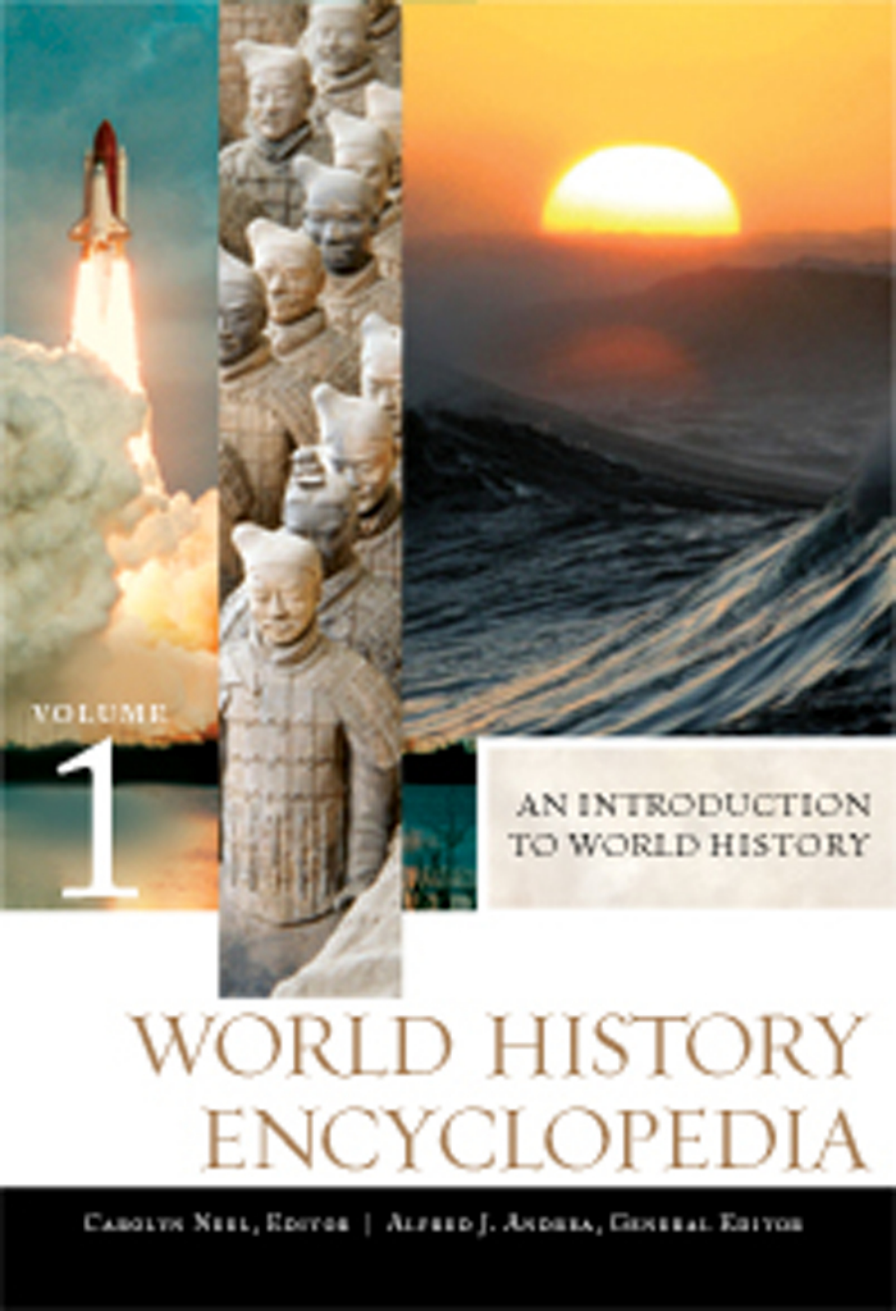




VOLUME

1

AN INTRODUCTION
TO WORLD HISTORY

WORLD HISTORY ENCYCLOPEDIA

CAROLYN NEEL, EDITOR | ALFRED J. ANDREA, GENERAL EDITOR

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World History Encyclopedia

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World History Encyclopedia

An Introduction to World History ■ Volume 1

VOLUME EDITOR

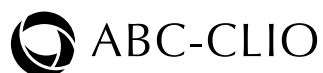
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Acknowledgments

Special thanks to the following scholars whose expertise made this project possible: **William E. Burns**, whose scholarship, scope of knowledge, and contributions helped shape our coverage in several eras, and **Fritz Blackwell**, an editor extraordinaire. We are also indebted to **Candice Goucher**, **Harald Haarmann**, **Jonathan Reynolds**, **Jane R. McIntosh**, and **Eric G. Swedin**.

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SECTION 1

Introduction and Preface

What Is World History?

Alfred J. Andrea and Carolyn Neel

Our purpose in creating this massive work, the *World History Encyclopedia*, is to provide intelligent laypeople, teachers, and students with a resource that will allow them to reach an understanding of the world in which they live. We offer a perspective that we believe will serve them well as they grapple with today's events and attitudes. First and foremost, we hope to assist them in developing a vision of the world as a human habitat, full of creativity, beauty, cooperation, brutality, choices, aptitudes, and attributes. We emphasize that a linear series of national, cultural, or geographical histories may have been considered world history in the past but is no longer a valid approach. Those elements are simply pieces of a mosaic designed to allow us to examine our world.

World history is as old as the putative “fathers of history,” Herodotus (fl. 450 BCE), Sima Qian (d. after 91 BCE), and the authors of Genesis. Each attempted to place the history of a particular people—Greeks, Chinese, and Israelites—into a far larger context, the context of the world as he knew and understood it. Beginning in the latter half of the twentieth century, however, a new historiographical tradition emerged, known as the New World History. Contemporary enthusiasm for world history, which is fast becoming global, initially blossomed in the United States in the aftermath of World War II and the Cold War that followed. People in the United States realized that isolationism was no longer possible or desirable. Consequently, interest in learning about other cultures and the interactions between societies led to an increasing interest in the study of world history. Such curiosity intensified as U.S. citizens realized, with some apprehension, that the “national” finances of the great American economic giant were intertwined with a global economic system. Three other phenomena were also at work. Demographically and culturally, the United States was clearly becoming far more complex and variegated after 1945, as immigrants from all over the globe swelled its numbers and enriched its social fabric. No longer was the standard Euro-American history a satisfactory response to the

question, “What are our roots?” With increased prosperity, higher levels of general education, greater leisure time, and faster modes of intercontinental travel, Americans were on the road to foreign destinations in numbers that multiplied almost annually, adding significantly to a growing awareness of and interest in the cultures of once-distant peoples. Then there was television and the other media of mass and fast communication that followed. Not only were Americans now able to view in their homes the cultures and histories of societies that once were largely unknown to the average university-educated American, but American culture was also going global and often returning to the United States in altered but interesting ways. One of many such manifestations of this development, which especially captivated young people, was (and is) Afropop, a blend of traditional African melodies and forms with Western music (much of which, in turn, had earlier connections with the music of Africa).

Most historians—certainly those who consider themselves students, consumers, or producers of works on world history—agree that this accelerating interest has been and will continue to be a good thing. Indeed, those who devote their lives to the discipline tend to be evangelical; some even believe that humanity’s very survival as a species depends upon our developing a nuanced understanding of the history of the world in which we live.

The discipline’s enthusiasts only begin diverging when they define their interests and methods of research and teaching. All agree on one issue. World history is *not* a collection of national or regional histories studied one after another. Put briefly, world history is a study of the past that transcends or crosses national, regional, and cultural boundaries. World history is also not, and can never be, the history of everything that has ever happened everywhere in the world. In order to be coherent and comprehensible, our remembrance, or reconstruction, of the past must be ordered and assembled with an end in mind. As is true of all historians no matter their specialty, world historians begin with specific questions and working hypotheses and subject those questions and hypotheses to exacting examination through careful analysis of available evidence. Only then do they venture to offer insights and to write their narratives. The only difference between the historian who focuses on a single nation, region, or cultural phenomenon and a world historian is the scope of the question and the narrative that follows.

When considering world history in the context of the discipline as a whole, it helps to think of a photographer in the field who carries a variety of lenses for a single camera. Some of those lenses are telescopic, allowing the photographer to capture distant objects. Others magnify minute objects that are close at hand but indistinct in their details to the unaided eye. Still others, known as wide-angle lenses, allow the photographer to take in vast panoramas. World history is analogous to that wide-angle lens.

The vast panoramas that world historians seek to describe include, but are not limited to, such issues as the ways in which societies across the world have come into contact with one another and cross-fertilized through a process of cultural interchange and adaptation. They also in-

clude a comparative, almost anthropological, approach to the past in which world historians study the different ways that diverse and often unconnected cultures have responded to similar stimuli. In addition to these three Cs—contact, cultural exchange, and comparative analysis—world historians are vitally interested in the ways in which societies across the globe have both cooperated and been in conflict with one another. One area in this regard that has become a rich field of inquiry for the new world historians is the study of borders and frontiers and the ways in which various societies have carried on complex relationships with their neighbors. Consider China, the self-described “Central Country” or “Middle Kingdom,” that has had a complex series of relationships with the many “peripheral” cultures along its borders. It is no wonder that China’s foreign relations loom large as a field of study for world historians. Simply put, world historians focus on historical *connections* on a grand scale. As already implied, that scale does not have to be global. For example, long-distance exchange of commodities and ideas along trade routes in the pre-Columbian Americas or similar commerce throughout Afro-Eurasia before 1500 CE have proved to be fruitful areas of investigation for many world historians.

Paradoxically, study of such grand vistas as, for example, exchange along the Silk Roads has also made world historians aware of the importance of many areas and cultures that were once considered obscure, largely peripheral to “real history,” and the province of only a few eccentric specialists working on arcane topics. One such area that is increasingly assuming a prominent position in world history studies is central Asia. No longer can it be seen as a great expanse of wasteland peopled only by nomadic pastoralists whose sole significant role in history was to occasionally raid and even overturn the states that ringed these great steppe lands, mountain ranges, and deserts that stretched from the Black and Caspian seas to Manchuria. To the contrary, the peoples, cultures, states, and even empires of central Asia are now coming into clearer focus (remember the historian as photographer?) and are being recognized for what they have been for many millennia: driving forces in the history of Afro-Eurasia.

Another paradox of world history studies is that the great majority of world historians, almost all in fact, also specialize in some discrete area of history. Most use their special area of interest, such as Tang China (618–907 CE), as a starting point for their world history studies. These two perspectives complement one another and result in a richer and fuller picture of both the localized field of inquiry (Tang China) and the broader field of study (Afro-Eurasia in the seventh and eighth centuries). To reiterate: all of the pieces are important, but they become world history only when assembled into the grand mosaic.

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Preface: This World History Encyclopedia

Alfred J. Andrea and Carolyn Neel

We live in an exciting and complex world. The realization that we are interlinked with other countries economically, politically, and culturally has inspired us—as curious laypeople, entrepreneurs, concerned citizens, or academics—to search for greater understanding of societies with which we share this globe. We find the process of globalization alternately exciting and disturbing, depending on the events of the day and our individual convictions. This intensified concern with international connections inspired educators to develop core courses in world history, some in response to state directives. Instructors by and large embrace the task, yet these mandates necessitate broad resources. Our goal for the ABC-CLIO *World History Encyclopedia (WHE)* has been to provide an interesting and comprehensive resource that is accessible to the intelligent reader, whether layperson, student, or instructor. We wanted to promote a deeper understanding without assuming prior knowledge. We were determined to write plainly and avoid jargon but never to “write down” or oversimplify. History presents many unanswered questions, and good history writing must address the past’s ambiguities and uncertainties. We also embraced the necessity for historical truth by addressing the common distortions in our understanding of history sometimes introduced in more or less well-meaning attempts to encourage pride by inflating the nobility, wisdom, or status of our ancestors.

The *WHE* is the result of several big dreams, beginning in early 2002, in the minds of Ron Boehm, the CEO of ABC-CLIO, and Simon Mason, an ABC-CLIO acquisitions editor. Simon searched for an academic general editor who shared his vision of a comprehensible story of human history. After an extensive search, he recruited Al Andrea during the spring of 2003, and Al came on board in January 2004. Although Simon went on to address other challenges, we believe that the encyclopedia remained true to his vision. His proposal remained our basic founding

document and inspiration. By the summer, the team began to jell. Carolyn Neel was hired as project editor in October 2004, and that month Carolyn, Ron, and Al began working together in earnest to refine the design of the *WHE*. Al had already been recruiting era editors to manage the nine chronological periods that the work would cover. He enticed Wilfred (Fred) Bisson, William (Bill) Mierse, James Overfield, Dane Morrison, and Micheal Tarver early on, reserving one era, the fifth (1000–1500) for himself. Later, Al and Carolyn were able to convince Kevin McGeough, Jack Waskey, Mark Aldenderfer, Fred Nadis, and, after the project was under way, Alexander Mikaberidze who joined us later in heroic effort to bring the *WHE* to the finish line.

We began organizing our project. Early on we had realized that the rich complexity of world history does not allow for a standard A–Z organization of entries. Such a structure plays havoc with the concept of change over time and would confuse more than enlighten. We also knew from many years of teaching that organizing world history courses under strict chronological narratives does not work well. There is too much happening simultaneously in too many parts of the world. The story becomes lost in a rapid blur of dates, names, and event. Yet chronology is the basic metric that every historian must follow. B does not happen before A and cannot, in Whiggish fashion, be read back into the past. Whether we like it or not, the discipline forces us to construct chronological narratives. For that reason, historians have traditionally divided the past into coherent periods, or eras, and have provided them with titles, such as the “Age of Democratic Revolutions.” These categorizations have a useful purpose in that they tend to focus attention on specific aspects of the past rather than presenting a confetti of dates, places, and strange names. Unfortunately, these labels also predispose us—professionals as well as students—to look at periods of time through a preset conceptual lens, often blinding us to phenomena that run counter to the theoretical overlay. For example, a student exploring the world through the perspective of western Europe’s so-called Scientific Revolution might miss the reality that societies in this same era experienced a widespread efflorescence of emotional religious or romantic movements throughout Europe and the Americas. World history presents the would-be codifier of eras with an almost insoluble conundrum. How does one find a characterization to describe a period of time that would be historically valid across the world? After all, even in the twentieth century societies across the globe are confronted with different challenges and move at different paces.

Over the past 50 years, many creative schemas have evolved. Fortunately, if we took great care to emphasize to our readers that these arbitrary delineations were for conceptual convenience, not indicators of concrete global realities, the task had already been largely done for us. As Simon Mason pointed out in his proposal, in 1994 the National Center for History in the Schools, under Professor Ross Dunn of San Diego State University, developed a set of national standards for world history for grades 5–12. Those standards had sadly fallen victim to political controversy but were widely respected by historians. Realizing that periodization of world history was absolutely necessary despite its pitfalls,

Dunn and his collaborators devised a schema comprised of eight eras that, in our estimation, was sufficiently general and broadly valid as to work fairly well. They are Era 1, The Beginnings of Human Society; Era 2, Early Civilizations to 1000 BCE; Era 3, Classical Traditions, Major Religions, and Giant Empires, 1000 BCE–300 CE; Era 4, Expanding Zones of Exchange and Encounter, 300–1000 CE; Era 5, Intensified Hemispheric Interactions, 1000–1500 CE; Era 6, Emergence of the First Global Age, 1450–1770; Era 7, The Age of Revolutions, 1750–1914; and Era 8, The Twentieth Century. This was an excellent beginning, but we needed to slightly refine this “table of historical periods” in light of our twenty-first-century purposes and perspectives. Again, with Simon’s proposal as our guide, we decided on a nine-part structure: Era 1, Beginnings of Human Society to 4000 BCE; Era 2, Early Civilizations, 4000–1000 BCE; Era 3, Classical Traditions, 1000 BCE–300; Era 4, Expanding Regional Civilizations, 300–1000 CE; Era 5, Intensified Hemispheric Interactions, 1000–1500; Era 6, The First Global Age, 1450–1770; Era 7, The Age of Revolutions, 1750–1914; Era 8, Crisis and Achievement, 1900–1945; and Era 9, Promises and Paradoxes, 1945–present.

Despite these nine eras that serve as the encyclopedia’s most basic divisions, it made sense to us (and again, Simon’s initial vision was our guideline) to organize the eras along thematic lines. As already noted, it is not feasible to try to give a simultaneous account of every society in the world; students and instructors alike would drown in a sea of facts.

We turned again to the National Standards for World History, which calls for the development of five themes: social, political, scientific/technological, economic, and cultural (philosophical/religious/aesthetic). Recognizing current historiographical trends and anticipating future developments, in full consultation with the era editors, Al and Carolyn went a bit further, and we wound up with eight themes: (1) Population and Environment, (2) Society and Culture, (3) Migration and Travel, (4) Politics and Statecraft, (5) Economics and Trade, (6) War and Diplomacy, (7) Thought and Religion, and (8) Science and Technology. Each theme would be further divided into major topics, and each topic would be developed through short essays ranging in length from 600 to 2,000 words, depending on the significance of the item under discussion, and almost every essay entry would be accompanied by a sidebar (short secondary articles highlighting some aspect of the main essay). For example, under Theme 2, Society and Culture, a topic might be literature across the world in the period between 1000 and 1500. Essays under the topic might then deal with literature in Persia, Tamil India, Islamic India, Southeast Asia, Japan, China, Latin Europe, Byzantium, the Inca empire, and other significant areas of the world. Sidebars would be designed to put the human face on each entry, perhaps a passage from a Chinese poem, an example showing the role of troubadours in Europe, and so forth. In the process of commissioning desired essays, we often found ourselves with a nice variety of regional examples, with accompanying human-interest sidebars, but discovered that we still needed an overview essay to tie them together. Given that reality, we quickly realized that we would need thematic and topic introductions to tie the pieces together into a “world history” perspective.

Early on, the question of “voice” arose. Would we try to maintain a single voice across the eras, or would we embrace the “multiple voices” mode of presentation? Al, Ron, and Carolyn agreed that much of the joy and beauty of studying world history comes from lively exchanges—a multiplicity of voices and perspectives—both in the primary source materials and in the work of those who compile histories. We believed that an attempt at a uniform voice would dilute the representation of people from various social and economic levels, various genders, and differing cultural milieus. Trying to force everything into one narrative tone would strip away much of the richness. And, of course, there was always the issue of the “adopted voice.” Historians tend to take on the cadence and vocabulary of those whom they spend their lives studying. We wanted to preserve those voices from the present and the past. The many-voices decision enriched the encyclopedia in ways that we had not originally anticipated because it allowed scholars to write from their hearts as well as their intellects. History without passion is sterile.

So, having developed the basic philosophy behind the structure of the work, Al and Carolyn spent a long week in a Santa Barbara conference room discussing, arguing, shifting sides, revising, evaluating. How would we deal with uneven coverage of themes? For instance, in the era 1500–1750, there were many developments in the ways humans conceive the divine or transcendent—whole libraries have been built with worthwhile works on the topic—but how much can we deduce about religious (or any other) sentiments in the period from the first hominids until about 3500 BCE? We look at evidence and draw conclusion, but the conclusions are based on our own worldviews; the minds of the earliest humans are out of our reach. But wait. Educated speculations based on archaeological remains are worth considering, and perhaps “what we don’t know” is indeed as important as “what we do.” It was a stimulating, invigorating, and exhausting week. At its end, Al and Carolyn realized that there was much to say about every theme in every corner of the world in every era, but trying to impose an artificial consistency for the relative percentage devoted across eras to any theme would result in distortions. We decided to avoid inflating or flattening any theme’s percentage of the era’s total number of words just to maintain a proportional consistency.

The next week we refined our notes and sent them to the era editors, asking for outlines for their eras, structured around the skeleton we had developed. As they came in we analyzed them, looking at the percentage of the proposed text devoted to each theme, and found that instinctively the era editors had made appropriate adjustments; not all themes are equally important in all ages. For instance, Era 5 (1000–1500) might devote a bit larger percentage of copy to disease because of the Great Eurasian Pandemic (known in the West as the Black Death), which began in China about 1330 and spread across Europe in the period 1348–1350. Era 7 (1750–1914), on the other hand, which encompasses the Industrial Revolution, might spend a higher percentage on the impact of technology. Not all issues had the same importance across all eras.

We began a series of long bimonthly teleconferences, most attended by all of the era editors, refining our approach. Each conversation lasted

for more than two hours until one of us would throw in the towel by admitting that his or her head was about to explode, and we would schedule the next one. Questions arose, and we found good answers for most, superb answers to a few, and agreed to revisit others. An example: Fred Bisson, editor of *Era 4* (300–1000 CE), asked where we would situate essays on warfare. The social impact of war would logically fit under “Society and Culture”; technological and scientific changes or discoveries made during the effort to provide weapons of war went under “Technology and Science.” But where would narratives of specific wars and war leaders fit? Of course they would normally go under the heading “War and Diplomacy,” but we would have to be very careful to ensure that the war did not overwhelm entries about efforts at diplomatic solutions. The biweekly teleconferences continued for several months, then Al and Carolyn met again in Santa Barbara to sort through the outlines. We commandeered a conference room and pasted copies of the outlines around the space at eye level (Carolyn’s eye level, as tiptoeing is more difficult than bending a bit).

By the end of July 2005, we believed that the work was as well designed as was humanly possible. Nearly every aspect of human life through nearly the whole of human existence was at least touched upon if not fully covered. We looked for thematic examples across the world, from the development of earliest humanoids to the age of astronauts, from the northernmost settlements in Russia, Siberia, or Canada to the southernmost areas of South America and the semipermanent stations of Antarctica. The work was organized so that readers could trace one aspect of human history, such as women’s roles, throughout history; they could make direct comparisons of changes brought about by temporal, cultural, or geographic distance or any combination thereof. By reading any one theme throughout the various eras, readers could develop a deep understanding of an issue, such as changes in environment and population or in attitudes toward technology. Teachers could assign the era introductions to a class to help students get a big-picture view of the topics to be covered in a class. There were so many ways to sort and pursue their interests that we began thinking about creative ways of organizing the search functions on the electronic versions.

We basked in the sheer beauty of our design; actually, we spent a couple of hours basking. Now all we had to do was find folks to write it all up. And therein lay the problem. The will was there with many scholars. We had a very good response from postings in *H-World* and e-mail notes to colleagues at university history and anthropology departments. But in some areas, the scholarship just did not exist yet. In other areas, scholars simply had so many other commitments that they had no time to devote to this project. We struggled with Africa—plenty of great African scholars around—but many were booked up for the next two or three or ten years. We found three outstanding scholars who made time to work with us—Candice Goucher, Jonathan Reynolds, and Eric Gilbert—and eventually they either wrote the entries we needed or found colleagues to do so. But entries on more comparative topics, such as comparing economic conditions in eleventh-century southern Asia with those in Europe, were beyond our reach. Over the next year we

realized that few scholars were comfortable doing broad comparisons. Many of our entries—essays under a single topic—would be centered on specific parts of the world, perhaps one on India, one on Germany, one on the Incas, one on Japan. But as already anticipated, we needed to have a solid topic introduction to tie them together into a world history perspective by making explicit comparisons and looking at the broader view. Composing these topic introductions fell largely to the era editors, and it was a task that proved formidable but doable after much gnashing of teeth.

Not surprisingly, we also found that many of the most exciting entries were done by a contributor/editor team when young scholars—sometimes advanced graduate students—were paired with academic editors with longtime experience in their fields. The back-and-forth (or, even often push-pull) relationships produced fresh insights that were well anchored to a solid base of acceptable historiography. We had a sense of insight and adventure interspersed with exhaustion. Some days it seemed that it would never be done; other days the finish line seemed to be just ahead.

The *WHE* team grew both at ABC-CLIO and in the number of people who were willing to invest their time and expertise in the project. The era editors have been the finest, most collegial group possible and made the work a joy despite some frustrating times. The ABC-CLIO staff's names are listed in the front of this volume. Each brought a set of characteristics and abilities that kept the work exciting. The *WHE* could never have reached this point without the grace, intelligence, and dedication of the entire staff both editorial and the fine production staff under the guidance of Donald Schmidt, a gentleman and scholar himself. We also owe a special note of gratitude to many fine contributors such as William Burns, who hung in with us throughout the entire project. And Al and Carolyn want to add a special note of thanks to Ron Boehm, who pushed, prodded, and challenged but never lost faith in us, even when we ourselves felt on shaky ground. All in all it has been a wonderful experience, and we did in fact live through it.

SECTION 2

What Historians Do and Why They Do It

Introduction

Carolyn Neel

Deciding to write about the whole world, covering the entirety of human existence, is a heady task. After a period of exhilaration and wild enthusiasm, the academic editors and project editor realized that there were some issues, such as historiography, that needed to be considered outside the temporal confines of eras. We needed to provide some solid groundwork in two basic areas: historiography, discussed immediately below, and overarching issues, which we discuss in the next section.

With this section, “What Historians Do and Why They Do It,” we intend to give our readers a sense of the many ways historians can approach their tasks. A few years ago, some scholars thought that world historians were intent on discarding the more traditional ways of looking at history. Some may still think so, but you would be hard pressed to find a functioning “world historian” who has pursued such an agenda. Most of us realize that world history is but one of many valid perspectives, all of which are valuable in advancing human understanding of the past. In the following essays, a few brilliant theorists discuss their perspectives on the historiography of world history.

In this group of essays, we consider the ways in which historians operate—keeping firmly in mind that historians are a lively, contentious group. The term *historiography* literally means “the writing of history,” but among historians, discussions of historiography generally center on methodology and analysis. What is proper? What is useful? What techniques or methods will withstand the tests of time? Newcomers to the field might also ask about the ways in which approaches to a subject or the discipline as a whole changed through the decades. We developed the essays in this section particularly to consider the strengths and challenges of world history and recruited scholars who seemed to us able to offer a thoughtful, innovative approach to their topics.

In the first essay, Dr. Tom Laichas considers the differences between “world” and national or regional histories. The second essay could be considered a world historian’s answer to the charge of “revisionism.” Dr. Heather Streets discusses the reasons that we *must* challenge our

perceptions and practice the dread *revisionist history* from time to time as we expand our perceptions and realize that we must ask different questions. Changing perspectives on the past sometimes even involves changing our definition of evidence. Many years ago, a dear professor told me that “history” depended on written records; material records were “archaeology.” We’ve moved beyond that and realize that many things are best expressed through visual means, and, as Dr. David J. Staley shows, even cinema and video games convey information about our past. Furthermore, today, most world historians agree with Dr. Rick Szostak that we benefit from breaking down the disciplinary boxes and pulling in social scientists, climatologists, and others to help us widen our view. In the penultimate essay of the section, Dr. Luigi Cajani presents the widest view of all, the history of world history, which we think of as the view from the moon. Finishing up, Margaret Favretti talks about the challenges and joys of pulling it all together into a meaningful narrative for youngsters and teenagers.

Together, it is our hope that these essays will give our reader a taste of the various ways in which we can approach the subject, and—more importantly—an understanding that human life, past and present, is a rich kaleidoscope that we all can endlessly examine, interpret, and celebrate.



At one time, there were people who seemed to believe that scholars embracing the world history approach were intent on replacing traditional methods of studying history. As Dr. Laichas notes, world history—in all of its permutations—depends on the integrity of biographical, local, national, and regional studies. World history does in fact differ from national and regional histories, but it cannot replace them. World history can offer the grand overview of human existence, but world histories do not necessarily limit themselves to “big picture” perspectives; one could conceivably develop a world history of mundane items, such as cooking pots, and focus on the similarities and differences in those utensils across many societies. Most of those who focus on world history understand the importance of the detailed studies that underpin our understanding of the past. The goal is to build a mosaic that can be understood from many perspectives.

—Carolyn Neel

How Does World History Differ from National and Regional Histories?

Tom Laichas

Imagine a graduate student receiving an introductory world history reading list. The student finds a few titles suggesting “the world”: William McNeill’s *Plagues and Peoples*, Clive Ponting’s *A Green History of the World*, and Bonnie Smith’s three-volume *Women’s History in Global Perspective*. There may be articles too from the *Journal of World History*, the *Journal of Global History*, and *World History Connected*.

Yet the reading list also includes works whose geographic scope seems far more constricted. Judging from the titles, one book focuses on the eighteenth-century Atlantic, and another focuses on a single west African village. What, then, does “world” mean to world historians? Where is the line between world history and regional or national histories?

World Histories and Scale

The answer to these questions depends very much on whose world history we are talking about. The reading list imagined above represents what Ross Dunn has called the new world history. Most college courses reflect this approach; so too does the College Board’s Advanced Placement World History curriculum, offered to high school students throughout the United States.

At its grandest, the new world history understands the global past through the metaphor of the network or web. Sometimes called big history, this concept informs John and William McNeill’s *The Human Web*, David Christian’s *Maps of Time*, and Jared Diamond’s *Guns, Germs and Steel*. All these works argue that agriculture, technology, commerce, and

social structure have interacted over the past ten thousand years or more. Over time, these self-sustaining synergies have multiplied and intensified, expanding the geographic scope of human interaction.

A second approach, once called universal history and now comparative civilizations, understands history as the story of civilizations, each distinguished from the others by deeply embedded cultural, social, and political structures. With roots in the work of Georg Hegel, Arnold Toynbee, and Pitirim Sorokin, its recent exponents include Samuel Huntington, Matthew Melko, and Carroll Quigley.

A third framework is world systems theory. As defined by the American sociologist Immanuel Wallerstein, a world system is a hierarchically organized network in which a commercial or manufacturing core dominates its less developed semiperiphery and periphery. When Wallerstein first proposed world systems theory in the 1970s, he implied that the world system dates back no further than Europe's sixteenth-century American conquests. Janet Abu-Lughod's *Before European Hegemony* later argued that the Mongol empire, 300 years before, had an anchored polycentric world system of eight interlocking trade networks spanning all of Afro-Eurasia. A few years later Andre Gunder Frank and Barry Gills went still further, arguing that the modern world system had evolved over a period of 5,000 or more years, growing out of its roots in ancient Mesopotamia, the Nile, and the Indus.

World History and Regional Histories

Each approach to world history draws its own distinctive lines separating world, regional, and national histories. Civilizationist accounts often focus specifically on core regions and on the frontiers between them. For some, particularly Samuel Huntington, intercivilizational friction and conflict characterize frontiers. For others, notably Carroll Quigley, intercivilizational interactions lay the foundation for new civilizations.

Many civilizational models stress the importance of what E. L. Jones called the European miracle. While the new world history and world systems theory invoke geographic and environmental contingency to explain the rise of Europe after 1500, civilizationists—following in the footsteps of Adam Smith, Karl Marx, and Max Weber—stress what they argue are uniquely European traits (limited family size, wider literacy, Protestant-influenced economic philosophy, and a culture receptive to greater scientific, technological, and commercial innovation). In such accounts the regional focus shifts over time, from northern Italy in the thirteenth through fifteenth centuries to sixteenth-century Iberia and seventeenth- and eighteenth-century Holland, Britain, and France. This narrative migration from one civilizational core to the next informs, for instance, David Landes's *The Wealth and Poverty of Nations*.

For some time, advocates of world systems theory and the new world history blasted the Eurocentrism informing civilizational narratives. Edward Said's *Orientalism*, James Blaut's *The Colonizer's Model of the World*, and Andre Gunder Frank's *ReOrient* all sought, in Dipesh Chakrabarty's words, to "provincialize Europe."

World systems theorists have less use for regional studies than do civilizationists. By definition, the purpose of world systems analysis is to interrogate inter-regional patterns of trade and finance for what they can reveal about global economic hierarchies. In this view, modern states and regions are integral parts of one integrated world system. That said, world systems theorists have identified premodern peoples whose geographically confined economic interactions have created very small self-sustaining world systems.

One small-scale world system, that of California's Wintu people, functioned in a network of association that extended well beyond their immediate living arrangements. According to Christopher Chase-Dunn and Thomas D. Hall, this world system comprised merely around 1,850 square miles (4,800 square kilometers).

In contrast to both civilizationist and world systems approaches, the new world history takes particular interest in zones of interaction between human communities. These zones are characterized as much by cooperation, exchange, and (echoing Carroll Quigley) syncretism as by conflict. Unlike world systems analysts, new world historians consider cultural interaction just as important as economic exchange.

Twentieth-century French historian Fernand Braudel influenced this approach. Taking the Mediterranean rather than the European continent as a coherent region, Braudel argued in *The Mediterranean in the Age of Philip II* that sixteenth-century international politics were shaped by the inland sea's deep geographical and cultural past.

Braudel's study became a rough template for two generations of work. Thus, Philip Curtin and Bernard Bailyn have written on the seventeenth-century Atlantic system, K. N. Chaudhuri and Rene Barendse have written on the Indian Ocean, Arturo Giráldez and Dennis Flynn have written on the Pacific, and Anthony Reid has written on insular Southeast Asia. At the same time, a growing body of material has focused on continental zones of interaction: the Sahara-Sahel salt trade, the central Asian Silk Roads, and the turquoise roads linking the southwestern United States to the Mexican plateau. In all these studies, the term "region" refers to an economic and cultural crossroads, not a subordinate hinterland or isolated backcountry.

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National Histories and World History

National history is the child of nineteenth-century nationalism. Since 1850, self-consciously modernizing states have mandated national history curricula from grade school to state-supported university coursework. To this day, most historians begin and end their careers as specialists in the histories of Japan, the United States, Iran, Russia, and other national states. Each national field subsumes all the history within the modern

state's geographical limits: the ethnically distinct Liao and Xiongnu states are part of Chinese history, while Indian history ranges over dozens of peoples, languages, and polities. Most historians, whether they have valorized or criticized the existing national narrative, reinforce boundaries within their discipline that coincided almost exactly with boundaries on the map. Very few possess the linguistic and methodological skills to undertake original research across large portions of the globe.

Though drawing heavily from such nationally based scholarship, world historians have criticized national histories on many grounds. Many national studies rest on the assumption that national history develops within its own territorial container, an "it" that may act or be acted upon but that over the centuries maintains an internal cohesion and identity. Yet as Thomas Bender has written of U.S. history, "the territorial space of the nation [is not] sufficient context for a national history. . . . National histories are part of global histories; each nation is a province among the provinces that make up the world."¹

This problem is particularly severe when national histories are read back into the distant past. This kind of history—particularly popular in the mid-nineteenth century but still very influential—asserts that modern legal systems, social networks, cultural conflicts, and national

character all incubate within the ovum of an ancient proto-national people. Such accounts can read like psychological case studies, as though they were reporting the childhood roots of the adult's heroism or psychosis. Mid-twentieth-century histories of Germany, Japan, Russia, Britain, and the United States were particularly prone to such thinking. Following Benedict Anderson's *Imagined Communities*, a generation of scholars has argued that nineteenth-century states invented ancient identities

Following Benedict Anderson's Imagined Communities, a generation of scholars has argued that nineteenth-century states invented ancient identities to legitimate their claims to expansive territories, classical cultural legacies, or prestigious cultural lineage.

to legitimate their claims to expansive territories, classical cultural legacies, or prestigious cultural lineage. Lately this debate has reopened, and historians are reexamining old questions. Was national identity really invented, or did it emerge from a preexisting ethnic/religious identification? Was it really invented by elites, or did these elite inventions merely build upon existing popular forms of communal identity?

Nineteenth-century national narratives also assumed that political structures developed predictably from clan through tribe to territorial state. And the development of political complexity, of state structures and administrative technique, fascinates world historians. Recent world history textbooks invite students to directly compare, for instance, Roman and Han administrative structures or eighteenth-century Japanese and French palace politics. Ambitious projects such as Victor Lieberman's *Strange Parallels* seek to understand why state building characterized so many early modern polities, from western Europe to Southeast Asia.

Yet as a group, world historians are skeptical of evolutionary schemes that place the centralizing state at the pinnacle of political development.

Many complex polities resist such neat categorization, among them the Hanseatic League, Mayan and Greek city-states, and West African forest kingdoms. The late-twentieth-century emergence of nonstate actors—commercial organizations such as the North American Free Trade Agreement (NAFTA) and the Mercado Comun del Sur (MERCUSOR, or the Southern Common Market), nongovernmental organizations (NGOs) like Amnesty International, and stateless religious-military-political movements like al Qaeda—have reminded historians (and everyone else) that paying too much attention to states, however defined, can seriously impair our understanding. Philip Curtin's investigation of cross-cultural trade networks, for instance, demonstrates the importance of nonstate organizations far into the past. Skepticism of national histories has led as well to studies of mapmaking. Relationships among cartography, national identity, and state political claims are at the heart of Laura Hostetler's work on the Qing, Thongchai Winichakul's work on Siam, and Jerry Brotton's work on early modern Europe.

World historians mine national histories to investigate one other topic: borderlands within nation-states. Over the past 20 years, U.S. historians Patricia Limerick, Richard White, and others have created a new Western history challenging the received image of a West settled from the East. In these narratives, indigenous, Mexican, east Asian, south Asian, east European, and African American peoples interact throughout the region's long history. Another strand of Western history links the region's economy to South America, Canada, Japan, China, the Philippines, and India. A zone of conquest, a zone of globalization, a zone of cultural encounter: the newly reimagined West was all of these. Studies of other frontiers and peripheries—Russia's eighteenth-century central Asian conquest territories, the Umayyad caliphate's eighth-century Persian frontier, and Argentina's nineteenth-century Chaco—have proven just as productive.

World History in Dialogue with Regional and National Histories

Perhaps the most important fact about the relationship between world and regional or national histories is this: regardless of theoretical perspective, world historians must—and do—read all three.

The reverse is not yet true. Historians of colonial New England, the Abbassid caliphate, or early modern Holland do not necessarily read world history. This entrenched localism impoverishes national and regional histories. It also impoverishes world history, which would benefit from the sustained attention of dedicated specialists.

Notes

1. Thomas Bender, *A Nation among Nations: America's Place in World History*, 1st ed. (New York: Hill and Wang, 2006), ix.

Bibliography

Abu-Lughod, Janet L. *Before European Hegemony: The World System, A.D. 1250–1350*. New York: Oxford University Press, 1989.

- Bender, Thomas. *A Nation among Nations: America's Place in World History*. 1st ed. New York: Hill and Wang, 2006.
- Blaut, James M. *The Colonizer's Model of the World: Geographical Diffusionism and Eurocentric History*. New York: Guilford, 1993.
- Braudel, Fernand. *The Mediterranean and the Mediterranean World in the Age of Philip II*. 1st U.S. ed. New York: Harper and Row, 1972.
- Chakrabarty, Dipesh. *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton Studies in Culture/Power/History. Princeton, NJ: Princeton University Press, 2000.
- Chase-Dunn, Christopher K., and Thomas D. Hall. *Core/Periphery Relations in Precapitalist Worlds*. Boulder, CO: Westview, 1991.
- Chaudhuri, K. N. *Asia before Europe: Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750*. New York: Cambridge University Press, 1990.
- Christian, David. *Maps of Time: An Introduction to Big History*. The California World History Library. Berkeley: University of California Press, 2004.
- Diamond, Jared M. *Guns, Germs, and Steel: The Fates of Human Societies*. 1st ed. New York: Norton, 1997.
- Frank, Andre Gunder. *ReOrient: Global Economy in the Asian Age*. Berkeley: University of California Press, 1998.
- Gilroy, Paul. *The Black Atlantic: Modernity and Double Consciousness*. Cambridge, MA: Harvard University Press, 1993.
- Huntington, Samuel P., Joseph S. Nye, Richard N. Cooper, and Harvard University. *Global Dilemmas*. Lanham, MD: Center for International Affairs, University Press of America, 1985.
- Landes, David S. *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor*. 1st ed. New York: Norton, 1999.
- McNeill, John Robert, and William Hardy McNeill. *The Human Web: A Bird's-Eye View of World History*. New York: Norton, 2003.
- McNeill, William Hardy. *Plagues and Peoples*. New York: Anchor Books, 1989.
- Ponting, Clive. *A New Green History of the World: The Environment and the Collapse of Great Civilizations*. Rev. ed. New York: Penguin Books, 2007.
- Quigley, Carroll. *The Evolution of Civilizations: An Introduction to Historical Analysis*. 2nd ed. Indianapolis: Liberty Press, 1979.
- Smith, Bonnie G. *Women's History in Global Perspective*. 3 vols. Urbana: University of Illinois Press, 2004.
- Wallerstein, Immanuel Maurice. *The Essential Wallerstein*. New York: New Press, 2000.



Today we often hear politicians hurling the charge, “revisionist history,” implying that their opponents are misinterpreting history in order to serve their own agendas. Such charges, no matter their validity, inspire the question, “why do we change our view of history?” Sometimes, of course, it’s because we find new information that causes us to look at our past in a different way. At other times, it’s because we begin to ask new questions of the past. Should history be revised? Of course—we have not yet learned all we can from our past. As long as we face new circumstances, we will be inspired to look at different aspects of history. For instance, after the women’s movement, we started asking about women’s lives in past societies. The current controversy over immigration is causing more historians to ask about the past waves of immigration to determine the similarities and differences from today’s issues. So, let’s have a hearty round of applause for people, like Dr. Streets, who reveal that history is always a work in progress.

—Carolyn Neel

Ever-Changing Perspectives

Heather Streets

History is the study of change over time. But even the study of history has a history: since humans have begun to record the events of the past, their understanding of those events has varied widely depending on when they wrote, who they were, and where they were from. As a result, history is constantly being revised according to the time and the place in which it is written. An example of how historical understanding has changed over time can be found in the ways that twentieth-century American historians have interpreted the life and achievements of Christopher Columbus. Until the early 1970s, American historians wrote about Columbus in a relatively positive way, depicting him as an intrepid and courageous voyager who discovered the Americas and set the stage for the European migrations that were to follow in his wake. After the publication of Alfred Crosby’s *The Columbian Exchange* in 1972, however, this view began to change. Crosby demonstrated that Columbus’s arrival set in motion a chain of events that led to massive death and environmental destruction among the indigenous people, flora, and fauna of the Americas, and henceforth historians began to re-evaluate earlier interpretations. By the end of the twentieth century, few histories depicted Columbus as positively as in the past, and few ignored the catastrophic consequences of his voyages for the New World.

In addition to changing perspectives over time, each culture and social group has tended to view historical events differently based on their position in society or whether or not they were on the winning or losing side of conflicts. Consider the old adage that “history is written by the victors.” This maxim, though well worn, highlights the fact that dominant groups in history tend to have the greatest opportunity to tell their version of the past. It is probably no surprise, however, that such versions of history—whether told by elites, conquerors, or rulers—might differ substantially from the versions told by nonelites, conquered peoples, or vassals. These different ways of remembering, telling, and

writing about history over time and across space make it possible for each generation, each culture, and even each social group to see the past differently and to ask different questions of the past. This has certainly been true of the twentieth century, when historical events as well as changes in the historical profession produced a succession of shifts in the way history was researched, interpreted, and written.

From Ranke to the Annales School

Although individuals have been writing history for millennia, the academic study of history as most contemporaries know it today—involving the critical use of primary sources and the evaluation of different points of view—became institutionalized in European and North American universities during the nineteenth century. Influential scholars like the German historian Leopold von Ranke (1795–1886) shaped the discipline by insisting that historians use a wide variety of primary sources to present a picture of “the past as it really was.” In this way, historians were supposed to be neutral arbiters of “the facts.” Moreover, historians like Ranke believed that the most important “facts” to assemble were those of political, military, or diplomatic history; in other words, those “facts” that mainly concerned the great men and great events of history. By default, the everyday lives of peasants, workers, slaves, women, and marginalized people were left out of most historical works.

For the most part, academic history remained focused on politics, diplomacy, and war until well after World War II. Some historians, however, grew dissatisfied with Ranke’s priorities before the war. One group of these historians formed during the 1920s at the University of Strasbourg in France, and their work collectively became known as the Annales approach to history. The Annales historians rejected the Rankean focus on politics and war and instead concerned themselves with a variety of unconventional subjects, including the everyday lives of ordinary

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individuals, economic history, the history of attitudes, and history that exceeded the boundaries of nation-states. For example, Lucien Febvre—one of the founders of the Annales school—published a book titled *Life in Renaissance France* that detailed the physical surroundings, spiritual beliefs, and social customs of ordinary French people during the Renaissance. In short, Annales historians like Febvre challenged the notion that history should only concern itself with high politics and great men by demonstrating that a multitude of subjects could be open to historical inquiry.

Why did some scholars begin to reject earlier models of history research and writing during the interwar period? Partly, responses like those of the Annales school reflected the evolution of the historical discipline itself, as researchers sought to differentiate their own work from

the work of previous historians. Yet part of the answer also lies in the devastating events of the interwar years. During this period, Europe was recovering from a world war that cost the lives of nearly 10 million soldiers. By the late 1920s, it was also seething with class conflict and reeling from economic problems that would only grow worse during the Great Depression. People all across Europe were fed up with the elite politics they believed caused the Great War and were deeply disenchanted with old attachments to class, station, and rank. In such an atmosphere, it is not surprising that some historians began to reject the elitism of history in favor of other emphases that could shed light on the history of ordinary people.

World War II to the Women's Movement

While the Annales school did not dominate academic historical study in the interwar years, it did provide inspiration for a new generation of historians who came to maturity after World War II. The war itself had devastated large populations all over the world: 60 million soldiers and civilians died, and countless more millions were left injured, hungry, or homeless. The trauma and expense of the war was also the death knell of the imperial era: in the three decades after World War II the Japanese, German, British, French, Dutch, Belgian, and Portuguese empires all collapsed. Colonial nationalist movements gained great strength in this period, involving the formation of massive political machines, civil disobedience, and—as in the case of Algeria, Indonesia, Angola, Mozambique, and Vietnam—protracted warfare.

One result of this imperial collapse was the appearance of scores of new nations in every part of the world, each with a need to understand its past anew. This was because prior to colonial independence, most academic histories about the various colonial possessions had been written by professional historians from the colonizing countries. The concerns of these histories, by and large, had been to tell the story of colonial conquest and to detail the lives of colonial administrators, colonial military officials, and imperial politics. Very few histories explored the lives or concerns of colonial subjects, and many depicted indigenous customs and history in a negative light.

Once independence was achieved, people in the new nation-states felt a strong need to produce histories that would explore the past from their own point of view. Their questions and perspectives, not surprisingly, were quite different from those of the colonizers. Instead of writing about colonial administrators and settlers, people of decolonized countries wanted to understand their precolonial histories, the mechanisms that colonizers had used to conquer and subjugate, and the story of their own mass movements and resistance to colonialism. For example, in 1957 the Indian historian Surendra Nath Sen published a book titled *Eighteen Fifty-Seven* that explored the history of the 1857 Indian Rebellion against the British. During the colonial period, British historians who had written about the movement depicted the Indian rebels as devilish fanatics or as incompetents. Sen's book sought to balance the

Left: Indian pro-independence leader Mohandas Gandhi and 78 of his followers march 240 miles to Dandi in March 1930 to protest the doubling of the salt tax by the British. Right: African American college students after their historic sit-in at a whites-only lunch counter in February 1960. (Library of Congress)



historical record by bringing to light the extensive atrocities that Britons carried out on Indian populations as well as the legitimate reasons that Indians resented the British presence. This kind of reinterpretation in all of the former colonies in turn opened up entirely new avenues of historical inquiry, fed by a hunger to recapture some of the past from the dictates of the colonizing powers.

Other events in the postwar decades led historians to broaden their focus from high politics, war, and diplomacy to more inclusive histories. One of these can be found in the struggles of oppressed and marginalized people to win basic civil rights in Europe and North America. Some of these movements were themselves inspired by colonial nationalist movements. By the 1960s in the United States, for example, American blacks had organized a massive civil rights campaign inspired in part by Mohandas Gandhi's ideas about civil disobedience and nonviolence.

Catholics in Northern Ireland, who were weary of being treated as second-class citizens by their Protestant neighbors, did the same in the late 1960s and 1970s. In the same two decades, many other groups organized in the name of civil rights. Indeed, student groups organized to protest the actions of their governments, labor unions organized to challenge what they believed were unjust laws and unfair labor practices, and

women's groups organized to work against sexual discrimination in the home and in the workplace. In all of these cases, ordinary people began to recognize and use the power of numbers to demand equal treatment before the law and to enact changes in government policy.

During these decades of unrest, protest, and change, many people began to realize—just as people in former colonial states had—that the conventional histories taught in school did not adequately represent the lives or the struggles of most people. For many, the history of high politics and diplomacy would no longer do; instead, they wanted to know about people like themselves, about the people whom history books and courses tended to ignore. This desire to ask new questions of history coincided with a gradual shift in the composition of professional histo-

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rians in the decades after World War II. During the first half of the twentieth century, most academic historians were men from the dominant social group of their society. There were, of course, exceptions. Men like J. L. R. James and Eric Williams—both West Indians of African descent—wrote influential histories prior to the war, as did some colonial subjects, women, and American blacks. In the midst of decolonization and the movements for civil rights after the war, however, more women as well as men from previously marginalized groups entered the ranks of professional historians than ever before. This phenomenon was, in fact, closely related to colonial independence struggles and civil rights movements. As nations became independent, institutions of higher learning opened up to former colonial subjects, and far greater numbers of individuals were able to continue their schooling to the highest levels. In Europe and North America, civil rights struggles began opening universities to a much wider group of people, including people of African descent as well as women. As the numbers of these new historians grew, their concerns and questions began to shape historical scholarship. No longer were they interested in only telling the story of the dominant classes; rather, they wished to investigate the histories of the masses.

The result of all these changes was a dramatic shift in the writing of history toward studies that explored “history from below.” This shift took coherent shape in the 1960s in the form of social history—an approach to history that seeks to explore the everyday lives, concerns, and events of a wide variety of groups including women, the lower classes, and ethnic and religious minorities. Although social history could (and frequently did) involve politics, its practitioners also explored interpersonal relations, family life, local communities, and leisure, often from the point of view of oppressed or marginalized groups. An excellent example of the new social history was the English historian E. P. Thompson’s (1924–1993) 1963 book *The Making of the English Working Class*. This book sought to tell the story of the working-class movement that developed in England in the late eighteenth and early nineteenth centuries. Few of the people featured in the book were famous, although each contributed their own small share to what Thompson saw as a critical mass movement designed to better the lives of ordinary workers. The sources that Thompson used were both conventional and unconventional; while he investigated a variety of official sources, he sought answers to his questions also in folk songs, stories, and pamphlets. Following Thompson, numerous historians chronicled the lives and events of workers, peasants, and other groups underrepresented by earlier histories.

Related to—but nevertheless distinct from—the social historical concern with history from below was the development of subaltern history in postcolonial India. Social history tends to focus on a wide variety of underrepresented and marginal groups who nevertheless left some kind of written record behind. In contrast, subaltern history seeks to recover the histories of people who had no voice at all and who left virtually no written records. In precolonial and colonial India, these were the people who had no education and who were too poor to come to the attention of the state except in cases of famine or rebellion. Subaltern history involves both asking new questions of history as well as the creative

use of primary sources. Frequently, its historians have to read between the lines of official documents in order to recover the voices of such marginal groups. In addition, subaltern history has tended to be concerned with the power relations specific to colonialism, especially in documenting peasant insurgence and peasant resistance to colonial rule.

The concern of social history with historically marginalized groups, combined with the development of the women's movement and the entry of many more women into the ranks of professional historians during the 1960s and 1970s, also gave rise to the development of the coherent subfield of women's history. In many ways the women's movement developed directly out of civil rights struggles; as minority groups sought to realize equal treatment before the law, some women in Europe and North America began to see parallels between themselves and other minorities. In response, they began to campaign on their own behalf for equal rights to education and employment and launched lengthy—and ultimately successful—battles to open institutions of all kinds to both sexes.

Like former colonial subjects or men of marginalized groups from many countries, women who entered academia with an awareness of the struggle that it took to get there were hungry for histories that might shed light on the past of their own gender. They sought to uncover the voices and actions of women who had contributed to history but were forgotten, they sought to re-create what women's lives had been like at different times and different places, they sought to understand the mechanisms (ideological, institutional, educational, social, sexual) that have oppressed women in patriarchal societies, and they sought to show the different ways that women's roles have been conceived and constructed over time. By the early 1980s, women's history had become a vibrant field that had gone far in reconstructing a long-neglected past.

The Linguistic Turn

Yet by the late 1980s, a number of social historians—foremost among them many women's historians—began to realize that it was not enough to simply document the past of conventionally underrepresented groups. Rather, they argued that historical relationships must be fundamentally reimagined. For example, the women's historian Joan Wallach Scott argued in her 1988 book *Gender and the Politics of History* that gender, gender ideologies, and gender relationships were not sidebars to history but instead were, in fact, central to every kind of history, from politics and diplomacy through working-class movements. Because ideas about and relationships of gender shape language, practice, and economic realities, she argued that attention to the lens of gender would transform virtually any historical narrative from the way it has conventionally been understood. Indeed, by shifting the focus to gender, she demonstrated that new realms of historical inquiry based on ideology, belief, and unstated practices were possible. The historian's role, then, was no longer to be the neutral arbiter of "facts" but rather to decode the language and practices of the past to understand the ideological

structures underpinning historical events. After Scott, many other historians argued that this method of undertaking historical study was relevant for other kinds of lenses besides gender, especially the lenses of class and of race.

These massive changes in the ways history was being written, in who was writing history, and in what was being written about spurred some academics to condemn the credibility of social, subaltern, and women's historians. History, as it was conceptualized beginning in the nineteenth century, was supposed to be about "facts," told by an objective professional who was not personally invested in the story. That so many "new" historians were abandoning conventional subjects and methods was viewed in some quarters as a disturbing trend away from historical objectivity. Such historians, it was argued, were entering the profession motivated by their own personal agendas and then were publishing works based on those agendas. And if the stories of history changed according to who was telling them and through what prism they were being told, how could professional historians claim any special expertise on the past?

That so many "new" historians were abandoning conventional subjects and methods was viewed in some quarters as a disturbing trend away from historical objectivity.

The "new" historians, in response, increasingly argued that no historian—regardless of background—is capable of being truly objective because every individual is embedded in his or her class, race, and gender. Instead, they proposed that historians would do better to admit their biases openly rather than pretend to some standard of neutral objectivity. By the 1980s, this rejection of the possibility of objectivity was in full swing. In this project, historians borrowed from scholars of other disciplines—particularly philosophy and literature—who were focused on the frailty of language as a medium for conveying reality. They argued, indeed, that language was not a reflection of some inherently knowable historical reality but that language itself creates reality. As a result, historians influenced by what has become known as the linguistic turn argued that objectivity in historical writing was impossible because historians were using the faulty mechanism of language to structure a falsely ordered past from events and perspectives that were chaotic and unordered. Moreover, these historians subjected the texts and documents produced in the past to a new kind of scrutiny; now, not just the content but the language of the texts themselves were to be examined for the ways in which they structured the past. For example, Judith Walkowitz's 1992 *City of Dreadful Delight* explored how the language used by newspapers to talk about sexual danger in late Victorian London not only reported events that supposedly happened but in fact created new ways of thinking by establishing a common vocabulary for these subjects.

Many of the same historians influenced by the linguistic turn also utilized the ideas of postmodernism and post-structuralism in their work, each of which rejected a fixed and stable world of reality. According to these philosophies, reality is fragmented by multiple individual realities,

and there can be no grand narrative that accurately reconstructs it. Historians borrowing from these ideas began to argue that history itself can only ever be fragmentary and that the work of any individual historian can only represent a limited attempt to create order from a fundamentally fractured past.

At the turn of the twenty-first century, then, history writing looked very different than it had at the turn of the twentieth century. Historians had moved from a focus on “facts” about elite politics, rulers, and great events to “history from below” and from there to multiple histories and fragmented pasts. While these changes can be attributed partly to internal changes in the discipline of history itself, they are also quite clearly connected to the historical events of their time. In the future, historians may conclude that the linguistic turn and its related attention to postmodernism and post-structuralism were products of the uncertainties and anxieties produced by accelerated globalization as well as the destruction of the Cold War world.

Conclusion

In the twenty-first century, most historians are deeply aware that change over time and differences in perspective determine the way the past is—and has been—written about. For this reason, it is to be expected that each generation will have new questions about the past to research and answer. During the twentieth century, decolonization, civil rights movements, the women’s movement, and increasing globalization have spurred momentous changes not only in the way history is written about and interpreted but also in who is writing academic history. Moreover, there is every reason to believe that future events will spur further changes in the discipline and that future historians will revise history according to their own priorities and perspectives. Because of this, history is never simply finished; it continues to change with the humans who write about it.

Bibliography

- Burke, Peter. *The French Historical Revolution: The Annales School, 1929–1989*. Stanford, CA: Stanford University Press, 1990.
- Crosby, Alfred. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- Febvre, Lucien. *Life in Renaissance France*. Cambridge, MA: Harvard University Press, 1972.
- Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, MA: Blackwell, 1991.
- Iggers, Georg C. *Historiography in the Twentieth Century: From Scientific Objectivity to the Postmodern Challenge*. Middletown, CT: Wesleyan University Press, 2005.
- James, C. L. R. *The Black Jacobins: Toussaint L'Ouverture and the San Domingo Revolution*. New York: Vintage, 1989.
- McCallum, Pamela, and Wendy Faith, eds. *Linked Histories: Postcolonial Studies in a Globalized World*. Calgary: University of Calgary Press, 2006.
- Said, Edward, Ranajit Guha, and Gayatri Spivak. *Selected Subaltern Studies*. New York: Oxford University Press, 1988.

- Scott, Joan Wallach. *Gender and the Politics of History*. Rev. ed. New York: Columbia University Press, 1999.
- Sen, Surendra Nath. *Eighteen Fifty-Seven*. Delhi: Ministry of Information and Broadcasting, 1977.
- Smith, Bonnie. *The Gender of History: Men, Women, and the Practice of History*. Cambridge, MA: Harvard University Press, 2000.
- Thompson, E. P. *The Making of the English Working Class*. New York: Vintage, 1966.
- Walkowitz, Judith. *City of Dreadful Delight: Narratives of Sexual Danger in Late Victorian London*. Chicago: University of Chicago Press, 1992.
- Williams, Eric. *Capitalism and Slavery*. Richmond, VA: Williams Press, 2007.

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In this essay, Dr. Staley considers the role of visual representation in shaping our thinking about history. He discusses the depictions handed down from the past that give us a sense of the time in a way that written words cannot. We also confront the question of modern media, such as movies and video games, some of which have been developed in such a way that they actually convey a sense of history. Can they have a valid role in developing students' awareness of the past? To discount such media as somehow too frivolous to be useful would be a disservice. When developed with care, these too advance an understanding of the past. This is a discussion well worth pursuing with an open mind.

—Carolyn Neel

Picturing World History

David J. Staley

One of the most popular video games on the market today is *Civilization*, in which a player develops a civilization from humble beginnings as a village into a mighty military, technological, and cultural power. The graphics are rich, including intricate maps and physical layouts of cities, realistic depictions of architecture and other building forms, human figures in costume, and statistics and other graphics to chart one's progress through the game. Video games like *Civilization* offer a rich multimedia experience of the past that many young people find very alluring.

Indeed, for many young students *Civilization* will be their most memorable experience with history, in the same way that an earlier generation of students was drawn more to films than to text. Consider the experience of watching a movie like *Saving Private Ryan*. Viewers of the movie can take in all at once the sounds and the sights of the advance on Omaha Beach during the Normandy invasion. With film, a viewer can see all the actions that are occurring simultaneously: here a mortar shell lands, there a squad disembarks, here a man cries out in pain, there orders are barked out, there a man grimaces at his wounds, here another's facial expressions show his fear. A reader of a textual version of these events must read the words one at a time in a line, since written language forces us to be linear with our descriptions. With writing, we must break up the simultaneity of the world into a sequential line: first this, then this, then this, and so on. As historian Robert Rosenstone observes, "Film lets us see landscapes; hear sounds; witness strong emotions as they are expressed with body and face, or physical conflict between individuals and groups . . . film can most directly render the look and feel of all sorts of historical particulars and situations—say farmworkers dwarfed by immense Western prairies and mountains, miners struggling in the darkness of their pits, millworkers moving to the rhythms of their machines or civilians sitting hopelessly in the bombed-out streets of cities."¹ These observations might explain the appeal of film and other visual media—these media allow us to take in

more information than what we can process with text. Video games represent the next step in the evolution of electronic media; with video games, in addition to the other affordances of film, the viewer can also be a participant. War games especially are becoming increasingly popular. Why merely watch a battle when one can actually “participate” in a World War II battle? Earlier generations of students asked their teachers if they could see the movie rather than read the text; we may well start hearing students ask their teachers “Can we play the video game?”

Movies and video games aside, history as it is practiced by professionals and taught to our students is largely a written discipline. The coin of the realm for a professional historian is a written monograph, a journal article, or a paper read at a conference. Historians prefer to transmit their findings by producing written secondary sources. While they may rely on visual primary sources in their research, the final product of that research is almost always a written representation of the past. While there are certainly other forms of representation in history—such as films, museums, the History Channel—and while these are all very popular forms of historical representation, they are largely marginalized by professional historians. By marginalized I mean that historians find them appropriate for teaching schoolchildren or the general public or perhaps appropriate for history buffs or for visitors to public history displays. These other forms of historical representation, however, are not accorded the same status as the “serious history”—like written history—practiced by professional historians. As the philosopher of history Hayden White once remarked, historians “are inclined to use visual images [merely] as a complement to our written discourse, rather than as components of a discourse in its own right, by means of which we might be able to say something different from and other than what we can say in verbal form.”² As we might expect, video games—even serious video games—are being similarly dismissed by professional historians as little more than popular entertainment but of no interest to the serious historian.

This attitude toward the visual has been enshrined in the historical profession for quite some time. In some ways, it dates back to the print revolution itself, as documented by Marshall McLuhan. The values that undergirded print culture reduced “serious knowledge” to that which could be printed in words. Pictures, oral tradition, and other forms of knowledge representation that had been so important to learning in the centuries before print were reduced in importance. Literacy—the ability to read and write printed language—became the hallmark of the educated person.

This tendency to value writing was especially evident among historians. At one time, those interested in the past would have been just as likely to represent the past in visual form as they would have been to write about it. Indeed, the impulse to picture notable events is as old as civilization itself, perhaps even older. Consider the following examples.

A mile deep into the caves at Lascaux, France, are paintings that are at least 15,000 years old. Some historians believe that these realistic depictions of bison, horses, and other animals are the commemoration of



Prehistoric painting of a bull with red and brown horses, found on the walls of Lascaux Cave in present-day Dordogne, France. Discovered in 1940, the cave is a treasure trove of Paleolithic-era cave paintings and petroglyphs. (Corel)

an especially successful hunt, a form of memory preservation in order to evoke more successful hunts.

Likewise with later civilizations, pictures commemorating significant events and triumphant stories were (and remain) an important form of public ceremony. Consider the Column of Trajan, a 100-foot marble obelisk with a long sequence of images spiraling upward, images that chronicled the Roman emperor's wars in Dacia during the second century CE. Arranging images in sequence as a way to tell a story is an ancient narrative form (familiar to anyone today who reads comic books).



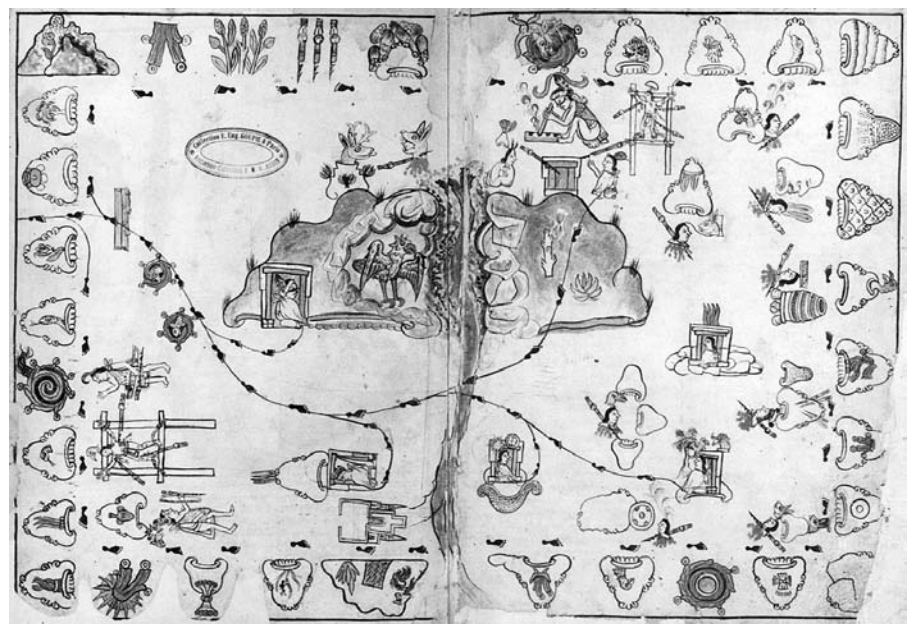
Trajan's column depicts events of Trajan's campaigns in Dacia, located in modern-day Hungary and Romania. The column is located at the forum of Trajan in Rome. (David Bailey)

Construction of a fortified military camp at Hastings, from the Bayeux Tapestry, eleventh century. (Gianni Dagli Orti/Corbis)



The Bayeux Tapestry is a 200-foot-long visual narrative of the Battle of Hastings of 1066 that similarly juxtaposes a long series of images and written descriptions in order to tell a story.

The people of the sixteenth-century Toltec city of Cuauhtinchan drew cartographic histories, which were combinations of maps and stories. Notable events would be located on the map, but these stories moved along sequentially (not unlike Trajan's Column or the Bayeux



Cartographic history from the sixteenth-century Toltec city of Cuauhtinchan. (University of Texas Libraries)

Tapestry). Rather than moving in a line, however, the sequence of images meandered over the map.

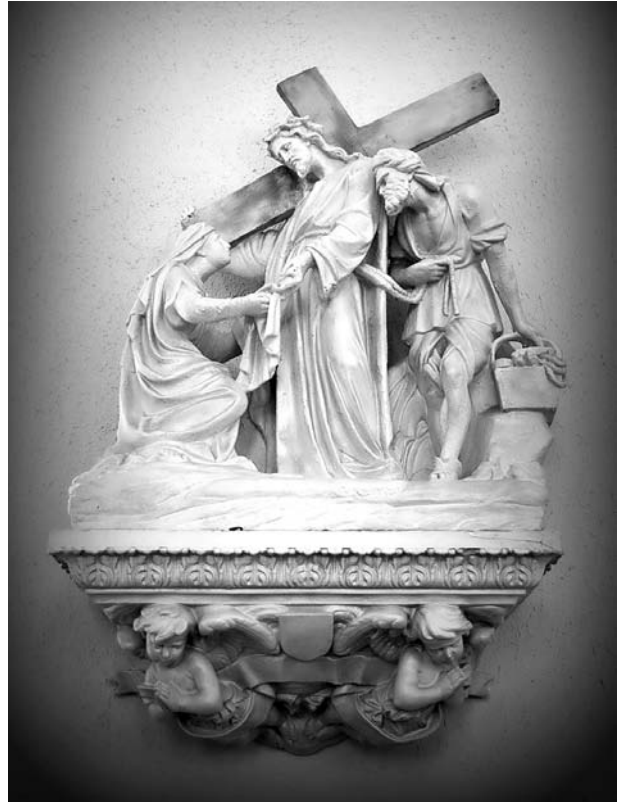
The 14 Stations of the Cross that became popular in European (and later American) Catholic churches are a visual reenactment of the path that Jesus took toward his crucifixion. Pilgrims to the Holy Land continue to retrace this route, walking and praying along Jerusalem's Via Dolorosa (Street of Sorrows). For those who could not travel to the Holy Land, this event was abstracted, plucked from the specific location, and turned into a series of visual representations of the notable events along that route. The devout could experience the historical event in this vicarious visual fashion.

Court artists in the West African kingdom of Benin created bronze plaques that decorated the palace structures of the *oba* (king). These images would recount notable events in the life of the king or important rituals that demonstrated his power and authority. Michele Coquet observes that these court artists “organize and master the past with the aid of images composed by artisans with the help of court historians . . . the role of royal artists in this memory work is no less important than that of court chroniclers.”³

The birth of museums is to be found in the “cabinets of curiosities” of the sixteenth through eighteenth centuries. These were designed as rooms to display natural and man-made objects. The visual story of these collections was to show the evolution of humanity from nature to technology, the mastery of humanity over the natural world. These objects were arranged in such a way as to draw visual connections and comparisons among them. Arranging these disparate objects together within the physical space of the cabinet created an order, a visual narrative.

For generations, Pacific northwestern Native Americans have carved totem poles out of cedar. “To the Northwest Coast Indians,” writes Maryanne Kathleen Basti, “the totem pole provided a means of communicating their stories, myths and legends. The totem pole is an arrangement of symbols or memory devices in sequence created for the purpose of recalling a story or event. These symbols function as a form of ‘writing’—pictures, not written letters, convey meaning.”⁴ Like Trajan's Column, totem poles are visual stories, with stylized figures each representing a person, mythological figure, or event recounting the stories of families or clans. They are a form of collective memory.

Historical painting as a genre was particularly vibrant in Europe in the years between the French Revolution (1789) and World War I (1914). In this period, painters of historical scenes seemed especially interested in realistic and accurate portrayals of their subjects and often engaged in the kinds of research that historical writers engaged in.



St. Veronica kneels before Christ in a depiction of the Stations of the Cross, St. Mary's Church of The Visitation, Huntsville, Alabama. (Brandi Sims)



Sixteenth-century bronze relief plaque from Benin depicts a nobleman and two attendants. Such plaques portrayed people and events surrounding the royal court and were mounted on the walls of the oba's (king's) palace. (Library of Congress)

At the same time, some historical painters were interested in interpreting the past as well, not just in trying to simply reconstruct it. In the same way that writers of historical works make interpretations based on word choice, historical painters make visual interpretations, as with David Wilkie's depiction of the news of England's defeat of Napoleon at the Battle of Waterloo. Rather than depicting the generals or scenes of the battle itself, Wilkie chose to represent common people and their celebrations of news of the event, which is a visual representation of social history rather than political or military history.

In 1765 Joseph Priestley (who is usually remembered as the discoverer of oxygen) drew one of the first time lines, a staple of any history classroom today. Priestley's first time line, a "Chart of Biography," plotted the lives of notable people. He later drew a time line of the "Principal Revolutions of Empire." "If a person carries his eye horizontally, he sees, in a very short time, all of the revolutions that have taken place in any particular country, and under whose power it is at present; and this is done with more exactness, and in much less time, than it could have been by reading." Priestley might have been referring to one of the most important properties of any visual medium: the ability to convey more information in less space and in less time. "I should not hesitate



View of a curiosities cabinet. From A series of illustrations . . . of Levin Vincent's collection of the marvels of nature. Haarlem: Sumptibus Auctoris, 1719. (Snark/Art Resource, NY)

to say,” he concluded, “that a more perfect knowledge of this kind of history may be gained by an hour’s inspection of this chart, than could be acquired by the reading of several weeks.”⁵

Mathew Brady documented the battles and other scenes of the American Civil War, one of the earliest examples of the use of photography to capture important events. Brady described his photographs as “a complete Pictorial History of our National Struggle.”⁶

Despite these and many other examples, histories of history rarely include these visual secondary sources and representations in their larger narratives. The typical story of the history of history begins with the Greeks, specifically Thucydides and Herodotus, who are widely credited with being the first historians because they sought objective answers (as opposed to appeals to myths or the supernatural) and wrote out their stories. David Hume famously remarked that “The first page of Thucydides is the beginning of all true history.”⁷ The typical account of the history of historical thinking then extends through the chroniclers, annalists, and historians of the Christian Middle Ages to Renaissance writers before extending to the creation of the professional discipline of history in the nineteenth century. Recently, historical writers from non-Western civilizations such as India and China have been added to the narrative, but only those civilizations that have a written tradition of historical memory are usually included.



The “Sun and Raven Pole” of the Tlingit Indians restored by Native American workers at Saxman Indian Village, Tongass National Forest, Alaska. (National Archives)



Chelsea Pensioners Reading the Waterloo Dispatch, by David Wilkie, 1822. Wellington Museum, London. (Victoria & Albert Museum, London/Art Resource, NY)

Grand review of the great veteran armies of Grant and Sherman at Washington, on May 1865. (Library of Congress)



The current professional practice of history had its origins in the nineteenth century, when history was firmly established as a written discipline and these other forms of visual secondary sources were relegated to the margins. Among several German historians especially, the dimensions of the professional practice of history were established, and in that professionalized form history was defined in terms of writing. Moreover, visual depictions were deemed lesser forms of historical knowledge. No one better expressed this new idea than Georg W. F. Hegel, who tied writing to the beginnings of history itself. Early peoples might have collected stories passed down orally over the centuries. “But it is the State,” wrote Hegel, “which first presents subject-matter that is not only adapted to the *prose of History*, but involves the production of such history in the very progress of its own being.”⁸ Early civilizations and the state structures that supported them required written records to maintain them, thus creating the necessary conditions wherein “the prose of History” could emerge. Historians have only recently begun to look again at visual primary sources as legitimate forms of evidence. However, visual secondary sources remain very much on the margin of our discipline (consider the fact that history on film is today considered as a controversial new subdiscipline).

In Western culture, as written text becomes the hallmark of literacy and education, images recede into the background, to serve as illustrations to the written text. We see here the birth of the visual aid whereby pictures support the text and are thus placed in a subservient role to the text. In Western societies, book illustration becomes a minor art (today it is associated strictly with children's literature), but at one time (in the medieval period in particular) diagrams and other illustrations were valued as intellectual arguments; philosophers and theologians accorded them the same status as a written argument. For a twelfth-century theologian such as Hugh of St. Victor, for example, geometric representations of knowledge (such as the diagram below) were the "fount of perceptions and the source of utterances."⁹

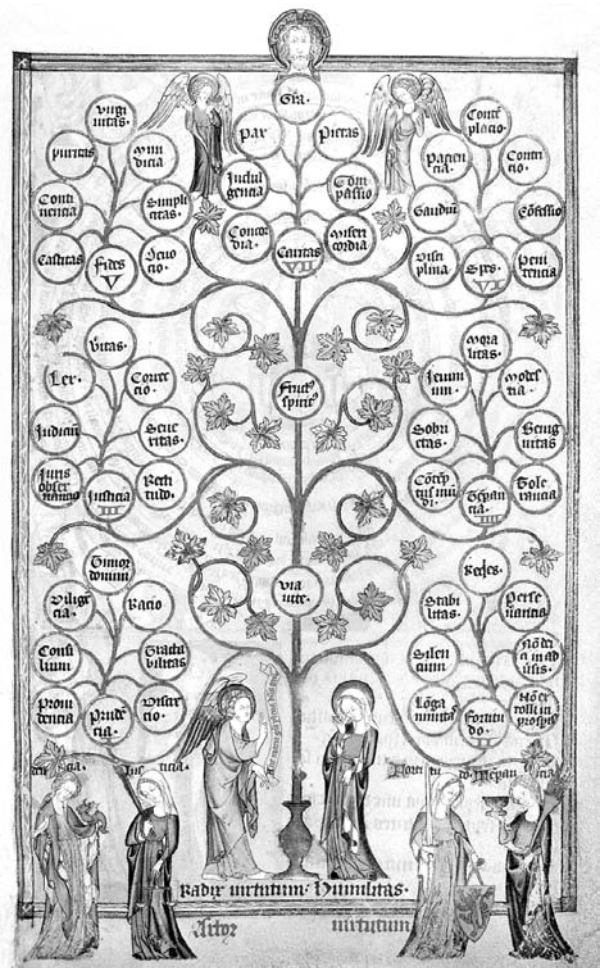
Among historians, images similarly recede into the background of historical texts. There are some excellent examples of these illustrations, which are largely ignored in the larger story of the history of history (and some might even say by students, who tend to see these merely as breaks in the blocks of text). The simple line drawings and sketches in the books of Hendrick van Loon, for example, were themselves meant to be visual interpretations. Look in particular at his depiction "The Real Congress of Vienna" from his book *The Story of Mankind*.

Not unlike the historical painters of the nineteenth century, van Loon is here making an interpretation of the event via his visual choices, in this case depicting the new diplomatic system that would organize European diplomacy in the nineteenth century as one being designed by only a few men. The emptiness of the room in which they work shows that this is not a system agreed to by the masses; democracy is not at work here.

Another notable example of these book illustrations can be found in the work of Bela Petheo, who designed the diagrams for William McNeill's classic world history textbook *The Rise of the West*.

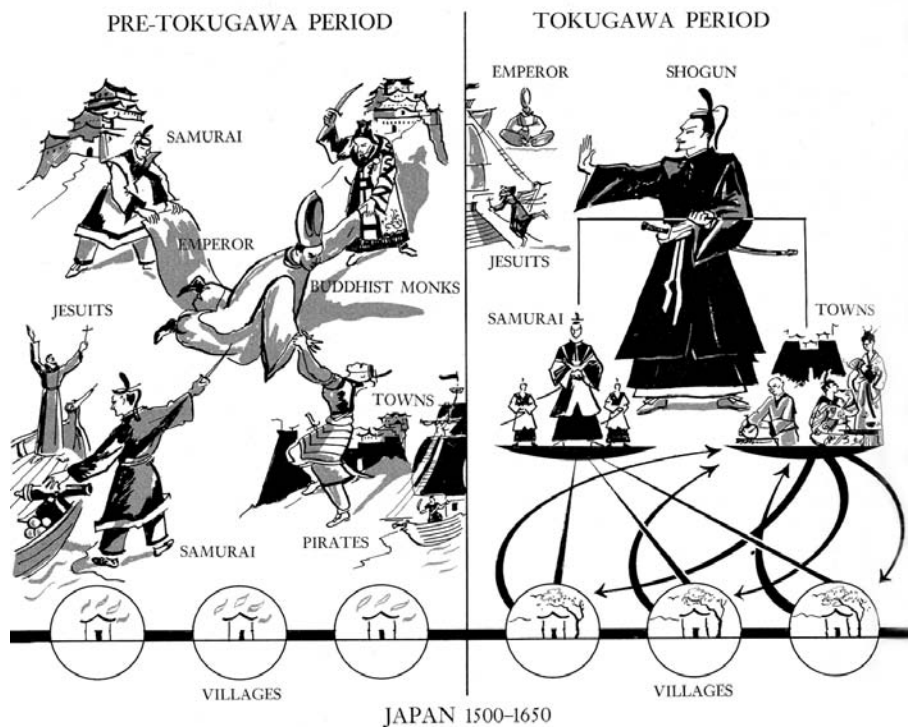
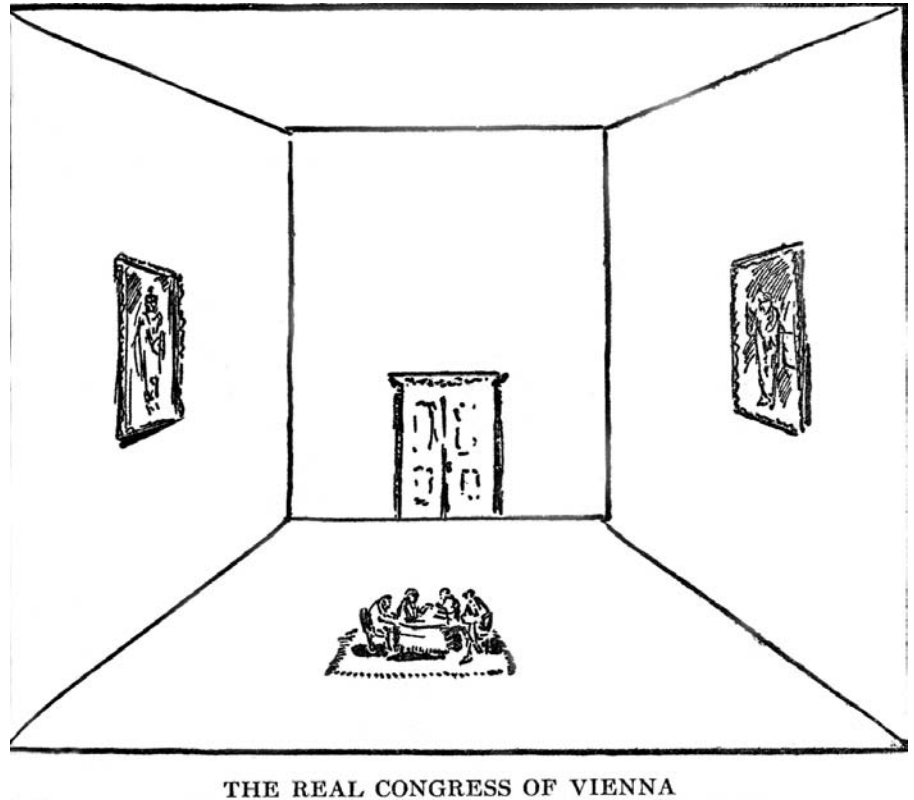
In contrast to van Loon's drawings and the earlier tradition of historical painting, which were often depictions of events, Petheo drew animated charts of historical structures, as in this case with his depiction of the changes brought about by the shogun.

There is every reason to believe that history in the future will be even more visual and immersive than today's video games. Virtual reality immersive spaces are already prevalent today; three-dimensional reconstructions of ancient buildings and cities are already being produced, like the example of a virtual reconstruction of ancient Rome shown on page 39.



The tree of virtues, from the Psalter of Robert de Lisle, fourteenth century. (The British Library)

The Real Congress of Vienna, by Hendrik van Loon. (van Loon, Hendrik. The Story of Mankind, 1921)



(William McNeill. The Rise of the West: A History of the Human Community, 1963)



Digital reconstruction of the ancient Roman Forum. (AP Photo/Rome Reborn project)

We should expect these reconstructions to become even more realistic and more interactive; in the not too distant future, you will be able to feel like you are walking around inside a famous building or along the streets of medieval London and interacting with people living and working in the city. (Think of this as like a living history museum made up of bits of digital information.) We are already getting a taste of this today; visit the Abraham Lincoln Presidential Library and Museum in Springfield, Illinois, to interact with a three-dimensional holographic image of Lincoln. Like the crew of the *Enterprise* on *Star Trek* who entered the Holodeck, history students in the future might learn about the past by experiencing a virtual re-creation.

Humans were preserving their history in visual form millennia before the first written histories were composed, and that ancient impulse—to picture the past—remains evident today. Whereas our earliest ancestors depicted the past on cave walls, today we see history represented in films and video games. By examining historical paintings, illustrations, cartoons, and museum displays we might learn something of how to think of world history visually. Images are not inferior to writing, and writing is not inferior to images. Rather, both offer different forms of representations that can be equally valuable in representing the past. Whereas someone like Hegel might have announced that “history begins with writing,” today’s young people—who have grown up on *Civilization* the video game—might be the ones who proclaim that “civilization begins with images.”

Notes

1. Daniel Rosenberg, “The Trouble with Timelines.” Cabinet 13, Spring, 2004.
2. Hayden V. White, *The Content of the Form: Narrative Discourse and Historical Representation* (Baltimore: Johns Hopkins University Press, 1990).

3. Michèle Coquet, *African Royal Court Art* (Chicago, IL: University of Chicago Press, 1998).
4. Maryanne Kathleen Basti, "Totum Poles of the North American Northwest Coast Indians," Yale-New Haven Teachers Institute, <http://www.yale.edu/ynhti/curriculum/units/1985/6/85.06.01.x.html>.
5. Joseph Priestley, *A Description of a Chart of Biography*, 1807 new ed. (Warrington, GB: William Eyres, 1765).
6. Mathew B. Brady, *Civil War Photographs, 1861–1865 a Selection of Images Made from Original Negatives in the Mathew B. Brady Collection* (1861).
7. David Hume, *Essays Moral, Political, and Literary*, ed. T. H. Green and T. H. Grose (London: Longmans, Green, and Co., 1875).
8. Georg Wilhelm Friedrich Hegel, *The Philosophy of History*, trans. J. Sibree (Buffalo: Prometheus Books, 1991). Original edition, 1894.
9. Hugh of St. Victor, *Practical Geometry = Practica Geometriae*, trans. Frederick A. Homann, Mediaeval Philosophical Texts in Translation (Milwaukee, WI: Marquette University Press, 1991).

Bibliography

- Bredenkamp, Horst. *The Lure of Antiquity and the Cult of the Machine: The Kunstkammer and the Evolution of Nature, Art, and Technology*. Princeton, NJ: M. Wiener Publishers, 1995.
- Burke, Peter. *Eyewitnessing: The Uses of Images as Historical Evidence*, Picturing History Series. Ithaca, NY: Cornell University Press, 2001.
- Coquet, Michèle. *African Royal Court Art*. Chicago, IL: University of Chicago Press, 1998.
- Gee, James Paul. *What Video Games Have to Teach Us About Learning and Literacy*. 1st ed. New York: Palgrave Macmillan, 2003.
- Haskell, Francis. *History and Its Images: Art and the Interpretation of the Past*. New Haven: Yale University Press, 1993.
- Hegel, Georg Wilhelm Friedrich. *The Philosophy of History*. Translated by J. Sibree. Buffalo: Prometheus Books, 1991. Original edition, 1894.
- Hugh of St Victor, *Practical Geometry = Practica Geometriae*. Translated by Frederick A. Homann, Mediaeval Philosophical Texts in Translation. Milwaukee, WI: Marquette University Press, 1991.
- Hume, David. *Essays Moral, Political, and Literary*. Edited by T. H. Green and T. H. Grose. London: Longmans, Green, and Co., 1875.
- Murray, Janet Horowitz. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Free Press, 1997.
- Priestley, Joseph. *A Description of a Chart of Biography*. 1807 new ed. Warrington, GB: William Eyres, 1765.
- Priestley, Joseph. *A Description of a System of Biography*. 1803 new ed. [n. p.,: n. d.].
- Rosenberg, Daniel. "The Trouble with Timelines." *Cabinet* 13, Spring 2004.
- Rosenstone, Robert A. *Visions of the Past: The Challenge of Film to Our Idea of History*. Cambridge, MA: Harvard University Press, 1995.
- Staley, David J. *Computers, Visualization, and History: How New Technology Will Transform Our Understanding of the Past*. Armonk, NY: M.E. Sharpe, 2003.
- Staley, David J. *History and Future: Using Historical Thinking to Imagine the Future*. Lanham, MD: Lexington Books, 2007.



In this essay, Dr. Szostak considers the place of world history in the general mosaic of our knowledge of the past. The broad views of world historians rest on the meticulous work of archaeologists, anthropologists, biographers, political scientists, etc. Perhaps world history can best be envisioned as the view from the moon, a wider perspective that allows us to discover the range of choices in the human repertoire.

—Carolyn Neel

What Can We Learn from History? The Role of Social Scientists and Others

Rick Szostak

How does history fit within the broader scholarly enterprise? Can it, and should it, inform theorizing in the social sciences and humanities? Philosophers of history have long debated these issues. This entry will discuss in turn a number of arguments that have been made on both sides of these questions. World history naturally takes a comparative approach and is thus especially likely to yield insights conducive to theoretical generalizations. These debates regarding the role of history are thus especially germane to world history.

The Evolution of Social Science

It is worth noting first that the earliest social scientists, such as Max Weber, relied heavily on historical examples to support their theorizing. In the twentieth century, however, as governments collected more and more data, public opinion surveys became common, and methods of statistical analysis proliferated, social scientists increasingly came to focus on contemporary data instead. Yet the dangers in theorizing from such a limited set of experiences are obvious. It is all too easy to imagine a general relationship if one examines only quite similar circumstances: the vast sweep of history provides cases that would point to clarifications of theories that seem to fit modern experience reasonably well. As just one example, most theories of macroeconomic performance are unable to cope with the experience of the Great Depression. History is of particular importance for changes that occur slowly over long periods of time: theorists looking only at their own time will be unaware of such transformations. Finally, theorists can hardly understand occasional historical experiences such as revolutions or famines unless they widen their gaze beyond the postwar Western world.

In the closing decades of the twentieth century, many social scientists and humanists regained some interest in history, though they generally did so without much contact with historians in history departments.

Some social scientists, notably the Gulbenkian Commission in its *Open the Social Sciences*, thus embraced on the one hand the value of historical research to all social science disciplines while wondering on the other hand about the value of departments of historians. As shall be seen, they thus failed to fully appreciate the purposes of historical research.

Generalizations or Events?

Should historians seek the sorts of general rules that can inform theory (or indeed should they frame their arguments more formally in theoretical terms)? Alternatively, should they take as their purpose the explanation of complex historical events or processes? The Gulbenkian Commission, established by the Calouste Gulbenkian Foundation for the purpose of examining the state of the social sciences, took the first view. Most practicing historians focus upon the second. And philosophers of history have sometimes worried that an emphasis on generalizations would guide historians to ignore the study of complex events in the pursuit of highly focused historical minutiae. Yet the two approaches can be viewed as complements rather than substitutes.

The advantages of comparative research are discussed elsewhere. Briefly, historians can be more confident of their explanations of a particular event or process if these explanations also illuminate other events and processes. By extension, greater confidence is also appropriate for historical explanations that accord with well-founded theoretical generalizations. In turn, historians and theorists can be more confident of historical generalizations (or theories) if these in concert provide powerful explanations of particular events or processes. If a historian of the French Revolution still finds the Revolution mysterious after recourse to all relevant historical generalizations, this suggests that these generalizations are either misleading in important respects or fail to illuminate much that is important historically.

Case studies and comparative research are thus complementary. All types of historians should be interested in both types of research. Still, a historian located in a department of history is most likely to explore an event or process in its full interdisciplinary complexity.

One potential reason why generalizations may fail to explain particular events is that individual personalities played a decisive role. Yet here too historians can

Some social sciences emphasize how societies constrain individual behavior, while others stress the ways in which individuals shape their worlds. Though often viewed as substitutes, these two types of theory are increasingly seen as complements.

strive to generalize about certain personality *types*. Some social sciences emphasize how societies constrain individual behavior, while others stress the ways in which individuals shape their worlds. Though often viewed as substitutes, these two types of theory are increasingly seen as complements. Historians can usefully investigate both how societies

constrain individual behavior and how different personalities react to similar situations.

One concern of many contemporary historians is that the discipline is fragmented along geographic and temporal lines and also in terms of academic fields, such as social history, cultural history, military history, and so on. While these specializations are each valuable, there is no easy way to tie the pieces together. If history pursues generalizations in addition to the study of processes or events, then histories of different times and places are drawn together. If these generalizations address how cultural and social and other phenomena interact, then thematic subfields are united as well. A unified world history can thus be seen to depend on the pursuit of historical generalizations. Such generalizations will be easier to achieve if some consensus can be reached across fields with respect to definitions of the key phenomena of study (e.g., what is meant by “class”?).

Path Dependence

Path dependence implies that the path of historical evolution shapes the outcomes of historical processes. In other words, what happens today depends on what happened yesterday. The alternative perspective is that certain outcomes are inevitable: the best technology or institution or cultural attribute will eventually be chosen no matter what. It might be imagined that path dependence is incompatible with historical generalization. Again, though, the simple fact that each historical process is in certain respects unique does not mean that general rules are not in operation. Historians can draw on generalizations grounded in comparative research to understand why different societies follow different paths. These generalizations, in concert with path dependence, can help world historians understand why some ideas are adopted in one society but not another.

Can Complex Events or Processes Be Broken into Constituent Parts?

It is only possible to draw historical generalizations if complex events or processes are broken into constituent parts. It would be foolhardy, for example, to imagine that an event such as the French Revolution or a process such as industrialization would reoccur in identical form. It might be the case, however, that the relationship between peasant hunger and political instability or between factories and technological innovation is fairly similar across several historical experiences.

Some historians have wondered if complex historical events can in fact be understood in terms of such constituent arguments. Yet in practice, historians necessarily do this. A complex event can only be understood in terms of a series of more precise arguments. To be sure, historical narratives often stress how such arguments interact (as food

shortages and elite disharmony interacted in the French Revolution). It may be difficult in some historical narratives to fully distinguish different arguments. Yet it is generally possible, and arguably desirable, to frame any historical narrative in terms of a set of arguments that lend themselves to generalization. Michael Mann's *The Sources of Social Power* and Theda Skocpol's *States and Social Revolutions* are two of many books that have achieved considerable acclaim among both historians and social scientists by outlining a handful of key theoretical arguments and tracing their interactions through several case studies. Moreover, techniques have been developed to help historians diagram complex argument structures.

There is a strong minority tradition in both history and many social sciences that suggests that it is systems of causal relationships rather than individual causal relationships that should be the focus of investigation. Yet such systems—say, the capitalist world system—are not static but instead fluctuate, rise and fall, and (usually) eventually disappear. These changes in systems can only be understood by examining individual elements of the system. The historian can also usefully examine whether there are emergent properties of such a system that cannot be comprehended in terms of individual components.

The Question of Historical Bias

Historians in the early postwar years were forced by developments in philosophy to recognize that history as written was far from identical to either history as it occurred or history as it was recorded at the time. Historians necessarily bring some frame of reference to historical analysis with which they order their account. It was widely suggested by leading historians in the 1960s and 1970s that the best frame of reference was social science theory. However, if historians became involved in social science debates, they would become partisan and would be

likely to bias their historical accounts. The best path, then, it was argued, was to be minimally aware of social science theory and certainly never seek to contribute to theoretical debates.

It can be argued, though, that the best defense against bias is not disinterest but rather the clear statement of the arguments that one is making within a historical

It can be argued, though, that the best defense against bias is not disinterest but rather the clear statement of the arguments that one is making within a historical narrative.

narrative. While individual historians may be tempted to squeeze a particular historical account into a particular theoretical envelope, other historians can more readily expose such biases if the arguments are clear. Moreover, it is often observed in both philosophy and science that understanding advances best when there is competition among competing theoretical perspectives. If historians were to explicitly apply a range of theories to historical research, they could provide useful input to theorists as to which theories best fit which elements of the historical record.

When historians do use social science theory they have tended to apply only some theories, such as psychoanalysis or feminist theory, while ignoring others. This limits the ability of the historical enterprise to contrast one theory with another. Historians might often find that no existing set of theories does a good job of explaining particular events or processes. Historians might usefully suggest theories of their own or at least point to apparent commonalities across historical cases that need to be theorized.

Different theories posit different types of causal relationships. Sometimes a particular realization of one phenomenon may be necessary for a particular realization of another to occur (as in functionalist arguments that a state needs an army or armylike body). Sometimes one realization may be sufficient for another, or both necessary and sufficient, though it would seem that history is generally more complicated than this. In other cases, the effect may be positive or negative but neither necessary nor sufficient. In still other cases the outcome may be either positive or negative depending on other circumstances (or chance). When a system of relationships is studied, feedback may be positive or negative or unpredictable. Historians need to be open to these various theoretical possibilities.

Since disciplines tend to choose methods that are well suited to investigating their favored theories, historians in pursuing only a subset of theories may also be discouraged from applying the full range of possible methods. If, for example, historians downplay certain highly formal theories, they may underutilize quantitative methods. As with theories, different methods can be viewed as complements. Case studies can illustrate why some cases differ from the general relationships observed statistically, can explore how variables assumed to be independent within statistical analysis actually interact, and can analyze whether a correlation observed statistically represents causation.

The community of historians can limit scholarly bias by comparing and contrasting different theories and methods. In doing so, historians will also be able to provide the most useful input to social science theorizing by identifying precise circumstances in which different theories and methods excel.

Concerns Regarding the Quality of Social Science Theory

Historians might instead worry that most social science theory is so vague and general that it provides little guidance to the historian. Social scientists have indeed generally done a much poorer job than natural scientists of clearly stating under what conditions a particular theoretical generalization is expected to hold. This theoretical failure can be seen as an opportunity for historians. Historical research, and especially comparative historical research, can usefully identify circumstances in which a theory seems to provide insight and circumstances in which it does not. The historian's focus on the particular can thus guide theorists as to the appropriate range of applicability of any theory. Likewise,

historians in applying theories to circumstances quite different from those the theorist imagined may well suggest useful clarifications to the theory.

Bibliography

- Gilderhus, M. T. *History and Historians: A Historiographic Introduction*. 5th ed. Upper Saddle River, NJ: Prentice-Hall, 2002.
- Griffin, L. J., and M. Van der Linden, eds. *New Methods for Social History*. Cambridge: Cambridge University Press, 1999.
- Mann, Michael. *The Sources of Social Power*. Cambridge: Cambridge University Press, 1986.
- McDonald, T. J. "What Do We Do When We Talk about History: The Conversations of History and Sociology." In *The Historic Turn in the Human Sciences*, edited by T. J. McDonald. Ann Arbor: University of Michigan Press, 1996.
- Open the Social Sciences: Report of the Gulbenkian Commission on the Restructuring of the Social Sciences*. Palo Alto, CA: Stanford University Press, 1996.
- Reuschmeyer, D. "Can One or a Few Cases Yield Theoretical Gain?" In *Comparative Historical Analysis in the Social Sciences*, edited by J. Mahoney and D. Reuschmeyer. Cambridge: Cambridge University Press, 2003.
- Skocpol, Theda. *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. New York: Cambridge University Press, 1979.
- Szostak, Rick. *Classifying Science: Phenomena, Data, Theory, Method, Practice*. Dordrecht: Springer, 2004.



Scholars who identify themselves as world historians define their pursuits in many ways: some focus on contacts between societies and the impact that cultures have on one another; others focus on comparisons, for instance, comparing marriage practices or military organization among African, Asian, European, and pre-Columbian American societies. Perhaps it is easier to decide what world history is not. It is not a study of any societies in isolation, but it does not necessarily have to be the study of the entire world. Dr. Cajani discusses below the history of writing world history and considers some of the unique challenges of the discipline.

—Carolyn Neel

Writing World History

Luigi Cajani

Perched on the Moon

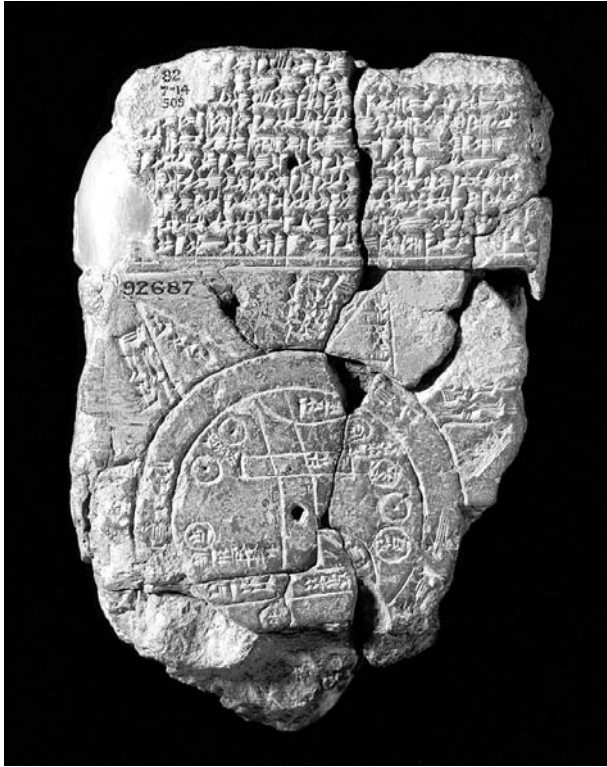
World history is variously defined by its practitioners, but one definition that is accepted by many is that world history is a comprehensive account of the human past, characterized by a threefold continuity: temporal, spatial, and conceptual. Temporal continuity means that the narrative proceeds chronologically, sometimes from the very beginning of human history. Spatial continuity means that it covers all the spaces of earth without privileging any geographical standpoint. This approach has been suggestively expressed by Leften Stavrianos, one of the founders of contemporary world history, as “the perspective of an observer perched on the moon rather than ensconced in London or Paris or Washington.” Finally, conceptual continuity means to give sense to this account by identifying common features to human societies worldwide.

A world history is therefore a coherent system, neither a collection nor an encyclopedic juxtaposition of separate particular histories, limited either in space or in time.

In the last three decades, interest in world history has been increasing among scholars, driven in part by a consciousness of globalization. But the drive toward an all-encompassing vision of the history of humanity is not new; rather, it has always accompanied historical thinking, in different forms and with different aims.

World History Begins at Sumer

As well as producing the first known literature, Sumerians produced the first written example of chronological and conceptual continuity with the *Sumerian King List*, whose first surviving text dates back to 2100 BCE. It is based on the idea that there is a unique legitimate kingship, established by the gods and passing from time to time to a different city. The list starts from the moment “when kingship was lowered from heaven” to the city of Eridu, with a set of mythical kings with very long reigns, lasting from a maximum of 64,880 to a minimum of 18,600



Babylonian map of the world, probably from Sippar, southern Iraq, 700–500 BCE. (HIP/Art Resource)

years. After 241,000 years the Flood swept over the earth, and then kingship was lowered again from heaven, this time to the city of Kiš: these kings ruled for much shorter periods, from a maximum of 1,500 to a minimum of a few years. Finally the list passes from mythical to historical kings, whose names are found in the historical records. The uniqueness of legitimate kingship is therefore the conceptual axis of the Sumerian view of history, and after the collapse of the last Sumerian dynasty, this model was adopted by such rulers of Mesopotamia as the Akkadians, Assyrians, and Babylonians. From Babylonian culture, we also have the first world map (dating from about 600 BCE, now in the British Museum), showing its geographical conception: the world is depicted as a circumference, occupied by Mesopotamia and surrounded by the sea, beyond which are seven islands.

This chronological continuity, based on a precise enumeration of years, was a particular feature of Mesopotamian historiography and is to be found also in the work of the Babylonian historian Berossos, a late-fourth-century BCE contemporary of Alexander the Great. Berossos published a history of Babylon in Greek and thus made Hel-

lenes and others immersed in Greek culture familiar with this vision of history. He identified ten kings before the Flood who collectively reigned approximately 430,000 years. The Hebrew Bible, or Tanakh, is also connected to the Mesopotamian vision. Genesis lists a succession of ten patriarchs before the Flood who also had mythically long lives, the oldest being Methuselah, who lived 969 years, and then continues through the history of the early Hebrews, with a precise account reckoned according to the passage of years.

Greek historians did not share this interest in an absolute chronology; instead, they widened the Mesopotamian geographical horizon to all the known world and inserted history into it, as in Hecateus of Miletus (ca. 550–ca. 476 BCE) and Herodotus of Halicarnassus (ca. 484–ca. 425 BCE), and developed two relevant conceptual paradigms: the pattern of the decadence of ages and the pattern of the succession of

empires. The former was formulated by Hesiod (who flourished in the seventh century BCE). In his *Works and Days* Hesiod lays out a Five Ages scheme, based on the Allegory of Metals: the first—and the best—is the Golden Age, followed by the Silver Age and the Bronze Age, each characterized by decreasing value and increasing violence. Then comes an age of heroes, the only one without a metallic reference

In his Works and Days Hesiod lays out a Five Ages scheme, based on the Allegory of Metals: the first—and the best—is the Golden Age, followed by the Silver Age and the Bronze Age, each characterized by decreasing value and increasing violence.

and that stops the trend of decline: heroes were semidivine, fought at Troy and Thebes, and were brought by Zeus to the Islands of the Blessed. Then follows the Iron Age, the present one, characterized by suffering, injustice, and hardscrabble lives. This vision was widely accepted in Western classical culture, from Plato to Ovid.

The idea of world empires is present in Herodotus of Halicarnassus, who identified the following ones, all related to Mesopotamia: Assyrians, Medes, and Persians. These were later put in a succession paradigm by Ctesias of Cnidus (fifth and fourth century BCE). In the time of Alexander the Great, historians added the Macedonian empire. Later, Roman hegemony in the Mediterranean led historians to add the Roman *impe-rium* as the fifth and last in this list. Thus, a five-empires pattern was established and became familiar in Greek and Roman culture.

The Christian Synthesis

Early Christian authors undertook the task of creating a new vision of history, the history of salvation, by merging the biblical narrative and the Greco-Roman historical tradition, and thus produced two main interpretation patterns that shaped the European vision of history until the eighteenth century: the pattern of Four Empires and the pattern of Six Ages. Before the advent of Christianity, the Greco-Roman pattern of the succession of empires was also to be found in the biblical Book of Daniel. In the first part, probably written about 250–230 BCE, Daniel interprets the dream of the king of Babylon: a statue made of metals of successively lesser value (the head of gold, a chest and arms of silver, a belly of brass, legs of iron, and feet made partly of iron and partly of clay), which is eventually destroyed by a stone. The theme reappears in the seventh chapter (written later around 164 BCE) with the vision of the four beasts. The identification of the statue or of the beasts with actual empires varied consistently among early Christian scholars, such as Saint Jerome (347–420) and Paulus Orosius (ca. 375–ca. 418), but there was a common agreement that four empires were indicated by the prophecy, the last being the Roman one, which was to last until the Second Coming of Jesus, put an end to it and inaugurated the kingdom of Jesus on earth. The Christianized Roman empire was given a providential meaning; the Pax Romana, the peace established by Caesar Augustus shortly before the birth of Jesus, was seen as the condition for the diffusion of the new religion.

Both beginnings and endings were significant in Christian lore, and consequently a branch of theology, known as eschatology, took shape that focused on the theological meaning of the Last Days and the ultimate destiny of humanity. The pattern of the Six Ages had for the early Christians a special eschatological significance. It was based on the tale of Genesis, according to which God created the world in six days, combined with the idea that for God one day is equivalent to 1,000 years, present both in the Hebrew (Ps 89 [90], 4) and Christian scriptures (2 Pet 3, 8). Therefore, the world was supposed to last 6,000 years until the Second Coming of Jesus. The biblical chronology, with its account

of the years since Creation, made possible predictions about the number of years left before the Second Coming. The reckoning was made difficult, however, by the fact that there was not only one text of the Old Testament but three: the Hebrew, the Samaritan (limited to the Pentateuch, or the first five books of the Bible), and the Greek translation called the Septuagint (Seventy Books). They showed relevant differences in chronology, both before the Flood and later about the kings of Judah and Israel. The ecclesiastical historian Eusebius of Caesarea (ca. 263–ca. 339) gave a synchronistic comparison of the three versions and calculated that according to the Septuagint, Jesus had started his public ministry in the 15th year of Tiberius, that is, 5,228 years from Creation, whereas the computation according to the Hebrew text gave 1,237 fewer years, and the one according to the Samaritan gave 935 years less. The debate on biblical chronologies absorbed historians' efforts for many centuries to come and well into modernity.

Saint Augustine of Hippo (354–430) strongly opposed eschatological calculations, asserting that only God knew when the end of the world would come. Nevertheless, Augustine accepted the model of the Six Ages, as in his *De Civitate Dei contra paganos* (*On the City of God against the Pagans*), which was written between 413 and 426. He established the following subdivision: the First Age went from Adam to the Flood, the Second Age went until Abraham, the Third Age went until David, the Fourth Age went until the captivity of the Jews in Babylon, the Fifth Age went until the birth of Jesus, and finally came the Sixth Age, the Christian Age, that included the present time and would last until the Second Coming of Jesus. Later the model of the Six Ages was adopted by Isidore of Seville (560–636) and by the Venerable Bede (674–735), who diffused Saint Augustine's periodization through their historical writings.

During the European Middle Ages the two models coexisted. The model of the Four Empires (also called the Four Monarchies) was adopted above all in Germany, for example in the *Annolied*, a poem probably written between 1077 and 1081 in honor of Anno II, bishop of Cologne, and by Bishop Otto of Freising (d. 1158), uncle of the Emperor Frederick I Barbarossa, in his *Chronica sive Historia de duabus civitatibus* (*Chronicle or History of the Two Cities*) because it supported the idea of the continuity between the old Roman empire and the new one in German hands and thus legitimated what became known as the medieval Holy Roman Empire. The model of the Six Ages was the more successful one: it is to be found, among others, in the *Libri Chronicarum* (*Book of Chronicles*) by Hartmann Schedel, published in 1493 in Nuremberg in Latin and German, that enjoyed widespread diffusion throughout Europe. In Schedel's hands, the Sixth Age melds the history of the Old Testament and the New Testament with the history of Rome, and the history of the Church and its popes and saints stands alongside that of the German emperors of the Holy Roman Empire. Moreover, alongside all of this, one finds the history of German and European cities and regions and of their most distinguished men. At the end there is the history of the future, the Seventh Age, opened by the coming of the Antichrist and closed by the Final Judgment.

Islamic World History

During the period known as the European Middle Ages there was a concomitant development of world history within the Islamic world. Muslim historians had a quite different horizon than their European colleagues, stretching from the Maghreb (western north Africa and Spain) to China. They were acquainted with Christian historiography, thanks to Christian historians working in the Islamic environment. Concerning periodization, Muslim scholars fundamentally divided history into two ages, before and after the *hijrah* of 622, the beginning of the Muslim era, when Muhammad journeyed from Mecca to Medina. Neither the Six Ages nor the Four Monarchies were relevant in this context. Great attention was given to the synchronization of the chronologies of the many cultures they met, however, and in some historians this issue had also an eschatological dimension, as it had for Christians. Abu Jafar Muhammad ibn Jarir al-Tabari (838–923) accepted the idea of the days of Creation to be equal to 1,000 years and concluded that Creation itself had lasted 7,000 years, and therefore the world after Adam would last 7,000 more years (*Tarikh al-Rusul wa al-Muluk* [History of Prophets and Kings]). On the contrary, in the tenth century Abual-Hasan Ali al-Masudi explicitly refused any calculations of the time from Creation and of the duration of the earth in his *Muruj al-dhahab* (*The Golden Meadows*).

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Europe Discovers New Spaces and New Histories

The European explorations suddenly and deeply changed the European vision of the world, of its geography, and of its history. A totally new part of the world was added to the three traditional ones (Europe, Asia, and Africa), and also the knowledge of these three dramatically increased through the reports of voyagers and missionaries. One can see an example of the outcome of the new knowledge in the work of François de Belleforest, who published in 1570 *L'histoire universelle du monde* (*Universal History of the World*). He did not follow any of the two medieval periodization patterns but instead combined a geographical (first Africa, then Asia and Europe, and finally the New World) with an ethnographical approach whereby the history of various peoples and countries was intertwined with the description of their present state. And the Dominican friar and utopian philosopher Tommaso Campanella (1568–1639) stressed the necessity of a new history that gave all the peoples in the world their share in the story. In his words:

The history of Humanity is of primary importance for politicians, orators and poets. . . . Let us read the particular histories of all nations: French, Spaniards, Germans, Britons, Ethiopians, Turks,

Moroccans. It would be necessary to collect the traditions of the indigenous peoples of the New World, who did not know the writing; and to collect what Chinese, Japanese, Tartars, Indonesians, Persians, Indians and other nations hand down concerning their own origins and deeds to posterity in written or oral form. . . . A complete universal history does not exist yet. (Pages 257–258)

Europe's two traditional chronological patterns survived nevertheless for a long time but with uneven success. The Four Monarchies became a new impulse because this model was adopted by Lutheran scholars, such as Philip Melanchthon (1497–1560), who worked in close contact with the historian Johannes Carion and whose *Chronicon Carionis* (*The chronicle by Carion*) became a most popular textbook, and Johannes Sleidan (1506–1556) in his *De quatuor summis imperiis* (*Regarding the Four Greatest Empires*), and so likewise did many Catholic historians, such as the Jesuits Orazio Torsellino and Antonio Foresti who wrote, respectively, at the end of the sixteenth and seventeenth centuries two successful reference works, the *Epitomae historiarum libri 10* (*Ten Books of Abridged Histories*) and the *Mappamondo istorico* (*Historical World Map*).

But freethinkers and Calvinist critics arose against this vision of holy and profane history. Jean Bodin, censored by Catholics as a heretic, rejected in his *Methodus ad facilem historiarum cognitionem* (*Method for the Easy Comprehension of History*, 1576) the eschatological interpretation of the Four Monarchies as “an inveterate mistake.” And John Calvin in his *Praelectiones in Danielelem* (*Lectures on [the Book of] Daniel*, 1561) stated that the Fourth Monarchy was, indeed, the Roman empire but that it had ended with Jesus.

Among Lutherans a new historiographical pattern emerged in connection with the idea of a *media aetas*, *medium aevum*, or *media tempestas* (all meaning “middle age”) of decadence, and the idea became a pillar of anti-Catholic polemic. This idea of a degenerate middle period of history between antiquity and the present had been initially conceived by humanist scholars to describe the time in which the putative decadence of classical culture took place, but the Protestants extended it to the decadence of the Church and hence to the whole of human history. The new periodization of ancient, medieval, and modern history was subsequently systematized in the late seventeenth century by the German historian Christoph Keller: the current Eurocentric scheme of history periodization had thus taken its form.



Tommaso Campanella, one of the first to develop a global vision of history, engraving by Sebastian Furck in *Bibliothecae Chalcographicae*, 1654. (Stapleton Collection/Corbis)

The End of Biblical Chronology

In the mid-seventeenth century biblical chronology was still an issue, and Moses, the supposed author of the Pentateuch, was still considered the first historian. Anglican archbishop James Ussher (1581–1656) put a milestone in the reckoning with his huge work *Annales veteris testamenti, a prima mundi origine deducti* (*The Annals of the Old Testament from the Beginning of the World's Creation*, 1650) in which he fixed the date of Creation at 4004 BCE on the basis of the Hebrew Bible and thus established a tradition accepted also in the Catholic world. But in the same period this Christian chronology was for the first time seriously questioned by new historical information coming from the East. Catholic missionaries, especially Jesuits, were providing new knowledge from within Indian, Japanese, and Chinese cultures through the study of their languages and histories. In 1658 the Jesuit Martino Martini published an account of Chinese history, the *Sinicae Historiae Decas prima* (*The First Ten Books of Chinese History*), based on Chinese sources, where he presented a chronology that was much more ancient than the Hebrew biblical one, a chronology that could not be easily disregarded and rejected as mistaken because, in his opinion, Chinese historians were highly reliable. The conflict between the Chinese and biblical chronologies unleashed a great debate among European scholars that continued during the eighteenth century, and one of the consequences was the admission of China onto the European historical horizon. One of the most relevant outcomes was Voltaire's *Essay sur les mœurs et l'esprit des nations* (*Essay on the Manners and Spirit of Nations*, 1754) in which China became a positive protagonist of history. In the foreword Voltaire pronounced a blanket condemnation of the latest "champion" of the old universal model of history inspired by the Christian religion, Bishop Jacques Bénigne Bossuet, who had published *Discours sur l'histoire universelle* (*Discourse on Universal History*) in 1681. Voltaire took the *Discours* as an example of the wrong approach to history writing:

The conflict between the Chinese and biblical chronologies unleashed a great debate among European scholars that continued during the eighteenth century, and one of the consequences was the admission of China onto the European historical horizon.

That renowned Bossuet . . . in making reference to the Arabs, who founded such a powerful empire and so thriving a religion, only says that they were a flood of barbarians. It looks as if he wrote history only in order to claim that everything that happened in the world has taken place for the sake of the Hebrews. . . . [I]t would have been desirable that he had not completely forgotten the ancient peoples of the Far East, such as the Indians and the Chinese, who were so important even before other peoples had yet come into existence. (Pages 240–241)

The Eurocentric Christian vision of history was definitively challenged. A great contribution to the renovation of historiography came with the English collection *An Universal History, from the Earliest Account of Time to the Present: Compiled from Original Authors*, a huge set of 23 volumes in-folio first published in London during 1736–1764. It soon had a great success in Europe, with many translations and often with important additions and revisions. This work provided historians an unprecedented treasure of sources and information on the history of almost all peoples of the world. One of the translations was made in Germany at the University of Göttingen, a stronghold of the Enlightenment, whose historians gave a great impulse to the development of the new world history. One of the most prominent among them was August Ludwig Schlözer, who in the foreword of his *Vorstellung seiner Universal-Historie (Presentation of his Universal History, 1772)* pinpointed ethnocentrism as the principal bias and obstacle in writing a well-balanced history of humanity:

World history takes into account all the states and all the peoples in the world. Without fatherland, without national pride, it covers all the countries where human societies dwell and embraces with its eyes all the scene where human beings played their role. All parts of the world are equal to it. It has no predilection for the Four Monarchies, which pettily put aside about thirty more, nor for the people of God, nor for the Greeks and the Romans. Its interest reaches the Huang He river and the Nile, just as the Tiber and Vistola; Ilidschuzaj is for it more important than Maecenas, Alexander the Great, Caesar and Gustav Adolf are not more important than Attila, the Incas, and Timur Lenk. (Page 28)

Schlözer maintained that world history should not be a loose *Aggregat* (aggregate or collection) but instead should make up a coherent *System*. His rationale was based on *Hauptvölker* (main peoples), divided into *herrschende* (dominating peoples) and *blos wichtige* (merely important peoples). The former were the peoples who had determined the course of history for millions of human beings either as conquerors or as legislators. The latter were the peoples who, without violence but only through wisdom, inventions, commerce, religion, superstition, or chance, gave rise over long periods of time to the fundamental changes affecting most of humanity. Schlözer's universal history had an essentially Euro-Asiatic bearing: Africa only appeared with the Egyptians and the Carthaginians, and America was completely absent. But soon other German historians widened this horizon, such as Johann Christoph Gatterer and Johann Gottfried Eichhorn, who gave a great space to America and Africa. A new secular and non-Eurocentric world history was thus born, in consonance with the cosmopolitan view of the Enlightenment, as expressed in those years by Immanuel Kant in his *Idea of a Universal History* (1784).

The Christian chronology in Ussher's version was still accepted, but another definitive stroke was arriving, this time not from inside historical scholarship but rather from outside, thanks to a development in

the natural sciences, namely geology. In 1778 the comte de Buffon published *Les époques de la nature* (*The Epochs of Nature*), which attributed at least 75,000 years to the age of earth. Shortly afterward, in 1788, James Hutton presented to the Royal Society of Edinburgh his *Theory of the Earth* in which he went far beyond Buffon, attributing millions of years to the planet. The end of Christian chronology had thus begun. One can find a sign of this in a later work by Schlözer, the *Vorbereitung zur Weltgeschichte für Kinder* (*Introduction for World History for Children*), in which, unlike in his work of 1772, he expressed skepticism about traditional chronology: “God created once the world from nothing. At what time did He create it? Nobody knows: possibly what we call the ‘world’ is many hundred thousand years old.” (Page 1)

Eurocentrism Strikes Back

The cosmopolitan commitment to writing a world history “without fatherland, without national pride” could not accommodate nationalism, which spread all over Europe and the Americas during the nineteenth century. The dominating idea, strengthened by the new colonial imbalance of power, was the superiority of Europe over the rest of the world, and the superiority of one’s own nation inside Europe. Georg Wilhelm Friedrich Hegel in his *Philosophy of History* (1837) developed a paradigm of world history based on the development of the Spirit toward the fulfillment of freedom. China was not anymore a model civilization but was only the first stage along this path, because in China only one man, the emperor, was free; then came the Greco-Roman world, where only a few men were free; and then the last and final stage, the German world, where everyone knows that he is free. This idea of German superiority is also to be found in one of the successful German world histories of the nineteenth century, the *Allgemeine Weltgeschichte* (*A General World History*) by Georg Weber. At the end of the foreword to the first edition he wrote:

This idea of German superiority is also to be found in one of the successful German world histories of the nineteenth century, the Allgemeine Weltgeschichte (A General World History) by Georg Weber.

[T]he German people more than any other is called to give world history its real shape. Its position in the center of Europe, its aspiration for universal education, its inborn cosmopolitan tendency, which applies the standard of humanity, justice, and philanthropy to the foreigner and the enemy, seems to enable the Germans to act as the guardians and managers of the treasures of history.

Leafing through the many volumes (15 in the second edition, published 1882–1890), one sees that only the first volume is devoted to non-European peoples, actually ancient China, Egypt, India, Mesopotamia, and the Hebrews. Then the path of world history goes continuously and

exclusively through Europe, from ancient Greece to Rome to the Middle Ages and so on to the present. Only the Arabs, with the development of Islam, and the Ottoman empire deserve attention because of their involvement with European history. The Aztecs and the Incas get about five pages. The rest of the world is thus only taken into consideration when it comes in touch with European history. This Eurocentric vision of world history also inspired the 9-volume *Weltgeschichte* (*World History*, 1881–1888) by the most important German historian of the century, Leopold von Ranke, who even ignored China and India in the first volume. In fact, he thought that they and their historical records could be ignored, as he asserted in one of his lectures:

India and China claim to have a great antiquity and their chronology goes far back in time. But not even the most skilled chronologists can find their bearings. Their antiquity is mythical. Their state is rather part of natural history.

The idea of European superiority was developed into the idea of a spiritual historical uniqueness by the German philosopher Ernst Troeltsch. He denied the existence of humanity “as single historical agent,” and asserted that only Europeans had developed a historical consciousness; as a consequence, only a “world history of Europeanness” can be written.

Other successful world histories of the first half of the twentieth century, such as the *Weltgeschichte* edited by Julius von Pflugk-Harttung (1907–1926) and the *Propyläen-Weltgeschichte* edited by Walter Goetz (1929–1933), followed this Eurocentric pattern. But it was nevertheless not unchallenged. In an explicit criticism of Ranke, Hans Ferdinand Helmolt edited between 1899 and 1907 a collective *Weltgeschichte* in nine volumes in which non-European history had a great place and that significantly began with paleontology and prehistory, new sciences generally ignored by historians. He followed a geographic instead of chronological pattern, starting from America and going west until covering all the world.

World History Today

Eurocentrism began a slow decline in the aftermath of the Second World War along with a crisis faced by those teaching nationalistic history, which was rejected in some circles for its perceived warmongering characteristics. With the aim of promoting peace through education, the United Nations Educational, Scientific and Cultural Organization (UNESCO) established among its first goals in 1947 “the publication of a history text-book of world civilization, which would constitute a basis for history-teaching in each country.” In this context a general history of humanity was launched, focusing on science and culture and emphasizing “the interdependence of peoples and cultures and of their contributions . . . to the common heritage.” This *History of Mankind: Cultural and Scientific Development* was published in six volumes between 1963 and 1969. Chronologically organized, it succeeded in giving

a parallel vision of all the parts of the world. In 1978 UNESCO launched an updated project, which has been published since 1994 with the title *History of Humanity*.

In the United States, many historians started working on a new vision of world history. In 1963 William H. McNeill published *The Rise of the West: A History of the Human Community*, one of the most prominent works in the field. Leften S. Stavrianos devoted himself in the 1950s and 1960s to a campaign in favor of the teaching of world history both in the schools and at the college level. In a speech given in 1968 at the annual meeting of the American Historical Association, he stated that history teaching in the United States, which focused on Western civilization, was unfit to promote an understanding of the rapidly changing world and led to a widespread disinterest in this discipline. He added also another criticism to this white Anglo-Saxon Protestant (WASP) vision of history: it did not give space to African Americans and other minorities who now demanded recognition. Thus, Stavrianos singled out two main issues, which are still today at the core of debates about the necessity of overcoming ethnocentrism in history teaching. Despite Stavrianos's engagement, world history did not penetrate most U.S. school systems because of cultural resistance until the problem broke out with the new *National Standards* for history in the mid-1990s. After a long and harsh struggle on cultural and political levels, world history has finally entered U.S. schools and colleges, supported by the achievements of scholarship, which is signified by the establishment of the World History Association in 1982. Europe is, on the contrary, behind the United States in both world history scholarship and teaching. Since the end of the Second World War, in fact, European historians are mostly concerned with overcoming the previous nationalisms through a European vision of history, and at the school level one can even notice in recent years in some European states a revival of national identities. It is significant that in 2001 the attempt to introduce world history in the Italian school system was violently criticized and eventually successfully defeated by politicians and historians as a betrayal of Italian and European identity.

Bibliography

- Cajani, Luigi. "A World History Curriculum for the Italian School." *World History Bulletin* 18(2) (Fall 2002): 26–32.
- Campamellae, Thomas. Ord. Praed. *Rationalis Philosophiae: pars quinta. Videlicet Historiographiae liber unus, iuxta propria principia*. Parisiis, apud J. et T. Du Bray, 1637–1638.
- Eichhorn, Johann Gottfried. *Weltgeschichte*. Göttingen: Rosensbusch, 1799–1800.
- Gould, Stephen Jay. "Fall in the House of Ussher." *Natural History* 100 (November 1991): 12–21.
- von Ranke, Leopold. "Idee der Universalhistorie." In *Vorlesungs-Einleitungen*, herausgegeben von Volker Dotterwisch und Walther Peter Fuchs (= Leopold von Ranke, *Aus Werk und Nachlass*, Band IV). München-Wien: R. Oldenbourg Verlag, 1975.
- Schedel, Hartmann. *Weltchronik: Kolorierte Gesamtausgabe von 1493*, Einleitung und Kommentar von Stephan Füßel. Köln, London, Madrid, New York, Paris, and Tokyo: Taschen, 2001.

- Schlözer, August Ludwig. *Vorstellung seiner Universal-Historie*. Göttingen und Gotha: bey Johann Christian Dieterch, 1772.
- Schlözer, August Ludwig. *Vorbereitung zur Weltgeschichte für Kinder*, vol. 1. Göttingen: bry Vandehoek und Ruprecht, 1809.
- Schröckh, Johann Matthias. *Allgemeine Weltgeschichte für Kinder*. Leipzig: Weidmann, 1779–1784.
- Stavrianos, Leften S. “A Global Perspective in the Organization of World History.” In *New Perspectives in World History*, edited by Shirley H. Engle. Washington, DC: National Council for the Social Studies, 1964.
- Stavrianos, Leften S. “The Teaching of World History.” *History Teacher* 3(1) (1969): 19–24.
- UNESCO. *General Conference: First Session Held at Unesco House, Paris, from 20 November to 10 December 1946*. Paris: UNESCO, 1947.
- UNESCO. *Records of the General Conference of the United Nations Educational, Scientific and Cultural Organization, Third Session Beirut 1948*, vol. 2, *Resolutions*. Paris: UNESCO, 1949.
- Voltaire. *Essai sur les mœurs et l'esprit des nations et sur les principaux faits de l'histoire depuis Charlemagne jusqu'à Louis XIII*, vol. 1. Paris: Bordas, 1990.
- Voltaire. *Essai Sur Les Mœurs Et L'esprit Des Nations Et Sur Les Principaux Faits De L'histoire Depuis Charlemagne Jusqu'à Louis Xiii*. Edited by René Pomeau, Classiques Garnier. Paris: Garnier frères, 1963 (1768).
- Weber, Georg. *Allgemeine Weltgeschichte*. Leipzig: Verlag von Wilhelm Engelmann, 1882–1890.



In the early years of the twentieth century, world history was taught as a series of national histories, beginning with Mesopotamia, traveling to Egypt, then to Crete and Greece, thence continuing through Rome toward modern Europe, with little emphasis on the connections. From the second half of the twentieth century, educators in the United States have worked to transmit a greater understanding of the world in which we all live. In the United States, as elsewhere, there is a tension between cultural chauvinism and the desire to fully participate in the global economic systems. In her essay below, Margaret Favretti traces the growth of modern world history courses in public schools. Margaret Favretti, who has received national recognition and honors for teaching in secondary schools—including the 21st Century Northeast Regional Teacher of the Year award in 1995 and the World History Association Teaching Prize, 2006—looks at both the past and the future of world history as taught in the nation’s secondary schools.

—Carolyn Neel

Teaching World History in Secondary Schools

Margaret Favretti

World history came to U.S. secondary schools in waves, beginning in the early parts of the twentieth century. For most of the nineteenth century, the United States was engaged in its own epic efforts to define itself as a commercial-federal-constitutional nation-state, expanding its continental borders, searching for its own distinctive cultural identity, protecting its trade in global systems, and struggling to determine the proper relations between states and the federal government as well as defining individual rights. Not surprisingly, history taught in secondary schools supported these efforts, focusing on those (mainly European) historical moments and trends that had shaped the political and social values and attitudes in the U.S.

As the world emerged from World War I, the “Great War,” historians began to put the years leading up to it into perspective. What they noted was that imperialism and its parallel developments in industrialization, more rapid and effective communication and transportation of goods and ideas, and widespread migration had all contributed to a world where nation-state boundaries seemed perforated by economic, technological, demographic, and cultural shifts, to say little of the supra-national effects of pathogens such as the avian influenza pandemic of 1918. The causes of the war itself seemed to call into question the long-term stability of the nation-state. And during the war, European armies were manned by Africans, Australians, and New Zealanders gathered in Egypt to prepare for a battle against Turks, and Japanese sailors navigated the Mediterranean. The increasingly multicultural nature of many countries was brought to the forefront of the world’s consciousness through wartime efforts to create lasting peace. By attempting to redraw boundaries according to nationality or by ignoring nationality when imposing old colonial boundaries through Versailles Treaty exchanges of

Students learn about World War II at a school on Long Island, New York, 1940s.
(Lucien Aigner/Corbis)



territory or League of Nations mandates, anticolonial efforts organized and saw some success after the war. Some historians, such as Arnold Toynbee and Oswald Spengler, began to rethink the way history looked and to present the idea of a world history that would look for supranational patterns of human development.¹

In the United States, however, not many secondary schools responded by adopting the new approach. Instead, the United States was just beginning to reap the benefits of its new muscular nation-state. At the same time, the United States was acknowledging its diversity by imposing the first widespread immigration restrictions, and society emphasized assimilation of immigrant cultures to a dominant American culture. The school curricula generally assisted by offering a U.S. first-and-foremost curriculum, which mainly continued the earlier trend of supporting nation-state histories, particularly if they led to important characteristics found in the United States. This meant focusing on U.S. history in several grades, supported by European history or Western civilization in a few other grades. When other societies were studied at all, it was usually to show that they were somehow lacking, or ended

up showing that while different cultures might be exotic or intriguing, they did not really change very much, and thus these studies were not usually called “history.”

The relatively narrow focus of these secondary school curricula also influenced the way that the courses were taught and the way that students were taught to “do”

A great reliance on primary evidence grew throughout the decades, and classrooms became filled with primary source readers to support the narrative textbook.

history. A great reliance on primary evidence grew throughout the decades, and classrooms became filled with primary source readers to support the narrative textbook. All of the documents were translated

(usually from European languages) into English, and many were selected for their “social values” that might encourage good national citizenship among young Americans. If more sophisticated students wished to read the documents in their original translation, they need only turn to their foreign-language instructors, whose curricula stuck pretty faithfully to the European languages. Reading documents from various societies outside of the European/American ecumene would have proven difficult for a typical high school student, who would not only have had trouble finding documents in translation but also would not have had access to language programs geared toward non-European languages. The result was that the primary evidence read by most high school students presented various perspectives resting comfortably within a “Western” point of view.

In the 1960s, cultural upheavals in Europe and the United States led to the rapid inclusion of the “peoples without history” into area studies, or global studies courses, in secondary schools. By the late 1970s, most schools had such an approach. For example, U.S. history courses began to look at native peoples in the Americas prior to European contact and to consider native perspectives on Europeans. Imperialism became less a study of various perspectives on the topic within the colonial powers and instead increasingly included colonial points of view and the impact of colonization on the colonized. Their active efforts to resist its negative pressures were portrayed more frequently as heroic. At the same time, a revitalized study of peoples “on the margins,” including women’s studies, African American studies, and so on, eventually led to looking at other liminal groups, such as nomads and traders, who frequently inhabit a transnational world.

For many historians, the logical next step, particularly after area studies researchers had developed regional or area strands of primary evidence, was to figure out how they were connected. Some researchers began looking for ways to reliably compare and contrast societies and their changes over time. Others began looking for recurring patterns in human experience across time and place. Still others found that the world’s history might fall into exchanges of goods and ideas within and among overlapping systems. Some found that looking at supranational themes such as disease, animals, migrations, technology, food commodities, and so on might open up still more ways of looking at the world. Taken together, these various approaches might be called the “new” world history. Many researchers were excited by the new approaches. They began sharing their thoughts and discoveries with their students. But the field was still very small, and many professors and institutions resisted it because it did not fit easily into the already established disciplines and departments laid out on college campuses. Further, it called on people to use more unfamiliar rules for research and interpretation. Yet today, some form of world history is called for in some part of a K-12 history curriculum by every state in the United States. It is now what most secondary educators expect to appear in a full history curriculum. The fastest-growing offering of the College Board is the AP World History course. As discussed below, each year, the number of students sitting for the exam increases dramatically.

So how did a small but committed group of scholars succeed in moving secondary education toward the new world history? In spite of all of the social and political changes in the world and in spite of the new developments in world history research, secondary education might have lagged far behind if not for the efforts of several individuals and institutions. One of the best ways to facilitate the spread of new research into secondary classrooms is to find people who cross over. Many high school teachers interested in scholarly research join in the research discussions and in the professional organizations of historians, and interested postsecondary educators participate in collaborations with secondary educators to help keep classroom instruction up to date. World history followed this pattern.

In the late 1970s, the Air Force Academy began teaching world history to its cadets. It made sense to the history department chair Carl Redell that academy students trained to circle the world every few days and to “win the hearts and minds” of the people they encountered would and should approach the world with a new point of view. He made contact with some of the other founders of the field and invited them to speak at the academy. In 1982 the Air Force Academy hosted the first of many efforts aimed at establishing collaboration among university researchers in world history and secondary educators, a conference cosponsored by the American Historical Association (AHA), the organization whose members are all professional historians, almost entirely at universities, public history sites, or secondary schools. The conference was a bigger success than expected, and two important outcomes emerged for world history in secondary schools. First, a group of historians—Kevin Reilly (who was representing the AHA), Ross Dunn, Craig Lockard, Marty Yanuck, and Jerry Bentley—founded the World History Association (WHA), a professional organization that would become a model of collaboration between postsecondary and secondary educators. Second, area high school teachers Heidi Roupp and Marilyn Hitchens joined Redell in the Rocky Mountain World History Association, which would eventually become the first regional affiliate of the WHA and would influence the collaborative direction of the WHA as a whole. In fact, the next year saw the WHA approve its constitution, which guaranteed not only that secondary educators could become members of the organization but also that they could hold leadership positions. This made the WHA unique among the professional historical associations and demonstrated its commitment to bringing the new world history into secondary schools.

The late 1980s and early 1990s saw rapid growth in the development of world history for secondary schools, as several models of collaboration helped to bring the new scholarship into classrooms, mainly through the voluntary professional development of teachers. As teachers tried to respond to the changing world, in which telecommunications and globalization made immediate communication and exchange of goods and ideas a common way of life, they wondered how to shift from curricula that emphasized European and American history and non-Western culture studies to one that provided for a more logical world history, while their own background had been in U.S. and European or

area studies. Teachers requested professional development. The new organizations sponsored a series of conferences and a journal, the *World History Bulletin*, with a special section on teaching. New collaborative groups were established, one in Philadelphia through Temple University (Howard Spodek) and the National Endowment for the Humanities (NEH); and another, the Woodrow Wilson Institutes, set up by the Woodrow Wilson National Fellowship Foundation to provide a creative environment for selected teachers to generate working models for world history curricula. The challenge for most teachers was making the shift from their own training, usually in European or American history, to thinking about world history. Additionally, the new world history was a field still emerging and was still so big that teachers would have to make tough choices about what concepts to emphasize and what to leave out. Over the course of three summers, the Woodrow Wilson Institutes tried to resolve this dilemma by creating model curriculum units and teacher-training approaches for the premodern era before 1450 CE, the years 1450–1750, and the modern era. The “Woody” teachers then became a strong nucleus of teacher-trainers who traveled around the country training teachers to teach world history. Many of these Woodrow Wilson Institute’s teachers and professors participated in the NEH-funded efforts of the National Center for History in the Schools to devise curriculum standards in world and U.S. history for grades K–12.

The challenge for most teachers was making the shift from their own training, usually in European or American history, to thinking about world history.

Several states had already begun investigating state standards for world history on their own, without adequate academic leadership, and had produced some bizarre drafts. The National Center for History in the Schools, under the guidance of Gary Nash and Charlotte Crabtree, wanted to provide a sound academic and pedagogical guide for those efforts as well as a responsible foundation for teachers and schools as they began devising their own world history curricula. The ensuing “culture wars” (mainly a political attack against the U.S. Standards on the basis of Lynne Cheney’s charge that they presented a “grim and gloomy” view of U.S. triumphs) discouraged some political officials from officially adopting the standards but actually speeded up the dissemination of the standards among the schools. The media attention encouraged large numbers of educators to read the standards, in which they found broad-based support for teaching world history and a sound approach for organizing their world history courses.

Further support and professional development grew exponentially after Heidi Roupp received an NEH grant in 1999 to sponsor 11 summer institutes (and one on-line institute) to train world history teachers. The first meeting involved a train-the-trainers session that prepared experienced world history educators at various levels to run the collaborative two-week seminars. The summers have been filled with institutes ever since, especially since the College Board initiated its Advanced Placement World History course and examination.

Students in an advanced placement history class in Laredo, Texas, 2009. (Bob Daemmrich/The Image Works)



The College Board began discussions about the advisability of offering Advanced Placement World History in 1999. The leadership of the members of the College Board History Academic Advisory Committee was instrumental in furthering the cause. There were internal concerns about whether or not world history was an accepted undergraduate course, whether or not an AP version could be taught, and whether there were enough teachers to teach it. Choosing to lead rather than follow, the College Board approved an AP course in 2000, and the course outline was prepared immediately by scholars and teachers on the test development committee, aided later on by the Academic Advisory group. In 2006, the fifth year of the administration of the AP exam, about 85,000 students took the test, making it the most rapidly growing course in the history of AP. The number of students taking the AP World History examination had skyrocketed to around 145,000 in 2009 and was up to 168,000 in 2010.

Today, every state in the United States makes at least some provision for world history in its standards. Not all of them give it strong secondary-school attention, but it is a part of what most high school students can now expect from their curricula. The story of how world history came to be taught in secondary schools is largely the story of how academic scholarship can move into secondary classrooms through professional development and collaboration among secondary and postsecondary educators. The readiness of our students and their communities to learn world history reflects the nature of our interconnected world.

Notes

1. Oswald Spengler, *The Decline of the West*, 2 vols., trans. C. F. Atkinson (New York: Knopf, 1926–1934), and Arnold Joseph Toynbee, *A Study of History*, 12 vols. (London: Oxford University Press, 1934–1961).

Bibliography

- Spengler, Oswald. *The Decline of the West*. Translated by C. F. Atkinson. 2 vols. New York: Knopf, 1926–1934.
- Toynbee, Arnold Joseph. *A Study of History*. 12 vols. London: Oxford University Press, 1934–1961.

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SECTION 3

The Overarching Issues, Seeing the Big Picture

Introduction

Carolyn Neel

History, the story of the human past, is vast. In its totality, it is too big to see, much less to learn. We normally separate “histories” into manageable chunks, but in order to understand human history—the story of our past as a species living on planet earth—we have to assemble those bits and prepare summaries in broad strokes. In this section, we attempt to combine the many pieces into a broad narrative.

The first four of these essays focus on humanity’s place in the natural world. We begin with Dr. J. R. McNeill’s insightful essay on humans and the natural world; although some would like to think that people are outside of (or, perhaps, above) the natural world, there is great risk in forgetting our own natural place. The second essay, by a prominent sociologist, Dr. Douglas Massey, is a digest of human history (so far) in approximately 13,000 words, which provides a rich and exciting overview; a serious, sophisticated study of the development of human societies. From works of this nature, readers gain a solid feel for our past as well as a sense of the historian’s mission. In their essay on regional geography, cultural geographers Dr. Donald Rallis and Dr. Melina Patterson challenge our perceptions of regions as “natural” as they consider the role of human perception and cultural worldview in shaping our beliefs about the earth’s landmasses. We continue the theme of humans as geographical actors in “Migration in Human History,” by Dr. Patrick Manning. Wonderfully adapted for mobility, humans spread from Africa and settled on every significant landmass except Antarctica.

The rest of these essays address human cultural adaptation, such as the development of language. As we spread across the earth, humans developed means of communication, as Dr. Harald Haarmann writes, and took note of the mysteries of the surrounding world, a topic also discussed by Dr. Todd Duncan in “Cosmology and Religion: The Human Quest for Meaning.” The last essays focus on cultural and economic adaptation. Technology, arguably the means through which humans came to dominate the planet, merits two essays; the first, “Humans, the Tool Makers,” by Dr. Marvin Kay, addresses the principles of tool making and

reflects on the role of primitive tool-making activities. Dr. William E. Burns, in “Technology in World History,” considers technological development’s place in creating the modern world. About 12,000 years ago or so, tool making led to an intense effort in some areas to shape and control living conditions. These efforts were gradual and often erratic or fitful, and, as Dr. Kevin M. McGeough discusses, agriculture was not an unmitigated benefit to any of the early farming societies. Nevertheless, agriculture did make large-scale urbanization possible, and Dr. Howard Spodek’s entry, appropriately called “Urbanization,” investigates the phenomenon. Like dominoes falling, we turn to “The Evolution of Complex Political Organizations,” by Dr. Paul Roscoe, thence to “Industrialization in World History,” by Dr. Carolyn Neel, and “Globalization in World History,” by Dr. Erik Gilbert.

We do, of course, encourage readers to pursue their interests, but reading these essays in order illustrates the swift acceleration of historical changes. For thousands of years, the lives of people on earth changed little from one generation to another, as hunter/gatherers formed bands, perfected their tools, and made gradual technological and cultural innovations (such as using fire and making warm coverings) that allowed them to live in climates which would otherwise have been uninhabitable. Then, the economic changes introduced by the adoption of agriculture—such as urbanization, political organization, and industrialization—set people on a different path. For at least the past century, people—often novelists, poets, or artists (such as Mary Shelley in her 1818 novel *Frankenstein*, or Edvard Munch in his painting *The Scream*)—have expressed qualms. Nevertheless, there can be little doubt that 100 years from now, a new edition of this volume would require several more essays.



Humans are a part of the natural world—a fact we overlook at great cost. In the essay below, Dr. McNeill considers the ways in which humans expanded their ecological range, at first using technologies such as fire, agriculture, animal husbandry, etc. While nineteenth-century historians focused on rulers and warfare, revolutions and statecraft, McNeill's essay shows another perspective through environmental history, which considers the larger interaction between humans and nature—whether in the form of microbes, wetlands, or the atmosphere itself.

—Carolyn Neel and Fred Nadis

Humans and the Natural World: The Long View

J. R. McNeill

For most of our career we, like our hominid ancestors, lived in small bands but roamed large territories. We had little impact on the earth, but the earth had much impact upon us. Then our ancestors, whether human or hominid, learned to harness fire and, later, to make it. This was one of history's great turning points, although we don't know when it happened. Informed guesses suggest maybe half a million years ago. Fire allowed our ancestors to shape landscapes through burning of vegetation. It allowed them to turn forest into grassland and to favor the big herbivores that were easiest to hunt; it proved useful in keeping big carnivores at bay, improving our ancestors' survival chances; and it permitted cooking, which widened the range of possible foods we can eat, improving nutrition. Fire changed our ancestors' place in nature and reduced the chance that they might go extinct, as other branches of our genus did.

Another turning point in the human relationship with nature came with the acquisition of language. Again, we do not know when it happened (maybe around 150,000 years ago), but with it hunters could plan their attacks in detail, foragers could coordinate their efforts, and learning from experiences became faster, easier, and more cumulative. This made us fully human and far more formidable than other creatures of the biosphere.

In Africa our ancestors had coevolved over many millennia with various microbes that fed upon them and with animal prey upon which they fed. This checked their population. But about 100,000 years ago some of them strolled out of Africa into Asia, and by exiting their long-term home they stole a march on the rest of nature. They left some pathogens and parasites behind. They also walked into landscapes brimming with native animals that had never been stalked by projectile-throwing upright apes capable of coordinating hunting efforts through language. They were an exotic invasive species, and as invasive species often do, they flourished in these new landscapes, reproducing prolifically and causing ecological havoc.

Big mammals suffered most. Soon after people arrived in Australia (maybe 60,000 years ago), many species of large mammals went extinct. The same thing happened in the Americas (roughly 14,000 years ago). Similar extinctions also occurred when people first settled the previously uninhabited islands of Madagascar (about 2,000 years ago) and New Zealand (about 1,000 years ago). Sometimes these pulses of extinction are attributed to other things, such as climate changes. Probably both human predation and climate change were often involved, in different proportions in different settings, although climate change likely had nothing to do with the extinctions on Madagascar or in New Zealand.

About 10,000–11,000 years ago, perhaps spurred by climate change, people began to produce food rather than merely hunting and gathering. This transition has been justly regarded as another great turning point, apparently began in the foothills of the Zagros and Taurus mountains in the Middle East. However, had it happened earlier in tropical rain forests or along coastlines now submerged (sea level was about 330 feet [100 meters] lower 10,000 years ago), we probably would not know. It seems to have happened independently at least five or seven times, perhaps more, all between 11,000 and 4,000 years ago, and to have diffused from each point of origin.¹ Humankind now acquired an enormous incentive to sculpt landscapes into fields and gardens, to permit only certain species to grow, and to work hard to extirpate others, now understood as weeds and vermin. Farming meant much denser and more sedentary human populations. It involved the gradual creation of new domesticated breeds of plants and animals. When people learned to irrigate crops, it came to involve a new connection to fresh water and amounted to a thorough revolution in the human environment and the human relationship to nature.

As human populations grew in size, individuals shrank in stature. On average early farmers were shorter than their foraging ancestors. These farmers ate less varied diets and much less animal protein than did nonfarmers and suffered more often from vitamin-deficiency diseases.

Those who did not move around lived among their own wastes and consequently suffered from gastrointestinal diseases. Their lives, like their bodies, were shorter than those of hunters and foragers. But farmers reproduced faster than any other human populations.² When farmers came to live cheek by jowl with their livestock (mainly in Eurasia), their health got worse still. Some of the diseases that infected livestock evolved into human diseases such as measles, tuberculosis, influenza, and smallpox.

However, to some extent the presence of livestock improved the human diet, especially where dairy cattle could be raised (and adult human populations developed the capacity to digest milk).

A new stage in world environmental history began about 5,500 years ago with the first cities. Urban populations generally could not reproduce fast enough to offset their high mortality, and cities survived

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only through constant influx from surrounding villages. Cities were demographic black holes until improvements in sanitation and disease control about 100–150 years ago. The surplus of deaths over births in London around 1750 was enough to cancel out half the natural increase of England.³

City life also altered agriculture. In village settings, soil nutrients cycled through plants and human bodies and eventually returned to the earth. Among urban populations, soil nutrients accumulated in cities after shorter or longer stays in human bodies and tissues. Carrying human excrement (“night soil”) from cities to the fields compensated somewhat for the long-term drawdown of soil nutrients. But the distance over which such measures were practical was much shorter than that over which farmers sent food to cities. So, over time cities reduced the fertility of the fields that supplied them, especially cities perched on riverbanks or seacoasts, because their wastes were often dumped into the water and thus their nitrogen and phosphorus was forever lost to farmers’ fields. The only way to counteract this nutrient loss was to use manure from animals that grazed in forests or meadows. The animals imported nutrients to farmers’ fields. Hence, as a Polish nobleman of the sixteenth century pithily put it, “manure is worth more than a man with a doctorate.”⁴

According to a controversial new hypothesis, early agriculture also affected climate. Some 8,000 years ago, it seems that the concentration of carbon dioxide (CO₂, the main greenhouse gas) in the earth’s atmosphere began to climb slowly. This came after about 2,000 years of declining CO₂ and when, according to climate models based on earlier alternations of ice ages and interglacials, the CO₂ levels should have continued to fall. How could this happen? Maybe because agriculture spread far and wide. Farmers cut and burned enough forest to send about 200 billion tons of CO₂ into the atmosphere. This may have forestalled the next ice age. The advent of irrigated rice farming, around 5,000 years ago, put additional methane into the atmosphere. Methane is also a greenhouse gas, and its rising concentrations over the past five millennia may have helped warm the earth. If this hypothesis is correct, human behavior has been affecting climate in significant ways for 8,000 years rather than merely in the last two centuries.⁵

Agriculture remained the most important way in which humankind affected the environment for millennia. Agrarian societies snatched the most fertile and well-watered lands, pushing pastoralists and hunter-foragers to the margins. Slowly, inexorably, human numbers grew, and more and more land became field, pasture, and garden. Agro-ecosystems spread. Domesticated animal populations flourished. Forest and other wild lands shrank back.

This slow frontier process is the main theme of world environmental history from 8,000 years ago until modern times. John Iliffe made it the central theme of African history in his survey *Africans: The History of a Continent*, in which Africans are cast as world history’s frontier farmers par excellence, struggling to carve their fields from the forests and keep wild animals at bay. Mark Elvin presented Chinese history in a similar light, an epic of frontier expansion of Chinese styles of agriculture



Agricultural terraces built by the Inca at Moray, near Cuzco, Peru. Crops including wheat and quinoa were grown on the terraces, which were equipped with built-in irrigation systems. (Robert Weller)

slowly taking over more and more land, assimilating or expelling other peoples, and all the while chiseling the earth into paddies and plots. Elvin assigns the Chinese state a key role in promoting this frontier process, which is quite different from the African story. But as ecological phenomena, the general pattern is quite similar.⁶

Epic agricultural expansions also characterize the history of the Indian and European subcontinents and the Americas as well. Where populations became large and dense, this resulted from successful agriculture. Large and dense populations (or at least the poorer people within them) normally felt a need to migrate, to expand, or to set up new colonies. Wherever they could drive off, kill, or absorb hunter-foragers and pastoralists, they usually did so. Thus, eventually agriculture covered one-third of the earth's land surface, arguably the largest environmental impact (such things cannot be reliably quantified) of the human race.

Humans also affected environments by moving plants, animals, and microbes around both intentionally and accidentally, a process often called ecological exchange. Wheat, for example, somehow got from the site of its original domestication, in southwestern Asia, to China by 1500 BCE. When and where conditions (e.g., peace) promoted travel and trade, the spread of crops and presumably also

weeds and pests accelerated. In the era of the Han and Roman empires (ca. 200 BCE to 200 CE), for example, China and the Mediterranean world exchanged numerous useful plants and animals: China acquired grapes, peas, alfalfa, sesame, camels, and donkeys. Sea transport encouraged ecological exchange over enormous distances. Austronesians carried bananas from Southeast Asia to eastern Africa, improving the prospects of farming in the moist forest regions around Africa's great lakes. Polynesian seafarers brought a suite of crops and a few animals throughout the South Pacific. All of this furthered the frontier epics of agricultural expansion; it also promoted a slow process of ecological homogenization whereby humankind altered ecosystems so as to raise a small handful of rewarding crops.⁷

A famous pulse of ecological exchange followed upon Columbus's voyage from Spain to the Americas in 1492. After the original human invasion of the Americas toward the end of the last Ice Age, very little interaction took place between the Americas and the rest of the world. The history of the Western and Eastern Hemispheres, although showing some parallels, remained separate. But the biota of the two hemispheres mingled after 1492, with tumultuous results. Eurasian and African diseases ran rampant among Amerindian peoples, reducing populations by 50–90 percent between 1500 and 1650. Eurasian livestock colonized the grasslands and some of the forests of the Americas. Wheat, barley,

oats, African rice, and a few other crops proved useful in the Americas. Going the other way, maize and potatoes spread widely in Eurasia and (maize, anyway) in Africa. How different would Irish history be without the potato or Argentina's history without wheat and cattle?⁸

The economic globalization that followed in the wake of Columbus and other mariners of the fifteenth and sixteenth centuries brought environmental changes beyond the flurry of ecological exchange. Chinese demand for silver drove a global mining boom, most rewarding in Japan, Mexico, and the Andes. Mining changed the face of the earth and spurred deforestation. In the case of silver, processing ores, which was most efficiently done with mercury, brought lethal pollution. Fur and hide markets animated a global hunt for beaver, seals, and deer, reshuffling ecosystems in North America, for example, where before 1800 beaver had played a key role in sculpting landscapes (and water-scapes). Markets for sugar inspired the creation of a plantation complex, first around Mediterranean shores and then on Atlantic islands and, on the largest scale, in northeastern Brazil and the Caribbean lowlands. Sugar brought deforestation, soil nutrient depletion, and biodiversity loss.⁹ Ongoing economic and ecological globalization lurched into a higher gear around 1500 and is still in motion. Overlaid upon it, since about 1800, is the emergence of high-energy society, based on fossil fuels.

From an economic and social point of view, the Industrial Revolution is justly regarded as a world-historical turning point. It is even more so from the point of view of environmental history. Before fossil fuels, people had great difficulty deploying enough energy to get work done. Human muscle power, supplemented in cases with animal muscle and, in a few select locations, wind or waterpower was the main energy source. This was a great constraint on how much work could be done and therefore how much wealth might be created. It also accounted for the popularity of slavery in the preindustrial era: there was no more efficient way to get big things done than to amass human muscle.

Fossil fuels opened a new era. They represent a subsidy from the geologic past, bestowed upon recent generations. Their ecological effects were enormous. First, fossil fuels made possible the big cities of the modern era. They allowed food to be brought in fast enough to keep millions of people alive. They made the factory labor of the toiling masses far more rewarding so that factory owners, and eventually laborers, could afford cotton, tea, sugar, and other products from far continents, changing the landscapes of India, Egypt, and the Caribbean.

Fossil fuels were a dirty innovation. The first industrial cities in Britain were horribly polluted as a result of the burning of coal.¹⁰ Mining coal, like drilling oil, was a messy business itself. Burning it was messier still. In nineteenth-century cities such as Manchester, Pittsburgh, or Osaka, coal smoke blocked out the sun, soot soiled every surface, and

Markets for sugar inspired the creation of a plantation complex, first around Mediterranean shores and then on Atlantic islands and, on the largest scale, in northeastern Brazil and the Caribbean lowlands. Sugar brought deforestation, soil nutrient depletion, and biodiversity loss.

airborne particles invaded enough lungs to help kill hundreds of thousands through respiratory infections.

Oil, the main fossil fuel globally by the 1950s, made energy cheaper still. Cheap oil made it economical to slice the top off mountains in search of a few specks of gold. After 1960, cheap oil (and chain saws) brought a surge of cutting and burning in the world's tropical rain forests, a major ecological change of our times. Cheap oil made the fertilizers and pesticides of modern agriculture feasible as well as the agricultural machinery and transport networks that help bring food from fields to tables almost everywhere. Without cheap oil, agricultural yields would be roughly half what they are, and the quadrupling of human population since 1910 could not have occurred. Of all the causes of environmental perturbation in the last century, cheap energy tops the list.

Since 1950 we have lived in an age of extreme ecological turbulence. The earth's history includes yet more turbulent episodes but none brought on by humankind. Awareness of our role as disturbers of the biosphere sparked the movements known as environmentalism, recently part of cultural, intellectual, and political scenes almost everywhere around the world. To date, environmentalism and associated new governmental regulations, market incentives, and greener technologies have dialed back the ecological turbulence somewhat but made no fundamental impact on the human relationship to the biosphere. The momentum of history remains too strong for now. For the future, as usual, only time will tell.

Notes

1. Peter S. Bellwood, *First Farmers: The Origins of Agricultural Societies* (Malden, MA: Blackwell, 2005), Melinda A. Zeder et al., eds., *Documenting Domestication: New Genetic and Archaeological Paradigms* (Berkeley: University of California Press, 2006).

2. Mark Nathan Cohen, *Health and the Rise of Civilization* (New Haven; London: Yale University Press, 1989), Jean-Pierre Bocquet-Appel and Stephen Naji, "Testing the Hypothesis of a Worldwide Neolithic Demographic Transition," *Current Anthropology* 47 (2006): 341–365.

3. Alan Macfarlane, *The Savage Wars of Peace: England, Japan and the Malthusian Trap* (Oxford, UK; Cambridge, MA: Blackwell, 1997), 22.

4. Anzelm Gostomski, *Gospodarstwo (1588)* (Wydawn: Zakladu Narodowego im. Ossolinskich, 1951).

5. W. F. Ruddiman, *Plows, Plagues, and Petroleum: How Humans Took Control of Climate* (Princeton, NJ: Princeton University Press, 2005), 65–114.

6. John Iliffe, *Africans: The History of a Continent* (Cambridge: Cambridge University Press, 1995), Mark Elvin, *The Retreat of the Elephants: An Environmental History of China* (New Haven: Yale University Press, 2004).

7. J. R. McNeill, "Biological Exchange and Biological Invasion in World History," in *Making Sense of Global History: The 19th International Congress of the Historical Sciences, Oslo 2000, Commemorative Volume*, ed. Sølvi Sogner (Oslo: Universitetsforlaget, 2001).

8. Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, CT: Greenwood, 1972).

9. John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World*, The California World History Library (Berkeley:

University of California Press, 2003), Warren Dean, *With Broadax and Firebrand: The Destruction of the Brazilian Atlantic Forest* (Berkeley: University of California Press, 1995), Reinaldo Funes Monzote, *De Bosque a Sabana: Azúcar, Deforestación Y Medio Ambiente En Cuba, 1492-1926*, 1st ed., Pensamiento Caribeño (México, D.F.: Estado Libre y Soberano de Quintana Roo: Siglo Veintiuno Editores, 2004).

10. Peter Thorsheim, *Inventing Pollution: Coal, Smoke, and Culture in Britain since 1800* (Athens: Ohio University Press, 2006).

Bibliography

- Bellwood, Peter S. *First Farmers: The Origins of Agricultural Societies*. Malden, MA: Blackwell, 2005.
- Bocquet-Appel, Jean-Pierre, and Stephen Naji. "Testing the Hypothesis of a Worldwide Neolithic Demographic Transition." *Current Anthropology* 47 (2006): 341-365.
- Cohen, Mark Nathan. *Health and the Rise of Civilization*. New Haven; London: Yale University Press, 1989.
- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport: Greenwood, 1972.
- Dean, Warren. *With Broadax and Firebrand: The Destruction of the Brazilian Atlantic Forest*. Berkeley: University of California Press, 1995.
- Elvin, Mark. *The Retreat of the Elephants: An Environmental History of China*. New Haven: Yale University Press, 2004.
- Funes Monzote, Reinaldo. *De Bosque a Sabana: Azúcar, Deforestación Y Medio Ambiente En Cuba, 1492-1926*. 1st ed, Pensamiento Caribeño. México, D.F.: Estado Libre y Soberano de Quintana Roo: Siglo Veintiuno Editores, 2004.
- Gostomski, Anzelm. *Gospodarstwo (1588)*. Wydawn: Zakladu Narodowego im. Ossolinskich, 1951.
- Iliffe, John. *Africans: The History of a Continent*. Cambridge: Cambridge University Press, 1995.
- Macfarlane, Alan. *The Savage Wars of Peace: England, Japan and the Malthusian Trap*. Oxford, UK; Cambridge, MA: Blackwell, 1997.
- McNeill, J. R. "Biological Exchange and Biological Invasion in World History." In *Making Sense of Global History: The 19th International Congress of the Historical Sciences, Oslo 2000, Commemorative Volume*, edited by Sølvi Sogner. Oslo: Universitetsforlaget, 2001.
- Richards, John F. *The Unending Frontier: An Environmental History of the Early Modern World*. The California World History Library. Berkeley: University of California Press, 2003.
- Ruddiman, W. F. *Plows, Plagues, and Petroleum: How Humans Took Control of Climate*. Princeton, NJ: Princeton University Press, 2005.
- Thorsheim, Peter. *Inventing Pollution: Coal, Smoke, and Culture in Britain since 1800*. Athens: Ohio University Press, 2006.
- Zeder, Melinda A., Daniel Bradley, Eve Emshwiller, and Bruce Smith, eds. *Documenting Domestication: New Genetic and Archaeological Paradigms*. Berkeley: University of California Press, 2006.

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In the essay below, Dr. Massey presents the grand global view of human history. World history courses, in universities as well as high schools, are taught in manageable but rather detailed chronological chunks, sometimes further separated into geographical divisions. Although students usually gain an understanding of the various segments—the Neolithic changes in the Fertile Crescent, for instance—it is generally difficult for readers to get a broad sense of the overall developments and changes in human life. Many world history courses, like national and regional histories, tend to focus on contrasts, emphasizing the ways in which a specific culture is unique. This focus on differences, while valuable, tends to obstruct the broad view and can distort our understanding by giving dissimilarities undue weight. Dr. Massey very effectively traces the similarities between societies, the distinctively human characteristics that find expression across the world. In so doing, Massey leads us through the grand narrative of human life on earth so far. The 10,000-yard view of the mosaic illustrates human commonalities and allows us to get a feel for the history of human beings as a family. It's a good starting place for any world history course. It is also a good reminder for all of us of our own place in history. In a recent article, David Christian remarked on the importance of scale as we study history, using maps—global, regional, city, etc.—as an analogy.* This is history at its grandest scale, the global view, temporally as well as geographically.

—Carolyn Neel

*David Christian, "Scales," in *Palgrave Advances in World Histories*, ed. Marnie Hughes-Warrington (Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2005), 64.

A Brief History of Human Society

Douglas S. Massey

Before the end of the second decade of the twenty-first century, two momentous events will have occurred. Somewhere around 2007, humanity crossed a demographic Rubicon: for the first time, more than half of all human beings will live in cities. From that point on, the bulk of population growth will occur in urban areas, thus guaranteeing that the human future will unfold in cities. Shortly thereafter, surely during the second decade of the twenty-first century, the last foraging societies will cease to exist, ending 6 million years of dedication to what Jared Diamond called "the most successful and long-persistent lifestyle in the career of our species."¹

As organisms, human beings evolved within the context of small social groups. In many ways, we are more adapted to life in small groups than to survival within any particular physical habitat. The natural forces that bind us together into cohesive communities are very old and predate our much-vaunted cognitive capacities for language and rational thought. Emotional bonds linking hominids together within stable social structures existed long before human beings were able to undertake any rational consideration of the costs and benefits of sociality. If we are to comprehend our place in the contemporary postmodern, postindustrial landscape, we must return to our emotional origins in the class of primates known as hominids and to the foraging societies they inhabited.

Foraging as a Way of Life

Humans are the last survivors of a host of bipedal primates, known as hominids, who once walked the earth. The evolutionary path from the first biped to ourselves resembles not so much a tree as a bush, with many branches drifting off to extinction and others continuing toward the present. Considering this shrub from its origins to the dawn of urban civilization and paying attention to the fundamentals of population, community, technology, subsistence, and culture, one may identify four basic eras of societal development.

Pre-Habiline Society

Recent archaeological finds have pushed the origins of the hominid line back to around 6 million years ago, when *Ardepithecus ramidus* and later *Australopithecus africanus* descended from the trees to spend their days walking upright, thus enabling them to exploit an emerging ecology of mixed forest and grassland.² Our earliest ancestors were small, averaging just slightly less than 5 feet (1.5 meters) in height and maybe about 155 pounds (70 kilograms) in weight but with a pronounced sexual dimorphism that left males 60 percent larger than females. Among primates, such high dimorphism is associated with a pattern of female out-marriage into a group composed of a dominant male plus subordinates, consorting females, offspring, parents, and siblings.³ As such, their way of life was probably similar to that of modern-day chimpanzees, which is organized around foraging, scavenging, and the occasional hunting of small prey.⁴ There is no evidence that the early *Australopithecines* manufactured permanent tools; hence, their society is labeled

The teeth of the Australopithecines were large, their jaws were adapted for crushing, and their guts were capacious, suggesting a diet centered on vegetable matter.

pre-habiline (pre-tool-using). Like modern chimps, they probably modified perishable materials and wielded unworked stones for a variety of purposes. The teeth of the *Australopithecines* were large, their jaws were adapted for crushing, and their guts were capacious, suggesting a diet centered on vegetable matter. Some have argued that the *Australopithecines* descended from trees precisely in order to exploit new ground-based food sources (protein-rich roots and tubers) that were becoming available on the expanding savannas.⁵

Groups of early hominids, like modern chimps, were probably loosely structured socially.⁶ Chimpanzee communities are held together by emotional bonds between individuals differentiated by sex, age, and rank in a dominance hierarchy. Within groups, rather strong ties exist between mothers and children, and these may persist even after the latter are grown, especially for male offspring; weaker ties exist between adult males; and ties between other community members are generally weak or absent. Females transfer out of the group at puberty, preventing the formation of strong structures based on intergenerational matrilineal lines of related females and fostering male-dominance hierarchies. Among apes and our last common ancestor, social structure was fluid, “leaving indi-

viduals at the micro level to seek out their own supportive ‘friendships’ that reflect personal likes and dislikes” that creates an overall sense of community at the macrolevel.⁷

Emotional bonds of kinship and friendship are maintained by mutual grooming, while rank is established by threat displays backed up occasionally by actual force. Social relations are complex, requiring each individual to recognize and form alliances with others. Chimps must cultivate webs of influence and mutual obligation, form coalitions to defeat common adversaries, remember the personal attributes and past behaviors of others, and know of relationships between others.⁸ Studies and field observations show that chimpanzees are self-aware, are able to infer the intentions of others, and are fully capable of social deception and manipulation.⁹ It is quite likely that Australopithecines possessed similar capacities.¹⁰

Compared with modern-day chimps, however, early hominids lived in larger groups. Whereas chimps normally exist in groups of around 50, calculations by Robin I. Dunbar suggest that Australopithecines lived in bands of 60–70 individuals.¹¹ Like chimpanzees, therefore, the earliest hominid species must have possessed a well-developed social intelligence. The number of dyads (mated pairs) among any number (N) of individuals is given by the formula $(N^2 - N)/2$. Whereas chimps (at $N = 50$) must keep track of 1,225 dyadic relationships, Australopithecines (at $N = 65$) had to manage 2,080, which requires more cognitive ability.¹² As a result, the average cranial capacity of Australopithecines, somewhere around 450 cc, is larger than that of chimps, which averages around 400 cc.¹³

The increase in cranial capacity stems from an expansion of the neocortex, the outermost layer of the brain, yielding a higher degree of encephalization.¹⁴ Despite their keen social intelligence, however, there is no evidence that Australopithecines possessed much in the way of what we would call rationality. The frontal, temporal, and parietal lobes of the brain—the loci of abstract reasoning and language—remained relatively undeveloped, and there is little evidence of any asymmetry between the right and left hemispheres, a definitive characteristic of habitual tool manufacture. Expansion occurred mainly in portions of the cortex that dealt with sensory processing and probably involved a rewiring to enable greater cortical control of emotional expression.¹⁵

Like modern chimps, the early Australopithecines could probably solve simple practical problems and learn through observation and imitation, but communication was restricted to vocalizations and gestures. Although modern chimps can be taught 150–200 symbols in the laboratory and can learn to string them together in sets of 2 or 3,¹⁶ they display no awareness of word order, and over millions of years they never evolved the use of symbols themselves.¹⁷ Chimps do not even engage in spontaneous pointing, a behavior evinced by youngest human children.¹⁸

Pre-habiline cognition is associated with what Merlin Donald calls episodic culture, in which perceptions and behaviors flow largely in the present moment.¹⁹ Individuals have memories of concrete past episodes, can recall prior experiences, and can perceive ongoing social situations, but they lack semantic memory and abstract reasoning. Pre-habiline

Table 1. Eras in the evolution of human foraging societies

	Pre-Habiline	Oldawan	Paleolithic	Neolithic
Beginning date	6 million BP	2.5 million BP	1.5 million BP	50,000 BP
Duration	3.5 million yrs	1 million yrs	1.5 million yrs	40,000 yrs
Generations	175,000	50,000	75,000	2,000
Inhabitants	A. Africanus	H. habilis	H. erectus	H. sapiens
Cranial capacity	450 cc	550 cc	1,100–1,400 cc	1,450 cc
Sustenance	Foraging	Foraging	Foraging	Foraging
Tools	Perishable	Crude stone	Refined stone	Flint and bronze
Kind of culture	Episodic	Episodic	Mimetic	Mythic
Settlement type	Mobile camp	Butchering site	Base camp	Village
Community size	~65	~75	~145	~155
Total population	<50,000	<100,000	<1 million	6 million

society and its episodic culture dominated human life for 3.5 million years. During all this time—some 175,000 generations—no stone tools were produced, and hominid life was confined to Africa, yielding a population that numbered only in the thousands or tens of thousands of beings dispersed into small roaming groups.²⁰ The essential features of pre-habiline society are summarized in Table 1, in comparison to its successors.

Oldawan Society

The first revolution in human history occurred with the appearance of stone tools about 2.5 million years ago and was associated with the appearance of a new genus. *Homo habilis* made crude stone artifacts that most of us would not even recognize as tools unless we knew what to look for. Named for the east African gorge where they were first discovered, Oldawan tools are pieces of rock that have been sharpened on one side by flaking to create crude choppers and scrapers. These simple tools are associated with the first evidence of patterned human living in the form of centralized butchering sites, indicating a growing reliance on hunting over gathering.

Although height did not change dramatically, the weight of *Homo habilis* did increase as skeletons grew more robust and cranial capacity rose to an average of around 550 cc,²¹ a 20 percent increase associated with an expansion of group size to 70 or 80 individuals.²² The increase in group size not only required a greater cognitive capacity to monitor the increased number of interpersonal dyads (2,775 at N = 75) but would have also necessitated a concomitant increase in the amount of time spent grooming. Primates cultivate and maintain dyadic bonds through mutual grooming, which causes the release of natural opiates in the brain to promote feelings of well-being and attraction leading to social cohesion.²³

Group size is naturally limited by the amount of time individuals can afford to spend grooming rather than engaging in other essential behaviors such as sleeping, feeding, courting, and mating.²⁴ Across primates, 20 percent seems to represent an upper threshold for time spent grooming. The group size characteristic of *Homo habilis* for the first time pushed grooming time above this threshold, suggesting that other mechanisms must have been coming into play.²⁵ Turner suggests that these mechanisms involved a more complex communication of emotion.²⁶

Beyond increased group size, the existence of stone tools, and a larger brain, little else changed cognitively, culturally, or socially for hominids during the Oldawan period, which lasted around 1 million years, or 50,000 generations. The total human population at the time still numbered in the tens of thousands, all lived in Africa, and there is no evidence of any use of language or symbolic culture (see Table 1). Hominid culture remained episodic, albeit with an increase in social complexity and a concomitant expansion of cranial capacity to handle greater demands on social intelligence.

Paleolithic Society

Somewhere around 1.5 million years ago, the appearance of another species and technology signaled the emergence of a new kind of society. The species was *Homo erectus*, and the technology was the Acheulean tool culture. The progression from *habilis* to *erectus* marked an abrupt and very important shift in human evolution.²⁷ Although upper heights changed relatively little, they became considerably more uniform (4.2 to 4.9 feet [1.3 to 1.5 meters]) as sexual dimorphism was reduced dramatically from a 60 percent male-female differential to one on the order of 15 percent, about the average for modern humans. Anatomically, full shoulder rotation disappeared, indicating a final break from arboreal (tree-living) life, while both teeth and guts grew smaller, suggesting the increasing nutritional importance of meat. With the emergence of *Homo erectus*, we find evidence of the controlled use of fire²⁸ and the creation of seasonal base camps.²⁹ The sharp decrease in sexual dimorphism stemmed not from a reduction in the size of males but instead from an increase in the size of females, thus raising the average height of hominids. The increase in female size was necessary to accommodate the birth of new creatures with large heads and fat brains, for the progression from *Homo habilis* to *erectus* was accompanied by a doubling of cranial capacity into the range of 1,000–1,100 cc. The dome of the cranium rose and the face flattened to accommodate expansion of the frontal, temporal, and parietal lobes of the brain. *Homo erectus* also provides the first evidence of brain laterality—a differentiation in size between right and left brain hemispheres—that is associated with handedness and communicative abilities.³⁰ Rather than the crude chop-pers of the Oldawan culture, the Acheulean tool kit evinced considerable manual dexterity (which goes along with handedness). Tools now consist of symmetrically shaped, carefully worked hand axes, cleavers, and knives with sharper and more effective cutting surfaces.

Skulls of prehistoric primates
(from left: *Homo erectus*, *Homo rudolfensis*, *Homo ergaster*, *Homo habilis*). (Deco)



The decline in sexual dimorphism and the need to care for large-brained children who were helpless in infancy, vulnerable in childhood, and dependent through adolescence produced a radical change in human social structure and mating patterns.³¹ It was probably during this era that the human practice of pair bonding appeared, accompanied by a decline in intermale conflict, the disappearance of rigid dominance

It was probably during this era that the human practice of pair bonding appeared, accompanied by a decline in intermale conflict, the disappearance of rigid dominance hierarchies, and a growing investment by fathers of time and resources in their mates and children.

hierarchies, and a growing investment by fathers of time and resources in their mates and children.³² Male commitment to pair bonding was reinforced (though not guaranteed) by an entirely new reproductive biology in which females were continuously sexually receptive, breasts were enlarged and displayed, and the timing of estrous was hidden. The distinctively human and unprimate practice of copulating in private probably also emerged at this time.

The increase in brain size enabled another expansion in group size to 90–120 individuals, yielding somewhere in the neighborhood of 6,000 dyadic relationships ($N = 110$). Despite greater encephalization, however, evidence suggests that the intelligence of *Homo erectus* was still prelinguistic. It was, however, different from the episodic intelligence that preceded it. The basic cognitive function for *Homo erectus* was mimesis—imitation or mimicry—in which vocalizations, facial expressions, eye movements, body postures, and manual signs were used to communicate and to transmit skills from person to person. The emergence of gestural communication reflected a significant increase in the range and complexity of emotional expression, as the cognitive bases for primary emotions such as fear, anger, disgust, happiness, and sadness were rewired and interconnected via the cortex to produce

new sets of emotions conducive to social cohesion and solidarity, such as shame, guilt, anticipation, and hope.³³

Learned physical abilities were an essential adaptive resource and were passed from generation to generation by demonstration and imitation.³⁴ Although mimetic culture remained concrete, visual, and episode-bound, it nevertheless brought about an increase in the sharing and accumulation of knowledge, yielding a more stable social structure based on ritual and custom that served to heighten the emotional content of social relationships and promote bonding.³⁵ It was during this phase of human social evolution that facial expressions probably attained their current importance as means of signaling emotion.

Patterns of nonverbal facial expression recur across cultures and are interpreted similarly by humans in all societies, suggesting a “hard-wired” ability to read emotions that are displayed on the human face.³⁶ The resulting mimetic culture provided humans with a powerful adaptive tool that enabled them to leave their ancestral homeland for the first time and survive in a wider variety of habitats. Around 1 million years ago, *Homo erectus* moved out of Africa and occupied the southern portions of Asia and Europe, bringing about the first significant growth of the human population.³⁷ Late in the Paleolithic period, around 300,000 years ago, several new species of hominid arrived on the scene to compete with *Homo erectus*, which eventually disappeared. The new species were *Homo heidelbergensis* and the better-known *Homo neanderthalensis*, also known as the Neanderthals.³⁸ The latter approximated modern humans in height but were much heavier and more powerfully built, with thicker bones and a more robust musculature. The size of the cranium also expanded to reach volumes characteristic of our own species, although the physical organization of the brain remained distinct, with smaller and more constricted frontal lobes. Nonetheless, the increase in average cranial capacity to around 1,400 cc enabled group size to expand further, reaching 120–160 individuals and implying a need to manage some 9,730 separate dyadic relationships ($N = 140$).

With groups this large, the maintenance of cohesion could not possibly have relied on mutual grooming, as servicing so many relationships would have required around 40 percent of the group’s entire time to be spent grooming, a percentage that is far too long to be feasible.³⁹ Culture, therefore, must by then have been the central mechanism maintaining social cohesion.

The Neanderthals evinced a more advanced material culture than their hominid predecessors, as indicated by the emergence of a new tool kit, the Mousterian, that consisted of flint or stone blades hafted onto wood or bone handles. These represent the first instance of composite tools, those composed of at least three materials. The new tool kit yielded ten times more cutting edge per kilo of raw material than the former Acheulean technology. With the Neanderthals we also begin to observe stone hearths and postholes, indicating the construction of permanent shelters. We also observe migration and settlement in the colder regions of northern Europe, and numerous bone middens indicate a heavy reliance on hunting. With the emergence of semipermanent settlements of 120–160 persons, social structure probably began to move

beyond small bands differentiated by age and sex to form larger collectives such as kin-based clans.

Neolithic Society

Fully modern human beings emerged in Africa somewhere around 150,000 years ago and rapidly migrated outward to occupy all corners of the globe. *Homo sapiens* reached Europe and Asia around 50,000 before the present (BP), Australia by 40,000 BP, the Arctic by 20,000 BP, the Americas by 10,000 BP, and most of the islands of Polynesia by 2,000 BP.⁴⁰ Whereas the Australopithecines and habilines had remained in Africa for 5 million years without moving and *Homo erectus* and the Neanderthals had not expanded beyond southern Europe and Asia over 1 million years, within the space of just 50,000 years the entire earth was populated fully by *Homo sapiens*. Clearly they must have gained access to some remarkable new survival tools. Demographers estimate that the prehistoric human population had grown to roughly 6 million persons by around 10,000 years ago.⁴¹

In *Homo sapiens*, the brain reached its final size and structure with a full expansion of the frontal lobes that created the potential for a new and revolutionary kind of culture.⁴² The importance of the human brain as an adaptive organ is indicated by the fact that it constitutes 2 percent of body weight but uses 20 percent of the body's total energy.⁴³ Nonetheless, the appearance of anatomically modern human beings was not initially accompanied by dramatic changes in culture.

The crucial period of change seems to be around 50,000 years ago, an era that has variously been called “the great leap forward,”⁴⁴ “the creative revolution,”⁴⁵ and “the symbolic revolution.”⁴⁶ From this point onward, technology undergoes rapid change that is disconnected from further changes in brain size or anatomy. Whereas earlier technologies prevailed for hundreds of thousands or even millions of years and only changed with the arrival of a new species, after 50,000 BP material culture evolves rapidly and differentiates without any corresponding physical changes. Human cognitive capacity had apparently reached a state of dynamism and flexibility whereby it could innovate cultural adaptations ad infinitum.

In addition to the hafted stone and wood tools characteristic of Mousterian culture, *Homo sapiens* now began to fashion a host of new and more delicate tools from bone and antler, creating hooks, needles, awls, and harpoons. They wove fibers into ropes and clothing, tanned hides for clothing and coverings, created jewelry and other forms of personal adornment, and built permanent shelters that included not only hearths but also lamps and kilns. They invented spear throwers, bows, and arrows to allow effective hunting from a distance, thus minimizing risks to personal safety. Late in the neolithic, bronze began to replace flint in tools and weapons, ushering in a “bronze age.”

Perhaps not immediately but sometime after the appearance of *Homo sapiens*, speech developed to give human beings a capacious verbal mem-

ory and new capacities for cognition and analysis.⁴⁷ The development of language was accompanied by important changes in the size, structure, and function of the brain. Expansion of an area located toward the bottom of the frontal lobes (Broca's area) permitted phonology, the making and controlling of sounds. The development of the temporal lobes (Wernicke's area) allowed audition, the ability to hear and differentiate sounds, and the expansion of the parietal and frontal lobes permitted conceptualization, the ability to use and manipulate arbitrary sound symbols in meaningful ways, that is, to think of words before uttering them and to organize them into large units of meaning. All of these expanded brain functions were connected into a larger articulatory loop that functioned in a newly coordinated fashion.⁴⁸

Language emerged not to give humans a capacity for rational or abstract analysis per se—this was more of a by-product—but instead to enhance their social intelligence so as to get along in large groups.⁴⁹ Language is the ultimate social arbiter, allowing people to maintain interpersonal relationships through conversation, to monitor the social interactions of others through gossip, and to reach collective decisions through discussion. In British anthropologist Robin Dunbar's words, "humans have bigger, more complexly organized groups than other species simply because we have a larger onboard computer (the neocortex) to allow us to do the calculations necessary to keep track of and manipulate the ever-changing world of social relationships in which we live."⁵⁰

As a means of maintaining social contact and monitoring interpersonal relationships, language is far more efficient than grooming for the simple reason that we can talk to more than one person at a time. The group size predicted for human beings from their cranial capacity is around 155 persons, which corresponds closely to the maximum size observed among hunter-gatherer societies.⁵¹ Comparing the group size of chimps to that of humans (55 to 155) suggests that whatever mechanism replaced grooming as a means of achieving group cohesion was three times more efficient. Unobtrusive studies of conversations conducted across a variety of cultural and social settings reveal that human conversation groups naturally gravitate toward a configuration of one speaker and three listeners. Moreover, whereas chimps spend about 20 percent of their time grooming, humans spend around 20 percent of their time in social interaction, mostly in conversation.⁵² Thus, language replaced grooming and built upon gesture as a means of ensuring social cohesion within large groups.

All human societies possess a spoken language, and all human beings are capable of learning any linguistic system. Indeed, as Noam Chomsky and Steven Pinker suggest, human beings possess a "language instinct."⁵³ Given appropriate exposure in childhood, any person anywhere can learn any language with a minimum of effort and without formal instruction. In contrast, even after intensive training throughout

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childhood, chimpanzees cannot learn to speak any language, and even though they can learn to recognize 150–200 symbols, they cannot use them in grammatical fashion.⁵⁴

Despite its evolution as an instrument of “social intelligence,” however, language also offered humans new possibilities for rational analysis. Through vocabulary, syntax, and grammar, languages inevitably create categories of perception for time, objects, and events in the real world. Languages thus create a conceptual model of the universe and how it works, permitting the invention of what Richard L. Gregory calls “mind tools,”⁵⁵ categories of thought that facilitate other mental operations. The emergence of language is thus associated with the emergence of a new kind of “mythic culture” in which humans developed symbolic metaphors to explain the operation of the universe.

The appearance of musical instruments, rhythmic devices, lunar calendars, and various other symbols in the millennia from 50,000 BP to 10,000 BP testifies to the growing importance of myth in society. Burial of the dead indicates the importance of ritual, and interment with utensils, food products, and jewelry indicates a belief in the afterlife.⁵⁶ The first symbolic art appears in the form of sculptures and cave paintings and, given the remote location of most cave art deep in the interior of inaccessible caverns, obviously served some symbolic ceremonial purpose.⁵⁷ Mythic culture, for the first time in history, allowed humans to synthesize discrete time-bound events and circumstances and to connect them into a single coherent narrative to explain the world. Mythic culture did not supplant episodic and mimetic culture; it was superimposed upon them and extended a preexisting emotional infrastructure. Every hunter-gatherer society thus has an elaborate mythic system that permeates daily life and, through the use of verbal and nonverbal symbols, gives meaning to everyday objects, circumstances, and events.⁵⁸ Myth constitutes a “symbolic web” that explains how people are supposed to behave, why cultural rules must be obeyed, and how they are to be enforced.⁵⁹ God myths in particular reflect a society’s idea of causality: where life comes from, what happens to people after death, and what controls events in the world.

When considered comparatively across time and space, hunter-gather societies are found to share a variety of traits.⁶⁰ They occupy large territories at low densities and are characterized by geographic flexibility and a lack of attachment to fixed settlements. They are unstratified, with few social distinctions except for those based on age and sex. Males and females are distinguished from one another in both ritual and subsistence, and adults take care of children and the elderly.

Most groups possess social mechanisms to distribute food and prevent the accumulation of surplus. They employ a universal classification of people according to kinship and have a symbolic structure based on bipolar opposites (good-bad, male-female, hot-cold, etc.). Their metaphoric narratives associate animal identities with those of humans, and much of human action is infused with ritual.⁶¹ Although possessing a capacity for rational thought, elements of rational cognition and culture are not very well developed in mythic cultures. Rather, the new cognitive apparatus created by words was more strongly connected to emo-

tional centers of the brain through conditioning and learning that was deliberately reinforced by ritual, ceremony, and spirituality.⁶²

Urbanism as a Way of Life

The signature characteristic of foraging societies is that except for the very young and the very old, everyone produces food: each day all able-bodied people move about the environment hunting and gathering to ensure a caloric intake sufficient to survive another day. Until quite recently, human societies had no specialists devoted to tasks other than food production and certainly none devoted to full-time cognition. The leisure time necessary to think broadly and deeply only became available between 12,000 and 10,000 years ago with the emergence of the first sedentary villages, a new social configuration rendered feasible by the invention of agriculture and the domestication of animals. For the first time in human experience farming created a food surplus, and the accumulation of calories above one day's needs enabled a dramatic acceleration of human population growth, higher population densities, and the emergence of a new class of people—urbanites—who did not have to produce food for their own survival.⁶³

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Agrarian Urbanism

Agriculture, herding, and cities emerged at different times in different places depending on access to plants and animals that were potentially domesticable,⁶⁴ but they first materialized in a geographic arc extending from the eastern Mediterranean upward through Anatolia and down into the valley of the Tigris and Euphrates rivers. Known as the Fertile Crescent, it was here that the ancient ancestors of several modern cereal crops and herd animals were found in foothills adjacent to a flat alluvial plain whose soil was annually replenished and watered by seasonal flooding, yielding the perfect environment for the emergence of intensive agriculture. Wheat, barley, and peas were domesticated in Mesopotamia by 10,000 BP, along with sheep and goats; by 6000 BP several fruit-bearing trees and bushes had also been tamed (notably those yielding olives and grapes). Agriculture was independently invented in China, Mesoamerica, and perhaps India, but mostly agrarianism spread to other regions through diffusion.⁶⁵

The domestication of plants and animals set the stage for a new kind of human society based in cities. The first cities emerged in Mesopotamia around 8,000 years ago, with populations in the 5,000–25,000 range.⁶⁶ Under a preindustrial technology, the amount of food that could be produced per acre was limited, and the total size of the food surplus was

necessarily meager. While intensive agriculture may have permitted cities to exist, they could not be numerous, and most people could not live in them. Prior to the industrial revolution, no more than 5 to 9 percent of most societies lived in cities, and the total population of a single city never exceeded 1 million.⁶⁷

With yields per hectare fixed by technological limits, the only means for a city to become larger was to gain control of more land and thereby to commandeer a larger surplus. Mesopotamian cities were limited in size by internecine rivalries and political fragmentation. It was not until the pharaohs consolidated their control over the Nile River valley around 5,000 years ago that cities really began to expand. The first settlement to exceed 100,000 inhabitants was Thebes, in Egypt, around 3,400 years ago. It was succeeded 1,000 years later by Babylon, which surpassed 200,000, and finally by Rome, which during the reign of Caesar Augustus was the first city to surpass 500,000.⁶⁸

Wherever it occurred, agrarianism displaced hunting and gathering as a way of life through direct conquest, demographic absorption, or ecological marginalization. This victory occurred not because agrarianism provided people with less work, better nutrition, and longer lives. On the contrary, the residents of early agrarian societies worked longer hours, consumed fewer calories, lived in poorer health, and within cities died in larger numbers.⁶⁹ What gave agrarian societies their decided advantage in confrontations with hunter-gatherers was their demographic weight, which allowed them to possess an advanced technology, specialized fighters, and much deadlier germs.

With the advent of agriculture, the stone age gave way to the bronze and iron ages, and metals replaced flint to create more effective tools and more lethal weapons. Urban dwellers and the empires they ran evinced new instrumental needs, specialists thought up new tools to satisfy them, traders obtained the necessary raw materials, artisans made them, a political elite controlled their distribution, and a religious elite justified their deployment. As a result, in any encounter agrarian societies were able to wield weapons and technologies far superior to anything that hunter-gatherers could muster.

Agrarian societies also had more people spared from the necessity of food production to wield these weapons, leading to the emergence of professional soldiers and the first standing armies. In any competition over land and resources, populations enumerated in the tens or hundreds of thousands held a clear advantage over small bands numbering in the dozens or hundreds, especially if the former fielded an army of well-equipped, well-fed, and well-trained professional fighters.

Finally, the density of preindustrial cities, the lack of sewage facilities, the contamination of drinking water, and the close association of humans with animals gave one final advantage to agrarian societies: germs.⁷⁰ Until the nineteenth century, in fact, health conditions in cities were such that infectious diseases were endemic and life expectancies were short, much lower than among peasants in the countryside.⁷¹ Were it not for continuous rural in-migration, preindustrial cities would not have been able to sustain themselves demographically.

Table 2. Eras in the evolution of human nonforaging societies

	Agrarian	Industrial	Postindustrial
Beginning date	10,000 BP	200 BP	20 BP
Duration	10,000 yrs	180 yrs	20+
Generations	500	9	1+
Inhabitants	H. sapiens	H. sapiens	H. sapiens
Cranial capacity	1,450 cc	1,450 cc	1,450 cc
Sustenance	Agriculture	Manufacturing	Knowledge
Tools	Bronze & iron	Steel alloys	Silicon, plastic
Kind of culture	Mythic	Theoretic	Theoretic
Settlement type	City	Metropolis	Megalopolis
Community size	1 million	20 million	30 million
Human population	970 million	6 billion	9 billion

Although death rates were high and life expectancies short, those urban dwellers who survived either inherited or acquired an immunity to bacteria, viruses, and other parasites that hunter-gatherers could never attain, given their low densities. As a result, throughout history initial contacts between hunter-gatherers and urban-led societies have invariably led to the former's decimation through a sudden exposure to diseases for which they had no natural immunity.⁷²

From the rise of the first city-states around 10,000 years ago to the year 1800, agrarianism was the dominant form of human society, occupying ever-larger portions of the world's geography with ever-larger populations, both rural and urban. The rough trajectory of world population growth is indicated in Table 2, which graphs the estimated size of the human population from 600 BCE to 1800 CE. At the end of the Paleolithic era the world's population stood at around 8 million, but over the next 8,000 years it grew to reach about 252 million in the year zero. Under the Pax Romana population growth reached a plateau, and with the collapse of the Roman empire it declined to around 200 million before rebounding slowly after the year 600. Beginning in the year 1000, a variety of technological and social innovations came together to unleash a demographic boom in Europe, which proceeded apace until the Black Death struck in the mid-1300s (Levine 2001). As the foundations for a global economic order based on mass production, trade, and investment were established after 1600,⁷³ the human population entered an era of sustained exponential growth that accelerated up to the dawn of the nineteenth century, when the world's population stood at around 954 million.⁷⁴

In the 500 generations preceding 1800, the proportion of people living in urban areas rarely exceeded 5 percent,⁷⁵ and before that date only 65 cities in the entire history of the world had ever achieved populations over 100,000.⁷⁶ The vast majority of people in "civilized" agrarian societies of the past were illiterate peasants who lived in small villages

and isolated hamlets that were not much bigger than the hunting and gathering communities of the Paleolithic era. Work was governed by the rhythms of the seasons, and most people lived and died within a few miles of where they were born, spending all their lives within a community of friends and relatives they knew personally. In such a society, culture remained substantially mythic. The only real difference compared with the mythic cultures of hunter-gatherers was the patina of formal structure imposed from above by a priestly class.

By innovating written languages, however, agrarianism created the foundations for a new kind of culture. The earliest known origins of writing lay in the desire of Sumerian merchants for an accounting system to keep track of sales and shipments. Some 10,000 years ago, urban traders began using a stylus to mark clay tokens of different shapes, thus indicating the quantity and nature of goods being shipped or stored.⁷⁷ Over the millennia, these clay tokens expanded into tablets and the markings were elaborated until round 5,000 years ago they became a syllabic script for the Sumerian language. About 4,000 years ago, the Phoenicians evolved the first phonetic alphabet, which was later borrowed and modified by the Greeks and eventually the Romans, whose system we use today.⁷⁸ Writing developed in China at about the same time, at least by the eighteenth century BCE, and was standardized across China during the Qin dynasty (221–206 BCE). From there, Chinese writing scripts spread across Asia.

The advent of writing created the first external memory devices—tablets, scrolls, and stone monuments—that dramatically reduced the demand on biological memory and freed up human cognition for other tasks. Whereas biological memory is inherently limited by a fixed number of neurons, writing created a storage system of unlimited size. Moreover, by allowing connections between individual brains within dense urban environments, writing dramatically increased the size of the human cognitive apparatus.⁷⁹ In many ways, cities functioned as macro-social “brains,” and the use of external symbols externalized thought and dramatically increased information processing.⁸⁰

In many ways, cities functioned as macro-social “brains,” and the use of external symbols externalized thought and dramatically increased information processing.

Writing thus created the potential for a new theoretic culture, a logical system of thought grounded in experience and rationality and capable of making accurate predictions about events in the natural and social worlds.⁸¹ Almost by definition, access to such a culture was limited to the small minority of people who were literate and were freed from the burdens of food production, and even among those who could read and write there were two competing modes of thought.⁸² Narrative thought is basically a written extension of oral culture expressed as literature: plays, poems, stories, novels, operas, etc. Analytic thought, while dependent on words, is a rational construction grounded in formal systems of argument, taxonomy, and conceptualization, which follow logical rules based on induction and deduction and make frequent use of formal quantitative measurement. Although theoretic culture gained

adherents and influence in human affairs during the agrarian era, it necessarily remained a minor part of the total human experience, given the small number of people who were literate.

Industrial Urbanism

All in all, agrarian urbanism proved to be a relatively stable and durable social system. Although numerous empires came and went in the 9,000 years from approximately 8000 BCE to 1000 CE, the basic contours of urban society remained largely unchanged. Throughout the period, city size was limited by the area of the agrarian hinterland; the rate of urbanization was limited by low productivity in agriculture; communication required physical travel by human beings; the fastest transport was by sail over water, and overland travel was slow, costly, and dependant on animal power; goods were manufactured by skilled artisans fabricating one item at a time within a single workshop; stratification was rigid and social mobility limited; few markets existed; and social interactions continued to be dominated by relations of communal sharing and equality matching, overlaid with a veneer of authority ranking imposed by urban elites.⁸³

Empires persisted for hundreds and even thousands of years without changing their basic structure, organization, or culture. Somewhere around 1,000 years ago, however, the world began to change in important ways. Innovations in political organization and technology gave birth to a material revolution that vastly increased human productivity and released cities from technical limits on their size, density, and number. The collapse of the Roman empire in 476 CE brought about a marked decline in urbanism throughout western Europe as cities, markets, and trade routes withered and gradually fell away.⁸⁴ Although large swaths of the former Roman empire were absorbed into the successor agrarian states of Byzantium, the Islamic caliphates, and for a time the Carolingian empire, after 1000 most of western Europe languished outside of any centralized polity and was divided into a series of small independent kingdoms that competed with one another in a shifting patchwork of alliances known as feudalism. Although feudalism, like agrarian urbanism, rested on an agricultural base, its politics were quite different compared with those of the agrarian empires that had gone before.

Whereas agrarian states imposed political order from above using military force and administrative power, a new technology of warfare changed the calculus of political domination in feudal Europe.⁸⁵ With the adoption of the stirrup, mounted horsemen in heavy armor acquired a decisive battlefield advantage over infantry, bowmen, and regular cavalry. Maintaining a knight in the field, however, required a rather large capital investment that was beyond the capacity of a single lord. Feudalism emerged as a means of financing this new man of war. Vassals were granted suzerainty over a territory and its people, from which they were expected to support themselves as knights. The knights—basically the armored tanks of their day—were then expected



Peasants work in the fields before the gates of a town. Miniature painting from the Grimany Breviary, sixteenth century. (Bettmann/Corbis)

to remain on call as soldiers to defend the king's interests.

Under feudalism, an all-powerful sovereign did not issue imperial orders from above but instead contracted with semiautonomous lords who offered arms in return for socially defined privileges. These lords, in turn, negotiated a social compact with peasants who then surrendered their labor and agricultural produce to support their squire's knightly enterprise in exchange for other rights and privileges. Although feudal relationships may have been decidedly asymmetrical and unequal, they were nonetheless negotiated and therefore fundamentally different from the politics of empire that had transpired before.

The dynamic Han empire of China fell in the third century of the modern age, and China went through a period of disunity from about 220 to 581 BCE, but trade across the Silk Roads and around the Indian Ocean basin never really ended and enjoyed a resurgence around 1000. Cities also came to acquire semiautonomous power in the feudal order.⁸⁶ Urban merchants began to rebuild the trade routes and markets that had shriveled with the demise of Rome, and they extended new trade routes into northern and eastern Europe and the Islamic empires of northern Africa, the Middle East, and Spain. The revival of trade brought

about a resurgence of markets, the reintroduction of currencies, and a new burst of capital accumulation.

As a result, urban merchants offered kings and nobles an attractive source of tax revenue to support their knightly ambitions.

In return for granting merchants the freedom to pursue commercial interests, make investments, and reap profits, the royals and the landed gentry imposed tolerable rates of taxation. Urban merchants and feudal lords shared a common interest in local autonomy and commercial freedom. Because of the granting of limited rights of self-government to cities, more wealth was produced by merchants to provide more tax revenues for the knightly enterprise.⁸⁷

The Roman Catholic Church, meanwhile, provided a multilateral framework that held the whole system together. The expansion of papal power, in particular, provided a semblance of international stability and global governance.⁸⁸ At about the same time, Gregorian reformers inserted themselves into medieval social life, forcing celibacy on a reluctant priesthood, restricting sex to marriage, and making primogeniture the basic rule of inheritance. This ecclesiastical revolution created a new family

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system characterized by late marriage, widespread spinsterhood, and inheritance of property by the eldest male, providing both monasteries and commerce with a ready source of recruits from among the younger sons of landed families.⁸⁹

The new family system slowed population growth by reducing the number of married women and thus the number exposed to the risk of childbearing. Primogeniture, meanwhile, limited the fragmentation of landholding. These social changes occurred in tandem with technological innovations that raised agricultural productivity, namely the introduction of the iron plow, new methods of crop rotation, the substitution of horses for oxen, and the application of wind and water power for the milling of grain.⁹⁰ As a result of these and other changes, the food supply increased, peasant households reproduced, and European population densities rose in both towns and the countryside.

By around 1340 even the most marginal lands were in production, and feudalism was on the verge of sinking into a low-level equilibrium trap whereby population growth overwhelmed land resources to create chronic food shortages.⁹¹ The event that prevented this cycle of economic decline from setting in was the arrival in 1348 of the Black Death, a flea-borne plague that killed rich and poor alike, city dweller as well as rural villager, and within a few years cut populations across the Eurasian landmass by about one-third.⁹² This massive wave of mortality transformed the social order in several important ways.⁹³

First, by opening vacancies at the top of the social hierarchy, the high mortality rate created new possibilities for social mobility from below. Second, by reducing the number of workers, it enhanced the bargaining power of labor and enabled workers to renegotiate the terms of their social contracts, leading to a rise in wages and the creation of nascent labor markets. Third, rural population loss led to farm abandonment and the emergence of the first land markets. Fourth, because the plague killed people but left capital untouched, it dramatically increased capital-to-labor ratios, yielding a sudden, if perverse, surge in capital formation. Finally, the experience of massive mortality reoriented the outlook of those who survived, prompting them to focus more on the fruits of this world rather than on promised rewards in the next.

Once the plague had run its course, the stage was set for the emergence of the modern world. All that was needed was a set of new technologies that could increase productivity enough to support a large nonagrarian population. The invention of the blast furnace in 1621 made possible the mass production of steel and offered a cheap metal that was strong enough to contain boiling water under pressure, leading in 1698 to the invention of the steam engine. Although the original engine was inefficient and of little practical use, its design was improved in successive steps until 1765 when James Watt of Scotland added a separate condenser connected to a cylinder by means of a valve, thus allowing the condenser to remain cool while the cylinder was hot.⁹⁴

Watt's patented design yielded a steam engine that efficiently converted heat from burning coal into mechanical power that could be applied to a wide variety of practical tasks. The productive potential of the steam engine was fully realized when it was combined with a social

reorganization of manufacturing that broke production down into a series of discrete but interconnected steps. Rather than occurring in small workshops where one artisan or a few artisans worked on one item from start to finish, production was reconfigured to occur in a cooperative division of labor that involved a large number of people applying machine power independently in coordinated fashion across a series of discrete steps that were linked together to form an integrated productive process.

This revolution in social organization combined with steam technology enabled human beings to fabricate a very large number of standardized items at very low marginal cost. The end result was a revolutionary increase in human productivity: the ability to produce a vast array of goods with relatively modest inputs of human labor. The Industrial Revolution emerged in England as steam power was applied to transform the cotton and woolen industries. After the invention of spinning frames and mechanized looms in the late 1760s, textile mills were established along rivers. But after 1780 Watt's steam engine was substituted for water power, and mechanized plants began to spring up throughout the English Midlands. Between 1780 and 1840 the production of British textiles increased by a factor of 50, creating vast new fortunes among the entrepreneurial factory owners.

In the 1770s factory methods were first applied to agriculture, and the introduction of the steel plow in 1837 dramatically increased farm production to overcome the historical imbalance between population growth and food supply, which up to then had held population growth in check.⁹⁵ After 1820 British entrepreneurs and engineers applied steam power successively to a growing array of manufacturing processes to create a plethora of new products that were sold to paid laborers who, in turn, spent their resulting earnings to buy the manufactured products on expanding urban consumer markets.

In 1787 steam power was harnessed to a propeller and used to drive ships through water, and by 1807 the first commercial steamship line had been established, thus providing a quick, reliable, and inexpensive means of transoceanic and riverine travel. Steam power and factory organization soon spread across the English Channel to Germany and the Netherlands and then moved steadily south and east to reach Russia by 1851, Italy by 1854, and Spain by 1859.⁹⁶ By 1870 steam power had jumped across the Atlantic to launch industrialization in the Americas, notably in Argentina, Canada, Brazil, and the United States.⁹⁷

In 1800 the first steel suspension bridge was built, and in 1804 the first steam locomotive was constructed, finally liberating human beings from their dependence on animate power for overland movement. With the advent of railroads, cost-effective transportation for the first time could be supplied to human settlements regardless of location or terrain.⁹⁸ The telegraph was invented in 1837, and railroad beds were put into service as clear corridors for cables to create an integrated network of transportation and communication linking the new industrial cities to one another. The first transatlantic telegraph cable became operational in 1857. With the advent of the telegraph, for the first time in human experience a person did not have to travel physically through

space to transmit information from one place to another. The functions of transportation and communication began to separate.

All of these technological changes brought about the massive societal transformation we know as the Industrial Revolution. At the dawn of modernity, in the year 1000, gross world product (GWP)—the total value of goods and services produced by human beings throughout the globe—is estimated to have been around 102 trillion dollars.⁹⁹ Seven hundred years later it reached 370 trillion dollars, for an average growth rate of just 0.2 percent per year between 1000 and 1700. As small as this rate of growth was, it was still much larger than that prevailing over the prior nine millennia. After 1700, however, the pace of economic production accelerated dramatically and surged after 1800 to reach exponential levels. Between 1800 and 1900, the GWP increased from 640 trillion dollars to 5,336 trillion dollars, for an average annual growth rate of 2.1 percent, a tenfold increase over the period 1000–1700 and a quantum leap over the rates of economic growth that had prevailed under agrarianism.¹⁰⁰

The Industrial Revolution likewise enabled a sustained increase in population after 1600, and the number of human beings on earth accelerated and population growth also reached exponential levels after 1700. Most of the new people were absorbed by urban areas, and in 1800 the share of human beings residing in cities accelerated greatly, escaping the cap that had constrained human societies since the invention of agriculture. After nearly 10,000 years of low-level stasis, the level of global urbanization grew rapidly to 28 percent in just 150 years, from 1800 to 1950.¹⁰¹

Impressive as this gain in urbanization may seem, it fails to convey the full scale of the transformation that was occurring in the world's industrializing societies. Urbanization in less developed regions only began to rise around 1900 and in 1950 still stood at just 17 percent. In contrast, urbanization in developed regions began a century earlier and by 1950 had reached 53 percent. For the first time in recorded history, an absolute majority of a society's members was able to live in cities rather than the countryside. Remarkably, in Western Europe and North America almost two-thirds (64 percent) had become city dwellers by the mid-twentieth century.¹⁰²

Although the interconnected revolutions in food production, manufacturing, transportation, and communication enabled the number, population, and geographic range of cities to increase, until late in the nineteenth century urban densities were still constrained by two technical limits. The first was medicinal: as long as infectious diseases remained outside of human control, urban mortality continued at high rates to create a permanent structural imbalance between births and deaths that offset the positive effect of in-migration to inhibit urbanization. Although the first successful vaccination occurred in 1796, it was not until 1881 that Louis Pasteur proved the germ theory of contagion

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to provide public officials with the scientific knowledge they needed to bring urban mortality under control. Municipal investments in water purification, sewage treatment, and housing in the late nineteenth and early twentieth centuries caused urban death rates to plummet and reversed the historical rural-urban mortality differential.¹⁰³ It soon became safer to live in cities served by efficient water and sewage systems and near hospitals and clinics than in the countryside.

The second limitation on density was mechanical: the inability to build very far upward. In theory, the availability of milled steel might have permitted humans to construct metal-framed structures as early as the eighteenth century, but heights were still constrained by the reluctance of people to walk up more than four flights of stairs on a regular basis. Density was also limited by the inability to heat, light, and ventilate large multistory buildings without suffocating, freezing, or cooking the inhabitants. These technical constraints were overcome with the adoption of electricity as a means of transmitting and distributing power.

The first electric generator was built in 1831 by Michael Faraday, and after 1870 the first coal-fired generators were placed into service, followed in the 1880s by the first hydroelectric dams. Elisha Otis invented the elevator in 1852, and once electric power became widely available, he began installing elevators in tall buildings throughout the developed world. Suddenly people could travel up and down dozens of floors effortlessly, and the four-story height ceiling was permanently breached: the era of the skyscraper had arrived. At the same time, the invention of the incandescent light bulb (1879) and the electric fan (1882) provided solutions to the long-standing problems of heating, lighting, and ventilating interior spaces, and the invention of the telephone in 1876 allowed instantaneous communication between floors, not to mention across town. With the last of the technical constraints lifted, urban population densities exploded in the nineteenth and early twentieth centuries to make urbanism possible as a way of life for a majority of those living in developed societies.

Postindustrial Urbanism

Dating the end of one era and the beginning of another is always an exercise in the arbitrary. Nonetheless, it is clear that sometime during the 1970s the reign of industrial urbanism came to an end. For a variety of reasons, the critical moment seems to have been around 1975. The mid-1970s coincided with a severe recession throughout the industrial world, the appearance of a new malady known as stagflation (high inflation combined with high unemployment), the end of a 30-year rise in median income, the bottoming out of the equally long decline in poverty rates, and a sharp turnaround from falling to rising income inequality.¹⁰⁴

Whatever the precise date of the transformation, the industrial era proved to be of remarkably short duration. Compared with the 40,000 years of foraging and the 10,000 years of agrarianism, the 175 years of industrialism was short indeed. If human beings did not have sufficient time in 500 generations to evolve genetic adaptations to agrarian urban-

ism, they certainly could not do so in the eight generations that encompassed the rise, peak, and decline of the industrial order. Just as human beings in preindustrial and industrial cities were more adapted physiologically, psychologically, and socially to foraging as a way of life, so too are the inhabitants of today's postindustrial urban landscapes.

Through the nineteenth and early twentieth centuries, wealth accumulated within industrial cities at an unprecedented rate. At the same time, educational levels steadily rose, mortality rates fell, and the pace of technological innovation quickened. Although socioeconomic inequality increased as well, new social movements emerged to press for reform, and by the second decade of the twentieth century they had begun to achieve significant redistributions of power and wealth in a growing number of countries.

For intellectuals, politicians, and the public, the continued march of progress under the banner of industrialism seemed inevitable. Faith in the inexorability of human improvement died violently, however, with the outbreak of World War I in 1914. Known in its day as the Great War, its causes were complex and are still much debated.¹⁰⁵ Perhaps the simplest explanation is that global trade proceeded too fast and moved too far ahead of global governance.¹⁰⁶ In 1914 the world lacked a set of multilateral political institutions capable of adjudicating disputes and diffusing the tensions that inevitably arose from a more intense interaction of nations within a globalizing economy.

Whatever the precise causes of the war, the end result was four years of horrific bloodletting among the world's industrial powers. The profligate, wholesale destruction of land, labor, and capital during the Great War sowed the seeds for economic collapse in the era that followed. When the war finally ended in 1918, international political stability was gone. The regimes of most belligerent nations had been overthrown, and the nascent system of international economic institutions crafted in the late nineteenth century lay in tatters.¹⁰⁷ World War I opened a Pandora's box of contradictory forces, and it would take most of the twentieth century to reconcile them: the intensification of the struggle between labor and capital, the polarization of political ideology between communism and fascism, a widespread retreat from liberal democracy among former trading nations, and the fatal wounding of one hegemonic power and the reluctance of its successor to assume the mantle of responsibility.

Reflecting these paralyzing contradictions, the period 1918–1945 witnessed the collapse of international trade, the rise of autarkic economic nationalism, and the widespread implementation of chauvinistic restrictions on trade, investment, and immigration.¹⁰⁸ Although the world economy hobbled along for a while on the strength of wealth accumulated in Oceania and the Americas during the Great War, the global system of trade and investment finally came crashing down in 1929. Laws

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passed by an isolationist U.S. Congress during that decade progressively choked off international flows of people, goods, ideas, and capital, ultimately producing an economic meltdown of unprecedented depth and duration.

During the years of the Great Depression, international trade, capital formation, and industrial expansion all but ceased, and technological progress slowed to a crawl.¹⁰⁹ Following ten years of social, economic, and political turmoil, the ideological contradictions unleashed in 1914 were partially resolved on the battlefield between 1939 and 1945, as a coalition of communist and liberal democratic states arose to defeat fascism in the Second World War. Hostilities ended in 1945, with much of the industrial world bombed into ruins and the world polarized into conflicting ideological camps.

Because of this unique history, the social and spatial forms associated with pre-1914 industrial urbanism were largely frozen in time through 1945 and changed slowly for three decades thereafter especially in the United States, which never suffered physical damage during the years of violent warfare. Although telltale signs of the new postindustrial order were evident in North America as early as the 1920s, the economic collapse of 1929 and the virtual absence of private investment through 1945 meant that the basic social, economic, and spatial infrastructure of industrial cities persisted more or less unchanged through 1950, when urban industrialism may be said to have reached its zenith. On or about that year, the population, wealth, employment, and influence of U.S. central cities peaked.

Over the next 25 years economic growth continued under institutional arrangements developed largely during the 1930s in response to problems of the 1920s, a social compact among workers, owners, and professionals generally known as the welfare state.¹¹⁰ Although its specific institutional manifestations varied from country to country,¹¹¹ the welfare state generally attempted to maintain balanced economic growth by regulating markets, protecting citizens against market failures, providing universal retirement and health care systems, and extending popular access to education and housing. Beginning in the 1970s, however, the institutions of the welfare state came under increasing pressure as a result of two notable developments: a revival of global trade and a return to rapid technological innovation.¹¹² Together these two macrostructural transformations gave birth to the postindustrial order.

As already noted, the end of the Second World War did not bring about a full resumption of global trade because of the armed standoff between liberal capitalist democracies and communist dictatorships. Billions of people lived outside of markets within command economies in China and the Soviet Union and their satellite countries. Millions more lived under autarkic regimes that sought to promote economic development internally by applying tariffs, capital controls, exchange regulations, and import quotas to insulate themselves from the global economy. The attempt to promote national economic growth by insulating domestic markets from the global economic forces was known as Import Substitution Industrialization.¹¹³ The period 1945–1975 was generally one of

state dominance in the political economy of both developing and developed nations.

Among Western industrial powers, the United States finally assumed the mantle of responsibility that it by rights should have assumed after World War I and took the lead in rebuilding a transnational market economy while attempting to correct the mistakes of the past. The United States joined with other liberal democracies to create a new, more effective international system to ensure international security, liquidity, convertibility, investment, and trade through multilateral institutions such as the United Nations (UN), the North Atlantic Treaty Organization (NATO), the World Bank, the International Monetary Fund (IMF), the General Agreement on Tariffs and Trade (GATT), and ultimately the World Trade Organization (WTO). Through these and other institutions, the United States supported the economic reconstruction of Europe and Japan and worked to facilitate their integration into the reconstituted global trading system.

These policies led to a revival of trade, first among industrialized nations and then, as decolonization proceeded, between the developing and developed worlds. As the reconstruction of Europe and Japan drew to a close, agencies such as the UN, the IMF, and the World Bank shifted their agendas to promote economic growth in developing nations and worked to facilitate their entry into the global market.¹¹⁴ During the 1970s and 1980s, newly industrialized nations such as Korea, Taiwan, Singapore, and Malaysia developed economically by selling manufactured goods to overseas markets in developed countries, a strategy that became known as Export Industrialization.

During the 1990s, this strategy became reified as the Washington Consensus and was imposed by the mandarins at the World Bank and the IMF on countries throughout the world. Rather than insulating domestic economies from global economic forces, the new strategy sought to achieve fuller incorporation into the international trade regime by reducing tariffs, relaxing capital controls, eliminating import quotas, downsizing government, privatizing state industries, and cultivating export markets.¹¹⁵

After 1975, flows of capital, goods, raw materials, and information increased and were accompanied by a revival of immigration, first among industrialized nations and then between developing and developed regions. During the 1970s trade increased sharply, finally equaling the share of gross national product (GNP) reached during the decade 1911–1920 (12.5 percent). At the same time, in absolute terms immigration surpassed the level it had last achieved during the 1920s. Until the 1990s, however, the global economy could not flower fully because nearly a third of all human beings were isolated from it within rigid command economies. Only with the fall of the Berlin Wall in 1989 were conditions ripe for a full return to international trade and the emergence of a truly global economy. With the collapse of the Soviet Union and the decisive shift of Chinese communist leadership away from command and toward market mechanisms, the world finally returned to a stage of integrated economic development that it had last achieved in 1914.

Over the final two decades of the twentieth century, both international migration and trade expanded to new and unprecedented heights. During the 1990s, for example, immigration surged to 9.4 million persons, while trade rose to almost 18 percent of GNP.¹¹⁶ At the dawn of the new century, therefore, the United States stood at the center of a new global economy characterized by the massive international movement of people, goods, capital, commodities, services, and information, leading during the 1990s to a remarkable burst of economic growth and wealth creation.

Despite the foregoing historical contingencies, the roots of the post-industrial revolution were ultimately technological. Industrial urbanism ended because its characteristic technologies were replaced by a new set of technical innovations that sparked a wholesale reorganization of human society. Electric motors replaced steam engines in manufacturing, gasoline engines replaced steam propulsion in transportation, satellite and cellular transmission replaced wire networks in communications, and digital processing using silicon chips and fiber optics replaced analog computation using mechanical switches and copper wires in information processing. These technical shifts led to a revolution in transportation, communication, computation, and production.

The accelerating pace of technological change during the post-industrial era is indicated by the annual number of patents filed in the United States from 1960 to 2000. During the 1960s and 1970s the pace of technological innovation was relatively stable, with the number of applications fluctuating at around 100,000 per year. Suddenly in 1984, however, the rate of innovation shifted sharply upward, with the number of patent applications doubling by 1994 and tripling by 2000. In the last decade of the twentieth century, some 2.5 million patent applications were filed, compared with just 1 million during the 1970s.

Never before had human society witnessed technical change on such a scale. Decreases in the cost and increases in the rapidity of transportation, communications, and computation after 1970 turned the economic logic of the industrial order on its head. Whereas the material foundations of industrial society lay in the manufacture of standardized goods within large stable institutions, the economic basis for postindustrialism was the production of symbols—ideas, knowledge, and information—within small flexible institutional settings. The new postindustrial regime did not favor economies of ag-

glomeration and scale, mass consumption, homogenous markets, or large centralized cities managed by hierarchical bureaucracies but instead favored dispersed production, segmented markets, and fragmented settlements linked by formal and informal networks managed by smaller and more compressed bureaucracies.¹¹⁷

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The Future of Human Society

Over the past 10,000 years human society has evolved in stages from tiny populations of mobile foragers circulating through natural environments, to small populations of settled horticulturalists exploiting narrow ecological niches, to moderately sized cities presiding over large agrarian hinterlands, to densely settled industrialized cities within an urbanizing world, and to the present configuration of populous geographically expansive metropolitan areas containing nearly all members of postindustrial society. In the course of this evolution, people did not change physiologically as organisms; what changed were the social structures they created and the technologies they deployed.

For most of human history, the impetus for social change came from fluctuations in the environment that occurred over time and space. As groups encountered different ecological conditions in different locations and in historical epochs, they innovated social structures and technologies to adapt. Since the emergence of the first human beings, the various stages of societal evolution have unfolded at an accelerating rate, and the impetus for change has shifted from the environment to the social structure.

The symbolic revolution that occurred around 50,000 years ago led to the flowering of mythic culture as an adaptive tool, which led to new innovations in technology and microsocial organization that, in turn, enabled the domestication of plants and animals. Around 10,000 years ago the first cities emerged, which made possible a new kind of theoretic culture that further accelerated rates of social and technological innovation that combined to produce, just 200 years ago, an industrial revolution that accelerated population growth and allowed societies to finally surpass the urbanization threshold of 5 percent. The subsequent industrialization and urbanization of society led to exponential accumulations of wealth, knowledge, and technology to give birth, a mere 25 years ago, to a new postindustrial metropolitan order based on the production and manipulation of information within large de-concentrated urban agglomerations scattered throughout the globe.

In the twenty-first century, a growing majority of human beings will live in large densely populated urban agglomerations. In this environment, most interpersonal associations will be impersonal and occur in the context of markets and anonymous public settings. The inhabitants of postindustrial urban societies will not lose their ability to form lasting bonds of intense emotion, of course. While continuing to cultivate such primary relationships to achieve emotional satisfaction, they will increasingly engage in fleeting, superficial relationships to attain material and symbolic rewards. In quantitative terms, these secondary role relationship will increasingly dominate society.

Increasingly, human social interactions will be shaped by exposure to an urban environment of great size, density, and social heterogeneity. Within this brave new urban world, the character of the ecological setting in which people find themselves—and the nature of their psychological, social, cultural, and physiological adaptations to it—will vary

dramatically depending on whether they are rich or poor and whether they live in areas of concentrated affluence or poverty. Evidence suggests that a remarkable and widespread geographic concentration of deprivation and advantage occurred within postindustrial cities during the final decades of the twentieth century.

This concentration was brought about by the combination of rising socioeconomic inequality with growing class segregation, an interaction whose effects were exacerbated by segregation on the basis of race or ethnicity. Postindustrial societies are increasingly differentiated socially along three fundamental axes variation—socioeconomic status, ethnic status, and family status—and the geographic intersection of these axes within the urban landscape has produced a new correspondence among these dimensions.

A growing body of urban research suggests that people who grow up under conditions of concentrated poverty and deprivation display higher rates of joblessness, educational failure, single parenthood, income deprivation, family disruption, poor health, and cognitive impairment as adults, compared with those who grew up in areas of concentrated affluence. Inequality, class segregation, and the resulting concentration of affluence and poverty have thus produced a reification of the fundamental mechanisms of stratification leading to a tighter intergenerational transmission of socioeconomic advantage and disadvantage.

Ultimately, avoiding the creation of a hardened stratification system of durable inequality requires preventing further concentrations of affluence and poverty and rolling back those that emerged during the period 1975–1995. Such a change ultimately requires the effective implementation of policies to reduce inequalities with respect to income and wealth, lower levels of class segregation, and reduction of segregation on the basis of ascriptive traits such as race, ethnicity, and gender, which are the proximate determinants of ecologically concentrated wealth and poverty.

If the status quo continues, inequality will increase and racial-ethnic divisions will grow, yielding a volatile and unstable society for the twenty-first century. Urban areas in developed countries and the Third World can expect to experience escalating crime and violence punctuated by sporadic riots and increased terrorism as class and communal tensions rise. The poor will become disenfranchised and alienated from mainstream political and economic institutions, while the middle classes will grow increasingly angry, frustrated, and politically conservative. The affluent will continue to withdraw socially and spatially from the rest of society and seek to placate middle-class anger with quick fixes and demagogic excesses that do not change the underlying structure responsible for their problems. This scenario is by no means inevitable, and one can only hope that it will not come to pass. Yet this is the path down which we are headed unless self-conscious actions are undertaken to change course.

Notes

1. Jared Diamond, *The Third Chimpanzee: The Evolution and Future of the Human Animal* (New York: HarperCollins, 1992), 191.

2. Richard W. Wrangham, "Out of the *Pan*, into the Figure: How Our Ancestors Depended on What They Ate," in *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, ed. Frans B. M. de Waal (Cambridge, MA: Harvard University Press, 2001), 119–144.
3. Jane Goodall, *The Chimpanzees of Gombe: Patterns of Behavior* (Cambridge, MA: Harvard University Press, 1986).
4. Robin I. Dunbar, *Primate Social Systems* (London: Croom Helm, 1988); Frans B. M. de Waal, *Chimpanzee Politics: Power and Sex Among the Apes* (Baltimore, MD: Johns Hopkins University Press, 1998).
5. Wrangham, "Out of the Pan."
6. Jonathan H. Turner, *On the Origins of Human Emotions: A Sociological Inquiry into the Evolution of Human Affect* (Stanford, CA: Stanford University Press, 2000).
7. Turner, *Origins of Emotions*, 9.
8. de Waal, *Chimpanzee Politics*; Richard W. Byrne, "Social and Technical Forms of Primate Intelligence," in de Waal, *Tree of Origin*, 145–172.
9. Goodall, *Chimpanzees Gombe*; de Waal, *Chimpanzee Politics*.
10. Alexandra Maryanski and Jonathan H. Turner, *The Social Cage: Human Nature and the Evolution of Society* (Stanford, CA: Stanford University Press, 1992).
11. Robin I. Dunbar, *Grooming, Gossip, and the Evolution of Language* (London: Faber and Faber, 1996).
12. Robin I. Dunbar, "Brains on Two Legs: Group Size and the Evolution of Intelligence," in de Waal, *Tree of Origin*, 173–192.
13. John R. Napier and Prue H. Napier, *The Natural History of the Primates* (Cambridge, MA: MIT Press, 1985).
14. Harry J. Jerison, *Evolution of the Brain and Intelligence* (New York: Academic Press, 1973).
15. Turner, *Origins of Emotions*.
16. Charles T. Snowdon, "From Primate Communication to Human Language," in de Waal, *Tree of Origin*, 193–228.
17. Eric Lennenberg, "Of Language, Knowledge, Apes, and Brains," in *Speaking of Apes*, ed. T. A. Sebeok and J. Sebeok (New York: Plenum, 1980).
18. Jerome Bruner, *Actual Minds, Possible Worlds* (Cambridge, MA: Harvard University Press, 1986).
19. Merlin Donald, *Origins of the Modern Mind: Three States in the Evolution of Culture and Cognition* (Cambridge, MA: Harvard University Press, 1991).
20. Ansley J. Coale, "The History of the Human Population," *Scientific American* 231, no. 3 (1974): 51.
21. Chris B. Stringer, "Evolution of Early Humans," in *The Cambridge Encyclopedia of Human Evolution*, ed. Steven Jones, Robert Martin, and David Pilbeam (Cambridge: Cambridge University Press, 1992).
22. Dunbar, "Brains on Two Legs."
23. Joseph E. LeDoux, *Synaptic Self: How Our Brains Become Who We Are* (New York: Viking, 2002).
24. Dunbar, "Brains on Two Legs."
25. L. C. Aiello and Robin I. M. Dunbar, "Neocortex Size, Group Size, and the Evolution of Language," *Current Anthropology* 34 (1993): 184–193.
26. Turner, *Origins of Emotions*.
27. Donald, *Origins of the Modern Mind*.
28. Charles K. Brain, "Evidence of Fire in Swartkrans Cave," in *Swartkrans*, Monograph no. 8, ed. C. K. Brain (Pretoria, South Africa: Transvaal Museum, 1983).

29. Donald, *Origins of the Modern Mind*.
30. Donald, *Origins of the Modern Mind*.
31. Peter Ellison, *On Fertile Ground: A Natural History of Human Reproduction* (Cambridge, MA: Harvard University Press, 2001).
32. C. O. Lovejoy, "Hominid Origins: The Role of Bipedalism," *American Journal of Physical Anthropology* 52 (1980): 250.
33. Turner, *Origins of Emotions*.
34. Donald, *Origins of the Modern Mind*.
35. Turner, *Origins of Emotions*.
36. Iranaus Eibl-Eibesfeld, *Human Ethnology* (New York: Aldine de Gruyter, 1989); Paul Ekman and Erika Rosenberg, *What the Face Reveals: Basic and Applied Studies of Spontaneous Expression Using the Facial Action Coding System* (Oxford: Oxford University Press, 1997).
37. Coale, "History of the Human Population," 51.
38. Ian Tattersall, *The Last Neanderthal: The Origin, Success, and Mysterious Extinction of Our Closest Human Relative* (New York: Macmillan, 1995).
39. Dunbar, "Brains on Two Legs."
40. Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: Norton, 1997).
41. Coale, "History of the Human Population," 51; Massimo Livi-Bacci, *A Concise History of World Population* (Oxford, UK: Blackwell, 1992); John Landers, "Reconstructing Ancient Populations," in *The Cambridge Encyclopedia of Human Evolution*, ed. Steve Jones, Robert Martin, and David Pilbeam (Cambridge: Cambridge University Press, 1992).
42. John Knight et al., "An Evolutionary Approach to Culture," in *The Evolution of Culture: An Interdisciplinary View*, ed. Robin Dunbar, Chris Knight, and Camilla Power (New Brunswick, NJ: Rutgers University Press, 1999); Ian Watts, "The Origin of Symbolic Culture," in Dunbar, *The Evolution of Culture*, 1999.
43. Donald, *Origins of the Modern Mind*.
44. Diamond, *Third Chimpanzee*.
45. Ian Tattersall, *Becoming Human: Evolution and Human Uniqueness* (New York: Harcourt Brace, 1998).
46. Philip G. Chase, "Symbolism as Reference and Symbolism as Culture," in Dunbar, *The Evolution of Culture*, 1999.
47. Richard L. Gregory, *Mind in Science* (London: Penguin, 1981).
48. Jaak Panksepp, *Affective Neuroscience: The Foundations of Human and Animal Emotions* (New York: Oxford University Press, 1998).
49. Dunbar, *Evolution Language*; Alexandra Maryanski, "Was Speech an Evolutionary Afterthought?" in *Communicating Meaning: The Evolution and Development of Language*, ed. B. M. Vlechkousky and D. M. Rumbaugh (Hillside, NJ: Lawrence Erlbaum, 1996).
50. Dunbar, "Brains on Two Legs," 181.
51. Dunbar, *Evolution Language*.
52. Dunbar, "Brains on Two Legs," 190–191.
53. Noam Chomsky, *Reflections on Language* (New York: Pantheon Books, 1975); Steven Pinker, *The Language Instinct: How the Mind Creates Language* (New York: HarperCollins, 1994).
54. Donald, *Origins of the Modern Mind*; Diamond, *The Third Chimpanzee*.
55. Gregory, *Mind in Science*.
56. Donald, *Origins of the Modern Mind*.
57. Tattersall, *Becoming Human*.
58. Donald, *Origins of the Modern Mind*.
59. Chase, "Symbolism as Reference."

60. Alan Barnard, "Modern Hunter-Gatherers and Early Symbolic Culture," in Dunbar, *The Evolution of Culture*, 2001.
61. Randall Collins, *Interaction Ritual Chains* (Princeton, NJ: Princeton University Press, 2004).
62. Turner, *Origins of Emotions*.
63. Gideon Sjoberg, *The Pre-Industrial City: Past and Present* (Glencoe, IL: Free Press, 1960).
64. Diamond, *Guns, Germs, and Steel*.
65. Diamond, *Guns, Germs, and Steel*.
66. Sjoberg, *Pre-Industrial City*.
67. Tetrius Chandler and Gerald Fox, *3000 Years of Urban Growth* (New York: Academic Press, 1974).
68. Chandler and Fox, *3000 Years*.
69. McNeill, *Plagues and Peoples*; Diamond, *Guns, Germs, and Steel*.
70. Diamond, *Guns, Germs, and Steel*.
71. McNeill, *Plagues and Peoples*.
72. McNeill, *Plagues and Peoples*; Diamond, *Guns, Germs, and Steel*.
73. Immanuel Wallerstein, *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (Orlando: Academic Press, 1974); Fernand Braudel, *Civilization and Capitalism, 15th–18th Century: The Wheels of Commerce* (New York: Harper and Row, 1982).
74. Livi-Bacci, *World Population*.
75. United Nations, *Patterns of Urban and Rural Population Growth* (New York: United Nations Department of International Economic and Social Affairs, 1980).
76. Chandler and Fox, *3000 Years*.
77. Roy Harris, *The Origin of Writing* (London: Duckworth, 1986); Andrew Lawler, "Writing Gets a Rewrite," *Science* 292, no. 5526 (2001): 2418–2420.
78. Diamond, *Guns, Germs, and Steel*.
79. Robert Wright, *Nonzero: The Logic of Human Destiny* (New York: Vintage, 2000).
80. Diamond, *Guns, Germs, and Steel*.
81. Donald, *Origins of the Modern Mind*.
82. Bruner, *Minds, Worlds*.
83. Sjoberg, *Pre-Industrial City*.
84. Henri Pirenne, *Medieval Cities* (Princeton, NJ: Princeton University Press, 1925).
85. David Levine, *At the Dawn of Modernity: Biology, Culture, and Material Life in Europe after the Year 1000* (Berkeley: University of California Press, 2001).
86. Pirenne, *Medieval Cities*.
87. Pirenne, *Medieval Cities*; Levine, *Dawn of Modernity*.
88. Levine, *Dawn of Modernity*.
89. Ansley J. Coale and Susan C. Watkins, *The Decline of Fertility in Europe* (Princeton, NJ: Princeton University Press, 1986); Levine, *Dawn of Modernity*.
90. Levine, *Dawn of Modernity*.
91. Levine, *Dawn of Modernity*.
92. William H. McNeill, *Plagues and Peoples* (Garden City, NY: Anchor, 1976).
93. Levine, *Dawn of Modernity*.
94. James E. McClellan III and Harold Dorn, *Science and Technology in World History: An Introduction* (Baltimore: Johns Hopkins University Press, 1999).

95. Thomas R. Malthus, *An Essay on the Principle of Population as It Affects the Future Improvement of Society* (London: J. Johnson, 1798).
96. Douglas S. Massey, "International Migration and Economic Development in Comparative Perspective," *Population and Development Review* 14 (1988): 383–414.
97. Brinley Thomas, *Migration and Economic Growth: A Study of Great Britain and the Atlantic Economy* (Cambridge: Cambridge University Press, 1973).
98. McClellan and Dorn, *Science and Technology*.
99. Angus Maddison, *The World Economy: Historical Statistics* (Paris: Organization for Economic Cooperation and Development, 2001).
100. Maddison, *World Economy*.
101. United Nations, *Patterns of Growth*.
102. United Nations, *Patterns of Growth*.
103. S. H. Preston and M. R. Haines, *Fatal Years: Child Mortality in Late Nineteenth-Century America* (Princeton, NJ: Princeton University Press, 1991).
104. Sheldon Danziger and Peter Gottschalk, *America Unequal* (New York: Russell Sage Foundation, 1995); Frank Levy, *The New Dollars and Dreams: American Incomes and Economic Change* (New York: Russell Sage, 1998); Kevin Phillips, *Wealth and Democracy: A Political History of the American Rich* (New York: Broadway Books, 2002).
105. Annika Mombauer, *The Origins of the First World War: Controversies and Consensus* (New York: Longman, 2002).
106. Douglas S. Massey and J. Edward Taylor, "Back to the Future: Immigration Research, Immigration Policy, and Globalization in the 21st Century," in *International Migration: Prospects and Policies in a Global Market*, ed. Douglas S. Massey and J. Edward Taylor (Oxford: Oxford University Press, 2004).
107. Harold James, *The End of Globalization: Lessons from the Great Depression* (Cambridge, MA: Harvard University Press, 2001).
108. James, *Globalization Lessons*.
109. Massey and Taylor, "Immigration Research."
110. Walter I. Trattner, *From Poor Law to Welfare State: A History of Social Welfare in America*, 6th ed. (New York: Free Press, 1998); Susan Pedersen, *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914–1945*. Cambridge: Cambridge University Press, 1995.
111. See Gosta Esping Anderson, *The Three Worlds of Welfare Capitalism* (Princeton, NJ: Princeton University Press, 1990).
112. Gosta Esping Anderson, *Welfare States in Transition: National Adaptations in Global Economies* (Newbury Park, CA: Sage, 1996).
113. Richard B. Clark, *Planning Import Substitution* (Amsterdam: North-Holland Publishing, 1970).
114. Joseph E. Stiglitz, *Globalization and Its Discontents* (New York: Norton, 2002).
115. Pedro-Pablo Kuczynski and John Williamson, *After the Washington Consensus: Restarting Growth and Reform in Latin America* (Washington, DC: Institute for International Economics, 2003).
116. Massey and Taylor, "Immigration Research."
117. David Harvey, *The Condition of Postmodernity* (Cambridge, UK: Blackwell, 1989); David B. Clarke, *Consumer Society and the Postmodern City* (New York: Routledge, 2002); Also see three works by Manuel Castells: *End of Millennium* (Cambridge, UK: Blackwell, 1998), *The Power of Identity* (Cambridge, UK: Blackwell, 1997), and *The Rise of the Network Society* (Cambridge, UK: Blackwell, 1996).

Bibliography

- Aielo, L. C., and Robin I. M. Dunbar. "Neocortex Size, Group Size, and the Evolution of Language." *Current Anthropology* 34 (1993): 184–193.
- Barnard, Alan. "Modern Hunter-Gatherers and Early Symbolic Culture." In *The Evolution of Culture*, ed. Robin Dunbar, Chris Knight, and Camilla Power. New Brunswick, NJ: Rutgers University Press, 2001.
- Brain, Charles K. "Evidence of Fire in Swartkrans Cave." In *Swartkrans*, Monograph no. 8, edited by C. K. Brain. Pretoria, South Africa: Transvaal Museum, 1983.
- Braudel, Fernand. *Civilization and Capitalism, 15th–18th Century: The Wheels of Commerce*. New York: Harper and Row, 1982.
- Bruner, Jerome. *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press, 1986.
- Byrne, Richard W. "Social and Technical Forms of Primate Intelligence." In *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, edited by Frans B. M. de Waal. Cambridge, MA: Harvard University Press, 2001.
- Castells, Manuel. *End of Millennium*. Cambridge, UK: Blackwell, 1998.
- Castells, Manuel. *The Power of Identity*. Cambridge, UK: Blackwell, 1997.
- Castells, Manuel. *The Rise of the Network Society*. Cambridge, UK: Blackwell, 1996.
- Chandler, Tetrius, and Gerald Fox. *3000 Years of Urban Growth*. New York: Academic Press, 1974.
- Chase, Philip G. "Symbolism as Reference and Symbolism as Culture." In *The Evolution of Culture*, edited by Robin Dunbar, Chris Knight, and Camilla Power. New Brunswick, NJ: Rutgers University Press, 1999.
- Chomsky, Noam. *Reflections on Language*. New York: Pantheon Books, 1975.
- Christian, David. "Scales." In *Palgrave Advances in World Histories*, edited by Marnie Hughes-Warrington. Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2005.
- Clark, Richard B. *Planning Import Substitution*. Amsterdam: North-Holland Publishing, 1970.
- Clarke, David B. *Consumer Society and the Postmodern City*. New York: Routledge, 2002.
- Coale, Ansley J. "The History of the Human Population." *Scientific American* 231 (3) (1974): 51.
- Coale, Ansley J., and Susan C. Watkins. *The Decline of Fertility in Europe*. Princeton, NJ: Princeton University Press, 1986.
- Collins, Randall. *Interaction Ritual Chains*. Princeton, NJ: Princeton University Press, 2004.
- Danziger, Sheldon, and Peter Gottschalk. *America Unequal*. New York: Russell Sage Foundation, 1995.
- de Waal, Frans B. M. *Chimpanzee Politics: Power and Sex Among the Apes*. Baltimore, MD: Johns Hopkins University Press, 1998.
- Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1997.
- Diamond, Jared. *The Third Chimpanzee: The Evolution and Future of the Human Animal*. New York: HarperCollins, 1992.
- Donald, Merlin. *Origins of the Modern Mind: Three States in the Evolution of Culture and Cognition*. Cambridge, MA: Harvard University Press, 1991.
- Dunbar, Robin I. "Brains on Two Legs: Group Size and the Evolution of Intelligence." In *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, edited by Frans B. M. de Waal. Cambridge, MA: Harvard University Press, 2001.

- Dunbar, Robin I. *Grooming, Gossip, and the Evolution of Language*. London: Faber and Faber, 1996.
- Dunbar, Robin I. *Primate Social Systems*. London: Croom Helm, 1988.
- Eibl-Eibesfeld, Irenaus. *Human Ethnology*. New York: Aldine de Gruyter, 1989.
- Ekman, Paul, and Erika Rosenberg. *What the Face Reveals: Basic and Applied Studies of Spontaneous Expression Using the Facial Action Coding System*. Oxford: Oxford University Press, 1997.
- Ellison, Peter. *On Fertile Ground: A Natural History of Human Reproduction*. Cambridge, MA: Harvard University Press, 2001.
- Esping Anderson, Gosta. *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press, 1990.
- Esping Anderson, Gosta. *Welfare States in Transition: National Adaptations in Global Economies*. Newbury Park, CA: Sage, 1996.
- Goodall, Jane. *The Chimpanzees of Gombe: Patterns of Behavior*. Cambridge, MA: Harvard University Press, 1986.
- Gregory, Richard L. *Mind in Science*. London: Penguin, 1981.
- Harris, Roy. *The Origin of Writing*. London: Duckworth, 1986.
- Harvey, David. *The Condition of Postmodernity*. Cambridge, UK: Blackwell, 1989.
- James, Harold. *The End of Globalization: Lessons from the Great Depression*. Cambridge, MA: Harvard University Press, 2001.
- Jerison, Harry J. *Evolution of the Brain and Intelligence*. New York: Academic Press, 1973.
- Knight, Chris, Robin Dunbar, and Camilla Power. "An Evolutionary Approach to Culture." In *The Evolution of Culture: An Interdisciplinary View*, edited by Robin Dunbar, Chris Knight, and Camilla Power. New Brunswick, NJ: Rutgers University Press, 1999.
- Kuczynski, Pedro-Pablo, and John Williamson. *After the Washington Consensus: Restarting Growth and Reform in Latin America*. Washington, DC: Institute for International Economics, 2003.
- Landers, John. "Reconstructing Ancient Populations." In *The Cambridge Encyclopedia of Human Evolution*, edited by Steve Jones, Robert Martin, and David Pilbeam. Cambridge: Cambridge University Press, 1992.
- Lawler, Andrew. "Writing Gets a Rewrite." *Science* 292 (5526) (2001): 2418–2420.
- LeDoux, Joseph E. *Synaptic Self: How Our Brains Become Who We Are*. New York: Viking, 2002.
- Lenneberg, Eric. "Of Language, Knowledge, Apes, and Brains." In *Speaking of Apes*, edited by T. A. Sebeok and J. Sebeok. New York: Plenum, 1980.
- Levine, David. *At the Dawn of Modernity: Biology, Culture, and Material Life in Europe after the Year 1000*. Berkeley: University of California Press, 2001.
- Levy, Frank. *The New Dollars and Dreams: American Incomes and Economic Change*. New York: Russell Sage, 1998.
- Lieberman, Philip. *The Biology and Evolution of Language*. Cambridge, MA: Harvard University Press, 1984.
- Lieberman, Philip. *On the Origins of Language: An Introduction to the Evolution of Human Speech*. New York: Macmillan, 1975.
- Livi-Bacci, Massimo. *A Concise History of World Population*. Oxford, UK: Blackwell, 1992.
- Lovejoy, C. O. "Hominid Origins: The Role of Bipedalism." *American Journal of Physical Anthropology* 52 (1980): 250.
- Maddison, Angus. *The World Economy: Historical Statistics*. Paris: Organization for Economic Cooperation and Development, 2001.

- Malthus, Thomas R. *An Essay on the Principle of Population as It Affects the Future Improvement of Society*. London: J. Johnson, 1798.
- Maryanski, Alexandra. "Was Speech an Evolutionary Afterthought?" In *Communicating Meaning: The Evolution and Development of Language*, edited by B. M. Vlechkousky and D. M. Rumbaugh. Hillsdale, NJ: Lawrence Erlbaum, 1996.
- Maryanski, Alexandra, and Jonathan H. Turner. *The Social Cage: Human Nature and the Evolution of Society*. Stanford, CA: Stanford University Press, 1992.
- Massey, Douglas S. "International Migration and Economic Development in Comparative Perspective." *Population and Development Review* 14 (1988): 383–414.
- Massey, Douglas S., and J. Edward Taylor. "Back to the Future: Immigration Research, Immigration Policy, and Globalization in the 21st Century." In *International Migration: Prospects and Policies in a Global Market*, edited by Douglas S. Massey and J. Edward Taylor. Oxford: Oxford University Press, 2004.
- McClellan, James E., III, and Harold Dorn. *Science and Technology in World History: An Introduction*. Baltimore: Johns Hopkins University Press, 1999.
- McNeill, William H. *Plagues and Peoples*. Garden City, NY: Anchor, 1976.
- Mombauer, Annika. *The Origins of the First World War: Controversies and Consensus*. New York: Longman, 2002.
- Napier, John R., and Prue H. Napier. *The Natural History of the Primates*. Cambridge, MA: MIT Press, 1985.
- Panksepp, Jaak. *Affective Neuroscience: The Foundations of Human and Animal Emotions*. New York: Oxford University Press, 1998.
- Pedersen, Susan. *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914–1945*. Cambridge: Cambridge University Press, 1995.
- Phillips, Kevin. *Wealth and Democracy: A Political History of the American Rich*. New York: Broadway Books, 2002.
- Pinker, Steven. *The Language Instinct: How the Mind Creates Language*. New York: HarperCollins, 1994.
- Pirenne, Henri. *Medieval Cities*. Princeton, NJ: Princeton University Press, 1925.
- Preston, S. H. and M. R. Haines. *Fatal Years: Child Mortality in Late Nineteenth-Century America*. Princeton, NJ: Princeton University Press, 1991.
- Sjoberg, Gideon. *The Pre-Industrial City: Past and Present*. Glencoe, IL: Free Press, 1960.
- Snowdon, Charles T. "From Primate Communication to Human Language." In *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, edited by Frans B. M. de Waal. Cambridge, MA: Harvard University Press, 2001.
- Stiglitz, Joseph E. *Globalization and Its Discontents*. New York: Norton, 2002.
- Stringer, Chris B. "Evolution of Early Humans." In *The Cambridge Encyclopedia of Human Evolution*, edited by Steven Jones, Robert Martin, and David Pilbeam. Cambridge: Cambridge University Press, 1992.
- Tattersall, Ian. *Becoming Human: Evolution and Human Uniqueness*. New York: Harcourt Brace, 1998.
- Tattersall, Ian. *The Last Neanderthal: The Origin, Success, and Mysterious Extinction of Our Closest Human Relative*. New York: Macmillan, 1995.
- Thomas, Brinley. *Migration and Economic Growth: A Study of Great Britain and the Atlantic Economy*. Cambridge: Cambridge University Press, 1973.

- Trattner, Walter I. *From Poor Law to Welfare State: A History of Social Welfare in America*. 6th ed. New York: Free Press, 1998.
- Turner, Jonathan H. *On the Origins of Human Emotions: A Sociological Inquiry into the Evolution of Human Affect*. Stanford, CA: Stanford University Press, 2000.
- United Nations. *Patterns of Urban and Rural Population Growth*. New York: United Nations Department of International Economic and Social Affairs, 1980.
- Wallerstein, Immanuel. *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. Orlando: Academic Press, 1974.
- Watts, Ian. "The Origin of Symbolic Culture." In *The Evolution of Culture: An Interdisciplinary View*, edited by Robin Dunbar, Chris Knight, and Camilla Power. New Brunswick, NJ: Rutgers University Press, 1999.
- Wrangham, Richard W. "Out of the *Pan*, into the Figure: How Our Ancestors Depended on What They Ate." In *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, edited by Frans B. M. de Waal. Cambridge, MA: Harvard University Press, 2001.
- Wright, Robert. *Nonzero: The Logic of Human Destiny*. New York: Vintage, 2000.



In this entry, cultural geographers Donald Rallis and Melina Patterson examine regions as the result of the interaction between geographic conditions—seas, mountain ranges, etc.—and human culture, perceptions, and heritage. The entry provides a very worthy lens through which to view the way in which humans form and maintain societies.

—Carolyn Neel

Regional Geography and World History

Donald N. Rallis and Melina A. Patterson

There are many ways in which we can consider the history of humans and their relationship with their surroundings. In this section, we present a short overview of world history from two perspectives. The first focuses on the significance of natural processes such as geographical and climatic conditions on human history. Next we consider the impact of human processes on the environment. However, before we can apply a regional framework to world history, we must first think critically about the concept of regions. There is a tendency to imagine that regions simply exist and always have, that those areas we see today as coherent units must have existed throughout time. However, regions are matters of convenience; they reflect our desire to generalize about places and peoples. A region is an idea that we use to organize information spatially. Today we define regions by their commonalities, by what they share, and thus we can identify linguistic, religious, precipitation, or soil regions (to give a far from complete set of examples). Regions, at any scale, can be imagined in an infinite number of ways for various intellectual projects. For example, climatic and cultural regions could both encompass the entirety of the globe but would have different boundaries. For our purpose, we treat regions as areas shaped by environment, culture, and ideas about the nature of places. In other words, our human understandings of self and other, here and there, home and not home, help create regions. All of these things—the environment, culture and ideas—change. The environment changes due to natural variability in rainfall and temperature patterns but also human actions. Cultures change over time due to internal causes as well as external contacts. The changes cause shifts in our collective understandings of how we live, or should live, in a particular place as well as our identity, our perception of who “we” are and who “they” are. So, regions are not static. The variables that define regions change over time, resulting in shifting regional boundaries. Looking at regions historically is a complex process. Any single regional division or framework reflects the perspective and realities of a particular historical moment; it will not fully or accurately represent the reality of other historical moments.

Commonalities define regions, so definitions of smaller regions will likely be more accurate because the area and the people in it will share more characteristics. For example, thinking about the Americas as a hemispheric region captures the degree to which the whole territory was a meeting ground between indigenous peoples and Europeans and to which certain aspects of those encounters, such as the importance of disease in destroying huge proportions of indigenous populations, were similar throughout the Americas. However, dividing the hemisphere into two, North and South America, recognizes the differences between Anglo-America (the United States and Canada) and Iberian America (from Mexico south) by recognizing the different religious and linguistic and political traditions that dominate each area. Dividing it further into North, Central, and South America further fine-tunes our view of the area, especially if we also divide Central America (from Mexico to Panama) into a mainland and a rimland. This last regional framework helps us discuss the complex social and economic world that emerged in the Atlantic islands and coastal areas of the Americas, where plantation economies dominated rather than the Hacienda-based organization of land and labor that characterized the mainland areas. And we could of course identify smaller regions still. However, dividing the world up into hundreds or thousands of regions limits the kinds of observations one can make about the world. Too much detail means not being able to see the big picture, after all. One other observation about regions follows from the example of the Americas. When we divide the hemisphere into North, Central, and South America and describe North America as “Anglo-America,” we ignore and deny certain realities, including the fact that much of the southwestern United States and California were part of Mexico until 1848. It was military conflict and politics, not just culture, that defined the borders of any North American region. The act of naming North America “Anglo-America” recognizes certain facts of history but negates others.

We should consider who defines regions and for what purposes. Today’s most common regional frameworks reflect the imprint of colonialism and the assumption that the nation-state is an almost natural unit. The idea of Africa and Southeast Asia as regions reflects the perceptions and influences of outsiders. The border between southern Asia and Southeast Asia, for example, reflects the historical realities of two different patterns of imperialism. Southern Asia includes all those contiguous territories of the British Empire in that part of the world. Southeast Asia is comprised of those territories that experienced a different form of colonial power. Contemporary regional frameworks generally try not to cut through nation-states because nationalism and state power are such powerful institutions today. However, they have not always been, so it is important to realize that in the past, regional boundaries would have had little relation to modern state boundaries. Regional divisions are expressions of current and recent power relations. When we discuss history through regions, we must remember that these regions came to be through the processes of history; they were not always delineated.

So, what regions will we use? We will use regions that exist or make sense in the early twenty-first century, regions that will make sense to most of our readers. But we acknowledge that this decision has some problems, and we will try to address them. Using contemporary regions might suggest that the regions that we see today were inevitable and that all of history has led to this particular natural, familiar arrangement of the world. However, not choosing contemporary regions would require using a set of regions so shifting that they would undermine using a regional framework at all or would result in a patchwork of regions defined by different criteria (e.g., the West, Incan civilization, China, the steppes). This framework suggests that some cultures were defined by particular historical moments and then were somehow frozen in time, while others progressed through time or were agents of history. This reinforces ideas about some places and peoples being backward and defined by tradition and others as representing modernity and progress. So, we have decided to use contemporary regional divisions and to focus on the major historical trends that have brought those regions into being. This means that with each region, we will discuss the particular environmental setting of one or more early cultural hearth areas (places of origin) and the social, economic, and cultural trends that extended various economic connections, cultural influences, and collective identities to broader social and environmental boundaries.

If today we understand regions as defined by commonalities—speaking English, practicing Buddhism, or the presence of high flat plains—it makes more sense to think of historical regions as defined by exchange and expansion. Economic exchange leads to cultural exchange in fairly direct ways, as the diffusion of Buddhism and, much later, Islam followed trade routes, for example. The expansion of empires would unite diverse groups of people into a single political unit, and while not every individual would come to understand themselves as part of that community, elites often would, and this would allow for new broader understandings of how people belonged to places. So our treatment of regions will focus on how historical processes led to the creation of our modern regional framework rather than assume that any regional framework would make sense at all historical moments.

All regions, however defined, have blurry edges, places that share some things in common with the rest of the region but have other things in common with those on the other side of a regional boundary. These blurry edges can be interesting places because they do not fit clearly into one region or another and because of what they reveal about the regions they border. Spain has often had a blurry boundary in Europe because of its location on the Mediterranean, today Turkey marks a complex border between Europe and the Middle East (and thus defining Turkey is one way that Europeans try to define what Europe means), and defining Egypt as part of Africa, as Mediterranean, as sharing Western (e.g., Greek) influences, as part of the Middle East, has been part of centuries of political projects. We will also focus on these blurry edges to explore the long-term production of regions, which is never complete and never neat.

Sub-Saharan Africa

Humans originated in sub-Saharan Africa, and since that time there have always been humans living in the region. Patterns of settlement, migration, and interaction have, however, changed over time. As elsewhere on earth, many of these changes have been strongly influenced by the physical environment. Indeed, the delineation of the region of sub-Saharan Africa is based on physical geography, bounded to the north by the Sahara desert and on all other sides by oceans. Its human geographies are also distinctive. Sub-Saharan Africa bears the strong economic, cultural, and political imprint of its colonial past, which may explain a bit about why it is presently the world's poorest region. All of this, however, gives a false sense of precision to the boundaries of the region. In part this is because the southern edge of the Sahara is not a fixed line. The desert expands and contracts with long-term climatic changes as well as seasonal and cyclical fluctuations in precipitation. Rather than envisaging a line separating northern and sub-Saharan Africa, it is more accurate to think of a transitional zone. This zone is the Sahel, an area of subtropical grassland between the savanna and the desert, an area subject to periodic droughts and, over the long term, to the ebb and flow of the Sahara. In recent decades the desert has been expanding southward, propelled in part by exhaustion of marginal agricultural land by the area's expanding population.

Just as there is no clear physical boundary to sub-Saharan Africa, so too is there no sharp boundary in the human landscape. Between the Arabs of northern Africa and the black Africans of sub-Saharan Africa is a zone of transition, a place that has been shaped over centuries by interactions between Africa's two main regions. For Africans, the northern Sahel has not been a barrier; it has been a zone of trade, commerce, and cultural exchange and also, all too frequently, a contested and conflicted place.

Physical Geography

Climate and topography have profoundly influenced the settlement patterns, trade, and colonization of Africa. Africa is a large continent about 20 percent larger than North America and about three times the size of Europe. Africa's coastline, however, is much shorter than Europe's, with fewer bays and natural harbors. The continent consists largely of high-lying plateaus: most of Africa lies at an altitude of over 1,000 feet above sea level, and half of the continent has an altitude of more than 2,500 feet. The coastal plain is narrow, and in some areas steep escarpments separate the interior from the coast. Rivers originating in the interior descend abruptly as they approach the coast, producing rapids and waterfalls. As a result, none of sub-Saharan Africa's rivers are navigable from their mouths into the interior of the continent.

Sub-Saharan Africa straddles the equator, and only the southernmost part of the region lies outside the tropics (see map of world climates). The equatorial regions of central and western Africa have tropical rain forest climates and are covered with forest vegetation that is rapidly be-

ing depleted by logging and the expansion of agriculture and human settlement. Farther away from the equator to both the north and the south are areas of tropical and subtropical savanna. These are the staple climatic landscapes of African wildlife documentaries, which are also important agricultural regions. These are in turn bordered by the semiarid steppe areas of the Sahel in the north and Kalahari in the south. Temperate climates dominate the extratropical southern African subcontinent. It is worth noting that the climates of the region are significantly affected by topography; the continent's interior would be significantly warmer if it were at a lower elevation.

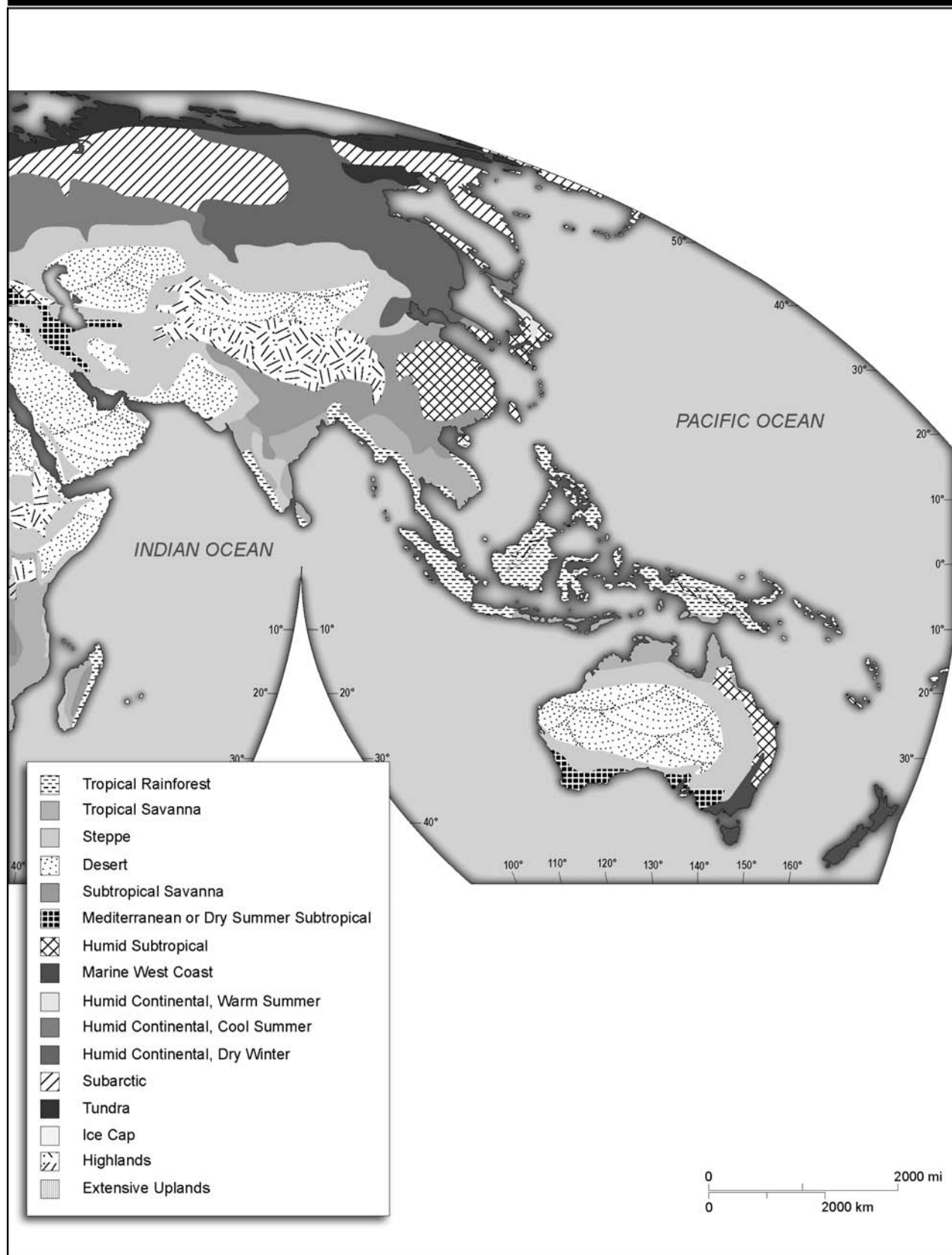
Climatic patterns have influenced the history and human geography of sub-Saharan Africa in a number of important ways. A comparison between the map of African climates and the map of population distribution show a close (though by no means perfect) correlation. Deserts, semideserts, and some rain forest areas are the most sparsely populated; most of the region's people are concentrated in the more hospitable savanna and extratropical areas. Topography has also played a role in population distribution. In the west and southeast of the region, the densest populations are along the coasts; in the east, the interior Great Lakes region is where population is concentrated. What the population map does not show, however, are the ways in which sub-Saharan Africa's population distribution have changed over time, a change in its own way closely linked to physical geography.

Human Geography

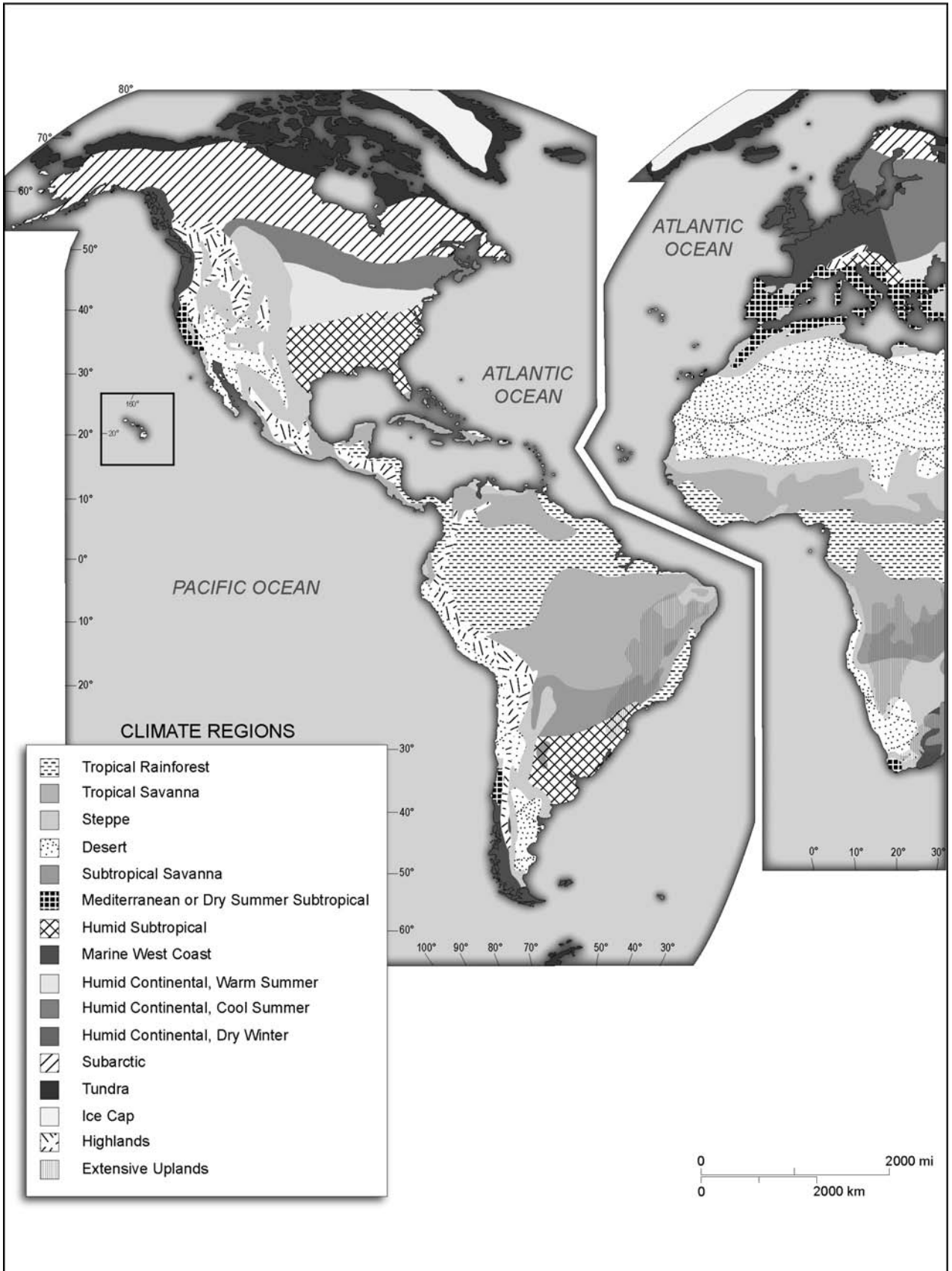
Sub-Saharan Africa is predominantly populated by black Africans. All human and hominid life originated in sub-Saharan Africa. Today it is home to a diverse range of cultures and people. As Christopher Ehret discusses in *The Civilizations of Africa*, between 16,000 and 9000 BCE there were four separate African groups: the Afrasans, the Nilo-Saharans, the Niger-Congo people, and the Khoisans. These groups were innovative, leading to four distinctive cultural heritages, traces of which remain today. From the rise of early societies, there has been trade between northern sub-Saharan African societies, including the Sudanic civilization in the east and the Niger-Congo peoples in the west, and the Middle East. This contact was maintained even as climate change led to an expansion of the Sahara desert. Herodotus, a Greek historian and geographer, associated Egypt with high civilization—meaning that it was highly organized, stratified, and rich in arts and culture—and imagined that Ethiopia, a place he had never been, must be even more so. In the 1400s European maps of northern Africa were filled with images of wealth and economic activity. Only after the development of the slave trade did Europeans begin to imagine Africa as the Dark Continent. Perceptions of regions matter because perception shapes attitudes and actions. This particular perception had long-lasting implications.

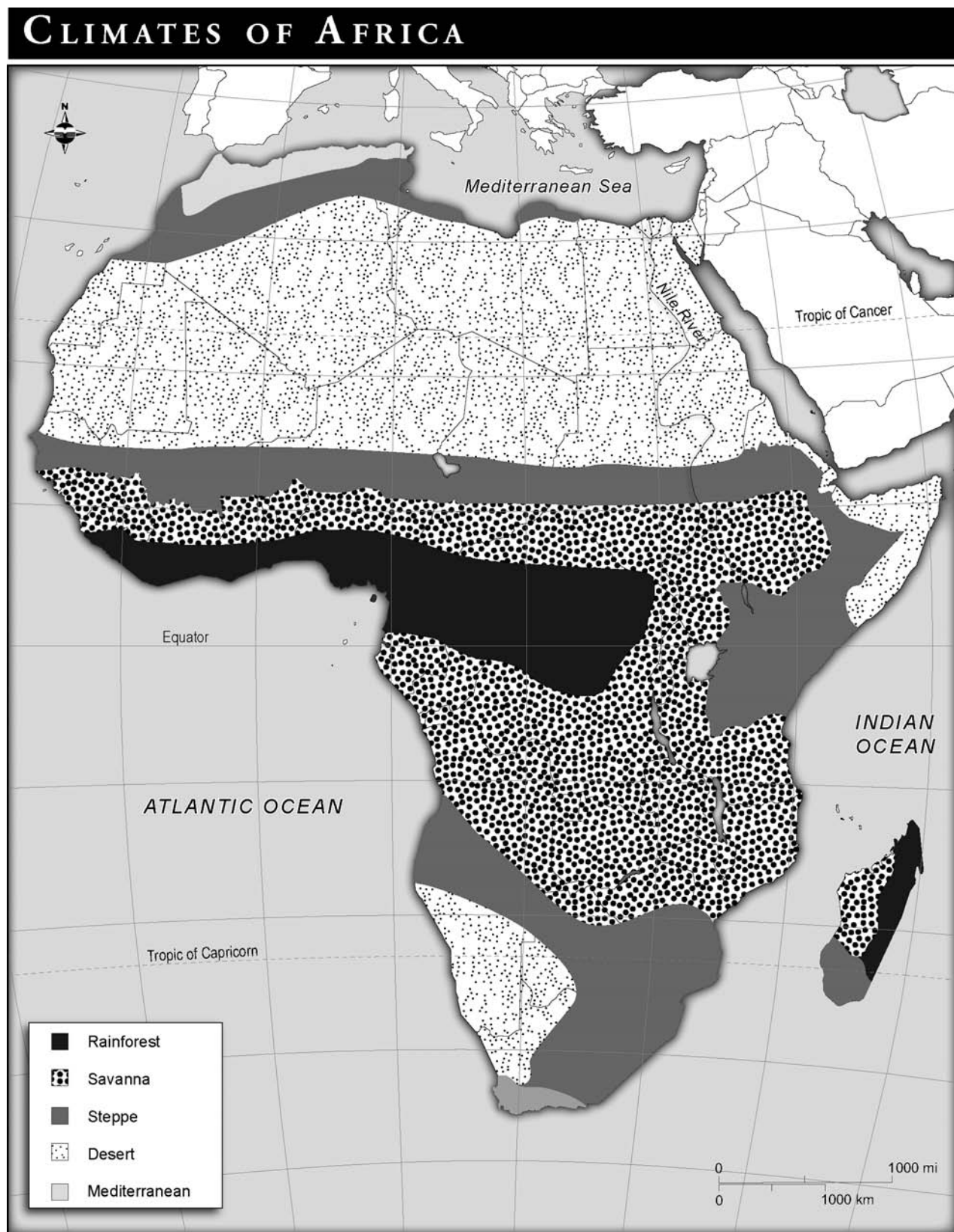
It is impossible to understand sub-Saharan Africa in the twenty-first century without understanding the impact of colonialism on the region. Although it came late and in most cases lasted less than a century, colonization restructured sub-Saharan Africa economically, culturally,

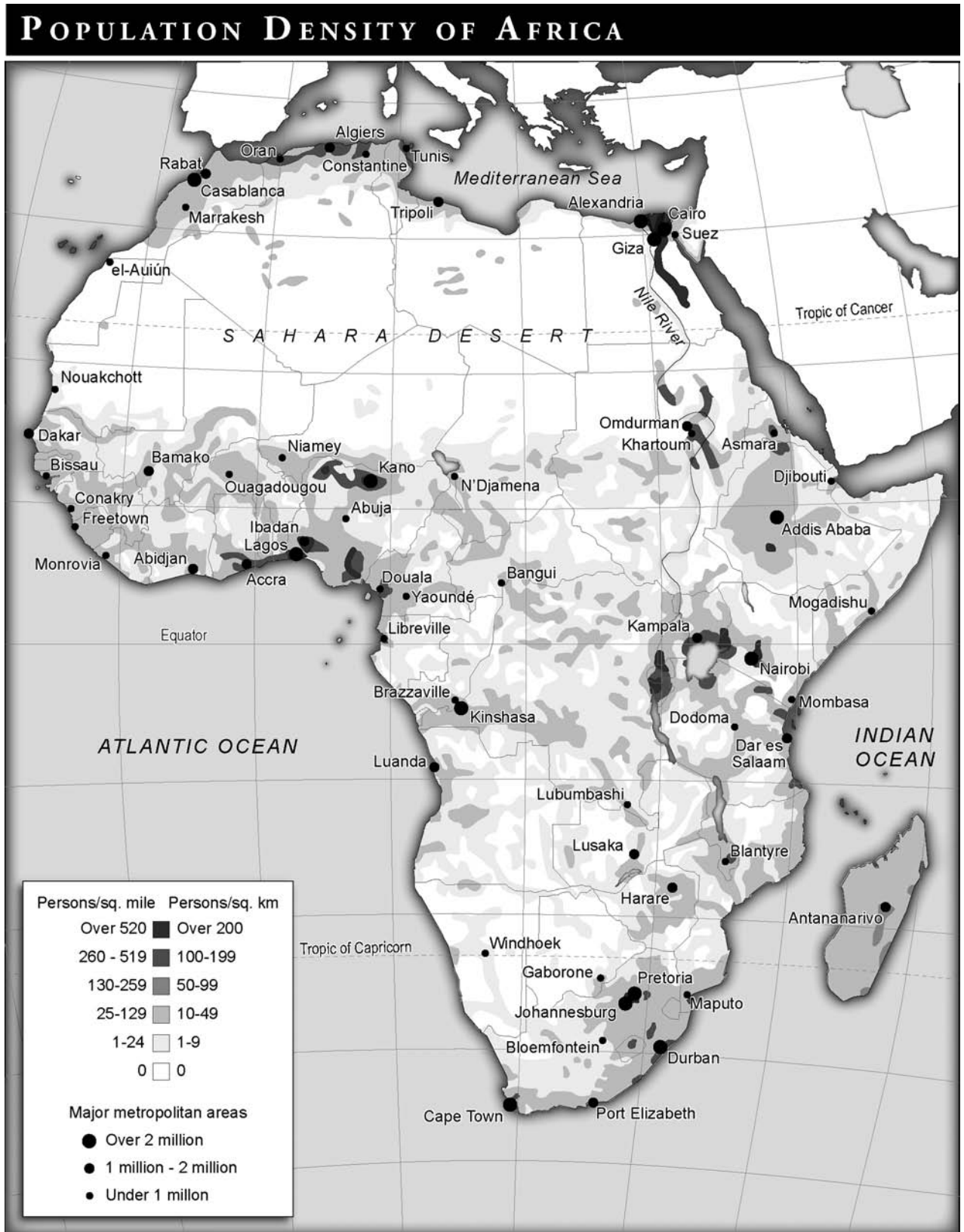
CLIMATE REGIONS OF THE EASTERN HEMISPHERE



CLIMATE REGIONS OF THE WESTERN HEMISPHERE





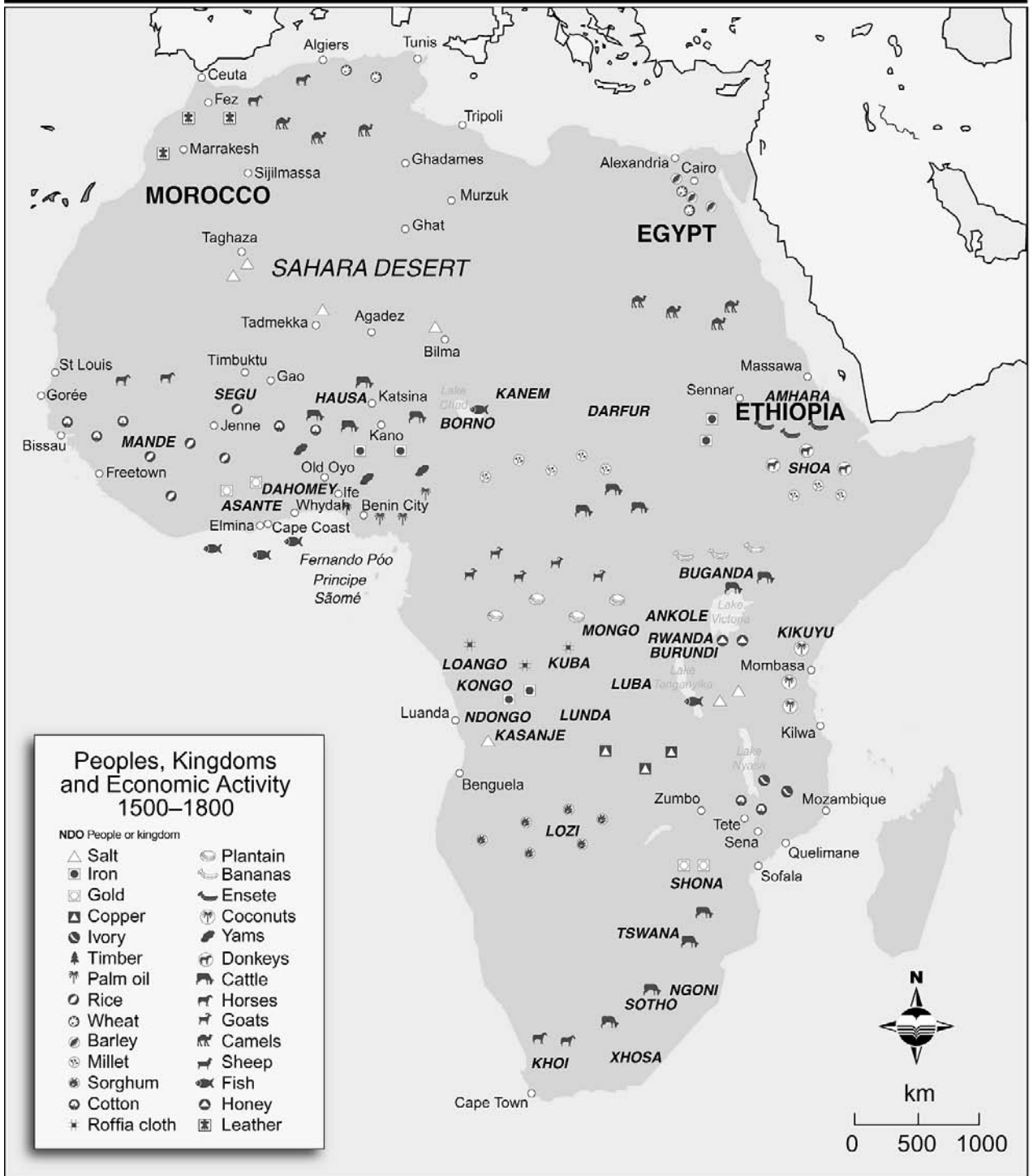


politically, and socially. Colonization also imposed new geographies on the region: boundaries, populations, and political organization were reshaped by the colonial powers as a result of their presence. Clearing lands for farming, mining, or construction of roads and railways reshaped the land. These new geographies were invariably motivated by the interests of colonial powers rather than those of indigenous Africans. This meant that when decolonization came, Africa's newly independent states found that they were heirs to geographies designed by outsiders for outsiders, often ill-suited to African needs. It is a paradox of colonial history that sub-Saharan Africa, one of the closest world regions to Europe, should have been among the last to be colonized by Europeans. By the early sixteenth century, Europeans had begun their conquest of the Americas and had opened trade routes to Southeast Asia. By the mid-seventeenth century they had substantial colonies in both of the regions and in southern Asia. By 1850, several centuries of colonial rule had ended in most of the Western Hemisphere, distant Australia and New Zealand had been colonized, and the coastal areas of eastern Asia were under European domination. But in that same year, a map of colonial rule south of the Sahara desert would have shown that with the exception of South Africa, most of sub-Saharan Africa had not been colonized.

There had certainly been trade between Europe and sub-Saharan Africa, most notably in the form of the slave trade. This had a significant economic, cultural, and demographic impact on the areas from which the slaves came as well as the colonies in the Americas to which they were taken. But although the impact of the slave trade reached well into the interior of sub-Saharan Africa, this occurred without European colonization. Only in the 1880s, with the Scramble for Africa, did Europeans extend their political control into the continent. By 1905, all of sub-Saharan Africa, with the exception of Liberia and Ethiopia, had been claimed by European powers. The reasons that colonization came so late to sub-Saharan Africa are largely rooted in the region's topography and climate. For Europeans traveling along the western side of the continent, the deserts and rain forests (which together accounted for most of the coastline) appeared to offer few rewards and numerous hazards. Even if Europeans had sought to venture inland, the practical obstacles would have been daunting. In the coastal areas of western Africa, heat, humidity, dense vegetation, and disease presented significant problems. South of the Gulf of Guinea, narrow coastal plains, steep escarpments, and a lack of navigable rivers made it difficult to penetrate the interior overland or transport goods back to the coast.

Some of the same geographic considerations that kept Europeans from the interior of sub-Saharan Africa influenced the nature of sub-Saharan societies in the precolonial era. Nowhere is this clearer than in western Africa, a region with a history of civilizations and empires that predated the arrival of Europeans by many centuries (see map of Human Geography of Africa). The economic base of these societies roughly corresponded with latitudinal climatic zones. The economies of the tropical forest zone along the coast produced crops such as yams and palm

HUMAN GEOGRAPHY OF AFRICA



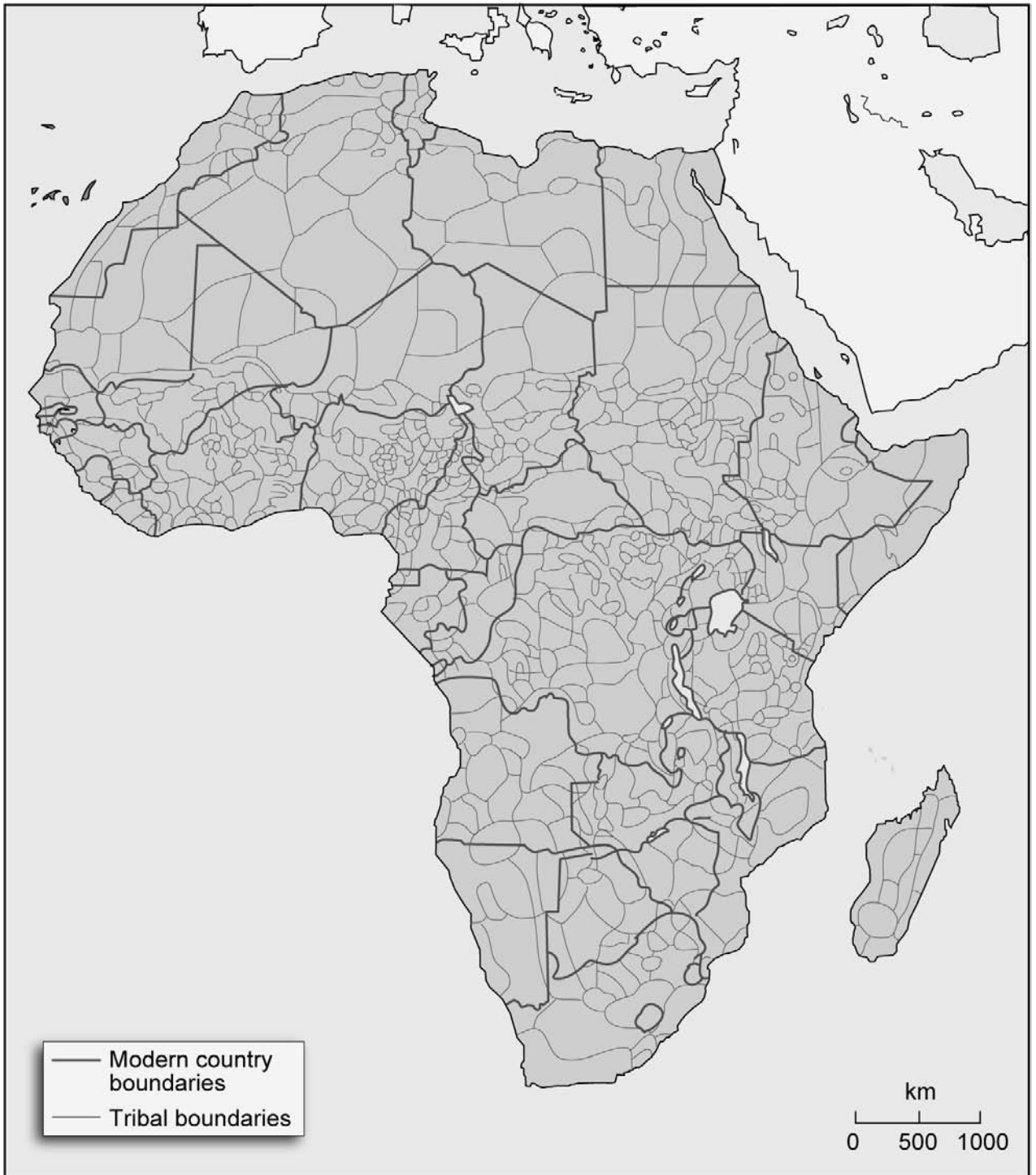
oil, whereas the inhabitants of the grassland Sahel region were pastoralists, a complementarity that gave rise to interzonal trade. Links also existed between western and northern Africa, along the Sahel region, and also across the Sahara. These were the routes along which Islam came to western Africa. Some of western Africa's largest and most powerful empires existed here, including Ghana, Songhay, and Mali. The administrative and trading centers of these empires were western Africa's main urban centers, among them Timbuktu, Gao, and Wadan.

When colonialism eventually engulfed sub-Saharan Africa, it did so rapidly and with profound consequences. Human geographies of the region were vitally changed by the colonists to serve their own needs, fundamentally altering indigenous societies and economies. Among the most vivid examples of this is the geography of political boundaries. As Europeans divided the African continent among themselves, they imposed colonial boundaries that bore no resemblance to preexisting indigenous cultural, political, or economic geographies (see map of African Country and Tribal Boundaries). In some areas, imprecisely demarcated or weakly enforced colonial boundaries had little immediate impact, with economic, social, and even local political relationships continuing as before. In other places, however, colonial boundaries blocked trade routes, divided tribal and even family groups, and hampered or halted patterns of nomadic and shifting agriculture. Superimposed boundaries assumed particular importance, however, when colonialism ended. Groups that had been neighbors in previous times found themselves competing for power in large states. Religious differences often compounded these conflicts.

Nigeria epitomizes the consequence of geographies inherited from the colonial era. In 2010 it was a state with 158 million inhabitants speaking some 500 languages. The northern part of the country lies within the Sahel region, and most of its people are Muslim; southern Nigerians are predominantly Christians and adherents of traditional African religions. The country's economic heartland is on its southern fringe, around the colonial era capital of Lagos and the oil-producing region of the Niger Delta. With such economic, political, and cultural divisions, it is hardly surprising that much of Nigeria's postindependence era has been marked by periods of instability and conflict.

Colonial elites also created a new geography of cities, based on colonial capitals, designed to serve as administrative and political centers as well as ports primarily for the export of local raw materials. These functions dictated their location: wherever possible, they needed to be on the coast. When west Africans had built their own cities to serve their own needs, they were located inland. When Europeans superimposed their priorities onto the landscape, coastal centers became preeminent. The map of Africa's railroads provides a further example of the new economic geography constructed by the colonists and inherited by Africans when the colonial era ended in the second half of the twentieth century (see map of Africa, 1914). Most of sub-Saharan's railroads link points in the interior to coastal ports; none (aside from those in South Africa) form a network connecting neighboring African states or even major centers within individual states.

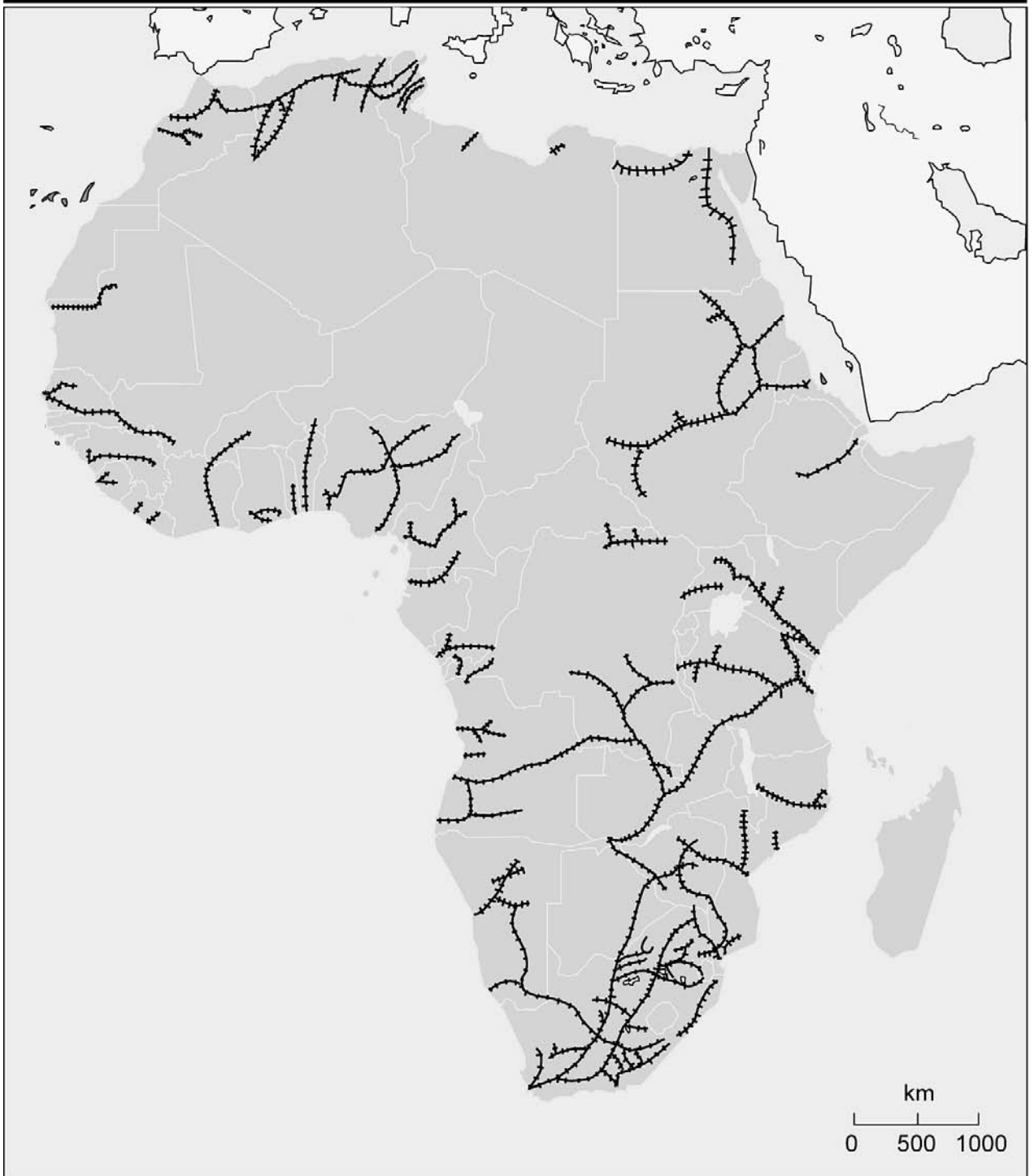
AFRICAN COUNTRY AND TRIBAL BOUNDARIES



AFRICA, 1914



AFRICA'S RAILROADS



Northern Africa and Southwest Asia

Today the regions of northern Africa and Southwest Asia encompass all of the African countries that border the Mediterranean, the Arabian Peninsula, and those countries east to Iran. This region would have been nonsensical in early human history, when human contact encompassed smaller territories and before the major historical diffusions that define the region today—Arab traders, Islam, European imperialism, and the emergence of a world economy based on fossil fuels—happened. This region provides an example of how regions emerge historically because it includes territories that have always been central to our study of human history.

Physical Geography

This is a region bounded by a wealth of physical geographic features. It features deserts both on the Arabian Peninsula and the Sahel, which marks its southern border in Africa. It is framed by multiple seas, including the Mediterranean to the west, the Red Sea between Egypt and Arabia, the Black and Caspian seas to the north, and the Persian Gulf between Arabia and modern-day Iran. In addition, it has mountains, including the Zagros Mountains, and high plateau regions in Iran. These features have meant that there is considerable diversity in terms of the ecosystems and resources available in the region, which encouraged early trade. The physical features have also funneled trade and migration patterns, around mountains and some seas and through passes and shorter water crossings. There are multiple narrow water passageways linking larger waterways, and the control of these passageways, such as the Bosphorus or the Dardanelles, means the ability to control trade.

Not all of these routes are waterways. The Jordanian Rift Valley is a strike-slip fault zone that stretches from Syria to Mozambique. The rift had long been a north-south transportation route. In addition, it has been the site of considerable seismic activity. The Jordanian Rift Valley and the Red Sea have been caused by the divergence of the Arabian Plate and the African Plate. At the same time the Arabian Plate has been converging with the Eurasian and Anatolian plates. These convergences have resulted in mountain ranges along the boundaries of these plates and tectonic activity through Turkey and Iran. The region is, in parts, very arid. This has meant that those parts of the region that receive regular rainfall have particular advantages relative to others in the area. Those areas that could not count on regular rainfall but had rivers that could support agriculture, such as the Nile or the Tigris and Euphrates, also had relative advantages. This also means that populations have been concentrated around coasts and rivers, with the deserts supporting less dense populations. The presence of oil is central to the importance of the region in modern history. Modern uses of petroleum are typically dated to the mid-nineteenth century, shortly before European powers became increasingly interested in the area. Today, southwestern Asia remains important in global politics because of its oil resources.

Human Geography

The oldest-surviving records of agriculture are found in the region sometimes called the Fertile Crescent, located in the area of modern Syria, Israel, Turkey, eastern Iraq, and western Iran. Agricultural innovations led to increasing populations and, in some cases, population pressures. People pushed out of the Zagros Mountains by population pressures settled throughout most areas in river valleys by 4500 BCE in what is today northwestern Iraq. As the population continued to grow, people moved into new areas, including the highlands and into the Tigris and Euphrates river valleys. In the southern regions of the Tigris and Euphrates rivers, some of the first urban civilizations emerged. We can understand the question of “why there”—why this may have been the original site of civilization—in two ways. First, local conditions: the particular mix of disadvantages and advantages found in the Tigris and Euphrates rivers can be understood as producing the necessary conditions for urbanization. Alternatively, its relative location can be seen as creating the possibility for this monumental transition in how humans live.

From the first perspective, the region between the Tigris and Euphrates had been relatively lightly populated because these rivers were swampy and not prone to the regular flooding that characterized regions with easy agriculture. Unlike the regions that produced the first agricultural innovations, these alluvial plains lacked sufficient rainfall, had few game animals, and produced little usable timber. However, the area had some advantages. It had firewood, mud for bricks, fish for food, reeds for baskets, flax for textiles, and fertile soils due to flooding. Agriculture would be difficult to establish but then would be highly productive. Those settling the area had experience transforming their environments, since they probably were being pushed from the Zagros Mountains by population pressures. In their new locale, they introduced incredible innovations for managing their environment and their economy: they dug channels to direct the water, raised the ground in order to build on it, and developed dikes and basins and irrigation systems. Then they harnessed animals, used manure, rotated crops, and left some fields fallow, all significant developments in agricultural innovations. This innovation required increasing organization over labor and accounted for the emergence of groups or classes of people with considerable social power. Those who controlled the irrigation works had power and status and were able to mobilize conscripted or forced labor when it was needed. Through responding to their environment and bringing it into production, the Sumerians, who developed this area, developed the first complex society or civilization.

From the second perspective, the region between the Tigris and Euphrates had an advantageous location, close to both the Persian Gulf and the Indian Ocean and between multiple environmental regions, including the arid zone to the south, mountains to the north, and the Iranian Plateau beyond them. The diverse environments in these regions meant that people in them specialized in different kinds of products. Some historians and geographers see this relative location as the primary cause of the rise of civilization in this area. While the Mesopotamian

region had little about it in particular to explain its success, it was surrounded by places that had considerable human activity and production. As these societies accelerated trade contacts with each other, the swampy area between the rivers became an essential and vibrant trade area. Sea-based trade existed on the Indian Ocean and the Persian Gulf from before 4000 BCE. The domestication of the donkey made overland caravans possible, so trading circuits, mostly in spices and precious metals, emerged that began to integrate the peoples in the region. Later, around 200 BCE, the invention of a saddle that sat high and avoided the hump increased human's ability to use camels to transport goods long distances, and this helped further integrate the Arabian Peninsula and northern Africa.

This region was also home to some of the first empires—political systems that unite multiple cultural groups under the rule of a single emperor or governing system—in part because of the increasingly stratified societies that emerged along with more complex interventions into the natural environment. These empires differed from place to place, of course, and over time. In Egypt, for example, the Nile flooded predictably and allowed for a form of irrigation that resulted in relatively less salinization of the soil, which minimized environmental degradation. In addition, the Nile could be traveled upstream and downstream, since it flows northward and trade winds can carry boats southward, which allowed for the integration of territory through the movement of labor and goods. Predictability and integration account for the long periods in which Egypt was politically united. Other areas were less stable in their boundaries but saw the emergence of empires that expanded dramatically, integrating more territories and more people into larger scale identities. After the first millennium a series of empires, including the Achaemenid, Seleucid, Parthian, Sassanid, and Persian empires and, briefly, that of Alexander united territory stretching across much of southwestern Asia. This territory encompassed diverse populations, linguistically, and disparate environmental regions, but sporadic political unification reflected the existence of broad trade relations and other connections.

The dense population due to agricultural production and relative centrality also help explain the number of cultural phenomena that emerged from southwestern Asia. Peoples living in more concentrated groups are more likely to have the ability to produce art and philosophy. And more diverse empires also challenge earlier ways of understanding religion. While earlier religious beliefs focused on gods that represented a particular place or tribe, the development of multi-societal empires and the expansion of political power and economic interdependence led to the emergence of religious systems that were more universal. Zoroastrianism, Manichaeism, Judaism, Christianity, and Islam all emerged in southwestern Asia from either the Persian end or the Mediterranean. These new religions delinked gods from geography, liberating spiritual authority from the limits of place. The relative location of the region also helped some of these belief systems extend dramatically but usually with the help of a political entity. The Roman empire, with its exten-

sive road system, facilitated the spread of Christianity throughout the region and into Europe.

Beginning in the seventh century, Islam had unified the Arabs into a powerful force who, in turn, began an astonishing military expansion shortly after Muhammad's death in 632. By 711, the Islamic empire united an area that stretched from the Iberian Peninsula in the West to Sind, around the Indus River valley, in the East. Even after the political fragmentation of the early Islamic empires, trade connections continued the expansion of Islam. This unification and the extension of trade routes beyond these borders made it possible for a vast number of technologies and resources to diffuse throughout the territory. Papermaking, developed by the Chinese, spread through the Islamic empire, bringing with it greater literacy and a respect for the printed word. Fruits and vegetables from India were introduced to areas to the east and became the foundations of much of what we think of as traditional foods from the Mediterranean, such as spinach and eggplant. In addition, new modes of agriculture diffused throughout the region. These more intensive modifications of the environment increased production and supported larger populations. Arabic, the language, did not diffuse as broadly as Islam, the religion, so in the end it was faith that provided the common element that created the region that we recognize today. Islam is the central characteristic of the region, tying together people across ethnic backgrounds (Arabs, Persians, Aryans, Berbers, Turks, and many others), across linguistic divides, and across vastly different environments. However, Islam unites a much larger area than that which is understood as the Middle East or northern Africa and southwestern Asia, extending into Bangladesh and as far as distant Indonesia. While religion is certainly one of the commonalities that defines the region, it is not the only feature that defines the boundaries or limits of the region. The limits of the region also reflect political history. The region has been loosely united by different empires intermittently, but nation-state boundaries were established under European colonial control.

Southern Asia

Southern Asia includes India, Pakistan, Bangladesh, Afghanistan, Nepal, Bhutan, the Maldives, and Sri Lanka and is defined by its physical geography, particularly the tectonic and topographic realities that stem from the past and present movement of the Indian Plate and, at least the core of the region, by the history of British colonial rule. The region is densely populated, although unevenly so. India is the second most populous nation in the world, with a density of 850 people per square mile, while the Himalayan states have population densities just over half that. This is also a region of considerable religious and ethnic diversity. India is the hearth area of Hinduism and Buddhism, and the region also has substantial Muslim populations. The region is significant because of its growing populations, the current emergence of India as an economic contender as its educated middle class expands and as comparatively

low wages makes Indian workers highly competitive actors in the global economy, and the religious and ethnic tensions that now take on global significance. India and Pakistan, separated in 1947, have a history of constant animosity and warfare throughout their short existence and are both now armed with nuclear weapons. Both are also the focus of international interest as possible havens or targets of terrorist activities. This confluence—the presence of both fearsome weapons and people bent on violence—arouses considerable international concern.

Physical Geography

The physical geography of this region is most defined by its tectonic situation and by the monsoons that provide it with seasonal rainfall. The Indian Plate collided with the main Eurasian Plate over 50 million years ago and continues to move, slowly, today. This movement has created the boundaries of the region, pushing up the Himalayas to the north and northeast. This is the highest mountain range in the world and features dramatically diverse ecologies as one moves up in altitude. The higher areas are dramatically snowy and cold. Much of the rest of the Indian Plate is defined by the rivers that come out of the Himalayas, the Indus, and Ganges. The floodplains of these rivers have supported the most densely populated parts of the region—northern India, southern Pakistan, and Bangladesh—because of the richly fertile soil associated with them. Southern India is a high plateau fed by different rivers and is tropical in its climate.

Because it rests on a separate plate (or on the borders of two plates), the region frequently suffers seismic activity and is vulnerable to earthquakes and tsunamis, the huge waves that can result from earthquakes in the seafloor. Populations are very vulnerable to disasters due to the low average incomes, the challenging topography that makes rescue difficult, and the limited governmental capacity of some (though not all) countries in the region.

Parts of the region are defined by their monsoon climate, which still shapes the daily lives of residents and long shaped the patterns of long-distance trade in Eurasia. Monsoons are winds that flow in one direction one part of the year and then reverse for the rest of the year. The term “monsoon season” refers to the period of heavy rains that are brought by winds blowing from the southwest into the coastal part of southern Asia. The monsoon season brings the vast majority of the annual rainfall to the region, and thus agriculture is highly dependent on it. Heavy monsoons flood out coastal cities and villages, while weak monsoons put the nutritional and economic welfare of vast populations at risk. In addition to shaping how people live, the monsoons shape another important aspect of the region. Southern Asia, especially India, has a vast coastline and has been part of sea-based trade for thousands of years, through the Arabian Sea to the west, the Indian Ocean to the south, and the Bay of Bengal to the east. The monsoons largely determined when people could travel by sea before the advent of engine-powered ships. The winds across the Indian Ocean blow to the east during the summer and early fall and to the west in the winter. This

pattern meant that several entrepôts, or trading centers, emerged where traders waited for the winds to change so that they could return home. Many of these were in southeastern Asia, near Vietnam or in Indonesia, but traders in the area all had to factor in the seasonal delays when planning how to move goods around.

Human Geography

The first wave of urbanization in southern Asia was in the Indus River valley with the emergence of what is known as the Indus Valley Civilization or the Harappan Civilization. Like other early civilizations, this one was enabled by the development of agricultural surpluses and trade opportunities. The civilization traded with Sumer, for example (see section on Northern Africa and Southwestern Asia). Little is known about the organization or demise of this civilization because archaeologists have not found any long texts to translate and because there is no evidence of tombs filled with goods, such as those found in Egypt. Thus, there is little information from which to build inferences. However, it is clear that cotton was domesticated around 2000 BCE in the Indus River valley and that cotton textiles woven and dyed in the area were sold in Mesopotamia, the Mediterranean, and Egypt. Much of the sea-based trade from the last few centuries before the Common Era relied on Malay sailors, who traveled from China to the eastern coast of Africa (see Southeast Asia). A valued commodity in this trade—spices such as pepper and, later, crystallized sugar—originated in southern Asia.

India produced more than goods that were valued throughout Asia and Europe. India also produced intellectual work that transformed worlds as it diffused, such as mathematics and spiritual studies, such as Buddhism. Buddhism spread east along the Silk Roads and still provides cultural cohesion to other regions. In southern Asia, Buddhism's hearth area, Buddhism is strongest in the Himalayan region, with large concentrations of Buddhists in Myanmar and Bhutan. There are also many Tibetan Buddhist refugees in Nepal, the birthplace of the Buddha. There are relatively few Buddhists in regions that once had many, such as the area in Pakistan once known as the Kushan empire (which extended from near the Indus River and into the Himalayan mountains). This is largely because of the importance of a later religious diffusion, that of Islam.

Islam (see section on Northern Africa and Southwestern Asia) reached Sind, a region of Pakistan around the Indus River valley, by 711. However, the progress of Islam into the heartland of India was less consistent. Some regions had well-established religious traditions in place, with relatively little interest in conversion. On the other hand, other parts of India became quite diverse religiously. Parts were ruled by Muslim leaders for many centuries to come. After the eighth century, the Muslim influence in most of the region came by way of Persian-influenced Turks rather than Arabs. Indian culture, with its strong traditions of Hinduism and Buddhism, changed Islam as much as it was changed by Islam. The synergy of the different traditions provides an example of how regional identities absorb, resist, and modify outside influences. During the Mughal

period (1526–1858), Muslims, mostly converts, made up majorities in the eastern and western parts of the region as they sought agricultural land, moving into areas that had never been heavily influenced by Hinduism. Only the area along the southwestern coast of India became Islamic through direct Arab influence. The region grew commercial quantities of spices, giving Arab traders influence in the region. When Portuguese traders arrived on the scene in the 1500s, the violent encounter was not between an exploring people (the Europeans) and an indigenous group unaware of the rest of the world. Instead, it was a meeting of two expansionist groups, one interested in accessing trade goods and the other interested in maintaining control over those goods.¹

European control or influence in the region began through the establishment (or taking) of defended port cities, so very little territory was actually under European control. In 1757 the British East India Company (EIC), a trading corporation, conquered Bengal and gained access to its vast fields of poppies. The EIC had finally found a trade item in which Chinese consumers were interested. The EIC began exporting to China a commodity that previously had limited presence in the international trading scene: opium. Opium provided British trading interests with an advantage over other Europeans, since its Indian source was close to China, which reduced transportation costs. By instituting British-defined laws such as the Doctrine of Lapse, which gave the trading company control over territories that did not have a clear heir after the death of a leader, British rule was established gradually over the region.

The legacy of British colonial rule has been much debated. The British built roads and railroads, but these were largely intended to move troops from place to place and to facilitate the export of Indian goods. Trade increased under British rule but not necessarily to the advantage of those in India, who had exported spices and cotton textiles in larger amounts long before the British arrived. Indian goods were not allowed to compete with British goods, which over time undermined those Indian industries that formerly had been strong. British-imposed taxes were high in the early 1800s but then were lowered after the Mutiny of 1858, otherwise known as the Sepoy Rebellion. From the fifteenth century onward, there had been peasants from northern areas of India, Sepoys, who made their living as mercenary warriors and had served both French and British interests at various times. By 1857 the British colonial army consisted of about 240,000 native soldiers (both Hindu and Muslim) and only about 40,000 British officers and men. The Sepoy Rebellion was rooted in growing dissatisfaction with high taxes, discrimination against Indians, and the work of proselytizing Christian missionaries. It was sparked by rumors that the cartridges used by soldiers in the army had been dipped in pig or cow fat. The rebellion also changed the nature of British rule and marked the beginning of both direct British political control and of the Indian nationalist movement that worked to end British rule. India emerged from colonial rule ready for democracy but has been plagued by religious violence that some claim is rooted in British policies of divide and rule and in European definitions of nationalism.²

The region faced droughts, destructive cyclones, and famines in the early twentieth century and then again during the Bengal famine of

1943, during which millions of people died. These environmental disasters, like most famines, were compounded and intensified by political decisions. In the early 1940s the British diverted rice from Bengal to other places, and rumors of food shortages created panic and high food prices in Bengal. These policy failures and violent massacres of civilians increased the appeal and strength of the independence movement and the Indian National Congress, a group that used civil disobedience and nonviolent protest in ways that have inspired generations of activists. This activism shaped an emerging collective consciousness, a sense of Indian identity.

During this period, Indian identity was geographically broad and included those parts of southern Asia under British control. Burma, now Myanmar, was governed as part of British India until 1937 and had a very different cultural identity even while integrated. Sri Lanka, then Ceylon, also had been governed as a separate colony from an even earlier period. Thus, both of these territories had their own sense of their colonial and postcolonial experiences. However, in other ways Indian nationalism was also understood as an expression of Hindu identity. When India gained independence in 1947, there were dramatic conflicts over what and where India would be. The British partitioned the area into India and West and East Pakistan (now Pakistan and Bangladesh). Pakistani nationalism has always been rooted in both a sense of territory and a Muslim identity. Indian nationalism continues to struggle with the question of whether it should focus on nurturing its Hindu identity or whether it is more in keeping with its commitment to democracy to encompass many religious identities.

Farther north, Afghanistan, Nepal, and Sri Lanka have cultural identities shaped in part by their mountainous terrain, which results in significant cultural variation and challenges to efforts to establish larger-scale identities. Today these areas are understood as remote, hard to reach, and underdeveloped, but it is worth noting that contemporary Afghanistan was once part of the Kushan empire and was central to trade along the Silk Roads. Today infrastructure is lacking (due to war and poverty), and the area is much less integrated into regional and global trade than it was in the past.

These divisions make it a region divided against itself more than a cohesive whole. And these divisions complicate the economic resurgence of the area once central to continental trade. India, where English continues to be a language of the educated classes, is increasingly competitive in the world economy. The ability of the rest of the region to participate as strongly in the global economy seems constrained by regional, interregional, and global conflicts.

Central Eurasia and Russia

The region of central Eurasia today is dominated by Russia, whose political territory makes up the vast majority of the region and whose political influence and domination define the boundaries of the region. In addition to Russia, the region includes the area between the Black

and Caspian seas and the nations north of Iran and Afghanistan. Politically, the region has been struggling to redefine itself after the end of the Cold War and the collapse of the Soviet Union and to answer questions about who will dominate and control resources and what kind of economic development is possible or best. Physically it is defined by its position on the interior of the continent, its fairly high latitudes, and its generally high altitudes, which include both mountain ranges and high plateaus, or steppes. Despite the varied and massive terrain, most of the region has notably cold temperatures, especially in the north. While today the region is defined primarily by Russia and its influence, it has a long and often overlooked history. Its people have been shaped by the landscape and the climate and have responded through constant innovation. However, because they were largely nomadic through much of history and thus left little in the way of architecture and other high art, they are often neglected by historians.

Physical Geography

Central Eurasia centers on the steppes, which are high plateau areas. Because it is in the center of the vast continent of Eurasia, this region relies on air masses traveling long distances from the distant seas for precipitation, which is thus fairly limited. This makes agriculture challenging; there is not enough rainfall to make agriculture easy to maintain. Growing seasons are short, drought is always a threat, and soil quality is often low and difficult to improve. However, since settled agriculture is challenging, herding animals is possible, so the region has supported many nomadic pastoralist groups. These include the reindeer herders of Siberia, the Huns and the Mongols. These (and many other) pastoralist groups have been the source of significant transportation and military innovation throughout history, since they traveled long distances on horseback and needed to be able to protect their herds. In addition, they have been important for trade due to their ability to travel long distances. A band of land in southern Russia has been used for industrial agricultural production since the time of the Soviet Union. The area around Moscow, the Russian plain, also supports farming. The eastern reaches of the region rely more on logging and hunting as well as on grazing animals, and, of course, the arctic area is mostly restricted to fishing and reindeer herding in terms of food production.

While climatologically challenging, the region does have minerals in the Ural Mountains and oil in Russia and in the Caucasus Mountains. The Ural Mountains are also important because they divide the region into distinct sections, which are united more by political will than by culture or climate. The Ural Mountains create a north-south boundary that begins just north of Kazakhstan, extending up to the arctic region. They are quite high in the north and wide in the south but are more passable in their central sections. Because of their timber and minerals, these mountains have been central to Russian industrialization for centuries. They divide the Russian plain from the low-lying plains of western Siberia and the high central Siberian plateau.

Human Geography

Pastoralists are often ignored in history books because their mobility means that they leave little behind to study: no grand buildings or long written documents. Thus, it is easy to imagine central Eurasia as an insignificant space, occasionally producing some grand, violent leader like Attila the Hun or Ghengis Khan but not really mattering until Russia colonized the area and then the Soviet Union expanded even farther. However, pastoralists not only acted as traders and transporters but also traded their own goods, including animal skins, furs, meat, and horses. So all settled civilizations engaged with pastoralists, both through warfare and through trade.

The Silk Roads cut through the Taklamakan desert, and traders relied on its peoples for safe passage, local knowledge, and access to goods. The Chinese were particularly interested in accessing horses, carpets, and furs from the pastoralists in the region. Chinese silk, of course, was in demand throughout India, Southeast Asia, and the Mediterranean. At times nomadic groups would become sufficiently interested in and proficient at trade that they would conquer territory and become leaders of kingdoms central to trade, such as the Kushan empire at the western end of the Silk Roads.

During a period of global warming from 800 to 1200, agriculture spread into much more northern parts of the hemisphere, enabling an expansion of wealth and the creativity that arises during times of relative stability. However, during this same period nomadic groups, strengthened as grasslands in the interiors of the continent received more precipitation, ended up in numerous conflicts with the settled societies on their edges. The Huns invaded the plains of the Danube River (what is now Hungary) and Europe for decades. Turks raided the northern regions of India from a nomad-ruled kingdom in Afghanistan. The Mongols finally conquered China in 1279 and then turned to Russia, where they gained control of Kiev and exacted tribute from Russian principalities. All of these are examples of central Asian militarized pastoralist groups who challenged and sometimes transformed the settled communities around them. The Mongols were often brutal warriors but provided safe conditions for traders, so during the period when territory from Kiev to Korea was controlled by the Mongols, trade was possible to an unprecedented degree. Europeans, such as Marco Polo, were able to travel to China for the first time. Economic integration and the diffusion of new ideas and technologies increased as trade flourished, but these same connections led to the rapid spread of epidemics. The Plague of the fourteenth century is thought to have started in a Mongol-controlled section of the Himalayas and then to have spread along trade routes throughout the entire continent. The Mongols themselves were particularly vulnerable because as nomads they had fewer opportunities to develop immunities to contagious diseases.

After the decline of Mongol control, Moscow emerged as a political center rather than Kiev. After the fall of Constantinople in 1453, Moscow was the center of the Eastern Orthodox Church. This ended up establishing a cultural boundary between Russia and Europe that would

continue through political divides. Ivan the Great came to the Muscovy throne in the 1400s and began to establish a sense of a Russian nation and to expand its borders. In other words, Ivan began the process of creating the modern region of Russia and central Asia through a process of expansion and consolidation.

The expansion was first into the north, which increased coastal access, and then to the Urals and into Siberia. This territory was sparsely populated, and Russians began a process of settlement, expanding their territory through relocation. By the beginning of the seventeenth century Russian villages extended hundreds of miles east of the Urals, and state-sponsored trade in furs had become quite important. The rivers of this region were key to integrating this area, since they enabled Russian settlers to travel long distances. The orientation of Russia shifted over time. While the religious institutions and political structures of Russia differed from those of Europe and much of Russia's expansion was to the east, Russia sometimes shifted its cultural emphasis toward Europe. Peter the Great built St. Petersburg on territory taken from Sweden, and moving the capital of Russia to St. Petersburg was an intentional effort to associate with the West. The city's noble families spoke French by the nineteenth century. Thus, the boundary between Europe and Russia has not been static, since Russia has expanded and acquired European territory, and the starkness of the difference between western Europe and Russia has sometimes seemed dramatic and at other times less so.

As serfdom weakened in Europe, in part because of the Black Plague, Russia's reliance on serfs increased, as did aristocratic power over them. Serf labor was central to the production of grains and cereals, which eventually were major exports for the region. In addition to increasing agricultural production, Peter also cultivated the exploitation of mineral resources. During his reign Russian minerals were surveyed and mined, a new economic development that shifted the Russian economic center toward the Ural Mountains.

During the period of European imperial expansion, Russia expanded to the south and the east and eventually reached the Bering Sea north of China. Much of the territory, such as the Khanates of Bukhara and Khiva, both east of the Caspian Sea, was established as dependent territories or vassal states, thus assuming a subordinate position to the Russian state, which was not trying to fully integrate the diverse populations. In addition, this model of expansion left in place existing political and social frameworks that allowed minority cultural identities to reproduce themselves while local elites maintained some degree of power. Russian expansion differed from European expansion in that it was directed toward contiguous territory rather than more distant regions. Theirs was a land-based imperialism as opposed to the sea-based ventures of the west European states.

The social and economic organization of Russia, which was still largely rural and was exploited at the dawn of the twentieth century, led to increasing violence by peasants against landlords and agents of the state. The increased hunger and chaos of World War I led to the collapse of the Russian tsarist government. The October Revolution of 1917

marked the establishment of the USSR. The Bolshevik leaders withdrew support from the Allies in order to try to fulfill their promise of “peace and land,” a decision that was part of the larger alienation of the Soviet Union from the capitalist countries in Europe, further defining the region as fundamentally not European. Soviet expansionism in the post-World War II period was both a response to and a contributing cause of the alienation and hostility between the Soviet world and the capitalist West. It also redrew regional boundaries for decades, as central European countries, such as the Czech Republic and Poland, were redefined as “Eastern Europe.” After the fall of the Berlin Wall and the subsequent Velvet Revolutions, these countries have reasserted their European identities, though often struggling with the development and historical legacies of decades of Soviet control.

Other nations, including those around the Black and Caspian seas, are also confronted with having to come to new understandings of themselves in the world, but they have often had a longer period of Russian control or influence. Will they remain Russian-focused or reorient themselves toward southern or southwestern Asia? Do they constitute a regional bloc with their own economic, social, and political interests, or have the centuries of Russian control established a particular continuing identity that will continue to shape the future?

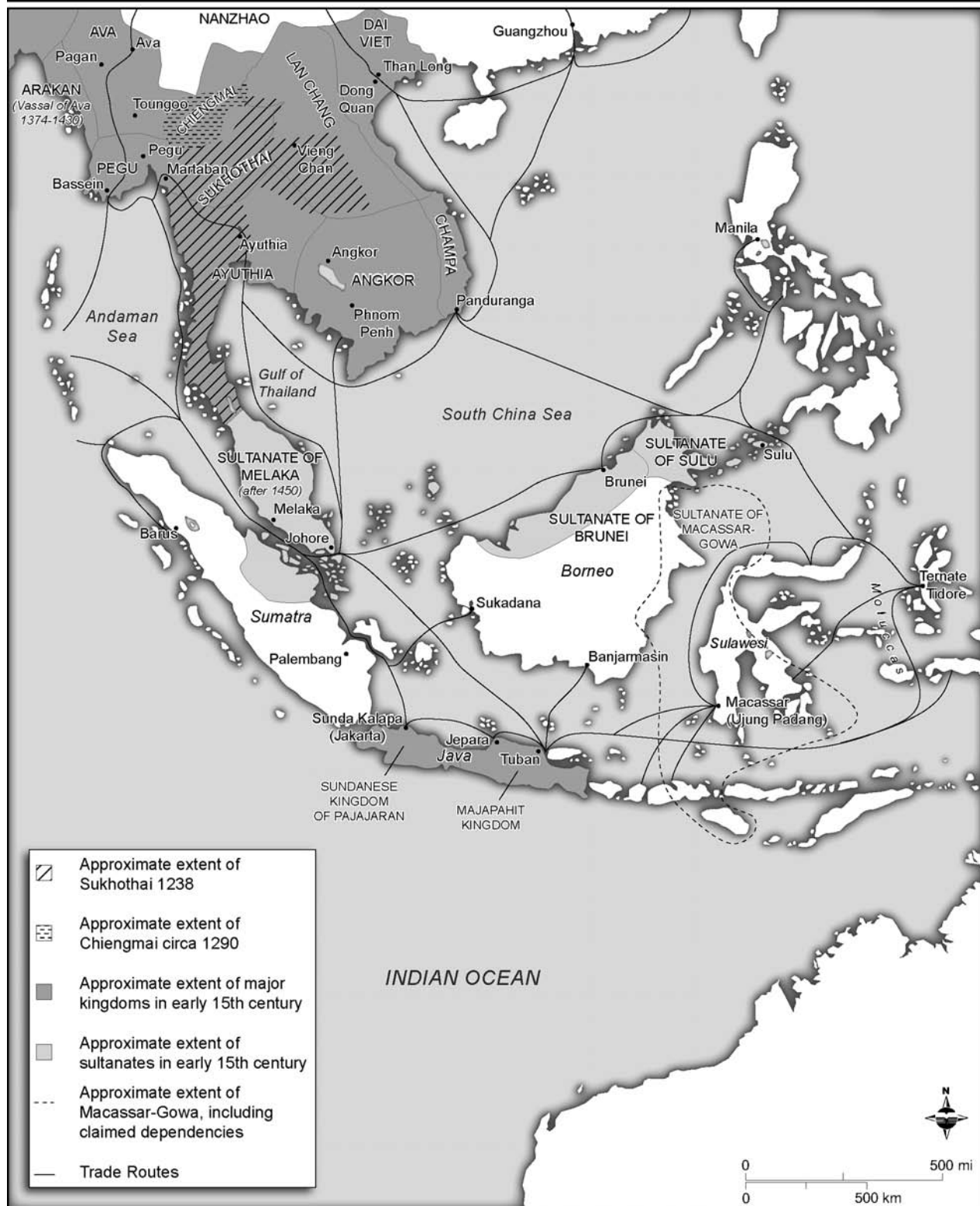
Despite a relatively weak economy and shaky steps toward a representative democracy and good governance, Russia and the region that it dominates and shapes continues to have global influence, in part because of its size and history but also because of its stores of minerals and fossil fuels.

Southeast Asia

The region of Southeast Asia encompasses 11 countries and spans some 35 degrees of latitude and 50 degrees of longitude. Its 11 countries include 4 of the world’s 20 most populous—Indonesia, Philippines, Vietnam, and Thailand—and the region as a whole is home to about 8 percent of the world’s population. It is a region that 1,000 years ago was home to the one of the largest and most advanced cities in the world—Angkor—and that in the twentieth century was the scene of some conflicts of extraordinary violence, including the Vietnam War and the Cambodian Genocide. It is impossible to understand the importance of this region and the events that have taken place there without an appreciation of Southeast Asia’s human and physical geography and particularly its critical location along the sea routes linking eastern Asia with the Indian Ocean.

The region of Southeast Asia can be divided into two parts: mainland and insular Southeast Asia (see map of early empires in Southwest Asia). Five countries are located entirely on the mainland: Myanmar (Burma), Thailand, Laos, Cambodia, and Vietnam. Malaysia straddles the mainland and islands, and the remaining countries—Indonesia, the Philippines, East Timor, and Brunei—are island countries.

KINGDOMS OF SOUTHEAST ASIA, 1200–1500



Physical Geography

Insular Southeast Asia consists of an archipelago of islands ranged along two of the world's most active tectonic plate boundaries (see map of tectonic plates). Indonesia lies adjacent to the boundary between the Australian and Asian plates, and the mountains and islands of the archipelago owe their existence to the collision of these two plates. Some of the most violent volcanic eruptions in earth's history have taken place along this plate boundary. The Toba eruption, which took place some 72,000 years ago in the southeastern part of the island of Sumatra, produced so much ash and dust that it changed global climates, giving rise to a six-year ice age and devastating human and animal populations worldwide. In 1883 the eruption of Krakatoa west of the island of Java killed thousands, and in 2001 an undersea earthquake near Aceh in Sumatra caused the deaths of over 300,000 people along the coast of the Indian Ocean.

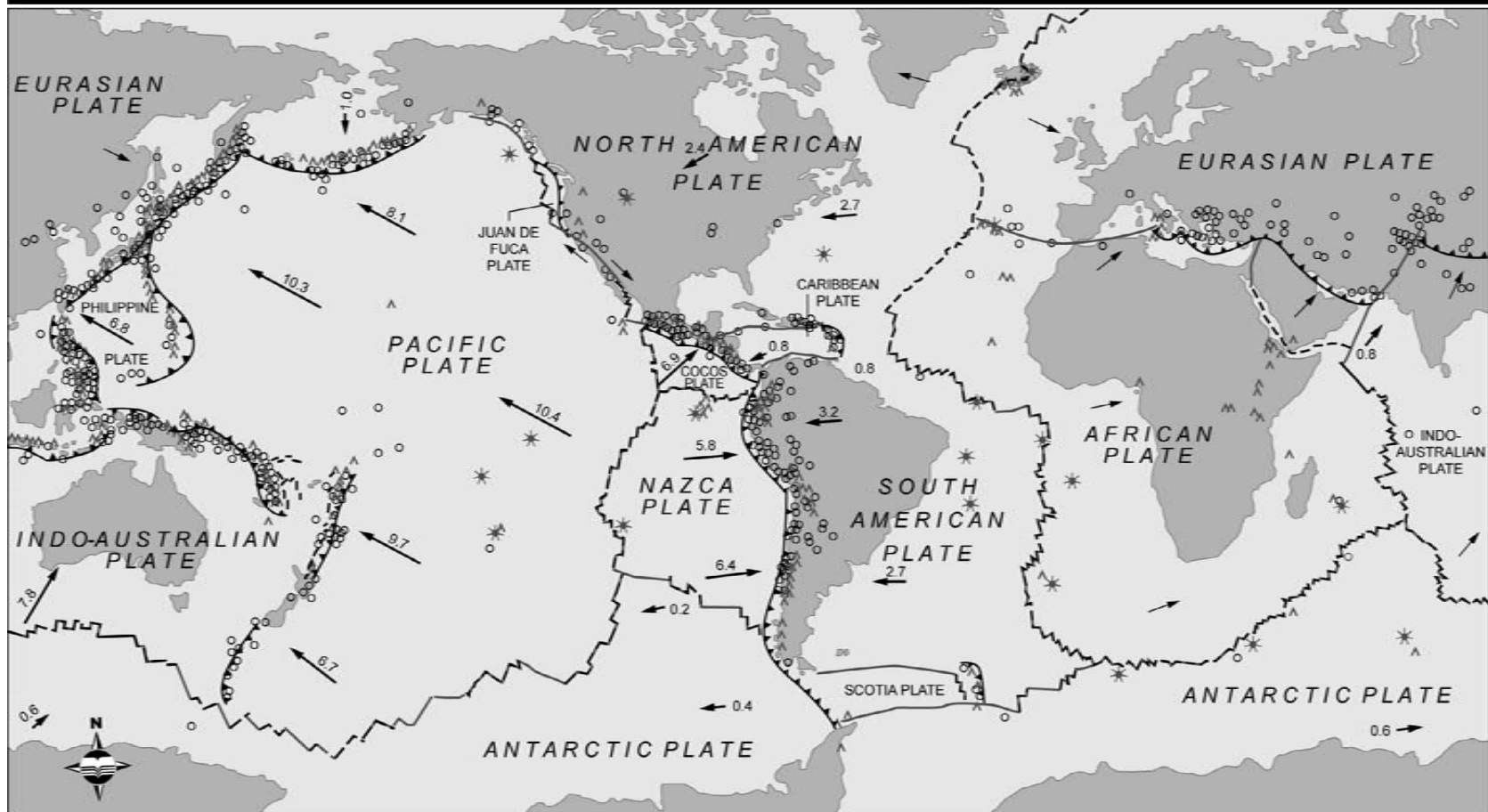
The Philippines lies alongside the Pacific Ring of Fire and is also a tectonically active area. The 1991 eruption of Mount Pinatubo caused considerable damage and also emitted a gas cloud that affected climates worldwide.

The modern landscapes of insular Southeast Asia reflect their tectonic origins. Indonesia is a mountainous country, its highest peak more than 16,400 feet (5,000 meters) above sea level, with over 400 volcanoes, about a quarter of them active. Volcanic ash has produced fertile soils, which are often found in places that are both mountainous and densely populated. The islands of Java, Madura, and Bali, comprising 6.9 percent of the land area of Indonesia, were in 1980 home to some 64 percent of Indonesia's population, necessitating the intensive use of agricultural land.

The topography of mainland Southeast Asia has also been significant in the region's history. The region is bounded to the north by the formidable Himalayan mountains, a daunting barrier to travel and trade. Extending through the peninsula are a number of smaller mountain ranges, separated by river valleys that have been important to civilization and trade throughout the region's history. Most important among these is the Mekong, a transportation route and source of sustenance and an avenue of trade for peoples of Laos, Cambodia, Thailand, and the southern part of Vietnam. Three modern national capitals—Vientian, Phnom Penh, and Ho Chi Minh City—lie on or close to the Mekong. The Irrawaddy River has long been the focus of Burmese civilization and commerce. The precolonial centers of Pagan and Mandalay are on its banks, and the modern capital of Yangon is located at its mouth. Other important rivers in the region are the Chao Phraya, which flows through the Thai capital, Bangkok, and the Red River, along whose lower reaches lie one of Vietnam's important rice-producing areas, as well as that country's capital, Hanoi.

While river valleys have historically made up the political, economic, and demographic cores of mainland Southeast Asia, mountain and upland regions make up the periphery. In Vietnam, Laos, Thailand, and,

TECTONIC PLATES, WORLDWIDE



most of all, Myanmar, members of the so-called Hill Tribes—among them such groups as the Karen and the Hmong—are among the region's most marginalized and disenfranchised peoples.

Most of Southeast Asia lies within the tropics, but its climates show considerable variation. Tropical rain forest and monsoon climates cover most of the area, helping to account for the agricultural abundance of much of the region and in particular its ability to produce tropical crops and rice, staples of the region now as in the past.

The monsoonal climates of western Southeast Asia have affected not only agriculture but also trade (see climate map). Monsoons are winds that reverse their flow seasonally, blowing from the west during the summer monsoon season and from the northeast during the winter monsoon season. In the era of sailing ships, this facilitated trade between southern Asia and Southeast Asia. It also contributed to the rise of the port city of Malacca, a destination for seafaring traders and a place where sailors would await the reversal of the winds for the journey west.

It is important to note that physical geographies of the region have changed over time and that their changes have had an important impact in and beyond the region. Early humans passed through Southeast Asia between 60,000 and 50,000 years ago on their way to Australia. At that time global climates were cooler and sea levels lower, allowing a mostly land-based journey from Asia to Australia. During the last ice age, some 20,000 years ago, sea levels were even lower, linking or narrowing straits between parts of the Southeast Asian archipelago that are now separated by oceans.

Human Geography

The human geography of Southeast Asia is in large part a reflection of the region's location and its physical geography. Located astride the searoutes linking eastern and southern Asia, the region long interacted with both of these regions. Location made parts of the region an early focus of European trade and colonialism and also contributed to the area's strategic importance to the major powers during and after the Second World War (an importance that had violent and tragic consequences for several countries in the region).

Broadly speaking, the western parts of Southeast Asia had the most interaction with areas to their west, the eastern part with areas to the east, and the coastal areas of insular Southeast Asia with both. And the optimum locations for interaction in all directions, those along the Strait of Malacca, have been able best to capitalize on the region's strategic location. Vietnam's history has long been closely (although not always harmoniously) linked with that of China, Burma's with India, and the littoral areas of insular Southeast Asia with each other as well as with traders and colonists from as far afield as Europe and Japan. Separated from the rest of mainland Southeast Asia by the Annamite Ranges, Vietnam historically had more interaction with China than with its neighbors to the west. The architecture, the imperial form of government,

Chinese variants of Buddhism, and the rendering of the Vietnamese language using a Chinese writing system were marks of this legacy. With the arrival of European influences in the area, however, came a change in some parts of the cultural landscape, most notably with the replacement of Chinese characters with a Romanized alphabet in written Vietnamese. Outside cultural influences vary regionally in Vietnam; for instance, Chinese influence dominated North Vietnam to a much greater extent than occurred in South Vietnam. The cultural landscape of western mainland Southeast Asia, west of the Annamite Ranges, carries the imprint of a long history of Indian influence: in writing systems that trace their origins to Sanskrit, in temples honoring Hindu gods, and perhaps most notably today in the prevalence of Buddhism, which superseded Hinduism in Thailand, Cambodia, Laos, and Myanmar.

The same trade routes and strategic location that brought outside influences to Southeast Asia at times also helped the region to project its own power and influence. The kingdom of Srivijaya (about the fifth to fourteenth centuries) capitalized on its location in southern Sumatra to control much of insular Southeast Asia (see map). And Southeast Asia—both islands and the mainland—were not simply the passive recipients of outside influences. Local populations adopted ideas that they learned from outsiders, but they also adapted them to their own needs and exported their own ideas. Hinduism came to mainland Southeast Asia, for example, but the caste system did not. Wet rice cultivation was a Southeast Asian innovation and diffused outward to other parts of the world.

Paradoxically, perhaps, one of Southeast Asia's largest and most powerful kingdoms seems to have eschewed the locational advantages of a coastal area in favor of a less accessible inland location. The capital of the Angkor kingdom was located on the flat and fertile lands at the northern end of the Tonle Sap, Cambodia's Great Lake, and Angkor's control extended through much of mainland Southeast Asia (see map). Angkor was a society of remarkable technological, agricultural, and architectural sophistication, and at its peak in the fourteenth century its capital was home to over 1 million people, making it one of the largest cities in the world.

Insular Southeast Asia

The location of insular Southeast Asia provided a different, though overlapping, set of influences from those experienced on the mainland. The littoral parts of the region have some of the longest histories of outside contact and influence in Asia. The Strait of Malacca, the most important sea link between the South China Sea and the Indian Ocean, has long been a highway of trade. Today, the clearest evidence of this is the city-state of Singapore, whose resource-poor but thriving economy owes its existence largely to its economically advantageous location at the southern end of the Strait of Malacca. Just to the north, the city of Malacca served as a port for Chinese traders and later for the Portuguese, Dutch, and British. The island of Penang, at the northern end of the strait, is

now being promoted by the Malaysian government as a manufacturing and trade center in part on the basis of its pivotal location.

The cultural and economic geographies of the Indonesian and Philippine archipelagos also reflect the area's location, but the effect differs profoundly depending on whether its society occupies a littoral or an inland area. Coastal regions have a long history of contact with outsiders and modern evidence to show for it. Most notable is the influence of Islam, which arrived in the area with Arab traders and was firmly established by the fifteenth century. Indonesia today has the largest Muslim-majority population in the world. Islam is also the predominant religion in Malaysia and Brunei. Insular Southeast Asia was also the earliest focus of European trade. The tropical climates and accessibility of the Spice Islands (in the modern-day Maluku) attracted European traders in the sixteenth century and later colonization by the Dutch (in Indonesia), Spanish (in the Philippines), and the Portuguese (in East Timor).

If accessibility and strategic location characterize the coastal areas of insular Southeast Asia, inaccessibility marks the inland areas. Mountainous terrain and tropical rain forests make the interior parts of islands like Borneo and New Guinea some of the least accessible places outside the polar regions. Their human landscapes reflect this: indigenous religions and languages predominate, populations are overwhelmingly rural, and subsistence agriculture as well as hunting and gathering are the mainstays for much of the population. The cultures of these areas are also some of the most diverse in the world. Inhabitants of the island of New Guinea alone speak over 1,000 languages.

Eastern Asia

Eastern Asia includes China, Taiwan, Hong Kong, Macau, North and South Korea, and Japan. Mongolia and Vietnam have also been closely tied to the region, while both have close connections that generally associate them with other regions. China's cultural, political, and economic influence in the region is long-standing. The recent economic rise of China can be understood as either a modern industrialized emergence or as a reemergence of a historic hegemon. China's vast territory, diverse resources, and large population allowed it to produce many of the most desired luxury goods of the classical era and all eras since. Japan rose as an economic power in the late twentieth century, but we would be myopic to imagine that the east Asian region has not played an important economic role in the world before. Korea has long had a sense of separateness but has spent more than 2,000 years resisting annexation primarily by the Chinese but also by the Japanese, primarily since the late nineteenth century.

Physical Geography

The continental core of eastern Asia is a vast area that encompasses dramatically different environments. The region has a very long coastline,

bounded on the east by the Yellow Sea and Pacific Ocean and on the south by the South China Sea. To the north are a series of deserts, including the Gobi and Ordos, and to the northwest are very high mountains. These geographic barriers largely define the boundaries of the east Asian region as well as the Han cultural region. The eastern section is defined by three river valleys. The Huang He, or Yellow River, to the north (also the hearth area of Chinese society); the Yangzi River to the south; and then the His River, farther south, that runs into what are today some of the largest and most important areas of China, including Hong Kong. The region also includes Korea, the islands of Japan, and the island of Taiwan, off the southeastern coast of China. This physical context has long shaped the historical geography of the region. Much of the early history of the region was marked by the expansion of Han culture and political control from north to south and the emergence and consolidation of a coherent and cohesive identity throughout the territory through migration and colonization. Even during this process of expansion and consolidation there has also been a long-standing relationship between China and its neighbors to the north. The Great Wall of China, for example, is a monument to long-term tensions between the Chinese and the nomadic peoples to the north. The wall is a cultural marker, obviously, but it follows a division that is both political and physical, reinforcing the boundaries of the region.

The region is rich in resources, which have supported considerable populations for millennia and account for the rich history of the area. The low-lying areas in the mainland have long been used for agriculture, and dense populations have been able to develop because of the richness of the soil. The mountain ranges are the source of rivers that support those agricultural plains but also have deposits of coal, oil, and other mineral resources. The mainland region is divided by east-west-running mountain ranges including the Qinling mountains, which mark a division between environmental and cultural subregions.

China has been a major cultural influence in the region, but the other areas should also be understood independently. Japan consists of four main islands: Honshu, Kyushu, Shikoku, and Hokkaido. Japan's history has been shaped by its island status, divided from the mainland and tied to the sea. The southern part of the island of Honshu has the best agricultural conditions, and early populations concentrated there. Obviously, fishing has also been an important resource for the island. The relative isolation that comes from being an island also contributed to a strong sense of Japanese nationalism; while there were always ties to the rest of the world, the seas protected Japan from all but the most determined invaders and gave the Japanese a strong sense of their own identity and power. Japan was originally populated by people from the Korean mainland. Korea, a peninsula that drops off of the mainland and toward Japan, appearing on the map rather like a finger pointing from mainland eastern Asia toward Japan, is separated from China by the Yellow Sea and from Japan by the ocean. Its relative location is an important feature of its geography and accounts for the its neighbors' intense interest. The climate of the region is extremely diverse, ranging from tropical in the south to almost arctic in the north. What makes eastern

Asia a region is not climate or environment but rather political and cultural connections.

Human Geography

The human geography of the region begins with an understanding of how human activities increasingly shaped the diverse physical geography of China, mostly in order to integrate disparate peoples into a single and more or less unified cultural, economic, and political region. China has been the central political and cultural actor in eastern Asia throughout recorded history, although Japan and Korea have developed distinctive cultures and at times have been actors in the world political arena as well.

Agriculture began with the cultivation of millet around the Hwang He as long as 9,000 years ago. Winds off the Gobi desert deposit fertile loess soil in this area. Agriculture supported the emergence of villages, but many of these villages remained seasonally mobile until the introduction of rice from the south about 5,000 years ago. From this period, there were well-established villages and signs of craft specialization and increasing social stratification. The emergence of what would be a Han-dominated region, however, can be understood as coming from the creation of coalitions among the walled villages of northern China. These coalitions facilitated the diffusion of what would come to be seen as traditional Han culture, including the cultivation of silkworms and the worship of ancestors. These coalitions shifted over time, with different clans or dynasties asserting control over generally broadening territory. Almost always, the coalitions were organized in order to fend off threats from militarized nomadic pastoralists to the north and to facilitate the development of infrastructure necessary to increase agricultural production.

The shift to more intensive agriculture included increasingly greater interventions into the natural environment. Toward its southern end, the Huang He was contained between levees and eventually flowed at aboveground level, a dramatic example of human intervention into the environment. More dikes and canals were developed in order to maximize agricultural production by controlling floods but also to provide the means for greater social and political control by creating transportation networks. The growth of agriculture and the expansion of populations also facilitated the shift of populations and production to the south around the Yangzi River valley, which was better suited to rice production. The desire to maintain political control and to integrate the north and south led to the development of larger-scale canals including the Grand Canal, which was completed in 611 CE. The Grand Canal connected the Huang He and the Yangzi River, facilitating trade, tax collection, and the movement of troops to the northern frontier, a perennial problem for China. In the early 1400s the second Ming emperor, Yongle, renovated the 1,200-mile canal as a centerpiece of his efforts to establish himself as a great leader. Thus, the boundaries of the region are defined by mountains and deserts, but the inside of the region has long been integrated to a remarkable degree through canals and public works projects.

Much of Chinese art and philosophy emphasized the importance of the environment through landscape portraits and through the development of a set of ideas that linked good governance and good living to patterns in nature and the overarching order of the cosmos. Cities were organized into nine sectors, with the homes of elites in the center. Cities themselves were (ideally, theoretically) the center of a similarly patterned set of fields (since agriculture was necessary to support urban life), which reflected the order of the Chinese lands that in turn reflected the organization of the cosmos. While China did not produce universal religions such as Christianity or Islam with an omnipotent god, the Chinese believed in an ordered universe that provided guidance for appropriate behavior. These philosophies relied on metaphors about nature, which was seen as a meaning-laden realm.

Confucianism, in one form or another, spread across the region, as did other aspects of Chinese culture. Although there have long been cultural and economic ties throughout the region, societies have kept a very distinct sense of identity. Korea is an excellent example of the individuality maintained by societies even though often in the shadow of stronger powers. Both China and Japan have had ambitions regarding Korea, and both have conquered and governed the peninsula on occasion. China considered Korea a client state through most of its history, recognizing its independence in 1895, which inspired another effort by the Japanese to annex the state. Taiwan was a contact area: the Portuguese landed there in 1544, the Dutch established a base in 1624, and it has been an area frequently contested by various states throughout the subsequent centuries. Japan itself practiced fairly isolationist policies from the seventeenth century to the nineteenth century and, like China, had a predominantly agricultural economy. Despite population pressures, Japanese urbanization had not been as extensive as in Europe and faced the same fuel depletion issues that Britain had (see section on Europe). Beginning in the mid-nineteenth century, Japan recognized the threat to its independence posed by strong European and North American economic and industrial interests and began to develop industries and invest in its military. Japan also began a period of imperial expansion, gaining territory throughout eastern and Southeast Asia, including Vietnam, Korea, and Manchuria. While Japan experienced devastating losses in World War II, including nuclear bombs being dropped on its cities, the country emerged from the postwar era as a strong industrial power.

Japan seemed for a while to be destined to be a truly modern society surrounded by countries not thriving to the same degree. But the successes of the “Asian Tigers”—Hong Kong, Taiwan, Singapore, and South Korea—as well as the rise of China as a major economic player in the world market suggests that the characteristics that long made eastern Asia a center of cultural and economic production remain important. The large populations and diverse natural resources contribute to impressively high productivity but have resulted in some rather severe environmental problems. Nevertheless, the economic ingenuity of the Japanese emerged from a history of skillful adaptation.

Europe

Europe makes up the western peninsula of the Eurasian landmass. The commonalities that help constitute it as a cultural region include religion and a collective racial identity formed through the experience of exploration and colonialism, and, in the modern era, economic strength based on industrialization. Much of Europe (but not all) was part of the Roman empire, but even those areas that lay outside the empire tend to include it in their heritage in one fashion or another. The physical boundaries of the region include the Atlantic to the west, the Mediterranean to the south, and, traditionally, the Ural Mountains to the east. The Ural Mountains are in Russia, which is sometimes identified as European, and does share some heritage with Europe. However, Russian culture is distinct enough to constitute the heart of another region entirely. Membership in the European Union (EU), which includes 27 countries, might also be considered a marker but is a very imperfect indicator at best. The EU does not include Switzerland, which is located in the center of Europe, or Norway, which is located in the far northwest and cannot plausibly be part of any other region. Serbia, Bosnia and Herzegovina, and Croatia are not members of the EU either, although Bulgaria, Greece, and Romania, located farther east, are members. Being European can carry a set of privileges, including academic and economic access and ease of movement from one state to another, yet the economic, religious, cultural, and historical criteria that might be used to define Europe are explicitly contested. Europe is as difficult a region to define as any other.

Physical Geography

Europe's topography is quite varied, but it is more mountainous in the southern regions and more characterized by plains in the northern parts. North of the Alpine mountain chain, the soil is fertile and productive for agriculture, although the Nordic countries of Europe have short growing seasons due to the cold. The climate of most of Europe is warmed by ocean currents off of the Atlantic, and temperatures in general are higher than in other areas at the same latitude.

Europe's coastline is uneven, which results in a long coastline relative to its area. Many European countries have been involved in maritime innovation and exploration. This is clearly true for the Vikings in the north and the early Greeks and eventually for the Spanish, Portuguese, Dutch, British, and French. However, many other European countries are landlocked, so a nautical tradition should not be imagined as a universal European experience.

If one considers connections and interactions as defining regions rather than just culture and continuity, European countries that border on the Mediterranean Sea have long participated in a set of economic, cultural, and philosophical exchanges around that body of water. While today we tend to see Europe as a distinct territory and the Mediterranean as dividing Europe from northern Africa and southwestern Asia,

traditionally these areas have been linked. The distance from the Iberian Peninsula to the northern coast of Africa is easily traversed. The Roman empire included territory on all sides of the Mediterranean, so while it was central to the formation of European identity, it formed that identity in relation to other regions in the world.

Human Geography

Many Europeans consider Ancient Greece the birthplace of Western civilization and the values of democracy and individualism. The weight of this philosophical tradition is one element that explains why Greece, which is fairly far to the east, is generally understood by Europeans as part of Europe (although some Middle Easterners consider it part of western Asia), even though its economic development lags behind the rest of the region. The Greeks divided the world into three regions: Europe, Asia, and Libya (Africa). These were the regions that the Greeks saw as surrounding them, and they would not have described themselves as belonging to any of them.

The Roman empire brought much, though not all, of Europe into a larger world for the first time and provided European elites access to elite goods produced throughout the rest of the hemisphere. The Roman empire integrated considerable territory by building roads, infrastructure in cities, ports, and harbors, and other investments that supported trade and bureaucratic control. Those areas not under direct Roman control (mainland Europe north of the Danube River for the most part) but close to the empire were also transformed by Roman influence. There was a great deal of trade as well as considerable conflict between Germanic tribes to the north and the Roman empire. The administrative burden of governing a huge territory led to the division of the Roman empire into two sections at the end of the third century BCE, and the eastern portion survived until the fifteenth century. In the West, failing trade policies, military losses, and the arrival of a militarized nomadic group, the Huns, from the central Eurasian steppes destabilized the northwestern frontier. While many members of Germanic tribes had assimilated into the Roman empire and fought in the military, the threat of the Huns increased attacks on the Romans and led to many “barbarians” seeking refuge from the Huns in the Roman empire. As today, refugees lived in poor conditions and threatened the social stability in the host domains. Romanized Europeans worried about the degree to which Germanic groups could assimilate and be more loyal to the empire than to their tribe. In other words, immigration issues arose.³ Gradually, the western political organization crumbled; the last Roman emperor was deposed in 476. As the Roman empire lost its ability to manage the western half of its territory, leadership fell to the Germanic chiefs. These new leaders did not have the advantages of a large empire and had to find other ways to appeal to local elites. Eventually, national identities provided a way of uniting and assimilating the populations of territories. By the nineteenth century, nationalism became one of the central dividing and unifying features of European culture.

The Iberian Peninsula was conquered by the Islamic Umayyad dynasty in 711; by 738, their campaigns reached far into France. Although they were pushed from France, the experience inflamed European animosity toward Muslims, which the erstwhile Iberian aristocrats who had been pushed to the Pyrenees constantly reinforced. The proximity with conquering Muslims intensified fundamentalism in both groups. Medieval European Christian aristocrats developed a warrior mentality and a rejection of all matters associated with “infidels.” Tensions between the Muslims and Christians took on the character of religious conflicts. From the seventh century, European Christians warred with Muslims in an attempt to reclaim the conquered Christian lands of Iberia; the island of Sicily was firmly in Muslim hands by 965. In 1074 the eastern emperor, Michael VII, appealed to Pope Gregory VII for help in repelling advances into the Byzantine empire. Pope Urban II, Gregory’s successor, called a council in 1095, stressing the plight of Christians in eastern areas and launching the first Crusade against Islam. Over the next century, these efforts of Western Christendom had the effect of giving some area of unity to the feuding Germanic princes of Europe.

The conflicts also increased contact (as well as mistrust and ill will) between Europeans and non-Christian populations in southwestern, southern, and western Asia. Through this contact, Europeans began to learn about scientific and medical traditions developed throughout the Islamic world. Exposure to the wealth and highly organized states of the Islamic lands transformed European culture, even as it intensified anti-Islamic sentiment. The Crusades actually increased trade as Europeans gained access to goods from the rest of the Eurasian landmass. Mongol rule provided safe passage for traders throughout the thirteenth century, and Europeans gained substantial experience in long-distance trade and the financial skills that facilitated it; unfortunately, they also came into contact with deadly pathogens. Bubonic plague spread along the trade routes during the fourteenth century, killing one-third to one-half of infected populations across the Eurasian landmass. One result of the Black Death in Europe was to create a new independence among peasants on continental Europe who gained new power to negotiate terms in exchange for their labor. On the other hand, in the British Isles, many landowners discovered that they could earn a greater return by expelling peasants and raising sheep for wool.

The rise of Europe is less mysterious and miraculous when understood within the context of this earlier period of trade and contact, during which Europeans learned much of the science, philosophy, and banking from sophisticated Indians and Arabs that encouraged them to develop market economies. After the demise of the Mongol empires, the Age of Exploration began as Europeans sought access to these goods by developing new routes that could avoid having to confront the Islamic Ottoman empire and other impediments. European exploration should be understood as motivated by a search for wealth and trading opportunities rather than just an interest in the unknown and undiscovered.

European exploration intensified by the mid-fifteenth century and slowly but surely transformed most of the globe, particularly Europe

itself. Exploration and colonization gave Europeans access to resources and led to dramatic transformations in production and trade. The emergence of sugar plantations in the Atlantic fueled the slave trade and led to a new protoindustrial form of production that was highly regimented, dependent on considerable amounts of machinery, and based entirely on long-distance trade. These experiences were central to the later emergence of industrial production within Europe. In addition, the increase in trade led to new roles for states in Europe. Governments increasingly invested in infrastructure to help trade in the sense of both transportation and investment. Ports, canals, and roads were developed. At the same time, governments became more adept at collecting taxes and regulating economic activity. All of these were capacities that helped Europe emerge as politically and economically strong in the coming age. Other changes followed. Colonialism, the slave trade, and global trade in general transformed power within Europe as new classes of people prospered. Their newfound wealth did not immediately translate into political power, which resided in the hands of monarchs and an aristocracy. Increasingly, kings made common cause with merchants and explorers seeking improved access to markets, challenging the traditional military aristocracy. The gradual realignment of power inspired new ideas about power and legitimacy. Instead of divine right (or military might) being the sole source of political legitimacy, a social contract between government and the people gradually became understood as the source of political legitimacy. Over subsequent centuries the boundaries between subject and citizen had been challenged, but this understanding of popular consent has become a central understanding of political organization in Europe and elsewhere.

Modern industrialization originated in Great Britain, but the techniques spread rapidly. The British had been exporting woollens for many years, and entrepreneurs were searching for more efficiencies in production. After centuries of cutting down forests, Britain faced a fuel shortage and needed to develop alternative forms of energy. In addition, Britain had coal deposits that could be used to meet those needs. Other characteristics that made industrialization possible were more broadly distributed, including surplus labor and capital to invest in new forms of production. But it is also important to realize that some of the features that enabled industrialization came from the contacts with the rest of the world that were reshaping Europe. From the fifteenth century, Muslims were establishing commercial plantations in Africa and nearby islands. Europeans colonizing the New World adopted the model and reworked the efficiencies of plantation-style production for other kinds of production. Knowledge about Indian cotton production was imported and modified. Industrialization, like capitalism, did not spring full-grown from European soil but instead emerged through interactions with other groups and regions also experimenting with new ways of producing goods and organizing economic relationships.

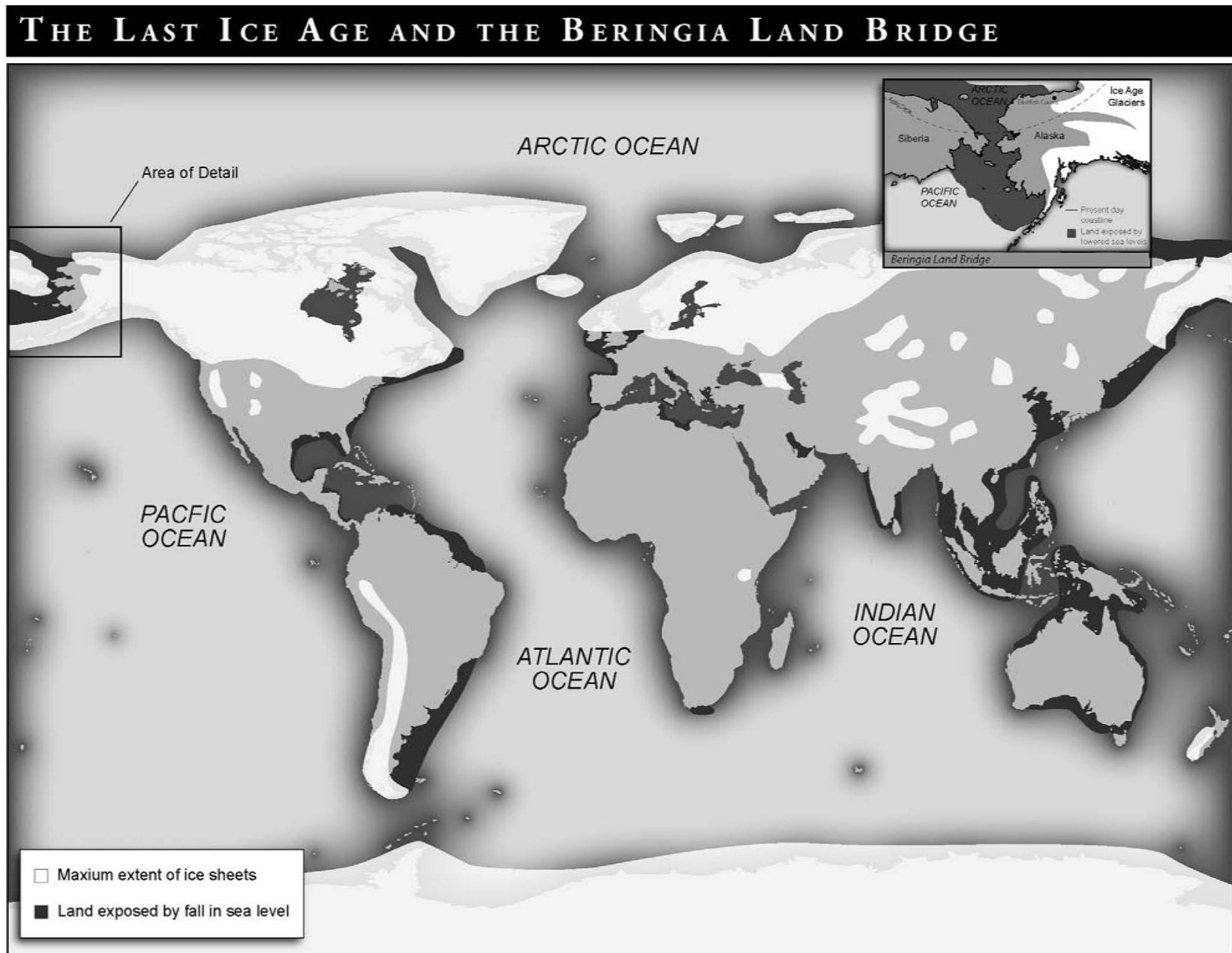
In the early twenty-first century, despite the creation of the EU, Europe's political geography remains somewhat fragmented into relatively small and numerous political units, often defined by a strong sense of nationalism. In the twentieth century this led to two major wars, and

since then there has been an increasing effort to shape a regional or European identity (in part to be able to compete with the United States economically in the world economy). Since the end of the Cold War and the collapse of the Soviet Union, Europe has seen the intensification of these seemingly opposite political trends. On the one hand, countries have divided, peacefully or violently, over nationalist differences, while on the other hand, the EU has gained strength and numbers. The increasing role of a European identity rather than a collection of disparate national identities has been complicated by large numbers of immigrants coming from Africa, the Middle East, and southern Asia. All regions grapple with issues of identity, but the relative power of Europe in shaping the modern world means that Europeans have the power to define their own region and other regions. Europeans have defined Europe through a set of ideas and values. Resistance to immigration and anxiety about protecting borders and resources mean that Europeans are struggling to understand what characteristics are necessary for an entity to be classified as European. Should it be commitments to abstract and universal principles, such as individualism, democracy, and free trade, or less universal things like birth, race, or religion?

Regions of the Americas

Scholars are still uncertain about the number of waves of prehistoric migrations into the Americas. The first was probably about 35,000 years before the present. But genetic and linguistic evidence suggests several subsequent migrations, taking place during times when global temperatures were colder and sea levels lower than they are today and when Siberia and Alaska were linked by an area of unbroken land known as Beringia (see map of ice ages and land bridges). These early migrants were the ancestors of a wide variety of indigenous American peoples living in areas as diverse as the Amazonian rain forest, the islands of the Caribbean, and the plains of North America.

The perception of “America” and how the word is used differs in various parts of the region today. Physiographically, the Americas are a contiguous landmass reaching from the Aleutians in the north southward to Cape Horn (but for the artificial and very modern division of the Panama Canal). This, however, treats as homogenous a territory that encompasses vast differences of climate, topography, and culture. On the basis of physical geography, the Americas can be divided into North America and South America, connecting at the southern end of Panama. Cultural and economic geography, however, argue for treating wealthy and developed Canada and the United States separately from the hemispheric neighbors and distinguishing between Anglo-America and Latin America. This division may make economic sense but is simplistic both as a cultural notion and physiographically. Culturally, it ignores in “Latin America” the numerous non-Latin peoples, including indigenous Americans, millions of Americans of African descent in the Caribbean basin and Brazil, and the non-Latin European cultural legacy found in places such as Jamaica, Haiti, and Aruba. Similarly, the



term “Anglo-America” ignores indigenous Americans, African Americans, Francophone Canadians, and Asians and the complex of immigrants throughout North America. Physiographically, the term lumps together a vast diversity of climates, topographies, mainlands, and islands.

Another way to conceive the Americas is as three distinct but related regions. North America, with the dominant population having roots in western Europe, consists of the economically powerful geographic north, Canada and the United States of America. Central America, including for our purposes Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Mexico (despite its location on the North American continent), and the islands of the Caribbean—the most populous of which are the Bahamas, Cuba, Jamaica, Haiti, the Dominican Republic, and Puerto Rico. The third district, South America, consists of the 13 countries of the South American continent (Colombia, which used to include Panama, and Venezuela, Guyana, Suriname, French Guiana, Brazil, Uruguay, Argentina, Chile, Peru, Ecuador, Bolivia, and Paraguay). Central and South America have cultural roots that combine Iberian influences with indigenous traditions.

North America

The region we are herein designating “North America” consists of only two nation-states, the United States and Canada. These countries are both wealthy and are economically intertwined, share common demographic and cultural characteristics, and have similar histories of early settlement, European colonization, and early industrialization. Despite these similarities, however, the case for defining the region of North America, as with all world regions, is problematic.

From the perspective of physical geography, if North America is indeed a region, it includes the landmass atop the North American plate and stretches from Canada’s northernmost Arctic islands as far south as Colombia’s northern border, including the Caribbean islands of Cuba and Hispaniola (see map of tectonic plates). If the region were to be defined based on its history and current cultural geography, much of the southwestern United States would have to be included in the same region as Mexico, the erstwhile political authority in the area and a country with whom a plurality of its population share a language and cultural heritage. The economies of North and Central America are closely linked by trade as well as migration, both legal and illegal. Politically, U.S. hegemony in the region dates back to the Monroe Doctrine in 1823, which was a declaration that the United States would consider any European efforts to colonize or interfere in the affairs of any region of the Americas to be an act of aggression. North America exists as a separate region largely determined by economic and cultural factors. The United States and Canada are stronger economically and share culture derived largely from western Europe; however, it should be stressed that there is a strong blurring along the borderlands of Texas, New Mexico, Arizona, and California, where the Spanish language and Hispanic culture are well established and growing.

Physical Geography

North America is a large region: Canada is the world's second-largest country, and the United States is the third-largest country. Together they have a land area of 7.65 million square miles, about 2.5 times the size of Australia or two-thirds as large as Africa. North America's physical geographies are diverse, ranging from vast plains to high mountains and from subtropical grasslands to tundra.

It is impossible to understand the history of the region without an appreciation of the opportunities provided by the physical landscape and the ecosystems it has supported. Climate, soils, and surface water made large parts of the region suitable for agriculture from precolonial times onward. Neolithic hunters who settled the southwest found environments that encouraged the development of agriculture. The coastal plains of the southeast proved suitable for plantation agriculture, particularly cotton. The lowlands of the continental interior were ideal for wheat and corn, and the advent of mechanized agriculture was made easier by large expanses of flatland. The Pacific climates of northern California provided an ideal environment for growing fruits and vegetables, and aided by irrigation schemes, the central valley of California was made into one of the world's most successful fruit- and vegetable-producing regions. Forests, first naturally occurring and later planted, provided an ample supply of wood for fuel, boatbuilding, and construction.

The physical environment also proved a boon to the development of transportation systems. The Mississippi-Missouri river system is the world's largest navigable river system, the Great Lakes provided another extensive array of trade and transportation routes, and the navigable rivers of the eastern seaboard proved invaluable in the growth of cities from Montreal to New York and Baltimore. Technology surmounted some of the obstacles that nature had provided: the Erie Canal linked the Great Lakes with the Hudson River and New York, and locks and canals linked the Great Lakes to the St. Lawrence and the Atlantic and helped facilitate trade from New Orleans to St. Paul and Pittsburgh.

North America's mineral deposits provided many of the resources necessary to support the Industrial Revolution and its aftermath. Extensive coalfields in the Appalachians and iron ore deposits in the Great Lakes region fueled the rise of the steel industry (navigable waterways played a role here too). Extensive coalfields in the Great Plains have supported the generation of abundant supplies of electricity enhanced by large public works projects such as the Hoover Dam and the dynamos installed at Niagara Falls. Oil and natural gas have also been important resources in the region, particularly in the Gulf of Mexico, Texas, California, Alaska, and the Great Plains of Canada.

The location of North America, separated from Europe and Asia by large oceans or desolate polar climates, has also had an impact on the region's history, inhibiting outside invasion, refugee movements, or political confrontations to the degree that have marked the histories of Europe, for example, or Southeast Asia. Despite manifold natural resources, it is worth noting that most of North America is not fecund: most of Canada and Alaska lie within Arctic or subarctic climatic regions

and are entirely unsuitable for agriculture (although these regions have historically provided a home for small populations of indigenous peoples relying on hunting and fishing). Some of the region's richest mineral deposits lie in remote and inconvenient locations: Alaska's oil deposits are mostly north of the Arctic Circle, and Canada's significant deposits of oil and natural gas are in the less severe but still challenging climates of northern Alberta.

It is tempting to exaggerate the impact of climate, resources, and the physical landscape as influences in the economic and political development of states and regions. As the experiences of Japan and Singapore (among others) attest, industrialization is possible without a significant resource base. Nonetheless, there can be little doubt that the physical environment has played a considerable role in the development of the United States and Canada.

Human Geography

Settlers arrived in North America from three different directions: northwest, east, and south. The region's first inhabitants arrived from northeastern Asia about 35,000 years ago over a land bridge that spanned what is today the Bering Sea and spread not only through North America but also through Middle and South America. In the large expanses of North America, they developed over 2,000 languages and a variety of lifestyles ranging from hunting and gathering to settled agriculture and the construction of cities. In 1492 indigenous peoples comprised the entirety of the North American population, and estimates of their total numbers vary widely from 1 million to 18 million. More than half a millennium later, indigenous peoples make up some 4 percent of Canada's population and less than 1 percent of the population of the United States: in other words, little more than 3 million in total. Their demise was brought about by the arrival of Europeans on the east coasts of the region and in much smaller numbers from Mexico to the south. Like the indigenous peoples of Australia and South America, indigenous North Americans had no resistance to many of the diseases that came from Europe, and their populations declined rapidly. Many of the survivors were displaced from their traditional lands to peripheral areas in the west and north of the region.

The Europeans who first colonized North America were primarily Spanish, Dutch, French, and British. British colonization and settlement ultimately dominated most of the region and is reflected today in the prevalence of the English language in both Canada and the United States. French colonial influence has been important in Canada, where French is today an official national language and the majority language in the province of Quebec. French influence also remains in parts of the United States acquired during the Louisiana Purchase, particularly in the state of Louisiana itself. Spanish culture and language initially arrived in North America from the south; large parts of the United States were Mexican territory before their acquisition by the United States in the mid-nineteenth century. This influence has been reinforced since that time with trade and immigration across the southern border of the United

States. In 2005, 14.5 percent of the U.S. population was classified as Hispanic or Latino by the U.S. census, a total of some 42 million people.

Another major group of settlers in North America arrived involuntarily as slaves from Africa. They settled mainly in the southeastern United States, where plantation agriculture was most prevalent. After emancipation African Americans spread to other parts of the country, primarily to urban areas. This migration increased in the twentieth century as the two world wars opened up jobs in the armaments industries. Today, blacks (most of them African Americans) make up some 12.5 percent of the population of the United States. Relatively few blacks migrated across the border; less than 2 percent of Canada's population is black.

In 2007 the combined population of the United States and Canada was 334 million people.⁴ Of these, 301 million lived in the United States, and 33.4 million lived in Canada. Both countries' populations continue to grow at a significantly higher rate than the populations of most other developed countries, although this is overwhelmingly as a result of immigration. In both the United States and Canada, native-born populations are growing slowly, whereas Japan and many European countries face declining populations in the twenty-first century. The spatial distribution of North America's population shows some clear patterns. First, large majorities in both the United States and Canada live in urban rather than rural areas. Second, most of the population lives along the west coast or in the eastern third of the continent. Third, over 75 percent of Canada's population lives along the country's southern fringe, within about 125 miles (200 kilometers) of the U.S. border. Fourth, the population center of North America continues to move to the west and south, as it has done for the past two centuries.

In many respects, the historical geography of the United States and Canada has a lot in common with that of Australia and New Zealand. All four countries were, prior to colonialism, occupied by indigenous peoples; in all but New Zealand large numbers of these first inhabitants died primarily as a result of diseases that arrived with Europeans. In all four countries, Britain became the colonial power and left a strong political, economic, and cultural legacy (the latter most evident in the predominance of the English language). In all four countries, large majorities are the descendants of European immigrants, although increasing numbers of recent migrants have come from Asia and, in the case of North America, Latin America. Mainly as a result of immigration, all four countries have increasing populations.

Middle America

Middle America contains eight countries (Mexico, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama on the mainland and all of the countries in the Caribbean Sea) and in 2010 was home to 195 million people. The region is diverse in terms of its physical and human geographies, and geographers commonly try to make

sense of these differences by subdividing the region into two parts. Topography may appear to suggest a simple division between the Central American mainland and the islands, which circle from Mexico's Yucatan Peninsula to the eastern coastline of Venezuela. Closer examination, though, reveals that it makes more sense to conceive of the region as consisting of the low-lying, tropical, and largely coastal areas bordering the Caribbean (which some geographers have called the rimland) and the mountains, plateaus, and western coastal areas (called the mainland). This mainland-rimland distinction helps to explain not only the physical geographies of Middle America but also the distinctive historical and cultural geographies of the two parts of the region.

Middle America is funnel-shaped, its broad end at Mexico's northern border and the southern end of its stem at the border between Panama and Colombia. To the west is the eastern edge of the Pacific plate, part of the tectonically active Pacific Ring of Fire. Earthquakes and volcanic activity are common here, and the destruction they have caused in the region is an integral and ongoing part of Middle American history.

Tectonic activity is responsible for the mountain spine that runs the length of the Middle American isthmus and passes through all but one of the countries of the mainland. At the broad northern end of mainland Middle America, the mountain spine divides into two distinct ranges. The Sierra Madre Occidental and Sierra Madre Oriental are separated by a high interior plateau, most of it more than 5,000 feet above sea level. On the western and southern coasts of Middle America, a narrow coastal plain separates the Pacific Ocean from the highland interior; in some places there is no coastal plain at all, with sheer cliffs marking the coastline.

The physiography of the eastern coastline is very different from that of the west. Here, along the Caribbean, the coastal plain is much broader. Most of Belize lies less than 500 feet above sea level, as do most of Mexico's Yucatan Peninsula and the Caribbean coastlines of Guatemala, Honduras, Nicaragua, and Panama. Topographically, these regions have much more in common with the islands of the Caribbean than they do with the mainland areas to the west. These similarities extend beyond topography to climate and help explain why they are considered part of the rimland rather than the mainland.

The climates of Middle America are influenced by a variety of considerations, including latitude, topography, and westward-moving weather systems. Much of the region lies within the tropics, but the high elevations of the mainland moderate the effects of this tropical location, producing cooler and drier climates and protecting the interior from the full force of westward-moving storms (not uncommonly hurricanes). The Caribbean islands, in contrast, experience mainly tropical rain forest-type climates, and their easterly or windward sides (meaning the direction from which the wind blows) often bear the full brunt of storms. Recreational sailors appreciate these dependable winds; the islands rely heavily on tourism for economic development.

Climatic and topographic differences have played a crucial role in the history and development of Middle America. Indigenous societies of

the mainland and rimland were distinct, as were their colonial economies and societies and the cultural and political landscapes of the post-colonial era.

Human Geography

Middle America was home to several powerful and innovative civilizations whose ideas and influence spread throughout the region. The Olmec culture thrived from about 1200 BCE until about the end of the fourth century BCE. The Maya rose to preeminence in the region in the third century CE; the heartland of their empires was in the low-lying tropical lands of the Yucatan Peninsula and the highlands of the Mexican state of Chiapas, but they had a much wider territory of influence, which would have constituted a Maya region during that time period. This region was comprised of those who paid tribute to the Maya (a political relationship), those who shared a language or related languages (a linguistic relationship), and those with similar agricultural practices and religious beliefs (a cultural relationship). This Maya region might have survived the collapse of the Maya empire, since the linguistic and cultural commonalities would remain even after the political and economic ties fell away. Even today southern Mexico and northern Guatemala share a great deal in terms of the culture of those who live there. This cultural region exists but is also subsumed into larger regions of more recent origins.

A succession of other societies lived in the topographically and climatically different areas of Mexico's Central Valley. This was where the city of Teotihuacan was built, at its peak a city of as many as 100,000 people. The Aztec state arose in this upland area in the fourteenth century, centered on its capital of Tenochtitlan, a city largely destroyed by Hernandez Cortes and his army in 1521 and ultimately replaced with the Spanish colonial capital of Mexico City. As in much of the rest of the world, geographic circumstances and processes both impelled and facilitated the process of colonization in Middle America. Climate precluded the growing of peppers and other much-desired tropical spices in Europe, spurring trade with eastern and Southeast Asia (see Europe, Eastern Asia, and Southeast Asia sections for more information). European maritime exploration was driven in part by the search for economical and secure routes for the lucrative spice trade. And it was in part the search for a new route to the spice islands of Southeast Asia that led to the arrival of Columbus in Hispaniola in 1492.

The path of conquest of the Americas by Europeans was made easier by the historical geography of early human migrations and specifically by the lack of contact between the peoples of the Americas and those of Europe. In the tens of thousands of years since their ancestors' migratory paths diverged in Asia (see map of early human migrations), the people of Europe had been exposed to different climates, foodstuffs, and animals and, critically, different pathogens than their Western Hemisphere cousins. There are two theories about the one-way direction of disease (although there is some controversy about the origins and directionality of venereal diseases). One theory is that few animals

EARLY HUMAN MIGRATIONS



CARIBBEAN ISLANDS, CIRCA 100 BCE



were actually domesticated in the Americas; most of the deadly pandemics of history came from diseases passed to humans from domesticated animals. The other theory is that the early episodes of diseases such as measles, influenza, etc., killed the most vulnerable members of the European and Asian human populations; those who survived tended to have immunities that were often passed along to their offspring, gradually reducing these dangerous outbreaks to mere “children’s diseases.” Separated by tens of thousands of years of evolution and thousands of miles of ocean, the indigenous peoples of the Americas had developed a different set of immunities. When Europeans arrived in the Caribbean islands in Mexico, the diseases they carried with them had a devastating effect on local populations. European diseases rather than European weapons brought victory to the conquistadors. (Disease similarly devastated other indigenous populations, such as Australia’s Aborigines and the Khoisan peoples of southern Africa.) Epidemics disorganized once highly organized societies as communities suffered massive deaths, lost crops due to the loss of farm labor, and dispersed as people fled both the Spanish and their diseases. The pathogens often spread faster than the Spanish themselves, which meant that in many instances European descriptions of the “new” world were of a world on which they had already had immeasurable influence.

Colonization changed the human geographies of Middle America not only by annihilating local populations but also by bringing in outsiders along with their ideas, beliefs, and cultures. On the mainland, Spanish influence was strongest. The Spanish language gradually came to be the predominant tongue in most of the countries of the region, although indigenous languages were widely spoken by minorities; however, today speakers of indigenous languages comprise a majority only in Guatemala. Roman Catholicism, the religion of the colonists, is today the faith of the overwhelming majority of Middle Americans (albeit with modifications shaped by indigenous religions and cultures).

Several European powers vied for control of the rimland; their varied legacy is reflected in the modern cultural and political landscape of the area. Spain controlled the largest tracts of territory in the rimland, including Cuba, Puerto Rico, and the eastern part of Hispaniola (today the Dominican Republic). The British colonial holdings were also significant and included Jamaica, the Bahamas, Belize (formerly British Honduras), and the coastline of present-day Nicaragua. The largest French holding in the rimland was Haiti, where the majority of the population today speaks a language largely based on French. The Dutch and Danish also acquired Caribbean colonies, though their major colonial interests were elsewhere. The economic geographies of the mainland and rimland areas were quite distinctive during the colonial era, and the legacy of these differences remains today. The tropical rimland areas, particularly lower-lying and more accessible coastal areas, were particularly well suited to the production of plantation crops, most notably sugar. In some parts of the region, including Jamaica and Haiti, colonial powers brought slaves from Africa to provide the labor force for their plantations. The economic and cultural legacy of this period is evident today: majorities of the population of both Haiti and Jamaica are of African descent, and the economies of several of the countries in the Caribbean still rely on the export of tropical agricultural products as their main sources of revenue.

The end of the colonial era in most of Middle America came in the early nineteenth century, but this did not mean the end of powerful foreign influences in the region. As European domination waned, Middle America began to feel the consequences of its proximity to an increasingly powerful United States. The impact of the United States remains today throughout the region. In the case of Mexico, its very political boundaries are in part a legacy of U.S. influence and power. Economic geographies in the region reflect the interests of North American capital and markets (although simplistic, the notion of the “banana republic” encapsulated the idea of a Middle American economy whose economic and political landscape is dominated by a single tropical crop grown for export to the United States). The U.S. demand for labor has prompted the migration of millions of Middle Americans to the United States as well as to the labor-intensive factories established in Mexico and elsewhere to take advantage of local cheap labor and proximity to U.S. and global markets. All countries in the region have experienced U.S. efforts to influence the course of their domestic politics, frequently involving the use of direct or indirect military force.

South America

South America is understood as a region in large part because of its separateness as a landmass. It is surrounded by water except for a sliver of land connecting it to Central America. Thus, unlike the divisions of many Eurasian regions, the physical boundaries of this region generally make sense. Only the northern boundary, between Colombia and Panama, is obviously produced by politics rather than natural forces (Panama was part of Colombia until 1903). But it is not just physical characteristics that shape the region. The countries of South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela) were almost all part of the colonial holdings of Spain or Portugal. (Guyana and Suriname began as Dutch colonies, with the British assuming control of Guyana in the early nineteenth century. French Guiana was colonized by the French in the seventeenth century.) The legacy of colonialism—arising from both colonizers' domination and indigenous resistance—shaped the economy, population, and aspects of the culture of the region. As centuries passed, European and native cultures acted upon each other as they developed. Of course, there are also notable differences in the areas colonized by different European powers. The region's population exceeded 370 million by 2005.

Physical Geography

The region of South America was separate from the other regions of the Western Hemisphere until 3 million years ago, when volcanic activity created the Panama Isthmus and connected the major landmasses. From this point animals were able to move from one region to another, and animals once found exclusively in South America, including armadillos and sloths, moved north. Other animals moved south, including llamas, which we now think of as quintessentially Andean animals. This exchange increased the range of plants and animals available for people to domesticate and use.

The region is defined by several quite distinct topographic and climatic features and subregions. The Andes mountains stretch from north to south along the western side of South America. Produced by tectonic activity, they are young and seismically active ranges. The Andes, with their high altitudes and challenges to agriculture and infrastructure development, have long shaped life in Argentina, Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela.

Apart from the mountains, South America also includes tropical areas, including the Amazon rain forest, and broad river basins, including that of the Amazon River, the largest river in the world by water volume. There are also deserts, especially the Atacama Desert in the southern reaches of the region, east of the Andes mountains, which gets remarkably little rainfall and is the driest desert on earth. The deserts, obviously, are scarcely populated. As is true in most regions, the coasts are most densely populated and the interior less so. However, in South America this pattern is more pronounced, with very high population

concentrations in urban metropolitan regions, which are generally on the coast or in the mountains and quite sparse populations in the rain forest and desert areas.

Human Geography

The earliest evidence of agriculture in South America is found in the Amazon Basin and dates to 6500 BCE, with evidence of animal domestication (the llama) and plant domestication (maize) in the Andes following this by 3,000 years, by 3200 BCE.⁴ The first signs of complex societies and empires occurred on the Peruvian coast, culminating in the emergence of the Chavin, a group with extensive trade relations along the coast that provided cultural influences for subsequent Andean empires, including the Inca. Before the rise of the Inca empire, smaller political units existed and extensive irrigation systems were built, but there was little urbanization and there were limited market systems, even though the highly varied topography of the area meant that there was considerable specialization in production. This fragmentation reflects the difficulty of uniting, economically or politically, highly mountainous terrain. Mountainous areas tend to have smaller farm plots, more dispersed populations, and greater cultural and linguistic diversity because they are harder to control. It is truly remarkable that the Inca empire was able to largely unite the Andes and the mountainous western coastal region in the early thirteenth century.

The Inca expanded existing infrastructure dramatically, building and maintaining 14,000 miles of road to connect the long, narrow, and dramatically mountainous territory that they controlled. Perhaps because of the importance of this infrastructure and transportation, they relied heavily on conscripted labor rather than taxing subjects in kind (collecting a percentage or fixed amount of agricultural production). Instead, men in the Inca empire served in the military and worked on public works projects for a certain amount of time each year. At some large-scale work projects drugs and alcohol were distributed to the workers to make them more content to be there. Each community under the Inca empire divided up its agricultural land, some set aside to feed locals, some dedicated to the empire and the gods. Under the Inca empire, the specialized production that resulted from the dramatic differences in climate and environment became the basis for extensive trade. At the height of the Inca empire, more food was produced throughout the Andes than is produced today.

The Inca empire stored surplus grain along its extensive road system to support troops and traders and in times of food shortages released it to communities in trouble. The Inca empire also attempted to quell conflict and dissatisfaction by bringing the children of conquered leaders to the capital, Cuzco, where they were raised to be loyal to the Inca and were later married to establish strategic alliances. When regions were seen as disloyal, some of the population would be moved to other parts of the empire to weaken challenges to Inca authority. However, like the Mexica (Aztec) empire, which apparently was experiencing some internal conflict, the Inca empire was in the midst of a struggle

for power between two brothers when the Spanish arrived. In addition to political conflict, smallpox had arrived—carried through indigenous contacts—before the Spaniards so that sections of the empire were already facing decreased populations and the consequent decrease in food production and social and political stability.

When the Spanish had control over most of the empire, they used the expressions of political power put in place by the Inca, including the mandatory labor system. Once the Spanish discovered the vast seams of silver in central Peru (now Bolivia) and the international demand for silver skyrocketed, conscripted labor was extended and used to mine the silver. This allowed the Spanish to make extraordinary profits but continued the process of demolishing the indigenous population. The global circulation of goods was not limited to silver. South American food products also diffused throughout the world. Potatoes, originally from the Andes, fed peasant communities from Ireland to Russia to China; corn, originally grown in Middle America but a staple throughout the Americas, was soon grown in Africa as a central part of colonial labor systems, since it requires relatively little effort per calorie and freed up African workers for forced labor in mines or plantations; manioc, native to Brazil, also became a staple in Africa. The diffusion of food supported the expansion of populations throughout the world.

On the Atlantic coast, the Portuguese found a different set of resources in Brazil. With no substantial stores of gold or silver, the Portuguese established plantation systems. By the 1530s, Brazilian sugar competed with sugar produced in the islands off the northwestern coast of Africa and, later, throughout the Atlantic and the Caribbean islands. These plantations were worked by slaves brought from Africa (some estimate that over a third of the slave trade was destined for Brazil), establishing the origins of a large Afro-Brazilian population that remains culturally significant today. On the eastern side of South America, population concentrates along the coasts even more than the western side, where there are vast capital cities at dramatically high altitudes. The Amazonian basin has long been populated by indigenous tribes but at relatively low densities and with the great cultural diversity that characterizes places with small dispersed populations. Some of these tribes were pulled into plantations as slave labor, many were defeated by disease, but some have remained independent for centuries. Today, the expansion of large-scale agriculture into the region leads to conflict with these populations.

Spreading Christianity was one of the justifications for the conquest of the Americas. Conquistadores were always accompanied by priests, some of whom had qualms about forced conversion, but many did not. While indigenous and African religions are still practiced and Protestant missionaries are increasingly successful in conversions, Catholicism has shaped the culture and politics of South America for all parts of the population. Catholicism has been simultaneously a tool for oppression and a voice for liberation and justice.

Following the American Revolution and the French Revolution, the Spanish colonies began to fight for independence, particularly after Napoleon Bonaparte invaded Spain. These local revolutions were generally

supported by propertied elites who were interested in liberating themselves from Spanish control but not in losing their power relative to the vast majority of the population, the indigenous population, or the Africans imported as slave labor. So, while there was a radical message in most independence movements throughout much of South America, independence led to the perpetuation of political and economic elites who were European rather than indigenous and who continued to exert power over the indigenous and black populations. Most countries continued the economic development begun under colonial rule, focusing on developing extractive economies and exporting primary products (metals extracted through mining or agricultural products). Much of the investment used to expand production came from Europe (especially Britain) and the United States. An American, Keith Minor, built railroads in Colombia and other countries in South America and Middle America; Americans and Europeans owned banana, coffee, and other plantations that exported food; and foreign companies provided financial and technological investment in mineral extraction throughout the region.

Overall, postindependence economic development produced more riches for the wealthy and growing poverty for the rest throughout South America and was the basis for increasing resistance from rural peasants and the urban poor and increasing repression from militarized governments. The proliferation of rebel groups (often Marxist) aroused U.S. concern, leading to U.S. interference and involvement in South American politics during the Cold War. During this period, the mountainous terrain of the Andean states of South America again proved difficult to control and dominate, as political and criminal threats to state control used the topography to hide from the military. Not surprisingly, many residents of the region found themselves caught between competing armed bands of men.

Today in the post-Cold War world when the United States is more focused on terrorism than the suppression of communist movements and many military governments have been displaced through democratic trends, a new set of leftist leaders has risen in South America. Venezuela, Brazil, and other countries have elected populist leaders, though all have faced internal resistance and international challenges. The near future will reveal if a new regional identity will emerge, one that articulates a new international economic agenda, a new role for indigenous and African peoples, and a new political vision.

Oceania

Nowhere is the problematic nature of regions clearer than in the case of the region encompassing Australia, New Zealand, and the South Pacific, a region frequently called Oceania. Indeed, even calling this area a region stretches the notion of region to its limits. In terms of sheer area, it is the largest of the regions we identify here. It extends longitudinally from western Australia (about the same longitude as Hong Kong) to Pitcairn Islands (the easternmost of which is about the same longitude as Vancouver). The northern Mariana Islands lie as far as 20° N, and New

Zealand's South Island reaches some 46° S. Although immense in extent, land areas make up only a small portion of the area, totaling an area roughly equal to that of the contiguous states of the United States. The region's population is tiny; only 34 million people, or just over 0.5 percent of the total global population, live here. This population is very unevenly distributed: the three largest and most populous countries in the region—Australia, New Zealand, and Papua New Guinea—are home to some 95 percent of the region's population. One in 8 people in the region live in a single metropolitan area, Sydney. The smallest countries are miniscule: the Republic of Tuvalu has only 11,800 inhabitants and consists of nine coral atolls with a combined area of 10 square miles (26 square kilometers), one-tenth the size of the District of Columbia.

The region is also extremely diverse in terms of most aspects of its physical landscapes and human populations. In this very diversity, however, lies the common geographic denominator that makes it possible to define the South Pacific as a region. All of the lands of the region are remote, largely isolated not only from other population centers on earth but frequently also from one another. Australian historian Geoffrey Blainey has argued that his own country's history has been shaped by the "tyranny of distance."⁵ The same argument might equally apply to the rest of the region.

For much of the region, remoteness is a consequence of insularity. Tonga and Nauru, for example, are isolated because they are small and remote islands. Much of Papua New Guinea, however, is isolated not as much by the island's distance from its neighbors (which is not very great) but rather by the ruggedness of its terrain and the density of its vegetation, which combine to make travel and transportation very difficult. For Australia, the tyranny of distance lies not only in distances to other continents but also in the distance between its major population centers, which requires surmounting the continent's own size and forbidding climates. The influence of distance is apparent in the early settlement of the South Pacific as well as in its colonial past. It helps account for the vast diversity of cultures and languages in the region as well as the obstacles faced by the modern economies of the region as they attempt to compete in global markets. Long before humans arrived in this region, distance and isolation had allowed the process of evolution to produce a range of unusual ecosystems in the region. Nowhere in the world are there as many marsupial species as there are in Australia and New Guinea. And in few places that humans settled did they find, as they did in New Zealand, ecosystems dominated by birds and devoid of all terrestrial mammals.

If the continent of Antarctica is to be considered part of any world region (a debatable issue on the basis of remoteness), it makes sense to include the continent here. From the perspective of human geography, Antarctica does not really fall within any world region since it has no permanent human population, no states, and, aside from the fishing areas around it, no economic activity. Its role in world history has thus far been negligible. From the perspective of the biologist or physical geography, however, it is a substantial landmass twice the size of Australia and every bit as intriguing as any other part of the world.

The vast region of Oceania can be divided into four subregions: Australia and New Zealand, the economic giants of the region and two of the three largest countries; Melanesia, the part of the Western Pacific that includes the islands of New Guinea, the Solomon Islands, Fiji, Vanuatu, and New Caledonia; Micronesia, the small islands on or north of the equator; and Polynesia, which includes the eastern Pacific Islands. This is somewhat complicated by the inclusion of the state of Hawaii, with its remote location, distinctive geology, and Polynesian cultural heritage but political inclusion in the United States of America. By and large, however, the 50th state should be considered a part of Oceania despite its political status.

Physical Geography

The largest landmass in the Pacific region, the continent of Australia, lies atop the Australian plate, and it is one of the oldest and most stable parts of the earth's crust. Earthquakes are rare, and the most recent volcanic activity took place more than 5,000 years ago. Its great age means that the continent has long been exposed to erosion, and the western region consists largely of low relief areas (those showing little differentiation in elevation) aside from the Great Dividing Range (near the east coast) and some smaller ranges in the interior.

By contrast, most the rest of the land area of the region owes its existence to tectonic activity that has taken place in the recent geological past. The plate boundaries that comprise the Pacific Ring of Fire pass beneath New Zealand, the island of New Guinea, and the western parts of Micronesia. The Southern Alps of New Zealand's South Island, which rise to over 12,000 feet above sea level, are the product of mountain building along a plate boundary; so too are the volcanoes and geothermal springs of the country's North Island. Another plate boundary had produced the rugged terrain of the island of New Guinea: Papua New Guinea's highest peak is nearly 15,000 feet high. Ocean floor volcanoes, either along plate boundaries or geological hot spots, are in some places high enough to protrude above the ocean surface, creating many of the smaller islands of the Pacific (including some of the islands of Fiji, American Samoa, Tonga, and Hawaii).

Some of the older volcanic islands have been eroded away over time, leaving behind the coral reefs that grew along their fringes. These are the low-lying atolls that make up such islands as those of Kiribati and Tuvalu. Their low elevations (some rise to less than 6.5 feet [2 meters] above sea level) make them particularly vulnerable to future sea-level rises that might accompany global climate change.

As a result of its large latitudinal extent and its extremes of relief, the climates of the South Pacific region are varied (see climate map). Although much of the region lies within the tropics and has tropical climates, in many places climates are affected by altitude. Papua New Guinea lies very close to the equator, and although tropical rain forest climates dominate its lower-lying areas, the country's highest peaks receive regular snowfall and even have small glaciers. In contrast, Austra-

lia is the driest of all the world's inhabited continents. Parts of New Zealand, by contrast, are among the wettest.

Human Geography

Location has played a pivotal role in the history of the South Pacific region from the time of earliest human settlement until the present. Those parts of the region closest to the Eurasian landmass were among the first areas to be settled by early humans after their departure from Africa. The remoter parts of the region were some of the most recently settled. Oceania was not high on the list of European colonial priorities and was for the most part colonized in the nineteenth century.

The first human settlers arrived on the island of New Guinea some 46,000–50,000 years ago when sea levels were below their current levels and a land bridge linked many of the now island parts of Southeast Asia. The same wave of migration brought the first human settlers to the Australian mainland and to Tasmania, at that time linked to the rest of the continent. The descendants of these early settlers, Australian Aborigines and the indigenous peoples of New Guinea, are some of today's longest-surviving cultures.

In contrast, most of the remaining islands of the South Pacific were among the last of the earth's habitable landmasses to be settled. New Zealand, which is only 932 miles (1,500 kilometers) from Australia, was not settled until some 45,000 years later. Whereas Australia's first settlers probably came by land bridges from the Asian mainland during cold, dry periods when sea levels fell, New Zealand was peopled by seafarers from the Polynesian islands. Human settlement of these islands, in turn, was impossible until the development of the technology of transportation and science of navigation made travel possible.

The physical fragmentation of the lands of the South Pacific is reflected in the region's cultural geography. Despite its small population, the South Pacific region accounts for 19 percent of all of the languages in the world.⁶ Of these, a remarkable 820 are found in Papua New Guinea alone, a consequence of the difficulties of travel and communication within that mountainous and densely vegetated country. Prior to the arrival of Europeans, indigenous Australians spoke over 300 languages, in part a reflection of the size and difficulties of travel within this largely arid continent.

The countries of Oceania are farther from Europe than any other places on earth, and so it is not surprising that they were low on the list of colonial priorities. Indeed, the first British penal settlements on Australia owed their existence in part to the continent's remoteness. Australia itself was the prison, escape made virtually impossible by deserts, distance, and oceans. When colonialism did arrive, though, it profoundly reshaped the region's cultural geographies. Australia is today a multi-cultural continent as it was in precolonial times, but the predominant cultural influences today are European and, increasingly, Asian. More Australians trace their origins to the United Kingdom than anywhere else, a legacy of colonial settlement and the "White Australia" policies

that favored European immigration for most of the postcolonial era. Likewise, New Zealand's population is dominated by people of British extraction, and the dominant language is English.

Indigenous peoples today comprise only a minority of the populations of both Australia and New Zealand. The isolation of the region was in part to blame for this: Australia's Aboriginal peoples had been protected from the diseases of the outside world by 40,000–60,000 years on their remote island location. When Europeans arrived, bringing new diseases with them, indigenous peoples quickly fell prey to infections against which they had no immunity. Laid waste by disease and vastly outnumbered by new arrivals, Aboriginals today make up less than 2 percent of Australia's population. The fate of New Zealand's first peoples, the Maori, was rather different. A much more homogenous population than Australian Aborigines, they arrived in the islands about a millennium before European colonization. They proved to be more resistant to European diseases than Australian Aborigines and mounted a fierce resistance to European conquest. The forces of colonialism ultimately prevailed, but today Maori make up nearly 15 percent of the country's population, and the Maori language is one of the country's two official languages.

Like Australia and New Zealand, the French territory of New Caledonia has a significant population of European descent. They number about a third of the territory's population, but the majority of the population are of Melanesian and other Pacific extraction. One other country in the region has a population geography profoundly affected by colonialism. During the colonial era, Indian indentured workers were recruited to work on plantations in the British colony of Fiji. Today, Indo-Fijians make up about half of the country's population, with indigenous Fijians comprising most of the remainder. This cultural geography is reflected in the country's political and economic landscape.

Distance and isolation have long shaped the history of Oceania. So too have technologies that mitigated the effects of distance. New technologies of boatbuilding made it possible for the first humans to reach the remote South Pacific islands. Sailing ships facilitated the colonization of the region by Europeans. Steamships and refrigeration allowed Australia and New Zealand to export meat and other agricultural produce to distant markets, and long-range aircraft allowed many of the countries in the region to promote themselves as tourist destinations. The Internet gave Tonga and Tuvalu the opportunity to supplement their meager foreign exchange revenues by selling Internet domain names (with the suffixes .to and .tv) and allowed Nauru to establish itself as an offshore banking location (briefly, at least, until money laundering charges put an end to this venture). In short, although distance has influenced the history of Australia, New Zealand, and the South Pacific, its influence has constantly changed and will continue to do so in the future.

Conclusion

As we have seen, regions are shaped by physical geography but are fundamentally created by humans. Regions are ideas and thus are funda-

mentally social products, held together by social and cultural cohesion. They are also historically constructed in the sense that the cultures that provide them with definition change over time. To understand the significance of regional geography and world history, we must recognize the interactions among environmental, social, and historical features. For example, while sub-Saharan Africa is bounded by the barriers of ocean and desert, the significance of those barriers has changed with time due to environmental, social, and technological changes. Oceania, on the other hand, gets its character (and name) from the seas and is unified by great expanses of water, but that coherence and the region's isolation from the rest of the world continue to change as distance itself seems less significant. As with the North African and western Asian cultural region of Dar al Islam or medieval European Christendom, some regions are unified by a common belief and other cultural ties. But these cultural ties are not timeless or ahistorical; they have emerged and grown and evolved over time and will continue to do so. As cultures adapt to new circumstances, so will the regions that they currently define. Borders might shift, as will defining characteristics. Environmental developments also have an impact on the regions that we use to understand the world. In conclusion, while regions are a necessary conceptual tool for ordering our thinking about the world and world history, they should not be imagined as a static tool.

Notes

1. Richard Eaton, "Islamic History as Global History," in *Islamic & European Expansion: The Forging of a Global Order*, ed. Michael Adas (Philadelphia: Temple University Press, 1993).
2. Maria Misra, "Lessons of Empire: Britain and India," *SAIS Review* 23(2) (2003): 133–135.
3. Patrick J. Geary, *The Myth of Nations: The Medieval Origins of Europe* (Princeton, NJ: Princeton University Press, 2002).
4. John A. Mears, "Agricultural Origins in Global Perspective," in *Agricultural and Pastoral Societies in Ancient and Classical History*, ed. Michael Adas (Philadelphia: Temple University Press, 2001).
5. Geoffrey Blainey, *The Tyranny of Distance: How Distance Shaped Australia's History*, rev. ed. ([South Melbourne]: Macmillan, 1982).
6. M. Paul Lewis, ed., *Ethnologue: Languages of the World*, 16th ed. (Dallas: SIL International, 2009).

Bibliography

- Abu-Lughod, Janet Lippman. "The World System in the Thirteenth Century: Dead-End or Precursor." In *Islamic & European Expansion: The Forging of a Global Order*, edited by M. Adas. Philadelphia: Temple University Press, 1993.
- Blainey, Geoffrey. *The Tyranny of Distance: How Distance Shaped Australia's History*. Rev. ed. [South Melbourne]: Macmillan, 1982.
- De Blij, Harm J., and Peter O. Muller. *Geography: Realms, Regions, and Concepts*. 12th ed. Hoboken, NJ: Wiley, 2006.
- Eaton, Richard. "Islamic History as Global History." In *Islamic & European Expansion: The Forging of a Global Order*, edited by M. Adas. Philadelphia: Temple University Press, 1993.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.

- Flynn, Dennis O., and Arturo Giraldez. "Cycles of Silver: Global Economic Unity through the Mid-Eighteenth Century." *Journal of World History* 13(2) (2002): 391–427.
- Geary, Patrick J. *The Myth of Nations: The Medieval Origins of Europe*. Princeton, NJ: Princeton University Press, 2002.
- Kearney, Milo. *The Indian Ocean in World History: Themes in World History*. New York: Routledge, 2004.
- Lewis, M. Paul, ed. *Ethnologue: Languages of the World*. 16th ed. Dallas: SIL International, 2009.
- Lewis, Martin W., and Kären Wigen. *The Myth of Continents: A Critique of Metageography*. Berkeley: University of California Press, 1997.
- Library of Congress. *Country Studies*, 2009. <http://countrystudies.us/>.
- Liu, Xinru. "The Silk Road." In *Agricultural and Pastoral Societies in Ancient and Classical History*, edited by M. Adas. Philadelphia: Temple University Press, 2001.
- "The Long March of Everyman." *The Economist*, December 20, 2005.
- Marston, Sallie A., Paul L. Knox, and Diana M. Liverman. *World Regions in Global Context: Peoples, Places, and Environments*. 3rd ed. Upper Saddle River, NJ: Pearson Prentice-Hall, 2008.
- McCann, James. "Maize and Grace: History, Corn and Africa's New Landscapes, 1500–1999." *Comparative Studies in Society and History* 43 (2001): 246–272.
- McNeill, John Robert, and William Hardy McNeill. *The Human Web: A Bird's-Eye View of World History*. New York: Norton, 2003.
- Mears, John A. "Agricultural Origins in Global Perspective." In *Agricultural and Pastoral Societies in Ancient and Classical History*, edited by M. Adas. Philadelphia: Temple University Press, 2001.
- Misra, Maria. "Lessons of Empire: Britain and India." *SAIS Review* 23(2) (2003): 133–153.
- Osborne, Milton E. *Southeast Asia: An Introductory History*. 9th ed. St. Leonards, New South Wales, Australia: Allen and Unwin, 2004.
- Pitts, Lynn F. "Rome and the German 'Kings' on the Danube." In *Expanding Empires: Cultural Interaction and Exchange in World Societies from Ancient to Early Modern Times*, edited by W. F. Kasinec and M. A. Polushin. Wilmington, DE: Scholarly Resources, 2002.
- Ringrose, David R. *Expansion and Global Interaction, 1200–1700*. Longman World History Series. New York: Longman, 2001.
- Roberts, J. M. *The New History of the World*. 4th rev. ed. Oxford and New York: Oxford University Press, 2003.
- Rosenberg, Matt. "Mount Pinatubo Eruption: The Volcanic Mount Pinatubo Eruption of 1991 That Cooled the Planet." *About.com: Geography*, 2007, <http://geography.about.com/od/globalproblemsandissues/a/pinatubo.htm>.
- Shaffer, Lynda N. *Southernization*. Edited by M. Adas. Essays on Global and Comparative History. Washington, DC: American Historical Association, 2003.
- Stearns, Peter N. "Interpreting the Industrial Revolution." In *Islamic & European Expansion: The Forging of a Global Order*, edited by M. Adas. Philadelphia: Temple University Press, 2001.
- "Summary Demographic Data for Nigeria." U.S. Census Bureau: International Database, <http://www.census.gov/ipc/www/idb/>.
- Winchester, Simon. *Krakatoa: The Day the World Exploded, August 27, 1883*. 1st U.S. ed. New York: HarperCollins, 2003.
- Xu, Yinong. *The Chinese City in Space and Time: The Development of Urban Form in Suzhou*. Honolulu: University of Hawai'i Press, 2000.



Humans migrated into every area of earth from their African origins and have established permanent settlements everywhere except Antarctica. People developed tools and technologies that allowed them to survive in the most marginal areas, from deserts to frozen tundras. Populations—driven by war, persecution, or in search of economic opportunity—continue to shift and relocate. In the essay below, Dr. Manning considers the history of migration, a fascinating journey.

—Carolyn Neel

Migration in Human History

Patrick Manning

The common pattern of human migration is for a minority of young adults to leave home and move away to a destination where the landscape and culture are different. Some migrants move to sparsely settled frontiers, while others move to centers of population; some return home, while others remain at their destination or even move farther. Migrations are initiated by human decision but also by natural disasters that can force whole communities to move. The motivations of migrants include adventure, escape, expulsion, commerce, war, and a search for resources to bring back to their home community.

Biological comparisons show that while various species have evolved quite different migration patterns, there remain some underlying similarities. Migration is the movement of individuals or populations from one habitat to another for reasons that serve a function in the life cycle of the individual and the species. Thus, *Homo erectus* spread, beginning a million years ago, from eastern Africa to much of the Old World and gave rise to successor species in Asia, Europe, and Africa.

While *Homo sapiens* first emerged on the east African savannas some 200,000 years ago, it is now speculated that not until 70,000–90,000 years ago did our ancestors gain improved vocal articulation and with it the beginnings of fully articulated speech. With the rise of language, human communities gained distinctive identities because of the gradual separation of their language and customs. Those who migrated from one community to another had to learn new languages and customs. This pattern emphasized learning in individuals, the exchange of customs and technologies among groups, and innovations in assembling old ideas and new. Consequently, migration facilitated an acceleration of social evolution that began to account for most of the change in human societies. Such cross-community migration remains the basic style of human migration. The same underlying logic of crossing community boundaries and generating social innovations continues to this day but has transformed human society almost beyond recognition.

The ancestral African habitat of *Homo sapiens* centered on tropical savannas, including locations at water's edge. Humans hunted and gathered but also ate plants and animals from the waters and learned to swim and to create watercraft. These elements—the ancient migratory

practices of mammals, the new practice of cross-community migration, and the reliance of humans on movement across water—provided a basis for modern *Homo sapiens* to occupy all the territories of the earth.

From 70,000 BP to 10,000 BP

In the early human migrations, the principal movements were to territories ecologically similar to those of the east African homeland, first within tropical Africa and then in Asia. Humans left Africa not, as is commonly asserted, by moving north to the Sinai and the Mediterranean but instead by moving along the Indian Ocean coast. With early watercraft our ancestors were able to cross the 6.2 miles (10 kilometers) from Somalia to southern Arabia and remain within a relatively constant environment. (Sea levels were then much lower than now.) In the time between 70,000 years ago and 50,000 years ago, human populations worked their way along the Indian Ocean coastline, presumably on both land and sea, to the east of what is now Indonesia. Australia and New Guinea—then joined in the continent of Sahul—lay across a great oceanic strait, but the migrants crossed open water exceeding 60 miles wide (100 kilometers) and did so on multiple occasions, as the genetic record attests. Similarly, humans followed the coast of the South China Sea, eventually reaching more northerly and even-temperate zones.

Human migrants, having mastered the tropics, did not automatically move north to temperate zones, since the colder climate and the sharply different flora and fauna required new technology. From well-dated European remains, we know that *Homo sapiens* (known locally as Cro-

Magnon) reached Europe as early as 40,000 years ago. What is not known is the route by which they arrived. Four major routes were available for entry to the temperate zone from the tropics: the Nile-Fertile Crescent corridor, the Persian Gulf-Caucasus corridor, the corridor of the Southeast Asian river valleys, and the Pacific coast of China. Along one or more of these routes, humans learned to live with the sharply

From well-dated European remains, we know that Homo sapiens (known locally as Cro-Magnon) reached Europe as early as 40,000 years ago. What is not known is the route by which they arrived.

varying temperatures and rapidly running rivers of the temperate zone. With this achievement, they gained the ability to range all across the Eurasian grasslands along routes that have been used ever since.

With each human colonization of a new continent, a great die-off of megafauna soon followed: this was the case first in Australia, then in temperate Eurasia, and later in the Americas. This was destructive behavior at one level but also showed the potential of human migration for bringing about change. Human migrants, in entering new ecologies, thus transformed them as well as accommodating to them, making each into a new habitat. While most other species were limited to a single habitat, the notion of “habitat” must be redefined for humans: a human habitat is not only a natural ecology but also a set of customs for life within that ecology. The social function of cross-community migration

was to create and spread innovations from habitat to habitat, so that migrations have been a significantly adaptive behavior.

At each stage in human history, most people remained in the land of their birth, yet migrants were sufficient in number to settle new areas. Those who stayed put in a given region underwent steady pressures of natural selection. Such adaptive pressures gradually brought about differences in superficial characteristics, such as skin color, hair type, and body size and shape. We can say, therefore, that the physical differences we label as “race” exist because of migration and that they mostly emerged between 40,000 and 10,000 years ago.

As early as 30,000 years ago, migrants succeeded in moving farther north and east, into North America. Both land and sea migrations to North America are known to have taken place in later times, so either mode of transportation could have worked for the first entry. Travel by sea may have been more feasible in this cool and ice-ridden era: the Pacific kelp beds provided offshore nourishment in a great arc along the coast from the South China Sea to South America.

Once in the Americas, humans migrated steadily to occupy the hemisphere. This process, though not yet known in detail, is likely to reveal much of the cross-community patterns of early human migration. Migrants moved from Arctic lands to temperate forests to grasslands to desert regions to tropical forests and on to further ecologies, though the Pacific coastline provided a substantial continuity in ecology that made movement relatively easy. Adaptation to each new ecology was a challenge. Here again, the experience of different communities, separated by language and culture, enabled them to develop their own adaptations; the process of migration spread the innovations of each group to others, and the interchange of ideas led to still more innovations. Thus, the Clovis culture, with its focus on finely honed arrowheads, was long thought to represent the first arrival of humans in North America. It is now understood to reflect the spread, among populations already in place, of an innovation in arrow technology that found wide use.

From 10,000 BP to 5,000 BP

The domestication of plants and animals, along with other technological advances, brought new patterns of migratory movement on foot, in association with animals, and by water. Studies of agriculture have gradually shown that food production, supplementing food gathering, was not a unique invention but instead was a repeated inspiration provoked by similar situations. A worldwide climate change provoked the development of agriculture in several privileged regions. Those regions shared physical relief and botanical variety, so that numerous plants could be experimented with. After the low-temperature trough of the Ice Age 18,000 years ago, temperatures began to rise: vegetation flourished, and humans began to depend on gathering expanding food supplies. But a thousand-year cold snap some 11,000 years ago (known as the Younger Dryas) brought a severe decline in food supplies and an impetus to discover ways to produce rather than just gather food. Responses

to this crisis brought the production of wheat in the Fertile Crescent, taro in New Guinea, rice in Southeast Asia, millet in Ethiopia, squash in South America, and sorghum in the Sahara. Populations grew with the development of agriculture; in addition, these and neighboring populations experimented with the domestication of animals and the creation of new implements, especially pottery.

Agriculture brought higher population density, development of new diseases, and migration of both humans and disease vectors. Jared Diamond and Peter Bellwood have argued that the agricultural populations expanded systematically in number and in territory in contrast to their neighbors. Another possibility, however, is that the techniques of agriculture spread more rapidly than the initial farming populations. Did the farming peoples spread, or did the ideas of farming spread? Was it demic migration (in which a single community expands) or cross-community migration (in which people and ideas moved through networks)? While the full results are not yet in, the evidence is just as strong for a patchwork of cases. Rice may have spread through Southeast Asia in the expansion of farming community, while wheat may have expanded through western Asia through its adoption by different communities.

From 5,000 BP to 2,500 BP

The domestication of horses in western central Asia some five thousand years ago brought an extraordinary expansion in mobility for those who controlled these animals. Harnessed to two-wheeled chariots, horses enabled peoples of the Caspian Sea region to raid and conquer in all directions. Surrounding states, at first suffering conquest, learned the new technology and later expanded their realms. Later, as saddles were

developed, the cavalry became an even more formidable tool of war. The military use of horses was sufficient to remake the political map of Eurasia from end to end, bringing migration both by conquerors and conquered.

In this era, thanks to evidence not only from language but also from archaeology and written texts, we can document some of the greater complexities in migration. An outstanding example is that of the

Lapita culture of the Bismarck Archipelago. There, the feedback and interaction of Austronesian migrants from the west with Indo-Pacific-speaking inhabitants of New Guinea and surrounding islands resulted in a synthesis of cultural and technical processes. Out of this cross-cultural exchange emerged the Polynesians, with a technology and social order enabling them to sail into the far reaches of the Pacific, colonizing the remaining islands.

Forced migration—the expulsion of people by human or natural causes—led migrants into catastrophic departure from their homes,

Harnessed to two-wheeled chariots, horses enabled peoples of the Caspian Sea region to raid and conquer in all directions.

Surrounding states, at first suffering conquest, learned the new technology and later expanded their realms.

movement through unfamiliar regions, and settlement in other lands. Such migrations, which have existed for all human time, became well documented in this era. Enslavement, an outstanding form of forced migration, expanded in this era, especially at the fringes of states from the Mediterranean through Iran.

Early stages of urbanization in this era provide a reminder that migrants gravitated toward centers of population density as much as toward sparse frontiers. In this era the cities and dense agricultural populations of Egypt, Mesopotamia, the valleys of the Indus River and the Yellow River, the Peruvian coast, and the Valley of Mexico emerged as major centers of population.

More striking than the growth of early cities in this era were the large-scale migrations and social transformations of large regions in this era, as documented through study of language and archaeology. The Austronesian-speaking migrants, who occupied most of the habitable areas of the Pacific and much of Southeast Asia within the past five thousand years, were discussed earlier. In the same period, Indo-European speakers expanded from a homeland in the region of the Black Sea and spread both east and west, becoming dominant in virtually all of Europe and as far south and east as northern India. Also in the same period, Bantu-speaking migrants set out from a homeland in southeastern Nigeria and expanded repeatedly south and east, ultimately remaking the language and perhaps the population of all central and southern Africa. They occupied a territory as large as that of the Indo-European speakers, and they too began as farmers.

Other groups, smaller in number but still of historical importance, included the Na-Dene speakers, who moved from central Asia to the Canadian region of Athabasca, some of whom later moved south to become the Navajo. Migrants from northern California to the south of Mexico, with migration completed some 3,000 years ago, became the Maya; in Australia the Pama-Nyungan spread out to dominate much of the continent. Phoenicians, Greeks, and Romans expanded to settle much of the Mediterranean and Black Sea basins.

From 500 BCE to 1200 CE

New patterns of migration emerged in this period centered especially in the densest part of the world's population, along the Eurasian and African river valleys and by the shores of the Mediterranean and the Indian Ocean. An accumulation of social innovation brought new patterns in innovation. Formal commerce, great empires, and large-scale organized religions each brought new patterns of migration.

The continuing development of military technology—and especially advances in the use of horses—brought the occasional absorption of regional monarchies into huge empires. From the first large-scale empire, that of Persia, to those that followed it in rapid succession—the Hellenistic, Roman, Qin, Han, and Mauryan—the powers of monarchies and bureaucracies now dispatched armies and navies in distant campaigns, brought artists and craftsmen to their capitals, and encouraged travel

Caravan crossing the Silk Road. Detail of the map of Asia, from the Catalan Atlas, Spain, Majorca, fourteenth century CE. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)



within their domains. The succeeding empires of the Gupta, the Umayyads, Abbasids, Tang, and Song similarly stimulated migration.

Empires were not alone as causes of migration. Documents from this era show how migrations of small numbers of people, especially merchants and religious missionaries, could bring major social transformations. The expansion of formal trade in the first millennium BCE—with the development of money, the beginnings of banking, construction of ports and caravanserais—enabled merchant families to travel and sustain long-distance connections necessary to the movement of commodities. Similarly, the formation at much the same time of large-scale religions—Zoroastrian, Judaic, Buddhist, Christian, Hindu, Muslim, and others—brought migrations and connections among the faithful. Networks of family, faith, and commercial interest sustained the movement and connection of migrants over large areas. The significance of return migration is also evident in documents on merchant and missionary migrants. Religion, in particular, may have expanded more through the preaching of individual missionaries than through the invasion and conquest of armies.

The rise of empire and commerce also provided scope for the expansion of enslavement. For those captured, whether in war or by kidnapping, their movement and sale required a network of a different sort, including those who guarded them, fed them, and transported them to their destination.

Migrations of types well documented in earlier times continued in this era. Urbanization brought such cities as Alexandria, Rome, Constantinople, Baghdad, and the Chinese capitals. Turkish and Arab migrants, accompanied by their herds of goats, cattle, camels, and horses, moved into both agricultural and pastoral regions. The Vikings, among the

most spectacular of migrants, conquered, traded, and settled for some 300 years before the impulse subsided.

From 1200 CE to 1850 CE

The Mongol conquests of the thirteenth century extended the logistics of communication and control all across Eurasia, including major naval expeditions along the Pacific coast. In the thirteenth and fourteenth centuries, Mongol rule ensured intense cultural interaction among eastern, central, and western Asia. Mongol successors, notably Timur, sustained both the furious warfare and the intervening periods of peace and commerce in central and western Asia to the sixteenth century.

As routes across the lands of the Old World widened, maritime technology advanced in all the oceans. An early Chinese lead in long-distance voyaging could not be sustained, so it was European voyagers who achieved decisive advances in technology and social organization through long-distance seafaring. These voyages linked more tightly the seas of the Old World, drew western Africa more tightly into the Old World, and opened the Atlantic and the Pacific to navigation and migration.

In the eras of both Mongol and European dominance of long-distance routes, forced migration reached its peak as a process of long-distance human movements. Under the Mongols, war displaced populations from China to Hungary. Enslavement became central to war and politics, as Turkish, east African, and Caucasian slave-soldiers became central to the regimes of the great powers. Overlaying this terrestrial wave of enslavement was a steadily expanding maritime slave trade. While 2 million Europeans migrated to the Americas from the voyage of Columbus to 1850, over 10 million enslaved Africans made the voyage to the Americas in the same era.

The global reach of empires on land and sea brought about the interconnection investment and seizure of resources—primitive accumulation, in the words of Karl Marx—that made possible dramatic global economic and demographic growth in the nineteenth century. New cities grew along new commercial routes; at the end of this era, European and American cities grew at the expense of others.

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From 1850 CE to the Present

Rather suddenly in the middle of the nineteenth century, the principal character of long-distance migration shifted from the forced migration of captives bound for slavery to voluntary migration (though many of these migrants were semivoluntary contract laborers). Sometimes it took a crisis to launch the flow of migrants, as with the potato famine of 1845–1849 in Ireland. The outstanding change, however, was the

development of new technology, especially steamships that traveled dependably and cheaply but also telegraphs to convey information on conditions worldwide and the rise of industrial production and expanded demand for minerals and agricultural produce. Whereas 10 million Africans crossed the Atlantic as slaves from 1650 to 1850, nearly 50 million Europeans crossed the Atlantic from 1840 to 1940, and another 80 million migrants moved from India and China.

Two regions of sparse population—North and South America and Southeast Asia—each absorbed over 30 million immigrants. Some became industrial workers, others agricultural workers, still others miners, and many entered service industries.

In this era of expanded migration, the networks of voluntary migration became clear. Advertisements from the lands of settlement circulated in lands of departure, shipping companies competed for passengers, and small-scale labor recruiters gathered their collections of prospective workers and often accompanied them to their destinations.

With the great expansion in migrant flows, communities, states, and business firms sought ways of regulating and sometimes restricting migrants. In North America, where immigrant European and Chinese workers competed for work, those of European ancestry were able to campaign successfully for restrictions on Chinese migration. More generally, in the late-nineteenth-century era of growing national identities and more centralized national states, borders began to be constructed as ways of keeping migrants out. Where migrants had previously been restricted mostly by the cost of travel, they were now restricted in addition by quarantine for possible disease and by distinctions separating legal and illegal migrants. At the extreme, genocidal killings took place: heightened views of national identity sometimes led to decisions to homogenize the nation by expelling and even executing those ethnic or political groups identified as dangerous to the nation.

In much of the period after 1850, it appeared that migration was mainly from crowded regions to sparsely populated regions. With time, however, the dominant pattern turned out to be the opposite. Urbanization—the movement of people from rural areas or small towns to centers of population—expanded as never before. In the last half of the twentieth century, a dozen urban areas grew to include 20 million inhabitants or more. The urban settlers, in addition, came primarily from the immediate hinterland of the cities rather than from great distances. As a result, human society reached a tipping point at the beginning of the twenty-first century in which a majority of the human population came to live in urban rather than rural areas.

Migration remains a mix of old and new. With the expansion of higher education, one of the new migratory trends is that in which students leave their home and even their country to attend university and prepare for their role in a high-tech world. Yet this same process includes much that is habitual for humans. That is, young adults leave home, travel a distance, cross social boundaries, and learn new languages and customs (now those of the academic world); some of them will return home after the experience, while others will migrate farther. The ancient human pattern of cross-community migration has now been put

in the service of contemporary globalization, demonstrating the role of underlying human habits in even the most dramatic of changes.

Bibliography

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Society*. New York: Norton, 1997.

Dingle, Hugh. *Migration: The Biology of Life on the Move*. Oxford: Oxford University Press, 1996.

Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.

Manning, Patrick. *Migration in World History*. London: Routledge, 2004.

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Most animals have the ability to communicate, to one degree or another, but none to the extent of humans. One of the hallmarks of humankind is the ability to communicate complex symbolic ideas. We are able to convey to each other and to our successors not only instructions but a complex world-view. Human adaptation to diverse conditions—environmental, political, theological, etc.—depends on our ability to communicate with each other. Below, Dr. Haarmann quite eloquently discusses the role of language in human development.

—Carolyn Neel

Language Evolution and the History of Languages

Harald Haarmann

By the time humans became tool makers, they were communicating cultural concepts by means of signs and symbols. This capacity for symbolic activity was a precondition for the development of language.

Language is an expressive vehicle used by humans to craft identities, to create cultural environments, to channel intentionality, to give profile to various worldviews, to express feelings and emotions, and to make sense of the world. For more than 200 years, the structures of languages and the sets of rules specific to each individual linguistic system have been the object of intensive linguistic analysis.

When did language develop as an operational system? Who were the first humans to use speech? Is language limited to our species (*Homo sapiens sapiens*), or were archaic humans, such as Neanderthal, also able to speak? Did language emerge as a fully developed technology, or did it evolve in stages?

Although long neglected, the study of language evolution has become a preferred field of study among linguists, anthropologists, and paleontologists. In particular, the evolutionary transition in communicational skills from the Neanderthal stage to that of modern humans has been investigated with great scrutiny. There are two basic approaches to understanding the development of linguistic structures during this transitional phase. One is based on the assumption that human linguistic ability matured in an evolutionary leap, while the complex languages spoken by modern humans developed from a protolanguage with simple, if not simplistic, structures.¹ The other approach advocates a gradual evolution of linguistic structures resulting from “the co-evolution of language and the human brain.”²

The idea of the existence of a protolanguage emerged out of the study of pidgin and creole languages. In the processes of pidginization and creolization, an indigenous language fuses with a colonial language, and the structures of the involved languages usually become simplified to form a new set of phonetic sounds, new grammatical and syntactic rules, and a reduced vocabulary. Since the 1970s, the study of such processes has produced many insights into how languages function with

simplified linguistic structures. Such insights have inspired some scholars to assume the emergence of a protolanguage used by early hominid species such as Neanderthal and *Homo erectus*.³

A certain capacity for using language may have been present in early humans, although its full-fledged evolution as complex language is related exclusively to *Homo sapiens sapiens*.⁴ There is anatomical evidence for the capacity to use language in Neanderthals, a hyoid bone that “lies between the root of the tongue and the larynx, and is connected to the muscles of the jaw, larynx, and tongue.”⁵ The hyoid bone in the Neanderthal skeleton is quite similar to that of modern humans.

Although the findings from creolistic studies can be helpful for understanding the construction of simple languages, there are still quandaries in terms of perceiving the progress of complex linguistic development. While the structures of most pidgin and creole languages are much simpler than the structures of those languages that fused to create them, creole languages are still much more complex than the communication skills assumed for earlier hominid species. The construct of a protolanguage spoken by hominids still lacks the potential to explain the transition to the stage of complex language.

The concept of a gradual evolution of the human brain along with the sequential appearance of more complex language structures shifts the idea of an evolutionary leap into a series of developmental steps. In some attempts by linguists to grade evolutionary levels, individual steps have been perceived as the independent developments of linguistic structures, as if phonetics, grammar, syntax, and lexicon were separated from each other.⁶ What is sometimes missed in an examination of internal linguistic changes is the intricate synchronicity of developments.

In all pertinent approaches to a gradation of the evolutionary process toward complex language, individual steps have been reconstructed by observing language acquisition in children.⁷ It is generally agreed among

linguists that as a child develops language skills, processes are repeated during individual socialization that originally took many thousands of years to evolve in different hominid species.

By recognizing the dynamics of a synchronic evolution of phonetic, grammatical, syntactical, and lexical structures, the following developmental steps—from rudimentary

means of communication to the sophisticated stage of complex language—can be described.⁸ This process lasted longer than 1.5 million years, covering the presence of three hominid species: *Homo erectus*, Neanderthal, and modern humans.

In all pertinent approaches to a gradation of the evolutionary process toward complex language, individual steps have been reconstructed by observing language acquisition in children.

Communicating with Signals and Interjections

Early humans, experimenting with sounds produced by the vocal cords, began to associate specific sounds or sound groups with communica-

tional meanings. Elements of sound use, similar to those used in this early stage, are still functioning in complex modern languages (e.g., “shh!” for giving the signal “be quiet!”; “hi” as a greeting; or “wow!” for expressing astonishment). The amount of individual signals may have been small in the repertory of *Homo erectus* and other hominids, but the inventory of signals and their purposes gradually increased.

Wording the Environment

A precondition for this step is the capacity to distinguish between individual objects and to assign to them different sounds with representational meaning. It is uncertain precisely how the representational dimension of cognition relates to verbal utterances.

The simplest process of wording the environment is the deliberate imitation of acoustic and visual effects typical of specific animals as well as the sounds and noises produced by natural forces such as the wind, the waves of the sea, water running in a brook, the noise of thunder, the sound of a burning fire, and other phenomena.

It has to be emphasized that archaic humans, for whom this stage of protolanguage may be postulated, had a rather limited capability for producing speech sounds. In all probability, early *Homo sapiens* could only produce two vowel qualities (like e and a) and perhaps eight consonants (p, b, t, d, s, h, m, n), although they were anatomically capable of producing a glottal stop, a sound that is still present in languages such as German, Danish, and Finnish.

This second stage of language evolution is still visible in the use of onomatopoeic (sound-imitating) expressions that exist in every historical and recent language. The amount of onomatopoeic elements in the lexicon of complex languages varies considerably. Finnish and Japanese, for instance, have a high proportion of onomatopoeic elements. In complex languages, onomatopoeic expressions are embedded in the phonetic, grammatical, and lexical system like other words. Nevertheless, their structures may differ from other words in certain properties. For example, in Lithuanian, “most onomatopoeic words are monosyllabic (they may comprise only consonants).”⁹

Talking about Things

Talking about things requires more than the ability to represent objects by linguistic signs. It requires the capacity to reflect about things, to identify interrelations between objects and living beings and to verbalize those interrelations, and to speak about happenings and actions and about relationships among human beings. The preconditions for this level include capacities of cognitive representation on a scale broader than stage 2 and the ability to process elementary linguistic techniques.

No existing language entirely represents stage 3 or earlier stages as described above. This means that in the living languages of the world, there is no evidence of “primitive” linguistic structures. Lingering beliefs

about the existence of “primitive” languages in the communities of modern humans are a reflection of prejudice.

Interacting Verbally in Communities of Modern Humans

This stage is documented in the contemporary languages of the world as well as in the stages that have been reconstructed for protolanguages (Proto-Indo-European, Proto-Uralic, and others).

At this stage, the entire panorama of speech sounds that are found in the languages of the world has evolved.¹⁰ Living languages show a vast variety of sounds. For example, in Tahitian, a Polynesian language, only 9 consonantal sound qualities are distinguished. The language with the most consonants in the world is !Xóõ (/Hua-Owani), a Khoisan language, for which no fewer than 117 consonant phonemes have been identified.

In phase 4, all word classes such as nouns, verbs, pronouns, adverbs (e.g., well, truly, often) and others are distinguished. This includes a class of conjunctions to link main clauses or main and subordinate clauses. Gender and number relations are fully developed in the system of grammatical categories.

This stage demonstrates the emergence of full-fledged case systems (with maximal distinctions of 15 cases in Finnish and 23 in Hungarian), complex verbal systems (with distinctions between simple and complex tense categories), fully developed aspect correlations (as in Slavic or Semitic languages), and complex pronominal systems.¹¹

Word order (i.e., elementary syntactic structures) is fully developed, with the elements S (subject), V (verb), and O (object) appearing in various configurations. In the languages of the world, different patterns of word order dominate. Most frequent are those orders with subject-initial position (i.e., SVO in most European languages and SOV in Altaic and most Semitic languages). Verb-initial word order is found in Celtic, Berber, and Polynesian languages. Object-initial word order is of rare occurrence. Languages with a OVS order are Gupapuyngu (Arnhem Land, Australia) and Barasana (Vaupés District of Columbia). One finds an OSV order in Apos (Papua New Guinea).¹²

The lexicon in complex languages is multilayered. The abundant lexical material existing in each language system reflects the cultural

environment of humans in relationship to their natural surroundings. In a given local language, lexical items also reflect the socioeconomic and cultural activities of a given speech community. For example, in Saamic or in Evenki, we find the highly specialized terminology of reindeer breeding. In the Somali vocabulary, for obvious reasons, there is no terminology relating

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The process of a division of labor and handicraft specialization in the societies of antiquity enhanced the elaboration of specialized sections of the vocabulary. In the era of industrialization, with the emergence of modern sciences, the pressure to create new terminologies has increased. World cultures are now confronted with the presence of global networks that require processes of modernization and the elaboration of a sophisticated vocabulary to serve the manifold purposes of electronic communication.

The evolutionary stage (stage 1) representing a simple protolanguage can be postulated for *Homo erectus*, who possessed certain capacities for a limited communicational system. This stage may also have dominated the verbal communication of Neanderthals who, in a later period of existence, might have reached stage 2 of a more elaborate protolanguage. However, stages 3 and 4 are reserved for modern humans. Stage 3 can be assumed for the early phase of *Homo sapiens sapiens*, about 100,000–70,000 years BP (before the present).

Stage 4 must have already emerged before modern humans peopled Sahul (the landmass comprising Australia and New Guinea) circa 62,000 years ago and before the colonization of Europe circa 45,000 years ago. The identification of the period circa 60,000 BP as a *terminus ante quem* is crucial because in the languages of Australia and in the Papuan languages of New Guinea there are no exceptional features that would indicate a seclusive development of language skills in those regions. It is clear from the earliest colonization of the Americas that only the complex languages of stage 4 were introduced. Modern humans entered the North American plains not later than circa 15,000 BCE.

The different strategies used by complex languages to make their grammars operational are known as “language types.”¹³ The emergence of language types is associated with stage 4. Language typology deals with issues of typological resemblances in languages (not with genealogical kinship, as does historical linguistics). The techniques of one type may work in languages that are historically unrelated. For example, Chinese linguistic structures are governed by techniques of the isolating type (see below). The same techniques have shaped the structures of modern English, which has retained only a few morphological elements from its stage of development as an inflectional language (i.e., the grammar of Old English).

Empirical research has provided much insight into the cooperative working of typological techniques. This means that a given historical language operates with techniques of different types, although as a rule the techniques of one type may dominate. The languages of the world may be categorized according to the dominance of one of the following types.

The Inflectional (Flexive) Type

This term indicates the significance of inflection. Case relations as well as phases of verbal action are expressed with the help of grammatical morphemes. What distinguishes the inflectional type clearly from the agglutinative type is the fact that the stem of words may change in the

process of inflection (e.g., a change in the vocalism of the stem, as in English *mouse*: *mice*; a change in consonantism as in Russian *drug* [friend] versus *druzhbba* [friendship]). Most of the Indo-European languages are predominantly inflectional.

The Agglutinative Type

Relations are expressed by means of fixing (agglutinating) formative elements to the word stem. The phonetic structure of the stem does not change in this process. Predominantly agglutinative are Altaic and most of the Uralic languages (e.g., Turkic, Tatar, Mongolian, Komi, Mansi, Yurak).

The Isolating Type

The techniques of this type exclude grammatical morphemes. Relations in the nominal and verbal complex are expressed by syntactic means, that is, through the positioning of lexical items in the syntactic continuum. Chinese is a typical isolating language. In ancient Chinese, isolating techniques are best represented. There is no inflection of the monosyllabic word, in the noun or in the verb system. In modern Chinese, there is some agglutination (as reflected in the existence of two-syllable compound words).

The Incorporating Type

Grammatical relations are expressed by a multitude of formative elements that are suffixed, prefixed, and/or infixes. The word stem can be enlarged by adding suffixes or prefixes, and objectival elements expressing dative or accusative objects (pronominal and nominal) are usually incorporated in the conglomerate of the stem and its extension. In statistical terms, words used in languages of the incorporating type are longer than in languages of other types, and this is due to the multitude of elements that are incorporated.

The linguistic techniques of the incorporating type operate most extensively in the indigenous languages of North America.¹⁴ A high degree of incorporation is categorized as polysyntheticism. This is typical of the structures of languages such as Chipewyan, Seneca, or Oneida. In the Eskimo languages (among them Sirenik in Siberia, Yupik in Alaska, Inuit in Canada, Inuktitut in Greenland), polysynthetic constructions are most elaborate; for example, Greenlandic *aawlisa-ut-issbaR-siwu-nga* (“I try to get something which is suitable for making a fishing tackle”) translates literally as “fishing tool-suitable-obtaining-my.”

Evolution and Extinction

In the process of evolution, many languages have emerged and many have died. The birth of new languages can be witnessed in our days.

For instance, when the old political order of the former Yugoslavia dissolved, the Serbo-Croatian language split into the modern languages of Serbian, Croatian, and Bosnian. However, of the 6,400 languages in the world today, many are endangered. This is true for some 2,100 languages whose speakers are under the assimilatory pressure of a dominant language. Is the process of evolution now primarily directed toward the extinction of languages? Will linguistic diversity ultimately be lost?¹⁵

Two centuries ago, Wilhelm von Humboldt (1767–1835), who was the first to engage in scientific study of Basque, predicted that this language would die out by about 1900. The death of Welsh, the Celtic language spoken in Wales, was predicted for the end of the twentieth century. In fact, both languages are still spoken by more than half a million people. Similar statements have been made about numerous other languages that have survived the predictions of their death.

It is hazardous to make generalizing statements about the crisis of the world's languages by extrapolating from limited conditions. There are regions with a multitude of languages where the local conditions of contact and the impact of conflict vary considerably. It is obvious, however, that the pressure exerted by dominant languages and cultures on local indigenous peoples is the key to understanding why indigenous languages vanish. Among the indigenous communities in Brazil, for example, the continuity of cultures and languages is guaranteed best where contacts with nonnative peoples are reduced to a minimum. English, the prominent vehicle of the globalization process, is often blamed for the mass extinction of indigenous languages.

English, however, is not homogenous. Linguistic variation reaches far beyond the well-known distinction between British and American English.¹⁶ There are many local and social varieties of English, such as Hindish in India, the English of the Australian outback and New Zealand, Ebonics in the United States among African Americans, and dozens of pidgin and creole variations. There are also variants of English spoken in Canada, the Caribbean (especially Jamaica), South Africa, Asia (India, Singapore, Malaysia, etc.), and other locations throughout the globe.¹⁷ English deserves recognition as the one language that has produced the greatest number of historical derivations.

The Death of Indigenous Languages

In the aftermath of the loss of each indigenous language—resulting from the shift of its speakers to another dominant language—cultural identity weakens. As long as the local language is alive, it may function as a shield against the inroads of foreign cultural influences. The moment it dies, foreign cultural elements gain direct access, via the vehicle of the foreign language, to the inner circle of the community whose speakers have become assimilated. There are numerous local communities scattered throughout the world that have lost the language of their

In the aftermath of the loss of each indigenous language—resulting from the shift of its speakers to another dominant language—cultural identity weakens.

ancestors. While these “speechless” societies may retain certain elements of their local cultural heritage, they are progressively absorbed by the cultural and linguistic web of the dominant community with whom they have been in long-term contact.¹⁸

Most “speechless” communities of the world are found in North and Central America as well as in Australia. The Catawba in South Carolina have retained some of their cultural traditions and identify as members of a community that differs from others, but none of the Catawbas speak their own language. Similar conditions prevail in many other Amerind communities in the United States whose members speak only English, such as the Kalapuya in Oregon, the Natchez in Oklahoma, the Miami in Indiana, the Narragansett in Connecticut, and the Powhatan in Virginia.

Many of the Aborigine groups in Australia are also “speechless” or on the verge of becoming so. Knowledge of the local language has faded among the Warrgamay and Warungu in the region of Cairns; among the Gowar, Yagara, and Gabigabi in the region of Brisbane; and among the Awabakal and Dharawal in the Sydney area. For some of these communities, an exact date for the death of the local language can be given. It is known, for example, that the last speaker of Tasmanian, a woman named Truganini, died in 1876.

There are many local speech communities with only a few speakers left. In some extreme cases, we can witness the transition of a living language into a fossil without practical communicative functions. Where only one single speaker is left in a community, he/she can only communicate with the spirit of the ancestors because no one else is left who understands the native tongue. Such are the conditions for the Barrow Point, Biladaba, Dirari, and Gugadj languages of Australia.

The chronological list of extinct languages with the dates of their disappearance is long. Language death has always been an arbitrator in the history of ethnic communities. Recent cases of language extinction are among the Yavitero (extinct since 1984 in Venezuela), Nooksack (extinct since 1988 in the U.S. state of Washington), Kungarakany (extinct since 1989 in Australia), Liliali (extinct since 1989 on the Indonesian island of Buru), Kamassian (extinct since 1989 in Russia, western Siberia), and Mlahsö/Suryoyo (extinct since 1998 in Syria, province of Diyarbakir).

Local speech communities are often embedded in a wider ethnic community with a fading maintenance of cultural traditions. Such a process of transition can be observed among the Manchu in northeastern China. More than 4 million people are known to have Manchu ancestors. Of these, 1.8 million Chinese citizens profess a Manchu ethnic identity. In contrast to this sizable ethnic community, not more than 70 speakers of the Manchu language are still alive.

Similar processes of a gradual loss, first of language and then of culture, are typical of the Hawaiian community. At the time of the “discovery” of the Hawaiian archipelago by James Cook in 1778, more than half a million Polynesians inhabited the islands. Today, there are 0.336 million ethnic Hawaiians, about half of them being the offspring of ethnically mixed parents. Of the ethnic Hawaiians, only 800 have an active

knowledge of their ancestors' language, and nearly 1,000 can still understand it. The loss of the local language finds its parallel in the loss of cultural traditions whose revitalization has become an attraction for the tourist business rather than for many Hawaiians' daily lives.

Indigenous language functions as the vehicle for the perpetuation of an entire fabric of cultural patterns. Therefore, the survival of indigenous languages is critical for sustaining cultural diversity and the continuity of local knowledge. When languages are allowed to die, their unique traditions and accumulated cultural memory are lost to the present and to the future. Moreover, since the structures of any particular language shape one's perception of the world in specific ways, the loss of language diversity can also be seen as the loss of perceptual richness, affecting how people live and interact in the world.

Notes

1. W. Noble and I. Davidson, *Human Evolution, Language and Mind* (Cambridge: Cambridge University Press, 1996).
2. T. Deacon, *The Symbolic Species: The Co-evolution of Language and the Human Brain* (London and New York: Penguin, 1997).
3. See D. Bickerton, *Language and Human Behavior* (Seattle: University of Washington Press, 1995), and P. Mellars, "Neanderthals, Modern Humans and the Archaeological Evidence for Language," *Memoirs of the California Academy of Sciences* 24 (1998): 89–115.
4. A. Carstairs-McCarthy, *The Origins of Complex Language: An Inquiry into the Evolutionary Beginnings of Sentences, Syllables, and Truth* (Oxford and New York: Oxford University Press, 1999).
5. R. Lewin and R. A. Foley, *Principles of Human Evolution*, 2nd ed. (Malden, MA: Blackwell Science, 2004), 467.
6. R. Jackendoff, *Foundations of Language: Brain, Meaning, Grammar, Evolution* (Oxford and New York: Oxford University Press, 2002).
7. R. Burling, "The Slow Growth of Language in Children," in *The Transition of Language*, ed. A. Wray (Oxford: Oxford University Press, 2002).
8. H. Haarmann, *Elementary Word Order in the Languages of the World* (Hamburg: Buske, 2004).
9. V. Ambrazas, ed. *Lithuanian Grammar* (Vilnius: Baltos Lankos, 1997), 441.
10. P. Ladefoged and I. Maddieson, *The Sounds of the World's Languages* (Oxford and Malden, MA: Blackwell, 1996).
11. M. Haspelmath, et al., eds. *The World Atlas of Language Structures* (Oxford: Oxford University Press, 2005).
12. H. Haarmann, "Evolution, Language, and the Construction of Culture," in *Handbook of Evolution*, vol. 1, *The Evolution of Human Societies and Cultures*, ed. F. M. Wuketits and C. Antweiler (Weinheim: WILEY-VCH, 2004).
13. J. Nichols, *Linguistic Diversity in Space and Time* (Chicago and London: University of Chicago Press, 1992).
14. M. Mithun, *The Languages of Native North America* (Cambridge and New York: Cambridge University Press, 1999).
15. D. Nettle, *Linguistic Diversity* (Oxford and New York: Oxford University Press, 1999).
16. D. Crystal, *English as a Global Language* (Cambridge: Cambridge University Press, 1997).
17. L. Todd, ed. *What Is World Englishes?* 2 vols. (London: Cassell, 2001).

18. D. Crystal, *Language Death* (Cambridge: Cambridge University Press, 2000).

Bibliography

- Ambrazas, V., ed. *Lithuanian Grammar*. Vilnius: Baltos Lankos, 1997.
- Bickerton, D. *Language and Human Behavior*. Seattle: University of Washington Press, 1995.
- Burling, R. "The Slow Growth of Language in Children." In *The Transition of Language*, edited by A. Wray. Oxford: Oxford University Press, 2002.
- Carstairs-McCarthy, A. *The Origins of Complex Language: An Inquiry into the Evolutionary Beginnings of Sentences, Syllables, and Truth*. Oxford and New York: Oxford University Press, 1999.
- Crystal, D. *English as a Global Language*. Cambridge: Cambridge University Press, 1997.
- Crystal, D. *Language Death*. Cambridge: Cambridge University Press, 2000.
- Deacon, T. *The Symbolic Species: The Co-evolution of Language and the Human Brain*. London and New York: Penguin, 1997.
- Haarmann, H. *Elementary Word Order in the Languages of the World*. Hamburg: Buske, 2004.
- Haarmann, H. "Evolution, Language, and the Construction of Culture." In *Handbook of Evolution*, vol. 1, *The Evolution of Human Societies and Cultures*, edited by F. M. Wuketits and C. Antweiler. Weinheim: WILEY-VCH, 2004.
- Haspelmath, M., M. S. Dryer, D. Gil, and B. Comrie, eds. *The World Atlas of Language Structures*. Oxford: Oxford University Press, 2005.
- Jackendoff, R. *Foundations of Language: Brain, Meaning, Grammar, Evolution*. Oxford and New York: Oxford University Press, 2002.
- Ladefoged, P., and I. Maddieson. *The Sounds of the World's Languages*. Oxford and Malden, MA: Blackwell, 1996.
- Lewin, R., and R. A. Foley. *Principles of Human Evolution*. 2nd ed. Malden, MA: Blackwell Science, 2004.
- Mellars, P. "Neanderthals, Modern Humans and the Archaeological Evidence for Language." *Memoirs of the California Academy of Sciences* 24 (1998): 89–115.
- Mithun, M. *The Languages of Native North America*. Cambridge and New York: Cambridge University Press, 1999.
- Nettle, D. *Linguistic Diversity*. Oxford and New York: Oxford University Press, 1999.
- Nichols, J. *Linguistic Diversity in Space and Time*. Chicago and London: University of Chicago Press, 1992.
- Noble, W., and I. Davidson. *Human Evolution, Language and Mind*. Cambridge: Cambridge University Press, 1996.
- Todd, L., ed. *What Is World Englishes?* 2 vols. London: Cassell, 2001.



In the essay below, Dr. Duncan considers cosmology and religion, the means through which humans search for an understanding of the universe and of our place in it. It appears that people were watching the skies and speculating about their composition long before the advent of agriculture and the priestly societies. There are philosophers and scientists who firmly believe it is in cosmology that science, philosophy, and theology meet. It is an inspiring, thought-provoking journey.

—Carolyn Neel

Cosmology and Religion: The Human Quest for Meaning

Todd Duncan

Introduction

One of the most profound human emotions is a sense of the mysterious, an awareness that we are part of something much greater than ourselves whose essence we can only dimly perceive. Although the origin of this awareness is lost in prehistory, we can re-create something like the change in consciousness that it must have involved. Simply go outside on a clear, dark night, gaze up at the starry sky, and notice the shift in awareness from a narrow view of your immediate concerns to a cosmic view of yourself as a strand in the vast tapestry of the heavens. Albert Einstein captured the importance of this fundamental religious emotion with these words:

The most beautiful and deepest experience [one] can have is the sense of the mysterious. It is the underlying principle of religion as well as all serious endeavor in art and science. He who never had this experience seems to me, if not dead, then at least blind. To sense that behind anything that can be experienced there is a something that our mind cannot grasp and whose beauty and sublimity reaches us only indirectly and as a feeble reflection, this is religiousness.¹

The widespread experience of the mysterious is a driving force that we can trace as a common thread through human history. Varied responses to that experience—how to make sense of it and answer the questions it raises—have shaped many aspects of human societies. Once an awareness of something beyond ourselves enters our consciousness, it raises questions beyond the immediate: What is this larger universe I am a part of? Does it have a structure and an order I can understand, and is there a specific role for me to play within its order? Was there a beginning to time? If so, how did the universe come into existence from nothing?

The answers that we give to questions such as these define a cosmology, a framework of beliefs about the nature of the universe that

organizes our experience and tells us how we fit within the grand scheme of things. Although we all live within the same universe, cosmologies vary widely from era to era, society to society, and even individual to individual. But all are responses to the same fundamental emotion of mystery and wonder that we experience in the presence of the universe and in our attempts to come to terms with it and harmonize our lives with it. Often there is a close mapping between a people's cosmology and the structure of their society. We look to the broader universe to find a context for ourselves within which to situate the details of our lives. In the words of Louise B. Young, "in human affairs an idea is a greater moving force than any physical influence. . . . So the shape of our future will depend to a large extent on our understanding of our role in the cosmic process."² In the rest of this essay, we will investigate the broad trend of how this impulse to understand our role in the larger cosmic process has helped to shape human societies.

Earliest Cosmologies

Because religious feelings emerged long before recorded history (probably even before symbolic language), we must rely on educated speculation guided by indirect evidence to help us re-create their earliest expression. Perhaps the longing for a meaningful place within the context of something greater than ourselves first appeared a few hundred thousand years ago as a vague sensation like hunger or thirst. Was the sensation connected to an awareness of time and death and the reality of events occurring before and after an individual life? Was there an awareness of making choices and an accompanying sense of morality, a feeling that choices can be "right" or "wrong"? What did these experiences feel like, and how were they expressed as they first emerged? Perhaps the closest we can come to empathizing is to imagine experiencing the feelings as we do now but without words to crystallize and label them.

We can speculate that the first cosmologies were a natural extension of the immediate experiences and surroundings of the people who created those cosmologies. Their nomadic lifestyles, foraging (and sometimes hunting) food in small groups, must have meant a very concrete and intimate connection to other people, animals, plants, and forces of nature. Some aspects of this environment were naturally more familiar and accessible than others: fruits eaten on a nearly daily basis, for example, would be much more familiar than those encountered only rarely, and immediate tribe members must have seemed more real than distant tribes encountered once a year perhaps. In this setting, one can imagine that the first stirrings of awareness of a world beyond immediate experience amounted to just a small step beyond these concrete experiences. As David Christian describes, "Modern studies of small-group religions suggest that the earliest human communities thought of the entire cosmos as bound into webs of kinship. . . . The supernatural world may also have been seen as a distinct but accessible realm—

almost like a separate tribal territory, with whose occupants one could negotiate, fight, or intermarry.”³

With the emergence of symbolic language (perhaps 150,000 years ago), the articulation and sophistication with which these feelings were expressed must have increased. Perhaps the early process of developing religious feelings could even be viewed as paralleling the growth of language, a transition from concrete to abstract, symbolic representations.

In any case, symbolic representation and language give us a chance to pick up the thread and start to find evidence of the internal world of our ancestors’ thoughts. Every culture is unique in some ways, so extrapolation based on observations of present-day hunter-gatherer societies (e.g., the San people of Botswana and the indigenous Australians and Americans) is limited and may be misleading. And the point where we can even begin to pick up the thread of religious feelings must already leave out a significant and rich history.

Still, we *can* pick up the thread by looking at the available material clues and make reasonable guesses about the inner world of the minds who produced them. Evidence of symbolic and ceremonial acts revealing a rich inner world is provided by middle Paleolithic artifacts and paintings dating back to at least 70,000 years ago in southern Africa.⁴ Such early signs of ceremonial practices beyond the necessities for survival are widespread, though of course we must be cautious of overinterpreting their meaning from a modern perspective. Findings in the Shanidar caves of Iraq (dating to about 60,000 years ago) and a 28,000-year-old Cro-Magnon site discovered near Moscow suggest ceremonial burial, which implies a concern for the well-being of the dead.⁵

Is there a common theme to these early expressions of religious emotions? Once again we must be cautious of overgeneralizing, but anthropological observations combined with the earliest archaeological evidence suggest that early expressions took the form of animism. An animist perspective views all objects in our surroundings as alive, with personalities and motivations analogous to what we humans experience. This perspective fits naturally with the hunter-gatherer way of life described earlier. Human interactions with the natural world were direct and concrete: individuals interacting with other *individual* life forms, whether human, other animal, object, or force of nature. This view of the structure of the universe is evident in the artifacts reflecting the structure of their lives: how they searched for food, related to each other, performed burial rituals, etc. A glimpse of this way of life is captured by Edward Harrison:

A magic universe each day was awakened by the Sun spirit and at night mourned by the Moon spirit. It was a universe of starlike campfires stretching across the night sky, of chromatic sky spirits manifesting in rainbows, sunsets, and northern lights, of mighty

Perhaps the early process of developing religious feelings could even be viewed as paralleling the growth of language, a transition from concrete to abstract, symbolic representations.

earth spirits rumbling beneath the ground and spewing forth from volcanoes. . . . The sudden noise, the fallen tree, the shaft of light piercing the forest gloom, the rising river, the lowering sky, the hurtful stone, and each incident of every day was the natural outcome of incarnate spirits pursuing their personal interests. It was a numinous world of the kind fleetingly glimpsed by children in spine-tingling fairy tales.⁶

States and Abstract Cosmologies

Perhaps not surprisingly, a major transition in cosmology and religion accompanied a corresponding transition in way of life. With the emergence of agriculture around 10,000 years ago and the concentration of people into cities roughly 5,000 years ago, along with the increased mobility provided by the domestication of animals such as horses and camels, significant accumulation of food and other material wealth became possible. This must have been part of a profound shift in lifestyle. No longer did everyone interact with nature directly to acquire the immediate necessities of life. Wealth in the form of food and other material goods could

be stored, transported, and accumulated. Denser concentrations of people and of goods to be distributed led to the emergence of more complex social structures. Social roles became more divided, specialized, and hierarchical, and for many people wealth began to be acquired not through direct interaction with individual beings in nature but through social interactions embodied in institutions instead of individuals. Power became more concentrated and abstract. Many human societies began moving toward the centralized and hierarchical social structure of states that we see today.

New cosmologies emerged in parallel with these changes, shaped by the new social structures and in turn helping to shape social evolution. The old cosmic order was an extension of a largely egalitarian society of individual humans interacting with individual beings in the natural world. The new hierarchical social structure, in which people were beginning to interact with abstract, symbolic *institutions* instead of individuals, naturally extended to a new cosmic order. Just as rulers were now remote from most people and their status was consolidated by tributes and monumental architecture, gods became more awesome, remote, and symbolic, consolidating the power and meaning that once resided in the individual spirits of every object in nature.

As the reach of individual states grew, so did the reach of their associated cosmic order. Univer-



Buddhist Wheel of Life as depicted on a thangka (Nepalese scroll painting). The wheel includes scenes symbolizing the different phases of samsara, the cycle of life and death. (Dharmapala Thangka Centre)

sal religions seem to have first emerged at the same time as universal empires, around 3,000 years ago. As David Christian writes:

One of the earliest religions of this type, Zoroastrianism, appeared in the largest empire of the mid-first millennium BCE, that of the Achaemenids, and at the hub of trade routes that were weaving Afro-Eurasia into a single world system. Indeed, most of the universal religions appeared in the hub region between Mesopotamia and northern India. They included Zoroastrianism and Manichaeism in Persia, Buddhism in India, Confucianism in China, and Judaism, Christianity, and Islam in the Mediterranean world.⁷

Thus, we see that at the same time the foundations emerged for the state-based socioeconomic structure we have today, the foundations for modern religions connecting this social order to the mystery beyond the everyday world were established as well.

Modern-Day Cosmologies

In contrast to most of human history, a distinguishing feature of cosmology in the last few hundred years is the split between its scientific and religious aspects. Most people today practice versions of religions that emerged out of the traditions described in the last section. These religious traditions carry with them associated models of the structure and arrangement of the universe (although these descriptions now tend to fade into the background; the focus is more on personal values and instructions for behavior, separated from the order of the universe that supports these values and instructions). At the same time, scientists who focused more on uncovering the structure of the universe (and less on the morals or values associated with this structure) have acquired a wealth of new evidence about the nature of the universe that has led to the emergence of cosmology as a field of science in its own right.⁸

While scientific and religious cosmologies are often viewed in conflict, a historical perspective helps us see them as part of the same trend of coming to terms with the mystery behind our existence. The scientific process is an extension of the same sort of exploration that we speculated must have occurred in early hunter-gatherer societies: extending the familiar world to answer questions about things that are beyond the familiar. The process we use today may be different, but the basic goal of grappling with the vaguely articulated meaning behind things is still the same. We still seek a framework for a general set of answers to questions about who we are and how we fit in.

Scientific evidence has broadened our awareness of the cosmos far beyond what our hunter-gatherer ancestors knew about and even far

While scientific and religious cosmologies are often viewed in conflict, a historical perspective helps us see them as part of the same trend of coming to terms with the mystery behind our existence.

beyond the cosmos known to our recent ancestors a century ago. Where once the lands of nearby tribes or other nations on our planet seemed to fade away at the edges of the universe, we now have concrete knowledge of a cosmos almost incomprehensibly vast: entire worlds beyond the Earth, countless stars beyond our Sun, and islands of stars like our own Milky Way that are so distant their light takes billions of years to get to us across vast reaches of space.

We also have now a scientific timeline of the history of the cosmos that places human history in a much broader context of time. To make this context for human history concrete, consider this:

If your outstretched arms represent the entire 13.7 billion year history of the universe, with the beginning of the universe at the tip of your right middle fingernail and the present day at your left middle fingernail, then the length of time humans have existed occupies only a sliver of fingernail, less than a millimeter thick. Trim your fingernail slightly and you remove human existence from the timeline, but leave the vast majority of cosmic history untouched!⁹

This science-based expansion of our awareness beyond what our ancestors could dream of has provided a unified intellectual description of our history and our surroundings that goes far beyond our immediate experience. This is another profound shift in the thread of developments driven by our awareness of the mysterious because it provides a common backdrop within which to think about the many different individual cosmologies among various cultures, past and present. Perhaps the next great advance in human culture will occur as this unifying framework of cosmic structure and history allows us to see individual, local cosmologies as ways of metaphorically coming to grips with the beauty and sublimity of the mystery behind existence. It will allow us to see that something real is there, even though any of our individual descriptions are incapable of capturing it completely.

This perspective is nicely summarized by primatologist Jane Goodall:

There are many windows through which we can look out into the world, searching for meaning. . . . Most of us, when we ponder on the meaning of our existence, peer through but one of these windows onto the world. And even that one is often misted over by the breath of our finite humanity. We clear a tiny peephole and stare through. No wonder we are confused by the tiny fraction of the whole that we see. It is, after all, like trying to comprehend the panorama of the desert or the sea through a rolled-up newspaper.¹⁰

We may never know the true nature of the universe and our place in it. But insights emerge as we trace the history of the search for meaning and view different cosmologies as different ways of exploring and interpreting what is fundamentally the same basic mystery. Perhaps the opportunity to combine the views from a wider variety of windows

will allow us to look deeper than ever before into the meaning of our existence.

Notes

1. Albert Einstein, from "My Credo," a speech to the German League of Human Rights, Berlin, 1932, as quoted in Michael White and John Gribbin, *Einstein: A Life in Science* (New York: Penguin, 1995), 263.
2. Louise B. Young, *The Unfinished Universe* (New York: Simon and Schuster, 1986), 185.
3. David Christian, *Maps of Time: An Introduction to Big History* (Berkeley: University of California Press, 2005), 189.
4. Robert Roy Britt. "Scientists Find First Known Human Ritual. Archaeologists Discover Stone Snake Carved in Cave in Botswana." <http://www.msnbc.msn.com/id/15970442/>. Accessed 20 April, 2010.
5. Carolyn Neel, "Cosmos and Community," unpublished manuscript.
6. Edward Harrison, *Masks of the Universe: Changing Ideas on the Nature of the Cosmos* (Cambridge: Cambridge University Press, 2003), 21.
7. David Christian, *Maps of Time: An Introduction to Big History* (Berkeley: University of California Press, 2005), 319.
8. For an overview of this scientific evidence see, e.g., Todd Duncan and Craig Tyler, *Your Cosmic Context: An Introduction to Modern Cosmology* (San Francisco: Pearson Addison-Wesley, 2009).
9. Todd Duncan, *An Ordinary World: The Role of Science in Your Search for Personal Meaning* (Beaverton, OR: Science Integration Institute, 2009), 90–91.
10. Jane Goodall, *Through a Window* (Boston and New York: Houghton Mifflin, 2000), 10.

Bibliography

- Britt, Robert Roy. "Scientists Find First Known Human Ritual. Archaeologists Discover Stone Snake Carved in Cave in Botswana." <http://www.msnbc.msn.com/id/15970442/>. Accessed 20 April, 2010.
- Christian, David. *Maps of Time: An Introduction to Big History*. Berkeley: University of California Press, 2005.
- Duncan, Todd. *An Ordinary World: The Role of Science in Your Search for Personal Meaning*. Beaverton, OR: Science Integration Institute, 2009.
- Duncan, Todd, and Craig Tyler. *Your Cosmic Context: An Introduction to Modern Cosmology*. San Francisco: Pearson Addison-Wesley, 2009.
- Goodall, Jane. *Through a Window*. Boston and New York: Houghton Mifflin, 2000.
- Harrison, Edward. *Masks of the Universe: Changing Ideas on the Nature of the Cosmos*. Cambridge: Cambridge University Press, 2003.
- Neel, Carolyn. "Cosmos and Community." Unpublished manuscript.
- Young, Louise B. *The Unfinished Universe*. New York: Simon and Schuster, 1986.
- White, Michael, and John Gribbin. *Einstein: A Life in Science*. New York: Penguin, 1995.

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Few of us can imagine humans without tools, forced to depend solely on our fingers and teeth to satisfy our needs for warmth, shelter, food or for transporting materials and small children, etc. As Dr. Kay illustrates, the same is true of many other species, such as ants and beavers. In the essay below, Dr. Kay considers the nature of tool-making and technology when placed in the context of the “natural world.” Together with the essay by Dr. Burns that follows, these pieces offer great insight into the development of human tool-making and technology.

—Carolyn Neel

Humans, the Tool Makers

Marvin Kay

Technology, *n.* 1. Industrial science; systematic knowledge of the industrial arts. 2. Terminology used in arts, sciences, or the like. 3. Applied science.—**technologist**, *n.*

Technological, **technologic**, *adj.* **a.** Pertaining or relating to technology; as, *technological* advance or problems. **b.** Relating or due to advance in technology; esp. in application of scientific knowledge, methods, or research to the industrial arts and the fields of manufacture and building; as, advances in technological productivity. **c. Econ.** Resulting from improvement in technical processes which increases the productiveness of machines, eliminates manual operations or old industries, or the like; as, *technological* unemployment.—**technologically**, *adv.*

(Definitions from Merriam-Webster Inc.
Webster's New Explorer College Dictionary.
Springfield, MA: Federal Street Press, 2003.)

Sir Kenneth P. Oakley, the debunker of the Piltdown hoax, in his book *Man the Tool-Maker* affirms the primacy of man as a maker and user of technology.¹ Oakley's view is widely held and seemingly is beyond reproach, for surely humans create the material world or “built” environments of our cities, smaller towns, farms, dwellings, factories, roads, seaports, and other infrastructure. We also have a vested interest in balancing tool efficiency with conservation of scarce material resources. And it is hard to imagine another species so conscious and deliberate in its technological choices or whose material record so emphatically speaks of intrinsic intelligence, thinking, planning, and the most human of all characteristics, the artful dodge, deliberate deception, or conjuring about art, literature, and the cosmos. In sum, while one cannot regard lying as the oldest human profession, it was a necessary precondition. Likewise, technology, in all its myriad forms, is quintessentially human and defines us as separate from other life forms. Or so it might seem.

We must, however, take a larger view of tools and technology. Indeed, how can one argue against, say, a sea otter as a tool user after watching

it swim on its back and smash a clam shell on its stomach with a rock? Or a beaver impound a stream and build a sturdy lodge in the resulting pond of sticks, logs, and mud and with an underwater entrance passage into an *engineered* central sleeping chamber? Moving down the phylogenetic ladder, it is readily apparent that other creatures contribute to structuring their own environments, for instance, paper wasps and hornets make their nests of a paper-like material that they make from saliva and wood fragments, while spiders construct intricate webs to trap prey.

At the low end of this scale, my favorite example is well known and now understood by Plains archaeologists, thanks to the research of Larry Todd and his students at Colorado State University, Fort Collins. In surveying (or surface reconnaissance of) high plains prairies for archaeological sites, one must look at anthills. Why anthills? The main reason is that in a grassland there are few subsurface exposures to check for artifacts, and ants—harvester ants to be precise—often collect and display them atop their anthills, just waiting, it seems, for our inspection. The question that Todd and his students explored is, what would possess harvester ants to collect and display inedible artifacts? The most notable of these artifacts are brightly colored glass beads a little bigger around than a pinhead, or what are called seed beads. Given the size of an ant, moving a seed bead is a pretty big deal.

The general findings of this research are relevant to my purposes here. It turns out that after harvester ants collect inanimate objects from the territory about an anthill, they move them into and out of the anthill during day or night depending on how well they retain heat.

It turns out that after harvester ants collect inanimate objects from the territory about an anthill, they move them into and out of the anthill during day or night depending on how well they retain heat.

Brightly colored but generally dark seed beads absorb heat. These are often discovered on an anthill's surface during the day and appear to have been left deliberately to absorb heat. They then are brought into the anthill to warm it at night. Conversely, light-colored seed beads and other similar small objects with the appropriate thermal characteristics to deflect heat are left

on an anthill's surface in the evening and are brought into its inner passages to cool them during the day. Heat regulation drives the ant to get and move these transportable objects into and out of its anthill. Quite apart from being either artifacts or ecofacts (or objects of nature), the objects are used if not fully regarded by the harvester ants as simple tools. These require no further modification to satisfy a vital physiological need.

These examples hardly scratch tool use among other animals, but I need not explore them more fully. Rather, my purpose is to identify some principles behind tool using by humans or other critters. More generally, I regard tool-using behaviors as a more inclusive concept that embodies the overall linear process of production, use, repair, recycling, intentional discard, and accidental loss, or what is described as a production chain and is crucial to engineering design assessments (for a few archaeological studies and applications, see the works listed in

the bibliography, particularly those by Peter Bleed and David P. Braun). I then make distinctions among human and other animal technology.

Technology and Tool Use Principles

Technology is extrasomatic, or nonbiological, and not part of the biology of the creating or employing organism. The most basic and fundamental technological systems address or satisfy physiological needs, on the one hand, and may be imbued or designed to connote symbolic content or meaning to makers and users alike, on the other. Tools afford a mechanical advantage that multiplies or extends the somatic capabilities of the organism, regulate heat (as is true of a hot water bottle or a seed bead for a harvester ant), or in some other way enhance performance and satisfy other physiological needs. They may vary too from the transportable to the fixed and stationary.

With these principles in mind, exactly what satisfies the definition of a tool is debatable if one goes to a logical extreme. An animal path or burrow need not be regarded seriously as a tool or even as a stationary facility or fixed modification to a landscape, even while either might make travel easier or safer. They seem to fall more into the category of by-products of habitual behavior (instinctual or learned) that constrain or modify a landscape or its substrate. So, if one wished, it would be logical to exclude too the beaver den and dam, the wasp or hornet nest, the spider web, and so forth. While deigning these exclusions as logical possibilities, I must confess to favor a fuzzy logic to this question; to wit, some objects are difficult to uniformly classify or require placement in an indefinite, or catchall, group. There is simply an uncertainty in the classification of facilities: if for all purposes and occasions are these strictly tools more so or exclusively than the stationary by-products of habitual behavior? Another application of fuzzy logic is that I am far more comfortable in classifying harvester ant manipulation of small objects with discrete thermal properties as tool use, whereas I would not opine an equal status to a bison wallow or to an elephant dusting itself to ward off insects; the latter more properly are examples of habitual behavior but obviously no less so than the harvester ant's. Indeed there is a parallel logic, as facilities exist that would seem to apply equally well to a bison wallow and a cattle dipping station. So should they both qualify as being technological in nature? Habitual behavior would underlie a deer or elk sharpening its antlers on a rock face, true enough. But would the rock face constitute a facility, a tool?

Classification and proper use of terms is fundamental to science. Yet it is in life where terminology is as vital as is the principle of classification. The consequences of racial terminology go well beyond the little science evident. Is Pluto a planet or merely a minor subplanetary body? The terms matter in either case because they stand as a reference to a larger reality, or perception, shared dearly by many regardless of any empirical measure of objective truth. The same, I submit, might be said of tools and tool using. Uncertainty is troubling to many users of science.

But it is uncertainty that drives science. Uncertainty is why our classifications of tools and tool using are partial or incomplete and are subject to change as knowledge improves.

Production Chains

A broad view to tool using allows development of a primitive theoretical model, or paradigm, of tools and technology more generally. The first step in this model opposes two dimensions, production mode dichotomized as single-step and multistep against animal group of nonhuman or human.

Single-step production is one in which resource procurement predominates when referring to a transportable object because it is not further modified for use. When speaking of stationary facilities, using them for a specific purpose, or purposes, alone transforms them. Thus, in either case usage for one or more purposes defines single-step production technology; elements of this type are often called ad hoc or expedient. Damage or breakage most commonly results in rejection of ad hoc or expedient technology, whether stationary or transportable, because repair does not normally occur or is simply insignificant.

Multistep production typifies more complex technology, whereas complexity strictly refers to a linear progression of commutative, or invariant, operations. These operations define essential and necessary procedures to create, maintain, or recycle technology; within each of these steps the order in which other technological processes are done is arbitrary, or noncommutative. Multistep production technology more commonly is called patterned, or shaped, as opposed to ad hoc and expedient. Multistep production always begins with material or resource procurement and then object manufacture; item rejection for any reason at these or subsequent steps is common and predictable, even when not expected.

These distinctions may seem at first glance to be almost too obvious and simple. They also may seem overly general and too inclusive, as almost anything might fit into one or the other. Their simplicity and inclusiveness, however, are their strengths and have long been recognized as such by archaeologists. An early and still relevant application is that of William Henry Holmes,² who cast a guiding light on production chain studies that still burns bright today. The utility of production chain analysis is, as Holmes recognized, that it gets us closer to the reality of technology and tool use. Technology represents and most profitably is viewed as dynamic and responsive to the needs of producers and users. The fact that we can identify a logical, linear progression when speaking of technology production, use, and discard allows us to empirically assess and compare behaviors and intellectual capability at discrete points in the performance histories of makers and users. When those insights are added to time and space distinctions that govern archaeological science, we have a repertoire of unified approaches to compare systematic differences in behavior and to evaluate their underlying causes.³ To what extent multistep production incorporates symbolic

thought typical of human speech is debated even for those species clearly within our ancestral line or co-occurring with it.⁴

Humans and Other Animals

Drawing on the few examples already cited, tool use among nonhuman, human, and our immediate or more distant ancestors is better known to satisfy physiological needs for shelter, food, water, and heat regulation. Single-step production technologies dominate the transportable tools of nonhuman animals. They undoubtedly were far more common too among our ancestors and other primate relatives than we have recognized from the archaeological record. Ancient stationary facilities, of single-step production, suffer a similar fate and are poorly or rarely recognized as such. Multistep production “technologies” are evident among nonhuman animals. Should one overlook the terminology plus the habitual behavior they mostly represent and focus upon performance criteria, these items would be as amenable to a production chain analysis as any fully acceptable similar multistep technology; as such, these items represent a direct measure of performance capability among species and species-specific differences regardless of underlying causes.

Notes

1. Kenneth Page Oakley, *Man the Tool-Maker* (Chicago: University of Chicago Press, 1957).
2. William Henry Holmes, “Natural History of Flaked Stone Implements,” in *Memoirs of the International Congress of Anthropology*, ed. C. Staniland Wake (Chicago: The Schulte Publishing Company, 1894); see also the critique: Jay K. Johnson, “North American Biface Production Trajectory in Historic Perspective,” *Plains Anthropologist* 38(143) (1993): 151–162.
3. For highly readable examples, see: Lauriston Sharp, “Steel Axes for Stone-Age Australians,” *Human Organization* 11(2) (1952): 17–22; and David B. Madsen and James E. Kirkman, “Hunting Hoppers,” *American Antiquity* 53(3) (1988): 593–604.
4. For a comparative example, see Bruce L. Hardy et al., “Stone Tool Function at the Paleolithic Sites of Starosele and Buran Kaya III, Crimea: Behavioral Implications,” in *Proceedings of the National Academy of Sciences of the United States of America [PNAS]* 98(19) (2001): 10972–10977. For basic assessments of technique and literature critiques, see George H. Odell, “Stone Tool Research at the End of the Millennium: Classification, Function, and Behavior,” *Journal of Archaeological Research* 9(1) (2001): 45–100.

Bibliography

- Bleed, Peter. “Trees or Chains, Links or Branches: Conceptual Alternatives for Consideration of Stone Tool Production and Other Sequential Activities.” *Journal of Archaeological Method and Theory* 8(1) (2001): 101–127.
- Braun, David P. “Pots as Tools.” In *Archaeological Hammers and Theories*, edited by James A. Moore and Arthur S. Keene. New York: Academic Press, 1983.
- Hardy, Bruce L., Marvin Kay, Anthony E. Marks, and Katherine Monigal. “Stone Tool Function at the Paleolithic Sites of Starosele and Buran Kaya III, Crimea: Behavioral Implications.” *Proceedings of the National Academy of Sciences of the United States of America [PNAS]* 98(19) (2001): 10972–10977.

- Holmes, William Henry. "Natural History of Flaked Stone Implements." In *Memoirs of the International Congress of Anthropology*, edited by C. Standiland Wake. Chicago: The Schulte Publishing Company, 1894.
- Johnson, Jay K. "North American Biface Production Trajectory in Historic Perspective." *Plains Anthropologist* 38(143) (1993): 151-162.
- Madsen, David B., and James E. Kirkman. "Hunting Hoppers." *American Antiquity* 53(3) (1988): 593-604.
- Oakley, Kenneth Page. *Man the Tool-maker*. Chicago: University of Chicago Press, 1957.
- Odell, George H. "Stone Tool Research at the End of the Millennium: Classification, Function, and Behavior." *Journal of Archaeological Research* 9(1) (2001): 45-100.
- Odell, George H. "Stone Tool Research at the End of the Millennium: Procurement and Technology." *Journal of Archaeological Research* 8(4) (2000): 269-331.
- Sharp, Lauriston. "Steel Axes for Stone-Age Australians." *Human Organization* 11(2) (1952): 17-22.



In this essay, Dr. Burns considers the role of technology in world history as humans become increasingly adept at developing technology to master their environment and overcome difficulties. Ultimately, we develop technological solutions to problems caused by our use or misuse of technology. The transition from simple digging sticks to complex computer-controlled weapon systems is an exciting journey to any of us who love our computers or our automobiles.

—Carolyn Neel

Technology in World History

William E. Burns

Humans are particularly dependent on their ability to design and produce tools. The attempt to manipulate, coerce, and improve on nature through technology is a constant human characteristic; no human society has existed without developing some forms of technology. However, technology, which we define as the art of producing and using tools, predates humanity. Some species of birds and animals use tools; for example, sea otters use rocks to smash open clam shells. A few species, including chimpanzees and New Caledonian crows, have even been observed to fashion objects into tools. Some of the earliest evidence of human societies is also evidence of their technologies: flint knives, bone needles, and other devices. Fundamental areas of life in which humans from early on sought technological solutions include obtaining, preserving, and preparing food; transportation; housing; and organized violence.

Technology and Environment

Humans have been able to adapt to a broader range of environments than any other mammal through the use of environment-specific technology. Arid environments, such as deserts, have called forth technologies based on the maximally efficient use of water resources, as the Garmantes of the Sahara dug irrigation canals out of limestone to tap underground springs. Isolated islands in the South Pacific were knit together into units capable of supporting complex human societies by the development of shipbuilding and navigation. The degree of technical ingenuity displayed by a society is not necessarily indicative of its degree of civilization in the sense of urbanization. Some of the most difficult places for human beings to live, such as the frozen tundra, can only support a small population but make immense demands for technology. The Arctic was opened by the oil lamp, which enabled long-distance hunting expeditions in the winter when the days are very short. Northern peoples, faced with difficult terrain and scarce resources, have shown great ingenuity in transportation technology, such as skis and snowshoes, as well as the ability to make maximum use of the resources they have, such as using polar bear teeth for fishhooks.

Some remote societies such as the Inuit of the Arctic used small-scale technologies to survive in hostile environments rather than large-scale technologies to reshape their environments. The densest early human societies, by contrast, in the great river valleys of Mesopotamia, Egypt, northern India, and China were supported by irrigation systems that channeled water over large productive agricultural areas. The Chinese placed such value on irrigation as to ascribe it to the legendary sage-emperors, while a Mesopotamian legend claimed that humans had been created by the gods to work on their canals. With large labor reserves to draw on, early societies could carry out large technological projects for economic reasons as well as for cultural or religious reasons, such as those remarkable works of engineering, the Egyptian pyramids.

Technological Innovations

One of the major questions in the history of technology is whether new technologies are usually invented once and spread from their point of origin or whether similar problems result in similar solutions in different settings, arrived at independently. A classic example of the different relations between technologies in different places involves the appearance of several originally Chinese inventions—paper, gunpowder, the

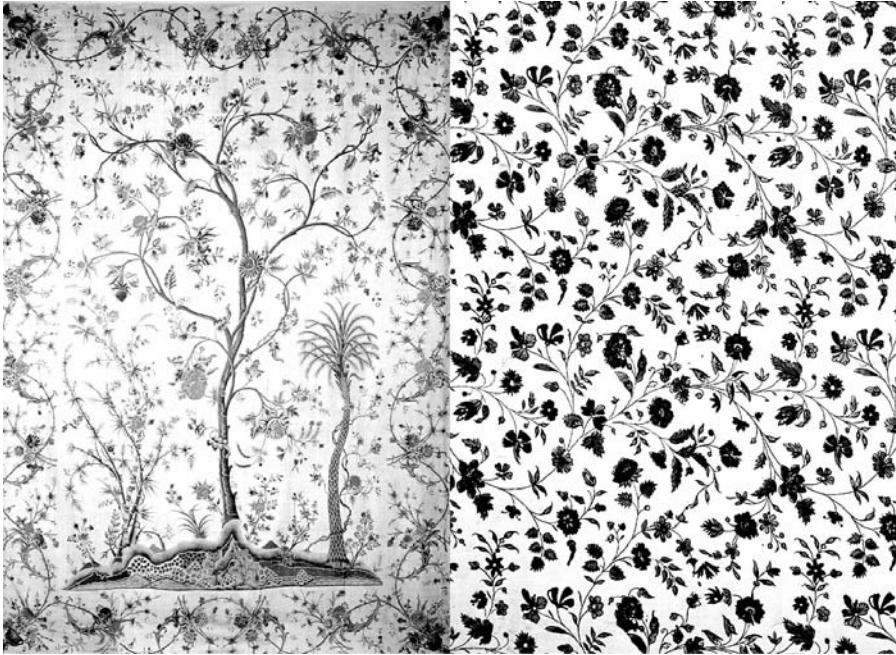
compass, and the printing press—in late medieval Europe. Paper and gunpowder came by transmission routes that can be fairly well documented. Paper was invented in China several centuries before the Common Era, and knowledge of its making was transmitted to the Islamic world in the eighth century CE. From Islamic Spain paper made its way to Latin Europe. Arab culture also seems to have been the intermediary by which the use of the mar-

One of the major questions in the history of technology is whether new technologies are usually invented once and spread from their point of origin or whether similar problems result in similar solutions in different settings, arrived at independently.

iner's compass reached Europe, while European knowledge of gunpowder was a product of the increasingly close relation of the Eurasian civilizations in the age of the Mongol empire. However, printing seems to have been an independent European invention.

However, many technology transfers lie on a continuum between direct transmission and independent invention. The mere knowledge that a technical problem has been solved can spur others to duplicate the solution. Porcelain, invented in China, found a ready market in seventeenth-century Europe, spurring Europeans to independently discover the process for making it in the early eighteenth century. Technological advance can also be spurred through emulation even if the technologies involved are radically different. Eighteenth-century British textile manufacturers were eager to compete with the cheap and colorful cotton fabrics of India, but the industrial processes they invented were very different from Indian handwork.

Another major question concerning technological development is the relative importance of incremental improvements, often anonymous,



Left: Chintz coverlet from the Coromandel Coast, India, about 1770. Right: English chintz, eighteenth century. (Private Collection/Mark Fiennes/The Bridgeman Art Library/Burstein Collection/Corbis)

in existing technologies and qualitative innovations. While qualitative innovations are usually the most dramatic, a stream of improvements is often required for a technology to reach its full potential. The telephone, invented by Alexander Graham Bell in 1876, in its earliest incarnation could only transmit across short distances. Subsequent and much less publicized inventions such as the loading coil and switchboard were needed to make the telephone a ubiquitous form of communication.

Technologically Creative and Technologically Conservative Societies

Technological advances have played an enormous role in economic growth. Technological advance that brings about improved productivity underlies the most fundamental economic expansions, from the invention of agriculture to the development of the Internet. One notable example was the rise of more efficient techniques of irrigation and better tools for wet rice cultivation in medieval China, which led to the expansion of its agriculture and the growth of its population. Another was the European and eventually the global Industrial Revolution, which has led to continuous economic expansion. Technological change is the easiest way out of the so-called Malthusian trap, by which increases in productivity are absorbed by increases in population and thus do not improve the standard of living for ordinary people.

Some societies have been more open to technological changes, whether of indigenous or foreign origin, than others. The reasons for these differences are disputed by historians, sociologists, and economists. In some places, governments or other authorities have taken specific measures to promote or suppress particular technologies, as

seventeenth-century Japan suppressed gun making. However, the reasons for technical advances and declines are usually not so clear-cut. The explanations put forth range across economics, politics, culture, and religion. For example, it has been argued that the ancient Greeks accomplished little in technology to match their achievements in science because they regarded manual labor as degrading, while medieval Europeans advanced technologically because they believed that God wanted them to master the physical world.

Social change has led to changes in technological creativity. These changes have not always affected all technologies in the same way. The fall of the Roman empire led to a pronounced technological regression in large-scale projects, such as civil engineering, hydraulics, and road building. It would be well over a millennium before Europeans matched some Roman achievements in these areas. However, medieval Europe far surpassed the Greeks and Romans in such small-scale technologies as horse collars and mills to more efficiently exploit the power of muscle, wind, and water. China in the northern and southern Song dynasties was the most technologically dynamic society on earth, but after the Mongol conquest in the thirteenth century it lost much of its capacity to innovate. The great water clock of Su Sung, built in 1087 and the most sophisticated timekeeping and astronomical device to date, was dismantled, found no successors, and eventually disappeared from memory. Even Chinese interest in Western clocks during the seventeenth and eighteenth centuries spurred no desire to emulate them. Britain, the technological leader among Western countries in the late eighteenth and early nineteenth centuries, was surpassed by Germany and the United States by the late nineteenth century.

The Rise of Technological Professionalism

Although persons known for their technical skill and inventiveness had long existed in numerous societies, the development of an organized profession of civilian technological specialists or “engineers,” with accompanying institutions, began in eighteenth-century Europe. Until that time, the term “engineer” had been used primarily in military contexts to refer to an expert in fortifications and sieges like the famous French fortress builder Sebastien de Prestre de Vauban. The broadening of the concept of engineer to include civilian specialists was part of a process by which science and technology had been drawing closer together during the scientific revolution of the seventeenth century. Such scientific ideas as precise measurement and repeated experiment were influencing the culture of technology, and engineering was becoming a more learned discipline. The imposition of the “scientific” or “rational” way of doing things on Europe’s traditional manufacturing cultures was fraught with difficulty. Many texts, such as the famous work of the French Enlightenment, the *Encyclopedie*, spread knowledge of the best technical practices of the day rather than encouraging innovation.

The two most technologically advanced societies of the eighteenth century, Britain and France, saw the engineering profession develop in

startlingly different ways. In France the engineer, whether military or civilian, was usually a state employee and, increasingly, one trained in a state institution such as the famous School of Bridges and Roads, founded around 1747. The traditional European university had little interest in technical advance, leaving a gap for new institutions. Germany developed a similar, although more decentralized, system of technical education than France's with the rise of Mining Academies. British engineers were more likely to be associated with entrepreneurs than with state organizations and were often self-taught or trained by apprenticeship rather than institutionally educated. The British effectively used voluntary associations dedicated to technological progress. The Royal Society, Britain's leading scientific society, recognized what would now be considered purely technical as well as scientific achievements, awarding its highest medal, the Copley Prize, in 1759 to John Smeaton, who is also credited with coining the term "civil engineer." Although British engineers often moved in the same social and intellectual circles as scientists, they made fewer contributions to science than did French engineers, and the subsequent development of the profession has been more influenced by the French model.

The driving force in British industrial technology was not the state but rather private capitalist enterprise. British manufacturers also looked to science and technological improvement to provide them with ways of making more profitable products. James Watt's development of the separate condenser for the steam engine, which enabled steam technology to come into wide use, was financed by entrepreneurs, and the state took little direct interest in technology except that with direct military or naval applications.

From Societies with Technology to Technological Societies

With the dramatic technological developments of the Industrial Revolution and the nineteenth century, societies in the West and throughout the world became aware of the importance of technological development for national power and wealth. At the same time many technologies were growing more complicated, out of the intellectual reach of the illiterate and scientifically untrained. Some of the most important new industries of the late nineteenth century were dyes and pharmaceuticals, which required advanced knowledge of chemistry. One result of these circumstances was the rise of technological education. Germany took the lead in developing technical education outside the established universities with the development of the *Technische Hochschule*. The British model of learning by apprenticeship became outmoded, although Britain's failure to adjust to the new reality is sometimes blamed for the loss of its early technological lead.

Two nineteenth-century inventions, the railroad and the telegraph, contributed the radical technological reshaping of space and time that is characteristic of modernity. The railroad enabled people to move overland at faster speeds than ever before, while the telegraph made

The new obsession with speed that the railroad brought can be seen in the popularity of Jules Verne's novel Around the World in Eighty Days and subsequent improvements in transportation technology, most dramatically the airplane, which also reshaped human relations.

communication over distance effectively instantaneous. So rapid was the railroad that it made necessary the creation of a standardized temporal regime embracing the world: standard time. The new obsession with speed that the railroad brought can be seen in the popularity of

Jules Verne's novel *Around the World in Eighty Days* and subsequent improvements in transportation technology, most dramatically the airplane, which also reshaped human relations.

One aspect of the cultural centrality of technology in the nineteenth century was increased interest in the individuals responsible for technological innovations, or inventors. The ascription of technological advances, or inventions, to specific individuals is a relatively recent develop-

ment. Famous inventors, individuals such as Benjamin Franklin, James Watt, and, later, Thomas Edison, were put forth as role models for boys. (The idea of the famous inventor has been heavily gendered.) The culmination of the cult of the engineer was a short-lived movement for technocracy, rule by engineers rather than politicians. Similar ideas were endorsed in the early twentieth century by leading intellectuals such as the economist Thorstein Veblen and the writer H. G. Wells as well as by influential Marxist regimes.

Technology was also a key component of the dominance that European and Western society was able to attain and maintain over the rest of the world beginning with the Spanish invasion and conquest of the Americas in the late fifteenth century and the sixteenth century and intensifying and continuing into the twentieth century. This was expressed militarily by the superior force of the nineteenth-century Western technologies of metal steamships, rapid-firing guns, and telegraphic communications and economically as indigenous technologies were replaced by Western ones. The technological expansion of the West often even preceded its political and military expansion, as the rifle displaced the bow among Native American groups before these groups were subjugated by Western societies or extended to societies such as Japan, which retained their political independence while adopting Western technologies. (Technical transfers were not always one way. The adoption of corn, an originally American crop, by European settlers was accompanied by adoption of much of the Native American technology for growing, harvesting, and preparing it.)

Technological superiority was also central to the development of the ideology of Western superiority that accompanied imperialism, particularly in the nineteenth century. The technological superiority of European and European-offshoot societies such as the United States were seen as evidence for the fitness of these societies to rule others who were viewed as "primitive" or "stagnant." While Indian technology in the eighteenth century and the early nineteenth century had found many British admirers—even the Royal Navy commissioned Indian shipbuilders to build vessels—after India had been incorporated into the British

Empire and many Indian industries had been destroyed by British competition and discriminatory British policies, British observers usually described Indian technology as primitive.

The late nineteenth century saw some non-Western societies begin to compete and even innovate within the tradition of Western technology, a process that would expand and continue through the twentieth century and into the twenty-first century. The most notable cases are in eastern Asia, led by Japan, South Korea, and China.

Technology and Modernity

Postindustrial revolution society differs from all previous societies in human history in the pace of technological development. New technologies are introduced continuously, and no one who lives to adulthood lives in the same technological world he or she was born in or grew up in. Even different age cohorts living at the same time have diverging technological experiences; witness the endless American jokes about parents relying on their children to program their consumer electronics. The cultural impact of the society of continuous innovation can be seen in the twentieth-century rise of the genre of science fiction, which despite its name is frequently more concerned with technology than science.

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The age of the individual inventor as technological hero has been succeeded by that of corporate, state, or university research-and-development and collaborative endeavors, of which the archetype is the invention of the atomic bomb by the organized hierarchical military group known as the Manhattan Project. The ability to absorb or generate new technology is a key measure of the success of modern societies. Both liberal capitalist and most Marxist societies in the twentieth century treated fostering technological advance as a public duty, although fascist and conservative regimes were more ambivalent. Postcolonial societies have often engaged in prestige projects that have proven unproductive, such as Egypt's Aswan dam.

The dominance of technology in modern society has not gone uncriticized. Entertainment technologies, most notably television and video games, have been accused of debasing culture. Advanced technology, by separating people from nature and primary production, has been condemned for its alienating effects. On a deeper level, the alleged tendency in modern society to view all problems as technological in nature, to be solved by technological means, has been criticized by humanists, philosophers, and theologians.

Most contemporary hostility to technology, however, has been motivated by less rarified and philosophical concerns. The unprecedented devastation of the world wars of the twentieth century, culminating in the atomic bomb, has led to fear that technological destructiveness cannot be checked. The invention and testing of the even more destructive

hydrogen bomb in 1952 for the first time brought to consciousness the possibility of the destruction of the entire human race, indeed of all living things on the earth. The end of the Cold War led to diminished concern with the possibility of extermination, but the thought of advanced technology in the hands of terrorists provokes anxiety. Outside the world of purely destructive technology, the fear of the environmental destructiveness of a technological society has increased with the growing evidence for global warming and the shrinking of the ozone layer. The dependency of modern society on its advanced technology is also a source of fear, as people imagine themselves thrown back on technologically primitive strategies of survival in the wake of a global collapse, such as that envisioned in the Y2K scare of 2000.

Bibliography

- Adas, Michael. *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance*. Ithaca, NY: Cornell University Press, 1989.
- Burns, William E. *Science and Technology in Colonial America*. Westport, CT: Greenwood, 2005.
- Cardwell, Donald. *The Norton History of Technology*. New York and London: Norton, 1994.
- Crosby, Alfred W. *The Measure of Reality: Quantification and Western Society, 1250–1600*. Cambridge: Cambridge University Press, 1997.
- Fernandez-Armesto, Felipe. *Civilizations: Culture, Ambition, and the Transformation of Nature*. New York: Free Press, 2001.
- Landes, David S. *Revolution in Time: Clocks and the Making of the Modern World*. Rev. and enlarged ed. Cambridge, MA: Harvard University Press, 2000.
- Landes, David S. *The Unbound Prometheus: Technical Change and Industrial Development in Western Europe from 1750 to the Present*. 2nd ed. Cambridge: Cambridge University Press, 2003.
- Mokyr, Joel. *The Lever of Riches: Technological Creativity and Economic Progress*. New York: Oxford University Press, 1990.
- Needham, Joseph. *The Grand Titration: Science and Society in East and West*. London: Allen and Unwin, 1969.
- Pacey, Arnold. *Technology in World Civilization: A Thousand Year History*. Cambridge, MA: MIT Press, 1990.
- Qaisar, Ahsan Jan. *The Indian Response to European Culture and Technology (A.D. 1498–1707)*. Delhi: Oxford University Press, 1982.
- White, Lynn. *Medieval Technology and Social Change*. Oxford, UK: Clarendon, 1962.



Beginning about 12,000 years ago in various parts of the world, people began, in slow steps, to adopt a new (and less secure) method of feeding themselves. In the nineteenth and early twentieth centuries, historians and anthropologists considered the development of agriculture as “progress.” After analyzing their bones, we now realize that prehistoric hunter-gatherers had a healthier diet and probably a more satisfying, egalitarian social organization. Farming required cultural adaptation, sometimes including a new, more complex social organization. Dr. McGeough examines the beginnings of agriculture, which is in fact the beginnings of the world we know.

—Carolyn Neel

The Origins of Agriculture

Kevin M. McGeough

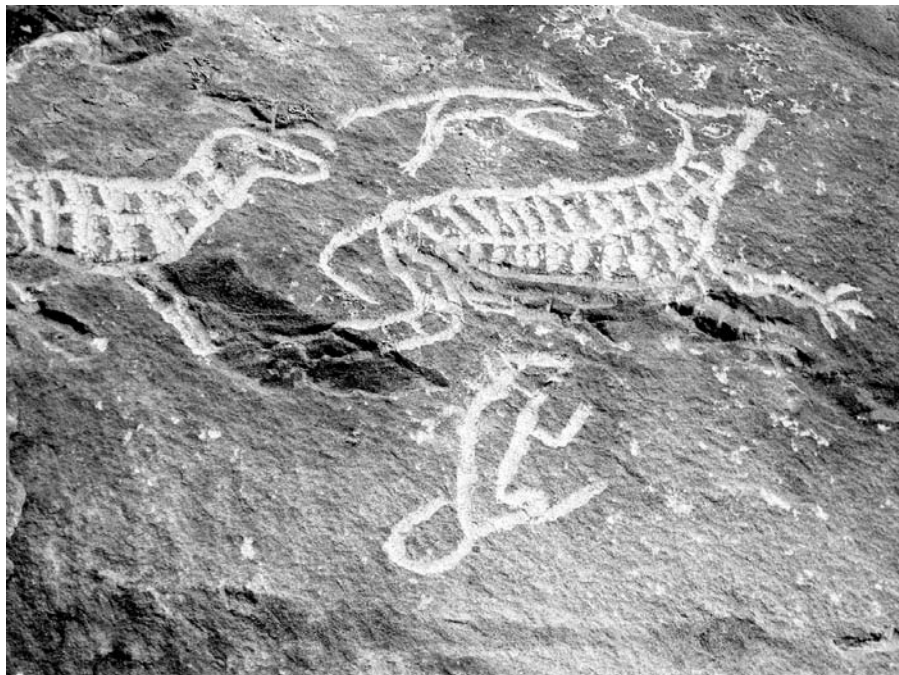
The emergence of agriculture is a scholarly problem that is more complex than may appear at first glance. Farming in the twenty-first century is a relatively successful means of reliably providing a variety of food types to a large population. This, however, was not always the case in the thousands of years over which agriculture developed around the world. There are in fact a number of reasons why switching to an agricultural regime would have been undesirable and problematic for those involved in the initial transition.

Archaeological evidence of the earliest agriculturalists has demonstrated that a switch from hunting and gathering to farming significantly decreases the diversity of food choice available to the community. Physical anthropologists (who study ancient human remains) have demonstrated that the decrease in choice of what to eat led to significant nutrition and health problems. Less diversity in food choice also would have impacted the taste of food in general and the social enjoyment that accompanies a good meal.

A common misconception is that agriculture is more secure than hunting and gathering. Over the long term this is certainly true (after agriculture is well established it can securely feed a larger population), but in the initial switch to farming a bad harvest (perhaps caused by drought, locusts, or poor management strategies) could put a community at risk of starvation. Stereotypes of hunter-gatherer lifestyles suggest that this is a dangerous and unstable economic strategy, but ethnographic studies show that this is far from the truth. The mobility of the hunter-gatherer lifestyle allows for rapid and dramatic transformations in food-acquisition strategies.

The work of gathering food is far less difficult in a hunter-gatherer regime than the work involved in intensive preindustrial agriculture. Economic historians consider drudgery to be a major constraint on the types of economic activities that people engage in. The idea is simple: the more difficult and/or boring the work, the less likely people will want to do it. From this perspective, it is difficult to understand what would encourage people to take up a difficult subsistence practice like farming.

Petroglyph of dogs running down two large steppe animals. Helankou Rock Engraving Preserve, Helan Mountains, China. (Alfred J. Andrea)



Despite these problems, once agriculture is established it brings with it a number of benefits. Eventually, assuming proper management techniques are used, farming is far more productive. More people can be supported by less land and resources by agriculture than through hunting and gathering. Agricultural produce can be stored more easily and safely, although it needs to be kept dry and free of pests (such as mice). Agriculture is seasonably predictable and allows for fairly secure long-term planning.

Agriculture seems to also be connected with a sense of ownership. Although we do not have written records for the earliest agriculturists, agriculture requires a sustained investment of labor and resources into a specific piece of land. Thus, concomitant with that must be some sense of territoriality over that cultivated land. Whether this manifests as community boundaries or private property, agriculture requires a greater proportion of the population to become sedentary. Sedentary settlements typically have much greater amounts of things than temporary sites, since people would not have had to carry their goods with them constantly.

Perhaps the problem with understanding the motivations for early agriculture is that the question is incorrect. And since the practice of agriculture has varied so significantly worldwide, it is next to impossible to meaningfully generalize about motivations. Rather than thinking of the switch from hunting and gathering to farming as a conscious choice, it may be better to think of it as a gradual outcome of the interaction between humans and their environment. Agriculture reflects a high degree of human manipulation of the environment. Whereas hunters and gatherers affect their environment by taking from it, agriculturalists actually manipulate their environment by altering the land,

planting crops, and managing herds. Thus, in many cases the development of agriculture should not be understood as a rapid shift but rather as a gradual process in which people took a more active role in influencing the reproductive success of their food sources.

Archaeologically, this process of an increasing manipulation of natural food sources is well documented throughout the world. The earliest evidence comes from the Levant (modern Israel, Syria, and Turkey), where cereal agriculture and animal domestication emerged around the same time as the warming trends of the Holocene epoch began (ca. 12,000 years ago). Prior to this in what archaeologists refer to as the Kebaran period (ca. 18,000–11,000 BCE), wild animals made up a significant proportion of the daily diet. However, some wild cereal crops were also consumed, as is evidenced indirectly through stone slabs, mortars, and other grinding equipment used to process cereals plants. Cereals (such as wheat) have an indigestible husk that needs to be removed before the plant can be consumed. This can be done through boiling (in which the cereal plants are made into a porridge-like substance) or by grinding (in which the plants are transformed into flour). Also present at Kebaran sites are tools for harvesting cereal crops such as stone sickles coated with a silica sheen (the residue from harvesting cereals) still apparent thousands of years later.

Over the course of the next archaeological period, known to modern scholars as the Natufian period (ca. 11,000–9300 CE), the Holocene warming began, and numerous changes to subsistence practices are identifiable. Throughout the course of the Natufian period, there was an increase in the proportion of material culture related to cereal production: more grinding tools are present, and there are more sickles and plaster-lined storage pits for stockpiling grains. Archaeologists have also been able to recover seeds that were carbonized in ancient hearths. Through the analysis of these seeds, it is clear that over the course of the Natufian period people gradually became more reliant on domesticated species of plants.

The main difference between wild and domesticated plants is whether or not the plant can successfully reproduce without human intervention. Wild cereals have a brittle central axis (called a rachis) that breaks easily, scattering seeds. The seeds can be scattered readily by blowing winds, by the movement of animals, or by any number of other natural processes. However, plants with a brittle rachis are difficult to harvest, so those individual plants with a stronger rachis were more successfully harvested. As these plants with a stronger rachis were harvested and the seeds were sown, humans began culturally selecting those traits that were preferable for farming. By the end of the Natufian period, this process, amplified by the natural hybridization of these plants with wild grasses, created domesticated species that were well suited to farming but could not readily reproduce through fully natural processes.

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Whereas the difference between wild and domesticated plants can be identified with relative ease archaeologically, it can be a bit more difficult to differentiate between wild and domesticated animals. Some scholars suggest that this dichotomy is often overemphasized in thinking about agricultural origins, and this is no doubt true. However, there are many archaeological instances where it is readily apparent that there was a difference in domesticated animals. As with plants, the key difference between wild and domesticated animals is the role that humans play in the reproductive activities of the animals (i.e., selective breeding). Until genetic manipulation became possible in the mid-twentieth century CE, domesticated animals were generally smaller than wild animals. Sometimes biological features were purposefully bred in animals, such as with domesticated sheep that tend to produce wool that is more amenable to textile production. Zooarchaeologists (archaeologists who specialize in the study of ancient animal bones) can sometimes identify these biological features directly in the remains of the animal bones. More often, though, evidence for animal domestication is indirect. Zooarchaeologists can identify patterns in the age and sex of the animal through remaining bones. By quantifying this data, they can determine whether the group of animals had a natural mortality rate (that is to say, they lived as a wild herd) or if the mortality rate reflects herding practices (since humans make selections on which animals to kill based on practices that will ensure the flock's or herd's long-term growth). Likewise, large groups of animal bones within a human settlement suggest that the animals were domesticated (since it would be quite unusual for a herd of wild horses to live within the confines of a city). Archaeological remains of tools related to animal use further indicate the domestication of animals; yokes and saddles would not be of much use on wild animals.

The transition from wild to domesticated reflects a process of what economic historians refer to as intensification. Agricultural intensification occurs when a society devotes a high proportion of labor and resources into agricultural production and, concomitantly, relies on agricultural production for a large proportion of its dietary needs. Intensification does not always occur when a society develops agriculture, especially when farming has been introduced from elsewhere. However, given the high degree of labor and land needed for agriculture and its potentially high yields, intensification is typical in locations where agriculture develops locally.

Arguably the most readily identifiable evidence of agricultural intensification is the development of complex irrigation systems. Scholars used to believe that only highly centralized governments were able to manage large-scale irrigation schemes. Archaeological investigations have shown that this is not the case; often intensive irrigation schemes actually predate the emergence of centralized states (such as in

Scholars used to believe that only highly centralized governments were able to manage large-scale irrigation schemes. Archaeological investigations have shown that this is not the case; often intensive irrigation schemes actually predate the emergence of centralized states (such as in Egypt, Mesopotamia, India, and China).

Egypt, Mesopotamia, India, and China). However, creating and maintaining irrigation systems requires much labor, planning, and maintenance. Water is absolutely fundamental to agriculture, and local communities must devote significant resources to ensuring that these needs are met. This can involve dramatic changes to the landscape. Irrigation in ancient Mesopotamia involved the construction of numerous small canals to bring the water of the Euphrates to the southern floodplains. These same canals also brought with them tremendous amounts of salt, disastrous to long-term field health, and so the maintenance of the canals and the management of desalinization of fields were essential for avoiding the collapse of the agricultural economy.

Intensive agriculture seems to be related to the growth of cities, although the exact relationship is heavily debated by scholars and seems to vary from location to location. In the Near East, for example, agriculture spreads along with the rise of cities in what V. Gordon Childe referred to as “the Neolithic Revolution.” Agriculture supports urban environments since it allows vastly larger populations to live in much closer proximity. However, identifying which comes first, cities or farms, leads scholars into a type of chicken-or-egg argument that has yet to be resolved. Regardless of which came first, agricultural production is fundamental to urban life, even if it is geographically divorced from it.

Key to agricultural production is that farmers produce a surplus, that is to say, they produce more food than they themselves can consume. This then frees up other members of a society to engage in other occupations besides food production. The emergence of occupations not related to food production is part of a process that archaeologists and anthropologists refer to as the development of complex societies. By referring to societies as being complex, anthropologists do not mean to imply a value judgment. Rather, complexity refers to how intertwined the socioeconomic practices of individual members of a society are. In a less complex society, individual members (or more likely households) produce most of what they themselves consume. In more complex societies, individuals perform one particular type of specialized labor and exchange that labor (or the fruits of that labor) for other goods and services. From this perspective, farming can be understood as facilitating the variety of specialized work that is performed in a society that has access to agricultural production.

Understanding the spread of agriculture is less problematic than understanding the motivations for initiating agricultural production. Once agriculture is well established in a region, it can be highly appealing for nearby locations or can facilitate the colonization of marginal areas. In Mesoamerica, for example, maize cultivation seems to have spread quite rapidly. Although the spread of farming in Mesoamerica is a heavily debated subject, most will agree that by about 4000 BCE maize domestication had occurred in the Oaxaca Valley of Mexico and that by 2000 BCE it had spread throughout Mesoamerica. Other domesticated crops were not initially as successful in this region (although the evidence may be somewhat obscured by the nature of archaeological preservation in the rain forests of Mexico). Maize, however, grew so well and had such a high return on its labor investment that it quickly replaced other forms

of subsistence practices as it was introduced to various locations. As maize domestication became fundamental to Mesoamerican society, the growth of other crops that required more intensive labor eventually followed.

Scholars used to believe that agriculture emerged in a few select locations and then spread throughout the world. Over the past 50 years this view has been challenged, and it has been shown that the development of agriculture varied considerably worldwide. However, there are numerous instances where the spread of farming is indicative of cross-cultural contacts. For example, wheat production in northern China seems to have spread from the Near East along routes that later became known as the Silk Roads. Despite these instances, given the varieties of world ecosystems, the emergence of agriculture was a complex and multifaceted process that defies easy generalizations.

Bibliography

- Adas, Michael, ed. *Agricultural and Pastoral Societies in Ancient and Classical History*. Philadelphia: Temple University Press, 2001.
- Bellwood, Peter. *First Farmers: The Origins of Agricultural Societies*. New York: Blackwell, 2004.
- Harris, David R., and Gordon C. Hillman. *Foraging and Farming: The Evolution of Plant Exploitation: Symposium on Recent Advances in the Understanding of Plant Domestication and Early Agriculture: World Archaeological Congress: Papers*. Boston: Unwin Hyman, 1989.
- Heiser, Charles B. *Seed to Civilization: The Story of Food*. Cambridge, MA: Harvard University Press, 1990.
- Larsen, Clark Spenser. "Biological Changes in Human Populations with Agriculture." *Annual Review of Anthropology* 25 (1995): 185–213.
- Nesbitt, Mark. "Agriculture." In *The Oxford Companion to Archaeology*, edited by B. Fagan. Oxford: Oxford University Press, 1996.
- Reed, Charles A., ed. *Origins of Agriculture*. The Hague: Morton Publishers, 1977.
- Smith, Bruce D. *The Emergence of Agriculture*. New York: W. H. Freeman, 1999.



Urbanization appeared rather late in human history but has been transformative. The shift of populations into cities set into motion most of the trends we consider hallmarks of modernity, such as nationalism, imperialism, industrialization, globalization and, in fact, large-scale political structures, such as totalitarianism or democracy.

—Carolyn Neel

Urbanization

Howard Spodek

About 5,300 years ago, people in Mesopotamia and in the Nile Valley created the first human settlements that were large enough in area and population and complex enough in social and economic patterns to be considered cities. These few small urban settlements ushered in a new era in world history. By 2006, United Nations (UN) demographers announced that half of the world's population were living in cities.

Early Urbanization: Cradles of Religious/Political Civilizations

The transformation to an urban world was most clearly registered in the physical construction of cities, with their impressive buildings and crowds of inhabitants, but other equally significant, though less tangible, developments also contributed to this revolution. Cities were nodes in the regional networks of exchange of goods and culture, and they encouraged the production of sophisticated arts, the specialization of labor, and the elaboration of a social hierarchy.

Most significantly, cities signaled the emergence of a state organization for guiding and administering the city and its surrounding area. The new state, usually headquartered in the new city, provided leadership, organization, and official control of armed power. The state governed the people of the city, sometimes with their consent but often without it. The state helped to create and enforce the conditions of inequality that emerged among the people of the new cities. In all these characteristics, the ancient city reminds us of our own.

Unlike modern cities, however, almost all early cities were relatively small. Until the Industrial Revolution in the late nineteenth century, a few thousand people concentrated in 100 acres might have been considered a city, for cities held only a tiny percentage of the total population of any region. The largest city contained perhaps 100,000 people in 8 square miles.

Most experts agree that innovative primary urbanization, not borrowed or imposed from outside, appeared independently in seven different places: five river valleys in the Eastern Hemisphere—Mesopotamia, the Nile, the Indus, the Huang He (Yellow River), and the Niger—and, in the Western Hemisphere, in Mexico and in the Andes mountains. The

birth of primary urbanization took place in these seven locations at very different times, with Mesopotamia the oldest at about 3300 BCE, the Nile about the same time, and the Niger, the most recent, at only about 400 CE.

As the cities grew the shrines grew with them, providing a more profound meaning to the lives of their inhabitants by linking their mundane existence to transcendent and powerful supernatural forces.

Many of these early cities were dedicated to gods and were built on the foundations of existing shrine centers. As the cities grew the shrines grew with them, providing a more profound meaning to the lives of their inhabitants by linking their mundane existence to transcendent and powerful supernatural forces.

Even today we can trace on the surface of the earth the 5,300-year-old designs of some of the first cities and the irrigation systems that supported them. Remnants of walls and fragments of monuments of these first cities still rise at their sites. From under the surface, archaeologists salvage artifacts: bricks; pottery; tools of wood, bone, stone, and metal; jewelry; musical instruments; and skeletons of citizens and slaves. The technology of the early cities also included new means of transportation, and we find the remains of wheeled vehicles and of sailboats. The earliest city dwellers advanced their skills in metallurgy, and products of their craftsmanship in copper, tin, and their alloys abound in the archaeological excavations.

But cities are more than bricks and mortar, metal and artifacts. They require institutions for their larger scale of organization and administration. As societies and economies became more complex, new class hierarchies emerged. Professional administrators, skilled artisans, long-distance traders, local merchants, and priests and kings enriched the diversity and sophistication of the growing cities. External relations with other cities required skilled negotiations, and a diplomatic corps emerged. Armies mobilized for defense and attack. In short, with the growth of the city the early state was also born, with its specialized organization, centralized rule, and powerful armies. To keep track of business transactions and administrative orders, the proclamations of rulers and the rituals of priests, the legends of gods and the histories of the city, new methods of record keeping were developed. At first these were tokens, pictures, seals, personalized markings, and, in the Andes, *quipu*, knots made in special lengths of string. By about 3300 BCE in Sumer, today's southern Iraq, the world's first system of writing evolved. This was one of the most revolutionary inventions in human history. The prestigious occupation of scribe was born, and schoolteachers soon followed.

Cities were the crucible in which civilizations were created and sculpted. The earliest cities held central importance in the religious, political, economic, and social life of their societies. So did later larger and more globally significant cities all throughout the world. For example, Jerusalem and Mecca, neither of them particularly large or geographically central in terms of trade and economics, had and have world significance for millions of people because of their religious centrality. The cultural creativity of Athens in the arts, literature, theater, and government and social organization, at its peak during about 600–400 BCE,

remains influential even today. Rome was a center of empire, beginning about 350 BCE, and later of Christianity. As the Roman empire grew ever larger, Emperor Constantine dedicated Constantinople in 330 to serve as the administrative capital of the eastern regions of the empire. The new eastern capital also served as the headquarters of one of the regional divisions of the Eastern Orthodox Christian Church, and thanks to its location at the point of contact between Europe and Asia, it was also an important port on the trans-Asian silk routes. Baghdad, similarly, was purpose-built in 762 CE as the imperial capital of the Abbasid dynasty and of its caliph, the secular and religious leader of the global Islamic community. In China, Xian, under various names, frequently served also as a capital of the Chinese empire from as early as the Zhou dynasty, about 1100 BCE. Trade along the silk routes also enriched the city, which was one of the easternmost points along that trade network. In the Western Hemisphere, Teotihuacan, about 25 miles northeast of today's Mexico City, also served as a center of empire and of religious worship for central Mexico and Mesoamerica, reaching its zenith, with about 200,000 inhabitants, during about 150–450 CE. Its influence continued under the Maya and other Central American nations. Under various names, Delhi was rebuilt repeatedly from the sixth century BCE, often serving as a capital city for the rulers of northern India. The Mughal ruler Shah Jahan rebuilt it in the seventeenth century as his capital and named it for himself, Shahjahanabad, in large part because of its historical aura. In the early twentieth century, the British rulers of India, wishing to retain the aura without living too close to Indians, relocated the capital of their own imperial enterprise in India to New Delhi, a new city built adjacent to but separate from old Delhi.

These capital cities provided urban designs and architecture that served as models in form and function to the smaller, less prominent cities in their orbit. Their street patterns, political capitols, religious shrines, business offices, and port facilities became templates for others to copy. So, for example, the walls and towers of Xian appeared throughout the cities of China. The aqueducts, roads, and theaters of Rome were replicated throughout the empire. And the raised ritual platforms of Teotihuacan were models adopted throughout Mesoamerica. These distinctive patterns did not always originate in the capital city, but once the capital chose to adopt them, they were copied by others within their cultural and political sphere. (Compare the state capitols throughout the United States, which copy the national Capitol building in Washington, D.C.) Cities everywhere began to tear down their defensive walls after the invention and deployment of cannon rendered them obsolete beginning in the fourteenth century.

Industrious Cities of Trade

Although trade had always been an important component of urban life, traders were usually subordinated to the greater power of political and religious leaders. Beginning about the twelfth century in western Europe, however, traders began to establish their own power bases that

Beginning about the twelfth century in western Europe, however, traders began to establish their own power bases that could rival and even surpass those of religious and political leaders.

could rival and even surpass those of religious and political leaders. In a region of the world beset by warfare among competitive states, the financial resources of the businessmen gave them leverage against rulers seeking support for their armies. Merchant guilds and associations, such as the Hanseatic League of traders in the ports of northern Europe, consolidated that leverage.

In other port cities, like Venice and Genoa in Italy and Bruges and, later, Antwerp in Belgium, where long-distance trade combined with extensive hand manufacturing, merchants dominated. In a city like London, a business ethic devoted to profit suffused public life, attracting men on the make, immigrants seeking their fortune, and those simply trying to survive when agricultural land and work were not adequate to support increasing populations.

Sometimes, as in the enclosure movement in England beginning in the thirteenth century and gaining momentum from the fifteenth century, landed gentry manipulated rural property laws to drive poorer farmers off the land and into the cities. Their double motive was to secure more land for the already landed and to drive potential workers into the labor-hungry growing cities.

Within the cities, open conflict between owners and workers, which Marxists would later label class struggle, broke out. In the fourteenth century, such class antagonisms multiplied. Impoverished workers, suffering also from plagues, wars, and bad harvests, confronted wealthy traders and industrialists. Workers were forbidden to strike and in some towns even to assemble. Nevertheless, class unrest continued to grow. In Florence, Italy, where hundreds of workshops provided work for almost one-third of the city's 100,000 residents, in 1345, 10 wool-carders were hanged for organizing workers. Nevertheless, the productivity and profitability of the trading cities were so obvious that a ruler like Peter the Great in Russia (r. 1682–1725) built a new city, St. Petersburg, to serve as an international warm-water port (open year-round) for his country. As a dictator, Peter simply suppressed revolt when he felt it necessary.

By the eighteenth century, London became the most outstanding example in western Europe of a trading port city, capital of a nation and an empire, center for hand manufacture, and home to an enormous population concentration: 200,000 in 1600, 400,000 in 1650, 575,000 by 1700, 675,000 in 1750, and 900,000 in 1800. In eastern Europe until about 1750, Constantinople was bigger, and perhaps more important, as capital of the Ottoman empire, but London grew primarily because of its economic successes. London's growth promoted the creation of a national market, including the necessary transportation and communication facilities; it evoked increasing agricultural productivity to feed the urban population; it developed new sources of raw materials, especially coal, to provide for them; it encouraged the development of new commercial instruments; and its concentration of population had the effect of increasing productivity and purchasing power. As a rule, pre-

industrial urban giants have high rates of death and of immigration, with the influx of immigrants partially masking the high death rates. London was no exception, and this demographic combination kept England's overall rate of population growth relatively low.

Cities and the Industrial Revolution

Modern cities and the Industrial Revolution created each other. The Industrial Revolution, beginning about 1750 in England, found its home in cities. Once the new workshops and factories, reliant upon steam power and, later, on electricity, were situated in the cities, an entirely new urban form was born. Previously only a minority of people, about 5–10 percent of the population, lived in cities. Urbanites were the elites of society: clergy, professionals, businessmen, and artists. The bulk of the population consisted of farmers. They lived in the countryside. (In some areas, like China and England, powerful elites also lived in the countryside on their estates; elsewhere, as in Italy and Belgium, even landed aristocrats tended to build their homes in cities.) The growth of cities to contain, by 2006, more than half of the world's population is a direct result of the Industrial Revolution.

This modern Industrial Revolution began with simple new machinery and minor changes in the organization of the workplace. It began with mechanization in textiles and continued with the invention of the steam engine and the advances that it made possible in productivity, transportation, and communication. These initial innovations in the late eighteenth and early nineteenth centuries were only the first steps. Between 1860 and the outbreak of World War I in 1914 new technological advances in steel, chemicals, and electricity introduced the so-called second industrial revolution. Ultimately, this ongoing process of industrial revolution multiplied the profits of the business classes and increased their power in government and public life. It broadened and deepened in its scope until it affected humanity globally, transforming the locations of our workplaces and homes, the size and composition of our families and the quality and quantity of the time we spend with them, the educational systems we create, the wars we fight, and the relationships among nations. As a global process, the Industrial Revolution restructured the procurement of raw materials in the fields, forests, and mines of the world, the location of manufacture, and the range of international marketplaces in which new products might be sold. The Industrial Revolution created an entirely new form of urbanization.

The steam engine, which could be constructed anywhere, made the location of industries more flexible. Factories sprang up near port facilities; at inland transportation hubs; in the heart of raw materials resource centers, such as the Midlands of England, Silesia in central Europe, Hubei Province in China, and Bihar in India; and near large concentrations of consumers, such as the great cities of Paris, London, Buenos Aires, and São Paulo. New industrial metropolises dotted the map.

Immigrants streamed into the new cities for jobs, as the balance between urban and rural populations tilted continuously toward the city.

Farmers, pushed off the land by overcrowding and by manipulation of land ownership and tenure laws, became factory workers, and so did the children of artisans. All found the new industrial city shocking. As they exchanged the lifestyles of the farm and the rhythms of nature for regimes of routinization, standardization, and regulation by the clock,

As they exchanged the lifestyles of the farm and the rhythms of nature for regimes of routinization, standardization, and regulation by the clock, they discovered that the skills they had previously mastered were of little use.

they discovered that the skills they had previously mastered were of little use. At the same time, new opportunities beckoned: cultural, educational, recreational, social, and, most important, economic.

In the early years of the Industrial Revolution, conditions of labor and of public health were abysmal. In the middle of the nineteenth century revolution seemed possible, as the urban-industrial working classes felt themselves crushed by the greed

and self-satisfaction of rising industrialists. Socialist and communist movements formed to recruit these workers. Karl Marx and Friedrich Engels, for example, wrote their classic *Communist Manifesto*, calling for a workers revolution—"workers of the world unite; you have nothing to lose but your chains"—in 1848. They went beyond the usual accusations of owners and managers exploiting workers through low pay, long hours, and awful working conditions. They condemned the filth and squalor and the high rates of mortality and morbidity of workers' neighborhoods. Surprisingly, many of their condemnations of the urban-industrial city pointed out the suffering of owners as well as workers: the separation of the city from the countryside, which left everyone alienated from nature (and degraded nature at the same time); the alienation of many owners and managers as well as workers from their work, as they became insignificant cogs in great systems of production; the rapidity of change, which left people feeling adrift; the evolution of a family structure, which ended the allegedly greater egalitarianism of the rural family; and the endless competition, which drove workers as well as owners to serve the unceasing economic demands of the capitalist system. All of these were products of capitalism and symptoms of the cities that the Industrial Revolution created.

In their call for revolution and because of their belief that it was inevitable, however, Marx and Engels failed to account for three developments in most of the urbanized industrialized world. First, politicians in search of votes in newly democratizing countries proved responsive to industrial workers. They legislated minimum wages, maximum hours, safer working conditions, and greater political representation for urbanites, in contrast to rural dwellers. These led to improvements in urban cleanliness, public health, and provision of urban services. Second, workers formed labor unions that won important benefits. Finally, workers created social networks that frequently brought them an important sense of belonging, of social solidarity, and of joy despite their difficult living conditions. The revolution against the capitalist industrial system did not occur, or at least it did not occur in the most industrialized and urbanized countries. On the contrary, revolutions occurred in Russia

(1917) and China (1949), countries low on the scale of urbanization and industrialization.

Industrialization fueled city growth. By the turn of the twentieth century, England and Wales, at 62 percent urban, were by far the most industrialized and the most urbanized regions on earth. The next closest were Australia, at 42 percent, and various parts of Germany, at about 30 percent. In general, the largest cities were growing fastest. London, the world's largest city in 1890, had 4.2 million people; New York, the second largest, had 2.7 million. The least industrialized countries were the least urbanized, below 10 percent. Conditions of urban life were improving, including increasing levels of longevity and personal comfort. New inventions such as electric lights, the telephone, and the phonograph improved the quality of life. On the other side of the ledger, although death rates in the city had been declining steadily, urban death rates remained higher than rural ones in most countries. In one of the worst examples, during the decade 1880–1890 when the expected length of life at birth for all of England and Wales was 47 years, in Manchester, one of the greatest centers of the early Industrial Revolution, it was 29 years.

The new industrial cities transformed family relations. Factory work drove a wedge between the home and the workplace. Wives who had been accustomed to working alongside their husbands on the farm or in the shop now found that the major source of employment was away from home. Most middle-class women spent a great deal of time caring for their families and homes, and the new urban domesticity increased their level of security and comfort. Life expectancy, a basic index of well-being, rose rapidly for women in Britain, slightly more than for men. It increased from 44 years in 1890 to 52 years in 1910 and to 60 years in 1920. Living standards began to rise and generally continued to rise into the twentieth century. New systems of ventilation, heating, lighting, indoor plumbing, and running hot and cold water contributed to making life easier for those who could afford them, although these facilities often did not reach working-class neighborhoods.

Urban conditions made children less of an economic benefit, as they had been on family farms, and more of an economic burden. Family planning increased. Childbearing became less frequent, freer from infection thanks to antisepsis, less painful with the use of anesthesia, and safer with the professionalization of medicine. The presence of children in the home also decreased as free compulsory education, beginning as early as the 1830s and 1840s, began to take them to school for several hours each day.

With more time freed from traditional domestic responsibilities, some women began to enter into the array of white-collar jobs that were opening. The most respectable jobs provided satisfying work that also fit the culturally approved role of women as caregivers and nurturers: teaching in the new school systems and nursing in the new hospitals. Other women worked as sales personnel in the new department

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stores (where they also shopped) and as secretaries and clerks in the new offices, although in the nineteenth century these were primarily male occupations. A very few went into the professions: medicine, law, journalism, and business.

The 15–20 percent of adult females who had to work as principal breadwinners for themselves and their families confronted more basic problems of earning a living. The value placed on domesticity as the proper role for females and the concomitant view that men should earn a “family wage” adequate to support their wives and children, but that women needed only supplementary income (“pin money”) made the plight of the working woman doubly difficult. These women, often immigrants, desperately poor, and without male support, were no longer seen, as the first industrial women workers had been, as proud and independent but instead as unfortunate objects of sympathy and pity. They found jobs where they could. Domestic service was most common, employing two to three times as many women as industry even in industrialized countries. On the margins of society, other women earned a living through prostitution. In the second half of the nineteenth century, censuses in the largest west European cities, London and Paris, routinely reported tens of thousands of prostitutes walking the streets, serving in brothels, or, occasionally, employed in more comfortable settings by more prosperous clients.

Cities of Empire and of Finance Capital

As Europeans began to master new technologies, first of business and then of industry, they extended their search for markets—buying raw materials, selling finished products—around the globe. As early as the fifteenth and sixteenth centuries, the Europeans established the pattern of planting their new colonial cities on seacoasts so that they could be supplied easily by ship from the mother country. The newer colonial cities of the age of the Industrial Revolution continued this pattern, for example, from west to east: Lima, Buenos Aires, Rio de Janeiro, Dakar, Lagos, Cape Town, Karachi, Bombay, Colombo, Madras, Calcutta, Kuala Lumpur, Singapore, Batavia (Jakarta), Hong Kong, and Manila. Many were built as dual cities. That is, they were built contiguous to already-existing cities, for example, Casablanca, Algiers, Mombasa, and Shanghai’s foreign concessions. Later, in the nineteenth and twentieth centuries, as Europeans penetrated ever deeper into their colonial realms, they built cities in the interior as well: New Delhi, Kandy, Harare (Salisbury), Lusaka, Nairobi, and Kampala. Several of these were also dual cities.

The Spanish had built their cities in the Americas for permanent residence; the new cities in Africa and Asia were normally built for temporary residence by colonial officials and those working with them. They did not buy land and real estate locally. The residences were permanent, but the residents were transients. At the end of their imperial service, these residents would normally return to their home countries.

The colonial city was designed to serve the economic and administrative needs of the colonial power more than those of the indigenous

peoples. The technology was usually European, and the town planning, although modified for the climate and political conditions of the colonial situation, was usually derived from European models. Railway networks connected port cities to the sources of raw materials and provided means for transporting colonial soldiers to the interior as needed. They did not necessarily connect the indigenous cities to one another. The development of industry, the key to urban growth in western Europe, was sharply limited in the colonial cities. The modern industries that were built in these new cities were mostly, but not entirely, owned and controlled by Europeans. While apologists for the imperial system gave it credit for introducing industrialization where it had previously been unknown, more critical commentators called this a system of dependency in which the colonial powers used their political and military authority to rig the economy—imports, exports, taxes, commercial agriculture, banking, and limited industrialization—for their own benefit, leaving the colonized people dependent upon them.

The dual-city pattern was the norm. The European enclaves were quite distinct from the indigenous city: more spacious (lower density) in overall design, with wide tree-lined roads; grand accommodations for the European administrators and officials who lived there; architecture built to European design, topped off with ornamental touches to acknowledge particular local styles; spacious and impressive offices equipped with modern machinery; and shops with glass show windows and consumer products of fine quality, often imported from Europe. In the larger cities, higher up the administrative ladder and especially in colonial capital cities, the public buildings were often built to monumental scale. Churches, too, dotted the landscape. Great attention was devoted to the cleanliness of the European neighborhoods. The Europeans feared local diseases—and local culture—and did their best to keep them at a distance.

Residence in these enclaves was often restricted to Europeans and people who worked with them. Most local people lived in the indigenous city, which was built to very different specifications, often reflecting quite different resources, social organization, institutional structures, and values. These indigenous cities were comparatively crowded. They were often built within long-standing protective walls, which unfortunately reduced air flow, and had narrow, twisting streets. Neighborhoods were based on local kinship patterns, and there was comparatively little public greenery, although larger homes, which turned blank walls to the street, often had lovely gardens in interior courtyards. Shop fronts were opened fully in the daytime but were completely shuttered at night. Artisans frequently practiced their crafts within their homes or on the street directly in front of them. Streets were crowded with people throughout the day and well into the night, especially after the arrival of electricity and street lighting, and many events that might have been

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considered private in the European enclave, such as marriages and funerals, were celebrated publicly, out of doors, in the indigenous sections of town. Public streets were not usually as clean as in the enclaves, and animals often shared the narrow streets with humans, cleaning the streets by eating refuse and soiling the streets by producing refuse. Religious institutions (mosques, temples) were often the most imposing structures in the indigenous city, and small neighborhood religious shrines dotted the urban landscape. Since private resources were often limited, public institutions, such as community baths and bakeries, were often provided throughout the city. In these regions, some 80–90 percent of the population continued to live in rural areas.

The colonial cities, despite their residential segregation, offered—and required—interaction between the colonial rulers and the local colonized people in offices, shops, industries, and schools, although not so much in recreation. The results of this interaction were unpredictable. Not only the social science literature but also biography, autobiography, fiction, drama, and films are filled with the stories of indigenous people and colonial rulers who were transformed in one way or another through their interactions with the diverse residents and the institutions of the European colonial cities, often in quite complex and ambivalent ways.

City Life and Culture

Philosophical and sociological speculations on the nature of the city flourished. In Germany, Max Weber (1864–1920) analyzed the modern industrial city as a new creation. He contrasted, negatively, its free-wheeling life and amorphous institutions against the close-knit guilds and political and religious associations of earlier self-governing European cities, especially medieval cities. Weber concluded that the sprawling industrial city—open to any immigrant who wished to come and embedded within a nation-state that controlled its life and politics—was quite different from the self-contained city of earlier times. Europe, at least, was living in a new era.

Many observers agreed, apprehensively. To them the openness of the new industrial city and the lack of institutional ties among its citizens seemed to be leading to breakdowns of both the social fabric and the individual personality. The division of labor was turning the individual into a specialist concerned only with narrow interests; the sense of personal or community wholeness was lost. And the sheer multitude of people and experiences in the city was also forcing the individual to retreat even further into a small, private niche. The urban dweller, they felt, was evolving into a person swift of intellect to achieve his own needs but lacking concern for and integration with the larger community. On the other hand, sociologist Emile Durkheim believed that the need to find common policies for the city would bring its residents together in what he called “organic solidarity.”

Some observers claimed to see the negative effects of urban individualism as part of a historical process that would ultimately lead to

disaster. Oswald Spengler (1880–1936), a German philosopher of history, declared that the enormous “worldcities” of his day were inevitably destroying the spirit of the folk peoples who had built them. Such attacks on urban life perpetuated the centuries-old cultural struggle between the cosmopolitan city of businessmen and the (perhaps imagined) homogeneous countryside of the common folk. This view of tough and rugged rural people confronting effete and weak urbanites had found expression in the Arab world five centuries earlier in the *Muqaddimah* of Ibn Khaldun of Tunis (1332–1406).

In the United States, with millions of immigrants streaming into its cities in search of industrial jobs, urban diversity was accepted, even valued, and certainly studied. Scholars at the University of Chicago examined their own city, the world’s fastest-growing industrial metropolis of the day, studying neighborhoods as well as the metropolis as a whole. The Chicago

School of Urban Ecology cited the importance of the “central business district,” the downtown area, but also pointed out that most urbanites did not live their lives downtown, as so many previous scholars had implied, but rather in neighborhoods, each of which had its own characteristics. Within these local domains, often characterized by high levels of homogeneity in class, religious affiliation, racial identity, and family size, people’s lives were not so disconnected, isolated, or alienated.

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A Single Global System of Cities

Following World War II, the Cold War had divided the world into the First World of capitalist democracy, the Second World of Communist Party dominance, and the Third World of mostly impoverished colonies. Then, with the fall of the Soviet Union (1989–1991), the entire tripartite division gave way to a more thoroughly integrated global system of cities.

The geographical distribution of cities shifted in an unexpected way. Economic growth and urbanization no longer seemed to be naturally related to one another. Previously cities had mostly arisen in wealthier regions. Their growth seemed to be a product of the pull of urban economic growth and job opportunities. In the late twentieth century, however, cities became characteristic of the poorer regions of the world. They seemed to grow not as producers of new wealth, but rather as the refuge of migrants fleeing an overpopulated countryside with its scarcity of land and jobs. In 1900, cities in the economically developed world held about 163 million people; those in the underdeveloped world held about 97 million people. By 2000, the developed world held 900 million urbanites, the underdeveloped world 2.15 million.

The economic functions of cities also changed dramatically. The large-scale industrial manufacture of commodities, such as steel in Pittsburgh, automobiles in Detroit, and textiles in Mumbai went into decline and even collapse. Service industries became the engines of new urban

growth: the information technology of California's Silicon Valley and India's Bangalore; the film industries of Hollywood and Bollywood; the theme hotels of Las Vegas and the more overtly risqué attractions of Bangkok and Manila; the amusement parks of the Disney empire in the United States, Europe, Tokyo, and Hong Kong; and the tourism of such holiday destinations as Cancun, Rio de Janeiro, Monaco, Cape Town, and Sydney.

So extraordinary were the size, technological transformation, and global integration of twentieth-century cities that many observers viewed this combination as a fourth turning point in world history, equivalent in its impact to each of the three earlier settlement revolutions: the move from nomadic existence to settled village life, the establishment of the first full-fledged cities, and the creation of industrial cities.

To what degree did the global system of cities encourage similarities in the internal systems in cities everywhere? The new technology of the Web and the new political economy of more open borders produced globalization, the linking of cities and regions into global networks for the exchange of information, capital, commodities, and labor. This did not mean that cities were becoming more equal. Some urban

The new technology of the Web and the new political economy of more open borders produced globalization, the linking of cities and regions into global networks for the exchange of information, capital, commodities, and labor.

centers, such as New York, London, and Tokyo, remained dominant and even increased their dominance. At the other extreme, some regions were hardly touched by globalization. Only 13 million (1.7 percent) of sub-Saharan Africa's 765 million inhabitants used the Internet in 2005. By contrast, in the United States, Japan, South Korea, Canada, Australia, and the Netherlands, about 2 of every 3 residents used an Internet connection.

A group of urban scholars, sometimes called the Los Angeles School, claimed that Los Angeles was becoming the model of the emerging global city. They cited, first, the sheer growth of the metropolis. By the end of the twentieth century the Los Angeles metropolitan region held a population of 12 million, spanned a diameter of 120 miles, included 5 counties and 132 incorporated cities, a vast hinterland of individual cities, each with its own personality; it produced a gross annual economic output of nearly \$250 billion. Then they noted the characteristics of Los Angeles that seemed to be spreading universally: the lack of a single geographical center in the metropolis; vast social divisions and inequities among its ethnically diverse residents; the absence of a dominant central business district, of a dominant social and economic group, and of a normative cultural style. The urban agglomeration expanded on the basis of a fast-growing economy with a strong emphasis on consumption. Many sectors of the economy were in "sunrise" industries of growth: the film industry and the fashion industry that surrounded it; high-tech industrialization, much of it based on production for warfare (airplanes, missiles, and electronics); international containerized shipping in this leading port city of America's west coast, its key Pacific Rim harbor; high levels of immigration, both high- and low-skilled, from sev-

eral continents; challenging ecological problems arising from its semi-desert location and its situation in a kind of topographical bowl as well as its reliance on millions of privately owned cars running on endless miles of freeways as the principal means of transportation.

With the Web and email providing inexpensive instantaneous communication everywhere in the world, manufacturers relocated many of their production facilities to poorer areas where wages were lower. The cities of developed regions were shifting out of manufacturing, the segment of the economy that had created their importance, into services.

China was the great exception. It showed continuous growth in urban manufacturing. China instituted four “special economic zones” to stimulate development. The largest, the city and region of Shenzhen, next door to Hong Kong, grew from virtually no population in 1980 to 12 million in 2005. Manufacturing, trade, and services flourished. Directly across the Huangpu River from Shanghai, the Chinese government designated Pudong a “national project” in 1991, also with the status of a special economic zone. By the early years of the twenty-first century, Pudong held some 10,000 financial, commercial, and trade institutions from over 60 countries in over 100 high-rises, among them some of the world’s tallest skyscrapers. China’s urban population rose from 16 percent in 1960 to 19.6 percent in 1980 and then jumped sharply to 35.8 percent in 2000 and 40.5 percent in 2005.

Communist Vietnam adopted similar policies of urban development through state-aided capitalist enterprise. Ho Chi Minh City in the south and Hanoi in the north, cities which had been cut off from the global economy for decades, were now joining it and adopting urban bourgeois consumer styles. (Most national communist parties did not, however, allow political democracy, at least not yet.) The Soviet Union also remained committed to centralized state planning, with an emphasis on manufacture, under a single-party state until 1989–1991, when the country dissolved as a political entity. Russia’s urban population reached 73 percent in 1990 and stabilized at that point. Ethnic diversity in the major cities, especially in Moscow, increased. Immigrants from regions of the former Soviet Union, as well as Turks, Arabs, Chinese, and Vietnamese arrived in search of work. Ethnic competition sometimes erupted into violence.

Russian cities, previously suffering in austerity under communism, began to see new shops open and private businesses flourish, quickly giving the cities more life and color. Advertising proliferated. Business services, a sector of the economy virtually nonexistent under communist rule, expanded to employ almost 10 percent of Moscow’s workforce by 2000. Many of the members of this new class were young, just beginning to master the language, computer, and business skills of their new tasks. Often they had served as Communist Party bureaucrats, had gained experience in administration, and had cultivated the connections to buy the businesses at bargain-basement prices from the state which was now withering away. Their prosperity

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inspired envy. Entrepreneurs founded new commercial outlets to attract their disposable income. By 2005, Moscow was estimated to have 33 billionaires, more than any other city in the world, and about 30,000 millionaires.

Migration to the City

Many global megacities, like Los Angeles, had high rates of diverse immigration, fragmented social groups, and tense separations among classes. The huge megacities of the Third World attracted migrants from all parts of their nation and beyond. Abidjan drew from all of the west African Sahel, Mexico City drew from throughout Central America, and Shanghai drew from the entire Yangzi River basin. Oil-rich cities of the Persian Gulf attracted migrants from the surrounding Arabian Sea periphery in Africa and Asia. (Sometimes their growth seemed fragile, as the collapse of the Dubai economy in 2009 suggested.) European cities received immigrants from their former colonies. For example, Paris attracted immigrants from northern and western Africa, while newcomers to London came from India, Pakistan, and the West Indies. Even without imperial connections, millions immigrated especially from Yugoslavia, Turkey, and southern Italy. Millions came from Islamic countries, introducing a new religious element into many European cities. By 2000, 15 percent of Paris's population, 50 percent of the population of Amsterdam, and 15–25 percent of the population of Frankfurt, Stuttgart, and Munich was made up of international migrants.

As in Los Angeles, tensions accompanied the uneasy mixture of diversity and inequality. Violence broke out. Urban riots across India in the 1990s and early 2000s pitted Hindus and Muslims against one another as social upheaval, religious tension, and political grandstanding combined to inflame both spontaneous mobs and organized rioters. Violence among competing criminal gangs also broke out periodically in many cities around the world. Not all urban violence was based on immigrant diversity. In many countries, electoral contests and sports competitions evoked periodic outbursts.

Spatial divisions among classes, ethnic groups, racial groups, and lifestyle groups within the city increased and hardened. Sometimes actual walls were erected between different neighborhoods. In America these were referred to as “gated communities.”

Patterns of social segregation were common. Spatial divisions were increasing whether cities were industrializing or deindustrializing, whether they seemed to be on the leading edge of globalization or excluded from it. Cities were so deeply divided spatially that their residents could live out their daily lives almost completely within geographically self-contained divisions. Residence, work, recreation, and socialization were all available within their quarters of the city. These quarters also tended to house people of similar political beliefs and affiliations.

Reactionary political parties saw benefits in proposing bans on immigration and even the expulsion of immigrants who had already settled. Parties like the National Front of Jacques Le Pen in France and the

Lega Nord in Italy introduced opposition to immigration and immigrants as essential planks in their political platforms. At street level, fights between immigrant and native youths became frequent, sometimes accompanied by assaults on property. In many European cities, youths proclaiming fierce nativism shaved their heads and, as “skinheads,” sought out “foreigners” to attack. Their victims often included residents who had been in place for a generation and more. In England the phenomenon was referred to as “Paki[stani]-bashing.” In France, especially, religious conflict merged with cultural conflict as the Muslim population coming from the former colonies in North and West Africa increased. In 1995 and again in 2005 rioting shook the immigrant, relatively poor suburbs that ringed the outer periphery of Paris and spilled over into other cities in France and even into the Netherlands and Belgium. In Rome, immigrants from countries in southeastern Europe and North Africa were targets of attack. Debates on immigration policy entered into national as well as local politics, as candidates for office proposed diverse economic, cultural, and political recommendations. American cities, too, had ethnic clashes and racial tensions. During the civil rights movement of the 1960s, rioting broke out in many American cities. In 1992, the most destructive urban rioting in the history of the United States erupted in Los Angeles when a court exonerated white police officers who had been captured on videotape beating Rodney King, an African American.

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Urban Slums and Policies

In the poorer countries of Asia, Africa, and South America, urban slums continued to expand in size and population. The UN estimated that 924 million people lived in slums worldwide in 2001, about 32 percent of the global urban population, with higher proportions in the cities of the developing world. Cities and nations experimented with diverse strategies for coping. Until the 1960s, most plans advocated the construction of public housing to accommodate new urban immigrants. The cost, however, was prohibitive. By the 1980s, programs of “sites and services” won favor. Governments would provide slum dwellers with individual plots—usually about 200 to 250 square feet—and basic municipal services of water, sewage, and electricity and then leave it up to the recipients of the plots to construct their own housing with their own resources. Even with this low-cost strategy problems remained. Who would get the plots? How would allocations be made? For the poorest of the slum dwellers, construction and maintenance costs were still expensive. After construction, the owner-builders often sold off their new homes to more middle-class buyers and returned to the slums, preferring the money to the home.

By the 1990s a new strategy of slum upgradation gained acceptance. Governments retrofitted existing slums with water and sewer lines and

electric connections and realigned their street plans. Most important for assuring residents of stability, they sometimes provided deeds or other legal rights to tenure. These interventions improved the physical quality of life of the residents while maintaining the basic social structure and organization of the slum. Tenure, when granted, encouraged residents to invest in the improvement of their properties, secure in their ownership and protected against eviction. In some cities, these structural improvements were supplemented with social, health, and educational services. As governments and nongovernmental organizations (NGOs) gained experience, they created a wide array of partnership programs to work with—rather than for—the slum dwellers.

By the turn of the millennium, differences among the regions of the world were emerging clearly. Cities whose economies were generally improving, as in much of East and Southeast Asia, and those that implemented specific policies to improve the lives of slum dwellers, as in much of Latin America, showed progress. On the other hand, in Africa the proportion of slum dwellers continued to rise rapidly. Everywhere legality of tenure was an issue. Without legal tenure, squatters could maintain their toeholds in the city only through collective organization. Corruption flourished as slum organizers had to negotiate deals with the police and the politicians.

Global Research and Planning

By the early twenty-first century, global urbanization had a new look. Half the world's population lived in urban areas. Metropolises sprawled for miles in all directions. The historic city, with its legally delineated boundaries, became less distinct and less significant as a functional unit. The end of the Cold War and the advent of the World Wide Web broke down international boundaries and allowed cities to enter into a world wide system of cities. In 1976 the UN sponsored the first Conference on Human Settlements, called Habitat I, in Vancouver, Canada. Habitat II followed in Istanbul in 1996 and Habitat III, again in Vancouver, in 2006. The conferences addressed a wide spectrum of concerns, including physical planning, ecology, group relations, women's issues, youth organization, slum improvement, neighborhood planning, and the historic preservation of significant structures from the past. Urban research and study centers, linked to government, to universities, and to NGOs, multiplied around the globe.

Cities were now firmly embedded in regional systems and global networks of communication, trade, and migration. Urban research and urban planning attempted to keep pace. It was easy to argue that the pattern of settlements around the world had indeed entered a fourth stage.

Bibliography

Hall, Peter Geoffrey. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. 3rd ed. Oxford, UK; Malden, MA: Blackwell, 2002.

- Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects*. New York: Harcourt, 1961.
- Mumford, Lewis. *The Culture of Cities*. San Diego: Harcourt Brace, 1996.
- Spodek, Howard. "Twentieth Century Urbanization: In Search of an Urban Paradigm for an Urban World." In *Essays on Twentieth Century History*, edited by M. Adas. Philadelphia: Temple University Press, 2010.
- Spodek, Howard. *The World's History*. 4th ed. Upper Saddle River, NJ: Prentice-Hall, 2010.

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As Dr. Roscoe considers the origins of complex political organizations, as well as their benefits and detriments, many questions arise in a reader's mind. Why do we have governments? What is involved in creating them? Are they really necessary? Do they arise from our desire to live in groups? Would organized states exist if not in opposition to each other? What would happen if there were only one government? As we think through these issues with Dr. Roscoe, we realize that simple or simplistic theories may comfort us, but they provide no dependable answers.

—Carolyn Neel

The Evolution of Complex Political Organizations

Paul Roscoe

Introduction

By the evolution of complex political organization, scholars generally mean the recent and sudden elaboration of the scale and complexity of human political organization. For most of our time on earth, humans have been a hunter-gatherer species, existing in communities with minimal divisions of labor, social stratification, and political centralization. In just the last few thousand years, however, this situation has been transformed, creating a world in which a tiny minority of the species has come to enjoy colossal wealth and enormous power over the rest and in which professions as rarified as professors and lifestyle counselors now flourish. Complex political organization works to both the benefit and detriment of humanity. On the one hand, it supports technological and organizational infrastructures capable of eradicating some diseases from the planet and of ameliorating the impact of natural catastrophes that once would have wiped out whole populations.

In the not-too-distant future, we shall even have the capacity to detect and deflect asteroids, safeguarding earth from the kinds of collisions that, in the past, have extinguished multiple species. On the other hand, complex political organization and the technologies that it supports and that support it have enabled damage and destruction on a scale unimaginable just a couple of centuries ago. In just the last century, these developments have enabled the industrialized slaughter of some 9 million people in the First World War;¹ the extermination under the Third Reich of around 6 million Jews, a quarter to half a million Gypsies, 200,000 to 250,000 mentally and physically handicapped people, and several thousand homosexuals and Jehovah's Witnesses, not to mention the murder of millions of civilians under Nazi occupation² and the deaths by execution or forced labor of at least 3 million Soviets during the Great Terror of 1937–1938 (a total of 20 million or more people perished over the entire course of Stalin's rule).³ Since then, complex political organizations have placed in our hands arsenals of thermo-nuclear weapons capable of eradicating most species and all human life

If we are to survive on this planet and improve the lot of humanity, we need to understand the processes that gave rise to complex political organization and propelled its development.

from the face of the planet. And in the future, their likely seed will include the introduction of genetically engineered bioweapons to which we have no immunity and alterations to the earth's climate that at a minimum will alter the distribution of vegetation belts and raise sea levels and, in darker scenarios, might trigger a new ice age. If we are to survive on this planet and improve the lot of humanity, we need to understand the processes that gave rise to complex political organization and propelled its development. This essay begins with a brief account of how these organizations have developed in prehistory and history and then reviews some basic ideas about the workings of political evolution. The conclusion briefly reflects on the future of complex political organization.

The Emergence and Development of Complex Political Organization

Political organization and political evolution mean different things to different people, but commonly the term “political organization” refers to the level of development (or elaboration) of a society’s division of labor, social stratification, and political centralization, while the term “political evolution” refers to the processes that propel this development. The term “division of labor” refers to the level of a society’s occupational specialization: the degree to which different occupations (e.g., farming, fishing, and pottery) are assigned to different people as opposed to being responsibilities expected of all. The division of labor is said to be minimal, for example, if everyone—or at least every family—undertakes its own farming, fishing, pottery, and the like; at the other end of the spectrum, tasks become lifelong occupations (farmers, fisherfolk, potters), and the division of labor is said to be developed or complex. The term “social stratification” refers to the degree to which access to important resources is restricted. In unstratified communities, everyone has the same access to resources; in highly stratified communities, access to economic resources such as land and wealth, to political and military resources like councils and weaponry, and to social resources such as membership in country clubs or entry to finishing schools is restricted to an elite. Finally, the term “political centralization” refers to the degree to which power—the capacity to secure outcomes through the agency of others—is centralized in the hands of a few. In egalitarian societies, disparities in power are minimal: although adults invariably are able to direct the behavior of children, they have negligible ability to influence the behavior of other adults. In politically centralized societies, by contrast, a minority of the population—be it a noble or royal court, a parliament, or a capital—may have enormous power over others.

For most of hominin and human history, political organization has been small-scale and political evolution minimal. The hominin lineage split from a common chimpanzee-hominin ancestor some 5 million to

10 million years ago, and over the ensuing millennia it developed numerous branches, most of which had become extinct by the time modern humans, *Homo sapiens sapiens*, emerged some 50,000 to 150,000 years ago. Like their predecessors, early modern humans lived a hunter-gatherer life. Archaeological evidence and inference from ethnographic fieldwork among historically known hunter-gatherer populations suggest that they were mobile, roaming the landscape in small scattered bands of perhaps 20 to 50 kinsfolk. The division of labor in these groups was extremely limited, principally following lines of age and sex. In addition to their work in bearing and raising children, women probably gathered small game and much of the plant food in the diet, while men hunted larger game and, where necessary, defended the band from human and animal predators. Stratification was minimal, communities were egalitarian, and gender relations were likely characterized by an unusual level of equality.

This picture may have begun to change when humans first took up fishing on a large scale. Evidence from historically known forager communities reveals that a subsistence regime of plant gathering coupled with heavy reliance on aquatic resources generally correlates with higher population densities and larger and more permanent settlements than are observed in communities that combine gathering with hunting. In these fisher-forager communities, we also witness the emergence of political leaders, who have a limited ability to influence the behavior of others and a slightly greater access to spouses and material resources. There is considerable uncertainty over when humans first developed a heavy dependence on fishing: opinions vary from 40,000 or more years ago to fewer than 8,000 or so years ago. If fisher-forager communities predated the beginning of the Holocene, around 12,000 years before the present (BP), however, it is possible that the first complex political organizations on earth emerged in fishing societies. Whatever the case, complex political organization failed to develop further until humans began to purposefully manipulate their environment by domesticating animals and, more importantly, cultivating the soil. With the emergence of agriculture some 10,000 years ago, human populations now had the capacity to intensify food production beyond the limits imposed by the natural environment. As a result, over the next few thousand years communities in several parts of the world became denser and more sedentary, and with these developments political organizations began to grow in scale and complexity.

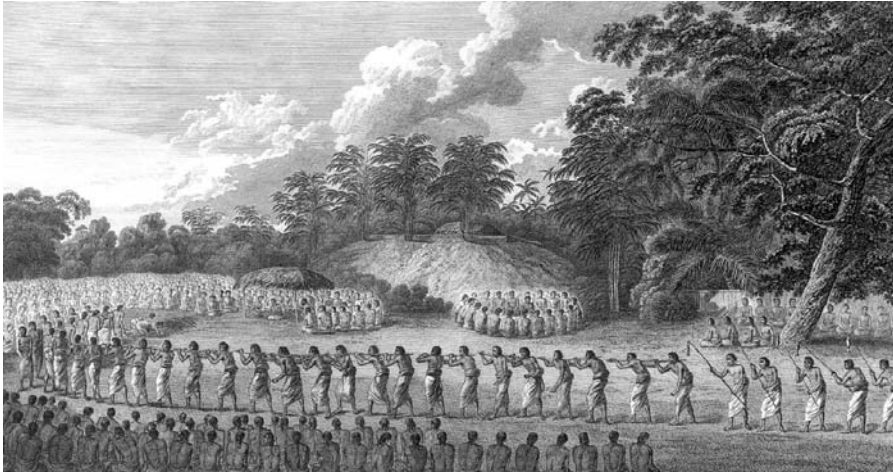
Whether the first politically complex communities emerged among fisher-foragers tens of thousands of years ago or among cultivators within the last 7,000 to 10,000 years, early complex political organization likely resembled that of the political communities documented in contact-era New Guinea. At the beginning of the twentieth century, New Guinea was the so-called Last Unknown, a great continental island that was home to some 2 million people, most of them cultivators. New Guinea political systems, it was soon discovered, were very similar to those in egalitarian hunter-gatherer bands, but they differed in two crucial regards. First, they boasted either great-men or big-men leaders. In great-men societies, some men had achieved a level of eminence for

The second difference between the cultivating societies of New Guinea and the egalitarian bands of early foragers was the emergence in the former of male political domination: although women could exert some influence through informal means, they were commonly excluded from formal participation in political affairs.

their prowess as warriors, hunters, and/or religious specialists. In big-men societies, some men had managed in addition to accumulate a limited degree of power. They were able to sway community opinion and, to a degree, influence the behavior of others, and they competed to display this power by sponsoring large feasts, distributing substantial amounts of valuables (notably shells and pigs), acquiring multiple wives, and occasionally sponsoring the construction of spirit houses. The second difference between the cultivating societies of New Guinea and the egalitarian bands of early foragers was the emergence in the former of male political domination: although women could exert some influence through informal means, they were commonly excluded from formal participation in political affairs.

The defining feature of the big man—and even more so the great man—was the limited reach and temporary nature of his power. Big men seldom held sway over more than a few hundred people. Big men could influence the behavior of others but rarely could they compel it. And they did not inherit whatever power they enjoyed but rather created it themselves. A big man had to build his power base from nothing, and when he became too old to maintain it, it disintegrated; he was unable to pass it on to a descendant. Sometime during the Early to Middle Holocene, however, this situation changed when a new form of political organization and leadership emerged: the chiefdom, centered on a chief. The levels of power enjoyed by chiefs varied markedly. Some commanded hardly more power—perhaps even less—than did a big man, but others enjoyed enormous power. The three high chiefs of Tongatapu in the Tongan archipelago, for example, ruled over a population of some 15,000 people and were able to appropriate the belongings and labor of the lower classes at their pleasure. Both the necessities and the luxuries of life were supplied to the chiefs by the people, and even “inferior” chiefs could physically abuse and even murder their followers with impunity. William Ellis, surgeon’s second mate on Captain Cook’s third voyage to the Pacific, was ashore on Anamooka in the Tongan archipelago when a chief ordered a market crowd to disperse. When the people proved too slow for the chief’s liking, he took up a club and began laying about him. “One man was knocked down and when taken away was to all appearance dead. The agee [chief] took no notice of it, and walked away as unconcerned as if nothing had happened.”⁴

Typically, chiefs had considerably more power than big men, but what distinguished them from the latter was that they inherited power by virtue of their birth. Inherited leadership is not restricted to chiefdoms: it existed in many New Guinea societies, where clans commonly were led by headmen who inherited their position through primogeniture (i.e., as the first-born son). But these were ceremonial rather than political positions, the difference between being the queen of the United



Engraving titled "The Natche, a ceremony in honor of the King's son, in Tongataboo," from Captain James Cook's Voyage to the Pacific Ocean, 1785. (Library of Congress)

Kingdom rather than its prime minister. Headmen might be official war leaders and peacemakers, ceremonial orators and officiants at wealth distributions and ceremonies, but they were not necessarily big men, nor were big men necessarily headmen. Indeed, if a headman had power, it was by virtue not of his office but of his political abilities in creating it. In a chiefdom, by contrast, chiefdomship conferred power, often very considerable power, and access to this power was restricted to the members of a noble family.

The emergence of inherited power is commonly accompanied by a further important political development: the institutionalization of stratification. In egalitarian hunter-gatherer bands, stratification was all but nonexistent. Adults enjoyed greater access to important resources than did juveniles, of course, but there was little or no stratification by gender and none among people of the same age and sex. In great-men and big-men communities, leaders might enjoy a few more privileges than their fellows: multiple wives, marriage to powerful allies, and perhaps a slightly greater control of land and important trade routes. Some of the most powerful big men in New Guinea even had small retinues of bachelors and war refugees in their households who provided them with labor in return for economic support and protection. But this stratification, like the big man's power, was as ephemeral as it was modest, his wealth and privileges usually dissolving at his death. In a chiefdom, by contrast, a chief's differential access to resources survived his or her death, passing to an heir as an integral component of the office of chief. The Polynesian island of Tahiti, for example, was divided at contact into 11 chiefdoms ranging in size from around 1,000 to 15,000 people, each ruled by a chief who could claim descent from a long genealogical line of royalty. As part of their office, the most powerful of these chiefs inherited by right of birth large landed estates (one of which included a nearby island "vacation resort"), elaborate houses and clothes, and courts staffed with priests, political advisers, entertainers, cooks, domestic assistants, and a retinue of burly young men whose job it was to carry the lord on their shoulders on state visits to other parts of the island. To subsidize these lavish lifestyles, followers were obliged to pay tribute in

the form of breadfruit, pigs, fish, tortoise meat, boats, mats, bark cloth, war decorations, and the like; to supply labor to construct their chief's houses, canoes, and irrigation systems; and to serve in his armies when it suited his ambitions to wage war on a rival.⁵

Some 5,000 years ago, the first state-level political organizations appeared on earth. The difference between an advanced chiefdom and an early state is more arbitrary than real, but a state is commonly defined as an organization that possesses a centralized bureaucracy and claims a monopoly on the exercise of physical violence within its borders. Whereas the Tahitian chief might have a cadre of advisers to assist him in collecting tribute and levying labor for his projects, a state has a formal body of officials whose job it is to keep track of and collect taxes, settle disputes, organize state projects, raise militias, and so on. If disputes among the underlings of a Tahitian chief erupted into violence, the chief might do little to restore order so long as the outbreak did not infringe on his interests. The state, by contrast, views the use of violence within its borders as an affront to its sovereignty. Only its own agents—its police and armed forces—are permitted to exercise violence and only toward the maintenance or restoration of peaceful internal relations.

Prehistorians have long considered that the first “pristine” or “primary” states—i.e., states that developed entirely through their own internal processes—emerged in six or seven different places: Mesopotamia, Egypt (the Nile), Mesoamerica, Peru, China, and the Indus River valley. The remainder, and by far the larger proportion, were “secondary” states, that is, states that appeared in response to or as a result of the emergence of an adjacent state. States are typically large in size. Rough estimates put the population of the Egyptian New Kingdom (1570–1069 years ago) at 3 million people, for example.⁶ With political entities of this size, stratification and political centralization undergo a further quantum leap. For one thing, the political center now controls an enormous labor pool, a state of affairs objectively manifest in the scale of monumental architecture. The enormous underground terra-cotta army constructed in the third century BCE to accompany the Chinese emperor Qin Shi Huangdi into the afterlife included more than 8,000 life-size and lifelike model soldiers and horses, a project that by some estimates took 700,000 workers 38 years to complete.⁷

The Great Pyramid at Cheops, over 482 feet (147 meters) high, built to inter the mortal remains of Pharaoh Khufu, comprised some 2.3 million limestone blocks ranging from 2.5 to 15 tons.⁸ The Greek philosopher Herodotus famously reported that the pyramid took 100,000 workers about 20 years to complete,⁹ though more recent calculations suggest a workforce on the order of 10,000 people, not counting support personnel.¹⁰

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With the emergence of state levels of political organization, the division of labor undergoes dramatic elaboration. In egalitarian bands and great-men and big-men communities, labor

is largely unspecialized beyond the axes of age and sex. Weapons, housing, and boats tend to be manufactured by men, while karosses (animal skin garments) and baskets are manufactured by women, but otherwise families produce or provide for themselves most of what they consume. Curing and other ritual services may be specialized, and in big-man and great-man systems pottery, artwork, and long-distance trading also may be the precinct of experts, but there are no artisans who support themselves wholly or even largely by these efforts. Specialization in the latter sense only begins to emerge in complex chiefdoms like those of contact-era Tahiti. With the development of the state, however, the specialization of labor advances dramatically. The urban centers associated with the royal courts of the pharaohs and the Inca were home to thousands of artisans, artists, soldiers, and other specialists, and even the countryside saw the emergence of specialized occupations as diverse as farming, fishing, pastoralism, construction, transport, and brewing.

These trends toward political complexity underwent a further dramatic expansion with the emergence of the industrial state some 400 to 500 years ago. Facilitated by organizational and technological innovations in weaponry, transportation, written communication, and later electronic communication, the political reach of the state expanded enormously. In sixteenth-century England, the ability to manufacture and stockpile firearms in London greatly enhanced the monarch's ability to consolidate and control the realm's competing noble powers. The westward expansion of the United States would have been impossible without the railroad and telegraph. These developments, in turn, fed further expansions in the division of labor, political centralization, and stratification. As noted earlier, modern industrial states now harbor a specialization of labor so complex that occupations as esoteric as professors, personal shopping assistants, and Hatha Yoga instructors are commonplace. They are witness to staggering levels of stratification, the wealth of business magnates like Bill Gates exceeding by ten million times that of people on the poverty line. And the power centralized in the hands of government now enables genocide on a massive scale and not inconceivably could one day result in the eradication of the human race.

Ironically, as political polities have expanded across the industrial world, the most recent of political innovations, the emergence in the twentieth century of the postcolonial state, is tending toward disintegration. Rooted in the European colonization of Africa, southern Asia, and the Americas, these newly independent and often highly unstable nations represent an artificial statehood, one created by colonial fiat rather than the organic processes that propelled the emergence of "pristine" and most secondary states. As the colonizing forces of Europe swept across the globe, once autonomous band, tribal, and chiefdom communities suddenly found themselves members of a colony, expected by their colonial overlords to abandon centuries of enmity almost overnight and become a single integrated political entity. These demands could be realized only insofar as the colonized could be coerced by their colonizers into getting along with one another. With independence, however, these cobbled-together political patchworks lost the centralized colonial force that had held them together, and their indigenous leaders now

struggle with the unenviable task of trying to maintain states that were imposed from above on disparate types of political community below.

Understanding the Development of Complex Political Organizations

Set against the span of human history, the emergence and development of complex political organization seems as abrupt as it was momentous, and social scientists have struggled for years to understand the processes that compelled it. Among the earliest theories was what we might call the Intellectual Development argument, and though scholars no longer accept this thesis, it is worth a moment's consideration since it remains a common view among the contemporary lay public. In the early days of anthropology, scholars such as Sir Edward Burnett Tylor (1871) in Britain and Lewis Henry Morgan (1877) in the United States theorized that human culture had developed from an early "primitive" or "savage" phase through successive stages until it reached the modern "civilized," "scientific," or "advanced" phase.¹¹ Morgan, for instance, posited a seven-step evolutionary trajectory that began with a Lower Status of Savagery and passed through stages that included the Lower Status of Barbarism until (finally) it reached the Status of Civilization. These evolutionary schemes commonly were projected onto the world of the day. It was surmised, for example, that the Australian Aborigines were "survivals" who exemplified "savage" or "primitive man," while their social systems characterized "primitive society." The Euroamerican nations corresponded to the most recent and "civilized" forms of humanity and society. These evolutionary differences were related to the "mind," "mental condition," "intellectual state," and so on of the people in question, the lurking and unfortunate—not to mention, untenable—implication being that groups like the Australian Aborigines lacked the intellectual development of citizens in the "civilized" nations of the world. Today, this perspective still circulates in lay opinion as an assumption that political centralization and the "advance of civilization" is a kind of "invention," a product of human intelligence, and that variations in these levels of development are the result of some peoples being "backward," while others are "progressive" or "modern."

Nowadays, scholars recognize the Intellectual Development argument as at best an ethnocentric theory and at worst a racist one. Moreover, it simply does not stand up to the test. Consider, for instance, the Pacific-island societies of contact-era Polynesia. When European explorers first voyaged into the Pacific Ocean, they found almost half of this vast emptiness, from Hawai'i in the north to Easter Island in the east and to New Zealand in the southwest, to be populated by a people speaking a set of very similar languages. Nowadays we know these people as the Polynesians, and we recognize their colonizing feat as one of the most extraordinary acts of human discovery. Starting out from southeastern Asia or Melanesia some 5,000 years ago, a comparatively small population sailing sophisticated oceangoing canoes managed to spread eastward across the Pacific, discovering and populating almost

all of its inhabitable islands. Since the Polynesians all stemmed from the same ancestral population, it would follow that if cultural and political evolution were determined by intellectual development, then their contact-era levels of political complexity should everywhere have been about the same. In fact, the opposite was the case. Polynesian political organization spanned almost the entire gamut of political forms, from quasi-egalitarian systems on Niué, through petty chiefdoms on large atolls like Tongareva and complex chiefdoms on Tahiti, to a quasi state on Oahu in the Hawaiian archipelago. Clearly something affects a society's level of political complexity—and, to judge from the Polynesian evidence, it can achieve marked effects within just a millennium or so—but variations in “mental conditions” or “intellectual states” are not the issue.

As the inadequacies of Tylor and Morgan's unilineal evolution theories became apparent, anthropologists began to advance a plethora of new conjectures. These are too numerous to survey in detail, but they can be roughly categorized into three essential types: voluntaristic theories (also known as governance-by-benefit, integrative, functional, or—most recently—managerial theories), coercive (or conflict) theories, and systems (or multivariant) theories. Voluntaristic theories enshrine an essential optimism about the nature of humans and their political society. In this view, political evolution occurs when humans recognize some desirable economic, social, or military goal that can be achieved by cooperating under a centralized governance. Accordingly, they institute and voluntarily surrender their sovereignty to this authority in order to advance their well-being. Karl Wittfogel's “hydraulic” theory of state emergence is sometimes identified as an example of this enlightened self-interest argument. Observing that the development of early states seemed to coincide with the emergence of irrigation (i.e., hydraulic) systems, Wittfogel proposed that the latter was responsible for the former. Incapable of building and maintaining advanced hydraulic systems without centralized planning and direction, these societies had instituted leaders and bureaucracies to organize them, to the benefit of all. In a variation on this theme, Marshall Sahlins proposed that chiefs in Polynesia and elsewhere functioned to redistribute vital resources such as food to even out natural fluctuations caused by seasonal change, climatic variations (e.g., droughts), or occasional catastrophes (such as a cyclone or El Niño).¹² In other arguments, central authorities were instituted as a means to manage trade and markets, organize early warning systems and raise fortifications against attack, or to construct temples or other public works. In one of the most sophisticated of these voluntaristic arguments, Elman Service proposed that political evolution might occur under any and all of these circumstances.¹³

Coercive or conflict theories take a diametrically opposed view to voluntaristic theory. Whereas voluntaristic theories see political evolution

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as motivated by enlightened self-interest, coercive theories see it as the product of coercion or violence. Whereas voluntaristic theories see leaders—big men, chiefs, kings, and emperors—as, in essence, public servants acting to advance the interests of the people, coercive theories present them as more like members of a legalized crime syndicate, exploitative agents who act to advance their own interests at the expense of the people. Karl Marx was one of the first to advance a conflict argument, and variations on this viewpoint frequently have been advanced by Marxist-inclined anthropologists such as Morton Fried and Jonathon Friedman.¹⁴ It was a non-Marxist, however, who developed the most influential coercive theory. In his circumscription theory of political evolution, Robert Carneiro observed that “pristine” states all seemed to have emerged in areas where large populations living on rich resources were hemmed in—circumscribed—by some kind of obstacle.¹⁵ The Akkadian and Egyptian empires, for example, evolved on great river systems that provided rich alluvial floodplains for farming but were hemmed in by deserts hundreds of miles wide. The kingdom of Hawai‘i appeared in an archipelago that was surrounded by more than 1,000 miles of water in every direction. Carneiro theorized that these circumscribed conditions were crucial in generating political evolution because of what happens when populations living in these areas start to increase. To begin with, the growing population begins to press on available material resources, increasing the intensity of competition. Now, in uncircumscribed environments such as the Amazon basin, this competition is relatively easily resolved: after some skirmishing perhaps, losers simply move away and take up new resources in some other unused area. Under circumscribed conditions, however, things are not so straightforward: losers are unable to easily move away because there is nowhere to move away to. What happens instead, Carneiro argued, is that losers are conquered and subjugated by winners, who then demand tribute (food and other material goods), exploiting the labor of the vanquished by forcing them to work longer hours in the fields. With this argument, Carneiro was able to sketch out an entire trajectory by which as a population increases in a circumscribed environment, one egalitarian village first conquers and subjugates another to create a petty chiefdom, one petty chiefdom then conquers another such chiefdom to produce a complex chiefdom, and so on until the entire population has been militarily unified under the coercive rule of a single powerful chief, king, or emperor.

Beginning in the 1970s, systems (or multivariant) theory attempted to unify voluntaristic and coercive theories by arguing that the evolution of political society was the product of both types of process.¹⁶ Since voluntaristic and coercive theories are polar opposites of one another, it is difficult to envisage, at first blush, how political evolution could be the product of both. How, for example, might leaders function both as dutiful public servants and as exploitative racketeers? Systems theorists pointed out, however, that there were three potential points of reconciliation. It might be, as Ronald Cohen observed, that in some places political evolution had occurred through voluntaristic processes, while in other places it had developed through coercive means.¹⁷ Alter-

natively, a society's political development might be voluntaristic in its early phases but switch over in later stages to coercive processes. Wittfogel's argument presumed, in fact, that this was the case with hydraulic societies: once a centralized authority had gained control of an irrigation system through voluntaristic processes, it then become despotic by virtue of its monopoly over a precious resource: water. Rathje and McGuire identified a third possibility: voluntaristic and coercive processes could perhaps operate simultaneously.¹⁸ In this scenario leaders are despotic and exploitative, but if they are wise they will consolidate their rule by providing benefits to those they exploit. Thus, conquest warfare on circumscribed land might result in coercive political evolution, much as Carneiro envisaged, but once in place a coercive leader might organize the construction and maintenance of irrigation systems, raising the productivity of the land to the benefit of everyone, much as voluntaristic theorists argued.

It should not be assumed that voluntaristic, coercive, and systems theories are as simplistic as they might seem when boiled down to their essentials. Nonetheless, as ethnographic, historical, and archaeological knowledge of the development of political society has expanded over the last two decades, there has been a growing consensus that the processes involved are considerably more complex than these theories imply. Scholars have become less certain about the underlying processes that propel political development, and it has become apparent that these sorts of broad-brush arguments are sometimes false in their specifics, overly simplified, or too vaguely expressed to be easily applied to specific cases. Even the basic categories on which these approaches are based—concepts such as egalitarian and big-man societies, chiefdoms, and states—are increasingly falling into question.¹⁹ Voluntaristic, coercive, and multivariant approaches remain useful as means of trying to conceptualize some of the core processes that might propel political evolution, but there has been a shift toward specific analyses of what went on over time in particular regions or societies. A lot of attention is now devoted to trying to understand the microdynamics behind, say, the emergence of great men and big men in New Guinea or the appearance of early states and later the Inca empire in Peru. The hope is that one day we shall be able to assemble from these particularistic studies a more robust and convincing overall picture of the processes of and conditions limiting or enabling political evolution.

The Future of Political Organization: Global Unification?

Given our fragile understanding of how political evolution occurred in the past, it might seem tendentious to consider what these arguments indicate about the future of complex political organization. Recognizing as incontrovertible that the Holocene has seen an inexorable consolidation of political organizations, an increase in the levels of political centralization and stratification, and an elaboration in the division of labor, however, a number of theorists have considered where these trends

Is political unification of the globe a foregone conclusion, and if so when can it be expected? If unification is not inevitable, what is it that stands to obstruct the centralizing trends of the last 10,000 years?

may be headed. Is political unification of the globe a foregone conclusion, and if so when can it be expected? If unification is not inevitable, what is it that stands to obstruct the centralizing trends of the last 10,000 years?

The principal argument against the likelihood of global unification stems from what is sometimes called the balance-of-power theory. As the biologist Richard Alexander has pointed out, one of the most important reasons why organisms form social groups is to defend themselves against predators.²⁰ By living in a group, organisms can capitalize on having many pairs of eyes and ears to detect predators, and they also may be able to repel attacks by mobbing or other collective action. Defensive grouping is especially important among humans, a species unusual for being its own most dangerous and ubiquitous macropredator. Humans are a warring species, and in Alexander's view, this characteristic locks them into a "balance-of-power race" with their neighbors. In this view, bands, villages, chiefdoms, and states are defensive organizations, and they evolve from one stage to the next as each group struggles to gain a military edge over its neighbors by expanding and developing its organizational and technological capacity. Amber Johnson has pointed to the logical consequence of such a struggle.²¹ If states evolve in opposition to one another, then we can expect political unification to continue until the globe has fallen under the control of just two superstates. At this point, however, the process of unification will cease because neither state can exist without the other. One superstate might succeed in conquering the other, but the external opposition that hitherto had unified it would then disappear, leading to its disintegration and the emergence, once again, of two or more units.

In contrast to the balance-of-power position, other theorists have argued that global unification is inevitable, and several have attempted to project its occurrence. Writing during the dark days of World War II, Hornell Hart examined data on the growth rates of past empires and of accelerative trends in the technologies of transportation and military armaments.²² His calculations indicated that by 1950, the world would either be unified under a world government or divided between two or more nearly equal rival groups, in which case a third world war would ensue. If one were to accept that the United Nations (UN) is a kind of global government, then Hart's prediction was not so far off. The frail global institution that is the modern UN was not what he had in mind, however, and the accuracy of his forecast therefore highlights rather dramatically the hazards of prediction in this field.

The difficulties are underscored by the range of unification dates calculated by later authorities. Based on the rate at which the number of world polities has declined through history, Carneiro calculated that global unification would occur in 200 to 300 years.²³ Applying sophisticated mathematical techniques to data on the expansion and contraction of 28 Eurasian empires, Raoul Naroll computed that unification was more rather than less probable within the next 200 years and close to a

statistical certainty within 1,000 years.²⁴ Finally, applying a different mathematical approach to Naroll's data, Marano (1973) projected unification between 1,500 years and 2,850 years.²⁵

Notes

1. John Keegan, *The First World War* (New York: Vintage Books, 1998), 423.
2. USHMM, *The Holocaust Encyclopedia* (Washington, DC: United States Holocaust Memorial Museum, 2006), www.ushmm.org/wlc/en/.
3. Robert Conquest, *The Great Terror: A Reassessment* (New York and Oxford: Oxford University Press, 1990), 485–486.
4. William Ellis, *An Authentic Narrative of a Voyage Performed by Captain Cook and Captain Clerke in His Majesty's Ships Resolution and Discovery, during the Years 1776, 1777, 1778, 1779 and 1780, in Search of a North-west Passage between the Continents of Asia and America*, vol. 1. (New York: Da Capo, 1969), 115.
5. Douglas L. Oliver, *Ancient Tahitian Society*, 3 vols. (Honolulu: University Press of Hawaii, 1974).
6. Douglas J. Brewer and Emily Teeter, *Egypt and the Egyptians* (Cambridge: Cambridge University Press, 1999), 40.
7. Jane O'Connor, *The Emperor's Silent Army: Terracotta Warriors of Ancient China* (New York: Viking, 2001).
8. Brewer and Teeter, op. cit., 160.
9. Herodotus, *The Histories*. Translated by Audrey de Sélincourt (Baltimore: Penguin Books, 1960), 151–152.
10. Brewer and Teeter, op. cit., 34.
11. See Sir Edward Burnett Tylor, *Primitive Culture*, 2 vols., 7th ed. (New York: Brentano's, 1924 [orig. 1871]); and Lewis Henry Morgan, *Ancient Society; or, Researches in the Lines of Human Progress from Savagery through Barbarism to Civilization* (London: MacMillan & Company, 1877).
12. Marshall D. Sahlins, *Social Stratification in Polynesia* (Seattle: University of Washington Press, 1958).
13. Elman Service, *Origins of the State and Civilization: The Process of Cultural Evolution* (New York and London: Norton, 1975).
14. See Morton H. Fried, *The Evolution of Political Society: An Essay in Political Anthropology* (New York: Random House, 1967), and Jonathon Friedman, "Notes towards an Epigenetic Model of the Evolution of Civilisation," in *The Evolution of Social Systems*, ed. J. Friedman and M. J. Rowlands (Pittsburgh: University of Pittsburgh Press, 1978).
15. Robert Carneiro, "A Theory of the Origin of the State," *Science* 169 (1970): 733–738.
16. Kent V. Flannery, "The Cultural Evolution of Civilizations," *Annual Review of Ecology and Systematics* 2 (1972): 399–426.
17. Ronald Cohen, "Introduction," in *Origins of the State: The Anthropology of Political Evolution*, ed. Ronald Cohen and Elman R. Service (Philadelphia: Institute for the Study of Human Issues, 1978).
18. W. L. Rathje and R. H. McGuire, "Rich Men . . . Poor Men," *American Behavioral Scientist* 25 (1982): 705–715.
19. For example, Norman Yoffee, *Myths of the Archaic State: Evolution of the Earliest Cities, States, and Civilizations* (New York: Cambridge University Press, 2005).
20. Richard D. Alexander, "Evolution of the Human Psyche," in *The Human Revolution: Behavioural and Biological Perspectives on the Origins of Modern Humans*, ed. Paul Mellars and Chris Stringer (Princeton, NJ: University of Princeton Press, 1989).

21. Amber Johnson, "Why Not to Expect a World State," *Cross-cultural Research: The Journal of Comparative Social Science* 38 (2004): 119–132.
22. Hornell Hart, *Can World Government Be Predicted by Mathematics?* (Ann Arbor, MI: Edwards, 1944).
23. Robert L. Carneiro, op. cit., and "The Chieftdom: Precursor of the State," in *The Transition to Statehood in the New World*, ed. Grant D. Jones and Robert R. Kautz (New York: Cambridge University Press, 1981).
24. Raoul Naroll, "Imperial Cycles and World Order," *Peace Research Society: Papers, Chicago Conference*, 7 (1967): 83–101.
25. Louis A. Marano, "A Macrohistoric Trend toward World Government," *Behavior Science Notes* 1 (1973): 35–39.

Bibliography

- Alexander, Richard D. "Evolution of the Human Psyche." In *The Human Revolution: Behavioural and Biological Perspectives on the Origins of Modern Humans*, edited by Paul Mellars and Chris Stringer. Princeton, NJ: University of Princeton Press, 1989.
- Brewer, Douglas J., and Emily Teeter. *Egypt and the Egyptians*. Cambridge: Cambridge University Press, 1999.
- Carneiro, Robert L. "The Chieftdom: Precursor of the State." In *The Transition to Statehood in the New World*, edited by Grant D. Jones and Robert R. Kautz. New York: Cambridge University Press, 1981.
- Carneiro, Robert L. *Evolutionism in Cultural Anthropology: A Critical History*. Boulder, CO: Westview, 2003.
- Carneiro, Robert L. "Political Expansion as an Expression of the Principle of Competitive Exclusion." In *Origins of the State: The Anthropology of Political Evolution*, edited by Ronald Cohen and Elman R. Service. Philadelphia: Institute for the Study of Human Issues, 1978.
- Carneiro, Robert L. "A Theory of the Origin of the State." *Science* 169 (1970): 733–738.
- Cohen, Ronald. "Introduction." In *Origins of the State: The Anthropology of Political Evolution*, edited by Ronald Cohen and Elman R. Service. Philadelphia: Institute for the Study of Human Issues, 1978.
- Conquest, Robert. *The Great Terror: A Reassessment*. New York and Oxford: Oxford University Press, 1990.
- Ellis, William. *An Authentic Narrative of a Voyage Performed by Captain Cook and Captain Clerke in His Majesty's Ships Resolution and Discovery, during the Years 1776, 1777, 1778, 1779 and 1780, in Search of a North-west Passage between the Continents of Asia and America*, vol. 1. New York: Da Capo, 1969.
- Flannery, Kent V. "The Cultural Evolution of Civilizations." *Annual Review of Ecology and Systematics* 2 (1972): 399–426.
- Fried, Morton H. *The Evolution of Political Society: An Essay in Political Anthropology*. New York: Random House, 1967.
- Friedman, J. "Notes towards an Epigenetic Model of the Evolution of Civilisation." In *The Evolution of Social Systems*, edited by J. Friedman and M. J. Rowlands. Pittsburgh: University of Pittsburgh Press, 1978.
- Graber, Robert Bates, ed. "The Future State of the World: An Anthropological Symposium." Special issue of *Cross-cultural Research: The Journal of Comparative Social Science* 38 (2004): 95–207.
- Hart, Hornell. *Can World Government Be Predicted by Mathematics?* Ann Arbor, MI: Edwards, 1944.
- Herodotus. *The Histories*. Translated by Audrey de Sélincourt. Baltimore: Penguin Books, 1960.

- Johnson, Amber Lynn. "Why Not to Expect a World State." *Cross-cultural Research: The Journal of Comparative Social Science* 38 (2004): 119–132.
- Keegan, John. *The First World War*. New York: Vintage Books, 1998.
- Marano, Louis A. "A Macrohistoric Trend toward World Government." *Behavior Science Notes* 1 (1973): 35–39.
- Morgan, Lewis H. *Ancient Society; or, Researches in the Lines of Human Progress from Savagery through Barbarism to Civilization*. London: MacMillan & Company, 1877.
- Naroll, Raoul. "Imperial Cycles and World Order." *Peace Research Society: Papers, Chicago Conference*, 7 (1967): 83–101.
- O'Connor, Jane. *The Emperor's Silent Army: Terracotta Warriors of Ancient China*. New York: Viking, 2001.
- Oliver, Douglas L. *Ancient Tahitian Society*. 3 vols. Honolulu: University Press of Hawaii, 1974.
- Rathje, W. L., and R. H. McGuire. "Rich Men . . . Poor Men." *American Behavioral Scientist* 25 (1982): 705–715.
- Sahlins, Marshall D. *Social Stratification in Polynesia*. Seattle: University of Washington Press, 1958.
- Service, Elman R. *Origins of the State and Civilization: The Process of Cultural Evolution*. New York and London: Norton, 1975.
- Tylor, Sir Edward Burnett. *Primitive Culture*, 2 vols., 7th ed. New York: Brentano's, 1924 (1871).
- USHMM. *The Holocaust Encyclopedia*. Washington, DC: United States Holocaust Memorial Museum, 2006, www.ushmm.org/wlc/en/.
- Yoffee, Norman. *Myths of the Archaic State: Evolution of the Earliest Cities, States, and Civilizations*. New York: Cambridge University Press, 2005.

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Changes in methods of production have an impact on the entire structure of societies, causing numerous changes in people's lives. Industrialization was one of the most profound economic transitions of history, requiring adjustments in social organization at all levels. It increased the pace of urbanization as it became more effective to gather people into centers near factories or near investment centers and banks. Time became important, as the pace of life became determined more by the factory whistle or the railroad schedule. Fewer families functioned as economic units as family farms became less common, while having a wife at home devoted to domestic duties became a symbol of success among middle classes. We have not yet determined the full extent of the political impact of industrialization, but it is certain that nationalism, internationalism, and the current globalization all are direct results.

—Carolyn Neel

Industrialization in World History

Carolyn Neel

When we speak of the Industrial Revolution, we are talking about the dramatic changes in production that transformed societies across the world and forever altered the relationship between states. Scholars and pundits of the past have occasionally searched for the factors that prevented some areas, such as China and India, from early entry into the Industrial Age. A better question is: why should any society turn to mechanized production? Industrialization was a by-product of conditions reaching back into Europe's medieval economic ages. Today's highly mechanized production was the result of a series of circumstances setting the stage for the determined pursuit of industrialization that came to fruition in the nineteenth century. Whether this turn of events was fortuitous or not has yet to be fully determined. For most of humanity's existence, people or domesticated animals provided most of the power necessary to produce the material means of survival. True, ingenious tinkerers had long harnessed water and wind for some purposes, but if water turned the millstones and wind filled the sails to send people across the seas, humans or draft animals pulled the plows, dragged the boulders, or charged into battle. Industrialization was not an end in itself; it was the means to achieve other goals, such as faster or less expensive production in order to maximize profits.

Although the international balance of power may not have been foremost in the minds of the early tinkerers who developed the steam engine or the spinning jenny, it was a foreseeable result. Eastern Asia was definitely a center of political and economic power during the mid-eighteenth century before European industrialization. China was clearly the regional hegemon, the dominant state, exerting a powerful influence far beyond its borders. The dynamic Qianlong emperor (1711–1799) doubled the size of China and maintained a clientage relationship with China's border states. The Chinese were aware of the “western barbarians” but did not bother to differentiate between the various European states until the late eighteenth century. The British, a people on a small,

gloomy island on the western edge of the Eurasian continent, began developing machines to drain coal mines and power the looms that produce textiles and in so doing altered the international balance of power. This first round of industrialization began as a British effort to secure and hold a place in the world textile markets as well as a response to the intensely competitive European political and economic world.

The efficiencies of industrialization appealed to Britain's powerful European competitors as well, and the urge to industrialize rippled around the world. Industrial espionage increased; aggressive governments hired, cajoled, and even occasionally kidnapped British workmen.

As we consider industrialization, we are focusing on Great Britain, but it was never alone in its efforts to improve productivity. All participants in markets work to minimize costs by managing production costs. The efficiencies of industrialization appealed to Britain's powerful European competitors as well, and the urge to industrialize rippled around the world. Industrial espionage increased; aggressive governments hired, cajoled, and even occasionally kidnapped British workmen.

Ultimately, the competition that gave rise to industrialization intensified nationalism and propelled imperialism. Industrialization may not have caused the global warfare of the twentieth century, but it did make wars more deadly. However, first things first: what was it, why did it happen, and what did it cause?

Some scholars contest the term "Industrial Revolution," believing that the changes in manufacturing, transportation, and communication represent an evolution rather than a revolution. The idea that production would evolve as people discovered and adopted efficiencies does make sense, yet the dramatic changes in culture and social organization that accompanied national industrialization supports the notion of revolution. Nevertheless, regardless of individual perspectives on that matter, we all agree that *something* world-altering happened. As the British fought for a secure footing in international markets, tinkerers worked with producers and investors to increase output and decrease costs. As mechanization accelerated, productive leaps followed, accompanied by social accommodations. The efficiencies of factories and mass production drew people away from bucolic settings and the traditional support systems of the village into urban factory towns.

It is almost impossible to avoid reaching far into the past when we look for the roots of any economic transition. Economic shifts require that people are motivated to change and have access to the material resources to do so. The steps toward industrialization began in the Middle Ages; things could have gone differently at almost any stage. As market-based economies developed, people sensibly tried to hold down the costs of manufacturing and transportation in order to realize the greatest profits possible. As early as 1400, west European states were moving slowly into economies based on the exchange of money rather than barter or service, although the Hundred Years' War (actually a series of wars and guerrilla raids between 1337 and 1453) brought about economic crises in both Britain and France. During the reign of Elizabeth I (r. 1558–1603), many British merchants believed that the best hope for

sustained prosperity lay in following the Portuguese and Spanish examples, turning to the seas in pursuit of their economic interests, although admittedly Elizabethan seafaring merchants derived wealth more often through privateering (state-sponsored piracy) than by trade. In fact, it has been argued that modern-day capitalism grew from these bold pirates. Indeed, one could make a strong argument that industrialization was simply an economic tool to assist in the European drive to secure and hold a position in the international markets.

The European motivation to develop new economic systems was born after a series of catastrophes forced many European states to begin serious social and economic experimentation. The pandemics that swept across Eurasia in the fourteenth century, reappearing in Europe periodically from the Black Death of the mid-fourteenth century until the seventeenth-century Great Plague, certainly disrupted the economic organization of many European and Asian states. In an unfortunate twist of fate, the pandemic coincided with the beginning of a long period of cooler temperatures that shortened growing seasons and jeopardized food production throughout the Northern Hemisphere. The so-called Little Ice Age began in the fourteenth century and peaked in the seventeenth century. The winters in the 1590s, the 1620s through the 1650s, and the 1690s were particularly harsh. Across the Northern Hemisphere, societies faced adversity through social, political, and economic innovation, albeit with varying degrees of success. In China, the famines of the period were indications that the Ming dynasty had lost the approval of heaven, and rebellions began popping out across the land. A series of civil wars and rebellions brought the Tokugawa to power in Japan. It was the “Time of Troubles” in Russia, a period of rebellions, civil wars, and coups. In North America, five tribes formed the Iroquois Nation and began expanding their empire.

European conflicts, such as the religious wars, the Thirty Years’ War, and the English Civil War added to the misery. Adversity led to innovation. An increased food supply and an available workforce grew from these harsh conditions. With agricultural production falling, tenant farmers found themselves in severely reduced circumstances; the owners of the large manorial estates were not able to collect the usual rents. Both parties began innovating. Some landholders turned to sheep farming; woolens had been a chief British export for years and had soared in the century following the plague. This land use was very attractive; one or two shepherds were less expensive and far less trouble than a village of peasant farmers. Other landowners stayed with food production and began trying new farming methods, introducing improved methods as well as enhanced strains of plants and animals. By the late sixteenth century, agricultural yield per acre had soared. The inspiration to innovate was in place and so was the available workforce.

By 1500, feudal serfdom was almost extinct in England; wage-earning rural workers, some of whom prospered and became landowners themselves, replaced serfs. Others wound up as tenant farmers or wanderers looking for day work. With the collapse of the feudal hierarchy, a few intelligent, aggressive former peasants became yeoman farmers—commoners without aristocratic titles who held and farmed small estates—some

eventually amassing significant holdings to become members of the gentry, powerful nonaristocratic landowners who collectively owned over 50 percent of the available estates. The gentry became progressively more powerful, particularly after the civil war and revolution of the seventeenth century. A few accrued fortunes, some by rather unsavory activities such as slave trading. Financial institutions grew and prospered. Class divisions began blurring at the highest levels and intensifying in the lower ranks. Aristocratic and wealthy gentry families entered into relationships through shared business interests or marriage;

yet at the same time, resentment intensified against the burdens of the Poor Laws (which mandated a level of care for Parish paupers). Food riots and dangerous roving bands of “masterless men” aroused more antipathy for the lower economic echelon than sympathy. Nonetheless, despite intensified class resentments, an important precondition for industrialization existed: capital was available for investment in manufacturing, investors with considerable political power held it, and there was enough competition for lower-level work to keep labor expenses low.

Nonetheless, despite intensified class resentments, an important precondition for industrialization existed: capital was available for investment in manufacturing, investors with considerable political power held it, and there was enough competition for lower-level work to keep labor expenses low.

Circumstances were somewhat different in France, but the French continued to pursue industrialization. They did not develop an equivalent independent nonaristocratic elite before the French Revolution, but the bourgeoisie had been growing steadily, while taxation and special fees burdened peasant farmers. France was rich and highly populated but lacking in resources such as coal. A Frenchman designed the first steam engine in the late seventeenth century, but the need to import coal drove up costs, particularly the costs associated with metallurgy. Revolution and subsequent wars interfered with the French movement toward industrialization until Napoleon Bonaparte’s defeat in 1812. Other west European states, such as Prussia, Belgium, and the Netherlands, were moving toward economies based on more efficient production techniques. Tsarist Russia began importing British technology early on and carefully cultivated working relationships with British advisers. By 1815 Russia had its first steamship and also imported machinery until the country could start its own machine-building factories. Yet because of the internal problems in Russia, the country did not develop into a true industrial power until the twentieth century. In the United States, by the mid-nineteenth century there was a strong political focus on banking, maintaining a stable currency, and developing internal improvements in infrastructure, all of which encouraged high productivity and modern industrial capacity.

German industrialization, which is often considered part of a second wave, was generally driven by government action. Guilds and serfdom were abolished by the 1840s, but Germany remained largely dependent on foreign techniques, often gained through hiring British workingmen. State backing of heavy industry and creative business structuring

gave Germany a jump-start, and industrialization proceeded at an amazing pace. Creative banking practices aided small businesses in combined forces, often gradually forming big amalgamations. The unification of the German states in 1871 did accelerate and enhance German efforts; they were determined to meet the French and British as equals in every way, including gaining access to raw materials through imperial expansion.

Some scholars argue that the first efforts at industrialization were inspired by the organization and division of labor found on the slave plantations of the early modern era. It is certain that industrialization was in large part funded by the Atlantic slave trade. The modern bout of imperialism in Asia and Africa can be traced directly to European industrialization, as the various states attempted to find and control sources of raw materials as well as potential markets. The military advantages of industrialization were painfully obvious during the Opium Wars (1839–1842, 1856–1858), the Crimean War (1853–1856), and the United States Civil War (1861–1865). Russia, China, Japan, and the Ottomans were all inspired to industrialize as these wars and the successful imperial adventures of the industrialized West unfolded. Although they worked toward industrialization, Russia and China were only able to stabilize their efforts to any significant degree until after rebellions and civil wars toppled the Romanov (1613–1917) and Qing (1644–1911) dynasties in the twentieth century. The Ottoman empire disappeared after World War I.

Two shocks inspired the Japanese to industrialize quickly: first, the ease with which the navy of a small European island forced its will upon the powerful Chinese Qing dynasty in the first Opium war and, second, the fleet of heavily armed U.S. warships that sailed into Tokyo Bay in 1854 demanding trade and diplomatic concessions. West European powers soon joined the United States, forcing the Tokugawa shogun to make concessions similar to those made by China. Japanese opposition forces joined in overthrowing the Tokugawa, elevating the young Meiji emperor to power. Feudalism was abolished in 1868. Private investors did not act quickly enough for the enthusiastic Meiji government, so the state became dominant in the industrializing effort, funding the initial railway connection between Tokyo and Yokohama with loans from the British Oriental Bank. The railroad lines were immediately profitable, and the government worked to develop mines, using imported machinery to support large-scale production. These dedicated bureaucrats embodied a combination of Confucian ethics and Samurai drive; they were men of action determined to meet the West on its own terms. They imported about 3,000 experts from Europe—Germans, Britons, French, and even Italians—between 1875 and 1890. By 1890 Japan had become a modern industrialized state, and soon—like Britain, Germany, and France—embarked on its own imperialist ventures: fighting wars with China over Korea (1894–1895) and with Russia (1904–1905), annexing Korea in 1910, and then attempting to conquer China (1937–1945), to name a few of Japan's military adventures.

To return to our original question: Why weren't the technologically advanced states of India or China the first to industrialize? Although it is still the wrong question, it does warrant discussion. Both Chinese and

Indian artisans had developed a high level of skill in metallurgy and production of wares, from heavy equipment to luxury goods. However, neither China nor India had the sort of political stability and support necessary. The Mughal dynasty of India (1526–1858) lost its hold and began disintegrating in the early eighteenth century. The Portuguese, Dutch, British, and French had trading posts in India, and Mughal instability caused many wealthy Indian merchants and bankers to turn to the Europeans for protection. The British East India Company defeated French forces in the mid-eighteenth century and then went on to conquer Bengal in 1757. Over the next 100 years the company, a trading corporation, conquered most of what we now know as India. India was, as Peter Stearns noted, “deindustrialized” as a part of the British overall trading strategy.¹ India had not been in a position to industrialize significantly under the Mughals or their British successors.

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Imperialistic foreigners and the heavy reparations imposed after the Opium Wars and the Boxer Rebellion destabilized China during a time of weak, indecisive leadership. Had the confrontations come a century earlier, China might have possessed the internal cohesion and resources to repulse foreign interference. Under the Ming dynasty (1368–1644), the large port cities of China developed robust consumer economies. There was even an existing manufacturing base, such as the huge Jingdezhen Porcelain Works, which was the largest industrial operation on the globe during the sixteenth century. It operated 1,000 kilns with 70,000 workers and used an assembly line process. There was an affluent gentry class in the sixteenth and seventeenth centuries under both the Ming and the early Qing. Roads and canals linked a very sophisticated internal market system. The reasons for China’s vulnerability to foreign economic interference have been debated for a generation or more. One of the best explanations, in this writer’s mind, comes from Mark Elvin in *The Pattern of the Chinese Past* (1973).² There had been a rapid expansion of small market towns in the sixteenth century and the total disappearance of serfdom by the eighteenth century, but this activity took place with very little technological change. Both income and profits were high; there was no motivation to change. Elvin sums it up with the phrase “quantitative growth, qualitative standstill”; China was caught in a “high level equilibrium trap.”³

There were frantic efforts to industrialize after the shocks of the Opium Wars and the loss during the Sino-Japanese War, but the Self-Strengthening Movement had little actual impact. The traditional Confucian deliberations prevented timely actions at a time when imperialistic vultures were circling. From another view, the political turmoil of the Qing dynastic decline made investors somewhat hesitant, even though there seems to have been adequate investment capital available. By the time of the Opium Wars, population had surged enough to place stresses

and the Boxer Rebellion destabilized China during a time of weak, indecisive leadership. Had the confrontations come a century earlier, China might have possessed the internal cohesion and resources to repulse foreign interference. Under the Ming dynasty (1368–1644), the large port cities of China developed robust consumer economies. There was even an existing manufacturing base, such as the huge Jingdezhen Porcelain Works, which was the largest industrial operation on the globe during the sixteenth century. It operated 1,000 kilns with 70,000 workers and used an assembly line process. There was an affluent gentry class in the sixteenth and seventeenth centuries under both the Ming and the early Qing. Roads and canals linked a very sophisticated internal market system. The reasons for China’s vulnerability to foreign economic interference have been debated for a generation or more. One of the best explanations, in this writer’s mind, comes from Mark Elvin in *The Pattern of the Chinese Past* (1973).² There had been a rapid expansion of small market towns in the sixteenth century and the total disappearance of serfdom by the eighteenth century, but this activity took place with very little technological change. Both income and profits were high; there was no motivation to change. Elvin sums it up with the phrase “quantitative growth, qualitative standstill”; China was caught in a “high level equilibrium trap.”³

on agricultural capacity at a time when natural disasters and failed harvests lowered production. In 1898, for instance, levies on the Yellow River failed, flooding 2,000 villages. The Qing solution of “more effort” and opening up marginally productive areas was not sufficient. Yan Fu (1854–1921), one of the most influential scholar/activists in China, believed that China’s problems were primarily internal, with only about 30 percent attributed to foreign interference. Perhaps. However, it may have been that 30 percent that resulted in the end of dynastic China.

Industrialization’s far-reaching changes in production and access to power transformed the globe. States with the power to support industrialization thrived but took an unfortunate turn as they attempted to gain control of raw materials and potential consumers across Asia and Africa. Latin America avoided formal colonization at this time, but Latin American states were drawn into the world markets as exporters of inexpensive raw materials, importing the higher-profit finished products. Many developed a dependency on foreign banks and corporations. Although there have been some improvements in economic connections, Latin America’s uneasy relationship with the United States and various West European states has persisted. The highly industrialized consumer states were willing to support unpopular governments in order to preserve commercial relationships, which further complicated already complex internal social arrangements.

The radical social reorganization required by industrialization changed culture and social organization everywhere. International success depended on the success of domestic businesses and maintaining a healthy economy. Labor costs were the most easily controlled; women and children were the most desirable employees because they tended to be more

Labor costs were the most easily controlled; women and children were the most desirable employees because they tended to be more compliant. Wages fell, as did standards of living.

compliant. Wages fell, as did standards of living. Governments became involved in labor issues, assisting in keeping wages low. Some economists, such as David Ricardo (1772–1873), opposed higher wages or unemployment assistance, maintaining that they disrupted a divine plan: when times were good, workers would have more children, ensuring that the next generation of workers would be competing for jobs, keeping wages low. When times were bad, excess numbers would die of starvation, keeping the world in balance. Had they not already been dead, humanitarians such as David Hume and Adam Smith would have been appalled. Yet until workers began organizing for political power, their living conditions and their treatment by employers was horrifying.

In Britain particularly, most operations began as textile producers. With the new mechanized looms, working at home became impractical. It was more efficient to gather the workers in one place—the manufacturing factory—than to try to move machinery, and thus grew the factory towns. Hastily built and centering on efficiency of production rather than quality of life, these towns were crowded, dirty, and oppressive. Friedrich Engels described the appalling conditions:

In most of the working-men's quarters of Manchester, the pork-raisers rent the courts and build pig-pens in them. In almost every court one or even several such pens may be found, into which the inhabitants of the court throw all refuse and offal, whence the swine grow fat; and the atmosphere . . . on re-reading my description, I am forced to admit that instead of being exaggerated, it is far from black enough to convey a true impression of the filth, ruin, and uninhabitableness, the defiance of all considerations of cleanliness, ventilation, and health which characterise the construction of this single district, containing at least twenty to thirty thousand inhabitants. And such a district exists in the heart of the second city of England, the first manufacturing city of the world. . . . Everything which here arouses horror and indignation is of recent origin, belongs to the *industrial epoch*.⁴

Urbanization brought economic benefits but disrupted traditional loyalties, which were slowly replaced by a sense of nationalism, an ideology based on common language, culture, and history, among other things.

Industrialization, nationalism, and patriotism were interwoven. People across the world began to believe that economic development was tied to the fate of the nation. The enhanced sense of nationalism, like industrialization itself, intensified during the transition to a market economy. It is arguable that nationalism was a prerequisite to industrialization; loyalty to manor or village could not call forth the coordinated effort required in completely redesigning an economic system. Imperial expansion had an economic motive but also required a population excited by the notion of serving “Queen and Country.” Imperialists loved their empires and the machines that made them possible. Iron machines were decorated with molded ivy or flowers; cannon were given human names and celebrated by songs and poems. By the nineteenth century, success in industry and commerce became a patriotic duty, and nations willingly provided the necessary military support and protection.

Notes

1. Peter N. Stearns, *The Industrial Revolution in World History*, 2nd ed., Essays in World History (Boulder, CO: Westview, 1998), 24.
2. Mark Elvin, *The Pattern of the Chinese Past* (Stanford, CA: Stanford University Press, 1973), 283–284.
3. Ibid., 283–285.
4. Friedrich Engels, *The Condition of the Working Class in England in 1844*, trans. by Florence Kelley (New York: J. W. Lovell Company, 1887), 45–53.

Bibliography

- Adas, Michael. *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance*. Ithaca, NY: Cornell University Press, 1989.
- Beaver, Patrick. *The Crystal Palace: A Portrait of Victorian Enterprise*. Chichester, Sussex, UK: Phillimore, 1986.
- Brook, Timothy, and Hy V. Luong. *Culture and Economy: The Shaping of Capitalism in Eastern Asia*. Ann Arbor: University of Michigan Press, 1997.

- Elvin, Mark. *The Pattern of the Chinese Past*. Stanford, CA: Stanford University Press, 1973.
- Engels, Friedrich. *The Condition of the Working Class in England in 1844*. Translated by Florence Kelley. New York: J. W. Lovell Company, 1887.
- Mokyr, Joel. *The British Industrial Revolution: An Economic Perspective*. 2nd ed. Boulder, CO: Westview, 1999.
- Stearns, Peter N. *The Industrial Revolution in World History*. 2nd ed. Essays in World History. Boulder, CO: Westview, 1998.
- Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. Translated by Talcott Parsons. London: Allen and Unwin, 1930.

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Globalization—the increasingly interconnected relationships between the people of the world—is a reality in our lives. We take for granted that our material belongings may be constituted of elements from across the world (perhaps Indian cotton, wood from Brazil, diamonds from South Africa, etc.). We also understand that the financial difficulties of late 2008 destabilized markets around the world. As Dr. Gilbert writes, international processes have an increasing impact on our lives.

—Carolyn Neel

Globalization and World History

Erik Gilbert

It is often remarked that historians' interpretations of the past reflect the concerns of their time. The great historians of the nineteenth century were primarily concerned with the history of the nation-state. Economic history saw its star rise in the United States during the Great Depression, a time when the writer Thomas Wolfe (author of *Look Homeward Angel*) observed that everyone claimed to be an economist. It should not come as a surprise then that since the end of the Second World War, historians have become interested in interpretations of the past that emphasize cross-cultural exchange and encounters. The years since 1945 have been marked by the greatest expansion of planetary interconnectivity in history, so naturally we have begun to notice and emphasize those aspects of the past.

This process of ever-increasing global interconnection is usually called globalization. Unfortunately “globalization” is one of those terms that gets used in so many ways, by so many people, and in so many contexts that a concrete and universal definition of the term is nearly impossible to come by. In his book *Globalization*, Jan Aart Scholte devotes nearly all of the first 85 pages to examining the different conceptions and definitions of globalization that are currently employed in both scholarly and popular usage. He ends by concluding that none of the standard definitions is completely satisfactory and offers his own, “the spread of transplanetary—and in recent times also more particularly supraterritorial—connections between people.”¹ Scholte wisely concedes that his definition is imperfect, but we will use it, as he does, because it makes a good starting point for talking about globalization.

These “transplanetary connections” can take many forms. They can be economic in that one aspect of the new global order is the free flow of capital and goods across national borders. The years since 1945 have seen a steady erosion of barriers to trade and investment, with the result that consumers all over the planet have access to goods produced wherever labor is cheapest. A far greater percentage of what is now consumed is manufactured far from the point of consumption than was ever the case in the past. This is not exclusively a rich world phenomenon. Africans are just as likely to see Chinese-made refrigerators and cell phones and Indian-made cloth in their stores as Americans are to see Chinese-made MP3 players and computers.

Maria Guaman receives 100 dollars sent by her husband, a U.S. immigrant, at a bank in Nabon, Ecuador, March 18, 2009. The country adopted a U.S.-dollar-based system in 2000. (AP Photo/Dolores Ochoa)



Economic connections between people are not limited to manufacturing. Outsourcing of business processes, mostly but not exclusively to India, lets businesses all over the world make use of educated and skilled workers more cheaply than they can get the same workers in the United States or Europe. Writing software code, accounting, telemarketing, and data entry and processing are all easily outsourced. An interesting example of this is New York City's use of workers in the west African nation of Ghana to process parking tickets.

Likewise, capital moves almost seamlessly through the world and across borders. Cross-border investment is commonplace, and the speed at which money can flood into a place that seems to promise good returns is rivaled only by the speed with which it departs once investors lose faith in an economy. The result of this has been extraordinary economic growth in places that are in favor with investors and catastrophic financial collapses when investors decide to bail out of an economy in crisis.

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People too move through the world, though with less ease than goods and capital. Even the most avid proponents of economic liberalization—that is, the removal of obstacles to the free movement of goods and capital—have been unwilling to see the movement of labor fully liberalized. The migration of people, whether for economic or other reasons, remains tightly controlled. Still, the global movement of people is at an all-time high. Workers from the poor parts of the world flood into the United States and Europe, where their labor is worth far more than it is at home. At the same time, ambitious skilled workers from Europe and North America are moving to the Persian Gulf and to eastern

Asia seeking opportunities for skilled workers with a good command of English. In addition, tourism and business travel routinely and cheaply send temporary visitors to places that would have been reachable only after an arduous and expensive journey 50 years ago.

There is a political element to globalization. Just as businesses are no longer anchored to the nation-state, the great political challenges of our time have a global component. Environmental concerns, such as climate change or the degradation of the oceans, are not issues that only affect or can be addressed by individual states. Similarly, nonstate political movements, like terrorist organizations, are global problems that transcend the confines of a particular nation-state. Even a fairly localized political organization, like Hezbollah in Lebanon, raises money from Lebanese Shiites living in places as disparate as the Ivory Coast and the frontier between Brazil and Paraguay. International organizations, most notably the United Nations (UN) but also the World Bank, the International Monetary Fund, Interpol, and the International Maritime Bureau, play an ever-growing role in trying to resolve these and other issues.

Globalization has a social and cultural side too. The presence of large groups of recent immigrants has changed the cultural landscapes of American and European cities. Foods that were once exotic and foreign have become commonplace in the West. Indian curries have supplanted fish and chips as the national food of Britain. Americans now eat more salsa than they do catsup. At the same time, Western restaurant chains and their imitators are found virtually everywhere. Nigerians eat their burgers at Mr. Biggs, Pizza Hut is ubiquitous in the Middle East, and Indians queue up for mutton burgers at various McDonalds imitators. The global reach of media means that people all over the world can watch similar television programming. Networks like CNN have a global audience, and American programming is popular in surprising places. *Baywatch* is popular in the Persian Gulf (you can enjoy it without understanding the dialogue), and sitcoms like *Friends* (with subtitles) are popular in Egypt. At the same time, local media can follow immigrants to their new homes. Mexican telenovellas are available in the United States, immigrants to the United Kingdom from southern Asia are able to follow the fortunes of their cricket teams at home, and you can catch the news from the Ukraine virtually anywhere by Internet radio. Low-cost international telephony, email, and video and cassette tapes have made it possible for migrants to stay in touch with the families and communities they have left behind. As a result, the nature of travel and long-term migration has changed. One can live in a new place, far from one's home, but still be socially connected to one's old home in ways that would have been impossible a hundred years ago.

Globalization, it seems, is the defining quality of our times. Naturally there are a number of debates about it. Probably the most charged of these is the question of who benefits and who is harmed by these new developments. From the historian's perspective, it is still too soon to be able to answer that question. Instead, this essay will focus on the origins of globalization and try to assess whether it is a fundamentally and qualitatively new phenomenon or whether it is simply an elaboration

and expansion of global interconnections that have been present for centuries.

Globalization's Past: 1500–1800

Some critics of the current thinking about globalization contend that there is little that is new about it. These critics, who are often historians, argue that there is a long history of the types of interactions that we now call globalization and that the apparent novelty of globalization

Gregory Gunn's book The First Globalization, 1500–1800, argues that many of the features of modern globalization were present in the early modern period as the European discovery of new sea routes dramatically increased global trade and cultural interaction.

is caused by the real novelty of some of the technologies that created the current intensification of global interconnection. By way of example, Gregory Gunn's book *The First Globalization, 1500–1800*, argues that many of the features of modern globalization were present in the early modern period as the European discovery of new sea routes dramatically increased global trade and cultural interaction.² Institutions like the Roman Catholic Church took on a global character in this age as

the Portuguese and Spanish empires put Catholic churchmen and missionaries into the far corners of the earth, giving the Church an early form of the global reach that organizations like the UN now wield. The Church even developed an early type of global media as it brought printing presses to its most distant outposts, often places that had never had them before. Global trade in spices, textiles, bullion, and even food (sugar) made for globally connected markets. Chinese merchants came to depend upon silver from the Americas, and the Mexican peso, the Spanish real, and the Indian rupee circulated far beyond the confines of the empires that minted them.

There were global cultural encounters as European intellectuals began to grapple with the study of the Chinese classics and with Islamic and Indian classical scholarship, a family of disciplines called Orientalism. At the same time scholars in China, Japan, and southern Asia had to come to terms with the scientific knowledge that Europeans possessed, a process that was sometimes as damaging to received wisdom there as the encounter with Asia and the Americas had been for Europeans. It was also during this era, according to Gunn, that the Portuguese language emerged as the first global lingua franca. Obviously the level of global integration increased dramatically during this period, but technology of the age saw to it that these interactions were far more limited in scope and scale than is the case now. It took years for messages to pass between Europe and Asia, global markets were mostly confined to a few commodities that could bear the cost of being aboard ship for six months or a year, and the number of people who had the opportunity and education to actually spend much time pondering the intricacies of someone else's philosophy was small indeed.

Globalization's Past: 1800–1919

After 1800 technological innovation picked up rapidly, and globalization kept pace. Primitive steam engines pumped water out of eighteenth-century mines, but in the first half of the nineteenth century steam power went through the sort of radical changes in efficiency and miniaturization that computer chips have experienced in the last 50 years. By midcentury steam engines were used in oceangoing ships for reliable passenger and mail services. By the 1870s steamships and their land-based cousins, the railways, were efficient enough that they carried much of the world's cargo. Steamships were not necessarily faster than sailing ships but were dependable. A sailing ship might make the passage in five days one time and ten days the next time. A steamship would make that same passage in seven days each time. This meant that like railways, steamships could keep to a schedule and make regular deliveries of raw materials to factories and finished goods to their markets. The result was an increasing integration of global supply chains, as Europeans manufacturers could rely on steamships to bring them regular deliveries of the materials they needed. Steamships also carried international mails in ways that were far faster and better organized (a letter was more likely to reach its intended destination) than in the past.

The advent of the telegraph meant a dramatic diminution of the time it took to communicate across long distances. By 1890 undersea cables linked the inhabited continents, and a message that might have taken many months to reach its recipient in the age of sail or some months in a steamer could pass in minutes from one side of the world to the other. To be sure, international telegrams were horribly expensive and were used mostly for essential

By 1890 undersea cables linked the inhabited continents, and a message that might have taken many months to reach its recipient in the age of sail or some months in a steamer could pass in minutes from one side of the world to the other.

business communication and by governments; there was no telegraphic equivalent of the chat room. The effect of this was to permit merchants to have more complete knowledge of global markets than ever before. For the first time in human history, market intelligence traveled substantially faster than trade goods. Before buying a cargo of cotton in Senegal, a merchant could know exactly what it would be worth that very same day in Nantes or Manchester and could make the decision of what to buy and where to send it based on that information. Prior to the telegraph, these sorts of decisions were made more or less blindly.

The expansion of European empires in the late nineteenth century coupled with Britain's ability to enforce free trade policies even in places where they were unwelcome meant that legal obstacles to trade and the movement of capital fell rapidly. European banks appeared in China, India, South America, and Africa. Telegraphs allowed these banks to process international financial transactions in hours rather than months, allowing businesses to move money globally at unprecedented rates. Global business was not the sole province of Europeans. The Indian

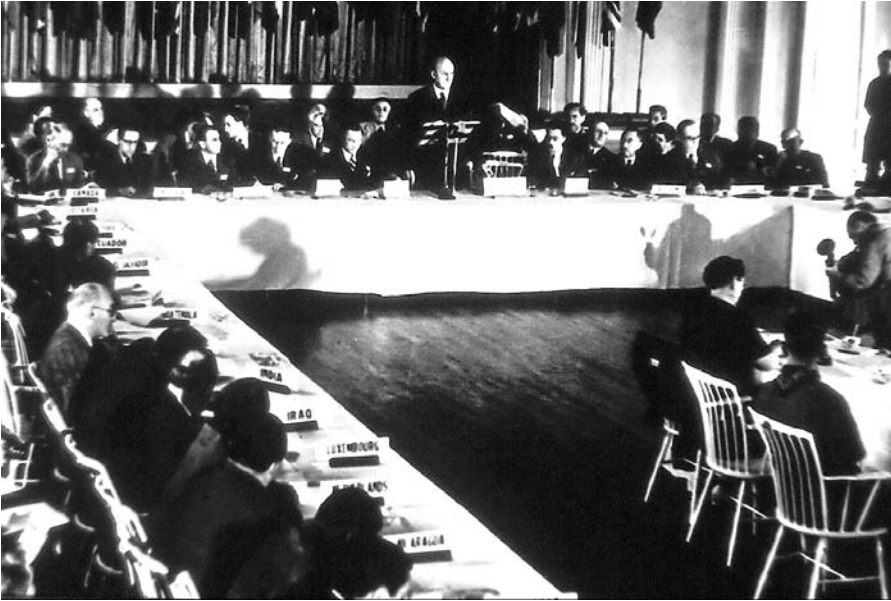
merchant house Cowsaji Dinshaw had offices in Bombay, Aden, Dar-es-Salaam, and Zanzibar and owned its own steamships. The Zanzibari merchant Tharia Topan had offices in Bombay and London in addition to Zanzibar. Chinese family businesses reached from southern China to branches in Southeast Asia. The Japanese soy sauce maker Kikkoman opened its first factory in the United States in 1892. All this was made possible, or at a minimum was encouraged, by the stability offered by the European empires and by a broader commitment to free trade.

This period also saw global labor migrations. Indian contract workers went to places as diverse as Trinidad, Surinam, Fiji, Kenya, and Mauritius to work on sugar plantations and build railways. Chinese laborers played a similar role in Southeast Asia, Peru, and the American West. Millions of Europeans migrated to the United States, Australia, New Zealand, and South Africa. Steamships and railways also facilitated travel for noneconomic reasons. The annual Muslim pilgrimage to Mecca, the Hajj, grew larger and more diverse during this period. The number of Indians, Africans, and Southeast Asians who could fulfill this religious obligation increased as the efficiency of steamships reduced the time and cost of long-distance travel. The late nineteenth century also saw the birth of modern tourism. Travel became part of the expected behavior of well-to-do Europeans and Americans. The postcard became popular in the mid-nineteenth century. The first round-the-world package tour was launched in 1872, and the traveler's check appeared in 1890.

Another aspect of globalization during this period was a rise in the number of international organizations. The International Red Cross and the Red Crescent were founded in 1863. The abolitionist movement and to a lesser extent the temperance movement were transatlantic efforts, though less formally organized than the Red Cross and the Red Crescent.

The Interwar Years

The decades just before the First World War were so economically integrated that some historians consider this period, rather than our own, the height of economic globalization. The war, however, brought this first great globalization to a grinding halt. Once the war started, attacks on merchant ships and the collapse of free trade agreements led to a rapid decline in global trade and migration. Even global telegraph connections broke down because they had relied on cooperation between different nations to pass messages across their territories. The British and French naturally did not allow German merchants to operate in their colonies, and once the war ended it was hard for German merchants to get back into their former businesses. The years between the world wars were also a time when protectionism was the order of the day. Nations that had once been eager free traders now worried about the economic vulnerability caused by coming to rely on resources that were not under their own control. The result was systems of tariffs meant to hinder cross-border or, in the case of the British and French,



United Nations delegates from 44 nations gather at the Mount Washington Hotel in Vermont for the Bretton Woods Conference, July 2, 1944. (Corel)

extraimperial trade. Globalization, at least with respect to trade and capital flows, diminished.

Other aspects of globalization proceeded apace. The year 1918 saw the first airmail service. The year 1919 saw the founding of Save the Children, a global humanitarian organization. Woodrow Wilson's League of Nations was the first organization that tried to embrace all of the world's nations, even if some, like the United States, shrugged off its embrace. The first transatlantic phone call, via radio link, took place in 1926.

Globalization since World War II

If the First World War set back the integration of global markets, the Second World War had the opposite effect. The pressure of war seems to act as a catalyst to human creativity. Much of the basic research for such staples of globalization as the jet engine, radar (without which air travel would be well nigh impossible), and the computer happened during the war. The precursor of the shipping container was also developed during the war, as global warfare forced the U.S. military to develop a global logistics system.

When the war ended, the leaders of the victorious nations were anxious not to repeat what they saw as the mistakes of the interwar years. One thing they especially hoped to avoid was the rise of protectionism again. Even before the war ended, the Allies had begun planning the economic recovery. They met in 1944 at Bretton Woods in New Hampshire, and the result was commitment to a steady reduction in tariffs and other obstacles to international trade. Their assumption was that nations would not go to war against their trading partners and that global prosperity might prevent another global war.

In the years immediately after the war the average tariff on international trade was 40 percent. As a result of Bretton Woods and its

successors, the General Agreement on Trade and Tariffs (GATT) and the World Trade Organization (WTO), average tariffs are now at 5 percent and still falling. Thus, most though not all of the legal obstacles to free trade have fallen. Most of the world's economic powers find free trade and globalization to be beneficial and desirable. Economically weaker nations are sometime less enthusiastic about economic globalization but find it hard to resist the pressure to participate that organizations like the World Bank and the International Monetary Fund are able to impose on them as a condition of receiving aid and loans.

The effects of these bureaucratic and legal changes have been dramatically amplified by technological innovation. The Internet, the rise of wireless phones and cheap international telecommunication, air travel, and containerized shipping have all led to what has been called

The Internet, the rise of wireless phones and cheap international telecommunication, air travel, and containerized shipping have all led to what has been called the “death of distance.”

the “death of distance.” The effects of distance have virtually ceased to exist from an economic perspective. Transportation costs represent less than 1 percent of the cost of finished goods. The price of communication has diminished to the point that mobile phone operators rarely charge extra for long-distance calls, and the price of sending an email from one side of the

earth to the other is so low that it would be hard to even calculate. Mobile phones are now more common than landlines, and their use is commonplace in parts of the world where phones of any sort are a relative novelty. For example, mobile handsets and phone cards have come to be seen as an essential feature of the bridewealth that a groom's family gives to a bride prior to a wedding in some parts of western Africa.

Containerized shipping, which uses standardized containers to hold cargo, has reduced shipping and cargo handling costs to the point that where something is made is virtually irrelevant to its price. Containers can be transferred, without being opened, to trucks or trains and taken directly from their port of arrival to the distribution center that ordered the goods. Containers are tracked and directed using the Internet, and the result of this combination of cheap communication and cheap transportation has revolutionized world trade.

From an economic perspective, death of distance is but an extreme version of the sort of global economic integration that characterized the 30 years before the First World War. On the social front the current globalization and the death of distance in personal communication do seem new and revolutionary. The Internet, air travel, and cheap international phone calls have utterly transformed what it meant to be a migrant. Immigrant communities are in regular touch with their former homes, so much so that they often seem less inclined toward assimilation than they once were. Nigerians in the United States and the United Kingdom can buy Nigerian movies with a click of the mouse. Lebanese immigrants in western Africa remain full and active members of their villages in Lebanon using not only regular phone calls but also video tapes of important events like weddings and funerals. The death of distance means that a social community can exist despite being geographically dispersed.

One effect of this has been, perversely, to strengthen rather than break down group identities. It has made west African and south Asian immigrants to Europe more rather than less conscious of their roots and community. It is easier now to avoid assimilation than ever before. Global organizations like the UN or the WTO, which strive for global integration, are rivaled and challenged by organizations like al Qaeda, which use global communications and transport for very different ends. What the future holds for globalization is difficult to judge.

The economic integration of the world in our time does not seem all that different than the economic integration of the pre-First World War era. Distance may be dead now, but its death throes began in the second half of the nineteenth century. What does seem different now is that distance is dead not just for markets but also for people. The extent to which social interactions can take place without regard to distance is revolutionary. It may be that this new development is why we are so much more conscious of globalization than people were in 1890. In 1890 Europeans rode bicycles with tires made from tropical rubber, Egyptians grew cotton to feed British textile mills, Americans drank coffee from the Middle East, and central Africans wore cloth made in Britain and New England. But they were not all watching the same movies or sending each other email. It is one thing to be in daily physical contact with objects from other places; it is another thing altogether to sit next to a person from a distant place on the bus everyday and to deal on a daily basis at work with people on the other side of the globe. It is this new social globalization, where cross-cultural interaction is a daily occurrence, that leads us to see cross-cultural interaction in the past and thus to write and read encyclopedias of world history.

Notes

1. Jan Aart Scholte, *Globalization: A Critical Introduction*, 2nd ed. (New York: Palgrave Macmillan, 2005), 59.
2. Geoffrey C. Gunn, *First Globalization: The Eurasian Exchange, 1500 to 1800*, World Social Change (Lanham, MD: Rowman and Littlefield, 2003).

Bibliography

- Appadurai, Arjun. *Modernity at Large: Cultural Dimensions of Globalization*. Public Worlds Series. Minneapolis: University of Minnesota Press, 1996.
- Gunn, Geoffrey C. *First Globalization: The Eurasian Exchange, 1500 to 1800*. World Social Change Series. Lanham, MD: Rowman and Littlefield, 2003.
- Gunn, J. A. W. *Beyond Liberty and Property: The Process of Self-Recognition in Eighteenth-Century Political Thought*. McGill-Queen's Studies in the History of Ideas, 6. Kingston: McGill-Queen's University Press, 1983.
- Held, David, and Anthony G. McGrew. *Globalization/Anti-Globalization*. Malden, MA: Polity, 2002.
- Kennedy, Paul M., Dirk Messner, and Franz Nuscheler. *Global Trends and Global Governance*. London and Sterling, VA: Pluto Press/Development and Peace Foundation, 2002.
- Marston, Sallie A., Paul L. Knox, and Diana M. Liverman. *World Regions in Global Context: Peoples, Places, and Environments*. 3rd ed. Upper Saddle River, NJ: Pearson Prentice-Hall, 2008.

- Pacey, Arnold. *Technology in World Civilization: A Thousand-Year History*. Cambridge, MA: MIT Press, 1990.
- Scholte, Jan Aart. *Globalization: A Critical Introduction*. 2nd ed. New York: Palgrave Macmillan, 2005.
- Spellman, W. M. *A Concise History of the World since 1945: States and Peoples*. Basingstoke, UK; New York: Palgrave Macmillan, 2006.

Glossary

A

Absolutism A theory of government in which all sovereignty rests on a monarch or prince. In theory, the power of an absolute monarch is not limited by any legislative or judicial bodies. In Europe, this type of rule was justified by either Divine Right Theory or reason of state and was based on the assumption that the monarch knows what is best for his or her subjects.

Acheulean A type of stone tool industry characterized by the hand ax from the Pleistocene period in human evolution. Associated with *Homo erectus* and Archaic *Homo sapiens*. Named after the site Saint Acheul in France where it was first discovered.

Afrikaner South African descendant of the seventeenth-century Dutch settlers of the Cape Town Colony who speaks Afrikaans, a Germanic language derived from Dutch. The Boers (the Dutch word for “farmer”), descended from the eastern Cape frontier and were a seminomadic group of farmers who lived in the borderlands. Today the term “Afrikaner” refers to all white Afrikaans-speaking people in South Africa, which includes descendants of the Boers.

Afro-Eurasian ecumene The interacting and interrelated band of civilizations stretching from Europe and North Africa through West Asia, Iran, South Asia, Southeast Asia, China, Japan, and Korea. As such, the Afro-Eurasian ecumene (or simply the Ecumene) included most of the major civilizations of the Old World. In this usage, “Afro-Eurasian ecumene” is not just a geographical term but instead denotes a cluster of interacting civilizations.

Ahimsa Religious principle advocating avoidance of violence, associated with South Asian religious traditions—Hinduism, Buddhism, and especially Jainism. This tenet prohibits the injuring or killing of living beings.

Ahura Mazda Central Zoroastrian deity associated with goodness and truth and in opposition to the force of destruction and lies, Angra Mainyu.

Aksum/Axum Ancient African trading kingdom centered in northeastern Africa in what is now northern Ethiopia. Though a proto-Aksumite culture existed from circa 400 BCE and lasted until circa 1000 CE, the kingdom flourished from the first through the seventh centuries CE.

Al-Andalus The name given to the Iberian Peninsula while under the control of the Umayyad caliphate. Later as the area passed to other caliphates, the name became synonymous with those territories controlled by Muslims, especially as the Christians began regaining more territory on the peninsula. The name became officially nonexistent in 1492 when Granada officially became a part of the Christian Spanish kingdom.

Allah The Arabic word for God, generally used by Arabic-speaking Christians as well as Muslims, used in the monotheistic tradition of the Abrahamic religions.

Allies Countries aligned with one another during war. The best-known use of the term was during World War II, when the United States, Britain, France,

and the Soviet Union joined forces. Winston Churchill called this cooperation the “Grand Alliance,” but these countries were more commonly referred to as the Allies.

Amun An ancient Egyptian deity representing the hidden or essential aspects of the universe. When amalgamated with the solar deity Re (becoming Amun-Re), he became one of the most important deities in Egypt, with his worship centered at the temple of Karnak at Thebes. *See also* Amun-Re.

Amun-Re Ancient Egyptian deity, amalgam of two originally individual deities, Re and Amun. *See also* Amun; Re.

Anarchism A political theory that holds all forms of governmental authority to be unnecessary and undesirable. Devoid of hierarchy, an anarchist society would be based on voluntary cooperation and the free association of individuals and groups.

Ancien régime French term for “former regime” that refers to the system of government and society in France before the French Revolution of 1789. This term dates from the postrevolutionary period and was used as a way to promote the revolutionaries’ cause and criticize the past, which they viewed as a tyrannical, absolutist government.

Anthropoid Nickname for a member of the suborder anthropoidea, the so-called higher primates, that includes monkeys, apes, and humans (but not tarsiers).

Antinomianism The belief that a religious principle frees one from an obligation to follow a secular law or code. This label was often placed on groups of religious dissenters such as the Anabaptists.

Antinonianism Syncretic religion of Africa started in the Kongo at the turn of the eighteenth century that asserts that Jesus, Joseph, and Mary were all black Africans. Its main prophet Dona Beatriz was burned as a heretic in 1706.

Anti-Semitism Hostility directed at Jews on political, social, economic, and religious levels. Anti-Semitism grew in Europe during the nineteenth century, fueled by biblical interpretations assigning Jews responsibility for the crucifixion of Christ, and was central to nationalist movements in Germany and the Austrian empire. Political anti-Semitism survived into the twentieth century, most notably during the Holocaust in which Nazis attempted to exterminate all the Jews in Europe.

Apartheid South African policy of racial segregation of black citizens in townships separate from white society.

Apocrypha The original meaning of the term “apocrypha” comes from the Greek for “those having been hidden away.” This referred to certain texts that were considered too sacred or profane for any but the initiated to read. In early Christianity, the term “Apocryphal” was used to describe certain texts that were hidden because of their questionable value to the church. In the sixteenth century the word took on a negative connotation as the Protestants questioned certain books that had been included in the original Bible.

Appeasement The policy of maintaining peace through acceding to the demands of a potential enemy. The term is most often used in discussions regarding World War II and gained widespread usage as a description of British and French policies toward Nazi Germany in the late 1930s.

Aramaic Aramaic was a Semitic language closely related to Hebrew that was used extensively in the ancient Near East from 700 BCE to 200 CE.

Arianism Early interpretation of Christianity espoused by Arius and his followers in the fourth century that rejected the divinity of Christ and negated

the Trinity and was thus at odds with Trinitarianism. Arianism was popular among Roman elites, the clergy, and many of the Germanic groups.

Arminianism Named after Jacobus Arminius, a Dutch theologian, Arminianism was a Christian movement in the seventeenth century that rejected the doctrine of predestination, a tenet of Calvinism that stated that God had already chosen which people would go to heaven. Arminianism, in contrast, upheld the importance of free will and asserted that salvation was dependent on faith. Arminianism influenced the development of Methodism and Unitarianism.

Arms race Reciprocal process among nation-states of augmenting military capabilities in response to the perceived or real military buildup of antagonist powers.

Arthashastra Ancient Hindu treatise on diplomacy, economic policy, and military strategy written during the later Maurya empire, circa fourth century BCE. This treatise remained influential until the twelfth century, when it disappeared.

Aryan A group of people, now generally called Indo-Europeans by scholars, who domesticated horses and migrated from the steppe region of the Ukraine by about 4000 BCE, reaching as far west as Ireland and Scandinavia and eastward to China, South Asia, Persia, Anatolia, and the Levant. In the mid-nineteenth century, Aryans were romanticized as the ancestors of a purportedly superior race, causing many serious scholars to abandon the term. These notions and claims were thoroughly discredited by the early twentieth century.

Asantehene The title given to the ruler of the Asante empire. The first asantehene was Osei Kofi Tutu in 1701.

Asiento Beginning in the sixteenth century, the *asiento* was a contract issued by the Spanish Crown to merchants who, in return for a fee, were granted monopolies over certain trade routes and/or products.

Assimilation The process whereby individuals or groups of differing ethnic heritage are absorbed into the dominant culture of a society.

Assyria North Mesopotamian region associated with the ancient Assyrian empire (ca. 2000–745 BCE).

Aten An ancient Egyptian deity, Aten or Aton is the name for the sun god, who was thought to be manifest as the physical disk of the sun. This deity was associated with Amenhotep IV, a pharaoh who changed his name to Akhenaten and advocated a henotheistic worship of Aten, although some historians argue that this was actually the beginnings of monotheistic theology.

Atlatl A tool used to throw darts and spears with greater force and accuracy than can be done by hand. The word was coined by the Aztecs, but it is now used for all spear throwers no matter their origin, even those from archaeological sites that predate accounts of the Aztec weapons used against the Spanish.

Audiencia In Spanish America, *audiencias* were courts with criminal and civil jurisdiction over cases in Spain's viceroyalties and other colonial possessions. In addition, *audiencias* were responsible for hearing complaints against colonial officers as well as protecting the rights of the indigenous people.

Australopithecus Refers to a genus of ancient hominids; its species include *A. afarensis*, whose fossil remains date to 3.75 million to 3 million years ago. The famous 5 million-year-old skeletal remains of "Lucy," found in Kenya, are also hypothesized as being *australopithecine*. Other *Australopithecus* species include *A. africanus*, *A. anamensis*, and *A. sediba*. All of these species were

small and light of build (or gracile) compared to later australopithecenes such as *A. boisei* and *A. robustus*.

Austronesian Language group common to Southeast Asia, Melanesia (not including Papua New Guinea), Micronesia, and Polynesia. The language spread with migrations that occurred about 5,000 years ago.

Authoritarian A political system that favors a concentration of power in a leader or an elite group of people. The people governed by such a system generally lack the right to replace the leader or even to form opposition groups.

Autocracy A government in which one person or a group, like a committee or party leaders, has unlimited power. Autocratic rulers usually rely on the use of force to compel obedience in their subjects.

Auto-de-fé /auto-da-fé The practice of the auto-de-fé (from the Spanish *auto de la fe*, meaning “act of faith,” spelled auto-da-fé in Portuguese) was the sentencing phase of an Inquisition trial conducted by the Catholic Church against suspected heretics. The autos-de-fé, started in 1481 in Spain and 1540 in Portugal, were designed to instruct the populace about the dangers of straying from orthodoxy.

Avesta Holy book comprised as a collection of sacred texts of Zoroastrianism, first written in 1278 BCE in the Avestan language.

Axis The coalition of countries that united against the Allies during World War II. Though the term was first used in a 1936 agreement between Germany’s Adolf Hitler and Italy’s Benito Mussolini, the pact was solidified with a military alliance in May 1939 and incorporated such countries as Japan, Romania, Slovakia, and Bulgaria over the course of the war. The Axis alliance ended on May 8, 1945, when Germany surrendered.

Ayatollah An honorific title for a high-ranking religious leader in the Shia branch of Islam. An ayatollah (the Arabic term *ayatollah* means “sign of God”) is regarded as being an authority in religious law and interpretation.

B

Balance of power Political situation in which an equilibrium exists within a group of nations, preventing any one nation or group from forcing its economic, political, or military will on another.

Bantu A language group, characterized by the usage of “ntu,” that inhabits the eastern and southern parts of Africa and makes up two-thirds of the continent’s population. The most widely spoken Bantu-derived language is Swahili, which has over 50 million speakers. The Bantus have migrated throughout western, eastern, and southern Africa in several phases over thousands of years.

Baroque A popular style of architecture, sculpture, music, and painting in Europe from the mid-sixteenth century to the mid-eighteenth century particularly in the countries of the Catholic Reformation, including Flanders, Bohemia, and the Catholic states of Germany. Characterized by elaborate detail and dynamic movement, the baroque style is often associated with excess, exaggeration, naturalism, and sensuality. The style was also encouraged by the Catholic Church because it emphasized religious themes in an emotionally charged and easily accessible fashion.

BCE An acronym for “Before the Common Era” used to designate the years that occurred prior to year 1 CE (Common Era) of the Gregorian calendar. BCE often replaces the abbreviation BC (“Before Christ”) and is the more widely used designation among scholars.

Bedouin Originally a nomadic Arabic-speaking people who lived in the Arabian Desert, the Bedouins were divided into tribes descended from a single ancestor. They converted to Islam in the 600s and today have spread to North Africa and the deserts of the Middle East, particularly Iraq, Jordan, Saudi Arabia, and Syria. Beginning in the nineteenth century, the number of nomadic Bedouins began dwindling as economic and environmental conditions forced many to settle in the cities of the Middle East.

Berber Indigenous peoples of northern Africa who inhabit lands between the Sahara and the Mediterranean Sea and between Egypt and the Atlantic Ocean. The Berbers form a substantial portion of the populations of Libya, Tunisia, Morocco, and Algeria.

Bey Derived from the Turkish term meaning “chieftan.” The first three rulers of the Ottoman empire were known as beys before becoming known as sultans. After the establishment of the sultanate, the title of “bey” was shifted to district administrators and lower-level military governors.

Bhagavad Gita Sanskrit for “Song of God,” the Bhagavad Gita is a sacred Hindu religious text and part of the longer Sanskrit epic the Mahabharata. It is unknown when this text was written, although most historians agree that it predates the Common Era.

Bhakti Devotional path in Hindu marked by an ecstatic mysticism in which adherents attempt a permanent union with a deity such as Vishnu/Krishna, Shiva, and Durga/Kali. Poetry expressing a fervent, even romantic union with a deity, often written by women, can be found in Bhakti literature from about 500 to 1000 CE.

Bible Central book of Christian scripture that combines the Jewish Tanakh, or Old Testament (the Book of Moses, the Prophets, and Writings) with the Christian New Testament.

Bishop A bishop is a high ecclesiastical official who has the authority to ordain and confirm. The term “bishop,” which comes from the Greek *episcopus* meaning “overseer,” describes the main traditional function of a bishop, which is to govern a diocese. Bishops are the earliest attested officials of the Christian hierarchy, and their office is usually equated with that of the apostles. Only gradually did the nascent churches in the Roman empire grow enough that bishops needed help, and the offices of deacon and priest were created to provide assistants to the bishop.

Black Death European term for the pandemic that erupted in China in the 1330s and spread over trading routes throughout China to Central Asia and Europe, killing from one-third to one-half of affected populations. *See also* Bubonic Plague.

Boddhisatvas In Buddhism, boddhisatvas are enlightened beings said to remain on a lower plane of existence to offer compassion and aid to sentient beings who have not attained enlightenment.

Boer South African descendants of Dutch, Huguenot, and German settlers who were sent in the early eighteenth century to strengthen the Cape Town station in South Africa, founded in 1652 by the Dutch East India Company. The word “Boer” comes from the Dutch word for “farmer” and originally applied only to the white population living in the hinterland around Cape Town, while white men in the city were known as burghers.

Borderlands Space where two or more cultural groups from adjoining regions clash but may also meld. The distinct groups exchange goods and cultural forms and may also intermarry to form a syncretic culture that borrows from all the groups.

Bourgeoisie French word for middle class discussed in Marxist theory as the pivotal class responsible for the accelerated development of industrialization at the expense of the exploited working class.

Brahmins Hindu class of priests, part of the upper echelons of caste society.

Bubonic plague Derived from the Greek word *bubo*, meaning “swollen glands,” the bubonic plague has been responsible for several disease outbreaks around the globe. The first recorded instance of the disease occurred in the Byzantine empire during the sixth century CE. The disease was also responsible for the fourteenth-century Black Death that spread throughout Eurasia, killing one-third to one-half of the population. In the nineteenth century the plague resurfaced again in the form of a third pandemic. This latest outbreak began in central Asia and killed millions in China and India before spreading worldwide. It was not eradicated until the twentieth century. *See also* Black Death.

Buddha Indian prince Siddhartha Gautama (ca. 563–483 BCE) who renounced his wealth in pursuit of enlightenment and who espoused the principles of what would emerge as the world religion of Buddhism.

Buddhism World religion that emerged from the teachings of Siddhartha Gautama, originating in India and spreading throughout central and East Asia. Based on the Four Noble Truths, Buddhism’s followers sought to eliminate temptations and desires to attain enlightenment, or nirvana. *See also* Four Noble Truths, Noble Eightfold Path.

Bushido Japanese for “the way of the warrior,” Bushido was a strict set of rules that governed Japanese samurai behavior.

Business cycle Term economists use to describe periodic downturns in capitalist economies that can result in recessions or depressions.

C

Cahokia Site of ancient Native American civilization centered in the Mississippi River valley in what is now Illinois, characterized by a series of earthen mounds. Cahokia was initially settled in circa 600 BCE and lasted well until circa 1400 CE.

Caliph Meaning “successor” or “representative,” a caliph is the religious and temporal head of a caliphate, or Islamic state. After the death of Muhammad in 632 CE, Islam split into two factions as its adherents disagreed over who should succeed him as caliph. This disagreement led to a faction in Islam, with the Sunnis recognizing the validity of the first four caliphs but the Shia only recognizing the first two and choosing not to follow the rest. The Umayyads, the Abbasids, the Fatimids, and the Ottomans all claimed the title of caliph at one time or another.

Caliphate The caliphate was the Islamic state, ruled by a caliph, that existed from the death of the Prophet Muhammad in 632 until 1258 CE. During centuries of conquest, the caliphate spread from Arabia to southwestern Asia, northern Africa, and the Iberian Peninsula. After the last caliph of the Abbasid line was killed in a Mongol attack on Baghdad in 1258, the already-declining caliphate collapsed. A puppet caliphate in Cairo lasted until 1517, when the Ottomans invaded Egypt.

Calvinism A school of Christianity based on the teachings of John Calvin, a sixteenth-century Protestant reformer. In the seventeenth and eighteenth centuries Calvinism served as the religious basis for the French Huguenots, Scot-

tish Presbyterians, and many English Puritans, including the Pilgrims who immigrated to North America. Calvinism upheld the Bible as the rule of faith and emphasized the doctrine of predestination, the belief that God had already determined salvation or damnation.

Canaan The term used to refer to the ancient region between the Jordan River and the Mediterranean Sea prior to the emergence of ancient Israel.

Canonization Literally meaning to put a name on the list (canon) of the Roman Catholic saints, canonization is the formal process of declaring a person to have possessed heroic virtue, as proved by conclusive arguments, and to be worthy of recognition as a special servant to God.

Canton system Term for trade restrictions imposed by the Chinese Qing dynasty Kangxi Emperor, who designated specific merchant families, called the Co Hong guild, to deal with European merchants. The Qianlong Emperor, who in 1758 limited all European trade to the port of Guangzhou (called Canton by Europeans) intensified these regulations. Despite Chinese laws prohibiting the importation of opium, Canton was a major port of entry for the drug. Destruction of a shipment of Opium led to the First Opium war, 1839–1842, after which the Canton system was abandoned.

Capital If referring to a city, it is the political center of a state. If referring to finances, it is the accumulated money or other assets invested to produce profits. Can also refer to the total assets of a business.

Capitalism A highly contested term, but generally used to describe an economic system where the capital used to generate profits is controlled by private or non-government entities.

Caravansary Stations built in intervals along trade routes in Muslim-held territories that provided room and board, goods and services, and protection for merchants following central caravan routes.

Cardinal Subordinate only to the pope, a cardinal is the second highest-ranking official in the Roman curia, the papal bureaucracy.

Cartel A pact among the producers of any product that establishes cooperative agreement regarding price regulation, market share, supply, and distribution of goods. Antitrust laws make cartels illegal in the United States and many other nations because they restrict competition. The Organization of the Petroleum Exporting Countries (OPEC) is one example of a legal international cartel.

Caste A sociological term indicating a rigid hierarchy of people of the same social standing and/or economic position. One caste's members are forbidden to marry those of another. The best-known caste system is in India, with five divisions that range from the educated wealthy Brahman elite to what were formerly known as "untouchables," who perform the most menial tasks.

Catalhöyük Prominent Neolithic archaeological site located in Anatolia (modern Turkey) indicative of a flourishing settlement lasting from circa 7250 to 6150 BCE.

Catholic Reformation Also called the Counter-Reformation, the Catholic Reformation was a reform movement initiated by the Catholic Church in response to the Protestant Reformation in the sixteenth century and included theological and clerical reform and the establishment of new religious orders, most notably the Jesuits.

CE Acronym for "Common Era," used to designate the years starting with year 1 of the Gregorian calendar, while dates prior to 1 CE use the abbreviation "BCE." CE often replaces AD (anno Domini, or "in the year of the Lord").

Chavín culture A pre-Columbian culture in the north central highlands of Peru dating from around 900 to 200 BCE.

Chiefdom A society characterized by related clans or lineages that share the same culture. Lineages are ranked, and the leader of the most highly ranked lineage has the role of chief.

Chimu A pre-Incan culture along the northern coast of Peru dating from around 1100 to 1470 CE.

Christendom Geographical concept used in the Middle Ages to refer to all Christian lands as a unified entity.

Christianity A major world religion that, as presented in the New Testament of the Bible, teaches that Jesus is the son of God and that the life, crucifixion, resurrection, and ascension of Jesus redeems all humanity's sins. Christianity's principal divisions are the Catholic Church, Protestantism, and Eastern Orthodoxy.

City planning City, or urban, planning is the design of a city for the purposes of dwelling, sanitation, economy, or defense. Ancient civilizations such as Egypt, Mesopotamia, and Rome all used city planning while building their biggest cities. Medieval Europe used the planning of cities for the purpose of defense, as they were built around fortresses or castles. However, unlike for the Romans, the streets were mainly narrow and winding, with little forethought as to their placement. The Renaissance and Enlightenment brought a revival of the classical style of city building, with wide streets built on a grid system. City planning also existed in Central America, where civilizations such as the Aztecs built cities with sewer systems and running water. City planning has lasted into the modern day.

Codex An early form of the modern book. The codex, which replaced rolls of papyrus, consisted of paper or parchment bound together in the shape of a book. Its use became popular in the early days of Christianity because codex could contain large biblical texts that did not fit easily on a roll of papyrus. The term "codex" is also used to refer to a collection of laws.

Colonialism Direct or indirect political, economic, and ideological control of a region by an external power or state.

Columbian Exchange A term first used by Alfred W. Crosby to describe the meeting of cultures which followed the arrival of Christopher Columbus in the Americas, which led to the exchange of foods, plants, animals, and diseases, many of which had lasting ecological and historical consequences.

Command economy Ideological economic system promoting communalism, rejecting private ownership of the resources necessary for production. In the early decades of the nineteenth century the concept was given a revolutionary focus in the writings of Karl Marx and Fredrich Engels, which predicted the failure of capitalism and the establishment of a socialist state for the benefit of the working classes along egalitarian principles.

Communism Ideological economic system that rejects private ownership of a society's resources necessary for production, promoting communalism. In the early decades of the nineteenth century the concept was given a revolutionary focus in the writings of Karl Marx and Fredrich Engels, which predicted the failure of capitalism and the establishment of a socialist state for the benefit of the working classes along egalitarian principles.

Concert of Europe A system of diplomatic cooperation among the European monarchies—at first the Austrian empire, the United Kingdom, Russia, and Prussia—following the Napoleonic Wars. Without signing a formal agreement,

the great monarchies pledged to work together to suppress uprisings that threatened their power and territory. While the system did not succeed in crushing all rebellion, particularly the widespread revolutions of 1848, the Concert of Europe did continue as a means of international consultation throughout the nineteenth century.

Concubinage A social arrangement in which a woman, in this case a concubine, is in an ongoing matrimonial-like relationship with a man whom she cannot marry, either because he is of a higher rank or because he is already married. In places like China and the Ottoman empire, concubines had a legal status. Many families voluntarily arranged for their daughters to become concubines, as it afforded them economic and sometimes political protection. In places such as Europe, where monogamous marriage was the only status that was recognized, concubinage was afforded no legal definition and was likened to adultery.

Confucianism A belief system based on the observations of a school of thought developed by Kong Fuzi (551–479 BCE), whose name is Romanized as Confucius, and his follower, Mencius (371–289 BCE). Confucianism offers humanistic moral and ethical guidance for behavior and for proper relationships, primarily that of monarch and subject, father and son, husband and wife, elder brother and younger brother, and friend with friend. The system differs somewhat from European notions of religion, yet the system of thought developed doctrinal and ritual requirements that would place it well within the realms of both religion and philosophy. Forms or schools of Confucianism continue to play a major role in the thinking of people throughout Asia. *See also* Kong Fuzi.

Conquistadores Spanish term meaning “conquerors,” used to designate the Spanish explorers and adventurers, whether of aristocratic background or not, who conquered much of the Americas.

Conservatism A social and political philosophy that supports the maintenance of traditional institutions and resists rapid social, political, or economic change.

Constitution The collection of laws, precedents, and principles under which a government or other organization operates. The constitution may or may not be written or gathered into a single document. A constitution usually defines the nature of the government, the functions of its major branches, and its limitations and can, but does not always, include the rights of the people.

Constitutional monarchy From the seventeenth through the nineteenth centuries, numerous revolutions gradually limited the powers of traditional absolute monarchs, compelling them to share their power with legislative bodies in the creation of constitutional monarchies. Today the powers of constitutional monarchs are largely symbolic, with the real power resting in an elected legislature or parliament.

Constitutionalism Political system that is based on the idea that the government derives its power from and is limited by a basic fundamental law.

Consumer culture Describes the patterns of consumption (of commodities) within capitalist societies, particularly since the eighteenth century. After the advent of industrialization, people increasingly purchased goods produced for a mass market rather than for specific customers. As mass production satisfied more people’s basic needs more easily, consumption soon became a form of entertainment and a symbol of social class.

Consumerism Notion of consumer culture ingrained in the values of a society centered around materialism and consumption of goods and services not necessary for survival.

Corporation Business enterprise owned by stockholders who purchase shares of stock in the company but are not personally liable for the actions of said entity. Early corporations were state-licensed enterprises, often aimed at promoting trade or constructing public works projects.

Corporatism Also known as corporativism, this national economic system divides all workers and their employers into industrial and professional corporations, organizations that serve as representatives of the people in the government.

Cosmology A theory or set of theories concerning the structure and character of the universe that provides a cohesive system of meaning to a particular people or society.

Cossacks Peoples based in the southern steppe region of eastern Europe, mainly southern Russia and Ukraine, known for their horsemanship and military abilities. Cossacks were used by the tsarist state as crack troops for conquest.

Coup/coup d'état French for “stroke of state,” a coup is a sudden change in government perpetrated, often by violent means, by a small group of people. The group ousts the current leader and installs a new one, usually a member of the group.

Creditor nation A country that has a surplus in its balance of payments (its financial transactions with other nations). Basically, a creditor nation takes in more money than it pays out. A nation becomes a creditor by exporting more than it imports, earning interest on loans to other countries, enjoying investment in its economy by other nations, or a combination of those things.

Creole Creole refers to mixed ethnic, linguistic, and cultural heritage, though the particular mixture varies from place to place, often including Spanish or French heritage. In Spanish America, the term “Creole” (*criollo*) refers to white Spaniards born in the Americas. In Brazil, the term “Creole” (*crioulo*) refers to Brazilian-born Africans. In Louisiana, the term “Creole” refers to the descendants of French Acadians and free blacks.

Cro-Magnon Alternate name for *Homo sapiens sapiens*, with general reference to human fossil finds from Europe and the Near East.

Crucifixion A method of capital punishment used in many ancient societies, including those of the Persians, the Carthaginians, the Macedonians, and the Romans. The condemned person was tied or nailed to a large wooden cross and left to hang there until dead. Jesus of Nazareth is probably the most famous person to die this way.

Cuneiform Ancient writing system devised circa 3500 BCE in Mesopotamia consisting of wedge-shaped symbols, usually impressed upon clay tablets.

Cylinder seals Small stones manufactured into cylinder shapes and inscribed with images or words. When rolled on wet clay, cylinder seals would leave an impression that could identify the bearer. Cylinder seals are most associated with Mesopotamia.

D

Daimyo Powerful feudal rulers in Japanese history who held large territories of land. The Japanese word *daimyo* comes from the words *dai*, meaning “large,” and *myo*, meaning “private land.” Originally, daimyos were large landholders in a loose sense; however, by the twelfth century the term referred specifically to a military lord. Beginning in the twelfth century and continuing

for the next 700 years, daimyos provided powerful authority that translated into local coherence for Japanese society. That power rested on the daimyos' ability to control village communities by reorganizing them as well as collecting taxes for their own benefit. The daimyos sought to reduce their dependence on all governing systems that were beyond their control. Only after the daimyos were able to completely subsume autonomous villages were the Ashikaga, Kamakura, and Tokugawa shogunates possible.

Dalai Lama A religious leader to Tibetan Buddhists from the Gelug sect. *Dalai* is a Mongolian word meaning "vast sea," and the Tibetan word *lama* means "teacher." Each Dalai Lama is considered to be a reincarnation of the first Dalai Lama, Gedun Drub, who died in the late fifteenth century.

Dao The main principle of a philosophical school in China that refers to individuals finding the correct or harmonious path that will also lead to an ordered individual life and society in harmony with nature and the cosmos.

Daoism Ancient Chinese philosophy based on the teachings of Laozi emphasizing harmony with nature and quest for immortality.

Dar al-Islam Literally meaning "house of Islam," Dar al-Islam refers to those countries in which Muslims are allowed to practice their religion freely. These territories are usually ones in which Muslims represent the majority of the population.

Darwinism School of thought that follows the scientific theory of evolution proposed by Charles Darwin in his work *On the Origin of Species* (1859).

Debtor nation A debtor nation is a country that has a deficit in its balance of payments (its financial transactions with other nations); basically, it pays out more money than it takes in. A nation becomes a debtor by importing more than it exports, paying interest on loans from other countries, investing in the economies of other nations, or a combination of those things.

Decolonization The undoing of colonialism. Generally, the term decolonization refers to the post-World War II devolution of European colonial imperialism, resulting in the establishment of independent states in Asia And Africa.

Deflation A decrease in price of goods and services resulting in the increase of the value of currency.

Deforestation The process of cutting down trees in forests and jungles to provide wood products and new farmland. Deforestation is also the by-product of overpopulation. As a result of deforestation, an alarming number of species of plants and animals have become extinct or endangered.

Deindustrialization Social or economic change that occurs as a result of the removal or reduction of industrial capacity in a country or region. For example, some historians believe that the British caused the deindustrialization of India in the nineteenth century by prohibiting the sale of certain Indian products abroad.

Deism A belief system that arose in the seventeenth and eighteenth centuries and can generally be recognized as a product of the Scientific Revolution. Deism is based on the notion of a natural religion and the assumption that religious knowledge can be deduced by humans from the observation of the natural world rather than through revelation of churchly teaching. Most deists reject the notion of miracles or divine intervention, believing that God's plan is clearly illustrated through the normal workings of the universe.

Demographic revolution The increase in global population that began in Europe in the 1700s as a result of better access to food supplies and improving sanitary conditions and health that expanded globally through the nineteenth and twentieth centuries.

Desertification The steady advance of the desert resulting from deforestation and topsoil erosion. The problem of desertification has had a particularly detrimental effect on countries in Africa.

Developed nation Rich countries, located primarily in the Northern Hemisphere, that have well-organized industrial and agricultural systems. Developed nations also make use of advanced technologies and have strong educational systems.

Developing nation Countries in which large segments of the economy are relatively unsophisticated and most people are poor. There is a wide disparity between the gross national products of these countries and more industrialized nations.

Developing world Global regions currently developing industrially and lacking various economic sectors and characterized by widespread poverty.

Dhimma/dhimmi The Arabic term *abl al-Dhimma* refers to the “People of the Pact” in Muslim lands, after an edict allegedly made by the caliph Umar I. The term at first applied to Christians, Jews, Samaritans, and, rather grudgingly, Sabaeans, or star worshippers, and guaranteed tolerance of their faiths under certain conditions. Later as the Islamic empire grew, tolerance also grew to include Hindus and Buddhists.

Diaspora A diaphora occurs when a large community of people live apart from a geographic location that is considered their homeland.

Diffusionist Scholar who believes that technology, cultural change and other innovations generally originate once and spread from their place of origin as opposed to developing independently in various regions.

Diocese Administrative district established in the late Roman empire governed by a prefect. Under Catholicism, a diocese became a region under the jurisdiction of a bishop.

Direct rule A method of governing colonies or other territorial possessions whereby local rulers are stripped of their authority and replaced by representatives of the colonial power.

Divine right of kings Concept that kingship was divinely sanctioned and that monarchs were responsible only to God for their authority. This theory asserts that the king derives his power directly from God; therefore, only God can judge him. Any attempts at revolt can be seen as subverting God’s will. The concept of the divine right of kings was predominant in early modern Europe.

Domestication The act of altering wild plants or animals through deliberate breeding for human use. An essential aspect of civilization, domestication of both plants and animals began in approximately 10,000 BCE. The domestication of plants spurred on large-scale farming and thus permitted some people to give up the constant pursuit of food to specialize in other types of work. As a result, the first villages and cities formed. The domestication of animals, including cows, horses, and pigs, gave great impetus to the development of farming. Domesticated animals were also used for protection and food and as companions. Domesticated plants and animals are genetically different from their wild ancestors and are often altered in both appearance and behavior.

Dominion The term refers to legal rule or authority exerted by one entity over another. In recent years, the term “dominion” characterized the countries that made up the British Commonwealth of Nations between 1926 and 1947. These countries—Canada, Australia, New Zealand, South Africa, Northern Ireland, and Newfoundland—were autonomous within the British Empire but al-

lied under the British Crown. Because to many the term “dominion” implied subordination, it was eventually discarded and replaced in 1947 with the term “commonwealth.”

Dowry Usually land, money, or other valuable property, a dowry is a gift bestowed by the bride’s family. In some instances wives maintain control of their dowries, while in others it is given to the groom or his family. Common in preindustrial Europe, Africa, and Asia, dowries served various purposes: they sealed the friendship between the couple’s families, allowed the husband to set up his household, or even insured the wife against divorce or widowhood. Sometimes dowries also compensated the husband’s family for its payment of a bride price.

E

East India Companies Various trading companies such as those established by the English in 1600, the Dutch in 1602, and the French in 1660, for trading with India and other Asian states. The Dutch East India Company (the VOC) was the first multinational corporation as well as the first to issue stock, and in its volume of business eclipsed the British and French companies until the late eighteenth-century. The British East India Company (the EIC) was also a joint stock company, and eventually dominated the trade with China and ruled India. The French East India Company, formed late, and enjoyed some success in Asia, but not to the degree of the first two.

Ecumene From the Greek word *oikoumene* meaning “the inhabited world.” In common twentieth-century usage it has come to describe any culturally cohesive populated area, such as “the Middle Eastern ecumene” or “The Afro-Eurasian ecumene.” The term “ecumenism” is often used to convey a sense of universality and is frequently found in the context of Christianity as well as by world historians attempting to avoid ethnocentric perspectives. *See also* Eurocentric.

Elam Ancient civilization of people (Elamites) centered in central Asia in western Iran, bordering ancient Mesopotamian civilizations.

Embargo The detention of a country’s property. An embargo may be civil (the detention of national vessels in home ports to protect them from foreign depredation) or hostile (the detention of the property of a foreign state). An embargo may also prohibit exports of war materials to belligerent states or to states in rebellion in an attempt to end hostilities or in an individual state’s effort to preserve its neutrality.

Emir/amir An emir, or amir, which means “commander,” is a ruler of a specified region or territory, called an emirate. The title of emir was once reserved for military commanders of very large Islamic territories, but rulers of small territories began to use the title in the thirteenth century. The nature and extent of an emir’s rule varies. Hausaland is an example of a country divided into emirates ruled by emirs.

Empirical Notion that knowledge originates only through the senses, by observation and experimentation.

Enclosures Large medieval British estates contained villages of tenant farmers, generally near unfenced communal lands (about half of the arable land) that were used to gather firewood, nuts, berries, graze animals and supplement their gardens. In the aftermath of the Black Death, the owners of many manors realized that they could realize a greater profit raising sheep and exporting

wool than they could from the rents of tenant farmers. They began fencing these communal lands, depriving the tenants of the ability to support themselves with only their share of their crops. Although Henry VII and Elizabeth I attempted to thwart the movement, it was heavily supported by Parliament, particularly after 1700. There were three long-term results. First, the emphasis on textile production eventually led to the mechanization that fueled the Industrial Revolution. Second, it created a large body of unskilled workers trying to find employment (called the Masterless Men), keeping labor costs low for embryonic manufacturing efforts, but exacerbating class tensions. And third, some of the displaced peasants were able to accrue the skills and lands to enrich themselves and form a powerful non-aristocratic gentry class that eventually formed the backbone of the financial and manufacturing industries.

Encomienda Spanish labor system, based on feudal precedents, that allowed the recipient (*encomendero*) to extract tribute and labor from the indigenous population in exchange for the responsibility of providing them instruction in Spanish language and Christianity.

Encyclopedia A compilation of knowledge from either one field or many fields of study. The earliest known encyclopedia was titled *Naturalis Historia* and was written by the Roman Pliny the Elder during the first century CE. During the medieval period, several encyclopedias appeared in both Europe and the Middle East. The Chinese produced several encyclopedias, the largest of which was the *Yongle Encyclopedia*. Written in 1408, it was comprised of over 11,000 handwritten volumes and contained over 370 million Chinese ideograms. The modern concept of the alphabetically arranged encyclopedia that presents material in a systematic, easily accessible method first gained popularity in the seventeenth century. Many intellectuals and philosophers wanted to collect all wisdom in one place. In the Western world, the most famous of these collections was the *Encyclopédie*, which was compiled by Denis Diderot and Jean le Rond d'Alembert and contained the work of the French philosophes, with the goal of encompassing the totality of human knowledge.

Enlightened despot During the eighteenth century, enlightened despots were European kings and queens who had absolute power over their domains yet at the same time, inspired by the ideals of Enlightenment philosophy, attempted to make their governments more rational and efficient. While absolutist in nature, they no longer claimed divine right but instead said that they ruled by “reason of state,” or the idea that the monarch knew what was best for their kingdoms. Those despots were often in conflict with the clergy and the nobility, who wished to retain their traditional privileges.

Epistemology Branch of philosophy concerned with the study of the basis of knowledge, how knowledge is structured and generated.

Eschatology Philosophical or theological study and/or concern with the events related to and resulting in the end of the world.

Eugenics A pseudo-science beginning in the late nineteenth century, largely inspired by the work of Herbert Spenser, an English philosopher who believed that it was in the nature of strong states to expand and absorb weaker states, and that it was important to the evolution of humanity that they do so. Regarding individual humans, eugenicists believed that it was essential to the quality of human life that those who were genetically inferior were not allowed to reproduce. There were instances of forced sterilization in the United States as well as in Europe. The movement lost its credibility by the end of World War II because of the horrors of the Nazi extermination camps, although in disguised forms, it does continue to find its way occasionally into national discourse.

Eurocentric The practice of viewing history through a European perspective, often with an implicit presupposition of European superiority.

Evolution The theory of evolution, which maintains that all living species evolved from simple organisms in a gradual process of change over a long period of time, first received serious scientific attention after English naturalist Charles Darwin published his book *On the Origin of Species* in 1859. Darwin believed that evolution occurred as a result of the process of natural selection, whereby chance variations could lead to useful adaptations in species. Darwin's theory caused an enormous intellectual upheaval and has influenced religious, scientific, and social thought throughout the world yet has, in the best scientific tradition, withstood rigorous examination and stands as the best possible explanation.

Excommunication An extreme punishment when a member of a church or religious community commits an offense that is in severe violation of church rules. The person is then excluded from the rites, benefits, and sacraments of church membership.

Exegesis The interpretation or critical analysis of theological/religious text that discusses its significance.

Export An item that is moved out of one region or country and into another. This usually occurs as a consequence of international trade.

Extraterritoriality Guaranteed to diplomats and some international organizations, extraterritoriality describes a foreigner's immunity from prosecution over the breaking of local laws. Extraterritoriality defined the economic, social, and political relationship between native Chinese and Europeans who lived in Chinese ports in the nineteenth and early twentieth centuries. The Europeans determined that they were exempt from Chinese laws and were therefore governed by European laws exclusively.

F

Factory system The term "factory system" has two meanings, the first of which relates to trade. In the medieval period, the term "factory" referred to organizations of merchants from the same country who lived in a foreign land. These organizations were created to protect their economic interests. By the fifteenth century, the Portuguese established *feitorias*, or fortified trading posts, all along the coast of Africa. These factories spread with the Portuguese empire, and soon the English, French, and Dutch began establishing them as well. The factories served as warehouses, customhouses, and market centers. In the other usage, the term "factory system" refers to a method of production whereby workers are gathered in a centralized workplace and tasks are often broken into easy steps. The first factories, such as textile mills, depended on water power, but soon afterward steam-powered engines that depended on the burning of coal or other fuel were introduced to factories.

Fatwā A formal legal opinion given by a Muslim scholar knowledgeable about Islamic law and the Quran. Although a fatwā is not legally binding, it is authoritative and bears some religious and legal weight. During the Middle Ages, a question might arise about the legality of such actions as a farmer confiscating his son's property to prevent him from gambling or a sultan seeking to execute a Sufi. The dissenting parties would seek the sage advice of the Muslim scholar to render an appropriate ruling on their respective actions.

Fazenda Large Brazilian plantations, widespread during the colonial period. The supervision and maintenance of the fazendas was determined almost

exclusively by the *fazendeiros*, a Portuguese term meaning “plantation owners.” A *fazenda* is similar to the Spanish *hacienda*.

Femininities The ways in which different societies construct understandings and definitions of femininity that enforce the position and understanding of women in various societies.

Feminism Social and political movements advocating for the political, social, and economic equality of women.

Feudalism In Europe, Feudalism functioned as a social system, an economic system, and a political system. It is based on a diffusion of power, ruled by a king, often considered “first among equals.” Large tracts of land in the kingdom are generally held by nobles and farmed by peasants. In theory, the land comes from the king and the nobles owe him military support, and sometimes taxes. Nobles have the responsibility of protecting peasants, who repay them with agricultural production and labor services. Feudal economics are generally based on barter, cash or precious metals are rarely involved to any great extent. As a social system, it is based on well-defined roles and hereditary obligations. There is a certain amount of instability built in through tensions between powerful lords and monarchs. Although the term is sometimes used to describe non-European societies such as Japan, it should be used only as an analogy.

First World Wealthy capitalist nations, including Western Europe, North America, and some countries in Asia, such as Japan.

Five Pillars The five central tenets of Islam: profession of faith that “there is but one god, Allah, and Muhammad is his prophet”; daily prayer (five times a day); fasting from sunup to sundown throughout the month of Ramadan; charity to the poor; and pilgrimage to Mecca (the *hajj*) once in a person’s lifetime.

Fortification Set of battlements installed for defense on the battlefield or defense installations around a city or defensible position.

Four Noble Truths Foundational tenets of Buddhism: life is suffering, suffering is caused by desire, eliminating desire ends suffering, and living life based on the Noble Eightfold Path will eliminate desire. *See also* Noble Eightfold Path.

Free trade Free trade is international or domestic trade not controlled by a government or discouraged by the imposition of tariffs or taxes. Internationally, several groups of nations have formed or begun to form free trade associations that lift restrictions on the passage of goods over international boundaries.

Fundamentalism A strict interpretation of and adherence to doctrines, generally religious teachings. The term is most often applied to Jewish, Christian, and Islamic religious principles. Practitioners generally stress religious purism, strict morals and conservative social values.

G

Gender Social construct that regards sexual identity as created not by biology but rather by cultural norms.

Genocide Systematic and intentional mass murder of an entire ethnic, religious, or cultural group defined as a crime under international law.

Gentry Generally used to describe a class of prosperous families of common origin (meaning, not aristocratic). The term is used most often in relationship with Chinese or British History. In China, it describes highly educated and

prosperous families, members of which have passed the Confucian civil service examinations, thereby gaining certain legal and economic benefits for the family. In Britain, the Gentry were also commoners who earned fortunes through commerce or commercial agriculture. The aristocracy and gentry commonly intermarried.

Ghazi During the fourteenth and fifteenth centuries, the ghazis were a special cadre of Islamic soldiers who fought for the Ottoman empire against the Byzantine Christians.

Ghetto An area in a city populated by an ethnic group that is usually compelled to live there because of economic, political, social, or legal pressures.

Gilgamesh Main character in Sumerian epic poem *The Epic of Gilgamesh*, mythical ruler of the Mesopotamian city-state of Uruk.

Globalization Process of increased international political, social, economic, and cultural exchanges and networks that accelerated in the late twentieth century, diminishing the importance of the nation-state.

Gold standard The gold standard is a monetary system in which the standard unit of currency is a fixed quantity of gold or is kept at the value of a fixed quantity of gold in the country's central bank. In international trade, countries on the gold standard can maintain fixed currency exchange rates. Britain left the gold standard in 1914, briefly returned to it in 1925, and left it again in 1931. The United States went on the gold standard with the passage of the Redemption Act of 1875. By eliminating the fixed price for gold (\$35 per ounce) in 1971, President Richard Nixon formally ended the national gold standard.

Gospels A gospel is a writing that describes the birth, life, and death of Jesus of Nazareth. In the Christian Bible, the Gospels are the first four books of the New Testament (the second section). Titled Matthew, Mark, Luke, and John after the men traditionally held to be their authors, the Gospels coincide in many details but differ sharply in others. Outside the Bible there exist another 33 gospels, called Apocryphal, that are either reconstructed or preserved. In addition, there are another 23 known gospels that have been mentioned in other texts but have not yet been discovered. Despite the large number of gospels, the early Christian Church had come to a consensus on Matthew, Mark, Luke, and John, which is why most Christians consider the Gospels contained in the Bible to be authentic. Many scholars believe that the Gospel of Mark was written first, in roughly CE 70, with Matthew and Luke following soon afterward and John not written until approximately CE 100.

Grand Tour Prior to the era of mass tourism, the Grand Tour was limited to upper-class Europeans, particularly from England, who would tour France, Switzerland, Austria, Germany, the Low Countries, and Italy with a view to admiring natural wonders, learning from cultural highlights, and gleaning political insights. The Grand Tour was common in the eighteenth century. Railroad travel in the early nineteenth century opened up such travel routes to larger groups of people and blunted the cultural and political importance of the Grand Tour.

Grand vizier The chief minister of the Imperial Council within the Ottoman empire. While the grand vizier conducted council meetings, the sultan remained behind a screen. Moreover, the grand vizier was charged with the authority to speak on behalf of the sultan.

Great Chain of Being The medieval European belief—popularized by translators of Aristotle's works—in a static universe that emerged fully formed, populated with living beings created by a great designer (Plato's Demiurge or the Creator of *Genesis*). In this grand plan, all life forms were linked in an unbroken chain with the simplest forms at the bottom and the highest forms

at the top. This concept of a fixed, unchanging hierarchy was contested by the growing notions of progression and modernity during the late Renaissance and the Enlightenment.

Great Zimbabwe East African city that was the political and cultural center of a civilization we identify as Zimbabwe that spanned from 1200 to 1500, serving as a capital for trade and control of the adjoining territory.

Greater East Asia Co-Prosperity Sphere Japan announced its plan to create a “New Order” in East Asia in 1938 and in Southeast Asia in 1940 that would involve the ousting of Western colonial powers. Japan hoped to encourage its neighbors’ nationalist and anti-Western sentiments in order to gain a larger role as the region’s hegemonic power. Seizing the opportunity offered by the war in Europe, Japan planned to establish itself in Indochina (present-day Vietnam, Laos, and Cambodia), Siam (present-day Thailand), Burma (present-day Myanmar), Malaya (present-day Malaysia), and Indonesia to gain control of the region’s strategic raw materials and make Japan the region’s most influential nation.

Greater Serbian State A goal of many Serbs during the nineteenth and twentieth centuries, the Greater Serbian State was to be a nation carved out of the Balkans that would unite all Serbs. During the Yugoslavian Civil War some Serbs engaged in ethnic cleansing—the killing of innocent non-Serbian people—for the benefit of establishing a nation exclusively of Serbs.

Gregorian calendar Named for Pope Gregory XII, the Gregorian calendar replaced the Julian calendar in 1582, and is currently still in use by most of the world. The old Julian calendar has 11 months of 30 and 31 days and the month of February, which contained 28 days except for leap years, when it had 29 days. However, the calendar had too many leap years, causing it to lose days. Therefore, by 1582 the vernal equinox was occurring on March 11, which was 10 days behind. The Gregorian calendar fixed this problem by only allowing leap years in years that are divisible by 4 except centennial years, which must be divisible by 400.

Gross domestic product (GDP) An economic gauge that reflects the total value of all the goods and services produced within a nation usually over one year. The GDP includes the value of goods and services produced within a nation by foreign investors, but unlike the gross national product, the GDP does not include the value of goods and services produced outside the nation by domestic companies.

Guild The traditional form of labor organization common throughout Europe before the Industrial Revolution when all goods were produced by artisans and craftspeople. Guilds were organized by trade (goldsmiths, blacksmiths, coopers, etc.) within which a hierarchy of masters, journeymen, and apprentices saw to the training of new workers and the regulation of economic questions.

Guru In Hinduism, a guru is a personal spiritual or religious teacher. A guru invites disciples to religious practice and worship and then helps them mediate between the natural and the spiritual world. The etymology of the word “guru” is Sanskrit, and it originated in the Upanishads, the Hindu texts dating from around the tenth century to the seventh century BCE that offered interpretations of ancient scriptures. Certain Hindu sects hold that gurus are direct descendants of their deity with the power to bestow divine grace on their disciples.

H

Hacienda Large agricultural estate in Spanish Latin America. Traditionally, indigenous peasants made up the majority of the haciendas. Although they be-

gan in the colonial period, haciendas survived well into the twentieth century. Haciendas are similar to the Portuguese/Brazilian *fazenda*.

Hagiography Literally meaning “writing about saints,” as a genre such writing contained edifying and formulaic tales about the lives of Catholic saints. Hagiographic works were usually in the form of miniature treatises—in simple Latin or sometimes in the vernacular—that could be read to a congregation during a religious service.

Haiku A style of poetry that originated in Japan during the Tokugawa shogunate. A haiku is made up of 17 syllables arranged in three lines of 5, 7, and 5 syllables each. Haiku became widely popular in the seventeenth century and is still popular throughout the world.

Hajj The pilgrimage to Mecca required at least once in a lifetime for Muslims provided that they are healthy enough to complete the journey and if they or their family can afford the cost.

Harappan Ancient South Asian civilization based along the Indus River valley that flourished from the third through the first millennium BCE.

Harem The secluded part of the house or palace of a sultan, king, or male ruler. The harem was the residence of concubines, wives, other females of the household, and eunuchs. Harems were common among Indian, Middle Eastern, and West Asian royalty and still exist in some conservative Islamic societies.

Hegemony Political, economic, and/or cultural dominance of one entity by another, whether referring to internal groups or international relationships. It may involve direct action, such as colonization, but more often is the result of economic pressures.

Hellenistic Literally meaning “Greek-like,” Hellenistic refers to the time period during circa 323–30 BCE in which Greek culture, language, and attitudes became dominant in the Mediterranean and the Near East. Macedonian king Alexander the Great’s conquests caused the growth of Greek influence through the Mediterranean world as well as in Pergamum in Asia, Antioch in Syria, and Alexandria in Egypt, which all became centers of Greek culture. Hellenistic culture fused Greek and local cultures, increasing knowledge in fields such as philosophy and mathematics.

Hellenization The process of becoming “more Greek” that accompanied the expansion of the Hellenistic world. During this expansion, Greek-style cities were founded with Greek settlers, who formed the new ruling class. Although Hellenization in the West was eventually replaced by Roman influences, Greek culture remained dominant throughout the eastern Mediterranean and the Near East until the rise of Islam.

Heresy Stemming from the Latin word for a school of thought or philosophical sect, the term is used to describe any beliefs held in opposition to orthodox teachings. Generally, charges of heresy are launched against teachings in opposition to established ecclesiastical opinion or authority. The concept long pre-dated Christianity, but after the Council of Nicaea first established an official Christian orthodoxy in 325, it became an important issue in European history, playing a part in the Reformation, Inquisition, and witchcraft trials of the medieval period.

Heretic A person who embraces religious teachings that are different from and often in opposition to the teachings of the traditional orthodox teachings. The spiritual revival of the Middle Ages led to the emergence of several heretical movements.

Heterodox Doctrine at odds with existing paradigm or established theological dogma.

Hijra Flight or pilgrimage of Muhammad from Mecca to Medina in 622 CE, marking year 1 for the Islamic calendar.

Hinduism World religion centered in South Asia based on a large set of texts and social norms that influence much of modern Indian culture. Scholars argue that Hinduism, which involves a large set of many local religions, was not defined until the period of colonization when South Asians were searching for a common identity in opposition to colonial influences.

Historicism Concept that historical circumstances rather than fixed laws or the essential character of a people or region shape societies and cultures.

Historiography Literally the writing of history; however, the term “historiography” generally denotes the study of history as a discipline. Historiographic works analyze the works of different historians and schools and evaluate changing interpretations of the same events over time. Historiography looks at the purpose and audience of a historian’s work to determine biases that may have influenced that historian’s written account of historic events and issues. Historiography also analyzes the sources from which historians get their information as well as the history and theory behind historical writing.

Hittite An ancient Indo-European-speaking cultural group located in Anatolia; their capital city was Hatti.

Holocaust Term from the Greek meaning “whole burning” used to describe Germany’s systematic murder of 6 million Jews (which the Nazis termed “The Final Solution”) as well as the killing of 5 million Russians, Poles, political socialists, communists, gypsies, homosexuals, and others during World War II.

Holocene Geological era since the end of the Great Ice Age (ca. 11,000 years ago) to the present.

Homer Semimythical Greek epic poet credited with authoring *The Iliad* and *The Odyssey*.

Hominid A member of the biological family of bipedal primate mammals. Originally thought to comprise modern humans and extinct species of human-like creatures, the term “hominid” was later broadened by some scientists to include great apes (chimpanzees, bonobos, gorillas, and orangutans). The term “hominin” is widely replacing the taxonomic term “hominid” for humans and their unique fossil ancestors since the split from the chimpanzee lineage about 6 million years ago.

Hominoid Apes and humans.

Homo erectus Literally “upright man,” this ancestor of *Homo sapiens* lived from approximately 1.6 million to .5 million years ago and is a hominid associated with the Acheulian stone tool artifacts.

Homo ergaster Identified from a mandible discovered in Kenya, this contemporary of *Homo erectus* lived from approximately 1.8 million to .5 million years ago and appears closer anatomically to modern humans than *H. erectus*. Some anthropologists argue that it is simply a variety of *Homo erectus*.

Homo habilis Literally “handy man.” One of five early hominid species within the hominid genus present about 2 million years ago. *Homo habilis* had a larger brain than *H. Australopithecus* and is associated with the Oldowan tool artifacts.

Homo heidelbergensis Species name given to earliest fossil remains of hominids found in Europe. *H. antecessor* may be a variant of the same species.

Homo sapiens Modern humans, likely evolved from *Homo erectus* approximately 500,000 years ago; some anthropologists argue that Neanderthals are a branch of this species.

Homo sapiens sapiens Species directly related to modern humans that does not include any archaic subbranches.

Humanism From the Latin term *humanitas*, meaning “human virtue.” A philosophical movement that began in Italy in the fifteenth century, humanism was also called Renaissance humanism and rejected ideas of supernatural supremacy over the reasoning capacity of human beings. Humanism emphasized classical studies (called humanities), which includes rhetoric, poetry, and philosophy, and continues to influence education and philosophical thinking today.

Hundred Schools of Thought A period in Chinese history during the eastern Zhou dynasty (ca. 770–256 BCE) in which many different philosophies developed and flourished. The period was called a golden age in China and was the source of all classical Chinese philosophy. Thinkers of the period included Confucius, Mencius, Xun-zi, Lao-tzu (the founder of Taoism), and Mozu. Philosophical schools that originated during the time included Confucianism, Taoism, Legalism, and Mohism.

I

Ice Age The term “ice age” describes any of the time periods when the majority of the planet was covered with ice during the Pleistocene epoch, which lasted approximately from 1.6 million to 14,000 years ago.

Iconoclasts Those who advocate iconoclasm, which means “image breaking.” The issue of images was one of the first controversies between the Eastern and Western branches of Christianity. After Christianity found itself with two centers, one in Rome and the other in Constantinople, Byzantine Emperor Leo III (r. 717–741) became convinced that religious depictions—statuary, paintings, etc.—constituted prohibited “graven images,” and banned them. Roman church leaders, presiding over a less literate society—dissented, saying the images allowed worshipers to focus their attention and visualize the stories of the Gospels.

Imam For Shia Muslims, the term “imam” refers to the divinely inspired and anointed one who is the legitimate leader of the Islamic world. For other Muslims, the term “imam” holds a different meaning. In the Middle Ages, the term was used by Sunni Muslims to refer to the caliph or leader of the Islamic community. For Shia Muslims, the position of the imam and the caliph are mutually exclusive. The Kharijite sects, which split away from both the Shia and the Sunnis in 654, recognized only the most pious among them as imams, regardless of any other leadership qualifications.

Imperialism Extending a nation’s control and influence over the political or economic life of other nations. Imperialism can be practiced via military conquests or methods of economic domination.

Indentured labor/servitude A form of serfdom into which people entered, often unwillingly, in exchange for transport to another country or as punishment for a crime. Indentured laborers worked without wages for a period of time stipulated in an indenture, or contract, although the servants normally had their room and board provided. Many indentured servants from Great Britain and Germany arrived in the North American colonies prior to the American Revolution and the growth of slavery. After the abolition of slavery in the nineteenth century, colonial powers commonly imported indentured laborers from Asia, Africa, and the Pacific Islands to work in their colonies.

Indirect rule A colonial governing structure where an imperial power ruled through existing indigenous structures rather than by directly imposing European-style systems. It had the advantage of being familiar to colonized peoples, but there was a tendency to propagate erroneous European assumptions about local attitudes and identities.

Individualism A term coined in the nineteenth century referring to a social ideal in which the individual's freedom, rights, or independent action are paramount and more important than loyalty to one's community or company.

Indo-Europeans Also called "Aryans," Indo-Europeans from the steppe region of present-day Ukraine and southern Russia, were primarily farmers who domesticated horses as early as 4000 BCE. Over millennia they migrated across a wide swath of territory including South Asia, Iran, Persia, Ireland, and throughout western Europe, carrying their cultures and languages with them. The Indo-European-language family is one of the world's largest and includes Germanic, Hellenic, Celtic, Iranian, Anatolian, and Latin or Romance languages, along with many more.

Industrialization The transition from primarily handicraft production to mechanized production, characterized by new efficiencies like the assembly line and dependence on mechanical power (such as the steam engine) rather than on animals or humans. Industrialization appeared first in Great Britain as a reaction to market incentives, coinciding with periods when capital funds were available for investment. Industrialization is generally dependent in its nascent stage on political assistance (in order to develop canals and roadways for moving materials), an available labor force not otherwise engaged in agricultural production, and a gentry class with investment funds available.

Infanta The daughter of a Spanish or Portuguese monarch.

Inflation A rise in the price of goods and services associated with a decrease in value of currency. The reverse trend, in which prices decrease, is called deflation.

Infrastructure "Infra" comes from the Latin word for "below"; therefore, an infrastructure represents underlying structures that aid transportation, communication, and services. These can vary across historical periods but may include roads, bridges, train tracks, water and sewage, gas and electric lines, and, more recently, fiber optic and cell phone networks.

Interdict In Roman Catholic canon law, an interdict is an order—usually issued by the pope—withdrawing the support of the Roman Catholic Church from a particular individual, district, or country. When an interdict is issued, most sacraments, including communion, marriage, extreme unction, and Christian burial, are removed and prohibited. This form of ecclesiastical censure was commonly used during the Middle Ages to persuade governments to take certain actions or to instigate public rebellion to overthrow governments. In Roman law, an interdict was an order issued by a magistrate that was most commonly used in the settlements over the question of property rights.

Interventionism A foreign policy that encourages the use of force to influence the internal affairs of another nation, particularly to head off undesired changes. During the Cold War, for example, both the United States and the Soviet Union relied on interventionist policies within their spheres of influence.

Investiture A symbolic act with contractual significance performed in the Middle Ages to create or transfer property. An investiture was performed in one of two ways: the lord accepted homage from his vassal and conferred the fief (estate) while holding an object—a ring, a scepter, or a wand—to repre-

sent the act of giving (the object was retained by the lord or formally broken after the ceremony), or the lord gave the vassal the object, as its purpose was to represent that which was given. In the latter case the object might be a stalk, a piece of straw, or a banner. The symbolic object, whether kept or given, implied the lord's concession to bestow on the vassal his possession of the fief. The vassal then had the right to the enjoyment and advantages of the property (short of destroying or wasting its substance) as long as he remained his lord's man. His "holding" of the fief was thus protected against invasion.

Islam The religion practiced by Muslims, based on the teachings of the Prophet Muhammad in the seventh century. Established in the Abrahamic tradition of Judaism and Christianity, Islam is strictly monotheistic. Muslims practice the Five Pillars of Islam and accept the recitation of Muhammad, called the Quran, as their scripture. The principle division in Islam is between Sunni Islam and Shia Islam. Despite being the youngest of the major world religions, Islam currently boasts more adherents than any other religion besides Christianity.

J

Jainism Ancient religion that emerged in India in the fifth century BCE that advocates nonviolence. Vardhamana Mahavira, possibly a contemporary of the historical Buddha, is the main figure associated with the transmission of the Jainist philosophy, but Jainists believe that he was only one in a long line of teachers.

Janissaries Ottoman crack troops taken as children from Christian provinces and raised as Muslims. Janissaries were loyal to the sultan and were used throughout the span of the Ottoman empire as a major force for conquest.

Jansenism Jansenism was a movement within the Catholic Church named after the French bishop Cornelius Jansen and based on his work *Augustinus*, published in 1640. Jansen stressed the doctrine of predestination, the small number of God's "elect," and the spiritual perfection required for partaking of the sacraments.

Jihad An Islamic term that means "holy struggle." The term "jihad" refers to undergoing trials for the cause of God, striving for righteousness, and following the path ordained by God. This may be done through activities ranging from converting a nonbeliever to waging a holy war against a group or country deemed to have violated precepts of the faith or to have renounced Islamic authority.

Jizya Tax on able-bodied male non-Muslim dhimmis by Muslim theocracies. If a dhimmi converted to Islam, then he was no longer required to pay the Jizya. In some circumstances dhimmis were discouraged from conversion so the government would not lose revenue.

Joint-stock companies Investment organizations formed for the purpose of sharing the costs and risks of expensive overseas trading ventures. The costs of ships, personnel, and cargos were often beyond the reach of single investors or small partnerships. The joint stock companies formed from the seventeenth century onward allowed many investors to pool their funds. Investors were compensated after successful ventures by receiving a share of the profits proportional to their investment.

Jomon Term associated with the archaeological period preceding the development of Japanese civilization. Jomon pottery remains have been dated to 10,000 BCE and earlier.

Judaism The religion of the Jewish people, the first of the Abrahamic religions (which also include Christianity and Islam). It traces its origins to the Ancient Hebrews, a Semitic people who enter historical records during the Bronze Age in the Middle East. When the kingdom of Israel fell in the late eighth century BCE, the surviving people of the tribe of Judah remained as the eponymous founders of Judaism as a belief system.

K

Kaba A cube-shaped building in Mecca that predates Islam. The Kaba is the holiest of Muslim religious shrines, and Islamic tradition says that the building there was built by Abraham. The Kaba is where all Muslims face when praying, and the main goal of the hajj, or pilgrimage, is to visit it.

Karma A concept common to Hinduism, Jainism, and Buddhism, karma is generally seen as a moral cause and effect in which a force—good or bad—created by one’s mental and physical actions determines one’s destiny in a future life. It is believed that karma is universally applicable and can only be transcended by those who have achieved nirvana or freedom from rebirth. Although the interpretations of karma are similar on a basic level, the specifics of karma vary significantly among different sects of those Indian philosophies.

Khan Title conferred on central Asian Mongol, Tatar, or Turkic rulers. The title of khan is most famously associated with the Mongol leader Chinggis (Genghis) Khan.

Khoikhoi Southwest African ethnic group associated with the Sans, labeled “Hottentots” by Europeans in the seventeenth century, a name now considered derogatory. The Khoikhoi began losing their land and economic livelihoods when the Dutch arrived and started settling South Africa. The relationship between the Dutch and the Khoikhoi set the stage for Apartheid in South Africa.

Koine A dialect that was the common language used by speakers of the many different languages throughout the ancient Greek and Hellenistic world. Koine was based on the dialect of Attica mixed with elements of Ionic dialects, and it eventually became the language used for many literary works of the period. Koine flourished from the fourth century BCE to the fifth century CE and had widespread use in Asia, Egypt, Greece, Italy, and Sicily. The Koine dialect has been credited with aiding the spread of Christianity because the gospel could be taught and read in many different regions due to knowledge of that universal dialect. Koine forms the basis for the modern Greek language.

Kong Fuzi Romanized as “Confucius,” Kong Fuzi (551–479 BCE) and his follower Mencius (371–289 BCE) formulated the philosophical system of Confucianism, which has had a major and lasting historical impact in Asia, particularly in China, where it was the official state ideology from the Han through the Qing dynasties. Confucianism offers humanistic moral and ethical guidance for behavior, with the goal of harmonious relations between that of monarch and subject, father and son, husband and wife, elder brother and younger brother, and friend with friend. Confucianism differs somewhat from European notions of religion, yet the system of thought developed doctrinal and ritual requirements that would place it well within the realms of both religion and philosophy. Forms or schools of Confucianism continue to play a major role in the thinking of people throughout Asia. *See also* Confucianism.

Koran *See* Quran.

Kshatriyas Military and ruling elite of Hindu caste system; one of the four varnas.

Kulak Prosperous peasants in Russia who acted as moneylenders, landlords, and village administrators. After the Russian Revolution of 1917, the communist regime tolerated kulaks until the drive for the collectivization of agriculture began in the late 1920s. As the government seized the kulaks' land, the kulaks were either arrested or forcibly relocated.

Kush Egyptian term for Nubia, the region along the higher Nile River valley.

L

Labor movement Political and social movement that emerged in Europe and the United States in the nineteenth century and was geared toward attaining better living and working conditions as well as greater political representation.

Labor union Organizations developed that combined both craft and non-skilled workers together to work toward attaining concessions from corporate management through negotiation or organized strikes.

Laissez-faire A French expression generally translated as "let it be." It is an economic theory based on the operation of unrestricted market forces. The idea is often associated with Adam Smith, but was popularized in the late seventeenth century by French finance minister Jean-Baptiste Colbert. The term is still popular with those who generally advocate "free markets" without significant government regulation.

Late Antiquity Period in world history (250–700 CE) preceding and overlapping with the early Middle Ages, particularly used by studies of the end of the Roman empire, the emergence of the Byzantine empire, and relations with Germanic kingdoms and the greater Eurasian ecumene.

Latifundia Large agricultural estates owned by Roman elites and worked by slaves and tenant farmers. Similar to the Spanish haciendas or Portuguese fazendas, these quasi-feudal estates depended on the confiscation and consolidation of land and the labor of slaves or serfs to achieve their goals of mass production and turning a profit.

Legalism Chinese philosophy associated with Xunzi (298–238 BCE) and implemented by the Qin dynasty (221–206 BCE). Xunzi, looking at the combative world of the Warring States, concluded that human beings are selfish and care only for their own interests and that it takes strong discipline to bring order to a society. He advocated establishment of clear, well-publicized standards of conduct, with strong punishments for those who deviated. Although legalism was disavowed by the Han dynasty, there has been a surviving (if unacknowledged) strain throughout Chinese history.

Liberalism Historically, liberalism was a political stance opposing state regulation. British laissez-faire liberal economists, for instance, wanted to be rid of all government oversight of finances. Today in the United States, liberalism is a political ideology based on support for civil rights, tolerance for social and political change, and the advocacy of government action to improve individuals' welfare.

Lithic Stone artifact or tool. The term "lithic" can also denote what was once called the Stone Age. The term "Paleolithic," for example, simply means "Old Stone Age."

Little Ice Age An ice age that began in the fourteenth century and peaked in the seventeenth. Experts suggest that either increased volcanic activity or a

decrease in sunlight caused the onset of this long trend. Glaciers increased in size during this period, and recorded snowfall levels increased while temperatures decreased. Storm belts, which normally flowed westward, instead moved southward, which resulted in colder climate conditions in northern continental areas. It was not until 1850, the beginning of the Industrial Age, that warming trends reemerged.

Littoral Coastal regions or adjacent regions along a coastal region.

M

Madrasa/madrese A school in which any of the Islamic sciences, including Islamic law, are taught. The word itself means “place of study.” In the Middle Ages, the madrasas evolved out of independent study circles. Eventually, charitable endowments called *waqfs* provided permanent structures for these circles and even attached dormitories and sometimes stipends for teachers and students. Madrasas became centers for exchange and communication among members of the learned classes of the Islamic world and as such became crucial for the forging of communally accepted consensus on important questions of law and other matters.

Mali West African trading empire forged in the thirteenth century by Sundiata Keita “the lion prince” upon his return from exile. Peaking in the early fourteenth century under Sundiata’s great-nephew Mansa Musa, Mali became widely known for the wealth of its rulers and its control over west African trade, especially in gold.

Malthusianism Named for the eighteenth-century English economist Thomas Malthus, Malthusianism is the belief that the all animal and human populations will grow to the limits supportable by available food sources, which will mean that times of bounty will occasion population increases unsustainable when available resources return to normal, leading inevitably to periods of famine and wars.

Mandarin Derived from the Portuguese word *mandarim* meaning “to govern,” mandarin was a Western term for a member of the educated class in China, from whom the civil service bureaucrats were drawn. A competitive examination system ensured that only the most highly educated individuals became bureaucrats. The term Mandarin also refers to the dialect that became the dominant language in northern China. Members of the bureaucracy were required to speak and correspond in Mandarin, regardless of the part of China in which they served.

Mandate of Heaven The Chinese concept of political legitimacy, the belief that authority to rule was granted and maintained by Tian, or Heaven, and would be withdrawn if there were signs that rulers were shown to be unfit. Signs could be famines, wars, rebellions, or any other signs that nature was displeased. Written records of the philosophy date back to The Zhou dynasty (1045–256 BCE), but it may have existed earlier.

Manichaeism Religion founded by Mani in the third century CE that combined Zoroastrian and Christian elements.

Manifest Destiny Belief and ideology popular in the nineteenth century that the United States had a divine duty to expand westward toward the Pacific Ocean.

Manor A nobleman’s estate during the Middle Ages. Manors were the normal social and political unit during that period and were virtually self-sufficient,

with the population producing most of what it consumed. The noble who held the manor exercised jurisdiction over the local population, allowing him to dispense justice to the people. The local population consisted of both free and servile individuals. The lord had greater authority over the servile population. Free individuals usually paid monetary rent to the lord.

Mansabdari system Similar to *devsirme* in the Ottoman empire, the mansabdari system was established in the Mughal empire in the seventeenth century to create a hierarchy for the imperial military officers who received a salary. Its primary purpose was to oversee the tax system.

Manumission The legal term indicating the official release of a person from slavery.

Maoism An influential strain of communist thought that originated with Mao Zedong, a communist revolutionary in China. Maoism adapted the precepts of Marxist-Leninist philosophy to the conditions of China. Mao focused on the revolutionary potential of the peasantry (rather than industrial workers) as well as strict organizational principles, and he emphasized the importance of armed struggle.

Market economy Also known as a free market economy, it is the belief that the laws of supply and demand will function to keep economic systems from going too far in any direction, and that basic economic decisions derived from market activities will always be more effective and sophisticated than any results of government intervention.

Martyr A person who dies for her or his faith. The term is derived from the Greek word for “witness,” but it came to mean someone who attested to her or his faith when doing so meant certain death. Martyrs were venerated by early Christians, and their relics and tombs came to be considered sacred. The martyrs’ names were collected, and stories of their tortures were written down to encourage and serve as ideal conduct for other Christians.

Marxism Ideological and economic philosophies derived from the works of Karl Marx and Friedrich Engels. Marxists believe that class struggles for material resources has shaped history. They argue that in the capitalist phase, upper classes and wealthy capitalists will exploit workers, or the proletariat, and will continue to do so until workers organize to seize the means of production. Although popular as an economic theory in the nineteenth and early twentieth century, Marxism has fallen from popular favor with the dissolution of the Soviet Union and the transition of China toward free-market capitalism.

Marxism-Leninism The communist philosophy of Vladimir Lenin that reinterprets Karl Marx’s philosophy in three ways. First, revolution must be violent to succeed; second, revolution is possible because of large peasant and laboring classes; and third, revolution must be controlled by a group of dedicated revolutionaries who will not sell out the revolution before it is completed.

Marxist revisionism An adaptation of Marxist ideology originally set forth by Eduard Bernstein (1850–1932), in which the notion of an imminent collapse of capitalism was abandoned. Bernstein and others noted that in some areas (such as Germany) the working classes seemed to be accruing power rather than falling into deeper misery and that it appeared that a violent revolution was becoming less likely. The revisionists believed that industrial nations were moving toward a type of social democracy that combined private initiative and social reform.

Masculinities Social constructions of expectations, roles, and archetypes of manhood associated with cultural expectations of gender roles for men in a given society.

Mass media Combining the influence of both the broadcast media and the print media, the mass media—television, radio, newspapers, magazines, and the Internet—are together among the most powerful methods of communicating a message to a large group of people. The massing of media began in the late nineteenth century with the development of large-circulation daily newspapers.

Mass tourism With increased industrialization in the late nineteenth century, people had more money and time with which to travel. British businessman Thomas Cook organized the first group tour in 1841, a train trip to a temperance meeting. He began actively arranging trips for profit in 1845 and pioneered the mass tourism industry, taking groups to destinations all around the world. In the contemporary world, tourism is considered one of the world's largest industries.

Materia medica Latin term that refers to collected knowledge of medical and healing practices.

Material culture Archaeological term that refers to the physical remains specific to a cultural group or people. The term can be applied to contemporary culture as well as that of the ancient world.

Matrilineal The ancestral lineage derived from one's mother's family. Matrilineal societies, in which inheritance is traced through the mother's family, are common worldwide, notably in such North American Indian communities as the Iroquois and in the Nayar culture in India. The role of a mother's brother retains special prominence, as he is the male of highest authority. In addition, property is passed down through one's mother. Matrilineal cultures are not necessarily matriarchal, however, as the males still retain property and power.

May Fourth Movement Named after the student protests in Tiananmen Square in Beijing on May 4, 1919, the May Fourth Movement began in protest of the terms of the Treaty of Versailles, which punished Germany by turning over the northeastern Shantung Province to Japan instead of returning control to China. The strike galvanized anti-imperialist and nationalist sentiment in China.

Megalith An enormous stone used to construct Neolithic Age and Bronze Age monuments. Those monuments include single standing stones, lines or aisles of stones, stone circles, and tombs. They were for the most part clearly meeting places, some constructed following astronomical alignments that suggest rituals at specific times of the year. Archaeologists have also found evidence of sacrifices at some of those sites. These stones appear to reflect a particularly Neolithic religious sensibility that ranged through much of Europe, and successive cultures continued to regard the megalithic monuments as sacred. Early monasteries often integrated standing stones, circles, and tombs into their ritual life, and some monks constructed monasteries at the site of megaliths.

Meiji Restoration A period of dramatic change in Japan that began in 1868 with the overthrow of the Tokugawa shogunate in favor of the young Meiji emperor in 1868. This change was brought on by the threat of Western intervention in Japan. Meiji leaders realized that industrialization was needed in order to compete with the West. The Meiji government sought to westernize and strengthen Japan through a centralized government.

Mercantilism An economic theory that accompanied monetization of the economies in western Europe during the sixteenth and seventeenth centuries and depended on government intervention to accumulate national wealth through a balance of trade that encouraged exports and discouraged imports in order to maintain high levels of bullion. This balance was achieved by de-

veloping and regulating production, granting industry monopolies, imposing tariffs on imports, and establishing and using colonies as sources of raw material for production and as markets for their own exports.

Mercenary Paid professional soldiers hired to defend locally or to serve a foreign ally.

Meritocracy A system of government in which people are given the opportunity to achieve and advance within the governmental structure through an evaluation of personal skills and qualifications. Napoleon I attempted to establish a meritocracy in nineteenth-century France, which was the precursor to the contemporary civil service system.

Mesopotamia Meaning “between the rivers”—the Tigris and Euphrates rivers—where myriad civilizations developed during much of Antiquity.

Messiah Literally, the term “messiah” refers to the anointed during most of Jewish history. Messiah came to indicate a savior who would deliver Israel from its troubles and bring it into the promised union with Yahweh. The form and role that Israelites expected the messiah to take differed according to circumstances. Some expected him to be a king, like King David, while others expected him to fulfill a more spiritual priestly role. Most Jews, however, believed that Yahweh would send a messiah who would right all wrongs. In the New Testament, the word “messiah” is rarely used. Instead, the Greek equivalent of Christ was used. The non-Jews who received the apostles’ message eventually accepted Christ as another name for Jesus of Nazareth and not a title signifying that he was the messiah.

Mestizo Literally meaning “mixed,” “mestizo” is a Spanish term used to identify Spanish-speaking people of mixed Indian and European descent. By the nineteenth century, mestizos made up a major portion of the population in Spanish and Portuguese America.

Metaphysics The origins of the word in Greek mean “beyond physics.” Metaphysics is the branch of philosophy concerning the ultimate nature of reality and human existence.

Métis One of the aboriginal groups in Canada. The Métis people are descended from mixed European and First Nation ancestry. While historically the name was used to describe all people who fit this description, the Métis now identify themselves as a separate group and have the same status as other First Nation and Inuit people.

Metropole Dominant region in a colonial relationship with the colony or colonies subordinate to the metropole.

Middle Passage The middle part of the three-part journey taken by slave traders in the seventeenth- and eighteenth-century Atlantic slave trade. The traders first carried goods to Africa, where they traded the goods for slaves, and then started across the Atlantic Ocean to the Americas, where they exchanged the slaves for other goods and departed again for Europe. The middle part of the voyage saw the newly enslaved Africans shackled and packed tightly into tiny areas, where they were subject to disease. Slaves who would not eat or who attempted suicide were often tortured. Mortality rates were high; it is estimated that between 10 percent and 20 percent of Africans transported through the Middle Passage lost their lives.

Mihrab In Islamic mosques, the mihrab is a niche in the wall of the *qibla* (the direction which one faces in order to pray toward the holy city of Mecca). Often, the mihrab is beautifully and ornately decorated. Mihrabs first appeared during the Umayyad dynasty in the reign of al-Walid I (r. 705–715) and

may have been adapted from the prayer niches found in Christian churches. The mihrab helps to orientate the worshiper during prayer, indicating the direction of Mecca even in an unfamiliar mosque.

Militarism The view that military power and efficiency is the supreme ideal of the state. Militarism was exemplified by the leadership of Otto von Bismarck as he consolidated governmental power and strengthened the Prussian army during the late nineteenth century. Militarism, combined with the military alliances and imperialism of the late nineteenth century, was a main cause of World War I.

Millet Autonomous community within the Ottoman empire.

Minaret Minarets are slender freestanding towers that stand at the corners of a mosque. A mosque may have from one to six minarets, connected to the mosque at the base and rising in a series of stages, each marked by a balcony. Stairs either on the inside or outside lead to a dome or pavilion at the top, where a crier stands five times a day to call Muslim worshippers to prayer. Designed to be “landmarks of Islam,” visible from a distance, minarets were a prominent part of the mosques built by the Ottoman architect Sinan.

Minoan/Minoan Pre-Classical Aegean civilization that emerged in Crete from 2200 to 1500 BCE that is mostly associated with the site of Knossos.

Mir In tsarist Russia, the mir was a semiautonomous community of peasants that elected its own officials and distributed its land among peasant families. The peasants of the mir were nevertheless subject to numerous restrictions and were required to make payments to land-owning families. The mir remained as an institution after the 1861 emancipation of the serfs.

Mita The compulsory rotational labor draft (corvée) system used in the Andes by the Incas that was later adopted for use by the Spanish in the Americas.

Modernity The idea that the present time represents a break with the past first appeared as Renaissance humanists represented their time as a new age. Nevertheless, it should be understood as an attitude toward the present rather than a reference to any specific era. The period described by the term varies according to the temporal framework of the person using it, but is always used to underscore a break or discontinuity between past and present, generally depicting the present as an improvement.

Modernization Changing a society through the introduction of industrialization, technological infrastructure, and consumer cultures.

Monastery The home of any community of monks or nuns. Unlike a hermitage, where a single religious individual often lived alone, at least two persons have to reside together in a monastery. A monastery had two main sources of protection: it was normally associated with a local ruler or noble family (often, those lay protectors had the right to appoint abbots and abbesses from their own kin), and it was made sacred by the reputation of its patron saint. Many religious traditions, including Buddhism, Hinduism, Islam, Judaism, Christianity, and Taoism, have adopted monasteries as sites of religious communities.

Monotheism A religious or theological belief that only one god exists, not to be confused with henotheism, which centers on the worship of only one god while acknowledging that others may exist.

Mosque Any Muslim place of worship. The first mosques were sacred plots of ground modeled after the courtyard of the Prophet Muhammad’s house in Medina, Arabia. Besides being places of worship, mosques were often used as courts of law, libraries and schools were sometimes attached, and people gathered at them for political and social functions. Mosques differed from Christian

churches in that ceremonies surrounding marriage and births were not performed there.

Mousterian tools A style of stone tools created by Neanderthal people in Europe from circa 70,000–30,000 BCE. The name comes from a Paleolithic Age rock shelter known as Le Moustier in France, where a large number of flint hand axes, racloirs (a type of blade used for scraping), and spear points have been found. The tools were produced by flaking off chips of stone until the tool reached the shape and sharpness desired. Archaeologists have found similar tools at sites throughout Europe, the Near East, and North Africa.

Muhammad (570–632 CE) Arabian merchant, military leader, and central prophet and founder of Islam.

Mulatto People of mixed black and white ancestry. Mulattoes faced varying social restrictions in different regions of the Americas and other Western countries. Within the black community, mulattos were often privileged. They sometimes passed into the dominant white community because of their physical characteristics that allowed them to appear white.

Multinational corporation (MNC) A corporation that has branches located in more than one country. Multinational corporations became increasingly common beginning in the middle of the twentieth century. At that time, many corporations founded in developed nations began opening branches in other developed nations as well as in developing nations, where cheap labor was readily available.

Mycenae/Mycenae Late Bronze Age civilization based in southern Greece (on the Peloponnesian peninsula) that flourished from 1400 to 1200 BCE.

N

Nara period Named for the early capital of Japan during 710–784 CE, the Nara period followed the Taika reforms, which were designed to codify Chinese policies into Japanese law. During the Nara period, those policies were implemented. The subsequent rise of a Japanese bureaucratic class, innovations in medicine, and the refinement of Buddhist art, architecture, and sculpture all had direct roots in Chinese culture, although overt Chinese influence started a gradual decline during this time. The Nara period drew to a close in 784 when the Japanese emperor Kammu, fearing that the government was growing overly influenced by the strong Buddhist monasteries in Nara, briefly moved the country's capital to Nagaoka-kyo and a decade later to Heian-kyo (present-day Kyoto).

Narrative A form of history presented so as to give an account of a series of events or developments, establishing connections or noting discontinuities, as opposed to theoretical histories that use selected events, persons, or ideas to support an underlying proposition. To fill in the historical record, historians can also turn to primary source narratives, which might be oral or written autobiographical records of individual or collective experiences.

Nationalism Political and cultural ideology that emphasizes unity among people in a particular geographic area based on shared cultural and linguistic traditions and values. Some varieties of nationalism can emphasize a unity based on ethnicity or religion and at times project hostility toward foreigners or groups within the same region that do not share those characteristics.

Nationalization The process of a government taking possession of privately owned businesses and industries.

Nation-state A sovereign political system in which the people, in general, share a common history, ethnicity, culture, and language. In other words, the territory occupied by a certain group of people (or nation) is the same as the territory (or state) controlled by their government. France and England were among the first modern nation-states, while Slovenia and Croatia are two of the newest nation-states.

Natural law A concept that can be traced to ancient Greek philosophers and insists that reason discloses that certain moral rights are engrained from nature. This concept eventually melded with the notion of Natural Rights, popularized during the Enlightenment in Europe with John Locke's enunciation of the right to life, liberty, and property.

Neanderthal/Neandertal Technically, *Homo sapiens neanderthalensis* refers to an archaic form of *Homo sapiens* dating to between 100,000 and 33,000 years ago. A study of *H. neanderthalensis* DNA now suggests that some interbreeding occurred between this species and modern *Homo sapiens* outside of Africa.

Neo Europes Term coined by Alfred Crosby in reference to European settler colonies that were established along similar political, economic, and social structures as those in Europe.

Neo-Confucianism A resurgence of Confucianism that developed first in the Tang dynasty (618–907) and flowered during the Song dynasty (960–1279). It is sometimes described as an attempt to reconcile Confucian, Daoist, and Buddhist concepts and practices but developed as a distinct phase of Confucian thought, emphasizing the relationship of individuals to the whole and declaring that abstract philosophy was useless until incorporated into moral behavior. Neo-Confucianism became the basis of civil servant examinations in the Song dynasty.

Neolithic Age Refers to Prehistoric periods when settled, agricultural ways of life begin to supersede nomadic and seminomadic lifestyles; there were various Neolithic periods in antiquity, depending on when this process occurred in each region.

Neolithic Revolution Although the term “revolution” may be a misnomer, as the change occurred over many centuries, the Neolithic Revolution refers to the transformation of human societies from hunters and gatherers to farmers and herders (food producers) and is usually used in reference to the Near East and Europe.

Nestorian Doctrine espoused by Nestorius, archbishop of Constantinople, that Christ and God the Father are two separate entities. Nestorianism was to become a prominent version of Christianity spread along the Silk Roads and into China in Late Antiquity.

New Economic Policy (Russia) Established in 1921 by Vladimir Lenin, the New Economic Policy reconstructed some of the basic characteristics of capitalism with changes in the role of the Russian government. The policy, viewed as transitional, allowed peasants to sell their own produce and even own their own businesses, provided that they had fewer than 20 employees. Meanwhile, the government owned and controlled all banking and large industry.

Noble Eightfold Path The fourth of Buddhism's Four Noble Truths, focusing on wisdom, ethical conduct, and concentration as a means to attain enlightenment. *See also* Four Noble Truths.

Noh theater Noh is a form of theater developed in Japan in the fourteenth century. Noh plays fit two general categories: realistic or fantastic. Plays can center on the doings of gods, warriors, women, or the insane as well as on demons and other supernatural characters. Noh plays are performed on a square

platform covered with a temple-style roof. The sets, although minimal, include a bridge, and crossings represent journeys, often to and from the spirit realm. The actors, always men wearing masks, speak in a highly stylized form, with every gesture governed by tradition. They act to a musical accompaniment provided by a four-person orchestra, and a chorus provides ongoing commentary on the action, similar to the chorus in Greek drama. The related genre of Kyogen often features tales of heroes and a variety of broad comedies. Because Noh plays are not very long, performances can consist of several plays being performed one after another.

Nonaligned movement A movement initiated by many Third World nations during the 1950s and 1960s as an attempt to steer a course of neutrality between the United States and the Soviet Union in the atmosphere of the Cold War. These countries felt that they had nothing to gain from entering direct alliances with either of the two superpowers, although they frequently courted both sides in attempts to gain greater amounts of economic and military assistance. The nonaligned movement first met at the Bandung Conference in Indonesia in 1955. International meetings were held periodically over the next two decades, but the neutral nations were never able to formulate any cohesive policies because of the wide variety of member countries. With the end of the Cold War, the nonaligned movement lost any importance that it once held in international affairs.

Nongovernmental organization (NGO) Not-for-profit groups that are financially and politically independent of any nation or international organization. The core feature of all NGOs is that they exist to meet a human need that their members and supporters believe is not met by government or business. Especially in areas such as environmental issues, human rights, refugees, nutrition, and economic development, NGOs exert enormous influence in developing policy and managing programs. Some well-known NGOs are the Red Cross, the Red Crescent, Amnesty International, and Greenpeace.

Northwest Passage A mythical sea route across or around North America from the Atlantic Ocean to the Pacific Ocean. From the moment that the existence of a New World became known in Europe, European explorers hoped to discover such a route, seeking a relatively short passage to the East Indies and the rest of Asia. Many explorers tried in vain to find the Northwest Passage through the mid-nineteenth century. Only in the late nineteenth century was a route discovered that enabled ships to reach Asia by sailing through the Arctic Ocean, but it is commercially impractical because of severe weather. Global warming, however, appears to have improved access to this passage in recent years.

Nubia The region south of Egypt in which the powerful kingdom of Kush formed in ancient times.

O

Obsidian A natural volcanic glass that was often used for making cutting tools and weapons in prehistoric times. Its cutting edge was superior to that of flint and other stones and was prized by the peoples of prehistoric Eurasia and preconquest Americas for use in tools, ornaments, and ritual displays of status and wealth. Archaeologists are able to distinguish where obsidian pieces originated and thus can trace the trading of prehistoric people.

Oceania The name given to the islands of the Pacific Rim, a geographical construct inclusive of Australia, New Zealand, Micronesia, Melanesia, and Polynesia and part of the Malay Peninsula.

Oligarchy Form of government in which power is vested in an elite or aristocratic few, usually powerful families. In modern usage, the term assumes that rule is based on the elite's own interests rather than on the public good.

Ontology The philosophical quest to define the essence or nature of being, or existence itself; largely associated with Aristotle and the Platonic schools of thought.

Orthodox A set of views, particularly in religious context, that are in accordance with views authoritatively approved as the true, valid, and correct interpretation or set of standards, beliefs, or commandments. Orthodoxy can only be established after a source of authority, such as a church council, has been formed and authorized to create a formalized sanction of belief or opinion.

P

Pacifism An attitude of opposition to violence or war as a means of resolving disputes.

Paleoanthropology A branch of anthropology that includes the study of human and primate evolution, prehistory, and the biological and geological backgrounds necessary to their study. Paleoanthropology uses such techniques and skills as the study of fossils, evolution theory, dating through study of rock layers and other methods, and the review of technology used by different groups during different periods of their development.

Pan-Islamism A political idea that advocated the union of all Muslim peoples. Pan-Islamism first appeared in the Treaty of Kuchuk-Kainardji (1774), when Ottoman sultan Abdulhamid I claimed religious jurisdiction over Muslims living outside of his territories. As the Ottoman empire lost power and watched many Muslim states become absorbed by European nations, Abdulhamid used Pan-Islamism as a diplomatic tool, threatening to stir up unrest among Muslims should he be pressed too hard into unsatisfactory concessions. Within the empire, the idea of Pan-Islamism was used to rally Muslim patriotism.

Pantheism A monistic, as opposed to dualistic, religious view holding that God is essentially identical to nature and the material universe rather than above or beyond it, as the dualistic doctrine of theism holds. In other words, for pantheists the divine, rather than being totally transcendent to the world, is entirely within it, thus dissolving the split between God and world. Seventeenth-century pantheism was most developed by the German Lutheran mystic Jakob Boehme and the Dutch Jewish philosopher Baruch Spinoza.

Papyrus A type of reed, the paper made from its stems, or a scroll formed from sheets of the paper. The ancient Egyptians used the papyrus plant to make several things, including cloth, but it was primarily used to make paper. The Greeks and Romans also used papyrus paper.

Paradigm Refers to the typical example or model of something, often an idea. In recent years the term was popularized by physicist and historian of science Thomas S. Kuhn to describe a deeply held belief or assumption within a field of science that underpins general thought or research programs that depend upon a particular vision of the nature of reality.

Pasha/pasa The rank or title accorded to high civil or military officials (not religious leaders) in the Ottoman empire. The term "pasha" (*pasa* in Turkish) followed a person's name, as in Mustafa Kemal Pasha. During the period of the Tanzimat reforms, the term "pasha" was applied to the four highest classes of civil and military authorities.

Pastoralism Lifeways associated with nomads or groups that migrated in search of pasture land for their domesticated herds.

Patrilineal The practice of tracing descent through male lines that generally also involves passing family names and property through male bloodlines.

Peasant A member of an agricultural class who depends on subsistence farming, whether as a tenant or freeholder of a small plot. The classification effectively distinguishes an aristocratic landholder from an agricultural laborer.

Peonage A system requiring that debtors (generally peasants involved in agricultural production) repay debts to landowners through labor. The system was often in practice in the Spanish empire.

People of color Broad term sometimes used in the United States to describe all persons who are not whites of European descent.

Pilgrimage The experience of pilgrimage is common to all religions. Pilgrimage combines the quest for inspiration, blessing, or grace with the rigors of a demanding journey, a sacrifice made to God. A pilgrimage can be made to fulfill a promise, to plead for a cure or other favors, or simply to seek out a place imbued with the sacred. The journey itself is as important as the goal because it is a symbol of purification.

Plantation An English word used to describe the large commercial agricultural activities such as practiced by the Roman *latifundias* and later found in tropical or subtropical areas, the profitability of which is dependent on inexpensive or slave labor. The term is also used to describe settlements of people from imperialistic societies established in colonized areas, such as the English Protestant settlements (plantations) in Ireland.

Pogrom The word “pogrom” is derived from the Russian word for “havoc” and refers to the organized massacre or persecution of a minority group, usually used in reference to Jews. The first wave of pogroms followed the assassination of Russian tsar Alexander II in 1881 and lasted through the 1880s. A second wave occurred in the early twentieth century. The pogroms erupted and remained concentrated in southern Russia, though they spread to other areas like Warsaw and Novgorod. The Russian government sponsored some pogroms, ignored others, and passed laws limiting the educational, occupational, and residential mobility of Jews. Hundreds of Jews lost their lives, and many more had their property destroyed during the first wave of pogroms, which played an important role in crystallizing Zionism as a national movement and inspiring many Jews in Russia and eastern Europe to emigrate to the Americas and Palestine.

Polity An empire, state, or any form of its subordinate political structures such as counties, cities, districts, or any civil order that performs a governing role. The word derives from “polis,” the Greek term for city-states and the territories they controlled.

Polygamy A type of marriage in which a person is married to more than one spouse of the opposite gender. There are two types of polygamy. Polyandry describes marriage to more than one man, and polygyny is marriage to more than one woman. Polygyny, which was once common in most parts of the world, has become synonymous with polygamy.

Pope The bishop of Rome and the head of the Roman Catholic Church. Catholics believe the pope to be the successor to Saint Peter as well as Jesus of Nazareth’s vicar in the temporal world. The term “pope” itself derives from the word “papa,” or father. In late antiquity the term “papa” was used to designate respected religious leaders, regardless of their official rank. In the ninth

century that term came to be applied specifically and uniquely in the West to the bishop of Rome. In the early Middle Ages a succession of popes struggled with kings and nobles for control of local religious institutions. By the twelfth century the pope was not only the spiritual leader of the Catholic Church but also an important player in European politics.

Popol Vuh A document containing information on Quiché Maya culture and mythology considered to preserve the Quiché people's history, creation story, and myths.

Popular culture The culture of the "common" people. In previous centuries, much of the surviving cultural expression was often that of elite groups, and much is difficult to recover. In the twentieth century, new media led the way to a tremendous increase in cultural forms designed for a mass audience such as comic books, sheet music, Hollywood and Bollywood films, radio and television series, spectator sports, and popular music. Popular culture has become the subject of serious analysis as a medium from which to draw cultural inferences.

Porfiriato The name given to the period in Mexican history in which Porfirio Díaz (1830–1915) dominated politics.

Positivism A strain of liberal philosophy developed during the nineteenth century in England and France, positivism argued that empirical science was the only means of validating genuine knowledge. Its adherents believed that the pursuit of science guaranteed the steady progress of humanity. Those who wished to undermine the importance of theology found positivist ideas particularly useful, and positivism was very popular in Latin America among liberal government leaders who sought to reduce the power of the Catholic Church. Among the best-known positivist thinkers were Auguste Comte of France and John Stuart Mill of Great Britain.

Postcolonial Term used to describe cultural, political, or economic changes in new states after the process of decolonization and their new relationship to the developed world/former colonizers.

Predestination A theological view adopted by John Calvin (1509–1564), holding that God exists outside of the limits of time and is infallibly prescient about all things, past and present, knowing the origins and outcomes of all events in history, including all aspects of individuals' lives and ultimate salvation or damnation.

Prefecture The largest governmental unit in Japan, followed by cities, towns, and villages. Japan is divided into 47 prefectures, which are administered by governors and assemblies. The size of the prefectures range from Hokkaido, the largest prefecture at more than 32,000 square miles (82,880 square kilometers), to Osaka, the smallest prefecture at 720 square miles (1,865 square kilometers). Tokyo is the only prefecture designated as a metropolitan prefecture, and it is the most populous. Governors of the prefectures are elected by local residents.

Primogeniture The right of the oldest son to inherit all of the family estate, regardless of whether there are any other heirs. The origins of the practice lie in the deep past and have the merit of ensuring an orderly transmission of property and rank, enabling a family to maintain its position and wealth.

Privateering The raiding of enemy commerce by privately armed vessels licensed by letters of marque (formal documents authorizing private individuals to seize the goods of enemy states) for strategic reasons. As one example, the sixteenth-century privateer Sir Francis Drake captured a prize so large in 1577 that Queen Elizabeth I was able to retire the national debt with the Crown's

share. Understandably, he was regarded as a hero in Britain (where he was knighted) and as a villain in Spain (whose ships he looted and sunk).

Privatization The act of transferring companies, industries, assets, or resources from government to private entities, such as individuals or corporations.

Propaganda A type of communication developed for the purpose of influencing the perceptions or views of those toward whom it is directed. Since World War II the perceptions of propaganda have been largely negative, but the mode of communication has also been used effectively to influence health and safety issues.

Protectionism A government policy that attempts to protect a nation's domestic industries from foreign competition. Such restrictions as tariffs, subsidies, and import quotas are used to block or decrease the import of goods that can be produced domestically. The mercantilist policies of European monarchs in the seventeenth and eighteenth centuries were based in protectionism. The most famous example of protectionism in the nineteenth century was Great Britain's Corn Laws, which depended on import tariffs to make imported grains more expensive than those domestically produced.

Protectorate The term used to describe the period in British history when England was ruled by the lord protector, Oliver Cromwell (1653–1659). In recent history, the term “protectorate” describes the circumstances when a developing state is put under the protection of a hegemonic power, sometimes as a precursor to attempts at colonization.

Ptolemaic The Egyptian kingdom founded by Alexander the Great's general, Ptolemy. The term also can refer to the thought of Ptolemy of Alexandria, a philosopher who championed the mathematical consistency of an earth-centered solar system, later challenged during the Copernican revolution.

Public education Educational systems, usually free of cost, as instituted by republican and constitutional states worldwide that grew from industrializing societies' recognition of their need for literate workers, having the dual purpose of instilling national and cultural values.

Public health movement The public health movement gained popularity in the late nineteenth century and was primarily concerned with preventative treatments, prenatal care, and pediatric services. The first European clinics appeared in Paris and Barcelona (1890) and London (1899). In the United States, the first strong public health movement resulted in the founding of the National Association for the Study and Prevention of Tuberculosis in 1904. Public health clinics generally receive funding from both public and charitable sources.

Purdah/pardah The practice instituted by Muslims and later adopted by some Hindu groups of keeping women isolated from public observation by requiring concealing clothing and veils when they are outside their homes. Within the home, curtains and enclosures are used to keep women out of sight.

Q

Qin dynasty The Qin dynasty ruled China for a short time, during 221–207 BCE, but instituted many of the practices that allowed the Han dynasty to form a strong state, including standardized currency, writing, and measurements. The Qin constructed many miles of roads and waterways, including the Grand Canal linking northern and southern China. The dynasty came to rule via conquest. Its founder, Qin Shi Huangdi, was a violent and paranoid man who

declared himself “the First Emperor” and set the stage for a modern government when he ignored the nobility and ruled through a centralized structure.

Qing The dynastic name assumed by the Manchus, a group from northwestern Asia that assumed power after Chinese rebels had overthrown the Ming dynasty. The Qing ruled China during 1644–1911 and brought China to an apex of wealth and power in the mid-eighteenth century before being humiliated by the British in the Opium Wars (1839–1842, 1856–1860). The Qing never recovered but endured until 1911.

Qizilbash Ottoman Turkish for “redheads.” The Qizilbash were members of seven Turkmen tribes in Iran who supported the founders of the Safavid dynasty. Military warriors from the late thirteenth century onward, they were key in the transformation of the Safavid empire from a religious to a political state. In return for fighting for the shahs, members of the Qizilbash were rewarded with administrative privileges. However, feuding among the Qizilbash eventually led to their demise during the rule of Shah Abbas I. The name was later applied to Shia Muslims in eastern Asia Minor and Turkmen in Afghanistan.

Quetzalcoatl The “feathered serpent,” a god and patron of creation, learning, and knowledge. Quetzalcoatl has been associated (under various names) with Mesoamerican societies for more than 1,000 years and was important in Toltec, Maya, and Aztec religious views. There is some indication that the veneration of the god traveled up the turquoise trail to the Anasazi people, the probable ancestors of the Hopi and Zuni tribes of the southwestern United States.

Quipu Derived from the Quechua word *quipu*, meaning “knot.” An apparatus of colored cords tied in knots that were used as a record-keeping system by the ancient Incas.

Quran Sometimes spelled “Koran,” the Quran is the holy scripture of Islam. It records the teachings based on the revelations sent down from Allah to the Prophet Muhammad during 610–632. Muhammad’s utterances were collected and ordered into a book sometime after his death. Regarded among Muslims as the word of God himself, the Quran provides a guide for social and personal life and details the religious responsibilities of Muslims. The Quran is one of the most influential texts in human history.

R

Racism Prejudice or discrimination based on the assumption that certain races possess superior mental and/or physical capacities. Racists believe in their own racial superiority even though there is no scientific proof that any racialization exists in humans. In fact, most modern anthropologists and geneticists reject the idea that humans can be divided into distinct racial categories at all. Since the mid-nineteenth century, racism has led to the oppression, enslavement, and sometimes even the attempted extermination of one group by another. Many scholars consider racism to be a modern expression of tribalism.

Radicalism Extremist ideological and/or political movements on both right- and left-wing fringes seeking change; adherents often espouse violence.

Radiocarbon dating Method that archaeologists use to date the origin of documents and artifacts that relies on measurements of the presence of carbon isotopes in organic matter, the levels of which begin to decrease once life ends.

Raj The Hindu word for “rule.” In English, Raj refers to the period of British rule over India. The British East India Company established British control

over important Indian harbors in the seventeenth century, and the company administered the colony as it continued to acquire more territory. As a result of the Indian Rebellion of 1857, better known as the Sepoy Mutiny, the British Crown liquidated the East India Company in 1858 and directly administered the colony until the end of the Raj in 1947, when India achieved independence.

Rajput Hindu Kshatriy soldiers and landowners in India who were the primary obstacle to Muslim domination of India beginning in the fourteenth century. Their dynasties ruled much of northern India, and they managed to retain their independence until the Rajput Rana Sanga was defeated by the Mughal emperor Babur at the Battle of Khanua in 1527. The Rajputs accepted overlordship by the Mughals under Akbar and served in various positions of government until the collapse of the Mughal empire in the eighteenth century.

Ramadan The ninth month of the Muslim calendar when it is believed that the Quran was sent to Mohammad. Observance of daytime fasting during this month is one of the required devotional acts of the Five Pillars of Islam.

Ramayana Ancient Hindu epic text recounting the life story of Prince Rama of Ayodhya. Rama was later deified as an incarnation of the Hindu god Vishnu. The epic is still retold in recitations at yearly festivals and in folk songs, films, and television series.

Rationalism The philosophical outlook that evolved out of the thinking of several seventeenth-century and eighteenth-century European philosophers. Rationalism was characterized by its claim that certain knowledge of the natural world was available to humans solely through the mind's reasoning ability. Rationalism arose in large part in response to earlier philosophical and theological methods that described the world primarily through personal experience and faith. For many Enlightenment rationalists, it was human reasoning that implied the existence of a God.

Re An ancient Egyptian solar deity (also spelled "Ra"). Re's association with the sun meant that he was understood to be an important force in the creation of the world, and Re's daily movement (from sunrise to sunset) was an embodiment of the cosmic order. *See also* Amun-Re.

Recession An economic downward trend in the business cycle characterized by a general decline in production and investment, increased unemployment, and lowered income and spending by individual households.

Refugee An individual forced to flee from her or his home country due to persecution, warfare, economics, or environmental disaster.

Relic The physical remains of a saint or objects that were touched by a saint. In Buddhism, Islam, and the Catholic Church, relics are given great reverence, and miracles are said to occur in their presence. The Catholic Church affirmed the importance of relics at the Council of Trent in 1563 and established rules to confirm their authenticity. Most relics are associated with a religion's founder or primary leaders, such as the shrines erected throughout Asia that are said to hold the remains and possessions of the Buddha.

Repatriamiento Labor system established by Spanish colonial authorities in the Americas whereby indigenous communities were required to provide labor for Spanish landowners in exchange for wages.

Republic A form of government in which sovereign power resides in the citizenry and is exercised by elected representatives who are responsible to the people. Republican government stands in contradistinction to monarchical or oligarchical government, in which the rulers have a vested right to office. A republic is also to be distinguished from a pure democracy, in which

the people govern directly. In the century following the American Revolution and the French Revolution, republican government emerged in many countries to replace monarchical systems.

Republicanism A political philosophy that gained support beginning in the eighteenth century in which elected officials represent the interests of citizens who desire a limited government role in economic and social life. The theory of republicanism also included the notion that citizens had to remain virtuous and educated for a republic to succeed and avoid corruption. In the United States the republican credo as expressed by Thomas Jefferson included a great suspicion of urban life and a championing of the notion of the independent farmer as a repository of virtue.

Revolution An internal political uprising that attempts to establish a new political order, usually with the support of a significant proportion of the population. A revolution is distinguished from a coup d'état, which is a brief and swift seizure of power that may in fact occur as part of a broader revolution. Revolutions are often associated with a shift in political ideology rather than a sheer desire for power and seek drastic social or political change.

Romanticism One of the major intellectual movements of the late eighteenth and early nineteenth centuries in Europe and North America, Romanticism refers to a movement in literature, music, and the visual arts that rejected rationalism and exalted the subjective, emotional and transcendental aspects of life. The effects of Romanticism were carried over into politics through its emphasis on individual freedom, heroism, and political justice for all people.

Ronin Masterless, landless samurai in seventeenth-century and nineteenth-century Japan. Prior to and after the founding of the Tokugawa shogunate in 1603, large numbers of ronin roamed Japan causing trouble, having either lost their masters through death or been disposed of for bad behavior or losses in battle. In the nineteenth century the ronin took up the cause of expelling Western influence from Japan and restoring the monarchy. Many samurai left their masters and became ronin to engage in a campaign of assassinations and disruption. The Meiji government's abolition of samurai privileges brought an end to the ronin in 1873.

S

Salon In Europe, particularly France, and the Americas during the eighteenth century, salons were held in the homes of private individuals and served as gathering places for the socially prominent to discuss intellectual trends and science with philosophers associated with Enlightenment thought. The women who organized and hosted the salons exercised considerable social power in their sponsorship of certain guests and helped shape the age's intellectual currents.

Sanitation Revolution Mid-nineteenth-century movement in Europe and the Americas to ensure public health with the institution of health care and sanitation measures, particularly in urban centers. As with other reform movements, the Sanitation Revolution represented the middle- and upper-class evangelical outlook. Not just communities but also individuals (particularly the poor) and their habits were targeted for reform.

Sanskrit An ancient Indo-European language preserved today through Indian classical literature and texts. Sanskrit is an official language of India and is one of the oldest surviving branches of the Indo-European language family,

which includes Latin, Greek, English, and the majority of modern European languages. The oldest surviving Sanskrit texts are the Vedas, sacred Hindu texts that date from the second millennium BCE. The term “Sanskrit” means “completed” or “perfected,” referring to the Hindu belief that the language was refined over a long period of time to become perfect. Sanskrit was deeply influential in the development of modern Indian languages. Knowledge of Sanskrit has long been considered a mark of distinction and education in Hindu society.

Satrap A provincial governor in the Persian empire and its successor states who had both military and political responsibilities. The word “satrap” is derived from Persian for “protector of the kingdom.” The title of satrap first appeared during the rule of King Darius I of Persia to describe his representatives in two provinces. The title was later applied to other imperial representatives. Because some provinces were controlled by governors, the term “satrap” implied royal favor and special social status. The court maintained by a satrap was a minor version of the imperial court, with the satrap enjoying a great deal of autonomy.

Savanna An area of dry grassland sparsely dotted with short trees. The climate is generally hot but includes both dry and rainy seasons. Many species of wild animals make their habitats in savannas. The savanna of western Africa historically has been an important region for the development of ancient civilizations. Its geographical location made it strategically important for trade routes to and from North Africa, where the Egyptians, the Romans, and other peoples had built empires. Some of the most important ancient civilizations of the African savanna included the Mali empire and Ghana.

Scholasticism A particular Christian philosophical mode and style closely associated with Thomas Aquinas (1224–1274) that arose in the medieval universities of Europe as Christian thinkers attempted to reconcile and fuse Aristotelian philosophy with Christian theologies. Many of these Christian thinkers sought to solve general philosophical problems dealing with a combination of faith, reason, will, and intellect.

Scientific method Formulated by thinkers such as Francis Bacon in the seventeenth century, the scientific method is a process that scientists use to construct accurate theories about the world. There are four steps in the scientific method: observation and description of a phenomenon, formulation of a hypothesis to explain the phenomenon, use of the hypothesis to predict other phenomena, and experiments to test the predictions. Prior to the development of the scientific method in the seventeenth century, dogmatic assertions about the universe were often taken as matters of fact and faith.

Second World Term used during the Cold War in reference to Soviet-dominated Communist Bloc states. *See also* First World, Third World.

Secularization The process through which a society becomes more concerned with temporal, material, and ethical issues than with spiritual and religious matters. The eighteenth-century European period known as the Enlightenment is an excellent example of an intellectual movement toward secularization as people began looking to human reason, science, and nature for the solutions to problems rather than depending on piety, religious texts, and prayer.

Sedentarism Anthropological term for describing a people who lived in a fixed village or town rather than being nomadic or migratory.

Self-determination Theories of self-determination propose that any society is comprised of a people having the right to decide on their own political affiliation without the outside influence of other people, groups, or institutions.

Separate spheres The concept of separate spheres, based on the physical and presumed essential differences between men and women, dominated thinking about gender roles throughout much of the nineteenth century. According to this ideology, women's proper sphere of activity is in the home and family as wives, mothers, and transmitters of virtue. The public sphere was meant for men. This concept has historically been used to legitimize gender-based laws.

Sepoys The northern Indian peasant warriors who had been mercenary soldiers from the 1450s. Both the British and French hired sepoys at times. By the mid-nineteenth century sepoys constituted approximately four-fifths of the British army in India.

Serf A peasant bound to the land, common to the Roman empire, ancient China beginning in the Han dynasty, and Europe in the Middle Ages. During the Roman empire, serfs were commonly known as *coloni*, or tenant farmers. Similar to medieval serfs, *coloni* ran their own farms and bore all its successes or failures. During the late Han dynasty a client-status developed that wedded serfs to an estate owner's property. In Europe, serfs could not own land and were tenants on manors or large estates. On some manors, lords might demand up to five days of labor per week from a serf. Serfs also owed the lord other such duties as a gift of his best livestock when he died. Serfs were not allowed to leave the manor, marry, or go to school without the lord's permission. By the sixteenth century serfdom was ending in England and France along with the growth of a money economy. Serfdom persisted longer in eastern Europe.

Serfdom A condition of bondage. In medieval Europe, serfs worked the land of their feudal lords and submitted to other arbitrary obligations in exchange for military protection. With the rise of commerce and central government in most of western Europe, most serfs acquired freedom of movement and, with certain restrictions, the right to own and dispose of private property. In Poland and the Holy Roman Empire, where weak monarchies left many governmental functions to the nobles, the institution of serfdom became more stringent during the seventeenth century. In Russia, on the other hand, where a free peasantry had been traditional, the labor requirements of seventeenth-century nobles led to a form of serfdom that resembled the plantation slavery of the Americas.

Sexuality The quality of being concerned with or characterized by sex or sexual activity, possessing sexual power or potency. In academic writing "sexuality" is used as an umbrella term to refer to cultural or individual expression related to gender roles as well as sexual practices, beliefs, preferences, or norms characterized by biological as well as historical and cultural influences.

Shah The title given to kings in Persia and present-day Iran. The title of shah is also used by rulers in southern and central Asia, such as in Afghanistan prior to the overthrow of the monarchy in 1973. Hereditary rulers and heads of Sufi orders often incorporated the term "shah" into their names, like Fath Ali Shah, the second shah of the Qajar dynasty.

Sharia The Islamic code of laws based on the Quran, Muhammad's life, and examples from Islam's early days. Sharia was drawn up by Muslim scholars after the death of Muhammad to provide Muslims with a practical guide to daily life. All Muslims are expected to lead their lives according to the sharia, much of which is based on the Quran. The sharia includes guidelines for penal law, laws of transactions, family law, succession law, and court procedures and is traditionally administered by sharia courts.

Shia One of the two major branches of Islam. In contrast to Sunnism, Shia believe that the prophet Muhammad designated a successor—his son-in-law

Ali—and that Ali's descendants are the only rightful Islamic leaders. The Shia tradition emerged in opposition to the political dominance of Sunnism in most areas, although there have been exceptions to that rule, notably in Persia where the Safavid empire established Shia as the religion of state. Shia is sometimes referred to as Shiism.

Shiism *See* Shia.

Shintoism Indigenous Japanese religion that pays homage to spiritual entities called kamis, believed to reside in sacred spots such as boulders, trees, or rivers, as well as deified humans or emperors. Shintoism adapted to the arrival of Buddhism in Japan, and many Buddhist temple grounds include Shinto shrines. As part of the Meiji Restoration of the mid to late nineteenth century, Shinto was temporarily severed from Buddhism and tied to nationalism, centralized power, and a cult of the emperor.

Shogun The title of the highest military officers, who ruled Japan from the twelfth century through the nineteenth century after power was wrested from the imperial house. In the Tokugawa period (1600–1867) the shogun ruled a unified Japan from a capital in Edo (present-day Tokyo). The Tokugawa shoguns remained in power until the Meiji Restoration in 1868.

Sikhs Members of an Indian monotheistic religion, which they call Gurmat (Punjabi for “the Way of the Guru”) established in the Punjab area of northern India by Guru Nanak (1469–1539). Sikhism clearly began in the Hindu tradition, but some scholars have noted an Islamic influence as well. Sikhs were noted for their military expertise in the nineteenth century.

Silk Roads/Silk Road Trade routes that crossed central Asia via land and sea, linking China to Syria, South Asia, and the eastern reaches of the Roman empire. The Silk Roads were critical to the prominence of the civilizations of China, India, and Rome.

Slav The largest ethnic and linguistic group in Europe. The largest Slavic groups live in eastern and southeastern Europe in nations that were once part of the Soviet Union, including Russia, Ukraine, Belarus, Poland, the Czech Republic, Slovenia, Serbia, Croatia, and Macedonia. Traditionally there has been little unity among the various Slavic people. Western Slavs were influenced by Western ideas, are associated with the Catholic Church, and use a Latin alphabet. Eastern Slavs were more isolated, are associated with the Eastern Orthodox Church, and use a Cyrillic alphabet. A Pan-Slavism movement in the eighteenth century attempted to unite all Slavic peoples under the leadership of Russia, a dream somewhat achieved after World War II when many Slavic peoples became part of the Soviet Union. Most attempts at unity have been disastrous, however, as evidenced by the Yugoslavian Civil War of the 1990s.

Social Darwinism Social theory promoted by various Victorians, particularly Herbert Spenser, postulating that “survival of the fittest” (a phrase first used by Spenser) worked in human societies as well as in the development of living organisms. The notion was used in the late nineteenth century and the early twentieth century to justify widening class gaps, imperialism, and laissez-faire economic and political policies. It should be noted that Charles Darwin never proposed extending notions of evolution to social organization.

Socialism Political and economic theory that gained popularity in the early nineteenth century with the rise of industrialism that argues for the collective ownership or at least the fair distribution of resources, especially the means of production. Communism is a branch of socialism that postulates that violent revolutions are often necessitated to achieve socialist goals. There are many variants of socialist theory.

Soteriology The branch of Christian theology that focuses on doctrines and ideas that relate to salvation.

Soviet The Russian name for a number of committees or councils with executive and other functions. The term “soviet” was used for many revolutionary councils prior to the revolution. The Bolsheviks depended on the Soviets as a source of their gathering power during the Revolution of 1917. Following the revolution the name “Soviet” was applied to local and regional legislative bodies; however, their autonomy was delimited by central party decisions. The term was also used for citizens of the USSR.

Stele/stela An upright inscribed stone slab or pillar used as a monument, boundary marker, or gravestone that can feature art, writing, or a combination of the two or be left uninscribed. Common throughout the Near East and Mediterranean, the use of stelae also developed independently in East Asia and in Mesoamerica, particularly among the Maya. Some of the more famous stelae include inscriptions detailing the Code of Hammurabi and the Lhasa rdo-ring (Long Stone of Lhasa) in Tibet, which dates from the early ninth century CE.

Steppe A vast flat expanse of semiarid grassland in central Asia. The steppe has been the home of nomadic herders throughout history.

Subinfeudation The practice whereby a vassal created vassals of his own from the tenants on his lord’s divided estate. The vassal then became a lord himself. In the medieval system of feudalism, a lord granted his vassal land and protection in return for military service and certain other such obligations as hosting the lord and his retinue when he visited. A vassal might also serve at the lord’s castle, serve as a juror, or help ransom the lord if he was captured.

Suffrage The right to vote. In the eighteenth and nineteenth centuries, most countries based suffrage on such special qualifications as land ownership or literacy and limited suffrage to certain racial or ethnic groups. Today most modern governments provide for universal adult suffrage, regarding it as a right that comes with citizenship. Suffrage that is not based on race or sex has often been a rallying cry of political movements throughout the world.

Sufi See Sufism.

Sufism The most mystical branch of Islam. Most Sufi sects sought a more personal relationship with God than that advocated by the more formal and legalistic approach of the ulema, the established Muslim scholars. Sufi practice was characterized by organization in brotherhoods (*tariqahs*) that followed the same path of worship and often venerated the tombs of local saints. Sufism remained very important in the far western (North Africa) and the far eastern (Indonesia and Southeast Asia) parts of the Muslim world, where the standardized practice of centralized states was not always available.

Sultan A king or sovereign, usually of an Islamic state. The title of “sultan” has been used in that regard since the eleventh century and in such countries as Iraq, the Ottoman empire, and Somalia.

Sumer The area in the southern half of Mesopotamia which was the home to approximately 30 early city-states built by a culturally cohesive but politically divided people, the Sumerians, who were among the first (if not actually the first) to develop complex political organization as well as writing, irrigation, etc.

Sunnism One of the two principal divisions of Islam, the other being Shia. Sunni Muslims base their legitimacy on the sayings and actions (or *sunna*) of the Prophet Muhammad. They believe that the leadership of Islam passed from Muhammad in the seventh century to the caliphs (or disciples) elected from Muhammad’s tribe. The sixteenth and seventeenth centuries were a time of

great expansion for the two great Sunni Muslim empires—the Ottoman empire and the Mughal empire—though that growth had slowed by the end of the seventeenth century.

Sura A chapter of the Quran. There are 114 numbered and named suras of varying lengths in the Quran. Each sura represents either the full content of one separate revelation delivered to Muhammad or a mixture of more than one revelation. The suras are labeled as either Meccan or Medinan; many scholars have interpreted that labeling to indicate whether the revelation came to Muhammad during his time in Mecca or in Medina.

Sati/suttee A Hindu practice in India in which a widow burned herself on the funeral pyre of her husband or set herself on fire shortly after his death. Occasionally a woman was burned before her husband entered battle in order to prevent her dishonor if he died; that practice was called *jaubar*. It was a common belief that men needed their wives in the afterlife, but sati may have spread because of the difficulties that widows faced in Hindu society. Stone memorials to such widows date back to the sixth century CE, but references to suttee are found in much older texts. For example, Diodorus Siculus, a Greek historian of the first century BCE, noted the practice in his description of the Punjab region of India.

Synagogue A Jewish religious and community center. Synagogues existed well before the third century BCE, and evolved as centers for public activities. Besides a central room for religious services, synagogues provided space for instruction for children, religious study for adults, and court proceedings. They also provided a home for a Jewish community's archives and library, a depository for funds, and lodging for travelers. Synagogues were especially important for Jews who relocated from Palestine during the Diaspora of the Hellenistic era, since they provided the only community framework available. Following the destruction of the Second Temple of Jerusalem in 70 CE, the religious role of synagogues became even more important.

Syndicalism Flourishing in the early twentieth century, syndicalism was a sociopolitical philosophy that advocated direct action by the working class to overthrow and dismantle the capitalist state. The philosophy was based on elements of both Marxism and anarchism and held that workers should unite in a series of strikes to overthrow the government, which was inherently corrupt and therefore incapable of reform. In place of the state, syndicalists hoped to establish small cooperative associations (syndicals) that functioned on the local level and coordinated themselves with other syndicals. Syndicalism lost influence after World War I and the Russian Revolution of 1917, when many revolutionaries threw their support behind Soviet communism.

T

Tanzimat reforms A series of measures that were intended to modernize Turkish education and law and put Ottoman society on a more equal footing with the Europeans in the mid-nineteenth century. By the early nineteenth century, the major powers of Europe were far ahead of the Ottoman Turks in science, mathematics, and other fields. Since this educational superiority had also led to European military advantages over the Ottomans, the Tanzimat reforms were enacted.

Tariff A tax levied on goods coming into a country, usually by the government of the importing country. Tariffs can raise money for the government and protect the domestic economy from an influx of cheaper foreign goods.

Temperance movements European and American social movements of the nineteenth and twentieth centuries advocating prohibition and the elimination of alcohol, which is seen as an agent promoting other social ills.

Theocracy Derived from the Greek meaning “rule by the deity.” A theocracy is a government that is directly operated by officials who claim divine appointment. They interpreted the law, the political context, and natural events in terms of the divine. Many ancient civilizations were governed by theocracies, including the Egyptians, Hebrews, Tibetans, Maya, Toltec, Aztecs, and Natchez.

Third World A term used in reference to the developing and or nonaligned countries in Africa, Asia, and Latin America in the context of the Cold War. It is assumed that these states have low literacy, low per capita income, and limited industrial capacity. The term “Third World” originated in Europe, but there is no clear consensus on its exact origin, which some attribute to the notion of the Third Estate of the French Revolution, that is, the nonelite. Be that as it may, the term “Third World” was in common use by the 1960s. The First World refers to the industrialized Western powers, including Western Europe, the United States, Canada, etc.; the Second World refers to the Communist Bloc, including Yugoslavia. *See also* First World, Nonaligned movement, Second World.

Torah Central texts in the religion of Judaism. Torah is the name commonly given to the first five books of the Bible, also called the Pentateuch, or Chumasch, that are said to be recorded by Moses straight from the words of God. The term “Torah” can also refer to the entire Hebrew Bible (or Tanakh), which is the Old Testament of the Christian Bible. In addition, the word “Torah” can mean the entire body of Jewish theology and teaching.

Trade deficit Occurs when an entity, generally a nation-state, buys more goods and services than it sells. Trade deficits are addressed in many ways, but the course of first choice is to develop an export product that would be in high demand, particularly in those states that are in a trade surplus situation. Trade deficits can also be addressed through import taxes and tariffs imposed that serve to raise the prices of foreign goods to amounts equal to or greater than those paid for goods produced.

Trade union An alliance of workers created to promote the interests of its members regarding wages, working conditions, and benefits through the process of collective bargaining with employers. Most trade unions are organized around the interests of one particular industry or a particular skill or craft. While the term “trade union” can be interchangeable with the term “labor union,” the term “labor union” can imply membership across trades and skill levels. The trade union movement developed in the early years of the nineteenth century and grew rapidly particularly in Great Britain after the repeal of the Combination Acts, which had prohibited workers from forming trade unions.

Trading bloc A group of nations that have entered into a free trade agreement. Most nations enter trading blocs in an attempt to provide higher-quality goods at lower prices to consumers in each of the countries. Poor countries that become members of trading blocs often receive large amounts of capital investments by wealthier countries. Examples of trading blocs include the European Union, the North American Free Trade Agreement (among Canada, the United States, and Mexico), Mercosur (among Argentina, Brazil, Uruguay, and Paraguay), and the Asian Free Trade Area, an outgrowth of the Association of Southeast Asian Nations.

Triangular trade Refers to patterns of oceanic trading ventures that required a round trip with three destinations. The best-known use of the triangle involved eighteenth-century trading ships from New England that carried rum and other goods to the west coast of Africa to be exchanged for slaves. The slaves then became the cargo for the voyage to the West Indies (the infamous Middle Passage), where they were exchanged for molasses to be transported back to New England and turned into rum.

Tributary state A tributary state maintains many or all of its autonomous institutions and practices but must pay a tribute to a hegemonic state, often (but not always) making some cultural concessions.

Trusts In the late nineteenth century, the heads of many large businesses tried to eliminate competition within an industry by forming trusts, a form of monopoly in which all shares of stock from participating companies were placed under the control of a single organizing body that held the stock in trust for the companies' owners. Trustees, who were usually bankers like J. P. Morgan, made decisions for the industry, setting prices and assigning spheres for each company and thus driving nontrust companies out of business and eliminating competition. The unfair practices of the trusts led to a public movement for business reform, culminating in the Sherman Antitrust Act (1890).

Tumulus A barrow or small earthen mound, often covering an ancient grave.

Twelver Shia A branch of Islam popularized by Shah Ismail in the Safavid empire that claimed there were 12 ideal religious leaders who had followed Muhammad and that the twelfth would someday emerge from hiding. Twelver Shia is also known as Twelver Shiism.

U

Ulama From the Arabic word for "learned." Ulama are Muslim scholars who are the main interpreters of Islamic law.

Upanishads A collection of Vedic and Hindu texts, primarily written between 800 and 400 BCE, that form the early canon for knowledge of Hindu principles and the understanding of the universe.

Urbanization In regard to ancient times, the term "urbanization" refers to the process by which cities became the center of political and economic life in a culture and to the concomitant physical growth of urban areas. Modern urbanization generally accompanies industrialization and the creation of new housing as well as transportation and communication infrastructure. Accelerated urbanization is often characterized by poor housing and sanitation conditions, leading to the poor hygiene and overall health of residents. Poverty perpetuated by low factory wages, insufficient diet, and other social ills, including alcoholism and violence, are frequent criticisms of modern urbanization.

Usury The practice of charging interest for money loaned. In present-day law, states sometimes regulate the rates of interest. During the European Middle Ages, all forms of interest were condemned as immoral, and sinful. Lending with any interest was prohibited to all Christians by canon law. During the twelfth and thirteenth centuries, Europeans were forced to reconsider the idea of charging interest: the commercial economy that accompanied the rise of towns could not function without loans, and people were not likely to make loans if they could not profit from them by charging interest. That problem was solved in part by creative arrangements borrowing heavily from the practices that migrated into Italy. Princes and monarchs were often able to force loans

from wealthy Jews, and often defaulted. By the sixteenth century, in many areas usury became defined more narrowly, as charging unfair or excessive interest, allowing lenders to realize some profit.

V

Vassal During the era of feudalism in the Middle Ages, a vassal was a person who pledged loyalty, homage, or fealty to a lord. Vassals performed such duties as military service in return for protection and a fief, an area of land that they governed on behalf of the lord.

Vedas Sanskrit texts dating to the second and first millennia BCE.

Vernacular A term used to describe cultural phenomena such as language, tradition, or architecture that are indigenous or native to a particular group or region. Vernacular styles, such as in architecture, can define particular regions, historical periods, and cultural influences.

Vizier A high government official or minister for the Egyptians, the Mongol empire, the Persian empire, Ottoman Turks, and other Eastern peoples. The English word “vizier” comes through Turkish from the Arabic *wazir*, which meant “caliph’s chief counselor.” In ancient Egypt, a vizier was a governmental official ranked directly below the pharaoh; the Egyptian word for such an official was *tjaty*. The term was also used for officials in some Muslim countries, especially during the Abbasid dynasty and the Ottoman empire, as well as in the Middle Ages and the early modern era.

W

Waterpower From ancient times through the early industrial revolution, water was one of the main sources of power for construction, milling, and other basic industries.

Westernization The process of adopting political, social, and economic practices that originated in Europe and the United States. In the eighteenth and nineteenth centuries, Westernization became synonymous with industrialization efforts in Japan, Turkey, Russia, and other parts of the world as underdeveloped nations attempted to implement technological and institutional innovations. Charismatic leaders such as Russia’s Peter I introduced Western-style education, fashion, military, and industrial practices. Such efforts were often met with resistance; however, at the same time indigenous nationalists might push for Westernization as a strategy for gaining national power, as in Meiji Japan.

World system/systems Controversial neo-Marxist theory of world history developed by sociologist Immanuel Wallerstein that describes how a world economy depends on a hierarchy of core, semiperiphery, periphery, and external regions of varying economic influence. Colonialism and neocolonialism, for example, both depend on a relation between a dominant core and a subordinate semiperiphery and periphery from which core regions might draw resources or find markets. Other scholars, such as Andre Gunder Frank and Janet Abu-Lugod, have further refined the concept. Critics point to the growing power of India and China, which once would have been considered peripheral states, as evidence that any world economic system would necessarily be more fluid and mutable than Wallerstein portrayed.

X

Xenophobia The fear of foreigners that may underlie cultural interactions as well as international and national politics.

Y

YBP Meaning “years before present” and sometimes simply referred to as BP (before present), YBP is a term used by archaeologists to define historical events. The year 1950 is set as the “present” for such time measurements.

Z

Zen Buddhism An offshoot of Buddhism that focuses on an individual’s achievement of enlightenment and de-emphasizes religious dogma. Zen Buddhism stresses the importance of Zen masters in helping followers (students) achieve enlightenment through such practices as meditation and pondering riddles. This form of Buddhism (known as Chan Buddhism) was dominant in China by the ninth century and spread to Korea and then to Japan as early as the fourteenth century, where it became known as Zen.

Zionism Political movement advocating the establishment, expansion, and preservation of a Jewish state in Palestine.

Zoroastrianism A dualistic, probably ancient, Indo-European religion that revived in Persia with the teachings of the prophet Zarathustra, the earliest known theologian, who probably lived in the sixth century BCE. He recognized a supreme deity, the creator of all goodness and light, but also an independent foe, Angra Mainyu or Ahriman, the great deceiver and author of all lies and other evil. Zarathustra taught that at the end of time, Ahura Mazda, supported by good humans, would prevail after a huge battle. Individual humans would then be judged and would receive rewards for good acts or punishments for evil done. Zoroastrian priests were called Magi and played a role in the nativity stories of Christianity.

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Era 1: Beginnings of Human Society ■ Volume 2

GENERAL EDITOR

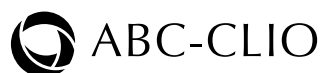
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

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Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 1 Beginnings of Human Society to 4000 BCE

This volume is concerned with the biological evolution of our species—*Homo sapiens*—as well as the origins of the social, political, and economic institutions that have characterized our cultural evolution. Although the contributions in this volume are in one sense broadly historical in that they describe our past, they have been informed by very different methods, approaches, and intellectual traditions than those commonly thought of as history. Archaeology, paleontology and paleo-anthropology, geology, studies of ancient climates, molecular genetics, physics, and linguistics have been brought to bear on the development of a more comprehensive understanding of the early history of our species. Indeed, evidence from written language, the standard means by which historians create reconstructions of the past, can barely be found in the pages of this volume. Writing such as we understand it appears fairly late in our cultural evolution, and even then, much of what was written down by cultures, such as those in the ancient Middle East, for example, was more about keeping track of economic transactions than describing the events, peoples, and politics of times past. This era, then, sees little traditional historical narrative and analysis.

Instead, the contributions to this volume are best seen as prehistory, which can be defined as the study of the past through the material remains created and left behind in burials, trash deposits, structures, and monuments by individuals, societies, and cultures. Archaeology is the primary means by which these material remains are recovered. Archaeologists identify important sites, excavate them, and examine the objects to create explanations about what happened in the past. And as noted above, data from other sciences are used to develop a more comprehensive picture of the past whenever this is possible.

This volume has adopted a global perspective, one that is best described as world prehistory. Although global in scope, this approach is at once regional (what was village life like in ancient China 8,000 years ago?) as well as comparative (when do we see the first villages in the ancient Near East and how do they compare in size, social organization, and complexity to the earliest villages found in other parts of the world?). This allows us to observe similarities and differences in the pace of cultural change as well as its causes. Moreover, world prehistory balances out treatments of the past that are confined to particular national or intellectual traditions and shows us that there is real value and insight to be gained in understanding how cultures, other than our own, have developed around the planet.

Many of the contributions to this volume have a strongly anthropological perspective. Broadly defined, anthropology is the study of

humanity, and it is composed of a number of distinct subfields that examine the biological, cognitive, linguistic, and cultural variability of our species. Anthropology offers a unique window for understanding the past because of its comparative perspective and its engagement with societies at all levels of complexity, ranging from the simplest of hunting and gathering peoples to the most complex of nation-states. Furthermore, anthropologists have documented tremendous variability in human cultures, a finding that reminds us that our species has evolved in a diversity of environments and that there is no single optimal biological and social adaptation. Thus, there are numerous forms of the human family, of kinships systems, of expressions of religious belief, and of political leadership. At the same time, however, anthropologists have discovered a number of broad regularities in human cultures that allow us to use some findings as analogies that help us understand what past societies might have been like. For instance, we can observe today that hunters and gatherers who live in arid environments characterized by limited resources necessarily move their residences frequently over the course of a year. If through archaeology we discover the remains of

This era begins deep in the past, some five million to eight million years ago, and ends around 4000 BCE. Our species did not exist at the beginning of this era, but paleontologists and paleoanthropologists are confident that they can recognize ape species that are on our direct line of evolution.

hunting and gathering peoples who lived in a similar environment 10,000 years ago, we can hypothesize that these ancient peoples likewise moved their residences frequently. By themselves analogies prove nothing, but they are used constantly to test our ideas about the past and to gain insight into past lifeways.

This era begins deep in the past, some five million to eight million years ago, and ends around 4000 BCE. Our species did not exist at the beginning of this era, but

paleontologists and paleoanthropologists are confident that they can recognize ape species that are on our direct line of evolution. These species are confined to a relatively small part of Africa. Although we know little about them aside from their fossilized remains, it is likely that they resembled modern chimpanzees in their social organization. They probably lived in small groups and foraged individually for their food. Their social lives revolved around reproduction, dominance hierarchies in which larger and more aggressive individuals maintained social prominence, and a limited recognition of biological kinship, that between mother and offspring. By the end of the era, the foundations of most of the major civilizations in the Eastern Hemisphere have been established, while those in the Western Hemisphere are in their formative stages. Although there are numerous hunting and gathering peoples to be found across the globe, many more people are now living in villages, towns, and, in a few instances, large cities. New subsistence technologies, such as the domestication of a bewildering variety of plants and animals, are widespread, as are technologies that have led to the creation of metal tools, textiles, and ceramics. New social relationships have emerged as societies become more complex, and in some places people now live under the rule of hereditary rulers and in profoundly

nonegalitarian circumstances. Instead of dominance hierarchies, people now live within a complex web of social rules, mores, and expectations. And instead of being found only in Africa, our species now lives in virtually every part of the world, from the driest of deserts to the highest of the world's plateaus. Finally, the earliest writing systems are just appearing in the ancient Near East, and in a sense this begins the times of literate societies and civilizations.

This era, then, describes the profound and extraordinary biological and cultural changes of our ancestors. It is hard to express just how extraordinary these changes have been. Not only has our species undergone dramatic physical change over these millions of years—for example, in comparison with some of our primate relatives and ancestors, we walk on two legs rather than four, we use our hands effectively as tools, and we have larger, more complex brains—but the cognitive changes in our species are equally, if not more, significant. Today, we speak thousands of languages, and even more importantly, some of us can learn them with facility. But for most of our evolutionary history, our ancestors had no real spoken language and had to communicate with gesture, action, and calls. And although we recognize that our closest primate relatives such as chimpanzees and gorillas have real intelligence, it is not of the same richness, complexity, and quality of that which characterizes our own species. Humans have a capacity for symbolic communication—the use of verbal utterances, gestures, and even objects—to represent ideas, concepts, people, and actions that are not physically present. Thus, humans can live not only in the here and now but can also describe both past and present and can create ideas and scenarios that have never actually existed in the physical world. None of our close primate relatives has this ability to any significant degree.

Scholars of this deep past have not only attempted to document these changes but have also actively sought to explain them. Among other things, the contributions to this volume will provide information that can be used to address a number of important themes, questions, and controversies about the evolution of our species and the creation of the rich cultural tapestry that characterizes the distant past. At the same time, these contributions will provide a detailed look into how scientists have studied our past and how difficult it has been to create a comprehensive and detailed understanding of that past.

What is it that makes our species human? What evidence is there in the past to say that one of our ancestors was “human”? We call ourselves *Homo sapiens sapiens* (“wise” or “thinking” human), our biological nomenclature, with *Homo* representing our genus and *sapiens* our species. We have a fossil ancestor that paleoanthropologists call *Homo habilis*, the so-called “handy man” because of the location of the thumb on the hand. This species made simple stone tools associated with two different technological traditions, an early one called Olduvan found at 1.8 million to 2.2 million years ago and a somewhat later tradition called Acheulean, which is dated between 1.8 million and 1.5 million years ago. Is the ability to make stone tools sufficient to assign this fossil find to the genus *Homo*? No, because the fossils of at least two other species—*Australopithecus aethiopicus* and *Australopithecus*

garbi—are found associated with tools of the Olduvian tradition. Why *Homo habilis* is in our genus is a combination of physical characteristics including a larger brain, a reduction of tooth size especially in the cheek (or grinding) teeth, and a larger brain-to-body ratio when compared to the contemporary australopithecines. These physical changes are said to signal a more intensive use of technology, which is believed to reflect an increased level of cognitive development.

This example offers a number of insights into the problems faced by the scientists working within this era. The data upon which conclusions

Why Homo habilis is in our genus is a combination of physical characteristics including a larger brain, a reduction of tooth size especially in the cheek (or grinding) teeth, and a larger brain-to-body ratio when compared to the contemporary australopithecines.

are based are fragmentary and sparse, and consequently many inferences are tentative at best. Also, fossils and stone tools tend to provide little insight into the social lives or behavior of these remote ancestors. Although archaeologists have made every effort to obtain evidence for food sharing, for example, by looking carefully at the distribution of animal bones at the sites they excavate, it is usually the case that these sites have been badly disturbed by erosion, animal activity,

and landscape changes since their deposition many years ago, all of which make it difficult to make an objective assessment of these past behaviors. History, then, in the earliest times of this era is based on fossils; comparisons of them with both later and earlier specimens, stone tools, and animal bones; and whatever tentative inferences can be drawn from them. As already noted, analogies also play a very significant role in our understanding of deep prehistory.

The fossil record, however, can only go so far in providing evidence for the appearance of our species. The earliest fossils that paleoanthropologists have identified as being *Homo sapiens* are found in Africa as early as 200,000 years ago. However, their skeletal characteristics are described as “transitional,” meaning that they are a blend of primitive and modern features. Fully anatomically modern *Homo sapiens* are not recognized until 125,000 years ago, again from Africa. But if these finds resemble us physically, were they modern in their behaviors? What behaviors would qualify as “modern”? Long lists of traits have been proposed, including the appearance of figurative and nonfigurative art, clear evidence of deep planning in terms of subsistence practice, the use of decorative body ornamentation, the creation and habitual use of a wide diversity of tools, especially those made of organic materials, and much more. Not surprisingly, given the Eurocentrism of many early paleoanthropologists, behavioral modernity was first proposed to have appeared in western Europe around 50,000 years ago, and the cave art found at sites like Lascaux, Altamira, and others was said to support this inference. Some scientists have proposed that the spark that created this so-called cognitive revolution was the appearance of fully human language and its habitual use. But more recent data, again from Africa, suggest that many aspects of behavioral modernity appeared at least as early as 70,000 years ago and possibly even earlier. Although the

European finds reflect modernity in the sense meant here, they are no longer believed to be the earliest expression of it. There is even evidence of body ornamentation dated to 100,000 years ago. Were the makers human? In one sense, yes, they were. But it is unlikely that they had the full range of behaviors we associate with modernity. In any case, it is important to remember that the evidence from the study of world prehistory is that our evolution has been complex and has varied considerably across geographic space and that, as a consequence, there is no finish line that one of our ancestors crossed in some race to become human. Becoming human is not an event; it is a process.

Data on our biological and cultural evolution remain relatively sparse for most of our past. But by 10,000 years ago, we routinely discover buildings and structures, elaborate artistic expressions, and significant quantities of food remains and broken artifacts. And as we near the end of the era, the quantity and range of physical objects left behind by our ancestors—from skeletal remains to the by-products of their technologies—grows tremendously. Although many of these early villages and cities are small by modern standards, they are larger and more complex by orders of magnitude than the remains created by our earliest ancestors. And while changes in landscapes due to erosion, sea-level rise and fall, and the movement of glaciers, for example, have destroyed or damaged many archaeological sites, many more sites have been discovered, resulting in a richer archaeological record. This means that it is much easier to get at the social lives of our ancestors than in earlier times, which in turn means that we are better able to develop a more complete historical perspective on these cultures and the peoples who created them.

How much influence did climate and climate change have on human biological and cultural evolution? We know that in the modern era anthropogenic global warming is creating significant problems for peoples living on low-lying islands in the Pacific as well as hunters living in the Arctic. If any of the more dramatic scenarios of sea-level rise come to pass within the next century, coastal cities around the world will be inundated, and the people living in them will be forced to adapt to these radically different environments.

Similarly, we can look at past environments and ask to what extent changes in the natural world shaped the direction, pace, and flow of the evolution of our species. A number of our ancestors, including *Homo erectus* (“upright human”) and our close relative *Homo neanderthalensis* (Neanderthal human), lived during some of the coldest periods the world has seen over the past 500,000 years. Insofar as it can be observed in the archaeological record, neither of these species had the technologies to create complex clothing, that is, with tight seals that fit the body snugly and preserve its warmth. Some paleoanthropologists have argued that aspects of the Neanderthal skull, such as the large nasal cavity, were adaptations to cold stress that allowed inspired

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air to be warmed more effectively before being drawn into the lungs. The relatively compact and heavily muscled body and short limbs relative to body size are indicators of an adaptation to cold because this morphology of features has less surface area, which reduces the amount of heat lost through the skin. For much of the early history of our species, changes in our biology and physiology were as important as changes in our behaviors.

Through time, however, cultural adaptations tend to become more important than changes to our bodies and biology. *Homo sapiens* and *Homo neanderthalensis* coexisted in what is now Europe for thousands of years, but by roughly 30,000 years ago the Neanderthals vanished from the region. Many hypotheses have been advanced for this, including violent conflict between the species and a competitive advantage for humans given their superior ability to use language as well as interbreeding, wherein the Neanderthal genome would have been absorbed into the human gene pool. None of these explanations has much evidence to support it. However, a hypothesis focusing upon a cultural adaptation—the appearance of a gendered division of labor—may offer some insights into this problem. All human societies have a division of labor based on gender. In hunting and gathering groups, men tend to hunt large dangerous game, while women, old men, and children gather plants and capture small game. Together, these different strategies offer the possibility of creating a more secure and varied (and therefore healthier) diet. Moreover, if one food strategy fails, the other may well succeed. Using archaeological data of animal bone assemblages and comparing Neanderthal sites with those of humans, it has been observed that the diversity of resources at the human-created sites is far greater than that of those created by the Neanderthals, suggesting that the humans of the era had a gendered division of labor. In contrast, for the Neanderthals, it is suggested that both males and females cooperated in the hunt. Because humans were able to obtain a healthier and more secure diet, they were better able to overcome periodic or unpredictable resource shortfalls and scarcity than were the Neanderthals because of their culturally derived ability to shift their resource procurement strategies.

Cultural adaptations such as these become the dominant force in cultural change after 15,000 years ago, and the pace of cultural change accelerates rapidly at about 10,000 BCE. The increased pace of change coincides with the global shrinking of the ice sheets that covered much of the Northern Hemisphere. Glaciers and ice sheets have been a common feature of the planet's climate throughout human evolution but only had a significant impact on it after our species moved out of Africa and into higher latitudes, where cold temperatures and aridity were more pervasive. Although the movement back and forth of ice sheets did not affect the daily lives of our ancestors, since the changes were slow and thus imperceptible at the scale of a human life, the regular back and forth of glaciers created short periods of warmth followed by longer periods of cooler and then colder temperatures. This process created a patchy, fairly unproductive environment. At 10,000 BCE, however, the glaciers retreated northward or up into high mountain valleys and have remained there since. Consequently, global climate has wit-

nessed an unprecedented period of stability characterized by warm temperatures and remarkably little variability.

Around 10,000 BCE we find that cultures in a number of places, primarily Mesopotamia, East Asia, and possibly the Nile Valley, begin a process of sedentarization. That is, although these peoples still practiced hunting and gathering lifeways, they no longer made frequent residential moves. In other words, they began to stay longer in fewer places and, in some cases, became fully sedentary, living in the same place for the entire year. The relatively mild climate of the time created an abundance of wild resources of all kinds, some of which were the ancestors of modern domesticated plants like wheat, barley, millet, and rice. According to some archaeologists, this new abundance created the conditions for sedentary life as populations became more dependent upon them and were thus tethered to them. One consequence of becoming sedentary is a more rapid rate of population growth. Although population densities were fairly low on a global scale, they became very high in these zones of abundant natural resources. For a time, there were sufficient resources in these areas to support larger numbers of people. And as densities grew larger, some groups migrated to other areas. Over time, however, wild resource density was not sufficient to support these ever-growing populations. This has led some archaeologists to argue that population-resource imbalance was the primary cause of the domestication of plants and animals in these regions.

But was climate change the ultimate cause of the domestication of plants and animals? There seems to be little question that the end of the glacial epoch facilitated domestication because of reduced climate variability. Moreover, there is no archaeological evidence of any kind from earlier in prehistory to suggest that plants or animals (aside, probably, from the dog) were domesticated. In this instance, it seems that it is best to label the onset of a stable climate a necessary condition for plant and animal domestication rather than a sufficient condition. But to put this argument into perspective, there is evidence from other regions of the world that some plants and animals were domesticated for very different reasons. Some plants, like chiles, were domesticated as condiments, while others, such as cotton, were domesticated to facilitate the harvesting of vast schools of anchovies off the coast of ancient Peru. Here is where a world prehistory becomes important, because it reminds us that there is no single “necessary” story to be told about the evolution of our species; instead, there are multiple contingent stories with very different causes and outcomes.

Whatever the causes of plant and animal domestication, however, there is no question that the creation of an abundant, reliable, and renewable subsistence system based on different combinations of domesticated plants and animals was causal to the veritable explosion of culture after 10,000 BCE. But not every part of the world was a part of this change.

Here is where a world prehistory becomes important, because it reminds us that there is no single “necessary” story to be told about the evolution of our species; instead, there are multiple contingent stories with very different causes and outcomes.

The Middle East, especially the Levant (eastern Mediterranean coast) and Mesopotamia (roughly present-day Iraq), along with some of the major river drainages in East Asia, were precocious. Eastern and central Europe saw the introduction of domesticates somewhat later, and still later was northern Europe and, surprisingly, sub-Saharan Africa. The explosion of culture in the Western Hemisphere was even later. And some places, like Australia, parts of southern Africa, and the Arctic, never developed indigenous, or local, forms of complexity, although these societies were certainly impacted by their more complex neighbors.

When does the world become truly global? When do societies move from being local to regional to supraregional? There is no question that for most of human history, we have been a profoundly local people. Although our ancestors moved out of Africa and populated the planet, we have to remember that these moves were piecemeal and took place over thousands of years. There was no organized migration out of Africa but instead a series of local moves that are best seen as part of the subsistence quest of these peoples. The peopling of the Americas is a good example of this. The earliest peoples who “discovered” it were not looking for it but were instead in search of the next good place to camp and find something to eat. None of those people who crossed the Bering Land Bridge or floated down the west coast of North America had any idea that there was a continent behind that coastline or ahead of them over the next rise.

We become more regional fairly late in our history. We can track this by looking at where artifacts come from and how they move across the landscape. There is evidence of small-scale exchange between groups of hunters and gatherers as early as 120,000 years ago, but the geographic scope of this exchange is still fairly limited. It is only near the end of the Paleolithic period that trade networks that were more regional in scope began to emerge. The trade of obsidian, a volcanic glass, involved the movement of raw materials over hundreds of miles from sources in Turkey to destinations in the Levant and elsewhere in the Middle East. This kind of regional exchange became fairly common after the end of the glacial era, as people began to live in sedentary communities and rely more extensively on domesticated plants and animals.

But we did not become more global until the very end of this era, around 4000 BCE. The exchange of precious stones, foodstuffs, textiles, and metals appears to have been important in the formation of the earliest states in the Old World. Connections over thousands of miles from the Indus to Mesopotamia are now well documented. But the very large majority of people living at the time were still quite local in that most probably never ventured far from the villages in which they were born. A global outlook was held by the traders and by the people, mostly elites, who benefited from the trade networks and who could afford to support them.

World prehistory offers us insights into our deep past and provides us with an understanding of what it means to be human. It shows us that our past is a truly complex mosaic of events, processes, and outcomes that have shaped the biological and cultural evolution of our species. And while we see tremendous variability in the expression of

culture in the past, we must not forget that there are similarities in our cultures that cross both space and time. Indeed, it can be argued that many of the foundations of the things we take for granted today, such as the way in which our minds frame problems, assess risks, and make decisions, were fixed when anatomically modern *Homo sapiens* made its first appearance some 125,000 years ago. Our mechanized agricultural systems of the modern era are ultimately based upon the decisions made by peoples living more than 10,000 years ago confronted with difficult choices about maintaining their subsistence systems in the face of population growth. We today owe much to our ancestors no matter where they are from, for ultimately they have created the foundations of what we are as humans and how we live in the world.

—Mark Aldenderfer

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Environment and Population

The story of human biological and cultural evolution can be usefully summarized as a story about adaptation to the environment. Adaptation is the process by which a species creates a stable lifeway within a specific environmental context. As mammals, we live within a habitat, which can be broadly defined as the physical location within which we live. Within these habitats are multiple niches, which describe the specifics of how we actually make a living: what it is we eat, how we go about obtaining what it is we eat, and how we modify the niche to make it more productive for our ends. We do not simply respond to the environment, but instead we are actively involved with it. As cultures became more complex over time, their ability to modify the environments (or niches) within which they lived increased dramatically. Once domesticated plants and animals became the basis for the diet in many regions of the world, we were no longer dependent upon the natural abundance of plants and animals. But this did not mean that we were free from the environment, because the advent of agriculture meant that in many instances, people became more dependent than ever on predicting the timing of rainfall, the probability of frosts, or other climatic events that could dramatically reduce the yield from their fields and crops.

Even today we are very strongly affected by the environments in which we live. Many scientists believe that anthropogenic global warming—the rise in the earth’s temperature that can be attributed to human agency—began at the end of this period, about 4000 BCE, as a larger proportion of the planet’s inhabitants became farmers and herders. These subsistence technologies are known to produce significant quantities of greenhouse gases, such as methane and carbon dioxide. If some of the more dramatic predictions of sea-level rise from this warming occur within the next century, many coastal cities and low-lying islands across the globe will be inundated, leading to massive economic dislocations and migrations of people from these places into more interior regions. Although the environment itself is not a constant, what is constant is the continual necessity of our species to adapt to the constraints and opportunities of environments and their changes over time.

For much of the evolution of our species we have adapted to our niches, as have all other species, by changes in our biology or our physical characteristics and, to a lesser extent, modifications to our behaviors. Thus, many of the contributions of this theme focus on the physical characteristics of our distant ancestors and describe how they may have made a living based in great part upon the inferences we gain from studies of their skeletal morphologies. Indeed, for the first five million

years of our evolution, we responded to environmental change, as did our neighbors within the environment.

But what distinguishes our evolutionary history is the degree to which we have come to rely on technology as our primary means of adaptation to the environment. Compared to many of our closest primate relatives, we are physically quite weak, have small teeth, and are fairly slow. Without our tools, few if any of us would fare as well as an adult male chimpanzee in a confrontation with a jaguar. But it is very unlikely that the chimpanzee would be able to adjust to a significant drying of the climate. Tools, as well as the mental capacity to invent

them and use them in novel ways, make all of the difference to our successful adaptation to the changing environments of the past and have made us—our species—what it is today.

Thus, as tool use becomes more common, we can observe that once-critical physical characteristics become diminished in importance. For example, many of our earliest ancestors had large, robust molars that helped them chew the gritty

foods they ate. Reliance upon chewing was also manifest in the shapes of their skulls, which themselves had to be robust for the attachment of the powerful muscles that permitted constant intense chewing. As our ancestors began to use tools, rather than their bodies, as the primary means by which to process the environment, molar size began to shrink, and skulls became less robust. Albeit slowly, technology trumped biology as our primary adaptive mechanism.

The advent of reliance on technology also meant that our ancestors could move into or even create new niches. Most animals are very much confined to their niches by their diets, dentitions, and limited range of behaviors. Many species are unable to cope with dramatic and rapid environmental change and have thus gone extinct. Our great capacity for tool use means that only the most severe, long-lasting, and persistent changes in the environment will threaten our survival. Our minds and our ability to make tools of all kinds mean that we can move away from problems more effectively than other species. Much of the early movement of our ancestors across and then out of Africa may have been in part due to movement away from scarcity of food or water in the distant past.

Dealing with challenging environmental contexts, however, is only one part of the story of our species and its evolution. Successful adaptations create stable and even growing populations. Population sizes are held in check by predation, disease and illness, and failures of some individuals or groups to reproduce. Many of our early ancestors were a prey species for large carnivorous animals like large cats and canids, such as wolves. For most of the evolution of our species, population sizes were very small.

As technology became more important as our means of adaptation, our ancestors could defend themselves more effectively against predators and move further up the food chain. Although there is continued

Without our tools, few if any of us would fare as well as an adult male chimpanzee in a confrontation with a jaguar. But it is very unlikely that the chimpanzee would be able to adjust to a significant drying of the climate.

debate as to whether ancestors such as *Homo ergaster* or *Homo habilis* were hunters or scavengers, it seems clear that *Homo erectus* was capable of hunting large mammals, and hunting was one of the most important subsistence technologies for *Homo neanderthalensis* as well as early *Homo sapiens*.

But a successful adaptation to a niche with an impressive technology does not guarantee rapid population growth. Most of our early ancestors and indeed most people on the planet until roughly 10,000 years ago were hunters and gatherers who had a mobile lifeway, and their subsistence strategies depended in great part upon the natural abundance and seasonal availability of the plants and animals important to their diet. Depending on the number of residential moves, women in hunting and gathering societies tend to have lower completed fertility than do women in more sedentary societies. The interval between births is greater for mobile women, and this acts as a powerful mechanism to depress rapid population growth rates.

After 10,000 years ago, a number of peoples began to adopt more sedentary lifeways. This process is related to, but not caused by, the domestication of plants and animals. In the ancient Levant, for example, the Natufians became sedentary by their focus upon large stands of wild barley and wheat. Populations began to grow rapidly in the region, but over time the pace of growth could not be supported by the harvesting of wild resources. In the Levant, this ultimately led to the domestication of these species. Similar processes likely took place in East Asia and in Mesopotamia. As subsistence systems based upon domestication became more widespread, populations grew exponentially. Ultimately, it is plant and animal domestication that has been the engine of population growth on our planet.

The contributions in this theme cover three important topics: a description of the primary methods used to study the ancient past, an overview of the evolution of our species starting almost five million years ago, and finally a review of the adaptations and lifeways of our ancestors over the past two million years. To study the deep past, information from a number of scientific disciplines is required, including archaeology, paleoanthropology, paleoclimatology, geology, molecular genetics, and linguistics. For the very earliest of our ancestors, we rely almost exclusively upon paleoanthropology, climate reconstructions, and geology. The remains of our ancestors are fossilized, and aside from the stone and sometimes bone tools they used, there is little direct evidence about their lifeways. Climate reconstructions help us define the niches in which they may have lived, while geology is used to provide chronological dates of when particular fossils were deposited into the archaeological record. Based upon these limited data, we make the best inferences possible as to the range of adaptations our ancestors may have employed.

As we near the modern era, other disciplines can contribute effectively to developing a story about the past. Although studies of skeletal anatomy remain important, in a few cases it is possible to identify the DNA contained in ancient bones. Currently, scientists are working to decode the Neanderthal genome; this is the most ancient of our ancestors to which this technique has been applied. The analysis of DNA,

however, in more recent times can be used to study population movements, patterns of interaction, and, in some cases, the relatedness of individuals found in ancient cemeteries. Archaeology is of considerable importance since our more recent ancestors were now leaving behind many more kinds of objects and creating many different types of archaeological sites. Through careful excavation and analysis of the materials recovered, it is possible to determine the adaptations of these peoples. Dating methods continue to be of great value. Finally, there are some opportunities to use the methods of linguistics to track population movements. Combined with the study of ancient DNA, this has become a very powerful approach to the study of the past.

—Mark Aldenderfer

■ Introduction: How We Study the Very Distant Past

Because prehistory is not preserved in memories or revealed to us in written records, scientists must rely completely on other forms of evidence for reconstructing it. Many of these methods are the same as those used to study historical periods, but there is no written record to verify the clues or to lead to new ones. The record of prehistory is restricted to the materials that have lasted thousands or millions of years in the ground and to those that have persisted for thousands or millions of years in our behavior, in our anatomy, and in each of our cells. Crumbly pots, dusty bones, regional tongues, and swabs of molecules are surprisingly telling when it comes to ancient history.

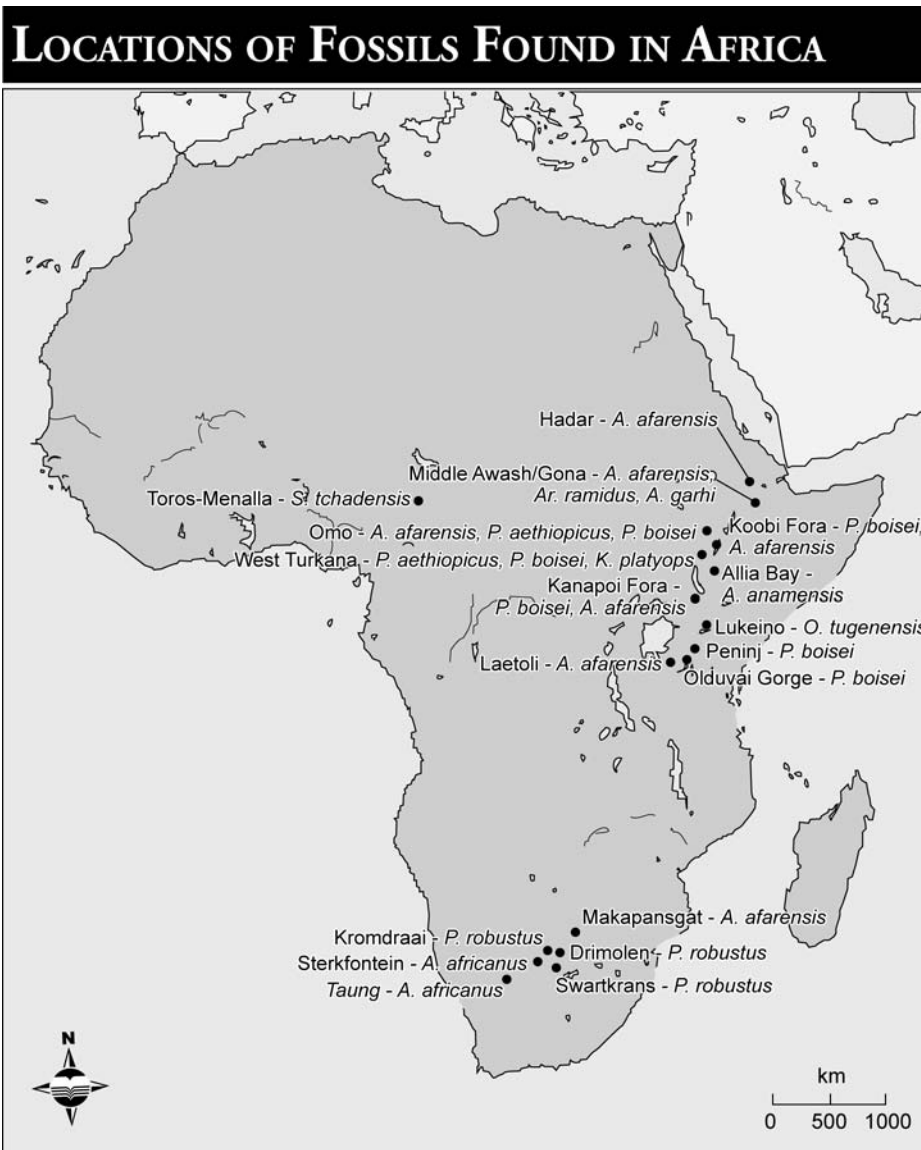
Prevailing over all the study of human prehistory is the understanding that humans share a common ancestor with every living thing, an idea championed by Charles Darwin. Ever since our humble beginnings we have been evolving, are currently evolving, and will continue to evolve as long as every child is not a clone of its parents and as long as every new generation is different from the one before it.

When it comes to our prehistoric past, nature, not scribes or journalists, wrote the story. Our biology and much of our behavior evolved by natural selection favoring certain traits that later became adaptations, by new favorable and not-so-favorable mutations in the genetic code, by bottleneck effects that restricted population

variation, and by gene flow between populations that spread variation around.

The traits particular to our species—including upright walking, an enormous brain, and a dynamic intellect—began evolving about six million years ago when the branch leading to *Homo sapiens* split from that leading to chimpanzees. Just as if we were interested in horses or dogs, most of the evidence for our prehistory comes in fossilized teeth and bones, in comparative anatomy, in ancient DNA, and in our own DNA. The rocks and the sediments that contain the fossils and the artifacts also hold geologic clues about the ancient environment and about the age of its contents. The only thing that is different about human evolutionary studies compared to other animals is the additional material culture and linguistic evidence that help reconstruct much more recent prehistoric life and human dispersals.

Humans are the result of millions of years of modification, and our adaptations are those bouts of tinkering that succeeded and that benefited our species over generations. With all that remains of these processes in the ground and in our bodies, scientists must reconstruct the experiments that nature has performed on us. Such a task requires creativity, tenacity, and technology. Creativity is imperative for asking the right questions and for figuring out the means by which to answer them. Tenacity and



stubbornness are traits that no scientist who is searching for evidence can do without. Technology helps scientists to see the evidence they have collected in ways that their naked eyes cannot. Cutting-edge methods also allow them to collect rare and fragile evidence, like bird blood residue on a 30,000-year-old arrowhead. Of course, luck plays a role as well, but the most successful scientists put themselves in luck's crosshairs more often than the rest.

It did not take modern science and technology for Darwin to figure out most of how the natural world, including humans, evolved. Thanks to a trip around the world on the HMS *Beagle*, he got a global perspective on geology and biological

variation. From his own backyard and through correspondence with peers all over the world, Darwin collected evidence from living animals, from dead ones, and from extinct ones to argue that everything is related and belongs somewhere on the metaphorical Tree of Life. By grouping extant animals into nested categories, it is possible to make predictions about where they shared a common ancestor in evolutionary history. Thus, since chimpanzees and humans share more features and behaviors than either does with fish, one would predict, accurately, that the extinct ancestors to chimpanzees and humans would be found in more recent layers of the earth, which were laid down later in the evolutionary history

of life on earth, compared to the common ancestor we share with fish. This comparative method extends all the way down to the molecules. DNA from humans and chimpanzees is more similar than either is to that of any fish, and when the differences between humans and chimpanzee genetic sequences are counted up, it is possible to estimate how long those differences took to accumulate (molecular clock analysis). Most studies like this estimate that humans and chimpanzees shared a common ancestor between six million and five million years ago and have been evolving independently ever since.

If a scientist is searching for the very first human ancestor, then they would first go to a geologic map and find sedimentary rocks that are between six million and five million years old. Chances are that this event took place in Africa, since chimpanzees and gorillas (our second-nearest relative) both live there. Thanks to the tectonic activity in the Great Rift Valley of East Africa, rocks of this age have been exposed for paleontologists to crawl all over, collecting fossils that have eroded out of the sediment. Millions of years of volcanic activity in this region have laid down periodic layers of ash, which are spread between fossil deposits and are datable using modern geochemical methods. This is probably how the paleontologists knew to survey these rocks in the first place, and if not, then once it is dated this is how future researchers will know where to search for the first fossil human ancestors. Much of the last six million years is represented by fossils and stone tools and other artifacts from East Africa thanks to the unique geology of the region. Because so much of what we know about human evolution and prehistory comes from work done in East Africa, it was nicknamed the “cradle of humankind.”

—Holly Dunsworth

Bibliography

- Darwin, Charles. *Descent of Man*. London: John Murray, 1871.
- . *On the Origin of Species*. London: John Murray, 1859.
- Maslin, Mark A., and Beth Christensen. “Tectonics, Orbital Forcing, Global Climate Change, and Human Evolution in Africa: Introduction to the African Paleoclimate Special Volume.” *Journal of Human Evolution* 53 (2007): 443–464.
- Sarich, V. M., and A. C. Wilson. “Generation Time and Genomic Evolution in Primates.” In *Science* 179 (1973): 1144–1147.
- Shubin, Neil. *Your Inner Fish: A Journey into the 3.5-billion-year History of the Human Body*. New York: Vintage Books, 2008.

Evolution, Natural Selection, and Adaptation

The late biologist Theodosius Dobzhansky wrote an essay in 1973 that summed up the state of biological science at the time in its title, “Nothing in Biology Makes Sense Except in the Light of Evolution.” Even as the theory of evolution comes under renewed attack at the beginning of the twenty-first century by those who feel that it threatens their religious beliefs, it is virtually impossible to find a biologist—or scientist in many other disciplines—who will find fault in Dobzhansky’s claim.

Evolution is the theory that explains how species appear and change over time. These changes consist of characteristics readily seen (known as the phenotype), such as plumage patterns in songbirds, but also in characteristics not so easily observed, such as the genetic composition (or the genotype) of organisms. Evolutionary adaptations affect virtually all aspects of an organism’s life, from success at obtaining mates to disease resistance; thus, evolutionary theory provides the foundation upon which our understanding of modern biology is built.

While ideas that could be labeled “evolution” were being proposed in the eighteenth century, the first expression of the theory of evolution as we know it was in a brief unpublished sketch by Charles Darwin in 1839 shortly after his return from the HMS *Beagle* expedition, which inspired his thinking on the topic. Darwin showed a revised copy of it to Joseph Hooker in 1844. Darwin knew that the ideas were controversial and spent much of the next two decades testing and revising his initial ideas and acquiring evidence that would help him make the case. He was forced into action in 1858 when Alfred Russel Wallace, a young biologist and explorer, sent Darwin an essay expressing very similar ideas. Darwin forwarded the paper to Sir Charles Lyell, who, with Hooker, had excerpts of both Dar-

win's and Wallace's work read at the July 1, 1858, meeting of the Linnean Society in London.

The theory of evolution posits that those individuals better able to acquire resources and avoid predation and who are more resistant to disease or possess similar positive traits within a given environmental context will be more likely to have viable offspring who, because of heredity, will likely inherit the characteristics that gave their parents an advantage over other members of the species. Over time, those with these positive traits will outbreed those without, and the population will change to reflect the increasing frequency of those better able to take care of themselves and their offspring. This is known as differential reproduction. The result of differential reproduction—the weeding out of individuals with less-adaptive traits and the gradual accumulation of favorable traits within the population—is what Darwin called natural selection. Through natural selection and assuming no environmental change, those organisms that produce more offspring within a specific ecological niche are said to be better adapted than those less able to do so. However, if the environment changes, different traits may become advantageous, and those traits that once may have enhanced adaptation no longer do so. In this sense, natural selection is “blind”; that is, it assumes no directionality and is contingent on the stability of the environment occupied by the organism.

Darwin and Wallace lacked a mechanism for inheritance, however, and Darwin died never knowing that the basic laws of inheritance had been discovered by Gregor Mendel, an Austrian monk who demonstrated through his studies of pea breeding that the inheritance of some traits was particulate and that patterns of inheritance of some traits could be explained by simple mathematical formulas and ratios. While Mendel's work remained unknown for several decades, it was rediscovered at the turn of the twentieth century, and in 1905 the particulate entity of inheritance was renamed the gene by William Bateson.

Although DNA (deoxyribonucleic acid) had been identified in 1869, its role in inheritance was not recognized until the early twentieth century. It is now known as the substance that carries genetic information in the cell nucleus

and is organized on chromosomes. The modern evolutionary synthesis combines the key concept of natural selection with our enhanced understanding of genes and their organization at the molecular level, including how they change through mutation, thus supplying the raw material for natural selection. In the modern synthesis, evolution can be understood as changes in gene frequency in populations of organisms over time. Adaptation, then, can be seen as genomes (combinations of genes on chromosomes) that confer reproductive benefits on organisms within specific environments.

Darwin himself saw significant evidence that something like evolution had occurred; in fact, that evidence is what made him change from a believer in the special creation of each species to the leading proponent that species evolved over time. Among the strongest evidence for evolution at the time was the fossil record that revealed many species that existed at different times in the earth's past. Some fossils appeared related to modern organisms, while others did not. Changes in fossils as revealed by examination of a sequence of geological strata reveal evolutionary developments in the line of organisms examined. The fossil record is sparse, however, as few environments on earth produce conditions that favor fossilization (i.e., burial of the remains of an organism in a low-oxygen or anoxic environment that prevents or limits decomposition).

Anatomical comparisons among living organisms as well as among living and extinct species can likewise reveal much about how a group of organisms has changed over time. For instance, humans and apes share a common ancestor. Humans and apes are typically born with the same number of teeth, but because the length of the human jaw appears to have shortened since humans and apes diverged from one another, adolescent and young adult humans have to endure the agony of having their wisdom teeth removed; for many of us, our jaws are too short to accommodate all the teeth.

The biotechnology revolution has also added to the arsenal of evidence in favor of evolution. By examining mutation patterns in genes among a group of nominally related individuals, molecular analyses may provide a powerful, objective confirmation of evolutionary pathways worked

out via fossil and anatomical analyses. For example, humans and chimpanzees share approximately 98 percent of their genetic material and genes, but that 2 percent that is distinct makes all the difference.

Not only can molecular evidence be used to reconstruct relationships among groups—with closely related groups being more similar genetically and vice versa—but by focusing on segments of the genetic code with more or less constant mutation rates, the timing of events in the history of a group of organisms can be estimated. While these analyses can be used as checks against estimates of the timing of events as recorded in the fossil records, they make it possible to obtain estimated dates of evolutionary events in organisms that leave few traces in the fossil record.

—David M. Lawrence

Bibliography

- Darwin, Charles. *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. London: John Murray, 1859.
- Dobzhansky, Theodosius. "Nothing in Biology Makes Sense Except in the Light of Evolution." *American Biology Teacher* 35 (1973): 125–129.
- Futuyma, Douglas J. *Evolution*. Sunderland, MA: Sinauer Associates, 2005.
- Mayr, Ernst. *What Evolution Is*. New York: Basic Books, 2002.

Archaeology

Archaeology is the study of human culture through the analysis of objects created or modified by humans throughout their past. The list of objects used in archaeological studies is almost limitless. Buildings, boats, burial sites, cave paintings, clothing, jewelry, roads, and tools are just some of the types of materials that have been examined by archaeologists.

Traditionally, archaeology has been subdivided from history based on one factor: whether or not the culture of interest had some form of written language during the time period of interest. If no written language was evident, the study was deemed to be archaeological; otherwise, it was deemed to be historical. Despite tra-

dition, the boundary between the disciplines is often blurry. For example, a study of Druidic culture in the British Isles may use historical analysis of Roman writings but also archaeological analysis of a Druidic site.

Most information about the past is obtained through excavation of ancient sites. In the past, archaeological excavations (or digs) seemed little more than academic ransacking of ancient sites. Heinrich Schliemann, in his search for Homer's city of Troy, destroyed a number of upper layers in the mound at Hissarlik, Turkey, in his search to reach a layer destroyed by fire (Troy II) as described by Homer. Many other archaeologists of his time were equally destructive.

Before a modern dig begins, a potential site is usually surveyed to locate areas within the site worthy of further investigation. Survey methods include walking or flying over a site to spot features that do not quite fit in with the natural landscape. Aerial photography and remote sensing data—especially side-looking airborne radar, sonar, and magnetic surveys—can help pinpoint structures of interest buried beneath the surface of the landscape.

Surveys may be supplemented by subsurface sampling techniques. Such samples may be obtained by coring and analyzing the cores for artifacts of interest. Test pits—in essence mini-excavations—are also used. Surveys and sampling minimize the risk of damaging the natural and cultural landscape as well as minimize the risk of wasting resources on an unproductive location.

Modern archaeology follows four basic principles (or laws) espoused by Edward C. Harris in the 1970s. The first of the laws is that of superposition: in undisturbed terrain, upper strata (layers) are younger than layers beneath. The second is the law of the original horizontal. According to this principle, unconsolidated sediments are deposited in horizontal layers. The third law is that of original continuity. Layers will be bounded by the edges of the physical context in which they are deposited, or else they will get progressively thinner toward the unbounded edge. Finally, the law of stratigraphic succession posits that a layer of interest takes its place in a sequence between the lowest of the layers above it and the highest of the layers below.

A proper excavation is painstaking. Each layer of dirt is slowly removed, and objects discovered are carefully mapped and sketched in place. By doing so, the stratigraphy (or horizontal sequence of soil layers) of the site as well as the context of the objects therein can be preserved. Context, or the relative locations, of objects within a site is vital in determining the relative sequence of strata as well as modifications to the site through the period of interest. Relative positions of artifacts, such as grave goods in a burial site, can indicate relative importance of those objects to the persons who left them. Thus, context provides significant clues to the origin, development, and change of cultures through time.

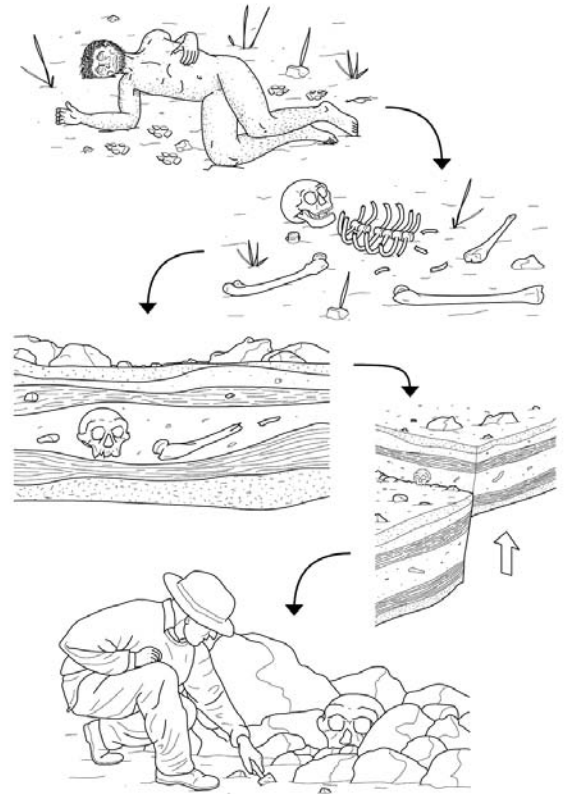
Painstaking detail during an excavation also ensures that the provenance (provenience) of the objects is properly recorded, vital in helping determine later whether an alleged artifact is authentic or a fake.

Once removed from the ground, archaeological artifacts must be cleaned, catalogued, and classified. Some must undergo some type of conservation measure to halt or reverse degradation that has accumulated over time.

For example, the turret of USS *Monitor*—one of the ironclads that took part in the pivotal battle of Hampton Roads in the American Civil War that heralded the end of wooden warships—was, at the time this article was written, undergoing such conservation measures after it was retrieved from the waters off the Outer Banks, where the ship sank in a storm in late 1862. The salt of the oceans had corroded and compromised the iron, the turret, and other components of the revolutionary ship.

In some cases, the absolute time (such as a calendar date) that an object was created or deposited is known. Many times, though, the objects have to be dated in other ways, either indirectly from comparisons with objects of known age from other sites or directly via methods such as tree-ring analysis, radiocarbon dating, or some other radiometric technique.

Artifacts may be subject to other types of analysis. Metallurgical analyses may be used to determine materials and methods of construction of weapons. Isotopic analysis may be performed on bones and teeth from a burial site in



How the archaeological record is formed. One of our distant ancestors dies and is not buried. The bones of the skeleton as the body decomposes will be scattered by animals and the elements. Over time, the bones may be buried by the accumulation of new soil. Over time, erosion may once again expose the bones on the surface or will reveal them in the stratigraphy of a deposit. (Illustration by Jeff Dixon)

order to obtain clues about the diets of the people who lived at the site in the past.

Archaeology became more concerned with ethical practices in the twentieth century. Concerns over past archaeological looting of sites (or smuggling of artifacts from sites, as Schliemann was accused of) has led to efforts by archaeologists to work more closely with governments in the regions where sites of interest are located or with peoples with ancestral ties to sites. For example, the U.S. Native American Graves Protection and Repatriation Act (1990) is an attempt to balance the competing but equally valid needs of scientists seeking to better understand the past of the Americas with the needs of Native Americans to have their sacred traditions and sites respected.

—David M. Lawrence

Bibliography

- Cassell, Joan, and Sue-Ellen Jacobs. *Handbook on Ethical Issues in Archaeology*. Special Publication of the American Anthropological Association No. 23. Washington, DC: American Anthropological Association, 1987.
- Harris, Edward C. *Principles of Archaeological Stratigraphy*. 2nd ed. New York: Academic Press, 1989.
- Thomas, David Hurst, and Robert L. Kelly. *Archaeology*. 4th ed. Belmont, CA: Thomson/Wadsworth, 2006.

Geology

Geology is an earth science devoted to the study of the solid portion of the earth as well as the materials that it is made of. As a science, geology has ancient roots. Humans have been studying geology to some extent at least as far back as the first time they began making tools of stone.

The first recognizably scientific studies of geology date back to Greeks such as Aristotle, but geology did not significantly develop as a science until the seventeenth and eighteenth centuries. Nicolaus Steno (Niels Stenson) laid the foundation of stratigraphy—a subdiscipline required for proper interpretation of geological layers, or strata—in his *Dissertationis Prodomus*, which was published in 1669.

Steno began with the assumption that geological deposits originate in some sort of fluid form (whether as liquid or suspended in air) that solidifies later. (Solid objects may be incorporated into soft sediments during the deposition stage.) Each new deposit is laid down on older deposits, leading to the principle of superposition: in undisturbed layers, the youngest layers are on top and the oldest are on the bottom of a sequence.

Steno observed that new strata are deposited in horizontal layers; this led to the principle of original horizontality. Thus, if strata lie at angles to horizontal layers, they must have been disturbed after they were initially deposited. Steno surmised that deposits would completely fill a basin of deposition—form one side to the other—unless some other solid object blocked the way; this is the principle of lateral continuity. A principle of Steno's is that of cross-cutting discontinuity, in that if a feature cuts through strata, that feature originated after the strata were deposited.

The principles outlined by Steno were not accepted right away—nearly a century passed before the ideas became common currency in geology—but in time they opened up huge spans of the earth's past to scientific analysis. One of the major inheritors of Steno's legacy was William Smith, a surveyor who created the first large-scale geologic maps.

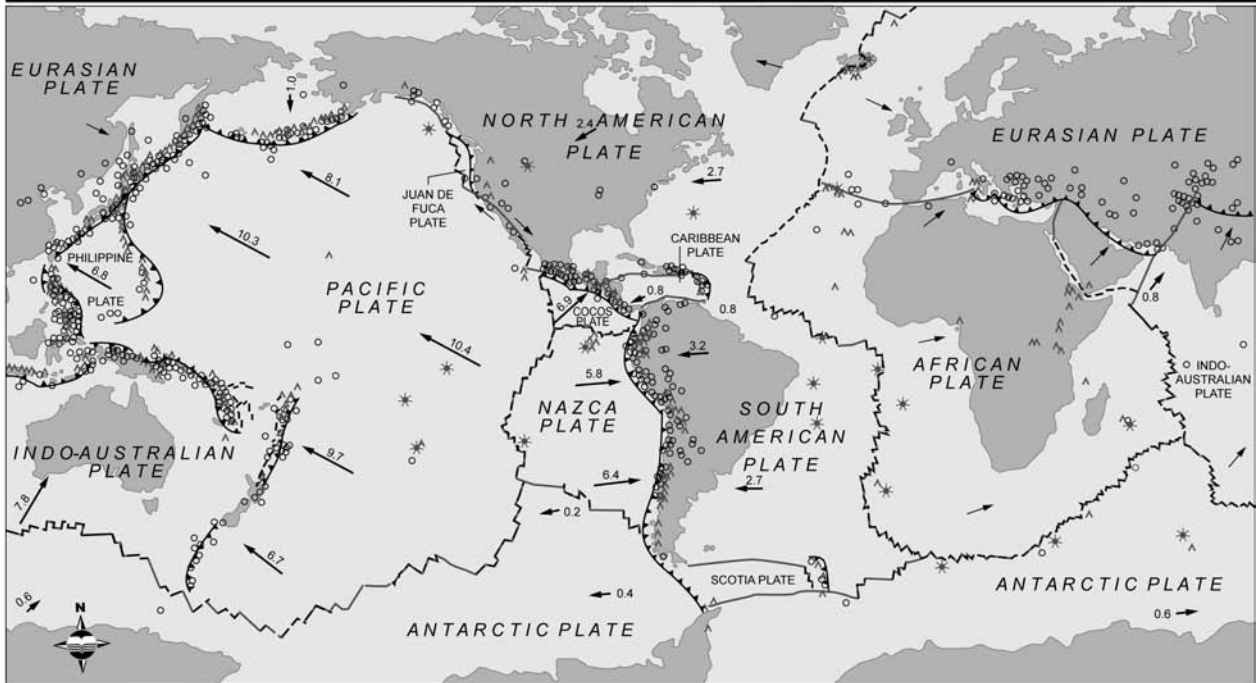
Smith, while working for a coal company, noticed that sequences of specific strata were often repeated at different sites across the English and Welsh countryside. Each stratum was characterized by specific sets of fossils, and the sequences of fossils, as the sequences of strata, were repeated from one place to another. He developed a hypothesis, later accepted as a principle, of faunal succession (change) that he repeatedly and successfully tested in years of subsequent geological mapping of the British Isles. His 1815 geological map of England, Wales, and parts of Scotland is known as “The Map That Changed the World,” as much for its revelations of the geological history of the British Isles as for its innovations in the mapmaking process.

While Smith mapped the countryside, James Hutton proposed a principle that opened many aspects of the past to scientific examination: uniformitarianism. The principle of uniformitarianism, often restated as “the present is the key to the past,” contends that physical processes proceed today in the same fashion as they have in the past. Thus, a scientist can understand how some phenomenon, such as coastal erosion, operated millions of years ago by studying how it operates in the present.

Hutton also recognized the importance of the role that the internal heat of the earth played in driving geological processes. Plutonism, as the idea came to be known, claims that the heat of the interior and its effects on related phenomena, such as volcanism, are vital in the creation of basic crustal features, such as mountain ranges, that are subsequently worn down by other processes, such as weathering and erosion. Plutonism itself provided a foundation for yet another pivotal theory of geology, plate tectonics.

The origins of the theory of plate tectonics goes back at least as far as the sixteenth century, when mapmaker Abraham Ortelius suggested that the continents on either side of the Atlantic

TECTONIC PLATES, WORLDWIDE



Ocean had once been joined and had drifted apart. The first modern expression of what later became plate tectonics was made by Alfred Wegener in his proposal of a theory that others called continental drift. Wegener's ideas originated in an observation similar to that of Ortelius: that the Americas had to have once been joined with Europe and Africa. Wegener pulled together evidence from many disciplines—geology, paleontology, and biogeography, for example—in marshalling his argument that the locations of continents and ocean basins are not permanent entities (as many scientists believed at the time) but instead are temporary features of the surface that change as the continents slowly move across the earth's surface.

Wegener's proposal met with significant skepticism, but accumulating evidence from ocean basins in the latter part of the twentieth century led to the development of plate tectonics. Plate tectonics—a theory that describes the surface of the earth as made of crustal, or tectonic, plates that drift on top of a molten layer called the mantle—revolutionized geology as well as the understanding of the earth's past in that it explains the origin of major landforms, all

volcanic activity, and most earthquake activity on the planet. It is also essential in its explanation of apparently anomalous climate patterns from the earth's past, such as tropical conditions in what is now Antarctica (because it was in the past located in the tropics) as well as the current distributions of major groups of plants and animals.

—David M. Lawrence

Bibliography

- Cutler, Alan. *The Seashell on the Mountaintop: A Story of Science, Sainthood, and the Humble Genius Who Discovered a New History of the Earth*. New York: Dutton, 2003.
- Lawrence, David M. *Upheaval from the Abyss: Ocean Floor Mapping and the Earth Science Revolution*. New Brunswick, NJ: Rutgers University Press, 2002.
- Repcheck, Jack. *The Man Who Found Time: James Hutton and the Discovery of the Earth's Antiquity*. Cambridge, MA: Perseus, 2003.
- Tarbut, Edward J., and Frederick K Lutgens. *Earth: An Introduction to Physical Geology*. 8th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Winchester, Simon. *The Map That Changed the World: William Smith and the Birth of Modern Geology*. New York: HarperCollins, 2001.

Paleoanthropology and Anatomy

Paleoanthropology is the study of the evolution of humans and related primates via analysis of bones, tools, and other physical evidence. In comparison with traditional archaeology, the time spans of concern to paleoanthropologists are far greater: millions of years as opposed to thousands for archaeologists. The evidence available is often skimpier as well.

Important clues as to the evolutionary history of humans can be found through analysis of the anatomy—or structure—of bones, often the oldest and most consistent evidence of the development of humans from ancestral primates over the past several million years. Analysis of bones reveals many of the key elements of human evolution. Development of hip girdle and lower limbs illustrate the change from walking on all four limbs to bipedal locomotion. Modifications of the forelimb, especially development of the opposable thumb, make tool creation and use possible. Changes in size and shape of the skull and, more importantly, the brain case reflect physical modifications that contribute to less tangible advances, the development of the ability to reason.

Since the evidence used in paleoanthropology consists of fossils, tools, and other materials, it is strongly grounded in the principles of geological and anthropological stratigraphy, as proper dating of evidence-bearing strata is essential to placing such materials in the proper chronological sequence.

Stratigraphic techniques only provide evidence as to relative ages of strata. Other dating techniques are required, however, if actual ages are to be assigned to fossils or artifacts. The primary dating technique of use to paleoanthropologists is radiometric dating, measuring the amount of decay of radioactive isotopes in a substance to determine how old it is. Study of radioactive isotopes in bones and other objects can also yield evidence as to the nature of past climates. Isotope ratios in bones and teeth further provide clues to dietary preferences of the individuals.

The ancestors of humans and apes were primates that walked on all four limbs. A key step in the evolution of humans was the acquisition of the ability to walk on the hind legs only (bipedal locomotion). Evidence for bipedal locomotion

includes changes to the pelvis, legs, feet, spine, and skull. The ilium (the bone that forms the upper part of the hip) of humans and their ancestors is relatively shorter and broader than in other primates, allowing attached muscles to provide greater stability when walking upright. The pelvis is bowl-shaped, providing greater support for internal organs when upright.

In humans and their ancestors, the upper legs insert into the hip joint in a fashion that allows the legs to better support weight and allow for a smoother stride while walking; other apes tend to sway from side to side while doing the same. Also, the human foot, with its shorter and less flexible toes, provides a more stable platform for walking.

Another sign of bipedal motion is the curvature of the spine, which allows the spine to serve as a shock absorber as well as increases strength, stability, and balance. Finally, the position of the foramen magnum—the opening in the skull through which the brain connects with the spinal cord below—is located farther forward in humans than apes, allowing the skull to pivot in a balanced fashion on top of the spinal column when the individual is upright.

Paleoanthropological evidence also provides clues as to how long early humans have been walking on their hind legs. In particular, footprints left by two individuals of *Australopithecus afarensis* are preserved in a 3.6 million-year-old volcanic ash deposit from the Leotoli region of modern Tanzania. While *A. afarensis* was very similar to apes in terms of skull characteristics, the impressions of the feet reveal a walking motion virtually indistinguishable from modern humans.

Most primates have long curved fingers and short thumbs suitable for climbing and swinging from branches. The ancestors of humans, while retaining characteristics suitable for climbing, began evolving shorter fingers with less curvature and longer thumbs that were opposable. These advances made it possible for them to begin to manipulate objects and use them as tools.

While the ability to walk and manipulate objects were important steps in human evolution, the ability to reason is what arguably separates humans from other species. Early humans had apelike skulls: forehead sloping backward, face

projecting forward, and a fairly small brain case. As humans evolved, so did the size of their brains. To accommodate the larger brain, the skull expanded downward as well as forward, the latter leading to a relatively flat forehead. The jaw shortened as well. This coupled with the forward expansion of the skull resulted in a relatively flat face.

In addition to revealing evolutionary trends in humans and their ancestors, paleoanthropology provides important clues as to the geographical center of human evolution. While primates can be found throughout much of the world, the greatest center of diversity of hominids (a group that includes humans, the great apes, and their ancestors) is in Africa.

The early human line split from the ape line between four million and five million years ago. While there is considerable debate over which species deserves credit as the first “human,” the strongest contender for the title is *Ardipithecus kadabba*, the earliest member of the australopithecine (literally meaning “southern ape”) line known from fossils dating to 5.8 million years ago from what is now Ethiopia. *Ardipithecus* was succeeded by *Australopithecus*, most species of which are also known from East Africa.

Many scientists believe that the genus *Homo*, to which modern humans belong, evolved from *Australopithecus afarensis*, a species known from East Africa between 3.9 million and 2.9 million years ago. The first member of the genus *Homo*, *H. habilis*, is believed to have lived between 2.5 million and 1.8 million years ago. *H. habilis* was one of the first of the early humans to master use of stone tools. The leading rival claimant to that achievement is *Australopithecus garhi*, a hominid known from sites in modern Ethiopia that may have used stone tools as many as 200,000 years before *H. habilis* is believed to have done so.

—David M. Lawrence

Bibliography

- DeSalle, Rob, and Ian Tattersall. *Human Origins: What Bones and Genomes Tell Us about Ourselves*. College Station: Texas A&M University Press, 2007.
- Gibbons, Ann. *The First Human: The Race to Discover Our Earliest Ancestors*. New York: Doubleday, 2006.

Johansen, Donald, and Blake Elder. *From Lucy to Language: Revised, Updated, and Expanded*. New York: Simon and Schuster, 2006.

Jurmain, Robert, Lynn Kilgore, and Wenda Trevathan. *Introduction to Physical Anthropology*. 10th ed. Belmont, CA: Thomson-Wadsworth, 2005.

Dating Methods

One of the most important tasks of anyone studying environments or societies of the past is to assign dates to sites or phenomena of interest. Without such a capability, it would be impossible for scientists of the past to determine the proper sequence of events in development of natural or human history. It would be impossible to determine what came first: dinosaurs versus primates, chariots versus automobiles, or hieroglyphics versus hexadecimal code, for example.

Sorting out the chronology of events in the life of this planet became easier with the development of material culture—especially written language—as human records often provide some date that can in time be correlated with a modern calendar. Prior to the development of written language, however, the effort to assign a date to an event or artifact becomes more difficult. Scientists have to work with clues left in a mute earth, understand the processes that created the clues, analyze the evidence, and then infer as best as possible the age of the event or artifact.

Fortunately, the earth and its residents leave quite a few signs that make dating possible. The signs are left in the proportions of certain radioactive isotopes in rocks and other materials, in annual layers of marine and freshwater sediments, in annual deposits of glacial ice, in annual bands of growth of organisms such as trees and corals, and in changes in the types and designs of human artifacts over time.

A basic way to differentiate dating methods is its type: relative versus absolute. Relative dating methods indicate whether a feature or artifact is older or younger than a comparable feature or artifact, but they are not useful in assigning a chronological age (i.e., calendar date) to the feature or artifact in question. Absolute dating methods do provide chronological ages, either exact ages as in the case of tree-ring dating or a range

of years of origin as in the case of radiometric (radioactive isotope) dating techniques.

Relative dating methods include stratigraphy in geology and seriation in archaeology. Stratigraphy is based on the analysis of the sequence of geologic deposits. By analyzing characteristic features of strata, such as a unique suite of sea-shells, presence of ash or pumice deposits, or flood deposits, and by correlating those strata with similar strata outside one's study area, geologists can work out which layers are older and which are younger, even if some geological upheaval disturbs the sequence of layers.

Seriation focuses on the development of human artifacts, such as blades, axes, pottery, or textiles. In general, a particular technology gets more sophisticated and diverse over time as its makers become more skilled and as there is more opportunity for innovation. It becomes more widespread over time if it proves to be popular; then it disappears from the record as it is replaced by a newer technology.

Absolute dating methods include radiometric dating and dating based on banded records, such as tree-ring dating and varve chronology dating. Radiometric dating techniques determine the age of an object based on the rates of decay of radioactive isotopes that are unstable (that decay, by giving off subatomic particles, and change into other isotopes or elements over time). For radiometric dating to work, a scientist must know the ratio of the two isotopes or elements of interest at the time the object was formed, the rate of decay of the unstable isotope into the other isotope or element, and the current ratio of the two isotopes or elements.

For many radioactive series, the rate of decay—typically described as half-life, or the rate at which 50 percent of the first isotope or element is converted into the other—is known and is a constant. Knowing the initial ratio of the two isotopes or elements at the time an object was formed is more difficult, but radiometric dating is limited to series in which there is a firm foundation, based on physical principles, for knowing what the initial ratio should be. Measuring the final ratio of the two elements can be done using a number of instruments, the appropriate choice of instrument determined by the isotopes or elements of interest.

No radiometric technique can assign an “exact” age—in terms of calendar date—to an object. Typically, an estimated age, plus or minus a certain number of years, is given. The range of likely ages increases with the age of the object.

One of the first, and probably the most familiar, of all radiometric dating techniques is radiocarbon dating of material of biological origin. Because of its relatively short half-life, radiocarbon dating is best done on materials less than 60,000 years of age. For older material and material not of biological origin, radiometric techniques involving other isotopes are required, such as isotopes of potassium, argon, or uranium. Potassium-argon dating and uranium-lead dating are useful for measuring the ages of things that may be hundreds of millions of years old to a few million years old. Argon-argon dating can be used to date objects hundreds of thousands of years old. For material formed within the last few centuries, other isotope series—such as those involving cesium, lead, or silicon—may be used.

A number of dating techniques rely on banding patterns produced by the annual growth of organisms or the annual accumulation of sediments or snow (ice). These annually banded records, when used effectively, can be used to assign a calendar date to the age of an object.

One of the most widely known techniques that relies on banding patterns is that of tree-ring dating, or dendrochronology. Dendrochronology analyzes annual growth increments of trees—the tree rings—in order to determine the date of some event, such as the felling of a tree used to build an old house.

Dendrochronology is often—mistakenly—referred to as tree-ring counting, but mere counting is not enough to ensure accurate dating for either tree rings or other banding patterns. First, not all trees put down annual rings. This is especially a problem in tropical areas, where strong climatically determined seasons do not exist. Even in temperate latitudes with a strong climatic influence on tree growth, some trees put on more than one band per year (a false ring), or a ring may be missing from the part of the tree sampled (a false or locally absent ring).

For tree-ring dating to be reliable, the patterns of wide and narrow rings must be com-

pared from a number of samples to ensure that no such errors occur. In addition to the overall pattern of wide and narrow rings, special features of rings caused by unique environmental conditions may also be used to check dating. All dating methods that rely on banding patterns require some type of cross-dating to ensure accuracy.

Varve chronology relies on the annual deposition of lake sediments. The layers typically alternate between coarse-grained bands and fine-grained bands, and they often differ in composition, structure, or texture. Varve chronologies have been one of the most important ways of reconstructing past environments, particularly by analyzing the pollen deposited in each year's sediments. Ice-core chronologies are developed from glaciers in which snow is deposited in a new layer each winter. The snow is modified over time to form glacial ice, which may trap samples of the atmosphere at the time the snow fell as bubbles in the ice. Such ice records have been vital in reconstructing past climates.

Similar dating techniques rely on speleothems—or annual layers of deposition of the mineral calcite in cave sediments—and growth bands in corals, the shells of mollusks, or the scales of fish.

—David M. Lawrence

Bibliography

- Fritts, Harold C. *Tree Rings and Climate*. New York: Academic Press, 1976.
- Gradstein, Felix M., James G. Ogg, and Alan G. Smith. *A Geologic Time Scale, 2004*. New York: Cambridge University Press, 2004.
- Sowers, Janet M., William R. Lettis, and Jay S. Noller, eds. *Quaternary Geochronology: Methods and Applications*. AGU Reference Shelf Series, Vol. 4. Washington, DC: American Geophysical Union, 2000.
- Stokes, Marvin A., and Terah L. Smiley. *An Introduction to Tree-Ring Dating*. Chicago: University of Chicago Press, 1968.
- Walker, Mike. *Quaternary Dating Methods*. Chichester, UK: Wiley, 2005.

The Reconstruction of Ancient Environments and Paleoclimates

To learn about the earth's past, a scientist must decrypt the coded messages left in the remains

of that past preserved in the earth's present. Such description is the goal of climatic and environmental reconstruction.

The raw materials that scientists may use are diverse: growth patterns as revealed in tree rings, the isotopic composition of gases trapped in ancient ice, the sequence of plant species as revealed in pollen grains trapped in lake sediments, the sequence of fossils in eons' worth of geological strata, and the chemical composition of rocks once exposed to ancient atmospheres and subsequently buried.

To reconstruct the earth's past through geological evidence, scientists must employ the techniques of geological subdisciplines such as stratigraphy and paleontology as well as of other disciplines, such as physics and chemistry. Any reconstruction of the earth's past must assume uniformitarianism, the concept that geological processes observed in modern times also operated in a similar manner in the deep past.

The type of geological evidence available depends in large part on the age of the rock formations being studied. For the time before life evolved, the chemical composition of ancient rocks once exposed on the surface may indicate the composition of equally ancient atmospheres. For example, sedimentary rocks devoid of signs of oxidation could not have been exposed to an oxygen-rich atmosphere like that of today. Similar rocks rife with oxidized minerals, on the other hand, had to have been exposed to atmospheric oxygen.

Clues such as these are strong hints that the earth's atmosphere was initially a reducing one—rich in compounds such as ammonia and methane, for example—but that it in time became an oxidizing atmosphere capable of supporting complex plant and animal life.

Certain types of rocks—especially sedimentary rocks, those formed by deposition and cementation of sediments—are associated with different types of environments. For example, the retreat of glacial ice leaves vast amounts of poorly sorted sediments—sediments composed of materials of a wide range of grain sizes—in deposits called moraines. Such deposits, in conjunction with exposures of scratched or polished bedrock, are clear signs of cold climates and associated glaciation.

In contrast, deposits of gypsum and rock salt most likely formed in shallow seas, where evaporation rates were high enough to cause the minerals to precipitate out of solution. This is evidence of hot arid climates and shallow waters such as are found in subtropical coastal environments. Likewise, carbonate rocks—even the limestone at the summit of Mount Everest—indicate a marine origin.

Fossils, in addition to indicating the evolutionary history of life on earth, also indicate the types of environments prevalent at the time the sedimentary rocks they are found in were formed. Fossils of tropical plants found in Antarctica indicate that the continent was once located in a tropical environment. Fossils of woody plants, such as those preserved in coal, can indicate the type of climate in which the plants once lived. Fossils from trees that grew in a tropical environment generally lack well-defined annual growth rings; those from trees that grew in more temperate climates possess well-defined annual growth rings.

Fossils may reveal more than the type of climate. They may also offer evidence as to the composition of the atmosphere. Photosynthetic plants, for example, require carbon dioxide from the atmosphere as the raw material from which to make, via photosynthesis, the carbon compounds necessary for fuel, growth, and development. In most photosynthetic plants, the carbon dioxide enters the leaf—the typical site of photosynthesis—via openings called stomates. While there is conflicting evidence from living plants, it appears from studies of fossil plants that as atmospheric carbon dioxide levels increase, both stomatal density and index (the latter a ratio between the number of stomates and the total number of stomatal and epidermal cells) decrease as gas-exchange efficiency between the inside and the outside of the leaf increases.

Plants provide useful evidence with which to reconstruct past climates in other ways. For example, in the Americas, the plant matter found in woodrat middens (essentially trash piles) indicates the type of plants growing in the woodrats' neighborhoods, thus providing powerful evidence as to the nature of the environment the rodents lived in. Pollen grains in lake sediments can likewise indicate the type of plant commu-

nity and, by extension, the environmental conditions that prevailed at the time the sediments were deposited.

The variation in the pattern of wide and narrow annual growth rings of trees, if properly calibrated, can be used as a proxy data set from which past climate fluctuations can be reconstructed. Variations in density of wood in the annual rings can likewise be used to reconstruct past climates. Other characteristics of the wood in the annual rings, such as scorching or scarring, can be used to reconstruct other types of events, such as wildfire chronologies or avalanche histories.

Radioactive isotopes can be used for more than merely assigning an age to an object. The ratio of some isotopes, such as oxygen-18 and oxygen-16, in the atmosphere varies with temperature. In warmer climates, the proportion of oxygen-18 is higher than in colder climates. Whether obtained from a tree-ring series or from analysis of gas bubbles trapped in glacial ice, such isotopic analysis can be used to reconstruct temperature over spans of tens of thousands of years. Isotope ratios in bones and teeth of humans and animals can yield evidence as to the nature of their diet.

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Bibliography

- Bradley, Raymond S. *Paleoclimatology: Reconstructing Climates of the Quaternary*. San Diego: Academic Press, 1999.
- Committee on the Geologic Record of Biosphere Dynamics, National Research Council. *The Geological Record of Ecological Dynamics: Understanding the Biotic Effects of Future Environmental Change*. Washington, DC: National Academies Press, 2005.
- Cronin, Thomas M. *Principles of Paleoclimatology*. New York: Columbia University Press, 1999.
- Prothero, Donald R., and Robert H. Dott Jr. *Evolution of the Earth*. 7th ed. New York: McGraw-Hill, 2003.

Molecular Biology and Ancient DNA

Deoxyribonucleic acid (DNA) is the molecule that contains the code for life on earth. DNA is complex enough to contain thousands of genes

in an individual organism, giving the molecule the ability to direct the individual's development from birth to death, to direct innumerable chemical reactions inside each cell every day, and to record billions of years of the history of life. The latter property of DNA makes it an excellent material to examine for clues to humanity's past.

DNA owes its utility to its simple yet elegant structure. The molecule is often described as a double helix, essentially a coiled ladder in which the information is stored in the parts of the molecule that make up the rungs of the ladder. The supports of the ladder consist of alternating sugar (deoxyribose) and phosphate molecules, that is, the sugar-phosphate backbone. Unlike a typical ladder, each support, or strand, runs in opposite directions.

The rungs are made of nitrogenous bases—adenine, cytosine, guanine, and thymine—of which one is attached to a deoxyribose in the sugar-phosphate backbone. A base from one strand joins with a base from the other to form the rungs. The base pairing between strands is not random. An adenine joins only to a thymine. A cytosine joins only to a guanine. This property, called complementary base pairing, makes it possible for each strand to serve as a template to make an exact copy of the other. The genetic information is stored in the sequence of bases along the length of the DNA strand.

In a cell, each DNA molecule (chromosome) can make exact copies of itself. This enables a cell to duplicate its entire genome—or collection of chromosomes—as it divides. Each chromosome in each cell today is a descendant of the original chromosomes and cells that evolved more than three billion years ago.

Despite the ancestral connections among all of life on earth, genomes differ from species to species. Within a species, genomes differ from individual to individual. This variety is a result of evolution. Mutation, natural selection, genetic drift, and other mechanisms created genetic and ultimately individual variation.

In sexually reproducing species, recombination is a major source of genetic variation. As an individual produces sex cells—egg or sperm cells, which have half the number of chromosomes as a nonsex cell—genetic material from that individual's mother and father are mixed on



Scientist with the Penn State University Mammoth Genome Project works with the DNA of a woolly mammoth. This project is one of the first attempts to decipher the genome of an extinct animal. (S.C. Schuster & Colleagues/Penn State University Mammoth Genome Project)

each chromosome, creating new combinations of gene variants that had not existed before.

Analysis of this chromosomal variation as well as variation in the proteins coded for by genes can reveal much about relationships among individuals as well as species. Individuals that are more closely related will be more genetically similar. Species that are more closely related are likewise more genetically similar.

Because of recombination, most chromosomes in sexually reproducing organisms are difficult to use to analyze patterns of genetic variation within species. For most individuals, the best place to find suitable DNA is outside the nucleus, where most chromosomes are housed. The better alternative is in an organelle—present in all but bacterial cells—called the mitochondria. These organelles, the powerhouses of the cell, have their own chromosome. They are usually inherited only from the mother, as the father's contribution to a new individual is typically the paternal chromosomes.

Mitochondrial DNA (mtDNA) is conservative in that mitochondrial chromosomes have nothing to recombine with except themselves. It also has a higher mutation rate than most nuclear chromosomes. This suite of properties coupled with the ubiquitous occurrence of mitochondria

makes mtDNA an excellent choice for genetic analyses of maternal lineages.

In organisms whose sex is determined by chromosomes, the sex chromosomes may likewise prove useful. Mammals, including humans, have two sex chromosomes, X and Y. Females have two X chromosomes. Males have an X and a Y chromosome. Because of the possibility of recombination among X chromosomes, their utility is as limited as that of the nonsex chromosomes. But the Y chromosomes, inherited only from the father, are quite promising, as most males only have one Y chromosome, and thus there is little opportunity for recombination. While Y-DNA is present only in males, it provides an excellent (and only) option for study of paternal lineages.

Many analyses of mtDNA focus on two hypervariable regions, HVR1 and HVR2, in which an individual's sequence is compared to a reference sequence. The analysis will reveal a number of mutations, such as substitution of nitrogenous base pairs, deletion of base pairs, or insertion of base pairs. Based on the mutations detected, an individual can be assigned to a mitochondrial haplogroup that indicates the evolutionary lineage—often referred to as deep ancestry—of the individual in his or her maternal line.

For Y-DNA, analyses focus on the number of short tandem repeats (STRs) at particular locations (loci) on the Y chromosome. STRs are repeated sequences; the number of repeats offers clues to a male's paternal line. Single nucleotide polymorphism (SNPs)—single base-pair substitutions at particular loci—may also be analyzed. As with mitochondria, a male can be assigned to Y-DNA haplogroups that indicate the deep ancestry of his paternal line.

DNA sequences on other chromosomes may prove useful for other analyses. For example, several research groups are working to compare the genomes of Neanderthal man and modern humans to determine whether the two are separate species or separate subspecies. Results so far indicate that the two are closely related, but efforts to determine whether or not the two interbred—and thus whether Neanderthals left a genetic legacy to humans today—are inconclusive.

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Bibliography

- Cavalli-Sforza, Luigi Luca, and Francesco Cavalli-Sforza. *The Great Human Diasporas: The History of Diversity and Evolution*. Reading, MA: Addison-Wesley, 1995.
- DeSalle, Rob, and Ian Tattersall. *Human Origins: What Bones and Genomes Tell Us about Ourselves*. College Station: Texas A&M Press, 2007.
- Jobling, Mark, Matthew Hurles, and Chris Tyler-Smith. *Human Evolutionary Genetics: Origins, People & Disease*. New York: Garland Science, 2004.
- Olson, Steve. *Mapping Human History: Genes, Race, and Our Common Origins*. Boston: Houghton Mifflin, 2002.
- Wells, Spencer. *The Journey of Man: A Genetic Odyssey*. Princeton, NJ: Princeton University Press, 2002.

The Contributions of Linguistics

The study of modern language patterns can provide important clues to the diffusion of humans and their culture. Language is a collection of sounds and symbols that have a common meaning among members of a cultural group. It includes spoken language but also written language as well as other forms of symbolic communications: sign language, Morse code, traffic signs, semaphore flags, and more. Most languages include a spoken component, but many languages have developed a written tradition in the past 6,000 years, especially in the last 2,000 years. Since written language is a fairly recent innovation, given humanity's long history, it offers limited insight into the patterns of human migrations in the distant past.

Spoken language, which has arguably been around as long as modern humans, poses its own set of challenges. It precedes written language, which makes it difficult, if not impossible, to determine when and where individual words were used by the speakers of a language.

To make up for the lack of written records, linguists compare the sounds of fundamental words that have similar meanings—words such as “sky” or “dog” as opposed to “dendrochronology” or “gastroenterologist”—among two or more languages using what is called the comparative method. Words with a similar sound (phonetic) structure are more likely to have been

derived from a common ancestor; in linguistic terms, they are more likely to be cognates. Linguists can use the comparative method to reconstruct a protolanguage, for example, an ancestral language to today's modern tongues. Other approaches used to compare languages, such as lexicostatistics, take advantage of cognates or other similar terms but are not useful for the reconstruction of protolanguages.

Any method to compare languages faces a major problem in that languages may share basic words for reasons other than common descent. Speakers of one language may borrow a word from another language. Consider a modern example: Indonesians use the term *taksi* to describe a vehicle that can be hired to transport passengers around cities. *Taksi* is similar to the English word "taxi," used to describe a similar vehicle, but the similarities do not result from descent from a distant ancestor. Instead, it is a result of the Indonesians borrowing the term from modern English. Rigorous analysis can often reveal which words are true cognates and which are not.

At present, most languages are classified into a series of language families—all languages descended from a common ancestor. The language families are further subdivided into branches. The branches are likewise subdivided into groups. Language groups have the most recent origin; families have the most ancient origin. The largest language families, ranked in terms of numbers of speakers, are Indo-European, Sino-Tibetan, Niger-Congo, Afro-Asiatic, and Austronesian. Indo-European is the predominant language family in Europe and West and South Asia. Sino-Tibetan is the primary language family in East Asia. Niger-Congo is the dominant language family in sub-Saharan Africa, while Afro-Asiatic is the dominant family in North Africa and Southwest Asia. Austronesian is the primary indigenous language family of Madagascar, insular Southeast Asia, and Oceania.

Other language families that were either more widespread or encompass a large number of individual languages include Dravidian, found in South Asia; Altaic in Asia (some argue that Altaic should be split into two families, Turkic and Japonic); Austro-Asiatic and Tai-Kadai in main-

land Southeast Asia; Uralic in northern Eurasia; Eskimo-Aleut in the Arctic; Algic, Cariban, Maipurean, Mayan, Na-Dené, Pano-Tacanan, Quechuan, Tupian, and Uto-Aztecan in the Americas; and Nilo-Saharan and Khoisan in Africa.

While linguistic comparisons are of interest in better understanding the development of modern languages, such studies may benefit research on the history of human migrations, complementing research in paleoanthropology, archaeology, and genetics.

In order to reconstruct human migrations from language data, linguists make two major assumptions: that related languages share the same area of origin and that the best explanation of the current distribution of related languages is one that requires the least number of moves from their area of origin. The latter assumption is in keeping with the scientific principle of parsimony in which the simplest explanation for a set of phenomena is generally the best. Given that the place of origin of a group of related languages is often unknown, the simplest way to locate it is to mark the center of distribution of each of the related languages, then find the point that minimizes the distance between it and each of those centers.

In an ideal scenario, comparisons of migration patterns obtained from linguistic data, genetic data, and archaeological and anthropological data will coincide. For example, many scholars believe that there are four possible routes by which modern humans colonized temperate Eurasia: along the Pacific Coast from tropical Southeast Asia, up river valleys from southern China, from the Nile through the Fertile Crescent and Caucasus region, and from South Asia northward across the mountainous spine of Asia.

An apparent convergence of linguistic and other data seem to support substantial migration along three of these paths: the river route from southern China by the ancestors of Native Americans; the Pacific coastal route by the ancestors of people whose native languages fall within language families that include Indo-European, Uralic, Altaic, and Eskimo-Aleut languages; and a more recent migration of Afro-Asiatic speakers along the Nile-Fertile

Crescent-Caucasus route. Much more work on this matter remains to be done.

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Bibliography

Cavalli-Sforza, Luigi Luca. *Genes, Peoples, and Languages*. New York: North Point, 2000.

Cavalli-Sforza, Luigi Luca, and Francesco Cavalli-Sforza. *The Great Human Diasporas: The His-*

tory of Diversity and Evolution. Reading, MA: Addison-Wesley, 1995.

Manning, Patrick. "Homo sapiens Populates the Earth: A Provisional Synthesis, Privileging Linguistic Evidence." *Journal of World History* 17 (2006): 115–158.

———. *Migration in World History*. New York: Routledge, 2005.

■ Introduction: What Causes Climate Change?

As the international community debates at the dawn of a new millennium what to do in the face of human-caused climate change, one fact is often overlooked in public pronouncements and media reports: one constant about climate is that it always changes. For most of earth's history, climate changes have been driven by natural processes, but humans, through their ability to modify the environment, have become an increasingly important force driving climate change.

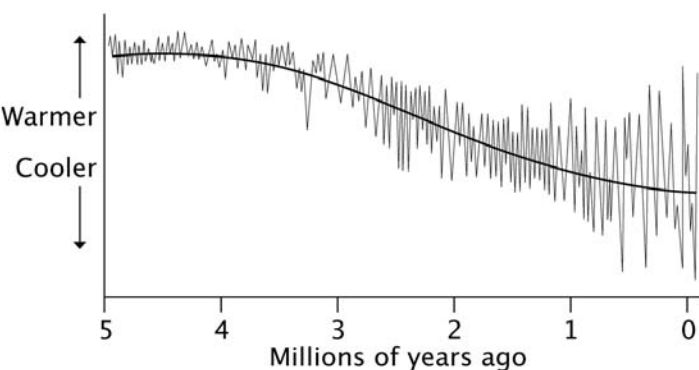
Since the earth's climate system is powered by radiation from the sun, the sun is among the first culprits to be evaluated in suspected cases of climate change. The intensity of solar radiation reaching the earth has varied over time. These variations can stem from differences in

the amount of radiation emitted by the sun as well as from changes in the relationship between the earth and sun.

Since the origin of the solar system, the sun has grown brighter, and its radiation output has increased. Such a long-term process, however, is not likely to have played much of a role in triggering the many climate upheavals in earth's history. The sun's radiation output fluctuates regularly in keeping with cycles such as the 11-year sunspot cycle. The role of these cycles in triggering climate change is controversial.

The notion that variations in earth's orbit around the sun affect the intensity of solar radiation at the earth's surface is not controversial, however. The closer the earth is to the sun, the more intense the radiation and vice versa. The degree of tilt of the earth's axis affects the distribution of radiation on the surface. Ice ages may be more likely to form when the degree of tilt is at its least. These and other orbital characteristics change in a cyclical fashion. The cycles, called Milankovitch cycles, explain some of the major fluctuations in earth's climate—such as the ice ages—during the past few million years.

Atmospheric and oceanic circulation patterns are tightly linked; in fact, ocean currents play a major role in redistributing heat from the tropics, where there is a surplus of solar energy, to the poles, where there is a deficit of solar energy. The Gulf Stream, for example, a current that runs roughly northeastward across the Atlantic Ocean from Florida to the British Isles, helps moderate temperatures in Western Eu-



Global temperature, as measured by ratios of oxygen isotopes in deep sea and ice cores, has undergone a steady average decrease in the last five million years and is marked by huge fluctuations. This cooling is attributed to the onset of the glacial epoch some three million years ago. (Illustration by Jeff Dixon)

rope. The continent would be much colder without the current's influence.

Oceanic circulation can be altered by tectonic processes, as drifting continents affect the exchange of water between ocean basins. Surface currents, such as the Gulf Stream, are linked to deep, cold currents via what is called thermohaline circulation. This circulation is driven by changes in salinity and temperature of surface waters. These changes alter density of the water, triggering sinking of denser (colder and/or saltier) water masses and uplift of less dense (warmer and/or fresher) water masses.

Changes to thermohaline circulation can alter the strength and path of ocean currents and thus climate. For example, freshening of surface waters in the North Atlantic (where cold, salty, dense water typically sinks) by the melting of the Greenland ice pack can displace the Gulf Stream to the south, leading to a rapid, dramatic cooling of the climate in the North Atlantic basin.

Changes in earth's surface characteristics can also trigger climate change. An important influence of temperature is the amount of solar radiation absorbed. Absorption is driven by the albedo—reflectivity—of the surface. Reflective surfaces, such as snow and ice, reflect most solar energy, leading to lower temperatures (and more snow and ice). Open water and dark forested surfaces absorb most solar radiation, leading to higher temperatures (and less snow and ice). More than 600 million years ago, much of the surface was frozen over during a period termed the "Snowball Earth." The frozen temperatures made it almost impossible for life to exist at the earth's surface.

Many scientists believe that the snowball melted as a result of a change in the chemistry of the atmosphere. Massive release of greenhouse gases—gases such as carbon dioxide or methane that, like a blanket, trap solar heat near the surface—triggered a warming climate. Natural sources of greenhouse gases include volcanoes, wetlands, and some marine deposits. In recent decades, humans have likely been triggering a new round of climatic warming, however, by burning fossil fuels, leading to a buildup of carbon dioxide in the atmosphere.

—David M. Lawrence

Bibliography

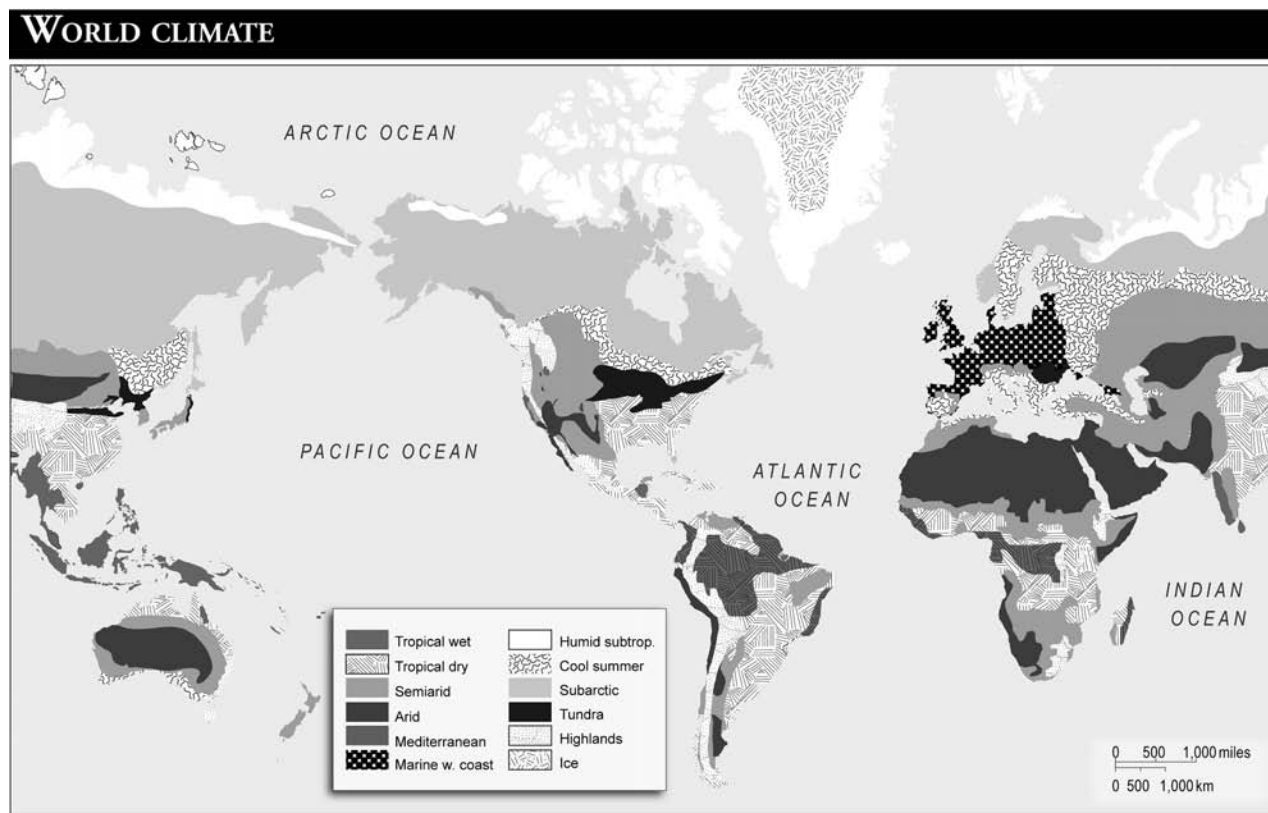
- Burroughs, William James. *Climate Change: A Multidisciplinary Approach*. New York: Cambridge University Press, 2001.
- O'Hare, Greg, John Sweeney, and Rob Wilby. *Weather, Climate and Climate Change: Human Perspectives*. New York: Pearson Prentice Hall, 2005.
- Ruddiman, William F. *Earth's Climate: Past and Future*. New York: W. H. Freeman, 2001.

Geological Epochs and Climate

Epochs are divisions of the geologic time scale that are the usual focal point for discussions of the environments of the past 65 million years. The geologic time scale is used by many earth scientists to organize analysis of and comparisons between events in the history of the earth. The largest subdivisions of the scale are eons, which range from 540 million years long (the duration of the current eon, the Phanerozoic) to 2 billion years (the Proterozoic). Eons are further subdivided into eras, which can range up to nearly one billion years long. The Phanerozoic includes the Paleozoic, Mesozoic, and Cenozoic (current) eras.

Eras are subdivided into periods that may be several hundred million years long. Dinosaur fans are familiar with the three periods of the Mesozoic: the Triassic, Jurassic, and Cretaceous. The Cenozoic includes two, the Paleogene and Neogene, the latter of which covers the past 23 million years. Periods are further subdivided into epochs for the Cenozoic. The Paleogene (65 million years ago to 23 million years ago) is subdivided into the Paleocene (oldest), Eocene, and Oligocene epochs. The Neogene is subdivided into the Miocene Pliocene, Pleistocene, and Holocene (current) epochs.

At the dawn of the Paleocene, life on earth was recovering from a massive extinction event that led to, among other things, the demise of the dinosaurs. As a result of continental drift, most of the continents were shifting northward. North America and Europe began to separate. These movements altered atmospheric and oceanic circulation patterns and, in turn, global climate. Oceans were warm, even at the poles, whereas climates began to cool over land areas



near the poles. Elsewhere, however, warm climates prevailed over land.

A massive warming took place at the Paleocene/Eocene transition about 55 million years ago. This warming, called the Paleocene-Eocene Thermal Maximum, is believed to have been triggered by a massive release of methane—a potent greenhouse gas—from marine sediments. A major increase in atmospheric carbon, whether in the form of carbon dioxide or methane, in the atmosphere would result in the acidification of the oceans. Widespread evidence for such acidification has been found in deep-sea sediments.

During the Eocene, North America completed its separation from Europe, South America moved farther from Africa, and Africa closed in on Europe. India was well on in its tectonic sprint from Antarctica toward Asia. Global temperatures remained relatively warm throughout the Eocene. The Eocene/Oligocene transition (39 million years ago) is marked by a major extinction event triggered possibly by meteorite impacts in Siberia or another near what is now the mouth of the Chesapeake Bay. While still

warm, the global climate began a slow cooling. This decrease in temperature was driven in part by the breakup of the southern continents, leading to the isolation of Antarctica and the cooling of the polar currents that now flowed freely around it.

The opening epoch of the Neogene—the Miocene, which began about 23 million years ago—was marked by a warming that rivaled the conditions of the Oligocene. That warm period came to a sudden halt about 14 million years ago at the Middle Miocene Climate Transition. Another major decrease in temperature began about eight million years ago as the Antarctic ice sheet began to reach its current size. Glaciers may have begun their expansion over Greenland at this time.

Antarctica was entirely ice-bound by the beginning of the Pliocene (five million years ago). At the other end of the earth in the Arctic, isotopic evidence and evidence of ice-rafted debris indicate that an ice cap had formed in the oceans of the far north. As the poles cooled, the climate of the middle latitudes became similar to that of

today, colder, drier, and more seasonal than in previous epochs. There is evidence of glaciation in the middle latitudes toward the end of the Pliocene.

The Pleistocene began about two million years ago with the continents more or less in their modern positions. The climate of the Pleistocene is dominated by several cycles of the advance and retreat of continental and alpine glaciers worldwide. Periods of advance are referred to as glacials; periods of retreat are referred to as interglacials. Four major glacials are recognized in North America—the Nebraskan (older), Kansan, Illinoian, and Wisconsinan (more recent)—but it is difficult to get an accurate number because evidence of older glacial advances is often destroyed during later ones. At their greatest extent, continental glaciers in the Northern Hemisphere reached to within 40 degrees of latitude of the equator. As the glaciers grew and locked up vast amounts of water, the seas retreated; sea levels were as much as 300 feet lower than today. During this epoch, modern humans evolved and spread across the planet.

The current epoch, the Holocene, began about 11,000 years ago as the last of the Pleistocene ice sheets retreated. Even though the climate of the Holocene is warmer than the Pleistocene, there were significant fluctuations. The earliest human civilizations were established and flourished during the Holocene climatic optimum (9,000–5,000 years before the present), when temperatures were as much as 4 degrees Fahrenheit (–15.5 degrees Celsius) higher than now. Cooler conditions, with a minor glaciation, prevailed until about 2,000 years ago. Since then, with minor variations, climate conditions have been much as they are at present.

—David M. Lawrence

Bibliography

- Gradstein, Felix M., James G. Ogg, and Alan G. Smith. *A Geologic Time Scale*, 2004. New York: Cambridge University Press, 2004.
- Prothero, Donald R., and Robert H. Dott Jr. *Evolution of the Earth*. 7th ed. New York: McGraw-Hill, 2003.
- Wicander, Reed, and James S. Monroe. *Historical Geology: Evolution of Earth and Life through Time*. 4th ed. Belmont, CA: Brooks/Cole-Thomson Learning, 2004.

Global Climate of the Pliocene

The Pliocene (5 million to 1.8 million years ago) is an important time in earth's climatic history. It was a period of transition from the warmth of the Miocene to the cold of the Pleistocene. Despite the overall cooling that took place during the epoch, a prolonged span of warm temperatures—the Pliocene Warm period, from 4.5 million to 3 million years ago—interrupted the cooling trend.

As the Pliocene began, earth's climate was nearing the end of a cooling that began in the Middle Miocene. The Antarctic ice sheets were expanding, and ice had been spreading across the Arctic region.

The expansion of the ice-bound realms stopped during the Pliocene Warm period. Global average temperatures rose to about 5 degrees Fahrenheit (–15 degrees Celsius) warmer than today, with even greater amounts of warming in high-latitude regions. Sea levels were 30 feet to 60 feet higher than present. The polar ice caps shrank somewhat.

While the cause of the Pliocene Warm period is not known, evidence indicates that El Niño-like conditions prevailed throughout much of the period. Under typical conditions, sea-surface temperatures in the eastern equatorial Pacific are cold, whereas in the central and western Pacific they are warm. Winds near the surface generally blow from the east to the west. In an El Niño, the sea-surface temperature differences are weakened, or else the temperature patterns are reversed. Equatorial winds likewise weaken or blow in the opposite direction. In the twenty-first century, El Niño events can have catastrophic effects on global weather patterns. Sustained El Niño conditions during the Pliocene Warm period could likewise have had dramatic effects on climate then.

By about three million years ago, an increase in Northern Hemisphere glaciation heralded the end of the warm interval and the start of a long-term cooling trend. Steps in the cooling process took place at different times in different regions. A host of factors may have contributed to the cooling.

In conjunction with cooler temperatures, drier conditions spread over many regions, leading to a decline in the distribution of tropical

forests and expansion of grasslands and temperate forests. A number of large grazing mammals—species capable of living off the grasses that spread across the landscape—appeared during this time, as did *Homo habilis*, an ancestor of modern humans.

—David M. Lawrence

Bibliography

- Crowley, Thomas J., and Gerald R. North. *Paleoclimatology*. New York: Oxford University Press, 1991.
- Ravelo, Ana Christina, et al. "Regional Climate Shifts Caused by Gradual Global Cooling in the Pliocene Epoch." *Nature* 429 (2004): 263–267.
- Wara, Michael W., Ana Christina Ravelo, and Margaret L. Delaney. "Permanent El Niño-like Conditions during the Pliocene Warm Period." *Science* 309 (2005): 758–761.

Global Climate of the Pleistocene (Quaternary)

The Pleistocene is arguably one of the most dramatic epochs in earth's past and one of the most important in the development of modern humans. Characterized by several cycles of advance and retreat of vast continental ice sheets, the interval is often referred to as the "Ice Age."

In older versions of the geologic time scale, the Pleistocene was grouped with the current epoch, the Holocene, into the second of two periods of the Cenozoic era: the Quaternary. The status of the Quaternary is controversial. Proposals range from treating the Quaternary as a period in its own right (equal status with Neogene and Paleogene) to retaining it as a named portion of the Neogene and to scrapping the term altogether. Many scientists feel that the Quaternary should begin with the Gelasian stage (the uppermost stage of the Pliocene epoch) about 2.6 million years ago and include all of the Pleistocene and Holocene epochs. The Quaternary was demoted to a subera in the most recent revision of the Geologic Times Scale, but many Quaternary scientists are unhappy with the decision. Thus, the matter remains under debate.

The argument for lumping the Gelasian stage with the Pleistocene epoch centers on the cli-

mate; for the past 2.6 million years, the earth has undergone several cycles of glacial advance and retreat. These cycles began with major glaciation in the Northern Hemisphere during the Gelasian as indicated by ice-rafted debris—rocky material carried by icebergs—in the North Atlantic and North Pacific. The cooling trend that began in high-latitude regions spread to the subtropics and tropics, a pattern similar to that of later glaciations.

Pleistocene terminology can be somewhat confusing, as American researchers and European researchers differ somewhat in usage. According to North American usage, a glaciation (glacial) is a period of major ice advance and retreat. An interglaciation (interglacial) is a period in which climate did not favor widespread glaciation. Glaciations can be further subdivided into stadials, or periods of minor ice advance, and interstadials, or periods of minor ice retreat and/or lack of movement in either direction.

Another source of confusion regards the number of glacial periods. Glaciers act as bulldozers, scouring the landscape in many cases down to bedrock. This process destroys evidence of previous advances, leaving geologists with the task of reconstructing glacial chronologies from fragmentary evidence along the fringes of the former ice sheets. Geologists often turn to marine sediments to help clarify the chronologies, but differences between marine and land-based evidence lead to further challenges in correlating data.

For example, land-based evidence indicates four major glaciations in North America during the Pleistocene: the Nebraskan (older), Kansan, Illinoian, and Wisconsinan (more recent). For Europe, however, up to six are recognized: Biber, Donau, Günz, Mindel, Riss, and Würm. Marine evidence, however, indicates dozens of potential Pleistocene glaciations.

Temperature patterns during interglacials were typically as warm as or warmer than today. During glacial periods, high-latitude temperatures could be significantly colder, especially in the neighborhood of the great ice sheets where high reflectivity and heat absorption by the ice led to cooler conditions. Glaciers could also exert significant influence on atmospheric circulation patterns.

THE GREAT ICE AGES

Ice ages refer to several periods in the earth's past when the global climate cooled and glaciers advanced from polar and subpolar regions into the middle latitudes. While the term "ice ages" is typically used to describe several glacials (periods of glacial advance) during the Pleistocene epoch (1.6 million to 10,000 years ago), there were several other ice ages in the earth's past, and some of the earlier ones were even more extensive than those of the Pleistocene.

Past ice ages include the Karoo (350 million–250 million years ago) during the Carboniferous and early Permian periods, the Andean-Saharan (450 million–420 million years ago) during the Ordovician, the Cryogenian (800 million–600 million years ago), and the Huronian (2.4 billion to 2.1 billion years ago) during the Proterozoic. The Cryogenian Ice Age was arguably the most severe ice age, for evidence shows that glaciers as well as sea ice may have extended into the equatorial zone. Because of the hypothesized extent of ice, this time has been referred to as the Snowball period.

Temperatures in tropical regions stayed relatively warm, although there is evidence of a tremendous reduction in the areal extent of the Amazon rain forest during the Kansan glaciation, likely triggered by cooling in tropical latitudes. Regions that are now quite arid—such as the southwestern United States or portions of North Africa—were often quite a bit wetter, resulting in the expansion of ecosystems like grasslands and forests in places that are now desert. Great glacial lakes formed in places where ice and glacial debris formed dams behind which rainwater and meltwater accumulated.

The ice dams posed another climate-related hazard: flooding. The waters of Glacial Lake Missoula, for example, which covered portions of the northern Rocky Mountain region in what is now Idaho and western Montana, periodically spilled down what is now the Columbia River basin in cataclysmic floods when the ice dams failed. These floods created the Channeled Scablands in eastern Washington. While floods could drain glacial lakes, they could also create lakes

Evidence for recent glaciation—within either the Pleistocene epoch or the Holocene, which followed—abounds in the surviving continental and alpine glaciers today as well as in glacially generated landforms such as arêtes, cirques, drumlins, eskers, and fjords. Evidence for older glaciations is not as widespread; the evidence often consists of deposits of tillite, a rock made of boulders and sorted and unsorted glacial deposits that have been buried and cemented into solid rock.

Ice ages may be triggered by a number of factors. One is the relationship of the earth to the sun. The orbit is not at a constant distance, and the elliptical path that the earth follows alternately lengthens and shortens. As the earth moves farther from the sun, the radiation it receives is less intense than when the earth is closer. Over long periods the climate can cool down, and glaciers begin to advance. Other factors, such as change in distribution of land and water as a result of continental drift and changes in atmospheric composition, may also play a role in initiating or ending glacial periods.

—David M. Lawrence

by filling basins that either existed before or were gouged out by the ice sheets.

The flow, or lack thereof, of meltwater into ocean basins affected climate far from glaciated areas by disrupting the thermohaline circulation, a global heat exchange engine driven by changes in the temperature and salinity, hence density, of seawater. Changes in the thermohaline circulation disrupt surface currents, such as the Gulf Stream, and can either enhance or retard upwelling of cold, deep waters, such as off the northwest coast of South America. These changes altered atmospheric temperature and pressure patterns, which in turn affected atmospheric circulation.

—David M. Lawrence

Bibliography

- Crowley, Thomas J., and Gerald R. North. *Paleoclimatology*. New York: Oxford University Press, 1991.
- Gibbard, P., and T. van Kolfshoten. "The Pleistocene and Holocene Epochs." Chap. 22 in *A Geologic*

Time Scale 2004. Edited by F. M. Gradstein, James G. Ogg, and A. Gilbert Smith. New York: Cambridge University Press, 2004.

Imbrie, John, and Katherine Palmer Imbrie. *Ice Ages: Solving the Mystery*. Cambridge: Harvard University Press, 1979.

MacDougall, Douglas. *Frozen Earth: The Once and Future Story of Ice Ages*. Berkeley: University of California Press, 2004.

Global Climate of the Holocene

The Holocene, which began about 11,000 years ago, is the fourth and last epoch of the Neogene, the latest period in the Geologic Time Scale. The Holocene, formerly known as the Recent, began about 11,000 years ago as the last of the Wisconsinan (in North America) ice sheets retreated. It is part of the controversial subera known as the Quaternary, the status of which is currently being debated by the scientific community.

The Holocene is important for a number of reasons, the primary one being that human civilization arose during the relatively mild climate of the epoch. The importance of civilization is reflected in the typical subdivisions of the Holo-

cene. Epochs are typically subdivided on the basis of characteristic groups of animal and plant fossils. But the Holocene is often subdivided on the basis of stages in the development of human technology using terms such as Mesolithic (during which animals and plants were domesticated and agriculture began) and Neolithic (during which permanent agricultural settlements and crafts such as pottery and weaving originated).

The Holocene originated as the Younger Dryas, a cold period at the end of the Pleistocene, waned. As the climate warmed during the Holocene Thermal Maximum (Holocene Climate Optimum, about 11,000–5,000 years before the present), the glaciers that had gripped much of the midlatitudes retreated toward the poles or back toward higher elevations. Forests and grasslands expanded northward into areas vacated by the ice. The timing of the warming—as much as 8 degrees Fahrenheit (–13.3 degrees Celsius) in some regions—varied, with delays in areas where ice sheets such as the Laurentide Ice Sheet (centered in what is now Quebec and Labrador) lingered.

This warmth was interrupted briefly about 8,200 years ago by a rapid cooling triggered

► GREENLAND ICE CORES

Ice cores from the glaciers of Greenland offer a proxy climate record that extends back in time for tens of thousands of years. While Antarctica similarly offers long-term ice core records, the Greenland cores are especially important because they record climate fluctuations in the Northern Hemisphere, where most of humanity is found.

Ice cores contain layers of snow and ice deposited over long periods of time. They are especially important to climate studies because, by trapping air bubbles, aerosols, dust, and volcanic ash inside the ice, they keep a sample of past atmospheres in cold storage until those samples can be retrieved and analyzed.

Scientists have been coring Greenland's glaciers for decades. Early drilling efforts obtained times series extending to about 40,000 years before the present. During the past two decades, however, several large-scale projects—the Green-

land Ice Sheet Project (GISP and GISP2), the Greenland Ice Core Project (GRIP), and the North Greenland Ice Core Project (NGRIP)—have obtained ice core records dating back to more than 100,000 years before the present.

The NGRIP core is one of the best, providing annual data on past climates for the past 120,000 years. Isotopic data from that core, which extended to more than 10,000 feet (3,048 meters) deep, shows that climate was warmer than today during the Eemian Interglacial (Warm) period. The Eemian climate was relatively stable, much like the climate has been the past 10,000 years during the Holocene. A brief warming period interrupted the onset of the last glacial (Ice Age) period. The latest glacial period has been punctuated by climate fluctuations (Dansgaard-Oeschger events) characterized by rapid warmings followed by periods of gradual cooling.

—David M. Lawrence

probably by a massive inflow of freshwater into the North Atlantic from melting ice sheets in the North Atlantic. The freshening of the North Atlantic likely disrupted the portion of the thermohaline circulation involving the Gulf Stream, which in turn altered atmospheric temperature and pressure patterns over wide areas of the earth. The event was of short duration, about 200 years.

During the time of the Holocene Thermal Maximum, northern and western Africa received more rainfall than today. This interval, known as the African Humid period, began late in the Pleistocene. It was triggered by strengthening of the West African monsoon. The Sahara, now the world's largest desert, was dotted with lakes, with woodlands and grasslands scattered throughout. Early human civilizations took root during this period. East Asia likewise was warmer and wetter during this period.

The seas were also affected by the warming of the climate as the Pleistocene ended and the Holocene began. Sea levels have risen by nearly 400 feet in the past 20,000 years. Vast areas of what were coastal plains were inundated, as were valleys that are now bays (such as the Chesapeake and Delaware bays). The Black Sea, formerly a depression kept relatively dry by an ice dam between it and the Mediterranean, was flooded about 7,500 years ago as the ice melted and the dam gave way. Such sea-level changes altered climate in coastal areas by changing local weather patterns; some may have had more widespread effects by modifying surface currents in the oceans.

Both the Holocene Thermal Maximum and the African Humid period came to an abrupt end about 5,200 years ago with rapidly cooling temperatures around the world and with increasing aridity in places like North Africa and the Arabian Peninsula. Neolithic settlements were abandoned in the Arabian interior, while highly structured societies developed in Egypt and Mesopotamia. It was at about this time that the famous Tyrolean Iceman—discovered in 1991 in the ice of a retreating glacier on the Austrian-Italian border—died and was quickly buried in the snow that concealed him for five millennia.

The global climate recovered somewhat within two or three centuries, but temperatures

did not return to Holocene Thermal Maximum levels. With cooler temperatures, glaciers again went on the advance, but the amount of area covered by glaciers was far smaller than that covered during peak periods of the Pleistocene.

The climate warmed again about 2,500 years ago; this warming culminated in the somewhat controversial Medieval Warm Period (about 800–1300 CE). The existence and extent of the Medieval Warm Period has become a contentious point in the climate change debate. The period, well documented in Europe and other parts of the North Atlantic basin, was assumed to have been a global phenomenon. Climate analyses, however, find warming in some places (such as Europe) but not in others. There is evidence for widespread precipitation anomalies, however, with some regions significantly wetter than normal, while others were significantly drier than normal.

The period that followed, however, is much less controversial: the Little Ice Age. A cooling trend that lasted until the mid-nineteenth century is evident from historical records and other data from around the world. A major feature of the Little Ice Age was the expansion of glaciers worldwide. A prominent casualty of the Little Ice Age was the Norse colony founded on Greenland during the Medieval Warm period. As the cold set in grasses and crops failed, and people who were unable to evacuate the colony starved.

Since the end of the Little Ice Age, average global temperatures have steadily warmed to levels higher than any point in the past millennium.

—David M. Lawrence

Bibliography

- Bradley, Raymond S., Malcolm K. Hughes, and Henry F. Diaz. "Climate in Medieval Time." *Science* 302 (October 17, 2003): 404–405.
- Fagan, Brian M. *The Long Summer: How Climate Changed Civilization*. New York: Basic Books, 2004.
- Gibbard, P., and T. van Kolfshoten. "The Pleistocene and Holocene Epochs." Chap. 22 in *A Geologic Time Scale 2004*. Edited by F.M. Gradstein, James G. Ogg, and A. Gilbert Smith. New York: Cambridge University Press, 2004.
- Roberts, Neil. *The Holocene: An Environmental History*. Oxford, UK: Blackwell, 1998.

■ Introduction: The Human Family Lineage—8 Million Years Ago to 20,000 Years Ago

The human family lineage spans some eight million years of earth's history. Our lineage comprises not only our own species, *Homo sapiens*, and close relatives but also more distant relatives, attributed to different genera such as *Australopithecus* and *Paranthropus*. The farther we travel back into our history, the more different these relatives look, though they all share the peculiar characteristics that make us human. These typical human features are smaller canine teeth and an upright posture since the very beginning of our evolution. Our family tree is no direct, linear progression, starting from a primitive apelike form and ending with us, but is bushlike instead, with many dead-ending branches. Our tree is as diverse as that of the lineages of other mammalian species. Throughout this branching bush, three clear trends characterize our family line: first, the development of bipedalism; second, an increase in brain size; and finally, a gradual change in the dentition.

The origin of the human family lineage can be traced back to the Late Miocene. In sub-Saharan Chad in Africa, a skull of *Sabelanthropus tchadensis*, referred to as "Toumai," meaning "hope of life," was found in geological strata six million to seven million years old in 2001. The skull of "Toumai" is small, has a very small brain cavity (estimates of 320–380 cubic centimeters), and resembles the skull of a chimpanzee. Yet the skull also has humanlike features (the foramen magnum is positioned forward and oriented downward) and is therefore considered by some scientists to be an early hominine, not an ape.

The next in the human family line might be *Orrorin* (meaning "original man") *tugenensis*, found by Cheboi in 2000 in the Tugen Hills of Kenya by a French-Kenyan team in strata dated between 5.27 million and 5.88 million or 6.2 million and 5.65 million years ago. Though the remains of this species are scanty, they show some typical hominid features, like thick enamel on the teeth and thigh and shin bones that indicate an upright posture, according to the discoverers.

The findings of *Orrorin* are of more or less the same geological age as those of *Ardipithecus ramidus*, found in Ethiopia in rocks dated between 5.2 million and 5.8 million years ago. The genus is based on fossils found in 1992 and 1993 by Tim White and his team. The remains are nothing more than many fragments, yet they are conclusive enough to attribute this species to our lineage. The arm and forearm bones seem to show a number of features that suggest a four-legged ground-moving ape. Its canine teeth are reduced in size like ours, and the lower jaw is more V-shaped, as is typical for the human lineage, whereas the apes have a more U-shaped jaw.

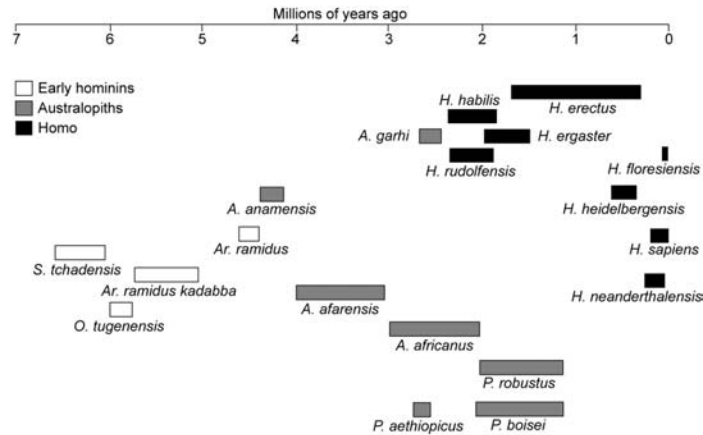
By 4.2 million years ago, the members of the human lineage are more advanced than the Miocene forms and begin to resemble us more. Although *Australopithecus* is more advanced than previous members, it is still very apelike in having a prognathic, or projecting, jaw; a small brain; and a small stature. Several species are known, of which the earliest known is *Australopithecus anamensis*, found in rocks near Lake Turkana in Kenya ranging from about 3.9 million to 4.2 million years ago. The next species in time is *Australopithecus afarensis*, better known as "Lucy," found near Hadar in Ethiopia in 1973 and published in 1978 as a new species. *Australopithecus afarensis* lived between 3.9 million and 2.7 million years ago and left a famous trackway near Laetoli in Tanzania, from which their way of walking can be inferred. The trail was made by two adult humans and a child, likely all three walking upright. Another famous *afarensis* fossil is the three-year-old girl, known as "Baby Lucy" or "Selam," found in 2000 at Dikika in Ethiopia. Younger in geological age are *Australopithecus bahrelghazali* from Chad of 3 million to 3.5 million years ago, *Australopithecus garhi* of 2.6 million years ago, and *Australopithecus africanus* of 2.8 million to 2.4 million years ago. The last species is based upon the skull of a child, known as the "Taung baby" after the Taung limestone quarry from which it was recovered by Raymond Dart in 1924. Later, be-

tween 1936 and 1948, Robert Broom found remains of adults in South African caves (Sterkfontein, Kromdraai, Swartkrans) and also by Dart (Makapansgat). Important findings are an adult skull known as “Mrs. Ples” (first indicated as *Plesianthropus transvalensis*) with attributed skeletal parts from Sterkfontein.

Australopithecus africanus is a small and gracile form with a small brain and small cheek teeth and lacking a skull crest. It differs essentially from a group of other *australopithecines*, which are robust. They have large cheek teeth, dish-shaped faces due to wide and flaring cheek bones, and a prominent skull crest as an adaptation to a vegetarian diet consisting of nuts and seeds. These robust australopithecines (*A. aethiopicus* between 2.3 million and 2.8 million years ago, *A. boisei* of 1.8 million to 1.4 million years ago, and *A. robustus* of 1.8 million to 1.0 million years ago) are often attributed to a genus of their own: *Paranthropus*. The earliest of these robust forms, *A. aethiopicus*, is known from a male skull, the “Black Skull,” discovered in 1975 on the shores of West Lake Turkana in Kenya. This species is considered the most primitive of the robust lineage. *A. boisei* is the most robust and is known as “Nutcracker Man” because of its huge thick-enameled molars, massive jaws, and strong skull crest. It was found in 1959 by Mary Leakey at Olduvai Gorge in Tanzania. A third species, *A. robustus*, was discovered in 1938 at Kromdraai cave in South Africa. Later, similar remains were found in other South African caves. There is some controversy as to whether *A. boisei* and *A. robustus* should be considered as a single species, but most paleoanthropologists today place them in closely related, but separate, lineages.

During the same period in which *Australopithecus* lived, another more primitive form of the human lineage lived in Africa, *Kenyapithecus platyops*. Its fossils were found in 1998 and 1999 in Kenya in strata dated to 3.5 million years ago. There are no known skeletal bones for *Kenyanthropus* (meaning “Man of Kenya”).

The first member of our genus is *Homo habilis*. It shared with us a larger brain size, a flatter face, small cheek teeth, and reduced canine teeth. It also lacks a skull crest and has reduced brow ridges, giving it a more gracile appearance. It is not clear which of the australopithecines



The hominin phylogeny. Lines linking the branches are not included because many of the relationships between the species remain unclear. (Illustration by Jeff Dixon)

could be the ancestor of *Homo*, but generally a form like the gracile *A. africanus* is considered the most likely ancestor. *Homo habilis* was discovered in 1960 in Olduvai Gorge in Tanzania by Mary Leakey in sediments of about 1.75 million years ago. Not only bones have been found; in Koobi Fora in East Turkana in Kenya an ancient camping site has been discovered where *Homo habilis* had camped about 1.8 million years ago around the carcass of a hippopotamus. They removed bones, meat, and marrow from the carcass with the use of small stone flakes, which they brought there from some 12.4 miles (20 kilometers) away. Similar places are found in Olduvai, once a shallow lake where hominids and animals came to drink. Another early *Homo* species is *Homo rudolfensis* of 2.4 million to 1.9 million years ago. No tools are found with this species. Both species, based on long arms, short legs, and small brain, are attributed by some scientists to *Australopithecus*.

Homo ergaster lived between 1.8 million and 1.6 million years ago. This human species is represented by a nearly complete skeleton, known as “Nariokotome Boy,” found on the shores of West Lake Turkana in Kenya in 1984. He was particularly tall, as the full-grown length of Nariokotome Boy is estimated at 5.9 feet (1.8 meters). *Homo ergaster* is often considered the African *Homo erectus*.

These early *Homo* species are generally considered to have made primitive stone tools,

choppers, and hand axes of the “Olduvai” culture, named after the Olduvai Gorge where these simple stone flakes were first recognized. This primitive technique, according to which the toolmaker stroked off a flake with a hammer stone, has been replicated by Nicolas Toth in the early 1980s. The tools were fit for splitting hide, cutting up a carcass, and breaking open bones for their marrow but not for hunting. Therefore, it is suggested that *Homo habilis* was at most a scavenger.

The main differences between members of the new genus *Homo* and *Australopithecus* are a much increased body and brain size; smaller teeth and, in accordance with that, a less-protruding face; and a striding gait. It is generally believed that these changes were induced by an increased complexity of human social interactions combined with a more varied diet. Life in a food-sharing social group places more acute demands on the ability to cope with unexpected situations and make fast decisions. The increased complexity of the social interactions was the main drive behind the development of a large brain, whereas the variegated diet, partly made easy to digest by food handling (smashing, grinding, cooking), was the main drive behind the regression of teeth size.

At about the same time a fourth *Homo* species arose, *H. erectus*. This species had an even larger brain but somewhat smaller in size than that of our own species. The stone tools made by *Homo erectus* belong to the “Acheulian culture.” *Homo erectus* was the first human species to leave Africa and colonize Eurasia. The earliest fossils of *Homo erectus* in Asia are dated to 1.8 million years ago and are found at Dmanisi in the modern Republic of Georgia. *Homo erectus* fossils from Java Mojokerto and Trinil (“Java Man”) are dated to 1.2 million years ago. Younger *Homo erectus* fossils, dated to between about 830,000 and 240,000 years ago, are found at several sites in Java and China (“Peking Man”), at Tham Khuyen in Vietnam, and in the Narmada Valley of India (“Narmada Man”). The last occurrence of *Homo erectus* in Asia is on Java 200,000 years ago. In Europe, possibly also in Africa and China, another species developed (*Homo heidelbergensis*) between 500,000 and 200,000 years ago. This form is more robust than *Homo*

erectus and is considered the ancestor of Neanderthals. The earliest Europeans (*Homo antecessor*) of Spain of 800,000 years ago may represent forerunners of *Homo heidelbergensis* or descendants of *Homo erectus* or may be unrelated to these species.

Neanderthal fossils were the first human fossils to be discovered. In 1856, quarry workers found a skeleton in a limestone cave in the Neander Valley near Düsseldorf in Germany. Although some scholars of the era correctly recognized the remains as those of a robust and ancient race, others concluded that their Neanderthal Man suffered from hydrocephaly or rickets. The image of the Neanderthals did not improve much after scientific acceptance, because the first descriptions were based on the skeleton of a diseased old man from Chappelle-aux-Saints in France, known as the “Old Man.” For decades this species was depicted as a primitive hairy creature with a crooked back, which lay the basis for persistent erroneous image of cave people in general.

In reality, however, Neanderthals had a slightly larger brain than us, a robust and strong body, and a complex culture with stone tools of the “Mousterian culture,” which enabled them to hunt even mammoths. Their skull resembles that of *Homo erectus* with large brow ridges, no chin, and a protruding face. Neanderthals were typically adapted to a life in cold climates, which may explain their robust and short stature. For decades Neanderthals were considered to be a subspecies of our species, but at present they are attributed to a species on their own, *Homo neanderthalensis*, based upon DNA and skull morphology.

Neanderthals lived in Europe and the Near East between 100,000 and 30,000 years ago. The reason behind their extinction is not well understood; possibilities that have been raised are a climate change, a dramatic conflict with modern humans (replacement model), a disease introduced by modern humans, a gradual evolution into modern humans (multiregional model), or an absorption into the modern human population (interaction with Cro-Magnon).

About 200,000 years ago, the last species of our lineage made its entrance in the fossil record of Africa. The earliest remains of an archaic

Homo sapiens are known from Herto in Ethiopia and date to 195,000 years ago. *Homo sapiens* left Africa at about 150,000 years ago and entered Eurasia, South Asia, and Southeast Asia. *Homo sapiens* coexisted with the Neanderthals for almost 10,000 years. After the extinction of the last Neanderthals, *Homo sapiens* was practically the only living species of our lineage. Only on Flores Island in Indonesia a relict population of another human species survived, *Homo floresiensis*, nicknamed the “Hobbit” because of its small stature. The origin of this species is not yet resolved, but they are either descendants of *Homo erectus* or a local form of *Homo sapiens*.

During its history, *Homo sapiens* developed complex cultures, characterized by the use and making of derived tools and weapons, the invention of art, and the performance of religious ceremonies. The best-known examples of early *Homo sapiens* are the Cro-Magnon people in Europe, who are responsible for the cave paintings.

—Alexandra van der Geer

Bibliography

- Sawyer, G. J., et al. *The Last Human: A Guide to Twenty-two Species of Extinct Humans*. New Haven, CT: Yale University Press, 2007.
- Tattersall, Ian, and Jeffrey Schwartz. *Extinct Humans*. Boulder, CO: Westview, 2000.
- Thomas, Herbert. *Human Origins: The Search for Our Beginnings*. Translated by Paul Bahn, edited by Sharon Avrutick. New York: Harry N. Abrams, 1995.

Our Most Ancient Ancestors— Eight Million to Five Million Years Ago

Humans are descended from ancestors shared with all the living apes on the planet. These ancestors thrived during the Miocene epoch, from 23 million to 5 million years ago, in Africa, Europe, and Asia. Humans stop sharing ancestors with the other apes between eight million and five million years ago, when the ancestors for each of the African great apes branched off on their own. First gorillas split off at about eight million years ago, then at about six million years ago chimpanzees and humans share their last common ancestor before they go their separate

ways. Thus, although gorillas may look and behave more like chimpanzees than we do, they are not as closely related to chimpanzees as we are. This part of our evolutionary history is recorded better in our genes than in the current fossil record (e.g., *Sabelanthropus*, *Orrorin*, and *Ardipithecus*), but paleoanthropologists are constantly finding more fossil evidence to put this story together and to test the genetic hypotheses.

During the Miocene, the world was a hot, wet place with vastly more geography dedicated to rain forests than today. For example, apes were able to live up into central Europe where the environment is too cold to support them now but where, in the Miocene, they had densely wooded forests replete with ripe fruit sources. This veritable planet of the apes held the right environmental conditions for the evolution of complex ape cognition and sociality that laid the evolutionary groundwork for our own.

Based on genetic similarities between living species and by estimating the time that it took to accumulate the differences they contain in their DNA, molecular clocks point to a divergence between apes (hominoids), including humans, and Old World monkeys (cercopithecoids) at the beginning of the Miocene, at about 23 million years ago. Then the lineage that gave rise to the so-called lesser apes, gibbons and hylobatids of China and Southeast Asia, split at about 18 million years ago.

The fossil record confirms these hypotheses. Sediments from the early Miocene of East Africa have produced the oldest fossils of primitive apes. A well-known creature of this sort, *Proconsul*, hails from sites in Kenya and Uganda. Dating to about 18 million years ago, the *Proconsul* skull and the teeth resemble apes, but most of the skeleton looks primitive and monkeylike, with some species as small-bodied as rhesus macaque monkeys (about 30 pounds or 13.61 kilograms). Small apes, like the size of modern gibbons and siamangs, are prevalent in the Early Miocene primate fossil record. Decades ago, *Proconsul* and the now-defunct taxon *Ramapithecus* (whose fossils have been assigned to other fossil ape species) were initially thought to be protohumans and potentially even bipedal. Now, however, the current fossil and genetic evidence tells us that protohumans did not appear

until much later, at end of the Miocene after the evolution of the great apes.

Much like the fossil record for our split from the monkey lineage at the beginning of the Miocene, the fossil record for the diversification of great apes in Africa, including humans, at the end of the Miocene is still somewhat patchy and difficult to interpret. However, the recent discovery of new specimens has provided some hope that the evolutionary history of gorillas, chimpanzees, and the earliest humans will eventually be resolved. Part of what makes reconstructing great ape evolution difficult is that most of the great specimens are actually found in Europe. *Dryopithecus*, *Pierolapithecus*, and *Ouranopithecus* are just a few examples of European fossil apes, represented by beautiful teeth, skulls, and skeletons, that all share traits with living great apes. It is possible that African great apes evolved in Europe or Asia after the initial evolution of the entire lineage in Africa. However, since there is a somewhat constant fossil record in East Africa for ape evolution, and given that gorillas, chimpanzees, and humans live there now, the simplest explanation is that they evolved in Africa.

Chororapithecus from about 10.5 million to 10 million years ago in Ethiopia, *Nakalipithecus* from about 9.9 million years ago in Kenya, and *Samburupithecus* from about 9.6 million years ago also in Kenya are all candidates for African great ape ancestors. Most of these traits are identified in the teeth, and these apes, which like modern ones, were designed for eating tough, hard fruits and vegetation. Because they are also large-bodied like modern apes, they probably foraged terrestrially for a greater proportion of their day than their more arboreal ancestors.

Beyond these Late Miocene apes, there is a continuation of the fossil record for neither gorilla evolution nor chimpanzees. After the Miocene, the only African apes on record are humans and our extinct ancestors, with one exception: a few 500,000-year-old fossil chimpanzee teeth from Kenya that look modern. It is probable that like modern apes, their ancestors were living in forested environments that are not well suited for sedimentation and fossil preservation. It is also possible that some of the fos-

sils from the Late Miocene and Early Pliocene that are currently labeled as hominins, or extinct bipedal human ancestors, are actually fossil chimpanzee and gorilla relatives instead.

These are some of the objections that researchers have made about the earliest hominins *Sabelanthropus*, *Orrorin*, and *Ardipithecus*, which are all placed on the earliest part of the strictly human branch of the ape family tree (i.e., the hominin branch). Some researchers consider that their assignment as hominins should be considered probationary until more specimens are discovered. Recent fossil humans, like those of the fossil chimpanzee teeth mentioned above, are not at all difficult to recognize; however, the farther one travels back in the fossil record toward the last common ancestor we share with chimpanzees, the fewer the available traits for distinguishing species.

Sabelanthropus from about 6 million years ago in Chad is currently the best candidate for earliest hominin, but *Orrorin* from about 6 million years ago in Kenya and *Ardipithecus* beginning around 5.8 million years ago in Ethiopia (and lasting for over 1 million years into the Pliocene) are nearly as old. Bipedalism is still the requirement that hominins must meet in order to be put firmly on the human line, but it appears that changes in teeth, like smaller canines and thicker enamel, are probably just as characteristic of our lineage and may have occurred concomitantly or even prior to the adoption of bipedalism. *Sabelanthropus* is represented by a cranium and jaws, so it is difficult to reconstruct locomotion, but the teeth and the face share similarities with later hominins. *Orrorin*, on the other hand, does have leg bones preserved, and the femur seems to indicate that it withstood the stresses unique to bipedal locomotion, but that interpretation is debated. The best earliest hominin fossils are of the genus *Ardipithecus*, which is represented by at least 40 individuals, most of which are single teeth but one of which is a well-preserved partial skeleton. Although the skull and teeth look like later hominins, the skeletal anatomy is still primitive and adapted to walking quadrupedally and climbing trees with a grasping big toe much like apes do. However, the pelvis shows some modifications that facilitated walking on two legs when on the ground.

It is possible that the long-held assumption that the evolution of bipedalism instigated the split between the lineage leading to humans from that leading to chimpanzees is incorrect and that an increase in tooth enamel thickness (for eating tougher foods) and a decrease in canine size (indicating its reduced use in social threats and displays) are all that distinguish early humans from early chimpanzees. Instead of new locomotor behavior, perhaps new dietary or social behaviors kick-started our evolution. This is just one of the issues that scientists will resolve with the discovery of more ape fossils from the Late Miocene.

—Holly M. Dunsworth

Bibliography

- Bernor, Raymond L. "New Apes Fill the Gap." *Proceedings of the National Academy of Sciences* 104 (2007): 19661–19662.
- Hartwig, Walter. *The Primate Fossil Record*. Cambridge: Cambridge University Press, 2003.
- Kumar, Sudhir, et al. "Placing Confidence Limits on the Molecular Age of the Human–Chimpanzee Divergence." *Proceedings of the National Academy of Sciences USA* 102 (2005): 18842–18847.
- Potts, Richard. "Paleoenvironmental Basis of Cognitive Evolution in Great Apes." *American Journal of Primatology* 62 (2004): 209–228.
- White, Tim D., et al. "*Ardipithecus ramidus* and the Paleobiology of Early Hominids." *Science* 326 (2009): 64–86.

The Late Miocene Climate and Environments of Central, Eastern, and Southern Africa

The Early and Middle Miocene African climate was wet and hot, and tropical rain forests covered major parts of the continent. In the Late Miocene, about 12 million to 5 million years ago, the African climate started to change dramatically as air flow and patterns of rainfall altered. The cause of the Late Miocene climate change was the development of the Great African Rift Valley, running from modern-day Israel to Mozambique. The Rift increased temperature contrasts and blocked moisture transport. On the west side of the Rift Valley the tropical forest was hardly influenced, but on the east side the

climate became drier. Toward the end of the Miocene, woodland savannas with grasses and weeds expanded farther in central, eastern, and southern Africa.

The African forests of the Late Miocene were still larger than those of today, while deserts and grasslands were smaller. The Sahara region was covered with grasslands. By the end of the Miocene, wet connections in the form of waterways of wetlands still existed between central and northern Africa, across the Sahara region, and between eastern and northern Africa, as evidenced by fossils of semiaquatic animals (*Libycosaurus* and *Kenyaipotamus*, respectively).

Rainfall patterns in eastern Africa are also related to the surface temperature of the Indian Ocean, which changes periodically. In wet phases, evaporated water from the Indian Ocean is transported mainly to eastern Asia but in dry phases to southern Asia. Plant fossils indicate that wet phases were still dominant at 12.6 million years ago and again around 6.8 million years ago. A dry phase existed at ten million years ago. At the Miocene-Pliocene boundary, the wet phase intensified temporarily due to the drying of the Mediterranean Sea, known as the Messinian event.

During the Pliocene at about 4.6 million years ago the dry phase would become dominant, resulting in the drier central and eastern Africa of today. Grasslands expanded at the cost of forests. The climate also became more seasonal. Seasonality means the end of tropical arboreal plants. On the interior plateau of southern Africa, woodland savannas arose. The present-day semiarid climate of southwestern Africa with rainfall in the winter was established somewhere in this period.

The cooling of the earth had begun already at the end of the Cretaceous period. The Late Miocene cooling was a late part of this global cooling. During the Late Miocene, life on earth became increasingly similar to that of today. The gradual spread of grasses and weeds and the reduction of forests reflected the global Miocene cooling of the earth. Toward the end of the Miocene, the Antarctic ice sheet was almost as large and thick as it is today. The continents had assumed more or less their present-day configuration.

As a direct result of the change in climatic and flora, a change in the fauna took place as well, with an explosion of grazing animals on the grasslands and savannas, and of primates in the thinner forests. The Late Miocene and the Early Pliocene are the time of success of our early ancestors. Without that Late Miocene climate change, we as a species may not have existed at all.

—*Alexandra van der Geer*

Bibliography

Ruddimann, William F. *Earth's Climate, Past and Future*. New York: Palgrave Macmillan, 2001.
Stanley, Steven M. *Earth System History*. New York: Freeman, 1999.

The Importance of *Sahelanthropus tchadensis*

In 2002 Michael Brunet and his team of researchers published an article in *Nature* titled “A New Hominid from the Upper Miocene of Chad, Central Africa.” This new specimen was named *Sahelanthropus tchadensis* (TM-266-01-60), or commonly Toumai, meaning “hope of life.” Unearthed at Toros-Menalla, a site in the Djurab Desert of Chad, the specimen consisted of a nearly complete cranium, two fragments of a lower jaw, and several teeth. Although no subcranial elements were found, these specimens displayed a mix of hominid and ape features previously unseen in paleoanthropology. While Brunet and his team lead the argument that *S. tchadensis* is the oldest hominid, skeptics claim that there is more evidence that this specimen is a Miocene ape. Others propose that the specimen is a failed species occurring during the divergence. Whether this specimen is a hominid, an ape, or a dead-end ancestor, its importance to anthropology is indisputable.

The location of the Toumai skull caused a stir among researchers for two main reasons. First, it is found in Chad, which is located in the middle of the African continent. During the Miocene era this area consisted of well-watered woodland. Prior to this finding, the majority of significant hominid excavations occurred in East and South Africa. If this skull is a hominid, then its discovery in central Africa reveals that early

hominids had a much wider range than earlier presumed. Second, the specimen was associated with fossil fauna that had been found at two East African sites. These fossils had been indisputably dated in the range of six million to seven million years ago. Although the geological context in which the Toumai skull was found did not allow for radiometric or paleomagnetic dating, comparison with these fossils would make Toumai the oldest hominid cranium ever found. This gives support to the genetic evidence that the hominid lineage diverged from the chimpanzee lineage during this time period. From DNA evidence, scientists have proposed that the split between the chimpanzee (*Pan troglodytes*) and hominid lineages occurred between five million and eight million years ago. This finding pushes the likelihood of this divergence having occurred closer to eight million than five million years ago. Prior to this discovery, the five million-year-old australopithecines were thought to have been the oldest ancestor of modern humans. Those who believe Toumai to be a hominid claim that its age will change how scientists view evolution.

At the center of the debate is whether or not Toumai was bipedal. This is fueled by the mixed hominid-ape features of the fossil. Brunet and others have pointed out that anatomical features of the fossil provide solid evidence that it was bipedal and therefore of hominid status. In April 2005, Brunet released a statement that analysis of the basal portion of the cranium suggested that Toumai may have been an upright biped. The most heavily scrutinized of the anatomical features is the foramen magnum. This is the large opening at the base of the cranium through which the spinal cord passes. Brunet stated that features of this opening pointed to upright posture that is similar to modern humans. One of these was the angle between the foramen magnum and the orbital plane. The orbital plane is the surface along the maxilla, or upper jaw, that lies perpendicular to the Frankfort plane at the orbitale. Among humans, the angle between the foramen magnum and the orbital plane is nearly perpendicular. In chimpanzees, this angle is more acutely angled, indicative of pronograde posture. According to Brunet, Toumai displays an angle closer to that of humans. Critics state

that the foramen magnum is positioned too far back on the base of the skull to have supported a head on an upright body. Since bipedalism is one of the noted features of the hominid lineage, proving Toumai's upright posture is of great importance to the ape-hominid debate. If Toumai is accepted as a hominid, then bipedalism and the human-chimp divergence occurred much earlier than once assumed.

The mixed features of this specimen remain somewhat enigmatic for both supporters and skeptics. The face is relatively flat, and a prominent brow ridge is present above the eyes. These characteristics are found in hominids dating after two million years ago but not the majority of the fossils found between four million and two million years ago. Hominids dated in this time period had more protruding faces and lacked brow ridges. These are also features that are not found among the Miocene apes. Also, while support for Toumai being bipedal is gaining strength, the brain case has apelike proportions of approximately 320–350 cubic centimeters. The unique mix of derived and primitive charac-

teristics not only raises questions but further suggests that the evolution of ape to man was anything but a straight progression.

If this specimen is a hominid, then it will change the previously accepted version of both when and how the hominid lineage evolved. If it is a Miocene ape, it can add information to the sparse pool of knowledge about the development of African apes. The possibility of this fossil representing a failed line of hominid-ape divergence can offer a great wealth of information about changes occurring in the Upper Miocene, another area of which little is known. Whether or not this ancient specimen is a hominid, an ape, or a failed by-product of diverging lineages, its importance to our understanding of evolution is immense.

—Kimberly Nguyen

Bibliography

- Boyd, Robert, and Joan B. Silk. *How Humans Evolved*. 3rd ed. New York: Norton, 2003.
- Sims, Michael. *Adam's Navel: A Natural and Cultural History of the Human Form*. New York: Penguin, 2003.

■ Introduction: Increasing Diversity—Our Ancestors of the Pliocene, 5–1.8 Million Years Ago

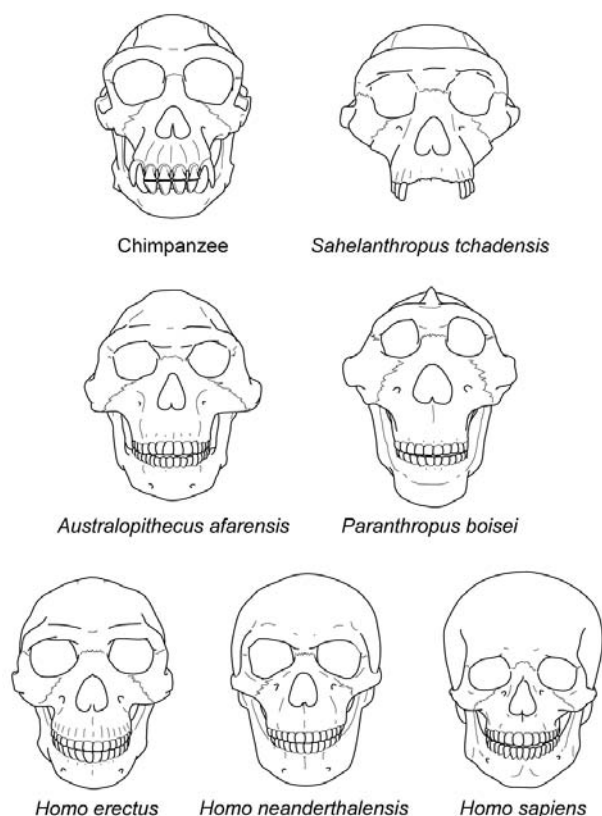
If you had to divide the story of human evolution into two chapters, the first would be the evolution of bipedalism from a quadrupedal ancestor, and the second would be the evolution of brain size beyond the size of that of living chimpanzees. The latter chapter, the brainy episode in human evolution, began about 1.8 million years ago. Before that, the first chapter takes place mostly during the Pliocene epoch from 5 million to 1.8 million years ago.

Bipedalism may not have been the reason that the hominin lineage separated from that leading to chimpanzees, but regardless, once upright posture and locomotion became important, natural selection spent at least three million years tinkering with the hominin body to be increasingly better at it. The fossil record throughout the Pliocene documents this transition from

very primitive apelike bodies to much more derived bipedal ones, especially from the waist down. (Shorter forearms and mobile yet strong shoulders, good for throwing, did not evolve until the Pleistocene.)

By the time the Pliocene epoch begins, *Ardipithecus* is in full swing. This is a genus with two named species that lasted about 1.5 million years (from 5.8 million to 4.4 million years ago) in what is now Ethiopia. *Ardipithecus* is a contender for the earliest bipedal hominin because of the anatomy of the feet, but it will remain disputed until the much-awaited partial skeleton is revealed to the scientific community by discoverer Tim White and colleagues.

The next hominin through time during the Pliocene is the first australopith, *Australopithecus anamensis*, dating from about 4.2 million to



Skulls of various hominid species, with a modern chimpanzee and human for comparison, show their diverse features. There are no mandibles yet for Sahelanthropus. (Illustration by Jeff Dixon)

3.8 million years ago. Thanks to a well-preserved tibia (shinbone) and some other fragments, it is clear that this hominin walked upright on two legs. Trends in tooth and jaw size and shape suggest that there is an evolutionary ancestor-descendant relationship running from *Ardipithecus* to *Australopithecus anamensis* and then to the next hominin through time, which is *A. afarensis*.

A. afarensis, known best for the iconic partial skeleton nicknamed “Lucy,” lived in Ethiopia, Kenya, and Tanzania (and perhaps Chad) from approximately 4 million to 2.5 million years ago. By this time, bipedal adaptations have moved further throughout the body, with a well-preserved knee, hips, foot bones, and footprints pointing to dedicated bipedal locomotor behavior. However, this hominin, living halfway be-

tween the beginning (about six million years ago) and the end of the hominin story (modern *Homo sapiens*), still had some anatomy that could have been useful for climbing, like slightly long and curved fingers and toes. It also had a chimpanzee-sized brain (estimated from fossilized skull bones), and it did not leave any evidence that it used tools or that it ate animals to any significant degree. *A. afarensis* was essentially a bipedal chimpanzee.

At about three million years the hominin tree becomes diverse. This is about when fossils of *A. africanus*, which is a lot like *A. afarensis*, show up in South Africa, and subsequently, in both regions, a new separate kind of hominin appears. These are the robust australopiths, and they are more and more often designated as a separate genus, *Paranthropus* (a genus that is often labeled *Australopithecus* as well). With massive jaws, anchored to the cranium with meaty chewing muscles, and with enormous molars, *Paranthropus aethiopicus*, *P. boisei*, and *P. robustus* were adapted for chewing tough fibrous vegetation and for cracking and grinding hard nuts, seeds, and fruits. Based on the currently available evidence, everything else about their bodies, including the brain size, is australopith-like. *Paranthropus* seems to thrive long after australopiths are extinct and until one million years ago. For about one million years these small-bodied large-jawed vegetarians were living simultaneously with and in the same regions as newly evolved members of the genus *Homo*.

Some of the big questions for paleoanthropologists who work on the Pliocene fossil record are: (1) Which species gave rise to *Paranthropus*? (2) Which species is the ancestor to the genus *Homo*? (3) Which species is responsible for making the earliest stone tools on record, dated to 2.6 million years ago from Gona, Ethiopia? This last question is crucial to efforts at reconstructing the evolution of the human genus. It has been long assumed that only members of *Homo* manufactured stone tools, that is, modified stones into particular shapes with sharp edges that were useful for butchering animals or preparing vegetation. The earliest fossil *Homo* is dated to about 2.3 million years ago, which is a

good 300,000 years after the Gona tools were left behind.

—Holly M. Dunsworth

Bibliography

- Harcourt-Smith, William E. H., and Leslie C. Aiello. "Fossils, Feet and the Evolution of Human Bipedal Locomotion." *Journal of Anatomy* 204 (2004): 403–416.
- Hartwig, Walter. *The Primate Fossil Record*. Cambridge: Cambridge University Press, 2003.
- Kimbel, William H., et al. "Was *Australopithecus anamensis* Ancestral to *A. afarensis*? A Case of Anagenesis in the Hominin Fossil Record." *Journal of Human Evolution* 51 (2006): 134–152.
- Semaw, Sileshi, et al. "2.6-Million-year-old Stone Tools and Associated Bones from OGS-6 and OGS-7, Gona, Afar, Ethiopia." *Journal of Human Evolution* 45 (2003): 169–177.

Ardipithecus ramidus

Ardipithecus is a very early hominid who lived some 4.5 million years ago in the forests of eastern Africa. Fossils of *Ardipithecus ramidus* were found in 1992 and 1993 in Aramis, Ethiopia, by Tim White, Gen Suwa, and Berhane Asfaw and their team. The remains include several isolated teeth, a basal skull part, some arm bones from a single individual, part of a lower jaw of a child, and a heavily fragmented incomplete skeleton. The estimated age is 4.4 million years. *Ardipithecus ramidus* was described in 1994 by Tim White and colleagues as a new *Australopithecus* species, but a year later they gave it its own generic name, warranted by the lesser-derived morphology of the skeleton. At present, *Ardipithecus* is considered a sister-taxon of *Australopithecus*, which means that they share a common ancestor.

Ardipithecus is suggested as one of the oldest members of human lineage, though not a direct lineal ancestor. The oldest member is, at present, *Orrorin tugenensis* of six million years ago, described by Brigitte Sénut and colleagues in 2001, alternatively named *Praeanthropus*. *Orrorin* is, however, not accepted by all scientists as a hominid. The status of *Sabelanthropus tchadensis* of Chad, estimated age between

six million and seven million years ago, is even more debated, though most scientists agree that it is an ape and not a hominid. If these two genera are dismissed as ancestral hominids, the honor goes to *Ardipithecus*.

Although *Ardipithecus* has many apelike features, it has some derived features as well, which makes it transitional between apes and australopithecines. It was about as large as a chimpanzee, with a height of only 2.6 feet (80 centimeters) and its brain was approximately the same size as that of a chimpanzee. The arm shows a mixture of apelike and derived features. The teeth of *Ardipithecus* are even more apelike than those of the *Australopithecus afarensis*. The back teeth are narrower, the enamel layer on them is very thin, and the front teeth are large, although the canine teeth are not as large as in living apes. The diet of *Ardipithecus* was similar to that of the living great apes. But some dental features are more similar to the australopithecines, including low, blunt, and less-projecting canine teeth; the somewhat smaller anterior teeth; and the somewhat broader lower molar teeth.

Ardipithecus led mainly an arboreal life but may have walked upright, as suggested by the structure of its toes and the position of the foramen magnum, which is found close to the base of the skull.

Two species of *Ardipithecus* have been described to date: *A. ramidus* of 4.4 million years ago and *A. kadabba* of 5.2–5.8 million years ago, both from Ethiopia. The differential diagnosis, however, is based on one canine tooth only, which seems to be more apelike in *A. kadabba* than in *A. ramidus*. Not all scientists recognize *A. kadabba* as a species on its own.

—Alexandra van der Geer

Bibliography

- White, Tim D., et al. "*Ardipithecus ramidus* and the Paleobiology of Early Hominids." *Science* 326(2009): 64–86.
- White, T.D., G. Suwa, and B. Asfaw. "*Australopithecus ramidus*, a New Species of Early Hominid from Aramis, Ethiopia." *Nature* 371 (1994): 306–312; corrected in *Nature* 375 (1995): 88.

Australopithecus anamensis

In 1994 Meave Leakey of the National Museums of Kenya led an expedition that unearthed a wealth of hominid fossils. The fossils were found in Kanapoi and Allia Bay near Kenya's Turkana Basin. Initially these were classified as belonging to the *Australopithecus afarensis*. However, upon further analysis marked differences led to reclassification of the fossil as *Australopithecus anamensis*. The name is derived from the word *anam*, meaning "lake" in the local Turkana language of the basin area. Among the fragments found were portions of a lower and upper jaw, part of a tibia, and various teeth. A portion of a humerus, found at Kanapoi by a Harvard expedition in 1965, has since been associated with this species. The Leakey find had a significant impact on establishing the identity of the hominid and shedding light on the nature of human evolution.

All *A. anamensis* sites are found near Lake Turkana. Associated animal fossils indicate that the region was once a combination of dry woodlands, gallery forests along rivers, and more open grasslands. Of these sites, Kanapoi and Allia bays have proven the most significant. This area is characterized by Pliocene sedimentary sequences. Studying these sequences has been one of the keys to dating the fossils found.

At Kanapoi the strata sequences have been dated at 4.17 million to 3.5 million years ago. Hominid remains from two different levels, lower and upper, have been found within this sequence. The lower level was deposited during a time when the majority of the area consisted of Lake Lonyumun, about 4.1 million years ago. Most of the fossils found in this layer are tooth or tooth fragments, which have assisted in creating a more vivid image of what the hominid's diet may have been. Postcranial elements have been located in the upper level of the sequence, roughly dated at about 4.1 million to 3.5 million years ago. In this layer fossils were unearthed in a small river channel below the Kanapoi Tuff, which is about 3.5 million years old. To date, some of the more significant elements found in this level are a distal humerus and a nearly complete tibia.

Allia Bay, adjacent to Kanapoi, has yielded many important fossils, including mandibular

fragments and isolated teeth. Elements found at Allia Bay were discovered both within and below Moiti Tuff, which is 3.9 million years old. These fossils were found near what archaeologists have determined to be an ancient river named the Proto-Omo.

Based on the fragmented fossils found, researchers were able to establish various characteristics of *A. anamensis*. These include an interesting mix of primitive and advanced features.

The cranial and dental elements are somewhat apelike as is common among australopithecines. The cranial capacity for *A. anamensis* is small, and the teeth are adapted for coarse foods. Also, the ear holes in this fossil are small and elliptically shaped, as is seen in apes. The dental characteristics of this specimen are also primitive and apelike. Tooth enamel thickness suggests a diet consisting of tougher foodstuffs such as robust vegetation. Inspection of the fossil's teeth revealed that the molars are large relative to the size of the body. Also, the molars were large in comparison to the incisors. These are both dental characteristics found in australopithecines. The overall dental features of *A. anamensis* are primitive and apelike.

In contrast with the primitive features of the cranial and dental elements, postcranial elements display more advanced hominid features. Analysis of the shape of the tibia revealed that *A. anamensis* was bipedal. For example, the thickness of the tibia's distal portion indicates an area adapted for high stress, as would be necessary for bipedal locomotion. Also, the proximal articular condyles, which connect with the femur to create the knee joint, are deeply concave, wide in the antero-posterior plane, and equal in size. These are all traits found in the tibias of modern humans. Oddly, the tibial features may share more with the genus *Homo* than with chronologically adjacent australopithecines, such as *A. afarensis*. Such mixed traits support the hypothesis that sister branches of *Homo* and *Australopithecus* coexisted during this time, thus buttressing the theory that evolution was anything but a simple linear progression.

—Kimberly Nguyen

Bibliography

Boyd, Robert, and Joan B. Silk. *How Humans Evolved*. 3rd ed. New York: Norton, 2003.

The Footprints at Laetoli and the Significance of Walking Upright

Some 3.7 million to 3.6 million years ago, two adult hominids and a child accidentally left their footprints in the volcanic ash from the eruption of Mount Sadiman at Laetoli in northern Tanzania. Their trail is the first direct evidence that these ancient hominids walked upright on two feet. The series of 59 imprints, which run over a length of at least 91.8 feet (28 meters), was discovered in 1978 by Mary Leakey and Tim White. The lines run parallel and close to each other. The stride length was relatively short compared to those of modern humans. Based upon the stride length and the size of the individual footprints, the stature of the hominids is estimated at about 4 feet (1.2 meters) for the smaller adult and 4.5 feet (1.4 meters) for the larger adult. Fossils of *Australopithecus afarensis* were found nearby, and the tracks are attributed to this species.

There is no general consensus on the interpretation of the hominid footprints at Laetoli. The only accepted view is that they were made by an upright-walking hominid, be it chimplike or humanlike. This way of locomotion is called bipedal, opposite to quadrupedal (four-footed). The trail lacks any evidence of knuckle walking as is displayed by the great apes. The points of discussion focus mainly on what the imprints resemble most and who made them.

According to one view, defended by Mary Leakey, Tim White, Richard Tuttle, and Ian Tattersall, the footprints perfectly resemble those of modern humans, with short and straight toes. Based upon this, attribution of the trail to *Australopithecus* is either dismissed (Richard Tuttle) or accepted (Mary Leakey and others). According to another view, shared by Jack Stern, Randall Susman, and Ronald Clarke, the footprints are more like those of an upright-walking chimpanzee, with long curved toes and a diverging big toe. Stern, Susman, and Clarke hold that they were made by *Australopithecus*.



A trail of fossilized footprints found by Andrew Hill at Laetoli in present-day Tanzania in 1976. Some of the oldest hominid evidence found in Africa, these footprints show that these hominin ancestors were walking upright in East Africa 3.5 million years ago. (John Reader/Photo Researchers, Inc.)

The transition from quadrupedal locomotion to a fully bipedal locomotion has significant advantages. Several theories have been developed to explain its importance. They focus on either the importance of having hands and arms free or the advantages of the new way of walking itself. Free hands and arms open the way to carrying food, infants, and objects; the more systematic use of tools, including weapons; and throwing stones toward enemies and predators. All of these advantages increase the survival chances of the first upright-walking hominids. Walking upright is efficient because the energetic costs are lower per unit of distance. Walking upright is also advantageous from a strategic point of view because it affords a better overview during

traveling. An interesting yet poorly supported theory is that bipedalism evolved in the water. Wading through shallow waters or wetlands is easier while walking upright. The absence of a hairy coat would have further facilitated it.

Hominids are the only primates with efficient upright walking as the primary form of locomotion. Only in our own lineage was a striding gait, whereby weight is alternately placed on a single fully extended hind limb, developed to its full extent. This required drastic changes in the skeleton, especially in the foot, long leg bones, and pelvis. Grasping abilities of the foot are lost, because after the heel has touched the ground during walking, the toes are pushed off, especially the big toe. The knee can be extended fully to make long strides. The legs are placed more closely to each other to prevent the center of gravity from swinging from left to right at each step. The weight transfer from the body to the legs has to change to keep balance. All major structural changes are already seen in the australopithecines, but there is no agreement about to what degree. *Australopithecus* most likely was not bipedal in quite the same way that modern humans are.

The type of upright walking of the great apes with bent knees and hips is energetically inefficient. Our way, with straight knees and hips and long strides, is energetically efficient. The amount of energy spent on locomotion is thus considerably reduced. Trained apes as well as monkeys still exhibit the bent knee and hip type of upright walking. Anatomical constraints apparently block the development of a striding gait.

Since the discovery of our early ancestors, the question of how our obligate bipedalism arose is fiercely debated. The early theories of the 1920s and 1930s follow the idea of a gradual and straight-lined evolution. The start was supposed to be a gibbonlike climbing and brachiating (arm-swinging) stage. The next stage was perceived as a chimpanzee-like knuckle-walking stage, culminating in our striding-gait bipedalism. The discovery of many new fossils and a better knowledge of the locomotion of the great apes shaped the theories constantly.

In the late 1960s a new initial stage was launched, that of vertical clinging and leaping with orthograde back and extended knees and

hips, first formulated by John Napier and Alan Walker. A variant of this hypothesis is that of an orangutan-like vertical climbing. The knuckle-walking stage has been promoted as more pronounced since the 1970s (e.g., by Sherwood Washburn) and is evidenced by our close genetic ties to chimpanzees. Whether the wrist of *Australopithecus* was fit for knuckle-walking or not is still under debate. A new and interesting theory was proposed in the mid-1990s by John de Vos, who sees an evolutionary parallel in the elongation and straightening of the limbs in all plain-dwelling animals, such as ungulates. The result is increase in speed and energetic efficiency. Most likely, as long as hominid fossils are unearthed, the fire of this debate will be fed.

—Alexandra van der Geer

Bibliography

- Kingdon, Jonathan. *Lowly Origin: Where, When, and Why Our Ancestors First Stood Up*. Princeton, NJ: Princeton University Press, 2004.
- Leakey, Mary D., and John M. Harris, eds. *Laetoli: A Pliocene Site in Northern Tanzania*. Oxford, UK: Clarendon, 1987.
- Leakey, Mary D., and Richard L. Hay. "Pliocene Footprints in the Laetoli Beds at Laetoli, Northern Tanzania." *Nature* 278 (1979): 317–323.
- Meldrum, D. Jeffrey, and Charles E. Hilton, eds. *From Biped to Strider: The Emergence of Modern Human Walking, Running and Resource Transport*. New York: Kluwer Academic/Plenum, 2004.
- White, Tim D. "Evolutionary Implications of Pliocene Hominid Footprints." *Science* 208 (1980): 175–176.

Australopithecus afarensis

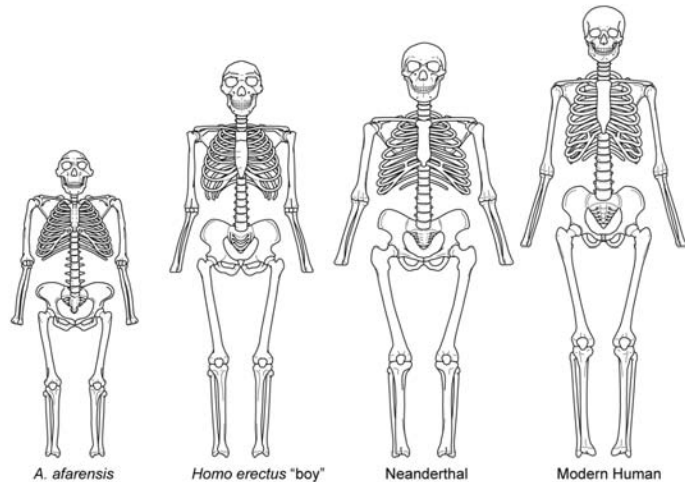
Australopithecus afarensis lived in East Africa between 3.9 million and 2.7 million years ago. They walked upright but were also good climbers. This species had low foreheads with prominent eyebrows, flaring cheeks, and a protruding face. Their build was slender (gracile), with long arms and short legs like an ape. The average cranial capacity of 430 cubic centimeters is comparable to that of a chimpanzee. The teeth were more apelike than those of the later *Australopithecus* species, with large front teeth, pointed canines, and small back teeth. Males were some

4.9 feet (151 centimeters) tall and weighed about 99.2 pounds (45 kilograms), while females were about 3.4 feet (105 centimeters) tall and weighed around 66.1 pounds (30 kilograms). Males had larger canines too, and their skulls had a prominent sagittal crest.

Australopithecus afarensis lived in a region with significant tectonic activity, with many volcanic eruptions and earthquakes. The fossils are generally found along what were rivers or lakes at that time, and most likely these australopithecines roamed their banks. *Australopithecus afarensis* was primarily adapted to a lake and river margin grassland environment, such as savannas and open woodlands. Fossilized pollen tells us that the forests along the rivers consisted of juniper and olive trees. Their diet was not restricted to fruits, seeds, leaves, and roots from the woodlands but instead included also grasses and sedges and probably occasionally termites, bird eggs, and maybe meat as well. The landscape of Dikika in Ethiopia, where *Australopithecus afarensis* fossils were found, can be reconstructed based on the faunal remains. There were rivers or lakes with hippopotamids and crocodiles and woodlands with African buffalos but mainly open grasslands with abundant extinct relatives of the wildebeests, rhinocerotids, elephants, and impalas of today. The lifeways of *Australopithecus afarensis* itself can only be guessed at. Stone tools and other archaeological evidence were never found, and the fossil sites do not represent living floors.

The majority of *Australopithecus afarensis* fossils originate from Ethiopia (Hadar, Aramis, Dikika); other localities are in Kenya (Lake Turkana, possibly also Koobi Fora and Omo), Tanzania (Laetoli), and South Africa (Makapansgat). The most spectacular findings are doubtlessly an incomplete skeleton of an adult female (“Lucy”), a group of 13 individuals (“The First Family”), and a complete right knee joint (“Johanson’s Knee”), all from Hadar, and the skeleton of a three-year-old girl (“Selam”) from Dikika. The species *Australopithecus afarensis* was officially named and described in 1978 by Donald Johanson and Tim White, based upon the remains known at that time.

The first finding of *Australopithecus afarensis* was not that of the famous “Lucy” but rather



Skeletons of different hominins show their relative body sizes, bone thicknesses, and limb proportions. Bones of the hands and feet were omitted for simplicity and also because few were preserved with the *H. erectus* skeleton. (Illustration by Jeff Dixon)

was a complete right knee joint with some more fragments of both legs (AL 129-1) nicknamed “Johanson’s Knee.” It belongs to an adult individual and is almost a miniature of a modern human knee. Because of this close resemblance, the knee is seen as evidence for upright walking. A year later, Johanson and his team found “Lucy” (AL 288-1), also at Hadar. This skeleton belonged to an adult female of about 20 to 25 years of age, about 3.5 feet (107 centimeters) tall and weighing some 61.7 pounds (28 kilograms). Her pelvis, thigh, and shin bones provided further evidence for upright walking. The same year, a lower jaw (LH 4) was found by M. Mubuala at Laetoli in Tanzania. This jaw would figure as the type specimen for the species in its 1978 description.

A year later, in 1975, Johanson’s team discovered the remains of several individuals at Hadar. Mike Bush, a medical student at that time, found an upper jaw fragment with hominid teeth. That was the very start of the discovery of a large assembly of hominids, including young adults and children at Afar Locality 333. The group was nicknamed “The First Family” by Johanson. The individual sizes show a considerable range, and this started the discussion of whether the group represents one, two, or even three species. Johanson and others maintain that all remains belong to a single species and explain the large

THE IMPORTANCE OF HADAR—THE DISCOVERY OF “LUCY”

The badlands of Hadar in Ethiopia’s Afar region yielded an impressive amount of early hominid fossils. One of the most important findings is “Lucy” (named after a popular Beatles song). Lucy is a skeleton of a female *Australopithecus* in her early twenties and was found on November 24, 1974, by Donald Johanson, Maurice Taïeb, and Tom Gray. Four years after the discovery, “Lucy” was launched as *Australopithecus afarensis*. At that time, “Lucy” and her kind were believed to be the common ancestors of all later hominids, including modern humans.

At the time, the skeleton was the first discovered skeleton of a fossil hominid. Not all parts have been preserved; completely missing are major parts of the skull, hands and feet, the shoulders, most vertebrae, and ribs.

The volcanic ash layers of Hadar can be dated, which provides an age framework for the fossils of *Australopithecus* that are found in the sediment layers sandwiched by the ash layers. This precise framework makes Hadar very important for early hominid evolution. Available dates of ash layers are 3.4 million years, 3.22 million years, 3.18 million years, and 2.95 million years.

—Alexandra van der Geer



Skeleton of “Lucy” (*Australopithecus afarensis*), discovered in Ethiopia by Donald Johanson in 1974. (Alain Nogues/Corbis)

size differences as due to the fact that males were much larger and stronger than females. Another hypothesis holds that the larger specimens belong to an early *Homo*. Actually, Johanson himself initially considered “The First Family” to be *Homo* in 1976; two years later, he and Tim White included the material into their description of *Australopithecus afarensis*.

In 1978, Mary Leakey and Tim White recognized a trail of hominid footprints at Laetoli in Tanzania, indicated to them by Paul Abell. The estimated age of the Laetoli footprints is 3.7 million–3.6 million years, based upon fossil findings nearby. The trail was made by three hominids: two adults and one child. There is disagreement about the nature of the footprints: humanlike or apelike. There is also disagreement about the

maker of the footprints: *Australopithecus* or early *Homo*. No hominid species other than *Australopithecus afarensis* is known from that region and that time, which favors the attribution of the footprints to this species.

The most complete *Australopithecus afarensis* skull to date was discovered in 1991 by Bill Kimbel and Yoel Rak at Hadar. The skull (AL 444-2) belonged to a large adult male. The brain size is 540–550 cubic centimeters. The skull is significantly larger than the smaller skulls of the same species, which fits the earlier observation that males and females indeed differed significantly from each other in size. This makes it more likely that “The First Family” indeed contains members of only one sexually highly dimorphic species.

In 2000 a skeleton and skull (DIK-1/1) of a three-year-old girl was discovered at Dikika in Ethiopia by Zeresenay Alemseged and team. The so-called Lucy's Baby is officially named "Selam," meaning "peace" in the Ethiopian language. With her estimated age of 3.3 million years, she is placed some 120,000 years before Lucy, which makes it impossible that "Selam" was Lucy's child. The practically complete skeleton preserves elements that were not recovered thus far. Scientists expect that this skeleton will shed new light on the anatomy and way of walking of *Australopithecus afarensis*.

Australopithecus afarensis, like the African apes of today, shared the upright (orthograde) posture of modern humans. The way of walking of *Australopithecus afarensis*, however, is considerably debated. The opinions range from almost exclusively bipedal to greatly arboreal. The reason for disagreement lies in its intermediate anatomy, with a mosaic of apelike and humanlike features. Apelike features are the long and curved fingers for grasping branches, a wrist-locking mechanism in the hand to enable knuckle walking, an upward tilted shoulder joint to use the arm above the head, relatively long arms for suspension, and a bony labyrinth of the inner ear that is not conducive to upright walking. Modern humanlike features, on the other hand, are the short and wide iliac blades of the pelvis, a wide sacrum that lies directly behind the hip joint, prominent attachment areas for the knee extensor muscles, an inward-orientated thigh bone resulting in a varus-knee, adducted big toes, and a derived ankle joint. The skeletal features that are used to explain its upright walking can also be explained as associated with vertical climbing. Most views today hold that the species walked upright and also climbed trees. A minority maintains that when on the ground, they practiced both upright walking and knuckle walking.

The discovery of a small-brained hominin with a primitive prognathic face that walked upright stirred the scientific world at first. Human evolution was supposed to first show an increase in brain size and only after that a shift to an upright posture and walking. The Taung Child (*Australopithecus africanus*) had already stirred the scientific establishment, but with the discovery

of *Australopithecus afarensis* in the 1970s, the earlier view had proven wrong. The current view is that first a shift in posture and locomotion took place and second an increase in brain size. The most commonly held view nowadays is that this species gave rise to the East African robust australopithecines, or possibly to all robust forms, and not to *Homo*. This honor goes at present to *Australopithecus africanus*.

—Alexandra van der Geer

Bibliography

- Alemseged, Z., et al. "A Juvenile Early Hominin Skeleton from Dikika, Ethiopia." *Nature* 443 (September 21, 2006): 296–301.
- Johanson, Donald C., and Maitland Armstrong Edey. *Lucy, the Beginnings of Humankind*. New York: Simon and Schuster, 1981.
- Johanson, Donald C., and B. Edgar. *From Lucy to Language*. New York: Simon and Schuster, 1996.

Australopithecus africanus

Australopithecus africanus lived in southern Africa between 2.8 million and 2.4 million years ago. With its relatively short legs, long arms, and a chimpanzee-sized brain, this hominid was more like an ape than a human. The skeleton shows adaptations for upright walking as well as for climbing. The chewing teeth are large and have a thick enamel layer. Sexual dimorphism, or the size difference between males and females, is marked as in all earlier hominids. Males were about 54.3 inches (138 centimeters) tall and weighed some 90.3 pounds (41 kilograms), against the 45.2 inches (115 centimeters) and 66 pounds (30 kilograms) of the females. The brain capacity was about 440–625 cubic centimeters, a little larger than that of *Australopithecus afarensis*. They ate fruits and leaves but also large quantities of grasses and sedges or animals that ate these plants. Their habitat was open, such as woodlands and grasslands. *Australopithecus africanus* is considered close to the ancestry of the *Homo* lineage.

The name *Australopithecus* was coined by the Australian anatomist Raymond Dart (1893–1988) in February 1925. He based his new species *australopithecus africanus*, meaning Southern Ape of Africa, on the skull of a child.

➤ SWARTKRANS AND THE TAUNG CHILD

In 1924, the first evidence of ancestral humans from Africa was unearthed. Until then, our ancestors were believed to come from Asia or Europe, not Africa. Raymond Dart found the skull of a young child among other fossils from a quarry near Taung in South Africa. He gave his “Taung Child” the scientific name of *Australopithecus africanus*, literally Southern Ape from Africa. The genus name *Australopithecus* is now the common label for a larger group of pre-*Homo* hominids.

Swartkrans cave, discovered in 1948 by Robert Broom, is the most productive hominid site in South Africa. Between the late 1960s and early 1980s, remains of 130 individual hominids were recovered here. The bones are a mixture and belong to a number of species, including *Australopithecus robustus* and *Homo erectus*. Many *Australopithecus* bones bear chewing marks, and one skull shows punctures made by the canine teeth of a large cat. Apart from the human bones, other animal bones were found that show butchery marks originating from stone tools. A number of animal bones from the one million-year-old level are burned, indicating the use of fire by early *Homo*. Swartkrans shows that late *Australopithecus* and early *Homo* possibly lived contemporaneously in the same region.

—Alexandra van der Geer

In boxes with fossils from a limestone quarry at Taung, South Africa, Dart had discovered a natural endocast of a braincase in 1924. He immediately realized that it belonged to a higher primate. This petrified brain imprint fitted to skull parts from another limestone block. Dart spent months removing the hard matrix around the fossils and with good result. His specimen turned out to be a child of about three to four years of age with a full set of milk teeth and its permanent molars just starting to erupt. Dart proudly considered it his Taung baby.

Dart realized that *Australopithecus africanus* could not be an ape, because the South African climate had been relatively dry for the last one million years. Features of the skull and teeth were more akin to humans than to apes, but the brain was too small. The estimated brain size if it had grown to adulthood is 440 cubic centime-

ters, which is somewhere in between that of the average gorilla and the orangutan. However, compared to a comparable-sized ape, the bonobo, the Taung child would have had a brain one-quarter larger as an adult. Dart postulated that *Australopithecus africanus* was a missing link between humans and apes, pointing out the hominid-like features of his fossil.

The established scientific community refused to accept Dart's view of a species intermediate between apes and humans. The commonly held view at that time was that human ancestors were to be found either in Asia or elsewhere in Africa. Furthermore, the missing link was expected to combine an enlarged brain with an apelike jaw. A small-brained ancestor was simply unacceptable. In addition, a juvenile skull was not a very trustworthy basis for a missing link.

Another unlucky coincidence was that at the very time Dart promoted his ideas, fossils of a primitive kind of *Homo* (“Peking Man”) had been discovered in China. Before that, similar fossils had been found in Indonesia in the 1890s and Europe from where the famous Neanderthals came. No one at that time considered Africa a possible birthplace for ancestral humans, despite Charles Darwin's observation on the similarity between the living species and the fossil species in the same region. The disappointment was large enough for Dart to cease working with the fossils for almost 20 years. By the early 1950s, based upon discoveries of rich fossiliferous sites in South Africa by Robert Broom (Sterkfontein 1936, Kromdraai 1938, Swartkrans 1948) and Dart himself at Makapansgat in 1947, the scientific community finally accepted the view of *Australopithecus* as early hominids, not just some kind of aberrant apes.

The second *Australopithecus africanus* fossil that was found belonged to an adult individual. In it is a heavily fragmented skull (TM 1512) with brain endocast. The endocast was discovered on August 17, 1936, by quarry foreman G. W. Barlow in the Sterkfontein quarry. He showed it to Robert Broom, who subsequently found skull fragments in the rubbish. Originally, he described the remains as *Plesianthropus transvaalensis*. On April 18, 1947, he found a very well-preserved adult skull in the same quarry. The skull, nicknamed Mrs. Ples (STS 5), is now

thought to be male (“Mr. Ples”). A nearly complete backbone, a pelvis, a part of a thigh bone, and some rib fragments (STS 14) from the same cave, found in the same year, seem to belong to the skull. This skeleton provides so far the only available information about body proportions of this australopithecine.

Australopithecus africanus was initially considered a forerunner of one or all of the later robust australopithecines. The back teeth are broader and have thicker enamel than those of *Australopithecus afarensis*, traits that are also present in the robust forms. The current view, however, is that *Australopithecus africanus* evolved into the genus *Homo*, more precisely into *Homo habilis* or *Homo rudolfensis*, dependent on the theory followed. This view is based upon its rounder skull and larger brain. The teeth and face seem less primitive, too. *Australopithecus afarensis* (“Lucy”) and the robust australopithecines (*Paranthropus*) are now seen as side branches without descendants.

A matter that complicates the possible ancestry of *Homo* is the unexpected apish limb proportions of a *Homo habilis* skeleton (OH 62) found in 1986 in Olduvai. The ratio of upper arm length to upper limb length of OH 62 is more apish than that of *Australopithecus afarensis*. It seems thus that some early members of *Homo* had apelike body proportions. Similar proportions are seen in *Australopithecus africanus*, which made it a good candidate for direct ancestry. An interesting new view was recently proposed by Bernard Wood, following an earlier remark by John de Vos in the mid-1990s. They suggest that *Homo habilis* and *Homo rudolfensis* are in actual fact australopithecines. In that case, the problem with OH 62 is nonexistent, and the ancestry of early *Homo* (*Homo ergaster*) is again open to discussion. The exact relation of *Australopithecus africanus* to the earliest *Homo* is, again, still under debate.

—Alexandra van der Geer

Bibliography

- Garwin, Laura, and Tim Lincoln, eds. *A Century of Nature: Twenty-one Discoveries That Changed Science and the World*. Chicago and London: University of Chicago Press, 2003.
- Raymond, Dart. *Adventures with the Missing Link*. New York: Harper, 1959.

The Robust Australopithecines—*aethiopicus*, *robustus*, and *boisei*

Three robust australopithecine species—*aethiopicus*, *robustus*, and *boisei*—stand somewhat apart from the common lineage of gracile australopithecines. These species have a very heavy build despite their small size, relatively long arms, prominent crests on their skulls, very thick jaws, and long, broad, and flat faces. The known robust species are, from geologically old to young, *Australopithecus aethiopicus* (2.5 million years ago) from eastern Africa, *A. robustus* (2.0–1.0 million years ago) from southern Africa, and *A. boisei* (1.8–1.4 million years ago) from eastern Africa. The most robust species of the three is *robustus*. The dentition of the robust australopithecines is suitable for a highly abrasive diet. They had a strictly vegetarian diet in contrast to the gracile australopithecines, who occasionally ate meat. Like all australopithecines, they were small, reaching a height of only 3.6–3.7 feet (1.1–1.4 meters), with a small-sized brain of about 410–545 cubic centimeters. The robust australopithecines were adapted to mixed grassland and woodland environments.

Since the discovery of the Taung child (*Australopithecus africanus*) by Robert Dart in 1924 in Transvaal, hundreds of fossil fragments of similar hominids were found throughout South Africa. They were in the first instance divided into two groups, the robust and the gracile types. The first named robust species is *Australopithecus robustus*. Its fossils come mainly from Swartkrans, Drimolen, and Kromdraai caves, all in South Africa.

Their history starts in 1938, when Robert Broom discovered skull fragments, including five teeth and some skeletal fragments (TM 1517), at Kromdraai cave in South Africa. The very first remains were discovered by Gert Terblanche, a schoolboy, earlier that year. Broom learned from Gert and his family where the fossil teeth came from and collected several specimens himself. Based upon the intermediate features between humans and apes, the remains became known as the “Kromdraai Ape-Man.” Originally, he officially named it *Paranthropus robustus* in 1938, but later the robust types were renamed to *Australopithecus*.

► OLDUVAI GORGE

Located in northern Tanzania, the Olduvai Gorge is known for two significant discoveries regarding human evolution. Olduvai was made famous by anthropologists Louis and Mary Leakey in the late 1930s. However, the region's political turmoil prompted their premature departure; although their initial findings were of the earliest known Paleolithic tools, upon their return in 1959 the Leakeys discovered remains of some of the earliest known hominids.

The tools that the Leakeys discovered date to over two million years in age. In addition to hand axes, the Leakeys discovered Oldowan tools, which are considered the oldest known stone tools. The name “Oldowan” was first used by Louis Leakey to refer to the lowest geological stratum in the find spot of Olduvai Gorge in Tanzania.

In 1960 Mary and her son Jonathan discovered the remains of what they named *Homo habilis*, and in 1972 son Richard Leakey discovered the “Turkana Boy,” another *Homo habilis* specimen. Both date to about two million years old. *Homo habilis* was a controversial find but is now accepted as the first member of the genus *Homo*. The term *habilis* was applicable because of their use and creation of tools. Although there is still controversy about the Leakeys’ findings in relation to human evolution, many agree that the Olduvai Gorge is significant for learning about early life and development.

—Shamika Ann Mitchell



Olduvai Gorge in northern Tanzania, where remains of some of the earliest known hominids were discovered. (William Warby)

Later, a skull (SK 48), probably of an adult female, was discovered at the same Swartkrans cave in 1950. Of the same geological age is an almost complete skull and lower jaw (DNH 7) of another female, nicknamed “Eurydice.” It is one of the most complete hominid skulls found to date. The remains were discovered in 1994 at the Drimolen cave in South Africa. Nearby, a lower jaw (DNH 8) of a male of the same species was found. Not surprisingly, he became known as “Orpheus.”

The second discovered robust species is *Australopithecus boisei*. A male skull (OH 5) was discovered in July 1959 at Olduvai Gorge, Tanzania, by Mary Leakey. The skull is almost complete and was nicknamed the “Nutcracker Man” because of its robust dentition. Originally, Mary

and Louis Leakey described it as *Zinjanthropus boisei*, but they later referred to the species as being of the genus *Australopithecus*.

More *Australopithecus boisei* fossils were found at Lake Turkana, Kenya, including an intact skull (KNM-ER 406) from the eastern side of the lake. Ten years later, a complete skull (KNM-ER 406), but without teeth, was found by Richard Leakey near Lake Turkana in Kenya. A year later, he found another skull (KNM-ER 732) in the neighborhood. The skull is similar to that of the “Nutcracker Man” (OH 5) but is smaller and lacks the prominent sagittal crest at the top of the skull. Based upon its smaller size and less massive look, most scientists believe this find to be a female’s skull. A geologically much younger specimen was discovered in 1993 by A. Amzaye

at Konso in Ethiopia. It is a partial skull with lower jaw (KGA 10-525), which differs in some anatomical aspects from the geologically older specimens. Dated to 1.4 million years ago, it is the last robust specimen from eastern Africa.

The most recently discovered robust australopithecine is *Australopithecus aethiopicus*. In 1985, Alan Walker found an almost complete skull (KNM-WT 17000) at the west side of Lake Turkana in Tanzania. The skull is known as the “Black Skull” because of its black color, which is caused by manganese in the soil in which it was deposited. With its estimated age of 2.5 million years, the skull is geologically the oldest robust australopithecine. The brain size of about 410 cubic centimeters is remarkably small, and the skull shows primitive as well as derived traits. The face is very similar to that of *Australopithecus boisei* from the same area, but the rest of the skull is more similar to that of *Australopithecus afarensis*. Originally, Walker and team assigned the “Black Skull” to the geologically younger *Australopithecus boisei*, but later it was honored with a species name of its own, *Australopithecus aethiopicus*, based on significant differences with the other species.

Typical for all robust species are the very large molar teeth and large molarlike premolar teeth combined with small front teeth and canines. The increasing grinding capacity of this dentition fits to the very thick jaws. The massive jaws, well-developed masticatory muscles, and large grinding surface of the molar teeth are specializations to a diet consisting of tough and fibrous plant materials. The most obvious difference between gracile and robust forms is that robust forms have

huge back teeth and small front teeth, whereas the gracile forms have larger front teeth compared to the size of their back teeth.

The ancestor of the robust species is not known. Both *Australopithecus africanus* and the more robust types of *A. afarensis* are suggested, but sufficient evidence is missing. The robust species are not considered ancestral to modern humans but instead constitute a side branch without known descendants. They became extinct around 1 million years ago in South Africa and by 1.4 million years ago in East Africa.

An increasing number of scientists are of the opinion that the three robust species differ too much from the gracile species such that a different genus name is warranted: *Paranthropus*. The genus name was already suggested by 1938 by Robert Bloom for the fossils from Kromdraai Cave but was dismissed later. At present, the earlier view seems to be reestablished.

—Alexandra van der Geer

Bibliography

- Grine, Frederick E., ed. *Evolutionary History of the “Robust” Australopithecines*. New York: Aldine de Gruyter, 1988.
- Henke, W., and I. Tattersall, eds. *Handbook of Paleoanthropology*, Vol. 3, *Phylogeny of Hominids*. Berlin: Springer, 2007.
- Schwartz, J., and H. Tattersall I. *The Human Fossil Record*, Vol. 4, *The Morphology of Early Hominids (Genera Australopithecus, Paranthropus, Orrorin) and Overview*. New York: Wiley-Liss, 2005.
- Walker, A. C, et al. “2.5-Myr *Australopithecus boisei* from West of Lake Turkana, Kenya.” *Nature* 322 (1986): 517–522.

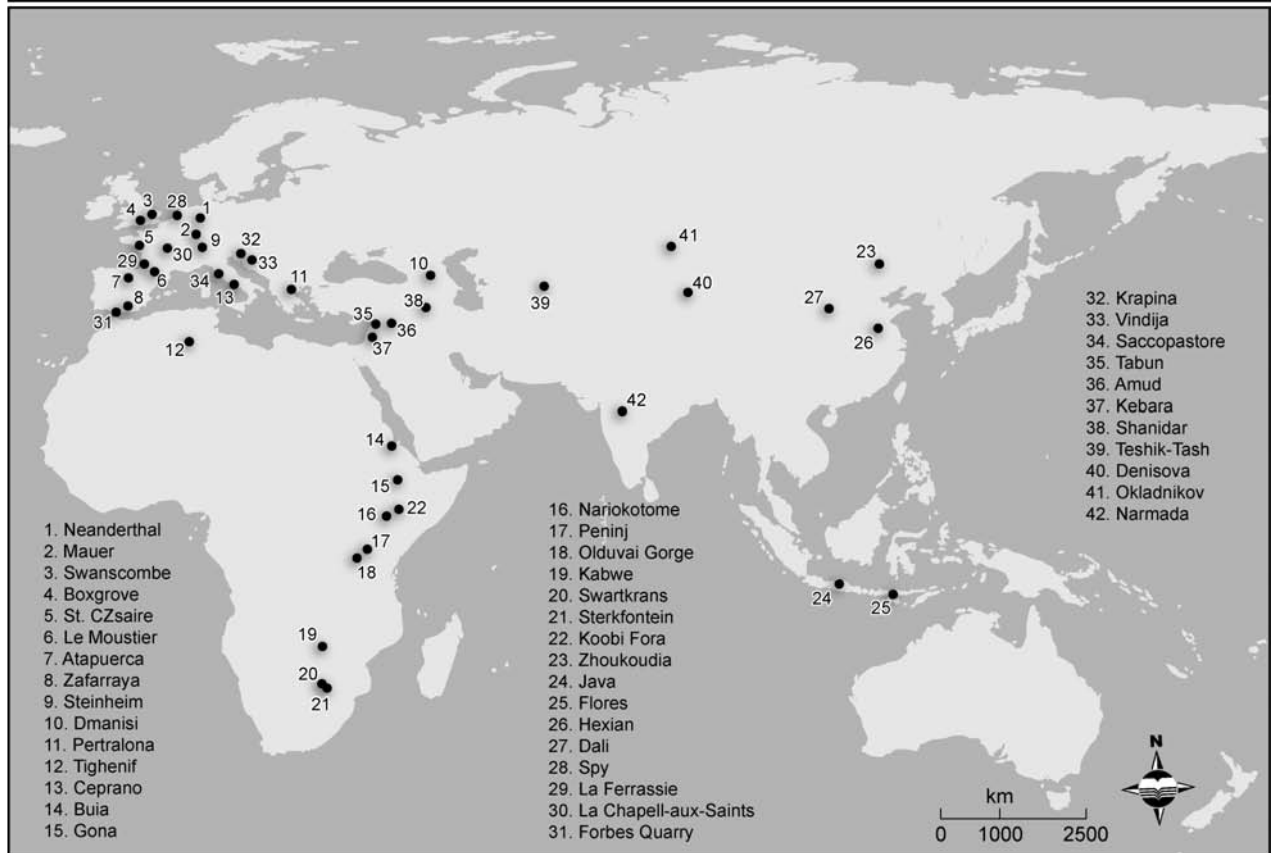
■ Introduction: The Appearance of the Genus *Homo* at Two Million Years Ago

The first members of our genus—*Homo*—appeared in eastern and southern Africa around two million years ago. Various described as *Homo habilis*, *Homo ergaster*, and *Homo sapiens* (known also as *Kenyapithecus rudolfensis*), one of them—most likely *Homo*

ergaster—evolved into later forms of *Homo*, including our own species, *Homo sapiens*.

What makes these species part of our genus and not that of their contemporaries, which include *Australopithecus robustus* and *Australopithecus africanus*? A number of physical

HOMINID FOSSILS FOUND THROUGHOUT THE WORLD



features are important: larger cranial capacity, reduced size of canine teeth when compared to the australopithecines, hands with opposable thumbs, and more human-like body proportions. Although the australopithecines made stone tools generally associated with the Olduvan industry, *Homo habilis* made more complex, stone tools, suggesting an increasing reliance upon cultural practices to manipulate the environment and obtain food.

Although it is difficult to define with certainty the diet of these early members of our genus, it has been hypothesized that their diet had a much larger proportion of meat and fat than did either their ancestors or contemporaries. The presence of animal bones with cut marks at sites thought to have been occupied by our ancestors supports this inference, at least indirectly. It is not known at present if our ancestors hunted game or scavenged meat from animals killed by other predators.

However, given that many of our closest primate relatives hunt occasionally, it is likely that our ancestors at this time did as well.

Such relatively simple technologies and inferred cultural practices became more complex around 1.5 million years ago. Acheulian stone tool technology, with its characteristic hand ax forms, became more common, and our genus spread across much of eastern and southern Africa. This in turn set the stage for the appearance of *Homo erectus*, the first of our genus to leave Africa and migrate into much of South and Southeast Asia.

—Mark Aldenderfer

Bibliography

- Klien, R. *The Human Career*. 3rd ed. Chicago: University of Chicago Press, 2009.
Scarre, C., ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2009.

African Climate at Two Million Years Ago

The African continent contains a lengthy and dynamic history of environmental and geological change, often in spatial association with abundant evidence of human evolution. At the same time, many geographic zones such as the Serengeti Plains and the Sahara have changed little since their ecological development millions of years ago. The primary evidence for climatic change comes from the well-studied Pliocene-Pleistocene paleoanthropological sites that have yielded stone tools, hominin fossils, and vertebrate and invertebrate fossil material. This data predominantly comes from the East African Rift Valley and is supplemented by other environmental markers such as vertebrate faunal assemblages, pollen and phytoliths, sedimentary isotopic levels, deep-sea cores off of various African coasts, cave deposits, and numerous sedimentary sources throughout the continent. One of the most significant periods in human evolution was approximately two million years ago in East and South Africa, marking the time immediately before the evolution of *Homo erectus* and also a time when a member of the genus *Homo* migrated from Africa into Eurasia for the first time. Most importantly, this was the point when the Pliocene period, which began at about 5 million years ago, was about to end and the Pleistocene epoch was about to commence (ca. 1.8 million years ago, or the Plio-Pleistocene boundary).

About two million years ago East Africa and other regions in the continent witnessed radical changes in temperature, vegetation, fauna, topography, and drainage, all directly or indirectly linked with each other. The climate had already begun to become periodically cooler and drier by about 2.8 million years ago, and this trend continued in Africa and globally until the end of the Pliocene or approximately 1.8 million years ago. These oscillating cycles were a direct outcome of the expansion of high-latitude ice sheets that also led to stronger winds and an increasing but gradual transformation of some rain forest or woodland areas (i.e., closed canopy) into grasslands or open savanna environments. Grassland environments also played a major role in early

human evolution and ecological adaptations and dispersals into other areas. The expansion of grasslands is reflected in the phytolith evidence from stratified marine records correlated with the cooler intervals. This is further supported through stable isotopic analyses of pedogenic carbonates from well-preserved terrestrial sequences in the Olduvai and Turkana basins. In West Africa the temperature had dropped 3.5 to 10 degrees Fahrenheit (2 to 6 degrees Celsius) and in East Africa it had dropped 3.5 to 7 degrees Fahrenheit (2 to 4 degrees Celsius). Arid environments dominated the African continent (including present-day subtropical West Africa), in contrast to the humid phases prior to 2.5 million years and after 1.9 million years ago. Prior to 2.8 million years ago African climatic periodicity was at 23,000 to 19,000 intervals; between 2.8 million and 1.0 million years ago this variance increased up to a periodicity of about 41,000 as reflected in the eolian cycles detected in the marine record. This was a direct influence of remote forcing by cold glacial North Atlantic sea-surface temperatures. Overall, African climates were equally governed by intermittent volcanic and tectonic activity and the intensification of seasonal monsoon regimes.

—Parth Chauhan

Bibliography

- De Menocal, P. B. "African Climate Change and Faunal Evolution during the Pliocene-Pleistocene." *Earth and Planetary Science Letters—Frontiers* 6976 (2004): 1-22.
- Vrba, E. S., et al., eds. *Paleoclimate and Evolution, with Emphasis on Human Origins*. New Haven, CT: Yale University Press, 1996.
- Williams, M. A. J., et al. *Quaternary Environments*. 2nd ed. London: Hodder Arnold, 1998.

Homo habilis—One Species or Two?

Homo habilis fossils were first identified as such by Louis Leakey in the early 1960s. The 1.9 million-1.8 million-year-old assemblage from Olduvai Gorge included upper and lower jaw fragments, skull pieces, and leg, hand, and foot bones. The teeth in the upper and lower jaws were more similar to those of humans than to



Discovered in the early 1970s at contemporaneous locations at Koobi Fora, Kenya, these skulls (left: KNM-ER 1813, right: KNM-ER 1470) typify the diversity of shape in early *Homo*. (The Natural History Museum, London/The Image Works)

the australopithecines, since the teeth were larger in the front and smaller at the back. The skull pieces lacked the bony crests typical for the australopithecines, were thinner, and reflected a larger brained hominid. Although not fully accepted at that time, most scholars now recognize these and similar fossils as belonging to early *Homo*. The contemporary 2 million–1.6 million-year-old fossil skull KNM-ER 1470, discovered at Koobi Fora by Richard Leakey several years later, was also classified as *Homo habilis*, though it revealed several cranial differences. The skull was much larger, and its jaws had australopithecine sized teeth. As more hominid fossils were collected, including KNM-ER 1813 from Koobi Fora, it became clear that two contemporaneous species lived in Africa at that time: *Homo habilis* and *Homo rudolfensis*. Based on the dates assigned to the fossil specimens, *Homo rudolfensis* is the oldest known species of *Homo*, perhaps joined by *Homo habilis* around two million years ago. *Homo habilis* fossils, such as KNM-ER 1813, 1805, 1501, and 1502 from East Turkana and five from Olduvai Gorge (OH 7, 13, 16, 24, and 62), are smaller brained, with an average endocranial capacity of about 630 cubic centimeters (cc). Their teeth are smaller and closer in size to later hominids. KNM-ER 1470, 1590, 3732, 1801, and 1802 and other *Homo rudolfensis* specimens, on the other hand, have larger cranial capacities, aver-

aging 750 cc, and larger teeth that are similar to those of the australopithecines. These fossils have long faces, are broad across the eye sockets, and are flattened below the nose, when compared to the short-faced *Homo habilis* skulls, which have a narrow space between the orbits and are more prognathic—that is, a forward-thrusting face—below the nose.

The postcranial elements also reveal differences between the two species. The arms of *Homo habilis* are long, which is a characteristic of the australopithecines, as are the curved finger bones. The early *Homo* species was relatively small in general, as was assessed by a group of 1.8 million-year-old fossils discovered at Olduvai Gorge in 1986. The teeth, fragments from the right arm, skull, and both legs are collectively known as OH 62 and belong to a single female individual. She was small, only 3.6 feet (109.73 centimeters) tall, just as *Australopithecus afarensis* was 1 million years earlier. Her long arms compared to her legs suggest that the tree-climbing ability of the australopithecines was retained. Alternatively, several large *Homo rudolfensis* femurs (upper leg bones) suggest a more humanlike skeleton, and its larger overall size distinguishes it from the australopithecines.

Dividing the fossil assemblage into two separate early *Homo* species is challenging, however. The total number of specimens is very small even before grouping them, and many of the bones lack species-specific attributes. Moreover, there are only eight skulls or partial skulls on which cranial capacity can be calculated. In fact, some scholars suggest that the fossil differences may reflect sexual dimorphism rather than two distinct species, whereby the larger robust specimens belong to the males and the smaller gracile (graceful, slender) pieces are from females.

Assuming that the fossil assemblage represents two separate species, the relationships between them, the earlier australopithecines, and the later *Homo ergaster* fossils remain unclear. *Homo habilis* fossils seem less humanlike than *Homo rudolfensis* specimens, but the large teeth and robust jaws of the latter species are also australopithecine-like. Which of these species, if either, is the ancestor to modern humans remains a matter of dispute.

—Shawn Bubel

THE HAND OF *HABILIS*

The name *Homo habilis*, popularly nicknamed “handy man,” was given in 1964 to an early human ancestor who was believed to be the producer of the stone flakes found at Olduvai, Tanzania. The shape of the hand was considered closer to that of *Homo* than to that of *Australopithecus* and apt for deliberately making tools. The type specimen is OH 7 from Olduvai, the fossil remains of a 12-year-old boy dated to about 1.75 million years ago. Only a lower jaw complete with teeth, an isolated upper cheek tooth, skull fragments, and about 20 fragments of his left hand were preserved. The hand bones show anatomical features indicating an ability to manipulate objects with precision. One of these features is a fully opposable thumb. However, fine precision grip, as is typical for modern humans, had not yet evolved because the wrist bones of OH 7 most resemble those of the African great apes. The tools ascribed to *Homo habilis*, stone

flakes and crude chopping tools, are very primitive, known as the Olduvian industry. They were used in scavenging, scraping meat from carrion, and not for sophisticated hunting as was originally believed. The somewhat more advanced hand of *Homo habilis* likely gave this species an advantage over the more primitive australopithecines in a changing environment.

—Alexandra van der Geer

Bibliography

- Leakey, L. S. B., P. V. Tobias, and J. R. Napier. “A New Species of Genus *Homo* from Olduvai Gorge.” *Nature* 202 (1964): 7–9.
- Napier, J. “Fossil Hand Bones from Olduvai Gorge.” *Nature* 196 (1962): 400–411.
- Tocheri M. W., et al. “The Evolutionary History of the Hominin Hand since the Last Common Ancestor of *Pan* and *Homo*.” *Journal of Anatomy* 212 (2008): 544–562.

Bibliography

- Johanson, D., G. Maso, G. Eck, et al. “New Partial Skeleton of *Homo habilis* from Olduvai Gorge, Tanzania.” *Nature* 327 (1987): 205–209.
- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Stringer, C., and R. Andrews. *The Complete World of Human Evolution*. New York: Thames and Hudson, 2005.

Introduction: Out of Africa—*Homo ergaster* and *Homo erectus*

The first hominins or humans found outside of Africa belong to the species *Homo ergaster* and/or *Homo erectus*. These forms are often distinguished on geographic location or on anatomical features. While they are similar in their postcranial bones, the skull differs significantly. Asian *Homo erectus* fossils have an angular skull with a ridge extending from the metopic suture (in the center of the forehead) up to the sagittal suture (on the top of the skull). Combined with flattened parietal bones (the “walls” of the skull), this gives the

skull a gabled appearance. Some African fossils of similar age have a rounder skull, more like the later species *Homo heidelbergensis* (and modern *Homo sapiens*). But these members of *Homo ergaster* share a similar cranial volume (ranging from 750 to 1225 cubic centimeters) with the Asian *Homo erectus*. While the oldest members of this species date to around 1.8 million years ago in Africa, there are a number of African specimens that are less than 1 million years old (for example, Olduvai Hominid 9 and “Daka” from the Middle Awash in Ethiopia).

These younger ones look more like classic Asian *Homo erectus* skulls. The easiest explanation is that they all belong to a single variable species, *Homo erectus*.

The oldest members of this species come from a number of localities in East Africa. The most complete is the Nariokotome skeleton from the west side of Lake Turkana in northern Kenya. Dated to around 1.6 million years ago, it is composed of most of the body of a teenage individual. What was surprising is the stature; this individual would have been around 6.5 feet (2 meters) tall as an adult. Skulls of similar form come from the east side of Lake Turkana as well as from Olduvai Gorge. In North Africa, the same hominins are present at a number of sites in Morocco and at Ternifine (or Tighenif) in Algeria. In most locations, they are associated with Acheulean artifacts or with core and flake tool assemblages.

The first dispersal of humans out of Africa must have occurred by 1.7 million years ago. That is because of their presence at the site of Dmanisi in Georgia (in the Caucasus). Over the last two decades, a number of skulls, mandibles, and most recently postcranial bones representing most of the body have been recovered from early Pleistocene deposits under a medieval castle at Dmanisi. They are associated with pebble tools and flakes as well as with fossil animal bones.

The first place that *Homo erectus* was discovered was on the island of Java in Indonesia. In the 1890s Eugene Dubois, a medical doctor from the Netherlands, recovered a number of fossil animal bones and some human remains from the site of Trinil on the Solo River. The initial finds were a small skull cap and a modern-looking femur. It was the upright posture of the femur that led Dubois to name these specimens *Pithecanthropus erectus*, later changed to *Homo erectus*. The exact age of these fossils is not clear. Later on, others were found at different localities along the Solo River. While they are likely to be early Pleistocene, their exact age is uncertain.

Similar fossils began being found in China starting in the 1920s. The most important Chinese site has been Zhoukoudian, or the “Peking Man” site, on the edge of modern Beijing. (Note that the fossils are still referred to as “Peking Man” although the name for the capital of China became

Beijing, using the Pinyin orthography.) As is the case at most Asian *Homo erectus* sites, the stone artifacts that these people made were cores and flakes, not the bifaces of Acheulean people. The oldest deposits at Zhoukoudian have been recently redated to around 700,000 years old.

So when did the first humans leave Africa? It must be by 1.7 million years ago in order to get their descendants to Dmanisi and beyond. Slightly before this time, humans had achieved a modern body form. Various researchers have suggested that key changes in social behavior and diet have occurred by this time. These would involve living in larger social groups, increasing mobility over a larger territory or range, and the reliance on meat in the diet. As brain size increased, babies would have to have been born more and more immature. Therefore, there needed to be more parental investment with offspring. While some of these innovations are thought to be associated with the appearance of Acheulean technology, it is clear that early humans left Africa well before the Acheulean was invented.

—*Pamela R. Willoughby*

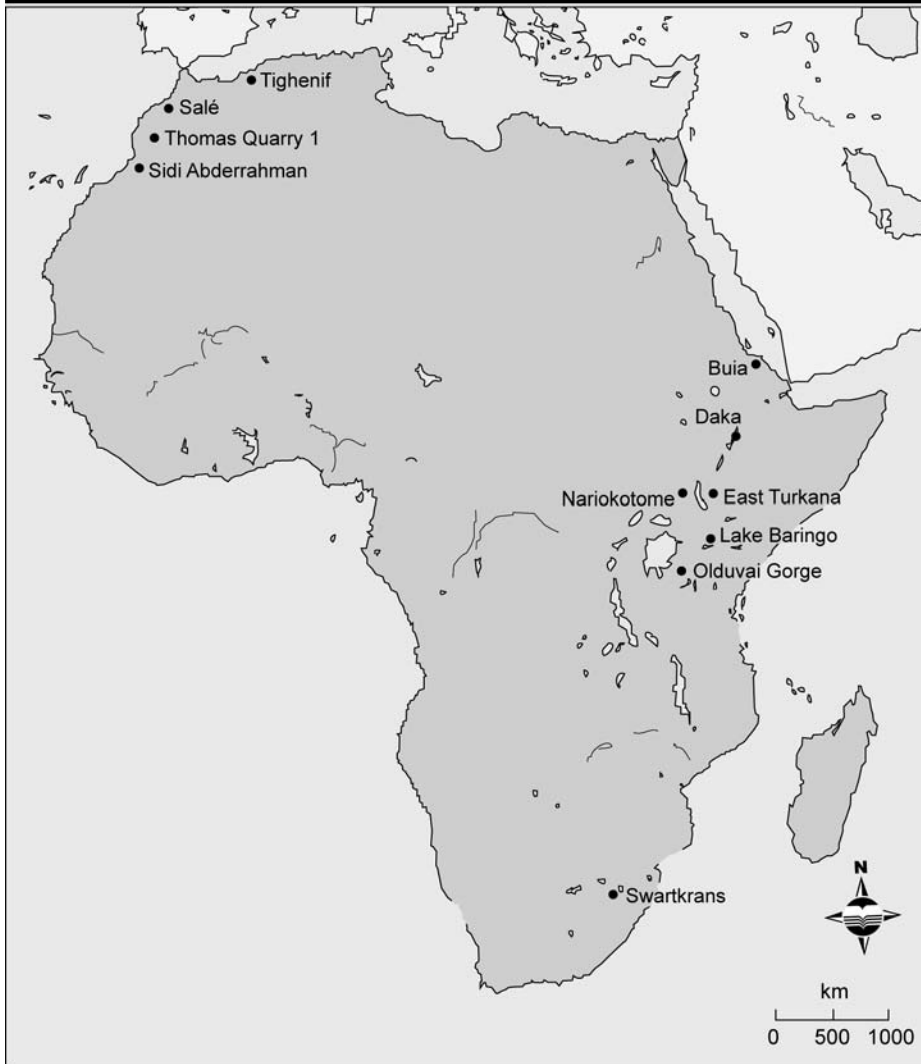
Bibliography

- Klien, R. *The Human Career*. 3rd ed. Chicago: University of Chicago Press, 2009.
- Scarre, C., ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2009.

Africa—*Homo ergaster*

Homo ergaster is a species defined by Groves and Mazak using a single mandible from Koobi Fora, the east side of Lake Turkana, Kenya (KNMER 992). It was described as being more like anatomically modern *Homo sapiens* than its contemporary, *Homo erectus* in Java and China, and it could have been the direct ancestor of *Homo sapiens* in Africa. If this is so, there would have been two parallel lines in later human evolution: one in Africa and one in East Asia. For other researchers, *Homo ergaster* is just a variety of *Homo erectus*. *Homo ergaster* ranges in time from 1.8 million to around 500,000 years ago, while the Asian species can continue up to around 250,000 years ago (at Zhoukoudian in China, for example). Regardless of this debate, *Homo ergaster*/*Homo erectus* is the earliest

LOCATIONS OF AFRICAN SITES WHICH HAVE YIELDED FOSSIL REMAINS OF *HOMO ERGASTER*



hominin with a body size within the modern range and the first found outside of the continent of Africa. For paleoanthropologist Bernard Wood, it is even the oldest species within the genus *Homo*. The tools produced by *Homo ergaster* were either pebble tools or Acheulean bifaces. Neither was a great leap forward in cultural evolution. In fact, Acheulean tools look remarkably similar for thousands of years.

Classic Asian *Homo erectus* skulls are angular, with a brain case ranging from 775 to 1,225 cubic centimeters. The frontal bone has a keel or prominent ridge along the metopic suture. It extends into a midsagittal keel between the parietal

bones. Early *Homo ergaster* specimens in Africa, on the other hand, have rounder skulls. While these are similar in size to Asian *Homo erectus*, they are shaped like those of *Homo sapiens*. Asian forms have quite thick cranial and postcranial bones. These features are variably present in Africa. But both share facial features such as a continuous supraorbital torus, a large projecting face and teeth, and no chin in the mandible. The postcrania are similar in form and size to those of modern humans. But the femur or thigh bone is platymetric or flattened in cross-section.

In Africa, a number of sites contain fossils of *Homo ergaster*. Most of these are single finds,

associated with pebble tools or Acheulean bifaces. In Morocco, the site of Thomas Quarry 1 produced a mandible and cranial vault (top of the skull), while nearby Sidi Abderrahman produced another mandible and an isolated tooth. At Salé, there is a partial vault and face. At Tighenif (formerly Ternifine), in Algeria, three mandibles, one parietal bone, and some teeth were recovered along with Acheulean tools. A single skull that is about one million years old comes from Buia in Eritrea; it is described as having a mixture of traits of *Homo ergaster* and *Homo heidelbergensis*. From the site of Dakaniyo or Daka in the Bouri Formation of the Middle Awash, there was a skull, three femora, and a proximal tibia fragment, also about one million years old. At the Acheulean site of Konso-Gardula, there is a mandible fragment. The most spectacular find has come from Nariokotome, West Turkana, in northern Kenya. Here researchers recovered an almost complete skeleton of a teenager. About 1.6 million years old, it was about 5.25 feet (160 centimeters) tall with skinny tropical body proportions. On the east side of Lake Turkana, in addition to the KNM-ER 992 mandible, two skulls were recovered (KNM-ER 3373 and 3883). These are around 1.8 million to 1.7 million years old and show the rounded skull with thin cranial bones, which is definitive of *Homo ergaster*. Farther south in the Kapthurin Formation of Lake Baringo, researchers have recovered some hominin mandibles and postcrania. In southern Kenya, the Acheulean site of Olorgesailie has yielded a single frontal bone. At Olduvai Gorge in northern Tanzania, a number of *Homo ergaster* specimens have been recovered over the years, including the OH 9 skull, which dates to about 1.2 million years ago. In South Africa, the early site of Swartkrans has produced a mandible that is assigned to either *Homo habilis* or *Homo ergaster*.

Homo ergaster/Homo erectus is the first hominin who ventured out of Africa into Asia, sometime between 1.8 million and 1.7 million years ago. The focus of current research on this species is on this Out of Africa 1 dispersal. What was different about *Homo ergaster* that enabled some of them to spread out of Africa? Was their adaptation significantly different from

that of earlier African hominins? What was different about this species that enabled some of them to widen their range? Their bigger body and brain size and reduced gut size (relative to other living primates) may offer a clue. Aiello and Wheeler created the expensive tissue hypothesis. A large brain costs a body in important ways. Aiello and Wheeler proposed that changes in the brain promoted a reliance on meat protein in a much bigger way and possibly to hunting. This might have led to an increased life span. Kristin Hawkes took this a step further and developed what is called the grandmother effect. Why would human females have developed a long postreproductive life? Most other primates continue to have offspring right up until they die. Hawkes suggested that it would be advantageous to have grandmothers (and grandfathers?) around to look after the offspring while the prime adults were involved in food acquisition. As populations moved into larger ranges, this might have made the difference in survival.

The oldest fossil humans outside of Africa come from the remarkable site of Dmanisi in Georgia. Dated around 1.7 to 1.8 million years ago, Dmanisi has yielded dozens of fossil human specimens as well as pebble tools. One recent skull was extremely small, in the range of *Homo habilis*. How big a brain did humans really need to disperse out of Africa? A more recent discovery is a skull and mandible belonging to an individual who lost his or her teeth while still living. Was the survival of this individual proof of some kind of social welfare system this far back in time? If so, the Out of Africa 1 migration was carried out by humans who were markedly different from earlier African species.

—Pamela R. Willoughby

Bibliography

- Aiello, L., and P. Wheeler. "The Expensive-Tissue Hypothesis: The Brain and the Digestive System in Human and Primate Evolution." *Current Anthropology* 16(2) (1995): 199–221.
- Conroy, Glenn C. *Reconstructing Human Origins: A Modern Synthesis*. 2nd ed. New York: Norton, 2005.
- Hawkes, K. "Human Longevity: The Grandmother Effect." *Nature* 428(6979) (2004): 128–129.

Rightmire, G. Philip. *The Evolution of Homo erectus*. Cambridge: Cambridge University Press, 1990.

Willoughby, Pamela R. *The Evolution of Modern Humans in Africa: A Comprehensive Guide*. Lanham, MD: AltaMira, 2007.

Changing Climate after Two Million Years Ago

About 1.8 million years ago, the Quaternary period comprised two epochs: the Pleistocene (ca. 1.8 million years ago to 10,000 years ago) and the Holocene (ca. 10,000 years ago to the present day). The Pleistocene era is further divided into three phases: Lower/Early (1.8 million years ago to 780,000 years ago), Middle (780,000 years ago to 127,000 years ago), and Upper/Late (127,000 years ago to 10,000 years ago). The last two million years resulted in the evolution of several hominin species, namely *Homo erectus*, *H. neanderthalensis*, archaic *H. sapiens*, and humans (*Homo sapiens*). Soon after two million years ago, a member of the genus *Homo* migrated into Eurasia from Africa for the first time, and approximately 1.7 million years ago in East Africa there was a sudden technological shift from the Olduvan to the more sophisticated Acheulian techno-complex, generally associated with the speciation of *H. erectus*.

In the early part of the twentieth century A. Penck and E. Brückner proposed four major glacial periods or Pleistocene ice ages in Europe, later attempting to apply them globally. However, studies on deep-sea cores over the last several decades confirmed that earth had a much greater number of cold-warm phases than previously thought. Observations on this extensive marine sedimentary record, comprised of calcium carbonate skeletons of fossil foraminifera, resulted in a framework representing various oxygen isotope stages (OIS) and multiple but magnetic polarity reversals. Also in the early twentieth century, M. Milankovitch first proposed that primary attributes of earth's astronomical position in relation to the sun (or orbital forcing) vary cyclically over time and on different wavelengths, a widely accepted concept by the 1970s. The effects from these variable cycles, however, were and are geographically divergent,

and the respective periodicity or general durations of cold-warm and wet-dry phases also varied globally. For example, northern America and northern Europe witnessed the greatest effects of these cyclic glacial advances and retreats than other geographic zones.

The most intense cold peaks during the Plio-Pleistocene took place at 2.5 million, 1.8 million, 0.9 million, and 0.4 million years ago, all having major impacts on the terrestrial environment. The time between 75,000 to 12,000 years ago was cool and dry though interrupted by several interstadials, and the Last Glacial Maximum (LGM) was at its peak about 20,000 years ago. On the other hand, the Holocene, beginning at about 10,000 years ago, was essentially characterized by a global warming trend synonymous with the large-scale melting of glaciers. The Holocene is divided into three broad climatic stages: anathermal (cooler and wetter than today), hypsithermal (warmer and dryer than today), and medithermal (again cool and wet). In recent times, this significant increase in annual average temperatures has been thought to be an effect of both natural and anthropogenic factors. These periodic climatic oscillations and associated glacial cycles over the last two million years are also reflected in the global fossil pollen and faunal records, fluvial terrace systems, eustatic sea-level fluctuations, loess accumulation, and gradual expansion of arid zones, among other evidence.

—Parth Chauhan

Bibliography

- Hays, J. D., J. Imbrie, and N. J. Shackleton. "Variations in the Earth's Orbit: Pacemaker of the Ice Ages." *Science* 194 (1976): 1121-1132.
- Raymo, E., L. E. Lisiecki, and K. H. Nisancioglu. "Plio-Pleistocene Ice Volume, Antarctic Climate, and the Global $\delta^{18}\text{O}$ Record." *Science* 313(5786) (2006): 492-495.
- Shackleton, N. J. "The Stratigraphic Record of Deep-Sea Cores and Its Implications for the Assessment of Glacials, Interglacials, Stadials and Interstadials in the Mid-Pleistocene." In *After the Australopithecines*, edited by K. W. Butzer and G. L. Isaac. Berlin: Mouton, 1975.
- Williams, M. A. J., et al. *Quaternary Environments*. 2nd ed. London: Hodder Arnold, 1998.

Homo erectus in Asia

Homo erectus is the first member of our genus in Asia. Fossil remains come from China, northern Vietnam, Java (Indonesia), and the Republic of Georgia and are dated between 1.2 million and 200,000 years ago. Initially, they were described with names such as “Peking Man” (*Sinanthropus*) and “Java Man” (*Pithecanthropus*), but now they are all called *Homo erectus*. *Homo erectus* had a robust and low skull with a robust and straight brow ridge and a protuberance on the back of the skull. The lower jaw bore no chin, and the face was protruding forward (prognathism), though not as much as in australopithecines. The brain size ranged between about 700 cubic centimeters (Georgia) to over 1,200 cubic centimeters (China, Java). Seen from above, the vault of the Asian skulls is more strongly pear-shaped compared to the African skulls. *Homo erectus* inhabited more open environments, such as open woodlands and savannas.

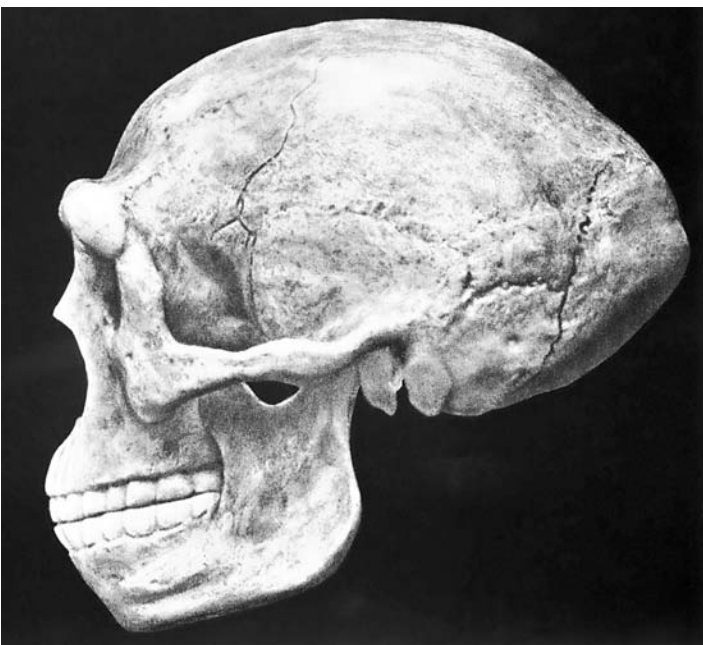
The Indonesian fossils span almost the entire Pleistocene, ranging in age between 1.2 million years ago to as recent as 200,000 years ago, with a local relict population on Flores until 12,000 years

ago. The earliest Javanese *Homo erectus* fossil is from Mojokerto (Perning), coinciding with a land-bridge connection with the mainland. The latest Javan *H. erectus* is found at Ngandong. The Chinese fossils range between 830,000 and 240,000 years ago; the Vietnamese fossils fall within this range. The earliest Chinese evidence comes from Yunxian. Recent claims suggest that remains of an early *Homo* from Longgupo are much older and date to as early as 1.9 million years ago. The latest Chinese *H. erectus* comes from Hexian. The northern Vietnamese remains come only from Tham Khuyen, dated to 500,000 years ago. The fossils from Georgia, the westernmost Asian *H. erectus*, also come from one site (Dmanisi) only. The fossils were found in a layer with animals that lived between 1.8 million and 900,000 years ago.

Homo erectus was discovered during fieldwork in 1893 by the Dutch medical officer Eugène Dubois (1858–1940). On the banks of the Solo River near Trinil in East Java (Indonesia), he found an upper wisdom tooth and a skullcap. In size, they fell in between apes and humans. Initially, he ascribed his transitional ape-man, or “Java Man,” to *Anthropopithecus*, the old name for chimpanzees, literally man-ape. The thigh bone that he found a year later made him realize that his species walked upright and was more human than ape. Dubois made public his find in 1894 as the missing link between humans and apes. Appropriately, he named the fossil *Pithecanthropus erectus*, which means the “upright-walking ape-man.”

Soon after his publication, a debate started about the real nature of this *Pithecanthropus*. Key European scientists, including Richard Lydekker, Daniel John Cunningham, Sir Arthur Keith, and Sir William Turner, did not agree with Dubois. The fossils were considered to belong either to an ape or to a human, in the latter case a primitive one or even an idiot. Only American scientists, including Othniel Charles Marsh, reacted enthusiastically. Similar reactions would repeat themselves with every new discovery of a human ancestor.

A few years after Dubois’ announcement, Gustav Schwalbe compared the fossils from Java with modern humans, apes, and Neanderthals. For him, Neanderthals were the first humans, hence their name of *Homo primigenius*. He



Reconstructed skull of *Sinanthropus*, also known as Peking Man, first found near Beijing, China, in the 1920s and dated to roughly 250,000–400,000 years old. (Bettmann/Corbis)

concluded that *Pithecanthropus* should be placed between apes and Neanderthals. However, *Homo erectus* belongs to the more human-like species of the hominid lineage and is thus not a true intermediate form between humans and apes, despite Dubois' original designation. *Homo erectus* is not a missing link anymore.

In October 1926, a second trace of *Homo erectus* from Asia was recognized. Two human teeth were discovered by the Swedish paleontologist Carl Wiman among a collection of fossils. The material came from a limestone quarry near the village of Zhoukoudian (formerly Choukoutien), some 31 miles (50 kilometers) southwest of Beijing. The teeth were published under the new name of *Sinanthropus pekinensis*, which means China Man from Peking. It is commonly known as Peking Man, a name given by the American paleontologist Amadeus W. Grabau. Two years later, in November 1928, skull and jaw fragments were excavated, and the next year, in December 1929, Pei Wenzhong found a complete skull. Similarities with the Java Man and the Heidelberg Man were immediately recognized.

The reconstruction of the skull of *Sinanthropus* by Franz Weidenreich and Lucile Swan in 1937 was based upon the remains of several individuals. Unfortunately, the rich Zhoukoudian collection was lost during World War II, and afterward only a reconstructed skullcap was recovered. This cap, as well as casts of the lost skulls and fragments, was included by Ian Tattersall and Gary Sawyer in their reconstruction of the *Sinanthropus* skull in 1996.

The search for an early human at Zhoukoudian was inspired by a fossil human tooth found as far back as 1899 by one K. A. Haberer in an apothecary's shop in Beijing, sold as a "dragon's tooth." The tooth was determined by the German zoologist Max Schlosser as an upper left wisdom tooth of an unknown anthropoid primate. That was the spark that initiated deliberate excavations of dragon bone sites by Johan Gunnar Andersson and the Austrian paleontologist Otto Zdansky in the early twentieth century.

The third early discovery of fossils of *Homo erectus* was made by the Dutch geologist Carel ter Haar in 1931 along the Solo River on Java near the village of Ngandong. The remains of this "Solo Man" were described by Willem Op-

THE ODYSSEY OF THE ZHOUKOU DIEN FOSSILS

Zhoukoudien in China is one of the world's richest locales with fossils of *Homo erectus*. In September 1941 human fossils recovered from the site were due to be transported to the United States to safeguard them against the Japanese invaders. The plan involved a series of transports within Beijing, ending at the U.S. Marine Corps compound from where they would be sent to the port of Chingwangtao to embark USS *President Harrison*. This latter step never took place, as the ship was sunk by the Japanese before arriving at the port. What happened to the fossils is still a mystery, because none of the prevailing theories could be proven. One theory holds that the fossils were taken by marines on a train to Tientsin. The train was stopped by the Japanese, and the boxes became lost. According to another theory, the fossils were brought by the marines to a Swiss warehouse in Chingwangtao to be shipped to the United States. A third view holds that the fossils were taken home by a western sailor. His wife, eager to collect a reward, showed photographs of the fossils but was overwhelmed by unwanted publicity and disappeared from public view.

Unlike the Greek hero Ulysses, the Zhoukoudien fossils never returned home.

—Alexandra van der Geer

penoort (1881–1965) in 1932 as *Javanthropus soloensis* and considered a kind of modern human, based upon the gracile built and the presence of advanced tools. At present, Solo Man from Ngandong is considered the last *Homo erectus*, which lived until 200,000 years ago based upon datings of the associated fauna. The taxonomy and the correct dating of the Ngandong fossils is, however, still under debate, as is the case with so many early human remains.

Only five years later a Javanese fossil collector found the skull of a child some 6.2 miles (10 kilometers) from Mojokerto, between the villages of Pening and Sumbertengu, on February 13, 1936. This Mojokerto Child was described by the German paleontologist G. H. Ralph Von Koenigswald as *Homo modjokertensis* (now *Homo erectus*). Soon after, in the early 1940s, he found unusually large hominid remains at Sangiran. Based on the large size, he erected a new hominid genus for

► HOMO ANTECESSOR AT ATAPUERCA, SPAIN

Homo antecessor is at present the oldest European hominin. They lived 800,000 years ago in northern Spain. The species is based on an upper jaw and a frontal bone (ATD6-69) of a ten-year-old girl. It was found in 1994 by Eudald Carbonell i Roura and Juan Luis Arsuaga Ferreras in the Gran Dolino at Atapuerca. Remains of six more individuals were recovered from the same site and level, all dated to at least 780,000 years old. Traces on some of the bones seem to originate from cannibalistic behavior.

The face of this first European is modern, but the large teeth, low forehead, prominent browridge, and lack of a chin are considered primitive and are reminiscent of *Homo erectus*. The brain size is about 1,000–1,150 cubic centimeters. Based on the primitive traits, many scientists prefer to refer to it as either *Homo erectus* or *Homo heidelbergensis*.

The latter species was widespread throughout Europe between 600,000 and 250,000 years ago and is the ancestor of the Neandertals (*Homo neanderthalensis*). A problematic point is that the species *antecessor* is not based on a full-grown specimen but rather on a juvenile specimen.

Hardly a kilometer away, there is a second site at Atapuerca: Sima de los Huesos. These specimens are Neanderthals, dated to 400,000 years ago, and may represent a second migration into Europe.

—Alexandra van der Geer

Bibliography

Bermúdez de Castro, J. M., et al. “A Hominid from the Lower Pleistocene of Atapuerca, Spain: Possible Ancestor to Neandertals and Modern Humans.” *Science* 276 (1997): 1392–1395.

them: *Meganthropus*. At present, this genus, too, is regarded as *Homo erectus*.

The name *Pithecanthropus*, given by Dubois to the Java Man, was not entirely new to science. In 1874 Ernst Haeckel already published a human phylogeny in his *Systematische Phylogenie der Wirbeltiere (Vertebrata)* in which he included two extinct intermediate human species between modern humans and our supposed common ancestor with the apes. One of these two intermediates was *Pithecanthropus alalus*, meaning the speechless ape-man. It was precisely this “missing link” that Dubois hoped to find. Haeckel had proposed the submerged tropical continent Lemuria in the Indian Ocean as a place of origin. Thus, on October 29, 1887, Dubois gave up his university job to leave for the East Indies, present-day Indonesia. The East Indies had his special interest because they were not only tropical but also housed gibbons (a species of ape), which he knew were closely related to humans. Java drew his attention after the finding of the so-called Wajak skull (now *Homo sapiens*) near Tulangagung in 1888.

Based on a growing number of hominid fossils from Java and China and observed similarities between them, Von Koeningswald and Weidenreich concluded in 1939 that *Pithecanthropus*

and *Sinanthropus* should belong to one and the same species, for which they proposed the name *Homo erectus*. Later, the Javanese *Meganthropus*, the South African *Telanthropus*, the North African *Atlantropus*, and finally *Homo leakeyi* from Tanzania underwent a similar fate. African *Homo ergaster* and Georgian *Homo georgicus* are often included too. *Homo erectus* in the broad sense thus became a widely dispersed species. At present, two different views prevail concerning the taxonomic status of *Homo erectus*. One holds that there is one species only (the “lumpers”), while the other holds that there were up to a dozen contemporaneous *Homo* species during the Pleistocene (the “splitters”).

—Alexandra van der Geer

Bibliography

Boaz, Noel T., and Russell L. Ciochon. *Dragon Bones: An Ice-Age Saga of Homo Erectus*. New York: Oxford University Press, 2004.

Shipman, Pat. *The Man Who Found the Missing Link: The Extraordinary Life of Eugene Dubois*. London: Weidenfeld and Nicolson, 2001.

Van Oosterzee, Penny. *Dragon Bones: The Story of Peking Man*. Cambridge, MA: Perseus, 2000.

Walker, Alan, and Pat Shipman. *The Wisdom of Bones: In Search of Human Origins*. London: Weidenfeld and Nicolson, 1996.

■ Introduction: The Appearance of Modern Humans

Following the appearance of our earliest ancestors in Africa more than two million years ago and the spread of *Homo erectus* across Africa and into Asia, the evolutionary history of our species becomes somewhat clearer. More fossil finds have been recovered from different parts of the world, and the larger sample of finds has made it somewhat easier to get a better picture of our subsequent evolution once our species left its homeland.

However, controversies remain. One of the most basic is concerned with the debate between supporters of the “multiregional” model of modern human origins versus those who ascribe to an “out of Africa” model. The former, which now has relatively few supporters, argues that our species, *Homo sapiens*, evolved from regional populations of *Homo erectus*. In contrast, the out of Africa model argues for a second migration of our species from Africa around 200,000 years ago. This movement spread our species into all continents except Antarctica by 15,000 years ago. Scientific opinion strongly supports this model.

What is interesting about this model is that humans moved out of Africa into some rather hostile environments. The great ices ages waxed and waned during much of this movement, and our ancestors had to cope with cold temperatures, limited resources, and difficult travel conditions. During this period, our species did not move into high northern latitudes simply because they were too great a challenge to the limited technologies these peoples carried. In fact, much of Europe was not occupied by *Homo sapiens* until just after 50,000 years ago.

However, a close relative, now extinct—*Homo neanderthalensis*—did in fact move into southern Europe some 300,000 years ago and persisted there until 35,000 years ago. The relationship between *Homo neanderthalensis* and *Homo sapiens* has been debated for more than a century. Early theories suggested that Neanderthals were on a direct line of evolution into *Homo sapiens*, at least in Europe. Yet other theories saw them as distant, somewhat dim, relatives that were very different from us in appearance,

behavior, and, importantly, intelligence. Yet it is now recognized that while Neanderthals were different from us, they were not that different. They survived in a very difficult environment for thousands of years with relatively simple stone tool technologies and primitive clothing. In this sense, they were well adapted to their surroundings until *Homo sapiens* made its appearance in Europe.

Just what led to the extinction of Neanderthals continues to be debated. Some have argued that our species hunted them into extinction whenever they were encountered. Others suggest that Neanderthals were submerged genetically through interbreeding, although there is little trace of their presence in the genes of modern Europeans and peoples in the Middle East, and comparisons of ancient DNA extracted from Neanderthal skeletons with that of modern humans show no evidence of interbreeding.

What seems to have led to the extinction of the Neanderthals are two factors: relatively small initial population size with little growth in numbers over time and competition with humans. This does not suggest that humans intentionally killed Neanderthals, but instead humans, with their more advanced technologies, more sophisticated division of labor, and better communication skills, were better able to compete for resources.

—Mark Aldenderfer

Bibliography

- Gamble, Clive. *Timewalkers: The Prehistory of Global Colonization*. Cambridge: Harvard University Press, 1996.
- Scarre, C., ed. *The Human Past: World Prehistory and the Development of Human Societies*. 2nd ed. London: Thames and Hudson, 2009.

The Multiregional versus the Out of Africa Model

All specialists in human evolution agree that the earliest stages of human evolution took place exclusively in Africa. The first migration out of the continent occurred by 1.8 million years ago. Groups of *Homo erectus* spread into the Middle

East as far north as Dmanisi in Georgia and then spread out to colonize East and Southeast Asia. This process is generally referred to as Out of Africa 1. The oldest fossil remains in Europe are younger and come from two localities at the Sierra de Atapuerca, Spain. At the Gran Dolina, fragmentary human remains about 800,000 years old have been assigned to a new species, *Homo antecessor*. At the Sima del Elefante, or Pit of Elephants, researchers recently reported the discovery of a human jaw dated to 1.3 million years ago. Elsewhere in Europe, the earliest people are *Homo heidelbergensis* and are no more than 500,000 years old. *Homo heidelbergensis* had a brain and body size within the modern range but retained a number of archaic features such as a projecting face, large teeth, and a muscular postcranial skeleton. The best fossil record of *Homo heidelbergensis* comes from the Sima de los Huesos, or Pit of Bones, at Atapuerca where thousands of human bones have been recovered from the bottom of a deep shaft. Interestingly, only a few cave bear bones and a single stone tool (an Acheulean hand ax) accompany them. The fossils are roughly between 400,000 and 200,000 years old and represent the population that gave rise to the Neanderthals.

While few scholars dispute this interpretation of the initial colonization of Europe and Asia, what happened next is the subject of much debate. In Europe, the distinctive Neanderthal anatomy had developed by 200,000 years ago: a short stocky body built to stand extreme stresses and shortened distal limb segments (the radius and ulna of the forearm and the tibia and fibula of the lower leg). Neanderthals typically had long bullet-shaped skulls with an extension out the back, the famous occipital bun. They had low foreheads like *Homo heidelbergensis* and inflated sinuses and puffed-out nasal areas. Most of these features are said to be adaptations for regulating body temperature in an extremely cold, dry glacial environment. Neanderthals were present in Europe until as recently as 26,000 years ago. By then, however, there were anatomically modern *Homo sapiens* living right next door.

This differs significantly from the situation in Africa. There were never any Neanderthals here, only *Homo heidelbergensis* and then modern *Homo sapiens*. When a series of new dating

techniques was developed in the 1980s, it became clear that modern humans had appeared in Africa around 200,000 years ago and had a history almost as long as that of the European Neanderthals. So how were they related to one another? This debate has become increasingly strident as new lines of evidence appear. The new dates for African modern human sites were important, but more and more data was coming from the study of the genetics of living people. Initially, there were two opposing views of the origins of our own species. The traditional view is now referred to as the multiregional model. The other extreme is the Out of Africa 2 or replacement model. But in the ensuing years, more immediate positions have developed.

The multiregional model is also known as the candelabra or continuity model. It is associated with paleontologists such as Alan Thorne and Milford Wolpoff, who generally work on fossil human remains from East and Southeast Asia. But it goes back to Franz Weidenreich's earlier research on the *Homo erectus* fossils from Zhoukoudian, China. Multiregionalists believe that there was only one Out of Africa event, associated with *Homo erectus*. Local populations in Africa, Europe, and Asia evolved gradually from *Homo erectus* into modern humans. But there was sufficient mating and gene flow between different populations so that living people are genetically very similar. For supporters of this model, the outward or phenotypic differences between geographic groups, or races, could go back as far as *Homo erectus*. In addition, there is no need to define species for the stages of *Homo*. The different forms represent grades of humans, a continuous line from the earliest Out of Africa event.

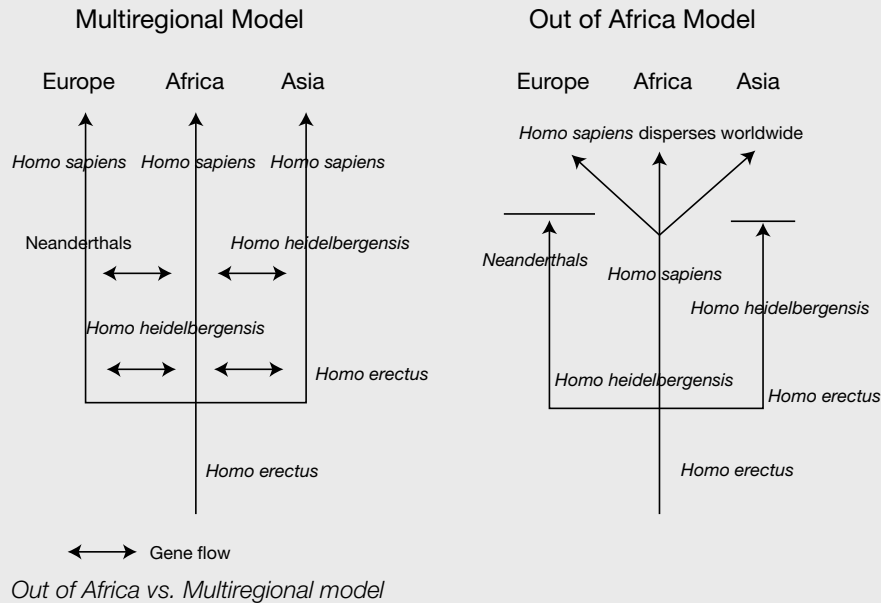
What proof do multiregionalists cite in defense of their model? They describe anatomical traits that are supposed to be specific to different regional populations. For example, East Asians and aboriginal people in the Americas have a high incidence of congenital absence of third molars (wisdom teeth) and commonly have shovel-shaped incisors. These are said to be retentions from the first Asian *Homo erectus*. But it turns out that Neanderthals tend to have shovel-shaped incisors, and so do *Homo heidelbergensis* and modern humans in Africa. They

➤ TWO MODELS OF MODERN HUMAN ORIGINS

The traditional or multiregional model argues that after populations of *Homo erectus* dispersed out of Africa around 1.8 million years ago, they eventually each gave rise directly to modern humans. We still appear to be similar today worldwide because of gene flow between populations. The Out of Africa model agrees that *Homo erectus* was the

first hominid in Eurasia. But its proponents argue that there was a second Out of Africa migration sometime between 60,000 and 40,000 years ago that brought modern humans to Eurasia, where they replaced the indigenous populations.

—Pamela R. Willoughby



also point to Neanderthals who show modern like traits, such as the individuals at Vindika Cave in Croatia. Early modern humans at sites such as Mladeč in the Czech Republic have cranial traits linking them with Neanderthals (a supraorbital torus or shelf of bone above the eyes as well as an occipital hemibun, or bulge). There is also an Upper Paleolithic (Gravettian culture) child burial at Lagar Velho in Portugal that has a combination of Neanderthal and modern traits.

Out of Africa 2 is also known as (complete) replacement or the mitochondrial Eve model. It states that the only continent in which modern humans evolved from earlier humans is Africa. A speciation event occurred in a limited region of Africa, most likely in East Africa, producing a new species, *Homo sapiens*. Much later, descendants of this founder group expanded out of Africa, replacing all other groups in Eurasia. Supporters of this theory, including Christopher

Stringer, believe that human racial differences developed in the last few thousand years.

What proof do replacement supporters offer? The fossil evidence from Africa, along with the new dates, clearly shows the presence of anatomically modern people by 200,000 years ago. The earliest moderns are associated with Middle Paleolithic or Middle Stone Age flake tools, the kinds of things that Neanderthals were making at the same time. But another line of evidence comes from the study of mitochondrial and nuclear DNA in living people. In 1972 Richard Lewontin demonstrated the lack of significant genetic variation in human populations worldwide today. We now know that this reflects our recent common ancestry. The first study of human mitochondrial DNA showed that the greatest diversity was in African populations; all others seemed to be subsets of African variation. Mitochondrial DNA from fossil European Neanderthals

also confirms that they are significantly different from us; they remain our distant cousins and possibly a separate species.

There are more intermediate positions. Gunter Bräuer argues for replacement with hybridization, also referred to as the Afro-European *sapiens* model. This accepts the Out of Africa 2 idea but proposes that modern people retained the ability to mate with local people, producing hybrids. For him, the Vindija Neanderthals, Mladeč moderns, and the Lagar Velho child could all represent hybridization. Fred Smith supports a theory of assimilation. He argues that there were always more Africans living than non-Africans. Gene flow from Africans swamped Eurasians, giving an apparent African origin. A number of other researchers argue for a “mostly out of Africa” scenario. Henry Harpending’s “weak Garden of Eden” model accepts an African origin of modern humans but a much delayed migration out. Some kind of event caused a population bottleneck; this explains the sudden drop in archaeological and fossil sites toward the end of the Middle Stone Age. It was only when populations recovered that they could spread out of their center of origin.

The vast majority of fossil and archaeological data support an African origin of modern *Homo sapiens* sometime by 200,000 years ago. But their descendants do not spread out of the continent until thousands of years later. Why this was the case is the most important question in current archaeological and paleontological research in Africa. Many researchers point to the fact that early modern Africans made and used Middle Paleolithic stone tools, ones that were very similar to those of the European Neanderthals. But when modern humans appeared in Europe for the first time, just before 40,000 years ago, they had developed a series of new technologies and behaviors. These include organic tools (in bone, ivory, and antler), the earliest jewelry and art, and a focus on parallel-sided blade tools instead of flake tools, and there is evidence of increased planning depth in site use and resource acquisition. Put together, these Upper Paleolithic innovations show a real break with earlier people. So why did early African moderns fail to develop any of them? It may be that only the deteriorating climate characteristic of the late glacial period prompted technological change in African

Middle Paleolithic people. Or there could have been something more fundamental. Richard Klein of Stanford University thinks that modern humans developed symbolism and complex language at this time; this in turn prompted innovations and the Out of Africa 2 migration that took modern humans worldwide.

—Pamela R. Willoughby

Bibliography

- Cann, R. L., M. Stoneking, and A. C. Wilson. “Mitochondrial DNA and Human Evolution.” *Nature* 325 (1987): 31–36.
- Klein, R. G. “The Archaeology of Modern Human Origins.” *Evolutionary Anthropology* 1 (1992): 5–14.
- Lewontin, R. “The Apportionment of Human Diversity.” *Evolutionary Biology* 6 (1972): 381–398.
- Stringer, C. B. “Modern Human Origins: Progress and Prospects.” *Philosophical Transactions of the Royal Society of London* 357B (2002): 563–579.
- Willoughby, P. R. *The Evolution of Modern Humans in Africa: A Comprehensive Guide*. Lanham, MD: AltaMira, 2007.

The Extreme Environments of Pleistocene

The Pleistocene is a geological epoch that until May 2009 was defined as spanning the period 1.8 million years ago to 10,000 years ago, but its time span has been redesignated by the International Commission on Stratigraphy to begin 2.6 million years ago. The revised date recognizes the advent of climatic cooling on a global basis. Together with the Holocene epoch, the last 10,000 years, the Pleistocene makes up the Quaternary period, the last of four periods that describe the earth’s geological history. The term “Pleistocene” derives from two Greek words, *pleistos* and *kainos*, that mean “most” and “new,” respectively. In terms of 4.54 billion years of earth’s history, the Pleistocene is both recent and short-lived. Nevertheless, it was a time of considerable environmental change associated with both natural and human activity. In the context of the latter it is unique, as many hominid ancestors and modern humans (*Homo sapiens*) emerged during this period, culminating in colonization of all the continents except Antarctica. In relation to natural change, the Pleistocene epoch was one of extremes, as warm and

cool climates alternated within climatic cycles, of which there were between 30 and 50. Such variations profoundly influenced soil processes and the distribution of plants and animals and raised and lowered sea levels. Why and how this occurred has been widely investigated, though many questions remain unanswered. The underpinning mechanisms relate to the pattern taken by the earth as it rotates around the sun, a factor that affects the amount of heat energy received at the earth's surface, and the global biogeochemical cycle, which had a much greater atmospheric pool during warm stages. Understanding such change and rates of change is especially important in the context of modern global warming and the necessity of understanding the mechanisms that underpin climatic change.

There is a wealth of information pertaining to the Pleistocene in the earth's environmental archives (e.g., ocean sediments, lake sediments, glacial deposits, peat, paleosols, ice caps, and glaciers). Biological, chemical, and physical evidence has facilitated a detailed reconstruction of this dynamic epoch. Of particular importance are oxygen-isotope signatures obtained from marine sediment and polar ice cores. The ratio of two isotopes of oxygen, ^{18}O to ^{16}O , is temperature dependent and is used as a proxy for reconstructing temperature/climate change. The lighter isotope, ^{16}O , is preferentially evaporated from the oceans, which are colder during periods of low temperature. This means that the heavier isotope ^{18}O becomes enriched in the water. The prevailing ratio is reflected in the shells (known as tests) of marine organisms, notably foraminifera, as they absorb oxygen-containing carbonate (CaCO_3) from seawater. The shells become incarcerated in sediment and thus provide a record of oxygen isotope variation, and hence of climatic change, over time. Water that accumulates as ice at the poles also comprises oxygen isotopes in ratios that vary climatically; during warm stages additional heat causes preferential evaporation of ^{18}O , which results in more ^{18}O relative to ^{16}O . The marine sediment and ice core records are thus mirror images. This methodology has been applied to widely distributed marine sediment cores as well as to numerous ice cores from the poles and high-altitude ice caps so that global patterns of Pleis-

tocene climatic change have been reconstructed. The oxygen-isotope data have been augmented by deuterium and carbon dioxide concentrations from ice cores, though these records extend at best as far back as circa 800,000 years.

Such reconstructions have revealed the pattern and characteristics of climatic cycles during the Pleistocene. Broadly, the cycles from 2.6 million to 0.8 million years ago lasted circa 40,000 years, with limited ice cap growth at high northern latitudes during the cold parts of the cycle. The cycles from 0.8 million years ago to the present lasted circa 100,000 years, with large-scale ice cap formation at high northern latitudes. Of the ten glaciations during this latter period, the last two were particularly extensive, with ice sheets several thousand feet deep covering much of Scandinavia and Eurasia and extending as far south as the Great Lakes in North America in addition to extensive glaciation in the Alps, Andes, Urals, and Himalayas. Each glacial stage lasted circa 80,000 to 100,000 years, with intervening warm stages being short-lived at circa 15,000 to 20,000 years. Although global temperatures were on average 18–20 degrees Fahrenheit (10 to 11 degrees Celsius) lower during glacial stages, the high latitudes cooled considerably more than the low latitudes. Conditions during the warm stages were similar to those of today (pre-1950s) or perhaps a little warmer. Furthermore, the shift from cold to warm conditions was relatively rapid, taking just 1,000 to 2,000 years. It is also important to note that climate was not uniform within the cold and warm stages of each cycle, but highs and lows were never as accentuated as those between warm and cold stages.

The major warm-cold shifts were relatively short-lived in geological terms, yet they had profound effects on global biogeography and possibly on early human history. First, ice advance displaced plants and animals, which reacted at the species level to climatic change. This means that new configurations of organisms occurred as soils and sea levels (which affected land links) altered and altered again. The impact is more obvious in high latitudes due to changes in the extent of ice, but it was significant in middle and low latitudes as reduced temperatures affected forest, savanna, grassland, and desert ecosystems,

which changed in distribution, extent, and composition. Second, mountain areas at all latitudes experienced major vegetation shifts (e.g., the tree line in the Andes was depressed by up to 3,000 feet [914.4 meters] during cold stages). The presence of land bridges during glacial stages facilitated plant and animal migration (e.g., the colonization of Mediterranean islands by plants and animals from Europe, Asia, and Africa), which has contributed to island biodiversity. It is also possible that Pleistocene climatic shifts prompted the movement of first *Homo erectus* and later *Homo sapiens* out of Africa, while the Bering land bridge between Asia and the Russian Far East facilitated the human colonization of the Americas, though when this occurred remains controversial.

—A. M. Mannion

Bibliography

McDougal, D. *Frozen Earth: The Once and Future Story of Ice Ages*. Berkeley: University of California Press, 2006.

Wilson, R. C. L., S. A. Drury, and J. L. Chapman. *The Great Ice Age: Climate Change and Life*. 2nd ed. Milton Keynes, UK: Open University Press, 2007.

Africa—*Homo heidelbergensis*

Homo heidelbergensis is a species of human defined by Otto Schoetensack (1908). He used the Mauer mandible as the type specimen, which

had been recovered from a quarry near Heidelberg, Germany. This species is also referred to as archaic *Homo sapiens* and represents the last common ancestor of European Neanderthals and African modern humans. It ranges in time from around 600,000 to 200,000 years ago and is found throughout Europe, Asia, and Africa. A single frontal bone has also been recovered at Zuttiyeh in Israel.

Homo heidelbergensis has a body structure that is quite similar to that of living humans. The skull has a large, round brain case within the modern size range (1,000–2,000 cubic centimeters). The face is prominent and projecting, with large teeth, and many individuals have an M-shaped arch or supraorbital torus over the eyes. Specimens assigned to *Homo heidelbergensis* vary greatly. Many show a mix of features seen in *Homo erectus* and *Homo ergaster* and more recent humans (such as modern humans and Neanderthals), clearly showing their role as transitional between the two groups. Others, especially those from Africa, mix archaic and anatomically modern features.

There are a number of sites in Africa from which remains assigned to *Homo heidelbergensis* have been recovered. They include a partial skull, face, and lower jaw (with a chin) from Rabat in Morocco and a partial skull from the nearby site of Temara. A number of skulls have been collected at Jebel Irghoud; these are either *Homo*

➤ WAS *HOMO HEIDELBERGENSIS* THE FIRST HOMININ IN EUROPE?

Homo heidelbergensis was possibly the first European. They originated in Africa and spread north into Europe around 500,000 years ago. When people arrived in Europe is quite contested. Anthropologists Wil Roebroeks and Thijs Van Kolfschoten argued that no one lived here before 500,000 years ago. Recent research at the Atapuerca site in Spain has shown that this conclusion was premature. The Gran Dolina or Trinchera Dolina has fragmentary human remains and pebble tools in sediments with reversed magnetic polarity. This makes them at least 780,000 years old. Based on this, Robin Dennell and Wil Roebroeks concluded that early humans must have reached Mediterranean Europe by this time. But then they

went on to say that no one lived in the part of Europe that really mattered until much later.

Atapuerca has yielded even more surprising results. A human mandible at a new locality, the Sima del Elefante, or Pit of the Elephant, is dated to 1.2 million years ago. But for many paleoanthropologists, the most important site at Atapuerca is the Sima de los Huesos, or Pit of Bones. This is a large underground cavern in which thousands of fossil bones have been recovered; they are between about 200,000 and 400,000 years old. Except for some cave bears, they are all human, people who were well on their way to becoming Neanderthals.

—Pamela R. Willoughby

► HOMO ERECTUS IN EUROPE

One of the most fascinating questions about the first peopling of Europe was whether or not *Homo erectus* ever settled on the continent. The oldest human fossils in Europe come from the Sierra de Atapuerca in northern Spain. A partial mandible was recently discovered in the Sima del Elefante and dated to around 1.2 million years ago. The next oldest are fragmentary remains from the Gran Dolina or Trincheras Dolina that have been assigned to *Homo antecessor*. These come from sediments with south-facing magnetic polarity and are at least 780,000 years old. But neither of these fit the description of *Homo erectus*.

Homo erectus (also known as *Homo ergaster*) first appears in Africa around 1.8 million years ago and spreads out of Africa into Asia around 1.7 million years ago. The oldest site outside of Africa is Dmanisi in Georgia; other localities on the island of Java in Indonesia could be almost as old. Less than one million years ago the same species is found at Zhoukoudian, the Peking Man site on the edge of the modern capital of Beijing. *Homo erectus* is defined by a number of cranial features including an angular skull with a sharp occipital angle, a sagittal ridge, and flattened parietal bones (giving the skull the appearance of a gabled house). They have a large projecting face, with

teeth larger than those of later humans. Their brain volume or cranial capacity ranges between 750 and 1,250 cubic centimeters (cc), with an average of 1,000 cc. This contrasts with the 1,000 to 2,000 cc (and average of 1,350 cc) for modern humans and *Homo heidelbergensis*.

Outside of Atapuerca, the oldest fossil humans come from sites like Ceprano in Italy. At both localities, they are associated with core and flake tools, not the Acheulean bifaces of the subsequent species, *Homo heidelbergensis*. The Ceprano skull, around 800,000 years old, is intermediate in form between *Homo erectus* and *Homo heidelbergensis*. While its cranial shape is similar to *Homo erectus*, its size is within the range of *Homo heidelbergensis*.

Most of the earliest fossil human remains in Europe date to 500,000 years ago or younger. They tend to be associated with Acheulean tools, but others are associated with flake and core tools. Few of them resemble the classic *Homo erectus* of Africa or Asia. If it was not for Atapuerca, one would be forced to conclude that no one reached Europe until around 500,000 years ago. Perhaps Atapuerca represents an early limited movement of humans out of Africa, possibly across the Strait of Gibraltar.

—Pamela R. Willoughby

heidelbergensis or modern humans. Excavations at the Paleolithic cave of Haua Fteah in Libya produced a mandible fragment, and a skull cap was collected at Singa in the Sudan. One cranium was found at Bodo in the Middle Awash of Ethiopia; it is around 600,000 years old. At Omo-Kibish locality 2, a skull was collected in 1967 that has recently been redated to almost 200,000 years ago. Other finds in the Kibish Formation are of similar age but are anatomically modern. One fragmentary cranium was found at Melka Kunturé and another at Diré Dawa (or Porc Epic Cave), both in Ethiopia. At East Turkana in Kenya, remains of *Homo heidelbergensis* have come from Eliye Springs, Guomde (KNM-ER 3884), and other localities. These are dated to between 200,000 and 300,000 years ago. Two mandibles have been collected from the Kapthurin Formation at Lake Baringo and a single cranium from the Ndutu For-

mation at Olduvai Gorge in northern Tanzania. The famous australopithecine site of Laetoli has also produced LH 18, a cranium from the Ng'oloba Formation. From an open-air site near Lake Eyasi, a single skull and other remains have been collected as well as three molars from the nearby Mumba Cave. In 1921, researchers reported several partial skeletons from Kabwe (or Broken Hill), Zambia. In South Africa, archaeological sites such as the Cave of Hearths (a mandible fragment), the Florisbad hot springs (a single skull), and Saldanha (or Elandsfontein or Hopefield) (another skull) have also produced fossil humans. The oldest *Homo heidelbergensis* fossils are usually associated with Late Acheulean tools (bifaces plus a range of Levallois flake tools). Many others belong to the Middle Paleolithic or Middle Stone Age.

—Pamela R. Willoughby

Bibliography

- Carbonell, E., et al. "The First Hominin of Europe." *Nature* 452 (7186) (2008): 465–469.
- Conroy, G. *Reconstructing Human Origins*. 2nd ed. New York: Norton, 2005.
- Dennell, R., and W. Roebroeks. "The Earliest Colonization of Europe: The Short Chronology Revisited." *Antiquity* 70(269) (1996): 535–542.
- Rightmire, G. P. "Human Evolution in the Middle Pleistocene: The Role of *Homo heidelbergensis*." *Evolutionary Anthropology* 6(6) (1998): 218–227.
- Willoughby, P. R. *The Evolution of Modern Humans in Africa: A Comprehensive Guide*. Lanham, MD: AltaMira, 2007.

Homo neanderthalensis

The first *Homo neanderthalensis* fossils were discovered at Engis Cave, Belgium, in 1929–1930, and in Forbes' Quarry, Gibraltar, in 1848, but their significance was not recognized as such at the time. It was the skullcap and postcranial bones found by quarry workers at the Feldhofer Cave in Germany's Neander Valley in 1856 to which most authorities trace the discovery of the Neanderthals. The large brow ridges, low forehead, and bulging sidewalls of the skullcap alongside the very robust limb bones were clear indications that the bones were not from a modern human. These features led the Irish anatomist William King to suggest that the fossils belonged to an extinct human species he called *Homo neanderthalensis*.

As more fossils were discovered, our understanding of the morphology of these hominins grew. By 1920 Neanderthal remains (and their artifacts) were found in the Belgian cave sites of Trou de La Naulette and Spy; in Sipka Cave in Moravia (Czech Republic); in the French cave sites of La Chapelle-aux-Saints, Le Moustier, La Ferrassie, and La Quina; and at the Krapina Rockshelter near Zagreb, Croatia. The decades that followed yielded many more fossils but also demonstrated that the range of the Neanderthals extended from western Europe into Asia. Early West Asian cave sites include Tabun, Kebara, and Amud in Israel; Dederiyeh in Syria; and Teshik-Tash in Uzbekistan (west-central Asia). The addition of Shanidar Cave in Iraq and several Iranian sites has pushed the eastern extent of their territory even farther.

Determining the age of the Neanderthal fossils is somewhat difficult, as most fall near the practical limit of radiocarbon dating. The youngest remains date between 40,000 and 30,000 years ago, using a combination of thermoluminescence (TL), uranium-series (U-series), electron spin resonance (ESR), and radiocarbon (^{14}C) dating methods. The geological age of the oldest sites is uncertain, as the deposits encasing the bone of nine individuals at Ehringsdorf, Germany, were formed between 242,000 and 186,000 years ago based on U-series and ESR dates, but the associated plant and animal remains suggest a Last Interglacial age between 127,000 and 71,000 years ago. TL dates between 190,000 and 159,000 years ago were also received from the Biache-Saint-Vaast site in France, however, which supports the appearance of *Homo neanderthalensis* around 190,000 years ago or before. Most Neanderthal fossils date between 127,000 and 50,000–35,000 years ago, placing them in the Last Interglacial and the early part of the Last Glaciation.

The abundant *Homo neanderthalensis* fossil record makes it relatively easy to characterize their skeletal morphology. The thin-walled cranium is long and low and has an oval shape, with the maximum breadth midway up the braincase. One of the most distinct features of the Neanderthal skull is the occipital bun, or chignon, on the back of the skull where the lambdoid and sagittal sutures meet. The endocranial capacity of the skulls range from 1,245 to 1,740 cubic centimeters (cc) and average around 1,520 cc, compared to 1,340 cc in living people. The front of the skull reveals a low frontal area with a pronounced continuous browridge that generally forms a double arch above the large eye orbits. The nasal aperture and cavity are also oversized. The lack of a chin is a typical feature, as are the large cheekbones.

The molars of the Neanderthals are smaller than those from earlier *Homo* species, overlapping in size with the teeth of modern humans, but their incisors are larger and often shovel-shaped. Many of these front teeth exhibit distinctive rounded wear on the inside and are more worn than the cheek teeth and canines. There is a discernible gap, called the retromolar space, between the lower third molar and the

ascending ramus of the mandible (lower jaw bone). Moreover, the sigmoid notch in the ascending ramus is larger, farther back, and asymmetrical when compared to a *Homo sapiens* mandible.

Postcranial elements reveal uniquely Neanderthal traits as well. The cervical vertebrae have long horizontal robust spines and enlarged neural canals that enclosed the spinal column. The ribs are also very thick and curve out from the spine to create a broad chest. The arm and leg bones have thick shafts that reflect an ability to endure long periods of intensive use. The muscle and ligament attachment areas on the bones are extremely large and well developed, which, together with the bowed shape of the radius and femur, signal extraordinary muscular strength. Neanderthal fingers are larger and rounder than those of modern humans, also revealing increased strength and a powerful grip.

Homo neanderthalensis is easily distinguished from all other *Homo* species based on these and other morphological traits. They were a powerfully built hominin that had a large, long, oval skull with a heavy browridge over large, deep-set eyes and a large nose. Their great breadth but their shorter stature and limb size may have resulted from an adaptation to the cold climate in which they lived. This could also explain their larger cranial capacity, which may be linked to greater metabolic efficiency. What remains difficult to assess is the language ability of these humans. The relatively flat cranial base and elevated larynx suggests that they could not make the full range of words and sounds as modern humans can, but the large neural canals imply control over the phonetically significant movements of the chest.

Recent advances in genetic studies have clarified the relationship between *Homo neanderthalensis* and *Homo sapiens*. Mitochondrial DNA extracted from Neanderthal fossils confirmed that the two species shared a common ancestor, between 690,000 and 550,000 years ago, diverging along separate evolutionary lines after that. They did, however, live in the same regions just before the Neanderthals became extinct, but it is very unlikely that the two populations interbred. The cause of their extinction

remains a matter of debate, but many scholars agree that they were behaviorally inferior to the newly arrived *Homo sapiens*. It is likely that they were outcompeted for food and other valued resources.

—Shawn Bubel

Bibliography

- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- Krings, M., et al. "Neanderthal DNA Sequences and the Origin of Modern Humans." *Cell* 90 (1997): 19–30.

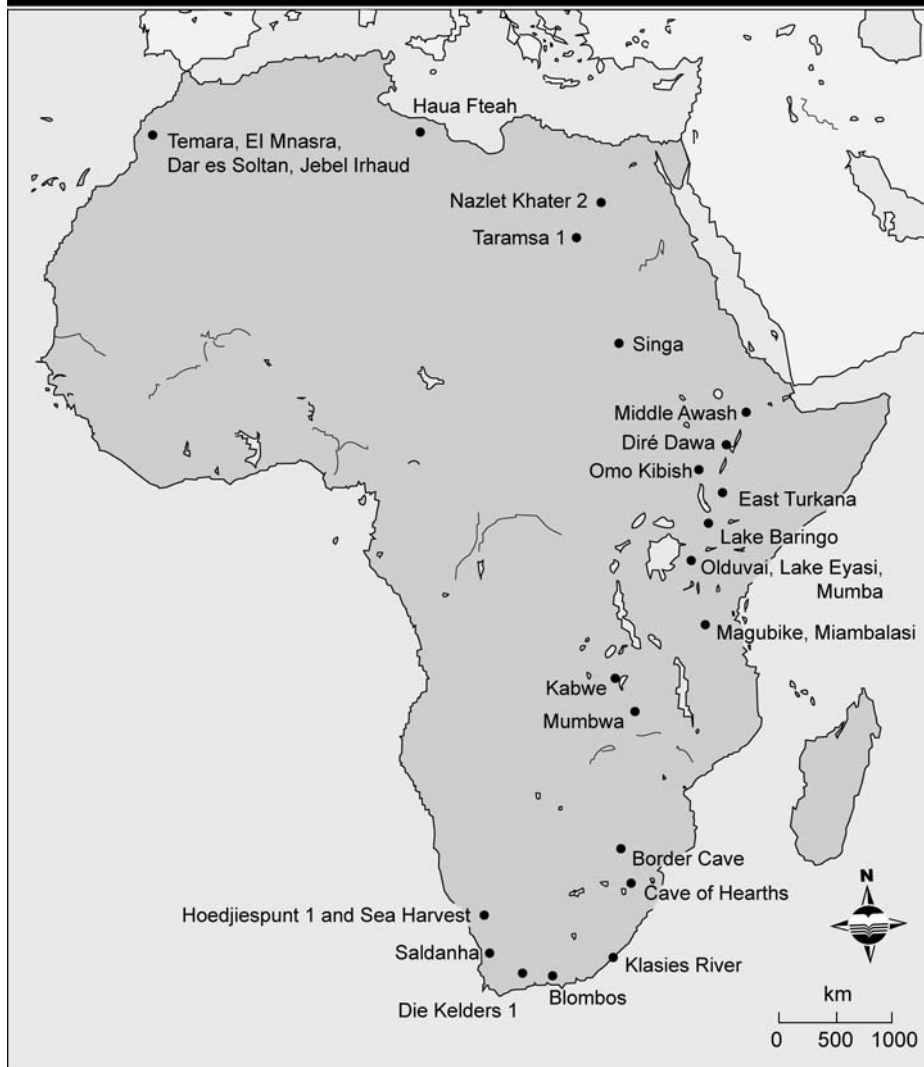
Homo sapiens in Africa

Our own species, *Homo sapiens*, was defined by the Swedish botanist Carolus Linnaeus in the tenth edition of his *Systema Naturae* (1758). There was no real description or type specimen or discussion of what this species represented. Much later, the American vertebrate paleontologist Edward Drinker Cope (1840–1897) left his body to science with the express wish that he could be designated the type. But his numerous skeletal pathologies, reportedly the result of syphilis, made him an unlikely candidate.

Like Linnaeus, modern anatomists and biologists have had difficulty defining what it means to be an anatomically modern *Homo sapiens*, especially in relation to our most recent direct ancestor, *Homo heidelbergensis* (formerly archaic *Homo sapiens*). Besides meaning people who are skeletally like us today, there are a few criteria that define us. One is our large round skull. Modern brain volumes range from 1,000 to 2,000 cubic centimeters (cc), with an average of 1,350 cc. The face is tucked in below the forehead and does not jut out. There is a chin or mental eminence on the lower jaw. Muscle attachments on both the skull and the rest of the body are reduced relative to earlier humans. Likewise, the entire skeleton is much lighter than earlier.

There have long been heated debates about the origins of modern *Homo sapiens* and even about what it means to be modern. In the 1980s around the same time as the Out of Africa 2 model became popular, geochronologists

LOCATIONS OF AFRICAN SITES WHICH HAVE YIELDED FOSSIL REMAINS OF *HOMO HEIDELBERGENSIS* AND/OR EARLY MODERN *HOMO SAPIENS*



developed a battery of new dating techniques that profoundly changed our image of modern human origins. These include electron spin resonance (of mollusks, tooth enamel, and corals), optically stimulated luminescence (of sediments), and thermoluminescence (of burned flint stone tools). These were first applied to Middle Paleolithic sites in the Levant, which contained either modern humans or Neanderthals. The surprise was that the modern human sites (the Mughareet es Skhūl and Jebel Qafzeh) were older than the Neanderthal ones. When African sites were dated in the same way, the old-

est modern humans became almost 200,000 years old. This date coincided with the beginning of the Middle Paleolithic or Middle Stone Age, not with the Upper Paleolithic (or Later Stone Age) as was expected. Modern humans appeared to have been living in Africa as long as Neanderthals had lived in Europe.

A number of African sites contain fossil remains of *Homo sapiens* or *Homo heidelbergensis*. Most of the early modern ones, however, belong to the Middle Paleolithic or Middle Stone Age and are over 100,000 years old. The archaeological and fossil record decreases remarkably

► MOLECULAR BIOLOGY AND THE EVE HYPOTHESIS

Human cells, like those of all living organisms, contain two sets of DNA strings, one in the nuclei and the other in the mitochondria, the organelles that generate energy. Both DNA types can be used to trace back our common ancestry. Mitochondrial DNA is inherited only from one's mother, while nuclear DNA from the Y chromosome is inherited only from one's father. All living humans' female line ancestry can be traced back to a single female (Mitochondrial Eve), who lived between 200,000 and 140,000 years ago. Our male line goes back to a single male (Y-chromosomal Adam) at around 60,000 years ago.

One advantage of using mitochondrial DNA is that it mutates relatively fast, unlike nuclear DNA. In this way, it provides a fast-ticking molecular clock. The meaning of all this is that even popula-

tions that became separated from each other not longer than just a few hundred thousand years ago have already built up detectable genetic differences in their mitochondrial DNA. The longer the separation between populations, the more genetic differences there are. With the use of mitochondrial DNA, the time of divergence can be calculated.

Another advantage of using mitochondrial DNA over nuclear DNA is that it is inherited through the maternal line only. In nuclear DNA, maternal and paternal genes may become mixed.

The Mitochondrial Eve hypothesis was launched in 1987 by Allan Wilson and colleagues. By analyzing mitochondrial DNA, they were able to place our common ancestor with the African great apes at some 200,000 years ago.

—Alexandra van der Geer

around 70,000 to 30,000 years ago, just as the Out of Africa 2 migration is supposed to begin. Richard Klein of Stanford University posits that African people were anatomically modern or near modern during the Middle Stone Age. But because their artifacts are similar to those of European Neanderthals, he believes that Africans only became truly modern at the start of the Later Stone Age. At this time, he argues, they developed complex language and cultural behavior. This in turn led to the great migration out of Africa and to the replacement of the indigenous people of Eurasia. It is hard to test this idea, but transitional sites are beginning to appear in East Africa and in the interior of South Africa. My own research in southern Tanzania has produced two already (Mlambalasi and Magubike rockshelters near Iringa City).

While there are many places with early modern human remains in Africa, these remains are quite fragmentary. In Morocco, some cranial fragments were recovered at Temara; these belong to *Homo heidelbergensis*. Early modern human remains have been found at Dar es Soltan, El Mnasra I (or the Smuggler's Cave), and Jebel Irhoud. All of these are associated with Mousterian or Aterian stone tools. The Mousterian is the typical North African Middle Paleolithic, dominated by Levallois tools. The Aterian is an

industry that belongs to the late Middle Paleolithic and is marked by tools with retouched stems or tangs. In Libya, the deep cave site of Haua Fteah yielded a single lower jaw; it is *Homo heidelbergensis* and is associated with Mousterian tools. In Egypt, an anatomically modern child skeleton was recovered from a Middle Paleolithic chert mine at Taramsa 1. Two partial skeletons come from Nazlet Khater 2. A single *Homo heidelbergensis* skull cap comes from the site of Singa in the Sudan.

In Ethiopia, *Homo heidelbergensis* skulls have been recovered from Bodo in the Middle Awash and from the Kibish Formation at Omo. *Homo sapiens* fossils come from Diré Dawa (a mandible) and Omo Kibish (a skull and partial postcranial skeleton from one locality and a forehead fragment from another). Three skulls were found at Herto, and a number of other cranial remains were found at Aduma, both in the Middle Awash. In Kenya, *Homo heidelbergensis* remains come from a number of localities on the east side of Lake Turkana and from the Kapthurin Formation at Lake Baringo. A fragmentary modern *Homo sapiens* skull was found at Lukehya Hill in the south. In Tanzania, a number of localities in the north (Olduvai Gorge, Laetoli, next to Lake Eyasi, and at Mumba Cave) have produced remains of *Homo heidelbergensis* or

Homo sapiens. My own fieldwork in southern Tanzania has produced Middle Stone Age human teeth in one rockshelter (Magubike) and one or more Later Stone Age human burials at another (Mlambalasi).

In Zambia, *Homo heidelbergensis* remains were excavated in the 1920s at Kabwe. Some teeth and postcranial fragments were recovered much more recently from Mumbwa Cave. South Africa has many sites with *Homo heidelbergensis* remains, either Middle Stone Age (Florisbad) or Acheulean (a mandible at the Cave of Hearths and a skull from Saldanha). *Homo sapiens* remains come from Middle Stone Age contexts at Klasies River, Die Kelders 1, Blombos Cave, Hoedjiespunt I, Sea Harvest, Border Cave near Swaziland, and Equus Cave near the early human site of Taung.

While it is clear that *Homo sapiens* had a very early African origin, the exact processes behind our emergence remain to be determined.

—Pamela R. Willoughby

Bibliography

- Klein, R. G. "The Archaeology of Modern Human Origins." *Evolutionary Anthropology* 1 (1992): 5–14.
- Willoughby, P. R. *The Evolution of Modern Humans in Africa: A Comprehensive Guide*. Lanham, MD: AltaMira, 2007.

Homo sapiens in Asia

There are two theories regarding the biological evolution of modern humans in the Old World, and Asia plays a crucial role in both. The first is the Multiregional theory, which posits that modern humans evolved more or less at the same time in different parts of the Old World from their respective predecessors in those respective regions (e.g., Chinese *Homo sapiens* from Chinese *Homo erectus* populations). The second theory is known as the Out of Africa or Replacement hypothesis, which emphasizes the evolution of modern humans in Africa and their subsequent dispersal into different parts of Eurasia and leading to the presumed gradual replacements of earlier *Homo erectus* or *Homo heidelbergensis* populations. While there is convincing multidisciplinary evidence that *Homo sapiens* may have

replaced preexisting *Homo neanderthalensis* populations in Europe during the Upper or Late Pleistocene, our understanding of the biological and behavioral evolution of modern humans in Asia remains highly ambiguous. Both theories have their respective professional advocates, including numerous physical anthropologists, Paleolithic archaeologists, and geneticists. One fact is clear, however: the oldest known anatomically modern human fossils currently come from Ethiopia and are 190,000 years old.

Asia is a large geographic area comprising various types of ecosystems and climatic conditions. The region is well known for its lengthy record of human occupation since the Early and Middle Pleistocene: Dmanisi and Ubeidiya in West Asia; Nihewan Basin, Zhoukoutien, and Chongok-ni in northern and East Asia; and Sangiran, Modjokerto, and Mata Menge in Southeast Asia. In recent decades, there have been an increasing number of archaeological and paleontological discoveries related to the occupational history of modern humans in the region. This evidence comes from a large number of sites from almost all geographic zones of Asia, though their respective ages vary considerably. Ultimately, the modern human paleontological record in Asia following the initial appearance of the species in Africa is significantly incomplete.

Various types of lithic or stone tool assemblages are associated with modern human fossils in different parts of Asia. These regional assemblages are indicative of indigenous technological development and ecological adaptations but also share affinities (at times) with similar assemblages from Africa and Europe. These tool kits include specialized artifacts such as prepared cores, blades, burins, projectile points, bone harpoons, points, and scrapers. Associated with the lithic evidence are related behavioral traits such as long-distance transport and curation of exotic raw materials, symbolic behavior such as cave/rock shelter painting, engraved or incised artifacts, the ritualistic use of ochre and other pigments, greater ecological adaptive strategies including site selection and land use, tool hafting, the utilization of other raw materials, self-adornment, and an increase in human burials often with grave goods. Some Asian examples of sites that have variably yielded human fossils,

stone tools, and other associated evidence include Liujiang and Upper Cave (Zhoukoudian) in China, Patne and Bhimbetka in the Indian subcontinent, and Kota Tampan and Niah Cave in Southeast Asia. All collective changes in technology and behavior are generally thought to reflect a gradual but distinct shift from the Middle Stone Age/Middle Paleolithic to the Late Stone Age/Upper Paleolithic. A unique feature of the Asian record is that large parts of the population retained expedient tool kits up to the Holocene, unlike the marked and visible change in lithic technomorphology in Europe and Africa.

In the Near East, evidence from over 30 individuals at Skhul (120,000–40,000 years ago) and Qafzeh (100,000–90,000 years ago) indicates the presence of early modern populations. In this region, however, there has been much debate regarding the identification of specific specimens to specific taxa (*H. sapiens* vs. *H. neanderthalensis*), and various theories have been put forward regarding admixture, gene flow, resource competition, seasonal population movements, interbreeding, and associated climatic, ecological, and faunal factors for the evolution of modern humans and the biological extinction of Neanderthals in the region. Based on published data, researchers have recently argued that modern humans arrived in South Asia at an earlier time than they arrived in Europe. Indeed, South Asia has often been depicted in publications as representing an intermediate geographic zone for early and modern *Homo* groups dispersing from East Africa to Southeast and East Asia along a southern coastal route. Some key sites in the Indian subcontinent that have yielded evidence of modern human occupation in the form of stone tools and human fossils are Sangaho Cave and Site 55 in Pakistan, Kurnool Caves and Attirampakkam in southern India, and Badatomba-lena and Fa Hien Caves in Sri Lanka.

In contrast, the evidence from East and South Asia is not as abundant as in other parts of the Old World. The East Asian evidence is utilized by proponents of the Multiregional theory to support biological continuity or evolution of modern humans from the archaic forms. The East Asian (i.e., Chinese) evidence appears to be comparatively more secure in terms of context and chronology than the Southeast Asian evidence. Another problem with some of the South-

➤ THE “DEEP SKULL” AT NIAH CAVE

The site of Niah Cave, located in northern Malaysian Borneo (part of Sarawak Island in Southeast Asia), contains a thick sequence of sediments ranging from the Late Pleistocene to the Holocene in age. The cave roof is about 246 feet (75 meters) from the cave floor, and the entire area totals almost 24.7 acres (10 hectares). Large-scale excavations in the 1950s and 1960s yielded over 200 burials of modern humans, including a cranium popularly known as the “Deep Skull” that was found in association with stone tools and charcoal. The significance of this young female specimen, which was recovered with a femur, nonhuman faunal remains, and a lithic flake, is highlighted by its possible age between 42,000 and 45,000 years ago. If this age estimate is accurate (the context of the specimen is controversial), then the “Deep Skull” and associated bones may represent one of the oldest modern human fossils in this region of Australasia.

—Parth Chauhan

east Asian evidence is the ages for some specimens labeled as *Homo erectus* at Ngandong: 53,000–27,000 years ago. In other words, if the age and taxonomic identification are correct, what role did these exceptionally young *Homo erectus* groups play in the evolution and/or arrival of modern humans in this part of Asia, especially if the latter were already occupying other parts of Asia and the Old World? A less contentious but equally significant find comes from Dali (ca. 200,000 years ago) in the Shaanxi Province in China, which yielded a cranium without teeth and has been employed to support evolutionary continuity from archaic human populations in this region. Under current circumstances, it is clear that the human evolutionary history of Asia was quite complex, and neither the Replacement nor the Multiregional hypothesis is currently supported or refuted completely.

—Parth Chauhan

Bibliography

Etler, D. “The Fossil Evidence for Human Evolution in Asia.” *Annual Reviews in Anthropology* 25 (1996): 275–301.

Kennedy, K. A. R. *God-Apes and Fossil Men: Palaeo-anthropology in South Asia*. Ann Arbor: University of Michigan Press, 2000.

Stringer, C. "Replacement, Continuity and the Origin of *Homo sapiens*." In *Continuity or Replacement: Controversies in the Evolution of Homo sapiens*, edited by G. Brauer and F. H. Smith. Rotterdam, Netherlands: Balkema, 1992.

Wolpoff, M., J. Hawks, and R. Caspari. "Multiregional, Not Multiple Origins." *American Journal of Physical Anthropology* 112 (2000): 129–136.

***Homo sapiens* in Europe and the Middle East**

The migration of *Homo sapiens*, modern humans, into Europe and the Middle East out of Africa developed out of a climatic change that allowed migration northward and gradual adaptation that permitted survival in the harsher

northern climes. It is estimated that between 60,000 to 40,000 years ago, modern humans dispersed northward into Eurasia after thousands of years of gradual evolution in regions of central Africa. The centrality of the Middle East as a crossroads from Africa to both Asia and Europe allowed for the migration of *Homo sapiens* into that region for settlement purposes. Within 20,000 years, *Homo sapiens* occupied areas of Eurasia previously inhabited by *Homo erectus* 1.8 million to 1.4 million years ago. In the midst of this migration, *Homo sapiens* settled in both Europe and the Middle East, competing at first with Neanderthals for resources. While first settling and adapting to the harsh northern latitudes, modern humans eventually settled in the warmer southern regions of Europe.

Climatic changes during this period of migration are characterized by a gradual warming of the northern latitudes in the period following

➤ RELATIONS BETWEEN *HOMO SAPIENS* AND NEANDERTHALS

Do *Homo sapiens* and Neanderthals belong to the same or different species? Ever since the first Neanderthal was recognized as an extinct human, this has been the key research question. For some researchers, Neanderthals are just a geographic subspecies of *Homo sapiens*; if so, they would be classified as *Homo sapiens neanderthalensis*. This would make them capable of interbreeding with "modern" Upper Paleolithic Cro-Magnons whose ancestors were African. Other researchers stress the anatomical differences between the two groups and the fact that Cro-Magnons seemed to have replaced Neanderthals in Europe between 40,000 and 26,000 years ago. For them, there is no clear evidence of interbreeding or of the evolution of modern humans directly from European Neanderthals. On the other hand, there is growing evidence of cultural interaction and trade between the two groups. Relatively recent Neanderthals were producing jewelry and bone tools, just as Cro-Magnons were. But it looks like this happened only after the arrival of modern people. Was this a sign of acculturation to a new Upper Paleolithic world? If so, did it alter the behavior of both groups? Looking at the evidence from the Middle Paleolithic in the Levant, anthropologist John Shea argues that both groups were affected in a significant way.

Both Neanderthals and moderns are descended from *Homo heidelbergensis*, so they represent evolutionary cousins. Genetic studies of living people and Neanderthals confirm this. But the first modern people in Africa created the same kinds of artifacts as Neanderthals did: Levallois and Mousterian points and scrapers. They also lived at the same time. So if the first "modern" people were African and Middle Paleolithic, then why were they the ones who became the ancestors of Cro-Magnons and replaced Neanderthals in Europe? This is a question that also remains unanswered.

—Pamela R. Willoughby

Bibliography

- D'Errico, F. "The Invisible Frontier: A Multiple Species Model for the Origin of Behavioral Modernity." *Evolutionary Anthropology* 12(4) (2003): 188–202.
- Mellars, P. "The Impossible Coincidence: A Single-species Model for the Origins of Modern Human Behavior in Europe." *Evolutionary Anthropology* 14(1) (2005): 12–27.
- Shea, J. "Neanderthals, Competition and the Origin of Modern Human Behavior in the Levant." *Evolutionary Anthropology* 12(40) (2003): 173–187.

the last Ice Age. The necessity to migrate north was perhaps due to scarcity of resources following long periods of increasing aridity. However, the gradual warming in the north allowed people to slowly migrate northward through what had previously been frozen wasteland or land expanses covered by glaciers. Vegetation and herds of animals suitable for hunting had also migrated northward due to climatic fluctuations that permitted their survival in northern latitudes. The evolving hunter-gatherer society that characterized this period of human history illustrated that northward migration was pivotal for survival to some segments of the population that had inhabited Africa.

Gradual climate change, while allowing for humans to inhabit Europe and the Middle East, was still characterized by cold weather and the living conditions associated with it. Humans in these regions were forced to adapt to the weather conditions in order to live a comfortable day-to-day existence. This created the need for technological adaptation in the form of tailored fur clothing, the use of lamps, and the ability to heat shelters for warmth. Other forms of technological advances during this period include tools for trapping small animals and for acquiring birds and fish. These adaptations allowed modern humans in Europe to survive in their new regions of habitation in this period of extreme climatic fluctuations.

According to archaeological estimates, modern humans already inhabited the Levant in the Middle East as early as 120,000 to 90,000 years ago in an archaic form of *Homo sapiens*. This find made between 1987 and 1992 in Skhul and Qafzeh represents not part of the northern migration of the later period but rather part of the gradual dispersal of the African populations into adjoining regions. This recent find underlines the proximity of the Middle East to Africa and indicates that there were precursors on the pathway that modern humans were to take in the later northward migrations between 60,000 to 40,000 years ago into Europe and Asia through the Middle East.

The first humans to inhabit Europe are believed to be from the East European Plain in what is now modern Russia and parts of Eastern Europe. Archaeological excavations in the region illustrate the level of cultural sophistication

➤ SKHUL AND TABUN

Skhul and Tabun, two neighboring caves at Israel's Mount Carmel, beside the Mediterranean Sea, contain extensive occupations with Neanderthal Mousterian lithic remains and burials as well as later occupations. The Mousterian lithic artifacts in the two caves are very similar to each other, flaked on flint using the prepared core Levalloisian technique. These are generalized Mousterian assemblages with points, many side scrapers for hide preparation, knives, perforators, endscrapers, cutters, and other tools. Both caves also contain burials of adults and the immature, with adults receiving food offerings but the peripheral juveniles buried without grave goods.

The big difference between the two caves is the skeletons. The slightly older Tabun (ca. 40,000 years) yields Neanderthals of classical form, with large brains, protruding faces and brow ridges, and receding chins atop strong rugged skeletons.

Skhul, however, has the more evolved or modern-looking skeletons, with high foreheads, less prognathism, and some chin. The woman Skhul IX has a fairly delicate skeleton. These puzzling differences cause some paleoanthropologists to think that the two caves show the remains of two quite different populations. The Skhul remains would be left by people of more recent African affinity. The cultural similarity but biological disparity appears remarkable because usually cultural dissimilarities outweigh biological distances among human remains.

—Ralph Rowlett

of these early people. Findings include stone tools such as blades, bone tools, ornamentation, and forms of art approximately dated to 45,000 years ago. In Siberia in the site of Kara-Bom, approximately around the same period, stone implements have been found with human fossils indicating this as an early area for migration.

The gradual colonization of the warmer climes in Europe is believed to have followed that of colder climes. Having first established themselves in colder regions, evidence showed settlements in southwestern Europe followed. The sites of Willendorf in Austria and El Castillo in Spain are estimated to have been settled approximately 40,000 years ago, subsequently

following the settlement of more northerly latitudes fraught with colder weather and conditions. This is far different from previous hominid settlement patterns that only occupied the warmer regions of Europe, completely avoiding the northern climes. Anthropologists believe that human adaptation to this region occurred as a result of technological changes that necessitated adjusting to colder climates. Unlike the better-suited Neanderthals, modern humans would be heavily stressed by the climate of the north. Intriguingly enough, the fact that they chose to inhabit colder regions before moving to warmer regions illustrates the reliance on technology to adapt during their northern migrations.

It is believed by some anthropologists that the late migration of modern humans into western Europe is due to the heavy Neanderthal regional presence. It would follow that this is perhaps the reason they did not inhabit the warmer southern regions of Europe as well. As *Homo sapiens* emerged into Europe they sought to avoid regions inhabited by Neanderthals. It would be later when *Homo sapiens* would live in areas adjacent to Neanderthal settlements and compete for resources. Around 30,000 years ago there would hardly be any Neanderthals left and thus no reason not to inhabit adjacent regions, much less have them around to compete for resources.

There is debate among anthropologists about the fate of Neanderthals and whether the migration of modern humans has anything to do with their ultimate demise. Some scholars argue that modern humans interbred and gradually emerged as a sole species with a mixed genetic inheritance. A skeleton excavated in Lagar Velho in Portugal in 1998 displays some Neanderthal features along with modern human characteristics and is used as evidence of this position. Others argue that modern humans replaced Neanderthals in Europe and that there was no interbreeding among them whatsoever. However, the question of how the migration of modern humans led to the displacement and disappearance of Neanderthals remains unanswered.

—*Abraham O. Mendoza*

Bibliography

Gamble, Clive, *Timewalkers: The Prehistory of Global Colonization*. Cambridge: Harvard University Press, 1994.

Hoffecker, John F. *A Prehistory of the North: Human Settlement of the Higher Latitudes*. New Brunswick, NJ: Rutgers University Press, 2005.

Roebroeks, Wil, and Thijs van Kolfschoten, eds. *The Earliest Occupation of Europe*. Leiden: University of Leiden, 1995.

The Last Glacial Maximum

Last Glacial Maximum (LGM, or Late Pleniglacial) is the term usually applied for the period of glaciation between 18,000 and 20,000 years ago. It was characterized by the lowest temperatures during the Pleistocene epoch and the maximal extent of the permafrost area.

At the time of the LGM the total area covered by glaciers exceeded the modern periods as much as three to four times, constituting about 30 percent of earth's total surface. In the Northern Hemisphere the ice sheet (the thickness of which reached up to approximately 1.8 miles) covered huge territories of North America, Greenland, Iceland, Scandinavia, and northern Eurasia. At the same time, some northern areas (Siberia, Manchuria, and some parts of Alaska) still showed no visible traces of glaciation due to prevailing westerly dry winds that considerably reduced precipitation and ice formation in these regions.

One of the most striking features of the LGM is the significant fall in average annual temperatures, up to 18 degrees Celsius (°C) lower than modern times. Paleoclimatic reconstructions made on the basis of data from a series of East European Late Paleolithic archaeological sites indicate that the LGM cold snap displayed itself unequally in different regions. In European Russia and the Ukraine, mean temperatures in January were 20°C to 29°C colder than today (with minimal meaning up to -35°C to -40°C); average temperatures in July were 5°C to 11°C lower than those today, and the maximum temperature in the summer never exceeded 20°C with probable light morning and night frosts. In contrast, in Siberia and Mongolia temperatures were only 7°C to 15°C colder in winter and 1°C to 7°C in summer. Light snow likely fell around the margins of the glaciers more than 280 days per year.

Temperatures dropped across the planet, even in places well away from the glaciers. In

very high and very low latitudes as well as in the tropics, climate became very arid. Annual precipitation averages declined 2.0–29.5 inches (50–750 millimeters). For example, average annual precipitation in Britain at that time is comparable to that in modern Morocco, and in southern Australia and the Sahel rainfall decreased up to 90 percent. In general, the annual precipitation rate across Eurasia during the LGM was about 9.8–11.8 inches (250–300 mm), thus creating vast deserts in both hemispheres.

The cold, dry continental climate typical of the Northern Hemisphere during the LGM was characterized by highly contrasted seasonal temperatures and in many areas led to the formation of large open grasslands when precipitation was sufficient. These grasslands supported many species of migratory herbivores that lived in large herds, such as mammoth, woolly rhinoceros, bison, horse, and reindeer. Dramatic and rapid climatic changes during the LGM sometimes created situations whereby certain species lost their favored niches and were forced to adapt to unfamiliar landscapes.

Plant and animal ecology were closely tied to latitude, with higher latitudes characterized by temperature extremes and low biomass. Close to the glaciers was a tundra environment characterized by extreme cold and low-growing plants. A mixed forest-steppe landscape with permafrost (ground frozen solid year-round) was found to the south of the tundra. Intensive erosion flattened the river valleys and upper areas of their watersheds in these areas. Adjacent to glacial sheet tundra landscape and situated to the south from them a belt of mixed tundra-forest-steppe landscapes correlated with a zone of permafrost distribution and were characterized by peculiar forms of flattened relief that originated due to intensive erosion in the river valleys and wash-out on the upper parts and watersheds. The trees that grew in this zone included pygmy birch and pine. Beyond the permafrost zone was the steppe, or grassland. Small patches of trees, mostly pine, birch, and alder, characterized these patches. In areas of low elevation, some patches of deciduous trees such as oak and elm were also found. The animal species that dominated the steppe environment included bison, horse, reindeer, and antelope.

The LGM was also marked by significant sea- and ocean-level decreases up to 328.1–426.5 feet (100–130 meters) below modern levels. Most inner seas such as the Black Sea functioned as continental fresh or brackish lakes, while smaller ones such as the Azov Sea did not exist at all. The Persian Gulf, the English Channel, and the Bering Strait were at this time dry land, thus creating land bridges that connected continents. Asia and North America were connected by the so-called Bering land bridge, thus enabling the colonization of the Americas by humans and animals from Siberia.

The most striking feature of the LGM is the dramatic deterioration of climate that significantly reduced the territories available for human use. The environment became patchy, and plant and animal biomass diminished considerably. In one sense, this was the first global environmental crisis experienced by humans. However, Late Paleolithic peoples were fully capable of adapting to these climate extremes.

—Olena V. Smyntyna

Bibliography

- Gamble, C. *The World at 18000 B.P.*, Vol. 1, *High Latitudes*. London: Unwin Hyman, 1990.
- Gribchenko, Yu. N., and E. I. Kurenkova. "Environment and Late Palaeolithic Human Settlement in Eastern Europe." In *Landscape in Flux: Central and Eastern Europe in Antiquity*, edited by J. Chapman. Oxford, UK: Oxbow, 1997.

The Retreat of the Glaciers and the Beginnings of the Holocene

The process of deglaciation and the transition to the modern geological era known as the Holocene begins with the process of glacial retreat and periglacial development dated to 17,500–10,300 years ago.

Gradual ice melting and ice sheet retreat to the north caused the transformation of landforms and associated tectonic processes. In Scandinavia it resulted in the gradual rise of the land (approximately 3.2 feet [1 meter] per 100 years); in North America it caused the origin of the peculiar terminal glacial moraines of Long Island, Nantucket, and Cape Cod. The North American Great Lakes and major lakes in Europe were created at this time as well.

Sea basin history provides insights into the final environments of the Pleistocene. One glacial melting resulted in the formation of the Baltic Sea in a depressed area. It began as a brackish estuary (Yoldian Sea) and was filled with saltwater, which arrived from the North Sea at the period of the opening of the strait between contemporary Sweden and Denmark. In the history of sea basins of southern areas of Eurasia, the final phase of Pleistocene was marked by significant sea-level rise (transgressions). Recent studies in this field provided by marine geologists have put forward a broad interdisciplinary discussion about catastrophic versus evolutionary consequences for human society of the sea-level rise in the Black Sea-Mediterranean corridor on the Pleistocene-Holocene border. One can observe significant growth of water levels of all major rivers of Eurasia as well as the development of small rivers and temporary estuaries and waterways.

This period is characterized by repeated climatic oscillations, which on a global scale were directed toward climate warming. Nevertheless, taken in a more narrow perspective, it is possible to detect a more complicated mode of climate evolution connected with alternations of warm phases with relatively cold periods during which ice sheets moved back to the south. These climatic changes happened unusually quickly for the Pleistocene. Climatic oscillations of the later phases of Pleistocene are displayed unevenly at different latitudes and caused the gradual and slow formation of zonal features of the landscapes.

The Lascaux interval traditionally is regarded as the earliest warm phase during the process of glacial retreat, dated to approximately 17,000 years ago. In western Europe it led to the development of deciduous forests that included elm, oak, hornbeam, alder, and nut-bearing trees, among others.

The first significant warming in what is now the boreal zone of Europe was detected in the northern region of Germany, where it was accompanied with the distribution of pine and birch forests in the interval of 15,000 to 13,000 years before the present. The first remarkable climate warming had caused the disappearance of relatively homogeneous periglacial landscapes

and their typical inhabitants such as mammoth, woolly rhinoceros, and musk ox.

The Older Dryas (or Dryas I) cold phase (not later than 14,500 years before the present) is usually correlated with restoration of periglacial arid steppe landscapes in the south and tundra-forest-steppe landscapes in the northern regions. The wide distribution of boreal vegetation is referred to as the Bolling interstadial (12,400–12,000 years before the present for western Europe and 12,800–12,000 years before the present in the East). In the northern part of Eurasia it was represented by birch and pine forests, with the gradual growth of spruce and deciduous species (oak and nut-bearing trees).

Following the Bolling interstadial, the Middle Dryas cold episode (12,200–11,800 years before the present) is marked by the disappearance of deciduous arboreal species and the further replacement of forest-steppe landscapes by dry grasslands.

The latest phase of the Pleistocene is referred to as the Allerød (11,800–11,000 years before the present), a warm and wet interval during which average temperatures of July could be as high as 13–14 degrees Celsius. This period was marked by wide distribution of boreal forests and forest-steppe landscapes with the presence of spruce and a low proportion of deciduous species over contemporary forest and forest-steppe in Eurasia. The northern periphery of the modern steppe zone was represented by mixed boreal forest-steppe landscapes gradually changing into meadow steppes to the south.

The Younger Dryas (or Dryas III) was the final climatic stage of the Ice Age and was marked by a slight and impermanent drop in temperature across Eurasia during the interval of 11,000–10,300 years before the present. It is traced by distribution of dry-adapted plant species in steppe landscapes and the appearance of arid steppes in the southern part of eastern Europe. In frames of forest-steppe and forest zones of Eurasia, birch and pine forest alternated with plots of dry-land plants. The presence of grasses and the low proportion of deciduous arboreal vegetation indicate that, taken in general, the Younger Dryas was the wettest interval among the cold phases of the final Pleistocene.

—Olena V. Smyntyna

Bibliography

- Gamble, C. *The Palaeolithic Societies of Europe*. Cambridge: Cambridge University Press, 1999.
- Straus, L. G., et al., eds. *Humans at the End of the Ice Age: The Archaeology of the Pleistocene-Holocene Transition*. New York and London: Plenum, 1996.

Homo sapiens in the New World

Evidence indicates that *Homo sapiens* first arrived in the New World during the Late Pleistocene era (11,000–126,000 years ago), although when and by what route remains a controversy. Historically, scholars thought that *Homo sapiens* first arrived in the New World no earlier than 11,500 years ago based on the distinctive style of lithic points found in 1933 near Clovis, New Mexico. According to the Clovis-First model, a small group of *Homo sapiens* hunters, possibly numbering under 100 individuals, entered the New World from Siberia at the end of the last Ice Age approximately 11,500–12,000 years ago. Prior to that, it was believed that most of Canada was covered by the Cordilleran ice sheet that was centered over the Rocky Mountains and the Laurentide ice sheet centered over the Hudson Bay, effectively blocking any way for *Homo sapiens* to enter North and South America. At the end of the last Ice Age, Clovis-First modelers hypothesized that *Homo sapiens* funneled through an ice-free corridor as a result of the melting of the two ice sheets. The Clovis-First model, despite its initial acceptance and popularity, has failed to stand up to the empirical evidence.

Four primary lines of evidence can be used in determining when *Homo sapiens* first arrived in the New World: biological, archaeological, linguistic, and cultural. Biological evidence consists primarily of dental and skeletal remains as well as genetic data, although in some rare cases trichological data (hair) has been used. Dental evidence indicates that *Homo sapiens* migrated into the New World from North Asia sometime around 20,000 years ago. Craniometric data, while not providing any chronological dates, indicates that the *Homo sapiens* that arrived in the New World at the end of the Late Pleistocene are not similar to any modern world popula-

tions. This has led scholars to conclude that either the crania of modern world populations has changed substantially enough that it no longer correlates with Late Pleistocene *Homo sapiens* crania from the New World or that the *Homo sapiens* populations that migrated into the New World were replaced by later migrations of more cranially modern humans. The genetic evidence, based on haplo group frequencies of genetic markers found on both the mitochondrial DNA (mtDNA) and the Y-chromosome, indicates that the first *Homo sapiens* reached the New World between 20,000 and 35,000 years ago from North Asia or Siberia.

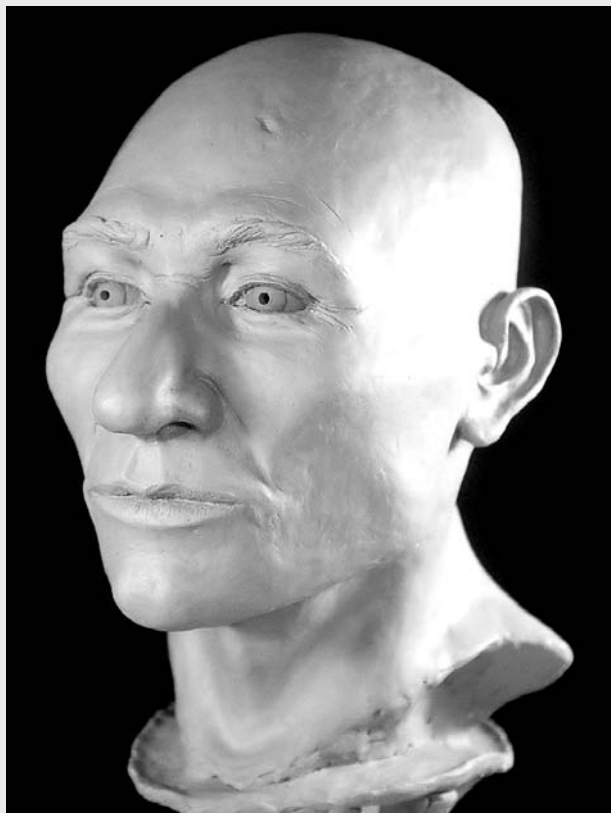
The archaeological evidence, contrary to the biological evidence, does not contain any empirical evidence that would place *Homo sapiens* in the New World further back than 12,500 years ago—the date of the Monte Verde site located in Chile, South America—although a handful of controversial sites argue for an earlier date of arrival. The archaeological evidence indicates that *Homo sapiens* arrived in the New World between 11,000 and 13,000 years ago, peopling North and South America within this period. No conclusive evidence has been found that would indicate from where or by what means *Homo sapiens* made their way to the New World.

Two methods—multilateral word comparison and historical linguistics—have been established by linguists in an attempt to determine how old indigenous New World languages are and from where they may have derived. The method of multilateral word comparison was developed by James Greenberg in 1987 in an attempt to reduce all known indigenous languages into a tripartite division that could then be compared to other known language families. Greenberg used the method of multilateral word comparison to examine the rate of retention of a specific list of 200 words and concluded that slightly more than 80 percent of the list was retained over 1,000 years. Based on this method, he concluded that *Homo sapiens* migrated into the New World in three waves as demonstrated by his construction of three primary protolanguage families (Amerind, Na-Dene, and Aleut-Eskimo). He was unable to give a firm date as to when the first migration took place, but based on the method of multilateral word comparison,

THE KENNEWICK MAN CONTROVERSY

On July 29, 1996, a 9,300-year-old skeleton was found on the banks of the Columbia River in Washington state that came to be known as the Kennewick Man. After recovery, the Army Corps of Engineers announced its intention to repatriate the remains to four federally recognized American Indian tribes and a nonfederally recognized American Indian band under the Native American Graves Protection and Repatriation Act (NAGPRA). Subsequently, eight scientists filed suit to prevent repatriation, arguing that NAGPRA and the Archaeological Resources Protection Act (ARPA) gave them the right to study the remains. During June 19–20, 2001, Magistrate Jelderks heard oral arguments and on August 30, 2002, ruled in favor of the scientists. On February 4, 2004, the Ninth Circuit Appeals Court upheld Jelderks's decision. The Ninth Circuit agreed with Jelderks that Congress had used the phrase “that is indigenous” in its “common and everyday usage” and that a relationship must be shown with an existing tribe, people, or culture for the remains to be determined “Native American” under NAGPRA. This ruling has raised the question of whether the people who initially populated North America are biologically and culturally affiliated with contemporary American Indians.

—Peter Jones



Reconstruction of the Kennewick Man, giving a face to one of the oldest and most complete sets of human remains found in the United States. The 9,300-year-old remains discovered on the banks of the Columbia River near Kennewick, Washington, has triggered a property battle between scientists seeking the bones for research and native Americans wanting to give them a spiritual burial. (AP Photo/Perfect Image, James Chatters)

it is argued to have taken place at least 35,000 years ago.

The final line of evidence available for establishing when *Homo sapiens* first arrived in the New World stems from cultural or ethnographic evidence. Because of the ephemeral nature of cultural evidence, it is generally held by scientists not to be reliable beyond a few hundred years. However, oral traditions of contemporary American Indians and First Nations peoples hold cultural memories that can be traced back to the last Ice Age. Such oral traditions contain evidence of *Homo sapiens* experiencing the glacial melting of the Cordilleran and Laurentide ice

sheets but do not contain evidence of movements across or around these ice sheets.

—Peter Jones

Bibliography

- Bonnichsen, Robson, and Karen Turnmire, eds. *Ice Age People in North America: Environments, Origins, and Adaptations*. Corvallis: Oregon State University Press, 1999.
- Campbell, Lyle. *American Indian Languages: The Historical Linguistics of Native America*. New York: Oxford University Press, 1997.
- Jones, Peter N. *American Indian mtDNA, Y Chromosome Genetic Data, and the Peopling of North America*. Boulder, CO: Bäuu Institute Press, 2004.

Meltzer, David. *First Peoples in a New World: Colonizing Ice Age America*. Berkeley, CA: University of California Press, 2009.

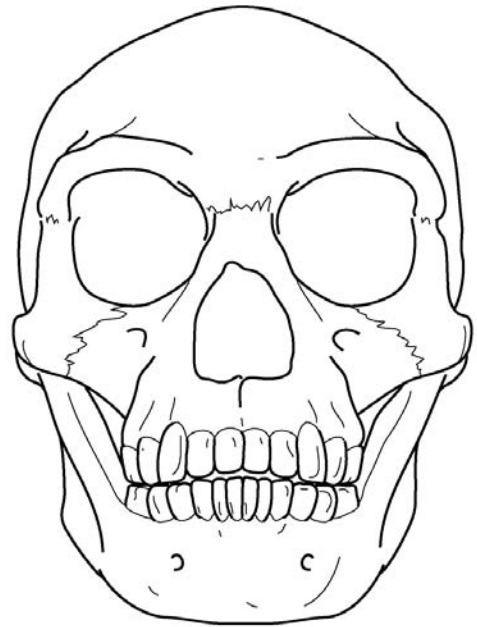
Powell, Joseph. *The First Americans: Race, Evolution, and the Origin of Native Americans*. Cambridge: Cambridge University Press, 2005.

Homo floresiensis

Homo floresiensis (nicknamed “the Hobbit”) is a species of the genus *Homo* found in 2003 in a cave on Flores, Indonesia. It is notable for its very small stature and brain size, its recent date, some anatomical features, and its association with stone tools and burnt animal bones. The existence of *H. floresiensis* shows that human evolution was one of multiple rather than single lineages until the very recent past.

Bones belonging to nine individuals have been excavated, but only one—a woman—is a near-complete individual. Based on bone measurements, *H. floresiensis* was about 3.3 feet (1 meter) tall with a brain size of about 380 cubic centimeters. The average modern human stature is 5.25 feet (1.6 meters) and the brain size of 1,300–1,800 cubic centimeters. The shape and thickness of the skull, the reduced size of the teeth, and the upright stance and stride show that it is within the genus *Homo*. The researchers’ interpretation, which has been accepted by most experts, is that it is a dwarfed descendant of early humans who reached Flores sometime within the last one million years. It is not an ape or directly descended from nonhuman ancestors. It is not a pygmy because pygmy brains are similar in size to those of other modern humans (*H. sapiens*). Other interpretations of its size, such as pituitary or microcephalic dwarfism, are not consistent with the skeletal features of *H. floresiensis*. Dwarfing is common among animal species isolated on small islands. On Flores itself a dwarf primitive elephant (Stegodon) is contemporary with *H. floresiensis*.

H. floresiensis existed until at least 14,000 years ago. The bones were found within a series of clay and silt layers beneath volcanic ash layers dated to 11,000–13,000 years ago by the luminescence dating technique. Two radiocarbon dates on charcoal associated with the skeleton and processed by the ABOX-SC method both



Homo floresiensis
(Hobbit)

H. floresiensis was a small-bodied and small-brained hominin known only so far from the Indonesian island of Flores that overlapped in time and space with modern humans, but may be dwarfed descendants of *H. erectus*. (Illustration by Jeff Dixon)

gave ages of about 18,000 years ago. These dates have been widely accepted.

The layers containing *H. floresiensis* also contained many stone tools and animal bones. The stone tools were mostly flakes and the cores from which these were struck, but there were also a few that had been subsequently shaped. The animal bones came from a wide range of species, including a Komodo dragon, a varanid lizard that grows up to 9.8 feet (3 meters) long, a rat, and a bat. Notably, 15 juvenile stegodons, which were broken up in ways suggesting that they were hunted and eaten, were present. *H. floresiensis* used fire, as demonstrated by a ring of burnt cobbles, but there are no signs of symbolic activities such as jewelry or the use of pigments.

The discovery of *H. floresiensis* was described by *Science* magazine as the most important scientific discovery of 2004 (when it was published). There are two aspects of wider significance in this discovery.

First, until this discovery human evolutionary history during the last 200,000 years was thought to be dominated by *H. sapiens* for the last 150,000–200,000 years. The Neanderthals of Europe were a recent offshoot of *H. sapiens* and died out about 30,000 years ago. While there is no agreement among experts, all agree that *H. floresiensis* is descended either from an earlier form of *Homo* or an australopithecine. Its existence demonstrates that modern human evolution continued the pattern of the last two million to three million years, with several coexisting species of humans. The presence on earth of only one species of humans is much more recent than previously thought.

Second, scientists have generally accepted that modern humans arrived in Australia at least 50,000 years ago, coming from Africa via Southeast Asia and Indonesia, and that these were the

first species to have made watercraft. However, Flores had been an island for millions of years, and thus the ancestors of *H. floresiensis* also must have had watercraft, demonstrating mastery of complex technology. This is forcing a rethink of current models of the evolution of technology.

—Peter White

Bibliography

- Brown, P., et al. "A New Small-Bodied Hominin from the Late Pleistocene of Flores, Indonesia." *Nature* 431 (2004): 1055–1061.
- Morwood, M. J. et al. "In Archaeology and Age of a New Hominin from Flores in Eastern Indonesia." *Nature* 431 (2004): 1087–1091.
- Morwood, M. J. et al. "Further Evidence for Small-Bodied Hominins from the Late Pleistocene of Flores, Indonesia." *Nature* 437 (2005): 1012–1017.

■ Introduction: Holocene Environments, 10,000–4000 BCE

The Holocene is the name given to the most recent warm or interglacial period. It began in 10,000 BCE, when the major ice sheets that once covered much of Europe and North America were melting rapidly due to a rise in global temperature, a process that has continued into the present. The land at middle to high latitudes, which was depressed by the weight of the ice sheets, began to rebound, resulting in the formation of the Baltic Sea and Hudson Bay. Sea level was rising worldwide as the ice melted, and much of the continental shelf and the lower reaches of rivers were inundated. Carbon dioxide concentrations in the atmosphere were also rising and contributing to global warming. Land bridges were severed, creating islands around the edges of continents, notably in Southeast Asia and in the Mediterranean Basin. In high and middle latitudes, huge volumes of sand and gravel were deposited by streams issuing from the ice as melting occurred and moraines were dumped by the retreating margins of ice sheets and glaciers. Similar processes occurred in high-altitude regions, which were glaciated such as the Hima-

layas, Alps, and Andes. Many continental basins gouged out by highly erosive ice filled with water to produce some of the world's largest lakes, such as the Great Lakes of North America.

Such changing conditions greatly affected ecological processes and ecosystem characteristics. The global vegetation belts and their fauna that are evident today came into existence as individual plants and animals reacted to environmental change. Global warming and increased moisture availability encouraged soil-forming processes and the colonization by pioneer plants, such as mosses and lichens, of vast tracts of formerly glaciated or near-glacial land in the Northern Hemisphere. This began to create suitable conditions for the migration north of plants and animals. The great temperate and boreal forests came into existence as colonization proceeded through open woodlands and eventually closed forests. Extensive wetlands also developed at high latitudes, notably in Siberia and northern Canada where temperatures had become warm enough to allow plants to grow but not sufficiently warm to facilitate complete de-

composition. These forests and wetlands enhanced the carbon store within the world's vegetation and soils. Early Holocene forest establishment comprised the pioneer species of birch and pine, but within a few thousand years forests dominated by oak, elm, lime, poplar, alder, beech, and hornbeam had developed throughout temperate Europe. In the Mediterranean zone, herb and shrub associations gave way to evergreen oak and pine forests. In North America, following pioneer stages, temperate forests developed along the coastal regions and in the Great Lakes/St. Lawrence region. The latter were dominated by hardwoods such as oak, aspen, maple, and beech often mixed with softwoods such as pine, spruce, and fir. On the west coast conifers predominate, such as firs, pines, redwoods, and cedars with some hardwoods, such as cherry, oak, maple, and dogwood.

Lands not directly glaciated were also affected by climatic change but perhaps not quite so dramatically. In tropical forests, new species assemblages developed as tree species reacted to increasing temperatures and increasing precipitation. Many species migrated to higher altitudes, and forests expanded into savanna and grassland areas. Temperate and boreal forests in the Southern Hemisphere responded similarly, while the world's desert regions contracted as precipitation increased and caused grasslands and savannas to expand.

Although natural processes dominate the first half of the Holocene, it remains unique as an interglacial period because of the substantial impact of human communities on the environment, especially following the inception of agriculture, which occurred as the epoch opened. Deforestation, enhanced soil erosion, urbanization, and accelerated plant and animal extinction are all characteristic of the first half of the Holocene, especially in temperate Mediterranean and subtropical regions, but have since intensified considerably.

—A. M. Mannion

Bibliography

- Anderson, D. E., A. S. Goudie, and A. G. Parker. *Global Environments through the Quaternary*. Oxford: Oxford University Press, 2007.
- MacKay, A., et al., eds. *Global Change in the Holocene*. London: Arnold, 2003.

Postglacial Animal Extinctions Worldwide

Extinction—the dying out of a species—has been a natural aspect of life on earth since life first arose on this planet. At least five major extinction events are recognized from the fossil record: at the end of the Ordovician period (about 440 million years ago), at the end of the Devonian period (about 370 million years ago), at the end of the Permian period (the greatest of them all, about 245 million years ago), at the end of the Triassic period (about 210 million years ago), and at the end of the Cretaceous period (about 65 million years ago). There have been numerous smaller extinction events as well.

Another major extinction event is going on now: the Holocene event. It differs from other extinction events in the rate of species loss, which is much higher than at any other time in earth's history; thus, it is called the Sixth Extinction. While the first phase of the current extinction event began in the Pleistocene about 100,000 years ago as modern humans spread out of Africa, the latest phase began in spectacular fashion at the beginning of the Holocene with the disappearance of many members of the Pleistocene megafauna (large animals).



The best-known mammoth species is the woolly mammoth (*M. primigenius*), also called the Siberian or Northern mammoth, which probably emerged in Eurasia. About 50,000 years ago, during the height of the earth's last ice age, the woolly mammoth's range extended across northern Europe, Siberia, and much of North America. (Darryl Brooks)

The Cenozoic era, which began about 65 million years ago, has been dubbed the “Age of the Mammals” because of the diversification and dominance of mammal species throughout most of the world’s ecosystems. Mammals evolved to tremendous size during the ice ages, in part to help conserve heat (larger bodies retain heat better than smaller ones) but also because of a sort of arms race between predators and prey. Grasslands and savannas had expanded across the landscape.

While small size might be an advantage in forested environments where there are plenty of opportunities for concealment, it is not so effective in open environments where little cover was available. Thus, herbivores grew larger: the larger the prey, the more difficult they are to bring down. As herbivores grew larger, so did the predators that fed upon them.

Some of the most massive species in history of current mammal groups evolved during the Early Holocene (from about 11,000 to 4,000 years before the present). Those that went extinct include several species of elephant-like animals (mammoth and mastodons), ancient bison, the Irish elk, several horse species (in North America), ground sloths, giant beaver, saber-toothed cats, and dire wolves.

Mammals were not the only species affected. Birds (especially large bird species), reptiles, fish, and marine invertebrates have been noticeably affected by Holocene extinctions.

Considerable debate rages over the primary cause of the Holocene extinctions. Are they the result of natural processes driven by climate and environmental change? Or are they the result of the increasing human impact on the planet’s natural resources? Or do natural and human-driven processes together play a role?

One problem in teasing out the cause results from similar timing. In the Americas, the Clovis point—a major innovation in Stone Age hunting technology—appeared about the time that glaciers were receding. More than 70 percent of large mammal genera (groups of closely related species) disappeared from North and South America at about the same time. Many species show evidence of butchering of animals, based primarily on cut marks on bones, but clear evidence that hunters were the cause of death of

the animals is less common. Couple that with the coincidental change in climate, and the situation grows murkier.

The hypothesis that climate alone caused the extinctions has one major problem: climate has fluctuated quite a bit since the Late Pliocene, but most of the time there have been no corresponding mass extinctions.

Given that many species that survived since the Early Holocene were also hunted to a great extent, an “overkill” hypothesis does not seem sufficient. The spread of agriculture may have played a role in some areas, but since agriculture was limited to just a few regions until late in the Holocene, it cannot be blamed for the demise of most species in the Early Holocene.

Recent research has focused upon life history traits of Early Holocene mammals. Many species that went extinct had slow reproductive rates, regardless of body size. Many of the species that survived had higher reproductive rates, again regardless of body size. Some species with slower reproductive rates survived, but most of those lived in environments with plenty of cover available for concealment, or else their habitats were those too harsh to support large human populations. Many of the surviving species were nocturnal and/or tree dwellers. Thus, the life history model, while not indicating that overkill drove the Holocene extinctions, supports the hypothesis that hunting played much more of a role than climate.

Climate certainly played a role in influencing the characteristics and distributions of ecosystems on the planet. Plant assemblages, in particular, fluctuated in middle and high latitudes as glaciers advanced and receded throughout the Pleistocene and Holocene. There is no evidence for widespread extinction among plant species, however, as there is among terrestrial animal species. Likewise, there is relatively little evidence for an above-normal extinction rate among marine organisms.

—David M. Lawrence

Bibliography

Diamond, J. M. “The Present, Past, and Future of Human-Caused Extinctions.” *Philosophical Transactions of the Royal Society of London*, Series B 325 (1989): 469–477.

- Jackson, Stephen T., and Jonathan T. Overpeck. "Responses of Plant Populations and Communities to Environmental Changes of the Late Quaternary." *Paleobiology* 26(4) Supplement (2000): 194–220.
- Johnson, C. N. "Determinants of Loss of Mammal Species during the Late Quaternary 'Megafauna' Extinctions: Life History and Ecology, but Not Body Size." *Proceedings of the Royal Society of London, Series B* 269 (2002): 2221–2227.
- Martin, Paul S. *Twilight of the Mammoths: Ice Age Extinctions and the Rewilding of America*. Berkeley: University of California Press, 2005.

Postglacial Environments in Europe and the Middle East

At the dawn of the Holocene, the environment of Europe and the Middle East went through drastic changes. The great ice sheets centered on what is now Scandinavia, the northern British Isles, and the Alps were shrinking.

Sea levels, which had been low enough to leave a broad land connection between the British Isles and western Europe, were rising, the waters filling in much of what is now the North Sea, the English Channel, and the Irish Sea. Anatolia (the thumblike peninsula of modern Turkey) was likewise broadly attached to southeastern Europe, but as the seas rose that link was likewise cut. The Baltic Sea, which at the beginning of the Holocene was a glacial lake, became connected with the ocean to form a brackish sea.

At the height of the last glaciation, Europe from the Alps north to the southern edges of the polar ice sheets was devoid of forests. A polar desert lay along the southern fringe of the ice sheets. Tundra covered the continent from the edge of the polar desert south to the Alps. Steppe—an arid or semiarid grassland or shrubland—dominated the Mediterranean region eastward through what is now Turkey and Iran and southward into the Middle East.

As the glaciers receded, the vegetation of Europe became more diverse. Tree species began to expand northward. While there is little evidence of trees in much of Europe during the last glacial maximum, those that began to recolonize Europe probably survived in natural refuges, either in areas that are now offshore (inundated by rising seas) or in protected areas, such as on

THE FORMATION OF THE ENGLISH CHANNEL, CIRCA 6500 BCE

The English Channel fills an ancient basin created by tectonic upheavals in the Mesozoic and Cenozoic. The channel itself—bound roughly by the Strait of Dover on the east and by a line running from the Isles of Scilly in Great Britain and Ushant in France to the west—was a broad lowland area connecting the British Isles to the European mainland at the end of the Devensian Glacial, the last great advance of glaciers in the British Isles.

At the height of the Devensian, sea levels were about 393.7 feet (120 meters) lower than today. The channel began to fill rapidly, however, about 10,000 years ago as the great ice sheets receded. In addition to the English Channel, Doggerland—a lowland area that now forms the floor of the North Sea—likewise began to fill. The flooding basins destroyed a number of human settlements as well as cut the land connection between the British Isles and continental Europe.

—David M. Lawrence

the southern slopes of the Alps, in the Balkans, or along the shores of the Black Sea.

Oak woodlands characteristic of the Mediterranean region were common in the uplands of the Levant (eastern Mediterranean). Steppe and desert were likewise common at lower elevations and throughout the Arabian Peninsula. The plants, particularly the grasses, and animals of the steppes and deserts laid the framework for domestication and the establishment of agricultural societies in the region.

Farther north at the crossroads of Europe and Asia in what is now Turkey, steppe vegetation was dominant throughout the region at the beginning of the Holocene. Forest and woodland vegetation became more abundant from Syria, throughout Anatolia, and into Greece and the Balkan Peninsula. Desert vegetation persisted in what is now northeastern Turkey, however. In most of the forested areas, conifers (pine and spruce) were replaced by broad-leaved species (basswood, oak, and hazel), although fir and beech became dominant in some parts of the Balkans.

Oak forests and woodlands dominated the Carpathian region of central Europe by the

middle of the Holocene (ca. 7,500 to 4,300 years ago). The relative abundance of ash, basswood, and hazel, all important components of the forests and woodlands, fluctuated over time. Farther west, birch, juniper, and pine woodlands gave way to a smorgasbord of deciduous species—including oaks, basswood, hazel, and others—by the Middle Holocene.

In the British Isles, tundra moved north as the ice retreated. The tundra vegetation was replaced by juniper woodland at the Pleistocene/Holocene boundary. Birch woodlands replaced juniper woodlands as the Holocene climate warmed. Hazel, pine, and willow followed birch. Alders, elms, oaks, and pines, which quickly gained a toehold in the southern portion of the British Isles, took longer—the Middle Holocene, about 6,000 years ago—to reach the northern part of what is now Scotland. Ash and basswood arrived in the south quite a bit later, about 7,000 years ago.

As glaciers retreated from the Baltic region, tundra, then pine and birch woodland, expanded throughout. Hazel, elm, and oak arrived by 9,000 years ago, followed by ash and basswood. Tundra was similarly replaced by pine woodland in central Scandinavia. In time, a belt of birch and alder developed at lower altitudes and latitudes. The altitudinal and latitudinal range of the pine and birch/alder belt shifted quite a bit as climate switched between warm and cold phases in the Holocene.

Toward the end of the Middle Holocene another environmental trend began, the clearing of forests and woodlands as agricultural settlements spread in the Middle East and southern Europe.

—David M. Lawrence

Bibliography

- Elenga, H., et al. "Pollen-based Biome Reconstruction for Southern Europe and Africa 18000 Yr BP." *Journal of Biogeography* 27 (2000): 621–634.
- Mudie, Peta J., Andre Rochon, and Ali E. Aksu. "Pollen Stratigraphy of Late Quaternary Cores from Marmara Sea: Land-Sea Correlation and Paleoclimatic History." *Marine Geology* 190 (2002): 233–260.
- Prentice, I. Colin, Dominique Jolly, and BIOME 6000 Participants. "Mid-Holocene and Glacial-maximum Vegetation Geography of the Northern Continents

and Africa." *Journal of Biogeography* 27 (2000): 507–519.

Tarasov, P. E., et al. "Last Glacial Maximum Biomes Reconstructed from Pollen and Plant Macrofossil Data from Northern Eurasia." *Journal of Biogeography* 27 (2000): 609–620.

Postglacial Africa

Much of the African natural landscape looked quite different at the dawn of the Holocene at 11,000 years ago than it does today. Steppes, which are a type of grassland characteristic of arid areas, were much more widespread, while the ranges of ecosystems at opposite ends of the moisture continuum—deserts and humid tropical forests—were more restricted.

Steppe vegetation dominated northern Africa. Much of the Sahel, the region bordering the Sahara to the south, was likewise dominated by steppe, which extended farther north and west than today. At somewhat higher elevations, savannas—grasslands with scattered trees—became more prominent and were mixed with patches of forest. In central Africa, savanna prevailed at the lowest elevations, and evergreen forests prevailed at the highest. Compared to today, the elevation range occupied by both was greater, squeezing lowland tropical rain forest to a narrow band at middle altitudes.

Not surprisingly, tree lines were lower in the high mountains of East Africa. The drier climate favored xerophytic vegetation, plants adapted to dry (xeric) conditions, often with thick leathery leaves to limit water loss and thorns, spines, or other defenses to limit grazing. The xerophytic woods and scrub (characterized by stunted trees and shrubs) were mixed with steppe at lower elevations and graded into evergreen forest at higher elevations.

Steppe dominated much of southern Africa, with fynbos (a unique south African type of xerophytic woods and scrub) locally important. Much of Madagascar was covered by a patchwork of broad-leaved evergreen and mixed forest, with lowland tropical rain forest restricted to a much narrower elevation band than today.

The climate changes of the Early Holocene had far-reaching effects. The Holocene Thermal Maximum (from 11,000 to 5,000 years ago) was

➤ A WETTER SAHARA, CIRCA 6500 BCE

Mention of the Sahara Desert conjures up images of a vast sea of sand—waves of towering dunes constantly driven by the wind—broken up by rocky pavements and bare escarpments. What vegetation occurs is only in the vicinity of the relatively rare oases.

The Sahara was not always a place of such desolation. During the Holocene Thermal Maximum, rising sea-surface temperatures in the Atlantic strengthened thermal gradients, which in turn intensified the West African monsoon.

The intensified monsoon transported vast amounts of water over western and northern Africa. River systems were enlarged. Places such as Wadi Howar, now a dry canyon, were connected to the Nile by a river that ran through a landscape dotted with lakes, covered by steppe, savanna, and xerophytic forest and scrub. With this enhanced water supply, human settlements dotted areas where nothing but caravan trails survive today.

—David M. Lawrence

Satellite image reveals a previously unknown branch of an ancient river, buried under thousands of years of windblown sand in a region of the Sahara Desert in Libya. (NASA/JPL-Caltech)



characterized by warmer temperatures, changes in atmospheric and oceanic circulation, and changes in precipitation patterns. One of the more dramatic shifts in the Early Holocene was the African Humid period. Driven by a strengthening of the West African monsoon, the period was characterized by more rainfall in western and northern Africa. Much of what is now the Sahara was dotted with lakes as a result.

The wetter conditions led to widespread changes in the African landscape. In northwest Africa, mixed deciduous-evergreen forests dominated the uplands, while xerophytic woods and scrub were widespread at lower elevations. Farther east in what is now Egypt, steppe was widespread but mixed with xerophytic woods and scrub. The belt of forest and steppe ex-

tended south into the Sahara. In the Saharan uplands, mixed deciduous-evergreen forests could be found.

The belt of Sahelian vegetation—steppe to the north adjacent to the Sahara, with xerophytic woods and scrub and then tropical dry forest—encroached upon the Sahara from the south. The combination of encroachment from both the north and south greatly restricted the area occupied by the great Sahara itself.

While much of northern and western Africa was wetter, other parts of the continent were drier, central Africa in particular. The area of the lowland tropical rain forest in central Africa appears to have been reduced compared to today. Tropical seasonal forest was much more widespread instead.

Eastern and southern Africa were much the same as today, mixed deciduous-evergreen forests in the mountains, xerophytic woods and scrub in the plateaus, and fynbos in the Cape region of what is now South Africa. Tropical dry forest was widespread in what is now the southern part of the Democratic Republic of the Congo, and savanna was widespread in what is now northern Botswana. The major exception to the similarity to today is outside the Cape region of what is now South Africa: xerophytic woods and scrub rather than today's mixed deciduous-evergreen forest.

About 5,000 years ago the Holocene Thermal Maximum and the African Humid period came to a sudden halt. Climate cooled globally. The change in temperature patterns led to a weakening of the West African monsoon. As the monsoon weakened, the rains faltered in northern and western Africa. The desert reclaimed much of the Sahara and North Africa. The Sahelian vegetation belts shifted southward, and mixed evergreen-deciduous forests expanded in what is now South Africa.

—David M. Lawrence

Bibliography

- Elenga, H., et al. "Pollen-based Biome Reconstruction for Southern Europe and Africa 18,000 Yr BP." *Journal of Biogeography* 27 (2000): 621–634.
- Jolly, Dominique, et al. "Biome Reconstruction from Pollen and Plant Macrofossil Data for Africa and the Arabian Peninsula at 0 and 6 Years." *Journal of Biogeography* 25 (1998): 1007–1027.
- Kutzbach, J. E., and Z. Liu. "Response of the African Monsoon to Orbital Forcing and Ocean Feedbacks in the Middle Holocene." *Science* 278 (1997): 440–443.
- Prentice, I. Colin, Dominique Jolly, and BIOME 6000 Participants. "Mid-Holocene and Glacial-maximum Vegetation Geography of the Northern Continents and Africa." *Journal of Biogeography* 27 (2000): 507–519.

Postglacial Asia and Australia

The continent of Asia was, as it is now, a land of vast contrasts at the time of the Last Glacial Maximum (LGM) in the Pleistocene 18,000 years ago. The ice sheets radiating out from Scandina-

via reached as far east as the Taymyr Peninsula in western Siberia. Lower sea levels—as much as 394 feet (120 meters) lower than today—exposed the wide land bridge of Beringia, between Asia and North America, as well as another, Sundaland, that helped bridge the gap between Southeast Asia and Australia.

As would be expected, ecosystems characteristic of cold climates, such as tundra and boreal forest (taiga), were more widespread than today. Tundra extended southward below 60°N throughout much of Siberia. Steppe, rather than boreal forest (taiga) as in today, extended southward from the tundra belt. The boreal forest, the dominant biome of northern Eurasia today, was greatly reduced, as was the desert belt of central Asia.

Ecosystems characteristic of warmer climates, such as deciduous and tropical forests, were displaced toward the equator. Wet-dry tropical forest and savanna covered much of mainland Southeast Asia. Sundaland consisted of an extensive savanna corridor. Tropical rain forests, widespread through the islands that make up Southeast Asia today, were, as temperate forests, greatly limited in extent; tropical forests did not reach northward to the latitudes of southern China as they do today.

Mainland Australia and surrounding islands were much drier, such that deciduous forests occurred at sites now occupied by tropical rain forests and arid woodlands, and shrublands and grasslands were more widespread in the south and center of the continent. On New Guinea alpine tree lines were likewise lower, reflecting the cooler temperatures. Boreal forest (to the north) and mixed conifer forest covered the main islands of Japan.

Temperatures warmed rapidly and stayed warmer as the LGM ended and worldwide deglaciation accelerated through the end of the Pleistocene and into the Holocene. As a result the great northern ice sheets receded, and Alpine glaciers throughout the continent likewise shrank.

Climate patterns of the glacial era changed to patterns more like those of today. Wetter conditions accompanied the warming temperatures. As climate patterns changed, so did ecosystem distributions, with tropical and temperate ecosystems expanding northward (and upward) at

the expense of polar (and alpine) ecosystems. Superimposed on the general trend toward warmer, wetter conditions, however, was variability in the extent and distribution of the South Asian and East Asian monsoons. When the monsoons extended their reach, ecosystems that depend on mesic (wetter) conditions spread. When the monsoons were reduced in extent, arid-zone ecosystems spread.

With rising sea levels, the low-lying regions of Sundaland and Beringia were inundated, converting the former into a vast archipelago between Asia and Australia and the latter into an oceanic barrier between Asia and North America. The changes affected the dispersal of plants and animals between the landmasses, with major effects on global and regional biogeographic patterns.

One of the most drastic transformations in Asia occurred in the northernmost latitudes. The widespread tundra ecosystem began to change from a landscape dominated by herbaceous species to one dominated by shrubs. A nascent boreal forest began to spread across the northern landscape, eventually forming a buffer zone between the tundra to the north and steppe mixed-conifer forest and deciduous forest to the south. Mixed-conifer forest and deciduous forest expanded northward, and desertlike conditions began to spread from central Asia into China. Deciduous forests extended southward as well, encroaching into areas such as the Black Sea basin formerly dominated by steppe.

By the middle of the Holocene some 6,000 years ago, forest belts on the Asian mainland had shifted: mixed-conifer and deciduous forest displaced boreal forest to the north as well as displaced steppe and desert to the west (the westward expansion was made possible by a stronger monsoon); montane deciduous and coniferous forests displaced alpine tundra in upland areas. Broad-leaved evergreen forest spread northward well into eastern China as well as upward in upland areas, in each case occupying regions now covered by deciduous forest. Tropical rainforest likewise expanded northward into southern China.

Ecosystem distribution throughout Southeast Asia was largely similar to that of today, with tropical rainforests in the islands giving

THE DISAPPEARANCE OF SUNDALAND

Sundaland is a region of islands and shallow seas that extends from Southeast Asia eastward to the edge of the Asian continental shelf, in particular to the Mindoro Strait between Palawan and the rest of the Philippines; the Makassar Strait, which lies between Borneo and Sulawesi; and the Lombok Strait, between Bali and Lombok.

During the Pleistocene, when sea levels were as much as 394 feet (120 meters) lower than today, much of Sundaland was above sea level: a vast coastal plain punctuated by highlands. As a result, Asian land animals spread throughout the region. The deep-water barrier between Sundaland and the islands to the east prevented Asian land animals from spreading eastward but also prevented Australian land animals from spreading westward.

As the Pleistocene came to an end sea levels rose rapidly, reaching about 197 feet (60 meters) below present sea level at the Pleistocene/Holocene boundary about 12,000 years ago, then to just above modern levels about 6,000 years ago. As the waters rose, what had once been the edge of a vast continent was transformed into part of the largest archipelago in the world.

—David M. Lawrence

way to tropical seasonal forests to the north, in Indochina, and to the south near Australia. Ecosystems in Australia were likewise similar to that of today, although arid woodlands and shrublands were more common in some portions of southern Australia, while mesic forests were more common in the eastern part of the continent. In the mountains of New Guinea and Sumatra, tree lines were higher than today, indicating warmer conditions than at present. All vegetation zones correspondingly shifted upward. In Japan, ecosystems were distributed much as they are today.

—David M. Lawrence

Bibliography

Bird, Michael I., David Taylor, and Chris Hunt. "Palaeoenvironments of Insular Southeast Asia during the Last Glacial Period: A Savanna Corridor in Sundaland?" *Quaternary Science Reviews* 24 (2005): 2228–2242.

Herzschuh, Ulrike, et al. "A General Cooling Trend on the Central Tibetan Plateau throughout the Holocene Recorded by the Lake Zige Tang Pollen Spectra." *Quaternary International* 154–155 (2006): 113–121.

Pickett, Elizabeth J., et al. "Pollen-Based Reconstructions of Biome Distributions for Australia, Southeast Asia and the Pacific (SEAPAC region) at 0, 6000 and 18,000 ^{14}C Yr BP." *Journal of Biogeography* 31 (2004): 1381–1444.

Prentice, I. Colin, Dominique Jolly, and BIOME 6000 Participants. "Mid-Holocene and Glacial-Maximum Vegetation Geography of the Northern Continents and Africa." *Journal of Biogeography* 27 (2000): 507–519.

Takahara, Hikaru, et al. "Pollen-Based Reconstructions of Japanese Biomes at 0, 6000 and 18,000 ^{14}C Yr BP." *Journal of Biogeography* 27 (2000): 665–683.

Beringia and the Peopling of the New World

Beringia stretches from the Kolyma River and the Kamchatka River in Russia eastward through Alaska to the Mackenzie River in Canada. During the last glaciation when sea levels were as much as 394 feet (120 meters) lower than today, continental shelf areas in the Arctic Ocean and Bering Sea were dry, greatly adding to the size of this already vast region.

Ice sheets were not ubiquitous features of the Ice Age landscape. Eastern Siberia was largely ice-free with the exception of alpine gla-

ciers at high elevations. Much of Alaska and northwestern Canada were likewise ice-free, the lack of ice largely being a function of low precipitation rather than high temperatures.

The massive Laurentide ice sheet lay to the east of the region (beyond the Mackenzie River), and the Cordilleran ice sheet lay to the south (from the Alaska Range east across the southern portion of the Yukon Territory to the Mackenzie Mountains). The uneven distribution of ice provided broad corridors for human colonization of the Americas from Asia.

During the last glacial maximum, about 18,000 years ago, tundra dominated the Beringian landscape. The dominant plant species of the tundra varied from region to region, ranging from herbaceous species in some locations to shrubs and heath in others. Many animal species roamed Beringia's plains and included woolly mammoth, American mastodon, woodland and tundra musk ox, western camel, Lambe's horse, steppe bison, elk, caribou, Dall's sheep, short-faced and grizzly bear, American lion, saber-tooth cat, wolf, and wolverine. Some animals migrated from North America to Asia; others migrated from Asia to North America. One species in particular, humans, moved across Beringia from Asia to find an entire hemisphere awaiting colonization.

While few scientists dispute that the ancestors of Native Americans came from Asia via Beringia, considerable controversy has raged over what path the migrants took. The standard hypothesis—the Clovis-First hypothesis—is that the ancestors of the Native Americans followed game from Siberia eastward into Beringia, spreading into Alaska and the Yukon, and then migrated along a gap between the Laurentide and Cordilleran ice sheets up the Mackenzie River Valley into southern Canada and the United States.

The hypothesis was advanced to explain the finds of Clovis artifacts, especially the distinctive Clovis point, near Clovis, New Mexico. The artifacts date to about 13,000 years before present; the ice-free corridor was believed to have opened up shortly before that. One of the strongest pieces of evidence for the Clovis-First hypothesis was the apparent lack of evidence of



This fresco at the National Anthropological Museum of Mexico depicts hunters migrating from Asia across the Bering Strait. North, Central, and South America were populated over a period of thousands of years after nomadic hunters crossed over a land bridge into North America about 35,000–9,000 BCE. (The Art Archive/National Anthropological Museum Mexico/Dagli Orti)

human habitation in the Americas prior to the appearance of Clovis culture.

The Clovis-First hypothesis did have problems, though. For one, the apparently rapid spread of human settlement to sites as far south as northern South America demanded an alternative migration route, a coastal route as opposed to an inland route. As more research was done on potentially ancient settlement sites, evidence accumulated to support the notion that Clovis culture could not be the first. The evidence is diverse, consisting of both archaeological and genetic data.

Sites in the Siberian portion of Beringia indicate that the ancestral populations of Native Americans had established themselves in the Arctic by 32,000 years before present. While there is evidence of bone artifacts apparently worked by humans as far east as the Yukon about 28,000 years ago, the earliest undisputed evidence of human habitation in North America comes from Swan Point, Alaska, and dates to about 14,000 years ago. The materials found at Swan Point are similar to items found at sites in eastern Siberia. A number of sites sprang up in eastern and western Beringia in the ensuing centuries.

For the human colonists to spread south, corridors had to open through the barriers formed by the ice sheets. A coastal route appears to have opened up by 15,000 years ago, while the route through the Mackenzie Valley did not open until at least 14,000 years ago. Evidence that humans used boats to make their way along the coast comes from a 13,000-year-old site on Santa Rosa Island off the California coast. The controversial Monte Verde site in Chile, which dates to 14,600 years ago, should spell the death knell of the Clovis-First hypothesis.

Genetic evidence supports a pre-Clovis colonization of the Americas. A recent analysis of Native American mitochondrial DNA (mtDNA) suggests a single founding population. That population went through a bottleneck—a drastic reduction in population size, possibly caused by a small group splitting off from a larger group—during the Last Glacial Maximum about 20,000 years ago. By 18,000 years ago, however, the population was expanding. Y-chromosome data also indicates a single founding population—

from the same region in Asia—that crossed into North America at the same time.

As the Holocene began, the great ice sheets were retreating throughout the region. Sea levels were rising, flooding coastal areas and cutting Beringia in two to form the Bering Strait between Asia and North America. By then, however, the Native Americans had established a beachhead and were on their way to transforming the American landscape.

—David M. Lawrence

Bibliography

- Goebel, Ted, Michael R. Waters, and Dennis H. O'Rourke. "The Late Pleistocene Dispersal of Modern Humans in the Americas." *Science* 319 (2008): 1497–1502.
- Pielou, E. C. *Climate after the Ice Age: The Return of Life to Glaciated North America*. Chicago: University of Chicago Press, 1991.
- Prentice, I. Colin, Dominique Jolly, and BIOME 6000 Participants. "Mid-Holocene and Glacial-Maximum Vegetation Geography of the Northern Continents and Africa." *Journal of Biogeography* 27 (2000): 507–519.

Postglacial North America

The North American landscape underwent a radical transformation as the last of the Pleistocene ice sheets receded. At the Last Glacial Maximum (about 18,000 years ago), two large ice sheets dominated the continent. The Laurentide ice sheet radiated out from northern Canada, reaching the location of the Ohio and Missouri rivers to the south, the Mackenzie River to the west, and the sea ice of Davis Strait to the east. The Cordilleran ice sheet covered much of the northwest of the continent, from Alaska and southern Yukon south to what is now the Snake River and Columbia River valleys.

The two ice sheets met along the continental divide, isolating Beringia to the northwest from the rest of the continent. To the south, the Cordilleran ice sheet likewise fused with the Pine-dale ice sheet radiating out from the central Rocky Mountains. Aside from helping create some of the continent's major river valleys, the glaciers bulldozed much of the landscape of the north, pushing ahead debris later left behind

THE DISAPPEARANCE OF THE CONTINENTAL SHELF

North America's continental shelves—the apron of gently sloping land that tilts from the coast to the ocean depths—were once part of the continent's coastal plains. During the Last Glacial Maximum (about 18,000 years ago), sea levels were much lower, about 394 feet (120 meters) lower than today.

In the Arctic, the Laurentide ice sheet was largely contiguous with the Arctic ice pack and Greenland ice sheet, but a broad belt of land was exposed along the Atlantic and Gulf of Mexico coasts. A much narrower belt was exposed along the Pacific.

As the glaciers melted, sea levels rose, and what was once coastal plain became continental shelf. Islands, such as Newfoundland in the Atlantic and Vancouver in the Pacific, formed as they were cut off from the mainland by rising waters. Valleys, such as the Chesapeake, Delaware, and San Francisco, flooded to become bays or fjords. The lower reaches of river valleys were transformed into submarine canyons, such as the Hudson River Canyon—an underwater extension of the Hudson River valley in New York.

—David M. Lawrence

as the deposits that make up Long Island, Nantucket, and Cape Cod.

In the west, the ice dammed up immense volumes of water to create massive glacial lakes such as Missoula in western Montana, Agassiz in the Great Plains of Canada and the United States, Lahontan in northwestern Nevada, and Bonneville in the Great Basin.

Lower sea levels (as much as 394 feet [120 meters] lower than today) exposed vast areas that now make up the continental shelves off the Atlantic, Gulf of Mexico, and Caribbean coasts and lesser areas along the Pacific coast and the Gulf of California. Newfoundland and the Grand Banks were connected to the North American mainland.

As with other portions of the Northern Hemisphere, ecosystems were compressed to the south. Polar tundra and polar desert occupied the southern fringes of the ice. Boreal forest (taiga) and cool mixed forests covered the eastern United States, with the exception of pine woodlands that were widespread in Florida and

along the Gulf Coast. Steppe and mixed woodlands dominated the Great Plains.

The topographic diversity of the Southwest makes generalizations difficult, but it was more or less a mix of alpine tundra at high elevations, subalpine forest and woodland at lower elevations, and pinyon-juniper-oak woodland in a mosaic with steppe and desert at lower elevations. Cool conifer forest covered the higher elevations of the Pacific coast, with steppe, desert, and woodlands at lower elevations.

Pinyon-juniper-oak woodland and steppe were common at lower elevations in northern and central Mexico. Conifer forests dominated the higher elevations. A savanna belt ran across southern Mexico into the Yucatan Peninsula, continuing eastward into the Greater Antilles. The tropical rain forest belt was restricted to the southern portion of Central America.

The retreat of the ice sheets was accompanied by significant changes in atmospheric circulation, weather, and ecosystems. The changes were most heavily felt in the southwestern and northern regions. Drying conditions led to expanding deserts and retreating forests in the Southwest and expanding grasslands on the Great Plains. Tundra retreated northward with the ice, giving way to boreal and mixed-conifer forest.

Rising temperatures and melting ice eroded the ice dams holding back the great glacial lakes. The dams periodically burst, leading to some of the greatest flash floods in earth's history. A series of such floods, draining Glacial Lake Missoula, burst down the Columbia Plateau toward the Pacific, creating the Channeled Scablands of eastern Washington state. Glacial Lake Agassiz burst in virtually every compass direction before its final cataclysmic flood into the Hudson Bay. As a result of the floods and the drying of the climate, many of the lakes shrank or disappeared altogether. Lake Winnipeg is the largest remnant of Glacial Lake Agassiz. The Great Salt Lake is the largest remnant of Lake Bonneville.

While many of the glacial lakes shrank, basins in areas once covered by ice filled with water. The Great Lakes were formed by meltwater from the Laurentide ice sheet as well as by drainage from Glacial Lake Agassiz.

The massive amounts of water from the shrinking ice sheets ultimately filled the ocean basins, raising sea levels and flooding areas that now form the continental shelves. The rising seas split Beringia, cutting North America off from Asia. Higher sea levels separated Newfoundland from the mainland and submerged the Grand Banks.

By the middle of the Holocene (about 6,000 years ago) temperatures had warmed significantly. Drier conditions spread as well, especially throughout the West. Ecosystems had shifted their ranges northward and in montane regions, upward toward higher elevations, so that their distributions were quite similar to ecosystem distributions today.

Tundra covered much of far northern Canada and Alaska. Boreal forest occupied a broad belt from the Bering Strait to the eastern shores of Newfoundland. Cool mixed forest spread across southeastern Canada and the northeastern United States, and deciduous forest, with occasional mixed conifer forest, covered the southeastern United States. The mixed woodlands that had been a major presence on the Great Plains had given way to steppe and prairie.

Desert (in the south) and steppe (in the north) had spread throughout low-elevation areas of the West and northern Mexico. As elevation increased, pinyon-juniper woodland gave way to pine woodland, subalpine forest, and alpine tundra. Cool conifer forest covered a greater portion of the highlands of the Pacific coast, again with a mix of desert, steppe, and woodland at lower elevations.

The northward extension of forest bands coupled with the expansion of deserts created a much more complex patchwork of ecosystems in Central America and especially Mexico. Deserts encroached upon woodland and steppe ecosystems. Savanna ecosystems took up a smaller portion of central Mexico, as tropical rainforests spread into southern Mexico. Tropical rainforests likewise displaced savanna in the Greater Antilles.

—David M. Lawrence

Bibliography

Pielou, E. C. *Climate after the Ice Age: The Return of Life to Glaciated North America*. Chicago: University of Chicago Press, 1991.

Thompson, Robert S., and Katherine H. Anderson. "Biomes of Western North America at 18,000, 6000 and 0 ¹⁴C Yr BP Reconstructed from pollen and Packrat Midden Data." *Journal of Biogeography* 27 (2000): 555–584.

Williams, John W., et al. "Late Quaternary Biomes of Canada and the Eastern United States." *Journal of Biogeography* 27 (2000): 585–607.

Postglacial South America

The continent of South America largely escaped the effects of Pleistocene glaciation. The mountainous spine of the continent, the Andes, was heavily glaciated, as were parts of the southern landmass of Patagonia including Tierra del Fuego, the archipelago at the continent's southernmost tip.

During the Last Glacial Maximum, about 18,000 years ago, tundra and cold steppe were present along the fringes of the ice. Steppe dominated the southern portion of the thin strip of coast along the Pacific Ocean. In the rain shadow of the Andes, desert spread across the nonglaciated plains of Patagonia. Cold desert gave way to semidesert in a thin strip of northern Argentina and Uruguay from the Andes to the Atlantic Ocean.

To the north, in the Altiplano (high plains) of the central Andes, tundra, alpine desert, and alpine semidesert prevailed. Desert dominated in the tropical latitudes along the Pacific coast until giving way to tropical savanna in the northwestern portion of the continent and tropical rain forest near the Isthmus of Panama.

In the lowlands east of the Altiplano—in eastern Bolivia, northern Argentina, and Paraguay—lay a small expanse of desert ringed by a larger area of semidesert. Much of southern and eastern Brazil was covered by grassland with the exception of a small patch of forest in the south-central part and tropical semidesert in the far east of the country.

North of the grasslands lay a wide belt of tropical savanna surrounding a large expanse of tropical rain forest in the upper reaches of the Amazon Basin and a smaller belt of rain forest in the Guianas. To the north of the savanna, in the Orinoco River basin, lay a belt of desert

THE RISE AND FALL OF LAKE TITICACA

Lake Titicaca is a large lake in the northern Altiplano (high plain) of the Andes along the Bolivia-Peru border. At 12,500 feet (3,810 meters) in elevation and more than 3,400 square miles (8,800 square kilometers) in area, it is the highest navigable lake in the world. It is also the largest lake in South America.

Early in the Quaternary, a vast lake, Mataro, occupied the northern and central Altiplano. Mataro's shoreline was more than 450 feet (137 meters) higher than today. Mataro eventually dried and then reappeared as Lake Cabana (1 million years ago; 300 feet [91 meters] higher). Cabana likewise dried and was replaced by a series of smaller lakes in the northern Altiplano: Ballivian (600,000 years ago; 165 feet [50 meters] higher), Minchin (30,000 years ago; 50 feet [15 meters] higher), and Tauca (13,000 years ago; 15 feet [5 meters] higher).

From the Early to the Middle Holocene (approximately 6,000 to 3,000 years ago), the levels of Lake Titicaca dropped as much as 330 feet (100



Lake Titicaca, on the borders of present-day Bolivia and Peru. (Totorean/Dreamstime)

meters) below current levels. At the end of that period, the waters rose rapidly and reached the current level about 2,100 years ago.

—David M. Lawrence

surrounded by a thin ribbon of semidesert. In the highlands of Colombia, conifer and mixed forest and grassland-shrub ecosystems were common.

Deglaciation of South America began in three stages beginning at about 17,500 years before the present and ending at 11,500 years ago. Precipitation patterns began their adjustment to more modern conditions about 1,600 years after temperatures began to rise. Glaciers, in general, began to retreat into higher elevations, although there was a short glacial advance in the area of the Strait of Magellan.

In Tierra del Fuego and southern Patagonia west of the Andes, tundra gave way to steppe and eventually forest. East of the Andes, the cold desert that had covered much of central and southern Patagonia had been replaced by semidesert. Steppe covered much of northern Argentina.

Throughout the Andes, tundra and alpine desert occurred at higher elevations along the fringes of alpine glaciers as well as at the highest elevational limits that vegetation could grow. Montane steppe spread through the Altiplano. In

the southern part of South America's Pacific coast, temperate forest and woodland and scrub replaced the coastal desert, which still occupied a sizable swath of the coastal area in the southern tropics. To the north, in northern Peru, the coastal desert gave way to semidesert, which in turn gave way to tropical rain forest in southern Ecuador.

East of the Andes, tropical ecosystems spread to cover most of the continent. Tropical savanna covered a broad band of inland territory from northern Argentina to central Brazil. Monsoon forest dominated much of eastern Brazil, with temperate evergreen forest in Uruguay and the extreme southern coast of Brazil. A sizable band of tropical rain forest grew along the southeastern coast. The tropical semidesert in the far eastern portion of the country gave way to thorn scrub and scrub woodland.

The range of tropical rain forest greatly expanded to cover virtually all of the Amazon River basin and extended into southern portions of the Orinoco Basin. Tropical montane forest

occupied Andean slopes along the edges of the Amazon Basin. In the Guianas, tropical savanna had been replaced by cloud forest—a type of cool rainforest—at the Pleistocene-Holocene transition, but drying climate in the Holocene created a patchwork of rain forest and savanna.

Tropical savanna replaced the belt of desert and semidesert north of the Orinoco. In Colombia, grassland-shrub ecosystems gave way to cool mixed forest. At lower altitudes, tropical seasonal forest replaced cool mixed forest; seasonal forest was in turn replaced by tropical dry forest and steppe at lower elevations, although tropical rain forest was also widespread.

—David M. Lawrence

Bibliography

- Behling, Hermann. "Late Quaternary Vegetational and Climatic Changes in Brazil." *Review of Palaeobotany and Palynology* 99 (1998): 143–156.
- Colinvaux, Paul A., and Paulo de Oliveira. "Palaeoecology and Climate of the Amazon Basin during the Last Glacial Cycle." *Journal of Quaternary Science* 15 (2000): 347–356.
- Heine, Klaus. "Tropical South America during the Last Glacial Maximum: Evidence from Glacial, Periglacial and Fluvial Records." *Quaternary International* 72 (2000): 7–21.
- Ortiz-Jaureguizar, E., and G. A. Cladera. "Paleoenvironmental Evolution of Southern South America during the Cenozoic." *Journal of Arid Environments* 66 (2006): 498–532.

■ Introduction: The Lifeways of Our Earliest Ancestors—The Miocene to Neanderthals

The evolution of the hominids, that is, great apes plus modern humans (*Homo sapiens*) and their humanlike ancestors, began in the geological era known as the Cenozoic, which began 65 million years ago. The later part of this era, the Neogene period beginning 22 million years ago, is divided into four epochs: the Miocene (23.03 million to 5.33 million years ago), the Pliocene (5.3 million to 1.806 million years ago), the Pleistocene (1.8 million to 10,000 years ago), and the Holocene (10,000 years ago to the present). By the time it opened, a wide range of mammals characterized the Neogene fauna, which included numerous species of apes. Much diversification subsequently occurred and produced a species from which humans and great apes (gorillas and chimpanzees) emerged. From which species and precisely when this occurred has not been established, though opinion focuses on circa 5.5 million years ago based on fossil evidence from East Africa plus molecular evidence. A key genus is *Australopithecus* and especially the species *Australopithecus afarensis* (known as Lucy), which emerged circa four million years ago, because it is considered to be the missing link, or one of several, between the quadripedal apes

and the upright or bipedal *Homo* species. The details of subsequent evolutionary links are equally controversial, although all later species are recognized as members of the genus *Homo*. The earliest species include *H. erectus*, *H. rudolfensis*, *H. ergaster*, *H. heidelbergensis*, and *H. habilis*, the ancestors of *H. neanderthalensis* and *H. sapiens*. Each of these species contributed to the technological base that distinguishes humans from other animals and played a key role in their lifeways. However, information on when and how various technologies, such as tool making and the domestication of fire, emerged is sparse due to limited fossil finds.

The Miocene apes, the oldest being the genus *Proconsul*, emerged in tropical forests in Africa. They then spread via the Arabian Peninsula into Asia and Europe, where they diversified as humid forests expanded due to climatic warming in the Middle Miocene. They were similar anatomically to modern apes, and most could exploit canopy resources as well as those on the ground. All were herbivores, with some being specialist fruit eaters (frugivores), and others were leaf eaters (folivores); some had thicker tooth enamel, which broadened their food base to include nuts. Genera include *Dryopithecus*

and *Sivapithecus*, which prevailed in Europe and Asia, respectively. The genus (species) that is ancestral to modern apes, including gorillas and chimpanzees, the closest relatives of humans, and humans themselves probably migrated into Africa from Eurasia in response to climatic cooling and drying that reduced forest extent and favored savanna. Opinion differs as to which genus this was, but *Dryopithecus* or its relative *Ouranopithecus* from Greece are the most likely. The ability to exploit open rather than forested habitats may have been a crucial factor in the evolutionary process that eventually gave rise to genus *Homo*, possibly in East Africa. Another debated issue concerns the timing of the split between the great apes and the australopithecines, the ancestors of modern humans, that is attributed to the Late Miocene and Early Pliocene (7.5 million to 4.5 million years ago).

The australopithecine subfamily is also controversial insofar as some researchers consider that it comprises only four genera, while others believe that it comprises six genera: *Sabelanthropus*, *Orrorin*, *Ardipithecus*, *Australopithecus*, *Paranthropus*, and *Kenyanthropus*. These genera existed between circa seven million and two million years ago. Their fossil remains have been found only in Africa, notably East and South Africa, with the fossils of one genus, *Sabelanthropus*, found in Chad in north-central Africa in 2001 and 2002. The genera *Sabelanthropus* and *Orrorin* comprise just one species; the former is the oldest, dated to circa seven million years ago, with *Orrorin*, found in the Tugen Hills of Kenya in 2000, being the next oldest at six million years ago. Given the paucity of remains, remarks about the respective lifeways of these species must remain conjectural. For example, in relation to bipedalism, uncertainties surround *Sabelanthropus*, but *Orrorin* walked upright but had climbing abilities; both lived on fruit and vegetable matter, though the latter may also have been a meat eater. *Orrorin* inhabited a dry evergreen forest rather than savanna or grassland; this questions the origin of bipedalism, which, as stated above, is usually associated with savanna environments. The *Ardipithecus* genus, which existed between circa 5.8 million and 4.4 million years ago, contains two species: *A. kadabba*, the older species, and *A. ramidus*.

Fossils of both species have been found in the Afar Depression in the Awash region of Ethiopia and are distinguished on the basis of dentition. Both were bipedal, and although plant remains from their sedimentary context indicate woodland and grassland in a floodplain environment, it cannot be ascertained if either *Ardipithecus* species were specific to one of these habitats or were more versatile exploiters of all habitat types. The *Australopithecus* genus comprises five species: *A. anamensis*, *A. afarensis*, *A. africanus*, *A. babrelgazhali*, and *A. garhi*, in order of age. Fossils of the first of these, dated to circa four million years ago, are limited to three sites in East Africa near Lake Turkana and one site in the Middle Awash region of Ethiopia. The species has tooth enamel that is thicker than *Ardipithecus* and larger molars that indicate a larger proportion of coarse food types in its diet. It may have been able to climb trees in common with its predecessors. *A. afarensis* is a particularly well-known species given publicity surrounding the discovery of the 40 percent skeletal remains known as Lucy in Ethiopia's Middle Awash region in 1974 and the attribution of preserved footprints at Laetoli, Tanzania, to the species.

Further finds have been uncovered in Ethiopia. The species is dated to circa 3.5 million to 3.8 million years ago and has characteristics that are apelike and humanlike, that is, small brain size, curved fingers, and a pelvic structure that indicates bipedalism. This suggests that bipedalism preceded brain enlargement, which occurred in later hominids. *A. afarensis* is considered to be a direct ancestor of the *Homo* genus and hence of modern humans. This was not, however, a meat-eating species. *A. africanus* fossils, dated to between three million and two million years old, are found at Taung, Makapansgat, Gladysvale, and Sterkfontein in South Africa, the Taung Child being the most famous. This bipedal species has a larger brain size than *A. afarensis* and other anatomical features that are more humanlike, though it retains curved fingers. It may have been the direct ancestor of the genus *Paranthropus* that existed at the same time as early species of *Homo*. *A. babrelgazhali*, found in Chad, and *A. garhi*, found in Awash, Ethiopia, existed circa 3.5 million to 2.5 million years ago; both are represented by relatively few fossils,

and both are probably members of lateral branches of hominin evolution. It is possible that *A. garhi* was the first hominid species to produce stone tools, given the presence of crude tools in associated sediments from Ethiopia.

Homo habilis (the name referring to skill), the first species of *Homo*, emerged circa 2.5 million years ago in East Africa and died out circa 1.5 million years ago. It is questionable as to which australopithecine species was the immediate ancestor of *H. habilis* though it may have been *A. ramidus* and there is debate about the place of *H. habilis* as an ancestor of *H. sapiens*. It is also possible that *H. habilis*, *H. rudolfensis*, and *H. ergaster* were contemporaneous.

Fossil finds are predominantly from the Rift Valley of East Africa in association with flake tools known as the Olduvan industry. These tools were associated with opportunist scavenging of animal carcasses, which reflects a shift in food procurement strategy from predominantly vegetarian to omnivore. Moreover, *H. habilis* was itself a hunted species, notably by big cats. *H. ergaster*, considered by some paleoanthropologists to be *H. erectus*, lived between 1.8 million and 1.4 million years ago, had a larger brain than *H. habilis*, and reached a height of circa 5.2–6.2 feet (1.6–1.9 meters). It is associated with a new type of stone tool industry known as the Acheulian, which contains a range of artifacts used for a variety of purposes such as meat and wood cutting. *H. erectus*, so-named to reflect its upright status, emerged circa two million years ago in Africa with a larger brain size than its ancestors. It was the first hominid to migrate out of Africa to Asia and Europe, used the sophisticated Acheulian tool kit, and was a hunter-gatherer rather than a scavenger. The species may have lived in small groups, though it had no more than a primitive language and had the ability to start and control fire. It persisted longer than most of the ancestors of modern humans, though much depends on the classification of so-called *erectus*-grade fossils; some argue that the Asian fossils reflect true *H. erectus* and that European and African fossils are different species of *Homo*. There is also debate as to whether *H. ergaster* or *H. erectus* gave rise to the later *Homo* species such as *H. antecessor*, *H. heidelbergensis*, *H. neanderthalensis*, and *H. flores-*

siensis. All were hunter-gatherers, used fire, were organized in groups, made stone tools, and were thus able to manipulate their environment and resources to some degree. *H. antecessor*, the remains found at Gran Dolina in northern Spain, lived between 1.2 million and 800,000 years ago and probably practiced cannibalism. At Boxgrove in southern England, the remains of *H. heidelbergensis*, circa 500,000 years old, are associated by butchered bones of rhinoceros, horse, and red deer. This species may be the direct ancestor of *H. neanderthalensis*, which lived between 350,000 and 30,000 years ago. Both had a primitive language. *H. neanderthalensis* lived at the same time as *H. sapiens* in Europe and Asia and had a similar brain size. They were active hunters and are associated with several stone tool assemblages. Important features of Neanderthal culture include the burial of the dead and care for the infirm.

—A. M. Mannion

Bibliography

- Cela-Conde, C. J., and F. J. Ayala. *Human Evolution: Trails from the Past*. Oxford: Oxford University Press, 2007.
- Lockwood, C. *The Human Story: Where We Come From and How We Evolved*. London: Natural History Museum, 2007.

Diets of Our Miocene and Early Pliocene Ancestors

The Superfamily Hominoidea, which includes all living and fossil apes and humans, is a group of anthropoids who have a lower molar with a shared Y-5 cusp and fissure pattern. The earliest fossil with this molar pattern is *Aegyptopithecus* from the Fayum in Egypt, which lived during the Oligocene epoch around 30 million years ago. In the Early Miocene epoch, from 25 million to 16 million years ago, there were many different kinds of these apes. Their fossil remains come from a series of sites near Lake Victoria in East Africa. While they have the Y-5 lower molar pattern, they were quadrupeds like *Aegyptopithecus*, with monkeylike bodies. Around 16 million to 17 million years ago, a land bridge was created between Africa and Eurasia roughly where the Middle East is today. Soon afterward, hominoids are found throughout Asia

► DETERMINING EARLY HUMAN DIET— AN ALTERNATIVE APPROACH

Anatomy remains the traditional way of determining early human adaptation and diet, but stable carbon isotopes offer a new perspective. Isotopes are chemical elements with different atomic weights. Carbon has three isotopes: ^{12}C , ^{13}C , and ^{14}C . The first two are stable isotopes; the third, ^{14}C , is unstable or radioactive and provides the basis for radiocarbon dating.

The ratio of ^{12}C and ^{13}C is used to reconstruct diet or past environments. It reflects the way that plants discriminate ^{13}C during photosynthesis. The ratio is lower in C3 plants (trees, bushes, shrubs, and forbs) than in C4 plants (mainly grasses). Values change as one goes up the food chain from plants to herbivores to carnivores. Julia Lee-Thorp and her colleagues studied carbon isotope ratios in bones and teeth of *Australopithecus africanus* and *Paranthropus robustus*. While there were some dietary differences, both were making use of C4 resources. But these could have been things like tubers or even termites.

Isotopic analysis of soil carbonates can help determine what the vegetation patterns were like in key stages of human evolution. East African vegetation is supposed to shift from forest to grassland starting in the Middle Miocene, but this happened at different times in different places.

—Pamela R. Willoughby

Bibliography

Lee-Thorp, J. A., M. Sponheimer, and N. J. Van der Merwe. "What Do Stable Isotopes Tell Us about Hominid Dietary and Ecological Niches in the Pliocene?" *International Journal of Osteoarchaeology* 13 (2003): 104–113.

and Africa. By the Late Miocene (eight million to five million years ago), most were extinct or reduced in distribution. But in Africa, the Late Miocene is associated with the appearance of the first possible human ancestors. Referred to as hominids (Family Hominidae) or hominins (Tribe Hominini), they share skeletal adaptations for upright walking using two legs, or bipedalism. Possible hominids from the Late Miocene include *Ardipithecus* from the Middle Awash in Ethiopia, *Sabelanthropus* from Chad,

and *Orrorin tugenensis* from central Kenya. But little is known about the posture and movement of any of these forms. Postcranial or body bones are poorly known, so we are not sure if any of these forms were bipedal.

In the Pliocene epoch, from 5 million to 1.8 million years ago, the first australopithecines appeared in East and southern Africa. The best known of these is *Australopithecus afarensis* from the Hadar area of Ethiopia, which lived between four million and three million years ago. It shows a combination of ape and human traits. While clearly adapted for bipedalism (walking on two legs) on the ground, the retention of long arms and curved digits in both the hands and feet argue for some degree of living in the trees. In terms of the brain, face, and teeth, *Australopithecus afarensis* was extremely apelike. Other forms include *Australopithecus africanus*, a species that lived between 2.5 million and 3 million years ago in South Africa, and the later robust forms usually put in the genus *Paranthropus*. *Paranthropus* appears around the same time as the earliest members of our own genus, *Homo*.

The majority of early ape and human fossils are jaws and teeth. Their morphology can be studied for features that might help us determine diet. These include jaw size and strength, tooth size, tooth enamel thickness, and pitting, wear, and other marks on the teeth. All early humans except for *Ardipithecus* exhibit thick tooth enamel, suggesting that they were eating hard, brittle foods. *Ardipithecus* has the thin enamel that one sees today in chimpanzees, animals that prefer to eat fruits.

One of the classic debates about reconstructing early human diet involves *Paranthropus* (or *Australopithecus*) *robustus* (South Africa) and *Paranthropus* (or *Australopithecus*) *boisei* (East Africa), two species that lived between 2.6 million and 1 million years ago. They are differentiated from the earlier or "gracile" australopithecines (*Australopithecus africanus*) by their enlarged back teeth (premolars and molars) and changes to the face and jaws, which are adaptations for enlarged chewing muscles. Anatomists suggested that *Paranthropus* ate hard, compact foods that caused a lot of tooth damage, while *Australopithecus africanus*, like early *Homo*, had a more generalized diet.

Recent studies of dental microwear have argued differently. Modern primates that eat hard and tough foods have pitted teeth with complex damage patterns, but not *Paranthropus boisei*. It resembles other Pliocene hominids. Another study suggested that *Australopithecus africanus* ate tough foods, while the diet of *Paranthropus robustus* included more brittle items. But both had a varied overlapping diet. Our own genus, *Homo*, appeared around 2.5 million years ago and lived side by side with *Paranthropus*. Members of *Homo* have always been argued to have such a generalized diet, with increasing use of meat over time. The enlarged brain of *Homo* had to be fueled by meat protein. It is not a coincidence that early *Homo* fossils are associated with the first flaked stone tools; these were probably used to butcher animals for meat. But most archaeologists argue that intentional hunting of animals for food only began with *Homo erectus* or *Homo ergaster* around 1.8 million years ago. This enabled *Homo erectus* to spread out of Africa into Asia.

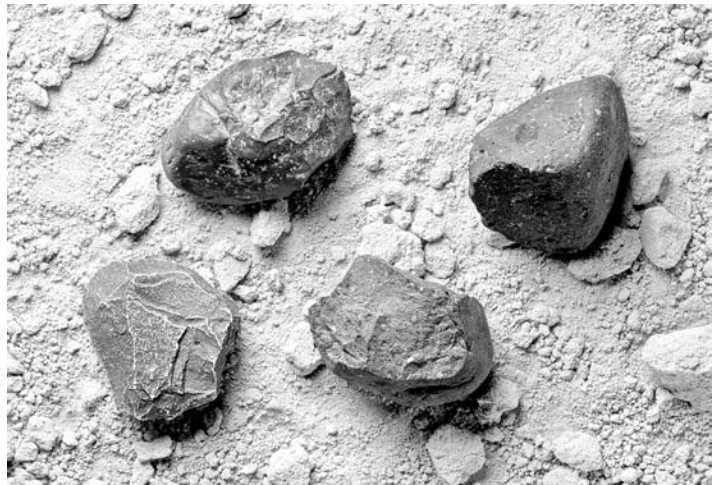
—Pamela R. Willoughby

Bibliography

- Lee-Thorp, J. A., M. Sponheimer, and N. J. Van der Merwe. "What Do Stable Isotopes Tell Us about Hominid Dietary and Ecological Niches in the Pliocene?" *International Journal of Osteoarchaeology* 13 (2003): 104–113.
- Scott, R. S. et al. "Dental Microwear Texture Analysis Shows Within-species Diet Variability in Fossil Hominins." *Nature* 436 (2005): 693–695.
- Ungar, P. S., F. E. Grine, and Mark F. Teaford. "Dental Microwear and Diet of the Plio-Pleistocene Hominin *Paranthropus boisei*." *PLOS One* 3 (2008): 2044.

Olduwan Times Lifeways

The appearance of stone tools in Africa around 2.5 million years ago marks the beginning of the Olduwan Industrial Complex. The oldest stone tools come from Gona, Ethiopia, and although they are not directly connected with hominid fossils, it is assumed that early *Homo* created the assemblage. Later sites, such as Olduvai Gorge and Koobi Fora, confirm hominin involvement. The manufacture and use of stone tools was an extremely significant factor in the lifeways of *Homo habilis* (and *Homo rudolfensis*).



Collection of Olduwan tools discovered at Olduvai Gorge, Tanzania, dating to about 1.8 million years ago. (The Natural History Museum, London/The Image Works)

Olduwan artifacts were simple tools created by knapping (hitting) a rock in order to remove stone flakes. The rock from which the flakes were removed is called the core. Both the core and the flake could be used as tools. A chopper is defined as a core tool from which flakes were removed from one face of an end of a cobblestone (creating a unifacial chopper) or from both faces of the same end (bifacial chopper). Pebble tools are also core tools but had more extensive knapping that often covered the entire surface of the stone. Flake tools, on the other hand, were made on the chips of stone removed from the core. They could have been used as such or further modified through detailed knapping along the edge(s). Choppers, pebble tools, and worked flakes are commonly found in Lower Paleolithic sites. The sharp edges of the all-purpose Olduwan tools may have been used to prepare plant or animal food.

Vegetal foods make up 60–80 percent of the diet of most modern hunting and gathering groups, so it is likely that this was also the case for the early hominins. Since plant remains rarely survive in the archaeological record, however, the types of plants consumed and their importance cannot be assessed. Evidence of meat consumption consists of scattered stone artifacts together with fragments of animal bone, some of which were cut with sharp flake tools or broken to remove the caloric-rich marrow. Such

assemblages were found at Hadar, Olduvai Gorge, and Koobi Fora. Distinguishing butchered bones from natural animal death assemblages is difficult, however. Taphonomic processes, including trampling, root growth, soil movement, and carnivore activity, can create similar-looking bone breaks, cut marks, and spatial patterns.

How the hominins acquired meat remains unclear, although most scholars suggest that scavenging took place. Hunting prey requires skill and communication, which may not have been advanced enough between 2.5 million and 1.7 million years ago. Incipient human cognitive and communicational abilities are implied, however, by the tendency of right-handedness tool manufacture. Fifty-seven percent of the Koobi Fora flakes were created by right-handed knappers, while a modern chimpanzee assemblage would contain tools more or less equally divided between left- and right-handers. The lateralization of the brain and marked functional separation of the cerebral hemispheres of modern humans may have already begun.

Other cultural aspects of Olduwan lifeways remain elusive. The early hominins may have carried their multipurpose Olduwan tools from site to site, which differentiates them from the expedient chimpanzee tool users, but site alteration, food sharing, a division of labor between sexes, and other expressions of social behavior cannot be distinguished. Simple shelters and living floors, representing a seasonally occupied home base, were identified at Olduvai Gorge by Mary Leakey in 1971, but a reinvestigation of these features suggested that tree roots, not hominin construction, were responsible for their creation. Moreover, there is no confirmed proof of shelter construction until 300,000 years ago at Terra Amata, France. There is, however, some evidence to suggest the caching of tools at sites, which does imply a plan to return to a specific place. Moreover, concentrations of archaeological remains found at a number of Olduwan sites may reflect the accumulation of garbage (discarded animal bones, tools, and waste flakes from tool manufacture), which is a distinctively human trait. Unfortunately, confirming that these artifact concentrations were made by hominins rather than by natural processes is dif-

ficult. Therefore, determining whether *Homo habilis* was using a home base, a lifestyle similar to modern hunting and gathering groups, is uncertain.

Evidence for the early use of fire is also ambiguous, as charcoal has little chance of survival at Olduwan sites. Concentrations of burned bone at Swartkrans in South Africa, reddened patches of sediment at Koobi Fora in northern Kenya, and burned clay at Chesowanja in central Kenya may be the result of campfires, but these features can be created by brushfires as well. Direct archaeological evidence for the oldest confirmed use of fire comes from Locality 1 at Zhoukoudian, China, where thick ash deposits, ash lenses, burned stones and bones, and charcoal pieces date to about 600,000 years ago. This site, however, postdates the Olduwan period by at least one million years.

Little of the Olduwan lifeways is known for certain, but it is clear that this was a period of significant change. The evolution of the first *Homo* species and the initial use of stone tools were likely the result of adaptations to a changing environment between three million and two million years ago. The shrinking of the forests due to the cooling and aridification of Africa meant spending increasing amounts of time on the expanding grasslands. The nearly upright bipedal posture, increased cranial capacity, and flexibility at the shoulder, arms, and hands allowed the hominins to compete in this environment. Tools helped them access new food resources, including meat and marrow, that diversified their diet and allowed for adaptive success over other hominids.

Although the fossil evidence is still limited for the Olduwan period, tool manufacture and butchering activities added an archaeological component to the record, thereby increasing our ability to study this stage of hominin development. Examining the early *Homo* fossils together with the archaeological remains reveals that although *Homo habilis* and *Homo rudolfensis* were not yet human, they may have exhibited early humanlike behavior. As more sites are discovered, our understanding of the Olduwan lifeways will hopefully become clearer.

—Shawn Babel

Bibliography

- Haviland, W. A. *Human Evolution and Prehistory*. 6th ed. Toronto: Thomson Learning, 2003.
- Hovers, E. and D. R. Braun, eds. *Interdisciplinary Approaches to the Oldowan: Vertebrate Paleobiology and Paleoanthropology*. The Netherlands: Springer, 2008.
- Isaac, G. L. "The Archaeology of Human Origins: Studies of the Lower Pleistocene in East Africa, 1971–1981." Vol.2, *Advances in World Archaeology*, edited by F. Wendorf and A. E. Close. New York: Academic Press, 1984.
- Leakey, M. D. *Olduvai Gorge*, Vol. 3, *Excavations in Beds I and II, 1960–1963*. Cambridge: Cambridge University Press, 1971.
- Potts, R. "Home Bases and Early Hominids." *American Scientist* 72 (1984): 338–347.
- Schick, K. D., and N. Toth. *Making Silent Stones Speak: Human Evolution and the Dawn of Technology*. New York: Simon and Schuster, 1993.
- Ungar, P.S. *Evolution of the Human Diet: The Known, the Unknown, and the Unknowable*. New York: Oxford University Press, 2007.

The Lifeways of *Homo erectus*

Homo erectus was a highly mobile species and was the first hominin species that left Africa and explored Eurasia. *Homo erectus* made simple tools out of stone, of which the most advanced is the hand ax. They employed a scavenging behavior, but the sophistication of their hunting skill can be questioned. Studies of the larynx, which houses the vocal apparatus, indicate that *Homo erectus* could not produce complex sounds. Most likely, *Homo erectus* language was simple in construction and restricted in its range of expressions. The larger brain might be related to a more complex lifeway. There is some controversial evidence of the controlled use of fire, but consensus is emerging that *H. erectus* did control it. The successful dispersal over Africa and into Eurasia can be attributed to an efficient way of walking with a striding gait combined with the availability of suitable habitats at that time and not to advanced tool technology and related cognitive abilities.

Stone tools made by *Homo erectus* are simple and include choppers, scrapers, points, and hand axes, often of a large size. Some tools show retouch and edge modification, indicating that

HUNTERS OR SCAVENGERS—THE ROLE OF MEAT IN THE DIET OF EARLY *HOMO*

Most scholars now agree that meat made up part of the diet of *Homo habilis* and *Homo rudolfensis*. Just how significant meat was to early *Homo* and how it was acquired remain unclear, however. Assuming that these hominins consumed a similar diet to modern hunter-gatherer groups, 60–80 percent of their food would have consisted of vegetal produce and 20–40 percent of meat and marrow. Evidence of meat consumption exists as concentrations of fragmented animal bones with stone tools at sites such as Olduvai Gorge and Koobi Fora. Several of the bones were cut with sharp stone flake tools or broken with Olduvai choppers to remove the meat and caloric-rich marrow. Distinguishing butchered bones from a natural bone assemblage is difficult, though, as taphonomic processes (fossilized), including trampling and carnivore activity, can create similar-looking fracture patterns and cut marks.

The acquisition of meat was likely through scavenging because hunting animals requires skill and communication, attributes that may not have been advanced enough at that time. There are several cases where the cut marks are overtop tooth marks on the bones, revealing that early *Homo* butchered the animals after carnivores had fed on them. There are, however, bones with tooth marks overtop cut marks, implying the opposite order of consumption, but most of these bones were from older animals that may have died of natural causes. Even if early *Homo* were scavengers, they would have needed to be fairly efficient in order to reach and butcher the animal before other carnivores arrived.

—Shawn Bubel

they were used more than once. The earliest stone tools attributed to *Homo erectus* consist of simple core choppers and rough flake scrapers and were made some 1.8 million years ago at Omo and Turkana in East Africa. The technique is considered a continuation of the Olduvai technology. Around 1.2 million years ago, a change took place in the shape of the stone tools made by early *Homo erectus*. The first hand axes and cleavers (bifaces) appear. The stone was now

➤ DIET AT ZHOUKOUDIAN

Although Zhoukoudian Locality 1 is one of the oldest archaeological sites for which there is abundant data about diet, the interpretation of this evidence remains controversial. Part of the evidence comes from the first excavations when field methods were rudimentary, and even for the more recently examined material, a tendency persists toward a global interpretation instead of a stratum-by-stratum reconstruction. Despite ambiguities, some conclusions seem irrefutable.

Both meat and some plant foods were eaten, although it is unclear as to the proportions of each. Since the site features were intermittently inhabited by other large predators, it is unclear just what meat the hominids ate. It must have been mostly wide-antlered deer, *Euryceros pachyosteus*, since the majority of bones, largely fractured and some burnt, belonged to this species. Since the main cave adjoins a natural trap, it was relatively easy to kill injured animals with wooden clubs and spears, used even by modern chimpanzees. Other apparent food game includes smaller deer species and seemingly mollusks. The rare bones of humans were subjected to the same treatment as accorded game animals.

Hackberries were clearly consumed, either raw or ground up for cooking into dry cakes on the ubiquitous rounded river pebbles heated by the fires. Both animal and plant foods were at least sometimes cooked by the omnivore *Homo erectus*.

—Ralph M. Rowlett

worked on both sides and symmetrically. This technique is called Acheulean. A famous group of sites is Olorgesailie in southern Kenya, dated to around 0.9 million years ago. Hand axes of the Acheulean type are typically oval and teardrop-shaped. Outside Africa, the first cobble or chopping tools appear in China around 800,000 years ago at Yunxian and Lantian, coinciding with the first firm evidence of *Homo erectus* in China.

The earliest evidence of tool making in Asia comes from Longgupo, dated to 1.8 million years ago. Its hominid remains are attributed to an early *Homo*, yet they are still under debate. There is, though, no doubt so far about the nature of the artifacts. They are primitive and crude

stone tools. The site itself was not a living floor but instead is better interpreted as a hyena den. *Homo erectus* often visited carnivore dens, possibly to collect bones, antlers, and horns for making tools or for other purposes. Primitive tools were also discovered at Dmanisi in the Republic of Georgia, in association with *Homo erectus* fossils (also named *Homo georgicus*), possibly dated to 1.8 million–0.9 million years ago.

At Zhoukoudian in China, no less than 100,000 stone tools and flakes were excavated, ranging in age from 400,000 to 250,000 years ago and possibly older. The cave itself was not likely used as a living place for *Homo erectus*. Instead, the cave was primarily used by hyenas or bears. *Homo erectus* came there regularly to get some fleshy remains and marrow, as evidenced by cut marks on some bones made by quartz flakes. Carnivore gnawing and bite marks sometimes overlay the cut marks. Also, *Homo erectus* itself fell prey to the large carnivores. Typically in the past damaged human skulls were thought to be proof of cannibalism but are now explained as hyena activities. Zhoukoudian is only one of the many sites with combined activity of large carnivores and *Homo erectus* scavenging behavior.

Whether *Homo erectus* knew how to kindle and keep a fire or not is not fully resolved. In Africa, some sites are seen as evidence for deliberate and controlled use of fire by *Homo erectus*, such as Swartkrans in South Africa and Chesowanja in Kenya, dating to about 1.5 million years ago. In China the evidence comes from Zhoukoudian, where several ash layers were found. The ash is piled up on the limestone floor of the cave up to 19.6 feet (6 meters), indicating that *Homo erectus* used the cave for many years and kept a fire. This knowledge of fire was challenged in the mid-1980s by Lewis Binford and colleagues, who argue that the ash was not produced by controlled fire in a hearth.

No evidence whatsoever has been found for symbolic behaviors among *Homo erectus*. So far no symbolic objects were unearthed. Purposeful burials are unknown. Carnivore dens that were frequented by *Homo erectus* also, as a rule, contain bones and skulls of *Homo erectus* itself, which ended up there as a result of animal scavenging.

—Alexandra van der Geer

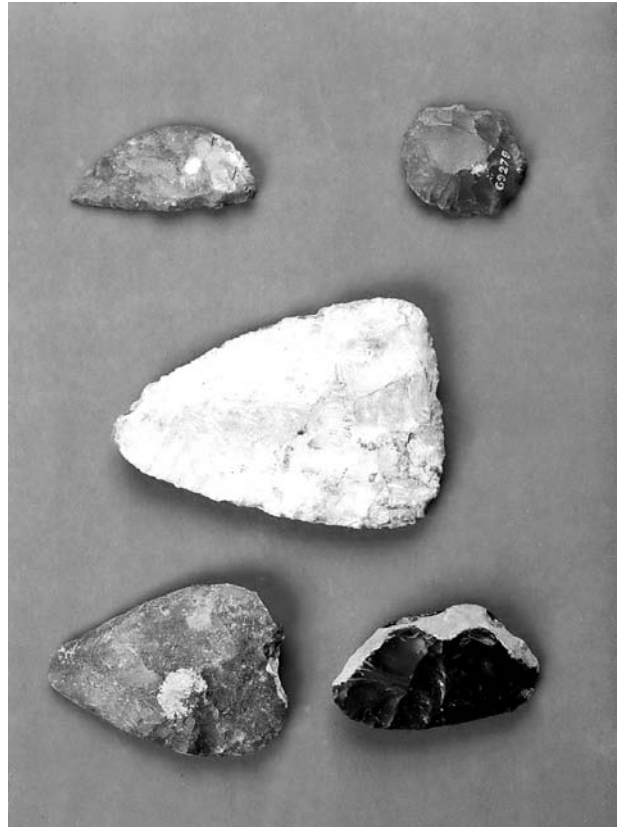
Bibliography

- Crabtree, Pam J., and Douglas V. Campana. *Exploring Prehistory: How Archaeology Reveals Our Past*. 2nd ed. New York: McGraw-Hill, 2005.
- Petraglia, Michael D., and Ravi Korisettar, eds. *Early Human Behaviour in Global Context: The Rise and Diversity of the Lower Palaeolithic Record*. London: Routledge, 1998.
- Wanpo, Huang, et al. "Early *Homo* and Associated Artefacts from Asia." *Nature* 378(6554) (November 16, 1995): 277–278.
- Wu, X., and F. E. Poirier. *Human Evolution in China*. Oxford: Oxford University Press, 1995.

Neanderthal Lifeways—Hunting, Gathering, and Scavenging

Most of the stone tools found at Neanderthal sites belong to the Mousterian Industry of the Middle Paleolithic period (250,000–40,000 years ago). It is important to note, however, that Mousterian tools were also made by early *Homo sapiens*. It is therefore necessary to distinguish the assemblages created by the Neanderthals living in Europe and western Asia from the others. Moreover, the Châtelperronian Industry is linked with the latest Neanderthals that lived alongside *Homo sapiens* populations in Europe. These artifacts provide insight into Neanderthal lifeways just before they became extinct.

Mousterian tools were made of flakes and blades knapped from stone cores. They commonly include scrapers, projectile points, and denticulates. Mousterian artifacts were typically created from prepared stone cores, meaning that rock nodules were first shaped in order to knap off particular flakes that were further modified into tools. Mousterian core preparation likely extended from the careful shaping of Acheulean hand axes during the Lower Paleolithic period. Specifically, the Levallois technique of core preparation involved removing a number of waste flakes in a systematic way to create the desired core shape. With the core prepared, a predetermined sized and shaped flake was struck. These flakes were typically long and had a sharp cutting edge. Based on microwear analysis, it is now clear that some of these flakes were used as such, but many were further shaped into tools. This modification was achieved by pressure flaking, also called retouching, the edge of a flake blank.



Selection of flint tools, Mousterian, 50,000–35,000 BCE. (Musée des Antiquités Nationales, St. Germain-en-Laye, France/The Bridgeman Art Library)

The location and shape of the retouch are used to define the tool. A double convex sidescraper, for example, was retouched on both edges of the flake, and these modified edges were rounded outward from the midline of the tool. A point is defined as a flake on which two continuously retouched edges converged at the tip, while denticulates were retouched to produce a serrated edge. This classification system, which remains in use today, was introduced by François Bordes to formalize a Mousterian typology.

Although the names of the tools imply a particular function, this is not necessarily the case. Advances in residue and microwear analysis revealed that only the denticulates were used in just one way, that being shaving or whittling wood. Scrapers were used to cut and scrape wood, flesh, bone, hide, and soft plant material. Points were also used mostly on wood, but polishes and striations on the base of some suggest that they were fastened (hafted) to wooden

➤ EARLY CANNIBALISM IN ANCIENT EUROPE

An anthropological controversy surrounds the issue of whether Neanderthals practiced cannibalism. Artifacts that show tooth marks and considerably brutal treatment of Neanderthal corpses provide substantial evidence that cannibalism was practiced among groups of Neanderthals. However, Neanderthals also are well known for burying their dead, and this leads some anthropologists to contend that perhaps their treatment of corpses illustrates a ritualistic preparation previous to burial.

Professor Gorganovič-Kramberger from Croatia discovered various scattered bones in a Neanderthal excavation at Krapina in the province of Zagreb that offered evidence that the bones had been split. It was speculated that this was proof of extraction of marrow for consumption, that is, that cannibalism had taken place among this particular group of Neanderthals. In other findings there was substantial evidence that Neanderthal skulls have been opened to extract the brain, and some have been found to be displayed, perhaps as trophies. In

addition, tooth marks found on bones from animals consumed by Neanderthals have also been found on bones from human corpses. The combination of all these findings is suggestive that Neanderthals perhaps practiced some form of cannibalism.

Other anthropologists, however, contend that these examples are not proof of cannibalism among Neanderthals but instead are evidence of ritualistic practices in regard to burial and commemorating the dead. At this point the evidence remains ambiguous.

—Abraham O. Mendoza

Bibliography

Finlayson, Clive. *Neanderthals and Modern Humans: An Ecological and Evolutionary Perspective*. New York: Cambridge University Press, 2004.

Jordan, Paul. *Neanderthal: Neanderthal Man and the Story of Human Origins*. London: Sutton, 1999.

handles. With the exception of a few points from Kebara and Qafzeh in Israel, there is little evidence to suggest that points were hafted to wooden spears and thrown.

The Mousterian Industry as a whole is remarkably uniform throughout the Middle Paleolithic period and between sites. The slight differences in the Neanderthal tool assemblages may well be connected to the available raw stone material, where sizable nodules of high-quality flint resulted in larger and better-formed tools. Various economic uses of the artifacts could have created different assemblages as well, although this is the least likely explanation since many of the scrapers served as multipurpose tools. Tools in different stages of use may also account for assemblage variability because resharpening modifies the shape of the artifact. With this in mind, assemblages with smaller heavily retouched artifacts reveal intensified tool use.

Much of the evidence used to understand how the Neanderthals adapted to their environment comes from the area around Les Eyzies, France, where more than 200 Middle Paleolithic sites have been found. Most of these sites are in

caves or rock shelters, which offer excellent archaeological preservation conditions. The environment supplied an abundant source of water and raw materials with which to manufacture stone tools. Shelter could be found in the rock cliffs, although open-air sites were used as well. The reindeer living in the area provided a large amount of the protein in the Neanderthals' diet. An analysis of the age of the butchered reindeer remains showed that this region was occupied year-round.

The Neanderthals are thought to have been big game hunters and followed large herds of animals across the open grasslands and tundra. Faunal remains from various sites substantiated the consumption of reindeer, red deer, fallow deer, bison, wild oxen, wild sheep and goats, gazelles, and horses. Bones from elephants (mammoths) and rhinoceroses have also been found albeit in much smaller quantities. How these animals were acquired is more difficult to assess. As mentioned above, very few hunting weapons have been found, and the strategies that the Neanderthals would have used were rarely preserved. Moreover, scavenging cannot be ruled

out, as several campsites contain only limb elements that may have been taken from the kills of other predators or natural deaths. What does seem clear is that *Homo neanderthalensis* took advantage of the animal populations present at the time. Environmental reconstructions across time and space revealed fluctuations in certain animal species, which was often matched by the faunal assemblages created by the Neanderthals.

Other cultural evidence revealing the lifeways of the Neanderthals includes the burial pits that were reported from La Chapelle-aux-Saints, La Ferrassie, and Le Roc de Marsal in France; Kebara Cave in Israel; and Shanidar Cave in Iraq. Neanderthals were likely buried at many other sites as well, as this is the only plausible explanation for the nearly complete skeletons that were found. The burials were relatively simple, however, and lacked grave goods of any sort. Neanderthal bones from Crombe-Grenal and the Abri Moula in France were cut and burned, so the idea of cannibalism must also be considered. This could also explain the large number of extremely fragmented remains of at least 20 individuals from Hortus Cave in France and 14 or more from Krapina Cave in Croatia. Alternatively, sites such as these may have been affected by postdepositional processes such as rockfalls, which could have fractured the bones, and the cut marks may reflect the de-fleshing of the bodies before burial rather than cannibalistic activities.

No matter how culturally adapted the Neanderthals were to their environment, they quickly disappeared when *Homo sapiens* moved into Eurasia. For a brief period of time around 40,000 years ago, the two populations lived in close proximity to one another. Neanderthals living in western Europe may have been influenced by the newcomers, as is evidenced by the Châtelperronian Industry. Tools from this industry resembled Mousterian artifacts but also included well-made endscrapers and burins as well as formal bone artifacts and pierced animal teeth, all of which are characteristic of *Homo sapiens*' Upper Paleolithic assemblages. Eventually, however, the behaviorally inferior Neanderthals were outcompeted for resources and vanished from the archaeological record.

—Shawn Babel

Bibliography

- Dibble, H.L. "The interpretation of Middle Paleolithic scraper reduction patterns." In *L'Homme de Neandertal Volume 4: La Technique*. Edited by L. R. Binford and J.-P. Rigaud. Liège: Etudes et Recherches Archéologiques de l'Université de Liège, 1988.
- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.

■ Introduction: The Lifeways of Early Modern Humans to circa 10,000 BCE

Modern humans, *Homo sapiens*, evolved in Africa between 250,000 and 150,000 years ago. Early species are often referred to as archaic *Homo sapiens*. There are two subspecies: *Homo sapiens idaltu*, meaning elder wise human, which is now extinct, and *H. sapiens sapiens*, the subspecies to which all human beings alive today belong. There is dispute about which hominid species was the immediate ancestor of *H. sapiens* and about the relationship with Neanderthals (*H. neanderthalensis*).

Both species may have evolved from *H. heidelbergensis*, which in turn evolved from *H. ergaster*, or the relationships might be more complex, with *H. ergaster* giving rise to *H. antecessor*, the common ancestor of *H. heidelbergensis* and *H. rhodesiensis*, which were the precursors of *H. neanderthalensis* and *H. sapiens*, respectively. Modern humans are bipedal and have a large brain (a volume of more than 1,350 cubic centimeters), well-developed language skills, and complex social networks. Unlike many of their

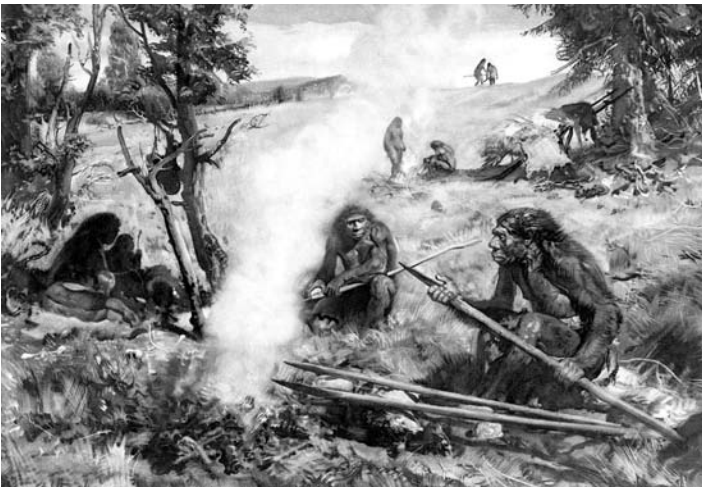


Illustration of a group of Neanderthals sitting around a fire holding lance-like weapons, 30,000 BCE. (Time Life Pictures/Getty Images)

ancestors, they exert a substantial direct and indirect influence over their environment and have the capacity to plan and to express memories, ideas, etc., in words and/or pictures and make music.

Modern humans evolved during a geologically turbulent time in the earth's history, notably the formation and subsequent melting of major ice sheets as global climate cooled for circa 100,000 years, warmed for circa 20,000 years, and cooled again for a further 100,000 years until circa 12,000 years ago. Such change may have stimulated the evolutionary process, or it might underpin the reasons that resulted in modern humans following in the footsteps of *H. erectus* out of Africa and into Europe and Asia and being more adventurous as it entered Australasia and eventually the Americas. Many questions surround the timing of such migration, whether or not there was more than one major migration, and whether there was any interbreeding with ancestral populations of *H. erectus* in Europe and Asia. Moreover, molecular evidence is difficult to interpret; it confirms the importance of an African origin but does not clarify other issues. Dated fossil evidence indicates that a significant migration out of Africa occurred circa 100,000 years ago, with modern humans colonizing Asia by 60,000 years ago and reaching Australasia circa 50,000 years ago and Europe by 35,000 years ago. A little later *H. neanderthalensis* became extinct, but why this

occurred and what, if any, role was played by modern humans is open to question. The issue of colonization of the Americas is particularly controversial, with conventional views focusing on 20,000 to 15,000 years ago and a route involving northeast Asia and a land bridge over the Bering Strait. However, evidence of human presence from several sites in South America indicates an earlier arrival circa 35,000 years ago.

The ancestors of modern humans had begun the practice of tool making from wood, stone, and bone and had learned to domesticate fire and to hunt as well as to recognize useful plant food sources. Modern humans developed these technologies and initiated new ones. In terms of archaeology, modern humans emerged during the Middle Paleolithic circa 300,000 to 45,000 years ago, while numerous sites, particularly in Asia and Europe, attest to major cultural developments during the Upper Paleolithic circa 45,000 to 10,000 years ago. Many fossil hominid remains from Africa and Europe dating from between 300,000 to 150,000 years ago are difficult to ascribe to a given species, as they have features common to Neanderthals, modern humans, and even *H. erectus*. Thus, detail relating to where and when *H. sapiens* first emerged is elusive. This period seems to have been one of transformation. Examples of important but later African sites with the remains of *H. sapiens* include the Klasies River Cave in South Africa, with remains dated to between 120,000 and 70,000 years ago; the Omo I sediments of Ethiopia, from which a partial skeleton is dated at circa 130,000 years ago; and sediments at Herto, Ethiopia, with several crania dated to 160,000 to 154,000 years ago. Of special importance is the Qafzeh site in modern-day Israel; this is a rock shelter where several skeletons of *H. sapiens* have been discovered and dated to circa 100,000 years. The bones were stained with red ochre, probably as part of a burial ritual. Nearby, the Skhul Cave also contains the remains of *H. sapiens*, while the Tabun and Kebara caves have yielded Neanderthal remains and Mousterian tools. This opens up the question of links and/or interactions between the two species, though their occupation of these sites may have been at different times. There is a paucity of evidence for the colonization of East Asia by *H. sapiens*

until circa 40,000 years ago; possible examples include fossils from Ngandong in Java and Jinniushan in China. The former is at most 53,000 years old, and the latter could be 200,000 years old; however, attribution of fossils to *H. sapiens* and dating are disputed. In Europe more sites have been investigated but are not without controversies. For example, in Petralona Cave near Thessalonika, Greece, a skeleton with mixed species traits and disputed dating (400,000–300,000 years old) was found in 1959, and in Sima de los Huesos at Atapuerca, northern Spain, many hominid remains circa 300,000 years old have been excavated that have archaic *H. sapiens* as well as Neanderthal characteristics.

Many anthropologists believe that major changes in human behavior and the capacity for innovation occurred around 60,000 years ago and may have been associated with a migration surge into Eurasia. This date gives credibility to the emergence of distinct cultural practices that are evident from widely distributed archaeological sites. There was a shift from open camps to covered sites, notably caves and rock shelters, many of which have yielded information on tool industries, hunted animals, wildlife, and art. Stone tool assemblages provide insight into the abilities and activities of early modern humans. Many Middle Paleolithic sites in Africa and Europe contain stone tools, referred to as Mousterian after the type site at Le Moustier in the Dordogne region of France. This “industry,” which predominated between 200,000 and 40,000 years ago and comprises flakes, scrapers, and points produced by working a flint core, is associated with Neanderthals in Europe, but in Africa and the Near East modern humans also produced it. Several other industries, all named after type sites in France, characterize the Upper Paleolithic sites of different cultures, first emerging circa 40,000 years ago separately in both Asia and Africa. This was the Aurignacian period, circa 40,000 to 28,000 years ago, that is associated with both *H. sapiens* and *H. neanderthalensis* in Europe and parts of Africa. It was followed by the closely related Châtelperronian, circa 40,000 to 34,000 years ago, and comprised stone and ivory tools, including characteristic denticulate (toothed) tools; it is predominant at sites with remains of *H. neanderthalensis*. The Gravettian, 28,000 to 22,000 years

ago, postdates Neanderthals and includes bone and ivory tools and ornaments such as Venus figurines; small pointed blades were used as spear tips to hunt a range of animals. The Solutrean period, circa 22,000 to 19,000 years ago, followed with a range of stone, bone, and antler tools with very sharp edges being made by pressure flaking and the heating or cooling of flint stones to shatter them in controlled ways. The last Upper Paleolithic period is the Magdalenian, circa 18,000 to 12,000 years ago, that is dominated by delicate flaked stones for arrows, scrapers, hooks, and spears; multibarbed harpoon points; and spear throwers made of wood, bone, or antler. Portable art (e.g., carved antler and ivory for decoration and figurines) was also evident, and microliths were becoming increasingly important. Tool kits enabled hunting and gathering, encouraged specialization within groups as they became increasingly sophisticated, and promoted communal activity as well as division of labor.

Art featured in the lifeways of early modern humans but not their predecessors. Figurines, cave paintings, decorated or carved ivory, and petroglyphs attest to the development of the capacity to represent aspects of their environment and the appreciation of beauty. Such items may also be linked to religion and thus to abstract thinking, while they also provide information on lifeways such as hunting. The increasing sophistication of tools and the depiction of hunted animals in cave art, the oldest of which are those of Chauvet in the Ardeche region of France at circa 32,000 years old, emphasize the importance of hunting. The most widely depicted are large game animals such as bison, horse, mammoth, and reindeer. Many paintings are on prepared surfaces and are colored with ochre; all reflect artistic talent, though the precise purpose of the paintings is unknown. Music was also part of the lives of Neanderthals and modern humans. When, how, or why it developed is not known, but the oldest instruments, a flute made from the femur of a cave bear found at Divje Cave in Slovenia and the less-contentious bone pipe from Geissenklösterle in Germany, are circa 43,000 and 36,000 years old, respectively. Music may be linked with language, which is a distinctly human trait. There is much debate as to when it developed and whether the ancestors of modern

humans were able to communicate via the spoken word, a capacity that would have conferred considerable advantage for all human activities through the sharing of knowledge and the facilitation of the division of labor.

—A. M. Mannion

Bibliography

Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 12th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2007.

Renfrew, C. *Prehistory: The Making of the Human Mind*. London: Phoenix, 2008.

Lifeways in Sub-Saharan Africa

During the Upper Paleolithic, hunter-gatherers in sub-Saharan Africa began to adopt more intricate weapons such as the bow and arrow, which gradually replaced the use of flake tools and core that had been characteristic of the Middle Paleolithic. Moreover, the lifeways that had been adapted by sub-Saharan hunter-gatherers, while comparatively similar to their hominid forbearers, had a greater level of complexity in terms of more innovative tool kits and social organization. While these hunter-gatherer bands relied on game and foraging for their subsistence, they developed hunting techniques that required social organization and increasing levels of cooperation within the group. Nonetheless, the sub-Saharan natural environment shaped the character of the lifeways of early human societies, given the region's available resources and geographical makeup.

Homo sapiens sapiens is estimated to have emerged from Africa between 200,000 and 130,000 years ago, thereby displacing other hominids in the rest of the world. Around approximately 60,000 years ago Africa remained home to modern humans, while other hominids, particularly *Homo erectus* and Neanderthals, were in Asia and Europe, respectively. Quite gradually, small groups migrated out of Africa to nearby continents suitable for human habitation after climate changes.

Early human societies in sub-Saharan Africa relied on foraging for much of their subsistence, living off the available flora and fauna of the region. The adaptability of these early societies allowed them to exploit different sources of food

and develop different tool kits to allow them to extract resources from the environment in terms of hunting, food processing, and the manufacture of implements from stone and other raw materials.

During the Late Stone Age, previously uninhabited regions such as the Congo River basin began to be populated. Some early human communities developed portions of the landscape to accommodate sedentary lifeways centered on agriculture. Through the use of fire as a way to clear brush and forests, thereby establishing dominion over the land, these early settlements developed farmland and grazing fields. Early artwork found in the region depicts a variety of foraging and hunting activities, as these remained the primary more of human sustenance in sub-Saharan Africa regardless of the evolving lifeways for sedentary agricultural communities. Moreover, these also suggest the beginnings of more complex behavior in regard to human beliefs and understandings of the natural world.

During the Neolithic, some sub-Saharan societies developed more complex and diverse settled communities. Agricultural surpluses allowed for the establishment of craft specialization outside of agriculture, the development of political structures, and the creation of more complex belief systems. Through this process humans domesticated both plants and animals, selecting both seeds and breeds that illustrated desirable characteristics and ensured survival and adaptability to human needs. The clearing of fields and forests continued along a more systematic course of landscape development as settlements increased in size and density. Livestock was maintained as an integral source of sustenance and was provided with food and protection from predators.

Given the geographical characteristics of much of sub-Saharan Africa, the diffusion of livestock domestication took root for various semi-sedentary groups as a viable lifeway shaped by the ecological makeup of the landscape. While agriculture developed in this region, it was not to the same extent as in North Africa or Mesopotamia. The Congo River, Upper Nile, and Niger River valleys as well as other viable supplies of water did allow for the creation of several agricultural communities in the sub-Saharan Neo-

lithic. However, much of sub-Saharan Africa remained characterized by hunter-gatherer societies and growing pastoral communities with livestock. Environmental concerns and niches shaped the type of lifeways that African societies chose for their sustenance. The increasing variety of lifeways as well as the mounting complexity of African societies amid the dynamic changes occurring in human lifeways made sub-Saharan Africa's genetic diversity far more complex historically than other world regions.

Advances in stone technologies, such as grinding stones, composite tools, and pottery, emerged among various sub-Saharan cultures during the Neolithic. While many of these were based on antecedents in earlier societies, they were also indicative of the increasing complexity of African societies of this period in terms of cognitive abilities and evolving human behavior. Moreover, artwork and the development of language groups also are illustrative of this dynamic change occurring as societies came into contact with each other, thereby diffusing their cultural characteristics across the region while also developing their own individual niches and forms independently.

—Abraham O. Mendoza

Bibliography

- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.
- Maddox, Gregory H. *Sub-Saharan Africa: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2006.

Lifeways in the Levant and Middle East

As the present interglacial, the Holocene, began circa 10,000 years ago, environmental change was occurring at a relatively rapid rate as global temperatures rose. As was the case when earlier ice ages terminated, ecological changes were occurring in response to this climatic stimulus as plant and animal species and communities adjusted to interglacial conditions. However, the



Aerial view of the archaeological site at Çatalhöyük, a Neolithic farming settlement. Discovered in the 1950s, the ruins are in present-day Turkey on the Konya Plain. The site is currently being excavated by an international team of archaeologists. (Yann Arthus-Bertrand/Corbis)

opening of the Holocene was a period of substantial socioeconomic change within human communities. This was associated with the alteration of strategies for food acquisition and had profound effects on the environment and society. The technology of agriculture was emerging, with the earliest evidence for plant and animal domestication coming from the Levant. From this region, crops and domesticated animals as well as the principles of agriculture spread into Europe, Africa, and Asia. This was a major watershed in human development and its influence on the global carbon cycle.

What caused people to domesticate certain plant and animal species remains enigmatic. Speculation focuses on pressure from rising population or increasing scarcity of resources due to environmental change or possibly a combination of the two. In the Levant and the Middle East, cereals such as wheat and barley, pulses such as lentil and pea, and fruit trees, notably the fig, were among the first plants to be domesticated, circa 10,500 years ago. Today, the cereals and pulses constitute major crops in world agriculture, while sheep, cattle, and goats, all domesticated by circa 8,000 years ago in this region, remain the most widespread livestock. While hunting and gathering continued to play an important role in human communities, agriculture encouraged permanent settlement. It

also required clearance of natural vegetation, soil preparation, plant and animal selection and breeding, and planning and management as well as labor. It most likely encouraged a degree of diversification of lifeways within and between human groups, with some people engaging in crop cultivation, others in herding, and yet others in hunting, with overlaps between groups that also exchanged produce and were elements in an increasingly complex trading system. Some groups may have practiced a form of transhumance, that is, spending some time taking animal herds to distant pastures for part of the year.

The increasing sedentarism (nonmigratory status) of human groups necessitated by crop cultivation encouraged the construction of nucleated permanent settlements that became widespread in the region by circa 8,000 years ago. Each housed approximately 100–200 people. Sun-dried brick houses with a stone foundation and roofs made of reeds, walls, communal storage pits for grain, and hearths were characteristic of these settlements. Some dwellings have shrines, suggesting religious practices, and some contained the skeletal remains of humans buried under floors or in walls. These included skulls with faces made from plaster and shells to represent eyes and may reflect a form of ancestor worship. Such settlements imply enhanced cooperation for mutual benefit between family groups, exchanges of resources, and possibly shared beliefs. Archaeological excavations of sites such as Jericho and nearby Netiv Hagdud in the Jordan Valley, Abu Hureyra in the Euphrates Valley of Syria, and many settlements throughout the Fertile Crescent (the Middle East, Levant, Turkey, western Iraq, and Iran) such as Çatalhöyük in Turkey provide detailed information on the transition from a hunting and gathering society to an agricultural society. Even in the latter, the wild food resources from woodland, and the lake and steppe, played a significant role in food acquisition. Jericho and Çatalhöyük, which are atypical of early Neolithic villages because of their large size, rapidly developed into urban centers. The lower layers of Jericho indicate a population of approximately 300, but later Neolithic layers suggest a population of several thousand. The shift to agriculture is well marked at Abu Hureyra, where hunter-gatherers settled

circa 11,500 years ago; they focused on wild gazelle and grassland plant species and lived in pit dwellings. Within a millennium another settlement had emerged whose inhabitants were engaged in herding domesticated sheep and goats and in cultivating wheat, barley, and pulses. They lived in aboveground dwellings comprising multiroom single-story rectangular structures with decorations and plaster floors built along narrow lanes. Charcoal deposits from hearths indicate that wood from willow, poplar, maple, and tamarisk was being used as fuel. Human skeletons, especially of females, reflect bone conditions associated with kneeling and food preparation such as cereal grinding. Public buildings and monuments, some with carvings and decoration, were also present, indicating communal activities and organization.

Many ancient sites also reveal evidence for other innovations and trade. For example, the tool assemblages of Abu Hureyra comprise flint flakes and scrapers plus awls, needles, arrowheads, and pins made from animal bone and include stone grinding tools. Tools made from obsidian, a glasslike product of volcanic activity, are also present at many sites. It was valued for the sharp edges that could be produced by flaking and was traded throughout the region from sources in Anatolia and Cappadocia, both in Turkey. Tools made of basalt, from the Red Sea region, are also present. Evidence for artistic development and possibly a form of religion comprises a huge range of female figurines and bulls made from clay. The earliest figurines come from Netiv Hagdud, where a village of oval and circular mud-brick houses was constructed almost 10,000 years ago and whose inhabitants became engaged in the cultivation of domesticated barley.

Another significant innovation was the development of pottery that postdates the initiation of agriculture. The earliest pottery from the Levant/Middle East is circa 8,000 years old. Once introduced, it spread rapidly and became increasingly sophisticated in terms of pattern and coloring. Examples include pottery with a herringbone pattern that was painted red from the artifact-rich Neolithic villages of Sha'ar Hagolan and Munhata. A wide range of vessels were produced in distinct centers using pit or kiln fires and

traded throughout the region. This plus the wide variety of tools and art forms reflects specialization within a rural society with the emergence of specialist craftspeople. Burial practices also changed; instead of interment in houses, burial grounds were established outside villages.

—A. M. Mannion

Bibliography

- Barker, Graeme. *The Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?* Oxford: Oxford University Press, 2006.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 12th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2007.

Lifeways in East Asia, Southeast Asia, and Austronesia

During the glacial epoch, there were three major landmasses in East Asia: East Asia proper (what is now primarily modern China); Sundaland, which was composed of what are known today as the islands of Indonesia and Borneo; and Sahul Land, which was composed of New Guinea and Australia. Sundaland was connected to the East Asian landmass. Sundaland and Sahul Land were always separated by the very deep waters of the Wallacea Straits. The modern configuration of islands, both large and small, appeared around 10,000 years ago.

To understand this geography is important, because it meant that many places that are islands today were once connected to larger landmasses, and therefore they could have been colonized by foot-mobile peoples. Thus, our ancestors could have moved easily into Sundaland from East Asia, whereas moving from there into Sahul Land would have always required the use of some sort of watercraft. Just how this was accomplished remains speculative, but most probably it was done by island hopping. Even at optimal times for crossing, watercraft would have had to move across distances of 18.6 to 55.9 miles (30 to 90 kilometers) over open ocean. This would have been daunting until the appearance of navigational technologies and reliable watercraft, and it seems clear based upon multiple lines of evidence that *Homo sapiens* would have been the only species capable of moving over these distances.

This argument is confirmed by the archaeological evidence from the region. Although there is speculation, based upon DNA evidence, that anatomically modern humans were present in the region well before 50,000 years ago, archaeological data suggest that an occupation of the region after 50,000 years ago is more probable, especially for Sundaland and Sahul Land.

After 40,000 years ago, *Homo sapiens* was present in most of East and Southeast Asia. Although *Homo erectus* had colonized the region at a much earlier date, possibly as early as 1.5 million years ago, studies of the skeletal morphology of the remains encountered by archaeologists suggest that *H. erectus* had gone extinct well before the arrival of our species in the region, thus demonstrating that *H. sapiens* had migrated into the region from elsewhere and had not evolved locally from *H. erectus*. However, the recent discovery of a diminutive species, *Homo floresiensis* (nicknamed the Hobbit), found on the Indonesian island of Flores, complicates our understanding of the relationships of these species. Some have argued that *H. floresiensis* is a direct descendant of *H. erectus*, while others suggest instead that it is a local variant of *H. sapiens*. To date, the bulk of the data support the inference that *H. floresiensis* is more closely related to *H. erectus*, although the specifics of that relationship remain unclear.

One of the most important sites in Sundaland is Niah Cave on the modern island of Borneo, where a skeleton of an anatomically modern human (that of an adolescent girl) was found and dates to around 40,000 years ago. There are earlier deposits in the cave that do not contain skeletal remains but show evidence of an intensive occupation of the site. Niah Cave thus provides a clear baseline for the occupation of Sundaland that dates to 50,000–40,000 years ago.

Archaeological data from Sahul Land show that the landmass was the scene of an intensive wave of occupation around 40,000 years ago, the source of which was Sundaland. There is a clear north-to-south trend in this occupation, with dates in northern Sundaland slightly earlier than those in the south. However, even the most widely separated dates are not separated by more than a few thousand years, suggesting a

➤ EARLY AUSTRALIAN HUNTER-GATHERERS

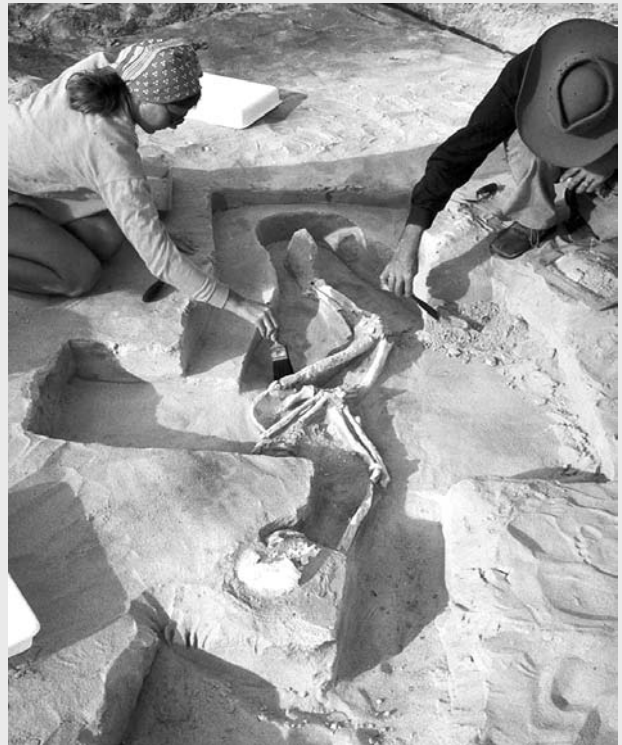
Homo sapiens arrived in Australia when it was part of a larger continent (Sahul) that included New Guinea, Tasmania, and lands now under water. This was 45,000–60,000 years ago; the older dates are still disputed. By about 40,000 years ago archaeological sites occur in all corners of the continent except Tasmania.

Late Pleistocene Sahul was populated by more than 50 species of large animals that are now extinct. Did arriving humans kill them off? There is no scientific consensus. Arguments can be found in favor of (a) a rapid killing blitzkrieg, (b) extinctions over the next 30,000 years, (c) climatic causes, and (d) nearly all being extinct before human arrival. At only one site, Cuddie Springs, is there any likely evidence for a smoking gun relation between humans and extinct animals, and even this is still strongly disputed.

Archaeological evidence shows that Pleistocene Australian's behavior was fully modern. At Lake Mungo, an extended burial, covered with powdered ochre brought from more than 124 miles (200 kilometers) away is dated to 40,000–45,000 years ago. About 30,000 years ago a young woman was cremated, the oldest cremation in the world. People here were camping near the lake, collecting freshwater shellfish, fishing (possibly with nets), and hunting small animals. They made shell beads, bone points for their spears, and stone artifacts, as did people in other parts of the continent.

Current evidence shows that Tasmania was occupied only less than 35,000 years ago. There, people were living in a very cold subalpine environment, often in caves and rockshelters. As hunters, they specialized in the highly territorial red-necked wallaby (about 33 pounds, or 15 kilograms), which supplied at least 85 percent of their meat.

—Peter White



Archaeologists excavate the remains of "Mungo Man" in southeastern Australia, 1974. (AP Photo/University of Melbourne)

Bibliography

- Cosgrove, R. "Forty-two Degrees South: The Archaeology of Late Pleistocene Tasmania." *Journal of World Prehistory* 13 (1999): 357–402.
- Fullagar, R. "Australian Prehistoric Archaeology: The Last Few Years." *Before Farming* 2004(2) (2004): 1–22.
- Mulvaney, J., and J. Kamminga. *Prehistory of Australia*. Sydney: Allen and Unwin, 1999.

very rapid colonization that spread quickly to the most favorable habitats on the landmass. Key sites include Malakunanja rock shelter and Lake Mungo, where the remains of an intentionally buried anatomically modern human, most probably an adult male, were discovered.

No matter their location, the lifeways of the peoples of East Asia, Sundaland, and Sahul Land were those of mobile hunters and gatherers.

Many settlements were located along the major rivers of the region, and there is some evidence that coastal settlements were also of importance. Much of southern East Asia and all of Sundaland at this time were covered in tropical forests, and it is important to note that while *H. sapiens* was able to successfully adapt to this difficult habitat, *H. erectus* was unable to do so.

—Mark Aldenderfer

Bibliography

- Barker, G., et al. "The 'Human Revolution' in Lowland Tropical Southeast Asia: The Antiquity and Behavior of Anatomically Modern Humans at Niah Cave (Sarawak, Borneo)." *Journal of Human Evolution* 52 (2007): 243–261.
- Bulbeck, D. "Where River Meets Sea: A Parsimonious Model for *Homo sapiens* Colonization of the Indian Ocean Rim and Sahul." *Current Anthropology* 48 (2007): 315–321.
- O'Connell, J. F., and J. Allen. "Dating the Colonization of Sahul (Pleistocene Australia-New Guinea): A Review of Recent Research." *Journal of Archaeological Science* 31 (2004): 835–853.

Lifeways in Inner Asia

Inner Asia, or the interior of the Eurasian landmass, is composed of the five independent central Asian republics of Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, and Kazakhstan; the republic of Mongolia; the Xinjiang Uygur, Inner Mongolia, and Tibet Autonomous Regions of the People's Republic of China; and adjacent parts of Afghanistan, Pakistan, Iran, China, and Siberia in the Russian Federation. The environments of this vast region are highly varied and include large expanses of desert; high plateaus and mountains; large, relatively flat river basins; subarctic tundras; and large expanses of open plains, or steppes.

Inner Asia remained unoccupied by humans until relatively late in prehistory, sometime after 50,000 years ago. Although *Homo erectus* remains have been discovered in western Eurasia as early as 1.7 million years ago at the site of Dmanisi in the Republic of Georgia, the species apparently ventured no farther north. That Inner Asia was colonized so late in great part can be attributed to the harsh environmental conditions that persisted in the region for most of the Pleistocene. Although most of Inner Asia was not covered in ice during the glacial epoch, it was very cold and dry until around 50,000 years ago, and resources attractive to our ancestors were sparse. Furthermore, the extreme cold of many areas of the landmass would have required well-tailored clothing, which was not made by our ancestors until roughly this date.

After 50,000 years ago, however, the climate of Inner Asia, while still harsh, nevertheless im-

proved. Grasslands attractive to large herbivores, such as mammoth, bison, and horse, became widespread. Anatomically modern humans (*Homo sapiens*) moved from an as-yet poorly identified region of Southwestern Asia and into Inner Asia. Although there are no sites known from the time period of 46,000 to 32,000 years ago on the East European plains, there are sites present during this time period farther to the east in the Altai Mountains and south-central Siberia. The tools used by these peoples are characteristic of the Upper Paleolithic. Arctic Siberia shows clear signs of habitation by 30,000 years ago, as does northern Mongolia. Although there have been claims of an early human presence on the Tibetan plateau as early as 50,000 years ago, these have yet to be verified. However, the Chusang site located near Lhasa has been dated to 30,000 years ago and thus provides some evidence for an early occupation of the high plateau.

Many areas occupied by humans during the relatively benign period from 46,000 to 22,000 years ago were either abandoned or used only sporadically from 22,000 to 17,000 years ago, a period known as the Last Glacial Maximum. Ice sheets moved farther to the south in the Northern Hemisphere, and this created very cold temperatures and very dry conditions across much of Inner Asia. It is likely that the Tibetan plateau was abandoned at this time, and many groups that had lived at more northerly latitudes in Siberia moved to the south.

As the glaciers began their retreat around 17,000 years ago, the climate across Inner Asia improved dramatically. Much of Siberia, except for the most northerly latitudes, was reoccupied as early as 21,000 years ago. However, settlement patterns reflect a highly mobile lifeway, indicating that resources were not yet of sufficient density for longer, more permanent occupations. Similar lifeways characterized most of Inner Asia at this time. Much of the coastal Russian Far East was also occupied at this time. Small groups of hunting and gathering peoples entered Mongolia from the north after 18,000 years ago, and by roughly 15,000 years ago groups of foragers had reoccupied the northeastern margins of the Tibetan plateau.

In Siberia, river basins became the focus of intensive human occupation. Fishing, using

barbed harpoons, became widespread, and the high-resource densities supported settlement patterns characterized by reduced mobility. Similarly, the coast of the Russian Far East saw the appearance of subsistence systems based upon salmon harvests. Settlements in the Amur Basin began making ceramics as early as 13,000 years ago; these artifacts show great similarity to those made by the Jomon culture of Japan, suggesting widespread contacts between these areas. Finally, around 10,000 years ago, hunters and gatherers of the Sumnagin archaeological tradition penetrated the arctic tundras of northern Siberia for the first time.

—Mark Aldenderfer

Bibliography

- Dolukhanov, P., et al. "Colonization of Northern Eurasia by Modern Humans: Radiocarbon Chronology and Environment." *Journal of Archaeological Science* 29 (2002): 593–606.
- Goebel, T. "The Missing Years for Modern Humans." *Science* 315 (2007): 194–196.
- Kuzmin, Y. "Siberia at the Last Glacial Maximum: Environment and Archaeology." *Journal of Archaeological Research* 16 (2008): 163–221.

Lifeways in Western and Eastern Europe

Anatomically modern humans (*Homo sapiens*) entered southeastern Europe sometime around 47,000 years ago from a source area somewhere in southwestern Asia or the Levant. At this time, much of southern Europe was occupied by Neanderthals, a species that had been present there for thousands of years, and there has been much speculation about the nature of relationships between these two species.

This period of the occupation of Europe is known as the Upper Paleolithic, and the archaeological culture carried by these newcomers is known as the Aurignacian, first defined from excavations at the Aurignac rockshelter in the French Pyrenees. Defined primarily by the types of stone tools used by these peoples, the Aurignacian was present across much of Europe by 35,000 years ago. Among the other tools used by these peoples were bone and antler projectile points (most likely used to tip spears), bone awls,

fire-making drills, and bone needles (some with eyes). Needles and awls are tools commonly thought to be associated with the manufacture of well-tailored clothing, which makes its first appearance in Europe. Such clothing would have helped Aurignacian peoples adapt to the relatively cold climate of Europe at this time. There is also evidence of items of personal adornment such as beads made of bone, drilled animal teeth, and marine shells. The latter indicates the existence of trade and exchange networks at this very early date. There continues to be debate as to whether some of the art found at Chauvet Cave dates to this period. If the dating is accurate, this would be the earliest rupestral art known from Europe and quite possibly the world.

Tool assemblages in eastern Europe, best represented by those found at the Kostenki site along the Don River in Russia, reflect something different. Although most archaeologists would describe them as being of Upper Paleolithic origin, they are distinct when compared to the Aurignacian, and some have argued that the tools found at the site were made by a different group of anatomically modern humans who began a migration into Europe from a different source than those who made typically Aurignacian tools. These findings suggest that Europe may well have been colonized by migrants from many sources from the Middle East or southwestern Asia instead of a single wave of people moving into the continent.

The period from 35,000 to 29,000 years ago is thought by some archaeologists to be a transitional period in European prehistory. That is, there are a number of stone tool traditions found scattered across Europe that have characteristics thought to have been created by Neanderthals that were contemporary with Aurignacian tool traditions. Many of these local traditions may reflect remnant populations of Neanderthals that finally disappeared from Europe sometime after 28,000 years ago.

The Gravettian archaeological culture is found across Europe from 28,000 to 21,000 years ago. The artifacts created by the peoples of this time are thought to reflect a mature adaptation to the climatic and social conditions found across Europe at this time. Composite tools made of bone or antler and stone become common, and a

► MAMMOTH HUNTERS OF THE RUSSIAN PLAIN

The examination of settlements of mammoth hunters of the central part of the Russian Plain had become a subject of special study as early as the late nineteenth century when sites such as Gontsy, Mezin, Mezhirichi, and Kostenki were discovered and the results of their study put into scientific circulation. Nowadays, about 100 sites, most of which date to the late Valdai period (25,000–10,000 BCE) are known from two main areas: (1) the Russian Plain and the Middle Dnieper River basin and adjacent territories and (2) the so-called Kostenki-Borshevo region in the Don River basin. Studies by many recent scholars have defined aspects of the livelihood and subsistence strategy and art and ideology of these ancient mammoth hunters.

These hunters lived in large base camps with significant concentrations of population where long-term dwellings made of mammoth bones, food storage pits, tool production areas, meat (food) processing zones, and hearth zones were discovered. Questions about duration of occupation, seasonality, and reoccupation of these base camps remain unresolved, and there is no clear idea about how these hunters survived the very cold conditions of the Last Glacial Maximum. The subsistence strategy of these peoples was based on collective hunting of large gregarious herbivores (mammoth, woolly rhinoceros, musk-ox, horse, reindeer, bison), fur-bearing species (arctic fox, wolf, bear, hare), and, rarely, predators (cave lion, hyena, lynx).

This subsistence strategy implies the existence of large agglomerations of population at these base camps necessary to realize collective hunt-

ing, while the presence of a series of small specialized sites around the base camps (tool production sites, short-term camps, and so on) indicates the possibility of seasonal population dispersion or movement.

The mammoth hunters of the Russian Plain engaged in highly developed artistic and creative activity through the creation of mobiliary (or movable) art. They made small (approximately 2–4 inches, or 5–10 centimeters in height) female figurines made of mammoth tusk, so-called Paleolithic Venuses, relatively realistic in the Kostenki region and more stylized in the Middle Dnieper region. These are thought to have been connected with fertility cults. They also made spectacular engraved and/or ornamented bones, antlers, and stones. Another genre of mobile art objects is represented by different kinds of personal decoration (bracelets, pendants, diadems, beads, and so on) made of bone, tusk, antlers, fangs, and rare stones, often interpreted as different sorts of amulets connected with specific forms of fetishism and used for magical individual protection. The earliest musical instruments in eastern Europe included striking, sound, and wind instruments (such as fife, reed, flute, and tomtoms). These were found inside a large construction made of mammoth bones at Mezin and have been interpreted as evidence for collective ceremonies including dances, songs, and music.

—Olena V. Smyntyna

Bibliography

Soffer, Olga. *The Upper Paleolithic of the Central Russian Plain*. London: Academic Press, 1985.

stone tool technology based on the production of prismatic blades is characteristic of the Gravettian. Bone tools indicative of the production of clothing continue to be found, and for the first time in Europe substantial heated structures have been discovered. At Kostenki, for example, semi-subterranean structures surrounded by mammoth bones were discovered. There is evidence of storage facilities in some sites of this period as well. In the winter climate of Gravettian eastern Europe, storage indicates the existence of camps occupied for longer periods of time. Some sites

also have evidence for the use of stone lamps that used animal fat as a fuel. At Dolni Vestonice (now in the modern Czech Republic), impressions left in clay that have been dated to 27,000 years ago are suggestive that cordage and baskets were used by these peoples.

The interment of the dead becomes more common in Gravettian times. One of the most interesting of these burials comes again from Dolni Vestonice, where three young adults were buried in a common grave. Each had necklaces made of teeth around their heads, and the ground upon

➤ REINDEER HUNTERS OF FRANCE—PINEVENT

The remains of a seasonally occupied camp of reindeer hunters at Pincevent (department of Seine-et-Marne, France) were discovered in 1964, and since that time this site has become one of the most illustrative examples of the lifeways and subsistence strategies of Magdalenian peoples at 13,000 years ago. Excavations under the supervision of Andre Leroi-Gourhan through 1985 have contributed greatly not only to our knowledge of early prehistoric culture but also to fieldwork methodology.

The site was occupied seasonally during the warm period of the year, when the reindeer crossed this locality in the course of their repeated migrations. Stored meat was consumed during the time between hunting episodes along with some aurochs (wild oxen), red deer, small game, fish and mollusks, and plants obtained through gathering. The site was occupied repeatedly, attesting to the successful nature of this lifeway.

Life at the settlement was concentrated around a central hearth, which contained plenty of burnt

bones and very little wood. Hearths were the focal point for most domestic activity. On the basis of patterns of artifact distribution, it appears that the site contained four circular structures, most likely tentlike dwellings.

—Olena V. Smyntyna

Bibliography

Audouze, F., and J. Enloe. "Subsistence Strategies and Economy in the Magdalenian of the Paris Basin, France." In *The Late Glacial in North-West Europe: Human Adaptation and Change at the End of the Pleistocene*, edited by N. Barton, A. J. Roberts, and D. A. Roe. Oxford, UK: Alden, 1991.

Enloe, J. G., F. David, and T. S. Hare. "Patterns of Faunal Processing at Section 27 of Pincevent: The Use of Spatial Analysis and Ethnoarchaeological Data in the Interpretation of Archaeological Site Structure." *Journal of Anthropological Archaeology* 13 (1994): 105–124.

which they were buried had been covered in red ochre, a pigment commonly used at this time in burial contexts.

Art of all different kinds is also commonly found at Gravettian-era sites. Much of the famous rupestrian art found in the caves of western Europe dates to this period, as do the bulk of the famous "Venus" figurines. Many artifacts of unknown function carved from mammoth ivory have also been discovered.

Around 21,000 years ago, the Gravettian is replaced by an archaeological tradition known as the Magdalenian, which lasts until roughly 10,000 years ago. The appearance of this tradition coincides with the onset of the Last Glacial Maximum, a period of intense cold across the Northern Hemisphere. Many areas of northern Europe that had been occupied during the Gravettian were abandoned, most likely due to the advance of glacial ice sheets that created an increasingly harsh climate even for peoples who had warm clothing, food storage, and robust shelters.

A number of technological innovations characterize the Magdalenian. It is thought that the

bow and arrow may have been invented at this time, although the evidence for this is indirect and based upon the presences of small, light, leaf-shaped points that would not have served well as tips of thrusting or throwing spears. There is less doubt about the invention of the spear-thrower, a tool that allows its user to hurl a spear longer distances with more accuracy than when thrown by hand. Barbed bone points, and possibly harpoons, are found at some Magdalenian sites in western Europe, and bone fish hooks are found in central Europe. These tools reflect the widening of the range of species that our ancestor began to use at this time. Yet another innovation, again found in western and eastern Europe after 18,000 years ago, is the domesticated dog, which is the first species known to have been tamed by humans.

After 18,000 years ago, which marks the end of the Last Glacial Maximum across the continent, most of the regions abandoned had been reoccupied. The circulation of artifacts, mostly lithics, across Europe attests to the importance of social networks that had become common-

place at this time. Although such networks were known in the Gravettian, their scope becomes much larger during the Magdalenian.

Art of all kinds is very common during this period, and some of the most spectacular cave art found in Spain and France dates to this period. Objects made of ivory and stone are also abundant at many Magdalenian sites. Some archaeologists have speculated that notched and carved bones may have served as calendars. Personal adornment is also commonly found in the burials of this period. Although the reasons are still debated, it is clear that the Magdalenian reflects a significant increase in social complexity in Europe at this time.

—Mark Aldenderfer

Bibliography

- Goebel, Ted. "The Missing Years for Modern Humans." *Science* 315 (2007): 194–196.
- Mellars, Paul. "Going East: New Genetic and Archaeological Perspectives on the Modern Human Colonization of Eurasia." *Science* 313 (2006): 796–800.
- . "A New Radiocarbon Revolution and the Dispersal of Modern Humans in Eurasia." *Nature* 493 (2006): 931–935.

Lifeways of the First Americans

Evidence has yet to be found that would provide a clear picture of the lifeways of the first Americans. Historically, most specialists believed that the first Americans were highly mobile hunters and gatherers who focused most of their subsistence economy on large mammals. This led several researchers, following Martin (1982), to propose a blitzkrieg model whereby the first Americans were hypothesized to have funneled into the New World, causing the extinction of more than 35 mammalian species. Evidence from Monte Verde and other sites, however, suggests that the picture is not as simple and that the first Americans followed different lifeways depending on ecological conditions.

Archaeological sites predating 12,000 years before the present have unfortunately been able to provide only glimpses of the lifeways of the first Americans. Current evidence indicates that the first Americans had a general, as opposed to specialized, tool kit and subsistence economy,

MONTE VERDE AND THE CLOVIS CONTROVERSY

Monte Verde, located on the southern end of South America, has provided irrefutable empirical evidence that the Clovis-First model is no longer viable. The Clovis-First model, historically favored, argues that the first Americans came into the Americas shortly after 12,500 years ago and followed a big-game subsistence economy. The Monte Verde site, which predates Clovis by 1,000 years, is a 12,500-year-old settlement along the banks of what is now Chinchihuapi Creek in Chile. Organic and inorganic artifacts were recovered from Monte Verde, including bones, various types of plant matter, and an array of simple flake tools and bifacially flaked stone tools. In January 1997 several leading specialists spent 11 days scrutinizing the Monte Verde site to examine its integrity; at the end of the examination period a consensus was reached that the stratigraphy was good and the radiocarbon dating of the site correct. The evidence from Monte Verde argues that people migrated into the Americas far earlier than previously thought under the Clovis model, sometime before 13,000 years ago. Furthermore, the Monte Verde evidence supports the conclusion that early migrants to the New World much more sophisticated and their complex lifeway patterns and technologies were more developed than were under the simplistic Clovis model.

—Peter Jones

Bibliography

- Dillehay, Tom D. *Monte Verde: A Late Pleistocene Settlement in Chile 1: Paleoenvironment and Site Context*. Washington, DC: Smithsonian Institution Press, 1989.
- . *Monte Verde: A Late Pleistocene Settlement in Chile 2: The Archaeological Context*. Washington, DC: Smithsonian Institution Press, 1997.

which was thought to be the case under the now-defunct Clovis model. This general tool kit and subsistence economy were used in the development of various specialized adaptive patterns that fit particular environmental contexts and included the ability of first Americans to exploit and adapt to a wide range of environments and their resources.

For example, in the western U.S. deserts of the Great Basin, evidence indicates that Late

Pleistocene peoples not only exploited a range of floral and faunal resources but also specifically targeted smaller fish in their subsistence quest. Analysis of fish remains from the Stillwater Marsh area indicates that small tui chub were a major food resource for inhabitants of the region. The subsistence economics of this lifeway, adapted to an arid desert and a lacustrine environment, further entailed that these late Pleistocene peoples gathered, transported, and stored a wide variety of other resources.

Likewise, evidence from up and down the Pacific coast of the Americas indicates that Late Pleistocene peoples followed a lifeway pattern that was based on available seasonal resources. For example, California's Channel Islands provide evidence for early maritime activity by the first Americans, including the use of seaworthy boats. Numerous early shell middens have been identified along with a relatively large assemblage of bifaces, chipped stone artifacts, shell beads, worked bone, and well-preserved faunal remains. This evidence indicates that the first Americans' lifeway pattern for the Pacific coast consisted of subsisting on mussels, abalones, and other shellfish from the rocky intertidal areas as well as fish, sea mammals, and sea birds when available.

In the vast plains of North and South America, on the other hand, evidence indicates that Late Pleistocene peoples relied on large mammals for much of their subsistence, clothing, and other resource needs. For example, Arroyo Seco, located near the city of Tres Arroyos in Argentina, is a multicomponent site that provides evidence indicating that hunter-gatherers used mostly quartzite flakes with some unifacial retouching in the pursuit of large mammals. The lithic remains were found associated with bones of modern animals and extinct Pampean megamammals, indicating a primary adaptation to guanaco, extinct horse (*Equus*), giant sloth (*Megatherium*), and deer as the economic basis of subsistence for the first Americans of the region.

The first Americans not only relied on a wide and diverse array of large sized flora and fauna but, according to zooarchaeologists, may have also exploited small mammals, insects, and aquatic species. Individually, these resources did not provide enough energetic return to be col-

lected, but when harvested in mass quantities by a cooperative group, they provided enough subsistence to be worth the time and effort.

Beyond the subsistence economies of the first Americans, little is known concerning social, religious, or economic aspects of their lifeways. Researchers have hypothesized that when resources became scarce due to climate changes, populations became more dispersed across the landscape and social networks broke down, while during more resource-rich times, population growth and settlement nucleation occurred. Furthermore, because of the instability of many environments, many first American groups practiced forms of out-migration to more resource-abundant areas along with population adjustments that involved intermarriage and reciprocity arrangements. However, most first American peoples followed a cyclical lifeway pattern when possible, preferring to stay within known and familiar environments.

Two theories have been put forward as to how these intermarriage and reciprocity networks functioned. In the band-macroband model, the first American lifeway pattern is considered to be strongly shaped by the environment, specifically seasonal and geographic variation in resources. The staging area model, on the other hand, argues that colonizing populations of first Americans settled into resource-rich areas fairly quickly and used them as bases from which to familiarize themselves with local resources as well as to explore and settle the surrounding region.

—Peter Jones

Bibliography

- Butler, Virginia L. "Tui Chub Taphonomy and the Importance of Marsh Resources in the Western Great Basin of North America." *American Antiquity* 61(4) (1996): 699-717.
- D'Azevedo, Warren, ed. *Great Basin*, Vol. 11. Washington, DC: Smithsonian Institution Press, 1986.
- deFrance, Susan D., et al. "Late Paleo-Indian Coastal Foragers: Specialized Extractive Behavior at Quebrada Tacahuay, Peru." *Latin American Antiquity* 12(4) (2001): 413-426.
- Erlandson, Jon, et al. "Beads, Bifaces, and Boats: An Early Maritime Adaptation on the South Coast of San Miguel Island, California." *American Anthropologist* 107(4) (2006): 677-683.

Fidalgo, Rancisco, et al. "Investigaciones Arqueológicas en el Sitio 2 de Arroyo Seco." In *New Evidence for the Pleistocene Peopling of the Americas*, edited by A. L. Bryan. Orono, ME: Center for the Study of Early Man, 1986.

Martin, Paul S. "The Pattern and Meaning of Holarctic Mammoth Extinction." In *Paleocology of Beringia*, edited by D. M. Hopkins, J. V. Matthews, C. E. Schweger, and S. Young. New York: Academic Press, 1982.

■ Introduction: Lifeways after the End of the Glacial Epoch, 10,000–4000 BCE

The lifeways of prehistoric communities worldwide between 10,000 and 4000 BCE can be broadly classified into two groups: hunting-gathering and farming. This distinction places food acquisition as the major force in human activity, not least because it underpins most aspects of social activity as well as facilitates trade and structures the division of labor. By 10,000 BCE most prehistoric communities continued to engage in hunting and gathering, which had become increasingly sophisticated since its adoption by *Homo erectus* circa 1.5 million years ago. However, at the dawn of an interglacial epoch, the Holocene, circa 8000 years BCE, significant changes were occurring in terms of the manipulation of plants and animals as food sources in the Near and Far East. The domestication of specific wild plants, notably grasses, was under way, as was clearance of natural vegetation as agriculture slowly developed. The domestication of specific animals was also occurring by this time, especially in the Near East where domesticated cattle and sheep originated. Further domestications took place in other regions at later times but mostly between 8000 and 4000 BCE. These include sub-Saharan Africa, Central America (Mexico), the northern Andes, and east-central North America. Changes in other aspects of society also occurred including permanent settlement, the production of pottery, diversification of resource use as metal smelting developed, and innovations in art forms and jewelry.

Hunting and gathering were the most widespread means of food acquisition circa 10,000 BCE. Paleolithic peoples worldwide used wood and stone tools for hunting, but as the last ice age ended, tool kits altered. Innovations included in-

creased tool diversity and the production of microliths (i.e., small scrapers, blades, and points that would have been hafted in wood). In some regions there was also an increase in tools made from antler and bone. In Europe such innovations appear to have been a response to a changing environment, notably a shift from relatively open habitats to early interglacial forests, and have led archaeologists to describe the culture as Mesolithic or Middle Stone Age, which lasted until circa 5000 BCE. In the Near East this stage is not represented, and the Paleolithic gave way to the Neolithic or New Stone Age, which is associated with the inception of agriculture. Mesolithic cultures comprise the Maglemosian in northern Europe, the Beuronian in central Europe, the Epigravettian in the Mediterranean zone, and the Sauveterrian in western Europe. Star Carr in Yorkshire, Britain, is a particularly important archaeological site, and excavations have yielded artifacts that provide an insight into Mesolithic lifeways. The habitation site consists of a platform of cut birch brushwood that was constructed in reed swamp at the edge of a lake; this platform may have been covered by animal skins to create tentlike structures. Bones from numerous animals such as badger and fox, which were possibly trapped for their fur, and various birds reflect the regional fauna, while bones from red deer, roe deer, elk, aurochs, and boar represent food sources. Bones of domesticated dog, the earliest domesticated animal found in Britain and the earliest domesticated animal in general, were also discovered, and it is likely that the species was used for hunting and guarding as it was elsewhere. Star Carr may not have been permanently occupied but rather may have been used

intermittently or seasonally by hunter-gatherers who also exploited coastal resources, used fire, treated animal skins, and made microliths; they may also have engaged in ritual practices, as indicated by the presence of stag frontlets with attached antlers. In Scotland, including the Scottish Islands, and along the European coasts of the North Sea, there is widespread evidence for Mesolithic exploitation of large mammals, especially species of deer, and coastal resources including mollusks, fish, and sea birds. At some sites bows made from elm, rowan, and yew have been found. Mesolithic communities constructed boats; both boats and paddles have been preserved. At Tybrind Vig on the Danish island of Fyn, deposits dating to between circa 7500 to 6000 BCE contain two canoes of circa 19.6 and 31.1 feet (6 and 9.5 meters) long made from the trunks of lime trees, decorated paddles, a great variety of bone, antler, and wooden artifacts, and fishing equipment as well as amber and a range of animal and plant remains. The latter include hazelnuts, sea beet, and acorns, which are present in many European Mesolithic sites along with water chestnuts.

By 9500 BCE in the Near East, changes were occurring that would have profound repercussions for both the environment and society. Archaeological excavations at many sites in the Near East, such as Jericho, Netiv Hagdud, Abu Hureyra, and Çatalhöyük, have revealed that lifeways were changing substantially, including the establishment of permanent settlements. Other changes involved the domestication of specific plants and animals and the inception of the first agricultural systems. This occurred in the Fertile Crescent of the Near East, a region incorporating the land adjacent to the eastern Mediterranean and the valleys of the great Indus and Euphrates rivers. The major crops domesticated included emmer and einkorn wheat, barley, oats, and rye, the ancestors of which are sometimes described as founder crops that were present in the region as wild grasses. A variety of legumes were also domesticated, such as the lentil, chickpea, and broad bean, along with the olive and fruits such as the fig. Animal domestication was also occurring; sheep, goat, cattle, and pig were all domesticated between 7000 and 5000 BCE.

Their ancestors were the mouflon, beozar goat, auroch, and wild boar, respectively. The Early Neolithic people responsible for this selection and domestication were also hunter-gatherers who began to adopt a more sedentary lifeway as farming became established, although hunting and gathering continued for obtaining additional sources of food. There is much speculation as to why this new lifeway of farming began, especially as it requires forward planning and is labor-intensive. Environmental change, which may have affected the availability of wild food plants and animals, and increasing population pressure are two likely reasons, or possibly the stimulus was linked to territory and the need to improve food security or to generate a food surplus for trade.

Neolithic people also practiced rituals, as evidenced by human figurines and plastered skulls found at some sites. The early farmers did not have pottery and belong to a period circa 8500 to 7500 BCE that is known as the prepottery Neolithic. It is distinguished from the earlier Natufian period by a more varied stone tool assemblage, including an increased range of pounding and grinding tools. Pottery making dates from 7500 BCE and marks the establishment of a new technology in the region. Settlements continued to grow and diversify as agriculture expanded. By 5000 BCE new technologies were developing, namely metal smelting, that initially involved the exploitation of copper ores, which gave rise to the Copper Age and the Bronze Ages, and later iron ores. Jewelry made from stone, clay, bone, and shell and later from metals was also produced. Such technologies broadened the range of goods for trade and reflect the increasing sophistication of societies in which craft specialization occurred. Agriculture thus allowed a proportion of society to engage in activities other than food acquisition. From the Fertile Crescent agriculture spread into Europe, Asia, and Africa, where it became a major cause of environmental change and especially of deforestation.

Much less research has been undertaken in other regions where plant and animal domestication occurred, so how lifeways altered is less well understood. Nevertheless those selected

plants and animals have had a profound impact on ecosystems and landscapes as well as on human lifeways. For example, China is considered to be the home of rice and millet, both domesticated from wild grasses. Where and when rice was domesticated is contentious, but it probably occurred in the Yangtze River basin and/or the delta; age estimates vary between 8000 BCE based on work at Diaotonghuan Cave near Poyang in the Middle Yangtze basin and at Shangshan, a Neolithic village in the Lower Yangtze valley, and 4900 BCE based on work in the Zhejiang region, also in the Lower Yangtze. The earliest date of 4500 BCE for domesticated millet comes from an early farming village of Dadiwan in northwestern China. The three centers of plant domestication in the Americas produced maize, capsicums (chili pepper), potato, and various squashes prior to 4000 BCE. All have become major world crops. The earliest evidence for maize domestication comes from the Xihuatoxtla rock shelter in the Rio Balsas valley of the Mexican state of Guerrero and dates to circa 7000 BCE. Capsicum and potato originated in Andean Peru and date to 4000 BCE, while squash and gourd domestication occurred circa 9000 BCE based on evidence from southwestern Ecuador and Mexico, where the species were domesticated independently. *Cucurbita pepo* was also domesticated circa 2500 BCE in eastern North America. Domesticated sorghum dates to circa 5000 BCE and originated in Ethiopia, though it may have been domesticated in several centers in sub-Saharan Africa independently.

—A. M. Mannion

Bibliography

- Bailey, Geoff, and Penny Spikins, eds. *Mesolithic Europe*. Cambridge: Cambridge University Press, 2008.
- Cauvin, Jacques. *The Birth of the Gods and the Origins of Agriculture*. Translated by Trevor Watkins. Cambridge: Cambridge University Press, 2007.
- Denham, Timothy, and Peter White. *The Emergence of Agriculture: A Global View*. London: Routledge, 2006.
- Murphy, Denis J. *People, Plants, and Genes: The Story of Crops and Humanity*. Oxford: Oxford University Press, 2007.

Foraging to Farming— The Neolithic Revolution

The term “Neolithic Revolution” refers to the marked change in lifeways from the stage of hunting and gathering to food production (i.e., plant cultivation and animal husbandry). The emergence of agriculture as sustained subsistence was neither accidental nor purely intentional. Instead, it resulted from the dynamic interplay of various factors, both external (i.e., relating to the conditions of environmental ecology) and internal (i.e., posing a challenge to human adaptive strategies).

Judging from the composition of the diet of those people who lived at the time of maximum glaciation during the last Ice Age, some 20,000 years ago, this period already included the protein-rich seeds of several of the wild plants in the Near East, among them species of wild grass and ember. It is from the experience with the taste of the seeds as foodstuff and their availability that hunter-gatherers began to experiment with them at a later period.

Human inventiveness was certainly spurred and the human mind challenged to collect seeds in greater quantity once they had ripened and to devise means to store them to prolong the span of time for consumption. It can be conjectured that the early experiments with wild seeds—for which the annual period of availability was always limited—were accompanied by simultaneous efforts to improve the capacities of their storage as foodstuffs. Experimenting with the seeds of wild plants is a necessary precondition for intentional plant cultivation.

The span of time from the first experiments with wild seeds to full-scale agriculture extends over 2,500 years, from circa 11,000 to circa 8500 BCE. Is it reasonable to describe the step-by-step evolution that is involved in terms of a revolution? The view of the modern observer who looks back into history tends to condense the proportions of absolute time, and longer periods may look, from the distance, more compacted than they really were.

The experiences of the hunter-gatherers with wild seed plants posed the challenge to remain in the area of their natural spread to follow the ripening and to engage in harvesting at the

➤ WAS THERE ONLY ONE NEOLITHIC REVOLUTION?

For many years, it was believed that the combination of technologies in the agrarian package is a prototype for all agrarian lifeways in the world. This belief made it easy to think of a spread of this prototype package from the Near East to other regions. However, the reality of what happened in the Neolithic Age is more complex and shows regional varieties of a transition from foraging of prehistoric hunter-gatherers to various forms of sustained subsistence. Recent findings in the archaeology of eastern Europe call for a revision of the idea of one single package of new technologies. The Neolithic Revolution produced at least two foundational packages of technological innovations: the agrarian package and the pastoral package. The agrarian package consisted of technological advances (in plant cultivation, animal husbandry, pottery, and weaving) characterized by sedentary lifeways, which made its first appearance in the Near East. The pastoral package consisted of technologies (the same as the agrarian package minus plant cultivation) characterized by semisedentary or nomadic lifeways, which made its first appearance in the East European steppe zone of the Pontic-Caspian region, extending between the Caspian Sea and the Black Sea in southern Russia.

What makes these new insights about an alternative package important is the evidence that

this package did not emerge as an offshoot of the agrarian package but rather as an independent form of subsistence. It was believed earlier that pastoralism and nomadism originated in regions where the crops from plant cultivation would have been too poor so that people living in those areas would have given up their sedentary lifestyle and would have focused on herding as the main form of subsistence.

The archaeological record of pastoralist culture in the steppe zone of southern Russia shows that herding developed in the region in the seventh millennium BCE, long before small-scale agriculture was introduced in the mid-sixth millennium BCE. Thus, the earliest variant of pastoralism did not originate as an offshoot of agriculture like nomadism in many parts of the world in later periods.

—Harald Haarmann

Bibliography

Anthony, D. W. *The Horse, the Wheel and Language*. Princeton, NJ: Princeton University Press, 2007.

Haarmann, Harald. "Indo-Europeanization: The Seven Dimensions in the Study of a Never-ending Process." *Documenta Praehistorica* 34 (2007): 155–175.

right time. This process of a seasonal presence of bands of hunter-gatherers in areas of optimal food supply furthered a development that was to become a major thrust in human socioeconomic evolution, the trend to adopt a sedentary lifeway.

Sedentism is a necessary precondition for the observation of the life cycle of wild plants and their seed production over a longer duration. Therefore, sedentism always precedes and predates the socioeconomy of plant cultivation. Sedentary lifeways enhance the transition to food production in the form of horticulture on a small scale and as agriculture on a larger scale.

When we speak of agriculture, we mean full-scale plant cultivation. The beginnings of this phase of food production date to circa 8500 BCE, and the earliest evidence for it comes from the Near East from the settlement of Jericho on

the west bank in the valley of the Jordan River. "Agriculture" is actually a blanket term for several forms of economic subsistence that are often interconnected. Those who practice agriculture also keep domesticated animals such as pigs, sheep, goats, and/or cattle. The production of food, of grain as well as meat, requires storage capacities (i.e., vessels to store food for later consumption). Therefore, the making of pottery unfolded, as a special technology, parallel to the other technologies.

In view of the network of technological skills that are involved, it becomes evident that when talking about agriculture, we are actually considering a diverse package of activities and technologies. Experts speak about the agrarian (or agricultural) package. In such contexts where the emergence of agriculture is referred

to—that is, to the three basic domains of plant cultivation, animal husbandry, and pottery and the related items—the agrarian package is defined as “the sum of traits that appear repeatedly in the Neolithic assemblages of Southwest Asia, Anatolia and Southeast Europe.”

The earliest signs of a trend toward sedentism are found in the ancient Near East, in the context of ecological changes that affected human living conditions. When the climate became colder during the Younger Dryas phase (in the course of the twelfth millennium BCE), this affected the availability of seeds of wild grass and other food crops. These food resources had been an important asset of nutrition for the hunter-gatherers of the region. In response to the ecological change, humans retreated to areas where wild grass was still available. In the vegetational refugia, humans adapted to local ecology and exploited the food resources intensively. The chain reaction of events during that phase of a shift from mobility to sedentism illustrates that the impulse for that development was sparked by ecological changes that in turn induced responses of human intentionality to cope with those changes.

Sedentism is a stable feature in any agrarian society. For reaching the stage of full-fledged agriculture, sedentary populations in the ancient Near East experienced a step-by-step transition. First is the sedentism of the Natufian people in the twelfth and eleventh millennia BCE (intensive exploitation of seeds of wild plants, beginnings of an intentional planting of wild seeds, no domesticated animals). Natufian settlements have been found at sites in Israel, Jordan, and Lebanon. Second is the sedentism of the early monument builders (at Göbekli Tepe, Çayönü, Nevalı Çori, and other sites in eastern Turkey) in the tenth and ninth millennia BCE (intensive exploitation of wild plants, intentional planting of wild seeds, no domesticated animals). Last is the sequence of sedentism of the early inhabitants of Jericho (ca. 10,000–8500 BCE, sedentary hunter-gatherers; ca. 8500–7300 BCE, domesticated plants; ca. 7300–6000 BCE, domesticated animals such as sheep and goats).

The history of sedentism and plant cultivation during the following millennia is the history of the spread of full-fledged agriculture and

animal husbandry in the area that has become known as the Fertile Crescent—extending from Egypt in the south over the Near East to Anatolia in the north and Mesopotamia in the east—and beyond. Those populations that founded the early civilizations of the Old World from the sixth to the fourth millennia BCE (i.e., the Danube civilization, Egypt, the city-states of ancient Sumer, and the kingdom of Elam in the Zagros Mountains) were agrarian communities.

—Harald Haarmann

Bibliography

- Bellwood, P., and C. Renfrew, eds. *Examining the Farming/Language Dispersal Hypothesis*. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Çilingiroglu, Ç. “The Concept of ‘Neolithic Package’: Considering Its Meaning and Applicability.” *Documenta Praehistorica* 32 (2005): 1–13.
- Haarmann, H. *Foundations of Culture: Knowledge-construction, Belief Systems and Worldview in Their Dynamic Interplay*. Frankfurt, Berlin, Oxford, and New York: Peter Lang, 2007.
- Harris, D. R. “The Expansion Capacity for Early Agricultural Systems: A Comparative Perspective on the Spread of Agriculture.” In *Examining the Farming/Language Dispersal Hypothesis*, edited by P. Bellwood and C. Renfrew. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Whittle, A. and V. Cummings, eds. *The Mesolithic-Neolithic Transition in North-West Europe*. Oxford and New York: Oxford University Press, 2007.

Defining Domestication

The term domestication derives from the Latin *domus*, meaning “home.” It means the harnessing or taming of wild resources, notably plants and animals, for use by humans and involves some form of modification that distinguishes domesticated species from their wild relatives. Domestication was a momentous development and the first stage in the initiation of settled agriculture and the provision of food security. As a technology it irrevocably altered the relationship between people and the environment and underpinned global environmental and cultural history. It also facilitated wealth generation and human appropriation and alteration of the global carbon cycle.

WILD TO DOMESTICATED WHEAT

Wheat traditionally is regarded as one of the earliest domestic plants. It was introduced to human culture and to the productive economy on the territory of the Fertile Crescent as early as 9000–7000 BCE. Paleobotanic assemblages of the first settlements of Near East farmers indicate that it was cultivated together with barley, sometimes on the same plot of land. From the very beginning, early farmers explored several sorts of wheat, the most widespread among these representatives of tetraploid (emmer) and diploid (einkorn) wheats.

The identification of wild ancestors of wheat is complicated by the genetic diversity of wheat's domestic forms, which implies that they were introduced into farming independently. Einkorn (*Triticum monococcum*) is regarded as a relatively more archaic form in comparison with emmer; nevertheless, most paleobotanists believe that einkorn was domesticated in the Taurus region a little bit later than emmer on the basis of its more widely distributed wild form.

Emmer's wild form, which nowadays is growing freely in southwestern Turkey, western Iran, and Armenia, usually is regarded as not related to domestic emmer (*Triticum dicoccum* Schrank). This domestic variety instead is traditionally connected with the southern coarse-grained race

of tetraploid wild emmer, which was primarily domesticated in Palestine and then distributed all over the Near East.

The appearance and dissemination of soft types of wheat around 6000 BCE are traditionally associated with the process of natural hybridization of wild emmer and einkorn with their wild relative *Aegilops* in southern Iran and Transcaucasia. The wheat variant widely distributed in the Caspian region and Caucasus most probably resulted from the natural hybridization of emmer *Triticum dicoccum* Schrank or common (or bread) wheat *Triticum aestivum* and club *Triticum compactum*. It is worth mentioning that soft wheat managed to replace emmer only in Roman times.

—Olena V. Smyntyna

Bibliography

- Harlan, J. R. "The Origins of Cereal Agriculture in the Old World." In *The Origins of Agriculture*, edited by C. A. Reed. The Hague: Mouton, 1977.
- Zohary, D. "The Progenitors of Wheat and Barley in Relation to Domestication and Agricultural Dispersal in the Old World." In *The Domestication and Exploitation of Plants and Animals*, edited by P. G. Ucko and G. W. Dimbleby. Chicago, Aldine, 1969.

The process of domestication begins with the selection of a wild species that is valued for a particular characteristic. Most species have been domesticated to provide food. In the case of plants the attraction might have been a high starch or sugar content, and in the case of animals it was edible protein. Other reasons for domestication include a capability for work or draft (e.g., ox and horse), assistance with hunting or herding wild or domesticated animals (e.g., dog), the provision of fiber (e.g., cotton and sheep), ornamental value (e.g., flowering plants), or as pets (e.g., dog and cat). There is a special relationship between domesticated species and humans, notably a degree of mutuality or symbiosis. This is sometimes expressed as the result of coevolution insofar as both humans and domesticated plants and animals have adapted to each other for survival.

The domestication of plants and animals is a comparatively recent development. The first domesticated species was the dog (*Canis lupus familiaris*) from the wolf probably about 15,000 years ago, though this is debatable. The place of first domestication is unknown, but as the earliest dates for sheep and cattle domestication circa 10,000 years ago come from the eastern Mediterranean region, it is possible that the dog was also first domesticated in that region. It is equally possible that the species was domesticated from the wolf in separate regions at different times. The period immediately after the last ice advance (i.e., 12,000 to 10,000 years ago) was a time of considerable innovation when numerous plant and animal species were domesticated and the first agricultural systems were initiated. This occurred in the eastern Mediterranean in the so-called Fertile Crescent and in southern China.

Emmer wheat (*Triticum turgidum*) and einkorn wheat (*Triticum monococcum*), barley (*Hordeum vulgare*), fig (*Ficus carica*), lentil (*Lens culinaris*), and chickpea (*Cicer arietinum*) were all domesticated in the Fertile Crescent between 9,000 and 11,000 years ago at about the same time as rice (the species *Oryza sativa*) was being domesticated in the middle Yangtze River valley. Nine thousand years ago corn (*Zea mays*) was being domesticated in what is now Mexico. Sheep, goats, cattle, and pigs were also domesticated in the Fertile Crescent between 10,500 and 9,000 years ago, and there was at least one further independent locus for cattle domestication in the Indus Valley of Pakistan, with a possible third locus in sub-Saharan Africa. Additional plant domestications occurred later in the Fertile Crescent, China, and Mexico as well as elsewhere. For example, potato (*Solanum tuberosum*) and tobacco (*Nicotiana* spp.) were domesticated in the Peruvian Andes, while domesticated squashes (*Cucurbita* spp.) and sunflower (*Helianthus annuus*) originated in central North America, and chicken and horse domestication occurred in Southeast Asia and the Eurasian steppes, respectively. From these centers of origin, domesticated species spread via migrants and trade to a wide hinterland.

How domestication occurs is open to question and varies between species. Domesticated plants are unlike their wild relatives because their life cycles and anatomy have been altered so that in many cases a plant may not be able to thrive and reproduce unless there is human intervention. In the case of animals there is a difference between domesticated and tamed. Tamed animals are taken from the wild and trained, while domesticated animals are bred in captivity and tamed. All domesticated species have been subject to selective breeding to accentuate desired traits, and thus their genetic characteristics have been altered when compared with their wild counterparts. In the process of such breeding other traits have been lost, and in many cases this means that the plant or animal cannot survive without human attention. Corn (maize) is a good example. It was domesticated in Mexico about 9,000 years ago from a wild grass called teosinte, which was selected because of its large seeds. Selective breeding over

thousands of years has produced modern hybrid varieties with larger seeds, but they cannot reproduce naturally through cross-pollination.

Given the many millions of plant, animal, and insect species that comprise the world's biodiversity, only a very small number have been domesticated. Even in today's high-technology world, the staple crops continue to be among those species that were first domesticated (i.e., wheat, rice, and maize). Similarly, the most numerous domesticated animals—sheep, pigs, cattle, and goats—were early domesticates, and relatively few animals have been domesticated when compared with plants. Why this is so is far from evident but possibly reflects the special characteristics needed for domestication and the special conditions that foster it. There is debate as to the roles of natural selection and selective breeding in domestication. Natural selection involves mutations that are independent of human intervention but render a proportion of plants and animals in a population more useful and easily manipulated by humans and are then selected by humans. Selective breeding over centuries has culminated in the high-yield crops and livestock that dominate world agriculture today. Moreover, selective breeding is becoming ever more precise through species manipulation at the molecular level using techniques of genetic modification, a major aspect of modern biotechnology.

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Bibliography

- Murphy, Denis J. *People, Plants, and Genes: The Story of Crops and Humanity*. Oxford: Oxford University Press, 2007.
- Price, E. O. *Animal Domestication and Behaviour*. Wallingford: CABI Publishing, 2002.

Plant and Animal Domestication in the Ancient Near East

With the end of the last Ice Age came dramatic changes in global climate. Temperatures and precipitation increased in many parts of the world, and vast areas of land were opened as the glaciers retreated. Most plants, animals, and humans adjusted to these new conditions and even expanded into new regions. Around this same time, 10,000 years ago, groups of largely sedentary

hunter-gatherers living in the Near East started cultivating wild cereal grasses, such as wheat and barley. Within a few centuries the domestication of plants and animals was achieved. This new adaptation in subsistence acquisition was highly successful and soon spread to neighboring regions.

Domestication involves the human alteration of the genetic makeup of plants and animals to the point that they are no longer able to survive in the wild. The first domesticates appeared in the Fertile Crescent of the Near East, which stretches 1,242 miles (2,000 kilometers) from the Negev in Israel north through Lebanon, Syria, and southeastern Turkey and arches eastward to include Iraq and Iran. This region offered a hospitable environment with arable lands to grow crops. Moreover, wild cereals along with sheep, goats, pigs, and aurochs were native to the area.

The domestication process began with the selective harvesting and sowing of wild plants. As humans continued to choose the most desirable plants and seeds, changes in the succeeding populations began to emerge. Over time, the selected attributes of the plants became the norm, making distinguishing between wild and domesticated forms relatively easy. The same domestication process is essentially seen in animal populations as well.

Evidence of domestication can be seen in the archaeological record in the form of preserved macrobotanical remains and phytoliths (silica fossils) from plants. The seeds and phytoliths from domesticated forms of cereals, for example, are larger. The loss of anatomical features, such as the brittle rachis that distributes the seeds by natural agents, is also a sign of domestication. Although specialists cannot differentiate between wild and domesticated plant forms using pollen grains, a significant increase in a particular genus or species can point to agriculture. A spike in pollen grasses can denote deforestation to create agriculture fields as well as indicate the crops themselves. Future studies on plant DNA may also help clarify the origins of domestication.

Two species of wild wheat, einkorn (*Triticum monococcum*) and emmer (*Triticum dicoccum*), the latter of which is likely a natural hybrid of einkorn and goat grass, were domesti-

cated in the ancient Near East. Through selective harvesting and planting, these wild wheat forms eventually became domesticated varieties. The wheats can be distinguished on the basis of whether the husks or glumes stick to the seeds (domesticated) or are easily removed (wild). The wild forms are also known as naked or free-threshing wheats. Wheat forms that kept the seeds on the plant were able to be transported from the field to processing areas, a highly advantageous trait. Barley can be differentiated much the same way as wheats can, as their seeds are larger and the husks more robust. The number of rows of grain also changed. Two-rowed barley was domesticated into two-rowed hulled barley and eventually into six-rowed hulled barley. The latter domesticate increased the seed yield and chance of contributing grain to future plantings. Other domesticated plants include legumes (lentils, vetches, and peas), fruits (figs, apples, and pears) and nuts (acorns, almonds, and pistachios), all of which are larger.

Animal domestication occurred in the Near East shortly after plant domestication. Beginning with animal husbandry, wild animals were gathered, herded, and slaughtered for their meat. By 9,000 years ago people living in the Zargos region of the Fertile Crescent were managing captive goat herds. As humans selected out individual animals with advantageous traits for breeding, such as increased muscle content and docility, domesticated populations emerged. These goats were the earliest to be domesticated, followed by sheep, pigs, and cattle.

Based on teeth and bones found in the archaeological record, domestication is reflected by a number of morphological changes. The decreased size of the domesticated form of the animal is apparent in several species, as is the reduction in jaw size and the increased crowding of teeth. The shapes of the horns of goats and sheep are indicative features as well. Certain pathologies can also show animal domestication because using trained animals as beasts of burden can inflict osteoporosis and other bone deformities. Overcrowding and unclean pens can lead to diseases as well. Although less likely to be preserved, the wool and hair in the skins of domesticated animals are also different.

Supporting evidence of domestication can also come from the faunal assemblages as a whole. Cattle bones reflecting the slaughtering of young males and older females, for example, point to farming practices in which the females are kept alive longer for breeding and dairy products. The presence of animal species outside their natural habitats also reflects domestication, as does artifact evidence including plows, yolks, and pens.

It is now clear that domestication first emerged in areas with an abundance of resources such as the Fertile Crescent, where the risks of exploring new subsistence strategies were less. It is also apparent that agriculture initially appeared among more sedentary and complex groups of hunter-gatherers, such as the Natufians living in the Levant, and was accompanied by a shift in the economic organization of these populations. The farming lifestyle required people to stay in one place in order to tend the fields. This significant change in lifestyle also led to new innovations such as ceramic production, which allowed for the storage of harvested crops.

By 8,000 years ago domesticated plants and animals were firmly established in the Near East. They then spread into Europe and the Nile Valley through the diffusion of ideas and products. Agriculture was quickly adopted in areas where hunter-gatherer groups occupied all the inhabitable ecozones and populations were large enough to support the process. Other regions, including Japan, China, the Americas, and the southern margins of the Sahara in Africa, also witnessed the domestication of plants and animals although independently from the Near Eastern farmers.

—Shawn Bubel

Bibliography

- Gebauer, A. B., and T. D. Price. *Transitions to Agriculture in Prehistory*. Monographs in World Archaeology No. 4. Madison, WI: Prehistory Press, 1992.
- Renfrew, C., and P. Bahn. *Archaeology: Theories, Methods and Practice*. 5th ed. New York: Thames and Hudson, 2008.
- Smith, B. D. *The Emergence of Agriculture*. New York: Scientific American Library, 1998.

Plant Cultivation and Animal Use in the Nile Valley

The Nile Valley was characterized by diverse habitats at the end of the last Ice Age. Marshlands supported varied wildlife, which in turn supported hunter-gatherers who established camps along the Nile's length. They exploited fish, water and migratory birds, and game, including aurochs, hartebeest, and gazelle, as well as plant species such as sedges and grasses, including the tubers of *Cyperus* sedges, which were extracted with digging sticks. However, despite abundant food, life was precarious given the unpredictability of Nile floods and their often dramatic impact on the floodplain and delta. Toward the beginning of the Holocene, these hunter-gatherers became increasingly sedentary. The Qadan culture, from the central Nile Valley, is one such example that existed circa 15,000 to 11,000 years ago. They buried their dead in cemeteries, had a tool kit of microliths, and a range of grinding implements. They are considered to be the precursors of the first agriculturalists in the Nile Valley.

How agriculture developed in this region is debatable. Were plants and animals domesticated in situ, or were they introduced from the Levant/Middle East? How, by whom, and when domesticated species were introduced remains unknown, but as in the Levant/Middle East, the use of such species spread rapidly. Evidence is limited, mainly because silt deposition has buried ancient villages, but the general consensus favors an introduction of domesticated species by circa 8,000 years ago. The earliest date for the presence of domesticated crops is circa 7,200 years ago and is from the El-Badari settlements in Upper Egypt, while one of the earliest dates for domesticated animals, notably goat, is circa 6,600 years ago from Napta Playa, 62 miles (100 kilometers) west of Abu Simbel in the Western Desert. This is considered to be the oldest Neolithic site in Egypt and was constructed when dry savanna was still characterized by prevalent vegetation prior to the development of drier desert conditions. Remains of six-rowed barley have also been found at this site along with pottery and numerous groups of monoliths

carved from sandstone. Glimpses of lifeways and deathways during the late Neolithic are also afforded by excavations at the Gebel Ramlah Playa, 80 miles (130 kilometers) west of Abu Simbel. Here communities of pastoralists herded aurochs, which may have been domesticated in situ, as well as goats and sheep. The animals were herded to take advantage of seasonal grass growth in what was then still savanna, and as the herders moved on they left behind hearths. These communities buried their dead in cemeteries, either as single or multiple burials, circa 6,000 years ago. The graves were rich in grave goods, including stone tools, pottery, palettes, polished pebbles, and jewelry. Vessels known as tulip beakers decorated with incised and stippled patterns were used specifically as grave goods, while the palettes were made of ivory, horn, pottery, or sandstone and contained cosmetics of various colors, which were derived from a range of mineral sources. The jewelry was varied and well crafted. It included necklaces, pendants, and bracelets made from a range of materials such as agates, turquoise, carnelian, various shells, bone, and horn. Bone needles and daggers as well as flint knives and arrowheads were present. These artifacts indicate division of labor within society and a material culture that embraced decoration. One grave contained a sheet of mica on which a tilapia fish had been carved. The fact that stones such as cornelian and shells from the Red Sea coast were present indicates well-developed trade with other regions.

By 6,000 years ago drought conditions were increasing, which may have resulted in human communities moving closer to the Nile to ensure a water supply and to adopt domesticated plants and animals to ensure a food supply at an environmentally precarious time. By this time, settlements associated with farming were in existence. Many of these are associated with the Badarian culture, named after El-Badari on the east bank of the Nile near Assyut in Upper Egypt, dated to circa 7,200 to 5,000 years ago. Here there are the remains of approximately 40 settlements that were permanently occupied, and there are also many cemeteries. The settlements consisted of mud-brick houses with hearths and had large granary pits for barley and emmer wheat. These cereals were also found in graves that reflected

considerable attention to body burial, including the use of linen shrouds and the burial of women with plaited hair and ivory combs. The flax to produce the linen was grown locally, and weaving was well established. Distinctive figures carved from hippopotamus ivory were also placed in graves. Tools included end scrapers, perforators, axes, bifacial sickles, and arrowheads. The remains of domesticated cereals and domesticated animals, which included cattle and sheep, indicate a mixed farming economy. Dogs, the earliest domesticated animal dating to at least 12,000 years ago, were also kept, and most were probably used for herding rather than as a source of food. Fishing and hunting were additional sources of protein. The Badarians used a particular style of pottery with a rippled surface. They also mined malachite, a copper mineral prized for its bright green color that was ground up to produce a green base for cosmetic purposes. The Badarian culture is also associated with early metalworking, notably copper for the fashioning of pins.

Merimde Beni Salama, contemporaneous with the Badarian, also provides evidence for early agriculture. Remains of this settlement are located on the edge of the Nile Delta and have an area of approximately 49 acres (20 hectares). It consisted of a cluster of mud-covered houses, sometimes oval shaped and constructed half belowground and half aboveground with hearths. The mud blocks contained straw for binding, and roofs were made with reeds or rushes. Storage jars and storage pits were used for grain and water. The major food types were wheat and barley, and cattle, goats, and pigs were kept. Estimates suggest that the village was occupied by between 1,000 and 2,000 people. Cemeteries were located outside the village borders, and bone assemblages imply that cattle and sheep were used for sacrifices.

The cultures described above were the precursors of the dynastic Egyptians (pharaohs) who controlled the Nile Valley, built monuments such as the pyramids, and entombed their dead with a wealth of grave goods.

—A. M. Mannion

Bibliography

Bard, Kathryn A. *An Introduction to the Archaeology of Ancient Egypt*. Oxford: Oxford University Press, 2008.

Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 12th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2006.

Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2003.

Plant and Animal Domestication in East Asia

The transition from economic subsistence based on foraging (i.e., hunting and gathering) to plant cultivation (i.e., horticulture and agriculture) is a major process of the postglacial period that resulted in fundamental changes of the lifeways of those populations that were involved. During the transitional period, people became sedentary and started to experiment with the seeds of wild plants, selecting the most nutritious for intense use. This then led to more extensive intentional use of such seeds for growing crops. Systematic plant production—that is, full-fledged agriculture—was the result of more than 2,000 years of experimenting in the Near East, and in other parts of the world where agriculture emerged independently, it also took a longer span of time for plant production to become the main system of subsistence. The emergence of agriculture has been celebrated as the Neolithic Revolution. A closer inspection of the conditions of the incubation phase reveals the relativity of the concept “revolution.”

The earliest evidence for the transition to the Neolithic in human history comes from the Near East and dates to the eleventh millennium BCE, with full-fledged agriculture appearing around 8500 BCE (the Neolithic Revolution). All other instances of early agriculture in the world are younger. Based on recent archaeobiological findings in East Asia, it is possible to relate the early experiments with wild rice to the seventh millennium BCE. In the Near East, the early date for experiments with domestication may be explained by exceptionally favorable conditions, set by a unique combination of ecologically adaptable and nutritionally complementary domestic plants and animals. In East Asia, this process did not yield the same kind of balance as in the Near East. It seems that in the Far East, plant domestication had priority over animal domestication.

➤ BASHIDANG (CHINA)—EARLY RICE CULTIVATORS

The Neolithic settlement of Bashidang extends over some seven acres or three hectares and is located in the middle Yangtze drainage. The lowest layer of human occupation dates to the eighth millennium BCE. Pottery, made of clay tempered with rice chaff, was introduced at the beginning of the seventh millennium BCE. The villagers constructed pile dwellings, and they buried their dead together with pots and stone ornaments. The inhabitants of Bashidang lived in a community sustained by the cultivation of rice. Evidence has been provided by an analysis of the remains of rice spikelets with marks that reveal that they were intentionally torn off the stalk (e.g., by threshing). In addition to rice, the remains of other plants—namely water caltrop and lotus—were found that are typical of wetlands such as marshes and lakes. The people probably already kept livestock, but this is as yet unconfirmed by the bone remains. The layout of Bashidang and the lifeways of the villagers that can be reconstructed from the material remains resemble those at Pengtoushan, situated some 12.4 miles (20 kilometers) to the southeast.

—Harald Haarmann

There is consensus that the earliest evidence for the domestication of plants in East Asia comes from central China, although there is still much debate about the location of the first self-sufficient communities. Although the period immediately following the end of the last Ice Age and the melting of the Eurasian ice shield saw a moderately warm climate, there was another intermediate period of cold weather that lasted to about 8000 BCE (called the Younger Dryas period). Another period of warming followed that and brought subtropical vegetation and fauna into the Yangtze Valley. Among the plants that spread from refugia was wild rice, and it is with this plant that Neolithic people came to experiment first. Rice was to become the major domesticate for food production in East and Southeast Asia.

Several archaeological sites in the middle and lower reaches of the Yangtze Valley (Pengtoushan, Bashidang, Fenshanbao, Tianluoshan, and other sites) and the Huanghe (Yellow River) valley (Erlitou) have yielded significant data as

proof of the Neolithic transition. The process of transition in the Far East was more complex than in the Near East. The main reasons for this were differences between climatic and vegetational zones in China where plant cultivation started out, which in turn explains the variety of plants with which people in East Asia experimented for the purpose of domestication. In the area of primary transition to agriculture—that is, in the area from which agriculture later spread into other regions—a southern and a northern gravitation can be discerned, each with individual species of domesticates.

The southern area of plant and animal domestication (warm-temperate Yangtze Valley):

Plant domesticate: rice (*Oryza sativa*)

Domesticated animals: dog, pig, chicken, water buffalo

Technology: pottery, utensils for agriculture, stone axes

Lifeways: grain-livestock farming; diet including wild plants

The northern area of plant and animal domestication (cool-temperate Huanghe Valley):

Plant domesticates: broomcorn, foxtail millet

Domesticated animals: dog, pig, probably also chicken

Lifeways: mixed economy (i.e., hunting, fishing, plant cultivation)

The origins of the cultivation of soybean—well known from historical times—cannot yet be dated with any certainty. If this plant was not part of the diet of Neolithic peoples and if goats and sheep were not among the domesticates in China, then the suite of East Asian domesticates was not as wide as that found in the Near East.

The domestication of rice was a prolonged process. At Tianluoshan (south of Shanghai) the remains of rice spikelets, belonging to archaeological strata of the fifth millennium BCE, have been found, belonging both to wild plants and to domesticates. The amount of rice that the people of Tianluoshan consumed increased over a span of several hundred years but was still only a quarter of the total plant diet by circa 4600 BCE. There was a steady increase of domesticated rice and a decrease in the consumption of wild rice, but the development was slow.

The spread of rice cultivation from the Yangtze Valley to other regions of East Asia was a prolonged process also. In China, the thrust of the spread of agriculture was mainly directed from north to south, crossing the boundaries of different climatic zones, and this set demands for complex ecological adaptations. The earliest traces of rice cultivation in mainland Southeast Asia date to circa 3700 BCE. During the third millennium BCE, rice production increased especially in Vietnam and Thailand. The spread along latitudinal zones was less vigorous. Rice cultivation reached Korea toward the end of the second millennium BCE, and in Japan the systematic cultivation of rice began as late as the fourth century BCE.

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Bibliography

- Bellwood, P., and C. Renfrew, eds. *Examining the Farming/Language Dispersal Hypothesis*. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Crawford, G. W., and S. Chen. "The Origins of Rice Agriculture: Recent Progress in East Asia." *Antiquity* 72 (1998): 858–866.
- Fuller, Dorian Q., et al. "The Domestication Process and Domestication Rate in Rice: Spikelet Bases from the Lower Yangtze." *Science* 323 (March 2009): 1607–1610.
- Glover, I., and P. Bellwood, eds. *Southeast Asia: From Prehistory to History*. London and New York: RoutledgeCurzon, 2004.
- Harris, D. R. "The Expansion Capacity of Early Agricultural Systems: A Comparative Perspective on the Spread of Agriculture." In *Examining the Farming/Language Dispersal Hypothesis*, edited by P. Bellwood and C. Renfrew. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.

Early Food Producers in the Indus Valley

The Indus Civilization represents one of the four ancient protohistoric urban cultures in the world, the other three being located in valleys of the Nile (Egypt), the Tigris-Euphrates (Iraq), and the Ho (China). The first-known site, Harappa, was discovered in the 1820s in modern-day Pakistan. Subsequent exploration revealed sites distributed in association with the Indus River and

➤ MEHRGARH

Mehrgarh, located on the Kachi Plain of Baluchistan, represents the earliest evidence of plant and animal domestication in the Indian subcontinent. Its cultural roots originate in West Asia, from which Neolithic groups dispersed into other regions. Occupational levels start at about 6500 BCE, when farmers cultivated and exploited wheat, barley, peas, cotton, dates, and sesame seeds and raised cattle, sheep, and goats. Divided into seven periods of development, the earliest does not contain any pottery, which seems to appear at about 5500 BCE at the site. The next two periods are Neolithic with ceramics, and the last four can be attributed to the Chalcolithic phase with an increase in specialized artifact production. Houses were made of mud bricks, and different types of artifacts have been recovered: ornaments of bead, shell, and turquoise (representing long-distance transport), terra-cotta and bone seals, stone and copper drills, stone sickle blades in bitumen, bone points, awls, stone blades, kilns, and crucibles for melting copper. Flexed burials have been found



Ruins of an ancient mud-brick village, dating from before 6500 BCE, Mehrgarh, Pakistan. (Corbis)

here with ochre, grave goods (e.g., ornaments, ground axes, baskets), and animal bones. The site represents one of the earliest that had a direct influence on the subsequent birth and maturation of the Indus Civilization.

—Parth Chauhan

its tributaries, including southern and western Pakistan as well as hundreds of sites in north-western India (Rajasthan and Gujarat). A few sites are also located in the periphery zone such as Jammu and Afghanistan (Shortughai). Hundreds of settlements of different types (e.g., city, trading post, artifact factory site, rural satellite site) are located on the river floodplains in fertile zones containing thick deposits of rich alluvium (except in Saurashtra), on islands, in coastal zones, and in lakeside contexts. Since a large number of sites are associated with the ancient Saraswati River (no longer extant) in Rajasthan, some scholars have argued for changing the name to the Indus-Saraswati or Saraswati-Sindhu civilization. Nonetheless, it is clear that the roots of this culture are located in Pakistan, primarily represented by such sites as Mehrgarh.

The Indus Civilization is divided into four developmental phases: Pre-Harappan, Early Harappan, Mature Harappan, and Late Harappan. The earliest food-producing phase spans 5500–3300 BCE and represents the Neolithic and pastoral roots of the earliest Harappan evidence. This is

followed by a Regionalization Era or the Early Harappan phase (3300–2600 BCE), an Integration Era or the Mature Harappan phase (2600–1900 BCE), and the Localization Era or the Late Harappan period (1900–1300 or 1000 BCE). These phases are further divided into various subphases (e.g., Hakra, Harappan 3B) based on data from different sites (e.g., Mehrgarh, Kot Diji, Nausharo, Harappa) and associated strata.

The cultural identity of the Harappan Civilization is essentially defined by the uniformity in its architecture, artifacts, script, and symbols and motifs illustrating various levels of technological and cultural sophistication. The distribution of raw materials for artifact manufacture was facilitated by an extensive maritime trade network with Mesopotamia. In fact, the term “Meluhha” in Sumerian literature may refer to the Harappan culture. Raw materials such as chert, lapis lazuli, shell, ivory, precious stones, limestone, faience, and copper were sought in different regions. Earlier research hinted at the introduction of plant domestication to the Harappan culture; this was later refuted as new evidence confirmed an

indigenous development of food production. The primary evidence of this comes from Mehrgarh as early as 6500 BCE. Many sites have also yielded the bones of domesticated animals (e.g., zebu cattle, water buffalo, goat, sheep), and at Kalibangan, plowing patterns, inferred from modern analogs, have been preserved.

The majority of Harappan sites are only a few thousand square feet (a few hundred square meters) in size, and some of the largest ones are Harappa, Mohenjo-Daro, Rakhigarhi, and Dholavira, probably being urban administrative centers. Some of these sites are surrounded by large fortification structures, and coupled with the context and configuration of some human burials at Mohenjo-Daro, the Harappan culture was long embroiled in controversial debates regarding the Aryan invasion theory, now theoretically defunct. The fortifications may have served as protection from seasonal floods, since many such sites are located within major floodplains. These structures were supplemented by large platforms made from mud bricks that were standardized in their dimension (ratio of 4:2:1) across the Harappan domain. In most cities, the streets ran in north-south and east-west directions, and many had covered drains. Houses were often two stories and contained courtyards, and water was generally obtained from wells. Other unique structures included large granaries, gates, and the Great Bath at Mohenjo-Daro, which may have been for public or ritual bathing. The lack of palaces and temples points to an egalitarian society of traders, farmers, artisans, and other occupations.

Some of the large and medium-sized sites are generally represented by large mounds variably covering human burials, brick structures, hearths, kilns, and associated material such as burnt bones, pottery fragments, and a large variety of other artifacts made from steatite, carnelian, agate, gold, copper, silver, and bronze. Many artifacts, especially pottery designs, exhibited regional styles and symbolic patterns. Some forms of art include a statue of a priest-king, a bronze statue of a dancing girl, and a terra-cotta figurine of a female with a headdress. From the numerous female figurines, it has been argued that these people worshipped a mother-goddess.

Other items include toys, ornaments, beads, and bangles, some of which were utilized as grave goods. Stone cubes of various sizes were used as weights, with precise measurements graduated at a uniform rate. Gradual but distinct transformations in the architecture and artifacts are visible over time. One of the most fascinating aspects of this culture is its script, mostly found on small seals of steatite, that remains undeciphered despite over a century of research. However, we do know that the script was read from right to left. This evidence appears indigenously in the region at about 2500 BCE, and the largest evidence is a public sign from Dholavira. The seals depict over 400 individual symbols (e.g., trees, animals, horned deities, people, and a mythical unicorn-like creature). One cross-legged anthropomorphic figure is likened to Pashupati or Lord Shiva, the Hindu god of destruction.

By about 1900 BCE many cities and towns were abandoned, although some cultural elements persisted or dispersed into other nearby regions. A combination of multiple factors rather than one dominant factor contributed to the decline of the Indus Civilization. This decline included a geographic shift south and southeast to the Indo-Gangetic plains and was a result of the drying up of major rivers (e.g., Saraswati) and changing patterns of climate. This subsequently led to the collapse of the prominent trade network with Mesopotamia. Distinct regional cultures also developed soon after 1700 BCE (e.g., Cemetery H Culture). The continuity of Harappan material culture up to the modern day is reflected in pottery designs, bullock carts, and fishing boats.

—Parth Chauhan

Bibliography

- Allchin, B., and R. Allchin. *The Rise of Civilization in India and Pakistan*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1996.
- Kenoyer, J. M. *Ancient Cities of the Indus Valley Civilization*. 2nd rev. ed. Oxford and Karachi: Oxford University Press and American Institute of Pakistan Studies, 2006.
- Possehl, Gregory. *The Indus Civilization: A Contemporary Perspective*. Walnut Creek, CA: AltaMira, 2002.

Early Horticulture in Melanesia

Horticulture began in Melanesia at least 10,000 years ago and perhaps much earlier. Outlined here is a description of Melanesian horticulture and the plants involved, setting a framework for research. Methods involved use microscopic research and proxy data within a conceptual framework sympathetic to very long-term human involvement with food plants.

Today, crops in Melanesia are grown in gardens, not fields. That is, most are small-scale and consist of a mix of plants grown for food, condiments, decoration, and medicine. They are cultivated with wooden hand tools such as spades and digging sticks rather than with plows. Most gardens are short-lived, cleared and planted for a few years only. They are fenced only when predators, such as feral pigs, may be a problem.

► KUK SWAMP

Kuk Swamp is in a low-lying part of the Wahgi Valley, in the Central Highlands of Papua New Guinea. Archaeological excavations on this site over the last 30 years have revealed six phases of horticultural systems, the oldest dating to about 10,000 years ago. The systems indicate increasing complexity with time.

Phase 1 consists of some rather indistinct and irregular mound and basin ancient ground surfaces possibly draining into a humanly modified natural stream channel. Stake holes, postholes, pits, and other clearly artificial cuttings show that the paleo-surfaces were humanly created. The presence of *Colocasia* (taro) starch grains on stone tools and *Musa* phytoliths in the soil confirm that humans both planted and modified the land. A thick clay fan, deposited from around 9,000 years ago, indicates that soil washed away after land clearance.

Phase 2 begins about 6,900 years ago. Its ancient surfaces comprise interconnected networks of depressions and small channels that outline roughly circular raised areas about 3 feet (1 meter) across. Large drainage channels exist at a similar stratigraphic level and are inferred to have been drainage for excess water. The system seems designed for growing a range of plants: wetter areas for *Colocasia* taro and the mounds for less water-tolerant sugarcane, bananas, and green vegetables. Remains of some of these have been found both in features and as residues on tools.

The organization of Phase 3, circa 4,800–2,300 years ago, is quite different. It displays a network of rectilinear ditches meeting each other at right angles and clearly articulating into large hand-dug drainage channels, which are up to 0.31 miles (0.5 kilometers) long. Several other sites in the Wahgi

and elsewhere in the Highlands, dated to the same period, provide similar evidence. Pollen, charcoal, and rates of change in these are further proxy evidence for humanly caused environmental alteration. Wooden artifacts associated with these systems include a long paddle-shaped wooden spade dated to 4,200 years ago, exactly similar to spades used throughout the Highlands in the early twentieth century, as well as digging sticks.

Later phases continue the same pattern of grid systems, which become gradually tighter-patterned as the swamp became wetter. In Phase 6, the last phase, sweet potato, a New World import, was grown on the mounds. This is also the only time period for which house remains have been found in the swamp area.

—Peter White

Bibliography

- Denham, T. "Agricultural Origins and the Emergence of Rectilinear Ditch Networks in the Highlands of Papua New Guinea." In *Papuan Pasts*, edited by A. Pawley, R. Attenborough, J. Golson, and R. Hide. Canberra: Australian National University, Pacific Linguistics 572, 2006.
- Denham, T., and C. Ballard, eds. "Perspectives on Prehistoric Agriculture in the New Guinea Highlands." *Archaeology in Oceania* 38 (2003): 129–216.
- Fullagar, R., et al. "Early and Mid Holocene Tool-use and Processing of Taro (*Colocasia esculenta*), Yam (*Dioscorea* spp.) and Other Plants at Kuk Swamp in the Highlands of Papua New Guinea." *Journal of Archaeological Science* 33 (2006): 595–614.

Melanesian crops are nearly all roots and fruits, with starch from sago tree (*Metroxylon sagu*) pith a notable exception. Common root crops include various forms of taro (*Colocasia* spp., *Xanthosoma* spp., *Alocasia* spp., and *Cyrtosperma* spp.) and yams (*Dioscorea* spp.); sweet potato (*Ipomoea batatas*), of American origin, was added about four centuries ago. Tree crops include bananas (Musaceae), breadfruit (*Artocarpus altilis*), canarium, and pandanus. Sugarcane (*Saccharum officinarum*) is common, as are many varieties of green vegetables. Genetic studies have demonstrated that many of these plants, including some taros, yams, and bananas, are endemic to the region and are likely to have been first taken into cultivation here.

Understanding current Melanesian horticulture suggests how the search for earlier forms needs to proceed. The plants involved do not have hard skins or seeds, unlike the wheat, millet, or maize cultivated elsewhere. Many do not produce pollen or do so in very limited quantities. What they leave as relics are microscopic starch grains and phytoliths (opalised plant cells). These can be found on stone tools used for processing plants as well as in soil samples from gardens and village sites. Their extraction is laborious and their identification rarely easy, but they are the only precise avenues to plants of the past. In most cases, however, these methods do not distinguish between cultivated and wild plants.

Another avenue to understanding plant use comes in the microscopic use wear that any use creates on the edges of stone tools. This can separate, for example, scraping from cutting, useful for confirming the ways plants were processed.

Proxy data is required to infer that prehistoric plants were cultivated rather than collected in the wild. The most common of these are changes observed in paleoenvironmental records such as increases in charcoal, implying local firing of cleared areas; pollen of early colonizer plants; geomorphic changes showing increased soil runoff as the result of clearance; and changes in the proportions of animal species hunted. Much less common is the evidence of structured facilities such as drains and terraces, occasionally associated with appropriate tools. It is the conjunction of many of these lines

of evidence that makes the Kuk Swamp site so important.

The earliest evidence for the human use of plants that are grown in present-day gardens occurs in Kilu cave on Buka Island. Starch grains of the genus *Colocasia* sp. (probably taro) on 14 small flake tools and of *Alocasia* spp., a similar plant, on 3 others also provide evidence. These and other tools also displayed use polish on sharp edges and can be inferred to have cut and scraped taro before cooking.

But were these plants grown in gardens? This is uncertain, because taro is native to the island, and no other kinds of evidence were found. While these roots may simply have been gathered from a local swamp, most researchers believe that some curation is likely. Curation, or caring for plots in the form of weed removal and increasing sunlight to naturally growing plants, is quite frequent throughout Melanesia. Nowadays, it is applied especially to forest trees with edible fruits, such as canarium and many varieties of pandanus. A more complex form of curation occurs with sago palm. Found now in localities where they would not naturally occur, these large stands are the result of people moving young plants and allowing them to grow. These plants are not domesticated in any visible way, nor are they fenced off, so they appear to be wild even though each stand is owned and harvested.

Determining when formally bounded gardens were established and plants were domesticated is difficult in Melanesia. Apart from the Highlands of New Guinea, proxy data of the kinds outlined above is almost nonexistent before about 1500 BCE. At that time, the arrival of pottery allows village areas to be identified, and geomorphic and pollen data show land clearance. There are, however, sufficient hints to show that horticulture in Melanesia began at least 10,000 years ago, while some form of gardening may have started long before.

—Peter White

Bibliography

Denham, T., and H. Barton. "The Emergence of Agriculture in New Guinea: Continuity from Pre-existing Foraging Practices." *Behavioral Ecology and the Transition to Agriculture*, edited by D. J. Kennett and B. Winterhalder. Berkeley: University of California Press, 2006.

Lebot, V. "Biomolecular Evidence for Plant Domestication in Sahul." *Genetic Resources and Crop Evolution* 45 (1999): 619–628.

Spriggs, M. *The Island Melanesians*. Oxford, UK: Blackwell, 1997.

Torrence, R., and H. Barton. *Ancient Starch Research*. Walnut Creek, CA: Left Coast Press, 2006.

The Spread of Agriculture into Europe

Agriculture was initiated in several different regions and at different times during the 12,000 years since the last Ice Age ended. These regions were the Near East or Fertile Crescent, the lower Yangtze Valley in China, Mexico, the Peruvian Andes, sub-Saharan Africa, and the eastern United States. Developments in the Fertile Crescent were the major influences on the crops and livestock that spread into Europe between circa 10,000 and 5,000 years ago. During this period, hunter-gatherer communities were transformed into farming communities, though both hunting and gathering continued to supplement agriculture. It was not until circa 1500 CE that major additions to Europe's food sources occurred as a result of exploration of the New World and trade with the Far East.

The first crops to be domesticated were emmer and einkorn wheat; barley; various legumes such as the lentil and chickpea, which are often referred to as founder crops; and the fig. These were selected because they had been valued as food in the wild and proved to be amenable to selection. Similarly, sheep, cattle, goats, and pigs were domesticated from native animals. It is also possible that the dog was domesticated in this region, at least 15,000 years ago, to assist with the herding and hunting of wild animals. Other domesticates included rye, pea, and faba bean. All of these species were introduced into Europe, and only rarely were new crops added to this complex. The ramifications of this spread were profound. Landscapes and cultures were transformed as settled rather than nomadic lifestyles developed and as Europe's forests began to give way to arable fields and pasture.

How this occurred is a matter of debate, and there is no reason to suppose that the same process occurred throughout Europe over the 5,000

➤ CARDIAL CERAMICS

Early Neolithic ceramics are traditionally seen as those decorated with stamps. In the case of Cardial ceramics the serrated edge of hearth-shaped *Cardium edule* shells were used as a stamp for soft clay decoration. Traditionally, it is regarded as the earliest type of pottery discovered in the southern part of western Europe and dated to the seventh through fifth millennia BCE.

Cardial ceramics were widely distributed along the central and western coasts of the Mediterranean region, including Corsica, Sardinia, the Mediterranean part of Spain, southern France (Provence), and Liguria. The best-known sites with Cardial ceramics are Arene Candide in Italy and Shateaneuf-les-Martigues in France. Rarely are ceramics decorated with stamps of *Cardium* mollusks discovered outside the Mediterranean region.

Domestic cattle breeding was already familiar to Cardial ceramic creators. They used domestic large cattle, pig, and sheep, and they also practiced plant domestication.

The Cardial ceramic culture is relatively simple and is represented by rough, ball-shaped pots; pots with rounded bottoms; and pots with tubular drains. In some cases Cardial ware is finer than so-called epi-cardial or Roucadour-type ceramics found in the western Mediterranean and in Atlantic France. On this base it was supposed that Cardial ceramics were used as items of prestige exchange.

—Olena V. Smyntyna

Bibliography

Zilhão, J. "Radiocarbon Evidence for Maritime Pioneer Colonization at the Origins of Farming in West Mediterranean Europe." *Proceedings of the National Academy of Sciences of the United States of America* 98(24) (2001): 14180–14185.

years that it took for agriculture to spread as far west as Britain or as far north as Scandinavia. There are two major theories: cultural diffusion and demic diffusion. Cultural diffusion involves the dissemination of ideas and their adoption by existing hunter-gatherer groups whose social organization was consequently transformed. This diffusion may have been linked with trade such as that associated with obsidian, which was well established by 12,000 BCE and involved the

exploitation of obsidian in Anatolia and Cappadocia. Other traded goods included semiprecious stones, stone for ax manufacture, stone implements, and pottery. These were exchanged for hides and crops, which ostensibly introduced domesticated crops and livestock beyond their region of origin. In contrast, demic diffusion involved the migration of farming people, initially from the Fertile Crescent, who merged with or displaced hunter-gatherer groups gradually throughout Europe. Evidence for cultural diffusion derives mainly from the archaeological record, which includes plant remains (archaeobotany) in cultural contexts and artifacts, especially pottery, that reflect innovation and contact between different human groups. This record, which is open to interpretation, is compiled in association with age-estimation techniques such as radiocarbon dating to produce a chronology of the spread of agriculture. Moreover, investigations of the present-day genetic constitution of Europeans have been undertaken to establish the relative importance of demic diffusion since it is considered that persistent migration into Europe would be reflected in the incidence of specific gene markers.

Contact between groups is reflected in the spread of pottery, notably a distinct banded pottery known as linear Bandkeramik in German (also known as LBK) as well as other artifacts and building structures that were widespread in Europe. While this commonality reflects common influence, it cannot be determined if cultural or demic diffusion occurred. Other lines of evidence more directly indicate directions and timings of the adoption of agriculture. For example, cereal grains in dated archaeological deposits indicate that the dissemination of cereal cultivation was initially quite rapid, taking some 3,500 years to spread from the Fertile Crescent along the eastern Mediterranean coast to the Iberian Peninsula. However, the pattern of spread into northern Europe appears to have been slower and sporadic. Following establishment in the Balkan region circa 8,000 years ago, there was a hiatus of circa 800 years before a surge north. Such a pattern can be interpreted in terms of rapid spread along the Mediterranean coastal region facilitated by sea connections and a relatively uniform climate similar to that of the Fertile Crescent, making

crop cultivation straightforward. In contrast, the spread north and northwest would have been more difficult given mountain barriers and dense forest plus climatic differences to which new crops would have to adapt. It is equally possible that hunter-gatherer communities were thriving under a subsistent lifestyle; either or both factors could have created inertia until innovation became essential.

The development of genetic (notably DNA) research has had considerable implications for archaeology as it has had for forensic science. The fundamental role of DNA relates to heredity and the legacy it leaves in modern populations. For example, if demic diffusion was responsible for the spread of agriculture, gene markers characteristic of the Fertile Crescent would be abundant throughout Europe.

A study reported in late 2008, based on DNA inherited through the paternal line of more than 1,000 men living in southeastern Europe, showed that the majority of male genetic groups predate the shift to agriculture and reflect the expansion of human populations after the last Ice Age. A degree of demic diffusion is indicated in the eastern Mediterranean basin, but otherwise the genetic evidence supports cultural diffusion as the dominant mode of transfer for the spread of agriculture in Europe.

—A. M. Mannion

Bibliography

- Barker, G. *The Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?* Oxford: Oxford University Press, 2006.
- Battaglia, V., et al. "Y-chromosomal Evidence of the Cultural Diffusion of Agriculture in Southeast Europe." *European Journal of Human Genetics* 17 (2009): 820–830.
- Colledge, S., and J. Conolly, eds. *The Origins, Spread and Use of Domestic Plants in Neolithic Southwest Asia and Europe*. Walnut Creek, CA: Left Coast Press, 2007.

The Hunters and Gatherers of Sub-Saharan Africa

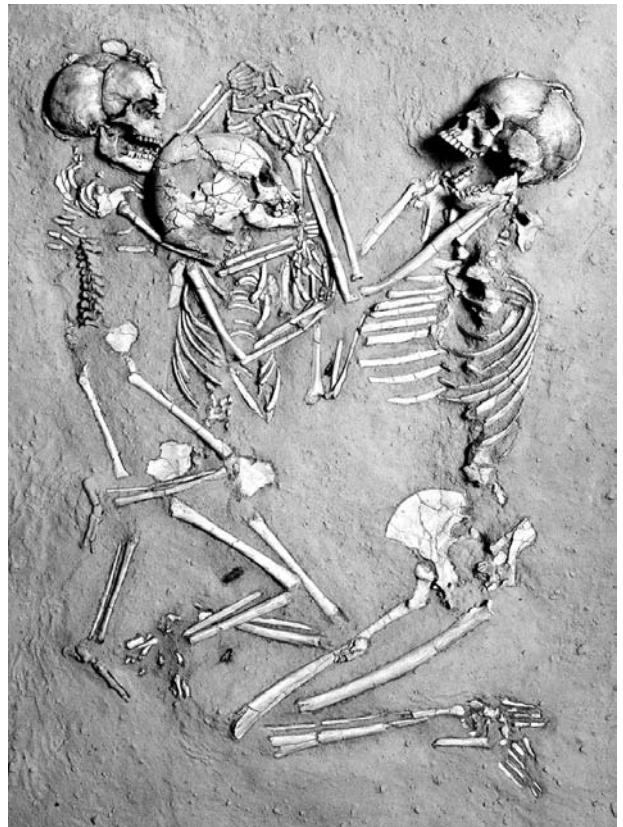
The hunter-gatherers of sub-Saharan Africa were people who subsisted on wild animals and plants, in contrast to settled Neolithic farmers or

pastoralists supported by domesticated plants and animals. Generally, the hunting and gathering societies worldwide evolved before the beginning of domestication of plants and animals. The hunter-gatherers lived in small bands and exploited the resources available to them. They were also generally believed not to have a permanent base, as their movement was dictated by the availability of food and game.

The hunters and gatherers of Holocene Africa displayed a wide variety of adaptations to their environments. The Holocene epoch is a geological period that began approximately 11,550 calendar years BP (about 9600 BCE) and continues to the present. The Holocene is part of the Neogene and Quaternary periods. During this period areas with dense forest such as western Nigeria were not easily exploited, as human groups often chose to settle within breaks in the forest beside lakes and rivers, where freshwater fish and water fowl as well as game animals were available.

Many of the assemblages of these African hunters and gatherers were dominated by a microlithic stone tool technology. Microliths consist of tiny blades and flakes of stone, of which one end was backed with a blunting retouch to make them easier to handle or to mount into mastic or with glue in a composite tool. These are small bladelets or segments of blades and flakes often but not always geometric in shape that have been blunted by retouch along one or more edges, the blunted part being opposed to a sharp cutting edge. The standardized flake is used to make composite tools with flint or chert cutting edges inserted into wooden or bone hafts. The blunting facilitates hafting, and several of the segments might be mounted by setting them in mastic to form a composite tool or weapon. The microliths were used in various combinations such as for the barbs on a multi-barbed spear, the heads of arrows, or the blades of knives, sickles, or saws.

The raw materials used for this technology in Africa were quartz and other fine-grained rocks. Microliths are indicative of a more efficient use of stone and of an intensified exploitation of the environment. Some of these microliths, for instance, were used as arrow barbs, and thus they mark the appearance in certain areas of the bow



Triple burial from a site in Gobero, Niger, about 5300 BCE. An adult female and two small children are buried with legs and arms entwined. Pollen found beneath the skeletons indicate the bodies had been laid on flowers, and the burial also contained four arrowheads. (AP Photo/Mike Hettwer, National Geographic Society)

and arrow, which indicates an emphasis on hunting. The microliths industry perhaps represents the culmination of a development in stoneworking that had its origin right from the Acheulian period. Microliths dating to at least 30,000 years ago have been found at Matupi cave in eastern Democratic Congo. At the mouth of the Klasies River in South Africa the microliths industry has been dated to 70,000–60,000 years ago, making it one of the earliest instances of stone industry in the world. In the southern African region hunter-gatherers are best known archaeologically from the varied complex of stone industries known as the Wilton, dating from about 6000 BCE onward in which microliths played an important part.

Other substantial archaeological evidence for these people includes organic remains from dry cave deposits in southernmost Africa, such

as at Melkhoutboom cave, and from waterlogged sites such as Gwisho hot springs in southern Zambia. Based on this evidence, archaeologists are of the opinion that the hunter-gatherers apparently made use of wood for bows, arrows, digging sticks, pegs, and wedges. It has also been suggested that hunter-gatherers would have probably made bark into trays and sewn leather into bags and clothing. It has been documented that plants were an important source of food for the hunter-gatherers, though they also made use of plants for other purposes, such as medicinal.

The economic life of the hunter-gatherers consisted of gathering plant foods with stone reaping knives or digging up tubers with digging sticks and hunting with spears and the bow. They exploited resources by moving around their landscapes generally in small groups, occasionally coming together in a larger seasonal gathering. They were characterized by mobility, they probably maintained a complex network of kinship links, and their societies were essentially small-scale in nature. The geographical and seasonal distribution of resources dictated the size and dispersion of these human communities and set a limit to their numbers. The hunter-gatherers could not produce their food requirements, so they were usually not many in number. In most cases they moved about in bands seasonally. Once the food resources at a particular geographical location were exhausted, they moved on to other locations where their needs could be met.

The community and social organization of the hunter-gatherers has been adequately reconstructed from plant remains and other cultural materials recovered in connection with the group. Plant remains along with animal bones have thrown light on the seasonal movement of settlements of the group. For instance, groups in the southwestern Cape moved regularly between the coast in winter and inland areas in summer. It seems likely that seasonal movement included gatherings of people at resource-rich times of the year when commodities could be exchanged and social relationships reinforced, and they dispersed at other times when resources were more limited. Also, bored stones that occur in some of the lithic assemblages ap-

pear to have served as digging stick weights to facilitate the exploitation of plant food. The dead were buried accompanied by tools, personal ornaments, and other items, sometimes including painted stones, perhaps indicating a belief of life after death. Personal adornment was common and included beads and pendants of bone or ostrich eggshell or freshwater shell.

—Clement Bakinde

Bibliography

- Breunig, P. "The 8000-Year-Old Dugout Canoe from Dufuna (NE Nigeria)." In *Aspects of African Archaeology: Papers from the 10th Congress of the Panafrican Association for Prehistory and Related Studies*, edited by Gilbert Pwiti and Robert Soper. Harare, Zimbabwe: University of Zimbabwe Publications, 1996.
- Chard, C. S. *Man in Prehistory*. New York: McGraw-Hill, 1969.
- Clark, J. D. *The Prehistory of Africa*. London: Thames and Hudson, 1970.
- Connah, G. "Holocene Africa." In *The Human Past*, edited by Chris Scarre. London: Thames and Hudson, 2005.

The Jomon Foragers of Coastal Japan

Jomon refers to a cultural complex and time period that was found in the Japanese archipelago from circa 14,000 BCE to circa 300 BCE. The name is derived from the characteristic cord-impressed pottery that was in use at the time; the Japanese term *jomon* means "cord-marked." The Jomon were hunters and gatherers. In fact, part of what makes this archaeological culture unique was its use of pottery without the adoption of domestic animals or agriculture.

The oldest pottery in Japan—in fact some of the oldest pottery in the world—was excavated from the Odai Yamamoto site in Aomori prefecture. Radiocarbon dating of adhesions on the surface of the pottery date it to circa 13,500 BCE. Other early pottery sites include Fukui Cave and Senpukuji Cave on Kyushu. Despite being classed as Jomon pottery, most of the pottery made during the Incipient Jomon period (ca. 14,000–9000 BCE) has little or no cord marking for decoration. Appliqué, punctuate marks, and linear relief are the major forms of

decoration. Most pottery vessels were deep bowls with either a circular or a flat base.

Many Incipient Jomon sites are found in caves. For open settlements, there are only a few with pit houses; the Sojiyama site in Kagoshima Prefecture is an example. The lithic assemblages from Incipient Jomon sites are dominated by spear points and tanged blades, with only a small percentage of grinding stones. This would imply that the subsistence was focused on hunting.

The Initial Jomon period (ca. 9000–5500 BCE) is marked by more open settlements with pit houses, changes in subsistence, and new pottery shapes and styles. The pottery of the Initial Jomon period is characterized by deep bowls with either conical, round, or flat bases. It is in this time period that cord marking is used for decoration.

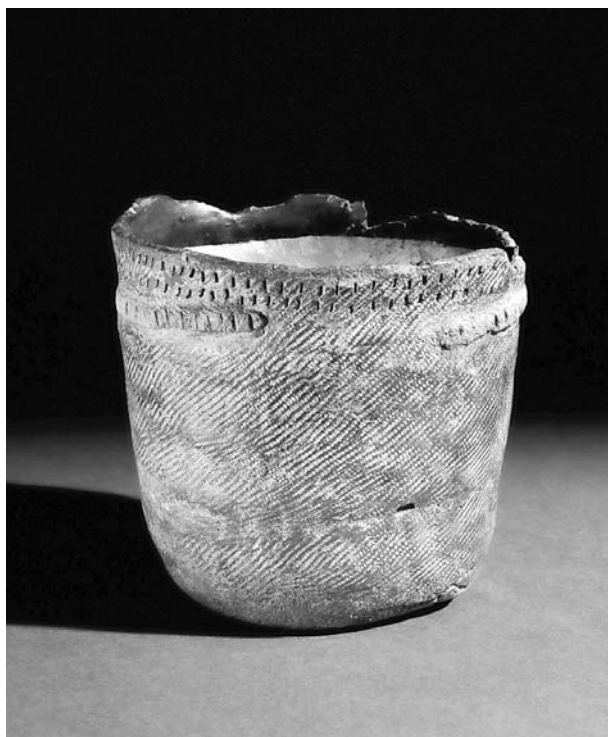
Natsushima in Kanagawa Prefecture is a large shell-midden site from the Initial Jomon period. A variety of shellfish, fish, and land mammals were found in the midden. The presence of chipped stone adzes and grinding slabs indicates the exploitation of plant foods. No evidence of pit houses was found at the Natsushima shell midden.

Elsewhere in Honshu most Initial Jomon sites are small, containing only a few pit houses. In Hokkaido and Kyushu, though, sites were found with many pit houses. The Nakano B site in Hakodate had more than 500 pit houses. Not all were contemporary, since they overlap; this indicates that the site was repeatedly occupied. In Kyushu, the Uenohara site had more than 40 pit houses. The excavators believe that only 13 or 14 houses were occupied at any one time at Uenohara.

The Early Jomon period dates from circa 5500 to 3600 BCE. Compared to the Initial Jomon period, there is an increase in the number of large settlements and an increase in the number of storage pits.

New vessel forms such as the shallow bowl and storage jars characterize pottery made during the Early Jomon period. New decorative motifs also appeared.

Lacquerware, while produced during the Initial Jomon period, is more common in Early Jomon sites. Lacquer is made from the sap of the lacquer tree (*Rhus verniciflua*). Jomon lacquer ware is characterized by being primarily red



Lacquered vessel, Japanese, early Jomon period, about 5005–4996 BCE. This bowl, which originally had a lid, has well-defined rim-decoration marks made by jabbing with a stick, bone, or fingernail. The main body has cord decoration. (Erich Lessing/Art Resource, NY)

with a minimal use of black. The red color was made by adding either iron oxide or cinnabar to the pottery.

Torihama in Fukui Prefecture is an Early Jomon shell midden north of Kyoto. Situated along a river, the site was waterlogged, and there was excellent preservation of organic materials. Basketry fragments, hunting bows, lacquer ware, and the prow of a boat were just a few of the wooden objects recovered in excavation.

The earliest occupation at Sannai Maruyama in Aomori Prefecture began during the Early Jomon period. The number of pit houses fluctuated throughout this period, but there are substantial midden deposits. Present analyses of the floral and faunal remains point to occupation of the site in the spring through the fall but provide little evidence of the site being occupied in the winter.

A broad range of resources were used for subsistence during the Initial through the Early Jomon periods. Nitrogen and carbon isotope

THE JOMON FORAGERS OF COASTAL JAPAN

Period	Date
Incipient Jomon	14,000–9000 BCE
Initial Jomon	9000–5500 BCE
Early Jomon	5500–3600 BCE
Middle Jomon	3600–2500/2000 BCE
Late Jomon	2500/2000–1200/1000 BCE
Final Jomon	1200/1000–800/300 BCE

The above chart gives the approximate starting and ending date for each period of the Jomon. There is a range of dates for the beginning and ending dates of some phases since the change did not necessarily occur instantly throughout the Japanese archipelago. Before the widespread use of radiocarbon dating in Japanese archaeology, the relative chronology was based on the excavation of stratified sites containing different styles of pottery. For the Jomon, pottery styles were based on the shape of the pottery and its decoration.

—Mark Hall

data from human skeletal remains indicates that most of the foods eaten were plants. In the spring and summer, grasses, roots, and shoots could be collected and eaten. Acorns, chestnuts, and fruits were collected in the fall. Nuts could have been stored or eaten shortly after collecting. The hunting of deer and boar occurred primarily in the winter. Harpoons and fishhooks found in shell middens suggest the exploitation of marine mammals and fish. Study of the bones in several midden sites indicated that a variety of freshwater and marine fish were eaten. Large shell middens, such as Natsushima and Torihama, point to the exploitation of shellfish during the Initial and Early Jomon periods.

Plant cultivation may have begun sometime in the Early Jomon period. Crawford's work on the Kameda Peninsula in Hokkaido found that there was a qualitative increase in grasses, such as barnyard grass (*Echinochloa*), from the Initial Jomon period through the Early Jomon period. Since barnyard grass is a plant that thrives in sunlight and on disturbed soils, Crawford argues that this increase is due to human modification

of the environment. It needs to be kept in mind, though, that while the Initial and Early Jomon people may have cultivated some plants, it was not done at a level that produced a surplus, and it did not produce a staple food.

While all of these resources existed for the Jomon to eat, it does not imply that they stayed year-round at the same site during the Initial and Early Jomon periods. Habu's analysis of the artifact assemblages and the settlement pattern for the Early Jomon period of Kanto indicates that the inhabitants of this area were probably collectors who moved their settlements seasonally.

—Mark Hall

Bibliography

- Crawford, Gary. *Paleoethnobotany of the Kameda Peninsula Jomon*. Ann Arbor: University of Michigan, Museum of Anthropology, 1983.
- Habu, Junko. *Ancient Jomon of Japan*. Cambridge: Cambridge University Press, 2004.
- . *Subsistence-Settlement Systems and Inter-site Variability in the Moroiso Phase of the Early Jomon Period of Japan*. Ann Arbor, MI: International Monographs in Prehistory, 2001.
- Imamura, Keiji. *Prehistoric Japan: New Perspectives on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

The Persistence of Hunting and Gathering in Mesolithic Europe

As the last great European ice sheet began to melt circa 10,000 BCE, hunter-gatherers and their prey began to migrate north to colonize new territory. Global warming was occurring relatively rapidly and driving ecological change characterized by shrubs and trees advancing into tundra. The first tree species to migrate onto deglaciated and tundra landscapes were birch and pine followed by the more warmth-demanding oak, elm, and lime. The increase in plant biodiversity offered a broader resource base than the treeless tundra and encouraged the northward spread of animals such as elk, red and roe deer, aurochs, wild horse, and wild pig. Cultural repercussions were also rapid as the Upper Paleolithic traditions disappeared, to be replaced by those of the Mesolithic between 8500 and 3500 BCE. Thus, it is a transitional but distinctive period between the old and new

stone ages. The Mesolithic is particularly well represented in northwestern Europe; in southern Europe and the Levant (eastern Mediterranean) it was either short-lived or nonexistent, as Neolithic innovations such as the onset of agriculture, permanent settlement, and the production of ceramics directly replaced Upper Paleolithic traditions.

One major difference between the hunter-gatherers of the Upper Paleolithic and the Mesolithic is the latter's adaptation to the closed habitats of forests in contrast to open tundra environments. Other differences include a broadening of the resource base, with hunter-gatherers exploiting coastal habitats, lakeside habitats, and forests. Exploitation of forest resources is especially interesting, as there is little evidence for such use in earlier (interglacial) warm stages or indeed for Neolithic plant and animal domestication and permanent agriculture. Why the opening of the current warm stage should be so different is open to question. Possibly the rapidity of climatic/ecological change forced rapid adaptation, or it may have been a case of population pressure combined with environmental change. Mesolithic communities were nomadic, probably operating from seasonal camps. Their subsistence strategy was based on hunting and gathering, although there is more evidence of hunting in bone remains in archaeological sites than of gathering because plant parts readily decompose and preserve well only in waterlogged environments. While large wild animals would have been the major source of protein, smaller mammals such as badger, otter, and beaver were probably hunted for skins and furs. It is likely that dogs, the earliest domesticated animal, were used for herding; that they were held in high esteem is reflected in the fact that their bones are present in many Mesolithic sites. Mesolithic sites near coasts often contain debris from marine organisms such as shellfish (e.g., oysters and mussels), fish, porpoises, dolphins, and seals, which provided a significant source of protein. The inhabitants may have exploited both terrestrial and marine resources. In some cases, as in those of the Erteboelle region of Jutland in Denmark, vast numbers of bones from various bird species attest to large-scale hunting and/or trapping.



Beaver jaw, ochre, stone tools, and assorted bones, as they were found in situ at a Mesolithic cave burial in Arene Candide, Italy. (Gustavo Tomsich/Corbis)

In common with their Upper Paleolithic ancestors, Mesolithic people employed well-defined strategies to obtain food and were not just opportunistic hunter-gatherers. Of particular importance was the use of fire as a means of manipulating the forested environment and animal herds. Fire, for example, opens up dense woodland, promoting new growth with a high water content that is favored by browsing animals. Evidence for this is widespread in moorland, heathland, and forest environments in Scandinavia and the British uplands, especially in the North York Moors, the Pennines, and the Lake District, where layers of charcoal in soils have been dated to the Mesolithic period and short-lived declines in tree pollen are recorded. The control of fire would have required skill, but it conferred the advantage that animal-herd movements could be predicted to some degree. Such activities also required collaboration between individuals and groups, which promoted cultural development. The remains of plant foods included berries, nuts, fruits, fungi, and seeds with much regional variation throughout Europe. In Britain, for example, hazelnuts are common in Mesolithic archaeological sites, while species such as strawberry, raspberry, rowan berry, acorn, and sea beet

have been recorded from Danish sites. From Franchthi cave in Greece, a rich but different assemblage of plant remains includes barley, lentil, oats, pear, bitter vetch, pistachio, and almond.

These findings reflect the varied characteristics and practices of Mesolithic cultures in Europe, which were far from uniform due to varied conditions along a north-south and east-west axis. Five major divisions are recognized: Maglemosian in Scandinavia, the Baltic countries and eastern Britain, the Beuronian of central Europe and western Britain, the Epigravettian in the Mediterranean zone (Italy, Balkans, and Greece), and the Sauveterrian of western France and Iberia. The characteristics of Mesolithic dwelling sites are not well known, probably because they consisted of materials that readily decompose such as wood and turf and because many sites were submerged by rising sea levels of the early postglacial period. Hearths and postholes are the most widespread indication of former structures. One exception is Star Carr in the Vale of Pickering, North Yorkshire, in Britain, where a birch platform was constructed in reed swamp at the edge of a large lake circa 10,500 BCE. It was occupied for some 300 years. Subsequent waterlogging has preserved this famous Mesolithic site, which provides much evidence for hunting and gathering, boats, tool assemblages, stone and amber beads, and antler headdresses, which may reflect ritual practices.

Mesolithic sites are characterized by distinctive stone tools with microliths, relatively small finger-sized tools in contrast to hand-sized Paleolithic tools, as a common denominator. Arrowheads, blades, adzes, picks, and scrapers were sculpted from a variety of stone types, most commonly flint, quartz, quartzite, and obsidian. Moreover, wood, antlers, and animal bones were also used as tools (e.g., antlers from deer or elk were set in wooden shafts and used as mattocks, or pickaxes, possibly for digging up edible roots and tubers). Water craft (similar to dugout canoes) made of wood and skins were also being used during the Mesolithic. The site of Tybrind Vig in Jutland, Denmark, has yielded two canoes with decorated paddles; the largest could carry six to eight people, contained rock as ballast, and has evidence for a small fire in the stern that may indicate eel fishing. Such vessels were also

used for transport at a time when sea levels were rising and Mesolithic groups were actively colonizing islands, as in the Hebridean Islands of Scotland.

—A. M. Mannion

Bibliography

- Bailey, G., and P. Spikins, eds. *Mesolithic Europe*. Cambridge: Cambridge University Press, 2008.
- Cunliffe, B., ed. *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 2001.
- Milner, N., and P. C. Woodman, eds. *Mesolithic Studies at the Beginning of the 21st Century*. Oxford: Oxbow Books, 2005.

The Archaic in the Americas

The Archaic is an archaeological term for the era that covers all of the Middle Holocene and parts of the Early Holocene in North and South America. In North America this stage covers the time between the Late Pleistocene and Early Holocene peoples who used a fluted point technology, such as Clovis and Folsom, and those peoples who adopted some combination of pottery making, burial-mound construction, or horticulture. In South America this stage covers a slightly longer period, usually spanning between the first colonizers of the continent and those people who adopted some form of domestication and sedentism.

First proposed by William A. Ritchie in the early 1930s as an organizing concept for a portion of the Eastern Woodlands cultural region in North America, the stage was soon appropriated and applied to seemingly analogous archaeological complexes throughout North and South America, although the stage manifested differently in each region depending on environmental, climatic, and cultural conditions. For example, in the Plateau region of North America, climatic conditions continued to warm from their Late Pleistocene and Early Holocene levels, becoming more maritime after 8,000 years before the present and allowing conifer forests to move downslope in the north and shrub steppes to replace grasslands in the Columbia Basin. These climatic changes had measurable effects on the peoples of the Plateau, as they shifted their technologies and resource strategies to

THE KOSTER SITE

The Koster site is stratified within a thick suite of Holocene deposits in a minor tributary valley of the lower Illinois River. Located between limestone bluffs and upland loess or till plains to the east and the Illinois floodplain to the west, the site was initially excavated by Gail Houart in 1971. Evidence from the site indicates that occupation began intermittently during the Early Holocene but that by the Middle Holocene, occupation of the site became intensive. Asch and Ford found evidence that human inhabitants were fishing, hunting deer, and intensively gathering wild plants. Occupation during the Middle Holocene was of long enough duration that permanent structures were constructed, and evidence has been recovered indicating that occupants also used roasting pits, grinding stones, limestone, and hematite plummets for bolas to kill ducks and also used fishhooks, stone knives, and atlatl points in their subsistence activities.

Geomorphic evidence from the site, instrumental in constructing an accurate paleoenvironmental

picture of the Illinois River valley, indicates that Archaic occupants may have temporarily accelerated disturbance of the vegetation cover and soil mantle during the course of food and fuel procurement, leading to local resource patchiness and possible demographic restructuring.

—Peter Jones

Bibliography

- Asch, N. B., Richard I. Ford, and D.L. Asch. *Paleoethnobotany of the Koster Site, the Archaic Horizons*. Springfield: Illinois State Museum, 1972.
- Butzer, Karl W. "Changing Holocene Environments at the Koster Site: A Geo-Archaeological Perspective." *American Antiquity* 43(3) (1978): 408–413.
- Houart, G. L. *Koster: A Stratified Archaic Site in the Illinois Valley*. Springfield: Illinois State Museum, 1971.

LA PALOMA

La Paloma is an Archaic village located just north of the Chilca Valley on the coast of Peru dating between 7,700 and 5,000 years ago. The site covers about 37 acres (15 hectares) and is situated on a series of low hills. Evidence indicates that the prehistoric peoples of La Paloma exploited four different resource zones in addition to the coastal desert: the littoral (or coast), the river valleys, the *lomas* (hills), and the western flanks of the Andes. Out of these zones evidence indicates that the peoples of La Paloma subsisted largely on marine resources, principally fish and mussels or other bivalves. Floral materials and terrestrial vertebrates indicate some use of land-based resources such as deer (*Cervidae*) and guanaco. The peoples of La Paloma also exploited more distant river valleys for reed and other riverine resources. Paleobotanical evidence indicates that human pressure on plant and other resources, coupled with the decreasing availability of local moisture, encouraged the

prehistoric peoples to focus their subsistence economy on littoral and riverine resources over time.

—Peter Jones

Bibliography

- Quilter, Jeffrey. *Life and Death at Paloma: Society and Mortuary Practices in a Preceramic Peruvian Village*. Iowa City: University of Iowa Press, 1989.
- Reitz, Elizabeth J. "Faunal Remains from Paloma, an Archaic Site in Peru." *American Anthropologist* 90(2) (1988): 310–322.
- Weir, Glendon H., and Philip J. Dering. "The Lomas of Paloma: Human-Environment Relations in a Central Peruvian Fog Oasis; Archeobotany and Palynology." In *Andean Archaeology: Papers in Memory of Clifford Evans*, edited by R. Matos, S. A. Turpin, and H. H. Eling. Los Angeles: Institute of Archaeology, University of California, Los Angeles, 1986.

➤ GUILÁ NAQUITZ

The archaeological site of Guilá Naquitz is a small cave located about 3.1 miles (5 kilometers) northwest of the present-day town of Mitla, in the state of Oaxaca, Mexico. Situated at the base of a large cliff, the site was originally excavated by Kent V. Flannery and colleagues in the 1960s. A total of five natural strata covering over 55 inches (140 centimeters) of depth characterize the site, which has been dated to 8,900–6,700 before the present (BP) and has supplied important information on the domestication of maize.

The preceramic cave deposits are divided into five strata (zones B through E plus the topsoil), from which parts of cultivated bottle gourd (*Lagenaria*) were recovered from zone C and upward. From zone D and upward seeds and peduncles of cultivated summer squash (*Cucurbita pepo*) were also recovered. In zone B grains of teosinte and *Tripsacum* were recovered, supplying information on the domestication date of maize. This evidence indicates that a generally cooler yet more xeric climate prevailed during much of the occupation of Guilá Naquitz and that a maize-like plant was being cultivated by the peoples inhabiting the cave by 7000 BP.

—Peter Jones

Bibliography

Flannery, Kent V. *Guilá Naquitz: Archaic Foraging and Early Agriculture in Oaxaca, Mexico*. Orlando: Academic Press, 1986.

ward newly emerging resources. Evidence indicates that reliance on salmon as the predominant resource was minimal for the first part of the Archaic but began to improve in the Fraser River system by around 5,500 years before the present as a result of these overall climatic changes, although there is evidence that Plateau peoples exploited salmon throughout the stage. In addition to salmon, people continued to subsist on deer and other ungulates, rabbits, beaver, waterfowl, muskrats, marmots, freshwater fish, small birds, and camas. Culturally, evidence indicates that lifeways continued from the Early Holocene based on overall tool kit resemblances, although projectile points decreased in overall size. Throughout the Plateau, activity continued to be

oriented toward lowlands, while midaltitude valleys were seasonally used and trade and exchange with other regions increased.

In the Rocky Mountains, where resources and climatic conditions did not support semisedentary lifeways, evidence indicates that Archaic peoples followed a more cyclical lifeway pattern alternating between the high mountain valleys during the warmer months and the lower parks and plains in the colder months. The Helen Lookingbill site, for example, is a stratified high-altitude open site in the Washakie Range of the Absaroka Mountains in northwestern Wyoming. The site, which served as a camp located near both quartzite and chert stone sources, contains evidence of continued use from the Late Pleistocene through the Middle Holocene. Archaic peoples used the camp to hunt mountain sheep, bison, porcupine, and other mammals, and the presence of a wide variety of tools, including drills, utilized and retouched flakes, and scrapers suggest that the site was occupied for relatively long periods of time, most likely during the spring, summer, and fall months.

Unlike much of western North America, where access to subsistence resources played a key role in Archaic peoples' lifeways, it appears that lithic resource locations played a larger role in southeastern North America for Archaic peoples. Evidence indicates that during the Archaic period high-quality stone for tool use played a more significant role in settlement adaptations than other factors and that group mobility incorporated the geological occurrence of preferred stone resource locations for tool use. The importance of high-quality stone for tool use was of such significance in some areas, such as in present-day Florida, that Archaic peoples transported lithic cores and flakes considerable distances from inland sources to coastal harvesting sites.

Not all Archaic lifeways, however, were centered around the procurement of faunal resources in North America. In some areas, such as the Great Basin and the deserts of the Southwest and northern Mexico, Archaic peoples appear to have lived semisedentary lifeway patterns that relied heavily on floral resources. Evidence from the Archaic period in the Lower Pecos River region of southwestern Texas and Coahuila, Mex-

ico, for example, indicates that people practiced a broad-spectrum subsistence economy and that they relied heavily on semidomesticated floral resources, especially lechuguilla (*Agave lechuguilla*), sotol (*Dasylirion texanum*), and prickly pear cactus (*Opuntia* spp.). Intensive use of these low-ranked resources indicates that local populations experienced periods of subsistence stress beginning in the Early Archaic and continuing through the Late Archaic, primarily because of Middle Holocene climatic conditions.

Farther south in Mesoamerica, the Archaic stage is not as well known as subsequent stages, although fundamental cultural adjustments were made to the varying physical environments by local peoples during the stage. Reliance on maize did not occur in most areas until the end of the stage, although by 3,000 years before the present at least 30 percent of the diet appears to have been based on cultivated plants in the Central Highlands of Mexico. Along the coast of Mesoamerica, there is evidence of Archaic peoples following a similar lifeway that was increasingly based on forms of sedentism but who instead relied more on seasonal marine resources than on domesticated cultigens. Many of the same general cultural patterns that occurred in North America also took place in South America during the Archaic, such as the rise of sedentism, the construction of ceremonial structures, and the beginnings of domestication. For example, in the south-central Andes at the site of Asana, evidence indicates that peoples did not settle the area until around 10,000 to 9,800 years before the present, and permanent habitation of the highlands was not achieved until approximately 9,500 years before the present. From 8,700 to around 6,500 years before the present, evidence indicates that three important social processes occurred at the site: population growth, residential stability, and the emergence of architectural structures indicative of social complexity. After 6,500 years before the present it appears that these trends begin a relatively rapid decline, with the abandonment of public structures and the length of occupation of the site shortening. By 5,000–4,400 years before the present, residential mobility in the area appears to have been confined to the high-sierra environment, where

ASANA

Asana is located on the north bank of Río Asana at an elevation of 11,270 feet (3,435 meters) in present-day southern Peru. Located in a basin within the relatively flat valley floor of the Río Asana valley, the site contains six stratigraphic complexes dating from the Late Pleistocene (10,500–9,000 BP) for Complex VI through the end of the Middle Holocene (4,400–3,500 BP) for Complex I. Evidence indicates that Asana was first utilized around 10,000 to 9,800 years BP, 800 years prior to permanent habitation of the rest of the south-central Andean highlands.

Asana was situated in an ideal location, allowing prehistoric Andean peoples multiple options in their subsistence pursuits. According to Aldenderfer, the earliest phases of occupation indicate that Asana was first used as a logistical camp monitored from a lower elevation base camp. These early site uses focused primarily on the hunting of guanaco and taruca. Later, evidence indicates that Asana became a residential base that was occupied for relatively long periods of time on an annual basis. By 5,000 BP the scale of settlement at Asana changed, with less residential mobility taking place along with a greater reliance on seeds. By the end of the Middle Holocene, evidence indicates that the guanaco had been domesticated and that this became the primary resource for people of the area until it was abandoned after 3,600 BP.

—Peter Jones

Bibliography

Aldenderfer, Mark S. *Montane Foragers: Asana and the South-Central Andean Archaic*. Iowa City: University of Iowa Press, 1998.

plants were intensively utilized and a series of ceremonial structures were built.

In central Brazil, on the other hand, evidence based on human skeletons, rock shelter stratigraphy, and chronology of open-air sites indicates that large areas ceased to be occupied by Archaic peoples during much of the Middle Holocene as a result of unfavorable climatic conditions. Evidence indicates that Archaic peoples moved to regions of South America where Middle Holocene environments were more favorable, such as along the coast of Brazil. Areas that

maintained a semistable climate, however, appear to have been continually occupied during the Holocene, such as the rock shelters of Santa Elina, Gruta do Gavião, Toca da Esperança, Lapa Vermelha IV, and Lapa dos Bichos.

Similarly, at the rock shelter site of Sabana de Bogota in the El Abra Valley of Colombia, evidence indicates that climate greatly affected Archaic peoples' lifeway patterns. Between 8500 and 5000 years before the present, Archaic peoples practiced a general hunting and gathering lifeway pattern with shifts in frequency of particular species hunted and changes in frequency of specific artifact types, while pounding and grinding implements may indicate increasing emphasis on plant foods. There is evidence of a gradual increase in the human population of the Sabana de Bogota over the millennia until the severe drought around 5000 years before the present reduced or scattered the population in the area. At this time, in the northern lowlands of Colombia, hunting and gathering populations concentrated on the coast or near marshes and lagoons, as evidenced by shell mound accumula-

tion, and on the Caribbean coast pottery appeared by 5,000 years before the present.

—Peter Jones

Bibliography

- Aldenderfer, Mark S. *Montane Foragers: Asana and the South-Central Andean Archaic*. Iowa City: University of Iowa Press, 1998.
- Araujo, Astolfo G. M., et al. "Holocene Dryness and Human Occupation in Brazil during the 'Archaic Gap.'" *Quaternary Research* 64 (2005): 298–307.
- Daniel, I. Randolph, Jr. "Stone Raw Material Availability and Early Archaic Settlement in the Southeastern United States." *American Antiquity* 66(2) (2001): 237–265.
- Haag, William G. "The Archaic of the Lower Mississippi Valley." *American Antiquity* 26(3) (1961): 317–323.
- Kornfeld, Marcel, et al. "10,000 Years in the Rocky Mountains: The Helen Lookingbill Site." *Journal of Field Archaeology* 28(3/4) (2001): 307–324.
- Voorhies, Barbara, et al. "A Middle Archaic Archaeological Site on the West Coast of Mexico." *Latin American Antiquity* 13(2) (2002): 179–200.

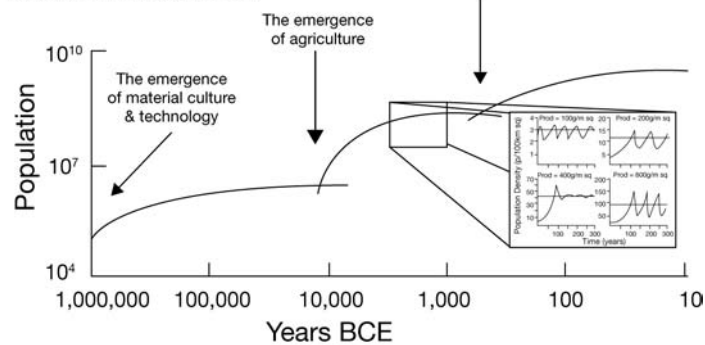
■ Introduction: Population Growth through Time

Population growth can be defined as the increase in the number of people per given area of land. In the absence of migration, it occurs when birthrates exceed mortality rates in a population. Population growth is one component within the broader study of human demography, which itself is underwritten by principles of ecology and evolution. Human paleodemography is the study of past population trends, and data is provided by the excavation of skeletal material and archaeological proxies (site densities or frequencies of radiocarbon dates) as well as, increasingly, via the analysis of genetic data from both currently living and ancient populations. As a species, *Homo sapiens* is today one of the most successful large-bodied mammals on the planet, with a global distribution. The archaeological record of the Pleistocene and Holocene charts the dispersal of various species of *Homo* onto all con-

tinents from its former confinement in Africa. Facilitated by key technological innovations, this remarkable dispersal went hand in hand with, was partly driven by, and led to an increase in the total number of people especially since the beginning of the Holocene, which has brought both milder and much more stable climatic conditions. On every inhabited continent, the end of the last Ice Age with its often erratic oscillations in climatic regimes and the subsequent onset of the Holocene are marked by patterns of accelerated population increase. Furthermore, it is clear from historical records, such as parish records and censuses, that over the last few hundred years the human population has grown at an ever-accelerating pace. Indeed, it is today growing so fast that feeding and accommodating these vast numbers of people has been identified as one of the major challenges for the future.

Traditional models of population growth assume that numbers will increase until a certain plateau is reached, around which time numbers will fluctuate slightly. Such a growth curve is termed logistic, followed by a dynamic equilibrium centered on the carrying capacity (K) of the environment. K is defined through fundamental ecological variables such as the availability of sunlight, plant and animal resources, water, etc. In contrast, recent population increases instead follow an exponential growth curve, and a number of studies on so-called natural fertility populations—that is, small-scale societies exhibiting traditional patterns of birth, death, and migration—support the view that human populations have the potential to grow without reaching an intrinsic ceiling. If these insights are extrapolated back into the past, the question arises as to why human population numbers have not increased to their current level and beyond much earlier. The answer likely rests with periodic local declines in human population numbers and growth trajectories that have kept these numbers in check, on occasion dramatically so such as in the case of epidemics or widespread famine. Individual fertility does not depend on the overall economic potential of a given area but rather on people's ability to extract resources for themselves and on their own reproductive efforts. Carrying capacity itself is a fluctuating property of the environment, especially when climatic variability over time is taken into consideration. Humans do not have the ability to predict future climatic trends accurately, and hence K is regularly exceeded, which, unless emigration occurs, leads to other density-dependent regulating mechanisms (e.g., disease, famine, conflict) taking effect. These will decrease population numbers below K , from where renewed cycles of population growth begin. It is against the backdrop of climatic change that human population growth must be considered. One of the key contributions of technology to population growth over time has been as a buffering mechanism against fluctuations in climate/carrying capacity. The contrast between exponential (unlimited) and logistic (limited) population growth may therefore be more apparent than real: When given the opportunity, human populations will in-

GLOBAL AND LOCAL (INSET) POPULATION GROWTH PATTERNS: 1,000,000 YEARS to PRESENT



(Source: M. Livi-Bacci, M. 2007. *A Concise History of World Population* (Oxford, UK: Blackwell, 2007); J. L. Boone, "Subsistence Strategies and Early Human Population History: An Evolutionary Ecological Perspective," in *World Archaeology* 34(1) (2007): 6-25.

crease near exponentially, but climatic factors as well as technological limitations set boundaries, resulting in growth curves that appear to mimic the logistic pattern.

Demography is vital for placing humans in an ecological and evolutionary framework and for understanding both human biological as well as cultural evolution. Population growth is both an effect of cultural changes (e.g., advances in food acquisition technologies) as well as a cause for further such changes (e.g., migration of populations from high-density into low-density areas, the emergence of permanent housing structures, etc.). The once-held assumption of stable or steadily growing populations in the past has been shown to be misleading. Instead, past demography should be thought of as highly variable and linked to patterns of both climate as well as societal change.

—Felix Riede

Bibliography

- Burroughs, W. J. *Climate Change in Prehistory: The End of the Reign of Chaos*. Cambridge: Cambridge University Press, 2005.
- Chamberlain, A. *Demography in Archaeology: Cambridge Manuals in Archaeology*. Cambridge: Cambridge University Press, 2006.
- Hassan, F. A. *Demographic Archaeology: Studies in Archaeology*. London: Academic Press, 1981.
- Livi-Bacci, M. *A Concise History of World Population*. Oxford, UK: Blackwell, 2007.

Raleigh, V. S. "Trends in World Population: How Will the Millennium Compare with the Past?" *Human Reproduction Update* 5(5) (1999): 500–505.

Shennan, S. J. "Population, Culture History, and the Dynamics of Culture Change." *Current Anthropology* 41(5) (2000): 811–835.

The Causes of Population Growth

The study of the causes of population growth considers both intrinsic and extrinsic factors. Intrinsic factors are those that relate to humans as biological organisms and especially so-called life-history parameters. Life history is the summary term for the course taken by an organism through the various biologically and socially defined stages of life (infancy, onset and end of reproductive activity, etc.). The key life-history parameters for understanding population growth are birth, reproduction, and death as well as migration. In contrast, extrinsic factors are environmental or external to the organism. The overall climatic regime within which an organism finds itself has important implications for population dynamics. Climatic changes and events can influence population growth directly through increasing mortality, but much more commonly the environment provides clues that organisms, including humans, use to make their life-history decisions: when to reproduce, how often to reproduce, and whether

to migrate. Beneficial climatic regimes will stimulate more people to reproduce faster, whereas a worsening climate will result in lower birth rates. It can therefore be said that the environment acts as the ultimate cause of population growth, whereas changes in human life-history—increases in fertility and birth rate, reduction in mortality, and increases in lifespan—have to be understood as the proximate causes.

From a historical or an archaeological perspective it is important to note that the environment for humans includes not only basic climatic factors but also other humans as well as the material culture with which we have surrounded ourselves over the course of the last 2.5 million years. Social learning and its material signature, technology, have been shown to be adapted to deal with medium-term environmental fluctuations (individual or trial-and-error learning deals with short-term fluctuations, and biological adaptation responds to long-term changes), and through the built environment and material culture, humans have become increasingly independent, albeit not fully divorced, from episodic climate change. The intrinsic life history of *Homo sapiens* is unlikely to have changed substantially for the last 150,000 years if not more, and patterns of fertility and mortality differ little between foragers and farmers. It is therefore possible to isolate the increasingly efficient buffering mecha-

ESTIMATED PREHISTORIC HUMAN POPULATION DENSITIES AND NUMBERS

Time	Relative population density (persons/km ²)	Land area (in km ²) occupied by humans	Total estimated human population numbers: World
Today*	approx. 44.952	148,300,000	approx. 6,666,400,000
5000 BCE	0.115	75,000,000	8,625,000
10,000 BCE	0.1	6,000,000	600,000
100,000 BCE	0.03	4,000,000	120,000
1,000,000 BCE	0.025	3,000,000	75,000

* U.S. Census Bureau actual values. At time of publication these will already have been vastly superseded. The values for prehistoric populations are from Hassan (1981).

° California is today the most densely populated state in the United States of America. The region comprising modern-day California was probably not occupied at all by humans until about 11,000 BCE (see Erlandson et al. 2007). Population estimates are calculated for a total of 423,970 km² land area.

Source: F. A. Hassan, *Demographic Archaeology: Studies in Archaeology* (London: Academic Press, 1981); J. M. Erlandson, et al., "One If by Land, Two If by Sea: Who Were the First Californians?" in *California Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jones and K. A. Klar (Walnut Creek, CA: AltaMira, 2007).

nisms provided by material culture as having facilitated the dramatic rise in human populations, in particular since the onset of the climatically more stable Holocene period. Key innovations such as the bow and arrow and the use of domestic plants and animals have stimulated episodes of often dramatic demographic growth and expansion of human groups. Agriculture in particular had far-reaching implications for human population growth. The high mobility required of hunter-gatherers limits the number of young children that can be looked after and transported at any one time. As populations settled down around domesticated resources, however, women were released from these constraints. Sedentary lifestyles by themselves are strongly associated with larger populations, even in prehistoric and recent forager populations (e.g., Erteboelle, Jomon, Northwest Coast First Nation groups). In addition, farmers would be able to provide foodstuffs adequate for earlier weaning of infants much more readily than would hunter-gatherers. Earlier weaning coupled with lower rates of mobility would have steeply increased birth rates in early farming populations. Supplementary refinements in agricultural technology, such as the introduction of iron plows, animal traction, and eventually mechanization, are at the root of further demographic increase, and some have argued that population pressure itself stimulates innovations.

No mention of population growth would be complete without addressing its counterpart, population decline. Few if any historically or archaeologically known populations have grown continuously, and the causes for decline are often linked to those for growth. In fact, growth itself can set the stage for subsequent decline, as it will usually go beyond the sustainability of a given environment and thus stimulate higher rates of mortality and a return to lower fertility. In addition, the climate, even during the Holocene, was rarely stable for extended periods, leading to local or regional reductions in population densities caused by migration or increased mortality and decreased fertility due to resource shortages.

—Felix Riede

Bibliography

Boserup, E. *The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure*. New York: Aldine, 1965.

➤ BIRTH SPACING AND POPULATION GROWTH IN THE !KUNG

The !Kung (also known as the San) are a tribe of hunters and gatherers who reside in the African Kalahari Desert. Anthropologists Melvin Konner and Marjorie Shostak observe that despite being sexually active and not practicing contraception, they have low fertility. Instead, their fertility rate is affected by birth spacing, which is practiced in several indigenous populations. !Kung birth spacing is thought to be connected to highly frequent and prolonged nursing, which diminishes the mother's ability to conceive during nursing.

The !Kung take parenting very seriously, and motherhood is a daunting task. The bond between a !Kung mother and her child is very intense, and a child often has unlimited access to its mother. Anthropologists Patricia Draper and Raymond Hames discovered that among the !Kung, the presence of older siblings in a family helps parents raise all children more successfully. For a child, the weaning stage can occur as early as two years and last as long as four years of age, and birth spacing averaging at 48 months in traditional !Kung societies is considered ideal. Although it is not considered an intentional practice among the !Kung, birth spacing is thought to be nutritionally advantageous to both child and mother.

—Shamika Ann Mitchell

Bibliography

- Cashdan, Elizabeth A. "Natural Fertility, Birth Spacing, and the First Demographic Transition." *American Anthropologist* 87 (1985): 650–653.
- Konner, Melvin, and Marjorie Shostak. "Timing and Management of Birth among the !Kung: Biocultural Interaction in Reproductive Adaptation." *Cultural Anthropology* 2(1) (1987): 11–28.
- Shostak, Marjorie. *Nisa: The Life and Words of a !Kung Woman*. New York: Vintage Books, 1983.

- Key, C. A. "The Evolution of the Human Life History." *World Archaeology* 31(3) (2000): 329–350.
- Metcalf, C. J., and S. Pavard. "Why Evolutionary Biologists Should Be Demographers." *Trends in Ecology and Evolution* 22(4) (2007): 206–212.
- Odling-Smee, F. J., K. N. Laland, and M. W. Feldman. *Niche Construction: The Neglected Process in Evolution*. Princeton, NJ: Princeton University Press, 2003.

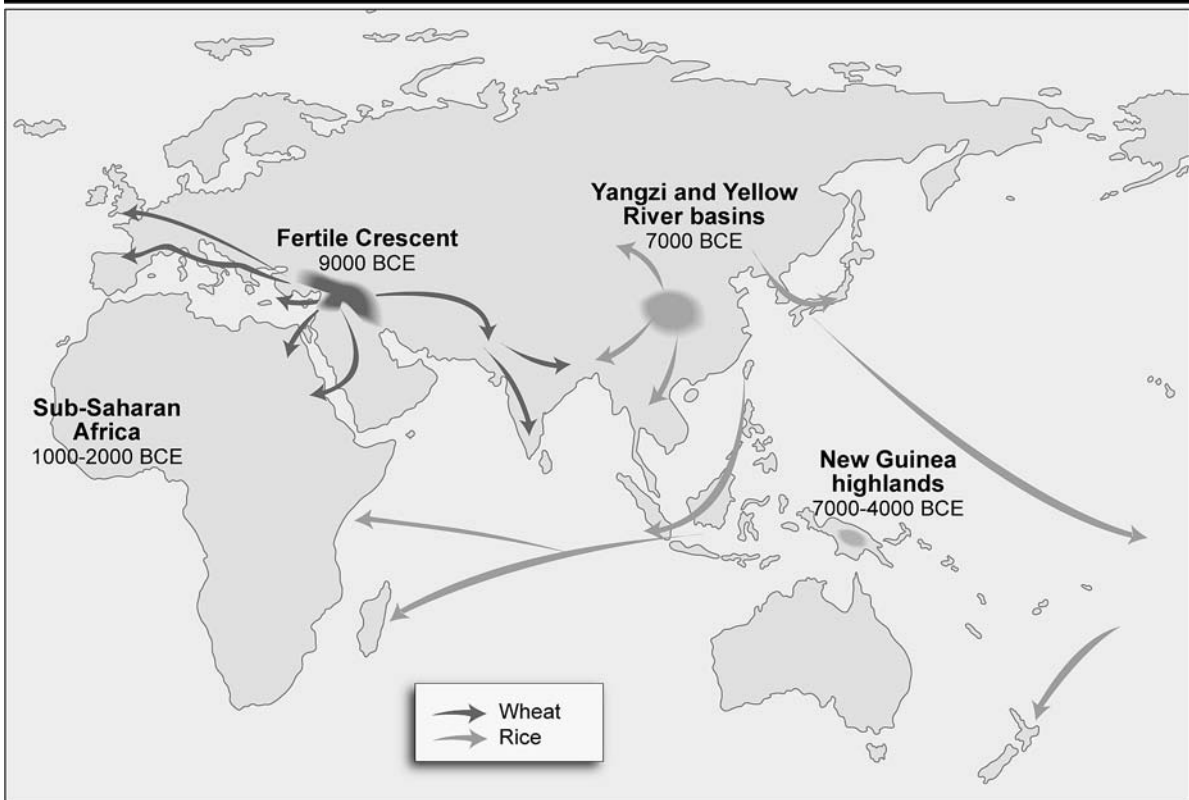
How Many Ancestors? (One Million Years Ago)

At around one million years ago, a robustly built early form of human, *Homo erectus*, had emerged out of a previously much greater diversity of hominid species living in Africa and immediately adjacent areas. Although we now have a reasonably good fossil record from this period, estimating population densities in deep prehistory remains exceedingly challenging. We have no contemporary analogs for either the Pleistocene savanna environments in which these hominids lived or their particular behavioral, economic, and ecological adaptations. Although they most certainly bracket the behavioral range of *Homo erectus*, neither other primates nor recent hunter-gatherers constitute fully adequate models for reconstructing demography one million years ago. A convincing argument has been made that group size correlates positively with the size of the neocortex, an area of the brain strongly related to social interaction and mem-

ory. *Homo erectus* displays a marked increase in brain size as well as a number of other morphological as well as behavioral and cultural novelties that set it apart from other hominid species and that may have been instrumental in its dispersal out of Africa. It is likely therefore that the emergence of *Homo erectus* and in particular its dispersal into previously uninhabited places reflect a significant growth in overall numbers. Total population number has been estimated at 0.5 million to 0.8 million globally, with hominids living population densities of between 0.019 to 0.064 persons per square mile (0.00425 to 0.025 persons per square kilometer).

Despite the evident success of the *Homo erectus* population, it has to be kept in mind that during the Pleistocene climatic regimes were extremely variable and that although accommodating this variation may have been part and parcel of successful hominid adaptation, significant fluctuations in population densities and distributions would have been common. Although new fossil finds made over the past few

MOVEMENT OF DOMESTICATED WHEAT AND RICE



decades have greatly expanded the known range of early hominids, there is also much evidence to suggest that the ebb and flow of these populations across the landscapes of the Old World was directed by general climatic patterns and that these early populations—small and isolated and hence fairly vulnerable—were prone to stochastic (i.e., unpredictable) extinction.

—Felix Riede

Bibliography

- Ambrose, S. H. "Late Pleistocene Human Population Bottlenecks, Volcanic Winter, and the Differentiation of Modern Humans." *Journal of Human Evolution* 34(6) (1998): 623–651.
- Antón, S. C., and C. C. Swisher III. "Early Dispersals of *Homo* from Africa." *Annual Review of Anthropology* 33 (2004): 271–296.
- Richerson, P. J., R. L. Bettinger, and R. Boyd. "Evolution on a Restless Planet: Were Environmental Variability and Environmental Change Major Drivers of Human Evolution?" In *Handbook of Evolution*, Vol. 2, *The Evolution of Living Systems (Including Hominids)*, edited by F. M. Wuketits and F. J. Ayala. Weinheim, Germany: Wiley-VCH Verlag GmbH, 2005.

How Many People? (100,000 years ago)

The period around 100,000 years ago was critical for the evolution of our ancestors, *Homo sapiens*. A number of fossils from various localities in Africa are known, charting the trend toward a modern human anatomy and a variety of genetic studies that point to the period between circa 200,000 and 70,000 years ago as critical for the formation of the contemporary global gene pool. In other areas of the world, archaic *Homo* species were established, such as Neanderthals in western Eurasia, *Homo erectus* groups in East Asia, and the small-bodied *Homo floresiensis* on the islands of Southeast Asia. Archaeological estimates put the global population numbers of this period somewhere between 125,000 and 1.2 million, although some areas may have been occupied at significantly lower densities. Most recent estimates, based on ecological considerations and minimum population densities derived from ethnographic studies, suggest a global population of approximately 350,000 individuals. Note,

however, that these as well as other estimates at the upper end of the scale include hominid species other than *Homo sapiens*, while the figure of 125,000 has been suggested exclusively for the ancestral populations of *Homo sapiens* in Africa. In fact, calculations of effective population size (N_e), that subsection of a population successfully participating in reproductive efforts (excluding children and postreproductive individuals), based on observed modern genetic variability propose an N_e of only 10,000 individuals. How can this apparent paradox be resolved?

The relationship between N_e and census size (N_c), which includes all individuals in a population, is complex, and a number of factors—population structure, age structure, and family size—impact on their relationship. In particular, extinction rate has been shown to be important: higher extinction rates result in a much greater total population estimate, N_c , in relation to N_e . If the hominid population of 100,000 BCE is thought of as a so-called metapopulation in which regular local and regional extinctions, followed by the recolonization of these areas from occupied areas, were common, raised extinction rates begin to make sense. Extinction rates of up to 30 percent per generation are known from ethnographic settings, and under such dynamic demographic regimes N_e would rapidly converge on estimates derived from ecological and archaeological calculations. Local extinctions and bottlenecks may have been caused by events such as the catastrophic eruption of Mount Toba at circa 70,000 years ago. Additionally, such elevated extinction rates also have implications for the transmission and accumulation of cultural traditions. The period of around 100,000 BCE was witness to the emergence of complex modernlike behaviors, albeit in a patchwork fashion. Local traditions emerge, especially in Africa, only to disappear again after a few thousand years. Steep reductions in population size influence the social transmission of knowledge and can lead to cultural discontinuities. If such discontinuities result in a lowered ability to extract resources from the environment or to buffer against climatic changes, further decreases in population size follow. Hominid demography at 100,000 BCE was highly variable, and it was only sometime later that those populations began

to stabilize and, eventually, to increase, resulting in the dispersal of now biologically fully modern groups out of Africa and the subsequent replacement of archaic populations in all regions of the world.

—Felix Riede

Bibliography

- Foley, R. A., and M. M. Lahr. "On Stony Ground: Lithic Technology, Human Evolution, and the Emergence of Culture." *Evolutionary Anthropology* 12 (2003): 109–122.
- Hassan, F. A. *Demographic Archaeology: Studies in Archaeology*. London: Academic Press, 1981.
- Klein, R. G. *The Human Career*. Chicago: University of Chicago Press, 1999.

How Many People? (10,000 BCE)

The Ice Age, which reached its height at around 20,000 BCE, resulted in considerable reductions of human populations in most areas of the world, a so-called bottleneck. As the planet began to fitfully warm up, populations recovered, and the renewed colonization of many high-latitude regions commenced. At 10,000 BCE, human groups relied on a hunting and gathering subsistence economy adapted to flexibly deal with the often pronounced and frequently recurring climatic oscillations of the Ice Age. Populations are thought to have been low, in some areas quite far below the levels recorded in ethnographically known recent hunter-gatherer groups. While both genetic as well as archaeological data have been used to calculate population numbers at this time, precise estimates remain difficult. Maximum global population numbers at 10,000 BCE were around ten million, but there is likely to have been considerable regional variation, with some areas fairly densely settled and others practically devoid of human activity. At lower latitudes, especially in Southwest Asia, larger nucleated settlements began to develop, some of which would have been occupied for a large part of the year by perhaps 200–300 people at any one time. In these areas, sedentary or semisedentary farmers began to experiment with potential domesticates (e.g., emmer/einkorn wheat, sheep, and goat). In contrast, approximations for middle- to high-latitude hunter-gatherer population densi-

ties range from 0.003 to 0.128 persons per square mile (0.001 to 0.05 persons per square kilometer). Given these estimates, California—today the most densely populated state in the United States with an estimated 36.5 million inhabitants—would have been occupied by between 424 and 21,200 highly mobile hunter-gatherers with population networks stretched over vast areas of effectively unoccupied space. Ireland, today home to some six million people, would have been visited by between 84 and 4,221 foragers at the time. Both areas were marginal for human settlement at 10,000 BCE, so actual population numbers would have been toward the lower end of these estimates.

The period around 10,000 BCE was one of relatively benign climate, and populations were most certainly growing and expanding. However, this was not to last, and both a general climatic turn just after 10,000 BCE (the so-called Younger Dryas) as well as unique events such as volcanic eruptions and comet impacts may have had considerable demographic consequences. Much like in earlier periods, it is not possible to postulate steadily growing or even stable populations during this period. Following the Younger Dryas, global climate began to ameliorate, becoming warmer and wetter as well as more stable. This marks the transition from the Pleistocene—the Ice Age—to the Holocene, the current climatic era. Although people faced the challenge of adapting to these new temperate climatic regimes, populations increased by an estimated order of magnitude, now at 0.03 persons per square mile (0.01 persons per square kilometer). Despite rising population densities, significant demographic changes, including pronounced reductions in population size, remain an important factor shaping the Holocene archaeological record.

—Felix Riede

Bibliography

- Bocquet-Appel, J.-P., et al. "Estimates of Upper Palaeolithic Meta-Population Size in Europe from Archaeological Data." *Journal of Archaeological Science* 32 (2005): 1656–1668.
- Soffer, O., and C. Gamble, eds. *The World at 18,000 Bp*, Vol. 1, *High Latitudes*. London: Unwin Hyman, 1990.

Straus, L. G., et al., eds. *Humans at the End of the Ice Age: The Archaeology of the Pleistocene-Holocene Transition*. New York: Plenum, 1996.

How Many People? (5000 BCE)

Around 5000 BCE, many areas of the world had recently or were currently experiencing a major transition: the shift from a subsistence economy based on primarily hunting, gathering, and fishing to one based almost exclusively on plant and animal domesticates. In Southwest Asia, where these developments had begun earliest, larger village agglomerations began to emerge. Built of mud-brick houses, these villages would have been home to around 150 people. The development of irrigation agriculture, the use of animals for traction, and the shift toward dairy economies as well as the increased use of tools made of copper—the period of circa 6000 to 3000 BCE is often referred to as the Chalcolithic or copper age—alongside stone implements facilitates a marked population increase in this area. Human settlements expanded into previously unoccupied areas. In many other parts of the world (i.e., western Europe, East Asia) the shift from foraging to farming correlates with the disappearance of Mesolithic (middle stone age) hunter-gatherer-fisher cultures and the emergence of various so-called Neolithic (new stone age) cultural entities. The domestication of plants and animals and their increasingly intensive use is perhaps best viewed as a coevolutionary process, which led to profound demographic changes both in the Old World as well as the New World. The new farming economy led to a more intensive economy, allowing more people to occupy a given area of land. In addition, by reducing the need to move about frequently, it raised the natural limits to how many dependent offspring any one family unit could support. Coupled with the greater availability of weaning foods in the form of gruel and, in some areas, animal milk, fertility rose sharply. Although this rise in fertility occurred in

tandem with an increase in mortality, a decrease in life expectancy as well as a decrease in overall health, rates of population growth increased markedly. This demographic transition has left traces both in the human genome, the skeletal as well as archaeological records. Global population has been estimated to between 5 million and 20 million people, but again there is likely to have been significant regional variation, especially pronounced at this stage because not everywhere had people switched from foraging to farming. In some areas (e.g., the High Arctic) this was simply not practical and was never achieved successfully, while in others relatively prosperous hunter-gatherer-fisher populations were well established and lived at fairly substantial population densities independently of farmers. Overall, however, Neolithic economies based on a range of domesticates did confer a significant demographic advantage to farmers and, on average, lived at higher population densities. However, early farming technology was still severely limited and could only function successfully within fairly tightly circumscribed conditions, namely fertile and easily tilled soils. As a result, such areas were settled first, and populations fluctuated in accord with both climate and cycles of anthropogenic (through human activity) soil exhaustion. These fluctuations as well as their overall great demographic success are reflected in the archaeological record of these early farming populations.

—Felix Riede

Bibliography

- Bellwood, P. *First Farmers: The Origins of Agricultural Societies*. Oxford, UK: Blackwell, 2005.
- Diamond, J. M. *Collapse: How Societies Choose to Fail or Survive*. London: Penguin, 2005.
- Scarre, C., ed. *The Human Past: World Prehistory and the Development of Human Societies*. London: Thames and Hudson, 2005.
- Smith, B. D. "Niche Construction and the Behavioral Context of Plant and Animal Domestication." *Evolutionary Anthropology* 16(5) (2007): 188–199.

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Society and Culture

Despite their apparent simplicity, society and culture are difficult to define. This is especially true for this era, since we must approach them both through the complexities and limitations of the data obtained from the archaeological record. Stones and bones are almost all that we have to define society and culture for more than two million years of our history, and it is only within the past 10,000 years or so that the archaeological record grows in quantity and quality. We are forced once again to rely upon analogy and inference to discuss the nature of social and cultural life of our distant ancestors.

Despite the problems associated with definition, it is important to at least make the effort to define these terms. Society generally refers to the set of relationships between individuals of some group; note that this definition includes both humans and nonhumans. Wolves, birds, and chimpanzees all have social relationships of some kind, and the term “society” is used to describe the nature of relationships between individuals. Chimps have well-defined dominance hierarchies, and each chimp knows his or her place within it, that is, who is above and who is below. These hierarchies influence many aspects of chimpanzee society: who grooms whom, who has sex with whom, and with whom you may share your food.

In modern America, we reserve the term “father” for our male biological parent. To say that someone is your father is to express both a biological and a social relationship. In some village societies in the Amazon Basin, however, the term “father” describes a relationship not only with a male biological parent but also with his biological brothers, who in the United States would be called “uncles.” The biological relationships in the United States and the Amazon Basin are identical, but they are different because the cultures of these groups are different. In one sense, culture is the ways in which social relationships are defined and expressed.

But the concept of culture goes far beyond social relationships and includes the totality of nongenetic behaviors, values, shared beliefs, material objects, and ways of defining and classifying experience within a group of individuals. “Culture” in this sense is a term that is reserved exclusively for humans, since the definition is based on the capacity for symbolic communication that is one of the hallmark traits of our species, *Homo sapiens sapiens*. Although other animal species are capable of learning new behaviors and emulating behaviors based upon direct

Although other animal species are capable of learning new behaviors and emulating behaviors based upon direct observation of them, it is the human capacity for symbolic communication—the ability to use symbols in a creative manner—that makes us unique.

observation of them, it is the human capacity for symbolic communication—the ability to use symbols in a creative manner—that makes us unique. Not only can we learn, we can create wholly new behaviors.

Relying on this definition of culture for the peoples of this era is problematic, however, because much of what the definition entails cannot be directly observed in the archaeological record. Archaeologists have responded to this dilemma by developing the concept of an “archaeological culture.” This definition includes consideration of variability in artifact shape, form, and numbers as they are distributed across space and within a restricted period of time. Variability in artifact types is a proxy measure, at least in part, of variability between cultures. Thus, in the Neolithic Age of western Europe, for example, two well-known archaeological cultures are the Bell Beaker culture and the LBK (for linear band-keramik) culture. Each has a distinctive style of pottery decoration that allows the archaeologist to identify and distinguish them from each other.

Among the critical questions that can be asked of the past, one of the most important is at what point we can identify the earliest expression of human culture. This is clearly related to the problem faced in our attempt to classify our ancestors from a biological perspective: when do we begin to call a species a member of our own genus, *Homo*? If we based this upon the presumed origins of symboling capacity, it would be either *Homo ergaster* or *Homo habilis* that created the first “human” culture. However, stone tools offer little support for this since they vary relatively little over 700,000 to 1 million years. For some, the appearance of the Acheulian tool tradition and *Homo erectus* is a more likely candidate for some form of early human culture. This is also the approximate time frame for the movement of this species out of Africa.

If culture is defined, albeit imperfectly, by variability in time and space in artifact types, how do we make inferences about the social lives of our ancestors? Analogy with modern hunters and gatherers and village peoples is the primary method employed in this analysis. In many hunting and gathering societies, the placement of huts or structures tells us something about the nature of social relationships. Among the San of the Kalahari Desert, people tend to place their huts closer to kin instead of unrelated people. We can thus measure distances between huts found in the archaeological record and get a sense of whether this rule could be applied to these past peoples. Although we cannot know the specifics of the nature of the social relationship between these people in the past, it does provide some insight into their social dynamics.

Sizes of structures or numbers of structures at sites also allow us to make tentative inferences about social organization when combined with inferences about room or structure function. In some societies, large rooms denote either large numbers of people living within them or possibly someone of higher social status. If blocks of rooms known to have been occupied at the same time are spaced far apart, it may be that different social groups of the same archaeological culture were present.

Sometimes artifacts themselves tell us something about social relationships. In the American Southwest, for example, although the ceram-

ics made by these people can be attributed to a specific archaeological culture, subtle differences in the use of specific stylistic designs suggest that distinct families were responsible for their creation.

Thus, while the kinds of evidence about social relationships are sparse, we can often combine them to make inferences about social status, social differentiation, numbers of people present, and more. The contributions to this theme will explore the degree to which we have been able to reconstruct the social relationships of our most distant ancestors.

—Mark Aldenderfer

■ Introduction: The Origins of the Human Family

Despite their best efforts, scholars will never know much about the origins of the human family and its transformations through time. The data from archaeological research is simply too coarse to create a satisfying picture of what ancient families were like, especially in the very deep past. Scholars are thus left with two primary approaches to developing something of an understanding of them: analogies with our nearest primate relatives and analogies with modern hunters and gatherers, village agriculturalists, and pastoral peoples. Our primate relatives are the best source of information for understanding the possible forms of social organization of our earliest ancestors, such as the australopithecines. Although these ancestors walked upright and were capable of making simple tools, scholars believe that their cognitive capacities and behavioral repertoires were limited and were likely more like those of our ape relatives. But researchers also believe that some of their social formations may have been somewhat more complex than our nearest relatives. Unfortunately, anthropologists can offer only informed speculations about what these social forms may have been like.

But our primate relatives do offer a baseline of sorts that is quite important to understand because we have replaced many things seen in the primate world with a bewildering variety of family types, kinship systems, and ways of reckoning social relationships of all kinds. For example, chimpanzees have social formations based upon

mother-offspring bonding, dominance hierarchies based upon sex and age, limited pair-bonding between males and females, limited sociality between nonrelated individuals, and very limited sharing of food, especially meat. The dominance hierarchy is by far the most important feature of chimpanzee sociality. Adult male chimps in their prime dominate chimpanzee groups; by physical means and display threats, they jealously guard mating opportunities with females in estrus, expel younger males from the social group, and, because of their status, receive more grooming from lower-ranking members.

In contrast, dominance hierarchies based upon physical abilities are rare in most human societies. Indeed, many mobile hunting and gathering peoples have a profoundly egalitarian ethos that requires the sharing of meat across all family members present and creates a social context within which attempts by individuals to become dominant in decision making and the hoarding of resources are met with resistance. Although family structures are highly variable across these societies, there is recognition of biological paternity and a wide range of recognized and named relationships between siblings and parents, such that brothers, sisters, aunts, and uncles are now part of the social framework. Pair-bonding is widely recognized in human societies, and these bondings and their outcomes are characterized by complex rules that govern the choice of marriage partners, degree of social mobility, and sets of rights and obligations that are owed to people

who are defined as part of a larger, more extended family.

These complex forms of sociality are utterly absent from the social formations of our primate relatives, and it appears that the ability to think symbolically is important in this transformation. Symbolic expression via language, and to a lesser extent speech, creates a context wherein ideas like “uncle” (your father’s brother, themselves terms that now require definition within the symboling system) or “first-cousin marriage” (a rule that directs you to marry your uncle’s daughter or son) now become possible. Indeed, the very idea of “marriage” is something that is unknown in primate societies but is virtually a human universal. The evolution of our symbolizing capacity, then, is closely tied to the evolution of new social forms.

It is also important to recognize that there is no single, universal form of the human family. Because of our ability for symbolic expression, one can imagine, and in some cases create, distinctive family structures. Early in human evolution, the development of what seems to be the core features of the human family—pair-bonding, recognition of biological paternity, and a definition of relatedness—may have been stimulated by ecological factors related to the division of labor, for example. Over time, however, historical circumstances and tradition become more important as defining features of the definition of the family and its constituent parts. As societies move from an egalitarian ethos to ones characterized by social ranking, families become more about status, prestige, and social power even though the bonds of relationship and recognition may persist. Some societies allow men to have multiple wives, while others recognize marriage but see it primarily as an economic transaction. Very few societies allow women to have multiple husbands. In some places families live together in a single habitation, whereas in others men and women live apart, with children living with women until a certain age and then moving into the company of men after initiation rites. These are all families.

The contributions in this topic will explore this variability and provide summaries of current thinking on these topics. But keep in mind that since these are primarily analogies, they are

our best ideas about what the past might have been like and not definitive commentary on what it was necessarily like.

—Mark Aldenderfer

Bibliography

- Boyd, Robert, and Joan Silk. *How Humans Evolved*. 5th ed. New York: Norton, 2009.
- Gough, Kathleen. “The Origin of the Family.” *Journal of Marriage and Family* 33(4) (1971): 760–771.

Primate Families and Their Relevance to Human Evolution

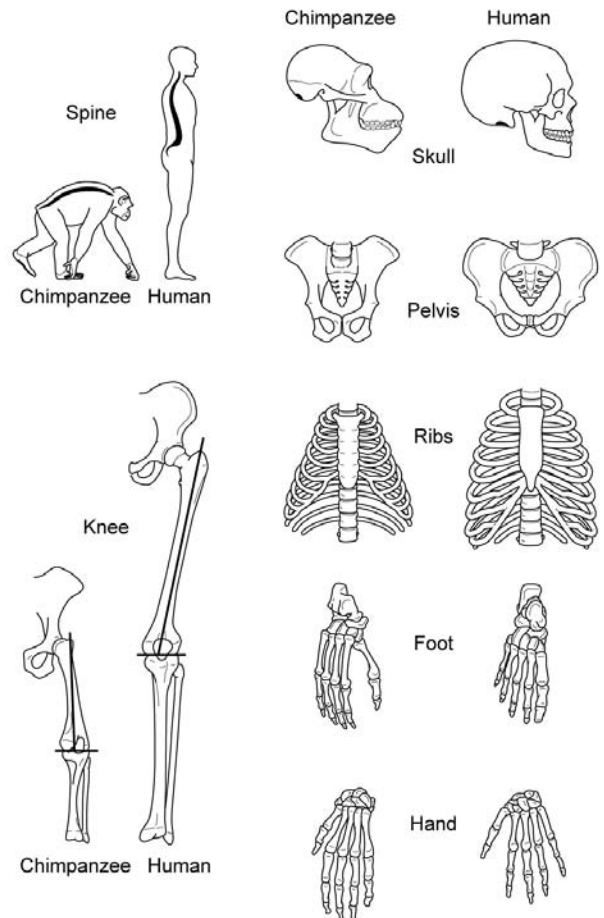
A survey of modern human societies tells us that families can be comprised of various combinations and associations of any number of people, from mothers, fathers, and their offspring to extended family, stepchildren or adopted children, and same-sex parents. The family experience is a varied but important one, and across many cultures the concept is frequently invoked as a powerful metaphor for security and loyalty. Family has also been pervasive in many narratives of human evolution, from the early idea that the nuclear family is a derived human adaptation characterized by male provisioning of the female and the young to the moniker “The First Family” given to a group of adult and juvenile *Australopithecus afarensis* individuals discovered together at Locality 333 at Hadar, Ethiopia. Unfortunately, in exploring the evolutionary meaning of family, we sometimes struggle to separate the cultural from the biological. Family may be defined by cultural norms that shift within and between cultures as well as over time, and it may also be defined by straightforward biological relationships and, in this sense, is easier to pinpoint: a unit of two parents and their offspring as well as other individuals genetically related through the paternal and maternal lineages. In this sense, we all have a family that can be understood along the same lines.

Some scientists interested in evolution ask why, or if, family is critical to the survival of modern humans as a species. In other words, they ask if living and functioning in family units, however they are defined, confers a reproductive advantage, and if so under what circum-

stances they are advantageous and in what conditions this evolved. This is a relevant consideration because humans display unique behavioral and biological characteristics that often function within the context of a family unit. Relative to other mammals, humans have an extremely long childhood with an equally long period of paternal investment. Humans are born altricial (requiring nourishment) and experience an extended maturation during which the child is dependent on its parents and other caregivers while it develops the linguistic and social awareness necessary to survive and compete in a complex social structure. Human females also have a uniquely long postreproductive life called menopause. Although counterintuitive, the cessation of reproduction may actually increase reproductive fitness. It is suggested that menopause evolved to provide the mother with enough time to raise her young prior to death; motherless children would be less likely to survive into adulthood. Additionally, menopause provides time for a woman to increase her reproductive fitness not through the direct care of her own offspring but her children's offspring, thus ensuring that her genetic legacy survives beyond the first generation.

Evidence for how hominin families were organized is not explicitly fossilized, so in order to extrapolate this information anthropologists frequently use primates as models to test theories of evolution against both the paleoanthropological record and modern human behavior. Primates are good candidates for this approach because not only are they our closest living relatives, but they also have a clear sense of their own families; all primates recognize their kin, and when protection or provisioning is required, preference is given to related individuals. In hierarchical primate societies, family membership even determines one's own status.

While cultural definitions of family are inappropriate to apply to nonhuman primates, we can investigate the biological relatedness of individuals and how this relatedness influences the composition of living groups and behavior toward others. These characteristics are determined by each species' reproductive strategy. Strategies range from harems, in which one male controls reproductive access to a large group of



A comparison of skeletal elements of the chimpanzee and Homo sapiens. Humans, as bipedal animals, show real differences in limb proportions and shapes when compared to the chimpanzee, which is only occasionally bipedal. This example provides good insight into the skeletal traits anthropologists examine when seeking to determine when our ancestors became bipedal. (Illustration by Jeff Dixon)

females but does not invest in their offspring (such as gorillas), to monogamy, in which one male and female mate exclusively. Primates are unique among mammals in that many species—perhaps 10–15 percent—are understood to be monogamous. This poses yet another problem in definition. Not only is monogamy a culturally loaded term, but biologically it can relate to two different things. One is a reproductive strategy in which one male and one female mate but the father provides no direct support for the offspring, and the other also describes a social structure characterized by joint paternal investment, parental pair-bonding, and family living units.

The golden standard for primate monogamy models has not been our closest living primate relative, the chimpanzee (which lives in multi-male, multifemale groups where exclusive mating opportunities do not commonly persist), but gibbons. However, recently it has been shown that gibbon pair-bonds are not lifelong but instead last from several months to several years and that within the general social structure there is a degree of flexibility not previously appreciated. It is likely that lifelong reproductive partnerships are not the evolved biological norm for humans either, with accumulated evidence supporting the conclusion that humans practice polygamous mating strategies and that multimale, multifemale groups have been common throughout much of our recent biological history.

However, it is clear that human adults often practice a mating strategy that involves pair-bonding and investment in the young regardless of modern cultural mores regarding monogamy. How can the evolution of this phenomenon be investigated in the hominin fossil record? We know from studies of primates and other mammals that in species where males must compete for access to the mates, there is a high level of dimorphism, or size difference between the sexes, but in species where there is little competition for mates, such as scenarios characterized by pair-bonding, there are lower levels of dimorphism. Therefore, we can use a decrease in hominin sexual dimorphism as a proxy for the evolution of pair-bonding and paternal investment. The initial evidence for such a decrease is found in *Homo erectus*; this taxon is often perceived as representing the first major step toward a reproductive strategy in which pair-bonding, and thus an inferred monogamous social structure, is critical. Recent evidence suggests that *H. erectus* may be more dimorphic than previously appreciated, so the issue of hominin family organization remains debatable.

—Kris Kovarovic and Alexander Bjarnason

Bibliography

- Anton, Susan. "Natural History of *Homo erectus*." *Yearbook of Physical Anthropology* (2003): 126–170.
- Fuentes, Agustin. "Re-evaluating Primate Monogamy." *American Anthropologist* (1998): 890–907.

Salmon, Catherine A., and Todd K. Shackelford, eds. *Family Relationships: An Evolutionary Perspective*. Oxford: Oxford University Press, 2008.

Primate Reproduction and the Origins of Families

The study of primate behavior is of great importance to understanding the evolution of human behavior. One of the richest topics to be explored through primatology is the evolution of group living, or families, in humans. There are many possible reasons that group living evolved among humans, but the primary factor was to increase survival of both individual and offspring. With the exception of the orangutan (*Pongo pygmaeus*), all higher primates live in complex social groups. Chimpanzees (*Pan troglodytes*) and bonobos (*Pan paniscus*), our closest genetic relatives, the core of these groups is comprised of related individuals. Changes in group composition as well as behavior within and between groups tend to be ultimately based upon reproduction and attempts to maximize reproductive opportunities. Primate reproductive strategies are highly varied throughout the order. However, certain trends dominant in higher primates are also parallel to those found in human populations. Human pairings are most frequently patriarchal, consisting of a monogamous pair or one man with multiple wives. Gorilla (*Gorilla gorilla*) groups are frequently comprised of one male with various females. Understanding the similarities as well as the differences between humans and nonhuman primates can reveal possible selective pressures involved in hominid evolution.

On a biological level, females are the limiting factor for reproduction. Males can inseminate females at a much quicker rate than females can reproduce. Also, female investment is much higher because once the offspring has been born, nursing leads to more parental investment from the mother than the father. Thus, females must be much more selective in choosing mates because they invest more at a biological level. Therefore, males must develop more competitive strategies in order to gain mating opportunities with females. This is observable in higher aggression rates between males than females in mating

situations. In one-male multi-female groups, such as gorillas, males will often attempt through violent interactions to keep outsider males from mating with their females. Group living for females in these situations is beneficial because they gain protection from outside males. In multimale multifemale groups, as seen in chimpanzees, females will often bond with certain males in order to gain protection for themselves and their offspring. Females in these groups will often display receptivity for mating through estrous, or labial swelling. These swellings remain quite prominent before and after the peak of the estrous cycle. It is theorized that this creates confusion about paternity, thus keeping threats to offspring low among males who may be unsure of whether or not it is theirs. These are biological adaptations that have occurred in the face of certain pressures. In humans, intersexual and intra-sexual interactions may have evolved due to similar pressures. For example, men tend to be larger than women, possibly because of the need for more visible, direct competition for females with other men.

At a behavioral and ecological level, group living has many benefits for primates. It is easier to monopolize resources and defend against predators in groups. Since related individuals share genes, which they are inherently driven to protect for passage into future generations, the chance of gaining support in conflict or gaining access to food are increased when living in family units. Dispersal occurs in situations when the individual can increase mating opportunities by joining other groups. This is observable in chimpanzee females, who will leave their natal group when displaying estrous swellings in order to gain tolerance from new males. Although in humans various traditions involving the female leaving her family to join another (an example is dowry) may seem to be directly related, it is important to note that these are cultural structures that may or may not have origins in biological and behavioral evolution. However, it has been proposed that patriarchal societies are dominant due to the nature of male-male relationships as selected by evolution. In other words, since males must cooperate in order to maximize survival, female dispersal may have been the result of such selective pressures. Presently there is

still disagreement as to whether predation or increased access to food sources is the primary factor in the evolution of group living. However, they are both highly significant to human and nonhuman primates.

—Kimberly Nguyen

Bibliography

Boyd, Robert, and Joan B. Silk. *How Humans Evolved*. 3rd ed. New York: Norton, 2003.

The Social Organization of the Australopithecines

Between 4.2 million to 1 million years ago, several hominin species lived in a diverse mosaic of habitats in sub-Saharan Africa. Collectively this group of human ancestors is referred to as the australopithecines. They possessed a suite of derived characteristics including smaller canines and the ability to walk bipedally. The australopithecines can be divided into two sister groups, colloquially referred to as gracile and robust australopithecines. The gracile species include *Australopithecus anamensis* (4.2 million–3.9 million years ago), *A. afarensis* (4 million–2.9 million years ago), *A. africanus* (3.3 million–2.3 million years ago), *A. garhi* (approximately 2.5 million years ago), and possibly *A. bahrelghazali* (3.5 million–3.0 million years ago). The robust australopithecines are characterized by a dentition and facial architecture adapted to a specialized diet of tougher foodstuffs and are generally given their own genus name, *Paranthropus*, on account of this distinction. Robust species include *P. aethiopicus* (approximately 2.5 million years ago), *P. robustus* (1.8 million–1.0 million years ago), and *P. boisei* (2.2 million–1.3 million years ago). A final species, *Kenyanthropus platyops* (3.5 million years ago), is distinguished by a very flat face. It is difficult to interpret how *K. platyops* fits into the hominin family tree, but this species bears some similarities to *P. boisei*.

Nonhuman primates, like humans, are social creatures. Humans evolved from a common ancestor, and it is therefore reasonable to ask if the australopithecines adopted similar social structures to those seen in our closest primate relatives. Plio-Pleistocene hominin habitats were typified by various degrees of woodland habitats

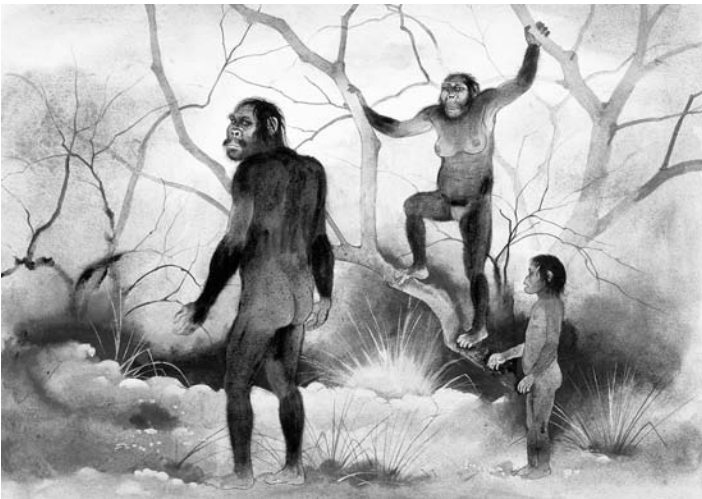


Illustration of a group of African hominids (*Australopithecus afarensis*) living three to four million years ago. (The Natural History Museum, London/The Image Works)

where there was certainly a risk of predation. Group living may have been a selective adaptation against this threat, and the fossil record provides some clues as to the nature of the organization of these social groups. Sexual dimorphism (i.e., sex differences exhibited between males and females of a species) can be used as an indicator of social organization. In particular, body size differences between males and females are greater in primate species, where there are high levels of competition among males for access to mates, and this has implications for other aspects of social behavior. Assessments of male and female *A. afarensis* and *A. africanus* body size indicate that both species showed levels of body size dimorphism that are larger than those seen in our closest living relatives, chimpanzees and bonobos. This implies that these two australopithecine species lived in a social structure where high levels of male-male competition prevailed. Sex identifications in the fossil record of both species indicate that there is less of a bias against males, as one might expect if the australopithecines lived in harems like gorillas. This provides evidence that male-male aggression occurred in the context of a social structure more similar to chimpanzees in which several males of the same group compete for reproductive access to females. In contrast, recent studies of sexual dimorphism and patterns of growth in *P. robustus* males tell us

that this species of robust australopithecine exhibited levels of sexual dimorphism as high as those seen in gorillas and may have adopted a haremlike social organization where one male monopolizes mating access to a number of unrelated females. In this context, maturing males form bachelor bands or travel as solitary males until each individual is large enough to take over another male's harem. A sex ratio of nearly 4:1 male to female *P. robustus* specimens found in the fossil record indicates that this scenario is likely due to increased predation of these solitary males. Other evidence for australopithecine group living comes from male and female body size ranges, which are similar to those observed in bonobos (*Pan paniscus*), who live in groups of around 30 individuals. However, as bipedal mammals, australopithecines may have been able to increase their home range size to encompass larger areas where resources could be exploited to support much larger groups.

Alternative forms of evidence confound our investigations. In contrast to chimpanzees, bonobos, and gorillas, the australopithecines all have relatively small canines. Large canines in primates are used as weapons and in threat displays, and canine size dimorphism occurs in species whose males exhibit a high frequency or intensity of aggression. Canine size in the hominin lineage gradually decreased during the early stages of evolution, as did levels of canine size dimorphism, although body size differences remained high. From this we can infer that social organization in australopithecines may not be analogous to that observed in primates living today. Problematically, in order to assess levels of sexual dimorphism, anthropologists rely on their ability to identify the different sexes in fossil taxa, but given the fragmentary nature of the fossil record, sex determination can be difficult. Additionally, identifying hominin fossils to the correct species is tricky; some researchers claim that size differences observed in species such as *A. afarensis* may not relate to sexual dimorphism but could be the result of two species of different body sizes being grouped into one taxon. Further discoveries of hominin remains retaining sex and species-specific characteristics will help to clarify the picture.

—Kris Kovarovic and Katharine Balolia

Bibliography

- Kappeler, Peter M., and Carel P. van Schaik. "Evolution of Primate Social Systems." *International Journal of Primatology* 23 (2001): 707–740.
- Lee, Sang-Hee. "Patterns of Size Sexual Dimorphism in *Australopithecus afarensis*: Another Look." *Journal of Human Comparative Biology* 56 (2005): 219–232.
- Lockwood, Charles A., et al. "Extended Male Growth in a Fossil Hominin Species." *Science* 314 (2007): 1443–1446.
- Plavcan, J. Michael. "Sexual Dimorphism in Primate Evolution." *Yearbook of Physical Anthropology* 44 (2001): 25–53.

Early Human Social Organization—*Homo ergaster* and *H. erectus*

Around 1.8 million years ago, at the very beginning of the Pleistocene epoch, hominin evolution makes a major shift. By this point, natural selection has shaped the hominin body to be as efficient as it has ever been and will ever become. This includes growing longer legs and an overall taller stature, which increases stride length for traversing greater distances. In fact, *H. erectus* and the similar species *H. ergaster* are the first hominins to disperse out of Africa, and when they do they roam into various remote tropical and temperate regions of the Old World. On top of that, the brain, which is the main player in social behavior, is large in these creatures, and it becomes even larger throughout the 1.5 million years of their evolution. Furthermore, these species show a major dietary shift toward a greater reliance on animal meat and marrow. With a large brain, a large body, a need to obtain animal resources, and an expanded range, it was only natural that social organization in *H. ergaster* and *H. erectus* evolved as well.

Although we cannot observe *H. ergaster* and *H. erectus* behavior, the fossils that they left behind offer many clues. There are well-known relationships between anatomy and behavior in living organisms. Sexual dimorphism—the difference in body size between males and females—is an indicator of a species' reproductive behavior. Males are generally larger than females in polygynous species, where males must compete vigorously to control a group of mating females. On the other hand, males and females

tend to be of similar size in pair-bonding species, where male competition is not as fierce.

The prevailing hypothesis has been that *H. erectus* showed humanlike levels of sexual dimorphism. If this is true, then we might look to monomorphic ape species such as gibbons and siamangs as a model for *H. erectus*'s behavior. Gibbons and siamangs are pair-bonding species in which males help in caring for offspring. However, recent fossil evidence places the monomorphic image of *H. ergaster* and *H. erectus* in doubt. At Dmanisi, Georgia, and Ileret, Kenya, extremely small hominin individuals have been discovered that appear to be members of the *H. ergaster* and *H. erectus* species. If indeed they are, this could mean that *H. ergaster* and *H. erectus* were much more sexually dimorphic than previously thought. If indeed *H. ergaster* and *H. erectus* were highly dimorphic, then similarly dimorphic orangutans and gorillas offer a better model. In these polygynous groups, males compete for exclusive access to multiple female partners at a time, and as a consequence they are far less involved in the lives of their offspring.

Regardless of the outcome of the current debate about sexual dimorphism and hence reproductive strategies in *H. ergaster* and *H. erectus*, females probably did most of the parenting and foraged for both animal and plant food, while males performed fewer parenting activities and foraged farther afield for relatively more animal resources.

As brains evolved to be bigger, however, infants became increasingly vulnerable. The additional brain growth that humans experience occurs after the infant is born, so the more brain growth that had to be accomplished as brains evolved to be bigger, the more immature neonates became as well. With these increased demands on the mother, male input had to increase, but it is still unclear if this was happening as early as *H. ergaster* and *H. erectus*.

Fossil evidence also offers clues about *H. ergaster* and *H. erectus* foraging strategies that affect sociality. When the preserved bones of hominin prey show stone tool marks overtop carnivore tooth marks, it is an indication that the hominins were not the first to have access to the carcass and probably scavenged for their meal. However, if the cut marks are overlain by tooth

marks, this indicates that the hominins scavenged or killed the prey themselves, and then scavengers worked on the leftovers. Furthermore, if the choice parts of the carcass are the ones marked with stone tools, then that also indicates that the hominins had first access. Without fangs, claws, or a carnivorous ancestry, *H. ergaster* and *H. erectus* had to perfect tool use and cooperation in order to outwit competing scavengers and hunters as they became successful predators.

Although cooperation with group members increased as hunting increased, group size may have dissipated compared to vegetarian relatives, like the great apes, since the closer a species gets to the top of the food chain, the smaller its population density can be. Since *H. ergaster* and *H. erectus* ate more meat than any preceding hominins, carnivore models, like cooperative hyenas and hunting dogs, are often evoked for their social and foraging behaviors and for their patterns of land use.

Although there are a couple of archaeological sites in East and South Africa with purported evidence for campfires (like at Chesowanja, Kenya), the best earliest evidence for controlled fire is from Gesher Benot Ya'aqov, Israel, dated to about 780,000 years ago. Thus, according to the current evidence, it is not accurate to envision *H. ergaster* or *H. erectus*, during the first one million years of their evolution, sitting around a hearth, cooking food, and enjoying one another's company. It is possible that these hominins looked like and behaved like bipedal predatory apes or stone-tool-wielding African hunting dogs more than they resembled humans for a vast stretch of their evolution.

—Holly M. Dunsworth

Bibliography

- Alpers, N. "Continual Fire-making by Hominids at Gesher Benot Ya'aqov, Israel." *Quaternary Science Review* 27 (2008): 1733–1739.
- Antón, Susan C., and Carl C. Swisher. "Early Dispersals of *Homo* from Africa." *Annual Reviews in Anthropology* 33 (2004): 271–296.
- McHenry, Henry M. "Behavioral Ecological Implications of Early Hominid Body Size." *Journal of Human Evolution* 27 (1994): 77–87.
- Shipman Pat, and Alan Walker. "The Costs of Becoming a Predator." *Journal of Human Evolution* 18 (1989): 373–392.

Walker, Alan, and Richard E. Leakey. *The Nariokotome Homo erectus skeleton*. Cambridge: Harvard University Press, 1993.

What Do We Know of Neanderthal Social Life?

Neanderthals are a group of humans who have been found in a number of localities in Europe and the Middle East. The farthest east they appeared was once thought to be Teshik Tash in Uzbekistan, but recent genetic research suggests that they also lived at Okladnikov Cave in Siberia. In Europe, Neanderthal sites range in age from around 200,000 to around 26,000 years ago.

Neanderthals represent the descendants of the indigenous or earliest humans in Europe. One can trace their ancestry back to some of the earliest people in Europe and see the gradual development of the short stocky body, protruding face, and other features characteristic of these people. On the other hand, there is little evidence of local evolution of Neanderthals in the Middle East; most likely, they arrived from Europe during a particularly cold stage of the last glacial. While their unique anatomical features had developed as adaptations to cold, dry glacial conditions in Europe, it appears that physiology can only get one so far when the climate changes for the worse.

Neanderthals are the ultimate other, the closest group to which we, as modern humans, compare ourselves directly. Some researchers see them as just a different kind of human; others see them as a separate species. They are seen as being just as capable of surviving as we are and, on the other hand, as being doomed to extinction. Each year brings growing amounts of data about them: new fossils and archaeological sites (belonging to the Middle Paleolithic) as well as ancient DNA samples. Both mitochondrial and nuclear DNA sequences are available for a number of Neanderthals. They show little individual variation in the bits of DNA that reflect history despite their presence over such a large geographic area. But this DNA also supports the idea that they had a last common ancestor with modern humans (meaning "us") no more recently than around 500,000 years ago.

While archaeologists and paleoanthropologists can tell us a lot about Neanderthal technol-

ogy, adaptation, and diet, what can they say about their social organization or social life? If one draws an analogy with modern hunter-gatherers, we would argue that they lived in small-band societies made up of several related families. About 25 to 50 people made up the group. They would be highly mobile, as they were living in glacial Europe. If the genetic data is right in proposing their within-group homogeneity, they would have had to have maintained social interaction over large territories. Possibly, like many hunter-gatherer groups, they practiced a fission-fusion kind of social organization, getting together seasonally for ceremonies and exchanging goods and marriage partners.

What is clear from stable isotope analysis and archaeology is that European Neanderthals were top predators, eating a lot of meat and possibly little else. They lived in cold, glacial Europe and were sort of supernorthern people. From age estimates of skeletons, it appears that they lived a lot longer than earlier humans but had a hard life. Many Neanderthal skeletons show evidence of extreme trauma. But on the other hand, they may have invented intentional burials and so had some notion of the afterlife. In both respects, they become more human, more like us.

Archaeologists would probably conclude that Neanderthals had control over language. They certainly communicated how to make complicated tools, using methods like the Levallois technique. Like archaic humans in Africa, the Neanderthals made composite tools, hafting stone points onto shafts of organic material (wood, bone, etc.). Geneticists have recently demonstrated that the Neanderthals have the same FOXP2 genetic sequence as modern humans have. Certain mutations in FOXP2 today are associated with specific language impairment, an inherited disease. The evolution of FOXP2 shows that it took on a new role in recent humans and is related to speech in some as yet unknown way. If Neanderthals went through the same evolutionary history as modern humans, it was not lack of communication skills that led to their extinction. This is supported by the fact that at least one of them, the Kebara Neanderthal from Israel, had the same kind of hyoid bone in the throat as modern humans have.

➤ DID NEANDERTHALS AND *HOMO SAPIENS* INTERBREED?

Although Neanderthals and modern humans—*Homo sapiens*—co-existed first in the Middle East and later in Europe for many thousands of years, scientists had discovered no unambiguous evidence that the two related species interbred. For much of the twentieth century, most archeologists and paleoanthropologists believed that modern humans replaced Neanderthals either by violence or by being better able to adapt to changing environments. Although skeletal evidence from a few Neanderthals recovered from sites in the Middle East suggested a blending of modern human and Neanderthal traits, this was not seen as conclusive data for interbreeding by most scholars.

The decoding of the Neanderthal genome through the sophisticated analysis of the DNA obtained from three bones from the Vindija site in modern Croatia, dated between 38,000 and 44,000 years ago, has provided direct evidence for the likelihood that at least some Neanderthals interbred with modern humans. The analysis suggests Neanderthals and modern non-African peoples share between 1 and 4% of their genes. Although this is not evidence for widespread interbreeding, the amount of sharing between the two species surprised the researchers.

These new findings present a challenge to a narrow “out of Africa” hypothesis that postulates that all modern humans can trace their ancestry to a small group of people from Africa that replaced all other populations during their expansion from Africa. Although the basic outlines of the out-of-Africa hypothesis remain valid in that the vast majority of modern genetic variability can be traced to these populations, the findings from Vindija suggest that population interactions in deep antiquity were far more complex than has been previously believed.

—Mark Aldenderfer

Bibliography

Green, R., et al. “A Draft Sequence of the Neanderthal Genome.” *Science* 328 (2010): 710-722.

What does this mean in terms of social organization and social interaction? Neanderthals are often seen as less organized than modern humans; they appear to lack the complex artifacts such as jewelry, art, and figurines that are so

► COMPASSION AMONG THE NEANDERTHALS—THE BURIALS AT SHANIDAR CAVE

The Neanderthal burials at Shanidar Cave in the Zagros Mountains of northeastern Iraq became famous after 1957–1961 when the first of them was excavated and popularized by Ralph Solecki. The archaeologist described the burial as being “touched by spirits.” The burial was likely of a disabled shaman who was maintained by his community. It was so impressive that it became the subject of Jean Auel’s popular novel *Clan of the Cave Bear*. Since then, nine Neanderthal burials have been recovered from the cave dating between 32,000 and 49,000 years ago. Burials 1 and 4 offer important insights into Neanderthal lifeways.

Shanidar 1, or Nandy, is the burial of an individual 45–50 years old, which was very elderly indeed for Neanderthals. His life was complicated not only apparently by old age but also by several serious injuries that made it impossible for him to take part in procurement and household activities of his group. His right arm was atrophied and nearly useless (withered and shortened) and had been fractured in several places and healed. He also had a broken and unevenly healed leg, and this injury caused deformation of the lower part of his leg and foot that was probably accompanied with some paralysis down his right side. It made walking a painful process and running impossible. He also had a serious injury to the left side of his face, and it is likely due to this that he was totally or partially blind in his left eye.

In spite of this severe and painful condition, Nandy was maintained by his community and

probably was regarded as marked by spirits since he had managed to survive through so many accidents in his life. Ralph Solecki viewed him as a shaman and assumed that he was a very important person for the community.

Shanidar 4, or the flower burial, represents one of the most striking examples known of a Neanderthal funeral rite. It is the burial of an adult male of 35–40 years old lying on his left side in a partially foetal position. Pollen data taken from the soil that covered the burial indicates the presence there of yarrow, cornflower, bachelor’s button, St. Barnaby’s thistle, ragwort or groundsel, grape hyacinth, joint pine or woody horsetail, and hollyhock, all of which are absent in samples taken in other parts of the cave. This finding implies that these flowers, most of which are widely explored in medical practice as diuretics, stimulants, astringents, and anti-inflammatories, were specially brought to the burial place, probably in connection with the shamanic medical practices of the buried person. It should be noted, however, that some researches tend to interpret the presence of the flowers as the result of natural agencies, such as wind or water transport of the pollens.

—Olena V. Smyntyna

Bibliography

- Solecki, Ralph. *Shanidar, the Humanity of Neanderthal Man*. London: Allen Lane, 1972.
Trinkaus, Erik. *The Shanidar Neanderthals*. New York: Academic Press, 1983.

abundant in Early Upper Paleolithic modern human sites. All of these are involved in information exchange, the transmission of knowledge from person to person. (But do not forget that Middle Paleolithic Africans did not have much of this either.)

So when it comes down to the facts, what was their relation to us? Were they a separate species, *Homo neanderthalensis*? Or were they just a polar version of us, at most a separate subspecies, *Homo sapiens neanderthalensis*? It is most likely that Neanderthals and modern humans were cousins rather than members of the

same species. But there is growing evidence of their social interaction with modern humans in Europe at sites belonging to the end of the Middle Paleolithic. Referred to as Chatelperronian in France and Spain, they are seen as transitional to the Early Upper Paleolithic of the first modern *Homo sapiens*. Chatelperronian sites, made by Neanderthals, contain the first evidence of bone and ivory tools and jewelry. If Neanderthals were not mating with early moderns, they were certainly interacting with them culturally. Were they becoming acculturated to the new Aurignacian world? If so, it only worked

for a few thousand years. By the time the ice came back at the height of the last glacial maximum, Neanderthals had disappeared, and only modern people were left.

—Pamela R. Willoughby

Bibliography

Finlayson, Clive. *The Humans Who Went Extinct: Why Neanderthals Died Out and We Survived*. Oxford: Oxford University Press, 2009.

Krause, J., et al. "Neanderthals in Central Asia and Siberia." *Nature* 449(7164) (2007): 902–904.

■ Introduction: The Social Organization of Modern Mobile Humans

Although there is considerable variability in the social formations of mobile hunters and gatherers, there are also significant regularities in these societies such that ethnographic analogies can be a useful way to hypothesize what social groups may have existed in the past.

The hunting and gathering lifeway is predicated upon the availability, abundance, and predictability of the wild natural resources that form the basis of the diet. Thus, many hunting and gathering groups who live in more marginal environments where resources or water are limited may move frequently over the course of a year. Groups living in more abundant environments may move less frequently. Thus, the reality of mobility strongly conditions, but does not determine, the nature of social formations within hunting and gathering peoples.

Although individual families are the smallest social formation, groups of families are loosely joined through kinship (either by descent or marriage) to define a band of hunting and gathering peoples. Group size varies considerably and is based upon the adequacy of resources present at any location, but in general, bands range in size from 30 to 50 individuals. Group structure is highly fluid, and individuals, both male and female, may leave one band and move to the location of another where they have kin. Although maximum band size is usually constrained by resource abundance, it is important to recognize that social factors, such as interpersonal tensions, desire to participate in a network of sharing, conflicts over access to certain resources, disputes over sexual infidelity, and other such problems, may well affect the number of people present at any location.

Depending on the seasonal availability of resources, bands may aggregate in favored places, and it is in these seasonal aggregations that marriage partners are sought, trade and exchange are practiced, and important multiband ceremonies are conducted. In one sense, this seasonal aggregation defines the maximal size of the bands that consider themselves to be part of the same social group, which for many mobile foragers ranges in size from 400 to 500 individuals.

Family organization in mobile hunting and gathering societies tends to follow two structural principles: bilateral and patrilineal reckoning of descent. The former recognizes kinship relationships through both the mother's and father's lines. This is a highly flexible form of kinship and one that responds more effectively to movement of individuals between different bands. This is especially important in regions of the world where mobility is relatively frequent due to resource shortages. In contrast, patrilineal descent is reckoned only through the father's line.

Although coresidence of the members of a family within a band is the norm, given that residences are moved often, there is considerable flexibility in the range and social relationships of people present at any location. In some hunting and gathering societies the entire coresidential group moves together, literally picking up the residence and moving it to a new location. Men and women may hunt and forage around this camp, returning to it at dark to share the day's finds. In other groups, however, a base camp, a more permanent residence, may be established. Group composition at the base camp may be more fluid. For instance, males may leave the base camp to go on extended hunting expeditions, and women, children, and the elderly may stay behind. Males

return to the camp after success, and the entire camp may move again to a new location. Women, especially those with younger children, tend not to go on these extended forays to obtain resources and instead stay relatively near the base camp collecting resources. Children and the elderly may help with this. Childcare is generally undertaken by women or older siblings.

In these societies, the division of labor between men and women is clearly tied to mobility. In general, men hunt larger game, whereas women are responsible for gathering plant foods and obtaining small game when encountered. In practice men may gather as well, and there are some instances in which women may participate in hunting larger animals. Women are also responsible for preparing gathered foods and sharing them with the family members present. In contrast, men are responsible for sharing meat with all of the people present at a camp if they are successful in killing a large animal. The failure to share is seen as a major breach of social ethics.

Most mobile hunting and gathering societies are characterized by an egalitarian social ethos. That is, there are no permanent positions of leadership within them, and consequently all leadership is situational and transitory. Thus, a great hunter may have real influence over decisions regarding where and when to hunt but may have limited influence in, for example, a dispute over a marriage or a case of spousal abuse. A healer may have high status because of her ability to cure the sick or interact with the spirit world, but this status does not translate into a more permanent leadership position. Decisions are made by consensus and through discussion, and while some individuals may have more influence than others, there is no obligation on the part of any individual to adhere to the decision of the group.

Hoarding and aggrandizing behaviors are seen as unacceptable activities. Although private property is understood in most of these groups, the concept extends only to personal possessions. Although hoarding of food is difficult to achieve under conditions of mobility, any attempt to hoard is met with ridicule and social leveling by other members of the group. As in any society, there are aggressive individuals who are demanding and sometimes violent. If ridi-

cule fails to prevent such antisocial behavior, people may leave the band and live with other groups to avoid conflict. But under extreme provocation, such aggressive individuals may be murdered through collective action of the band. This kind of homicide is not uncommon in hunting and gathering societies.

Mobility characterized the evolution of our species, and therefore it is likely that many of the social arrangements seen in modern foraging peoples were common in the past as well. These peoples serve as powerful sources of analogy for the interpretation of the archaeological record.

—Mark Aldenderfer

Bibliography

- Kelly, Robert J. *The Foraging Spectrum: Diversity in Hunter-Gatherer Lifeways*. Washington, DC: Smithsonian Institution Press, 1995.
- Lee, Richard B. *The !Kung San: Men, Women, and Work in a Foraging Society*. Cambridge: Cambridge University Press, 1979.
- Lee, Richard B., and Richard Daly. *The Cambridge Encyclopedia of Hunters and Gatherers*. Cambridge: Cambridge University Press, 2004.

Variation in Social Organization, 50,000–5000 BCE

The period from 50,000 to 5000 BCE sees a vast change in human adaptation and social organization. At the beginning of this period, everyone made their living by foraging: hunting or gathering available foods. Only certain continents were occupied: Africa, Asia, Europe. The first people may have entered Australia around 60,000 years ago but will not enter the Americas until significantly later. (The exact date for the first occupation of the Americas remains subject to dispute. What we know is that people were here at least by the end of the last glacial period.)

There was also more than one kind of human around: Neanderthals in Europe and the Middle East, anatomically modern *Homo sapiens* in Africa and parts of the Middle East, archaic *Homo sapiens* (also known as *Homo heidelbergensis*) in East and Southeast Asia. Soon afterward, according to genetic, fossil, and archaeological data, modern humans begin to

disperse worldwide from an East African center and probably replaced all earlier kinds of people. At the other end of the time scale, things look quite different. By 5000 BCE, the domestication of plants and animals was well established in different parts of the world. People are now relying on the production of various kinds of foods. There are many ways of becoming tied in with domesticates. Pastoralists rely on domestic animals and tend to be quite mobile, moving seasonally from pasture to pasture. Farmers, on the other hand, become tied to their land and settle year-round in the same place. In some places such as the Middle East, the first literate societies have developed by this time, leaving us a written record of their history and concerns.

Clearly a fundamental change has happened by 5000 BCE. It must have involved a social transformation as well as an economic one. But how does one measure the varieties of social organization in the past without access to written records? Anthropologists define social organization as the way people reckon relationships between individuals within a society. Who is a member of the same family, the same clan, and/or the same village? Members of most societies worldwide as well as anthropologists distinguish between affines, relatives by marriage, and consanguines, relatives by blood. But who falls into these categories depends on social norms and practices rather than just biology.

By 50,000 years ago, modern humans have been present in Africa for at least 150,000 years; Neanderthals have been living in Europe for the same length of time. Early modern humans, or *Homo sapiens*, disperse out of Africa by 50,000 years ago and colonize Europe, Asia, and Australia soon afterward. In Europe and Asia, they come into contact with other kinds of people; our genetic record suggests that there was no significant interbreeding between natives and newcomers.

What kind of social organization would they have had? We are not sure what group size would have been. By analogy with historic and modern foragers, members of band societies, there may be 25 to 50 people in a single group. Perhaps they practiced seasonal fission-fusion; larger groups could get together when resources were most available. At these times of years, they could

have exchanged information and marriage partners. If territories were established, marrying into another group might give one access to their land and resources; this would be a critical advantage in times of stress.

Early modern hunter-gatherers would have probably exhibited a division of labor by age and sex. People would own their own personal property but little else. We imagine hunter-gatherers as mobile, but there are examples of ones who are more or less sedentary. (Usually this is in regions with rich natural resources, such as on the coastlines.) If they were highly mobile, they would have significant spacing between individual births. Mobile women can nurse only one child at a time and thus might have had a child every three years.

How did they make a living? A useful way to look at this is Lewis Binford's idea of the range of hunter-gatherer lifeways from foragers (people who move seasonally from place to place) to collectors (people who settle more or less permanently and who move resources to people).

Contrast this with the situation around 5000 BCE. Now there are farmers with domesticated animals and/or plants in large parts of the Old World. The plants and animals they use vary from place to place, but the basic social pattern could be similar. Early farmers were possibly still living in small groups, but they most likely were sedentary, living in the same place year-round and tending to fields and animals. If one relied on domestic herd animals, like modern pastoralists, they could have been more mobile. But this is not always the case. In the Fertile Crescent of the Middle East, people were settled permanently as hunter-gatherers by 18,000 years ago and seem to be experimenting with wild cereals (the Natufians). Yet during the Archaic period in the Tehuacan Valley of highland Mesoamerica, people were mobile for thousands of years after plants were domesticated, so there is more than one way to become a successful farmer.

Anthropologists have argued that increased sedentism led to reduced birth spacing between children and therefore to increased population. Children also were useful; they played an increasing role in looking after animals or fields. If population increased, there would have to be

changes in the economy to support them, and social networks might have grown larger and larger. By 5000 BCE in the Middle East the first cities have developed, ushering in a way of life that most of us participate in today. Without agriculture, this would never have happened.

—Pamela R. Willoughby

Bibliography

- Binford, L. "Willow Smoke and Dog's Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation." *American Antiquity* 45(1) (1980): 4–20.
- Kelly, R. *The Foraging Spectrum: Diversity in Hunter-Gatherer Lifeways*. Washington, D.C.: Smithsonian Institution Press, 1995.

■ Introduction: Social Life and the Family in Early Village Communities, 15,000–5000 BCE

For more than one million years, roughly until 15,000 BCE, humans lived a mobile existence. Families moved in concert with the seasonal variability and lived in temporary bases occupied for varying duration. Some groups, especially those living in arid environments, moved relatively frequently, while those in more abundant places moved less frequently. Individual families were responsible for their own subsistence needs, but sharing of meat was common between families. Except in harsh, very cold environments, storage of food was uncommon, and when food was stored it was for family consumption in the winter months and was not used for other purposes. Family structure was fluid, and individuals could and did move to places in which they had kin.

Sedentary life utterly transformed human society. Being sedentary means living at a single location for most, if not all, of the entire year. More permanent places on the landscape of this kind are called villages. Villages are composed of a cluster of residences and their associated structures, and they vary considerably in size. However, most early villages in the prehistoric world probably had no more than 500 permanent residents, and most were far smaller. Over time, and especially in very favorable environments, as societies became more dependent upon agricultural production and more capable at it, some villages grew to be very large and had many thousands of residents.

Village life is generally based upon some form of subsistence agriculture, although there

are a number of early villages, especially in the ancient Near East, that had subsistence systems focused upon extraordinarily dense stands of wild plants, like the ancestors of domesticated wheat and barley or other plant foods. Because villages are permanent, the people who live in them must store food for the winter months or the dry season when agricultural activities are not possible. Furthermore, they must store some of the seeds as well for the next year's crop. In most societies dependent upon agriculture, most adults and older children are involved in subsistence-related tasks at different times of the year.

Villages are composed of households, which are the primary economic unit of the village. In most villages, the household is economically self-sufficient, growing its own food, making its own clothing and tools, and, when possible, generating sufficient surplus for trade or exchange with other households for items that they are unable or unwilling to produce. Households generally have a division of labor based primarily upon gender. Women performed domestic tasks, and men performed tasks outside of the household. Household members cooperated in major agricultural tasks like planting, weeding, harvesting, and preparing grain for storage. However, there are instances where there is communal sharing of resources. Some of the earliest villages in the Near East, for example, had communal storage areas, indicating that while households obtained the resources, they were shared among all village members.

The family is the core of the household. Ethnography shows that family structure within villages is highly variable. Both nuclear families, composed of a married couple and their children, and extended families, composed of a nuclear family, their parents, or other relations, may be found in small and large villages. Families are organized into lineages, which are groups of related individuals who can trace common descent according to some principle. Common forms of descent include patrilineal, where individuals trace relationships through their father; matrilineal descent, in which it is reckoned through the mother's line; and bilateral kinship, where it is traced through both. In many villages, marriage partners are to be found from other lineages. The smallest villages are usually composed of a single lineage, but as they grow larger they contain multiple descent groups.

Politics in a village can be complicated. Within the lineage, leadership is exercised by elder adults, either male or female, depending on the descent principle. Large lineages with many families are often dominant within a village, but they must act by consensus with the other lineages present.

—Mark Aldenderfer

Bibliography

- Bellwood, Peter. *First Farmers: The Origins of Agricultural Societies*. New York: Wiley-Blackwell, 2004.
- Robb, J. *The Early Mediterranean Village*. Cambridge: Cambridge University Press, 2007.

Variation in Early Village Communities in the Near East

There is very significant variability over time and across space in the social and political organization of villages in the ancient Near East. In part, this is related to changing subsistence strategies over time. At 20,000 BCE, all peoples living in the region were hunters and gatherers; at 6000 BCE, almost all people lived in villages and towns and were dependent upon agriculture for their subsistence. Some cultures in the region were based on pastoral nomadism and thus did not live in permanent villages.

➤ AIN GHAZAL, A SMALL VILLAGE IN JORDAN

Ain Ghazal, a small village northeast of present-day Amman, Jordan, was inhabited between 7300 and 5000 BCE. Approximately 30 acres in size, the location was significantly larger than many villages in the Neolithic period of the region. Over 3,000 people lived there, and their lifestyle was similar to other places of early agricultural settlements on the eastern banks of the Jordan River. Archaeologists found houses, graves, tools, bones, and roasted grains. In some areas, remnants of sacred or ritual buildings were discovered. One small circular structure had a white floor and a large fireplace, possibly an altar. In another part of the settlement, a two-room building was cut off by a separation wall and furnished with an altar and a fireplace. Around 6500 BCE the population suddenly decreased, most likely due to drastic changes in the environment.

Among the most important findings from Ain Ghazal are 30 anthropomorphic sculptures also from the early seventh century BC. Considered among the oldest of monumental statues, they included smaller busts and life-sized statues. The sculptures were found in two deposits or pits less than 9.8 feet (3 meters) below the ground surface. One set included statues with detailed bodies but rather plain faces, while the other set has characteristic features of the faces but bulky bodies.

The Neolithic artists built individual parts of their sculptures around a reed skeleton and assembled them. Then they used a bright, almost white, mixture of limestone and clay to shape the statues and marked the eyes with black bitumen and cowrie shells. The reed skeleton extended through the soles of the statue, indicating that they could be attached to a pedestal. Some statues show special attention given to the decoration of their faces. Elaborately polished faces, large and wide eyes, a fine nose, and a small mouth without accentuation of the lips add to the uniqueness of this facial type.

—Sebastian Maisel

Bibliography

- Hadidi, Adnan, ed. *Studies in the History and Archaeology of Jordan*. London: Taylor and Francis, 1985.
- Pollock, Susan, and Reinhard Bernbeck, eds. *Archaeologies of the Middle East: Critical Perspectives*. Malden, MA: Wiley-Blackwell, 2005.

➤ JERICHO—THE WORLD'S FIRST LARGE VILLAGE

The ancient city of Jericho, located in the West Bank of the Palestinian Authority, is 853 feet (260 meters) below sea level and close to the Jordan River where its valley broadens between the Moab and Judean mountains. Jericho is considered to be the oldest continuously occupied settlement and was originally the site of a temporary Natufian camp (a hunting-gathering society) close to the Ain es-Sultan spring circa 11,000 years ago. The camp, with access to a reliable water supply and fertile land, developed into a permanent settlement comprising several low mounds (tells) as agriculture was initiated during the early Neolithic period and expanded to a comparatively large area of circa 9.8 acres (4 hectares). The city was protected by a ditch and robust stone wall 9.8 feet (3 meters) thick with a tall stone tower. It contained mud-brick huts shaped like beehives. Excavations have revealed that domesticated crops were being grown (e.g., emmer wheat, barley, and legumes), while the remains of wild animals, such as gazelle, wild cattle, and boar, reflect the importance of hunting. By circa 9,000 years ago rectangular houses were being constructed, the range of crops had increased, and domesticated animals (e.g., sheep and goats) were being consumed. The burial of human remains in the walls was a common practice.

—A. M. Mannion



Archaeologists excavating Jericho clear the top of a tower believed to date back to 7000 BCE. (Bettmann/Corbis)

It is important to stress that there is no simple trajectory toward larger and more complex villages throughout the Near East over this period. Indeed, the subsistence systems of some of the largest villages seen in the region before the development of large cities and towns after 4000 BCE were not based upon domesticated plants at all. Technically, these peoples are considered sedentary hunters and gatherers. In some parts of the Near East, these large villages were followed by the creation of a large number of smaller village sites. Although some archaeologists have argued that environmental collapse was responsible for the disappearance of these large villages, others have focused their attention on changes in subsistence patterns—full reliance upon plant and animal domesticates—that permitted village peoples to disperse into new ecological niches favorable to farming. It is thus best to think of the

ancient Near East as a mosaic of variability in village size, organization, and subsistence practice.

The earliest village sites in the ancient Near East are found in the Early Epipaleolithic period, which dates from 20,000 to 12,000 BCE. At this time, the inhabitants of the region were still hunters and gatherers who relied upon the abundance and availability of wild foods in the environment. Although most of these peoples were still mobile, one site in the Levant (in modern Israel), Ohalo II, reflects early sedentary life and the formation of a small village composed of a small number of domestic residences. The group that inhabited this site probably numbered no more than 50 people, but the site is distinguished by its permanence on the landscape. Although there are likely to have been small villages of this size elsewhere in the region, Ohalo II is the only one discovered to date.

In the following Late Epipaleolithic (12,000–9600 BCE), larger villages begin to appear in the region, especially in the Levant. The Natufian is the name of the archaeological culture here. Although there was considerable variability in the kinds of settlements present, what is important is the emergence of large permanent villages, such as Eynan, that may have been composed of 200–300 people. At Eynan, for example, the houses are relatively small circular structures that showed little variability. Subsistence in the Natufian culture reflects reliance upon stored plant foods, hunted animals, aquatic resources like fish and birds, and other seasonal plants. Although there is variability in the size of some of the structures at Eynan, there are no obvious ritual or large communal structures present.

The Neolithic in the Near East is divided into a number of periods, each of which shows interesting variability in village structure and organization. The so-called Aceramic Neolithic (so-named because of the absence of pottery) dates from 9600–6900 BCE and is divided into two periods: 9600–8800 BCE and 8800–6900 BCE. In the earliest of these periods, domesticated plants and animals have yet to dominate the diet. People were harvesting wild plants such as the abundant ancestors of wild wheat and in some cases cultivating these plants. However, their interaction with them at this time was not sufficient to change the structure and genetics of the plant into the domesticated variants we know today. But whatever the diet, villages, some of them relatively large, began to appear across the region. Although some villages continued to have circular buildings that were clustered together, other villages began to be based upon an architectural canon of rectangular rooms that adjoined one another to form large room blocks. At some villages, new structures that are clearly not residential are found, and these have been interpreted as communal rooms where religious rituals or other community-level activities took place. At many villages of this period, food storage, which is essential for survival, was organized at the community, not household, level. This suggests to some anthropologists that the inhabitants of these villages emphasized the importance of community over the individual household.

➤ ÇATALHÖYÜK—SOMETHING DIFFERENT IN SIZE AND COMPLEXITY

Çatalhöyük is one of the largest village sites of the Neolithic Near East and was occupied during approximately 7500–5700 BCE. First discovered and then excavated by Sir James Mellaart, the site is more than 32 acres (13 hectares) in size. The site is exceptional because of its size as well as the preservation of extraordinary art found painted on the walls of many of the houses. Estimates of population size range from 5,000 to 8,000 people. Although the large majority of rooms excavated to date are residential, or domestic, a number of rooms interpreted as shrines that may have served a communal purpose have also been discovered. Shrines are characterized by the display of decorated skulls of bulls that are prominently displayed on benches or embedded in the walls. Many of these rooms also have impressive murals that depict scenes of humans, animals, and geometric designs. Burials, often contained in baskets, are commonly encountered at the site and are found below the floors of many domestic residences. Human skulls covered in plaster are thought to reflect religious or ritual activities.

—Mark Aldenderfer

Bibliography

- Balter, M. *The Goddess and the Bull*. New York: Free Press, 2004.
- Hodder, I. *The Leopard's Tale: Revealing the Mysteries of Çatalhöyük*. London and New York: Thames and Hudson, 2006.

By the later part of the Aceramic Neolithic, most village communities were now fully reliant upon domesticated plants and animals for their diets, although their inhabitants continued to hunt wild animals and gather wild plants. Both large and small villages persisted across the Near East, but in some places truly extraordinary villages appeared. Examples include Çatalhöyük in modern Turkey, Jericho (in the Jordan Valley), and 'Ain Ghazal in Jordan. These villages were very large, with thousands of inhabitants. The constructions were solid and impressive as well and included rooms for habitation, ritual activities, and other functions. These very large sites were something very different and were likely

to be important regional centers for political and social interaction in the regions in which they are found. Also of interest during this period is the gradual shift from communal storage of food to household-based storage. Although community remained important judging from the presence of ritual and community structures at many sites, this shift in storage of subsistence goods suggests that individual households were becoming more self-sufficient.

The Ceramic Neolithic (6900–6000 BCE) marks a fundamental transformation of village life in the Near East. All of the very large villages that appeared in the preceding period now disappear and are replaced by much smaller villages that move into a number of distinctive ecological niches. These smaller villages are likely composed of self-sufficient households. This pattern of village formation persists into the following Chalcolithic period (6000–3000 BCE). However, this is a period of dramatic political and social change. By the end of this era at 4000 BCE, villages are now a part of the much wider network of large towns and emerging urban centers that will flourish after this date in much of the Near East.

—Mark Aldenderfer

Bibliography

- Kujit, I., ed. *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation*. New York: Kluwer, 2000.
- Mathews, R. *The Archaeology of Mesopotamia*. London: Routledge, 2003.
- Simmons, A. *The Neolithic Revolution in the Near East: Transforming the Human Landscape*. Tucson: University of Arizona Press, 2007.

Early Village Life in Ancient India

The time around 10,000 BCE is one of the most significant in human history. This is when humans left behind their prehistoric past and embraced new lifeways. During this time, South Asia and much of the rest of the Old World was in the terminal Mesolithic phase of prehistory, dominated by microlithic assemblages. Subsistence economy was still largely based on hunting, fishing, and gathering but had become highly specialized as compared with the earlier

Paleolithic phase. The majority of Mesolithic groups lived at open-air sites, although a large number of caves and rock shelter complexes have been documented from various parts of the Indian subcontinent (e.g., Bagor, Langhnaj, Bhimbetka rock shelters, Sarai-Nahar-Rai). It is culturally significant that during the Middle Holocene and later in India, Mesolithic or hunter-gatherer groups (i.e., tribal populations), Neolithic groups, and the Chalcolithic phase chronologically and spatially overlapped in various parts of the subcontinent. Even during early historical times and up to modern-day times, there were economic interactions between the forest/hill-dwelling tribal groups and the nontribal inhabitants of agricultural villages and towns and cities. The planned production and domestication of rice, wheat, and barley was in sync with the domestication of cattle, buffalo, sheep, goats, pigs, fowl, and dogs (animal husbandry and pastoralism). During the Neolithic, handmade pottery was more prolific than wheel-made pottery, which became dominant later. The Neolithic economy was a combination of plant cultivation, animal husbandry, and hunting-gathering. The recovery of a respectable amount of querns and grinding stones from numerous sites testifies to the advent of increased and regular food production. This, in turn, resulted in a decrease of nomadic lifestyles and an increase in seasonally sedentary settlement or establishment of villages.

One of the most important South Asian typesites for incipient village life is Mehrgarh (Pakistan) and represents the earliest evidence of plant and animal domestication in South Asia. Its pre-Harappan cultural roots originated in West Asia from where Neolithic groups dispersed into other regions, but its subsequent development appears to be indigenous. Occupational levels start at about 6500 BCE, when farmers cultivated and exploited wheat, barley, peas, cotton, dates, and sesame seeds and raised cattle, sheep, and goats. Divided into seven periods of development, the earliest does not contain any pottery, which seems to appear at about 5500 BCE at the site. The next two periods are Neolithic with ceramics, and the last four can be attributed to the Chalcolithic phase with an increase in specialized artifact production. Houses were made of mud and mud bricks, and different

types of artifacts have been recovered: ornaments of bead, shell, and turquoise (representing long-distance transport); terra-cotta and bone seals; stone and copper drills; stone sickle blades in bitumen; bone points; awls; stone blades; kilns; and crucibles for melting copper. Flexed burials have been found here (under house floors) with ochre, grave goods (e.g., ornaments such as steatite-bead necklaces, ground axes, baskets), and animal bones. The site represents one of the earliest that had a direct influence on the subsequent birth of the Harappan civilization. While Mesolithic sites were generally homogenous, the Neolithic phase was the first to accommodate cultural variation at a sub-regional level. South Asian Neolithic sites and associated material culture can be archaeologically separated into several broad geographic groups, and all are highly distinct from each other. In southern India, well-known Neolithic ashmound sites (accumulation of burnt cow dung) include Budihal, Sangankallu, Piklihal, Tekkalakota, and Utnur. In Kashmir Valley, this phase is best represented by the pit dwellings in Pleistocene loess deposits such as at Burzahom and Gufkral, where steps down into the pit floors were cut in the walls of the structures (into Karewa deposits). Unlike other Indian Neolithic sites, the Kashmir Neolithic shares a few features with some Chinese sites. During the fifth to fourth millennia BCE, Neolithic populations in Baluchistan had started migrating to the north and east, some gradually giving rise to the Chalcolithic in central and northwestern India.

At many sites and regions the Neolithic phase is missing, and there is a direct stratigraphic transition from the Mesolithic to the Chalcolithic. Due to accelerated agriculture and shifting cultivation, alluvial plains were increasingly favored for settlement. This trend of village-level settlements is archaeologically visible through the following regional Chalcolithic cultures: Ahar (e.g., Gilund), Malwa, Kayatha, Jorwe (e.g., Daimabad), the Ochre Colored Pottery (OCP) culture, Savalda (e.g., Kaothe), and the Narhan culture. It is thought by many scholars that evidence for the religious roots of modern Hindu society are reflected in Harappan and Chalcolithic phases. Architecture progressed from simple wattle-and-daub houses to mud and mud-brick houses; later,

stone was also utilized. Hut and house shapes ranged from circular, square, and rectangular to oval, often with compact mud floors. Fortification at many sites was initially thought to represent warring or feudal societies, but this interpretation is being rejected by some scholars. The second half of the Holocene also witnessed a major spurt in the variety of pottery styles and associated motifs. The role of granaries with pits and/or large ceramic jars highlights the increase and importance of food storage, which revolutionized the modes and scales of economic agriculture (i.e., trade with regional and distant counterparts). Surplus food production (e.g., millet) also led to individual technological and artistic creativity, including craft specialization and domestic construction. This inevitably led to the establishment of hierarchical societies whereby different levels of economic contributions became the norm. There was rapid improvement in the technological and methodological efficiency of agricultural practices (e.g., irrigation). The appearance of copper and bronze marks the onset of metallurgy and associated production of a rich repertoire of tools and implements for everyday life. Regional centers with small satellite villages developed in the form of farmsteads, hamlets, campsites, craft-production centers (bead manufacture or salt processing), and so forth. Such growing economic prosperity led to an increase in villages and subsequently towns and cities. These early villages (e.g., Inamgaon, Navdatoli) became the cultural foundations of modern-day Indian rural life and, with the exception of external influences and modern technology, have changed only marginally since then.

—Parth Chauhan

Bibliography

- Allchin, B., and R. Allchin. *The Rise of Civilization in India and Pakistan*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1996.
- Dhavalikar, M. K. *Indian Protobistory*. New Delhi: Books and Books, 1997.
- Kennedy, K. A. R. *God-Apes and Fossil Men: Paleanthropology of South Asia*. Ann Arbor: University of Michigan Press, 2000.
- Misra, V. N. "Prehistoric Human Colonization of India." *Journal of Bioscience* 26(4) (2001): 491-531.

Early Village in Ancient China, 10,000–5000 BCE

There is much speculation about the social life and the family structure of the people who built the early village communities of ancient (Neolithic, 10,000–5000 BCE) China. The archaeological data is sparse, and all theories about what day-to-day human existence must have been like must be understood as open to debate. The most scrupulous scholars are careful not to project their own worldview upon prehistoric populations. We have nothing in writing from this period that would give insight into the emotions, thoughts, motivations, or experiences of individuals who comprised these communities. However, archaeologists have uncovered man-made artifacts and botanical remains that give insight into the material culture of Neolithic settlements and some hints as to social life. If we are conservative in our extrapolations, we may state a few facts.

Humans inhabited both caves (usually on the seacoasts, sometimes inland) and clusters of free-standing houses near water sources (rivers and lakes) in Neolithic China. One sort of shelter was not superseded by the other. They coexisted and exploited different ecological environments. Seacoast caves sheltered those populations who harvested the products of seas and oceans, while people who built subterranean “pit dwellings” (wattle and daub walls, thatched roofs) along the inland rivers and on the banks of lakes fished in these freshwaters, hunted land animals, and eventually began to plant seeds and breed animals to serve human needs more efficiently. In southern China—which was subject to severe flooding that nonetheless ensured fertile soil, as the flooding of the Nile did in ancient Egypt—pile dwellings (houses raised above water by means of wooden posts) allowed for this environmental hazard. Social and economic changes that followed such ecological adaptations were gradual, and one lifestyle did not oust another; however, variations occurred according to climate and environment.

One common misconception is that the appearance of pottery only coincides with Neolithic plant cultivation and the appearance of sedentary communities. However, at the Chinese cave site of Miaoyan (Guangxi), pottery predat-

ing 10,000 BCE was found. At the open-air camp found at Nanzhuangtou, although no domesticated plants or animals were found, low-fired incised sherds are dated to between 9000 and 8000 BCE. Human existence predating 8000 BCE was most probably nomadic; therefore, it seems that the manufacture of pottery does not necessarily require sedentary existence, nor do communities of pit dwellings necessarily indicate a sedentary lifestyle. A seminomadic rather than a completely sedentary existence seems to have been most characteristic of the Neolithic cultures of China, for pollen analysis of plant matter and the bones of deer and wild boar found at Neolithic sites suggest that wild plants and wild game continued to augment food supplies of domesticated millet (northern China), domesticated rice (southern China), and domesticated cow, chicken, dog, and pig by 7000 to 5000 BCE.

The problem is that we do not know who occupied the Neolithic settlements at various times of the year or for what length of time. We do have a basis of comparison, however. Native American indigenous populations who were seminomadic foragers and horticulturalists occupied their villages only from spring to summer to plant and then to harvest their crops. During the winter months entire villages (men, women, and children, all except the very elderly or the very ill) traveled into the wilderness to follow wild game. For this reason, colonial authorities of historic times often characterized Native American villages as “abandoned” when they were only unoccupied for a brief three to four months out of the year.

Early village life in China could have followed a similar pattern. Another possibility is that women, children, and frail elderly persons may have been left behind while the men alone hunted and fished at great distances from their habitations, but we have no absolute proof of this division of population into sedentary and traveling occupations based on gender, age, or fitness, nor do we know if both men and women farmed and engaged in animal husbandry or if gender dictated economic role. In addition, we do not know who made the pottery and tools: men or women or both. The most likely scenario is that early village life was egalitarian, based upon mortuary practices.

In terms of mortuary practices and living arrangements, the Peilingang site in Henan Province (6500 to 5000 BCE) offers one of the most complete assemblages of artifacts and botanical remains for describing village life in ancient China. At this site were discovered 48 semisubterranean dwellings, 300 storage pits, pottery kilns, chipped and ground stone tools including sickles for harvesting domesticated millet, bone flutes attesting to musical development, turquoise jewelry, and other sorts of adornment as well as 300 burials in formal cemeteries where the dead were interred with grave goods to serve them in the afterlife. One indication that Neolithic village life was egalitarian is that the graves were roughly equal in size and equal in the amount and the quality of the grave goods. One of the most interesting finds at the site was incised turtle shells filled with small pebbles, which may indicate the development of shamanism and divinatory arts. At the site of Yangshao (5100 to 5000 BCE) archaeologists found that hemp was pressed for oil and used to manufacture clothing. Ceramic spindle whorls for spinning thread were also found.

By 5000 BCE the archaeological record indicates social change. There seems to have been a population explosion, for communities of permanent dwellings proliferate. Graves are no longer of equal size, and there is differentiation in the amount and quality of grave goods, indicating the development of social hierarchies. There is also evidence of warfare that may have been due to the coveting of accumulated wealth, or it may indicate social pressures such as overpopulation that led to conflict over land. There is also evidence that health declined for Neolithic peoples due to several factors. Diseases were more easily spread when people lived in closer proximity to one another. Living with domesticated animals and their excreta may have increased disease. Also, diet became more restricted when Neolithic people ceased to forage and hunt.

—Susan Marie Kirwan

Bibliography

- Crawford, Gary W. "East Asian Plant Domestication." In *Archaeology of Asia*, edited by Miriam T. Stark. Malden, MA: Blackwell, 2006.
- Shelach, Gideon. "The Earliest Neolithic Cultures of Northeast China: Recent Discoveries and New

Perspectives on the Beginning of Agriculture." *Journal of World Prehistory* 14(4) (2000): 363–413.

Underhill, Anne P., and Junko Habu. "Early Communities in East Asia: Economic and Sociopolitical Organization at the Local and Regional Levels." In *Archaeology of Asia*, edited by Miriam T. Stark. Malden, MA: Blackwell, 2006.

Early Village Life in Europe

The introduction of agriculture changed the way the peoples of Europe lived and interacted with their environments. Contrary to the popular notion of an agricultural revolution, which implies a rapid change, the transmission of agriculture across Europe was lengthy and uneven due to factors such as climate, geography, and local traditions. Starting from its introduction in about 7000 BCE, it took more than three millennia for agriculture to become the primary means of subsistence throughout Europe. From its origins in western Asia, agriculture spread in two general directions across Europe. Colonists from the southeast took agricultural technology to the eastern Mediterranean islands and then on to Greece, Italy, and westward. A second movement of agricultural technology spread from the southeast Balkans up through central Europe and eventually to France and the British Isles. By the fourth millennium BCE, indigenous Mesolithic hunting and gathering practices had given way to sedentary Neolithic agrarian villages.

Some of the oldest evidence for agricultural life in Europe comes from Franchthi Cave in the northeastern Peloponnese of Greece, where around 7000 BCE Mesolithic hunting and gathering activities were supplemented by the cultivation of emmer wheat and barley and the raising of sheep and goats. As this occurred, the focus of daily life moved out of the cave to the surrounding area. The presence of obsidian from the Aegean island of Melos indicates trade with the eastern Mediterranean and perhaps the source of the agriculture, domesticated animals, and pottery enjoyed at Franchthi Cave. As often occurred in this transitional phase, populations increased with the introduction of agriculture and a sedentary lifestyle. When populations increased beyond the land's capacity to sustain the

numbers or when crops failed due to drought or pestilence, portions of the population moved on to new territories, taking their agricultural and animal husbandry skills with them.

Between 7000 and 5500 BCE, settlements were established in northern Greece that reveal much about early village life in Europe. Communities consisted of groupings of square or rectangular wood-framed houses, some reaching 39.3 feet (12 meters) long. The typical interior consisted of a single room, with a clay oven on one wall and a stone floor. The exterior walls were covered with clay or daub, and some were painted. The houses appear to have held individual families, and their close proximity to one another indicates the importance of the community and cooperation. At Sesklo, in northern Greece, some houses contained basements, and others had two stories.

At settlements such as Nea Nikomedeia in Macedonia, the houses were grouped around a larger central building, perhaps used as a shrine or a meetinghouse. With the absence of writing, little is known about the spiritual lives of early Neolithic villagers. Across Europe, the presence of figurines of both females and animals indicates that fertility and nature were of central importance. As time passed and settlements spread northward and westward, the size of the villages increased, as did the size of the individual houses and meetinghouses, but overall populations remained small due to the limitations of early farming techniques and local resources.

Within these Neolithic villages, daily life consisted of tilling, planting, tending, and harvesting the fields along with the feeding and caring of livestock. In addition to growing wheat and barley and raising domesticated sheep, goats, pigs, and cattle, the villagers searched for wild plants such as berries, fruits, and nuts and hunted wild deer, small game, and birds. Archaeologists speculate that hunting may have been relatively easy, as many wild animals and birds would have been drawn to the cultivated fields near the villages.

With the availability of plant, animal, and natural resources, early villagers would have had a wide array of foodstuffs and materials. With grain, they made breads and gruel. Wild honey and fruit may have been used as sweeteners.

The animals produced milk and supplied meat and hides. The hides were used for clothing and blankets. Animal bones were used for making tools, fishing implements, and sewing needles; animal sinews were used for threads. Cutting tools and weapons were created out of obsidian and flint, and stones, shells, and copper were used to create jewelry and ornaments.

The introduction of pottery served to protect food supplies from pests and the elements. Early pottery was made by hand without the use of a pottery wheel. The earliest pottery was plain, but eventually villagers began painting and incising decorations on pottery. The spread of agriculture can often be traced by the presence of certain types of pottery at various sites. The Bandkeramik culture, named for its linear bands or incisions of its pottery, stretched from Hungary to France. Pottery designs may have been purely aesthetic, but they may have also indicated the owner's status in the community or the community's distinctness from other communities. Pottery that is fragile or easily broken is indicative of a sedentary way of life and is found throughout Neolithic Europe.

The burial practices of the early villagers varied by time and region, but all reflect a respect for the deceased. Infants were sometimes buried within the dwelling itself, often near or under the hearth, whereas neonatal infants and newborns were placed in the graves of their mothers, who presumably died in childbirth. Adult burials were typically placed close to the dwellings. Males were buried with tools and females with jewelry, reflecting their roles in life and perhaps indicative of a belief in the afterlife. As societies became more stratified, class distinctions were reflected in burial practices, as in the monumental mortuary mounds found in France and the British Isles.

The adoption of agriculture changed the societal face of Europe. Mesolithic hunting and gathering practices had been an extension of the natural and animal world, with humans living in balance with nature and each other. Agriculturalists, on the other hand, sought to alter and control nature. Village life focused on production and accumulation, which led to wealth and power stratifications within those populations. By 4000 BCE, the societal and en-

vironmental landscape of Europe had been changed forever.

—Sonia Sorrell

Bibliography

- Mithen, Steven. *After the Ice: A Global Human History, 20,000–5000 BC*. Cambridge: Harvard University Press, 2006.
- Price, T. Douglas, ed. *Europe's First Farmers*. Cambridge: Cambridge University Press, 2000.

Sherratt, Andrew. "The Transformation of Early Agrarian Europe: The Later Neolithic and Copper Ages, 4500–2500 BC." In *The Oxford Illustrated History of Prehistoric Europe*, edited by Barry Cunliffe. Oxford: Oxford University Press, 2001.

Whittle, Alasdair. "The First Farmers." In *The Oxford Illustrated History of Prehistoric Europe*, edited by Barry Cunliffe. Oxford: Oxford University Press, 2001.

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Migration and Travel

At the start of this era, our most distant ancestors lived in a very small region of East Africa. By its end, humans had spread across the globe and had taken up residence in virtually every corner of the planet and were now living in arid deserts, high plateaus, deep tropical forests, and frigid tundras. The only places on the planet that our species has never occupied, at least until very recent times, are Antarctica and Greenland.

The story of our ancestors' travels is really a story about adaptation and the movement of our ancestors in and out of ecological niches. Although it is romantic to think of a small band of *Homo erectus* moving steadfastly out of Africa and into the Middle East and then ultimately into East Asia, the reality is that the distance moved by any band of our ancestors was likely to have been very short. The motivation to move was not a predisposition for wanderlust but instead was the necessity to eat and to feed the members of the group. Our ancestors had no way of knowing that East Asia lay thousands of miles to the east; they were only concerned with ensuring a steady diet. In this way, our ancestors were much like the many other animal species that moved across the globe throughout the Pleistocene and into the Early Holocene.

The constraints on the movements of our ancestors were numerous. Environmental conditions and resource availability were the most important. During much of the glacial era of the Pleistocene, many areas of the world simply did not have sufficient resources to support even small groups of people. A secondary constraint related to this was the relative simplicity of the technologies of our early ancestors. In very cold environments, clothing and the controlled use of fire are absolute necessities for survival. However, clothing suitable for very harsh environments did not appear until between 70,000 and 45,000 years ago. Our ancestors appear to have controlled fire possibly as early as 400,000 years ago. Depending on the severity of the climate, this means that our ancestors were unlikely to have migrated into the highest northern latitudes, highest mountains or plateaus, or other cold marginal environments until fairly late in our history.

The cognitive capacity of our ancestors may also have been a serious constraint on the migrations of our ancestors. One of the hallmarks of our own species is the degree to which we can plan complex moves into the future. Modern hunters and gatherers in the Arctic, for example, look at least six months into the future and examine multiple possible residential moves before deciding upon their course of action. Choosing the wrong set of moves could lead to the death of all members of the group. This ability to look into the future is known as anticipatory

planning. This ability is especially important in harsh resource-limited environments. It seems that *Homo erectus* was the first of our ancestors to have sufficient cognitive ability to move over longer distances and into unfamiliar environments, as is witnessed by the spread of the species out of Africa and into the East. Since *H. erectus* did not move into more northerly latitudes, this suggests that planning in depth was not a part of the behavioral repertory of this species.

The very large majority of the migrations of our ancestors were by foot. However, there are a number of examples of migrations that were at least in part accomplished by some sort of watercraft. The peopling

It seems that Homo erectus was the first of our ancestors to have sufficient cognitive ability to move over longer distances and into unfamiliar environments, as is witnessed by the spread of the species out of Africa and into the East.

of the New World is a good example of this. Until relatively recently, it was believed that the entire New World had been populated by foot-mobile people moving across the Bering Straits land bridge and ultimately moving into both North and South America. Recent studies suggest that there was very likely a movement of people down the western North American coast. This could only have been accomplished with the use of some sort of

watercraft, most likely some sort of skin boat like a coracle. A more controversial idea has people from Europe moving into the northeastern coast of North America. Demonstrating these possible migratory routes is difficult, however, because ancient shorelines are now inundated by ocean waters following the rise of sea level that followed the melting of the ice sheets at the onset of the Holocene.

Population movements or migrations appear to have become more frequent after our species became dependent upon domesticated plants and animals for our subsistence. Sedentary peoples have higher population growth rates than do mobile peoples, and this combined with the development of a more stable subsistence system led to a population explosion in some parts of the world, such as the ancient Middle East. Absolute population size increased, as did local population density. Populations can continue to grow as long as there is sufficient agricultural land to support them. However, as land becomes scarce, people must either create new subsistence technologies to support this larger population or move to new areas where land is available. Other factors that promote group movement are social in nature. Villages that grow too large tend to have more conflict between members of rival lineages or families. In the absence of some kind of widely recognized central authority, such tensions make it likely that some set of families will move to a new area simply to escape these problems.

The contributions in this theme explore these topics in greater detail and provide insight into the multiple ways in which our ancestors moved across the globe.

—Mark Aldenderfer

■ Introduction: Out of Africa—The First Time

The first of our ancestors to leave their African origins is widely believed to be *Homo erectus*. This species, which originated in East Africa, is thought to have first migrated out of Africa between 1.6 million and 1.8 million years ago and quite possibly far earlier. Although the specific routes of its dispersal are unclear, it moved from Africa into the Near East, western Asia, and eventually Southeast Asia. There is no evidence of movement of *Homo erectus* into Europe or central Asia, and evidence for its presence in East Asia is equivocal at best.

The stone tool assemblages carried by these hominins were composed of a core and flake technology similar to that seen in East Africa and known as the Oldowan. There are numerous tool assemblages found in the Near East and West Asia that are likely to be made by *Homo erectus* but are not directly associated with fossil specimens. Although these stone tools are found in Southeast Asia, there are fewer sites when compared to other areas.

Variability in skeletal morphology of *Homo erectus* suggests that more than one group of this hominin migrated from Africa. This is no surprise, in that the total population size of the migrants was likely to have been very low and the groups widely dispersed. This would have meant that mating networks would also have been small, and this in turn means that genetic diversity was likely significant.

One of the most interesting questions about this migration from Africa is why it happened in the first place. At this time, a number of species began to expand out of Africa and into other nearby regions. However, these species moved as their ecological niche expanded. In contrast, although some of the movement of *Homo erectus* was indeed within the ecological niche within which it evolved in Africa, as it moved into West and Southeast Asia it encountered different niches and adapted to them successfully. Undoubtedly, this reflects the growing cognitive capacity of this hominin and its ability to use culture as its primary means of adaptation.

Although most paleoanthropologists have accepted this reconstruction of the past, it is not

without controversy. Some have argued that *Homo erectus* was not necessarily the first hominin species to leave Africa and have suggested that it was one of the australopithecines or possibly *Homo habilis* or a more primitive version of *Homo erectus*. However, careful analysis of the known fossil evidence indicates that *Homo erectus* was indeed the first of our evolutionary lineage to leave Africa.

—Mark Aldenderfer

Bibliography

- Anton, Susan C., and Carl C. Swisher III. "Early Dispersals of *Homo* from Africa." *Annual Review of Anthropology* 33 (2004): 271–296.
- Dennell, Robin, and Wil Roebroeks. "An Asian Perspective on Early Human Dispersal from Africa." *Nature* 438 (2005): 1099–1104.

The Adaptive Radiation of *Homo erectus*

Homo erectus was the first hominid to move out of Africa and disperse into Eurasia. Its large-scale migration represents the first major adaptive radiation in human evolution. This radiation was relatively rapid, because the earliest Indonesian fossils are about 0.5 million years younger than the earliest African fossils (ca. 1.8 million years ago). Migration was inherent to the nomadic lifestyle of *Homo erectus*, which kept them constantly on the move. The pattern of migration suggests that a coastal route was followed to reach the islands of Southeast Asia, which were then connected by a large land bridge, followed much later by a land-inward migration resulting in the colonization of the mainland. This movement resulted in a vast distribution of the species over a variety of landscapes and climatic zones with one major limitation: *Homo erectus* is found only in open landscapes and savannas. A population with such a wide range naturally shows regional differences.

The Asian homeland of *Homo erectus* extended from the Republic of Georgia on the Eurasian border to China in the northwest and Indonesia in the southeast. The climate and the

► THE GENETIC EVIDENCE FOR A COASTAL MIGRATION INTO SOUTHEAST ASIA

While scientists have for some time recognized that humans originated in Africa, some controversy has raged over the migration route taken as they left their homeland to colonize the rest of the earth. Some proposed a path from the lower Nile Valley across the Sinai Peninsula to the Levant. Others suggested a southerly path from the Horn of Africa and along the coast of Arabia and India into Southeast Asia and Australasia.

Fossil data to support either hypothesis has been difficult to come by—with the exception of coastal settlement of Eritrea about 125,000 years ago—but analysis of genetic data from indigenous populations in Southeast Asia and in the Andaman and Nicobar islands has provided the answer. An examination of the Orang Asli (original people) of Malaysia shows that their mitochondrial DNA

(mtDNA) lineages are quite distinct from that of other inhabitants of Southeast Asia. The analysis further suggests that the lineages date to between 44,000 and 63,000 years ago.

Analysis of the mtDNA lineages from the Andaman and Nicobar islands shows that the Andaman islanders likely represent an ancient colonization about 50,000 to 70,000 years ago, while the Nicobar islanders descend from much more recent immigrants. Data from Papuans and Aboriginal Australians indicate a similarly ancient origin. The coincidence of data—along with analysis of data from other Eurasian populations, who appear to have branched off from southern groups—further supports a purely southern route for *Homo sapiens*' initial exodus from Africa.

—David M. Lawrence

landscape were thus far from homogeneous. These variations in ecological parameters triggered local variations in the morphology and adaptation of *Homo erectus*. Furthermore, regional isolation on the islands may have further facilitated a diversification in the Asian *Homo erectus* population. Gene flow was probably limited within each island, as well as between the islands. The population on the mainland was divided into smaller units as well. The most northern sites, Zhoukoudian and Nanjing, were only occupied during interglacial periods. The glacial periods likely made the northern localities too cold or unreachable for *Homo erectus*. The relation between the South Asian population (Narmada fossils) and the other Asian populations is as yet unsolved.

The earliest migration into Java (Indonesia) took place about 1.2 million years ago. Fossils of *Homo erectus* are part of the Cisaat fauna. This fauna includes carnivores and is thus direct evidence for a land bridge connection to the mainland. *Homo erectus* thus reached the island by land and not by sea. After that, the island became isolated due to a rise in sea level. The fauna also became impoverished with endemic elements, such as a dwarf stegodon. *Homo erectus* fossils from Trinil (ca. one million years ago) be-

long to this insular period. Apparently, no new colonization took place for a long period, and *Homo erectus* evolved regional characters such as a relatively large skull, as evidenced by Ngandong material (200,000 years ago). Eventually, around 120,000 years ago, a land bridge developed through which a tropical rain forest fauna migrated into the island, known as the Punung fauna. It included a newcomer: *Homo sapiens*. Elements from the earlier fauna went extinct and with them *Homo erectus*.

The migration of *Homo erectus* into China took place considerably later than into Indonesia. The earliest evidence comes from Gongwangling in the Lantian Valley, dated to 800,000–750,000 years ago. *Homo erectus* fossils and stone tools have not been found outside the eastern half of China. They reached the northernmost sites (Zhoukoudian, Jinniushan) not before 500,000 years ago. The last occurrence is at Hexian (240,000 years ago).

Zhoukoudian was utilized during more temperate climatic periods of the interglacials. The stratigraphy of the site and the sequential layering of the occupational layer argues for sequential use of the area by *Homo erectus* and against a single interglacial occupation. There is no evidence that the site was frequented during glacial

periods as well. The combined range of dates for the southernmost located sites Yuanmou and Hexian (600,000–240,000 years ago) includes both glacial and interglacial periods. Here, *Homo erectus* was not on the move but instead settled for a long continuous period of time.

In spite of early studies, an Asian morphotype does not exist. The mutual differences between the Asian specimens are too large to appoint one of them as a model for the Asian *Homo erectus*. In most studies, the so-called Asian morphotype is based on the skulls from Zhoukoudian in China, but these differ significantly from other Asian skulls.

Features of the skull point to the existence of two major geographic variants of *Homo erectus* in Asia. The first variant comes from Indonesia and is quite consistent through time. The earlier and the later Indonesian skulls are more similar to each other than to the second variant except for their size. The observed differences between early and later forms are entirely size-related. The second variant comes from northern China and is in time and size intermediate between the early and latest Indonesian specimens. The Indonesian variant has a wide posterior vault and a relatively broad occipital region, compared to the northern Chinese variant. The most prominent differences are that the Indonesian faces are more prognathic than the Chinese faces and have larger front teeth and more massive molars. The Georgian skulls and early African skulls seem to follow the Indonesian variant.

Whether the southern Chinese forms follow the second variant is not clear, because the specimens are either too fragmentary (Yuanmou) or too deformed (Gongwangling). The specimens from Hexian differ somewhat from the northern Chinese variant and from the Indonesian variant as well. This observation indicates that a geographic variation may indeed have existed in China, probably triggered by latitudinal adaptation. The north-south variation then reflects the adaptation of the northern variant to colder regions.

The variation in form observed among the earliest Indonesian skulls is larger than that observed among the Chinese and later Indonesian

skulls. Features observed in the later skulls are present in the early skulls but not always so vice versa. It appears that each of the later groups preserved and elaborated different aspects of the earlier forms.

The contact between the Chinese and Indonesian variants of *Homo erectus* during the Pleistocene was most of the time hampered by high sea levels, which submerged the land bridge connections between the islands and the mainland. Another blocking factor was environmental factors on the mainland that were related to the ice ages. During glacial periods, the northern regions of the mainland were not inhabited, and likely *Homo erectus* migrated farther south, into the contact zone with the land bridges.

—Alexandra van der Geer

Bibliography

- Henke, W., and I. Tattersall. *Handbook of Paleanthropology*, Vol. 3, *Phylogeny of Hominids*. Berlin: Springer, 2007.
- Rightmire, G. Philip. *The Evolution of Homo Erectus*. New York: Cambridge University Press, 1990.
- Sawyer, G. J., et al. *The Last Human: A Guide to Twenty-two Species of Extinct Humans*. New Haven, CT: Yale University Press, 2007.
- Schwartz, J. H., and I. Tattersall. "The Human Fossil Record, Vol. 2, *Craniodental Morphology of Genus "Homo" (Africa and Asia)*. New York: Wiley-Liss, 2003.

A Failed Migration into Europe by *Homo antecessor*

Homo antecessor is a putative hominid species whose fossilized remains are some of the oldest evidence of human occupation of Europe. The species is known from only two locations, the Gran Dolina and Sima del Elefante sites, both in the Sierra de Atapuerca of northern Spain. Specimens attributed to *H. antecessor* date from the Early to Middle Pleistocene, 1.2 million to 800,000 years ago.

The species is a controversial one. Some of the controversy is over whether the species is a valid species or whether it may represent a

chronospecies, a transitional stage along the evolutionary path from one species to another. Part of the problem in assessing its status is the relatively small number of specimens and the restricted region from which it has been found. Another problem has been that some of the best-preserved specimens are juveniles, but many of the diagnostic characteristics of the hominid line are only visible in adult specimens.

Another controversy is over the place of *H. antecessor* in the hominin evolutionary sequence. The species was originally proposed as an intermediary between *H. ergaster* (which is either a separate African species or an African variant of *H. erectus*) and *H. heidelbergensis*, a possible ancestor to both modern humans and Neanderthal man (*H. neanderthalensis*). Some researchers argue that *H. antecessor* is the same species as *H. heidelbergensis* (the latter's status as a species is also somewhat controversial).

Whatever *H. antecessor*'s status as a species, it raises questions about the origins of the first Europeans. The prevailing assumption has been that the first hominins came to Europe from Africa via Southwest Asia. Early analysis of jawbone characteristics seemed to confirm that *H. antecessor* had African ties, with *H. ergaster*/*H. erectus* being the most likely ancestor. More recent comparisons of the characteristics of *H. antecessor* teeth to those of Pleistocene species from Africa and Asia suggest, however, that the influence of Asia (via *H. erectus*) on the hominin colonization of Europe was greater than the corresponding influence of Africa.

The question of whether *H. antecessor* evolved elsewhere and migrated into Europe or whether it evolved in Europe from an earlier migrant remains unresolved, although a European origin seems more likely.

Whatever its origins, *H. antecessor* was a toolmaker from the start. The Sima del Elefante site, where its oldest fossils have been found, includes knapped stone objects and stone flakes, evidence of tool-making activity within the cave itself. More layers of stone tools are found at the Gran Dolina site.

H. antecessor was a hunter or at least a scavenger. Bones of large mammals within the Sima del Elefante and Gran Dolina sites have cut

and scrape marks that are clear evidence of butchering. Butchering was not limited to animals, however. *H. antecessor* remains at the Gran Dolina site likewise show evidence of butchering. Given that the butchered hominin remains are scattered among the animal remains rather than stored in a separate place, it appears that the motivation for cannibalism was solely for food.

—David M. Lawrence

Bibliography

- Bermúdez de Castro, J. M., et al. "A Hominid from the Lower Pleistocene of Atapuerca, Spain: Possible Ancestor to Neandertals and Modern Humans." *Science* 276 (1997): 1392–1395.
- Carbonell, E., J. M. Bermúdez de Castro, J. L. Arsuaga, et al. "An Early Pleistocene Hominin Mandible from Atapuerca-TD6, Spain." *Proceedings of the National Academy of Sciences* 102 (2005): 5674–5678.
- Carbonell, Eudald, et al. "The First Hominin of Europe." *Nature* 452 (2008): 465–469.
- Fernández-Jalvo, et al. "Human Cannibalism in the Early Pleistocene of Europe (Gran Dolina, Sierra de Atapuerca, Burgos, Spain)." *Journal of Human Evolution* 37 (1999): 591–622.
- Martinón-Torres, M., et al. "Dental Evidence on the Hominin Dispersals during the Pleistocene." *Proceedings of the National Academy of Sciences* 104 (2007): 13279–13282.

H. heidelbergensis Moves across Africa into the Middle East and Europe

Homo heidelbergensis, or Heidelberg man, is a hominid species whose fossilized remains, along with those of *H. antecessor*—which may be the same species—are some of the oldest evidence of human occupation of Europe. The species, like its predecessor *H. erectus*, spread far beyond the African continent, ranging across Eurasia from eastern China to western Europe.

Specimens attributed to *H. heidelbergensis* date from the Early to Late Pleistocene, 1.2 million years ago (if *H. antecessor* and *H. heidelbergensis* are two variants of the same species) to about the time of the appearance of modern humans (*H. sapiens*) about 200,000 years ago. The

better-documented specimens of *H. heidelbergensis* range from about 800,000 years ago to 200,000 years ago.

Since the species was first described from a mandible (jawbone) discovered in a quarry in Mauer (near Heidelberg), Germany, its status as a species and its position in the hominin evolutionary tree have been uncertain. For a time, it was lumped with *H. erectus*, probably the first hominin to make a successful foray out of Africa. Some argued that it was an archaic form of *H. sapiens*. Since the discovery of *H. antecessor*, scholars have debated whether it and *H. heidelbergensis* are the same, though more recent scholarship tends toward the belief that the two represent separate species. Furthermore, some African specimens of *H. heidelbergensis* are assigned by some researchers to a different species, *H. rhodesiensis* (Rhodesian man).

Given the confusion over Heidelberg man's status as a species, it should be no wonder that there is likewise confusion over its position in the hominin evolutionary sequence. The prevailing hypothesis is that *H. heidelbergensis* is a descendant of *H. ergaster* (which itself may be nothing more than an African variant of *H. erectus*). It either evolved directly from *H. ergaster*/*H. erectus* or from *H. ergaster*/*H. erectus* via *H. antecessor* (which is less likely).

H. heidelbergensis appears to be the common ancestor of Neanderthals (*H. neanderthalensis*) and modern humans (*H. sapiens*), with a European population of *H. heidelbergensis* giving rise to the Neanderthals and an African population giving rise to modern humans. Many who accept the existence of *H. rhodesiensis* as a separate species believe, however, that *H. heidelbergensis* gave rise to Neanderthals only, while Rhodesian man gave rise to modern humans.

Heidelberg man most likely originated in Africa and spread from there to Europe and East Asia via Southwest Asia. The species brought with it Acheulean technology—oval and pear-shaped hand axes—that was developed in Africa and then spread across Eurasia as *H. erectus* colonized the Old World. Its tool-making skills indicate the capacity for symbolic thought and language.

There is other evidence to support Heidelberg man's capacity for symbolic thought and language. Dental wear indicates that *H. heidelbergensis* was predominantly right-handed, as modern humans are today. This supports the notion of brain specialization necessary for advanced thought and communication. Analysis of the outer and middle ear anatomy of several specimens from the Sierra de Atapuerca of northern Spain indicates that they had a similar sensitivity to sound that modern humans do, strong evidence of their capacity for spoken language.

H. heidelbergensis, like many hominin species, was a hunter. Substantial evidence of butchering of animal carcasses can be found at sites associated with Heidelberg man. Wooden spears found in a bog near Schoeningen, Germany, date to 400,000 years ago. Remains of wild horses found along with the spears show signs of butchery. It is likely, though not certain, that *H. heidelbergensis* was the hunter. Finally, one of the most famous Heidelberg man sites, the Boxgrove Quarry site in southern England, has an abundance of stone and bone tools along with remains of animals with many cut marks, revealing evidence of butchery.

—David M. Lawrence

Bibliography

- Lozano, Marina, et al. "Right Handedness of *Homo heidelbergensis* from Sima de los Huesos (Atapuerca, Spain) 500,000 Years Ago." *Evolution and Human Behavior* 30 (2009): 369–376.
- Martínez, I., et al. "Auditory Capacities in Middle Pleistocene Humans from the Sierra de Atapuerca in Spain." *Proceedings of the National Academy of Sciences* 101 (2004): 9976–9981.
- Martinón-Torres, M., et al. "Dental Evidence on the Hominin Dispersals during the Pleistocene." *Proceedings of the National Academy of Sciences* 104 (2007): 13279–13282.
- Mounier, Aurélien, François Marchala, and Silvana Condemi. "Is *Homo heidelbergensis* a Distinct Species? New Insight on the Mauer Mandible." *Journal of Human Evolution* 56 (2009): 219–246.
- Rightmire, G. Philip. "Human Evolution in the Middle Pleistocene: The Role of *Homo heidelbergensis*." *Evolutionary Anthropology* 6 (1998): 218–227.

■ Introduction: Out of Africa—The Second Time

Transitional or anatomically modern *Homo sapiens* appeared in Africa some 200,000 years ago, and by roughly 15,000 years ago the species had migrated to all of the continents of the planet excluding, of course, Antarctica. In this process, they moved into very different environments, including high plateaus, deserts, islands, and cold dry steppes. Although *Homo ergaster/erectus* had left Africa much earlier, this species remained in relatively benign environments and did not move into the planet's more marginal places.

Until recently there has been considerable debate about the timing of this second migration and the number of times our species left Africa. New fossil discoveries as well as more detailed analyses of mitochondrial and Y-chromosome DNA, however, have led to a growing consensus on how to explain the second migration from Africa.

Although it was speculated that our species could have left Africa as early as 100,000 years ago, this date is now seen as far too early, and converging lines of evidence point to an initial migration out of Africa in the interval between 50,000 and 60,000 years ago. This later date means that we are looking at a behaviorally modern *Homo sapiens* that likely possessed language as we know it today.

The source location of these early humans is hypothesized to be East Africa. Not only did these ancestors move out of Africa, they also colonized southern Africa as well at least by 35,000 years ago if not far earlier. The migrants are believed to have moved out of Africa via a route that crossed the Red Sea and into the Arabian Peninsula. At least one other route out of Africa—via the Nile Valley into what is now the Levant—has been hypothesized, but data for this route have yet to be recovered.

From the Arabian Peninsula, humans moved along a coastal route along the Persian Gulf into coastal India, Southeast Asia, and ultimately what was then Sundaland and Australia. This migration could have been accomplished in as little as 10,000 years, which would bring humans to

Australia by roughly 45,000 years ago. According to some authors, like Paul Mellars citing Carl Sauer, a coastal route would have afforded our ancestors a fairly easy path because they would have been quite familiar with these coastal environments, in contrast to the diversity of habitats they would have encountered in movements into the interior of the continents.

Moving into the interior of the continents, particularly into higher northern latitudes, would have been much more challenging. Most of Europe as well as central Asia at 50,000 years ago was quite cold and dry, and moving into these places would have demanded new subsistence adaptations. Those of our ancestors moving into Europe would have had an additional challenge: the presence of Neanderthals. Nevertheless, humans entered eastern Europe by at least 45,000 years ago and moved steadily westward throughout the rest of Europe. Just where this population of migrants came from remains unknown, but the source is likely to have been somewhere in West Asia. The number of migrations into Europe is somewhat uncertain as well, but archaeological evidence suggests that two separate waves moved into Europe from this hypothesized West Asian source.

Humans also moved eastward into central Asia and eventually into Siberia, arriving there around 30,000 years ago. From here, other groups of humans began to colonize the Americas, at least initially by a coastal route, as early as 15,000 years ago. The exact source of these migrants remains much debated, but recent research suggests that coastal populations of North Asia and Japan may have been the homeland of these first Americans.

—Mark Aldenderfer

Bibliography

- Goebel, Ted. "The Missing Years for Modern Humans." *Science* 315 (2007): 194–196.
- Mellars, Paul. "Going East: New Genetic and Archaeological Perspectives on the Modern Human Colonization of Eurasia." *Science* 313 (2006): 796–800.

***H. sapiens* Moves across Africa and Beyond**

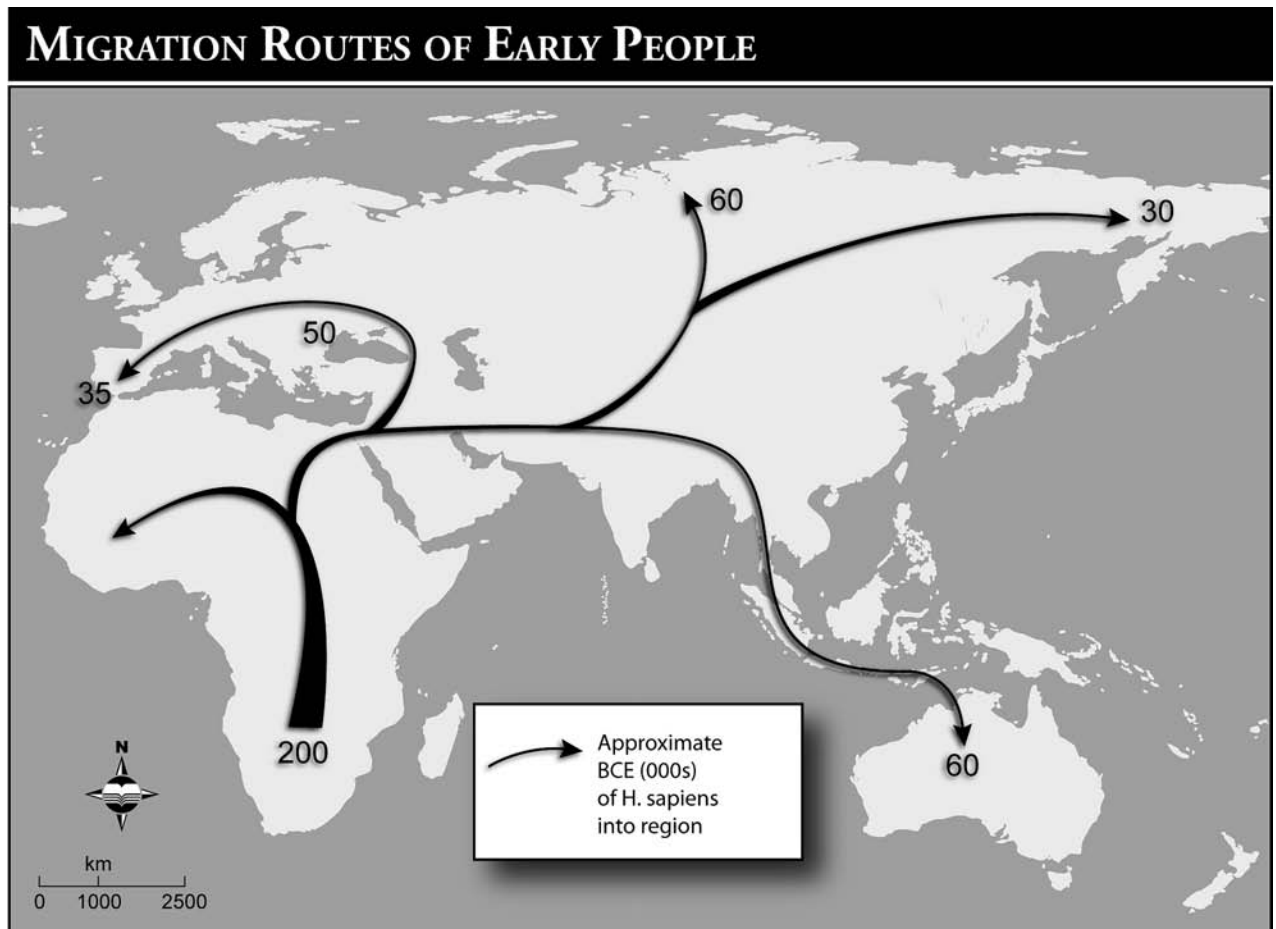
Charles Darwin is credited with the origin of the “Out of Africa” hypothesis in his book *The Descent of Man* (1871). Given the similarities among humans and the great African apes—in particular the chimpanzees, bonobos, and gorillas—Darwin argued that humans and apes shared a common ancestor and that the common ancestor would likely be found in Africa.

While there was no dispute that hominins left Africa and populated Eurasia once before—that species was *Homo erectus*—a long debate raged over the place of origin of modern man, *H. sapiens*. For most of the first 125 years after the publication of Darwin’s book, the fossil record, with hominin finds in Asia and Europe as well as Africa, confused the matter more than it helped.

The multiregional hypothesis suggested that modern humans arose throughout the Old World with local differentiation but with sufficient gene flow among regional populations to permit species-wide evolutionary change from *H. erectus* to *H. sapiens*.

The “Out of Africa” hypothesis instead calls for a relatively recent origin of *H. sapiens* in Africa sometime in the last 200,000 years, followed by an exodus from Africa across Eurasia (and eventually the Americas) beginning about 50,000 years ago. This was not the first exodus of modern humans from Africa—they appear to have settled in portions of what is now Israel about 120,000–80,000 years ago, for example—but there is no evidence that descendants of those earlier migrations persisted until today.

The tide of debate began to turn in favor of the “Out of Africa” hypothesis in 1987, when analysis of mitochondrial DNA—which is



handed down intact from mother to child—suggested that all humans today descended from a mitochondrial Eve who lived in Africa about 200,000 years ago. Analysis of Y chromosomal DNA—Y chromosomes are passed down intact from father to son—found a similar pattern, with all human males today descended from a Y chromosomal Adam who lived in Africa about 60,000 years ago.

Modern humans had been in Africa for nearly 100,000 years before their great migration off the African continent. Factors that may have played a role in their dispersal include possible population growth and rapidly fluctuating environmental conditions. Genetic evidence indicates dispersal of modern humans across Africa first.

The climate changes, along with dropping sea levels as vast amounts of water were locked up in the northern ice sheets, helped open up migration routes out of Africa into Southwest Asia.

By 60,000 years ago, small groups of humans began to leave Africa. A vigorous debate has raged over which migration route was used: a northern route from the Nile Delta across the Sinai Peninsula into the Levant (eastern Mediterranean) or a southern route from the Horn of Africa, across the Red Sea, and along the coast of the Indian Ocean into eastern Asia and, ultimately, Australia.

The northern route may seem more intuitive given the relative ease—at least physically—of crossing between Africa and Asia there today; however, archaeological and genealogical evidence indicates that modern humans reached Southeast Asia via the southern route faster than they passed through the Levant into Europe by the northern route. Beyond the initial crossing into Asia, there were more obstacles to face along the northern route. It primarily involved travel by foot and would require crossing major barriers, such as deserts and mountain ranges; coping with new climates, from tropical to temperate and eventually polar; and learning to survive in each of the new environments encountered.

The southern route along the Indian Ocean had the advantage of allowing rapid movement for long distances with few obstacles and without having to adapt to wildly different environments. The humans making the initial crossing

of the Red Sea into Asia would need some kind of boat or raft, and a boat or raft capable of crossing the Red Sea is equally able to travel along the shore of the Red Sea and cross the straits that separate the chain of islands linking Southeast Asia to Australia. The entire route is in tropical or subtropical environments similar to the ones they left in Africa, and they would find plenty to eat in the sea and adjacent shores.

Archaeological and genetic evidence indicates the southern route was the primary route—if not the only route—taken by humans leaving Africa. Modern humans had reached what is now Malaysia by 55,000 years ago, Australia by 45,000 years ago, and Tasmania by 35,000 years ago. In contrast, by the northern route *H. sapiens* had only reached the Levant—Israel and Lebanon—by 50,000 years ago and Europe by about 45,000 years ago. The early settlers of the Levant may have arrived via either the northern or southern route. In either event, the northern route proved a more significant barrier to migration than the southern route.

Small groups of humans began pushing inland from the Indian Ocean toward the interior of the Asian continent. The mountainous spine of the continent, which generally runs in an east-west direction, proved a major barrier to northward expansion, but those who reached East Asia could bypass the mountains and head north—into the Arctic and ultimately across Beringia into the Americas—and west into central Asia and ultimately Europe. Groups in Southeast Asia and Australia, having mastered the art of sailing, pushed into Melanesia and across the islands of the Pacific, eventually reaching as far as Easter Island and Hawaii.

Settlers of the Levant, no matter how they got there, could likewise expand eastward into central Asia, northward into the steppes of eastern and central Europe, and westward along the Mediterranean into western Europe. As in Asia, the Alps of Europe posed a major barrier to northward expansion, such that many settlers of northern Europe likely arrived from the east. The earliest settlers of what is now the British Isles likely crossed by land when low sea levels created land bridges across what is now the English Channel and the Irish Sea.

—David M. Lawrence

Bibliography

- Cann, Rebecca L., Mark Stoneking, and Allan C. Wilson. "Mitochondrial DNA and Human Evolution." *Nature* 325 (1987): 31–36.
- Forster, Peter, and Shuichi Matsumura. "Did Early Humans Go North or South?" *Science* 308 (2005): 965–966.
- Mellars, Paul. "Going East: New Genetic and Archaeological Perspectives on the Modern Human Colonization of Eurasia." *Science* 313 (2006): 796–800.
- . "Why Did Modern Human Populations Disperse from Africa ca. 60,000 years ago? A New Model." *Proceedings of the National Academy of Sciences* 103 (2006): 9381–9386.
- Pearson, Osbjorn M. "Has the Combination of Genetic and Fossil Evidence Solved the Riddle of Modern Human Origins?" *Evolutionary Anthropology* 13 (2004): 145–159.
- Weaver, Timothy D., and Charles C. Roseman. "New Developments in the Genetic Evidence for Modern Human Origins." *Evolutionary Anthropology* 17 (2008): 69–80.
- Wolpoff, Milford H., John Hawks, and Rachel Caspari. "Multiregional, Not Multiple Origins." *American Journal of Physical Anthropology* 113 (2000): 129–136.

Homo sapiens Enter East and Southeast Asia

When modern humans (*Homo sapiens*) left Africa, they were destined to pass through territory that either was occupied by or had been occupied by other hominin species. *H. erectus* had been a presence in East and Southeast Asia for more than one million years but was probably extinct by the time modern humans left Africa. *H. heidelbergensis* may have reached China as well, but that species was likely extinct too.

Other hominin species survived. *H. neanderthalensis* occupied a wide swath of territory from western Europe into central and South Asia, including the Levant (eastern Mediterranean), the key region for any exodus from Africa via a northern route from the Nile Delta across the Sinai Peninsula into Asia. In what is now the island of Flores in Indonesia, a diminutive hominin, *H. floresiensis*, survived until as late as 12,000 years ago. It is possible that modern humans encountered this species as they colonized Southeast Asia.

With the profusion of hominin species, each with a stone tool technology, it can be difficult to assign sites to particular hominin species without fossil evidence that allows a positive (and unequivocal) identification or accurate dating that places the site at a time when no other hominin species could have been present. These problems have created significant confusion in resolving the questions of when and by what path modern humans reached East and Southeast Asia.

The northern route featured plenty of the plant and animal resources that a group of hunter-gatherers needed to survive. From the Levant, the route offered ready access to Europe and central Asia and from there south and east to the Indian subcontinent and north and east into Siberia, but deserts and east-west trending mountain ranges—such as the Himalaya—restricted access to South and East Asia.

A southern coastal route, from the Horn of Africa across the Red Sea and along the shores of the Indian Ocean had a number of advantages. It would have allowed rapid movement over long distances, featured relatively few geographic obstacles such as deserts or mountains, and offered people adapted to life along the seashore essentially the same environment—with plenty of food and other resources—along the entire path of the migration.

Intervening bodies of water, such as the Timor Sea between what is now Indonesia and Australia, would not pose much of a challenge to people already familiar with traveling on the ocean, as humans living along the shores of the Horn of Africa would presumably be. There would be little direct evidence of their travels, however. If any groups built substantial settlements along the coastal route, those settlements have since been covered by the seas that rose 200 to 300 feet (60–90 meters) once the Ice Age came to an end.

Despite the challenges in identifying and dating modern human archaeological sites, especially along the now-inundated southern route, patterns of genetic diversity and archaeological evidence (including unequivocal modern human remains) suggest that modern humans reached East and Southeast Asia primarily via the southern route. The great migration began between 75,000 and 60,000 years ago during the

most recent Ice Age, when low sea levels narrowed the expanse of water the migrant humans had to cross to reach Asia.

The migrant humans traveled quickly, covering nearly 7,500 miles (12,000 kilometers) of Indian Ocean coastline in a few thousand years. In keeping with their coastal migratory path, modern humans appear to have settled areas near water before moving to the interior of the continent. Greater genetic diversity in Southeast Asia than in surrounding areas of East Asia, Australia, and Oceania suggests that modern humans resided in Southeast Asia longer than in the neighboring regions. It also suggests that Southeast Asia served as the local source region for the migrants who dispersed into the surrounding regions.

This hypothesis is reinforced by the dates of archaeological sites in and around Southeast Asia. Modern humans reached what is now Malaysia by 55,000 years ago. One of the better-dated sites, Niah Cave in Sarawak, Borneo, dates to a minimum age of 46,000 years before present (and is probably older). Modern humans reached mainland Australia shortly after arriving in Southeast Asia. The Nauwalabila site in northern Australia was settled by 50,000 years ago, and Devil's Lair, in southwestern Australia, was settled by 48,000 years ago. Tabun Cave, on the island of Palawan in the southern Philippines, was occupied by 47,000 years ago.

Determining the settlement history of China is difficult because of confusion over taxonomy and dates. Many Chinese researchers embrace the multiregional hypothesis of human origins. As such, many of their older sites (older than 70,000 years, or prior to the accepted start of the migration from Africa) are attributed to "archaic" or "premodern" *H. sapiens*, though it is probable that those are actually other species, such as *H. heidelbergensis* or even late surviving *H. erectus*. The dates of many of those sites are questionable. Nevertheless, most of the sites attributed to "modern" *H. sapiens* in China range from 40,000 to 30,000 years old.

Dates for sites in Siberia, which was populated by migrants from the southwest (ultimately via the northern route out of Africa) as well as from the southeast (via East Asia) range from about 40,000 years ago in the south to about 13,000 years ago in the north. Modern humans

most likely reached Japan about 36,000 years ago and the Korean Peninsula about 30,000 years ago.

—David M. Lawrence

Bibliography

- Forster, Peter, and Shuichi Matsumura. "Did Early Humans Go North or South?" *Science* 308 (2005): 965–966.
- Macaulay, Vincent, et al. "Single, Rapid Coastal Settlement of Asia Revealed by Analysis of Complete Mitochondrial Genomes." *Science* 308 (2005): 1034–1036.
- Mellars, Paul. "Going East: New Genetic and Archaeological Perspectives on the Modern Human Colonization of Eurasia." *Science* 313 (2006): 796–800.
- Olson, Steve. *Mapping Human History: Genes, Race, and Our Common Origins*. Boston: Houghton Mifflin, 2002.
- Oppenheimer, Stephen. "Radiocarbon-based Chronology of the Paleolithic in Siberia." *Quaternary International* 202 (2009): 2–13.
- Wells, Spencer. *The Journey of Man: A Genetic Odyssey*. Princeton, NJ: Princeton University Press, 2002.

What Happened to *Homo erectus* in Asia?

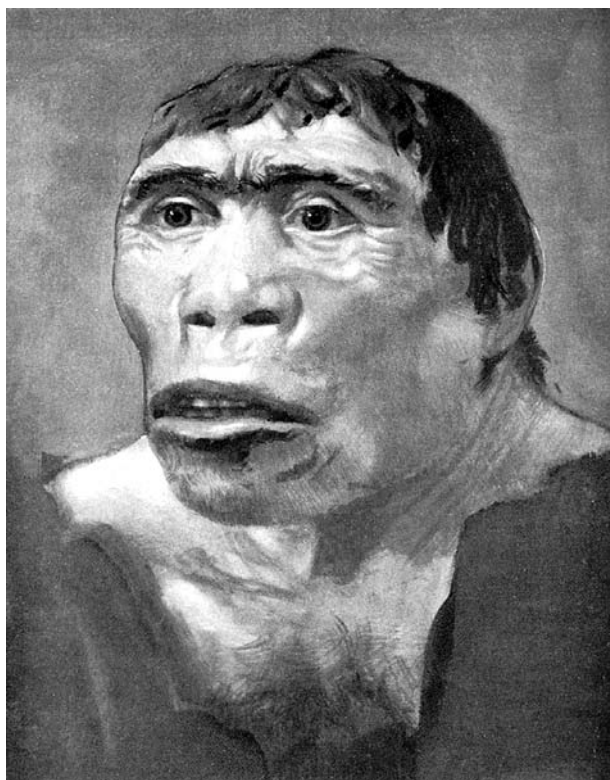
Homo erectus disappeared around 400,000 years ago from the East Asian mainland. On the Indonesian islands, the species survived well into the late Pleistocene, up to 200,000 (on Java) or even 12,000 (on Flores) years ago. On the mainland, *Homo erectus* was replaced already much earlier by archaic modern humans and these on their turn by modern humans. There is no evidence that *Homo erectus* migrated into Australia. The oldest evidence for human occupation of Australia is around 50,000 years ago and is ascribed to *Homo sapiens*. As far as is known today, modern humans were not the direct cause for extinction of earlier *Homo* species in Asia. More likely, the disappearance of *Homo erectus* was driven by changes in the climate and environment. This disappearance may be either extinction or a gradual evolution into a more advanced form.

The end of *Homo erectus* and the beginning of *Homo sapiens* in Asia is still a matter of debate. At present, two opposite views prevail. One maintains that *Homo sapiens* evolved some-

where in Africa and dispersed into the Old World, replacing *Homo erectus* in Asia and *Homo neanderthalensis* in Europe (the uniregional model, the Recent Out of Africa model, ROA). The other maintains that *Homo sapiens* evolved more or less simultaneously from various regional variants of *Homo erectus* (the multiregional model, or MRE) through intermediate archaic forms. In the second model, no major migration of *Homo sapiens* and no replacement took place. In the first model, *Homo sapiens* dispersed from Africa into southern and southeast Eurasia, less than 150,000 years ago. In this view, both migration and replacement took place. A variation of this model is that another archaic *Homo* migrated into Asia before (*H. heidelbergensis*); *H. sapiens* is then the third *Homo* species to colonize Asia.

The issue is unsolved, although mitochondrial DNA and the fossil evidence support the replacement model. The large gap in the Chinese fossil record between the last occurrence of *Homo erectus* (ca. 400,000 years ago) and the first occurrence of archaic or posterectine modern humans (250,000 years ago) and a similar gap between the last occurrence of the archaic modern humans (120,000 years ago) and the first occurrence of true modern humans (not before 90,000 years ago) also support the migration and replacement model. On the other hand, the gap may be artificial, and future findings may fill it. In that case, a gradual change from *Homo erectus* through the intermediate posterectine premodern forms to *Homo sapiens* took place in Asia as well as in Africa. Regional continuity in anatomical features would support the multiregional model, but at present there is no firm evidence for such continuity.

The two models imply a totally different scenario for what happened to *Homo erectus* in Asia. If the first model—no migration, no replacement—is followed, the two *Homo* species cannot be found together, and if so *Homo sapiens* should be found in later archeological strata than *Homo erectus*. If the second model—migration, replacement—is followed, the two *Homo* species may be found together in the same stratum. *Homo sapiens* may have been the direct cause of extinction of *Homo erectus*, or perhaps this latter species was already extinct prior to the arrival of modern humans.



Reconstruction of "Java Man" (*Pithecanthropus erectus*, now known as *Homo erectus*) based on a skull cap, thigh bone and two back teeth discovered in Pliocene fossil beds in Trinil, Central Java, by Dr. Eugene Dubois in 1894. (Jupiterimages)

The archaic modern humans who replaced Asian *Homo erectus* bear different scientific names, according to the theory followed. The relict population in Indonesia is sometimes called *Homo soloensis*. Current alternative names for the Chinese fossils are *Homo heidelbergensis* and *Homo daliensis*. *Homo heidelbergensis* is supposed to be the Eurafrikan sister-taxon of *Homo erectus* and the precursor of Neanderthals. Originally, the species was limited in distribution to Europe. At present, based upon a skull from Africa (also known as *Homo rhodesiensis*), which is similar to a lower jaw from Heidelberg (Germany), the distribution is thought by some to be much larger, including China.

The end of *Homo erectus* on Java is better documented than its end in China. Java was colonized by *Homo erectus* already around 1.2 million years ago at low sea level stands. Gradually, the sea rose and the island became isolated again, resulting in a local evolution of *Homo*

erectus on the islands. Around 120,000 years ago a new sea level drop occurred, and a modern Asian rain forest fauna migrated into Java with orangutans and possibly *Homo sapiens*. The dramatic faunal turnover constituted the end of *Homo erectus* on Java.

The new arrivals on Java all indicate that the conditions at that time were wetter and warmer than before. Such a marked change in environmental conditions led to the extinction of many species of the earlier fauna, including *Homo erectus*. The newcomer, *Homo sapiens*, apparently was better adapted to living in a wetter and warmer climate than was *Homo erectus*.

The nearby island of Flores saw a similar colonization of modern humans, but here a relict population of *Homo erectus* seems to have survived the impact and managed to continue its local, endemic evolution toward dwarfism, eventually leading to a new species, *Homo floresiensis*. This dwarf human, nicknamed the “hobbit,” lived till 12,000 years ago. Stone tools made by *Homo erectus* found on Flores date to around 800,000 years ago, which means that the isolation was a long-term one, apparently sufficient to evolve into an insular dwarf.

The Ngandong (or Solo) fossils of Java are sometimes presented as a relict (surviving) population of *Homo erectus*. The date of the Ngandong fauna is, however, 200,000 years ago. This is confirmed by the character of the associated fauna, which consists of extinct elements such as dwarf stegodons. The younger dates such as 50,000 or even 27,000 years are based on elements from another period. A true relict population is seen only on Flores. These fossils indicate that *Homo sapiens* might indeed have had contact with latest *Homo erectus* in insular Asia between 100,000 and 12,000 years ago. Here, modern humans might have led to the extinction of erectine humans, either directly through hunting and extermination or indirectly through habitat destruction or diseases.

—Alexandra van der Geer

Bibliography

- Delson, Eric. *Ancestors: The Hard Evidence*. New York: Alan R. Liss, 1985.
- De Vos, J., and P. Y. Sondaar. “Dating Hominid Sites in Indonesia.” *Science* 266 (1994): 1726–1727.

Into Europe and across Central and Northern Asia

When modern humans (*Homo sapiens*) left Africa, there is little doubt about much of their route into Europe: from a base in the Levant (eastern Mediterranean) and across Asia Minor into southeastern Europe. How they reached the Levant, however, is another question.

There are two competing theories for how humans left Africa. The most obvious is a northern route, from the Nile Delta eastward across the Sinai Peninsula into Asia. The other is a southern route, from the Horn of Africa and across the Red Sea to the Arabian Peninsula.

It is probable that modern humans used the northern route in an earlier failed migration out of Africa about 100,000 to 80,000 years ago. Evidence for this earlier migration comes from two caves, Skhul and Qafzeh, in what is now Israel. But those early *H. sapiens* migrants were displaced by a related species, *H. neanderthalensis*, that had replaced the modern humans by 70,000 years ago. There is no evidence that any modern humans are descendants of that earlier foray.

Both genetic data (especially patterns of genetic diversity) and dating of modern human archaeological sites suggest that migration that led to modern humans spreading across the globe followed the southern route out of Africa. Once on the Asian continent, the migrants could have followed the coasts of the Red Sea or the Persian Gulf through the interior of Arabia or even through what is now Iran to reach the Levant.

The great migration began between 75,000 and 60,000 years ago when the spread of northern ice sheets lowered sea levels and narrowed the expanse of water that migrant humans had to cross out of Africa. Initially, their movement north would have been blocked by desert conditions, but by about 50,000 years ago the climate moderated enough to permit movement northward. As they did so, they moved into areas populated by *H. neanderthalensis*. The Neanderthals held on for some time afterward before dying out about 24,000 years ago. Their presence may confuse some of the dating of putative modern human sites unless unequivocal modern human remains are present.

By the time modern humans arrived in Boker Tachtit in what is now Israel (47,000 to 46,000 years ago) and Ksar Akil in what is now Lebanon (45,000 to 43,000 years ago), they were to stay but not stay still. From their base in the Levant, they could move west into Europe, east into Asia, and even back into Africa by, ironically, the northern route.

By about 45,000 years ago modern humans had reached Asia Minor in Üçagizli Cave on the Mediterranean coast of what is now Turkey near Syria. From there, they could continue west, either along the Mediterranean and Aegean coasts or through the interior of what is now Turkey and cross the Bosphorus or Dardanelles straits into Europe. One putative modern human site, the Bacho Kiro Cave in eastern Bulgaria, dates to about 43,000 years ago.

The lower Danube River valley is key. Modern humans could follow it north of the Alps, obtaining ready access to central and northern Europe. They made quick progress, reaching what is now the Czech Republic shortly afterward and southern Germany by 38,000 years ago and crossing the Rhine Valley into what is now central France by 36,000 years ago. To the north, *H. sapiens* had moved into what is now western Ukraine by 35,000 years ago.

South of the Alps, modern humans likewise made rapid progress west. They reached sites in what are now northern Italy and northeastern Spain by about 40,000 years ago. Southern Italy was colonized from the north by 30,000 years ago. Southern Spain was colonized about the same time.

Ice blocked much of their access into northwestern Europe, including most of the British Isles. But to the northeast, in the Russian Arctic, much more land was available. Humans moving

northeastward had reached the Don River valley, in what is now Russia, by 42,000 years ago, and they had made it to the region of the northern Ural Mountains by about 28,000 years ago. As they spread across Siberia, they would have met migrants from the east, such as from what is now China.

As with Europe, modern humans could pass from the Levant into central Asia via either an eastern route through the mountains of what is now Iran and along the southern shore of the Caspian Sea, a central route through the Caucasus Mountains, or, once in Europe, a western route north of the Black Sea. It is possible that all three routes were used. From central Asia, they pushed through the mountainous spine of Asia to enter South Asia, primarily what are now Pakistan and India. Dating of a number of putative modern human sites suggests that they reached the Indian subcontinent by about 30,000 years ago.

—David M. Lawrence

Bibliography

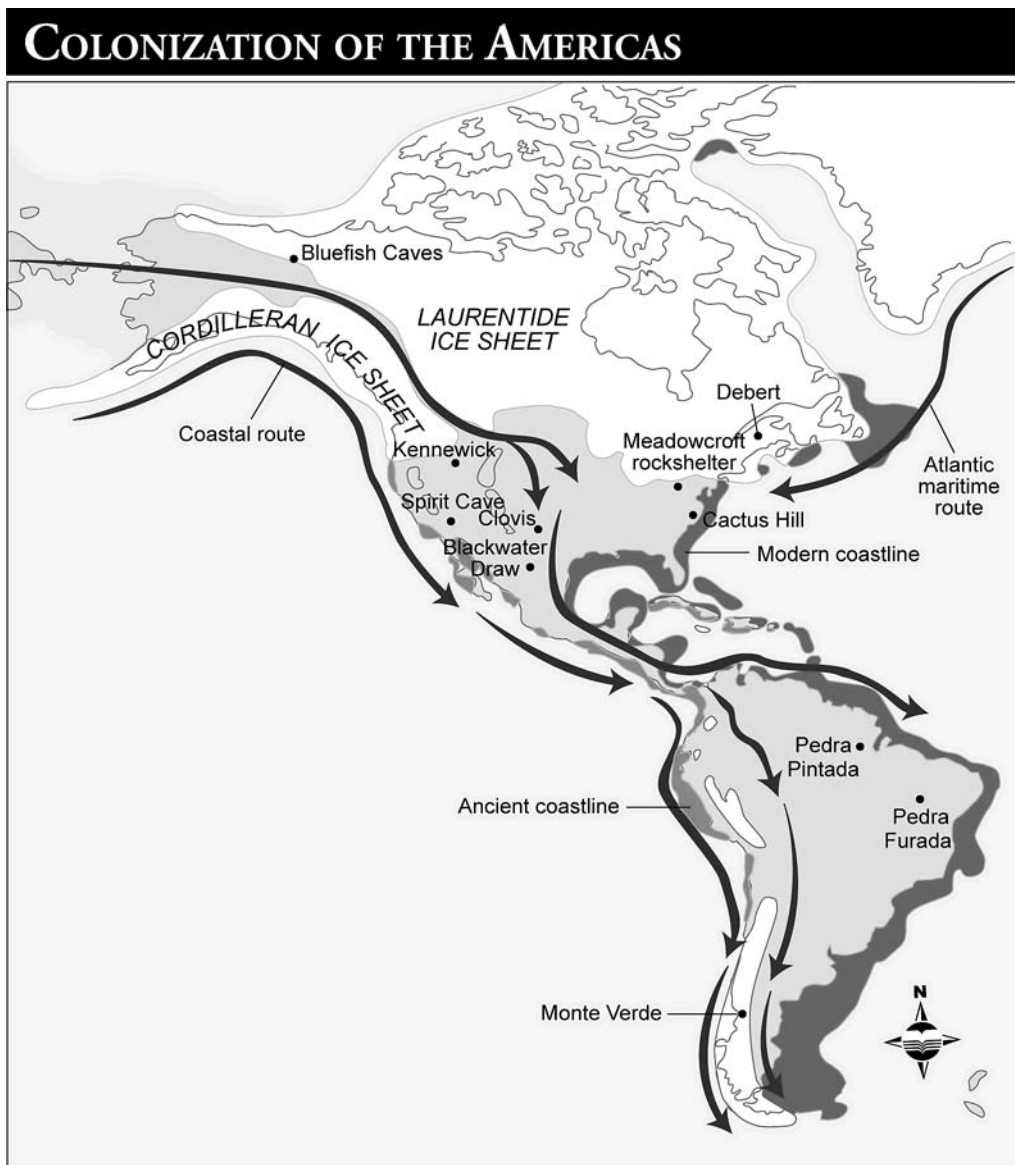
- Anikovich, M. V., et al. "Early Upper Paleolithic in Eastern Europe and Implications for the Dispersal of Modern Humans." *Science* 315 (2007): 223–226.
- Bar-Yosef, Ofer. "The Upper Paleolithic Revolution." *Annual Review of Anthropology* 31 (2002): 363–393.
- Hoffecker, John F. "The Spread of Modern Humans in Europe." *Proceedings of the National Academy of Sciences* 106 (2009): 16040–16045.
- Mellars, Paul. "Going East: New Genetic and Archaeological Perspectives on the Modern Human Colonization of Eurasia." *Science* 313 (2006): 796–800.
- Pavlov, Pavel, John Inge Svendsen, and Svein Indreli. "Human Presence in the European Arctic Nearly 40,000 Years Ago." *Nature* 413 (2001): 64–67.

■ Introduction: The First Americans

Who the first Americans were, when they arrived, and how they arrived are among the most contentious issues in world archaeology. The debate has escalated in

the last 20 years as new archaeological finds have brought conventional wisdom into question.

Until the late 1980s it was generally accepted that the first Americans were the Clovis people



who crossed from Asia to North America via a land bridge across the Bering Strait. These migrants were so-named because distinctive fluted stone spear points, as well as blades and cutting tools and fashioned mammoth bones, were discovered at Blackwater, near Clovis, New Mexico, in 1936–1937. Subsequently, numerous sites throughout North America, for example Murray Springs and Naco in Arizona, have yielded similar finds and reflect the food procurement strategies of these hunters who pursued animals such as the mammoth, horse, and bison, among others, and collected a wide range of plants. Most sites date to between 9500 and 9000 BCE and

have prompted the suggestion that the first migrants arrived approximately 13,000 to 11,000 years BCE before melting ice at the close of the last Ice Age caused the submergence of the Bering land bridge. They gradually moved south into Central and South America in search of big game. The Clovis culture prospered for circa 300 years, after which a range of disparate hunter-gatherer societies developed. Why this occurred remains unknown, though it may be associated with the extinction of many large animals (megafauna), which in turn may have been caused by altering environments and hunting pressures.

However, recent evidence from several North and South American sites has prompted a reappraisal of the colonization of the Americas. For example, several sites predate established Clovis sites. These include Monte Verde, southern Chile, where camp remains have been dated at 11,500 years BCE; the rock shelter at Pedra Furada, Brazil, where non-Clovis human remains and rock drawings date to circa 10,000 years BCE; and three sites in Patagonia dating between 9,000 and 8,500 years BCE. Several North American sites also yield pre-Clovis dates such as Big Eddy in Missouri, Page Ladson in Florida, the Schaefer and Hebior mammoth sites in Wisconsin, Walker in Minnesota, Meadowcroft Rock Shelter in Pennsylvania, and Cactus Hill in Virginia, where various artifacts date between circa 10,000 and 15,000 years BCE. Additional information includes DNA extracted from human coprolites (fossilized excrement) from Paisley Caves, Oregon, in 2008. First, the organic material is dated to 12,300 years BCE, which clearly predates Clovis and supports a pre-Clovis presence if only along an ice-free coastal corridor. Second, the DNA contained two sets of genetic sequences common to present-day indigenous Americans and native East Asians and Siberians, which reinforces the Bering land bridge as a chosen route.

Other suggestions include possible colonization from Europe by travel along the edge of the Northern Hemisphere ice sheet, independent colonization using boat transport from Southeast Asia, and migrants other than those from Siberia. Further evidence and dates will undoubtedly add to this debate.

—A. M. Mannion

Bibliography

- Balter, Michael. "DNA From Fossil Feces Breaks Clovis Barrier." *Science* 320 (2008): 37.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. Upper Saddle River, NJ: Prentice Hall, 2006.

Early Debates about the Peopling of the New World

Early theories concerning the peopling of the New World were largely grounded in myth or legend. It was not until Thomas Jefferson dem-

onstrated in 1784 that contemporary American Indian tribes were responsible for the large mounds found throughout the U.S. Southeast that theories became grounded in empirical evidence. Previously, many believed that these mounds had been the work of either the mythical Atlantians or one of the lost tribes of Israel. These speculations have been thoroughly discredited, but people continued to speculate about possible Old World cultures peopling the New World. For example, during the nineteenth and early twentieth centuries, some scholars theorized that Chinese junks had crossed the Pacific and reached the northwestern coast of North America and had peopled the New World. Others believed that Phoenicians from the Mediterranean made their way across the Atlantic or that West Africans reached eastern Mexico at some point during the late Holocene era.

Debates about the peopling of the New World changed in the early twentieth century when archaeologists discovered fluted spear points in diverse locations throughout the New World. These discoveries allowed them to argue for a single migration model to explain the appearance of the same technology across the New World at relatively the same time period. This model, which came to be known as the Clovis-First model, argued that the peopling of the New World took place no earlier than 11,500 years ago, based on the distinctive style of lithic point found in 1932 near Clovis, New Mexico. According to the Clovis-First model, a small group of hunters and gatherers, possibly numbering fewer than 100 individuals, entered the New World from Siberia at the end of the last Ice Age, approximately 11,500–12,000 years ago. Prior to that, it was believed that most of Canada was covered by the Cordilleran ice sheet that was centered over the Rocky Mountains and the Laurentide ice sheet centered over Hudson Bay, effectively blocking any way for peoples to enter the New World beyond Alaska. Clovis-First modelers hypothesized that at the end of the last Ice Age, a single migration of peoples funneled through an ice-free corridor that formed as a result of the melting of the two ice sheets.

The Clovis-First model was not universally accepted. In the work cited below, Alex Krieger argued that it was impossible to believe that the

THE CLOVIS SITE

The Clovis site, later named Blackwater Locality #1, is located approximately 7 miles (11 kilometers) north of the present-day city of Portales in eastern New Mexico. The site lies on the northern edge of Blackwater Draw and has produced the remains of 4 mammoths and 1 bison along with scattered remains of mammoth, bison, horse, camel, antelope, deer, wolf, peccary, turtle, rodents, and birds in addition to more than 166 lithic (stone) specimens. The site was first discovered in 1932 by E. B. Howard and John Cotter and spans a cultural sequence dating between 13,300 and 5,000 years before the present.

The archaeological evidence indicates that the site was originally a hunting and butchering site located near a watering hole, as lithic tools were recovered in direct association with extinct Pleistocene fauna. The association of lithic tools and Pleistocene fauna from this site was the first empirical proof that people were in the Americas by 12,500 years before the present, leading to the development of the Clovis-First hypothesis. This hypothesis argued that the first people migrated into the Americas at the end of the Pleistocene, bringing with them a simple lithic technology as discovered at the Clovis site. The lithic tools

recovered from the site were predominantly unifacial and were manufactured from blades and primary flakes. Only projectile points and bifacial knives, however, were flaked on both sides. Most of these primary flakes were made from Alibates flint from the Canadian River valley of the Texas Panhandle, indicating that the site was used on a seasonal basis by prehistoric hunters and gatherers. Evidence also indicates that these peoples dug wells to locate water and possibly to attract faunal resources. Although the Clovis-First hypothesis is no longer widely held, the Clovis site remains important in understanding early Native American lifeways.

—Peter Jones

Bibliography

- Haynes, C. V. "Fluted Projectile Points: Their Age and Dispersion." *Science* 145 (1964): 1408–1413.
- Warnica, James M. "New Discoveries at the Clovis Site." *American Antiquity* 31(3) (1966): 345–357.
- Waters, Michael R., and Thomas W. Stafford Jr. "Redefining the Age of Clovis: Implications for the Peopling of the Americas." *Science* 315 (2007): 1122–1126.

New World was unoccupied before the appearance of fluted points primarily because there were numerous sites that seemed to predate Clovis-era points. These early sites, because they could not be conclusively dated to the pre-Clovis era, were often ignored by those who followed a Clovis-First model of entry. Linguists also entered the debates, siding either with those who favored a Clovis-First entry model or those who came to be known as early entry modelers and who argued for a pre-Clovis peopling of the New World. Many of these linguists analyzed American Indian languages and argued that American Indians had been in the New World for more than 12,000 years based on interlanguage separation and diversity, thus adding further controversy to the debates.

As a result, early debates concerning the peopling of the New World could be placed into two camps, either those favoring the early entry

model or those favoring the Clovis-First model. The early entry modelers argued that such sites as China Lake in eastern California, Pedra Furada in Brazil, and Meadowcroft rock shelter in Pennsylvania all demonstrate that people had been in the New World prior to the Clovis period. Clovis-First modelers argued that these sites were inconclusive and could not be accurately dated. Outside these two general schools of debate, a few scholars continued to argue during the twentieth century for alternative models concerning the peopling of the New World.

The Clovis-First model is no longer widely believed. Instead, scholars have returned to proposing variations of the early entry model. Although most theories still argue that the peopling stemmed from North Asia, alternative theories have become more prominent. Some of these newer theories stem from the early debates. For example, some have argued that prehistoric Euro-

peans, and not North Asians, populated the New World. In 1941 Frank Hibben reported finding leaf-shaped bifaces and the remains of extinct fauna in the deepest culture-bearing stratum of Sandia Cave. Hibben noted that the flaking technology of the Sandia artifacts more closely resembled the Solutrean technology of Paleolithic era France than Clovis-era fluted points.

—Peter Jones

Bibliography

- Bonnichsen, Robson, and Alan L. Schneider. "Breaking the Impasse on the Peopling of the Americas." In *Ice Age Peoples of North America: Environments, Origins, Adaptations*, edited by R. Bonnichsen and K. Turnmire, 497–519. Corvallis: Oregon State University Press, 1999.
- Haynes, Gary. *The Early Settlement of North America: The Clovis Era*. Cambridge: Cambridge University Press, 2002.
- Hibben, F. C. *Evidences of Early Occupation of Sandia Cave, New Mexico, and Other Sites in the Sandia-Manzano Region*, Vol. 99. Washington, DC: Smithsonian Institution Press, 1941.
- Krieger, A. D. "Comments on 'The Paleo-Indian Tradition in Eastern North America,' by R. J. Mason." *Current Anthropology* 3(3) 1962: 256–259.

The North Asian Origins of the First Americans

It is generally recognized that the original New World populations migrated from North Asia. North Asia consists of all of present-day eastern Russia and northern Mongolia, including Siberia and surrounding areas. Although North Asia was inhabited by the middle Pleistocene era (ca. 500,000 years ago) or earlier, population levels did not expand throughout the area until the late Pleistocene era. Yet these peoples did not move into the Americas until they faced expanding population pressure and environmental changes. The evidence for the North Asian origins of the first Americans, although inconclusive, argues that these people migrated into the Americas largely from around the Lena and Kolyma river basins, located in present-day northeastern Siberia, beginning in the late Pleistocene era (ca. 35,000–15,000 years ago).

With the exception of the Diring Yuriakh site no credible evidence of human presence

earlier than the late Pleistocene era has been discovered in North Asia. The evidence of human settlement found at the Diring Yurakh site is contested. The oldest accepted sites in North Asia are known from the middle and lower Aldan River of Sakha (Ust-Mil 2 and the Ikhine sites), which date to circa 35,000 years ago. However, by this time archaeological evidence indicates that there was a unity among eastern and western Siberian sites in their virtually universal possessions of characteristic late Pleistocene artifact assemblages. The only exception to this general pattern is the Layer VII assemblage from the Ushki locality in Kamchatka, where the stemmed bifaces of the lowest component are at variance with this general lithic characteristic. This general lithic pattern argues, however, that the first Americans came from North Asia because of the close resemblance and chronology found between Alaskan and Yukon assemblages and North Asian assemblages.

The largest group of sites in North Asia thought to be tied to the first Americans lies in the Lena River basin. This area contains a massive river system that drains the Central Siberian Plateau and higher upland areas and mountains to the south and east. With the exception of Dyuktai Cave on the Aldan River, these sites all represent open-air occupations located on low or medium river terraces near stream confluences. Localities on the Aldan River include Ust-Mil 2, Ikhine 1–2, Verkhne-Troitskaya, Ust-Timpton 1, Ezhantsy, and Tumulur. Several important sites from this period are also located along the Olekma River, including Kurung 2 and Leten Novyy 1.

Evidence further indicates that these first Americans of North Asian origin likely moved into the Lena Basin from the Middle Amur River, and the southern Primorye. Sites located in the Middle Amur area are found in the Zeya-Bureya Lowland, and include one possible early locality along the Zeya River (Filimoshki) and several sites along the Amur River (Kumara 1–3). Sites in the southern Primorye occur on both sides of the Sikhote-Alin Mountains, which extend along the coast of the Sea of Japan. They include Geographical Society Cave on the Suchan River and several open-air localities situated along small rivers, most notably Osinovka and Gorbatka 3 on

➤ DID EUROPEANS MIGRATE TO THE NEW WORLD?

Whether prehistoric Europeans possibly migrated to the Americas prior to Columbus's discovery has been a question of interest for more than 200 years. By 1891, Rasmus B. Anderson published *America Not Discovered by Columbus*, which contained a bibliography of 350 sources on the topic. It listed claims of America's discovery by the Chinese, Arabs, Welsh, Venetians, Portuguese, and Poles. However, the majority of the references supported the notion of Vikings as the first to arrive in the Americas.

This hypothesis was confirmed in 1960 when Helge Ingstad discovered Norse ruins at L'Anse aux Meadows on the northern tip of Newfoundland. More recently, several sites and lines of evidence have been cited as supporting an even earlier migration of Europeans into the New World. This hypothesis, called the Solutrean hypothesis, postulates that Upper Paleolithic peoples from Europe, utilizing Solutrean lithic technology, migrated into the Americas during the late Pleisto-

cene era. Evidence supporting such an argument remains elusive and highly controversial primarily because the Solutrean ended in Europe at least 5,000 years before the Clovis technology appeared in the America. Furthermore, there are major differences between these two technologies in terms of lithic composition.

—Peter Jones

Bibliography

- Chandler, James M. "Clovis and Solutrean: Is There a Common Thread?" *Mammoth Trumpet* 16(3) (2001): 15.
- McGhee, Robert. "Contact between Native North Americans and the Medieval Norse: A Review of the Evidence." *American Antiquity* 49(1) (1984): 4–26.
- Straus, Lawrence Guy. "Solutrean Settlement of North America? A Review of Reality." *American Antiquity* 65(2) (2000): 219–226.

the Illistaya River, and Ustinovka 1 and Suvorovo 3 on the Zerkalnaya River.

Some have used the above evidence, along with morphological data, to argue that some of the first Americans may have originated from along the Japanese littoral. However, the genetic evidence supports the theory of the North Asian origins of the first Americans, although it traces their origins further back in time (ca. 35,000–25,000 years ago) based on Y chromosome and mitochondrial DNA (mtDNA). The major Y haplotype present in most American Indians has been traced back to recent ancestors common with Siberians. These ancestors include the Kets and Altaians from the Yenisey River Basin and Altai Mountains. The next common ancestor gave rise also to Caucasoid Y chromosomes, probably from the central Eurasian region. The mtDNA evidence argues for a similar conclusion, although it places the homeland of these first Americans somewhere between contemporary Mongolia and Siberia, most likely around present-day Tibet and Ulan Bator. This is based on evidence indicating that all mtDNA lineages

can be found in Siberia except lineage B, which is found in the Ulan Bator region of North Asia.

The linguistic evidence also argues that the first Americans came from North Asia. This is based on phylogenetic language comparisons which indicate that American Indian languages are more closely linked to North Asian languages than any other known languages in the world. Linguistic analysis, however, is unable to give any finer resolution to the debate over where in North Asia the first Americans originally came from. Some attempts have been made to link linguistic, genetic, and dental evidence together, placing the North Asian origins of the first Americans in southern Siberia and surrounding regions, but all attempts have been met with a high level of skepticism based on a lack of empirical evidence.

—Peter Jones

Bibliography

- Meltzer, David. *First Peoples in a New World: Colonizing Ice Age America*. Berkeley: University of California Press, 2009.

Powell, Joseph. *The First Americans: Race, Evolution, and the Origin of Native Americans*. Cambridge: Cambridge University Press, 2005.

Into South America

Current evidence indicates that by the end of the Pleistocene era (approximately 12,500 years before the present), humans had already occupied the major environmental zones in South America. These peoples enjoyed diverse cultural traditions and different levels of technological development and subsistence patterns. It is unknown how and exactly when these peoples moved into these areas, but recent scholarship has argued that the dates were earlier than has been traditionally believed.

Early studies attempting to reconstruct specific colonization routes and times relied largely on geographic data that looked at South America on a continental scale. For example, Carl Sauer explicitly ruled out movement along the Pacific Rim of South America because of this region's difficult topography. He argued that the first South Americans colonized the eastern portion of the continent. This geographically based entry model was founded upon a supposed relationship between Clovis-type points associated with North America and a scatter of stemmed fishtail points found from Central America and throughout the Andean chain to the tip of South America. Since scholars often associated Clovis-type points with big game hunting lifestyles, they assumed that the makers of fishtail-type points were descendants of big-game hunters who had migrated from North America. Recent studies, however, have demonstrated that any relationship with Clovis technology and the lithic points found in South America is tenuous since very few South American fishtail points are fluted, and those that are were not crafted using the same methods as with Clovis. Furthermore, most paleobotanical evidence indicates that the first South Americans, like their North American counterparts, practiced a diverse hunting and gathering lifestyle. Thus, they would not have been restricted to following large animals in the grasslands and savannas of eastern South America.

Current evidence suggests that the first South Americans did not follow the coastline for

WHAT WAS FOUND AT MONTE VERDE?

Monte Verde is credited as the earliest human occupation site in the New World. The site, in south-central Chile, is located by a small creek near the Pacific Ocean. It is believed to have been occupied about 12,500 years before the present. This site predates various Clovis sites, originally believed to have been the earliest human occupations sites in the New World, by about 1,000 years.

The Monte Verde site, first excavated in the late 1970s by archaeologist Tom Dillehay, was heavily analyzed and scrutinized by the archaeological community for at least 20 years. Based on materials collected, scientists have surmised that the site was occupied by a hunter-gatherer group. Optimal conditions at the site allowed for the preservation of various organic materials such as animal hides, wooden stakes, and bones. These organic materials as well as the stone tools found at Monte Verde helped support the claim that the site was occupied by humans, since the materials showed evidence that they were worked and manipulated by humans. Artifacts also indicate the presence of huts, fire places, and tent stakes with knotted ropes attached. Scientists believe that the people who inhabited Monte Verde gathered local flora such as berries, chestnuts, potatoes, and mushrooms and also hunted wild game, as evidenced by mastodon bones found at the site. Archaeological evidence shows that the Monte Verde people also fished but relied more on hunting and gathering. They lived in tentlike structures that were covered by animal hides.

—Christine Boston

long. They either continued down along the western side of the Andes or proceeded along the Caribbean and Atlantic coasts and into the central part of the continent to the east of the Andean chain. Movement throughout the interior of South America during the late Pleistocene was not as difficult as today primarily because much of the interior was covered with grassland, scrub forest, or savannas. Tropical rain forest environments were only present in the western Amazon basin, where movement and settlement may have been difficult. Despite these two routes of colonization, archaeological evidence indicates that people had colonized

most of South America by the end of the Pleistocene era, although population densities did not reach high levels until the Middle Holocene era.

The site of Taima-taima, located in the Caribbean coastal zone of Venezuela, has revealed a fragment of an El Jobo point in the pelvic cavity of a mastodon. The bones bore clear-cut marks indicating Late Pleistocene human activity. Likewise, the site of Tibitó, located in a small basin on the Sabana de Bogotá high in the Andean uplands of Colombia, has revealed clusters of bone fragments and stone artifacts. This site has been dated to the end of the Late Pleistocene era and reveals that prehistoric Andean peoples were living in the Andean uplands by this time.

Archaeologists have discovered several sites along the Pacific Coast route and found evidence from the desert Pacific coast of southern Peru that indicates that populations developed a specialized maritime economy beginning in the Pleistocene era and continuing through the Early Holocene era. For example, the site of Quebrada Jaguay indicates that peoples were intensively exploiting fish, marine clams, crustaceans, and seabirds by the end of the Pleistocene era. The site of Monte Verde, 1,553 miles (2,500 kilometers) farther south, suggests that Late Pleistocene peoples successfully utilized the varied resources of woodland and wetland environments that existed in the temperate rain forests of south-central Chile at the time.

In the interior uplands of eastern Brazil, where more than half a dozen archaeological sites have been dated to circa 9000 BCE, evidence indicates that the first South Americans were not as specialized as peoples on the Pacific

coast. Lapa do Boquete, for example, is a large limestone rockshelter that suggests that prehistoric peoples hunted and gathered palm nuts, freshwater mussels, fish, and small- to medium-sized mammals.

Early foragers also successfully adapted to the tropical rain forest of the Amazon basin by the Late Pleistocene era. The lowest occupation level at Caverna da Pedra Pintada, a large rockshelter in a sandstone bluff just north of the Amazon River, has been dated to circa 9000 BCE. Floral and faunal remains indicate a broad-spectrum foraging economy that used a small but varied lithic assemblage as well as bifacial stemmed points and thick unifacial scrapers.

—Peter Jones

Bibliography

- Anderson, David, and J. Christopher Gillam. "Paleoindian Colonization of the Americas: Implications from an Examination of Physiography, Demography, and Artifact Distribution." *American Antiquity* 65 (2000): 43–66.
- Dillehay, Tom D. *Monte Verde: A Late Pleistocene Settlement in Chile 1: Paleoenvironment and Site Context*. Washington, DC: Smithsonian Institution Press, 1989.
- Roosevelt, A. C., et al. "Paleoindian Cave Dwellers in the Amazon: The Peopling of the Americas." *Science* 272 (1996): 373–384.
- Sandweiss, Daniel H., et al. "Quebrada Jaguay: Early South American Maritime Adaptations." *Science* 281 (1998): 1830–1833.
- Stanford, Dennis. "Clovis Origins and Adaptations: An Introductory Perspective." In *Clovis Origins and Adaptations*, edited by R. Bonnicksen and K. Turnmire. Corvallis: Center for the Study of First Americans, Oregon State University, 1991.

■ Introduction: Miscellaneous Movements

Aside from the major movements of *Homo sapiens* that populated our planet, there have been innumerable migrations of humans in our prehistory. Many of these movements can be traced in multiple ways, including artifacts, remains of plants and animals, human remains, and, increasingly, both modern and an-

cient DNA. Large-scale movements are relatively easy to identify, but there are likely to have been many "local" movements that will remain invisible to the archaeologist and historian.

In the absence of human remains and DNA, archaeologists and historians have debated how artifacts originate in one region and are then

found in a later time period in another. Do ideas—that is, concepts of artifact form, subsistence practice, and social relationships—diffuse from one population to another, or are they moved by people who physically carry them into these new locations? This debate, then, pits diffusion against migration as competing explanations of the appearance of artifacts and other cultural traits in regions across the globe.

For much of the past, it is likely that both diffusion and migration had roles to play in the spread of cultural materials. People are excellent borrowers and imitators and will borrow ideas and concepts when they can be usefully adapted into local circumstances. For example, for most of the early twentieth century, archaeologists believed that the idea of plant and animal domestication diffused from a Near Eastern heartland into Europe and beyond. Although there may well have been local instances where this may have been true, the evidence is overwhelming that people migrated from the Near East and carried their plants and animals with them. The analysis of ancient and modern DNA shows clear traces of these ancient migrants in contemporary European populations.

The causes of migrations are hotly debated within archaeology. Environmental change has long been seen as a likely cause for movement; long-term, persistent, and severe drought is known to have forced people to move from dry regions to more fertile ones. Cultures are resilient, however, and instead of moving, they may develop new subsistence strategies and cultural practices that allow them to stay in their familiar places. Another cause of migration is population growth. As a local population begins to grow, it may soon begin to outstrip the capacity of a subsistence system to feed the growing population. An alternative to changing subsistence practice—that is, to intensify resource production—may be to simply move to an uninhabited place. Population pressure of this kind has been identified as one of the likely causes of the movement of peoples out of the Near East at the advent of the Neolithic. During the Paleolithic, populations that experienced resource shortfalls probably moved frequently since they had relatively few neighbors. As populations grew denser, however, with the advent of villages and seden-

tary groups, movement became a less common response to increasing resource shortfalls.

Other causes for population movement include warfare and the inability of existing social institutions to prevent political frictions within groups. However, these causes would have been relatively uncommon for most of our evolution and would only have become more prominent after peoples began to become more sedentary.

Some population movements have involved the invention of new technologies. To move domesticated animals and plants into the Aegean Islands, for example, more sophisticated watercraft were required. And movement into very cold or very high-elevation environments required the development of warm clothing. Extreme environments like the Arctic or the Tibetan plateau were occupied relatively late in our prehistory only after our species was capable of inventing these technologies.

—Mark Aldenderfer

Bibliography

- Gamble, Clive. *Timewalkers: The Prehistory of Global Colonization*. Cambridge: Harvard University Press, 1996.
- Scarre, C., ed. *The Human Past: World Prehistory and the Development of Human Societies*. 2nd ed. London: Thames and Hudson, 2009.

The Spread of Agriculture into Europe—Diffusing Ideas or Moving Peoples

The beginnings of agriculture are to be found in the Near East from where the knowledge of plant cultivation spread into neighboring areas of Anatolia in what is modern-day Turkey. There is evidence for sedentary communities in Anatolia practicing horticulture on a small scale from the ninth millennium BCE onward. The first settlement with an agrarian population that continued to flourish for a longer span of time (more than 1,000 years) was Çatalhöyük in the Konya Plain (southern Anatolia).

The cultivation of plants for food production and the raising of cattle require the mastering of a set of specialized technologies. The knowledge of these technologies and their application is called the Neolithic package (or agrarian package). There is a consensus among

➤ MARITIME MOVEMENTS INTO THE AEGEAN, 7000 BCE

Trade routes linking Anatolia with the Aegean area and continental Europe can be assumed to be very old, dating at least to the eighth millennium BCE. Indicators of early trade relations between people settling on both sides of the Aegean Sea and beyond are trade goods such as obsidian (from the island of Melos and traded to mainland Greece) and spondylus shells, which found their way from the coasts of the Aegean inlands. Trading contacts were facilitated by the land bridge that linked Europe with Asia until circa 6700 BCE, when the Bosphorus Strait opened.

Later, such contacts continued under the auspices of a network of maritime routes that were frequented by people from Anatolia and southeastern Europe moving in both directions. Maritime movements in the early millennia BCE have to be imagined as short-distance travels between the islands. At certain times, the Dardanelles and the Bosphorus connected people settling on either side; in other periods, they functioned as geographical and even cultural divides. For instance, during the fifth millennium BCE there was much movement in the convergence zone around the Aegean, while during the fourth millennium BCE the Dardanelles functioned more like a dividing line. Contacts became lively again toward the end of that era. The Ezero culture in Bulgaria is known to have inspired pottery styles and ornamentation of Troy I. Troy, at the southern tip of the Dardanelles, was founded around 2950 BCE.

—Harald Haarmann

scholars that agriculture spread from western Asia and reached southeastern Europe from Anatolia sometime before 7000 BCE. What has remained a matter of scientific debate to the present is the way in which the agrarian package was adopted by the ancient populations that settled around the Aegean Sea.

There are two hypotheses of the spread of agriculture into Europe that, at first sight, seem to exclude one another but that from the perspective of the history of human ecology both have a weight in explaining how early agrarian settlements emerged and developed in Europe. The two hypotheses emphasize different scenar-

ios for the spread of the agrarian package into Europe.

The first stresses migration as the source of spread (the agrarian package spread with the movements of ancient populations leaving Anatolia and migrating into Europe). In a modern version of the migration hypothesis, the spread of agriculture is linked to the assumed movements of Indo-Europeans from western Asia. However, the most ancient elements of agricultural terminology in the languages of the Balkanic region are of pre-Indo-European fabric.

The second theory considers idea diffusion as the source of spread (the knowledge of agriculture spread to local populations in southeastern Europe that acculturated and adopted a sedentary lifeway). The old indigenous population left its genetic footprint in the region (see below).

The earliest evidence for the practice of agriculture in the Aegean comes from Crete (the area of Knossos), dating to circa 7000 BCE. The dates for the beginnings of agriculture in continental Europe (the plain of Thessaly in Greece, coastal areas of the Black Sea in Bulgaria and Rumania) are somewhat earlier. The archeological record in southeastern Europe does not show evidence of large-scale immigration during the eighth or seventh millennia BCE. This means that the earliest agrarian communities were local people who had experienced the transition from a hunter-gatherer economy to the sedentary lifestyles of agriculturalists through acculturation. Those people had previously established trade contacts with the agriculturalists in western Anatolia, from whom they adopted the knowledge and the technologies of plant cultivation. Judging from the traces of a small-scale immigration in the seventh millennium BCE, this was directed and remained limited to the plain of Thessaly in eastern Greece.

There is ample genetic and linguistic evidence to show that the hunter-gatherers who inhabited southeastern Europe prior to the advent of the Indo-Europeans were of non-Indo-European stock. On the genetic map, the footprint of this ancient population is recognizable as a divergent genomic profile, called the Mediterranean outlier by geneticists. This profile is distinct from the genetic composition of all surrounding populations.

According to the migration hypothesis, the hunter-gatherers were driven out of the arable land, where the immigrating agriculturalists then settled and built their communities. And yet there are weighty arguments that stand against this assumption, and these come from the most vivid documentation of human activity, language. A broad layer of loanwords can be identified that survived, as relics from the language of the indigenous people, in ancient Greek and in languages of the Balkans. These also include agricultural terms and vocabulary of other technologies that developed in the agrarian communities such as weaving, pottery, and house construction.

These pre-Greek elements that are attested in the lexicon of ancient Greek support the assumption that the hunter-gatherers of Old Europe were not displaced by immigrants but that they adopted the agrarian package via idea diffusion and adjusted to agrarian lifestyles. Otherwise, they would not have developed a terminology for the agrarian package in their native language. The early indigenous agriculturalists crafted a cultural sphere where settlements were linked by intense trade relations for mutual advantage. This cultural complex with its egalitarian society has become known as Old Europe.

The spread of agriculture from southeastern Europe into the central part and the east of the continent unfolded in several waves. By circa 5500 BCE the agrarian package had reached southern Russia and by circa 5000 BCE had reached the British Isles. The spread of agriculture into central Europe was swift and is linked to the LBK (Linearbandkeramik) culture, named after their particular ornamentation of pottery in linear bands. The absolute time of the speed of spread was estimated according to a wave of advance model. This model, however, is too theoretical and cannot explain the various local conditions of human ecology. The archaeological insights from agrarian communities illustrate that older settlements expanded and that in the course of time plant cultivation shifted from the most fertile to less fertile arable land in the surroundings. Thus, the spread of agriculture in Europe unfolded under specific local conditions of land exploitation and the exploration of new terrain for settlements.

Later, during the sixth millennium BCE, there is genetic evidence for a populous migration movement from western Asia into Europe. This movement might have been caused by the climatic change around 5800 BCE, a rapid warming that resulted in a drying out of much of the arable soil in western Anatolia and might have forced the inhabitants to move. For instance, Hacilar was abandoned around 5500 BCE. The movement from western Anatolia in the sixth millennium BCE, however, is not related to the early spread of the agrarian package because agriculture had already spread earlier throughout most parts of the continent.

—Harald Haarmann

Bibliography

- Bellwood, Peter, and Colin Renfrew, eds. *Examining the Farming/Language Dispersal Hypothesis*. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Budja, Mihael. "The Transition to Farming in Southeast Europe: Perspectives from Pottery." *Documenta Praehistorica* 28 (2001): 27–47.
- Harris, David R. "The Expansion Capacity of Early Agricultural Systems: A Comparative Perspective on the Spread of Agriculture." In *Examining the Farming/Language Dispersal Hypothesis*, edited by Peter Bellwood and Colin Renfrew. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.

How Many American Migrations?

Current archaeological evidence indicates that the first Americans migrated from northern Asia into the Americas sometime during the late Pleistocene era (130,000–12,500 years before the present). How many migrations took place and by which routes, however, are still unresolved by scholars. The historic Clovis-First model argued that a single migration took place around 12,500 years before the present and that this migration funneled south through an ice-free corridor located along the eastern flanks of the Rocky Mountains, eventually populating all of the Americas. More recent models, based on archaeological, geographical, genetic, morphological (characteristics defining the form and structure of an organism), and linguistic data refute the simplistic, linear Clovis-First model and instead argue for multiple

► HUMAN ADAPTATION TO LIVING CONDITIONS IN HIGH ALTITUDES—CHUSANG ON THE TIBETAN PLATEAU

Findings from recent geological and archeological research emphasize the importance of prehistoric sites on the Tibetan plateau that provide evidence for the early presence of humans in the region. In the mid-1990s remnants of a hearth and human footprints in a sedimentary deposit were found at Chusang, west of Lhasa. The footprints originated when human beings (adults and children) stepped onto mud that hardened under the influence of carbonate in a later overlay of water from a hot spring. Optically stimulated luminescence dating produced a high age for these remains. If the date given of circa 21,000 years before the present can be confirmed by other dating methods, then Chusang is the oldest campsite in Tibet. More recent dating, however, places the age of the site at approximately 30,000 years ago.

The presumed high age makes the site sensational in its significance for the history of human evolution. The Tibetan plateau was inhabited already at the time of maximum glaciation during the last Ice Age, and the region was not covered by a thick layer of ice. Living conditions in the area at an elevation of 13,779 feet (4,200 meters) must have been extremely harsh. Prehistoric Chusang provides evidence for early human adaptation to life in high altitudes. So far, no artifacts (i.e., tools or mobile art) have been found at the site, which still awaits systematic exploration.

—Harald Haarmann

Bibliography

Alenderfer, Mark, and Zhang Yinong. "The Prehistory of the Tibetan Plateau to the Seventh Century A.D.: Perspectives and Research from China and the West since 1950." *Journal of World Prehistory* 18(1) (2004): 1–55.

migrations accomplished in different ways. These more recent models argue that several migrations into the Americas took place during the Late Pleistocene and Early Holocene eras along several different routes and that these migrations did not follow a single north-south migratory pathway.

Archaeological evidence indicates that the earliest Americans made several types of lithic

points (stone arrowheads), ranging from fluted points such as Clovis and Folsom points in North America to fishtail-type points in South America. This evidence was originally taken to be indicative of a single migration wave whereby fishtail points were thought to be a type of Clovis point used by the first South American migrants from North America. Presently, however, it is generally accepted by archaeologists that the first Americans created different point styles in different regions and that little migratory evidence can be discerned based on point dispersals alone. For example, although several Clovis points have been recovered from sites dating between 11,200 and 10,900 years before the present on the Great Plains, Clovis points are actually more common in the Eastern Woodlands, where they have been dated somewhat earlier at several sites. Furthermore, Clovis-like fluted points are rarely found in Central America as far as Panama, and only a few Clovis-like points have been reported from Colombia and Chile. Stemmed fishtail points, on the other hand, are more common in South America, and several sites in the southern cone have yielded fishtail points dated to as early as 11,000 years before the present. If a single migration took place, as suggested by the Clovis-First model, then such a model would require that a viable breeding population had migrated about 7,456 miles (12,000 kilometers) from northern North America to southern South America within a few hundred years to fit with the archaeological data. As suggested by archaeologists Alan L. Bryan and Ruth Gruhn, however, a more parsimonious model argues that during the Late Pleistocene era several waves of first Americans brought a relatively simple retouched flake industry with them from northeast Asia that they subsequently modified based on their particular needs, a model that could account for the relative simultaneous appearance of fluted and stemmed points throughout North and South America.

Furthermore, because there is no clear spatial or chronological gradient in initial archaeological dates of first American sites, single-wave models suggest that any expansion of peoples into the Americas was both spatially and chronologically rapid. As such, individuals would have needed to migrate 3.7 to 6.2 miles (6 to 10 kilo-

meters) per year between birth location and adult residence to account for the archaeological evidence, an unlikely proposition based on ethnographic data from contemporary hunter-gatherer migration rates. More recent evidence indicates, on the contrary, that numbers of sites or of discarded artifacts (such as lithic scatters containing fluted projectile points of early migrants) are more parsimoniously understood as markers of cumulative occupancy rather than indicators of individual migrating groups. Such an interpretation is more in line with models arguing for several migration waves because such an interpretation does not require such a rapid initial peopling of the continents.

Although geographic data is unable to provide evidence on the exact number of migrations into the Americas, it is able to indicate whether there was more than one migration wave. Geographically, there were two primary paths into the Americas once across the Bering land bridge, either along the eastern flanks of the Rocky Mountains and through an ice-free corridor or along the northwestern coast along modern-day Alaska by means of coastal refugia (an area that has escaped detrimental changes to a habitat) that remained unglaciated. Archaeological evidence spanning the Late Pleistocene and Early Holocene transition period demonstrates that both geographic routes were in use during the initial peopling, indicating that different migratory groups used different pathways to enter the Americas.

Corroborating the archaeological and geographical evidence, molecular genetic studies of North Asian and Native American populations indicate that several migrations took place, although at an earlier time than the archaeological evidence can empirically confirm. The molecular genetic data indicates that the initial migration into the Americas originated in south-central Siberia between 35,000 and 20,000 years before the present. Early migrants are hypothesized to have followed the northwestern coastal route until they were south of the American glacial ice sheets. As they migrated throughout the continent, they brought with them similar genetic makeup, as has been deciphered by archaeologists studying the mitochondrial DNA of their remains. Furthermore, different genetic makeup of

a second group suggests a later second migration. A third migration is hypothesized to have taken place after the Last Glacial Maximum period in northern North America, giving rise to present-day Aleuts, Eskimos, and Na-Dene peoples.

One of the postulates put forth by single-wave models is that indigenous American populations should constitute a homogeneous population. The molecular genetic evidence does not support such a postulate but rather supports the conclusion that several migrations into the Americas took place, primarily because indigenous American populations are genetically heterogeneous. A similar conclusion is also supported by the cranial morphological evidence. For example, studies comparing Early Holocene cranial morphological characteristics with worldwide human cranial variation have found that the first Americans were morphologically diverse. However, the cranial morphological evidence has once again also brought into question whether all migration waves originated in North Asia. Originally suggested by archeologist Frank C. Hibben with his discovery in 1941 of bifaces (two-sided stone tools) that resembled Upper Paleolithic Solutrean points, more recent cranial morphological and archaeological evidence has been used to argue for a possible migration from prehistoric Europe, or possibly Oceania, into the Americas. For example, at the site of Santana do Riacho, dating between 9,500 and 8,200 years before the present and located at Lagoa Santa/Serra do Cipó in the state of Minas Gerais, Brazil, cranial morphology of skeletons is characterized by long and narrow neurocrania (skull around the brain) and low and narrow faces with low nasal apertures and orbits. These crania exhibit stronger morphological affinities with present-day Australians and Africans than any other world population, and they show no resemblance to recent northern Asians. As such, these findings have led some researchers to conclude that more than one migration took place and possibly from more than one continental region. Likewise, the Cactus Hill site in Virginia, for example, presents evidence of a pre-Clovis occupation with lithic tool characteristics that some have attributed to be of Solutrean technology. However, the molecular genetic and linguistic data does not support the

hypothesis that prehistoric Europeans or peoples from other continents migrated to the Americas during the Late Pleistocene or Early Holocene eras, complicating the picture.

The final line of evidence supporting multiple migration waves is linguistic. The hypothesis put forth by Greenberg that all indigenous American languages can be reduced into either Amerind, Na-Dene, or Eskimo-Aleut language stocks is highly controversial and largely rejected. Instead, the diversity of prehistorically found indigenous languages is not thought to be reducible beyond several dozen language stocks. If a single-wave model is to fit with the linguistic data, then the initial migrating population would have had to have spoken more than one language. As with the other types of data, a more parsimonious interpretation is that several migrations into the Americas took place, one possibly for each language stock.

—Peter Jones

Bibliography

- Bryan, Alan L., and Ruth Gruhn. "Some Difficulties in Modeling the Original Peopling of the Americas." *Quaternary International* 109-110 (2003): 175-179.
- Haynes, Gary. *The Early Settlement of North America: The Clovis Era*. Cambridge: Cambridge University Press, 2002.
- Hazelwood, Lee, and James Steele. "Spatial Dynamics of Human Dispersals: Constraints on Modeling and Archaeological Validation." *Journal of Archaeological Science* 31 (2004): 669-679.
- Jones, Peter N. *American Indian mtDNA, Y Chromosome Genetic Data, and the Peopling of North America*. Boulder, CO: Bäuu Institute Press, 2004.
- Neves, Walter A., et al. "Early Holocene Human Skeletal Remains from Santana do Riacho, Brazil: Implications for the Settlement of the New World." *Journal of Human Evolution* 45 (2003): 19-42.
- Schurr, Theodore G., and Stephen T. Sherry. "Mitochondrial DNA and Y Chromosome Diversity and the Peopling of the Americas: Evolutionary and Demographic Evidence." *American Journal of Human Biology* 16 (2004): 420-439.

Moving into the World's Extreme Environments

Modern humans are the only species that have spread throughout the world, leaving out only the most inaccessible and uninhabitable regions

such as the polar zone, the most arid deserts, and the highest mountain ranges. And yet even in Antarctica there are some permanently inhabited settlements, and even the waterless routes through the western Sahara are frequented by Berbers (Touareg).

There are at least two other hominid species known to have peopled wide areas of the Old World, and these are archaic humans and *Homo erectus*. The latter species left Africa, the homeland of all hominid species, and spread throughout vast areas of Eurasia. Archaic humans in their European subspecies, the Neanderthals, in particular reached out farther than *Homo erectus*. But it was modern humans who explored all habitable lands on all continents.

According to the general idea of adaptation as propagated by evolutionary theory, the drive of hominids to explore the regions of the world cannot be explained. There was no need for adaptation that would have brought humans to extreme environments because they could have stayed in regions with more prosperous living conditions. And yet there is a driving force, innate in modern humans, that the other hominid species lacked or only possessed in a rudimentary form, and this is intentionality. This driving force that exceeds the goals for physical survival is the source for the individual's curiosity, for the testing of one's capabilities, for the discovery of the unknown, and for the mobilization of one's inventiveness. Intentionality induces complex behavior such as exploration, and this is an expression of a higher-order consciousness, typical of modern humans and untypical of previous hominids.

Humans in early prehistory might have moved into extreme environments as a result of the challenge to explore the unknown, not because they would have been forced by ecological constraints to do so. In later periods of the history of human settlement, many people were displaced and forced to live in extreme environments because of outside pressure. Numerous cases of displacement are known, such as that of the Amerindians who were pushed into areas that were not suitable for agriculture or herding by the white settlers or that of the Australian Aborigines who were driven into the deserts of the Australian inland under the pressure of colonizing European immigrants. There is no ground to

► LIFE IN PREHISTORIC SIBERIA

Modern humans reached Siberia from the west between circa 40,000 and 35,000 BP. They moved south of the ice sheet that covered the northern part of Siberia during that time. In the area around Lake Baykal in central Siberia, a number of sites have been discovered that belong to a zone of Paleolithic culture. The oldest of them is Tolbaga, east of the lake, where human presence is attested at circa 35,000 BP. The best known of the Siberian sites and the one with the richest variety of tools and other artifacts is Malta.

The Siberian Malta—not to be confused with Malta in the Mediterranean—is situated west of Lake Baykal in central Siberia, in the valley of the river Belaya, about 15.5 miles (25 kilometers) from its confluent with the Angara and at a distance of about 50 miles (80 kilometers) from Irkutsk. The site was discovered by M. M. Gerasimov in 1928 and excavated until 1958. The cultural strata of a Paleolithic settlement is found at a depth of 3 feet (1 meter) below the modern surface. Several encampments, the grave of an infant, and abundant remains of human activities have been unearthed at this site.

The settlement dates to the last Ice Age and human presence in the area extends for several millennia from circa 23,000 BP onward. On the basis of analyses of pollen and of the bones of animals, it can be established that the people of Malta lived under the harsh conditions of the polar tundra, which was roamed by mammoth, bison, reindeer, and other animals. The vegetation was

comprised mostly of herbs. Tree species such as pine and birch that could stand the cold were rare.

The minds of the prehistoric inhabitants of Malta were not only set to physical survival as one might expect, judging from the extreme living conditions. In addition to a vast array of stone tools, many pieces of Paleolithic mobiliary art were found at the site, among them dozens of female figurines, small sculptures of animals (bears and water fowl in particular), pieces of adornment such as bracelets and diadems, and a plaque with incisions on both sides. These artifacts were all made of mammoth bone and ivory.

Separated from this zone of Paleolithic culture around Lake Baykal is an isolated site in the middle valley of the river Berelekh, a tributary of the Indiguirka. This prehistoric encampment is the northernmost in the world of the sites with human presence in the Paleolithic age, at 71° northern latitude. The site was discovered in 1970. At a depth of 7.5 feet (2.5 meters) below the modern surface, bones of various animal species (among them mammoth, bison, horse, reindeer, polar fox) and several types of stone tools were found. The encampment was occupied between circa 13,400 and 12,900 BP.

—Harald Haarmann

Bibliography

Abramova, Zoya A. *L'art paléolithique d'Europe orientale et de Sibérie*. Grenoble: Editions Jérôme Millon, 1995.

assume such kind of motivation for population movements in early prehistory except for claims that modern humans drove the Neanderthals into remote areas where they encountered them in western Europe.

The impact of ecological factors is likely to keep humans away from extreme environments. In certain regions of the world, one can observe the abandonment of previously settled areas because of ecologically changing conditions. This is true for the Sahara, which was once covered by wide fertile savannas and was rich in rivers and lakes. Well into the fourth millennium BCE northern Africa received rain with the monsoon winds, which later changed direction. As a re-

sult, the Sahara gradually dried out in a long process that is still occurring today. In search of water and grassland for their cattle, the inhabitants of the formerly fertile areas traveled farther south. This movement brought more and more people to the Sahel zone, bordering the Sahara in the south. Eventually northern Africa became depopulated except for the coastal strip of the Mediterranean and the Atlantic and the oases in the desert.

Modern humans explored the cold rim of the Northern Hemisphere relatively early, between approximately 45,000 and 40,000 BP, migrating from the Near East farther north, around the Caspian Sea and/or crossing the plains of

central Asia. Their movement came to a halt near the edge of the massive ice sheet that had covered northern Eurasia during the last Ice Age. There were only two geographical directions that opened to continued movements: one to the west and into Europe, the other to the east and into southern Siberia. Both options were chosen and there is archaeological evidence for the presence of humans in Europe and in Siberia that dates back more than 35,000 BP.

Those early inhabitants of Eurasia were archaic hunters who had not yet invented the most effective hunting weapon of prehistory, the bow and arrow. Judging from the remains of bones at campsites, the mammoth and the reindeer were the most preferred animals for their diet. After the ice shield had melted, living conditions in Europe changed dramatically, while in Siberia climatic conditions of the Ice Age continued in the north.

The archaic hunters could have stayed in the southern zone. Instead, they moved farther north into the areas that had been freed by the ice and beyond and continued to live in the circum-polar zone. Their form of subsistence, hunting and gathering, did not change, although there was a transition from big game to small game hunting. In later periods the economy expanded to include reindeer herding. The sustainability of the communities of the peoples of northern Siberia has depended for millennia on hunting, fishing, and herding as the only forms of subsistence that can be practiced in the polar tundra and in the forest zone of the taiga.

Human ecology is determined by three major resources of life that function as arbitrators of living conditions in general and of extreme conditions in particular, and these are temperature, precipitation (amount of rainfall), and the composition of the air. What makes certain regions of the world uninhabitable is the deficiency or the lack of one or several of these factors. Extreme ecological conditions may be found in the following zones:

- The Arctic zone (i.e., the circum-polar zone of permanent and/or extreme cold climate, with average annual temperatures below the freezing-point). Habitation in the Arctic

zone expands from the area of the Saamic settlement in northern Scandinavia over northern Eurasia, Alaska, and the Canadian North to the settlements in Greenland.

- The arid deserts (i.e., zones with extremely high temperatures and extremely little precipitation). Such zones are found in Africa (Sahara, Kalahari, etc.), Asia (Saudi Arabia, central Asia, Gobi, etc.), the Americas (southwestern United States, Atacama in northern Chile, etc.), and Australia (outback). The Arab nomads of the Arabian Peninsula in historical times, the Touareg in the western Sahara and the San in the Kalahari up to the present, the Mapuche in northern Chile, the Aborigines in central and western Australia, and the Hopis, Navahos, and Apaches in the North American Southwest adjusted to extreme arid conditions.
- Extremely elevated zones (i.e., in the highlands of Tibet, in the Himalayas, in the Andes of South America). In Tibet the highest permanent settlements are at a level of 15,000 feet (5,000 meters), the highest in the world. At an altitude of about 6,000 feet (2,000 meters), the air becomes thinner, and in order to guarantee a regular supply of oxygen, breathing becomes heavier. Such conditions put humans and animals under stress. For instance, horses are not adept at carrying heavy loads in the high Andes, a task that is given to llamas, which are adapted to thin air.

Extreme ecological conditions may also be characterized by an overabundance of heat and rainfall. This is true for the zones with rain forest (central Africa, Amazon region, Southeast Asia, etc.). Human beings such as the pygmies, Amazon Indians, negritos in Malaysia, and others have also adapted to the living conditions in the jungle.

—Harald Haarmann

Bibliography

Burroughs, William J. *Climate Change in Prehistory: The End of the Reign of Chaos*. Cambridge and New York: Cambridge University Press, 2005.

Politics and Statecraft

Because this era covers almost five million years of human evolution, it is difficult to define suitably the concept of politics. At its start, it is likely that our ancestors were living in social groups similar to those we see among our modern primate relatives, such as the chimpanzee. Here, politics is based upon parallel dominance hierarchies for males and females, and ultimate authority is exercised by the senior adult male in the group. His leadership is demonstrated primarily by greater sexual access to females at all levels of the female hierarchy, increased opportunities to be groomed by both males and females, and, in rare cases, increased access to meat obtained by other group members. He defends his position by displaying threats against subordinates and physical violence against challengers to his position. At some point, he is deposed by a younger, stronger male and drops down the hierarchy. Alliances between males and females are also present, and these tend to revolve around habitual grooming partners. There is some sense of female solidarity in that related females tend to spend more time with each other than with other females. Dominant females have similar politics but seldom intrude into the hierarchy of the males. There is, however, a sense of group in that unrecognized chimpanzees are in some cases driven away by the adult males. There are even reports of conflicts between unrelated groups of chimps.

By the end of the era—4000 BCE—politics takes on its more modern familiar meaning. Many people across the globe are now living in complex social formations characterized by hereditary leadership, significant social inequality, and impressive economic disparities between individuals and families. In some of these societies, rulers have the power of life and death over their subjects. In others, civil and religious authority is mixed, and rulers have the dual role of priest and king. In still others, religious authority challenges that of civil rulers. And in a very few of the societies of this era, true social classes are about to emerge. But in much of the world, especially those areas inhabited by hunters and gatherers, societies are more or less egalitarian and have few, if any, positions of permanent leadership. Between these extremes are those in which authority and leadership are tightly connected with kinship, lineage, and clan. Politics has become far more complex. There is good evidence that alliances between polities have become common. There is also internal politics, with factions within societies based upon competing economic and social interests. Although one hesitates to use the term “statecraft” to define the relationships between the polities of this period of the era, it is quite likely that the interactions between their maximal rulers would be very familiar to any modern politician.

The study of ancient leadership is mostly anthropological in nature, and scholars interested in it examine existing societies at varying levels of social and political complexity and use the results of their work to construct analogies of what politics in past societies might have been like. Those studying our most ancient ancestors use analogies derived from our close primate relatives to investigate probable forms of dominance and hierarchy and their changes through time.

In the nineteenth century, the anthropological study of non-Western societies was strongly evolutionary in tone. Influenced directly and indirectly by Charles Darwin, it was believed that human societies progressed through a series of stages from relatively simple to quite complex. Terms now seen as pejorative, such as “savagery” and “barbarism,”

Terms now seen as pejorative, such as “savagery” and “barbarism,” were used to describe societies that we now describe as hunters and gatherers, pastoral nomads, or village agriculturalists. Societies were thought to evolve through each of several stages.

were used to describe societies that we now describe as hunters and gatherers, pastoral nomads, or village agriculturalists. Societies were thought to evolve through each of several stages. At the end-point of the evolutionary hierarchy were Western industrialized nations.

Savages, the most basic stage, had no forms of permanent leadership, most of their politics were based upon kinship, and there was nothing like law as known

in Western societies. It was also thought that many contemporary “savage” societies, such as Australian aboriginals or North American Indians, were remnants of the earliest stages of human social, political, and cultural evolution. Barbarism was one step removed from savagery and defined by more “advanced” forms of social and political organization. Such societies had more permanent leaders and more rules and regulations that defined norms of social conduct, and political interaction was expressed through the competition of different kin groups or lineages as they jockeyed for social status and economic advantage.

This version of evolutionary thinking was roundly rejected by the anthropologists of the early twentieth century as they began to conduct ethnographic fieldwork across the globe. They found that there was no easy equivalence among societies labeled as savages, and furthermore, they realized that historical development created social and political structures within these societies that could not easily be attributed to their stage of development. Finally, these anthropologists rejected the judgmental quality of early evolutionist thought that placed Western societies at the pinnacle of social and political development.

Evolutionary thinking returned to importance in the mid-twentieth century and was described by its proponents as multilineal cultural evolution. Although change through time from simple to complex was recognized, these anthropologists made no value judgments about the progress each society had made and instead attempted to characterize social, economic, and political foundations as a result of adaptations to the environment. Thus, certain kinds of political or social structures should be found in hunters and gatherers living in resource-limited en-

vironments. Likewise, village-based agriculturalists, by nature of their subsistence practice, should have similar forms of economy, leadership, and kinship. Degrees of social and political complexity, then, were more about adaptation than a set of progressive stages of evolution.

This line of thinking led to another shorthand useful for the description of societies: bands, tribes, chiefdoms, and states. These four categories of society describe a continuum of complexity from simple to complex. Hunters and gatherers are generally seen as band-level societies, and for the most part, they are seen as egalitarian in social and political structures. The term “egalitarian” in this sense means that all leadership is situational and impermanent. A leader of a hunt has no authority over decision making about where the group should move to next. Status, often linked closely to leadership, is based upon gender, generosity, and relative humility. But there is no single individual or deliberative body that exerts authority or control over others.

Tribes are those societies in which lineages and kinship form the basis of leadership. Commonly, tribal societies have subsistence economies based upon agriculture or animal husbandry. Here, the headmen of kinship groups have political power. However, this power is highly limited and is based upon persuasion, not coercion. These headmen have real authority, but there is not necessarily a sanction against those who chose not to follow the headman’s decisions. Leadership is also compromised by competition between rival families, and thus internal politics becomes more complex as these groups seek alliances with other families or the inhabitants of other villages. Marriages are often used to create alliances, although these are fragile ties that can be easily rejected.

Chiefdom societies are those in which kinship groups are ranked. That is, one lineage may be recognized as the dominant one, and the headman of that lineage may thus be able to exert political power over subordinate lineages. All members of the dominant lineage are more highly ranked than all others. This does not equate to the formation of a dominant political class, however, as lineages may move up and down in rank depending on their economic and political fortunes. Factional competition between lineages is common, and chiefdoms are seen as unstable societies by many anthropologists.

Finally, states are those societies that have some form of hereditary leadership that can be transferred across generations. Fathers (or in some cases mothers) can pass on the right to rule to their children, who are recognized as legitimate candidates for rulership because they are born into the elite class. States typically have class structures wherein there is an elite stratum made up of highly ranked families. Below them are different classes based upon occupation or other social rules. Those at the top of the class structure are usually seen to have power over others. Codified sets of laws become more common, and these are used to adjudicate disputes and define rules of conduct. Alliance between noble families is quite important both within the state and with its competitors.

Although this is a useful four-part model, once again it became apparent that many societies did not easily fit into a single category. Some

hunters and gatherers—nominally bands—more resemble chiefdoms, for example, since they have ranked lineages. The reality is that societies are more complex and diverse than simplistic stage categories are capable of expressing. Nevertheless, these stages can provide insight into how politics might have been expressed in past societies.

—Mark Aldenderfer

■ Introduction: Forms of Leadership and Dominance in Primate Societies

In order to understand the possible structures of social life of our ancient ancestors, we must turn to analogies. Fossils and stone tools have their limits and are very poor guides to social relationships, especially in the very distant past. Modern hunter-gatherers are often used to construct analogies about what kinds of leadership strategies may have existed among our early ancestors, but the problem with these comparisons is that they are like comparing apples and oranges. Our ancestors were not fully human in terms of mental and cultural capacity, and thus direct comparisons are problematic and misleading.

Analogies derived from our closest primate relatives are often seen as more likely to offer some sense of the possibilities of what leadership strategies may have been like in the past. However, analogies are only guides to the past, and as such they must be used with care and caution.

Our closest living relatives are chimpanzees (*Pan troglodytes*), gorillas (*Gorilla gorilla*), bonobos (*Pan paniscus*), and orangutans (*Pongo abelii*). For chimps, bonobos, and gorillas, leadership is expressed through a male-based dominance hierarchy. For chimps, who live in multimale groups, there is a single adult male—the alpha male—who sits above all others. Because of this position, the alpha male has more mating opportunities and access to better resource patches. All other males in the group are arranged in a linear manner from top to bottom. All males, however, are dominant over females, who have their own hierarchy. Higher-ranking females have more offspring and have better ac-

cess to resources. Gorillas, in contrast, live in small groups composed of a single adult male, multiple females, and their offspring. Dominance is expressed between males when a group leader is challenged by another male.

Bonobos have a very loose male dominance hierarchy and very flexible social relationships in contrast to their cousins, the chimpanzees. Females may dominate males, and there is a strong bonding effect among female bonobos that limits the ability of any single male to become dominant.

Orangutans have social structures based upon female alliance and bonding. Except during mating season, males live a solitary existence within defended territories. Aggressive displays are common when males encounter one another. Females raise the young and often form small groups to resist mating attempts by subadult males.

Which, if any, of these analogies may be a good description of leadership among our early ancestors is difficult to determine. Many human hunter-gathering peoples have elements of both chimpanzee and bonobo social relationships in that while males tend to dominate these human societies (thus similar to chimps), so-called reverse dominance hierarchies limit the power of any single male (thus more similar to bonobos). Kinship in these human societies is flexible, much like the bonobos.

—Mark Aldenderfer

Bibliography

Boyd, R., and J. Silk. *How Humans Evolved*. 5th ed. New York: Norton, 2008.

Chimpanzee and Gorilla Leadership

Dominance relationships among primates are primarily determined by their social structures. Social structure and dominance have both been extensively studied among chimpanzees (*Pan troglodytes*) and gorillas (*Gorilla gorilla*). Data on social structure and dominance for these species have been observed in the wild as well as in captivity. Aspects of dominance that have been of most interest to researchers have been how the initial rank is obtained, how it is kept, how it changes, and the influence that leadership has in primate relationships.

To understand how leadership functions among chimpanzees and gorillas, it is first important to understand the nature of their societal structures. The dispersal patterns, meaning which sexes migrate out of their natal groups and at what rate, affects how the dominant individual behaves in relation to its subordinates.

Chimpanzees congregate in multimale, multi-female groups. The composition of these groups is precisely as the title implies; many males and many females. Furthermore, chimpanzee groups have also been categorized as fusion-fission, which indicates groups that change due to individuals leaving and rejoining other groups. These groups are commonly made up of 20 to 100 individuals, but there have been many exceptions found in the wild and created in captivity. Chimpanzees are patrilocal, meaning that males tend to stay within natal groups, while females often leave to join other groups. Females often transfer when they are in mating condition and seek higher-ranking males. It is for this reason that male hierarchies tend to be linear and stable, while female hierarchies are more convoluted. Males are also dominant over all females of the group.

Gorillas have been documented to live in three types of groups: one-male, multifemale; multimale, multifemale; and all-male. For this reason, group sizes range greatly. In one-male, multifemale groups, the alpha, or silverback, is dominant over all of the females in the group. Gorilla groups tend to remain stable, but they are also one of the few known living primate groups in which both sexes leave their natal

groups. Males will sometimes range alone until they are able to join another group. They will leave their groups prior to breeding. Females, on the other hand, never travel alone.

Primates are born into a rank known as a dependent rank, which is the status they are able to maintain by virtue of who they are related to and thus who will give them support in conflict. Acquired rank is the rank an individual can hold independently. Among males, this is often determined by the strategic formation of alliances with other males to overthrow higher-ranking males or to further stabilize their own rank.

Chimpanzee and gorilla groups are similar in that males dominate females. The alpha male, the highest ranked of the males, will often rule by threat of violence. Threats are the most common form of aggressive behavior and rarely result in direct violence. Also, the alpha male has access to primary resources, such as estrous females and food. For example, when females are in estrous, the dominant males are able to copulate with females during the peak of their cycles. Subordinate males copulate with little significant difference in frequency but may not be able to access the females during the peak of their cycles due to threat of violence from dominant males. Subordinate males will often mate in seclusion, or hidden from view. Dominant males will copulate with females in more central locations of the group in view of all. This is also a similar situation with food in which subordinate males are more likely to share food with dominant males. Solitary males also copulate with females in groups, but this only occurs in situations where they can mate out of view of other males. Females have a looser hierarchy, but it is not as linear and clear as is found among males. In gorillas, the adult females spend more time near the silverback than they do with any other individuals in the group.

The most hierarchical differences arise when comparing multimale, multifemale chimpanzee groups and one-male, multifemale gorilla groups. Among chimpanzees, related females will spend much of their time grooming and bonding with each other. Gorilla females spend proportionately less time bonding with each other than they do grooming the silverback. The nature of intra-sexual relationships in each species leads to the

manner in which they have been observed to reinforce the dominance hierarchy.

There are various forms of dominance style ranging from the strict to the relaxed. In more relaxed dominance styles, the gestures and actions associated with hierarchical status may not be as prominent or may shift more frequently. In stricter dominance styles, the hierarchy is clearly established and reinforced often. Stricter dominance styles are more common to species in which one male and many females compose a group, such as some gorilla groups. The male may reinforce his dominance often through threat behaviors such as lunging or directly in the form of biting. Among chimpanzees and gorillas, dominance is reinforced through threats of violence. In gorillas, for example, dominance is sometimes shown by charging and chest-beating. Dominant chimpanzee and gorilla males guide the group's activities, frequently intervene in aggressive conflicts between subordinates, and

have priority of access to resources. Gorilla males, however, practice a stricter form of dominance. This is especially apparent in harem situations where one male must constantly reinforce his dominance. Since there is only one male to keep watch over various females, his leadership style must be much stricter than among chimpanzees. Among chimpanzees, leadership is more relaxed because the higher number of males requires more tolerance. Because chimpanzee groups require more cooperation between males, the dominance enforced over females appears to be more relaxed than that observed in the harem situations of gorillas.

—Kimberly Nguyen

Bibliography

Harcourt, Alexander H., and Kelly J. Stewart. "Gorillas: Variation in Female Relationships." In *Primate Societies*, edited by B. Smuts, R. Wrangham, D. Cheney, R. Seyfarth, and T. Struhsaker. Chicago: University of Chicago Press, 1987.

■ Introduction: How Archaeologists See Early Social Complexity

Social complexity is a concept used by anthropologists to describe the range of occupations, kinship groups, factions, alliances, status positions, and leadership roles within a society. Modern industrial civilization is highly complex, with thousands of occupations, social classes, factions, and other social formations. In contrast, hunters and gatherers have many fewer social formations. Social complexity is thus a continuum ranging from the very simple to the very complex.

Social complexity, status, and leadership are highly interrelated but not always predictable. High social status does not necessarily imply political leadership. However, most socially complex societies do have permanent leadership positions that may have great social status as well. One of the interesting questions about the social evolution of our species is under what circumstances status begins to reliably translate into permanent political leadership. Put another

way, when do we begin to see indicators of social inequality, and under what circumstances do some people become more equal than others?

There are very few reliable ways in which archaeologists see early social complexity. For much of our evolution, until roughly 50,000 years ago, the signs of emergent complexity are very faint and are open to multiple, sometimes conflicting, interpretations. Indeed, it is only after about 15,000 years ago that archaeological indicators of social complexity become more common and less open to debate and challenge.

Using analogy as a guide, it is easy to see why complexity is difficult to see in the very early archaeological record of our ancestors. Most ethnographically known hunting and gathering societies, a category that describes most of the evolution of our species, are characterized by their egalitarian ethos. That is, no single individual is capable of forcing or compelling others to act against their own interests. Leadership is

highly situational as well. A healer may have real status in these groups, but this status does not translate into leadership in other social domains. Thus, a skilled hunter might be respected for his ability to kill animals but may be ignored when other decisions that involve the group are discussed. Finally, the range of status positions within these societies is quite limited as well. There may well be distinctions between people based on their age, gender, skills and abilities, and even charisma, but these differences in most circumstances do not lead to permanent leadership. The range of occupations is likewise limited.

Furthermore, all ethnographically known mobile hunting and gathering peoples have a strong ethos against accumulation and aggrandizing behaviors. That is, even when resources are abundant, efforts by some individuals to obtain more resources than immediately needed for daily consumption are strongly resisted by other members of the group. Hoarding is seen as an antisocial activity, and those who do so are chastised and ridiculed by other members of the group. Therefore, it is quite difficult to accumulate a surplus of subsistence or other resources that could be used to obtain other desired goods. Furthermore, since these peoples must move frequently to areas of more abundant resources, it is not possible to accumulate large numbers of objects simply because they cannot be carried.

For most of the evolution of our species, then, the material record reflects few social distinctions between individuals. Most objects recovered from deep antiquity reflect the subsistence quest or gender roles and as such say little about status distinctions.

The recent discovery of nonutilitarian objects, such as drilled shells and what is best described as art, which dates to between 60,000 and 100,000 years ago, has been used by some archaeologists to suggest that more socially complex groups began to emerge at this time. This is coincident with the appearance in Africa of transitional (or anatomically modern) *Homo sapiens*. These are real changes in the nature of the archaeological record, but their significance is not clear. The drilled shells are best seen as personal adornments, and at least to some archaeologists, they signal an enhanced ability to conceptualize the self and thus reflect cognition,

not expanded social roles. Interpretations of art are problematic as well. Most interpretations see art reflecting religious or spiritual activities, and thus their appearance at this time may well indicate a more formal role for religious practitioners. However, it is important to note that earlier material expressions of spirituality may not have been preserved in the archaeological record. Their absence cannot be assumed to be because they were not once part of the social fabric of our ancestors.

However, it is equally clear that there is no evidence of accumulation of subsistence resources or other material objects before 50,000 years ago, suggesting that while the range of social roles may have begun to expand, there was as yet no translation of these roles into permanent leadership positions. Insofar as can be read from the archaeological record, the societies of this period were still egalitarian.

More direct evidence for the emergence of social complexity, and perhaps social inequality, only begins to appear after societies begin to become more sedentary, which in most parts of the Old World only occurs after 12,000 years ago. Indicators of complexity include expanded storage of subsistence resources that go beyond the requirements of the household, the possession of extremely rare objects that would have been costly to obtain (many of which were used as personal adornments), and more prosaic evidence of early specializations of craft production. Rare costly objects signal the increased range of social contacts of an individual and their ability to trade for these items. This status-enhancing activity is seen by some archaeologists to be a very early form of social inequality in that these individuals have been able to overcome the egalitarian ethos and accumulate desired goods.

One of the most important lines of evidence used by archaeologists to track the emergence of complexity and inequality is the artifacts recovered from burials. For most of our prehistory, objects found with the dead reflected their gender. However, as complexity increased, people were interred with artifacts that more likely signaled their occupations or their ability to obtain, and then dispose of, these rare items.

—Mark Aldenderfer

Bibliography

- Price, T. Douglas, and James A. Brown, eds. *Prehistoric Hunter-Gatherers: The Emergence of Cultural Complexity*. Orlando: Academic Press, 1985.
- Price, T. Douglas, and Gary Feinman, eds. *Foundations of Social Inequality*. New York: Plenum, 1995.

Increasing Social Complexity to 4000 BCE

Between 2.5 million years ago, when early hominids produced the first tools, and 4000 BCE major changes in the social complexity of hominids occurred in parallel with developments in subsistence, notably food procurement, and technology. The evidence for early hominid social organization is limited due to relatively few archaeological sites, but even this indicates that hominids have always been social rather than isolated beings. By 4000 BCE highly organized and sophisticated societies had developed worldwide, mainly based on permanent agriculture and well-developed stone and metal technologies. In general, shifts in social structure tend to have occurred gradually over centuries or millennia rather than suddenly over mere decades. A key factor is mobility, which in turn is linked to food acquisition. Hunter-gatherers tended to be highly mobile, and although they are structured to a degree in terms of leadership and organization, their mobility limited material wealth, population size, and subsistence options. In settled societies leadership, or power relations, and wealth tended to be more hierarchical, while the individual's role in society was defined by her or his contribution to community operation, which is characterized by division of labor. Thus, the latter are more complex than hunter-gatherer societies. It is also likely that agrarian and urban societies were more flexible, which increased the chances of not only survival but also success. The transition from hunter-gatherer lifeways to agrarian-urban lifeways, can be considered to correlate with the traditional division between Paleolithic and Neolithic, dated to circa 10,000 BCE, involved a substantial increase in complexity. However, there are other periods of perhaps less pronounced but nevertheless significant changes in social complexity. For example, the

distinctions between the Lower, Middle, and Upper Paleolithic reflect increasing complexity in hunter-gatherer societies. In addition, a further distinction is recognized in northwestern Europe where a transitional phase, known as the Mesolithic, occurred between the Paleolithic and Neolithic.

The Paleolithic extends from 2.5 million years BCE to circa 10,000 BCE. Its subdivision into three overlapping stages is a convenient way of charting cultural changes including social complexity, but in common with all generalizations its limits must be acknowledged; most archaeological chronologies are generalizations that reflect a broad shift in social organization. The Lower Paleolithic extends from 2.5 million years BCE to circa 98,000 years BCE and incorporates the lifeways of *Australopithecus afarensis*, *Homo habilis*, *Homo antecessor*, *Homo erectus*, and *Homo heidelbergensis*. Three cultures distinguished by specific stone tool assemblages are recognized: the Oldowan, Acheulian, and Clactonian. The earliest hominids were scavengers, being opportunistic meat eaters as well as gatherers. Not a great deal can be discerned about their social complexity except that scavenging requires knowledge, such as where animals may die or be killed by other animals (e.g., in waterholes), and is most productive if a carcass can be shared before it goes rotten. Moreover, the adoption of meat eating by early hominids indicates the capacity to exploit a wider range of food types; omnivory is probably an indication of increasing social complexity, as it utilizes a wider resources base than carnivory or herbivory. The shift to hunting and the harnessing of fire were major changes in the social complexity of Lower Paleolithic hominids and mark a shift from a relatively passive role within the environment and ecosystem to an active role that positively seeks out resources. Evidence is scarce, but at the archaeological site of Boxgrove, West Sussex, England, bones and teeth of *Homo heidelbergensis* circa 500,000 years old are associated with butchered bones of large animals, including a rhinoceros, and an array of stone tools. This implies highly organized hunting through cooperation in groups. A further issue concerns the migration of *Homo erectus* out of Africa. Does its achievement reflect social

complexity, social problems such as resource scarcity, or curiosity?

The Middle Paleolithic extends from 300,000 years to 28,000 years BCE and includes the Mousterian culture. By this time *Homo neanderthalensis* had evolved, and by 200,000 years BCE *Homo sapiens* had evolved. The diversity of stone tool assemblages increased especially in relation to projectile points as arrow or spear heads were attached to hafts of wood. This would have enhanced hunting success and encouraged specialist craftspeople. The use of fire became widespread, and new ways of dealing with food emerged such as cooking, smoking, and salting, which reflect forward planning. Some groups practiced cannibalism. There is evidence for various burial practices, which could be linked with religion, care within communities, and several types of artwork such as jewelry and rock art. All point to the emergence of behavioral modernity, which are traits that are characteristic of modern humans and their recent ancestors; these include language, abstract thought, art, religion, and humor. Such traits are also indicative of increasing social complexity, though human groups probably continued to be relatively small and are generally thought to have been egalitarian. Once again, hominids in the form of *Homo sapiens* migrated out of Africa circa 80,000 years BCE.

The Upper Paleolithic dates from circa 40,000 to 10,000 years BCE and heralds the era of modern humans. Behavioral modernity had become well established. Numerous cultures, distinguished by specific stone implements, also emerged; stone assemblages attest to a wide variety of tools including axes, scrapers, blades, hooks, and needles. In addition, a wider variety of materials for tool making were employed, notably bone and antler. There is evidence for increasingly sophisticated hunting strategies involving fire, planning, and cooperation as well as a range of art types including many cave paintings depicting animals such as those found in Lascaux, France, and Venus figurines. Societies were becoming more sophisticated and diverse, though there is more evidence on which to base opinions than for earlier periods. There are also campsites reflecting some level of permanency and likely seasonal occupation. In-

creasing social sophistication is also reflected by the operation of trade. Although trade probably began in the Middle Paleolithic, it increased during the Upper Paleolithic as exchange networks for tools, shells, semiprecious stones, and possibly food developed. The Upper Paleolithic also witnessed the extinction of the Neanderthals circa 30,000 years ago. This is enigmatic but may be linked with the increasing dominance of *Homo sapiens*, which in turn may be linked with their increasing social complexity.

As the last Ice Age ended circa 10,000 years BCE, there were substantial changes in human activity and social organization worldwide. In northwestern Europe the Mesolithic, or Middle Stone Age, period opened and lasted until circa 4000 years BCE. Hunting and gathering persisted as the most important means of food acquisition, but evidence points to a varied diet incorporating seafood as well as plants and animals from forested and open habitats. Ritual or religious practices are indicated at some archaeological sites, and finds from Star Carr, Yorkshire, England, indicate seasonal occupation, fishing, and boating plus the use of a wide variety of stone, bone, and antler tools, while beads and amber reflect trade. How complex or otherwise Mesolithic societies were is a matter for debate. Certainly not much can be stated regarding social hierarchies or stratification, but Mesolithic societies were inherently successful, though they eventually relinquished nomadic hunting and gathering lifeways as agriculture spread from centers of origin to reach the European periphery by circa 4000 years BCE.

In the Near and Far East the first domestications of plants were taking place as precursors to the initiation of agricultural systems. This was the start of a new age known as the Neolithic or New Stone Age. The earliest domestications, of cereals such as wheat, barley, and oats and animals such as sheep, cattle, and goat, occurred circa 10,000 to 8,000 years BCE in the region of the eastern Mediterranean basin known as the Fertile Crescent, while rice was domesticated circa 8,000 years BCE in the Lower Yangtze Basin. Further centers of domestication and agricultural innovation developed in the Americas and Africa by 4000 years BCE. Why such innovations were necessary remains unknown but

must be associated with environmental and social factors; moreover, to invest so much effort in such a labor-intensive activity required considerable social organization. Societies became sedentary, with individual houses and storage facilities, and developed complex organization with a hierarchy and division of labor and expanded skills such as pottery production. They also planned and produced public monuments and buildings, the most prominent of which were the megalithic monuments of Europe for use by the general population. Ritual and religious practices were widespread and varied, as were burial practices. The Neolithic was an age of diversity and innovation with synergistic relationships with social complexity that, in turn, had profound ramifications for both environment and society.

—A. M. Mannion

Bibliography

- Bailey, G., and P. Spikins, eds. *Mesolithic Europe*. Cambridge: Cambridge University Press, 2008.
- Bar-Josef, O., and A. H. Simmons. *The Neolithic Revolution in the Near East: Transforming the Human Landscape*. Tucson: University of Arizona Press, 2008.
- Dennell, R. *The Palaeolithic Settlement of Asia*. Cambridge: Cambridge University Press, 2008.
- Gamble, C. *The Palaeolithic Societies of Europe*. Cambridge: Cambridge University Press, 2008.
- Tattersall, I. *The World from Beginnings to 4000 BCE*. New York: Oxford University Press, 2008.

Implications of Increasing Population Density Following Agriculture

The gradual implementation of agriculture in human societies from that which began 10,000 years ago, during what scholars call the Neolithic Revolution, had a significant impact on population density given the political and social organization necessary for the development of agriculture and the needs of growing populations. Hunter-gatherer societies, able to sustain small groups of pastoralists, needed huge tracts of land to follow herds and forage for and collect food, while newly developing agricultural societies needed smaller tracts of land for regular cultivation, which tended to create settled com-

munities with myriad needs to ensure survival and stability. Agriculture and irrigation encouraged long-term settlement in a particular region, whereas hunter-gatherers tended to follow an irregular seasonal settlement along their sojourns. Increasing population densities in agricultural settlements led to the development of more cohesive and integrative political and social systems in order to confront famines, reduce the potentiality of invasion, and establish legal systems for social stability.

The agricultural revolution allowed for the development of new polities amid the growth of settlements and the growing population density of these settlements. Many scholars have argued that agriculture and agricultural technologies allowed for the expansion of human populations as a result of food surpluses and thus allowed for the establishment of political, social, economic, and artistic developments in early settled societies. However, economist Ester Boserup, among others, argued that the opposite was true, that in fact preexisting population growth had triggered developments in agriculture and thus spurred on political and social developments amid agrarian settlements. Higher yields offered by settled agriculture allowed for the growth in population and the expansion of population density in the surrounding areas. Permanent field agriculture typically preceded the onset of political developments in urban settlements, given the need to create a cohesive governing structure for the growing population.

The onset of agriculture throughout various world regions allowed for drastic changes in societal organizations within an approximate 8,000-year period. These Neolithic farming villages emerged in Europe, East Asia, North Africa, South Asia, and Mesoamerica, with the oldest and more elaborate settlements located in the Near East, particularly in Palestine along the Dead Sea. The transition from hunter-gatherer societies to agricultural settlements and subsequent population growth contributed to the establishment of political organizations and trade networks to ensure the supply of goods and technology associated with agriculture. While this did not occur throughout the world at the same time intervals, it did occur within the larger period and led to similar developments throughout.

Growing populations in agricultural settlements also allowed for the establishment of occupational specialization in certain nonagricultural functions, such as metallurgy, arts, and other duties involving trade, not to mention religious institutions related to the emergent civic authority. Farming was relegated to certain members of agricultural societies, and thus other occupations were skill-specific in terms of manufactures and crafts. Technological advances related to agriculture and storage created the need for such crafts en masse (e.g., metallurgy and pottery) as routine specialized occupations rather than as sporadic developments, as with hunter-gatherer societies. Growing populations in agricultural settlements benefited from these new developments, as they created new venues for occupations outside of agriculture.

However, increasing populations also led to occurrences of bad harvests and the resultant famine, which in turn created a need for maintaining surpluses and storage facilities for said surpluses. These organized communities stored foods and manufactured material goods and eventually participated in trade. This led to the development of political organizations, which were maintained to ensure the prosperity and maintenance of crops for the populace and also to function as trading centers. The governing authorities were acceded legitimacy, as they were the ones responsible for administering agricultural surplus storage and preserving stability in the settlement. The growing complexity of the urban settlements allowed the functions and structures of the governing authorities to expand through time, encompassing far more functions than the mere administration of food surpluses. Moreover, social complexity through time allowed for the gradual development of the division of labor, as different social functions created different social levels for urban dwellers. Gender relations also became heavily bifurcated as certain occupations in society and within the household became associated with either men or women. Dwellings and housing, technological innovations, domesticated animals, and organized political structures all were a result of the relationship between settled agricultural communities meeting the needs of burgeoning population density in the transition from hunter-gatherer societies in the Neo-

lithic period. As wealth increased, populations became vulnerable to attacks by outsiders, and this allowed for more power to be accumulated by governing authorities, who gradually established their monopoly over violence and legitimate authority over protecting settlements and the surrounding territories.

—*Abraham O. Mendoza*

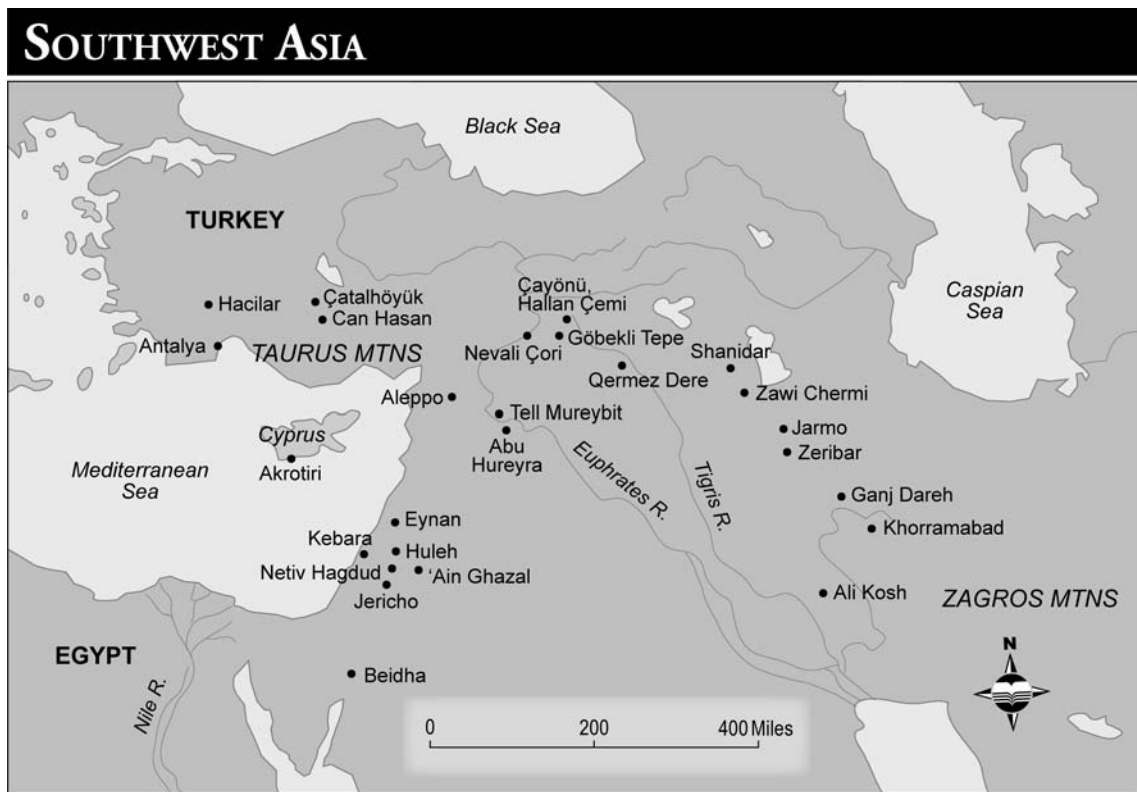
Bibliography

- Duiker, William J., and Jackson J. Spielvogel, eds. *World History to 1500*. 5th ed. Belmont, CA: Thomson Wadsworth, 2007.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Social Complexity in the Ancient Near East to 4000 BCE

The modern observer readily associates the concept “social complexity” with the higher-order complexity found in societies with class distinctions by which the early civilizations of Mesopotamia and ancient Egypt are characterized. Social complexity may also be an expression of a complex division of labor and a specialization of professional fields, albeit in the absence of social classes. The archaeological record of the Near East and neighboring Anatolia provides evidence for a bifurcation in the evolution of social complexity, one trajectory leading to complex society without social hierarchy and another where the emergence of social class distinctions is typical.

Social changes are a vital ingredient in human evolution. The transition from the organization of social relations in the communities of hunter-gatherers to levels of social complexity—as part of the “Neolithic package”—has had far-reaching effects on human society. For tens of thousands of years during their social history, humans lived in bands of hunters and gatherers. With the end of the Ice Age (that is, after ca. 12,000 BCE), living conditions in the Near East were subject to dramatic climatic changes that, in turn, created major challenges to the strategies of survival in the peoples of the region. The ecological conditions in the Near East had been those of a savanna toward the end of the Ice Age. Then, the seeds of wild grass and



other food crops were available in plenty and formed a considerable part of the hunters' diet. The climate changed and became colder and drier, and the availability of wild-grass seeds was more restricted. Because of such restrictions, the movements of hunters were limited to dwindling areas of resource abundance, and this spurred the development of sedentism.

The history of sedentism stretches over a considerable span of time, from the early experiments with planting wild seeds (as among the Natufian people in the twelfth millennium BCE) to full-fledged agriculture (as at Jericho in the latter half of the eighth millennium BCE). Among archaic hunter-gatherers there was an elementary division of labor, with hunting practiced by men while the manifold tasks of gathering and taking care of the children were the duties of women. This elementary division proliferates in sedentary communities to produce professional specialization and, eventually, full-time occupation with certain handicrafts. For example, craft specialization at Çatalhöyük in the seventh millennium BCE extends to the working of obsidian, which demands special-

ized chipping skills, and to small-size handicraft (i.e., crafting bead necklaces).

Evidence for an early specialization in handicraft is seen in the monumental structures at Göbekli Tepe in eastern Turkey, dating to the tenth millennium BCE. Monumental architecture requires specialized skills in masonry and sculpting but not necessarily a complex society or political leadership. The kind of specialization found in the communities of sedentary hunter-gatherers who built the first temples of humankind was not associated with the authority of a social elite. It is still widely believed that complex social structures are the precondition for the emergence of monumental architecture. The temple builders of Göbekli Tepe, with their sense for communal solidarity and elaborate skills, teach us otherwise.

The degree of social complexity in the agrarian community of Çatalhöyük that was founded around 7400 BCE and abandoned around 6000 BCE has been a matter of much debate. In the layout of the city there is no distinction between rich quarters with bigger buildings and others with smaller houses. Çatalhöyük has neither a

palace nor a central temple, but buildings are of equal size, and various sanctuaries are scattered throughout the city. Recent investigations into the grave goods of that settlement have revealed that there was no distinction between richer and poorer people or between male and female burials. The archaeological record does not show any evidence for a social elite that would have ruled one of the earliest towns of Anatolia.

Instead, communal life at Çatalhöyük was characterized by relative social equality between men and women. Also, when it comes to the part of revered ancestors for the constitution of lineages, the finds of selected male and female crania—separated from their skeletons—seem to indicate ancestry derived from both male and female lines. The kind of egalitarian society that has been reconstructed for Çatalhöyük had been identified earlier for the early agrarian communities in southeastern Europe.

Çatalhöyük, with its egalitarian community, provides evidence that the sustainability of communal life in an urban settlement with 7,000 inhabitants or more did not require the organization of social relations in a hierarchical order, as known from chiefdoms, and that the trajectory from bands to clans and to class society is not the result of a straightforward development in human evolution but rather one among several options.

Social complexity might have produced more differentiation and forms of political authority at Çatalhöyük, as known from chiefdoms, but such a stage of communal life cannot be identified for the Neolithic inhabitants of that city. In other areas, there was a trend toward the monopolization of economic surplus that was previously shared by the community as a whole, and this monopolization enhanced the establishment of political leadership, first of chiefdoms and later of kingship. The monopolization of economic surplus was most probably motivated by the control over offering goods for cult practices. Such an association is documented for the early temples of the Ubaid era at Eridu in southern Mesopotamia. Here, for the first time in human history, the chiefdom transforms into kingship and the political control over resources becomes large scale, resulting in the emergence of early statehood of the Sumerian era. The development of a complex society into the fourth millennium BCE—with

distinctions of social classes, a political elite, state organization, and bureaucracy—in the Sumerian city-states finds its parallel in predynastic Egypt of the Nagada period.

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Bibliography

- Çilingiroglu, Ç. "The Concept of 'Neolithic Package': Considering Its Meaning and Applicability." *Documenta Praehistorica* 32 (2005): 1-13.
- Hodder, I. Çatalhöyük. *The Leopard's Tale*. London: Thames and Hudson, 2006.
- Maisels, Ch. K. *Early Civilizations of the Old World: The Formative Histories of Egypt, the Levant, Mesopotamia, India and China*. New York: Routledge, 1999.
- Nissen, H. J. *The Early History of the Ancient Near East, 9000-2000 B.C.* Chicago: University of Chicago Press, 1988.

Social Complexity in Early Europe

During the period after the end of the Ice Age (ca. 10,000 BCE), called the Holocene, human populations in Europe experienced changes of their economy and social structures, and these processes of transition further increased with the advent of agriculture (ca. 7000 BCE). On the economic level, this was the shift from the subsistence system of hunter-gatherers to farming and, what concerns social structures, the shift from socially undifferentiated bands to communities with social stratification.

According to traditional approaches to this process of transition, this is described as an evolutionary trajectory from band via chiefdom to kingship, as if social development followed a straightforward path without alternatives. In this view, ruling elites in European societies made their appearance in the fifth millennium BCE, and kingship emerged in the second millennium BCE with the rise of the first state organization, the Mycenaean city-states.

Modern anthropological research has yielded insights that call for a revision of the static evolutionary-based model of socioeconomic transitions. What has been neglected in traditional approaches is the dynamic factor of human agency. In Holocene Europe, human beings shaped their cultural space ever more

THE MEANING OF THE CEMETERY AT VARNA

The ancient pre-Indo-European cultures of Europe were strongly affected by the process of Indo-Europeanization that unfolded during the fifth, fourth, and third millennia BCE. The influence of Indo-European culture was felt initially on the periphery of the Danube civilization (in the areas on the western coast of the Black Sea). The decisive thrust toward cultural Indo-Europeanization resulted from the third wave of Kurgan incursion (Kurgan wave III, ca. 3000–2800 BCE) when the people from the eastern steppe zone infiltrated into most of southeastern Europe and dominated the major areas where the Danube civilization once flourished.

In the northwestern Pontic region, the incursions of the steppe people produce permanent patterns of change. Judging from richly equipped graves, a new social elite makes its appearance at Durankulak (northeastern Bulgaria) around 4600 BCE, and 100 years later the tradition of burials also changes at Varna. The sudden appearance of great personal wealth, in a previously egalitarian context, may illustrate the fusion of worldviews as a result of intensive interaction between the local population and Kurgan traders from the northern Pontic region during the mid-fifth millennium BCE. The strict distinction between richly equipped male graves and female graves, which contain fewer goods, seems to be indicative of a society with a social hierarchy. However, in one of the major burials a male and a female were interred in a joint grave, which does not suggest gender difference in political power.

In one of the Varna graves, insignia such as a horse-headed scepter and other ceremonial items of political power were found that provide evidence of the spread of steppe tribes from the east to the west and in the Kurgan model of Indo-European origins is seen to reflect the first wave of Indo-Europeans from their homeland in the steppelands of the Ukraine and southern Russia.



Ornate burial from the Varna Cemetery in present-day Bulgaria. (Cordaiy Photo Library Ltd./Corbis)

Old European features prevail in lifestyles and religious imagery, while political authority appears to be represented by pastoral invaders. The graves near Varna yielded the earliest finds of gold objects dating to the mid-fifth millennium BCE. The technical skills reflected in the metal finds from the graves of Varna, containing the oldest gold treasure of the world, suggest that gold was worked much earlier in that region. Gold objects such as bracelets and ring pendants are found mainly in the Lower Danube area. It is noteworthy that gold was worked in southeastern Europe more than 1,500 years earlier than in Mesopotamia.

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Bibliography

- Gimbutas, Marija. *The Civilization of the Goddess: The World of Old Europe*. San Francisco: Harper, 1991.
- Mallory, J. P., and D. Q. Adams, eds. *Encyclopedia of Indo-European Culture*. Chicago: Fitzroy Dearborn, 1997.

actively in their interaction with the natural environment. Human culture of the Ice Age was dominated by the struggle for sustainability, while Holocene communities in Europe saw humans engaged in the active management of their cultural ecology. Human agency promotes variability, and the local populations did not experience the same kind of shift to social complexity in all

areas at the same time. The overall picture of social complexity in early Europe is diversified, with various gravitations in different regions.

Contrasting with the traditional view of an intrinsic linkage of agrarian lifeways and social hierarchy are observations about social and economic equality in the communities of early agriculturalists. Evidence for this comes from

Anatolia (i.e., from Çatalhöyük, whose community flourished between ca. 7400 and ca. 6000 BCE) and from farming communities in south-eastern Europe. Climatic changes with a fall of temperatures and reduced rainfalls around 6200 BCE strongly affected the farming communities in Anatolia and hampered their development. But the repercussions were more moderate in Europe, where the pace of economic development was swifter than in contemporary western Asia.

Between 6500 and 5500 BCE, community life unfolded in southeastern Europe to reach the level of high culture or civilization, with institutions such as a complex layout for settlements, advanced technologies (i.e., pottery making, weaving), refined art and religious symbolism, metalworking (copper since the sixth millennium BCE and gold since the fifth millennium BCE), and sophisticated notational systems, including writing. The older name for this high culture is Old Europe, but it is currently known as Danube civilization. Comparative research on ancient civilizations has demonstrated that the fabric of the Danube civilization resembles that of the ancient Indus civilization (ca. 2600–1800 BCE). The most fundamental difference between these civilizations and those of Mesopotamia (the early Sumerian city-states) and ancient Egypt lies in the sociopolitical organization of the early agrarian societies. While ancient Sumer and predynastic Egypt knew the political institutions of ruling elite and related statehood, the ancient communities in the valleys of the Danube and Indus lacked such institutions.

In the Danube civilization, egalitarianism manifests itself in two domains: economic and social. Economic egalitarianism is manifested in extended trade relations whereby villages exchanged goods among themselves and with larger settlements. There is no evidence to show that any of the larger settlements would have dominated the economy of surrounding villages. In the context of economic egalitarianism, trade contacts evolved as relationships of mutual advantage, making the community a commonwealth or an ecumene. Among the preferred trade goods were obsidian, shells (spondylus in particular), salt, and copper. Social egalitarianism is reflected in the absence of a marked distinction between the social roles of the sexes in community life,

something that is typical of a society with social hierarchy. Equality between the sexes implies matrilinearity or matrifocality (with women as prominent figures in lineages), but this concept must not be confounded with the notion of matriarchy. According to modern anthropological research, cases of a sociopolitical dominance of women in historical societies are rare exceptions (e.g., the Naxi in southern China).

There were at least two basic models of sociocultural evolution that both inscribed in their constituents the possibilities of cultural and technological advancement so as to cross the threshold to the stage of high culture. One is the ecumene model, the oldest representation of which is found in Neolithic Europe (i.e., the Danube civilization). The other is the state model, well known from Mesopotamia and Egypt. Civilization as high culture did not originate from an exclusive and universal model of human evolution but rather as the result of differing trajectories that illustrate the overriding principle of variability, a principle that governs biological evolution as much as the evolution of institutions that emerged as the result of human agency.

In eastern Europe, Neolithic transitions produced a trajectory that did not favor agrarian life-ways or social egalitarianism. In the steppe zone of southern Russia, during the early Neolithic of the seventh millennium BCE a shift occurred from hunter-gatherers' subsistence to a pastoralist economy, with sheep, goat, and horse (later also cattle) as the basis of animal husbandry. Pastoralist society soon produced social stratification, forming a system of clans with strong leadership, territorial control over pastures, and a warrior elite whose importance increased in time.

In the course of the fifth millennium BCE, the pastoralists established contacts with the agriculturalists in the west. The subsequent history of contacts between steppe nomads and farmers is characterized by disputes over arable land (which farmers would claim for their economy but nomads used as pastures) and by militant clashes, culminating in the intrusion of pastoralists into southeastern and central Europe.

These movements of pastoralists have been associated with the migrations of Indo-European populations (Kurgan people) from the fifth millennium BCE to the third millennium BCE. The

Kurgan hypothesis of Indo-European migrations, advocated by archaeologist Marija Gimbutas, has been much debated and was neglected for some time, but it has experienced a reappraisal in recent years.

The people from the eastern steppe did not only establish their political supremacy over the agrarian communities in the west, they also introduced the model of social hierarchy and power relations, with the pivotal role of the ruling elite. Within a few generations, the former pastoralists became acculturated and adopted an agrarian lifestyle themselves. The history of western Europe from the fifth millennium BCE onward is the history of continual Indo-Europeanization and the construction of hierarchical societies.

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Bibliography

- Anthony, David W. *The Horse, the Wheel and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World*. Princeton, NJ: Princeton University Press, 2007.
- Haarmann, Harald. *Foundations of Culture: Knowledge-Construction, Belief Systems and Worldview in Their Dynamic Interplay*. New York: Peter Lang, 2007.
- . "Indo-Europeanization: The Seven Dimensions in the Study of a Never-ending Process." *Documenta Praehistorica* 34 (2007): 155–175.
- Kristiansen, Kristian. *Europe before History*. New York: Cambridge University Press, 1998.
- Maisels, Charles Keith. *Early Civilizations of the Old World: The Formative Histories of Egypt, the Levant, Mesopotamia, India and China*. New York: Routledge, 1999.

Economics and Trade

For most of this era, economics and trade are mostly about the subsistence quest and production and consumption in the domestic sphere. It is only after 10,000 years ago that the trade and exchange of commodities such as stone, obsidian, and ceramics become a more important part of social life. By the end of the era, regional trade networks that covered large distances were common in the Near East, Mesopotamia, the Indus Valley, and East Asia.

Economics for our most distant ancestors was exclusively about the food quest. Individuals foraged for themselves, but mothers did share with their offspring and sometimes their close female kin. There is some limited evidence from East Africa that *Homo habilis* may have ranged over dozens of kilometers to obtain stone to make tools. Although it is not certain, it is highly likely that this stone was obtained during foraging trips for food.

More extensive food sharing with nonkin may be seen as a very early form of economics. In modern hunting and gathering societies, meat obtained by a hunter is typically shared among all of the people present at the camp. This form of sharing reflects the fundamental principle of reciprocity. In relatively simple societies, people exchange objects not so much for economic gain but for the social relationship that the exchange implies. Exchange creates obligations for future exchanges and highlights the social relationship between individuals.

The accumulation of objects or food in most hunting and gathering societies is seen as a breach of social mores and is strongly resisted. Those individuals who seek to have too much are often shunned socially or constantly mocked until they cease their drive toward possession. This also reflects the egalitarian ethos of these societies.

Ownership or personal possession is recognized, but the concept does not extend beyond the personal. In hunting and gathering societies, land is not owned in the common sense of the word but instead is open to all. Territory is often recognized, however, but the degree to which people from different social groups are excluded from it varies considerably.

As societies become more sedentary, however, the egalitarian ethos begins to break down, and the accumulation of food as well as nonsubsistence commodities begins to increase. Food storage is important in highly seasonal environments in which there is little to eat during the coldest months of the year. As societies in more temperate zones began to be more sedentary, families began to store food in larger quantities. Surplus food production—that is, more food is produced by a household than is required to feed it—could be used to obtain valued objects through trade and exchange or could be used to create debt obligations

with other families that were unable to produce enough food to feed themselves. Because of the reciprocity principle, these debts would have to be repaid either in kind or with labor. Some families, then, were able to use these repaid debts or this labor to further improve their economic standing. The surplus production of food meant that these families could then accumulate desired objects, thus enhancing their social status.

With the advent of more widespread reliance upon domesticated plants and animals, this process of accumulation, debt generation, and increasing wealth in the hands of a small number of families intensified.

There are numerous examples from ethnography in which land is held in common by a lineage or a village. The concept of private property seems to be a relatively late addition to the social lives of our ancestors.

However, reliance upon domesticated plants does not necessarily mean that land is owned by a single family. There are numerous examples from ethnography in which land is held in common by a lineage or a village. The concept of private property seems to be a relatively late addition to the social lives of our ancestors.

With increasing social complexity and the advent of village life, we begin to see signs of economic differentiation. In many

mobile societies, people make for themselves what they need to survive, including clothing, hunting equipment, utilitarian objects, personal ornamentation, and other items. Although some individuals may have greater skill than others in making specific objects that are then traded or bartered, for the most part households produce what they need. As villages become more complex, however, some begin to specialize in the production of goods or commodities, such as salt, wooden objects, and pottery. These goods are then traded in a number of ways, ranging from direct barter with producers to large market systems, where producers meet on a periodic basis to offer their wares to consumers in some central location. Itinerant traders may also serve to distribute goods between regions.

At the very end of the era, elites begin to support the production of what are best seen as luxury objects that are either displayed or presented as gifts to other elites. This is known as a prestige goods economy. Elites use surplus food production extracted from farmers to support this activity. Religious institutions as well use their wealth to support specialists to create objects of veneration.

—Mark Aldenderfer

■ Introduction: How Our Primate Relatives Made a Living

Nonhuman primates (NHP's), like humans, have evolved with a wide variety of methods to make a living. At the forefront of activities needed for living is obtaining

food. Some NHP's have developed complex mechanical and social methods for accessing resources, while others fill simpler ecological niches. Regardless of where they fall on this

spectrum of complexity, our primate relatives have evolved in a myriad of successful ways to make a living.

Foraging is the manipulation, collection, and consumption of food items. This is the most common method of obtaining food sources among primates. The only aspect of foraging more varied than the species among which it is observed is the vast array of forms it takes. Variation in both foraging methods and foods foraged for are based upon many factors. Among the more significant factors are the size of the animal, the physical structure of the animal, and its habitat. The animal's size impacts how much food it requires in order to survive. For example, a chimpanzee (*Pan troglodytes*) will need to invest more time in food acquisition than the much smaller olive baboon (*Papio anubis*). The animal's structure also determines which foods it may acquire. Anatomical limitations and advantages will determine not only its ability to acquire the food item but also its ability to manipulate it for consumption. For example, smaller primates are able to reach fruits found higher and on small tree branches. However, larger primates may have the strength to tear open tougher rinds to access seeds inside of some fruits. The animal's habitat also affects the availability and accessibility of food. Availability of food is dependent upon the suitability of the land for its growth, seasonal conditions, and topography. Primates are not only limited to what is available in their habitats but are also limited by where food patches are present. Seasonal changes affect when certain foods are available, which subsequently impact primate diets and foraging patterns. Topography affects where these food patches will occur as well as whether or not they are accessible to the primates. The high level of variation in the act of foraging is due to a large number of factors affecting the behavior as well as the wide range of species that have created adaptations to it.

Hunting is another method of food acquisition that is less common yet also highly varied. NHP's engage in hunting for insects and other live prey as both a solitary and cooperative activity depending upon the species in which it is being observed. The solitary aye-aye (*Daubentonia madagascariensis*) uses its elongated middle

digit to tap on trees in order to cause movement among the grubs within. Upon hearing the movement, the aye-aye chews into the wood and extracts the grubs with the same finger. Chimpanzees have been observed hunting cooperatively and strategically with other group members for red colobus monkeys (*Procolobus rufomitratus*) and have been seen to strategically block escape routes in the trees to trap their prey.

Tool use has been observed among NHP's in both foraging and hunting activities. Orangutans (*Pongo pygmaeus*) have been recorded habitually using tools while manipulating fruits for consumption. They have been observed using leaves to protect their hands while manipulating fruits with spiky rinds and have also been known to use twigs to scrape seeds from inside of fruits while partially open. Chimpanzees have been seen using branches to spear nocturnal primates known as lesser bushbabies (*Galago senegalensis*), which are sometimes found in tree hollows. In both cases, tools utilized were carefully selected for certain attributes and often manipulated to maximize efficiency for food acquisition.

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Bibliography

- Oates, John F. "Food Distribution and Foraging Behavior." In *Primate Societies*, edited by B. Smuts, R. Wrangham, D. Cheney, R. Seyfarth, and T. Struhsaker. Chicago: University of Chicago Press, 1987.
- Strier, Karen B. *Primate Behavioral Ecology*. 3rd ed. Boston: Allyn and Bacon, 2007.

Food Sharing in Primate Society

Food sharing is a trait that is observed in various species of primates. It is generally defined as the unforced transfer of food from one individual to another, most commonly close relatives. The study of food sharing among primates has been an important component of understanding reciprocal behaviors in primate social systems. Among nonhuman primates, food sharing has been most extensively studied among chimpanzees (*Pan troglodytes*). It appears that these interactions both shape and indicate the present nature of complex social relationships between individuals.

It was once thought that food sharing was an altruistic act between individuals. This was often thought to be the case when food sharing was observed between nonkin members of a group. However, further research has provided evidence that food sharing may serve to benefit the actor as well as the recipient. Food sharing occurs most commonly between related members, usually closely related kin, the most frequently observed being the transfer of food from mother to offspring. Among chimpanzees, mother to infant sharing was most commonly observed when the infant had trouble accessing or processing food. This was most frequently seen with fruits, especially when infants were unable to open hard shells or remove seeds from sticky pods. Frequently, a mother will tolerate an infant taking food from her hand, or she may directly offer it. This not only serves to increase the survival of the offspring but also contributes to infant learning. Through food sharing, the infant not only learns how to process foods and what is edible but also picks up on social cues involved with the transaction when it occurs between adults. This has been observed in younger primates, such as adolescent chimpanzees. Food sharing between adults tends to hold a highly social function. Which individuals share food can be indicative of social hierarchy, individual relationships, and relatedness. Food sharing most commonly occurs between individuals who are close in rank, bonded through sexual or allied relationships, or closely related. It has been observed that individuals are more likely to share food with individuals they are attempting to establish sexual relations with or individuals who assist them in some way.

Chimpanzee food-sharing behavior has been recorded intensively at Gombe in Tanzania and other well-known research sites in the wild. The majority of food sharing occurs from parent to offspring. Between adults, food sharing is predominantly initiated by males. This behavior is found in significantly higher frequency between males, with males to females, and with males to young or infant chimpanzees. It is found in the lowest frequency between adult females. This may also be indicative of the nature of chimpanzee culture, in which males form alliances and bond more than females do with each other. The reason for this structural trait is due to dispersal

patterns in this species. Males stay within their natal, or birth, group and thus form a more stable hierarchy. Females, however, often leave to join new groups in order to increase mating opportunities with other males. Males team up in order to successfully hunt young red colobus monkeys (*Piliocolobus badius*). While there are various theories as to specifically why the male chimpanzees share their food, especially protein-rich colobus meat, several trends have been found in meat-sharing following hunts. First, males are more likely to share meat with males who participated in the hunt. This suggests intrasexual social functions of meat sharing. However, this has also been observed in cases of sharing with other foods, such as fruits. Males not only shared with those after participating in hunts but also with males with whom they were attempting to establish bonds for future support. This is especially seen in males attempting to bond with higher-ranked males in order to reduce chances of harassment and increase chances of support in future alliances. Second, males were more likely to share meat with those who shared with them in previous situations. Reciprocal sharing has also been observed with other foodstuffs. In captive studies of chimpanzee groups, individuals who did not share food were also less likely to become recipients of shared food. In a sense, chimpanzees show awareness of which individuals are known to share and which are not. This applies to all individuals of a group regardless of age or sex. Third, sharing of meat has been seen to play a role in intersexual functions. Often dubbed the “meat for sex” hypothesis, males have been observed to withhold meat from begging females until after they have willingly copulated with them. Males are also more likely to share food, other than just meat, with females with whom they are attempting to copulate or have already established bonds. Currently, the primary motivation for food sharing among chimpanzees is still debated.

While chimpanzees remain the most frequently studied species engaging in food sharing, other species have also been known to utilize this social technique. Food sharing in the wild has been observed among the Callitrichidae family, which largely consists of marmosets and tamarins. These are New World monkeys, residing in South America, that are known for all

group members participating in infant care. Most observations of Callitrichidae food-sharing traits to date have been recorded among golden lion tamarins (*Leontopithecus rosalia*) and buffy-headed marmosets (*Callithrix flaviceps*). Among these species, processors were seen to give "food calls" soliciting younger group members to take food. Monogamous species within the Cebidae family have also been observed to share food with their mates and offspring. Within this family, the owl monkey (*Aotus trivirgatus*) and dusky titi monkey (*Callicebus moloch*) have been observed to share food in both wild and captive situations. Food sharing has been extensively studied in brown capuchin monkeys (*Cebus apella*) in controlled environments as well.

The study of food sharing among nonhuman primates is directly significant to understanding the role that food sharing may have played in human evolution. Observing practices of food sharing among chimpanzees, for example, may provide an example of how early hominids may have engaged in the practice. The tendency among all primates to share most with offspring indicates an innate drive to increase genetic fit-

ness by ensuring sustenance for the young. The social implications of food sharing have been studied by those suspecting that access to food may have influenced gender roles in modern human society. Many feminists believe that access to meat has played a large role in the formation of male-dominated societies. Whether this is truly the case or not has yet to be determined, but the importance of food sharing in primate evolution is indisputable.

—Kimberly Nguyen

Bibliography

- Boyd, Robert, and Joan B. Silk. *How Humans Evolved: Third Edition*. New York: Norton, 2003.
- Silk, Joan B. "Social Behavior in Evolutionary Perspective." In *Primate Societies*, edited by B. Smuts, R. Wrangham, D. Cheney, R. Seyfarth, and T. Struhsaker. Chicago: University of Chicago Press, 1987.
- Strier, Karen B. *Primate Behavioral Ecology*, Vol. 3. New York: Allyn and Bacon, 2007.
- Whitten, Patricia L. "Infants and Adult Males." In *Primate Societies*, edited by B. Smuts, R. Wrangham, D. Cheney, R. Seyfarth, and T. Struhsaker. Chicago: University of Chicago Press, 1987.

■ Introduction: Food Sharing and Cooperation among Our Earliest Relatives

Human beings have adapted and thrived in a wider range of environments than any other animal. This distinction given to human beings is impressive because it has been achieved despite biological limitations and disadvantages. Humans are not the fastest or strongest animals, nor are they equipped with the most acute senses. However, they have developed one adaptation that has allowed them to survive and thrive as successfully as they have: cooperative behavior. There is a strong body of evidence to suggest that cooperative behavior and food sharing is an adaptation that existed among some of humanity's earliest ancestors. Three areas of anthropology support cooperation and food sharing among our early ancestors: primatology, archaeology, and cultural anthropology.

Studies of social nonhuman primates, particularly chimpanzees (*Pan troglodytes*), dem-

onstrate cooperative behavior especially in relation to food. Chimpanzees engage in cooperative hunting of red colobus monkeys (*Procolobus rufomitratu*s), working together to block escape routes in order to capture their prey. The meat is then sometimes redistributed among the other members of the group. Behavioral evidence suggests that if chimpanzees possess the cognitive abilities to engage in cooperative behavior and food sharing, early hominids most likely also had the capacity for such activity.

Archaeological evidence for cooperative living and food sharing among early ancestors exists in some sites of Olduvai Gorge, located in Africa's Great Rift Valley. In some sites of Olduvai Gorge, archaeologists have unearthed possible shelter remains, semiprocessed animal fossils, and stone tools that point to a strong possibility of cooperative living among our early

ancestors. These elements suggest a strong possibility of butchery sites, where early hominids would store tools and transport meat in order to process the carcasses. One stone circle found at Olduvai Gorge has been hypothesized to be the remains of a simple shelter. This simple shelter would have been utilized as a temporary camp while the hominid butchered or processed meat. A simple shelter would indicate that early hominids remained at the sites for a time period long enough to warrant the energy investment necessary to create such a structure. Many animal fossils excavated at Olduvai Gorge show cut marks from hominid tools, indicative of some kind of processing. Some of these fossils belong to fauna that would have been very difficult for a single hominid to acquire due to the size of the animals. This indicates that cooperative hunting and/or transport was required in order to bring the animal to the butchery site. Caches of stone tools matching the marks found on bones, thus processing equipment, have also been excavated at some Olduvai Gorge sites. By caching tools, as opposed to carrying these implements with them, our early ancestors would have saved energy. The practice of caching tools would also indicate that early hominids had the capacity to remember where the cache sites were located and navigate from kill sites to caches. This is a behavior that has been observed among chimpanzees.

If these are in fact butchery sites, then studies from cultural anthropology would lend further support of cooperative behavior and food sharing among our ancestors. These butchery sites bear a strong resemblance to temporary camps of contemporary foragers. In foraging communities, members almost always share their meat. Studies of foraging communities show behavioral patterns that lead to the creation of sites that leave evidence similar to the elements excavated in Olduvai Gorge.

Various lines of evidence from three anthropological subdisciplines point to the strong likelihood that our early ancestors engaged in cooperative behavior and food sharing. This evidence offers an explanation as to how humans became the most successful primate in the world.

—Kimberly Nguyen

Bibliography

Boyd, Robert, and Joan B. Silk. *How Humans Evolved*. 3rd ed. New York: Norton, 2003.

Australopithecine Food Sharing?

The sharing of food resources beyond related kin is a behavior expressed in most human societies and is often considered a defining feature of humanness. Humans are also unique in the mammal world in the duration of the provisioning of offspring after they have been weaned from breast milk. However, in the context of human life history, which is characterised by a long period of maturation and reliance on adults, as well as basic evolutionary theory, the provisioning of offspring makes sense because it increases one's reproductive fitness. Among our primate cousins, food sharing also occurs between related individuals, especially mothers and their infants, and to a certain extent chimpanzees are known to share food outside of their own kin. Anthropologists are as yet unsure at what point in evolutionary history this became a critical component of hominin survival. In order to understand food sharing, scholars can make observations about the nature of this behavior in primates and modern hunter-foragers and use this to test hypotheses about fossil hominins; unfortunately, there is very little evidence to understand if and why this occurred in the australopithecine lineages.

Chimpanzees have the most diverse diet of the primates, relying on a variety of ripe fruits, leaves, seeds, and insects, and they opportunistically use tools to aid certain food-procuring activities (i.e., termite fishing with sticks, cracking open nuts with rocks). In addition, chimpanzee diets include cooperatively hunted vertebrates, such as monkeys and other small mammals, and although not reliant on this as a staple, hunting occurs consistently. The sharing of meat and herbivorous resources is quite different; mothers frequently share fruits, seeds, and other vegetation with their infants, but meat is generally shared between adults, including nonrelated individuals. Why might meat-eating encourage food sharing? Meat is both a valuable and mobile resource; the individual who is mainly responsible for procuring a kill (or appropriating it from

► THE DIVISION OF LABOR IN NEANDERTHAL SOCIETY

The division of labor in prehistoric societies is a topic that recently received a lot of attention from the archaeological community. However, the archaeological record left behind by Neanderthals contains little direct evidence of their social organization, gender role structure, or division of labor. Archaeologists thus rely on indirect information from ethnographical examples to construct hypotheses that can be tested against the archaeological data.

From studying the artifacts (primarily stone tools) and the faunal remains unearthed at Neanderthal sites, archaeologists have been able to establish that the overall Neanderthal subsistence strategy was based on hunting and gathering, much the same way our own species (*Homo sapiens*) survived for most of our species prehistory. We know that Neanderthals were very effective hunters based on the analysis of the animal species that composed their diet. The faunal remains indicate that Neanderthals regularly targeted large terrestrial mammals such as bison, various species of deer, and wild horses, thereby efficiently exploiting the resources of their environment. These remains also demonstrate Neanderthals' ability to exploit large animals in the extremely cold conditions of Ice Age Europe for over 200,000 years. Based on the analysis of the isotopic content of the Neanderthals' bones, it was determined that the Neanderthals' diet was largely composed of large herbivore proteins that regularly reached up to 85 percent of their overall diet. These different lines of evidence draw a picture of skilled hunters organized in highly mobile small groups able to adapt their subsistence strategies to the fluctuating climate of the Pleistocene. The need for cooperation during hunting expeditions tends to support the notion that some form of social organization existed during Neanderthal times and that some form of division of labor is probable.

From the study of the fossil record and now genetic studies, we also know that Neanderthals likely possessed a form of complex articulated language, similar to our own linguistic abilities. Such capacity for language is a prerequisite for successfully creating and maintaining strong and durable social ties. This capacity for language also supports the notion that Neanderthals maintained traditions over time. It is likely that some of these

traditions contained rules about social organization and division of labor.

To further identify what this organization may have looked like, archaeologists rely on ethnographical examples from living or recently documented hunter-gatherer groups. The premise of this analogical reasoning is that the mode of subsistence of any given human group impacts many other aspects of the group's social structure. Hunter-gatherer groups are known to possess a flexible social structure that allows them to quickly respond and adapt to changes in the environment on which they tightly depend. The social hierarchy of hunter-gatherer societies, however, is often limited since the social function of each group member is well established and does not require constant reinforcement based on authority. It is therefore safe to assume that Neanderthals' societies were organized around a loose social structure emphasizing the function and the skills of each group member. Prior to the 1960s and the rigorous use of ethnographical analogy, it was widely accepted that in most hunter-gatherer societies, men were in charge of hunting animals, while women and children were in charge of gathering and collecting plant foods, seeds, and tubers. This definition was later challenged by ethnographers emphasizing that in many hunter-gatherer groups, gender roles were not so strictly established. The main point was to remind archaeologists that a hunter-gatherer lifestyle requires the active participation of every group member and that women's roles were not restricted to child rearing and gathering plants. The relatively small part of plants and vegetables in Neanderthals' diet tends, however, to suggest that women did not play a major role in subsistence activities in Neanderthal societies.

More recently, the archaeologists S. Kuhn and M. Stiner used ethnographical analogy to conduct a study designed to assess what the division of labor may have looked like in Neanderthal societies. They relied on both ethnographical examples and archaeological data to confirm the hypothesis that men were likely hunting large mammals and thus procuring the bulk of the group's daily caloric intake. Women and children did not seem to have had a significant role. In some contexts, they may have participated in the gathering and hunting of small slow terrestrial animals (tortoise, snails, and

THE DIVISION OF LABOR IN NEANDERTHAL SOCIETY (continued)

shellfish), but their role was limited to supporting the male-dominated hunting activities and to occasionally participating in hunting expeditions. For Kuhn and Stiner, this clearly demonstrates the sharp contrast between Neanderthal and *Homo sapiens* social organization. In the case of our species, we created strong and complex social structures early in our evolutionary history. Such emphasis on social interaction is considered to be one of the most characteristic behavioral traits of our species. For example, the first sites occupied by *Homo sapiens* yielded artifacts with strictly symbolic and social functions. These objects included jewelry and ivory beads that were probably sewed onto clothing items. These decorative objects are often found in burials, thus indicating that they were meaningful and that they belonged to an individual, not the group. These artifacts most likely functioned as social markers to display special social status or the individual's

skills. None of these symbolic objects have ever been identified in Neanderthal archaeological contexts. This does not necessarily mean that such social hierarchy did not exist in Neanderthal societies but strongly suggests that their social organization was different and likely less elaborate than ours.

—Alexandre Steenhuyse

Bibliography

- Fagan, Brian M., and Charlotte Beck. *The Oxford Companion to Archaeology*. Oxford: Oxford University Press, 1996.
- Havarti, Katerina, and Terry Harrison, eds. *Neanderthals Revisited: New Approaches and Perspectives*. Netherlands: Springer, 2005.
- Kuhn, Steven, and Mary Stiner. "What's a Mother to Do? The Division of Labor among Neanderthals and Modern Humans in Eurasia." *Current Anthropology* 47 (2006): 953–981.

a lesser-ranking individual) can retreat with it to safety in order to guard it from others. However, while actively protecting a carcass it cannot be easily consumed. Therefore, it might be in an individual's best interest to first share the meat with others, and in some cases this follows along family lines. But more often than not the kill is made by a male and shared first with unrelated males, with smaller bits parceled out to females or juveniles. This situation may ensure that similar sharing is received on other occasions and may also be an agent of reinforcing social hierarchies. In fact, this is not so dissimilar from what we see in classic studies of contemporary hunter-forager societies such as the Ache and Hadza. The sharing of food resources is predominantly restricted to medium- to large-size mammals, which are actively hunted and distributed to both kin and nonkin depending on a number of variables: the type and amount of the resource, the likelihood of reciprocity, one's social status and the status of the receivers, the cultural meaning of the sharing event, and the way in which one's social group will perceive the sharer if he does or does not engage in sharing.

If meat plays a central role in food sharing in both chimpanzee and modern human societies, it

is not unreasonable to investigate the dietary adaptations of early hominins for evidence of meat consumption and the archaeological traces of this. Early reconstructions of hominin social behavior focused on dense concentrations of stone tools and mammal bones, especially at sites such as Olduvai Gorge. These were interpreted as home bases, places to which hominins returned with kills or scavenged remains in order to share with the wider community. Researchers now believe that many Early Stone Age accumulations were the result of the activities of many mammal species including carnivores and hominins, who were competing for these meat resources, but it is not clear exactly what the level of competition was between them. Furthermore, our investigations are confounded by the fact that we cannot be sure which hominin species made and used the stone tools purported to be used in the processing of meat resources. Gracile and robust australopithecines, early *Homo*, and *Kenyanthropus* were contemporaneous, and although most researchers favor a scenario in which *Homo* struck the first flake from a cobble core, this is not yet resolved, nor will it likely be.

Hominin morphologies provide more direct evidence for their dietary preferences, and they

do not indicate that australopithecines were obligate meat eaters. Craniofacial architecture and relatively large molars suggest that the australopithecines were adapted primarily for a vegetarian diet, one that was dominated by harder foodstuffs such as nuts and seeds that required a masticatory apparatus that could withstand high grinding forces in the robust species. The less specialized dentition of the gracile species, while still indicating that a substantial amount of vegetation was consumed, may however indicate a tendency toward omnivory. Isotopic studies infer that *Paranthropus robustus* may have consumed some animal material. However, it is the reduced molars, less the robust face and jaw and relatively larger brain of *Homo*, that indicate a probable transition toward consistent meat eating. Researchers may therefore conjecture that the australopithecines were primarily vegetarian but consumed and shared meat in a fashion similar to chimpanzees.

Recent advances in the application of agent-based computer modeling may help us understand what conditions favored the evolution of particular hominin diets and food-sharing behaviors. Such models infer that meat eating would have allowed *Homo* to meet their calorie demands in environments modeled after modern East African mosaic habitats. Furthermore, the increased patchiness of woodlands in the

Plio-Pleistocene may have favored an evolutionary scenario in which food sharing became critical to the survival of the group.

—Kris Kovarovic

Bibliography

- Boyd, Robert and Joan B. Silk. *How Humans Evolved*. 4th ed. New York: Norton, 2006.
- Janssen, Marco A., et al. "Hominids Foraging in a Complex Landscape: Could *Homo ergaster* and *Australopithecus boisei* Meet Their Calorie Requirements?" In *Advancing Social Simulation: The First World Congress*, edited by Shingo Takahashi, David Sallach, and Juliette Rouchier. Kyoto, Japan: Springer, 2007.
- Mitani, John C., and David P. Watts. "Why Do Chimps Hunt and Share Meat?" *Animal Behaviour* 61 (2001): 915–924.
- Moore, Jim. "The Evolution of Reciprocal Sharing." *Ethology and Sociobiology* 5 (1984): 5–14.
- Premo, Luke. "Patchiness and Prosociality: An Agent-based Model of Plio/Pleistocene Hominid Food Sharing." In *Multi-Agent and Multi-Agent-Based Simulation*, edited by P. Davidsson, K. Takadama, and B. Logan, 210–224. Lecture Notes in Artificial Intelligence, Vol. 3415. Berlin: Springer-Verlag, 2005.
- Teaford, Mark F., and Peter S. Ungar. "Diet and the Evolution of the Earliest Human Ancestors." *Proceedings of the National Academy of Sciences* 97 (2000): 13506–13511.

■ Introduction: The Ancient Household as the Primary Economic Unit

How do people make a living? That is, what is the range of variability in ways in which people obtain resources of all kinds? For our closest primate relatives, each adult animal is responsible for its own subsistence. Although chimpanzees share meat on occasion, this is rare, and such sharing is more the expression of social relationships than it is of subsistence requirements.

Mobile human hunter-gatherers, however, have a different modality of resource procurement. Here, the family, composed of a male-female pair and their offspring (the so-called

nuclear family), are responsible for obtaining resources for one another. A typical division of labor has females gathering plants and hunting small game, while males hunt larger animals. Children may or may not participate in food gathering. What food is obtained is shared among the members of the family, which could also include close relatives. Meat is shared more widely, however, as a gesture of social reciprocity. To fail to share meat is a serious social transgression, and there is real pressure to do so. In times of hardship, other resources may be shared with people from other families.

As people become more sedentary, the family becomes even more important. With growing dependence upon domesticated plants and animals comes a demand for more labor. Children often tend animals, weed plants, and participate in the harvest. Families also become more complex as well and may include other adults defined as family members through new forms of kinship (extended families) and who work together to obtain resources. Surplus subsistence production—that is, more food than is required to feed the family or prepare it for the next season—is often held within the family unit. This may lead to disparities of wealth between families, and many anthropologists see the accumulation of surplus as crucial to the development of social inequality and the formation of more complex societies.

Through time, then, we see a transformation of the subsistence quest from individuals to nuclear families to large extended families. Although the transition to large extended families as engines of economic growth are clearly associated with the onset of sedentary life and eventually reliance upon plant and animal domesticates, the transition to more widespread food sharing within the nuclear family is not so well understood. Indeed, exactly when families appear is a point of debate within the field. Once they are created, however, they become essential to societal reproduction and longevity.

—*Mark Aldenderfer*

Evidence for the Division of Labor in the Upper Paleolithic

The Upper Paleolithic era spans a time period from around 45,000 years ago until approximately 10,000 years ago. It has numerous informal monikers due to the enormous wealth of artifacts, leading to an even larger trove of hypotheses regarding the many human behaviors and advances made during this time. Tools of this period are key to unearthing the flurry of activity that seemed to occur at this time. This particular time period, especially the transition between the Middle and Upper Paleolithic, marks a boom in archaeological evidence for technology and the division of labor. Division of labor is a major indicator of development, since it is characterized by

cooperative specialization. For this reason, it is important to determine when the division of labor began in human history. While the existence of a division of labor at such an early point in hominid history is still debated by some, artifacts from sites all over the world point to at least a strong possibility of the development of a division of labor occurring as far back as during the transition between these eras.

Technological advancements made in the Upper Paleolithic era allowed for increased quantity and efficiency of tool production. A wide variety of tools have been excavated from sites dating from the Upper Paleolithic. The formation of these tools, particularly blades, has been a major topic of discussion among archaeologists. One of the most fascinating findings from this era is the discovery of numerous thin, relatively uniform blades. This indicates development in the sophistication of tool making and thus increased manners in which our early ancestors could manipulate raw materials. Among the most significant of these blades discussed are prismatic. These are thus named for their shape, which displays tapering narrowness on either side. Prismatic blades were produced from methods known by archaeologists as Levallois and Disk Core technologies. The Levallois and Disk Core techniques employed the striking of flakes from a prepared flint core. These methods were widely utilized during the Upper Paleolithic and grew increasingly refined over time. Another highly significant technological advancement made during the Upper Paleolithic was the production of burin blades or microburin. This is a technique that allowed our early ancestors to produce very narrow blades. These blades were useful for gouging and engraving bones. From these bones, bone needles were then created. Bone needles meant that clothing could also be manufactured that was more closely fitted and thus more effective for thermoregulation in frigid temperatures. These two major technological advancements contributed to the explosion of tools and artifacts found in archaeological sites of the Upper Paleolithic. The development of such sophisticated techniques as well as their consistent employment supports the notion of a division of labor existing during the Old Stone Age. The existence of many blades and needles manufac-

tured from the same techniques would indicate the existence of specialists among our early ancestors, able to manufacture uniform tools and products.

Increased sophistication of tools also paved the way for more efficient hunting, thus giving our ancestors an edge in survival. One of the most advanced hunting implements of this era is the atlatl. The atlatl gave hominids the ability to hunt using sharpened projectiles. The darts are flung from a leather strap, which rests over the user's shoulder. The invention of the atlatl increased not only the distance from which a target could be struck but also the accuracy with which it could be struck. The atlatl was more accurate than throwing projectiles simply by hand. This was advantageous for widening the variety of game that could be utilized as food sources. Again, the manufacturing of such tools indicated

the presence of specialists since many were uniform.

Cultural artifacts also point to specializations of trades and skills. The study of art during this time is highly significant because art shows movement toward specialization. Cave paintings are among the most-discussed topics regarding the Upper Paleolithic. There is also evidence for shamanism, especially in sites where ritual burials are evident. Specializations for cultural activities further support the existence of a division of labor in the Upper Paleolithic.

—Kimberly Nguyen

Bibliography

Gamble, Clive. *The Paleolithic Societies of Europe*. Cambridge: Cambridge University Press, 1999.
 Scarre, Chris, ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2009.

■ Introduction: The Social and Economic Meaning of Exchange

Ever more archaeological, anthropological, and linguistic evidence is being accumulated to demonstrate that peoples of the Old World were engaged in long-distance trade contacts and intercultural relations much earlier than has hitherto been believed. Nothing speaks against the assumption that a network of trade relations had been established within Anatolia and between this region and Mesopotamia at an early date. Trade relations already functioned with certainty during the times when the ancient accounting system, used by Samarran and Ubaid and later Sumerian traders in the Near East for counting commodities, came into use in the eighth millennium BCE.

It is obvious that the incentive to engage in the exchange of goods is motivated by multiple interests, which may be practical as well as non-practical. Ecological conditions may trigger processes of an intensification of contacts between distant groups of people. For instance, the fourth millennium BCE saw a climatic change in Anatolia, the Near East, and Mesopotamia. As a result,

weather conditions became drier, and agriculture became more difficult in the areas of early farming. The human response to this change was the intensification of the use of arable land by means of irrigation, the improvement of agricultural techniques, and the initial establishment of cultural and trade links.

Exchange has a broad meaning that encompasses both the exchange of commercial goods as an act of trade and the exchange of gifts. The former way is associated with items of material and practical value; the latter way is linked to items that carry symbolic and sociocultural value. In principle, any kind of exchange may have both social and economic significance, although preferences for one or the other may relate to certain materials or goods, as appreciated by people in different communities.

Obsidian is among the oldest known items of material value that has been traded since ancient times. Obsidian had already been traded across Anatolia thousands of years before the founding of the oldest town in Anatolia, Çatalhöyük,

around 7400 BCE. Evidence for early trade relations comes from this site, where obsidian, as a trade good, from quarries near two volcanoes in southern Cappadocia is attested for the seventh millennium BCE.

Altogether, seven different industries relating to the production of obsidian artifacts have been documented for the community at Çatalhöyük, which attests to the specialization of handicraft in an early phase of agrarian society. Moreover, the distribution of obsidian raw material at Çatalhöyük points to exchange in the hands of specialized traders. The wide range of items made of obsidian suggests that the significance of this material reached far beyond the practical into the social sphere and suggests a relation to social identity, given its use as a razor for grooming and scarification.

Perhaps the most prominent items with symbolic significance in the exchange networks of the Neolithic were figurines. Actually, it was their fragments that were exchanged in acts of fragment enchainment. Pieces of broken figurines have been found in numerous settlements of the Danube civilization dating to the sixth and fifth millennia BCE. Among the early agrarian population of Europe, there was a widespread custom to break figurines into pieces after rituals and ceremonies in which they had played a central part. Obviously, those pieces were believed to be infused with spiritual energy, and consequently they were considered precious. The broken pieces were not discarded but instead were given as gifts to friends, kin-folks, and trading partners. This habit explains why the pieces of one and the same figurine could travel in different directions and find keepers at various distances from the place where the sculpture had been made.

Such customs of using figurines and/or pieces of them in gift exchange were induced by a spiritually grounded worldview and intended to sustain social relationships in community life. Beyond the Neolithic era, this kind of gift exchange was popular in classical Greek civilization, among the Etruscans, and in ancient Rome. In some regions of the world, gift exchange to sustain social bonds has been practiced since ancient times up to the present, such as in the local Melanesian cultures in eastern Papua New

Guinea and adjacent islands. The repeated custom of exchanging ceremonial gifts over the whole life span is called *kula*.

—Harald Haarmann

Bibliography

Carter, T. "City of Glass: The Role of Obsidian at Çatalhöyük." In *From Earth to Eternity: Çatalhöyük*, edited by M. Haydaroglu. Istanbul: Yapi Kredi Cultural Activities, Arts and Publishing, 2006.

Chapman, J. *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South Eastern Europe*. London: Routledge, 2000.

Upper Paleolithic Exchange Networks

The development of exchange networks during the Upper Paleolithic (approximately 50,000 to 10,000 years ago) is indicative of the degree of change that occurred in human societies during the long-term transition from hunter-gatherer to agricultural settlements. Moreover, the establishment of exchange networks is indicative not only of the type of subsistence of early human societies but also of the growing connectedness between such societies in proximity to each other for the distribution and exchange of goods. Archaeological evidence indicates that goods such as marine shells, lithics, and other raw materials were exchanged over distances of several hundreds of kilometers in some areas of Afro-Eurasia. This reflects the level of complexity that characterized these early societies during the Upper Paleolithic through the onset of specialized crafts and ubiquitous technological innovations, which percolated across much of the world through these exchange networks.

The development of social and economic organization of early human societies during the Upper Paleolithic, particularly the ubiquitous hunter-gatherer bands that characterize the period, allowed for the establishment of exchange networks. Moreover, they are also indicative of evolving human behavior and cognitive capacity in that they illustrate the ability to understand the idea of value and exchange. Raw materials such as mammoth ivory, amber, marine shells, and elk teeth were exchanged in Upper Paleolithic Europe. These were later crafted into dec-

orative objects or implements for composite tools. While the prevalence of local raw materials used in manufactured goods found in archaeological sites is indicative that most items were collected from local sources, the use of valuable raw materials that were highly valued, as they were of higher quality and used for more ostentatious decorative purposes rather than more practical applications, is evidence of exchange networks.

There is evidence that exchange networks preexisted the Upper Paleolithic period, given that certain sites indicate that small quantities of stone from as far away as 74.5 miles (120 kilometers) were exchanged in western Europe. While much of the raw material for lithic industries was locally extracted, a small percentage of stone was in fact exchanged with other early human societies during this period. Evidence also suggests that late in the Middle Paleolithic, growing percentages of imported stones vis-à-vis local raw materials were brought from greater distances. In one instance in eastern Europe, some materials were found to have been brought from approximately 186.4 miles (300 kilometers) away, indicating greater distances in the emergent exchange networks of Eurasia. Moreover, some scholars suggest that sources of flint in eastern Europe were more vastly dispersed perhaps due to a colder climate, which necessitated longer distance rather than shorter-distance exchange networks such as those in western France. Early humans would have had to migrate much more frequently in such ecological conditions and had greater contact with other groups during their sojourns, thus establishing exchange networks over vaster distances. In contrast, shorter-distance exchange networks, such as those found in France, indicate that the prevalence of certain materials in more hospitable climates did not necessitate longer distances for trading such goods.

Lithic assemblages found by archaeologists at various sites in Europe, Asia, and Africa suggest that by the Upper Paleolithic, the percentage of local raw materials, while prevalent in tools and implements, included larger amounts of stones exchanged from vaster distances. In Germany, Gravettian sites had an estimated 95 percent of their lithic artifacts composed of

stone from within a radius of 15.5 miles (25 kilometers), with the rest from outside that perimeter. In contrast, in French Upper Paleolithic sites there were higher percentages of nonlocal flint in the lithic assemblages found. In central and eastern Europe, much like in the Middle Paleolithic, there is evidence of long distances in exchange networks but in much larger percentages of nonlocal stones for lithic implements. In some cases, in eastern European assemblages some perhaps came from distances as far as 186.4 to 260.9 miles (300 to 420 kilometers) from the archaeological sites where these were found. This indicates that long-established exchange networks continued from the Middle to the Upper Paleolithic amid the increasing complexity of human societies during this transition.

—Abraham O. Mendoza

Bibliography

- Bar-Yosef, Ofer. "The Upper Paleolithic Revolution." *Annual Review of Anthropology* 31 (2002): 363–393.
- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.
- McBrearty, Sally, and Alison S. Brooks. "The Revolution That Wasn't: A New Interpretation of the Origin of Modern Human Behavior." *Journal of Human Evolution* 39 (2000): 453–563.

The Importance of Agriculture for the Expansion of Trade

A precondition for agrarian ways of life is sedentism, which enhances the construction of solid houses for a continuous presence of their inhabitants. The houses of agriculturalists provide more space than dwellings in the campsites of hunter-gatherers (foragers). Sedentary agriculturalists develop their capacities for the storage of grain and other items so as to guarantee the provisioning of food from one season to the next.

Storage capacities are enhanced with the spread and specialization of technologies relating to the making of pottery and ceramic vessels. Depending on the quality of the soil and on weather

conditions the surplus of agricultural production may vary, but it is the key to socioeconomic advancement in agrarian communities and calls for trading and exchange. Trade may even assume a decisive role for sustainability of communal life. In those areas of the Old World where agrarian societies under the auspices of social and economic equality were established (i.e., in south-eastern Europe in the sixth millennium BCE and in the Indus Valley in the third millennium BCE), intensive trade for mutual advantage was the backbone for the relations between communities in bigger and smaller settlements.

The early agrarian communities traded agrarian surplus among themselves, but in order to enlarge the range of their exchange and the spectrum of commodities agriculturalists would engage in trade with their hunter-gatherer neighbors. The findings from comparative ethnographic research show that the relationships of agriculturalists and hunter-gatherers are, as a rule, friendly because there is no agenda of conflict over terrain. The agriculturalists would not compete with hunter-gatherers over the exploitation of the forest, nor would hunter-gatherers be interested in the fields for plant cultivation. Comparative research has also produced insights about prestige relations. Hunter-gatherers would consider agrarian lifeways to be more prestigious and would prefer commodities offered by agriculturalists for that reason.

Prehistoric scenarios of trading in the contact zone separating the area for plant cultivation from hunting grounds have been studied for southern and northern Europe. The context of contacts between Indo-European agriculturalists and Fennic hunter-gatherers in the Baltic area is illustrative of how exchange networks develop and expand. Agriculture spread into the region south of the Gulf of Finland from the third millennium BCE onward, gradually expanding in a west-east direction. In the eastern Baltic region, the frontier of agriculture remained stable over many hundreds of years. The Baltic agriculturalists engaged in trade with Fennic tribes on a basis of mutual advantage in a balanced reciprocity.

Prestige goods from the south that were traded to the people of the north included pol-

ished stone axes, pottery, bone combs and rings, cattle, and grain. The items that the agriculturalists received from the foragers in exchange for their commodities were furs, arrowheads, seal fat, forest products (berries, herbs, edible roots), and amber. This contact expanded over vast areas in the Baltic and eastern Europe, establishing connections for cultural and technological innovations. Trade enhanced social contact, and in the course of time, social relationships were also established, with a trend of forager women marrying into the lineages of agriculturalists.

Gradually, the hunter-gatherers with social bonds to the people in the south would acculturate and adopt agrarian lifeways themselves. The transition to farming in the eastern Baltic may have lasted over a longer span of time, between 700 and 1,500 years. In the zone bordering farming areas, bilingual and bicultural communities were established. It may have been the members in these communities who controlled the exchange of goods and ideas both ways. These prehistoric contacts can be traced by the linguistic borrowings of Baltic origin in the modern Baltic-Finnic languages, and these are loanwords in the terminology of kinship relations (e.g., Finnish *morsian*, "bride"; *sisar*, "sister"; *beimo*, "tribe") and of body parts (e.g., Finnish *kaula*, "neck"; *hammas*, "tooth"; *reisi*, "thigh").

—Harald Haarmann

Bibliography

- Haarmann, H. *Foundations of Culture: Knowledge-Construction, Belief Systems and Worldview in Their Dynamic Interplay*. New York: Peter Lang, 2007.
- . "Language, Economy and Prestige in the Context of Baltic-Fennic Contacts." *Studia Indogermanica Lodziensia* 5 (2003): 87–102.
- Harris, D. R., ed. *The Origins and Spread of Agriculture and Pastoralism in Eurasia*. London: University College London Press, 1996.
- Price, T., ed. *Europe's First Farmers*. Cambridge: Cambridge University Press, 2000.
- Zvelebil, M. "The Agricultural Frontier and the Transition to Farming in the Circum-Baltic Region." In *The Origins and Spread of Agriculture and Pastoralism in Eurasia*, edited by D. R. Harris. London: University College London Press, 1996.

The Growth of the Obsidian Exchange Network in the Near East

Obsidian is a black, green, or red rock of volcanic origin. Its noncrystalline structure is due to rapid cooling of lava, which gives it a glasslike attractive appearance. It is easily worked by flaking or knapping, and when fractured it has sharp edges. Such properties made it attractive to Stone Age societies for making a range of tools and projectile points as well as for mirrors, jewelry, and decorative purposes. Moreover, the obsidian produced by each volcano, and even each eruption, has distinctive properties or chemical signatures, notably trace metal and isotopic characteristics. In combination with dating controls, these characteristics have been used to reconstruct ancient obsidian trade networks. The obsidian was initially carried by individuals on foot and later by ship and was traded as the raw material and the finished product.

Among the oldest obsidian tools are flakes and blades from the Red Sea coast of Eritrea, which are at least 125,000 years old. However, major exchange networks began to appear from circa 12,000 BCE. This was a time when hunting and gathering were becoming increasingly organized and the initial stages of plant and animal domestication were occurring prior to the beginning of agriculture and the start of permanent settlement; all mark the increasing social complexity of Upper Paleolithic and Early Neolithic societies. Many sources of obsidian have been identified. Sources in Turkey are widespread in Anatolia and Cappadocia, while the obsidian of the islands of Pantelleria, between Sicily and Tunisia, and Lipari, between Italy and Sicily, supplied Tunisia and Sicily plus many other locations in the central and western Mediterranean via sea trade. Both islands supported well-developed Neolithic cultures as a result. Other sources in Transcaucasia (modern Georgia and Armenia) were also used but mostly locally. However, the sources in Cappadocia and Anatolia are especially significant in terms of a trading network in the eastern Mediterranean. The obsidian trade also enhanced links between settlements and contributed to the wealth and

development of settlements. These trading links were not confined to obsidian insofar as other commodities, such as crop plants, domesticated animals, and pottery were also exchanged, and equally importantly, ideas were transmitted.

At about 12,000 years BCE when habitats were still open, obsidian from two major sources, Göllü Dağı and Nenezi Dağı in Cappadocia, central Turkey, and deposits at Nemrut Dağı and around Bingöl in Anatolia, western Turkey, was traded several hundred miles along two major routes. As well as spreading west to the Sea of Marmara, Cappadocian obsidian crossed the Taurus Mountains to the Euphrates and into the northern Levant, and Bingöl /Nemrut Dağı obsidian was taken southwest along the foothills of the Eastern Taurus Mountains to the Tigris Valley and what is today Iraqi Kurdistan. As climate ameliorated, Cappadocian obsidian penetrated farther south into the Jordan Valley. By 9500 BCE when settlements were becoming permanent and agriculture was beginning, the volume of traded obsidian increased, and there was a degree of coalescence between the two sources, notably in the Middle Euphrates Valley. Within a millennium the trade had further expanded, probably in response to increasing demand from growing settlements and populations in the region, which were supported by well-organized food production. Notable developments were the shipping of Cappadocian obsidian to Cyprus and the extension of the land trade route to the Negev as well as the trading of Bingöl obsidian farther southeast to the Zagros Mountains. There is evidence that several urban centers controlled the obsidian trade including Çatalhöyük, Abu Hureyra, Bougras, Ain Ghazal, and Basta. Çatalhöyük, located on the flat plain of Anatolia, which was an important agricultural region, was noted for trade in general; shells and various semiprecious stones exchanged hands there, but the obsidian trade appears to have been prominent. Well-crafted arrowheads and spearheads have been found, and the importance of obsidian in the economy is reflected in the presence of a wall painting that depicts the eruption of the nearby volcano Hasan Dağı. Moreover, the abundance of shrines in the city to a goddess of similar image may indicate a close link between religion and obsidian trading.

It is possible that the obsidian itself was considered to be a sacred stone with divine power. Çatalhöyük's size, significance as a regional center, and wealth would have been due in large part to the obsidian trade. By 7000 BCE pottery production was developing, new settlements were being established throughout the Near East, and existing settlements were flourishing. A new obsidian trade route opened up along the coast, and obsidian ownership increased significantly. Only with the advent of metallurgy several millennia later, which provided durable and sharp implements, did the obsidian trade decline.

—A. M. Mannion

Bibliography

- Chataigner, C., J. L. Poidevin, and N. O. Arnaud. "Turkish Occurrences of Obsidian and Use by Prehistoric Peoples in the Near East from 14,000 to 6000 BP." *Journal of Volcanology and Geothermal Research* 85 (1998): 517–537.
- Sherratt, A. "The Obsidian Trade in the Near East, 14,000 to 6500 BC." *Arch Atlas*, January 2008, Edition 3. <http://www.archatlas.dept.shef.ac.uk/ObsidianRoutes/ObsidianRoutes.php>, accessed April 30, 2009.

Exchange Networks in Neolithic Europe

The exchange of goods, the beginnings of trade, and the emergence of systems of material value already date to the times of the Upper Paleolithic. However, it was during the Neolithic era that trade relations became more organized and developed into exchange networks, including far-distant or interregional trade. With the rise of horticulture and agriculture, goods and exchanged items became more diversified, including not only things of material value but also items that carried symbolic meaning, with significance for social bonds between kin groups, lineages, or communities that were engaged in trade over longer distances. A diagnostic item with religious significance for a network of gift exchange are female figurines and/or their pieces that are scattered throughout the Neolithic communities of the Danube civilization.

Among the first materials that were traded in the modern sense of the term was obsidian. According to experts, the most outstanding prop-

erty of obsidian is that properly worked blades are sharper than a knife made of metal. The area of origin of local obsidian can be pinpointed on the basis of its chemical composition ("signature"). Evidence for trade of obsidian over longer distances comes from Anatolia and from central and southeastern Europe. Already in the seventh millennium BCE, obsidian was transported from sites in Hungary and Slovakia to the Balkan region. There was another obsidian route leading from the Aegean coast farther inland. The area of origin of the Aegean obsidian is Melos, one of the Cycladic islands. Finds of obsidian from Melos on either side of the Aegean Sea are proof of sea trading in the Early Neolithic.

Throughout the ages, the major river systems in Europe have served as transport routes for people and goods. This is true for the Rhine and the Danube as much as for the Dnieper and the Volga. The early obsidian trade route from central Europe to the south went down the Tisza River into the Danube and as far as the Black Sea at a later date. The southern route from the Aegean coast was directed overland into the Danube Valley. Of all the Neolithic trading centers in the Balkan region, Vinca (south of Belgrade in Serbia) was the most important, linking the main route along the Danube with side routes along its tributaries. Vinca was founded around 5500 BCE, and the trade route system remained intact until circa 4000 BCE.

From the Aegean coast, a much-appreciated trade good—spondylus shells—found its way into the Vinca region and beyond. It was not only the big size of those shells that impressed Neolithic people but also the spiral structure of their core. Spondylus shells were worked to produce bracelets, pendants, and receptacles for special use such as cult vessels. The network of trade relations for this item was amazingly vast, and one can follow the spondylus trade archaeologically over nearly 1,864 miles (3,000 kilometers).

Obsidian and spondylus shells are durable materials. Therefore, their routes of distribution can be easily studied. However, it is not always easy to ascertain which were the goods traded in exchange. In the case of pottery and ceramic ware, these items tend to be widely strewn over large areas. Pots from the Vinca region have been found at distant places as far as southern

Anatolia. The exchange of perishable goods can only be inferred from comparisons with later periods for which documentation is available. Among the goods that were traded by late hunter-gatherers and early agriculturalists were furs, animal fat, the meat of domesticated animals, and surpluses of grain and fruits.

Metalworking started in the Balkanic region, and this new technology spread to the north and into the steppe zone of eastern Europe. The oldest metal that was worked was copper (since the sixth millennium BCE), later followed by gold (since the mid-fifth millennium BCE). The beginnings of metalworking and of the distribution of items made from metal date back in time prior to the advent of Indo-European populations. Linguistic evidence for the time depth are the terms for copper and for the generic terms for “metal” in Greek (i.e., *kbalkos*, *metallon*), which are both of pre-Greek origin and were adopted by the Greeks from the ancient pre-Indo-European population of southeastern Europe.

The use of metal signaled the beginning of a new era when stone tools were gradually replaced by copper tools. The era is called Chalcolithic (derived from the ancient Greek term for “copper,” *kbalkos*) or Eneolithic in modern terminology. Copper, especially in the form of ore as raw material, was traded throughout southeastern Europe. While copper was traded in considerable quantity (in the form of ore, metal scrap, or manufactured items), gold was of much rarer occurrence and may have served, from the beginning, as an item signaling social status.

Salt was a much-needed and much-appreciated commodity that was available in eastern Bulgaria and in Transylvania (northwestern Romania). Recent archaeological excavations have uncovered large salt deposits in the area of Provadia on the banks of the Provadia River west of Varna. The exploitation of the local salt demanded the development of special technologies of salt extraction from the rock-hard deposit and of the production of ceramic vessels with specialized functions.

The prehistoric settlement near the site was fortified, obviously to protect the area of salt exploitation against outsiders’ incursions. The con-

trol over salt and of the trade with it as a source of prosperity for the local community might have been the decisive incentive for steppe people to make incursions into the Varna region and establish themselves as a social elite over the local population. There might have been a connection between the prosperity stemming from the trade with salt and the advancement of metalworking (i.e., of gold) in the region. The oldest artifacts made of gold known in the world have been unearthed from a prehistoric cemetery near Varna. These artifacts are plates made of hammered gold in the shape of animals (i.e., cattle) and spirals.

During the transition from the Eneolithic to the Bronze Age (late fifth millennium BCE), the significance of exchange networks increased. Trade, including prestige goods made of metal, became a major form of subsistence for certain local groups in the contact region of western agriculturalists and pastoralists from the Eurasian steppe.

—Harald Haarmann

Bibliography

- Anthony, D. W., ed. *The Lost World of Old Europe: The Danube Valley, 5000–3500 BC*. New York: Institute for the Study of the Ancient World; Princeton, NJ, and Oxford, UK: Princeton University Press, 2009.
- Bailey, D. W. *Balkan Prehistory: Exclusion, Incorporation, and Identity*. London: Routledge, 2000.
- Chapman, J. *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South Eastern Europe*. London: Routledge, 2000.
- Kostov, R. I., B. Gaydarska, and M. Gurova, eds. *Geoarchaeology and Archaeomineralogy*. Sofia: St. Ivan Rilski Publishing House, 2008.
- Nikolov, V., ed. *Provadia-Solnitsata: Prehistoric Salt-Producing Center*. Sofia: Bulgarian Academy of Sciences, 2008.
- Scarre, C., and F. Healy, eds. *Trade and Exchange in Prehistoric Europe*. Oxford, UK: Oxbow Books, 1993.
- Séfériadès, M. L. “Spondylus and Long-distance Trade in Prehistoric Europe.” In *The Lost World of Old Europe: The Danube Valley, 5000–3500 BC*, edited by D. W. Anthony. New York: Institute for the Study of the Ancient World; Princeton, NJ, and Oxford, UK: Princeton University Press, 2009.

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War and Diplomacy

The antiquity of conflict, warfare, and diplomacy in the course of human evolution has yet to be defined with clarity. For most of our species' evolution, terms like "war" and "diplomacy" are hardly applicable since they tend to be used to describe the interactions of more complex polities with their neighbors. But there is little question that conflict was one important aspect of the social lives of our ancestors. The question, then, is what are the characteristics of conflict in relatively simple human societies as well as those of our more distant ancestors?

Among our primate relatives, conflict between groups of individuals of the same species has been recorded but is rare. Perhaps the most common motivation for intergroup conflict is territorial defense, a pattern that becomes more common as people become increasingly sedentary and tied to particular pieces of terrain. This suggests that conflict intensifies significantly when we became more dependent upon domesticated plants and animals as the basis for our subsistence. Indeed, evidence for conflict between groups, such as trauma derived from conflict observed upon skeletal remains and the wholesale burning and destruction of whole villages, becomes more common after 6000 BCE, especially in the Middle Eastern and Mediterranean regions. After more complex societies are established at the end of this era, the term "warfare" is used more widely.

There are a number of times in the past when conflict may have been more intense or pervasive. One of the more interesting of these cases is the argument that Neanderthals were driven to extinction by our own species as it colonized Europe after 50,000 years ago. The evidence for this is slim, however, but it remains a distinct possibility since there is little of the Neanderthal genome to be found in our own.

Another episode of more intensive conflict that begins to resemble warfare can be seen in central and western Europe as farming populations began to move into lands traditionally used by hunting and gathering peoples after 6,000 years ago. These migrating farming peoples constructed what appear to be defensive structures around their villages, presumably to protect themselves from the indigenous inhabitants of the regions into which they moved.

Aside from these more dramatic episodes of conflict between groups, most conflict in our ancient past is within the social group or between small similarly scaled groups. In modern hunting and gathering societies, homicide is relatively common and is often sparked by sexual jealousies or rivalries. Some homicides, however, are directed at individuals who are habitually abusive to their neighbors and who make

demands on people that are unreasonable. Homicides over possessions are very rare.

Our evolution, however, is not just about competition and conflict. Cooperation is a powerful social force that apparently emerged fairly early in the evolution of our species. We see evidence of cooperation among chimpanzees when males group together to hunt small mammals. Sharing food, especially meat, between families is a form of cooperation that is common in almost all hunting and gathering societies. If people can be convinced that cooperation is in their best interest, such behavior may produce greater social solidarity in the face of challenges from rivals. Religion may well be a powerful force that motivates and sanctions cooperation, thus creating group solidarity.

—Mark Aldenderfer

■ Introduction: Conflict and Cooperation in Primate Societies

The primate order has had many members over its 50 million-year history, most of which are now extinct. Humans (*Homo sapiens sapiens*) are the only bipedal species left, as the other bipedal genus, *Australopithecus*, went extinct from the plains of East Africa over one million years ago. Nevertheless, scientists believe that studies of primate societies past and present can inform us on current human society, especially on the “nature versus nurture” debate concerning the origins and nature of conflict and cooperation in humans. Do we have a built-in genetic disposition to fight as well as cooperate for survival on a group level, or are these learned behaviors? Researchers now believe that a combination of the two may be at work.

Two classifications are currently in use as suborders for primates past and present. One classification uses temporal origins and evolutionary development to create the older suborder *Prosimii* (treeshrews, lemurs, lorises, and tarsiers) and the more recently evolved *Anthropoidea* (apes and humans). The other classification utilizes physical characteristics such as the presence or absence of a nasal rhinarium to create the suborders *Strepsirhini* (with nasal rhinarium) and *Haplorhini*. The former classification is more useful for looking at primate societies that are similar to human societies and will be used here.

The primate closest to humans was the *Australopithecine* genus, of which the famous “Lucy” was a member. They existed between four million and one million years ago in the same East African savanna that spawned the human genus. Fossil evidence suggests that both moved in cooperative groups and that both experienced interspecies and intraspecies conflicts. Scavenging and gathering activities may have promoted cooperation, while each group also experienced interspecies conflicts with other big-game predators from the feline and canine families. However, only the *Homo* genus made and used tools and was bipedally more efficient. Physical anthropologists cannot be sure if one group genetically or culturally influenced the other due to the limited evidence.

The modern primates closest to human society are the chimpanzees (*Pan paniscus*). The greater ape societies such as gorillas, orangutans, and gibbons have all been heavily impacted by human intrusions, but researchers still feel that chimp societies can inform us about human societies. Chimps are known to use simple tools, form territorial groups, engage in group hunts of monkeys, fight over mating rights, and even engage in group conflict over resource access. The family units of females and young are also similar to human units, as is the

need to protect and nurture highly vulnerable young. Perhaps most telling in chimp societies are the age sets and age grades, which roughly parallel those found in human societies. However, researchers are still uncertain if chimps developed conflict and cooperation in societies based on nature or on nurture. This mirrors the debate in human society research and explains why some researchers now turn to a mixed hypothesis, with both environment and genetics as variables associated with social conflict and cooperation.

Primate social studies may be compromised due to human impact on modern primates and the limited nature of the evidence from species that split from the primate order millions of years ago. Furthermore, humans as a species have been developing social conflict and cooperation mechanisms for perhaps one million years. The debate concerning “nature versus nurture” as the cause of cooperation and conflict in primates continues, with the “nature” proponents holding to a more ancient and genetic cause, while the “nurture” proponents hold to more recent and learned behaviors that can be modified. Those who sit in the middle on the debate see primate societies adapting to changing environments, using both biological and learned traits.

—Christopher Howell

Bibliography

- Campbell, C. J., and A. Fuentes, eds. *Primates in Perspective*. Oxford: Oxford University Press, 2006.
- Strier, Karen B. *Primate Behavioral Ecology*. 3rd ed. New York: Allen and Bacon, 2006.
- Strum, S. C., and L. M. Fedigan, eds. *Primate Encounters*. Chicago: University of Chicago Press, 2002.

Territory Formation and Defensive Behaviors among Our Closest Primate Relatives

If for nothing else, humans are well known for their capacity for violence and hostility against their enemies. The origins of this tendency are much debated. Some have argued that humans have an evolutionary predisposition to violent behavior, while others claim that violence is not part of our evolutionary heritage but instead is

learned behavior associated with social, cultural, and political challenges.

To resolve these questions, or at least to seek evidence that could be used to evaluate these competing hypotheses, physical anthropologists and archaeologists have turned to the study of our closest primate relatives to determine if there is anything relevant in their behavior that may shed light on the human past. Once again, we are using data from our primate relatives as analogies and not as explanations.

Chimpanzees (*Pan troglodytes*) and bonobos (*Pan paniscus*) are our closest primate relatives based upon comparative studies of DNA. Chimpanzees have clear feeding territories that are aggressively defended by groups of adult males. These males patrol the edges of their territories in search of intruders and in some instances may actually enter the territories of their neighbors in a deliberate effort to kill members of that group, especially males. These encounters have been observed in the wild, so it does not seem that this aggressive behavior is the result of captivity. Such violence is strongly conditioned by the number of males in the group. All things being equal, larger numbers of males within a group will lead to increased violence against their neighbors.

Explanations for this behavior vary but appear to be related to the social structure of chimpanzee groups, which is strongly male dominated and in which males born in a territory never leave it over the course of their lives. Territories can be relatively large, but chimpanzees are able to move through them rapidly. Aggressive behavior is not clearly tied to resource abundance, although it may become a factor in times of extreme scarcity.

In contrast, bonobos, while having loosely defined territories, do not display these aggressive behaviors. Although there may be aggressive displays between individuals, even this is relatively rare, and male-dominated coalitions are unknown. Unlike chimpanzees, females in bonobo groups have enhanced status and often form coalitions of their own. In great part, this reduces violent behaviors both within and between neighboring groups. Males often derive their status from their affiliation with these coalitions, and this tends to reduce conflict between groups as well.

Gorillas (*Gorilla gorilla*) tend to live in groups composed of a single dominant male, multiple females, and their offspring. Gorilla home ranges are relatively small, and thus group encounters are not common. Gorillas show none of the aggressive behaviors so commonly observed in chimpanzees. Single roaming males, intent on finding mating opportunities, may engage in challenges to the dominant males of the groups they encounter, but this is not about territory per se.

Orangutans (*Pongo* spp.) have what might be best described as a semisolitary social organization. Fully adult males have large home ranges within which they move frequently, and within these ranges are a number of adult females and their offspring with whom the males maintain mating opportunities. These home ranges are defended against solitary males when encountered. However, adult male orangutans do not develop multimale coalitions and live mostly solitary lives. Active boundary defense and patrolling are unknown. Adult female orangutans often form small groups with other females and

their offspring. Since these territories overlap, there are occasions of hostile displays between females, although it is equally likely that relationships will be either neutral or affable.

Among the great apes, chimpanzees and humans are the most similar in their territorial behaviors. However, this should not be taken to imply that they are the best model or indeed the only model of what some of our hominid ancestors may have been like in remote antiquity. Of interest, however, is that in two of the species—bonobos and orangutans—female coalitions are important and serve, at least in part, to dampen male aggression against other individuals or groups.

—Mark Aldenderfer

Bibliography

- Harcourt, A., and K. Stewart. *Gorilla Society: Conflict, Compromise, and Cooperation between the Sexes*. Chicago: University of Chicago Press, 2007.
- Wrangham, R., and D. Peterson. *Demonic Males: Apes and the Origins of Human Violence*. New York: Mariner Books, 1996.

■ Introduction: Conflict and Aggression in Early Human Societies

Evidence of warfare in early human societies can be found in archaeological materials that show indications of violent death prior to the development of agriculture and settled societies. Moreover, sociobiological theories utilized by some anthropologists suggest that early human behavior can be studied by analyzing primate social behaviors. However, there is disagreement as to how such behaviors developed, especially by anthropologists opposed to sociobiological notions. However, many anthropologists do agree that it is very likely that violence and aggression existed between groups of hunter-gatherers since the Paleolithic. Some speculate that humans possessed aggressive tendencies and had the behavioral potential for warfare long before the development of seden-

tary societies. Since hunting was a crucial element for survival, it followed that aggression was a means to this end. Thereby, warfare and conflict between groups of early humans were mostly over access to resources, using techniques and tools used for hunting.

While sociobiological theories that purport that early humans, much like their primate relatives (such as the modern chimpanzee), might have developed aggressive behaviors (aggression defined as the use of violence and the incidence of warfare), there are scholars who find such theories controversial. Scholars who subscribe to sociobiological explanations for violence and conflict in early human societies, such as anthropologist André Leroi-Gourhan, argue that biological drives predetermine human behavior.

Though initially displaying such behaviors when hunting game and developing tools for such activities, hunter-gatherers eventually used their developing aggressive tendencies against each other over access to resources. In contrast, French anthropologist Pierre Clastres argues that humans developed aggressive tendencies not as a result of innate biological drives but rather as a result of acquired behaviors established over time. Moreover, aggression in hunting does not translate directly into aggression for the purpose of violence and warfare against other humans in his interpretation. According to Clastres, early warfare was not directly linked to hunting but instead was derived from cultural contexts that made it necessary for survival of the group. However, regardless of these scholarly debates surrounding early human aggression, archaeological evidence sustains that violence did exist among hunter-gatherer societies.

Economic considerations are also part of the theories purported by anthropologists who study aggression in prehistoric human societies. Some scholars have speculated that hunter-gatherer societies, perhaps because of access to scarce resources, might have developed aggressive behavior amid the seizure of goods and land between groups in attempts to subsist off the land. However, new research has shown that resources were plentiful to many early hunter-gatherer societies, thus rendering this explanation more implausible and not really explaining how aggression and violence developed. While the evidence, in the form of human fossil remains, typically fractured skulls with signs of damage inflicted by weapons, illustrates incidences of violence, the economic considerations do not provide a full picture of such developments.

Anthropologist Lawrence H. Keeley compares early human societies with ethnographic studies that exist in today's world as a means to establish the origins of warfare. Studies of various stateless groups in contemporary Papua New Guinea and Latin America offer anthropologists like Keeley a glimpse into what hunter-gatherer warfare might have been like. Prevalent and ritualistic warfare as a means of ensuring access to resources and territory between modern stateless groups indicates that such behavior patterns

were perhaps adapted by early human societies as a means of ensuring subsistence and power over a region. Developments in the Upper Paleolithic illustrate that warfare did exist between hunter-gatherer groups akin to the aggression and conflict that characterizes the behavior of modern-day stateless ethnic groups. Therefore, the prior assumption by archaeologists that "civilization," which was characterized by settled agricultural societies and increasing complexity, was a prerequisite to warfare and aggression is no longer an element of scholarly consensus on the subject of early human violence.

By the time of the development of agriculture, human societies had already acquired the necessary implements for organized violence and warfare. However, the establishment of cities and settled communities, particularly in the Near East, created a further layer of complexity to the organization of violence under the auspices of the state. In the early Neolithic, growing population densities due to the widespread development of sedentary agriculture and the resultant competition over resources, particularly scarce agricultural lands, led to contentious situations among emergent villages and cities. The incidence of organized state violence emerged during this period as a result of this endemic warfare as successful war leaders took the helm of political power at the village and city levels. Much like early hunter-gatherer warfare, sedentary societies found warfare necessary for the protection of their resource base and for territorial expansion at the expense of another group.

—Abraham O. Mendoza

Bibliography

- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Dawson, Doyne. "Evolutionary Theory and Group Selection: The Question of Warfare." *History and Theory* 38(4) (1999): 79-100.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.
- Guilaine, Jean, and Jean Zammit. *The Origins of War in Prehistory*. Translated by Melanie Hersey. Malden, MA: Blackwell, 2005.

- Keeley, Lawrence H. *War before Civilization*. New York: Oxford University Press, 1996.
- Thorpe, I. J. N. "Anthropology, Archaeology, and the Origin of Warfare." *World Archaeology: The Social Commemoration of Warfare* 35(1) (2003): 145–165.

Conflict and Cooperation among Our Earliest Ancestors

Primates are one of the few animal orders where living in social groups is common; our earliest apelike ancestors are no exception. Living in large social groups evolved and has been maintained throughout a large number of primate lineages, mainly through survival advantages resulting from predation pressure. Associated with group living comes a necessity to cooperate with other group members as a means to ensure inclusion in the social group. Conflict as a result of competition for access to resources and mates is also a feature of group living, both within and between groups.

The human and chimpanzee lineages split approximately six million to eight million years ago. Much of what is known of the social behavior of our bipedal hominin ancestors since this divergence has been obtained from the paleontological and archaeological record, specifically through the application of knowledge about living species to the study of this prehistoric evidence. The study of living great apes shows that the degree of size difference between males and females is linked to the level of male-male competition within a species; species in which males monopolize access to females through intense competitive encounters, as observed in gorillas, have higher levels of body size dimorphism compared to those who adopt pair-bonded or multi-male/multifemale mating systems. Canine size is also an important indicator of social behavior; large canine size in primate males is associated with threat displays and low tolerance for one another.

Evidence from the Pliocene fossil record between 4 million and 2.3 million years ago shows that *Australopithecus afarensis* and *Australopithecus africanus* demonstrated moderate to high levels of body size dimorphism. This is broadly indicative of social structures in which

high levels of male-male conflict are apparent. However, these early hominins also demonstrated derived characteristics of reduced canines, indicative of higher levels of tolerance and cooperation and lower frequencies of aggression. The first archaeological evidence for cooperation in our earliest ancestors is attributed to *Homo habilis* approximately 2.5 million years ago. These early members of the genus *Homo* are thought to have been responsible for the first stone tool kit, known as Olduvan technology. Given the widespread transmission of this technology, which persisted for over 800,000 years, a high level of cooperation among these early toolmakers was likely.

There is clear evidence of conflict and cooperative behavior in our hominin ancestors throughout the Pleistocene. Cranial specimens of both *Homo erectus* (who lived between 1.7 million and 500,000 years ago) and *Homo neanderthalensis* (who lived between 500,000 and 30,000 years ago) have been discovered that exhibit healed skull fractures, inferred to have been the result of purposeful blows to the head. Along with such evidence of interpersonal violence, cooperation among individuals has become more and more prevalent, and this has been coupled with an increasing brain size through the evolution of *Homo erectus*. It has been argued that a large brain in the *Homo* lineage has evolved, partially as a result of increased cognitive demands required to deal with larger social networks. In conjunction with inferred increase in social group size came advances in lithic technology, with the appearance of more sophisticated Acheulean tools approximately 1.6 million years ago. As a result of increased consumption of meat from this point onward, a shift in subsistence strategies emerged from the scavenging of meat to cooperative hunting of larger-bodied prey.

Toward the end of the Pleistocene just two species remained: anatomically modern humans and Neanderthals, both of whom demonstrated large relative brain sizes, complex social groups, and associated cooperative behaviors. Modern-day hunter-gatherer groups are thought to represent the ancestral behavior of both modern humans and Neanderthals in which food sharing behavior and intergroup aggression are common. Around 35,000 years ago, anatomically

modern humans, adapted to hot climates, began to inhabit eastern Europe, an area traditionally occupied by cold-adapted Neanderthals. Armed with a more extensive tool kit and cohesive group structure, modern humans would have been able to outcompete Neanderthals, this being a leading hypothesis for their demise. This highlights the importance of both conflict and cooperation to the success of our modern human ancestors.

—Katharine L. Balolia

Bibliography

- Hoffecker, John H. "Neanderthals and Modern Humans in Eastern Europe." *Evolutionary Anthropology* 7 (1999): 129–141.
- Klein, Richard G. "Archaeology and the Evolution of Human Behavior." *Evolutionary Anthropology* 9 (2000): 17–36.
- Lockwood, Charles A. "Sexual Dimorphism in the Face of *Australopithecus africanus*." *American Journal of Physical Anthropology* 108 (1999): 97–127.
- Plavcan, J. Michael, and Carel P. van Schaik. "Intrasexual Competition and Body Weight Dimorphism in Anthropoid Primates." *American Journal of Physical Anthropology* 103 (1997): 37–68.

The Archaeology of Aggression and Violence in Early Human Societies

The meaning of the concept "violence" in terms of acting violently against other people is culturally coded. In many societies of the world, physical violence is considered a violation of human rights. In this context, the killing of one human being by another is perceived as a violent act. This connotation, however, is lacking in the context of some societies where we find exceptions in the attitude toward violence.

One such case is Iban society in Kalimantan (Borneo). A prominent feature of historical tradition among the Iban (or Sea Dayak) is head-hunting, and this includes the cutting off of an adversary's head while the person is asleep. The head was kept as a trophy, ensuring the transfer of the adversary's energy into the keeper of the head. As such, head-cutting is not considered abominable by Iban people but rather is a ritual act.

THE BURIALS AT SHANIDAR CAVE (TURKEY)

Shanidar Cave, located in the Zagros Mountains of northern Iraq, was excavated in the 1950s. Several adult and young Neanderthal skeletons, dating between 60,000 and 45,000 years ago, were discovered along with Mousterian artifacts. These skeletons are especially interesting for a number of reasons.

First, several skeletons show recovery from bone trauma, which suggests that Neanderthal life was harsh and difficult. This also insinuates that disabled individuals were cared for by the group. The Shanidar 1 skeleton, for example, had severe arthritis in his feet and a healed fracture on his left eye orbit, which may have caused blindness. Moreover, his right side was either paralyzed by the blow to his eye or he was born with his right arm, shoulder blade, and collarbone not fully developed. In either case, he compensated for this by using his teeth for grasping and holding objects, attested by the severe wear of his upper incisors. When Shanidar 3 was killed by a rock fall in the cave, he was recovering from a projectile point found embedded in his ribcage.

Second, although most of the Shanidar Neanderthals were killed by rock falls from the cave roof, some were intentionally buried. Flower pollen found in the graves suggested that ritualistic activities for the dead were carried out, but this was later discounted based on the context of the pollen grains. The burial of their dead and prolonged survival of the infirm suggest that the Neanderthals from Shanidar Cave had behavior similar to modern humans.

—Shawn Bubel

Bibliography

- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Solecki, R. "On the Evidence for Neanderthal Burial." *Current Anthropology* 30 (1989): 324.

► VIOLENCE AND CONFLICT IN AUSTRALIAN ABORIGINAL ART

Australian Aboriginal art in the form of rock art, bark paintings, and carvings provides one of the oldest continuous documentations of violence and conflict from the Stone Age to modern times. In the 1830s Australia was being colonized mainly by Europeans, who encountered over 600 “tribal” groups speaking over 200 languages in four main groupings with many social and cultural traditions. Conflict between Europeans and Aboriginals is well marked in the rock art from the 1880s on, with Europeans and guns often the leading theme. Based on art that depicts small group violence along territorial borders, in precontact times Aboriginals engaged in raiding and feuding over territory and breeding issues. Evidence includes depictions of long war spears, spearthrowers, and war boomerangs along with territory markers. This record extends tens of thousands of years back in time. Based on more recent ethnographic records, much of the violence and conflict was mediated by rituals between “tribal” groups and is similar to conflict resolution rituals found throughout Stone Age civilizations. The coming of Europeans with guns, ships, and diseases in the nineteenth century ended this age-old system of equilibrium, resulting in increased violence not only along European-Aboriginal borders but also within the Aboriginal core areas.

—Christopher Howell

Bibliography

- Ferguson, R. B., and N. L. Whitehead, eds. *War in the Tribal Zone: Expanding States and Indigenous Warfare*. Santa Fe: School of American Research Press, 2000.
- Isaacs, J. *Australian Dreaming: 40,000 Years of Australian Aboriginal History*. Sydney: New Holland Publishing, 2006.
- Keeley, L. *War before Civilization*. Oxford: Oxford University Press, 1997.

Given the arbitrary, culturally specific connotation of the term “violence” in the world’s cultures, a modern observer is cautioned not to apply Euro-American conceptualizations and value systems in a generalizing way to the world of early human societies. The archaeological record may produce evidence for physical violence

in various forms (e.g., skulls fractured by weapons, heads of arrows or spears stuck in skeletons, the body of a strangled person retrieved from a bog), but the context of such finds may point to acts of ritual killing.

As a collective form, violence may be practiced on a gradually increasing scale, from violent clashes between clans or kin groups to tribal wars. In complex societies, certain radical forms of collective violence have developed, among them “ethnic cleansing” that may assume the magnitude of genocide. Ethnic cleansing has been practiced by many “civilized” people, from the times of the Assyrian and Hittite empires to the genocide crimes committed by Nazi totalitarianism and beyond (e.g., the clashes of the warring factions in the Balkans or between the Tutsi and Hutu in central Africa in the 1990s).

Large-scale violence cannot be assumed for preagrarian societies since the size of local populations was fairly restricted. In addition, the command structure as a precondition for the direction of collective violence to a target group was still weakly developed in early human communities. The argument of intertribal violent clashes over issues relating to authority and the usurpation of political power, brought forward by Pierre Clastres in the 1970s, was based on observations about territorial disputes among recent traditional cultures in South America. The transposition of the relevance of such an agenda to prehistoric societies is problematic, since an awareness of territorial separation with a conflict-producing political impact cannot be verified for prehistoric and stateless communities.

As for the Upper Paleolithic era and its European context, there must have been lively and peaceful interaction among different local groups of hunter-gatherers. Otherwise, it would be impossible to explain the high degree of cultural uniformity that is typical of the Gravettian period between circa 27,000 and circa 19,000 BCE. The zone of cultural convergence stretched along the southern fringe of the contemporary ice shield, from southern France to the Ural Mountains in Russia. Among the diagnostic terms of this uniformity is a remarkable similarity in habitation structures, in stone-tool tech-

nology, and in forms and styles of artistic representation (i.e., figurines).

There has been speculation that the spread of agriculture from western Asia into Europe would have been a movement of warlike agriculturalists who worshipped a bull god and intruded into areas of hunter-gatherers, destroying their camps and driving the local population away, in similar ways to white settlers in North America who claimed possession of their land in clashes with the Indians. For the initial period of the spread of agriculture in southeastern Europe (i.e., sometime before 7000 BCE) there is no proof for the intrusion of aggressive Neolithic migrants from Anatolia or for an independent bull cult. The bull appears much later in religious iconography and is best known as an attribute of the Mesopotamian goddess Ishtar.

In all probability, the spread of agriculture in the Neolithic was no violent process but instead unfolded in a peaceful way. A typical indicator of violent clashes is layers of ash (of burnt houses) in the stratigraphy of settlements. It is significant that this indicator is missing from the archaeological record of most Neolithic settlements in western Asia and southeastern Europe. It has been concluded that the adoption of the Neolithic package—in terms of the technology of plant production and lifeways associated with it—enhanced something of a nonviolent “Neolithic spirit.”

And yet, there are exceptions to this general view. At some places—Talheim (Germany) and Schletz (Austria)—mass graves have been unearthed with skeletons bearing traces of violent killings. These ancient settlements were occupied by Bandkeramik agriculturalists in the sixth millennium BCE. There has been speculation about the reasons for the considerable amount of violence. With respect to Talheim, it has been conjectured by Chris Scarre that its inhabitants had been killed by raiders from a neighboring Bandkeramik settlement, though whether as part of a feud or simply to steal livestock or food stores cannot be determined.

Forager/food-producer relations in prehistoric Africa are described in three alternative models, none of which associates violent clashes. Foragers are assumed to have maintained their own economy while retaining connections with farmers, to have exchanged commodities and ideas with food producers and to have imitated sedentary people’s lifeways, and to have engaged in coresidency and intermarriage with farmers. The latter option is well documented for northern Europe in the second millennium.

What produced a considerable amount of violence in early human societies was the confrontation between differing socioeconomic systems and related worldviews, particularly of pastoralists and agriculturalists over the control of land that could be used both for plant cultivation and as pastures for animals. Scenarios of major clashes have been reconstructed from the archaeological record for eastern Ukraine in the fifth millennium BCE, when nomads from the Eurasian steppe zone extended their socioeconomic space farther west. Their thrust resulted in violent incursions into the area with agrarian settlements. Evidence for this large-scale conflict is a dramatic increase in the number of arrowheads found inside and around settlements and ash layers. A new item of material culture was introduced by the people from the steppe: horse-headed scepters or maceheads.

—Harald Haarmann

Bibliography

- Anthony, D. W. *The Horse, the Wheel and Language*. Princeton, NJ: Princeton University Press, 2007.
- Preucel, R., ed. *A Companion to Social Archaeology*. Oxford, UK: Blackwell, 2004.
- Scarre, Chris, ed. *The Human Past: World Prehistory & the Development of Human Societies*. London: Thames and Hudson, 2005.
- Trigger, B. G. “Cross-cultural Comparison and Archaeological Theory.” In *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, edited by L. Meskell, A. Whittle, and V. Cummings. New York: Oxford University Press, 2007.

■ Introduction: Conflict in Ancient Village Societies

In ancient villages where Stone Age hunter-gatherers first settled down in the Neolithic period at the end of the last Ice Age, conflict was transformed by population growth associated with permanent landscapes. Surprisingly, early villages around the globe were relatively peaceful compared to their Paleolithic forbearers and later urbanized state descendants. Conflict was initially associated with individuals and small related groups concerning village access, revenge, and reproduction issues. Conflict often led to violence and also to the development of conflict resolution rituals to mediate the violence. Most early villages in world history were initially formed around the models of power sharing associated with their nomadic ancestral bands. However, as populations grew with year-round mating and resource access, new adaptations became necessary. Growing villages came into resource conflict with other growing villages and with their still nomadic neighbors. This resulted in social stratification and organized conflict.

Evidence for ancient village society is mainly the realm of anthropologists and archaeologists, as few written records exist from prehistory when early villages formed in the Neolithic period. Cultural materials from landscape and tools to human remains and rock art are used to reconstruct the prehistoric past. Social scientists in these fields rely upon archaeological data and dating methods to examine conflict in ancient villages. Anthropologists studying more recent small-scale village societies create ethnographies or written descriptions of these cultures. Conflict studies from these ethnographies are used to develop analogies and correlates for ancient village society. Social scientists have long noted the correlation among population size, segmented or complex societies, and levels of individual and group violence or conflict. Small-scale societies of families and bands, whether nomadic hunter-gatherers or herders or sedentary farmers and fishers, tend to have conflict at the individual or family level. Conflict is as likely to be within a family as between families or bands. Conflict mediation in the form of sociocultural ritual for controlling conflict behavior is

usually well developed for both individual behavior and kin-related behavior. Perhaps the individual was so valuable in small-scale societies that only those societies that mediate conflict behavior would survive, while others are effectively destroyed by the loss of too many productive members. Whatever the case, such a model requires small populations with relatively abundant natural resources.

Conflict in village society ethnographies is not uncommon, as is evidenced by the presence of conflict mediation rituals and by numerous episodes of violence in the ethnographic record. Conflict in the form of individual and family or band violence toward another member of that same group is most common. Issues that lead to conflict generally involve prime-age males initially but may later include females and other small group members. Clashes over reproduction access to females, treatment of marriage partners and children, and access to natural resources were the most common cases. In terms of conflict between groups, revenge killings, raids, and line battles are also quite common in the ethnographic literature. Leaders with fraternal groups in segmented societies were very often involved. However, to extrapolate these findings from more modern village societies back into the ancient and often ambiguous archaeological record is difficult.

One finding from the ethnographic record, however, does seem to have correlates in the archaeological record of ancient village societies. The presence of segmented societies in both records is an indicator of increased levels of group conflict. Segmented societies generally result from population growth that leads to increased social complexity needs for the group to survive and thrive. The general pattern in the archaeological record for the emergence of complex, segmented societies is clear when a developmental adaptation model is used. Thus, to examine the role of conflict in early village societies in world history, scholars need to use both a spatial and a temporal analysis.

In the Paleolithic period just before villages emerged, archaeological data indicates that most

hunting bands practiced conflict and violence within their bands and toward other groups. Individual skeletons with violent causes of death are a good sign that conflict manifested as violence impacted individuals, while group remains with violent death signs are indicative of inter-group conflict. Both indicate that conflict resolution mechanisms were necessary and often failed in the Paleolithic world of hunter-gatherers. The cemetery in Nubia known as site 117 or Jebel Sahaba when excavated in 1964 by archaeologist Fred Wendorf yielded human remains radiocarbon dated to 13,700 years ago (11,700 BCE). Fifty-nine humans were recovered, including at least 40 percent who died in violence due to conflict. Cause of death was most commonly from multiple projectile points, including bow and arrow or spear. In some cases more than a dozen wounds are noted per individual, making it unlikely that these were human sacrifices. Roughly equal numbers of men, women, and children were killed and in roughly equal percentages, though most of the men were buried individually, perhaps having been killed away from the site. Such conflict and violence took place within the context of Late Ice Age hunter-gatherers clustering around dwindling or changing resource bases due in part to a drying climate trend. Wild animal and plant species changed, and coastlines and secure locations of water also changed, with the result that Paleolithic hunter-gatherer bands had to adapt to ensure survival. These bands began a process called “cyclical nucleation,” or seasonal settlements around these resources. Some animals and plants were transported with these bands, and horticulture became more common. Small hunter-gatherer bands settled down perhaps around decreasing water and food supplies and staked a permanent claim to that area.

This process of the “emergent village” can be seen at early village sites at Paloma in Peru (5500–3000 BCE), the Oaxaca Valley in Mexico (4000–3000 BCE), Mehargarh in India (6500–6000 BCE), Early Jomon culture sites in Japan (5000–2500 BCE), Yangshao villages in northern China (6000–5000 BCE), ancient Near Eastern villages such as Çatalhöyük (7500–5700 BCE), Jericho (9000–6800 BCE), and many Natufian villages in Egypt and the Levant (ca. 10,000 BCE).

The intermixing of village and nomad hunter-gatherers increased. Some villages grew in population and complexity, while others failed. The successful villages used more local resources than surrounding villages and nomads, both on an individual or per capita scale and as an overall group, especially when year-round occupation and usage are taken into account. Urbanism emerged as a by-product.

The confusion for researchers of conflict comes at the next stage. As certain villages reached populations where social segmentation and stratification result, larger group conflict became evident. However, it is not clear if this is created by surpluses within the village, as some researchers theorize when villages become towns and cities, and urbanism leads to surplus and the ability or affordability to go into organized conflict with others. Another theory has villages competing over scarce resources, and thus it is lack of surplus that creates tensions leading to organized conflict. Yet another theory sees the conflict as motivated by the emergence of elite village social members who use conflict to gain, maintain, and legitimize their social standing. A final idea concerns the role of still-extant nomads who, pushed to the edges of natural resource areas by growing villages, begin to prey upon those villages using their nomadic hunting skills applied to humans as their advantage.

Several points emerge concerning conflict data from these Neolithic sites. Little direct evidence of group conflict is seen in these early unsegmented village societies. Few sites were fortified, cemeteries have little evidence of violent death, and few tools were developed specifically for conflict. Populations increased as year-round mating took place versus the seasonal mating patterns of nomads. Wild plants, animals, and natural water sources were often exhausted by the increased populations before large-scale domestication and irrigation took place. Pottery, grinding stones, storage pits, and pit houses, all signs of permanent populations, often emerged only well after settlements formed. In some cases, villages were seasonally utilized before becoming permanently occupied. Other bands of people continued to practice nomadic lifestyles around these early villages, increasing interaction, cooperation, and conflict potential.

Based on archaeological and ethnographic data, ancient early village societies around the world experienced an unusual lull in conflict, at least as manifested in the record of discernable violent death evident in skeletal remains. The earlier Paleolithic and later historical phases of urbanism and first states both have increased levels of conflict manifested as violence when compared to early village societies. Conflict and cooperation within smaller, more nomadic groups was transformed to meet the adaptation needs of later larger village groups. This could be due to differential successes of conflict mediation, undetectable forms of conflict in early village society, the unique requirements of village and agriculture life, or something else as yet unstudied by researchers.

—Christopher Howell

Bibliography

- Guiliane, J., and J. Zammit. *Origins of War: Violence in Prehistory*. Hoboken, NJ: Wiley-Blackwell, 2004.
- Keeley, L. *War before Civilization*. New York: Oxford University Press, 1997.
- Kelly, R. C. *Warless Societies and the Origins of War*. Ann Arbor: University of Michigan Press, 2000.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.
- Peterson, D., and R. Wrangham. *Demonic Males: Apes and the Origins of Human Violence*. New York: Mariner Books, 1997.

Warfare and Conflict in Ancient Village Societies

Social conflict can range from individual strife within a society to organized, armed conflict between societies, or war. In all cases violence is usually evident in the historical and archaeological records. However, the relationship between conflict, violence, and warfare has remained an area of great debate in the scholarly community. What is the nature of conflict and war in humans? Is it natural and biological, learned and environmentally driven, or perhaps a combination? When is evidence of violence in the archaeological record a murder, execution, part of a feud or raid, or a result of full blown war? Does war have an origin point (or points) or has it al-

ways been a part of the human record? The best database available for examining such questions comes from the Ancient Near East, especially from Mesopotamia, Egypt, and the Levant, where a rich archaeological record exists from the Paleolithic and Neolithic periods concerning emergent villages and social conflict. Since writing and leadership are associated with state level war and leadership, they will be avoided here.

During the Paleolithic, most humans practiced a nomadic, hunter-gatherer lifestyle that kept human societies at the family and band levels as they moved to and with the resources. Cave paintings and skeletal remains indicate that conflict in the form of violent death was not uncommon as groups encountered each other. However, since most of the past evidence did not survive, the context of the violence is difficult to determine. The nine thousand-year-old Kennewick Man from Northwest North America is a classic example. He had a healed wound from an embedded spear point but without further context and evidence it is not possible to determine the nature of the social strife that caused the point to become lodged in the pelvis. Much of the Paleolithic evidence for conflict is of this nature but not all of it.

Some researchers believe that even war can be identified in the record from the period before humans settled into permanent villages. Two arguments are made. First, little evidence of the past remains so if consistent evidence of social conflict is found, the actual case numbers must have been far greater in the Paleolithic period. The second argument centers on the archaeological site of Jebel Sahaba or site 117, a rare, Paleolithic cemetery in Nubia excavated in 1964 by archaeologist Fred Wendorf. Over one hundred human remains were eventually recovered and radiocarbon dated to 13,700 years ago (11,700 BCE). At least 40 percent died of violent conflict wounds. The most common cause of death was from multiple projectile points such as arrow or spear points. Some individuals had more than a dozen wounds. Roughly equal percentages of men, women, and children were killed though most of the men were killed offsite and buried later in the cemetery. Certainly the highly skilled hunters of this period were capable of such violence from a technological stand-

point as bows, spears, and clubs were already in use. Was it evidence of armed, group conflict? The debate has continued on how to interpret the evidence at Jebel Sahaba but those who see war as developing before settled villages emerged cite it as strong evidence to support their theory of war having always been with humans.

In the Neolithic, as humans settled down, early villages around the world do not have much direct evidence of group conflict. Cooperation may have been premium at the time or mortuary practices may have changed. This peaceful phase apparently did not last based on evidence from the Ancient Near East. Population growth and social conflict emerged only a few centuries after village settlements began to grow. The archaeological site of Jericho (Tell el-Sultan) in the Levant indicates Natufian bands of hunter-gatherers settled around the permanent spring onsite in a few huts and a shrine. Population increases by the eighth millennium BCE led to a village of several thousand people and fortifications soon emerged. A 13.12 by 9.84 foot (4 by 3 meter) stone wall was surrounded by a 26.25 foot (8 meter) wide rock cut moat, and a 26.25 foot (8 meter) tall tower capped the works. Arguments that these constructions served as water works have not fared well, but the village did, surviving for several thousand years among a dozen other regional villages.

Jericho's fortifications were rebuilt several times and it was not the only fortified site in the region. Similar walls were excavated at the Beidha site as well. Fortifications and the implied social conflict were not yet widespread but that would change dramatically by the end of the Neolithic in the Ancient Near East. Fortifications (walls, moats, towers), changes in weaponry (metals, slings, bows, daggers, javelins, maces), and signs of violent ends to villages and societies (burning of villages, violent deaths) all indicate growing conflict in the late Neolithic villages of the regions. Some of this was internal social conflict, some of it undoubtedly warlike in nature.

A drying climate and human ecological impacts via growing populations likely led to social conflict between villages, and between villages and nomadic bands. Eight-thousand-year-old Tel es-Sawwan near Samarra had massive walls and a 9.84 foot (3 meter) wide moat built. At Anshan

(Tel Malyan) near Shiraz, Iran, around 3500 BCE, a massive, concentric set of walls over 3 miles (5 kilometers) long surrounded over 494 acres (two hundred hectares) of land. Built with a stone foundation, mud-plastered glaucis, and brick topped, the innermost of the three walls was 16.4 feet (5 meters) thick. Anshan was an early center of copper metallurgy as was the fifth millennium BCE Susa where fifty-five copper axes were buried in elite burials. The earliest known copper spearheads and masses of clay sling balls are from this time as well. Villages such as Susa, Uruk, and Ur might number a few thousand inhabitants in the Neolithic but grew to ten times that by the Chalcolithic (metals age). Settled village societies consisted of blended cultures that emerged as proto-Sumerian civilization. By 4000 BCE most researchers believe Sumerian polities had fully formed warfare replete with military systems including fortifications, logistics, armies, special weapons and armor production, and specialized military units such as infantry and heavy chariots with command and control by specialized leadership.

In Egypt, unlike Mesopotamia, villages developed in environmental isolation along the Nile River as it flowed through the Sahara Desert. This promoted a linear rather than circular geographical development of village society and conflict. Natufian bands also settled in villages here, but the water supply on the river and delta was much more stable than the flood prone Tigris and Euphrates rivers. Resources such as wood, copper, and gold were not found along the lower Nile and promoted international trade just as in Mesopotamia. By 5,000 years ago, Egypt unified politically a long but narrow strip of territory by using the Nile and social conflict. The early village and emergent chiefdom of Naqadda (6,000–4,000 years ago) was a trade center for metals and like Uruk in Mesopotamia may have been the center of early expansion attempts. From this time the Hierakopolis "painted tomb" and the Gebel-al-Araq knife handle both depict battle and kingly sacrifice scenes, including animal skin armor, daggers, a variety of Neolithic maces, javelins, and spears, and the use of boats in naval combat.

Egyptian use of both stone and copper weapons simultaneously indicates the difficulties of

labeling the past as Neolithic and Chalcolithic. Egyptian expansion into Libya, Nubia, the Sinai, and Canaan in predynastic times led to the development of fortifications in those regions, both by Egyptians and against Egyptian aggression. Massive fortifications were constructed at Ahad in southern Canaan as well as along the cataracts of the Nile River toward Nubia. By the time of legendary King Narmer (Menes), Egypt had been united from a series of river villages into dynastic kingdoms with armed coercive force an integral part of the process. First dynasty kings recorded their military exploits in writing just as early Sumerian priest-kings did.

Based on preservation levels and research breadth and depth, the Ancient Near East is the best area to examine the relationship between village social conflict and emergent warfare. In Mesopotamia, the success of some villages led to the development of fortifications perhaps to keep out nomad raiders and other rival villages. Successful long-term villages became towns often associated with urbanism, trade, metal production, and the use of coercive force, perhaps internally and externally. Warfare fully emerged by the Chalcolithic with metals as a key ingredient. In Egypt however, war and coercive force may have played an even larger role in unifying areas of the Nile. The idea of leadership, such as priest-kings in Mesopotamia, and politics and pharaohs in Egyptian dynastic kingdoms, appears tied to the use of coercive force and the development of social, stratified power. Furthermore, the role of villages as precursors to armed, organized groups in social conflict is evident in the Ancient Near Eastern record.

—Christopher Howell

Bibliography

- Arkush, E., and M. Allen, eds. *The Archaeology of Warfare: Prehistories of Raiding and Conquest*. Gainesville: University Press of Florida, 2006.
- Hamblin, W. J. *Warfare in the Ancient Near East to 1600 BC*. New York: Routledge, 2006.
- Keeley, L. *War Before Civilization*. New York: Oxford University Press, 1997.
- Otterbein, K. *How War Began*. College Station: Texas A&M University Press, 2004.
- Turney-High, H. *Primitive War: Its Practices and Concepts*. 1949; reprint, Columbia: University of South Carolina Press, 1991.

The Archaeology of Leadership and Conflict in Village Societies to 4000 BCE

Archaeology interprets the past through the context of cultural materials such as tools, architecture, and human remains. Little of the prehistoric past survives, and thus large gaps in prehistory exist. One gap is in the relationship between leadership and conflict in village societies before 6,000 years ago. Current evidence suggests that other leadership forms emerged before conflict leadership. Difficulties include identification and interpretation of conflict and leadership in the archaeological record. Social scientists agree that conflict emerges over resources, leadership ambitions, and cultural beliefs. However, the presence of these variables is hard to detect in the early villages that emerged around the world between the last Ice Age and 4000 BCE.

Evidence for conflict in prehistory is found in skeletal violence, weaponry, and fortifications. Neolithic skeletons have evidence of violence usually in the form of males killed with arrows and both males and females with cranial fractures, sometimes healed. This informs scholars only that male-oriented long-distance conflict using hunting weapons was most common, followed by close-range concussing-weapon conflict involving all members of a village. The role of conflict leadership, identified through differential burial practices, specialized architecture, and cultural materials is unknown. The problem is in understanding the relationship between conflict, evident throughout the Neolithic, and various forms of religious, political, and conflict leadership evidence, only discernable together in the later Neolithic. Generally, a segmented and hierarchical society is associated with leaders who have special duties and status within a society. For early villages, issues of ecology are associated with emergent leadership. Increasing populations permanently settled on a finite resource base needed better control of the environment, which came through specialization of skill sets including leadership in the village. Shamans from old nomadic groups that settled down would be likely candidates for leadership in an emerging village with their specialized

knowledge of plants, animals, celestial time-keeping methods, and the commandment of social respect. Political and commercial leaders also emerged with specialization and the need to create orderly villages and acquire unavailable local goods. However, conflict specialists were readily available from the old hunting nomad skill sets, and leadership was not needed initially to help form specialists in that area.

This process of the “emergent Neolithic village” is evident around the world at sites like Paloma and Caral in Peru, the Oaxaca Valley in Mexico, Linear Ceramic and Trypillian Culture sites in Europe, Lajuradewa, Jhusi, and Mehargarh in South Asia, Early Jomon sites in Japan, Pengtoushan, Peiligang, and Yangshao villages in China, Gobekli Tepe and Catal Huyuk in Turkey, and Jericho in the Levant. A model of emergent leadership can be posited based on the data from these and other early permanent settlements. Complexity with population growth led to year-round decision making and the need or want for year-round leadership, different from the older nomadic model of timely decisions made by family and band elders. Based on architecture and cultural material remains, three main leadership groups came to dominate Neolithic villages by 4000 BCE. These were political, religious, and military specialists.

Religious and political elites (presumably leaders) emerged by the Middle Neolithic based on the prevalence of religious and public architecture, differential burials, and specialized artifacts that suggest centralized leadership to construct, produce, distribute, and control. Conflict leadership evidence is not seen until the Late Neolithic; however, as is always the case in prehistory, absence of evidence is not necessarily evidence of absence. Conflicts might well take place outside of village areas in “battle-zones,” and coercive force might be used as a threat more than a reality to establish order in growing village populations. Jericho is the Early Neolithic exception, with a wall, moat, and tower. Gobekli Tepe in Turkey and Paloma in Peru are both examples of sites with religious and political architecture or artifacts but no evident conflict. Entire village cultures in parts of China, India, southeastern Europe, and Mesoamerica also have little evidence of military lead-

ership and conflict until the Late Neolithic. Some sites remain ambiguous concerning military specialists. Çatalhöyük in Turkey has burials and artifacts such as maces indicative of specialists, but its “pueblo” style of architecture has only identifiable religious and politically specialized rooms, and researchers still debate the site’s defensive characteristics.

In the Late Neolithic fortified sites with specialized weaponry became more common, hinting at the emergence of military leadership in terms of construction, production, command and distribution. Eight thousand-year-old Tel es-Sawwan near Samarra had massive walls and a moat 9.8 feet (3 meters) wide built. At Anshan (Tel Malyan) near Shiraz, Iran, 5,400–4,800 years ago a massive concentric set of walls over 3.1 miles (5 kilometers) long surrounded over 494 acres (200 hectares) of land. Elite burials at Anshan and Susa are associated with early copper metallurgy, but it is not clear if copper axes were ritually powerful or were for actual utilitarian use in conflict. Egypt too, at the village of Naqadda (6,000–4,000 years ago), shows this emerging relationship among metals, elites, and conflict. In Europe, Linear Ceramic culture sites were built with trenches and palisades. In the Oaxaca Valley of Mexico, villages formed up shortly after 6,000 years ago, and by 5,000 years ago growing populations had signs of segmentation, elites, and external conflict. Banpo, the type site for Yangshao culture in northern China had a moat 16.4 feet (5 meters) wide surrounding 9.8 acres (4 hectares) of villages by 4500 BCE.

Population density and environmental adaptations appear to be key variables in the development of identifiable leadership in the prehistoric archaeological record. The emergence of coercive force and conflict in association with leadership is one of the last associations manifest in the Neolithic period, not one of the first. The current state of research may indicate that religious leadership around shrine sites emerged first, followed by population growth and the need for political leadership to negotiate resource use and access. Only at the end of the Neolithic did military leadership begin to emerge on a par with religious and political leadership.

—Christopher Howell

Bibliography

- Arkush, E., and M. Allen, eds. *The Archaeology of Warfare: Prehistories of Raiding and Conquest*. Gainesville: University Press of Florida, 2006.
- Barker, G. *The Agricultural Revolution in Prehistory*. London: Oxford University Press, 2009.
- Guiliane, J., and J. Zammit. *Origins of War: Violence in Prehistory*. Hoboken, NJ: Wiley-Blackwell, 2004.
- Hamblin, W. J. *Warfare in the Ancient Near East to 1600 B.C.E.* New York: Routledge, 2006.
- Keeley, L. *War before Civilization*. New York: Oxford University Press, 1997.
- Kelly, R. C. *Warless Societies and the Origins of War*. Ann Arbor: University of Michigan Press, 2000.

Thought and Religion

One of the distinguishing aspects of our species is the capacity for symbolic thought. Unlike other species, we have real self-awareness. Through the medium of language, we are capable of expressing thoughts and emotions in complex and novel ways. Language and other media allow us to imagine and create wholly new aspects of culture. Through this capacity, we are not bound by genetics or learned behavior. Although it is likely that some of our nearest primate relatives have some symbolic abilities, these have only been observed after extensive training and coaching in laboratory settings.

At what point in the evolution of our species did this remarkable capacity appear? It is best to recast this question to think about it as a process instead of as an event. There is no “cerebral frontier” that one of our ancestors crossed from a very limited symboling capacity to one that was more fully human. But it is the case that significant changes in the structure and capacity of the brain were required to create a symboling capacity.

One of the principal difficulties in the analysis of this process is the lack of clear material correlates of “thought” and symbolic capacity. In the deep past, we rely solely upon data obtained that reflect changes in the cranial anatomy of our ancestors to get some insight into how the brain was structured. Although the absolute size of the brain is important, more important is evidence about the structure of the brain itself. This is studied by examining endocasts, or physical models of brain shape made by filling fossil skulls with resins or other similar material. Endocasts may reveal new patterns of vein and artery placement, which may reflect a new importance of certain brain areas in response to adaptive pressures, or changes in certain structures known to control the capacity of abstract thought in our own species. Based on these criteria, it is likely that *Homo erectus* had achieved some capacity for symbolic thought.

As we move closer in time to the modern era, new lines of evidence can be used. One of the most important of these is that of artifacts used for personal ornamentation. Objects such as beads and pendants are thought to signal attention to personal difference. Chimpanzees, for example, while showing distinct personalities, make no effort to use objects to distinguish themselves from others. Humans, in contrast, use tattoos, paint, and other types of ornamentation to show both group and personal distinctions. These kinds of display are seen as evidence for self-awareness. Although pigments that could have been used as body painting are thought to be over 100,000 years old, such decorative objects appear in greater numbers after that date. It is possible, then,

that both *Homo erectus* and *Homo neanderthalensis* had this degree of self-awareness. But it is also clear that such behaviors were not widespread in these species.

For many scholars, the appearance of art—objects that have what appears to be a nonutilitarian function—is a clear signal of the capacity for symbolic thought. The earliest known expressions of art, broadly defined, appear in Africa, the Middle East, and Europe as early as 300,000 years ago and possibly much earlier. These finds include pigments, bones with regular incisions, and a crude but recognizable female figurine from Berekhat Ram on the Syrian-Israel border. The function of these objects is unknown.

Despite these discoveries, most of what we know as art in antiquity is seen in greater frequency after 50,000 years ago. Many utilitarian objects dating to this period have decorative treatments and flourishes that speak to an artistic aesthetic, and some objects, such as the famous “Venus” figurines, have no obvious utilitarian function, nor does the famous cave art from sites such as Lascaux or Altamira. How, then, can they be interpreted?

By far, the most common explanation for the appearance of cave art, figurines, and other similar objects is that they served some sort of religious role for the peoples who produced them. Religion, as a category, is a Western construct. That is, many peoples today who live in small village-based societies have no term in their languages for our word “religion.” However, all societies have classes of entities that can be broadly defined as “spirits,” or nonhuman actors, that populate this world. The term “animism” is often used to describe this set of beliefs. In some societies, the dead become spirits who become entities of veneration. In many modern hunting and gathering societies, there are people known as shamans who are said to be able to communicate with spirits. These shamans perform healing rituals and in some societies protect their groups from spiritual attacks sent by shamans of competing groups.

The origins of religion are hotly debated, and archaeology has been drawn into the discussion. Unfortunately, direct evidence for anything that can be clearly labeled as “religious” activity in the archaeological record is difficult to come by. Perhaps the earliest expression of religion is the intentional burial of the dead by Neanderthals at a number of European and Middle Eastern sites. Whether this is religion or some other social practice cannot be inferred, however, with any degree of certainty. Similarly, the interpretation of cave art as an expression of religion, while a distinct possibility, cannot be directly demonstrated.

Activity that is more likely religious in nature becomes more commonplace with the advent of sedentary life. At numerous early village sites in the Middle East, rooms of some structures appear to have been used as shrines, and at others, such as Göbekli Tepe in modern Turkey, monumental architecture inscribed with images of animals common in the region was erected. Lacking habitation features, the site is thought to have served a religious function for the people who built it.

Humans, in contrast, use tattoos, paint, and other types of ornamentation to show both group and personal distinctions. These kinds of display are seen as evidence for self-awareness.

One of the new occupational specialties that emerges with sedentary life is the full-time religious specialist. By the end of the era, it is likely that there are people who take on the role of what we today would call a “priest.” Although we have no knowledge of the meaning of the religion practiced at that time, we find evidence of more elaborate religious structures and a wider range of artifacts that appear to serve religious purposes.

The contributions to this theme explore these and other topics in detail, and together they illustrate the evolution of the human mind and describe the ways in which this evolution created social and religious institutions that continue to be important in modern times.

—Mark Aldenderfer

■ Introduction: The Evolution of Human Language

Most mammals, birds, and reptiles rely to varying degrees on vocal or at least audible communication, and in this regard humans are no different. Primates, including humans, are highly communicative mammals, using not just oral cues but also gestures, or body language, to communicate emotions and threats. Some monkeys link calls to specific types of dangers and predators. Chimpanzees contort their faces to represent emotions like fear and aggression. Humans, however, have taken both vocal-lingual abilities and symbolic communication to the extreme.

Human speech itself is much more complex than the vocal repertoire of other primates, and the concepts that symbolic speech (including sign language) can represent far outnumber those that any other living creature can transmit to another.

In his *Descent of Man*, Charles Darwin hypothesized that language enabled our intellect to evolve to be more complex than our relatives, and this remains a strong hypothesis. Cortical regions of the human brain—those that are dedicated to controlling the biomechanical production of speech and also to crafting, receiving, and perceiving language—prove how strongly tied language is to the evolution of our large brains. The ability to share knowledge and to think symbolically allowed humans to learn, retain, and synthesize immeasurably more infor-

mation than their ancestors and other species. Speech and language have been intimately intertwined with encephalization and brain organization in evolutionary history.

Because encephalization beyond the size of chimpanzees begins with the genus *Homo* about two million years ago, it is possible that language abilities evolved hand-in-hand since then. Neurological anatomy can be tracked through the hominin fossil record, but so far it has not been used to successfully pinpoint the origin of language. Based on reconstructions of the throat and vocal tract from fossil skulls and skeletons, it appears as though this anatomy was not humanlike until about 50,000 years ago and only in modern humans, not in Neanderthals who were also living at that time.

The latest evidence for language origins comes from our DNA. People with the same mutation at the gene known as FOXP2 have difficulties with certain aspects of both speech and language. Although FOXP2 is involved in the development of vocalization in many animals, like birds and mice, it has undergone strong natural selection in humans over the past 100,000 years. This estimate, based on genetic differences between humans from different populations all over the world (a method known as molecular clock analysis), suggests that language evolved before the throat anatomy was fully modern. What is interesting is that ancient DNA from

Neanderthals actually contains the same version of the gene found in humans. Furthermore, it appears that once language became important, the cognitive aspects were selected (e.g., as seen in FOXP2) before the anatomy was perfected (e.g., as seen in the fossil record). The implications of this scenario are twofold: (1) the earliest hominin speakers could not make the full range of sounds that humans are capable of making today, and (2) once human vocal anatomy evolved—the same anatomy that causes adults of our species to incur a high risk of choking on food—the selection pressure was stronger for speech than it was against choking, so the anatomy persisted.

Thus, at some point between 100,000 and 50,000 years ago, humanlike speech emerged, and this dovetails with an explosion of symbol use in the archaeological record. But what caused complex oral communication to begin in the first place?

It is not just throat anatomy that is keeping trained chimpanzees and gorillas from having language. They learn thousands of words and symbols, which includes sign language for some, yet even when armed with such a vocabulary they are unable to use words and symbols in millions of syntactic combinations as we do. Cognitive differences are certainly at play, but there may be something crucial about actually speaking words. Early hypotheses for language evolution claimed that learning to manufacture stone tools required oral instruction or that hunting required complex communication that only language could provide. Yet these hypotheses have lost strength. More recently, Dean Falk hypothesized that baby talk, or “motherese,” between a mother and infant was the first step to human language. Robin Dunbar suggested that gossip may have replaced grooming (e.g., like baboons preening one another’s fur) in hominin evolution, especially when we started to live in large groups when vocal “groomers” could simultaneously interact vocally (rather than physically) with multiple individuals and could spread information over a vast network.

—Holly M. Dunsworth

Bibliography

Dunbar, Robin. *Grooming, Gossip, and the Evolution of Language*. Cambridge: Harvard University Press, 1996.

Enard, W. M., et al. “Molecular Evolution of FOXP2, a Gene Involved in Speech and Language.” *Nature* 41 (2002): 869–872.

Falk, Dean. “Prelinguistic Evolution in Early Hominins: Whence motherese?” *Behavioral and Brain Sciences* 27 (2004): 491–541.

Lieberman, Philip. “The Evolution of Human Speech.” *Current Anthropology* 48 (2007): 39–66.

What Biology Tells Us of the Structure of the Brain and Its Capacity for Speech

When we are looking for the capacity for speech, we have to go back in time to earlier hominid species. Our predecessors in the history of evolution had that capacity. These were the Neanderthals, as the archaic humans were called after the place of the earliest find, in 1856, of their remains. Archaic humans (or archaic *Homo sapiens*, respectively) were attributed different roles in human history. In the past, they were mostly degraded as primitive, savage, and unintelligent. Insights from recent research have revolutionized the image of these ancestors.

Today, it is known that the Neanderthals were inventive, had a sense for abstractness, adorned themselves with necklaces and pendants, shared beliefs about the afterlife, and might have even participated in the improvement of the lithic tool industry of the Cro-Magnon population in western Europe during the time of the transition from the Middle to the Upper Paleolithic Age (ca. 45,000–35,000 BCE). The Cro-Magnon were the earliest modern humans to live in Europe. The Neanderthals lived both in cohabitation with and in separation from modern humans for several thousand years.

The more we learn about the Neanderthals, their living conditions, and their achievements, the more we are able to theorize about the trajectory of evolution and especially about the capacities (and limitations) of our own species. Much of what we think is typical of modern humans finds its roots in the behavioral patterns and the cultural horizon of the Neanderthals. Among the abilities that we modern humans share with archaic humans is symbolic activity and the ways in which the brain operates for producing speech.

Scientific findings have provided proof that Neanderthals could speak and use a rudimentary language. These findings have raised some questions regarding the relationship between modern humans and their ancestors in terms of brain capacity and structure. What are the differences between the brain of modern humans and that of archaic humans? Do they diverge in their structures or in the ways they operate or in both? There was a time when scientists thought that the difference between the species in question was the size of their brain. According to modern findings, the brain of the Neanderthals was about the same size as our brain. This means that the size of our brain is not decisive for the faculty of language and the quality of our language skills.

The opinion that the faculty of language and the ability to speak rely on the structure of our brain remains widely accepted. This would speak in favor of the physical architecture of our brain as the major arbitrator of these mental capacities. Our brain is divided into a right and a left hemisphere. Neurology tells us that the left hemisphere of the brain is more active than the right hemisphere when we use language. This, however, does not mean that the multiple ability to utter linguistic sounds, to connect them into conventional molds of meaningful elements (i.e., words), to select from a repertory of lexical items to word the world, and to produce patterns of word order to form intelligible sentences would “reside” exclusively in the left hemisphere.

It has been a matter of priority for neurological research to identify certain areas in the brain that are allegedly responsible for linguistic operations. The most popular of these approaches is the so-called Broca-Wernicke language organ theory. This theory identifies two specific areas (called after their discoverers the Broca area and the Wernicke area) on the cerebral cortex as the “center” of language. The Broca-Wernicke theory cannot account for the wholeness of linguistic performance. This “center” may be responsible for most of the programming of the motorics of speech sounds. However, language skills are much more comprehensive than the part of motorics controlling utterances. Furthermore, clinical experience has shown that the faculty of language is not defunct in patients

whose brain is damaged in or around the Broca-Wernicke areas.

Some modern linguistic theories look for an explanation of the mechanism of language in assuming that a kind of “module” functions in the human brain that is programmed exclusively for linguistic performance. Such modular theories draw on the analogy of how computers operate and how their goal-oriented programs work. Although a modular theory pinpoints a program—not a specific section—for the brain, it looks for independent linguistic procedures, distinct from other brain activity.

Linguistic performance is an activity that belongs to the range of complex behavior. In order to account for the totality of such behavior, it seems futile to postulate certain areas of the brain as major gravitations or assume a specific programming.

Seemingly, those theories have a greater explanatory value that assumes linguistic operations to be effected by a comprehensive neurological process, with multiple activity of the synaptic network. From the standpoint of evolution, this means that the faculty of language did not evolve in segregation from other abilities but rather evolved as a result of a rise in dynamics and effectiveness of the overall brain capacity. This would speak in favor of a coevolution of language and the human brain, from the stage of primary consciousness among Neanderthals to that of higher-order consciousness in our species.

Further confirmation of the validity of comprehensive and integrated theoretical approaches comes from molecular genetics. A “language gene,” called FOXP2, has been identified that is involved in verbal apraxia (Greek for “inaction”). The involvement of this gene in processes of blocking linguistic performance concerns brain activity as a whole neither in sections nor relating to certain module programs.

—Harald Haarmann

Bibliography

- Chomsky, Noam. *Knowledge of Language: Its Nature, Origin and Use*. New York: Praeger, 1986.
- Deacon, Terrence. *The Symbolic Species: The Coevolution of Language and the Human Brain*. London and New York: Penguin, 1997.

Jackendoff, Ray. *Foundations of Language: Brain, Meaning, Grammar, Evolution*. Oxford, UK, and New York: Oxford University Press, 2002.

Lieberman, Philip. *Toward an Evolutionary Biology of Language*. Cambridge and London: Belknap Press of Harvard University Press, 2006.

Pinker, Steven. *How the Mind Works*. New York: Norton, 1998.

How Do Our Nearest Primate Relatives Communicate?

In an evolutionary perspective, hominids are a branch of the primates. The australopithecines are the last of our common ancestors. Their brains were still apelike, and their behavioral skills lacked the complexity that we find in later hominid species.

When reflecting on communication in primates other than hominids, we have to be aware of their needs to communicate. All primates are social animals, which means that they live in groups of different size, and interaction in social groups requires systems of signs. The conditions of animal communication can be described as follows.

In order to properly assess the means of communication among our primate relatives and the difference between simple and complex communication, it is important to note the exclusiveness of human communication. Modern humans have devised a multitude of means of communication for use in a world whose social, cultural, and economic organizations are becoming more and more complex. Complex language is the most effective of the communicational systems, and this is exclusive to our species.

In addition to language, modern humans use many other systems of communication. From the standpoint of cultural evolution, communication by means of language evolved out of a milieu of nonverbal communication, that is, out of the interaction with meaningful gestures and poses. We have not lost the capacity of nonverbal communication (popularly called body language). Like other hominids before us, we communicate with movements of our hands, with different facial expressions, and with poses of our body.

There is another means of nonverbal communication that we have also inherited from our

hominid ancestors, and this is tactile communication (e.g., holding hands as an expression of intimacy, hugging as an expression of affection, kissing someone's cheeks as a friendly greeting). The trajectory of nonverbal communication (i.e., gestural code, tactile means with symbolic meaning) connects our behavior with that of other hominids and with primate species. Within the hominid branch of the primates the ability for nonverbal communication goes back to the australopithecines, some 4.5 million years ago. Among the nonhominid primates, nonverbal communication assumes more and more specific traits for each species. And yet there is a difference in the performance of nonverbal means among modern humans when compared to nonhominid primates. By virtue of their intentionality, modern humans can train their personal repertory of gestures and poses to make them effective tools in personal communication (e.g., facial expressions of a politician giving a public speech).

Communication in ape species may be limited to the use of simple signals to get attention like "Do this," "Don't do that," or "Come here," or their composition may be more varied with the use of gesturing signs with symbolic meaning. Humans use dozens of such nonverbal gesturing symbols, while in nonhominid primates the number is smaller. This is ultimately due to the fact that the social systems of apes are less complex than human societies, which have produced more refined systems of communication.

Since the late 1960s, behavioral scientists have conducted experiments with chimpanzees, testing their capability of language production. The means of communication have been visual, focusing on either the gesturing code or the stimulus-response mechanism (pressing symbols on a keyboard). In recent years, such experiments have been carried out also with other ape species, orangutans and monkeys. All the ape species on which behavioral experiments have been conducted show an astounding capacity for adjustment to human language.

The insights from such experiments confirm that there is an innate capacity for the use of symbols in the functioning of the brain in primates. This capacity can be directed, through behavioral training, explicitly toward human language. It has to be noted, however, that the

faculty of symbol using related to language is dormant in nonhominid primates (apes), and this ability is not activated under the conditions of their natural habitats. Humans need complex communication, verbal and nonverbal, while apes do not.

—Harald Haarmann

Bibliography

- Bekoff, Marc, and Dale Jamieson, eds. *Readings in Animal Cognition*. Cambridge, MA, and London: MIT Press, 1996.
- Burgoon, Judee K., David B. Buller, and W. Gill Woodall. *Nonverbal Communication: The Unspoken Dialogue*. 2nd ed. New York, St. Louis, and San Francisco: McGraw-Hill, 1996.
- Hargie, Owen D. W., ed. *The Handbook of Communication Skills*. 2nd ed. London and New York: Routledge, 1997.
- Philips, Michael, and Steven N. Austad. "Animal Communication and Social Evolution." In *Readings in Animal Cognition*, edited by Marc Bekoff and Dale Jamieson. Cambridge, MA, and London: MIT Press, 1996.
- Savage-Rumbaugh, Sue, and Karen E. Brakke. "Animal Language: Methodological and Interpretive Issues." In *Readings in Animal Cognition*, edited by Marc Bekoff and Dale Jamieson. Cambridge, MA, and London: MIT Press, 1996.

The Biology of Speaking—Australopithecines and Early Human Speech

Human speech is an articulation of sounds produced by the human voice in order to express words with symbolic meanings. Sound patterns created by the voice are specific to each speech community. For instance, the sound patterns of American English are specific and distinct from British English and other languages such as French, Russian, or Chinese. Speech is the wholeness of an utterance (or of a series of utterances) in the context of interaction (speech act). The realization of speech relies on anatomical features in the mouth, throat, and chest that coordinate the production of linguistic sounds.

Speech is only one among several forms of linguistic expression, although it is a major manifestation of information technology. Human language is fully operational even without spoken utterance. Linguistic messages can be

conveyed with the help of a gestural code or in writing. Moreover, inner language (imaging the inner world) is tacit and remains unexpressed to outsiders.

From the standpoint of the evolution of language, the transfer of information was not the main driving force behind the evolution of human speech. The need to develop social relations in the community most probably directed the evolutionary trajectory of linguistic skills.

In the process of the production of speech (the speaker's role) and of the reception of speech (the listener's role), various mental abilities and physiological activities operate in a symbiotic way. These activities include the following (ranging from the most general to the most specific):

- As a form of symbolic activity, objects of the real world are associated with an arbitrary sound sequences (e.g., the idea of a mountain is connected to the sound sequence *mountain* in English, *montagne* in French, *Berg* in German, or *gora* in Russian), ideas that cannot be visualized are related to lexical items (e.g., the idea "mother" is related to expressions such as *mother* in English, *äiti* in Finnish, or *okasan* in Japanese), and abstract ideas are expressed in words (e.g., peace, love, doubt, inventiveness, or vision).
- Motoric activity transmits the contents of an intended message to the motoric system and coordinates the voice and the movements of the tongue in order to mold spaces for the articulation of distinct sounds in the oral cavity.

In view of these preconditions, it becomes apparent that speaking is a complex human behavior in which the neural circuits of the brain and various physiological activities need to be activated to function in a symbiotic interplay. As for the evolution of human capacities relating to speech, the question has to be answered which of the primate species possessed the capacities required to accomplish this kind of complex behavior.

The reconstruction of the faculty of language and of the ability to speak includes the cultural horizons of archaic humans (*Homo*

neanderthalensis) and possibly even *Homo erectus*. Symbolic activity is evidenced for *Homo erectus*. Evidence for symbolic activity by hominid species is found on objects that were intentionally incised with notches. Such a manifestation of the abstract mind is unknown for other hominid species that existed before *Homo erectus*, more than 1.5 million years ago.

Since the capacity for symbolic activity is seemingly absent in earlier hominid species, the most basic precondition for language is missing. This means that *Homo ergaster* at 1.6 million years BP, *Homo rudolfensis*, and other species could not communicate by means of language. Language is also absent from the repertory of behavioral skills in *Homo habilis*, the first hominid species to use natural objects as tools and to produce crude stone tools. The stone tool industry began with *Homo habilis* approximately 2.6 million years ago. Although *Homo habilis* possessed practical skills, their mind was obviously not capable of symbolic performance.

While the neural activities of hominid species predating *Homo erectus* remained below the threshold of symbol making, certain constituents in the architecture of their brains that control the motorics of speech organs seem to have been in a state of developing:

- In fossil remains of the brain of *Homo rudolfensis*, signs of the Broca and Wernicke areas—control centers of speech motorics—have been identified. These areas in the left hemisphere of the human brain are responsible for the production of linguistic sounds as well as for the comprehension of speech.
- The hypoglossal canal through which nerves are transported is linked to the tongue, which is the most essential organ for the articulation of the sounds of human speech. The size of this canal is much bigger in humans than in early hominids or non-hominid species.
- The vocal tract has a unique position in the anatomy of humans and is different from other mammal species. In mature humans, the larynx lies lower in the neck. This increases the size of the pharynx and enhances sound production. In infants and

in all other mammals, the position of the vocal tract is high. This enables the individual to breathe and swallow at the same time (which is impossible for adult humans) but reduces the scope of vocalization.

Australopithecines, as one primate branch with several subspecies (*ramidus*, *africanus*, *robustus*), appeared more than four million years ago. This is the last common ancestor of all hominid species. The vocal tract of australopithecines is similar to that of chimpanzees and is incapable of producing the sounds necessary for human speech. None of the other indications of the capacity of speech and the faculty of language mentioned above can be identified for this species since the *Australopithecus* brain was similar to an ape's.

—Harald Haarmann

Bibliography

- Lewin, Roger, and Robert A. Foley. *Principles of Human Evolution*. 2nd ed. Malden, MA, and Oxford, UK: Blackwell, 2004.
- Lieberman, Philip. *Toward an Evolutionary Biology of Language*. Cambridge and London: Belknap Press of Harvard University Press, 2006.

The Advent of Speech in Human Evolution

Language is a system of signs used to communicate symbolic meanings. Although linguistic ability is clearly an aspect of being human, did it develop suddenly with the appearance of *Homo sapiens sapiens*, or did the ability to speak evolve slowly as an attribute of other hominid species?

It is possible, of course, to communicate without the use of articulated sounds. Meaning can be expressed by the use of visual signs, by symbols of a gestural code (as in sign language), or in writing (via signs and graphic symbols that signify ideas or letters that represent the sounds of speech).

Behavioral scientists have carried out extensive experiments with chimpanzees, orangutans, and other primate species to understand their capacities to use signs and symbols. Research findings indicate that nonhominid primates possess astounding abilities to learn human language by means of gestures and to identify letter se-

quences within a written code. This speaks in favor of a long evolutionary history of symbol making. And yet the capacity for symbolic activity in nonhominid species remains latent and seemingly unexploited in their natural habitats. The ecological conditions of life for primates do not require the use of complex sign systems such as language.

Although the ability of primates to recognize symbols may go back more than 7 million years, the capacity to produce the sounds of human language can only be traced to the emergence of our own species between 120,000 and 150,000 years ago. The relationship between the sound structure and the meaning of words is arbitrary in complex human language. The fact that English “house,” Italian *casa*, Russian *dom*, Finnish *talo*, and Japanese *uchi* all have the same meaning is a matter of convention within each local language. These conventions are perpetuated from one generation to the next through the process of language acquisition by which humans learn to articulate the sounds of speech and to group sounds into meaningful sequences. This is something primates cannot do because they lack the anatomical features to produce the sounds of human speech.

For several decades, paleontologists were convinced that archaic *Homo sapiens* (*Homo neanderthalensis*) had the faculty of language. The ability of Neanderthals to organize their living conditions and to construct the fabric of culture was rudimentary and lacked sophistication. It is widely assumed that their ability to communicate corresponds to the stage of protolanguage. What could not be answered with any certainty until recently was how many sounds of human speech the Neanderthals were capable of articulating.

Final proof for the presence of language among Neanderthals came in 1989 with the find of a hyoid bone (language bone) in a Neanderthal skeleton in the Near East. This bone, which lies between the root of the tongue and the larynx and is connected to their muscles, is known only in modern and archaic humans. The mere existence of this bone in archaic humans is evidence of their ability to produce sounds of speech. Therefore, the development of language (as a system of arbitrary signs) and of speech (as articulated in sounds) began with the Neanderthals.

How limited were the language skills of Neanderthals, and did their language represent a fully developed sign system? Moreover, did the complex linguistic ability of modern humans emerge out of a leap in evolution, or were there stadial differences in the transition from Neanderthals to our species? Were there archaic stages of development that may have left traces in the structures of modern languages?

The findings from paleontological and physiological research tell us that the spectrum of speech sounds that Neanderthals were able to articulate is much more limited than the minimum range of distinct sounds that are known from some of the languages of the world. Neanderthals could perhaps utter ten speech sounds, two vowels, and eight consonants. In addition, they were capable of producing a glottal stop, a sound found in German, Danish, and Finnish. The only modern language of the world with only two vowels (a, e) is Ubykh, an indigenous language of the Caucasus, affiliated with the northwestern group. Consonants in Ubykh, however, number 82, which is among the highest number of consonants in any language. In modern languages such as Hawaiian and Tahitian, the number of consonants is relatively limited, comprised of only eight sounds. As a compensation for this limited range, the full spectrum of basic vowels (a, e, i, o, u) produces a variety of syllabic structures in combination with the available consonants.

Whether or not *Homo erectus*, who lived between circa 1.6 million and 0.4 million years ago, was in the possession of language is still a matter of debate. The ability of this hominid species to produce linguistic sounds was certainly more limited than that of Neanderthals. *Homo erectus* probably relied on visual signals and gestures. Language-related communication would have been limited to sounds expressing surprise, shock, joy, pain, and the like. Such utterances in the form of interjections (such as wow, oh, and yay) are still utilized in the languages of modern humans.

In the 1970s, specialists in language evolution studying Pidgin and Creole languages began to theorize about how these variants are formed. The general impression concerning their formation is that the sound patterns and the grammatical

structures of a sophisticated language become simplified when learned without the control of school education or when used by people with different mother tongues. For example, in Haitian Creole, the sounds and the grammatical techniques of European French are simplified. Tok Pisin, spoken in Papua New Guinea, is based on an abbreviated version of British English.

In a reversed order of development, Neanderthal protolanguage, which predated the development of modern human language, has been compared to the simplified variants of Pidgin and Creole. Such comparisons, however, have not been satisfactory because even the simplest Pidgin languages are more complex than what can be postulated for the Neanderthal.

An intermediate stage of linguistic evolution has been postulated between the primitive Neanderthal protolanguage and the complex linguistic development of early humans. The evidence for this hypothetical stage is highly circumstantial, although some existing languages contain elements that might be remnants of an archaic stage of complex evolution. Some Paleosian languages such as Chukchee, Koryak, and Negidal, for example, lack a clear distinction between word classes (nouns, adjectives, verbs, pronouns, etc.). Also, the object-initial word order used in some peripheral languages of Southeast Asia and Central America—spoken in traditional hunter-gatherer societies—gives the impression of being much older than the

subject-initial word order prominent in most modern languages.

The Aboriginal languages of Australia, which represent the final stage of complex linguistic development, come from a region of the world that was inhabited more than 60,000 years ago. Therefore, if an intermediate stage of archaic complex language existed, it must be older than about 70,000 years. Perhaps the inhabitants of the Blombos Cave in South Africa, who lived some 75,000 years ago, represent speakers of the more archaic transitional stage of complex linguistic development.

—Harald Haarmann

Bibliography

- Deutscher, Guy. *The Unfolding of Language: An Evolutionary Tour of Mankind's Greatest Invention*. New York: Metropolitan Books, 2005.
- Haarmann, Harald. "Evolution, Language, and the Construction of Culture." In *Handbook of Evolution*, Vol. 1, *The Evolution of Human Societies and Cultures*, edited by Franz M. Wuketits and Christoph Antweiler, 77–119. Weinheim: WILEY-VCH Verlag, 2004.
- Ladefoged, Peter, and Ian Maddieson. *The Sounds of the World's Languages*. Malden, MA, and Oxford, UK: Blackwell, 1996.
- Lewin, Roger, and Robert A. Foley. *Principles of Human Evolution*. 2nd ed. Malden, MA, and Oxford, UK: Blackwell, 2004.
- Lieberman, Philip. *Toward an Evolutionary Biology of Language*. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2006.

■ Introduction: The Origins and Evolution of Art

Among the many definitions of art offered by the online version of the *Oxford English Dictionary*, the following is the most pertinent to the study of the human past: "The expression or application of creative skill and imagination, typically in a visual form such as painting, drawing, or sculpture, producing works to be appreciated primarily for their beauty or emotional power. Also: such works themselves considered collectively." The keys to this defini-

tion, and what makes it so pertinent to the evolution of our species, are the terms "beauty" and "emotional power." Just when did our ancestors begin to create objects that had aesthetic qualities, uses that went beyond simply the utilitarian?

The challenge for the archaeologist and anthropologist is to identify objects that reflect and embody such qualities. But what might those qualities have been for species that were not yet human? And could we as humans recognize

them? This question, of course, suggests that only humans, with our ability to use symbolic expression as a means of communicating thoughts and ideas about the world, could recognize art. Indeed, while we know that many species have advanced cognitive capacities, such as chimpanzees, dolphins, and whales, we do not believe that they have quite the same kind of ability to create symbolic expressions as our own species. Insofar as we know, none of these species have ever created anything that we humans would call art.

Although art may seem to be uniquely human, could any of our ancestors have had the cognitive ability to create objects that we would consider artistic? Although some have argued that *Homo erectus* may have possessed some cognitive skills that would have fostered the creations of objects with an aesthetic sense, most archaeologists now believe that *Homo neanderthalensis* (Neanderthals) did create art, most likely in the form of body decoration and modification. But it is only after the appearance of our own species, *Homo sapiens*, that art really becomes more apparent in the archaeological record. The Upper Paleolithic peoples of Europe certainly created objects with a fine artistic sense, but increasing evidence from Africa suggests that peoples of our species could be said to have created art somewhat earlier, perhaps by 100,000 years ago.

Objects that have an aesthetic dimension are far more numerous as societies begin to settle and become reliant upon domesticated plants and animals. Art in these contexts begins to take on more recognizable roles: decorations in homes, wall paintings, and clay figurines that may have had a role to play in religious practice. After 10,000 BCE, art becomes more familiar to us as the creation of objects that may not have a clearly utilitarian role but have been produced to satisfy some larger purpose.

—Mark Aldenderfer

Bibliography

- Bahn, P., ed. *The Cambridge Illustrated History of Prehistoric Art*. Cambridge: Cambridge University Press, 1998.
- White, R. *Prehistoric Art: The Symbolic Journey of Humankind*. New York: Harry N. Abrams, 2003.

Why Is There So Little Very Ancient Art?

Although we may say that we know art when we see it, the fact is that art is difficult to define, and because definitions of it are so highly subjective, there is often little agreement even among specialists as to what art is. This problem is even more difficult when one looks back into the very distant past and at the species that are part of our evolutionary lineage. In the very deep prehistory of our evolution, species such as the australopithecines and even early *Homo* had far smaller cognitive capacities and very limited ability for symbolic communication. This suggests that art as we understand it did not exist in this deep prehistory.

If, however, we expand our concept of art to include not simply objects but also attributes of them, we get a sense that art by this definition may have appeared far earlier than expected. Some archaeologists have suggested that Achuelan hand axes are a very early form of art because many of them exhibited a refined sense of symmetry. This is especially the case of those made after 600,000 years ago. *Homo erectus* was the species that created these tools.

More conventional conceptions of early art focus primarily upon those objects that appear to have no obvious utilitarian function. These may include items of personal decoration, such as beads, but also materials that could have been used to paint or otherwise modify the body, such as mineral pigments like ochre of various colors. These pigments may also have been used to color animal bones as well, but whether this was art or something else remains unknown. Ochre and possible pigments have been found at sites in Europe as well as in Africa at Acheulean-era sites. Beads appear far later in human prehistory and only become common after 100,000 years ago as anatomically modern *Homo sapiens* makes its appearance. Some archaeologists also consider artifacts that have deliberate markings, cuts, or gouges on them to be an expression of art. An example of such an object is an elephant leg bone from the Bilzingsleben site (dated to approximately 250,000 years ago) in what is now modern Germany that is inscribed

► THE BEREKHAT RAM FIGURINE

A small piece of lava no more than 1.3 inches (3.5 centimeters) in length excavated from the Berekhat Ram site in modern Israel and dated to 400,000 years ago is considered by some archaeologists to be the earliest known artistic representation yet discovered. This assessment, however, is not without controversy.

The pebble has three grooves scored into it; the grooves have been verified to have been made with a stone tool. The form of the pebble is vaguely reminiscent of a female form with exaggerated hips. Some scholars have suggested that this pebble may be a very early example of the so-called Venus figurines that appear far later in the Upper Paleolithic; however, this speculation is not widely accepted.

If this object is truly a figurine, this means that one form of symbolic capacity appeared far earlier in the evolution of our species than is commonly accepted. Until similar objects are discovered at sites of a comparable antiquity, the interpretation of the Berekhat Ram figurine remains uncertain.

—Mark Aldenderfer

Bibliography

- D'Errico, F., and A. Nowell. "A New Look at the Berekhat Ram Figurine: Implications for the Origins of Symbolism." *Cambridge Archeological Review* 10 (2000): 123–167.
- Goren-Inbar, N., and S. Peltz. "Additional Remarks on the Berekhat Ram Figure." *Rock Art Research* 12 (1995): 131–132.

with parallel cuts of similar length. Whether this is art, however, is debatable.

It is only after 50,000 years ago that artifacts commonly recognized as art begin to be found in greater numbers. Not surprisingly, this explosion of art objects, such as carvings of humans and animals in bone and antler, cave paintings, and utilitarian objects with decorative motifs and flourishes, is coincident with the migration of humans—*Homo sapiens*—into South, East, and southeastern Asia; the Near East; and eventually Europe and central Asia. Clearly, our species had evolved a complex symbolic capacity that used objects in new and powerful ways to represent other concepts and symbols.

It is important to remember, however, that the archaeological record is very much biased toward the preservation of durable objects: those made of stone, bone, antler, shell, and sometimes wood. Fiber and body modification, like tattooing or painting, simply does not preserve in such a way that it can be discovered. Thus, art may well have something of a deeper prehistory than is currently conceived, but it is highly unlikely that evidence of this will ever be discovered. It is also possible that cuts, grooves, and other markings on bone may be due to natural processes, and unless such causes can be definitely rejected, it is safe to be initially skeptical of claims of objects that are said to be representative of early art.

—Mark Aldenderfer

Bibliography

- Barham, L. S. "Systematic Pigment Use in the Middle Pleistocene of South-Central Africa." *Current Anthropology* 43 (2002): 181–190.
- Hovers, E., et al. "An Early Case of Color Symbolism: Ochre Use by Modern Humans in Qafzeh Cave." *Current Anthropology* 44 (2003): 491–522.
- Mania, D., and U. Mania. "Deliberate Engravings on Bone Artefacts of *Homo erectus*." *Rock Art Research* 5 (1988): 91–97.

A Cognitive Revolution? Competing Theories about Art and Its Meaning

The problem of the origins of prehistoric art and the search for an explanation of its remains are among the most acute issues of scientific and public discussions since the first discoveries of cave art were made in the late nineteenth century. Dozens of theories from multiple perspectives have been offered to explain why it emerged when it did and what it might have meant to the people who created it.

In spite of the obvious differences of methodological and theoretical approaches to the study of prehistoric art, for most scholars and contemporary researchers there is no doubt that it is important to consider the biological and cognitive capabilities of our prehistoric ancestors to fully understand prehistoric artistic creative activity. Such ideas became the starting

point of the so-called biological theory of art origin, proponents of which sometimes describe the origin of art as a cognitive revolution that is viewed as one of the most important phenomena in human history.

Nevertheless, archaeological and anthropological data show that while biological and cognitive premises of creative artistic activity are important, having sufficiently developed minds and bodies does not necessarily lead to the creation of art. Therefore, other theories and hypotheses for the origins of art, primarily those of a cultural or social type, have been proposed.

Magic (or a ritual explanation) of cave art traditionally is regarded as one of the earliest concepts of art and can be traced back to the ideas of Edward B. Taylor. In archaeology, it is usually connected with the studies by Henri Breuil and Henri Begouen at the beginning of the twentieth century. They argued that animals were the center of ritual activity (totemic, magic, and other forms) of Paleolithic hunter-gatherers. Thus, animal images on cave walls most probably were identified with living animals. Inherent to magic is the principle of analogy, which implies that one can control the object if one controls its image. The magic function of cave art is connected with sympathetic magic, hunting, protection, breeding and reproducing, healing, and other rituals and collective ceremonies, some of which, as Jean Clottes has argued, were of a shamanic nature. Such understanding of prehistoric art dominated archaeological thinking until the mid-1960s.

Another approach to the interpretation of art is one that emphasizes its symbolic meaning within a larger religious or mythological framework. Its proponents argued that instead of looking at individual images, it was necessary to interpret them as an integral system of signs, tokens, and symbols, every component of which—location, disposition, co-occurrence frequency, and other parameters—are based upon rules that, in their turn, are caused by general cultural peculiarities of their creators. Supporters of this perspective argue that all images could be and must be deciphered (decoded); this process results in reconstruction of general ideas of a prehistoric population about the universe, life-death dualism, and the basics of human life. Nowadays, similar ideas are developed in frames of

postmodernist and poststructuralist directions of historical and anthropological thought.

The social interpretation of cave art suggests that symbols of any kind could be used to reinforce collective identity (kin, community, ethnic, ritual, etc.). The latest trend in the development of such an understanding of social function of prehistoric art is connected with Late Paleolithic exchange and social networks studies by Clive Gamble and his colleagues.

Communicative and memorial (or mythological) explanations are similar to theories of art that see it having magical or social functions but stress that symbols and images of any art object could reflect collective unity and integrity only if they suggest connection with preceding generations, or early ancestors. They also have a connection to emerging cognitive theories of art.

Cognitive explanations of cave art concentrate on information flow throughout generations, which could be transmitted by images. Interpreting art in general as the peculiar form of world knowledge and information storage, it underscores that only important hunting species were the subject of cave pictures, and prehistoric painters were well informed about animal anatomy and hunting practices. Such information could be used for the preparation of adolescent members of the community for the initiations. Contemporary postmodernists also imply cognitive significance of prehistoric cave art images, regarding them as texts that could be deciphered or images that could be read in order to comprehend past cultures.

The concept of the explosion of information that many scholars believe occurred at the middle of the Paleolithic has become the starting point for ecological-demographic explanation of cave art origins. Climate deterioration created by the last glaciation caused resource shortage, which in turn forced people to move to more suitable places for their subsistence needs. Their concentration in a few niches demanded strict defense and marking of their foraging territories, and art has been proposed as one way this was accomplished. The theoretical background and empirical verification of this hypothesis has been provided by Steven Mithen in the 1990s.

Aesthetic explanation (“art for art’s sake,” or the “game hypothesis”) traditionally is regarded

as one of the earliest in prehistoric culture studies and was proposed by Edouard Lartet and Edouard Piette in the mid-nineteenth century. Nowadays, its proponents usually emphasize the emotional sphere of prehistoric peoples and its display via art and in the creation of monumental compositions of high aesthetic value. This theory suggests that there is no deep meaning of art in terms of social, ritual, or ideological concepts and that it was just art.

In many recent case studies researchers tend to emphasize the primacy of the symbolic function of cave art and its connection with ritual activity of prehistoric communities. The complex character of such compositions, along with their remoteness from cave entrances and from settlements, which ensured high secrecy of the process, tends to support this hypothesis.

—Olena V. Smyntyna

Bibliography

- Banh, P. G. "Cave Art without the Caves." *Antiquity* 69 (1995): 263.
- Bahn, P. G., and A. Rosenfeld, eds. *Rock Art and Prehistory*. Oxford: Oxbow Books, 1991.
- Conkey, M., et al., eds. "Beyond Art: Pleistocene Image and Symbol." *Memoirs of the California Academy of Sciences* 23 (1997): 1–378.
- Gamble, C. S. "The Social Context for European Paleolithic Art." *Proceedings of the Prehistoric Society* 57(1) (1991): 3–15.
- Humphrey, N. "Cave Art, Autism and the Evolution of the Human Mind." *Cambridge Archaeological Journal* 8(2) (1998): 165–191.

Art Objects and Early Ornamentation—Blombos Cave

Modern humans (*Homo sapiens sapiens*) are the last hominid species to appear. According to the findings of human genetics, the origins lie in southern Africa and date back some 120,000 to 150,000 years. Until recently, the artifacts found in the caves from the Upper Paleolithic, dating to no earlier than circa 30,000 years ago in western Europe, were thought to be the oldest evidence for the artistic sense in our species, reaching beyond the practical intelligence to produce tools. This picture has changed with recent finds in South Africa.

Research has been carried out in caves of southern Africa south of the Zambezi River, including Klasies River Cave, Boomplaas, Die Kelders Cave I, and others. Those caves were inhabited by humans during the Middle Paleolithic over 70,000 years ago. Evidence for this comes from the assemblages of artifacts in the caves, such as bone tools, backed blades, raw material for stone tools, etc., and yet those finds have remained controversial as to the exact dating of their cultural horizon.

Since 1991, investigations have been going on also in the Blombos Cave near the southernmost tip of South Africa, the southern Cape shore of the Indian Ocean, about 200 miles from Cape Town. There also, a variety of highly specialized tools for hunting and fishing were discovered. The Blombos Cave distinguishes itself from the other sites by some exceptional artifacts that attribute to the knowledge of the early history of art and ornamentation among modern humans.

Several small pieces of ochre (i.e., iron ore stone ochre) were discovered that belong to the same cultural strata as the tools. Thermoluminescence dating gives a time frame between 70,000 and 77,000 BP for these finds. Ochre is known for its ceremonial use in prehistory and in traditional cultures. Ochre was not an ordinary material in or around the Blombos Cave. It came from an area of at least 20 miles (32 kilometers) from the cave.

The presence of ochre in the old cultural layer of the Blombos Cave speaks in favor of early symbolic activity. Circumstantial evidence for this assumption of a nonpractical use of the ochre pieces comes from ornaments engraved on some of the pieces. Their surface was scraped and polished. The space was then carefully laid out for designs of geometrical ornaments (straight lines and alternating rhombic forms), which were intentionally executed. The ornamentation is proof of the working of a sense of abstractness. Moreover, since many of the lines show parallel patterns, these ornamental designs document a sense of symmetry operating in the minds of those who crafted these pieces.

A cluster of intentionally perforated shell beads, altogether 41, was found during the excavations in April 2004. The beads are red-stained and were likely put on a string and worn. The

shells are from a tiny mollusk (*Nassarius kraussianus*) that populated a nearby estuary.

The finds of art objects and ornamentation in the Blombos Cave close the gap between symbolic activity documented for earlier hominid species such as Neanderthals and *Homo erectus* and the cultural horizon of modern humans. Finds of ornamental beads (ostrich-eggshell beads) similar to those in the Blombos Cave and of high age are also known from Loiyangalani in the Serengeti National Park (Tanzania).

—Harald Haarmann

Bibliography

Henshilwood, Christopher, et al. "Emergence of Modern Human Behavior: Middle Stone Age Engravings from South Africa." *Science* (2002): 1278–1280.

Early South African Rock Art

Sites with rock engravings and paintings are scattered over a wide area of southern Africa, including Namibia, South Africa, Malawi, Zimbabwe, and Tanzania. These sites are known for both naturalistic and stylized images as well as simple and complex abstract motifs.

By the nineteenth century, researchers began to realize that the myriad images preserved on rocks were created by the ancestors of the Khoikhoi (Hottentots) and the San (Bushman) tribes who still live in those areas. Since the indigenous people of southern Africa were considered primitive by European standards, their artistic achievements were overlooked for a long period.

By the 1970s, rock art in southern Africa was finally appreciated as a serious subject of scientific—particularly anthropological—inquiry. In the course of investigations during the 1980s, the motifs and scenes depicted in rock images were associated with traditions and customs observed among the living Bushman tribes. Today, it is well known that the images eternalized on the surface of boulders and on the walls of rock shelters express important aspects of the San belief system and were produced by shamans in a state of trance. Experiments have been conducted with San shamans who identified various abstract motifs in the picture panels as representing living beings and objects from the real world.



San rock art from the Drakensberg Mountains in South Africa. (Victorita/Dreamstime)

In the communal life of the Khoikhois and Sans, the trance (or curing) dance plays a key role. In the rupestral imagery, women and men—predominantly in groups—are often depicted as dancing. Pictures of animals, which have a symbolic or metaphoric role in the trance dance, are rendered in the greatest variety of motifs and styles.

A human motif that occurs in a wide area—from Zimbabwe to the southwestern Cape Province—is a female figure in frontal view with splayed legs and raised arms. This type of figure, sometimes referred to as the mythic woman, is found in contexts where the life cycle theme is addressed.

The two basic categories of rock imagery—engravings and paintings—are found in differing surroundings. Paintings were executed on the walls of rock shelters, usually under sandstone cliffs, while engravings were made on isolated rocks, usually of a smaller size. Paintings have also been found in caves. Some of the cave paintings are among the oldest pictures of southern Africa. The oldest pictures of hunting scenes, made by archaic hunter-gatherers, show humans without bows and arrows. In more recent hunting scenes, men are shown with bows and arrows.

The animal images of the Apollo 11 Cave in Namibia are the earliest that can be dated with some accuracy. The calibrated radiocarbon dates range between 30,000 and 35,000 years ago. It has been speculated that some of the imagery in

Tanzania may be even older. However, no reliable dates are yet available. In some areas, rock art was created for many millennia. For instance, at some sites in the Kimberley region of South Africa, engravings were produced from approximately 10,000 years ago to about the middle of the nineteenth century.

—Harald Haarmann

Bibliography

- Chippindale, Christopher, and Paul S. C. Taçon, eds. *The Archaeology of Rock Art*. Cambridge and New York: Cambridge University Press, 1998.
- Dowson, Thomas A. *Rock Engravings of Southern Africa*. Johannesburg: Witwatersrand University Press, 1992.
- Garlake, Peter. *The Hunter's Vision: The Prehistoric Art of Zimbabwe*. London: British Museum Press, 1995.

The Rupestral Art of the European Upper Paleolithic

In earlier times, there was much speculation among scholars about the unfolding of human beings' abilities to create images. The origins of iconography or representational art are linked to the advent of modern humans in Europe (around 45,000 BP). Representational art is an innovation that fits in the overall picture of the revolutionary transition from the Middle to the Upper Paleolithic eras. According to the present state of knowledge, the earliest evidence for image making is not older than approximately 35,000 years ago, and this comes from Europe. The combined manifestation of image making and symbol making as full-fledged capacities, documented for the horizon of modern humans, marks a leap in the evolution of culture when compared with earlier hominid species that were capable of symbol making but lacked representational art.

There are two regions in Europe that harbor representational art of the Paleolithic Age. These both lie on the peripheries, one in western Europe and one in eastern Europe. Well known are the painted caves in southwestern France and northern Spain where the earliest images were discovered. Rupestral art (also called parietal art) from the Paleolithic era is also known from Russia. The pictures in the caves of the southern

Ural Mountains (Kapova Cave, Ignatievka Cave, Serpievka Cave) are not as abundant as the imagery in western Europe, but they are also masterly executed. The best explored of the Paleolithic caves in the Ural Mountains is the Ignatievka Cave.

The western tradition of Paleolithic art flourished throughout the latter period of glaciation while, in the east, rupestral art of the caves emerged toward the end of the last Ice Age. For this reason, the imagery in the Ural caves is younger than most of the pictorial traditions in western Europe and dates to the latest phase of Paleolithic cave art. The presence of humans in the Ignatievka Cave is contemporaneous with the youngest painted caves in the west. The period when Paleolithic art was produced is sometimes called the Age of the Reindeer because this animal, together with the mammoth, was the most preferred for hunting and accounted for most of the meat diet of the archaic hunters.

Most of the painted caves in France and Spain were discovered in the late nineteenth century and in the first half of the twentieth century. Besides Altamira in northern Spain, the most widely known sites with Paleolithic art are Lascaux (department of Dordogne in southwestern France), Les Trois Frères (Ariège), Pech Merle (Dordogne), and several others.

Some spectacular discoveries were made in the 1990s. The Cosquer Cave (Bouches-du-Rhône) near Marseille, with its underwater entrance, was discovered in 1991, and the Chauvet Cave (Ardèche) was discovered in 1994. The paintings and engravings of the Chauvet Cave are the oldest so far known, dating back to circa 32,000 BP. The oldest radiocarbon date for the Cosquer Cave is circa 27,000 BP. Paleolithic rupestral art was produced for about 20,000 years. The youngest of the painted caves, Le Portel (Ariège), dates to circa 11,600 BP.

The space in the caves is subdivided into many chambers, corridors, and tunnels. Paintings were not executed indiscriminately in all parts but instead concentrate in certain areas, in particular chambers, at prominent gateways, at places with exceptional rock formations, and the like. In most caves, no paintings are found

➤ CAVE OF LASCAUX (FRANCE)

The Cave of Lascaux is situated in an area of the département Dordogne in southwestern France where several other painted caves have been discovered. The cave had been sealed off by debris for many millennia. In the 1920s, one of the pine trees that had grown in the area fell down, and under its roots a crack opened in the soil with an opening like a foxhole at the bottom. Farmers kept the hole blocked to prevent cattle from falling in. In September 1940, a group of youngsters decided to explore the hole and find out what lay beneath it. What they found was to become a world sensation.

Hundreds of images of animals and numerous geometric signs are scattered over the walls and ceilings in different sections of the cave, which stretches over a total length of 820 feet (250 meters). The most richly decorated is the Rotunda or Hall of the Bulls, which has been described by Ruspoli as containing “the most majestic pictorial composition and the largest figures known from prehistoric times.” Also in the Passageway, the Nave, the Chamber of the Felines, and in other sections, there are painted and engraved pictures. The images were produced during the Early and Middle Magdalenian period, and the cave was occupied about the time of maximum glaciation (between ca. 21,000 and 17,000 BP).

The animal species that are depicted in the Cave of Lascaux also appear in the imagery of other caves. There is, however, an element in the imagery that is typical and exclusive of Lascaux, and these are the so-called disjointed signs, a category of the geometric signs. These composite signs whose constituents are disjointed have been interpreted as ethnic markers by which Lascaux, as a cultural province, distinguished itself from other regions.

In addition to the images and manifestations of the creative human mind, many remainders of the materials and tools used by the artists have been found in the cave, among them various pigments for producing different shades of colors. There are some special finds by which Lascaux distinguishes



Section of Lascaux Cave (in present-day Dordogne, France) known as the Great Hall of Bulls. Lascaux Cave, discovered in 1940, provides stunning examples of Paleolithic-era painting. (Corel)

itself from other Paleolithic caves. At Lascaux, more than 100 stone lamps have been found, and in the Chamber of the Felines the imprint of a rope was preserved in hardened clay. This is seen as evidence for some kind of scaffolding that was used in the cave for the artists to reach otherwise inaccessible parts of the vault.

The cultural space of the Cave of Lascaux has been frequented by millions of visitors. Already several decades ago, it was noticed that the exhalation and perspiration of masses of humans in the vault causes algae to cover the surface of the walls and the paintings. A replica of parts of the original cave (i.e., the Rotunda and the subsequent Axial Gallery) was reproduced in a concrete blockhouse in a quarry not far from the original cave. The replica (Lascaux II) was opened to the public in 1984.

—Harald Haarmann

Bibliography

Ruspoli, Mario. *The Cave of Lascaux: The Final Photographic Record*. London: Thames and Hudson, 1987.

➤ ALTAMIRA (SPAIN)

The Cave of Altamira, in the province of Santander (northern Spain), was first visited in 1875. At that time, the Spanish discoverer Don Marcelino Sanz de Sautuola did not notice the paintings in the deeper chambers of the cave. In 1879 after having been inspired by the pieces of mobile art that had been on display at the 1878 Paris Universal Exhibition, Sanz de Sautuola started to explore the Cave of Altamira in search of pieces of art of those people who had frequented the place in earlier times. The story goes that the explorer kept his eyes fixed to the ground while his daughter Maria looked up. It was she who discovered the paintings in what was to be called the polychrome chamber some 100 feet (30 meters) from the entrance.

In a booklet that Sanz de Sautuola published in 1880, he describes some artifacts, decorated bones, and other remainders such as pigments that he had found near the entrance. He introduced the cave paintings and identified one of the animal species, the bison. This kind of art from the times of the Ice Age had been totally unknown until then. The public reacted negatively since, in the minds of the contemporaries, no categories existed to evaluate the early rupestral art in its proper cultural context. Sanz de Sautuola even had to face accusations of being a forger, and the wall paintings in the cave were dismissed as a hoax. On the occasion of the Congress of Prehistoric Archaeology, held in Lisbon in 1880, a visit to the Cave of Altamira was arranged, but none of the delegates showed any interest in the manifestations of the so-called savage mind of prehistoric people. It was not until the early twentieth century that the authenticity of the cave paintings at Altamira was finally acknowledged.

The Cave of Altamira is about 1,000 feet (300 meters) deep and is divided into numerous cham-



View of the 14,000-year-old painted bison on the ceiling of the Polychrome Chamber in the Altamira Cave in northern Spain. (AP Photo/Pedro A. Saura)

bers and gateways. Paintings and also some engravings are found in many sections, although they concentrate in the Polychrome Chamber. On the ceiling in the chamber is the Great Panel with more than 30 large images, mostly of bison. The animals are depicted in black and in red with shades of red dominating. In the Great Panel, there are also claviform (club-shaped) signs and some other geometric motifs.

The cave was frequented by humans for several millennia. Paintings were executed between circa 16,500 and 14,500 BP. Occupation of the cave ended when the entrance was closed by collapsing rocks at a length of 20 feet (6 meters) around 13,000 BP.

—Harald Haarmann

Bibliography

Beltrán, Antonio. *The Cave of Altamira*. New York: Abrams, 1999.

near the entrance with the exception of the Cave of La Pasiega (Santander, Spain), whose imagery abounds with abstract symbols.

Although neither the public citizens nor scientists in the nineteenth century took much interest in the primitive art of prehistory, the mastery of those early manifestations of the human creative mind was celebrated in later periods. Pablo Picasso is frequently quoted as having said, following a visit, “After Altamira, all is decadence.”

The paintings in the caves of southwestern France and northern Spain show a great variety of images, both in form of isolated pictures and in groupings. The style of many images is naturalistic, while others show a high degree of stylization. There are different styles that change over time. In the 1960s and 1970s André Leroi-Gourhan elaborated a typology of style for Paleolithic art that has gained wide appreciation. The following types are distinguished:

Style 1: Aurignacian, some 30,000 BP; crude contours of animals; symbols of vulvas

Style 2: Gravettian and Early Solutrean, ca. 25,000–20,000 BP; animal figures with a prominent cervico-dorsal line; female figures in bas-relief

Style 3: Later Solutrean and Early Magdalenian, ca. 20,000–15,000 BP; a higher degree of stylization; experimenting with different proportions; abundance of abstract motifs

Style 4: Middle and Upper Magdalenian, ca. 15,000–10,000 BP; images in an elaborate realism, with a richness in details; great variety of abstract motifs

The images in most of the Paleolithic caves in France and Spain belong to the period of Style 4.

In many cases of depicted animals only the contours are given, emphasizing basic features.

Other images are more elaborate and show more detail. There are panels that are comprised of naturalistic pictures of mostly animals and, in some assemblages, also of human beings. The species that are represented in the cave paintings all belong to the bestiaries of the hunter-gatherers who lived in the areas of the caves. Among the animals are felines, mammoth, bison, aurochs, rhinoceros, bear, horse, deer, ibex, goat, and others.

The animals are not depicted in their natural environment. In the scenes in the caves, there are no clues as to the habitats of the animals, no riverine meadows for grazing, no plains to be roamed by the beasts. The pictures do not show the true proportions of the animals. A mammoth may be smaller in size than a horse or a deer. Some of the animals are depicted as standing upright or in other positions that are unnatural,

➤ CHAUVET CAVE (FRANCE)

The Chauvet Cave is one of several caves in the river valley of the Ardèche west of the Rhône in southern France. In the early 1990s, three people systematically explored the sites in the gorges of the Ardèche, and on December 18, 1994, they found the cave that was later named for the leader of the expedition. After the dating of some pigments in the contours of the paintings, the age of the images was revealed. These are the world's oldest known paintings. The series of radiocarbon dates for Chauvet range from 32,400 to 30,300 BP.

The accessible parts of the cave are some 1,700 feet (500 meters) long. The ceilings are relatively high—between 50 feet (15 meters) and 100 feet (30 meters)—as compared to the heights of vaults in other caves. For instance, the ceilings at Lascaux are between 10 feet (3 meters) and 20 feet (6 meters) high. Major sections of the cave are the Hall of the Bears, the Panel of the Horses, the Lion Panel, the Panel of Hand Prints, the Panel of Hand Stencils, the Candle Gallery (with concretions in red and orange), and the Cactus Gallery (with lines drawn in red ochre). One of the artistic techniques that seems to be exclusive for the Chauvet Cave is the crafting of the image of an animal with the help of red dots (as filling and for marking contours) as in the Panel of Red Dots.

—Harald Haarmann



Prehistoric image of a human hand, stenciled on the interior of a cave in Chauvet, France. Dating back approximately 31,000 years, this is an example of the earliest type of cave paintings, created by blowing pigment over a hand held against a surface. (AFP/Getty Images)

Bibliography

Chauvet, Jean-Marie, et al. *Chauvet Cave: The Discovery of the World's Oldest Paintings*. London: Thames and Hudson, 1996.

➤ IGNATIEVKA CAVE (RUSSIA)

The Ignatievka Cave, with its portal situated about 36 feet (12 meters) high from the bottom of the valley in the slope of the sandstone canyon of the river Sim, has been mentioned in the sources since the nineteenth century. Russian archaeologists first visited the cave in 1968. The paintings in the deep cave were discovered as late as 1980. With its length of 1,875 feet (626 meters), the cave is a true labyrinth. It was occupied by humans between circa 14,200 and 10,400 BP. Most of the pictures were executed between circa 14,000 and 13,000 BP.

The greatest concentration of images is found in the deepest chamber of the cave, the end hall. There, pictures are grouped in two panels, a red panel and a black panel. The images in the red panel are the largest of the cave. The scene depicted in the red panel seems unreal and is obviously imbued with mythological meaning. On one end, there is the large image of a woman (more than 3 feet, or 1 meter, tall), with breasts hanging down on both sides and with parted legs as in a birth-giving position. The vulva is marked by a concentration of red ochre. Rows of dots (altogether 21 in number) are placed between the

legs, with 12 dots in the longest row originating directly from the vulva and others in rows of four and five dots. The long row of dots points to another row of 21 dots on the other side of the scene. That row is associated with the breast of an animal, most probably a wild bull.

The elements of this scene have been associated with motifs and narratives of Eurasian mythology, with Uralian traditions in particular. The female figure may be identified as the divine Ancestral Mother (the Ural Mother), the Creatrix of all living things, the Mistress of Nature. The meticulous elaboration of the rows of dots recalls Uralian mythical numerology (with 4 symbolizing the male principle, 5 symbolizing the female principle, and 7 serving as the sacred number and 21, or 3×7 , as its potency). Perhaps one finds the roots of mythopoetic concepts about the world among Uralian and Siberian peoples reflected in the imagery of the Ignatievka Cave. It is assumed that the end hall was a sanctuary frequented by humans for performing rituals (e.g., for celebrating rites of passage).

—Harald Haarmann

such as a horse standing back to back with a reindeer as in the Cave of Las Monedas (Puente Viesgo, Spain). The animals were painted at remote places in the depth of caves that they never inhabited. This is true also for the cave bear that did not camp at a distance of many hundreds of feet from the entrance.

Most probably, the representation of animals in the form of usually painted and more rarely engraved images had a symbolic significance. The animals were mythical beings whose spirits were captured in the images. The Paleolithic rupestal art was not intended for decorative or ornamental purposes. Painted walls and ceilings are found in the depths of the caves, in dark places where humans never lived and that were visited only to perform rituals and hold ceremonies (e.g., rites of passage to commemorate stages in the life cycle). In some caves, there were pedestals that suggest ceremonial places, such as in the Chauvet Cave that has a bear skull positioned on top of it and the bones of bears strewn around it.

Images of human beings are of much rarer occurrence than those of animals. In some settings, humans are depicted as hybrids (half human, half animal) or are dressed in a bear's fur (such as the figure of a sorcerer in the Cave of Les Trois Frères). In modern interpretations, hybrid creatures or humans in strange attires are identified as shamans who, in ecstatic trance, seem to shift their identities and merge with the spirits of animals. On the walls of the painted caves are many depictions of isolated parts of the human body, in particular hands (i.e., hand stencils) and vulvas. These motifs obviously had a symbolic meaning for those who painted them. The motif of the vulva is of frequent occurrence in Paleolithic symbolism and can readily be associated with the female principle of the life cycle of nature (birth, growth, death, and regeneration).

Alongside naturalistic images and motifs with symbolic meaning there is a variety of abstract motifs (zigzag signs, undulated lines, grid signs, dots, strokes, lozenges, etc.). In many caves, ab-

stract motifs may appear in isolation, and certain individualized forms may appear in groupings without any association with other motifs. There are painted walls of caves with abstract motifs only, as in the El Castillo Cave (Santander). Here, the dot is the basic motif and features on the wall in rows of three (extending to the left and right) and in four (in a vertical alignment).

The abstract signs are evidence for symbol making as an elementary capacity of Paleolithic people. The origins of this capacity go back in human evolution as far as *Homo erectus* (ca. 1.9 million–400,000 years ago). In the beginning of research on rock art, the existence of abstract motifs in the picture friezes of the Paleolithic caves was hardly taken notice of, and the repertoire of abstract signs was marginalized. Modern analyses of Paleolithic rock art pay due attention to both pictures and abstract motifs.

The panels where abstract motifs appear are as old as the friezes with pictures in natural style. Consequently, humans have demonstrated the dual capacity to produce naturalistic pictures and abstract signs from the time of their earliest cultural activities onward. The synchronic manifestation of the dual visual capacity provides evidence that the sense of abstractness is not a secondary achievement in the cultural evolution of humans but instead is as primary as the sense for naturalism.

In the Upper Paleolithic era, the synchronicity of naturalistic representation and the presence of highly abstract motifs in the pictorial record highlight the independent functioning of two elementary capacities (image making and symbol making) in modern humans. Where pictures of animals appear in close association with abstract motifs (e.g., the image of an aurochs in the La Tête du Lion Cave, Ardèche, with a set of dots painted above the back line of the animal or a horse with superimposed hand stencils in the Cosquer Cave, Bouches-du-Rhône), it becomes clear that the visual elements of both categories (iconic and abstract) form a meaningful unit, although the interpretation of the narrative groupings in question remains, for the most part, speculative.

The pictures, symbols, and abstract motifs are depicted in different colors. These may appear either separated or in multicolored pic-

tures. For example, black (executed by using charcoal or manganese dioxide) is the dominating color in the paintings of the Chauvet Cave, while in the Cave of Altamira, red (executed by ochre or iron oxides) dominates.

The epoch in human cultural history during which the rupestral art of the Upper Paleolithic period flourished came to an end when the fauna of the Ice Age, especially the big hunted animals such as the mammoth, left western Europe under the pressure of global warming, which marked the transition to the postglacial period, and moved toward colder regions (to northeastern Europe and to Siberia). The culture of the big game hunters fell into decline and with it the tradition of cave painting.

—Harald Haarmann

Bibliography

- Chippindale, Christopher, and Paul S. C. Taçon, eds. *The Archaeology of Rock Art*. Cambridge and New York: Cambridge University Press, 1998.
- Clottes, Jean, and Jean Courtin. *The Cave Beneath the Sea: Paleolithic Images at Cosquer*. New York: Abrams, 1996.
- Clottes, Jean, and David Lewis-Williams. *Shamans of Prehistory: Trance and Magic in the Painted Caves*. London: Thames and Hudson, 1998.
- Lewis-Williams, David. *The Mind in the Cave: Consciousness and the Origins of Art*. London: Thames and Hudson, 2002.
- Mellars, Paul, ed. *The Emergence of Modern Humans: An Archaeological Perspective*. Edinburgh, UK: Edinburgh University Press, 1990.

The Mobiliary Art of the European Upper Paleolithic Era

The beginnings of representational art are associated with the advent of modern humans (i.e., *Homo sapiens sapiens*) in Eurasia. The earliest manifestations of the human creative spirit for representation date back more than 32,000 years. Representational art appears in two major categories: rupestral art (as in the paintings of the Paleolithic caves) and mobiliary art (also called mobile or portable art). The difference is basically one of the dimensions of representation.

Paintings on the walls and ceilings of caves are two-dimensional, while mobile art is three-dimensional. And yet the distinction between

► THE HOHLENSTEIN-STADEL LION-MAN

The Paleolithic sculpture from Hohlenstein-Stadel in southern Germany is an exceptional piece of mobile art in many respects. In size, it differs from other similar finds because of its great size. The statuette, which has been named lion-man, measures 11.5 inches (29 centimeters) in height, while other figurines are much smaller. The sculpture is made of mammoth ivory. This piece was found in a cultural layer of the Aurignacian period and is dated to circa 32,000 BP.

The figure was found in August 1939 and was broken into more than 200 small pieces. These were retrieved from the Stadel Cave in the valley of the Lone River near the town of Ulm in the federal state of Baden-Württemberg in southern Germany. The material of the figure was stored in a box together with bone fragments. In the late 1960s, a German archaeologist attempted a reconstruction that, however, remained incomplete. In later excavations, additional pieces of the head and an arm were found. In 1987–1988, a restorer from the Württembergisches Landesmuseum (Stuttgart) succeeded in completing the reconstruction, revealing the sensational nature of the sculpture.

The lion-man is a rare specimen of a therianthrope figure, with hybrid anthropomorphic and zoomorphic features. The body is that of a male human standing upright with his arms hanging down, while the head is that of a lion. Such hybrid figures are rare in the archaeological record of the Paleolithic Age. This category of therianthrope pieces becomes more frequent and verified with respect to stylistic and feature-oriented variation during the Neolithic period, particularly in the context of figurine production in southeastern Europe.

—Harald Haarmann and Joan Marler

the dimensions is sometimes blurred. In the paintings of many caves, the artists adjusted to the natural formations of the rock in such a way as to make use of certain dimensional features. For example, the lower part of the body of a depicted deer may be delimited by the edge of a rock panel, or a vulva sign may be carved into a soft deepening in the wall that resembles the female pubic triangle.

In the Paleolithic caves, we find sculpted human figures in bas-relief, such as the image of the Venus of Laussel with elongated breasts and curving hips and holding a horn. In these and other cases, the boundaries between two-dimensional paintings and three-dimensional representations of imagery are floating. There are also cases of three-dimensional sculptures that are fixed to the ground and are thus immobile. This is true, for example, for the clay sculpture of a bear in the Montespan Cave (Haute-Garonne) that is attached to the floor of a ceremonial space.

The early finds of Paleolithic artifacts belonging to the category of mobile art were made in the 1870s. At that time, none of the painted caves had yet been discovered. In 1878, some of those pieces were displayed at the Paris Universal Exhibition and raised the attention of the Spaniard who later explored the Cave of Altamira and whose daughter was the first to notice images of animals there. Before the discovery of the Chauvet Cave in 1994, it was believed that the beginnings of mobile art would reach farther back in time than the origins of rupestral art. The oldest pieces of three-dimensional imagery are some 32,000 years old. This is the age of the oldest paintings in the Chauvet Cave.

Artifacts that fall under the category of mobile art distinguish themselves from ordinary tools because of their nonpractical symbolic functions. The following can be identified as the major types of such pieces: zoomorphic figurines (small size, measuring a little more than an inch); anthropomorphic figurines (predominantly depicting nude females and usually of small size); hybrid sculptures with zoomorphic and anthropomorphic features; decorated bones (batons), antlers, etc.; personal ornaments such as jewelry (i.e. necklaces, bracelets, pendants) composed of perforated beads, teeth, bone plaques, etc.; and accessories (e.g., belts).

In addition, there is a special functional type of mobiliary art with pieces that have a practical function but are crafted and/or decorated as pieces of art: spear throwers (e.g., one in the shape of a leaping horse from Bruniquel/Tarn-et-Garonne) and stone lamps (e.g., one from the Cave La Mouthe/Dordogne with the image of an ibex on the underside).

➤ VENUS FIGURINES AND THEIR MEANINGS

The representation of the female body in art looks back on a tradition of more than 32,000 years. Some female figurines of an early date—executed in mammoth ivory or bone—are known from western Europe and from the settlement of Malta near Lake Baykal in central Siberia. The oldest figurine so far known—some 2.3 inches (7 centimeters) long—is approximately 31,000 years old and was found at Galgenberg (near the town of Krems in Lower Austria) in 1988. This particular figurine was named “Fanny, the dancing Venus of the Galgenberg” (after an Austrian dancer, Fanny Elssler, of the nineteenth century) and depicts a woman in an obvious dancing posture with her left arm raised.

Many of the figurines from the Upper Paleolithic period were found during excavations and explorations of Stone Age sites in the late nineteenth century and the early twentieth century. Those who found such figurines were caught in the aesthetic zeitgeist. Nakedness was the first property of the figurines that strikes the eye. According to the moral standards of contemporary society in western Europe, nakedness was tolerated only in one public sector, the arts. In that domain, the Greek goddess Aphrodite and her counterpart Venus in Roman civilization were the preferred objects of painters and sculptors. In a generalizing and stereotyping view, the naked female figurines of the Stone Age were associated with the goddess of love of antiquity and labeled as Venus statuettes. The artifacts are catalogued under those labels (e.g., the “Venus of Willendorf” in Austria, the “Venus of Lespugue” in France) in the museums up to the present.

The association with Venus is misleading also from an aesthetic standpoint. Many figurines depict mature women with protruding breasts, belly, and buttocks rather than young women. The idea of the Mother Goddess is a more natural visual association with such figurines, and the identification of religious cults for the Stone Age on the basis of ideas relating to fertility and motherhood remained popular for a long time. In more modern interpretations, the Paleolithic female



Venus of Willendorf, limestone, about 28,000–25,000 BCE. (Jupiterimages)

figurines have been identified, in metaphoric terms, as the embodiment of ancestor spirits (e.g., in the role of the ancestral mother) or as various categories of epiphanies of a goddess (e.g., as the Giver of Life and Death, as the Mistress of the Life Cycle, as the Ancestral Mother, as the Nurturing Mother, as a Guardian Spirit of the Hearth).

It is clear from the occurrence and frequency of female figurines amid the Paleolithic imagery that these artifacts carried symbolic meaning and played a significant role as cultural markers in the communities of people whose worldview was spirited.

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Although many early artifacts of mobile art have been found at Paleolithic sites in Europe, there are also finds in other parts of the world that are just as old. For instance, the oldest sculpture of a bear was found in central Siberia at Tolbaga near Lake Baykal. The age of that piece is about 35,000 years. In the European context, finds of Paleolithic mobile art are more numerous than in Siberia, and the chronology of their production stretches over a longer span of time, more than 20 thousand years (from ca. 31,000 to 9,000 BP).

The sites with finds of mobiliary art from the Paleolithic Age are scattered over the southern part of the continent, from Spain and France to Ukraine and Russia. The oldest pieces come from sites in southern Germany and Russia, the youngest in France and Russia (southern Urals). Many pieces of mobile art were found in the dwellings of the Paleolithic people. These peoples preferred to live in open rock shelters. Those shelters are scattered throughout central and southern Europe in areas that lay south of the great ice cap that covered the northern part of the continent during the time of glaciation.

Mobiliary art is also known from the caves with painted imagery although not from the deep chambers. The pieces from the caves form part of the ensembles of symbols, imagery, and artifacts with functions in the context of ceremonies and rituals. Within people's living spaces, the pieces of mobile art were kept in places that were separated from tools and artifacts for daily use.

The pieces of mobile art differ in size, proportions, and style. Some of the oldest pieces are very small, such as the animal figurines from Vogelherd and Stratzing in southern Germany and the human figure with raised arms in bas-relief on an ivory plaque from Geissenklösterle. They measure not more than 2 inches (5 centimeters). Perforated artifacts that were used as pendants (fox canines, ivory items) are also small in size. Larger pieces such as the statuette of the lion-man from Hohlenstein-Stadel are rare.

As in rupestral art, in Paleolithic mobiliary art one can distinguish between imagery that depicts animals and other pieces that represent human beings. The selection of animal species that are sculpted is more limited than the great vari-

ety of species that are depicted in the caves. Nevertheless, the major species such as feline, bison, mammoth, bear, and horse are represented. Things are different with respect to human figures. There is an abundance of female statuettes and only a limited number of male sculptures, including hybrids such as the lion-man. Such proportions in the mobile art do not find their parallels in the canon of depicted human beings in the rupestral art. Here, the prominence of female imagery is marked by the abundance of vulva motifs and their frequent occurrence.

The batons (also called command sticks) represent a category of artifacts that illustrate how permeable the boundaries are between the realm of decorative function and symbolic meaning. The batons are long bones or antlers that are decorated with images and sometimes incised with symbols. The intentional alignment of incisions on these sticks has been identified as a form of notational system recording calendrical information (e.g., about moon phases).

The command sticks received their name because they have been interpreted by some scholars as status symbols of political power. However, the existence of complex leadership in the communities of Paleolithic hunter-gatherers is unlikely. It seems more plausible to associate the command sticks—together with the other pieces of mobile art that had a function outside of daily affairs—to the belief system of those people for whom the world was spirit-filled. The command sticks may well have served as mnemonic devices and/or requisites for shamans to perform communal ceremonies, healing sessions, or rituals of divination.

The most sensational finds of Paleolithic jewelry come from burials near Sungir (Russia), some 95 miles (150 kilometers) east of Moscow. The date for this early burial site is given as circa 32,000 BP. The grave goods in two of the burials that were originally dug into the permafrost were exceptionally rich. One was the grave of a boy, the other that of a girl. In the boy's grave a belt was found with 250 canine teeth of the polar fox and with some 4,900 beads. The jewelry of the girl included, among other objects, a total of 5,274 beads. The wealth of the grave goods has been interpreted by some as indicating high social status of the deceased. Other scholars reject

the assumption of a stratified society in the Paleolithic and see those who were buried as members of a prominent lineage, and thus the grave goods would not honor individuals but instead would signal collective reverence for a group of ancestors.

—Harald Haarmann and Joan Marler

Bibliography

- Clottes, Jean, and David Lewis-Williams. *Shamans of Prehistory: Trance and Magic in the Painted Caves*. London: Thames and Hudson, 1998.
- Knecht, H., A. Pike-Tay, and R. White, eds. *Before Lascaux: The Complex Record of the Early Upper Palaeolithic*. Boca-Raton, FL: CRC Press, 1993.
- Lewis-Williams, David. *The Mind in the Cave: Consciousness and the Origins of Art*. London: Thames and Hudson, 2002.
- Rudgley, Richard. *Lost Civilisations of the Stone Age*. London: Arrow Books, 1998.
- White, R. "Technological and Social Dimensions of 'Aurignacian-Age' Body Ornaments across Europe." In *Before Lascaux: The Complex Record of the Early Upper Palaeolithic*, edited by H. Knecht, A. Pike-Tay, and R. White, 366–390. Boca-Raton, FL: CRC Press, 1993.

Decorative and Ornamental Art from the Near East and Anatolia

The basic concept of art and ideas about decorative and ornamental art derive from classical Roman antiquity. The meaning that Westerners attribute to these terms is imbued with the spirit of antique European civilization. Within this conceptual frame, "art" stands in opposition to nonart (e.g., tools, utensils, objects for practical use), while what is decorative and ornamental is contrasted with the visualization of religious ideas and with symbols intended to convey information.

The categorizations mentioned here cannot be applied, without reservation, to the realities of visual expression in prehistory, since the conceptualizations of both visible and of invisible culture (i.e., the relationships between the symbolic meanings of artifacts) were not as rigidly divided as we know it from our Western tradition. Much of what a modern observer would call decoration or ornamentation may well have

carried symbolic or metaphorical meaning for the bearers of prehistoric cultures. In most cases, the symbolic connotations of prehistoric art were lost after the decline of the cultures of origin, and they can only be reconstructed tentatively and fragmentarily.

Unlike Europe with its abundance of art produced during the Upper Paleolithic, the documentation for the Near East for the Late Paleolithic is scanty. The beginnings of decorative and ornamental art go back to the transitional phase from Paleolithic hunter-gatherers to sedentism (twelfth and eleventh millennia BCE). The earliest pieces belong to the cultural horizon of the Natufian. These are decorated bone artifacts with carvings depicting animals.

The earliest manifestations of naturalistic representation from sites of the early cultivators-hunters are animal figures executed in bas-relief technique on stone pillars from Nevalı Çori and Göbekli Tepe (in modern Turkey). As for their cultural chronology, those early pictures of animals belong to the prepottery age (tenth millennium BCE). The earliest statuary at the mentioned sites is contemporaneous with the ornamental reliefs.

According to our current knowledge, there seems to be a hiatus of more than 1,000 years in the tradition of ornamental art between the ninth and seventh millennia BCE, when it "reappears" again in different genres. The fullest documentation of the contemporary artistic production comes from Ain Ghazal (Jordan), where in addition to clay statues and animal figurines, motifs painted on walls and floors were found. The context of artifacts and motifs in their specific assemblages has led scholars to the conclusion that all these manifestations of "art" were related to mythical ideas in a spirited world and make the impression of what Schmandt-Besserat termed "an explosion of symbolism."

The tradition of decoration and ornamentation does not show continuity even from the seventh millennium BCE onward. Its preferences and gravitations vary in space and time. For instance, at Ain Ghazal (east of the Jordan River, Jordania), with its wealth of representational art and decoration in the early phase, the custom to decorate graves vanishes from the archaeological record in the first half of the sixth millennium BCE. At Çatalhöyük in Anatolia, wall painting

➤ WALL PAINTINGS AT ÇATALHÖYÜK

The Neolithic town of Çatalhöyük, located in the Konya plain of central Anatolia, was inhabited from circa 7400 to 6000 BCE. This Neolithic settlement is known for its unique architecture of interconnected houses (entered through rooftop openings) and by an abundance of wall paintings in three major colors: red, black, and white. The dominant color is red, ranging from brownish-red to pink and orange-red. Most of the paintings on plastered walls were discovered by British archaeologist James Mellaart in the early 1960s, although new frescos are still being found, often under a cover of white plaster.

The major motifs that appear in the paintings are animals, human beings, and geometrical symbols. These motifs are not isolated but instead are grouped in narrative scenes. Human figures often appear to be engaged in dynamic communal rituals. Some figures are shown naked, while others seem to wear girdles or skirts, perhaps made of leopard skins. This is suggested by skirtlike dresses covered with spots, some with tails hanging down. Deer, wild boar, leopard, and bull predominate in pictures of fauna.

The largest image found so far is that of a red bull, which is about 6 feet (2 meters) long. This bull is painted in the center of a scene surrounded by hunters in dancing postures holding weapons. One human figure is kneeling on the back of the bull. Is this a precursor of the bull-leaping scene in the Minoan palace of Knossos of the second millennium BCE? Some motifs may have metaphorical allusions, such as the images of two cranes, in black color, facing each other in a dancing posture.

Cranes are known for their elaborate mating dances.

Among the exceptional sceneries is an assemblage of rectangular shapes with subdivisions marking the interior spaces that make the impression of a layout of the ancient city. Unique is the scene where two leopards face one another in relief. The design on the animals' skin is rendered, in painting, as rectangular black forms with a white crosslike motif as a filling.

Evidently related to the mythical world of the inhabitants of Çatalhöyük and, presumably, to their burial customs are scenes with big birds (vultures) in close association with headless human figures. These settings might reflect the custom of open-air burials, with the defleshing of the corpses by vultures.

In addition to the abundance of naturalistic images, there are a variety of abstract motifs, some with geometrical shapes (i.e., triangles, rhombic forms, zigzag lines) reoccurring as ornamental friezes. Most probably, some of these motifs did not function simply as elements of decorative design but instead carried symbolic meaning. This idea is supported by the presence of hand stencils in association with abstract motifs.

—Harald Haarmann

Bibliography

- Balter, Michael. *The Goddess and the Bull*. New York: Free Press, 2005.
- Haydaroglu, Mine, ed. *From Earth to Eternity: Çatalhöyük*. Exhibition catalog. Istanbul: Yapi Kredi Cultural Activities, Arts and Publishing, 2006.

remained popular during the whole cultural sequence, while in contemporary 'Ain Ghazal, the same art genre always occupied a marginal role for communal life.

Jewelry (i.e., bracelets, necklaces, pendants, beads), as a category of decorative art and as an identifier of cultural continuity throughout the Neolithic and beyond, forms part of the archaeological record in all parts of the Near East and Anatolia. Especially exquisite and varied is the jewelry from Çatalhöyük.

—Harald Haarmann

Bibliography

- Hauptmann, Harald. "The Urfa Region." In *Neolithic in Turkey: The Cradle of Civilization*, edited by Mehmet Özdoğan and Nezihe Başgelen. 2 vols. Istanbul: Arkeoloji ve Sanat Yayınları, 1999.
- Özdoğan, Mehmet, and Nezihe Başgelen, eds. *Neolithic in Turkey: The Cradle of Civilization*. 2 vols. Istanbul: Arkeoloji ve Sanat Yayınları, 1999.
- Schmandt-Besserat, Denise. "'Ain Ghazal 'Monumental' Figures." *Bulletins of the American School of Oriental Research* 310 (1998): 1–17.

Rupestal Art in the Americas

Petroglyphs are found throughout the Americas as well as in many regions of the world. Engravings on rocks were never intended as mere decoration. Since Paleolithic times, rock art has been used to express images of cultural significance. Many of the motifs are integrated in picture friezes expressing highly symbolic visual narratives.

In the Americas, it is rare to find petroglyphs in caves. Most are found on the walls of rock shelters or on isolated boulders in the open, which distinguishes them from those in Europe. Although rock engravings are known in almost every state in the United States and throughout Canada, they are especially concentrated in the western, northwestern, and southwestern regions of North America and in British Columbia. Petroglyphs are found from northern California to Baja California (Mexico). They also abound in Oaxaca, southern Mexico, and in the Andean region of South America. Most modern discoveries of rupestal art have been made in the eastern part of Brazil. The southernmost images are found in Tierra del Fuego at the tip of South America.

In general, petroglyphs in the Americas have been produced from the end of the Ice Age, some 12,000 BP into the historical era. In some areas, the tradition of rock art is relatively young, as in the Upper Ohio Valley where petroglyphs were produced by Algonquian-speaking tribes between circa 1200 and 1750 CE.

It is noteworthy that the oldest dates attributed to rock art locations are found in South America, not in the Northern Hemisphere, although the Paleo-Indians arrived from the north. The controversial dates for sites such as Goiás in northern Brazil (ca. 43,000 BP) and Pedra Furada in northeastern Brazil (between ca. 30,000 and 25,000 BP) do not fit the conventional time frame for the earliest migrations of humans from Siberia to North America (between 13,000 and 11,000 BP). Taima-Taima in northwestern Venezuela (ca. 13,000 BP) and Monte Verde in central Chile (ca. 12,500 BP) still predate the oldest sites in North America.

The living conditions of the Amerindians are reflected through time in the narrative themes of their rock art. The oldest engravings may have been made by archaic hunters who did not yet

use bows and arrows. Their imagery abounds in isolated pictures of animals. The second stage is that of hunter-gatherers whose diet included fruits and seed plants as well as wild game. The following stage of socioeconomic development was mixed economies with small-scale horticulture supplemented by traditional hunting and gathering. Later developments include agriculture as the major subsistence economy. For the agrarian communities rain was a major issue, and their petroglyphs indicate water rituals and animals associated with rainmaking (especially in the arid U.S. Southwest).

The American tradition of rock art contains naturalistic and stylistic images as well as abstract motifs (single forms such as lines or dots, complex forms such as geometrical symbols, hand stencils, etc.) as found in other areas of the world. Naturalistic images and abstract motifs often appear in the same context, such as human figures, highly stylized supernatural beings, and animals, including reptiles and birds.

The selection of visual motifs concerns culturally specific symbolism related to local belief systems. Therefore, spiritual beings were sometimes depicted more often than were creatures found in the actual environment. In some sites in eastern Brazil, for instance, birds that were not necessarily common in the area and were not used for food are found in abundance in early rock art. Birds did, however, play a major role in local mythologies as embodiments of spirits and human souls.

In some areas, knowledge of the symbolism of the richly condensed pictorial assemblages has been lost over time and can only be tentatively reconstructed. In other instances, the contents of visual narratives can be associated with the oral traditions of the Amerindians whose ancestors composed the picture friezes. One such site is found near Red Lake in Canada, with narratives in well-arranged rows of pictorial symbols. These resemble the pictorial writing of the Walam Olum, the myth of origin of the Ojibwa that was scratched on several sheets of bark of a birch tree. This pictorial technique for recording information by visual means, called *kekinowin* in Ojibwa, can be seen as a later echo on perishable material of more ancient engravings on stone.

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Bibliography

Castleton, Kenneth B. *Petroglyphs and Pictographs of Utah*. 2 vols. Salt Lake City: Utah Museum of Natural History, 1987.

Chippindale, Christopher, and Paul S. C. Taçon, eds. *The Archaeology of Rock Art*. Cambridge and New York: Cambridge University Press, 1998.

Keyser, James D., and Michael A. Klassen. *Plains Indian Rock Art*. Seattle and London: University of Washington Press, 2001.

Schaafsma, Polly. *Indian Rock Art of the Southwest*. Santa Fe and Albuquerque: School of American Research and University of New Mexico Press, 1992.

■ Introduction: The Nature of Ritual and Religion

Religion is hard to define. Many scholars have lamented that there is no universally applicable definition of it. There is real, not simply theoretical, disagreement, uncertainty, and unease about what religion is and whether it is a universal element of the human experience. Most anthropologists agree that some sort of “spiritual experience” is a cultural universal but that religion “proper” is not to be found in simpler societies. This of course reflects a bias toward definitions of religion that describe highly formal ecclesiastical spiritual practice found within hierarchical societies. But it is the case that religion as a highly systematized body of knowledge and practice is hard to identify in relatively simple and nonhierarchical societies. Although people “have” religion, finding it presents real challenges to the ethnographer, not to mention the archaeologist.

Not fully understanding what religion is does not make impossible understanding what it does. Indeed, by using standard definitions of religion together and to see what they emphasize, it is possible to get a sense of what roles it can play within any society, be it simple or complex. For Edward Tylor, religion was “belief in Spiritual Beings.” He argued that religion was best seen as an attempt by people to understand the world in which they live. For Emile Durkheim, religion was a so-called social fact and served as a “unified system of beliefs and practice relative to sacred things, that is to say, things which are set apart and forbidden—beliefs and practices which unite into one single moral community called a church, all of those who adhere to them.” He also believed that religion was essential to social cohesion and social solidarity, and

in this manner he anticipated a functionalist view of religion. Bronislaw Malinowski also saw religion as promoting social solidarity but within an emotive context in which religious ritual was not so much about creating a solution to a crisis but instead was more about enhancing group solidarity in the face of crisis. He also saw religion as a powerful moral force, one that defined right conduct. In the same vein, Anthony F. C. Wallace, while emphasizing the role of religion as the fundamental societal force for social control, identity formation, and value definition, also portrayed it as a means by which social contradictions could be rationalized and justified. He also suggested that in some contexts, religion could be seen as a source of inspiration for social change. Clifford Geertz saw religion as a set of symbols that created “pervasive moods and motivations in men” that conceptualized the nature of existence. Finally, Maurice Bloch sees religion and politics inextricably intertwined across all levels of sociocultural complexity but notes that relationships among symbols, religion, ritual, politics, and action can be extremely complex. That is, a ritual event sanctioned by religious belief may remain constant and unchanging through periods of dramatic socioeconomic transformations. Here, religion may appear conservative, but through its use in novel and new contexts by emerging leaders, a traditional form is used to justify new social circumstances.

Summarizing these perspectives as well as those of other theorists of religion, it is possible to say that religion does at least the following: it provides an explanation for the existence of the world, its form, and content and the place of people within it; offers significant opportunity for

the development of a sense of group cohesion, social solidarity, or communal feeling, especially for the members of small-scale face-to-face societies; explains, at least in part, the nature of social relationships within and between societies and provides a justification for the shape of social norms and rules; creates an emotional and psychological context for the evaluation of daily experience and how it articulates with rules, roles, and norms; creates a basis for the formation of individual and group identity; identifies nonhuman actors as elements of existence and provides mechanisms whereby they can be addressed; creates a set of procedures or processes, such as ritual, that can be used to influence the course of events; presents a set of symbols—material, linguistic, and cognitive—that conceptualize, reflect, capture, and represent the nature of existence; and may become a kind of tool used by individuals to create new social and political spaces or resist their appearance.

If religion is primarily about ways in which to think about the world, ritual is seen as the vehicle used by religion to influence the world. Ritual is action and can be defined as a repeated patterned set of activities or sequence of events. If such activity is performed within the context of religion and manipulates or uses religious symbols, it is then possible to define this as religious ritual. Ritual that can be characterized as religious can be found in all societies, even those that have no formal concept of religion. Within a religious context, ritual is often closely related to myth, which can generally be seen as stories that societies tell about the origin and place in the world and that usually communicate important principles of conduct, behavior, and morality. In many societies, rituals enact aspects of these stories.

Religious rituals vary tremendously in scale. Some are conducted by single individuals in the privacy of their homes or in a sacred place, while others involve whole communities that have come together to perform a rite. Types of religious rituals vary as well. Anthony F. C. Wallace, an anthropologist, has classified religious rituals into at least six major categories, including so-called rites of passage, healing and therapeutic rituals (or those designed to cause harm to enemies), rituals used to control nature, salvation

rituals, revitalization rituals, and rites that are used to enhance social solidarity or remind practitioners of correct behavior and morality. Obviously, rituals can serve more than one purpose.

—Mark Aldenderfer

Bibliography

- Eller, J. *Introducing the Anthropology of Religion*. New York: Routledge, 2007.
- Lambek, M. *A Reader in the Anthropology of Religion*. Malden, MA: Blackwell, 2002.
- Wallace, Anthony F. C. *Religion: An Anthropological View*. New York: Random House, 1966.

Defining Ritual and Religion

No known human culture lacks religious or ritual experience. Two signature threads may be traced through the history of anthropology's approach to religion. One, rooted in individual cognition, gives primacy to ideas, concepts, and beliefs. The other is grounded in ritual as the primary humanizing social experience and generator of the sacred domain.

A prime example of the first tendency was Edward Tylor's 1871 definition of religion as animism: belief in spiritual beings, arising from a concept of the soul. Herbert Spencer, James Frazer, and the naturist Max Müller followed this trend of ascribing religion to erroneous beliefs or pseudorational explanations. Rejecting notions of religion as the "product of a delirious interpretation," Emile Durkheim established the sociology of religion. His 1912 text *The Elementary Forms of Religious Life* remains the single most influential work on the subject.

For Durkheim, there were no false religions: all were rooted in reality and expressed that reality was, above all, "a system of notions by which individuals imagine the society to which they belong." Such a system could not arise from the thought or experience of any individual alone. Only through collective effervescence, the intense exaltation of experience in ritual, could individual members of a group become aware of their moral unity, allowing fusion of all individual feelings into a common feeling. Durkheim describes this process in materialist terms: collective representation requires consciousnesses to act on one another through tangible intermediaries. Individual minds can only

meet and commune by coming out of themselves through movement. “It is the homogeneity of these movements that makes the group aware of itself,” according to Durkheim. That homogeneity, once established, serves to symbolize the representations. Without these symbols, such feelings and representations cannot endure. The movements must be inscribed on “lasting things,” material objects or designs on the body that can embody the representations.

Durkheim’s fundamental idea is that religious phenomena set apart and oppose the sacred to the profane. In his definition, religion is “a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and surrounded by prohibitions—beliefs and practices that unite its adherents in a single moral community called a church.” Ritual alone can provide the generative ground for experience of the moral community; the sacred objects that embody collective representations stand for nothing other than the community’s sense of itself. Durkheim’s work was cast as a study of supposedly “primitive” or simple religions, using ethnography of Australian totemism. But in principle he did not differentiate the sacred experience of an Aboriginal corroboree, with its collective effervescence engendered by bullroarers, from the political fervor of citizens marching under the revolutionary flag of the Republic.

Solidly within Durkheim’s tradition stands Roy Rappaport’s analysis of the form and features of ritual that make it “the social act basic to humanity” and Mary Douglas and Victor Turner’s investigations of the sacred in relation to social order. Where Durkheim had never allowed for conflict at the heart of his moral community, these anthropologists grappled with questions of deception and contest underlying society’s most basic truths. Ritual overcomes the divisiveness of individually held beliefs.

Turner’s ethnography of the Ndembu of Zambia vividly illustrated ritual as dynamic social drama, renewing the moral community through critical junctures of change and conflict within the group such as in a rite of initiation. Initiates, removed from the normal structures and categories of everyday life, enter a “realm of primitive hypothesis, where there is a certain freedom to juggle with the factors of existence.”

In this “liminal” phase, ritual initiates play with and reconfigures the symbolic building blocks of the cosmos, and the initiates are offered the opportunity to see their place within it.

Cognitive anthropologists Pascal Boyer and Scott Atran have recently rejuvenated the old Tylorian perspective. Religion emerges as an evolutionary by-product rather than adaptation. The religious universe is populated with counterintuitive entities resulting from cognitive misfires: in effect, our minds all too easily ascribe agency and intention even to inanimate objects and non-humans. These supernatural beings may then be recruited as a kind of moral police force against social defection. But this mentalist approach still falls back on Durkheimian mechanisms of ritual collective effervescence to render the “gods” morally authoritative. Atran concedes that the costliness of ritual participation is the way individuals demonstrate commitment to their group.

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Bibliography

- Atran, S. *In Gods We Trust*. Oxford: Oxford University Press, 2002.
- Durkheim, E. *The Elementary Forms of Religious Life*. Abridged by Mark Cladis. Translated by Carol Cosman. 1912; reprint, Oxford: Oxford University Press, 2001.
- Rappaport, R. A. *Ritual and Religion in the Making of Humanity*. Cambridge: Cambridge University Press, 1999.
- Turner, V. *The Forest of Symbols: Aspects of Ndembu Ritual*. Ithaca, NY, and London: Cornell University Press, 1967.
- Tylor, E. B. *Primitive Culture*. 1871; reprint, New York: Harper and Row, 1958.

Seeing Ritual and Religion in the Archaeological Record

In the hierarchy of reliability in archaeological inference that the British archaeologist Christopher Hawkes presented in 1954, the reconstruction of technologies, subsistence economies, sociopolitical institutions, and religion are compared to steps on a ladder. This ladder model has become seminal and has remained anchored in archaeological thinking up to the present. According to Hawkes, seeing religion in the archaeological record is the most demanding task.

There are archaeologists who deny any chance of reliably reconstructing prehistoric religion. Seemingly, these scientists are not aware of the full range of their discipline. Archaeology has to do with what human beings produced and experienced in the past, that is, how they constructed their cultural space. Culture functions in a way whereby human beings make sense of the world by attributing meaning to the artifacts they live with. The artifacts constitute the visible dimension of culture, while the conventional meaning that is attached to them forms the invisible network of mentifacts (i.e., ideas and values). There is a pressing demand for archaeological theorists to reach beyond the technological and economic domains, and even beyond the social domain, toward a reconstruction of beliefs, values, and religious traditions.

For the world of antiquity and prehistory the significance of religion was much more comprehensive when compared with the more modern separation of the religious sphere from the secular. Societies with a prescientific worldview base their knowledge about their environment and about their place in the world on mythopoetic concepts. When we modern observers try to reconstruct the spirited world of the past with our science-oriented categories and nomenclature, we are advised not to impose modern conceptualizations, which were nonexistent in ancient times.

Similar reservations hold true for the Euro-American tradition of thinking in opposites. When archaeologists describe the living conditions of prehistoric communities, they easily adhere to a framework of opposite concepts known from our world. As an example, the prominent items of imagery at Çatalhöyük in southern Turkey (ca. 7400 to 6000 BCE), the so-called splayed figures, in bas-relief on the walls of sanctuaries can be mentioned, which were interpreted by the excavator in the 1960s, James Mellaart, as images of the Great Goddess of Anatolia. More careful investigation has revealed that the feet and hands may have been depictions of bears' claws. The conclusion is that since the figures show animal features, they cannot be images of a divinity.

Such thinking in opposites misses the crucial point that different types of hybrid figures are known from prehistoric cultures, from Eur-

asian imagery for one (e.g., a female figure with arms like birds' wings, with legs like those of a bear, with hands like eagles' claws, and with a lion's head). The hybrid figures of Egyptian divinities, both anthropomorphic and zoomorphic, are well known. In Homer's *Iliad* (eighth century BCE), the goddess Athena is described as "owl-eyed." The name of the goddess Artemis is associated with the Greek term for bear (i.e., *arktos*). Artemis is the Divine Bear Woman. Ideas about the kinship of humans and revered animals crystallize in totemism, a theme of larger coinage that is of high age and features in many mythological traditions around the world, past and present. It is obvious that the categorical distinction we make between what is human and what belongs to the realm of animals was unknown to people in prehistory.

Many of the problems involved in interpretative approaches to prehistoric religion arise from the fact that there are no written records that would contain information and descriptions of religious practices. The presence of ancient texts explaining Greek mythology makes the identification of rituals within the context of the archaeological record much easier. Despite the difference between ancient civilizations with written media and prehistoric cultures without such media, Greek archaeology teaches us the valuable insight that myth and religion were integral elements of Greek art. Why would prehistoric imagery be less religious than that of ancient Greece?

Religion is a complex system of values, rituals, and ceremonial activities, such as rites of passage (e.g., baptism, marriage, and funerals), processions, offerings, and festivities. Every complex system has a multilayered infrastructure, which means that the nature of prehistoric religion cannot be identified on the basis of any single artifact. In order to gain knowledge about an artifact's significance for the mythopoetic conceptualizations of ancient cultural memory, we have to look at the context in which the artifact is embedded. A figurine is an artifact by definition because it is made by a human being, and it establishes a meaningful role in relation to other artifacts of the same cultural horizon that, together, form a system of interrelated meaningful items. The context in which this artifact appears may be a cult platform in a sanctuary or

near the hearth of a house and may point to a ritual and/or ceremonial function. And yet in order to determine the exact nature of a ritual, we have to relate to a working hypothesis about beliefs and values among prehistoric people. Therefore, the assumptions about the religious system and the identifications of its rituals are intrinsically intertwined. In any statement about ritual in prehistory, a statement about the religious system is involved, either explicitly or implicitly.

The terminological apparatus that is applied to reconstruct a prehistoric worldview may pose challenges to the investigator. For example, it is widely agreed to see the function of female figurines in general association with religious beliefs. What is more tricky, is how to identify the religious function of the figurines more precisely. If they are seen as images of a goddess, such an identification may evoke misleading (albeit unwanted) allures to the concept of “goddess” as we know it from antiquity. Antique goddesses are individualized as personified characters identified by specific names and attributes described by classical authors and known from early inscriptions. Many of these goddesses, while retaining various aspects of their ancient roots, function within the power structure of hierarchical pantheons.

In contrast to goddesses of the historical periods, the concept of a prehistoric divinity may

be defined as “a symbol of the unity of all life in Nature.” Such an encompassing concept leaves space for an overall view on the natural world. When viewing female figurines as spirit holders of an overarching concept of divinity, then the modern observer may find access to the mind-set of people in a spirited world.

Given the complexity of reconstructive work to explore prehistoric religion, an interdisciplinary approach, reaching beyond the boundaries of archaeology, is called for. In addition to archaeology as a discipline “of the spade,” the history of mythology and religion (i.e., archaeomythology), culture science, semiotics, and cognitive science have also made valuable contributions to the study of prehistoric religion.

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Bibliography

- Haarmann, H. *Interacting with Figurines: Seven Dimensions in the Study of Imagery*. West Hartford, VT: Full Circle, 2009.
- Hawkes, C. “Archaeological Theory and Method: Some Suggestions from the Old World.” *American Anthropologist* 56 (1954): 155–168.
- Insoll, T. *Archaeology, Ritual, Religion*. New York: Routledge, 2004.
- Lewis-Williams, D., and D. Pearce. *Inside the Neolithic Mind*. London: Thames and Hudson, 2005.
- Rappaport, R. A. *Ritual and Religion in the Making of Humanity*. New York: Cambridge University Press, 1999.

■ Introduction: Religious and Ritual Practice until 15,000 BCE

Although religion and ritual are notoriously difficult to define in the archaeological record, it is possible to use analogy and ethnoarchaeology, along with the materials recovered from a number of sites ranging from Africa to Europe, to infer what they may have been like during the early evolution of our species. However, it is important to acknowledge that much of this discussion will be little more than plausible, informed speculation that will be difficult to verify.

Although many animals reflect some degree of self-awareness (i.e., chimpanzees, elephants),

it is probable that *Homo erectus* is the first member of our evolutionary lineage that had a degree of self-awareness more similar to that of our species than that of its predecessors. This assumption is based upon multiple lines of evidence, including a wider cultural repertoire (habitual use of fire, complex settlement patterns), movement into a wide range of new ecological niches, and evidence of careful attention to the details of tool production, such as the obvious symmetry of Acheulean hand axes and other complex tools of this era.

A striking discovery from a number of sites in East Asia, Africa, and Europe dating from 900,000 to 400,000 years ago is the number of human bones, especially skulls that were intentionally cut, crushed, or broken. At the famous *Homo erectus* site of Zhoukoudian, a number of skulls with their bases smashed in and removed is suggestive of the removal of the brain in a cannibalistic act. Acts like these have led Brian Hayden to suggest that they reflect a clear sense of the afterlife and possibly the soul. Using analogy, he notes that modern cannibals break skulls in a similar manner and consume the brains as part of a ritual act to capture the essence of the deceased. Not surprisingly, his interpretation of these remains has been challenged, but his argument is plausible. If accepted, these activities can certainly be seen as an early form of ritual within a religious context.

There seems to be little doubt, however, that Neanderthal-era burials reflect a sense of afterlife, and the formal treatment of the dead by placing them into specially excavated pits (what we would call graves), the placement of objects with the deceased (like the plants at Shanidar), and the use of red pigments at a number of sites supports this argument. Analogy strongly suggests that these interments were performed within some kind of religious context. The elaborate burials found throughout the Upper Paleolithic in many parts of the world demonstrate the continuity of this belief in an afterlife.

Although it is widely known that anatomically modern humans were responsible for painting the remarkable art found in the deep caves of western Europe after 50,000 years ago, it is less well understood that Neanderthals also explored many such caves and performed rituals within them. Again, while the evidence for these activities is controversial, the arguments for them are quite plausible. French archaeologists have documented a number of small structures, some made out of stalagmites, in caves that were occupied in Neanderthal times as early as 50,000 years ago. At the most reliable of these sites, the entrances to the caves had been blocked in modern times, thus rendering it unlikely that these sites were created by Upper Paleolithic humans who entered the region after 40,000 years ago. The location of these small structures deep

within the caves suggests to some anthropologists that they were the scenes of ritual activity, possibly initiation rites. There are also arguments for the existence of animal cults, specifically related to cave bears, in Neanderthal times. Although many early reports of such cults have been dismissed with good reason by archaeologists, more recent findings, such as the burial of a cave bear near the burial of a Neanderthal at the site of Régourdou in southwestern France, have reopened the debate.

It is only after 40,000 years that the evidence for ritual and religion becomes clearer. Although there are many debates as to the meaning of the art painted on the walls of caves such as Lascaux, Altamira, and Chauvet, there is little question that the images served a ritual purpose that was embedded within a poorly understood religious tradition. David Lewis-Williams has argued that many of the images seen on the cave walls are a reflection of shamanic practice, a common form of ritual activity among hunters and gatherers. Lewis-Williams argues that certain geometric shapes, such as dots, zigzags, concentric lines, and other forms, represent what are known as entopic images. These appear in the human visual field under conditions of stress and sensory deprivation. In his reconstruction, a shaman would enter the caves and perform rituals and later would inscribe his visions on the cave walls. Other images, such as half-human, half-animals, suggest a magical transformation of the shaman during these rituals. The images of the animals themselves, such as the bison, mammoth, horse, and others, have been interpreted as evidence for animal cults.

Another artifact from the Upper Paleolithic—the Venus figurine—has also been the focus of intense debate as to its meaning and role within a ritual or religious belief system. These figures, carved out of stone but sometimes ivory, have exaggerated hips, breasts, and buttocks. However, their faces are curiously blank, with no signs of eyes, nose, or mouth. Because of a lack of facial features, they are not thought to be representations of any person. Most anthropologists believe that these figures are meant to symbolize female fertility, and Brian Hayden has argued that they served as a part of a fertility cult in high-status or prestige families. Others

have suggested that this figure was meant to represent a female goddess, but these arguments have been widely discounted.

Although it is likely that many of the interpretations of these contexts and artifacts are plausible, it remains the case that we will never be certain of the meanings that they carried for the peoples who created them.

—Mark Aldenderfer

Bibliography

- Hayden, B. *Shamans, Sorcerers, and Saints: A Prehistory of Religion*. Washington, DC: Smithsonian Institution Press, 2003.
- Lewis-Williams, D. *The Mind in the Cave*. London: Thames and Hudson, 2002.

Primate Attitudes toward Death

Primates respond to death in a variety of ways. Any examination of nonhuman primate attitudes toward death will necessarily be speculative, and the danger of anthropomorphism, which is interpreting animal behavior using human categories, will always be present. Humans, *Homo sapiens*, display the widest variety of responses of any primate toward death. Human cultures have historically responded to death in religious ways, involving complex webs of social interactions, mourning, and rituals. Evidence for hominid concern for the dead exists as early as the Neanderthals, who buried their dead.

The evidence is more difficult to ascertain when considering nonhuman primate attitudes toward death. Attitudes or responses to death in nonhuman primates arguably can be understood as part of the broader category of primate culture. Strong evidence exists for culture in primates, particularly in the genera *Cebus*, *Gorilla*, *Macaca*, *Pan*, and *Pongo*. Genus *Pan*, which includes chimpanzees and bonobos, by far demonstrates the most evidence for culture. This genus has been the richest source thus far for discovering responses to death.

Although it is difficult to universalize primate attitudes toward death, primatologists have observed a number of responses among chimpanzees, for example. In response to the death of their mothers, chimpanzee infants have been observed displaying similar body language to that of human children under similar circumstances.

In at least one instance, a chimpanzee child died shortly after its mother's death. Likewise, chimpanzee mothers commonly respond to the death of an infant by whimpering and wailing. On occasion, chimpanzee mothers have been observed to scream when their children die. Chimpanzees have also been observed screaming in response to the death of a companion, while at other times they remain silent for long periods of time. In one instance of accidental death of an adult chimpanzee, the remainder of the pack gazed upon the carcass, threw rocks in a variety of directions, and embraced one another, and some even touched and sniffed the carcass.

Responses to death in monkeys have been equally varied. In captivity, infant monkeys have been observed making a ruckus when their mothers have been taken away, whether for purposes of experimentation or because they have died. In some instances, infant monkeys respond to maternal death by losing their appetites and slouching, becoming nonresponsive. Likewise, in response to the death of captive infant rhesus macaques, some mothers have made vocal noises for an entire day after the dead child has been removed. In one instance where a baboon lost her infant, the mother appeared agitated in the weeks following the death in that every time the troop passed by the site of the infant's death, the mother was seen looking for her infant, calling out loud, and sometimes climbing a tree.

—Jeffrey L. Morrow

Bibliography

- Boesch, Christophe. "Behavioural Diversity in *Pan*." In *Behavioural Diversity in Chimpanzees and Bonobos*, edited by Christophe Boesch, Gottfried Hohmann, and Linda F. Marchant. Cambridge: Cambridge University Press, 2002.
- de Waal, Frans. *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge: Harvard University Press, 1996.
- McGrew, W. C. *The Cultured Chimpanzee: Reflections on Cultural Primatology*. Cambridge: Cambridge University Press, 2004.
- Muller, Martin N. "Agonistic Relations among Kanyawara Chimpanzees." In *Behavioural Diversity in Chimpanzees and Bonobos*, edited by Christophe Boesch, Gottfried Hohmann, and Linda F. Marchant. Cambridge: Cambridge University Press, 2002.

Smuts, Barbara B. *Sex and Friendship in Baboons*. New York: Albine, 1985.

Wrangham, Richard W., et al., eds. *Chimpanzee Cultures*. With assistance from Linda A. Marquardt. Cambridge: Harvard University Press in cooperation with the Chicago Academy of Sciences, 1994.

Wunn, Ina. "Beginning of Religion." *Numen* 47(4) (2000): 417–452.

Anthropological Thinking on Death and Burial in Simple Societies

The anthropology of death examines the conceptualization of death in societies and the social rituals created to commemorate the deceased. Anthropological thinking in regard to the dead and burial practices in simple societies involves the examination of how cultural definitions of death shape how such societies deal with the process of dying and burial. Biological definitions of death, or the termination of life and/or the life cycle, have far deeper meanings given the cultural constructs imparted by simple societies related to specific worldviews, religions, and other belief paradigms. The characteristics of ceremony and rituals and the process of burial and mourning differ from culture to culture regardless of the level of complexity of individual societies. Moreover, anthropologists have found that there are no universal conceptualizations of death; however, there are rather culturally specific definitions that characterize how different societies deal with the deceased, thus moving away from Western assumptions that all people view death similarly.

Anthropologists who study death and burial in simple societies examine the social and cultural practices surrounding the death of individuals. Through the examination of the differing conceptualizations of death and dying, grief and mourning, burial rituals, and commemorative practices surrounding the deceased, anthropologists can decipher how such practices are social constructions specific to unique cultural contexts. Anthropologist Bronislaw Malinowski examined the relationship of burial customs to beliefs about transcendence beyond death in simple societies. His examination on the rela-

tionship of rites surrounding death and burial considered how religion or understandings of the life cycle served to explain death as part of the life cycle and how burial provided a mechanism for this process and understanding of human immortality. Moreover, it provided a venue for mourning, reverence, and restoring normality after the social disruption caused by death created within the group. Anthropologists who examine death and burials in simple societies have also studied how some groups view death as the end of the life process, while others might see it as a regenerative process that continues in either an afterlife or another stage of the life cycle. The way these groups ritualize dying, death, and burial is indicative of these sometimes subtle differences.

The anthropological study of death in contemporary simple societies offers a glimpse into the greater development of the process of death and dying and how these are conceived of in more complex societies in similar ways. However, the rituals surrounding such practices are far too diverse for anthropologists to establish universal human conceptualizations of death and the idea of an afterlife. Moreover, archaeological evidence of early human societies offers illustrative evidence that such practices date back to early humans as well as to Neanderthals. Such evidence suggests that burial practices on the part of such early hominids are indicative of the growing complexity of their belief systems and their understanding of death as a social process related to the group, be they relatives or members of the greater community.

—Abraham O. Mendoza

Bibliography

Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Robben, Antonius C. G. M., ed. *Death, Mourning, and Burial: A Cross-Cultural Reader*. Malden, MA: Blackwell, 2004.

Disposal of the Dead by Our Earliest Ancestors

The identification of burial practices for our earliest ancestors is a controversial topic. While some form of disposal of the dead has been



Neanderthal burial from Kabara Cave, Israel, 60,000 years old. The body appears to have been intentionally buried, having been laid on his back in an east-west orientation (head facing west). Excavators found that his right arm was laid across his chest and his left arm on his stomach. (The Natural History Museum, London/The Image Works)

hypothesized for Neanderthals, little is known for any other previous hominin species. The main obstacle impeding a better understanding of burial practices before 100,000 years ago remains the differential preservation of organic materials over time as well as the action of taphonomic processes and natural agents that have affected the composition, location, and overall integrity of the fossil record after its initial deposition in the ground.

The oldest burials are therefore commonly attributed to Neanderthals around 100,000 years ago, as documented at the sites of La Chapelle-aux-Saints (France, 1908) and Shanidar Cave (Iraq, 1971). While the real meaning behind these burials is still a debated topic, it is safe to assume that these burials were intentional even though intentionally does not demonstrate their religious or supernatural nature. They are best described as shallow round pits where the deceased was often placed in a forced-flexed or fetal position. Some of these bodies were covered with a red pigment identified as ground ochre (iron oxide). The specific meaning of these practices is unknown, but they may reflect some form of ritual. While some archaeologists would

like to see Neanderthal burials as the first signs of religious thought, most archaeologists are much more skeptical. The quick disposal of rapidly decaying bodies may have been a much more practical justification for such practices.

After 35,000 years ago and the demise of the last archaic hominin species (Neanderthals), burial practices associated with our species became much more sophisticated. Grave goods such as jewelry and carved objects are often found in long narrow graves. These burials clearly reflect the investment of the group in rituals likely supported by some form of belief in the supernatural.

—Alexandre Steenbuysse

Bibliography

- Bouyssonie, A., J. Bouyssonie, and L. Bardon. "Decouverte D'un Squelette Humain Mousterien a La Bouffia De La Chapelle-Aux-Saints (Correze)." *L'Anthropologie* 19 (1908): 513–518.
- Solecki, R. *Shanidar: The First Flower People*. New York: Knopf, 1971.
- Stewart, T. "The Neanderthal Skeletal Remains from Shanidar Cave, Iraq: A Summary of Findings to Date." *Proceedings of the American Philosophical Society* 121 (1977): 121–165.

Treatment of the Dead in Neanderthal Times

The existence of intentional burials associated with Neanderthals is still a controversial topic in archaeology. The difficulty for archaeologists in reaching a firm consensus on this topic stems from the fact that the data used to support intentional burials and the existence of rituals associated with these burials remains ambiguous. It is, however, commonly accepted by most archaeologists that Neanderthals were the first hominin species for which we are able to document some form of disposal of the dead. The very fact that we possess more Neanderthal complete specimens than any other previous hominin species tends to support the notion that Neanderthals buried their dead. The controversial nature of this topic is also reinforced by current debates within the archaeological community regarding the cognitive capacities of Neanderthals and their evolutionary relationships with our own

species (*Homo sapiens*). A total of about 33 Neanderthal burials have been recorded to date.

The first Neanderthal burial was discovered in 1908 by two local French archaeologists at the site of La Chapelle aux Saints in western France. The archaeologists claimed to have found a complete skeleton belonging to an old Neanderthal male placed in a shallow round pit covered with a red pigment identified as ground ochre (iron oxide). Based on their account, the skeleton was in a forced-flexed, or fetal, position lying on his side and surrounded by large animal bones and stone tools interpreted as grave offerings. In 1909 a Swiss collector made a similar discovery at the site of Le Moustier (France). He also described the Neanderthal individual as a male skeleton in a forced-flexed position covered with red ochre. In the 1920s the excavation of the rock shelter of La Ferrassie (France) yielded eight Neanderthal skeletons (two adults and five children, including two neonates), which were described as having been buried in small round shallow pits. A slab of limestone located on top of one of the children burials was interpreted as a possible tombstone since it bore geometric engravings (grooves and cupules) although later identified as resulting from water dropping on the stone from the ceiling of the shelter. The site of La Ferrassie remains one of the most important archaeological sites supporting the existence of burials during Neanderthal times. In the late 1950s American archaeologists discovered nine Neanderthal skeletons at the site of Shanidar Cave in the Kurdistan region of northern Iraq. All the individuals were in a forced-flexed position on their sides or on their backs, bringing further support to the intentionality of Neanderthal burial practices. The unusually high concentration of flower pollen in the soil surrounding one of the male skeletons (Shanidar 4) was interpreted as resulting from a funeral ritual. However, this hypothesis was later rejected by some archaeologists who demonstrated that the flower pollen may have been brought into the burial by natural agents (wind and rodents). In 1954 the site of Regourdou (France) yielded one Neanderthal skeleton in proximity to cave bear skulls. The excavator of the site claimed that the cave bears were painted with red ochre and placed in a coffin made out

➤ SHANIDAR CAVE

The site of Shanidar Cave is a large Paleolithic site located in the Zagros Mountains of northern modern Iraq. Excavated by Ralph and Rose Solecki from 1957 to 1961, the site's stratigraphic sequence covers the Middle and Upper Paleolithic all the way to the Pre-Pottery Neolithic (from ca. 80,000 to 10,600 BP). The most important archaeological features are a series of nine nearly complete Neanderthal skeletons, while a tenth individual was recently found by M. Zeder. One of these individuals (Shanidar 4, discovered in 1960) was identified as a potential burial. The skeleton belonged to a 30–45-year-old male lying on his left side in a forced-flexed or fetal position. The analysis of samples of the soil directly surrounding the skeleton revealed an unusually high concentration of flower pollens. Some of these plants were further identified as possessing medicinal properties, leading to the hypothesis that this so-called flower burial was possibly one of a shaman or healer. This hypothesis was later challenged and refuted by archaeologists demonstrating that these pollens have not necessarily been brought to the site by Neanderthals but by natural agents including a small rodent (Persian jird) known to have burrowed through the site.

—Alexandre Steenhuyse

Bibliography

Solecki, Ralph, P. Anagnostis, and P. Agelarakis.
The Proto-Neolithic Cemetery in Shanidar Cave.
College Station: Texas A&M University Press,
2004.

of flat limestone slabs. Since the excavation of the site did not follow strict scientific guidelines, it is difficult to evaluate the real relationship between the Neanderthal fossil and the cave bears.

The difficulty in identifying rituals associated with Neanderthal burials stems from the very nature of the archaeological record. Typically, the burials have been found at large cave sites where Neanderthals carried out their daily living activities. These archaeological sites thus contain large numbers of stone tools and animal bones as well as hearths and other archaeological features. It is difficult to clearly establish that the objects found near the burials were indeed offerings rather

than normal remains from Neanderthal occupation of the site. Similarly, the presence of large slabs of limestone interpreted as tombstones on top of some of the Neanderthal burials are to be expected in rock shelters and cave sites. Large portions of the cave roof regularly collapse due to erosion, the effect of infiltrated water, and expansion during glacial conditions that eventually crack the cave walls. Similarly, the forced-flexed position observed for many of the Neanderthal skeletons was interpreted by some archaeologists as reflecting specific burial practices and/or religious or supernatural beliefs. Other archaeologists have pointed out the fact that flexing a corpse into such a position could have been a way to minimize the space taken up by these burials, which were located in the middle of their living quarters. Such practices are still widespread in many cultures around the world today.

De-fleshing and possibly the cannibalistic consumption of the deceased flesh may be another mortuary ritual practiced by Neanderthals. At several archaeological sites in Europe, cut marks left by stone tools were identified on many Neanderthal bones. At the site of Krapina (Croatia), for example, these stone tool marks were located on the skulls and skull fragments of several young Neanderthal individuals. Similar evidence was identified at the sites of Abri Moula (France), Grotta Guattari (Italy), and Combe-Grenal (France). It is again difficult to further evaluate the significance and the actual function of such cannibalistic practices. The ritualized consumption of human flesh has been well documented in modern-day tribal groups in Africa and in the Pacific Islands. However, such practice has become relatively rare since it has been shown to cause Kuru or Creutzfeldt-Jacob disease in some members of those populations.

—Alexandre Steenhuyse

Bibliography

- Gargett, R. H. "Grave Shortcomings: The Evidence for Neandertal Burial." *Current Anthropology* 30 (1989): 157–190.
- Leroi-Gourhan, A. "The Flowers Found with Shanidar IV, a Neanderthal Burial in Iraq." *Science* 190 (1975): 562–564.
- Trinkaus, Erik. "Cannibalism and Burial at Krapina." *Journal of Human Evolution* 14 (1985): 203–216.

Villa, P. "On the Evidence for Neanderthal Burial." *Current Anthropology* 30 (1989): 324–326.

White, Tim D., and Nicholas Toth. "The Question of Ritual Cannibalism at Grotta Guattari." *Current Anthropology* 32(2) (1991): 118–138.

Death and Early Modern Humans to 15,000 BCE

Archaic *Homo sapiens* ("early modern humans") appear in the fossil records of Africa, Asia, and Europe between approximately 400,000 and 200,000 BCE. At this time, they began to exhibit ritual activities that seem to connect the living with the dead. From 130,000 to 28,000 BCE, changes in skeletal morphology (Neanderthal in comparison with *Homo sapiens sapiens* remains) and an increase of ritual practice suggest not only biological evolution and an increase of knowledge about the physical environment but also the possibility of symbolic thought pertaining to death. By 13,000 BCE our species initiated the process of the domestication of plants and animals, which led to the Neolithic age (10,000–4000 BCE). Apparent continuity exists among mortuary ritual traditions of archaic *Homo sapiens*, Neanderthal, modern *Homo sapiens sapiens*, and Neolithic populations.

As early as 200,000 BCE, burial of humans becomes deliberate and ritualistic in scope, as evidenced by the manipulation of human bodies after death. At the Spanish site of Sima de los Huesos in Sierra de Atapuerca (dated to approximately 200,000 BCE), physical anthropologists analyzed the remains of a communal grave to find that prior to deposition of the corpses the flesh had been removed from the skulls, indicating symbolic behavior connected with burial. At Kebara Cave in Israel, archaeologists found that the focus of mortuary practice continued to be the skull 130,000 years later (70,000–60,000 BCE), finding that a carefully positioned skeleton had been decapitated, its skull deposited elsewhere.

Another indication of ritual continuity was the widespread use of red ocher at many burial sites as early as 150,000 BCE. Ocher is formed of deposits of the mineral iron oxide, which can be grated to create powder. This substance was of

ten sprinkled over the dead prior to burial in Africa, Asia, Europe, and North America. In Australia, archaeologists uncovered skeletons having ochre sprinkled over them in graves dating to approximately 60,000–40,000 BCE. Among North American indigenous populations, the practice continued into historic times. Anthropologists speculate that red ochre symbolized life and therefore the life force to early humans. The act of sprinkling ochre over the dead may indicate the conceptualization of a life after death. However, the use of red ochre may also indicate growing knowledge of the physical world. In this regard, certain Australian indigenous tribes in the present treat wounds with ochre because of its antiseptic qualities, and we know that growing knowledge of medicinal herbs was a particular feature of Neanderthal culture.

The site most famous for Neanderthal burial is Shanidar Cave in Iraq. A skeleton of a man had been buried in a pit at the back of the cave (approximately 60,000–40,000 BCE), his body carefully positioned. Pollen analysis revealed that the corpse may have been placed on a bed of flowers, and a wreath of flowers was placed upon its head. All of the flowers are known to have had medicinal properties that are still utilized by herbalists today. There are critics of this forensic data who maintain that botanical remains probably did not represent deliberate burial custom. Rather, the pollen is interpreted as having entered the cave by means of air currents or the activity of rodents. However, the evidence for the existence of a wreath of flowers and medicinal herbs (to the exclusion of other plant pollen) makes the air-current and rodent hypothesis a bit doubtful as well. In any case, if the body had been buried with flowers, a great antiquity for funerary flower offerings may be suggested.

Since the excavations at Shanidar Cave, thousands of Neanderthal graves have been discovered from the Middle East to Russia. Some of the most important sites include Skhul Cave (Mount Carmel) and Kebara Cave in Israel; La Ferrassie, La Chapelle aux Saints, Le Moustier, and many others sites in France; the Neander Valley in Germany; Grotta Guattari in Italy; Zafarraya in Spain; Krapina in Croatia; the Mesmaiskaya Cave

in the Caucasus of Russia; and Teshik Tash in Uzbekistan. Two significant aspects of the data collected from these archaeological sites deserve mention. First, there was evidently culture contact between Neanderthal and Cro-Magnon populations. In at least one excavation at the Jebel Qafse site in Israel (dated to 100,000–90,000 BCE), a communal grave of 21 individuals included *Homo sapiens sapiens* and at least 1 Neanderthal. Second, both populations buried their dead with grave goods, for they are found in roughly half the burials whether of Neanderthal, Archaic *Homo sapiens*, or *Homo sapiens sapiens* origin. Interred artifacts include tools and other objects made of stone, bone, and antler as well as pierced shells, teeth, stone pendants, and other sorts of adornment. At the Qafse site, excavations in 1971 uncovered the skeleton of a child buried in a shallow pit, positioned on its back with both hands placed near the head, one hand holding a deer antler. Some archaeologists and paleoanthropologists speculate that such artifacts may imply the beginning of social inequality, while others hypothesize that the presence of grave goods is evidence of a belief in life after death. This practice of burying bodies with jewelry, tools, and other objects for the afterlife had its greatest elaboration in ancient Egypt during historic times, but evidently its roots have a much greater antiquity.

—Susan Marie Kirwan

Bibliography

- Parès, J. M., et al. "On the Age of the Hominid Fossils at the Sima de los Huesos, Sierra de Atapuerca, Spain: Paleomagnetic Evidence." *American Journal of Physical Anthropology* 111 (2000): 451–461.
- Riel-Salvatore, J., and G. A. Clark. "Middle and Upper Paleolithic Burials and the Use of Chronotypology in Contemporary Paleolithic Research." *Current Anthropology* 42 (2001): 449–479.

Death and Burial in the Upper Paleolithic

Intentional burial on the part of early humans suggests to many archaeologists that hominids during the Upper Paleolithic (approximately 40,000 to 10,000 years ago) had a particular

► THE SUNGIR BURIALS

The Sungir site (near the city of Vladimir, central Russia) is attributed to Kostenki culture and is dated between 20,000 and 26,000 years ago. A complex burial was found near one of the dwellings at the site, and it contained a young girl of 7–8 years and a boy of 12–13 years (both defined as anatomically modern humans). They were buried simultaneously, back-to-back, in a narrow grave that showed evidence of fire and the abundant scattering of powdered red ochre.

One of the most striking peculiarities of the burial is the presence of a wide variety of artifacts, including highly decorated clothing and head-dresses. Almost 7,500 mammoth tusk beads used to decorate the clothing were recovered. Carved disks made of mammoth tusk were found at the right temple of both individuals and on the girl's chest and stomach. Other adornments associated with the girl included lamellate and bead bracelets, finger rings, tiepins, and other carved artifacts of ivory and bone. Two *batons de*

commandement (animal bones thought to have been used as spear shaft straighteners) were found next to the girl's feet.

Two long spears made of straightened mammoth tusk as well as flint knives were found next to the boy. Other artifacts found near him suggest their use in an animal cult. These include horse figurines found on his chest, a small sculpture of a mammoth found behind his left shoulder, two cave lion claws near his mouth and waist, and an imitation animal tail made of flattened squarish bone beads behind his torso.

The significance of the Sungir children's burial lies in the elaborate treatment of the dead. Although burials are known from earlier time periods, these burials suggest a well-developed sense of ritual and religion in these Upper Paleolithic peoples. Moreover, children were rarely buried with such an abundance of artifacts, and this implies that in some sense, they were perceived as special or important within their society.

—Olena V. Smyntyna

conceptualization of death. Moreover, intentional burials perhaps also illustrate that as early human societies developed increasingly complex cognitive abilities, they were also establishing particular views regarding life and death. Through evidence gathered in archaeological sites, such as grave goods, ochre dyes, and the actual burial site itself, archaeologists have interpreted that these early burials are indicative of awareness of death and are perhaps an early development of belief systems surrounding immortality. While much of this theoretical perspective is purely speculative given the available evidence, it does offer a glimpse into the early establishment of hominid ways of thinking surrounding death and dying and the increasing complexity of their lifeways in the Upper Paleolithic.

Archaeological evidence indicates that hominids did intentionally bury their dead in the late Middle Paleolithic, albeit in few findings. Intentional burial, replete with symbolic value given the burial goods, occurred during this period as *Homo sapiens* replaced Neanderthals. Moreover, this is illustrative of a long-term development

that lasted into the transition into the Upper Paleolithic. Regardless of the short span of time in which *Homo sapiens sapiens* (modern humans) and Neanderthals coexisted in Europe, early humans developed burial rites and funerary practices from which anthropologists derive that they were developing a more complex understanding of death. Regardless of the scholarly debate over the dispersal of *Homo sapiens* out of Africa, archaeological finds do illustrate that it was during the Upper Paleolithic in Europe that intentional burial became prevalent and a standard practice in early human societies.

The use of burial ochre, which was used to cover the corpses, was used by Neanderthals from the late Middle Paleolithic to the Upper Paleolithic. Modern humans also used ochre in burials down through the Neolithic period. Some archaeologists speculate that perhaps the reddish color of the ochre was akin to blood and was somehow associated with preservation of life. The early Cro-Magnon burials found at St. Eyzies in France in the mid-nineteenth century were illustrative of early intentional burials by

hominids. These Aurignacian culture intentional burials, replete with material goods indicative of early European *Homo sapiens sapiens*, offered archaeologists the first glimpse of human burials. At the Grimaldi caves on the French-Italian border, the remains of two children were discovered with elaborate decorations composed of seashells and animal teeth. The quality of the craftsmanship in the constructing of these complex decorations indicates to archaeologists that some meaning was given to the burial by the inclusion of such goods.

At Aurignacian culture burial sites found at Sungir in Russia, dated to the estimated range of 30,000 to 25,000 years before the present, five remains were found with a large amount of grave jewelry attached to the individuals. Pendants, necklaces, bone/tusk artifacts, and pierced beads were part of the findings. Given the amount of time and effort made at preparing this burial and the significance attached to these valuables, it can be suggested that perhaps this ritual formed a part of early human belief systems. Archaeologists interpret this as either a form of appreciation of the passed or the belief of a continuity of the life cycle in which the deceased should be properly clothed. Further findings from the subsequent Solutrean and Magdalenian epochs illustrate far more complex and elaborate burial rituals and grave goods and even artwork, suggesting that human societies had established belief systems surrounding an afterlife and perhaps also illustrating their understanding of the significance of death. In some regards, this understanding of death might have been the continuity of life in some other form or perhaps simply an understanding of the end of life and an appreciation for the deceased through a ritual. These are the explanations and interpretations by anthropologists, given the grave decorations and luxury goods found with early human remains in intentional burials. By the Neolithic, these practices were long established and part of the lifeways of myriad peoples throughout much of Afro-Eurasia.

—Abraham O. Mendoza

Bibliography

Bar-Yosef, Ofer. "The Upper Paleolithic Revolution." *Annual Review of Anthropology* 31 (2002): 363–393.

Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.

Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

McBrearty, Sally, and Alison S. Brooks. "The Revolution That Wasn't: A New Interpretation of the Origin of Modern Human Behaviour." *Journal of Human Evolution* 39 (2000): 453–563.

Shamanic Religion in the European Upper Paleolithic

The concept of "shamanic religion" suggests an association to a belief system that we modern people categorize as one among the world's religions. As is the case with various other religious systems, there is more to shamanism than cult practices and ritual ceremonies. Shamanism has an infrastructure, and this is comprised of value systems and a worldview that serve as guidelines for a certain way of life. In order to emphasize the overarching role of shamanic worldview for the people who profess it, the term "shamanhood" is preferred over the term "shamanism" by some scholars.

Shamanism (or shamanhood) is perhaps the most widespread prescientific worldview in the cultures of the world, past and present. With respect to Eurasia and its ancient convergent cultures, shamanism is indeed the key to the understanding of how belief systems are over-arched by an animistic worldview. Anthropologist Antero Kare states, "The most ancient, the oldest and the most long-lasting [*sic*] institution in the northern hemisphere is shamanism. Shamanism is a family—a clan—institution and it has been present in hunting, gathering and agricultural societies right up to our day, living on in the industrial era."

The oldest record written by a European in which reference is made to shamanism in Siberia comes from the late seventeenth century CE. The word "shaman" in European languages is borrowed, via Russian, from a Tungus language. In a Chinese source of the twelfth century CE, we learn that Tungus *saman* originally meant "female shaman." The earliest reference

to shamanism among the Tungus (Jurchen) is found in a Chinese source dating to the seventh century CE.

The spiritual motivation of a shamanistic worldview lies in the necessity of a harmonious relationship of human beings with nature. One aspect of a shamanistic worldview is the awareness about the fragile balance of life resources that enhances the insight that the living conditions and activities of human beings cannot evolve in a kind of antagonistic tension with the life cycle but instead evolve in concordance with it. Human beings are supposed to live and breathe in the rhythm of nature in order to minimize conflict when interacting with the world of animals, plants, and the spirits.

Since its appearance as a cultural institution among Paleolithic hunter-gatherers, shamanism has persisted in many parts of Eurasia, and as a living institution, it can be studied in the Himalayas, Southeast Asia, Mongolia, Siberia, and the northeastern corner of Europe (among the Nenets/Yuraks). Among the Sami people of northern Scandinavia, animistic beliefs are still vivid as part of cultural memory and in local lore. Among the native peoples of northern Siberia, shamanism has enjoyed an unbroken continuity since the Ice Age. At that time, the arctic tundra stretched across the whole of Eurasia, from the Atlantic in the west to the Pacific in the east. Historical evidence illustrates that the shamanistic worldview that still today determines the pace of life among people in the Far North is the only viable guarantor of sustainability for community life near and in the eternal ice.

In a world of animated nature, the shaman possesses a key role for communication between the worlds as a mediator to convey the vital spiritual needs of the community to the forces that guarantee a harmonious balance among the participants in the life cycle. The shaman acts as a mediator between the world of the living and the spirit world with a mandate from the spiritual powers that inhabit the animated world. Only with the shaman's intervention can the community experience the oneness of the spirit world and the protection provided by the spirits inhabiting everything in the environment (plants, animals, and natural phenomena such as rivers or lakes, mountains, and the forest).

The tradition of shamanism among the peoples of northern Eurasia includes both male and female shamans. Female shamans among the Saami and the Samoyed peoples of Siberia were held in high esteem. Those traditions must be of great age, because there is evidence for the presence of women in the Neolithic imagery of northern Europe relating to mythopoetic contexts of shamanism, among them the image of a female shaman that features in the largest picture complex of rock art found thus far in Finland, at Astuvansalmi (in the municipality of Ristiina) on the shore of Lake Saimaa. The female shaman holds a bow, perhaps suggesting that the petroglyph depicts a female hunter. The figure is centered and surrounded by elks, with their heads turned toward her. The site has been identified as a cult place for the performance of rituals related to hunting magic. In all probability, the female figure who is depicted represents the performer of such rituals.

Cave painting and mobiliary art are the preferred genres of how the people of the Paleolithic expressed their worldview in visual form. Pictures and abstract motifs were painted on the walls of many caves, both in western Europe (in southwestern France and northern Spain) and in eastern Europe (in the Ural Mountains). Those who painted the caves had exceptional artistic skills, and it is assumed by some scholars that they were shamans. The images of animals and mythical beings are often aligned in narrative sequences whose contents remains cryptic to the modern observer. For the understanding of Paleolithic people the images had a meaning, most probably associated with rites of passage that were performed in certain areas of the caves, which served as sanctuaries. The action of painting was, most likely, a performance carried out in an altered state of consciousness (i.e., trance), which also activates mental imprints of elementary visual motifs such as dots, circles, grid signs, or wavy lines. Such motifs are found in association with naturalistic pictures. The oldest paintings in the caves date to a time prior to 30,000 BCE, and the youngest dates to circa 14,000 BCE.

In the Paleolithic imagery, one finds some specimens of figures with both anthropomorphic and zoomorphic features. A shamanistic context seems to be the only reasonable expla-

nation for these hybrid creatures, which are interpreted as shamans in ceremonial action. Among the most impressive of these images is the “deer-man” (known as the “magician”), from the Cave Les Trois Frères (Département Ariège in southern France), dating to some 13,000 years ago. Much older is the sculpture of the “lion-man” (a human figure with a lion’s head and feet) from Hohlenstein-Stadel in southern Germany, the age of which is circa 30,000 BCE.

The Paleolithic communities of Europe shared a remarkable degree of conformity in their cultural expression during the Gravettian period between 27,000 and 19,000 BCE. It can be conjectured that a shamanistic worldview formed part of the sociocultural network that united western Europe with Ukraine and Russia. Diagnostic items of the widespread Gravettian culture are female figurines of similar posture and style. During the transition from the Paleo-

lithic to the Mesolithic and Neolithic, shamanism gradually disappears from the record of western Europe but persists in northeastern Europe into subsequent historical periods.

—Harald Haarmann

Bibliography

- Flaherty, G. *Shamanism and the Eighteenth Century*. Princeton, NJ: Princeton University Press, 1992.
- Haarmann, H., and J. Marler. *Introducing the Mythological Crescent: Ancient Beliefs and Imagery Connecting Eurasia with Anatolia*. Wiesbaden: Harrassowitz, 2008.
- Harvey, G. *Animism: Respecting the Living World*. London: Hurst, 2005.
- Kare, A., ed. *Myanndash: Rock Art in the Ancient Arctic*. Rovaniemi: Arctic Centre Foundation, 2000.
- Lewis-Williams, D. *The Mind in the Cave*. London: Thames and Hudson, 2002.

■ Introduction: Ritual and Religious Beliefs, 15,000–4000 BCE

After 15,000 BCE, traces of what can be called religious activity become more apparent. In great part, this is due to the increasing complexity of society. In general, as society becomes more complex so does religion, and religion begins to assume a wider range of societal roles. Although its traditional roles, such as healing and promoting a worldview, are maintained, they begin to appear in new structures. A wider range of religious specialists can be found, and by the end of the era it is reasonable to describe these roles as priests. And while there may be private or family-level religious practice, by the end of the era religious ritual becomes increasingly institutionalized and supported by the secular rulers of more complex societies.

Certain regions are more precocious than others in these developments. We see a more formal expression of religious activity first in the ancient Near East at sites such as Göbekli Tepe, where large carved stones are erected. But no large monumental constructions can be found in

this region until the very end of the era. Elsewhere, religious activity, while more formal, has not yet achieved a true institutional role.

—Mark Aldenderfer

Bibliography

- Hayden, B. *Shamans, Sorcerers, and Saints: A Prehistory of Religion*. Washington, DC: Smithsonian Institution Press, 2003.

The Organization of Religion in Sedentary Societies

Sedentism generally precedes and predates the socioeconomy of plant cultivation. Sedentary lifeways enhance the transition to food production in the form of horticulture on a small scale and as agriculture on a larger scale. Sedentism is no natural stage in human social evolution. Yet socioeconomic conditions in mobile bands of archaic hunters and gatherers may lead to the transition from a nonsedentary lifeway to sedentism.

On the other hand, it would be incorrect to state that this transition was the result of intentional planning. The transition to sedentism was a multifaceted process in which external factors and human adaptive skills operated in succession.

The earliest signs of a trend toward sedentism are found in the ancient Near East in the context of ecological changes that affected human living conditions. When the climate became colder during the Younger Dryas phase (in the course of the twelfth millennium BCE), this affected the availability of seeds of wild grass and other food crops, then an important food resource for the hunter-gatherers of the region. In response to the ecological change, humans retreated to areas where wild grass was still available. In the vegetational refugia, humans adapted to the local ecology and exploited the food resources intensively. The chain reaction of events during that phase of a shift from mobility to sedentism illustrates that the impulse for that development was sparked by ecological changes that, in turn, induced responses of human intentionality to cope with those changes.

Sedentism is a stable feature in any agrarian society. For reaching the stage of full-fledged agriculture, sedentary populations in the ancient Near East experienced a step-by-step transition: sedentism of the Natufian people in the twelfth and eleventh millennia BCE (intensive exploitation of seeds of wild plants, beginnings of an intentional planting of wild seeds, no domesticated animals), sedentism of the early monument builders (at Göbekli Tepe and other sites) in the tenth and ninth millennia BCE (intensive exploitation of wild plants, intentional planting of wild seeds, no domesticated animals), and sequence of sedentism of the early inhabitants of Jericho (ca. 10,000–8500 BCE, sedentary hunter-gatherers; ca. 8500–7300 BCE, domesticated plants; ca. 7300–6000 BCE, domesticated animals [sheep and goats]). Thus, wild planting, plant domestication, and animal domestication are the major steps in the sequence from simple sedentism to full-fledged agriculture.

When we reconcile the insights that modern archaeology has provided about prehistoric belief systems with the history of human ecology, it suggests that the mobilization of humans for adopting a different lifeway had long-term con-

sequences for their worldview. In the societies of archaic hunter-gatherers, the division of labor produced gender-oriented specialization that can still be observed in traditional cultures. Men customarily go hunting and take care of the meat supply, while women provide food from gathering. It has been estimated that the supply of food from gathering made up 60 percent or more of the total diet in prehistoric hunter-gatherer communities.

If the major responsibility for gathering food lay with women, it seems reasonable to assert that women were the first to experiment with activities such as selecting and sowing the seeds of wild grass. Intensive gathering activity shifted to wild planting and ultimately to plant cultivation. The association of the sprouting of plants from the soil with the birth-giving of new life among humans would first originate in the minds of those who took the greatest burden of adaptation in the process of transition, that is, among women. Women were the ones to make the living space of early sedentary communities meaningful through their input of harvesting, storing, and baking activities.

The role of women for the progress of sedentism and for the conceptualizations of religious thought in early agrarian communities can hardly be overestimated. The female impact on the shaping of a new worldview is perhaps reflected in the ancient imagery. Typical figurines of the Early Neolithic Age (ninth and eighth millennia BCE) are those depicting standing or seated women. The seated woman type marks the canon of figurines throughout the Neolithic. This orientation toward the female gender may signal the increasing recognition of women in these societies.

Sedentary communities are more vulnerable to climatic fluctuations than are mobile bands of hunter-gatherers. Experience with the changes of the local weather and the dependence of cultivation on the conditions of the seasons for sowing and harvesting must have left permanent traces in the cultural memory of the early agrarians and led them to focus knowledge construction on insights about the eternal life cycle. Ideas about the organizing principles of wild nature extended into the new realm of plant cultivation. Here, human activities needed special protection to be successful.

There seems to be a growing consensus among paleoanthropologists, archaeologists, and scholars in the field of culture studies that the world of sedentary communities in the early Neolithic was as much spirited as the world of archaic hunter-gatherers, with the difference being that the worldview of agriculturalists is more complex and diversified. What makes a worldview spirited is that supernatural powers are made responsible for natural phenomena. An illustrative example of how very old beliefs in a spirited world can survive into our times is the traditions of animistic religions in a wide culturally interconnected zone in Asia, from northern Siberia to South East Asia. In Eurasian mythology, a female guardian-spirit resides in everything in nature, for example, in a tree, in a bird, or in a lake.

The difference with the transition to sedentism is that the lifeway of plant cultivators sets other priorities. While for hunter-gatherers, agriculturalists, and cattle growers alike, the rising and setting of the sun, the water supplied by rivers and lakes, and the fertility of animals is equally important, there are other phenomena that are of utmost importance for agrarian communities but a minor issue for hunter-gatherers.

This is true for rainfall, for the fertility of the arable soil, and for seasonal changes such as the fertility of the earth in spring and summer and the resting of nature in winter. Cults of rain gods are found in agrarian communities, not in the cultures of hunter-gatherers. Similarly, rituals focusing on the invocation of rain for the crops are typical for the religion of agriculturalists. So too are rites for the blessing of the fields and ceremonies of thanksgiving after harvesting.

Social patterns and the level of technological development in sedentary societies are more complex than in the communities of hunter-gatherers. This is also true for the level of specialization of agrarian rituals and ceremonies. The ritual calendar in agrarian communities requires more organizational infrastructure than the festivities of hunter-gatherers. The higher the degree of organization in this domain, the greater the demands for the professional specialization of the personnel responsible for ritual performance. Here opens the path for the trajectory toward the emergence of distinctly defined cults, the establishment of a seasonal ritual cal-

endar, the organization of cult personnel with permanent responsibilities, and the supervising role of a temple bureaucracy over the nature and amount of votive offerings and over the socioeconomic resources of the community.

In sum, the evolution of religious concepts among sedentary populations did not mean a rigid breaking away from the beliefs of archaic hunter-gatherers. Rather, what marks the difference is a gradual shift of conceptualizations about the life cycle toward new priorities of agrarian concern, while the close relationship between humans and their natural environment (i.e., wildlife) was not lost.

—Harald Haarmann and Joan Marler

Bibliography

- Bar-Yosef, Ofer. "The Natufian Culture and the Early Neolithic: Social and Economic Trends in Southwestern Asia." In *Examining the Farming/Language Dispersal Hypothesis*, edited by Peter Bellwood and Colin Renfrew. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Bellwood, Peter, and Colin Renfrew, eds. *Examining the Farming/Language Dispersal Hypothesis*. Cambridge, UK: McDonald Institute for Archaeological Research, 2002.
- Cauvin, Jacques. *The Birth of the Gods and the Origins of Agriculture*. Cambridge: Cambridge University Press, 2000.
- Hodder, Ian. *Çatalhöyük, the Leopard's Tale: Revealing the Mysteries of Turkey's Ancient "Town."* London: Thames and Hudson.
- Johnston, Sarah Iles, ed. *Religions of the Ancient World: A Guide*. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2004.

The Birth of the Gods? Natufian Religious Concepts

The massive melting of the ice sheets in the Northern Hemisphere that marked the end of the Ice Age was caused by global warming. This process continued until, in the course of the twelfth millennium BCE, another climatic change—with colder and drier weather—caused ecological changes in the vegetation of vast areas of the Near East. Wild emmer wheat and barley and almond and pistachio trees had provided a considerable amount of the food supply for mobile bands of hunter-gatherers that had

populated this region. When the soil dried out, these plants receded to isolated areas on higher grounds that were scattered, like oases amid dry land, throughout the region. The hunter-gatherers were forced to stay in the vicinity of these oases where there was enough water for plants, animals, and humans.

These conditions mark the transition to sedentism (remaining in one place rather than following a nomadic migratory pattern) in the Near East. One of the prominent cultures of this era is called the Natufian, which flourished throughout the Levant—though not in Mesopotamia—in the twelfth and eleventh millennia BCE. Sedentism effected a change in lifeways. Villages were formed, with circular houses in semisubterranean structures and storage pits (excavated at Kebara, el-Wad, Nahal Oren, Nahr el Homr, Dibsi Faraj, and Mureybet). The intense exploitation of the wild cereals in their refugia may have soon led to a shortage of the natural food supply and may have subsequently influenced the inhabitants of the villages to intentionally use the seeds for planting. This activity was a prestage of food production, but it was not yet practiced on a scale that later marked the beginnings of plant cultivation.

Those who experienced sedentism and engaged in the initial process of planting certainly became aware of the vulnerability of human ecology, with its fragile balance of food supply and water resources. The social bonds in the communities of the Natufian villagers extended to also include the ancestors who were buried in carefully designed cemeteries. Judging from the variety of artifacts that were found as grave goods, it can be concluded that the Natufians had a developed belief system with concepts about afterlife. The stone bowls in some graves may have served as cult vessels (e.g., for libation).

Among the tools that were found in the Natufian villages were bone sickles with stone implements, the typical tool for harvesting cereal grass. In addition, the Natufians produced mobiliary art. Small-scale pieces of art are rare before the Natufian period. The most prominent pieces from Natufian sites are bone artifacts, which were modeled and carved out with fig-

ural design. The motifs in these designs are stylized pictures of animal heads. Phallic objects are known from the el-Wad Cave near Haifa (Israel). An exceptional figurine was discovered at Ain Sakhri south of Bethlehem (Palestine). It depicts two persons engaging in sexual intercourse.

If one relates the pieces of mobiliary art, by their thematic nature, to the belief system of the Natufians, then it can only seem conclusive to see, in their art, reflections of an understanding of the process of procreation and fertility on the continuum of the natural world. The practical experience with the planting of the seeds of wild cereals and of the sprouting of new plants might have caused individuals to form an analogy with fertility among humans.

On the other hand, the evaluation of the information that we get from Natufian graves and the interpretation of Natufian imagery does not allow for statements about a putative pantheon of primeval gods and/or goddesses. The world of the Natufians was spirited, although they might have lacked clearly defined concepts of supernatural powers as personified figures, ascribing specific functions to individual divinities as did the agriculturalists of a later time.

The Natufians represent, with their subsistence economy of wild cereal planting, an early step to full-fledged plant cultivation. The beginnings of that phase in human socioeconomic evolution lie with the communities at Abu Hureyra in Syria and of Jericho (with evidence from the lowest strata) in the Jordan Valley around 8000 BCE. It is in the cultural milieu of those early agriculturalists, the successors of the Natufians, that concepts about divinities gain in profile.

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Bibliography

- Bar-Yosef, Ofer, and François R. Valla, eds. *The Natufian Culture in the Levant*. Ann Arbor: University of Michigan Press, 1991.
- Bellwood, Peter, and Colin Renfrew, eds. *Examining the Farming/Language Dispersal Hypothesis*. Cambridge: McDonald Institute for Archaeological Research, 2002.
- Delage, Christophe, ed. *The Last Hunter-Gatherer Societies in the Near East*. Oxford, UK: BAR International Series, 2004.

Communal and Ritual Structures as Expressions of Religious Belief in the Ancient Near East

For a long time, it was believed that the world's oldest monumental structures were the megalithic temples from Malta, the alignments of menhirs (standing stones) at Carnac (Brittany, France), the stone circles of Stonehenge (Wessex, England), and the passage tomb of Newgrange (Ireland). Even the earliest dates for some of those monuments do not reach further back in time than the fifth millennium BCE.

Finds from newly discovered and excavated sites in the Near East have changed this picture. The beginnings of monumental architecture date to remote times in the tenth millennium BCE. This early age is itself a sensation. Also sen-

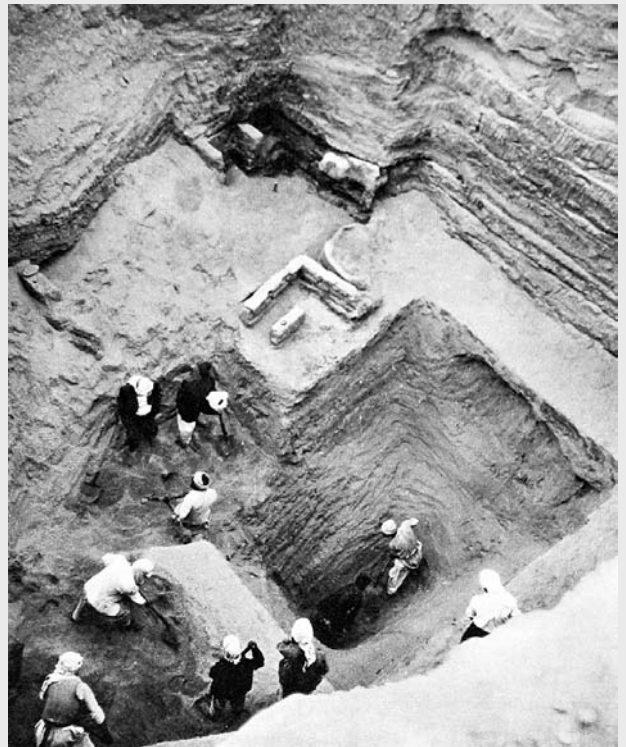
sational are the cultures in which the new finds are embedded. The early monumental structures were not erected by agriculturalists but rather by hunter-gatherers who had become sedentary. In this respect, the conditions of building activity in the ancient Near East differ from those in Europe, where the earliest monuments have to be attributed to members of agrarian communities. Another exceptional feature of this period of a dawn of monuments is that it precedes the technology of pottery making in the Near East and Europe.

The discoveries of early monumental architecture were made at a number of sites located in the Urfa Province of southeastern Turkey, and these are Nevalı Çori, Göbekli Tepe, Sefer Tepe, Hamzan Tepe, Karahan, Çayönü, and several others. Excavation activity at Çayönü started in 1964.

► THE EARLY TEMPLE AT ERIDU

The temple at Eridu housed one of the first religious cults in the world. There is evidence that the temple was rebuilt several times over a 3,000-year period (from 5400 to 2050 BCE), which may reflect its importance and significance to the people of Mesopotamia. Eridu is also believed to be one of the first cities, having been constructed around 5400 BCE astride the Euphrates River valley marshlands near the Persian Gulf. Archaeological evidence shows that the temple, or ziggurat, at Eridu was one of the first structures erected in the city. It was built in the city center in a depression that allowed for water to collect. The temple of Eridu was a mud-brick structure that housed an altar and offering table to the water god Enki (Ea in Sumerian), the patron deity of the city. Enki was credited by inhabitants of Mesopotamia as the creator of all humankind and was considered the perfect masculine type to which men should aspire. He was the god of fresh waters, intelligence, knowledge, and magic as well as the keeper of the Me, the gifts of civilized life. The cult of Enki controlled and oversaw tribute at the temple. Goods used for tribute included marine fish, ceramics, and other items. Aside from serving as a religious center, the temple of Eridu was also an important political and economic center.

—Christine Boston



Excavation of the fifth-millennium-BCE temple at Eridu, the oldest and largest city in Mesopotamia, in 1948. (Mary Evans/The Image Works)



Excavation at Göbekli Tepe in present-day Turkey. The site, believed by some to be the “first temple,” dates to the tenth millennium BCE. (Verity Cridland)

One of the sites, Nevalı Çori, was explored in a rescue excavation that started in 1983 and ended in 1991. Afterward, the area was flooded by the waters of the newly constructed Atatürk Dam that regulates the river Euphrates. Göbekli Tepe has been in the process of excavation since 1995.

All mentioned sites were inhabited by populations of hunter-gatherers. These had receded to areas where their major food supply—wild emmer wheat, barley, and some other food crops—was still available after the ecological changes that had been induced by the colder and drier climate in the course of the tenth millennium BCE. These people had become sedentary and had grown accustomed to an intensive exploitation of the local seeds of wild plants. Perhaps in those early sedentary communities planting wild seeds was already practiced to some extent; full-fledged agriculture was still in the future.

The monumental architecture that was erected by the hunter-gatherers was all communal buildings (called “cult buildings”) that served ceremonial and ritual purposes. The buildings at the various sites display typological similarities in their architectural properties, although their layouts differ locally.

The oldest cult building, at Nevalı Çori, was carved into the slope of a mountain to a depth of about 10 feet (3 meters) and had a size of some 46 feet (14 meters) x 44.3 feet (13.5 meters). The

inside of the rectangular building was structured by 15 stone pillars in a t-shape. Eleven of them interrupted a bench of quarry stone that runs around three sides. On the front side, there were two steps leading down to the interior. What makes this ceremonial hall unique is a podium in one spot of the bench. This space held the large sculpture of a bird.

On the foundations of this oldest construction, a new cult building was erected, with 11 pillars interrupting the bench and 2 in the center. The pillars in the center and some spots in the walls bear relief decoration. Among the major motifs are two human arms whose hands are joined, the carving of a snake in a niche, and reliefs depicting birds.

The sculptures that were found in the ceremonial precinct depict mythical beings. One is a female head on which a bird is perching, while another features two female figures, back-to-back, with a bird (perhaps a vulture) perching on them. There are some female figures whose bellies are swollen as if indicating pregnancy.

The Göbekli Tepe site shows semisubterranean monumental architecture. There are four circular structures that were partly cut into the limestone bedrock. These structures give the impression of crypts. Their interior is subdivided by pillars, two in the center and eight on the peripheries. The measures and weights of the central pillars are likely to emphasize the scale of these early monumental structures. The taller ones measure more than 6 feet (2 meters) and weigh more than six tons.

The pillars were decorated with pictures in bas-relief. The dominant motifs are wild animals such as snakes, birds, gazelles, lions, wild boars, and foxes. The images appear single or in groups. On some pillars, one finds complex groupings such as on the tallest pillar in the form of a stela (10 feet/3.1 meters), with bas-reliefs of a bull (above), a fox (middle), and a crane (below).

One of the images in the ceremonial buildings at Göbekli Tepe is mysterious since it differs from all other pictures in style and theme. This is the image of a mature woman with a round-shaped head who is in a squatting position with elongated labia and with her breasts hanging on both sides. The technique is canellure (or grooving) carving, and this stands

in contrast to the usual bas-relief technique. The figure is found on one of the bench lintels in the crypt that is called the Lion Pillar Building.

The cult buildings at Çayönü belong to the youngest phase of monumental structures in the area. They date to circa 8000 BCE, which is contemporaneous with the oldest occupation of an agrarian community at Jericho.

The largest of the cult buildings, a rectangular structure with an apse, is called the House of the Dead because 66 skulls were discovered beneath the floor together with skeletal remains of about 400 humans. In the center stands a stone slab, which has been interpreted as an altar. It might have functioned as a sacrificial stone, judging from the traces of animal blood. Since traces of human blood have also been found on the surface of the stone, it has been argued that this altar might have been the scene of human sacrifice. The validity of this conjecture, however, is still a matter of dispute.

The cult buildings stood as isolated structures. They were communal buildings, and their function was most probably that of ritual centers. The houses of those who constructed the communal buildings are located elsewhere, at some distance from the cult buildings. It has been estimated that many hundreds of people were engaged in the construction work, not including the workers who carved out the pillars from the bedrock. At Göbekli Tepe, the quarry was situated at some 295 feet (90 meters) from the nearest crypt. Sustaining such a workforce over weeks or possibly months required far-reaching planning, particularly with respect to the food supply.

There are many questions that cannot yet be answered. It is hard to imagine that the layouts for the cult buildings originated out of the blue, without prototypes or precursors. Where are these prototypes to be found? There is a hiatus in the cultural chronology between the era of the early monumental architecture and the tradition of ceremonial architecture of the times of the ancient civilizations in Mesopotamia. Where are the missing links? Was the belief system of the early sedentary hunter-gatherers the cradle of the religious cults of the later agrarian communities? Who were the heirs of their culture? Is there any direct line of descent leading from

the population that constructed the cult buildings to later populations of the Near East?

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Bibliography

Lewis-Williams, David, and David Pearce. *Inside the Neolithic Mind: Consciousness, Cosmos and the Realm of the Gods*. London: Thames and Hudson, 2005.

Özdoğan, Mehmet, and Nezih Başgelen, eds. *Neolithic in Turkey: The Cradle of Civilization; New Discoveries*. 2 vols. Istanbul: Arkeoloji ve Sanat Yayınları, 1999.

The Skull Cults in the Ancient Near East

The first information about an unusual burial custom in the Neolithic period came from Jericho, a site in the Jordan Valley excavated by Kathleen Kenyon. In 1953 she found three human skulls in a pit. Much about these skulls was exceptional, and the way they had been treated by the early inhabitants of the settlement was unknown to other regions.

The prominent features of these finds are that the skulls were separated from the skeletons and placed elsewhere; the surface of the skulls was covered with plaster; the interior of the skulls was filled with clay; the eyes were inlaid with cowry shells, transported some 31 miles (50 kilometers) from the coast of the Mediterranean; and all three skulls were positioned in a way that the eyes could “see” in the same direction.

Similar finds of severed and plastered skulls were made in different locations within settlements, such as Jericho, Kfar HaHoresh and Beisamoun in Palestine, and Ain Ghazal in Jordan. The postmortem removal of the skull is known from burial practices in the Near East. The beginnings of this custom can be dated to the tenth millennium BC, and it continued into the second half of the seventh millennium BC. The tradition of plastered skulls derived from the general custom of skull removal and was seemingly geographically restricted. Surprisingly, a plastered skull was found at Çatalhöyük in 2004, which means that the custom was evidently practiced also in Anatolia at an early stage of agrarian settlement.

Wherever they were found, the skulls were all intentionally positioned in groups. The spaces where the skulls had been collected made the impression of caches (skull nests). With more specimens of these plastered skulls found, other features of their treatment were revealed. One skull had brown paint on its top as if to indicate a headdress. Other skulls seemed to have worn masks, which were found next to them.

The special treatment of the head is also typical of statuary that is known from the site of 'Ain Ghazal. Big sculptures and busts of human figures, each measuring about 3.3 feet (1 meter) in height and made of clay, were retrieved from two caches. The statues in the one date to circa 6750 BCE, while those in the other date to circa 6570 BCE.

While the whole bodies of the older statues were modeled carefully, prominence in the younger ones lies with the heads. The contours of the eyes are marked with bitumen, and they have a staring gaze. All the sculptures were made in such a manner that they could stand upright in their specially dug pit.

Whether or not the “seeing” statues were associated with the “seeing” skulls is unclear, yet such exceptional finds spontaneously call for speculation about their symbolic meaning. From the beginning of the investigations, scholarly attention focused on the prominence of the eye zone with inlays. Obviously, “seeing” in the afterlife was considered by the Neolithic contemporaries to be an essential link for the deceased to be connected. The crucial question is, connected to what or to whom? In this scholarly opinions vary, although there is a general consensus that the special treatment of the eye zone was associated with a worldview that included concepts about a realm beyond the world of the living.

Once the focus is on the role of the inlaid eyes, there are several trajectories of interpretation: the “seeing” eyes may be a general metaphor for beliefs in a continuation of life after physical death; the “seeing” eyes may have specific symbolic meaning as an orientation for the deceased in the realm of the ancestors; the “seeing” eyes may symbolize an intentional preparation of the deceased individual for rebirth, such as an event in the process of regeneration; the “seeing” eyes

may symbolize the closeness of the deceased as a “living” ancestor and his or her continuing participation in the affairs of the living.

This last alternative interpretation is supported by the special conditions of skull nests under the floors of houses. Archaeologists refer to the plastered skulls and to their symbolic meaning as a religious pattern and prefer to call it cult. The skull cult is often—in a generalizing manner—described as expressing Neolithic people’s concern with death.

Circumstantial evidence, though, shows that the event of physical death was not the matter of main concern. Rather, it was the spiritual consequences of death and the perception of it as a stage in the eternal life cycle of birth, death, and regeneration that were of significance. In this view, the skull cults of the ancient Near East were not cults of the dead but rather ancestor cults, with stress on the spiritual linkage of the deceased with the memory of the living.

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Bibliography

- Goren, Y., A. N. Goring-Morris, and I. Segal. “The Technology of Skull Modeling in the Pre-pottery Neolithic (PPNB): Regional Variability, the Relation of Technology and Iconography and Their Archaeological Implications.” *Journal of Archaeological Science* 28 (2001): 671–690.
- Haydaroglu, Mine, ed. *From Earth to Eternity: Çatalhöyük*. Exhibition catalog. Istanbul: Yapi Kredi Cultural Activities, Arts and Publishing, 2006.
- Lewis-Williams, David, and David Pearce. *Inside the Neolithic Mind: Consciousness, Cosmos and the Realm of the Gods*. London: Thames and Hudson, 2005.

Goddess Cults in the Ancient Near East, Anatolia, and Southeastern Europe

There is a zone of ancient cultural convergence that stretches from the ancient Near East to Anatolia and beyond, including southeastern Europe. The origins of this convergence of cultural traditions and—most probably—also of similar worldviews date to a time prior to the birth of the Black Sea, that is, prior to the breaking of the land bridge that had connected Europe with Asia until about 6700 BCE. The land bridge had

facilitated the movement of people and the diffusion of ideas on both sides of the Aegean Sea.

Among the cultural markers of the convergence zone is a special category of artifacts that documents to the existence of ancient beliefs in female divinities, namely female figurines. Although the frequency of their occurrence varies in different periods, female figurines nevertheless constitute an element of cultural continuity and speak in favor of the sustainability of local societies over long spans of time. The cultural chronology of the figurines shows that by the seventh millennium BCE, this category of artifacts had spread over the whole convergence zone.

Different interpretations have been given for the role of female figurines in Neolithic societies, some drawing on the sacred and others on the mundane. The most conclusive of these approaches stresses the prominence of the female element in the belief system of people with an agrarian lifestyle whose world was filled with spirit entities. Before the emergence of the ancient civilizations of the Near East, there were no statues for gods and goddesses. Female figurines may have assumed symbolic meaning as metaphors of the divine feminine, as objects imbued with spiritual energy where the spirit of the divinity would crystallize. This can be inferred from the context of religious imagery and artifacts at the sites of ancient settlements (e.g., figurines in association with cult vessels in shrines, on cult platforms, or near the hearth or the baking oven).

The term “goddess cults” makes reference to certain religious practices (i.e., rituals, sacrifices, and votive offerings) related to the veneration of female deities. Although the concept of cult is widely used, it is but one aspect in the wholeness of a worldview that helped members of the agrarian community to perceive the role of the goddess as multifaceted, as the One and the Many. She was the Mistress of Nature, depicted in various forms of figurines (e.g., as wearing a mask resembling a bird’s head, appearing in the guise of a female bear nursing her cub); she was the patron of plant cultivation (the Grain Mother); and the guardian of the household, among other things.

The functional multiplicity of female deities that were venerated in the ancient convergence



Seated mother goddess figure, with exaggerated breasts, hips and belly. The right hand rests on the breast and the left on the hip. The flattened top of the head is a stylized depiction of a crown, a symbol of power. Anatolian, sixth millennium BCE. (Barbara Heller)

zone is reflected in the features of the goddesses of later times who can be identified by their names. There are the strong women of Sumerian mythology: Mami, the Great Mother Goddess; Tiamat, a primeval goddess; Ereshkigal, mistress of earth; Ishhara, goddess of marriage and childbirth; Zarpanitum, goddess of pregnancy; Uttu, the patron of weaving; Ninkasi, the patron of beer brewing; Ninurra, the patron of pottery making; and Nisaba, originally a grain goddess and later the patron of writing and knowledge. The Sumerian Inanna was a goddess of the Underworld. As Ishtar she gained in importance among the Akkadians and became the powerful goddess of love and war.

In the Near East, the attributes in the imagery of Ashera, the spouse of the god El, point in the direction of her role as the mistress of animals. From the pantheon of ancient Ugarit, the city-state that flourished from the fourteenth to the twelfth centuries BCE, Anat is known as the goddess of love, sister and consort of the mighty

➤ GODDESS WORSHIP AT ÇATALHÖYÜK (ÇATAL HÜYÜK)

Female figurines are among the cultural markers of community life in Çatalhöyük. The most famous of these is the sculpture of a mature woman sitting naked on a throne and flanked by leopards. This configuration of female figure and animals resembles similar sculptures from Hacilar (from the sixth millennium BCE) or from the sanctuaries of Cybele in Phrygian times (first millennium BCE). Çatalhöyük was founded in central Anatolia, in the plain of Konya, about 7400 BCE by sedentary people who practiced agriculture. This is the first urban agglomeration in the history of humankind that continued over a longer span of time. The main mound of the residential area at Çatalhöyük was abandoned around 6000 BCE, although human occupation continued nearby for some time beyond that date. Up to 8,000 inhabitants might have lived in the town at a time.

The ancient urban layout of the site was explored in the early excavations in the late 1950s and early 1960s, led by James Mellaart. He identified some of the courtyards between houses and the more spacious rooms in some of the buildings as sanctuaries and shrines of the goddess. The most famous of the sacred spaces is the hall with the figure of a female being in a squatting position, sculptured in bas-relief on the wall, in close association with bull's horns. According to Mellaart's interpretation, the female figure represents the Great Goddess of Anatolia whose

daughter, in later millennia, was Cybele. The Great Goddess of Çatalhöyük is referred to by the Turks as Ana Tanrıça (Mother Goddess).

This interpretation of the imagery at Çatalhöyük and the reconstruction of the large figure in bas-relief have not remained undisputed. Ian Hodder, who has led a new excavation campaign at Çatalhöyük since 1993, and his team acknowledge the presence of a powerful female divinity in the ancient community but recognize features of an animal, a bear, in the large figure of the sanctuary. They stress the close relationship of the inhabitants with wildlife and nature. Such a reconstruction, in fact, would not contradict the veneration of a female divinity in her role as the Mistress of Nature who appeared in the guise of the Bear Goddess, as in other communities of the convergence zone (see above). The same intimate relationship is suggested by a recently found seal, featuring a stylized bear, with a handle imitating the buttocks of a female body.

—Harald Haarmann and Joan Marler

Bibliography

Balter, Michael. *The Goddess and the Bull: Çatalhöyük, an Archaeological Journey to the Dawn of Civilization*. New York, London, and Toronto: Free Press, 2005.

Mellaart, James, Udo Hirsch, and Belkis Balpınar. *The Goddess from Anatolia*. Adenau: Eskenazi, 1989.

god Baal. The Phoenician goddess Ashtart (also known as Ashtort) later influenced the tradition of the Cyprian Aphrodite as the goddess of love and fertility. In Anatolia, the most powerful of the goddesses known by their names is Cybele, the motherly goddess, the protector of the community.

On the western fringe of the convergence zone, the pre-Indo-European heritage of the goddess cult is best known from ancient Crete with its Minoan civilization that flourished in the second millennium BCE. The opinions of scholars are divided over the fabric of Minoan religion. Some assume the presence of one mighty female divinity, while others reconstruct a pantheon of gods and goddesses. Even if Minoan religion

knew various divinities, the prominence of female deities among them remains striking.

The heritage of the strong women in pre-Greek mythology is reflected in the goddess cults of ancient Greece. All major achievements of Greek civilization are associated with goddesses: Demeter, the patron of agriculture (the Grain Mother); Hestia, the guardian of the hearth and the household; and Athena, the supergoddess, the patron of technologies such as pottery (the potter's icon was Athena's owl), shipbuilding, and weaving and the protectress of the community and the patron of justice, the arts, and science.

Of all the female deities once venerated in the ancient convergence zone, the goddesses of classical Greece—often in their Roman equiva-

lents (Demeter as Ceres, Athena as Minerva or Iustitia, Aphrodite as Venus, etc.)—live on in our cultural memory as elements of Western civilization, with many allusions to them in the visual arts and in literature.

—Harald Haarmann and Joan Marler

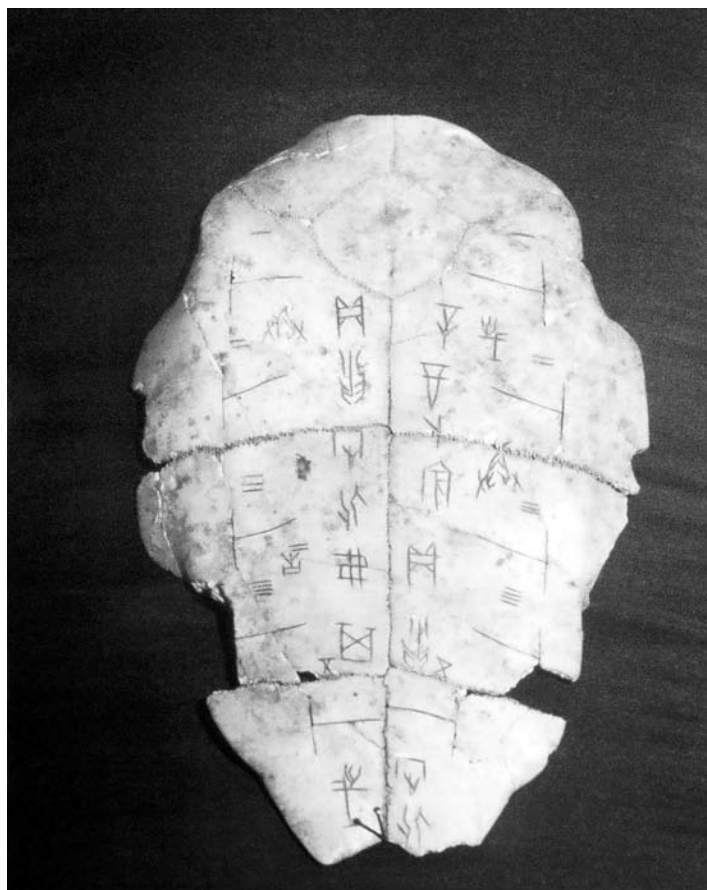
Bibliography

- Billington, Sandra, and Miranda Green, eds. *The Concept of the Goddess*. London and New York: Routledge, 1996.
- Frymer-Kensky, Tikva. *In the Wake of the Goddess: Women, Culture and the Biblical Transformation of Pagan Myth*. New York: Fawcett Columbine, 1992.
- Gimbutas, Marija. *The Living Goddesses*, edited and supplemented by Miriam Robbins Dexter. Berkeley, Los Angeles, and London: University of California Press, 1999.
- Havelock, Christine Mitchell. *The Aphrodite of Knidos and Her Successors: A Historical Review of the Female Nude in Greek Art*. Ann Arbor: University of Michigan Press, 1995.
- Johnston, Sarah Iles, ed. *Religions of the Ancient World: A Guide*. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2004.
- Marinatos, Nanno. *Minoan Religion: Ritual, Image, and Symbol*. Columbia: University of South Carolina Press, 1993.

Ancestor Worship in Ancient China

The tradition of ancestor worship (also referred to as ancestor cult) has deep roots in the cultures of East Asia, including China. It is from China, however, that the earliest evidence and the oldest documents have come down to us. The memory of the ancestors, either real or mythical, was ritualized and became the focus of social organization and political authority in ancient Chinese society. The identity of a lineage found its anchor in the ritual commemoration of the founding ancestor, and in the case of the lineage to which the emperor belonged, the founder of the dynasty had deified status.

Already in the earliest written documents from the end of the second millennium BCE, the oracle bone inscriptions, the basic unit of ancient Chinese society, the lineage (Chinese *tsu* or *zu*), is mentioned. The term *tsu* is rendered in writing as a complex ideogram, with the component of a



Shang dynasty tortoise shell with incised pictographs, from the archaeological site at Anyang. The Shang dynasty, which lasted from about 1760 to 1150 BCE, is the earliest Chinese dynasty supported by archaeological and documentary evidence. These inscriptions form the earliest body of Chinese writing, which can be traced back to 4000 or 5000 BCE. (Art Directors.co.uk/Ark Religion.com)

flag above and an arrow below. The flag was the iconic identifier of the *tsu*, and the arrow pointed at its function, which originally was that of a military unit of about 100 armed men, each from a household of the lineage. The head of the *tsu*, the lord, was the military leader during times of war. His role in community life was that of a guardian of social rules of behavior. There is consensus among Chinese legal historians that these rules had the value and weight of laws. The origins of the legal system in China have to be sought in this tradition of customary laws in the lineages.

The rule of behavior with absolute priority was the worship of the ancestors, the glorification of the founding ancestor in particular. When a lord engaged in building activity the

► THE EMERGENCE OF WRITING UNDER THE AUSPICES OF THE ANCESTOR CULT IN ANCIENT CHINA

The far-reaching impact of the ancestor cult on civic and military affairs in ancient Chinese society can be illustrated to the modern observer by means of the early written documents. The origins of writing in ancient China do not have to be sought in the context of bookkeeping, taxation, or incipient bureaucracy, as in the city-states of ancient Sumer in Mesopotamia. Rather, ancient Chinese writing was a medium of divination, and it remained so for more than half a millennium. Writing for the scope of divination on ritual bones was an innovation that was introduced around 1200 BCE.

Writing was a royal privilege and was used only by the emperor and his closest relatives. At the same time, writing played a key role for decision making. Before any significant event, whether civic or military, the emperor would consult with the ancestors. Questions such as “Is tomorrow an auspicious day for starting to build a new ancestral temple?” or “Will our army be victorious if we attack the enemy after the harvest season?” would be written—in logographic and ideographic characters—on the shells of turtles or on the shoulder bones of deer, which were then thrown into a ritual fire in the ancestral temple. A diviner (priest) would carefully supervise the action and later interpret the cracks that the fire produced on the bones. According to the interplay of cracks and signs of writing, the diviner would decode the advice and will of the ancestors.

Writing as a means of divination continued to be used into the times of the western Zhou. Later, writing lost its monopoly as a means in the religious context and was used as an information technology in profane functions.

—Harald Haarmann

ancestral temple had to be constructed first, and it was around this spiritual center that all major rituals and ceremonies in the community crystallized. When a lord neglected his duties to build an ancestral temple, keep it in good condition, or take care of the organization of obligatory rituals, he could be degraded by the emperor. Orders given by the lord to ordinary members of the lineage in connection with

these ancestral duties had to be obeyed. There were severe punishments for defiance of a lord that included mutilation and/or execution.

The highest authority in ancient Chinese society was the ruler (Chinese *wang*), the supreme head of all lineages. The origin of the Chinese character for writing the term *wang* is obscure. Some historians assume that it derived from the pictogram of an executioner's ax, thus referring to the absolute authority over life and death in the hands of the king (emperor).

Ancestors to whom the members of a lineage traced back their origins were not only worshipped as distant figures; their role for the living was more than that of a personified identifier of ethnicity. According to ancient beliefs, the highest wisdom of life lay with the ancestors. In practical terms, this meant that knowledge construction in ancient China was grounded in the appreciation and observance of the achievements of the ancestors, with the founding ancestor as the leading figure. Ancestors were invoked in prayers and rituals and were asked for advice.

A preferred means to consult with the ancestors was divination. The practice of divination by means of a bone ritual (*scapulomantia*) has a long tradition in China. Its origins date to the fifth millennium BCE. The diviners had a prominent status as officials of the Shang rulers. They were guardians of a secret information technology and of privileged knowledge.

In the early days, the diviners were often women. This is still recorded for the later period of the Shang and Yin dynasties (ca. sixteenth to eleventh centuries BCE). Under the rulers of the dynasty of the western Zhou (ca. eleventh century to 771 BCE), the authority of the office of the diviner shifted to male priests. Whether gender difference reflected preferences among individual members of the royal lineage or gender-oriented power relations in society is not known. The authority of female diviners in ancient China is no exceptional phenomenon when viewing divination in a comparative perspective of cultures in East Asia. Female shamans have had a prominent status among Siberian peoples. The privileged role of female diviners in society has been preserved, for instance, in Korean society up to the present. Korean women diviners are called *mu-dang* or *mansin* (ten thousand spirits).

The cult of the ancestors has never vanished from Chinese community life and has been perpetuated even through the communist era. April 5 is a day of ceremony for modern Chinese who remember their ancestors by performing memorial rituals in temples and praying to them. Ancestor worship has spread to neighboring regions, where Chinese influence was felt in historical times or is still vivid. This is true for Korea and Japan as well as for Vietnam in the south. On the day of Tet Nguyen Dan, the Tet Festival (New Year's Day), the ancestors are invited to participate in the celebrations in their honor, organized by the living. The beginning of the new year is marked as the first new moon in spring (ranging between mid-January and mid-February).

—Harald Haarmann

Bibliography

- Bagley, Robert W. "Anyang Writing and the Origin of the Chinese Writing System." In Houston, Stephen D., ed. *The First Writing: Script Invention as History and Process*. Cambridge and New York: Cambridge University Press, 2004.
- Chang, K. C. *Art, Myth, and Ritual: The Path to Political Authority in Ancient China*. Cambridge, MA, and London: Harvard University Press, 1983.
- Houston, Stephen D., ed. *The First Writing: Script Invention as History and Process*. Cambridge and New York: Cambridge University Press, 2004.
- Keightley, David N. *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China*. Berkeley, Los Angeles, and London: University of California Press, 1985.
- Liu, Yongping. *Origins of Chinese Law: Penal and Administrative Law in Its Early Development*. Hong Kong, Oxford, and New York: Oxford University Press, 1998.
- Qizhi, Zhang, ed. *Traditional Chinese Culture*. Beijing: Foreign Languages Press, 2004.

Religious Expression in Neolithic Europe

There has been much speculation about the belief systems among European populations during the Neolithic Age, that is, during the crucial period of socioeconomic transition from the communal life of hunter-gatherers to societies of agriculturalists. There are two major domains that provide information about religious expression in the Neolithic Age: (1) imagery (including

sculptures, reliefs, rock paintings, and engravings), artifacts, and structures related to cult practices (e.g., cult vessels, offering tables, altars, and holy precincts), and (2) narratives of mythopoetic contents that form part of the oral traditions of ancient and modern peoples. Written sources are not available from the Neolithic but instead date from the Chalcolithic Age (literally "copper-stone-age") in southeastern Europe (fifth millennium BCE, in an undeciphered script) and from the Bronze Age (end of the fourth millennium BCE in Mesopotamia).

The various theories about the spread of cult practices and related religious ideas distinguish themselves by their degree of association with conceptions about the social structures of early agrarian societies. Some see religious ideas among agriculturalists arising in a society with social stratification and with religious expression reflecting social hierarchy and power relations. Others recognize egalitarian social structures with women having a prominent (though not dominant) position in agrarian communities.

There is ample evidence from previous and recent findings among several disciplines (i.e., archaeology and comparative religion) to illustrate that most societies in the areas bordering the Black Sea in the south (southeastern Europe, Anatolia) were egalitarian. The abundance of female figurines that dominate the imagery in this zone of cultural convergence testifies to religious concepts focusing on female divinities as patrons of the abundance of the natural world that was of overall importance for the agriculturalists. This cycle includes the birth, growth, death, and regeneration of all living things.

In the communal life of the Neolithic people, an intimate interconnection between the cultural space that people established for themselves and their natural environment can be recognized. This close relationship can be seen as a heritage from earlier times, and comparisons are made between the older and younger periods of the Stone Age.

The cosmos that the Neolithic people constructed for their orientation was inhabited by mythical beings. One of the figures that illustrates the connections with the real world and the spiritual realm is the mythical bear that features in many pictures and sculptures of

Paleolithic art. This figure continues to appear in the Neolithic Age, sculpted as the natural animal or in hybrid figurines with female human features of the Bear Goddess.

Any comparison of the imagery and visual motifs of the Neolithic with those of the Paleolithic has to be approached with caution because the symbolic meaning of visually similar elements might have differed in cultures that were separated in space and time. And yet given the same kind of relationship between the cultural and natural space, the striking similarities in the canon of the imagery can hardly be overlooked.

The same holds true for certain types of narratives that recur in many oral traditions of contacting cultures. Myths are among the oldest themes of a mythopoetic interpretation of human beings' anthropocentric worldview, and similar motifs are found in many parts of Europe. Among the most archaic layers of narrative traditions are myths of origin that encapsulate tribally held ideas about creation, death, and the structure of the world. Different versions of the same archaic myth in different cultures may represent various developmental stages of the narrative repertoire. This is the case with the origin myth of the world egg, which forms part of the mythic repertoire of Uralic peoples in eastern Europe as well as the ancient Greeks and various peoples of the ancient Orient. The northern version contains more archaic features than the southern version.

In the myth of the world egg, two basic motifs are associated. One is the motif of the waterbird, the other that of a female guardian spirit or a goddess. The motif of the water fowl in various mythological associations is vivid in both narrative texts and visual representation. Saamic mythology abounds with narratives relating to the wild swan as a mythological animal. With good reason the Saami have been called the "people of the wild swan." According to Uralian mythology, a waterbird builds its nest on the knee of the Air Maiden (called Ilmatar in Finnish), who is reclining on the cosmic waters. Accidentally, the egg rolls into the sea and breaks, and from its contents the world finds its origins.

The North European version of the myth focuses on the totemistic aspect. The waterbird takes the active part in the creation process by

laying the egg, although the creation of the world may be understood as accidental, while in the Greek cosmogonical tradition the world originates from the creative spirit of a female deity whose creation is imbued with intentionality.

According to this version, the first divinity to emerge from the primordial chaos is Eurynome ("wide wandering"), the goddess of all things, whose first task is to divide heaven from the eternal waters. She cannot find a place to rest, so she wanders south on the waves. Eurynome is followed by the north wind, Boreas, who takes the form of a snake. His longing for a female companion culminates in a sexual union with the goddess, who becomes pregnant. Eurynome experiences a metamorphosis, turns into a water fowl, and places an egg on a patch of land. From this egg emerges all the things of this world, living and not living.

The mainstream Greek cosmogonical myths are collected in Hesiod's "Theogonia" ("Origins of the Gods") of the seventh century BCE, although there are other cosmogonies categorized as deviant by scholars, among them the so-called Pelasgian myth inherited from pre-Greek times. In this version, the central position of the goddess as creatrix of the world is indicative of the pre-Greek origin of the cosmogonic myth.

The formative period of the mythical narrative of the world egg may well date to pre-Neolithic times. This variant of a myth of origin continued into the Neolithic and beyond, such as in the case of Greek mythology, and in northern Europe it has even survived up to the present.

Also on European soil, another tradition of religious expression—deviant from the canon in the egalitarian agrarian communities—originated during the Neolithic Age. This was the pantheon of predominantly male divinities that is typical of the cosmos of the proto-Indo-Europeans with their socially stratified society and their pastoralist economy, which had originated in the steppes of southern Russia. The early imagery focuses on the horse as a mythical animal. Later, with the Indo-European migrations, the model of a male-dominated pantheon and of a hierarchically structured society, with political power concentrating in the hands of a social elite, was to be transferred into other parts of Europe.

—Harald Haarmann and Joan Marler

Bibliography

- Cauvin, Jacques. *The Birth of the Gods and the Origins of Agriculture*. Cambridge: Cambridge University Press, 2000.
- Donald, Merlin. *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Cambridge and London: Harvard University Press, 1991.
- Hodder, Ian. *Çatalhöyük, the Leopard's Tale: Revealing the Mysteries of Turkey's Ancient "Town."* London: Thames and Hudson, 2006.
- Lewis-Williams, David, and David Pearce. *Inside the Neolithic Mind: Consciousness, Cosmos and the Realm of the Gods*. London: Thames and Hudson, 2005.

Chinchorro Mummies

Dating to between 5050 and 1100 BCE, the Chinchorro mummies are the world's oldest anthropogenic, or artificially created, mummies. These mummies were originally discovered on the Chilean coast near the modern-day city of Arica by archaeologist Max Uhle. He named the mummies Chinchorro, meaning "fishing net," based on the elaborate fishing technologies interred in their burials. Subsequent excavations, however, have shown that these mummies existed along the coasts of Peru and Chile spanning from Ilo, Peru, to Antofagasta, Chile. The term "Chinchorro" is also used to refer to the culture with which these mummies are associated. The Chinchorro people were a preceramic culture that specialized in marine subsistence strategies and complex mortuary traditions.

Chinchorro mummification practices began in the Camarones Valley in northern Chile and are believed to have spread to other regions. Men, women, and children were all mummified. Studies have led researchers to conclude that mummification was open to all members of the group regardless of age, gender, or social status, with mummification styles varying by time. Based on evidence of their repair, the mummies may have been used in ritual ceremonies and were eventually buried in group burials along beach sites.

There are several different types of mummies associated with the Chinchorro culture, including Natural, Black, Red, Bandaged, and Mud-coated mummies. These mummification



Mummified Chinchorro baby, San Miguel Museum in Arica, Chile. (Ivan Alvarado/Reuters/Corbis)

types were created at specific times over the 4,000 years the Chinchorro employed their anthropogenic mummification practices. The extremely arid conditions of the region often created naturally mummified human remains.

Black-style mummies are the oldest and most complex mummies and date to between 5050 and 3000 BCE. Their creation entailed the removal of the skin of the deceased followed by the removal of all of the remaining soft tissues. Organic materials were then used to re-create the shape of the individual, with the body being reinforced and secured with wooden poles and reed cords. The skin was placed overtop the organic materials, and the face and sex organs were remodeled with clay. A short black wig

made of human hair was placed on the deceased's head, and the body was painted with black-blue manganese paint.

Red mummies were less complex than the Black mummies and occurred between 2500 and 2000 BCE. The soft tissues of the deceased were removed through slits cut at strategic points on the body, such as along the shoulders and groin. The head was removed, and the body was dried by placing burning materials into the body cavity. The body was reinforced with sticks and stuffed with organic materials, the incisions were stitched, and the head was reattached. The head was then adorned with a long black wig, and the body was painted with red ochre.

Bandaged mummies were created in a similar fashion to the Red mummies and date from 2000 to 1100 BCE. The main difference between these two types of mummies is that the Bandaged type is wrapped with long pieces of animal or human skin.

Mud-coated mummies were the simplest and were created by drying the body without removing the internal organs. The body was covered with a thick mud paste after it was placed in the burial.

It is unclear as to why the Chinchorro began to mummify their dead, but three hypotheses concerning their origins exist: adoration of children, ecological factors, and spiritual con-

cerns. The adoration of children hypothesis asserts that the Chinchorro may have begun mummification on children first as a way of assuaging community grief, later incorporating adults as their belief system developed. The ecological factors hypothesis states that through observing the natural mummification processes, the Chinchorro felt the need to perfect the process based on a need or desire to control the environment. The spiritual concerns hypothesis centers on the idea that mortuary rituals, such as mummification, enabled and guaranteed reincarnation as well as allowed the living to communicate with the deceased in the afterlife. Nonetheless, scholars believe that no single hypothesis can explain the origins of the Chinchorro mummification practices.

—Christine Boston

Bibliography

- Arriaza, Bernardo. *Beyond Death: The Chinchorro Mummies of Ancient Chile*. Washington, DC: Smithsonian Institution Press, 1995.
- Arriaza, Bernardo, et al. "Chinchorro Culture: Pioneers of the Coast of the Atacama Desert." In *Handbook of South American Archaeology*, edited by Helaine Silverman and William H. Isbell. New York: Springer, 2008.
- Aufderheide, Arthur C. *The Scientific Study of Mummies*. Cambridge: Cambridge University Press, 2003.

Science and Technology

If nothing else, our species has a remarkable capacity for invention. Although other animals, including ants, otters, and birds, are known to make tools, the tools made by these species and the contexts of their use are ephemeral and highly situational. Among our nearest primate relatives, chimpanzees are known to make simple tools and have even been seen modifying stones in a way that must have been very similar to the ways in which the australopithecines knapped stone almost two million years ago. But chimpanzees show little capacity for creating new forms of tools or using them habitually. Our evolutionary lineage is the only one to have engaged in consistent technological innovation. Our capacity to learn was bolstered by our growing ability for learning and the transmission of knowledge through social learning from one generation to the next.

The pace of technological change, however, was slow for the first one million years or so. Most of the stone tools that our early ancestors made were probably for a single episode of use, and their forms changed little over long periods of time. Even the beautiful and symmetrical Acheulian hand axes persisted in a recognizable form over hundreds of thousands of years and over large geographic areas. This suggests that these tool forms were well suited to the tasks for which they were created and that the environmental and behavioral contexts within which they were used changed slowly as well.

A serious problem in the study of early technological innovation is the loss of tools made of perishable materials such as wood, fibers, or other plant materials. It is likely that many of the stone tools we find in the archaeological record were used to shape and fashion these tools. And like our chimpanzee relatives, our ancestors may well have used unmodified sticks, branches, and similar objects to obtain their food. Thus, while we have good evidence for stone tool manufacture as early as 2.5 million years ago, it is highly probable that some of our ancestors, notably *Australopithecus afarensis* and *A. africanus*, used tools of perishable materials.

Technology is not just about objects but is also about the contexts and behaviors associated with their use. One of the great controversies about the evolution of our species is whether our early ancestors were primarily hunters of animals or scavengers of the carcasses of animals killed by disease, old age, or predators. Hunting involves behaviors that are distinct

Thus, while we have good evidence for stone tool manufacture as early as 2.5 million years ago, it is highly probable that some of our ancestors, notably Australopithecus afarensis and A. africanus, used tools of perishable materials.

from those of scavengers. Stone tools can contribute little to this debate because they could have been used to both kill and/or butcher the animal carcass. To resolve this debate, it is necessary to look at the species processed, their size and age distribution, and the contexts of their discovery. Hunters may show preference for certain types of animals, whereas scavengers may not be so selective. Whatever the outcome of this debate, it provides an important reminder that technology is not just about things but, more importantly, is about how things fit into the subsistence systems and social lives of the people who used them.

Technological change is in great part driven by adaptation. Technologies, broadly defined, are modified as circumstances demand. New tools are created, production processes are refined or redefined, and new uses for old tool forms may be developed. “Necessity is the mother of invention” is true to a point, but it is also true that technological change is not always driven by need. People often modify their technologies to take advantage of new opportunities. The process of domestication of plants is a good example of this. In some parts of the world, foraging peoples were attracted to large stands of wild plants that appeared as climate improved at the start of the Holocene not out of necessity but because they offered an opportunity to obtain resources with greater security. Stone tool technologies were subsequently modified to harvest these stands of plants more efficiently.

Structures and shelters are a somewhat different kind of technology. When did our ancestors begin to create them? Our primate relatives live and sleep in the open, sheltered by trees or vegetation, and it is likely that our most distant ancestors did likewise. Although circles of stone are said to exist at Olduvai Gorge that some have described as remnants of a structure, others have disputed this claim. Somewhat later in time, we have good evidence that our ancestors used rockshelters as a kind of natural structure and may also have lived in the light zones of caves. Structures made by our ancestors, however, appear in a number of regions during the Upper Paleolithic. In part, this may reflect the movement of our species into colder regions where protection from the elements was a necessity.

With the advent of sedentism, the pace of technological change increased dramatically. This was due in part to the significant increase in population in these areas as well as greater demands for subsistence technologies to feed more people. New technologies, such as ceramic manufacture and metallurgy, appeared. Increased levels of regional interaction through trade and exchange created new markets for specialist production of commodities such as salt, obsidian, and textiles. Elite demand for exotic or luxury items spurred technological innovation as well. By the end of the era, thousands of new technologies had been invented, reinvented, and borrowed.

We owe this tremendous capacity for innovation to our ability to observe within the context of our evolving capacity for symbolic representation and thought. Symbols allow us to envision new things and then to put those objects to use. Observation is the close study of the natural world. Together, symbols and observation have made us what we are today. Our power to observe and then reason is a kind of presci-

entific mind-set. That is, while it is very unlikely that our ancestors framed their observations in the modern language of science and hypothesis testing, it is also clear that they put things together in novel ways and conducted natural experiments with them. People who know nothing about genes, for example, are quite aware of the potentialities of cross-breeding plants and animals to improve their yields. And while most of their innovations were supremely practical, this does not disqualify them as a kind of prescientific thinking.

The contributions to this theme explore our evolved capacity for innovation over a two million-year span and attempt to place them into a wider social, political, and economic context.

—Mark Aldenderfer

■ Introduction: Tools and Technologies of the Early and Middle Paleolithic, 2.5 Million–100,000 Years Ago

Aside from the fossil remains of our earliest ancestors, stone tools perhaps provide the most critical insights into the evolution of our species. Simply put, stone tools are durable records of behavior and are certainly the most ubiquitous remains of the earliest stages of our evolution. Although it is likely that our most distant ancestors used tools fashioned from wood, bone, leaves, and even grasses, these perishable materials are seldom preserved from deep antiquity. Our early past may not be written in stone, but it is in great part reflected by it.

Making a stone tool requires some manual dexterity. Although our closest primate relatives, especially chimpanzees, have been known to make very simple stone tools, their hands are not suited for making and using tools in an efficient manner. The development of an opposable thumb—a digit when, combined with the others, creates a powerful grip that is simultaneously precise in movement—was one of the key steps in providing our ancestors with the dexterity to use tools of all kinds effectively and habitually.

Stone tools also reflect to some degree the cognitive abilities of our ancestors. Even the simplest tool requires some foresight and a sense of possible outcomes. All early stone tools were created by striking one stone with a harder stone, and not just any stone is suitable for making a tool. Over time, our ancestors learned

which kinds of stone could be struck that would lead to the desired outcome. As tools become more complex, then, they reflect the growing cognitive abilities of our ancestors.

Although our ancestors may have used unmodified rocks and stones to crush bones or mash plants, we cannot easily see these activities in the archaeological record. The earliest stone tools that we know of are called unifacial tools and are modified on only one side, or face. Many of these early tools were little more than sharp edges that were presumably used to cut meat from bones or process plants. The first stone tool tradition, that is, tools that were made and used consistently in a region over a specific period of time, is known as the Olduwan and is found in eastern and southern Africa. The first Olduwan tools date to approximately 2.5 million years ago and persist until around 1.5 million years ago.

Around 1.6 million years ago a new tool tradition, the Acheulean, emerges from East Africa. This tradition, best characterized by large bifacially worked hand axes, was remarkably persistent and successful and in its most basic form lasted until 250,000 years ago and spanned three continents. This was the tool industry carried by *Homo ergaster* as that species moved out of Africa around one million years ago. Unlike unifacial tools, bifaces require more skill and planning to produce, and this suggests that the cognitive

capacity of *H. ergaster* was superior to that of the australopithecines or early *Homo*. In addition to hand axes, the Acheulean is characterized by a wider diversity of unifacial tool forms, suggesting their use in more complex tasks.

The earliest Acheulean hand axes, those dating before 600,000 years ago, were relatively crude. While worked bifacially, they lacked real symmetry, were relatively thick, and in some cases cortex, which is the exterior surface of the stone used to make the tool, was left on the hand ax. In contrast, the hand axes of the Late Acheulean were highly symmetrical, very thin, and very carefully made. Some archaeologists have argued that the appearance of these finely made tools implies a significant advance in the cognitive capacity of the individuals who made them and thus may reflect the appearance of *H. heidelbergensis*, who is likely to have been the first of our ancestors to occupy the European continent.

The Acheulean, however, is not found in East Asia, and here the tool industries contemporary with it are known as a chopper/chopping tool complex with varied regional names. The species most closely associated with these tools is *Homo erectus*. Although the tool forms in East Asia are relatively simple when compared to those of the Acheulean, they nevertheless were a key aspect of the successful adaptation of *H. erectus* in the varied environments of East Asia.

Although our ancestors undoubtedly used a wide range of natural materials in their daily lives, it is only after 500,000 years ago that we begin to see the first vestiges of tools made of other materials. Bone is well known to be an important source of tools for modern peoples, and large bones can be flaked and worked much like stone. Large hand ax-like tools made of bone are found in Europe at this time, as are other crude bone flakes and chopping tools. Likewise, wooden tools have been found, again in Europe. The Theime (or Schoeningen) spears, most probably used in a thrusting manner, date to around 400,000 years ago. Evidence for other technologies, such as fire and the creation of structures, begins to be found in the archaeological record at this time but is still very rare. Evidence for clothing, basketry, and textile making are unknown for most of the Paleolithic, although it is probable that *H. heidelbergensis* made crude

clothing, given the harsh environment of Europe that species encountered when it migrated into the continent.

With the disappearance of the Acheulean tradition around 250,000 years ago, the number of distinctive tool traditions seen in the archaeological record increases substantially. In part, this reflects the appearance of species transitional to *H. sapiens* in Africa as well as the growth of numbers of our ancestors living in distinctive environments that led to the development of tool traditions more suited to these local settings. In Africa, the period from roughly 250,000–100,000 years ago is known as the Middle Stone Age. In Europe and southwestern Asia, the Mousterian is the name of the tool tradition during this period and tends to be associated with *H. neanderthalensis*. In general, stone tool technologies at this time reflect a growing trend of specialization of function and a progressive decrease in size. Many of the tools of these varied regional traditions are well made and show careful attention to symmetry and design, a pattern that clearly indicates the presence of a high level of cognitive capacity.

—Mark Aldenderfer

Bibliography

- Hovers, E., and S. Kuhn, eds. *Transitions before the Transition: Evolution and Stability in the Middle Paleolithic and Middle Stone Age*. New York: Springer, 2006.
- Klein, Richard. *The Human Career*. Chicago: University of Chicago Press, 2009.
- Scarre, C., ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2009.

Toolmaking by Our Closest Primate Relatives

Tool use and toolmaking is widely considered an important aspect in the evolution of the human lineage. Generally, human cultures are defined by the tools they use: of what material they are made, how they were made, and what use they possibly could have had. Humans are, however, by no means the only toolmaking primates. Monkeys and apes share this ability, each on its own level. The chimpanzee and the orangutan are the most creative in toolmaking, while gorillas miss this ability altogether.

A tool can be any object from the environment that is used to perform a task; even parts of one's body can be considered a tool in the broadest sense. Tools fall under two different categories. The naturefacts are tools in their unchanged original state. The artifacts are based on objects that are deliberately changed to improve their usefulness. Under the first category fall the leaves that are used by chimpanzees to collect water or to wipe themselves clean and the sticks to reach an object. Toolmaking can be applied only to the second category. Artifacts are thus objects that are modified to make it a tool.

Toolmaking by primates was not discovered until October 1960 when Jane Goodall observed that chimpanzees in the wild in Tanzania make and use tools. This was a shock for the scientific community, which until then had made a neat distinction between the toolmaking humans and the nontoolmaking apes. The reaction of Louis Leakey on the report of Jane was, "Now we must redefine tool, redefine Man, or accept chimpanzees as humans."

Jane Goodall observed that chimpanzees use sticks to extract termites from their hills. The chimpanzees deliberately modify twigs and grasses into suitable tools by stripping them of their leaves. The self-made stick is then carefully inserted into a termite hill. The agitated insects will attack the stick, and once enough attackers are attached to it, the chimpanzee slowly withdraws it and eats the termites. Young chimpanzees learn the technique by imitating adults, though it takes them years to become successful termite fishers. The use of the sticks is not limited to termite and ant fishing but also includes collecting honey from beehives and digging up edible roots. The stripping of leaves from a twig can be considered the very beginning of toolmaking. Somewhat more sophisticated is the joining of two sticks together to make a longer tool for reaching high places. Chimpanzees in captivity have been observed to do so.

Stone artifacts or stone tools were long considered unique to human cultures. A trained chimpanzee named Kanzi, however, learned how to knap stones simply by watching people do it. No attempt whatsoever was made to help him position his hand correctly or make use of the proper arm motion. Chimpanzees in the

wild occasionally use stone flakes in order to obtain meat from bones. These primitive stone flakes differ little from the stone artifacts attributed to early humans. Such observations dim the difference between apes and humans, earlier defined as "Man the Tool Maker."

Different chimpanzee groups use tools in different ways, thus constituting different chimpanzee cultures. There is, however, no evidence of different toolmaking, analogous to human cultures, between the groups.

Among the apes, only gorillas seem not to be able or willing to make tools. They do use sticks as the other primates do and also use various types of containers to store water. Deliberate modification of these objects to improve its use is, however, not observed. Orangutans, on the other hand, have also been known to braid twigs into ropes to facilitate climbing. As with chimpanzees, orangutans remove inefficient aspects of naturefacts and so make it an artifact.

As compiled by Benjamin Beck, monkeys too have been known to utilize tools in many ways, but in almost all cases this concerns naturefacts, not self-made artifacts. A rare exception is formed by captive hooded monkeys that were observed while making spoons from pieces of wood to extract yogurt from narrow tubes.

Apart from primates, birds especially prove to be excellent toolmakers, such as the woodpecker finch of the Galapagos Islands, which uses a cactus spine to spear insects. This finch deliberately shortens too-long cactus spines in order to form more manageable tools. In this way it transforms a natural object into an artifact.

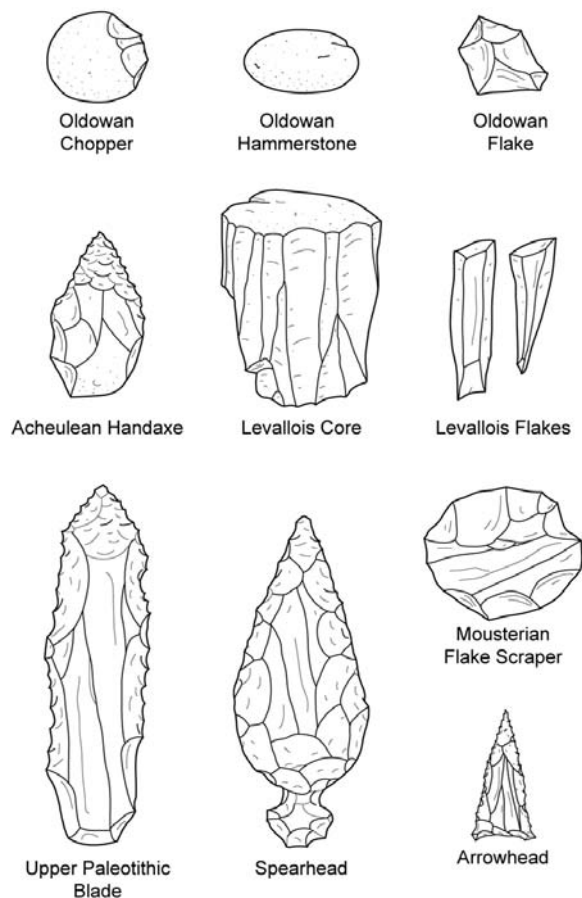
—Alexandra van der Geer

Bibliography

- Berthalet, Arlette, and Jean Chavaillon, eds. *The Use of Tools by Human and Non-human Primates*. Oxford, UK: Clarendon, 1993.
- Goodall, Jane. *The Chimpanzees of Gombe: Patterns of Behavior*. Boston: Belknap Press of Harvard University Press, 1986.

Stone Tools

Stone tools (also referred to as lithics) are artifacts created through a process called flint knapping. Flint knapping involves striking a stone with another object in order to remove flakes



A comparison of stone tool types found throughout the prehistoric record. Spearheads and arrowheads would have been hafted onto wooden implements and were not invented until 50,000 years ago. (Illustration by Jeff Dixon)

from it. The stone from which the flakes are removed is called the core. The striking object is classified as either a hard hammer or a soft hammer. Hard hammers are normally stones that are harder than the core, while soft hammers are often made from bone or antler. The waste flakes resulting from lithic manufacture are classified as debitage. The product is the tool.

There are three main techniques used to remove flakes from the core. The most basic method, called direct percussion, is to hit the hammer directly against the core. Indirect percussion involves placing a punch between the core and the hammer. When the punch is hit, the knapper is able to achieve greater flake removal precision. The third method is pressure flaking, which is used to modify a flake knapped off the core. In most cases a piece of antler or

bone is used to remove tiny flakes along the edge of the flake to shape, dull, or sharpen it. This is achieved by firmly pressing the soft hammer directly against the edge of the flake. These flint-knapping techniques can be used independently or in combination.

The Paleolithic (Old Stone Age) dates from approximately 2.5 million years ago, when stone tools first appear in Africa, to 10,000 years ago. Over these 2.5 million years, stone tools evolved as knapping techniques evolved and skill improved. As a result, archaeologists subdivide the Paleolithic into three periods. The Lower Paleolithic, dating from 2.5 million to 250,000 years ago, is predominantly made up of larger and more primitive stone tools. Generally, the core is shaped into a single tool that is used for a number of activities. There is little variability in the tool assemblages. Around 250,000 years ago the knapping technique changed significantly. Instead of shaping the core into a single tool, the core was knapped to produce usable flakes, which were then modified into tools using the pressure flaking technique. This change in knapping technology allowed the knapper to create several stone tools from one core. These flake tools dominate the Middle Paleolithic period. During this period more tool types were created, although many still seem to have been used for multiple purposes. The Upper Paleolithic, beginning around 40,000 years ago, is marked by a shift to blade tools, although flake tools continued to be manufactured. A blade is defined as a flake with a length that is at least twice as long as the width. Blades were produced from a core using the indirect percussion technique. These lithics are much more refined. Many different types of tools were created, some of which had a specific purpose.

Plant domestication and the creation of ceramics around 10,000 years ago in the Near East mark the end of the Paleolithic and the beginning of the Neolithic (New Stone Age), although stone tools continue to be made up to the present day.

—Shawn Bubel

Bibliography

Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.

Schick, K. D., and N. Toth. *Making Silent Stones Speak: Human Evolution and the Dawn of Technology*. New York: Simon and Schuster, 1993.

Olduwan Tools

The oldest stone tools found thus far come from the site of Kada Gona, Hadar, Ethiopia, and date to circa 2.6 million years ago. Several other sites in East Africa including Olduvai Gorge, for which these early artifacts are named, have also yielded stone tools. These tools have been found at sites that date back to the Lower Paleolithic period, between 2.6 million and 1.7 million years ago. The stone tools found at the various sites over the million-year time span are remarkably similar. They are grouped together as belonging to Olduwan Industry.

Olduwan tools are generally crude in form. Most are made using the hard-hammer direct-percussion technique. Locally available stone (the core) was hit with a hammerstone to remove flakes. These flakes were occasionally modified along an edge to create a scraper or were used to cut without any modification, but the more common Olduwan tools are cores from which flakes (debitage) have been removed. Based on the shape and size and the knapping technique used, Mary Leakey typologically classified the core tools found at Olduvai Gorge into different tool types. Her classification system remains widely used.

Choppers are the most basic Olduwan tool. They are created by striking off a few flakes from one end of the core to create a sharp edge. When only one side of the end is knapped, it is a unifacial chopper. If flakes are removed from both sides so that the knapped edge intersects, it becomes a bifacial chopper. Cores with more extensive flake removal are classified as discoids, spheroids, or polyhedrons based on their final shape (that being disk, sphere, or cube-shaped, respectively). However, their final shape may have more to do with the initial core shape than the knapper's vision. Eventually, the stone tools become more refined, and protobifaces begin to appear, but true bifaces, which are cores extensively knapped on both surfaces, do not appear until 1.7 million years ago.

As noted by Haviland, the appearance of Olduwan tools marks a significant technological

WHO MADE OLDUWAN TOOLS?

Between 2.6 million and 1.7 million years ago when Olduwan tools were made, there were at least three different hominids living in Africa. *Paranthropus* (or *Australopithecus*) *boisei*, *P. robustus*, and *Homo habilis* remains have been found at several sites. This situation is further complicated, as many of the sites with Olduwan artifacts are either not accompanied by skeletal remains or have bones from two different species, as is the case at the FLK Zinj site at Olduvai Gorge. Based on skeletal morphology, the robust *Paranthropus* species could have made the Olduwan tools; however, most scholars agree that it was the gracile *Homo habilis* (meaning "handy man" for this toolmaking ability) that produced them. Their main argument is based on the evolution of Olduwan into Acheulean tools, which were made by *H. habilis*'s successor *Homo ergaster* (African *Homo erectus*). Furthermore, Lower Paleolithic tools continued to be crafted long after the *Paranthropus* species died out.

—Shawn Bubel

Bibliography

- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- Leakey, M. D. *Olduvai Gorge: Excavations in Beds I and II, 1960–1963*. Cambridge: Cambridge University Press, 1971.

advance for the hominids. These tools allowed them to process their food more effectively and enabled them to incorporate new foods into their diet. Why the Olduwan tools appear is unclear, but climate change may have played an important role. Between three million and two million years ago the climate in Africa became drier. As a result, forests shrank, and grasslands increased. The hominids may have been forced to turn to other food resources in order to survive, therefore needing tools to access them. Whatever the reason, the manufacturing of Olduwan stone tools contributed to the evolution of modern humans.

—Shawn Bubel

Bibliography

- Haviland, W. A. *Human Evolution and Prehistory*. 6th ed. Toronto: Wadsworth, Thomson Learning, 2003.

Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.

Leakey, M. D. *Olduvai Gorge: Excavations in Beds I and II, 1960–1963*. Cambridge: Cambridge University Press, 1971.

Acheulean Tools

Around 1.6 million years ago the Acheulean industry developed out of the preceding Olduvan industry. These new Lower Paleolithic artifacts include more sophisticated stone tools. They are associated with *Homo ergaster* (African *Homo erectus*), who evolved from *Homo habilis* at this time. Although Acheulean tools first appear exclusively in Africa, they eventually spread into

Asia and Europe as the hominids migrated to these regions. In fact, the industry was first identified at the site of St. Acheul, in France. Lasting until at least 200,000 years ago in some areas, the Acheulean industry is the longest-lasting, most widespread lithic tradition.

The Acheulean industry includes a number of skillfully made bifacial (knapped on both surfaces) artifacts, the most famous of which is the hand axe. This teardrop-shaped tool is pointed at one end and rounded at the other. It was likely manufactured using the soft-hammer direct-percussion technique, as is the case with many of the Acheulean tools. Using a soft rather than hard hammer facilitates more precise flake removal from the core, therefore allowing the knapper to create a more symmetric tool with thinner edges.

➤ MOVIOUS LINE

The areas occupied by hominids during the Lower Paleolithic are determined mainly by the location of where stone tools are found, although fossil remains add to this assessment. By 500,000 years ago, Africa, southern Europe, and southern Asia were populated. It is assumed that the hominids traveled out of Africa into these new areas, bringing their Acheulean tool industry with them. Interestingly, however, not all sites yield Acheulean tools. In Southeast Asia, for example, the Chopper Chopping-tool industry is present. Traditional hand ax tools are also missing in the northern reaches of the newly occupied areas outside Africa. Hallam Movius was the first to note this phenomenon. The defined boundary separating the different tool traditions is now commonly referred to as the Movius Line. Since his publication, however, several sites were discovered that bring the boundary into question. However, most archaeologists agree that there remains a geographic division between the lithic industries.

—Shawn Bubel

Bibliography

Movius, H. L. "Lower Palaeolithic Archaeology in Southern and Eastern Asia." *Studies in Physical Anthropology* 1 (1949): 17–81.



Acheulean culture hand ax from St. Acheul, France. (Goran Burenhult)

➤ KOOBI FORA

Koobi Fora is located on the east side of Lake Turkana in Kenya. Discovered by Richard Leakey in 1948, it continues to be one of the richest Lower Paleolithic sites in the world. The incredible succession of deposits, dating between about 4.3 million and 0.7 million years ago, has yielded a rich sequence of fossils and artifacts. Hundreds of skeletal remains of *Australopithecus anamensis* (ca. 3.9 million years ago), *A. africanus* (ca. 2 million–1.7 million years ago), *Paranthropus boisei* (ca. 2 million–1.4 million years ago), *Homo habilis* and/or *H. rudolfensis* (ca. 2 million years ago), and *H. ergaster* (ca. 1.7 million–1.3 million years ago) have all been found. The oldest tools discovered, dating between circa 2 million and 1.8 million years ago, consist of choppers and flakes. They are classified as the KBS industry (falling within the Olduvian industry). These tools precede the Karari industry (Developed Olduvian), which includes choppers, discoids, polyhedrons, and a few protobifaces, dating to 1.4 million years ago. The beautifully crafted Acheulean tools evolved directly from these Olduvian objects.

—Shawn Bubel



Anthropologists probe the earth for artifacts at Koobi Fora, Kenya, in 1970. (Gordon Gahan/National Geographic/Getty Images)

Bibliography

Walker, A. C. "The Koobi Fora Hominids and Their Bearing on the Origins of the Genus *Homo*." In *Homo erectus: Papers in Honor of Davidson Black*, edited by Becky A. Sigmon and Jerome S. Cybulski. Toronto: University of Toronto Press, 1981.

An Acheulean pick is similar to a hand ax in size but is trihedral (three-sided) rather than bifacial. It is a bulkier, cruder artifact that is not as symmetrical as a hand ax. Cleavers have a sharp flat edge instead of the pointed end of hand axes and picks but remain rounded at the base. The flat end is often wider than the base but is much thinner. Choppers, discoids, spheroids, polyhedrons, and retouched flakes, similar to those associated with the Olduvian industry, are also found in Acheulean assemblages.

Acheulean tools are more standardized than those of the Olduvian industry, implying that they were intentionally designed by the flint knapper. Moreover, the different tool types may have been crafted to serve different purposes, although this is very difficult to prove due to the lack of preservation. Based on the large numbers of broken bone at many Acheulean sites, it is clear that the occupants were butchering animals for consumption. Stone tools would have been necessary to perform this activity. Cleavers

may have been used to butcher the animals, and retouched flakes may have been used to cut the meat. Lithics would have been employed to process plants as well. Hand axes and picks could have served to dig up roots, although they were likely used for other purposes as well.

The advance of lithic technology seen in the Acheulean industry may have been the prerequisite that enabled *Homo ergaster* to move out of the forest onto the open savanna and into the regions outside Africa. Eventually the ability to control fire, to hunt rather than scavenge, and to construct shelters, among other skills, were achieved.

—Shawn Bubel

Bibliography

Haviland, W. A. *Human Evolution and Prehistory*. 6th ed. Toronto: Wadsworth, Thomson Learning, 2003.

Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.

McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.

Asian Stone Tools

Based on the recent discovery of skeletal remains at Dmanisi, Georgia, in Southwest Asia, the first exodus of *Homo* out of Africa took place around 1.7 million years ago. The hominids traveled through Northeast Africa into Southwest Asia. Although dating slightly later, artifacts are found at a number of sites in this newly inhabited region, confirming the migration. Some of the hominids continued eastward, eventually reaching present-day China and Java. Due to the fact that the climate and environment in Southeast Asia were different than in Africa, the hominids adapted, eventually evolving into Asian *Homo erectus*.

Artifacts assumingly manufactured by *Homo erectus* differ from those of the Acheulean industry in Africa, Europe, and Southwest Asia. True hand axes and well-made bifacial tools are absent in Southeast Asia. Instead, choppers and flake tools, along with large numbers of flakes, make up the assemblages. They are grouped together as the Chopper-chopping tool industry. In this industry choppers are defined as cores with flakes removed from one end on one side (unifacial choppers), while the chopping tools have flakes removed from both sides (bifacial choppers). Flake tools are created by either purposely pressure flaking the edge of a flake in order to shape, dull, or sharpen it or through use. When a flake is used to cut, saw, or scrape, small flakes break off of the working edge. In either case, these flake tools are technically classified as retouched flakes.

The oldest confirmed Chopper-chopping tool industry artifacts in Asia come from the Nihewan Basin in China and date to about 1.66 million years ago. Other similarly early artifacts, dating to approximately 800,000 years ago, were found near Ban Mae Tha in northern Thailand and at Trinil in central Java. The best-known Chopper-chopping tool assemblage comes from Zhoukoudian Locality 1, near Beijing. More than 100,000 artifacts were discovered at this site, which was occupied numerous times between

750,000 and 25,000 years ago. Most of the artifacts found are flakes, with very few choppers or retouched flakes present. The characteristic tool is a quartzite unifacial chopper. Several *Homo erectus* remains were also found at Locality 1, confirming the link between the hominid and the tools.

During the period that *Homo erectus* occupied Southeast Asia there was very little change in the lithic technology they employed. The variability that does exist is likely due to the nature of the local stone used to create the tools and flakes. It is not until the arrival of *Homo sapiens* around 50,000 years ago that new artifacts are seen in this region.

—Shawn Bubel

Bibliography

- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Pope, G. G., et al. "Earliest Radiometrically Dated Artifacts from Southeast Asia." *Current Anthropology* 27 (1986): 275-279.
- Zhu, R. X., et al. "New Evidence on the Earliest Human Presence at High Northern Latitudes in Northeast Asia." *Nature* 431 (2004): 559-562.

Perishable Tools from the Lower Paleolithic

Stone tools make up the majority of the Lower Paleolithic artifacts due to their durability. However, perishable tools were likely important to the hominids as well. Perishable tools are made out of bone, wood, reeds, hide, skin, or other soft material. In extremely arid, waterlogged, and cold environments, perishable tools can survive, providing a more complete view of the different artifacts used by early humans.

Animal bones found at sites in Africa, Europe, and Asia occasionally have percussion marks on them, suggesting that they were used as soft hammers or for pressure flaking. Careful study of lithic artifacts has confirmed the use of bone and antler tools in the flint-knapping process, even at sites lacking preserved animal bone.

➤ OSTEODONTOKERATIC TOOLS

Osteodontokeratic tools are those made of bone, teeth, and horn. This term was first used by Raymond Dart to classify the bone remains at Makapansgat, South Africa. Dart believed that the australopithecines found at the cave site made tools out of animals they hunted. He noted the broken animal bones had rounded edges, smoothed and polished surfaces, spiral fracturing, and damaged ends, which he believed to be the result of hominid processing. His findings are no longer accepted by most archaeologists. The broken bones at Makapansgat and other early Lower Paleolithic sites are now most often viewed as the result of carnivore activity or natural weathering. Furthermore, as Brain concludes, the

australopithecine remains found at Makapansgat were actually brought in by carnivores, such as lions and hyenas, along with the other animal bones. In other words, they were the prey, not the hunters. There is no evidence that the australopithecines made either bone or stone tools.

—Shawn Bubel

Bibliography

- Brain, C. K. *The Hunters or the Hunted? An Introduction to African Cave Taphonomy*. Chicago: University of Chicago Press, 1981.
- Dart, R. "The Osteodontokeratic Culture of *Australopithecus prometheus*." *Pretoria: Memoirs of the Transvaal Museum* 10 (1957): 1–105.

At the Acheulean sites of Fontana Ranuccio, Magliocchia, and Castel di Guido in Italy, elephant bone artifacts were discovered. These artifacts were knapped on both sides to create bifacial tools. Scraperlike artifacts, also made of elephant bone, were found at the non-Acheulean site of Bilzingsleben, Germany. These bifaces and scrapers were knapped the same way one would make a stone tool, implying no change in technology but an expansion of raw material use.

A few wooden artifacts have also been found, although it is debatable whether some are true artifacts or the result of natural formation processes. A piece of willow wood shaped and polished through use came from Gesher Benot Ya'aqov, Israel. This piece and others from the 780,000-year-old site may be the oldest perishable tools discovered. A possible hunting spear point came from Clacton-on-Sea, England, although others argue that it is an ice probe, a digging stick, or a stake. At the site of Kalambo Falls in Zambia, Clark interpreted several finds to be shaped wooden artifacts, one of which may be a club. The most remarkable wooden artifacts come from Schoeningen, Germany. At this 400,000-year-old site, three carefully designed wooden spears were found along with a double-pointed wooden stick and three wooden branches that may have been used as handles for stone tools.

➤ THIEME SPEARS

Archaeological investigations led by Hartmut Thieme at the Schoeningen coal mine site in northern Germany uncovered three wooden spears in 1995. They were remarkably well preserved in a deposit of organic mud together with butchered animal bones and lithic artifacts. The spears, each made out of a separate spruce sapling, range in length from 5.9 to 7.5 feet (1.8 to 2.3 meters). They were all manufactured the same way. The harder and denser wood at the base of the tree was sharpened to create a point, while the opposite end tapers gently. Remarkably, each spear was weighted like a modern javelin, with the balance point situated at about one-third its length from the point. Based on the morphology of the spears, Thieme interprets these to be projectile weapons rather than thrusting spears. If this is the case, these approximately 400,000-year-old wooden artifacts may be the oldest throwing spears ever discovered.

—Shawn Bubel

Bibliography

- Thieme, H. "Lower Palaeolithic Hunting Spears from Germany." *Nature* 385 (February 27, 1997): 807–810.

Besides the bone and wooden artifacts, no other Lower Paleolithic perishable tools have been found. Nevertheless, Pope believes that bamboo was used by *Homo erectus* to create efficient, durable, and easily portable tools. Bamboo artifacts would have complemented the lithic tools of the chopping tool industry of Asia. According to Pope, the effectiveness of bamboo artifacts may explain why the East Asian stone tools seem of lesser quality when compared to the contemporary Acheulean industry. Until bamboo tools are discovered, however, their use remains difficult to prove. Similarly, reed and leather tools may have been created by the hominids living in Africa, Europe, and Asia but are missing from the archaeological record.

—Shawn Bubel

Bibliography

- Belitsky, S., N. Goren-Inbar, and E. A. Werker. "Middle Pleistocene Wooden Plank with Man-made Polish." *Journal of Human Evolution* 20 (1991): 349–353.
- Clark, J. D. *Kalambo Falls Prehistoric Site*, Vol. 1. Cambridge: Cambridge University Press, 1969.
- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- Oakley, K. P., et al. "A Reappraisal of the Clacton Spearpoint." *Proceedings of the Prehistoric Society* 43 (1977): 13–30.
- Pope, G. G. "Bamboo and Human Evolution." *Natural History* (October 1989): 48–56.

Structures

An archaeological structure is a nonportable object, such as a wall, floor, or shelter, constructed through human (or hominid) intention. Based on the seemingly patterned arrangements of stones, early structures have been proposed at a handful of Lower Paleolithic sites, the oldest of which is the 1.75 million-year-old site of Dk1 at Olduvai in northern Tanzania. The discovered circular feature of basalt rocks was initially interpreted as a structure, but subsequent investigations have shown it to be the result of tree root growth. Natural processes have also been identified as the agents that created the 450,000–380,000-year-old stone arrangements at Terra Amata in southern

France. This also seems to be the case for Soleilhac, in southeastern France. Roebroeks and Kolf-schoten (1994) interpret not only the 65-foot (20-meter) line of basalt rocks but also the suggested pre-Acheulean artifacts to be of natural origin.

Concentrations of artifacts and bones may mark the presence of huts or similar structures at Bilzingsleben and Ariendorf 1 in Germany and Le Lazaret in France. At the 350,000-year-old site of Bilzingsleben, three circular to oval ring patterns of large stones and bones have been explained as weights to secure tentlike structures. These features were complemented with hearths and activity areas in front of them. Excavations at Ariendorf 1, dating between 301,000 and 242,000 years ago, revealed several large stones, partly surrounded by bones and artifacts, that may belong to the base of a structure. The fact that the quartzite stones and archaeological remains were found within a sandy-silt deposit suggests cultural placement. At the 186,000–127,000-year-old cave site of Le Lazaret the concentration of artifacts and bones seems to have been bounded by a line of large rocks running parallel to the cave wall. Lumley and Bonne believe that these rocks may have served as supports for tent poles. Although compelling, none of the cases have been confirmed.

Unequivocal evidence of structures prior to the advent of modern humans 50,000 years ago is limited, and no definite structures are seen prior to 130,000 years ago. Archaeologists agree, however, that structures of some sort would have been essential for those living in the cooler regions of Eurasia and were probably used in other regions as well. The lack of conclusive evidence may be due to the fact that many of the early structures were likely constructed with organic materials that rarely preserve over time. Furthermore, most structures would have been temporary, used only for a short time as the people moved across the landscape. Therefore, they would have been quickly constructed with little or no intention of perpetuation.

—Shawn Bubel

Bibliography

- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.

Leakey, M. D. *Olduvai Gorge*, Vol. 3, *Excavations in Beds I and II, 1960–1963*. Cambridge: Cambridge University Press, 1971.

Lumley, H. de, and Y. Boone. “Les structures d’habitat au Paléolithique inférieur.” In *La Préhistoire Française*, edited by H. de Lumley. Paris: Centre National de la Recherche Scientifique, 1976.

Mania, D. “The Elbe-Saale Region (Germany).” In *The Earliest Occupation of Europe*, edited by W. Roebroeks and T. Van Kolfschoten. Leiden: University of Leiden, 1995.

Potts, R. B. “Hominid Hunters? Problems of Identifying the Earliest Hunter/Gatherers.” In *Hominid Evolution and Community Ecology*, edited by R. A. Foley. London: Academic Press, 1984.

Roebroeks, W., and T. Van Kolfschoten. “The Earliest Occupation of Europe: A Short Chronology.” *Antiquity* 68 (1994): 489–503.

Villa, P. *Terra Amata and the Middle Pleistocene Record of Southern France*. Berkeley: University of California Press, 1983.

Caves, Rockshelters, and Open-air Sites

The archaeological sites of our earliest ancestors fall into three types: caves, rockshelters, and open-air sites. Each has produced important evidence for the evolution of our species and the technologies they employed. Caves are generally described as subterranean passages that have three distinct elements: a light zone, where natural sunlight illuminates the entrance to the cave; an intermediate zone, where natural light penetrates but does not brightly illuminate the interior of the cave; and a dark zone, in which no natural light of any kind can be seen. There is a common belief that most of our ancestors were “cavemen” and lived in the deep interiors of caves, but this is a misconception. Although some of our ancestors, notably *Homo neanderthalensis* as well as our own species, used the light zones of caves for habitations, none ever used the dark zones of these spaces as habitations. However, there is ample evidence from the Upper Paleolithic of western Europe that dark zones were used for ritual purposes. Examples of caves used in this manner include Lascaux, Altamira, and Chauvet Cave.

Occasionally, however, remains of our ancestors are found deep in the dark zones of caves.

DK 1

The Lower Paleolithic site of DK1 (Douglas Korongo) in Olduvai Gorge, Tanzania, dates to approximately 1.75 million years ago. Excavations lead by Mary Leakey in 1962 uncovered Olduvai artifacts, including choppers, polyhedrons, discoids, spheroids and scrapers, fragmented animal bones, and a partial *Homo habilis* skull. Associated with these remains was a circular concentration, 13–16 feet (4–5 meters) in diameter, of loosely piled basalt rocks on the same surface upon which the artifacts were found. Most of the rocks measured 4–10 inches (10–25 centimeters) long. The maximum height of the stone concentration was 11.8 inches (30 centimeters). The area immediately outside the stone circle, within a radius of about 20 inches (50 centimeters), was relatively void of stones. Leakey suggests that this feature was either the remnants of a stone windbreak or the base of a rough shelter. If this is the case, it may be the oldest structure in the world. Conversely, Potts argues that the circular feature was created naturally. He proposes that lateral tree roots growing into the lava deposit directly below the site broke it apart and brought the basalt rocks to the surface. Even if Potts is correct, there is no doubt that *Homo habilis* manufactured stone tools at DK1.

—Shawn Bubel

Bibliography

Leakey, M. D. *Olduvai Gorge*, Vol. 3, *Excavations in Beds I and II, 1960–1963*. Cambridge: Cambridge University Press, 1971.

Potts, R. B. “Hominid Hunters? Problems of Identifying the Earliest Hunter/Gathers.” In *Hominid Evolution and Community Ecology*, edited by R. A. Foley. London: Academic Press, 1984.

Examples include Swartkrans in southern Africa and Sima de los Huesos in Atapuerca, Spain. At Swartkrans, the remains of australopithecines found in the caves appear to have been deposited by predators who consumed their prey while resting in trees above the entrance to the cave. The bones, some of which exhibited tooth marks, fell into the entrance, which later collapsed. At Sima de los Huesos, however, the remains of a Neanderthal-like species appear to

➤ LE LAZARET

Le Lazaret cave is located in southern France. It was occupied sometime between 186,000 and 127,000 years ago. The spatial location of the Acheulean archaeological remains suggests the construction of a structure inside the cave. Lithic artifacts and fragmented animal bones were found concentrated between the cave wall and a line of large rocks in an area approximately 36 by 11 feet (11 by 3.5 meters). The excavators speculate that the rock line supported poles used to pitch a tent against the cave wall. Possible entrances are marked by two breaks in the rock line, where artifacts flow out of the structure. Two circular charcoal pockets, thought to be hearths, were located near the cave wall. Interestingly, a large number of small seashells were also found, which may have been attached to seaweed brought into the cave for bedding. Substantive evidence confirming the presence of a human-constructed shelter at Le Lazaret is absent, however.

—Shawn Bubel

Bibliography

Lumley, H. de and Y. Boone. "Y. Les structures d'habitat au Paléolithique inférieur." In *La Préhistoire Française*, edited by H. de Lumley. Paris: Centre National de la Recherche Scientifique, 1976.



Excavation at Le Lazaret cave in southern France. (Marc Charuel/Sygma/Corbis)

have been intentionally deposited into the cave system essentially intact. This may represent a form of early mortuary, or burial practice, but since almost no other material aside from bones has been recovered from the cave, it is difficult to make this assertion.

Rockshelters are natural features that exhibit overhangs that protect inhabitants from wind, rain, snowfall, or other elements. Rockshelters do not have dark zones. In the modern era, hunters and gatherers use these overhangs for temporary camping stops or as habitations and occupied them for relatively long periods of time. These kinds of uses can also be seen deep in our prehistory.

Open-air sites are found in many different kinds of places upon the landscape. The simplest of these may be sites where someone had stopped to knap flint to make a stone tool. Here, the remains left behind would be very sparse. Some open-air sites are long-term habitations and contain the remains of structures and other features built by our ancestors. Depending on how long or how many times the sites were occupied, these sites can accumulate large amounts of artifacts.

Because they are relatively easy to locate, caves and rockshelters have been worked extensively by archaeologists seeking to obtain data about our deep past. In contrast, open-air sites

of early time periods are very difficult to locate because in many cases, they have been buried or destroyed by natural processes. However, to get a complete picture of the lifeways of our ancient ancestors, it is important to make an effort to discover sites of all three types, because each provides a slightly different picture of how people used the landscape in the past.

—Mark Aldenderfer

Bibliography

- Fagan, B. *People of the Earth*. 13th ed. Upper Saddle River, NJ: Prentice Hall, 2009.
- Scarre, C., ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2009.

Fire

The ability to control fire is a milestone in human evolution. Where and when this was achieved is intensely debated, however. Many archaeologists suggest that fire was first controlled in Africa and that it is this skill that allowed the hominids to travel out of Africa into Asia and Europe. Others believe that fire was controlled long after the migration to regions outside Africa. Resolving this issue is complicated due to lack of preservation and the difficulty of distinguishing a natural fire from a cultural one.

Evidence for the earliest human-made fire may come from the sites of Koobi Fora and Chesowanja in Kenya. Baked clay deposits dating to 1.5–1.4 million years ago suggest purposely lit fires, although Isaac argues that naturally ignited smoldering vegetation could have produced the same results. Pieces of burned bone were found in cave deposits dating between 1.4 million and 1.0 million years ago at Swartkrans, South Africa. According to Brain and Sillen, the 270 charred bone fragments denote controlled fire use. Their experiments demonstrated that the bones were heated beyond what a natural fire would produce, but other scholars remain unconvinced. Similar disagreements relating to the dispersed ash found at the Cave of Hearths and Montagu Cave in South Africa persist.

Lower Paleolithic sites outside Africa are marked with the same problems. Dispersed char-

coal was found at Torralba and Ambrona, Spain, as well as at Prezletice in the Czech Republic, but there is no way to prove human involvement. Alternatively, the circular feature of fire-cracked basalt rocks at the 700,000-year-old site of Kao Poh Nam, Thailand, could be the oldest campfire, but this discovery awaits authentication. What seems to be the oldest confirmed evidence of culturally made fire comes from Locality 1 at Zhoukoudian, China. Thick ash deposits, ash lenses, burned stones and bones, and charcoal pieces dating to as old as 600,000 years ago were found at the site. Although the thicker ash beds and some of the burned remains may have been deposited in the cave by natural processes, the ash lenses seem to attest to human activity. However, it is not until the Middle Paleolithic period (beginning around 250,000 years ago) that unequivocal evidence of human-made hearths is seen.

Regardless of when humans learned to control fire, they probably first obtained it from sources that were already burning, such as brush fires, volcanic eruptions, and oil and gas seepages. Early humans may have camped near or used the natural resource to scare off predators or warm themselves. Once they learned how to harness fire, they were able to use it at distant open-air and cave sites, especially those that required protection from predators.

—Shawn Bubel

Bibliography

- Brain, C. K., and A. Sillen. "Evidence from the Swartkrans Cave for the Earliest Use of Fire." *Nature* 336 (1988): 464–466.
- Gowlett, J. A., et al. "Early Archaeological Sites: Further Hominid Remains and Traces of Fire from Chesowanja, Kenya." *Nature* 294 (1981): 125–129.
- Isaac, G. L. "Early Hominids and Fire at Chesowanja, Kenya." *Nature* 296 (1982): 870.
- Klein, R. G. *The Human Career: Human Biological and Cultural Origins*. 2nd ed. Chicago: University of Chicago Press, 1999.
- McKee, J. K., F. E. Poirier, and W. S. McGraw. *Understanding Human Evolution*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Tattersall, I., and J. H. Schwartz. *Extinct Humans*. New York: Westview, 2000.

Seeing Evidence of Fire in Deep Antiquity

When our ancestors began to control and use fire in their daily lives is a contentious issue in the discipline of archaeology. Fires, of course, can be created by natural events such as lightning strikes, and so it is crucial to define what kinds of evidence are unequivocal indicators of hominin or human activity. Ideally, the best evidence would be from hearths, or intentional facilities created by our ancestors to contain the fire. Burned or charred bone, burned artifacts, remains of wood ash, soil discolorations resulting from heating, and combinations of these found in a small, apparently bounded, space would be most convincing. Such features become very common after 130,000 years ago and thus indicate that *Homo sapiens sapiens* had full control of fire. But are there any earlier sites?

Because of problems of archaeological site preservation, the data on the deep antiquity of

the use of fire is very scarce. Sites like caves or rockshelters, for example, are likely to preserve evidence of fire better than open-air sites. The two early sites that have the best, if still controversial, evidence for the controlled use of fire are Gesher Benot Ya'aqov in Israel, dated to approximately 800,000 years ago, and Zhoukoutien in China, which is dated to between 670,000 and 400,000 years ago. At Gesher Benot Ya'aqov, small concentrations of burned lithic debris are surrounded by scatters of unburned artifacts and animal bones. These concentrations may be hearths in the sense described above. At Zhoukoutien, thin strata of burned soils that contain charred and burned bones suggest hearths as well. Both of these sites fall within the time frame of *Homo erectus*, and fossil remains of this species have been recovered from Zhoukoutien.

Understanding when our ancestors began to use and control fire has a number of important implications for the history of our species. Fire

➤ ZHOUKOUTIAN

Zhoukoudian (Locality 1) is a cave site situated 30 miles (45 kilometers) southwest of Beijing. Excavations began in 1927, and since then remains of more than 40 *Homo erectus* individuals and roughly 100,000 artifacts belonging to the Chopper-chopping tool industry have been discovered. In addition, thick ash beds, ash lenses, burned stones and bones, and charcoal pieces were found throughout the 131 feet (40 meters) of deposits. Tattersall and Schwartz note that the thicker ash beds and some of the burned remains may have been deposited by natural processes, but most archaeologists are convinced that the ash lenses attest to learned fire technology. Based on recent dates acquired, the site was occupied for 350,000 years, between about 600,000 and 250,000 years ago. If *Homo erectus* is responsible for the ash lenses, Locality 1 may be the earliest site in the world with culturally made campfires.

—Shawn Bubel



(Best View Stock)

Tattersall, I., E. Delson, and J. Van Couvering. *Encyclopedia of Human Evolution and Prehistory*. New York: Garland, 1988.

Tattersall, I., and J. H. Schwartz. *Extinct Humans*. New York: Westview, 2000.

Bibliography

Conroy, G. C. *Reconstructing Human Origins: A Modern Synthesis*. 2nd ed. New York: Norton, 2005.

would have made it possible for our ancestors to use the coldest environments on the planet. The absence of sites in much of the higher latitudes of the Northern Hemisphere before 400,000 years ago suggests that the controlled use of fire was not widespread before that. Fire is also important because cooking makes all foods more digestible. The common use of fire after 130,000 years ago may be a signal of one

aspect of behavioral modernity in our species, one that may have given those groups who controlled it effectively a competitive edge over those who did not.

—Mark Aldenderfer

Bibliography

Wrangham, R. *Catching Fire: How Cooking Made Us Human*. New York: Basic Books, 2009.

■ Introduction: The Tools and Technologies of Early Modern Humans, 100,000–10,000 Years Ago

With the appearance of anatomically modern humans after 100,000 years ago, stone tool technologies underwent a series of dramatic changes when contrasted to earlier periods of human evolution. For the preceding two million years, the pace of technological change was relatively slow, and new technologies and tool forms appeared fairly gradually. In contrast, after 100,000 years ago the pace of change in the range of flint knapping (stone toolmaking) technologies and the numbers of tool forms themselves intensified. These changes can be attributed to a number of factors, the most prominent of which was the expansion of niches occupied by our species. After 60,000 years ago, our ancestors began to move for the second time out of Africa and into a series of highly diverse ecological niches, including deserts, high plateaus, the subarctic, and tropical forests. Although the characteristics of an ecological niche do not in themselves determine the specific stone tool reduction strategies or the forms that tools take, it is clear that different niches created new constraints and opportunities for our ancestors regarding their subsistence adaptations and also that changes in stone tool technologies were an integral aspect of the process of adaptation to them.

The term “Upper Paleolithic” is often used to describe the stone tool technologies of this period, and historically it has been generally applied to technologies found in Europe and the Near East. This generic term is replaced with

more regional and local terms as the number of dated tool assemblages from excavated archaeological contexts increases.

Although different niches led to the development of distinctive local technologies and tool forms, four general trends that crosscut these niches can be observed: the appearance of sophisticated bifacial reduction strategies, blade-core technologies, more special-purpose tools, and a wide range of composite tools.

Although bifacial technologies can be found as early as the Acheulean tradition, after 100,000 years ago bifacial tool reduction strategies became more sophisticated. Bifacial strategies conserve raw material because more finished forms can be made for a given quantity of raw material. Bifacial tools are those that are worked on two faces, and the most common of the tool forms produced by this technology are projectile points of different shapes and sizes, depending on the task for which they are intended. Tool functions served well by bifacial implements also include cutting and slicing soft materials (“knives” with thin sharp edges) and sawing or whittling wood, bone, or antler (tools with thicker edges).

Blade-core technologies create prismatic blades, which are long, thin, and narrow flakes. This reduction strategy conserves even more raw material than a bifacial strategy. Blades can be easily transformed into a wide variety of useful tools, including burins, scrapers, awls, and knives.

Throughout this period, the number of tool forms increases dramatically. New technologies

make this possible, but the appearance of such diversity in tool forms also means that our ancestors were using them for a wider range of activities. Ethnography informs us that tools become more specialized in their forms as they are turned to very specific tasks.

A good example of this is the set of tools used for hide working. Our ancestors used animal hides for shelter and also for clothing of different styles and qualities. To make simple cloaks of hide, it is only necessary to remove the fatty tissue on the inside of the hide to make it usable. Relatively large crude scraping tools are sufficient for this task. However, as clothing becomes more complex and requires more steps for its production, more tool forms are required. Although the larger tools may still be used for the initial steps of hide preparation, smaller tools with specific forms, perhaps hafted, may be used for finer work in which more control is required.

Another set of tool forms that appears during this period is that used to work bone, antler, and wood. Although it is likely that more distant ancestors used stone to work these materials, apparently these activities did not require special tool morphologies. In the Upper Paleolithic, special tool forms to work these materials become more common. Tools such as burins, easily made from prismatic blades, are used to score and groove bone or antler so that it can be carved or split more easily. The end products of bone working were tools such as barbed projectile points, bone or antler hafts, harpoons, and needles.

Composite tools are those made of more than one raw material. The simplest composite tool is a spear made of wood tipped with a stone or bone point. This kind of composite tool was probably made by *Homo neanderthalensis*. However, during the Upper Paleolithic, the range of composite tools increased dramatically. Many of these tools were used for hunting. For instance, wooden spear shafts were edged with small broken segments of prismatic blades (bladelets). This created a weapon that would tear flesh more effectively than a spear tipped with a stone point. One important innovation in hunting tools was to create so-called foreshafts, which were smaller bone or antler tools that were placed on the end of wooden spears. The stone tip would then be placed in the foreshaft.

Archaeologists believe that foreshafts were created to preserve the most expensive part of the hunting equipment, which was the wooden shaft of the spear itself. Small, more specialized stone tools were used to make these foreshafts.

At the end of the Upper Paleolithic, primarily in the Near East, a new stone tool reduction strategy emerges, one based upon the creation of small blades, or microliths. The term “Epipaleolithic” is used to describe the cultures making these tools. Microblades are intentionally made very small blades that are used in composite tools similar to those made with snapped bladelets made during the Upper Paleolithic. Some archaeologists have argued that microlithic tools were used to make complex hunting weapons that were used to hunt a wider variety of animals, including smaller species that were ignored in previous periods. This change in stone tool technology and hunting strategy is coincident with increased reliance upon wild plants and increasing sedentism. Microlithic technologies became much more common across much of the Old World as deglaciation progressed.

—Mark Aldenderfer

Bibliography

- Gamble, Clive. *The Paleolithic Societies of Europe*. Cambridge: Cambridge University Press, 1999.
- Klein, Richard. *The Human Career: Human Biological and Cultural Origins*. 3rd ed. Chicago: University of Chicago Press, 2009.

Hands, Minds, and Tools

The ability to use tools is not restricted to humans. Chimpanzees in West Africa use sticks to batter the shells of nuts to crack them open. What distinguishes the use of tools among humans from the realm of other living creatures is the diversity and sophistication of tools for general and specialized use that humans have designed in the course of cultural history. The ability to use tools reaches beyond our species (i.e., *Homo sapiens sapiens*, or modern humans) into the remote past and includes various earlier hominins, the first being *Homo habilis*.

The earliest tools that were made of stone appear some 2.6 million years ago, found at sites in Ethiopia (Hadar and Gona regions) and Kenya (shore of Lake Turkana). According to their

mode of production and criteria of their specialization, stone tools are categorized into five modes: Mode 1 (simple chopping tools), Mode 2 (bifacially flaked tools), Mode 3 (standardized and retouched flakes), Mode 4 (narrow stone blades), and Mode 5 (microliths, or small delicate artifacts). With increasing complexity of the industries to produce the desired shape or type of an instrument, the human mind is challenged to apply innovative technologies. The thrust of innovation is spurred by the demands for functional specialization of the tools. The innovations of Modes 4 and 5 are associated with modern humans in the Eurasian context.

The finds of long spears near Schoeningen (northern Germany), dating to some 330,000 years BP, is evidence for the skills of *Homo erectus* who roamed the region before the Ice Age. Various abilities have to be activated to guarantee a successful production and use of a spear, including the choice of a suitable material for reuse that would not break after the first throw, the hardening of the tip in fire, learning how to balance the weapon, and practicing the coordination of body movement and the interplay of fingers and thumb. In order to hunt with a spear the hunter has to learn how to track down animals and how to approach them within the range of the weapon. The hunters who used the spears—the oldest known in the world—in the remote past killed wild horses, which is evidenced by the bone remains in the campsite.

The technical skills of Neanderthals were more advanced. This species devised a remarkable improvement in the fabrication of a spear, namely incising the tip and inserting a sharp stone implement. Spears, clubs, and hand axes were used by hunters in the Upper Paleolithic. The invention of bow and arrow appeared much later in the arsenal of weapons designed by modern humans. The pictures in cave and rock art of Africa and Eurasia that depict humans with spears belong to an older period than those that feature hunters with bows and arrows. Although a spear is a tool that is far too complex in its design and function to be used by chimpanzees, this instrument is much less complex than the ensemble of bow and arrow.

The question arises as to how an elder hunter would have instructed a member of the

THE MIDDLE STONE AGE OF AFRICA

Until recently, it was believed that behaviorally modern humans first emerged in the Upper Paleolithic of western Europe around 50,000 years ago. New evidence from Africa, however, challenges that belief, and stone tools play a significant role in that challenge. The discovery across the continent of a wide variety of complex tool forms suggests that their makers had created composite tools forms—likely made of stone and wood—much earlier than had been previously assumed. In Africa, the Middle Stone Age is dated between roughly 190,000 and 50,000 years ago. Stone points from Howieson's Poort in southern Africa, dated between 70,000 and 60,000 years ago, may have been used as tips on wooden spears. Small geometric-shaped microliths have been discovered at the site of Mumba in Tanzania and are dated to 65,000 years ago. Typically, microliths are used to create a sharp serrated edge along a wooden shaft. They are embedded into the wood, thus creating a powerful thrusting spear that does more damage to the animal into which they are thrust than spears with simple sharp points. More complex tool forms suggest changes in hunting strategies or species targeted. These tool forms, together with other kinds of evidence such as decorative art, extensive use of red ochre in nonfunctional settings, and more complex settlement patterns, all point to a wider behavioral repertory in these late Middle Stone Age peoples.

—Mark Aldenderfer

Bibliography

Hovers, E., and S. Kuhn, eds. *Transitions before the Transition: Evolution and Stability in the Middle Paleolithic and Middle Stone Age*. New York: Springer, 2006.

younger generation to build and use a bow. Was it necessary to use language for instruction, or could the training be carried out through productive action and visualization of techniques? There are those who think that the unfolding of language was stimulated by instructive needs to transmit technical knowledge from one generation to the next. Others believe that the process of language skills was independent from such demands. Instruction with or without language

is not a matter of opposite alternatives but rather is one of choice on demand. There are certain phases in the process of technical instruction that work without language, while others require verbal explanation.

Since the time of *Homo erectus*, who appeared some 1.6 million years ago, the brain of hominins has been equipped with the neurological infrastructure for symbolic activity. Language is a sign system whereby individual verbal signs have arbitrary symbolic meaning. Capacities involving symbol making and abstract thinking alike are required for the manufacturing of complex tools as well as for the use of language. In all probability, the skills of tool industry interacted vividly with linguistic skills. All in all, the use of verbal signs in connection with activities to manufacture and apply tools was just one trajectory among others to enhance the evolution from protolanguage to complex language.

There is a special facet in the relationship between manual and mental activities, involving language, and this is the specialization of language usage in association with the division of labor. The assumption has been made that specialized tools such as stone scrapers (to clean animal skin) or bone needles (to tie pieces of skin with fibers for clothing) were used by women and also manufactured by women. So, a mother would have instructed her daughter to produce certain tools and how to use them. In a similar way, a father would have instructed his son to make and use a hunting weapon. The distinction between women's language and the terminology of men's occupations, which is first documented in Sumerian texts of the third millennium BCE, may find its origin in remote prehistoric traditions.

—Harald Haarmann

Bibliography

- Barham, L., and P. Mitchell. *The First Africans: African Archaeology from the Earliest Toolmakers to Most Recent Foragers*. Cambridge and New York: Cambridge University Press, 2008.
- Deacon, T. *The Symbolic Species: The Co-evolution of Language and the Human Brain*. London and New York: Penguin, 1997.
- Haarmann, H. *Foundations of Culture: Knowledge-construction, Belief Systems and Worldview in Their Dynamic Interplay*. Frankfurt, Berlin, Oxford, and New York: Peter Lang, 2007.
- Lewin, R., and R. A. Foley. *Principles of Human Evolution*. 2nd ed. Malden, MA, and Oxford, UK: Blackwell, 2004.
- . *Spears from Schöningen; Man and Hunt about 400,000 Years Ago*. Stuttgart: Konrad Theiss, 2007.
- Lewis-Williams, D. *The Mind in the Cave*. London: Thames and Hudson, 2002.
- Mithen, S. "The Hunter-Gatherer Prehistory and Human-Animal Interactions." *Anthrozoös* 12 (1999): 195–204.
- . *The Prehistory of the Mind: A Search for the Origins of Art, Religion and Science*. London: Thames and Hudson, 1996.
- Thieme, H., ed. *Die Schöninger Speere: Mensch und Jagd vor 400,000 Jahren*. Stuttgart: Theisse, 2007.

Mousterian Lithic Industry

The Mousterian lithic industry from Middle Paleolithic times was very systematically executed by its manufacturers. This industry dates from circa 120,000 to 40,000 BCE. This technology for making chipped stone artifacts flourished in western and central Eurasia, South Asia, the Middle East, and Africa during most of that time span.

The different artifact combinations of 55 different tool forms seem to be functional tool sets, although some geographic variation has been observed. The Middle Eastern Mousterian is nearly always derived from specially prepared cores known as the Levalloisian technique, but in Europe and central Asia additional ways served to prepare cores for deriving flakes. In North Africa, the Aterian variant exhibits a hafting tang, while the Pontic in central Italy consists of small artifacts. The southwestern French and northern Spanish variant is distinguished by extremely skilled and systematic tool manufacture.

The Mousterian represents the tool inventory of Neanderthal humans (*Homo neanderthalensis*) in Europe, central Asia, and parts of the Middle East, but the makers of the Mousterian are not so well known in Africa and South Asia.

Besides flaked stone tools of flint there are a small number of ground stone artifacts such as abraders, polishers, and hammerstones. Except for hammerstones, such tools are very rare. Art-

work consists of a few beads of bone and shell. In the European Balkans, some fine points were used to make flutes from cave bear foot bones.

These final Mousterian Audi assemblages are the only assemblage combinations with a chronological implication. All the other Mousterian assemblages date from circa 120,000 to 75,000 BCE, the time of the last interglacial and the onset of the final glaciation, the Wurm in Europe. All the other four kinds of assemblages are made up of various combinations of the same 54 or similar kinds of tools.

The basic tool combinations form the sets Typical Mousterian, Mousterian of Acheulean Tradition, Set A and Set B, La Quina, Ferrassian, and Denticulate Mousterian. In general, all the combinations could be made with either of the two basic flaking techniques. The Levalloisian or prepared core technique produces thinner flakes than the discoidal core technique so that the Ferrassian is very similar to the more massive La Quina assemblage made from discoidal cores, but the Ferrassian has the thinner flakes. The Levalloisian struck flakes always have tiny flake scars formed by the preparation of the point of impact for the hammerstones that removed the flakes.

The Typical Mousterian is the most generalized of all the Mousterian assemblages and can be made with either the Levalloisian prepared core technique or the discoidal core. This assemblage has a rather full range of tool types, which includes sidescrapers and endscrapers, and is the one with the most Mousterian triangular points. This category includes a number of different tools in themselves, some being knives and others perforators, and a few of the thinner ones may even be projectile points. Typical assemblages are the ones that accompany mammoth kill sites in Europe.

The Mousterian of Acheulean Tradition, Set A, includes bifacial tools sometimes called hand axes. These are much smaller and thinner than the older Acheulean true hand axes, forming flat equilateral triangles. The use of these implements is unknown. Knives seem a bit more common in this kind of Mousterian assemblage also, and these assemblages are always found in the early last glaciation before the Main Würm Interstadial Complex.

A later Mousterian with hand axes is called Set B or Audi Mousterian, but here the hand axes are rarer, smaller, but less carefully flaked and triangular than those of Set A. These tools are joined by a kind of backed knife with a straight cutting edge and a semicircular back that is blunted so that the pressure of a finger can be exerted against it in use. The knives are called Audi Points. The Set B assemblage occurs at the top of Mousterian stratigraphy as a late Mousterian.

The La Quina Mousterian consists primarily of large and thick ovate sidescrapers, which seem to be used in the first stages of mammal hide preparation. In western Europe, where children are the only deceased to receive grave goods, these are La Quina-type sidescrapers. These are always made with the discoidal core technique and may make up nearly 60 percent of the tools found.

The Ferrassian is very similar to La Quina except that the thinner sidescrapers are made on flakes produced on Levalloisian cores.

The Denticulate Mousterian is another specialized kind of assemblage, being made up of predominantly small flake tools with irregular serrations along the cutting edge. These may make up over 60 percent of the tools in a Denticulate Mousterian. It is postulated that these are cutting tools for plants, but at Chassemy in northern Champagne, France, they occur at an open creekside site and fireplace where freshwater shellfish were opened.

These Mousterian lithic combinations are puzzling but do convey an idea of the mental sophistication and manual dexterity of the Neanderthals who made them. The amount of planning required for the preparation of the cores to make flakes is impressive, and when cutting implements are desired, a flake is produced that requires minimal subsequent retouch to shape it.

—Ralph Rowlett

Bibliography

- Dibble, Harold. *The Middle Paleolithic: Adaptation, Behavior, and Adaptability*. University of Pennsylvania: University Museum Publications, 2003.
- Kuhn, Steven. *Mousterian Lithic Technology*. Princeton, NJ: Princeton University Press, 1995.

The European and Southwestern Asian Upper Paleolithic

Developments in Europe and Southwest Asia (Near East) during the Upper Paleolithic, a period lasting broadly from 40,000 to 10,000 years ago, in terms of early human activities allows for the examination of technological changes by archaeologists that allowed for particular lifeways in the increasing complexity of human societies. Moreover, this is the period when early humans (*Homo sapiens sapiens*) replaced Neanderthals in Europe. Early human societies formed during this period adopted lithic assemblages composed of blades and intricate composite tools and also developed cultural manifestations in cave art and other forms of material culture. Questions over the interactions of early humans and Neanderthals and what ultimately became of Neanderthal society are still being considered by archaeologists based on the evidence available from this period of history. The Upper Paleolithic encompassed revolutionary changes in human culture and society, shaping the understanding of how anthropologists conceive of the beginnings of the behaviors and cognitive abilities of modern man through the study of technological changes that occurred during this period.

Long-term developments during the Upper Paleolithic in early human societies, based on archaeological evidence, suggest significant changes from the prior Middle Paleolithic period in terms of cultural, material, and behavioral manifestations. Population increases and the development of exchange networks between Upper Paleolithic societies indicate the establishment of trade as a viable economic function between hunter-gatherer bands. Such early human societal lifeways have allowed archaeologists to decipher the shift from the mainly pastoral, isolated nature that characterized much of Middle Paleolithic hominid societies to that of more sophisticated Upper Paleolithic early human hunter-gatherers. Much of the archaeological evidence for this process has come from Europe and Asia. While such exchange networks were within a few hundred kilometers at most, they do suggest the development of societal interaction for the purpose of trade and an understanding of the value of items by humans.

Upper Paleolithic assemblages illustrate the development of the systematic manufacturing of blades and their further production into microlithic stone tools. Upper Paleolithic tool manufacturing, in its Aurignacian and Mousterian forms (also used by Neanderthals), indicates the level of sophistication in tools as early humans adopted increasingly complex production methods and far more intricate composite tools composed of items other than stone. Other raw materials, such as bone, antler, and wood, were also used for the production of tools and weapons by Upper Paleolithic societies. Sites in Europe and the Levant illustrate the intricate reduction of cores in the process of manufacturing tools through the use of burins and punches, indicative of the level of standardization that existed in production practices under development during this period. The use of grinding and pounding stones also became quite prevalent in terms of their use for food production, typically grains collected by hunter-gatherer bands. The use of weapons, such as spear throwers, boomerangs, and bows and arrows, was also adopted during this period, providing more efficient tools for hunting game. The incorporation of this complex tool kit allowed for the more efficient procurement and production of foodstuffs for early human societies.

Other developments in material culture in Europe and the Levant suggest behavioral changes on the part of early human societies in terms of emergent belief systems. Body decorations, in the form of pendants and beads, indicate that early humans were developing a sense of identity as individuals and as a group. Typically, these were manufactured from shells, ivory, teeth, and ostrich egg shells. Moreover, animal and human figurines manufactured from bone, ivory, antler, and stone begin to appear during this period in rockshelters, caves, and other places of habitation. Cave art, notably in France and Spain, is also indicative of this long-term development of early human culture. More intricate behavior patterns are also suggested by intentional human burial of the dead along with grave goods, which are indicative of changing perceptions on death by early humans and Neanderthals compared to that which characterized preceding Middle Paleolithic burial practices.

Habitations and material sites in Europe and Southwest Asia during the Upper Paleolithic were characterized by semisedentary attributes that differentiated them substantially from the Middle Paleolithic. Storage facilities and underground freezing techniques were used for food preservation and surpluses. Hearths in dwellings made with rocks and used for heat and food preparation also become ubiquitous in the Upper Paleolithic. Moreover, the organization of sites used for different lifeway functions also became prevalent during this period. Areas for food preparation, butchering, sleeping, and stone manufacturing as well as places for discarding waste materials became common in Upper Paleolithic sites. These sites and their spatial organization illustrate the level of organization of labor within early human communities as well as suggest the increasing complexity of societal functions and behavior developed during the Upper Paleolithic. Some scholars suggest that social stratification might have developed during this period as well, given that some burial sites were indicative of wealth, not to mention that certain habitations possessed a greater degree of goods that were not available to all members of a hunter-gatherer band. Nonetheless, based on existing archaeological evidence available to scholars, the Upper Paleolithic in Europe and Southwest Asia is illustrative of the development of lifeways of early humans, characterized by increasing complexity and diversity.

—Abraham O. Mendoza

Bibliography

- Bar-Yosef, Ofer. "The Upper Paleolithic Revolution." *Annual Review of Anthropology* 31 (2002): 363–393.
- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Grinding, Pounding, and Crushing Tools

Although it is likely that our earliest hominid ancestors used simple, unmodified stones to crush

and pound subsistence resources, the use of more formally designed stones for grinding and processing foodstuffs became more common during the Upper Paleolithic. At Qafzeh Cave in Israel, early stone grinding tools were found including a mortar with ochre stains, indicating its use for processing ochre through crushing. Moreover, it also appears that many of these stone tools were used for multiple purposes, serving to grind and pound both food and non-food items for manufacture and consumption. Tools such as the grindstone and the handstone were developed as human populations began to rely more extensively upon plants as a major component of the diet.

While early human societies were still characterized by their foraging activities as hunter-gatherers, the increasing complexity of their tool kits allowed them to process different foods. Barley processing existed as early as 20,000 before the present in the Ohalo II site in Israel, where a basalt grinding stone was found that was used to process the plants for baking. Deep mortars from the Upper Paleolithic Levant, dated from 20,000 to 14,500 before the present, indicate their usage for processing grains for baking and other uses. The growing prominence of grinding tools also suggests to some archaeologists that maximizing food usage, given limited sources, was perhaps an impetus to their increasing use by early societies. As some hunter-gatherer societies became semisedentary before the prevalence of settled agriculture, grinding tools provided a way to process grains and thus create enough provisions through the available cereals found by foraging. Items such as mortars, pestles, and other types of grinding implements became prevalent among these societies.

As Late Upper Paleolithic hunter-gatherer societies developed longer sedentary lifeways in some parts of Eurasia, they acquired a greater reliance on the processing of grains through grinding, pounding, and crushing tools. Grinding slabs, which were large concave grinding tools, may have been developed during this transitional settlement process. In this transition between the Late Upper Paleolithic and the Neolithic, handstones and grinding slabs were more widespread, given that this seems to be a period when the domestication of cereals may have occurred.

As this became a more prevalent practice in the Early Neolithic, these tools became more intricate, with far more craftsmanship utilized in their manufacture. Moreover, given the technological complexity of lithic tool kits during this period, these food-processing tools that developed were also more sophisticated.

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Bibliography

Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.

Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Tools Made of Perishable Materials—Bone, Antler, and Wood

Stone tools are most abundant in archaeological sites because stone preserves well under a range of environmental conditions. However, in early prehistory other materials were also used for tool-making, notably wood and the bones and antlers of hunted animals, which attest to the ingenuity of Stone Age people. Such materials, especially wood, are more susceptible to decomposition than stone. Evidence for wooden tools is scarce,

but stone, bone, or antler tools would have been difficult to use without shafts or handles. Consequently, shaped wood was not a tool in itself but instead was one component of a tool together with binding. Specific examples of wooden tools include 400,000-year-old shaped spears of spruce preserved in peat in a coal pit near Hanover, Germany, and a yew spear circa 300,000–200,000 years old in sediments at Clacton in Britain. Wooden tools are more abundant in Mesolithic sites and include parts of an oar circa 8,500 years old from Star Carr near Scarborough, in Britain; throwing sticks, bows, spears, borers, skis, an oar, and sledge runners from Vis I; a peat bog in the Vychegda basin of Ural Russia; and decorated paddles from Tybrind Vig, Denmark.

Debates surround what constitutes a bone tool, the earliest tools so far discovered, and what such tools mean in relation to early human development. Bone points from the South African sites of Swartkrans, Sterkfontein, and Dri-molen are between 1.8 million and 1 million years old. Wear marks suggest that the bones were used as digging sticks, possibly for extracting tubers and/or termites and possibly by *Australopithecus robustus*, an ancestor of the hominids. Bone digging sticks and implements for butchering are evident at Olduvai Gorge, possibly associated with *Homo habilis* (*rudolfensis*) or *H. erectus*. Sediments circa 82,000

► THE KATANDA HARPOONS—EARLY EVIDENCE FOR RIVER FISHING?

The open-air site of Katanda is located in the valley of the Upper Semliki River in Zaire, where two other similar sites of Early and Middle Stone Age designation are found in paleo-floodplain contexts. Direct and indirect radiometric dating methods including thermoluminescence (among others) yielded preliminary age estimates between 65,000 and 90,000 years before the present. Along with a daggerlike implement and faunal material, these sites have yielded formal bone tools including unbarbed bone points and barbed bone harpoons, the latter possibly the earliest known in prehistory. The harpoons were recovered from several sites and seem to be tanged (that is, with a stem) for hafting purposes. The evidence of

fishing in this region is suggested by the stratigraphic association of fish bones, possibly belonging to adult catfish and signifying seasonal exploitation of riverine resources and specialized subsistence behaviors. Though no hominin fossils have been recovered here, behaviorally and biologically modern humans are thought to be responsible.

—*Parth Chauhan*

Bibliography

Brooks, A. S., et al. "Dating and Context of Three Middle Stone Age Sites with Bone Points in the Upper Semliki Valley, Zaire." *Science* 268(1995): 548–553.

▶ EUROPEAN UPPER PALEOLITHIC BONE AND ANTLER TECHNOLOGIES

The Upper Paleolithic (ca. 40,000–10,000 years ago) was a period of innovation especially in relation to toolmaking and cultural development in Europe that is categorized chronologically as follows: Châtelperronian, Aurignacian, Perigordian, Gravettian, Solutrean, and Magdalenian industries. Such innovations are attributed to the arrival of modern humans (*Homo sapiens*). The use of bone and antler increased substantially, as did the range and sophistication of tools and toolmaking technology, notably blade tools, the use of jewelry, and representational art. For example, 142 pieces of worked bone, including bird bone, from the Châtelperronian site of Arcy sur Cure, Grotte du Renne, north-central France, include awls, points, pins, and rings.

Bone, ivory spearheads, bone points, and antler bâtons have been found in Aurignacian sites between circa 34,000 and 28,000 years old in France and Germany. The rock shelter of La Madeleine, circa 16,500 years old, in Dordogne, France, has yielded bone tools, which include javelin points, barbed bone points, eyed needles, spears, spear throwers, and chisels of bone, while antler tools include a spear thrower with a handle carved in the shape of a mammoth. Sediments circa 12,000 years old in Gough's Cave in Cheddar Gorge, in southwestern Britain, also contain tools



Reindeer antler carved with deer and leaping salmon, from the Grotte de Lortet, Magdalenian, 15,000–18,000 BCE. (Gianni Dagli Orti/Corbis)

that include a bâton (use unknown) of reindeer antler and a shin bone of arctic fox that had been sharpened and notched to provide an implement for piercing (probably skins/furs for clothing). Such complexity is apparent throughout Europe and reflects planning, skill, and the use and availability of time to undertake painstaking work.

—A. M. Mannion

years old at Blombos Cave, Southern Cape coast of South Africa, contain bone tools (e.g., projectile points and piercing tools similar to awls); these facilitated the stitching of skins for clothing, containers, etc. Early Paleolithic bone tools in Europe include those from several sites in Italy (e.g., sediments from Fontana Ranuccio, 55 miles [90 kilometers] southeast of Rome, and circa 450,000 years old contain bone tool bifaces produced by flaking the long bones of a now extinct elephant, *Elephas antiquus*). At Salzgitter-Lebenstedt, Germany, sediments circa 50,000 to 60,000 years old have yielded a range of tools fashioned from mammoth bones and evidence for systematic exploitation of reindeer, possibly by Neanderthals. Bone (and antler) tools have also been found at Xujiayao, China, that are circa 104,000–124,000 years old.

From circa 40,000 years ago, when the Upper Paleolithic period began, the occurrence of bone tools increases in archaeological sites and is associated with the arrival of modern humans with advanced social strategies including highly organized food procurement. Many Upper Paleolithic and Mesolithic sites contain tools made from wood, bone, antler, tooth, horn, ivory, and shell. These were used as cutting edges for butchering, points for piercing and sewing, and percussive surfaces for breaking bones to extract marrow and making tools. Sites where such tools are present include Vela Spila, a cave on the island of Korkula, Croatia, from where 29 bone tools from Mesolithic habitation layers have been retrieved and that outnumber stone tools in contrast to lower Paleolithic layers. Many are needles, possibly for extracting shellfish from shells,

and some were probably hooks for fishing. Many Mesolithic sites along the western coast of Scotland contain similar bone tools and discarded shells.

The oldest antler tools, used as hammers to fashion flint tools, are from Boxgrove, southern England, where sediments circa 500,000 years old have yielded remains of *H. heidelbergensis*. Otherwise, antler tools are most significant in European Upper Paleolithic sites in association with bone and stone tools.

—A. M. Mannion

Bibliography

Cunliffe, Barry, ed. *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 2001.

Projectile Technologies—Spears, the Atlatl, and Bow and Arrow

The origin of projectile technologies begins in the Middle Paleolithic. Their wide and relatively quick diffusion across many societies can be explained in terms of their efficiency as hunting tools and as defensive implements. In effect, these tools allow action at a distance and provide the opportunity for the hunter to hit targets with greater precision and more force. Some researchers even view invention of spears, darts, atlatls, and the bow and arrow as a process which placed humans at the top of the food chain in competition with other predators.

Spears are of two kinds: thrusting and throwing. In practice, these uses can overlap. Early spears, such as those found in Europe and that date to 400,000 years ago, were made of wood. The use of harder tips, such as those made of flint, appear somewhat later in time.

The atlatl (a term derived from Nahuatl language of Aztecs), or spear thrower, is a device that uses leverage to achieve greater velocity in spear throwing. Usually it is thin and flat, is made of bone and antler, and consists of a shaft with a hook in which the butt of the spear rests. Its size and weight depend on the type of animal hunted and the distance at which the animal was engaged. Instead of large spears, atlatls hurl smaller projectiles known as darts that may or may not have been tipped with stone. Skilled

hunters could hurl a dart at distances more than 300 feet (100 meters) with great accuracy. The atlatl was often decorated (carved, painted, or designed), and some modern examples have special inclusions made of leather, plant fiber, or small stones, probably for better balancing.

The earliest known atlatl was found in northwestern Africa and is dated to about 25,000 years ago. It became widely distributed in latter phases of European Late Paleolithic in the Solutrean and Magdalenian technocomplexes. The atlatl, however, was likely to have been reinvented numerous times in the past.

The invention of the atlatl is regarded as a very important step toward the development of small projectile points. As the bulk of elastic energy is stored in the throwing device rather than the projectile, the size of flint inserts on the dart or spear could be made smaller, which offered ancient people a means to standardize their hunting implements and to conserve raw materials.

During much of the twentieth century, the origin of bow and arrow was believed to date to the Mesolithic in Europe, or sometime after 10,000 years ago, when large mammals disappeared as the glaciers retreated. As such, the bow and arrow were seen as a technological innovation that made the hunting of smaller animals more efficient.

However, recent discoveries in Africa leave little doubt that the bow and arrow were probably invented in the Late Upper Paleolithic, perhaps as early as 18,000–20,000 years ago. The best evidence for this comes not from the bows but from projectile points that were too small to place on spears or darts. The assumption is that these were used to tip arrows. Like the atlatl, the bow and arrow were probably invented numerous times and at very different times.

Archaeological data (in particular, scarce findings of wooden and slightly more abundant bone artifacts) led to distinguishing two types of bow used during the Late Paleolithic and Mesolithic: the simple form was made of one piece of wood, while the complex form consists of three pieces of wood, bone, or antler. The choice of a particular material depended, most probably, on the availability and quality of raw material and, in some cases, the intended function of the implement. Bow dimensions differ greatly: archae-

ological and ethnographic specimens are as large as 6.6 feet (2 meters) or as small as 15.7 inches (40 centimeters) in length. Arrows may be simple: a shaft with or without a tip, or composite, and composed of a tip and shafts of different sizes.

Darts, the atlatl, and bows and arrows are widely used nowadays by the aboriginal population of North America, Australia, New Guinea, and other territories where hunting is still important as a subsistence procurement strategy.

—Olena V. Smyntyna

Bibliography

- Garrod, D. "Palaeolithic Spear Throwers." *Proceedings of the Prehistoric Society* 21 (1955): 21–35.
- Perkins, W. "Atlatl Weights, Function and Classification." *Bulletin of Primitive Technology* 5 (1993): 58–61.

Fiber Technologies, 100,000–10,000 BCE

"Fiber technologies" refers to the discovery that plant and animal matter may be treated in such a way as to produce nets, ropes, and cloth. Evidence for fiber technology (otherwise known as textile production) comes from such archaeological sites as Çayönü, Turkey, excavated by archaeologist Robert Braidwood and dated to approximately 7200 BCE. At this site, Braidwood's team found a piece of cloth wrapped around an antler. Gillian Vogelsang-Eastwood, of the National Museum of Ethnology (Leiden, Netherlands), identified the cloth fragment as flax that had been soaked in water and rotted somewhat in order to extract and separate its fibrous content, a process that is still necessary to this day in the manufacture of plant-composed fabrics. Potsherds from these sites also bear decorative impressions of both twine and fabric. Similar textile fragments were discovered at several Turkish sites and in Israel that date to approximately the same time period. Animal hair and plant fiber artifacts of rope and cloth were also found at sites in central Europe and Russia dating to between 31,000 and 25,000 BCE.

It is not known if weaving with animal hair precedes the use of plant fibers or the reverse. Perhaps both technologies developed in tandem.

However, various plant fibers (jute, hemp, cotton, nettles) are suitable for the production of textiles, and the development of plant fiber technology everywhere retains the same basic characteristics. First, the desirable fiber crop is uprooted, bundled, and dried by the sun. The seed is then separated from the fibrous mass, which is then subjected to a process called retting wherein the fibrous material is soaked in water again and allowed to rot, which may take from several days to a month depending upon the character of the fibers. When the bark of the stems can be peeled away from their core, the plant material is again dried and then pounded with stones to crush it so as to separate the fibrous filaments. These filaments are then combed in order to align the fibers, which are then drawn out of the mass and twisted into threads by means of spinning. Stone hand-spindles are further evidence for textile manufacture at the aforementioned Turkish, Israeli, and Russian archaeological sites.

Threads and yarns drawn out and twisted by means of spinning are then cut to suitable lengths and woven by means of the interlacing of threads at right angles, of which the longitudinal threads are called the warp and the transverse threads are called the weft. The wooden device for facilitating this process is called a loom. The first looms were made of wood and were handheld and portable, suggesting that a sedentary lifestyle is not a prerequisite for this human invention.

—Susan Marie Kirwan

Bibliography

- Barber, E. J. W. *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special Reference to the Aegean*. Princeton, NJ: Princeton University Press, 1991.
- Good, Irene. "Archaeological Textiles: A Review of Current Research." *Annual Review of Anthropology* 30 (2001): 209–226.
- Scheoser, M. *World Textiles: A Concise History*. London: Thames and Hudson, 2003.

Structures

The livelihood and subsistence strategies of early modern humans were based mainly on extensive exploitation of their foraging territories, implying regular, usually seasonal, movement. As a

► THE GRAVETTIAN STRUCTURES AT KOSTENKI

In Stratum 1 of Kostenki 1 (in the Don River valley of central Russia) are found remnants of two oval outlines usually interpreted as dwellings (living structures). A series of deepened hearths marks their long axes. Walls also were marked by specially prepared (curved) big mammoth bones and tusks planted into the earth. They were practically vertical, but their curved shape produced an overhang in the interior of the dwelling.

Gravettian structures at Kostenki were discovered as early as the 1930s, and since that time their social interpretation remains in dispute. Most Soviet researchers believed that they reflect an occupation by the whole community with common storage. On the other hand, based on results of newer studies of analogous structure at the Pushkari I site on the Desna River, one cannot exclude the possibility of their interpretation as a series of very close small dwellings (every one with its own hearth) connecting the livelihoods of separate but closely related families. The first model implies common procurement and consumption of resources, while the second suggests a pattern of sharing within smaller families while living together in a larger community group.

Reconstructions of these structures are on exhibit in an open-air museum near the site.

—Olena V. Smyntyna



Archaeologists use mammoth bones to re-create a prehistoric shelter at the Kostenki site in Russia. (Ira Block/National Geographic/Getty Images)

Bibliography

- Grigor'ev, G. P. "A New Reconstruction of the Above-ground Dwelling of Kostenki." *Current Anthropology* 8(4) (1967): 344–349.
- Soffer, O., and N. D. Praslov, eds. *From Kostenko to Clovis: Upper Paleolithic–Paleoindian Adaptations*. New York: Plenum, 1993.

► THE MAGDALENIAN STRUCTURES AT MEZHIRICH

The settlement of Mezhirich is situated on the high promontory at the confluence of the Rosava and Ros rivers near Kiev, Ukraine, and traditionally is connected with mammoth hunters of the Epigravettian tradition (including the Mezin archaeological culture) in the Middle Dnieper region.

Four household complexes have been excavated there since the end of the nineteenth century, each consisting of a circular dwelling surrounded by storage pits, open-air hearths, places of flint tool production, and bone and hide processing.

The dwellings were large (up to 16 feet, or 5 meters, in external diameter), and their sides were made of long mammoth tusks and bones. It is likely that hides covered the bones to seal out cold and weather. Both mammoth tusks and skulls were used as construction elements; in one structure,

over 17 tusks and 95 skulls were used. The careful placement and fitting of the tusks and skulls, which were often trimmed and cut, suggest that a great deal of effort and thought went into the construction of these houses.

The interior of the dwellings contained hearths and storage pits. Remains of lamps (made of mammoth's patella) suggest the use of fats or oils to light them. Plenty of flint, bone, and ivory artifacts have been found there together with ocher and amber. Female figurines and ornamented bones were also found in the structures.

—Olena V. Smyntyna

Bibliography

- Soffer, O. *The Upper Paleolithic of the Central Russian Plain*. London: Academic Press, 1985.

THE PRE-CLOVIS STRUCTURES OF MONTE VERDE

The pre-Clovis structures found at Monte Verde, located in south-central Chile and dating back to circa 10,500 BCE, have provided modern scholars with significant insights into the settlement patterns of early Americans. A wishbone-shaped structure comprised of compacted gravel and sand was found on the site's lowest stratigraphic level. The structure also has a semirectangular platform protruding from the exterior side of its base, with evidence of an entryway opening to the southeast. Two hearths have been found on the floor of the structure, and the remains of a center pole 16.5 inches (42 centimeters) long were recovered from inside the structure. Furthermore, vertically arranged branches about 1–3 inches (3–8 centimeters) in length were recovered from the middle of the side walls, which scholars believe are the remains of walls made of branches. Archaeologists have also recovered evidence of a tentlike structure that is 65.6 feet (20 meters) long. These findings indicate that the frame was made of logs and planks anchored by stakes and that the walls were poles covered by animal hides. Inside the tent, planks and poles divided individual living spaces. Outside the tent two large communal hearths were found, along with a store of firewood, wooden mortars, and grinding stones.

—Peter Jones



Foundation of a pre-Clovis-era hut excavated at the Monte Verde archaeological site in south-central Chile. (Courtesy Tom D. Dillehay)

Bibliography

- Dillehay, Tom D. *Monte Verde: A Late Pleistocene Settlement in Chile 1: Paleoenvironment and Site Context*. Washington, DC: Smithsonian Institution Press, 1989.
- . *Monte Verde: A Late Pleistocene Settlement in Chile 2: The Archaeological Context*. Washington, DC: Smithsonian Institution Press, 1997.

result of this mobile existence, like modern hunters and gatherers these ancient peoples made extensive use of structures of different kinds.

Traditionally, dwellings are defined as natural or artificial constructions that vary widely in the materials used to build them, taking into account climate, occupation duration, and site function. Four basic types of prehistoric dwelling are recognized: wind screens, pit dwellings, surface dwellings, and rockshelters or cave dwellings.

Wind screens are simply animal hide, fabric, or vegetation frames used to shield people from wind or blowing dust. Although the screens themselves are not preserved in the archaeological record, patterns of artifact deposition suggest that people routinely performed activities behind them.

Pit dwellings are defined by relatively shallow excavations in the soil surface. Within them,

hearths and other features of daily life are found. Their superstructures tend to be conical or circular in form and were likely composed of wood, bone, or other perishable materials. These were then covered with brush, animal hides, mud or earth, and similar materials. Pit structures were often constructed in cold windy climates.

Surface dwellings are the most common type of structures found at Paleolithic settlements. Archaeologically, they are traced via accumulations of bone and stone artifacts, along with hearths and fauna that define their edges. In their simplest form, they resembled modern tents configured into different shapes. However, occupations of long duration were more substantial, and good examples of these are the Late Paleolithic dwellings of central Europe and of the central Russian Plain. Here, skulls and long bones of mammoth were used to create the

framework for the structure, which was then covered with hides.

Cave dwellings are restricted to mountainous areas or locations where the local geology favors their formation. Caves have dark zones (interiors where natural light does not penetrate), while rockshelters are best described as overhangs that create sheltered spaces, sometime quite large, beneath them. Rockshelters tend not to have dark zones. Beginning in the Middle Paleolithic, humans began to use both extensively, and during the Upper Paleolithic, deep interiors of caves were used for ritual activities. While humans may have used the mouths or entrances of caves, their deep interiors have never been used for habitation. Instead, people often constructed surface shelters at cave entrances and conducted most of their daily activities in them.

In most cases structures were closely integrated with outside hearths, working places, and storage and garbage pits. Together, these complex artifacts aid the process of reconstructing the daily lives of ancient peoples.

—Olena V. Smyntyna

Bibliography

- Bonsall, C., and C. Tolan-Smith, eds. "The Human Use of Caves." *British Archaeological Reports, International Series* (1997): 667.
- Newell, R. R. "Mesolithic Dwelling Structures: Fact and Fantasy." In *Mesolithikum in Europa*. Berlin: VEB, 1981.
- Sklenar, K. "Paleolithic and mesolithic dwellings: problems of interpretation." *Pamatky archeologicke*, LXVI, 2 (1975): 266–304.

The Origins of Clothing

Because modern apes are covered in fur, we know that our ancestors were too. At some point along the hominin evolutionary path, however, our body hair thinned out drastically even though we retained the same number of hairs as apes and monkeys have. It is possible that this hair reduction, this transition to being a naked ape, according to a hypothesis offered by Nina Jablonski, occurred when hominins achieved completely bipedal bodies around two million years ago. A great climatic shift occurred about then, at the beginning of the Pleistocene epoch, causing much of sub-Saharan Africa to become

drier and to become more seasonal as well. The grasslands that characterize much of East Africa today became common, prior to which forests were the norm. Hominins like *Homo ergaster* or *Homo erectus* were eating more meat and bone marrow and may have been actively scavenging and hunting for long days under the hot sun on these savannas full of grazing herbivore prey. Being naked and being able to sweat profusely would have been advantageous to keep body temperatures down. Clothing may have been helpful for desert nights or at high altitudes, but there is no evidence for such a thing. Nor is there evidence that *H. ergaster* or *H. erectus* dispersed to higher latitudes in more temperate climates like those found at Dmanisi, Georgia, or wore anything on their bodies. That is not to say that they did not, but there is no evidence, and there was not necessarily good reason to wear anything. If the practice of wearing clothing originated out of the need to keep warm, it is not until very late in the story of hominin evolution that people would have needed it.

People of the Middle Paleolithic, the so-called archaics that included transitional *Homo sapiens* and *Homo neanderthalensis*, were the first to adapt to colder climes in central and western Europe. Upper Paleolithic humans, in the Late Pleistocene, were then the first to inhabit lands with long cold winters like easternmost Europe and North Asia. Therefore, it is definitely by this point that cultural innovations, like using fur and tanning hides for clothing and for housing, would have been useful. Some Upper Paleolithic sites in Russia, like Kostenki XIV, contain skeletons of fur-bearing animals like wolves and foxes. Sometimes entire skeletons are preserved but are missing the bones of their paws, and other times all that remains are the articulated bones of the paws. Modern hunters often leave the small bones of the paws inside the skins when removing them from a carcass, and this is how these archaeological remains are interpreted. However, at these sites it is unclear whether the skins were used for insulating a hut, closing off a cave opening, or insulating a person. Regardless, by about 70,000 years ago people were probably draping, wrapping, and tying furs and skins around their bodies, and some Upper Paleolithic tools are interpreted to have been used as awls

➤ WHAT CAN BODY LICE TELL US ABOUT CLOTHING? (100,000–10,000 BCE)

Recent DNA studies of body lice (*Pediculus humanus corporis*) by molecular geneticists and physical anthropologists propose the hypothesis that both lice and clothing originated in Africa between 72,000 and 40,000 BCE in a parasitic relationship. This correlates with an earlier hypothesis by Rebecca Cann, Mark Stoneking, and Allan C. Wilson (1987) based on DNA studies, maintaining that anatomically modern humans (*Homo sapiens*) are descended from one woman who migrated with her band from Africa to Europe within this same period.

The Kittler study examined DNA sequences obtained from two mtDNA segments and two nuclear DNA segments in 14 body lice from 12 geographic areas. Concocting a “molecular clock,”

the evolution of body lice and the inception of clothing manufacture was dated to the European and Asian expansion of *Homo sapiens* with the proviso that clothing may have existed before lice exploited this “ecological niche.”

—Susan Marie Kirwan

Bibliography

- Cann, R. L., M. Stoneking, and A. C. Wilson. “Mitochondrial DNA and Human Evolution.” *Nature* 325 (1987): 31–36.
- Kittler, Ralf, Manfred Kayser, and Mark Stoneking. “Molecular Evolution of *Pediculus humanus* and the Origin of Clothing.” *Current Biology* 13 (2003): 1414–1417.

and punches, useful for sewing skins together. Dated to about 19,000 years ago, there are bone needles with eyes for threading that were certainly used for making clothing.

Impressions of clothing from Upper Paleolithic burials are the earliest best evidence for what people were actually wearing. All that remains is a pattern of soil discoloration along with beads strung around the skeletons of three people buried at the site of Sungir, Russia, dated to at least 22,000 years ago. It is possible to make out the beaded leather ensemble complete with hat, shirt, coat, pants, and shoes. That the earliest preserved clothing, albeit discolored soil and beads, is decorated lends strength to the hypothesis that clothing did not so much originate from the need to protect the body as it arose from the need to adorn it; clothing is a form of communication. When exactly people began to weave plants into textiles is not known either, but the latest evidence from the foothills of the Caucasus Mountains is helping to change that. Flax fibers that were once part of a colorful woven textile have been recovered from a cave site dating to as old as 36,000 years ago.

—Holly M. Dunsworth

Bibliography

- Barber, Elizabeth. *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages*

with Special Reference to the Aegean. Princeton, NJ: Princeton University Press, 1991.

Jablonski, Nina. *Skin: A Natural History*. Berkeley: University of California Press, 2006.

Kvavadze, Eliso, et al. “30,000-Year-Old Wild Flax Fibers.” *Science* 325 (2009): 1359.

Soffer, Olga. “Recovering Perishable Technologies through Use Wear on Tools: Preliminary Evidence for Upper Paleolithic Weaving and Net Making.” *Current Anthropology* 45 (2004): 407–413.

Clay and Ceramic Artifacts

The oldest known ceramic artifacts are baked clay figurines from the Czech Republic, which date to 26,000 years ago. These nonutilitarian objects, called Venus figurines, were made by shaping moist clay into female forms and then drying and heating them to a hardened state. The first utilitarian ceramic vessels appeared independently around 12,000 years ago in Japan, 10,500 years ago in the Near East, and 3,000 years ago in the New World. Ceramic artifacts are relatively well preserved in the archaeological record because they are fired. Unfired clay items are easily broken down but in exceptional cases survive. Most clay artifacts are nonutilitarian figurines.

To create ceramic artifacts, three important principles of clay must be known: moist clay can

be molded and when dried will retain that form, the dried clay artifact will harden when heated or fired, and by adding different materials to clay its natural properties and utility can be improved. Improvement in ceramic manufacturing techniques over time reflects an increased knowledge of these principles as well as technological advances. By closely examining ceramic artifacts, archaeologists can tell the clay mixture used, how the artifact was formed and fired, and often its function. Moreover, the shapes and styles of the pieces are frequently associated with particular cultures and chronological periods.

Clays consist of decomposed silicate rocks that contain a high percentage of alumina, such as micas and feldspars. They are found either in their primary location, where the rock weathering took place, or at a secondary location due to transportation by water or other forces. The different clay colors come from impurities in the deposit. White clays typically lack impurities, while gray to black clays likely contain organics. Red, brown, buff, and yellow clays are created by the addition of oxides and hydroxides. Clay color can change during the firing process, however. Organic rich black clay, for example, will change to red-brown or white when fired because the organics are burned off. The addition of organic or inorganic materials to clay can reduce shrinkage and cracking during firing. Called tempers, these agents are also important because they may be culturally specific, as can the clays. Chemical analysis of ceramic artifacts can help source the raw clays and tempers used and often aids in the reconstruction of trade networks.

With the clay fabric prepared, the next step in ceramic production is forming the item. Vessels were made four ways: modeling, coiling, molding, and throwing. The earliest artifacts were modeled by hand, generally starting with a ball of clay that was pinched into shape. Coiled artifacts were built up from a base using long clay coils that were joined together. These and the modeled vessels were finger smoothed or finished using a paddle and an anvil. Molded vessels were formed by pressing a rolled piece of clay into a concave mold or onto a convex mold. This allowed for the production of a large num-

ber of similar artifacts. The invention of the wheel around 5,500 years ago in the Near and Far East revolutionized ceramic production. A skilled potter was then able to throw vessels in a fraction of the time.

A number of decorative finishing techniques were applied to the vessels before and after firing. Before the vessels were completely dry they could be burnished, polished, or decorated by impressing objects into the clay. Color could be added before the vessels were fired by slipping or painting the items or by painting them afterward. The firing environment also plays a role in the final color of the artifact. In an oxygen-rich atmosphere the colors of the paints and clays are revealed, while in reduced atmospheres lacking oxygen the pieces are often grayed.

To avoid cracking the vessels during firing, the clay artifacts had to be completely dry. Any remaining water in the clay fabric was then driven off in the dehydration period of firing. At this stage the clay artifacts were placed in a low-temperature environment (approximately 200 to 400 degrees Fahrenheit, or 100 to 200 degrees Celsius) for several hours. The second firing stage at a higher temperature, called the oxidation period, is when any organic temper was burned off. The final vitrification stage was only reached when the clay particles fused together. This process begins between about 1,500 and 1,650 Fahrenheit (800 and 900 degrees Celsius) and is completed at about 2,192 degrees Fahrenheit (1,200 degrees Celsius).

A basic ceramic analysis looks at the clay and temper of the artifact, the manufacture technique(s) used, the finishing applied, and the firing stages. Moreover, an analysis of the style and form of the vessel and any residue remaining can reveal the function of the artifact. Together, technology, form, and style are culturally and chronologically specific.

—Shawn Bubel

Bibliography

- Rice, Prudence. *Pottery Analysis: A Sourcebook*. Chicago: University of Chicago Press, 2006.
- Sutton, M. Q., and B. S. Arkush. *Archaeological Laboratory Methods: An Introduction*. 4th ed. Dubuque, IA: Kendall/Hunt, 2006.

The Technology of Cave Painting

The earliest cave paintings were created by *Homo sapiens* 32,000 years ago. More than 200 caves in France and Spain alone depict visually accurate portrayals of Ice Age mammals including bison, aurochs, horses, mammoths, and deer. Geometric designs and hand prints are also common. The animals in the paintings are often drawn two-dimensionally, although some artists made use of the cave features to create a more three-dimensional perspective. Many of the paintings are found toward the backs of the caves, where the wall surfaces were of better quality, and the artworks were hidden from casual view. Sandstone lamps in which animal fat was burned were found in a few of the caves. These lamps would have burned for several hours, providing adequate light for the artists.

Through the experimental work of cave art specialist Michel Lorblanchet, the technology of the artists is now recognized. Lorblanchet discovered that there were two main ways that the artists applied paint to the cave wall. The first was to spit the paint, with or without a hollowed tube, onto the rock using an object such as the hand, a piece of cloth, or a feather as a screen. When the item was removed, a negative image remained. To create dots, an animal skin with a hole punched through it was held against the rock wall. The second method involved making a brush by chewing the end of a twig. The painter then used it to create the artwork, though this technique was not as effective if the cave wall was too uneven. On careful inspection of cave art, it is clear that the spit technique was more commonly used. Many of the paintings have a sharp edge on one side and a fuzzy edge on the other, created by spitting with a screen held against the cave wall. Hand screening was long inferred by archaeologists, but the use of this technique for the detailed animal and geometric drawings was enlightening.

Chemical analyses of the different paints have confirmed their components. Charcoal and manganese oxides were used to create black. They were ground using limestone blocks and then mixed with talc, a mixture of barite and potassium feldspar, potassium feldspar alone, or

potassium feldspar mixed with an excess of biotite. These extenders helped bring out the color of the pigment and add bulk to the paint. The powdered blend was then mixed with water or saliva. To create red paint, ochre from iron-rich clay, natural hematite, or heated goethite were used, while yellow, although less commonly used in cave art, was made from goethite. Animal fat may have also been used in the mixtures, but these paints are more likely to be associated with the brush technique.

Several hypotheses as to the meanings of the ancient cave paintings have been suggested, ranging from shamanistic control over the animals (hunting magic) to simply art for art's sake. Unfortunately, only speculations can be made. Their true meaning(s) may never be known.

—Shawn Bubel

Bibliography

- Chalmin, E., M. Menu, and C. Vignaud. "Analysis of Rock Art Painting and Technology of Palaeolithic Painters." In *Measurement of Science and Technology* 14 (2003): 1590–1597.
- Haviland, William A. *Human Evolution and Prehistory*. 6th ed. Toronto: Wadsworth, Thomson Learning, 2003.
- Lewin, Roger. *The Origin of Modern Humans*. New York: Scientific American Library, 1998.
- . "Paleolithic Paint Job." *Discover* 14(7) (1993): 67–69.

Early Notational Systems

The reconstruction of the origin and beginnings of early notational systems began with Alexander Marshack in 1972, and since that time his ideas remain the basis for the analysis of this aspect of the cultural behavior of Paleolithic peoples.

Although cut marks on bones due to butchery practice are common, the cuts and notches described by Marshack were distinct from these in that they were often found on the shafts of the long bones of animals and as such had no apparent utilitarian purpose. Such notched bones were thus included in the corpus of mobiliary (portable) art of the Paleolithic peoples of Europe.

Using a microscope, Marshack noted that the notations were made by different tools. This

➤ MAGDALENIAN NOTCHED BONES

The beginnings of information technology in the cultural history of modern humans can be found in the notational systems of the late Paleolithic Age. This was a time when the ice shield in the northern regions of Europe began to melt, marking a period of significant climatic and cultural transition.

While the earliest engraved objects from the Ice Age were decorated with realistic images, notched bones from the latter phase of the Magdalenian period, circa 17,000–10,000 BP, were carved with abstract signs carefully composed in specific groupings and alignments. This intentional arrangement of nonrepresentational signs suggests a deliberate system of notation used to encode specific information.

The categories of linear signs engraved on notched bones—such as lines (horizontal and vertical, long and short), dots, and scaling measures (long, straight, or curvy lines with markings of gradation)—have been widely interpreted as comprising an early calendrical system used for measuring the phases of the moon and seasonal cycles. On a notched stick from the Cave of Cueto de la Mina (Asturias, Spain) dating to circa 13,000 BP, for instance, the intervals between the phases of the moon are recorded throughout most of the year, from mid-February to the end of October.

—Harald Haarmann



Fragment of a bone engraved with marks and decorations, Magdalenian culture, from Marsoulas, southwestern France. (Réunion des Musées Nationaux/Art Resource, NY)

Bibliography

Haarmann, H. "The Challenge of the Abstract Mind: Symbols, Signs and Notational Systems in European Prehistory." *Documenta Praehistorica* 32 (2005): 221–232.

implies that they were done by different individuals or by the same individual but at different times, and thus these marks could reflect corresponding calculations of time. The next step was to track the regularities or patterns of these notches. Marshack claimed to have detected daily, lunar, seasonal, and ceremonial cycles in patterns of notches. In Marshack's terms, they represent stored (i.e., already transpired) events that had no apparent connection with resource and fertility magic.

The necessity to develop notational systems was probably caused by the needs of everyday life. Based on the analysis of portable art objects found at Late Paleolithic sites of Europe, at least two notational systems were practiced at that time: one based on units of five and likely associated with the number of fingers and toes of the human body and the other based on seven units, probably reflecting awareness of four lunar phases consisting of seven days each.

Abstract notation is thus best understood as an aid to memory (collective as well as individual). Such systems helped hunters and gatherers maintain a sense of the timing of seasonal changes critical to their survival. As early agricultural societies emerged, simple notational systems eventually evolved into calendars that helped to predict crucial events in the timing of the agricultural cycle, such as when to plant and to harvest. Notational systems also played a role

in the emergence of ritual calendars or cycles, which were often connected to those related to subsistence events.

—Olena V. Smyntyna

Bibliography

Marshack, A. *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol and Notation*. New York and Toronto: McGraw-Hill, 1972.

■ Introduction: Tools and Technologies of Modern Humans, 10,000–4000 BCE

By 10,000 BCE modern humans had migrated to every continent on earth and possessed a number of technologies and tools that allowed them to rapidly adapt to each environment they encountered. In some locations these technologies and tools enabled them to settle in one place for extended periods of time. As a result, humans were able to not only refine their current tool kits but also develop a wide array of new technologies and tools for the first time. New technologies to emerge beginning around 10,000 BCE included plant and animal domestication, agriculture, permanent to semipermanent architecture, the preservation and long-term storage of food, ceramics and pottery, and sophisticated farming, hunting, and gathering technologies, each of which required a variety of new tools. However, not every group developed the same technologies at the same time, nor did all these technologies develop in all regions of the world. For example, the earliest farming societies in the Middle East did not use pottery, while in parts of Europe and Britain it remains unclear to what extent plants were domesticated or whether permanently settled communities existed. In other parts of the world, such as in Asia, Southeast Asia, and the Americas, independent domestication events of plants and animals led to regionally distinctive cultures that arose completely independent of those in Europe and the Middle East.

Beginning around 9000 BCE in parts of the Middle East, Europe, North Africa, and Asia, domestication of both plants and animals emerged as one of the most powerful new technologies to be developed by modern humans. At first domestication was limited to a narrow range of plants, such as wheat, millet, and spelt, as well as animals, including dogs, sheep, and goats. Soon after, however, cattle and pigs were domesticated along with barley and rice. In the Americas, evidence indicates that domestication of plants and animals as well as agriculture was independently invented from that of the rest of the world at a slightly later date. Beginning around 6000 BCE squash, corn, and some tubers may have been domesticated, and by the end of the period archaeological evidence indicates that beans, turkeys, and the alpaca were also domesticated. In New Guinea and parts of Southeast Asia sugarcane, bananas, and species of taro and yams were domesticated by 6000 BCE, while there is no evidence that domestication of any plants or animals occurred in Australia, parts of southern Africa, or the Pacific Islands during this period. As this technology developed, many new tools associated with farming, agriculture, and animal husbandry are recorded in the archaeological record for the first time.

New tools associated with the tending, harvesting, and processing of crops to first emerge during this period include sickle blades and

grinding stones, pottery and ceramics, specialized bone and wood implements, mortar and pestle, and other tools associated with the production and long-term storage of food and animal husbandry. Modern humans also manufactured for the first time a range of other types of new stone tools and ornaments, including increasingly smaller projectile points, beads, statuettes, fishhooks and net weights, and polished stone tools such as the ax, adze, and other items. In turn, many of these new tools and technologies allowed modern humans to begin to alter the landscape and environment around them in new and profound ways. For example, in Europe the development of the adze and polished stone ax allowed humans to clear large swaths of forest for farmland as well as to use wood for structures, shelter, and watercraft. In parts of the Americas, Southeast Asia, the Middle East, and North Africa, modern humans began to control the flow of water in some locations as well as to create areas of farmable land through terracing, plowing, and irrigation. Likewise, evidence of stream and coastal shore modification for fish traps has been recorded in the Americas, Australia, and Africa.

The domestication of plants and animals along with agriculture also allowed people during this time to settle into permanent or semi-permanent communities, where evidence of permanent architecture is first seen during this period. In the Levant, Anatolia, Syria, northern Mesopotamia, and central Asia, evidence of mud-brick technology to construct houses and villages first appears. In some locations, such as Çatalhöyük in Turkey dating to around 6500 BCE, this technology was developed to such a degree that individual houses were constructed, plastered, and painted with elaborate scenes of humans and animals. In Europe, longhouses built from wattle and daub technology were constructed, although by 6000 BCE wood houses became more common in certain parts. People in the British Isles also built long barrows and chamber tombs for their dead out of stone and also constructed causewayed camps, henges, flint mines, and large stone monuments. In the Americas, evidence of permanent architecture does not emerge until the end of this period, while in Australia, sub-Saharan Africa, the

Pacific Islands, and northern Asia there is no evidence of this technology during this period.

In coastal areas of the Indian Ocean, the Arabian Gulf, and North and South America, the technology associated with line and net fishing first appears during this period. Shell and bone fishhooks as well as nets and line weights are first recorded in the archaeological record beginning around 7000 BCE, while technology to exploit shellfish and mollusks emerged a little earlier and in more places, including Australia, Japan, and the Mediterranean. Finally, nonutilitarian objects such as statuettes, beads, stone disks, and other items become much more common during this period and have been recovered from all regions of the globe. Although some items have been dated prior to 10,000 BCE, it is not until this period that there is archaeological evidence of mass production and specialization in nonutilitarian tools.

—Peter Jones

Bibliography

- Milisauskas, S. *European Prehistory: A Survey*. New York: Kluwer Academic/Plenum, 2002.
- Mulvaney, J., and J. Kamminga. *Prehistory of Australia*. Washington, DC: Smithsonian Institution Press, 1999.
- Scarre, C., ed. *The Human Past*. 2nd ed. London: Thames and Hudson, 2008.
- Shaw, T., et al., eds. *The Archaeology of Africa: Food, Metals and Towns*. London: Routledge, 1993.

Increasing Diversity and Complexity of Human Technological Organization

The emergence of *Homo sapiens* during the Upper Paleolithic and the adoption of the tool kits of preceding hominids contributed to the increasing complexity and added diversity of technology. The organization of human tool kits was shaped by further innovations in the manufacturing of stone tools, the development of more complex composite tools, and the use of antler, bones, and wood as elements of such tools. With the inception of hunter-gatherer societies and then the subsequent development of settlement agriculture, technological advances in terms of manufacturing, techniques, and actual tools underwent

significant advances, given the adaptations to lifeways by modern humans albeit in different world regions at distinct times. Nonetheless, this process is illustrative of the dynamic nature of technological innovation in early human societies amid their increasing complexity.

Hunting, foraging, food production, and other aspects of early human lifeways were characterized by myriad technological innovations. As early hominids adapted to their environments by developing into hunter-gatherer societies, their technology, in terms of new tools and inventive techniques, underwent drastic changes. During the Upper Paleolithic, early *Homo sapiens* foraged and hunted across vast regions, typically in bands, following migration patterns of game and seasons. Building on the technological framework of their *Homo erectus* predecessors (Acheulian culture) and Neanderthal (Mousterian culture) contemporaries, *Homo sapiens* acquired a fairly complex tool kit of sophisticated composite tools composed not only of stone but also of bone and antler. Moreover, such technological innovations allowed for a more complex lifeway than that of prior hominids. While they did continue along hunter-gatherer lifeways, their new tools allowed them to be far more effective hunters and to make better use of animal parts as integral elements for tools and other wares for daily life. Thus, such technological innovations in terms of tools and new techniques reflected the evolving complexity of early human hunter-gatherer societies across much of Afro-Eurasia during this period.

Prior to the development of the early civilizations along the Levant, *Homo sapiens* was able to develop certain technologies prior to the transition from hunter-gatherer societies to that of settled agricultural communities during the Upper Paleolithic. From approximately 35,000 to 8000 BCE, as evidence found in rock shelters and caves in France and Spain suggests, hunter-gatherer cultures developed tool kits far more complex than that of the Mousterian cultures of the Neanderthals. These implements, namely harpoons, bone hooks, spear throwers, and clubs, allowed them to hunt reindeer and other game as well as fish for salmon along nearby rivers. While such hunter-gatherer societies continued to follow the game along with the seasons,

they were equipped to acquire food in any given environment with their sophisticated tool kits, which utilized parts of their kill, wood, and stone. This contributed to the versatility of the lifestyle of early humans in allowing them to adapt to climate in their quest for sustenance.

The development of exchange networks in the Upper Paleolithic, particularly in the Levant and Europe, illustrates the level of interaction between hunter-gatherer societies as crafts and goods became more specialized and utilized as a means of trade. By the end of the Pleistocene in parts of Europe and the Near East, the establishment of semipermanent settlements by seasonal hunter-gatherer societies were characterized by the use of microlithic food-processing tools, such as grindstones. For example, the Natufian culture, which encompassed a region between southern Anatolia to the Nile Valley, used such implements and techniques to process wild cereal grasses. Moreover, their tool kits also included picks and flint sickle blades (mounted on bone handles), used for harvesting. Their lifeways were also characterized by the use of storage chambers in their dwellings along with bowls, mortars, and the development of decorative elements to their tools, which suggest a far more complex lifestyle as they transitioned into semisettled societies. By 8500 BCE, the semipermanent Natufian farming settlement of Jericho in the Levant displayed many of the sedentary characteristics of later fully settled agricultural communities. Trading activities in obsidian, sea-shells, and bitumen were also practiced. Their food-production tool kits, agricultural developments, and the establishment of exchange networks allowed them to remain in the settlement for a longer period of time. Such semiagricultural communities, which would later characterize many of the precursors of the later civilizations that would span Afro-Eurasia, are examples of the relationship among developing human technological organization, the amplified diversity of tool kits, and the increasing complexity of human lifeways.

Fully settled agricultural communities, spanning across Afro-Eurasia, were characterized by the adoption of food-storage facilities, nonsubsistence occupations, and the establishment of organized political structures. While hunter-gatherer

societies continued to exist during this period, the development of settled agriculture provided a far more viable opportunity for the expansion and diversity of technological innovation. The construction of dwellings, artwork, and other urban amenities became integral characteristics of settled agricultural communities. This was due to the specialization of occupations not directly associated with farming (or hunter-gathering) but necessary for the increasing complexity of sedentary lifeways. Such urbanized lifeways were further characterized by the use of new materials, such as earth and plants, for the purpose of construction, as technological innovations for sedentary living.

—*Abraham O. Mendoza*

Bibliography

- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Transformations in Stone Tool Technologies

The long-term development of stone tool technologies from the earliest hominids to modern man reflect the increasing complexity of prehistorical societies from *Homo habilis* to *Homo sapiens*. The use of stone implements for myriad tasks initially developed approximately two million years before the present. Multiple archaeological findings from Olduvai, Acheulian, Mousterian, and Upper Paleolithic cultures have allowed archaeologists to trace the long-term evolution of stone technologies use by hominids through much of this period. Through this evidence, archaeologists have pieced together the manufacture, types, and uses of stone tools used by hominids. Moreover, through these findings, scholars have also been able to determine how and why these stone tools are illustrative of the lifeways of these early societies and their day-to-day activities.

Archaeological evidence at Olduvai Gorge in East Africa, where British archaeologist Mary Leakey excavated a significant amount of arti-

facts, stone tools, and animal bones, illustrates the earliest examples of stone technologies utilized by *Homo habilis* as early as two million years ago. This concentration of stone tools around animal bones in Olduvai indicates that they were imported there from elsewhere, illustrating that they were used by hominids for the purpose of processing meat for consumption. These tools suggest that they were used to cut animal skin too tough to be cut with teeth. While Olduvai tools look crude in their shape and look like fractured rocks, they do possess characteristics that illustrate their functions as scrapers and cutting tools. From this evidence, it is known that Olduvai hominids were indeed skilled stone toolmakers and were able to make weapons, tools for cutting animal flesh, and scrapers for making tools. Similar tool kits have been found elsewhere in Europe and Asia.

The Olduvai tool kit of choppers, scrapers, and flakes lasted for nearly 1 million years until about 1.5 million years ago, when it was gradually replaced by Acheulian stone technology. Among the major developments that characterized the innovation of the Acheulian stone tools is the stone hand ax. This Acheulian hand ax technology was named after the French town of Saint-Acheul, around which such tools were first found. This technology is mostly associated with *Homo erectus*. The hand ax, unlike Olduvai choppers and scrapers, had to be crafted with greater precision rather than imprecise hammer blows. Hand axes came in a myriad number of shapes and sizes, evidence of their value as tools for *Homo erectus*. Moreover, they were diffused over a vast area of Afro-Eurasia (e.g., northern Europe, sub-Saharan Africa, the Near East, and South Asia), ranging from finely crafted forms to more crude versions. Hand axes were used not only to skin and butcher game but also to grub roots, for woodworking, and for scraping skins. One major advantage of hand axes was that they could be sharpened again for reuse or crafted into smaller flake tools. Some archaeologists, such as Eileen O'Brien, suggest that it was possible that this hand ax could also serve as a projectile tool for hunting large game.

During the same period that the Acheulian hand ax gained prevalence in some areas of Afro-Eurasia, the chopping tool tradition of the

Olduwan variety continued and expanded into other world regions. Evidence from the Zhoukoudian site (occupied from approximately 460,000 to 230,000 years before the present) in China illustrates that *Homo erectus* in East Asia continued to use chopping tools, although they were far more sophisticated than those used by the Olduwan culture, as they were smaller and far less crude. Moreover, choppers were the tool of choice, rather than hand axes, in central Europe, South and East Asia, and eastern Britain.

Mousterian stone technology, developed under the Neanderthals, was more complex than that of the Acheulian variety in technique and level of complexity. Neanderthals developed far more intricate manufacturing techniques for their stone tool kits. They were the first hominids to use prepared core techniques, which essentially allowed them to take standard-sized stones and reworked them into specific tools. Moreover, they were also the first to manufacture composite tools, which were composed of more than one part, such as spears (with spear point, spear shaft, and the binding that connected them). Most Mousterian stone tools consist of flakes, mostly points and scrapers, utilized for hunting, woodworking, and the preparation of skins. These fine tools were carefully crafted at a relatively higher level than that of the preceding Olduwan and Acheulian stone technologies. In French sites, the diversity of Mousterian tool kits suggests that a variety of skills and tasks for different activities are evidence of increasing social complexity on the part of Neanderthals in the Middle Paleolithic.

By the Upper Paleolithic period, *Homo sapiens* had adapted the stone technologies of prior hominids to a vaster array of stone tools and implements, suggesting the increasing complexity of their lifeways. Upper Paleolithic hunter-gatherer societies created highly specialized tools, such as harpoons, retouched points, and graving implements. Such major technological changes have been researched by archaeologists at sites such as Shandidar in Iraq and Mughareh el-Wad in Israel. Major innovations in Upper Paleolithic stone technologies include the use of far more composite tools than Neanderthals (such as the bow and arrow), punchstruck blades, and a more vast range of toolmaking

items, such as bone and antlers. Upper Paleolithic tools were mainly manufactured by punchstruck blades, which were crafted by a punch, a tool that specifically was directed at a single point of the core. Scrapers and burins, which were both smaller tools, were made in this fashion. Burins were used to groove wood, antlers, and bones into spear points and harpoons, part of the innovative composite tool kits of the Upper Paleolithic. Such technological advancements allowed *Homo sapiens* hunter-gatherer societies to develop far more levels of complexity than prior hominids.

—Abraham O. Mendoza

Bibliography

- Brantingham, P. Jeffery, Steven L. Kuhn, and Kristopher W. Kerry, eds. *The Early Upper Paleolithic beyond Western Europe*. Berkeley: University of California Press, 2004.
- Fagan, Brian M. *People of the Earth: An Introduction to World Prehistory*. 5th ed. Boston: Little, Brown, 1986.

Innovations in Ceramics, 10,000–4000 BCE

The Neolithic Age (10,000–4000 BCE) designates a time of remarkable innovations in the development of human technologies, one of which was ceramic manufacture (the exposure of pottery composed of clay mixed with other materials to very high temperatures). So important is this technological advancement that many archaeologists divide the Neolithic Age into two time periods, terming the earlier dates (approximately 10,000–6750 BCE) the “pre-ceramic” or the “a-ceramic” Neolithic. The second time period, the “ceramic Neolithic,” begins roughly after 6750 BCE according to archaeological excavations at some of the most ancient and continually occupied Neolithic sites known to science, those of the Near East and the Levant.

Before humans began to work clay, liquids were held in such naturally occurring products as gourds and coconuts. Where these did not grow, leather pouches stored and transported water. Baskets woven from various grasses carried nonliquid foraged plant matter (berries, nuts, undomesticated grains) from the wild back to the domestic household. Bowls and drinking

➤ JOMON IN JAPAN, 10,000–4000 BCE

The term “Jomon culture” refers to a type of pottery found throughout the Japanese archipelago characteristically having rope impressions. Thus, archaeologists refer to the people who made it as “the Jomon.” Although the period 10,000–4000 BCE roughly delineates the Neolithic phase of Jomon culture, some evidence implies that Jomon peoples inhabited the Japanese archipelago perhaps before 16,500 BCE.

By 10,000 BCE, the Jomon seashore cave encampments and pit-house settlements along river tributaries were numerous. Pit-house villages were seasonally occupied so that the Jomon could engage in horticulture during summer, when they also fished with nets and bone hooks (fiber lines, stone sinkers), foraged with digging sticks for various tubers, and collected wild nuts and plants. They also hunted deer and boar with bows and traps during the winter months. Technology included ground stone artifacts such as arrow and spear heads, a stone device used to straighten arrow shafts, stone grinders and querns for processing nuts and berries, clothing (rope made of plant fibers also used for cloth), and the manufacture of pottery and clay figurines. Part of their diet consisted of fish obtainable only in deep seawater, suggesting the use of watercraft as well as the possibility of long-distance trade.

—Susan Marie Kirwan

Bibliography

- Habu, Junko. *Ancient Jomon of Japan*. Berkeley: University of California Press, 2004.
- Kobayashi, Tatsuo. *Jomon Reflections: Forager Life and Culture in Prehistoric Japanese Archaeology*. Oxford, UK: Oxbow Books, 2004.

vessels gouged out of stone were heavy and for that reason were not easily portable. The chief drawback, however, is that natural fibers and skins are combustible. Even stones crack when subjected to fire. Therefore, the invention of unfired clay pottery (much lighter than stone) followed by fired clay pottery (ceramics that could store liquids and better resist fire) were technological advancements. Fire does not destroy clay pottery but rather renders it stronger, harder, and less permeable than unfired clay pottery;

therefore, it is more suitable for the storage of liquids and for cooking.

The preceramic Neolithic Age was of long duration, and many factors determined subsequent developments. Knowledge of the physical properties of the various sorts of clay, its chemical reaction during exposure to the sun's rays and fire, and the effects of adding “openers” (also referred to as “tempers”) such as sand, small fragments of flint or lime, crushed shells, chopped grass, cinders, dried dung, or crushed pottery (termed “grog”) in order to improve clay that is malleable but that retains too much water were all such empirical observations necessary to the development of ceramic manufacture.

The following brief description of the most ancient methods of pottery production combines archaeological evidence coupled with data from specific societies that preserve ancient pottery traditions through ethnoarchaeology to provide the researcher with insights into the practicalities and technology of pottery manufacture. First, suitable clays were dug from the earth's surface and washed clean of loose soil and foreign particles such as large stones. The clay was then mixed with water to achieve a specific consistency, squeezing it by hand or pressing it beneath the feet. Finally, the clay was shaped into a pot, bowl, drinking vessel, or figurine.

For small bowls the clay may have been first gathered into a lump of clay or ball. A fist then punched a deep hole into the ball, and the hole was enlarged by degrees, while the walls of the vessel were molded by hand. With larger pots the fist technique may have been used for the initial lump of clay, but the potter then built up the walls of the vessel a little at a time with subsequent additions of handfuls of clay around the insides of the pot, pressing ever outwardly in order to gradually enlarge the vessel's cavity until the desired holding capacity was attained. Sometimes a basket served as the mold, and a thick layer of clay was smeared over it or inside of it. Sometimes an inverted pot served the same purpose. The mold removed, the pot was then smoothed both inside and out by means of scrapers and then with a handheld piece of leather.

A second ancient method of pottery manufacture was to coil ropes of pliant clay upon a base of clay, working the coils together in such a

way that they were no longer discernable. Scrapers and a piece of leather smoothed both the inside of the vessel and its outer surface. Decoration was sometimes added by making incisions with a sharp object; sometimes rope or matting was pressed into the wet clay. The pot was then set in the sun to dry. Items that are merely sunbaked, however, are only suitable for holding dry goods. Unfired clay pottery absorbs liquid, which eventually destroys it. Fired clay pottery, in contrast, is much less permeable, for clay contains a percentage of so-called free water—that is, water that evaporates as the pot dries in the sun and air currents—but it also contains “combined” water, which can only be extracted from the clay at temperatures from 650–750 degrees Fahrenheit (350–400 degrees Celsius) and above which completely alters its chemical composition. It can never be returned to plasticity again, yet the pot will more easily hold liquids, and it is sufficiently strong and hard enough to place it in proximity to a cooking fire. The chemical composition of the clay and its method of firing will determine the color of the finished product.

The earliest method of firing pottery is to sun-dry it for a short amount of time at first and then to place it in contact with fire. However, the hotter the fire, the harder and the more impermeable the vessel becomes. Potters after 7650 BCE invented ways to make vessels impermeable in two ways. They discovered that very fine clay could be mixed with water to form “slips,” which were then smeared over the pot and fired for greater impermeability. They also learned to subject clay vessels to very high temperatures and to sustain high temperatures by means of ovens.

The first oven seems to have been a hole dug in the ground, the floor of the shallow hole being made sufficiently flat and large enough to accommodate a number of vessels whose rims did not protrude above the surface of the ground. The pots were then surrounded and covered in a mound of charcoal, wood kindling was heaped around and over the mound, and the entire structure was ignited. Air passages cut at a diagonal through the ground to the level where the pots rested would allow bellows to force air into the hole, thus creating and sustaining very high temperatures. Toward the end of the Neolithic (roughly 6000–4000 BCE) aboveground ovens

➤ EARLY SAHARAN CERAMICS

The earliest ceramics in North Africa predate those from the Near East by two millennia. They have traditionally been ascribed to two groups: dotted wavy line and wavy line.

The wavy-line pottery originated in the Nile Valley, from the tenth millennium BCE onward, and is most prevalent in the central Nile. Six subtypes have been recognized: classic waves, angular waves, mild waves, arched waves, serpentine waves, and composite motif. It was originally excavated, described, and (poorly) defined by Arkell in the mid-twentieth century.

Some of the motifs allotted to the wavy-line pottery are lacking wavy lines. The wavy-line motifs were produced by catfish spines, which were used to produce other motifs as well. Thus, implements, techniques, and motifs were originally conflated.

True Saharan wavy-line pottery occurs as scattered sherds, ill-provenanced and of debatable dating. It was relatively slow in diffusing into the Sahara and reflects a limited distribution.

By contrast, dotted wavy-line pottery originated in the Sahara. It was present from the tenth millennium onward and probably spread quickly to the Nile Valley through exogamy and/or trade exchange. There are three types of discernable motifs: deep dotted waves, shallow dotted waves, and angular dotted waves.

Both the wavy-line and dotted wavy-line pottery were made from locally derived materials. The matrix and temper are a strong argument against the pottery being representative of a homogeneous cultural complex, such as Camps-Fabrer's Saharan Sudanese Complex. The pottery cannot be considered forms to determine diagnostic cultural traits, but they hold potential for analyzing cultural variations and covariations within and between regions.

—Michael Brass

were built of clay, and finally enclosed ovens, or clay “kilns,” made the extremely high temperatures necessary for both high-quality ceramics manufacture and the smelting of metals.

We gain a better understanding of the chronological development of ceramic manufacture by examining data from excavations at a particular site (Tell Maghzaliyah) just west and south of

the Tigris River in Iraqi Kurdistan. Artifacts and architectural features from the lowest level of this site yield dates of approximately 7000 to 6000 BCE and may therefore represent a connection between aceramic culture and that of the ceramic, for its inhabitants suggest that they were close to developing ceramic vessels.

One architectural tradition at Meghzaliyah was to make floors of stone slabs that were then smoothed over with clay and covered with a plaster. The inside walls were also plastered, attesting to growing knowledge of the chemical properties of clay. As to the domestication of fire, unfired clay storage bins for grain coexist with clay ovens for baking bread. A piece of bitumen having reed mat impressions suggests that basketry still was being made impermeable with applications of various sorts of resins and tars and that pottery yet could not store liquids for any length of time. Stone vessels of sophisticated manufacture predominate at the site of Meghzaliyah, yet unfired clay artifacts (pottery, ovens, and dwelling places) are numerous, as are lumps of kneaded unfired clay. Also found at the site were many fragments of unfired clay figurines of women. In 1980 two nearly complete figurines were uncovered. They are both seated and have disproportionately large torsos resembling an “elongated cone” that has “small” protrusions to suggest breasts.

The site of Tell Sotto just southeast of Maghzaliyah, dated sometime after 5000 BCE, revealed ceramic storage jars, clay and stone spindles, clay pellets for slings, clay ovens, and clay pottery that had been tempered with organic material and shells or sand and then fired. There was also red and black burnished thin-walled fired pottery. Some of it was decorated with zoomorphic and anthropomorphic figures molded of clay and attached to the rims of the vessels. At the nearby site of Yarim Tepe I (approximately 5000–4000 BCE) were found 13 domed kilns constructed of clay located outside of the dwelling places, indicating that technological advances had reached that of the ceramic stage.

—Susan Marie Kirwan

Bibliography

Bader, N. O. “Tell Maghzaliyah: An Early Neolithic Site in Northern Iraq.” In *Early Stages in the*

Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq, edited by Norman Yoffee and Jeffery J. Clark. Tucson and London: University of Arizona Press, 1993.

Merpert, N. Ya., and R. M. Munchaev. “Yarim Tepe I.” In *Early Stages in the Evolution of Mesopotamian Civilization: Soviet Excavations in Northern Iraq*, edited by Norman Yoffee and Jeffery J. Clark. Tucson and London: University of Arizona Press, 1993.

Simmons, Alan H. *The Neolithic Revolution in the Near East: Transforming the Human Landscape*. Tucson: University of Arizona Press, 2007.

Mining and Metallurgy, 10,000–4000 BCE

With the advent of the Neolithic, humans began to selectively breed animals and to plant cereal crops, becoming semisedentary pastoralists, or sedentary farmers. This transformation in the subsistence economy freed Neolithic people from having to hunt wild game or gather wild foodstuffs, permitting some people to pursue specialized crafts. Artisans learned to grind and polish stone, revealing its brilliant colorations and metallic content.

Between 5400 and 4000 BCE (the Chalcolithic Age), humans learned the properties of copper, and Old Stone Age (Paleolithic) technologies merged with those of the New Stone Age. However, adherence to a strict chronology is problematic for copper technologies developed at different times at various places of the globe. The oldest finds of copper artifacts are located in the Middle East dated to between 7000 and 4000 BCE, in the Nile Valley between 6000 and 3500 BCE, but in the Mediterranean and Europe not until after 3500 BCE, which puts these areas beyond the purview of this article.

Gold and copper seem to have been the first metals to have attracted the attention of early Neolithic artisans because “native” gold and copper occur “freely” in nature, that is, as simple metals, not as chemical compounds, and may be found on the surface of the earth in mountainous regions, riverbeds, and streams. Because gold does not corrode or tarnish, shiny nuggets of it were readily discernable to the human eye, whereas the surface of copper oxidizes to a greenish hue and must be polished to reveal its

slightly reddish luster. For this reason, the desirable properties of copper were probably discovered after those of gold. Large and small gold nuggets were first made into beads by grinding to size and polishing them, and they were then strung to form necklaces and bracelets. Gold may also have been hammered into sheets that could then be cut into various shapes and sizes, and its malleability (softness) allowed it to be rolled and twisted into wire. Yet its very softness made it unsuitable for weaponry or cutting tools. The Late Neolithic cemetery at Varna in Bulgaria dated from 4500 to 4000 BCE yielded a stone ax with a gold decorated haft, gold face ornaments, a gold penis sheathe, and an ax covered in sheet gold.

Copper artifacts also date to Early Neolithic times. Copper beads found at the site of Çatalhöyük in Turkey date from between 7000 and 6000 BCE. A copper mace from the Ur excavations in Iraq dates to between 5000 and 4000 BCE. Copper was shaped by grinding nuggets down to size and polishing them or by hammering them into flattened sheets cut to form awls, pins, fishhooks, and spearheads. However, copper is rather brittle and, if beaten for too long, cracks. Prior to 5000 BCE artisans discovered that if copper was heated (annealed) in a wood fire and subsequently hammered, not only was it more easily shaped, it also became twice as hard, making it much more suitable for cutting tools and weaponry. Stone tools wear out more quickly than those made of copper. Copper weapons are lighter in weight and therefore more easily handled. The mining of metals does not seem to have occurred until after 4000 BCE, nor smelting (the extraction of metals from rock), nor the use of casts; these developments occurring after 4000 BCE.

The invention of pottery led to metallurgical advances. To produce fine ceramics, knowledge of chemistry is necessary, and the firing of ceramics cannot be accomplished without pottery kilns (ovens). Closed ovens that could attain extremely high temperatures facilitated the making of ceramic pottery, fired bricks, and the smelting and the casting of metals. This took place after 4000 BCE.

Archaeologists are not in total agreement regarding early metal use. The above-mentioned

dates are disputed among scholars. Archaeologists also debate whether knowledge of metallurgy spread from the Middle East to Europe or whether metallurgy developed independently in various regions. One ubiquitous contention concerns the identity and subsistence economy of the people who first learned how to work metal. It is now believed that Neolithic farmers most probably were not the people who prospected for metal or made artifacts of it for the simple reason that Neolithic farming settlements were generally located in the major river valleys, whereas metals, even native gold and copper, are most often found in the mountainous regions of the earth. Furthermore, people who trade and work in metals are of necessity nomadic. The search for metals requires travel to those mountainous regions where they are plentiful. The need for timber in annealing and later in smelting metals was great, and the depletion of timber was rapid in the heavily populated river valleys where agriculture had first developed, whereas the remote mountain ranges are often heavily wooded.

More probably, Neolithic farmers traded their surplus food for metal objects made by full-time specialists living and working where metals and timber were plentiful. Metalworking may be one of the oldest of the specialist crafts except that of the magician. Indeed, metalworkers were regarded as magicians from ancient times and are still regarded as such among shamanistic peoples even today. There is also evidence that miners and smiths comprised separate castes that intermarried only with one another and whose knowledge of geology, chemistry, and physics was kept secret, being transmitted genealogically from parents to children. For this reason, metalworkers all over the world were feared and regarded with awe by the various peasant populations. Recently, archaeologists have collaborated with the cultural anthropologists who have researched contemporary metalworking castes and tribal peoples of Asia and Africa for



Copper mace heads, from the Cave of the Treasure (Nahal Mishmar) in the Judean Desert, Chalcolithic, 4500–3500 BCE. (Erich Lessing/Art Resource, NY)

insights into the metallurgical past. For example, the metalworking Ghorbati of southern Iran are nomads. They transmit metallurgical secrets orally from elders to the younger generation, and sedentary populations regard them as magicians and witches.

—Susan Marie Kirwan

Bibliography

- Aitcheson, Leslie. *A History of Metals*, Vol. 1. New York: Inter-science Publishers, 1960.
- Renfrew, Colin. *Problems in European Prehistory*. New York: Cambridge University Press, 1979.
- . “Varna and the Social Context of Early Metallurgy.” *Antiquity* 52 (1978) 199–203.
- Wenke, R., and D. I. Iszewski. *Patterns in Prehistory: Humankind’s First Three Million Years*. New York: Oxford University Press, 2007.

The Emergence of Watercraft and Its Social Implications, 10,000–4000 BCE

The invention of watercraft and its chronology, technology, and world distribution have widespread social implications. Watercraft allowed human populations to explore oceans, thereby permitting human expansion to previously uninhabited island archipelagos around the world and the discovery in the process of fresh stores of aquatic food supplies only accessible from deep seawaters. In addition, watercraft allowed the charting of rivers and their tributaries that led to previously unknown territories, facilitating the discovery of raw materials and land for the production of culture. The invention of watercraft also changed the length of time required for long-distance trading. Travel by means of boats, even mere rafts for the transportation of people, animals, foodstuffs, and other products of human labor, is much more rapid than overland travel. New research suggests that as a result of the harvesting of aquatic resources and the expansion of long-distance trading by means of seas and waterways, a unique way of life developed based upon ancient boat-building technologies that were sometimes orally transmitted from one generation to the next.

Regarding the invention of watercraft, the archaeological record is far from conclusive;

therefore, it is a matter of contention among archaeologists today. The major reason for various interpretations of the archaeological record is that actual specimens of vessels are scant. For example, rather than actual boats, some of the earliest evidence is of miniature models depicting watercraft constructed of papyrus bundles uncovered at archaeological sites in Egypt dating from between 6000 and 5000 BCE. Regarding watercraft made of bundled reeds (a very ancient form of boat construction), archaeologists formerly thought them to be unseaworthy and suitable only for river travel. However, explorer and writer Thor Heyerdahl proved that various reed-constructed boats were seaworthy in 1977 when he sailed his reed boat, “Tigris,” through the Persian Gulf from Iraq across the Arabian Sea to Karachi, India, and then back again to Djibouti at the mouth of the Red Sea.

Archaeologists cannot be certain as to whether papyrus and reed-bundle construction was followed by wooden plank construction of watercraft or if they developed simultaneously, but between 5500 and 3500 BCE Egyptian boats began to be built of wooden planks either lashed (“sewn”) together or joined by means of mortise and tenon. Egyptian mortuary practices also included the burying of full-sized boats with the dead sometime between 4000 and 3000 BCE. One such boat of cedar planks was found buried in a pit near the pyramid of Giza, dated to between 4500 and 3500 BCE. Clearly, the boat had social and ritual significance for the Egyptians, although archaeologists are not certain as to its exact nature.

There is further evidence for the existence of watercraft in Mesopotamia, along the Tigris and the Euphrates rivers and their tributaries. At certain sites of the Ubaid period between 5000 and 3800 BCE, clay models of ships of wooden plank construction were discovered.

Also found were the remains of small watercraft at European sites. Three complete wooden boats (dated to between 6000 and 5000 BCE) were found at Mecklenburg in northern Germany on the Baltic coast. However, at times archaeologists have had to infer the presence of watercraft from the presence of other artifacts such as a birch-wood paddle preserved in peat bog excavated at Star Carr in northern England

that is dated to approximately 6000 to 5000 BCE. From this paddle, archaeologists postulate the existence of a boat that was constructed either of sewn skins or birch bark stretched over a wooden frame. Another possibility is that the boat may have been constructed of bundled marsh reeds. However, no such boat was ever found at the site because of the perishable character of skins, birch bark, and reeds. And although small watercraft such as dugout log canoes and boats of wooden plank construction can be well preserved especially in water-saturated soils and peat bogs, no wooden frame was located either.

The existence of watercraft is also hypothesized from the bones of fish and other aquatic life only attainable from deep seawaters, such as those found discarded at Neolithic campsites along the seacoasts of Europe, the Middle East, and Asia. Of equal significance but few in number are fragments of bitumen found to have reed or wood impressions in them, the other side being encrusted with barnacles. Bitumen was used to caulk watercraft, thus making it impervious to water. Such fragments were found at many Neolithic sites (7000–3500 BCE). Other artifacts that suggest use of some sort of watercraft are nets made of plant fibers, fishing hooks made of bone, fishing lines made of plant fiber, and stone sinkers. However, one must also bear in mind that fishing is possible from the banks of rivers and in the shallows of a bay, in which case the watercraft might have been as simple as a raft of reeds or of wooden planks lashed together with sinew or strong rope made of plant fibers. One problematic issue faced by archaeologists was articulated by historian Himanshu Prahba Ray in that studies of the Neolithic era (10,000–4000 BCE) have generally focused upon the domestication of land plants and land animals as well as overland trade routes, thus causing a paucity of information about marine life exploitation by early *Homo sapiens* and the development of concurrent ichthyology.

—Susan Marie Kirwan

Bibliography

Gould, Richard A. *Archaeology and the Social History of Ships*. Cambridge: Cambridge University Press, 2000.

THE DUFUNA DUGOUT

One of the oldest means of transportation by humans is the use of boats. Boats were used effectively over the ages by humans for the exploitation of aquatic resources and for rapid communication between communities over long distances. In Africa this type of activity has been ongoing for a long period of time. Evidence for this assertion comes from Dufuna, which is located between Potiskum and Gashua in northern Nigeria. At this site a canoe was discovered dating to 5500 BCE in a fully preserved state. It was the first of its kind to be discovered in sub-Saharan Africa. It has a length of 27.5 feet (8.40 meters) and a maximum breadth and height of 1.6 feet (0.5 meters), while the sides were about 2 inches (5 centimeters) thick. African mahogany (*Khaya senegalensis*) was used for the construction of the boat. This specific species used has a widespread distribution all over the savanna region of Africa. It has been suggested that the Dufuna canoe would have been used for the exploitation of the fish stocks of the Komadugu Gana River. It has also been postulated that the boat might have existed at a time when the surface level of the Chad was about 130 feet (40 meters) higher than its present level, a period generally referred to as the Mega-Chad.

—Clement Bakinde

Heyerdahl, Thor. *The Tigris Expedition*. New York: Doubleday, 1981.

Ray, Himanshu Prahba. *The Archaeology of Seafaring in Ancient South Asia*. Cambridge: Cambridge University Press, 2003.

Early Farming and Agricultural Technologies

Humans, including our earliest ancestors, have consumed plants for millions of years. However, it has only been within the past 12,000 years that humans have cultivated and then domesticated plants for their subsistence. Over time, humans created a wide range of technologies to clear land, plant seeds, manage water, harvest crops, and then store them for future use. Some technologies were more subtle and involved manipulating the plants themselves in an effort to

create larger seeds or more robust varieties resistant to cold or drought.

Although hunters and gatherers in many parts of the world included plants in their diet, the technologies used to obtain them probably remained stable for much of human history. Such tools as grinding stones were used to process seeds that were harvested. Digging sticks may have been used to excavate tubers or underground roots, and cutting tools may have been used to cut stalks.

As humans became more reliant upon plants, technologies began to change, and more specialized tools, allocations of labor, and perceptions of the landscape began to appear. Specialized plant-processing tools are first seen in the ancient Near East in the Levant, where grinding stones suitable for processing hard seeds begin to appear in abundance after 20,000 years ago. Mortars and pestles are found to appear more frequently as well. Although these are not direct indicators of cultivation or agriculture, they signal a more intensive use of plants that prefigures, in many parts of the world, eventual domestication of plant species.

In the Natufian culture of the Levant, dated between 12,000 and 9600 BCE, lunate-shaped chipped stone blades make their first appearance. Although similar microlithic tools are known from earlier periods in the region, these tools appear to be sickle blades, and those that have been examined in detail provide some evidence of being used to cut plants. The blades were probably set in a wooden or bone haft. Their standardized shape and limited range of functions is indicative of their specialized use. Most archaeologists believe that the appearance of these tools signals an even more intense reliance upon plants than in previous periods.

In all likelihood, Natufian peoples were engaged in the cultivation of the wild plants of the region. Cultivation involves the clearing and planting of fields, weeding and care of the plants while growing, and, of course, harvesting when ripe. Although people may be heavily reliant upon these plants, cultivation is not the same as domestication, which is best seen as a significant transformation of the biology and genetics of the plant, making it ultimately dependent upon hu-

man intervention for its reproduction. As these groups find themselves even more reliant upon these modified plants, major changes in how labor is deployed and how landscapes are used can be observed, and for most archaeologists this signals the appearance of agriculture, which is best seen as a major transformation of the relationship among humans, domesticated species, and their environments.

It is relatively easy to see domesticated plants in the archaeological record. For example, seeds of domesticated plants are larger than their wild ancestors, and some plant structures, such as the heads that hold the seeds, change from a brittle form to one that can withstand being cut or shaken. Finding direct evidence of new technologies, changes in labor, or landscape modifications, however, is more difficult. In fact, the results of the reliance upon agricultural production—such as growth in population, appearance of larger towns, and greater political complexity—are more evident to the archaeologist than are the technologies that led to such outcomes.

Sometimes settlement location provides an indirect means by which to infer the existence of an agricultural technology. The earliest farming villages in Mesopotamia, for example, were located on terraces above river valleys. This suggests that the farmers were dependent upon rainfall. Over time, however, these settlements moved on the valley floors themselves, and this suggests reliance on a different kind of water-control strategy, one based on simple irrigation systems composed of networks of small canals that brought water from the river to the fields. Such small-scale irrigation systems became far more common in this region after 6000 BCE.

But the creation of specialized agricultural technologies does not always lead to increased social complexity. Instead, it may be a response to unusual environmental conditions. Such is the case with evidence for early plant cultivation in highland New Guinea, particularly at Kuk. Archaeologists have discovered evidence for forest clearance as early as 7000 BCE and mounding of soil by 5000 BCE. More elaborate systems of drainage canals and ditches did not appear until much later, around 2000 BCE. Here, the mounding of the soil was likely under-

taken to get plants above the soggy soil so that roots would not rot.

In most regions, the soil was tilled or turned with spades made of animal bones (especially the scapula, or shoulder bone), wood, or stone and with digging sticks. Stone spades have been found in China at the Cishan site, which dates to circa 6000 BCE, and bone spades have been recovered from other Chinese Neolithic sites. Such tools were likely common throughout much of the ancient Near East and Europe during the Neolithic period. Because they rely exclusively upon human labor, these types of agricultural tools mean that field sizes were relatively small.

The domestication of cattle and then the invention of the plow transformed agricultural practice throughout much of the Old World. Although cattle had been domesticated in the Near East as early as 8000 BCE, there is little evidence of their use in agriculture until circa 5000 BCE. Early plows were made of wood; evidence for the use of the plow comes from furrows or plow marks in ancient fields. Plows entered eastern Europe by 4500 BCE, and by 4000 BCE they were found throughout much of western Europe as well. The advantage of the plow over spades or digging sticks is that the plow is much more efficient. More land can be tilled with the same amount of labor. It is likely that the combination of plow and animal traction was a response to

increasing population growth throughout the Neolithic.

An overlooked technology is one that humans developed as they began to move agricultural technologies into more forested regions, so-called slash-and-burn agriculture. Before the invention of metal tools, stone tools (but also sometimes bone tools) were used to cut trees. These axes, often made of polished hard stone, were of limited effectiveness when confronted with large, thick hardwood trees. To clear land for fields, then, people turned to the use of fire combined with the girdling of trees, cutting through the soft area just below the bark that is responsible for moving nutrients through the tree. Smaller trees and brush could either be cut or burned. This technique, still used today, had the added advantage of adding essential nutrients to the soil through the ash from the burned wood. This method of land clearance was used during much of the expansion of agriculture into Europe as well as East Asia.

—Mark Aldenderfer

Bibliography

- Barker, G. *The Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?* Oxford: Oxford University Press, 2006.
- Bellwood, P. *The First Farmers: Origins of Agricultural Societies*. Oxford, UK: Blackwell, 2004.

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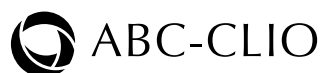
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

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130 Cremona Drive, P.O. Box 1911
Santa Barbara, California 93116-1911

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Manufactured in the United States of America

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ERA 2 Early Civilizations, 4000–1000 BCE

The story of Gilgamesh, the semilegendary king of Uruk in Mesopotamia (present-day Iraq), deals with themes such as coping with grief and understanding the meaning of life and death, which are as relevant to modern life as they were to life 5,000 years ago. Gilgamesh, saddened by the death of his friend Enkidu, went on a quest for eternal life, a quest that ends in failure. At the end of the story, Gilgamesh comes to the realization that nothing lasts forever, stating that “Nobody hears the voice of death, brutal death cuts mankind down,” and resigns himself to the fate that awaits everyone. Yet we are still reading about Gilgamesh’s exploits today and exploring the ancient houses of Uruk through archaeology. The *Epic of Gilgamesh* (in its various incarnations) stands as a monument to human creativity and cultural achievement.

The developments in writing and literature, art and architecture, science and discovery, and politics and governance that took place during this 3,000-year period have been foundational in world history. Perhaps these manifestations of human ingenuity best capture the spirit of this era or at the very least capture what has been important to modern historians about this era. The *Epic of Gilgamesh* is not the only piece of literature to have been produced in this era noteworthy for world historians. While the Mesopotamians and Egyptians were perhaps the most prolific, the original oral compositions that eventually became the Homeric epics from Greece, the Vedas of India, and parts of the Tanakh (the Hebrew Bible, or so-called Old Testament) likely originated in this era. The world’s first named author dates to this period: Enheduanna, a woman from Ur (in Mesopotamia).

This is the period of the Great Pyramid of Giza in Egypt and Stonehenge on the Salisbury Plain in England, two monuments that have captured the imagination since their construction. This is a period of artistic fluorescence in many media, from the elaborate Shang bronzes of China to the whimsical frescoes of the Minoan palaces. Scientific theorizing and observation begin in a recognizable form; some branches, such as zoology and botany, are still practiced as science today, while others, such as astrology, have been relegated to pseudoscience. Most of us do not even question the existence of the state as a form of governance. 4000 to 1000 BCE is the period of the first states as well as the first kings (although probably not the first taxes, which apparently originated farther back in the past). In this period, people started to specialize in their work. Some were able to engage in work that went beyond simply providing food,

4000 to 1000 BCE is the period of the first states as well as the first kings (although probably not the first taxes, which apparently originated further back in the past).

shelter, and clothing, even if basic subsistence remained the most important goal for most of the population.

How Do We Know What We Know?

Given the number of firsts achieved between 4000 BCE and 1000 BCE, it is shocking how much has been forgotten. Most of what we know about this time period was rediscovered in the past 300 years through archaeology and related disciplines. Any historical work in this time period is dependent on archaeology. Most of the texts that date to this period have been recovered through archaeology. Many of these ancient languages were forgotten and have had to be relearned, whereas others remain indecipherable. Knowledge of these civilizations was mostly lost, replaced by hazy traditions and legends that surrounded the monuments that still remained aboveground. Over time, people rebuilt in the same places: knocked down older buildings, leveled the ground, and built atop the ruins. In some cases, the cities were utterly destroyed, the regions abandoned or the inhabitants killed off, and the ruins were left to be buried by natural processes. So, to find out about these cultures, we needed to excavate first. Even scholars who only work with ancient texts are reliant on archaeologists to dig up the texts.

With the birth of writing in this period comes the birth of history. Not that the lives of people that preceded this period are any less important; rather, writing led to the production of the historian's most important type of evidence: written documents. For all of their flaws and inadequacies, such as usually being written by and for elites, the preserved writings of ancient peoples allow the modern historian far greater access to the details of individual lives than any other source, even archaeology. The information that historians have access to exists on a far larger scale for literate societies than for those without writing.

The same problem is apparent when we compare the treatment of different regions within this period. The Egyptians and the Mesopotamians wrote in a script that we can read today on materials that survive archaeologically, so we know far more about them than we do about the inhabitants of the Indus Valley in India, who had a type of writing that, however, exists only in fragments and is still indecipherable. The Mesopotamians wrote on clay, which can survive for thousands of years when fired and buried, by purpose or chance. The Egyptians wrote on papyrus, which has lasted well in the arid Egyptian climate, and on the faces of their architecture, which was built of stone and has lasted for thousands of years. The people who lived between Egypt and Mesopotamia, in the region called Syria-Palestine, wrote on both clay and papyrus. There the clay tablets have survived, but the moist climate has destroyed most papyrus, so our record is further skewed. The ancient Chinese wrote on a variety of materials including bones and tortoise shells, which survive archaeologically, but other organic materials (if they were used in China during this era) have not lasted. The earliest writing in the Americas may be an Olmec inscription dating to 900 BCE (called the Cascajal Block), but this requires further analysis.

Archaeological remains are no different in this sense. The more that people built, the more likely modern scholars are to find the ruins. As noted, the Egyptians built in stone and on such a massive scale that many of their buildings were never lost. The Mesopotamians and the inhabitants of the Indus Valley built in mud brick, which is easily knocked over, but these crumbled and buried remains preserve relatively well until they are exposed and disturbed by erosional processes. The cultures of South America and Mesoamerica built great stone edifices that have survived the hot and humid climate. The inhabitants of North America during this time, however, built homes and tools mostly in organic materials; since these materials do not survive well in the North American climate, our knowledge of these people is similarly fragmented at best. This is the frustrating part of studying the people of this period: we are limited to what has been accidentally preserved and then uncovered archaeologically.

Our knowledge of the ancient past is limited not only by the ravages of passing time but also by the ravages of current events. Modern political boundaries and ideological debates threaten historians' ability to do their work or share their findings with their colleagues. To do their work, they have to be able to visit the locations where these people lived, conduct archaeological excavations in these regions, study the artifacts in local and national museums, and read ancient texts in the universities that are charged with conserving them. Armed conflict is very damaging to the study of ancient world history. Right now, the Mesopotamian heritage is in real danger because of the political situation in Iraq. When American- and British-led forces invaded Iraq, there was no plan in place to care for the antiquities, as mandated by the Geneva Conventions. The looting of the Baghdad Museum was the first sign that Iraq's ancient past was threatened. The situation has become far worse due to American and British forces damaging artifacts and archaeological sites, insurgent attacks, growing ideological opposition to the study of ancient Mesopotamia, and looters illegally excavating Iraqi artifacts to sell to European and American collectors on the black market. The problem in Iraq shows how quickly the situation can change for historians. Mesopotamia, which was once one of the most studied regions in this period, may become one of the least studied regions.

Egypt and Africa

We will start our exploration of this era with the region that is paradoxically both the most and least studied of this period: Africa. Far and away, we have the most evidence for ancient Egypt. At the same time, the rest of Africa from 4000 to 1000 BCE has stood in the shadow of Egypt. Other African cultures have long been treated as footnotes to Egypt, even though cultures such as that of the Nubians (located in modern-day Sudan) are much in evidence. This tendency is changing, but at present most of our knowledge of African life for the period from 4000 to 1000 BCE centers on Egypt.

The first stirrings of an Egyptian state appeared sometime between 3200 and 3000 BCE. Prior to this, in what scholars call the Naqada period (4000 to 3000 BCE), the land of Egypt was divided roughly into two distinct culture zones. The north (or Lower Egypt, because the Nile flows north) and the south (or Upper Egypt) had different material cultures from one another, which is not surprising given the very different climates in the two regions. Between 3200 and 3000 BCE these two regions became unified (although the exact process of unification is debated by scholars), forming the state of Egypt. However, the existence of two conceptually separate regions within Egypt continued to be reflected in Egyptian political iconography, and tensions between the two regions flared up periodically.

Nubia was of great interest to the ancient Egyptians. It held desirable resources (especially gold and labor power), and it held potential danger to the Egyptian state, as a potential rival in times of Nubian power.

The story in the rest of Africa is not as clear. We know about the kingdom of Nubia (located in what is now known as Sudan, south of Egypt) mostly through Egyptian records and the limited archaeological excavations. Nubia was of great interest to the ancient Egyptians. It held desirable resources (especially gold and labor power), and it held potential danger to the Egyptian state, as a potential rival in times of Nubian power. Thus, historians who are interested in Nubia have a lot of evidence to work with in this time period, but most of that evidence comes from an Egyptian perspective. Many other parts of Africa came into contact with the Egyptians who sought resources throughout the northeastern part of the continent.

Archaeology in the rest of Africa has not been as fruitful, although there have been significant finds in recent years. During this time, people inhabited both the savannas and the forests of Africa. Pastoralism and hunting and gathering were the most common means of subsistence. Yet sometime between 4000 and 1000 BCE, agriculture took root in Africa; some of the crops, such as millet, that are grown in Africa today were first cultivated at this time. Beyond subsistence practices, we are on less sure footing in our understanding of Africa. Remains of cultural practices (such as the Saharan rock carvings of Tassili n' Ajjer in present-day southeastern Algeria) tantalize archaeologists, hinting at a rich heritage that remains to be discovered by scholars. Ethiopian archaeology has also demonstrated that there was increasing social complexity in the northeastern Horn of Africa throughout this period. Likewise, archaeological and linguistic evidence suggests that the origins of the Bantu migration (a centuries-long movement of Bantu speakers throughout Africa) were prior to 1000 BCE.

Mesopotamia and the Near East

Mesopotamia, in what is now known as Iraq (and parts of Syria and Turkey), rivaled Egypt as a regional power. Contact between the regions existed from at least the very beginning of this period. The clearest evi-

dence for this contact comes in the form of shared artistic motifs (such as images of humans mastering animals) and shared material culture (such as cylinder seals and certain types of pottery forms). Egyptologists and Sumerologists (scholars who study Sumerian, the earliest written Mesopotamian language) argue over who invented writing first and whether one region learned of it from the other.

Unlike Egypt, Mesopotamia was rarely a fully unified political state. The name itself is a later Greek term that translates as “the land between two rivers.” The two rivers are the Tigris and Euphrates, and generally when scholars talk about Mesopotamia, they refer to the cultures centered between these two rivers. While the people who lived in ancient Iraq frequently lived in a politically fragmented area, there were considerable social and cultural practices that united them. Scholars sometimes refer to these shared practices as the cuneiform tradition, a tradition that spanned beyond Mesopotamia proper and extends throughout the ancient Near East. Cuneiform (meaning “wedge-shaped”) is the type of writing that was used in this region. The name refers to the shape of the letters, created by a scribe impressing a reed stylus into clay tablets. Cuneiform was used for a number of different languages including Sumerian, Akkadian, Ugaritic, and Hittite, not all of which were Mesopotamian. There was much similarity among the cultures that used cuneiform. Even when they did not share the same language, they shared legal and diplomatic traditions as well as social practices. In some ways, cuneiform connected the Near East, Africa, and the eastern Mediterranean in a system of mutually understood customs and ideas.

Scholars of ancient Mesopotamia further subdivide it by time period and region. The most important division for the ancients themselves was between the north and south. In the earliest periods, scholars refer to the southern people as Sumerians (speakers of Sumerian) and use the general designation of Sumer to refer to this culture, although Sumer was never a fully realized political state, as was Egypt; Sumer is best thought of as a group of competing city-states. Toward the end of this period, this southern region came to be known as Babylonia because of the prominence of the ancient city of Babylon. In older works, scholars would sometimes refer to this region as the Chaldees because this is often how it is referred to in early biblical texts. However, the scholarship of the past 200 years has shown that this is an inappropriate designation for Babylonia, since the name “Chaldees” is derived from a group of people who emerged in the region in a later period, in the period of the Neo-Babylonian dynasty. The situation in the north in the early periods is less straightforward. By about 2000 BCE, scholars can safely refer to the north as Assyria. Most scholars of Mesopotamia refer to themselves as Assyriologists, but this is just a convention; it does not mean that they limit themselves to the study of ancient Assyria.

Given the close proximity of Anatolia (present-day Asian Turkey) to Mesopotamia (present-day Iraq), it is no surprise that the people of these two regions were in frequent contact with one another. Much of what we know about these cultures comes from Mesopotamian and Egyptian sources, and often this information is confused (or confusing). For example, the state of Mittani (located in what is now southern

Turkey and northern Syria) was very important in the late second millennium. A lot of information about this state is found in cities located on its periphery. From these sources we can glean much about its political and social history. We know that the capital was a city named Washukanni, but we do not know exactly where that city was. We know that the Hittites called it “the land of the Hurrians.” We know the Hurrians were a much older group from this region with a distinct language that was widely spoken, but we have only relatively few texts written in it. On the other hand, modern scholars know a significant amount about the Hittites, who were located in the central region of Anatolia during much of the second millennium. They spoke an Indo-European language (which is markedly different from the rest of the ancient Near East, where Semitic languages were predominant).

Between Egypt and Mesopotamia-Anatolia lies the region scholars call Syria-Palestine, or the Levant (where the modern political entities

of Israel, Syria, Palestine, Jordan, and Lebanon now lie). When we think of this region today, we cannot help but imagine dry, dusty deserts empty of vegetation and difficult for people to survive in. This region, however, was one of the richest areas on earth in terms of natural resources. The biblical description of this region as a “land of milk and honey” was not an exaggeration. The temperate climate and productive soil and the fact that the Levant provided the only land route between Af-

The biblical description of this region as a “land of milk and honey” was not an exaggeration. The temperate climate and productive soil and the fact that the Levant provided the only land route between Africa and Asia meant that this region was heavily contested.

rica and Asia meant that this region was heavily contested. Much of the history of the Levant in this period centers on the struggles between the larger powers that surrounded it, struggles that played out in Syria-Palestine. For much of this period, Egypt held sway over the region. The local governments were small city-states whose power waxed and waned relative to Egypt’s authority or the shifting powers in Anatolia.

Despite (or because of) this, the Levant from 4000 BCE to 1000 BCE is of great importance in world history. It is here that the alphabet rose to prominence as a writing system, over the more complex hieroglyphic and cuneiform systems. It is also the center of much of the narrative of the Tanakh (Old Testament). While only a handful of passages from the Tanakh were actually written during this time, much of the Tanakh centers on events that were supposed to have occurred in this period. While the historicity of the Bible is heavily debated by scholars, these traditions about this time period play an important role in the beliefs of Jews, Christians, and Muslims today.

Greece and the Mediterranean World

Throughout the period from 4000 to 1000 BCE there was significant interaction among the Near Eastern cultures and the people of ancient Greece. The shared Mediterranean Sea provided relatively easy trans-

portation; the shared climate meant that there were many cultural similarities between these areas. The extent of interaction is fiercely debated by scholars; usually the interaction is underemphasized since scholars are trained in either Greek archaeology or Near Eastern archaeology but not usually both. Regardless of how intense the interaction was, the Mediterranean indirectly linked much of Southern Europe with the Near East and Egypt.

During the Bronze Age, Minoan civilization emerged on the island of Crete. The Minoans left behind monumental palaces, elaborate pottery, and a yet to be deciphered script, Linear A. Perhaps most impressive are the frescoes that the Minoans left behind. Painted directly onto the wet plaster of the walls of Minoan buildings, these frescoes provide us access to a unique visual culture. Minoan men and women leaping over bulls, Minoan women parading in elaborate gowns, and dolphins and monkeys frolicking in idyllic settings attest to a rich artistic aesthetic. What this aesthetic reflects about Minoan society is difficult to determine. Minoan civilization came to an end under uncertain circumstances. A volcano erupted on the nearby island of Thera (present-day Santorini) around this time, although the exact date and effects of the eruption are heavily debated. Perhaps this culture was conquered by the more warfare-prone Mycenaean Greeks who inhabited Crete after the Minoans. Whatever the case may be, Minoan civilization came to an end.

Greece in this period is not yet the Greece of Olympic games, marble temples, and lifelike sculptures that was to emerge in later centuries. This may, however, be the period to which the Homeric epics refer (although it is not likely the period in which they were crafted); certainly the ancient Greeks thought that the events of these epics took place in this time period. When we speak of Greek culture at this time, we are speaking of a collection of numerous independent city-states, scattered throughout mainland Greece and the islands of the Mediterranean and the Aegean Sea and populated by a people who spoke an archaic form of Greek, which they wrote in a script known today as Linear B. These early Greeks are referred to as Mycenaeans because the obviously once-powerful and rich city of Mycenae in the Peloponnese was the first site of this culture excavated on the Greek mainland. Moreover, the *Iliad* records that the prince of Mycenae was the head of the Achaean (the self-referential name used by these early Greeks) confederation that attacked Troy but only as a first among equals. Mycenaean architecture and pottery is distinctive, and archaeologists have tracked Mycenaean artifacts and other forms of material culture throughout the eastern Mediterranean, clear evidence of a wide trade web and a long cultural reach.

Most scholars assume that the Homeric epics refer to this Mycenaean culture. Written down well after 1000 BCE, the *Iliad* and the *Odyssey* may partially reflect the values and social institutions of this earlier period, deemed by Greeks in centuries that followed as “heroic.” It is fitting, then, that the archaeologist who first identified the Mycenaeans, Heinrich Schliemann, is also credited with having discovered the lost city of Troy, the setting for the *Iliad* and the Trojan War. His

archaeological work at Troy was deficient by modern standards, but the site in Turkey remains a fantastic tourist destination and a monument to these Homeric heroes. What exactly happened to Mycenaean civilization is unclear. Destruction layers throughout the region suggest that it was wracked by war, and Greek tradition records that following the Trojan War, Greek cities became embroiled in internecine wars. The concomitant appearance of Greeks within the group known in ancient texts as the Sea Peoples (who attacked Anatolia, Egypt, and Syria-Palestine) suggests that much of Mycenaean civilization was displaced. Some Mycenaean sites, such as Mycenae, were deserted, whereas others, such as Athens, remained inhabited. The appearance of significant amounts of Mycenaean pottery at sites on the coastal Levant suggests that the Mycenaeans were the ancestors of the Philistines (of biblical infamy).

Farther west were the cultures of southern Italy, Iberia, Portugal, and the islands of Corsica, Sardinia, Sicily, and Malta, all of which displayed a wide range of lifestyle traditions, from small permanent villages to temporary camps. Iberia's traditions of tomb construction and copper metallurgy are noteworthy, and significant contact with North Africa is evident in the preponderance of African materials found in the tombs (for example, ostrich eggs). Rock-cut tombs in southern Italy and Sicily contained drinking vessels and weapons and showed similarities to cultures in the Alpine regions of Italy. From around 3600 to about 2500 BCE, megalithic temples were important components of life on Malta. These temples are some of the oldest (still-existing) freestanding structures in the world, and although each was built to a unique plan, their shared construction practices and architectural features point to a great deal of continuity over their 1,000 years of use. Ports around the Mediterranean Sea acted as nodal points in a vast network and were major points of contact among European, African, and Near Eastern cultures.

South Asia

When scholars discuss the emergence of the first known complex civilizations, the three regions cited are Egypt, Mesopotamia, and India. Since scholars cannot read the earliest Indian scripts (if these can even be considered scripts), we know far less about early Indian civilizations

than about these other regions. Most of what we know about early India comes from archaeology and from later accounts of the region.

Specialists call the first complex civilization in India either the Indus Valley People or the Harappans. The Indus Valley in present-day Pakistan was the location of the first large cities in the Indian subcontinent, perhaps as early as 3200 BCE. Certainly by 2500 BCE, the Indus Valley was

the location of major urban centers. Harappa is the name of one of the two largest cities excavated to date (Mohenjo-daro is the other). Indus

Specialists call the first complex civilization in India either the Indus Valley People or the Harappans. The Indus Valley in present-day Pakistan was the location of the first large cities in the Indian subcontinent, perhaps as early as 3200 BCE.

Valley culture was not uniform; while there are numerous similarities among the ancient cities, there are also significant local variations. Generally, though, the cities follow an organized civic plan, with identifiable subdivisions and possibly professional quarters. Monumental buildings are present in most town plans. The functions of these buildings are not clear; they could have functioned as governmental offices, religious centers, storage areas, or public meeting places.

The Indus Valley civilization had trade contacts with regions as distant as Europe. It is not likely that Europeans met face-to-face with Indus Valley people during this period. Rather, this contact was what archaeologists refer to as “down-the-line-trade” in which goods travel through successive territories through a series of intermediaries. Thus, the person at the beginning of the chain and the person at the end have little knowledge of one another. There is good evidence, however, for direct trade with the people of ancient Iran, and it is likely that the Mesopotamians traded (to some extent) with the Indus Valley as well. Distinctively Mesopotamian objects, such as cylinder and stamp seals, are found at Indus Valley sites, and locations mentioned in cuneiform texts likely refer to places in South Asia.

The urban basis of Harappan civilization began to erode around 1900 BCE, and by 1750 BCE Mohenjo-daro had been abandoned. However, the disappearance of Harappan culture was not quick, and some scholars have argued that Indus Valley material culture persisted as late as 1000 BCE. Life in India changed dramatically in the centuries that followed the decline of Harappan civilization. The population center shifted from the Indus River to the Ganges River, but what exactly caused this is debated by historians. The traditional understanding of this period is that a group of people (referred to as Indo-Aryans) invaded the region and brought new technologies (the chariot) and new traditions (preserved in the Vedas). For this period we have some textual evidence, textual evidence that shows that these people spoke an Indo-European language or Indo-Aryan language (the terms are used interchangeably). Scholars debate whether this actually reflects a migration of a new population into India at this time or whether the people of ancient India had been using an Indo-European language for quite a while. The theory of an Aryan migration has come into question (and is discussed at length in the encyclopedia). Since we cannot read any of the Harappan scripts, we do not know if this was an Indo-European language or something entirely different. Whatever their origins, the inhabitants of the Gangetic Plain were the authors of the Vedas, the oldest religious texts still used by faith communities today. The Vedic texts are the oldest sacred texts in Hinduism, and while most of their written composition (as opposed to oral transmission) dates to after 1000 BCE, many of their values and traditions reflect life in India during this time.

Central Asia

The argument that Indo-Aryan groups moved into India at the end of the Harappan civilization is based on evident similarities between these people and groups living in central Asia at this time. These people dwelt

throughout the Eurasian steppe, and a number of different cultures have been identified by archaeologists based on their material remains and later linguistic evidence. These cultures were very diverse, but in general these people resided in small fortified villages or mobile camps. Pastoralism was a fundamental component of their subsistence practices, although some of these groups (for example, the Bactrian-Margian Cultural Tradition) were farmers. The horse was domesticated at some point in this period (or slightly earlier), and after this it became a fundamental component of Eurasian life, especially on the steppes of central Asia. Some scholars argue that the horse was first domesticated around 3500 BCE in this region by the Botai culture of present-day northern

Some scholars argue that the horse was first domesticated around 3500 BCE in this region by the Botai culture of present-day northern Kazakhstan. However, it is possible that these people simply hunted wild horses. The issue remains debated.

Kazakhstan. However, it is possible that these people simply hunted wild horses. The issue remains debated. Much of what we know of the people of central Asia in this period comes from archaeological excavations of their burials. For example, archaeologists working at Gonur-Depe in Turkmenistan have recently uncovered a cemetery dating to about 3000 BCE filled with numerous types of grave goods, including vases, jewelry, and silver artifacts.

Prefiguring the Silk Roads that emerged in later centuries, central Asia prior to 1000 BCE was one of the key locations connecting China and East Asia with West Asia, South Asia, Europe, and the Near East. Mummies found in the Tarim Basin (the location of the Taklamakan Desert) dating to around 1800 BCE may have genetic links to the people of western Eurasia. After this period, the people in the Tarim Basin are known to have spoken a language called Tocharian, which is an Indo-European language (and the Indo-European language spoken farthest east; most were spoken in regions that later became known as Europe). It is likely that the mummies of the Tarim Basin were the Tocharians' predecessors and, if so, points to substantial contact between western and eastern Eurasia.

Other evidence shows how central Asia linked Asia, Europe, and the Near East. The war chariot is a technology that may have been invented in western central Asia (although this is debated by scholars) and was transmitted to China through this region. Chariots buried in graves (presumably along with their ancient drivers) have been found as early as 2000 BCE in sites associated with the so-called Timber-Grave culture, located along the Tobol River in Russia. Various grains that were first cultivated in the Near East (such as wheat and barley) were likely brought to China through central Asia. These Near Eastern cereal crops went on to have a profound effect on northern Chinese cuisine. The mineral resources of Afghanistan were much desired by the people of the ancient Near East; most certainly the lapis lazuli that is associated with some of the finest Egyptian art was imported from central Asia. Similarly, the mineral resources of the Taklamakan desert were desired in China, and perhaps as early as this period nephrite jade was imported from here after local Chinese sources in the Yangzi River region were depleted.

China and East Asia

By the beginning of this period, rice cultivation was well established in southern China, whereas cereal crops such as millet (introduced from West Asia) were raised in the loess soils of the Yellow River. During 4000–3000 BCE, China is characterized by diverse agricultural communities. It is not entirely clear to archaeologists how these different groups were related to one another if at all. Generally, scholars refer to them according to the geographic region in which they are found or the first site at which they are identified. Different villages are grouped together by archaeologists based on location as well as shared material culture.

At some point in the period from 4000 to 1000 BCE, these small villages formed into larger political units. Exactly when and how these early Chinese states formed remains considerably difficult for scholars to reconstruct. Chinese traditions suggest that the first Chinese states arose around 2100 BCE in what is referred to as the Period of the Three Dynasties. The first of these was the Xia dynasty, which until recently most scholars took as entirely mythical. Following the Xia, according to the traditional accounts, was the Shang dynasty (traditionally dated from 1544 to 1045). The Shang state is well attested both archaeologically and historically in northeastern China and the Yellow River valley. It eventually gave way to the Western Zhou dynasty, according to tradition in 1045 BCE, a dynasty that is said to have lasted until 771 BCE.

Current scholarly opinion regarding the accuracy of the traditional accounts of Chinese history has changed dramatically in response to archaeological exploration. Until recently, scholars considered the Shang to be the first truly historical dynasty and the first period in which a Chinese state can be said to have emerged. The first of these was the Xia dynasty. Recent archaeological excavations suggest that the situation was somewhat more complex. Rather than affirming that there was no Xia dynasty, many scholars now believe that the archaeological evidence proves that there was such a dynasty but that our chronological understanding of this period has been mistaken. The Period of the Three Dynasties, rather than consisting of three successive dynasties, is better understood as consisting of three concurrent dynasties with different and successive periods of hegemony. If this was the case, then the latter half of this period in China is much more complex than previously thought. What seems most probable is that from about 2100 BCE on, the small villages in China became increasingly unified into small chiefdoms. These chiefdoms (one of which may have been the basis for the Xia of later myth) competed with one another for power and authority. Around 1500 BCE one of these chiefdoms, the Shang, emerged as the most powerful, later to be supplanted by the Western Zhou.

The situation in Japan at this time is not quite as confusing for historians as that of China, but it does have its uncertainties. Around 5000 BCE, Jomon culture (named after its distinctive pottery styles) had spread throughout the Japanese archipelago, and by roughly 4000 BCE there was a dramatic increase in population density, but most Jomon sites were still small villages. At this time, the Jomon people subsisted on marine life (especially clams) and wild game. Around 3500 BCE, the

Recent archaeological discoveries, however, suggest that our understanding of ancient Japan may overemphasize the Jomon culture and that there may be a greater variety of cultural differentiation than was previously thought.

Jomon began practicing agriculture. Yams and taro roots were probably introduced via China (perhaps originally from the Malay Peninsula), and a variety of agricultural practices were developed. Rice agriculture did not arrive until later. Recent archaeological discoveries, however, suggest that our understanding of ancient Japan may overemphasize the Jomon culture and that there may be a greater variety of cultural differentiation than was previously thought.

The rest of the Pacific Rim is not so well understood by archaeologists. Other parts of Southeast Asia (such as the areas now encompassed by Vietnam and Thailand) were inhabited, interacting with China and developing rice agricultural and metalsmithing techniques. Traders traveled from Asia to Australia (possibly bringing with them dingoes). These traders are attested archaeologically through their distinct stone tools, and their material culture is referred to as the Stone Tool Tradition, although the usefulness of this term for understanding the period is currently debated. The first migrations to Polynesia occurred in this period, made possible by the invention of the double-hulled canoe that allowed long journeys across the ocean. By 1600 BCE, people known by the term “Lapita” began colonizing the islands of the South Pacific.

Ultramontane Europe

The beginning of this period in Europe is marked by the florescence of agriculture as the dominant mode of subsistence and the appearance of regional diversity. These cultural traits started to appear around 4500 BCE and become normative for most of Europe by about 4000 BCE. Although material culture and social practices varied throughout Europe, for most Europeans at this time the small village was home. These small villages were linked through informal trade networks, and evidence of warfare suggests that relations were not always friendly. These inter-village connections waxed and waned throughout the Bronze Age. Some types of material culture spread throughout most of Europe, pointing to shared values and aesthetic sensibilities. Likewise, burial practices became steadily more uniform, suggesting common beliefs about the after-life (or at least common beliefs about how the dead should be treated). The cultures of this time period are referred to by a bewildering variety of names, often based on a distinctive type of material culture (the Corded Ware and Beaker people are both named after distinctive pottery) or cultural practices (the Urnfield people are named after their burial customs).

While most of the material culture from this period in Europe is meager, there are some noteworthy exceptions. Metallurgy, especially in the Carpathian Basin and Scandinavian regions, reached a high level of technical and artistic skill. Rock art is found in mountainous regions,

such as the Alps or Pyrenees, and was probably much more widespread. The evidence for rock art elsewhere may have been destroyed over the past few thousand years. Monumental architecture is rare and mostly involves standing large stones (called megaliths) in patterns on the landscape. The most noteworthy of these monuments is Stonehenge, which still has the power to awe. However, this was not the only “henge” monument or megalithic structure in Western Europe. Over 1,000 of these monuments have been found throughout the British Isles, Ireland, and France (dating roughly from 3500 to 1200 BCE); thus, they reflect a larger regional culture that saw meaning in these kinds of constructions.

The Americas

Our evidence for life in the Americas from 4000 to 1000 BCE is significantly less than in other regions. Much of this has to do with issues of archaeological preservation. Scholars assume that this is a period of growing regional diversity, but the material manifestations of this (houses, clothing, language) have not, for the most part, survived. Scholars tend to emphasize the study of later periods in the Americas, where evidence is present on a grander scale. However, it is a mistake to ignore this period, as many fundamental changes in American civilizations occurred.

North America

With a few major exceptions, culture in North America from 4000 to 1000 BCE is particularly ill-attested. It is certain, however, that this was a time of growing cultural complexity in North America. The environment changed dramatically in this period, with the appearance of the distinct environmental regions that are currently present in North America. Over the course of these three millennia, people living in these different regions developed cultural practices that made sense for their particular environment. It is impossible to speak generally of a unified North American culture by 1000 BCE because there is so much variety in the material record.

One of the major changes to the North American lifestyle was the development of new approaches to food acquisition. In an earlier era, the big game species that many North American peoples had relied on as the major part of their subsistence practices disappeared. The big game had been widespread and were best exploited through mobile hunting strategies. With their disappearance, early North Americans adopted different approaches to food procurement. Some, such as the people of the Plains, maintained mobile hunting practices. Bison became a fundamental resource, and new methods of hunting these animals developed, as is in evidence at the site of Head-Smashed-In Buffalo Jump in Alberta, Canada. The Koster site, in the Illinois River valley of the Eastern Woodlands, shows evidence of a different process, a trend toward permanent year-round settlements. In general, archaeologists are

now recognizing that social complexity increased dramatically in the Eastern Woodlands in the period from 4000 to 1000 BCE, concomitant with a dramatic increase in population.

The American Southwest also shows increasing social complexity during this period. There are interesting similarities and continuities, dissimilarities and discontinuities, with the cultures of Mesoamerica. On the one hand, during this period the people of the American Southwest adopted farming practices that were clearly learned from their Mesoamerican neighbors. On the other hand, these people did not adopt the intense social stratification, writing, or monumental architecture of the Mesoamericans with whom they had contact. Clearly, also, the people of the Southwest participated in long-distance exchange networks and acted as a major link between Mesoamerica and the Great Basin and Plains of North America.

Mesoamerica

The period from 4000 to 1000 BCE straddles two major chronological divisions, as seen by Mesoamerican archaeologists. The first half continues the Archaic period from earlier centuries; the Archaic period is characterized by the transition from a reliance on wild animals and plants to a domesticated agricultural lifestyle. The people of Mesoamerica started living in villages, basing their economy on small-scale agriculture. Maize, while domesticated at or before the beginnings of this period, became the staple of the Mesoamerican diet and the crop that allowed complex civilization to develop in this region. Perhaps around 1500 BCE, the use of maize as a major crop spread out of the Mexican highlands into parts of North America, South America, and maybe even the Caribbean.

The rise of complex civilization was characteristic of the Formative period, the second major chronological division within this period.

Were these early Olmec people a type of mother culture from which all complex civilizations in this region emerged, or were there numerous complex cultures at this time that eventually came to be dominated by the Olmecs?

Cities became the centers of political and religious authority concomitant with a dramatic increase in the stratification of wealth and power. Pottery appears in this period, as does monumental architecture. In this period, the foundations of Mesoamerican life (until the Spanish conquest) were established. Scholars, however, are quite divided on how these early cultures developed and how they relate to the later cultures of the region. Toward the end of

this period, the Olmec people had emerged. Were these early Olmec people a type of mother culture from which all complex civilizations in this region emerged, or were there numerous complex cultures at this time that eventually came to be dominated by the Olmecs? This is the most difficult controversy in Mesoamerican archaeology of this time period.

South America

Complex civilization also arose in South America. By about 3000 BCE, small villages were established in the Andes and coastal Peru. By around 1000 BCE, many of these small villages had become larger centers. However, this process was not uniform. For example, the city of Caral in the Supe Valley grew into a major center during 3100–2600 BCE. People living on the coast ate a combination of fish, shellfish, and cultivated crops and also built large stone mounds (such as at the site of Aspero, in present-day Peru). From 2500 to 2000 BCE, sites in the north-central highlands of Peru appeared that seem to have been focused on ceremonial activity. One of these sites, Kotosh, gives its name to a religious system that lasted for the next 1,500 years in which people would meet in small buildings with built-in fire pits and benches around the walls, similar to kivas found in the southwestern United States. Starting around 2200 BCE (and lasting until 1100 BCE), people began moving inland from the coast to take advantage of new developments in irrigation agriculture. Irrigation agriculture may have allowed populations to grow substantially. With these larger populations came woven textiles, pottery, and monumental architecture. This monumental architecture typically consisted of U-shaped platform mounds made of stone and is found at sites such as Sechin Alto. The northern and southern Andes are less well understood for this period. It should be noted that some of the earliest pottery in the Americas was manufactured by the Valdivia culture (3500–1500 BCE) in northern Colombia. The Valdivia culture changed considerably over this 2,000-year period, with sites becoming larger and displaying signs of increasing social complexity throughout this stretch of time. The Chinchorro culture, which originated in the centuries that preceded this period, survived in the southern Andes until about 2000 BCE and continued to develop mummification practices that involved the flaying of the deceased and the reconstruction of the body with materials such as straw, reeds, and clay. The first monumental architecture in the southern Andes appears around 1300 BCE near Lake Titicaca. The best example of this is found at the site of Chiripa, which features a large sunken courtyard surrounded by a number of buildings.

Outside of the Andes, other parts of South America saw moves toward sedentarization and urbanization. People living in the Amazon seem to have been connected to those living in the eastern Andes through a network that is evidenced through shared material culture. The movement of pottery forms can be traced all along the Upper Amazon and into Peru, and around 2000 BCE this is especially in evidence.

In summary, the period from 4000 to 1000 BCE was a period of innovations, many of which we take for granted today. These included writing, state-level governance, and law, but they also included the development of class differences, state-level warfare, and gender inequalities institutionalized within legal and political frameworks. This was the birth of civilization, for good and for ill.

—Kevin M. McGeough

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Environment and Population

The people of the Late Bronze Age town of Akrotiri in Greece must have known that their entire city was about to be destroyed. When Spyridon Marinatos began excavations of the town in 1967, he did not find many bodies. The ancient villagers had abandoned their sophisticated town just before the volcanic eruption of Thera. Nearly 3,500 years ago, this eruption covered the city with a heavy layer of volcanic ash. The ash, over 26 feet (8 meters) high in some places, had preserved the ancient Minoan town as it had been in the Bronze Age, including remnants of its indoor plumbing and walls covered in beautiful painted frescoes.

Archaeologists thrive on natural disasters (such as the eruption of Thera). Most archaeological work involves sifting through the garbage left behind by ancient people. Major calamities, however, prevent people from making changes to their lifestyle or removing valuable objects, and as a side effect, they leave behind valuable information for archaeologists. Unexpected changes in climate can be devastating for the human populations who eke out a fragile existence based on environmental regularity and predictability. A natural disaster can upset this balance. In the case of the eruption of Thera, there was little that humans could do to prevent or withstand the devastation. Successful societies were able to develop means of surviving and thriving in their environment. Barring unforeseen changes, such as volcanic eruptions, human settlements in the period from 4000 to 1000 BCE developed in response to the growing ability of humans to manage their environment. In this period, human societies emerged in a variety of different environmental locations throughout the world, such as the arid deserts of Egypt, the temperate forests of Europe, and the tropical rain forests of the Amazon.

By 4000 BCE, a much higher proportion of the world's population had become farmers and herders. Agriculture and the utilization of domesticated crops grew in importance from 4000 to 1000 BCE and by the end of that period, people in the Near East, parts of Africa, Europe, South Asia, parts of central and East Asia, and parts of the Americas relied on farming to support the ever-increasing population. With agriculture playing a more important role in subsistence practices, new crops and food products derived from cultivation became prominent. Beer and wine, although probably invented earlier, became important drinks in Egypt, the Near East, and the Mediterranean. Oils (such as olive oil, palm oil, and sesame oil) were used as food and fuel and were an important means of storing agricultural products and preventing them from spoiling. Rice spreads farther throughout East Asia, and other crop types spread throughout Africa. Maize farming moves out of Mesoamerica into what is now the southern United States and into South America.

With larger populations came larger settlements, and an increasing trend toward urbanization is noteworthy throughout much of the world in this period. Although the majority of people did not live in what could be called cities, urban areas became the centers of power and authority in many regions. New approaches to disposing of domestic waste and garbage are innovations that have had a profound impact on human lifeways. The beginnings of concerns regarding sanitation are often ignored by historians and yet were fundamental to successful urban life.

As distinctions between urban and rural became apparent, so did distinctions between sedentary groups and nomadic and seminomadic groups, although often these groups relied on one another for different resources. Often these seminomadic groups were pastoralists who were compelled to move in order to allow their herds to graze. Sometimes these pastoralists were seen as part of the larger community (although marginal members), as was the case in Egypt and Mesopotamia. In other instances, pastoralists were seen as a completely separate community, as was the case with the Andronovo culture who lived in the steppes of central Asia and traded with the settled Bactrian-Margian culture.

Environmental change was a fact of life for the people of this period, regardless of whether they lived in urban centers or in temporary campsites. The Sahara began warming up during this period, pushing people out of North Africa, a process that continued in the centuries that followed. Volcanic eruptions may have also had a negative impact on farming, although how wide the impact of these eruptions was on

the environment is debated by scholars. The changing courses of the Tigris and Euphrates rivers are apparent, and the people of Mesopotamia altered their landscape tremendously by building canals off of these rivers for irrigation. The extinction of big game throughout North America prior to this period had led the people of that region to adapt a variety of diver-

The changing courses of the Tigris and Euphrates rivers are apparent, and the people of Mesopotamia altered their landscape tremendously by building canals off of these rivers for irrigation.

gent subsistence techniques suited to their local environment, as opposed to practices that could be utilized throughout the continent. Another approach to managing the environment at this time was the use of religious or magical practices to control climatic events. Although historians do not presume that these practices were efficacious, the environment was extremely important in many of the religious traditions of the period from 4000 to 1000 BCE.

Modern archaeologists are subject to the whims of the environment in which they work, just as these ancient civilizations were. The climate is not much of a problem for actually doing the archaeological work (although excavating in Egypt in June can be far from comfortable!); rather, it is a problem for what archaeologists can actually find. Environmental conditions are the most important factor in archaeological preservation. The climate, soil type, humidity level, and changing geomorphology of the earth profoundly affect what types of artifacts survive in the archaeological record. An archaeologist must understand

the environmental conditions of the site, since these conditions directly affect what will be found. Generally, inorganic materials (such as stone tools and clay) can withstand a diversity of environmental conditions. Metals, however, are a different matter. In very acidic soil, metal (especially copper and bronze, the two metals most frequently used in this period) oxidizes, eventually deteriorating into a green- or rust-colored stain. Organic materials, anything derived from animals or plants, do not fare as well archaeologically. Decomposition processes vary dramatically depending on the nature of the matrix (the material, usually soil, that surrounds the object). Bone is preserved well in chalky soils but is completely destroyed by acidic soils.

The best types of preservation conditions are the most extreme conditions: wet, dry, and frozen regions yield the best-preserved artifacts. Wet or waterlogged areas that have not been disturbed (such as peat bogs or shipwrecks) seal remains away from air, thus preventing the development of decomposing agents. Once an artifact is removed from a waterlogged site, however, it begins to deteriorate very quickly, so archaeologists must employ conservation techniques immediately. Dry regions desiccate organic materials and typically destructive microorganisms cannot survive in these types of environments. Thus, bodies buried in the Egyptian desert are already well located for mummification. Frozen environments, such as that which trapped poor Oetzi, work as natural refrigerators.

When we are exploring the cultures of this period, it is thus important to keep in mind how the environment affected what archaeologists were able to recover. The best organic materials come from Egypt because of the dry climate. The most texts come from Mesopotamia, since the Mesopotamians wrote on nearly indestructible (inorganic) clay tablets. The preservation in Neolithic sites in China varies dramatically across the country, given the diversity of environmental conditions. The varying treatment of world cultures does not reflect a varying level of importance to world history. Rather, it reflects a varying level of environmental suitability for the preservation of evidence.

—Kevin M. McGeough

Introduction: Ancient Chronology

One of the most challenging issues facing scholars of ancient world history is how to integrate chronological systems from different regions. The chronological understanding of this period is imperfect, in part due to difficult textual sources and in part due to some of the vagaries of scientific dating techniques. In regions where we have written accounts from the period, scholars can utilize these ancient dates, but this is much more difficult than it may seem at first since the ancients had different means of reckoning time than moderns have. Converting ancient dates into modern dates involves introducing some margin of error. Since the late 1940s CE, archaeologists have been able to use scientific dating techniques, such as radiocarbon dating, that can provide “absolute dates.” Dates that are derived from these techniques are generally

accurate but themselves all have some margin of error and thus leave some ambiguity. Archaeologists often use relative dating techniques, techniques that involve understanding when events happened in relation to other dates. Relative dating techniques often involve the study of material culture changes over time and are often based on the analysis of changes of material culture over time. In general, when working with dates in this period, remember that these are often just working dates and may be inaccurate.

Egyptian Chronology

Predynastic Period	5300 BCE	3000 BCE
Dynasty 0	3200 BCE	3000 BCE
Dynasty 1	3000 BCE	2890 BCE
Early Dynastic Period	3000 BCE	2686 BCE
Dynasty 2	2890 BCE	2686 BCE
Dynasty 3	2686 BCE	2613 BCE
Old Kingdom	2686 BCE	2160 BCE
Dynasty 4	2613 BCE	2494 BCE
Dynasty 5	2494 BCE	2345 BCE
Dynasty 6	2345 BCE	2181 BCE
First Intermediate Period	2181 BCE	2055 BCE
Dynasty 7	2181 BCE	2160 BCE
Dynasty 8	2181 BCE	2160 BCE
Dynasty 9	2160 BCE	2025 BCE
Dynasty 10	2160 BCE	2025 BCE
Dynasty 11	2125 BCE	1985 BCE
Middle Kingdom	2055 BCE	1650 BCE
Dynasty 12	1985 BCE	1773 BCE
Dynasty 13	1773 BCE	1650 BCE
Dynasty 14	1773 BCE	1650 BCE
Dynasty 15	1650 BCE	1580 BCE
Dynasty 16	1650 BCE	1550 BCE
Second Intermediate Period	1650 BCE	1550 BCE
Dynasty 17	1580 BCE	1550 BCE
New Kingdom	1550 BCE	1069 BCE
Dynasty 18	1550 BCE	1295 BCE
Dynasty 19	1295 BCE	1186 BCE
Dynasty 20	1186 BCE	1069 BCE
Third Intermediate Period	1069 BCE	664 BCE
Dynasty 21	1069 BCE	945 BCE

Egyptian Chronology

From 3000 BCE and well through 1000 BCE, these two regions (Upper and Lower Egypt) remained culturally unified (if not always politically unified). The chronological system that scholars use to describe Egypt reflects this. The Old Kingdom, the Middle Kingdom, and the New Kingdom refer to periods in which Egypt was unified under a central government. Following each of these periods is an Intermediate period (the First, Second, and Third, respectively); the term “Intermediate” is used to acknowledge that there was a breakdown in centralized authority in that time. At those times there was often more than one dynasty operating at the same time, controlling different parts of the country. Thus, the dates for some of these dynasties overlap. The designation “Predynastic” is used to refer to the period of Egyptian history that dates to before the advent of the unified state. Dynasty 0 is a somewhat confusing term; it is used by scholars to refer to the earliest dynasty that ruled over a unified Egypt, a dynasty that was unknown when scholars began numbering the dynasties. The dates for the Old Kingdom and the Middle Kingdom have a margin of error of up to about 50 years (and as much as 150 years for the Early Dynastic period). The dates for the New Kingdom have a margin of error of about a decade. These dates are based on ancient observations of astronomical phenomena, but the location from which the phenomena were observed is unknown and is the source of the ambiguity. Note that all of the dates presented here are disputed, but these are the most commonly accepted by Egyptologists today.

Mesopotamian Chronology

Perhaps one of the most difficult issues for students when they start studying Mesopotamia is getting a handle on chronology. Unlike Egypt, which existed as a unified state for much of this period, Mesopotamia did not, and thus there has never developed a consistent terminology for referring to its own past. Modern scholars have had to create this terminology as they have recovered the lost Mesopotamian traditions. This means that the periods do not always match up well together and are not always meaningful for all of the people between the two rivers. The chronological system used at the beginning of this period (4000 BCE) is entirely based on material culture. Around 2350 BCE, scholars designate periods according to the ruling dynasties. This initial change in designation is problematic because the Mesopotamians did not immediately change their material culture (houses, pottery, etc.) because a new ruling dynasty took over, so some overlap is expected. Likewise, since there was not always a smooth succession from one dynasty to another, designations based on dynasty often overlap or do not fully capture the actual diversity of the ancient political system.

In terms of absolute dates, Mesopotamian chronology is on relatively certain ground. The ancient Mesopotamians were expert astronomers and recorded various astronomical phenomena. Since modern astronomers can calculate when events such as eclipses occurred, it is possible to “translate” ancient Mesopotamian dates into our calendar. There are still some ambiguities. Since the Mesopotamians thought that eclipses were bad omens, it is possible that later historians in Mesopotamia assumed that eclipses occurred around certain calamitous events. While the details of the chronological problems are too complex to get into here, you should be aware that the exact dates surrounding King Hammurabi’s reign are disputed, and thus many of the dates that are calculated based on Hammurabi’s traditional dates are also in question.

Mesopotamian Chronology

Uruk Period	4000 BCE	3200 BCE
Jemdet Nasr Period	3200 BCE	2900 BCE
Early Dynastic Period I	2900 BCE	2700 BCE
Early Dynastic Period II	2700 BCE	2600 BCE
Early Dynastic Period III	2600 BCE	2350 BCE
1st Dynasty of Akkad	2334 BCE	2154 BCE
Gutian Period	2193 BCE	2112 BCE
Ur III Period	2112 BCE	2004 BCE
1st Dynasty of Larsa	2025 BCE	1763 BCE
1st Dynasty of Isin	2017 BCE	1794 BCE
Isin and Larsa Period	2004 BCE	1800 BCE
Old Assyrian Period	2000 BCE	1807 BCE
1st Dynasty of Babylon	1894 BCE	1595 BCE
Old Babylonian Period	1800 BCE	1600 BCE
Kassite Period	1600 BCE	1155 BCE
Middle Assyrian Period	1350 BCE	745 BCE
2nd Dynasty of Isin	1150 BCE	1025 BCE

Syro-Palestinian Chronology

Be wary of historians who refer to the Levantine chronology in the period from 4000 BCE to 1000 BCE using biblical terminology (i.e., the Patriarchal period, the period of the Judges). Mainstream scholars are quite divided on which (if any) of these biblical periods reflect a historical reality, and there is certainly little agreement on when these periods and events should actually be dated. Most scholars of Syria-Palestine use archaeological terminology when discussing chronology in this region in order to avoid these problems altogether. This era begins in the middle of the Chalcolithic period, otherwise known as the Copper

Syro-Palestinian Chronology

Chalcolithic Period	4300 BCE	3300 BCE
Early Bronze Age I	3300 BCE	3050 BCE
Early Bronze Age II/III	3050 BCE	2300 BCE
Early Bronze Age IV/Middle Bronze Age I	2300 BCE	2000 BCE
Middle Bronze Age IIA	2000 BCE	1800 BCE
Middle Bronze Age IIB/C	1800 BCE	1550 BCE
Late Bronze Age	1550 BCE	1200 BCE
Iron Age I	1200 BCE	1000 BCE

Age. Most of the period from 4000 BCE to 1000 BCE is considered the Bronze Age, which is subdivided into Early, Middle, and Late (and then each of these periods is further subdivided first by Roman numeral and then by a letter). The last stages of this period in Syria-Palestine are in the Iron Age (specifically the Iron I). Scholars are not entirely in agreement about what constitutes the beginning of one period and the end of another, so you will often find different dates or nomenclature in use. Our understanding of the time periods also changes with each new archaeological discovery, but it becomes too confusing to change the name of each period. So, confusingly enough, bronze is still used in the Iron Age, and iron is first invented in the Bronze Age! In other cases, scholars will generally agree on what constitutes a time period but will not agree on what to call it. For example, most scholars are in agreement that the Early Bronze IV period and the Middle Bronze I period are the same. But no one agrees on which term should be used. Presented here is a conservative chronological scheme that is commonly used.

Greek Chronology

Early Cycladic Period	3000 BCE	2000 BCE
Early Helladic Period	3000 BCE	2000 BCE
Early Minoan Period	3000 BCE	2000 BCE
Middle Cycladic Period	2000 BCE	1600 BCE
Middle Helladic Period	2000 BCE	1600 BCE
Middle Minoan Period	2000 BCE	1600 BCE
Late Cycladic Period	1600 BCE	1500 BCE
Late Helladic I Period	1600 BCE	1500 BCE
Late Minoan Period	1600 BCE	1050 BCE
Late Helladic II Period	1500 BCE	1450 BCE
Late Helladic IIB Period	1450 BCE	1400 BCE
Late Helladic IIIA Period	1400 BCE	1300 BCE
Late Helladic IIIB Period	1300 BCE	1200 BCE
Late Helladic IIIC Period	1200 BCE	1050 BCE

Chronology of Greece and the Greek Islands

The chronology of Greece and the Greek islands in this period is based on archaeological excavations and understandings of the change of material culture over time. The dating systems are divided into three geographic regions: Helladic, Cycladic, and Minoan. Helladic dates refer to mainland Greece. Cycladic dates refer to the Cyclades, an island group in the Aegean Sea. Minoan dates are based on archaeological excavations on the island of Crete. None of these dates are precise, but those that are presented here are commonly used by archaeologists.

Indus Valley Chronology

The chronology of the Indus Valley civilization is based entirely on archaeological evidence. The beginning of this period, in 4000 BCE, is also the beginning of the Pre-Harappan or Early Harappan phase, which lasts until about 2600 BCE. The Mature Harappan phase (the period in which the Indus Valley civilization seems to peak) starts in 2600 BCE and lasts until about 1900 BCE. Scholars are uncertain about exactly how Harappan civilization comes to an end. By 1750 BCE, substantial urban occupation of the cities of Harappa and Mohenjo-daro had come to an end, but recent excavations have shown that this may not have been the case elsewhere. The origins of the Vedic Age are particularly contested since scholars debate the relationship between the culture of this period and the preceding Indus Valley civilization. The term “Vedic” refers to the Vedas, sacred texts that were composed during this period.

South Asian Chronology

Early Harappan	3300 BCE	2600 BCE
Mature Harappan	2600 BCE	1900 BCE
Late (Post-urban) Harappa	1900 BCE	1300 BCE
Beginnings of the Vedic Age	1300 BCE	ca. 500 BCE

East Asian Chronology

Chinese chronology for the period from 4000 BCE to 1000 BCE is under constant revision, as archaeological excavations demonstrate an increasingly complex situation. The general picture that has emerged regarding

Chinese Chronology

Neolithic Cultures	Approximate Location		
Majiabang	Taihu Lake area	5000 BCE	3500 BCE
Hemudu	Zhejiang	5000 BCE	3300 BCE
Dawenkou	Shandong	5000 BCE	3000 BCE
Daxi	Three Gorges Region	5000 BCE	3000 BCE
Dapenkeng	Taiwan Strait	5000 BCE	2500 BCE
Yangshao	Central Yellow River	4500 BCE	2500 BCE
Majiayao	Upper Yellow River	3500 BCE	1500 BCE
Liangzhu	Yangtze River Delta	3300 BCE	2200 BCE
Hongshan	Inner Mongolia	3500 BCE	2500 BCE
Longshan	Central and Lower Yellow River	2500 BCE	1700 BCE
Dynasties			
Xia Dynasty (Erlitou)		2000 BCE	1300 BCE
Shang Dynasty		1544 BCE	1045 BCE
Western Zhou Dynasty		1045 BCE	771 BCE

Japanese Chronology

Early Jomon	7500 BCE	3000 BCE
Middle Jomon	3000 BCE	2000 BCE
Late Jomon	2000 BCE	1000 BCE

China at the beginnings of this period is that there were a variety of independent Neolithic cultures within the region. The dates for these individual cultures are presented here, most of which are based on radiocarbon dating and have a high margin of error. The dates of Chinese dynasties given reflect scholarly adaptations of traditional dates and also involve more standard of error than may appear here. Japanese dates are presented for the Jomon culture, and all of these are derived from archaeological excavations.

European Chronology

European Chronology		
Mesolithic Period	12000 BCE	3000 BCE
Neolithic Period	7000 BCE	3500 BCE
Copper Age	4500 BCE	2300 BCE
Bronze Age	2300 BCE	800 BCE

The chronology of Europe and western Asia in this period is extremely complex. Since the cultures of Europe in this time are very diverse, their material culture is very diverse, so it is difficult to identify overarching trends that accurately reflect European society. To deal with this, European archaeologists who work in this period generally use two types of chronologies. The first type is a local chronological

system that makes sense only for a small region. The second type, originally referred to as the Three-Age System (and the basis for the system used in Syria-Palestine) references metallurgical technology: Stone Age, Copper Age, Bronze Age, and Iron Age. These terms are used very broadly, and even though technological capabilities varied dramatically in Europe, archaeologists use these designations to talk about Europe as a whole. Note that these dates in Europe are not the same as the dates in Syria-Palestine; the two systems have developed independently and need to be “translated.”

Chronology of the Americas

North American Chronology		
Middle Archaic (Eastern Woodlands)	6000 BCE	3000 BCE
Archaic (Southwest)	6000 BCE	200 CE
Archaic (Plains)	5000 BCE	1 CE
Late Archaic (Eastern Woodlands)	3000 BCE	1000 BCE

Mesoamerican Chronology		
Middle Archaic Period	5500 BCE	3500 BCE
Late Archaic	3500 BCE	2000 BCE
Initial Formative Period	2000 BCE	1200 BCE
Early Formative Period	1200 BCE	900 BCE

South American Chronology		
Archaic (Preceramic)	8000 BCE	2000 BCE
Early Formative Period	3500 BCE	1500 BCE

Scholars use the broad term “Archaic” to refer to the Americas through much of the period from 4000 BCE to 1000 BCE. This is the second stage of human occupation in the region in the schema developed by Gordon Willey and Philip Phillips and is characterized by subsistence practices that are utilized before farming is introduced. The introduction of farming marks the end of the Archaic in many regions and the beginning of the Formative period. Various subdivisions are used in different regions, acknowledging that there was actually a significant diversity of cultures in the Americas throughout this period, despite this broad chronological framework.

—Kevin M. McGeough

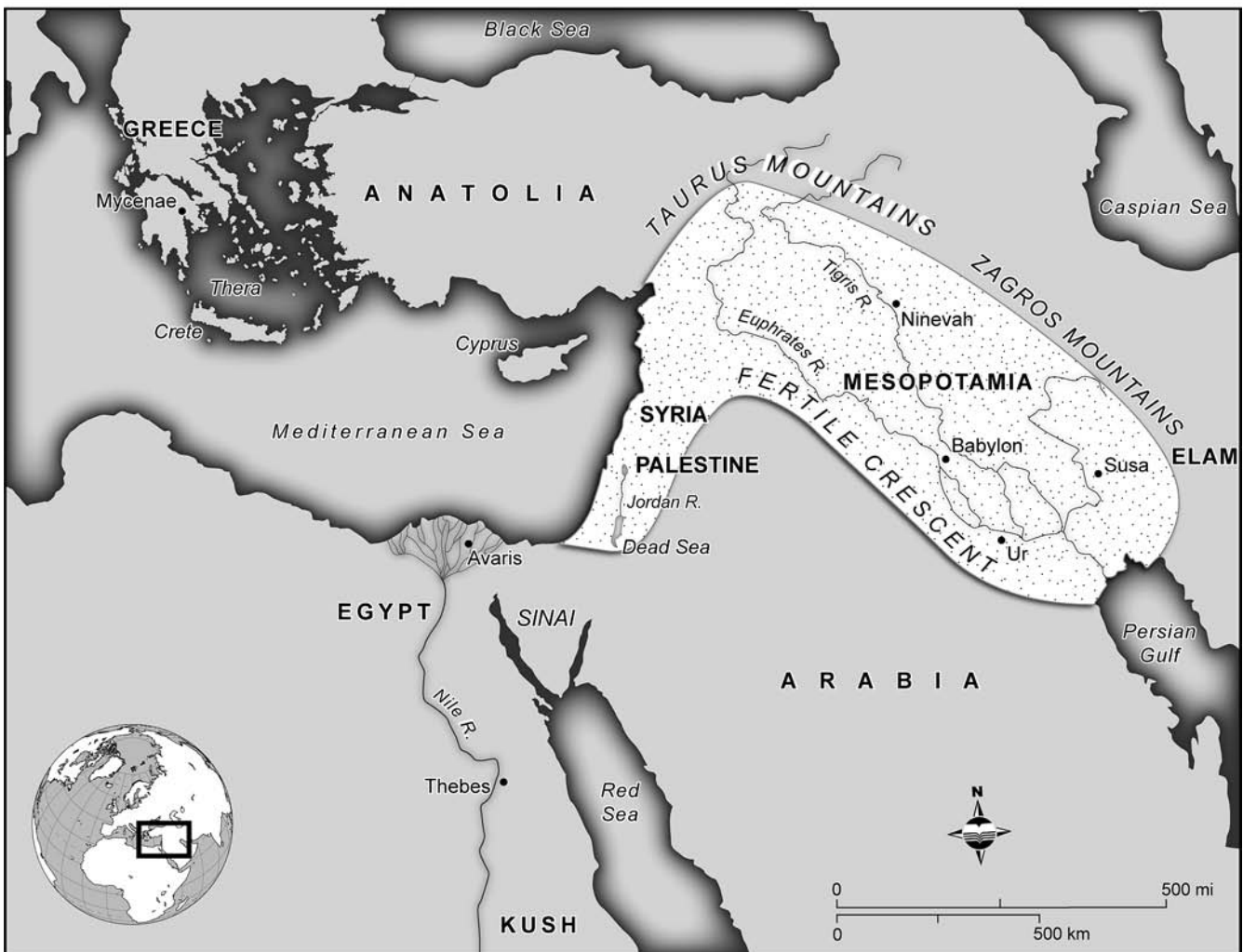
■ Introduction: The Environmental Framework

From 4000 BCE to 1000 BCE, people gained a greater degree of control over their environment, continually developing the skills, knowledge, and technology that allowed them to survive and thrive in a variety of environmental conditions. These ancient humans were able to see the potentials and possibilities in their local regions and adapt themselves and their surroundings accordingly. They were capable of long-term environmental planning and management, although ancient environmental management did not involve conservation or sustainability,

as modern environmentalists often romanticize about the past. However, the people of this period were capable of planning elaborate subsistence regimes based on seasonal variation, for example, constructing sophisticated water projects that allowed them to irrigate crops and store fresh water for dry seasons. Rivers were diverted and dams built to better suit the needs of some and (sometimes) to purposefully weaken competitors.

Historians used to study the environment simply as a means of setting the stage for the

EASTERN MEDITERRANEAN AND MESOPOTAMIA, CIRCA 6,000 BCE



culture of interest to them. Now, historians have realized the profound importance that the environment plays on the development of any cultural group. Environment provides the immediate constraints and possibilities, initial problems that must be solved in order to survive, and resources that can allow people to thrive. In order to truly understand another culture, it is profoundly important to understand the environmental conditions in which it is found.

The first large organized polities developed in this period in regions that are environmentally stable and predictable yet require significant human intervention in order to make them habitable. Egypt and Mesopotamia are the earliest of these cultural regions. Both had been inhabited long before this period began, but both rise to prominence in this time. The Indus Valley civilization appears shortly after, and as with Egypt and Mesopotamia, this is a somewhat inhospitable land for hunting and gathering. Yet in all three of these regions, the major rivers are predictable and the soil is rich and productive, allowing for rich agricultural practices and healthy surpluses of food. These lands, although hot and barren outside of the river valleys, were able to support human life on a massive scale and were the first large civilizations.

—Kevin M. McGeough

The Nile Valley

In *The Histories*, the Greek historian Herodotus called Egypt “the gift of the Nile”; without the Nile, Egypt would be uninhabitable desert. Rains are rare in Egypt, so the population relies on the Nile River for fresh water not only for drinking but also for irrigating crops. Beginning in the Early Dynastic period, the ancient Egyptians altered the landscape of the Nile Valley in order to maximize the amount of land available for agriculture.

To understand just how important the Nile River is to Egypt’s survival, it is important to understand a little about the geography of Egypt. The Nile River runs from south to north. Over the course of millions of years, the Nile River cut a path through the high desert plateau from Lake Victoria in Kenya to the Mediterranean Sea, a journey of more than 3,000 miles. The erosive

forces of the river created cliffs on either side of the fertile Nile Valley, equivalent to a much longer and wider Grand Canyon. Every winter, the Nile River overran its banks and flooded much of the valley. When the floodwaters receded, highly fertile silt or mud was left behind. The deposition of this silt was thickest nearer the river, which caused the Nile Valley to be convex in cross-section. High silt banks retained the Nile, and the fields were below the level of the river. The terrain near the base of the high desert cliffs begins to rise again, and it is here that sand blown from the surrounding desert accumulates. These high areas are not flooded by the Nile and remain sandy desert, called the low desert plateau. The Nile River is not the only river in the Nile Valley. The Bahr Yousef (the Arabic term *bahr* means “river”) branches off from the Nile between the ancient city of Amarna and the present-day capital of Asyut and flows into a permanent lake called Birket el-Qarun. The area surrounding the lake, called the Fayoum, is highly fertile due to deposits of silt from the annual flooding of the Nile and made this region valuable in terms of agriculture. Near present-day Cairo, the Nile breaks up into several branches (as many as seven in pharaonic times and only two today) to form the fertile delta, or mouth, of the Nile River where it flows into the Mediterranean Sea.

In Paleolithic times, Egypt had much more rainfall, and the high desert plateau had grasslands that could support a large variety of animals (elephant, rhinoceros, giraffe, gazelle, antelope, etc.), which in turn sustained Egypt’s early populations. At some point in the Predynastic period (ca. 3250 BCE) Egypt became very arid, large animal species migrated or died off, and the early peoples were forced to turn to agriculture as their sole source of food.

With almost no rainfall in Egypt, farmers relied on irrigation to water their crops. The method of cultivation in ancient Egypt was called basin-irrigation farming. This involved creating small walls of earth in order to form a series of depressions in a field. These basins not only retained the floodwaters of the Nile, which watered the new crops, but also caught the highly fertile silt suspended in the water. Where a particular crop was planted depended entirely upon

► THE SHADUF—DRAWING WATER FROM THE NILE

The water-lifting machine that was used by the ancient Egyptians to raise water from a river or canal in order to irrigate their gardens is called a *shaduf*. Pronounced “sha-doof,” the word for this device comes from the modern Arabic and remains in use all over Egypt today. The ancient Egyptian term for *shaduf* is unknown, as the only evidence for it comes from illustrations on tomb walls.

The *shaduf* first was employed in Mesopotamia as early as 2370–2200 BCE, as indicated by a depiction on an Akkadian cylinder seal. The first evidence for the use of the *shaduf* in Egypt comes from drawings in the New Kingdom (Eighteenth Dynasty) tomb of Merire at Amarna. Prior to the New Kingdom, the ancient Egyptians used water jars suspended from yokes to lift water out of the Nile or canals.

The *shaduf* had a basic lever design consisting of a pole, the center of which rested on a fulcrum. The pole had a bucket attached to one end and a counterweight on the other. The *shaduf* required only one person to operate it, and because that person did not have to take time-consuming trips up and down the bank of the Nile (or canal), much more water could be lifted much faster than through the traditional yoke method. However, the *shaduf* was not efficient enough to be used as the only means of irrigating fields of summer crops. It was utilized primarily for vegetable gardens and orchards and to fill small pools for fish or fowl.

—Vanessa Smith



Villagers in Egypt use a *shaduf*, about 1910. (Library of Congress)

its available water source. Vegetables required constant watering, and gardens were placed near wells, canals, or the river so that they could be watered daily either by hand or with the *shaduf*, a simple water-lifting machine. Grain crops only needed a burst of water for initial growth and could be placed in fields that flooded but were at some distance from a continuous water source. Finally, levees and higher ground were planted with date palm trees whose roots were deep and did not require much water.

While most basins that were created by local farmers were small and relatively shallow, some basins were built at a monumental size. These huge basins, often built by kings, formed permanent artificial lakes 2,500–50,000 acres in area

and acted as insurance against a poor Nile flood, for if the annual flood was low, crop yields would be small, and starvation would follow. Artificial lakes could relieve some of the drought by the controlled release of some of the water through the canal systems to water crops.

Earthen walls, or levees, were also used to hold the inundation away from areas that the ancient Egyptians did not want to flood. Settlements in the Nile Valley were located on two different types of terrain: at the edge of the low desert plateau, which was unlikely to be reached by floodwaters, and on turtlebacks. A turtleback is a natural hill or high spot within the cultivation. The building of settlements on turtlebacks had three advantages, the most important

of which is that the floods would not wash the village away every year. Second, because the floods did not reach this land, it was unsuitable for agriculture, which made it perfect for towns. And finally, because the turtlebacks were within the cultivation, village farmers were close to their fields. The very nature of being within the floodplain meant that even a settlement on a turtleback could be flooded. Only levees could hold the waters back from homes, livestock, and grain stores.

As discussed earlier, the silt deposited in the Fayoum region made the lands around the lake important in the annual agricultural production of Egypt. However, sometime in the First Intermediate period, the Bahr Yousef became blocked with silt at the Hawara Channel (located at the place where the Bahr Yousef turns west and stretches into Birket el-Qarun) due to a series of unusually low inundations. In the Middle Kingdom, King Amenemhat I removed the silt and widened the Hawara Channel in order to restore and increase water flow to the lake. In so doing, a reservoir was created for those years when the Nile flood was poor and served as a flood escape for those years when the Nile flood was dangerously high. The Twelfth Dynasty rulers, therefore, had created an insurance policy against the unpredictable Nile floods. The Fayoum basin, with its permanent lake, would continue to provide food in case of drought and acted as a catchment in case the flood was too high, thus protecting valuable farmland in Lower Egypt. The importance of this area is emphasized by the fact that Senwosret II and Amenemhat III built their pyramid complexes here (Lahun and Hawara, respectively).

It was very important to the ancient Egyptians to know what to expect from any particular flood. The varying heights of the inundation determined how good a crop was. Too high a flood might ruin infrastructure and cause planting to be too late. A low flood meant that floodwaters did not reach as many fields, and fewer crops could be planted. The ancient Egyptians set up a series of nilometers up and down the Nile River that measured the height of the river. If a flood was going to be high, a warning might be sent upstream to let people prepare. Additionally, the Egyptians kept track of which lands

flooded at which height of the Nile. Using this data, the state could estimate the grain yields at harvest and could levy taxes appropriately. This meant that the value of a piece of land was based on its likelihood of flooding annually or intermittently.

—Vanessa Smith

Bibliography

- Butzer, Karl W. *Early Hydraulic Civilization in Egypt: A Study in Cultural Ecology*. Chicago: University of Chicago Press, 1976.
- Eyre, Christopher. "The Agricultural Cycle, Farming, and Water Management in the Ancient Near East." In *Civilizations of the Ancient Near East*, vol. 1, edited by Jack Sasson. New York: Scribner, 1995.
- Hassan, Fekri. "The Dynamics of a Riverine Civilization: A Geoarchaeological Perspective on the Nile Valley, Egypt." *World Archaeology* 29(1) (1997): 51–74.
- Laessø, Jørgen. "Reflexions on Modern and Ancient Oriental Water Works." *Journal of Cuneiform Studies* 7 (1953): 5–26.
- Murray, Mary Anne. "Cereal Production and Processing." In *Ancient Egyptian Materials and Technology*, edited by Paul Nicholson and Ian Shaw. Cambridge: Cambridge University Press, 2000.

The Mesopotamian Floodplain

Surrounded by mountains in the north and east and desert in the west and bounded in the south by the Persian Gulf, ancient Mesopotamia was shaped by its two rivers, the Tigris and Euphrates. These provided water for agriculture and daily life and were the main highways for communication. Major environmental differences divided Mesopotamia into two distinct regions, the northern plains of Assyria and the southern Babylonian alluvium. Further differences split Babylonia into a northern river plain (Akkad) and a more southerly delta plain (Sumer). These geographical contrasts were mirrored by cultural, political, and economic distinctions. Marshes divided Babylonia from Elam, the eastern alluvial plain and adjacent Zagros Mountains, a land whose history frequently intertwined with that of Mesopotamia. At times, cities and states beyond the desert and the mountains were also involved with Mesopotamia, while mountain and desert fringes were home to tribal groups who frequently raided their settled neighbors.

The surface geology of the Near East is mainly sedimentary limestone and sandstone, but volcanoes have also created outcrops of basalt and obsidian. Pressure from the Arabian shield in the west forced the adjacent lands to fold, forming the Zagros Mountains and depressing the intervening area, creating a trough in which the rivers deposited alluvium.

Between the marshlands and the latitude of modern Ramadi and Baghdad, where the Tigris and Euphrates come within 19.8 miles (32 kilometers) of each other, lies the alluvial region of Babylonia. Its agricultural prosperity depends on irrigation, since the scanty rainfall is quite inadequate to water crops and the rivers' annual inundation unhelpfully occurs around harvest time. The deeply incised and fast-flowing Tigris was difficult to harness for irrigation, and settlement along its course was largely eschewed. Farming therefore concentrated along branches of the slow-moving Euphrates, which watered a wide expanse of plain. The land to the east along the Diyala, a tributary of the Tigris, formed an extension of the Babylonian political and economic sphere; here both dry farming and irrigated agriculture were possible.

The alluvial river plain is almost flat, decreasing from a gradient of 1.8 inches per 1,093 feet (30 centimeters per kilometer) to just 3.9 inches (10 centimeters), producing a landscape in which the river divides into several meandering watercourses, and farther south in the delta plain below Hilla, it decreases still further to 1.18 inches per 1,093 feet (3 centimeters per kilometer). The meager gradient causes the Euphrates' branches to run sluggishly through the plains, depositing silts that gradually raise their beds and the surrounding banks so that the rivers flow on levees, which can reach 1.2–1.8 miles (2–3 kilometers) in width, raised above the surrounding plain. These provide a fertile and well-drained environment ideally suited for cultivation. Irrigation channels can be cut through the levee banks to divert water onto the surrounding land, using gravity flow. Willow, poplar, licorice, tamarisk, grasses, and rushes form dense thickets along the watercourses, providing food and shelter for wild boar and fallow deer.

Spring melting of snows in the distant Taurus Mountains, where the Tigris and Euphrates rise,

➤ CANAL MAINTENANCE AND CONFLICT

The creation of canals and dams could significantly alter drainage patterns; though often unwitting, at times the interference was malicious. Upstream communities sometimes channeled water to serve their own needs at the expense of communities farther downstream, creating a catalyst to conflict. Several kings diverted the Euphrates to starve hostile cities of essential water supplies or to destroy them by flooding, often with devastating long-term effects. For example, Sumu-El (1894–1866 BCE) of Larsa built dams to divert water from the rival kingdom of Isin, contributing significantly to its decline. But his own state, farther downstream, also suffered as a result, bringing famine. This failure in his primary responsibilities to his own people led to a popular revolt in which he was replaced by a commoner, Nur-Adad, who soon restored the canals to their original courses. Nur-Adad's son, Sin-iddinam, recorded that he and his father were assiduous in performing their duties to dredge the river and maintain the canals, work that was crucially important for the well-being of the state.

—Jane R. McIntosh

swells the rivers in April and May, causing them to flood their backslopes. Every few years they burst their banks and inundate a wide expanse of the alluvial plains, encouraging the Euphrates to change its course and multiply its channels. The arrival of floodwaters just when the crops are ready to harvest means that drainage and flood control are as important as irrigation.

Away from the narrow fertile strip along the rivers and canals, the land is dry semidesert mud. Here the perennial vegetation consists of scrubby, xerophytic species such as camelthorn and artemisia (wormwood), which in antiquity were more abundant. Overexploitation has resulted in erosion and desertification in many places. During the hot dry summer and early autumn (May to October), this is a bleak region inhabited by small elusive fauna—birds, burrowing creatures, and their predators, jackal and fox. The rains, although generally slight (rarely exceeding 5.9 inches, or 150 millimeters, per annum), transform this landscape in the winter and

spring, producing fast-growing grasses, flowers, and other herbaceous plants that provide seasonal grazing for domestic sheep and goats and for gazelle and, in antiquity, onager, preyed on by hyenas and lions. In places, low-lying hollows and relics of former watercourses allow water to collect, creating shallow lakes or seasonal swamps that attract wildlife, particularly birds including sandgrouse, teal, pelicans, geese, cranes, and sometimes flamingos and ibises.

Towns and cities clustered along the watercourses, each surrounded by fields and gardens, and the adjacent desert provided grazing. But the contrast between waste and fertile land hung on the availability of water. Prosperous settlements could suddenly be stranded in newly formed semidesert as their life-giving river moved elsewhere. The Babylonian landscape is littered with abandoned settlements, great tells rising in what is now the middle of nowhere. And the greater the investment in irrigation works, the more catastrophic the change.

Although often politically divided, the city-states of Babylonia were united by their environment, common problems, and solutions, promoting the growth of a common culture. Sharp ecological contrasts and significant geographical barriers divide this region from the surrounding lands: marshes to the east, and to the west a low rocky escarpment marking the frontier with the desert.

—Jane R. McIntosh

Bibliography

- Butzer, Karl W. "Environmental Change in the Near East and Human Impact on the Land." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Lees, G. M., and N. L. Falcon. "The Geographical History of the Mesopotamian Plains." *Geographical Journal* 118 (1952): 24–39.
- Lloyd, Seton. *Foundations in the Dust*. Rev. ed. London: Thames and Hudson, 1980.
- Nissen, Hans J. *The Early History of the Ancient Near East*. Chicago: University of Chicago Press, 1990.
- Nutzel, Werner. "The Climatic Changes of Mesopotamia and Bordering Areas." *Sumer* 32 (1976): 11–24.
- Pollack, Susan. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press, 1999.

Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.

Elam and the Zagros

The Zagros foothills form a region of open woodland and grasses that enjoy warm dry summers and mild wet winters. The region skirts the low ranges that jut out from the Zagros; of these the most formidable is the Jebel Hamrin, a steep and rugged range rising to 656–984 feet (200–300 meters) that presents a major barrier dividing the lands of the north from the plains of Babylonia. The Diyala River cuts a pass through Jebel Hamrin and flows into the Tigris some 111.8 miles (180 kilometers) to the southwest. South of the Diyala, marshes divide the Babylonian plain from Susiana (Khuzestan).

Although Susiana is geologically part of the southern plain usually associated with the Mesopotamian cultures, it was culturally and economically quite distinct from Mesopotamia. Apart from marshes in the extreme south and an arid zone south of Ahwaz, the region lies within the area where rain-fed agriculture is possible. Five rivers rising in the Zagros, of which the Karun and the Karkheh are the most substantial, allow productivity to be increased by irrigation.

Cultivation was only a part of the farming economy of Susiana, where transhumant sheep and goat pastoralism has great antiquity. In winter, flocks grazed on the plains and foothills, covered in tamarisk, pistachio, jujube, and grasses, and in summer in upland pastures of the Zagros, where in antiquity there were widespread open forests (now largely denuded), mainly of oak and pistachio, interspersed with abundant herbaceous vegetation, home to herds of red deer, roe deer, wild sheep, and wild goat.

Susiana and the adjacent Zagros region became known to the Mesopotamians as Elam. Through history, Elam varied in extent, at times including Anshan, the mountains and coastal plain along the eastern side of the Persian Gulf. From the Zagros, Elam looked east across the Iranian plateau with which it often had close economic and cultural ties. To the west, routes around the northern and southern edges of the marshes gave access to Babylonia, by turns friendly or inimical to Elam; the northern pas-

sage also joined routes into Assyria, with whom Elam often had hostile relations.

The Diyala River, Elam's northern boundary, was one of the main access routes into the Zagros mountain chain, which rises to 2.2–2.4 miles (3,600–4,000 meters) in a series of steep terraces, well watered and lushly vegetated in antiquity. In places, patches of grass-covered soil along valleys or on hillside terraces give the opportunity for small communities to practice cultivation, although pastoralism has always provided the main way of life. The high Zagros offers rich summer pastures, and in the bitter winters grazing is found on the lower slopes or foothills on either side of the mountains. Three larger intermontane valleys—the Shahrizur, Rania, and Rowanduz plains—offer scope for more dense settlement, but the difficulty of movement through the Zagros meant that they were always home to tribal groups rather than larger political entities. From the Zagros, Assyria and Babylonia were frequently raided by groups speaking many languages, such as Hurrians, Gutis, and Kassites.

—Jane R. McIntosh

Bibliography

- Lloyd, Seton. *Foundations in the Dust*. Rev. ed. London: Thames and Hudson, 1980.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Nissen, Hans J. *The Early History of the Ancient Near East*. Chicago: University of Chicago Press, 1988.
- Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.
- Potts, D. T. *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge: Cambridge University Press, 1999.

The Mediterranean

The Mediterranean Sea encompasses wide sections of southern Europe, Asia Minor, the Levant in West Asia, and vast regions of North Africa. The geographic attributes of these regions retain similar yet distinctive characteristics that have shaped the historical patterns, climate, and cultural and economic diffusion of this important world region. Debates among historians and geographers over whether or not there is a unified

Mediterranean world stems from studies that attempt to link the historical evolution of the region emphasizing the similarities of the adjacent cultures while minimizing the differences. Given the immense diversity of regions, cultures, and resources that surround the Mediterranean Sea, it remains a complex geographic area for study by scholars.

The geographic evolution of the Mediterranean region begins with the breakup of the supercontinent of Pangaea occurring over various millennia. The gradual dismemberment of Pangaea into various continents due to the process of plate tectonics led to the formation of the Tethyan Ocean in a gap created between the evolving modern continents of Europe and Africa. Scholars speculate that this ancient ocean had only limited access to the Atlantic Ocean and was subject to constant evaporation, leading to the formation of the characteristic salt beds on the floor of the Mediterranean Sea. The eventual opening of the Straits of Gibraltar allowed the constant flow of salt water into the Mediterranean, but it had already retained its signature salt beds formed in the previous period. As a boundary between tectonic plates, the Mediterranean basin is also characterized by volcanic activity and earthquakes. Various mountain ranges were formed as a result of the collisions between the African plate and the European plate, such as the Caucasuses, the Apennines, and the Alps. Volcanic activity such as the massive eruption of Mount Vesuvius that caused the destruction of Pompeii in 79 CE is a testament to the cataclysmic effects of tectonic processes.

The economic resources of the Mediterranean region were formed in this early period of geological processes, which formed the various mountain ranges and shaped the contours of the coastlines. The flow created by igneous belts moving through rock strata moved mineral formations throughout the rock formations and mountain ranges, leading to a rich diversity of elements. Oil as well as ores such as copper, lead, and zinc are among the various deposits in the Mediterranean, which in turn affected the cultures and civilizations that extracted and processed them. The large deposits of copper in Asia Minor were used by the ancient Hittites in the production of bronze artifacts (nineteenth to

twelfth centuries BCE). The formation of limestone allowed for its usage as a primary construction material, which characterized the architecture of various urban areas around the Mediterranean. Oil reserves in adjacent areas also formed in this early period, which are now evident in the immense oil production in the Middle East and natural gas reserves around Italy.

The Mediterranean climate, generally characterized by cool summers and temperate winters, actually differs from region to region according to its location and other factors that contribute to climatic shifts. Precipitation also fluctuates accordingly and is characterized by long periods of drought followed by long bouts of rain that in turn lead to flooding, particularly in low-lying regions such as Venice. The heavy months of rain, typically in the winter, are sometimes followed by long dry periods, which have a greater affect in the more arid areas such as southern Spain and Algeria. The formation of anticyclones in the western Mediterranean also creates unstable weather conditions, which have led to high winds and extreme levels of precipitation. In the winter months, extreme temperatures with the chance of snows are possible even in arid North Africa. In the summer months, extreme heat can cause death in some southern European cities. The climate also affects the type of agricultural practices and crops particular to the various regions. Olives, wine grapes, pistachios, and figs characterize the Mediterranean region, each crop adapted to a unique region's distinct weather pattern. For example, Italy, Greece, and southern France are historically known for their olive oils and fine wines.

Of the various civilizations that emerged out of the Mediterranean region, none have garnered more fame in the historical profession than the ancient Greeks and perhaps to a lesser extent the ancient Phoenicians. Ancient Greek civilization emerged from the cultural diffusion that characterized the eastern Mediterranean as a result of the growth in trade and the expansion of political control of the Aegean by various Greek city-states. Prior to this, Minoan civilization (1200–1250 BCE) had flourished on the island of Crete and manifested itself at Knossos. In the Minoan kingdom, early vestiges of what would later evolve into Greek culture began as an example

of the seafaring skills that people of the region had developed. These capabilities for seafaring and maritime technology allowed the ancient Greeks to colonize the Mediterranean region and expand their economic ties with other ancient civilizations. The destruction of Minoan civilization (1760 BCE) is speculated to have been caused by an earthquake or by invasion, but the subsequent period includes the growing diffusion of Greek culture throughout areas surrounding present-day Greece, southern Italy, Spain, and much of Asia Minor (Turkey). The ancient Phoenicians (2000 BCE), also a seafaring people, traded and colonized areas in Spain and Carthage (North Africa) from their home bases in Canaan (Palestine/Lebanon). The diffusion of Hellenistic, Roman, and later Byzantine and Islamic cultures followed the trade links and sea routes established in the period of the ancient Greeks and Phoenicians. Much of this cultural diffusion is apparent in the architecture, religions, and languages of the ancient and later periods of the history of the region.

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Bibliography

- Gates, Charles. *Ancient Cities: The Archaeology of Urban Life in the Ancient Near East and Egypt, Greece and Rome*. New York: Routledge, 2003.
- Harris, W. V., ed. *Rethinking the Mediterranean*. New York: Oxford University Press, 2005.
- King, Russell, Lindsay Proudfoot, and Bernard Smith, eds. *The Mediterranean: Environment and Society*. New York: Arnold, 1997.
- Newby, Eric. *On the Shores of the Mediterranean*. London: Harvill, London, 1984.
- Winks, Robert W., and Susan P. Mattern-Parkes. *The Ancient Mediterranean World: From the Stone Age to A.D. 600*. New York: Oxford University Press, 2004.

The Environment of Ancient India

The Indo-Pakistan subcontinent consists of three main geomorphological regions: Peninsular India, which juts out into the Indian Ocean in a triangular shape; the extrapeninsular mountain system, which separates the subcontinent from the rest of Asia; and the alluvial plains of the Ganges and Indus rivers. The inhabitants of India early in the period 4000–1000 BCE were con-

centrated in the alluvial plains associated with the Indus River and are referred to as the Indus Valley civilization or the Harappans (after one of the two largest excavated sites). By the end of the period 4000–1000 BCE these settlements had been abandoned, and people (the bearers of Vedic culture) had settled along the Ganges River.

The Indus Valley civilization was spread over a relatively large geographic region. The two largest sites, Harappa and Mohenjo-daro, are about 388 miles (625 kilometers) away from each other. Both are located along the Indus River or its tributaries. Smaller settlements were located all along the Indus River. The Indus River flows south into the Arabian Sea, fed from tributaries that originate as snowmelt in the Himalayas. The river carries a vast amount of silt with it, which causes the riverbed to get higher and higher, leading to sometimes disastrous flooding but also providing a rich source of agricultural soil. The many tributaries in this region facilitated transportation in this area.

In ancient times another river, the Ghaggar-Hakra (probably identified with the Saraswati River mentioned in Vedic texts), was equally if not more important for the development of this society. Now mostly dried up, this ancient river ran parallel to the Indus River. Unlike the Indus, the Ghaggar-Hakra does not seem to have been fed by melting snow in the Himalayas but instead relied on rainfall during the monsoon season, a less stable source of water. Most Indus Valley sites are actually located along what would have been the course of this river, including the large site of Ganweriwala that has yet to be excavated. Thus, the designation of Indus Valley civilization may be something of a misnomer.

The Indus Valley civilization was surrounded by natural boundaries. To the north, the mountain ranges of the Himalayas were nearly impassable, thus preventing contact with East Asia. To the east was the Thar Desert; as the climate became more arid to the east, human settlements disappeared. To the south was the Arabian Sea, where evidence of trade and trade routes have been identified. Contact with other civilizations also occurred throughout the west and northwest. The region to the west, known as Baluchistan, encompasses parts of modern Afghanistan, Iran, and Pakistan. While mountainous and hilly,

➤ THE GHAGGAR-HAKRA RIVER

The earliest excavators in India concentrated their excavations and surveys near the Indus River, rightly thinking that given the climate, substantial human settlements must have been located near a major river or tributary. Subsequent investigations demonstrated that most settlements had been located along an ancient river, called the Ghaggar-Hakra, running parallel to the Indus. This river had gradually dried up during 4000 BCE–300 CE. As it dried, it split into numerous streambeds. This process seems to be documented in Vedic literature. The Ghaggar-Hakra in these sources is called the Saraswati and is also personified as a goddess. The Rig Veda and the Mahabharata both attempt to explain the constantly shifting nature of this river and document its eventual disappearance.

—Kevin M. McGeough

many passes (such as the Khyber Pass) allowed movement between these regions; there is substantial evidence for contact with the civilizations to the west.

The climate of ancient India was probably not so different from the climate of India today. The principle location of the Indus Valley civilization receives less than 8 inches (200 millimeters) of rainfall annually, and thus agriculture must have depended on the Indus overflowing its banks and on irrigation schemes based on this seasonal pattern. From June to September the monsoons would bring this rainfall, more so in the north. By November, winter conditions set in, lasting until March, when the harsh summer weather began. Although uncomfortably warm, the climate and geography of the alluvial plain were (and still are) well suited for human habitation.

—Kevin M. McGeough

Bibliography

- Chakrabarti, D. *India: An Archaeological History*. New York: Oxford University Press, 1999.
- Fairservis, W. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. New York: Oxford University Press, 1998.
- Maisels, Charles Keith. *Early Civilizations of the Old World*. New York: Routledge, 1999.

China—An Ecology of Diversity

From east to west China rises in a stair-step fashion to the Tibetan plateau. Almost 70 percent of the country is higher than 3,200 feet, more than 40 percent is higher than 6,000 feet, and a large part of the Tibetan plateau is higher than 16,000 feet above sea level. Even in the lower-lying areas within 500 miles or so of the coast, China has much rugged terrain, especially in the southeastern provinces such as Zhejiang, Jiangxi, Fujian, Hunan, Guangdong, and Guangxi. China's major rivers rise in Tibet and take an easterly course as they head to the sea, carving deep canyons as they descend the heights. Much of China's early history is closely connected with the geography of its rivers.

The home of early Chinese civilization lies in northern China, in the vast drainage area of the Yellow River valley. In fact, no other physical feature in early Chinese history played as prominent a role as the Yellow (or Huang) River, which serves to this day as a supporter of agricultural civilization. About 2,700 miles in length, the Yellow River has built a vast floodplain from centuries of silt deposits. In fact, the silty loess sediments of the Yellow River played a role in later Chinese history unlike any other physical feature on the Chinese landscape. The river's frequent flooding created a continuing problem for Chinese rulers, who had to build dikes and clear sediments in order to keep the river on course. Indeed, the river has jumped its banks, broken its dikes, and changed course many times in the past 2,000 years, causing great devastation as it surged to the sea and giving the river its title as "China's Sorrow."

China's southern river, the Yangzi or Changjiang, is 3,200 miles long and less prone to flooding than the Yellow River. Even so, heavy rainfall on its vast watershed can quickly raise water levels to enormous heights. It too has caused frequent devastation throughout Chinese history. The Yangzi River represents the geographical features of the south in other ways as well. Its vast network of tributaries is reminiscent of what was called in early times the "marshy southland." In fact, one of the most powerful differences between northern and southern China is the wetness of lands in the Yangzi River valley and

southward. The Yangzi creates the possibility of easy rice cultivation (grains such as wheat are far more prevalent in the arid north), fishing, and river trade.

One historian, examining Chinese dynastic histories over two millennia, noted that flooding or drought accounted for almost 15 disasters a decade throughout Chinese history. Clearly, the geography of this complex landmass has played a significant role in the lives of its people. This is also the case in the matter of rainfall. We can draw a line from Manchuria in the northeast down to the far southwest of China Proper to mark the rather dramatic differences in rainfall from northwest to southeast. In fact, we can follow that diagonal line to see that the more arid northwest regions support a vastly different kind of economy than the more lush southeast. The peoples who lived for generations in the arid regions beyond the Great Wall were never closely, or continuously, connected to the people and territories most often covered in Chinese civilization narratives, yet these nomadic peoples played an enormously important role in later history. The wetter regions of the far south also were not fully integrated into Chinese culture until the beginning of the Common Era, indeed some only within the past 1,000 years. Until relatively recently, exceedingly wet or dry regions had rather tenuous connections to the mainstream political and cultural life in China Proper, at least in its early history.

China is also known for its vast and complex mountain ranges, many of which have figured in political history and, for that matter, in thousands of pages of poetry written over three millennia. Most symbolic of all are what are called the "Five Cardinal Peaks" in the north, denoting each of the "five directions" so important to Chinese cosmological classification: north, west, south, east, and center. The major mountain ranges form great physical barriers that protected warring states such as the Qin in the third century BCE, gave respite to rebel groups harassed by government troops (as in the case of the White Lotus rebels in the late eighteenth century), or even sheltered Mao's Long March in the 1930s.

Finally, there is China's coastline, which makes up 8,700 miles of China's border. Until the nineteenth century the coast did not represent a

significant vulnerability to external threat; in fact, coastal defenses were something of an afterthought throughout Chinese history. To be sure, Japanese and other travelers arrived at Chinese ports, and coastal trade was present from early times. Still, China scarcely worried about its coastal borders and spent little effort exploring the possibilities beyond the coasts until the British arrived with opium in the eighteenth century. Aside from a few missions initiated by the First Emperor of the Qin and a brief three decades of naval exploration as far as Africa in the fifteenth century, life beyond 30 miles of the coastline held little appeal to most prominent actors in Chinese history.

Rivers, mountains, coastlines, and other geographical features figure prominently in any narrative of China's past. It is important not to think of them as causes of historical change in and of themselves. Yet their very structural significance, in terms of rainfall, flooding, mountainous respite, and coastal possibility, figured greatly in the choices that historical figures made (or failed to make) in light of these enormous geographical features.

—Robert LaFleur

Bibliography

- Blunden, Caroline. *Cultural Atlas of China*. Rev. ed. New York: Checkmark Books, 1998.
- The Classic of Mountains and Seas*. Translated by Anne Birrell. London: Penguin Books, 2000.
- Elvin, Mark. *The Retreat of the Elephants: An Environmental History of China*. New Haven, CT: Yale University Press, 2006.
- Huang, Ray. *China: A Macrobistory*. Armonk, NY: M. E. Sharpe, 1997.
- LaFleur, Robert, ed. *China: A Global Studies Handbook*. Santa Barbara, CA: ABC-CLIO, 2003.

Jomon Culture

The Jomon period covers more than 10,000 years of Japanese history from about 11,000 BCE to about 450 BCE. There were probably significant societal and technological changes during this period. We also know, from pottery styles and other evidence, that there was regional variation as well. However, we can still make some reliable generalizations about Jomon culture. The Jomon people(s) were hunter-gatherers but with

➤ JOMON AND THE JAPANESE LANGUAGE

Though written Japanese is heavily dependent on Chinese (the Japanese Kanji characters) and has some similarities of grammar to modern Korean, it is not clearly related to either. Where then does Japanese come from? One answer, which is popular in Japan, is that it is a direct descendant of the Jomon language. This is also taken to mean that the Jomon people are the ancestors of the modern Japanese and thus that the Japanese have always lived in Japan. Another explanation is that the Japanese language is a mixed or contact language with elements of Jomon alongside the (presumed) Korean-type language of the Yayoi period. Chinese cultural influence was later added. It is probable that Japanese is the descendant of a now extinct language spoken in southern Korea, especially in the old kingdom of Paekche.

—Michael Thompson

the difference that they settled in one place for long periods. By investigating these sites, we can reconstruct Jomon culture at least as it was lived at a particular place and time.

The word “Jomon” means “corded or straw rope,” which is an element used in their pottery decorations. This simple fact actually tells us a lot about Jomon culture. First, they had a high level of artistic development. These pots were not just useful; they were decorative too. Second, they indicate the presence of specialized craftsmen, which in turn means a complex society where people can be divided up by specialization. Last, their size and complexity show both how settled the Jomon were and the fact that people were willing to purchase/obtain costly articles. The Jomon people also used precious stones such as jade and obsidian. Archaeologists have also found that Jomon people were careful in their burial customs and buried grave goods (arrowheads, ornaments) with their dead. This probably indicates some kind of cultural belief in the afterlife where these items could be used. In their settlements they also built large mounds, which are associated with a number of small ritual artifacts indicating religious ceremonies of some kind. There are also a number of

small female statues that were probably connected with fertility practices.

A complex society with social specialization and religious practices might mean people (priests) who had charge of these practices. However, we have no evidence that this was the case. The surviving Ainu people of Hokkaido, whose connection with Jomon is unclear, seem to have continued with a lifestyle similar to that of Jomon. In Ainu culture there are ritual specialists (shamans) responsible for religious practices, but they have other occupations as well. This may have been the case with Jomon. In various parts of mainland Japan and Okinawa there is a tradition of shamans as well. In most cases these are women, and that may have been the case for Jomon as well. The ethnic continuity of Jomon with modern Japanese is a contested subject. Cultural continuity is an even more difficult area for scholars.

In terms of material culture, Jomon depended on natural resources to survive. They seemingly had quite a varied diet (fish, meat, fruit, and nuts), and some scholars believe that they may even have made fruit wine. They traded between communities so that they were not just dependent on local food. They also made and used salt and preserved food. Their houses were most commonly pit dwellings with sunken floors and a roof of some natural material. These houses were not very big, averaging about 39 feet (12

meters) in floor space. They also had larger long-houses that probably served as community buildings, indicating a high degree of social cohesion and maybe decision making. While there are many things we do not know about Jomon culture, what we do know is enough to give us a general picture. Jomon culture was innovative in many ways, though their environmental impact was very limited.

—Michael Thompson

Bibliography

- Brown, Delmar. *Cambridge History of Japan*, vol. 1, *Ancient Japan*. Cambridge: Cambridge University Press, 1993.
- Kenrick, Douglas Moore. *Jōmon of Japan: The World's Oldest Pottery*. London: Kegan Paul, 1995.
- Kobayashi, Tatsuo. *Jōmon Reflections*. Oxford, UK: Oxbow, 2005.

Europe—Natural Boundaries

The landscape and climate varies significantly throughout Europe, and numerous topographic and ecological boundaries present obstacles to the movement and interaction of humans. Major natural boundaries include mountains, seas, and deserts, the former two of which are particularly relevant to Europe. Unlike North America and Africa, Europe has a significantly long east-west axis, meaning that a number of regions at the same latitude experience similar temperature ranges, seasonal variations, and levels of precipitation. This principle largely holds for all of Eurasia and partially explains the rapid spread of domesticated plants and animals in Europe. Thus, even though there are obstacles for travel between these regions, the similar environments along this east-west axis allow plants and animals that are moved along this axis to readily adapt to their new environment.

Prominent mountain ranges in Europe include the Carpathian Mountains, the Caucasus, the Alps, and the Pyrenees. The topography of these systems has shaped and constrained the relationships of prehistoric societies for thousands of years.

During the Early Bronze Age, for instance, significant cultural differences existed between populations to the north and south of the Carpathian Mountains. Whereas fortified settlements

► TEMPERATE FORESTS AS NATURAL BOUNDARIES

Temperate forest cover influenced the development and spread of farming in Europe. In Mesolithic Europe, before the emergence of sedentary agricultural communities, hunter-gatherers frequently migrated along coastal regions in order to maximize the diversity of resources they could exploit. Dense tree stands reduced available grazing space for game and made long-distance travel difficult. With time and increased dependence on agriculture, humans required open-field systems. Although forested regions were occasionally cleared for agriculture, most populations were forced to exploit naturally open areas away from woodlands.

—Noah V. Honch

and flat-grave cemeteries were the norm in the south, meager rural settlements and large earthen burials mounds typified the north. Although metal ore sources were commonly exploited in the Carpathian Basin, the mountains drastically influenced the orientation of trade networks in central Europe. This also occurred in the Alps; in the Mitterberg region, for instance, local deep valleys frequently limited contact between autonomous metal-producing communities. Although transalpine travel was difficult it was certainly possible, as the diverse origins of preserved artifacts with the Tyrolean iceman clearly attest. The Pyrenees may have deterred terrestrial travel between France and Spain in antiquity, but they were probably bypassed quite easily by sailing along the Mediterranean or Atlantic coasts.

Large water bodies were also formidable boundaries in Europe. The Mediterranean exists as a boundary in the sense that it defines the southern limits of Europe. In antiquity, it was a hindrance to travel and trade with the infrastructure because sailing was poor. By the Bronze Age, Bell-Beaker groups were present in southern Portugal, suggesting that sea travel was available quite early. By the time of seafaring Mycenaeans and Phoenicians, the Mediterranean coast essentially defined the primary routes of trade and migration. Other water bodies, while not completely inhibiting movement, effectively slowed the diffusion of people and ideas. The English Channel, for instance, delayed the arrival of major domesticated plant and animal species to England, which occurred one to two millennia after most regions in central and western Europe.

—Noah V. Honch

Bibliography

- Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1999.
- Fagan, Brian M. *People of the Earth*. 8th ed. New York: HarperCollins, 1995.
- Shennan, Stephen. "Cost, Benefit and Value in the Organization of Early European Copper Production." *Antiquity* 73 (1999): 352–363.
- Sherratt, A. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated Prehistory of Europe*, edited by B. Cunliffe. Oxford: Oxford University Press, 1994.
- Wells, Spencer. *The Journey of Man: A Genetic Odyssey*. London: Penguin, 2003.

Mesoamerican Geography

"Mesoamerica" is a term used by archaeologists and anthropologists to refer to Mexico and neighboring countries in Central America in the period prior to European contact. While the peoples who inhabited this region prior to the arrival of Europeans were incredibly diverse, archaeologists see a number of cultural connections that distinguish ancient Mesoamericans from ancient North Americans and South Americans. Thus, the ancient civilizations of Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, and Costa Rica may all be deemed Mesoamerican.

Despite the small size of this region, this is one of the most environmentally diverse regions in the world. Within this area, the climate vacillates between extremes of dryness and wetness and of hot and cold. High mountain ranges cede to vast lowlands. This diversity of ecological zones brought both possibilities and constraints to the people of ancient Mesoamerica. It is not surprising that there was considerable diversity in approaches to subsistence practices. Numerous active volcanoes dot the region, and much of Mesoamerica is susceptible to earthquakes. While active volcanoes bring with them particular dangers, they also provide fertile soils for agriculture. Obsidian is another gift of volcanic activity; it is a type of stone that the ancient Mesoamericans would use to create extremely sharp implements.

A useful distinction to keep in mind when considering the geography of Mesoamerica is that between highlands and lowlands. The highlands



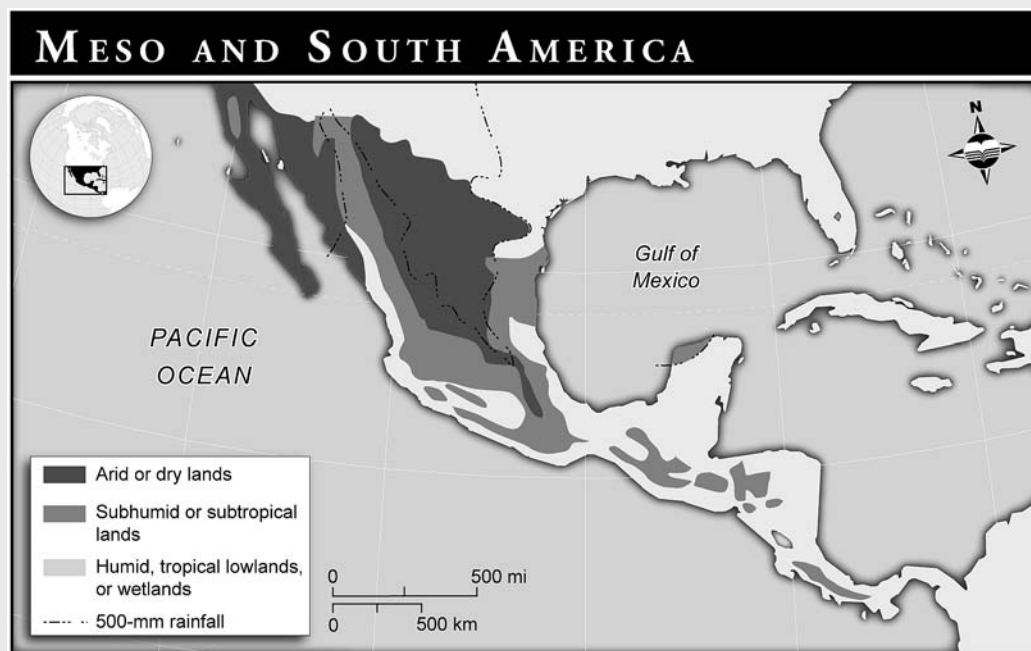
Sierra Madre mountains in present-day Mexico. (Jesus Eloy Ramos Lara/Dreamstime)

➤ TIERRA FRÍA, TIERRA TEMPLADA, AND TIERRA CALIENTE

Differences in rainfall and altitude define three distinct climatic regions of Mesoamerica: *tierra fría* (cool lands), *tierra templada* (temperate lands), and *tierra caliente* (hot lands). The *tierra fría* climate zones are arid and dry and are located along the northern coasts and in the northern highlands. These cold zones are the highest in altitude, higher than 6,561 feet (2,000 meters). In these areas,

nights are cold, and frost is a possibility. The *tierra templada* zones are located at a lower elevation (about 3,280 feet, or 1,000 meters). In most areas there is sufficient rainfall for maize agriculture. The *tierra caliente* zone roughly equates with the lowlands, which are extremely humid.

—Kevin M. McGeough



consist of two general regions: the Sierra Madres and the highlands of Guatemala and Chiapas (a state in Mexico). The Sierra Madres are located in the northern areas and project wedge-shaped down into the south. Their height is substantial enough to interfere with cloud formation, and thus this is a particularly dry part of Mesoamerica. In some parts of the highlands, agriculture was possible when irrigation methods were utilized.

The lowlands in the north are thin coastal strips that gradually increase in width as they move farther south. The lowlands are environmentally diverse, moving from tropical rain forests in the south to arid brush forests in the

north. Very wet summers contrast with very dry winters, although not all regions become dry in the winter months.

Location relating to the Isthmus of Tehuantepec is another geographic distinction that led to important cultural distinctions. This is the location of the short land distance between the Pacific Ocean and the Gulf of Mexico; the continental landmass constricts considerably here. To the west of the isthmus were highland mountain regions. To the east, rain forests predominated in both highland and lowland areas. It was at this isthmus, at the confluence of two distinct habitat zones, that Olmec civilization arose.

—Kevin M. McGeough

Bibliography

Evans, Susan Toby. *Ancient Mexico and Central America*. New York: Thames and Hudson, 2004.
 Killion, Thomas. "Mesoamerica: Introduction." In *The Oxford Companion to Archaeology*, edited

by Brian Fagan. Oxford: Oxford University Press, 1996.

West, Robert C., and John P. Agueli. *Middle America: Its Land and Peoples*. Englewood Cliffs, NJ: Prentice Hall, 1989.

■ Introduction: Climate Change and Natural Disasters

Archaeologists are able to reconstruct the environment and changing climate patterns in the period from 4000 BCE to 1000 BCE using a variety of scientific means. What is often less certain for these scholars is what exactly caused these changes and how much of an impact these changes may have had on ancient societies. Since human activities—especially deforestation, agricultural practices, and water management—also play a role in climate change in this period, identifying causes and effects can be particularly difficult.

Evidence for dramatic events and large-scale natural disasters comes in a number of forms. Ancient records (both written and artistic) sometimes refer to earthquakes, unseasonable weather, volcanic activity, and storms. The results of these disasters can often be recovered archaeologically, such as the volcanic ash that covered the village of Akrotiri or cracks from seismic activity found in buildings. Drawing conclusions about the long-term effects on the humans who experienced these disasters is not as straightforward. For example, we are really unsure of how dramatic an impact the eruption of Thera had on agricultural practices in the surrounding region. Did it amount to a few days of strange weather? Or did it force a transformation in agricultural practices by altering the climate patterns of the eastern Mediterranean?

Less dramatic evidence for climate and climate change is also available to archaeologists. Information about ancient temperatures is preserved in the sediments of the ocean floors. Scientists can take what are called core samples (long but thin columns of sediment) and study

the variations (in the remains preserved within the cores) of one-celled organisms called foraminifera that are readily effected by temperature fluctuations. Similar methods can also be used on ice cores. From the data collected using these and similar techniques, it is possible to reconstruct ancient wind and precipitation patterns.

Changes in the landscape can also be reconstructed by archaeologists. For the cultures of this period, changes in river flow are particularly important, given the large percentage of people who lived near the major river systems (i.e., the Nile, the Tigris and Euphrates, and the Indus River). The Indus River, for example, carries a significant amount of sediment that it deposits as it flows. These deposition processes lead to minor variations in the course of the river that, when taken over hundreds of years, add up to very substantial changes.

Pedologists (people who study soils) can also contribute to the reconstruction of the ancient climate. Of course, archaeologists are very interested in soil (since most archaeological sites are covered by it!), but pedologists provide further specialized information about changing weather patterns. They can immediately tell if the soil at a particular site was deposited by humans, water, or winds and can also determine the subsequent erosion processes. Certain types of soil are only deposited under certain kinds of climatic conditions. So, for example, if loess soils are found at a site, it is certain that the site experienced a period of cold and dry climate, as these are the only conditions in which such soils can be deposited.

—Kevin M. McGeough

The Drying of the Sahara

Of the past 10,000 years, one of the most readily observed environmental changes has been the desertification of the Sahara. By about 3500 BCE, the process of desertification had begun of what had once been if not lush verdant land then at least a temperate landscape. By about 700 BCE, the Sahara had come to look like what it does today, a vast swath of marginally habitable territory with minimal precipitation. By this time, the Sahara had become the largest desert in the world, spanning an area of close to 3.5 million

▶ WHAT EVIDENCE EXISTS FOR RECONSTRUCTING THE DESERTIFICATION OF THE SAHARA?

The first European explorers of the Sahara were struck by rock paintings and pictographs depicting diverse animal and plant life that were ill-suited to an arid climate. Archaeological exploration further suggested that in order to support the human habitations in evidence, at some point the Sahara could not have been a desert. Geological research has clarified the situation, and although there are still numerous questions about the history of the Sahara, the situation is far better understood. Sedimentary research is less accurate here than in other areas of the globe because of the constantly shifting sands in the Sahara and problems particular to the geology of the region, so geographers have had to rely on other types of evidence to reconstruct Saharan climate history. Deep-sea cores taken downwind of the northeasterly winds that pass through the Sahara show that starting around 700 BCE the erosion of soil and sand (blown into the sea by these winds) increased dramatically. Likewise, lake sediment and geochemical analysis help reconstruct the changing nature of lake and lakeshore environments. Pollen analysis allows scholars to learn the relative proportions of different types of plants at different times. Since certain plants are better suited to some climates than others, charting the shifting patterns of vegetations allows scholars to chart shifting temperatures and climate patterns. New approaches to modeling complex phenomena have allowed scholars to better study how these and other factors interacted and were part of the creation of the Sahara Desert.

—Kevin M. McGeough

square miles, almost the size of the United States. It now encompasses all of North Africa and is bordered on the south by the Sahel, a stretch of semiarid tropical savanna that divided Africa into Saharan and sub-Saharan ecozones. Given its massive size, it should not be surprising that there are significant environmental variations throughout the Sahara and numerous distinct ecological regions. Despite this diversity, only limited human inhabitation has been possible through much of the desert since the Sahara dried up.

Before 11,000 BCE, the Sahara was an arid region much like it is today. But between 11,000 BCE and 3500 BCE, North Africa experienced a period of wetter conditions that allowed for a variety of human inhabitations of the region. This humid period was brought on by monsoons, which are caused by air heating over land. The hot air rises and draws in cold moist air from large bodies of water nearby, which in turn causes substantial levels of precipitation. These monsoons provided stable water resources to North Africa until slight variations in the earth's orbit (effects of which interacted with the earth's atmosphere and vegetation) pushed the monsoons farther south.

Without the seasonal monsoons, North Africa lacked stable water sources other than the Nile (which has its source far enough south to still be fed by monsoons). That is not to say that precipitation stopped altogether in North Africa; rather, the amounts of precipitation stopped being of sufficient quantities and of sufficient duration to sustain a nonarid environment. From about 3500 BCE until 700 BCE, the Sahara underwent numerous transformations related to this shift in climate patterns. Freshwater lakebeds became saltwater lakes or salt flats (what are referred to as *sabkhas* in Arabic), a process that may have begun as early as 4200 BCE in some areas. Since the rivers had dried up, the only method of output for these lakes had become evaporation into the air, meaning that large quantities of salt were left behind in the lakes and not removed by other hydrological processes. Flora and fauna not adapted to saltwater could not survive in this environment and were replaced by those that could. Likewise, vegetation not adapted to semiarid conditions also could not survive;

from 3500 BCE to 700 BCE paleoenvironmental evidence documents the death of tropical trees and plants and the gradual decline of grasses. Around 700 BCE, desert plants had fully taken root in the Sahara. At this time, precipitation levels had become hyperarid, meaning that less than 20 inches (500 millimeters) of rain fell each year.

Along with the decline in precipitation and the disappearance of vegetation, the Sahara also experienced a change in wind patterns. By about 700 BCE, the speed of winds increased, and powerful northeasterly winds came to dominate the weather year-round. These powerful winds combined with the lack of vegetation to cause severe erosion. With no plants to hold down the soil, the winds blew loose the soil and deposited it as sand dunes throughout the Sahara. Since these winds are powerful, frequent, and year-round, the dunes in many parts of the Sahara have been constantly shifting ever since.

Contemporary scholarly consensus holds that humans did not cause these particular environmental changes. However, human utilization of the Sahara changed dramatically because of them. Archaeologically, this is evident in gradual material culture and settlement pattern changes between about 3500 BCE and 700 BCE. As lakes became saline, lakeside settlements were abandoned in favor of seasonal oases and river valleys. In some of the larger oases, semisedentary life was possible, based on small-scale plant domestication. For the most part, however, those who chose to live in the Sahara had to adopt mobile lifeways. With the adoption of these highly mobile lifeways, the people of the Sahara adopted material culture that was better suited for constant transport. Outside of Egypt and larger coastal settlements, mobile lifeways became the most common.

The Sahara Desert continues to expand southward, but in contemporary times this is caused primarily by human factors. Deforestation in the Sahel (primarily for timber to be used as fuel) has led to erosion and desertification.

—Kevin M. McGeough

Bibliography

Cremaschi, M., and S. Di Lernia. "Holocene Climatic Changes and Cultural Dynamics in the Libyan

Sahara." *African Archaeological Review* 16(4) (1999): 211–238.

Holmes, J. "How the Sahara Became Dry." *Science* 320 (2008): 752–753.

Kröpelin, Stefan, et al. "Climate-Driven Ecosystem Succession in the Sahara: The Past 6000 Years." *Science* 320 (2008): 765–768.

Kröpelin, Stefan, et al. "Response to Comment on Climate-Driven Ecosystem Succession in the Sahara: The Past 6000 Years." *Science* 322 (2008): 1326–1327.

Shaw, B. "Climate, Environment and Prehistory in the Sahara." *World Archaeology* 8(2) (1976): 133–149.

The Eruption of Thera

Thera (also known as Santorini) is a small group of islands in the southern Aegean Sea, just north of Crete. The islands are arranged in a circle around a caldera (a large crater) that resulted from the eruption of the volcano there. Although scholars are certain that the volcano erupted during the Bronze Age and are relatively certain about what happened when the volcano erupted, there is considerable controversy about the exact date of the eruption and the consequences of the eruption for the civilizations of the eastern Mediterranean region. Since the effects of the volcanic explosion should be identifiable throughout the region, the eruption of Thera should act



View of the caldera, Santorini, Greece. The caldera was formed by the massive eruption of a volcano on the island. The eruption and ensuing aftermath probably caused the end of the Minoan civilization on the nearby island of Crete. The date of the eruption is debated by scholars and this uncertainty poses significant problems in the chronology of the ancient Mediterranean and Near East. (iStockPhoto)

➤ DID THE ERUPTION OF THERA DESTROY THE LOST CIVILIZATION OF ATLANTIS?

Pseudoarchaeologists have made the spurious claim that the lost city of Atlantis, as described by Plato in two of his dialogues, was destroyed completely by the eruption of Thera. There is no evidence to suggest that Atlantis ever existed let alone that it was destroyed by this eruption. This suggestion was first offered by Spyridon Marinatos (a legitimate archaeologist), who excavated the village at Akrotiri destroyed by the eruption of Thera. He argued that Plato's account was based on an earlier story about the collapse of Minoan civilization and attempted to explain the discrepancies between the details provided by Plato and the details of Minoan culture as ancient translation errors. Most scholars remain unconvinced of this theory, understanding Atlantis as a fictional city imagined by Plato for didactic reasons. However, documentaries and Internet sites devoted to this theory proliferate because stories of Atlantis make for interesting entertainment.

—Kevin M. McGeough

as a chronological anchor for eastern Mediterranean chronology. Because of this, identifying the precise date of Thera's eruption is of considerable importance.

Thera did not erupt without warning. While the village of Akrotiri was completely covered by volcanic material, no bodies were actually found in the village, suggesting that the inhabitants had fled before the eruption. When Thera did erupt, the event could have lasted a few days given the intensity of the eruption. This was a Plinian eruption, characterized by a plume of pumice and volcanic material 27 miles (35 kilometers) high being ejected into the air. So much magma was removed that the volcano itself collapsed, leaving the caldera that makes the island chain distinctive today. The eruption was intensified when the Aegean Sea flowed into this crater; the water running over the exposed vent resulted in considerable steam. A tsunami likely hit the Cretan coast, although the degree of damage that this would have caused is disputed. Distant observers would have experienced storm-

like conditions and periods of darkness, atypical of the time of day. It would have been quite frightening.

The longer-term consequences of the eruption of Thera are unclear. Scholars generally agree that the amount of particulates ejected into the stratosphere would have resulted in a noticeable reduction in world temperatures. How much impact this would have had on worldwide civilizations is less clear. Would it have been enough to harm agriculture and force people to find new subsistence practices? Could the environmental changes have been severe enough to cause a number of civilizations to collapse? Or would it merely have been cooler than expected? Finding answers to these questions is very difficult. Maximalists argue that the Minoan civilization was severely disrupted (if not destroyed) by the eruption and that the other cultures of the eastern Mediterranean suffered varying degrees of collapse. Minimalists argue that the Minoans suffered through a few unpleasant days but were relatively unaffected since most of the volcanic material would have landed to the east of Crete.

Much of the problem with determining the extent of the effects of the Thera eruption is caused by the uncertainty regarding the date of the event. This uncertainty surrounding the date makes it difficult to establish correlations between the eruption and subsequent historical events. There are two ranges of dates that are most likely: 1550–1500 BCE, based on archaeological evidence, especially from Egypt, and 1627–1600 BCE, based on scientific dating independent of archaeological considerations.

The archaeological evidence is based on a number of factors and taken without the scientific evidence seems relatively reliable. The village of Akrotiri, which was covered by volcanic debris, contains material culture that can be associated with the Late Minoan IA period (LMIA) on Crete. Syro-Palestinian pottery dating to the Middle Bronze Age II period (MBII) was also found at Akrotiri, which is found at other LMIA sites in Crete as well. LMIA material culture from Crete is also found in Egypt in well-dated contexts. Egyptian dates have been reconstructed by scholars based on historical records of astronomical observations, radiocarbon dates, and

synchronisms with other regions. Generally, Egyptian chronology in this period is not seriously contested except when considered in relation to the scientific evidence for the eruption of Thera.

The scientific evidence for the eruption of Thera suggests that the volcano erupted about 100 years earlier than does archaeological evidence. Ice cores from Greenland show that there was a volcanic event within 20 years of 1644 BCE, although more recent analysis suggests that this may not have been the Thera eruption. The analysis of tree ring growth indicates that there was a temperature drop around 1629–1628 BCE, although once again this does not have to have been caused by Thera. Radiocarbon dates from various areas around the eastern Mediterranean provide more compelling evidence, suggesting dates for the eruption of 1660–1600 BCE. Recent radiocarbon dating of an olive tree found beneath the lava flow at Thera provided a date range of 1627–1600 BCE. This evidence is not compelling, however, since volcanic activity can cause discrepancies in radiocarbon dating. If this scientific evidence does in fact point to an earlier date for the eruption of Thera, most of the chronologies of the eastern Mediterranean need to be reevaluated. At the present, the archaeological evidence for an eruption date of 1550–1500 BCE seems most acceptable.

—Kevin M. McGeough

Bibliography

- Foster, K. P., R. K. Ritner, and B. R. Foster. "Texts, Storms, and the Thera Eruption." *Journal of Near Eastern Studies* 55(1) (1996): 1–14.
- Manning, Sturt W., et al. "Chronology for the Aegean Late Bronze Age, 1700–1400 B.C." *Science* 312 (5773) (2006): 565–569.
- Muhly, J. D. "Egypt, the Aegean, and Late Bronze Age Chronology in the Eastern Mediterranean." *Journal of Mediterranean Archaeology* 4 (1991): 235–247.

Volcanic Eruption and the Collapse of Akkad

The sudden collapse of the Akkadian empire at the end of the reign of Shar-kali-sharri (ca. 2223–2198 BCE) has long been attributed to the in-

herent instabilities of its administrative and economic systems, the internal pressure generated by the persistent revolts of its conquered city-states, and the external pressure applied by nomadic groups on its borders. In 1993, however, archaeologist Harvey Weiss suggested that the Akkadian empire fell as a direct result of the abrupt aridification of the Habur region (in northern Mesopotamia) following a volcanic eruption in 2200. With the loss of the Habur's productive dry-farming land—controlled and reorganized by the empire to help meet its agricultural needs—and the population pressure imposed on southern Mesopotamia by the refugees from that region, the Akkadian economy rapidly crumbled. Although kings of Akkad continued to reign until around 2159, following a brief interregnum after Shar-kali-sharri's death the territory over which they ruled was drastically reduced, comprising little more than the environs of Akkad and possibly the Diyala region.

While excavating Tell Leilan in the Habur River basin, Weiss and his team discovered a three-foot (one-meter) soil stratum so arid that even earthworm activity had diminished. This stratum, immediately overlying a .2-inch (.5-centimeter) layer of volcanic debris, was dated from circa 2200–1900 and was devoid of artifacts, indicating its abandonment during that period. An examination of other sites in the vicinity, including Abu Hgeira 2 and Abu Hafur, revealed a similar drought layer to that at Tell Leilan, and the general abandonment of many sites on the Habur Plain during this period suggested that a broad regional rather than local phenomenon was responsible. Weiss indeed speculated that the aridification of the Habur Plains and the subsequent collapse of the Akkadian empire resulted from a possible global climate-changing event that triggered simultaneous instability throughout the Near East and also in Egypt, the Indus Valley, and the Aegean. This drought was unlikely to have been precipitated by the preceding volcanic eruption; while volcanic activity may have short-term global effects, these are measured in years rather than decades or centuries. Current research is focusing on alternate causes of such climate changes, such as a shift in tidal strength capable of triggering cooler ocean-surface temperatures.

Weiss's sweeping conclusions, extrapolated from extremely limited data, have been challenged by archaeologists, one being Norman Yoffee, who prefer to emphasize the political and cultural factors that destabilized the Akkadian empire or who question, as Richard Zettler has done, the premises of Weiss's theory. Recent research by paleoclimatologists, however, focusing on sediment cores, ice cores, and lake pollen records from central and West Asia, Africa, and North and South America has tended to support the theory of a global shift to a much more arid climate a little over 4,000 years ago. Weiss and other archaeologists of both the Old and New World contend that the demonstrated scale of the climate change would have had a severe effect on even established polities of the time, such as the Akkadian empire.

—Karen Sonik

Bibliography

- Cullen, H. M., et al. "Climate Change and the Collapse of the Akkadian Empire: Evidence from the Deep Sea." *Geology* 28(4) (2000): 379–382.
- Keeling, C. D., and T. P. Whorf. "The 1,800-year Oceanic Tidal Cycle: A Possible Cause of Rapid Climate Change." *Proceedings of the National Academy of Sciences of the United States of America* 97 (2000): 2814–3819.
- Weiss, Harvey. "Beyond the Younger Dryas: Collapse as Adaptation to Abrupt Climate Change in Ancient West Asia and the Eastern Mediterranean." In *Environmental Disaster and the Archaeology of Human Response*, edited by Garth Bawden and Richard Martin Reyecraft. Albuquerque: Maxwell Museum of Anthropology, 2000.
- Weiss, Harvey, and Marie-Agnès Courty. "The Genesis and Collapse of the Akkadian Empire: The Accidental Refraction of Historical Law." In *Akkad: The First World Empire: Structure, Ideology, Tradition*, edited by Mario Liverani. Padova, Italy: Sargon, 1993.
- Yoffee, Norman. "The Collapse of Ancient Mesopotamian States and Civilization." In *The Collapse of Ancient States and Civilizations*, edited by Norman Yoffee and George L. Cowgill. Reprint. Tucson: University of Arizona Press, 1991.
- Zettler, Richard. "Reconstructing the World of Ancient Mesopotamia: Divided Beginnings and Holistic History." *Journal of the Economic and Social History of the Orient* 46(1) (2003): 3–45.

Changing Waterways in Ancient Mesopotamia

At the height of the last Ice Age, global sea levels were some 100 meters lower than they are today. The whole Gulf was dry land, through which flowed the Tigris and Euphrates rivers. Global sea levels began to rise from around 14,000 BCE, rapidly drowning the shallow Gulf, which reached its present shores by 5000–4000 BCE. By 3000 BCE waters in the Gulf may have risen a further 1–2 meters, bringing the coast some 150 kilometers farther northwest and reaching nearly to Ur, which is recorded in early texts as a port.

When and how did the Gulf achieve its present shoreline? Alluvium deposited by the rivers may gradually have enlarged the delta, causing the head of the Gulf to retreat, although an important study by Lees and Falcon suggests that this alluviation was balanced by subsidence caused by continued tectonic activity. There is some evidence that the present shoreline had been reached by around 1500 BCE, but other data suggest that this did not happen until around 1000 CE. Since the region at the head of the Gulf is very flat, slight changes in the levels of sea and alluvium can cause significant changes in the line of the coast, and flooding can create new areas of swamp. It is therefore difficult to determine when and in what way the shape of the region developed over time. Deep-sea core evidence may indicate that before 4000 BCE extensive annual flooding made southern Mesopotamia mainly marshland and that during the later fourth millennium this region became drier, at first creating a land crisscrossed by waterways but by 3000–2800 BCE becoming similar to the way it is today.

As rising postglacial sea levels progressively flooded the Gulf, the changing location of the coast affected the gradient of the rivers, causing the upper reaches to become more deeply incised and therefore generally stable in their location, but slowing their flow across the plains so that an increased volume of alluvium was deposited there. Just north of Sippar, the plain broadens out and its gradient declines, causing the rivers to become far less stable. The Euphrates

in particular has split into a number of major and minor branches, and in years of heavy flooding these can change their course, with devastating effects for their dependent settlements. Before 3000 BCE, the Euphrates flowed in three channels, passing through Kutha, Kish, and Jemdet Nasr; by the third millennium, the Kish branch had become the principal one. Around the end of the Early Dynastic period I (ca. 2750 BCE), the main flow of the Euphrates farther south moved eastward to run down a previously minor branch, reducing water in its former main channel. Uruk, on the latter, though still a major city, declined from its earlier preeminence, while cities on the eastern branch, including Umma, grew in importance. During the later third millennium, a minor branch developed though Babylon, growing to become the principal branch by the late second millennium BCE. Today the principal bed of the Euphrates lies farther west.

The Euphrates is not alone in changing its course. Below Kut, the Tigris is also unstable and is known to have shifted at least three times. In antiquity, it flowed directly into the Gulf, having followed a much more direct course than that of today. The Diyala anciently joined the Tigris considerably south and east of their present confluence near Baghdad. And until around a millennium ago, the Karun and Karkheh in Susiana formed a joint estuary.

Evidence from pollen cores and oxygen isotope profiles from mountain lakes gives some indication of variations in vegetation, rainfall, and temperature, although many uncertainties remain. Temperatures exceeded those of today by 1–2 degrees Celsius around 5000–2000 BCE. This, combined with higher rainfall, allowed trees to grow at higher altitudes and in regions of steppe that today have sparse vegetation. A period of reduced rainfall in the northern mountains from 3800 BCE may have caused the marshes of southern Babylonia to become progressively drier. Further evidence suggests that the years around 2900 BCE saw particularly severe inundations. During the third millennium BCE, river levels may have fallen, particularly around 2350–2000 BCE, necessitating increasing investment in irrigation works. Later episodes of fluctuating river levels included peak volumes of water in both

SEALAND

The extreme southwest was until very recently a region of marshland; drained by order of Saddam Hussein, it is now being restored again to marshland. Around Qurnah the Tigris and Euphrates combine to form the Shatt al Arab, joined by the Karun from the east before discharging their waters into the Gulf. In antiquity, however, the rivers flowed independently into the Gulf. South of Nasiriyah on the Euphrates and Amara on the Tigris, the waters of the delta spread out to form a huge area of perennial marsh, lakes, and waterways. Reed beds and rushes cover the area, and date palms grow along the waterways. There is abundant wildlife—fish, shellfish, turtles, and waterfowl—and fowling, harvesting dates, and fishing have always offered a productive way of life in the area. In times of political unrest, the marshland has also served as a place of refuge for defeated soldiers, escaped slaves, and other fugitives.

—Jane R. McIntosh

the Tigris and the Euphrates around 1350–1250 BCE, followed by a reduction that lasted until around 950 BCE.

Ongoing research using remote sensing continues to reveal and clarify the complex history of the development of the Gulf coastline and the southern Mesopotamian alluvium and the changing courses of Mesopotamia's rivers.

—Jane R. McIntosh

Bibliography

- Butzer, Karl W. "Environmental Change in the Near East and Human Impact on the Land." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000. First published 1995 by Scribner.
- Lees, G. M., and N. L. Falcon. "The Geographical History of the Mesopotamian Plains." *Geographical Journal* 118 (1952): 24–39.
- Pournelle, J. "The Littoral Foundations of the Uruk State: Using Satellite Photography Toward a New Understanding of 5th/4th Millennium BCE Landscapes in the Warka Survey Area, Iraq." In *Chalcolithic Hydrostrategies*, edited by D. Gheorghiu. Oxford: Archaeopress, 2003.

Richason, Benjamin F., and Carrie Hritz. "Remote Sensing and GIS Use in the Archaeological Analysis of the Central Mesopotamian Plain." In *Remote Sensing in Archaeology*, edited by James Wiseman and Farouk El-Baz. New York: Springer, 2007.

Sherratt, Andrew. "Environmental Change: The Evolution of Mesopotamia." *ArchAtlas*, 3rd ed. (January 2008), <http://www.archatlas.org/Environmental> (accessed February 1, 2010).

Wilkinson, T. J. *Archaeological Landscapes of the Near East*. Tucson: University of Arizona Press, 2003.

The Formation of Agroecosystems in Europe

The formation of agroecosystems was the greatest single ecological change in Europe's preindustrial human history. Whether cultivating plants, harvesting edible parts of plants, slaughtering animals, storing food, or controlling propagation, agricultural activities modify the ecosystems upon which they rely. As in other ecosystems, green plants capture solar energy, which then flows through food webs to animal organisms, gradually dissipating into uselessness (entropy). Plant growth requires water and nutrients, whether provided by natural processes or human agency.

Agroecosystems, however, are highly simplified food chains and are inherently unstable. Humans typically manage agroecosystems to favor a few annual plant species (cereal grasses in the case of Europe), subsidizing their growth with nutrients and water to gain high productivity (though less than the total productivity of the diverse species in a natural ecosystem). These plants concentrate their entire growth and reproductive cycle into high-speed circulation of nutrients during a single growing season. Because in nature such pioneer organisms soon give way to other, longer-lived ones, agricultural work is required to keep the system at this simple stage. These systems are unstable, as they require subsidies and export the favored consumable biomass to humans elsewhere.

More broadly, farmers alter vegetation by clearing forest and controlling weeds; they alter the composition of topsoil by hoeing or plowing; they drain and divert water; they retain seeds for

further planting; and by selecting for desirable characteristics, they often render certain plants unable to reproduce on their own. Such changes may be significant at the microlevel, but for the early and middle Neolithic of northern Europe we must apply a wider lens.

Neolithic farmers did not fully re-create the mosaic landscape bequeathed to them by the Mesolithic (i.e., deciduous forest containing open areas), though they did clear more and larger openings in the forest with polished stone axes and by ring-barking and burning, leaving larger stumps to rot. The composition of the ancient wildwood remained intact. Far from being an unmitigated enemy, the forest provided pasturage for pigs and cattle, the latter grazing on edge grasses and munching on twigs, leaves, and young saplings. Ancient Britons practiced coppicing, allowing the cut stump of a deciduous tree to send up shoots used for cattle food, poles, and other purposes. The forest became more open, with increasing edge, clearings, and flourishing understory. One can imagine the small fields ensconced in woods that little by little developed into an agrarian landscape. Deer populations may have taken off as forest edge increased, hunting declined, and farmers began to kill wolves and other predators of both deer and livestock. Neolithic populations remained too small to take much of a toll on either forest or soil. No evidence of decreasing soil fertility comes from central Europe, though the earliest farmers in the region relied too heavily on cattle, an imbalance corrected in later prehistory by a partial shift from cattle to domesticated pigs. In this light it is best to see the Neolithic as the first stab at a long work-in-progress.

Environmental change accelerated in succeeding centuries. From the creation of landforms, such as some of the lowland heaths of Britain, to the podzolization of soil in Denmark, human communities began to rework ecosystems as agriculture expanded.

—Tamara L. Whitely and
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Bibliography

Bogaard, Amy. *Neolithic Farming in Central Europe: An Archaeobotanical Study of Crop Husbandry Practices*. London: Routledge, 2004.

- Bogucki, Peter. *Forest Farmers and Stockherders: Early Agriculture and Its Consequences in North-Central Europe*. Cambridge: Cambridge University Press, 1988.
- Price, T. Douglas, ed. *Europe's First Farmers*. Cambridge: Cambridge University Press, 2000.
- Simmons, I. G. *An Environmental History of Great Britain: From 10,000 Years Ago to the Present*. Edinburgh, UK: Edinburgh University Press, 2001.
- Whited, Tamara L., et al. *Northern Europe: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2005.
- Whittle, Alasdair. "The First Farmers." In *The Oxford Illustrated Prehistory of Europe*, edited by Barry Cunliffe. Oxford: Oxford University Press, 1994.

Climate Change at the End of the Late Bronze Age—Volcanic Eruptions in Iceland and Other Indicators of Climate Change

The end of the Late Bronze Age in the eastern Mediterranean and Near East (around 1200 BCE) coincides with a number of climatic changes evident from Europe to China. How significant these climate changes were to the collapse of Late Bronze Age civilization is heavily contested by scholars; there is no clear causal relationship between these instances of climate change and the transformations that Mediterranean society underwent at this time. That climate change occurred at this time, however, is clear from the environmental record identified by archaeologists and geographers.

The clearest evidence for Late Bronze Age climate change involves the eruption of Hekla, an extremely active volcano located in Iceland (Hekla III). Ice cores taken from Greenland and other evidence indicates that the eruption took place around 1135 BCE, give or take 130 years on either end. In Ireland, starting in 1159 BCE, tree ring growth is stunted for about two decades, which is the expected result if there had been a substantial eruption nearby. Significant amounts of volcanic soot that remain present in the atmosphere after an eruption will limit the amount of sunlight that reaches earth and thus stunt plant growth. However, recent climatological research suggests that these particulates all precipitate out of the atmosphere after two years,

➤ MISTAKING VOLCANIC ERUPTIONS FOR ECLIPSES

After a large volcanic eruption, soot and dust are spewed into the atmosphere. Called dust veils, these events can result in a variety of environmental problems, since the dust blocks the sun's rays. Depending on the density of the dust veil and global wind patterns, these veils can cause havoc significant distances from the eruption site. These dense dust veils can also create unusual visual anomalies, especially relating to solar observations. The sun may appear to have a pink corona around it, the color of the sun may appear to be different, or the sun may seem to have dimmed in intensity. Ancient astronomical observations lack the technical language that could differentiate this type of event from an eclipse. Thus, ancient records of eclipses may actually be records of dust veils.

—Kevin M. McGeough

which lessens the length of climate change. Historical records from Egypt indicate that there were crop failures around 1150, also consistent with this reconstruction. Records from the Shang dynasty in China refer to dust and ash rains around this time, which also may correspond to this eruption. That Hekla III erupted is well agreed upon by scholars, but the extent of the eruption's environmental impact is unclear. Not only is it unclear how significant this event would have been on ancient vegetation (and thus on subsistence practices like farming), it is also unclear how far away the effects would have been felt.

Another climatological debate related to the end of the Late Bronze Age (and possibly involving the Hekla eruption) involves reconstruction of precipitation variation from 1200 to 900 BCE. Evidence from tree rings points to very heavy precipitation in some parts of Turkey at this time, but in Mesopotamia, Syria, and possibly the Greek world, there may have been a significant reduction in precipitation. These unusual precipitation patterns may have had a very severe effect on the precipitation agricultural economies of these regions.

—Kevin M. McGeough

Bibliography

- Baillie, M. "Do Irish Bog Oaks Date the Shang Dynasty?" *Current Archaeology* 117 (1989): 310–313.
- Baillie, M. "Irish Oaks Record Volcanic Dust Veils Drama!" *Archaeology Ireland* 2(2) (1988): 71–74.
- Davis, R. "Volcanic Dust in the Atmosphere and the Interpretation of African Eclipse Traditions." *History in Africa* 4 (1977): 31–41.
- Kuniholm, P. "Archaeological Evidence and Non-Evidence for Climatic Change." *Philosophical Transactions of the Royal Society, London A* 330 (1990): 645–665.
- Neumann, J., and S. Parpola. "Climatic Change and the Eleventh-Tenth-Century Eclipse of Assyria and Babylonia." *Journal of Near Eastern Studies* 46(3) (1987): 161–182.
- Tipping, Richard, et al. "Response to Late Bronze Age Climate Change of Farming Communities in North East Scotland." *Journal of Archaeological Science* 35(8) (August 2008): 2379–2386.
- Weiss, B. "The Decline of the Late Bronze Age Civilization as a Possible Response to Climate Change." *Climatic Change* 4(2) (1982): 173–198.

■ Introduction: Crops and Animal Products

During the period from 4000 to 1000 BCE, world populations became more and more reliant on domesticated crops. The process of domesticating plants began prior to this period, yet it continued on and still continues today. By 1000 BCE, much of the world's people were dependent on agricultural produce, with North Americans and Australians being notable exceptions.

Archaeologists can recover evidence for ancient crops in a number of ways. Ancient textual accounts from Mesopotamia and Egypt record crop types, crop yields, and instructions for proper planting techniques. Sometimes the crops themselves survive directly as seeds and/or carbonized remains or indirectly as impressions on clay pots. Residues from plants are sometimes left on tools. In the Near East, stone sickles with a shiny sheen on the blade are often recovered. This sheen is from the plant silica that accumulates on a stone tool when it is used to cut down plants. Iodine can be used on ancient tools to determine if the tool was used to cut down starchy plants, since iodine changes color when exposed to starch. Biologists can also study modern plant samples, attempting to reconstruct the genetic history of plants in a given region.

The study of ancient pollen provides a broader understanding of changing vegetation patterns in a given region. Pollen itself is virtually indestructible, so if treated carefully, it can

be recovered at many sites. The results of a palynological analysis provide an idea of fluctuating ratios of different types of vegetation over time. By comparing different pollen levels, it is possible to reconstruct the history of the region's plant life. For example, an early level may present evidence for oak, elm, and pine trees as the dominant types of plant life, which is indicative of a forest. Following this, the amount of these trees drop dramatically (a larger drop than could be explained through natural processes) and is replaced by wild grasses and weeds, which is indicative of forest clearance. Following this, the pollen of various crops (and associated weeds) makes up a significant proportion of the overall numbers of plants, suggesting that what was once a forest had become farmland. After this, a drop in the amount of crop pollen and the return of oak or pine pollen would indicate that the farmland had been abandoned and that forest had been allowed to return again.

—Kevin M. McGeough

Wheat and Barley

Wheat (of which several varieties were grown) and barley (*Hordeum vulgare*) are the key domesticated plant crops of the ancient Near East. Without the steady surplus food supply created by these crops, the urban civilizations that developed in Egypt, the Levant, Anatolia, and Meso-

➤ BARLEY—TO EAT OR TO DRINK?

Barley was one of the first domesticated crops. Barley could be used to create gruel and coarse flour for bread. Naturally occurring yeast in the air mixing with such gruel may have been responsible for the discovery of the rising action of yeast needed to make leavened breads. In addition to leavening, such naturally occurring yeasts can cause further fermentation. Yeast fermenting the natural sugars in accidentally sprouted barley (barley malt) and water may have resulted in the world's first beer. The resulting barley beer would become the common beverage of the inhabitants of both Sumer and Egypt sometime after the fourth millennium BCE.

Beer is high in calories and resistant to bacteria due to its alcohol content. This would help reduce the risks of contracting many common infections carried in water contaminated by human or animal waste. More importantly, stored grain or flour is at risk from pests. Typically, 25 percent of the yield of barley was lost each year to various pests such as mice, rats, and insects. Beer, however, is not attractive to these pests and is more easily stored in clay jars than grain, which needed to be stored in vast pits or granaries. In addition, beer had the advantage of adding welcome variety to the diet and also had the bonus of being an intoxicant. This made the appeal of brewing very high, since in many ways it was the most efficient means of getting the most caloric yield out of the sown barley seeds.

This early beer would have been very different from modern beers. Hops, which produce much of

the flavor in modern beers, were not added. The beer in Mesopotamia was made using baked cakes of barley flour mixed with barley malt (dried sprouted barley) and date honey. The brewing liquid was not as well processed as today, and it was common for the beer to be full of chaff and pieces of sprouted grain. As a result, the earliest images of beer drinking found in Mesopotamia show it being drunk from large pots through straws with filters on the end. Typical pottery vessel shapes in this period throughout the Near East are vessels with spouts that are often called teapots. It is more likely that these vessels were used for beer and were meant to strain off the unpleasant solid bits and leave just the tasty liquid.

The question that remains is whether barley was first domesticated for food or for making beer. In 1953, a symposium was held among some of the leading scholars of the day to answer this question. Unfortunately, evidence exists for both arguments. The earliest barley was grown alongside early wheat, which may have been the main source of solid carbohydrates. This suggests that in those areas where barley was not a necessary crop, barley may have been grown primarily for beer from the outset. However, there is little evidence for the earliest beer manufacture, and what little early barley has survived is carbonized. Since deliberate burning of the barley would not be part of the process, this may suggest that it was used for other purposes.

—David R. Lipovitch

potamia would never have reached a population size sufficient to require or spark the creation of cities. Even had the populations been large enough to coalesce into urban centers, it was only through the extreme surpluses that were created by wheat farming in Egypt and barley farming in Mesopotamia that the immense public works projects typical of these cultures during their formative stages could be built and maintained.

Both barley and wheat were first domesticated in the hill country around Mesopotamia around 9000 BCE. These crops spread through-

out the Near East and were being cultivated in Egypt by about 5000 BCE. In Mesopotamia, barley was the crop of choice due to its resistance to salt. The nature of farming in the Mesopotamia plane, which required irrigation, resulted in soils quickly becoming saline. Wheat would not have been able to tolerate such soil conditions, but the otherwise rich soil deposited as alluvium by the Tigris and Euphrates rivers yielded huge harvests of barley that rival modern yields. The barley could be parched, cooked as gruel, made into flour and baked into bread or cakes, or, most importantly in Mesopotamia, used to make

beer. While barley was less important as a crop in Egypt and the Levant, it was also grown there primarily to make beer, which was the main beverage of the average person. Beer was an ideal way, in a world without pesticides, to get as many calories from the grain as possible without losing your yield to insects and other vermin.

In Egypt the situation was quite different. Thanks to the regular flooding of the Nile, the occupied parts of Egypt were well watered and covered with an extremely rich layer of silt. The force of the annual inundation drove out any salt in the soil and prevented the buildup of any salinity. The inundation also came at the right time of year to be of the most benefit to wheat growing. The main crop in Egypt before the Ptolemaic era, when durum wheat was introduced, was emmer (*Triticum dicoccum*). The yields for wheat under these conditions were incredible and guaranteed a surplus every year that could be stored for use by the central government in times of famine or to provide food for the vast temple establishment and other state employees. In addition to the wheat grown for bread, the Egyptians also grew barley, which was used to make beer.

The growing schedule of this wheat and the nature of the Nile meant that during the summer months, farmers had few tasks to deal with (unlike Mesopotamia, where constant irrigation and tending of the fields, canals, levees, and drainage ditches was necessary). This left them available for the construction of immense government-sponsored building projects such as the pyramids typical of the Old Kingdom in Egypt. Thanks to the huge surpluses created, the state could pay the workers in the form of rations of bread and beer. Without the food surpluses created by the growing of wheat and barley in Egypt and Mesopotamia, the complex societies of Sumer and Old Kingdom Egypt would never have come to be realized.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford Limited, 2000.
- Bard, Kathryn A. "The Emergence of the Egyptian State (c. 3200–2686 BC)." In *The Oxford History*

of Ancient Egypt, edited by Ian Shaw. Oxford: Oxford University Press, 2000.

- Braidwood, Robert J., et al. "Symposium: Did Man Once Live by Beer Alone?" *American Anthropologist* 55(4) (1953): 515–526.
- Grigson, Caroline. "Plough and Pasture in the Early Economy of the Southern Levant." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- King, Phillip J., and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Malek, Jaromir. "The Old Kingdom (c. 2686–2125 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford Limited, 2000.
- Wenke, Robert J. *Patterns in Prehistory: Humankind's First Three Million Years*. Oxford: Oxford University Press, 1984.

The Spread of Rice

Asiatic rice is indigenous to much of South and East Asia. Recent genetic studies have demonstrated that it separated more than 200,000 years ago into two forms, the annual *Oryza nivara* and the perennial *O. rufipogon*, which were domesticated in two separate areas, giving rise respectively to the long-grained *indica* in India and the short-grained *O.s. japonica* in China. This has prompted a reexamination of the supposed *indica* and *japonica* grains from early Chinese sites. It now appears that wild rice was brought under cultivation by 6000–5000 BCE in the middle and lower Yangzi Valley, where by around 4500 BCE it had evolved into domestic japonica.

Contact between rice farmers in the Yangzi Valley and millet farmers in the Yellow River basin encouraged the spread of rice to northern China, where it is known by 3000–2500 BCE and appears in quantity in Longshan sites (2500–2000 BCE). It is likely that plows (evidenced by stone plow tips) were used for ground preparation in both North and South China, but there is

no clear evidence before the later second millennium BCE of the domestic water buffalo needed to draw them.

Rice cultivation may have been introduced to Korea over land through northern China or by sea directly from the Yangzi region. Although the earliest finds of imported rice in Korea date to around or before 2000 BCE, wet-rice cultivation did not begin here until later. Recently, paddy fields have been unearthed at Geumcheon-ni, Yaeum-dong, and Okhyeon dated to the late second or early first millennium BCE and to Ma-jeon-ni from the second quarter of the first millennium BCE. These include both lowland fields and small terraced hillside fields; some were associated with canals and reservoirs.

Rice was by now under cultivation over most of China. The earliest Neolithic site in southern China is Shixia, dated to around 2800 BCE. The farming communities on Taiwan were cultivating rice by around 2500 BCE at, for example, Nu-anguanli; the appearance of rice husks in pottery coincides with the common use of stone harvesting knives. The associated remains of foxtail millet suggest that the rice was introduced from the Shandong Peninsula, where both crops were cultivated by the early third millennium, rather than directly from the Yangzi Valley. Cultivated rice spread to the Philippines by 1500 BCE and was found at, for example, Andarayan in Luzon.

Wild rice was one of many plant foods exploited from early times in Southeast Asia; it is known from around 3000–2500 BCE at Banyan Valley Cave. Nevertheless, it now seems likely that rice cultivation and agriculture in general were introduced to Southeast Asia rather than developing locally. From around 2300 BCE, a few villages are known in parts of mainland Southeast Asia—such as Non Nok Tha, Ban Chiang, and Ban Non Wat in Thailand—whose inhabitants combined hunting, fishing, and probably gathering with agriculture, raising domestic pigs, dogs, and cattle and growing rice. By 1500 BCE there were communities right across mainland Southeast Asia that were also working bronze and among which rice cultivation was by now an important subsistence practice.

Geneticists favor the Indian foothills of the Himalayas as the region where indica rice was

➤ RABI AND KHARIF CULTIVATION

Although the Harappans were experienced and innovative farmers, there were constraints on cultivating rice that probably account for its relatively late adoption. Harappan agriculture was based on a range of crops, including wheat, barley, and pulses that required winter temperatures and were sown in November or December and harvested in April or May. This is known locally as *rabi* cultivation. In contrast, the local flora required summer temperatures to grow and the shortening days of autumn to reach maturity, taking advantage of the moisture offered by the summer floods and monsoon rainfall, the latter being particularly relevant in Gujarat. These plants, including rice and some millets, pulses, and vegetables, were probably first incorporated into the diet as gathered wild plants. Bringing these under cultivation required planting around June or July for harvest in October (*kharif* cultivation), a major change in the pattern of agriculture.

A shift from *rabi* cultivation alone to *rabi* supplemented by some *kharif* cultivation occurred at Harappa in period 3C (ca. 2200–1900 BCE). By the Late Harappan period the mosaic of differing local crop mixes and *rabi*-*kharif* balances was well developed in some previously settled Harappan regions such as Gujarat, while in others such as the Kachi plain and in new areas such as the Deccan and the Ganges-Yamuna doab it was still evolving.

The addition of *kharif* crops brought a number of advantages. The ability to plant a summer crop if spring harvests were poor offered an important assurance against food shortages in the Indus region, where yields could be high but where there were ever-present dangers of crop failure due to drought, excessive flooding, or changes in the course of the rivers. Rice could be grown in areas too wet for other cereals to thrive. New crops increased the diversity available in the diet. Finally, *kharif* crops enabled double-cropping to be practiced, allowing two crops to be obtained from the land during a single year.

—Jane R. McIntosh

domesticated, although both genetic and archaeological evidence show that this may have occurred in several separate locations. Rice was among the wild plants exploited by hunter-gatherers in the middle Ganges region from early times. Claims that domesticated rice was present in middle Ganges sites from the fifth or even seventh millennium BCE are unsupported, but from the third millennium rice (and other local cereals) was certainly under cultivation here in several areas, including oxbow lakes in the central Ganges Valley, the valleys of the Son and Belan rivers, and the Vindhya hills at sites such as Damdama, Senuwar, and Mahagara, often alongside continued hunting and gathering. Farther to the south and east, at Golbai Sassan, Gopalpur, and other sites in Orissa, rice cultivation probably began a little later, around 2000 BCE, and was certainly established by 1500 BCE; this was quite possibly a separate center of rice domestication.

Rice grew wild in Gujarat. Charred rice husks and impressions of rice husks and leaves were found here in Indus (Harappan) pottery (ca. 2600–1900 BCE) at Lothal and Rangpur. Rather than indicating rice cultivation, this probably reflects the use as a pottery temper of dung from cattle that had grazed on wild rice. However, other third-millennium rice grains or impressions are known outside the area in which wild rice grew, at the Indus city of Harappa, at Ghali-gai and Birkot Ghundai in Swat, and at Early Harappan Balu and Kunal in the eastern Harappan region. By the early second millennium, rice was certainly being grown in the latter region, such as at the Late Harappan site of Hulas.

While it is possible that the Harappans domesticated rice themselves, there is an alternative. By 2500 BCE some sites of the middle Ganges region had wheat, barley, and sheep introduced from the northwest, presumably due to indirect contacts between the middle Ganges groups and the Harappans. It is not unreasonable to suggest that this may have been a two-way traffic, with domestic rice being introduced to the Harappans by the same means. This may be supported by linguistic evidence: Language X, known only from a few words, seems to have been the language spoken in the Ganges Valley, while Paramunda is an Austro-Asiatic language that, it has

been argued, was spoken in at least the Punjab in Harappan times. The word for rice in Paramunda seems to have been adopted from Language X, presumably as the label accompanying the introduced crop.

An increasing population in the Kachi Plain was associated in the early second millennium with combined winter cultivation of cereals and pulses and summer cultivation of rice and millet. Surprisingly, this was apparently japonica rather than the indica rice that was cultivated at this time in neighboring Punjab and by Late Harappan communities farther east. This may perhaps be explained by the increased internationalism of this period, when Baluchistan and the Kachi Plain had strong links with the region to the north, stretching to Afghanistan and beyond. While organized long-distance connections between China, central, and South Asia did not develop until the first millennium BCE, there was a trickle of goods, plants, animals, and ideas passing from east to west and west to east much earlier. In the later third or early second millennium BCE, some artifacts and practices (such as dog burial) in Kashmir strongly resembled those of China, and wheat and barley reached China from the west, demonstrating the existence of indirect links between South Asia and China.

Summer rainfall, coupled with water in seasonal streams and rivers, made it possible to grow rice in the Kachi Plain, where it was the main crop at Pirak from around 1700 BCE. Elsewhere in the Indus basin, rice could be cultivated by sowing it in dhands (seasonal lakes) created by floodwater retained in depressions. The margins of Lake Manchar would have provided ideal conditions, as they do today. However, in the Ganges-Yamuna doab and areas to the east, summer monsoon rainfall was adequate to provide water for growing rice, and this is reflected in the cultivation of rice in Late Harappan sites in this region, the gradual southeastward extension of the land under cultivation during the second millennium, and the spread of farming communities into the Ganges Valley in the first millennium.

Rice cultivation also developed in western India during the second millennium. Rice was one of the crops grown both by the Late Harap-

pan inhabitants of Gujarat and by the Ahar-Banas people in Rajasthan with whom they had links. However, rice cultivation apparently did not spread into South India until the first millennium BCE.

—Jane R. McIntosh

Bibliography

- Bellwood, Peter. "Asian Farming Diasporas? Agriculture, Languages, and Genes in China and South-east Asia." In *Archaeology of Asia*, edited by Miriam T. Stark. London: Blackwell, 2006.
- Crawford, Gary W. "East Asian Plant Domestication." In *Archaeology of Asia*, edited by Miriam T. Stark. London: Blackwell, 2006.
- Fuller, Dorian Q., Ling Qin, and Emma Harvey. "A Critical Assessment of Early Agriculture in East Asia, with Emphasis on Lower Yangtze Rice Domestication." *Pradghara*. Special issue edited by Rakesh Tewari. London: Blackwell, 2007.
- Sweeney, Megan, and Susan McCouch. "The Complex History of the Domestication of Rice." *Annals of Botany* 100(5) (2007): 951–957.

Olive Oil

Olive oil was a highly prized commodity in the ancient world. Olive oil was used as a cooking medium, a condiment, a lubricant, fuel for lamps, a base for perfumes and unguents, and soap. The olive (*Olea europaea*), however, only grows in very specific environments and requires a great investment in time and energy before the trees will yield fruit. As such, in those areas where it was grown (such as the Levant) it became a key trade commodity.

The earliest evidence for the domestication of olives comes from the Chalcolithic (ca. 4300–3300 BCE) site of Teleilat Ghassul in present-day Jordan, where olive stones were found alongside vats used for crushing the olives. The site is in close proximity to sources of wild olives. There is evidence in the Levant that during the Early Bronze Age II and III (3050–2300 BCE), a new form of pottery called Metallic Combed Ware appeared. It is often thought that this new style of pottery, which included separator vats and large storage jars, is evidence of the first olive oil industry (rather than home production), supplying oil both locally and for export abroad.

➤ HOW OLIVE OIL WAS MADE



A reconstructed olive press in the courtyard of a dwelling at the archaeological site of Hazor in present-day Israel. Olives were first crushed in a basalt basin, then placed in a press, where the oil was extracted with the help of weights hanging from a long wooden lever. (Pictorial Library of Bible Lands)

Ripened olives are harvested by handpicking or by shaking or beating the tree with a long pole. The harvested olives are then crushed in presses to release their oil. The initial pressing, which releases the oil without mixing in any of the bitter pulp, is considered the best method and is referred to today as cold-pressed extra virgin. In order to get the largest possible yield, the remaining olive pulp could be pressed multiple times and doused with hot water to release even more oil. As the pressings continue, the oil becomes less and less palatable but remains useful for fuel.

—David R. Lipovitch

Raw olives are unpalatable and must be pickled to make them edible. It is generally thought that the pickling of olives did not occur until late in the first millennium BCE. There is, however, some evidence (in the form of olive stones found in single-use cooking fires at the Middle Bronze Age site of Ashkelon in Israel) that they may have been eaten as early as the first half of the second millennium BCE. It is clear, therefore, that olives were initially cultivated as a source of oil.

Olives were grown along much of the coast of the Mediterranean Sea. They require an average temperature of 15 degrees Celsius to grow but also need a period of cold weather for the

fruit to ripen. This meant that olives could not grow in Egypt or Mesopotamia where the winter weather does not get sufficiently cold. Olives require a great investment of time before they yield fruit. They generally do not even flower until they are five to six years old. This is why there is an injunction in the Hebrew Bible (Deut. 20:19–21) on the destruction, even during wartime, of olive trees and other fruit trees since replacing them would take so long. As a result of their limited habitat and the investment needed in raising olives, olive oil became an important trade commodity for those ancient cultures living along the Mediterranean coast where this fruit could be grown. This may be one of the key reasons that Egypt always took a keen interest in the Levant. Since their attention often sparked local cultural developments, it can be claimed that olive oil was a key element in the development of complex societies in the Levant.

Previously, linseed oil produced from the flax plant was used as the main source of oil in the ancient Near East, but it is largely unpalatable. While it made a decent fuel, its use in cooking would have been minimal. The pleasant taste and aroma of olive oil would have made it an excellent replacement for linseed oil and therefore a highly valued commodity.

—David R. Lipovitch

Bibliography

Grigson, Caroline. "Plough and Pasture in the Early Economy of the Southern Levant." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.

King, Phillip J., and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox, 2001.

Dates

Dates are the fruit produced by the date palm (*Phoenix dactylifera*). They are native to the oases of North Africa and of southwestern Asia. As a result, they were available to the earliest cultures of Egypt, the Levant, Mesopotamia, and the Indus Valley, whose inhabitants relied on dates as an important dietary supplement and as a source of raw materials. Date palms are fairly

salt-tolerant (making them ideal for Mesopotamia, where the soil was often saline), prefer warm climates, and are resistant to drought (and thus ideal for planting in oases to feed caravans). A typical tree can yield between 8 to 10 kilograms of dates, but an older tree, even without modern cultivation techniques, can yield up to 80 kilograms of fruit per harvest.

Wild date stones were found at the Paleolithic site at Shanidar Cave in Iraq dating to about 50,000 years ago, when they were already being collected for food. Domesticated date stones have been found preserved at several Chalcolithic sites (ca. 4300–3300 BCE) in the Levant including the Cave of the Treasure (Nahal Mishmar) in Israel and Teleilat Ghassul in Jordan. It is generally assumed that dates were being cultivated as early as 4000 BCE throughout the region from northeastern Africa through the Persian Gulf.

Dates are remarkably high in calories (dried ripe dates have about 29 calories per date, about two-thirds of the calories of an equivalent amount of pure sugar) and are rich in protein, calcium, potassium, dietary fiber, and B-complex vitamins. As such, they played an important role in the diet of the people of the ancient Near East. The fruit could be eaten fresh or dried and at various stages of ripeness. Harvested dates could be molded into dried cakes for long-term storage. Dates could also be further processed to make date honey, which in the absence of sugar would likely have been the main sweetening agent. By letting the date honey ferment, it could also be made into a potent alcoholic beverage known as palm wine.

In addition to the fruit itself, the wood was used as timber (although of poor quality) and could be used for construction or as fuel. The leaves could be used as roofing material or for basketry, and the seeds could be used as animal fodder. As a secondary ingredient, date honey played a major part in flavoring breads and in producing beer. As such it would have played a huge role in the ancient diet, particularly that of the ancient Sumerians among whom much of the caloric intake may have come from dates either directly as food or indirectly as part of their beer. Dates, which grew primarily in the southern part of Mesopotamia, were an impor-

tant early trade good and were often traded into northern Mesopotamia in return for local commodities. Until recently, Iraq led the world in date production.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford, 2000.
- King, Phillip J., and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Morton, Julia F. *Fruits of Warm Climates*. Miami: Julia F. Morton, 1987.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.

Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.

Wenke, Robert J. *Patterns in Prehistory: Human-kind's First Three Million Years*. Oxford: Oxford University Press, 1984.

Maize

Maize (*Zea mays*, corn) is the key crop grown by most New World cultures. Without maize agriculture, population size was limited by the number of people who could be supported through hunting and gathering. The development of maize-based agriculture alongside beans and squashes allowed populations to swell and become more sedentary, and with this change came the possibility of urbanized cultures. Without

THE MYTHOLOGICAL ORIGINS OF MAIZE

Maize (corn) was the key crop grown by the early North American and Mesoamerican civilizations. It was only through the surplus created by these crops that complex urban societies such as the Olmec, Maya, Aztec, and Toltec were able to develop in the New World. As a result of its incredible importance in day-to-day life, maize was also to play a key role in the mythology of these cultures. The myths associated with the discovery of corn may help enlighten archaeologists and historians about the events involved in its actual domestication.

The most common Mesoamerican myth of maize origins involves a fox who follows an ant and discovers a stash of maize enclosed within a large mountain or boulder, eats the grain, and decides that he has found a wondrous new food. In most versions the maize remains trapped within the mountain or boulder and is only made accessible to humans by a deity blasting open the mountain with a thunderbolt. This explains why maize kernels occur in a range of colors depending on how close they were to where the lightning struck.

Among the Maya of Guatemala there was a belief that in antiquity there was no maize and that humans ate the roots of a plant called *txetxina*, meaning “mother maize.” This plant had a large

root and a single stalk much like the postulated wild predecessor of domesticated maize. These stories tell how maize was discovered when people spotted it in the dung of a wildcat.

Maya creation myths tell of three gradual improvements of creation. Humans were created from mud, then out of wood, and finally from maize dough, with the dough proving to be the ideal human flesh. Similarly among the later Aztec there was a progressive improvement upon creation. This idea is further developed in the much later creation myths of the Aztecs of central Mexico, which tell of the present world having been created after a succession of four previous eras, or suns. The food that humans consumed improved during each subsequent phase of creation. In the First Sun, gathered acorns and fruits were the primary food. In the Second Sun, humans progressed to pine nuts. In the Third Sun, it was millet. In the Fourth Sun, it was *teocentli*, meaning “great or divine grain.” This would appear to refer to the immediate ancestor of maize. Finally, during the Fifth Sun, the food provided by the gods was *centli*, modern cultivated maize. This myth suggests that the Maya had a recollection of an era when they gathered the wild progenitor of maize before it was domesticated.

—David R. Lipovitch

maize the various cultures that existed with the arrival of Europeans in the New World would never have reached their level of complexity.

Unlike the domesticated plants of the Old World where the process of domestication is now fairly well understood, in the New World archaeologists are still trying to uncover the history of maize domestication. Since all evidence of preserved corn found to date in the New World are of already domesticated maize, it is unclear what the original wild forebear of corn was. The earliest preserved corn found to date was discovered in the 1960s by Richard “Scotty” MacNeish at Coxcatlan Cave in Tehuacán, Mexico. The oldest of the recovered corn cobs was radiocarbon dated to 5050 BCE. While quite primitive in shape and form (not like modern corn), they were definitively maize and not some wild species of grass or a primitive hybrid of two wild species.

There are a number of different hypotheses currently in vogue that may explain the development of domesticated maize. The Wild Maize Hypothesis claims that there must have once been a wild form of maize, now extinct, from which the cultivated form evolved. The problem with this theory is that no preserved remains of such wild maize have ever been found. The Orthodox Teosinte Theory says that maize was derived from the wild grass teosinte (*Zea mays mexicana*). Variants of this theory include the possibility that maize is a hybrid of teosinte and the as-yet undiscovered wild maize or of teosinte and another related wild grass. Finally, the Catastrophic Sexual Transmutation Theory holds that through a series of genetic mutations the teosinte tassel spike (the male reproductive organ) was transformed into the maize ear (the female organ) as opposed to more conventional approaches that have the maize ear developing from the teosinte ear. The idea that maize develops quickly as a result of a mutation may explain the lack of wild maize in the archaeological record. Recent DNA and related studies do indicate that teosinte is extremely closely related to maize and likely descended from it, but exactly how is still unknown.

In whichever way maize domestication occurred, by 2700 BCE this new crop had spread from Michoacán to Puebla in Mexico. By 1400

BCE maize cultivation had reached both Mexican coasts and was spreading to other parts of Mesoamerica. By 500 BCE it had reached into much of the United States (first appearing at Bat Cave around 1000 BCE) and had reached as far north as Ontario, Canada, by about 1000 CE, becoming the staple crop in much of the New World.

—David R. Lipovitch

Bibliography

- Betz, Virginia M. “Cotton and Maize: Early Plant Domestication in Mesoamerica.” *Athena Review* 2(1) (1999): 24–31.
- Salvador, Ricardo J. “Maize.” In *The Encyclopedia of Mexico: History, Culture and Society*, edited by Michael Werner. Chicago: Fitzroy Dearborn, 1997.

Chili Peppers

Despite the fact that chili peppers are associated with cultures worldwide today, they are a New World crop that was only introduced to the rest of the world after 1492 and the European discovery of the New World by Columbus. Chili peppers (*Capsicum* sp.) are a member of a large family of plants, related to the nightshades, that includes at least 25 species. Due to some taxonomic uncertainty, there is some debate as to whether 4 or 5 species were actually domesticated. The 5 species generally cited as domesticated are *Capsicum pubescens* (South American rocoto peppers), *Capsicum baccatum* (chiltepin), *Capsicum annuum* (bell peppers, jalapeños, and paprika), *Capsicum chinense* (habaneros and Scotch bonnet peppers, the hottest of the peppers), and *Capsicum frutescens* (cayenne and tabasco peppers). *Capsicum annuum* is the best known of the domesticated species and was the first introduced into the Old World by Columbus. *Capsicum chinense* was also discovered by Europeans at an early date, but while it spread globally it did so to a lesser extent than *C. annuum* probably because of its slightly later discovery in South America.

Due to numerous questions of biological taxonomy, much of the question of how and when chilies were first domesticated is still unclear. The pungent varieties of the chili pepper occur naturally in an area ranging from southern Brazil to Bolivia. Nonpungent related peppers occur in a larger area that includes Central America and

southern Mexico. Currently, it is thought that ultimately the chili pepper and its relatives originated in Bolivia but that the various types of peppers were domesticated more locally and independently. For instance, *C. annuum* appears to have been first domesticated in Mexico, while the other species appear to have South American origins. Thus, there were multiple centers of chili domestication. It is also unclear what the forebearer of chili peppers was. Wild *C. eximium* and *ulupica* (*C. cardenasii*) have been suggested as possibilities. Both of these species are native to Bolivia. Domestication of the species resulted in chilies becoming deciduous plants with much larger fruit than the wild varieties. The natural means of seed dispersal, through ingestion by birds, was also lost as a result of domestication.

Evidence for the first use of the various types of chili peppers is spread across the New World. The earliest evidence for the use of chili peppers in the archaeological record comes from the Tehuacán Valley from between 7000 and 5700 BCE. It is unclear whether these remains represent a wild form of *C. annuum* or an early domesticated form. Definitively cultivated chilies were recovered from the same area dating to around 1170 BCE. The earliest clearly domesticated chili peppers, however, come from Huaca Prieta in the South Andes of Bolivia and date to 3300 BCE. The remaining domesticated forms of capsicum were probably domesticated around 400 BCE.

—David R. Lipovitch

Bibliography

- Bray, Warwick. "Early Agriculture in the Americas." In *The Cambridge Encyclopedia of Archaeology*, edited by Andrew Sherratt. Cambridge: Cambridge University Press, 1980.
- Eshbaugh, W. H. "History and Exploitation of a Serendipitous New Crop Discovery." In *New Crops*, edited by J. Janick and J. E. Simon. New York: Wiley, 1993.

Millet and Sorghum

Millet is a general term for small seeded cereal plants that grow around the world. The term is not taxonomic; it reflects the fact that these crops share a number of similarities, both in morphol-

➤ SESAME

Sesame is a flowering plant native to the Indian subcontinent that has subsequently spread to Africa, the Near East, and tropical regions around the world. The plant is cultivated for its seeds, which are rich in protein and oil. Sesame oil was used extensively in the ancient Near East because it is very flavorful and does not go bad easily, even in high heat. Sesame is suitable for small-scale cultivation; the seeds scatter very easily, so harvesters must be quite careful with them. The plant itself is quite resistant to all sorts of bad conditions, including drought, pests, and hot temperatures. Sesame plants are usually not irrigated but are fed through rain. Thus, in the ancient Near East, the crop would not have been grown above the isohyet.

Sesame seeds have been found at Harappa, in Pakistan. These are the oldest seeds that archaeologists have yet recovered. This is consistent with the biological evidence that suggests that the sesame plant was native to South Asia. However, most evidence for sesame oil usage comes from Mesopotamian textual accounts. Sesame is mentioned in many economic texts as a commodity that was traded. The word "sesame" in fact has Semitic roots, and likely the etymology can be traced back to the Akkadian language (in Akkadian it is called *shamashshammu*). Sesame seeds may also have been present in King Tutankhamun's tomb in Egypt. This evidence is enough to demonstrate the wide usage of sesame oil in the ancient Near East.

—Kevin M. McGeough

ogy (form and shape) and behavior. In general, they are grasses that can grow in very inhospitable conditions yet still provide significant food yields. People eat the seeds of millet, which are encased in hard, indigestible hulls. These hulls must be removed before millet can be consumed. Out of the hulls, the seeds look like little yellow spheres with a hole in one side (where it was attached to the stem). The nutritional value of millet is similar to wheat. Millets were cultivated very early in East Asia; different types of millets began to be cultivated in Africa, India, and Eurasia in 4000–1000 BCE.

» CACAO

Cacao and chocolate are made out of the seeds of the Cacao tree, a tropical evergreen tree probably native to the Amazon region of South America. The seeds (more often referred to as beans) are found in pods that vary from 6 to 12 inches (15 to 30 centimeters) in length. The seeds number 20 to 60 in a given pod and contain a significant amount of fat (known as cacao butter). The name is derived from the ancient Nahuatl language, and its scientific name (*Theobroma cacao*) literally means “food of the gods.” The Olmecs of Mesoamerica cultivated cacao; most scholars believe that the tree was exploited long before this.

Cacao trees are very fragile and require considerable care and maintenance. In ancient times the tree had to be kept well shaded, which was not difficult under the thick forest canopy of the Amazon. The tree needs very good soil and consistent rainfall. The trees could not be climbed, so to harvest the pods, long cutting implements had to be used. The yields of trees are very low, especially given the amount of work that is required in cultivation. No doubt the difficulties in growing, harvesting, and transporting these trees lay behind the value that cacao held in ancient times. Modern agricultural techniques have reduced the difficulties (and thus the costs) of cacao cultivation.

—Kevin M. McGeough

Millet is well suited for the African climate. Many varieties need very little rainfall, growing quite well in arid and semiarid environments. As with any successful desert grass, many varieties of millet are able to establish themselves within a short growing season. This makes it particularly difficult to identify where the first cultivation of millets may have taken place in Africa since it could have been anywhere along the southern margins of the Sahara Desert. Archaeologists have found evidence for pearl millet along the Saharan fringes and in northern Ghana dating to about 1000 BCE. Finger millet has been identified at the site of Kadera in the Sudan dating to about 3000 BCE, making it the earliest known millet crop in Africa. At Kadera, ceramic potsherds were discovered that had plant im-

pressions on them, allowing archaeologists to be certain that the ancient human inhabitants of Kadera had access to millet.

Sorghum was also found impressed onto potsherds at Kadera. The term “sorghum,” like millet, actually refers to a wide variety of species of grasses. Sorghum—which is native to Africa—has characteristics similar to weeds that allow it to spread quite rapidly. There are two general theories about where in Africa it first came into use as a domesticated crop. Ethiopians may have learned agriculture from the ancient Egyptians at some point during 4000–1000 BCE and applied this knowledge to the cultivation of sorghum, or sorghum may have gradually become domesticated during 4000–1000 BCE anywhere on the savannahs of Africa (from Sudan to Nigeria). It was probably cultivated in this region by 3000 BCE.

Sama millet was first domesticated on the Indian subcontinent around 2500 BCE. Archaeologists found carbonized grains at the Harappan site of Rodji (in India), Harappa itself (in Pakistan), and numerous other sites, indicating widespread human exploitation of this crop at the time. This is not surprising since sama is drought tolerant and does not require good soil to grow in, thus making it an ideal crop for the environment of the subcontinent. Many other types of millets (probably introduced from Africa) have been found in South Asian contexts, and it is likely that millet played an important role in Harappan subsistence practices.

Throughout the European Bronze Age, proso millet spread throughout the continent, especially in southern Europe. Although still grown in some parts of Europe, it is no longer used for human consumption. This crop likely originated in China, where it is attested archaeologically at least 5,000 years ago. It is still used in China today, an important component of some types of bread.

—Kevin M. McGeough

Bibliography

- Bedigan, Dorothea. “Sesame.” In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.
- De Vartavan, C. “Contaminated Plant Foods from the Tomb of Tutankhamun: A New Interpretative

System." *Journal of Archaeological Science* 17: 473–494.

De Wet, J. M. J. "Millets." In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.

De Wet, J. M. J. "Sorghum." In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.

Harlan, Jack R. "The Origins of Indigenous African Agriculture." In *The Cambridge History of Africa 1: From the Earliest Times to c. 500 B.C.*, edited by J. Desmond Clarke. Cambridge: Cambridge University Press, 1982.

Macleod, Murdo J. "Cacao." In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.

Sowunmi, M. A. "The Beginnings of Agriculture in West Africa: Botanical Evidence." *Current Anthropology* 26(1) (1985): 127–129.

Stol, M. "Remarks on the Cultivation of Sesame and the Extraction of its Oil." *Bulletin on Sumerian Agriculture* 2 (1985): 119–126.

Weber, Steven. "Out of Africa: The Initial Impact of Millets in South Asia." *Current Anthropology* 39(2) (April 1998): 267–274.

Young, Allen M. *The Chocolate Tree: A Natural History of Cacao*. Washington, DC: Smithsonian Institution Press, 1994.

Palm Oil

Palm oil is a vegetable oil produced from the fruit of the oil palm tree. The oil was used for cooking in ancient times; it could also have functioned as a lubricant, but there is no positive evidence for this use in the period 4000–1000 BCE. It may also have been included in soups, sauces, and dough in ancient times, as modern ethnographic analogy would suggest. Several kilograms of palm oil were recovered from Early Dynastic period tombs at the site of Abydos in Egypt, proving that palm oil has been used in Africa for at least 5,000 years and probably longer. The Egyptians may have produced this themselves or acquired it from other parts of Africa. Archaeologists have found remnants of oil palm trees dating from 4000 to 1000 BCE in West Africa, but this would not have been the only region that the oil palm grew in at this time.

The oil palm tree is native to West Africa and grows well in humid tropical regions. The fruit

➤ PALM OIL AS BIODIESEL—ENVIRONMENTAL SOLUTION OR PROBLEM?

The ancient oil palm tree has long been exploited because of its highly productive yields. In recent years, the governments of Thailand, Indonesia, and especially Malaysia have been focusing energy on the cultivation of the oil palm tree (which is not native to those regions) for use as a biodiesel fuel and as a possible alternative to the use of fossil fuels. Ironically, what appears to be environmentally sound may not be, since large sections of natural forest are clear-cut and replaced by oil palm plantations, possibly leading to significant environmental problems.

—Kevin M. McGeough

grows in bunches, which can become quite heavy, between 22–88 pounds (10–40 kilograms); in ancient times, probably closer to 22 pounds would have been normative. The fruit is removed from the tree by the bunch and then must be left to ferment in order to be soft enough to separate the individual fruit. The individual fruit is red in color and resembles plums.

Scholars are not sure precisely how palm oil was produced in ancient times but can reconstruct production techniques based on more recent practices. In the so-called soft oil technique, the fruit is separated from the bunch as soon as it is loose enough to do so. It is then boiled in water until the flesh is softened (a process that would take as long as four hours and require a substantial amount of firewood). The cooked fruit is then placed in a vat and pounded into a pulp. Water is added to the pulp, which causes the oil to separate and float to the top of the vat, where it is then skimmed off. This process is repeated over and over until all of the reddish oil has been removed. The separated oil is then boiled again to remove any extra water, a process that removes the reddish color from the oil and also uses a large amount of wood.

The more likely technique to have been used in antiquity is the so-called hard oil technique whereby the fruit is left on the bunch for a longer period of time. This removes the need to boil the fruit to soften it and also does not require

the substantial amount of firewood necessary in the soft oil technique. The fruit is mashed in some sort of container that allows the oil to drain out. This is done over and over again until all of the oil has drained out. Then, the oil is boiled to remove any excess water, changing the color from red to white. There is a significantly lower yield from the hard oil technique, but it was probably still preferred given how much wood would have been consumed in the fires necessary for the soft oil technique.

—Kevin M. McGeough

Bibliography

- Berger, K. G., and S. M. Martin. "Palm Oil." In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.
- Harlan, Jack R. "The Origins of Indigenous African Agriculture." In *The Cambridge History of Africa 1: From the Earliest Times to c. 500 B.C.*, edited by J. Desmond Clarke. Cambridge: Cambridge University Press, 1982.
- Sowunmi, M. A. "The Beginnings of Agriculture in West Africa: Botanical Evidence." *Current Anthropology* 26(1) (1985): 127–129.

IDENTIFYING MANIOC USE THROUGH EXPERIMENTAL ARCHAEOLOGY

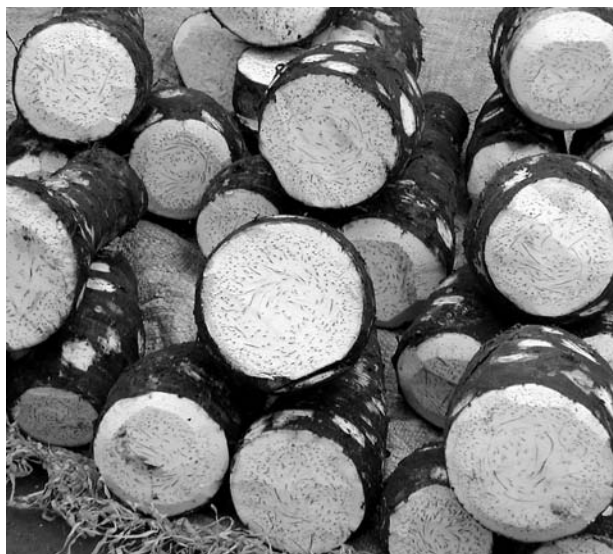
Given that manioc does not survive well archaeologically and that the tools that could be used for manioc exploitation could also be used for other activities, archaeologists had to devise methods to determine when manioc use began in ancient America. Dave Davies has attempted to solve the problem of identifying manioc use through experimental archaeology. Taking obsidian tools, such as those that would have been used in the ancient Americas, he used them to grate manioc. After the grating was finished, he examined the tools for distinctive wear marks left on the tools from the act of grating. What he found was that given the peculiarities of manioc, a distinct wear pattern could be identified on the tools that he used to grate manioc. This same wear pattern could be found on ancient obsidian tools, thus providing strong evidence for manioc exploitation even when no remains of manioc were found.

—Kevin M. McGeough

Manioc

Manioc is a tropical root plant that is indigenous to the Americas. There is no scholarly consensus regarding where manioc originated. In modern times the widest variety of manioc species are found in Brazil. The earliest samples of manioc that have been recovered archaeologically come from the Casma Valley in Peru, dating to 1785 BCE. Scholars are relatively certain that manioc was being exploited in South America prior to that date, even though evidence is lacking. Manioc is not preserved well in a tropical environment, so the evidence for its purposeful use must come from the analysis of artifacts that may have been used in its exploitation and production, such as ceramic platters or graters. Since these types of tools may be used for other purposes, any conclusions drawn about early manioc exploitation are far from certain.

The plant goes by many names—the most common other names are yuca and tapioca—and requires secondary processing before it can be consumed. Most important are detoxifying procedures that are necessary to prevent poisoning. The processed material can be made into a type of meal or mush, bread, or tapioca pudding. It can also be roasted or fermented into an alcoholic beverage. Manioc is not particularly high in protein. However, crop yields are high, and the leaves can also be ingested, making manioc cultivation a relatively profitable enterprise.



Manioc. (Angela Sevin)

There are two major types of manioc: sweet and bitter. Sweet manioc grows relatively quickly and is very suitable for eating. Bitter manioc takes longer to grow and is more likely to become poisonous (although it can be detoxified). However, bitter manioc is more resistant to natural pests and drought and provides certain soil benefits. Scholars initially took manioc to be quite destructive to soil since it was found in regions that had suffered from severe soil degradation (claims such as this often appear in older books). Further analysis has shown that manioc was found in these areas not because it had destroyed the soil but because it was one of the few crops that could grow in this soil.

—Kevin M. McGeough

Bibliography

- Davis, Dave D. "Patterns of Early Formative Subsistence in Southern Mesoamerica, 1500–1100 B.C." *Man*, n.s., 10(1) (1975): 41–59.
- DeBoer, Warren R. "The Archaeological Evidence for Manioc Cultivation: A Cautionary Note." *American Antiquity* 40(4) (October 1975): 419–433.
- Karasch, Mary. "Manioc." In *The Cambridge World History of Food*, edited by K. Kiple and K. Ornelas. Cambridge: Cambridge University Press, 2000.
- Roosevelt, A. C. *Parmana: Prehistoric Maize and Manioc Subsistence along the Amazon and Orinoco*. New York: Academic Press, 1980.

The Domestication and Spread of the Chicken

Evidence for the history of chicken domestication is rather patchy. Bird bones are small and fragile and thus are often poorly preserved and more frequently missed during excavation. Domestic fowl were often kept by ancient societies not only for meat and eggs but also for rituals and sacrifices and the cocks for fighting.

The chicken was domesticated from the jungle fowl (*Gallus* sp.). Of the four wild species, the red jungle fowl (*Gallus gallus*) is most closely related to the domestic chicken and is likely to be its ancestor. Its distribution includes much of eastern India, Bangladesh, most of mainland and island Southeast Asia, southern China, and Henan. In the 1990s genetic evidence suggested a single origin, Thailand, for domestic



Southeast Asian red jungle fowl. (David Hosking/Corbis)

fowl, but more recent genetic studies indicate two separate foci of domestication, China and India.

Diaotonghuan and Xianrendong caves, south of the Yangzi, were occupied from the late Pleistocene by people who exploited wild resources, including chickens; possibly in the later stages of the occupation these were domesticated. Fowl bones are known from a number of sixth- or fifth-millennium Chinese sites, including Cishan north of the Yellow River. It is not clear whether these were from wild or domestic birds, but it is significant that they are outside the range of wild red jungle fowl. Probably by the fourth millennium, domestic chickens were well established in China. Chickens were introduced to Korea from China and then to Japan during the Yayoi period. Chickens must have made a welcome addition to the limited range of Chinese domestic animals, mainly pig and dog.

Jungle fowl were domesticated considerably later in South Asia. It is disputed whether their original distribution extended into Sindh; there seems no doubt, however, that wild jungle fowl were present in the eastern region of the Indus civilization (2600–1900 or 1800 BCE), and they were probably domesticated there. It is likely that the development of urbanism encouraged the domestication of chickens, since they were animals that could be kept for meat (as well as eggs) in the restricted space available to town

► THE CHICKEN IN SOUTH AMERICA

It has long been suggested that there were pre-Columbian contacts between Pacific islanders and the inhabitants of South America. One reason is that chickens were being used by the Incas when Pizarro arrived in Peru; it seemed improbable that these could have spread to Peru so rapidly from the European settlements in Central America and the Caribbean established a few decades before. It was suggestive that chickens were kept by the first colonists of the Pacific who had reached Hawaii and Easter Island sometime between 400 and 800 CE. In addition, the unusual blue color of the eggs of some American chickens was paralleled in China and Easter Island. Nevertheless, irrefutable proof was lacking.

Recent work, however, provided the evidence to clinch this hypothesis. The DNA of a chicken bone from El Arenal-1, on the Arauco Peninsula, Chile, analyzed in 2007 proved to match that of chickens from Tonga, Samoa, and Easter Island, revealing that the South American Aracauna breed of chicken was of Polynesian origin and had been introduced by or before the fourteenth or early fifteenth century CE, well before the arrival of the first Europeans in the Americas.

—Jane R. McIntosh

and city dwellers. Chicken bones have been found on many sites of the Indus civilization, including the cities of Mohenjo-daro and Harappa and the towns of Rupar and Kalibangan in the east and Lothal, Rojdi, and Surkotada in the west. These birds were larger than wild jungle fowl, emphasizing their domestic status. There are also Indus figurines and images on seals depicting chickens and a sign in the Indus script that is a logograph of a chicken. The presence of domestic fowl is also claimed at Neolithic Gufkral in Kashmir, dated to the late third or early second millennium BCE and perhaps an introduction from the Harappan region.

Numerous chicken bones were found in the third-millennium Middle Ganges settlement of Damdama. These were probably from wild jungle fowl but indicate that the birds were an important economic resource at this time. During the

second millennium, domestic chickens began to be kept in many parts of the subcontinent.

The spread of chicken to West Asia, Africa, and Europe seems to have involved birds from both China and India. From China, chickens were introduced to central Asia possibly before 3000 BCE. From here steppe nomads probably introduced them to both eastern Europe and the Iranian plateau. Chickens are known from a few third-millennium sites in Romania, Turkey, and Greece and in the Bronze Age German sites of Wüste Kunersdorf and Kyffhäuser cult caves.

From South Asia, small numbers of chickens reached West Asia and then Egypt in the third and second millennia, but they remained rare. A Sumerian literary reference to birds with a carnelian beard from Meluhha (the Indus) suggests that the Harappans first brought chickens to Mesopotamia. Chickens probably continued to be exotic goods brought in by traders. Chicken bones have been reported from late third-millennium Tel es-Sweyhat in Syria and late Bronze Age Tel Michel in coastal Canaan.

In Egypt the evidence is purely from artistic and literary sources. These include a graffito of a chicken in an Egyptian temple around 1840 BCE, references to chickens brought back to Egypt from military campaigning in the Levant during the Eighteenth Dynasty (1539–1292) and in the fifteenth century to birds that laid eggs every day, and an unmistakable cockerel drawn on an ostrakon from Tutankhamun's tomb.

By the later second millennium, chickens were being raised in Iran. The Medes adopted the cock as a symbol in the Zoroastrian religion. From Iran chickens were introduced to West Asia, where they are depicted on seals from the eighth century onward. The birds seem to have been kept at least in part for cock fighting and as sacrificial animals. Representations in Egyptian art appeared in some numbers from around 650 BCE, but chickens only became common in West Asia and Egypt during the Persian period. Chickens increased further in importance in Hellenistic times when several breeds are known.

Domestic fowl spread from West Asia into Anatolia and Europe, being known in Greece and Italy from the eighth century and becoming common by the sixth century. They were popu-

lar in the Classical world as sacrificial victims and in augury and more widely as a symbol of fertility. The Phoenicians or the Greeks probably introduced the chicken into Spain. The Greeks and Romans kept large breeds of chickens, some of which were imported into Celtic Europe, where chickens were kept in small numbers, providing mainly meat but also eggs in the spring.

Recent genetic studies suggest that chickens in Africa may derive from both South Asian and East Asian domestic lines. The same is true of chickens in Southeast Asia and Sri Lanka, reflecting the complex history of trade and migration in the Indian Ocean. It is likely that chickens were introduced to the Sahel belt of sub-Saharan Africa through trans-Saharan trade; the earliest evidence here is from the city of Jenne-jeno in the Niger basin, dated to 500–800 CE. Domestic chickens are known at Qasr Ibrim in Nubia from the fifth and sixth centuries CE; they may have been introduced from Egypt along the Nile Valley, from the Mediterranean via the Red Sea, or from India by sea.

Indian Ocean trade in the first millennium CE is also likely to have introduced chickens from India to eastern parts of sub-Saharan Africa. They are known at Iron Age sites in East Africa (Manekani and Chibuene in Mozambique) and South Africa (Ndongondwane in Natal) in the eighth century CE. At the important coastal trading site of Manda in East Africa, chickens become an important domestic animal from the ninth century CE.

Given the distribution of wild jungle fowl, we would expect chickens to have been domesticated in Southeast Asia; however, this seems not to have been the case. Bones at Khok Phanom Di in Thailand, dated after 2000 BCE, belonged to a nonlocal species of jungle fowl. Similar evidence comes from the contemporary site of Nong Chae Sao. By 2000 BCE, farming communities whose domestic animals included chickens were also appearing throughout the Malay Peninsula.

Until recently it was thought that the farmers and fishers who colonized the islands of the Pacific originated in Taiwan and the Philippines, but the most recent evidence indicates a more southerly origin, from Southeast Asia through

Indonesia. The inclusion of domestic chickens among the staples of the colonists' economy (along with dogs and pigs) shows that the chicken was an established domesticated animal in island Southeast Asia before 1500 BCE despite the paucity of evidence in that region itself. These colonists reached Samoa in western Polynesia by 1000 BCE and spread chickens throughout the Pacific, with the exception of New Zealand. New Guinea was bypassed in this movement and probably acquired domestic chickens at a later date.

—Jane R. McIntosh

Bibliography

- Bellwood, Peter. *First Farmers: The Origins of Agricultural Societies*. Oxford, UK: Blackwell, 2004.
- Blench, Roger, and Kevin C MacDonald. "Chickens." In *The Cambridge World History of Food*, Vol. 1, edited by Kenneth F. Kiple and Kriemhild Coneè Ornelas. Cambridge: Cambridge University Press, 2000.
- Clutton-Brock, Juliet. "The Spread of Domestic Animals in Africa." In *The Archaeology of Africa: Food, Metals and Towns*, edited by Thurston Shaw, et al. London: Routledge, 1995.

The First Wine and the Origins of Viticulture

It is difficult to identify the earliest wine since, unlike beer brewing, wine is created through natural processes. The grapes do not have to be cultivated, nor does fermentation need to be encouraged by human intervention in order for wine to be created. The juice of grapes simply needs to come in contact with airborne yeast for fermentation, a relatively quick process, to take place. Thus, the earliest wine may date to the earliest consumption of grapes, a practice that can be traced back at least 35,000 years in France.

The first positive evidence for wine, however, appears in the archaeological record much later, in Iran. There is evidence that wine was consumed during 5400–5000 at the site of Hajji Firuz Tepe. Amphorae (large ceramic vessels) excavated from Godin Tepe in Iran preserved wine resins that demonstrate a sophisticated knowledge of wine production. At the bottom of these amphorae a reddish deposit, caused by

WINE—MEDICINE OR POISON?

The modern debate over whether wine is a healthy dietary supplement or a substance that destroys both body and mind has roots far back in antiquity. It seems that for as long as wine has been produced, people have debated whether or not it should be drunk. Vedic texts from India praise wine as an important part of a healthy diet during the cold winter seasons. Wine is said to increase strength, energy, and courage. However, the Vedas also warn of the ill-effects of too much consumption: drowsiness, obesity, impotence, and even leprosy. In general, the intoxicating properties of wine were seen in a negative light by the authors of the Vedas (as opposed to the positive intoxicating effects of soma). The ancient Egyptians were similarly undecided about whether wine was healthy or unhealthy. In tomb reliefs, wine is used as a symbol of positive abundance. Yet in some of these reliefs, diners at banquets are depicted as vomiting from too much wine. An Egyptian wisdom text called *The Admonition to Schoolboys* warns of the negative consequences of drunkenness.

—Kevin M. McGeough

tannin and tartrate crystals, was preserved, clear signs of wine consumption (as opposed to merely grape juice consumption). Since vines provide numerous types of foodstuffs (such as fresh fruit, raisins, and vinegar), the finds at Godin Tepe are important evidence for early consumption of wine per se.

While cultivated vines are not necessary for the production of wine, human crop management is important for producing a stable crop of grapes. The domestication of vines is quite different from the domestication process for cereals, which is based on seed selection. Vines are reproduced through cuttings and grafting (the connection of two living pieces of plant tissue so that they will grow as one plant). Many varieties of vines are dioecious (meaning that there are male and female vines); hermaphroditic vines are the easiest to cultivate, so much of the domestication process involves crossbreeding vines to facilitate reproduction. Determining where vines were first domesticated is very difficult since vines grow naturally throughout the Medi-

terranean and between the Black Sea and the Caspian Sea. Today, the greatest diversity of wild vines is found between the Caucasus and Armenia, so this region may be a good candidate for the first domesticated vine although there is no positive archaeological proof of this.

While scholars are uncertain of the location of the first domestic vines, they are able to trace the spread of domesticated vines throughout the Old World. At the site of Trialeti, Georgia, in the former Soviet Union, vine cuttings were found in a silver sheath (decorated with vine buds) dating to about 3000 BCE. Cuttings dating to approximately 3000 BCE have also been recovered from southern Spain, indicating vine domestication that developed independently of eastern Europe and Asia Minor. Third-millennium Mesopotamia had vines in the north, yet wine never overtook beer as the dominant drink of the region. In Anatolia, however, the climate was well suited for viticulture, and wine distribution and wine making were important industries throughout the Bronze Age. Certainly by 3000 BCE, vines had been imported into the southern Levant (Canaan). These Canaanite vines are clearly imports since they do not naturally grow in that region. Farther south in Egypt (another region where vines do not grow naturally), vines had been imported during Predynastic time, as early as 3100 BCE. Vines may have been imported to the Indus Valley around 3000 BCE, but there is no evidence of wine consumption in this culture at all. Wine becomes prominent in Vedic India sometime between 2000 and 1000 BCE; Vedic culture was better situated ecologically in the Indian subcontinent than the Indus Valley for wine production. By 2500 BCE, domesticated vines were well established on the Greek mainland and on some of the Greek islands.

Planting a vineyard was a long-term process. Vines typically do not bear fruit for the first 3–5 years after planting. They require constant attention and must be judiciously manipulated with cuttings and graftings; if not, the vines will revert to wild form quite quickly. Vines cannot easily be removed; after a vine has been planted, it is very difficult to make the land arable for other types of crops. Vines will, however, last for generations, making them very valuable once they have been properly established.



Minoan storage jar (known as a pithos) found at Phaistós on the island of Crete. Ceramic containers were used to store oil, wine, and food throughout the ancient world. (Corel)

The manufacturing of wine is relatively simple. All that is really required is an appropriate storage container for the fermentation process. Egyptian tomb reliefs depict ancient wine-making practices; similar equipment found throughout the Mediterranean suggests that the practices were relatively standard. Grapes were first crushed to yield free-running juice. The remnants of these grapes were put into sacks and pressed (usually with heavy equipment) to release more juice. It is unclear when exactly the grapes were allowed to ferment (the timing probably varied from vintner to vintner). Usually, though, fermentation took place in large amphorae where air was deliberately kept out.

Wine production and distribution took place at a number of different levels, from large royal enterprises to small-scale household production. The Hittites had numerous laws dealing with the appropriate distribution practices of wine; there the practice seemed to be highly regulated. At the site of Ugarit, on the Syrian coast and under Hittite hegemony during the Late Bronze Age, real estate contracts stipulate that vineyards were considered part of the individual's land. At that same site, which clearly allowed small-scale vintners to practice the craft, the palace engaged in its own wine production at large agricultural estates called *gittu*. Similar royal practices are evident among the Minoans of Crete. The palaces of the Minoans (especially the largest, Knossos) had large magazines (storerooms) filled with gigantic pithoi (ceramic vessels) embedded into the floor that once held wine. Linear B texts detail the distribution of wine by the palace, and one of the few signs that can be identified in Linear A (the untranslated language of the Minoans) is the sign for wine.

Wine production in Egypt is extremely well attested. There, wine was considered an elite beverage (as opposed to the lower-class beer that most Egyptians had access to). Vines were grown in small walled gardens. Olives were grown in a similar fashion and often in tandem with grapes. Since wine was frequently deposited in tombs to accompany the dead into the afterlife, many intact vessels have been recovered. The earliest examples are the approximately 700 amphorae that filled three rooms of King Scorpion's Predynastic tomb at Abydos. Many of these vessels were labeled, listing where the wine had come from. The wine recovered from King Tutankhamun's New Kingdom tomb preserved even more information. These wine labels listed information such as the location of the vineyard, the owner of the vineyard, the chief vintner's name, and even the year of bottling. It seems that 1345, 1344, and 1340 BCE were particularly good years for Egyptian wine.

—Kevin M. McGeough

Bibliography

Grivetti, L. "Wine: The Food with Two Faces." In *The Origins and Ancient History of Wine*, 3rd ed., edited by P. McGovern, S. Fleming, and S. Katz. Amsterdam: Gordon and Breach, 2000.

McGovern, P., S. Fleming, and S. Katz, eds. *The Origins and Ancient History of Wine*. 3rd ed. Amsterdam: Gordon and Breach, 2000.

Renfrew, J. "Wine." In *The Oxford Companion to Archaeology*, edited by B. Fagan. Oxford: Oxford University Press, 1996.

Robinson, J. ed. *The Oxford Companion to Wine*. 3rd ed. Oxford: Oxford University Press, 2006.

Beer

In ancient Mesopotamia and Egypt, beer was an essential part of the daily diet. It was drunk by all classes of people, was used in all manners of ritual, and acted as an ingredient in many medicines. It has been suggested that the transition of hunter-gatherer tribes to settled farmers was due to their desire to grow grain, not for bread but for beer. This is unlikely, however appealing it may sound as a theory. Regardless, beer production appears very early in both the artistic and archaeological records of the Near East and Egypt. Depictions of people drinking beer in Mesopotamia appear as early as 3500 BCE on cylinder seals. At the site of Hierakonpolis in

Egypt, the earliest brewery was discovered dating to the Naqada II period (around 3500 BCE).

Beer in ancient Mesopotamia and Egypt was made using grains such as emmer and barley. Beer could be flavored using a variety of additives such as honey, dates, herbs, and spices. There were a couple of different methods of brewing beer in the ancient world. The first involved the fermentation of beer bread. A loaf of bread was made and partially baked (fully baking the bread kills the yeast). The bread was then crumbled into a vat of water. The live yeast in the bread caused the water and bread mixture to ferment. Another method of brewing beer involved creating malt, which involved soaking grain in water for several days until it started to sprout. The malt created the sugars on which the yeast feeds during fermentation. The malt was then crushed and mixed with regular grain before being sieved to remove the indigestible chaff (the papery shell enclosing the seed). This malt mash was put in a vat of water, yeast was added, and the vat was allowed to sit for several days. Fermentation of these bread and water or malt and water mixtures resulted in beer. Unfortunately, beer could not be stored for long periods of time, as after a while it turned very sour. So beer, like bread, had to be made on demand.

Beer was a staple of the ancient diet. Every class of people from kings to peasants drank beer. In many cases beer was safer than drinking water because its alcohol content killed off many bacteria. It was also full of carbohydrates, vitamins, and calories, which made it nutritious as well as thirst-quenching. Beer was drunk in two forms, strained or unstrained. The Egyptians drank their beer strained, but the Mesopotamians seem to have preferred their beer unstrained. Carvings on cylinder seals from as early as 3500 BCE show people drinking their beer through long straws. These depictions of beer drinking almost always show two or more people drinking from a large vat, suggesting that it was a social activity. The straw, often with a little sieve at the bottom, prevented the drinker from ingesting the chunks of malt or beer bread floating in the beer. The straws were made out of a variety of materials from a simple hollow reed to metals such as copper and gold. The



An ancient Syrian in Egypt drinking beer with a straw. Egypt, Eighteenth Dynasty, about 1350 BCE. (Bettmann/Corbis)

tomb of Lady Puabi at Ur (roughly 2600 BCE) contained a four-foot-long gold straw with a lapis lazuli strainer at the tip for drinking beer.

In both Egypt and Mesopotamia there was no monetary system, so wages were frequently paid using food and other goods, including beer. Institutions, especially temples and palaces, had large baking and brewing operations to make the bread and beer rations for their workers. In ancient Egypt a normal daily wage for a worker consisted of ten loaves of bread and two jugs of beer. It may sound like a lot, but this food also had to feed the worker's family. The higher the status of the worker, the more bread and beer he received. Beer was dispensed in pottery jars that were roughly equal in size, ensuring that everyone got an equal portion. Prices were often expressed in units of bread and beer, even though other commodities were used in the actual transaction. In Mesopotamia, workers were paid in raw grain that they then turned into bread and beer at home. Brewing beer and baking bread fell into the sphere of domestic chores done by the women of the household in Mesopotamia. Some women were able to take these domestic skills and turn them into a business as tavern owners.

Taverns were common in Egypt and Mesopotamia. In Mesopotamia, brewers and tavern owners were often women. The Code of Hammurabi (roughly 1800 BCE) refers to tavern owners as specifically being women. Literature from ancient Egypt and Mesopotamia links taverns with intoxication, rowdiness, and debauchery despite the fact that ancient beer had a relatively low alcohol content. A genre of literature from Egypt called the instruction text gives advice on how to behave in order for Egyptians to advance their careers. Many of these texts warn against drinking too much beer or going into taverns, even if accompanied by your boss.

Beer was prescribed as a medicine in ancient Egypt and Mesopotamia. Although it could be used alone, more often it was used as a base into which other active ingredients were mixed and then applied to a wound or ingested. Apart from taking the edge off, beer may also have had real healing qualities because certain bacteria, which flourished in grain stores, are similar to those

➤ BEER AND MYTHOLOGY

In Mesopotamia, Ninkasi is the patron goddess of beer. She was charged with making beer for the gods. In Egypt, Hathor was considered the goddess of beer because of her role in the myth of the destruction of mankind. In the myth, the god Re, ruler of earth, learns that mankind is plotting to rebel against him. As punishment he sends Hathor, usually a peaceful goddess, to kill the rebels. However, Hathor threatens to kill all men. In an effort to save the innocent, Re causes the land to be flooded with beer, which he stains red to make it look like blood. Bloodthirsty Hathor falls for the ruse, drinks the red-colored beer, gets very drunk, and becomes docile again.

—Vanessa Smith

used to make modern antibiotics. A swig of beer could give a boost to the immune system, as beer production did not use very high temperatures (unlike the baking of bread), which killed the antibiotic bacteria.

—Vanessa Smith

Bibliography

- Curtis, Robert. *Ancient Food Technology*. Boston: Brill, 2001.
- Darby, William, Paul Ghalioungui, and Louis Grivetti. *Food: The Gift of Osiris*. Vol. 2. New York: Academic Press, 1977.
- Dayagi-Mendels, Michal. *Drink and Be Merry: Wine and Beer in Ancient Times*. Jerusalem: Israel Museum, 1999.
- Geller, Jeremy. "From Prehistory to History: Beer in Egypt." In *The Followers of Horus: Studies Dedicated to Michael Allen Hoffman 1944-1990*, edited by Renée Friedman and Barbara Adams. Oxford: Oxbow, 1992.
- Hartman, Louis, and A. L. Oppenheim. "On Beer and Brewing Techniques in Ancient Mesopotamia: According to the XXIIIrd Tablet of the Series HAR.ra = hubullu." Supplement to the *Journal of the American Oriental Society* 10 (December 1950).
- Milano, Lucio, ed. *Drinking in Ancient Societies: History and Culture of Drinks in the Ancient Near East*. Padova, Italy: Sargon, 1994.

Soma

In Vedic literature, Soma is a type of plant, a type of drink, and a god. These three aspects of Soma were probably not understood as separate elements but rather all mutual aspects. Soma is glorified in the Vedas, most notably in the Ninth Mandala of the Rig-Veda. Also called the Soma Mandala, this section of the Rig-Veda consists of

» HYMNS TO SOMA

The Ninth Mandala of the Rig Veda is filled with hymns about Soma. Here, in Ralph T. H. Griffith's translation from 1889 (outdated but capturing the spirit of the hymn), some of the powers of Soma are described. What follows is from Hymn IV:

- “1. O Soma flowing on thy way, win thou and conquer high renown;
And make us better than we are.
2. Win thou the light, win heavenly light, and,
Soma, all felicities;
And make us better than we are.
3. Win skillful strength and mental power. O Soma,
drive away our foes;
And make us better than we are.
4. Ye purifiers, purify Soma for Indra, for his drink:
Make thou us better than we are.
5. Give us our portion in the Sun through thine own
mental power and aids;
And make us better than we are.
6. Through thine own mental power and aid long
may we look upon the Sun;
Make thou us better than we are.
7. Well-weaponed Soma, pour to us a stream of
riches doubly great;
And make us better than we are.
8. As one victorious unsubdued in battle, pour
forth wealth to us;
And make us better than we are.
9. By worship, Pavamana! men have strengthened
thee to prop the Law:
Make thou us better than we are.
10. O Indu, bring us wealth in steeds, manifold.
quicken all life;
And make us better than we are.”

—Kevin M. McGeough

Source

Ralph T. H. Griffith, *The Hymns of the Rig Veda* (London: E. J. Lazarus, 1889).

hymns about Soma. There it is compared to the sun and to fire and throughout the Rig-Veda is associated with immortality. Soma is so important in this literature that Wendy Doniger O'Flaherty asserts that Soma sacrifice and the results of ingesting Soma lie at the heart of the Vedas. By 800 BCE, however, references to Soma disappear, and the practice of ingesting Soma was no longer written about.

The precise identity of the plant is not made clear in the texts. The Vedas describe the plant as shining brilliantly and yielding a yellow liquid when pressed. It grows in the mountains but cannot be cultivated. Modern scholars have made many attempts to identify Soma. Given the hallucinogenic qualities associated with Soma, it has been variously suggested that it was a type of wine, cannabis, rhubarb, ephedra, or mushroom. It is unlikely that it was a type of alcohol since the production processes were not long enough to allow fermentation, alcohol is referred to by other terms in the Vedas, and generally, alcoholic intoxication is not described in a positive light in Vedic literature. Rhubarb had been suggested since later traditions explicitly describe the substitution of rhubarb for Soma (of course, if rhubarb is described as a substitute for Soma, it hardly makes sense to assume that the two plants are equivalent). Plants that yield ephedra would have been available to the ancient priests, and ephedra does provide the type of stimulation that is described in the Vedas. The properties of hallucinogenic mushrooms are more consistent with the Vedic descriptions of Soma (both its appearance and its effects), and this is the most widely accepted identification, although the contention that Soma was a type of mushroom cannot be proven with certainty.

The traditional etymology of the word Soma states that it means “pressed thing.” While traditional etymologies often do not actually reflect the true linguistic origins of a word, in this case the etymology reflects the typical production techniques used for Soma according to the Vedas. The plant is submerged in water and then removed and placed on a board covered in hides. Rocks are then used to pound the juice out of the plant. The juice is then forced into wooden filters. After filtering, the juice may have been mixed with a number of other substances, in-

cluding milk, barley, honey, or water. Priests then drank the concoction, feeling the hallucinogenic properties, which from a theological perspective gave them divine attributes or allowed them to experience divine qualities.

—Kevin M. McGeough

Bibliography

- Falk, Harry. "Soma I and II." *Bulletin of the School of Oriental and African Studies* 52(1) (1989): 77–90.
- Kalyanaraman, S. *Indian Alchemy: Soma in the Veda*. New Delhi: Munshiram Manoharlal Publishers, 2004.
- Smith, Huston. "Wasson's 'Soma': A Review Article." *Journal of the American Academy of Religion* 40(4) (December 1972): 480–499.
- Wassan, R. Gordon. *Soma: Divine Mushroom of Immortality*. New York: Harcourt, Brace, and World, 1969.
- Wassan, R. Gordon. "The Soma of the Rig Veda: What Was It?" *Journal of the American Oriental Society* 91(2) (April–June 1972): 169–187.

■ Introduction: Food Production

Food-production techniques show remarkable similarities throughout the world in the period from 4000 BCE to 1000 BCE. This is because there are certain steps in the manufacture of food that are essential in order to supply the food and process it in a way that is digestible (and palatable) to humans. The main types of food production that are identifiable in the archaeological record of this era include hunting and gathering/foraging, pastoralism, and agriculture, all of which probably have their origins prior to 4000 BCE. The material culture associated with these activities displays some level of homogeneity. Hunters usually use stone projectile points (arrows or spears) as well as stone tools that can be used to process the meat of dead animals. Agriculture requires tools for planting and harvesting (such as sickles and plows), tools for processing grains since the hull is indigestible (such as stone grinders and pounders), and tools for baking, cooking, or fermenting the produce. When excavating a site, archaeologists look for clusters of these kinds of tools in order to identify the food-production techniques that were used.

The similarity in foods eaten and tools utilized led nineteenth-century historians to argue for two opposing explanations. One group of historians believed that all cultures develop along similar lines, going through similar stages, much as children reach different developmental stages

on their way to adulthood. This theoretical framework is referred to as unilinear cultural evolution. Another group of historians argued for an explanation that is incompatible with unilinear evolution, that innovations are invented once and then spread throughout the world by travelers, traders, and conquerors. Scholars who agreed with this theory (called diffusion) attempted to trace where agriculture was first invented and the route of its spread around the world. It was difficult for scholars to reconcile these views. There was evidence that could support both theories, but there were also problems with each. Historians (usually) no longer argue that one or the other of these theories was the sole operating mechanism behind the development of world food-production techniques. Both viewpoints seem to have some validity in certain contexts (e.g., it seems clear that rice cultivation spread from China to the rest of South Asia; however, that agriculture itself developed independently in such regions as the Americas and the Near East). However, hints of these theories can still be found in the reconstructions of the past made by many archaeologists. These biases are important to detect since this argument still lingers on as the subtext beneath many discussions of the development/spread of food-production techniques.

—Kevin M. McGeough

African Agriculture—On the Savannah and in the Forest

The origins of agriculture in Africa (outside of Egypt) are very poorly understood; not enough archaeological work has been done to truly understand the issue. Most scholars assume that at some point during the period between 1000 BCE and 300 CE, agriculture took root in parts of Africa, both on the savannah and along the forest margins. The general distinction between savannah and forest agriculture has survived to the present day. Different temperatures as well as the different amounts of rainfall, sunlight, competing plant life, and soil types in these regions forced the inhabitants to employ different agricultural strategies and make different choices about which crops to plant.

The current working hypothesis on the origins of African agriculture is that it began on the savannah. Most indigenous African plants were first domesticated in the savannah. Likewise, im-



Sorghum growing near Masvingo, Zimbabwe. (Corel)

ported plants also seem to have first adapted to the savannah before adapting to the forests. As population or cultural pressures (such as warfare, competition, or senses of territorial ownership) developed, people were forced to plant crops in areas that were increasingly less suitable until they were planting on the margins of the forest (and in some cases within forest zones).

African savannahs are (and were) large stretches of relatively flat land dominated for most of the year by the huge cloudless sky. Temperatures remain constant throughout the year, usually averaging between 60 and 75 degrees Fahrenheit. Rain falls in the winter but generally not in the summer. The land is covered by wild grass, and there are shrubs and a few trees dotting the countryside, plant life that can survive even given this seasonal variation in rainfall. Although most plants die in the summer, the underground roots survive. Herd animals roam the savannah subsisting on this vegetation; predators such as lions survive on these herd animals. Crops grown on the savannah vary from region to region. The most important include pearl millet, sorghum, and rice. Other crops grow on the savannah as well, although it is more difficult to identify which may have been in use in this period; certainly seeds and nuts were exploited that early.

The forests and forest margins are not as well adapted for agriculture, but most scholars believe that agriculture began in the forests of West Africa and the Congo during this period.

➤ MALARIA

Malaria was a significant problem in antiquity and undoubtedly limited the ability of humans to make use of significant stretches of sub-Saharan Africa for farming or cattle rearing. As Africans began living in settled communities with larger populations, they increased their chances of spreading malarial infections. Similarly, human clearance of forest land left swamps and small pools of standing water, the ideal habitat for insects, especially the tsetse fly. Eventually, communities were able to develop immunity to malaria but at a significant cost of human life. From central and western Africa, malaria spread across the globe. Mesopotamian texts associate plagues with the god Nergal, and it is likely that some of these references are to malarial plagues. Vedic texts from India describe plague symptoms that are similar to those associated with malaria. Ancient Chinese medical texts (such as the *Nei Ching*) also discuss plague symptoms similar to the fevers associated with malarial infection. The spread of malaria may be seen as one of the unintentional side effects of sedentary farming in Africa and contact with outside regions.

—Kevin M. McGeough

Coffee, kola, and akee apple are well suited for forests, but it is doubtful that these played an important role in this era's subsistence regimes. Rice can thrive in this environment if enough effort is expended by farmers to provide proper conditions. Arguably the most suitable crop for the forests was the yam, which can thrive in a number of situations. No positive evidence for yam domestication in this period has yet been discovered; unfortunately, yam remains will not survive well archaeologically in this region, so a lack of evidence cannot be taken as proof that yams were not domesticated. Oil palm may also have been important on the margins of the forest but cannot survive in the deep forest. Oil palm kernels dating to this era have been recovered from archaeological sites in West Africa, but the context has not been clear; these may have been from wild trees.

Even though plant domestication seems to have taken place first in the savannah regions, there does not seem to have been a central location where this innovation first appeared. Had agriculture developed in one location first and then spread elsewhere, we would expect to find only a few genera of species used as crops. In fact, the evidence shows that a variety of local plant types in a variety of different areas were incorporated into early agriculture. Thus, agriculture seems to have developed independently in different areas of Africa.

—Kevin M. McGeough

Bibliography

- Harlan, Jack R. "Agricultural Origins: Centers and Non-Centers." *Science* 174 (1971): 468-474.
- Harlan, Jack R. "The Origins of Indigenous African Agriculture." In *The Cambridge History of Africa 1: From the Earliest Times to c. 500 B.C.*, edited by J. Desmond Clarke. Cambridge: Cambridge University Press, 1982.
- McIntosh, S. K., and R. J. McIntosh. "Current Directions in West African Prehistory." *Annual Review of Anthropology* 12 (1983): 215-258.

Egypt and Wheat

Ancient Egypt developed and flourished as a result of the Nile River. The presence of the Nile allowed the Egyptians to cultivate emmer wheat (*Triticum dicoccum*) in a manner that yielded

vast surpluses of grain. Emmer wheat was already being cultivated by the Naqada I period (ca. 4000 BCE), having been introduced already domesticated into the region around 5500 BCE. At sites in northern Egypt of the contemporary Maadi culture, store jars full of wheat have been found. Wheat cultivation allowed the development of the complex culture that would become Dynastic Egypt and later would make Egypt the breadbasket of the Roman empire (after the introduction of durum wheat, *Triticum durum*, in the Ptolemaic period).

Cereal agriculture was the economic basis for the growth of Old Kingdom Egypt (2686-2125 BCE). Wheat and barley thrived in the Egyptian environment. One of the key problems in primitive agriculture is salinization of the soil. In many places this is dealt with by focusing on crops such as barley that are salt tolerant. In the fertile Nile Valley this was not necessary. The annual inundation of the Nile flushed out any of the accumulated salt in the soil, making the need for salt-tolerant crops unnecessary. Instead, the Egyptians were able to focus on wheat.

Like everything about Egyptian culture, subsistence strategies focused on the Nile and its annual cycles. The Nile would flood every July and August, and sowing would begin immediately after the flooding ceased in September. The wheat grown was a variety that matured during winter and was harvested during the spring before the heat and dryness of an Egyptian summer could damage it. This left the summer months for other tasks, such as the major public works and monuments built during the Old Kingdom. The strong centralized authority that developed during the Predynastic period (4000-3200 BCE), the Early Dynastic period (3200-2686 BCE), and the Old Kingdom was ideally suited for this sort of agriculture. The government would collect surplus grain (which was usually guaranteed given the extreme fertility of the Nile alluvium) that would be stored in case of low floods (disaster relief) and redistributed as rations during the off seasons when farmers were likely working as laborers on major projects. The government would also arbitrate in the typical sorts of grievances that are common among farmers (property lines and ownership and the use and maintenance of canals, for instance) and provide

security. Local governments that were subservient to the central government would have been responsible for maintaining the irrigation systems used in order to keep as much land under cultivation as possible.

The technology available to the Egyptians was primitive but effective. Ploughs were drawn by yoked cattle to break up the soil. Seed was then scattered, and the cattle were used to tread it in. Harvesting was done (even into the Late Bronze Age) using flint-bladed wooden sickles. The ears of grain were then collected in baskets for threshing, which was done by throwing the grain on a threshing floor where cattle, sheep, or goats were driven to tread out the grain. The grain was then winnowed and sifted by hand to remove the chaff and then was stored in granaries. When needed for food, the grain would have been ground into flour and used to bake any number of different forms of bread and cakes.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford, 2000.
- Bard, Kathryn A. "The Emergence of the Egyptian State (c. 3200–2686 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.
- Gardiner, Alan. *Egypt of the Pharaohs: An Introduction*. London: Oxford University Press, 1964.
- Malek, Jaromir. "The Old Kingdom (c. 2686–2125 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.
- Midant-Reynes, Béatrix. "The Naqada Period (c. 4000–3200 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.
- Wenke, Robert J. *Patterns in Prehistory: Human-kind's First Three Million Years*. Oxford: Oxford University Press, 1984.

Mesopotamia and Barley

Early Mesopotamian farmers had access to both domesticated barley and wheat, but barley dominated crops growing in this region in antiquity. This stems largely from the nature of the Mesopotamian climate and topography. The annual flooding of the Tigris and Euphrates rivers comes

too late for early crops and too early in the year for late crops. As a result, the only way to grow crops in the region is using irrigation agriculture. In Egypt, the Nile's annual inundation washed the salt out of the soil. In Mesopotamia, reliance on artificial irrigation meant that salt built up quickly in the soil. The salt-resistant nature of barley, however, made it a viable crop in this environment. Despite this tendency of the soil to become saline, it is highly fertile, and Mesopotamian yields of barley, according to Herodotus and Strabo, verged on modern yields of grain in the most fertile of Canadian wheat fields. Barley was so important a commodity to the ancient Mesopotamians that it was used as a currency, and in the Law Code of Hammurabi, barley is often used alongside gold as a standard for assessing values and penalties.

About 2.4 acres (1 hectare) of land was required to raise enough barley for subsistence in ancient Mesopotamia. This would mean that during the Late Uruk period (when the city of Uruk was at its peak size) the city would have been surrounded by 3.7 miles (6 kilometers) of farmland. This would mean that many farmers living in the city would have had to walk for more than an hour to reach their farm plots.

Thanks to numerous documents preserved on clay tablets, a great deal is known about the way that barley was grown in ancient Mesopotamia. For instance, the Sumerian Farmers' Almanac, which dates to about 1700 BCE, gives elaborate descriptions of the process, including details about how far apart to space the furrows, how much seed to plant, and how one should care for one's agricultural tools. The agricultural calendar was again closely tied to the local climate and topography. In the late summer, fallow land was well watered and then broken up using shod oxen. The land was then leveled out by hand using hoes. Then the soil was plowed with a seed plow pulled by donkey or an ox, which allowed for the sowing of seed and the digging of furrows in an organized fashion, unlike the broadcast sowing done in Egypt. The bulk of the land was sown with barley seeds, although some smaller allotments were sown with wheat and other crops. The standardized spacing and amount of seed made it easier to weed and irrigate than would have been possible had the seed

been broadcast sown. This constant weeding and maintenance of the irrigation canals, levees, and drainage ditches would have gone on from late summer through late April or early May, when the barley would be ready for harvesting. During this time the fields would be deliberately flooded three to four times. At harvest, the crop was cut using either a flint or ceramic sickle and was stacked for threshing. Threshing was done by driving carts or dragging threshing sledges over the grain. It was then hand-winnowed to remove the loosened chaff. Out of each measure of barley harvested, the Mesopotamian farmer could expect to feed about 16 percent to his animals, use about 10 percent for the next season's sowing, and lose about 25 percent in storage.

—David R. Lipovitch

Bibliography

- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford, 2000.
- Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.
- Wenke, Robert J. *Patterns in Prehistory: Human-kind's First Three Million Years*. Oxford: Oxford University Press, 1984.

Irrigation in Mesopotamian Agriculture—Benefits and Problems

Babylonia was a land of sharp contrasts, cultivation giving way to desert at the farthest point that water from rivers and canals could reach. Irrigation was essential, because annual rainfall was generally below 100 millimeters, but even in the zone of rain-fed agriculture farther north, irrigation was important to increase productivity. Success in water management was therefore a crucial part of a ruler's duties. Mesopotamian kings proudly recorded the creation of dams, canals, and reservoirs, and the failure to provide or maintain water facilities could bring down a monarch or regime. Landowners and cultivators were legally responsible for the proper control and maintenance of the canals that supplied and the dykes that protected their lands, as law

codes and court records attest; there were stiff penalties for causing damage to a neighbor's crops or land by failing in these duties. Clashes over water rights provoked not only fights among neighbors but also wars between neighboring states. Land was plentiful and could be taken into cultivation by creating new canals and dykes, but this was only worthwhile in politically stable times. The importance of water management is also demonstrated by numerous school math exercises concerned with such matters as calculating the volume of water that needed to be released from canals or reservoirs to irrigate fields of certain sizes.

Since the annual inundation came just around harvest time, flood control was as important as irrigation. Dykes and embankments were built to contain the river at flood level and to protect existing irrigation works, and immediately before the floodwaters arrived, sluices and regulators were opened. The flood waters spread out over an area several kilometers wide, depositing the coarsest silt, richest in nutrients, on the levees, which were raised above the water table, encouraging good drainage; as the waters moved farther from the river, the silts deposited became progressively finer and more prone to waterlogging. Thus, the fertility of the land fell with distance from the rivers.

For plants cultivated on the levees, water was drawn directly from the river using lifting equipment. The simple shaduf devised by the Early Dynastic period was widely used, both to obtain water for immediate use and to raise it from lower to higher canals, reservoirs, and watercourses. The lower reaches of the Tigris, which flows at a lower level than the Euphrates, defied use for such simple irrigation but began to be exploited in the first millennium BCE when the Assyrians invented more sophisticated water-lifting equipment.

The backslopes and lower land were irrigated by canals, often several kilometers long, cut through the banks of the river levees. Regulators—brick-built structures that narrowed the watercourse and could be blocked or opened as required—allowed the water level in the river to be raised high enough to flow into these channels through sluices and outlets. Their slight gradient meant that the water flowed slowly along

► THE QANAT—UNDERGROUND IRRIGATION IN PERSIA

In Mesopotamian and Persian mythology, water was considered the source of being and a symbol for eternal life. Ancient Babylonian agriculture relied on aboveground irrigation systems that could be repaired, expanded, and enlarged. Open canals were not efficient in the very arid Iranian plateau, so people there relied on a system of underground water channels. These underground canals, called *kariz* or *qanat*, prevented the evaporation of water (a typical problem in surface channels). Constructing qanats gave Persians the opportunity to transfer underground water to villages and towns located away from sufficient water sources. A qanat was a main shaft excavated down to the permanent subterranean water level, usually at the base of hills or mountains. At approximately 50-foot intervals, shafts were dug to help remove material and maintain the qanat line. A qanat taps water that has seeped into the ground and channels it via straight tunnels to the land surface. To provide water to tree roots in orchards, contiguous gardens, or lining avenues, they built small open canals called *jubes* to move water in furrows or shallow ditches between rows of trees.

The oldest known qanat (located at Hailan-Aleppo in Armenia) is a profound channel 7.5 miles (12 kilometers) long that was still in use until the early part of the twentieth century. It is unclear what spurred the development of this type of water source. One theory is that qanats were originally improvised by miners in order to extract the water from the mines, and after a while, this system was gradually applied by farmers and spread all over the plateau of Iran. Later, the Achaemenid kings of Persia employed this system of water supply to the unirrigated regions of their territory. These underground channels, which could reach long



Qanats, underground canals for transporting water, in the desert near Isfahan in Iran. (Roger Wood/Corbis)

distances, gave people the ability to cultivate their own lands without great expense and trouble. Persians introduced qanats in Oman and Saudi Arabia (about 525 BCE), Egypt and Syria (600–500 BCE), and the Arava Valley in the Israeli Negev (during the Persian rule between 537 and 332 BCE).

—Mohammad Gharipour and Doug Allen

Bibliography

- Forbes, R. J. *Studies in Ancient Technology*. Vol. 1. Leiden: Brill, 1964.
- Moynihan, E. B. *Paradise as a Garden in Persia and Mughul India*. New York: George Braziller, 1979.
- Russell, A. *The Natural History of Aleppo*. London: G. G. and J. Robinson, 1794.

these channels, and much was consequently lost to evaporation and seepage. Large networks of irrigation channels were constructed in the delta plain. Farther north in Babylonia's river plain the annual floods could sweep through with devastating ferocity, often damaging or destroying canals and breaking down the levees. The volume of silt carried and deposited by the river also

tended to clog up the river and canals, exacerbating the problem. Much effort was therefore put into creating dykes to protect the land and its irrigation works from the force of the waters. Early settlement concentrated particularly on the delta plain, but by the early second millennium BCE, developing technology, enhanced by the larger workforces that could now be mobilized,

enabled the Babylonians to better cope with the river-plain floods.

Irrigation exacerbated the naturally occurring problem of salt deposition on Babylonia's fields. Small amounts of salts carried down by the rivers from the sedimentary rocks of the north have over the millennia accumulated in the groundwater of southern Mesopotamia. The deposition of salts is greater in periods, such as that between 2350 and 2000 BCE, when the volume of water in the rivers is reduced. Intensive irrigation raises the water table, bringing this saline water close to the surface, where it is drawn up by capillary action, causing salts to accumulate in the subsoil and on the surface where water spread for irrigation also contains salts. When moisture is removed by evapotranspiration, the salts are deposited on the land, progressively reducing fertility. Strenuous efforts were made to drain away surplus water to prevent the water table from rising. Fields were left fallow, and therefore unirrigated, in alternate years, and affected areas were flushed with large amounts of water to leach out and carry away the salts. Eventually the land became too saline for cultivation. Many southern cities were abandoned in the second millennium BCE, and their inhabitants moved north or turned to pastoral nomadism.

—Jane R. McIntosh

Bibliography

- Bienkowski, Piotr. "Irrigation." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- Butzer, Karl W. "Environmental Change in the Near East and Human Impact on the Land." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Cordova, Carlos. "The Degradation of the Ancient Near Eastern Environment." In *A Companion to the Ancient Near East*, edited by Daniel C. Snell. Oxford, UK: Blackwell, 2005.
- Eyre, Christopher J. "The Agricultural Cycle, Farming and Water Management in the Ancient Near East." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Mattingly, Gerald L. "Water." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski

and Alan Millard. London: British Museum Press, 2000.

McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

Mediterranean Agriculture

The topography of the Mediterranean Sea region greatly influences agricultural practices. Mediterranean rivers are few and short in length, the land is mountainous and dry, and the region is spotted with thousands of inlets, bays, islands, and harbors that allow for shipping and the exchange of seeds, farm products, and technology. In times of drought and bad harvests, farmers from one region such as Greece could purchase grain from Phoenicia or Egypt. The lands surrounding the Mediterranean are framed by enormous geographical features: the Alps and related mountains to the north, the African Sahara Desert to the south, the deserts of Arabia and Syria to the east, and the Atlantic Ocean to the west. Agriculture in the Mediterranean region benefits from what is known as the Mediterranean climate, characterized by mild, rainy winters followed by hot, semiarid summers. In summer months, stationary weather fronts at the western (Atlantic) side of the Mediterranean block ocean air and allow very dry hot air from the Sahara to flow northward and bake the soil. In winter,

THOLOS TOMBS ON CRETE

The Greek word *tholos* means a rounded, bell-shaped, large funerary building with a vaulted roof constructed with stones in the shape of a beehive. Tholos tombs were great circular chambers cut into a hillside and entered by a corridor (a *dromos*). While the more famous tombs such as the misnamed Treasury of Atreus are found at Mycenae on the Greek mainland, the Greek archaeologist Stephanos Xanthoudides began excavating in 1904 in the southern Messara Plain on the island of Crete and found many circular tholoi similar in design to the Mycenaean type. Scholars continue to argue about the connection between the tholos tombs on Crete and the more famous examples at Mycenae unearthed by Heinrich Schliemann.

—Jonathan L. Thorndike

➤ AGRICULTURAL TERRACING



Remnants of agricultural terracing near Vathia, Greece.
(Karol)

Remnants of ancient terrace agriculture can be found in Mesopotamia, the Americas, Southeast Asia, and Africa. Farmers developed techniques of agricultural terracing in many places of the world, including the Mediterranean, where steep hillsides and mountains could not be plowed using traditional means. Terracing prevented erosion of soil and impeded precious rainwater from escaping. By slowing the speed of the movement of water, terrace platforms allowed sediment to settle, enriching the soil with nutrients. Terraces were constructed following the contours of hillsides using stones, clay, and dirt worked into steps or level channels that could be planted and easily drained.

—Jonathan L. Thorndike

weather fronts move in quickly from the Atlantic and bring waves of cold air, rain, and storms.

Indigenous plants that thrive in this climate need to grow quickly in the spring and fall and also be able to withstand long periods without rain in the summer. Many varieties of cereals, grains, and pulses (lentils) naturally adapted to this climate are also useful for human cultivation because they are annuals; that is, they live for only one year. These plants normally dry up and die during the hot summer. Because the cereals and grains live for only one year, they never get large or grow inedible woody stems. Grains such as barley and wheat devote most of their

energy to reproduction through seeds. The seeds are planted during the autumn months and thrive in the temperate rainy winter. They become dormant during the dry season and can be eaten or replanted with the return of the rains in the fall. Wheat requires somewhat more water and better-quality soil than barley and was thus a more valuable crop to Mediterranean farmers.

Besides barley and wheat, Mediterranean farmers also planted beans, emmer and einkorn (wheat varieties), pulses, olives, pomegranates, and grapes and produced related products such as olive oil and wine. The grains could be grown using available rain, while vines, vegetables, and fruit trees required irrigation.

The technology of Mediterranean agriculture evolved due to the need to break up the hard soil with wooden plows, which were sometimes covered with iron blades. Family farmers with small holdings plowed by sheer muscle power using hand tools such as spades. Aristocrats and wealthier Mediterraneans who owned larger estates could afford to feed oxen, which were used to pull plows, and keep more acreage until cultivation. In prosperous farming families, half of the acreage was uncultivated and crops rotated to avoid depletion of the soil. Even unplanted fields were plowed to increase the oxygen and vitality of the soil for the next year. Smaller family farms could probably not afford to sustain fallow land and were planted every year.

—Jonathan L. Thorndike

Bibliography

- Cotterell, Arthur, ed. *The Penguin Encyclopedia of Ancient Civilizations*. London: Penguin, 1980.
- Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 1999.
- Isager, Signe, and Jens Erik Skydsgaard. *Ancient Greek Agriculture: An Introduction*. London: Routledge, 1992.
- Willetts, R. F. *The Civilization of Ancient Crete*. London: Phoenix Press, 2004.

Agriculture in India after the Indus Valley Civilization

Agriculture in the Vedic period, which followed the Indus Valley civilization, was dominated by the transition from pastoralism to settled farming. In northern India (what is now Punjab and

later Uttar Pradesh and Bihar), new crops, technologies, and farming practices were introduced over several centuries. The use of iron was introduced sometime between 1300 and 1000 BCE. Prior to the introduction of iron, the use of wooden plows limited farming to areas with lighter soils, but iron-tipped plows allowed new areas with heavier soils to be cultivated. Iron axes supplemented the use of fire for the clearing of farmland in the Ganges River valley.

In the Rig-Veda, the most important literary source for the early Vedic period, barley is the most commonly mentioned crop. Other crops included sugarcane, seesamum (an oilseed), cucumbers, and gourds. The Rig-Veda does not mention wheat or cotton even though they were grown during the Indus Valley civilization. Land ownership was based on the tribe, and there is some evidence of changing ownership patterns during the Vedic period. Land was owned or assigned to members of the elite, although the labor was performed by hired laborers or slaves.

Domestic animals included horses, cattle, sheep, goats, buffalos, and, later, elephants. There has been a great deal of debate over the origins of the sacred cow in Vedic society. It is clear that cattle were used as one of the primary measures of wealth, and the Rig-Veda has numerous references to cattle raids. The Rig-Veda mentions animal sacrifice, and later Vedic literature specifically mentions cow sacrifice. It is only toward the end of the Vedic period that explicit prohibitions on cow slaughter began to appear.

Later in the period barley was replaced by rice and to a lesser extent wheat, and with the new crops came new systems of crop rotation and irrigation. The Indus Valley civilization may have used some irrigation, but large-scale irrigation became necessary with the cultivation of rice. Water for irrigation was drawn from rivers and wells. Irrigation channels were cut from rivers, and the Rig-Veda alludes to soil erosion along riverbanks. The need to efficiently draw water from wells led to the eventual invention of the Persian wheel, although it is unclear exactly when this occurred. The Rig-Veda also includes hymns devoted to the dangers of cows falling into wells, which were often little more than open holes in the ground.

—Eric Strahorn

Bibliography

- Gadgil, Madhav, and Ramachandra Guha. *This Fissured Land: An Ecological History of India*. New Delhi: Oxford University Press, 1992.
- Randhawa, M. S. *A History of Agriculture in India*. 4 vols. New Delhi: Indian Council of Agricultural Research, 1980–1986.
- Thapar, Romila. *Ancient Indian Social History: Some Interpretations*. New Delhi: Orient Longman, 1984.

Changing Subsistence Practices in the Indian Subcontinent

The development of ancient Harappan cities was possible because of the rich alluvial soils brought down by the Indus River. This river flooded its banks annually, bringing mineral-rich soil and a predictable volume of water to the vast agricultural lands that supported the urban population. The crops that were best suited for this type of subsistence regime were wheat and barley, and these two crops were the staple of the Harappan diet. Both of these crops are winter crops (*rabi*) in India and Pakistan. They are planted in the fall, watered by winter rains, and reaped before the floods that come in April. Neither crop would require extensive irrigation in the climate of the Indus Valley. However, given that the Indus River would have had to be constantly monitored and diverted to prevent flooding, it is likely that irrigation canals, water diversion channels, and dams may have helped ensure a stable flow of water to the crops. Harappan farmers used plows pulled by oxen to work their fields. Archaeologists have recovered numerous clay toy plows that replicate actual equipment, and a plowed field has been excavated at Kalibangan.

Oxen were not just used as beasts of burden. Animal husbandry was another key component of Harappan subsistence practices. Cattle (humped and unhumped animals) would have been a stable source of dairy products and possibly meat during times of crop failure or as a rare treat during festivals. Cattle are well suited for grazing in rocky terrain, allowing otherwise unusable land to be utilized in a subsistence regime. Images of cattle in Harappan art depict wide horned creatures, suggesting that the species utilized by the Harappans were either wild or newly domesticated. Water buffalo are less

► THE HARAPPANS AND CATTLE

Given the religious importance of cattle in modern Indian society, scholars have been keenly interested in the history of cattle rearing in the Indian subcontinent. For the ancient Harappans, cattle were clearly an important source of food and were also used as draft animals. In addition, cattle were also the sources of possibly vast personal wealth; an individual with a large herd was probably quite wealthy. Cattle appear prominently in Harappan art, especially in the glyptic art. Clay figurines of cattle and plows are common finds at Harappan sites. The pieces that are retrieved most often are legs that have been broken off of the body.

—Kevin M. McGeough

adaptable to their environment since they must be immersed in water or mud during the hottest months, so they were confined to the riverbanks. These animals do provide fatty, rich dairy products and would have been the most important source of dairy products for the ancient Harappans. Goats and sheep were kept in the cities as well as in the countryside, providing meat, dairy, and wool to the urban dwellers. Goats and sheep were (and still are) used as pack animals in the region.

The Harappans had access to other food resources to supplement their diet. Other types of crops included peas, vegetables, sesamun, and pulses. India and Pakistan are known for the abundance of spices that grow there. This was as true in ancient times as it is today, so it can be assumed that Harappan food would have been well seasoned. Honey, dates, and palm sugar were used as sweeteners. Fish and shellfish made up a large portion of the diet of the Indus Valley people, whose cities were all close to large water systems. Wild pig bones have been recovered from sites, indicating that these animals may have been hunted occasionally. There is no evidence for any sort of pig domestication. Many other wild animals were hunted as dietary supplements, including rhinoceroses and elephants.

Scholars are divided on when rice, sorghum, and pearl millet were introduced into the Indian subcontinent. It seems that the ancient Harap-

pans may have experimented with these crops, but at that time they would have been unsuitable for that region. They were better suited for planting in very wet areas, so the introduction of these crops allowed the monsoon regions along the Ganges River to be utilized as agricultural lands. They would have been planted during or immediately after the monsoon season and harvested in the fall. Over the course of the second millennium, settlements in the subcontinent shifted from the Indus Valley to the Gangetic Plain, and the cultivation of summer crops (*kharif*) such as rice, sorghum, and pearl millet provided the dietary staples.

—Kevin M. McGeough

Bibliography

- Chakrabarti, D. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.
- Fairservis, W. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

Maize Crop in the Americas

When Christopher Columbus arrived in the Western Hemisphere, maize was raised by most of the Indians of the Americas; they considered maize the staff of life. Its cultivation extended from Canada in the north to Argentina and Chile in the south. The precise origin of domesticated corn continues to be a matter of debate to the present day. Some scholars claim that there exists a clear direct link between a wild grass called teosinte (*zea mexicana*) and the early varieties of domesticated corn. These scholars theorize that ancient Americans in gathering teosinte began to select more productive strains and through this process began to alter the genetic marks of the wild teosinte, leading eventually to production of domesticated maize. Yet there exists no archaeological evidence to substantiate this transitional evolution of teosinte.

In 1948 in Bat Cave, New Mexico, and La Perra Cave in Tamaulipas (northeastern Mexico), archaeologists discovered tiny corn cobs dating between 4,000 and 5,000 years ago. Famed archaeologist Richard MacNeish led the way in the 1970s in tracing the evolution of maize culture

► THE GENETIC PREDECESSOR OF MODERN CORN ON THE COB

Domestic corn's genesis remains a subject of controversy and conjecture. In particular, this controversy centers around what a number of scholars believe is the precursor to all forms of maize: a wild grass known as teosinte that can be found growing over much of Mesoamerica. Botanist George Beadle in 1981 postulated that teosinte evolved into a form of primitive corn via human selection. Beadle's theory states that the early forms of teosinte experienced a mutation that led to a genetic evolution that caused the grass to elongate, which protected and enclosed the kernels growing on it.

Through this change wild teosinte became easier to thresh, and as it progressed to a domestic form of maize it quickly spread as a crop in the Americas. According to the hypothesis supporting the notion that teosinte led to the genesis of corn, human beings needed and sought out predictable types of grass to harvest. Over time humans began to select more productive varieties whose seed was larger and more robust. Ancient Mesoamericans through natural experimentation saw to the planting of hardier and higher-yielding versions of the teosinte, which led to what today is modern maize.

—John S. Leiby



Teosinte, the genetic predecessor to modern corn. (Hugh Illitis/University of Wisconsin-Madison)

in the Americas. In the caves and rock shelters around Tehuacán (Mexican state of Puebla), MacNeish and his team of researchers determined that the natives inhabiting the area had lived primarily by means of hunting and trapping until about 9,000 years ago. Then these native peoples shifted to gathering wild plants and to the domestication of such plants as squashes and avocados between 9,000 and 7,000 years ago. MacNeish's findings showed that by 6,000 to 7,000 years ago the Tehuacán people were moving irrevocably toward agriculture, which explained the discoveries of 1948 indicating the ongoing evolution of maize culture that spread across the Americas after 3000 BCE.

As of today, no concrete evidence has been found of corn production in South America prior

to 3,500 years ago. However, scholars such as MacNeish and others suggest that South America experienced a similar evolution as that found near Tehuacán. Archaeologists, for instance, have found artifacts such as bottle gourds and lima beans near Chilca and Nazca (on the southern Peruvian coast) dating between 6,700 and 5,000 years ago, suggesting the nature of the movement of agriculture into South America. Available evidence generally indicates that agriculture remained a secondary activity in South America, and hence maize production there occurred much later and was not as extensive as in Mesoamerica.

Maize production nevertheless spread throughout the Americas over a protracted period of time. Maize was one of the earliest crops

to cross the Rio Grande after it had been cultivated in northern Mexico for some period of time. As a consequence of the climate, maize and bean yields were lower than those found in central Mexico, yet they were predictable. According to many scholars, it seems likely that southwestern Indians adopted maize cultivation because of rising populations and food shortages.

The variety of corn (low yielding) that first entered the Southwest was Chapalote. It probably appeared between 1500 and 1000 BCE and soon introgressed with the wild teosinte, which eventually resulted in a hybrid cob with more rows and kernels. However, a much more important type of maize known as Maiz de Ocho revolutionized corn production in the Southwest. It was robust with large kernels and required a short growing season and a temperate climate. Archaeologists have found Maiz de Ocho in southern New Mexico dating to about 1225 BCE. As with other maize forms, it spread widely and quickly in later centuries throughout the Southwest. By 300 BCE the spread of and evolution of hybrid maize from the south resulted in the development of a more sedentary way of life. This evolution led to the birth of the three great southwestern archaeological traditions: Hohokam, Mogollon, and Anasazi. These southwestern farmers persevered by adapting to their environment and harnessing scarce water resources through dams, floodwater irrigation, and other systems for distributing runoff. Planting techniques were also adapted over time to the desert environment to create sufficient harvests.

In eastern North America the indigenous peoples adopted the deliberate cultivation of food plants to supplement their supplies of food gained via hunting and gathering wild plants. This development nevertheless occurred much later in prehistory. It apparently came by way of the Southwest. Midwestern Indians grew the 12-row or Chapalote variety, and by the late 100s CE it was also known to southeastern Indians. The lower Mississippi, because of its floodplain, was the perfect setting for the cultivation of high-yield maize strains as well as beans. However, maize in these vicinities was grown chiefly as a supplementary foodstuff rather than as a staple as found in Middle America.

—John S. Leiby

Bibliography

- Fiedel, Stuart J. *Prehistory in the Americas*. 2nd ed. Cambridge: Cambridge University Press, 1992.
- MacNeish, Richard, ed. *The Prehistory of the Tehuac n Valley*. Austin: University of Texas Press, 1970.
- MacNeish, Richard, ed. *The Science of Archaeology*. North Scituate, MA: Duxbury, 1978.
- Smith, Bruce D. *River of Change*. Washington, DC: Smithsonian Institution Press, 1992.

Mesoamerican Domesticates—Pumpkins, Squash, Avocado, and Amaranth

Tropical settings are anathema for the preservation of vegetable matter. The heavy rains and high humidity destroy the archaeological evidence of early plant (and animal) domestication. Yet new scientific techniques are pushing scholars' understanding of domestication back into prehistory. Accelerated Mass Spectrometry (AMS) dating of preserved rinds and seeds in addition to starch analysis on bowls and grinding stones are inexorably rewriting basic texts on domestication.

Early hunting and gathering groups probably domesticated squash and gourds about 10,000 years ago. These nomadic groups carried seeds and containers with them as they moved about on the landscape. Around 4,000 years ago, village life became important. Plant domestication enabled more people to settle for longer periods. At this point, villagers had accumulated significant knowledge of wild plant growth and used this knowledge to identify better food-producing varieties and crops that could be cared for near the village. Over time, some crops became more important than others. Maize (Maya: *nal*; *Zea mays*), beans (Maya: *bu'ul*; *Phaseolus* sp.), squash (Maya: *kum*; *Cucurbita* sp.), amaranth (*Amaranthus* spp.), and a host of fruits dominated the orchards and fields of Mesoamerica.

The earliest current evidence of domesticated pumpkins and squash (*Cucurbita* spp.) comes from the Guila Naquitz cave in Oaxaca, Mexico. Bruce Smith submitted samples of *Cucurbita pepo* for AMS dating. These were dated to 10,000 years before the present (BP). Pumpkins, squash, and other gourds were used for

food and were hollowed out for containers by archaic people. Some archaeologists believe that the earliest ceramics were modeled after gourd forms. Cucurbita species were often grown intermixed with maize in small fields or in gardens. Their nutritional value offsets the heavy carbohydrates of maize and provides variety to the diet.

Avocados (*Persea americana*) have been domesticated since 6,000 years BP and eaten in their wild state at least from 9,000 years BP. There are three main varieties of avocados: Mexican, Guatemalan, and West Indies. Avocado trees are often grown around the periphery of the garden plot in Mesoamerica or in their own orchards. Avocados prefer a Mediterranean climate and can grow up to 80 feet high. Fruiting occurs around year 8 from seedlings and continues for another 12 years.

Amaranth (*Amaranthus* spp.) is a psuedo-grain with a pedigree at least 6,000 years old. It was found throughout Mesoamerica and South America prior to contact and even extended into the temperate parts of North America. The tiny seeds of the plant can be eaten as popcorn or flakes or ground into flour. In North America, amaranth is frequently included in multigrain products such as bread, although in Mesoamerica and South America it is still grown for home consumption in family gardens. The Aztecs used amaranth in their religious ceremonies, which invoked the displeasure of the Spanish friars. In religious ceremonies, amaranth dough was used to create miniatures of deities, or sacred images. The dough idols were then passed around and eaten. In an effort to combat this practice (and others), amaranth sowing was discouraged by the priests.

Chile peppers (Maya: ik; *Capsicum frutescens*) are an overlooked part of the Mesoamerican diet. They were domesticated around 6,100 years BP, possibly in Ecuador. Their use, throughout Mesoamerica, was as a seasoning for food. Chiles were traded in the marketplace and consumed in a variety of dishes. We think of chile as a condiment, but it had other uses in ancient times. For example, the Aztecs would discipline their children by making them inhale the smoke from burning chiles.

—Zachary Nelson

Bibliography

- Coe, Michael D. *Mexico: From the Olmecs to the Aztecs*. 4th rev. and enlarged ed. New York: Thames and Hudson, 1994.
- Evans, Susan Toby. *Ancient Mexico and Central America: Archaeology and Culture History*. 2nd ed. London and New York: Thames and Hudson, 2008.
- Schlesinger, Victoria. *Animals and Plants of the Ancient Maya: A Guide*. Austin: University of Texas Press, 2001.

Peruvian Fishing

The relative importance of marine resources in the ancient Peruvian diet is an often-argued issue in South American archaeology. Sometime between 3000 and 2500 BCE, more inland sites in Peru were abandoned for coastal sites. Some scholars have suggested that part of this change in settlement patterns may have been to allow

➤ SHELL MIDDENS AND THE SAMBAQUÍ TRADITION IN BRAZIL

Middens are ancient garbage heaps that are more than just garbage heaps for archaeologists. These refuse piles can provide important information on diet and subsistence since they provide clear evidence for materials that people used and discarded. In coastal regions of the Americas, shell middens are extremely common. These shell middens are usually composed almost exclusively of mollusk shells (although other materials can work their way into the piles).

In Brazil, these middens are called *sambaquí*, and this name is used to refer to a specific set of archaeological remains found on the Brazilian Coast, dating from 3000 to 1500 BCE. Some of the *sambaquí* associated with this tradition are flattened at the top. These flattened areas made for excellent living spaces during certain parts of the year since they were cooled down by the sea breezes and lay above the swarms of mosquitoes that appear seasonally. Stone tools shaped like fish and birds are frequently found in association with these middens.

—Kevin M. McGeough

for greater exploitation of marine resources. It has been suggested that these reliable fish resources allowed more complex settlements to emerge, eventually creating the first Peruvian states. Others have argued that marine resources were too unreliable to form the basis of subsistence and that Peruvians of this period lacked the capability to fully exploit this type of food source. Or, scholars argue that sites prior to 3000 BCE also relied on fishing, and thus there is no real change in subsistence strategy that can be dated to this period. These scholars would argue that the origins of complex civilization in Peru have no basis in fishing.

Whether or not fishing facilitated the development of complex civilization, there is significant evidence for fishing in Peru during this era. The remains of mollusks, fish, and sea mammals have been retrieved from a number of sites. The evidence is preserved as bones or shells or (as direct evidence that humans consumed these foods) in the intestinal remains of preserved bodies or in the coprolites at sites. Artifacts also attest to the importance of fishing: fishhooks, nets, net weights, and floats all would have been part of a fishing economy. Anthropologists who have studied the physical remains of ancient Peruvians have identified physical conditions typical of repetitive diving in cold water, the clearest evidence being inner ear bone growth.

Different types of marine creatures required different acquisition strategies. Fish were gathered much as they are today, using hooks or nets. Mollusks would have been collected by hand or raked from the shores (or close to the shores) of beaches. Mammals would have been hunted using similar techniques to those used on land: clubbing or spearing. There is not much archaeological evidence for the use of watercraft, but this possibility should not be discounted entirely.

—Kevin M. McGeough

Bibliography

- Moseley, M. Edward, and Gordon R. Willey. "Aspero, Peru: A Reexamination of the Site and Its Implication." *American Antiquity* 38(4) (October 1973): 452–468.
- Plew, M., ed. *Prehistoric Hunter-Gatherer Fishing Strategies*. Boise, ID: Boise State University Department of Anthropology, 1996.
- Quilter, Jeffrey, and Terry Stocker. "Subsistence Economies and the Origins of Complex Civilizations." *American Anthropologist*, n.s., 85(3) (September 1983): 545–562.
- Sandweiss, Daniel H., Michael E. Moseley, Jonathan Haas, and Winifred Creamer. "Amplifying Importance of New Research in Peru." *Science*, n.s., 294(5547) (November 23, 2001): 1651–1653.
- Willey, Gordon. *An Introduction to American Archaeology*. Vol. 2. *South America*. Englewood Cliffs, NJ: Prentice Hall, 1971.

■ Introduction: Pastoralism

People who choose to produce their food by farming are compelled to alter their environment. Pastoralists, instead of manipulating their environment, move to different environments, seeking out appropriate resources and ecological conditions. Pastoralism, then, represents a dramatically different strategy for coping with environmental constraints. This is a strategy that is still in wide use today and has been widespread since this period. By 1000 BCE, pastoralist economies had developed throughout Eurasia, Africa, the Near East, and the Americas. It is a strategy that is found on the margins

of habitable land and thus on the margins of settled agricultural society, even though agriculturalists and pastoralists interact frequently. Pastoralists survive in areas that are unsuitable for agriculture; what they require are large stretches of land where wild grasses grow in great enough abundance to provide for their large herds. These herds are the main source of a pastoralist's subsistence.

There are two main types of pastoralists. Nomadic pastoralists have no fixed homes. Rather, they follow fixed migratory routes, moving as the seasons change and as grazing resources

dwindle. Typically, nomadic pastoralists are fully self-sufficient, although they may trade with other nomadic groups or sedentary societies for luxury goods or supplementary supplies. While nomadism may bring to mind the idea of roaming without a fixed path, this is actually highly unusual. The movement of nomadic groups is highly purposeful and organized.

Transhumance pastoralists tend to move less far and return to the same regions seasonally. The typical transhumance strategy is to move the herd to the desert or steppe fringes when vegetation is at its peak. As temperatures rise and vegetation gets scorched, the pastoralist groups follow the retreating vegetation. Usually this means moving into highland areas (although this differs from region to region) where temperatures remain warmer in colder months and vegetation is found year-round. Sometimes transhumance simply involves moving back and forth between two regions so that not every member of the community follows the herd. Many of these transhumance pastoralists could be considered semisedentary and may have even practiced some small-scale agriculture. Likewise, many fully sedentary societies had smaller groups within that practiced transhumance, living with the larger group only seasonally.

Both types of pastoralism are well suited for temperature extremes. This is consistent with where archaeologists have identified pastoralist activities in the period from 4000 to 1000 BCE. In central Asia, for example, temperatures can range from -45° F (-43° C) in the winter to 120° F (49° C) in the summer. Desert temperatures, in the Sahara and Arabia, can also reach 120° F (49° C) in the day and yet still be below freezing in the winter. Even in the summer, night in the Saharan desert is very cold. Archaeologists, who typically start work very early, often have to wear warm jackets on cold desert mornings.

Pastoralist Society

The herd is the single most important aspect of a pastoralist subsistence economy and is crucial for the survival of the group. Herds supply almost everything that a pastoralist economy requires. Milk and dairy products are the most

important food supplies. Meat is also important, although the pastoralists must carefully strategize which animals to kill so that their herds do not die out. Clothing is made from the hides, wool, and hair of the herd animals. In central Asia and some parts of the Near East, tents are also made from the hides of herd animals. Almost all small tools are made from animal bone, as are art and pieces of jewelry. All of these products can be traded with other groups in order to gain materials that the group cannot produce themselves. So in a way, even goods that pastoralists have traded for are provided by the herd. In some societies, these animals also provide the primary means of transportation for the group. Without the herd, the people could not meet any of their primary needs.

There are a variety of different types of animals that are exploited by pastoralists. In Mesopotamia and Syria-Palestine, shepherd tribes who raised sheep and goats were most common in this period (and still are today). Some groups in this region also may have dwelt on the desert fringes supplementing their shepherding activities with the hunting of gazelle. In southern Mesopotamia there were also groups that raised cattle and water buffalo, although these were not nearly as common. African pastoralists were cattle herders during this period. The pastoralist groups of the central Asian steppes exploited multiple types of animals at once. During this period, these animals included sheep, goats, cattle (mostly water buffalo), and horses.

Pastoralists can live in groups of varying size. At the smallest are groups of 10 to 20 in which everyone is closely related. The largest groups are usually around 100 people, which may include a number of distinct lineages or where everyone claims descent from the same common ancestor. Almost every known pastoralist group is organized in a strict patrilineal manner; that is to say, descent is traced through the paternal (as opposed to maternal) line. There is no reason to doubt that this same patrilineal organization may have existed in this period, although there is little positive evidence to prove this. Based on modern anthropological studies, gender roles in pastoralist societies are fairly fixed. Men are directly responsible for the care of the herd; women are responsible for child rearing

and the production of goods (such as dairy products and clothing). Polygamy is relatively common within pastoralist societies, but it is difficult to determine how widespread this practice would have been in this period.

Pastoralist societies can be highly stratified, although this kind of stratification is not readily identifiable in the archaeological record. Scholars who study the years from 4000 to 1000 BCE are forced to base their conclusions on ethnographic analogy, although in some cases the archaeological excavations of pastoralist cemeteries have yielded proof of stratification. Often, individual status was based on herd size. Those individuals who controlled a large herd wielded more power within the community and thus had more access to trade goods and possibly wives in polygamous societies. Individuals with smaller herds could form debt or client relationships with these wealthier members, thereby increasing the status and influence of the wealthy individual within the group. Other high-status individuals within the pastoralist community may have been religious specialists, craft specialists (especially metalsmiths), elders, and perhaps successful warriors.

Typically, pastoralist groups are not portrayed in a favorable light by individuals living in sedentary communities. Egyptian and Mesopotamian accounts of pastoralists describe them as unlawful, hostile forces that cause problems for city dwellers. For this period, we do not have any texts that describe how pastoralists viewed settled people, but it is unlikely that ancient descriptions would have been flattering. However, these groups lived very much in tandem, and without a doubt the actual relationships were varied and complex.

One of the important motivating factors for any interactions between these groups would have been trade. Sedentary groups would have produced goods that could not be manufactured by pastoralists, the most noteworthy being metal tools and agricultural produce. Urban dwellers may have prized the meat, dairy products, hide products (especially skins), and exotic items that pastoralists could have provided. Neither pastoralists nor sedentary folk would have required the products produced by the other group but

may have wanted them nonetheless, facilitating contact between the two.

Hostilities between these two types of societies doubtless took many forms. If a pastoralist group was particularly powerful or skilled in fighting, a village may have paid tribute or given gifts to the group in order to not be attacked. If the city (or in some cases the state) was particularly powerful, it may have tried to tax the pastoralist groups, either for products or as military conscripts. Letters found in the palace at the Syrian city of Mari discuss the difficulties in getting pastoralist groups to submit to census taking.

—Kevin M. McGeough

Bibliography

- Bacon, Elizabeth. "Types of Pastoralism in Central and Southwest Asia." *Southwestern Journal of Anthropology* 10(1) (Spring 1954): 44–68.
- Grousset, René. *Empire of the Steppes: A History of Central Asia*. New Brunswick, NJ: Rutgers University Press, 1970.
- Khazanov, A. M. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1984.
- Levy, T. E. "Emergence of Specialized Pastoralism in the Levant." *World Archaeology* 15(1) (1983): 15–37.
- Smith, A. B. *Pastoralism in Africa*. London: Hurst, 1992.

Pastoralism in the Ancient Near East

The desert fringes of the Near East have long been home to pastoral groups keeping sheep and goats, generally in mixed herds in which sheep predominated. Goats produced milk and hair and tended to act as leaders of other animals within flocks, but they were chiefly a source of meat. Flocks varied in size, small farmers owning a few animals, whereas full-time pastoralists might manage several hundred. Although they frequently had permanent homes in one area, full-time pastoralists were generally transhumant, moving seasonally to obtain pasture for their flocks, during the winter staying in the steppe or desert fringes or on the wasteland between areas of cultivation and in summer moving to camp in settled areas where their flocks grazed on stubble and in fallow fields, leaving dung as fertilizer.

Grazing rights were negotiated and often established over long periods, both between different pastoral groups and between pastoralists and farmers. In the autumn the pastoralists returned to their own villages, where they often planted some crops. Some of the group, particularly the elderly and women with small children, might live in the villages year-round. Pastoralists also inhabited the Zagros and Taurus and the mountains of Lebanon, grazing their flocks in the rich upland pastures in the summer and returning to the foothills for the winter. As well as herding and cultivating, pastoralists engaged in trade and probably exploited wild plants and animals.

Pastoralism was a risky and fluid business in which substantial profits and drastic losses could occur. Shepherds whose flocks became too small might hire themselves out as herders or settle into a sedentary existence. Those whose flocks grew to considerable size might invest in land and settle down to manage it, hiring others to take care of their animals. Many rulers, such as the Assyrian king Shamshi-Adad and the Mari royal family, had nomad ancestors and relatives who lived in tents. Sedentism was also a response to climatic deterioration that reduced pasturage, as was raiding, especially in times of political instability. Frequently, however, farmers and pastoralists had a symbiotic relationship, exchanging grain for animals, wool, and other animal products.

Their mobility enabled pastoral groups to maintain large flocks of their own and to be employed as shepherds for the flocks of temples, kings, and wealthy landowners, taking the animals to pastures distant from the settled land where grazing was limited. For example, administrative texts in the town of Nuzi (near modern Kirkuk in Iraq) name 90 hereditary herders as part of the community, although they spent most of the year elsewhere.

Sheep were kept almost entirely for their wool, the main material for making textiles. The spring sheep shearing (actually plucking) was a major landmark in the agricultural year. Bones excavated from temple complexes show that most sacrificial animals were young kids and lambs; their meat was consumed by temple personnel, and their hides were processed for leather.

➤ MAKING A LIVING AS A SHEPHERD

Many surviving contracts are complex agreements between herder and animal owner in ancient Mesopotamia. The shepherd was usually given food and clothing for himself and pay for an assistant but took on considerable risks. One or two in every ten sheep would be accepted as a normal rate of annual loss; four in every five ewes were expected to produce a lamb, and every animal was expected to yield around two minas (slightly over two pounds) of wool. The shepherd generally kept the milk and a proportion of the wool, fixed in advance. Any lambs over the agreed number were also his. Large flocks were often dealt with by a herding contractor, who employed a group of shepherds, but the form of the contract was similar. The records of the great depot at Puzrish-Dagan, where animals paid in tribute were collected in Ur III times (2112–2004 BCE), give some idea of the huge numbers involved. Around 70,000 sheep and goats passed through it in the course of a year.

—Jane R. McIntosh

One important function of animals, particularly sheep and goats, was as a means of investment. Crop surpluses could be used to buy or feed additional animals. These would create interest in the form of lambs, kids, and wool and could be cashed in for grain or other commodities when the need arose. A specialist practice was fattening animals for the table on barley, particularly fat-tailed sheep, the fatty tail being a delicacy appreciated in the Near East to this day.

—Jane R. McIntosh

Bibliography

- Hesse, Brian. "Animal Husbandry and Human Diet in the Ancient Near East." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Mattingly, Gerald L. "Animal Husbandry." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

Schwartz, Glenn M. "Pastoral Nomadism in Ancient Western Asia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

of Africa: Food, Metals, and Towns, edited by T. Shaw, et al. New York: Routledge, 1993.

Herding in Southwest Kenya

Although scholars have assumed that agriculture in Kenya originated between 4000 BCE and 1000 CE, there is no strong evidence for any agricultural (or horticultural) activities. The subsistence practices of the people of this region and time are best thought of as a mixture of herding and hunting animals as well as gathering wild plants and marine fauna.

Shellfish were a particularly important source of food for the people of what is now called Kenya. Large shell middens (trash heaps) are typical of this era in this region. Basket traps were used to catch fish in Lake Victoria and the rivers of the region. Middens also tend to have many wild animals; a diverse variety of species were hunted, suggesting opportunistic local hunting as opposed to hunts planned with a long-term strategy in mind.

Perhaps the most easily identifiable group within Kenya at this time is the Elmenteitan Industry, situated mostly on the west side of the Rift Valley (in the high rainfall area). This group incorporated obsidian into their tool kits; they must have been part of a larger obsidian trade network, since many Elmenteitan sites are far from known deposits of obsidian. The Elmenteitan dead were cremated—unusual for Africa at this time—and at Njoro River Cave the dead were interred with food-processing equipment. These two traits (obsidian usage and cremation) make Elmenteitan sites stand out from other Kenyan cultures in this period. The Elmenteitan seemed to have practiced an equal mixture of herding and hunting; the animal bones recovered from sites usually show relatively equal proportions of wild and domesticated animals.

—Kevin M. McGeough

Bibliography

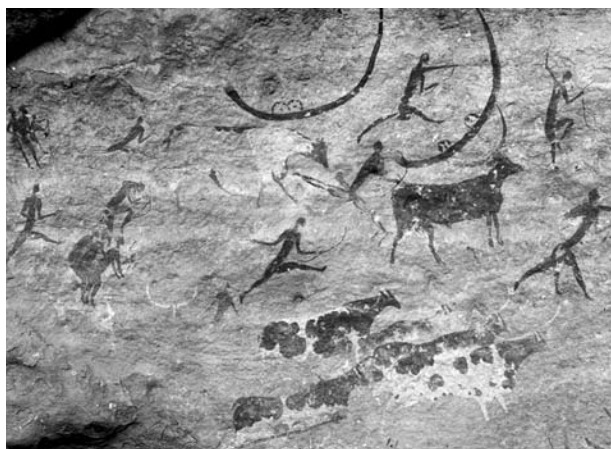
Phillipson, D. *African Archaeology*. 2nd ed. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1993.

Robertshaw, P. "The Beginnings of Food Production in Southwestern Kenya." In *The Archaeology*

Saharan Pastoralism

By the beginning of the period between 1000 BCE and 300 CE, people living in the Saharan region of Africa had started practicing pastoralism alongside the exploitation of wild animal resources. At this time the Sahara was not the barren desert that we associate it with today. The area at the time had grasslands spread between small lakes located in the highland regions. Without a doubt, the human populations were concentrated near these water resources. This type of environment is well suited for a pastoralist economy. Pastoral species need large amounts of grazing land; the Saharan region provided a vast amount of space for these practices. Throughout this period, however, life in the Sahara became more and more difficult as environmental degradation set in.

The site of Uan Muhuggiag has some direct evidence of ancient pastoralist activities. The most important is a skull fragment of an ox, dated to 5000 BCE (1,000 years before this era). Dated to around 3400 BCE are numerous buried rock paintings of cattle. In associated contexts are grindstones, probably used for processing wild plants for consumption, suggesting that the people of Uan Muhuggiag did not rely solely on their cattle for subsistence.



Cave paintings of people with cattle, about 4000 BCE–2000 BCE at Tassili n' Ajjir, in the Sahara Desert of Algeria. (Patrick Gruban)

Arguably the most whimsical evidence for Saharan pastoralism in this period can be found at Tassili n' Ajjer in Algeria. Here numerous rock paintings tell us much about life in the Sahara. There are many images of cattle with humans. The paintings are so detailed that it is possible to distinguish different species of cattle (usually on the basis of the colors of their coats or the shape of their horns). People are depicted milking the cattle and riding the cattle, and some of the cattle may be depicted in pens. These paintings depicting cattle are usually considered part of the Bovidian Tradition; scholars use this term inconsistently, sometimes referring just to the style of rock art and other times referring to the people who painted this art. Later paintings from Tassili n' Ajjer show horses and camels as well, but these paintings date to the subsequent period.

From about 4500–3300 BCE, the Ténéréan Industry ran from northern Niger to northern Chad. By the term “industry,” archaeologists mean a set of shared technological and economic traits that are found over a distinct geographic region. This industry includes stone tools (such as knives and microliths) as well as grinding stones, significantly more sophisticated tools than are typically found in association with Bovidian sites. The Ténéréan people hunted wild animals and gathered wild plants. However, ox bones from the site of Adrar Bous prove that these nomadic people also raised domesticated animals.

In central Niger during this time period, the people of the Tilemsi Valley were also cattle herders. The first cattle herders appear in this region around 3300 BCE. By 2000 BCE they moved into the southern parts of the valley (including the Karkarichinkat sites), leaving behind (for modern archaeologists to find) cattle bones, clay figurines of cattle, and tools for hunting and fishing.

—Kevin M. McGeough

Bibliography

- Camps, G. “Beginnings of Pastoralism and Cultivation in North-West Africa and the Sahara: Origins of the Berbers.” In *The Cambridge History of Africa 1: From the Earliest Times to c. 500 B.C.*, edited by J. Desmond Clark. Cambridge: Cambridge University Press, 1982.
- Carter, P. L., and J. D. Clark. “Adrar Bous and African Cattle.” In *Proceedings of the Panafrikan Con-*

➤ GIRAFFE HERDERS?

As people began domesticating animals and employing them in pastoralist practices, it is likely that there were a few failed experiments. People probably attempted to herd antelope rather than just hunting them. In the Jebel Uweinat in Libya, there are numerous pieces of rock art depicting humans interacting with giraffes. A few of the images show what must be giraffes tethered to a spike set into the ground. Others show humans leading the giraffes on relatively long leashes. Unfortunately this rock art cannot be dated, so we are left to wonder who was catching giraffes in Libya, and when.

—Kevin M. McGeough

gress on Prehistory, edited by Berhanou Abebe et al. Addis Ababa: Provisional Military Government of Socialist Ethiopia Ministry of Culture, 1976.

Phillipson, D. *African Archaeology*. 2nd ed. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1993.

Shaw, T. “Hunters, Gatherers, and First Farmers in West Africa.” In *Hunters, Gatherers, and First Farmers beyond Europe*, edited by J. V. S. Megaw. Leicester, UK: Leicester University Press, 1977.

Van Noten, F. *Rock Art of the Jebel Uweinat (Libyan Sahara)*. Graz: Akadem. Druck-u. Verlagsanst., 1978.

Nomadic Groups in Egypt, 4000–1000 BCE

Egypt’s remarkable geography created a land of major urbanized oasis surrounded by deserts incapable of supporting urban lifestyles. The Egyptians often found themselves in direct contact with groups of nomadic peoples whose seemingly chaotic lifestyle did not mesh well with the Egyptian concept of *maat*. *Maat* is a term that does not bear English translation well. The closest basic meaning would be “order.” Maintaining this cosmically ordained order was one of the key roles of the Egyptian pharaoh. As such, regular military action against these nomadic groups in order to reestablish *maat* was of key importance. In some cases, this sort of belligerent

contact with these groups led to some surprising results within Egypt proper.

Among the earliest evidence for contact with foreign groups comes from the eastern borders of ancient Egypt with the world of the Sinai pastoral nomads. As early as the Chalcolithic period of the Levant (ca. 4500–3500 BCE) and the Middle Predynastic (ca. 4400–3000 BCE) and Early Dynastic periods of Egypt (ca. 3000–2686 BCE), there is evidence of trade between these two groups and evidence for Egyptian attempts to establish a degree of permanent control over that region in the form of way stations and encampments along communication routes. Friendly trade as well as military campaigning by the Egyptians in the regions goes on throughout the Old and Middle Kingdoms. At Beni Hasan there is a famous series of paintings in the tomb of the local nomarch, Khnumhotep, showing his proud hosting of Abisha, an Asiatic caravan leader and tribal chieftain.

With the marginality of the Sinai, changes in climate often meant that locals were forced to migrate either north into the Canaanite world or west into Egypt. Such a model is seen in the narratives of the patriarchs in the Old Testament, where when famine hits they flee to Egypt. Eventually these Asiatics, or Aamu, become a significant enough threat to Egypt that a chain of fortifications called the Wall of the Ruler is built during the Middle Kingdom to limit access to the delta. The Egyptians, however, continue to impose their form of order on the Levant during the period and regularly raid the Sinai and further north into urban Canaan in order to take captives, who were forced into servitude in Egyptian homes. The large base of ethnically Levantine people living in the delta by the end of the Middle Kingdom likely made it much easier for the Hyksos to take over Egypt from their bases in coastal Canaan and begin the First Intermediate period, Egypt's first experience with foreign rule.

To the south the Egyptians faced the people of present-day Sudan. These people, known en masse to the Egyptians as Nehsy, or Nubians, included various groups, many of whom were pastoral nomads dwelling in caves. They often supplemented their lives by raiding Egyptian caravans heading south. Again, these people were

considered a sufficient threat to the Egyptian view of order, and thus regular campaigns were conducted in Nubia by the Egyptians, and massive fortifications were built at places such as Semna and Buhen to protect Egypt's southern frontier. The Egyptians were, however, so impressed with the military abilities of at least one of the Nubian subgroups, the Medjay, that they recruited many of them into the Egyptian Army as mercenaries and, more importantly, as the core of the Egyptian national police force.

To the west in what is today Libya lived a group of nomadic peoples called the Tjemhu and Tjehnyu. These fair-skinned red-haired people lived around the oases in the deserts west of the Nile. These groups were in conflict with the Egyptians as early as the reign of Narmer, who united Upper and Lower Egypt. By the time of the New Kingdom, some of the subgroups among the Libyans had gained sufficient power and wealth to hire mercenaries from the Aegean world and become a significant threat to the Egyptians. Again, much like they had with the Asiatics who came to dominate them as the Fifteenth Dynasty and the Sixteenth Dynasty, within a few centuries these same Libyans would come to be Egypt's next foreign rulers as the kings of the Twenty-Second Dynasty and the Twenty-Third Dynasty.

—David R. Lipovitch

Bibliography

- Gardiner, Alan. *Egypt of the Pharaohs: An Introduction*. London: Oxford University Press, 1964.
- Redford, Donald B. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.
- Shaw, Ian. "Egypt and the Outside World." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.
- Steindorff, George, and Keith C. Seele. *When Egypt Ruled the East*. Chicago: University of Chicago Press, 1957.

The Negev and the Sinai

The Negev and Sinai deserts in antiquity were home to groups of pastoral nomads who herded sheep and goats and, as conditions permitted, tended to crops planted along the beds of seasonal streams (wadis). Even today, some local

Bedouin engage in similar activities. Unlike the agriculturally rich coastal plain and lowlands of Israel or the Judean Highlands, the Negev and Sinai deserts are semiarid regions. Throughout much of antiquity these regions were home to specialized hunter-gatherers and, after the advent of domesticated animals and crops, to seminomadic pastoralists who may have formed the core of the urbanized population of the Early Bronze Age.

While the earliest agriculture and stockbreeding was occurring in the rest of the Levant, the Negev and Sinai were still dominated by specialized hunter-gatherers who traded with the early Pre-Pottery Neolithic (ca. 8500–7500 BCE) peoples to their north. Part of this trade must have included early domesticated sheep and goat, which were subsequently introduced into more marginal regions. The Chalcolithic period (4300–3300 BCE) marks the high point for pastoralism in the Negev. During this period the main center of activity in Israel was in the vicinity of the Wadi Beersheva and Wadi Besor in the northern Negev. This region was essentially uninhabited during the preceding period but became home to sites as large as 10–20 acres as well as many very small seasonal encampments during the Chalcolithic period. It is thought by some that these larger centers were home to chieftains and to tribal religious and burial centers. This is based to some degree on cemeteries where there was evidence for some of the tombs being much larger than others, possibly suggesting a more hierarchical than egalitarian society.

It is possible that during this period rainfall was considerably higher than today. Even with more rain, though, this region is still somewhat marginal and requires a lifestyle that is mobile and keyed to taking advantage of seasonal resources. It is likely that crops (probably barley, wheat, lentils, and vetch) were grown along wadi beds to take advantage of winter flooding and that when not sowing or harvesting the people of the Beersheva cultures were herding sheep and goats. Most of the smaller sites show regular abandonments, suggesting that they were indeed seasonal encampments rather than permanent settlements.

Contemporaneous with these sites in the Negev are numerous small sites in the Sinai. Among

➤ DIET IN THE NEGEV AND SINAI



Woman carrying a churn over her head and a ram with cornets on its back. From Gilat in the Negev, Chalcolithic Period. (Erich Lessing/Art Resource, NY)

Ninety percent of the animals identified from these campsites are the remains of domesticated sheep and goats. The virtual lack of any sort of arrowhead among the lithic toolkit of the Chalcolithic cultures suggests that virtually no hunting was being conducted. The consistent use of images of churns, cornets (horn-shaped pots thought to have been used for holding milk), and dairy animals (sheep, goats, and cows) in the imagery found in their religious centers suggests that the Chalcolithic people had an economy focused on the use of secondary products such as milk, cheese, yogurt, and butter.

—David R. Lipovitch

these sites were *nawamis* (a type of clustered circular stone burial structure with a central pillar) and numerous pit dwellings. Sites along the Sinai coast were likely the seasonal homes of pastoralists planting crops there in much the same manner as do modern Bedouin of the Sinai.

In the subsequent Early Bronze Age, the beginnings of urbanization are seen, and the center of population moves north away from the Negev. While the region depopulates to some degree, there is still continuity with the establishment of unfortified villages in the region. The nawamis and related occupational sites found in the Chalcolithic Sinai continue through the Early Bronze Age I (3300–3050 BCE). It is likely that some of the Negev sites acted as intermediaries between the more urban centers of the north and the pastoral nomads of the Sinai. These Sinai nomads may have also acted as intermediaries between the Levant and the people of Predynastic and Early Dynastic Egypt. In the period immediately following, the Early Bronze Age II (ca. 3050 BCE), there is evidence for a significant population in the Sinai. Surveys in that region identified 50 sites clustered along the wadi systems. These sites consisted of central courtyards surrounded by a mixture of rounded and rectangular dwelling rooms. The rectangular rooms are typical of the sort of structures found in the north at urban Early Bronze Age sites, while the round ones are characteristic of local Sinai structures dating as far back as the Neolithic period. Ceramics found at the sites show clear links between these Sinai people and the populations of Arad in the northern Negev. It is likely that these sites represent a mix of local Sinai pastoralists living alongside people mining the nearby copper sources needed by the urban populations in the north.

At the end of the Early Bronze Age II there is an almost complete depopulation of the Sinai and Negev. Similarly, in the more urbanized parts of the Levant there is a centralization of people in large well-fortified urban centers. It is unclear why this occurs, but it is likely due to a combination of factors including interurban warfare and a drying of the local climate. At the end of the Early Bronze Age III there is a further collapse among the urban centers of the Levant. With the advent of the Early Bronze Age IV/Middle Bronze Age I, all urban centers west of the Jordan disappear, and only a handful of centers continue to exist east of the Jordan River. This leads to a second rise of pastoral nomadism as the dominant lifeway in the Levant.

Many hundreds of small settlements and handfuls of 5- to 12-acre villages appear alongside vast communal cemeteries and tumuli fields throughout the Levant. The largest of the centers had populations of fewer than 100 people. In the Negev alone, more than 500 such sites have been identified. In the Sinai, there is evidence for more than 200 ephemeral campsites along the coast. Unlike the Early Bronze Age II, however, there are no sites in the more marginal Sinai highlands. Typical sites of this period consist of rounded single-room structures with a central pillar surrounded by animal pens.

With the beginning of the Middle Bronze Age IIA and the reurbanization of the Levant, there is a near complete disappearance of sites from the Negev and Sinai. While over time pastoral nomads such as present-day Bedouin do indeed return to the Negev and Sinai deserts, such pastoral nomadism never again becomes the dominant lifeway of the Levant and is limited to small populations taking advantage of the limited resources of a marginal area.

—David R. Lipovitch

Bibliography

- Ben-Tor, Amnon. "The Early Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Gonen, Rivka. "The Chalcolithic Period." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Gophna, Ram. "The Intermediate Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Levy, Thomas E. "Cult, Metallurgy and Rank Societies: Chalcolithic Period (ca. 4500–3500 BCE)." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.

The Andronovo Culture and the Timber Grave Cultures

The geography of central Asia is well suited to a pastoralist lifestyle since much of it can be char-

acterized as semidesert or steppe. In the period between 4000 and 1000 BCE, one of the best understood of these central Asian nomadic groups is the Andronovo culture. The name comes from the site of Andronovo, which was first excavated in 1914. The use of the term “culture” here may be misleading. It is best to think of the Andronovo as a group of several individual cultures with a number of shared features; there is no evidence that they were ever unified politically. The Timber-grave culture is named after the type of graves that are typical of the group but are also known as the Srubna culture, based on the Russian word *srub* (“timber”).

The Andronovo culture was quite widespread; remains have been found throughout western Siberia, Russia, and Kazakhstan dating from 2300 BCE to about 1000 BCE. The Timber-grave culture was located directly to the west of the Andronovo culture and extended as far west as the Black Sea. The two groups were roughly contemporaneous, and most scholars assume that there was some relationship between these two groups. However, the two cultures have different burial practices, which may indicate quite different belief systems.

Both cultures are interesting examples of settled pastoralists. These people do not seem to have been nomads. Instead, they lived in small villages in houses built of timber. However, it is important to recognize that some members of the community may have lived as seminomads and during certain parts of the year may have lived apart from the community along with their herds.

Some of the villagers engaged in copper mining, and long-distance trade in mineral resources may have been an important component of economic life. The horse had likely been domesticated in this region around 4000 BCE or perhaps slightly earlier. Initially, horses were probably bred for their meat, and horsemeat was probably an important component of the Andronovo and Timber-grave diet. Horses, however, came to play an extremely important role in transportation at this time. Burials often included horses

➤ YURTS

Nomadic groups who lived in this region of the world lived in temporary tent-like structures called yurts. These were structures that were made out of hide and wood and were generally circular in shape. Hide would have been readily available to the pastoralists, but wood was not as common in the steppe regions and was probably acquired through trade. These tents could be easily set up and taken apart, and they were lightweight and easy to transport, perfect homes for people on the move. These types of structures are still used in Mongolia today and are viewed as a nationalist symbol in various parts of central Asia.

—Kevin M. McGeough

and chariots, and the first evidence for the spoke-wheeled chariot is associated with these cultures.

Other animals besides horses were part of the pastoral economy. Cattle were probably the most important subsistence animal after the horse. Goats and sheep were also herded but not to the same extent. Dairy products, hides, and meat would have been the major types of products derived from this pastoral lifestyle, and these would have been traded with nearby agricultural communities (such as the Bactria-Margiana Archaeological Complex) for cereals, such as wheat and barley.

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Bibliography

- Anthony, D., and N. Vinogradov. “Birth of the Chariot.” *Archaeology* 48(2) (1995): 36–41.
- Jones-Bley, K., and D. B. Zdanovich, eds. *Complex Societies of Central Eurasia from the 3rd to the 1st Millennium BC*. 2 vols. JIES Monograph Series Nos. 45, 46, Washington, DC, 2002.
- Mallory, J. P. “Andronovo Culture.” In *Encyclopedia of Indo-European Culture*. Chicago: Fitzroy Dearborn, 1997.
- Mallory, J. P. “Srubna Culture.” *Encyclopedia of Indo-European Culture*. Chicago: Fitzroy Dearborn, 1997.

■ Introduction: The Americas—Many Ecozones, Many Ecostrategies

Broad geographical patterns are visible in the distribution of archaeological remains of prehistoric American peoples. These patterns are thought to be the result of shared cultural practices that prehistoric American peoples utilized to solve problems they faced in adapting to the various ecologies of the Americas. In each major continental region these shared cultural solutions (ecostrategies) have been identified and clearly delineated. North America under this delineation is broken up into ten general areas based on the ecology and ecostrategies pursued in each area by prehistoric peoples: Arctic, Subarctic, Northwest Coast, California, Plateau, Great Basin, Southwest, Plains, Northeast, and Southeast. For example, evidence indicates that prehistoric peoples of the Great Basin practiced a similar ecostrategy throughout the area, one largely dictated by the basin and range ecology of the area. Similarly, prehistoric peoples of the Southeast practiced a similar ecostrategy based on hunting and gathering wild foods with an increasing emphasis on the gathering and gardening of seed-bearing plants over time.

To the south, Central America is generally split into four primary areas, each of which required unique ecostrategies: the Atlantic Lowlands, the Central Highlands, the Pacific Lowlands, and present-day Mexico, which is split further into several subareas.

Like the North American continent, the South American continent is extraordinarily diverse in the range of ecozones it prehistorically offered. The most outstanding features of South America are the Andes Mountains and the large tropical river systems of the Orinoco, Amazon, and La Plata. These environmental and geographic features prehistorically created several ecozones that each required their own unique ecostrategy. These ecozones are generally broken up into 15 general areas: Caribbean Plains, Pacific Plains, Orinoco Plains, Andes Mountains, Sabana de Bogota, Altiplano, Guiana Highlands, Amazon Basin, Llanos de Mojos, Mato Grosso,

Gran Chaco, Brazilian Highlands, La Plata Basin, Pampas, and the Patagonian Deserts. For example, the ecostrategies pursued on the Pacific Plains focused primarily on marine resources and were very different than those utilized in the Gran Chaco, which required a more varied ecostrategy due to the seasonal nature of the area's ecozone.

—Peter Jones

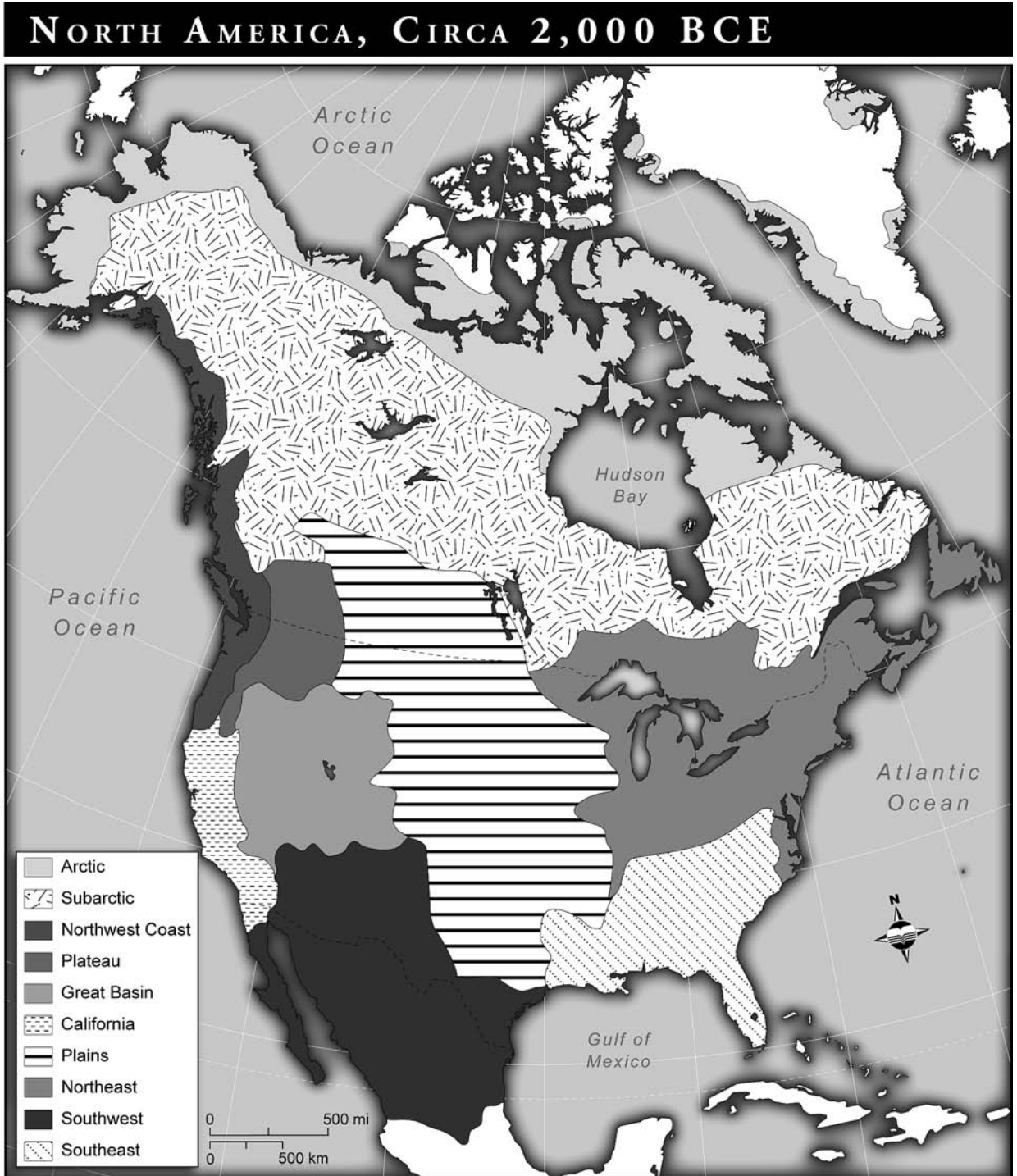
Bibliography

- Bruhns, Karen Olsen. *Ancient South America*. Cambridge: Cambridge University Press, 1994.
- Evans, Susan Toby. *Ancient Mexico and Central America: Archaeology and Culture History*. New York: Thames and Hudson, 2004.
- Pauketat, Timothy R., and Diana DiPaolo Loren, eds. *North American Archaeology*. Malden, MA: Blackwell, 2005.

Bison in the Great Plains

American Bison adapted well to their ecological niche and provided valuable resources that could be profitably exploited by human predators. The contemporary species of American bison (*Bison bison*) appeared in the Great Plains around 5,000 years before the present (BP) as a relatively smaller species than that previously found in the Americas. Before this time, several other species of bison existed in the North American plains as part of a Pleistocene megafauna complex: *B. latifrons*, *B. priscus*, and *B. antiquus*. All of these species of bison were descended from prehistoric Eurasian populations. By the Middle Holocene, however, only *B. bison* remained extant, primarily as a result of climatic and environmental changes that took place at the end of the Pleistocene and the beginning of the Holocene as well as possible population pressure from early American Indian groups.

The physical and social evolution of American bison fitted it to the newly emerged Holocene Great Plains ecosystem with its climatic seasonality and cyclicism and, to a lesser degree, woodland habitats elsewhere in North America.



The strongly seasonal breeding and birth patterns of American bison proved well suited to the seasonality of the newly emerged Great Plains environment. Similarly, the low stability of bison group membership helped to adapt the species to the low patchiness and high cyclicism of food

abundance on the Great Plains. Flexibility in birth-site selection and the determinants of dominance status among cows helped bison adapt to the range of habitats and to the fluctuations in carrying capacity of the Great Plains ecosystem. These adaptive traits allowed bison to become

the dominant ungulate fauna (animals with hooves) in the Great Plains ecosystem during the Holocene, and these characteristics allowed Middle Holocene peoples to base a large portion of their lifeway pattern around bison and bison-related resources.

Across the Great Plains the climate varied considerably during the Middle Holocene, but overall it was marked by a north–south gradient of increasingly warmer and drier conditions with a reduction in effective moisture, surface water, and resource abundance and an increase in resource patchiness, sediment weathering, erosion, and aeolian activity. These factors resulted in pronounced drought conditions in the southern Great Plains and in either resource abundance or patchiness in the northern Great Plains, factors that influenced how Middle Holocene peoples inhabited the region. In the southern Great Plains where drought was most severe, surface and groundwater sources dried, and bison populations became diminished, prompting substantial adaptive changes by Middle Holocene peoples of the area, including local abandonment, well digging to tap underground water, and a widening of the diet breadth to incorporate higher-cost, lower-return seed and plant resources. To the north, where drought conditions were not as severe, Middle Holocene sites also evidence an increase in diet breadth and perhaps changes in settlement mobility, although the evidence is not as pronounced as in the south.

Bonebed 2 at Bonfire Shelter, Texas, originally excavated in the 1960s and dated to the Early Holocene, is one of the earliest bison-processing sites known in the Great Plains. Numerous other kill and processing sites have been found throughout the Great Plains that date to the Middle Holocene, and some contain evidence of continued use by prehistoric peoples from the beginning of the Early Holocene through the end of the Middle Holocene. The abundance of these types of sites, along with their chronology, indicate that Middle Holocene peoples of the Great Plains relied on bison for a substantial portion of their subsistence and economic resources despite specific regional climatic conditions. For example, archaeological evidence from the Powder River Basin in Wyoming has revealed several thousand sites from the Middle Holocene age

along with one stratified site that dates back to the Early Holocene. This site is a remnant of a much larger one that contains cultural levels including Clovis, Folsom, Agate Basin–Hell Gap, Alberta–Cody, and small Middle Holocene lithics, respectively. The site location and the taphonomics of the bone bed suggest that its use was primarily associated with the procurement of bison throughout the Middle Holocene.

During the Middle Holocene, people hunted bison by a number of means, as evidenced by the variety of lithic assemblages and processing tools recovered throughout the Great Plains, but the use of bison jumps appears to have been a common technique throughout the Great Plains. The Hawken site, located in northeastern Wyoming and dating to around 6,500 years BP, for example, is a steep-sided arroyo into which small groups of bison were driven and slaughtered. The projectile points recovered from the site are of a side-notched tradition, and the butchering tools are similar to those found in most bison kill sites dating from the Early Holocene to the end of the Middle Holocene. This evidence suggested to Frison and colleagues that bison procurement methods and reliance on bison changed little during the Middle Holocene despite regionally specific environmental conditions.

The importance of bison to Middle Holocene peoples of the Great Plains went beyond simple subsistence reliance. Evidence indicates that only the heaviest nonmeaty bones were left at the kill site, while the bones rich in marrow were chopped up for marrow extraction. Likewise, although the evidence is scant, it is generally assumed that perishable items from the bison, such as skin and fur, were also utilized by Middle Holocene peoples for a variety of purposes.

—Peter N. Jones

Bibliography

- Byerly, Ryan M., et al. "On Bonfire Shelter (Texas) as a Paleoindian Bison Jump: An Assessment Using GIS and Zooarchaeology." *American Antiquity* 70(4) (2005): 595–629.
- Frison, George C. "The Carter/Kerr-McGee Paleoindian Site: Cultural Resource Management and Archaeological Research." *American Antiquity* 49(2) (1984): 288–314.
- Frison, George C., Michael Wilson, and Diane J. Wilson. "Fossil Bison and Artifacts from an Early

- Altithermal Period Arroyo Trap in Wyoming." *American Antiquity* 41(1) (1976): 28–57.
- Kehoe, Thomas F., and Alice B. Kehoe. "Observations on the Butchering Technique at a Prehistoric Bison-Kill in Montana." *American Antiquity* 25(3) (1960): 420–423.
- Lott, Dale F. "American Bison Socioecology." *Applied Animal Behaviour Science* 29(1–4) (1991): 135–145.
- Meltzer, David J. "Human Responses to Middle Holocene (Altithermal) Climates on the North American Great Plains." *Quaternary Research* 52(3) (1999): 404–416.

Head-Smashed-In Buffalo Jump

The site of Head-Smashed-In Buffalo Jump is located where the foothills of the Rocky Mountains and the Great Plains meet near Fort Macleod, Alberta, Canada. Head-Smashed-In is the site of one of the oldest and best-preserved buffalo jumps known to archaeologists. The aboriginal population of the plains used the precipice as a means to hunt bison by driving them over the edge to their deaths. At the bottom of the buffalo jump was an area where the hunters camped and carcasses were processed. Several similar jump sites are located nearby to take advantage of the terrain and the behavior of the bison.

The site was first archaeologically investigated by Junius Bird of the American Museum of Natural History in 1938. Since then, three major archaeological projects have continued the investigations of the complex. The Head-Smashed-In site is composed of a gathering basin, drive lanes, the cliff kill site, and the processing area below.

West of the cliff lies a large basin that was a natural grazing area for bison. From this, lines of stone cairns were built to direct the bison to the cliff. These drive lines extend for more than 8.6 miles (14 kilometers) into the gathering basin. It is unclear whether these cairns were simply piles of stone or whether in antiquity they may have supported brush to hide the hunters from the view of the bison.

To start the hunt, young men would lure the herd into the drive by mimicking the bleating of a lost calf. As the bison moved into the drive lanes, the hunters would circle behind and up-



View of the Head-Smashed-In Buffalo Jump site in Alberta, Canada. (Ken Thomas)

wind of the herd and scare the animals into stampeding toward the cliff edge. At the cliff edge the lead animals might try to stop, but the weight of the herd behind would have forced them over the cliff. Immediately below the kill site are stratified deposits 36 feet (11 meters) deep that contain evidence of use going back more than 5,700 years. Artifacts found in the kill site include bison bone, stone tools, and projectile points. The oldest evidence of humans at Head-Smashed-In are two Scottsbluff spear points. These projectile points date back 9,000 years. Near the kill site itself was a flat area where the hunters camped when processing the carcasses. Here the meat was sliced into thin strips and hung to dry in the sun. The large bones of the bison were smashed to extract their marrow. Numerous boiling pits and smashed bone indicate that the remaining bone was boiled down to render its grease. Artifacts found in this area include tools used in processing the carcasses such as scrapers, knives, and choppers. Also in this area were found vast amounts of fire-cracked rocks used in the boiling pits. In 1981, the United Nations Educational, Scientific and Cultural Organization (UNESCO) declared Head-Smashed-In Buffalo Jump a World Heritage Site.

—David R. Lipovitch

Bibliography

- Berry, Susan, and Jack Brink. *Aboriginal Cultures in Alberta: Five-Hundred Generations*. East Lansing: Michigan State University Press, 2004.
- Brink, Jack W. *Imagining Head-Smashed-In: Aboriginal Buffalo Hunting on the Northern Plains*. Edmonton: Athabasca University Press, 2008.

Marine Mammal Hunting in the Arctic, 4000–1000 BCE

The global climate changes at the end of the Pleistocene and beginning of the Holocene (about 9550 BCE) led to the extinction of the typical representatives of Late Pleistocene megafauna in the arctic. By the Middle Holocene (about 3500 BCE), new ecosystems had become established, and arctic peoples changed their lifeways to adapt to the available resources. Those peoples living along the coast had to adapt different subsistence strategies (practices to gain food, clothing, and shelter) than those inhabiting the interior, and the archaeological tool kits of both groups reflect this. Interior peoples oriented their lifeway patterns around the caribou and other faunal resources, while those on the coasts focused much of their subsistence lifeway patterns on marine resources. The major components of the arctic marine fauna during this period were made up of marine mammals: whales, walrus (*Odobenus rosmarus*), and seals. The two major species of seals that occurred in the arctic at the time were the ringed seal (*Phoca hispida*) and the bearded seal (*Erignathus barbatus*).

Archaeological evidence indicates that notch-point and lanceolate-point lithics, along with microblades, made up the primary items of these peoples' tool kits, which has come to be known as the Arctic Small Tool (AST) tradition. The AST tradition includes the archaeologically distinct assemblages from a variety of sites in Alaska, Greenland, eastern Canada, Manitoba, and the Yukon. These people focused their activities around the coasts, although evidence indicates that they maintained some interest in interior subsistence pursuits, and in some locations marine mammal resources provided enough of a consistent and substantial resource to support sizable settlements. Since there is considerable

variability in the tools that are included in the AST tradition, it is presumed that the makers of these tools had contact with one another but adapted their manufacture to their own particular preferences.

The overall importance of marine mammal hunting for Middle Holocene arctic peoples is further supported by the location of settlements. For example, archaeological evidence from the northeast coast of Devon Island, Northwest Territories, indicates that there is a significant positive correlation between locales and access to marine mammal resources, with high site densities found where access to these resources was readily available and low site densities located near sedge meadow or freshwater resources. These site distributions are most likely the result of marine mammal ecology in that during winter months, seals are found in open water or along sea ice fissures, while during spring, summer, and fall months, seals stay closer to shore or the ice floe edge. The Saatut site, located on the northern coast of Baffin Island, for example, appears to have been inhabited mostly in the summer and fall as a fishing and seal-hunting camp.

The seacoast locations of settlements, along with the presence of harpoon heads and numerous other artifacts of seal and walrus bone and ivory, attest to the importance of seal and walrus in the subsistence economy of arctic peoples during the Middle Holocene. Evidence for beluga (*Delphinapterus leucas*) and narwhal (*Monodon monoceros*) hunting, on the other hand, is less conclusive but sufficient to suggest at least occasional exploitation. However, whaling appears to have been greater in some areas of the arctic than in others. Evidence indicates that whaling accounted for approximately 12 percent of dietary intake of the peoples of this region, with a high proportion of other marine mammals also found to be part of these peoples' subsistence regime.

Although reliance on marine mammals remained constant over the Middle Holocene, the implements used to take marine mammals did not. The harpoon heads for sea-mammal hunting appear to follow a stylistic progression through Pre-Dorset time, with the earliest versions known coming from Igloodik, northwestern Foxe Basin, Mittimatalik, northeastern Baffin Island, and Port

Refuge on Dundas Island. These harpoon heads have a single line hole, are self-bladed with single or bilateral barbs, and have open sockets. Subsequent Dorset period evidence indicates that harpoon heads shifted from open sockets to closed sockets as the subsistence economy continued to be dominated by seals of several species. Walrus bones appear in middens (large garbage heaps) in relationship to access to better hunting sites, while narwhal and beluga hunting appears to have lessened in importance, though there is some evidence indicating active hunting of the baleen whale.

Although peoples' cultural practices along the coast during this time were focused on marine mammals, evidence indicates that there was a marked difference between kill sites and residential sites. For example, archaeological site distributions indicate that ringed seals were usually transported whole from kill sites to residential sites on the eastern Canadian arctic coast and Greenland. Some have argued that this indicates that intra- and interhousehold activities such as food-sharing mechanisms may have played a more significant role in conditioning butchering variability and assemblage composition than transportation from hunting locations.

—Peter N. Jones

Bibliography

- Arima, Eugene Y., John D. Heath, and Guy Mary-Rousseliere. *Contributions to Kayak Studies*. Quebec: Canadian Museum of Civilization, 1992.
- Bielawski, E. "Paleoeskimo Variability: The Early Arctic Small-Tool Tradition in the Central Canadian Arctic." *American Antiquity* 53(1) (1998): 52–74.
- Coltrain, Joan Brenner, M. G. Hayes, and Dennis H. O'Rourke. "Sealing, Whaling and Caribou: The Skeletal Isotope Chemistry of Eastern Arctic Foragers." *Journal of Archaeological Science* 31(1) (2004): 39–57.
- Diab, Mark C. "Economic Utility of the Ringed Seal (*Phoca hispida*): Implications for Arctic Archaeology." *Journal of Archaeological Science* 25(1) (1998): 1–26.
- Helmer, James W. "Prehistoric Site Location Strategies in the North Devon Lowlands, High Arctic Canada." *Journal of Field Archaeology* 19(3) (1992): 291–313.
- Mary-Rousseliere, Guy. "The Paleoeskimo in Northern Baffinland." In *Eastern Arctic Prehistory: Paleoeskimo Problems*, edited by M. S. Maxwell.

Salt Lake City: Society for American Archaeology, 1976.

Following the Caribou, 4000–1000 BCE

As climate changed in North America, the inhabitants of the more northerly regions adopted new strategies to cope with new temperatures, new environmental conditions, and new food resources. One solution to these climatic changes was to increase reliance on caribou as a source of subsistence in the region.

Changes in arctic and subarctic flora and fauna during the Late to Middle Holocene (fully evident by about 3500 BCE) reflected the influence of the changing climate induced by the retreating ice sheets, orbitally driven seasonal insolation patterns (patterns of solar radiation), increasing carbon dioxide concentrations, and relatively rapid internal variations. At regional scales, these climate changes resulted in ecosystem variability that impacted arctic peoples and their access to resources. During the Late Pleistocene, arctic peoples used fluted points (spearheads with a groove carved into them that would allow them to be fit snugly into a shaft) to hunt large mammals, including caribou (*Rangifer tarandus*) that inhabited environments across the arctic, from Alaska to the coast of Labrador and parts of Greenland. Rapid regional warming at the beginning of the Early Holocene and continuing into the Middle Holocene coincided with the abandonment of fluting technology and the development of other point styles and hunting technologies. By the time of the Middle Holocene (3500 BCE), evidence indicates that all of arctic Canada, Greenland, and Alaska were inhabited by peoples who utilized a variety of notched, stemmed, and lanceolate (spear-shaped) projectile points. This tool kit is characteristic of peoples who practiced hunting and gathering lifeways that were dependent upon maintaining access to key faunal resources. Specifically, evidence indicates that caribou were an important resource not only in the diet of these peoples but also in other aspects of their lifeway pattern as they followed the caribou herds between their winter breeding grounds and their summer feeding grounds.

Evidence indicates that during the fall and winter months arctic peoples followed the caribou from tundra areas to forested taiga regions or exposed ridges and hillside slopes, while during spring and summer months they followed the caribou into lower-lying resource-rich areas. Prior to the development of this subsistence pattern, archaeological evidence indicates that arctic peoples initially followed the caribou and other faunal resource northward from lower latitudes as a response to the climatic warming during the Middle Holocene. However, there is also limited evidence of continued occupation by people in some regions of the arctic from the early Holocene through the Middle Holocene. Despite this possible northward movement of peoples, and perhaps as a result, the variations found in lithic point styles associated with caribou are substantial, both in the form of the implements used and in the presence or absence of microblades in the assemblages. This heterogeneity in point styles has been used by some researchers to define specific prehistoric cultural groups.

Regardless of the cultural affiliation of these prehistoric hunting and gathering peoples, archaeological evidence indicates that the peoples of the Middle Holocene followed the caribou herds in their seasonal rounds between winter breeding grounds and summer feeding grounds. In this lifeway pursuit these people appear to have been highly skilled at hunting caribou with bows, arrows, and lances of both thrusting and throwing types. Evidence indicates that the bows were small, composite, and sharply recurved, while arrows had long, slender bone or antler foreshafts that ended either in blunt tips or in gouged-out beds for a stone tip. Help in hunting caribou and other large mammals was possibly further aided by large domesticated dogs. By the end of the Middle Holocene (around 2000 BCE), however, evidence indicates that the bow and arrow was dropped from these people's tool kit, as was the use of dogs.

Overall, the common weapon for taking caribou appears to have been the lance with a bone foreshaft and open-socked head. Pre-Dorset, Independence I, Saqqaq, and Arctic Small Tool cultures (all distinct archaeologically defined cultures) were associated with this technology,

although there was a wide diversity of specific traits unique to each of these cultures. The lance allowed large quantities of caribou to be taken, such as by driving them into lakes where they could be speared, as evidenced by the high concentration of caribou bones found in lakeshore sites. Similarly, the lance and the bow and arrow were ideal weapons for the taking of caribou at key geographic locations along the well-defined caribou migration routes, such as mountain passes and drainage systems.

Not only was the tool kit of these peoples geared toward hunting caribou, but so were other aspects of their lifeway. For example, evidence from Nain, located on the central Labrador coast, indicates that people used a variety of shelters that could be easily constructed and transported as the caribou moved from their winter grounds to their summer grounds. Settlement types included semisubterranean shelters or stone-lined tents that were probably caribou-skin-covered hemispherical tents made of flexible willow frames with unlined fireplaces located in the middle of the floors. Furthermore, these peoples' religious, ceremonial, and spiritual lives also revolved around the caribou to some extent.

—Peter N. Jones

Bibliography

- Anderson, Douglas D. "A Stone Age Campsite at the Gateway to America." *Scientific American* 218(6) (1968): 24–33.
- Campbell, John M. "The Kayuk Complex of Arctic Alaska." *American Antiquity* 25(1) (1959): 94–105.
- Campbell, John M, ed. *Prehistoric Cultural Relations between the Arctic and Temperate Zones of North America*. Montreal: Arctic Institute of North America, 1962.
- Cook, John P. "The Early Prehistory of Healy Lake, Alaska." PhD dissertation, University of Alaska, 1969.
- Dumond, Don D. "Toward a Prehistory of the Naden, with a General Comment on Population Movements Among Nomadic Hunters." *American Anthropologist* 71(5) (1969): 857–863.
- Fitzhugh, William W. "Preliminary Cultural History of Nain, Labrador: Smithsonian Fieldwork, 1975." *Journal of Field Archaeology* 3(2) (1976): 123–142.
- Helmer, James W. "Resurrecting the Spirit(s) of Taylor's Carlsberg Culture: Cultural Traditions and

Cultural Horizons in Eastern Arctic Prehistory.” In *Threads of Arctic Prehistory: Papers in Honor of William E. Taylor, Jr.*, edited by D. Morrison and J.-L. Pilon. Ottawa: Archaeological Survey of Canada, Canadian Museum of Civilization, 1994.

Newby, P., et al. “A Paleoindian Response to Younger Dryas Climate Change.” *Quaternary Science Reviews* 24(1-2) (2005): 141-154.

Food Management on the Northwest Coast, 4000–1000 BCE

The Northwest Coast of North America, stretching from the Copper River in Alaska south to the present-day Oregon and California border, was one of the first areas in the Americas to be peopled. The area also possibly functioned as a corridor in the initial peopling of the Americas. Because people had lived and subsisted along the Northwest Coast since the first settlement of the Americas, the people of this region developed a complex relationship with the ecology and resources there. There is strong empirical evidence that by the Middle Holocene (5500 BP) the peoples of the Northwest Coast were actively, and inactively, managing the subsistence resources of their local environment.

The recovery of seal and sea lion remains from archaeological sites, along with shell midden remains on northern coastal islands of the Northwest Coast, indicates that the peoples of the region used seaworthy canoes and sophisticated technology in their subsistence pursuits. This technology allowed prehistoric Northwest Coast peoples to exploit seals and sea lions along the coasts of California and Oregon. Originally it was argued that these peoples exploited these resources to the point of destruction. However, recent evidence argues that these peoples managed this resource primarily through the incorporation of other marine mammal resources of the region. Farther north along the coast of present-day British Columbia, seaworthy canoes and sophisticated technologies allowed Northwest Coast peoples to exploit large quantities of shellfish, as evidenced by large shell middens on the Queen Charlotte Islands. Archaeological evidence indicates that Middle Holocene peoples of the Northwest Coast did not overexploit this resource.

Part of the food-managing strategy of Northwest Coast peoples during the Middle Holocene was in the shifting of sites for food harvesting and processing. Shell midden sites from the central coast of British Columbia, for example, suggest that resource exploitation in this region was strongly linked to the gradual long-term decline in relative sea levels during the Middle Holocene. Thus, Northwest Coast peoples must have successfully managed this resource over a long period of time.

Another food-management strategy used during this period is the continued long-term reliance on salmon (*Oncorhynchus*). This evidence indicates that salmon exploitation took place at a manageable level, allowing for continued yield. For example, ancient DNA identification of salmon remains from the site of Namu, a prehistoric permanent village on the central coast of British Columbia, shows use of a variety of salmon species with an emphasis on pink salmon during the Middle Holocene. These results support arguments that salmon exploitation took place at a manageable level by peoples of the Northwest Coast during the Middle Holocene. In fact, evidence from throughout the Northwest Coast indicates that sockeye (*O. nerka*), pink (*O. gorbuscha*), coho (*O. kisutch*), chum (*O. keta*), and chinook (*O. tshawytscha*) varieties of salmon were harvested at sustainable levels from the Middle Holocene (2500 BCE) to the present.

Further evidence for such a conclusion comes from the Fraser River and its tributaries, where the people of the Middle Holocene appear to have actively managed the salmon population in order to support the relatively large population of peoples living in the area at the time. Along the Fraser River in the Lillooet region of British Columbia, villages ranged from 500 to 1,000 individuals toward the end of the Middle Holocene. Salmon heavily dominated the subsistence economy of these groups, who appear to have effectively managed this food resource for several thousand years in order to maintain such a population density. Toward the end of the Middle Holocene (about 2000 BCE), catastrophic landslides along with persistent forest fires and summer droughts altered the local ecosystem enough to have caused this resource

to collapse, which was followed by the subsequent collapse of these population groups.

Farther south along the coast of Washington at the Ozette site, evidence indicates that a wide range of both marine and land resources were manageably exploited. Seal, whale, halibut, lingcod, salmon, and shellfish were all taken by Middle Holocene peoples who occupied this site throughout the year. Not only were marine resources actively managed by Northwest Coast peoples during the Middle Holocene, but so were land faunal resources such as blacktail deer (*Odocoileus hemionus*), the Dall sheep (*Ovis dalli*), and breeding colonies of seabirds that seasonally provided nesting bird and egg resources.

Although most archaeological reports have primarily focused on faunal resource management, floral resources were equally important, and there is evidence that these resources were also managed by Northwest Coast peoples. For example, the use of red elderberry fruit on the northern Oregon coast appears to have been quite extensive despite the fruit and its seeds being somewhat toxic. In fact, more than 40 berries and fruits were available in some part of the area to peoples of the Middle Holocene and include gooseberries, currants, salmonberries, serviceberries, and wild raspberries, blackberries, and strawberries. Likewise, many plants with edible roots or rhizomes were manageably harvested by peoples up and down the Northwest Coast during the Middle Holocene, including eelgrass (*Zostera marina*), Pacific cinquefoil or silverweed (*Potentilla pacifica*), wild caraway (*Perideridia gairdneri*), and hemlock parsley (*Conioselinum pacificum*).

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Bibliography

- Bonnichsen, R., and K. Turnmire. "An Introduction to the Peopling of the Americas." In *Ice Age People in North America: Environments, Origins, and Adaptations*, edited by R. Bonnichsen and K. L. Turnmire. Corvallis: Oregon State University Press, 1999.
- Cannon, A. "Settlement and Sea Levels on the Central Coast of British Columbia: Evidence from Shell Midden Cores." *American Antiquity* 65(1) (2000): 67–77.
- Cannon, A., and D. Y. Yang. "Early Storage and Sedentism on the Pacific Northwest Coast: Ancient

DNA Analysis of Salmon Remains from Namu, British Columbia." *American Antiquity* 71(1) (2006): 123–140.

Fladmark, K. R. "The Early Prehistory of the Queen Charlotte Islands." *Archaeology* 32(2) (1979): 38–45.

Hayden, B., and J. M. Ryder. "Prehistoric Cultural Collapse in the Lillooet Area." *American Antiquity* 56(1) (1991): 50–65.

Lyman, R. L. "On the Evolution of Marine Mammal Hunting on the West Coast of North America." *Journal of Anthropological Archaeology* 14(1) (1995): 45–77.

Exploiting Plant Life in the Great Basin

The Great Basin is a region encompassing more than 115,800 square miles (300,000 square kilometers) between the Sierra Nevada of California in the West and the Wasatch Range of Utah in the East. To the north the region is bounded by the lower Snake River plain in Idaho and to the south by the Grand Canyon and the Colorado River. The region is composed of a series of large internally draining basins in which seasonal lacustrine marshes and lakes form, providing a rich variety of plant life that was regularly exploited during the Archaic period. Likewise, these basins are divided by a series of north-to-south ranges that also provide floral resources in a seasonal cycle from the basin floor to the upper mountain slopes along with riverine-based floral resources that grow in the perennial mountain streams. During the Archaic period, Great Basin peoples exploited plant life for a variety of reasons including subsistence, shelter, and technological purposes.

In the western Great Basin, for example, evidence indicates that 9,000–6,000 years before the present Great Basin peoples practiced a lakeshore lifeway adaptation that consisted of a generalized subsistence pattern emphasizing lacustrine and riverine food resources. By 6,500 years before the present evidence indicates that this lifeway pattern expanded to include a basic hunting and gathering subsistence regime that included the exploitation of plant life in the development of basketry and weaving. During this period ground-stone food-processing implements (e.g., manos and metates) also became common,

indicating an increased use of seed-bearing plants. These floral resources generally consisted of a variety of seed-bearing grasses, wetland plants, reeds, and desert scrubs, and there is some evidence of piñon nut exploitation in some of the upland areas at this time. Later a more dramatic series of changes in lifeway patterns took place, which is reflected by a major intensification in land use that included the nearly simultaneous appearance of intensive piñon nut procurement from upland camps and cache sites along with the establishment of seasonal alpine villages to exploit mountain floral resources. Coincident with these changes in the western Great Basin is evidence for the abandonment of some logistical hunting camps and the mass processing and storage of dryland seeds using specially prepared threshing floors. Throughout this period structures appear to have consisted of simple plant-based shelters (although caves were also used) along with the use of woven mats made out of reeds and marsh-based plant fibers.

Evidence for plant-life exploitation during the Archaic is also found in the central Great Basin, although the evidence is not as extensive. For example, analysis of paleofeces from Hidden Cave in western Nevada indicates exploitation of plant life throughout the Archaic period. Faunal and floral macrofossils, coupled with pollen analysis, evidences a dependence on wetland food resources augmented with small seeds from dryland plants. However, fecal steroid analysis indicates that the primary occupants of the cave were probably women, arguing for a differentiation in subsistence roles during the Archaic in this part of the Great Basin. This is most likely the result of the demanding environment of the central Great Basin at this time as compared to the western or eastern portions of the region where perennial mountain water sources were more common, requiring men to hunt for faunal resources while women gathered floral resources around centralized camps. Plant life was also exploited in the making of mats and clothing, as evidenced by the number of woven fragments and plant materials recovered from Great Basin cave sites. For example, at Danger and Hogup caves, the greater bulk of the deposits in the caves was made up of plant-life material, includ-

ing grasses, twigs, seed husks, and bulrushes, brought to the site by Great Basin peoples.

During the Archaic period, the people who lived in the eastern Great Basin followed similar social and subsistence practices as in the western part of the region. Initially most sites were located along prehistoric lakeshores in the basin floors. Later, Great Basin peoples also occupied upland regions that were situated in the piñon-juniper ecozones, allowing access to sage and grass communities as well as higher montane resources. Subsequently, corn agriculture was adopted from the Southwest in some areas of the eastern Great Basin, although evidence indicates that the adoption of agriculture in the region was short-lived.

Not only was plant life exploited for subsistence purposes, but Archaic peoples of the Great Basin also used floral resources in the construction of shelters, mats, clothing, and especially baskets. The exploitation of plant life in the construction of baskets was so important, in fact, that it has been possible to identify at least three distinct basketry-manufacturing regions. Each region had special characteristics that delineated it from other basketry-manufacturing styles, such as in the northern Great Basin where at least 13 different basket wall-construction techniques have been identified. These include at least 6 different coiling techniques and 7 basic twining methods such as close simple twining, close diagonal twining, and open simple twining.

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Bibliography

- Adovasio, James M. Prehistoric Basketry. In *Handbook of North American Indians*, vol. 11, *Great Basin*, edited by W. D'Azevedo. Washington, DC: Smithsonian Institution, U.S. Government Printing Office, 1986.
- Aikens, C. Melvin. "Archaeology of the Northern Great Basin: An Overview." In *Man and Environment in the Great Basin*, edited by D. B. Madsen and J. F. O'Connell. Washington, DC: Society for American Archaeology, 1982.
- Bard, James C., Colin L. Busby, and John M. Findlay. *A Cultural Resources Overview of the Carson and Humboldt Sinks, Nevada*. Carson City, NV: Bureau of Land Management, 1981.
- Coltrain, Joan Brenner, and Steven W. Leavitt. "Climate and Diet in Fremont Prehistory: Economic

Variability and Abandonment of Maize Agriculture in the Great Salt Lake Basin.” *American Antiquity* 67(3) (2002): 453–485.

Eerkens, Jelmer W. “Privatization, Small-Seed Intensification, and the Origins of Pottery in the Western Great Basin.” *American Antiquity* 69(4) (2004): 653–670.

Rhode, D. “Coprolites from Hidden Cave, Revisited: Evidence for Site Occupation History, Diet and Sex of Occupants.” *Journal of Archaeological Science* 30 (2003): 909–922.

Thomas, David H. *Archaeology of Hidden Cave, Nevada*. Washington, DC: American Museum of Natural History, 1999.

Smaller Game in the Southwest

The Southwest is a region that extends from the Grand Canyon and the Colorado River in the north to the southern reaches of the Sonoran, Chihuahuan, and Mojave deserts. The western border of the region is bounded by the southern Colorado River and the Gulf of California, while the Guadalupe and Sandia Mountains loosely bound the eastern edge. Within this large region the geography and ecology vary greatly, although aridity is characteristic throughout the region. Prehistorically, the location of floral and faunal resources played a substantial role in the lifeway patterns of the people of the region because of these geographic and ecological factors. Prior to the domestication of various floral resources, especially corn, evidence indicates that prehistoric peoples of the region moved through different ecological zones in an annual cycle to take advantage of the seasonally available plant and animal resources. This lifeway pattern and its related technology are associated with what is known as the Archaic period and is represented by ground-stone seed-milling equipment and small atlatl-dart projectile points. This evidence indicates that the peoples of the region relied heavily on small game for much of their subsistence, which was supplemented by seasonal seed-bearing plants.

Smaller game played such a central role in Southwest Archaic peoples' lifeways that boundaries of foraging ranges moved to accommodate the shifting nature of resources in the region. This is evidenced by the variety of point styles and site locations found during the period. In

fact, Archaic period points have been recovered from a range of elevations and environmental zones across the Southwest, indicating seasonal population movements that exploited floral and faunal resources that occurred in distinctive ecozones along environmental and physiographic gradients. Based on projectile point distributions and data from obsidian sourcing studies, the scale of mobility and interaction across the region and between subregions was great. Lithic point styles that have been identified for the region and that date to the Archaic include unifacial and bifacial flaked points, long tapering-stemmed points, stemmed points, side-notched concave-based points, triangular concave-based points, and a wide variety of other lithic styles. All of these point styles appear to have been used in the procurement of relatively smaller faunal resources as compared to other regions, such as the Plains where Archaic peoples relied on bison and other large fauna. Procurement methods of Archaic peoples are little understood, although evidence indicates that a wide variety of techniques were used such as atlatls, spears, the bow and arrow, and various forms of traps and snares. Furthermore, because the region is marked by an arid ecosystem, Archaic peoples of the region were unable to rely heavily on floral resources until domestication and irrigation processes came into play at the close of the Archaic period.

For example, although evidence based on phytolith (archaeological remnants of plant cells) content of coprolites indicates that Archaic peoples relied on some noncultivated desert succulents (the agave and cactus families), other evidence indicates that the majority of the Archaic diet consisted of small game. The archaeological evidence shows that small game commonly taken by Archaic peoples of the Southwest include jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus auduboni*), deer (*Odocoileus hemionus*), antelope (*Antilocapra americana*), quail (*Callipepla squamata*), and javelina (*Tayassu tajacu*) along with a variety of other small mammals and fowl. In the San Francisco Peaks region of northern Arizona, for example, the prehistoric inhabitants of the region relied heavily on both jackrabbits and cottontails. Furthermore, studies of body part frequencies and

bone damage in the archaeological assemblages have shown that Archaic peoples of the region did not suffer from the extreme dietary stress that later affected people in the region when reliance on domesticated floral resources became more prevalent.

Small game played such a key role in people's subsistence regimes of the Southwest during the Archaic that a majority of archaeological site locations from this period reflect this subsistence regime. For instance, sites from the Rio Grande Valley and surrounding area indicate that Archaic peoples lived in small or open-air structures for intermediate to short periods of time in localities that were positioned in areas favorable for the taking of small game. Evidence also indicates that some of these locations were selected to take advantage of small game population peaks, which occur in the late spring and summer, although there is little evidence of long-term storage use during the Archaic.

Archaeological site locations suggest that similar subsistence patterns occurred across the Southwest during the Archaic, although variation did occur depending on subregional specifics. In the Willcox Basin of southeastern Arizona, for example, during the Archaic period inhabitants maximized resource exploitation of diverse nonlacustrine (nonlake) semiarid habitats by following a vertical seasonal round (a cycle of moving from high regions in the summer to low regions in the winter year after year). Survey data from several dozen sites further indicates that residential camps were relatively sedentary, while specialized task groups established specific sites that took advantage of the basin's small game faunal resources. Reliance on small game continued to be of importance after the Archaic period, which is generally held to end 3,200–2,500 years before the present with the arrival of agriculture.

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Bibliography

- Adams, Jenny. "Refocusing the Role of Food-Grinding Tools as Correlations for Subsistence Strategies in the U.S. Southwest." *American Antiquity* 64 (1999): 475–498.
- Ortiz, Alfonso, ed. *The Southwest*. Vol. 10. Washington, DC: Smithsonian Institution, 1983.

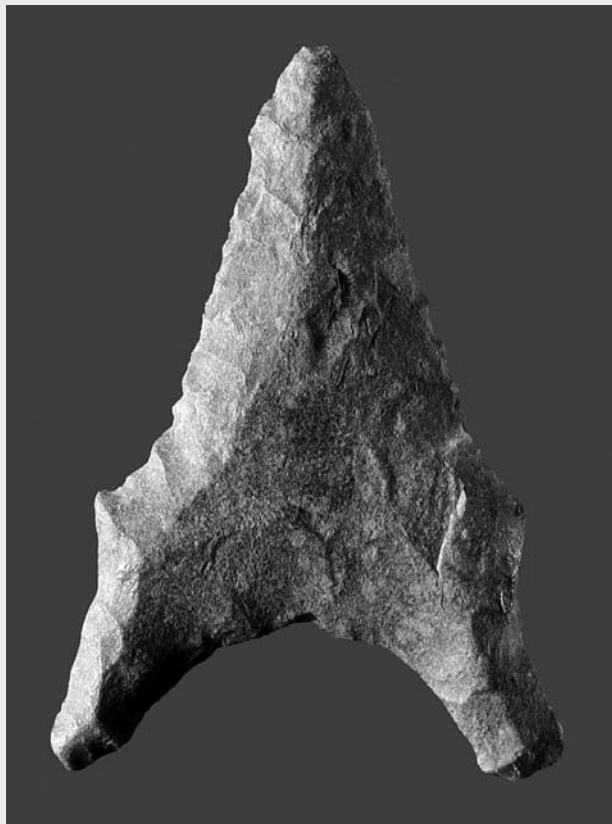
- Quirt-Booth, T., and K. Cruz-Urbe. "Analysis of Leporid Remains from Prehistoric Sinagua Sites, Northern Arizona." *Journal of Archaeological Science* 24(10) (1997): 945–960.
- Reinhard, Karl J., and Dennis R. Danielson. "Pervasiveness of Phytoliths in Prehistoric Southwestern Diet and Implications for Regional and Temporal Trends for Dental Microwear." *Journal of Archaeological Science* 32(7) (2005): 981–988.
- Stuart, David E., and Rory P. Gauthier. *Prehistoric New Mexico: Background for Survey*. Albuquerque: University of New Mexico Press, 1984.
- Waters, Michael R., and Anne I. Woosley. "The Geoarchaeology and Preceramic Prehistory of the Willcox Basin, SE Arizona." *Journal of Field Archaeology* 17(2) (1990): 163–175.
- Whalen, Michael E., and Paul E. Minnis. "Architecture and Authority in the Casas Grandes Area, Chihuahua, Mexico." *American Antiquity* 66(4) (2001): 651–668.

Hunting in the Eastern Woodlands

The Eastern Woodlands is a term used to designate the portion of North America east of the Great Plains and south of the boreal forests of the subarctic. Because this enormous region is so diverse, it is often divided into smaller units such as the Southeast, Northeast, and Midwest. Ecologically, the Eastern Woodlands are influenced by north to south trending temperature and plant-community gradients, which prehistorically created a variety of ecosystems throughout the region. Major physiographic features that also influenced these prehistoric ecosystems were the Coastal Plains, the Appalachian Mountains, the Central Lowlands in the interior north, and the Ozark-Ouachita hills in Missouri and Arkansas. Paleontological data indicates that the primary subsistence resources available in this region during prehistoric times were white-tailed deer, small game, fish, shellfish, various types of nuts, and wild seeds and roots.

The subsistence lifeway patterns in the Eastern Woodlands during the Archaic period (ca. 10,450–2350 years before present) consisted of a broad range of exploitative patterns ranging from hunting large and small mammals to fishing and gathering various floral resources, although

➤ DALTON TRADITION



Dalton projectile point from the Hardaway site near Badin, North Carolina, about 10,000 BCE. (Collection of the North Carolina Office of State Archaeology Research Center, Raleigh, NC)

The Dalton tradition is named after a distinctive type of lithic point found by S. P. Dalton in Missouri around 1948. Dalton points were thought to represent an early Archaic stage confined to Missouri, but current evidence indicates that these distinctive lithic points were ubiquitous throughout the Eastern Woodlands. The Dalton tradition is thought to date between 10,500 and 9,900 years before the present and was characterized by fluted points with lateral retouching usually obscuring all or most of each face. The point is commonly serrated, which has been taken to indicate that the main function of the point is for cutting meat. Small chert hammers, notched abraders, and end scrapers made on flakes are part of the tradition. Sites where Dalton tradition points have been recovered range from bluff shelters to open sites in the southeastern United States.

—Peter N. Jones

evidence indicates that the hunting of mammals played a significant role in most prehistoric Eastern Woodland peoples' diet. Projectile point sequences from the region begin with Dalton or Dalton-like points (10,700–10,200 years before present), and continue through side-notched (10,200–9650 years before present), corner-notched (9650–8850 years before present), and bifurcate forms (8850–7950 years before present), all of which were used in the hunting of mammals. Smaller side- and corner-notched points in a variety of regional styles followed these larger points until the end of the Archaic period, at which point evidence indicates that use of the bow and arrow began. It has been argued that these shifts in projectile point styles reflect shifts in how hunting weapons were used. For example, the shift from side-notched to corner-notched points is thought to have accompanied a change from thrusting spears to lighter darts propelled by an atlatl, while bifurcate forms are thought to have been adaptations for hunting particular forest game such as white-tailed deer (*Odocoileus virginianus*).

Evidence indicates that during the Early and especially Middle Archaic period, people practiced a hunter-gatherer economy based primarily along the floodplains and river bottoms where they hunted white-tailed deer, certain smaller game, and gathered seasonally available floral resources. This subsistence economy is thought to have been partially brought on by a change during the Middle Holocene from closed mixed deciduous forests to open xeric oak-hickory forests. This vegetation change and accompanying faunal change brought about a change in the overall subsistence economy of the prehistoric people of the area. For example, evidence from the Bluegrass site located in an interior upland drainage basin of southwestern Indiana suggests that white-tailed deer and hickory nuts became the basis of the subsistence economy during the Middle Holocene period.

Likewise, evidence from Martha's Vineyard (an island that is part of present-day Massachusetts) for this period indicates that people moved seasonally within their territory hunting white-tailed deer, with lesser meat taken from other species of birds, fish, and mammals. Similarly, evidence from the Koster site in southern Illi-

nois indicates that the people of the area relied primarily on hunting deer and small mammals, along with turkey and various migratory birds. In some regions archaeological data indicates that hunting primarily was a winter activity and that during summer months prehistoric peoples switched to more of a fishing and gathering subsistence economy. For example, the subsistence economy inferred from data of the interior Northeast indicates that during spring and summer people occupied riverbanks where shellfish, fish, turtles, and migratory birds were taken, while during the winter months hunting camps were formed to exploit deer and other terrestrial mammals.

Data from the Lamoka Lake site in central New York and dating to 4500 years before present indicates that the site was used over a period of several seasons and that white-tailed deer were the most commonly taken species. Similar evidence comes from the Cole Gravel Pit site located on a terrace above the Genesee River, south of the present-day city of Rochester. There is also some evidence that deer were transported whole to these sites where they were processed for both meat and marrow.

Toward the end of the Archaic, prehistoric peoples in certain parts of the Eastern Woodlands began to rely on other resources besides mammals, such as fish and freshwater mussels. Likewise, cultivation of various floral resources was adopted by peoples throughout the region to various levels by the end of the Archaic period. However, the hunting of small mammals continued to be a valuable resource, as evidenced by the Angel site. Located on the Ohio River and dating to the Late Archaic, this site has produced the remains of 26 different species of mammals, 5 of reptiles, 9 of fish, 32 of birds, 22 of mussels, and 15 of plants. The habitat preferences of the animals recovered from the site reflects a hunting subsistence economy based on the deciduous forest and forest-prairie edge.

—Peter N. Jones

Bibliography

Baden, William M., and Christopher S. Beekman. "Culture and Agriculture: A Comment on Sissel Schroeder, Maize Productivity in the Eastern

➤ FISHHOOKS IN LATE ARCHAIC NORTH AMERICAN SITES

Curved hooks of shell and bone used as fishhooks have been recovered from sites throughout the Americas dating to the Late Archaic period. A majority of these sites are located in California, such as on the Santa Barbara Channel Islands, on the islands farther south and more distant from the mainland, and on the coast from Point Concepcion to Santa Ana. Bone hooks have also been recovered from the lower Sacramento Valley and from coastal shell mounds in Humboldt County in northwestern California. Similarly, curved bone hooks of an open-throated straight-shanked form have been recovered from Late Archaic Mississippian sites of the eastern United States as well as from the Great Lakes, the St. Lawrence Valley, and northern New England. The majority of these fishhooks are made from abalone (*Haliotis*) or mussel (*Mytilus*), although bone fishhooks have also been recovered. The ubiquity of these hooks throughout North America attests to the importance of fish in the subsistence regimes of Late Archaic peoples.

—Peter N. Jones

Woodlands and Great Plains of North America." *American Antiquity* 66(3) (2001): 505–516.

Black, Glenn A. *Angel Site: An Archaeological, Historical and Ethnological Study*. Indianapolis: Indiana Historical Society, 1967.

Goodyear, Albert C. "The Chronological Position of the Dalton Horizon in the Southeastern United States." *American Antiquity* 47(2) (1982): 382–395.

Hadlock, Wendell S. "Bone Implements from Shell Heaps Around Frenchman's Bay, Maine." *American Antiquity* 8(4) (1943): 341–353.

Heizer, Robert F. "Curved Single-Piece Fishhooks of Shell and Bone in California." *American Antiquity* 15(2) (1949): 89–97.

Kidder, Tristram R. "Climate Change and the Archaic to Woodland Transition (3000–2500 cal BP) in the Mississippi River Basin." *American Antiquity* 71(2) (2006): 195–231.

Madrigal, T. Cregg, and Julie Zimmermann Holt. "White-Tailed Deer Meat and Marrow Return Rates and Their Application to Eastern Woodland Archaeology." *American Antiquity* 67(4) (2002): 745–759.

- Morse, Dan F., and P. A. Morse. *Archaeology of the Central Mississippi Valley*. New York: Academic Press, 1987.
- Ritchie, William A. *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A Study in Coastal Ecology and Adaptation*. Garden City, NY: Natural History Press, 1969.
- Sherwood, Sarah C., et al. "Chronology and Stratigraphy at Dust Cave, Alabama." *American Antiquity* 69(3) (2004): 533–554.
- Stafford, C. Russell, Ronald L. Richards, and C. Michael Anslinger. "The Bluegrass Fauna and Changes in Middle Holocene Hunter-Gatherer Foraging in the Southern Midwest." *American Antiquity* 65(2) (2000): 317–336.
- Winters, Howard D. "The Riverton Culture: A Second Millennium Occupation of the Central Wabash Valley." In *Illinois State Museum Report of Investigation*, Vol. 13. Springfield: Illinois State Museum, 1969.

■ Introduction: Urbanization and Demographic Trends

The first cities were formed prior to 4000 BCE. By that time, cities and villages had become the dominant settlement types for much of the world (excepting North America, non-Egyptian Africa, and Australia). For those parts of the world where cities dominated, numerous new possibilities and problems arose from the fact that many people were living in close proximity to one another. In demographic terms, much of the population still remained in rural areas, which was essential for food production. However, power shifted to the cities; the city became the economically, politically, and religiously central type of settlement.

In order to study cities and the demographic patterns associated with urbanism, archaeologists use methods derived from the study of modern human geography. Of primary concern are settlement patterns: in other words, the spatial distribution of human settlements (of different sizes) and the changes in that distribution over time. By studying these spatial and temporal relationships, archaeologists can get a solid understanding of larger trends in human settlement behavior. This can be very revealing. For example, Indus Valley sites seem to disappear at about the same time that sites along the Gangetic Plain appear. By tracking changes in settlement patterns over time, archaeologists have been able to demonstrate that as river systems associated with the Indus Valley people disappeared, these people moved to other locations, and gradually settlements shifted toward the Gangetic Plain.

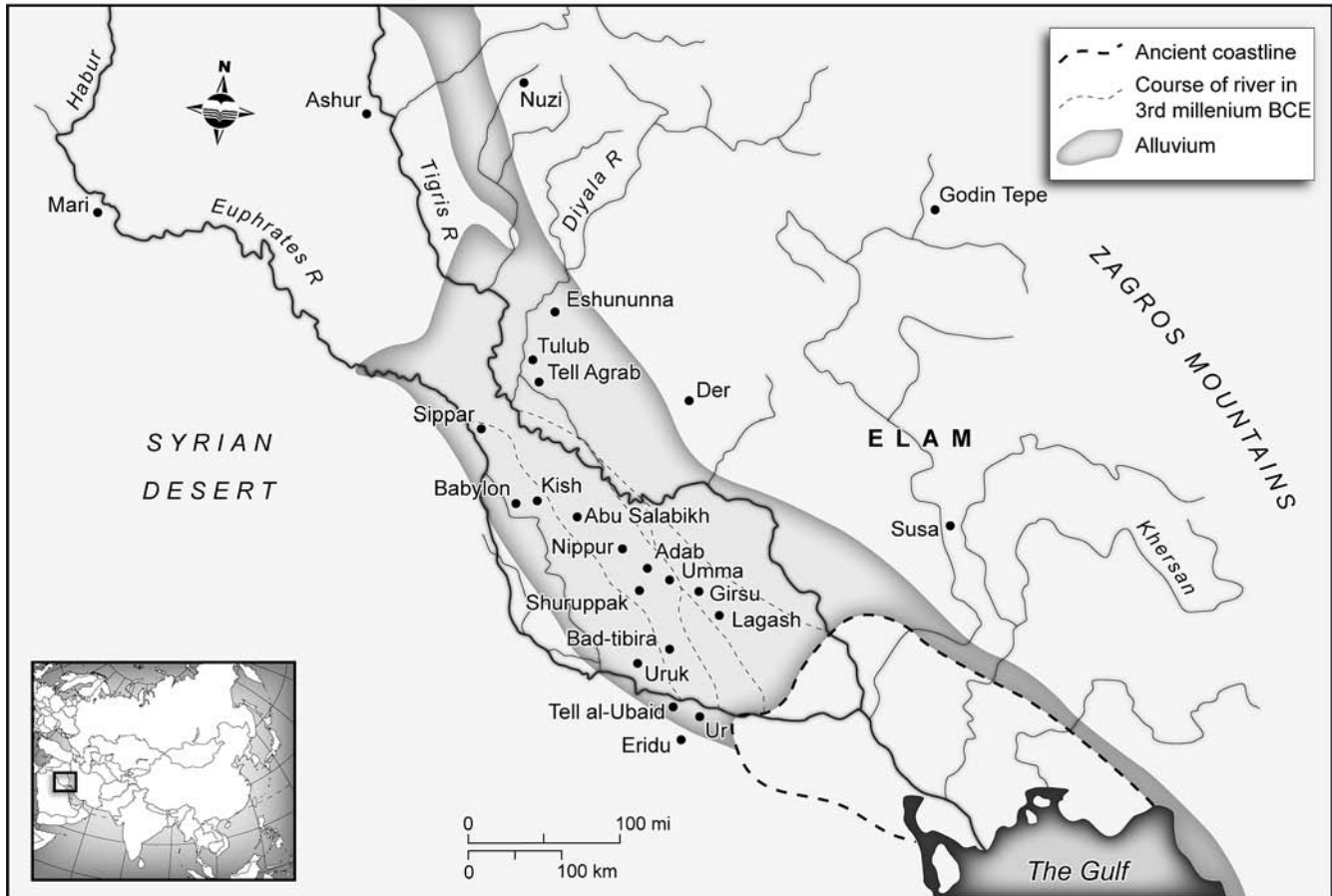
Within a given settlement system, there is bound to be a hierarchy of sites. These hierarchies are often reflected in the relative size of the sites. That is to say, large cities are most powerful, followed by medium-sized cities, followed by villages and hamlets. Usually larger centers hold the most economic power in a settlement system, but this is not the only type of power. Think of New York City in the modern United States; it is clearly the largest city in North America and holds substantial economic power in that continent. Yet it has no formal political power in Canada and Mexico, while a much smaller city—Washington DC—is the capital of the United States, not New York. Likewise, New York City has virtually no religious authority. The same is true for ancient settlement patterns, so it is very important for archaeologists to identify political, economic, and religious capitals within a given settlement system.

—Kevin M. McGeough

The Explosion of Cities in the Near East

Southern Mesopotamia, during the fourth millennium, experienced an increase in the number of populated sites. Scholars still debate the reasons for this increase, which seems to be too large to be explained by just normal population growth. Toward the end of the fourth millennium BCE a small region located near the head of the Persian Gulf experienced a sudden growth

EXPLOSION OF CITIES



in urbanism. One site, the city of Uruk, surpassed all others as an urban center surrounded by a group of secondary settlements. It covered approximately .96 square miles (250 hectares) and has been called the “the first city in world history.” The city was ruled by a man depicted in art with many religious functions. He is often called a priest-king. Underneath this office was a stratified society in which certain professions were held in high esteem. One of the earliest written texts from Uruk provides a list of 120 officials that includes the leader of the city, the leader of the law, the leader of the plow, and the leader of the lambs as well as specialist terms for priests, metalworkers, potters, and others.

At present it is not known how many other large urban sites existed in close proximity to Uruk due to the difficulty of excavating levels that date to this early period. To the east of south-

ern Mesopotamia lay a region located below the Zagros Mountains called Susiana. The name reflects the civilization centered on the site of Susa. There temples were built, and clay tablets were inscribed with numerals and word signs. Examples of Uruk-type pottery are found in Susiana as well as in other sites in the Zagros Mountains and in northern and central Iran, attesting to the important influence of Uruk culture. Uruk culture also spread into Syria and southern Turkey, where Uruk-styled buildings were constructed in urban settlements.

The period of Uruk expansion and cultural influence and possibly political influence came to an end around 3100–3000 BCE. The monumental buildings of the city were razed, and the religious quarters were leveled. The city remained, however, and new competing city-states emerged. During the approximate 550-year period that

THE SUMERIAN KING LIST

This text is best known from manuscripts dated almost 700 years after the end of the Early Dynastic period. The author assumes that there was only one legitimate divinely appointed ruler for any one period of time and that political hegemony was restricted to a limited number of city states.

“After the kingship descended from heaven, the kingship was in Eridug. In Eridug, Alulim became king; he ruled for 28800 years. Alagar ruled for 36000 years. 2 kings; they ruled for 64800 years. Then Eridug fell and the kingship was taken to Bad-tibira. . . . Then the flood swept over.

After the flood had swept over, and the kingship had descended from heaven, the kingship was in Kish. In Kish, Gushur became king; he ruled for 1200 years. . . . Then Kish was defeated and the kingship was taken to E-ana. In E-ana, Mesh-ki-ag-gasher, the son of Utu, became lord and king; he ruled for 324 years. Mesh-ki-ag-gasher entered the sea and disappeared. Enmerkar, the son of Mesh-ki-ag-gasher, the king of Uruk, became king; he ruled for 420 years. 745 are the years of the dynasty of Mesh-ki-ag-gasher . . . ; he ruled for 5 + x years. Lugalbanda, the shepherd, ruled for 1200 years. Dumuzid, the fisherman whose city was Kuara, ruled for 100 years. He captured En-me-barage-si single-handed. Gilgamesh, whose father was a phantom (?), the lord of Kulaba, ruled for 126 years. Ur-Nungal, the son of Gilgamesh, ruled for 30 years. Udul-kalama, the son of Ur-Nungal, ruled for 15 years. La-ba'shum ruled for 9 years. En-nun-tarah-ana ruled for 8 years. Mesh-he, the smith, ruled for 36 years. Til-kug (?) . . . ruled for 6 years. Lugal-kitun (?) ruled for 36 (or 420) years. 12 kings; they ruled for 2310 years. Then Uruk was defeated and the kingship was taken to Ur.”

—*Ira Spar*

Source

Jeremy Black, et al., *The Electronic Text Corpus of Sumerian Literature*, The Oriental Institute, University of Oxford, 1998–, <http://www-etcsl.orient.ox.ac.uk/>.

followed, called by modern scholars the Early Dynastic period, written records inform us of the rise of the Sumerian cities of Adab, Kish, Shuruppak, Nippur, Umma, and Uruk as well as three foreign centers, one at Awan in the east, Hamazi in the north, and Mari located to the north on the Euphrates in Syria.

At the end of the third millennium a group of legendary epics was recorded in Sumerian cuneiform that relates to the exploits of early rulers. These accounts recount military victories and adventures. These narratives centered on the exploits of three kings from Uruk: Enmerkar, Lugalbanda, and Gilgamesh. Exploits of kings from other cities have at present not been discovered. The most important text describing the dynasties and central cities of southern Mesopotamia during the Early Dynastic period is called the Sumerian King List. Although composed at the end of the third and beginning of the second millennium BCE, it remains the most important source for understanding the rise of competing city-states. According to this text, kingship descended from heaven in a period before the flood. At that time eight mythological kings ruled for a total of 241,200 years. Another Sumerian composition called the “Rulers of Lagash” somewhat explains these fantastic numbers. It states that in the early days after the flood when kingship was reestablished, “the carefree youth of man lasted for 100 years and, following his upbringing, he lasted for another 100 years.” Kingship following the flood was then centered in local dynasties, which held political sway for short periods of time. At present it is not possible to determine which of these early rulers were real kings or legendary rulers vaguely recalled from now lost oral traditions.

By circa 2500 BCE urban centers of over 100 acres dominated the landscape of southern Mesopotamia. Land was held by private families and in estates controlled by the king and temple. Each city had a patron deity, and the city's temple functioned as a center for the receipt and redistribution of agricultural resources. The temple was the largest building in the city, and the god together with his or her household was thought to dwell there. Smaller temples for lesser deities were scattered throughout the cities.

Kings were both administrators and war leaders. The population was divided between speakers of Sumerian and a Semitic language that some scholars call proto-Akkadian. It is not known if ethnic rivalries contributed to the political alliances and warfare that characterized the Early Dynastic period.

—*Ira Spar*

Bibliography

- Algaze, Guilhermo. *The Uruk World System*. Chicago: University of Chicago Press, 1993.
- Liverani, Mario. *Uruk: The First City*. London: Equinox, 1998.
- Pollock, Susan. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press, 1999.
- Roaf, Michael. *Cultural Atlas of Mesopotamia*. New York: Facts on File, 1996.

The Uruk Period— Shifting Settlements

The Uruk period (4000–3200 BCE) marks the first large-scale urbanization of Mesopotamia. What is remarkable is the scale of the change seen between the end of the earlier Ubaid period and the end of the Late Uruk period. While the Ubaid period was marked by small sites of less than about 25 acres (10 hectares) evenly distributed over the alluvial plains of the Tigris and Euphrates rivers, the Uruk period sees the creation of cities up to about 620 acres (250 hectares) in size surrounded by hundreds of smaller sites and with a cultural impact that was felt as far away as Egypt and Afghanistan.

During the Early and Middle Uruk periods, settlement in the region became much denser and was centered on the city of Nippur (60 percent of the population of Mesopotamia lived near Nippur). A vast increase in both the number of sites (more than 100 around Uruk alone) and the size of sites was seen. Uruk at this time was already more than 175 acres (70 hectares) in size, and several other cities of more than approximately 75 acres (30 hectares) were already established. In the Late Uruk the center shifted to the city of Uruk (60 percent of Mesopotamians now lived near Uruk), and Uruk itself doubled in size to a massive 620 acres (250 hectares).



Ruins of the ancient Sumerian city of Uruk in present-day Iraq. (Nik Wheeler/Corbis)

It was now large enough to house 20,000–40,000 people, making it probably the largest population center in the world of its day. This initial shift south may have come as a response to a change in the courses of the Tigris and Euphrates and of their smaller tributaries as well as from the need to find room for the growing population. Furthermore, much of the southern portion of Mesopotamia in the earlier part of the Uruk period may still have been too marshy to support the agricultural capacity and population of large cities.

As the climate changed, populations in the north of Iraq also began to move farther south into the plains, particularly around the Zab and Diyala river regions. This period was also marked by expansion of the culture outside of the heartland of Mesopotamia into Syria, Iran, and Turkey. Initially, this expansion probably took the form of traders moving outside their normal sphere looking for new sources of trade goods and raw materials. Iran and the east provided materials such as chlorite and lapis lazuli, while the northwest provided timber, copper ore, and workable stone. At first these traders likely did not settle permanently in the region, but over time they came to establish dedicated neighborhoods of Mesopotamian expatriates living locally for at least part of the year in order to conduct trade. This is seen at sites in the north, where abundant workable stone was available, yet the inefficient clay sickles used in the south were being used alongside the more efficient flint sickles

used by local inhabitants. No corresponding shift of these populations southward into lowland Mesopotamia was seen, since they benefited more by staying on the periphery and providing the necessary trade goods. By the end of the Late Uruk period, however, this trade had become so productive that the cities of lowland Mesopotamia established permanent fortified colonies such as Habuba Kabira in Syria.

—David R. Lipovitch

Bibliography

- Nissen, Hans J. "Uruk: Key Site of the Period and Key Site of the Problem." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate. Wiltshire, UK: Aris and Phillips, 2002.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford, 2000.
- Rothman, Mitchell S. "Tepe Gawra: Chronology and Socio-Economic Change in the Foothills of Northern Iraq in the Era of State Formation." In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate. Wiltshire, UK: Aris and Phillips, 2002.

Rise and Fall of Minoan Civilization

Crete has been inhabited since at least the seventh millennium BCE, with the earliest settlements, probably of farmers, appearing at Knossos. The Early Minoan period is subdivided into three periods as originally designated by Sir Arthur Evans. The first two periods are called Prepalatial, as there is no evidence of large-scale communal buildings in Crete at this time. Instead, in the Early Minoan I and II periods, we see the rise of villages, notably at Haghia Triadha (Holy Trinity), Gournia, Knossos, Mallia, Mochlos, Myrtos, Palaikastro (Old Castle), Phaistos, and Vasiliki. The evidence from these sites suggests an undifferentiated society where most people were probably farmers who also took part in other crafts, such as pottery and weaving, during rests from fieldwork. Society seems to have been based on individual family units, with larger family units living together in village-like communities.

Changes occurred in the Early Minoan period that transformed the somewhat egalitarian farmer community into a political and social hierarchy. A hierarchy of settlements developed as some Early Bronze Age communities grew much larger than others. Knossos was always the largest, achieving a size of five hectares already in the Early Bronze Age. Phaistos, Mallia, and Mochlos, however, grew enough to absorb their neighbors. As early as the Early Minoan II and III periods, Palaikastro and Knossos begin to show elements of palatial architecture, such as monumental architecture and copious storage facilities. These new buildings were much larger than the simple homes of the Early Bronze Age Minoans, and it would appear that one of their original purposes was the storage of agricultural surplus. Orchard horticulture at these large sites indicated long-term planning and the emergence of a managerial class. The tombs of Mochlos, with a variety of elaborate tombs indicating great expenditures of wealth as well as more humble tombs, revealed that social differentiation was already beginning in the Early Minoan period.

Perhaps the most significant development in Minoan Crete is the rise of the palaces, which first occurred at the end of the twentieth century BCE—the Middle Minoan or First Palace period—at Knossos, Phaistos, and Mallia. The creation of the palaces indicates a new societal organization in Minoan Crete, with a supposed elite class (those who inhabited the palaces), occupational differentiation and craft specialization, and state control over long-term planning and trade, both domestic and foreign. The fact that the three earliest palaces are similar in plan also suggests that there was island-wide trade and communication by the Early Minoan III–Middle Minoan I period, indicating the beginnings of a homogeneous Minoan culture.

Another significant distinction between Early Minoan and Middle Minoan Crete was the rise of craft specialization. The high quality of such artifacts as metal objects, pottery, stone, and seals, as well as the elaborate palaces themselves, shows that professional stonemasons, metallurgists, and other artisans were now prevalent in Middle Minoan Crete. But there were other, more significant changes in Middle Minoan society,

specifically in foreign relations. During the Early Minoan III period, it is unlikely that Crete had any direct or long-standing trade links with Egypt. This picture changed dramatically in the First Palace period, when direct contacts emerged between Crete and Egypt. To the north, the main contacts occurred between Crete and the Near East. Crete's main trading partners were the western coast of Anatolia, especially the site of Miletos, and the islands off of Turkey's southern coast, especially Rhodes. The Minoans also made their first attempts at colonization outside of Crete; evidence suggests that the Minoans may have settled at their earliest known colony at Kastri on the island of Kythera during the Early Minoan II period. Other early colonies included the site of Trianda/Ialysos on the island of Rhodes, founded at the end of the First Palace period between Middle Minoan I and Middle Minoan II, and a colony at Iasos in mainland Turkey, settled from the Middle Minoan II period onward.

The trend toward larger settlements during the Early Bronze Age culminated with the rise of towns in the Middle Minoan period. Large towns such as Gournia and Palaikastro are distinguished by clearly delineated, somewhat regular streets creating blocks of multi-room, two-story houses. By the Second Palace period, such towns grew even larger and maintained community-oriented facilities such as public shrines. Some villages clearly defined their regional territory in the Middle Minoan period, notably Aghia Photia (Holy Light), which was entirely surrounded by a stone circuit wall punctuated by stone towers. The growing contacts and trade with regions outside of Crete, and especially with the Near East, prompted the growth of port cities.

On the whole, the First Palace period was a productive time for the Minoans. However, a volcano on nearby Thera experienced a massive eruption in approximately 1640 BCE, taking much of Thera with it and causing considerable real estate damage on Crete. But the Minoans emerged from the literal ashes of their Middle Bronze Age society to create an even more glorious Late Bronze Age society. This apex of Minoan civilization took place between Middle Minoan III and Late Minoan I, also known as the Second Palace period, roughly between 1640

and 1450 BCE. The Minoans rebuilt their palaces on an even grander scale, creating monumental structures at Knossos, Phaistos, Mallia, and Zakro. These palaces shared a number of similar features and styles, which can not only be attributed to the fact that they served similar functions, but also to close connections that emerged throughout Crete during this period. Island-wide communications are also evident in the pottery dating from that period. Coarse wares (simple pots used mainly for food preparation and transportation) from eastern and central Crete show up throughout the island, indicating island-wide trade in specialized commodities.

Perhaps as a result of improved communications and contact, or perhaps resulting in them, social organization became even more elaborate during this period. At the pinnacle of this society, as previously mentioned, are the palaces, although who actually ran the palaces is still a matter of debate. Greeks who lived 1,000 years later told stories of three brothers—Minos, Rhadamanthys, and Sarpedon—who were the kings of Knossos, Phaistos, and Mallia, respectively. By contrast, the Bronze Age evidence seldom depicts kings; rather, females predominate in the artwork from that period, leading some to suggest that Crete was ruled by women, either in the function of queens or priestesses.

Regardless of who ran the palaces, by the Second Palace period a new level of bureaucracy emerged in Crete, visible in a new architectural structure—the villa. There were three distinct types of villas throughout Crete: country villas, which were fairly independent entities; manorial villas, which were associated with towns and villages; and urban villas, which were located in the cities, including one located right beside the palace of Knossos itself. The country villas were equipped for industrial production, storage, and religious/ritual use as well as domestic activities. The manorial villas were usually more oriented toward storage, and the urban villas could provide little more than a household unit with possible religious functions. However, all villas seem to have performed one common function—to serve as a liaison between the palaces and the rest of the community. Thus, as opposed to the roughly two-tiered bureaucracy of the First Palace period, the Second Palace period

appears to have had a three- or even four-tiered system, with palaces at the top, villas and cities in the middle, and villages and farmlands at the bottom. Nevertheless, this social hierarchy does not seem to have been as exclusive as those in many contemporary societies. The boundaries between palace and village, or villa and village, were not so clear (at least in modern excavations), suggesting a certain amount of free access on the part of all members of society to the areas of power. This freedom of access probably not only contributed to the general lack of warfare on Crete in the Second Palace period, but also served to homogenize the society, whereby all members engaged in similar religious rituals and bureaucratic practices.

The general peace and stability of Crete at this time are particularly significant in light of the general growth in population discernible in the seventeenth and sixteenth centuries BCE. Ultimately, the Minoans decided to stretch out into the eastern Mediterranean, continuing the process of colonization that they had begun in the preceding era. Many of the Cretan colonies were new foundations, whereby the Minoans settled previously uninhabited land. At other sites, the Minoans settled down among the native inhabitants, bringing aspects of Minoan culture such as pottery and architecture into the native culture. Often these colonies served not only to relieve overpopulation in Crete, but also to establish trade networks throughout the Aegean.

Beyond the Aegean, Minoan Crete had increasingly frequent contact with the great powers of the Near East during the Second Palace period. In Egypt, records from the reigns of Queen Hatshepsut and King Thutmose III mention “gifts” (more likely items for trade) brought by the “Keftiu,” who appear in Egyptian wall paintings dressed in Minoan-style garb. Pottery from the island of Cyprus and the eastern coastal areas of the Mediterranean appeared in increasing quantities in Crete during the seventeenth through fifteenth centuries BCE. Likewise, Minoan pottery began to appear in quantity on Cyprus in the Late Minoan IA period, and from Cyprus to Canaan to Egypt by Late Minoan IB.

Such was the power and influence of Minoan Crete at its peak. What brought an end to this great power in the middle of the fifteenth

century, at the break between Late Minoan IB and Late Minoan II, was not another natural disaster. To the contrary, invaders from the north—the Mycenaeans—brought about the end of the Minoan civilization.

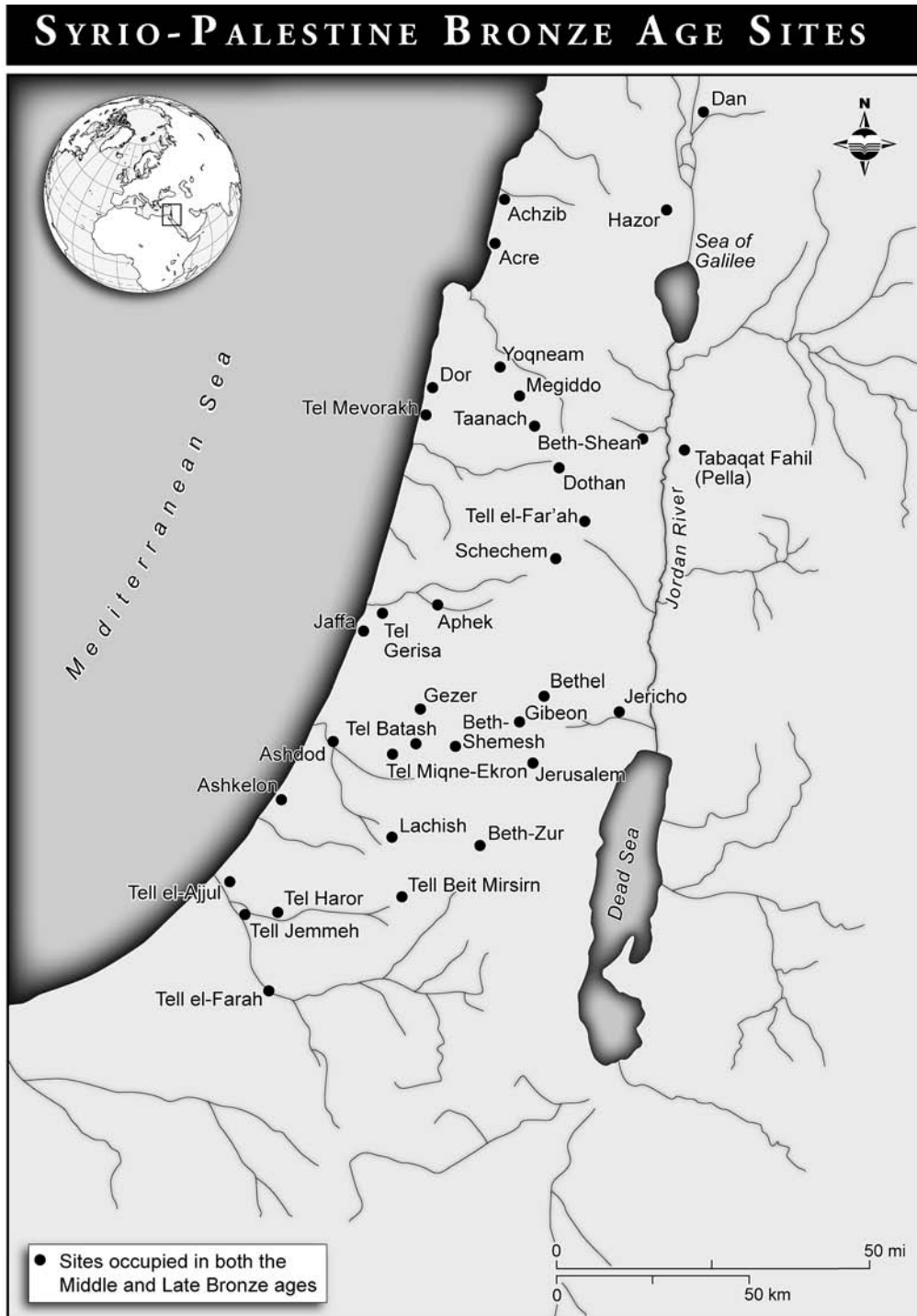
—Stephanie Lynn Budin

Bibliography

- Betancourt, P. P. “The Minoan Villa: The Definition of the Minoan Villa.” In *The Function of the “Minoan Villa,”* edited by R. Hägg. Stockholm: Paul Åströms Förlag, 1997.
- Budin, Stephanie Lynn. *The Ancient Greeks: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Cherry, J. “Evolution, Revolution, and the Origins of Complex Society in Minoan Crete.” In *Minoan Society*, edited by O. Krzyszkowska and L. Nixon. Bristol, UK: Bristol Classical, 1990.
- Coldstream, J. N., and G. L. Huxley. “The Minoans of Kythera.” In *The Minoan Thalassocracy: Myth and Reality*, edited by R. Hägg and N. Marinatos. Stockholm: Paul Åströms Förlag, 1984.
- Dickinson, O. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 1994.
- Niemeier, W.-D. “The End of the Minoan Thalassocracy.” In *The Minoan Thalassocracy: Myth and Reality*, edited by R. Hägg and N. Marinatos. Stockholm: Paul Åströms Förlag, 1984.
- Preziosi, D., and L. A. Hitchcock. *Aegean Art and Architecture*. Oxford: Oxford University Press, 1999.
- Warren, P. “The Genesis of the Minoan Palace.” In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Paul Åströms Förlag, 1987.
- Warren, P. *The Aegean Civilizations*. New York: Peter Bedrick, 1989.

The Early Bronze Age—The Rise and Fall of Urbanism in the Levant

The Early Bronze Age (EB), which runs from approximately 3300 BCE to 2300 BCE and is divided into three discreet periods (I, II, and III), marks the beginning of urban life in the Levant. After millennia of hunting and gathering followed by the first experiments with agriculture, groups of people began to establish the first semisedentary centers in the Neolithic and Chalcolithic periods. By the end of the Chalcolithic period, large groups of pastoral nomads living



on the margins of the Negev Desert had begun to establish permanent centers where their elites lived, where regular religious events were held, and where their dead were buried. With the end of this period, there appears to have been a change in climate that resulted in these marginal

areas becoming more inhospitable. The survivors of these cultures eventually settled along the more fertile coastal plains and lowlands and established the first urban centers. Over the thousand years of the EB I-III, these large villages develop into numerous small cities and then into a

handful of well-fortified cities before finally collapsing at the end of the EB III and returning to pastoral nomadism.

At the beginning of the Early Bronze Age, a dramatic growth is seen in the number of settlements in the region and in the density of population. Areas that had been heavily populated in the preceding Chalcolithic period are either partially or totally depopulated. Even when sites are found in these regions, they appear on virgin soil. New sites, however, pop up all over the rest of the Levant.

It is likely that the economic focus at this time had switched from pastoral herding to full-scale agriculture. The sites consist primarily of unfortified villages in the regions of the country with the most fertile but easily maintained soil. Sites were generally located so as to best control communication routes and access to water. Given that the technology to build plaster-lined cisterns was not yet available, sites were limited in general to locations with an ample natural supply of water.

By the end of the EB I, the population of the region had grown quite dramatically. This would have created new pressures and new incentives to build larger, more complex centers. Furthermore, the EB I corresponds with the rise of dynastic Egypt. This resulted in an even greater need to control access to resources and communication routes. Many of the sites founded in the EB I became major population centers during the EB II. Some of these centers grew at the expense of smaller sites, which were depopulated as their people moved to the larger urban centers. By the time urbanization in the region had peaked during the EB II, more than 1,500 acres of urban area existed in the Levant, representing a population of at least 150,000 or more. For the first time many of these centers began to be substantially fortified, with sites having city walls 9–13 feet (3–4 meters) thick and towers.

The EB III sees a dramatic change in the state of urbanization. Many of the EB II centers are either depopulated or destroyed, and the population becomes centered primarily in about 20 major centers. It is unclear why this occurs, but it likely stems from a combination of environmental factors such as decreased rainfall and from political factors such as competition for land and resources between the burgeoning

city-states. Fortifications around sites are dramatically strengthened at this time and sometimes even doubled in size. Massive cyclopean stone walls and glacis are seen for the first time, as are massive monumental gateways. These all require massive amounts of well-regulated manpower and resources, suggesting a strong centralized authority in these cities. Not surprisingly, as a result, for the first time large palaces are seen in these centers.

Despite this major series of developments, with the onset of the EB IV/Middle Bronze Age I there is a complete collapse of the urban system and a return to pastoral nomadism. It is not known what the cause or causes of this collapse were. Suggestions have included the collapse of the Old Kingdom in Egypt and the subsequent period of chaos that ensued immediately to the west, a dramatic change in climate including a drastic change in rainfall, or the appearance of foreign groups from the north and east. It is unlikely that any one of these was the single cause and more likely that all of these played a role, as did other factors that may also have driven the collapse of the Old Kingdom in Egypt and the need for groups to migrate south and west from Mesopotamia and Anatolia.

—David R. Lipovitch

Bibliography

- Ben-Tor, Amnon. "The Early Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor. Translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Gonen, Rivka. "The Chalcolithic Period." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor. Translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Gophna, Ram. "The Intermediate Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor. Translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.

The Intermediate Bronze Age, circa 2300–2000 BCE — A Return to Nomadism

The Early Bronze (EB) Age (ca. 3300–2300 BCE) marked the beginning of urbanization in the Levant. At the end of the EB III (approximately

2300 BCE) after about 1,000 years of city dwelling, the entire urbanized society collapsed and reverted to pastoral nomadism. Numerous explanations have been offered for this dramatic change in lifeways, including the appearance of new ethnic groups, warfare, and climatic change. None of these alone explains the collapse, but it would appear that a combination of all of these factors may underlie it.

The end of the EB was marked by a period of declining population, centralization of settlements, and fortification building. It is likely that these phenomena were linked. Without any historical documentation it is impossible to be certain, but it appears that the end of the period was marked by intercity warfare that led to this centralization of populations in large defensible centers rather than spread across the landscape in small villages. Some evidence may be seen not only in the stronger fortifications at these sites but also in the constant rebuilding and repairing of them.

There is also virtually no evidence during the EB III of any form of trade between Egypt and the Levant. This would have caused economic hardship for the region since trade with Egypt had previously been the impetus behind the creation of cities in the Levant. This period is contemporary with the end of the Old Kingdom, when the Egyptian economy was beginning to be spread thin by its immense public projects and when power was becoming less centralized with the king and more localized with the nomarchs. There is evidence toward the very end of the Old Kingdom that the Egyptians campaigned against the so-called sand dwellers in the Levant. These campaigns may be the cause of many of the destructions and abandonments of cities at the end of the period. Not long after these events, the Old Kingdom itself collapsed. While this would mean no further attacks by the Egyptians, it would also mean no trade.

In addition, it is thought that the end of the EB may have been marked by a dramatic decrease in rainfall. This would have placed the urbanized population under great stress. The cities were entirely reliant on agriculture for food, and given the primitive technology of the day, a significant drought would have resulted in chaos. Given the increase in population in the area

with the growth of urbanization, it would have been highly susceptible to climatic and population pressures. Such pressure may be behind the appearance of new populations in the region looking for alternative sources of food, trade, and land. Contemporary documents from Mesopotamia first mention the appearance of Semitic nomads called Amurru (Westerners). These people may come to form the core of the Semitic population of the Levant from the Middle Bronze Age onward. Other groups including people from the Caucasus begin to appear in the region, bringing new technologies as seen in the appearance of a highly burnished and poorly fired ceramic known as Khirbet Kerak, Red-Black Burnished Ware, or Early Trans-Caucasian Ware. The appearance of these pastoral groups in the region would have only added to the stresses already evident. The combination of these factors likely made the collapse of the EB civilization of the Levant inevitable.

With the collapse of the urban culture of the EB, the groups best able to cope with the change in climate, lack of foreign trade, and the much smaller population were the pastoralists who had been living alongside the city and village dwellers. These people were joined by the new groups of pastoral nomads who had entered the region at the end of the EB III. Instead of having large population centers, these people lived in small villages (no larger than 75 people). Virtually all of the major city sites were abandoned, and if there was a continuous occupation, it was on a very minor scale. Their villages were seasonal, and they would have moved with their flocks in order to take advantage of wet seasons in the moister parts of the region and grow crops to supplement what could be garnered from their sheep and goat herding. These small groups would have interacted with other small related kin groups who shared a common material culture. They would gather infrequently to bury their dead in one of the numerous vast cemeteries characteristic of this period. This would explain the very regional nature of much of the pottery and the varying forms of burial seen during this period. The differences are quite drastic from the north to the south of the Levant and may suggest that the groups were quite isolated and limited to small territories.

—David R. Lipovitch

Bibliography

- Ben-Tor, Amnon. "The Early Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Dever, William G. "Social Structure in the Early Bronze IV Period in Palestine." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Gophna, Ram. "The Intermediate Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.

The Late Bronze Age

In Egypt the Late Bronze Age marked the resurgence of independence with the repulsion of the Hyksos and the beginning of the New Kingdom. After years of being dominated by the Canaanite Hyksos, the Egyptians made their presence known in the Levant by regularly campaigning there and by establishing administrative centers and fortifications along the major communication routes. They also prevented the local Canaanites from rebuilding their own fortifications.

The Canaanite cities paid heavy tribute to the Egyptians and bowed to their trade demands in order to avoid being crushed. The only hope for these cities was to ally with Egypt's enemies. Initially this was the Anatolian state of Mitanni. Mitanni became Egypt's paramount rival during the early part of the New Kingdom (Eighteenth Dynasty). This rivalry culminated in the Battle of Megiddo when Thutmose III defeated Mitanni and a coalition of Canaanite city-states. This left Mitanni weakened, and the Hittites who had an empire based in central Anatolia became the new threat around the mid-fifteenth century BCE. The Hittites and Egyptians eventually also came to blows at the Battle of Kadesh during the reign of Ramses II. The battle resulted in a draw, and both sides decided that an alliance would be more useful given the changes occurring in the region at the time.

Between the periods of regular military campaigning typical of the early rulers of the

Egyptian Eighteenth Dynasty and those of the Nineteenth Dynasty was the Amarna period. This period was marked by a stretch of both relative calm in the region and visible weakness on the part of the Egyptians who opted to stay in Egypt and run their little empire from their heartland.

Correspondence between the vassal states in Canaan and the Egyptian Crown were preserved in the form of hundreds of cuneiform tablets found at the site of Tell el-Amarna. These Amarna Letters show a complicated web of diplomacy that existed between Egypt, the Levant, and Mesopotamia at the time. They also highlight a key issue of the day for the Canaanite cities. Every time the Egyptians campaigned through the region or demanded more tribute, more and more economic pressure was placed on the Canaanites. The constant demands of the Egyptians meant that much of the wealth generated there was finding its way back to Egypt and not reaching the locals who lived in a constant state of economic depression. Furthermore, many of the Canaanites were being forcibly relocated to serve in Egypt, thereby depopulating the region. Given that the Egyptians appear not to have allowed the Canaanites to fortify their cities during the Late Bronze Age, the threat of raids by both their Egyptian overlords and local banditry would have been constant. This combination of economic and other pressures drove many to abandon their urbanized lives and move to the hills. Enough of these disenfranchised and frustrated people existed to form an entire substratum in Canaanite society. These groups of people were called the Habiru. They wandered the hill country, set up small settlements, and harassed the cities through both banditry and more organized means. Some of these Habiru may have eventually come to form the nucleus of what will be the ancient Israelites. It is clear from the Amarna Letters that the region was constantly in flux thanks to intercity warfare and the existence of these Habiru.

In the Aegean world two great cultures had existed simultaneously during the Bronze Age. The Minoan and Mycenaean cultures thrived during the Middle Bronze Age, with the Minoan cultures of Crete helping in the development of the Mycenaean culture of mainland Greece. Un-

fortunately for the Minoans, their civilization collapsed around 1450 BCE possibly as a result of the explosion of the Thera volcano. The Mycenaeans managed to maintain their civilization, even taking over Crete, until the thirteenth century BCE when widespread destruction of their centers was seen. It is unclear why the Mycenaean society collapsed, but a number of suggestions have been made including outside threats, economic issues, intercity warfare, and drought. As a result, the military and elite of this society were forced to abandon their palaces and seek new homes and new ways to exist.

It appears that some of these former Mycenaeans initially fled to Cyprus and coastal Anatolia, where they came to be known as the Sea People. These people brought about the collapse of the Hittite empire (which had also been affected by severe drought), conquered parts of the coastal Levant (including the important city-state of Ugarit), and tried to invade Egypt only to be repelled during the reigns of Merneptah and Ramses III. Some of the survivors of these invasions came to settle on the coast of Israel and became the biblical Philistines of the early Iron Age.

In the wake of the attempted Sea People invasion, the Egyptians campaigned in the Levant and destroyed numerous major urban centers. With the general mayhem that ensued, the Levant found itself to be a hospitable place for disenfranchised groups to claim a stake, and alongside the Philistines we see the establishment of what would eventually become the states of Israel and Judah in the form of the early Israelite settlement. Not long after this the area that is now Jordan would see the establishment of the early forms of the states of Edom, Ammon, and Moab.

In Syria, this period saw the rise of the Arameans who in the Iron Age came to be major players on the geopolitical scene. They were originally a nomadic people but over time came to settle alongside and then within the established urban communities of the region. Initially, they acted as mercenaries for the various powers of the day.

In Mesopotamia proper, the Old Babylonian empire was brought to an end by the Kassites who conquered Babylon around 1595 BCE. This



Ruins of the ancient city of Mycenae, center of a large and powerful Greek civilization that existed between the seventeenth and twelfth centuries BCE. The remains of the city were first excavated by German archaeologist Heinrich Schliemann in 1876. (Ken Russell Salvador)

Indo-European group probably came from what is now Luristan. They had been a peaceful neighbor to the Babylonians, but thanks to an influx of population from the warlike horse-using nomads of Russia they rose up against the Babylonians. It is at about this same time that the Harrapan civilization of the Indus Valley collapsed, possibly also due to invasions by Indo-European horse warriors. In Mesopotamia proper as the Late Bronze Age drew to a close, changes in the regional balance of power led to the rise and fall of several great powers. The Assyrians under Shalmeneser I (ca. 1275 BCE) conquered Urartu in Armenia and Hanigalbat, the capital of the Hurrians. These events may be behind the alliance formed between Egypt and the Hittites, who feared the onslaught of the new Assyrian empire. The Kassites in Babylon also feared the Assyrians but managed to hold out against them until finally in 1157 BCE Babylon was conquered by the Elamites of Iran, who had also taken advantage of this period of general unrest to rise to the forefront.

The Late Bronze Age marks a turning point in the history of the Near East. It is a period when the region becomes far more cosmopolitan in its politics. With the collapse of the Mycenaean civilization and the appearance of mounted warrior cultures from Russia, the region is dramatically

affected by the appearance of Indo-European populations. These new groups stir up the politics of the region and cause much of the unrest underlying the various foreign policies of the great powers of the day. The near constant warfare, political maneuvering, and resulting economic effects created opportunities for the various disenfranchised populations such as pastoral nomads (e.g., the Arameans) and displaced groups (e.g., Sea Peoples and Habiru). As a result, the end of the Late Bronze Age saw a complete change in the status quo of the region. By the end of the Late Bronze Age the Mycenaeans, Mitannians, Hittites, and Hurrians had all ceased to exist as independent cultures. Some of the Mycenaeans may have become the Philistines. The remains of the Hittite empire formed small rump states in the southern part of the former empire that during the Iron Age eventually became important Aramean city-states. The period saw the rise of the Elamites and the Assyrians at the expense of the Kassites and also saw the beginnings of what would become, thanks to the Hebrew Bible, some of the more well-known cultures of the Iron Age Levant.

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Bibliography

- Bunimowitz, Shlomo. "On the Edge of Empires: Late Bronze Age (1500–1200)." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Gonen, Rivka. "The Late Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.
- Warren, Peter. "The Aegean and Western Anatolia in the Bronze Age." In *The Cambridge Encyclopedia of Archaeology*, edited by Andrew Sherratt. Cambridge: Cambridge University Press, 1980.

Urban Life in the Indus Valley

The Indus River valley was the location of a great urban civilization of the third and second millennium BCE. Like ancient Egypt and Mesopotamia, civilization in the Indus River valley was

built around large cities, with a well-developed trading system, agriculture, and metalworking. Unlike the other two cultures, that of the Indus River valley was unknown to modern archaeologists until chance discoveries led them to the key locations in the 20th century CE.

The civilization of the Indus River valley is known as the Harappan civilization, the Indus civilization, or the Indus Valley civilization. Radiocarbon dating indicates that it arose around 2500 BCE in the greater Indus River valley of Pakistan and northwest India. The two major cities of the culture were Harappa and Mohenjo-daro. The existence of a prehistoric civilization in the Indus River valley had not been known, so the discovery of square seals during the nineteenth century CE in northwest India caused British archaeologists some puzzlement. The hieroglyphs found on the seals could not be read by the archaeologists, so a search for more artifacts continued.

In 1921, Sir John Marshall, the director general of the Archaeological Survey of India, sent his colleague, Rai Bahadur Daya Ram Sahni, to excavate the ruins at Harappa. At around the same time, Rakal Das Banerji of the Archaeological Survey of India was digging at Mohenjo-daro, 400 miles away. When Banerji and Sahni discovered similar seals at the two sites, the archaeologists realized that they represented the remains of a unique civilization. By 1924, Marshall could announce the discovery of a previously unknown civilization. For nearly a decade, intensive digging occurred at both sites, as well as at others that were discovered later.

Archaeologists realized that the Indus River valley civilization spread over a large part of modern Pakistan and northwest India. Settlements were found that dated back to 2800 BCE. Between 2600 and 2500 BCE, a great social change occurred. Urban centers that had not existed before came into being. The people survived on a mixed agricultural economy. They grew barley and wheat, with possible evidence of rice cultivation as well. They also cultivated chickpeas and field peas. The fruits and seeds of various wild plants were also gathered, including grapes and jujube. Some of the earliest known use of cotton dates to the Indus River valley civilization as well. In addition, the people of the In-

dus River valley raised a species of humpbacked cattle. Other animals that they raised included sheep, goats, pigs, and dogs, and chickens were domesticated. Fish were an important part of their diet, and evidence indicates that urban centers near the sea traded fish to inland centers.

Harappan sites show a remarkable uniformity in building techniques and urban design across a very large area, suggesting some form of widespread centralized government. The uniformity of buildings and the lack of palaces or temples within the cities also suggest that there were not large distinctions in class. Large urban centers like Harappa and Mohenjo-daro were surrounded by agricultural villages that presumably provided the cities with food.

Trade played an important role among the Harappan people. Besides trading food products among themselves, they also maintained trading relations with the people of central Asia. Raw products, like gold, silver, and copper, and various minerals and precious stones were obtained. They produced metal products, like copper goods, and ceramics and pottery. Information about trade with the people of the Persian plateau is uncertain, but a thriving trade was carried on with the cities of Mesopotamia. The Mesopotamian trade was carried on through ships, and Mesopotamian records refer to Meluhha, their name for the Indus River valley people. Products sent to Mesopotamia include agricultural goods and carved stones and different artistic items, including statues.

The hieroglyphic writing of the Indus River valley people still has not been deciphered. Archaeologists have studied the drawings that have been recovered, however, and have developed theories about the religious life of the people. Their gods appear to have animal characteristics as well as plant characteristics. The idea of gods with these characteristics is one that became common in Hinduism, causing many to speculate that the Indus River valley religion played a role in the origin of that religion.

Water also played an important role in the Indus River valley civilization. Among the huge public buildings at Mohenjo-daro was a public bath, known as the Great Bath. Many of the private homes in the urban centers surveyed also included bathing facilities. Bathing and cleanli-

ness appear to have played a religious role in the Indus River valley civilization.

By ca. 1750 BCE, the Harappan civilization had begun to decline. Many cities had been abandoned, or their population had declined to a very small number. One explanation offered for this was that the surrounding countryside had been devastated by the deforestation caused by a population and building explosion. Other explanations, like a devastating flood or destruction caused by invading Aryan tribes, have been disputed. Further details about the civilization remain to be discovered by further investigations of the relics of the Indus River valley civilization.

—Tim Watts

Bibliography

- Fairservis, Walter A., Jr. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.
- Murray, Tim, ed. *Encyclopedia of Archaeology: History and Discoveries*. Santa Barbara, CA: ABC-CLIO, 2001.
- Wheeler, Robert Eric Mortimer. *Civilizations of the Indus Valley and Beyond*. New York: McGraw-Hill, 1966.

Mohenjo-Daro and the Cities of the Indus River Valley

The city of Mohenjo-daro, meaning the “hill of the dead,” was the largest settlement of the Indus River valley culture that is believed to have originated in the third millennium BCE. The city’s ruins, on the west bank of the Indus River about 200 miles north of Karachi, Pakistan, display evidence of a careful urban design combined with a sophisticated infrastructure that was undreamed of in the contemporary river valley civilizations of Egypt and Mesopotamia. Noted for widespread and seasonal flooding, Mohenjo-daro peaked from 2500 to 1700 BCE.

Archaeological evidence suggests that Mohenjo-daro emerged around the late fourth century BCE. Along with its sister city Harappa in the north, Mohenjo-daro was the southern capital of the Indus River valley civilization. The Harappans, who inhabited the city, were an agriculturally based people who cultivated barley

and wheat. Originally begun as agricultural villages located alongside the Indus River, Mohenjo-daro reorganized itself to accommodate frequent annual flooding.

The Harappans made a dizzying leap from villages to cities between 2600 BCE and 2500 BCE. Quite suddenly the dynamics of the community changed, including commercial centers with high levels of municipal control, complex social organization, specialized occupational structures, administrative expertise, and such tools as a writing system, mathematics and geometry, survey instruments, and standard weights and measures.

As Mohenjo-daro evolved, its economy widened. While agriculture remained its mainstay, organized crafters, including brick makers, builders, and potters, coexisted with the farming people. At its high point, Mohenjo-daro boasted approximately 35,000 inhabitants. Although there were other locations of comparable size and importance, Mohenjo-daro was a principal Indus River city, covering more than 200 acres and measuring more than two miles around. Like most Indus cities, it had two principal and functionally disparate districts, each built on a huge mud-brick platform that raised it above the annual floods. To the west stood the 40-foot-high citadel, measuring 1,260 feet by 750 feet. Fortifications survived at the southeastern corner, and the entire platform may have been enclosed by a wall.

The city was home to a collection of public and private buildings. Archaeological evidence suggests that public buildings included a large granary, an assembly hall, a college, and a ritual tank. Noteworthy among the public buildings was the so-called Great Bath, about 39 feet by 23 feet in size and 8 feet deep. It was built of fired bricks laid in gypsum mortar and sealed with bitumen.

The well-thought-out grid-patterned city gives early indications of South Asian urban planning, as the residential lower city occupied a more extensive platform than the city to the east. The lower city was set out on a north-south east-west grid of properly drained brick-paved streets, 30 feet (9 meters) wide, forming rectangular urban blocks measuring about 400 yards by 270 yards (366 by 247 meters). Tightly packed courtyard

houses and places of business, all built of fired brick, faced the streets. It is likely that internal walls were plastered, and most houses had stairs leading to either a second story or a flat roof. The houses normally had a private bathing area supplied with water from a well on the property and also had a properly drained toilet. A secondary grid of narrow service lanes subdivided the main blocks, and chutes from most residences were connected to a system of covered sewers, more evidence of well-developed municipal controls that still cannot be found in many Asian cities. Harappa and many other Indus River sites are almost identical to Mohenjo-daro in layout and organization, which indicates that at the peak of the civilization regional centers may have been built to a standard city plan.

The remarkable civilization remained unified for nearly 700 years. After 1900 BCE, as a result of an overexpansion of its trade networks, the city began to disintegrate gradually. Within 150 years, Mohenjo-daro's efficient urban government had disappeared. Ecological factors augmented the administrative breakdown. Recent research indicates that most protohistoric cultures suffered three centuries of persistent drought from about 2200 BCE, perhaps activated by a sudden global climate change. The passing of the Indus River cities can also be attributed in part to changing river patterns that upset a river-based agricultural and trade economy that had already outgrown its strength.

—Donald Langmead and Christine Garnaut

Bibliography

- Gupta, Swarajya Prakash. *The Indus-Saraswati Civilization: Origins, Problems, and Issues*. New Delhi: Pratibha Prakashan, 1996.
- Langmead, Donald, and Christine Garnaut. *Encyclopedia of Architectural and Engineering Feats*. Santa Barbara, CA: ABC-CLIO, 2001.
- McIntosh, Jane R. *The Ancient Indus Valley: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2008.
- Ratnagar, Shereen. *Understanding Harappa: Civilization in the Greater Indus Valley*. New Delhi: Tulika, 2001.
- Tahir, Naeem. *People of the Indus Valley 'The Mellubas': Their Culture, Civilization, Rise, Fall and Disappearance!, 8000 B.C.-500 B.C.* Islamabad: Pakistan National Council of the Arts, 2008.

Mohenjo-Daro's Sewers

Almost all historians today regard the sewage system of Mohenjo-daro as the largest and best-built sanitation system among contemporary urban centers. It is easily comparable with present-day drainage systems of South Asian countries such as Pakistan, India, and Bangladesh. Even today in most of Pakistan and India the same model of drainage is followed what was used in Mohenjo-daro. This indicates the advanced engineering and urban planning of the Indus Valley civilization.

The sewage system of Mohenjo-daro was comprised of ducts covered with bricks and draining pipes running the length of the usually unpaved streets connected by small chutes with most of the houses. These ducts, U-shaped in cross-section, opened into the main collecting channel of the avenue wherefrom the waste was disposed of into either a landfill or a lake. The main collecting channel was covered with bricks, and access to the channel was gained by man-hole covers when cleaning was required. Historians have different opinions about the land used for the disposal. Some conclude that sewage was simply dumped, while others argue that this waste was disposed of in a way to increase soil fertility. The latter opinion is more likely, as the permanent standing water would produce an unpleasant odor throughout the city.

This complex drainage system also supports the view that all or at least most of the houses in Mohenjo-daro had indoor water facilities. Evidence tends to confirm the presence of wells for their daily household water consumption. Usually, each house had a private bathroom with a shallow basin made by the arrangement of bricks in it as well as a sophisticated toilet with brick seats. Archaeological excavations from Mohenjo-daro also prove the presence of a great bath that served as a public bathroom connected with the draining system in the same manner as private bathrooms.

Although it is logical to say that there might have been a public sanitation department in Mohenjo-daro with specialized workers who were responsible for the maintenance and repair of such a large and complex sewer system, no clear-cut evidence has been found to prove this.

THE GREAT BATH OF MOHENJO-DARO



Great Bath at Mohenjo-daro. (J. M. Kenoyer, Courtesy Dept. of Archaeology and Museums, Government of Pakistan)

A large bathing platform covering 18,298 square feet (1,700 square meters) named the Great Bath of Mohenjo-daro was excavated in the northern sector of the Acropolis in 1925. This Great Bath was thought to be a place for ablutions by priests and others. There were a series of eight bathing compartments in two rows on either side of the Great Bath. The Great Bath had a huge well and lots of structures in it; fresh water was obtained for use here. The concept of deliberate extravagance in the use of water can be seen through the Great Bath.

—Muhammad Aurang Zeb Mughal

It seems most likely that some formal agency was responsible for monitoring the system. Such a well-engineered drainage system represents not only the engineering skills of the people of the Indus Valley civilization but also the importance that sanitation and cleanliness played within their culture.

—Muhammad Aurang Zeb Mughal

Bibliography

- Jansen, M. *Mohenjo-daro: City of Wells and Drains, Water Splendour 4500 Years Ago*. Bergisch Gladbach, Germany: Frontinus Society Publications, 1993.
- Jansen, M. "Water Supply and Sewage Disposal at Mohenjo-Daro." *World Archaeology* 21(2) (1989): 177-192.

Kenoyer, J. M. *Ancient Cities of the Indus Valley Civilization*. Karachi: Oxford University Press and American Institute of Pakistan Studies, 1998.

Wheeler, Mortimer. *The Indus Civilization*. Cambridge: Cambridge University Press, 1962.

The Bactria-Margian Archaeological Complex

The Bactria-Margian Archaeological Complex (BMAC) is a Bronze Age culture that established a sedentary lifestyle in central Asia from about 2200 BCE to about 1700 BCE. “Bactria” and “Margian” are both terms that the ancient Greeks used to refer to the region. The culture is also known as the Oxus civilization, since many of the sites are located along the Amu Darya (which was called the Oxus River by the ancient Greeks). Archaeological evidence for this culture has been found in modern Turkmenistan, northern Afghanistan, southern Uzbekistan, and western Tajikistan.

The BMAC was one of the earliest cultures to urbanize in central Asia. The largest of these sites is Namazga-Tepe (or Namazge-Depe), which at its largest extent was approximately 173 acres (70 hectares) in size. In general, BMAC towns had circular plans and were well fortified, indicative of warfare in the region. Monumental architecture has also been uncovered in many of the cities. Some scholars have suggested that these cities were established in response to in-

teractions with cities in the Near East and the Indus Valley, and evidence for contact with those regions is well attested through BMAC artifacts (such as stamp seals) that have been found in those regions.

Namazga-Tepe has been well excavated, and archaeologists have identified distinct zones within the city, including living quarters, industrial quarters, and cemeteries. A smaller town, Altyn-Depe, has also been excavated and was about 74 acres (30 hectares) in size. Other cities are not as large, and it has been suggested that Namazga-Tepe was the capital and Altyn-Depe was a secondary or regional capital. However, the size of sites does not always correspond directly with their political power (compare New York City with Washington, D.C., for example), and one should be cautious in reconstructing this kind of political relationship.

The people of the BMAC relied heavily on irrigation agriculture; this was their primary means of subsistence. As with urbanization, it is likely that they learned how to farm from interaction with Mesopotamia or the Indus Valley civilization. Their primary crops were barley and wheat, both of which were initially domesticated in the Near East. This may have been one of the areas through which wheat and barley agriculture spread from the Near East to China. There is little doubt that the development of farming allowed the BMAC to become sedentary. However, even after the establishment of cities, the BMAC maintained close contact with the Andronovo culture, who were pastoralists. Likely the BMAC gained sheep, goat, horse, and dairy products from the Andronovo and themselves offered agricultural products in exchange.

—Kevin M. McGeough

➤ WERE THE BMAC INDO-ARYANS?

One of the most controversial issues in the archaeology of South Asia is the question of where the supposed Indo-Aryan invaders who brought Vedic culture to India came from, if they ever existed outside of South Asia. Based on references in Vedic texts and linguistic evidence, some scholars have suggested that the Bactria-Margian Archaeological Complex (BMAC) may have been the homeland of the Vedic peoples. Unfortunately, little evidence for the language of the BMAC people exists, and it is very difficult to associate material culture with language and ethnicity, so this must remain, at present, an unproven theory.

—Kevin M. McGeough

Bibliography

- Hiebert, F. T., ed. *Origins of the Bronze Age Oasis Civilization of Central Asia*. Cambridge: Harvard University Press, 1994.
- Lamberg-Karlovsky, C. C. “Archaeology and Language: The Indo-Iranians.” *Current Anthropology* 43(1) (February 2002): 63–88.
- Mallory, J. P. “BMAC.” In *Encyclopedia of Indo-European Culture*. London: Fitzroy Dearborn, 1997.
- Sarianidi, V. I. “Soviet Excavations in Bactria: The Bronze Age.” in *Bactria: An Ancient Oasis Civi-*

lization from the Sands of Afghanistan, edited by G. Ligabue and S. Salvatori. Venice: Erizzo, 1995.

Domestic Waste

Although the ancient methods for the disposal of domestic waste might be considered unhygienic by modern standards, it is clear that an attempt was made to effectively manage the by-products of everyday living. Domestic waste can include a broad range of material yet typically contains ash, excrement, items considered beyond repair, and the refuse from food preparation. Refuse was commonly dumped in the open, although occasionally special storage or disposal was arranged.

Streets, courtyards, fields, and rivers served as convenient toilets and dumps. While at sea, waste (including excrement) was simply discarded overboard. In the case of river or sea dumping, the debris would be carried away; in a hot climate, insects and the sun could obliterate all traces of uncovered feces and organic waste. In some settlements, the dumping into exterior spaces resulted in ever-rising street levels, such that it necessitated stepping down into the buildings and the eventual rebuilding of the structure at a higher level. Residents near the outskirts of town simply dumped waste over the town walls.

Although there is abundant archaeological evidence for constructed street drains in many urban settlements, we have only a few examples of built interior toilet facilities. Most large drains appear to have been municipal projects designed to sluice water and liquid waste outside the city walls. The drains varied in construction from simple unlined sluices to fully waterproofed, carved, and covered stone troughs. Some wealthy private structures contained sewage drains and even toilets and cesspits, but the average residential structure appears to have done without. One exception might tentatively be identified at Tell Beer-sheba (Building 2309) in which a plaster-lined stone drain was discovered leading from a side room. It is possible that some residents used portable chamber pots that were later emptied outdoors, although no vessel has been definitively identified for this specific purpose. A portable toilet stool from the Eighteenth Dynasty tomb of Kha, a senior official in the hierarchy

› DOMESTIC WASTE DISPOSAL AND DISEASE

Epidemic disease was an accepted part of life in the ancient world and may have been perpetuated by waste disposal methods. Urban scavengers such as rodents, dogs, and pigs had easy access to domestic waste. If the scavengers were a part of the local diet, it is possible that the meat transmitted diseases to the population. Fleas from infected rodents are known to carry disease to human hosts. The Nile River, even in early days, was a polluted health hazard that became a breeding ground for abundant parasites. The archaeological remains from one Jerusalem cesspit, dated circa 586 BCE, revealed large numbers of eggs from the intestinal parasites tapeworm and whipworm. Whipworm may be an indication of foods contaminated by contact with human excrement, either through fertilization with night soils or from poor personal hygiene after contact with waste. Tapeworm can be associated with the practice of irrigation using sewage or with undercooked and infected beef and pork.

—Adam Aja

of the workmen's community, may give an indication of toilets for the poorer classes. This wooden seat sported a central hole and could have been placed in any convenient location.

While it seems likely that organic waste was recycled to fertilize the fields, there is little direct evidence for the practice. The archaeological discovery of pottery sherds in cultivated land might suggest the deliberate use of collected household debris as fertilizer. The concentration of recognizable waste would diminish with increasing distance from the settlements. There are many historic and ethnographic examples for compost fertilizers utilizing animal dung, ash, human excrement (night soils), and urban-derived refuse. Pits, both inside and outside residences, may have been the most commonly used storage features used for creating compost, which could later be carted out to fields or smaller garden plots. Archaeological excavations of the residential areas of Ugarit, an ancient settlement (dating to ca. 1190–1180 BCE) located on the northeast coast of the Mediterranean, revealed that many of the houses were equipped

with a stone-lined pit. These were frequently discovered containing domestic waste, including excrement. It is likely that pits dug for a variety of purposes were reused to serve as simple disposal sites, which would allow residents to bury waste, thereby hiding it from view. The contents of these disposal pits could be burned periodically to deal with odor and insects or to reduce the bulk of the waste.

It is clear that the dried dung of herbivores (most commonly of cattle, sheep, or goat) was used as an alternative fuel source, especially in dry climates where wood fuel was scarce. Wet dung can be collected, made into dung cakes by mixing it with straw or additional vegetable waste, and left to dry in the sun. The straw would bind the moist dung, and it could then be formed into regular size and shape for storage and sale. In archaeological contexts, the presence of charred seeds in hearth fires may indicate the use of dung fuel. Seeds can pass through the digestive tract of animals completely undigested. Additional combustible domestic waste may have served as alternative fuels as well.

—Adam Aja

Bibliography

- Cahill, J., K. Reinhold, et. al. "It Had to Happen: Scientists Examine Remains of Ancient Bathroom." *Biblical Archaeology Review* 17 (1991): 64–69.
- Herzog, Z. *Beer-Sheba II: The Early Iron Age Settlements*. Tel Aviv: Institute of Archaeology and Ramot Publishing, 1984.
- Wilkinson, T. "The Definition of Ancient Manured Zones by Means of Extensive Sherd-Sampling Techniques." *Journal of Field Archaeology* 9 (1982): 323–333.
- Yon, M. "Ugarit: The Urban Habitat—The Present State of the Archaeological Picture." *Bulletin of the American School of Oriental Research* 286 (1992): 19–34.

The Rise of Civilized Disease Pools—William H. McNeil's Thesis

With the rise of urban civilization and state-level societies came diseases and epidemics. While diseases and parasites have always coexisted with humans, the substantial stable human settlements that characterize the period 4000–1000

BCE provided ample opportunity for the development of what William H. McNeil has called civilized disease pools. Prior to the rise of cities, humans lived in small enough groups that diseases could not be supported indefinitely. Either all of the local human population would develop immunity to the disease, or the disease would kill the entire small community and subsequently its own hosts. Diseases need hosts to survive, so one of two situations is necessary for the perpetuation of the disease. There must be carriers who have the disease but suffer no ill effects from it, or there must be a large enough population base so that there is always someone around who has never had the disease. The growth of cities and the explosion of population worldwide provided the necessary demographic background for the development of stable diseases. These large stable population bases are what McNeil refers to when he uses the term "disease pool."

Other elements of urban life contributed to the growth of civilized disease pools. Certain subsistence practices associated with population growth can contribute to a rise in disease. Most problematic are practices that bring humans into closer and continual contact with animal populations. Humans share diseases with a large number of animal populations, including poultry, horses, pigs, sheep, cattle, dogs, and rats. Settled society typically involved the utilization of poultry, sheep, cattle, and pigs; the use of dogs and horses; and the appearance of rats within the community. In most cases, as city life became more developed, humans decreased the variety of animal types that they were dependent on and increased the size of individual herds of animals. If there are many of the same type of animal around, then there are a larger number of hosts for the diseases to pass through, providing a longer time frame for humans to contract those diseases.

Parasites were also a problem in these early urban centers and state-level societies. Poor sanitation in the cities and concomitant contact with human feces allowed intestinal parasites to thrive. Mobile societies, which do not remain in the same area for any length of time, are not as likely to contract parasites in this manner. Parasites thrive in shallow water, so communities

utilizing irrigation agriculture were particularly susceptible to parasites. Individuals wading through shallow irrigation canals were likely to pick up parasites and transmit them to their families at home.

Disease probably had a very important demographic influence on the ancient city. Given the low level of medical knowledge during this period, there would have been a higher level of fatal incidences of disease. Indeed, it is very likely that the population of ancient cities was not entirely stable. That is to say, due to the ravages of disease in an urban environment, cities would have constantly been losing more members than would have been added. Immigration from rural areas must have played an important role in keeping stable populations in urban areas.

Disease pools become entrenched in urban environments but move in waves out to rural areas. Contact between city and town enlarges the disease pool. While a rural area cannot sustain a disease for very long, the urban region acts as a hub for disease to reach other rural areas. McNeil theorizes that the growth of state-level civilization drastically increases the size of a disease pool. Increased security for travel as well as transportation infrastructure allows cities to stay in close contact. More contact between cities allows more opportunities for diseases to develop and transfer and hence a larger disease pool.

For McNeil, these state-level disease pools played an important role in the long-term success of larger states over smaller states and regional polities. When ancient societies came into contact with one another, those with larger disease pools brought with them a biological weapon of sorts. The smaller societies would have succumbed not only to the greater military strength of an aggressive larger society but also to the higher number of virulent diseases to which the larger society had developed immunity.

Unfortunately, the study of ancient disease and epidemics is constrained by a lack of sources. Ancient scholars did not well understand disease and parasites, nor did they understand infection and immunity. So we have very few records that directly attest to pandemics or epidemics before the Classical era. Scholars are confined to the analysis of human remains or to reading between the lines of ancient historical

➤ IDENTIFYING DISEASE ARCHAEOLOGICALLY

Disease is not easy to identify for the period 4000–1000 BCE. The best direct evidence comes from the investigation of human remains recovered archaeologically. Human remains are preserved to different degrees depending on a number of factors, especially the environment. Most remains from this period are simply the bones of the dead, which have only limited use in identifying ancient diseases. However, if the disease was of a type that eroded away bone structure, caused growths on the bones, or affected the bone structure itself, then these diseases may be identifiable. Leprosy and polio are probably the most readily visible diseases archaeologically.

If any soft tissue has been preserved, then it is much more likely that paleopathologists will be able to identify an ancient disease. Parasites may actually be preserved in the soft tissue and be identifiable to the specialist. Viruses leave visible traces in the soft tissue and may also be recognizable. Perhaps the most affective approach is through DNA analysis, where the genetic traces of ancient diseases can be identified in preserved specimens.

—Kevin M. McGeough

documents to reconstruct the realities of ancient disease.

—Kevin M. McGeough

Bibliography

McNeil, William H. *Plagues and People*. New York: Doubleday, 1977.

Demography in Ancient Societies

The word “demography” brings to mind ideas such as census and population size, in short how many people and where. But besides counting heads, the study of demographic processes in ancient societies is relevant for the understanding of their social and political configurations as well as of their economies. Much of what archaeologists have done in this sense has to do with questions such as: What explains a certain demographic transition? Why do people have large families in some times and places and small ones in others? Why do preferences of family or

➤ HAS POPULATION GROWTH BEEN INEVITABLE THROUGHOUT HUMAN HISTORY?

Interpretations of demographic processes are often infused with the idea of the inevitability of population growth, when in fact this does not seem to always be the case. Several political dynamics in antiquity, such as warfare, imperialism, or the very emergence of social complexity, have been argued to be the result of a growing population that eventually could lead to a shortage of resources. However, small bands of hunter-gatherers (which represent the most frequently employed lifestyle during the vast majority of human history) employed several kinds of methods of population control in order to limit population size. When resources were abundant (relative to population size) and time could be devoted to the development of technology, humans frequently attempted to live with a smaller population. Thus, when reconstructing the demography of ancient societies, assuming a necessary relationship between resource abundance, technology, and population growth (and not assuming that population growth is inevitable) will yield more accurate results.

—Andrea M. Cuéllar

community size change? Why have regulations about family size emerged? Other questions related to demographic processes that relate to settlement organization are: Why do people settle in a compact fashion or in a dispersed one? Is life in compact communities inherent to our social nature? If so, why have so many people preferred to live in a dispersed fashion throughout human history? Why did urban centers emerge in some places but not in others?

Of course, the first step toward answering these interesting questions is demographic reconstruction (how many people, when, and where). Archaeologists deal with a material record that is often extremely fragmented and hard to interpret, but this does not deter them from reconstructing demographic histories based on demographic approximations, as a real and total census of a nonexistent population is not within their reach (or the reach of contemporary de-

mographers for that matter). These demographic approximations can be based on absolute estimates: “the population of Ticoman phase Cuicuilco was about 7,500 people” or “rural family size in Moundville was six people.” These approximations can also be relative: “Classic period Maya population at Palenque was *larger* than at Tikal” or “the size of residential groups *increased* from Middle to Late Horizon in the Andes.”

To get to these approximations, absolute or relative, archaeologists look at a variety of evidence. If bone is well preserved and the funerary customs are known, archaeologists can count individuals at cemeteries or household graves. Alternatively, they can measure house floor area and estimate the number of people per house. They can also use areas of occupation, measured by the dispersion of refuse, as a proxy for population. Only in a few cases can archaeologists use written records that contain census data or even maps that had often been produced by imperial authorities. These have sometimes been compared to archaeological data and have been useful in helping to calibrate the tools with which archaeologists estimate ancient populations.

Once archaeologists marshal this kind of information, they can start to answer the interesting questions laid out above. The theoretical frameworks that are typically used to interpret demographic information usually emphasize the economic determinants of demographic processes. Thus, most of our understanding of demographic histories revolves around variations of the relationship between people and resources (be it at the family level or at much larger scales). For example, fertility decline and the replacement of large families by small families have been linked to the advent of technologies or labor configurations that promote the economic autonomy of individuals. This would seem to make logical sense, but it is based on an instrumental view of the family (as if this was simply a function of economic processes).

Although the relationship between some demographic and economic dynamics is undeniable, never in human history has this association occurred outside of a cultural context that gives meaning and shapes demographic processes. It

is with this basic premise in mind that demography in ancient societies is more productively studied. Small or large family size, dispersed or compact community, and urban or rural are all part of cultural ideals and have been experienced as such throughout human history despite the fact that political or economic forces are intertwined with them.

—Andrea M. Cuéllar

Bibliography

Kertzner, David, and Tom Fricke, eds. *Anthropology and Demography: Towards a New Synthesis*. Chicago: University of Chicago Press, 1997.

Kramer, Carol. "Estimating Prehistoric Populations: An Ethnoarchaeological Approach." In *L'archéologie de l'Iraq*, edited by T. Barrelet. Paris: Editions de la Centre Nationale de la Recherche Scientifique, 1980.

Mamdani, Mahmud. *The Myth of Population Control: Family, Caste and Class in an Indian Village*. New York: Monthly Review Press, 1972.

Paine, Richard, ed. *Integrating Archaeological Demography: Multidisciplinary Approaches to Prehistoric Population*. Carbondale, IL: Center for Archaeological Investigations, 1997.

Stone, Glenn. *Settlement Ecology: The Social and Spatial Organization of Kofyar Agriculture*. Tucson: University of Arizona Press, 1996.

■ Introduction: Religion and the Environment

When one first studies ancient religion, it is tempting to try to equate various ancient gods with various natural phenomena. For example, students of ancient Egypt may begin by trying to identify the various "sun gods" in that ancient religious system. Likewise, students of mythology are often tempted to see myths as means of explaining the natural world. These myths are often looked upon with a sort of superior scorn, with the implication that these ancient people lacked the benefits of modern science to really understand their environment. Scholars of ancient religion try to avoid these sorts of overly simplistic approaches, recognizing that ancient spiritual beliefs were much more complex than these sentiments imply.

Still, religious beliefs and myths did play an important role in mediating (and understanding) the human relationship to the environment. While it is best not to think of ancient deities as equating directly with weather phenomena, some gods were thought to control elements of the climate or were associated with various astronomical bodies (especially the sun, moon, and Venus). Many myths did, in part, explain the origins of weather events. In other instances, mythological language was used as a means of expressing observations about the environment.

What follows are some noteworthy examples of the intersection between religion and the environment in the period from 4000 BCE to 1000 BCE.

—Kevin M. McGeough

Egyptian Solar Deities

The sun was omnipresent in Egyptian religion and daily life, an importance made all the more conspicuous by the sun's nightly disappearance. Consequently, no other aspect of divinity in ancient Egypt was more widely recognized and worshipped than the sun god. As the single most important manifestation of the primordial creator, the sun was understood as the source of time (*neheb*), the guarantor and prime recipient of cosmic order (*ma'at*), the regulator of the seasons, and the source of life itself, both in this world and the next. In addition, the sun was thought to be the wellspring of kingship, and from the Fourth Dynasty (ca. 2649–2513 BCE) onward, Egyptian kings took the epithet "son of (the sun god) Re" (*za Ra*) as an explicit indicator of their divine pedigree.

The Egyptians recognized many different aspects of the sun. The basic term for the sun itself was Re (probably pronounced something like "*Ri'a*"). Since Re's daily progress from east to

west appeared to entail a cyclical waxing and waning of the disc's light, the Egyptians developed a biological mythology of aging to explain this phenomenon. Each morning, the sky goddess Nut was said to give birth to the newborn sun, identified as the scarab Khepri ("he who becomes"). The solar child then evolved into his mature form as Re, typically shown in the guise of a falcon-headed male and representing the sun at midday in the height of his power. After this, the sun assumed the form of a feeble old man identified as Atum ("he who is finished/complete") with the head of a ram. Nut then swallowed the aged sun god into the western horizon, passing him through her body, in order to bring light and temporary revivification to the dead. At the midpoint of the sun's nocturnal journey, he would unite with the corpse of Osiris, god of the dead. The temporary union of these two deities enabled the sun to reverse the aging process and once again assume the form of the solar child, to be reborn from his mother's thighs in the eastern horizon the next morning. This solar journey through day and night was mapped out in great detail, according to two 12-hour cycles, from which our own 24-hour day derives.

In addition to the triple god Khepri-Re-Atum, the Egyptians also recognized the disc of the sun as the physical vehicle of the deity. The term for this disc, *aten*, is attested from the earliest religious texts but only began to acquire special status as a god in its own right in the Eighteenth Dynasty (after ca. 1500 BCE). The deification of the *aten* reached its height during the alleged heresy of King Akhenaten (ca. 1372–1355 BCE), who sought to give preeminence to the visible aspect of the solar disc while excluding the nocturnal realm of Osiris and many traditional aspects of pluralistic divinity.

Almost any god or goddess could acquire significance as a solar deity. Thus, the goddesses Hathor and Sakhmet were viewed as twin aspects of the fiery eye of Re, the sun as a destroyer who withers crops and burns flesh with the potential to destroy all life. Conversely, the feline goddess Bast eventually assumed the role of the benevolent sun, whose light and warmth nourish all living things. One of the great reli-

gious compositions of the New Kingdom, the Litany of Re, exemplifies this desire to quantify and describe the various forms of the solar deity. This text describes the 74 aspects of the sun god as part of a ritual whose focus is the union of Re and Osiris, ostensibly for the benefit of the king. In describing the sun as a multifaceted god by whose nature the cosmos, life, and death are made manifest, the litany constructs a hermeneutic theory of solar divinity, which provides an unparalleled degree of insight into the nature of an ancient god.

—Joshua Roberson

Bibliography

- Assmann, Jan. *Egyptian Solar Religion in the New Kingdom: Re, Amun and the Crisis of Polytheism*. Translated by Anthony Alcock. London and New York: Kegan Paul, 1995.
- Hornung, Erik. *Akhenaten and the Religion of Light*. Translated by David Lorton. Ithaca, NY: Cornell University Press, 1999.
- Hornung, Erik. *Conceptions of God in Ancient Egypt: The One and the Many*. Translated by John Baines. Ithaca, NY: Cornell University Press, 1996.
- Piankoff, Alexandre. *The Litany of Re*. Bollingen Series XL, 4. New York: Bollingen Foundation, 1964.
- Quirke, Stephen. *The Cult of Ra: Sun-Worship in Ancient Egypt*. New York: Thames and Hudson, 2001.

Communicating the Environment in Egyptian Art

Life in ancient Egypt revolved around the Nile River. The day-to-day realities of life in the river valley therefore played a huge role in the formulation of Egyptian religious thought and the expression of its concepts in tangible form, expressions that later civilizations have come to identify as works of art. The Nile cuts a swath of fertile land some 750 miles (approximately 1,200 kilometers) in length, from the first cataract south of Aswan to the tip of the Nile Delta, which begins approximately 13 miles (20 kilometers) north of present-day Cairo. Along the edges of this valley, great cliffs separate the low-lying tract of the river from the plateau of the high desert beyond. The soil of the valley, fertilized by the annual inundation, assumes a rich,

black color that stands in stark contrast to the arid red soil of the desert. The black soil came to be identified with Egypt itself, dubbed Kemet (Black Land), while *desbret*, the red desert, was associated with the destructive forces of chaos. Above the valley, the sun could be observed in its travels from east to west, marking the progress of the hours and the change of the seasons. This cyclical rising and setting served as a constant reminder of the delicate natural balance and fundamental order, or *ma'at*, upon which all life in Egypt depended.

Egyptian art possessed a vast repertoire of images used to depict various aspects of riverine existence. The bounty of the Nile itself could be personified as the androgynous god Hapy, who was typically shown as a corpulent man carrying armloads of agricultural surplus. Images of fishing and fowling from private tombs depict nonroyal Egyptians engaged in the act of hunting native marsh wildlife with throw sticks, nets, and trained cats. Subtle iconographic clues indicate that such representations were intended to show the deceased symbolically reigning in the forces of chaos. The hunter's posture mimics the smiting pose assumed by the king as he crushes the skulls of Egypt's enemies, allowing the private individual to participate, in some small measure, in the maintenance of cosmic order. The vast papyrus marshlands in which these hunts took place were represented as a paradisiacal land of plenty known as the Field of Reeds, or *sekbet ialu*, that eventually found its way into Greek as Elysium, the Isle of Blessed where the righteous take their repose.

So-called scenes of daily life from tombs of the Old Kingdom (ca. 2650–2150 BCE) are replete with images illustrating the interaction of the ancient Egyptian with his environment. These scenes shed light on practices as diverse as river navigation, the avoidance of dangerous creatures such as hippopotami and crocodiles, cattle herding, animal husbandry, and agriculture. The fact that such scenes figured so prominently in the decoration of private tombs amply demonstrates the Egyptians' perception of their role as masters of their environment and the importance placed on these activities even after death.

—Joshua Roberson

➤ THE HORIZON AS HIEROGLYPH



Massive pylons front the Temple of Edfu, Egypt. (Bernt Rostad)

The physical geography of the Nile Valley—a central lowland flanked by cliffs to the east and west with the sun overhead—was expressed in the hieroglyphic script as . This stylized horizon, or *akhet*, eventually crept into virtually every aspect of royal and private art and architecture. The most striking example of this phenomenon can be seen in the structure of the great pylons—massive gateways consisting of paired, sloping towers joined by a central doorway—that fronted the entrance to virtually every major Egyptian temple. The same concept can be observed in two-dimensional representations as far back as the Old Kingdom, which depict a horizontal strip of land flanked by two human heads personifying the eastern and western mountains of the horizon. This symbolic Earth would then serve as the lower register line for the text and images above it, with a hieroglyphic representation of the sky (Egyptian, *pet*)  placed above it. The area bounded by these two signs symbolically re-created the physical environment of Egypt as a microcosm, or world in miniature. Related images of the horizon appear again and again in both two- and three-dimensional art from all periods. Virtually any image consisting of two symmetrical halves could be interpreted, on some level, as an expression of the horizon, constantly evoking the regenerative power of the solar cycle.

—Joshua Roberson

Bibliography

- Aldred, Cyril. *The Development of Ancient Egyptian Art, from 3200 to 1315 B.C.* London: Academy Editions, 1973.
- Baines, John. *Fecundity Figures*. Warminster, Wiltshire: Aris and Phillips, 1985.
- Robins, Gay. *The Art of Ancient Egypt*. Cambridge: Harvard University Press, 1997.

Baal, Ugarit, and Rainstorms

The ancient urban center of Ugarit (Tell Ras Shamra), located approximately half a mile (one kilometer) off the coast of the Mediterranean Sea on the Syrian coast, was an important city-state that flourished in the second half of the second millennium BCE. As the capital city of a small kingdom of the same name, Ugarit was occupied as early as the Neolithic Age (seventh millennium BCE) and abandoned around 1180 BCE, though the site was minimally occupied at later times. Of special interest to historians of the ancient Near East and the Bible, in 1928 CE a large cache of texts was discovered in Ugarit's ruins, revealing a previously unknown language—Ugaritic—and thousands of clay texts written in alphabetic cuneiform on topics ranging from receipts to personal letters to mythological literature. This literature, revealing a realm of western Semitic gods and heroes, sheds light on Ugaritic religion and mythology that often serves as an important point of comparison for many of the religious practices and worldviews described in the Bible.

At its height (fifteenth through thirteenth centuries BCE), the small kingdom of Ugarit encompassed hundreds of tiny villages and towns and covered an area of approximately 772 square miles (2,000 square kilometers). Ugarit's approximate borders were the coastal mountain Jebel al-Aqra (its ancient name was Mt. Sapanu) in the north, the Orontes River in the east, and the area of Jebel in the south. The city itself was situated on a plain bordered by two small streams (Nahr Habayyeb on its north and Nahr ed-Delbe on its south), .6 mile (1 kilometer) east of a natural harbor (Minet el-Beida) that served as Ugarit's seaport. Public buildings, such as the three royal residences, and the houses of the high officials were situated in the western half of the city. The

eastern half of the city contained an acropolis, a temple for Baal, a temple for the god Dagan, and the residence of the chief priest. Additionally, several private houses have been excavated throughout the city, revealing homes occupied and utilized by artisans, officials, and scribes.

The economy of Ugarit, which is situated on the north-south coastal highway and acts as the western terminus for the highway that connected northern Syria and Mesopotamia to the Mediterranean Sea, was based primarily on maritime trade and flourished especially during the Late Bronze Age (fifteenth through thirteenth centuries BCE). Ugarit was economically strong but militarily weak, often affiliating with stronger foreign military powers, first the Egyptians (before ca. 1330) and then the Hittites (after ca. 1330). Often described as cosmopolitan, Ugarit reveals the influence of many surrounding cultures: in its material culture, pottery from both Cyprus and Mycenae were imported; in its written materials, at least seven languages have been attested in texts found at Ugarit; and in evidence that Egyptians, Hittites, and Hurrians were known to have lived in Ugarit.

At the beginning of the twelfth century, with the ability of the Hittite empire to protect Ugarit waning, the city came under attack from the sea with increasing frequency. Ultimately, the city was destroyed, with traces of fire, arrowheads, and buried objects remaining in the ruins. The city of Ugarit was not repopulated for nearly 1,000 years.

The most important deity in Ugarit was Baal, a Canaanite warrior-god of storms and fertility. Baal is an epithet meaning "lord" and refers to a god named Hadad, meaning "thunderer." Known primarily from Ugaritic texts and the Bible, Baal is also attested in texts from Ebla, Egypt, and in Phoenician inscriptions. This deity was also known by several descriptive titles such as Òvictor Baal, "rider of the clouds," "mightiest of the heroes," and "the prince lord of the earth." In these titles can be seen references to Baal's role, attested throughout the Ugaritic literature, as hero, storm-god, and king.

Baal is known both as the "son of Dagan" and the "son of El." The latter of these is not likely to indicate the conception of a genetic relationship between Baal and El but rather that

Baal was a divine being under the figurative fatherhood of El as the head of the Ugaritic pantheon of gods, virtually all deities in Ugaritic mythology being “brothers and sisters,” “sons and daughters of El.” Baal was often affiliated with the goddess Anath, his primary consort. Occasionally another goddess, Astarte, serves as Baal’s consort, though why Baal has two different consorts is never entirely clear.

Though known from many Ugaritic texts, Baal is most centrally featured in a six-tablet series of texts known as the Baal Cycle. In this narrative, Baal conquers Yam (“Sea”), seeks and obtains permission from El to build his new royal residence on Mt. Sapanu, and battles with Mot (“Death”). These three narrative elements are united by the main theme of kingship as Baal performs kingly duties, conquering the chaotic elements of Sea and Death and establishing his own palace. In the Baal Cycle and other Ugaritic texts, Baal is depicted as a warrior-god of the storm whose voice thunders, who rides on the clouds, who battles against chaos, who causes nature to convulse at his appearance, and who fertilizes the earth through storms. Though Baal fertilizes the earth through rainstorms, human fertility does not typically appear to be within Baal’s purview, though in the story of Aqhat, Baal does entreat El, on behalf of the human Aqhat, to grant a son to Aqhat.

Within the biblical text, Baal is frequently depicted as the object of worship for Israelites who have gone astray after other gods. Still seen as a storm-god (1 Kings 19), Baal is frequently associated with Asherah, who is typically the consort of El in the Ugaritic literature. It appears that the pairing of Baal with Asherah may be part of the biblical writers’ polemic against non-Yahwistic religion.

—C. K. M. Peacock

Bibliography

- Astour, Michael C. “Ugarit and the Great Powers.” In *Ugarit in Retrospect: Fifty Years of Ugarit and Ugaritic*, edited by Gordon Douglas Young. Winona Lake, IN: Eisenbrauns, 1981.
- Cross, Frank Moore. *Canaanite Myth and Hebrew Epic: Essays in the History of the Religion of Israel*. Cambridge: Harvard University Press, 1973.
- Keel, Othmar, and Christoph Uehlinger. *Gods, Goddesses, and Images of God in Ancient Israel*.

Translated by Thomas H. Trapp. Minneapolis: Fortress, 1998.

- Kuhrt, Amélie. *The Ancient Near East: c. 3000–325 BC*. 2 vols. Routledge History of the Ancient World. London: Routledge, 1995.
- Smith, Mark S., ed. *The Ugaritic Baal Cycle*. Vol. 1. Leiden: Brill, 1994.
- van der Toorn, Karel, Bob Becking, and Pieter W. van der Horst, eds. *Dictionary of Deities and Demons in the Bible*. 2nd ed. Leiden: Brill, 1999.
- von Soldt, Wilfred H. *The Topography of the City-State of Ugarit*. Munster: Ugarit-Verlag, 2005.
- von Soldt, Wilfred H. “Ugarit: A Second-Millennium Kingdom on the Mediterranean Coast.” In *Civilizations of the Ancient Near East*, vol. 2, edited by Jack Sasson. 2 vols. New York: Scribner, 1995.
- Yon, Marguerite. “Ugarit.” In *The Anchor Bible Dictionary*, vol. 6, edited by David Noel Freedman. Translated by Stephen Rosoff. New York: Doubleday, 1992.

Mesopotamian Astral Deities

The stars and visible planets played an important role in Mesopotamian religion and daily life. The heavens and the celestial bodies within them were consulted by diviners seeking clues to future events, invoked by exorcists or witches to help their patients or harm their victims, studied by those seeking propitious moments to gather herbs or prepare medications or amulets, and appealed to by those seeking protection against various misfortunes or help contacting the gods. Given their significance and the energy devoted to studying the stars, it is unsurprising that some of the most prominent deities of the Mesopotamian pantheon had astral manifestations in addition to their other roles. Those gods who lacked specific affiliation with the stars or planets were often associated with other important features or phenomena of the natural world.

The three most important of the astral gods and goddesses were Sin, Shamash, and Ishtar. Sin, known as Nanna in Sumerian, was the moon god. As the Mesopotamian calendar was based on the lunar cycle, he was especially important for determining the proper date on which to perform specific rites and rituals. Often represented by a crescent moon, he was also depicted in anthropomorphic form with a distinctive

► THE BEARDED ISHTAR

The identification of Ishtar with the planet Venus may explain the occasional descriptions or renderings of the distinctly female goddess with a beard. While it was recognized that Venus appeared twice during the day, the two manifestations were assigned to different genders. The planet was typically considered female in the morning and male in the evening, although these attributions could be reversed. Venus's dual nature has been paralleled with Ishtar's feminine role as a goddess of love, albeit primarily sexual, and her more masculine role as a patron of war. Other explanations for Ishtar's masculine qualities have been put forth, however, including her connection to Athtar, a male god of South Arabia.

—Karen Sonik

crescent headdress or with rays emanating from his body. Shamash, called Utu in Sumerian, was the sun god. In the course of his daily journey across the sky, he not only offered light and warmth but also witnessed all manner of good and evil deeds performed by humans. This led to his role as the god of truth and justice as well as to his patronage of some of the great heroes of Mesopotamian myth, such as Gilgamesh and Etana. He was often represented by a solar disk or was depicted, like Sin, as an anthropomorphic deity with solar rays. Ishtar, identified with the Sumerian Inana, was the goddess of sexual love and war and took the planet Venus as one of her aspects. Frequently represented by the eight-pointed star in later representations, Ishtar's anthropomorphic representations varied depending on which aspect was being emphasized by the artist. She was often depicted as a clothed female with weapons sprouting from her shoulders, signifying her warlike nature, but could also be shown nude, stressing her sexual character, or with a beard, indicating her masculine qualities.

Other deities with astral associations included Nergal, an underworld god responsible for plague and disease who was identified with the inauspicious planet of Mars; Ninurta, a warrior and farmer god connected to Sirius; Nabû, a scribal god likely identified with Mercury; and

Gula, a goddess of healing associated with Capella, the Goat Star. In addition to the stars and planets with which these gods were associated, other celestial bodies and constellations were invoked in various prayers, incantations, and rituals. While the reason that a specific astral deity was appealed to in a particular situation was rarely recorded, there are occasional cases where it may be deduced. Thus, lovers seeking to kindle or rekindle affections frequently called upon Venus, and those seeking to heal or be healed often left the medications they had prepared out in the light of Capella.

—Karen Sonik

Bibliography

- Black, Jeremy, and Anthony Green. *Gods, Demons and Symbols of Ancient Mesopotamia: An Illustrated Dictionary*. Austin: University of Texas Press, 1992.
- Bottéro, Jean. *Religion in Ancient Mesopotamia*. Translated by Teresa Lavender Fagan. Chicago: University of Chicago Press, 1998.
- Koch-Westenholz, Ulla. *Mesopotamian Astrology: An Introduction to Babylonian and Assyrian Celestial Divination*. Copenhagen: Museum Tusculanum Press, 1995.
- Reiner, Erica. *Astral Magic in Babylonia*. Philadelphia: American Philosophical Society, 1995.
- Reiner, Erica. "The Uses of Astrology." *Journal of the American Oriental Society* 105(4) (1985): 589–595.

Environment and the Vedas

Although their main focus is religious, the Vedas contain some geographical and environmental information about the lands inhabited by the early Indo-Aryan people and the shift through time in their geographical horizons. The Vedas were composed over a long period: the Rig-Veda probably between 1500 and 1000 BCE, the others slightly later. During these centuries archaeological evidence shows a shift in settlement from the Punjab into the Ganges Valley and major economic and political changes. The authors of the Vedic *sambitas* and the people whose religious life they reflect were part of this eastward movement, as were the descendants of the Harappans and other native communities and probably also non-Vedic Indo-Aryan-speaking groups. There are also hints in the earliest parts

of the Rig-Veda of life before the Vedic people began to settle in the subcontinent. River names and geographical interrelations may indicate that early Indo-Aryans were among groups who migrated to Seistan during the early centuries of the second millennium BCE.

By about 1500 BCE, Vedic Indo-Aryans were moving into South Asia, where they applied old names to the new rivers they encountered. The earliest parts of the Rig-Veda reflect this initial period in the northwest, with many references to mountainous country and mountain passes. Rivers identifiable as tributaries of the Indus, including the Kubha (Kabul), Suvastu (Swat), Krumu (Kurrum), Sushoma (Soan), and Gomati (Gomal), show familiarity with the upper Indus region; northernmost is the Rasa, a possibly mythical stream high in the Himalayas (known as Himavant). The Yavyavati may be the Zhob in southern Baluchistan; otherwise, their southern limit may be the Bolan Pass, inhabited by the Bhalanas tribe.

Most of the Rig-Veda reflects settlement in the Punjab and lands as far as the Yamuna, an environment containing extensive scrubland and pasture but also forests yielding fruit and game. Regions to the south are described as forested and inhabited by indigenous tribes. The Punjab is known as the Sapta Sindhavah (Seven Rivers): the Sindhu ("river" in general but here applied specifically to the Indus), Vitasta (Jhelum), Asikni (Chenab), Parushni (Ravi), Vipash (Beas), Shutudri (Sutlej), and Saraswati.

The river that today bears the name Saraswati (Sarsuti) is one of a number of small seasonal rivers that rise in the Siwaliks; these also include the Chautang (probably the Vedic Dri-shadvati). However, Vedic hymns describe the Saraswati as a major river, flowing to the *samudra* (usually translated as "sea," although it literally means "gatherer of waters"). Surveys in the region have revealed that the Saraswati and Chautang, along with the now largely dry Ghaggar-Hakra river channels, once formed a major river system, fed not only by the small rivers of the Siwaliks but also by the Sutlej, which flowed into the Saraswati, while the Himalayan river that now feeds the Yamuna at that time flowed into the Chautang. The lower course of this system is still uncertain; it may have reached the

sea but more probably ended in a major inland delta in the Thar Desert in Bahawalpur.

At some time in the past, tectonic activity in the Himalayas caused the eastern river to change its course and flow into the Yamuna, and some time later the Sutlej was captured by the Indus system. Thus, the Saraswati system lost its main sources of water. Archaeological evidence of settlement along paleochannels shows that the rivers of the Saraswati system were in full flow in the third millennium BCE and that the decline took place mainly during the second millennium, the time when the Vedic people were moving into this region.

It is difficult to match the magnificent river described in the Rig-Veda with the Saraswati as it would have been in Vedic times. It therefore seems possible that the river originally described in this way was the Arghandhab-Helmand in Seistan. This has been identified as the Harakhvatti, the Avestan river whose name is equivalent to Saraswati; it is a major river and flows into a vast inland lake, the Hamun-i Helmand. Later, as the Vedic people moved east, they applied the name "Saraswati" to other less suitable rivers (at least seven rivers of this name are known in India) while preserving the memory of the original Saraswati.

The Ganges is mentioned only once in the Rig-Veda but appears more often in the later Vedic texts. The Atharvaveda in particular refers to regions as far east as Angra (West Bengal). By this time the Saraswati and Yamuna appear as the principal rivers; others include the Gomati (Gumti) and Sarayu (Sarju, Gogra) in the Ganges basin, both of them names transferred from rivers farther west. What had in Rigvedic times been the extreme southeast of known territory was by now the central Indo-Aryan region, the Middle Land (Madyadesha), of which the most important region was Kurukshetra (the lands around the upper Saraswati, referred to in Rig-Veda III.53.11 as "the earth's choicest place"). Western regions are still mentioned in Atharvaveda, including west-flowing rivers and the Sapta Sindhavah, where a strong north (winter) wind is said to blow. The Himalayas are described as a mountain region toward which clouds float, where it rains at all times of the year. In the warmer eastern region beyond the Middle Land

► THE ENVIRONMENT IN VEDIC IMAGERY

The natural world played a major role in Vedic religion, so there are frequent descriptions of natural phenomena in the Vedic texts. Although some are realistic, others relate more to imagined features of the idealized and superlative realm of the gods than to their pale reflection observed on earth. This may be the case with the magnificent divine river Saraswati. The Vedic hymns are rich in imagery, drawn from the natural and human worlds. For example, the Maruts, the gods of the winds, are portrayed as warriors, hurling boulders in competition, driving their chariots, and releasing rain as from a skin container (Rig-Veda I.85). The mighty Sindhu River is described as “bellowing like a bull,” like a warrior leader marshalling his troops, leading the “roaring rivers” that run into it like cows rushing to their calves. Its own waters are “flashing and whitely-gleaming,” “magnificent and unrestrained”; it is “rich in steeds” and “rich in gold” (Rig-Veda X.75). Another hymn (Rig-Veda 1.92) describes the stages of dawn breaking: the first light appearing like cattle coming out from of their pen, a flame driving back the monstrous darkness, its rays spreading like a river in flood, like banners across the sky; Dawn’s beautiful smiling face gazing everywhere and bringing every living thing awake.

—Jane R. McIntosh

grain ripened earlier, while farther west there was desert. By the time of the *Brahmanas* the whole of northern and central India was known territory. The easterly regions are described as heavily populated and rich in cattle and goats, while regions farther west are described unfavorably as wilderness, useful for grazing and fruit but not suitable for agriculture, and as lands with hail and harsh winters. Farther north are “hungry” lands that lack rain but where horses and woolly sheep flourish, along with camels. People recognized in the texts as Aryans are now divided into Amavasava (those who remained “at home” in the northwest) and Ayava (those who moved east). There are now references to seven rivers flowing east: the Yamuna and Ganges and their tributaries. The river Sadanira forms the boundary between the Middle Land and the ter-

ritory of the Kosalas and Videhas, the easternmost Indo-Aryan groups at this time. Their lands are initially described as marshy and uncultivated but were used for agriculture by the Brahmana period.

By now the Saraswati and Drishadvati had dried up significantly so that there was no longer water in the Ghaggar-Hakra, and the rivers themselves were said to disappear into the ground at Vinashana and Triplaksh, making the abundant waters of the Yamuna and Ganges significantly more attractive. The far more heavily forested environment of the Ganges basin was cleared for cultivation using both fire and iron tools. Reference to plow teams of 6 or 8 and even 12 oxen reflect the heavy work of land preparation, which in the case of newly broken ground would include ripping out tree stumps.

By the time of the latest Vedic texts, in the later first millennium BCE, much of the subcontinent was known territory. Geographical references to areas outside the Vedic core, however, are rare, since they were of little interest to orthodox Brahmins.

—Jane R. McIntosh

Bibliography

- Griffith, Ralph T. H., trans. *The Hymns of the Rig Veda*. Benares: E. J. Lazarus, 1896.
- Habib, Irfan, and Vijay Kumar Thakur. *The Vedic Age*. New Delhi: Tulika Books, 2003.
- Kochhar, Rajesh. *The Vedic People*. Hyderabad, India: Orient Longman, 2000.
- Witzel, M., ed. *Inside the Texts, beyond the Texts: New Approaches to the Study of the Vedas*. Cambridge: Harvard University Press, 1997.

Yu, Tamer of the Waters, and Other Chinese Tales of Environmental Power

Yu is one of several great cultural heroes of China’s mythic past. Whether understood as heroes who became venerated as gods or gods who came to be understood as model rulers in Chinese history, the tales of the contributions of these heroes reflect advances of Chinese civilization. Environmental power is central to many myths. For example, the Three Sovereigns include Fuxi (Fu-shi), who is recognized for inventing hunting, fishing, and domesticating animals,

➤ SHENNONG, CULTURAL HERO OF AGRICULTURE

Yu's contributions of taming the floods and carving out an effective system for irrigation built upon the agricultural advances attributed to Shennong (Shen-nung). Chinese mythology describes Shennong, the "Divine Farmer," as a god of agriculture and medicine. Traditional Chinese history places him in the twenty-eighth century BCE as one of the Three Sovereigns (San huang). He is understood to have invented the plough and taught the people of China how to cultivate food. He is also associated with the burning wind, which suggests that his creation of a plough may represent advancing beyond slash-and-burn agriculture. Appreciation for Shennong's contributions included worship during the imperial spring plowing ceremony, which signaled the annual start of the growing season. His close association with plants extended to skill in their medicinal uses, and thus he is known as the father of Chinese pharmacology. Shennong's transparent stomach allowed him to develop extraordinary knowledge of the medicinal power of plants by observing their interaction with his body. As the cultural hero attributed with inventing agriculture, Shennong's mythic contributions were pivotal to the development of Chinese civilization and serve as the origin of farming, which remains the most widespread occupation in China even today.

—John Harding



Shennong. Funeral stone carving of Eastern Han dynasty (25 CE–220 CE), Wuliang Shrine, Jiaxiang County, Shandong Province. The inscription reads, "Shennongshi taught people to cultivate according to the land's quality and to sow grains in order to relieve the hungry people." A popular culture hero who started agriculture, Chinese medicine, the market, the Zhaji Sacrificial Rite, and also invented many farm tools and musical instruments. (Feng Yunpeng and Feng Yunyuan, Research on Stone Carving, 1821. Reprinted Shanghai: Shangwu Yinshuguan, 1934)

and Shennong (Shen-nung), who is known as the "Divine Farmer" for inventing agriculture. Chinese history places Huangdi (Huang-ti), the "Yellow Emperor," just after these two in the twenty-seventh century BCE and credits him with numerous cultural advances such as writing, boats, and silk cloth. He is listed as the first of the Five Emperors leading up to Yu, whose reign is traditionally dated to the twenty-second century BCE. Similar to these cultural heroes who preceded him, Yu's origins and exploits include extraordinary powers and associations

with nature. Rather than a tale of human separation from and defeat of nature, Yu's story maintains that he was so integrally tied to nature that he could take on the form of a bear and read nature's signs. He is described as a shaman in stories that maintain that his father, Gun (Kun), and the emperors Yao and Shun, who ordered him to tame the floods, were also shamans as well as shape shifters.

Yao is described as a model ruler who recognized that something must be done to combat the floods of the Yellow River. Yao, or his successor

Shun, assigned Yu's father, Gun, to tame the floods. Gun worked at this task for years and built dams and dikes in an attempt to contain the waters. However, his method failed to control the floods. The *Classic of History (Shujing)*, an influential Zhou source that includes myths of the Three Sages—Yao, Shun, and Yu—implies that Gun partially succeeded in damming the flood but thereby created more chaos and was executed as a punishment. Gun's body was left exposed to the elements for three years, but then in an extraordinary turn of events he was revived and took on the form of a bear, splitting open his belly and extracting his son, Yu. Other versions maintain that after three years Yu, in the form of a dragon, was extracted from his father, who then turned into a bear. Either way, Yu bears all the marks of a cultural hero from his miraculous birth to his great exploits and sage rule. He inherited the ability to become a bear, and he surpassed his father by taming the floods through an environmental transformation that yielded a more orderly system of rivers that irrigated the land for agriculture and flowed out to the sea. While Yu's father had been slain and abandoned for failure, Shun rewarded Yu's hard work and impressive success by ceding power to him.

Mythic accounts of Yu's feats maintain that he transformed the landscape through 13 years of hard labor. Yu is reported to have continued his shape shifting as he roamed across the country building up mountains above the flood plain, bolstering the banks of rivers and lakes, breaking through mountains and rocks to release trapped waters, draining marshes, and carving channels to redirect the water's flow. Yu's ability stemmed from his close connection with nature and the cooperation of other powers, which according to some accounts provided him with a book to gain mastery over the waters. Legends claim that he traveled to the stars to learn from spirits in that realm. His work created rivers and other waterways that simultaneously tamed the floodwaters, redirected water to cultivate the land, and connected the country. The altered landscape of a more orderly and unified China came to be described in divisions of nine radiating out from the basic irrigation design, where intersecting pairs of parallel channels of water divided arable

land into nine sections in a tic-tac-toe grid pattern to corresponding references in Classical literature such as "How did he set bounds to the Nine Lands?" in the "Heavenly Questions" verses of *Songs of the South* or the "Great Norm with Its Nine Categories" in the *Classic of History*.

Yu's story may have been used to emphasize the importance of environmental powers, such as rivers, in cultivating or destroying crops through irrigation and flooding, respectively. It may have also served to explain environmental changes such as actual shifts in the course of the Yellow River—two major course alterations have been dated to the middle and the end of the third millennium BCE—to cultural shifts away from more primitive techniques of agriculture and water control, symbolized by Gun's attempts, to the large-scale irrigation attributed to Yu. Stories of Yu also continued to influence shamanic practice, as later shamans donned bearskins and attempted to retrace through dance Yu's bearlike gait and celestial journeys.

Legends of Yu link him to nature from shape shifting to forms of a dragon and a bear to shaping the landscape and its cultivation. He is linked to Chinese civilization, culture, and governance more broadly, as his extraordinary abilities, attunement with nature, hard work, and success in taming and redirecting the waters to provide for survival and the unity of the country were rewarded with rule. Myths of Yu and his son link them to Chinese dynastic history. Yu's wife is said to have turned to stone in fright or exhaustion upon fleeing from him in the form of a bear. Whereas he would typically beat a drum to signal his wife to bring food, that day he was still in the shape of a bear when his wife mistook the sounds of his work for the beating of the drum. His son, Qi, was extracted from his wife's stone belly, echoing his own birth story. While Yao and Shun are venerated for passing over their sons and choosing successors based on merit, Yu reluctantly broke precedent when Qi succeeded him as ruler. This departure is explained as being in keeping with the will of the people and ministers who wanted Yu's son to rule. This hereditary succession designated Yu as the virtuous founder of the Xia (Hsia) dynasty, the first dynasty in traditional accounts of Chinese history. The existence of the Xia and Shang Dynasties

was challenged with the introduction of more critical scholarly methods of historical verification in the early twentieth century. However, extensive archaeological discoveries in the 1920s have firmly established the existence of the Shang dynasty. While the Xia dynasty remains in doubt, there is a growing body of evidence that may prove its historical validity, although perhaps as one of many regional states that coincided with rather than preceded the Shang dynasty.

—John Harding

Bibliography

- Allan, Sarah. *The Shape of the Turtle: Myth, Art and Cosmos in Early China*. Albany: State University of New York, 1991.
- Christie, Anthony. *Chinese Mythology*. New York: Peter Bedrick, 1985 [1968].
- Loewe, Michael, and Edward Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.
- Wong, Eva. *The Shambhala Guide to Taoism*. Boston: Shambhala, 1997.

Mesoamerican Sacrifice and Earth Fertility

Human sacrifice and bloodletting (autosacrifice) were Pan-Mesoamerican religious rituals found across time and space in the civilizations of the region whether Olmec, Teotihuacan, Maya, Mixtec, Zapotec, or Aztec. These rituals were intertwined with religious belief in universal cycles of gods sacrificing to create and nurture humans and the human need to do the same for the complex Mesoamerican pantheon of deities. While we know much about these rituals after 1000 BCE from archaeological and written sources, they likely have their origins in the period 4000–1000 BCE when sedentary agricultural societies first emerge with early Olmec and proto-Maya civilizations.

The lack of domesticatable animals led Mesoamerican civilizations to rely heavily on domesticatable plants such as maize and thus on their ecological ties to Mother Earth for sustenance. Blood sacrifice became associated with earth fertility, especially the life cycle of corn. Acquisition of captives for sacrifice, often through warfare, and elite shamanistic and family autosacrifice



Mayan lintel shows a blood offering made by Xoc, wife of the Mayan ruler Shield Jaguar. Xoc is shown kneeling and drawing a thorny cord through her tongue. Accession ritual from Structure 23, lintel 24 at the Mayan site Yaxchilan in present-day Chiapas, Mexico, about 725 CE. (Bettmann/Corbis)

helped maintain the cosmic balance necessary in all aspects of life including earth fertility, city planning, and state politics.

Archaeological evidence in the form of imagery, artifacts, and burials points to shamanistic origins for blood sacrifice in Mesoamerica. Bloodletting artifacts such as stingray spines and sacrificial burials have been found at the local village levels associated with droughts and wells. Sacrifices might have occurred in small groups and included all age sets. By 1000 BCE at sites such as San Lorenzo for the Olmec and later Cuello for the Maya, blood sacrifice had been institutionalized in Mesoamerican civilizations. Some of the earliest examples of writing have sacrifice as a theme to keep the cosmic vital force in balance. The Maya called this force *ik*, the Zapotecs *pee*, the Mixtec *ini*, and the Aztecs *tona*. Later-

constructed creation myths of the Maya based on the Popol Vuh and the Dresden Codex probably echoed these early beliefs.

The Maya Hero Twins story exemplifies this. Hunapu (sky, sun, life) and Xbalanque (underworld, death, Venus) travel to the underworld of Xibalba, entered via caves and ball courts, to outsmart the lords of death. They intentionally sacrifice themselves and trick the gods into bringing their ground-up bones back to life. The gods then wish to learn this secret and have the twins sacrifice them. However, the twins do not bring the gods of death back to life and instead negotiate a deal whereby human blood can be used to rebirth the universe, the sun, the rain, the gods, and the corn of Mother Earth. The Maya god Bulac Chabtan is the god of sacrifice,

and the Hero Twins are also known as the Twin Corn gods, further solidifying the ties between sacrifice and earth fertility.

—*Christopher Howell*

Bibliography

- Adams, Richard. *Prehistoric Mesoamerica*. 3rd ed. Norman: University of Oklahoma Press, 2005.
- Joyce, Rosemary A., et al. "Olmec Bloodletting: An Iconographic Study." In *Sixth Palenque Round Table, 1986*, edited by Merle Greene Robertson and Virginia M. Fields. Norman: University of Oklahoma Press, 1991.
- Soustelle, Jacques. *Ritual Human Sacrifice in Mesoamerica*. Dumbarton Oaks, 1979 Conference. Edited by Elizabeth Hill Boone. Washington DC: Genealogical Publishing Company, 1984.

Society and Culture

Human sacrifice seems to have occurred irregularly in the period from 4000 to 1000 BCE, from China to Europe, from Mesopotamia to Egypt. One of the most grisly (but at the same time compelling) finds in archaeology was the Great Death Pit of the city of Ur in Mesopotamia. The Great Death Pit, along with other graves, preserved the remains of numerous people who had been sacrificed within the tombs of dead royalty. No one knows how the individuals who were killed to accompany the kings and queens of Ur must have felt about their sacrifice. Was it an honor to drink poison and accompany the king into the afterlife? Would this have been a way of allowing the royal court to continue on into eternity? Were those sacrificed chosen by lot, chosen for having granted particularly good service while living, or was this a punishment of sorts? Most likely, the deaths of these individuals spoke more to a lack of concern about their lives than anything else. The lives of these people were understood to be less valuable than the lives of the royal family. Thus, they could be sacrificed so that the royalty could have some material benefit in the afterlife and as a ritual demonstration of royal authority to those still living. This was a highly stratified society where not all lives were equal.

The development of highly stratified social relationships is one of the major hallmarks of this period. The Royal Cemetery of Ur, the Great Pyramids of Giza, the Valleys of the Kings and Queens, the royal tombs near Anyang, the warrior barrows of Europe, and the kurgans of central Asia are all funerary monuments in which the prominent social role of the dead was publicly demonstrated. The ability to force people to invest resources into some mortuary complexes and not others signifies a vast gulf between the rich and the poor, elite and non-elite. It reflects the different amounts of power that individuals within a society could hold. Grave goods, such as jewelry (think especially of King Tutankhamun's tomb), reflect the fact that people had different access to material wealth. Some people could own gold and fine exotic wares; some people were themselves the property of others (slaves or members of an ancient absolutist political entity).

Archaeologists find that social relationships were often mediated through objects. Large houses set the wealthy apart from the poor, the latter dwelling in small or less well-made homes. Expensive objects such as jewelry, fine art, fashions, or rare foods are also markers of wealth and status. It is on these types of evidence—material manifestations of

No one knows how the individuals who were killed to accompany the kings and queens of Ur must have felt about their sacrifice. Was it an honor to be killed and accompany the king into the afterlife?

difference—that archaeologists reconstruct ancient social relationships. For an archaeologist, it is not the monetary value of the objects that he or she discovers that is exciting; rather, it is what those objects can tell him or her about an ancient society.

Divisions of wealth and status are one marker of a larger series of social processes that were transforming the world during this period. People had begun to live in closer proximity to one another and had developed transportation technologies that effectively decreased the distances between one another. As greater numbers of people began interacting with one another on a very regular basis, new types of institutions developed in order to mediate these relationships. Political organizations and religious institutions were among the most prominent of these institutions. The development of these institutions is one of the most noteworthy accomplishments of civilizations in this period, an accomplishment that provided the basis for many of the institutions that still mediate social relationships today.

The basis for the development of many of these social mediators was writing. The first written languages appeared during this period, and this technological innovation allowed humans to communicate with one another through space and time. Communication no longer had to be between individuals in close proximity to one another. A scribe in Egypt could write on a tablet that could be sent to Cyprus and read by a scribe there. A Mesopotamian scholar could read the scientific findings of a scholar who had recorded his observations centuries ago.

A social institution that seems to develop quite naturally out of writing is codified law. The period from 4000 to 1000 BCE features the earliest examples of laws that are written down. The most noteworthy is the so-called Code of Hammurabi, but it is not the oldest. While modern scholars are uncertain about the precise role that these ancient legal precepts played in early society, from the volumes of legal cases and contracts that have been recovered, scholars can be certain about the prominence that legal precepts had in mediating ancient social relationships. These laws governed life at many levels, including relationships within a family (or in the creation of a new family through marriage), the treatment of people of different statuses, and interactions with foreigners. Shared legal precepts united many regions of the world in this period while simultaneously rigidly fixing the differences between peoples.

—Kevin M. McGeough

■ Introduction: The Family

Discerning family structure and organization from archaeological remains can be relatively difficult. One of the methods through which archaeologists approach this

topic is to study the remains of households and the spatial relationship of artifacts within the building. Thus, for archaeologists, the “household” is often what is explicitly studied, as op-

posed to the “family” per se, since the physical structures of houses often survive at archaeological sites. However, numerous conclusions about families can be drawn from the analysis of the household. For example, a typical rule of thumb is that each member of a household needs approximately 108 square feet (10 square meters) of space. This does not account for differences in status among members of the family (likely children needed or were granted less space than adults) and different uses of household space (storage space and cooking space are not usually counted as “living space”). In very rough terms, though, archaeologists can extrapolate how many people lived in the household.

Based on analysis of household size, extended families were likely more common in the period from 4000 to 1000 BCE than were nuclear families. A nuclear family is one married couple (or group, if the society is polygamous) and their offspring. An extended family consists of more than one marital group or numerous generations all living within the same structure. In polygamous societies, more than one wife (or much less frequently more than one husband) lived within the same household. Usually, if more than one wife was present, these wives were ranked in status. For example, in Near Eastern society, if a wife was unable to bear children, a husband was sometimes able to take on a secondary wife for the purpose of having children, although his first wife retained authority as the “first wife.” In societies where slavery was present, slaves would often live in the households and may have been treated, in some cases, as family members.

For extended families in this period (at least those for which we have written evidence), the oldest male of the household was understood to be the head of the family. From at least the era of the Shang dynasty in China (and likely earlier), the ideal of Chinese family life was for the oldest living male in the household to wield almost legal authority over other members of the household. Families in Syria-Palestine seem to have been structured along similar lines, with the oldest living male heading the household. Similar situations were likely present in ancient Greece of this period, Egypt, Mesopotamia, and perhaps elsewhere. In many parts of the ancient world, this type of family structure was understood to

be the basis of political organization, a type of organization called “patrimonial.” In patrimonial systems, the leader of the society (often a king) was thought to be the “head of the household,” and the entire society was seen as one extended household. Thus, all members of that particular kingdom were thought to be members of the king’s extended family, and family names (such as father, son, and brother) were used to refer to different members of the governing group even if there was no biological relationship.

In many of the families of the period 4000–1000 BCE, dead ancestors were considered to be active members of the family group. In China, for example, ancestor veneration was very important, and deceased family members were given offerings or prayers and were consulted about family matters. In northern Syria during parts of the Bronze Age, deceased family members were interred in tombs beneath the house and thus remained physically present in family life.

—Kevin M. McGeough

Marriage and Divorce in Egypt

Marriage in ancient Egypt is a difficult subject to approach, as the Egyptians had no concept directly comparable to the contemporary western institution of marriage. The Egyptians did, in fact, have words that can be translated as “husband” and “wife” and even “widow” or “divorced person.” The typical Egyptian household revolved around the nuclear family, which was headed by a couple who had entered into the arrangement in some official capacity. There were loose conventions governing both the creation and dissolution of these couplings, although these arrangements were made on the individual or local level rather than on the state level. However, there was no religious or legal institution that can be neatly defined as marriage at any point in pharaonic Egyptian history. In fact, in legal terms, marriage was essentially little more than an economic contract between individuals.

Most historical information about marriage derives from the New Kingdom and Late Period, thanks to the preservation of large numbers of legal and economic documents and personal letters from a handful of sites such as Deir el Medina. A more idealized picture of marriage

➤ DIVORCED WOMEN AND PROPERTY OWNERSHIP

Women could inherit, own, trade, and dispose of property as they wished throughout most of ancient Egyptian history. Upon entering a marriage, women retained sole rights to the property that they brought into the partnership. Married women could and did carry out business transactions and wrote wills independently of their husbands. One well-known example is the “Will of Naunakhte,” a document dating to the Twentieth Dynasty during the reign of Ramses V (ca. 1147–1143) drawn up at the request of a married woman who had decided to disown several of her children and divert their inheritance to other family members.

By the Late Period (beginning around the seventh century BCE), economic contracts drawn up between couples typically guaranteed that the woman would retain whatever property she held upon entering the marriage in the case of a divorce. Additionally, she would retain the original bride price paid by the man to her father at the time of marriage as well as an additional sum that her husband had agreed to pay her in case he decided to initiate a divorce. However, some of these contracts stipulated that the woman would forfeit this right if the divorce was the result of her adultery. Similar customs may already have been in place earlier, although they were not as formalized as in the Late Period.

—Megaera Lorenz

emerges from artistic sources (such as funerary depictions of married couples), wisdom texts, and literary texts.

The primary goal of an adult at any period of ancient Egyptian history was to establish a household (*gereg per*, the phrase most commonly translated as “to marry”) and have children. The importance of offspring was paramount. Not only did offspring have the responsibility of supporting their parents in life, but they were also expected to carry on their deceased parents’ mortuary cult, thereby ensuring their immortality. Thus, being married and owning a home were considered the ideal situation, and the ultimate goal of marriage was to produce offspring. Theoretically, an Egyptian individual could marry any person of his or her choosing. Egyptian men

and women both frequently married non-Egyptians. One famous literary example occurred in the Middle Kingdom story of Sinuhe in which the title character married the daughter of a Canaanite chief. There were also no strict limitations in terms of rank, although typically people chose spouses of similar social and economic status. Parents and family were probably very influential in the selection of potential spouses for their children. Some literary texts, such as the many love poems from Deir el-Medina, hint that mothers held a great deal of authority in their daughters’ choice of mates. Men often donated a bride price to the parents of their new wives.

There is no known formal ceremony associated with marriage in ancient Egypt. The couple would draw up a contract before witnesses stating the amount of property brought into the marriage by each party and how that property would be dealt with in the case of a divorce or the death of one of the spouses. Before the Late Period, these contracts fell under the broader category of the transfer deed (*imyt per*) and were not limited to specific use as a marital contract (i.e., this type of document could be used for any contract dealing with the disposal of property). It was only in the Late Period (Twenty-sixth Dynasty and later) that a formal system was developed specifically for drawing up marriage contracts.

In spite of the strong religious traditions associated with brother-sister marriage (the best example being the marriage of Isis and Osiris), such couplings were, in reality, extremely rare among nonroyal individuals before the Roman period. In the New Kingdom, spouses would often affectionately refer to one another as “brother” and “sister.” This practice occasionally confuses attempts to sort out actual kin relationships in texts from the period, but numerous genealogical analyses have effectively demonstrated that the usage of these terms between married individuals was figurative in most cases.

Polygamy was also uncommon among nonroyal individuals, and polyandry (the marriage of one woman to more than one man) is completely unattested at this point. There are a few cases of references to multiple spouses (i.e., a second or third wife), but these may refer to subsequent marriages rather than polygamous situations. Re-

marriage after divorce or the death of a spouse was an accepted and perhaps even encouraged practice for both men and women.

There are several terms in the Egyptian language meaning “wife” but relatively few meaning “husband.” This is largely because women were more often discussed than men in purely relational terms vis-à-vis their spouses. The one nonrelational title most often used to refer to married women was *nebet per*, or “mistress/owner of a house.” This term seems to reflect the role of a married Egyptian woman quite realistically. The *nebet per* carried out an administrative role within the household itself, managing household staff and domestic duties such as cooking and weaving. One wisdom text of the late New Kingdom, the Instruction of Any, famously advises the married man to mind his own business in the home and allow his wife to run the household unimpeded.

Textual sources indicate that divorce was fairly common and could happen for any number of reasons. Perhaps the most common was adultery, which was frowned upon largely for pragmatic reasons (e.g., any child sired through an extramarital affair would play havoc with the inheritance rules set out in the original contract). Divorce could be initiated by either the man or the woman, and no particular grounds were necessary. The greatest concern in the case of a divorce was the disposition of property.

—Magaera Lorenz

Bibliography

- Capel, Anne K., and Glenn E. Markoe, eds. *Mistress of the House, Mistress of Heaven: Women in Ancient Egypt*. New York: Hudson Hills, 1997.
- Pestman, P. W. *Marriage and Matrimonial Property in Ancient Egypt: A Contribution to Establishing the Legal Position of the Woman*. Papyrologica Lugduno-Batava, 9. Leiden: Brill, 1961.
- Robins, Gay. *Women in Ancient Egypt*. Cambridge: Harvard University Press, 1993.

Marriage and Divorce in the Ancient Near East

The institutions of marriage and the family were quite similar throughout the ancient Near East in the third and second millennia BCE. Lacking the religious and civil authorities' involvement,

➤ NUZI MARRIAGE CONTRACTS

In this case, the bride's brother and the groom's father agreed to this marriage contract. The bride-price has been established but not yet paid, and stipulations for a second wife for the groom are established. Besides corporal punishment, the groom loses his children and thus access to their inheritance if he violates the agreement with regards to a second wife.

“Tablet of contract of Puhi son of Shupantil with Uthaptae son of Zike.

They made a contract between them. Puhi has given his sister Nawaya to Hupita son of Uthaptae for marriage. Uthaptae will pay Puhi 45 shekels of silver.

If Nawaya does not give birth, Hupita may marry a second wife. If she does give birth, Hupita may not marry a second wife. If Nawaya gives birth, and Hupita takes a wife, Puhi shall strike him down. He shall take Nawaya along with her children. If Uthaptae treats Nawaya like his secondary bride, Puhi shall take Nawaya (back).

Whoever defies (the agreement) shall pay, in full, 1 mina of silver and 1 mina of gold.”

—Spencer L. Allen

Source

Ernest Lacheman, *Excavations at Nuzi: Conducted by the Semitic Museum and the Fogg Art Museum of Harvard University*, Harvard Semitic Series 19 (Cambridge: Harvard University Press, 1962), 84.

the marriage process focused on establishing the succession of inheritance for the two families. This focus increased the dependence upon contracts, oral or written, for the typically three-stage marriage process. These three stages involved the initial contractual agreement, which resembled modern-day prenuptials; the betrothal and payment of the bride-price; and the completion of the process, when the bride finally became legally subordinate to her husband rather than her father. Due to the contractual nature of marriage and the inheritance issues, several laws are devoted to marriage, divorce, and remarriage in the ancient Near Eastern law collections.

The initial agreement between families could occur years before the actual marriage. In the agreement, the groom or his parents and the bride's parents determined the bride-price that the groom would pay to his father-in-law. The inheritances of any eventual grandchildren were also determined, and penalties for divorce were set. Should the bride die before the wedding, her parents could substitute another daughter, demonstrating the importance of the family over the individual in the marriage process. Once the bride-price was paid, formal divorce proceedings were necessary. Lacking justification, the reneging party was heavily penalized. Furthermore, once betrothed, the bride-to-be was liable for adultery. Given this situation, the completion of the process was simply accomplished through oral declarations (for example, "you are my husband"), consummation, or cohabitation. The bride did not always leave her parents' household, and some agreements doubled as adoption contracts whereby the in-laws adopted the groom prior to the marriage and he left his own household. Notably, while slaves could marry other slaves as well as free persons, if a master married his own slave, she was emancipated with the completion of the marriage.

Throughout the ancient Near East, a qualified monogamy was the norm. While the husband held exclusive sexual rights to his wife, he was permitted extramarital relationships with nonmarried, including nonbetrothed, women. Possible sexual partners included his slaves, concubines, prostitutes, and widows. A wife's extramarital affairs, however, could be punished by divorce or by corporal or capital punishment for her and her paramour. With the exception of the king, polygamy was largely limited to the Old Assyrian and Old Babylonian periods and even then was confined to bigamy. Two notable exceptions to this rule existed: one when the woman was proven barren and the other in cases of levirate marriage. If a woman was thought to be barren, her husband was permitted to take a secondary wife. Several marriage documents from Nuzi, Emar, Alalakh, and the biblical story of Sarah and Hagar (Genesis 16) attest to this practice in the mid-second millennium. Levirate marriage, attested in Middle Assyrian, Hittite, and biblical law collections, occurred when the

widow of a childless husband married one of her in-laws and raised the resulting child as the child of the deceased.

Typically, either husband or wife could initiate a divorce. Grounds for divorce are not always provided in the documents and may not have been necessary. If the husband expelled his wife for adultery, slander, or financial malfeasance, he kept her dowry. Otherwise, she retained it. Remarriage was permitted after divorce, widowhood, or the husband's absenteeism whether due to military or unexplained circumstances. In such cases, a marriage contract was not necessary.

—Spencer L. Allen

Bibliography

- Bottéro, Jean. "6. Love and Sex in Babylon" and "7. Women's Rights." In *Everyday Life in Ancient Mesopotamia*, translated by A. Nevill. Edinburgh: Edinburgh University Press, 2001.
- Greengus, Samuel. "Old Babylonian Marriage Ceremonies and Rites." *Journal of Cuneiform Studies* 20 (1966): 55–72.
- Greengus, Samuel. "The Old Babylonian Marriage Contract." *Journal of the American Oriental Society* 89 (1969): 505–532.
- Paradise, Jonathan. "Marriage Contracts of Free Persons at Nuzi." *Journal of Cuneiform Studies* 39 (1987): 1–36.
- Westbrook, Raymond, ed. *A History of Ancient Near Eastern Law*, Vols. 1–2. Leiden: Brill, 2003.
- Westbrook, Raymond, ed. *Old Babylonian Marriage Law*. Horn, Austria: Verlag Ferdinand Berger and Söhne Gesellschaft M. B. H., 1988.

Childbirth in the Near East

Childbirth practices were relatively similar throughout the ancient Near East from Egypt to Syria-Palestine to Mesopotamia. Most of the evidence for these practices is indirect. Historians have used descriptions from mythological texts, artistic depictions, and information included in magical instructions to reconstruct what happened when a woman went into labor. The Egyptians especially disliked commemorating events that were dangerous or stressful, believing that writing something down could bring it into existence. The overall result for the entire Near East is that only limited information has been preserved about this important subject.

Conception was well understood to be the result of a sexual union between a man and a woman. However, the biological processes behind conception were unclear. In Egypt it was believed that the man placed the child directly into the belly of the woman. In Mesopotamia, conception was understood in almost botanical terms; the man planted the semen (in Akkadian one word served for both semen and seed) into the woman's belly, and conception was understood as similar to aspects of farming.

Numerous techniques were used to ensure that conception occurred. Magical incantations could be said, offerings could be made to the gods, various oils and ointments could be rubbed into the body, or any combination of these could be employed. Similar techniques could be used in order to prevent conception. The Egyptians also employed various techniques to ascertain whether or not a woman had become pregnant. One of these pregnancy tests had the woman urinate on a barley or emmer wheat seed. If the seed germinated, then it was determined that the woman was in fact pregnant. It has been subsequently shown that this test is relatively dependable. In Mesopotamia, it was thought that the gender or health of the baby could be determined by observing the changes in physical appearance that the mother's body underwent, especially skin blemishes.

When an expectant Egyptian mother went into labor, she was moved into a special room of the house or into a confinement pavilion. Delivery took place in special ritualized surroundings, set off from everyday activities. It is unclear if this was also the case in ancient Mesopotamia, although it seems likely. The expectant mother did not lie down to give birth. Rather, she squatted on stones or sat in a chair that had a portion of the seat removed; perhaps midwives or female relatives provided support on either arm. While this may seem uncomfortable, it is in fact much easier for the birthing woman, who can use gravity to help deliver the baby. After delivery, the mother was confined to the pavilion for a brief period. The child was granted a name in a naming ceremony, and special rituals were enacted with the placenta and umbilical cord.

Childbirth was a time of great danger for both the mother and the baby. Various rituals and mag-

➤ THE ABYDOS BIRTH BRICK

In 2001, the Pennsylvania-Yale Excavation to Abydos in Egypt, led by Josef Wegner, made an extraordinary archaeological find. Excavators working within a princess's quarters in the Middle Kingdom mayor's office discovered an ancient birth brick. Made out of mud like any of the thousands of bricks that the mayor's residence is composed of, this birth brick is unique in that it was plastered over and painted with magical symbols. On one face are depictions of the goddess Hathor as well as a woman holding a baby in a birthing arbor. Along the sides are images of sword-bearing animals cutting off the heads of other animals, likely symbolizing some sort of protective power. This is the only extant example of a birth brick, on which the mother would have knelt during delivery or on top of which the baby would have been placed immediately following delivery.

—Kevin M. McGeough

ical spells were enacted to protect mother and child before, during, and immediately after delivery. Special amulets were designed to provide protection against the dangerous spirits that may wish to harm the mother or child. Especially worrisome were the child-snatching demons, known as *lamashtu* in Mesopotamia.

—Kevin M. McGeough

Bibliography

- Beckman, Gary. *Hittite Birth Rituals*. 2nd rev. ed. Wiesbaden: Otto Harrassowitz, 1983.
- Feucht, Erika. "Birth." In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Janssen, Rosalind, and Jac Janssen. *Growing Up in Ancient Egypt*. London: Rubicon, 1990.
- Stohl, M. *Birth in Babylonia and the Bible: Its Mediterranean Setting*. Groningen: Styx, 2000.

Children in Egypt

The ancient Egyptians clearly differentiated childhood from adulthood, although it is less clear whether there were any further subdivisions in the Egyptian conception of childhood such as moderns hold (e.g., toddler or teenager). Scholars

THE EGYPTIAN WET NURSE

A wet nurse would have been a familiar figure to ancient Egyptian children from wealthy families. For Egyptian families that were able to hire a wet nurse, this woman would become a close member of the family, with the milk provided by the nurse establishing a symbolic link between the families akin to a blood tie. For the wet nurse, this position could be very beneficial. Payment could be quite good. In one particular instance the wet nurse was compensated by a family better than was a physician. The husband or biological offspring of a wet nurse could also benefit from the favors granted because of her employment by a high-ranking family. Indeed, acting as a wet nurse for a well-connected family could result in greater social mobility for the wet nurse's family. The occupation of wet nurse seems to have been a respected position in ancient Egypt. A frequent technique for showing divine favor in Egyptian art was to portray the goddess as suckling an individual, implying that the deity had the same close relationship to the individual as a wet nurse would have.

—Kevin M. McGeough

are unsure if any ceremonies formally marked the transition from childhood to adulthood. There are some indications that circumcision may have marked the male transformation from child to adult status, but this does not seem to have been the case for all periods of Egyptian history. Another possible initiation rite may have included wrapping a band around the boy's head. Female children may have been considered adults upon marriage, but this is not certain. Whatever the case may be, it is not clear exactly when an Egyptian child became an adult.

The differentiation between child and adult is most apparent in terms of dress and hairstyle, evidence that is well preserved in reliefs found on the walls of ancient tombs and from depictions in ancient statuary. However, when working with this evidence it is unclear whether these images reflect the real-life situation or are simply artistic conventions. In art, both male and female children are frequently depicted in the nude, although this fluctuates throughout Egyptian history. Given the preponderance of images,



Wall painting depicting an adult and children, Tomb of Inherkha, Deir el-Medina, Egypt, Eighteenth–Twentieth Dynasty. (Bojan Breceelj/Corbis)

it is safe to conclude that nudity was acceptable for prepubescent children. However, some children's clothes have been recovered archaeologically, including a linen dress from Thebes and a linen sleeve from Gurob, so it should not be assumed that nudity was the normative dress (or lack thereof) for children.

Childhood was not only marked by specific clothes (or more correctly the absence of such) but by hairstyle. Once again, style does not reflect gender differentiation. The most common style was to wear the hair in a sidelock, braided and curled on the right side of the head. The rest of the hair was either cut short or shaved off completely. Some variations are evident. Occasionally children are depicted with braids, with jewelry woven into the lock, or with short hair

but no lock. Hand gestures are similarly used as conventions in Egyptian art. Boys are typically seen sucking their middle fingers.

There is less evidence for the daily life of a child in ancient Egypt. What may be toys have been recovered archaeologically, including balls and animal figurines. Egyptian art and literature also hint at certain games that were played, especially acrobatic pursuits and role-playing games. Pets are often depicted along with children in tomb art. It is unclear whether this meant that children did normally have pets or if these were idealized images of childhood intended to perpetuate pleasant surroundings in the afterlife. Some children would have attended school, but we have little evidence for what that would have entailed or who would have had access to it. Most nonelite children would have to have engaged in some sort of work. For some children this would have meant following their parents around, working around the home or assisting in professional labor. In other instances, children may have had formal occupations working as servants, entertainers, or attendants for the elite.

It is assumed that infant mortality was very high in ancient Egypt. A cemetery associated with the New Kingdom site of Deir el-Medina contains the remains of many dead children in a variety of containers. At some sites the remains of infants were interred under the floors of houses or within household furnishings. Family size in ancient Egypt varied depending on various circumstances. Perhaps the most extreme was Pharaoh Ramses II, who had more than 150 children. More typical families would have between 2 and 6 children, perhaps more in the rare cases in which all children managed to live past infancy. Demographic evidence for Egypt is extremely limited since the Egyptians did not keep accurate birth and death records. Generalizations can be made based on the biographical information contained in private tombs.

—Kevin M. McGeough

Bibliography

- Feucht, Erika. "Children." In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Janssen, Rosalind, and Jac Janssen. *Growing Up in Ancient Egypt*. London: Rubicon, 1990.

Robins, Gay. *Women in Ancient Egypt*. Cambridge, MA: Harvard University Press, 1993.

Children in Canaan

Due to the paucity of Canaanite sources on the topic of children, we are left primarily with the Hebrew Bible and several texts from Ugarit (though technically just north of Canaan) as our main sources of information regarding children. Despite the fact that this population demographic was virtually powerless—ancient Israelite society being one that more clearly valued adults and elders (Prov. 3:2, 16:31), with parents having near absolute authority over children (Exod. 21:17; Prov. 23:13)—a number of references in the biblical and Ugaritic texts provide insight into the lives of children in Canaan in antiquity.

The birth of a child was seen as a blessing from God, especially in that children, once grown, provided labor for the family and an heir for the parents. That children were considered a blessing can be seen in both prayers of petition for children (1 Sam. 2) and in the joyful celebration for the arrival of a child (Gen. 21:6; Ruth 4:13–15). Such prayers of petition, though, were not limited to the would-be mother. Men also joined in petitioning God (or the gods) for an heir (Gen. 15:1–3; Aqhat in the Ugaritic narrative of Aqhat). The frequency of prayers for children in the Bible underscores the seriousness of the issue of childlessness. To be a married woman without a child was a rather unfortunate circumstance (Gen. 16; Jer. 18:21). It appears, though, that once a family was blessed with a child, the mother frequently contributed to the naming of the child (Gen. 29–30). Children were often named after local species of flora or fauna or after their ancestors, for instance, a grandfather. Alternatively, names might include a theophoric element; that is, the name of the god worshipped by the parents could appear in the child's name (e.g., Joshua, meaning "Yahweh saves"). Estimates suggest that an Israelite woman would give birth to an average of four children. With high infant mortality rates, however, only two would be expected to reach adulthood. Consequently, the average nuclear family would comprise approximately four members.

Children primarily received their education from their parents. Children were instructed in religious matters (Exod. 13:3–16; Deut. 6:7), vocations (1 Sam. 3), and the military (Gen. 14:14; 1 Chron. 12:8). Children were also taught to “honor thy father and mother” (Exod. 20:12). “Honor,” however, did not merely entail respecting the word of one’s parents but instead included honoring one’s parents after the parents had died. Children would be expected to oversee the burial and mourning rituals for their parents and the ongoing maintenance of the tomb. Further duties are listed in the Ugaritic narrative of Aqhat detailing the requirements of a good son. The good son contributes to the family in ritual matters and mundane matters. Ritual actions include setting up a stele (standing stone) in remembrance of one’s ancestors, offering incense and songs to the gods, and participating in ritual feasts. Mundane actions include defending one’s father in social circles and household chores such as patching the roof and cleaning clothes. Of course, children were expected to contribute to the well-being of the family, with boys assisting with farming or the family’s animals and girls assisting their mothers. As was just seen in the description of filial duties, though, we should not be too quick to assume a traditional division of labor, since the good son cleans his father’s clothes.

Should a child reach adulthood, issues of inheritance and primogeniture came into play. Typically, only sons would receive an inheritance of land upon the death of a father. If there was more than one son, the eldest would receive a double portion (Deut. 21:17). This privileging of the eldest son in a family is known as primogeniture. Besides receiving a double portion of the inheritance, the eldest typically received a special blessing (Gen. 48) and would succeed his father as head of the household. Exceptions, of course, exist. Jacob, by means of trickery, obtained the special blessing of his father, Isaac (Gen. 27), and Joseph, though the 11th of 12 sons, was deemed the favorite, receiving a special coat from his father, Jacob (Gen. 37:1–4). On the chance that a father would die without sons, daughters would be eligible to receive an inheritance, though this was considered exceptional (Num. 27:1–11).

—C. K. M. Peacock

Bibliography

- Grassi, Joseph A. “Child, Children.” In *The Anchor Bible Dictionary*, vol. 1, edited by David Noel Freedman. New York: Doubleday, 1992.
- King, Philip J., and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Parker, Simon B., ed. *Ugaritic Narrative Poetry*. Atlanta: Scholars Press, 1997.
- Wright, David P. *Ritual in Narrative: The Dynamics of Feasting, Mourning, and Retaliation Rites in the Ugaritic Tale of Aqhat*. Winona Lake, IN: Eisenbrauns, 2001.

Children in Mesopotamia

Children, particularly sons, were earnestly desired by the Mesopotamians, for who else would care for a couple in their old age and make offerings to ensure the well-being of their spirits after their death? Where children were more abundant than resources, the baby might be adopted by a childless couple. The Mesopotamian infant was protected in the womb against the baleful she-demon Lamashtu by magical amulets and incantations (in which the child was visualized as a ship on a dark sea carrying an unknown cargo). Abortion was illegal, although a recipe for an abortion-inducing potion shows that it was illicitly practiced.

Babies were fed by their mother or by a paid wet nurse for their first two or three years. During this time they were still threatened by Lamashtu, who was held responsible for infant mortality. The average family was lucky if more than two or three of their children survived into adulthood. Thereafter life expectancy was good, 70 being considered a good age and 120 stated as the greatest age that the gods would allow; timely death was not feared but welcomed. Fifty was considered too young to die; early death through disease, accidents, or warfare was regarded as a sign that the gods, particularly the family deity, had turned their back on the individual concerned, often because of some consciously or unconsciously impious act.

Soon after birth the baby was given a name, often incorporating the name of the family god or the family’s city of residence. At first it slept in a basket, hushed to sleep by a lullaby sung by its mother, lest its crying disturb and anger the gods. During the day she carried it around in a sling.

Once out of infancy children were expected to help their parents and learn the skills they would need in adult life, usually following their parents' occupation. Often children worked alongside their parents, in the fields or at their work. For example, the huge textile factory in Ur-III-period Guabba employed 1,800 children as well as more than 4,000 women. The children of the well-to-do attended school. In one Sumerian text, a father berates his son for idling instead of attending school, saying that he has been spared the chores and labors that most children had to undertake in support of their families.

Life was not all work. Little model animals set on boards must have been pull-along toys for small children, and their older brothers and sisters played knucklebones, dice, and board games or skipped and danced to the music of a flute. Board games had a more serious side too, being used in divination. Boys might accompany their fathers for hunting or practice shooting at a target. Literary skills could be honed in debating contests. On occasion there would be profes-

sional entertainers to watch: jugglers, wrestlers, clowns, acrobats, instrumental musicians, singers, snake charmers, and performing bears.

—Jane R. McIntosh

Bibliography

- Black, Jeremy, and Anthony Green. *Gods, Demons and Symbols of Ancient Mesopotamia: An Illustrated Dictionary*. London: British Museum Press, 1992.
- Kramer, Samuel Noah. *History Begins at Sumer: Thirty-Nine Firsts in Recorded History*. 3rd rev. ed. Philadelphia: University of Pennsylvania Press, 1981.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Nemet-Nejat, Karen Rhea. *Daily Life in Ancient Mesopotamia*. Peabody, MA: Hendrickson Publishers, 2002.
- Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.
- Stol, Marten. "Private Life in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

■ Introduction: Social Classes

In the period from 4000 to 1000 BCE, social differentiation at its most extreme emerged. At various times in Egypt, Mesopotamia, and China human sacrifice was present, which at heart reflects conceptions that some humans are more worthy than others. In these cases of human sacrifice, a wealthy or powerful individual wanted servants to accompany him into the afterlife.

Human sacrifice may be the extreme example of this high level of social differentiation that appears in this period, but it is not the only example. Many of the era's greatest monuments and achievements came at the expense of people exploited by more powerful individuals. The Pyramids at Giza, while not built by slaves (a common misconception), were built by laborers working for the state, using state resources acquired through taxation. The pyramids, as tombs for kings, reflect social stratification in that they were a visible marker of the extreme

importance of one individual over another. Throughout Europe, the Middle East, and China, wealth in this period becomes very unevenly distributed; archaeologists are easily able to differentiate the houses of the poor from the houses of the wealthy in these areas.

The first evidence for slavery comes from this period as well. While this institution may have existed even earlier, it is very difficult to identify slaves in the archaeological record; textual accounts, usually laws about the treatment of slaves, provide the firmest evidence for slavery. In this period, slaves were either foreigners captured in war or people who had become so impoverished that they were compelled to sell themselves into slavery in order to survive. The ability for one person to own another is one of the unfortunate contributions that humans in this period made to world history.

—Kevin M. McGeough

► THE LANGUAGE OF SOCIAL DIFFERENTIATION

When ancient historians talk about inequality, they use very specific language to refer to very specific concepts. Rank is the relative position that an individual has in a society and can be determined by any number of means. Status likewise is the relative position that an individual has in a society, but it is determined by individual achievements and displays of that achievement. Class is the relative position of a group within a society and defined by economic relationships.

—Kevin M. McGeough

Hammurabi's Law Code and the Tripartite Structure of Mesopotamian Civilization

The most fundamental document from the Old Babylonian period (2000–1500 BCE), the Code of Hammurabi is one of the earliest law collections from Mesopotamia, serving as a vista into

► LEX TALIONIS

The following law sections, making up part of what is known as the *lex talionis* or “law of retribution” (the law is also found in the Hebrew Bible, Exod. 21:22–27), reveal strikingly the division of social classes invoked in judicial settings of the Old Babylonian period. The translation is Roth’s 1997, with a few minor alterations:

“Section 196: If an *awīlu* should blind the eye of another *awīlu*, they shall blind his eye.

Section 197: If he should break the bone of another *awīlu*, they shall break his bone.

Section 198: If he should blind the eye of a *muškēnu*, he shall weigh and deliver 60 shekels of silver.

Section 199: If he should blind the eye of a *wardu* owned by an *awīlu* or break the bone of the same, he shall weigh and deliver one-half of his value (in silver, i.e., ≈ 10 shekels).”

—Ben Thomas

Source

M. T. Roth, *Law Collections from Mesopotamia and Asia Minor*, Society of Biblical Literature Writings from the Ancient Near East 6, 2nd ed. (Atlanta: Scholars Press, 1997), 121.

all aspects of ancient Babylonian life. It was compiled under the auspices of King Hammurabi of Babylon (ca. 1792–1750 BCE) toward the end of his reign. While most agree that it is not a true code in the sense of Justinian’s *Institutions* or Napoleon’s *Code Civil*, much of its subject matter is disputed, not least of which is the discussion of the three primary social strata: the *awilum*, the *mushkenum*, and the *wardum*. Defining the *awilum* and *mushkenum* is slippery, since they are only legally distinct in the Old Babylonian period. The *awilum*, often simply translated as “man,” may simply refer to an ordinary individual in any given section of the code. However, when used in conjunction with the *mushkenum* or *wardum*, he always represents a freeman (i.e., free from debt). The *awilum* usually owned land and performed the role of household head.

The *mushkenum*, a West Semitic term meaning “subordinate,” after the Old Babylonian period became a designation for someone stricken by poverty. It has even come into the Romantic languages with the same connotation (Italian *meschino*, French *mesquin*). Yet in the code its usage is too specialized to be merely construed with “the poor.” In relation to the *awilum*, the *mushkenum*’s social standing was inferior. It may be, however, that the *mushkenum* belonged to the king, and as such legal requirements may have been required since the *mushkenum* were not defended by customary law. Rights explicitly guarding this group are often put adjacently to those of the palace (Section 16). Due to the dubiety of defining the roles of the *mushkenum* and the *awilum*, many refrain from translation and leave them simply in transcribed Akkadian.

Slaves (*wardum* class) were both of indigenous and foreign nationality, sometimes prisoners of war. Overall, slaves were relatively few in number, as compared to the Greco-Roman times, since agriculture and herding were not based on slave labor. Some slaves were forced to sell their wives, children, and even themselves into slavery due to economic hardship. Slavery was not a fixed social condition. Slaves could purchase their freedom and even buy land. The average price for a slave was 20 shekels of silver but was sometimes as much as 90 shekels. The normal wage paid to hired laborers was 10 shekels annually. It was the wealthy who were really only able to afford slaves. Thus, one can understand

why runaway slaves are often a topic of concern for the code and were given a distinct lock of hair to make public their status.

Fees and punishments varied according to the social condition. This is clearest in the famous *lex talionis*, or “law of retributive justice.” An awilum would have to pay more for damages inflicted upon an awilum of equal or superior rank than to a mushkenum. However, social barriers could also work in favor of the lower classes. The mushkenum had to pay 10 shekels of silver for striking the cheek of another mushkenum (§204), yet an awilum would have to pay 60 shekels for the same offense to an awilum. It stands to reason that an awilum should pay in accordance to his pecuniary means, which was of course more substantial than for the mushkenum.

—Ben Thomas

Bibliography

- Greengus, S. “Legal and Social Institutions of Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Roth, M. T. *Law Collections from Mesopotamia and Asia Minor*. 2nd ed. Society of Biblical Literature Writings from the Ancient Near East 6. Atlanta: Scholars Press, 1997.

Warrior Classes in Bronze Age Europe

The emergence of Bronze Age warrior classes reflects important social, economic, and technological developments in European prehistory. Iconographic and burial evidence associate warriors with weapons, armor, and related material culture that embodied prestige and power. Only select individuals were associated with warrior artifacts, indicating the restricted nature of their social and perhaps political or economic status within communities. Although the roles of warriors likely varied between regions and did not always involve warfare, warriors are consistently portrayed throughout Europe, attesting to widespread cultural influences during the Bronze Age.

Social stratification and the emergence of Bronze Age warriors are related to agricultural developments and the growth of bronze metallurgy. Although settlements were small and dispersed during the Early Bronze Age, local agricultural production intensified with sedentism

and the introduction of the ox and plough. Food surpluses allowed segments of local populations to engage in nonagricultural activities, which included metalworking. Metallurgy existed before intensive agriculture, but the demand and widespread acquisition of metals and the understanding of their properties did not occur until the late third millennium BCE, in central Germany.

Bronze metallurgy led to the production of weapons and material culture of prestige, which became a protocurrency. Naturally occurring copper and tin were rare, requiring trade networks to transport metal ores from prominent sources in the Carpathian Basin and the Caucasus to meet demand elsewhere. Bronze metallurgy became widespread in central and northwestern Europe with the exploitation of copper sulphide ores from the Alps and German-Bohemian hinterland, as did lavish grave goods and the appearance of warrior burials. During the Bronze Age, communal (multiple-person) burials, which were popular during the Neolithic period and the Copper Age, were abandoned in favor of individual burials, which marked an ideological shift in the perception of identity and the recognition of social stratification. By the Early Bronze Age, most humans were interred in single flat burials, some accompanied by weaponry and presumed to be warriors; elaborate burials included bronze weaponry, wagons, and ceramic vessels associated with feasting.

With long-range trade and metallurgy came changes in warfare. In the Early Bronze Age, metal projectile points replaced stone arrowheads, and the bow and arrow became the chief mode of combat. With metallurgical developments in the Carpathian Basin, daggers became increasingly important, their blades later elongating into rapiers and swords, a particularly important phenomenon in tumulus burials along the Rhine and upper Danube. By the Late Bronze Age, thrusting spears were widespread, as were daggers and swords, indicating that close-range combat was common. Rock carvings and other iconographic evidence suggest that shields were common but made of organic materials such as wood and animal skins, which rarely preserve.

Although metallurgical developments were vital to the emergence and identity of warriors, their roles in warfare and trade are not obvious. Many weapons in warrior burials and ritual

► THE DEVELOPMENT OF SOCIAL STRATIFICATION AND THE EMERGENCE OF BRONZE AGE WARRIOR CLASSES

Did social stratification and the appearance of warriors occur out of societal necessity or individual interests? Functionalist understandings of social stratification contend that larger sedentary Bronze Age communities had different needs than Neolithic or Copper Age societies, including systematic labor organization, resource distribution, and security. These responsibilities required the leadership of select individuals, and warrior classes may have emerged in response to communal need. Nonfunctionalist perceptions of social stratification claim that certain individuals accumulated and protected material wealth gained through the control of interregional trade networks. These individuals were prominent socioeconomic elite who may have included warriors or employed them for security and protection. What do you think?

—Noah V. Honch

deposits would have been ineffective in battle. Many helmets could not have withstood impact blows, and others had protruding horns that would have been awkward in combat. Many breastplates were heavy and mechanically awkward, making fighting extremely difficult. In such cases, metal artifacts were probably of ritual or symbolic significance. As such, some so-called warrior burials did not contain warriors of battle but instead contained important individuals whose power and social stature were symbolized by warrior artifacts, which were connected to elaborate ceremonies and purposeful display.

Extensive use wear on the surfaces of weapons, however, attests to the reality of warfare. A number of buried individuals, having died in battle, have projectile points embedded in their spinal cord or pelvis. Hillforts and fortified settlements also appear with the expansion of weapons manufacture. Many fortifications exploited natural boundaries for defense and overlooked waterways and roads that were important to metallurgical trade routes and may have marked important geopolitical boundaries; these facilities were probably manned by warriors.

A dramatic transition in the representation of warrior classes occurred upon the collapse of the Mycenaean civilization during the Late Bronze Age. Population movements along the Middle and Lower Danube ushered in the Urnfield period during which the dead were cremated, placed in funeral urns, and buried in cemeteries. Urnfield burials overturned traditional inhumation practices in central Europe and peripheral areas of the continent, carrying new technologies (e.g., sheet bronze working) and further outlets of elaborate display and prestige. While the intellectual or theological belief systems behind emergent Urnfield burials are not clear, the memories and achievements of warriors remained important and continued to be symbolized by weapons, armor, and prestige objects.

—Noah V. Honch

Bibliography

- Gilman, A. "The Development of Social Stratification in Bronze Age Europe." *Current Anthropology* 22 (1981): 1–23.
- Jensen, J. "The Heroes: Life and Death." In *Gods and Heroes of the European Bronze Age*, edited by K. Demakopoulou, et al. New York: Thames and Hudson, 1999.
- Osgood, R., S. Monks, and J. Toms. *Bronze Age Warfare*. Stroud, Gloucestershire: Sutton, 2000.
- Sherratt, A. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated Prehistory of Europe*, edited by B. Cunliffe. Oxford: Oxford University Press, 1994.

Mesopotamian Slavery

Slaves—*wardum* in Hammurabi's law code—occupied the lowest rank in Mesopotamian society. Textual clues suggest that slavery already existed by the later fourth millennium BCE. Initially, all or most slaves were war captives and generally female. Male prisoners were often slaughtered, although they might be restrained in a neck stock until cowed enough to be used as slaves or blinded to make them easier to manage. Enslavement was not necessarily permanent, and some prisoners became *mushkenum*. By Old Babylonian times, prisoners of war of either sex were becoming economically more important and were therefore valuable booty. Several letters from Mari and Karana's royal la-

dies refer to promises of new slaves after a successful military campaign, and most or all of the slaves in the Mari palace workshops were prisoners of war. These captives were initially state property, sent to work in the temples or palaces, but in late Assyrian and Neo-Babylonian times, even private soldiers could acquire prisoners as their private booty, often selling them to wealthier individuals or hiring them out as prostitutes.

By the second millennium there was a flourishing trade in slaves, fed by slave-taking raids in addition to the flow from regular warfare. In Old Babylonian times, tribesmen and women from the eastern mountains were popular as slaves, but the mountains to the north and the desert to the west also supplied tribal captives. Slaves did not come cheap, from 20 to as much as 90 shekels of silver at Old Babylonian rates compared with around 10 shekels a year to hire a laborer, but in addition to work they could give a return on investment by producing children. Many of the slaves in Mesopotamian households and institutions were the offspring of slaves or of slave women and free men.

Not all slaves were war captives or their descendants. Enslavement was a punishment for certain crimes in Hammurabi's code. A substantial proportion of slaves in most periods were local people whom misfortune had forced into slavery. In times of extreme hardship, for example during a long siege, it was a recognized practice for a man to sell himself or members of his family to the temple or palace to keep them from starvation. In Neo-Babylonian times children could be dedicated to the temple as oblates for the same reason. They were free to practice a craft or other occupation but had to pay the temple part of their earnings.

Debt drove many into slavery. High rates of interest on loans (one-fifth) and on loaned grain and other perishable goods (one-third) meant that it was easy for individuals who suffered a succession of bad harvests or a run of ill luck to spiral into debt. A man could bind himself or a member of his family to serve his creditor for a period of time—fixed at three years in Hammurabi's law code—or sell them to pay off the debt. Unlike foreign captives who were generally slaves for life unless manumitted, debt slaves could

redeem themselves by paying off the debt. Periodically an enlightened ruler (such as Lipit-Ishtar of Isin or Ammisaduqa of Babylon) would annul such debts, releasing those trapped in debt slavery.

The Late Assyrian kings deported vast numbers of conquered people; unlike war captives, these initially retained their freedom, and many settled peacefully into their new homes, enjoying rights equal to those of the native population. But from the reign of Sennacherib onward, their status changed. They now became royal slaves and were distributed by the king alongside other booty, some becoming the property of temples, nobles, and private citizens and others being conscripted into the army or serving the palace by cultivating its fields and gardens or tending its flocks and herds.

Kings offered many of their prisoners of war to the temple, and it was not uncommon for private individuals to dedicate slaves as offerings. Slaves might also be transferred from private to state ownership to pay taxes. In the third millennium most temple workers were free employees. Temple and Crown estates were cultivated by free tenants, and public works were undertaken largely by citizens as *corvée* labor. Increasingly as time went on, however, slaves worked alongside, or instead of, free individuals on public works, in state factories, and on large royal, temple, or private estates.

Most domestic slaves undertook household activities, but if they had a particular skill they might work as craftsmen or craftswomen in the home or be hired out to make a profit for their owner. In later times, slaves could be apprenticed to learn a useful trade or skill, such as baking, cobbling, brewing, or weaving. In some cities or in some periods, slaves were allowed to operate in many ways like free individuals, earning an income by working; owning and renting out houses, land, animals, and even their own slaves; and becoming involved in business ventures. However, they had to make their owner a regular payment (*mandattu*), and they could not buy their freedom but could still be sold by their owner, their earning power and accumulated savings increasing the price they fetched. Temple slaves could attain senior administrative positions but likewise remained slaves.

Careful records were kept of the origins and personal details of state-owned slaves, who were housed in barracks. Slaves were rarely physically restrained but were identified by their hairdo or *abbuttum* (*apputtum*), probably a style of forehead hair since “clearing the forehead” was the term for manumission. It was a grave offense, attracting severe punishment, for a barber to shave this off or for anyone to coerce him into doing so or to aid a slave in escaping. On the other hand, at least at Mari, slaves themselves were not punished for attempting to escape, although habitual bolters might be chained. A more permanent mark, branded on the forehead or hand, was initially rare but had become usual by the first millennium BCE. One text recorded an escaped domestic slave’s attempt to turn her ownership mark into a temple brand to improve her lot. Temple slaves received the same rations as free employees: basic food, with extras on feast days, and an allowance of clothing or wool. The conditions of domestic slaves varied, but they enjoyed no legal protection against harsh treatment, and their families could be split up and sold separately.

On the other hand, slaves were often valued and well-treated members of the household and were usually few in number. Letters found at Mari and Karana show that it was thought bad

form to get rid of a long-serving slave; one records a combined protest by the other household slaves against such an action, and another was directed by a slave to King Zimri-Lim himself, begging him not to sell her mother. A slave girl who had borne a son to her master could not be sold, and she and her children became free on their master’s death, whereas other slaves were inherited by the next of kin. Other slaves might be granted their freedom on the death of their owner; the children of a freed slave automatically became free too.

—Jane R. McIntosh

Bibliography

- Dalley, Stephanie. *Mari and Karana: Two Old Babylonian Cities*. London: Longman, 1984.
- Greengus, Samuel. “Legal and Social Institutions of Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Mendelsohn, Isaac. *Slavery in the Ancient Near East*. Westport, CT: Greenwood, 1978.
- Saggs, H. W. F. *Peoples of the Past: Babylonians*. London: British Museum Press, 1995.
- Snell, Daniel C. *Life in the Ancient Near East*. New Haven, CT: Yale University Press, 1997.

■ Introduction: Ethnic Identities

Human groups had been differentiating themselves from other human groups long before 4000 BCE. Yet between 4000 BCE and 1000 BCE, there are hints that people had started to differentiate each other on the basis of what we today call race and ethnicity. Generally, the term “race” refers to classifications based on biological or physical difference. This conception, while still common in public discourse, is less favored in academic circles, since with the rise of genetics as a science, it has become clear that the traditional markers of racial difference are in genetic terms almost negligible. Ethnicity is different from race in that

these categories are based on similarities within a group (and differences to other groups) derived from cultural practices and historical circumstances. An ethnic group usually shares a language, cultural values, territory, and perhaps shared origins. For a group to be an ethnic group, the members must have a shared belief that they are members of a group.

Ancient conceptions of what constitutes ethnicity would not have lined up evenly with modern ones. In the languages of this period, there are no terms for the abstract concepts of ethnicity and race. Yet there were words to describe someone as a foreigner or stranger, and there

were artistic conventions for depicting this kind of difference. The traits that made someone “foreign” included speaking a different language, wearing different clothing styles, engaging in different cultural practices (e.g., circumcision), and being born in a different location. These differences, however, do not necessarily line up with specific political entities. For example, the Canaanites (who dwelt in what is now known as Israel) were seen as a distinct group of people (with a shared language, religion, fashion, and cultural practices) even though they were never a unified political body.

One must be very careful when studying ancient race and ethnicity to not impose modern baggage on the ancient world. Do not presume that modern ideas of race were held by the ancients. The Egyptians, for example, did differentiate themselves from people in the Levant, the Greek world, and the rest of Africa. Skin color, however, was not one of the typical means of this differentiation. In Egyptian art (as well as Minoan art), skin color reflects gender, not race. Dark-skinned individuals are males; white-skinned individuals are female.

—Kevin M. McGeough

Conceptions of Ethnicity in Ancient Egypt

The ancient Egyptian view of ethnicity is complex, demonstrating a mix of conceptions as well as changes over time and situation. It is unclear what ethnicity Egyptians themselves were, partially because, at least to begin with, the country consisted of a heterogeneous ethnic background. There have been various scholarly debates over the ethnic origins of Egyptians, employing everything from linguistic analysis to studies of artistic representations. While disagreements are likely to continue, it seems clear that as the country became unified it was made up of a range of groups, more heavily African in the south and Levantine in the north. The Egyptian language is characteristic of this. Often designated as Afro-Asiatic, it demonstrates consistent characteristics of both Semitic and African language families. While the Egyptians always maintained a sense of local identity (e.g., a Theban, an oasis man, etc.), they also developed a

strong sense of national identity, separating those who were Egyptians from those who were not. The distinctions were god-given. A hymn to Amun-Re states, “It is Atum who has created men; who has defined their nature and has made them live; who has distinguished them one from the other by the color of their skin.” Egypt was considered the center of creation, and thus Egyptians held a central place among ethnicities.

The Egyptian view of others was complex, receiving a mixed treatment in available sources. Two divergent outlooks are apparent, which Loprieno has classified as the *topos* and *mimesis* views. The *topos* view, promulgated in official texts and representations, held a hostile regard toward those of non-Egyptian ethnicity. Just as the ordered and organized world was surrounded by an ever-impinging chaos, so Egypt was surrounded by ever-impinging foreigners. Foreigners became the epitome of chaos, and the need to subjugate them was as long lived as the idea that order must conquer chaos. Thus, as all of chaos should become ordered, all of the world, *de facto*, belonged to Egypt and must be controlled by it.

Of the many texts promulgating the *topos* position, two examples will suffice. The prophecy of Neferti outlines that a period of chaos in Egypt was the direct result of the incursion of foreigners and that as a king arose who would set things right, “Asiatics will fall to his slaughter; Libyans will fall to his flame . . . Asiatics will not be allowed into Egypt,” and due to these actions, “Order will return to its seat; chaos is driven out.” In an Eighteenth Dynasty letter to the viceroy of Kush, he is warned to “not trust Nubians, beware their people and their magic.”

Yet in more mimetic sources, such as fictive tales, biographies, and mundane texts, a different view of foreigners appears. Here we find foreigners who have acculturated to Egypt, married Egyptian natives, hold Egyptian positions of trust, and raise Egyptian families. Even foreigners who came to Egypt as slaves, likely as part of the booty of war, could be raised to positions of trust. We know of Semitic and Nubian tutors, temple gatekeepers, generals, and viceroys. Some immigrants adopted Egyptian names and seem to have completely integrated into Egyptian society. There are even a few instances of people

with foreign names being referred to as Egyptians. Some foreign ruling groups were hated, and others were acculturated and well received. Some foreign enclaves in Egypt lived peacefully with their neighbors, while others were treated with hostility. But throughout Egyptian history, distinctions were made between ethnicities.

—Kerry Muhlestein

Bibliography

- Gordon, A. "Foreigners." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Loprieno, A. "Slaves." In *The Egyptians*, edited by S. Donadoni. Chicago: University of Chicago Press, 1997.
- Redford, D. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.
- Smith, Stuart Tyson. "People." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 3, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Smith, Stuart Tyson. "Race." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 3, edited by D. Redford. Oxford: Oxford University Press, 2001.

Akkadian Personal Names

Akkadian names were given at birth or soon after. This fact is demonstrated by names that reflect the circumstances of the birth itself, such as Ippushqim-usi ("He came out with difficulty") or Tulid-dannam ("She [the mother] has given birth to a strong one"). Some names seem to be short prayers for a successful birth, Suchur-Sin-lisi ("May he come out to the light of the moon-god Sin"). The name Ikshud-appashu ("His nose has arrived") is a particularly interesting example of a name that alludes to birth circumstances. According to J. J. Stamm, this name probably reflects the fact that the child was born as a breach. In a normal (head-first) birth, the child's nose "arrives" at the beginning and so would not, it seems, warrant any notice. Only in a breach birth, whose end is marked by the "arrival" of the nose, is there cause for notice. Since, in antiquity, live breach births were rare, this name expresses the namer's joy upon the successful completion of what must have been a difficult birth. The circumstances of birth are also reflected in a number of names that refer to the

child's birth date, such as the names Mar-um-eshra ("Son of the twentieth day of the month") or Nisanitum ("Born in the month of Nisan").

Very often, Akkadian personal names are theophoric, meaning that they refer to a particular god in some way. Some of the simplest theophoric names use a genitive construction to evoke the relationship between the child and his or her god. Names in this category include: Naram-Sin ("Beloved of the Other"). Theophoric names express the namer's wish for the child, such as Nabu-bullissu ("Oh god Nabu, make him healthy!") or Nabu-kudurri-usur ("Oh god Nabu, preserve my heir!"), which is the original Akkadian name of the famous Babylonian king Nebuchadnezzar. A related group of names are those that are, in strictly grammatical terms, the child's own prayer to the god, such as Nabu-ballitanni ("Oh god Nabu, make me healthy!") and Ashur-tursanni ("Oh god Ashur, protect me!"). Similarly, names such as Nabu-shuma-ushabshi ("The god Nabu has made a name"), Adad-ubla ("The god Adad has brought [this child] to me"), Ibni-Ea ("The god Ea has fashioned [this child]"), or Iddin-Ishtar ("Ishtar has given [this child]") express the namer's thanksgiving to the god for the child. Other theophoric names, such as Nabu-naid ("The god Nabu is praiseworthy") and Sin-shar-ili ("The god Sin is king of the gods"), are more abstract statements about the god. There are also names that refer to the human king, such as Marduk-sharra-usur ("Oh god Marduk, preserve the king!").

Speakers of Akkadian also gave names taken from nature. The names of animals, such as Shel-ebum ("Fox"), Burtum ("Cow"), or Habasiru ("Mouse"), and plants, such as Ishhunu ("Vineyard") or Lurindiya ("My pomegranate"), are all known as names of people.

There is evidence for the use of nicknames in Akkadian. Generally, as in English, these nicknames preserve the basic sound of the name but transform it in some way. Examples of nicknames include Gimillum for Gimil-Marduk ("Granted by the god Marduk"), Wardum for Warad-Ishtar ("Servant of the goddess Ishtar"), and Kabtiya for Kabti-ilani-Marduk ("The god Marduk is honored among the gods").

—Shalom E. Holtz

Bibliography

- Bottero, Jean. *Religion in Mesopotamia*. Translated by T. L. Fagan. Chicago: University of Chicago Press, 2001.
- Di Vito, R. A. *Studies in Third Millennium Sumerian and Akkadian Personal Names: The Designation and Conception of the Personal God*. Rome: Pontifical Biblical Press, 1993.
- Oppenheim, A. Leo. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Chicago: University of Chicago Press, 1977.

Ancient Ethnicity in South Asia

Ancient ethnicity is a complex and often controversial subject. Ethnicity is often defined on the basis of language, culture, and race, but these need not be congruent. For example, in modern South Asia there are many languages. Some are spoken by biologically distinct groups, in restricted geographical regions, or by certain tribal groups or members of particular religious communities. Most, however, are not. Through time, biological distinctions have been blurred by intermarriage, linguistic differences have been accentuated by interactions such as bilingualism, and cultures have constantly evolved. Identifying ancient communities who would have seen themselves as distinct ethnic groups is therefore fraught with difficulty.

Physical anthropology, literature, language, and archaeology are the principal sources of evidence for attempts at reconstructing ancient ethnicity. These also shed light on religion, culture, economy, human geography, and other aspects of life important in people's characterization of their own ethnicity.

Skeletal and genetic evidence indicate that most of South Asia's population is descended from people who settled here during the Pleistocene and that there has been almost no contribution to the gene pool by women from outside the subcontinent. However, genetic studies suggest that a small number of men from West Asia settled here at an early date. Skeletal evidence from northwestern South Asia indicates the arrival of small numbers of people from the west in the fifth millennium and from somewhere outside the subcontinent in the early second millennium BCE. The majority of South Asians be-

long to the Caucasoid general racial group, but many in the Himalayas and extreme eastern regions are Mongoloid, part of the same general group as East Asians; they presumably colonized these regions from the east.

The earliest South Asian literature is the Rig-Veda, hymns composed around 1500–1000 BCE. The chronology of their composition reveals a gradual eastward shift from west of the Punjab to the upper Ganges-Yamuna doab. The Rig-Veda describes a warlike society, with horses and chariots, that kept cattle, and, above all, practiced the rituals that defined them as Aryas. Unflattering descriptions may indicate that their non-Arya enemies were physically distinct and spoke an incomprehensible language. Nevertheless, the Aryas occasionally allied with them; the Aryas also fought among themselves.

The Rig-Veda reveals an anthropomorphic male-dominated pantheon, and its rituals include precisely organized sacrifices and the drinking of sacred *Soma*. Similar gods and practices are found in the contemporary Iranian sacred book, the Avesta, but they contrast with the tentative reconstructions of Harappan religious practices and beliefs, which probably included goddesses, animism, ritual bathing, and a fertility cult, features that appear among the rich range of Hindu practices and beliefs of post-Vedic times.

Most South Asians today speak Indo-European languages. Sanskrit, the language of the Rig-Veda, belongs to this language family, as does Old Iranian. These separated from their common ancestor, Proto-Indo-Iranian, probably in the early second millennium. Progressive changes in the language of the Rig-Veda indicate that through the later second millennium its speakers were in contact with speakers of languages that had features such as retroflexion, characteristic of the Dravidian and Austro-Asiatic languages but absent from other Indo-European languages, demonstrating that this contact took place in South Asia. Dravidian languages today are largely confined to southern India, but once they were spoken from Gujarat through western into southern India and possibly in Sindh. It is still unclear whether Dravidian originated in the subcontinent or outside. The few modern speakers of Austro-Asiatic in India are confined to

IDENTITY AND THE INDO-ARYANS

Ethnicity is often a major component of identity, allowing people to define themselves. Pakistanis can use their Muslim faith as well as their geographical home in defining national identity. The inhabitants of much of India speak Indo-Aryan languages and practice the Hindu religion, of which the most sacred texts are the Vedas. Both language and religion are therefore major elements of their national identity. Most Indians are happy to be the inheritors of a rich cultural tradition in which indigenous developments have been mixed with the contributions of small numbers of settlers from the many foreign incursions that have taken place in historical and earlier times. For a vociferous and at times fanatical minority, however, it is unacceptable that the weight of evidence indicates that both the Indo-Aryan language and the Vedic religion came from outside and that the Indus civilization was the achievement of non-Indo-Aryan speakers who did not practice Vedic religion. They therefore attempt, generally by strong words rather than reasoned argument, to identify the Indo-Aryans with the Harappans. This is to misunderstand the whole situation, creating rigid boxes in which separate ethnic identities each equate with a single language, genetic background, and culture. In truth, the inhabitants of India are biologically, culturally, linguistically, religiously, and in every other way the inheritors of both the Vedic Indo-Aryan and the Harappan traditions, which came together in the second millennium BCE in the Punjab and the northern Ganges region and which by the first millennium had created a heterogeneous but fully integrated Indian culture and ethnicity.

—Jane R. McIntosh

some tribal regions, but languages of this family were once much more widespread in South Asia. Language borrowings indicate that Austro-Asiatic languages were already spoken in parts of South Asia into which Dravidian speakers moved in antiquity. Linguistic clues from the Rig-Veda suggest that at least one extinct Austro-Asiatic language, Para-Munda, was spoken in the Punjab and farther east. Language X, also extinct and identified from a few words, may have been spoken in the Ganges Valley by the second millen-

nium. The peoples of the Himalayan regions mainly speak Sino-Tibetan languages, related to those of East Asia. Modern relict languages suggest that there were once many more.

By the late Pleistocene, hunter-gatherers were thinly but widely spread throughout the subcontinent. Agricultural communities appeared first in the Indo-Iranian borderlands, where they raised local and West Asian plants and animals from around 7000 BCE, spreading into the Indus basin in the fourth and third millennia and intermingling with local hunter-gatherer groups, particularly in Gujarat and Punjab. From this mix a culture of villages and towns arose, developing by 2500 BCE into the Harappan civilization. This state interacted profitably with its neighbors, including hunter-gatherers, fishers, and farmers. Communities in northern South India were raising cattle and local crops; in the middle Ganges Valley foragers also exploited local and West Asian domestic plants and animals.

The Harappan state disintegrated in the early second millennium. Urban culture was abandoned, but many other aspects of life, including farming and craft production, continued and developed. Population in the Indus and Saraswati valleys declined significantly but rose in Gujarat, Rajasthan, and Madhya Pradesh, where villages and later towns grew up, spreading through the Deccan into the south and in the east, where farming villages spread gradually from the Ganges-Yamuna doab into the Ganges Valley. The earlier second millennium also saw the arrival in the north of horses, weaponry, and other new features.

Each of these lines of evidence offers some information relevant to identifying ethnicity. It is tempting to make a neat story from these in which ethnic groups are identified with archaeological cultures and linguistic groups along the following lines.

After the subcontinent was colonized by hunter-gatherers during the Pleistocene, regional groups separated by geographical barriers evolved different languages, including Austro-Asiatic languages, across much of the subcontinent and perhaps Dravidian in the west. People from East Asia, speaking an ancestral Sino-Tibetan language, settled in the eastern and Himalayan regions. Male farmers from West Asia,

bringing their crops and animals, settled in Baluchistan in the eighth millennium BCE, marrying local women. Further western settlers, possibly Dravidian speakers, arrived during the fifth millennium but had no apparent cultural impact. Population increased in Baluchistan, and in the fourth millennium its herders and farmers colonized the Indus basin, integrating some local hunter-gatherer communities and establishing mutually beneficial relations with others who continued as hunter-gatherers or took up farming. From this rich and diverse cultural, economic, ethnic, and linguistic mix developed the Harappan civilization. The Harappan state fragmented in the early second millennium, with depopulation in the central region. Farmers in Gujarat and western India expanded gradually southward, interacting with local farmers. By the late first millennium these were Dravidian speakers, implying that some earlier cultures of western and/or southern India spoke Proto-Dravidian. Farmers in the Punjab and the eastern Harappan region spread gradually into the Ganges Valley, becoming culturally, ethnically, and linguistically mixed with its inhabitants. At the same time, small numbers of outsiders were arriving in the northwest, speaking Indo-Aryan languages, conducting Vedic rituals, and using horses and chariots in cattle-rustling raids; among them were the authors of the *Rig-Veda*. After centuries of linguistic and cultural interaction, Indian-influenced Indo-Aryan languages became dominant in the Ganges basin, spreading out from there through military conquests that culminated in the Mauryan empire. By this time, however, the contribution of the original Indo-Aryan settlers to the gene pool had been infinitely diluted and the Vedic religion subsumed into the plurality of Hinduism.

This story is undoubtedly a simplification. In reality it is impossible to entirely mesh the results of the individual types of evidence since they relate to aspects of life that are independent, different, and fluid. At various times and in various places, groups must have considered themselves ethnically distinct, but at all times there were cultural, biological, and linguistic interchanges that were constantly blurring the distinctions.

—Jane R. McIntosh

Bibliography

- McIntosh, Jane R. *Ancient Indus Valley: New Perspectives*. Santa Barbara: ABC-CLIO, 2007.
- Petraglia, Michael D., and Bridget Allchin, eds. *The Evolution and History of Human Populations in South Asia*. Netherlands: Springer, 2007.
- Settar, S., and Ravi Korisettar, eds. *Indian Archaeology in Retrospect*. Indian Council of Historical Research. Delhi: Manohar, 2002.

The Appearance of Regional Differentiation in North America

Prior to the Archaic period, little regional differentiation between prehistoric peoples and their lifeways can be determined in North America based on the archaeological record. During the Early Archaic period it is possible to distinguish large-scale regions based on lithic point styles and/or general subsistence practices. However, it was not until about the Middle Archaic period that specific regional differences began to appear in terms of social organization, cooperative construction of large-scale structures, the development of long-term resource storage, and other lifeway patterns. Coupled with area-specific ecological factors, these processes resulted in the development of eight large-scale regions, each of which contained subregional differences: Arctic, Subarctic, Northwest Coast, California, Plateau, Great Basin, Southwest, Plains, and Eastern Woodlands. Although each of these large-scale regions can be differentiated from each other, it is important to note that regional boundaries at this time were fluid and dynamic.

For example, there is clear evidence that by 2000 BCE regional and subregional differentiation had taken place in California. However, there is also evidence of cultural continuity, indicating that the appearance of regional and subregional differentiation occurred out of local long-term processes. Common elements for all occupants of prehistoric California are found in hunting implements, with the early groups apparently equipped with the atlatl, and there is also evidence for the use of milling stones for small-seed grinding. Evidence also indicates that by 2,000 BCE native peoples had specialized in selective exploitations of particular environments, and village sites show signs of permanent housing middle-sized populations.

➤ APPEARANCE OF REGIONAL DIFFERENTIATION IN THE SOUTHWEST

Although the southwestern region of the United States was differentiated from neighboring regions by about 2000 BCE, little interregional differentiation appears to have been established. By about 550 CE, however, regional differentiation within the Southwest became apparent as lifeway patterns became more sedentary and several small-scale regional networks emerged. Based on farming-foraging economies, these regional differences are evidenced in the geographic location of settlements, the types of pottery found, and the degree to which reliance on agriculture occurred. For example, the Mogollon area differentiated itself from other areas of the Southwest region by its distinctive layout of pueblo villages focusing inward on plazas, rectangular kivas within room blocks, the three-quarter groove axe, and brown corrugated pottery often with patterned, incised, or painted designs. Furthermore, the prehistoric peoples of the Mogollon region appear to have been far less committed to agriculture than their northern and western neighbors, suggesting that adoption of agriculture played some role in regional differentiation within the Southwest.

—Peter N. Jones

Differentiating the California region from the Southwest and Great Basin regions is simple, but any attempt at drawing a precise line between the Northwest Coast region and California has proven difficult. However, it is possible to clearly differentiate the Plateau region from the Northwest Coast. Evidence indicates that by about 2000 BCE most of the Plateau lifeway pattern focused on the mass harvest and long-term storage of fish, edible roots, and large ungulates. Likewise, settlement systems by this time appear to have become relatively similar throughout the region, characterized by winter settlement in lowlands and a series of resource-harvesting forays throughout warmer seasons into the uplands or to prime fishing sites. Subsequently, around 2,500 years ago settlements appear to have contracted into large villages centered on the lower reaches of the great rivers, some with more than 100 houses. Furthermore, because

populations contracted, subregional differentiation between social groups developed, as inferred from regional rock art and burial locations and styles.

In fact, across most lands laying between the mountain ranges, or intermontane, of western North America the early Archaic lifeway patterns were similar, found over a vast area from Oregon to the central Mexican Plateau and from the flanks of the Sierra Nevada to the western slopes of the Rockies. By the Middle Archaic, however, detectable regional variations can be found in the archaeological record, primarily the result of available resources and ecologically tied processes that influenced cultural development.

On the other hand, the Plains region, beginning on the eastern flanks of the Rocky Mountains, differentiated itself from the large intermontane regions to the west much earlier. For example, around 8,000 years ago lifeway patterns on the Plains differentiated themselves from other neighboring regions. Characterized by groups of band-level size that continually fragmented and aggregated in response to food resources, especially large game such as buffalo, the prehistoric peoples during this period practiced a highly mobile hunter-gatherer subsistence lifeway pattern. Furthermore, because regional differentiation for the Plains was devised by comparison to archaeological materials of what did not develop in other regions such as the Southwest, the Northeast, or the Southeast, the prehistoric peoples of the Plains region are also characterized by the lack of sedentary lifeway patterns. The Plains were differentiated as a region based on these characteristics until the development of agriculture, and only then did the eastern Plains differentiate itself as a clear subregion.

Although there is evidence that the southern Plains and the Southwest regions shared many similar characteristics during the Early Archaic period, it is possible to clearly demarcate the two regions by the Middle Archaic period. The specific regional differences that distinguish the Southwest from other regions are permanent villages with relatively dense populations; regionally differentiated architectural forms including pithouses, jacals, and adobe and masonry structures; evidence of specialized religious and ritual

structures; patterned settlements; agriculture; pottery; and evidence for trade and exchange with other distant regions. These patterns emerged around 4,500–3,500 years ago and clearly distinguish the Southwest from the Plains and Great Basin regions, both of which maintained a more seasonally nomadic lifeway pattern, and the California region, where lifeway patterns remained constant and agriculture was not adopted to the extent that it was in the Southwest.

Regional differentiation also occurred in the Eastern Woodlands at around the same time, although subregional differentiation between the Northeast, Southeast, Great Lakes, and Mississippian regions occurred somewhat later. For example, between 2,300 and 1,500 years ago, the cultural lifeway adaptations in the Northeast underwent a change that resulted in a number of transitions, and by about 1,200 years ago the Mississippian cultures of the central Midwest were beginning to take their distinctive forms.

—Peter N. Jones

Bibliography

- Broughton, Jack M., and Frank E. Bayham. "Showing Off, Foraging Models, and the Ascendancy of Large-Game Hunting in the California Middle Archaic." *American Antiquity* 68(4) (2003): 783–789.
- Chatters, James. "Population Growth, Climatic Cooling, and the Development of Collector Strategies on the Southern Plateau, Western North America." *Journal of World Prehistory* 9 (1995): 341–400.
- Haury, Emil W. *Mogollon Culture in the Forestdale Valley, East-Central Arizona*. Tucson: University of Arizona Press, 1985.
- Kelly, J. E. "The Range Site Community Patterns and the Mississippian Emergence." In *The Mississippian Emergence*, edited by B. Smith. Washington, DC: Smithsonian Institution, 1990.
- Reid, Kenneth C. *An Overview of Cultural Resources in the Snake River Basin: Prehistory and Paleoenvironments*. Pullman: Washington State University, Center for Northwest Anthropology, 1991.
- Stokes, Robert J., and Barbara J. Roth. "Mobility, Sedentism, and Settlement Patterns in Transition: The Late Pithouse Period in the Sapillo Valley, New Mexico." *Journal of Field Archaeology* 26(4) (1999): 423–434.
- Wedel, Waldo R., and George C. Frison. "Environment and Subsistence." In *Plains: Handbook of North American Indians*, Vol. 13, edited by R. J. deMallie. Washington, DC: Smithsonian Institution, 2001.
- Wills, W. H. "Pithouse Architecture and the Economics of Household Formation in the Prehistoric American Southwest." *Human Ecology* 29(4) (2001): 477–500.

■ Introduction: Law

Even today in areas influenced by the European tradition, law is rooted in the advances in jurisprudence made in Mesopotamia 5,000 years ago. The Mesopotamian legal traditions provided the basis for the concepts that would later inspire the legal thought preserved in the Old Testament, which in some ways preserves the Mesopotamian traditions but in other ways significantly departs from them. Many of the key concepts and institutions in modern legal thought can be traced back to Mesopotamia.

Law does not just arise in Mesopotamia during the period from 4000 BCE to 1000 BCE. The

Egyptians also had complex notions of law, believing that there was an ideal ordering of society and that laws could be enacted to help create this ideal ordering. Legal traditions are less formalized in other regions, although conceptions of law and conflict resolution permeate the stories of Homer from Greece and the Vedic texts from India.

That formal law should first arise in this period is not surprising. In this era the first writing emerged, a necessity for the codification of law (a term that describes the results when laws of a state are collected and arranged in a systematic manner, although it is arguable whether or not

Mesopotamian law should actually be considered to be codified). The growth of urban populations meant that more strangers were living together in close proximity. These strangers relied on each other for their basic subsistence needs, security, and the satisfaction of wants. Thus, it was important that the rules that governed these various kinds of interactions be formalized. Law also reflects political and social authority beyond the level of the family; there must be a consensus among the members of the community that this body has the right (or ability if the power is coercive) to enact laws that govern the behavior of the individual.

The study of ancient law poses some interesting problems. It is very difficult to understand the relationship between various ancient “codes” of law and the actual practice of law in antiquity. The Code of Hammurabi is a good example of these problems. This text, which is frequently mistaken to be the first code of laws (it is not the first, and some say it is not even a code!) lists a series of very specific conflicts and provides the legal resolution that should be offered in each situation. The resolutions to actual ancient court cases sometimes follow Hammurabi’s precepts very closely yet at other times deviated substantially. Does this mean that some people studied the Code of Hammurabi and used it in legal decision making and that others did not? Was the Code of Hammurabi set up in a public center with the intention that it be consulted for legal crises, or was it merely a royal inscription set up as propaganda asserting that law was from the authority of the king (as opposed to other figures)? These questions are still open to debate.

—Kevin M. McGeough

Egyptian Law

Ancient Egypt did not have a fully codified system of laws in pharaonic times. The king sometimes issued decrees that constituted legal statutes, and such edicts comprise the closest thing to a law code that can be identified. The ancient Egyptian term often translated as “law” (*hep*) seems to encompass a broader array of meaning that, along with royal decrees, can include virtually any kind of rule whether applied through tradition, legal process, or contract.

These would have been predicated upon the guiding concept of justice (*maat*). In theory the king was the ultimate judicial authority; however, in practice the office of vizier customarily acted as the top legal officer. Much of the evidence relating to law and judicial practice dates to the late New Kingdom. An abundance of material derives from the village of Deir el-Medina near Thebes, the home settlement of the builders of the Valley of the Kings.

Options for addressing an alleged crime depended on the degree of the offense and the status of the injured party. Ancient Egypt did not have legal personnel corresponding to modern professional lawyers, and full-time judges are not recognized until after the New Kingdom. Councils assembled periodically to conduct trials. Individual plaintiffs and defendants were responsible for gathering evidence and presenting their own cases. The basic judicial body in ancient Egypt was called a *qenbet*, a court tribunal. A local *qenbet* was comprised of community members, especially those in high office, and sometimes visiting officials from the ranks of the royal government. It is not clear whether minimum qualifications had to be met or if some official standing was required to serve on a local *qenbet* in all cases. At Deir el-Medina regular workmen are known to have served.

Higher courts also existed in the form of great *qenbets*, such as those of Thebes in the south and Heliopolis in the north. These institutions operated under the vizier and were composed of upper-level officials from the regional or national administration, including those holding priestly titles. This echelon of the judiciary dealt with crimes against the state, including the temple system, royal foundations, and state landholdings. Cases include felonies such as treason, attempts on the life of the king (e.g., Ramses III), or looting of royal tombs in the Valley of the Kings (late Twentieth Dynasty). Sentences of extreme corporal or capital punishments—bodily mutilation (e.g., removal of ears or noses), execution, or forced suicide—were available only to the highest judicial practitioners, namely viziers and kings. Reports of the royal tomb robberies of the late New Kingdom indicate that torture was condoned as a method of questioning suspects in such important investigations.

➤ MAAT

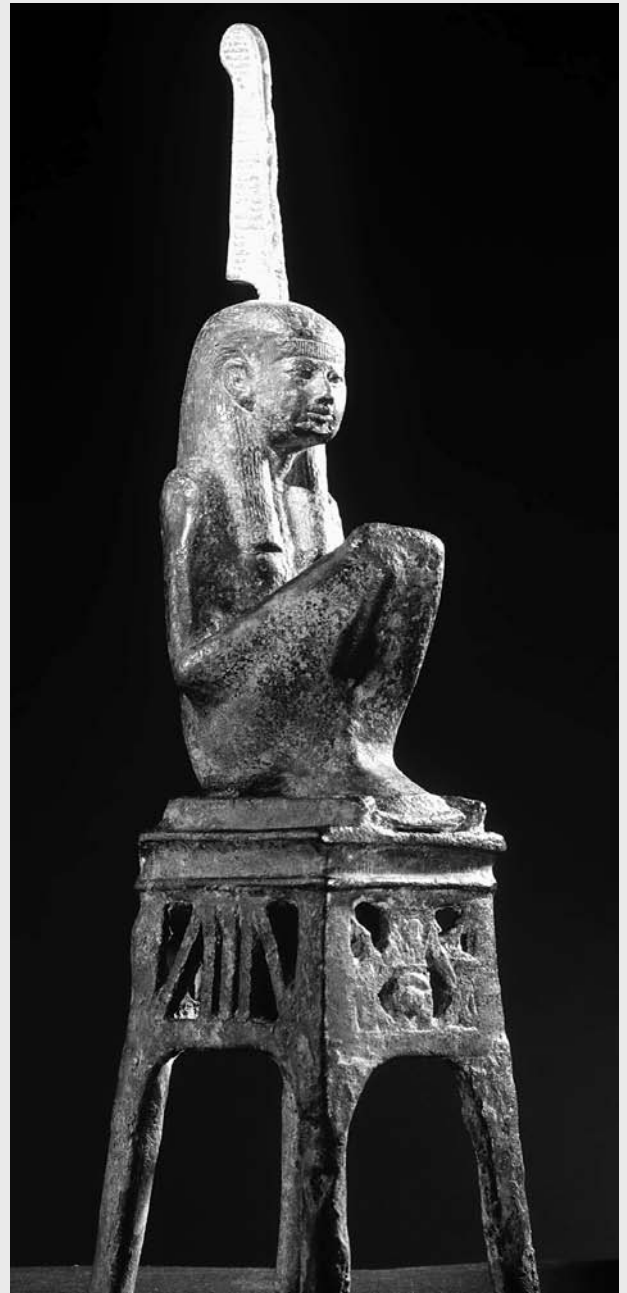
Maat is nothing short of the guiding principle of the ancient Egyptian way of life and worldview. It was at once an ethical concept, a natural philosophy, and a goddess. Conceptually it encompasses notions of order, truth, and justice. *Maat* was present as of the creation of the universe, acting as the positive antithesis of *isfet* (disorder, chaos). The Egyptians classified aspects of the world by these two opposing concepts: whereas Egypt exemplified *maat*, foreign lands were agents of *isfet*. The inhospitable desert was an environment of *isfet*, contrasting with the ordered and habitable cultivation of the Nile Valley.

Political, social, and cosmic stability required that *maat* overcome chaos, which always threatened to throw the world into disarray. Prominent kingly responsibilities included maintaining *maat* by fostering the country through skillful administration and devotion to the gods. The gods were said to feed on *maat*, thus the scenes of the pharaoh offering it to the gods on some temple and tomb walls.

As a personified goddess, *Maat* was the daughter of the sun-god Re. She is depicted as a woman wearing a headband with a single ostrich feather. The feather often appears alone as the symbol of *maat* as both idea and deity. Its most well-known appearance is on the scale of judgment in chapter 125 of the Book of the Dead, where it is weighed against the heart of the deceased to gauge whether she or he had lived by the principles of *maat* and was thus worthy of the eternal afterlife that every Egyptian desired to achieve.

—Nicholas S. Picardo

Seated figure of the goddess Maat, personification of truth and justice, Twenty-first–Twenty-second Dynasty. (Werner Forman/Art Resource, NY)



Much evidence from ancient Egypt deals with contract law. Virtually everyone had a legal right to ownership of property regardless of social status or gender. Ideally, any arrangement dealing with land or property was recorded in writing in case of later dispute. Such documentation held considerable weight in the *qenbet*, as

did the swearing of oaths for testimony in any legal matter. Common issues brought before the local *qenbet* were breaches of contract for goods and services (such as that of a servant or a donkey), failure to honor debt, accusations of theft, and inheritance disputes. Resolution often resulted in restoration of property or fulfillment of

the contract with interest added up to full value of the original terms. Beatings could be threatened as incentive for the responsible party to pay in a timely fashion.

Theft of temple property or unlawful use of temple landholdings carried especially heavy consequences and punitive damages. A return of many times the amount stolen could be added to beatings and even death. In general, corruption of high office was distinctly frowned upon, although it is well documented. Officials guilty of crimes as well as those who knowingly failed to report criminal activity risked physical punishments, loss of professional office and status, and mandatory labor service. Repercussions could extend from the primary offender to his family as well, and monetary damages could also be levied against a criminal's descendants.

As a complement to trial in the qenbet system, judgment by oracle also became a valid procedure for settling disputes by the late New Kingdom. As documented at Deir el-Medina, an image of a patron god or goddess (in the form of a statue or the like) was carried on a portable platform before a crowd. Simple questions were put to the deity, whose simple positive or negative verdict was conveyed by specific patterns of movement. The influence of the deity's priestly porters upon the judgment is obvious, and presumably the answer would have complied with local standards of behavior or law. Whether these were the very same individuals who would have served on the local qenbet is not known, although this possibility exists.

—Nicholas S. Picardo

Bibliography

- Kruchten, Jean-Marie. "Law." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 2, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Lorton, David. "Legal and Social Institutions of Pharaonic Egypt." In *Civilizations of the Ancient Near East*, vol. 1, edited by Jack M. Sasson. New York: Scribner, 1995.
- McDowell, Andrea G. *Jurisdiction in the Workmen's Community of Deir el-Medina*. Egyptologische Uitgaven 5. Leiden: Nederlands Instituut voor het Nabije Oosten, 1990.
- Morenz, Siegfried. *Egyptian Religion*. Translated by Ann E. Keep. Ithaca, NY: Cornell University Press, 1973.

Teeter, Emily. *The Presentation of Maat: Ritual and Legitimacy in Ancient Egypt*. Studies in Ancient Oriental Civilization No. 57. Chicago: Oriental Institute of the University of Chicago, 1997.

Homeric Legal Traditions

The culture and society of ancient Greeks is thoroughly reflected in the Homeric poems of the *Iliad* and the *Odyssey*. Homer (ca. eighth century BCE) is among the most important and influential literary figures of antiquity whose writings served as a basis for ordering much of the value systems of the ancient world in terms of legal, cultural, philosophical, and societal traditions. Much of his writing emerges from the Greek Dark Ages in the eighth century BCE, which was a time of prevalent social and political disorder in the Greek world. The myths and stories that inspired the *Iliad* and the *Odyssey* further inspired Greek societies in the Classical and Hellenistic periods. Philosophers such as Plato and Aristotle discuss the value systems that they interpret from the stories in both the *Iliad* and the *Odyssey*. The intricate level of description in Homer's depictions of various characters, either gods or mortals, and their conflicts and resolutions to problems presented Greeks with a model of proper behavior, values, and ethics regarding similar problems that they might confront. Stories regarding justice and property rights had much bearing in later Greek and Roman society.

Homer's *Iliad* offers retribution as a means for resolving a wrong or offense committed against a person and his family—or acquaintances, as in the case of Achilles' duel with Hector regarding Patroclus's death. In the midst of the Trojan War, Achilles has a quarrel with King Agamemnon, both allies in the war against Sparta. His friend/cousin Patroclus beckons Achilles to let him fight using his enchanted armor. Subsequently, Patroclus is slain by the Trojan champion Hector, and his corpse is defiled. Enraged, Achilles engages in a duel to avenge this slight and kills Hector, defiling his corpse in a manner unbecoming a person of his rank. However, this serves as a case where Hector overstepped the bounds of proper rules of war and engaged in an excess that could only be resolved though an

equal act. While both acts are equally atrocious and undesirable on the part of a Greek warrior, Achilles is justified and absolved in that his action is in direct response to that of Hector's actions. This eye-for-an-eye approach represents not only the justice of the eighth-century Greek world but also the rationale that the later Classic and Hellenic Greeks would utilize in similar situations.

The *Odyssey* also contains various episodes that expressed instances of legal procedures used as precedent in later periods, such as Penelope's property rights in the absence of Odysseus. In this instance, Odysseus is absent for 20 years, having been lost at sea at the conclusion of the Trojan War, leaving his wife Penelope in possession of his properties as king in Ithaca. Penelope's position in his absence gives her command of all his properties as well as the right to remarry. In this right to remarry, she possesses the right to pass the succession of the throne of Ithaca. Therefore, various aristocratic suitors attempt to woo her in order to become king of Ithaca, not to mention to marry the beautiful Penelope. However, she stalls them for several years in order to retain the estate of Odysseus in his absence and secure it for their son Telemachus. From this story, scholars interpret that women in Archaic Greek society had a level of agency as executors of their husband's estates. Penelope's cunning in avoiding marriage illustrates that perhaps she valued this position to which she was privy due to a veritable loophole ruled by men. This episode in the *Odyssey* offers a glimpse into the daily life of the ancient Greeks and their issues over property values and gender roles.

—Abraham O. Mendoza

Bibliography

- Adkins, A. W. H. "Homeric Values and Homeric Society." *Journal of Hellenic Studies* 91 (1971): 1-14.
- Allen, Walter, Jr. "The Theme of the Suitors in the *Odyssey*." *Transactions and Proceedings of the American Philological Association* 70 (1939): 104-124.
- Bassett, Samuel Elliot. "Achilles' Treatment of Hector's Body." *Transactions and Proceedings of the American Philological Association* 64 (1933): 41-65.
- Halverson, John. "The Succession Issue in the 'Odyssey.'" *Greece and Rome* 2(33) (1986): 119-128.
- Marquardt, Patricia. "Penelope 'Polutropos.'" *American Journal of Philology* 1(106) (1985): 32-48.

Hittite Law

The Hittite law collections can be divided into two groups, the earlier dating to the Old Hittite Kingdom (ca. 1650-1500 BCE) and the later dating to the New Hittite Kingdom (ca. 1400-1180 BCE). Both groups are written in cuneiform, a wedge-shaped writing system, and are generally identical, though the language of the New Kingdom laws is substantially updated. Only one New Kingdom law text, the Late Parallel Text, contains actual legal revisions. The Hittite laws are part of a broader ancient Near Eastern legal tradition that includes the Sumerian Laws of Shulgi (ca. 2094 BCE), the Old Babylonian Laws of Hammurabi (ca. 1750 BCE), and the Middle Assyrian Laws of the late second millennium.

Built upon precedent and local custom, Hittite law was case law, following an "if . . . then" formula. The laws included in the collections were probably derived from specific cases that had already been tried and were not intended to be authoritative for future cases. Thus, governors and magistrates continued to follow local traditions in their decisions, often contradicting the judgments in the law collections. The king also reserved the right to decide any lawsuit directly, and his judgments were to be strictly followed under penalty of death.

The underlying principle of the Hittite laws was the accessibility of justice to all subjects, ensuring that any offenses committed against person or property could be remedied. In practice, this remedy took many forms, including corporal punishment, monetary fines, or other repayment awarded to the victim and various other forms of compensation and restitution. The Hittite ideal for compensation and restitution is exemplified in the instance in which an incapacitated assault victim received a monetary payment from the offender, who also paid for the victim's medical care and provided a worker to perform the victim's duties until he recovered. Cases of theft usually involved a punitive fine or a doubled repayment in kind, so that a man who

THE DEVELOPMENT OF HITTITE LAW

Many of the Old Hittite Kingdom laws refer to older Hittite legal precedents that have not survived, contrasting the harsh standards of long ago with more lenient contemporary rulings. For example, the corporal punishment originally prescribed for certain offenses was replaced by fines in Old Kingdom written laws. Similarly, sheep could be substituted for an offender in cases that previously demanded capital punishment. This more lenient standard of punishment continued to develop in the laws of the New Kingdom in which fines were generally reduced by half, presumably because the king now waived his fee.

—Spencer L. Allen

stole an ox not only had to return the original ox to its owner but also had to supply a second ox. Double restoration and compensation were also applied to unintentional manslaughter, so that the man who accidentally killed a free man or free woman had to both pay the burial expenses and provide the victim's household with two replacements from his own household.

Notably, Hittite law was not equal in its application. The punishments imposed upon the offender were dependent both on his or her own social status and that of the victim. Corporal punishment was primarily reserved for slaves found guilty of burglary or arson, and in assault cases where the victim was a slave, punitive fines were half those imposed in cases where the victim was a free citizen. Capital punishment was reserved for a variety of unrelated offenses: rejecting the king's judgment, black magic, certain forms of bestiality, limited forms of theft, and adultery. Capital punishment could, however, be overridden in certain circumstances. The king could reduce a sentence at his discretion, and the husband of an adulterous wife could spare her life if he also spared that of her paramour.

—Spencer L. Allen

Bibliography

- Beckman, G. *Hittite Diplomatic Texts*. Atlanta: Scholars Press, 1996.
- Bryce, T. *Life and Society in the Hittite World*. Oxford: Oxford University Press, 2002.

Güterbock, H. G. "Authority and Law in the Hittite Kingdom." *Supplement to the Journal of the American Oriental Society* 17 (1954): 16–25.

Hoffner, H. A., Jr. *The Laws of the Hittites: A Critical Edition*. Leiden: Brill, 1997.

Roth, M. T. *Law Collections from Mesopotamia and Asia Minor*. Atlanta: Scholars Press, 1997.

Mesopotamian Law

Our knowledge of Mesopotamian law comes piecemeal from law codes and court records. The law codes were collections of legal provisions set down by the king, often after he had conquered new territory where laws might be different. The earliest attested example was that of Uru-inim-gina of Lagash; others were compiled by the Ur III king Shulgi, Lipit-Ishtar of Isin, Hammurabi, and later monarchs. They include statements about a selection of cases and situations along with the appropriate action to be taken. These often followed customary law but also included reforms made by the king. Hammurabi's Code includes the harsh *lex talionis* (punishment by reciprocal injury: "an eye for an eye, a tooth for a tooth") that is often thought to have reflected the traditions of the nomadic Amorites. In contrast, earlier codes tended to prescribe more humane punishments involving compensation.

These codes are by no means comprehensive, and many recorded court judgments follow other systems, reflecting custom and tradition and the experience of the judiciary. As society changed, traditional law was modified to reflect contemporary practice and attitudes. Many of the recorded cases deal with civil matters such as inheritance, adoption, and the sale of property. Others relate to crimes: injury, manslaughter and murder, adultery, rape, theft, and criminal damage. The penalty might depend on the wishes of the victim. In the case of murder, for example, the victim's family could choose whether the murderer was to be executed or should pay them compensation.

Often courts had to deal with conflicting claims such as disputed ownership. In such cases the parties involved might be required to swear an oath on a sacred object, such as a divine emblem, with fear of committing sacrilege

constraining them from perjuring themselves. In the most serious cases, one or both litigants might be required to undergo the river ordeal to demonstrate their guilt or innocence. The selected party or parties had to plunge into a given part of the river; if they sank their guilt was established.

The judiciary operated at three levels. Local councils of elders representing a village or an urban ward dealt with everyday matters such as divorce applications, disputed paternity, and conflicts over inheritance. The members of the council made decisions based on their experience of and familiarity with the litigants and could call upon local witnesses with inside knowledge to testify under oath. Where oral testimony was unavailable, documentary evidence could also be produced, such as records of former transactions or agreements or of the outcome of pertinent earlier legal proceedings.

If the council felt unable to deal with a case or if one of the parties was dissatisfied with its outcome, the matter could be referred to a higher authority, a judge appointed by the king, or to the king himself—the highest authority. Some serious offenses such as murder, known as *din napolishtim* (“case of life”), were referred directly to the king as a matter of course, but he could send cases back to the council whose detailed local knowledge could be important in establishing or disproving guilt.

The role of the judiciary was not only to resolve disputes and punish criminal behavior but also to administer and enforce government decrees and to witness and record legally binding agreements between individuals. Most contracts were agreed upon orally, often before witnesses, and took their force from the power invested in the words of the legal formulae used, which were often backed up by performing symbolic gestures. The use of such formulae and actions in creating a legal marriage bond is familiar in modern society across the globe; in ancient Mesopotamia they were also used to legalize many other contracts, such as that between a landowner and his tenant. Written records of these transactions did not increase their legality, which was made binding by the oral pronouncements, but served as a record in case of future disputes. In the third millennium, these documents were

authenticated by an official seal; later the seals of the parties involved and of witnesses were generally required.

—Jane R. McIntosh

Bibliography

- Bienkowski, Piotr. “Crime and Punishment.” In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- Greengus, Samuel. “Legal and Social Institutions of Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Roth, M. T. *Law Collections from Mesopotamia and Asia Minor*. 2nd revised ed. Atlanta: Scholars Press, 2000.
- Sasson, J. M. ed. *The Treatment of Criminals in the Ancient Near East*. Leiden: E. J. Brill, 1977.
- Wells, Bruce. “Law and Practice.” In *A Companion to the Ancient Near East*, edited by Daniel C. Snell. Oxford, UK: Blackwell, 2005.

The Relationship between Biblical and Cuneiform Law

Historians of cuneiform law have long recognized that there was a relationship between the legal materials preserved in the Hebrew Bible (Old Testament) and ancient Mesopotamian and Hittite law. The forms in which ancient laws were preserved are similar, and many of the laws seem to reflect a shared social and legal culture throughout the ancient Near East. Thus, the study of ancient law has developed as a subfield of Near Eastern studies that brings a comparative approach to the study of Mesopotamian, Hittite, biblical, and even Egyptian literature.

The laws and legal reasoning preserved in various parts of the Hebrew Bible reflects many shared Near Eastern social norms. Many of the laws found in the Bible are very closely paralleled in other Near Eastern sources. For example, laws prohibiting sorcery, laws regarding kidnapping, and the use of false weights and measures are conceptualized similarly in the Bible and in cuneiform legal sources. Scholars have recognized that there are a number of issues that are of great concern in the Mesopotamian legal traditions that are not treated in biblical

► THE GORING OX

Ancient Near Eastern laws dealing with goring oxen well illustrate the similarities and differences between biblical and Mesopotamian law. Oxen are dangerous and powerful animals but were fundamental to the agricultural lifestyles of the Mesopotamians and the people of the Bible. Thus, numerous laws provide guidance for what to do and who has responsibility in different situations when an individual loses control of an ox. While both Mesopotamian and biblical law provide some sort of compensation for the victim, the biblical laws (as presented in Exod. 21:28–32, 35–36) also state that the ox must be punished. It must be stoned to death, and no one may eat its flesh, as it has committed a crime against the community and against God.

—Kevin M. McGeough

law. However, these issues are often dealt with in later Jewish texts (such as the Mishnah) in a manner similar to how they were dealt with in ancient Mesopotamia, which suggests that there was a shared legal milieu that was not preserved in biblical literature. So, for example, laws about what to do with wedding gifts when the husband or wife to be has died before the wedding are remarkably similar in the Code of Hammurabi and the Mishnah (which dates to the early third century CE).

There are instances where some of the biblical laws (especially the presumably older laws) reflect a more tribally oriented society and a less urban society than those of Mesopotamia. For example, crimes related to murder are treated differently in the Mesopotamian and biblical corpora. In the Bible, relatives of the victim are allowed (if not compelled) to kill the murderer or a member of the murderer's family for vengeance. This practice is usually referred to as blood vengeance and is a typical manner of dealing with murder in tribal societies. Mesopotamian laws deal with murder, often through similar punishments, but the punishments are meted out by the state.

Historians of ancient law have analyzed the literary similarities and differences between Mesopotamian and biblical law in great detail. Most

agree that while the term “code” is often used for the literary form of laws in both societies, the use of this term is somewhat erroneous, as neither collection attempts to provide complete and comprehensive overviews of the entire legal system. Both Mesopotamian and biblical legal writers articulated laws in a casuistic manner. This means that the first part of the statement of law was the presentation of a hypothetical situation, and the second part of the statement of law indicates what the punishment for that hypothetical case should be. The famous biblical scholar Albrecht Alt noted that biblical laws were also formulated as apodictic statements. The so-called Ten Commandments, for example, are apodictic laws, commands of what should not be done. Apodictic formulations are relatively uncommon in Mesopotamian law, and historians debate to what extent this is a unique biblical phenomenon.

The most significant difference between biblical law and the laws of other Near Eastern societies is in the understanding of where the authority to enact law stems from. For the ancient Mesopotamians, law was the domain of the king, and legal codes (such as the Code of Hammurabi) were written from the perspective of the king. They were understood to have been created by the king, whether or not this was actually the case. According to the Bible, the authority for biblical law came not from a secular authority but through God. As it is presented in the Hebrew Bible, laws were presented to the prophets directly by God. Thus, a transgression of law was not just a transgression against the society and king but against God as well. Some scholars have argued that this creates a different ethical obligation in the relationship between the community and the legal theory, since a transgression against God would have been conceptualized as significantly more serious than a transgression against the king.

—Kevin M. McGeough

Bibliography

- Sandars, E. P. “Law.” In *The Yale Anchor Bible Dictionary*, vol. 4, edited by David Noel Freedman. New Haven, CT: Yale University Press, 1992.
- Westbrook, Raymond. *A History of Ancient Near Eastern Law*. Handbuch der Orientalistik 72. Leiden: E. J. Brill, 2003.

Westbrook, Raymond. *Law from the Tigris to the Tiber: The Writings of Raymond Westbrook*. 2 vols. Winona Lake, IN: Eisenbrauns, 2009.

Westbrook, Raymond. *Studies in Biblical and Cuneiform Law*. Cahiers de la Revue Biblique, No. 26. Paris: Gabalda, 1988.

■ Introduction: Gender

The study of gender in the period from 4000 BCE to 1000 BCE is one of the most difficult yet potentially most rewarding areas of research available to historians. The archaeological evidence to aid the study of gender is very uneven. Archaeologists can look at ancient burials; since it is frequently possible to identify the sex of the interred bodies, archaeologists can extrapolate about gender roles from the differing treatment of the different sexes in death. Art historical evidence can also inform about gender roles, since it is frequently possible to identify the sexes of the artistic subjects. The textual record from Egypt and Mesopotamia is particularly rich for the study of gender; legal texts especially provide direct evidence for ancient conceptions of gender and gender roles. Given the importance of this topic, historians frequently attempt innovative and creative methods for reconstructing ancient gender roles and norms.

The archaeology of gender should be differentiated from feminist archaeology, since these two disciplines have different goals. Feminist archaeologists are concerned with the male bias in archaeology and in the historical record. This is important work, since historical evidence has a decidedly male bias and the practice of studying history has long been dominated by males (although there have been many noteworthy female archaeologists since the development of archaeology as a scientific discipline). Gender archaeology is the attempt to study ancient conceptions of gender, ancient gender roles, and the social construction of gender. Gender is understood to be a social construction, whereas sex has a biological basis. While the terms are used differently by different scholars, generally this is a good rule of thumb. Gender scholars tend to see gender as more complex than a mere polar-

ity between male and female; it is part of a larger structure of social meaning.

This may seem like the kind of obscure theory that scholars are often accused of using to make simple reality more complex, but when studying gender in this period, it becomes clear that a simple bipolar schema is insufficient. Children are often a problem for a bipolar model, since they are usually treated as neither fully male nor female until they reach the age of puberty. Isolated instances, though, are where the boundaries between male and female really appear to be problematic. Take the Egyptian queen Hatshepsut, for example. She was a woman who became the sole leader of Egypt. In private artistic depictions of her, she is portrayed as a woman and as a mother. In public depictions, she is dressed as a man and wears a false beard, one of the Egyptian symbols of kingship. Ancient graffiti of Hatshepsut depicts her in various sexual positions and was likely intended to be derogatory. Since this type of graffiti is not found for the male kings of Egypt, it seems that Hatshepsut's gender was the subject of public discourse in ancient Egypt.

—Kevin M. McGeough

Gender in Ancient Egypt

Conceptions of gender affected the creation of the sources that are now used to study ancient Egypt, and they are also relevant to the interpretation of these sources today. Whereas biological sex (female/male/hermaphroditic) is often regarded as incontrovertible fact, gender (feminine/masculine/androgynous) is constructed and negotiated by culture and custom. Although often based on dominant cultural views about biological sex and prescribed roles in life, concepts of gender are malleable. Much of the surviving

➤ SEXUAL IDENTITY AND DISCOURAGED SEXUALITY IN ANCIENT EGYPT

Although sex and sexuality are rarely addressed directly by ancient Egyptian sources, it is abundantly clear that notions of femininity and masculinity correspond directly to fertility and virility, respectively. In one of the primary ancient Egyptian accounts of creation, the initial ordering of the universe by the creator god Re-Atum began with the asexual release of bodily fluid (the precise fluid varies by version of the myth). However, the rest of creation proceeded through the union of male and female consorts. The gods themselves were aligned as family groups, usually triads consisting of parents and an offspring. This family unit was a cornerstone of ancient Egyptian culture. For both the divine and the mortal, the cycles of birth-life-death-rebirth pervade the Egyptian understanding of the world, with procreation as an integral element of the process. Homosexuality, which was inconsistent with the procreative ideal of this dominant cultural view, was thus generally frowned upon.

An assortment of relevant documents refers only to male homosexuality. In the popular *Tale of King Neferkare and General Saset*, a king, possibly Pepy II, is said to have amorous nighttime liaisons with his general, whose unmarried status is emphasized. At least one character finds this

situation objectionable. A missing ending makes it unclear if the story concludes with an obvious moral statement about homosexuality. In the Late Egyptian mythological story *The Contendings of Horus and Seth*, the chaotic god Seth attempts to establish himself as the sexual conqueror of Horus as a means of proving dominance over him. Through a crafty ruse the tables are turned, however, and Horus is revealed as the sexual superior. It also suggests that sexual roles were linked to issues of power and dominance.

Perhaps because of such religious underpinnings, the Book of the Dead contains a passage in which a deceased Egyptian disavows homosexual experience as this might prevent successful admission into the afterlife. However, inclusion of homosexuality in this context is also perhaps the clearest attestation that it was an acknowledged reality in ancient times. The earliest of these sources, *The Maxims of Ptahhotep*, warns against sexual encounters with an especially effeminate male. In total, these sources suggest that the main objection to male homosexuality was that someone acted in a feminine role but lacked the female fertility to fulfill the procreative norm prescribed by ancient Egyptian culture.

—Nicholas S. Picardo

evidence reflects the elite perspective, and as with most ancient Egyptian material, the loudest voice is male. Additionally, there is ample reason to expect that gender roles were not entirely consistent through all levels of society.

As illustrated by the hieroglyphic writing system, the ancient Egyptians acknowledged two gender categories: masculine and feminine. Most generally, gender roles revolved around the ideal of the nuclear family. Young men and women were to establish a household by marrying and starting a family at their earliest feasible opportunity. It seems to have been regarded as a responsibility of women to bear children. Sons were desired in particular, although Egyptians appear to have been enthusiastic about childbirth regardless of the sex of the child. An eldest son was called the Staff of Old Age, for he held the responsibility to care for the parents in their

advanced years. Upon his parents' deaths he was also expected to officiate the Opening of the Mouth Ceremony, the most important funerary rite. Also at the funeral, female family members acted as mourners, a role important enough by the New Kingdom that professionals could be hired.

The title that conveyed the married status of a woman was lady/mistress of the house. Egyptian society acknowledged the home as the domain of the wife, to whom household matters were often deferred. At all tiers of society a man might have to travel for work, leaving his home for lengthy periods. Even under normal circumstances, though, Egyptian mothers were required to balance the numerous responsibilities of child care and household management. If tomb scenes and models represent reality, a division of labor in the basic tasks of everyday life was rarely or-

ganized exclusively along gender lines. Provisioning of the house could involve both husband and wife, depending on the individual situation. Women of lower rank in particular may have assisted with agricultural field work, although apparently not with the most laborious cultivation tasks. However, although both sexes appear as bakers, women are more frequent, and the tedious process of stone-grinding grain appears to have been adopted specifically by women. Men align more closely with the related process of brewing beer, the staple Egyptian beverage. The weaving of linens and textiles is also one of the few occupations in which men did not participate. Both men and women comprised the servant staff for the wealthy.

The administrative system of the Egyptian state operated for and to the benefit of men, a situation that affected the opportunities of women in several ways. The socioeconomic status of a woman was dependent upon the male head of the household in which she resided, her father prior to marriage and her husband thereafter. A man's professional office was passed on through his sons; however, there are scattered examples of women holding administrative titles of significance. Because literacy was a job-specific skill, likely rather few women outside those of the highest ranks learned to read. Most positions commonly held by women were in the temple cults. Although female priestly titles appear during some time periods, women were most often musicians or chantresses who accompanied priests as they tended to daily temple rituals. Women of all social standing and profession technically had legal standing, allowing them to hold, transfer, and inherit property and land as well as enter into legal proceedings. However, the extent to which these rights were exercised in practice may have been influenced by family.

The highest office in the land, that of the king, was undisputedly a masculine role. The few cases of female pharaohs usually resulted from the absence of a suitable male heir to the throne. All signs indicate that the female Pharaoh Hatshepsut of the Eighteenth Dynasty was a capable and accomplished ruler. She obviously recognized the gender associations of kingship, in some scenes having herself depicted in male garb and with a masculine writing of her name.

Yet public response was likely far from entirely positive, as perhaps reflected by some extremely disrespectful graffiti left near her mortuary monument at Deir el-Bahri. Following her exit from the historical record, her stepson and co-regent Thutmose III embarked upon a program to destroy, alter, or conceal her monuments and erase her from historical memory.

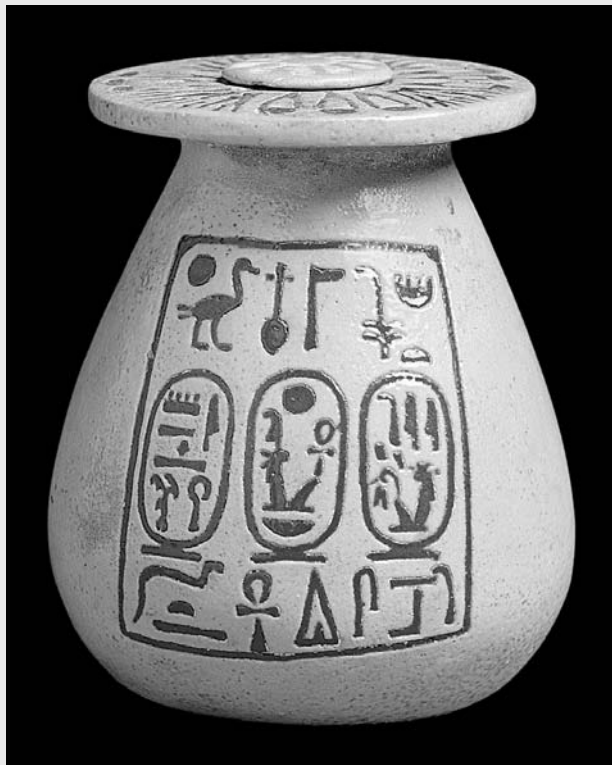
Artistic depictions on tomb walls and stelae incorporate gender distinctions. Most superficially colored conventions distinguish between reddish-brown men and drab yellowish women. Females occupy secondary positions to men in both word and space. The primary male figure is also the primary actor of a scene, with a woman (usually his wife) watching from aside. Texts focus on his life, his work, and his titles. Women and children customarily receive labels that do not indicate their own standing; rather, their identity in this context is defined solely by their relationship to the primary male figure. Afterlife expectations on the part of women paralleled those of men. This inequality results partly from circumstance, as a tomb sizable enough to carry imagery and inscriptions was possible largely due to the husband's professional status, which was thought worthy of advertisement. That a streak of misogyny was present, however, is reflected by Egyptian literature, produced exclusively by men. Several literary stories include the character type of the temptress, and the notion of women as the primary instigators of adultery turns up in several kinds of Egyptian texts.

—Nicholas S. Picardo

Bibliography

- Bryan, Betsy M. "In Women Good and Bad Fortune Are on Earth: Status Roles of Women in Egyptian Culture." In *Mistress of the House, Mistress of Heaven: Women in Ancient Egypt*, edited by Anne K. Capel and Glenn E. Markoe. New York: Hudson Hill, 1996.
- Manniche, Lise. *Sexual Life in Ancient Egypt*. London and New York: KPI, 1987.
- Robins, Gay. "Gender Roles." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 2, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Robins, Gay. "While the Woman Looks On: Gender Inequality in New Kingdom Egypt." *KMT* 1(3) (Fall 1990): 18–21, 64–65.

➤ EGYPTIAN COSMETICS



Ointment vase with the names of Pharaoh Amenhotep III and Queen Tiy, Egyptian, 1391–1353 BCE. (Erich Lessing/Art Resource, NY)

Cosmetics were an integral part of daily life in ancient Egypt. Almost every person, regardless of status or gender, was buried with a makeup kit. The most popular makeup was *kohl*, used around the eyes by both men and women. Usually applied around the upper and lower lash lines, although sometimes on the upper lid, kohl came in green and black colors. Kohl was not only considered a beauty aid but was also medicinal, as many prescriptions use kohl in curing eye infections. Perfumed oils were also used by both genders. They acted as deodorants, skin moisturizers, and perhaps even insect repellents as well as giving the wearer a pleasant scent. Some of the items included in perfumes were water lilies, cedar wood, herbs, and spices such as cinnamon. During the New Kingdom, banquet scenes show people with cones of perfumed fat balanced on their heads. As the perfumed cones melted, the fat dripped through the hair, nourishing it and also cooling the wearer during the hot festivities.

—Vanessa Smith

Roehrig, Catherine H. “Women’s Work: Some Occupations of Nonroyal Women As Depicted in Ancient Egyptian Art.” In *Mistress of the House, Mistress of Heaven: Women in Ancient Egypt*, edited by Anne K. Capel and Glenn E Markoe. New York: Hudson Hill, 1996.

Egyptian Concepts of Beauty

Ancient Egyptian concepts of beauty are not easily understood, but literature, art, and artifactual remains all give clues as to what beauty involved. The concept of *maat* (truth, world order, and cosmic balance) is central to the Egyptian way of life. Evil things, acts, or people could upset the balance and allow chaos to reign. Therefore, it was every Egyptian’s duty to maintain *maat* by adhering to a moral code, worshipping the gods, obeying the king, and striving for perfection. In ancient Egyptian the same word is used for “perfect” and “beautiful,” indicating that beauty was an important facet of Egyptian life.

In literature, love poetry includes descriptions of the beauty of both men and women. Wisdom literature warns the reader to beware of beautiful women because they can lead to jealousy and because beauty may not indicate purity of heart. Fables tell of women falling in love with beautiful young men. Medical texts are full of prescriptions for wrinkle creams and cures for baldness.

The uniformity of depictions of the human figure from ancient Egyptian art throughout its long history give the best understanding as to what the Egyptians thought was beautiful. Art for the Egyptians was reality: if it was drawn or sculpted it could be magically brought to life to act as a vessel for a dead person’s spirit. Depictions of evil acts or evil people might cause them to become reality, which would threaten *maat*, or the peace and order of Egypt. To counteract this, Egyptian art rarely depicts bad actions or bad people unless they were happening to the enemy or foreigners. The result was to portray both men and women in an idealized form. Pharaohs never aged, and, in fact, few people are ever shown as being old. Youth and perfect figures dominate all of pharaonic art. Men are shown with wide shoulders, a narrow waist, slightly muscular arms and legs, reddish skin, and black

hair. Women are depicted as slim with a long neck; narrow shoulders; small, firm breasts; a small waist; pale, usually yellow, skin; and dark hair. The choices of yellow skin for women and red skin for men have a basis in reality and mythology. Because upper-class women spent most of their time indoors attending to the house, their skin was paler than the men, who spent more time outside under the hot Egyptian sun. Hathor, the goddess of beauty, fertility, and childbirth (among many other things), is described as having skin of gold. Depictions of women with yellow skin may be an emulation of the goddess of beauty.

Aberrations from the ideal form in art do exist but usually in conjunction with depictions of lower-status people, or servants, who are engaged in physical labor. In these instances, people are shown as being old or bald or with medical conditions (withered limbs, hernias, blindness). Noblemen are sometimes shown as old and portly as a way of indicating both their achievement of rank and their wisdom. Egyptian women, however, are almost never shown as fat, pregnant, old, or in poor health. Exceptions come from the Amarna period (1370–1350 BC) when the aesthetics of Egyptian art changed drastically in conjunction with changes in religion and kingship. Figures from the Amarna period are portrayed with very angular faces, almost pointed heads, very long necks, very long fingers, a small belly, rounded thighs and buttocks, and no muscle tone. Depictions of people, including women, from this period are more likely to include wrinkles and other nonidealized characteristics. Perhaps the most famous depiction of an antithesis of beauty from the pharaonic period is that of the Queen of Punt from the temple of Hatshepsut at Deir el Bahri. The queen is portrayed as obese, with rolls of fat covering her stomach, arms, and legs and with very large buttocks. Because the Queen of Punt is a foreigner and therefore does not threaten the ideals of *maat*, artists could depict the reality of her body.

—Vanessa Smith

Bibliography

Arnold, Dorothea. *The Royal Women of Amarna: Images of Beauty from Ancient Egypt*. New York: Metropolitan Museum of Art, 1996.

Baines, John. "Egyptian Art and Aesthetics." In *Civilizations of the Ancient Near East*, vol. 4, edited by Jack Sasson. New York: Scribner, 1995.

Hawass, Zahi. *Silent Images: Women of Pharaonic Egypt*. Cairo: Cultural Development Fund, 1995.

Robins, Gay. *Women in Ancient Egypt*. Cambridge: Harvard University Press, 1993.

Manniche, Lise. *Sacred Luxuries: Fragrance, Aromatherapy, and Cosmetics in Ancient Egypt*. Ithaca, NY: Cornell University Press, 1999.

Manniche, Lise. *Sexual Life in Ancient Egypt*. New York: Kegan Paul International, 1997.

The Authority of the Father and Gender Roles in Ancient Mesopotamia

The family was the cornerstone of Mesopotamian society; the male head of the household made all important family decisions. As long as he was alive, his parental authority was legally uncontested. If he so wished he could use any member of his family as collateral to secure a loan, and if he fell into debt he could sell or give his wife or children to his creditor to satisfy an outstanding obligation. Later, if financially able, he might redeem his family members, but he was under no legal or societal obligation to do so.

Children were required to obey their father's command. According to the Laws of Hammurabi no. 195, "If a son strikes his father, they shall cut off his hand." The father had the responsibility of caring for his children and could not disinherit a son without good cause. This is reflected in law numbers 168 and 169 of the Laws of Hammurabi. Law 168 reads:

"If a man should decide to disinherit his son and declares to the judges, 'I will disinherit my son,' the judges shall investigate his case and if the son is not guilty of a grave offense deserving the penalty of disinheritance, the father may not disinherit his son."

Law 169 reads:

"If he [the son] should be guilty of a grave offense deserving the penalty of disinheritance by his father, they shall pardon him for his first one; if he should commit a

grave offense a second time, the father may disinherit his son.”

Family members took the name of the father. Sons and daughters were known by their personal name followed by the name of their father. In the middle of the second millennium, a patronymic (family name) was added so that a son was called Mr. So-and-So son of Father’s Name, descendant of a named ancestor. Household slaves did not take the name of the head of the family. They were only known by their personal names without any parentage being given.

Children were grouped according to age. The youngest was called weaned at the breast. Later the child was referred to as “weaned.” A boy, once he passed adolescence and reached age 13, was considered to be an adult. He was now supposed to get married in order to “build his house.” An older adult past the age of 80 was called “aged,” and one who lived to age 90 was one of “extreme old age.” It was believed that the maximum age limit was 120.

Married women were expected to remain at home and manage their household, but they could leave the house to attend festivals or engage in household-related errands. Literary texts and art identify a married woman with a toggle pin (to hold up her garment) and a spindle. A man was associated with his weapon. Both men’s and women’s outer clothing consisted of a long one-piece garment. Women wore it pinned on the left, men on the right. Men, unless they were eunuchs or involved in religious ceremonies, grew beards, which were associated with virility. Women were considered to be unclean during their menstrual period. If a man touched a woman during menstruation, he too was declared unclean. A husband had the right to beat his wife for certain offenses. In middle Assyrian society a husband could punish his wife in a number of ways, such as cutting off her ears and nose or by beating and whipping her and pulling out her hair. Adultery was condemned. A proverb stated that “He who has intercourse with [another] man’s wife, his sin is severe.” Another proverb warns a man not to be alone in a room with someone else’s wife.

A man usually married only one woman; his wealth and name would normally be passed to

his eldest son. If, however, his wife became ill and could not bear children, then he had the right to take a second wife. This is reflected in law no. 148 of the Laws of Hammurabi, which reads:

“When a man marries a woman and she is seized with *li’bu* disease [and cannot conceive], if he has made up his mind to marry another, he may marry [her], without divorcing his ill [first] wife; she shall live in the house which he built and he shall continue to support her as long as she lives.”

If a man had no male offspring, “his hearth has been extinguished.” Many children died at childbirth or at a young age. In Assyrian society (northern Mesopotamia), abortion was deplored. A Middle Assyrian law refers to a woman who intentionally aborted her own unborn child and disposed of the fetus without burial. She was condemned to die, impaled on a stake without burial. Her ghost was doomed to wander forever, never to reach its eternal dwelling. Children were abandoned in the street, in wells, and in open areas. If saved, they could be named “He who was snatched from the mouth of a dog.” A school text refers to a child saved from the mouth of a raven.

If a couple was childless, the husband could adopt a child in lieu of taking a second wife. The primary method of adoption was to obtain a newborn infant. This was expressed by the Babylonian phrase “to take for sonship” a baby that was still “in [its] water and blood.” This later expression indicates that the baby was adopted just after birth from parents who planned to abandon the child. According to the Laws of Hammurabi no. 186, if a child became lost and was then found and raised by his adoptive family and afterward sought to locate his biological parents, that child may be reclaimed and returned to his original home. Children were also adopted into families where they would be taught the family trade. In these cases it may be assumed that the family that gives up their son was too poor to provide him with an education. The terms of this type of adoption specified that the child was to be raised and apprenticed in a craft. Such training ensured both that the boy had a profession

and that he also had a skill that could be passed on to his heirs. Failure to teach the child a craft was considered a breach of contract. When a family fell into financial straits, their children could be put up for adoption for a price equal to their cost of raising and feeding the child. The adopter, frequently a relative, purchased the child for an agreed-upon price. In special circumstances a brother might adopt and thereby legitimize his sister's illegitimate child if he considered the mother's lifestyle and living conditions to be unsuitable. Adoption was primarily a process to ensure that upper-class families had both old-age support and an heir to carry on the family name and fortune. The law supported this concept by requiring that adopted sons be considered natural heirs. If a childless couple adopted a son, he was to be their heir. If later they had biological children, the adoptee was still to be considered the eldest child and primary heir.

—Ira Spar

Bibliography

- Bahrani, Zainab. *Women of Babylon: Gender and Representation in Mesopotamia*. London: Routledge, 2001.
- Harris, Rivkah. *Gender and Aging in Mesopotamia: The Gilgamesh Epic and Other Ancient Literature*. Norman: University of Oklahoma Press, 2000.
- Roth, Martha T. *Law Collections from Mesopotamia and Asia Minor*. 2nd ed. Atlanta: Scholars Press, 1997.

Women in Mesopotamia

On marriage a girl became part of her husband's household, her fate intimately tied up with his fortunes. If things went badly, she and her children could be hired out to work, and in extreme financial trouble they could be pledged as slaves against unpaid debts. A wife's dowry property was managed by her husband, and in some periods and regions she was confined to the house. Royal Assyrian ladies, from the Middle Assyrian period onward, were segregated in a harem, seeing only their husbands, children, and female attendants. In this hothouse environment, rivalry and quarrels were common. Some relief from the monotony came when the court traveled as they accompanied the king. Apart from nomads,

however, and itinerant entertainers, such as jugglers and acrobats, Mesopotamian women rarely traveled.

On the other hand, women often enjoyed considerable responsibility, running large establishments, deputizing for their absent husbands, and owning property in their own right. They could bring court cases and be called as witnesses. The Mari letters include several from Queen Shibtu to her husband Zimri-Lim about the palace administration—managing and acquiring stores, running the workshops, deploying new slaves, observing religious rites—as well as discussing personal matters. Her contemporary Iltani, queen of Karana, had to deal in addition with legal cases and petitioners on behalf of her husband. Even the Assyrian royal ladies in their harem could wield considerable political power as advisor to the king (their husband or son). On occasion their authority was overtly acknowledged; for example, the ninth-century queen Sammuramat was named in inscriptions alongside her son Adad-Nirari III. The wives of the Assur merchants who lived in Kanesh also shouldered business responsibilities, often running the Assur end of operations: supervising the textile workshops staffed by slave girls, dispatching consignments of textiles, keeping their husbands informed about the situation in Assur, handling financial matters, and, when necessary, selling off their jewelry—gold earrings, silver bracelets, and rings—to raise capital.

As brides were generally younger than their husbands, many women were widowed while their children were still young. Women in this situation often enjoyed the same business rights as men, managing the family's property on behalf of their sons. The Nuzi archives show the successful and sometimes aggressive business dealings of several such women who managed and acquired land and engaged in trade.

An exceptional group was the well-born girls dedicated to the service of Shamash in Sippar, and other gods elsewhere, as *naditum* priestesses. One of the girls' main tasks was to ensure through prayers that the deity was kept aware of their families' interests. Perhaps equally important, however, was the disposal of property, for the dowry that the girl brought to the temple cloister (*gagum*) generally reverted to the family

on her death. In return, the naditum could expect to be supported by her father or brothers. She exercised full control over her dowry lands and their revenue during her lifetime, often using the income to buy and sell goods and land and acting as a shrewd and vigorous businesswoman.

The sexual status of naditum women varied. Those in Nippur were vowed to celibacy, but the Sippar ladies could, it seems, take lovers, raising children who were adopted by their brothers, again ensuring that the dowry lands stayed within the family. In Babylon, in contrast, Marduk's naditum ladies were allowed to marry but had to remain celibate, often introducing a real or fictional younger sister as a subordinate wife to furnish the marital bed.

At the opposite end of the social scale were women whose families owned no property and who worked for a living, many of them in the woolen textile industry, especially in Babylonia where great cities such as Ur had enormous factories employing hundreds or even thousands of women and children. Although their main occupation was weaving, they might be required to undertake a variety of other tasks, including agricultural work. Large palace or temple kitchens also employed many female staff in such tasks as grinding grain; making bread, cakes, and beer; and preparing and cooking various dishes. Central to the life of every married woman, however, was the bearing and raising of children.

—Jane R. McIntosh

Bibliography

- Bottero, Jean, ed. *Everyday Life in Ancient Mesopotamia*. Translated by A. Nevill. Edinburgh, UK: Edinburgh University Press, 2001.
- Dalley, Stephanie. *Mari and Karana: Two Old Babylonian Cities*. London: Longman, 1984.
- Maidman, Maynard Paul. "Nuzi: Portrait of an Ancient Mesopotamian Provincial Town." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Melville, Sarah C. "Royal Women and the Exercise of Power in the Ancient Near East." In *A Companion to the Ancient Near East*, edited by Daniel C. Snell. Oxford, UK: Blackwell, 2005.
- Stol, Marten. "Private Life in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

Gender in the Indus Valley

Since we are still unable to read the writing of the ancient inhabitants of the Indus Valley (the Harappans), reconstructing gender roles can be quite difficult. This leaves the art historical record as the main resource for the study of ancient gender. For reconstructing gender among the Harappans, the most useful resources are the numerous figurines that are recovered from sites. Usually archaeologists are able to identify figurines as male and female and thus can extrapolate about the different fashions and activities of Harappan men and women. Unfortunately, we do not really understand what these figurines were used for in ancient times (whether they were children's toys, religious artifacts, or perhaps decorative objects), so care must be taken in drawing conclusions about Indus Valley society as a whole. Imagine using a Barbie Doll and a depiction of the Virgin Mary to reconstruct modern North American society; certainly these pieces of evidence could inform you about gen-



Bronze statuette of a dancing woman from Mohenjo-daro, about 2500 BCE. (Scala/Art Resource, NY)

der roles in North America, but they would not give you a particularly balanced view.

The clearest evidence for gender difference in the Indus Valley is in regard to hairstyle. Women's hairstyles as depicted in figurines could be quite elaborate. Archaeologists have been able to identify styles that were in fashion in specific cities, indicating that we should consider fashion on a local level. The most elaborate hairstyles for women had the hair rolled and lifted above the head, with various types of jewelry inserted among the curls. This type of hairstyle would have required a hairstylist's help (it would be impossible to do this on one's own) and would have required very careful upkeep. Likely this type of hairstyle would have been limited to elite women or special occasions. Less elaborate styles still involve complex braiding, worn up or down. Women also wore head coverings, either headdresses that were incorporated into the hair or turbans that fully covered the head. Men's hairstyles show less variation. When the hair is not covered by a turban, it is worn twisted into a bun (or double bun) at the back of the head. Most male figurines have beards, but the beard was worn in a variety of styles. Both men and women would sometimes wear their hair long, especially with a long braid hanging down one side of the head.

It is more difficult to reconstruct clothing styles. Generally, male figurines are nude and female figurines wear a short skirt, which indicates a difference in sensibility toward male and female modesty. Male figurines, when dressed, wore generally one of two outfits. A long shawl may have been draped over the left shoulder and draped around the midsection like a toga. Or a piece of cloth may have been wrapped around the midsection and then tucked through the legs and into the back of the garment. Both men and women wore jewelry, but women wore larger quantities and more elaborate styles (at least in the figurines). Bangles were most common, but necklaces and rings were also common.

Most figurines depict men and women in rigid formal stances, devoid of activity. However, figurines that do depict activities can also tell us what types of work men and women engaged in. Dancing was a common subject of figurines for both men and women. In some figurines men

➤ GENDER AND BURIAL AT HARAPPA

Archaeologists working at the site of Harappa have begun trying to use genetic evidence to understand gender roles in the Indus Valley. By studying the genetic remains of bodies exhumed from ancient cemeteries, scholars have made the preliminary observation that women tended to have been buried in close proximity to their blood relatives, whereas men were not. This kind of burial practice is called *matrifocal* and suggests that after marriage women retained close ties to their own family and that men gained close ties to their in-laws.

—Kevin M. McGeough

appear to be hunting or fighting (the difference is hard to distinguish). Women are sometimes depicted as grinding grain or engaging in other aspects of food production.

—Kevin M. McGeough

Bibliography

Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

Gender Roles in Vedic Society

The Vedas, dated between 1000 BCE and 300 BCE, are the most ancient religious texts from the Indian subcontinent. They consist of four books: Rig-Veda, Samaveda, Yajurveda, and Atharvaveda. These texts consist of hymns and incantations to be used during fire sacrifices to the Vedic deities. The texts themselves also give insight into the culture and society from which they were composed. One of the most interesting components of the Vedic society is the gender roles found latent within the text. Through analysis of the scriptures, this period is perceived to mute the gender separation that later periods within the region seem to emphasize. The gender roles of both males and females are most evident within the institutions of education, betrothal, and marriage.

The Vedic period was a time of great freedom for women. The age of the Vedas is rivaled only by modern times in terms of the opportunities that women, unmarried women in particular,

had to lead meaningful lives by their own merit. The opportunities were multiplied by their access to education. In Rig-Veda chapters one and ten, learned female rishis “composed verses, performed sacrifices, offered hymns to the Gods, and won glory and fame.” A major prerequisite for this ability to perform acts that would later be denied to women would be their education and initiation by the *brahmanacarya* (the vow of priestly study given by someone who has already been through the vow of study). In fact, according to the Atharvaveda, “a young daughter after the observance of *brahmanacarya* should be married.” This indicates that in fact all unmarried women should be initiated into studies before advancing into any other stage of life. It also seems as though the procurement of a “learned” husband was directly dependent on being a “learned” woman. Therefore, the education of an unmarried woman was the means by which she was able to attain personal achievements and have a good marriage. A woman’s education was the only beginning point to a successful life and thus was duly stressed in scripture.

Initiation into the education of Sanskrit and the Vedas through *brahmanacarya* was considered *dharmā* or the duty of all twice-born males, that is, males of the upper three *varnas* or castes: Brahmin, Ksatriya, and Vaisha. In fact, after the Vedic period these were the only groups allowed to enter this celibate student stage. This tradition has continued even until the present in many orthodox Hindu sects. Thus, the educational system, like at no other time until the modern secularization of India, was equally open despite gender.

During the Vedic age, women enjoyed the ability to freely choose their husbands and if they found no adequate suitor to remain unmarried. As was the case in most ancient societies that placed a heavy importance on progeny and descendents, remaining unmarried was not viewed as the most honorific position for a female. Therefore, women would at times more actively pursue their love interests and curse their rivals in love. As has already been alluded to, there had to be present the mutual consent of both the future bride and groom. This mutual consent was gained through encounters with the opposite sex such as in the Mahavrata rituals,

which can be described as orgies. There were also other rituals and festivals (called *samanas*) in which there was an intermingling of sexes. These were popular festivities in which women could enjoy themselves and seek to find a husband. Such events were necessary to bring together the opposite genders to facilitate meeting opportunities, as these were quite scarce due to daily responsibilities maintaining the home.

In the Vedic period both genders were involved in the selection of a potential suitor. This led to what is called in the Laws of Manu a “love marriage.” This is contrasted with the Epic model of Rama and Sita, where Sita is won by Rama after a display of strength and with the *dharmashastras*, which implemented the arrangement of marriage between the parents of eligible families dependent on caste. Therefore, greater interaction between the sexes prior to marriage was prevalent in this period.

Marriage was a time that stressed the difference between the roles of male and female. This was one of the most restrictive stages in the lives of Vedic women. During married life, the husband was to be worshipped as a *deva*, or god. He was in charge of the fire sacrifice and thus had a monopoly over communicating with the devas. This would ultimately lead to the widening gap between the genders during the Epic period in India. Women within the confines of marriage were even limited in their legal status. They were completely under the control of their husbands. They were also not the heirs of their property, as their eldest sons held that honor. If there was no son the husband’s brother would receive the widow into his family. He would then take over the inheritance. The wife did, however, have certain control over the household, with the children, servants, and livestock falling under her charge. She also had the duty of keeping the sacrificial fire lit. This was the same fire that was circled during the wedding ceremony that was to remain forever lit. She also had responsibility over the children, but her authority over anything was never secure because she was under the all-encompassing charge of her husband.

Therefore, the Vedic period on many levels was a time of equality between male and female. But the disparity between the two within the marital relationship would be exacerbated in the

following millennia to all but erase much of the gender equality found within the Vedas.

—Caleb Simmons

Bibliography

- Atharvaveda sambhitha*. Edited and translated by M. R. Rajesh. Kozhikode: Mathrubhumi Granthavadi, 2005.
- Ayyangar, K. T. *Bhasbyam Women in Hindu Law*. Madras: S. Ganesan, 1928.
- Findly, Ellison Banks. "Gargi at the King's Court: Women and Philosophic Innovation in Ancient India." In *Women, Religion, and Social Change*, edited by Yvonne Yazbeck Haddad and Ellison Banks Findly. Albany: State University of New York Press, 1985.
- Hopkins, Thomas. *The Hindu Religious Tradition*. Belmont, CA: Wadsworth, 1971.
- Kapadia, K. M. *Marriage and Family in India*. Oxford: Oxford University Press, 1966.
- Smith, Brian K. "Ritual, Knowledge, and Being: Initiation and Veda Study in Ancient India." *Numen* 33(1) (June 1986): 65–89.

Nüwa and the Repair of the Broken Sky

Though the notable myth about Nüwa mending the broken sky is sometimes attributed to flood myth systems, the disaster it describes is actually not only a flood. Rather, it is a cosmic catastrophe. In some versions, this calamity was caused by the collapse of the four poles supporting heaven. In other texts, this cosmic disorder was caused by the breakdown of one of the sky poles, Mount Buzhou (literally means "not full"), in a war between the gods Gonggong and Zhuanxu (names differ in different texts). Gonggong fought with Zhuanxu to be the supreme god but failed in the war. He was so angry that he butted into Mount Buzhou.

The collapse of the sky pillar(s) caused great disasters. Fires raged fiercely and could not be extinguished. Water flowed without abating. Ferocious birds and beasts seized and devoured people. At this moment, the goddess Nüwa melted stones of five different colors to patch heaven, and cut the legs off of a huge tortoise and set them up to support the four extremities of heaven. She defeated the fierce Black Dragon to save the people, and collected ashes of reeds

to stop the flood. Her arduous work cleared up the terrible mess and put the world in order again. In some versions collected in the twentieth century, Nüwa not only mended the broken sky but also repaired the broken earth that was damaged in the same disaster. Her mythical actions often serve as an etiology to explain why people today can see colorful clouds in heaven (because the goddess mended heaven with colorful stones), and why the current western land of China is high while the east is low (she used the longer legs of the tortoise to support the west, using the shorter legs to support the east).

—Libui Yang, Deming An, and Jessica Anderson Turner

Bibliography

- Birrell, Anne. *Chinese Mythology: An Introduction*. Baltimore: Johns Hopkins University Press, 1993.
- Bodde, Derk. "Myths of Ancient China." In *Mythologies of the Ancient World*, edited by Samuel Noah Kramer. 1961. Reprint, New York: Anchor Books, 1989.
- Yang, Lihui, Deming An, and Jessica Anderson Turner. *Handbook of Chinese Mythology*. New York: Oxford University Press, 2008. First published 2005 by ABC-CLIO.
- Yang, Lihui, Deming An, and Jessica Anderson Turner. *The Cult of Nüwa: Myths and Beliefs in China* (in Chinese). Beijing: Zhongguo Shehui Kexue Chubanshe, 1997.

Homosexuality and Transgender in the Ancient Near East

No evidence has been found that people in the ancient Near East defined themselves by their sexual preferences or behavior, and no clearly attested terms define someone as heterosexual or homosexual, so it may be anachronistic to look for evidence for self-defining homosexuals in the ancient Near East. Yet there is evidence that sexual preferences were varied in antiquity as they are in the present. There are some recorded instances of what appear to be same-sex relationships, and there are references to homosexual activities in a variety of sources.

Mesopotamian legal literature contains clear allusions to male homosexual activity. Mostly these are legal proscriptions against male-male sexual activity or limitations on accusations that

➤ THE TOMB OF THE TWO BROTHERS AT SAQQARA



Relief of Nyankhkhnum and Khnumhotep from a tomb at Saqqara, Egypt, Fifth Dynasty. (Jon Bodsworth/The Egypt Archive)

An Egyptian tomb found at Saqqara, dating to the Fifth Dynasty, may have been the final resting place for two men who were partners in a same-sex relationship (in addition to their relationship with their wives). The two men, Nyankhkhnum and Khnumhotep, were wealthy workers in the royal court, both holding the title of king's manicurist. Reliefs from the tomb depict the men with their families in some areas. However, the most space is devoted to images depicting the two men together in various states of embrace. In Egyptian art, these intimate scenes are not meant to depict sexual activities but rather are intended to be illustrative of the nature of the relationship. Poses such as these are more typically used to depict relationships between husbands and wives or between kings and the gods. One theory is that these two individuals were brothers (possibly twin brothers), and generally scholars call this The Tomb of the Two Brothers. The question of whether Nyankhkhnum and Khnumhotep were friends, brothers, or lovers cannot be resolved.

—Kevin M. McGeough

can be made against men regarding their sexual practices. For example, Middle Assyrian laws (which originally date to the fourteenth century BCE but survive only in eleventh-century BCE copies) proscribe that an individual proven to have sodomized another shall be punished by being sodomized himself and then have his genitalia removed. A man who accuses another man of sodomy but cannot prove it should be punished through a physical beating, a head shaving, forced labor for the king, and a very hefty fine. The punishment is severe, not for the particular type of slander he has levied at his fellow citizen but in keeping with other penalties for those who provide false testimony.

The *Epic of Gilgamesh* (from ancient legends recorded in the seventh century BCE) is often cited as an ancient story with strong homoerotic overtones. In fact, these readings of Gilgamesh are far from certain. The hero, Gilgamesh, is described as having a voracious sexual appetite, enjoying the company of women and possibly young men. Gilgamesh's relationship with his friend Enkidu is described as very intimate, but it is not clear if a sexual relationship existed even though there are frequent double entendres describing their relationship. The scholar Martti Nissinen suggests that the relationship between Gilgamesh and Enkidu is better understood as homosocial, a strong friendship between members of the same sex.

The Egyptian Book of the Dead, a book that was buried along with the deceased in New Kingdom times to be used as a guide for passing into the afterlife, contains some hints that male homosexual practices were looked upon negatively. One section of the guide gives instructions that the deceased should assert that he has not engaged in sodomy. Egyptian literary references to male homosexual activities are explicit. In The Tale of King Neferkare and the Military Commander Saset, the king and his commander carry on a sexual relationship under the cover of night. Here, the relationship is described as mutually desired but nevertheless scandalous because of its deviation from Egyptian normative practices. In The Tale of Horus and Seth, the god Seth attempts to have intercourse with Horus both as a means of pleasuring himself and humiliating Horus.

Different moral evaluations are identifiable in the historical record for the active and passive members of a male on male sexual relationship. Some textual references suggest that there was no stigma associated with the active partner but that there was a stigma against the passive recipient of a male sexual act. For example, the Egyptian word *nkḳw* is used as an insulting term referring to a male as a recipient of a sexual act. In some Mesopotamian dream omen texts (texts that describe what particular dreams tell about the future), different male homosexual acts correspond with different forecasts for the future for the individual. For example, a man who dreams that he is the active participant in a sexual activity with another male of the same social class is actually forecasting his own development as a leader in the waking world.

From earliest Mesopotamian times until the conquest of the land by the Persians, there is evidence that certain transgendered individuals were associated with the worship of the goddess Ishtar. A transgendered individual is someone whose self-identified gender is different from their culturally assigned gender. Gender identity is different from sexual orientation, and the two issues should not be confused when researching their manifestations in the ancient world. These transgendered devotees of Ishtar were almost ex-

clusively males who had taken on traits that were deemed feminine by Mesopotamian society. Certainly this involved dressing as a woman and acting as a woman in the cultic settings. It is unclear if it involved any medical procedures, such as castration. Other evidence for transgender in the ancient Near East is more ambiguous, and there is little evidence to suggest that eunuchs were prominent within the society despite frequent statements to the contrary.

—Kevin M. McGeough

Bibliography

- Meskel, L. *Private Life in New Kingdom Egypt*. Princeton, NJ: Princeton University Press, 2002.
- Nissinen, M. *Homoeroticism in the Bible: A Historical Perspective*. Translated by K. Stjerna. Minneapolis: Fortress Press, 1998.
- Parkinson, R. "Homosexual Desire in Middle Kingdom Literature." *Journal of Egyptian Archaeology* 81 (1995): 57-76.
- Reeder, G. "Same Sex Desire, Conjugal Constructs and the Tomb of Niankhkhnum and Khnumhotep." *World Archaeology* 32(2) (2000): 193-208.
- Roth, M. *Law Collections from Mesopotamia and Asia Minor*. 2nd ed. SBL Writings from the Ancient World Series. Atlanta: Scholars Press, 1997.
- Smith, W. S. *The Art and Architecture of Ancient Egypt*. Revised with additions by W. K. Simpson. Pelican History of Art. New Haven, CT: Yale University Press, 1981.

■ Introduction: Education

Education for most of the people who lived during this age (4000 to 1000 BCE) would have come primarily from their families. This education would not have been very formal but instead was a matter of learning necessary skills as the need developed. This kind of education through practice tends to be very conservative, since it perpetuates traditional methods of understanding the world and working within it.

While the family may have been the dominant educational institution at this time, it was the period in which the first schools were formed. Evidence for schools is primarily found in the Near East; the possibility that schools may have

existed in other regions of the world cannot be ruled out. These schools would not have been for as broad ranging of an education as students receive now. These schools were designed to teach specific skills to a select group of students. An education would not have been necessary for everybody (as it is today). Scribal schools were the most common types of educational institution; these were schools where students learned how to read and write, usually specializing in specific genres. Many of the copies of Mesopotamian literature that have survived to the present day are actually school exercise tablets, the remnants of an ancient student's homework now

used to reconstruct the lost literary heritage of an ancient society.

The development of the school as a medium for education is indicative of larger changes in society as a whole. It reflects a sensibility that the community at large should play a part in the education of some individuals. The community could set standards not only about who could get this knowledge but what constituted knowledge that needed to be taught. The development of schools is also indicative of a more complex society. The need for schools reflects that more specialized types of knowledge had developed (such as writing), knowledge that could not just be picked up “on the job.”

—Kevin M. McGeough

Egyptian Scribal Academies

The scribal profession was the cornerstone of ancient Egypt’s civil and military administration from the earliest dynasties through the end of pharaonic history. Although the basic designation of *sešb* (scribe) was not a particularly high-ranking title, having a scribe’s education was a necessary prerequisite for advancement in the bureaucracy. One of the most telling pieces of

archaeological evidence for the prestige accorded to scribes comes from the many scribal statues placed on behalf of deceased individuals in tombs and temples. These figures are shown seated with legs crossed, a papyrus unrolled in the lap, and writing utensil in hand. Even officials whose rank far outstripped that of a mere scribe frequently chose to have themselves depicted in this fashion, clearly demonstrating the high premium placed on literacy by the largely illiterate society.

The literacy rate in ancient Egypt was, as a rule, probably less than 2 percent in any given period. Consequently, education at scribal academies must have remained the prerogative of a relatively small cross-section of elite males. It is therefore hardly surprising that scribal training often appears to have acquired the character of a hereditary prerogative, passed from father to son. Private correspondence in the New Kingdom, much of which derives from the unusually literate workmen’s village of Deir el-Medina, also attests to the presence of literate women. However, textual evidence for formally trained female scribes is sparse and often inconclusive.

Formal studies at a scribal school (*at ni seba*, or “room of instruction”) began with training in the script and in grammar, elementary mathematics, geometry, etc., lasting around four years. Junior scribes did not begin their studies with the monumental hieroglyphic script. Rather, the cursive hieratic script used for administrative purposes, record keeping, correspondence, etc., was taught first. Many schoolboys’ copies of practice texts, written in ink on potsherds or flakes of limestone, known as ostraca, attest to the countless hours of copying and recopying of basic texts required at the early stages of a scribe’s education. Onomastica—encyclopedia lists naming different classes of objects—were one type of text used for this purpose. Later, the scribe in training would progress to more advanced literary compositions, such as the popular story of Sinuhe; didactic (i.e., instructional) literature, which frequently extolled the virtues of the scribal profession over the indignities of manual labor; and model letters designed to teach the proper format for correspondence. Most, perhaps even all, of these types of pedagogical com-

► THE HOUSE OF LIFE

One of the most important centers of scribal activity in ancient Egypt was the House of Life (*per ankh*). It was once believed that this institution functioned as a sort of university for the training of scribes. However, a careful reading of the extant sources indicates that the House of Life was actually a sort of scriptorium where the countless religious texts (including magical and medical treatises) were edited and compiled by advanced scribes. Many such institutions existed, and they were generally located at or near major temple complexes. The scribes working at the House of Life were closely associated with the nearby cult centers, and many priests doubtless spent a portion of their time engaged in state-sponsored research into matters of religious importance at the House of Life.

—Joshua Roberson

positions could be compiled in textbooks for use at schools. One popular example of this type of compilation is the Eleventh Dynasty Book of *Kemit* (Summation), which includes epistolary greetings, a short model letter, and a stereotyped autobiographical text. Once the basic training was completed, a junior scribe would begin an apprenticeship under the tutelage of a senior official or administrator. If the junior scribe performed his duties well, he might then hope to distinguish himself as one who was *jqr djeba'u* (excellent of fingers), an esteemed man of letters and valued member of the king's bureaucracy.

—Joshua Roberson

Bibliography

- Bryan, Betsy M. "Evidence for Female Literacy from Theban Tombs of the New Kingdom." *Bulletin of the Egyptological Seminar* 6 (1984): 17–32.
- Gardiner, Alan H. "The House of Life." *Journal of Egyptian Archaeology* 24 (1938): 157–179.
- Simpson, William Kelly. "Scribal Traditions." In *The Literature of Ancient Egypt*, 3rd. ed., edited by William Kelly Simpson. New Haven, CT: Yale University Press, 2003.
- Wente, Edward F. *Letters from Ancient Egypt*. Atlanta: Scholars Press, 1990.
- Williams, Ronald J. "Scribal Training in Ancient Egypt." *Journal of the American Oriental Society* 92 (1972): 214–221.

The Mesopotamian E-Dub-ba

Children generally learned their parents' trade or occupation, although some were apprenticed to learn other skills, as young slaves often were. For the children of the well to do, many of whom would become scribes, there were formal schools. Schoolrooms—known as "tablet houses" (*e-dub-ba*, Akkadian *bit tuppi*)—have been uncovered in Ur, Nippur, Sippar, and the Mari palace, and Sumerian texts describe the curriculum and other aspects of schooling. School was run by a master scribe, the "school father," paid out of the students' fees and assisted by an advanced scholar known as "big brother" and sometimes by masters in particular subjects such as drawing and Sumerian. Pupils were kept hard at work, with only six days a month off, and they were beaten for various offenses, including late-

> MESOPOTAMIAN "SCHOOLDAYS"

An Old Babylonian text ("Schooldays") vividly conjures up the student's day and his sufferings: rising in haste, he urges his mother to hurry with his packed lunch—two bread rolls—but arrives late and is punished, not for the last time that day. In the evening his father listens sympathetically to his son's complaints and invites the teacher over, plying him with food, drink, and gifts, while his son strives to display his deference and desire to do well. The teacher is mollified and flattered; eventually he praises the boy's application and assures him of success. This little story was a popular text that students copied to practice their writing skills.

—Jane R. McIntosh

ness, speaking or standing up without permission, and poor-quality work.

In late-third-millennium and Old Babylonian times, there was a set curriculum pursued in schools; earlier and later the course of study varied, but the basic elements were the same. The beginner, seated on a cloth in the courtyard, was taught to form cuneiform symbols in the sand. He progressed to learning how to prepare a clay tablet and reed stylus for writing and began his studies, copying on one face of the tablet the signs that his teacher had written on the other. Schooling since the earliest days around 3000 BCE had been in Sumerian, but by the early second millennium this was a dead language that the pupil also had to learn. Many of the surviving textbooks are Akkadian-Sumerian dictionaries. The student copied lists that introduced him to the written forms of many categories of words: plants, animals, professions, places, minerals, and many others. As he became more proficient he began copying more complex texts, including literature, model letters, and law codes, acquiring a knowledge of grammar and vocabulary and of broader skills and information that would stand him in good stead in his adult career. Surveying and mathematical exercises also loomed large and were concerned with such practical matters as the rations required to feed

enough workmen to dig a canal of a given length or the time needed to build a siege ramp.

The teacher was expected to help his students obtain suitable posts in the civil or temple service. Literacy was a valuable asset, even to those not destined to work as scribes. Several kings boasted of their scholarship. Many royal and private family letters survive in archives such as those from Kanesh and Mari. They range from exchanges on purely business matters to chatty information on domestic dramas and complaints about parental neglect and filial bad behavior.

—Jane R. McIntosh

Bibliography

- Bienkowski, Piotr. "Education." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- Kramer, Samuel Noah. *History Begins at Sumer: Thirty-Nine Firsts in Recorded History*. 3rd rev. ed. Philadelphia: University of Pennsylvania Press, 1981.
- Pearce, Laurie E. "The Scribes and Scholars of Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

■ Introduction: Early Writing

Writing was one of the most important contributions that the people of the period from 4000 BCE to 1000 BCE made to world culture. This invention lies at the heart of much of the world's accomplishments and achievements. Writing is a means of expressing language visually (as opposed to orally or aurally). There is nothing about language itself that necessitates the development of a writing system, although it is hard for us to now imagine a world without writing.

The first writing was likely invented in Mesopotamia, even though Egyptologists and Sinologists argue that writing developed first in Egypt and China respectively. This controversy is not likely to be solved any time soon since an answer is dependent on the accidental finds of archaeology and the development of a consensus on what constitutes writing and what are better thought of as symbols.

The reasons for the invention of writing are multiple and seem to differ from society to society. In Mesopotamia, the earliest attested writing is found on accounting documents. However, literary texts dating to very soon after have also been recovered; the difference in time between the first Mesopotamian economic texts and the first Mesopotamian literary texts is not archaeologically significant, thus the claim that writing was invented for business purposes alone is de-

batable. In Egypt the first artifacts with writing (if it can be considered writing) are labels with the hieroglyphic signs for various cities. Chinese writing is first attested for purposes of divination and communication with the gods. Since no one can read the Proto-Elamite texts from Iran or the writing from the Indus Valley, it is impossible to be certain about the functions of writing in these cultures. However, given that they appear to be analogous to economic tablets and seals bearing personal names and occupations from Mesopotamia, it is likely that writing at least fulfilled an administrative role in these cultures. Linear A, found on Crete, also cannot be read, but for various reasons scholars presume that these were administrative texts as well.

—Kevin M. McGeough

Egyptian Hieroglyphs

The Egyptian hieroglyphic script remained in use for nearly 4,000 years, from the earliest known examples on ivory labels found recently at Abydos, in Middle Egypt (ca. 3500 BCE), to the latest datable hieroglyphic text from the island of Philae, far to the south (ca. 340 CE). Despite this remarkable longevity, the number of people who could actually read and write hieroglyphs at any one time was never more than a tiny percentage of the Egyptian-speaking population (probably

less than 2 percent). During the last centuries of pharaonic Egyptian history, even this small number began to dwindle, as command of the hieroglyphic script became an increasingly esoteric skill of the priesthood.

The word “hieroglyph” derives from the term used by the Greeks to describe the Egyptians’ monumental writing system, *ta hieroglyphika grammata* (holy carved letters), which must be distinguished from the cursive hieratic script used on papyrus documents for day-to-day communication. The Egyptians’ own name for the hieroglyphs, *medu netcher* (words of god), reflects a firm belief in the divine origin of writing. At the same time, the individual hieroglyphs themselves could also be viewed as entities with inherent power. This principle is illustrated by an early Old Kingdom autobiographical inscription in which the very signs used to write the text were described as *netcheru* (gods), made in stone by the tomb owner as an imperishable record of his deeds.

Given their divine nature, hieroglyphic signs also carried the potential to magically harm, especially when used in a funerary context. Because of this danger, signs representing animals such as snakes and crocodiles could, on occasion, be drawn with heads separated from bodies, pierced by knives, or cut in half with stylized grains of sand placed between the severed portions, thus magically preventing their reattachment. Even signs depicting seemingly benign creatures such as birds or human figures could be ritually mutilated in this fashion. To the Egyptian, a sign or symbol always drew a portion of its essence from the thing signified, and the pictorial character of the hieroglyphs combined with their divine status made them a particularly effective means of manipulating this power.

Through the centuries leading up to the modern era, the most common misconception regarding the hieroglyphic writing system was the mistaken assumption that hieroglyphs were used exclusively as some sort of esoteric, and largely allegorical, pictorial code. This view can be traced back at least as far as the fifth century CE to the Greeks, whose belief in the occult meaning of the characters colored western perceptions of the Egyptian language for more than a millennium. This belief only began to be seri-

ously challenged with the discovery of phonetic correspondences for certain hieroglyphic signs on the now-famous Rosetta Stone by the British polymath Thomas Young in 1814. Building upon Young’s work, the final breakthrough came in 1822 with Champollion’s irrefutable confirmation of the script’s phonetic character. After this point, modern understanding of the hieroglyphic script and the language it conveyed progressed rapidly. Egyptologists can now profess a reasonably thorough understanding of the principles underlying the writing system (orthography, syntax, etc.), which has opened the door for exploration of the finer points of grammar, cognition, and lexicography.

Most scripts developed for the purpose of recording human speech can be traced back to pictorial forms, which were simplified and schematized over time. This observation holds true for the writing systems of dead languages such as Akkadian and Sumerian as well as for scripts still in use today, such as Chinese, Hebrew, and our own borrowed Roman characters, whose origins may be traced back to the alphabet of the Phoenicians. Egyptian hieratic, the aforementioned cursive script, exhibits this same tendency. By the Ramessid era (ca. 1315–1081 BCE), many earlier sign forms had been abstracted to a system of simple strokes combined with highly stylized characters that often bore little obvious relation to their hieroglyphic counterparts. Monumental hieroglyphs, on the other hand, represent the opposite pole of this phenomenon. Rather than simplifying, the inventory of hieroglyphic signs actually increased over time. Even more importantly, the various objects and creatures represented always retained their identity and distinctive character as miniature works of art, irrespective of their value as sound-signs or ideograms.

Two basic principles underlie the use of the Egyptian hieroglyphic script (note that the word “hieroglyphic” should only be used as an adjective, as opposed to the noun “hieroglyph”). These are the use of sound-signs (phonograms) and idea-signs (ideograms). Phonograms were used to spell out the sounds, or phonemes, of the Egyptian spoken language, similar to our own alphabet. To this end, the original significance of a sign as an object, creature, etc., was dropped in

➤ ART AND WRITING IN ANCIENT EGYPT

Two of the most recognizable aspects of the culture of ancient Egypt are its highly distinctive mode of artistic representation and the monumental hieroglyphic script. The near-simultaneous development of these two features appears to have begun around the terminal protodynastic period as a tool of the newly created central bureaucracy. The formal principles that underlie the production of both two- and three-dimensional art were intimately linked with the pictorial signs used for the hieroglyphic script. The pictorial or artistic character of the hieroglyphs is well known, and many of the hieroglyphic texts rank as some of the finest examples of relief and painting known from ancient Egypt. However, the countless scenes, which illustrate tombs and temples, as well as statues of humans, kings, and gods, also possess a hieroglyphic aspect, enabling an observer to read the figures in scenes themselves. The posture and gestures exhibited by human figures almost invariably mimic the forms of hieroglyphs; thus, a man shown addressing a god may stand in the posture of the sign meaning “to call, address,”  while representations of the dead praising the sun in the underworld adopt the form of the hieroglyph meaning “to praise, adore,”  etc. In addition to the figures’ posture, the emblems held in their hands, as well as clothing, crowns, and other objects in a given scene virtually all possess hieroglyphic counterparts, lending additional depth of meaning to the tableau. In fact, the Egyptians, who possessed no known word for “art” in the modern sense of the term, appear to have understood text and image as complementary aspects of the same phenomenon. Art and writing were essentially tools for the expression of concepts and ideas in a manner that would endure longer than the spoken word, thereby creating a *menew*, or “monument” (literally “enduring thing”), to be read by future generations.

—Joshua Roberson

favor of its phonetic value, which was generally derived by means of the rebus principle (e.g., the consonant “r” was written with a mouth, which derived from the Egyptian word for “mouth,” *ro*). In addition to signs conveying a single consonant, Egyptian also possessed a number of biliteral and trilateral signs representing groups of

two or three consonants, respectively (hieroglyphic Egyptian did not typically use vowels). The various so-called alphabetic signs could then be strung together to spell out the sounds of any given word. With the exception of cryptographic texts, most phonograms in classical Egyptian possessed only one primary, consonantal value as opposed to languages such as Sumerian and Akkadian, which could assign many different sounds to a single sign.

Ideograms, unlike phonograms, derive their meaning from the object or creature represented by the sign in question. Signs used in this way can represent actual words, as in the use of a disc to write the word *ra* (sun). However, since a single glyph could have multiple ideographic readings, these types of signs were very often accompanied by less ambiguous phonetic complements, which helped to clarify the reading of the main sign. Thus, the disc used to write *ra* could also be used as an ideogram for *heru* (day). The inclusion of phonetic complements eliminated the potential for ambiguity between the two words. In addition to ideograms, which carried information about the actual sound of a word, other signs functioned as so-called determinatives, which were placed after a word to clarify its meaning but carried no phonetic value of their own. Because Egyptian did not typically use vowels, the use of determinatives became especially important when two different words shared the same group of consonants. For example, the word *mes*, meaning “child,” was spelled identically to another word *mes*, meaning “calf,” and yet another, meaning “bouquet of flowers.” By placing a picture of a seated child, a calf, or a bundle of plants after the word, these various meanings could be easily distinguished. The majority of Egyptian words were, in fact, written in this way as a combination of phonograms, ideograms, and determinatives. However, it is also important to note that the hieroglyphic system was extremely flexible with the ways in which these signs were chosen, and very few words possessed anything resembling a fixed orthography. This is particularly true with regard to the inclusion or omission of determinatives and phonetic complements.

As a direct result of the built-in flexibility of the hieroglyphic script, the Egyptians also devel-

oped an alternate system of phonetic and ideographic sign values, which have been described as cryptographic or enigmatic by modern scholars. The use of enigmatic writing in Egypt may be observed in virtually all periods, from the Old Kingdom through Greco-Roman times. These alternate sign values began to be standardized in the New Kingdom, although the Egyptians themselves never appear to have coined a term to differentiate cryptography from more standard hieroglyphic inscriptions. Cryptographic sign values were derived in a number of ways that have the potential to seriously tax the ingenuity of would-be decipherers. Signs could be drawn from unusual angles or replaced with variant forms; phonetic similarity of consonants (e.g., “d” for “t,” “b” for “p,” etc.) could be exploited; many signs could acquire abnormal phonetic values, especially through the reduction of weak or omissible elements (the so-called consonantal principle); the usual order of signs could be switched; and signs could be altered for thematic, mythological, or purely aesthetic reasons. Fortunately, a large number of cryptographic texts were accompanied by transcriptions into regular hieroglyphic Egyptian, which has enabled scholars to proceed on surer footing with other texts that lack such convenient cribs, to borrow a term from modern cryptanalysis. In any event, the most recent research suggests that most cryptography was probably not intended to hide a text’s message from the uninitiated. On the contrary, cryptography appears to have been meant to entice the reader to speculate on the nature and content of the obscure spellings and may even have served as a sort of signpost pointing to the occurrence of certain philosophically challenging portions of a longer narrative, which would eventually yield up their secrets to the persistent reader.

—Joshua Roberson

Bibliography

- Allen, James P. *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*. Cambridge: University of Cambridge Press, 2000.
- Darnell, John C. *The Enigmatic Netherworld Books of the Solar-Osirian Unity: Cryptographic Compositions in the Tombs of Tutankhamun, Ramesses VI and Ramesses IX*. Orbis Biblicus et Orientalis, No. 198. Fribourg: Academic Press, 2004.
- Goldwasser, Orly. *From Icon to Metaphor: Studies in the Semiotics of the Hieroglyphs*. Orbis Biblicus et Orientalis, No. 142. Fribourg: Academic Press, 1995.
- Hoch, James. *Middle Egyptian Grammar*. Mississauga, Ontario: Benben, 1997.
- Hornung, Erik. *Idea into Image*. Translated by Elizabeth Bredek. New York: Timken, 1992.
- Quirke, Stephen, and Werner Forman. *Hieroglyphs and the Afterlife in Ancient Egypt*. Norman: University of Oklahoma Press, 1996.
- Wilkinson, Richard. *Reading Egyptian Art: A Hieroglyphic Guide to Ancient Egyptian Painting and Sculpture*. London: Thames and Hudson, 1992.

Linear A and B and Earlier Aegean Scripts

Bronze Age Aegean society is often described as prehistoric, that is, without written sources. This is not entirely true. Two different writing systems, called Linear A and Linear B, were in use. Linear A belongs to the palace society on the island of Crete and the cultural realm of the Minoans. Linear B is a similar script, but it was the method of writing for Mycenaean society on the Greek mainland.

In approximately 1900 BCE a palatial society arose on Crete with several large palaces at various sites, the largest at the city of Knossos (present-day Heraklion). It was here at Knossos that the Minoans developed a written script to help them deal with the increasing bureaucracy of the palace economy. The archaeologist Arthur Evans, who excavated Knossos, called the script Linear A because the signs were made up of different combinations of lines. Linear A became the standard system of writing on Crete in the Bronze Age, but it has not yet been deciphered. Since its discovery more than 100 years ago, various scholars have claimed that they have indeed deciphered Linear A. One of the better-known theories was proposed by Cyrus Gordon, who claimed that Linear A is actually a Semitic language related to Canaanite. His conclusions have not met widespread support, and as of yet there is no accepted decipherment.

Linear B uses the same signs as Linear A but represents an altogether different language. This

➤ PHAISTOS DISC

The Phaistos Disc is one of the most enigmatic artifacts to emerge from Minoan archaeology. It was discovered at the Palace of Phaistos and can be dated by its archaeological context to circa 1700 BCE. The artifact is a flat clay circular disc covered on both sides with pictographic signs arranged in a spiral. The signs were impressed on the clay using stamps or punches, just like a printed document. Vertical lines separated groups of signs and must have served as word dividers. It is not clear where to begin reading the document or in which direction. Although it is sometimes assumed that this document is a foreign object, for nothing else like it has ever been found, a few of the signs do in fact have parallels with hieroglyphic signs inscribed on an object found at the Arkalochori cave on Crete, and many resemble Linear A and B signs.

Over the years there have been many interpretations and translations of the disc. These range from some outlandish suggestions printed on the Internet to interpretations of the disc as a cultic calendar, board game, or mathematical treatise. The languages that the Phaistos Disc are said to represent also range from Slavonic to Greek and Canaanite. The most recent attempts focus on an Indo-European language called Luwian of southern Anatolia and related to Hittite or some other early Indo-European language. As with Linear A, there is no consensus on any of these interpretations or translations. Because the Phaistos Disc is a one of a kind document, there is virtually no way to check



Dating from about 1700 BCE, the Phaistos disc, an artifact found on Crete, contains an undeciphered pictographic script. (Gianni Dagli Orti/Corbis)

a decipherment through a comparison with another document. Until parallels are discovered by archaeologists, the Phaistos Disc will continue to baffle us.

—Susan Helft

is not unlike the modern world in which the Latin alphabet is used to represent languages as different as Turkish, Russian, and English. Unlike Linear A, Linear B was deciphered in 1953 and conclusively shown to represent an early form of Greek. Linear B thus proved once and for all that the Mycenaeans were indeed the progenitors of the later Greeks.

Linear A is older than Linear B, which adopted Linear A's signs, but even Linear A was not the oldest script used in the Aegean region. Even before 1900 BCE, scattered groups of pictorial signs such as hieroglyphs were used on small

objects on Crete. Although these inscriptions, like Linear A, cannot be deciphered, some of the hieroglyphic signs show a picture of some commodity, such as a sheep, and a number next to it. Like the Linear B archive, these too were economic texts.

The most famous example of a hieroglyphic inscription on Crete is an enigmatic clay disc-shaped object covered in hieroglyphic pictographs. This was found at the palace at Phaistos and is called the Phaistos Disc. The relationship between the hieroglyphic script, the script on the Phaistos Disc, and Linear A, all of which

share several signs, is not entirely clear. It used to be assumed that Linear A was a development of the earlier hieroglyphic script. Instead, they may represent different regional dialects or even different languages in use by the Minoans.

Both writing systems, Linear A and B, are syllabaries. In an alphabet each letter represents one consonant or one sound. Before the alphabet was invented, however, scripts used one sign to represent one syllable, such as *ka* or *ki*. Signs in Linear A and B represented either a single syllable or sometimes an entire word. There were also separate signs to represent numbers and fractions.

Inscriptions in Linear A and B are generally short transaction records or inventory lists. The primary purpose of the script was for economic records in the palaces. A few inscriptions are short dedications to gods, and there are also short inscriptions on sealstones or individual signs used to mark pottery or building stones. As in Mesopotamia, both the Minoans and Mycenaeans used wood or reed styli to impress their signs into small clay tablets. These tablets were not intentionally baked in order to give them permanence. Unfortunately for us, unlike the Mesopotamians neither the Minoans nor the Mycenaeans ever produced a body of literature such as mythologies, royal inscriptions, or historical works. Therefore, the corpus of Linear B texts is of limited use to the historian. What the texts do show is that Aegean society, like most ancient societies, was nearly illiterate except for the scribes. In addition, writing was closely tied to the palaces, where almost all texts are found. When the Aegean palaces were destroyed around 1200 BCE, so were the traditions of writing in the Aegean until a new tradition, the Phoenician alphabet, was introduced to Greece in the eighth century BCE.

—Susan Helft

Bibliography

- Dickinson, O. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 2001.
- German, Senta Cosima. *Performance, Power and the Art of the Aegean Bronze Age*. Bar International Series. Oxford: Archaeopress, 2005.
- Shelmerdine, Cynthia W. *The Cambridge Companion to the Aegean Bronze Age*. New York: Cambridge University Press, 2008.

The Alphabet

The words in this sentence are written using a technology that emerged almost 4,000 years ago in the eastern Mediterranean: the alphabet. Although a number of societies have developed writing systems, the alphabet appears to have been a unique invention that diffused from the Near East to Africa, Europe, East Asia, and the Americas in the subsequent millennia. Any writing system can be used to approximate any human language, but the first alphabet appears to have been developed around 2000–1750 BCE in the southern Levant or Egypt to write an ancient Semitic language, Proto-Canaanite, also called Proto-Sinaitic. A common ancestor to the later Hebrew and Arabic scripts, the earliest alphabet consisted of consonants only.

An alphabet is a writing system in which there is a discrete correspondence between one sound (called a phoneme) and one symbol (called a grapheme). The word “alphabet” derives from the classical Greek term for the first two letters of their alphabet, *alpha* and *beta*, much in the way the alphabet is called the ABCs in the English-speaking world today. In fact, abecedaries are texts that simply record the order of the alphabet. As in present-day schools, one basic way to learn an ancient alphabet was to practice writing it out. This repetition led to the standardization of the order of the alphabet in the latter half of the second millennium BCE, and aspects of that order have been preserved down to the present.

The earliest documented writing emerged in the ancient Near East near the end of the fourth millennium BCE. Cuneiform and hieroglyphs from Mesopotamia and Egypt were the earliest writing systems, and both dominated the written records of the region for millennia. Against this background, the first alphabet was a latecomer on the scene and was at first not very significant. Even though the early alphabet was comparatively easy to learn, literacy rates probably remained rather low.

The very first alphabetic inscriptions are still not completely understood. The Proto-Canaanite alphabet contained fewer than 30 distinct characters. It was used to write a few personal names and titles as well as some longer dedicatory

inscriptions. This earliest script is also sometimes called Proto-Sinaitic because the majority of the inscriptions were found in the Sinai Peninsula. However, this designation is probably too specific, since similar alphabetic inscriptions were recently discovered at Wadi el-Hol in Upper Egypt not far from Luxor. These earliest alphabetic inscriptions date broadly to about 2000–1750 BCE.

The first alphabet was essentially pictographic, meaning that the symbols represented real objects in the world. The current theory is that some peoples from the Levant devised these pictograms in either Egypt or the Levant. One likely source of inspiration came from the visually evocative hieroglyphs used to write Egyptian, but there is no direct link between hieroglyphic Egyptian and the first alphabet. Like the Egyptian symbol for “house,” the earliest pictographic form of the letter “B” looks like the top plan of a simple building. This pictograph is appropriate for writing “B” because the early Semitic word for “house” started with the “b” sound, *baytu*. The pictograph for “house” could thus be used to represent the “b” sound in any word. A contemporary analogy would be to draw a balloon to express the “b” sound. This principle is what modern scholars call the acrophonic principle.

After the basic shapes of the letters were established by the acrophonic principle, the forms of the letters became more linear and abstract in the latter half of the second millennium BCE. The alphabetic inscriptions from the southern Levant in this period are called linear Canaanite. Like the Proto-Canaanite inscriptions, these are mostly personal names and votive inscriptions on objects. A parallel alphabet is attested on clay tablets from the coastal city of Ugarit, Syria, in the fourteenth to thirteenth centuries BCE. The alphabet used in these texts is remarkable because it consisted of cuneiform (wedge-shaped) symbols. The inspiration for these characters was the syllabic cuneiform writing system from Mesopotamia, which was also used at Ugarit in the same period.

In most alphabetic inscriptions from the second millennium BCE there is no punctuation, no divisions or spaces between words or phrases,

and no distinction between upper and lower case. The direction of writing was fluid. By the end of the second millennium BCE, word dividers were used sporadically, and the direction of alphabetic writing (left to right at Ugarit; right to left in the southern Levant) became more or less standardized on the local level.

The Greek alphabet resulted from a dynamic cultural interaction between seafaring Phoenicians and the Greek world around 1000 BCE. Speakers of early Greek did not recognize some of the consonantal sounds present in the Phoenicians’ Semitic language. These linear Phoenician letters were thus adapted in the Greek world for approximating the vocalic quality of the Semitic consonants. The early speakers of Greek came to use these signs to write vowels.

A number of publications have photographs and drawings of early alphabetic inscriptions. The West Semitic Research Project (University of Southern California), <http://www.usc.edu/dept/LAS/wrsp/>, maintains a useful digital archive called InscriptiFact, <http://www.inscriptifact.com/>.

—Matthew T. Rutz

Bibliography

- Darnell, John Coleman, et al. “Part II: Two Early Alphabetic Inscriptions from the Wadi el-Hol.” *Annual of the American Schools of Oriental Research* 59(2)(2005).
- Naveh, Joseph. *Early History of the Alphabet: An Introduction to West Semitic Epigraphy and Palaeography*. Jerusalem: Magnes Press, Hebrew University; Leiden: Brill, 1982.
- O’Connor, Michael. “Epigraphic Semitic Scripts.” In *The World’s Writing Systems*, edited by Peter T. Daniels and William Bright. Oxford: Oxford University Press, 1996.
- Pardee, Dennis. “Alphabet.” In *Oxford Encyclopedia of Archaeology in the Near East*, vol. 1, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Sass, Benjamin. *The Genesis of the Alphabet and Its Development in the Second Millennium B.C.* Ägypten und Altes Testament 13. Wiesbaden: Otto Harrassowitz, 1988.
- Sass, Benjamin. *Studia alphabetica: On the Origin and Early History of the Northwest Semitic, South Semitic and Greek Alphabets*. Orbis Biblicus et Orientalis 102. Freiburg, Switzerland:

Universitätsverlag; Göttingen: Vandenhoeck and Ruprecht, 1991.

Whitt, William. "The Story of the Semitic Alphabet." In *Civilizations of the Ancient Near East*, Vol. 4, edited by Jack M. Sasson. 1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.

Harappan Writing

During the late fourth millennium graffiti on pottery at Harappa began to include some distinctive signs that in the following Early Harappan period were sometimes used in sequences of two or three signs. These were arranged in the sign order subsequently adopted in the fully fledged Harappan (Indus) script, which emerged during the Transition period (2600–2500 BCE). This was used by the Indus civilization on seals and other objects and served many purposes. However, when urban life declined in the early second millennium BCE, the script went out of use. Some of its signs appeared occasionally in later contexts, not as script but probably as auspicious religious or political symbols. Nothing links the Harappan script with the Brahmi script that appeared more than 1,000 years later.

Of the surviving objects bearing Harappan writing, the most common are the square stamp seals. Only a few sealings made using such seals are known. Small engraved copper tablets, inscribed on one face and bearing a design on the other, were found at Mohenjo-daro. These may have been amulets, as may the many miniature tablets of steatite, faience, and terra-cotta found in the upper levels at Harappa, which bear a short inscription on one face, sometimes with a design, and often a number on the other.

Small inscribed objects included bronze axes and chisels, gold jewelry, bone hairpins, ivory and bone rods, and painted terra-cotta bangles. The inscriptions may be the owner's name or a charm to ensure the object's safe use or to protect the owner. Some may record a votive offering. Inscriptions were impressed on many pots before firing, perhaps giving information on the designated contents or capacity of the vessel. Small, very fine stoneware bangles bearing a short inscription, manufactured at Mohenjo-daro

➤ ZEBU BULL—HARAPPAN SEALS



Zebu Bull seal from the city of Mohenjo-daro.
(Harappa Archaeological Research Project, Department of Archaeology and Museums, Government of Pakistan)

The Zebu bull is an exclusive motif found on the large Harappan seals excavated from big cities of the Indus Valley civilization. The bull has broad curved horns and heavy dewlap with long hair on its neck. Seals having Zebu bulls on them usually have very short inscriptions due to its well-defined form. The Zebu bull was not worshiped as a god but instead was most likely a sacrificial animal. It was the symbol of power and strength as the leader of the herd. On stone seals the bull symbolizes the most dominant clan or powerful leader.

—Muhammad Aurang Zeb Mughal

and probably Harappa under carefully regulated conditions, may have been badges of office.

A unique inscription was found at Dholavira: a line of nine huge signs made of a white crystal-line material. These had probably originally been set on a wooden board over the North Gateway to the citadel. The text probably had some religious significance, perhaps purifying or blessing those who passed under it.

The surviving inscribed objects served only some of the functions to which writing can be put, probably including marking ownership (artifacts), personal or official identification (seals), preventing tampering, managing distribution (seals and sealings), and dedications, spells, prayers, or benedictions (miniature tablets, copper tablets, inscribed artifacts). Most literate societies also used their writing to keep economic records, and it seems unlikely that the Harappans were the exception, so they probably also used other writing media that has now vanished. In more recent times many perishable media have been extensively used in the subcontinent for writing: wood, cotton cloth, bark, palm leaves, and parchment, all of which, if used by the Harappans, would long since have decayed away. Several clues suggest that the Harappans used objects similar to the wooden writing boards used by modern South Asian schoolchildren.

The script for Harappan writing is undeciphered, but detailed studies have revealed much about its nature. It uses a large number of signs. Some are unambiguously pictorial, such as the (headless) stick man; many seem abstract; and many others seem pictorial, but it is not clear what they show (e.g., a sign that resembles a jar with handles might alternatively represent a cow's head). A few signs appear very frequently, with the most common 20 signs accounting for around half the content of the inscriptions over the whole corpus. Some are known from a single example, and many others occur only a few times.

Identifying the corpus of different signs should provide important information, but this is far from straightforward. Many signs look similar to each other. Some are probably allographs (different accepted ways of writing the same sign). Others, however, must be different signs with different semantic or phonetic values. The problem is distinguishing between these possibilities. A similar problem is posed by ligatures. These are two to six signs combined in various ways: by joining them with a line, by writing one inside another or one above another, or by superimposing parts of one sign upon another. They may be a space-saving device, allowing a complete word or phrase to be written as one; alternatively, the ligatured sign may express a meaning obliquely related to the sum of its parts

or differing entirely from all of them, so it is difficult to determine whether each ligature should be considered as a separate sign. While there is no agreement on an exact figure, the number of Harappan signs lies somewhere in the range 350–700. This matches the number of signs in a logosyllabic script, generally 400–700 signs; alphabetic and syllabic scripts use far fewer signs (20–35 and 100–150, respectively).

Words are typically 1 to 3 signs long in logographic scripts. The majority of Harappan texts are very short, around 1 to 8 signs; the longest continuous text is 17 signs, few have 10 or more, and quite a few have only 1. This is partly because most texts needed to convey very little information, such as a name or dedication.

A few other features of the script have been worked out. Various pieces of evidence (such as which end of the line a space or sign crowding occurs) have satisfactorily demonstrated that the Indus script was written from right to left in rows from the top downward. Numbers in scripts can often be identified using clues from their form and behavior. Obvious candidates for the numbers in the Harappan script are sets of short and long parallel strokes, some arranged in several rows.

The complex task of deciphering a script involves identifying both the language in which it was written and the meaning or sound represented by each sign. The pictorial meaning of a few Harappan signs seems clear, and sometimes Harappan art confirms this. For example, the suggested fish sign is identical to a fish shown in a crocodile's jaws. But for many other signs it is hard or even impossible to identify their pictorial meaning. For example, a vertical stroke with horizontal lines might be a comb, a harrow, a tree, or none of these. Many scholars have taken the pictorial signs as a starting point in their attempts at decipherment. Ideally, if the underlying language were known, these could yield words clustered around their pictorial meaning and one or several homonyms.

The language of the script is, however, still unknown. It cannot have been Indo-Aryan, as linguistic evidence shows that this language entered the greater Indus region later and was influenced by the languages already spoken there. These probably included Para-Munda (a recently

identified Austro-Asiatic language), possibly Meluhhan (perhaps related to Para-Munda), and probably Proto-Dravidian (an ancestral Dravidian language). The hopes of many scholars are focused on the latter. A number of persuasive Dravidian-based sign readings seem to give consistent results, but they are too few to offer proof. A major drawback is that apart from Proto-Dravidian, very little is known of the plausible candidate languages.

Many factors hamper the decipherment of the Harappan script: the absence of bilingual inscriptions to provide a starting point, the stylized form of most signs, the very limited length and nature of the texts, ignorance of the underlying language, the failure of the script to evolve into later scripts, and the complexity of logosyllabic scripts. It is therefore likely that the Harappan script will continue to defy attempts at decipherment for the foreseeable future.

—Jane R. McIntosh

Bibliography

- Konishi, Masatoshi A. "Writing Materials during the Harappan Period." In *Archaeology and History: Essays in Memory of A. Ghosh*, Vol. 1, edited by B. M. Pande and B. D. Chattopadhyaya. New Delhi: Agam Kala, 1987.
- McIntosh, Jane R. *Ancient Indus Valley: New Perspectives*. Santa Barbara: ABC-CLIO, 2007.
- Parpola, Asko. *Deciphering the Indus Script*. Cambridge: Cambridge University Press, 1994.
- Possehl, Gregory L. *Indus Age: The Writing System*. Delhi: Oxford University Press, 1996.
- Witzel, Michael. "Substrate Languages in Old Indo-Aryan (R̥gvedic, Middle and Late Vedic)." *Electronic Journal of Vedic Sanskrit* 5(1) (1999): 1–67.

Chinese Writing

To those who do not know Chinese, the appearance of the Chinese language is altogether novel: instead of neat rows of alphabetic letters, there are thousands of unique characters, many of which seem incredibly intricate. The diversity of these characters is also fascinating, both visually and aurally. For example, the word "China" requires two characters, and there are two accepted variations. (As the illustration indicates, the second version substitutes the simplified character designated here as "d." for "b.") Can-



The word China, two variations. (LaFleur, Robert Andre. *China: A Global Studies Handbook*, 2003)

tonese Chinese pronounce this word *junggok*; people from Shanghai pronounce it *zonggoh*; and Mandarin speakers say *zhōngguó* or *chūngkuó*. Can any of these be isolated as the correct form and pronunciation for the word "China"?

In fact, no, as all of them are right. Chinese is not as "simple" as English, which has only one five-letter word representing the name of the largest country in Asia. Variety is what the Chinese language is about, and all aspects of this variety have evolved through China's long history. The respective pronunciations for the word China—*junggok* in Cantonese, *zonggoh* in Shanghaiese, and *zhōngguó* in Mandarin—represent three of the eight major dialects of China.

The legendary Cang Jie (c. 2500 BCE), the official historian of the Yellow Emperor, is often credited with the invention of the earliest Chinese characters. According to folklore, Cang Jie had an extra pair of eyes that brought him extraordinary discernment. Inspired by the natural objects around him, particularly by the footprints of birds and animals, he ostensibly created the pictographic symbols that marked the beginning of the Chinese written language.

The actual origin of such a sophisticated writing system is, of course, less simple. The early pictographs were reflections of daily life, and they developed gradually from various sources. Thus Cang Jie can be considered the collector and organizer of existing signs and symbols, rather than the genius who successfully and single-handedly created an intricate communication method. Still, the legend surrounding his contribution remains—the first computer program for building characters that were not yet in the vocabulary pool, developed in the 1980s, was named after Cang Jie.

The oldest form of the Chinese written language can be found in the oracle bone inscriptions called *jiǎgǔwén*. Carved on tortoise shells

	oracle bone inscription	bronze inscription	Small Seal script	Clerical script	Regular script
	甲骨文	金文	篆文	隶书	楷书
moon	𠄎	𠄎	月	月	月
people	𠤎	𠤎	人	人	人
eye	目	目	目	目	目
mountain	山	山	山	山	山

Evolution of written Chinese. (LaFleur, Robert Andre.
China: A Global Studies Handbook, 2003)

and mammal bones during the Shang dynasty (c. 1600–1100 BCE), these inscriptions recorded royal events and documented divinations. Each symbol represented a concrete image: a number, an animal, a tree, a mountain, the sunrise, and so forth. These early inscriptions demonstrate the inconsistencies found in primitive writing: an idea can be carved with many strokes or with just a few. Likewise, character size varies, and character positioning can be upright, sideways, or reversed. The strokes of these symbols mainly take the form of straight lines with sharp ends made with forceful carving knives.

During the late Shang dynasty and throughout the Zhou dynasty (c. 1100–256 BCE), bronze inscription, *zhōngdīngwén*, prevailed. This form of inscription refined oracle bone inscription. Although its earliest characters resembled the oracle bone inscriptions, curved lines are common in bronze inscriptions. Characters in this form were more regular in size and mainly upright. The number of characters was also greater: the large text inscribed on a single piece of bronze in the Zhou dynasty could contain as many as 500 characters.

The standardization of Chinese characters began under the first emperor of the Qin dynasty (221–206 BCE), who founded the first unified Chinese empire and ordered the unification of the written language. This standardized writing, called the Small Seal script (*xiǎozhuàn*), was the official national script designed by the court of the Qin. The characters in the Small Seal script are highly stylized, with each confined

to a vertically oblong shape. The lines are even, thin, and wiry; the space is carefully regulated, and the pictorial elements of earlier writing forms are not apparent. Although the Small Seal script was crisply distinctive, its composition required patience and skill, so it was inconvenient for daily use.

The Clerical script (*lìshū*) began to appear at the end of the Qin dynasty and was adapted as the formal writing form during the Han dynasty (206 BCE–220 CE). As its name suggests, the Clerical script was initially used by clerks for the daily documentation of government records in the early Han. Reaching the height of its popularity in the Later Han period (CE 25–220), it simplified the complicated curves of the Small Seal style and replaced them with straightened lines and angles for clarity in reading and ease of writing. The Clerical script marked an important change in Chinese writing, for, hereafter, Chinese characters progressed from ancient symbols to their modern form.

Following the Clerical script was the Regular styled script (*kǎishū*), which came into use at the end of the Han dynasty (CE 220). It is an austere script that eventually replaced the Clerical for daily official functions. The Regular has been the formal script and remains the standard printing type in China today. Its major features are clarity and legibility—every character has a definite form and a square shape, and only minor variations are allowed. Each character in the Regular script clearly displays the basic strokes of Chinese writing that Chinese school children learn and practice.

—Shin Yong Robson

Bibliography

- Chang, Raymond, and Margaret Scrogin Chang. *Speaking of Chinese*. New York: W. W. Norton, 2001.
- DeFrancis, John. *The Chinese Language: Fact and Fantasy*. Honolulu: University of Hawaii Press, 1986.
- Li, Leyi. *Tracing the Roots of Chinese Characters: 500 Cases*. Beijing: Language and Culture University Press, 1993.
- Moore, Oliver. *Chinese*. Berkeley: University of California Press, 2000.
- Robson, Shin Yong. "Chinese Language." In *China*, edited by Robert André LaFleur. Santa Barbara, CA: ABC-CLIO, 2009.

■ Introduction: Cuneiform Scripts

Mesopotamian cuneiform was probably the world's first writing system, but it is essential to understand that cuneiform itself was not a language. The term "cuneiform," meaning "wedge-shaped," was first used by Europeans in the early nineteenth century CE to describe the basic character of this indigenous Mesopotamian script, which, aside from its very earliest form, consisted of various combinations of wedges. Cuneiform was written primarily by using a reed stylus to impress characters onto clay, one of the few abundant natural resources in ancient Mesopotamia. However, cuneiform signs have also been found inscribed on stone, metal, and other media. The cuneiform script is attested in use for well over three millennia, from approximately 3200 BCE to 100 CE. In that time cuneiform was adapted to render a wide variety of different languages from many of western Asia's language families. Some of the most prominent languages written in cuneiform were Semitic (related to later Hebrew and Arabic) and Indo-European (related to later Sanskrit, Spanish, and English). However, the first language written with cuneiform was Sumerian, a language isolate (meaning that it is not related to any other known languages), and it was later adapted to write Semitic Akkadian, with its northern Assyrian and southern Babylonian dialects. Semitic Eblaite and Ugaritic as well as the unrelated Hurrian language appear in northern Syrian cuneiform documents. Indo-European Hittite and the unrelated Anatolian languages Luwian, Palaic, and Hattic are found in Asia Minor. Elamite and Old Persian are native to Iran, and Canaanite dialects are found in the southern Levant. Urartian appeared later on in Armenia. Individual words in Amorite, Kassite, and Egyptian are attested, as are personal names, place names, and divine names from the region's numerous other ethnolinguistic groups, very few of which survived in writing at all. Only some of the languages spoken in the ancient Near East can be confidently identified. Although the vast majority of cuneiform documents have been found in what is today Iraq, cuneiform inscriptions are also known from present-day Syria, Turkey, Iran,

Egypt, Israel, Lebanon, Jordan, Armenia, and Saudi Arabia.

—Matthew T. Rutz

Bibliography

- Black, J. A., et al. *The Electronic Text Corpus of Sumerian Literature*, <http://etcsl.orinst.ox.ac.uk/>, Oxford 1998.
- Dassow, Eva von. "Canaanite in Cuneiform." *Journal of the American Oriental Society* 124 (2004): 641–674.
- Edzard, Dietz O. "Cuneiform." In *The Oxford Encyclopedia of Archaeology in the Near East*, Vol. 2, edited by Eric M. Meyers. 5 vols. New York: Oxford University Press, 1997.
- Sanders, Seth, ed. *Margins of Writing, Origins of Cultures*. Oriental Institute Seminars 2. Chicago: Oriental Institute of the University of Chicago, 2006. <http://oi.uchicago.edu/OI/DEPT/PUB/SRC/OIS/2/OIS2.html>.
- Walker, Christopher B. F. *Cuneiform: Reading the Past*, Vol. 3. Berkeley: University of California Press, 1987.

The Origins of Cuneiform

In its earliest stages the cuneiform script appears to have been almost entirely logographic, which means that individual characters expressed complete words, both concrete ("sheep," "bread," "city") and more abstract ideas (numbers). Over time, cuneiform was also adapted to express syllables that were various combinations of consonants and vowels. On the whole, this writing system stands in sharp contrast with the alphabetic systems that developed well over a millennium later. From the earliest periods until the end of the third millennium about 700–800 cuneiform signs were in use, and additional signs were used to represent numbers. In the first quarter of the second millennium, the minimum inventory of characters necessary for functional literacy was reduced to only about 70–80 signs.

The remarkably persistent use of cuneiform throughout much of the ancient world represents a paradoxical blend of tradition and innovation. In this respect, the diffusion and influence

► ENMERKAR AND THE ORIGINS OF WRITING

A number of literary narratives from the Old Babylonian period (ca. 1750 BCE) recount the deeds of legendary kings of the southern Mesopotamian city of Uruk. Among these kings are Gilgamesh, Lugalbanda, and Enmerkar, who are said to have embarked on distant campaigns and engaged in diplomatic exploits. One of these texts is a Sumerian legend referred to by modern scholars as “Enmerkar and the Lord of Aratta,” but in ancient Babylonia it was called “City, Awesome Bull,” referring to the city of Uruk itself. A passage from this tale sheds light on some ancient Mesopotamian beliefs about the invention of writing. Here, writing emerges as a practical tool to preserve a long and complicated message from King Enmerkar, referred to by the title “Lord of Kulaba,” to his rival the Lord of Aratta, an unnamed leader of a mythic far-off land outside of Mesopotamia. The message is too difficult for the messenger to memorize, so Enmerkar takes some clay in his hand and writes the first cuneiform tablet:

“His (Enmerkar’s) speech was substantial, and its contents extensive.
The messenger, whose mouth was heavy, was not able to repeat it.
Because the messenger, whose mouth was heavy, was not able to repeat it,
The Lord of Kulaba patted some clay and wrote the message as a tablet.
Formerly, the writing of words on clay was not established.
Now, under the sun and on that day, it was indeed so!
The Lord of Kulaba set the words as on a tablet, it was indeed so!

The messenger then travels to the land of Aratta, delivers the message, and instructs the Lord of Aratta to read it and give his reply in the contest:

‘Enmerkar, the son of (the sun-god) Utu, has given me clay.
O Lord of Aratta! After you have looked at the clay, after you have learned the content of the message, say whatever you will say to me,
...
I shall announce that message in the shrine Eana (temple in Uruk) as glad tidings
...
to Enmerkar, the son of Utu.’

...

After he (the messenger) had spoken thus to him (the Lord of Aratta),
the Lord of Aratta received from the messenger his kiln-fired clay.
The Lord of Aratta looked at the clay.
The words just spoken was mere nails, and his brow furrowed.”

The Lord of Aratta’s brush with the frustration of illiteracy is then interrupted by the storm-god thundering in the sky. But how could Enmerkar expect the Lord of Aratta to understand the written message since Enmerkar had himself just invented writing? The invention of writing occurs here in the context of a series of contests between the rulers of Uruk and Aratta for the rightful patronage of Inana, the Sumerian goddess of sex and war. Enmerkar’s invention of writing to attain victory in this contest represents the Mesopotamian belief in the superiority of Mesopotamia’s urban literate civilization. Nevertheless, the larger narrative also illustrates the awareness that Mesopotamia was heavily dependent on trade with the surrounding regions and cultures.

It is telling that both ancient Mesopotamian scribes and modern scholars locate the invention of writing in the southern Mesopotamian city of Uruk, biblical Uruk. Both ancient and modern observers also relate the creation of the cuneiform writing system to the administrative need to preserve large amounts of information over space and time. In Old Babylonian schools “Enmerkar and the Lord of Aratta” was probably memorized and then copied out from memory by advanced students. This adds a layer of humor to the messenger’s inability to remember Enmerkar’s message and the Lord of Aratta’s frustration and inability to read the written message.

—Matthew T. Rutz

Sources

J. A. Black, et al. *The Electronic Text Corpus of Sumerian Literature* (<http://etcsl.orinst.ox.ac.uk/>).

Herman L. J. Vanstiphout, “Epics of Sumerian Kings: The Matter of Aratta,” ed. Jerrold S. Cooper. *Writings from the Ancient World 20* (Atlanta: Society of Biblical Literature, 2003).

of the cuneiform script is somewhat akin to that of the Chinese script and, for example, its later adaptation to write Japanese. Just as Old Japanese texts (ca. 700–800 CE) are written using only Chinese characters and can thus be understood in either language, there are cuneiform tablets that appear to be written in Sumerian but can also be read in Akkadian.

The textual corpus of cuneiform tablets is in general very large, although some periods and genres are much better attested than others. This is largely a by-product of chance preservation and archaeological excavation. Only a fraction of the cuneiform tablets that have been excavated have been thoroughly studied by modern scholars, and untold numbers of tablets remain unexcavated. The looting of archaeological sites for cuneiform tablets remains a serious problem in the present-day Middle East.

The first major attestation of cuneiform texts coincides with the invention of writing itself. Although the archaeological sequence in Mesopotamia goes back much further, it is only with the advent of writing that it becomes possible to put together historical and ethnolinguistic aspects of Mesopotamian society with the vast material culture from the region. Both ancient Mesopotamian literary tradition and modern archaeology place the invention of writing at the major southern Mesopotamian site of Uruk in the so-called Archaic period or Uruk period, about 3200 BCE, although modern scholars continue to argue about the precise date. The language of these earliest texts is not certain, but it was probably Sumerian, the name ascribed to it by the later inhabitants of Mesopotamia, who called the most southern region Sumer.

At this earliest phase the cuneiform script was pictographic, which means that the characters generally looked like the objects they represented, but often even the earliest signs bore no obvious resemblance to objects in the world. In later phases of cuneiform these signs are stylized to such an extent that they are no longer truly pictographic in nature. Although cuneiform signs changed significantly over time and space, this evolution typically happened at a slow rate, so it is possible to put the different forms of the same sign in a chronological and geographic sequence.



Trade dictionary containing the cuneiform script in different languages for widely used merchandise, for metals, textiles, clothes, oil, and cereals, third–second millennium BCE, Susa. (Erich Lessing/Art Resource, NY)

A very early group of cuneiform texts has also been found in Elam in southwestern Iran. These sources have yet to be fully deciphered, and our current knowledge of Proto-Elamite is therefore very poor.

The partially pictographic nature of the early cuneiform script, which is more linear and abstract in later periods, is to be contrasted, for example, with the hieroglyphic Egyptian monumental script whose use began in the south of Egypt at the same approximate time or, more likely, slightly later. In stark contrast with cuneiform, hieroglyphic Egyptian never lost its pictographic nature, although other less discernibly pictographic Egyptian scripts (hieratic and demotic) emerged alongside it in the history of ancient Egyptian.

It is very difficult to read archaic cuneiform texts, but they appear to represent a sophisticated tradition of bookkeeping. This administrative use of cuneiform writing is by far the most

common in almost every phase of its use. The Archaic period also contains a large number of examples of the lists that modern scholars call lexical lists. Lexical lists were standardized compilations of signs, words, or phrases, for example, lists of different types of plants, human occupations, cities, tools and metals, and animals. Lexical lists appear to have served a fundamental role in scribal education in every phase of cuneiform regardless of the major language(s) that were currently rendered in the script. Some of these lists were preserved by ancient scholars for more than a millennium, offering strong evidence of the highly conservative nature of some critical aspects of the cuneiform writing tradition. There is no known example of an Archaic period text with complete sentences or a connecting narrative, so there is no real grammar or narrative in this period and no literature that we can recognize as such.

Bibliography

- Englund, Robert K. "Review of J.-J. Glassner, *The Invention of Cuneiform*." *Journal of the American Oriental Society* 125(1) (2005): 113–116.
- Englund, Robert K. "Texts from the Late Uruk Period." In *Mesopotamien*, edited by Josef Bauer, Robert K. Englund and Manfred Krebernik, Späturuk-Zeit und Frühdynastische Zeit. Anährungen 1, Orbis Biblicus et Orientalis 160/1, Freiburg, Switzerland and Göttingen: Universitätsverlag and Vandenhoeck und Ruprecht, 1998.
- Glassner, Jean-Jacques. *The Invention of Cuneiform: Writing in Sumer*. Edited and translated by Zainab Bahrani and Marc Van de Mieroop. Baltimore: Johns Hopkins University Press, 2003.
- Michalowski, Piotr. "Cuneiform: Origins." In *The World's Writing Systems*, edited by Peter T. Daniels and William Bright. Oxford: Oxford University Press, 1996.
- Nissen, Hans J., Peter Damerow, and Robert K. Englund. *Archaic Bookkeeping: Early Writing and Techniques of the Economic Administration in the Ancient Near East*. Translated by Paul Larsen. Chicago: University of Chicago Press, 1993.
- Rubio, Gonzalo. "On the Alleged 'Pre-Sumerian Substratum'." *Journal of Cuneiform Studies* 51 (1999): 1–16.
- Schmandt-Besserat, Denise. *When Writing Met Art: From Symbol to Story*. Austin: University of Texas Press, 2007.

The Birth of Royal Inscriptions and Sumerian Literature

Significant developments in cuneiform occurred during the so-called Early Dynastic period (2900 BCE to 2370 BCE). Early Dynastic cuneiform texts are found in a greater geographic distribution than in the previous Uruk period. Significant finds of cuneiform tablets from this period come from several major southern Mesopotamian cities, such as Ur. It is in the Early Dynastic period that the first appearance of Sumerian as a written language can be proven. In addition, in what is now Syria, cuneiform tablets from Ebla preserve the first major occurrence of written bilingualism in cuneiform. In some lexical tablets the royal scribes of Ebla translated Sumerian terms into their native Eblaite, a Semitic language closely related to early Akkadian. Numerous administrative documents from Ebla are written in Eblaite, providing insight into the regional economy of the day.

This period also marks the emergence of a major genre of Mesopotamian literary activity, the royal inscription, that occurs in some form down to the end of the cuneiform tradition. Many Early Dynastic monumental or dedicatory inscriptions are preserved, typically carved on some medium other than clay such as a stone vessel or mace head. In some instances, royal inscriptions contain a narrative of important royal deeds, for example, waging of war or undertaking major architectural projects such as the building of temples. Scholars gain the first significant textual evidence of Mesopotamian political history in this period. A series of royal inscriptions describe a long-standing border conflict between the major southern Mesopotamian city states of Umma and Lagash. The most celebrated of these inscriptions is the Stele of the Vultures commissioned by Eanatum, the ruler of the Babylonian city-state Lagash (ca. 2460–2400 BCE).

The Early Dynastic period also offers the first evidence of Sumerian literature. Within Mesopotamia proper, texts of this kind are found almost exclusively at the sites of Shuruppak and Tell Abu-Salabikh, where scribes wrote down collections of Sumerian proverbs and hymns. It is in this period that the legendary Gilgamesh of

Uruk was first mentioned in religious texts. The Early Dynastic period also marks the first use of magical incantations in Mesopotamian medicine against such dangers as unspecified illness, snake bites, scorpion attacks, and the perils of childbirth.

In the Old Akkadian period (ca. 2334–2154 BCE), much of southern Mesopotamia was consolidated under the reign of Sargon of Akkad in what is arguably the world's first attested empire. The most significant advancement in the cuneiform script in this period is its use in rendering Semitic Akkadian, which functioned as the administrative language of Sargon's empire. Although Akkadian personal names are attested in texts prior to this period, the Old Akkadian texts give the first examples of cuneiform tablets written solely in Akkadian. In subsequent periods, a rich and varied Akkadian-language textual tradition evolved in Mesopotamia, complementing the earlier Sumerian textual tradition.

In the ensuing Ur III period (2112–2004 BCE), another major empire emerged based in the southern city of Ur. From a textual standpoint, this period is best known for the survival of myriad economic tablets from the major centers of the empire. The kings of the Third Dynasty of Ur reintroduced Sumerian as the major language of the bureaucracy (an example of this is the large number of texts, all written in Sumerian, recovered from a site near Nippur known as Puzrish-Dagan, where shipments of various animals were collected as tribute to the king). The earliest known version of the famous Sumerian King List dates to the Ur III period. The Sumerian King List details a sequence of legendary and actual kings in Mesopotamia from primeval times, interrupted by a disastrous mythological flood that closely resembles biblical traditions of the flood in later literary tradition. The text then goes on to link the legendary past with a list of verifiable historical monarchs. This composition is one of the first texts that permits major insight into the ways that the peoples of ancient Mesopotamia composed their own histories. The Ur III period also marks the first instance of a royal law collection in Sumerian, authored in the time of either King Ur-Namma or his son Shulgi. This law collection antedates the famous Code of Hammurabi by a few centuries. The Ur III period

➤ ELECTRONIC RESOURCES ON CUNEIFORM

There are many good resources on cuneiform writing available on the Internet. These sites preserve photographs and drawings of the inscriptions, transliterations of cuneiform into English characters, and translations, as well as provide search tools, dictionaries, and commentaries. Some of the best Web sites are listed below.

Cuneiform Digital Library Initiative, <http://cdli.ucla.edu/>.

The Cuneiform Digital Paleography Project, <http://www.cdp.bham.ac.uk/>.

The Digital Corpus of Cuneiform Lexical Texts, <http://cuneiform.ucla.edu/dcclt/>.

Pennsylvania Sumerian Dictionary, <http://enll.museum.upenn.edu/epsd/>.

—Matthew T. Rutz

probably marks the beginning of the end of Sumerian as a spoken language of everyday life in Mesopotamia, although Sumerian persisted as a legal, literary, and religious language for centuries, akin to the use of Latin in medieval and early modern Europe.

It is in the Isin-Larsa and Old Babylonian periods (ca. 2017–1595 BCE) that the most extensive collections of Sumerian literature and lexical texts are preserved. Many of the sources come from the remnants of Babylonian schools, known in Sumerian as the *edubba* (“tablet house”), in Nippur and Ur. In this period schooling occurred in a domestic setting.

The scribal curriculum in Old Babylonian Nippur has been reconstructed in considerable detail, revealing a carefully arranged general sequence of exercises designed to teach Sumerian sign values, vocabulary, and grammar. The most elementary school exercises betray elements of the most basic didactic methods.

Among the corpus of literary texts from this period are a diverse range of myths involving important Mesopotamian deities and the creation of the first human. There does not appear to have been one single, systematic, universally accepted creation myth in ancient Mesopotamia. A Sumerian version of the Mesopotamian flood story also dates to late in this period.

—Matthew T. Rutz

Bibliography

- Bottéro, Jean. *Mesopotamia: Writing, Reasoning, and the Gods*. Translated by Zainab Bahrani and Marc Van De Mieroop. Chicago: University of Chicago Press, 1992.
- Glassner, Jean-Jacques. *The Invention of Cuneiform: Writing in Sumer*. Edited and translated by Zainab Bahrani and Marc Van de Mieroop. Baltimore: Johns Hopkins University Press, 2003.
- Nissen, Hans J., Peter Damerow, and Robert K. Englund. *Archaic Bookkeeping: Early Writing and Techniques of the Economic Administration in the Ancient Near East*. Translated by Paul Larsen. Chicago: University of Chicago Press, 1993.
- Pearce, Laurie E. "The Scribes and Scholars of Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, vol. 4, edited by Jack M. Sasson et al. New York: Scribner, 1995.
- Quenet, Philippe. "The Diffusion of the Cuneiform Writing System in Northern Mesopotamia: The Earliest Archaeological Evidence." *Iraq* 67(2) (2005): 31–40.

Cuneiform in the Second Millennium

From the second millennium on, scribes continued to copy Sumerian texts for educational purposes. Akkadian was the spoken language of the Old Babylonian period, and the prevailing view is that Sumerian was no longer a spoken language at this time. The first significant group of literary compositions written in Akkadian is from the early second millennium. A large corpus of Old Babylonian letters written in Akkadian is particularly significant for the study of the political history of kings such as the famous Hammurabi of Babylon. An unanticipated cache of letters and other cuneiform documents was unearthed during excavations at the site of Mari near the modern Syria-Iraq border. These significant archives of royal and private correspondence illuminate the details of politics, economy, and society in this period. The thousands of private documents excavated from second-millennium family archives shed light on aspects of social history and everyday life that are only dimly known for earlier periods.

The early second millennium witnessed a number of other significant intellectual advances.

The very beginning of this era furthered the development of a standardized numerical scheme that was in use for the next two millennia of Mesopotamian history: the sexagesimal (base 60) number system, which is the origin of the modern system of counting hours, minutes, and seconds. In addition to lexical lists and literary compositions, Old Babylonian scribes also produced the earliest known textual record of pure mathematics. Other early scientific activities include advances in Mesopotamian medicine and the development of written Mesopotamian omen science.

The textual record from northern Mesopotamia is much less extensive in the early second millennium. The most important corpus from this period is from an Old Assyrian merchant colony, Kanish (modern Kültepe), in present-day Turkey. This collection of mostly letters and economic documents centered around the dynamic caravan activity that connected Assyria and Anatolia. It is in this period that scholars find the earliest evidence of relatively widespread literacy. The Old Assyrian cuneiform writing system was simplified to such an extent that it was possible for merchants to write their own tablets instead of having to hire a scribe to write letters and contracts for them.

The fall of the First Dynasty of Babylon ushers in a significant gap in the written sources, followed by the Middle Babylonian or Kassite period (ca. 1595–1155 BCE) of the cuneiform record in the south. Large corpora of cuneiform documents, including massive caches of administrative records, are known from both Assyria and Babylonia in the latter half of the second millennium, especially at the sites of Assur and Nippur. The Middle Assyrian library from Assur is an important repository of information about scribal traditions in northern Mesopotamia. The cities of Nippur and Babylon provide evidence for the uses of cuneiform in Kassite Babylonia. Outside of Mesopotamia, various cultures adapted cuneiform writing in innovative ways. The thousands of cuneiform tablets from the royal library in the Hittite capital of Hattusha furnish an example of the adaptation of cuneiform to meet local needs. International correspondence was carried out in Akkadian (and sometimes Hittite),

local documents were written in Hittite, and various literary and religious compositions (rituals, festivals, hymns, and prayers) were copied in a wide variety of Mesopotamian and Anatolian languages. The situation in Syria was similar in this period. For instance, the coastal port of Ugarit has yielded a wealth of cuneiform documents, many that were written using a new invention of the second millennium: the alphabet. This local alphabet was rendered in a new set of cuneiform characters that were derived from Mesopotamian cuneiform, but Babylonian continued to be used in other capacities at this cosmopolitan city of the Late Bronze Age. Farther inland in Syria, the site of Emar on the Euphrates attests to local use of Akkadian to draft personal documents, such as letters and contracts, but also a large collection of Mesopotamian scholarly lore and local religious festivals.

—Matthew T. Rutz

Bibliography

- Bottéro, Jean. *Mesopotamia: Writing, Reasoning, and the Gods*. Translated by Zainab Bahrani and Marc Van De Mieroop. Chicago: University of Chicago Press, 1992.
- Edzard, Dietz O. "Cuneiform." *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 2, edited by Eric M. Meyers. New York: Oxford University Press, 1997.
- Frame, Grant, and A. R. George. "The Royal Libraries of Nineveh: New Evidence for King Ashurbanipal's Tablet Collecting." *Iraq* 67(1) (2005): 265–284.
- Geller, Markham J. "The Last Wedge." *Zeitschrift für Assyriologie* 87 (1997): 43–95.
- Kuklick, Bruce. *Puritans in Babylon: The Ancient Near East and American Intellectual Life, 1880–1930*. Princeton, NJ: Princeton University Press, 1996.
- Larsen, Mogens Trolle. *The Conquest of Assyria: Excavations in an Antique Land, 1840–1860*. New York: Routledge, 1996.
- Pearce, Laurie E. "The Scribes and Scholars of Ancient Mesopotamia." *Civilizations of the Ancient Near East*, vol. 4, edited by Jack M. Sasson et al. New York: Scribner, 1995.

THE ZENITH AND NADIR OF CUNEIFORM

The advent of the Neo-Assyrian empire (1180 BCE) necessitated huge royal archives of administrative, legal, and literary cuneiform tablets as well as a large body of monumental historical annals. The last king of the Neo-Assyrian empire, Ashurbanipal (668 BCE), assembled an extensive library in his South-West Palace in Nineveh. This library included selections from Mesopotamian literature written throughout Assyria and, most significantly, Babylonia, and Ashurbanipal himself boasted of being able to read the most difficult of cuneiform inscriptions. After the fall of Nineveh, the subsequent Neo-Babylonian (625–539 BCE) and Persian (538–331 BCE) periods witnessed the continued use of cuneiform for a variety of royal and private documents. The multilingual Behistun rock relief inscription of the Persian king Darius the Great (549–486 BCE) provided one of the essential keys for the decipherment of the cuneiform script in the nineteenth century CE.

Historical chronicles in Babylonian cuneiform continued to be composed in the time of Alexander the Great and in the subsequent Seleucid and Arsacid periods. One striking peculiarity of this late period is the corpus of Graeco-Babyloniaca. These clay tablets are inscribed on one side with a cuneiform Sumerian-Akkadian lexical list, hymn, or incantation and on the other with a transliteration of the same text using the alphabetic Greek script in use at that time.

Paradoxically, the zenith of cuneiform learning, the Neo-Assyrian library of Ashurbanipal in Nineveh, also showed the first hints of the long decline of cuneiform into obsolescence. In addition to evidence from cuneiform documents, images from Assyrian art suggest that the Crown simultaneously employed scribes to write cuneiform on clay tablets or wax-covered writing boards as well as scribes to write alphabetic Aramaic on parchment. Over the course of the first millennium, alphabetic Aramaic slowly replaced cuneiform Akkadian as the preferred international language of the region before it too was finally unseated by Arabic.

—Matthew T. Rutz

■ Introduction: Leisure

The role of physical activities in ancient cultures provides some insight into the lack of a distinct division between play and the work necessary for daily survival. Physical culture served a variety of social, political, religious, and military purposes in ancient civilizations such as those that existed in China, Egypt, Mesopotamia, Mesoamerica, Minoan, and Mycenae. In our attempts to understand and appraise the role that physical recreation plays in our own society, it can be instructive to examine the place of physical activities in past civilizations. Through an examination of play elements in ancient societies it becomes clear that these activities were employed for critical ends. They defined relations between people and mediated interactions, especially regarding conflict.

Physical activities that can be broadly defined as sports represent universal human experiences and are found in every culture. Defining cultural practices that are inclusive of sport may be as simple as focusing on play activities, that is, those practices that are not necessarily work and are participated in for reasons other than survival. Yet there are numerous examples of sports, games, and contests that harbor greater cultural meaning and relevance than to be defined simply as play in a pejorative sense.

Johan Huizinga defines play as activities that are free and out of the ordinary. He does not suggest that play is unimportant but argues that it is necessary or even essential to any culture. These often sacred activities serve to promote and reinforce the formation of social groups. Play, whether it is done for fun or other more practical purposes, serves society in ways that ordinary or everyday activities do not. Clearly, work activities have generally received the most attention by those who have studied past civilizations. However, it is necessary to delve into the complexities of activities outside the ordinary to recognize the important religious and cultural functions that occurred during times of rest, celebration, or religious worship.

Play, particularly in its physical forms, represented a complex activity that held an important place in all ancient civilizations. Whether the

goal was to train warriors in the martial arts, solidify the privileged position of a ruler or members of the ruling class, or provide a means to try to influence supernatural forces, play and games served vitally important functions in the ancient world. Did men and women who lived in the world's earliest civilizations recognize these activities as being less important than other aspects of their lives? It is doubtful that this would have been the case. Yet today our understanding of play, games, and sports as secondary concerns continues to impact the manner in which these activities as they existed in the past are considered.

—Robert Kossuth

Bibliography

- Guttmann, Allen. *Sports: The First Five Millennia*. Boston: University of Massachusetts Press, 2004.
- Huizinga, Johann. *Homo Ludens: A Study of the Play Element in Culture*. Boston: Beacon Press, 1955.
- Morse, Mike. "Sport as a Model for Cultural Interaction: The Classic Maya Ball Game." *Journal of Sport and Social Issues* 16(1) (1992): 34–48.

Figurines

Figurines—sculpted artifacts depicting human beings or animals—have been produced over the past 30,000 years of human cultural history.

Throughout the ages, figurines have been crafted out of diverse materials such as mammoth ivory, bones, stone, baked clay, wood, leather, wool, cloth, straw, and other materials. As for the distribution of figurines depicting human beings in the cultures of the world, there are marked disproportions. Where both sexes are represented, the female figurines are more elaborate than the male ones (e.g., at Çatalhöyük in Anatolia). There are numerous cultures where an abundance of female figurines is common, including the Paleolithic in western Europe and in central Siberia, the Neolithic Era in the Near East, Anatolia and southeastern Europe, the Pre-Columbian cultures in Mesoamerica, and the traditional matrilineal societies in central Africa, among others.

➤ FIGURINES AS DOLLS

One of the popular interpretations of prehistoric figurines is their identification as dolls—that is, toys—for children. This idea is based primarily on the visual impression of certain types of figurines and on the association that these may evoke in the modern beholder's cultural memory. The general association with dolls is ambiguous, however, because it leaves space for various interpretations that for the most part are not related to the realm of children's toys.

In a typological-functional overview of dolls in the cultures of the world, only little variation can be observed for the category of dolls as playthings. Surprisingly, the greatest variety of doll types can be distinguished for the category of dolls not to play with. The first to study dolls as a serious scholarly subject was Max von Boehn. The dolls that are not meant for playing with are imbued with a symbolic meaning induced by cultural tradition. This is true, for instance, for the Japanese imperial dolls that feature members of the royal family. Such dolls, which are usually kept in small show-cases and placed in prominent spaces in Japanese people's homes, are objects of respect, a crystallizing element of Japanese identity.

Dolls that carry a spiritual meaning, such as the Kachina dolls among the Hopi Indians in New Mexico, play a similar role. These dolls are given to children not to play with but as instructive pieces for young people to learn about the spirit world, about different categories of spirits and divinities, and about their functional ranges. Among the traditional Kachina, there is one type with which an infant may play, although this function is not primary. The cradle doll, called Hahayiwuuti (Happy Mother), is believed to bless the child with attributes of good motherhood, making it a happy human being.

In certain cultures, doll-like figurines play a role as healing devices, as in the tradition of the worry dolls among the Maya in Central America. The worry dolls have remained in use up to the pres-

ent. According to Mayan beliefs, these dolls made of soft material attract pains and worries and relieve those who keep them under their pillow overnight.

There are also doll-like figurines that are as much imbued with cultural as spiritual meaning. This is the case with the Matrioshka dolls, which are assembled as a set of dolls within dolls. The popularity of these dolls is so widespread that they may be considered the most typical symbol of Russianness. The Matrioshka dolls are a metaphor and visualize the idea of Mother Russia, of the female guardian who protects Russian territory and those who inhabit it. The Matrioshka dolls were created by the Russian artist Sergei Maliutin toward the end of the nineteenth century and have enjoyed popularity ever since. There is an even deeper historical background to the idea of the protective mother figure that finds its origin in the cult of the pre-Christian goddess Mokosh among the eastern Slavs. Mokosh personified the Earth Goddess, and her attributes of motherhood later merged with the figure of the Virgin Mary.

—Harald Haarmann and Joan Marler

Bibliography

- Boehn, Max von. *Dolls and Puppets*. Translated by Josephine Nicoll. Newton Centre, MA: Charles T. Branford, 1956.
- Hellberg-Hirn, Elena. *Soil and Soul: The Symbolic World of Russianness*. Aldershot, UK: Ashgate, 1998.
- Lenz, Mary Jane. *Small Spirits: Native American Dolls from the National Museum of the American Indian*. Washington, DC, and New York: Smithsonian National Museum of the American Indian, 2004.
- Pearlstone, Zena. *Katsina: Commodified and Appropriated Images of Hopi Supernaturals*. Los Angeles: UCLA Fowler Museum of Cultural History, 2001.

The absence of written sources for prehistoric periods has spurred scholarly imagination about the possible function of figurines in the communities of hunter-gatherers and of early agrarians. Interpretations have focused on the role of female figurines in communal life in par-

ticular. These interpretations range between two extremes, one being strictly profane and the other focusing on the sacred.

In the history of the study of figurines, a strictly profane use of figurines has been emphasized by some investigators who identify them



Ceramic figurine from Ashdod (named “Ashdoda” by the excavators), twelfth century BCE. (Zev Radovan, *Land of the Bible* Picture Archive)

as children’s toys. Some scholars see the educational function of toys as one that teaches children about power relations in society. In such approaches, the projection of concepts of power relations in modern society onto the conditions of social organization of community life in prehistory seem to prevail over a genuine assessment of the symbiotic relationship between the visible (artifacts) and the invisible (symbolic meanings)—the fabric of any culture—in a prehistoric context.

Symbolic and metaphorical meanings are highlighted by others who provide insights about spiritual associations. In many cases, the context in which the figurines appear indicates a symbolic meaning of these artifacts. Often, they are associated with sacred spaces such as

shrines, ceremonial platforms, or altars. Circumstantial evidence favors the assumption of a metaphorical function of female figurines, which would fall in line with the insight that the world of prehistoric people was spirited.

Thus, a female figurine—assumed to be infused with spiritual power—shifts its identity from being a sculpture to becoming the embodiment of a divine female spirit or of a venerated ancestor. According to the mind-set of members in a community for whom a parallel world—the spirit world—exists apart from the real world, the figurine does not only depict a female human being, it *is* the venerated ancestor or a female deity.

Assumptions about metaphorical identifications of figurines are supported by certain categories of artifacts such as receptacles or vessels with anthropomorphic features. In the archaeological record of the Neolithic in Southeastern Europe, for instance, there are cult vessels for offering with the shape of a female body or with breasts and arms of a woman or clay models of shrines with a woman’s head on top. One also finds hybrid figurines with both anthropomorphic and zoomorphic features (e.g., a female figurine with a bird’s head and arms like a bird’s wings).

Valuable insights supporting a spiritual interpretation of the role of female figurines in prehistoric societies come from anthropological and ethnographic comparisons with living traditional cultures. A well-studied domain of spiritually oriented imagery is concerned with the figurines produced and venerated in the Luba community, a people living in the southeastern part of the Democratic Republic of Congo (former Zaire). The Lubas believe that the female body has a special capacity to attract spiritual energies and that protective spirits reside between a woman’s breasts. The same properties are attributed to figurines made of wood or ivory. Some figurines are worn as pendants, and they embody the spirits of revered ancestors.

—Harald Haarmann and Joan Marler

Bibliography

Bailey, Douglass W. *Prehistoric Figurines: Representation and Corporeality in the Neolithic*. London and New York: Routledge, 2005.

- Haarmann, Harald. *Interacting with Figurines—Seven Dimensions in the Study of Imagery*. West Hartford, VT: Full Circle Press, 2009.
- Haarmann, Harald and Joan Marler. *Introducing the Mythological Crescent: Ancient Beliefs and Imagery Connecting Eurasia with Anatolia*. Wiesbaden: Harrassowitz, 2008.
- Lesure, Richard G. "The Goddess Diffracted: Thinking about the Figurines of Early Villages." *Current Anthropology* 43 (2002): 587–601.
- Nooter Roberts, Mary, and Allen F. Roberts, eds. *Memory: Luba Art and the Making of History*. New York: Museum for African Art; Munich: Prestel, 1996.

Egyptian Games

Play was certainly important to the ancient Egyptians. It is a frequent motif in Egyptian tomb art. Since the Egyptians believed that the depictions on tomb walls would become reality in the tomb owner's afterlife, pleasurable activities such as play were common subjects. The games of children are especially well attested and include acrobatics and wrestling, make-believe games, and chasing games. Games with toys (such as balls or board games) were also fun for the Egyptians. Athletic games in Egypt were tied to conceptions of male masculinity and included activities such as hunting and fighting, while other games were demonstrations of rank and status within Egyptian society.

Games of physical exercise were popular both as participatory activities and as spectacles. Numerous tomb scenes depict acrobatic contortions by individuals and with groups, creating demonstrations that at a surface level appear much like those of modern cheerleaders. Similarly, climbing scenes are often associated with the cult of the god Min, and climbing seems to have been a public demonstration sport. Children also seemed to have amused themselves with less formal variations on these, creating obstacles for each other to leap over or balance upon. Dancing was very popular as an entertainment; professional dancing girls and women performed at feasts and religious occasions.

Numerous sports demonstrated the masculinity and the virility of the player. Hunting (for sport as opposed to for food) tested the skills and status of the male hunter. Big-game hunting

➤ SENET

The game Senet, whose name means "to pass" or "to go by," was popular throughout Egyptian history. The game was played on a rectangular board divided into 30 squares (3 by 10). The winner of the two-person game was the player who managed to remove all of his or her seven pieces from the board first. The movements were determined based on throwing flat two-sided sticks that performed essentially the same role as modern dice. A player could block the other player's pieces from moving or could leap over the other player's pieces. Beyond this, the specific rules of the game are a mystery to modern scholars. Senet was associated with Egyptian conceptions of the afterlife and was often included in Egyptian tombs along with other funerary equipment. The removal of the player's pieces from the boards symbolized the resurrection of the player after death. The game is featured in some copies of the Egyptian Book of the Dead, in which the relationship between this game and funerary culture is made most apparent.

—Kevin M. McGeough

and marsh hunting were the most common types. In the New Kingdom, the pharaoh was frequently depicted as a hunter, a depiction that communicated messages about his strength as well as the fertility he brought to the land through his divine presence.

Other types of games involved contests of sorts. Perhaps the best attested in Egypt is wrestling, which is depicted in tomb art and in statuary. Other games similar to tag, tug-of-war, and arm-wrestling were also played by the Egyptians. Stick fighting was a type of mock battle engaged in by Egyptian males of all ages. This leisure activity is still played by Egyptian men today. Played in the evenings, it is now more like an improvisational dance than a physical battle. Target archery and chariot demonstrations were likewise games that originated as enactments of and practice for combat.

The Egyptians also played games with toys. Balls have been recovered archaeologically, and it is doubtless that there were many variations

of games played with these balls. Those that we know of include juggling and throwing according to complex rhythms or while seated on a crawling individual. One particular game is depicted on the walls of the Temple at Luxor. There, the pharaoh is shown hitting a ball with a stick toward priests who try to catch the batted ball.

Board games were popular past-times for adults. Of most interest is Senet, the equipment for which has been found at Egyptian sites. Other board games include: *men* (endurance), a game where players race tokens along a board; *mehen* (serpent), a game that was played on a board, shaped like a coiled-snake, with numerous accessory pieces; and Twenty Squares, which some have suggested is the earliest form of the game Parcheesi, well known from India and still played in the United States today.

—Kevin M. McGeough

Bibliography

- Decker, Wolfgang. *Sports and Games of Ancient Egypt*. Translated by Alan Gutman. New Haven, CT: Yale University Press, 1987.
- El Habashi, Zaki. *Tutankhamun and the Sporting Traditions*. New York: Peter Lang, 1992.
- Janssen, Rosalind, and Jac Janssen. *Growing Up in Ancient Egypt*. London: Rubicon, 1990.
- Kendall, Timothy. "Games." In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.

The Sporting Life in Mesopotamia

Beginning in the middle of the fourth millennium BCE, successive empires ruled the Mesopotamian region. Societies within these cultures were engaged in almost continuous war, which in part explains their high regard for physical strength. This strength arose not only from the body but also from the variety of weapons and tools that could improve physical power. There is some difficulty in locating reliable information about the physical culture of these early Near Eastern civilizations. Evidence from sites in ancient Mesopotamia is scattered and often difficult to interpret. This problem is evident in Sumerian seals that depict wrestlers. It is not known whether these were athletic contests or

actual mortal combat. Despite this concern over interpreting evidence, displays of physical ability represented important cultural practices.

Myths and epic narrations that celebrated heroic deeds such as those of Gilgamesh, the king of Uruk, suggest that extraordinary strength and physical prowess were required of a hero or warrior king. For the warrior, the most important weapons were the bow and arrow, the dagger, and the sword. In addition, the ancient war wagon, which allowed warriors to move quickly, was first used in ancient Mesopotamia at the end of the fourth millennium BCE. The mastery of weapons while driving a war wagon required special training that was limited to aristocratic and royal youths. Often these military skills were honed during the hunt.

A ruler's feats of hunting wild and dangerous animals such as lions, wolves, boars, and panthers represented both the social function of protecting their subjects and a means to demonstrate their physical abilities. The close connection between hunting and war is evident in the god Ninurta, who represented both of these activities. Stele pictures of lion hunting date to the earliest Sumerian period, and artwork depicting rulers hunting is evident throughout the successive Ancient Mesopotamian empires. A carved stone monument referred to as the Lion Hunt Stele from the late Uruk period (3100 BCE) depicts a man in a net skirt hunting lions. Hunting dangerous animals such as lions represents a common signifier of high political office or royalty in ancient Mesopotamia. During the period of Assyrian dominance, the hunt became a spectacle whereby animals were enclosed and controlled for the ruler to demonstrate his prowess before his assembled subjects.

Demonstrations of physical ability also played a role in determining some legal proceedings. Cuneiform archives from the town of Mari provide accounts of river ordeals in letters sent to the king of the Mari, Zimri-Lim (1775–1760 BCE). River ordeals took place in the town of Hit on the banks of the Euphrates, where custom suggests that people traveled to the site to seek divine justice. The ritual ordeal began with a statement of the details related to the cause of the dispute. The test involved the performance

of a physical feat in the river and ultimately emerging alive. An individual or team would be required to swim a specified distance into the river and return. Normally the swimmer would carry a heavy object while completing the test. Although it might be difficult to suggest that this ordeal was sport rather than a legal remedy, it is clear that the physical abilities of the participants were being tested during this ritual.

Festivals, which were part of the cycle of renewal, included merry-making, pleasure and leisure pursuits such as music, dancing, drinking, and sex. As part of the festivities there were reenactments of myths such as the fight between Gilgamesh and Enkidu along with animal fights and martial contests between men. Scenes depicted on limestone panels and cylinder seals from the late fourth and early third millennia depict men fighting. A document of Hittite origin from 1200 BCE describes sporting events associated with festivals that included staged fights between groups of men and a running race for the right to hold the reins of the king's chariot. It is not clear, however, whether these activities were actual contests or mythical demonstrations.

In ancient Mesopotamia the body was not viewed as an object of great interest and was not depicted in art or viewed as an artistic entity. This can be explained in part by the lack of interest in individual attainment in deference to the interests of royalty and the gods. As such, sporting events were never seen as very important in and of themselves, but they did exist in the culture of these ancient civilizations as a means to reinforce the power and privilege of the kings and gods.

—Robert Kossuth

Bibliography

- Bottéro, Jean. "The Epic of Gilgamesh." In *Everyday Life in Ancient Mesopotamia*, edited by Jean Bottéro and translated by Antonia Nevill. Baltimore: Johns Hopkins University Press, 2001.
- Guttmann, Allen. *Sports: The First Five Millennia*. Boston: University of Massachusetts Press, 2004.
- Lafont, Bertrand. "The Ordeal." In *Everyday Life in Ancient Mesopotamia*, edited by Jean Bottéro and translated by Antonia Nevill. Baltimore: Johns Hopkins University Press, 2001.

➤ GILGAMESH AND THE HEROIC TRADITION

The *Epic of Gilgamesh* is an example of an ancient masterpiece in which the ordeals and feats of the warrior king are detailed to examine the frailty of existence and mortality that is the human condition. Although the author of this story is unknown, it is clear that the setting of Uruk and the person of Gilgamesh were real. Reliable sources document that Gilgamesh was the sovereign of the city of Uruk in 2600 BCE who was lauded for constructing great defensive walls around the city. Sometime after his death, Gilgamesh was elevated to a divine legend. Stories related to the feats of Gilgamesh included his defeat of Huwawa, the protector of the Pine Forest, along with his compatriot Enkidu; the slaying of the Celestial Bull by the two heroes; and finally Gilgamesh's descent into the underworld to retrieve precious talismans. Several versions of the epic are found in the archaeological record, but the most complete was found in the ruins of the library at Nineveh. The Akkadian story focuses on Gilgamesh's broad and powerful physique and emphasizes that the most-favored man is the most worthy to achieve immortality but is doomed to fail to reach such a lofty goal.

—Robert Kossuth

- McCuaghrean, Gerladine. *Gilgamesh: The Oldest Story Ever Told*. Oxford: Oxford University Press, 2002.
- Olivová, Věra. "Games and Sports Elements in Ancient Mesopotamia." In *History of Physical Education and Sport*, vol. 2. Tokyo: Kodansha, 1974.
- Pollock, Susan. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press, 1999.
- Postgate, J. N. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.

Greek Sport—Minoa and Mycenae

Two ancient civilizations that preceded the ancient Greek culture of the first millennium BCE were the Minoans based on the island of Crete and the Mycenaeans who populated the southern

➤ HOMERIC GAMES

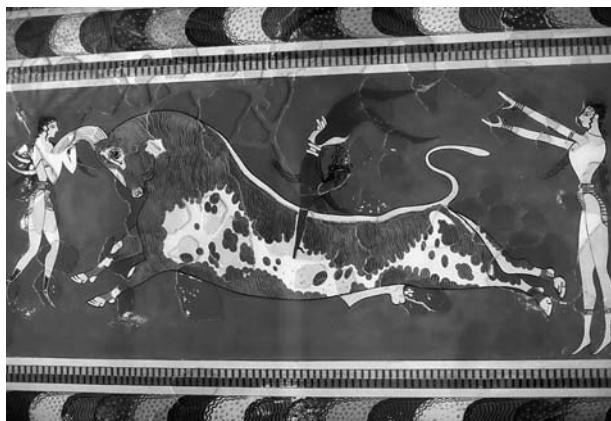
The earliest written account of sport and athletic activities in the western world can be found in the *Iliad* and the *Odyssey*. These epic poems are generally attributed to the Greek poet Homer from about the eighth century BCE. The events described are supposed to be based on the earlier Mycenaean civilization circa 1200 BCE. These stories describe a violent age of a male-dominated and class-structured society where religion centered on the gods of mythology including Zeus, Apollo, Hera, Poseidon, and Aphrodite, all of whom existed in human likeness and influenced mortals' lives while ruling the world from Mount Olympus.

According to several passages from these accounts, competitive physical activity existed for one main purpose: to train upper-class men to become worthy warriors. Yet within this training the Greeks were also competitive, and the participants sought victory to honor the gods and demonstrate their prowess as warriors. This is particularly evident in Book 23 of the *Iliad*, which provides a detailed description of the funeral games held in honor of Patroclus, a friend and comrade in arms of Achilles, at the time of the Mycenaean siege of Troy. A variety of contests took place during this ceremony, including a chariot race, boxing match, wrestling match, foot race, and javelin throw, for which the winners received prizes ranging from jars of olive oil to horses and slaves. This story exhibited both the importance of athletic ability to the worth of ancient Greeks and how physical contests, like life, were fraught with danger and depended heavily on luck and the favor of the gods.

—Robert Kossuth

regions of Greece in the latter centuries of the second millennium BCE. Both of these cultures seem to have had some influence on later ancient Greek civilization, although both disappeared well before 1000 BCE. Archaeological evidence suggests that the Minoans and the Mycenaeans participated in ritual-based physical activities, although little is known about the social meanings of these practices.

The discoveries made at the Tomb of Agamemnon and the Palace of Minos at Knossos on



Taureodor (bull leaping) fresco from the Minoan palace of Knossos, about 1500 BCE. (Wolfgang Kaehler/Corbis)

Crete provide evidence about the life and the physical activities of these ancient Greek civilizations. Yet much less is known about their nature and cultural significance. The bull-leaping fresco at the palace at Knossos dates from about 1500 BCE and depicts the acrobatics of two white female figures and a red male figure. The first female is shown grappling the bull's horns in preparation to perform a front somersault onto the animal's back, while the second female stands at the rear of the animal in preparation to assist a male acrobat who is preparing to hand-spring off the bull's back. It is possible that these figures represent performers providing entertainment for the royal court. A further explanation is that the youths were engaged in a fertility ordeal or ritual. Ritual bull leaping was likely an activity that incorporated both physical contest and religious ceremony in a manner similar to later Greek athletic contests.

Reliefs found on the gold Vapheio Cup from Aghia Triada (Boxer Vase) depict boxers, wrestlers, and what seem to be Minoan hunters. As with the bull-leaping images, all that can be taken from these representations is that these activities took place in Minoan society. Thus, it is difficult to accurately argue the larger social meaning of these activities beyond the supposition that they were valued physical practices.

As limited as our understanding of the place of physical activity in Minoan society is, even less is understood about these practices in the lives of the Mycenaeans. What is known is derived from archaeological evidence, particularly

that associated with funeral rituals. A recently discovered coffin from Tanagra depicts bull leapers, sword fighters, and charioteers, all part of a procession of mourning. A second example of a funeral ritual is found on the larnax from tomb 22, where some bull games are depicted. Three men are shown jumping on bulls and clinging to the horns. On the other side of the sarcophagus, two fighting men are depicted. It is not known whether the game and the fight are part of the funeral ritual in honor of the deceased or whether the depictions memorialized the achievements of the deceased. One theory is that these were rites of passage where the progression from childhood to adolescence was marked by a test: the youth probably had to pass a physical test, such as hunting or bull games. Finally, the container depicts horse-drawn chariots being used in a funeral procession. It is suggested that these images represent either Mycenaean funeral rites or a mythical/legendary event, or both. It is also suggested that fighting contests held at funerals for deceased leaders may have been used to select a new leader.

The Minoan and Mycenaean civilizations demonstrate a fragile link to the later ancient Greek athletic practices. Although their forms of physical culture were similar, the sacred importance for each seems to have differed; whereas the Minoans celebrated the emergence of life and fertility, the Mycenaeans employed physical contests as part of the ceremonies associated with death.

—Robert Kossuth

Bibliography

- Baker, William J. *Sports in the Western World*. Rev. ed. Chicago: University of Illinois Press, 1988.
- Guttmann, Allen. *Sports: The First Five Millennia*. Boston: University of Massachusetts Press, 2004.
- Howell, Maxwell L. "Archaeological Evidence of Sports and Games in Ancient Civilization, Part II." *Canadian Journal of History of Sport and Physical Education* 2(2) (1971): 5–29.

Music and Dancing in Ancient Egypt

The importance of music and dancing in ancient Egyptian culture is evident from the numerous depictions of dancers and musicians in ancient

Egyptian art as well as the large number of musical instruments scattered in museums around the world. Music and dancing served both secular as well as ritual functions in ancient Egypt. Banquet scenes are commonly represented on the walls of ancient Egyptian tombs, especially those dating to the New Kingdom (1550–1069 BCE). Scenes of dancers frequently show them accompanied by people clapping their hands, using clappers, or playing drums, sistra, tambourines, *menat*-necklaces (an emblem of the goddess Hathor, patroness of music, song, and dancing, that consisted of a beaded necklace with a counterpoise that produced a rattling sound when shaken), or any other type of percussion instrument that would keep rhythm. Examples of scenes showing dancers accompanied by flutists do exist. It is, however, unclear whether dancers were also accompanied by a whole orchestra, since representations of dancers and musicians are usually shown on the same wall, but on different registers, and even when represented on the same register, they were clearly separated.

Music and dancing played an important role from the earliest times in ancient Egyptian history. Even in the Predynastic period (5500–3100 BCE), pottery vessels showed representations of female figures that appear to be dancing with their arms raised above their heads, and musicians were represented on Predynastic artifacts such as stone vessels and ceremonial palettes.

Dancing

It is important to point out that there was no ancient Egyptian word for "dance" that covered all aspects of the concept but rather more precise words referring to specific types of dance or movement. Dances were usually, but not always, performed by women, most often by very young girls. Some dances, however, were performed by men. Group dances were segregated, for there are no scenes showing men and women dancing in the same group. Some of the movements represented on tomb walls are closer to acrobatics, including such movements as cartwheels and backbends. Religious dance in ancient Egypt falls into the following categories: (a) dances of the gods, for instance, the son of Hathor, Ihy, is

known as the divine dancer; (b) cult dances in honor of the gods, usually performed in temples; (c) dances performed during festivals; and (d) dances accompanying funerary rites. The final group comprises the oldest dances known from ancient Egypt, the most famous of which were performed by what are known as *muw*-dancers. These dancers are attested from the Old Kingdom (2686–2181 BCE) until about the end of the New Kingdom (1550–1069 BCE). They are identified by their headdresses, which were made of papyrus stalks. They were represented dancing at tomb entrances, and their role was to symbolically ferry the deceased to the netherworld.

Music

There were four main types of musical instruments in ancient Egypt: idiophones, membranophones, aerophones, and cordophones. The idiophones included such instruments as cymbals, bells, clappers, and sistra and were particularly popular during religious events. For instance, sistra were associated with the worship of the goddess Hathor, the patroness of dance, music, and song. The membranophones consisted of tambourines and drums. The former were often played by young girls at banquets, while the latter were played in religious processions and military events. Aerophones included flutes, what may be identified as double clarinets and double oboes, as well as trumpets. Finally, the chordophones included the indigenous harp as well as the Asiatic lute and lyre, which were all plucked rather than bowed. Instruments were often inscribed with the owner's name and decorated with images of the gods Hathor and Bes (a domestic deity and patron of childbirth, humor, drunkenness, song, and dance).

There seems to have been a hierarchy of musicians in ancient Egypt. Temple musicians occupied the highest level, followed by musicians of the royal household. Entertainers who played music at banquets occupied a lower position to those of the first two categories. Music was also practiced for pure pleasure, for there seems to be evidence that workmen kept themselves motivated and entertained while they worked by singing.

In short, the ancient Egyptians, very much like ourselves, used music and dance to add life to their celebrations, but for them these two activities carried much more meaning. They were sacred and played a very important role in their religious lives.

—Yasmin El Shazly

Bibliography

- Bleeker, C. J. *Hathor and Thoth: Two Key Figures of the Ancient Egyptian Religion*. Leiden: Brill, 1973.
- Engel, C. *The Music of the Most Ancient Nations: Particularly of the Assyrians, Egyptians, and Hebrews, with Special Reference to Recent Discoveries in Western Asia and in Egypt*. 1864, 1929; reprint, Whitefish, MT: Kessinger, 2007.
- Lexova, I. *Ancient Egyptian Dances*. Mineola, NY: Dover, 2000.
- Manniche, L. *Ancient Egyptian Musical Instruments*. Berlin: Deutscher Kunstverlag, 1975.
- Manniche, L. *Music and Musicians in Ancient Egypt*. London: British Museum Press, 1991.

Ancient Chinese Sport

Although there is little evidence to suggest that the ancient Chinese participated in sport and athletics as we understand them from a Western perspective, there are terms that point to the existence of a developed sphere of physical culture. These descriptors include words representing martial valor (*wuyong*), boxing valor (*quanyong*), games (*xi*), the art of attacking (*jiji*), and the art of keeping fit (*yangsheng*). Ancient Chinese physical culture included a variety of activities associated with military training, rituals, medical treatment, and art and was strongly influenced by economic, political, cultural, and philosophical ideas.

Since the Xia dynasty, which existed from approximately 2100 to 1600 BCE, China has been ruled by more than a dozen imperial dynasties. Evidence from the Zhou period (1122–256 BCE) suggests that soldiers engaged in running, jumping, throwing, wrestling, archery, sword fighting, chariot driving, and weight lifting as part of their military training. For example, *jiaoli* was originally a term for weight lifting in training for the military but later came to describe acrobatic

exercise and, more recently, wrestling. Ancient forms of wrestling were from the very earliest dynasties one of the most popular military training forms. Another example of training can be traced to the western Zhou dynasty, during which servants or soldiers would run in front of their lord, who was on horseback. Later, distance-running contests required soldiers to traverse distances as long as 93.2 miles (150 kilometers) or, when in full battle dress, 31 miles (50 kilometers) in half a day. The kicking game of *tsu-chu* is first mentioned authentically in the third century BCE, although it likely had an earlier origin. This ancient game appeared in a number of variations, one being the kicking of a ball over a net similar to volleyball. Others required the kicking of a ball into or through a hole. The origin of these games is found in military training; later they became recreational activities. During the Han dynasty the football game involved two teams, each of which guarded six goals.

Physical exercise used to promote health and longevity was commonly practiced in ancient China. For example, *qigong*, a system of breathing exercises, was practiced as early as the eighth century BCE. A second form of medical exercise from this same period was Daoying. This form of exercise developed from a variety of primitive dances and consisted of movements imitating a bear climbing a tree and a bird stretching its wings. These exercises are depicted in silk paintings found in a Han dynasty tomb. There were additional exercises that imitated other animals including tigers, deer, and apes.

Chinese aristocrats tended to avoid sports in favor of achieving spiritual harmony. For example, Confucians viewed playing ball games as a sign of weak character and a moral shortcoming. Archery, however, was seen as gentlemanly and was employed as a ceremonial activity to reinforce social status. Archery games were considered a harmonious activity. *Lishe*, the ceremonial shooting of arrows, originated in the western Zhou dynasty around 1000 BCE. An aristocratic pastime, *lishe* required the use of various types of bows, arrows, and targets along with the accompaniment of music and attendants. The etiquette surrounding the event was deemed more important than the actual competition and represented

a ritual demonstration of feudal ethics rather than a competitive sport. Similarly, *Touhu*, a game that evolved from archery, involved throwing darts into a pot or kettle from varying distances and using varying sizes of targets and throwing techniques. This game of throwing into a pot was usually played at banquets by feudal lords. Archery and other throwing contests were relatively short-lived as popular aristocratic leisure activities.

—Robert Kossuth

Bibliography

- Guttmann, Allen. *Sports: The First Five Millennia*. Boston: University of Massachusetts Press, 2004.
- Shiquan, Gu. "Introduction to Ancient and Modern Chinese Physical Culture." In *Sport in China*, edited by Howard G. Knutten, Ma Qiwei, and Wu Zhongyuan. Champaign, IL: Human Kinetics, 1990.
- Simri, Uriel. "The Ancient Chinese Kicking Game and Its Remnants." *Canadian Journal of Sport and Physical Education* 4(1) (May 1973): 58–62.

Mesoamerican Ball Courts—Fusing Game and Religion

One of the most extensively practiced religious-sporting events in ancient American cultures was a ritualistic ballgame played on ceremonial courts. The religious function of these practices was to influence nature and the cosmos. Forms of these ballgames existed as far south as El Salvador and as far north as Arizona. Normally, ball courts were located near or attached to temples and often represented the sky where divine beings played among the stars. Although the actual meaning of the individual games differed, the rubber ball generally represented either the moon or sun, and the players sought to control the movement of these heavenly bodies considered so vital and important to sustaining life.

The site of the earliest ball courts in Mesoamerica, according to the available archaeological evidence, was believed to be at the Olmec site of La Venta dating from about 1200 BCE. However, new evidence of a ball court from the Mazatan village of Paso de la Amada moves that date back to somewhere between 1650 and 1500 BCE. Similarly, a tomb from El Opeño in western

➤ PASO DE LA AMADA—THE FIRST BALL COURT IN MESOAMERICA

Among the Mokaya of Mazatan the emergence of a tiered society with larger central villages and peripheral settlements began to appear between 1650 and 1500 BCE. In Paso de la Amada, one of the main villages of the Mazatan, there is evidence of the earliest examples of civic buildings that included a palace and ball court. This is believed to be the earliest formal ball court in Mesoamerica. It is argued that among this and later Mesoamerican cultures the ball game played an important role in community life by mediating relations between communities. In Paso de la Amada, the game is believed to have been contested between two individuals or teams moving a rubber ball around the court. Most formal ball courts measure between 65 and 492 feet (20 and 150 meters) long. The court at Paso de la Amada, at 262 feet (80 meters) long by 22 feet (7 meters) wide fits clearly among these and, like other early courts, was enclosed by sloping earth walls.

—Robert Kossuth

Mexico dating from about 1500 BCE contained figurines of ball players with miniature pieces of equipment. However, the earliest evidence of a ball court in that region dates to only 600 BCE. This suggests that in some instances the early incarnations of the game were played not in a court but more likely on an open field. Generally, play took place on a long court where participants attempted to knock the ball to their opponent's end using only their elbows, knees, and hips. It is believed that the presence of a vertically placed ring (often compared to a basketball hoop) was a relatively recent appearance, likely no more than 1,200 years ago. It was from these earliest civilizations that later Mesoamerican societies adopted the religious ball court game.

The mythological origins of the game are revealed through myths of the Mayan civilization. The story revolves around twin brothers who so enjoyed ball and dice games that they were lured to the place of the dead, where they lost a ball game and were sacrificed so that the lords of



Wall of the Great Ball Court at Chichén Itzá in present-day Mexico, twelfth century. At the top is the stone goal ring. (Brian Snelson)

death would no longer be disturbed by their play. The boys' severed heads were placed in a barren tree that miraculously bore fruit in the likeness of the twins. A maiden daughter of one of the lords of death took pity and visited the tree, where she was impregnated and bore twin sons who later became the sun and the moon. It was these brothers who defeated the lords of the underworld through their skill in the ritual ballgame. Thus, the ballgame represented the victory of the sun and the moon over the forces of death. There are alternate variations of this story in which, for example, the sun and the moon are resurrected from the original set of twins and the woman who gives birth to the second set of twins is a goddess.

Variations of the ballgame mythology included the moon, representing the forces of evil and darkness, to be overcome by the sun, repre-

senting life and light. The sacrifice of players in later incarnations of the game, such as that played by the Mayans, represented the rebirth of life, with the sacrifice of the moon in favor of the sun. Therefore, the display of severed heads on poles represented a rebirth in a manner similar to the myth of the brothers' heads when placed in the barren tree. The ballgame, as it was practiced, manifested religious themes and images in the ritual of its play. The game established a ritual identity for the players, priests, and fans in which man, always seeking to control nature, created a device in the ballgame to con-

front and exert control over chaotic and powerful natural forces.

—Robert Kossuth

Bibliography

- Cordes, Kathy. "The Ritual of the Mesoamerican Ballgame." *Journal of Physical Education, Recreation, and Dance* 59(1) (1988): 44–47.
- Evans, Susan Toby. *Ancient Mexico & Central America: Archaeology and Cultural History*. London: Thames and Hudson, 2004.
- Morse, Mike. "Sport As a Model for Cultural Interaction: The Classic Maya Ball Game." *Journal of Sport and Social Issues* 16(1) (1992): 34–48.

■ Introduction: Architecture and Urban Planning

Architectural achievements are arguably the most famous contributions to world history in the period between 4000 and 1000 BCE. From the Pyramids of Giza to the palaces of Knossos and Mycenae to Stonehenge in England, the monuments of this age are truly inspirational feats of engineering and planning. Yet it is not just the monuments that are amazing. The cities themselves are remarkable, even though most were lost until nineteenth- and early-twentieth-century archaeologists revealed them again. Cities like Troy, Ur, and Mohenjodaro reflect extremely sophisticated urban spaces that were built and lost thousands of years ago. While cities were first built before this time, it is clear that by 4000 BCE people had begun to recognize the importance of urban space. The realization of this is reflected in the diversity of ancient urban layouts.

It is very important to understand how ancients viewed their surroundings. Urban space defines how people think about themselves and their world and how they live most of their lives. Often these values remain completely unquestioned by urban dwellers, yet they form the core of daily experience. Understanding ancient urban space is critical to understanding the daily life of the ancient world.

For archaeologists who study town plans, an important question is always whether a town

➤ THE LANGUAGE OF THE ARCHAEOLOGY OF URBAN PLANNING

Archaeologists use very specific terminology when they are discussing ancient architecture and city planning. Public buildings are those buildings that reflect state power and/or infrastructure; this is shared space that may belong to the people as a community (like a town hall) or to the ruler of a city (like a palace). Even if a public structure is used only by governing officials, it was likely paid for out of state wealth. Monumental architecture is similar. It is usually commemorative in some manner, although sometimes the term "monumental" is used simply to indicate that the structure is large. "Production zones," "industrial zones," "craft quarters," and "workshops" are all terms used by archaeologists to refer to areas where materials were manufactured. When these terms are used, they are not meant in the same sense that they are used to describe modern society, so we must not draw too many connections with modern industrial and production practices. Elite architecture is very high-end architecture, the types of houses that the very wealthy would have lived in. "Domestic architecture" can encompass elite architecture, but the term is used primarily to refer to the houses and apartments of poorer people within a city.

—Kevin M. McGeough

was purposefully planned or not. In the absence of ancient maps (although these are occasionally found, such as the map of ancient Ur), archaeologists must determine which aspects of a town were planned beforehand and which parts developed organically within the confines of that original plan. As a rule of thumb, if a layout appears to be too regular to be accidental or lines up too neatly with a preexisting cosmological perspective, then some amount of planning must have been employed. Different zones of activity that are identifiable within a city may be planned, but often these develop on their own over time.

—Kevin M. McGeough

Temple, Pyramids, and Palaces

Pyramids, temples, palaces, and state-built towns dot the Egyptian landscape and should all be considered monumental architecture. These types of structures represent a major commitment of wealth, natural resources, and labor by the state in order to venerate the king, the gods, and the power of the Egyptian state.

Although the Giza pyramids are the most famous of Egypt's pyramids, there are almost 100 pyramids known from within Egypt marking the burial places of their associated kings. In the Third Dynasty, King Djoser built the first pyra-

mid. Known as the step pyramid because of its stepped sides, it marked a major innovation in monumental architecture. Djoser's pyramid complex is built of stone, whereas previous kings built monuments using mud brick. The Fourth Dynasty king Sneferu built the first true, or straight-sided, pyramid. He managed to build three pyramids in his lifetime: a step pyramid, the bent pyramid whose slope decreases about halfway to the top due to structural problems, and the true pyramid. From Djoser to the beginning of the Eighteenth Dynasty, more than a thousand years, almost every king built a pyramid to celebrate his reign and burial. During the Old Kingdom, pyramids were built completely of layers of stone blocks and cased in finely polished white limestone that reflected the sun. By the Middle Kingdom, the core of many pyramids was built of mud brick and cased in polished limestone. These mud brick pyramids were structurally much weaker than the stone ones, and once the casing stones were removed (there is no pyramid that has retained its casing stones), they partially or completely collapsed.

In the New Kingdom, kings were buried in the Valley of the Kings. The valley is marked by a pyramidal-shaped peak at the top of its cliffs, meaning that the kings buried there are actually buried under a natural pyramid. It must be noted, however, that by the New Kingdom there was less emphasis on aspects of the solar in Egyptian religion that had been so important in the Old and Middle Kingdoms and of which the pyramid was an integral part. The move to the Valley of the Kings was also an effort to protect the royal burials from theft. The pyramid, by its very nature, is a giant marker of the wealth contained within, which almost guaranteed robbery of the burial. Kings came up with ever increasingly complicated security measures (portcullis, hidden chambers, deep pits in hallways, etc.), but none worked. In the New Kingdom, private citizens started using small pyramids over their tombs. This marked the democratization of a previously solely royal architectural form.

The pyramid has several mythological meanings. The first comes from the Pyramid Texts, a series of texts about the king's journey to the afterlife, that were written on the walls of the burial chambers in Fifth and Sixth Dynasty pyra-



Step pyramid, designed for King Djoser of the Third Dynasty by his architect Imhotep, is located in Saqqara, the main necropolis of Memphis. The structure, considered the first great monument built of stone, was started as a mastaba and enlarged twice to its current six-step shape. (Corel)

► THE PYRAMIDS AT GIZA

The pyramids at Giza are perhaps the most recognizable monuments from ancient Egypt. There are three main pyramids on the Giza plateau built by three kings of the Fourth Dynasty. An enclosure wall surrounds each pyramid. Each pyramid is also accompanied by subsidiary pyramids (also known as queens' pyramids) and a pyramid temple on the western side of the pyramid (which was attached by a causeway to a valley temple that was very near a harbor).

The pyramid of King Khufu is also known as the great pyramid because it is by far the largest pyramid ever built, about 492 feet (almost 150 meters) in height. Inside Khufu's pyramid are a series of ascending and descending passages that lead to three chambers. The king's chamber is the highest room and held the sarcophagus of the king. The middle chamber is called the queen's chamber but was probably designed to hold the king's statue. The subterranean chamber is the lowest of all the chambers and is carved out of the bedrock upon which the pyramid sits. On the western side of the pyramid are three small queens' pyramids. One is that of Queen Hetepheres, King Khufu's mother, whose burial contained a sedan chair, a bed, and a canopy, all with gold fittings. At least seven boats have been discovered buried around the pyramid of Khufu. One boat has been fully restored and reconstructed. The Egyptians believed that the spirits of the dead traveled through the underworld on boats, and the boat burials were for the king's underworld transport.

King Khafre, a younger son of King Khufu (his brother Djedefre ruled before him and built a pyramid at Abu Roash), built his pyramid just to the southeast of the great pyramid. His pyramid is almost 10 feet (3 meters) shorter than that of his father, Khufu, but because he built on a rise in the bedrock, Khafre's pyramid appears taller. Khafre is perhaps most famous for building the sphinx, which is located next to his valley temple about 1640 feet (500 meters) west of the pyramid. The sphinx is almost 64 feet (20 meters) tall at the head and about 187 feet (57 meters) long. It was carved out of solid bedrock, but the quality of the rock was poor enough to need several restorations, the earliest in the Eighteenth Dynasty.

The pyramid of King Menkaure lies to the southeast of the pyramid of Khafre and is the smallest of the king's pyramids at Giza, measuring only about 217 feet (66 meters) tall and only one-tenth of the mass of Khufu's pyramid. The reason for the downsizing of the pyramid may be linked to the growing importance of the solar cult at the time and the greater emphasis on temples rather than on tombs. To the south of Menkaure's pyramid are three queens' pyramids, two of which were unfinished. Excavation of Menkaure's valley temple revealed a series of beautifully carved statues of the king shown with the goddess Hathor, nome goddesses (the goddess of that particular Egyptian administrative region), and one of his queens.

—Vanessa Smith

mids. In the Pyramid Texts, the sun's beams shine down on Earth and act as a ramp for the king to climb to the sky in order to join his father Re, the sun. The sides of the pyramid mimic the rays of the sun coming down on Earth, and their situation directly over the king's burial ensures his pathway to the heavens. The second connotation of the pyramid is that of the primordial mound. In one ancient Egyptian myth about creation, a mound (the god Geb) rises out of the watery void (the god Nun), and it is upon this land that everything, including other gods, were created.

In the Old Kingdom, much of the focus of monumental architecture was on the burial place

of the king or his pyramid and its complex of temples. Throughout pharaonic history, mortuary temples—or those temples venerating the deceased king—remained an important part of the Egyptian monumental architectural repertoire. However, not all temples were dedicated to dead kings; many celebrated gods. In the Fifth Dynasty, sun temples were a variant of the pyramid complex, celebrating the sun god Re. At the heart of the sun temple was the benben, a rather stubby obelisk that mirrored the pyramid. Sun temples also had causeways, valley temples, and boat burials like pyramid complexes. Clearly, sun temples were meant to venerate the connection

between the living king and Re, whereas pyramid complexes honored the dead king. From the Old Kingdom only a few other gods' temples are known, and these are from provincial cult centers (such as at Medamud and Hierakonpolis).

The Middle Kingdom saw an increase in construction of temples all over Egypt, which coincided with a decrease in quality of pyramid construction. Middle Kingdom kings no longer devoted most of their assets to building mortuary monuments but instead used state wealth in a variety of religious projects. The temple Amun at Karnak, the temples of Montu at Tod and at Medamud, and the temple of Osiris at Abydos all had extensive construction during the Middle Kingdom. Unfortunately for Egyptologists, most of the Middle Kingdom temples were destroyed in the New Kingdom to allow for their remodeling and enlargement.

The New Kingdom witnessed a boom in construction of gods' temples. Not only were old ones remodeled, but new ones were built. Simultaneously, emphasis on the king's funerary monuments further decreased. The kings dug tombs into the cliffs of the Valley of the Kings and retained a permanent workforce of a few in comparison to pyramid projects. In addition, the kings built only one temple, a valley temple, instead of the two associated with the pyramid complexes. The temples of Amun at Karnak, Osiris at Abydos, Aten at Amarna, Hathor at Dendera, and Mut, Montu, Maat, Thoth, and Ptah at Luxor are some of the major divine temples that were renewed or founded in the New Kingdom.

The palace appears often in art and texts from ancient Egypt, and it is from these sources that we understand that the palace played a central role in the running of the state. Palaces acted as both the house of the king and the seat of government. The word "pharaoh" comes directly from the ancient Egyptian word for palace, *pr-aa* or "great house." Unfortunately, relatively few palaces have survived the ravages of time from ancient Egypt, mostly due to the fact that they were usually built out of mud brick. Ancient mud brick is susceptible not only to the elements but also to modern farmers who use crumbled mud brick to fertilize their fields and have destroyed many ancient Egyptian buildings. From excavations of New Kingdom palaces such

as that of Amenhotep III at Malkata or Akhenaten at Amarna, it is clear that the walls, floors, and ceilings of palaces were covered in beautiful paintings. The motifs in these paintings were of nature (birds flying over a marsh, cows running through a field, etc.) or of kingship (bound foreign prisoners, scenes of the royal family relaxing, etc.). Although not as rigid in architectural style as pyramid or temple complexes, all palaces had a few elements in common. There were large-scale columned halls and throne rooms, courtyards with pools, ceremonial areas, gardens, and a window of appearances. The window of appearances was a place where the king stood to receive visitors, to dispense rewards to courtiers, or to conduct ceremonies. The living quarters of the king are very modest given the large size of the palace as a whole. They generally consisted of a series of small rooms with bedrooms and antechambers.

—Vanessa Smith

Bibliography

- Lehner, Mark. *The Complete Pyramids*. New York: Thames and Hudson, 1997.
- Petrie, W. M. Flinders. *The Pyramids and Temples of Gizeh*. London: Histories and Mysteries of Man, 1990.
- Smith, W. Stevenson. *The Art and Architecture of Ancient Egypt*. 3rd ed., revised with additions by William Kelly Simpson. New Haven, CT: Yale University Press, 1998.
- Wilkinson, Richard. *The Complete Temples of Ancient Egypt*. New York: Thames and Hudson, 2000.

Egyptian Town Planning

A study of ancient Egyptian settlements can illustrate how Egyptians planned, constructed, inhabited, and eventually abandoned their villages, towns, and cities. In a very broad sense, Egyptians usually built their towns near the Nile River and its branches, which supplied the farmers with water and fertile soil and the travelers with an effective transportation highway. The center of a town was typically the temple (and the palace in the case of a royal town), and houses and workshops of socially diverse populations developed around it. Many Early Dynastic towns (e.g., El-Kab, Edfu, Elephantine) were surrounded by

fortification walls, but in the subsequent periods enclosures were generally restricted to those of individual temples and palaces within the city, perhaps due to the relatively stable politics within the country. The cemeteries almost always developed outside the town in the nearby desert.

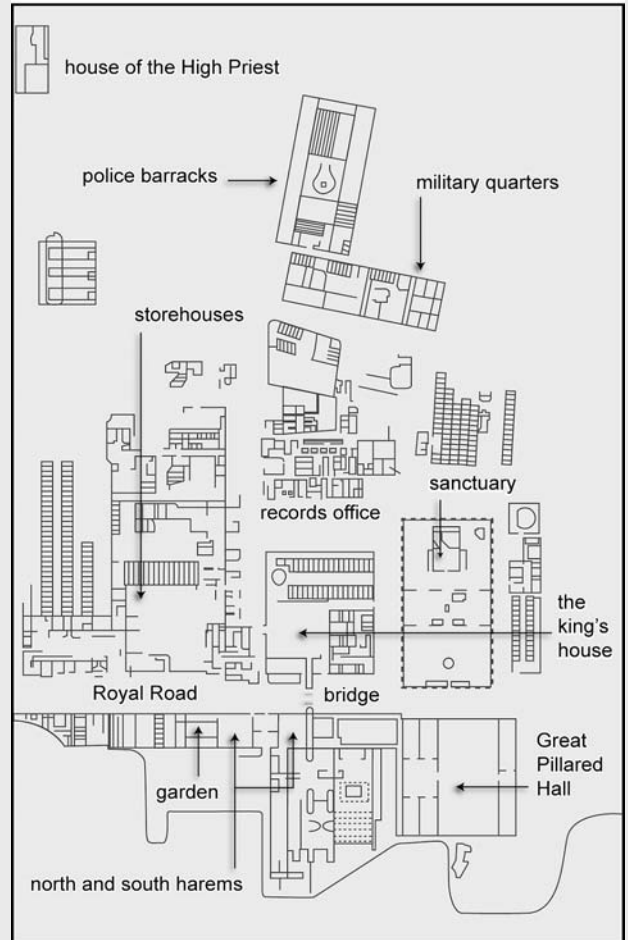
At a closer look, however, Egyptian towns were very diverse in appearance due to varied natural, economic, and political factors that had to be considered in choosing the towns' locations and designing their internal plans. The diversity of ancient Egyptian towns also had much to do with the history of individual towns. Especially marked differences existed between settlements that, on the one hand, originated naturally and developed gradually and, on the other, settlements that were planned and constructed as state-funded projects. The two kinds of towns might correspond to the ancient Egyptian words *niwt* and *dmi*.

The origins of gradually developed towns were often influenced strongly by geological and topographical factors. While towns were ideally located near the Nile, they also had to be situated above the river's annual inundation level so that the mud-brick buildings were not washed away by the flood. Therefore, many towns in the Nile River valley and delta developed on seasonal islands (e.g., Tell el-Daba, Memphis, Hierakonpolis), while others evolved in a linear fashion along the border between the cultivation field and the adjacent desert (e.g., Abydos, Dendera, el-Kab). Some New Kingdom royal cities (e.g., Amarna, Deir el-Ballas, Malqata) may be considered imitations of the latter type. These naturally originated towns usually looked less orderly inside because new buildings were planned and constructed at different times and by different people.

Political and economic factors played more important roles in the special towns that were founded under state supervision. For example, pyramid towns (e.g., Giza, Kahun) and other settlements associated with royal mortuary cults (e.g., Dahshur, South Abydos, Medinet Habu) were built near the related royal monuments. Similarly, villages of royal tomb builders (e.g., Giza, East Amarna, Deir el-Medina) and of royal miners (e.g., Qasr es-Sagha) were situated not too far from the respective workplaces. Furthermore,

THE SITE OF AMARNA

PLAN OF AMARNA, CIRCA 1350 BCE



Amarna (ancient Akhet-Aten) was the capital of Egypt during the reign of Akhenaten, who marked its boundary with a series of large stelae. Located on the east bank of the Nile, the city can be divided into three zones along an avenue. The central zone included several temples of Aten and the main administrative palace. In the north end of the city were the residential palaces of the royal family. Most houses and workshops were located in the southern zone. Private individuals were buried in the low desert, while royal tombs were cut into the rock farther in the wadi.

—Kei Yamamoto

STATE BUILT TOWNS

Compared to temples, pyramids, and tombs, very little is known about domestic architecture from ancient Egypt. This is because most settlements were located in the floodplain and over the millennia have been covered in layer after layer of Nile silt or are located under modern towns and cities and are inaccessible to archaeologists. Some settlements from ancient Egypt have survived and are currently undergoing intensive study. These settlements tend to be located at the edge of the desert and have missed destruction by the Nile or by modern building. Interestingly, most of these towns were planned and built by the state rather than forming organically from farming villages.

Due to the nature of their construction (with entire towns conceived and built by the state all in one go rather than organically growing over years like most villages), these state-built towns can be considered monumental in nature. From the Old Kingdom, the Giza Workmen's Village was where the workers who built the pyramids lived. The town included not only houses for the workers but also bakeries and slaughterhouses to feed them and administrative buildings for their overseers. From the Middle Kingdom the towns of Lahun and of South Abydos were associated with the burials of

King Senwosret II and King Senwosret III, respectively. The towns were founded not only to house the workers building these tombs but also to house the priests and the many other people it took to service their mortuary temples after their deaths. From the New Kingdom, King Akhenaten founded the town of Amarna to house the workmen building temples and palaces for his new capital, which was devoted to the worship of the god Aten. Deir el-Medina was a town built in the New Kingdom in Thebes to house the workmen who dug and built the kings' tombs in the Valley of the Kings.

—Vanessa Smith

Bibliography

- Arnold, Dieter. *The Encyclopedia of Ancient Egyptian Architecture*. Translated by Sabine Gardiner and Helen Strudwick, edited by Nigel and Helen Strudwick. Princeton, NJ: Princeton University Press, 2003.
- David, A. Rosalie. *The Pyramid Builders of Ancient Egypt: A Modern Investigation of Pharaoh's Workforce*. Boston: Routledge and Kegan Paul, 1986.
- Kemp, Barry. *Ancient Egypt: Anatomy of a Civilization*. New York: Routledge, 1991.

frontier towns (e.g., forts in Nubia and North Sinai) were placed strategically, based on specific military demands and topographical features that allowed effective defense. Aided by the cubit system (1 cubit = approximately 52.4 cm), these premeditated towns often manifest orthogonal designs and repeated patterns inside, partly to maximize the efficiency in the building process and partly to impose the officials' bureaucratic policies onto its inhabitants.

Over time, the accumulation of debris turned ancient towns into tells. On the other hand, some settlements were swept away by the shifting course of the river or were buried deep under the accumulating silt, while others have been covered up completely by modern settlements. The rising level of underground water presents yet another obstacle to archaeologists trying to investigate ancient settlements in the Nile River valley and delta. Despite these challenges, the ur-

banism in ancient Egypt is much better understood today than it was four decades ago.

—Kei Yamamoto

Bibliography

- Bietak, Manfred, ed. *Haus und Palast im Alten Ägypten*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1996.
- Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London and New York: Routledge, 1989.
- Lacovara, Peter. *The New Kingdom Royal City*. London and New York: Kegan Paul International, 1997.
- Uphill, Eric P. *Egyptian Towns and Cities*. Princes Risborough, Buckinghamshire: Shire, 1988.

Egyptian Domestic Architecture

There is ongoing debate as to whether known remains of settlements accurately reflect how the majority of the population lived in ancient Egypt.

➤ FROM HOWARD CARTER TO MARK LEHNER—ARCHAEOLOGY'S CHANGING INTERESTS

The motivations that steer Egyptian archaeology have changed through time. The origin of modern Egyptology is usually credited to Napoleon Bonaparte's exploits in Egypt during the late eighteenth century. More specifically, it is attributed to the efforts of the scientists, architects, botanists, and scholars who accompanied Napoleon to study aspects of contemporary Egypt and its history, which culminated in the ambitious documentary work *Description de l'Égypte*. Two primary goals characterized the objectives of expeditions to Egypt during much of the nineteenth century: to procure exotic artifacts for Western museums and wealthy art collectors and, in some cases, to find archaeological remains that would document events and locales chronicled in the Bible. Some individuals were also spurred by the intrigue of a seemingly mysterious civilization with a strange pictographic language, the comprehension of which had been lost to the world long before.

Following Jean François Champollion's announcement of breakthroughs in deciphering the hieroglyphic language in the early 1820s, a desire for more inscriptions fueled efforts to find additional monuments. Egyptology truly arrived on a worldwide stage with the discovery of the largely intact royal tomb of King Tutankhamen (Eighteenth Dynasty) by Howard Carter in 1922. This discovery was a realization of the shift in the objectives of Egyptology research, which had already begun to focus on monumental architecture, especially large tombs and temples. A fascination with mummification (also often regarded as the territory of museums and collectors) further promoted the excavation of many cemetery sites.

Amid this backdrop, systematic academic archaeology was born under William M. Flinders Petrie in the late nineteenth and early twentieth centuries. The discipline advanced considerably through the 1960s when a coordinated international effort was mobilized for the emergency excavation, documentation, and, where possible, rescue of many Nubian sites that were threatened with imminent submersion behind the new Aswan Dam. At around this time, trends in archaeological study were already beginning to shift toward nonfunerary topics. Regional issues such as settlement patterns and urbanism became quite prominent in Egyptology from the 1970s to the 1990s, bringing houses, households, and communities into focus as important subjects of archaeological study.

Egyptological archaeologists now view houses in ancient Egypt's cities, towns, and villages as important keys to understanding ancient Egyptian society. Settlements—and even individual households—are viewed as microcosms of the broader cultural system in which they were situated. Since 1988, Mark Lehner has been applying this manner of research at Giza to address the age-old question of who built the pyramids. Under investigation is an expansive settlement comprised of eastern and western town sectors, large administrative buildings, workers' housing, production areas, and storage facilities. Ongoing excavation and analysis promises to help clarify how this sector of society was organized in its efforts to construct and maintain the funerary monuments and institutions of the powerful kings of the Fourth Dynasty.

—Nicholas S. Picardo

The basic notion of “house” was little more than one- and two-room structures represented schematically by the hieroglyphs  (h) and  (per), but in reality much more complex designs are known, including expansive structures akin to mansions. It is not advisable to speak in terms of a typical ancient Egyptian house but rather to consider houses well represented in the most preserved settlements. Archaeological remains of houses usually preserve their basic ground plans and an incomplete selection of fixtures, portable items, and trash left behind when occu-

pation ended. For long-lived houses the foundations of multiple phases of construction are often superimposed upon one another, making the task of tracing the building's history difficult.

Many of the earliest remains of houses date to the Pre-Dynastic period (prior to 3100 BCE). Some are loose collections of round or ovular huts, possibly with domed roofs. Waddle and daub and thatch construction predominated, and many houses appeared to be occupied only temporarily. This period also saw the transition to more permanent rectangular buildings arranged

in larger villages. The size of a house ranged from approximately 21 to 376 square feet (2 to 35 square meters). In many cases plastered floors were slightly recessed below the natural ground surface.

In all later periods, mud brick was the primary building material for domestic architecture, often with an exterior coat of whitewashed plaster that could be refreshed periodically as it wore away from exposure to the elements. Roofing included wattle and daub and beam-supported ceilings as well as vaulted ceilings of mud brick. Elite houses sometimes incorporated substantial components of stone and wood such as door fixtures, windows, and support columns for higher ceilings. Though three-story houses are sometimes reconstructed for illustration purposes, most if not all of Egypt's largest houses were probably one or two stories tall.

The Middle Kingdom (ca. 1938–1630 BCE) town of Kahun (also called el-Lahun/Illahun) was a state-planned, highly structured gridlike town with distinct blocks of houses of similar types. Approximately ten large mansions (about 26,909 square feet, or 2,500 square meters) occupied the most affluent sector. These buildings consisted of a residential core comprised of a three-room living area that led back to a number of private rooms behind it. In the front, a large courtyard accommodated semipublic business, the keeping of animals, and other activities. Surrounding blocks of rooms included storage chambers, granaries, cooking rooms, secondary living quarters, and other functional spaces totaling over 70 rooms and corridors in the largest houses. Small and medium houses (about 430 to 2,152 square feet, or 40 to 200 square meters) consisted of three to seven rooms and lacked the dramatic features of the large courtyard and abundant private space of the larger structures. In many buildings, stairways allowed roof access, where additional cooking and baking were undertaken in the open air.

The capital city of Akhetaten (modern Tell el-Amarna) is the most well-preserved example of an ancient Egyptian city, complete with a downtown area and suburbs. Though the city contained a high proportion of royal buildings and architecture devoted to religious rites and public ceremony, there were also sectors popu-

lated by large estates with gardens, water wells, animal pens, and dome-shaped storage silos. The typical Amarna villa house averaged roughly 2,152 to 4,305 square feet (200 to 400 square meters) and consisted of 15 to 25 rooms. It centered on a square living hall fronted by a roofed entry or reception hall and small ancillary rooms. The main hall often included a small raised platform for the owner to formally receive guests. Smaller living and sleeping rooms flanked the central hall, with private rooms such as a primary bedroom and bathroom to the extreme rear of the house. Many had at least a second floor and some usable roof space. The city's smaller houses, ranging from 430 to 1,614 square feet (40 to 150 square meters), were based on a simpler plan but also incorporated the placement of private quarters at the rear of the structure.

In the New Kingdom (ca. 1539–1075 BCE) the skilled workers (and their families) who built and decorated the Valley of the Kings were provided with villages of their own in western Thebes. Constructed of rubble-stone walls, not always joined at perfect right angles, lines of long and narrow houses were abutted against each other on the opposite sides of a main village street with their entryways facing across one another. They averaged around 53 feet (5 meters) wide by 150 to 269 feet (14 to 25 meters) long and were often not built level with the street. In a typical house, a front chamber often contained a raised bedlike fixture or shrine that was likely used for domestic ritual practices or events relating to childbirth. The next room contained a bench alongside other fixtures of domestic cults, including an inset for a bust of an ancestor or the like. One or two rooms followed that provided multifunctional space and sleeping quarters. A kitchen area occupied the rear of the house. Ascending stairways led to roof space on many houses, while descending stairways gave access to small underground storage chambers.

—Nicholas S. Picardo

Bibliography

Arnold, Felix. "Houses." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 2, edited by Donald B. Redford. New York and Oxford: Oxford University Press, 2001.

Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London and New York: Routledge, 1989.
 Uphill, Eric P. *Egyptian Town and Cities*. Princes Risborough, Buckinghamshire: Shire, 1988.

Nubian Cities—Areika and Kerma

Experts' knowledge of the villages of ancient Nubia is fairly limited, as only a few settlement sites have been excavated. Most of our understanding of the region comes from the excavation of cemetery sites. However, two sites—Areika in Lower Nubia and Kerma in Upper Nubia—provide good evidence for the nature of urban life in Bronze Age Africa.

Areika was inhabited by the so-called Nubian C-Group people. It was a relatively small village of about .7 acres (0.28 hectares), probably an average village size for the C-Group culture. When the site was first excavated, Leonard Woolley and David Randall-MacIver assumed that it was a fortified dwelling or castle. Further analysis, however, has shown that it was actually a small fortified community with two primary sections. On the west were the residential complexes. The houses were rectilinear in shape. This is unusual for C-Group homes, which are typically curvilinear. The eastern half of the town was a food production area. Most noteworthy is the large rectangular building, outfitted with bread ovens and 24 large storage jars. In Egypt, structures such as this were used for baking bread and brewing beer. Doubtless this was the function of the building at Areika as well. Large courtyards in the eastern section functioned as cattle pens, and a large granary provided storage space for cereal crops.

Kerma was a substantially larger city and probably a major center (if not the capital) of the Kingdom of Kush. More than 61.8 acres (25 hectares) in size, Kerma is most noteworthy for its cemetery with large tumulus tombs and hundreds of sacrificial victims. The city was defended by a wall about 11 yards (10 meters) tall that surrounded the central section of the city. Within the central section, the 200 or so households were laid out irregularly but followed a series of paths that linked the interior of the city to the four main entrances. The houses varied considerably in size and layout, but all were con-



Ancient Nubian city of Kerma in present-day Sudan.
 (Lassi Hu)

structed of mud brick. In the center of the town was a large mud-brick temple that on quick inspection appears similar to Egyptian-style temples but on closer examination deviates substantially from Egyptian architectural practices. Associated with the temple was a palace, an audience hall, and various smaller structures.

—Kevin M. McGeough

Bibliography

- Adams, W. *Nubia: Corridor to Africa*. London: Penguin, 1977.
 O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University Museum of Archaeology and Anthropology, 1993.
 Trigger, Bruce. "Kerma: The Rise of an African Civilization." *International Journal of African Historical Studies* 9(1) (1976): 1–21.
 Trigger, Bruce. *Nubia under the Pharaohs*. London: Thames and Hudson, 1976.

Palaces and Megarons in Greece

The Greek term *megaron* means "great hall" and is the word that Homer uses in the *Iliad* and *Odyssey* to describe the palaces of the Achaean kings. Today the term refers to a particular architectural form that lay at the heart of monumental Greek buildings in the Bronze Age. The megaron is a long and narrow hall approached through an open porch on one of its shorter sides. Megaron constructions were characteristic of the grand palaces of the Mycenaean kings



of the fourteenth to thirteenth centuries BCE, but in fact this building style was first used in Greece at the end of the Neolithic period, and megaron buildings can also be found all over the eastern Mediterranean in the Bronze Age from the Balkans to Turkey.

Monumental architecture and the construction of large central buildings that may have served as a type of early palace, or the home of a ruler, began in Greece at the end of the Neolithic period. A good example is an early form of the megaron at Dimini, a site located in the plains of Thessaly. At around 3700–3300 BCE there existed at Dimini a small, walled settlement with a megaron and courtyard set atop the hill. The large size of this building with its large open courtyard and its position at the top of the hill suggests the beginnings of social and class ranking in Greece.

In the following period, the Early Bronze Age (ca. 3000 BCE), there is a proliferation of larger,

more regular and more complex constructions that are interpreted as evidence for the growth of a wealthy ruling class in Greece at the time. These generally take the form of either a corridor house (a rectangular house with long corridors along its sides) or the megaron. An example of the corridor house can be seen at Lerna in the Peloponnese, where a large building called the House of the Tiles clearly dominated the town around 2900–2400 BCE. The material found in the House of the Tiles came from various parts of the Aegean and demonstrated that the owners of this house had the wealth and access to foreign goods to obtain valuable and exotic materials.

What we may justifiably call a palace in the more modern sense of a large and complex building that served as the home for the administrator of a city or a state does not occur in Greece until the Mycenaeans gained power toward the end of the Late Bronze Age (ca. 1300 BCE). The Mycenaean palace was essentially an

➤ MYCENAE

Mycenae holds a special place in Greek scholarship. This was the city of Agamemnon, leader of the Achaean army against Troy, mythical and tragic Homeric hero. Even today the remains of the site attest to the physical greatness of the city of Agamemnon. The city is surrounded by massive walls whose stones were so large that its construction is called Cyclopean, implying that it was carried out by the Cyclopes, the one-eyed monsters of superhuman strength.

Much of the city visible today was built at the end of the Late Bronze Age, approximately the thirteenth century BCE. But here also are the earliest indications of the growing power of the Mycenaeans. Enclosed within the city walls was an ancient burial mound called Grave Circle A where the royal family of Mycenae was buried along with gold masks and other riches. The burials remind us of Homer's epithet for the city, "Mycenae, rich in gold."

The city we see today is really only a fortified citadel, a small, walled area enclosing the palace, storerooms and workshops, shrines, and some houses of palace administrators. The houses of the ordinary townspeople lay outside the Cyclopean walls. At the top of the citadel stood the palace, a sprawling megaron building of substantial size adorned with frescoes. Little today survives of the palace besides the outlines of the central megaron.

Mycenae also boasts some of the best examples of Mycenaean architecture. One example is the Lion Gate, a large stone portal of post and lintel construction that served as the main entrance to the city. A massive stone block with a carving of two lions standing beside an upright pillar filled the triangular space above the gate and foreshadowed the importance of the triangular pediment in Classical Greek architecture. The image of lions and pillar occur often on Minoan and Mycenaean seals and seem to have been important symbols in the realm of religion and cult. Today the heads of the lions no longer exist, yet



Ruins of the Lion Gate, the main entrance to the citadel of the ancient Greek city of Mycenae. (Andreas Trepte)

the size of the pediment itself and the careful carving of the lions' haunches do not fail to impress the visitor.

Other examples of the skill of Mycenaean engineering are the lavish stone-built *tholos*, or beehive tombs, that dot the hillside around Mycenae. The excavators who found these tombs named them after the Greek heroes of Mycenae, Atreus, Agamemnon, and Clytemnestra, choosing to imagine these spots as the resting place of the great Homeric kings, although this is of course pure fantasy. These tombs were carved out of the hill and faced with stone. They consist of a large stone-built circular chamber with an open passageway leading to it. The entire structure was covered in a dirt mound so that the chamber was actually underground. Unfortunately, when these tombs were excavated it was found that they had been robbed long ago.

Today the impressive remains at the ancient site of Mycenae are a testament to the wealth and strength of the Mycenaean world.

—Susan Helft

outgrowth of the Middle Helladic megaron house consisting of a narrow room, vestibule, and porch with a fixed hearth at its center. In the palace these were of course built on a monumental scale, but this emphasizes that the palace was essentially the house of the ruler.

Over the last 100 years archaeologists have uncovered megaron palaces at Sparta, Tiryns, Athens, Mycenae, and Orchomenos. These all date to the heyday of the Mycenaean period (fourteenth to thirteenth centuries BCE). The best-preserved example comes from Sandy Pylos,

the seat of king Nestor in the Homeric tales. The palace at Pylos was entered through two small columned porches into an open courtyard. To the left of the gate were the palace archives where the transactions of the palace could be recorded. From the courtyard one enters into the great megaron, the public space of the palace. By this time the megaron form was quite standardized so that the depth of the porch was approximately half the size of the hall.

The main hall had at its center a large decorated circular hearth surrounded by four columns that held up a clerestory ceiling. Along the long wall was a stone chair or throne. On the palace walls were scenes of procession and banqueting as well as combat and hunting. In the megaron, or throne room, however, was a heraldic scene of griffins very much like the scene in the throne room at the Minoan center of Knossos. Even the floor of the main hall was decorated. It was painted to imitate a tiled floor.

The megaron hall was the heart of the palace and clearly served as the seat of the ruler. There is also some indication that the great hearth and throne were areas of ritual activity. Channels running from the throne and ashes of animals found on the hearth may be evidence for sacrifice and libations. We should therefore also consider that the Mycenaean palace was a religious as well as political center.

To either side of the megaron and generally divided by a long corridor were small rooms, perhaps used as either storerooms, pantries, or kitchens. Two rooms in particular had large amounts of drinking cups, possibly an indication of large drinking parties and feasts held at the palace. The main sleeping quarters may have been on the second story of the palace; however, second stories rarely survive in the archaeological record. At Pylos there were large storerooms with sunken pithoi probably for the storage of oils, and one area of the palace may have been a perfume factory. One can also find smaller megaron suites in Mycenaean palaces, sometimes called the queen's megaron. These areas were either more reception rooms or private apartments. The suites often included luxurious bathrooms with a large enclosed bathtub and paintings. Sophisticated drainage systems carried water and waste out of the palace.

The plans of the palaces at Tiryns and Mycenae were more elaborate but share certain general features with the palace of Pylos, such as the open court in front of the megaron and a series of galleries beside the megaron. Like Minoan palaces on Crete, many of the Mycenaean palaces have remarkably similar plans and construction techniques. This suggests that there existed a class of architects and builders that were shared among the ruling elite.

As far as we can reconstruct from the remains of the Mycenaean palaces as well as the Linear B documents, the palace was not only the home of the ruler, called in Mycenaean Greek the *wanax*, but was also the economic center of the kingdom. The palaces employed large numbers of craftsmen and slaves primarily in the keeping of flocks and the production of textiles but also for the production of luxury items including perfume, as in Pylos. The palace household represented the primary producers and consumers of elite goods. In addition to housing the royal family and being a place for state functions, we must also imagine the palace as the scene of religious rituals and large banquet feasts.

By 1200 BCE all of the palaces on Greece and Crete had been at least partly destroyed or abandoned. The world of royalty and power and the institutions of a palatial society and economy ended with their demise. The megaron form, however, survived and continued to be used in monumental buildings well into the Iron Age at places such as the Anatolian kingdom of Phrygia. The legacy of the megaron in Greece can still be seen in the layout of the Classical Greek temple for which it was most likely the forerunner.

—Susan Helft

Bibliography

- Andreadi, E., and L. Braggioti, eds. *Archaeological Atlas of Mycenae*. Athens: The Archaeological Society of Athens, 2003.
- Blegen, C. *A Guide to the Palace of Nestor: Mycenaean Sites in Its Environs and the Chora Museum*. Prepared by Carl W. Blegen and Marion Rawson, revised by Jack L. Davis and Cynthia W. Shelmerdine, with permission of the Department of Classics of the University of Cincinnati, 2001.
- Dickinson, O. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 1994.

- Galaty, M. L., and W. Parkinson, eds. *Rethinking Mycenaean Palaces: New Interpretations of an Old Idea*. Los Angeles: Institute of Archaeology, UCLA, 1999.
- Hitchcock, L., and D. Preziosi. *Aegean Art and Architecture*. Oxford: Oxford University Press, 1999.
- Mylonas, G. *Mycenae: Rich in Gold*. Athens: Edothike Athenon, 1983.
- Tomlinson, R. *From Mycenae to Constantinople: The Evolution of the Ancient City*. New York: Routledge Press, 1992.

The Palace of Minos at Knossos

In Greek mythology, King Minos was thought to have ruled the Aegean from his palace at Knossos on the island of Crete. As part of his palace, so the stories suggest, he had the mythical architect Daedalus build him a special labyrinth to house the bull-like monster called the Minotaur. In 1900 the British archaeologist Arthur Evans began to unearth the secrets of Minos's palace. Evans called the civilization that he uncovered (and what he thought was the earliest in Europe) Minoan after this legendary king.

The actual occupation of Knossos goes well back into the Neolithic period (ca. 7000 BCE) where small finds from below the palace show that Knossos was occupied even then. The city grew tremendously around 1900 BCE when a significant building, the First Palace, was built at the site. This palace lasted nearly 200 years until it was largely destroyed by a massive earthquake. At around 1700 BCE the palace was remodeled after severe earthquake damage, and this is called the Second Palace. The building was renovated again at least twice in the Late Bronze Age, the last phase of the palace remodeled by Mycenaeans from Greece. The palace that we see today at the site is mostly from this last phase, although parts of it are earlier. We should keep in mind, however, that the term "palace" is applied to this building because of its monumentality. In fact, there is no proof that this was the home or center for a single king or royal family, and we do not fully understand how these buildings were used.

The palace was built on a hilltop next to a river and covers an expanse of nearly 3 acres (21,000 square meters). It had nearly 1,000 rooms, the intricate layout of which may have given rise

to the stories of the Knossos labyrinth. The palace was likely the economic, political, and spiritual center of the town. Many scholars see a dual function for the palace as a seat of royal authority and a central shrine, perhaps reflected in the roles of the ruler himself, who would have served as a priest-king. Certain features, such as orienting corners to coincide with compass points, show that the palace was consciously planned with sensitivity to its landscape.

The approach to the palace is from a large courtyard to the west from which paved paths lead to a corridor to the south. This is called the Corridor of the Procession, as sections of wall paintings of a courtly procession lined the walls. From here one was led through a series of columned antechambers and up a staircase to the central part of the palace, the Piano Nobile, a columned audience hall just above the Throne Room and what is called the Tripartite Shrine. This area faced the Central Court, a large paved space at the center of the palace that was no doubt used for banquets, festivals, and perhaps even the famous bull-leaping games. The court tied together the two sides of the palace. The western side of the palace at Knossos, as in other palaces, was the nexus of the ceremonial and official areas and had large storage facilities. The eastern part of the palace comprised the industrial and perhaps domestic wing of the palace. On the eastern side the Royal Apartments were reached by a magnificent staircase rising three stories. These so-called apartments were suites of rooms consisting of a portico, a megaron hall, and luxurious bathrooms. In one room there was even a toilet connected to the drainage system of the palace. In the area north of the queen's megaron there is some evidence for craft workshops and storage facilities where huge storage jars lay in rows.

The palace shows very fine engineering skills. It was equipped with an aqueduct and an advanced drainage system. Its staircases were sophisticated accomplishments, and much of the palace was built of finely cut stones fitted together without mortar. The palace itself was a work of art. Many of its walls were decorated with painted frescoes, the best of which now lie in the Heraklion Museum. These showed scenes of palace life or compositions from nature. The

➤ AN ARCHAEOLOGIST'S PLAYGROUND—ARTHUR EVANS AND KNOSSOS

Sir Arthur Evans was the son of a wealthy British antiquarian with an interest in anthropology and antiquities. This interest led him to Crete, for he had seen interesting carved seal stone from there. After a few years of negotiations, Evans was able to purchase the site of the palace at Knossos and began his excavations there. He realized right away the importance of his finds. Here was a very ancient site, earlier even than Schliemann's discoveries at Mycenae, very large and very rich. Evans began to imagine Knossos as the origin of European civilization.

Over the next 30 years Evans devoted himself to the exploration and restoration of the palace. He was also a romantic and an imaginative excavator. In his notes and reports he conjures up images of the kings and queens of the palace and names the rooms according to then-current Victorian ideas about palace life. Thus, you will find on the palace plan spaces called Ariadne's Bath, the Piano Nobile, and the Grand Staircase. Evans's approach to the site's restoration has always been controversial. He practiced what he called reconstituting the palace. In many cases this meant rebuilding whole rooms, floors, pillars, and frescoes in concrete the way he imagined they must have looked. He did this for two reasons. One was a general need to conserve what was left of the original structure, and the other was to help visualize the palace's original appearance.



View of a reconstructed portion of the palace complex at Knossos on Crete, excavated and partially rebuilt by British archaeologist Arthur Evans at the turn of the twentieth century. (Paul Cowan/iStockPhoto)

Current research has shown that Evans's reconstitutions are in many cases quite fanciful. This is particularly true of his restoration of frescoes, which sometimes deviate substantially from the excavated fragments. The palace seen today at Knossos is largely Evans's creation. His partial restorations intentionally created a romanticized ruin to appeal to a modern visitor, but by doing so he gave us a static and somewhat misleading picture of the Minoan palace.

—Susan Helft

palace art and the objects recovered from the palace are evidence that the royal elite controlled the best artists, artisans, and builders in Minoan Crete.

—Susan Helft

Bibliography

- Brown, A. *Arthur Evans and the Palace of Knossos*. Oxford, UK: Ashmolean Museum, 1983.
- Castelden, R. *The Knossos Labyrinth*. New York: Routledge, 1990.
- Hitchcock, L., and P. Koudounaris, "Virtual Discourse: Arthur Evans and the Reconstructions of the Minoan Palace at Knossos." In *Labyrinth Revisited*, edited by Y. Hannilakis. Oxford, UK: Oxbow Books, 2002.
- Michailidou, A. *Knossos: A Complete Guide to the Palace of Minos*. Athens: Ekdotike Athenon, 1989.

Preziosi, D., and L. Hitchcock. *Aegean Art and Architecture*. Oxford, UK: Oxford University Press, 1999.

Troy

Troy was a legendary city supposedly built by the gods Apollo and Poseidon. The city of Troy gained fame through the epic poetry of the seventh-century bard Homer. In Homer's legend, Troy was the background to the daring deeds of the Greek and Trojan heroes in a ten-year siege called the Trojan War. The Trojan War has been assumed to be a factual event in history, and since the late nineteenth century Troy has become associated with Hisarlik in Anatolia in northwestern Turkey. This site has become connected to

the myth of Troy, and some excavators claim that it is the remains of the Homeric city that gives strength to the reality of the Trojan War.

In the Homeric myth, Paris, Prince of Troy, eloped with a Spartan queen, Helen, and took her back to Troy. According to Homer, the Achaeans, Danaans, and Argives were from nation-states such as Mycenae, Thebes, Pylos, and Athens in what is now called Greece and came together in some type of alliance. They were so outraged by Helen's abduction that they sent 1,000 ships, under the command of Agamemnon, king of Mycenae, to retrieve her. They besieged the city of Troy in a ten-year-long siege, but the city would not yield. Homer describes the city as being a "well built city" with "fine walls." In the *Iliad*, the walls of Troy were built by the god Poseidon who boasted of the strength of the walls to the other gods: "I walled the city massively in well-cut stone, to make the place impregnable." The walls were sacred, so it was impossible to breach them. It was only through the trick of a large wooden horse (given to the city but containing armed Greek soldiers) that the Greeks could enter the city and end the siege.

Believing that the legend of Troy was based on a historic event led German archaeologist Heinrich Schliemann to search for the city in the nineteenth century. The exact location had long been lost. In the ancient world it was believed that Troy was under the Roman town called New Ilium; however, its location could only be guessed at, but from Homer's description of Troy, Schliemann chose a hill called Hisarlik and in the 1870s began to excavate this hill.

Schliemann excavated Hisarlik in two separate campaigns (1871-1873 and 1878-1879). Although he uncovered a small settlement and fabulous gold finds, the settlement was too small and was later found to be 1,000 years too early to be Homer's Troy. After Schliemann's death, architect and assistant to Schliemann Wilhelm Dörpfeld undertook a further campaign in 1893-1894 that was paid for by Schliemann's widow Sophie Schliemann. Dörpfeld excavated cyclopean walls and fortifications that resembled the descriptions of Homer. After a break of 40 years the next excavation was by the American Carl Blegen, who uncovered a city that consisted of grand houses that he considered to have been

destroyed by earthquake and another city above it that consisted of small tenements built inside the grand houses and constructed from the rubble of the previous city. It was this latter city that Blegen considered to be Homer's Troy.

In the 1980s excavation recommenced under the direction of Manfred Korfmann, who applied new technology to areas of Hisarlik that had not been excavated for 50 years. A magnetic imaging survey of the fields revealed a ditch that contained remains and possible evidence of a battle believed to be dated to the early twelfth century BCE. The excavation of the site continues today under the direction of Ernst Pernicka.

What these excavators have uncovered is a cross-section of human existence. There were nine main cities built one on top of the other. The top city, Troy IX, was the Roman city of New Ilium founded in the reign of Emperor Augustus. This city was visited by Emperor Constantine in the fourth century, but by this time it was in decline; it eventually disappeared, and its location was forgotten. Underneath the Roman city was a Greek city, Troy XIII, visited by Alexander the Great and the Persian emperor Xerxes. This city was founded in circa 700 BCE.

The archaeological level known as Troy VII is divided into four distinct periods. These divisions are known as VIIb3 (destroyed ca. 950 BCE), VIIb2 (destroyed by fire ca. 1020 BCE), VIIb1 (destroyed by fire ca. 1120 BCE), and Troy VIIa (1300-1190 BCE). The archaeological level that corresponds to the hypothesized date of the Trojan War, circa 1240 BCE, is VIIa, and this is the most likely to be the city of Homer's Troy. With its shanty tenements, it is consistent with the image of a city at siege. Mycenaean pottery has been found in this level that matches with the type and the style of the pottery of the invaders from mainland Greece. Also found in this level were three arrows and some human remains.

Troy VI is Blegen's city of grand houses; here he found a single Mediterranean arrowhead but no remains. The earlier Bronze Age cities were thriving trading centers that traded horses, wool, and slaves. It was Troy II that Schliemann initially proclaimed to be the Homeric Troy. Hisarlik is now referred to as the archaeological site of Troy.

In over 5,000 years of history, the archaeological site of Troy has revealed nine successive

➤ HOMER'S TROY

Prior to German archaeologist Heinrich Schliemann's excavations in the 1870s, the city of Troy was believed to be mythical, as it was based on Greek poet Homer's epic, *The Iliad*. Renowned for its importance in the Homeric tale of the Trojan War, Troy was perceived by most educated Europeans of the nineteenth century to be a purely fictional place, its existence unsubstantiated by any tangible evidence. Schliemann's discovery of Troy, along the Dardanelles in Asia Minor, and later excavations demonstrated that a total of seven cities had been founded in the same location over a long span of time. Notable for its location on an important geographical crossroads of the ancient world, Troy served as a center for the trade of tin between Asia and Europe. Moreover, as a vulnerable trade center caught between the Greeks to the west and the myriad peoples of West Asia, Troy and its successor cities were constantly destroyed and rebuilt.

—Abraham O. Mendoza



View of the ruins at the archaeological site of Troy in present-day Turkey. During the late nineteenth century, an amateur archaeologist named Heinrich Schliemann succeeded in locating the site of the ancient city of Troy. Later excavations have shown that the ancient city that occupied the site was destroyed and rebuilt many times over the centuries. (Jon Eben Field)

cities, but not one of them can clearly be defined as Homeric Troy. Four arrowheads and a few human remains cannot be construed as evidence of the fiercely fought siege of a ten-year duration. However, excavations continue with both new and old technologies, and it appears that the archaeological site of Troy has a lot more secrets to reveal. In 1998 the archaeological site of Troy was listed as a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage site.

—Tessa Morrison

Bibliography

- Blegen, Carl W. *Troy and the Trojans*. London: Thames and Hudson, 1963.
- Homer. *The Iliad*. London and Boston: Allen and Unwin, 1984.
- Korfmann, Manfred. *Troia: An Archaeological Guide*. Istanbul: Arkeoloji ve Sanat Yayinlari, 1992.
- Morrison, Tessa. *Labyrinthine Symbols in Western Culture: An Exploration of Their History, Philosophy and Iconography*. Saarbruecken: Verlag Dr. Müller, 2009.
- Price, Roberto Salinas. *Homeric Whispers: Intimations of Orthodoxy in the Iliad and Odyssey*. San Antonio: Scylax, 2006.

Wood, Michael. *In Search of the Trojan War*. New York: Facts on File, 1985.

Ugarit and the Levant—Public Architecture

Small kingdoms ruled by petty kings dominated the Levant throughout the Bronze Age. Unlike the Egyptians to their south or the Hittites to their north, the kings of the Levant never successfully united to form a large state. Lying as they do along the trade routes between Egypt, Anatolia, and Mesopotamia, much of their culture was influenced from the outside. This is especially true of the royal elite, who consciously styled themselves after the great kings of Egypt or Mesopotamia. Even so, an indigenous cultural uniformity is evident in the public architecture of the Levant and western Syria, the region known as the Syro-Palestinian sphere.

Temple architecture is the most marked example of a long-lived and widely adopted cultural expression. At Levantine sites such as Jericho, Hazor, and Beth Shean and Syrian sites such as Ebla, Emar, and Ugarit, small free-standing temples built with antechamber and cella on axis

are the norm. In northern Syria this is the classic Syrian *in antis* type, a long-roomed cella with two side walls projecting forward to form an enclosed porch. In the southern Levant the cella is often broader or almost square and has pillars, but the two types are clearly related. This Syro-Palestinian temple form has a long history in the region ranging chronologically from the Neolithic period down to the early Iron Age.

In the Middle Bronze Age many Levantine and Syrian sites display marked similarities in their defensive systems. At this time, the eighteenth to seventeenth centuries BCE, most Levantine sites built massive fortifications with great earth ramparts often topped with a casing of stone, called a glacis. In addition to the strong ramparts, Levantine sites such as Shechem and Hazor, Alalakh in the north, and Ebla in the east built nearly identical two-chambered gates flanked by massive towers. The lower courses were often encased with stone slabs for extra strength, a technique also used in Syrian palaces.

More examples of a shared Syro-Palestinian architectural tradition can be seen in the palatial architecture of Late Bronze Age kingdoms. Several design and planning features are shared at the palaces of Megiddo, Lachish, Alalakh, and Ugarit. In all cases, the palaces were mostly square buildings built around a large rectangular court. Reception rooms within the palace were almost always approached through pillared entryways. This arrangement of an antechamber and pillared entrance was first found in the fifteenth-century BCE palace at Alalakh, was used again in the palaces of Ugarit and Megiddo, and became the main feature of the Iron Age Syrian palaces called *bit-bilanis* (portico house).

Ugarit is the best preserved and most splendid of these Late Bronze Age palaces and magnifies on a large scale the features of the smaller southern examples. The palace itself was built and used in the fourteenth to thirteenth centuries BCE. It was multistoried and covered an area of at least 6,500 square meters. Unlike the other palaces of Syria-Palestine, Ugarit was constructed mostly of stone and not mud brick. It was thoughtfully constructed and included amenities such as planted garden courtyards and a water system running through the palace in canals under the floors. Even in its own time, Ugarit was considered one of the wealthiest sites in north-

THE ART OF DEFENSE IN SYRIA-PALESTINE

Toward the end of the Middle Bronze Age there was an intensification and standardization of defenses at many Syro-Palestinian sites. Many cities in the period from circa 1800–1600 BCE spent considerable effort on new and improved fortifications. This can be seen in the wider city ramparts that now included very steep earthen ramparts or stone- or lime-lined glacis and large two-chambered gates. The fortifications attest to a highly politicized and competitive environment in the Levant at this time. The modifications in city defense also reflect changes in military technology and warfare. The new wider gates with ramps provide better access for the latest in military technology, the horse-drawn chariot. The ramparts or glacis helped to defend against siege techniques such as tunneling below city walls or attacking the walls on ladders. It also counteracted the latest military innovation: the use of the battering ram.

—Susan Helft

ern Syria-Palestine. Rib Hadda wrote to Egypt of Ugarit, “See, there is no mayor’s residence that can compare with that at Tyre. It is like the residence at Ugarit. Extraordinarily large are the riches there.” The fiery destruction of circa 1200 BCE that brought the city to its end also preserved many of the riches of the royal palace at Ugarit. Archaeologists recovered some of the finest gold and ivory work of the Late Bronze Age from there. The objects found in the palace showed that Ugarit had very close ties with the Aegean to the west and the Egyptians to the south.

—Susan Helft

Bibliography

- Dever, W. *Palaces and Temples in Canaan and Ancient Israel, in Civilizations of the Ancient Near East*. Edited by Jack Sasson. New York: Scribner, 1995.
- Mazar, A. *Archaeology of the Land of the Bible*. New York: Doubleday, 1990.
- Mazar, A. “The Fortification of Cities in the Ancient Near East.” In *Civilizations of the Ancient Near East*, edited by J. Sasson. New York: Scribner, 1995.
- Schwartz, G., and P. Akkermans. *The Archaeology of Syria*. Cambridge: Cambridge University Press, 2003.

Near Eastern Tells

Most archaeological sites excavated in Mesopotamia and the Levant are of a particular type called a tell. A tell is simply a large mound (*tell* is the Arabic form, and *tel* is the Hebrew form). These tells vary considerably in size, but most range from 7 to 20 acres in size, although tells as large as 200 acres do exist. A typical tell in Israel was occupied for about 1,000–2,000 years and contains remnants of all of those years of occupation. A ruin (or *khirbet* in Arabic) is a site that is only occupied very briefly, maybe for 100 or 200 years, and is usually quite a bit smaller than a tell.

Tells form because people in the ancient Near East tended to build their cities on top of older settlements. It may seem strange that people would have kept building cities higher and higher instead of just moving to another location



Tell at Beth Shean, Israel. (James Emery)

(like the ancient Egyptians did), but in fact it is quite a logical practice given the environment of the Near East. Cities need to be located near a stable water supply and need to have sufficient arable land to produce food for the inhabitants. Since locations where both of these conditions are met are limited, it was worthwhile to build cities in the same areas, over and over, basically as long as the land remained arable and water was present.

Because of this conservatism, fixed trade and communication routes quickly became entrenched. So, if an older site had been located along a major trade route, it was worthwhile to build a new city in that same location since the transportation and communication infrastructure may already have been present. Building on high ground also presented certain benefits. The city can be more easily defended from up high, and invaders can be seen from farther away. Flooding and other natural disasters are also less problematic from up above.

—Kevin M. McGeough

➤ WHY ARE ANCIENT SITES BURIED?

Almost all archaeological sites are buried. This seems strange to our own lived experiences of the world because the processes through which an entire city can be buried occur at a very slow rate over hundreds of years. Rivers gradually expand and contract (dependent on varying precipitation levels), leaving deposits of silt and gravel over a site. Wind can blow unconsolidated material (such as soil) over a site; in places such as Egypt where there is little plant life to anchor the soil, these aeolian deposits can be quite substantial. Forest droppings (such as leaves and pine needles) eventually build up and decay, forming humus that can completely cover a site. Gravity also has an effect; material tends to roll downhill over time, and this can gradually lead to a buried site. Natural catastrophes can also bury sites. Floods can leave up to 3 feet (1 meter) of silt on a site, and volcanoes can cover a site almost completely. Humans also play a role in burying sites, especially through construction. Before modern construction equipment allowed for a building foundation to be dug rapidly and all of the previous material removed, most builders would simply knock down the older material, rake it over, and fill in any open spaces with construction fill, in the process burying the ancient site.

—Kevin M. McGeough

Bibliography

- Feder, Kenneth L. *Linking to the Past: A Brief Introduction to Archaeology*. Oxford: Oxford University Press, 2004.
- Mazar, Amihai. *Archaeology of the Land of the Bible*. New York: Doubleday, 1992.

Levantine Houses

The form of the Levantine house varied according to conditions of geography, economy, available materials, and constraints of space. Both

rural and urban settlements held multistory structures, although few examples have been recovered. Wealthier homes were made of better-quality building materials and had more rooms and decorative elements, but the majority of the population lived in simple structures. The basic house, which would have served a sedentary family supporting itself through a mixture of agricultural production and animal husbandry, included living, working, and storage space for both people and animals.

Wood, stone, and mud were the most common building materials. In the hill country, both foundations and superstructures could be built from stone. Elsewhere, where stone was less plentiful, walls were built of sun-dried mudbrick with stone foundations or entirely without stone. Straw was used in the brick to bind the mud and provide strength. Mud plastering prevented erosion of the brick and could be whitewashed. Doors, windows, and ceiling supports were made of wood. Room width was limited by the length of available timber, but this could be extended by the judicious placement of pillars to support shorter beams. Smaller branches spanned the ceiling beams and were covered by a thick mud plaster to create a stable second floor or roof.

Typically the ground floor housed animals and heavy items and provided work rooms, while the upper stories were intended for living accommodations and additional light storage. Roofs (accessed by built-in stairs or ladders) were flat and could serve as a work, sleeping, or storage space in dry seasons. Beaten earth floors were frequently plastered or covered by mats, carpets, or flagstones. Windows were likely small and restricted to use on the upper stories for purposes of safety and privacy. Cooking took place either indoors on the ground floor or outdoors in courtyards.

Structures were either rectilinear or curvilinear in plan. Most rounded house plans went out of use by the Early Bronze Age IV/Middle Bronze Age I (ca. 2300–2000 BCE), although some continued to be used at the fringes of sedentary society. The curvilinear layout was less conducive to use in areas of dense population, such as urban settlements. Rectilinear structures allowed for a more economical use of space. They could fit tightly adjacent to one another,

➤ PHILISTINE HOUSES

Archaeologists have discovered several examples of Philistine domestic structures. Although some scholars continue to debate, most agree that the Philistines, the biblical enemy of the Israelites, were originally an Aegean people who migrated to the shores of the Levant around 1185 BCE, bringing their distinctive culture with them. The lack of similarity to the layout of the ubiquitous Israelite house supports the interpretation that the Philistines were an intrusive culture in the region. Their rectilinear houses frequently included a large room with a central pillar (likely support for a second story) and a hearth for cooking and heating. Rooms of varying size and function were arranged around this central living space. An adjacent exterior courtyard appears to have served for baking activities and garbage disposal, a pattern of use found throughout Near Eastern settlements. Activities such as the spinning of thread and the weaving of cloth on a vertical loom took place inside the residences.

—Adam Aja

even sharing walls. The layout of structures demonstrates that the residents did not have a fixed plan but instead built to suit the needs of the family and the constraints of the space allotted to them. Over time, individual structures could be altered to add, remove, or subdivide rooms, possibly for rent and sale or for issues of inheritance. By the Late Bronze Age (ca. 1550–1200 BCE) the common Levantine house consisted of several rooms placed to the side of a courtyard. The Iron Age I (ca. 1200–1000 BCE) saw the development of a nearly standardized rectilinear house plan, variously identified as the Israelite house, the three- or four-room house, or simply the pillared house.

The use of the pillared house appears to have spread from the central hill country and Galilee to be used everywhere in rural and urban settlements. Discussion of a standard layout should not obscure the frequent variation witnessed in the numerous Iron Age examples. Generally, the pillared house displayed a large central room, divided from two parallel side rooms of equal length by rows of pillars. At the back, a

broadroom for storage spanned the width of the building. Often the space between the pillars was filled to create walls. The designation “four-room” describes the plan of the ground floor, although the rooms of the upper floors should not be forgotten. Previous reconstructions did not include a second story or left the central room unroofed. The central pillars supported a ceiling and were easily spanned by available timbers. Flagstone-covered floors in the side aisles provided a durable surface for stabling animals and facilitated the mucking out of the stalls.

—Adam Aja

Bibliography

- Daviau, Paulette M. *Houses and Their Furnishings in Bronze Age Palestine: Domestic Activity Areas and Artefact Distribution in the Middle and Late Bronze Ages*. JSOT/ASOR Monograph Series 8. Sheffield: Sheffield Academic Press, 1993.
- Kempinsky, A., and Ronny Reich. *The Architecture of Ancient Israel from the Prehistoric to the Persian Periods*. Jerusalem: Israel Exploration Society, 1992.
- King, Philip, and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Stager, Lawrence E. “The Archaeology of the Family in Ancient Israel.” *Bulletin of American Schools of Oriental Research* 260 (1985): 1–35.

Stager, Lawrence E. “Forging an Identity: The Emergence of Ancient Israel.” In *The Oxford History of the Biblical World*, edited by M. Coogan. Oxford: Oxford University Press, 1998.

The Palace of Mari

During the Bronze Age (3300–1200 BCE), Mari (present-day Tell Hariri) was an important trading center because of its position at a major crossing point on the Euphrates River. Mari lies on the eastern border of present-day Syria, and in antiquity it controlled the trade between the Syrian states to its west and south and the southern Mesopotamian states to its southeast. Mari’s intermediary position between the Levantine coast on the one hand and the cities of Babylonia on the other hand certainly influenced its political and social culture. Nowhere is this more evident than in the large palace at the very heart of the city.

Even in antiquity the palace at Mari was famed for its size and beauty. Other kings specifically came to Mari to see the splendor of the palace as is attested by a letter to the king of Mari, Zimri Lim, translated by Dossin in 1937: “Thus says your brother Hammurabi [of Yamhad]: The king of Ugarit has written to me as follows: ‘Show me the palace of Zimri Lim! I wish to see it.’”

The palace of Mari was quite extensive, covering at least six acres of the city and occupying a ground area of about 26,910 square feet (2,500 square meters). The first floor had more than 250 rooms, and at least part of the palace had a second story. The palace is called the Palace of Zimri Lim because Zimri Lim was the last known ruling king at Mari, but the palace was actually constructed over a period of about 300 years. The building itself served as the nexus of the city from the Sumerian period of circa 2100 BCE to the time of Hammurabi (ca. 1750 BCE). The palace is laid out on a well-known Mesopotamian plan of large square courtyards with adjacent long reception rooms. The Mari palace centered around two main courtyards that were open to the sky. One of these, we are not sure which, was called the Court of the Palms and was probably planted with trees and a garden. Spanning out from these courtyards are royal

➤ THE MARI ARCHIVE

Thanks to the roughly 20,000 tablets found at Mari, archaeologists have a very good idea of life in the palace of Zimri Lim. Even mundane events were recorded by the king. One recorded that a lion was captured on a rooftop in the city and another that locusts were sent to the king (perhaps as food). In another letter Zimri Lim gives advice to his wife not to let the palace women drink from the cup or sit on the seat of a certain Nanna who has a very contagious disease. The palace was very luxurious for its time. We know for instance that the king had ice brought down from the mountains to cool his drinks in the summer months. We also learn about the work of palace singers, weavers, cooks, scribes, and doctors, all attending to the needs of the kings at the palace.

—Susan Helft

apartments, a throne room, a chapel, living apartments, kitchens, storerooms, workshops, bathrooms, and an archive.

The palace at Mari is the largest palace in Syria excavated so far. It is best known today for the paintings and sculpture found there over the course of excavations. Painted walls have survived from the major courts and adjacent shrine (rooms 131 and 132). They portray processions of men and animals in typical Syrian-style clothing. The most famous of these paintings is called the Investiture of Zimri Lim. It shows the king receiving the rod and the ring of kingship from the god Shamash in a vibrant garden scene with mythological creatures. In the adjacent room (room 65), either a shrine or the throne room, two large sculptures of the “goddesses with flowing vases” flanked the entrance. These were extraordinary because they actually piped water through the statues so that it would flow out of the vases that the goddesses held in front of them.

—Susan Helft

Bibliography

- Akkermans, P., and G. Schwartz. *The Archaeology of Syria*. Cambridge: Cambridge University Press, 2003.
- Heimpel, W. *Letters to the King of Mari: A New Translation, with Historical Introduction, Notes, and Commentary*. Winona Lake, IN: Eisenbrauns, 2003.
- Roaf, M. *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File, 1996.

Ziggurats and Gardens of Mesopotamia

Uruk, probably the world's first city, had at its heart two sacred areas: Kullaba and Eanna. Throughout the fourth millennium BCE Kullaba was focused on a single shrine, the White Temple, built from the start on a slight platform. These were repeatedly reconstructed, increasing in size and reaching their final version around 2900 BCE, when the temple was raised on a platform that was 14.2 yards (13 meters) high.

The tripartite plan that had characterized the White Temple became standard in the third millennium. While the normal low temple was the home of the deity, some (high) temples were



Ziggurat at Ur, an important Sumerian city in ancient Mesopotamia, photo from 1932, before restoration. (Library of Congress)

raised on platforms: these may have been regarded as portals through which the deity might descend to Earth as well as a means by which priests could come closer to the gods. This practice reached its climax when the first Ur III king, Ur-Nammu (2112–2095 BCE), created ziggurats (sacred pyramids) at Ur, Eridu, Uruk, and Nippur.

Ziggurats were constructed of solid layers of sundried brick, separated at every seven courses by a layer of reed matting as protection against rising damp. Weep holes set at intervals and internal drainage shafts also served to keep the structure dry. A thick facing of baked bricks protected the exterior. The Ur III ziggurats, epitomized by the well-preserved example at Ur itself, consisted of three staged tiers, sloping inward, with a platform at each stage accessed by a triple stair on one side; some later examples, such as that at Dur-Sharrukin (Khorsabad), were approached via a spiral ramp. The platform on the summit bore a building, probably a shrine.

Ziggurats became a regular feature of sacred precincts in subsequent periods. A block of solid brick masonry, wind scoured but still monumental, remains from the Kassite ziggurat in Dur-Kurigalzu (Aqar Quf), while in neighboring Elam the short-lived city of Al-Untash-Napirisha (Choga Zanbil) was centered on the largest surviving ziggurat, still substantially preserved; this differs from the Mesopotamian examples in form, having internal rooms in the ground tier and four internal staircases. The tradition reached its zenith with the famous ziggurat of Marduk (the

➤ GARDENERS

Gardeners are often mentioned in early Mesopotamian texts. According to legend, Sargon of Akkad (ca. 2334–2284 BCE) was the son of a priestess who, when he was born, cast him adrift on the river in a reed basket. He was rescued by Aqqi, a water carrier, who raised him as a gardener. In the eighteenth century BCE gardeners were among the many people listed as working for the palace at Mari on the middle Euphrates. Specific reference is made to the employment of blind people: gardening was apparently one of the range of occupations they undertook. In the previous century, Erra-imitti, king of Isin, had chosen a gardener, Enlil-bani, to act as his substitute, a device intended to avert from the real king evil that was forecast. This failed. Erra-imitti himself died, and Enlil-bani became king in reality, reigning for 23 years.

—Jane R. McIntosh

Tower of Babel) in first-millennium Babylon, which had seven tiers. Ziggurats were apparently painted; the traditional colors for seven-tiered examples were, from the bottom up, white, black, red, blue, orange, silver, and gold.

When Leonard Woolley excavated the Ur ziggurat, he believed he had found evidence that the tiers had been planted with trees and vegetation, the model for the later Hanging Gardens of Babylon. This theory is no longer accepted. Providing a daily supply of water for such plants would have been an impossible task; moreover, the combination of water and roots would soon have destroyed the mud bricks of the structure. Texts make no reference to plants on ziggurats, and more recent investigations have found no evidence of such gardens.

In contrast to Kullaba, the Eanna precinct at Uruk developed in the fourth millennium BCE as a diverse complex of shrines, courtyards, and other religious structures. The public spaces between the buildings, epitomized by the Mosaic Court with its cone mosaic walls and pillars, were probably as much the focus of religious activities as were the buildings' interiors. Cisterns and conduits found here may have supplied water for trees and plants in some of these open

spaces, the beginning of the practice of creating gardens in palace and temple courtyards.

Not all Mesopotamian rituals took place within the temple precincts. An important part of many religious festivals was transporting the god's statue from his home in the temple to a garden within or outside the city.

Gardens played an important role in Mesopotamian life. The description of Uruk in the days of the semilegendary King Gilgamesh, who may have lived around 2600 BCE, mentions that a major part of land within the city's walls was garden (date orchard). A cuneiform tablet dated around 1300 BCE bears a scale plan of the city of Nippur, carefully labeled with measurements. It shows the city's walls and gates, the Euphrates River and its canals, a number of temples, and one large area in the south labeled "garden in the city."

Both in the cities and their suburbs and in the land surrounding villages, gardens were used to raise fruits and vegetables to complement the cereals grown in the fields. Gardens were often located on river levees or along the banks of streams and canals, where they could be watered regularly, either by hand or by lifting water using a shaduf.

Often the plants were grown in a highly efficient shade-tree garden, the origins of which are described in a Sumerian myth. There was once a gardener, Shukalletuda, who could not grow his plants because they were burned up by the sun and covered with dust by mountain winds. After long thought and study of divine matters, he devised a way of overcoming these problems, planting a *sarbatu* tree to provide perpetual shade.

Sumerian shade-tree gardens usually used date palms rather than *sarbatu* (probably the Euphrates poplar). Tall date palms provided day-long shade from the hot summer sun, creating a microenvironment of cooler temperatures and higher moisture. Shorter fruit trees such as apple and pomegranate were planted beneath the date canopy, and vegetables, herbs, and spices were planted at ground level. Manure was sometimes applied to increase productivity. Similar gardens shaded by other trees were popular farther north. Shade reduced the evaporation that would normally have occurred when plants were watered in the summer heat. Other trees in the

garden might include tamarisk, grown for its wood, as well as figs, pear, plum, cherry, and mulberry.

In the third millennium the plants grown included various pulses, cucumbers, garlic, and onions; later the range increased, including beetroot, turnip, leeks, mustard, cress, radish, lettuces, fennel, coriander, marjoram, saffron, fenugreek, rue, mint, rosemary, melons, cumin, and watercress. Grapes were also grown in shade-tree gardens, trained along trellises or from trees. Olives were grown in Assyria but did not thrive in Babylonia.

Date palms were not only for shade. Dates, rich in vitamins and high in carbohydrates, were the chief fruit grown in Babylonia. They were hand pollinated from at least the time of Hammurabi, allowing growers to raise mainly the fruit-bearing female trees. Their young sprouts could be eaten as a vegetable, and the palms yielded leaves for making roofs, baskets, and mats; bark fibers for making rope; and, at the end of their productive life, timber. Date palms represented a considerable investment, as they did not bear fruit until their fourth or fifth year and reached full productivity only around 25 years.

While growing vegetables, fruit, and herbs was important for the Mesopotamian economy, gardens were not merely for producing food but were also shady places of relaxation where lovers or other people might meet in privacy and meals could be taken.

The courtyards of palaces and the precincts of temples were probably often furnished with trees and gardens. The Ur III king Shulgi (2094–2047 BCE) claims in his inscriptions to have planted gardens, and evidence of gardens comes, for example, from the palace at Mari where date palms were planted in at least one of the courtyards. Texts from Mari show that the king and his entourage often ate in the garden. Excavations in the palace at Ugarit (dating from the second millennium, like Mari) revealed traces of a garden in one of the courtyards with a pool near the center; loose earth suggests that there were plants around the courtyard and possibly a tree in its center. Another large courtyard in the eastern part of the palace contained a walled garden.

Tiglath-Pileser I (1114–1076 BCE) may have been the first of many Assyrian monarchs to cre-

ate a garden planted with trees brought back from his campaigns in foreign lands, including cedars, boxwood, and oaks. He also collected exotic animals: herds of horses, deer, gazelle, and ibex stocked his park—along with four Syrian elephants he had captured in the Habur region.

—Jane R. McIntosh

Bibliography

- Bienkowski, Piotr, and Alan Millard, eds. *British Museum Dictionary of the Ancient Near East*. London: British Museum Press, 2000.
- Dalley, Stephanie. "Ancient Mesopotamian Gardens and the Identification of the Hanging Gardens of Babylon Resolved." *Garden History* 21(1) (1993): 1–13.
- Kramer, Samuel Noah. *History Begins at Sumer: Thirty-nine Firsts in Recorded History*. Philadelphia: University of Pennsylvania Press, 1956.
- Leach, H. "On the Origins of Kitchen Gardening in the Ancient Near East." *Garden History* 10(1) (1982): 1–16.
- Van de Mieroop, Marc. *The Ancient Mesopotamian City*. Oxford: Oxford University Press, 1999.

Mesopotamian Houses

Early experimentation with house structure in Mesopotamia largely disappeared by the second millennium BCE, when the courtyard house emerged as the predominant choice for both rural and urban domestic architecture. Some of the largest areas of domestic housing have been excavated at the urban sites of Nuzi, Nippur, Ur, Sippar, and Babylon, but additional examples have been identified including some at smaller rural sites in the Hamrin. The typical courtyard house had several rooms arranged around a central open courtyard, which provided light and air to the surrounding rooms. Residents used these rooms for storage and living space but also had special rooms for use as bathrooms or kitchens. The kitchen, identified by the presence of an oven, was often located in the corner of a house. Poorer structures may only have had one or two rooms in addition to the courtyard, which could have served as the cooking and baking area. The stairwells that have been identified in some buildings may have only led to a roof rather than a second story, although the roof in Near Eastern climates typically could be

➤ A NEIGHBORHOOD AT UR

The excavations of Leonard Woolley at Ur exposed one of the most illustrative examples for early second millennium domestic architecture. The neighborhood of narrow, meandering streets possessed generally small structures (under 100 square meters or 119.6 square yards) that included storefronts, shrines, and the homes of both wealthy and poor. Although there was no standard size or layout for the buildings, the structure at Woolley's so-called #3 Gay Street serves as an example of the ideal house type. Residents could enter from the street by passing through a small entrance chamber, which led into a central bricked courtyard. There were no windows in the first story since the courtyard would provide light and air to the living rooms, storage spaces, kitchens, and bathrooms arranged around and opening onto it. Interior walls were plastered and whitewashed, and the foundations were constructed of baked mud brick to protect the walls from the damp. A stairwell gave access to the second story.

—Adam Aja

used as an additional functioning room for the house, providing storage or sleeping space and a well-lit activity area. Wealthier urban homes would often have a small entrance chamber between the street and the courtyard. The doors of this chamber were offset to obstruct or obscure the view of the courtyard from the street, thus providing an additional level of privacy. It is suggested that buildings with direct access to the courtyard from the street might have housed animals.

Mud brick was the most common construction material in southern Mesopotamia. Even in northern Mesopotamia, where stone was more common, builders often opted for the inexpensive and readily available mud alternative. By the second millennium, bricks were typically made by packing mud into wooden molds and leaving them to dry in the sun. To prevent cracking, builders used chaff as a temper for bricks with high clay content or straw as a binder for silty

bricks. Additional mud served as the mortar. Mud-brick walls supported wooden roof beams without the aid of any pillars. Smaller timbers or branches spanned the roof beams, which were covered by brushwork or reeds and sealed with a thick layer of mud plaster. Builders used wood for doors, window frames, and lintels. Doors pivoted in stone sockets. Mud plaster, whitewash, or paint covered some walls. Gypsum (more common in the north) or lime may have been added to the mud plaster to act as the whitewash, although it was little used in domestic architecture. The reeds plentiful in the wetlands of southern Mesopotamia served several functions including mud-brick temper, mats, curtains, and fencing. Builders frequently added harder kiln-baked brick for foundation courses to provide some stability and protection from rising damp. Baked brick was also used in paving, drains, water basins, and thresholds. In later periods and in wealthier structures, bitumen was used to waterproof drains, toilets, basins, and lower damp courses. Given the scarcity of wood and stone, building components constructed of these materials were frequently rescued and recycled when houses were rebuilt. Rebuilding a house (every 60 years or so) often brought some changes to the layout, either by dividing a room or expanding the structure to incorporate areas that had previously been considered exterior spaces.

Changes in family size may have necessitated some alteration to building layout. A household would most likely have consisted of a single simple family related by marriage or blood or may have included an additional generation, slaves, or animals. Houses could be divided to accommodate the families of several sons (as texts at Nippur indicate), with rooms being altered for different uses. Alternatively, individual rooms might be sold off and the structure reconfigured to change the access to the room. Family tombs were often located directly under the homes. An eldest son's favored inheritance or retention of the house might have been tied to his maintenance of rituals for the dead ancestors. Homes, such as those at Ur, were often equipped with a small shrine or cultic niche, perhaps designated for this purpose.

—Adam Aja

Bibliography

- Moorey, P. R. S. *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence*. Winona Lake, IN: Eisenbrauns, 1999.
- Moorey, P. R. S. *Ur "of the Chaldees": A Revised and Updated Edition of Sir Leonard Woolley's Excavations at Ur*. Ithaca, NY: Cornell University Press, 1982.
- Postgate, J. N. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York: Facts on File, 1990.
- Stone, Elizabeth C. *Nippur Neighborhoods*. Studies in Ancient Oriental Civilization 44. Chicago: Oriental Institute of the University of Chicago, 1987.

Monumental Architecture in the Indus Valley

One of the most puzzling aspects of the Indus Valley civilization (the ancient Harappans) is the lack of evidence for public structures such as palaces or temples, typical of other urban societies in the period between 1000 BCE and 300 CE. Perhaps these kinds of structures have not yet been excavated, or perhaps buildings that have already been excavated have not been properly identified. Some examples of public architecture have been identified, although the functions of these buildings are heavily debated by scholars.

The least controversial types of public architecture are the fortifications common to the cities of the Indus River valley. These fortifications were made of mud brick, as were the gates that allowed access through the walls. The cities themselves were surrounded by walls; smaller walls also separated subsections of the cities.

Most controversial are the so-called granaries excavated at Mohenjo-daro and Harappa. The granary at Mohenjo-daro was extensively excavated in the 1950s by Mortimer Wheeler, who unfortunately did not record the types of artifacts that were retrieved from the structure. However, excavation records do point out that no remnants of grain were recovered from the structure, which perhaps should have indicated to him that this was in fact not a granary! The structure itself is quite large, about 165 × 88 feet

➤ TOWERING WELLS

Visitors to Mohenjo-daro may be misled by the large, circular mud-brick buildings that rise high above the plain. These structures look very much like watch towers or medieval European castles. In fact, these are ancient wells excavated by archaeologists. In ancient times the wells would have extended deep underground, with the sides buttressed by the mud-brick structure. Only the very top of the well would actually have been visible aboveground.

—Kevin M. McGeough

(50 × 27 meters) in size, and is divided into 27 rectangular or square blocks. While most no longer accept that this was a granary, there is little evidence to point to its actual use. The granary at Harappa is equally suspect. This building is about 165 × 130 feet (50 × 40 meters) in size and built on a mud-brick foundation. A corridor 23 feet (7 meters) wide runs through the center of the structure. The corridor separates two rows of six rooms. The building does not resemble the “granary” at Mohenjo-daro except in one way: no evidence for grain was retrieved from it either! So while the “granary” at Harappa was certainly a large public building, it was likely not a public granary. Other large buildings have been excavated at Harappa, Mohenjo-daro, and other sites and are varyingly called assembly halls or college halls, acknowledging that these buildings would have facilitated public gatherings but that no evidence remains to indicate the precise function of these structures.

A less controversial but nonetheless stunning piece of monumental architecture is the Great Bath at Mohenjo-daro. This may be the earliest public water tank in the world. It is 40 × 23 feet (12 × 7 meters) wide. Two wide staircases lead down to a ledge that surrounds the bath. People would have been able to walk around the ledge, gaining access to the water without actually getting wet. The floor itself is water-tight. It is made of tightly packed mud bricks and gypsum plaster. The walls of the bath were reinforced with bitumen (a tarlike substance with waterproofing

characteristics). There is not much evidence for public bathing here; it was more likely used as a supply of fresh water.

—Kevin M. McGeough

Bibliography

- Chakrabarti, Dilip K. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.
- Fairservis, Walter Ashlin. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.
- Kenoyer, Jonathan Mark. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.
- Maisels, Charles Keith. *Early Civilizations of the Old World*. New York: Routledge, 1999.

Urban Planning in the Indus Valley

The ancient cities of the Indus Valley (the Harappan culture) display an orderly design and may reflect some of the earliest conscious urban planning (as opposed to a laissez-faire strategy of constructing buildings beside earlier building without any overall strategy for the shape of the town). The basis of this urban design is the layout of streets along the cardinal directions. Careful astronomical observations must have been made in the initial laying out of major city roads. The major roads form rough grids with north-south and east-west axes.

▶ THE HOMOGENEITY OF INDUS URBAN DESIGN

Much is made of the relative homogeneity of urban design in the cities and villages of the Indus Valley. The traditional accounts of the sites suggest that the people of the Indus Valley shared a common sensibility of what their cities and houses should look like. At first glance, this certainly seems to be the case. The construction materials are the same at most cities (even the size of bricks used is relatively consistent) and domestic architecture in general looks relatively similar. On closer examination, these similarities may only exist at a surface level, as the spatial relationship of structures within the cities varies. Still, the sites do share general features pointing to an overriding architectural sensibility that could be called Harappan or Indus.

—Kevin M. McGeough

Mortimer Wheeler, who excavated Mohenjo-daro in the 1950s, described the city plan as a gridiron layout, believing that the construction of buildings in between the roads was constrained by formal desires to retain a grid structure. This viewpoint has been questioned recently, since the actual evidence from Mohenjo-daro does not seem to support this view. In fact, the buildings in between the major roads as well as the minor roads appear more haphazard, looking more like a large interlocking net of varying size than a formal grid. The major roads were laid out with a strict cardinal orientation, but the rest of the construction was not constrained by this orientation per se. Using the roads as boundaries, structures were built as space and resources would allow, shifting over time as they were renovated, destroyed, and rebuilt.

Urban design based on an initial large-scale plan and followed by ad hoc construction as the need arose is also apparent in the extensive sanitation systems. The initial laying out of a sewage system would have required extensive planning and cooperation among the inhabitants of the city. Once laid out, the sewer system could be altered with minimal effort. It must be presumed that some sort of infrastructure (or at least formal rules) existed to provide maintenance of the sewage system and handle dispute resolutions for neighbors sharing the same drains.

The domestic architecture at Harappan sites is also indicative of a shared sense of what a house should look like. Mostly made of mud brick and wood, houses were built with the same general principles. The center of the house would be a large courtyard with several rooms opening into it. The houses were at least two stories tall; upper roofs were probably built of wooden beams and straw, although none of these have survived. Doorways to the houses were located along side streets and alleys and not on the major roads. Windows were common; shutters or lattices of wood provided some privacy.

—Kevin M. McGeough

Bibliography

- Chakrabarti, Dilip K. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.
- Fairservis, Walter Ashlin. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.

Kenoyer, Jonathan Mark. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

Shaffer, Jim. "Harappan Culture: A Reconsideration." In *Harappan Civilization: A Contemporary Perspective*, edited by G. Possehl. Warminster, UK: Aris and Philips, 1982.

Shang Cities

The layout of Chinese cities is remarkably conservative. Until the rise of the communist government in the twentieth century of the modern era, the ideal Chinese town was enclosed by a rectangular wall complex. Within the major wall system, Chinese cities were further subdivided into smaller sections, creating inner cities and separate complexes. This conceptualization of the city as walled space was already present to some degree in Neolithic China and is fully apparent in Shang period urban planning.

Throughout the period of the Shang kings, the establishment of cities was part of the formal strategy of asserting the dominance of the monarch and securing political, economic, and military force throughout the kingdom. The walled cities built under the auspices of the Shang ruler acted as fortresses throughout the heartland of the kingdom, as both real loci of military power and powerful symbols of the military dominance of the king. The capital city of the Shang king varied with shifting political currents (especially with the vacillating power of many of the minor lineages).

Archaeological excavations have provided a wealth of information on Shang cities. Many scholars have attempted to connect place-names from the ancient historical accounts of the Shang with archaeologically excavated sites. This is actually extremely difficult, as the ancient names of the archaeological sites have usually not been preserved. The standard practice is to refer to these Shang cities by their modern place-names, a practice followed here.

The site of Yanshi is one of the likeliest candidates for an early Shang city. It is a relatively small city, surrounded by an imposing wall 52–82 feet (16–25 meters) thick and 3–7 feet (1–2 meters) high. Within this wall is a second wall, differentiating an inner and an outer city. The

outer city wall has seven narrow gates and would have been a strong defensive structure. Within the inner city is a palace complex.

Zhengzhou dates slightly later and is a larger city, with a wall that was 66 feet (20 meters) thick and 33 feet (10 meters) high. Within the walls is a large palace complex (in the highest section of the city); the remains of human sacrificial victims are interspersed throughout the palace complex. The residential areas of the city display class differences, with elite homes as well as very small homes of a poorer group. Bronze workshops were identified within the city walls, as were two hoards of bronze artifacts. Cemetery complexes were also found in the city.

Since 1928, excavations at the site of Anyang, on the Huan River, have revealed much about Shang civilization. Anyang has been identified as the last Shang capital city, Yin. Yin was inhabited during 1300–1050 BCE; the excavators believe that there were four major building phases within that time period. Only parts of the city wall have been located so far, and some contest that these are in fact parts of the city wall, but it is assumed that there was one. The palaces and temples of Yin are located in the northern part of the city, close to the river. The city itself consists of clusters of rammed earth foundations (called *hang tu*) upon which sat various structures. A royal cemetery and numerous sacrificial remains have also been located at Anyang.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Bagley, Robert. "Shang Archaeology." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Debaine-Francfort, Corinne. *Discoveries: The Search for Ancient China*. New York: Abrams, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

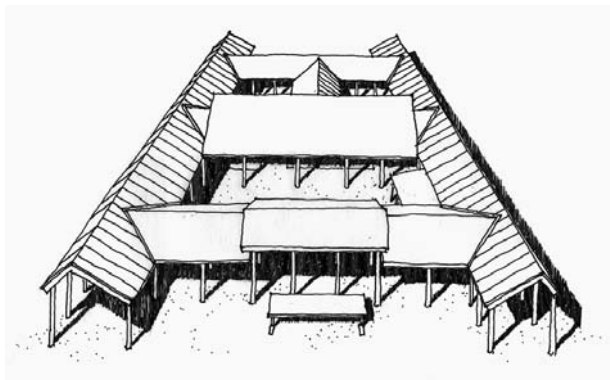
Houses in Early China

Architectural tradition in China divides along regions determined and dominated by the great river systems, the Yellow River in the north and Changjiang River in the south. Along the middle course of the Yellow River rises the high and arid plateau of yellow earth that supported many of the splendid empires of the Chinese past, while the Changjiang River flows over 1,000 miles of fertile tract of flat plain where the ancients settled. Each region from very early times defined an architecture essentially its own and forecast later phases of Chinese architecture.

Each region has its prototypes: dwellings cut into earth in the north where the land is high and shelters erected on trees in the south where the underground water is high. The building materials were those most readily available for constructing shelters: earth, wood, bamboo, and thatch. The main building material in the north is earth, and the main building material in the south is wood.

The architecture in the loess plateau has been distinguished by earthen dwellings, which still dominate the rural area in the region today, called *yaodong*. The earth-cut caves without architectural form and structural mass were made by digging into the hillside or terrace for space. The layout depends upon the geography of the land.

According to Chinese literature (*Huai Nan Zi*, ca. 120 BCE), Emperor Shun (ca. twenty-second century BCE) was the first to design buildings to allow his people to move away from caves. Archaeological excavations proved that early buildings in the Yellow River valley were mainly roofed and semisubterranean. At Banpo near Xian, the dug space was in general about 15–31 inches (0.4–0.8 meters) below ground level of the respective times, which became shallower in the later time. The dwelling units were circular or square in plan and had a diameter or side of 13–19 feet (4–6 meters); rectangular plans of housing areas up to a 1,076 square feet (100 square meters) appeared at later dates. The houses were timber structured and plastered with mud. The floors were prepared by pounding clay and then treated by burning for heating



*Multiple courtyard complex, Early Western Zhou.
(Joseph K. Crea)*

purposes into a continuous surface. This has led to its historical name, terracotta subterranean dwelling (*taofu taoxue*).

To protect the earthen walls, additional eaves were constructed by the Shang people. Moreover, to avoid attack by rain and groundwater, buildings were elevated; as Mozi (468–376 BCE) said, “build houses upon high platforms to avoid excess moisture.” The state architecture of the Spring-Autumn and Warring States periods was represented by wooden buildings on high platforms of rammed earth. The platform could be several levels, and the central part was usually higher than the surroundings, which might result in a multistoried appearance of grand scale. This type of buildings is traditionally called high-platform architecture.

Yellow earth is strong enough to bear heavy loads when dry, but excess water may cause it to expand and even sink or slide under a load, leading to building collapse. This problem was solved by ramming the earth. The platform, on a building site, was made by first digging a base in the ground 3–9 feet (1–3 meters) deep, then filling it with soil and ramming it to compact it layer by layer until the required height was reached.

The archetypal house of the Changjiang area was characterized by a wooden structure raised on posts, with a pitched roof and extended ridges. Many building remains of this type were found from a prehistoric site at Hemudu in Yuyao, Zhejiang Province, one of the most important centers of Neolithic culture. Bronze vessels bearing

incised depictions of a shelter on trees have been preserved to the present day to give picturesque evidence of the architecture. The pile dwelling was recorded as *ganlan* in historical books. This type of building is suitable for areas that are hot and humid, found in all parts of the geographical limits of the Changjiang River culture. Similar houses are commonly built in Southeast Asia.

A building compound excavated at Erlitou in Henan Province is believed to be a palace built in the late Xia dynasty (twenty-first to sixteenth centuries BCE). It is a courtyard compound bounded by roofed corridors all around. The palace consists of a gatehouse, a court, and a main hall. Facing south, the main hall is on a rammed-earth platform and is covered by a thatched roof. The building has eight longitudinal bays and three transverse bays. It measures 33 by 12 yards (30.4 by 11.4 meters), and each bay is a square whose sides each measure 4 yards (3.8 meters). The walls were of compacted earth within frameworks (*banzhu qiang*) that were plastered; the interior wall was decorated with paintings.

A courtyard complex of the early western Zhou, found at Fengchu in Shaanxi Province, is encircled by inward-facing buildings joined in a right angle on four sides. Typically orientated to the north-south, the main halls are laid along the axis: office in front and residence behind. A screen is in front of the gatehouse. The courtyard walls, gate, and screen certainly meant protection. In the compound there was a drainage system to allow storm water to drain away. The drainage design was responsible for the development of walled courtyards and walled cities in China.

—*Qinghua Guo*

Bibliography

- Fu Xinian, Guo Daiheng, Liu Xujie, Pan Guxi, Qiao Yun, and Sun Dazhang. *Chinese Architecture*. English text edited and expanded by Nancy S. Steinhardt. New Haven, CT, and London: Yale University Press, 2002.
- Knapp, Ronald G. *China's Traditional Rural Architecture: a Cultural Geography of the Common House*. Honolulu: University of Hawaii Press, 1986.

Tsugaru, a Sociocultural Center in Ancient Japan

The Jomon age, the Neolithic age in the Japanese archipelago that laid the foundation for later Ainu and other indigenous cultures, emphasized shamanism as the primary governing system. Connected by trade and migration, ancient indigenous communities in northern Japan shared certain cultural practices with those in Siberia and across the Aleutians. Tsugaru, a peninsula in the prefecture of Aomori at the northwestern tip of Honshu, was a center of social, political, and spiritual exchange in the early indigenous history in northern Japan.

From time immemorial, Tsugaru has been a magnet for wrecked ships, flotsam, and refugees from all directions. Among its earliest settlers were speakers of an Ainu language. According to local oral tradition, the people of the region are the descendants of Asobe and Tsuboke; the word "Asobe" is a mispronunciation of the Ainu Ape "fire," and "Tsuboke" is originally *chupka* ("the sun"). The name "Tsugaru" may also derive from the Ainu word *chupka-un-kur*, the "People at the base of the sun," or "Easterners," as east remains the most important sacred direction for the Ainu.

A final Jomon period site at Kamegaoka (1000–300 BCE) in Tsugaru is one of the showcases of Jomon culture. The artifacts from Kamegaoka indicate a prosperous settlement with a rich ritual and ceremonial structure and considerable societal distinction. These include some of the early examples of female figurines nicknamed Jomon Venuses, often depicting a pregnant mother similar to those found in Siberia, such as Malta. These were deliberately broken or burnt before they were buried or disposed of, indicative of its use in fertility ritual. Kamegaoka-type potteries are characterized by elaborate asymmetrical shapes and designs, often compared to later Ainu decorative motifs. A number of similar sites in northern Honshu and Hokkaidô as well as mainland Northeast Asia indicate that a cultural relationship of some sort existed between these areas. Similarities in ritual objects used in shamanic performance, such as bent-nosed masks, also suggest a connection between the Jomon and ancient Siberia.

➤ WHO WERE THE JOMON?

The orthodox historical view of Japan assumes that the Jomon period was a historical Dark Age and that the Jomon populations were simple, primitive, and barbaric, lacking elaborate political arrangements comparable to the Yayoi state. In recent years, scholars have increasingly accepted the view that the Jomon populations shared a distinct culture and technology in the context of a complex sociopolitical relationship, managing territorial and economic matters without relying on a centralized political structure. In the hands of some proponents, however, this view retains nationalistic overtones, maintaining that the Ainu and the Ryukyu islanders, positioned on the geographic margins of present-day Japan, remain closest to the Jomon populations genetically, physiologically, culturally, and probably linguistically.

Nevertheless, a variety of locally occurring items of evidence suggests that certain characteristics of Jomon cultures extended beyond modern lines on the map. The Jomon populations were neither homogenous nor culturally uniform: they were constantly negotiating ways to relate to different groups in different areas at different times through various languages in the same way as any set of indigenous communities tied together by a stake in trade.

—Sakurako Tanaka

In the city of Aomori alone, approximately 200 Jomon sites have been confirmed, including several large stone circles. While many of these sites go back to the early Jomon, the Sannai Maruyama site is the best-known example of Jomon cultural development. This 5,000-year-old burial ground is considered to be part of one of the largest and most complex settlements from the Jomon period. The name “Sannai” derives from the Ainu expression *san-nay*, to “send downriver”; indeed, an Ainu village was known to have existed there until the nineteenth century. Sannai was a well-planned community, stable for 1,200 years from about 3200 to 2000 BCE, with a minimum population at times exceeding 500.

Sannai reveals the considerable technological achievements of the Jomon populations, evi-

denced in mass production (perhaps even surplus production) of pottery, lacquerware, jewelry, and stoneware as well as a high level of architectural and construction skill, including the use of large chestnut trees. Weaving and knitting characterize Sannai clothwork as well as sewing and perhaps even stitching, as countless needles made of animal bone have been found.

The Jomon inhabitants of Sannai were not simply a hunting and gathering people but were sedentary and affluent forager-fisher-farmers with ample access to sea and land resources. They foraged and farmed gourds, beans, burdock, perilla, flax, and millet and even farmed forestry resources by artificially creating chestnut forests around the community. There was also some level of urban planning to sustain the population within the limits imposed by ecological balance, evidenced by the use of Jomon feet, a measurement unit; the construction of paved roads with pits; and a well-planned waste disposal system.

The exchange with outside traders was an essential aspect of social sustenance. The Sannai site contains jade, amber, asphalt, and obsidian stones brought in through water-based trade from other regions across oceans and mountains. To accommodate the trade traffic, Sannai has an arc-shaped main public road 1,378 feet (420 meters) long running east-west, leading to and from the water. The tombs and large mounds are a highly organized part of community design and planning, indicating the development of social stratification and the possible emergence of slavery and/or outcast classes.

Complex ritual structures and belief systems interacted with their ecological situation and limitations at the Sannai community. The numerous finds of elaborate ritual objects, particularly of large female figurines and the evidence of careful urban planning that appears to have been carried out under the influence of a developed cosmological scheme, is all but impossible to explain without assuming a highly developed ceremonial and religious life on the part of the people who lived there.

—Sakurako Tanaka

Bibliography

Aikens, C. Melvin, and Takayasu Higuchi. *Prehistory of Japan*. New York: Academic Press, 1982.

Tanaka, Sakurako. "Sannnai Maruyama, the Origin of the Ainu and the Problem of the Historical Interpretation of 'Japan.'" In *Japan in the Global Age: Cultural, Historical, and Political Issues on Asia, Environment, Households and International Communication*, edited by M. Nakamura. Vancouver: Centre for Japanese Research, University of British Columbia, 2001.

Stonehenge

Stonehenge is an ancient monument of standing stones in the Wessex chalklands of southern England. Known as the place of hanging stones, it has captured the minds and imaginations of humans for thousands of years. The site consists of approximately 162 large stone blocks surrounded by an earthen enclosure and external ditch with a single opening to the northeast. The chief construction materials are sandstone sarsens (stone blocks) and bluestones, which originated from different geological sources and were manually transported to the site. The demanding assembly of Stonehenge occurred over a number of centuries and required substantial labor forces, skillful engineering, and the management of numerous resources. While its intended purpose is not known with certainty, Stonehenge probably played a central role in the expression and organization of communal beliefs, values, and ritual activities.

The emergence of henge monuments (stone monuments) in Britain marks a profound shift in the structure and organization of Neolithic communities. During the Early Neolithic, chamber tombs and long barrows frequently contained communal burials and collective mortuary deposits, which Harding takes as indicating the egalitarian organization of society and the importance of ancestor worship. By the Late Neolithic, communal burials were abandoned in favor of individual interments with discrete deposits of new and diverse material goods, denoting the advent of social stratification. The emergence of social ranking and overt changes in religious practices corresponded with the appearance of henge monuments, which provided alternative arenas for the participation in and organization of ritual activities.

Stonehenge is composed of a series of nested stone structures. The outer sarsen circle supports



Megaliths (large, ancient stones) constituting the circular monument known as Stonehenge on the Salisbury Plain near modern-day Wiltshire, England. (Corel)

a number of horizontal lintels that bridge the crowns of adjacent stones, only half of which survive from antiquity. Moving into the center of the circle, five autonomous trilithons—each comprised of two massive standing stones and a lintel—are arranged in a horseshoe formation that opens toward the northeast entrance of the enclosure. Igneous bluestones encircle the trilithons and line the interior area of the horseshoe. A handful of autonomous sarsens are positioned throughout the henge and may have fulfilled particular roles. Among the most important are the Heel Stone, located beyond the northeast entry of the enclosure, and the Altar Stone, located at the interior apex of the trilithon horseshoe.

The sarsens were obtained from a natural sandstone outcrop near Avesbury, approximately 19 miles to the north. There the stones were lifted from the ground with wooden poles and roughly shaped before transport. Crude breaks were probably controlled through fire-setting, which involved the repetitive application of fire and water. Sarsens were transported to the construction site with a series of ropes and wooden rollers. Upon arrival they were shaped with stone mauls, some of which have been recovered. Most upright stones were intentionally tapered at the apex to make them appear perfectly straight from a distance, similar to the columns of classical Greece. Surface polish was commonly applied with the pecking of quartzite hammers, although little such evidence remains today.

➤ OTHER HENGES MONUMENTS

Henge monuments are not restricted to Britain and are found throughout Ireland and continental Europe. Some of the earliest henge monuments are located on Orkney Island in northern Scotland. The famous stone circles of Stenness and Brodgar may have even provided the initial inspiration for megalithic henges in the British Isles. The large stones of Avebury are oriented in the same direction as Stonehenge, which indicates that other monuments were aligned with respect to the rising sun of the midsummer solstice. However, not all henge monuments were made of stone. Woodhenge, for instance, contained six concentric circles of postholes, which may have supported architecture. In fact, some of the largest henge monuments contain evidence of internal wooden structures, including Durrington Walls (Wiltshire), Marden (Wiltshire), and Mount Pleasant (Dorchester). Although some henge monuments contain human burials, they are relatively infrequent. At Duggleby Howe (Yorkshire) and Maes Howe (Orkney), however, earthen burial mounds are clearly present, suggesting that in a minority of cases henge monuments were essential components of mortuary practices and the expression of social ranking in prehistory.

—Noah V. Honch

The bluestones of Stonehenge weigh only a few tons and are significantly lighter than the sarsens, which weigh upward of 50 tons. Petrographic analyses identify their geological origin to be in the Preseli Mountains of southwestern Wales, more than approximately 217 miles (350 kilometers) away. Although the methods and routes of transport between Wales and the central Salisbury Plain are uncertain, a combination of water and overland travel was essential. Two routes are most likely, both of which required overland transport to the Bristol Channel and water transport along the southern coast of Wales. The shorter route involved water transport up the Severn and Bristol Avon, with a short overland haul to inland rivers leading to the vicinity of Stonehenge. The longer route involved less overland travel but necessitated transport along the unprotected waters of southwestern

England to the Hampshire Avon, which could be sailed inland to the Stonehenge environs.

Although Stonehenge may appear to be a single monument, it was constructed in multiple phases. In the first phase (Stonehenge I), the circular enclosure was constructed from the excavated fill of the external ditch. A series of holes (Aubrey Holes) were created along the interior perimeter of the enclosure that may have initially held wooden posts but were later used as repositories for cremations. The Heel Stone was placed outside of the enclosure bank in line with the northeast entrance. In the second phase (Stonehenge II), the enclosure bank entrance shifted slightly eastward, and two new stones were placed in line with the Heel Stone between newly constructed parallel banks. Bluestones were placed in an incomplete circle at the center of the enclosure but were removed sometime afterward.

The third phase saw Stonehenge as it generally exists today and represents a complex construction period that is frequently separated into a number of subphases. In brief, it was at this time that the outer circle of linteled sarsens, the central structure of large trilithons, and the transport of the distant bluestones took place. During the initial stages of this phase, a series of postholes, typically referred to as Y and Z holes, were arranged in two circles between the outer sarsens and the earthen embankment. The function of these holes is uncertain, but they may have been used to guide celebrants through the monument or create small-scale wattle-and-daub architecture.

Interpretations of Stonehenge are often shrouded by the legacy of myth and legend. Early writings attributed Stonehenge to the magical acts of Merlin, who single-handedly transported large stones between Ireland and England and arranged them according to royal decree. Renaissance thought commonly ascribed Stonehenge to the Romans, who possessed the necessary intelligence and technologies that the prehistoric Britons supposedly lacked. Other schools of thought held that seafaring Phoenicians were responsible for the movement of the sarsens, which according to belief could not have originated anywhere other than the primordial geology of Africa. Connections between

Druids and Stonehenge were not drawn until the seventeenth century and had no legitimate foundation. The explicit mention of Druids by early Roman writers in Britain, including Tacitus, Diodorus Siculus, and Pliny, made reference to religious ceremonies and sacrifice but did not ever associate them with megalithic monuments. Modern interpretations of Stonehenge are still commonly influenced by theories that were established, and sometimes convincingly refuted, hundreds of years ago.

Sweeping astronomical interpretations tend to see Stonehenge as a prehistoric computer or observatory. Most archaeologists while acknowledging the coherence of Stonehenge's orientation are hesitant to accept that prehistoric monuments functioned on the same principles as modern scientific instruments and knowledge of space. In most cases, if enough internal configurations of Stonehenge are compared to the infinite bodies of space, geometric patterns will always be found; however, it does not mean that these patterns were known to the builders of Stonehenge or were ever intended for its construction. Some clear patterns exist, however, that clearly attest to prehistoric mathematical understanding. The axial alignment of the Heel Stone and the central Alter Stone with the rising sun of the summer solstice, for instance, is virtually unmistakable. The summer solstice was an important religious as well as practical event, although such divisions may not have existed in the minds of ancient Britons. The midwinter's sunset may have been an equally important event to commemorate. Sedentary Neolithic communities were agriculturally dependent, and established calendrical systems would have been important to the timing of religious rituals and the organization of agricultural activities such as the planting or harvesting of crops. Considered in context, Stonehenge could have easily fulfilled this role for local communities. Whether it actually did, however, is unclear and will likely never be known with certainty. Thus remains the mystery of Stonehenge.

—Noah V. Honch

Bibliography

Chippendale, Christopher. "Stonehenge." In *The Oxford Companion to Archaeology*, edited by B. M. Fagan. Oxford: Oxford University Press, 1996.

Chippendale, Christopher. *Stonehenge Complete*. Leipzig: Thames and Hudson, 1983.

Darvill, Timothy. *Prehistoric Britain*. London: Yale University Press, 1987.

Gibson, Alex. *Stonehenge and Timber Circles*. Stroud, Gloucestershire: Tempus, 1998.

Harding, Jan. *Henge Monuments of the British Isles*. Stroud, Gloucestershire: Tempus, 2003.

European Houses in the Copper and Bronze Age

With the arrival of farming in Europe in the Neolithic period came settled, domestic residences. Previously, people had had to move frequently throughout the year to take advantage of seasonal resources. As farming replaced hunting/gathering and foraging as the dominant subsistence practices, people built permanent homes and resided in the same locations year-round. Throughout the Copper Age and the Bronze Age in Europe, diverse styles of domestic architecture developed over the continent, contingent on locally available resources and local topography and weather patterns.

In the British Isles, houses were typically round and small. The diameter of these houses varied anywhere between 3 and 23 feet (1 and 7 meters). The size of these houses suggests that only a single nuclear family could have lived comfortably inside. Walls consisted of rings of posts or stones that probably supported a thatched roof (although roofs are not frequently preserved). Visitors to Dartmoor (in England) today can wander through fields filled with the round foundations of Bronze Age huts. Round houses dating to the Bronze Age are also found in parts of southern Italy, usually having been constructed in stone.

The most common type of house in Copper and Bronze Age Europe was the rectangular house. These houses varied considerably in size and were made mostly of wood but sometimes had stone foundations. The walls and roofs of the houses could also be made of wattle and daub, a mixture of sticks, reeds, and clay. One of the largest rectangular houses in Bronze Age Europe was found at the site of Brezno, measuring 105 by 21 feet (32 by 6.5 meters) in size. The more typical size of a house ranges from 53 to

➤ HOW ARCHAEOLOGISTS RECONSTRUCT ANCIENT EUROPEAN HOUSES

The archaeological remains of European houses are sparse. Due to the organic materials used in construction (which rot away over time) and the continuous reuse of sites over the past 6,000 years, most of the remains of houses have vanished. Archaeologists are forced to reconstruct houses based on the foundations that remain, often simply the charred remains of postholes that had been hammered into the ground centuries before. This tells archaeologists a lot about floor plans and the division of space but next to nothing about the superstructures. For that, archaeologists must rely on depictions of houses in rock art and on clay models of houses.

—Kevin M. McGeough

66 feet (16 to 20 meters) on the long side and 19 to 26 (6 to 8 meters) on the short side. These houses are significantly larger than the round houses of Britain, large enough for an extended family (or more than one nuclear family) and some livestock to dwell inside. In some cases excavators have been able to identify internal divisions of rooms. Houses recently excavated in Jutland are divided into three rooms, with internal walls (made of posts) functioning as both room dividers and roof supports.

Perhaps the most spectacular European houses that have been recovered archaeologically are lakeside sites. Houses built near or on lakes in Bronze Age Europe were well situated to take advantage of marine resources for subsistence. The houses were rectangular, but instead of being set directly into the ground, the houses were built on piles that lifted them above the water level. Piles were either placed into the lake vertically (holding up the houses as though on stilts) or were laid down horizontally (creating a platform for the house to sit on above the water). Bridges would have connected the houses, allowing people to walk through the village without going down into the water. In Switzerland, numerous waterlogged remains of these

piles were preserved when lake levels rose and covered these ancient dwellings. It seems that many of these houses were abandoned at the end of the Bronze Age, probably due to a significant rise in water level.

Less common in the Bronze Age were the so-called hilltop forts, actually fortified settlements situated on defensible hills. These types of settlements are found most frequently in Spain. The site of Cabezo de Monleón in the Ebro Valley was founded on a hill. Over 57 rectangular houses were built along the outer edges of the top hill. The houses shared long walls, and the short walls faced the outer edge of the hilltop and the interior of the village. Perhaps the best known of the Spanish hilltop sites is El Argar, which was built on a hill over 328 feet (100 meters) high. El Argar is particularly famous for the wealth of funerary remains; bodies found under the floors and within the walls of houses suggest that domestic structures were not just for the living in Bronze Age Europe.

—Kevin M. McGeough

Bibliography

- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Sherratt, Andrew. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.
- Sherratt, Andrew. "The Transformation of Early Agrarian Europe: The Later Neolithic and Copper Ages, 4500–2500 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.

South American Urban Planning at Real Alto

Real Alto is a village located in Ecuador associated with the Valdivia culture, which was inhabited from roughly 3300–1500 BCE. At its greatest extent, the village reached a size of 31 acres.

Throughout its occupation, Real Alto was laid out in a U-shape typical of Valdivia villages in general and common to South America. The U-shape (or ring shape as some excavators describe it) is formed by houses densely arranged

around a central plaza. Slight variations to this plan throughout Real Alto's use point to changes in social structure and political organization. In the earliest phases, the houses were roughly similar in size and quality, and the U-shape was fairly round. By around 2300, this had changed somewhat. The ring was more rectangular than circular, and two mounds with platforms on top jutted out into the center plaza. This layout lasted until about 1850 BCE and marks the period of Real Alto's largest population. Until about 1500 BCE the village remained in use, and the ceremonial mounds seemed to take on more importance than the domestic structures; the population gradually declined until it was abandoned altogether.

The earliest houses were simple wattle and daub huts. Not much of these houses survived in the material record; archaeologists identified the locations of walls by the postholes that did survive. These early houses were small one-room structures; presumably there was enough space for a single nuclear family to inhabit them. Spindle whorls and evidence of cooking have been found immediately outside of the huts in the interior plaza, so it is assumed that cooking and textile production took place immediately in front of the home. Burials have also been identified within the homes or under the walls of the homes. In the later phases of the site, the huts get larger and more rectangular, large enough for an extended family to live within.

Atop the two mounds that projected into the central plaza, two ceremonial structures have been identified. The Fiesta House contained remnants of ancient food and pottery; the excavators suggest that this may have been used for communal feasts and/or village celebrations. The Charnel House, on the other mound, yielded mostly human remains and associated grave goods.

—Kevin M. McGeough

Bibliography

- Bermann, Marc, and José Estévez Castillo. "Domestic Artifact Assemblages and Ritual Activities in the Bolivian Formative." *Journal of Field Archaeology* 22(4) (1995): 389–398.
- Damp, Jonathan E. "Architecture of the Early Valdivia Village." *American Antiquity* 49(3) (July 1984): 573–585.

➤ THE WANKARANI COMPLEX OF BOLIVIA

Starting around 1500 BCE, small villages began appearing around Lake Poopo. Archaeologists refer to these villages as the Wankarani Complex, named after the first site (Wankarani) where this culture was identified. The villages vary considerably in size, from 1.2 to 4.9 acres (0.5 to 2.0 hectares) in size, holding populations of anywhere from 75 to 3,900 people. Most Wankarani villages are clusters of circular houses (usually made of adobe); sometimes the entire village is surrounded by an adobe wall. In later periods, the Wankarani Complex is noteworthy for its unusual carved stone llama heads.

—Kevin M. McGeough

➤ THE SYMBOLIC LAYOUT OF MESOAMERICAN SITES

Principles of orientation in the layout of urban and ceremonial centers were systematically used in Mesoamerica. Therefore, time and space were articulated in landscape by means of the alignment of buildings and settlements to natural elements such as mountains, springs, and caves. In Mesoamerican sites, the observation of the natural environment (sky, seasonal cycles, and landscape) was instrumental in the definition of sacred geometry. Moreover, topographic devices marked the rising and setting positions of the sun or stars as landmarks of ritual calendars. Evidence from ancient codices suggests that directions along the horizon were crucial for establishing architectural structures, stressing the relationship between the cosmos and humankind.

—Alfonso Valenzuela-Aguilera

- Lathrap, Donald W., Jorge G. Marcos, and James Zeidler. "Real Alto: An Ancient Ceremonial Center." *Archaeology* 30 (1977): 2–13.
- Schwarz, Frederick A., and J. Scott Raymond. "Formative Settlement Patterns in the Valdivia Valley, SW Coastal Ecuador." *Journal of Field Archaeology* 23(2) (1996): 205–224.
- Zeidler, James. "Valdivia Culture." In *The Oxford Companion to Archaeology*, edited by Brian M. Fagan. Oxford: Oxford University Press, 1996.

Poverty Point in the Mississippi Valley

Arguably, the first “city” in North America is located at Poverty Point in northeastern Louisiana. Visitors to the site, now a state park, can see the remnants of the vast earthworks that, while not unusual for this region, are unusual for the time period ranging from 4000 to 1000 BCE. These earthworks are something of a mystery, as it is unclear why they were built or how they functioned. Whether or not this should actually be considered an ancient city is debatable. Some scholars suggest that this was a large settlement site. Others argue that this was a ceremonial meeting center that a human population would have used only some of the time.

The earthworks consist of six concentric ridges running in a semicircle. The ridges are broken by aisles that run straight from the outer ridges into the open central area. Each of these segments are about 82 feet (25 meters) wide. The lengths vary considerably. The ridges are about 6–10 feet (1.8–3 meters) high. They are built of earthen fill and refuse. In total, approximately 1.2 million cubic feet (35,000 cubic meters) of soil would have been needed to construct the complex. Five other mounds are associated with the complex. To the west is a large artificial mound, 22.87 yards (20 meters) high and 228.7 yards (200 meters) long. Its location appears to be related to astronomical observations. It is impossible to say with certainty what this complex was used for. Without a doubt, it reflects a tremendous amount of planning and control of labor resources.

The site itself is located on the Macon Ridge, near the Mississippi floodplain. Near the confluences of six rivers, this location was ideal for trade and transportation throughout the region. That trade took place here is likely. The material culture of Poverty Point consists of a wide variety of materials that originated throughout the eastern United States. Many scholars suggest that this was a regional exchange center. People living in nearby settlements would have come to Poverty Point to exchange locally manufactured goods for goods and raw materials from farther away.

The subsistence economy of the original inhabitants of Poverty Point seems to have been

hunting and gathering, not agriculture or horticulture. As at Stonehenge in England, the builders of the Poverty Point monuments were not participants in a complex economy. They were not settled agriculturalists, nor is there evidence for extensive craft specialization. Scholars generally assume that Poverty Point culture was organized as a chiefdom with a loose political structure organized along hereditary lines. The leaders were able to compel many people to engage in hard labor over long periods of time and commit substantial resources to the enterprise.

While Poverty Point appears to be the largest center of this culture, there are at least ten settlement clusters within the region. At least 100 sites have been identified as part of the Poverty Point culture. Each of the ten regional clusters broadly follows natural geographic boundaries, and each cluster has a central site that is larger than the others.

—Kevin M. McGeough

Bibliography

- Ford, James A., and Clarence H. Webb. *Poverty Point: A Late Archaic Site in Louisiana*. New York: American Museum of Natural History, Anthropological Papers 46, 1956.
- Gibson, John L. *Poverty Point: A Culture of the Lower Mississippi Valley*. Anthropological Study 7. Baton Rouge: Louisiana Archaeological Survey and Antiquities Commission, 1983.
- Sassaman, Kenneth. “Structure and Practice in the Archaic Southeast.” In *North American Archaeology*, edited by Timothy R. Pauketat and Diana Dipaolo Loren. Malden, MA: Blackwell, 2005.

Domestic Structures in North America

The domestic structures of prehistoric Americans remained fairly simple and ephemeral until the middle to late Holocene period, at which point late Archaic lifeway patterns emerged. These late Archaic lifeway patterns focused on the construction of permanent architecture, the reliance on dependable subsistence resources such as domesticated floral species, and the rise of sedentary modes of existence. Prior to this period, the prehistoric people of North America constructed a range of structures for domestic activities that included pithouses, longhouses,

the use of rock shelters, and wall-trench-type structures.

For example, semisubterranean pithouses were the most distinctive form of dwelling in California for most of the Holocene. Structures typically had round floor plans in which a dome or a cone was built over a shallow pit. Pits generally ranged in diameter from 4 to 8 meters (13–26 feet) and in depth from 0.3 to 1.0 meters (1–3.3 feet). Most of these pithouses had ground-level entrances, and they typically had strong interior support posts with rafters covered by sticks, wicker, and earth to create a dome structure. Pithouses were also the common domestic structure for the Plateau and parts of the Great Basin and Southwest regions. Because of the time and effort required to construct pithouses, they generally are only found where resources were rich enough to make recurrent seasonal occupation possible. The earliest pithouses are located in northeastern California and the Plateau region, where they date to 5,500 years before the present. In the Southwest and Great Basin, the earliest known examples of this form of domestic structure use dates to 2000 BCE.

Another form of domestic structure used in North America during the middle and late Holocene periods is that of the longhouse, also called a plank house. Longhouses were pole framework structures covered by long woven mats of bark, cedar planks, or other materials and were often 18–30 meters (59–98 feet) long, although evidence indicates that some were longer. Longhouses were common along the northwestern coast and in parts of the Plateau region where the abundance of trees for use in constructing the structures were common, with the earliest known dating to around 1000 BCE. For example, evidence from southern British Columbia indicates that people lived in villages made up of big rectangular, heavy-timbered structures arranged along the shore in rows. On the coast of Washington, the Ozette site contains perhaps the best preserved of these longhouse structures, although it is not the earliest known example. Nearly 20,000 structural members have been recovered, including roof, wall, bench, and drain planks; rafter support posts; and support poles for walls, benches, and drains. At least three of the houses found at the site contained drainage-



Pipe Shrine House, a pithouse at Mesa Verde National Park in southwestern Colorado. (Caitlyn Willows)

control trenches to divert ground runoff from the longhouse roofs.

In the Great Basin and other regions where resources were not as abundant to use for the construction of domestic structures, people used rock shelters or ephemeral brush and twig structures as their domestic residence. Throughout the Great Basin and in parts of the Southwest people used rock shelters as a primary domestic residence, usually modifying the living floor and in some cases creating walls or wind blinds by stacking rocks at the rock shelter mouth. Temporary structures were used for forays away from the centralized rock shelter, which were generally constructed of locally available resources such as reeds, sticks, and branches in the form of a small dome shelter. Evidence of rock shelters being used as a domestic structure has also been recovered for parts of eastern North America, although it appears that these were not the primary place of domestic residence for the people of the region.

Beginning in the middle Holocene period and continuing through the late Holocene period, people of the Southwest region also used adobe to construct various domestic structures. Adobe is a sun-dried brick made of clay, vegetable fiber, and water. The adobe bricks were used by people in the Southwest to make what are called pueblos, which are substantial above-ground structures that have contiguous rectangular rooms.

Contrary to these forms of domestic structures, in the Midwest the use of wall-trench

THE BAILEY SITE

The Bailey site located in Giles County, Tennessee, provides evidence of both summer and winter Middle Archaic domestic structures. Dating between 3750 and 3200 BCE, the site contains evidence for a total of five structures as well as several storage pits and hearths. Three open rectangular structures measuring 4.4 by 7.7 yards (4 by 7 meters) long and 2.8 by 4.5 yards (2.6 by 4.1 meters) wide containing interior hearths and shallow to medium pits have been interpreted as single-family warm-weather shelters that are thought to have been used during summer months. The other two structures, thought to be winter houses, are fully enclosed structures measuring 9.7 by 11.5 yards (8.9 by 10.5 meters) with two internal hearths and nine large pits. Evidence indicates that these pits were used for winter storage of a diverse array of floral and faunal resources. The walls of these larger winter houses were most likely made of wattle and daub construction, while the frame was made of large posts. Because both summer and winter domestic structures were found at this site, it has been concluded that the Bailey site represents a Middle Archaic year-round habitation site.

—Peter N. Jones

structures was common and is often associated with the Mississippian tradition (1050–350 years before the present), although its use has been found outside the Mississippian area. Long, narrow trenches were dug around 25–40 centimeters (10–16 inches) deep, and small posts were set within them to form relatively substantial walls and interior partitions. Most wall-trench structures were square or rectangular semisubterranean buildings that had a wattle-and-daub sheathing covering the walls and thatch to cover

the roofs. The remains of interior benches, floor supports, fireplaces, processing racks, storage pits, and other features are often found in the structures. Evidence indicates that wall-trench structures were usually components of spatially distinct household clusters that consisted of a grouping of one or two wall-trench structures, storage and processing pits, and other specialized features. The other common domestic structure in eastern North America was that of the wigwam. Wigwams were lightly built structures, usually made of branches and other materials, in a variety of shapes and sizes, although heavily built single-post examples are also known.

—Peter N. Jones

Bibliography

- Adovasio, J. M., et al. "Meadowcroft Rockshelter, 1973–1977: A Synopsis." In *Peopling of the New World*, edited by J. E. Ericson, R. E. Taylor, and R. Berger. Menlo Park, California: Ballena, 1982.
- Burley, David V. *Marpole: Anthropological Reconstructions of a Prehistoric Northwest Coast Culture Type*, vol. 8. Burnaby, BC: Simon Fraser University Press, 1980.
- Elston, Robert G. "Prehistory of the Western Area." In *Handbook of North American Indians*, vol. 11, *Great Basin*, edited by W. D'Azevedo. Washington, DC: Smithsonian Institution, 1986.
- Lohse, E., and D. Sammons-Lohse. "Sedentism on the Southern Plateau: A Matter of Degree Related to the Easy and Efficient Exploitation of Resources." *Northwest Anthropological Research Notes* 20(2) (1986): 115–136.
- Mauger, Jeffrey E. *Shed Roof Houses at the Ozette Archaeological Site: A Protohistoric Architectural System*. Pullman: Washington State University Press, 1978.
- Wills, W. H. "Pithouse Architecture and the Economics of Household Formation in the Prehistoric American Southwest." *Human Ecology* 29(4) (2001): 477–500.

Introduction: Art

Artwork is one of the great contributions made to world culture in this period. Throughout the time from 4000 to 1000

BCE, art displays a high level of technical sophistication, aesthetics, and multiplicity of styles and techniques. The ability to manufacture complex

designs in a number of media, in metallurgy especially, developed beyond the rudimentary levels.

Art can be found in many forms throughout the age, but most scholars think of art as sculpture, painting, or the combination of the two (such as inscribed wall reliefs or painted statues). One of the problems in studying these ages is that often the artistic pieces that have been recovered from an archaeological site are not fully preserved. Many Egyptian and Mesopotamian statues were sculpted so as to wear clothes, jewelry, or other adornments that do not survive as well in the archaeological record. Frescoes are usually not preserved directly on walls; frequently they have fallen face down into the room of the building, and archaeologists must carefully lift these paintings up and reconstruct their original provenance. In the case of the Minoan palace at Knossos, these reconstructions were made based more on the imagination of the excavators than on any rigorous scientific basis. A further danger to the study of ancient art can be the museum conservator. If a conservator is too aggressive in restoring a broken piece of ancient art, then sometimes the conservator's artistic sensibility can overwhelm the original artist's creativity. The rule of thumb when studying ancient artifacts is to first identify what is original to the piece and what has been added by later conservators.

More problematic than issues of recovery and preservation is the fact that we no longer share the visual culture of these ancient artists. Some of the art fits nicely into our modern conception of art. The Shang bronzes are unanimously taken as objects of incredible beauty and sophistication. Modern viewers are readily drawn to Egyptian art, with its fine proportion and balance, so much so that ancient Egyptian aesthetics are often used as the basis for more recent artistic styles, art deco being the most notable example of this. Yet Mesopotamian art is often described as strange, alien, and lacking in aesthetic refinement. When studying ancient art in order to understand the past (a different enterprise than attempting to understand the development of art), one must try to understand the art from the worldview of the ancients. Art involves shared conventions (even when an artist

breaks with convention, there is still an acknowledgment that those conventions exist), and to understand ancient art, one must try to reconstruct what those conventions were. For example, students often comment that the posture of humans in Egyptian art looks somewhat awkward, since faces are almost always depicted in profile, yet the body is twisted to face straight ahead toward the viewer. This does not reflect a lack of skill in portraying bodies and movement in ancient Egypt; rather, it reflects very strict conventions of how the human body was supposed to be depicted.

—Kevin M. McGeough

The Rock Art of the Tassili n' Ajjer

Located approximately 932 miles (1,500 kilometers) from the Mediterranean Coast in the central Sahara in Algeria, the Tassili n' Ajjer is home to fantastic ancient African rock art. Over 15,000 drawings and engravings have been identified, most of which probably date to the period between 1000 BCE and 300 CE. This region was once lush and fertile, not the barren desert that visitors can travel through today. In ancient times the region would have been spectacular, with unusual rock formations jutting out of the ground, some monumental in proportion. Nestled among these rock outcroppings are shallow caves and steep cliffs, now breaking up the surrounding sand flats, described by UNESCO as "forests of rock." The geological beauty is enhanced by the unique rock art found throughout.

This rock art was discovered by Europeans in 1909, by a French military officer. Until the 1930s, a series of French military expeditions explored the region, occasionally mapping the paintings. In the 1950s, Swiss explorers traveled through and took note of the remains of ancient Africans. Formal scientific work began in the early 1960s with a French expedition led by Henri Lhote. Much of the formal artistic analysis of the Tassili n' Ajjer rock art has been based on the initial interpretative work of J. D. Lajoux. The general working hypothesis that has arisen from this research is that the art can be divided into four general stages. The earliest stage, dating to sometime before 4500 BCE, is referred to as the

► THE EGYPTIAN HOAX

On an archaeological excavation, the temptation to play practical jokes can be almost impossible to resist. In the case of the Lhote expeditions, a practical joke went too far, making its way into many of the published reports and into the scholarship on the Tassili n' Ajjer. Some members of the expedition chose to paint their own rock art, creating humans standing in ancient Egyptian postures and wearing ancient Egyptian head-dresses. Two of these modern paintings were included in Lhote's monograph on the subject in which he argues vehemently that the Tassili n' Ajjer art was influenced by Egyptian art. While these forgeries have been removed from subsequent editions of the book, scholars still discuss the so-called Egyptian influences on Saharan rock art, not realizing that the Egyptian influence is entirely modern.

—Kevin M. McGeough

White Figure period or the Archaic stage. Following this is the Bovidian Tradition, which is associated with the domestication of cattle in the region, probably around the beginning of this period. After that are two successive stages: first, the Horse Stage, and second, the Camel Stage. Unlike rock art in other regions, there are no associated artifacts in cave deposits that could provide stratigraphic dating information or radiocarbon dates. Given the current state of knowledge on chronology (which is not expected to change any time soon), these dates and stages must be considered very hypothetical.

The rock art consists mostly of paintings or drawings (the distinction is difficult to make when it comes to rock art), although some are engraved or partially engraved. The paint was made of locally available materials (especially ochre) that were ground up into a powder and mixed with a solvent. At least some of the images were applied with a brush, and all were done directly on the stone. Some may have been traced lightly beforehand; the evidence is ambiguous. Styles vary considerably, but some broad generalizations can be made. Usually there is no groundline (although sometimes part of the natural rock stands in for this), and the individuals

are oriented chaotically upon the stone face. Scale and size vary dramatically within individual compositions. It is difficult to be certain which figures go with which and if there is any narrative conveyed by the art. Often figures are superimposed upon other figures.

The chronological schema mentioned above is roughly based on the subjects of the artists (and more loosely based on identifiable stylistic conventions). The subjects of the so-called Archaic Art are masks, human figures wearing masks, individual body parts (mostly arms and genitalia), and abstract symbols. With the advent of the Bovidian period, animals and humans become the most frequently attested figures. There are some ostriches and some fish but many land mammals. Of most interest are the images of cattle (hence the name "Bovidian"), which are depicted in unparalleled detail. It is possible to identify individual species of cattle since the depictions are of such high quality. In the final stage, geometric shapes are very frequent.

The art of the Tassili n' Ajjer provides historians with information on many aspects of daily life in North Africa. The clothing on the human figures gives us some hint as to what ancient African clothing would have looked like. Humans are depicted using a number of tools, including pottery, bows, arrows, spears, clubs, and drills. Various activities are attested as well. Most important is evidence for cattle pastoralism; collars on cattle and cattle in pens are all apparent in the artwork, demonstrating that these North Africans did, in fact, engage in these practices. Some horticulture may be in evidence; scenes of individuals drilling with bows look much like modern horticultural practices in North Africa. These same images could also be understood as depictions of fire production or drilling for water. From this art, we also know that hunting was important.

The function of this art in antiquity is poorly understood. Most scholars do not believe that this was merely art for art's sake, although there is no evidence (beyond modern biases in taste) to prove that aesthetics did not play an important role in its production. Scholars postulate a number of possible functions. These paintings may be commemorative, may indicate places where important events occurred, mark holy sites, or

distinguish group boundaries. Some scholars suggest that these may have played an apotropaic role, that is, they had magical powers to influence real-world events, probably providing fertility or safety for the community. Whatever the case may have been, the Tassili n' Ajjer is now a UNESCO world heritage site, a designation that recognizes its importance in human history.

—Kevin M. McGeough

Bibliography

- Holl, A. *Holocene Saharans: An Anthropological Perspective*. London and New York: Continuum, 2004.
- Holl, A. *Sabaran Rock Art: Archaeology of Tassilian Pastoralist Iconography*. Walnut Creek, CA: Alta-Mira, 2004.
- Elgar, Frank. *The Rock Art of Tassili*. London: Thames and Hudson, 1963.

Ancient Egyptian Art

Ancient Egyptian art has a very unique flavor that makes it easily recognizable by most viewers. However, a real appreciation of the art of the ancient Egyptians cannot be reached without a good understanding of the culture of the people who produced it. The art of the ancient Egyptians was mainly functional in purpose. Its main concern was to ensure the continuity of the universe. The ancient Egyptians were firm believers in life after death and spent considerable amounts of time and energy trying to ensure that their next lives would be idealized versions of the lives they had lived on earth. Therefore, most artistic representations did not focus on achieving realism as much as on producing idealized forms that would last for eternity. The ancient Egyptians believed that what was represented through art became, in a sense, real. For instance, a statue carved by a sculptor to represent a particular deity actually became that deity. Offerings were presented to it, and it was carried around in procession during festivals.

It is important to point out that the ancient Egyptians had no term for “art.” Their vocabulary included words for specific monuments such as “tomb,” “stele,” “statue,” etc. The artists who produced these works of art were usually anonymous. Unlike modern art, which is highly individualistic, the ancient Egyptian artist was a

conformist. Artists had to abide by a strict set of rules. This is why ancient Egyptian art appears, to the untrained eye, to be very static. This, however, is not entirely true. Since ancient Egyptian art was closely tied to the view that the artists had of the world, it only changed when there was a change in this view. The most obvious example of such a change took place during the reign of the so-called heretic king Akhenaten (1352–1336 BCE), who is also known as the world’s first monotheist. The art of this period (known as the Amarna period), especially the royal art, was very distinct from the highly idealized forms produced in other periods of ancient Egyptian history. Images of the king were characterized by a large head, a long neck, narrow shoulders and waist, and a high small of the back, making the upper torso appear small. The lower body is characterized by large buttocks and thighs, giving the king an effeminate appearance. The arms and lower legs were thin and lacking in musculature. These characteristics were not restricted to images of the king but were typical of all representations of human figures of the period.

Art of the Amarna period is different from that of all other periods of ancient Egyptian history in that it broke many of the rigid rules that governed ancient Egyptian art production. It still obeyed certain rules, such as the rule of frontality in sculpture (i.e., the idea that most large-scale statues were designed to be viewed from the front, since they were intended as architectural components), and rules governing two-dimensional representations of the human figure, such as depicting the head in profile, with the eye and eyebrow shown fully frontal, the shoulders shown fully frontal, while the waist, limbs, buttocks, and breasts are shown in profile with a full view of clothing and jewelry. The art of that period, however, broke important rules of proportion as well as the idea that royal figures should be represented as idealized demigods. Scholars differ in their interpretation of the possible reasons behind this artistic revolution.

Finally, it is important to point out that the ancient Egyptians did not distinguish between arts and crafts. Books on ancient Egyptian art usually contain such items as furniture, coffins, toys, and jewelry. Art for art’s sake was very rare;

➤ BUST OF NEFERTITI

In 1912, during the excavations of the Deutsche Orient Gesellschaft of Akhenaten's capital city Akhetaten (present-day Tel el-Amarna) led by Ludwig Borchardt, a beautiful painted limestone bust was found in the deserted workshop of the sculptor Thutmose. It was found among about two dozen pieces, the majority of which were heads but also included busts and complete statues, almost all were

unfinished. The bust was that of a very beautiful woman, recognized by her flat-topped crown as Akhenaten's chief wife, Queen Nefertiti. This bust is a testimony to the fact that ancient Egyptian sculptors were capable of producing realistic, delicately carved portraits that boasted the high craftsmanship and sensitivity of the artist. This beautiful portrait of the queen is very different from the distorted two-dimensional representations that resembled those of her husband. It suggests that the Amarna distortions of figures of members of the royal family were the result of a certain ideology rather than reflections of reality. Unfortunately, the face of the queen is missing its left eye. The reason why the left eye was never finished is unknown. Nevertheless, this infamous bust has remained an icon of beauty through the ages. The bust is now in the Ägyptisches Museum in Berlin.

—Yasmin El Shazly



Bust of Nefertiti, fourteenth-century-BCE Egyptian queen and wife of Pharaoh Akhenaten. (Jean-Pierre Lescourret/Corbis)

it did nevertheless exist and was particularly visible in the village that housed the workmen who worked on the royal tombs of the Valley of the Kings, between the Eighteenth Dynasty and the later Ramesside period (ca. 1550–1069 BCE) known today as Deir el-Medina. Large numbers of chips of limestone and ostraca (broken pieces

of pottery) were found on which the workmen drew sketches, many of which seem to have been done for pure entertainment; for instance, they drew caricatures mocking their overseers and images that clearly broke the artistic rules of the time. It is possible that the shortage of examples of works of art produced for art's sake was due to a lack in the archaeological record of sites such as Deir el-Medina, which provide information on the everyday lives of the ancient Egyptians.

—Yasmin El Shazly

Bibliography

- Freed, Rita E., Yvonne J. Markowitz, and Sue H. D'Auria, eds. *Pharaohs of the Sun: Akhenaten, Nefertiti, Tutankhamen*. London: Thames and Hudson, 1999.
- Robins, Gay. *The Art of Ancient Egypt*. London: British Museum Press, 2000.
- Smith, W. Stevenson. *The Art and Architecture of Ancient Egypt*. New York: Penguin, 1981.

Syro-Palestinian Artwork

Far less art has been discovered in Syria-Palestine than in the neighboring regions of Egypt and Mesopotamia. Artistic production in the southern Levant involved significant interaction with artistic forms from both of these neighboring regions, as well as, in some cases, with the Greek world. The adaptation and reinterpretation of foreign styles according to local traditions made Levantine art relatively unique.

Significant advances in craftsmanship are apparent in the Chalcolithic period, most notably in the Nahal Mishmar Hoard of weapons. Art that originated outside of a warfare context is also well attested. Several forms of small statuary and figurines were used during the Chalcolithic period. These include anthropomorphic and animal figurines made of ceramic and stone. Violin-shaped figurines have been found at a number of Levantine sites, especially Gilat, which had more than sixty examples made from a variety of materials. Some are clearly female, as certain examples have breasts. A corpus of small ivory figurines from sites in the Beer Sheva area probably dates to later in the period. These figurines include representations of both sexes and are indicated by detailed genitalia. There are also

stone-carved heads, sometimes referred to as “Pinocchio figurines,” the schematic style of which, particularly their pronounced noses, link them to the ivory tradition. One unique bone figurine from Shiqmim shares elements of both the earlier violin-shaped tradition and the Beer Sheva ivories.

Two outstanding ceramic sculptures from this period both come from Gilat, including the “Lady of Gilat” and the “Ram with Cornets.” The former is a representation of a female figure sitting on what may be a birthing stool and holding a churn on her head, while the latter is a ram with three cornets protruding from its back. As both were found in a cultic context, and both concern aspects of pastoral production, they have been interpreted as relating to ritual beliefs concerning fertility. A ceramic figure of a bull similar in style to these has been found at Ein Gedi.

Art from the Early Bronze Age demonstrates close connections between the southern Levant and Egypt during this period. The various types of glyptic art that appear in the Early Bronze Age, especially seal impressions, form an important part of the material culture of the period. The stamps and cylinder seals themselves that were used to make these impressions have not been found, however, as many may have been made from wood. Seal impressions from Egypt or Egyptian-style stamp seals have been found throughout southern Canaan at sites such as Halif Terrace, Arad, and En Besor.

Seal impressions from cylinder seals are known from a number of northern sites, including Beit Yerah, Dan, Hazor, Megiddo, and Tel Qashish. Typical geometric designs include spiral, herringbone, and lattice patterns, which suggest a connection with Asia Minor or perhaps the Aegean. Seals from Jawa, in the semiarid region east of the Jordan Valley, show a Syrian influence, while a Byblite and Mesopotamian (Jemdet Nasr) influence is evident in many seals. Figurative designs involving lions and horned animals were also used, many forming schematic motifs, as seen in seals from Megiddo and Jericho.

Pictographic art also appears in the form of engraved images found in stone and on pottery. At Megiddo, horned animals were incised on the stones used to pave the cultic area, and at Arad the Dumuzi Stele depicts human stick figures.

Serekhs, essentially the insignias of Egyptian kings that ruled at the end of the fourth millennium BCE, were incised on the bodies of vessels, often wine jars. The symbols of several different rulers (for example, Narmer and Hor-Aha) were also found on sherds from a number of Levantine sites, including Ai, Arad, Azor, Halif Terrace, and Tel Malhata.

Gold continued to be quite rare during the Early Bronze Age. There are beads made of gold, and a gold disk, possibly from Asia Minor, found in a burial cave near Beit Yerah. Silver, even more rare and more valued than gold at the time, was also used to make beads, and one of the most outstanding singular artifacts from this period is the silver bowl from Tel el-Farah North. Ivory was used to make various items, notably bulls' heads, which have been found at Beit Yerah, Jericho, and Ai in Early Bronze Age (specifically EB3) contexts, all of which display a remarkable similarity in style. Carved bone handles with geometric designs (for example, spirals and herringbone patterns) similar to those appearing on seals have also been found at these sites, bolstering the possible connection with Asia Minor.

Expensive luxury goods are actually quite rare during the Intermediate Bronze Age. One exception is the silver vessel from Ain Samiya. This piece displays expert craftsmanship with the use of the repoussé technique and was decorated with various mythical beings, pointing to a Syrian origin. Items of personal adornment were sometimes made of copper during the Intermediate Bronze Age. Toggle pins of various types appear, including short, simple types as well as longer examples that sometimes have eyelets or knobbed heads. The latter are similar to contemporary pins from northern cities such as Byblos and Ugarit. Earrings, bracelets, and rings made of copper also appear, usually as burial goods, during the Intermediate Bronze Age.

Imported goods from Egypt and Syria are also typical of Middle Bronze Age assemblages, attesting to the networks of international trade that began to emerge during the period. Scarabs bearing royal Hyksos names written in Egyptian hieroglyphics have been recovered at Tel el-Ajjul (City 2). In some cases, the scarabs appear to use the Egyptian symbols in a somewhat random

fashion, and at times the glyphs are replaced altogether with geometric shapes. Syrian cylinder seals have also been found at Canaanite cities, mostly in the north.

A particular style of glyptic art called the “Syrian Style,” which combines Mesopotamian, Egyptian, and local motifs, emerged during the eighteenth century BCE. This syncretistic genre ultimately spawned a number of motifs that are now regarded as uniquely Canaanite, in particular those portraying the deities Hadaad-Baal and Astarte. Mythical beasts such as the griffin and sphinx, native to neighboring lands, were spun into local Canaanite versions, while random symbols such as the ankh were used to fill space. Human (or divine) figures are also depicted in many seals. These figures sport the styles of the Canaanite noble class, such as the long robe and beard for men.

One other medium where Canaanite artistic and iconographic styles can be observed is in the small plaques made of bone used as insets to decorate wooden items such as jewelry boxes or furniture. These inlays employ a range of motifs, including naturalistic figures such as birds, lions, cattle, and various other animals, in addition to humans; the men depicted often have an Egyptian “attitude,” as do some of the birds, and a symbol that closely resembles the Egyptian Djed column was also used. There are also inlay pieces in the form of strips that may have been used as border trim. These feature a range of geometric designs, including rows of concentric circles, zig-zag triangles, and other symbols.

The glyptic art of the Late Bronze Age reflects various foreign influences, including seals in the Mitanni style depicting lions, winged beasts, griffins, and horned animals. Other seals show a Cypriote-Aegean influence, while Assyrian motifs begin to creep in. It is also during this time that Proto-Canaanite and Proto-Sinaitic inscriptions begin to appear. In some instances, such as the celebrated “Charioteer Vase” from Tel Dan, elaborate images were painted onto fancy vessels.

Artistic styles can also be seen in the sculptures that were sometimes incorporated into the architecture of temples and palaces. Lions depicted in sculptural work at Hazor and Beth Shean have parallels with Syria-Cilicia, especially the city of Alalakh. Several unique examples of

Canaanite sculptural art of the Late Bronze Age come from the Hazor shrine (Area C), including a group of small stelae, a statue of a seated male figure, and a small, sculpted lion. Artifacts made of carved ivory were also used, with several outstanding examples from Megiddo, including a long piece of inlay that may be from a knife handle, a pyxis with lions and winged beasts, and a plaque crowded by figures both mythical and naturalistic. Although the latter shows a Syria-Cilician influence, other ivory pieces are more Aegean in style.

—Jonathan Golden

Bibliography

- Ben-Tor, Amnon. “Cylinder Seals of Third Millennium Palestine.” *BASOR, Supplement Series 22*. Cambridge, MA: American Schools of Oriental Research, 1978.
- Golden, Jonathan M. *Ancient Canaan and Israel: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Keel, Othmar, and Christoph Uehlinger. *Gods, Goddesses, and Images of God in Ancient Israel*. Translated by T. Trapp. Minneapolis: Fortress, 1998.
- Levy, Thomas E., and Jonathan Golden. “Syncretistic and Mnemonic Dimensions of Chalcolithic Art: A New Human Figurine from Shiqmim.” *Biblical Archaeologist* 59 (1996): 150–159.

Greek Art—From the Neolithic to the Iron Age

The dawn of artistic production in Greece dates back to the Neolithic period, approximately the sixth millennium BCE. The first true Greek art, art that can be associated with a people who definitely spoke Greek, only properly begins with the Mycenaean culture of the sixteenth century BCE. Numerous important trends developed in the arts in Greece from the Neolithic period continuing through the end of the Mycenaean period and the beginning of the Iron Age.

The artist in these early periods of human history was not so much an artist as an artisan. Any discussion of the art of the Neolithic period and the Bronze Age for the most part describes the production and decoration of pottery vessels, ceramic figurines, and small stone sculptures. Although this may not look like what we call art

today, each object displays artistic choices made by their creator. Vessels were utilitarian, but they were also carefully decorated. Artists chose specific and meaningful modes and motifs for representation.

In the Neolithic period in Greece and on the Greek islands there is a wide interest in depicting the human form. Many small clay figurines depicting men and women and often emphasizing the breasts and hips of women have been found. These figurines are often taken to be an allusion to women's fertility and carry important social or ritual connotations. These are the precursors to more developed sculpture. The pottery, too, shows aesthetic considerations. It is decorated with thoughtful linear and geometric designs that harmonize and enhance the shapes of the vessels themselves.

By the Early Helladic period, the third millennium BCE, two major innovations shaped artistic production in Greece. The first was the introduction of the fast potters' wheel. The fast wheel allowed the potter to create more elegant and graceful vessel shapes so that the need for vase painting actually declined. The second innovation was the mastery of metalworking techniques. Beautifully crafted pieces of jewelry, vases, tools, and weapons are the hallmark of the Early Helladic period. The metalworking of the period shows considerable influences from Anatolia and the eastern Aegean from which the metals technology probably reached Greece. The Early Helladic period is also known for a development in art that took place in the Cycladic islands off of the Greek mainland. Here a particular type of stone sculpture developed from earlier more abstract Neolithic examples. The white marble sculptures are of both males and females and range in size from about 6 inches to 15 inches. They often show the figures lying down with arms crossed over their chests. A few examples show figures playing musical instruments. These sculptures show a development in the study and rendering of the human body in stone that was not to be achieved again in Greece until the Iron Age.

In the next period, called the Middle Helladic period, Greece was experiencing a transitional period or even a downturn. The cultural arts stagnated during this period, although this

➤ MYCENAE—THE SHAFT GRAVES

With one important discovery, Heinrich Schliemann opened the doors to the Mycenaean Age and what he believed to have been the world of Homer. In 1876 in his excavations at Mycenae, Schliemann found two circular graveyards lying just outside the older city. Carved stone stelae marked some of the graves. Their contents were astonishing. Schliemann found gold and silver death masks, exquisite weapons, jewelry, and vessels of precious metals and stones. Beautifully carved daggers and cups and the gold jewelry found in the Shaft Graves showed a heavy dependence on the rich culture of Minoan Crete. Other materials such as amber, ivory, and gold showed that Greece also had contacts with Europe, Egypt, and Syria. The earliest burials can be approximately dated to circa 1600 BCE. Here lay the early kings and royal family of Mycenae. This massive accumulation of wealth and the apparent emergence of kingship in Greece marks for archaeologists and historians the beginning of the Mycenaean Age.

—Susan Helft

may be the time when Greek speakers first migrated into their eventual homeland. It was in the next period, called the Late Helladic period (also known as the Mycenaean Age), that there was a flowering of artistic production and that the foundations for later Greek art were formulated. This flowering can be pinpointed to a particular moment and place in Greek history, the period of the Shaft Graves at Mycenae. In the extraordinarily wealthy tombs of Mycenae's elite, the characteristic forms of Mycenaean art emerged. The main feature of Mycenaean art was that it borrowed heavily from its neighbor Crete, where the more advanced Minoan civilization flourished. It was from Crete that Mycenaean craftsmen learned the more complicated techniques of metalworking and jewelry making. Several features, however, distinguish the Mycenaean products from their Minoan counterparts. Minoan art is almost entirely focused on naturalistic renditions of nature, with peaceful subjects and free-flowing compositions. In contrast, Mycenaean art often focuses on military

subjects and maintains strict symmetry and austerity in its decorative elements.

Examples of Mycenaean art range from wall paintings, exquisitely painted pottery, sealstones, ivories, and metalwork. By the thirteenth century BCE, Mycenaean vases were prized throughout the Mediterranean for their quality of manufacture, the variety of their shapes, and their painted decorations. Toward the end of this period Mycenaean vase painting became increasingly pictorial and focused on representing scenes of warriors and fighters, human activity, and animals and birds. Some of these scenes presage the figural scenes on Greek geometric pottery and the full-blown pictorial pottery of the Archaic and Classical stages of Greek art.

In wall painting, the Greeks did not stand out; their compositions were clumsy and primitive compared to their Minoan counterparts. Nevertheless, the characteristic Mycenaean interest in conflict is best demonstrated in this format, as can be seen in the battle scenes of the Palace at Pylos. Perhaps the most beautiful of Mycenaean art is found in their ivory carvings and on seal stones. Here the Mycenaean craftsmen had a delicate hand and a naturalistic eye. In ivory sculpture the carver showed an interest in and knowledge of human anatomy and mastered the rendering of movement and garments. A similar mastery in representing motion and volume can be found on engraved seals, many of them considered masterpieces of Mycenaean art.

—Susan Helft

Bibliography

- Dickinson, O. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 1994.
- Sakellarakis, J. *Greek Art: The Dawn of Greek Art*. Athens: Exdotike Athenon, 1994.
- Vermeule, E. *Greece in the Bronze Age*. Chicago: University of Chicago Press, 1972.

The Art of the Indus Valley

The fine arts are surprisingly poorly represented in the Indus civilization, with only a few known sculptures in bronze and stone; these, however, include some pieces of the highest aesthetic standard. Lively figurines of people and animals, in terra-cotta and other media, attest to Harappan participation in a long-lived and vigorous



The "Priest-king" sculpture of Mohenjo-daro. (J. M. Kenoyer, Courtesy Dept. of Archaeology and Museums, Government of Pakistan)

folk art tradition. Almost every creature in the Harappans' world, from fishes and hares to elephants and rhinoceroses, were depicted as figurines or as images on seals and other objects. Pottery painted with both representational and geometric designs also continued earlier traditions. There may have been painted designs on other media such as walls and wall hangings and woven patterns in textiles. The artistic abilities of the Indus people are reflected best in the superb images on their seals.

Of the very few Harappan stone sculptures, almost all come from Mohenjo-daro. Some are unfinished, and most are broken, possibly deliberately. (An attractive though quite untestable hypothesis suggests that the human figures represent a line of kings who were overthrown and their portraits smashed.) They are all quite small:

the famous Priest-king torso, for example, is only 6.8 inches (17.5 centimeters) high.

One poorly preserved head may depict a woman; all the rest are male. These generally wear a robe, draped to expose the chest and right shoulder, over a garment resembling the modern dhoti. They are normally sitting on one leg with the other knee raised and clasped by the corresponding arm, perhaps in reverence or supplication before a deity. They have almond eyes and parallel lines representing a beard, though some may be clean shaven. Braided or wavy lines depict the hair, often tied in a bun and held in place by a fillet. The finest example, known as the Priest-king, is a calm, austere figure with short, neatly combed hair tied in a headband with trailing ribbons. The angled flat back to his head suggests that a headdress was formerly fixed here. His robe is decorated with trefoils, originally filled with red paste. The sculptures vary in quality, and their features and expressions are all different, suggesting that they represent real individuals.

Two small sculptures from Harappa are carved in an extremely naturalistic style very different in feel to other Harappan figures. Each is a naked male torso; while the legs of both have broken off, dowel holes show that the arms and head were separately attached. One seems to be dancing, his upper body swinging to one side and his left leg raised in the opposite direction. The other figure also appears to be moving. John Marshall compared the dancing figure to later images of Shiva Nataraja (Lord of the Dance).

There are also a few animal sculptures, including a beautiful stone ram. In contrast, an incomplete composite beast, a bull with an elephant's trunk and ram's horns, is heavy and lifeless.

Marshall suggested that some objects represent the classic Indian male and female symbols, the *lingam* (phallus) and *yonī* (vulva or womb), associated in more recent times with the worship of Shiva. Certainly a few stone cylinders are unmistakably phallic. Several hemispherical stone stands, including a finely polished example decorated with trefoils, had a central hollow that must have held an upright stone or wooden post, plausibly creating a combination of *yonī* and *lingam*, a common symbol in later Hindu

art. A complete example of this combination in terra-cotta is known from Kalibangan.

Bronzes are even rarer than stone sculptures. These demonstrate the Harappans' mastery of complex *cire perdue* casting. The most famous is the charming figure from Mohenjo-daro known as the Dancing Girl, an extremely thin, unnaturally tall young woman with her hair in a bun and clad only in an armful of bangles and a small necklace. Her left hand holds something, while her right hand rests on her hip, and she stands in a relaxed pose very true to life. Another, compositionally similar, figure is far less convincing: she stands stiff-legged with none of the insouciance of the Dancing Girl; Shereen Ratnagar has humorously dubbed her "the ugly sister." An incomplete bronze from Chanhudaro probably depicts a man throwing something overarm or dancing with a raised arm. In addition, two miniature bronze animals are known from Mohenjo-daro: an exquisite naturalistic model of a water buffalo tossing its head and a lively goat forming the end of a pin.

The charming Harappan terra-cottas are very different from the sculptures. They are often quite crudely modeled, with tubular arms, pinched-out noses, and clay blobs and strips attached to represent everything from eyes and mouths to headgear, jewelry, or the markings on animals, but they are brimming with vitality. Some of the animal figurines are of a higher standard, very carefully modeled with attention to detail and quite true to life.

Some terra-cottas are models from the real world: posed women standing in their finery; seated men or unadorned women engaged in everyday tasks; carts loaded with miniature pots complete with driver and team of draft bullocks, among the most delightful of Harappan products; and a host of animals, particularly bulls but also pets, domestic animals, birds, and wild creatures. A charming figurine from Harappa shows a dog in a decorated collar on its hind legs begging. Some were probably toys: wheeled carts and animals with wheels or jointed to allow their heads to bob or their limbs to move. While human figurines are often scantily clad, great attention was paid to details of their often elaborate hairstyles, headdresses, and jewelry. Many female figures wear their hair folded up over a

THE ARTISTRY OF THE ARTISAN

Some fine pottery vessels were painted with designs in black on a red-slipped background. In the earlier part of the Indus period, the designs often included plant and occasionally animal motifs, such as peacocks or pipal leaves, as well as geometric patterns, but later painted wares usually bore only the latter. These included designs using intersecting circles, a distinctive fish-scale pattern, and hatched squares or triangles.

The Harappans must have also created art in perishable media, such as textiles of cotton and possibly flax and Indian silk. The exuberant geometric decoration on pottery may reflect textile designs. Shell and ivory inlay pieces were used to decorate wooden furniture. The Harappans probably used wood for many other objects, including figurines, with carved or painted decoration.

Jewelry also reflected Harappan artistic sensibilities. The finest goldwork employed skilled techniques such as granulation and filigree work, and gold and silver were beaten into paper-thin sheets or drawn into fine wire. Beads were particularly popular. Technical mastery of the bead maker's craft was shown in the production of exceptionally long carnelian beads, each taking as much as two weeks to make, and minute steatite beads less than .04 of an inch (1 millimeter) in diameter. Highly prized patterned stones such as banded agate were worked so as to expose bands encircling the bead or a series of circles or eye patterns of concentric circles over its surface.

—Jane R. McIntosh

pannier or fan-shaped frame or piled high on their heads; others have a simpler bun or turban. Some wear a short skirt and sometimes a substantial bead belt. Their jewelry includes ear ornaments, pendants, and anklets. Many have neck chokers with pendant beads and bead necklaces of graduated lengths virtually covering their chests. The less common male figurines are generally naked, though some wear a turban; the majority are bearded, and they rarely wear jewelry.

Other figurines are caricatures of reality or perhaps characters from folktales. These include figures with animal heads and vaguely human

pot-bellied bodies. One delightful example has a trumpet for a nose and is covering its face with both arms.

It is on the tiny steatite seals that Harappan artistic skill is best displayed. Some show schematic scenes, peopled with stick figures; in other scenes, however, the figures are lively and perfectly proportioned, their features completely naturalistic and the composition well balanced. Most seals are decorated with a single animal. Although only a few centimeters long, these are miniature masterpieces, beautifully observed portraits of animals true not only to the anatomical detail but also to the spirit of the beasts.

The most common image was a unicorn with features of both bull and antelope. This is the most subtle version of the composite beast theme: some of the other hybrid animals are grotesque. Occasionally figures combine features of people and animals, particularly bulls, buffaloes, and tigers.

Although narrative scenes appear on seals, they are more commonly found on small incised steatite or mold-made terra-cotta or faience tablets, found mainly at Harappa but also at Mohenjo-daro. They are often interpreted as amulets, as are tiny animals molded in faience or carved in shell or ivory. Carefully modeled and realistic, these include creatures not known from the terra-cottas, such as fishes, monkeys, hares, and squirrels. Among the wide range of other ivory objects are beautiful gaming counters, thin rectangular rods with tops fashioned as ducks or other birds or animals.

—Jane R. McIntosh

Bibliography

- Ardeleanu-Jansen, A. "The Sculptural Art of the Harappan Culture." In *Forgotten Cities on the Indus*, edited by M. Jansen, M. Mulloy, and G. Urban. Mainz: Verlag Philipp von Zabern, 1991.
- Clark, Sharri. "Embodying Indus Life: TerraCotta Figurines from Harappa." <http://www.harappa.com/figurines/index.html> (accessed 28 May 2008).
- Huntington, Susan L. *The Art of Ancient India*. New York: Weatherhill, 1995.
- Marshall, John. *Mohenjo Daro and the Indus Civilization*. London: Probsthain, 1931.
- Possehl, Gregory L. *The Indus Civilization. A Contemporary Perspective*. Walnut Creek, CA: Alta Mira, 2002.

Vidale, Massimo. *The Archaeology of Indus Crafts. Indus Craftspeople and Why We Study Them*. Rome: ISIAO, 2000.

Artistic Motifs from Egypt to India: Connections and Comparisons

Toward the end of the fourth millennium BCE there is a remarkable shift in the organization of society in Mesopotamia. Scholars call this the urban revolution, the shift from small rural settlements and economies to the hustle and bustle of city life. The transformation that took place in Mesopotamia was followed soon thereafter by and probably contributed to the rise of urban centers to its west and east from Egypt and Syria to Iran and the Indus Valley. In this period, the Early Bronze Age, study is focused primarily on the three urban cultures that grew up around fertile river valleys. These are Sumer (roughly the location of present-day Iraq), Egypt, and the Indus Valley or Harappan civilization in present-day India and Pakistan. It is certain that these civilizations were in contact with one another at least by the middle of the third millennium BCE. Sumerian texts from the third millennium mention place-names as far away as Oman, India, and the Gulf states, and traces of these contacts can be recognized in the shared artistic motifs and styles found at these sites.

Of the Early Bronze Age Near Eastern world, Egypt was the most isolated. Little influence from Egypt can be seen in Sumerian culture, although early Mesopotamian influence on Egyptian culture is apparent, so much so that early Egyptologists claimed that pharaonic Egypt was founded by eastern invaders from Sumer and Iran. While such a conclusion is drastic and unwarranted, certain features of Egyptian civilization do indeed imitate Mesopotamian motifs and practices. It is certain that the Egyptians learned from the Sumerians how to seal jars and doors using a cylindrical seal. In fact, a few Mesopotamian cylinder seals have been found at Egyptian sites. Certain iconographic motifs on Egyptian predynastic artifacts imitate images found on Mesopotamian seals and sealings from the late fourth millennium BCE. These include the images of a man dominating two lions and of animals with long intertwined necks. In Egypt these

images adorn luxury items such as cosmetic palettes (e.g., the Narmer palette) and ceremonial knives (e.g., the Jebel el Araq knife) and were most likely used in the royal sphere. They suggest that the Egyptians not only imported goods but also took ideas about the representation of kingship from Mesopotamia.

Early Egyptian architecture also displays affinities with Sumerian styles. One characteristic feature of Mesopotamian architecture, the niched facades of public buildings, found its way into Early Dynastic Egyptian architecture. There is also a very general comparison between the stepped towers of Mesopotamia called ziggurats and the great pyramids of Egypt. Both were monumental pyramidal shaped structures, although they differed in materials, function, and form (Near Eastern ziggurats were temples, while the pyramids were tombs). Even so, it is not inconceivable that one was the impetus for the other.

Contacts between Mesopotamia and the Indus civilization are better documented. Known as Meluhha in Sumerian sources, the Indus was a rich supply of goods, especially of carnelian (a hard red stone). One particular type of bead, a carnelian bead etched with a white design, shows the extent of trade already in the third millennium BCE. Examples of this type of bead have been found at many Indus sites, in Iran, Bahrain, Mesopotamia, and recently the Aegean island of Aegina. Several other Indus products have been found in Mesopotamia in small numbers. Some objects combine Indus and Near Eastern features, for instance stamp seals with Indus-style animals with a cuneiform inscription.

The extraordinarily rich Royal Cemetery at Ur (in southern Iraq) dating to the end of the third millennium provides some information on contacts with the Indus Valley and Iran. The women of these burials wore elaborate golden headdresses with gold flowers and rosettes as well as belts made from long etched carnelian beads. The headdresses and belts if not Harappan products were influenced by Indus styles. This is clear from a comparison of these pieces with statuettes of women found at Indus Valley sites. Jack Kenoyer has even suggested that some of the females buried at Ur were servants brought from the Indus Valley itself.

Several features of Harappan culture also indicate influences from Mesopotamia. As in Mesopotamia, Harappan culture emphasizes the bull. Deities are identified by bulls' horns or as composite animal-human monsters, just as in southern Mesopotamia. Despite these comparisons, the Harappan civilization was organized quite differently than Mesopotamia or Egypt. At Harappan sites, unlike in Sumer, there are no remains of what we would identify as a palace or a temple. Instead, there are large ceremonial baths and a focus on providing a clean water supply. While both Egyptian and Sumerian society and economy centered on the palace and the temples, understanding the social and political organization of the Harappan society is more difficult.

Between the two regions of Sumer and the Indus Valley lay Iran and central Asia, both of which were essential links in the overland trade network. It is not surprising, then, that early Iranian culture (called Susa I-II and then Proto-Elamite) was heavily influenced by Mesopotamian art, although it always retained some distinct features. Standing statues from Susa imitate Mesopotamian gestures and dress. Square wall plaques with banqueting scenes found frequently at Mesopotamian sites of the early third millennium were also used at Susa. From Iran came high-quality alabaster vessels and various chlorite vessels.

Vessels made of chlorite (a type of soft stone found in eastern Iran) are particularly useful in highlighting the extent of third-millennium contacts. They have been found in Syria, Mesopotamia, Iran, and central Asia but certainly originated in eastern Iran, with a smaller production site in modern Bahrain (ancient Dilmun). The imagery is quite varied but often includes ferocious serpents, lions, and eagles. They are carved in what is called the intercultural style because some images such as the lion-headed snake derive from Iran and central Asia, while others such as the bull man are more at home in Mesopotamia. The variety of motifs and their appeal to such disparate cultures is an evocative symbol of the mixing of styles and motifs as a result of international trading networks of the third millennium BCE.

—Susan Helft

Bibliography

- Allen, J. "Egypt and the Near East in the Third Millennium B.C." In *Art of the First Cities*, edited by J. Aruz. New York: Metropolitan Museum of Art, 2003.
- Aruz, J., ed. *Art of the First Cities*. New York: Metropolitan Museum of Art, 2003.
- Aruz, J., ed. "Art and Interconnections in the Third Millennium B.C." In *Art of the First Cities*, edited by J. Aruz. New York: Metropolitan Museum of Art, 2003.
- Hansen, D. "Art of the Early City-States." In *Art of the First Cities*, edited by J. Aruz. New York: Metropolitan Museum of Art, 2003.
- Kenoyer, J. M. "Beads of the Indus Valley." In *Art of the First Cities*, edited by J. Aruz. New York: Metropolitan Museum of Art, 2003.
- Moorey, P. R. S. "On Tracking Cultural Transfers in Prehistory: The Case of Egypt and Lower Mesopotamia in the Fourth Millennium B.C." In *Centre and Periphery in the Ancient World*, edited by M. Rowlands, M. T. Larsen, and K. Kristiansen. New York: Cambridge University Press, 1987.
- Potts, D. "Distant Shores: Ancient Near Eastern Trade." Vol. 4, *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. New York: Scribner, 1995.
- Smith, H. S. "The Making of Egypt: A Review of the Influence of Susa and Sumer on Upper Egypt and Lower Nubia in the 4th Millennium B.C." In *Following Horus*, edited by Barbara Adams and Rene Friedman. Oxford: Oxbow Books, 1992.

Shang Art

China's Shang dynasty (ca. 1600–1100 BCE), which ruled an area in the northeastern region of what is now regarded as China proper in the Yellow River valley, was long considered to be mythical. During the late nineteenth century, however, peasants near the modern city of Anyang began digging up mysterious pieces of bone with notches carved into them. Local legend assumed them to be the bones of dragons. Some of the bones had small pictures and inscriptions carved on them as well. Eventually some of the bones found their way to an antique dealer, who recognized the inscriptions to be a very early form of Chinese writing. The Anyang farmers, hoping to increase profits from the sale of more bones, began to dig deeper until they began unearthing very brightly decorated bronze uten-

sils. China had finally discovered its long lost bronze age.

Later excavations of Shang tombs led to the discovery of a wealth of bronze and other treasures. The artwork of China's earliest dynasties, extending from the start of the Shang period to the early Han dynasty in the third and second centuries BCE, quite often focused on the cult of the dead. Kings and their families as well as other government leaders were very concerned about gaining immortality. As a result they often built and decorated elaborate tombs. Since the Chinese favored burials deep underground, many of their tombs remain. These tombs, especially those of royalty, were fashioned with very intricately fashioned bronze vessels, a variety of weapons including swords and bows and arrows, small and large objects carved from jade, and a variety of ceramic objects. These goods were often placed very near to the coffin to provide comfort and protection to the deceased in the afterlife. The walls of these burial chambers are also highly decorated with a variety of painted or carved ornamental scenes that depict popular Chinese legends or scenes from daily life.

An inventory of the tomb of Fu Hao, from around 1250 BCE, offered many artifacts. Fu Hao was one of the notable women of Shang history and the consort of King Wu Ding. She controlled her own estate and led important sacrificial ceremonies. Her tomb revealed numerous items including:

- 468 bronze objects such as weapons, bells, knives, mirrors, and 4 tigers or tiger heads.
- Over 800 objects of jade, stone, and ivory.
- Numerous bone objects including bone hairpins and arrowheads.
- 11 ceramic objects and thousands of pieces of cowry shell.

Early in the Shang period artisans began to manufacture very high-quality jars and plaques (flat pieces), often inscribed with the names and titles of clans and rulers, that were buried in their owners' tombs. Beautifully carved jade objects as well as woven silk, glazed ceramics, and lacquerware also first appeared in the Shang and were found in tombs as well.

➤ SHANG TOMBS

Shang dynasty kings frequently had very elaborate tombs constructed for them. They were convinced that there was an afterlife and that they could carry their materials to the world of the dead. Shang kings, other members of the royal household, and many members of the nobility often were buried with lavish evidence of their wealth.

One Shang tomb excavated in 1934–1935 was in a deep cross-shaped pit 226 feet (69 meters) long and 147 feet (45 meters) wide. The many funerary items found here included many stone and bone carvings, white-clay ceramic pottery, jades, and bronze vessels. The ceramics and bronze objects displayed finely carved motifs of daily life and animals.

Besides the vast array of beautiful funerary objects, the excavation yielded large numbers of human bones. These were the remains of sacrificial victims who were either buried alive or ritually killed at the time of the king's burial. Those buried alive included soldiers, ceremonial attendants, and the king's servants. Those killed included the bones of at least 59 people who had been decapitated before being placed on the south side of the tomb. It is possible that these were prisoners of war taken during the Shang's frequent military campaigns against neighboring tribes.

—Daniel A. Métraux

It is surmised that the people of northern China had learned from the people of western Asia how to make bronze out of copper and tin and that it took several centuries to develop the highly stylized products of the Shang period. Shang craftsmen produced a wide range of bronze products including mirrors, bells, boxes, and weapons such as bronze-tipped arrows and the bronze halberd, but their most common implements were vessels or jars for wine and food. The bronze jars, vessels, and boxes were quite often cast in molds employing the lost wax technique. Often they were cast in a few different pieces and then soldered together with melted bronze or tin. Early in the Shang period artisans developed a method for using multiple ceramic molds to cast bronze. The

results were remarkable ritual vessels with complex embellishments of figures such as monsters, birds, and humans in relief.

Many of the food or wine vessels were used during the banquets of royalty, but others were employed in various rituals associated with ancestor worship. The most common of all Shang era bronze vessels is the *li* tripod, a bowl having three legs; the shape is unique to the northern areas of China. This tripod design is clearly derived from a pottery cooking vessel used by the Neolithic ancestors of the Shang. The tripod was an extremely practical design for cooking over an open fire.

The bronze version of the *li* tripod was one of several connected with ancestor worship. The pouring of hot wine was an important aspect of these ceremonies. One often finds the most intricate designs on the outsides of these wine vessels. Some of these outside surface designs included intricate and very detailed geometric patterns, silhouettes, and masks of composite dragonlike animals. Many of the vessels come with detailed configurations of birds, animals, and dragons.

The different types were used for at least three purposes: as vessels containing a form of millet wine, vessels containing varieties of food, or vessels containing water. Some vessels with their long tripod feet made it possible to cook the food from the inside using a fire of charcoal under the vessel. Some types, especially wine containers, were made to stand in a charcoal basin.

Another notable Shang art form was carved jade. Chinese legends relate that the original ancestor of the Shang ancestor, born from a great phoenix, was sent to earth from heaven. The result of this legend is that the phoenix became an important motif of Shang jade artifacts. Another important jade motif is that of a dragon. Varying greatly in size and weight, Shang jade artifacts, many of them found in tombs, often include a kneeling person, pigs, sheep, a wide assortment of mythical animals, dinosaurs, jars, and jade plaques.

While upper-class Shang people could afford intricately designed bronze vessels and works of art, the ordinary citizens had to be satisfied with ceramic goods. Shang era ceramics were,

of course, much cheaper and easier to produce, but at the same time they showed many of the same styles concerning shape and decoration as the bronze vessel. Initially, Shang bronze workers often tended to imitate existing ceramic shapes and decoration. Later in the dynasty potters often reflected the influence of bronze ware in their work.

It should be noted that fine work in bronze in China was not just confined to northern areas controlled by the Shang. In 1986, at Sanxingdui in Sichuan Province in western China, other examples of sophisticated work in bronze, gold, and jade were discovered, made by contemporaries of the Shang.

—Daniel A. Métraux

Bibliography

- Cheng Te-k'un. *Archaeology in China*. 3 vols. Cambridge: Cambridge University Press, 1959–1963.
- Sullivan, Michael. *The Arts of China*. Berkeley: University of California Press, 2000.
- Watson, William. *Ancient China: The Discoveries of Post-Liberation Archaeology*. New York: New York Graphic Society, 1974.

The Art of Ancient Europe

The art of non-Greek Europe during 4000–1000 BCE can be divided into two general categories: mobiliary (easily transported) and petroglyph carvings (rock carvings). The subject matter of this art as well as its role within European society is much debated. Without textual evidence to help interpret this material, much of it remains poorly understood. Yet our poor understanding of this art does not take away from our ability to appreciate the aesthetic value of the works and the technical achievements of the artists.

Petroglyphs are preserved in remote locations in ancient Europe on the walls of cliffs and mountains. There may have been other locations of this art, but over the centuries of European occupation, this ancient art has all but disappeared. More than 100,000 images are engraved into the hard stone of Mt. Beggo located in the Alpes-Maritimes in France. These carvings were carefully incised into the rock using a hammer and soft chisel. About 60 percent of the images relate to bovines; occasionally bulls are yoked and guided by farmers. Some may also be de-

picted enclosed in pens. Weapons and bronze implements make up about 15 percent of the repertoire. Anthropomorphic figures are rare but appear in a variety of poses: raising their arms, pushing a plow, or brandishing a weapon. Val Camonica, located in northern Italy, has a similar variety of images. Of the more than 200,000 images preserved here, some bear traces of ancient paint, testimony to the fact that the viewer would have seen a more colorful image than the modern visitor. The parietal art of Scandinavia bears different motifs. At Bohuslän in western Sweden, men with exaggerated penises wield axes while standing aboard boats. Scholars debate if images such as these reflect narratives of ancient battles or commemorate dances or ritual activities. Petroglyphs are found in many other locations throughout Europe in varying amounts.

The mobiliary art of ancient Europe is quite elaborate. Archaeologists assume that much of this art was produced in wood or other organic media, materials that are not well preserved in the European climate. Among the most elaborate artistic achievements of Bronze Age Europe are pieces produced in metal. Elaborate gold cones (sometimes interpreted as hats or wooden post coverings) have been recovered from France and Germany. These cones are of varying shapes and size, but all bear elaborate registers filled with geometric shapes. Helmets retrieved from Late Bronze Age contexts were not necessarily suitable for protection in battle, and thus they must have served as personal adornments for special occasions. A horned helmet from Zealand in Denmark features a talonlike hook between two circular mounds, likely a nose and eyes. One of the most ubiquitous classes of European art from this period is model carts. Most of these models feature birds or bronze vessels set atop wheels. Perhaps the most curious is the so-called Trundholm sun chariot. Found by a Danish farmer, this piece defies easy explanation. It is a six-wheeled wagon made out of bronze. In the rear is a bronze shield covered with gold leafing (mistakenly interpreted as a sun by early art historians). Standing on the front axles is a bronze horse, seemingly riding the wagon as well. Other classes of art are identifiable as objects for personal adornment, indicating the importance



Trundholm sun chariot. (Gianni Dagli Orti/Corbis)

➤ RECORDING THE PETROGLYPHS AT VAL CAMONICA

In 1956, Emmanuel Anati began working in Val Camonica, a valley in North Italy filled with rock carvings that date from 8000 BCE to 16 BCE. Anati's goal in the valley has been to identify, record, and make sense of these diverse petroglyphs. As of 1995, his team has recorded more than 300,000 rock carvings of varying types and time periods. For the most part, recording these rock carvings is a two-step process. First, students must clean the carving. Often this involves carefully scraping off the moss or grass that may obscure the image, being careful not to damage the petroglyph itself. Once the surface is clean, the students lay a polyethylene sheet over the carving and trace the image directly onto the sheet. This allows the carving to be faithfully reproduced even by someone with minimal artistic talent. Similar processes are used by archaeologists all over the world, most notably in Egypt where an excavator's tool kit often includes a number of polyethylene sheets and markers as well as a trowel.

—Kevin M. McGeough

of individual status in European Bronze Age society.

—Kevin M. McGeough

Bibliography

Anati, Emmanuel. *Camonica Valley: A Depiction of Village Life in the Alps from Neolithic Times to the Birth of Christ*. New York: Knopf, 1961.

Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology Series. Cambridge: Cambridge University Press, 2000.

Mohen, Jean-Pierre, and Christiane Eluère. *The Bronze Age in Europe*. Discoveries Series. New York: Abrams, 2000.

Mesoamerican Arts and Andes Arts and Crafts

Three major media formed the basis for early arts and crafts in Mesoamerica and South America. These were clay, stone, and textiles. Knowledge of these crafts is based in part on the degree to which they have been preserved in the archaeological record. As such, knowledge of early crafts differs in between the arid coastal deserts of South America and the humid tropical zones of Mesoamerica where the first advanced cultures flourished. In arid regions of Peru and Chile, excavations have produced evidence of craftwork in shell, bone, feather, and gourds. Such materi-

als may also have been common in Mesoamerica but are not preserved archaeologically.

Pottery is one of the earliest documented crafts in both Central and South America, developing about 3000 BCE probably first in north-eastern South America. People in both regions may have used containers fashioned from plain or decorated gourds before they produced pottery vessels. Gourds with designs burned into them have survived in coastal Peru. The earliest pottery was simply made basic forms using organic fiber temper. In Mesoamerica stamping, cord, and fabric impression and incision became common decorative techniques. Inhabitants also developed the use of kaolin clays, which produced fine buff to white-colored pieces. Burnishing was another common decorative technique in South America. Both areas eventually developed slip painting in a variety of colors. People in both regions created clay figurines, predominantly in the form of human females, for use in what were probably shamanic rituals.

Textiles were another common craft item serving both decorative and practical purposes. People in both Mesoamerica and South America made early textiles out of cotton, although South American people eventually favored wool from llamas and alpacas, probably for its ability to hold dyes. Early dye stuffs included indigo, madder root, and cochineal. Cochineal, derived from a scale insect that infests cactus, eventually became one of the most valuable commodities in the Americas. Examples of early textiles have survived in Peru and Chile. In these we can see examples of a number of different techniques including twining, looping, and knotting in addition to simple weaving. Twining, looping, and knotting could produce very open textiles or shaped forms such as hats. Hats created by these techniques have survived in the deserts of Chile. Plain cloth was sometimes embroidered, painted, or stamped to produce sophisticated multicolored designs.

Stone carving became another early craft. Mesoamerica has been specially noted for the production of jade and jadeite sculptural pieces, such as the cache of miniatures from LaVenta and examples of jade masks. Sculpture also includes the oversized heads executed in basalt by Olmec people (1200–500 BCE). There is no

➤ MESOAMERICAN MASKS

A number of exquisite pieces in private and public collections have been referred to as masks. These are slightly oversized representations of human faces, usually made of jade or other green stone. Although the known pieces are all unprovenienced (that is, archaeologists are not sure where they were originally found), they bear unmistakable marks of Olmec art: elongated and/or cleft foreheads, rounded faces, and down-turned mouths. However, the pieces were unlikely to be used as masks by their creators. The eyes, nose, and mouth are solid rather than perforated to allow a wearer to see or breathe. The back of masks tends to be flat rather than hollowed.

What, then, did the creators intend for these pieces? Masks do have perforations at the sides so that they could be tied to or suspended from something. Flattened areas at the back suggest that the intention was to attach the mask to a flat surface. Analogy to later Mesoamerican finds and roughly contemporary South American finds suggest that people created these masks for funerary rituals or ancestor worship.

—Jo Ellen Burkholder

direct correlation for the jade work in the South American sphere at this time other than perhaps small items of shell and bone. Sites such as Huaca de los Reyes, however, bear evidence of large faces carved into the adobe of platform mounds. Unlike the Olmec heads that appear to be lifelike, if stylized, portraits, the oversized images from Peru appear to represent supernatural beings with snarling mouths and crossed fangs.

There is some debate as to whether or not craft production was specialized during this period. Simple textile, gourd, and pottery production was probably within the grasp of most people. However, special skills were needed to carve hard stone such as jade and basalt into ele-

gant forms. Jade in particular is unavailable in the Olmec area, requiring long-distance trade for acquisition. More sophisticated pottery, such as Mesoamerican types produced with high kaolin clays, also required significant technical skill and time to produce.

—Jo Ellen Burkholder

Bibliography

- Adams, Richard E. W. *Prehistoric Mesoamerica*. 3rd ed. Norman: University of Oklahoma Press, 2005.
- Bruhns, Karen Olsen. *Ancient South America*. Cambridge: University of Cambridge Press, 1994.
- Miller, Mary Ellen. *Art of Mesoamerica: From Olmec to Aztec*. London: Thames and Hudson, 1986.

■ Introduction: Fashion

World fashion varied dramatically throughout the time between 4000 and 1000 BCE. However, the actual production techniques used in the manufacturing of clothing are relatively consistent from location to location. Because the processes of manufacturing garments are remarkably similar, the most important variable is in the kind of materials that are available.

Hides were perhaps the easiest materials to use in the manufacture of clothing in this time. The hides would first be skinned from hunted animals, and then scrapers (stone or metal tools that look like sharp flattened popsicle sticks) would be used to remove any excess tissue from the skin. The skin would then be dried and tanned and possibly dyed (although with hides, this was less common).

Textiles are fabrics manufactured from twisted or spun thread. In this period, most thread was derived from plant products. Plant stalks (for example, flax) were harvested and then retted (soaked in water until the individual strands separated). Then these strands were dried and straightened (and possibly beaten) and then set out in the sun to be bleached. The short threads would then be twisted together to make much larger continuous threads. This process is called spinning, and archaeologists often find

spindle whorls, which were small clay or stone spheres with a hole in the middle, used to make twisting the threads easier. Wool was also spun after it was cut from sheep, and from this point on in the process wool and textiles are processed similarly. These long individual pieces of thread were then woven together on a loom. The warp threads were stretched out on a loom vertically, and the woof threads were woven in and out of these threads until a rectangular piece of fabric had been created. Archaeologists often find loom weights, which look very much like spindle whorls and were used to help stabilize the thread on the loom. Afterward, the fabric was fulled, in other words, shrunk, cleaned, and thickened. This process removes animal oils from wool (which actually decreases weather resistance but makes the fabric smell better). Fulling involves soaking the cloth in some solution, often urine. After this, textiles were sometimes dyed, usually by immersion in a vat of dye, which was usually a very expensive process.

—Kevin M. McGeough

The Origins of Cotton

There are around 50 wild species of cotton (*Gossypium* sp.) native to tropical and semitropical regions. Four have been separately domesticated:

► COLORED COTTON

From the beginning of cultivation in South America there seems to have been deliberate selection to grow cotton of different colors, ranging from brown through mauve to red and through grayish green and yellow to white. Darker-colored cotton was preferred for nets and fishing lines since it was less visible to fish. By the third millennium BCE, naturally colored cottons, along with threads dyed other colors, were used to create patterned cloth with geometric designs including stylized animals and people. In recent centuries the use of naturally colored cottons declined in favor of white cotton, which can be dyed any color, and in some regions naturally pigmented cottons were deliberately eradicated. Almost all cotton grown commercially in the world today is white. Recently, growing concern for the environment and the growing emphasis on organic products have sparked a revival of interest in naturally pigmented cottons, which are now being grown commercially on a small scale in Peru and elsewhere in the Americas.

—Jane R. McIntosh

these are native to Central and South America, Africa (extending into southwest Arabia), and India. In recent centuries the American species have almost completely replaced the Old World species in cultivation across the globe. Today, cotton is planted in spring or early summer and harvested in late autumn. Although winter frosts inhibit the plant's growth they do not kill it, so cotton can also be grown as a perennial bush, a method that was used in the past. Cotton requires a moderate but reliable supply of water, so where rainfall is inadequate cotton must be irrigated or grown on well-watered land.

The wild form of Asian cotton (*G. arboreum*) still grows in southern Sindh and the central Deccan and was probably more widespread in antiquity. The earliest evidence of its use comes from Mehrgarh, Pakistan, where a sixth-millennium grave included a bracelet of copper beads within which were traces of a cotton thread. Later deposits at Mehrgarh, probably of the fifth millennium, included charred cotton seeds. It is not clear whether these came from wild or cultivated cotton shrubs.

Cotton was certainly cultivated by the people of the third-millennium Indus (Harappan) civilization. A scrap of cloth from a bag was found in the city of Mohenjo-daro preserved in the corrosion products from two silver jars. Other Harappan textiles survive as impressions of cotton cloth on metal objects and on the inside of faience vessels, the imprint of rougher cloth and of cord on the reverse of sealings that had been fastened on sacks, and marks imprinted on the base of drying pottery vessels. These show that the Harappans were making cotton cloth of various grades, including very fine closely woven fabrics, all in plain weave. It is likely that cotton cloth was among Harappan exports to Mesopotamia.

The Harappans must have used various colored dyes to decorate their cotton cloth. At present, the only surviving evidence is that the cotton fragment from Mohenjo-daro had been dyed red with madder root and fixed using alum as a mordant. However, other local plants such as indigo and turmeric were probably also used, producing blue and yellow dyes, respectively.

Cotton may also have been grown for its oil-rich seeds. Most plants cultivated by the Harappans were sown in the autumn and harvested in the spring, but cotton was probably grown as perennial bushes on the edges of the active flood plain of the rivers.

After the collapse of the Indus civilization, cotton continued to be cultivated in South Asia. Cotton seeds and occasionally cotton threads are known from second-millennium sites in many parts of the subcontinent. Cotton was probably introduced into Southeast Asia in the late centuries BCE when Indians began to trade there. A discovery in 2007 shows that cotton had reached China at an earlier date: cotton textiles were among grave goods in an eastern Zhou tomb at Lijia. One had been dyed red with vermilion, a pigment used in China for dyeing silk since Neolithic times.

Elsewhere the picture of early Old World cotton cultivation is still unclear. Fifth- or fourth-millennium cotton fibers were recovered from the impression of a textile in the northern Arabian desert at Dhuweila in eastern Jordan, the only cotton known from the Near East before the first millennium BCE. The Dhuweila cotton

could have come from either Africa/southwest Arabia or South Asia. Cotton fibers were certainly in use by this time in the Indo-Iranian borderlands, as evidenced at Mehrgarh. Connections between South Asia and the Near East, although they existed at this date, were extremely tenuous. On geographical grounds, Africa or southwest Arabia might seem a more probable source for the Dhuweila fibers, but little is known of the early history of African cotton (*G. herbaceum*). Third-millennium BCE cotton seeds and lint hairs were found at Afyea, in Egyptian Nubia, in goat coprolites, which shows that goats were grazing on cotton locally, something likely to have been discouraged if cotton was being used by their herders. This is an isolated find: there is no early evidence of cotton cultivation or cotton textiles elsewhere in the Nile Valley, a region with an exceptionally rich archaeobotanical record due to its arid environment.

The earliest evidence of cotton cultivation outside South Asia is in an inscription of the Assyrian king Sennacherib, who planted “trees bearing wool” in his botanical garden in the seventh century BCE. These were a curiosity and seem not to have been taken into cultivation by others; it was many centuries before cotton cultivation became well established in the Near East. Cotton was being grown at Qasr Ibrim in Nubia by the early centuries CE; it is not yet clear whether this was Indian or African cotton. Pliny refers to cotton cultivation in Nubia and Upper Egypt during the first century CE, and it was also grown in Libya, Syria, Arabia, and Anatolia. In sub-Saharan Africa, however, the evidence for cotton cultivation and cotton textile production is much later.

In the New World, two species of cotton were taken into cultivation. *G. hirsutum* is native mainly to Mexico, Guatemala, and the Caribbean but extends into the Isthmus, where it overlaps with the distribution of *G. barbadense*, which grows mainly in northern South America. The two species were separately domesticated.

Much of our information on early cultivation in Mesoamerica comes from the Tehuacan Valley in highland Mexico (an arid region where preservation of organic remains is excellent). Excavations here show that through time, seasonally mobile hunter-gatherer communities gradually

brought a variety of local plants under cultivation and became increasingly sedentary, with permanently occupied villages emerging around 2000–1500 BCE. Two cotton boll fragments, dated around 5800 BCE, and threads possibly of cotton in the Abejas phase (3500–2300 BCE) were found here. Cotton was a well-established cultivar by the Ajalpan phase (1500–900 BCE), and woven cloth survives here from the first millennium BCE. In later Mesoamerica, cotton cloth was generally used for elite garments, while the ordinary people wore clothing woven from maguey (agave) fibers.

However, the world’s most impressive evidence of ancient cotton production comes from the central Andean region of South America, where arid environments have enabled a wealth of textiles to survive, particularly from burials. Genetic evidence suggests that the center of original domestication of *G. barbadense* was in northwestern Peru or southwestern Ecuador. From early times, the inhabitants of northern Chile, Peru, and Ecuador seasonally exploited the exceptionally rich coastal marine resources and those of the valleys inland, and by the third millennium BCE there were permanent settlements in both zones. Plants cultivated in the valleys by the late fourth millennium BCE included cotton. These were traded to the coast where they were also cultivated by some communities, although more commonly the cotton was grown and processed at inland sites. Cotton nets with bottle-gourd floats and cotton fishing lines with shell or cactus-spine fishhooks were essential equipment for coastal communities. Cotton was also used extensively at coastal sites, such as Ancón and Chilca, to make twined or looped textiles as well as bags and slings for hunting. Frequent finds of spindle whorls and needles reflect the processing of cotton. Exchange networks also developed between the lowlands and the diverse regions of the Andean highlands. Cotton was cultivated in the sierra region of the Andes, for example, associated with the complex of ceremonial platforms and other buildings at La Galgada (2200–1200 BCE) where bodies tightly tied in a flexed position with cotton thread were buried wrapped in a cotton cloak or blanket and often wearing a cotton cap. In areas where rainfall or floodwaters were inadequate,

such as in the sierra, small canals were dug to provide water for cultivation. The period 2500–1800 BCE is often known as the Cotton Pre-ceramic since the extensive use of cotton precedes the appearance of pottery in the central Andean region.

—Jane R. McIntosh

Bibliography

- Fuller, Dorian Q. “The Spread of Textile Production and Textile Crops in India beyond the Harappan Zone: An Aspect of the Emergence of Craft Specialization and Systematic Trade.” In *Linguistics, Archaeology and the Human Past*, edited by T. Osada and A. Uesugi. Indus Project, Occasional Paper 3. Kyoto: Research Institute for Humanity and Nature, 2008.
- Moulherat, C., et al. “First Evidence of Cotton at Neolithic Mehrgarh, Pakistan: Analysis of Mineralized Fibres from a Copper Bead.” *Journal of Archaeological Science* 29 (2002): 1393–1401.
- Smith, C. Earle, Jr., and Richard S. MacNeish. “Antiquity of American Polyploid Cotton.” *Science* 143(3607) (1964): 675–676.
- Zohary, Daniel, and Maria Hopf. *Domestication of Plants in the Old World: The Origin and Spread of Cultivated Plants in West Asia, Europe and the Nile Valley*. 3rd ed. Oxford: Oxford University Press, 2000.

Linen and Flax

Flax (*Linum usitatissimum*) was one of the last major crops domesticated in the ancient Near East. Unlike the bulk of the early domesticated plants, flax was raised primarily for something other than food. The fiber from flax was used to produce linen. Until the development of cotton, flax was the key fiber-producing crop.

Linen is a very strong and lightweight textile ideal for the hot climates of the ancient Near East. It is also pleasing to the eye and skin and as a result is still manufactured today. Evidence for linen’s use comes from as early as the Pre-Pottery Neolithic B in Israel (ca. 7000 BCE based on radiocarbon dating of the remains) at the Judean Desert cave of Nahal Hemar, where the dry climate preserved fragments of woven linen textiles.

Linen provided most of the material used in clothing in ancient Egypt and was used in the production of the bandages used in mummification. While not as prevalent in other parts of the ancient Near East, it did supply a substantial amount of the raw material used in producing lighter-weight clothing. Linen was used to make underwear, tunics, dresses, and kilts and was often considered to be of better quality than other materials and so was often worn by the elite of society. In addition to linen’s use for producing clothing, its fibers were used in sail-making and for ropes, while the poorest quality fiber was used as lampwicks in oil lamps that would have been found in essentially every ancient home.

In order to produce linen, the stalks of flax were harvested and then retted. Retting involves soaking the stalks in water to separate and soften the fibers. Once they have been prepared in this way, they are then crushed and beaten to further separate the fibers into a product that can eventually be made into yarn or thread. The beaten stalks were placed in direct sunlight (often on open rooftops) to dry and bleach. The resulting fiber was then combed and spun into yarn, which could be dyed or left white, and woven into cloth.

In addition to its primary use as a source of fiber for textiles, flax also produces a seed that is very high in oil content. While these seeds can be eaten and today are considered a popular



Fragments of linen textiles from the ancient site of Deir el-Medina, Egypt. (Gianni Dagli Orti/Corbis)

healthy dietary supplement, in antiquity the seeds were probably used more commonly for oil production. The resulting flaxseed or linseed oil is not very palatable (it is used primarily today as a base for oil paints) but was used in antiquity as a lubricant; as a basis for resins, unguents, and pigments; and probably most importantly as a fuel for lamps. Its importance would have been even higher in those early periods before the domestication of olives sometime during the Chalcolithic or Early Bronze Age (when olive oil becomes the fat of choice for cooking and other uses). Linen was a major trade commodity for ancient Egypt, and Egyptian linen was renowned throughout the ancient Near East for its high quality.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford, 2000.
- Gonen, Rivka. "The Chalcolithic Period." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Grigson, Caroline. "Plough and Pasture in the Early Economy of the Southern Levant." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- King, Phillip J., and Lawrence E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.

The Origins of Silk

According to Confucius, Lady Xi Ling Shi, the wife of the legendary Yellow Emperor of China, invented sericulture, the manufacture of silk textiles. One day, the 14-year-old wife of the emperor was sitting beneath a mulberry tree drinking her tea. A silk cocoon fell into her hot tea and began to unravel. The empress realized that the unwinding filaments could be woven into textiles. Her husband, the Yellow Emperor, Huangdi, was one of the Sage emperors and is himself credited with numerous important in-

ventions, and there is no reason to believe that the legend of Xi Ling Shi is anything but a legend. Nevertheless, the earliest clear archaeological evidence for sericulture dates to the third millennium.

In 1927 archaeologists working in Shanxi Province found half a silkworm cocoon that dated to between 2600–2300 BCE. Ribbons, threads, and some woven fragments were recovered from the site of Qianshanyang in Zhejiang Province. These pieces date to between 3600–3000 BCE. Not enough remains of them to learn much other than that they are pieces of silk; the context suggests that they may have been used as the burial shroud for a child. Also from Qianshanyang but dating to about 2500 BCE are about 300 bamboo tools and pieces of silk, all evidence of sericulture. The fragments of silk were woven in a herringbone pattern and consisted of material from at least 20 different cocoons, as fine as silk manufactured today. Much evidence has come from along the Yangtze River. At numerous sites, spinning tools, threads, and woven fragments have been recovered. One ivory cup decorated with silkworms has also been recovered. Clay and stone models of silkworms attest to Chinese interest in the creature, although the function of the sculptures themselves are unknown. This is not substantial archaeological evidence, but it is enough to be certain that by 3000 BCE, the ancient Chinese were practicing sericulture. Characters for silk appear along with the earliest writing, the tortoise shell inscriptions of the Shang dynasty.

The Chinese silk industry has long been based on the exploitation of a blind and flightless moth, *Bombyx mori*. The wild ancestor (*Bombyx mandarina* *Mora*) may not have been blind and flightless, but over centuries of selective breeding the ability to fly has been selected out of the species. Controlling the breeding and feeding the moth appropriate feeds are key aspects of sericulture; it is unclear when these skills were perfected by the ancient Chinese.

One moth will lay around 500 tiny eggs (about 5 grams, or .18 ounces, in total weight) and then die shortly after. These eggs are kept at an ideal temperature until they hatch. The baby worms are then fed fresh handpicked mulberry leaves constantly until they reach an ideal weight.

Once they have reached the appropriate weight, the worms start spinning cocoons. After the cocoons have been left alone for about eight or nine days, they are steamed in order to kill the pupas. Then the cocoon is immersed in warm water, where the filaments begin to unwind. Each cocoon actually has a considerable amount of filament, about 1,968–2,952 feet (about 600–900 meters). The filaments of between 5 and 8 cocoons are twisted together to make a very long thread on a spool. These threads are then woven together to make silk.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Vainker, S. *Chinese Silk: A Culture History*. London: British Museum Press, 2004.

Peruvian Textiles

By about 3500 BCE, the people of ancient Peru had developed sophisticated textile production techniques. At this time, cotton became the fabric of choice, replacing the less malleable reeds and rushes that had provided weaving materials in prior periods. By 1800 BCE, weaving had become widespread throughout Peru, with cotton and animal fibers (especially from llamas) being the most commonly used materials.

In the earliest stages of the era from 4000 BCE to 1000 BCE, the most common techniques were twining and looping naturally occurring fibers, such as those found in reeds. Most examples that have been recovered are grass mats often associated with burials. The beginnings of cotton cultivation, starting around 3500 BCE, changed this dramatically. Cotton is much more flexible and allows for the creation of greater varieties of designs. Spindle whorls are also found in the archaeological record around this time, indicating that more effective (and time-efficient) spinning practices had been developed for use with cotton.

Preserved at the site of Huaca Prieta are some of the most interesting designs in early Peruvian

weaving. Barely discernible now (and probably hardly discernible in antiquity) are ghostly bird figures, woven directly into fabrics. Generally, designs in Peruvian textiles from this period are all rectilinear. Given the types of weaving technology available, patterns and figures were produced using straight lines as opposed to curved lines. Even dyed fabrics follow this rectilinear schema. Geometric designs, involving contrasting colors, are very frequent. Birds, animals, and human figures are also readily apparent. Peruvian weavers also seemed to enjoy pairing serpents, fish, and human figures, having the opposing figures twist around each other or interlock with one another.

Between 2000 and 1800 BCE a new technology was developed that allowed textiles to be produced much more quickly and in greater numbers. Called the heddle loom, this new technology allowed the spun fibers to be mounted and separated, allowing for quicker weaving and more complex designs.

—Kevin M. McGeough

Bibliography

- Bird, J. B. "Preceramic Art from Huaca Prieta." *Nawpa Pacha* 1 (1963): 29–34.
- Doyon-Bernard, S. J. "From Twining to Triple Cloth: Experimentation and Innovation in Ancient Peruvian Weaving (ca. 5000–400 B.C.)." *American Antiquity* 55(1) 1990: 68–87.

Ancient Clothing Styles

Fashion is one of the ways that people identify themselves. This is as true for antiquity as it is today. People of the ancient world dressed according to the fashions of their time and especially of their place. Clothing styles can be very informative. They tell us about a person's origins and status as well as about a society's attitudes toward the body or gender differentiation.

Rarely do textiles survive in the archaeological record. Therefore, our knowledge of ancient fashion is based primarily on painted and sculptural decoration. Third-millennium BCE sculptures from Mesopotamia give us a good sense of Sumerian styles. At this time a heavy fleecy garment made of sheepskin, called a *kaunakes*, became popular. The men wrapped it like a kilt



Statue of what may be a Minoan snake goddess, found in the temple at Knossos on Crete. (Roger Wood/Corbis)

with a kind of bustle in the back, but the women draped it over a shoulder and covered their breasts. Images of women also show that hats and elaborate wigs and hairstyles played an important role in women's fashions. Men were usually bearded with long curly hair, although bald and clean-shaven men served as temple priests. Over the course of time the norm in Mesopotamia became a long tunic and robe of linen or wool decorated with patterns and fringes. Even into the Roman period, Mesopotamia was well known for the quality of its multicolored textiles.

The most prized textiles of the ancient world, however, were Egyptian linen garments. The men in Egypt were generally clean-shaven, and they wore short kilts that fell a little longer in the front. The women, at least the elite women, wore a form-fitting dress with shoulder straps

that exposed the breasts for much of Egyptian history. Almost all of their clothing was of white linen. Clothing in Egypt was also an indication of rank. The more elaborate the garment, the higher the social rank. Of course, elaborate gold and colored jewelry was always in fashion for the rich. In the Egyptian New Kingdom, circa 1550 BCE, long loose gowns that fell in pleats became popular for both men and women. Changes in dress such as these help art historians to date Egyptian wall reliefs.

Perhaps the most dramatic fashions among Bronze Age people belong to the people of the Aegean. The painted women in the frescoes found on Crete and Greece wore elaborate colored skirts that fell in multiple flounces to the floor, sometimes with an apron over their skirts. The sleeved bodice of the dress came around the breasts, leaving them bare, and fit tightly around the waist. Wealthy Minoan women also wore jewels in their hair, which is usually shown long and curly. Men on Crete, at least young men, also wore their hair long so that it fell in curls over their shoulders. They wore short patterned kilts or a garment called a codpiece, an ancient version of the jock strap.

The differences in dress among the Egyptians, Mesopotamians, and Minoans emphasizes the role of costume as a marker of cultural identity. Details of dress were faithfully reproduced in paintings and wall reliefs because dress displayed both social rank and group identity. Like people of today, the people of antiquity often cared about fashion and were sensitive to fashion trends. One Egyptian funeral poem tells us, "She who was rich in fine linen, who loved clothes, lies in the cast-off garment of yesterday."

—Susan Helft

Bibliography

- Boucher, F. *20,000 Years of Fashion*. New York: Harry N. Abrams, 1983.
- Collon, D. "Clothing and Grooming in Ancient Western Asia." In *Civilizations of the Ancient Near East*, edited by Jack Sasson. New York: Scribner, 1995.
- Green, L. "Clothing and Personal Adornment." In *Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. New York: Oxford University Press, 2001, 274–276.

Green, L. "Seeing through Ancient Egyptian Clothes." *KMT* 6.4 (1995–1996). 28–40, 76–77.

Irvin, D. "Clothing." In *The Oxford Encyclopedia of Archaeology in the Ancient Near East 2*, edited by E. M. Meyers. New York: Oxford University Press, 1997.

Janssen, R. "Costume in New Kingdom Egypt." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

■ Introduction: Death and Dying

It may seem strange that the topic of death and dying is found in the "Society and Culture" section of this encyclopedia rather than the "Religion and Thought" section. Yet for many of the people of this period, the dead were still members of the community. The practices associated with the treatment of the dead reflected the roles that the dead continued to play in the community and helped mediate the social relationships of those still living. For archaeologists, cemeteries provide some of the best information about ancient social relationships.

Individual graves can tell us much about the society as a whole. For example, Egyptian pyramids, which are essentially tombs, show us the power that the Egyptian king wielded in order to compel people to invest their time, labor, and resources in such a lavish display. Similarly, King Tutankhamun's tomb, which was filled with riches and jewels, showed that the royal family could afford to consign such valuable materials to eternity. The ancient Egyptians would not have seen this as a waste; they felt compelled to provide these offerings to their honored dead.

Studying cemeteries as a whole can also provide important information on ancient social structure. When archaeologists excavate cemeteries, they have certain questions in mind. For each burial they want to determine the gender of the body, the age of the body, how many bodies were entombed together, what types of grave goods were buried with the body, and any other evidence that may shed light on burial practices. When this information is analyzed, it can provide very important insights. For example, if all of the individuals in a cemetery were buried with the same quantities and qualities of goods, this reflects a relatively egalitarian society. If one can

identify differences between the goods buried with males and females, then it may be possible to reconstruct gender roles. If children were buried with huge amounts of valuables (more than many of the adults), this suggests that there was a strong class structure in the society (since most children are not able to accumulate wealth on their own). If only the occasional adult is buried with lavish grave goods, then perhaps status was an important factor in a society (these may have been successful warriors or religious figures). Genetic patterns may also reveal information about families in ancient times.

—Kevin M. McGeough

The Egyptian Afterlife

There was not one simple, unified view of the afterlife that persisted unchanged through the three and a half millennia of ancient Egyptian history. Different conceptions of the afterlife existed side by side in Egyptian theology, a fact that the population seems to have accepted without major question or concern. Sources available for reconstructing ancient perspectives of the afterlife include the remains of lavishly constructed tombs as well as simple graves, mummified human remains and the ritual treatments applied to them, and preserved funerary texts. Such preparations provided the Egyptian who had led a positive life with access to an eternal afterlife. These deceased individuals, who were considered vindicated, or justified (literally "true of voice"), were thus worthy to avoid a second death that would obliterate them completely.

The ancient Egyptians looked in either of two directions for their final destination: skyward to the distant heavens or downward to a remote,

➤ WERE THE EGYPTIANS REALLY OBSESSED WITH THE AFTERLIFE?

The uncertainty of what happens after death is perhaps the most daunting concern addressed by any belief system. The ancient Egyptians are often characterized largely on the basis of their approach to this great mystery. Views regarding death and the afterlife dominate surviving materials. Partial explanation for this situation rests in geography and the randomness of preservation. Areas where the ancient Egyptians went about their daily lives have more frequently been built over, eroded away by a shifting Nile River, or destroyed by human activity as modern civilization has developed. Modern archaeologists have easiest access to remains along the desert margins and farther away from the Nile Valley where necropolises were customarily located. Additionally, large tombs intended as eternal houses for the deceased were often constructed of stone blocks, which preserve well. By contrast, the majority of architecture in ancient Egypt would have been built of mud brick, a much less enduring material. Thus, the modern view of ancient Egyptian civilization is likely somewhat skewed, presenting a somewhat larger discrepancy between matters of life and death than was actually the case.

If the ancient Egyptians are charged with an afterlife obsession, then they are equally guilty of being obsessed with life in general. Indeed, the average Egyptian did not have a lengthy lifespan to look forward to, and many religious and magical beliefs were directed toward improving both the quality and length of one's life. The afterlife was viewed as an extension of this earthly life but effectively as an eternal improved version. Most Egyptian funerary literature and preparation focus on the necessary transitions required to achieve that extended life.

Looking beyond the trials and obstacles of transition, it is notable that the needs and desires

relating to the afterlife itself are surprisingly mundane and are not belabored in texts. The deceased wish to have a household, the companionship of their earthly families, productive fields, perhaps some time for recreation, and the type of lifestyle to which they might have aspired while alive. There is perhaps no other religion in history that emphasizes the preservation of earthly humanity more strongly than ancient Egyptian religion. One quintessentially human desire for the deceased was to avoid working after “retiring” to the Afterlife. This consideration brought about a type of mummy-shaped figure that eventually became ubiquitous in tombs (often in large numbers). Called *shabtis* (“ones who answer”), they were meant to magically substitute for the deceased if called to do fieldwork, a task that paralleled the real world where farming was the most common occupation. A spell sometimes said over the shabti explains their purpose:

O this/these *shabti*,
If the Osiris [person's name] is detailed
for any work that is to be done yonder in the
netherworld . . .
here I am you shall say.
If you are detailed
at any time to serve there,
to cultivate the fields, to irrigate the river-banks, to
ferry sand of the east to the west
and vice versa
here I am, you shall say.

—Nicholas S. Picardo

Source

Harry M. Stewart, *Egyptian Shabtis* (Buckinghamshire, UK: Shire Publications, 1995), 49.

subterranean underworld realm. In either case, from at least the Pyramid Texts onward the most desired destinations in the afterlife—when put in geographical terms—were The Field of Reeds (aka Field of Rushes) or the Field of Offerings. References to these locales suggest that the afterlife was essentially a reproduction of the earthly Egyptian setting, only idealized as a perfect version. In essence, the eternal paradise that the

Egyptians hoped to attain was the life of a wealthy estate owner, an unsurprising conception of the ideal life given that most sources for funerary religion were generated by the elite and thus reflect their outlook and experiences. This was a place of constant availability of life's necessities, where the well-to-do Egyptian hunted, fished, and oversaw agricultural fields. However, in this vision of Egypt the hunt was

always successful, the fish were always biting, and the fields always yielded a bountiful harvest. No comfort of life was lacking.

Egyptian funerary religion focuses more on the transitions and transformations required to attain the desired afterlife than on extensive details of what awaits upon arrival. The Egyptian conception of the human condition recognized three spiritual elements that, though lacking precise English translations, collectively come close to the modern idea of a soul. These are the *ka*, the *akh*, and the *ba*. Foremost was the *akh*, the effective or equipped spirit that was successful in reaching the desired state of eternal existence. The *ka* was the sustaining energy, or life force, with an individual at birth and surviving through death into the afterlife as a spiritual twin of sorts. Offerings made by the living to sustain the deceased in the afterlife are customarily made for the *ka* of that person. Though likely thought to have been with a person during life, the *ba* emanated primarily after death, acting as the mobile spiritual manifestation that could cross the divide between the realms of the living and the dead. Depicted as a human-headed bird, it was required to return to the tomb and the mummy at night.

A statue of a tomb owner could be set up as a substitute for the corpse in case of damage or loss, but ideally a mummy would be preserved indefinitely. Although there are hints of early attempts to preserve the body from before Early Dynastic times, experimentation that developed into the full process of mummification is usually placed in the Old Kingdom, initially only for the royal family. Elaboration of mummification led to the complex process of drying the body and removing some organs to preserve it from decomposition, followed by wrapping with linen bandages.

Mummification achieved several practical objectives. By desiccating the corpse it accomplished artificially what the dry climate of the desert had done for centuries before the use of built tombs. The body was refashioned in the image of Osiris, god of the underworld and afterlife who, according to Egyptian religion, had been the very first mummy. Just as mummification prompted his resurrection after being killed and dismembered by his jealous brother Seth, the same treatment was expected to facilitate

the rebirth of every dead Egyptian. It also maintained the humanness of the body, keeping it as close to its original form as possible and thus making it an appropriate vessel for the *ba*. This also meant satisfying basic human needs such as eating, drinking, and breathing, which would still be needed in the afterlife. These faculties were restored in both the mummy and tomb statues of the deceased through the most important funeral rite, called the Opening of the Mouth Ceremony, that was performed by a priest or the eldest son of the deceased.

The transition to the afterlife is also expressed in the terms of a cosmic cycle, especially for the king but also for other individuals during some time periods. During the Old Kingdom, a most important transition occurred when the sun's rays provided a ramp or stairway (of which the pyramid shape is often considered a symbol) for the pharaoh to ascend. As the sky was thought to be a body of water, the king joined the sun-god Re in his daily crossing of the sky in a solar boat. The sun set in the western horizon, understood as the underworld realm of the dead, only to emerge, reborn anew each morning at sunrise. The deceased pharaoh could also become a celestial body, specifically one of the circumpolar stars that, from the vantage point of Egypt, never disappeared from the night sky. By the New Kingdom the focus of royal funerary texts changed to the underworld portion of this journey (embodied by the descending underground tombs in the Valley of the Kings), when the king followed Re's perilous nightly course and was reenergized by Osiris in the underworld, providing for rebirth at sunrise and the start of one more day in eternity.

—Nicholas S. Picardo

Bibliography

- Ikram, Selima, and Aidan Dodson. *The Mummy in Ancient Egypt: Equipping the Dead for Eternity*. London: Thames and Hudson, 1998.
- Lesko, Leonard H. "Death and the Afterlife in Ancient Egyptian Thought." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. New York: Scribner, 1995.
- Quirke, Stephen. *Ancient Egyptian Religion*. New York: Dover, 1992.
- Spencer, A. J. *Death in Ancient Egypt*. London: Penguin Books, 1982.

Egypt—From the Pyramid Texts to the Book of the Dead

Ancient Egyptian funerary literature has a long and complex history that probably long predates the earliest known written examples. The genre was fluid, versatile, and constantly changing from its inception. The first known funerary texts are the Pyramid Texts (PT), which were inscribed inside the burial chambers of Old Kingdom pharaohs, starting with King Unas (ca. 2375–2345 BCE) of the Fifth Dynasty.

The PT were used strictly for royal burials and appeared in the tombs of both kings and queens. The texts consisted of a series of self-contained spells or utterances. The pyramid of Unas contains 236 spells. Many of his successors also incorporated new spells, bringing the total number of known spells close to 1,000. Whether the arrangement of the spells within the pyramid is of any significance has been a matter of debate. Some scholars, such as James P. Allen, have argued that they were intended to be read in a specific order. Allen argues that the physical grouping of the spells within the structure of the pyramid was directly related to their specific magical function (for example, the spells along the north wall of the sarcophagus chamber were specifically intended to ensure that the dead king had the necessary provisions for survival in the afterlife).

The PT were intended to ensure that the king (or queen) would safely enter and thrive in the afterlife and achieve immortality through continuous, cyclical rebirth. This was accomplished by magically merging the king's soul with various divine identities, especially Re (the solar deity, whose daily rising and setting was equated with continuous birth, death, and rebirth) and Osiris, who represented the king in death and was associated with fertility and resurrection. The spells were also intended to protect the dead king from the dangers of the afterlife, preserve his physical remains (without which the soul could not survive), and ensure that his soul would have freedom of movement.

In the First Intermediate period (ca. 2160–2055), the sacred texts that had once been the domain of royalty alone became accessible to a wider segment of the population. Several tombs

of nonroyal individuals from this period contain copies of the PT, mostly those that appeared in the tomb of Unas. This trend continued and evolved in the Middle Kingdom (ca. 2055–1650). The spells that had formed the corpus of the PT were adopted, adapted, and vastly expanded upon for use by private individuals, who inked or inscribed them on the inner and outer surfaces of the characteristic wooden coffins of the Middle Kingdom. This new corpus of funerary literature is referred to in modern scholarly parlance as the Coffin Texts (CT). These texts were still restricted to wealthier individuals, since only the relatively well-to-do could afford the luxury of a decorated coffin.

The range of possible spells was vast, and there were many variations of each individual spell. The CT served the same basic functions as their predecessors: they provided protection for the dead and ensured a safe transition to the afterlife. Now, theoretically, any individual—royal or nonroyal, male or female—could assume the role of Osiris in the afterlife. The beneficiaries of these spells were referred to as “the Osiris (so-and-so)” in the texts, thus linking the spirit of the deceased with the god through the magically potent act of equating them in writing. In addition, the spells were intended to provide the dead with many of the same things that people sought in life: provisions, the company of family members, and protection from many of the same dangers that threatened the living (such as dangerous animals and human enemies). Many spells promised the beneficiary an afterlife free from hard manual labor.

The CT also introduced a new element that would become crucially important in the development of Egyptian funerary religion: the idea of judgment in the afterlife. The souls of the dead were thought to be judged by Osiris and a tribunal of other gods. This would be a central theme of the corpus of texts that would come to be known as the Book of the Dead (BD). An additional body of texts and artistic vignettes, also depicted on coffins, emerged in the Middle Kingdom. This is called the Book of the Two Ways by modern Egyptologists, and it described and illustrated the actual physical journey of the deceased into the afterlife, another core concept of the BD.

THE AFTERLIFE IN PICTURES



Detail from the Book of the Dead shows the scribe Hunefer being conducted to the balance by the jackal-headed Anubis, the deity who served as embalmer and guide for the dead. (Jon Bodsworth/The Egypt Archive)

Illustrations of the realm of the dead had already begun to appear as part of the decorations on coffins in the Middle Kingdom in the form of the elaborate maps that accompanied the text known as *The Book of Two Ways*. Images of the afterlife proliferated in funerary contexts from the New Kingdom and remained popular well into the Roman period.

The first pharaohs of the Eighteenth Dynasty were buried in tombs decorated with stylized painted scenes from the *Am Duat* (*Book of What Is in the Underworld*), imitating the simplified drawing style used in contemporary papyrus book rolls. The drawings depict the journey of the sacred bark of Re through the underworld (i.e., the world of the night, where the sun would go when it “died” at the end of each day) and all of its accompanying perils.

The popular *Book of the Dead* was typically illustrated with colorful vignettes depicting the topic of each spell. Tomb walls also frequently depicted scenes of the afterlife, one of the most famous examples being the elegantly decorated Nineteenth Dynasty tomb of Sennedjem at Deir el-Medina. In both cases, the images range from depictions of supernatural scenes, such as the deceased standing in the judgment hall of the gods watching the weighing of the heart, to depictions reflective of the routines of daily life, such as the deceased harvesting grain, walking about freely, or simply sitting down to eat.

—Megaera Lorenz

The BD first emerged in its full form in the New Kingdom (ca. 1550–1069), although sections of it are already attested as early as the late Thirteenth Dynasty, approximately 100 years earlier than the start of the New Kingdom. It was one of several illustrated collections of funerary and cosmological literature that became common at this period. The BD was part of the standard funerary inventory of nonroyal individuals (although individual spells from the BD occasionally appeared on items of funerary equipment from royal burials).

The BD most commonly took the form of an illustrated papyrus scroll, which would typically be placed in the coffin with the mummy with the idea that the vital information it contained would be immediately available to the deceased. The BD contained a series of spells (approximately 189 total, although individual copies varied considerably in the number of spells), grouped roughly by category. The spells have been numbered by modern Egyptologists, although the order in which they appeared in actual copies of the BD was highly variable, as was the actual content of the individual spells.

The spells of the BD dealt with many issues, including the ability of the deceased to safely enter the underworld and retain the physical abilities of the living, the judgment of the deceased by the gods and the vindication of the deceased of any crimes committed in life, the merging of the deceased with various deities (especially Osiris and Re), the ability of the deceased to take on various forms and to be allowed complete freedom of movement, the ability of the deceased to travel in the sacred bark of Re and thus be reborn on a daily basis, and the provision of the deceased with all the necessities of life in the underworld.

The BD remained in use well into the Roman period (30 BCE–395 CE), often supplemented by other funerary books such as the *Am Duat* (*What Is in the Underworld*) and other new books that developed in the funerary tradition. It was never truly canonized, and variations on specific spells were not only accepted but encouraged. The BD, like its predecessors and all other Egyptian religious literature, was part of a living tradition that thrived for the entire period of pharaonic Egyptian history.

—Megaera Lorenz

Bibliography

- Allen, James P. *The Ancient Egyptian Pyramid Texts*. Society of Biblical Literature Writings from the Ancient World 23. Atlanta: Society of Biblical Literature, 2005.
- Allen, T. George. *The Book of the Dead or Going Forth by Day*. Chicago: University of Chicago Press, 1974.
- Faulkner, Raymond O. *The Ancient Egyptian Coffin Texts*. 3 vols. Warminster: Aris and Philipps, 1973–1978.
- Faulkner, Raymond O. *The Ancient Egyptian Pyramid Texts Translated into English*. Oxford, UK: Clarendon, 1969.
- Faulkner, Raymond O., et al., eds. *The Egyptian Book of the Dead: The Book of Going Forth by Day*. San Francisco: Chronicle Books, 1994.

The Valley of the Kings

The Valley of the Kings contains the tombs of nearly every pharaoh from Egypt's New Kingdom (Eighteenth through Twentieth Dynasties, ca. 1545–1081 BCE) as well as a small handful of lesser royalty, high officials, and members of the priesthood. The vaguely Y-shaped valley slices through the limestone cliffs to the west of the modern city of Luxor, the site of the ancient Egyptian capital of Thebes. Its modern designation derives from the Arabic name Wadi Biban el-Moluk, or Valley of the Gates of the Kings. As the location of some of the most spectacular monuments in all of Egypt, the Valley of the Kings has been a popular tourist destination since ancient times, as shown by thousands of graffiti left by ancient Greek and Roman visitors in a number of the tombs, which have stood open since antiquity.

It is not known precisely which king decided to initiate construction in the valley proper. In the nearby village of Deir el-Medina, which housed the community of workmen responsible for building the kings' tombs, the pharaoh Amenhotep I was deified and worshipped as the patron and ostensible founder of the settlement. The archaeological record, however, is decidedly unclear on this point, as the Theban tombs of the first four Eighteenth Dynasty pharaohs—Ahmose, Amenhotep I, Thutmose I, and Thutmose II—have yet to be conclusively identified. Fortunately, there are few such problems of identification from the joint reign of Hatshepsut and Thutmose III on-

ward. The tombs of the remaining New Kingdom rulers have now been identified within the confines of the valley, with the notable exceptions of Akhenaten, who chose to be interred in Middle Egypt near his new capital of Akhetaten (modern Tell el-Amarna), and Ramses VIII, whose tomb has not been identified.

A considerable amount of speculation has been put forth regarding possible reasons for the decision to shift the location of the royal burial to the Valley of the Kings. On the one hand, the nearby site of Deir el-Bahri was sacred to the goddess Hathor, whose associations with birth and rejuvenation may have held particular significance for the afterlife of the king. At the same time, the great peak known as el-Gurn ("the Horn"), which dominates the skyline above the valley, quite possibly served as a natural symbolic pyramid for the tombs beneath it. Parallel to this geographical peculiarity was the shape of the limestone cliffs themselves, whose outline resembles the twin peaks and central valley used to write the Egyptian term for the horizon, *akhet*. As the mythical location of the sun's entry into and emergence from the Underworld, the *akhet* was of central importance to Egyptian conceptions of the afterlife. Quite significantly, this same term could be applied both to the royal necropolis itself and to the individual tombs within it. Finally, the isolation of the valley and its relative inaccessibility may have been seen as a potential deterrent to tomb robbers seeking to plunder the cemetery's treasures. However, if the hindrance of thieves was one of the factors motivating construction in the valley, then this goal was never achieved.

All of the tombs in the valley are rock-cut subterranean structures, excavated at a descending angle perpendicular to the cliff face. They differ from most of the earlier pyramid-type royal tombs in that there was no visible connection between the sepulchers in the valley and their respective funerary temples, located along the edge of the cultivation nearer the Nile. In addition, the lack of any substantial built superstructure further distinguishes the tombs in the Valley of the Kings from the pyramids of the Old and Middle Kingdoms.

The basic design employed in the royal tombs of the New Kingdom consisted minimally of an

initial descending stairway or corridor, a second corridor flanked by paired niches, and a burial chamber. To this group was frequently added an additional chamber, or well shaft, whose floor was sunk to a greater depth than the remainder of the structure. In at least one tomb (KV 17, Seti I), this shaft served the practical purpose of diverting destructive floodwaters from the burial chamber, but the wells' probable symbolic association with the primordial ocean and certain regions of the Underworld must also be taken into account. From the reign of Thutmose IV onward, the basic four-room design was frequently doubled, creating the impression of an upper and lower tomb that may have reflected the ancient duality of the royal burial.

Unlike the pyramids, the tombs in the Valley of the Kings exhibit no consistent alignment to the cardinal directions. However, a system of internal alignment was developed, probably during the Eighteenth Dynasty, in which the entrance to the tomb was always located symbolically south, with the burial chamber in the north. Beginning in the Nineteenth Dynasty, this symbolic axis began to shift such that the tomb entrance came to be seen as located notionally east, with the burial chamber in the west. Both systems of symbolic alignment reflected aspects of the mythical journey of the sun god (equated with the deceased king), as also indicated by the ancient names assigned to many of the tomb's chambers, such as "First god's passage of (the sun god) Re, which is upon the sun's path."

Undoubtedly, the most striking features of the New Kingdom royal tombs are the extensive decorative programs employed on their walls and ceilings. These include representations of various divinities associated with the mortuary cult, images of the king, and a wide array of cosmographic scenes and texts depicting the chthonic and celestial regions traversed by the sun god (and, by extension, the deceased king). The use of such texts served to magically associate the tomb with the regenerative powers of the underworld, or *Duat*. At the same time, the architecture of the tomb itself was also conditioned by the layout of the *Duat*, which likewise recalled the association of the valley with the horizon (*akhet*) as the point of convergence between the land of the living and of the dead.

—Joshua Roberson

Bibliography

- Černý, Jaroslav. *The Valley of the Kings*. Bibliothèque d'Étude, vol. 61. Cairo: Institut Français d'archéologie orientale du Caire, 1973.
- Dodson, Aidan. "The Tombs of the Kings of the Early Eighteenth Dynasty at Thebes." *Zeitschrift für Ägyptische Sprache und Altertumskunde* 115 (1988): 110–123.
- Hornung, Erik. *The Valley of the Kings*. Translated by David Warburton. New York: Timken, 1990.
- Lesko, Leonard H. "Spiritual and Intellectual Matters." In *Pharaoh's Workers: The Village of Deir el Medina*, edited by Leonard H. Lesko, 87–94. Ithaca, NY: Cornell University Press, 1994.
- Reeves, Nicholas, and Richard H. Wilkinson. *The Complete Valley of the Kings*. London: Thames and Hudson, 1996.
- Romer, John. "Royal Tombs of the Early Eighteenth Dynasty." *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 32 (1976): 191–206.
- Thomas, Elizabeth. "The 'Well' in Kings' Tombs of Bibân el-Molûk." *Journal of Egyptian Archaeology* 64 (1978): 80–83.
- Wilkinson, Richard H. "Symbolic Location and Alignment in New Kingdom Royal Tombs and Their Decoration." *Journal of the American Research Center in Egypt* 31 (1994): 79–86.

Egypt—The Dead among the Living

Ancient Egyptians did not believe that death severed all earthly ties. The dead were thought to maintain links to the mortal world from the beyond, and deceased individuals were still considered influential members of the community in which they had once lived. They had the ability to exert themselves from beyond the grave, especially through appearances in dreams, and they could also act on behalf of the living in the realm of the dead. The living expressed this ongoing relationship by perpetuating the memory of the dead and attempting to communicate with them directly. Such interactions often happened either at the tomb or within the family home.

A prominent feature of ancient Egyptian religion was the expectation that the living would help sustain the spirits of dead relatives by regularly depositing food and drink offerings at their tombs. Certain holidays, such as the Festival of the Valley, were dedicated to family gatherings at

► A LETTER TO THE DEAD WRITTEN ON A POTTERY BOWL (THE CAIRO BOWL) FROM SAQQARA IN THE COLLECTION OF THE CAIRO MUSEUM

What Dedi presents to the God's Servant Intef, born of Iunakht:

"What about the Maid-servant Imau, who has become sick? Can you not fight night and day on her account against any man or woman who acts against her? Why would you want the destruction of your home? Fight again for her. Set her household in order so that someone will pour libations for you. If there is nothing from you, then your household is done for. Could it be that you don't realize that it is the maid-servant who creates your household from people? Fight for her so that someone will be watchful on her account and so that she will be spared from any (deceased?) man or woman who acts against her. Thus your house and your children will be provided for.

"It is good that you hear" (translation by author).

—Nicholas S. Picardo

Source

Alan H. Gardiner. *Egyptian Letters to the Dead, Mainly from the Old and Middle Kingdoms*, (London: Egypt Exploration Society, 1928), 7–8, plates VI–VIA.



Terra-cotta bowl inscribed with a letter written by the lady Merti to her dead son Meteri, Middle Kingdom, third–second millennium BCE. (Erich Lessing/Art Resource, NY)

the relatives' tombs. During the New Kingdom, particular houses were sometimes equipped with their own small shrines or niches that displayed images of family ancestors, to be worshipped and petitioned when it was felt that they could intercede when surviving family members were beset with difficulties. The main objects of this ancestor cult were uniquely shaped statue busts and stelae (inscribed slabs of stone or wood) that depict an ancestor. These family members were often called Able Spirits of Re, suggesting high standing as part of the sun god's entourage that would perhaps make them powerful spiritual allies in the afterlife.

The living also wrote letters to the dead as a more formal mode of communication. Letters were sometimes composed on papyrus or linen, but they were frequently written on ceramic bowls to be deposited with offerings at the tomb in a simultaneous effort to satisfy the relative's

spirit. Such letters identify a problem that is usually attributed to an agent from beyond the grave and request that the addressee intercede. Apparently a case could be brought against such malicious forces in a spiritual version of a law court similar to those found in the mortal world. In some cases the writer believes that the addressee is causing the harm. Common topics include assistance in overcoming illness, redress for wrongful loss of property or inheritance, and requests for children. As incentive for the deceased to comply, some letters hint that future offerings might be withheld if matters do not improve. The writer might also list the good treatment provided when the deceased was alive or remind them of the proper rituals provided upon their death and afterward. This tactic insinuates that the deceased is not fulfilling reciprocal family obligations.

—Nicholas S. Picardo

➤ HUMAN SACRIFICE IN ANCIENT EGYPT

It is generally accepted that upon the death of the earliest kings of Egypt, some of their servants were killed and buried with their ruler in order to accompany him in the afterlife. Some early ivory labels may also depict ritual slaughter. Still, a general reluctance among Egyptologists to acknowledge human sacrifice in Egypt has led some to find other explanations, causing most to dismiss any possibility of the practice in later dynasties. Yet archaeological finds at Mirgissa and Avaris clearly point to human sacrifice. Texts from Senusret I, Amenhotep II, Ramses III, and Prince Osorkon explicitly describe ritual slaughter. Evidence for ritual smiting is also coming to light. These examples are calling into question the assumption that human sacrifice was eschewed in ancient Egypt, which has led archaeologists to reexamine some of the practices of ancient Egyptians, along with their own previously held opinions. Currently the evidence does not support the conclusion that there was a regular program of sacrifice, although this cannot be dismissed. However, it is clear that in Egypt human sacrifice was at least used as a response to particular situations, often in response to some type of rebellion against the system.

—Kerry Muhlestein

➤ EAR STELAE—VOICEMAIL OF THE GODS

The deified dead were not the only useful intermediaries employed in ancient Egypt to establish a direct link between individual and deity. In the New Kingdom ear stelae were directed toward the same objective. A stele is an inscribed slab, usually of stone or wood. Stelae were used as tomb or boundary markers, commemorative monuments, and votive offerings. Ear stelae were much like other offering stelae but for representations of human ears applied to them. The number of ears on a single stele varies from 1 to well over 300. Accompanying inscriptions often refer to a god “who hears” or sometimes to the hearing of the ears themselves. The ears are traditionally interpreted as those of the gods, placed on a stele to magically record an earthly message for retrieval by the divine.

—Nicholas S. Picardo

Bibliography

- Baines, John. “Practical Religion and Piety.” *Journal of Egyptian Archaeology* 73 (1987): 79–98.
- Friedman, Florence D. “Aspects of Domestic Life and Religion.” In *Pharaoh’s Workers: The Villagers of Deir el-Medina*, edited by Leonard H. Lesko. Ithaca, NY, and London: Cornell University Press, 1994.
- Wente, Edward. *Letters from Ancient Egypt*. Society of Biblical Literature Writing from the Ancient World 1. Atlanta: Scholars Press, 1990.

The Deified Dead in Ancient Egypt

In addition to cults of state or local deities and private mortuary cults, another type of cult recognized individuals who, although nonroyal mortals in life, were treated as minor deities long after they died. Practically speaking, the maintenance of family cults only lasted as long as dedication from the living permitted. Private mortuary cults could fall into neglect within a few generations. However, some enjoyed sustained devotion from a broader population than just family and lasted many centuries. The offering cult extended beyond the tomb. Shrines, statues, and even temples enacted the formal cult of the deified dead in much the same manner as the cults of gods and kings.

Throughout much of ancient Egyptian history, a deceased member of society was thought to adopt some aspects of the divine upon passing from the mortal sphere of existence into the Afterlife. However, those who gained more extreme notoriety among the deified dead were not merely those whose cults managed to receive sustained attention. Such people were usually quite notable in life, renowned for professional accomplishments (some of which may have become embellished through time) or remarkable wisdom. Commemoration through a formal offering cult was not strictly a means of veneration, however. The deified dead were ascribed a status similar to sainthood. The living considered them close, useful intermediaries who could facilitate communication with gods and goddesses. Cult statues of these influential saint-figures could be incorporated into major festivals, and even royal patronage of such cults is documented.

One very prominent case of the deified dead includes Imhotep, architect of Dynasty III king Djoser. He receives credit for the construction of the Step Pyramid at Saqqara in the early Old Kingdom, the very first royal pyramid. His reputation is also one of the most long-lived of any nonroyal Egyptian, due in part to his eventual deification. By the late New Kingdom he was still remembered as a man of knowledge and letters. Deified status followed thereafter with the erection of temples dedicated to him. In still later times under the Greek occupation of Egypt, an association with medicine and healing caused him to be equated with the Greek medical god Asclepius.

At the southern Egyptian site of Elephantine (at modern Aswan) are the remains of a sanctuary devoted to a prominent provincial governor named Heqaib, who lived during the Sixth Dynasty of the Old Kingdom. He was known in life especially for successful trade expeditions to the south on behalf of the king. Statues, votive items, and additions to his sanctuary indicate that his cult was well maintained through at least the late Middle Kingdom.

Formal cults to the deified dead became especially widespread in the Late period and after.

—*Nicholas S. Picardo*

Bibliography

- Franke, Detlef. "Elephantine." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Pinch, Geraldine. *Votive Offerings to Hathor*. Oxford, UK: Griffith Institute, Ashmolean Museum, 1993.
- Teeter, Emily. "Divine Cults." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Wilkinson, Richard H. *The Complete Gods and Goddesses of Ancient Egypt*. London: Thames and Hudson, 2003.

The Kerma Cemetery

Nearly two miles (3 kilometers) east of the ancient city of Kerma (in present-day Sudan, ancient Nubia) lies a cemetery almost 148.2 acres (90 hectares) in size that contains numerous small

graves, some very large graves including elaborate tumulus graves and two funerary temples for ritual practices. Many of the grave goods are Egyptian in style, and much of the belief that justified the huge expenditure of labor and resources on these funerary monuments must have been based on Egyptian practices. However, the cemetery is uniquely Nubian, representative of the kingdom that the Egyptians called Kush. Kerma was Kush's largest site and arguably was the first city in Nubia. Its use, based on the dates of Egyptian objects found in association with the cemetery, was roughly coincident with the Egyptian Second Intermediate period.

The most elaborate tombs are the eight tumuli located on the southern edge of the cemetery. A tumulus is a large mound of earth or sand set atop an underground chamber. The largest at Kerma are 98.4 yards (90 meters) in diameter; the dirt tumuli of these tombs are supported by a series of mud-brick walls that run perpendicular to either side of the burial chamber. In three of these tumuli, the burial chamber was a long central corridor that ran the length of the tomb. While most of the grave goods had been looted long before the modern excavations of George Reisner, much of the layout was still intact. Each of the eight largest tumuli had a central burial chamber; one had a coffin made of quartz, and another had a coffin made of slate. The three tumuli with the long central corridor were filled with the bodies of retainers sacrificed for service in the afterlife. These sacrificial victims numbered in the hundreds. Associated with these larger tumuli are smaller satellite tumuli. These satellites are smaller than the main tombs but feature some elaborate artifacts; scholars are divided as to whether these were royal family members or high-powered court officials (or both), since unlike Egyptian tombs there are no written explanations provided in these tombs.

The vast majority of burials are simply oval or rectangular pits cut directly into the ground and covered by a very low tumulus. The bodies are laid on their right side, in a flexed position, facing north. The bodies rested on a wooden bed, buried with slippers and a headrest, covered with an animal hide, and provisioned with various animals and beverages for use in the afterlife.

Some of these simpler burials were associated with sacrificial victims as well, servants killed for their superior's use in the afterlife.

Tumuli burials, like those found at the Kerma cemetery, are also found at other Kerma culture sites. While none are as elaborate as those of the Kerma cemetery, they are similarly built and equipped. Male graves commonly include weapons. Daggers and swords are found in many male graves. Archers were also buried with their equipment.

—Kevin M. McGeough

Bibliography

- Adams, W. *Nubia: Corridor to Africa*. London: Penguin, 1977.
- Kendall, Timothy. *Kerma and the Kingdom of Kush, 2500–1500 BC: The Archaeological Discovery of an Ancient Nubian Empire*. Washington, DC: National Museum of African Art, 1997.
- O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University Museum of Archaeology and Anthropology, 1993.
- Trigger, Bruce. "Kerma: The Rise of an African Civilization." *International Journal of African Historical Studies* 9(1) (1976): 1–21.
- Trigger, Bruce. *Nubia under the Pharaohs*. London: Thames and Hudson, 1976.

➤ WHY CHILD SACRIFICE?

Why, in a culture where animal sacrifices were normative and usually sufficient for most purposes, would one sacrifice a child? The theory that child sacrifices offered a way to control family size with added divine benefit has been presented, but it remains questionable. It is more likely, as A. R. W. Green notes, that child sacrifice granted a benefit beyond that of sacrificing an animal. Since a child was much more valuable than an animal, the sacrifice would have been seen as more significant. Because of this, child sacrifice was likely used in times of great need or at especially important sites, such as high places or city gates.

—Thaddeus Jacob Nelson

Bibliography

- Alberto R. W. Green, *The Role of Human Sacrifice in the Ancient Near East* (Missoula, MT: Scholars Press, 1975).

Babies under the Floor— Canaanite Burial Practices and the Issue of Child Sacrifice

Certain burial sites from Canaanite settlements have been theorized as being the remains of child sacrifices. Of concern are infants and young children interred in jars occasionally with small amounts of grave goods, such as bowls or jugs, and placed within floors or walls. These burials are the focus of scholarly debate about whether they represent child sacrifices to bless homes and sacred sites or a culturally accepted burial custom for young children and infants.

Such burials were first identified as child sacrifices by R. A. S. Macalister in the excavation report from the site at Gezer. Macalister identified these burials as child sacrifices to sanctify a holy site, or high place. The religious importance of such sites is well attested in Canaanite sites. In later excavations at Gezer, the jar burials were not found to be contemporaneous with the use of the high place or its construction. Instead, the infants were likely gathered together in a specific place that served as a graveyard. The high place was then developed at the same site in a later period.

The recognition of the Gezer burials as having resulted from natural deaths has raised questions concerning the practice of child sacrifice as a means of sanctifying building sites within the Canaanite culture. Since the Gezer excavations, there have been other child jar burials found under foundations and walls in Canaanite sites. Generally, they have been regarded as fulfilling a normative interment tradition, placing newborns and young children close to the hearth. The presence of such burials in numerous sites may just reflect the child mortality rate in the Canaanite sites.

While many jar interments have not been seen as sacrifices, there remain some individual burials that may reflect these practices. One such burial was found in the site of Dothan, where a child of one-and-a-half years of age was discovered beneath a large individual square slab of stone that was part of a wall dated to the Middle Bronze Age. Another wall burial was found at Tell el-Farah, which is located near Nablus. This burial consisted of one infant interred in a jar

and a hollowed-out location for a second infant against a Middle Bronze Age gate. It has been noted, however, that the hollow area in the gate could have been prepared after construction, which would limit the likelihood that the infants were a foundation sacrifice.

The sacrificial basis of burials, such as those at Tell el-Farah and Dothan as well as others at Negeb and Jericho, remains heavily contested by scholars. There is little evidence that they were more than burials of individuals who died of natural causes. This in conjunction with the reevaluation by William G. Dever and others of the Gezer high place calls into question the practices of child sacrifice to bless foundations within the Canaanite culture. The possibility that this practice was present cannot be ruled out, but within most sites it has become questionable.

—*Thaddeus Jacob Nelson*

Bibliography

- De Vaux, Roland. *Studies in Old Testament Sacrifice*. Cardiff: University of Wales Press, 1964.
- Dever, William G., et al. "Further Excavations at Gezer, 1967-71." *Biblical Archaeologist* 34(4) (1971): 94-132.
- Green, Alberto R. W. *The Role of Human Sacrifice in the Ancient Near East*. Missoula, MT: Scholars Press, 1975.

The Greek Hearth

The Greek hearth was a fixed, slightly raised area often rectangular in shape of about 3 feet (1 meter) across and coated with plaster, clay, or stones designed to contain the family fire within the home. The hearth fire stood in the open center courtyard or was sometimes built near the entrance in the vestibule. It was a focal point of Greek life. Near the hearth, slaves and women of the family attended to their household duties that included spinning, weaving, and preparing meals. It was the home's practical and symbolic center where families cooked food, kept warm, and received light and functioned as the axis of familial religious activity.

The Greek word for hearth is *hestia*, which is also the name for the goddess believed to dwell within it. The head of the household sacrificed at the hearth before every meal. The hearth fire was considered sacred and was kept burn-

ing throughout the year. New members of the *oikos*, or family, such as babies, brides, and slaves, experienced their ritual introduction at the hearth. On the fifth day of life, the newborn child circumambulated the hearth in his or her father's arms in a festival called Amphidromia. On the day of betrothal, the bride was led by her father from his hearth to that of her new husband. Slaves were brought to the hearth the day they fell under the authority of their new master. Thus, the hearth was sacred to the Greek sense of family unity and identity. Socrates in the *Cratylus* (401b) relates the Greek proverb "Begin from the hearth," which meant a propitious start to any undertaking. The hearth and its undying fire symbolized permanence of the family and the divine presence of the goddess.

Like the domestic hearth that was the center of the home, the Greek city-state had its own civic hearth where the members of many families gathered at the single public cult of Hestia. Thus, the civic hearth helped to create a sense of community beyond that of the *oikos* and certainly helped substantiate the ideals of democracy in Athens. It also served an important diplomatic function since foreigners from different city-states would be honored there as guests. In a similar vein, the civic hearth functioned as a place of refuge for those seeking asylum since it was considered sacred space and as such was protected from hostile intrusion by the threat of ill-omen. The temple at Delphi had its hestia at the center and was considered the communal hearth for all of Greece and as such helped foster feelings of Pan-Hellenism, at least when city-states were not at war with each other. It was from here that the most sacred of fires would be brought to the new hearth. In Argos when the head of the family died, the hearth fire was extinguished, and a new unpolluted flame was brought in from the fire at Delphi. The goddess Hestia was considered to dwell in all these hearths, working to keep the main social units of family, polis, and Greek as a series of interlocking communities.

The hearth was essential to the lives of ancient Greeks since it defined them as civilized people. Without a hearth, a human is a wanderer and vagrant, without attachment to a family, city-state, and the sacred fire. With the hearth fire,

people dwelled with the great goddess Hestia and her promise of concord. Without a hearth, a person was no better than a beast that dwells in the outskirts of town away from the comfort of family, community, and the gods.

—Dennis P. Quinn

Bibliography

- Ault, Bradley A., and Lisa C. Nevett, eds. *Ancient Greek Houses and Households: Chronological, Regional, and Social Diversity*. Philadelphia: University of Pennsylvania Press, 2005.
- Burkert, W. *Greek Religion*. Cambridge: Harvard University Press, 1985.
- Nevett, Lisa C. *House and Society in the Ancient Greek World*. Cambridge: Cambridge University Press, 2001.
- Nilsson, M. P. *Greek Popular Religion*. New York: Columbia University Press, 1940.
- Rider, B. C. *The Greek House: Its History and Development from the Neolithic Period to the Hellenistic Age*. Cambridge: Cambridge University Press, 1965.

Minoan and Bronze Age Greek Tombs

Two styles of tombs were prevalent in Crete (the home of the Minoan culture) in the Early and Middle Bronze Age; they might be characterized as square and round. The square variety was more prevalent, appearing in different manifestations from Palaikastro to Gournes to Arkhanes to Mochlos. These were either square or oblong rooms or a series of narrow rectangular chambers arranged parallel to each other. Some scholars suggest that these square tombs should be regarded as house tombs and that they served as houses for the dead.

Located only in southern Crete in an area called the Mesara were the round tholos tombs. These were slightly more elaborate in construction, combining a rubble core with a rock facing. The entrance was always to the east, probably in association with the rising sun. Whether or not these structures were roofed is still under debate. Inside, the structures had a slight corbel vault, meaning that the rocks came closer together as they rose above the ground. For large structures, the only way to secure such vaulting was with a capstone at the very top, meaning that the cor-

beling had to go all the way up. Such a roof has never been preserved among the tholoi of the Mesara, so it is impossible to tell if all their roofs have simply fallen in, if the corbeling went up only a short distance before being covered over by a reed roof, or if the tombs were simply left open to the sky. These structures were large enough for several burials, and they were used repeatedly over several generations, occasionally having the insides burned as a form of house-cleaning. The ultimate form of the tholos appeared much later and much farther to the north when the Mycenaeans adapted the Minoan practice for their own nobility.

Before that occurred, however, the Bronze Age Greeks had their own styles of burial. Simple inhumations in cist graves generally served in the Early and Middle Bronze Age. A cist grave was a rectangular chamber dug into the ground and lined with slabs of rock to support the shape. A bedding of pebbles could line the floor, and the interred might be laid out in a crouched position so that a smaller cist would suffice for burial. With the coming of the Mycenaeans (or at least their newfound wealth), a more elaborate style was used, specifically the shaft graves of Mycenae. These were improved cist graves in which the cist was deepened and enlarged to accommodate up to three people, and the walls were given additional supports to keep them from falling in on the dead. Finally, the grave was roofed over with stone. Several such shafts are arranged together in Grave Circles A and B at Mycenae, with the circles themselves covered over with earth and the individual graves marked by sculpted stelae.

—Stephanie Lynn Budin

Bibliography

- Budin, Stephanie Lynn. *The Ancient Greeks*. Santa Barbara, CA: ABC-CLIO, 2004.
- Dickinson, O. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 1994.
- Pedley, J. G. *Greek Art and Archaeology*. 2nd ed. Upper Saddle River, NJ: Prentice Hall, 1998.
- Preziosi, D., and L. Hitchcock. *Aegean Art and Architecture*. Oxford: Oxford University Press, 1999.
- Touratsoglou, I. *Macedonia: History, Monuments, Museums*. Athens: Ekdotike Athenon, 1996.
- Vermeule, E. *Greece in the Bronze Age*. Chicago: University of Chicago Press, 1972.

► THE TREASURY OF ATREUS

For true ostentation, nothing beat the Mycenaean tholos tombs of the Late Helladic III period. These structures were the result of a natural evolution of the Minoan tholoi. Several smaller tholoi appeared in Greece during the Mycenaean period. All were round, and at the time of discovery all of their roofs (these did have roofs) had fallen in. But in the Late Helladic II, these structures took on monumental proportions. One of the later examples, the so-called Treasury of Atreus, for example, measured 15 meters in diameter and in height. The interior was entirely lined with sculpted stone and was originally decorated with gold wall ornaments. A separate rectangular room jutted off from the circular tholos where, past a door, the body was laid to rest. Grave robbers were prolific in the Bronze Age (and also in the Victorian era), and every attempt was made by the Greeks to protect the grave and its goods. Despite their attempts, however, nothing now remains of the treasure, but both the side chamber and the tholos were probably filled with elaborate grave goods.

Located 90° from the burial chamber was the tholos entrance, comprising a door almost 10 meters high capped with a lintel stone weighing several tons. The entire portion of the tholos below the level of the lintel was dug into a hillside along with a 36-meter-long dromos, or corridor, leading to the entrance. The face of the doorway as well as the dromos walls were lined with large regularly cut rectangular stones. Above the level of the lintel was the corbel vault, giving the tholos the nickname “beehive tomb,” as on the interior such corbel vaulting looked like a beehive. This kind of vaulting stayed in place through conflicting pressures: pressure that the cut stones placed on each other and pressure that the surrounding earth placed on them from above and around. For this reason, it was imperative that the vaulting be buried. If the ground above the capstone eroded



The Treasury of Atreus in Mycenae is actually a tholos or beehive-shaped tomb. The structure was identified and named by the second-century-CE traveler Pausanias. (Corel)

away, the capstone eventually fell in, and the entire vault came undone.

On all the walls except the doorway, the corbeling was pretty much continuous from floor to capstone, so no one stone had to bear very much weight. This was not the case with the lintel, however, that had nothing below it for support. To relieve this stone (which is already quite heavy) of some weight, the Mycenaean architects developed the relieving triangle, a hollow triangle directly above the lintel. This triangle was covered with decoration so as not to be visible from the outside. Of course, grave robbers inevitably knew that it was there, and this was the main form of illicit access into the tholoi.

The treasury's façade was elaborately decorated with sculpted stone imported from Egypt and is now on display in the National Museum in Athens. Once the entire complex was filled and finished, it was buried so that only a hill was visible. It might be called a rather inconspicuous form of conspicuous consumption.

—Stephanie Lynn Budin

Royal Cemetery of Ur

The excavation of the Royal Cemetery of Ur was one of the earliest and most spectacular discoveries in the world of Near Eastern archaeology. In 1922 Sir Leonard Woolley, a British explorer and archaeologist, was laying trenches in the fabled city of Ur, a large tell (a mound containing

the remnants of previous settlements) in the southern Iraqi desert and the birthplace of the biblical Abraham. What Woolley found, the burials of the kings and queens of Ur, continues to shock and fascinate us today. Buried beneath the sands was a large burial ground for the city of Ur during a period called the Early Third Dynastic



Carved gold helmet that belonged to Meskalamdug, a king of Kish and Ur, 2450 BCE. (Scala/Art Resource, NY)

period, circa 2600–2400 BCE. This was a period when kings gained absolute power in southern Mesopotamian cities such as Ur, and they built great temples and palaces to advertise that power.

Most of the more than 1,000 burials that Woolley excavated at Ur were simple human burials (referred to by archaeologists as inhumations), where the body was wrapped in a reed mat or coffin and placed in a rectangular pit. Sixteen tombs stood out both for their carefully built burial chambers and the wealth of their burials. These came to be known as the Royal Tombs. Several of the cylinder seals and objects found with these burials name a king or queen, seemingly confirming Woolley's royal identification.

The royal tombs were large vaulted stone-built chambers, usually with a ramp leading up to them. One of the most unusual features of these graves was the large number of sacrificial victims buried with the main occupant of the tomb. One burial had 63 retainers, or court officials, buried in a large pit in front of the tomb chamber, and another tomb had 73 retainers. Most of these victims were young women opulently dressed with exotic and expensive golden headdresses. At the entrances to some of these tombs, male skeletons with helmets and spears

or daggers and whetstones lay where they had stood guard.

Woolley found small cups next to many of these retainers, who had come down to the tomb with the funeral bier where they drank (or were forced to drink) some kind of poison. In addition to the large numbers of people buried with each royal burial, the numbers and wealth of the objects included in these burials were staggering. The elite themselves were dressed in elaborate jewelry and gold headdresses, and with the bodies were cylinder seals and sometimes weapons. Hundreds of beautiful objects, some of the best examples of Sumerian art, were taken from these tombs. One is a delicately carved gold helmet that belonged to a Meskalamdug, a legendary king of Kish and Ur. Other famous pieces are the four-foot-tall wooden lyres decorated with gold bull heads and inlaid shell.

Many of these objects, like the lyres and wooden and silver sledges, would have been used in the burial ceremonies for the transport of the body and the playing of music. Many others were probably for the dead king or queen to use in the afterlife.

These objects represent the absolute best in Mesopotamian craftsmanship. The metalwork and especially the jewelry show the mastery of complex gold-working techniques, such as repoussé (a technique whereby metal is shaped or ornamented with patterns in relief made by hammering or pressing on the reverse side). The range of materials used to fashion the objects also demonstrates the wide-ranging trade contacts that the kings and queens of Mesopotamia had already established at this early date. All of the precious materials in the tombs—the shells, gold, silver and lapis lazuli—were imported from the Gulf states, Egypt, Anatolia, and Afghanistan. Certain luxury objects, such as ostrich eggs, chlorite vessels, and large carnelian beads, came from as far afield as Egypt, Libya, eastern Iran, and India.

The Royal Tombs of Ur also give us an extraordinarily clear insight into one very important aspect of Mesopotamian society: their attitudes toward death and dying. It is certainly clear that the rulers of Ur put an extraordinary amount of effort and wealth into their burials. How can we understand these burials and what appears

► THE ROYAL CEMETERY OF UR—TEXT AND ARCHAEOLOGY

Several Sumerian texts can shed light on the archaeological phenomenon of the Royal Cemetery of Ur and demonstrate the complementary nature of both bodies of evidence, text and archaeology.

The first is a poem about the great hero Gilgamesh, one of the legendary kings of Mesopotamia. The poem, titled *The Death of Gilgamesh*, describes his death as follows:

“His beloved wife, his beloved son,
His beloved favorite wife and junior wife,
His beloved singer, cup-bearer and . . . ,
His beloved barber, his beloved . . . ,
His beloved attendants who all served (in) the
palace,
His beloved consignments—
When they had lain down in their place with (him),
as in
The pure palace in Uruk, Gilgamesh, son of
Ninsun,
Weighed out the meeting gifts for Ereshkigal,
Weighed out the presents of Namtar.”
(Tinney 1998, 27).

The poem seems to suggest that Gilgamesh’s crossover to the underworld included his family members and attendants laying down with him at his burial.

A second poem belongs to a famous woman poet, Enheduanna, who lived several centuries later than Gilgamesh, around 2000 BCE. The poem starts out with Enheduanna cursing the city of Uruk. The last few lines of the poem refer to mourning practices perhaps demonstrated in the Royal Tombs of Ur:

“Oh lady, the (harp of) mourning is placed on the ground.

One had verily breached your ship of mourning on
hostile shore.
At (the sound of) my sacred song they are ready to
die.”
(Woolley and Moorey 1982, 93).

Could the harps that accompanied the attendants into the death pits at Ur have played the sacred song of Inanna and heralded their impending deaths?

A third poem, *The Death of Ur Nammu*, was written circa 1800 BCE. The text lists the sacrifices that Ur Nammu made and the offerings and gifts that he presented to the gods of the underworld. These parallel the vast numbers of goods found in the Royal Cemetery of Ur. Were these goods the offerings and presents needed for the kings of Ur to gain entrance to the underworld, as Ur Nammu’s text suggests?

The texts, although all later in date, can help us understand Mesopotamian death rituals and provide possible explanations for the phenomenon of the Royal Cemetery of Ur.

—Susan Helft

Sources

- S. Tinney, “Death and Burial in Early Mesopotamia: The View from the Texts.” In *Treasures from the Royal Tombs of Ur*, edited by Richard Zettler et al. (Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 1998).
- L. Woolley, *Ur “of the Chaldees”: The Final Account of Excavations at Ur*. Revised and updated by P. R. S. Moorey (London: Herbert Press, 1982).

to us as the gruesome practice of mass human sacrifice?

Woolley described the Royal Tombs as a burial site in which all of the court—the soldiers, servants, musicians, and grooms—all descended to their king’s or queen’s tomb, where they drank of some potion and willingly laid down their lives to serve their lord in the afterlife as well. Since Woolley’s discovery, others have suggested competing theories to explain this extraordinary

phenomenon. One theory has it that the kings and queens buried there were playing out a famous Sumerian myth about the sacred marriage of the Mesopotamian god Dumuzi, king of the Underworld, and the goddess Inanna, goddess of fertility and war, to ensure the fertility of the land. Others suggest that the burial of extraordinary riches and his court was a powerful way for each ruler to demonstrate his wealth and his control over others’ lives.

Although the practice of human sacrifice did not survive long after the Royal Cemetery of Ur, it was practiced in other early societies in Egypt, Sudan, and China. In all these cases, the court retainers were considered part of the possessions of the king and queen, and their services would surely be needed again in the afterlife. The same principles may have been at work in Ur.

—Susan Helft

Bibliography

- Woolley, L. *Excavations at Ur*. London: Ernest Benn, 1955.
- Woolley, L. *Ur “of the Chaldees”: The Final Account of Excavations at Ur*. Revised and updated by P. R. S. Moorey. London: Herbert Press, 1982.
- Zettler, R. *Treasures from the Royal Tombs of Ur*. Philadelphia: University Museum Press, 1998.

Burials in Neolithic China

Burial customs in the Neolithic period in China varied considerably from region to region. In the early part of the Neolithic at the site of Banpo, joint burials and family tombs were the norm. Typically these were secondary burials, meaning that the deceased were deposited elsewhere initially, only later being brought into the family/joint tomb. The tombs are filled with members from different generations who died at different times. Adults tend to be buried separately, although female children are buried with adults at the near-contemporaneous cemetery at Yuanjunmia. Changing gender roles at Banpo are apparent through the study of different grave goods. In the earliest use phases of the cemetery, men were buried with tools for fishing and hunting. Women were buried with tools used in agriculture and clothing production. These grave goods probably reflect the roles that the individuals played in life. As the period progresses, men start being buried with agricultural equipment, and there are significantly more tools than women. It is usually impossible to understand how the inhabitants of the Banpo family tombs related to one another. This is not the case at Dawenkou, where couples are often buried together (men on the left and women on the right). Gender roles are also apparent at Dawenkou, where men are given considerably more space in the tomb, while women

are relegated to the corner. Graves at Dawenkou are simple pit graves. A smaller and deeper pit is dug into a larger pit. In single graves, the body of the deceased is placed in a coffin and buried in the deeper interior pit. Grave goods are placed throughout the shallow pit.

A different mortuary tradition is in evidence at the site of Xishuipo in Puyang in Henan Province. As with Banpo, the site of Xishuipo is associated with the Yangshao culture. Unlike Banpo, status differentiation is apparent in the burials at Xishuipo. Most remarkable is Tomb M45, the final resting place of the so-called Puyang Shaman. The tomb consists of three main sections (each with a human body), with the Puyang Shaman in the middle section. He was found laid out on his back in between two clamshell inlaid images; on his right is a dragon, and on his left is a tiger. Two other clamshell animal designs were found north of M45, depicting tigers, deer, dragons, spiders, and mythical creatures. Scholars have speculated on interpretations of this complex; some have suggested that these designs must reflect some sort of sacrificial practice.

The burials at Xishuipo are not the only burials from Neolithic China that seem to be associated with ceremonial centers. Piled stone grave mounds, associated with the Hongshan people, have been excavated from near what is thought to be a temple at Niuheliang. Excavations of some of these burial mounds have revealed an uneven distribution of grave goods; some of the bodies are not associated with any grave goods at all. Those goods that were recovered were not utilitarian goods like those found at Banpo. Rather, these were elaborate jade objects used for personal adornment, ritual or religious purposes, or both.

In the latter half of the Neolithic, social differentiation is even more readily apparent. The remarkable burial excavated at Sidun in Jiangsu attests to the developing social stratification in Neolithic China. Called Tomb 3 by the excavators, this burial contained more than 124 grave goods, most made of jade. Thirty-three *cong* were found in the burial. These are white jade cylinders (squared on the edges), at most about 13 inches (35 centimeters) in height. These *cong* bear a common Liangzhu motif, two eyes that

seem to represent a deity. In some cases the eyes are depicted as part of an animal-like face with feathers for hair. The functions of these objects during this period are unclear. Twenty-four *bi* were found in Tomb 3. Also distinctive of Liangzhu culture, *bi* are small white jade disks, at most 10 inches (26 centimeters) in diameter, with a hole in the center. Other remarkable Liangzhu-era tombs have been excavated. Tomb M12 from Fanshan in Zhejiang produced what has been called the “king of the *cong*.” It weighs 7.7 pounds (3.5 kilograms) and features a more elaborate form of the typical *cong* iconography. Also from M12 is a jade ax, known as a *yue*; this particular *yue* bore the same iconography as the “king of the *cong*.” Other *yue* recovered from funerary contexts bear inscriptions of birds sitting atop pedestaled structures, with distinct icons in the center. Some scholars have taken these as signs of clans, lineages, or ruling houses; they are remarkably similar to Egyptian *serekhs*.

The large cemetery at Taosi, which was in use from 2600 BCE until 2000 BCE, reflects a highly stratified culture where personal wealth varied dramatically. Although there are likely at least 10,000 bodies interred at the site, only about 700 have been excavated. Of those, 600 were classified as small graves, 80 were medium-sized graves, and 6 were large graves. The small graves were very shallow rectangular pits, just large enough to fit a body without a coffin. A few of these graves have some grave goods, but most have none. The medium-sized tombs are also rectangular, and usually the deceased is buried in a wooden coffin (sometimes a man and a woman are found in these burials). The excavators further subdivide these medium-sized tombs based on the wealth of grave goods. Most have some mortuary objects, but the type and number of goods varies considerably. Finally, the six large tombs are rectangular and substantially larger 9 feet (3 meters) by 6 feet (2 meters). Wooden coffins were placed on floors covered with cinnabar. Amounts of grave goods run from 100 to 200 objects, most of high quality and many of unusual style (for example, wooden drums covered with crocodile skin, pottery with dragon designs, and stone chimes).

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Chang, Kwang-Chih. “China on the Eve of the Historical Period.” In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries Series. New York: Abrams, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

The Shang Cemetery at Xibeigang

The cemeteries at Anyang (ancient Yin, the Late Shang capital) have been well studied. A royal cemetery was located at Xibeigang at Anyang; while most of the tombs had been looted, the basic layouts and architecture of the tombs was preserved. There are 13 tombs that archaeologists associate with the royal cemetery. All are



A Chinese archaeologist works at a newly-discovered pit of chariots and horses in the ruins of Yin, just outside present-day Anyang in central China's Henan Province. Five of the seven pits are arranged in a line, with chariots and horses facing eastward. Yin was an ancient name for the Shang dynasty. (Corbis)

► THE TOMB OF FU HAO AT ANYANG

The only individual known from historical accounts of the Shang dynasty whose tomb has been discovered (and identified) is Fu Hao, the consort of Wu Ding, one of the Shang rulers. Bronzes in her tomb bear inscriptions of her name. Located in Anyang, this tomb, which is 8.2 yards (7.5 meters) deep, had been flooded, so the wooden coffins and remains of the deceased were not well preserved. However, 1.7 tons (1,600 kilograms) of bronze objects (more than 200 pieces) were recovered, as were 755 jades, 564 carved bone objects, and a variety of other grave goods. The large bronze objects were arranged around the edges of an outer coffin, and the jades were placed within an inner coffin along with more than 7,000 cowrie shells.

—Kevin M. McGeough

oriented to the northeast, and all feature long sloping ramps that lead to deep vertical shafts. At the bottom of the shafts is where the deceased and associated grave goods and sacrifices were interred. Since many of these shafts are beneath the water table, preservation and archaeological recovery have been minimal. The most frequent class of grave goods in these tombs is military equipment; each tomb seems to have had a vast amount of equipment, including chariot fittings.

Tomb M1001 at Xibeigang is somewhat unusual in that it has four ramps that lead down to its main chamber. The chamber is also cross-shaped, with a wooden installation in the center. While no coffin (or body) was recovered from the tomb, it is likely that it would have been placed in the center. Around the outside of the chamber were nine pits with human sacrificial victims. After or during the funeral ceremony, the chamber was filled with earth and more human sacrifices. The ceremony was particularly violent given the large number of sacrificial victims found within. Along the south ramp, 59 headless skeletons and 42 skulls were found. Most of these were teenage boys; their arms had been tied behind their backs, and they had been lined up and beheaded. Thirty-one sacrificial pits were found outside the tombs as well. Twenty-

two of these had human remains (ranging from one to seven bodies in each). A few also had horses and other animals. The funeral for whoever had been buried in M1001 was certainly a conspicuous display of power.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Bagley, Robert. "Shang Archaeology." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries Series. New York: Abrams, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

Thai Metallurgy—Burials at Non Nok Tha and Ban Chiang

Prior to the 1960s it was widely believed that the earliest metal use in Southeast Asia dated to around 500 BCE. New data, however, suggests a much more advanced civilization, evidencing metallurgical technology dating much earlier. These findings in the northeastern region of Thailand point toward a technologically sophisticated civilization and demonstrate complex social organization. In addition, the metal usages, as well as art, pottery, and agricultural practices, help to identify possible contacts and influences from outside cultures. Two excavated sites in Thailand, cemeteries at Non Nok Tha and Ban Chiang, have been extremely useful in providing evidence of innovation and advanced civilization from within indigenous civilizations of Southeast Asia.

The excavation of the cemetery at Non Nok Tha represented one of the first and largest excavations of its kind in Southeast Asia and resulted in the unearthing of more than 200 samples of human remains. These findings helped researchers conclude that there had been intermittent

human habitation in the region since 3500 BCE. Archaeologists also uncovered some of the oldest evidence for rice cultivation. In 1966 archaeologists discovered bronze fragments at Non Nok Tha, revealing one of the oldest and most sophisticated copper tools used presumably in agricultural practices. The discovery of bronze in Thailand changed many conceptions of the local development of bronze metallurgy. Likewise, discovery of agricultural practices contradicted prior notions of their origination in the Middle East. The site revealed evidence of bovine domestication, indicating advanced and innovative use of water buffalo in rice cultivation. Recent reevaluation of the radiocarbon dating methods used to argue for these early dates has suggested that bronze manufacturing this early at Non Nok Tha is unlikely. The more accepted dates now range from 1500 to 1000 BCE, which is still significantly earlier than what had previously been believed to be the case in Thailand.

The second site at Ban Chiang, excavated between 1974 and 1975, was initially interesting because of pottery discoveries. The site became increasingly important as bronze jewelry and tools dating to around 2500 BCE were excavated. While some dates have been contested and most now believe that the metal objects are better dated to around 1500 BCE, the findings themselves were important in reevaluating the history and influence of the region. Artifacts and human remains were found at the site dating to both the Bronze Age and the Iron Age. Potsherds found at Ban Chiang indicated advanced artistry as well as individual creativity. The time-consuming patterns and designs are detailed, suggesting what some believe to be an indication of leisure as well as the development of skill. It is believed that Ban Chiang was settled around 4000 BCE. Settlers there cultivated rice, raised domestic animals, and practiced sophisticated funerary rites. It is also suggested that this area of northeastern Thailand consisted of a network of autonomous villages with no hierarchical sociopolitical order. There is no evidence of a militaristic or violent civilization, with no discovered combat related mortalities. The civilization, however, seems to have vanished around 200 CE.

Nestled between two cultural giants, namely India and China, the historical cultural and social

➤ AN ACCIDENTAL DISCOVERY—THE “LOST” BRONZE AGE

Considering the importance of the archaeological finds of Ban Chiang, it is remarkable that its discovery was purely accidental. A young Harvard student, in July 1966, happened to trip on some tree roots while taking a walk in Ban Chiang. To his and subsequently archaeologist's amazement, he landed face down in some pottery protruding from the earth. The sophistication of their design and artistry quickly drew attention, resulting in the later large-scale excavations. Little did anyone imagine the tools, jewelry, pottery, and human remains that lay beneath these shards of clay.

—Erika Jahn

contributions of the smaller countries of Southeast Asia have been overshadowed. The findings at Non Nok Tha and Ban Chiang, however, contribute to a convincing argument for sedentism and cultural modernization, demonstrating that Southeast Asian civilization was not nearly as primitive as originally presumed.

—Erika Jahn

Bibliography

- Bayard, Donn T. *Non Nok Tha: The 1968 Excavation, Procedure, Stratigraphy and Summary of the Evidence*. Dunedin, New Zealand: University of Otago, Department of Anthropology, 1972.
- Higam, Charles. *The Bronze Age of Southeast Asia*. Cambridge: Cambridge University Press, 1996.
- Solheim, Wilhelm G., II, and Chester Gorman. “Archaeological Salvage Program: Northeastern Thailand, First Season.” *Journal of the Siam Society* 54 (1966): 111–181.
- Solheim, Wilhelm G., II, Hamilton Parker, and Donn Bayard. *Preliminary Reports on Excavations at Ban Nadi, Ban Sao Lao, Pimai No. 1, Honolulu*. Honolulu: Social Science Research Institute, University of Hawaii, 1966.

The Varna Cemetery

The Copper Age cemetery of Varna provides important information about mortuary practices, metallurgy, and the emergence of social ranking in prehistory. The cemetery contains the oldest mass assemblage of gold in the world, and the

➤ WHERE DID THE VARNA GOLD COME FROM?

The Varna gold is of high purity, and chemical analyses have been unable to determine its origin. Although gold is commonly found throughout the Balkans in later periods, the large accumulation at Varna is unique for the Copper Age. It is possible that the population exploited local gold sources that were unavailable to other communities. It is clear, however, that Varna participated in expansive trade networks, and others could theoretically have had access to it. Archaeologists can only guess at the ancient source. Some believe it to be from a combination of local (less than 31 miles, or 50 kilometers) and distant locations. Whatever the case, it is not clear why Varna is the only site to have so much of it.

—Noah V. Honch

early appearance of copper artifacts attests to the independent development of metallurgy in southeastern Europe. The volume and diversity of grave goods at Varna indicate the existence of widespread trade networks in the eastern Balkans and suggest that gold and copper were used to express the social status of deceased individuals.

The Varna cemetery is located in northeastern Bulgaria, slightly inland of the Black Sea and north of the Varna Lakes. Archaeological excavations have uncovered 281 graves, which are typically classified into three groups: (1) inhumations (155 burials), (2) cenotaphs (56 burials), and (3) destroyed burials (70 burials). Inhumations contain full or partial skeletons, which are generally accompanied by grave goods. Cenotaph burials lack human remains but contain significant deposits of diadems, beads, bracelets, and other items that are often placed in anatomical positions on clay masks. Cenotaphs are inferred to be deliberate, symbolic acts of reverence for eminent individuals who are buried elsewhere.

The number and variety of material goods differ considerably between individual graves at Varna. The central core of burials contains exceptionally wealthy inhumations and cenotaphs but lacks the remains of females or children, which may indicate male gender bias. Some burials outside of the core do not contain grave

goods although most do, and females and children are represented. Even though gold appears to be common at Varna, it was used sparingly, particularly in relation to copper, and many objects were made to look as if they were constructed of gold even when they were not. Furthermore, gold was mostly used for decorative and symbolic objects, such as maces and scepters, rather than utilitarian items. And while some burials lacked gold completely, others contained substantial quantities, weighing upwards of 1.5 kilograms. In this light, it appears that gold was highly valued and in all probability was related to the expression of social status in antiquity.

On the whole, however, Varna was an anomaly; no other Copper Age site contained the same amount of gold or showed such marked differences in the distribution of grave goods. Yet Varna was not an isolated populace; to the contrary, many individuals were involved in wide-ranging trade networks. *Dentalium* shells and *Spondylus* bangles are common burial items, both of which are Mediterranean mollusk genera that provide evidence of trade contacts in the Aegean. And while copper sources for the manufacture of artifacts at Varna have not been identified, most Copper Age tools in the Balkans were smelted from ores in south-central Bulgaria, hundreds of kilometers away. Accordingly, although the unique nature of the cemetery remains a mystery, Varna may have been a mortuary center for the interregional elite who played important roles in the formation of alliances and the organization and control of exchange networks in the East Balkans.

—Noah V. Honch

Bibliography

- Chapman, John C. "The Creation of Social Arenas in the Neolithic and Copper Age of S.E. Europe: The Case of Varna." In *Sacred and Profane: Proceedings of a Conference on Archaeology, Ritual and Religion*, 152–171. Oxford: Oxford University Committee for Archaeology, 1991.
- Ivanov, Ivan. "Varna and the Birth of the European Civilization." In *Varna Necropolis: The Dawn of European Civilization*. Sofia: Agató, 2000.
- Renfrew, Colin. "Varna and the Emergence of Wealth in Prehistoric Europe." In *The Social Life of Things: Commodities in Cultural Perspective*, edited by A. Appadurai. Cambridge: Cambridge University Press, 1986.

Renfrew, Colin. "Varna and the Social Context of Early Metallurgy." *Antiquity* 52 (1978): 199–203.

European Warrior Graves

European warrior graves began to appear during the Bronze Age, when metallurgical advances and material demands brought forth new means of harnessing and expressing individual power. Warrior graves usually contain a single human and a variety of weapons and armor, such as copper or bronze axes, daggers, projectile points, spears, greaves, helmets, shields, and breastplates. Many graves include pottery connected with ritual feasting, and exotic materials such as amber that originated from distant sources attest to robust trade networks.

The composition of warrior graves varies between geographic regions and time periods. In central Europe, Early Bronze Age warriors were primarily interred in flat graves. By the Middle and Late Bronze Ages, warriors were generally buried in earthen mounds or tumuli that required significant organization and labor to construct, indicating the social importance of those interred. The Leubingen tumulus in Germany, for instance, contained a male warrior with bronze weapons, woodworking tools, and a whetstone for metalworking; similar artifacts at other tumuli suggest that metalworking was an elite skill. Barrow burials in Wessex, England, contain bronze weaponry, sheet goldwork, and foreign materials such as faience and amber, which indicate distant trade contacts in the Mediterranean and the Baltic regions. Unique ship-setting burials in Scandinavia consist of stone slabs in the form of ships. Ship-setting burials signify the importance of boats in trade and raiding; while not restricted to warriors, several burials probably contained leaders and participants of war.

The introduction of the horse and wagon improved mobility during the Bronze Age. Whether horses and wagons were used in warfare or limited to trade and transport, they were expensive to maintain and were likely restricted to the elite. Wagon burials appear in Switzerland, southern Germany, and Austria during the Late Bronze Age and are commonly assumed to be warrior graves. As at Hart an der Alz in southern Bavaria, these burials frequently contain a wagon, a sword, and feasting vessels. Most wagon



Ship burial in Gotland, Sweden. (Jürgen Howaldt)

➤ DID HUMANS IN WARRIOR GRAVES ACTUALLY ENGAGE IN WARFARE?

We often cannot be sure if warriors engaged in warfare. Soft tissues rarely preserve, and battle wounds are difficult to recognize from skeletal evidence. E2 cut marks on bones and weapons occasionally indicate whether an individual fought or died in combat. In rare cases, projectile points are found embedded in bone, suggesting death in battle. Many warriors, however, likely never fought. Countless warrior weapons would have been useless in battle and were symbolic rather than practical. It is likely that some warriors also had the necessary material resources to organize, equip, and control combatants for self-interests without engaging in fighting themselves. Nonetheless, warrior graves are consistently distinguishable from other Bronze Age burials. Whether or not interred individuals engaged in battle, they probably played important social, political, and even religious roles in prehistoric communities.

—Noah V. Honch

burials belong to the Urnfield period, during which individuals were cremated and placed in urns. Although wagons are frequently damaged by cremation and only preserve in part, they are important precursors to Iron Age chariot burials.

—Noah V. Honch

Bibliography

- Luise Dietz, U. "Horses in the Bronze Age." In *Gods and Heroes of the European Bronze Age*, edited by K. Demakopoulou et al. New York: Thames and Hudson, 1999.
- Osgood, R., S. Monks, and J. Toms. *Bronze Age Warfare*. Stroud, Gloucestershire: Sutton, 2000.
- Sherratt, A. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated Prehistory of Europe*, edited by B. Cunliffe. Oxford: Oxford University Press, 1994.
- Sherratt, A. "Prehistoric Amber Trade." In *The Oxford Companion to Archaeology*, edited by B. M. Fagan. Oxford: Oxford University Press, 1996.

Passage Tombs in Ireland

Neolithic peoples in Ireland constructed enormous stone monuments called megaliths that are among Europe's earliest and most impressive prehistoric accomplishments. Many megalithic passage tombs are concentrated along the Boyne River Valley north of Dublin in County Meath. The importance assigned to these tombs for burial of kings and nobles is ascertained by the fact that no regular domestic houses have ever been found from the Neolithic period. They are called passage tombs because of the subterranean passages constructed to hold cremated remains and allow for the passage of people and sunlight.

► PROFESSOR O'KELLY AT NEWGRANGE

Archaeologist Dr. M. J. O'Kelly of University College, Cork, excavated Newgrange between 1962 and 1975 and oversaw the restoration of the white quartz front wall that is visible for miles around. O'Kelly first documented how the center of the passage tomb is illuminated for a brief 17 minutes on the winter solstice because the Neolithic builders cut a special opening above the entrance, intending to send the message that as plant life returns with the summer sun, the deceased Neolithic kings should also live again in some mysterious afterlife. O'Kelly argued for restoration of the white quartz wall in front of Newgrange, giving it a regal and dignified appearance after hundreds of years of being obscured under dirt and sod.

—Jonathan L. Thorndike



This Neolithic passage grave in Newgrange, Ireland, dates to about 3000 BCE. Passage graves were built on mounds of earth and contain multiple chambers connected by subterranean passageways. (Corel)

Among hundreds of Neolithic sites in Ireland, the three most important are the megalithic tombs found at Newgrange, Knowth, and Dowth. Stretched out along a ridge north of the River Boyne, these passage tombs make up a necropolis or megalithic city of the dead similar in purpose to the pyramids of ancient Egypt. Archaeologists date the construction of Ireland's passage tombs to the third millennium BCE, or about 500 years earlier than the pyramids.

Newgrange, the best preserved of the sites, has been associated with the Brugh na Boinne (Palace of the Boyne) in Irish epic poetry such as the "Tain Bo Cualnge" ("The Cattle Raid of Cooley"). The megalithic tomb is 280 feet in diameter and 26 feet in height and was originally enclosed by a circle of standing stones, only a few of which remain. Many stones outside the tomb show intricate abstract carvings in the shape of spirals and diamonds. The exact meaning of these symbols has never been deciphered. At the entrance, visitors stare down a 62-foot-long passage that faces the south, aligned in such a way that on the shortest day of the year (the winter solstice) sunlight moves through the opening above the lintel known as the roof box and down the passage toward the inner chamber. The inner chamber was thought to be a communal burial vault because remains of several individuals were found.

Dr. George Eogan of University College, Dublin, excavated the nearby passage tomb of

Knowth and discovered two opposing passages that are longer in length than those at Newgrange. Still under excavation, Knowth has a large collection of stone carvings and drawings that might eventually yield evidence about the people who built the megalithic tombs. Like Homer's fabled city of Troy, Knowth was occupied by many cultures unrelated to the original builders such as the Bronze Age Beaker People who created metal urns to hold cremated remains, Iron Age Celts, and later Romans, all of whom buried their dead and added on new entrances and buildings. The third passage tomb at Dowth is similar to Newgrange in size and construction technique, but Dowth has been left relatively intact and undisturbed.

—Jonathan L. Thorndike

Bibliography

- Cotterell, Arthur, ed. *The Penguin Encyclopedia of Ancient Civilizations*. London: Penguin, 1980.
- Harbison, Peter, and Jacqueline O'Brien. *Ancient Ireland: From Prehistory to the Middle Ages*. New York: Oxford University Press, 2000.
- McCaffrey, Carmel, and Leo Eaton. *In Search of Ancient Ireland: The Origins of the Irish from Neolithic Times to the Coming of the English*. Chicago: New Amsterdam Books, 2002.

Early North American Burial Customs

In North America the early burial customs of prehistoric peoples were highly diverse, changing in complexity across regions and times. Evidence indicates that the majority of burial customs consisted of a variety of simple practices revolving around the interment of individuals until the rise of sedentism and the adoption of agriculture, at which point burial customs became more elaborate and complex. Prior to the elaboration of burial customs at the end of the Archaic period, the archaeological evidence indicates that people practiced relatively simple burial customs that involved specific forms of interment, the adornment of the burial with small material goods (e.g., beads, cloth, red ochre), and the association of certain geophysical phenomena with the dead (e.g., rock cairns, earthen mounds, caves).

For example, in Lyon's Ferry, Washington, the Marmes Rockshelter is one of the earliest

known burial sites for the Pacific Northwest. Dating to 6,500–4,000 years before the present, burials from the site contained skeletal material, beads, and evidence of red ochre use. One burial contained approximately 80 olivella shell beads and large amounts of red ochre, while another burial was of an individual of unknown gender between the ages of six and eight who was buried with three antler shafts, olivella beads, and red ochre. Other burials from the site appear to have been specifically oriented toward the east, and stone artifacts and rock cairns were also associated with some of the burials.

Nearby at the DeMoss Site in Idaho, a burial site was discovered containing the remains of at least 22 individuals of all ages along with 236 burial blades, cascade points, and side-notched points. The burials contained bifacial cache blades, large side-notched projectile points, obsidian preforms (pieces of obsidian that have not yet been fully knapped into tools), and Olivella shell beads. Evidence also indicates that the bodies may have been ritually cremated as part of the burial custom. As Sprague has argued for the region as a whole, these burial customs can be traced back to the initial peopling of the area.

To the south in the Great Basin region, slightly different burial customs seem to have been practiced, although the use of beads and red ochre were ubiquitous. Studies of the burial patterns in the Great Basin have led some to conclude that the pattern extends over a long period of time, with an emphasis on inhumation especially in rocky areas and the infrequent but regular use of cremation. For example, early Great Basin burial customs show a strong preference for burial in rocks or rocky places with the body wrapped and extended, with areas of cremation, such as in the western California regions of Owens Valley and Death Valley. Orientation of skulls shows a weak pattern of westerly preference in the north, an easterly preference in the south, and a variable preference in the central region. However, some have countered this general conclusion by noting that at some important sites, no pattern over time can be found. For example, at Lovelock Cave in Nevada, no clear burial custom across time has been determined. Burials from the site evidence a female oriented west; a flexed child oriented southwest; an infant

► BURIAL CUSTOMS AT LOVELOCK CAVE

Lovelock Cave is an open rock shelter located in western Nevada. Human use of the rock shelter began around 3000 BCE and continued into the historic period. Throughout this long period of use, evidence indicates that the interior of the rock shelter was used only for burials and storage; all evidence of domestic activities are from the outside rim of the rock shelter. Overall, more than 20,000 artifacts and faunal remains have been recovered along with at least 75 human burials that evidence social complexity and a developed burial practice.

For example, one skeleton of a 35-year-old male lay in a semiflexed position on its left side with the head oriented west and facing north. The grave goods were recovered from the ventral side of the skeleton near the ribs and included 24 shell beads and ornaments, 9 ground stone objects, 6 bone artifacts, and 1 chipped stone point. The presence of Pacific Ocean beads evidences long-distance trade and exchange with other groups.

—Peter N. Jones

oriented northwest; an adult flexed on the left side and oriented northeast; a cremated skeleton of unknown age, flexed on the back, oriented west and with stones over it; a cremated child; a cremated infant; and a male adult flexed on the left side and oriented west. Furthermore, some of these burials evidence the use of sagebrush to line the burial pit as well as to cover it after the individual had been deposited. Other burials from the Great Basin indicate that wrapping the body in woven material and covering the head with oval-shaped rocks was also common, as was placing the body in extended to semiflexed positions. Some burials appear to show signs of a division in social ranking, as some burials from the region have yielded artifacts made from Pacific Ocean marine shells.

In the Plains region, early burial customs appear to have also been fairly similar. For example, a Middle Archaic burial from the Plains-Prairie border in East-central Kansas contained deer bone, a drill, and a side-notched projectile

point or knife. Use-wear analysis demonstrates that the stone tools were used before being placed with the burial and therefore were not manufactured specifically as burial goods. Dating to 6,000 years before the present, this burial compared to other burials from the region shows similarities in burial customs across the Plains. In the Northeast and Southeast, evidence indicates that burial customs became more elaborate and complex at an earlier date than in the rest of North America, with the appearance of large earthen burial mounds by the Late Archaic (5,950–4,450 years before the present). Architectural structures were also associated with burial customs in the Southwest although not until sedentism arose in the region between 3,000 and 1,500 years before the present.

—Peter N. Jones

Bibliography

- Barker, Pat, Cynthia Ellis, and Stephanie Damadio. *Determination of Cultural Affiliation of Ancient Human Remains from Spirit Cave, Nevada*. Carson City: Bureau of Land Management, Nevada State Office, 2000.
- Breschini, G. "The Marmes Burial Casts." *Northwest Anthropological Research Notes* 13(2) (1979): 111–158.
- Green, T. B., et al. "The Buhl Burial: A Paleoindian Woman from Southern Idaho." *American Antiquity* 63 (1998): 437–456.
- Green, T. B., et al. "The DeMoss Burial Locality: Preliminary Observations." *Idaho Archaeologist* 9(2) (1986): 31–40.
- Hoard, Robert J., et al. "A Middle Archaic Burial from East Central Kansas." *American Antiquity* 69(4) (2004): 717–739.
- Sprague, Roderick. "A Review of Southern Plateau Burial Practices: Attachment 1." In *Establishing Cultural Continuity between Kennewick Man and Modern Columbia Plateau Tribes*, edited by M. Jaehnig. Pendleton, OR: Confederated Tribes of the Umatilla Indian Reservation, 2000.
- Tuohy, D. R., and David T. Clark. *Excavations at Marble Bluff Dam and Pyramid Lake Fishway, Nevada*. Reno: U.S. Bureau of Reclamation Contract Report #C2520, 1979.
- Tuohy, D. R., and Mercedes C. Stein. "A Late Lovelock Shaman and His Grave Goods." In *Miscellaneous Papers on Nevada Archaeology 1–8*, vol. 14. Carson City: Nevada State Museum, 1969.

Migration and Travel

Around 3300 BCE, high up on the Similaun Mountain in the Alps, Oetzi (a name given him by modern researchers) collapsed from the wound he had received a few minutes earlier. He had pulled the shaft of an arrow out of the back of his shoulder but had not been able to dislodge the arrowhead. Having eaten his last meal about eight hours previously, Oetzi had probably set off from a village downslope with companions but had gotten involved in a fatal skirmish. After Oetzi passed on, his body was covered by the Schnalstal Glacier, not to be revealed again until 1991, when two German tourists discovered him, an extremely well-preserved example of a human from the Copper Age whose travel plans had ended abruptly.

Not all travel in this period was as fraught with peril as Oetzi's travels. The period 4000–1000 BCE was a period in which technologies and networks necessary for travel developed to allow people to move across substantial distances and environmental divides relatively easily and safely. The ease with which people could now travel led to the development of different travel motivations. More complex nautical skills made long-distance trade more viable. The development of the wheeled cart, pulled by oxen, allowed people to travel with more than what they could carry on their backs. People could also easily return to their homeland after a long voyage, allowing for travel as opposed to merely migration.

Yet there were still some major migrations between 4000 and 1000 BCE. In some cases, there is much evidence for migration but little evidence to explain why the migration occurred. The Sea Peoples, for example, were a coalition of different groups from Greece, Libya, and perhaps elsewhere. They traveled from these regions and attacked Anatolia, and some of them settled on the coast of what is now Israel. Why they abandoned their homeland for this new region is debated by archaeologists, but the fact that they did so is not. In other cases, there are historical or religious accounts of migration, but the archaeological evidence does not corroborate these accounts. The Israelite exodus from Egypt and the Aryan invasion of India are both important subjects in the sacred literature of modern political and faith communities. Yet positive archaeological evidence for either of these migrations is profoundly lacking. Making sense of these discrepancies is one of the challenges archaeologists face in reconstructing world history from 4000 to 1000 BCE.

Archaeological exploration in central Asia has shown that the history of travel and migration between Europe and East Asia is much more complex than what has been previously assumed. Excavations in the Tarim Basin in Turfan have unearthed bodies that bear a closer

physical resemblance to what one would expect from European populations at this time as opposed to East Asian. The presence of this population, who may have spoken an Indo-European language, this far east has shown that the boundary between Europe and Asia was fluid, even in this early period.

Since this is the period of the earliest writing, this is also the first period of travel writing. Accounts of voyages to distant lands are thrilling, and no doubt these first attempts at the genre were exciting to ancient audiences. The ancient Egyptians, who had a strong sense of Egyptian identity and truly felt that Egyptian civilization was normative and that all other civilizations were aberrations of this norm, produced

One set of inscriptions, carved on the walls of Queen Hatshepsut's funerary monument at Deir el-Bahari, provide our only evidence for the yet-to-be-identified African kingdom of Punt. Who knows what other civilizations may have existed in this period that we do not yet know about?

some of the most fascinating accounts of journeys to foreign lands. One set of inscriptions, carved on the walls of Queen Hatshepsut's funerary monument at Deir el-Bahari, provide our only evidence for the yet-to-be-identified African kingdom of Punt. Who knows what other civilizations may have existed in this period that we do not yet know about?

As you read the following entries about travel and migration from 4000 to 1000 BCE, you may notice a methodological tension of sorts. Archaeologists can be

uncomfortable discussing the movement of people, since what they usually have evidence for is the movement of artifacts. In the early twentieth century, archaeologists used the model of migration to account for all change. Any time a new type of artifact appeared or house styles changed, scholars postulated that a new group had moved in and settled in the region. In the 1960s and 1970s, migration as a means of explaining change fell out of vogue, and archaeologists went out of their way to explain any changes as having been caused by anything but migration! The pendulum has swung back to somewhere in the middle ground now. Archaeologists acknowledge that change can be caused by the migration of people but that this is not the only mechanism of change.

—Kevin M. McGeough

■ Introduction: Strangers in a Strange Land—Ancient Travelers

While there was a great deal of travel throughout the age between 4000 and 1000 BCE, there are some unique examples of particularly brave (or foolhardy) travelers who ventured outside of their home

territory into far-off lands. There was an established infrastructure for traveling traders and for state-sponsored expeditions (which will be explored more fully throughout the rest of Theme 3 of this volume), and there certainly are many

examples of large-scale population migrations during this time. Yet there are also hints of individuals who traveled outside of established trade routes, some such as Oetzi the Iceman and the Urumqi mummies dying before they returned to their homelands.

What inspired these ancient travelers to set out for far-off lands? In the case of the Bronze Age traders and the Medjay police force in Egypt, economic and sociopolitical opportunities were motivation enough. But what about the lone travelers who wandered farther than they could possibly return from? Were they lost? Were they in some sort of legal trouble or fleeing their homelands for other reasons? Did warfare leave them isolated and without a community? Or were they merely curious, tourists before the tourism industry? Unfortunately, when archaeological remains are all that are left of these ancient travelers, historians can only make educated guesses about what may have motivated them.

It can often be difficult to identify the remains of ancient travelers, who did not leave textual records of their journeys. In the case of the Iceman, it was clear that he was traveling since he was found in an inhospitable part of the Alps. Likewise, the Urumqi mummies appear to have come from elsewhere, given that they share physical characteristics that differentiate them from the local population. It is possible that there are many more ancient travelers who have not been identified as such, since markers of difference may not have survived from antiquity. These isolated cases that have been identified point to the possibility that there may have been significantly more travel than scholars can identify.

—Kevin M. McGeough

Oetzi the Iceman

Oetzi is a naturally preserved Copper Age mummy that was discovered in the alpine region between Austria and Italy in 1991. He is named after the Ötztal Valley, near the location of his discovery, but is also referred to as the “Iceman,” the “Similaun Man,” and “the man from Hauslabjoch.” Oetzi’s body was found in a protective rock hallow that contained a variety of tools, weapons, and clothing, many of which were made from materials that rarely preserve in the



The body of Oetzi the Iceman found in Italy's Ötztal Alps (near present-day Austria) in 1991. Oetzi died around 3300 BCE. (Corbis)

archaeological record. These objects provide important information about Oetzi but also offer insight into the prehistoric time in which he lived. Although Oetzi and his belongings have been the focus of intensive research, pervasive questions remain about his identity, his place of origin, and the circumstances behind his death.

Oetzi was initially discovered by passing hikers, who noticed the human corpse partially entrenched in glacial ice and melt water. After two recovery attempts, the corpse was removed and transported by a forensic specialist to the University of Innsbruck, Austria, where it was examined and recorded. Preliminary investigations of Oetzi's tissues revealed that the cold, dry conditions of the glacial environment had mummified his body. Consequently, protective measures were taken to prevent exposure to contamination and inhibit the thawing of tissues. Subsequent tooth wear studies and computed tomography (CT) scans of Oetzi's skull suggested that he was between 25 and 40 years of age at the time of death.

A preliminary assessment of the recovered artifacts suggested that Oetzi dated to the Bronze Age. Radiocarbon dates of Oetzi's tissues, however, indicated that he was older and probably lived during the Copper Age, around 3300 BC. Metallurgical studies of Oetzi's axe, which was hafted in wood and bound with leather, determined that it was made of copper, not bronze, and thus confirmed the Copper Age date.

► THE INTERNATIONAL BATTLE FOR OETZI

Oetzi was found on an alpine ridge in Tyrol, a region that straddles the border between Austria and Italy. During the early twentieth century, Tyrol was united under the Austrian-Habsburg empire. After World War I, however, the border between these countries was redrawn, and South Tyrol was given to Italy, effectively cutting some German-speaking populations out of Austria. The border has been contentious ever since. Although Oetzi was brought to Austria after his recovery, it was known that he may actually have been discovered in Italy. As Oetzi's story became high profile, so too did interest in his ownership. Did he belong to Italy or Austria? Existing maps suggested that Oetzi was found in Austria. A subsequent trek by government surveyors from both countries determined that the body was found in Italy. South Tyrol, however, did not have a university or the appropriate facilities to ensure Oetzi's preservation, complicating his return to Italy. The larger scientific community realized that Oetzi did not just belong to Austria or Italy but instead belonged to everyone and that his conservation was of utmost importance. At the same time, however, they respected Italy's claim to a find that could bolster tourism. In 1992, after significant deliberations, a treaty was signed between Italy and Austria that allowed Oetzi to remain at the University of Innsbruck for research but ultimately called for his return to Italy when appropriate storage facilities were in place. In 1998, Oetzi was transferred to Bolzano, Italy, where he remains on display in an environmentally controlled chamber in the South Tyrol Museum of Archaeology.

—Noah V. Honch

Oetzi may have made the axe himself. Chemical analyses have discovered arsenic within the physical structure of his hair, which was probably ingested during the smelting of arsenical copper ores.

Oetzi's belongings were constructed from a variety of materials and suggest that he had extensive knowledge of the natural world. His clothing was largely made from the skins of hunted animals and included deerskin leggings, a goatskin loincloth, a hat with bear fur, and

shoes that contained deerskin, calfskin, and grass insulation. Oetzi also had a deerskin coat and a long grass cape that was likely worn on the outside. He possessed a bow of yew wood, which is naturally flexible and conducive to bow making, and 14 unfinished arrows of viburnum and dogwood, two of which had flint projectile points and feathered fletching. The arrowheads show evidence of retouching and were probably worked by Oetzi with an antler fragment that was hafted into wood and found near his body.

Oetzi was almost certainly a seasoned traveler. In one of two birch bark containers, he carried rolled-up maple leaves that held embers that could be transported and used to ignite fires. CT scans of Oetzi's body suggest that he suffered from arthritis and showed evidence of biomechanical adaptations (e.g., well-developed nutrient canals and thick cortices in his lower leg bones) that were probably related to extensive walking in mountainous valleys. Tattoos on Oetzi's lower back, legs, and feet are aligned with important acupuncture points and, if not for aesthetic value, may have marked places to relieve stress.

In many ways it is not certain who Oetzi was, where he lived, and why he was found so high in the Alps. It has been suggested that he was everything from a herder to a hunter, a shaman, a warrior, a metal smith, or a trader. If Oetzi herded sheep or goats, he likely also hunted or traded, since much of his clothing was made from animal skins and furs. Although his belongings appear to be too practical for a shaman, it is possible that Oetzi was familiar with metallurgy and used rituals to guide his work. The diversity of other materials and evidence for travel, however, imply that he did not specialize in metallurgy alone and may have been involved in a number of socioeconomic spheres.

The remote location of Oetzi's death makes it difficult to connect him to local Copper Age sites. Oetzi's colon and stomach contents contained einkorn wheat, a domesticated cereal that indicates he was in contact with or part of a sedentary agricultural community. It has been suggested that Oetzi belonged to a village that farmed poor alpine soils and supplemented their diets with animal products from wild and domesticated species. Unfortunately, there is little

archaeological evidence for such communities. Local cultural relationships cannot be traced with pottery because Oetzi was not found to carry any. Oetzi's flanged axe is similar to one found at the prehistoric cemetery of Remedello Sotto, leading some to believe that he lived south of the Alps. The archaeological relationship is weak, however, since there are 119 graves at Remedello, and the axe is the only item of like comparison. On the other side of the Alps, several villages are known to have statue menhirs, carved stones that depict humans engaging in a variety of activities. Some menhirs portray humans with flanged axes, which may represent the small proportion of humans actually buried with such weapons. Oetzi's axe is similar to these depictions and suggests that he may have been an important figure in his community, wherever it may have been.

The circumstances behind Oetzi's death remain unclear. Early theories suggested a fight-and-flight scenario whereby Oetzi engaged in a violent confrontation, was wounded, and fled to the mountains where he died. Others believed that Oetzi died from exhaustion while traveling, that he was caught in a storm and froze to death. CT scans recently discovered a flint projectile point in Oetzi's left shoulder that would have entered from the back. Although it missed vital organs, the arrowhead almost certainly caused heavy bleeding, inevitably resulting in Oetzi's death. How and why he was shot, however, remains a mystery. It might not ever be clear whether he died in combat, was intentionally murdered, or was simply the victim of a hunting accident.

—Noah V. Honch

Bibliography

- Barfield, L. "The Iceman Reviewed." *Antiquity* 68 (1994): 10–26.
- Fowler, B. *Iceman: Uncovering the Life and Times of a Prehistoric Man Found in an Alpine Glacier*. New York: Random House, 2000.
- Holden, C., ed. "Ötzi Death Riddle Solved." *Science* 293 (2001): 795.
- Murphy, W. A., Jr., et al. "The Iceman: Discovery and Imaging." *Radiology* 226 (2003): 614–629.
- Seidler, H., et al. "Some Anthropological Aspects of the Prehistoric Tyrolean Ice Man." *Science* 258 (1992): 455–457.

The Urumqi Mummies

The Urumqi mummies are a group of remarkably well-preserved humans from the desert environment of the Tarim Basin in western China (Xinjiang Province). Although the mummies date to the late second and first millennia BCE, they are virtually all caucasoid. They are tall; their hair is brown, red, or blonde; and their eye sockets are typically large and round. Their clothing is mainly woven from sheep wool but frequently consists of animal skins and furs, which provide vital information about early textile technologies, the environment, ancient aesthetics, and human migrations in central Asia.

The Tarim Basin is conducive to natural processes of mummification. The long winters and dry summers inhibit tissue degradation, and the salty desert sands draw moisture from the body. Evidence suggests, however, that mummification was a deliberate cultural practice in this region. Numerous mummies were covered in a protein paste, which may have acted as a preservative, or were placed on wooden platforms to enhance air circulation and the desiccation of soft tissues. Several mummies were also buried in wood-lined coffins or under hollowed-out logs, which exposed their bodies to the desert sands.

The most important information about the Urumqi mummies is derived from preserved textiles. Most of the mummies wore heavy insulated clothing. The well-known Cherchen Man, for instance, wore deerskin boots, felt leggings, woollen pants, and a shirt. The Beauty of Loulan, a famous female mummy, was clothed in a long, thick garment of wool and fur and had moccasins on her feet. The necessity of insulated



Urumqi mummy from the Tarim Basin in western China, late second–first millennium BCE. (Reza/Webistan/Corbis)

► THE LEGACY OF THE URUMQI MUMMIES

Early Chinese writings describe encounters with Yeuzhi or Ruzhi peoples, unusually tall people with full beards, bright eyes, and light hair. It is widely believed that these Yeuzhi or Ruzhi spoke Tocharian, an Indo-European language whose earliest writings date to the first millennium CE. Tocharian has astonishing linguistic similarities to the Celtic and Italic languages of western Europe, much like the stylistic similarities of textiles between the Urumqi mummies and prehistoric Celtic societies. Although the Urumqi mummies lived well before the first millennium CE, they may have been influential in shaping the linguistic and genetic fabric of populations in the Tarim Basin, which eventually gave rise to the Tocharians.

—Noah V. Honch

clothing indicates that winter conditions were difficult in the Tarim Basin and often resulted in death. Sheep wool was commonly used to manufacture suitable clothing, suggesting that local humans engaged in animal herding that probably complemented small-scale agricultural practices during the warmer months.

Many garments on the mummies show evidence of twill weaving, a technique that was virtually absent in China until the Western Han period (206 BCE–25 CE) and was probably introduced from the West. The clothing designs of the Urumqi mummies frequently include tartans and plaid striping, which resemble the patterns of preserved textiles from the Bronze and Iron Age salt mines of Hallstatt, Austria. Although textiles rarely preserve, there is sufficient evidence to indicate that tartans were common in Celtic societies throughout Europe. In light of stylistic influences in textile design and the overt caucasoid physical features of the mummies, the Urumqi mummies provide evidence of early human migrations between the steppe environment of eastern Europe and the relatively unoccupied marginal regions of central Asia during the late second and early first millennia BCE.

The major impetus for early migrations between eastern Europe and central Asia is unknown. It is possible that migrants from the Caucasus were involved in the silk trade and

may have been responsible for the regional introduction of the chariot by the second millennium BCE. It is apparent, however, that the earliest Urumqi mummies date to approximately 2000 BCE, well before the nomadic era of the horse, and this suggests that migrants were initially involved in small-scale agriculture and animal herding.

—Noah V. Honch

Bibliography

- Barber, Elizabeth W. *The Mummies of Ürümchi*. London: Macmillan, 1999.
- Mair, Victor H. "Mummies of the Tarim Basin." *Archaeology* 48(2) (March/April 1995): 28–35.
- Mallory, J. P., and V. H. Mair. *The Tarim Mummies*. London: Thames and Hudson, 2000.

The Medjay—Nubian Police in Egypt

Although the ancient Egyptians often took an outwardly xenophobic or foreign-hating stance toward non-Egyptians, the Medjay (also Medjayu) illustrate that such sentiments did not prevent Egypt from capitalizing on advantageous relationships. Attested from the Old Kingdom onward, the Egyptian term "Medjay" initially referred to nomadic and seminomadic tribal groups of the eastern desert regions of Nubia. Keeping a predominantly pastoral lifestyle with a focus on cattle, their seasonal migrations in search of hospitable grazing lands moved them primarily along the Red Sea coast and neighboring hill regions east of northern Nubia (modern Sudan). Their travels also brought them within Egypt's borders to the north and into contact with other Nubian groups closer to the Nile.

Much of what is known about the Medjay is derived from ancient Egyptian textual and pictorial sources and thus represents a distinctly Egyptian view. The Medjay are represented archaeologically within Egypt by remains of the Pan-Grave group with whom they are customarily equated. Although generally somewhat dispersed, by the Middle Kingdom the Medjay were organized enough in two territories to be regarded by Egypt in essentially the same manner as larger, more consolidated foreign polities.

During periods of Egyptian exploitation of natural resources in the Nubian desert, conflict



Regiment of Nubian archers, model from the tomb of Mesehti, Asyut, Egypt, about 2000 BCE. (The Art Archive/Corbis)

with Medjay groups was still common. Egypt employed both practical and magical measures against such threatening segments of the Nubian population. One of many Egyptian military forts established in Nubia during the Middle Kingdom received the unambiguous symbolic name of That-which-Repels-the-Medjay (or simply Repeller-of-the-Medjay). The Medjay are also targeted among Egypt's traditional enemies in Execration Texts, ritual writings intended to magically neutralize dangerous forces whose interests ran contrary to those of Egypt.

Yet the most threatening aspects of the Medjay could also be co-opted by the Egyptians as useful assets. They became renowned for their aptitude at desert tracking and warfare. Nubians in particular were known as highly skilled bowmen. By the Late Old Kingdom into the First Intermediate period, Medjay were already finding positions in Egyptian military service, although they appear most active as mercenaries in later sources dating to the Middle and New Kingdoms. They were even included among forces employed at Egyptian forts in Nubia, established in part to control the movements of the indigenous population.

A widely acknowledged tactical role eventually prompted the word "Medjay" to shed its

➤ THE MEDJAY IN THE SERVICE OF KAMOSE

The Medjay feature prominently in accounts of Dynasty seventeen military efforts late in the Second Intermediate period. Kamose, last king of this Theban dynasty, found himself in an ominous position between two hostile powers: the Canaanite Hyksos in northern Egypt and their Nubian allies, the Kushites, wielding power to the south. In a northward push against the Hyksos, Medjay archers were employed as scouts and watchmen, roles of paramount importance under the circumstances. It was likely that these forces intercepted an envoy with a dispatch from the Hyksos king Apophis to his Nubian ally at Kush, severing communication between the two. Despite Kamose's favorable account of his battles, it was left to his successor Ahmose to regain Egypt under Dynasty eighteen and inaugurate the New Kingdom.

—Nicholas S. Picardo

specificity of meaning during the New Kingdom. Losing its cultural association with Nubia, the term came to refer to protective agents who acted much like a standing police force. The responsibilities of these troops included security patrols along the desert margins, guard duty in necropolises, and more specific duties such as participating in the investigation of tomb robberies in the Valley of the Kings.

—Nicholas S. Picardo

Bibliography

- O'Connor, David B. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 1993.
- Redford, Donald B. "Textual Sources for the Hyksos Period." In *The Hyksos: New Historical and Archaeological Perspectives*, edited by Eliezer D. Oren. University Museum Monograph 96. University Museum Symposium Series 8. Philadelphia: University Museum, 1997.
- Trigger, Bruce G. *Nubia under the Pharaohs*. Ancient Peoples and Places 85. London: Thames and Hudson, 1976.
- Williams, Bruce B. "Medjay." In *Encyclopedia of the Archaeology of Ancient Egypt*, edited by Kathryn A. Bard, 485–487. London and New York: Routledge, 1999.

■ Introduction: Migration Mysteries

The origins of many groups are dated to the time between 4000 and 1000 BCE. Yet these origins are often quite obscure, preserved only in mythical accounts or vague recollections. Historians have a number of tools that can be used to reconstruct ancient movements and deconstruct the biases that are intrinsic to migration stories in order to solve these migration mysteries. The safest proof of movement comes from the study of material culture, which is discussed in depth in the next section. Biases are often apparent in textual or oral accounts of migrations, but historians can often identify these biases and come to conclusions about the historical realities behind these tales by comparing these accounts with other types of evidence.

Linguistics can also provide important evidence, although most historians are not trained in historical or comparative linguistics and thus are less likely to use this kind of evidence. Language from the age can be preserved in ancient writing and often in the language of modern inhabitants of the region. Linguists argue that changes in language are not arbitrary, but changes follow typical patterns under particular sets of circumstances. Tracing changes through time and deducing possible causes for the changes may allow scholars to reconstruct ancient movement from the idiosyncrasies of a modern speech community. The easiest way that language can be used to understand ancient migration, however, is when scholars can identify that a new language was introduced into the region. Often it is possible to identify where that language (or related language) was spoken previously and thus reconstruct that a group of speakers of that language moved to the new region.

The work of historians is more complicated by the fact that accounts of ancient migration can be incredibly politically loaded in the present. A story of a group's origins is often burdened by the political and social issues of the present, and often these kinds of stories are manipulated for political purposes in the present. As in the case of the origins of the Zhou dynasty, various communities are proud of what they see

as their region's contributions to history and their own connections to these glorious ancestors. Other times, such as in modern-day India and Pakistan, the supposed movements of people 4,000 years ago have a bearing on political actions taken in the present.

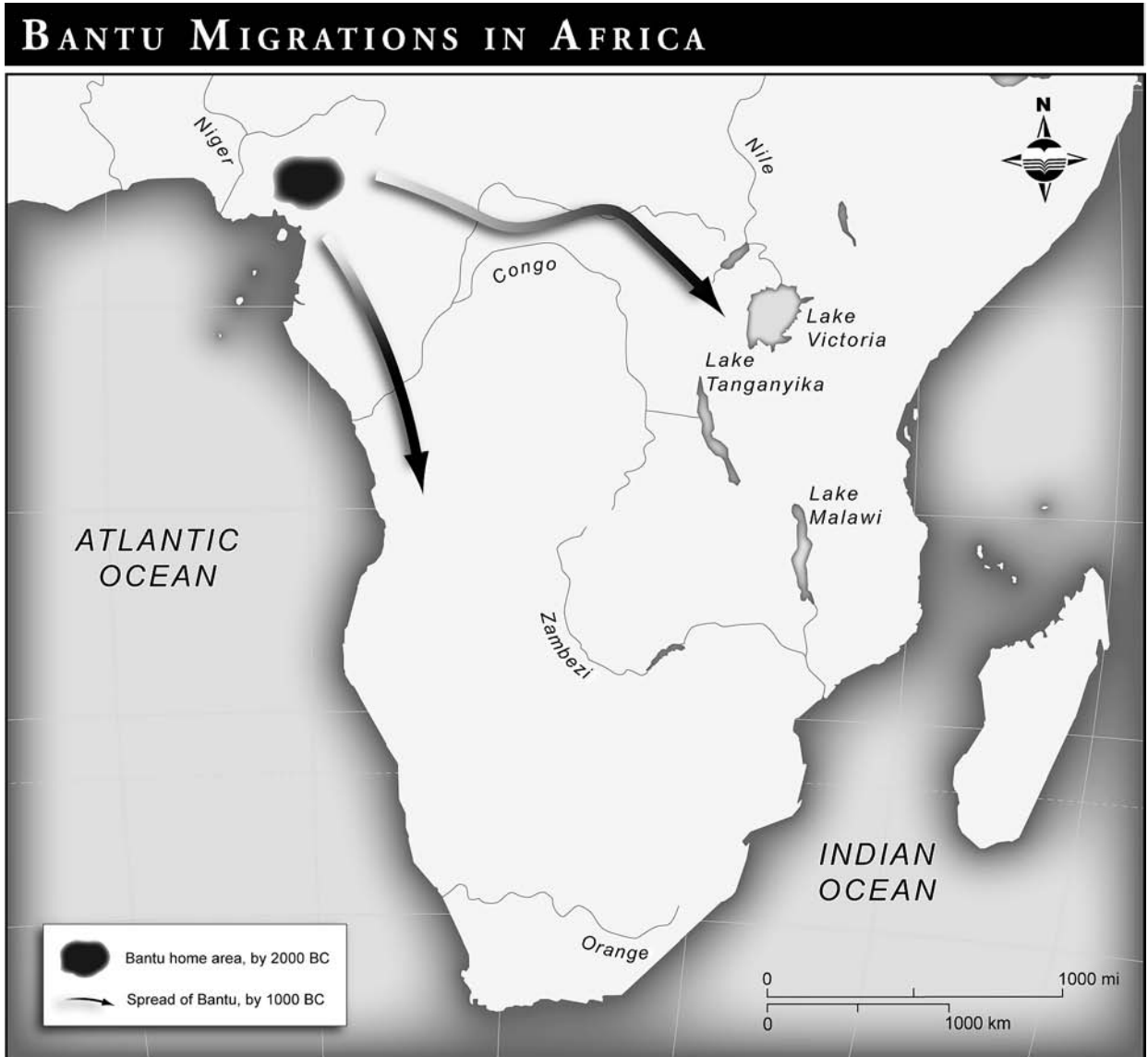
—Kevin M. McGeough

Bantu Expansions, Earliest Times to circa 1000 BCE

From early in the history of contact between African peoples and travelers to the continent, visitors have remarked on the surprising similarity between many of the languages spoken in central, East, and southern Africa. Indeed, about a third of the languages spoken in Africa today are of the same family of languages. How did so many African people come to speak related languages over such a huge expanse of the continent?

Scholars trying to answer this question used the word “Bantu” (literally “people”) to refer to the related family of languages, the peoples who speak those languages, and the cultures they share. Yet each of these ideas—the Bantu languages, the Bantu people, and Bantu culture—carries very different assumptions about the history of the expansion of the Bantu languages across central, East, and southern Africa.

To refer to the Bantu as a group of people could imply that all Bantu people are genetically related to each other or that they form a racially distinct people, neither of which is the case. Or, we could assume that the Bantu people share a political relationship like the British, all of whom are citizens of the United Kingdom. Yet speakers of Bantu languages today and in the past belonged to hundreds of distinct polities, from great kingdoms to smaller-scale neighborhoods. Moreover, when we speak of a common Bantu culture, we risk losing sight of the diversity of lifeways that speakers of Bantu languages developed over the last several thousand years, from the Bambenga-speaking hunting and foraging specialists of the equatorial rain forests to the ChiTonga-speaking farmers of the southern sa-



vannas to the Kiswahili-speaking traders of the coast of East Africa.

To speak about the history of the Bantu Expansions, then, is to talk about the history of a group of people bound together by a shared linguistic history rather than a shared geographic or political history, as we might study with Native American or British history. This shared linguistic heritage tells us something of the history of peoples speaking Bantu languages because scholars can reconstruct the words used to talk about the things and ideas that constituted the world of people living long ago and speaking languages of the Bantu family. That is to say, tracing the history of the development of Bantu

words allows us to trace the history of the experience of people speaking Bantu languages.

All Bantu languages share a single ancestral language, Proto-Bantu. The history of Bantu-speaking peoples, then, begins in the border region between modern-day Nigeria and Cameroon, where Proto-Bantu was first spoken 5,000 to 7,000 years ago. The earliest speakers of Bantu languages, speakers of Proto-Bantu, cut out small gardens from the forests and farmed root crops such as yams and groundnuts (similar to peanuts) as well as beans, peas, and gourds. They tended wild oil and raphia palm trees for cooking oil and fibers for weaving mats and baskets. They kept goats, dogs, and guinea fowl. They

also hunted, fished, and gathered wild foods and medicines from the niches of the swampy, grassy, and woody lands of the diverse rain forest environment.

Early Bantu speakers were probably organized around prominent charismatic leaders who attracted followers by composing successful communities, communities with skilled healers and priests and enough people to provide food for the young and the old. With a plethora of land and a relative scarcity of people, leaders had to work hard to attract followers, because those who felt that their needs were not met by their leaders could “vote with their feet” and either start or join a new settlement. While scholars are not sure if formalized organization into patrilineages and matrilineages existed in the earliest eras of Bantu history, real and fictive family ties played an important role in helping people organize their relationships with each other.

For example, early Bantu communities of the equatorial rain forests organized themselves into Houses led by Big Men (charismatic wealthy leaders), whose power was justified by their role as the supposed “father” of all the members of the House. Houses cooperated with each other and collected into villages that could, in turn, cooperate as a district-wide collection of villages. Some Houses developed alliances with Houses in different villages, creating clans. Houses could vary in size from a large family with a few hangers-on to several hundred people, all working together to ensure that the group was fed, that ancestors and spirits were happy, that youths matured into adulthood, and that the House grew in wealth and prominence.

Early scholarship on the Bantu Expansions explained the spread of Bantu languages using concepts such as mass migration, military conquest, and technological superiority, concepts that better reflected Europeans’ own ideas about their role as colonizers. Scholars now believe that the Bantu languages slowly spread east and south through two simultaneous processes. Farmers spread out, searching for new places to plant their yam crops when soils were exhausted or to found new settlements when Houses or villages grew too large. At the same time, the demographic advantages of farming and sedentism that

allowed speakers of Bantu languages to live in bigger settlements than mobile hunter-gatherers may have produced a situation in which Bantu languages served as a lingua franca in trade negotiations or as a regional language of prestige. Speakers of non-Bantu languages slowly adopted Bantu languages, contributing to the spread of those languages.

Bantu speakers interacted frequently with autochthonous hunter-foragers living in the lands into which Bantu speakers moved. Autochthonous people were an important source of information about local resources and a vital ritual link to the spirits of the land and of the ancestors. Indeed, Bantu speakers probably sought to attract notable spirit mediums whose ability to communicate with the spirit world made them important intercessors between unfamiliar spirits and immigrant Bantu speakers. Bantu speakers’ social organization was flexible and incorporative; non-Bantu peoples were easily absorbed into Houses through ties of kinship, dependence, and friendship. These new members helped Bantu immigrants to successfully propitiate the ancestors and learn about local forest resources such as honey and medicines. Bantu speakers taught autochthonous peoples about their novel social organization and technologies such as farming.

Just as the actions of people caused Bantu languages to spread across the rain forests, they also contributed to the emergence of new generations of languages in the Bantu family tree. Each ancestral language, starting with Proto-Bantu, slowly diverged into new daughter languages. Sounds changed and vocabulary was replaced in the ancestral language until speakers on distant ends of the geographic expanse in which the ancestral language was spoken could no longer understand each other. They now spoke such different versions of the original ancestral language that they no longer spoke dialects of that language but rather new distinct languages, the next generation of the Bantu language family tree.

Over several thousand years, through the movement of people and the adoption of Bantu languages, the lands in which Bantu languages were spoken grew, extending southward through the forests of modern-day southern Cameroon and along the Atlantic coast of modern-day Ga-

bon. In the rain forests, an extensive system of waterways may have accelerated the spread of people and languages into the interior and eastern regions, with rivers serving as a highway system that facilitated transportation and communication. By 1000 BCE, people spoke Bantu languages in the Bantu homeland on the border of Nigeria and Cameroon and as far south as the central Africa savannas in the modern-day southern Democratic Republic of the Congo, as far west as the Atlantic Ocean of west-central Africa, and as far east as the fringes of the rain forest on the edge of the Great Lakes Region as well as all the lands between those frontiers. During the last 3,000 years, speakers of Bantu languages would continue to spread east and south, drawing on both their shared cultural heritage and their capacity to innovate new ways of making a living, of composing successful communities, and of appeasing the ancestors as they faced the opportunities and challenges of technological innovation, climate change, and contact with new neighbors.

—Kathryn M. de Luna

Bibliography

- Klieman, Kairn. *"The Pygmies Were our Compass": Bantu and Batwa in the History of West Central Africa, Early Times to c. 1900 C.E.* Portsmouth, NH: Heinemann, 2003.
- Nurse, Derek, and Gérard Philippson, eds. *The Bantu Languages.* London and New York: Routledge, 2003.
- Vansina, Jan. *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa.* Madison: University of Wisconsin Press, 1990.

The Dorian Migration—The Mythical Migration of the Children of Heracles

The Dorian invasion refers to the movement of peoples ca. 1200 BCE from the north of Greece into the Peloponnesus, a Greek peninsula that extends south into the Mediterranean Sea. That migration, which is also called the Return of the Heraclids, has been considered by some scholars to be responsible for the destruction of the Mycenaean world.

According to myth, the sons of Heracles were expelled from the Peloponnesus by Eurystheus.

After an unsuccessful attempt to come back, they settled in central Greece until the Oracle at Delphi informed them that the time had come for their return, whereupon they were divided into three groups, descended to the Peloponnesus, and conquered most parts of it. Another version of the legend has them wandering until reaching Doris, a small region in the mountains of central Greece, where they settled on land given by the king, thus establishing a friendship with the Dorian people, who would later help them invade the Peloponnesus. According to others and ignoring the myth, Doris was erroneously thought to be the Dorians' original homeland, but rather they emerged from Epirus in northwestern Greece and migrated south.

None of the ancient writers ever suggested that the Dorian migration was a destructive affair, and it was only after German archaeologist Heinrich Schliemann's excavations in the nineteenth century that the picture changed. Schliemann found that the Mycenaean centers were suddenly and catastrophically destroyed, most probably by human hands, and immediately the Dorians were held responsible. Thus, in the nineteenth century, the Dorian migration became known as the Dorian invasion, and its date was synchronized with the fall of Mycenae, sometime between the end of the thirteenth and the end of the twelfth century BCE.

The argument that a new population entered the Peloponnesus mostly comes from the later appearance of the Doric dialect. In terms of archaeological evidence, the invasion of a foreign people can be attested by the appearance of new metal types: the bronze flange-hilted sword with a straight blade known as the Griffzungenschwert sword; the spearhead with flame-shaped blade and a complete cast socket; a type of flange-hilted dagger called the Peschiera dagger; a single-edged knife, with or without a curved blade; a type of lugged ax called the Armchenbeil; and the so-called violin-bow fibula (clasp), which was related to the use of thicker clothes.

However, the evidence so far does not support the theory of an invasion, and most scholars no longer accept that explanation. There is no distinctive material culture that would define the invaders, and most of what were thought to be new metal types actually appeared long before

the destruction. In addition, the destruction in the Mycenaean world occurred over quite a long period and according to no geographical pattern that would imply an invasion. Innovations in burial practices (namely the frequent use of cyst graves) could imply the arrival of a new population, but they appeared well after the destruction of the Mycenaean world. Therefore, there is a possibility that the so-called Dorian invasion was actually an infiltration of peoples into a half-empty land, and not a military invasion.

—Christina Aamont

Bibliography

- Drews, Robert. *The Coming of the Greeks*. Princeton, NJ: Princeton University Press, 1988.
- Sandler, Stanley L. *Ground Warfare: An International Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2002.
- Snodgrass, Antony M. *The Dark Age of Greece*. Edinburgh, UK: Edinburgh University Press, 1971.
- Thomas, Carol G., and Craig Conant. *Citadel to City State: The Transformation of Greece, 1200–700 BCE*. Bloomington: Indiana University Press, 1999.

Heinrich Schliemann's Theories of Ancient Greek Invasions

Although Heinrich Schliemann was an amateur archaeologist, his excavations in Asia Minor at Troy changed our knowledge of early Greece

➤ SCHLIEMANN EXCAVATES IN MYCENAE

Heinrich Schliemann went to Mycenae in 1876 because Homer described the city as “rich in gold,” and the archaeologist unearthed specimens that were hair-width thin and expertly crafted. A golden goblet was named by Schliemann “the cup of Nestor” along with the gold funeral mask he named the “Mask of Agamemnon.” Schliemann liked to think that he had exhumed the very corpse of the warrior-king who led the Greek invasion. He supposedly wrote a telegram with the breathless line, “Today I have gazed upon the face of Agamemnon bold.” Many scholars doubt that Schliemann ever wrote this, but the line accurately describes his enthusiasm and the importance of his discovery.

—Jonathan L. Thorndike



German archaeologist
Heinrich Schliemann.
(Library of Congress)

and origins of the Trojan War. Before Schliemann, knowledge of the Greek Bronze Age was only conjectural. Schliemann has been accused of overzealous romanticism, but the sheer number of objects he unearthed rank him among the giants in archaeology. Even if he exaggerated his finds, his excavations made an enormous contribution to

our understanding of Greek culture.

Schliemann was born in 1822 in eastern Germany. His father was a Lutheran pastor who fueled his son's imagination with heroic stories of the Trojan War. When Schliemann saw a picture of Aeneas escaping from the burning city of Troy, he said that he would one day excavate the city. He wrote in his autobiography that he had an “obsession” with discovering a historical basis for Homer's *Iliad*. Ilios is the alternate name for Troy, the powerful fortified city in northwestern Asia Minor (Anatolia) where, according to Greek myth, Paris ran off with Helen, wife of Menelaus. Troy is located near the Dardanelles Straits at a crossroads on the major waterway connecting the Mediterranean Sea and the Black Sea.

Beginning in 1870, Schliemann began excavating on a hill next to the mouth of the Dardanelles in present-day Hissarlik, Turkey. He found the ruins of nine cities built on top of each other that were complete with pots, weapons, and a jewelry hoard he labeled the Treasure of Priam. When news of his discoveries reached newspapers in Europe and America, Schliemann became an overnight celebrity.

Schliemann was convinced that Hissarlik was the site of Homer's legendary walled city of Troy. Subsequent excavations led by Schliemann's colleague Wilhelm Dorpfeld in 1890 and by Americans William Semple and Carl Blegen from 1932 to 1938 revealed that Troy was a major city throughout the third and second millennia BCE. Archaeologists designated the nine layers at Troy

from earliest to latest with the Roman numerals I through IX.

On the level of Troy VII, Schliemann found traces of a fire that destroyed the city in the thirteenth century BCE. He thought that Mycenaean Greek invaders whose famous deeds were recounted by Homer probably started the fire. In the *Iliad*, a loose confederation of Greek warriors led by Agamemnon seeks revenge on Troy for the theft of Helen, wife of Agamemnon's brother Menelaus. However, an invasion by Mycenaeans against Troy would be more likely based on Troy's political, military, and economic power as a major regulator of trade rather than on the abduction of one person. Archaeology on sunken ships has confirmed extensive commercial traffic and the existence of imported precious metals, pottery, amber, and grain at many Aegean sites. If Troy stood at a crossroads between east and west, it might have taxed shipping and regulated traffic, giving Greeks incentive to invade and destroy the famous walled city. Modern excavations at Troy show that Schliemann was wrong about the dating of Troy, which he assumed to be of the Mycenaean era or the late Bronze Age (1600–1000 BCE). The Treasure of Priam and other relics actually date to about 2500 BCE, or 600–1,000 years earlier than the rise of Mycenaean civilization in Greece.

—Jonathan L. Thorndike

Bibliography

- Fitton, J. Lesley. *The Discovery of the Greek Bronze Age*. Cambridge: Harvard University Press, 1996.
- Latacz, Joachim. *Troy and Homer: Towards a Solution of an Old Mystery*. Translated by Kevin Windle. Oxford: Oxford University Press, 2004.
- Luce, John Victor. *Celebrating Homer's Landscapes: Troy and Ithaca Revisited*. New Haven, CT: Yale University Press, 1998.

Theories of the Origins of the Indo-Europeans

“Indo-Europeans” is a generic term referring to those people in antiquity who spoke languages that stem from a common ancestral source. The close relationship between many of the languages of southern Asia and most of the languages of Europe has been known for more than 200 years. The first to speak about Indic-European

languages was Franz Bopp in his comparative grammar that sparked Indo-European studies, published in 1816. The most remote of these languages in the south is Singhala in Sri Lanka, and the northernmost in Europe is Icelandic.

Some 410 languages are spoken in the world today for which a common ancestral language, Proto-Indo-European, has been reconstructed. The beginning of the formative period of that earliest variety of Indo-European dates back to circa 7000 BCE. It has become customary to call the people who spoke that protolanguage, and other ancient languages derived from it, Indo-Europeans. The homeland of the Indo-Europeans has been a matter of dispute up to the present. The origins of the Indo-Europeans have been sought in Europe, Asia, and even Africa. Of the various homeland candidates, two have enjoyed special attention by scholars.

The first is the Anatolian hypothesis, according to which the ancestors of the Indo-Europeans migrated from Anatolia to southeastern Europe and gradually extended their areas of settlement. It is assumed that the Indo-Europeans spread not only their languages but also the technology of farming. There are basic problems of chronology that arise in this context. The horse, as a prominent animal in mythology and economic life, belongs to the oldest cultural strata of Indo-European culture, dating back at least to the sixth millennium BCE. However, the horse and the wheeled wagon appear in Anatolia and southeastern Europe as late as circa 2000 BCE. According to linguistic and anthropological evidence, the Indo-Europeans established contacts with their Uralian neighbors west of the Ural Mountains as early as the sixth millennium BCE. If the Indo-Europeans had come from Anatolia, their migration to eastern Europe would have taken them too long to have arrived there in time.

The second theory is the Kurgan hypothesis, according to which migration started from eastern Europe (from an area north of the Black Sea and the Caspian Sea) and was directed to the west (into central and western Europe) and to the east (into central Asia and beyond, to the Iranian plateau and into the Indian subcontinent). Kurgan, a term of Tartar origin and transmitted by Russian into Western languages, denotes an earthen grave mound that was typical of the

culture of the early Indo-European migrants. The burial tradition associated with the kurgan grave mounds spread widely into southern Europe and into the Caucasus.

In the nineteenth century, Indo-European studies were mostly carried out by historical linguists. In the course of the twentieth century, other scientific disciplines such as archaeology, anthropology, and culture studies have contributed important data. The breakthrough of genetics in the 1990s—when it became possible to identify the genomic profile of human populations—brought valuable insights also for the study of the early dispersal of Indo-European tribes.

In the area of the putative homeland of the Kurgan people, the findings from various disciplines can be reconciled. The archaeological record shows continuity of settlement since the end of the last Ice Age (ca. 10,000 BCE), and climatological research has produced evidence for a desiccation of the region and the emergence of the steppe landscape. The reconstruction of the socioeconomic vocabulary of Proto-Indo-European reveals that the early Indo-Europeans were pastoralists, a form of subsistence they adopted and practiced in the steppes of southern Russia. A particular combination of genes and their frequencies, the Indo-European genomic profile, which differs from the gene pool of the Uralian peoples farther north and from that of the population in the Caucasus farther south, can be recognized in the genetic map.

From here, the genetic features were transmitted into other regions of Europe through intermarriage of the migrants with local populations whose offspring carry the genes of their ancestors. The frequency of features of the original Indo-European gene pool decreased with a growing distance from the homeland, and this is discernable as gradients in the genetic map. Resulting from the migration movement, the Indo-European proto-language gradually dissolved in the course of the fifth and fourth millennia BCE and split into regional branches. The earliest traces of an intrusion of migrants from the steppe in the west come from a prehistoric cemetery near Varna in modern Bulgaria. Among the grave goods was a scepter with a horse head and the oldest gold treasure of the world, dating

back to circa 4500–4400 BCE. The latest of the big migrations brought the Indo-Aryans to northwestern India in the seventeenth century BCE.

The oldest of these branches is Indo-Iranian, which later split further into the Indo-Aryan and the Iranian branches. These languages (some 300) make up the great majority of the modern Indo-European languages. Other major branches of Indo-European are Slavic (Russian, Bulgarian, Polish, etc.), Germanic (English, German, Swedish, etc.), Celtic (continental Celtic is extinct; Insular Celtic with living languages such as Irish, Welsh, and Breton), Greek, and Armenian. Among the extinct languages of Indo-European stock are those of the Anatolian branch (all languages such as Hittite, Luwian, Lydian, etc., are extinct) and of the Italic branch (except for Latin, which is still used, all other languages of this branch are extinct such as Umbrian, Oscan, etc.) as well as Thracian, Illyrian, Phrygian, Venetic, Tocharian, and several others.

Some of the prominent vehicles of high culture that originated and flourished in antiquity belong to the Indo-European phylum: for example, Sanskrit, Greek, Latin. Most of the languages of the world with more than 100 million speakers each are of Indo-European affiliation: that is, English, Hindi, Spanish, Russian, Bengali, Portuguese, French, German.

In the early centuries of our era, Indic languages such as Sanskrit and Pali spread, as the sacred languages of Buddhism, throughout Southeast Asia. During the colonial age, starting in the sixteenth century, Indo-European languages (English, French, and Spanish in particular) were exported into most regions of the world. Since the seventeenth century Russian spread, as the mother tongue of Russian settlers and as the language of the tsarist empire, into its inner colony of Siberia. Today, Indo-European languages are spoken, as first, second, or additional languages, by several hundred million people whose ancestors were non-Indo-Europeans.

—Harald Haarmann

Bibliography

- Beekes, R. S. P. *Comparative Indo-European Linguistics. An Introduction*. Philadelphia: John Benjamins, 1995.
- Carpelan, Christian, Asko Parpola, and Petteri Koskikallio, eds. *Early Contacts between Uralic and*

Indo-European: Linguistic and Archaeological Considerations. Helsinki: Suomalais-ugrilainen seura, 2001.

Gimbutas, M. "The Indo-Europeanization of Europe: The Intrusion of Steppe Pastoralists from South Russia and the Transformation of Old Europe." *Word* 44 (1993): 205–222.

Haarmann, H. "Aspects of Early Indo-European Contacts with Neighboring Cultures." *Indogermanische Forschungen* 101 (1966): 1–14.

Mallory, J. P., and D. Q. Adams, eds. *Encyclopedia of Indo-European Culture*. London and Chicago: Fitzroy Dearborn, 1997.

The Settlement of the Gangetic Plain and the Indo-Aryan Invasion Theory

Until very recently, most accounts of the ancient history of the Indian subcontinent told a similar story, that during the second millennium BCE, Indo-Aryan invaders entered India, settling in the Gangetic Plain and possibly dealing a final blow to the waning Indus Valley civilization (the ancient Harappans). Some scholars still subscribe to this theory (or variations), but since the 1970s there has been a growing understanding that the changes in second-millennium India came not from outside but within. Environmental changes and the introduction of new crops drew Indian civilization out of the Indus Valley and into the Gangetic Plain. Concomitant with these environmental and subsistence changes were numerous social changes. From 1900 BCE to 1300 BCE, the Harappan civilization disappears in the Indus Valley, and Vedic civilization appears along the Ganges.

The theory of an Indo-Aryan invasion of India is worth outlining. The roots of the theory must be seen in the observation (made in the eighteenth century CE) that Sanskrit, the language of the Vedas, was related to European languages. Sanskrit, like English, is part of the Indo-European family of languages. For eighteenth-century scholars, it was difficult to reconcile this fact with the racist theories of a superior Europe and an inferior Asia. Dravidian, the other major language in India, is substantially different from the reconstructed Indo-European root language than is Sanskrit, so it was not long before European scholars posited that there were two

ancient racial groups in India, one related to Europeans and one that was indigenous. With the discovery of the Harappan culture and the realization that this culture long predated the Vedas, the scholarly consensus among European historians came to be that the Harappans spoke a form of Dravidian and that Sanskrit was introduced by a later group. The British archaeologist Mortimer Wheeler identified what he thought to be the results of an ancient battle at Mohenjodaro (one of the main centers of Harappan civilization) and argued that a warlike group of Indo-Aryan invaders had come from across the Caucasus Mountains, destroying the Indus Valley civilization and settling in the Gangetic Plain. Although Wheeler's evidence for an invasion proved to be incorrect, this theory was embraced by historians of ancient India and is still perpetuated in introductory textbooks today.

Archaeological work since World War II has shown that the collapse of Harappan civilization and the rise of Vedic society in the Ganges was a gradual transformation and not a sudden development caused by an external invading force. Those scholars who still see change as having come from the migration of people from outside of the subcontinent to India argue for a series of much more complex migrations rather than one large movement. Most scholars, however, see the development of Vedic culture as coming from within India, reflecting internal change as opposed to external pressure. Scholars have recognized that there was no central authority that led the Harappans, no king, and no political capitals. Thus, the transformation from Harappan to Vedic culture may not have felt like a drastic change, and the changes that did occur over 600 years may not have been noticed. Imagine how different your home town was 600 years ago. If you live in North America it probably did not exist! This is not to say that the Vedic society that emerged around 1000 BCE was not very different from the Harappan society that emerged closer to 4000 BCE. In fact, these societies were extremely different from one another. Rather, this realization reflects developing understandings of what caused change in ancient societies and how complex these causes actually were.

One of the most important events associated with this cultural transformation was the

➤ SCHOLARLY CONTROVERSIES—RACISM, NATIONALISM, AND INDIAN LANGUAGES

Part of the difficulty in understanding the changes in Indian society in the second millennium come from how historical accounts of these events have been used in modern political discourse. For the British, tales of a group of militaristic Indo-Aryans invading and civilizing India provided historical precedent for their own imperial interests in the subcontinent. Adolf Hitler also used India's Indo-Aryan heritage for his own political purposes. Following some of the spurious nineteenth- and early-twentieth-century scholarship equating race and language, he saw these Indo-European language users as an ancient warlike racial group, using the term "Aryan" to describe them and a host of other pseudohistorical groups. It is now difficult to conceive of Aryans and Aryan languages without the baggage of Nazi pseudo-scholarship. In fact, the term *arya*, when used in the Vedas, does not refer to a racial group at all. It is better translated as "noble" and does not line up neatly with any particular ethnic group. It is quite hard to identify a clear and consistent difference between Aryan and non-Aryan in these texts. The supposed Indo-Aryan conquest of India also plays a role in modern Hindu nationalism. The hierarchy implicit in the discussion of Sanskrit speakers conquering Dravidian speakers is still controversial and fuels various conflicts, with the northerners generally associated with the Aryans and the southerners associated with the Dravidians. The argument that there was no Aryan invasion may be equally politically loaded within the context of modern Indian nationalism. Scholars who argue vehemently that all of the changes associated with the Aryans came from internal developments within India may be arguing this less on the basis of the evidence and more out of their own nationalist sentiments.

—Kevin M. McGeough

disappearance of the Ghaggar-Hakra River (probably identified with the Saraswati River mentioned in Vedic texts). Many of the important Harappan cities were situated along this river. As its course gradually shifted, through a combination of drying up and intermingling with the

Indus River systems, these cities were no longer supplied with fresh water for drinking, let alone for agriculture. So, very gradually, these settlements were abandoned in favor of locations closer to dependable water sources.

Movement into the Gangetic Plain became possible with the introduction of new crops, especially rice but also sorghum and pearl millet. The Gangetic Plain is monsoon plain, which is unsuitable for wheat and barley agriculture, the staple crops of the Harappan subsistence regime. These summer crops depend on very different agricultural practices than wheat and barley, and thus the people who moved to the Gangetic Plain were forced to develop new social and economic practices in order to prosper.

Trade with Baluchistan and western Asia, one of the hallmarks of Harappan civilization, also declined. This is evident from the marked decrease in imports from western Asia found in sites in India dating to the second millennium and the lack of Indian artifacts found in western Asia in this same period. It is difficult to isolate the causes of this decline in trade contacts and whether this was a cause or a symptom of Harappan decline. After 1300 BCE, there is clear evidence of the introduction of the domesticated camel and horse into India, thus facilitating trade with central and eastern Asia.

The linguistic evidence for an Indo-Aryan invasion or migration is quite a bit more complex, and there does not seem to be consensus among linguists about what the evidence proves or among historians about how much faith to have in linguistic arguments. Generally, the linguists working on this issue have tried to identify how Sanskrit relates to Iranian languages of the same family and how both of these languages relate to the root language (called Proto-Indo-European by linguists). Old Iranian and Sanskrit are clearly very closely related, so when and where did they diverge: in Iran, in India, or outside both regions? Since Iran and the Indus Valley were in constant contact since at least the beginning of the fourth millennium, these questions are not easy to answer.

By about 1300 BCE, the culture of the Gangetic Plains must have seemed quite different from the third-millennium culture of the Indus

Valley. The Indus script was no longer in use; Sanskrit was the dominant language, the language in which the Vedas were written. The Vedas record numerous new social, political, and religious practices, practices with little apparent connection to the Indus Valley civilization. The material culture was also different. Pottery styles in Vedic times differ from those in Harappan times; new motifs are apparent, as are more elaborate styles. The Painted Gray Ware, which was once taken as the material culture of the Aryan invaders, remains a marker of this new culture to archaeologists working in the region. Figurines of horse and camel riders point to the introduction of these domesticated animals, which come to play an important role in India in Era 3. Whether or not one sees these changes as indigenous developments, the results of gradual migrations from the north, or a combination of these factors, the second millennium BCE was a time of remarkable change for the Indian subcontinent.

—Kevin M. McGeough

Bibliography

- Bryant, Edwin, and Laurie Patton, eds. *The Indo-Aryan Controversy: Evidence and Inference in Indian History*. New York: Routledge, 2005.
- Chakrabarti, D. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

The Spread of Indo-European Languages

The term “Indo-European” refers to the postulated largely defined and related ethnic groups utilizing the majority of the languages of Europe, central Asia, Iran, Afghanistan, and the northern stretches of India, both past and present. The relationship between these languages and particular cultural attributes among these groups leads many linguistic anthropologists to assign different theories as to the inclusion and the exclusion of certain groups. While it has been suggested that Indo-Europeans existed at one time or another as a large uniform group that split off into various subgroups that retained cultural elements from the original group, historical linguists are

divided as to when this split occurred. The original Indo-European cultural group is believed to have existed anywhere between east of the Black Sea to central Europe and down to the Balkans, although scholars are still in disagreement over the exact location. The eventual breakup of the Indo-European group from this initial geographic region, which occurred over nearly two millennia, resulted in the diffusion of ten major groupings with further subgroupings emerging over time and geographic distance.

The three major branches of Indo-European language that scholars agree originated in the second millennium BCE are Anatolian, Indo-Iranian, and Greek. Anatolian consisted of distinct Hittite languages confirmed by archaeological findings in central Turkey at Hattusas, the capital of the Hittite empire. Documents written in cuneiform script have allowed scholars to distinguish between Old Hittite (ca. 1700–1500 BCE), Middle Hittite (1500–1350 BCE), and Neo-Hittite (1350–1200 BCE). Indo-Iranian encompasses two language groups, Indic (Indo-Aryan) and Iranian. Indic texts in Vedic Sanskrit are believed to have existed in the Punjab during the latter half of the second millennium BCE. However, recent archaeological findings have created considerable controversy as to exactly how related Indic is to Indo-European. Iranian, spoken initially over most of southeastern Eurasia, evolved into Old Persian and Parthian within the geographical confines of modern Iran. Modern Persian, Farsi, evolved from ancient Iranian. Greek (Hellenic) emerged in its first form as Mycenaean Greek on the peninsula and in Crete. It later evolved through the Classical, Hellenistic, Byzantine, and modern forms.

A further two branches, Italic and Celtic, are attributed to the first millennium BCE from which emerged a series of further language groupings. Old Latin is firstly attested in inscriptions (sixth through third centuries BCE) from which evolved Classical Latin. Other Italic dialects, also prevalent in the Italian peninsula, eventually became subsumed within Latin with the rise of the Roman Republic. Celtic languages were spoken in parts of western to southern Europe from central Europe to the Iberian Peninsula and eventually in remote areas of Britain.

Irish, Gaelic, and Gallic are among its most prominent subbranches.

Five branches of Indo-European emerged in the Common Era: Germanic, Armenian, Tocharian, Balto-Slavic, and Albanian. The first Germanic language known to be written is Gothic, from a Bible translation in the fourth century CE. Other groupings would be Vandalic, Burgundian, and Old Norse. These languages were spread throughout central and eastern Europe and in contact with Latin through the Romans. Evidence for Armenian is known from a Bible translation from the fourth century around the Caucasus and the Black Sea region. Tocharian, found in the Tarim Basin in Chinese Turkestan, was found to be from the sixth to eighth centuries CE. From Baltic-Slavic (Slavonic) in eastern and central Europe, evidenced from Bible translations in the ninth century, you get a host of subgroups that diffused down to the Balkan regions coming in contact with Greek and the Greek alphabet. Last, Albanian is known to have existed since the fifteenth century, when it was first attestable in writing from the period.

—Abraham O. Mendoza

Bibliography

- Bryant, Edwin F., and Laurie L. Patton, eds. *The Indo-Aryan Controversy: Evidence and Inference in Indian History*. New York: Routledge, 2005.
- Giacalone Ramat, Anna, and Paolo Ramat, eds. *The Indo-European Languages*. New York: Routledge, 1998.
- Renfrew, Colin. *Archeology and Language: The Puzzle of Indo-European Origins*. Cambridge: Cambridge University Press, 1988.

Where Did the Zhou Come from?

In 1045 BCE, the Western Zhou king (King Wu) overthrew the Shang dynasty and became the leader of most of Shang China. In a few short years, the Zhou had expanded its empire through the East, establishing a pattern for Chinese kingship that would last for thousands of years. Once the Zhou established themselves as the preeminent power in China, there is a substantial amount of information preserved about them. However, for the time prior to their conquest of the Shang, there is less information.

Chinese historians are forced to work with ambiguous ancient poetic accounts of the Zhou and attempt to match these accounts with archaeological evidence. Further complicating the problem is the fact that the Western Zhou dynasty is viewed in a very positive light in the Chinese tradition. This means that people in different regions of modern China are quick to claim descent from the virtuous Zhou. The historian who takes a stand on this issue does so at the risk of undermining local historical traditions.

The traditional account of the origins of the Western Zhou can be found in the *Shi jing*, a collection of 305 ancient poems. In one poem, the Zhou are said to be born of a woman named Jiang Yuan who conceived when she stepped in the footprint of the divine Di. Jiang Yuan gave birth to Hou Ji, whom she abandoned (believing that this was the wish of Di). Hou Ji learned to survive on his own and became the eponymous ancestor of the Zhou people. Another poem in the collection lists the genealogy of the Zhou leaders. One of the leaders, Gu Gong Danfu, brought his people to the base of Mount Qi where, we are told in another poem, he built the city of Qishan. Gu Gong Danfu is described as the grandfather of King Wen, who was the father of King Wu, the king who defeated the Shang.

Tradition holds that the people had been living in a place called Bin (although this reading of the ancient Chinese characters is not entirely certain) and that they had to cross over the Liang Mountains to get to Mount Qi. Identifying the precise locations of where they came from and the location of Qishan is difficult since the ancient place names are not accurately preserved. Bin is typically associated with Binxian, which is in Shaanxi Province, located to the west of the Shang heartland. A small range of mountains, called the Liang Mountains, lies between Binxian and Qishan. This seeming correlation has led historians to generally situate Zhou origins in Shaanxi.

In the 1930s, the historian Qian Mu argued that in fact the Zhou originated to the east of the Shang heartland in Shanxi Province (not to be confused with Shaanxi in the west). Qian Mu was able to show that the place names and geographic descriptions mentioned in the *Shi jing*

may also correlate with locations in Shanxi. Furthermore, Shang oracle bone inscriptions (published in the 1950s) mention a site called Zhou, located in Shanxi.

Archaeological evidence also seems to support Zhou origins in either Shaanxi or Shanxi. A Proto-Zhou material culture assemblage seems to be identifiable in the archaeological record and has been identified at numerous sites. Most important is the analysis of the spatial distribution of various pottery and bronze forms; some scholars believe that a pattern of Zhou movement can be discerned in this material. This is done by correlating material culture excavated from Qishan and material culture that dates to after the Zhou conquest with older forms. Unfortunately, analysis of the evidence can be skewed to support either location as the Zhou homeland.

Recent work suggests that the quest to find the Zhou homeland and trace their migration route to Qishan may be based on premises that are too simplistic. The quasi-historical accounts in the *Shi jing* should probably not be seen as an ancient attempt to preserve specific information about the Zhou past. Rather, these accounts should be understood as an ancient attempt to understand the relationship of the Zhou to the rest of China and to simplify that relationship in a way that was meaningful (and possibly politically advantageous) to ancient contemporary readers and listeners. Likewise, more recent archaeological theory has shown that migrations and movements of people do not necessarily correlate with the movements of material culture. These older “pots equal people” theories have fallen out of fashion, so attempting to trace a Zhou path in pottery or bronze may be misleading. Finally, the Zhou and the Shang categories may not be as fixed as they seem in the traditional accounts. The lines between Shang culture, Zhou culture, and other Chinese cultures from the period were likely much more blurry than the historical traditions suggest. Given recent reevaluations of the relationship between the Xia and the Shang, a similar reevaluation may be appropriate for the Shang and the Zhou. Material cultural changes associated with the advent of Zhou leadership may better reflect shift-

➤ THE LI—PROTO-ZHOU MATERIAL CULTURE



Bronze li from the Zhou dynasty, 1100–771 BCE. (Asian Art & Archaeology, Inc./Corbis)

One of the primary pieces of evidence that archaeologists have used to try to identify Zhou origins is the *li*. This is a form of ceramic cooking pot, very distinctive because of its three legs (called lobes by ceramicists)—its own built-in tripod. This type of pot is common throughout China immediately prior to and after the Zhou conquest of the Shang. However, the style (especially the shape of the lobes) varies from region to region.

—Kevin M. McGeough

ing tastes and temporal changes than the advent of a brand new cultural tradition.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Rawson, Jessica. “Western Zhou Archaeology.” In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by

M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
 Shaughnessy, Edward L. “Western Zhou History.” In *The Cambridge History of Ancient China: From*

the Origins of Civilization to 221 B.C., edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

■ Introduction: Movement and Material Culture

The movement of ancient material culture is the most reliable way in which archaeologists are able to trace ancient travel. By plotting the appearance of the same types of material culture over different locations through time, archaeologists are able to reconstruct the ancient paths that people took long after those people have vanished. For an archaeologist to be confident that he or she has identified an ancient migration by the distribution of artifacts, he or she must have found the material in at least three locations: (1) in the place where the people originally lived, (2) along the route that the people traveled, and (3) in the final location of the people. Without finding the same material culture in all three of these types of locations, there is really no evidence that the movement took place. The temporal distribution must also line up. In other words, the material culture found at the original location must be earlier (or at very least contemporary) with the material found at the end location. It is this temporal distribution that allows an archaeologist to identify which was the starting point and which was the end point.

Identifying migration is not as simple as this, however. An archaeologist must be certain that the movement of a particular material culture assemblage should be associated with migration and not other kinds of activities, such as trading or plundering. Early archaeologists often equated “pots with people,” which is an oversimplistic equation at best. To take an example from modern times, imagine an archaeologist plotting the distribution of Coca-Cola bottles. Coca-Cola bottles can now be found all over the world. This is certainly a meaningful observation, and it has some important implications for understanding the present day. Yet the archaeologist would be incorrect in positing that there had been a mass

migration of “Coca-Cola people” that began in North America and spread throughout the world. The same problem should be considered in regard to other finds from early periods; the movement of material culture was culturally significant but not necessarily indicative of an ancient migration.

Below, three examples of migrations reconstructed from material culture are presented: the arrival of new groups on the island of Malta, the so-called Uruk expansion from ancient Sumer, and the first settlements in the Caribbean. These are all situations where archaeologists have been able to plot the movement of material culture over time.

—Kevin M. McGeough

The Arrival of the Tarxien Cemetery and Borg In-Nadur Cultures in Malta

There is no clear reason why the Temple culture of Malta seems to have disappeared. Various theories have been put forward, yet no single theory has been completely accepted. It is probable that there was not a single cause for why the highly organized Temple people abandoned Malta.

One of the issues surrounding the disappearance of Temple culture is whether or not the islands were actually abandoned and left uninhabited for a number of years. Could it be that only a few people remained on the islands and thus a certain kind of continuation existed between the people who erected the magnificent temples and those who came afterward? This does not seem likely since there is not much cultural continuity between Temple culture and the cultures that arrived in the Bronze Age.

Scholars are fairly certain that by 2500 BCE, the Temple culture on Malta had vanished. Some time afterward a new group of people arrived on Malta, bringing new types of buildings, a different design program, new pottery, and a different approach to the artistic representation of the human form. This new culture also introduced the use of metal, mostly copper, in the early stages of this period (even though the culture is referred to as “Bronze Age”). These people may have come to Malta from the eastern Mediterranean. The Cycladic Islands are a likely place of origin, due to similarities in material culture: cyclopean structures (buildings made of large, undressed stones), pottery shapes, and representations of the human form that are reminiscent of Cycladic statues.

Cremation was introduced by the so-called Tarxien cemetery people. This name has been applied to the first phase of the Bronze Age, the third period in the Maltese prehistoric sequence. Over the ruins of the Tarxien temple complex, which seem to have been abandoned around 2500 BCE, the newcomers to the islands established their cremation cemetery. These made use of the upright stones that were still standing to act as a shelter for their raging fires. The bodies were placed on wooden pyres, and the remains were then placed in funerary urns. Although this kind of burial has been noted during the Tarxien Cemetery phase, only scant remains have actually been preserved.

One of the most significant changes to the Maltese prehistoric sequence associated with this period are the so-called fortified villages in which the citadels had a distinct location. Not much material has actually been recovered from these sites, but a good number of sites have been identified on flat-topped hills. These hills usually offer natural protection, at least on three sides. If the hills are surrounded by steep slopes, the inhabitants of the islands did not bother to build any artificial defense walls. Yet in certain places, the hills chosen were surrounded by three slopes on three sides of the hill; defensive structures (usually walls constructed of large boulders) had to be built on the fourth side. The style of building is known as cyclopean, in which these large irregular boulders were placed next to each other

and thus formed a formidable wall of defense. The best fortified walls that have survived are that of Borg in-Nadur, the type site of the second phase of the Bronze Age.

Built a few meters away from the ruins of a temple belonging to the previous Temple period, the Borg in-Nadur village has only survived partially. The most impressive are the walls that surround part of the landward side, as on three sides of the site there are the slopes of the hill. The ancient walls have also a D-shaped form, and the entrance to the enclosure seems to have been hidden and protected by an outwork. Sophisticated defense works similar to the Borg in-Nadur remains have not yet been identified in earlier phases on Malta, suggesting that this construction style reflects the arrival of a new group of people.

The remains of huts were discovered behind the walls, indicating the presence of a small village. Yet the area is small and possibly would not have been large enough for the whole village community to live there. Perhaps the enclosed area was a citadel, where villagers could retire to in case of an attack. This is further indicated by the contemporary remains found along the shoreline, indicating that activity took place outside of the walls as well. A number of bell-shaped cavities have been discovered, (although many of these have been submerged by the rise in sea levels). These rock-cut cavities could have been used for water and/or grain storage. Since they are situated just on the shore, it has been suggested that these cavities could have been part of a still unknown import-export trade practiced by the prehistoric communities living on the islands.

The Bronze Age period had another influx of newcomers, and it seems that they set up their settlement on another flat-top hill, close to the high cliffs of the coast. This phase, known as the Bahrija phase after the site where it was first identified, ended along with the Borg in-Nadur phase when contact with the Phoenicians intensified, starting with more frequent trade with the islands and leading eventually to the establishment of Phoenician trading outposts among the local inhabitants. By 700 BCE, the Phoenicians were well established on the islands.

—*Vincent Zammit*

Bibliography

- Briard, Jacques. *The Bronze Age in Barbarian Europe: From the Megaliths to the Celts*. London: Routledge and Kegan Paul, 1979.
- Coles, John M., and A. F. Harding. *The Bronze Age in Europe: An Introduction to the Prehistory of Europe c. 2000–700 BC*. New York: Methuen, 1979.
- Evans, John Davies. *Malta*. London: Thames and Hudson, 1959.
- MacKie, Euan Wallace. *The Megalith Builders*. Oxford, UK: Phaidon, 1977.
- Zammit, Themistocles. *Prehistoric Malta: The Tarxien Temples*. Oxford: Oxford University Press, 1930.

The Uruk Expansion

Between 3500 and 3100 BCE (the Late Uruk period) the influence of southern Mesopotamia expanded far beyond the confines of the Tigris and Euphrates. The Uruk period in Mesopotamia was a time of urbanization and the period in which writing and monumental art emerged. Uruk (biblical Erech) was the largest site in southern Mesopotamia (over 247 acres [100 hectares] in size) at this time, and this may have

been the center of many of these changes. These societal transformations spread far beyond the city of Uruk during this period, along with Uruk material culture; the exact nature and processes behind this expansion are unclear, but no doubt this was an important period for the spread of literate urban life throughout Asia Minor. Generally, scholars refer to this movement of Uruk culture out of southern Mesopotamia as the “Uruk expansion.”

Mesopotamian material culture from the Uruk period has been identified at sites in northern Syria and Anatolia and as far west as the Mediterranean. In this area, the influence of southern Mesopotamian material culture on local material culture seems to have been relatively minor in that Uruk materials such as pottery and writing existed alongside local forms of material culture. There is also some evidence that Uruk culture may have influenced Egypt, since Egyptian material culture at this time incorporated elements from Mesopotamia. The Egyptians incorporated cylinder seals, artistic motifs, and various types of architecture and architectural decorations that originated in Mesopotamia, although the nature of the two regions’ contact with another at this stage is not entirely understood.

Uruk period links to southwestern Iran during this period were even more intense, and it is possible that Uruk colonies were established in northern Mesopotamia and Iran. If these were not colonies, then perhaps local people were attempting to emulate Uruk materials and lifestyles. However, given the dramatic similarities in material culture between Uruk and southwestern Iran at this time, it is most likely that these were colonies of some sort. It is not clear how much (if any) political control Uruk held over the Iranian plateau. Likewise, it is unclear what the purpose of this expansion of Uruk culture was. Some scholars have argued that the people of southern Mesopotamia were attempting to acquire resources such as timber, stone, and metals (since these are absent in the resource-poor Mesopotamian floodplain).

—Kevin M. McGeough

▶ BEVELED RIM BOWLS

One of the most distinctive types of Uruk material culture that is found at sites from the Mediterranean coast to the Iranian Plateau is the beveled-rim bowl. Named for its distinctive beveled edges, these bowls were mass-produced ceramics made from very coarse clay (tempered with straw). Often, the finger marks of potters are visible on the insides of these cheaply made ceramics. What these bowls were made for is still a mystery, although numerous suggestions have been offered. Some have argued that these were ration bowls for the state workforce, since they seem to have relatively fixed sizes. Others have argued that perhaps they were used for bread or for yogurt, both commodities that were typically stored in mass-produced vessels in the Near East. Salt may also have been stored and transported in these vessels. Finally, religious uses have been suggested; these may have been “official” feast bowls or votive bowls for temple offerings.

—Kevin M. McGeough

Bibliography

- Algaze, Guilhermo. *The Uruk World System*. Chicago: University of Chicago Press, 1993.

- Liverani, Mario. *Uruk: The First City*. London: Equinox, 1998.
- Moorey, P. R. S. *From Gulf to Delta and Beyond*. Beer-Sheva: Ben-Gurion University of the Negev Press, 1995.
- Rothman, Mitchell, ed. *Uruk Mesopotamia and Its Neighbors*. Santa Fe: School of American Research Press, 2001.

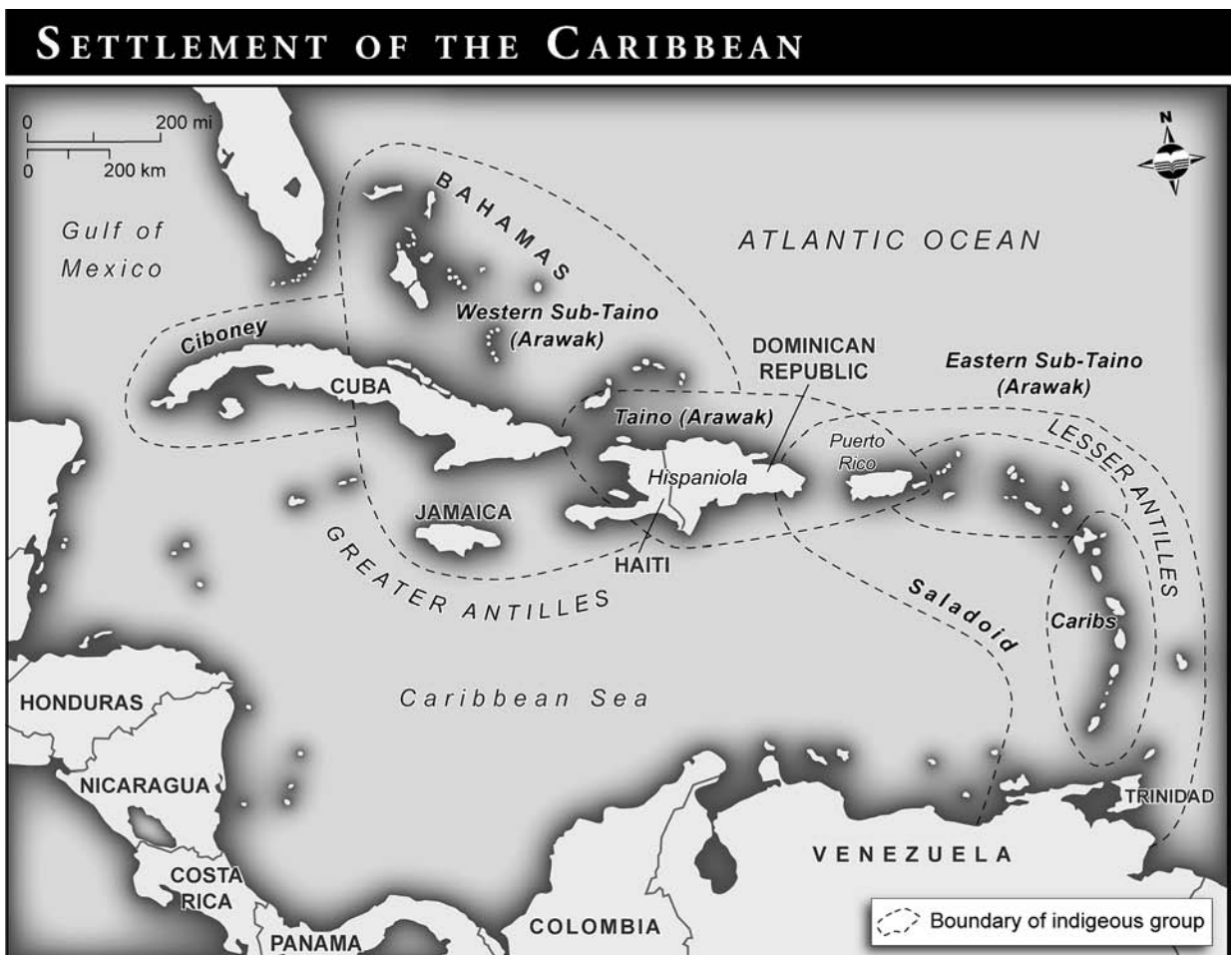
The Settlement of the Caribbean

The first settlements in the islands of the Caribbean occurred between 1000 BCE and 300 CE. From 4000 BCE onward, waves of settlers have continuously moved to these tropical islands. The first settlers to these islands had to adapt to a new environment with mild and pleasant weather but with very different fauna from their homelands. Those cultures that thrived in the new island environment learned to subsist on marine resources and limited horticulture, sub-

sistence regimes that typically were vastly different from those they left behind.

Around 4000 BCE, the first Caribbean settlers left the Yucatán Peninsula and journeyed to the islands of Cuba and Hispaniola (present-day Haiti and the Dominican Republic). Their flaked stone tools (which make up most of what has been recovered archaeologically) are very similar to those found in the Yucatán, so scholars are quite certain that this is where these people originated. This material culture is called Casimiroid, after the site of Casimiri in the Dominican Republic. There is one site in Puerto Rico—the Cerillo site—that may be considered Casimiroid, but this is uncertain. By about 2000 BCE, the people of Cuba and Hispaniola had developed an independent material culture tradition that is especially noteworthy for ground stonework.

The next wave of Caribbean settlers that has been identified by scholars arrived in the Lesser Antilles and Puerto Rico around 2000 BCE.



► THE CIBONEY

Around 2500 BCE, a group of people known as the Ciboney left Venezuela for the Caribbean. While the early history of this group is obscure, people claiming descent from this group still live in parts of Florida and Cuba today. Identifying early Ciboney material culture is difficult; scholars identify some shell middens, tools, and canoes as Ciboney. However, the material culture varies substantially from island to island. The name, which means “cave dwellers,” is derived from the language of the later Arawak Indians (or Taino) who seem to have conquered the Ciboney (or at least forced them to the margins of island life). The terminology that scholars use to discuss the people of the Caribbean can be quite confusing, since there are a few different conventions for use. Generally, when scholars refer to the Ciboney, they are referring to early settlers who did not use pottery and did not farm.

—Kevin M. McGeough

These settlers had come from the coast of South America, bringing with them distinct tools made in chert. Living in small villages, the people of ancient Puerto Rico and the Antilles lived on marine life hunted on reefs and small game hunted in the forest.

—Kevin M. McGeough

Bibliography

- Dacal, Ramón, and Manuel Rivero de la Calle. *Art and Archaeology of Pre-Columbian Cuba*. Pittsburgh: University of Pittsburgh Press, 1996.
- Scarre, Chris. “The Archaeology of the Caribbean.” In *The Oxford Companion to Archaeology*, edited by Brian M. Fagan. Oxford: Oxford University Press, 1996.

Lapita Complex

The pottery now called Lapita was discovered first in 1907 on the small island of Watom, Papua New Guinea. But it takes its name from a site in New Caledonia where quantities were excavated in 1952. Sites containing it have now been found from New Britain in the west to Samoa in the east.

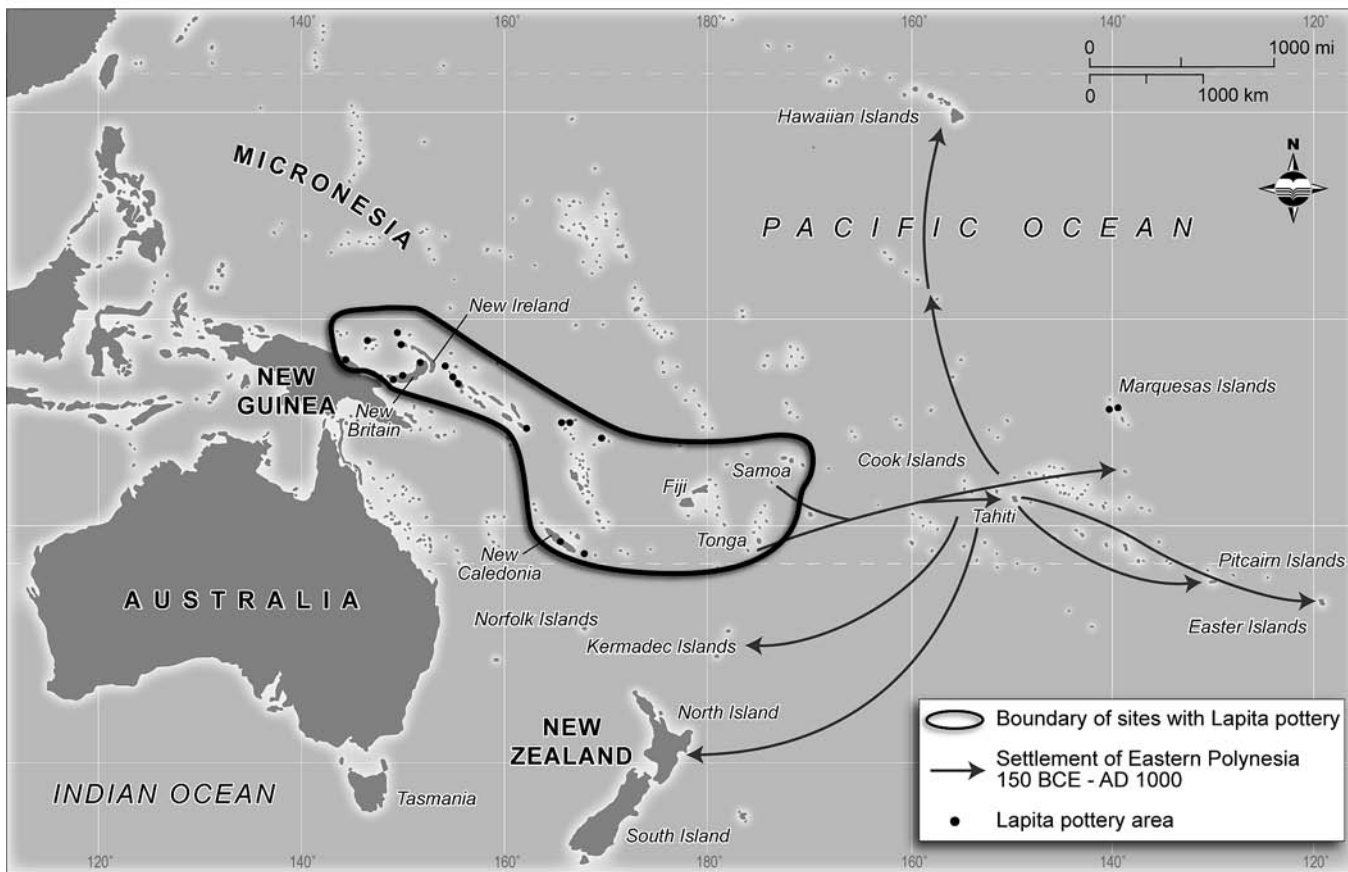
The distinctive aspects of Lapita pottery are its decoration and shape. The most elaborate decoration is geometric in style, often including stylized faces. This decoration is made with toothed stamps, which may contain up to 15 teeth per 0.4 inches (1 centimeter). Some large-bellied pots are nearly 3 feet (1 meter) tall with elaborate shoulders and rims and covered with a red slip. The pottery is, however, handmade, often with poor-quality material and badly fired.

The people who made this pottery were the first settlers of Remote Oceania. This extensive region was occupied in a very short time. The earliest sites, in the Bismarck Archipelago, are dated to about 1200 BCE. By 1000 BCE Lapita pottery was being made in New Caledonia, 1,367 miles (2,200 kilometers) to the southeast, and by 800 BCE in Samoa and Tonga 2,485 miles (4,000 kilometers) to the east. This is the earliest large-scale maritime colonization in the world, and the voyagers clearly had good sailing canoes and navigational skills.

The term “Lapita complex” has been developed because sites with lots of Lapita pottery show many other common features. Numerous shell artifacts were made of *Conus*, including fishhooks, bracelets, armbands, rings, beads, and pendants. Many of the sites are stilt villages on small offshore islands or protected peninsulas with good access to the sea. People were agriculturalists and kept domestic pigs, dogs, and chickens. The recent discovery of a cemetery in Vanuatu revealed bodies buried with or in pots and grave goods including shell jewelry and human skulls. Nearly all Lapita sites contain some obsidian, drawn from sources in the Bismarck Archipelago. Stone axe/adzes of new asymmetrical cross-section also occur.

While the fact of colonization is undoubted, the source of it is still strongly debated. The most widely accepted suggestion is that the colonizers were migrants, initially from Taiwan. The claim was originally based on the idea that Polynesians were so different from Melanesians that they could not possibly be descended from them. Today the strongest evidence is linguistic. All Remote Oceanians speak languages of the Austronesian family, as do some coastal New Guineans and all southeastern island Asians. Linguistic prehistory traces the origins of this family to Taiwan

DISTRIBUTION OF LAPITA POTTERY



about 6,000 years ago. The archaeological evidence for such a migration is, however, very slight. No Lapita pottery has been found in Taiwan or the intervening areas, although red-slipped ware is common throughout the region from about 2000 BCE.

Recent biological evidence deriving from various aspects of the human genetic makeup is inconclusive. Some studies suggest links between Remote Oceanians and southeastern Asians, while others show no such link. Similarly, claims that Austronesian speakers in Near Oceania are biologically distinct from speakers of other older non-Austronesian languages are disputed by other analysts.

On the other hand, Lapita pottery seems to appear quite suddenly at the oldest sites, in the Bismarck Archipelago, and its very early examples are among the most elaborately decorated. This suggests that the technology of pot making

was likely derived from elsewhere. Allied to this are the possibility that Bismarck Archipelago obsidian was traded to the eastern Philippine islands by 3,000 years ago and the fact that Lapita decoration is very similar to that found in other media in this area of the Pacific and would have been easily transferred to pottery. Thus, the Lapita complex may well represent a fusion of ideas and technologies in the Bismarcks, perhaps with a few people arriving from the west.

But what stimulated the great migration of people out into Remote Oceania, people whose descendants occupied all the islands of the Pacific, is not clear at all.

—Peter White

Bibliography

Clark, G. R., A. J. Anderson, and T. Vunidilo, eds. *The Archaeology of Lapita Dispersal in Oceania*. Terra Australis 17. Canberra: Pandanus, 2001.

➤ LAPITA NAVIGATION

Lapita navigation was based entirely on observations of the world around the sailors and on their traditional knowledge. They had no compasses or other mechanical aids.

Initial exploration, of course, was not navigated. As the archaeologist-sailor Geoff Irwin has shown, people almost certainly set out exploring upwind so that when they reached the limit of their food or patience they could return safely and quickly.

But once settlements were established, there continued to be movement and exchange between them. Judging from Pacific islanders of the recent past—our only real source—the most important techniques were:

- Observing the succession of stars over particular points in the east and west horizon and their relation to other star patterns.
- Dead reckoning, allowing for currents, swell patterns, winds encountered, and the angle of the wake. Modern experiments show that

errors within these observations tend to cancel each other out in the hands of an experienced navigator.

- The observation of bird behaviors, especially of those species that returned to land to roost every night.
- Cloud patterns, as clouds often form over islands in the tropics.

The other important point to remember is that most targets were large. Many islands lie within archipelagoes, which presented targets up to 20 degrees wide. So navigators could afford to be a bit off. Single islands such as Easter Island seem to have been rarely or never visited.

—Peter White

Source

G. Irwin. *The Exploration and Colonization of the Pacific* (Cambridge: Cambridge University Press, 1992).

Kirch, P. *The Lapita Peoples*. Oxford: Blackwell, 1997.
Sand, C., ed. *Pacific Archaeology: Assessments and Prospects*. Le Cahiers de l'Archéologie en Nouvelle-Calédonie 15. Noumea: Service des Musées et du Patrimoine, 2003.

Spriggs, M., ed. *Lapita Design, Form and Composition*. Occasional Papers in Prehistory 19. Canberra: Department of Prehistory, Australian National University, 1990.

■ Introduction: The Kingdom of Punt

The Kingdom of Punt was a minor trading partner with the ancient Egyptians all through the dynastic period, at least Dynasties five through Dynasty twenty. The Egyptians described Punt as a paradise where every good thing, from gold to exotic animals (rhinos, giraffes, baboons, etc.), existed in abundance. However, the Egyptians were mainly interested in obtaining myrrh for use in temple ritual, as it could not be found locally. Almost nothing is known about the Kingdom of Punt from its location to its culture. The ancient Egyptians are the only ones who ever refer to Punt, and their mentions of Punt were usually fleeting. However, Queen Hatshepsut (Eighteenth Dynasty) created

a series of reliefs with texts that show and describe an expedition to the land of Punt. These reliefs are the only depictions of the land of Punt from ancient Egyptian art and form the basis for most of the knowledge about Punt.

The location of the Kingdom of Punt is largely a mystery. The ancient Egyptians did not create maps, nor did they give detailed directions on how to get there. A number of theories have arisen as to its possible location based primarily upon its trade goods; these places include Yemen, Bahrain, India, Ethiopia, Sudan, Eritrea, Somalia, Mozambique, the Sinai, and Phoenicia. The most likely candidate is that of eastern Sudan/Eritrea, located between the fifth cataract

of the Nile and the mouth of the White Nile on the west and stretching east to the Red Sea. All the trade goods described in texts and depicted in art as coming from Punt can be found in this area. It must be noted that the placement of Punt in modern Yemen cannot be ruled out. But this would mean that the Yemen Puntites were part of a much larger and more complicated trade network that included India and southern Africa. The location of Punt in East Sudan and Eritrea is a simpler explanation. Until more archaeological study can be done in these areas, the debate will continue.

—*Vanessa Smith*

Egyptian Expeditions to Punt

Punt was of great interest to the Egyptians, who not only wanted the myrrh resin but also myrrh trees so that they could cultivate their own resin. In fact, all of the historical evidence for the Kingdom of Punt comes from Egyptian accounts of expeditions to this land. All of these expeditions were organized for trade, and it was clear that Egypt's interest in the land was mostly economic.

The first reference to Punt is from the Palermo Stone, which recorded the reigns and deeds of the kings of the first five Egyptian dynasties. The Fifth Dynasty king Sahure had myrrh and electrum (a gold and silver alloy) brought from Punt. During the Sixth Dynasty, a man named Harkhuf traveled to the land of Yam, whose exact location is also unknown but seems to have been near Punt. Harkhuf wrote a diary of his travels on his tomb walls in Aswan and included a letter from the boy king Pepi II, who is very excited to learn that Harkhuf is returning from an expedition with a pygmy to dance in the temple. The letter states that the pygmy is to be guarded very carefully so that he does not fall off the boat on the trip back. The king's letter also mentions that Harkhuf is returning with goods from the land of Punt but clearly shows the king's preference for the pygmy. Slightly later in the reign of King Pepi II, the autobiography of Pepinakht describes an expedition to the Red Sea coast to retrieve the body of Anankht, who was killed by desert tribes while assembling a boat to travel to Punt. Although this reference to

Punt does not describe its location or its goods, it is important in that it describes one of the routes that the Egyptians used to travel to there. The king's letter to Harkhuf indicates that he traveled on the Nile, whereas the inscription of Pepinakht indicates that Punt could also be reached via the Red Sea. These references help in determining the most likely location of the land of Punt as eastern Sudan.

Kings also sent expeditions to Punt during the Middle Kingdom. A graffito written by a man named Henu was found in the Wadi Hammamat, which was the overland road between the Nile Valley and the Red Sea. In the graffito, Henu states that he was sent to Punt by King Mentuhotep III Sankhkare (Eleventh Dynasty) via the Red Sea in order to get myrrh.

The ancient Red Sea port of Sawaw (present-day Mersa Gawasis) provides further inscriptional evidence of trips to Punt from several poorly preserved stelae. Three stelae record one or more trips to Punt during the reign of Senwosret I of the Twelfth Dynasty. The stele of Vizier Intefoker records that 3,756 people (including 500 sailors) traveled through the Wadi Hammamat to assemble boats for the expedition to Punt. Another stele dates to the reign of Senwosret II (Twelfth Dynasty) and records the successful return of a mission to Punt.

Perhaps the best-known expedition to Punt comes from the reign of Queen Hatshepsut in the New Kingdom (Eighteenth Dynasty). One whole wall from her mortuary temple called Deir el-Bahri in Thebes is covered with drawings of the journey to Punt, negotiations with the Puntite chiefs, the return journey, and the presentation of the booty to the god Amun. The Hatshepsut inscriptions are the only ones that depict the land of Punt itself. The people are shown to dress somewhat like Egyptians, but they have long, thin beards. Their houses are dome-shaped on stilts and are reached by ladders. The local flora and fauna are also depicted: dom-palm trees, ebony trees, baboons, a giraffe, and a rhinoceros are but a few. Despite the fact that the expedition returned with all sorts of exotic goods that clearly delighted the Egyptian court, myrrh was the main reason for the trip.

Queen Hatshepsut's successor, King Thutmose III (Eighteenth Dynasty), is famous for his

► THE SHIPWRECKED SAILOR

The Middle Kingdom fairy tale called the “Shipwrecked Sailor” recounts the story of a sailor who is washed up on a deserted island paradise somewhere in the Red Sea. The island is uninhabited except for a huge talking snake more than 50 feet long. The sailor befriends the snake, and they recount their separate stories of woe (the sailor’s shipwreck and the death of the snake’s family). The snake is so grateful for having a friend that he tells the sailor his future, which includes returning safely to his family and being lauded by the king. The sailor, in turn, is so overjoyed at learning that he will return safely home that he tells the snake he will make food offerings and send back incense, perfumes, spices, and oils as gifts. The sailor then tells the snake that he believes that the snake is a god. Upon hearing this, the snake laughs and says that no gifts were necessary, for he is the ruler of Punt and therefore controls all the myrrh. Although a fable, the “Shipwrecked Sailor” emphasizes how important myrrh was to the Egyptians. It was a gift for the divine.

—Vanessa Smith

expansion of the Egyptian empire to the north into Syria and expanding territories south in Sudan. He chronicled his exploits at the temple of Karnak and included depictions of the strange flora and fauna that he saw while on his travels. In years 33 and 38 of his reign, Thutmose III annals recount that in the first instance 2,136 gallons and in the second instance 304 gallons of dried myrrh resin were brought from Punt. It is unclear from the annals whether Thutmose III sent an expedition to Punt or the Puntites traveled to Egypt to trade. Three nobles tombs, from the reigns of Thutmose III and Amenhotep II (a total time span of about 80 years), record visits to Egypt by people from Punt. The tomb of Puyemre shows King Thutmose III inspecting 7,634 gallons of myrrh as well as myrrh trees, ivory, ebony, and gold. The tomb of the vizier Rekhmire depicts Puntites offering myrrh, ebony, ivory, gold, ostrich feathers, ostrich eggs, leopard skins, live baboons, and a cheetah. The tomb of an unknown man depicts the boats of the people of Punt as raftlike with black triangular

sails—very different from depictions of Egyptian boats. A graffito from the Sinai dated in the year 36 of King Amenhotep III tells how an official went to the seacoast to receive visitors from Punt. Under the reign of the heretic king Akhenaten, also known as Amenhotep IV (Eighteenth Dynasty), the tomb of Meryre shows the Puntites visiting the new capital city of Amarna and offering myrrh to the king.

During the Nineteenth Dynasty, there are references once again to Egyptian expeditions to Punt. King Seti I, from his temple at Abydos, tells of the many ships sent to Punt to get myrrh. His son, King Ramses II, from his temple at Abydos, recounts planting temple gardens with myrrh trees brought from Punt. Ramses III (Twentieth Dynasty) sent the last known expedition to Punt via the Red Sea route to bring back myrrh.

After Ramses III, there are no more mentions of Punt from ancient Egypt. Trade with Punt may have continued but simply went unrecorded. References to Punt are not found in the literature from any other culture, such as the Greeks or Romans. It may be that the sociopolitical design of Punt changed and that it ceased to be recognized as the culture of Punt.

—Vanessa Smith

Bibliography

- Breasted, John Henry. *Ancient Records of Egypt*, vol. 1. London: Histories and Mysteries of Man, 1988.
- Foster, John. *The Shipwrecked Sailor: A Tale from Ancient Egypt*. Illustrated by Lyla Pinch Brock. Cairo: American University in Cairo Press, 2000.
- Kitchen, K. A. “The Land of Punt.” In *The Archaeology of Africa*, edited by Thurston Shaw. New York: Routledge, 1993.
- Kitchen, K. A. “Punt and How to Get There.” *Orientalia* 40, no. 2 (1971): 184–207.
- Smith, W. Stevenson. *The Art and Architecture of Ancient Egypt*. Revised with additions by William Kelly Simpson. New Haven, CT: Yale University Press, 1981.
- Smith, W. Stevenson. “The Land of Punt.” *JARCE* 1 (1962): 59–61.

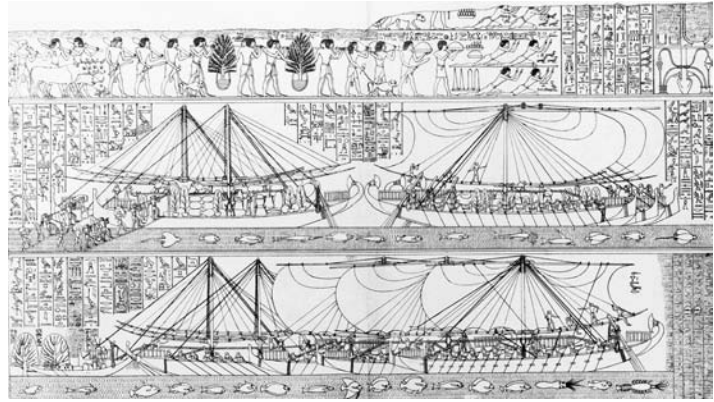
Hatshepsut’s Reliefs

The Punt reliefs commissioned by Queen Hatshepsut are extremely detailed both in illustrations and text. The reliefs offer the ability to study

not only the little-known culture of Punt but also the political situation in Egypt during the queen's reign, since Queen Hatshepsut emphasizes a close connection to the god Amun-Re throughout the reliefs as a means of legitimizing her reign. The drawings (and their captions) of the land of Punt are the only known representations of that culture and form the basis of all discussions about Punt. The texts underscore the importance of myrrh to ancient Egyptian religious practices (burned as incense in the daily temple rituals at the hundreds of temples all over Egypt) and the fact that the Egyptians would travel a very long way to get it.

The New Kingdom queen Hatshepsut (Eighteenth Dynasty) came to power by taking power from her nephew and stepson King Thutmose III, for whom she had briefly acted as regent. Queens rarely held sole rule in ancient Egypt, and their reigns were generally short and came at times of political instability. Queen Hatshepsut's reign was an exception and is marked by widespread trade with neighboring territories and large building projects including her mortuary temple at Deir el-Bahri. Inscriptional evidence from her monuments as well as from those of her courtiers suggests that during Hatshepsut's reign there was trade with places as far away as Cyprus, the Levant, Minoan Crete, Mycenaean Greece, the Sudan, and Punt.

The mortuary temple of Deir el-Bahri is situated on the west bank of the Nile River near the present-day town of Luxor. The temple is known as a terrace temple and consists of three levels, which are built into the sides of the high desert cliffs. Many of the scenes carved into the temple walls emphasize the queen's divinity in an attempt to legitimize her reign. One of these scenes involves a command given to the queen by the god Amun-Re, an especially prominent deity in the Eighteenth Dynasty, to send an expedition to the land of Punt in order to get myrrh. In a very long inscription complete with illustrations placed on the middle terrace on the south side of the temple, Hatshepsut recounts the oracular statement from Amun-Re, the trip to Punt, the return trip, and the triumph that followed. These reliefs are the only ancient Egyptian depictions or descriptions of the land of Punt. As such, they represent our only knowl-



Redrawn from stone reliefs on the tomb of Hatshepsut at Deir el-Bahri, the illustration depicts an Egyptian trading voyage to the land of Punt. The hieroglyphic text describes the cargo acquired at Punt, consisting of ebony, ivory, gold, and a live panther. (HIP/Art Resource, NY)

edge of the nature of that land, its culture, its geography, and its ecology.

The narrative begins with a scene showing five Egyptian boats leaving the Red Sea coast to begin their journey to Punt. The boat decks are empty of cargo in anticipation of the bounty that they will bring back from Punt. The accompanying text states that they are going to Punt at the command of the god Amun-Re and in order to glorify Queen Hatshepsut.

The next scene in six registers, or lines, portrays the Egyptian expedition's arrival and the Kingdom of Punt itself. In the first register, the chief of Punt, his wife, two sons, a daughter, and their entourage receive the royal envoy and the Egyptian Army. The Egyptians present the Puntites with their trade goods: gold, weapons, and jewelry. This is the only depiction of Puntite women from ancient Egyptian art. The appearance of the chief's wife, named Aty, departs from the stylistic and artistic norms of Egypt. She is shown with a long braided wig and a sheer linen skirt—both fashion norms for Egyptian women—but that is where the similarities end. Aty is very obese with pendulous breasts and fleshy rolls cascading down her tummy and over her knees, ankles, and elbows. Close behind Aty is her daughter, whose name is not given. The daughter, while not obese like her mother, is depicted with pendulous breasts, and her limbs are plumper than stylistic norms, implying that she is on her way to matching her mother's ample

► THE ORACULAR COMMISSION FROM AMUN-RE

The text accompanying the Hatshepsut reliefs recounts the original commission of the expedition to Punt by the god Amun-Re. One day when Hatshepsut was praying before the god's shrine, he spoke to her and told her to make an expedition to Punt in order to get myrrh for him. Amun-Re goes on to tell her that he has always intended that she rule Egypt and that her power spread to all the lands, including Punt. Of course, Hatshepsut is using this text to legitimize her usurpation of the throne from her nephew and stepson, Thutmose III. Amun-Re then makes a long speech about Punt and how no Egyptians had ever reached Punt before, which is false, as expeditions to Punt were undertaken as early as the Fifth Dynasty. Amun-Re tells Hatshepsut that Punt is a paradise that he made as a sort of holiday resort for gods, literally a place to divert his heart. He says that the people of Punt revere him, and because he wishes it, they will revere Hatshepsut as well. Finally, he asks that Hatshepsut plant myrrh trees in a garden in the temple (presumably Karnak temple) so that he can be offered fresh myrrh incense and be bathed in myrrh ointment daily.

—Vanessa Smith

form. The second register depicts the Egyptian envoy in front of his tent receiving the chief of Punt and his portly wife, who present the envoy with a meal and the Puntite trade goods.

All six registers depict the land of Punt dense with trees and with the native houses, flora, fauna, and Puntites at work. The houses of Punt were dome shaped and sat on stilts with a ladder to reach the door. Most likely the houses were made out of organic materials—timber and reed or grass mats—that often are not preserved in the archaeological record, one reason why proving the ultimate location of Punt may be extremely difficult. The people of Punt are shown at work cutting ebony, carrying myrrh trees, collecting myrrh resin, and tending cattle. The local wildlife (a giraffe, a rhinoceros, baboons, and various birds) reside among the trees, ignoring the nearby workmen. Punt is depicted as an idyllic land with plenty of food, trees, animals, and happy people. Interestingly, the Egyptians

do not remark on the apparent primitiveness of Punt society in relation to their own, even though the barbarity of foreign societies is a favorite theme among the ancient Egyptians. The cordial nature of the relations between the Puntites and the Egyptians shows exactly how desperate the Egyptians were to get myrrh incense for their temples.

The next scene in the story of the Punt expedition portrays the Egyptians loading two ships with live myrrh trees, pots of myrrh resin, ivory tusks, and baboons and three ships already under sail back to Egypt. The accompanying text gives a long list of the items that they have loaded onto the ships. It also states that the myrrh is destined for the temple of Amun-Re.

After the departure scene, the Egyptian envoy and some people of Punt present the goods to Queen Hatshepsut, including live myrrh trees, myrrh resin, baboons, and short-horned cattle. The captions tell of the far-reaching power of the queen and how the Puntites pray for peace from her and then tell her how great she is. Subsequently, the queen offers the goods to Amun-Re with a list of exactly what she is presenting, which includes (in addition to the goods above) electrum, eye paint, throw sticks (a type of weapon), ebony, ivory, shells, a live panther, a giraffe, ostrich eggs, many panther pelts, and 3,300 cattle. All the goods are shown lined up or stacked on tables, and there are two heaps of myrrh, one the height of a man and the other twice the height of a man. Part of the queen's presentation to the god Amun-Re includes her weighing and counting all the items. Although exact numbers are not given, the items from Punt are said to be in the millions.

The final scene depicts Queen Hatshepsut announcing to her court that the expedition to Punt was a success. The queen is enthroned in front of three of her courtiers. Around the courtiers is a very long text, which records the queen's speech. There is an introduction that says that Queen Hatshepsut held court in year nine of her reign, which suggests that the expedition to Punt took place within the previous year. The queen opens by saying that because she makes wonderful offerings to the god Amun-Re, he is very happy and loves her very much (another attempt at legitimating her rule). She

goes on to state that Amun-Re commanded her to send an expedition to Punt in order to bring back myrrh and especially to make a garden for him. After this the text becomes too broken to read.

—Vanessa Smith

Bibliography

- Breasted, John Henry. *Ancient Records of Egypt*. Vol. 2. London: Histories and Mysteries of Man, 1988.
- Bryan, Betsy. "The Eighteenth Dynasty before the Amarna Period." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. New York: Oxford University Press, 2003.
- Kitchen, K. A. "The Land of Punt." In *The Archaeology of Africa*, edited by Thurston Shaw. New York: Routledge, 1993.
- Smith, W. Stevenson. *The Art and Architecture of Ancient Egypt*. Revised with additions by William Kelly Simpson. New Haven, CT: Yale University Press, 1981.

The Resources of Punt

The main product from Punt that the ancient Egyptians were interested in was myrrh. Myrrh is the sap from the myrrh tree (*commiphora myrrha*), which when burned gives off a very fragrant aroma. Myrrh trees did not grow naturally in Egypt but were found in East Africa, southern Arabia, and India. The Egyptians used it in mummification rituals, medicines, and cosmetics, but its primary purpose was incense. During the daily temple ritual, incense was burned in front of the god's statue in order to purify the air. Egypt required a steady supply of myrrh in order to service the hundreds of temples all over the country. The Egyptians frequently brought back not only dried myrrh but also live myrrh trees from Punt in the hope of starting their own supplies. Texts relate that these trees were planted in temple gardens. Any other products that Egypt received from Punt, although welcome, were secondary.

Ebony and ivory were another major component of trade between Egypt and Punt. Ebony trees were found in the same regions as myrrh trees: East Africa, southern Arabia, and India. Ebony was used in furniture making and was a luxury good. Ivory typically comes from the teeth of three animals: whale, hippopotamus, and elephant. Hippopotami lived in the Nile

➤ GETTING TO PUNT

If Punt was indeed located in East Sudan/Eritrea, the Egyptians describe two ways of getting there. The first was to travel all the way down the Nile River directly to Punt. But this journey is not as easy as it sounds, for the Egyptians had to go around at least five cataracts, or areas of the river, that were too rocky to be traveled by boat. Therefore, at every cataract the Egyptians had to haul the boats out of the river and carry them overland until the water became navigable again. Another hazard taking the overland route came from the fact that in many places along the Upper Nile River the desert reaches all the way to the river's edge, meaning that the Egyptians would have to pack all their food for the trip. The more popular and perhaps easier route to Punt was via the Red Sea. Numerous texts recount the construction of boats at Thebes, sailing them up to Koptos, disassembling them, and carrying the parts through the Wadi Hammamat, the east-west road through the desert from the Nile Valley to the Red Sea coast. The boats were reassembled at the Red Sea and sailed down to Punt, which seems to have been located along the coast. The sea route required a massive undertaking. The stele of Vizier Intefoker (Twelfth Dynasty) states that he took 3,756 people through the Wadi Hammamat to reassemble the boats: 3,200 civilian staff (presumably to do the reassembly and support the rest of the staff), 500 sailors, 50 overseers, 5 scribes, and 1 man in charge of it all (Intefoker, of course). Trips to Punt could not and were not organized by private citizens for personal profit; they were simply too expensive. Trade with Punt was state initiated and state run, and the trade goods were intended for state and temple use.

It is clear that the people of Punt traveled to Egypt to trade. In one depiction, they arrive with raftlike boats with triangular black sails and large steering oars. The Egyptians are usually quite disrespectful of foreigners in texts and art, but in scenes where the Puntites visit Egypt and in the Hatshepsut inscriptions where her envoys visit Punt, relations between the two countries are very cordial.

—Vanessa Smith

River and were hunted by the Egyptians. But elephants did not live in the Nile Valley during the Dynastic period, and their tusks were much larger than those of the hippopotamus. Like ebony, ivory was mainly used in furniture by the ancient Egyptians and was a luxury good.

The Egyptians also traded for gold and electrum (a gold and silver alloy) from Punt. Egypt controlled gold mines in the Sinai, the Eastern Desert, and the Sudan, so gold from Punt probably just supplemented that from the state's mines.

The Egyptians brought back living animals and their pelts from Punt, the more exotic the animal the better. Texts and drawings show short-horned cattle (not a native Egyptian species), baboons, monkeys, dogs, foxes, ostriches, ibex, cheetahs, leopards, etc. These animals and their skins were not simply luxury goods but also curiosities to be marveled at by the Egyptians.

The ancient Egyptians also trafficked people. There are at least two references to Punt expeditions returning with pygmies, who were meant to dance for the gods in the temples. It is clear that the pygmies caused a sensation among the Egyptians. One letter from the young king Pepi II (Sixth Dynasty) states that the pygmy must be guarded very carefully to protect him from falling over the side of the boat on the return voyage from Punt. The Hatshepsut inscriptions

indicate that the Egyptians returned with some people of Punt and their children. It is unclear whether these people were slaves or immigrants, but given the good relations between Egypt and Punt, it is more likely that they were immigrants.

—Vanessa Smith

Bibliography

- Breasted, John Henry. *Ancient Records of Egypt*. Vol. 2. London: Histories and Mysteries of Man, 1988.
- Fattovich, Rodolfo. "The Problem of Punt in Light of the Recent Field Work in the Eastern Sudan." In *Akten des vierten Internationalen Ägyptologen Kongresses, München, 1985*, vol. 5, edited by Sylvia Schoske. Hamburg: Helmut Buske Verlag, 1991.
- Harvey, Stephen. "Interpreting Punt: Geographic, Cultural and Artistic Landscapes." In *Mysterious Lands*, edited by David O'Connor and Stephen Quirke. London: University College London Press, 2003.
- Kitchen, K. A. "The Land of Punt." In *The Archaeology of Africa*, edited by Thurston Shaw. New York: Routledge, 1993.
- Kitchen, K. A. "Punt and How to Get There." *Orientalia* 40(2) (1971): 184–207.
- Meeks, Dimitri. "Locating Punt." In *Mysterious Lands*, edited by David O'Connor and Stephen Quirke. London: University College London Press, 2003.

■ Introduction: The Sea Peoples

The Sea Peoples" is a term used to describe the mobile, displaced groups who were associated with attacks upon and disruptions of many societies around the eastern Mediterranean around 1200 BCE. They fell upon areas from Greece and the Aegean to Anatolia and Cyprus and as far as the Levant and Egypt. Their origins, movements, and actions were instrumental in the transformations that occurred in this region at the end of the Bronze Age and the beginning of the Iron Age.

Egyptian inscriptions provide key evidence for identifying the groups involved. Merneptah, the last significant pharaoh of the Nineteenth

Dynasty, and Ramses III, the second pharaoh of the Twentieth Dynasty, both recorded inscriptions that described their forces successfully defeating a number of groups, collectively called the Sea Peoples. Merneptah names Lybians and allied Sea Peoples, the Meshwesh, Sherden or Shardana, Lukka, Ekwesh, Teresh, and Shekelesh. Ramses III identifies a coalition of Peleset (the biblical Philistines), Tjeker, Shekelesh, Denyen, and Weshesh. Relief carvings depict Egyptian forces defeating these attacking groups in battles both on land and sea and also taking captives.

Further evidence for the Sea Peoples comes from archaeological excavations around the east-

ern Mediterranean basin. Heinrich Schliemann's excavations at the ancient Homeric cities of Troy and Mycenae in the late 1800s found a distinctive ceramic style that he attributed to a culture he called Mycenaean. Destruction layers at these sites marked the beginnings of the Greek Dark Age. Sir Flinders Petrie discovered similar Mycenaean pottery in tombs excavated in Egypt in 1889. Petrie was the first to suggest that this type of pottery might be evidence of a connection to the Sea Peoples and their Aegean origins.

In the early 1900s, excavators began to identify sequences of layers indicating that the Late Bronze was a period rich in trade throughout the eastern Mediterranean basin. Pottery manufactured in Mycenaean sites in the Aegean was discovered at sites in the Levant, Cyprus, and Egypt. The Bronze Age ended, however, with destruction at most of these sites. The subsequent period, the Iron Age, began without imports. At many sites, however, Early Iron Age pottery was manufactured from local clays while using the same shapes and decorative styles as the prior imported vessels.

The ceramic evidence together with new buildings, settlement patterns, and other artifacts suggest that the disruptions at the end of the Late Bronze Age were connected to the displacement of groups of Sea Peoples. The Iron Age began with Sea Peoples settling again not just in the Aegean but also together with local inhabitants at many places around the eastern Mediterranean. In Palestine, the Peleset, a Sea People group named Philistines in the Bible, became the coastal rivals of the Israelites.

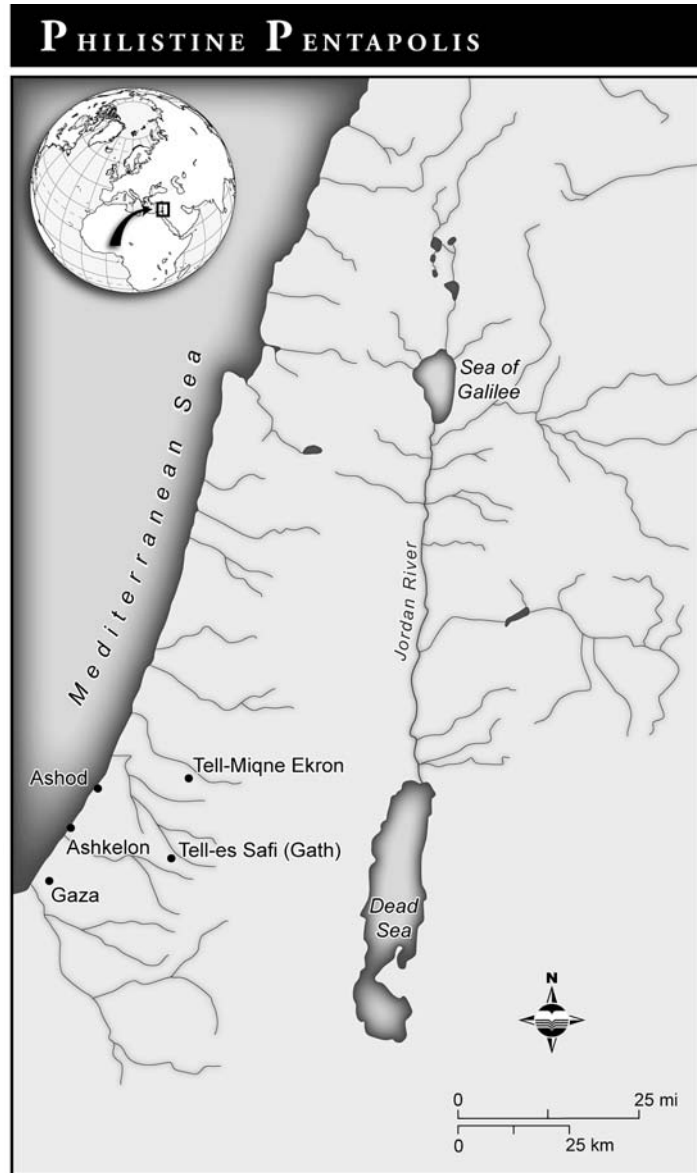
—D. Bruce MacKay

Bibliography

- Pritchard, J. B., ed. *Ancient Near Eastern Texts relating to the Old Testament*. 3rd ed., with supplement. Princeton, NJ: Princeton University Press, 1969.
- Sanders, N. K. *The Sea Peoples: Warriors of the Ancient Mediterranean, 1250–1150 B.C.* New York: Thames and Hudson, 1985.

Who Were the Sea Peoples?

The Sea Peoples were small groups not clearly associated with any one location or any of the major city-states that typified the Late Bronze



Age east Mediterranean world. The large city-states and empires were characterized by agrarian economies and united by long-distance trade. Various Sea People groups are named in texts produced by other civilizations and identified variously as seafaring traders, mercenaries, or invaders. These groups rose to greater prominence during the years marking the end of the Late Bronze Age. Texts from many of the city-states and kingdoms clearly associate the Sea Peoples with the upheavals that mark the end of the age.

Egyptian inscriptions explicitly call some of these groups Peoples of the Sea. Those specifically

named include Denyen, Shardana, Lukka, Meshwesh, Ahhiya, Teresh, Ekwesh, Shekelesh, Peleset, Tjekker, and Weshesh. Identity is largely discussed in terms of where the groups originated and how names of Sea Peoples correlate with groups named in other sources from both earlier and later periods.

It is likely that the Sea Peoples were involved in long-distance trade networks during the Late Bronze Age. Sea trade is reflected in similarities in the forms and decorative styles on pottery vessels and other artifacts recovered from archaeological sites throughout the eastern Mediterranean. These similarities imply that there were related groups of people who carried the trade. However, scholars remain uncertain about where many of these groups originated.

The Egyptians repulsed an invading force of Sea Peoples in the eighth year of the reign of Pharaoh Ramses III (ca. 1186 BCE). An inscription on the mortuary temple of the pharaoh at Medinet Habu proclaimed that people from foreign lands conspired to attack Egypt. A number of other areas were reported to have been attacked by the invaders prior to their appearance in Egypt: Hatti, Kode, Carchemish, Arzawa, and Alashiya. These names refer to a number of northern peoples and places: the Hittites of Anatolia (Hatti and Carchemish), the region of Cilicia (Kode), eastern Asia Minor (Arzawa), and Cyprus (Alashiya). This would suggest that the Sea Peoples originated in northern Mediterranean regions.

Earlier Egyptian inscriptions from the time of the Nineteenth Dynasty pharaoh Ramses II (ca. 1301–1235 BCE), whose forces fought against the Hittites in the Battle of Qadesh in Syria, support this northern connection. Included in the list of groups who fought alongside Egyptians in the pharaoh's army were the Shardana, Lukka, Derden, Masha, Pitasha, Arawanna, and Karkisha.

Merneptah, another Nineteenth Dynasty pharaoh, defended Egypt in the fifth year of his reign (ca. 1220 BCE) from attacks by a coalition of Lybians and allied Sea Peoples. The inscriptions celebrating the Egyptian victory list specific names of the attacking groups who were defeated: the Meshwesh, Sherden or Shardana, Lukka, Ekwesh, Teresh, and Shekelesh.

Ramses III repulsed a more serious Sea Peoples attack in the eighth year of his reign (ca. 1186 BCE). The same inscription on his mortuary temple at Medinet Habu, which described the attackers in northern lands, also reports in both words and relief carved images that his forces defeated a coalition of Peleset, Tjekker, Shekelesh, Denyen, and Weshesh.

A final piece of Egyptian evidence comes from a papyrus document written shortly after the death of Ramses III. It celebrates the victories of the pharaoh against foreign attackers. It refers to the Denyen, Tjekker, and Peleset and mentions the Sherden and the Weshesh as being from the sea.

—D. Bruce MacKay

Bibliography

- Dothan, T., and M. Dothan. *People of the Sea: The Search for the Philistines*. New York: Macmillan, 1992.
- Oren, Eliezer D. *The Sea Peoples and Their World: A Reassessment*. Philadelphia: University Museum, University of Pennsylvania, 2000.
- Pritchard, J. B., ed. *Ancient Near Eastern Texts relating to the Old Testament*. 3rd ed., with supplement. Princeton, NJ: Princeton University Press, 1969.
- Sandars, N. K. *The Sea Peoples: Warriors of the Ancient Mediterranean, 1250–1150 B.C.* New York: Thames and Hudson, 1985.

Causes of the Movement of Sea Peoples

There are a number of possible reasons why the Sea People groups embarked on their journeys around the eastern Mediterranean. One suggestion is that they were displaced by other groups moving southward into northern Greece, the Aegean, and Asia Minor from eastern Europe. This is an older theory that is based on the assumption that most conflict and movements of people are rooted in a natural human tendency for territorial expansion and conquest. Sites in Greece such as Mycenae and Phylakopi suffered a series of destructions at the end of the Late Bronze Age. Subsequent occupation included pottery with styles similar to that found in the Balkan regions. This implied that these sites were destroyed by northern invaders from the Baltic area

who then occupied the destroyed sites and pushed the previous occupants, the Sea Peoples, out into the eastern Mediterranean, where they eventually came into conflict with other groups in eastern Asia Minor, Cyprus, Syria-Palestine, and Egypt.

Another idea is that the Sea Peoples instigated the aggression themselves. This theory supposes that because of growth in population or lack of resources, the Sea Peoples actively sought new territories and lands for new settlements. Their expansion led to conflicts that produced the destruction layers discovered by archaeologists at many eastern Mediterranean sites at the end of the Late Bronze Age. However, there is little evidence in Greek and Aegean sites to suggest that there was population pressure or resource depletion.

A third possibility is that there was a natural catastrophe that forced the Sea Peoples out of their home territories. A potential candidate for such a natural event is the massive volcanic explosion at the Aegean island of Santorini. However, this eruption occurred centuries before the end of the Late Bronze Age (and the migration of the Sea Peoples), and although it would have caused major disturbances in the lives of people in the Aegean at the time of the event, it is highly unlikely that this was the cause of the Sea Peoples movements.

However, the movement of Sea Peoples was most likely caused by the general economic collapse and upheavals at the end of the Late Bronze Age. The Egyptian reliefs thus may depict not invaders intent on destruction and domination but rather people displaced by the collapse of the economic system upon which they depended. In this case the Sea Peoples' journeys probably followed established trade routes. They may have been seeking to settle with well-known trading partners and thus traveled to a fruitful land they already knew, such as Egypt or the coast of Syria-Palestine. As long-distance traders, they were seeking new opportunities and new places to live as they attempted to continue trading in spite of the collapse of trade and economic networks upon which they depended. If this is the case, then the peoples depicted on the Egyptian reliefs could as easily be refugees as invaders.

—D. Bruce MacKay

➤ MYCENAEAN IIIC:1B POTTERY

Mycenaean IIIC:1b is the label for pottery characterized by a distinctive ceramic decorative style that was made in the Mycenaean world of Greece and the islands of the Aegean at the end of the Late Bronze Age. Mycenaean pottery, which was first identified as a distinctive type at the Greek site of Mycenae, developed through a number of stylistic variations in the Late Bronze Age. It was a valued trade commodity, manufactured in the Aegean world and then traded throughout the eastern Mediterranean in that time period. Mycenaean IIIC:1b, also known as the Close style, falls at the end of the era. It is characterized by a light cream-colored slip that was decorated with a concentrated variety of geometric and animal designs painted in a darker brown. The decoration was applied to a number of different vessel types.

At some sites, following the end of the Late Bronze Age and in levels immediately above destructions marking the end of the era, Mycenaean IIIC:1b vessels were made locally using local clays. This indicates the cessation of long-distance trade around the eastern Mediterranean and strongly implies that potters manufacturing the vessels were very well acquainted with the style and perhaps had migrated from Aegean settlements as part of the movement of Sea Peoples.

—D. Bruce MacKay

Bibliography

- Dothan, Trude. *The Philistines and Their Material Culture*. Jerusalem: The Israel Exploration Society, 1982.
- Friedrich, Walter L., et al. "Santorini Eruption Radio-carbon Dated to 1627-1600 B.C." *Science* 312(5773) (2006): 548.
- Pritchard, J. B., ed. *Ancient Near Eastern Texts relating to the Old Testament*. 3rd ed., with supplement. Princeton, NJ: Princeton University Press, 1969.
- Sanders, N. K. *The Sea Peoples: Warriors of the Ancient Mediterranean, 1250-1150 B.C.* New York: Thames and Hudson, 1985.

Travel Routes of the Sea Peoples

Determining the routes of the Sea Peoples' movement depends in large part on where the different groups originated.

➤ CONTROVERSY—BY LAND OR BY SEA

Scholars are divided on how the Sea Peoples migrated to the Levantine coast, by land or by sea. Obviously, there had to have been some travel over sea, but there is some evidence to suggest that the Sea Peoples landed in Egypt first and may have traveled over land to the Syro-Palestinian coast. The controversy centers on evidence from Egyptian relief carvings and on interpretations of the ceramic evidence recovered at excavations along the Syro-Palestinian coast.

Dramatic images on the walls of the mortuary temple of pharaoh Ramses III (ca. 1186 BCE) at Medinet Habu depict two different battle scenes. One panel describes a furious battle between Egyptian soldiers in oared vessels and invaders traveling in unoared ships. The accompanying text celebrates Ramses's victory and explicitly mentions the invaders as making a "conspiracy in their islands." Further evidence for seaborne attacks comes from a cryptic letter recovered in excavations at the ancient city of Ugarit on the west coast of Syria that reports the sighting of enemy ships.

However, in another panel on the temple of Ramses III, Egyptian forces are depicted meeting invaders in a land battle. The attackers are foot soldiers, charioteers, and what appear to be noncombatant women and children riding in ox-drawn carts.

Excavations at many Syro-Palestinian sites have also revealed two ceramic stylistic phases following the destructions of the Late Bronze Age. Initial interpretations of this evidence were that the two ceramic styles correlated with two waves of invaders, one by sea and one by land. However, the current view is that the changes in style were more likely the result of local innovation and that there were not two waves of invasion.

—D. Bruce MacKay

In Greece and the Aegean area it is possible that some East European peoples moved southward as the Late Bronze Age ended. However, although it is clear that there were a great many similar changes in the cultures of southeastern Europe and the Aegean at the end of the Late Bronze Age, the evidence is not unequivocal that

Europeans moved southward into Greece and the Aegean as the era ended. If there was southward motion it would have progressed generally from the Danube River valley southward through the Balkans into Greece and the Aegean Islands.

Another region of interest for discussing the routes of movement of Sea Peoples groups is Asia Minor. The Hittite empire of north-central Asia Minor also collapsed at the end of the Late Bronze Age, as is evidenced by destructions at the Hittite capital city of Khattusha, the site of Boghazköy in Turkey. Texts recovered in excavations there report conflict with the Kashka, who were likely located just to the north of Khattusha along the shores of the Black Sea. Other documents describe tensions with Arzawa and Lukka, which lay to the southwest along the Aegean coast. These documents would seem to indicate that apart from general turmoil, it is possible that there were movements of people southward from northern Asia Minor and eastward from the Aegean coast. There may also have been some movement northward from the Mediterranean coast against the Hittite heartland in central Anatolia.

Movement by groups on and across the Mediterranean ocean is another issue. Cuneiform letters have been discovered at Ugarit (Ras Shamra on the Syrian coast) that indicate that ships from Cyprus were involved in conflicts both with the Hittites and with Ugarit. Also, texts of the Egyptian pharaoh Merneptah describe attacks from Lybia that his army successfully defeated. Included with the Lybians are the Meshwesh, Shardana, Lukka, Ekwesh, Teresh, and Shekelesh. These groups are thought to have been coastal peoples from a variety of locations around the eastern Mediterranean. Since they were attacking Egypt from the west along the North African coast, they almost certainly crossed the Mediterranean southward from the Aegean or Crete.

Finally, the listing of names in the texts of Ramses III suggests a general north to south order of movement by the Sea Peoples. The report from the eighth year of the pharaoh's rule reports that no nation could stand before them, including Hatti, Kode, Carchemish, Arzawa, and Alashiya. The order of the cities implies a north to south movement.

However, although there is general consensus among scholars about the location of the named peoples in the Egyptian texts that describe the Sea Peoples, there is no clear unambiguous archaeological evidence for the routes of movements of any of these groups as the Late Bronze Age came to a close.

—D. Bruce MacKay

Bibliography

- Albright, W. F. "The Sea Peoples in Palestine." In *The Cambridge Ancient History*, vol. 2, edited by I. E. S. Edwards. 1975; reprint, Cambridge: Cambridge University Press, 2000.
- Wells, Peter S. "Crisis Years? The 12th Century B.C. in Central and Southeastern Europe." In *The Crisis Years: The 12th Century B.C.: From beyond the Danube to the Tigris*, edited by William A. Ward and Martha Sharp Joukowsky. Dubuque, IA: Kendall Hunt, 1992.

Medinet Habu

The great mortuary temple of Ramses III, known today as Medinet Habu ("City of Habu"), lies in Upper Egypt, near modern Luxor, along the southern edge of the ancient Theban necropolis. The ancient name of the site was Djamet and was the supposed burial place of the primordial Ogdoad of eight deities, who preceded the creation of the world. Although the main temple was constructed in Dynasty 20, under Ramses III (ca. 1198–1166 BCE), a number of subsidiary structures from both earlier and later periods are contained within its precincts. These include the so-called small temple, begun in the Eighteenth Dynasty by Hatshepsut (ca. 1502–1482 BCE), later usurped and expanded by a number of subsequent kings, as well as the chapels of the Divine Adoratrices of Amun, built in Dynasties 25 and 26 (ca. 755–525 BCE).

► CHAOS VERSUS ORDER IN THE RELIEFS

The battle reliefs depicting the victory of Ramses III over the Sea People horde effectively illustrate a very real threat to the established Egyptian order. However, the representation of the invaders as a tangled, chaotic mass of bodies also serves to associate them iconographically with the mythical forces of chaos. The motif of Egyptian order defeating foreign chaos appears again and again throughout the temple. The enormous outer gateway, or pylon, is decorated with colossal images of the king, poised to smash the skulls of bound captives. This image not only served as a self-explanatory political statement but also functioned to magically ward against all such foreign people. This type of imagery achieves its most blatant expression in the window of appearances, wherein Ramses would stand to greet assembled crowds. Here we encounter the smiting scene on either side of the window accompanied by smaller images of the king leading bound captives. Beneath these groups is a row of prisoners' heads, carved in high relief, that supports the platform above which the king would stand. As he stepped into the window, the king's physical presence would be magnified by his own colossal images, even as his feet trod upon the



Relief of a battle between the Egyptians and the Sea Peoples inscribed on a wall at Medinet Habu. The victory of Ramses III in 1179 BCE over the Sea Peoples is one of the earliest naval battles known to history. (Pictorial Library of Bible Lands)

severed heads of his foes, frozen in stone. The clear message of the pharaoh's invincibility, magically reenforced by his literal and symbolic trampling of the forces of chaos, would have been inescapable.

—Joshua Roberson

The bulk of the main temple has been reconstructed from thousands of fallen blocks and now stands as one of the most impressive such constructions from the New Kingdom. The copious reliefs preserved on the walls of the temple provide a vital glimpse into the ideological, military, and religious concerns that gripped Egypt in the latter half of the New Kingdom. From a historical perspective, some of the most important inscriptional material concerns Ramses III's famous conflict with the Sea Peoples. Already in the Nineteenth Dynasty, Merneptah (ca. 1237–1226 BCE) had repulsed an earlier incursion by groups of these eastern Mediterranean nomads. Some 33 years later, in his eighth regnal year, Ramses III weathered a second invasion, the results of which he immortalized in text and image. On the north wall of the main temple, Ramses is shown counterattacking the Sea People forces, which poured in over land and water; his army was ultimately successful against the former, while his navy defeated the enemy ships off the Delta coast. The images in the reliefs are staggering in their depiction of the chaos of these battles, showing countless foreign corpses speared like fish and cast headlong into the turbulent sea. Through their midst sail the high-prowed Egyptian war barges as archers reign down their deadly volleys, and the triumphant infantry leads bound captives away to be dispatched according to the king's whim. The lists of conquered peoples that accompany the reliefs provide some limited insight into the invader's identities. While some of these, such as the Peleset (Philistines), represent archaeologically or textually identifiable peoples, the specific origins of others remain speculative (e.g., the Denen, whom some scholars have identified as early Greeks) and must continue to be grouped under the general heading of "people of the sea," coined by Merneptah, following their initial invasion.

—Joshua Roberson

Bibliography

- Murnane, William J. *United with Eternity: A Concise Guide to the Monuments of Medinet Habu*. Cairo: American University in Cairo Press, 1980.
- Ritner, Robert K. *The Mechanics of Ancient Egyptian Magical Practice*. Studies in Ancient Oriental Civilization, No. 54. Chicago: University of Chicago Press, 1994.

- University of Chicago Oriental Institute. Epigraphic Survey, Harold Hayden Nelson. *Medinet Habu*, 8 vols. Chicago: University of Chicago Press, 1930.
- Wilkinson, Richard H. *The Complete Temples of Ancient Egypt*. New York: Thames and Hudson, 2000.

The Philistines and Hebrews

Biblical stories, especially in the books of Judges and in 1 and 2 Samuel, describe a conflict between the Israelites and Philistines. The Hebrew people, who are described expanding their sphere of influence out of the central hill country, meet resistance from the Philistine people who lived along the coast. Discussion of the history of these two groups has considered the question of origins and how the Philistines are connected to the Sea Peoples.

Apart from the internal biblical evidence, the clearest external evidence for the Hebrews comes from the fourteenth-century BCE Amarna texts recovered at the Egyptian site of Tell el-Amarna, the former capital of Pharaoh Akhenaten. These letters give a rich description of economic, social, and political contact between Egypt and various Late Bronze Age city-states in Syria-Palestine. The Hapiru, a label used for a mobile and disruptive group of people whom the kings of a number of city-states complain about, are likely early manifestations of the Hebrews, given the linguistically strong connection between Hapiru and Hebrew.

The biblical Philistines, again because of the linguistically strong connection, are almost certainly related to the Peleset named in a number of Egyptian sources that describe Sea People groups. The Egyptian pharaoh Merneptah defended Egypt in the fifth year of his reign from an attacking coalition of forces approaching across the North African desert from Lybia. Among the Lybian allies named are the Peleset. The famous Ramses III also names the Peleset in the list of attackers the pharaoh defeated, both on his mortuary temple at Medinet Habu and in the papyrus Harris. These texts suggest very clearly that the Peleset were one of the Sea Peoples.

The Philistines were located, according to the biblical evidence, around five main cities lo-

cated in the coastal plain: Ashkelon, Ashdod, Gaza, Ekron, and Gat, the so-called Philistine Pentapolis. The Philistines figure prominently in stories dealing with the early consolidation of Israelite identity and religio-political authority. Notable stories of this time include tales about the Hebrew hero Samson and his downfall at the hands of the Philistines and the Philistine woman Delilah (Judges 16:4–31), the loss of the Ark of the Covenant to the Philistines (1 Samuel 4), and the battle between the Israelites and Philistines in the valley of Elah where the hero David defeats the Philistine Goliath (1 Samuel 17). Although there is no way to confirm the historical veracity of these tales, collectively the stories depict clear differences and tensions between the Hebraic Israelites of the hill country and the coastal Philistines.

In terms of material culture, ceramic evidence from the early Iron Age excavated at the known Philistines cities of Ashdod, Ashkelon, Gaza, and Ekron demonstrates continuities with Mycenaean ceramic traditions from the Late Bronze Age and differences with the ceramic repertoire of hill country sites at this time. Fol-

lowing the Late Bronze Age destructions at these Philistine sites, locally made Mycenaean IIC:1b indicates continuity with Aegean ceramic traditions. The material culture thus adds additional weight to the argument that the Philistines were related to the Peleset of the Sea Peoples. Later ceramic traditions are characterized by a distinctive black and red, or bichrome, decoration, which has been called Philistine. The concentration of vessels of these types in coastal sites and their relative paucity in hill country sites overlaps with the biblical and extrabiblical evidence to suggest that the Sea People Peleset who settled along the coast were the Philistine rivals of the hill country Hebrews.

—D. Bruce MacKay

Bibliography

- Cohen, R., and R. Westbrook. *Amarna Diplomacy: The Beginnings of International Relations*. Baltimore: Johns Hopkins University Press, 2000.
- Finkelstein, Israel, and Neil Asher Silberman. *David and Solomon*. New York: Free Press, 2006.
- Golden, Jonathan M. *Ancient Canaan and Israel*. Santa Barbara, CA: ABC-CLIO, 2004.

■ Introduction: The Exodus

Let my people go so that they may become my servants.” These words from the biblical book of Exodus have echoed throughout the ages, telling the story of the redemptive history of the ancient Israelites and their beginning in the land of Canaan. Exodus, an ancient Greek word meaning “going out,” is used as the title of the second book of the Bible and the second book of the Pentateuch. The story of the book narrates the story of how the ancient Israelites were released from the bondage of the ancient Egyptians into the hands of the Israelite national deity, Yahweh. Arguably the most important book for Jews and Christians alike, it is the story of the exodus that narrates the forging of a nation through the telling of a charter epic. The epic functions as the foundation story of the birth of a nation and the beginning of a narrative

theology of redemption and sanctification, two prominent themes in Judaism and Christianity alike. The events of this story resonate across time and space, so much so that the message and language of the biblical exodus have framed the origins of many modern-day liberation movements, from the civil rights movement of the 1960s to Zionist and liberation theologies of the twenty-first century. The story is of course retold yearly in the Passover Haggadah, and rabbis historically have reflected and interpreted these miraculous events of the crossing of the sea in both Midrash and Talmudic literature. Even Enlightenment discourse is preoccupied with this story, though in that time the emphasis shifted from God to Moses, emphasizing the memory of Moses in the book of the Acts of the Apostles: “And Moses was learned in all the wisdom of

the Egyptians and mighty in words and deeds” (Acts 7:22).

These retellings of the story remind us that the book of Exodus is a story of triumph against all odds. As a whole, the book of Exodus unites the rest of the message of the Bible, highlighting roughly five timeless themes: the sovereignty of God over nature, history as theological meaning, God as Creator-Redeemer, the institution and importance of religious rituals and practices for ancient Israel, and full release and liberation from slavery as a motive for social reform and covenant law.

There is little positive evidence for an actual historical event as described in the biblical account. Given anachronistic details in the Old Testament (such as references to camels before they were used in Egypt) and a lack of corroborative external evidence, most mainstream historians believe that the exodus account is a story of a later time period with minimal basis in historical events. Despite this, the story of the exodus is a profoundly important story for people throughout the world. The following entries examine the biblical story itself, some of the theories about routes of the exodus that can be reconstructed from the narrative, and other evidence that helps us understand this important tradition.

—Kevin M. McGeough

The Biblical Account of the Exodus

According to the biblical book of Exodus, the sons of Joseph, the Semitic official of the land of Egypt narrated in Genesis 41–47, grew in great number and settled in the region of Goshen of the Nile Delta after Joseph died. Joseph, the beloved son of Jacob, who was thrown into a well and sold into slavery by his brothers, had providentially risen through the ranks of administration throughout Egypt. But eventually his good fortune waned with the appointment of a new pharaoh to the throne, one who “did not know Joseph” (Exod. 1:8). By that time the Israelites had increased in number, so much so that their prosperity was considered to be a threat to the Egyptian way of life. Population control methods were introduced to limit the number of Israelites and minimize the risk of an Israelite revolt.

Egyptian taskmasters were set over the Israelites as they were enslaved in forced labor, building the supply cities of Pithom and Ramses. In an effort to rid Egypt of the next generation of Israelites, the pharaoh ordained a decree that all male Hebrew babies were to be exterminated. But the more the Israelites were oppressed, the more they increased and spread out throughout the delta, and the Egyptians hated them (Exod. 1:12). In resistance to a decree that would exterminate a new generation of Hebrews, a mother from the tribe of Levi placed her three-month-old baby boy, Moses, into a basket lined with tar and pitch along the Nile reeds. Moses, meaning “to be born” in ancient Egypt and a name also derived from the Hebrew root “to draw out,” was discovered by the daughter of Pharaoh and taken into the palace to be adopted into the royal nursery, to be trained in all of the wisdom of the ancient Egyptian court.

Unfortunately, the biblical account is silent and does not provide a historical biography of young Moses living in Egypt. It does, however, record a few defining moments in his life: Moses killed an Egyptian whom he witnessed beating a Hebrew slave, fled Egypt and found refuge in the land of Midian, and married a woman of Midian and was employed as a shepherd by her father, Jethro, a priest of a tribe in Midian. It was during his time of grazing sheep that Moses witnessed the most wonderful yet terrifying site of the theophany of God. God, in the form of a bush aflame yet unconsumed (Exod. 3:1–22), appeared before Moses, addressing him by name. Moses, who stood face-to-face before the God of his forefathers, Abraham, Isaac, and Jacob, heard directly from the God of Creation, whose special name was YHWH. It was this important event that inaugurated a dramatic turn of events in the life of Moses, as he then returned to his people, the Hebrews, and stood as the leader of the ancient Israelite ordained by Yahweh.

Upon returning to Egypt, Moses witnessed even harsher measures of enslavement on his people. Because of a strong disability with his mouth, he was accompanied by the Levite Aaron, who was appointed by God to serve as the mouthpiece of Moses, to stand before Pharaoh. Moses requested that the king of Egypt release the Hebrew slaves so that they could worship this

deity Yahweh in the wilderness for a few days, but Pharaoh refused to grant a holiday for a cultic festival. Consequently, Pharaoh received a visitation of ten plagues sent by Yahweh himself through the very hands of Moses, who now served as the prophet of his God and the prophet par excellence of all of Israel. Pharaoh eventually relented upon the receipt of the last plague over Egypt, the death of the firstborn in all of Egypt sent by the destroyer; however, the Hebrews who sacrificed the blood of a lamb and brushed it around their doorposts were saved, and the Israelites began their departure out of Egypt and away from Ramses. Pharaoh's heart was hardened by God, and he quickly engaged his chariots and horses to destroy the Israelites. The Israelites marched to Succoth and beyond and found themselves flanked by the Red Sea on the one side and the Egyptian army on the other side. In a miraculous movement authored by God, the Israelites were instructed to advance into the sea. The waters parted, the Israelites crossed over on dry ground to the other side of the shore, and the Egyptian forces who followed were destroyed halfway as the waters returned to the sea. There, Moses and Israel, free at last, sang a Song of the Sea in praise of God, and Miriam led the women in a dance (Exod. 15:1–21). These events were recorded and memorialized in the second book of the Bible.

Whereas the first part of the book focuses on the redemption of the people, the remainder of the book of Exodus narrates the sanctification of the Israelites through the giving of the law on Mount Sinai, the regulations of the institutions of royal cult and worship liturgy, the difficulty of their wanderings in the desert, the giving of divine provisions of food and water, and the building of a tabernacle to house God temporarily during their journey. Toward the end of the book, the composition of the Book of the Covenant (Exod. 20:22–23:33) forms a very prominent section of the book of Exodus. The context of the covenant as a metaphor between God as sovereign king and Israel as a loyal vassalage, modeled after Near Eastern vassal treaties, is set during these formative and struggling years in the wilderness. The Mosaic covenant between God and Israel forms the basis for the rest of the Bible including the historical, wisdom, and pro-

➤ THE SONG OF SEA

One of the earliest writings of ancient Hebrew poetry, Exodus 15:1b–18, or what is known as the Song of the Sea, declares the victory of Yahweh over the mighty ancient Egyptians. Biblical scholars date the poem to the early thirteenth century BCE based on its archaic verbal forms and its structural similarities with poems from the Canaanite tablets of the Late Bronze Age city-state of Ugarit. The poem is preceded by a later narrative version of the account in Exodus 14.

In the Song of the Sea, like other older poems of the Bible such as Judges 5 and Habbakuk 3, Yahweh is depicted as a storm god who wields the forces of the nature with his mighty right hand to win the battle for the Israelites. In this case, the battle is recorded as Yahweh's battle over the forces of chaos embodied by the sea, similar to other ancient Near Eastern accounts of gods defeating the sea (see Marduk versus Tiamat in the Mesopotamian *Enuma Elish* and Baal versus Yam in the Ugaritic *Baal Cycles*), and he is given the ultimate victory, praise, and admiration for the Israelite defeat of Pharaoh's famed charioteers.

"I will sing to Yahweh, for he has triumphed
gloriously;
Horse and rider he has thrown into the sea (v. 1)
Yahweh is a warrior
Yahweh is his name (v. 3)
Your right hand, O Yahweh, glorious in power—
Your right hand, O Yahweh, shattered the enemy.
(v. 6)
At the blast of your nostrils the waters piled up,
The floods stood up in a heap. (v. 8)
You blew with your wind, (sea) covered them
(v. 10)."

—William Zimmerle

phetic literature, which all organically recall the covenant stipulations and the redemptive story.

—William Zimmerle

Bibliography

- Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Hoffmeier, James. *Ancient Israel in Sinai: The Evidence for the Authenticity of the Wilderness*

Tradition. Oxford and New York: Oxford University Press, 2005.

Hoffmeier, James. *Israel in Egypt: The Evidence for the Authenticity of the Exodus Tradition*. New York: Oxford University Press, 1997.

Meyers, Carol. "Israel in Egypt." In *The Oxford History of the Biblical World*, edited by M. D. Coogan. New York: Oxford University Press, 1998.

Sarna, Nahum. *Exploring Exodus: The Heritage of Biblical Israel*. New York: Schocken Books, 1986.

Archaeological Evidence for the Exodus

The dating of the exodus is a contentious matter, but tradition places the event in the reign of Ramses II (ca. 1290 BCE), though the name of the pharaoh in the book of Exodus is omitted. This is one reason why archaeologists and biblical scholars alike have also expressed difficulty fitting the exodus narrative, especially the first 15 chapters, into ancient Near Eastern history. Although it is true that the biblical writers were

concerned with writing a theological history and not with an objective record of scientific facts in our modern sense, there is still little direct evidence in the archaeological record to date that supports the biblical account; nevertheless, the absence of evidence is not always the evidence of absence. What is the evidence, then, that provides a historical background for the plausibility of such an account? There is little direct archaeological evidence. Asiatic slaves with Semitic names serving in Egypt are mentioned in papyri, therefore attesting to slavery in the delta. Furthermore, excavations in the Sinai have confirmed an Egyptian presence through an extensive network of forts throughout the Sinai peninsula that correspond to the historical geography of Canaan listed in Exodus. However, given the paucity of the evidence, it cannot be stated that there is positive archaeological evidence to support a historical exodus.

—William Zimmerle

➤ MERNEPTAH STELE

The first nonbiblical attestation of Israel in the archaeological record is the Merneptah stele. Dated to circa 1207 BCE, the stele recounts the campaign of the Egyptian king Merneptah in Canaan against the enemies of Egypt, which in this case are the cities of Syria-Palestine: Ashkelon, Gezer, and Yanoam as well as the lands of Hatti, Canaan, and Hurri and the people of Israel. Here Israel is listed among other important entities, so it must have had considerable influence by this point to be on par with major city-states of the day, such as Ashkelon and Hurri.

Ancient Egyptian hieroglyphs are frequently written with determinatives that describe the category of words. In the Merneptah stele, the word "Israel" is listed with the hieroglyphic determinative of a people and not a city-state. Scholars believe that the attestation reflects Israel as a masculine collective with a patriarchal ancestry, a tribe and not yet a state. The Merneptah stele historically anchors the Israelites as a significant powerful patriarchal people by circa 1207 BCE on their way into the Promised Land.

—William Zimmerle

Bibliography

Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.

Hoffmeier, James. *Ancient Israel in Sinai: The Evidence for the Authenticity of the Wilderness Tradition*. Oxford and New York: Oxford University Press, 2005.

Hoffmeier, James. *Israel in Egypt: The Evidence for the Authenticity of the Exodus Tradition*. New York: Oxford University Press, 1997.

Meyers, Carol. "Israel in Egypt." In *The Oxford History of the Biblical World*, edited by M. D. Coogan. New York: Oxford University Press, 1998.

Sarna, Nahum. *Exploring Exodus: The Heritage of Biblical Israel*. New York: Schocken Books, 1986.

The Route of the Exodus

The geography of the exodus is listed in the book of Exodus as a series of itineraries (see Num. 33:1–49, Num. 21:10–20, Deut. 10:6–7). The toponyms, or site names, point out where the Israelites stopped in the journey. Approximately three dozen locations are named, although none of the places listed can be found with certainty. Today, the city of Ramses, the starting point of the journey, is usually identified with Per-Ramses,

the delta capital of Egypt. Based on comparative linguistic evidence, Succoth is probably the Egyptian Tjeku. Kadesh-Barnea is probably Ain el-Qudeirat, a fertile oasis in the northern Sinai situated at the crossroads between two routes in the Arabian peninsula.

The mountain of God, known interchangeably by two appellations, Horeb or Sinai, has not been found. Traditionally, of course, the site is located where St. Catherine's monastery resides in the southern Sinai peninsula, but there is no concrete evidence to suggest that this is the same site besides the circumstantial evidence that the mountain is the tallest peak in the southern desert. The site was designated as the mountain of God in the Byzantine period.

Controversy still remains over the miraculous travails through the Red Sea. First, the Greek version of the Bible, the Septuagint, translates *yam suf* as Red Sea, while the Hebrew Masoretic renders it Reed Sea. Strong arguments support both renderings, but then a problem remains in the archaeological reconstruction of the event itself. Did the crossing occur at the shallow reed beds located in the northeastern Nile Delta or at the Red Sea? Did it happen at the thin strip of land near the Mediterranean coast at Sabkhat el-Bardawil (Lake Sirbonis)? No consensus exists among contemporary scholars, and the reconstructions are basically conjecture.

Generally, archaeologists reconstruct two geographical routes for the exodus, including the southern route through the Sinai and a northern one along the Mediterranean. Although the northern route would have been the shortest distance between the two points—Egypt and Canaan—it was avoided, as suggested by the anachronistic insertion into the narrative ("the way of the land of the Philistines" was not taken, Exod. 13:17–18).

Although the geography of the exodus itinerary is difficult to reconstruct, recent archaeological work in the Sinai has suggested two alternative routes, tracing four major east-west ancient routes running through the Sinai. Whereas the northern route runs along the Mediterranean coast, the other three routes run along the desert wadis, where water and trade routes were found. Most of the ancient settlements in this region were found in the south-central Sinai.

Despite the evidence offered above, direct historical-literary witnesses from the ancient Near East to these events are lacking in the archaeological record. But extensive excavations in the Sinai are limited due to environmental conditions. Nevertheless, archaeological surveys and small-scale excavations, such as the recent excavation of the site of Tel el-Borg, have revealed a systematic layout of fortified New Kingdom military checkpoints throughout the Sinai along the route known as the Way of Horus. In addition to more recent evidence, older data from excavations at Serabit el-Khadim in the early twentieth century revealed an Egyptian temple to Hathor and turquoise mining activities throughout the New Kingdom. The most striking evidence found there was the discovery of an early Semitic alphabet, adapted from Egyptian hieratic script and dating to circa 1500 BCE. More recently, rock inscriptions from the western desert of Egypt, a site in the Wadi el-Hol, have revealed even older evidence of an early Semitic alphabet dating to circa 1900–1800 BCE. Both of these finds attest to Semites living and working in Egypt and the Sinai Peninsula.

While concrete evidence does not currently exist for an exodus, historical analogs from the ancient Near East do supply us with knowledge of the migration patterns of Asiatics, or Semites, from Canaan into the Delta. Artistic reliefs of the Aamw, the Egyptian term for Asiatics, in the second millennium were found in the nineteenth-century BCE tomb paintings of Asiatics traveling into Egypt from Canaan in the tomb of Beni Hassan in Middle Egypt. Easily recognizable by their clothing and beards, the Asiatics in the Beni Hassan reliefs are nomads traveling from Canaan as part of the caravan trade into Egypt. This evidence attests to the migration patterns of the patriarchs from Canaan to Egypt during the Bronze Age and concurs with the literary picture of the patriarchs in the book of Genesis providing plausibility to a biblical account of an Israelite exodus out of Egypt.

—William Zimmerle

Bibliography

Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.

Hoffmeier, James. *Ancient Israel in Sinai: The Evidence for the Authenticity of the Wilderness Tradition*. Oxford and New York: Oxford University Press, 2005.

Hoffmeier, James. *Israel in Egypt: The Evidence for the Authenticity of the Exodus Tradition*. New York: Oxford University Press, 1997.

Meyers, Carol. "Israel in Egypt," In *The Oxford History of the Biblical World*, edited M. D. Coogan. New York: Oxford University Press, 1998.

Sarna, Nahum. *Exploring Exodus: The Heritage of Biblical Israel*. New York: Schocken Books, 1986.

■ Introduction: The Issue of the Conquest and Settlement of Canaan

The conquest of Canaan is a term used to describe the biblical narrative of the forceful occupation of southern and central Palestine by the ancient Hebrews. According to the biblical story, after the ancient Israelites escaped from Egypt and wandered for 40 years in the wilderness of the Sinai, Moses stood upon the mountain of Nebo in Transjordan overlooking the entire land that was promised to his forefather, Abraham, and died. Moses, forbidden by God to enter this new land (Deut. 32:48–52), was succeeded by Joshua (son of Nun), who led the Israelites across the Jordan River in divine campaigns against the powerful city-states of Canaan to fulfill their national destiny. Largely successful in warfare because of their obedience to God, the Israelites marched from one victory to another, commanded to seize and settle down to build their homes in the Promised Land of their forefathers, a land that is described in the Bible as a "good and spacious land, a land flowing with milk and honey." Biblical scholars and Near Eastern archaeologists debate the nature and date of the occupation of this land and the historicity of the biblical tradition. The following entries compare the biblical and archaeological evidences for the emergence of Israelite settlements in Canaan and pay particular attention to the problems of history, geography, social lifestyle, and communal structures of ancient Israel in the Iron I period (1200–1000 BCE).

—William Zimmerle

Bibliography

Dever, William G. *Recent Archaeological Discoveries and Biblical Research*. Seattle and London: University of Washington Press, 1990.

Dever, William G. *Who Were the Early Israelites and Where Did They Come From?* Grand Rapids, MI: Eerdmans, 2003.

Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed; Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.

Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* New York: Doubleday, 1990.

Stager, Lawrence E. "Forging an Identity." In *The Oxford History of the Biblical World*, edited by Michael D. Coogan. Oxford and New York: Oxford University Press, 1998.

Biblical Evidence—The Conquest Narratives (Joshua and Judges), 600 BCE

The biblical books of Joshua and Judges provide the historical accounts for the conquest and settlement of Israel in the highlands of Canaan during the twelfth and eleventh centuries prior to the United Monarchy. Although the books were probably written by one historian, the books differ in their treatment of the period, in large part because of the sources that were available to historians, including oral traditions and written documents, and the unique theological message that each book carries. The first of these books, the book of Joshua, is the sixth book of the Old Testament and the first of the historical books. Written by the Deuteronomistic Historian (DH), it was composed of 24 chapters, divisible along four thematic lines: the introduction of Joshua, son of Nun, as the new leader of the tribes (chapter 1); the conquest of the cities of Canaan (chapters

2-12); the distribution of the land among the tribes (chapters 12-22); and the concluding words of Joshua upon his death (chapters 23-24). The latter book mentioned, the book of Judges, immediately follows the book of Joshua in the order of the biblical canon. It is divisible along three thematic lines: the introduction of the period of the Judges in Israelite history (chapters 1-3), the summary of events under the five great judges as well as a few minor ones (chapters 3-16), and the appendices, a few stories that describe the historical period at the start of the book of Judges in chapter 1.

The core of the book of Joshua is the theological motif of divine warfare. Joshua 10:24 declares the message perspicuously as a statement that serves as a reminder of the reason for this national epic of a miraculous conquest under one leader: "The Lord fought for Israel." Beginning with the transfer of leadership from Moses to Joshua in chapter 1 (verses 1-18), the first two chapters of the book of Joshua focus on the divine commandments and promises, (1:1-9), principles for successful campaigning when in the Promised Land. The literary design of the depiction of the battles themselves are presented with an economy of words, emphasizing the swiftness of the victories as it describes the Israelites crossing the Jordan River (2:1-9:27), attacking central Palestine, sweeping through the southern cities of Palestine (10:1-43), and finally defeating the northern cities of Galilee (11:1-23). Jericho is recorded as an unconventional and mighty victory (5-6) with parades and trumpets, followed by the city Ai, but only after Achan is punished for violating the covenantal principles and seizing booty that belongs to God (7:1-8:29). Chapters 3-5 narrate in detail the unification of the Israelite tribal confederacy with the renewal ceremonies at the sites of Gilgal and Shechem. Chapters 6-12 list the conquest of the Canaanite city-states, in particular Jericho (12:9), Ai (12:9), Jerusalem (12:10), Hebron (12:10), Jarmuth (12:11), Lachish (12:11), Eglon (12:12), Gezer (12:10), Debir (12:13), Geder (12:13), Hormah (12:14), Arad (12:14), Libnah (12:15), Adullam (12:15), Makkedah (12:16), Bethel (12:16), Tappuah (12:17), Hepher (12:17), Aphek (12:18), Lasharon (12:18), Madon (12:19), Hazor (12:19), Shimron (12:20), Achsaph (12:20), Taanach

(12:21), Megiddo (12:21), Kedesh (12:22), Jokneam (12:22) Dor (12:23), Goiim (12:23), and finally Tirzah (12:24). The final chapter of the book of Joshua recounts Joshua's last address to the Israelites as he further unites the tribes in their loyalty to Yahweh alone. Not all of Canaan was conquered in this major offensive, but Israel obtained a good foothold in the land and ultimately was fashioned and formed in preparation for its transformation from a tribal polity to a nation under King David in circa 1000 BCE.

Whereas the DH in the book of Joshua narrates the events as a blitzkrieg—or a lightning-speed victory from the east to the west, from Ammon to the hill country of central Canaan and the north to Galilee—the DH in the biblical book of Judges weaves together multiple accounts and offers a slightly alternative tradition of settlement that reflects a slower and more gradual infiltration of the Israelites into the Promised Land. In the latter book, the DH narrates the literary and theological themes of covenant and community through the social and religious struggles of idolatry, divine punishment, and divine aid. The book of Judges narrates the emergence of a new office for the Israelite community, the *shopbet*, a Hebrew term that denotes charismatic rulership and means "judge," or one who takes a particular centralized rule in the military and administrative-legal functions of the community. Judges, in ancient Israel, had the unique ability to discern the times, and they offered their voices to reinforce the old covenantal ideals of Sinai, ideals essential to the tribe's communal cohesiveness in times of crisis.

Although both books of the Bible, Joshua and Judges, record at times the common identity of the Israelite tribes, the book of Judges, however, largely offers a more nuanced narration into the various conflicts of the tribes and the social crises of the day. According to Judges 21:25, "In those days, there was no king in Israel; all the people did what was right in their own eyes." The task of making right in the land was set to judges who are named, and their actions are reviewed in the book, beginning with Othniel, Ehud, and Shamgar (chapter 3); Deborah and Barak (chapters 4-5); Gideon (chapters 6-8); Abimelech (chapter 9); Jephthah and minor judges (chapters 10-12); and the great judge Samson

(chapters 13–16). In these chapters, the book often juxtaposes themes of strong versus weak judges in its structural organization. But redemption was possible even for the weak judge, and although Samson is often interpreted as a tragic hero, a strongman who falls prey to his own weaknesses, he indeed renewed his vow to God, overcame his tragedy in the end, and recovered his virtue in one last feat of strength against the Philistines.

In Judges chapter 5, the hallmark of the biblical book of Judges, there is an ancient Hebraic poem that has its roots in oral verse. This ancient poem, called the “Song of Deborah,” serves as an eyewitness account of God’s victory in battle and follows the narrative counterpart in Judges chapter 4, which sets up in detail the Israelite campaign against the kings of Canaan under the leadership of the judge Deborah and the commander Barak. In the victory ode of Judges chapter 5, the tribes of Ephraim, Asher, Zebulun, and Issachar answer the call to battle the Canaanite king Jabin, while Reuben, Dan, Asher, Zebulun, and Naphtali refuse to follow and face rejection and ridicule. Judges chapter 5, then, provides the biblical interpreter with unique insight into the theopolity of tribes, who did not always operate in accord, offering a more complex picture than the book of Joshua on the nature of the individual identity of the collective tribes and the role of the judge as military leader of the community.

—William Zimmerle

Bibliography

- Dever, William G. *Recent Archaeological Discoveries and Biblical Research*. Seattle and London: University of Washington Press, 1990.
- Dever, William G. *Who Were the Early Israelites and Where Did They Come from?* Grand Rapids, MI: Eerdmann, 2003.
- Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology’s New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Stager, Lawrence E. “Forging an Identity.” In *The Oxford History of the Biblical World*, edited by Michael D. Coogan. New York: Oxford University Press, 1998.

The Archaeological Evidence for the Settlement of Canaan

The archaeological problem of the conquest and settlement of the ancient Israelites rests in part on the dating of the events themselves. Some contemporary archaeologists have followed the interpretations of the ancient Jewish historian Flavius Josephus and have placed the departure of the ancient Israelites from Egypt in the time of the Egyptian purge of the mighty Hyksos from their capital at Avaris in the Egyptian Delta region. According to a literal reading of the biblical account, specifically 1 Kings 6:1 (“And it came to pass in the four hundred and eightieth year after the children of Israel had come out of the land of Egypt, in the fourth year of Solomon’s reign over Israel”), Israel would have left the land of Egypt around 1446 BCE and entered Canaan 40 years later. The conquest then would have taken place in the 15th century between around 1406 and 1400 BCE. Given the close proximity of circa 1446 BCE to the date of the Egyptian pharaoh Ahmoses and his purge of the Hyksos from Egypt to Sharuhén in circa 1550 BCE, an Israelite connection with the Hyksos is plausible, although these foreign rulers of the Delta were never described or depicted as slaves, as indeed the Israelites were. More problematic, however, is the fact that if this chronology is accepted, the period of conquest and settlement is much longer than the current archaeological record for occupation of the various Canaanite cities supports. Additionally, the only extrabiblical evidence for Israel as a tribal people exists on the Merneptah stele inscription that dates to circa 1207 BCE. Thus, contemporary scholarship emends the date of the conquest roughly to the thirteenth century BCE, an emendation dating from the days of William Foxwell Albright, the father of biblical archaeology, who based his date on the excavations of four important archaeological sites: Tell Beit Mirsim (which he thought was biblical Debir), Beitin (possibly biblical Bethel), Lachish, and Hazor.

The thirteenth and twelfth centuries in Canaan were a cosmopolitan period of a mix of ethnicities swarming throughout the land, many of whom the ancient Israelites would engage with militarily. Influxes of Sea Peoples arrived



Pillars partially unearthed at the archaeological site of Hazor. (Library of Congress)

from the Aegean by land and by sea, and they were depicted as new arrivals with their families on the temple walls of Medinet Habu in Egypt. Eventually defeated by the Egyptians, the Sea Peoples were relocated to Palestine, and the ancient Peleshets, or Philistines, settled in lower Palestine. The Peleshets would eventually build the cities of the Philistine Pentapolis in southern Canaan, cities that were renowned throughout the biblical world: Gath or Safi, Ashkelon, Ashdod, Ekron, and Gaza. The Philistines would bring Aegean cultural traditions to Canaan that would include the consumption of pork and wine and the cult worship of the Aegean mother goddess. Upon the disintegration of the Egyptian empire after 1153 BCE, the Philistines would spread out in all directions and threaten the Israelite settlements, a historical fact that is attested in the historiography of the book of Judges and throughout the book of 1 Samuel. The Philistines were a formidable foe, and their threatening presence convinced the Israelites to demand from God an earthly king to protect and rule over them (1 Sam. 8:5).

Although successful reconstructions of the Philistine occupation in Palestine are possible because of extensive excavations at the sites of the Pentapolis and clear ethnic markers such

as the great presence of pig bones in their archaeological record, reconstructions of Israel's emergence in the highlands are more difficult to support. According to Harvard archaeologist Lawrence Stager, in order to persuasively present a case for the mass migration of people from one homeland to another or to substantiate this unified conquest theory found in the book of Joshua, an archaeologist must be able to (1) trace the newly supplanted culture from its homeland or origin; (2) find the homeland of the migrating or invading group; (3) find discontinuities in the archaeological levels, such a massive destruction layers, if there was an invasion; (4) and trace the route of migration or invasion.

To date, there is inadequate archaeological evidence available for a unified conquest of Canaan that fits the criteria established above. According to the itinerary of the biblical conquest narrative in Deuteronomy and Joshua, the Israelites waged campaigns in Transjordan, seizing Heshbon, Sihon, Medeba in Ammon, and Dibon in Moab, taking the cities of Jericho, Ai, Gibeon, Lachish, Hazor, and Bethel by force as well as an itinerary of other less well-known sites. Archaeological excavations from these sites have yielded mostly weak data. From the biblical site of Jericho, for example, first excavated by the English archaeologist Katherine Kenyon, who was renowned for her stratigraphic methods, neither a large walled settlement nor destruction layers were found in the thirteenth century. One reason may have been the excessive erosion that the site has endured throughout the ages. Excavations at et-Tell, or biblical Ai, which means "ruin," revealed a large settlement, which was abandoned in the second millennium between circa 2250 and 1200 BCE. It resurfaced in the twelfth century with a new village planted there. Bethel, on the other hand, revealed a destruction level in the thirteenth century. And finally, ongoing excavations at Hazor, the head of all the cities listed in Joshua, have revealed strong evidence of a destruction level in the thirteenth century.

In summary, the problem lies in the fact that of about the 30 cities mentioned in the biblical itineraries of war, only 20 of the archaeological sites can be located to date. Of the 16 cities destroyed in Joshua, only 2—Hazor and Bethel—

yield layers of destruction in the archaeological record for the thirteenth century and support the first criteria listed above. (A third city is possible, but the verdict is still out on Lachish.) So, the archaeological evidence leaves scholars with many discrepancies and problems, and to date no current explanation reconciles all the loose data. Some attempts have been made to push the dating of the conquest even earlier than the thirteenth century to correlate with the biblical attestations of 1 Kings 6:1 or to relocate biblical sites such as Ai, but once again the archaeological issues are unresolved, and the verdict awaits further excavations and more thorough surveys in Israel.

—William Zimmerle

Bibliography

- Dever, William G. *Recent Archaeological Discoveries and Biblical Research*. Seattle and London: University of Washington Press, 1990.
- Dever, William G. *Who Were the Early Israelites and Where Did They Come from?* Grand Rapids, MI: Eerdmans, 2003.
- Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Stager, Lawrence E. "Forging an Identity." In *The Oxford History of the Biblical World*, edited by Michael D. Coogan. New York: Oxford University Press, 1998.

Current Theories on the Conquest of Canaan

Biblical interpretation, particularly from the post-Enlightenment onward, has often emphasized contradictions in the biblical historical books and has subsequently tried to solve these discrepancies through the application of more empirically based historical and literary methodologies. In the German theological circles of the nineteenth and twentieth centuries, for example, emphasis was often placed on rereading the historical texts of the Bible less literally and more as etiologies, or causal narratives, oral stories circulating around the community that served the purpose of explaining local customs,

concepts, rituals, and important sacred places for reasons of tribal affiliation and communal identity. Given the rise of archaeology as a social science in the twentieth century, biblical scholars and Near Eastern archaeologists alike have more or less attempted to reconcile the textual data with whatever available archaeological data in three major ways. The first method was to read the text more literally, accepting the narration of the biblical text. The American scholar William Foxwell Albright and his student G. Ernest Wright supported this view, but they often overstated what the biblical text really said. The Albright-Wright synthesis, as it was called, also known as the conquest or military model, stressed the conquest narratives in Joshua and Judges as straightforward and reliable sources of historiography, detailing an accurate portrayal of the Israelite destruction of the Canaanite city-states. Albright, Wright, and the Israeli archaeologist Yigael Yadin were confident that the Deuteronomistic Historian's account was verifiable through the archaeological record. Yadin's excavations at Hazor and Tell Beit Mirsim, for example, also offered further evidence to support this hypothesis in its earliest stages.

Along with the first hypothesis mentioned above, a second hypothesis emerged out of the German form-critical school that is known as the peaceful-infiltration hypothesis. First formulated by Albrecht Alt, this second hypothesis rejected the notion of the Israelites as a wandering band of refugees from Egypt and used subsistence models, emphasizing their pastoral nomadic lifestyle in the central highlands. In a sense, Alt placed the narration of the book of Joshua after the book of Judges, stressing the notion of Israelite conquerors only later in their evolution as they began to settle and expand in number, forced then to defend their territory. For Alt, the Israelites were not outside invaders but instead were peaceful insiders who formed strong communities as a means of survival in the central highlands.

The final hypothesis purported to describe the theory of how the Israelites seized ancient Canaan was the peasant-revolt theory designed and defended by biblical scholar George Mendenhall. Mendenhall, later joined by Norman Gottwald, broke away from Albright's conquest

model and Alt's subsistence paradigm to suggest that the conquest was really an evolutionary revolt of indigenous peasant Canaanites fleeing toward more marginalized areas. In this sense, the Israelites were not a unique ethnic group but rather merely a subgroup of Canaanites, devoted to Yahweh, and broke away from their Canaanite overlords to establish communities in the central highlands.

These three classic arguments for the historicity of the settlement of Israelites in the central highlands have given way to more critical readings of the archaeological evidences that even stress less the unique phenomenon of how the early Israelites settled in Canaan. The last two decades of excavation work and surface surveys in the central highlands of Israel have revealed evidence that shows a dramatic increase in small farms and villages in the Iron I period. The Iron I settlements demonstrate a remarkably similar pattern of material culture that is evident of a mixed economy of sheep and goat herding and agriculture. Although many of these sites may point to Israelite settlements, they also may point to settlements of other Canaanite subgroups. The type of material culture found at these sites includes collared-rim storage jars; pillared houses; storage pits; faunal assemblages of sheep, goat, and cattle; and little or no pig bones. Such current data suggests, then, that ethnicity is difficult to detect in the archaeological record, and the Israelites were largely indistinguishable from the other communities of Canaan and the Transjordan.

The evidence for an explosion of population and settlement sites in the Iron I period has led contemporary archaeologists and biblical scholars to propose newer solutions to the conquest and settlement problems. For example, Israel Finkelstein and Neil Asher Silberman, who maintain in their recent and controversial book that there is no evidence for a violent invasion of in-

filtration or a migrating Israelite group, push a theory of settlement that emphasizes a revolution in seminomadic lifestyle as the explanation for how 250 hilltop Israelite settlements emerged in the highlands during the thirteenth century. Harvard archaeologist Lawrence Stager, on the other hand, offers a hypothesis based on ruralization instead of revolution as the means of explaining the deep structural changes of the settlement patterns at the end of the Late Bronze Age, when early Israelites who were becoming agriculturalists moved toward settling down beyond state control in the highlands and developed ways to terrace the land, store grain, and build cisterns and houses. The debates over the issue of how Israel settled in the Promised Land continue, and although it is difficult to locate a unique Israelite ethnicity in the archaeological record today, most if not all contemporary archaeologists and biblical scholars alike agree that Israel's ethnic identity is no doubt found in its uniquely religious phenomenon attested by their worship of and covenant with a very unique deity named Yahweh.

—William Zimmerle

Bibliography

- Dever, William G. *Recent Archaeological Discoveries and Biblical Research*. Seattle: University of Washington Press, 1990.
- Dever, William G. *Who Were the Early Israelites and Where Did They Come from?* Grand Rapids, MI: Eerdmans, 2003.
- Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Stager, Lawrence E. "Forging an Identity." In *The Oxford History of the Biblical World*, edited by Michael D. Coogan. Oxford: Oxford University Press, 1998.

■ Introduction: Kassites

For over four hundred years, from around 1600–1155 BCE, Babylonia (in southern Mesopotamia) was ruled by a dynasty called the Kassites, a tribal people that most scholars presume came originally from the Zagros Mountain region. Under Kassite rule, Babylonia was both economically prosperous and politically stable. The rise and fall of this dynasty is obscure; historical records are somewhat lacking at both the start and the end of the Kassite reign. Despite the so called Dark Ages that bracket the Kassite period, much Babylonian literature survives from this period, in part because the Kassite kings sponsored Babylonian literature as a means of justifying their own rule. Not Babylonian themselves, the Kassites promoted Babylonian culture throughout the Near East and at this time the Akkadian language used in Mesopotamia became the language of correspondence between polities throughout western Asia, Egypt, and Cyprus. Thus, the Kassite period in Mesopotamia is of particular interest to world historians as this is a period when a foreign group gained control of southern Mesopotamia and promoted the spread of that culture throughout the Near East.

—Kevin M. McGeough

Kassite Babylonia

The Kassite dynasty of southern Mesopotamia ruled for about 400 years (1475–1155 BCE). This was not a period of complete calm, but both contemporary records and later tradition credit the Kassite kings with an unusually stable period of dominance. The origins of the Kassite are unknown, and it would be a mistake to think that the majority of Babylonia's inhabitants in this period were ethnic Kassites. The dynasty is given the name "Kassite" because of the distinctly Kassite names taken by most Babylonian kings in the latter half of the second millennium BCE. The Kassite kings adopted many of the trappings of Mesopotamian culture, including the languages and symbols of royalty, but they also adapted these elements to meet their needs. Babylonian

literature flourished over this long period. The latter half of the second millennium BCE was a particularly vital international period in ancient Near Eastern history when diplomatic ties were forged to avert wars and increase commerce. Archaeologists have discovered a number of settlements that date to the Kassite period in southern Mesopotamia. Some are known from earlier periods in Mesopotamian history, such as Babylon, Nippur, Ur, and Uruk. Other sites such as Dur-Kurigalzu appear to have been politically insignificant before the Kassite period.

The vast majority of the written sources about Babylonia in the Kassite period come from the major economic centers in the southern Mesopotamian city of Nippur and roughly date to the fourteenth and thirteenth centuries BCE. These are mostly economic and administrative documents as well as a number of letters. We know quite a number of titles and offices associated with the Kassite administration, but a very large sector of the workforce was servile. Only a fraction of the excavated sources have been properly studied by scholars. Unlike in the earlier Old Babylonian period (ca. 1800–1600 BCE), only a very few private contracts were found at the site of Ur, but most aspects of the private household economy do not appear in records from the Kassite period. Unpublished documents from the city of Babylon and elsewhere may one day shed light on domestic life in Kassite Babylonia.

A variety of types of personal names and group designations are attested in Kassite Babylonia. Only some of the personal names from this period are recognizably from the Kassite language, and many names are known from earlier and later periods of Babylonian history. Some scholars have argued for the multiethnic nature of Babylonian society in the Kassite period. In form this was likely the case. However, finding ethnicity in the archaeological record is difficult if not impossible, and the results of such attempts are often questionable or flawed. The textual record is useful because it allows us to attach names to different groups, but these names, like

➤ DUR-KURIGALZU

Dur-Kurigalzu (modern Aqar Quf), Akkadian for “Fortress of Kurigalzu,” is the ancient name of a major southern Mesopotamian settlement established by the Kassite king Kurigalzu I. Joint Iraqi-British excavators conducted archaeological investigations of the site during World War II (1942–1945). The king Kurigalzu who built Dur-Kurigalzu is the same one known from the Babylonian correspondence in the Amarna letters from Egypt. Even though the Kassite language is poorly understood, the royal name of Kurigalzu probably means something like “Shepherd (= Protector) of the Kassites.” Despite the fact that Kurigalzu undertook a major building project at Dur-Kurigalzu and renamed it in his own honor, there are indications that Dur-Kurigalzu was not an entirely new settlement in the fourteenth century BCE. During the fifteenth century BCE the name of the site was Parsa. Located just west of modern Baghdad and about 56 miles (90 kilometers) north of Babylon, Dur-Kurigalzu covers an area of about 556 acres (225 hectares). King Kurigalzu I commissioned a ziggurat, or temple tower, in Dur-Kurigalzu called Egirin (“Pure House”). Exposure to the elements over the millennia has weathered the ziggurat, but its core is still visible on the landscape to this day. In the sacred precinct around the ziggurat other temples were erected in honor of well-known deities from

the ancient Babylonian pantheon, such as Enlil, Ninlil, Ninurta, and Nisaba. We also know of a temple dedicated to the Kassite gods Shuqamuna and Shimaliya. Kurigalzu I had a palace built at Dur-Kurigalzu to which he gave a ceremonial, anachronistic Sumerian name meaning “Palace of the Whole World.” In the palace at Dur-Kurigalzu excavators found distinctive wall paintings of human figures in procession as well as terra-cotta sculptures, glass, gold jewelry, and other significant small finds. After the end of the Kassite dynasty in Babylonia in the twelfth century BCE, Dur-Kurigalzu was abandoned and never reoccupied.

—Matthew T. Rutz

Bibliography

- George, Andrew R. *House Most High: The Temples of Ancient Mesopotamia*. Mesopotamian Civilizations 5. Winona Lake, IN: Eisenbrauns, 1993.
- Kühne, Hartmut. “Aqar Quf.” In *The Oxford Encyclopedia of Archaeology in the Near East*, Vol. 1, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Tomabechi, Yoko. “Wall Paintings from Dur Kurigalzu.” *Journal of Near Eastern Studies* 42 (1983): 123–131.

Kassite, were the product of scribal activity and may not have reflected wider practices in ancient Mesopotamia. There are limits to what we can know about ancient attitudes. Personal names are a good example of this problem, since it is usually not clear why a certain personal name was chosen. The texts leave the impression that families in the Kassite period were organized in large kinship networks, called “houses.” Sometimes it is unclear whether the texts are referring to an actual house or estate or to a larger social group based around some idea of common descent. Scholars frequently describe these house-centered groups as “tribes,” but recent anthropological and ethnographic research has undermined commonly held ideas about what

tribes are in the ancient and modern Near East and elsewhere.

The diplomatic correspondence from the latter half of the second millennium attests to the active connections and competition among the neighboring rival powers of the day: Kassite Babylonia, Ramesside Egypt, Hittite Anatolia, Mittani in northern Syria, Middle Elamite in southwestern Iran, and eventually the Middle Assyrian empire. The Amarna letters mention the Kassite kings Kurigalzu I, Kadashman-Enlil I, and Burnaburiash II. Even though the dominant political figures had different ethnolinguistic origins, no attempt was made to fundamentally alter the dominant languages (Sumerian and Akkadian) and cuneiform script. Though it was not

the native tongue of any of the political entities of the day, Akkadian continued to be used as the international diplomatic language. Each of these political entities also cultivated local scribal traditions that preserved some elements of Mesopotamian scribal culture, but at the same time they also adapted cuneiform writing in innovative ways.

An innovation of the Kassite period was the creative use of cuneiform to commemorate economic activities using a new medium, called the *kudurru*. Kudurrus are a class of Babylonian documents, often in the form of stone monuments or smaller stone tablets that originated in the Kassite period. These inscribed objects document certain kinds of economic activities and relationships around concepts such as real estate, tax exemptions, temple service, and personal property. These objects are attested from the fourteenth century BCE up until the seventh century BCE, and some 160 individual pieces have been discovered. Although the term “*kudurru*” is often translated as “boundary stone,” there is very little evidence that these objects were used to mark property boundaries. Other than *kudurru*, there are few other Babylonian names for these objects, such as “stele,” “inscribed slab,” and simply “stone.” The archaeological evidence suggests that kudurrus were generally erected in or around temples or sacred quarters, perhaps to demonstrate divine approval of the economic relationships described in the inscriptions. Kudurrus were found in sacred contexts at sites such as Nippur, Dur-Kurigalzu, Babylon, Uruk, Larsa, and Ur. So far no *kudurru* has been found in situ, so only further scientific excavation can settle the question of where the ancient Babylonians displayed these objects.

The vast majority of inscribed material from Mesopotamia is preserved on clay, since stone had to be imported to Babylonia. The standard medium of the kudurrus, stone, was chosen for its permanence, since many of the inscriptions describe the documented economic relationship as being valid for all time. Although kudurrus commemorate a legal transaction, they were not simply legal contracts. In fact, some state that they were copied from clay tablets that acted as the proper legal document that could have been used in court.

These monuments are frequently decorated with distinctive divine symbols. These symbols can often be identified as specific gods in the Babylonian pantheon, and there is good reason to believe that the unidentified symbols also represented deities. We still do not understand the precise meaning and function of these elaborate symbols. Some scholars have attempted to view the symbols as representations of the constellations visible in the night sky. Others view the divine symbols as legal witnesses. Each theory has some merit, but the presence of the divine symbols may have been merely to secure the gods’ protection since a number of deities are invoked in the curses that constitute much of the final section of the text. For example, the curses on one text read:

“Should anyone violate the terms of the land grant, may (the sun-god) Shamash and (the storm-god) Adad, the mighty gods, the supreme judges, speak ill of him (in court) and may they not adjudicate for him a just and right verdict! May the god Ninurta, lord of boundaries and *kudurrus*, tear down his *kudurru*! May Gula, the great lady, place a chronic wound on his body, and may she bathe him in blood and pus as in water! . . . May the great gods named on this stele curse him with a wicked curse! May they rip out his foundation! May they annihilate his progeny!” [translated by author]

—Matthew T. Rutz

Bibliography

- Brinkman, John A. “Administration and Society in Kassite Babylonia.” *Journal of the American Oriental Society* 124 (2004): 283–304.
- Brinkman, John A. “Babylonian Royal Land Grants, Memorials of Financial Interest, and Invocation of the Divine.” *Journal of the Economic and Social History of the Orient* 49(1) (2006): 1–47.
- Brinkman, John A. *Materials and Studies for Kassite History I: A Catalogue of Cuneiform Sources Pertaining to Specific Monarchs of the Kassite Dynasty*. Chicago: Oriental Institute of the University of Chicago, 1976.
- Feldman, Marian H. *Diplomacy by Design: Luxury Arts and an “International Style” in the Ancient Near East, 1400–1200 BCE*. Chicago: University of Chicago, 2005.

- Moran, William L., ed. and trans. *The Amarna Letters*. Baltimore: Johns Hopkins University Press, 1992.
- Sommerfeld, Walter. "The Kassites of Ancient Mesopotamia: Origins, Politics, and Culture." In *Civilizations of the Ancient Near East*, vol. 2, edited by Jack M. Sasson. 1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.
- Stein, Diana L. "Kassites." In *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 3, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Zettler, Richard L. *Nippur III: Kassite Buildings in Area WC-1*. University of Chicago Oriental Institute Publications 111. Chicago: University of Chicago Press, 1993.

Kassite Origins

The Kassite dynasty ruled for centuries in southern Mesopotamia in the second half of the second millennium BCE, so it is something of a surprise that so little is known of Kassite origins. The Kassites first appear in Mesopotamian cuneiform sources in the early second millennium BCE. As with the Sumerian, Akkadian, Amorite, and Hurrian ethnolinguistic groups, hints of the Kassites presage their rise to power. Babylonia was probably not completely deserted after the fall of the first dynasty of Babylon (ca. 1595 BCE), but the details of the Kassites' movement into Babylonian society and subsequent rise to power are not adequately documented in the archaeological or textual records.

Scholars have long theorized about the origins of the Kassites as an ethnolinguistic group. The most plausible hypothesis at present is that the Kassites came down to the Mesopotamian floodplain from the Zagros Mountains in the north via the Diyala River basin. There are still questions about the Kassites' place in Babylonian society in the first half of the second millennium BCE. A certain number of Kassites were employed as workers or mercenaries in Babylonia toward the end of the first dynasty of Babylon in the seventeenth century BCE, but it is not likely that the Kassites were simply migrant workers in southern Mesopotamia. Unlike the Hittite invasion that destroyed the first Babylo-

nian dynasty, there is little evidence of a Kassite invasion. However, it should be noted that Kassite mercenaries sometimes sided with forces hostile to the kings of Babylon. In the eighteenth century BCE, kings Samsu-iluna and Abi-eshuh of Babylon reportedly defeated an army of Kassites. This is the first mention of the Kassites in the cuneiform record from Mesopotamia, but there are hints of Kassite personal names from previous decades. In a letter dated to the reign of Samsu-iluna, messengers from Aleppo to Babylon stop in a place called Bitat-Agum ("Houses/Families of Agum"), where the local leader bears a Kassite title. The second king of the Kassite dynasty was reportedly named Agum, but it is impossible to say where the settlement Bitat-Agum was located. It is also unclear whether this Agum ruled over a sedentary or seminomadic population.

Following these movements into southern Mesopotamia, at least some Kassites apparently integrated into Babylonian society. Some Kassites evidently assumed relatively high offices in institutions such as the military. However, other groups of Kassites evidently remained distinct in this early period.

—Matthew T. Rutz

Bibliography

- Sassmannshausen, Leonhard. "The Adaptation of the Kassites to the Babylonian Civilization." In *Languages and Cultures in Contact: At the Crossroads of Civilizations in the Syro-Mesopotamian Realm*, edited by K. van Lerberghe and G. Voet. *Orientalia Lovaniensia Analecta* 96. Leuven: Peeters, 1999.
- Sommerfeld, Walter. "The Kassites of Ancient Mesopotamia: Origins, Politics, and Culture." In *Civilizations of the Ancient Near East*, vol. 2, edited by Jack M. Sasson. 1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.
- Stein, Diana L. "Kassites." In *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 3, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- van Lerberghe, Karel. "Kassites and Old Babylonian Society. A Reappraisal." In *Immigration and Emigration within the Ancient Near East: Festschrift E. Lipinski*, edited by K. van Lerberghe and A. Schoors. *Orientalia Lovaniensia Analecta* 65. Leuven: Peeters, 1995.

► THE KASSITE LANGUAGE

Very little is known about the Kassite language. The Kassite name for Babylon was Karduniyash, and the Kassite word for “Kassite” was probably *galzu*. Not a single complete sentence of Kassite is preserved anywhere in the known corpus of cuneiform tablets. Attempts by some scholars to connect the Kassite language with Indo-Aryan are not convincing. The Kassite language is so poorly attested because of the Kassite dynasty’s thorough and systematic appropriation of Babylonian literature and culture. In addition, at no point in any period of Mesopotamian history were Kassites the majority ethnic group in Babylonia, which also might explain the continued reliance on the written Akkadian and, to a lesser extent, Sumerian languages.

The very first evidence for the Kassite language is indirect and dates to well before the advent of the Kassite dynasty. In the latter half of the seventeenth century BCE, there is mention of a translator who came from the houses (or tribes) of the Kassites to communicate with Babylonian military forces. It is reasonable to suspect that the translator was translating from Kassite into the Old Babylonian dialect of Akkadian.

There are three major types of sources that give direct evidence about the Kassite language: ancient glossaries, personal names, and individual words that were borrowed into Akkadian, the Semitic language used throughout Mesopotamia in the second millennium. There are only two ancient glossaries that shed light on the meanings of a few Kassite words. Neither glossary was produced by native speakers of Kassite. Rather, these glossaries are copies from a much later time (mid-first millennium BCE) of words that scribes needed to learn how to write and understand. The first Kassite glossary appears in a list of personal names that were then translated into Akkadian. The section that deals with Kassite names oddly begins with Hammurabi and Ammisaduqa, two kings from the First Dynasty of Babylon that preceded the Kassite period; both of their names are

Amorite, not Kassite. The other glossary contains Akkadian glosses of Kassite god names, titles, and basic vocabulary. The two generally agree, but this is no guarantee that together they adequately represent the Kassite language of the second millennium BCE. In fact, one glossary may have been created using the other.

A handful of Kassite personal names are known from the eighteenth century, and many more royal and personal names are attested later on throughout the second millennium BCE. Because it was first created to write Sumerian and then later adapted to write Akkadian, the Mesopotamian cuneiform writing system was inadequate for representing the sounds and structure of Kassite words and names. This should come as no surprise to anyone who has struggled to use one language’s preferred writing system to express the sounds in another language. For example, imagine trying to render Chinese names with the Latin or Cyrillic alphabets or Arabic names with the Korean syllabary.

One important by-product of contact between different cultures occurs at the level of language borrowing. Every language borrows and adapts words and phrases to enrich its vocabulary, and the peoples of ancient Mesopotamia were no different. A number of words in the Akkadian vocabulary appear to derive from Kassite. Many of these words refer to horses and various technologies associated with horses, but this should not be taken as an indicator that the Kassites were first and foremost master horsemen. Rather, such terms entered the Akkadian vocabulary in a haphazard way to meet specific needs at a variety of specific times.

—Matthew T. Rutz

Bibliography

Brinkman, John A. “Kassiten.” *Reallexikon der Assyriologie und vorderasiatischen Archäologie* 5 (1976–1980): 464–473. [In English.]

Kassite Appropriations of Babylonian Literature

The Kassite period in Mesopotamia is also commonly called the Middle Babylonian period. In some ways the latter designation is more apt, since very little of the Kassite language and culture are preserved in the written record of cuneiform documents. Just as Egyptian culture appealed to foreign dynasties, subsequent Mesopotamian dynasties were quick to adopt many elements of Babylonian culture.

Although there are admittedly gaps in our knowledge of the literary activity from this period in Kassite Babylonia, evidence from Nippur and Babylon suggests that a widespread standardization of cuneiform literary traditions occurred at this time. Many of the texts relating to Mesopotamian omen science, including hepatoscopy, were edited and standardized in the Kassite period. This process may have had royal oversight, since there is at least one example where a text was produced for the Kassite king Nazi-Maruttash (1307–1282 BCE). Mesopotamian medical collections of prescriptions, diagnoses, and prognoses were compiled at this time as well. Literary works like the Epic of Gilgamesh and Enuma Elish likely took shape, and a large body of new Akkadian-language wisdom literature developed. There is some evidence for the educational process used to teach cuneiform in the Kassite period, but the documentation is much less rich than that of the preceding Old Babylonian period (ca. 1800–1600 BCE). Many elements of Old Babylonian scribal tradition were continued and enhanced in the Kassite period. This process gave rise to groups of Kassite-period scholars who examined and edited much of the cuneiform literature that is so abundantly attested later in the first millennium BCE. In the first millennium elements of the learned elite became so interested in scholarly pedigree that they frequently traced their origins all the way back to ancestors in the Kassite period. For example, some first-millennium scholars trace their genealogies back to Sin-leqi-unninni, who was credited with organizing the Epic of Gilgamesh. Although he does not have a Kassite name, Sin-leqi-unninni probably lived at some point in the mid-second millennium BCE.

One theme unique to the literature of the Kassite period is a general pessimism about the human condition. In the following example from “The Dialogue of Pessimism,” the word for “ruin-mound” is the same word archaeologists use today, that is, “tell”:

“Ascend the ancient ruin-mounds and walk around!
Look at the skulls of the lowly and the preeminent!
Which belongs to someone who did evil and which belongs to someone who did good?”

Another text, “The Babylonian Theodicy,” is somewhat reminiscent of the biblical Book of Job. The elaborate poetry of the Babylonian text is an acrostic, which means that the first sign of each stanza together form a phrase, in this case “I, Saggil-kinam-ubbib, the exorcism-priest, am one who blesses the gods and the king!” A poem known in Babylonia as “I will praise the lord of wisdom” describes the extensive suffering of its unnamed author, who appeals to the lord of wisdom, the god Marduk, for help.

Babylonian literary texts from the Kassite period have been found at Nippur, Babylon, and elsewhere. Many texts that were probably first composed in the Kassite period survive in later copies from the first millennium BCE. Although Sumerian literary texts are much more common in the Old Babylonian period, many continued to be copied and studied in the latter half of the second millennium BCE. Kassite kings also continued the tradition of having royal inscriptions written in Sumerian, such as Kurigalzu I’s inscriptions from Dur-Kurigalzu, as well as in Akkadian.

Other Kassite innovations took place in the manufacture of cylinder seals. Changes occurred in both the imagery and inscriptions on the seals. Unlike inscribed seals from earlier periods, inscribed Kassite cylinder seals often refer to more than just the bearer’s title. Parallels to these inscriptions are more readily found in the corpus of Mesopotamian literature than among administrative tools of the late third and early second millennia BCE. One Kassite period cylinder seal inscription is in Sumerian cuneiform and reads:

➤ ENUMA ELISH

Enuma Elish is the ancient title of an Akkadian-language composition written in the Mesopotamian cuneiform script. Sometimes referred to as the Babylonian creation myth or epic, *Enuma Elish* recounts the creation of the cosmos and the elevation of the chief god of Babylon, Marduk, to the head of the whole Babylonian pantheon. In the Assyrian version of *Enuma Elish*, Assyrian scribes replaced the name Marduk with the name of their chief god, Assur. The title *Enuma Elish* is what scholars call the composition's incipit, a term that refers to the very first phrase of a text: "When on high (Akkadian: *enuma elish*)," short for

"When on high the heavens had not been named,
Down below solid ground had not been called by
name . . ."

For a more familiar example, imagine if Shakespeare's *Romeo and Juliet* were referred to as "Two households, both alike in dignity," instead of by the names of two of its main characters. Referring to a composition by its incipit was a common practical shorthand throughout ancient Mesopotamia.

At the beginning of *Enuma Elish*, various gods are created from the commingling of the primordial fresh waters, personified as the god Apsu, and the waters of the sea, personified as the goddess Tiamat. Eventually the heroic god Marduk combats and defeats Tiamat. Marduk then creates the cosmos out of Tiamat's corpse. Scholars frequently compare elements of *Enuma Elish* and the biblical

creation motifs in Genesis and elsewhere in the Bible. One title that Marduk often bears is Bel, literally meaning "Lord" but also connoting "storm-god." Marduk's creation and ordering of the universe includes creating divisions of time (for example, the phases of the moon as well as the seasons), setting the fixed stars as constellations in the night sky, and the creation of temples for various other gods in the pantheon. From Tiamat's eyes, Marduk is said to have created the Tigris and Euphrates rivers, the very lifeblood of Mesopotamian civilization. Using the blood of Tiamat's henchman, Qingu, Marduk creates human beings. Marduk also founds Esagil, Marduk's main temple in the city of Babylon, as the center of the universe. The composition concludes with a series of exultations of Marduk, each of which addresses him with one of 50 different esoteric names.

Most of the tablets that preserve *Enuma Elish* are from the first-millennium BCE library of Ashurbanipal in Nineveh, but the text was probably composed sometime during the second millennium BCE. From the later first millennium BCE we have textual evidence of some of the most important public ritual activities in Babylonia. One such tablet gives a description of the Babylonian New Year's festival at which, we are told, *Enuma Elish* was publicly recited.

—Matthew T. Rutz

[All translations by author from the original cuneiform.]

"May he be established as one chosen by his god!
May he be considered noble in his king's palace!
As his lot may abundance, wealth,
and a long life be decreed for him!"

At the time this seal was produced, the Sumerian language had not been spoken for over half a millennium, and this type of Sumerian personal prayer for well-being is unknown before the Kassite period. Although the Kassites adopted much of the Babylonian culture that preceded their rule, they did embark on some subtle innovations within the bounds of the received tradition. The individual prayer on a cylinder seal, especially in Sumerian, is unique in this respect. As in the

present seal, various deviations from classical Sumerian are evident, such as the reinterpretation of the grammar, usage, and vocabulary of the long-dead language. Other seal inscriptions are better classified as psalms, since they merely exult a particular deity. A whole class of such seals bears psalms that conclude the short paean with the phrase "Have mercy!" It is also in the Kassite period that the Akkadian language started to become commonplace on seal inscriptions. In this same period some seals even took on the form of amulets intended solely to protect the bearer, enhanced in magical efficacy by the lustrous stones that the seal cutters used.

—Matthew T. Rutz

Bibliography

- Dalley, Stephanie. *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and Others*. Edited and translated with an introduction and notes. Oxford World's Classics. Oxford: Oxford University Press, 1998.
- Foster, Benjamin. *Before the Muses: An Anthology of Akkadian Literature*. 3rd ed. Translated by Benjamin R. Foster. Bethesda, MD: CDL, 2005.
- Foster, Benjamin. "Epic of Creation (1.111)." In *The Context of Scripture*, vol. 1, edited by William W. Hallo and K. Lawson Younger Jr. Leiden: Brill, 1997.
- Matthews, Donald M. *The Kassite Glyptic of Nippur*. Orbis Biblicus et Orientalis 116. Freiburg, Switzerland: Universitätsverlag; Göttingen: Vandenhoeck and Ruprecht, 1992.
- Pritchard, James B., ed. *Ancient Near Eastern Texts Relating to the Old Testament*. Princeton, NJ: Princeton University Press, 1969.
- Sassmannshausen, Leonhard. "The Adaptation of the Kassites to the Babylonian Civilization." In *Languages and Cultures in Contact: At the Crossroads of Civilizations in the Syro-Mesopotamian Realm*, edited by K. van Lerberghe and G. Voet. Orientalia Lovaniensia Analecta 96. Leuven: Peeters, 1999.
- Sommerfeld, Walter. "The Kassites of Ancient Mesopotamia: Origins, Politics, and Culture." In *Civilizations of the Ancient Near East*, vol. 2, edited by Jack Sasson. 1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.
- Stein, Diana L. "Kassites." In *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 3, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Talon, Philippe, ed. *The Standard Babylonian Creation Myth Enuma Elish*. State Archives of Assyria Cuneiform Texts. Helsinki: Neo-Assyrian Text Corpus Project, 2005.
- Veldhuis, Niek. "Kassite Exercises: Literary and Lexical Extracts." *Journal of Cuneiform Studies* 52 (2000): 67-94.

■ Introduction: The Movements of Cultures in Bronze Age Europe

Students of Neolithic and Bronze Age Europe are often overwhelmed by the preponderance of strange names given to the cultures that archaeologists have reconstructed as having inhabited the region. These cultures are typically named after the first site in which the culture was identified (called the type site), after a particular artifact that is distinctive of the group (usual pottery), or after a practice that is typical of the group (perhaps burial practices). Most of these groups were small chiefdoms, which could have had as few as 5,000 members or at the most up to about 20,000 members. These chiefdoms shared some general traits from region to region but were not homogenous, each having its own unique cultural features.

Archaeology in Europe has generally been conducted at a local or national level. Very few attempts at synthesis over Europe as a whole have been attempted. Each country uses its own terminology and own research agendas. There is an archaeological division between Eastern and

Western Europe that reflects not an ancient boundary but instead the boundary of the Cold War of the twentieth century, a time when archaeologists were unable to share information easily. Ancient boundaries are further confused by modern nationalism and ethnicity, since many of these modern identities are seen to be rooted in groups that existed over 4,000 years ago.

One of the key problems facing European archaeologists is how to understand the movements and connections of these disparate groups. Given that some regional attributes were shared among groups that maintained their own unique behaviors (preserved as artifacts), how can archaeologists differentiate one group from the next? It is very difficult, in the study of ancient European society, to understand what evidence constitutes evidence for trade, for migration, and for warfare, since all of these three types of activities can manifest the same types of archaeological remains. The evidence, for archaeologists, is preserved as different artifacts and practices

(manifest as collections of artifacts) gradually spreading and subsequently disappearing throughout Europe. The following entries describe some of the major patterns of material culture movement patterns throughout Europe.

—Kevin M. McGeough

The Corded Ware Phenomenon

Around 3000 BCE, a new material culture assemblage appeared in northwestern Europe. The most distinctive artifact associated with this new assemblage is the corded ware ceramic vessel. These types of pots are handleless drinking vessels (much like the beakers that appear in the same region later). The rims of the vessels flare out, a style called everted by ceramic specialists. The pottery is decorated with impressions left

by rope (or cord) wrapped around the vessels before they are fired, leaving distinct horizontal bands. This kind of decoration appears much earlier in the pottery of the eastern European steppes. The exact relationship between corded ware pottery and the pottery of the steppes is not clear.

Archaeologists are not entirely certain what these vessels would have contained, but the best guess is some kind of alcoholic beverage, most likely a type of mead made from honey or wine imported from the south. Archaeologists have taken these vessels as evidence of the spread of drinking culture from southern and eastern Europe. Another possibility is that these pots may have contained cannabis; there is strong evidence for the use of cannabis as a narcotic substance in eastern Europe at this time. Other possibilities include nonalcoholic beverages or honey.

Corded ware pottery appears alongside another distinct type of material culture, the shaft-hole ax. This is a type of ax that had existed in the region prior to the appearance of corded ware; with the appearance of corded ware, this kind of ax appears in much greater frequency. A shaft-hole ax is a stone ax that would have had a wooden handle. A hole for the shaft of the handle is carved into the stone. Both of these types of material culture (corded ware pottery and shaft-hole axes) are found associated with individual male burials. Other materials found in these burials include beads, flint tools, and bone tools. Usually the burial is located under a large human-made mound.

Andrew Sherratt and others argue that this change reflected a larger social change in which individual wealth became more important than communal wealth and monuments (such as Stonehenge). It is difficult to determine whether this new material culture was associated with the movement of a new population into the region or whether it represented the adoption of new types of lifeways by people already living in northern and western Europe. Settlement patterns associated with the corded ware phenomenon differ from previous patterns: houses are small, and there is no evidence for ceremonial or social centers. Corded ware burials are individual, whereas the burials associated with mega-

➤ WHAT IS AN ARCHAEOLOGICAL ASSEMBLAGE?

One of the most important concepts in archaeology is the idea of the assemblage. An assemblage is a group of types of material culture that are consistently found together and are assumed to reflect a specific culture. In the early years of the twentieth century, archaeologists (especially in Europe and North America) concentrated on identifying sets of material culture that appear again and again through a specific region. It was assumed that while one type of material culture found in isolation could represent any number of social phenomena (it could have been deposited in the region by trade, through conquest, as a souvenir, as an heirloom, etc.), if more than one type of artifact is consistently found together, then this reflects a particular lifeway. Many of these identifications by early archaeologists are still used as designations for particular groups; European archaeologists still talk about Corded Ware People, Bell Beaker People, etc. It is also important to distinguish between an assemblage and a sub-assemblage. A subassemblage refers to a set of material culture that is consistently found together and reflects a particular activity (as opposed to a particular culture). Thus, a hunter's assemblage may include a quiver, bow, and arrows, and a blacksmith's assemblage may include an anvil, a hammer, and some metal ingots.

—Kevin M. McGeough

lithic monuments are collective. Corded ware settlements coexist alongside settlements associated with henge and megalithic monuments for about 200 years. After this, megalithic settlements fall out of use, and the settlements associated with corded ware spread down into central Europe (Switzerland and Bohemia) and east along the coast of the Baltic Sea (all the way to Poland). This may reflect an early pan-European cultural group or may simply reflect material culture customs common to the northern half of Europe.

—Kevin M. McGeough

Bibliography

- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Mohen, Jean-Pierre, and Christiane Eluère. *The Bronze Age in Europe*. Discoveries Series. New York: Harry N. Abrams, 2000.
- Sherratt, Andrew. "The Transformation of Early Agrarian Europe: The Later Neolithic and Copper Ages, 4500–2500 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.

Beaker People

The Beaker People are named after a handleless ceramic cup or beaker that became widespread in central and western Europe during the Late Neolithic period and the Early Bronze Age (ca. 2800–1900 BCE). Beakers have a bell-shaped cross-section and are commonly referred to as Bell Beakers. These vessels are generally found in burial contexts with a combination of daggers, arrowheads, wristguards, and v-bored buttons, which indicates to Burgess and Shennan that there was a proliferation in the production of weapons and archery equipment by the Early Bronze Age. Beaker burials generally evoke male-oriented warrior symbolism and mark a breakdown in the prevailing social structure of temperate Europe, which sees the emergence of ranked societies. The changing social and economic conditions of the age are far-reaching, as is the distribution of Beaker artifacts, which are found from Ireland to Hungary and from Scotland to the Mediterranean.



Beaker culture "Glockenbecher" bell-shaped vase which gave its name to a period of the Late Neolithic or Chalcolithic (copper) period. From Laa an der Thaya, Lower Austria. (Erich Lessing/Art Resource, NY)

According to radiocarbon evidence, the earliest Beaker pottery was manufactured in the Rhine Delta by the mid-third millennium BCE. Beaker burials are found in Spain and Portugal shortly afterward, suggesting to Sherratt that distant marine contacts were established by the Late Neolithic. Traditional theories attribute the movement of Beaker artifacts to the migration and trade of a coherent Beaker culture. In reality, there is little evidence to suggest that a distinct cultural entity existed. The single burial tradition in flat graves and burial mounds, once considered a hallmark of the Beaker culture, is not consistent throughout Europe; beakers are found in chamber tombs in Brittany, in both communal barrows and cremation burials in Britain, and within settlements in Ireland but never in burials. Although few Beaker settlements are known, village and house plans vary considerably between regions. Beaker material culture thus represents a dispersed range of related artifacts as opposed to a monolithic assemblage that reflects uniform social and economic conditions across geographic regions.

► THE SOCIAL SIGNIFICANCE OF THE BEAKER

Beakers played important roles in drinking rituals and may have been used to consume alcohol or other stimulants. Although relatively pure alcoholic drinks were available in Egypt (beer), Mesopotamia (beer), and eventually the Classical Mediterranean world (wine), the required ingredients were not accessible in the necessary quantities to produce such material in temperate Europe during the Beaker period. Beakers probably contained a mixture of fermented materials, although there is little direct evidence to know for certain. One of the earliest examples of alcoholic beverages in Europe comes from a preserved birch bark container in a Bronze Age burial in Denmark that contained clover, honey, fruit, leaves, and cereal grains; it was an ale, a fruit wine, and mead. This type of drink was probably used in social settings during the Beaker period, possibly by elite who had access to such material or perhaps among travelers and newly established contacts.

—Noah V. Honch

The appearance and spread of Beaker artifacts is probably related to two major agricultural developments: the introduction of the plow and the increased exploitation of secondary animal products. Brodie argued that the efficiency of the ox- and later horse-drawn plow created agricultural surpluses that fostered population growth in ways that were not possible in previous periods. Secondary animal products, such as milk and wool, diversified agrarian produce and allowed humans to inhabit areas with soils of marginal fertility. Resulting settlement expansion led to increasing contact between communities, which became progressively important with the exploitation and trade of copper and copper ores. Metal weapons, tools, and archery gear became important symbols of a Beaker warrior ethos that previously did not exist. Some individuals were able to accumulate material wealth and prestige by controlling the flow of copper and other metals, presenting challenges to traditional social roles in ways that gave rise to early stratified societies.

Emergent social differentiation cannot itself explain the mechanisms by which Beaker mate-

rial culture spread through much of Europe. Although traditional explanations advocate population movements and cultural diffusion, it is difficult to evaluate their relative effects. Price et al. have argued that strontium isotope data from the teeth and bones of Beaker burials indicate that a significant proportion of local populations in central Europe are of nonlocal origin. Given the increasing importance of the horse and established marine travel, migrations could certainly account for the movement of material culture, particularly if local skirmishes over resources provided the motivation. It is problematic, however, to draw direct connections between material culture and ethnicity—to assume that Beaker pottery equals Beaker people—and to accept that a coherent body of artifacts was carried and traded by a distinct cultural group. It is equally difficult to assume that many or all indigenous communities in Europe were receptive to Beaker materials and chose to obtain them by trade alone. In Yorkshire, however, there is evidence that Beaker materials were incorporated into a developing prestige goods economy at a local level. Although the specific causes behind the movement of Beaker artifacts remain unclear, the distribution of material culture certainly points to widespread cultural influences and rapid sociocultural changes in central and western Europe during the Late Neolithic period and the Early Bronze Age.

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Bibliography

- Brodie, N. *The Neolithic–Bronze Age Transition in Britain: A Critical Review of Some Archaeological and Craniological Concepts*. Oxford, UK: Tempvs Reparatum, 1994.
- Burgess, C., and S. Shennan. “The Beaker Phenomenon: Some Suggestions.” In *Settlement and Economy in the Third and Second Millennia B.C.*, edited by C. Burgess and R. Miket. Oxford, UK: British Archaeological Reports, 1976.
- Price, T. D., et al. “Strontium Isotopes and Prehistoric Human Migration: The Bell Beaker Period in Central Europe.” *European Journal of Archaeology* 7 (2004): 9–40.
- Shennan, S. “Cultural Europe in the Third Millennium B.C.: An Evolutionary Trajectory for the Beginning of the European Bronze Age.” *Journal of Anthropological Archaeology* 5 (1986): 115–146.

Sherratt, A. "Cups That Cheered." In *Bell Beakers of the Western Mediterranean: Definition, Interpretation, Theory, and New Site Data*, edited by W. H. Waldren and R. C. Kennard. Oxford, UK: British Archaeology Reviews, 1987.

Thorpe, I. J., and C. C. Richards. "The Decline of Ritual Authority and the Introduction of Beakers into Britain." In *Neolithic Studies: A Review of Some Current Research*, edited by R. Bradley and J. Gardiner. Oxford, UK: BAR International, 1984.

Urnfield Culture

The Urnfield culture is characterized by the widespread appearance of cremation burials in central and eastern Europe during the Late Bronze Age. Traditional inhumations are largely replaced by incinerated human remains, which are typically placed in ceramic urns and buried under earthen barrows or long beds. Cremation burials are generally found in dense clusters, or urnfields, that show expansion with successive interments and symbolize long-term connections between small communities and the local landscape. Urnfield burials demonstrate a profound break with established burial practices and represent a substantial shift in the cosmological belief systems of many regions, including north-eastern France, the Carpathian Basin, northern Italy, and the northwest European Plain.

The Urnfield culture shows continuity with earlier Middle Bronze Age traditions but introduces significant cultural changes. During the Middle Bronze Age, the Tumulus culture buried multiple individuals in earthen mounds or barrows, which are usually isolated entities that contain distinct families. With the introduction of cremations, there is a shift toward single-burial barrows and the formation of clustered urnfields, which preserve the remains of a local community and suggest the development of a collective identity. The internal organization of urnfields probably reflects kin relations, but on a larger scale they serve as visible landmarks and possibly define the territories of neighboring groups.

The proliferation of urnfields is related to population movements and competition over land and prestige items. Upon the collapse of the Mycenaean civilization, there was a population influx of Mediterranean groups along the Middle

> POLITICAL AND SOCIOECONOMIC ASPECTS OF HOARD DEPOSITS

With technological advancements in bronze metal casting, swords and other metal artifacts became symbols of power and wealth. While massive hoards are found in rivers and other water bodies, they are virtually absent from early urnfields. The specific reasons for this are unknown, but the deposition of hoards almost certainly took place in a public context. The public arena was a good venue for local leaders to compete in the ceremonial destruction of material wealth, to convey their power, and to reaffirm their roles in the larger community. Hoard deposits also ensured the scarcity of bronze and kept its value high. This solidified the economic standing of those who controlled the bronze trade, which invariably included community leaders.

—Noah V. Honch

and Lower Danube. Early urnfields are primarily associated with farmsteads and primitive field systems but are increasingly found in marginal agricultural regions, suggesting population pressure and resulting competition over land encouraged further resettlement. Fortified sites are known in many regions and are particularly apparent in Poland and eastern Germany. In this context, urnfields probably legitimized the territorial claims of local communities by providing evidence of long-term settlement and ancestral inheritance.

Relationships between the living and the dead were reinforced by the intentional deposition of metal hoards, which also served political and socioeconomic functions. Although most early urnfield burials possess few grave goods or lack them altogether, metal hoards of armor, swords, weapons, and other bronze artifacts are commonly found in rivers and other water bodies. The hoards may be votive offerings to deities but could also strengthen the relationship between communities and their ancestors, especially since rivers are known to have been perceived as portals to the otherworld of the dead by later non-Classical groups in Europe. The initial absence of metal artifacts in urnfield burials may be due to the collective power of



Ceramic jars and sieves from the urnfield at Tannheim, Germany, Bronze Age. (Erich Lessing/Art Resource, NY)

local leaders, whose communal responsibilities did not translate into material wealth. By the end of the Late Bronze Age, however, metal weapons and armor are commonly present in urnfields, and some elaborate burials are known to contain four-wheeled wagons and horse bits. By this time, communal leaders appear to own or control sufficient metal resources to convey wealth and power outside of obligatory ritual duties.

At the close of the Late Bronze Age there is a lack of grave goods in cremation burials, and urnfields go out of use. The specific causes of decline are unknown but probably relate to ecological problems and shifting trade networks. Roymans has argued that extensive farming may have contributed to the erosion or acidification of soils, rendering formerly abundant regions unproductive. Remaining agricultural land was scarce and became a source of competition, as indicated by the increasing appearance of fortified settlements. It was difficult for urnfield communities to trade for metals and other commodities without agricultural surpluses. Furthermore, iron emerged as the dominant metal, which could not be controlled along the same

lines as tin and copper ores; iron ores were less scarce, but the associated metallurgical technologies were considerably different than bronze working. With the emergence of the Hallstatt culture and extensive salt extraction in Austria, trade networks significantly changed, leaving urnfield communities to adjust under difficult circumstances. Urnfields had gone out of use in central Europe by the end of the Late Bronze Age, around 700 BCE, lasting slightly longer in peripheral areas of the Lower Rhine, which experienced the same fate during the sixth century BCE.

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Bibliography

- Champion, T., C. Gamble, S. Shennan, and A. Whittle. *Prehistoric Europe*. London: Academic Press, 1984.
- Fontijn, D. "Socializing Landscape: Second Thoughts about the Cultural Biography of Urnfields." *Archaeological Dialogues* 3 (1996): 77–87.
- Roymans, N. "The Cultural Biography of Urnfields and the Long-term History of a Mythical Landscape." *Archaeological Dialogues* 2 (1995): 2–24.
- Roymans, N. "Late Urnfield Societies in the Northwest European Plain and the Expanding Networks of Central European Hallstatt Groups." In *Images of the Past: Studies on Ancient Societies in Northwestern Europe*, edited by N. Roymans and F. Theuws. Amsterdam: Instituut voor Pre-en Protohistorische Archeologie Albert Egges van Giffen, 1991.
- Roymans, N., and F. Kortlang. "Urnfield Symbolism, Ancestors and the Land in the Lower Rhine Region." In *Land and Ancestors: Cultural Dynamics in the Urnfield Period and the Middle Ages in the Southern Netherlands*, edited by F. Theuws and N. Roymans. Amsterdam: Amsterdam University Press, 1999.

Unetice Culture

The Unetice culture appears in central and eastern Europe during the Early Bronze Age and is generally characterized by whole-body inhumations in earthen barrows or tumuli. The culture is named after a series of burials in the vicinity of Prague and frequently appears as "Aunjetitz" in German and English publications, which, as Sherratt describes, indicates the appropriate pronunciation. Unetice burials are renowned for the

diversity and sheer quantity of metal artifacts, which exemplify impressive technological innovations in bronze metallurgy and demonstrate the importance of overt display and ostentation in burial contexts. The degree of ritual display generally exceeds contemporaneous Beaker burials and is almost certainly linked to the accessibility and control of copper and tin ores.

Unetice cemeteries are usually associated with settlements. For instance, most burials at Brezno, Czech Republic, are located within meters of longhouses. Unetice cemeteries also reflect a level of spatial organization that is generally not observed by contemporaneous groups in other regions. Inhumations are relatively dispersed in Beaker burial areas but are frequently found in compact groups at Unetice sites. Some Unetice burials are found in roughly linear arrangements with inhumations aligned in the same direction, as is the case at Tesetice-Vinohrady, Slovakia, and Dolni Berkovice, Czech Republic.

Unetice burials are particularly known for the elaborate display of gold and bronze artifacts, which convey prestige and reflect the status of the deceased. Warrior symbolism is particularly pervasive, and many graves contain a variety of bronze weapons including swords, daggers, halberds, and axes. Well-known warrior burials include the burial mounds of Leubingen and Helmsdorf in Germany and Lekki Mound in Poland. The Leubingen barrow is 8.5 meters in height and covers an internal pitched-timber chamber that contains metal weapons and gold jewelry. The interred male burials are associated with a cushion stone that could be used for metalworking, suggesting that such a trade was prestigious and perhaps limited to particular individuals or classes.

Although most Unetice burials contain single inhumations, many show evidence of secondary interments and indicate that burials were reopened to inter the newly deceased. Burial mounds were probably important physical manifestations of kin relations and served as physical markers of ancestral relationships. Chambered burial mounds require more resources and labor time to construct than flat graves and reflect the status of those interred. While some Unetice burials contain wooden chambers and show oc-

➤ UNETICE METALLURGICAL DEVELOPMENTS

Many Unetice artifacts reflect an astonishing degree of metallurgical innovation. During the Early Bronze Age, the production of bronze artifacts primarily depended on simple casting techniques and subsequent physical reworking such as hard-hammering. By the Late Bronze Age, however, with efficient metal extraction, a higher demand for metals, and emergent social differentiation, important metallurgical advances were present in Unetice artifacts. Swords possessed metal hilts that were physically cast onto the blade; during previous periods, hilts were fixed to the blade with relatively flimsy metal rivets. Unetice metallurgists knew how to enrich tin on the surface of bronze weapons, making them appear to be made of silver. Some rare finds suggest that some Unetice metallurgists were already familiar with iron.

—Noah V. Honch

casional evidence of wood coffins, others are utterly sparse and bodies are scattered in trash pits, which may hold the remains of slaves or defeated enemies, perhaps some of whom were used to build large barrow mounds.

By the Middle Bronze Age, metal artifacts were easier to cast because of developments in tin-bronze metallurgy, which could produce harder end products than with copper alone. Although copper ore sources were common in many regions of Europe, tin was rare. The Unetice culture developed in areas with access to tin ores, such as the Fichtelgebirge and the Erzgebirge Mountains of eastern Germany. In general terms, bronze production could be mediated by the extraction and trade of tin ores. The Unetice likely played a dominant role in these processes and strongly influenced the distribution of metal ores throughout much of central Europe. In this context, it is little surprise that Unetice burials are among the first to engage in the purposeful display of elaborate metal artifacts.

The Unetice culture was involved in long-distance trade networks that connected northern Europe with the Mediterranean. Wealthy burials belonging to the Wessex culture of southern England contain Baltic amber and a variety of

metal artifacts including daggers, which originated in Brittany and central Europe. Mycenaean burials also contain Baltic amber, which inevitably traveled through central Europe to arrive in the Mediterranean. The Unetice culture was almost certainly the unifying point of contact between these groups. Many Unetice burials in the Carpathian Basin contain elaborately decorated horse bits, which suggests that horses were already used for riding in eastern Europe. Horses significantly enhanced travel efficiency and were an important means of establishing and maintaining long-distance trade networks involving the Unetice culture.

—Noah V. Honch

Bibliography

Champion, T., et al. *Prehistoric Europe*. London: Academic Press, 1984.

Clark, G. *World Prehistory: In New Perspective*. Cambridge: Cambridge University Press, 1977.

Kristiansen, K., and T. B. Larsson. *The Rise of Bronze Age Society: Travels, Transmissions, and Transformations*. Cambridge: Cambridge University Press, 2006.

Krut'ová, M. "Bell Beaker and Unetice Burial Rites: Continuity and Change in Funerary Practices at the Beginning of the Bronze Age." In *The Northeast Frontier of Bell Beakers: Proceedings of the Symposium Held at Adam Mickiewicz University, Poland*, edited by J. Czebreszuk and M. Szmyt. Oxford, UK: BAR International Series, 2003.

Roe, D. *Prehistory: An Introduction*. London: Macmillan, 1970.

Sherratt, A. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated Prehistory of Europe*, edited by B. Cunliffe. Oxford: Oxford University Press, 1994.

■ Introduction: Avenues and Routes of Travel

There are a number of sources of information that archaeologists can use to reconstruct ancient travel routes. Textual records describe the routes that ancient people took to get from one place to another, often even providing the ancient names of the routes. Archaeological surveys can identify the remains of ancient roads. Using advanced remote-sensing techniques, both aerial and ground, archaeologists can identify patterns in the landscape that hint at these types of ancient connections.

Indirectly, archaeologists can identify ancient routes by studying the distribution of artifacts. If an Egyptian artifact is found in what is now Iran, it must have gotten there somehow. By comparing artifact distribution patterns with natural boundaries (and natural paths and access routes through those boundaries), archaeologists can reconstruct, roughly, where ancient routes may have been found. Likewise, settlements within a given region are often located along important trade routes. Rivers are the most common, since they can often provide stable transit routes from one city to the next. In

the Syria-Palestine Bronze Age, sites were located roughly one day's donkey ride away from one another, which allowed for safe overland transportation.

While individuals would have traveled for many reasons, the development of distinct routes was certainly rooted in economics. The desire to acquire exotic goods from distant lands would certainly have been an impetus. Related to this but on a larger scale, the need to gain access to resources that were not available locally would have been very important. The Egyptians, for example, suffered from a lack of local timber resources, so they traveled to the port city of Byblos to acquire the famed cedars of Lebanon. Tin, an essential component of bronze, was only available in a few isolated areas (such as England and Afghanistan), so travel to these far-off locales would have been essential for metallurgy. Trade networks developed that facilitated the transport of such goods without necessitating any one individual (or groups of individuals) from having to make a long-distance journey. Sites were linked together, and goods could pass

from one area to another without the originator of the good and the receiver of the good ever encountering each other (or even really of knowing of the other's existence). Aside from economics, diplomatic routes and routes connecting the distant areas of large empires were also established.

—Kevin M. McGeough

The Via Maris

The Via Maris (Latin for “Way of the Sea”) refers to the land route from Egypt along the northern coast of the Sinai Peninsula and along coastal Israel to the Esdraelon Valley. This was the main source of overland communication between ancient Egypt and the Levant and indirectly to northwestern Mesopotamia and Anatolia. The earliest reference to this coastal highway is found at the Temple of Amun at Karnak from the reign of Seti I (ca. 1300 BCE), where it is referred to as the Way of Horus. In Exodus 13:17 it is likely that the route avoided by the Israelites and referred to as the “way of the land of the Philistines” was the same as the Way of Horus.

Evidence for a coastal land route between Egypt and Canaan exists as far back as the Chalcolithic period (4300–3300 BCE) but certainly is strongly in evidence by the beginning of the Early Bronze Age (ca. 3300 BCE). *Serekhs*, a sort of royal signature inscribed on pots during the Early Dynastic period of Egypt, are found at numerous Early Bronze Age I (3300–3050 BCE) sites in southern and coastal Israel and along the northern Sinai coast. A stretch of the northern Sinai 124 miles (200 kilometers) long was surveyed, and 14 clusters of short-term encampments were located in the sand dunes. In some cases the pottery found at the sites was predominantly Egyptian and in some cases predominantly Levantine (specifically from the city of Arad). It is likely that the sites were created as way stations along the coast stemming from the trade in copper ore and bitumen coming from Sinai and the Dead Sea region. By the end of the Second Dynasty of Egypt, however, this trade with Egypt temporarily came to an end, and most of these campsites begin to disappear midway through the Early Bronze Age II. The Early Bronze Age III is a period of minimal contact be-

tween Egypt and the now urbanized centers of the Levant. The Early Bronze Age III ends (ca. 2300 BCE) with military campaigns by Egypt in Israel that were probably staged by this route.

The Middle Bronze Age IIA (ca. 2000–1750 BCE) sees a resettlement of the coastal Levant. However, the bulk of the trade between Egypt and the Levant was now conducted by sea between Egypt and the great trade center of Byblos on the coast of Syria. As a result, the Way of Horus was of less importance during this period. The Middle Bronze Age IIB/C (ca. 1750–1550 BCE) corresponds to a period in Egypt known as the Second Intermediate period. During this period, Egypt was ruled primarily by a group of foreign rulers referred to as the Hyksos. Recent archaeological investigations have made it clear that these foreign rulers originally came from the coastal Levant. As a result, the Via Maris would have regained some of its importance as a major communications route between Egypt and the homeland of the Hyksos. In the end, the Hyksos rule over Egypt ends with the expulsion by force of the Hyksos from Egypt by the pharaohs of the New Kingdom.

After the expulsion of the Hyksos, the Egyptians felt a need to expand their control over the eastern Mediterranean and began to make forays into southwestern Asia. In order to campaign in the region the Egyptians needed to have guaranteed control over the coastal land and sea routes into Canaan, and it is at this time that the Way of Horus becomes of greatest importance to the Egyptians. With Egyptian campaigns by Thutmose III and Amenhotep II against the cities of Canaan and the great kingdom of Mitanni came the establishment in Canaan of permanent military outposts along the Way of Horus. The relief at Karnak shows more than 20 way stations built by the Egyptians along the Sinai coast, and survey in the region has uncovered more than 40 such small sites as well as a major administrative center. Other administrative centers were built along the coast, with the main Egyptian stronghold at Gaza. Additional fortified centers were built farther inland to control access to the interior from the coastal road at key crossing points and passes. In addition to guaranteeing Egyptian lines of supply in the event of military action in the Levant, the Via Maris also controlled the

trade routes carrying wood, olive oil, wine, wheat, cattle, and slaves through the region.

—David R. Lipovitch

Bibliography

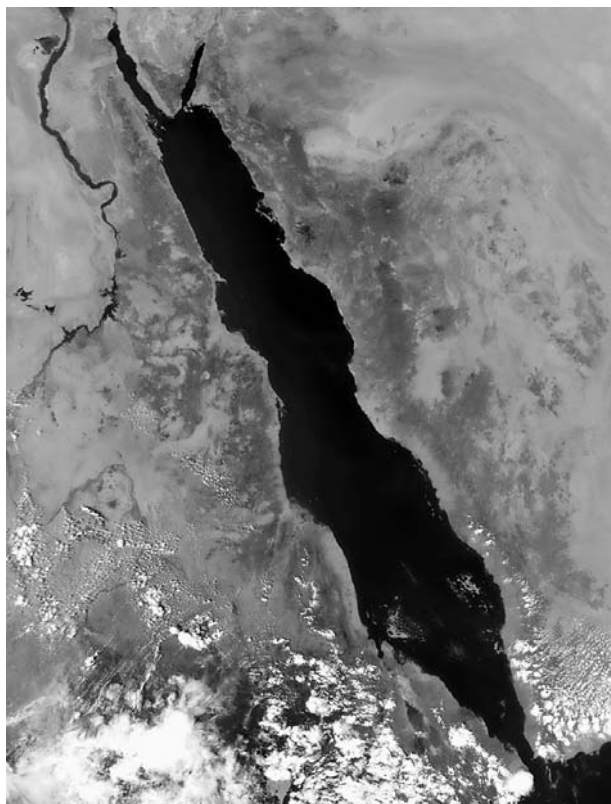
Gonen, Rivka. "The Chalcolithic Period." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.

Gophna, Ram. "The Intermediate Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor and translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.

Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.

The Red Sea

Today's Red Sea separates Africa from the Arabian Peninsula. At its north end, the Red Sea splits into two gulfs, the Gulf of Aqabah to the east of the Sinai Peninsula and the Gulf of Suez to the west. Traditionally, the Red Sea, or its various parts, has been equated with the Red Sea (*yam sup*) from the exodus story (Exod. 13:17–15:21, especially 13:8 and 15:4). The prophet Jeremiah probably identified *yam sup* (lit. "the Reed Sea") with the Gulf of Aqabah (Jer. 49:21),



Satellite view of the Red Sea, bordered by Africa and the Arabian Peninsula. (National Aeronautics and Space Administration)

► THE RED SEA AND THE SEED OF REEDS

The Hebrew name *yam sup* has been translated as "the Red Sea" since at least the third century BCE. The ancient Greek translations rendered *yam sup* as *erutha thalassa*, a name that could refer equally to the Red Sea or to the entire Indian Ocean. The Latin Vulgate then translated the Greek *erutha thalassa* as *Mare Rubrum*, from whence "Red Sea" later entered English translations. Ancient commentators as early as Jerome, Rashi, and ibn Ezra, however, suggested that *yam sup* properly meant "Sea of Reeds," based on Exodus 2:3 where *sup* means "reed" while *yom* is the general Hebrew word for "sea." Although *sup* may mean "reed," deriving from the Egyptian *twf* ("papyrus plant"), the relationship between *yam sup* and the literal meanings of the two individual words *yam* and *sup* remains problematic.

—Spencer L. Allen

while other biblical references suggest either the gulfs of Aqabah or Suez. Alternatively, other places mentioned in Exodus, including Pithom and Ramses (1:11) or Pi-Hahiroth, Migdol, and Baal-Zephon (14:2) suggest a location in the eastern Egyptian Delta. However, a precise location for any of these places is also difficult to determine. Although no consensus has been reached, most modern scholars accept that the biblical Red Sea was likely a reedy marsh in the eastern delta region. Thus, for geographic and literal translation purposes, scholars usually designate the biblical Red Sea as the Sea of Reeds.

The Bible provides multiple accounts of the crossing of the Sea of Reeds, including twice in Joshua (2:10 and 4:23). The oldest version is found in the Song of the Sea (Exod. 15:1–18) and the Song of Miriam (v. 21), the Bible's oldest examples of ancient Hebrew poetry. In this version, God piles the waters with his breath rather

than splitting them (vv. 8 and 10) and throws Pharaoh's forces into the sea (vv. 1, 4, and 21), where they sink like stone or lead (vv. 5 and 10). Thus, God leads the Israelites (v. 13), but no action is attributed to them.

The other account, Exodus 13:17-14:31, is actually two separate crossing stories that have been combined by an ancient Israelite editor. When separated, each of these versions still provides a full account of the crossing. However, each provides different, and at times conflicting, information about the crossing. The so-called P, or priestly, version (14:1-4, 8-9, 15-18, 21a, 21c, 22-23, 26, 27a, 28a, and 29) more resembles the famous scene from Cecil B. DeMille's 1956 epic *The Ten Commandments* than does the so-called J/E version (13:17-19, 21-22; 14:5-6, 10-14, 19-20, 21b, 24-25, 27b, 28b, and 30-31). Moses raises his arms in order to split the sea, allowing the Israelites to pass through, but when the Egyptians try to cross, the seawalls crash down upon them. Unlike the Song of the Sea, then, Moses and the Israelites are active participants in these events.

In contrast, the J/E account more resembles the Song of the Sea. The Israelites are passive, following Moses's orders to stand firm and be still while the cloud pillar separates them from the Egyptians. Instead of splitting the waters, J/E describes a wind that blows the waters back throughout the night. In the morning, Pharaoh's chariots pursue the Israelites but get weighed down in the muddy ground (v. 25) and attempt to flee. Notably, unlike P's account, the ground is not dry. When the waters return, the Egyptians are overtaken and wash up dead on the banks.

—Spencer L. Allen

Bibliography

- Batto, B. F. "The Reed Sea: Requiescat in Pace." *Journal of Biblical Literature* 102 (1983): 27-35.
- Huddleston, J. R. "Red Sea." In *The Anchor Bible Dictionary*, vol. 5, O-Sh. New York: Doubleday, 1992.
- Propp, W. *Exodus 1-18*. New York: Doubleday, 1999.
- Rainey, A., ed. *Egypt, Israel, Sinai: Archaeological and Historical Relationships in the Biblical Period*. Tel Aviv: Tel Aviv University Press, 1987.
- Shanks, H. "The Exodus and Crossing of the Red Sea, According to Hans Goedicke." *Biblical Archaeology Review* 7 (1981): 42-50.

Emergence of Coastal Cities in the Northern Levant

By 4000 BCE, several significant cities had already begun to form in the Levant—the eastern Mediterranean coast—including Byblos, which became the first Phoenician city, and Ugarit 100 miles (165 kilometers) to the north, a leading Canaanite city.

Byblos emerged early as a major sea-trading power in the Mediterranean largely due to densely populated Egypt's demand for cedar from Lebanon. Egypt had almost no wood suitable for construction and sought the strong, fragrant cedar to build burial chambers and great temples, such as the one at Hierakonpolis in 3200 BCE. Archaeological excavations at Byblos show larger homes, public buildings, and massive city walls being raised in the years that followed the opening of that trade.

This good fortune allowed Byblos to expand southward along the coast of what is now Lebanon, founding the cities of Tyre and Sidon around 2750 BCE. Cedar and other trade goods from these three cities were tremendously in demand during Egypt's massive construction projects, which included the pyramids. The importance of the timber trade to Old Kingdom rulers is verified by archaeological evidence. For example, two boats made from cedar of Lebanon were found beside the Great Pyramid of Khufu buried for the pharaoh's use in the afterlife. When local supplies were not sufficient to meet the market demand, traders from Byblos, Sidon, and Tyre obtained more supplies from sources across Anatolia and the Aegean to meet Egypt's demand for materials. In antiquity the Aegean island of Santorini (also known as Caliste or Thera) was the one most frequently associated with these Levantine traders.

Beautiful purple cloth was created by the Phoenicians using dye from the murex shellfish. The resulting fabric was so highly treasured that it became a symbol of royalty. The Phoenicians made delicate glass bottles, which they filled with precious cosmetics and ointments obtained from exotic lands. Their intricately crafted bowls of gold and silver were highly prized, even being complimented by Homer in the *Iliad*. They were

BIKAI'S EXCAVATIONS AT TYRE



Cedar boat buried beside the Great Pyramid at Tyre. (Jon Bodsworth)

From 1973 to 1974, Patricia Bikai led an excavation team at Tyre in Lebanon that carefully worked its way down layer by layer to bedrock. In so doing, she confirmed the date given by Herodotus for the founding of this city in the third millennium BCE. After more than 700 years of occupation, serious depopulation of Tyre was observed around 2000 BCE. Then by 1425 BCE the city began to grow again, flourishing after 1200 BCE. Bikai dated each of the 28 layers by examining pottery fragments found in the soil and matching them to identical pottery from other cities where dates had already been well established. When combined with historical information such as that provided by Herodotus, archaeological work such as this has provided an excellent window into the past.

—Sanford Holst

also well known for selling colorful trinkets and costume jewelry to clients who could afford no better.

The development of bronze technology led to new economic possibilities for these people. Bronze is created when copper is mixed with tin, and these Levantine traders supplied those

raw materials in great volume. They kept the sources of their tin secret, but some assert that much of it came from the lands now known as France, Spain, and possibly Cornwall in England.

Some scholars posit that just before 2000 BCE, fierce Amorites began harassing Ugarit and Byblos. To escape these raiders, a partial migration of people took place from Tyre, Sidon, and Byblos. Current research suggests that they moved westward and may have participated in the rise of the Minoans at that time. Five hundred years later, the fall of the Minoans coincided with a return of large populations to Tyre, Sidon, and Byblos under difficult circumstances. Ugarit took advantage of its southern rival's problems and finally grew into a great city in its own right after 1500 BCE. At that same time, King Thutmose III of Egypt led his troops northward into the Levant and established tributary status over these lands east of the Mediterranean.

When the Hittites later marched southward from Anatolia (present-day Turkey) and took Ugarit, that city became a major port for the Hittite empire. This caused Tyre, Sidon, and Byblos to lose their long-held leading role in Mediterranean sea trade. Then, in the years just before and after 1200 BCE, the Sea Peoples devastated virtually every city from the Aegean Sea to Gaza near Egypt. For this reason, historians originally thought that the Phoenicians came into existence after 1200 BCE, since they were seen to be flourishing after that time. However, archaeological excavations have clearly established that there was no destruction at Tyre, Sidon, and other Phoenician cities at this time.

The Canaanite city of Ugarit was utterly destroyed by the Sea Peoples and was never rebuilt. The powerful Mycenaeans and Egyptians also fell into decline at this time. The Phoenicians took full advantage of this window of opportunity and spread trading outposts westward the full length of the Mediterranean Sea, recovering their position as major sea traders.

Among the remarkable papyrus scrolls found in Egypt is one written by an official named Wenamun, who went to Byblos to buy a cedar boat for his temple around 1075 BCE. This journal of his trip gave a firsthand look into this coastal city at that time. It also suggests how the much-

earlier cedar boat came to be buried beside the Great Pyramid and underscores the long-standing trading relationship between these two lands.

—Sanford Holst

Bibliography

- Bikai, Patricia. *The Pottery of Tyre*. Warminster, UK: Aris and Phillips, 1978.
- Herodotus. *The Histories*. Translated by Robin Waterfield. Oxford: Oxford University Press, 1998.
- Holst, Sanford. *Phoenicians: Lebanon's Epic Heritage*. Los Angeles: Cambridge and Boston Press, 2005.
- Lichtheim, Miriam. *Ancient Egyptian Literature*. Vol. 2, *The New Kingdom*. Berkeley: University of California Press, 1976.

Sailing through the Gulf

By 2500 BCE, major changes occurred in the pattern of trade among Mesopotamia, the Iranian plateau, South Asia, and the regions now known as the Gulf States. Sumer ceased direct trading across the Iranian plateau, becoming instead a key player in the Persian Gulf, where it had long-standing trade links. Here it interacted with three countries: Dilmun, Magan, and Meluhha.

Earlier, the name “Dilmun” had been applied to the Arabian coast around Tarut, but during the third millennium it came increasingly to mean Bahrain. The island is blessed with sheltered harbors and sweet water and was a three-day sail from Sumer. Seagoing ships could put in at Dilmun to take on water and fresh supplies, including the island’s exceptionally fine dates. Agricultural land on the island is limited and probably became inadequate to support the burgeoning third-millennium population. In exchange for imported grain, Dilmunites could offer fish, mother-of-pearl, and “fish-eyes” (pearls). Increasingly, Dilmun also served as an entrepôt, exchanging Mesopotamian goods for materials imported from farther south. Its role in international trade is underlined by the presence of weights on two different standards, that of Mesopotamia and that of Meluhha. Large warehouses and the island’s distinctive Persian Gulf seals—round stamp seals bearing motifs such as two people drinking from a vessel through straws—attest to the importance of trade to Bahrain, supported by the frequent mention of Dilmun in

Sumerian texts as the source of many commodities that the island could not have produced.

These included copper, which in reality came from Magan, as did diorite. Like Dilmun, Magan probably shifted its geographical focus through time, including within its purview the Makran coast of Iran, but in the later third millennium it referred mainly to Oman. Substantial copper deposits on the Omani peninsula were mined by 2500 BCE. Maysar in the Wadi Samad has remains from various stages in processing copper ore. Pottery and other imported items found in burials and at Umm-an-Nar on the west coast attest to relations with traders from farther north, and on the east coast the fishing village of Ras al-Junayz traded with people from the Indus Valley who sought their copper and bitumen and perhaps materials imported from farther west along the Arabian coast.

To the Sumerians, these Indians’ homeland was known as Meluhha, the source of many essential and luxury goods—fine timbers, ivory, gold, agate and carnelian, and other exotica such as haia birds (peacocks)—although they may never have visited it themselves. The Indus town of Lothal in Gujarat, through which some of the trade was channeled, has yielded abundant evidence of warehouses, tradeable goods and materials, and Indus seals—square steatite stamp seals bearing a motif and a short inscription, alas as yet undeciphered (and probably undecipherable)—as well as a Persian Gulf seal. If foreign traders came here at all, it seems that they were from Dilmun.

The Meluhhans, however, certainly traveled to Dilmun and Sumer. Persian Gulf seals and cylinder seals have been found bearing Indus-style motifs and inscriptions in the Indus script but with unfamiliar sign sequences, suggesting non-Meluhhan words. A fine cylinder seal identified its bearer as a “Meluhha interpreter.” In the Ur III period, Lagash was said to have had a village of Meluhhans in its territory, presumably a trading colony. One of the Meluhhans’ most valuable exports was lapis lazuli, the former mainstay of trade across the Iranian plateau. They did not prize this material themselves, preferring harder stones that could take a high polish, but they went to the lengths of establishing a colony at Shortugai in Afghanistan to monopolize the

supply of lapis to West Asia. Shortugai may also have been used to control trade in other Afghan valuables, notably tin ore, which now reached Mesopotamia via the Gulf.

Sargon of Akkad boasted that ships of Meluhha docked at Akkad; Ur's quays also saw trading ships arriving from the south. Numerous Akkadian and Ur III texts record goods issued to and received from merchants engaged in the Gulf trade. But in 2004 BCE, Ur was sacked, and the highly bureaucratic Ur III empire gave way to smaller political units centered on individual city-states. Gone was the capital and financial security needed to fund large-scale ventures. Merchants continued to trade, but their ships were smaller (40 gur maximum, a marked contrast to the vast 300-gur ships of former times) and their voyages more restricted, going no farther than Dilmun, whose role as middleman now increased significantly.

Further changes were soon to come. From around 1800 BCE, the Indus civilization experienced the decline and eventual collapse of city life. Rural communities, and in some areas towns,

continued to flourish, but the era of international trading ventures was over. At much the same time, the political heart of Babylonia shifted northward to Babylon. Sumer ("Sealand") became a backwater, and for some centuries Mesopotamia ceased to be involved in Gulf trade.

—Jane R. McIntosh

Bibliography

- Bass, George F. "Sea and River Craft in the Ancient Near East." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Crawford, Harriet. *Dilmun and Its Gulf Neighbours*. Cambridge: Cambridge University Press, 1998.
- Hawkins, J. D., ed. *Trade in the Ancient Near East: Papers Presented to the XXIII Rencontre Assyriologique Internationale*. London: British School of Archaeology in Iraq, 1977.
- McIntosh, Jane R. *The Ancient Indus Valley: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2008.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ratnagar, Shereen. *Trading Encounters: From the Euphrates to the Indus in the Bronze Age*. Delhi: Oxford University Press, 2004.

■ Introduction: Modes of Transportation

Other than walking, there were three main modes of transportation during the period between 4000 and 1000 BCE: by boat, by horse, or by pack animal/draft animal. The use of these three modes of transportation was profoundly important. Humans could travel longer distances more readily, with greater speed and less exhaustion. They were not limited to what they could physically carry; thus, new trade and migration possibilities became available. Interregional connections were facilitated, since messages could be sent quickly and goods and ideas could be exchanged.

For long-distance travel, sea and river travel were by far the most important modes. Water allowed large (and heavy) amounts of goods to be easily transported. Watercraft were significantly faster than any overland modes of transportation. Sea and river travel were, however, limited

by the season; in certain times of the year (depending on the location) it would have been too dangerous to travel on water, or, as in the case of the Mediterranean Sea, seasonal winds and currents would have made transportation too difficult, given the available technology.

Horses were important in much of Asia during this age, allowing nomadic and seminomadic people to utilize vast expanses of territory in their subsistence regimes. The domestication of the horse also allowed chariots and cavalry to become important components of warfare. Draft animals, such as oxen, allowed people to travel overland with heavy loads. People could ride in or walk beside wheeled carts pulled by these strong animals over long distances. Donkeys could carry smaller loads on their backs or could carry a human passenger. In general, donkeys were more suitable for transportation over

smaller distances and were commonly used for day-to-day transportation within a community.

Wheeled transport was an incredibly important technological development that seems to have developed independently in the Near East and China. Without engines, wheeled transportation had to be pulled by a horse, a draft or pack animal, or a human. As wheeled transport became more sophisticated, land transportation became more feasible. This technology also led to innovations in military strategy (the chariot) and agricultural technology (the plow).

—Kevin M. McGeough

Seafaring and Navigation, 4000–1000 BCE

During the fourth to the first millennia BCE, seafaring significantly expanded its role in human history. Since earliest times, people had used sea transport for fishing and exploration. They also used seafaring to settle new lands. People had crossed wide expanses of water to populate islands in many parts of the world as early as 50,000 years ago. Ireland, Crete, Cyprus, Sri Lanka, Australia, Sumatra, New Guinea, Taiwan, Japan, and the Philippines are just a few of the places where emigrants crossed wide bodies of water to settle new lands. Then, with the emergence of the civilizations in the regions of the Nile, Tigris, Euphrates, and Indus rivers about 6,000 years ago, seafaring developed into a major commercial and political element of complex urban centers. Archaeological and other evidence provides a picture of ships of the time carrying people, materials, and goods overseas in the eastern Mediterranean and the western Indian Ocean. Sailing in the time period becomes a major ingredient in international trade, with sea transports carrying large amounts of goods to markets, natural resources to manufacturing sites, and military men and equipment to protect and extend commercial interests.

The significant role of maritime trade in the fourth to first millennia BCE is well exemplified by its participation in the bronze industry of the eastern Mediterranean. Large amounts of tin and copper, the essential alloys of bronze, were carried by sea throughout the region during this period. A cargo of metal ingots in one vessel un-

covered by nautical archaeologists, for example, measured more than 11 tons. Furthermore, tin was imported by sea to the island of Cyprus, a major center of the manufacture of bronze objects, from as far away as Great Britain. The bronze tools, weapons, and other objects made on the island were then distributed by sea transport to sites in the Aegean, the Levant, and Egypt. This extensive commercial activity soon attracted piracy and sea marauders. To protect the maritime commerce, military leaders began to carry troops and supplies in ships to guard the sea routes, repulse pirates and marauders, and also expand their spheres of influence both on the sea and on the shore. Control of the sea and naval battles became a part of political and military history.

Commercial and trading interests of the earliest civilizations had recognized that ships were the cheapest, safest, and fastest means of transporting goods over large distances. Furthermore, seagoing peoples had developed the technology for constructing vessels with large carrying capacities and the ability to navigate them successfully over the open sea. While the evidence for the extent and impact of seafaring during the three millennia considered here is incomplete, the historical records, pictographs, and traditional archaeological research have provided us with an overall picture of the times. Furthermore, there has been a significant increase in our knowledge during the last 50 years due to ethnographic research among seagoing peoples and new developments in archaeology. From the ethnographic research, we have learned how it was possible for ancient mariners to navigate over open seas without modern instruments. At the same time, new discoveries around the world have provided us with a more detailed picture of the materials transported, the life of sailors, and the character of the vessels used in the early maritime trade. In particular, the introduction of nautical archaeology has made possible the close examination of ancient shipwrecks never before accessible to investigators. These additional sources have provided us with a greater appreciation of the role that early seafaring played in human history.

One of the technological advances that enabled the transportation of large amounts of

> ULU BURUN



Copper plano-convex or 'bun' ingot with incised marks perhaps denoting ownership. This particular mark may represent a ship's quarter rudder. (Institute of Nautical Archaeology)

The Ulu Burun shipwreck is one of the most important finds in Bronze Age archaeology because it is a snapshot of the Mediterranean Bronze Age trade network. In the 1970s archaeologists found the remains of a ship lying on the sea floor off the coast of present-day Turkey near the village of Ulu Burun. The ship sank with all of its cargo more than 3,000 years ago (ca. 1320 BCE according to dates obtained from tree rings). At the time it sank it was carrying mostly raw materials, especially large ingots of tin and Cypriot copper. The ship also carried raw glass, ebony wood, containers of foodstuffs and spices, and quantities of Mycenaean pottery. The mixed nature of the materials on board, some coming from Egypt, the Levant, Cyprus, and the Aegean, makes it almost impossible to pinpoint where this ship originated or who was manning it. It is therefore a superb demonstration of the international flavor of Late Bronze Age society.

—Susan Helft

material was the construction of plank boats. While it was possible to carry tons of cargo on large log rafts (they were used for seafaring along the South American coast in more recent times), the number of vessels involved and the large tonnage of materials transported were better served by planked boats. The planks were cut from logs and then sewn together to make the shell of the ship. Mortise and tendon joints were also used to prevent the separation of the planks, and the hull was caulked to ensure its seaworthiness. No metal fasteners of any sort were used. These techniques enabled shipbuilders to construct vessels that extended the length, width, and freeboard of vessels far beyond that of any previous vessels. Sewn-plank boat construction continued to be used for carrying tons of cargo over long sea voyages until recent times. Large cargo vessels with this style of construction were still carrying cargo between India and Africa during the last century.

The international sea trade saw another technological advance in the use of sail power. Although sails were in use earlier, during the fourth to first millennia the standing rigging, control lines, anchoring devices, sails, and steering mechanisms on seafaring vessels saw numerous developments. Various styles of rigging were devised, many of which are still used today. Lateen, brailed square sails, and a form of Marconi rigging (with bendy, adjustable mast) enabled mariners to control a vessel without difficulty under normal conditions and adjust the sails when weather deteriorated. Combined with knowledge of the seasonal winds, rapid long-term voyages could be undertaken with increased certainty of survival. Furthermore, a vessel could easily travel 24 hours a day with a limited amount of crew.

Long-distance seafaring requires a number of basic elements. One is seaworthy vessels, and it has become clear that these were in use 6,000 years ago from the material evidence recently uncovered by nautical archaeologists. Long-distance seafaring also requires navigational techniques that ensure traveling out of sight of land and arriving in a timely fashion at a destination. The ability to secure sufficient food and water for the sailors during an extended voyage is also required. While there is some direct evidence of these capabilities provided by historical docu-

ments, most of what is known today is derived from ethnographic accounts of contemporary seafaring peoples. Seafarers have used birds for thousands of years to locate land; this was one of the navigation devices widely utilized. Early seafarers developed at least a portion of the knowledge known today among navigators in Oceania of sea animals, astronomical events, currents, winds, clouds, and bioluminescence that have enabled Polynesians, for example, to travel for hundreds of miles out of sight of land to find an island no larger than several city blocks. There is no doubt that long before the invention of the quadrant, the compass, and the clock, ancient seafarers had developed the ability to successfully navigate in open water. They also had fermented fruit, fruit pastes, dried shellfish, coconuts, and fire hearths aboard their ships that enabled them to travel for long distances without replenishing food and water.

—Martin Ottenheimer

Bibliography

- Bass, George F., ed. *A History of Seafaring Based on Underwater Archaeology*. New York: Walker, 1972.
- Casson, Lionel. *Ships and Seamanship in the Ancient World*. Baltimore: Johns Hopkins University Press, 1995.
- De Graeve, Marie-Christine. *The Ships of the Ancient Near East (c. 2000–500 B.C.)*. Leuven: Departement Orientalistiek, 1981.
- Pulak, C. “The Uluburun Shipwreck.” In *Res Maritimae: Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity, Nicosia, Cyprus, October 1994*, edited by S. Swiny, R. L. Hohlfelder, and H. W. Swiny. Atlanta, GA: American Schools of Oriental Research Archaeological Reports No. 4., 1997.
- Pulak, C. “The Uluburun Shipwreck: An Overview.” *International Journal of Nautical Archaeology (IJNA)* 27 (1998): 188–224.
- Wachsmann, Shelley. *Seagoing Ships & Seamanship in the Bronze Age Levant*. College Station: Texas A&M University Press, 1998.

Ships, Boats, and Watercraft

The first boats appear well before the first states, probably around 10,000 BCE. In the third millennium BCE, however, water transportation became increasingly more important as Egyptian

➤ THE PERILS OF EXPERIMENTAL ARCHAEOLOGY—THE OMAN BOAT PROJECT

On September 7, 2005, an international experiment that attempted to replicate ancient sea transportation methods began and ended. A team of scholars had reconstructed a reed boat covered in bitumen, replicating the types of boats thought to have been used by sailors from ancient Oman. The eight-person crew had prepared for a long and difficult journey from Oman to India, replicating a travel route thought to have been used by ancient mariners. A few hours after setting off the ship sprung a leak, and the sailors had to be rescued by the modern boat carrying the rest of the team. The project was subsequently canceled.

—Kevin M. McGeough

and Mesopotamian civilization developed. Mesopotamia depended heavily on irrigation agriculture, and thus numerous artificial canals were built from the Tigris and Euphrates throughout the countryside. The Egyptians utilized the overflowing of the Nile’s banks in order to irrigate their crops; controlling this flooding also demanded the construction of artificial canals. Since most Egyptian settlements were situated along the Nile River, river travel made sense. Thus, in both areas sophisticated ship-construction techniques developed by as early as 3500 BCE. These early craft would have been towed by individuals walking on either side of the narrow canals, rowed by oarsmen on the boat, or punted using large poles to propel the boat through the marshes.

The earliest evidence for Egyptian ships comes from artistic motifs found on Predynastic tomb walls (Hierakonpolis) and on ceramic vases. These vessels are not depicted in much detail, but some general observations can be made. The ships were sickle-shaped and may have had masts. The ships seem to have numerous oars projecting out from the hull, but no rowers are apparent. None of the images are depicted to scale since the figures standing on board dwarf the vessels.

At the Egyptian cemetery of Tarkhan, planks from an ancient ship were recovered. Since

these planks have survived, it is possible to make some observations on early ship construction. The planks were sewn together but also made use of mortise and tenon joints. Mortises are rectangular holes drilled into the sides of the planks; a tenon is a peg inserted into these holes to bind planks. The combination of these two building techniques kept the vessels watertight. These vessels were alternate ended, meaning that either end could function as the prow or stern. This was necessary since the narrow canals on which these ships floated would not allow the vessel to turn fully around.

The remains of actual Egyptian ships have been recovered from funerary complexes. Believing that death involved a ship voyage through the afterlife and that anything buried with the deceased could be used in the next world, some kings were buried with ships. One of the most important early ship burials is located at the site of Abydos, associated with the grave of the Early Dynastic king, Den. Den's ship was over 50 feet (15.2 meters) long and constructed in a manner similar to that found at Tarkhan.

A significantly larger vessel has been recovered from the complex of the Great Pyramid at Giza. Two boats were discovered; one was left in the sand, and one is on display in a small building next to the pyramid. These were King Khufu's boats and, like his pyramid, were quite large, over 150 feet (45.7 meters) long. Made of cedar imported from Lebanon, these were the most expensive types of ships available in Egypt at the time. Even given the size and cost, they were still constructed of mortise and tenon planks lashed together.

Ships from ancient Thera may also have been built according to Egyptian standards. Miniature frescoes found on the walls of the West House in Akrotiri, which was destroyed by a volcanic explosion, depict Minoan ships. These ships were probably double-ended like Egyptian vessels; both masts and oars are depicted on the ships as well. This is different from later Greek vessels, which have one elongated end that projects outward and were primarily powered by rowing.

Outside of Egypt, there was more diversity in ship construction. In Oman, reeds were lashed together and covered with bitumen. These ves-

sels could have had sails or oars. Cuneiform texts from Mesopotamia discuss the boats of Meluhha, Dilmun, and Magan (and use the place name for the ships from those regions). The Mesopotamians believed that these vessels differed significantly. Canaanite ships were well suited for transporting cargo with a small crew. They had rounded hulls and traveled very slowly. A merchant ship flotilla from Canaan is depicted on the walls of the tomb of Qenamun in Egypt. The Ulu Burun shipwreck, excavated off of the coast of Turkey, was this type of vessel.

—Kevin M. McGeough

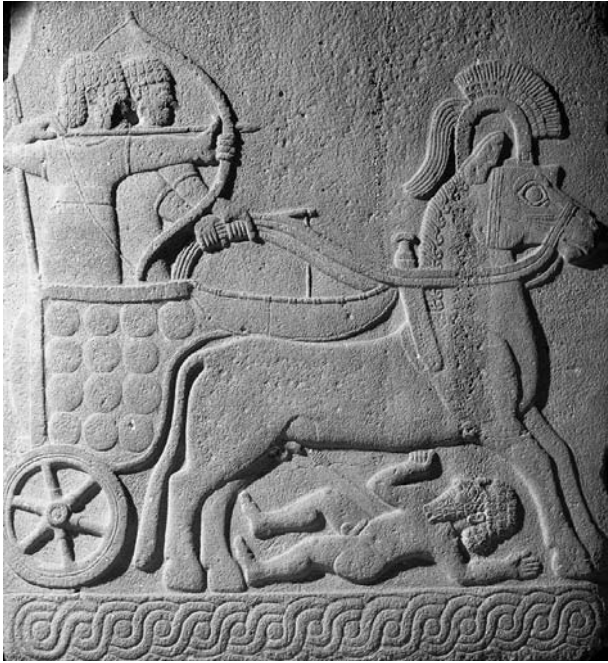
Bibliography

- Casson, L. *Ships and Seafaring in Ancient Times*. London: British Museum Press, 1994.
- Raban, A. "The Thera Ships: Another Interpretation." *American Journal of Archaeology* 88(1) (January 1984): 11–19.
- Stieglitz, R. "Long-distance Seafaring in the Ancient Near East." *Biblical Archaeologist* 47(3) (1984): 134–142.
- Tilley, Alec. *Seafaring on the Ancient Mediterranean: New Thoughts on Triremes and Other Ancient Ships*. Oxford, UK: John and Erica Hedges, 2004.
- Vinson, S. "Ships in the Ancient Mediterranean." *Biblical Archaeologist* 53(1) (1990): 13–18.
- Ward, Cheryl A. *Sacred and Secular: Ancient Egyptian Ships and Boats*. Dubuque, IA: Kendall/Hunt, 2000.

Horses

Horses were among the last animals domesticated in the Old World. As such, they were more specialized in their use than most other domesticated species. Until the late Iron Age, for the most part horses were used only in warfare or by the nobility. Even in warfare their role was limited by lack of the stirrup, which made riding them in battle difficult. Therefore, horses were most commonly used to draw war chariots.

The domesticated horse (*Equus caballus*) was first tamed somewhere in Russia or Ukraine about 4000 BCE by the forebears of the people who today speak Indo-European languages. Some of these horse-using groups migrated south and east and came into contact with the urban cultures of the ancient Near East. Some groups were assimilated into the Hurrian groups living



Hittite archer on a chariot with charioteer, Anatolia, ninth century BCE. (Gianni Dagli Orti/Corbis)

in Anatolia, where they formed the empire of Mitanni. Other Hurrian groups also played an important role in the Hittite empire and spread their culture southward into the Levant. With them they brought the use of horses as carried by a group of elite chariot-using warriors called the *maryannu*, a Mitannian term meaning “prince or noble.” The earliest attested horse-training manual comes from the Hittite capital at Boghazkoy and is written in Hurrian.

The introduction of chariotry to the military technologies of the region made possible the first empires. During the New Kingdom, Egypt dominated the Levant as a result of their chariotry. In Anatolia, the Hittites become a major force in the region thanks in part to this technology.

Horses first arrived in Mesopotamia around the end of the third millennium. They are mentioned as *ANSHE-KUR-RA* or “asses from foreign countries.” In the Mari letters, *sisu* horses are also mentioned for the first time. In the Mesopotamian world, the Assyrian empire arose largely as a result of its massive chariot force. Chariotry provided the shock and awe of their day by adding a mobility and surprise factor that heretofore had been lacking. The Harappan or Indus Valley civilization may have come to an untimely end

as a result of invasion by Indo-European horse-riding nomads around 1500 BCE. The wide use of horses as beasts for burden and as riding animals would await developments in the Iron Age and the increased availability of horses to average people.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford, 2000.
- Borowski, Oded. *Every Living Thing: Daily Use of Animals in Ancient Israel*. Walnut Creek, Ca: AltaMira, 1998.
- Grigson, Caroline. “Plough and Pasture in the Early Economy of the Southern Levant.” In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford, 2000.
- Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.

Donkeys

Donkeys (*Equus asinus*) played an important role in the economies of the ancient Near East. The wild forebear of the donkey was the wild ass (*Equus africanus*), native to both Africa and West Asia. It was likely domesticated independently in both regions. The first domesticated donkeys are thought to have appeared around 4000 BCE, with the oldest remains found so far at the site of Tell Rubeideh in Iraq, dating to the Uruk period levels at that site. Early evidence has also been found in Egypt in the form of third-millennium BCE donkey burials. Evidence for their early domestication in Mesopotamia can also be seen in the earliest cuneiform writing, which includes a sign for the word *ANŠE* (donkey) consisting of the stylized view of a donkey’s head.

Donkeys and wild asses were well adapted to life in desert climates. They handle heat well, do not need much water to survive, and are happy living off of desert scrub. This, in addition

► THE DONKEY—A FORM OF TRAVEL STILL USED TODAY

Thanks to the adaptability of the donkey in harsh climates, its calm nature, and its ability to haul a great deal of weight, donkeys are still commonly used today throughout the world as beasts of burden. Unlike horses that are often high-strung and expensive and require a great deal of care in poorer locales, donkeys make for an inexpensive alternative to tractors, cars, and trucks. In modern Turkey, for instance, it is still common to see donkey carts carrying produce to market.

—David R. Lipovitch

to their ability to haul great weight, made them ideal animals for crossing the distances between Egypt and the Levant and Nubia and between North and South Mesopotamia and Syria. The domestication of the donkey made long-distance trade between these various groups much easier and allowed the spread of new technology and innovation in a manner that took place at a much slower rate before their domestication. In addition to their use in donkey caravans, they were often used as an everyday beast of burden, hauling plows or carts or carrying loads for farmers. They only begin to be gradually replaced by horses in Mesopotamia during the Kassite period (1602–1595 BCE). They were also used for short-distance travel as riding animals. Their physique, however, made them uncomfortable for longer journeys or for riding at high speed.

Before the introduction of the horse, donkeys were crossbred in Mesopotamia with onagers (a form of wild ass) to produce mules. The high-spirited onagers loaned a temperament to these mules that was prized for use in hauling early chariots. Thanks to both historical documentation and archaeology, we know of Egyptian convoys of donkeys at the end of the Old Kingdom traveling as far south as the Fifth Cataract. Earlier donkey caravans between Egypt and the Levant of the Chalcolithic (4300–3300 BCE) and Early Bronze Ages (3300–2000 BCE) may be at least partially behind the development of complex cultures in that region. The tomb paintings at Beni Hasan from the Middle Kingdom (ca. 1900 BCE) show Semitic traders visiting Egypt

and carrying their wares and equipment on donkeys. Evidence in the form of donkey remains in the Levant show their presence as early as the Chalcolithic period at Teleilat Ghassul (ca. 3000 BCE).

In Bronze Age Mesopotamia, donkeys made possible the trade colonies and networks that existed between Anatolia and Assyria for trading Anatolian tin and Mesopotamian textiles. They also played a key role in the growth of major trade centers such as the Bronze Age Mari in Syria, where caravans of 3,000 donkeys are recorded. In Second Intermediate period Egypt (1650–1550 BCE), the presence of donkey burials is a sure sign of the presence of the Hyksos, foreign rulers of Egypt originally from the Levant. During the Late Bronze Age (ca. 1550–1200 BCE), the Amurru (the biblical Amorites) were renowned in Mesopotamia for their donkey breeding. Their prize donkeys were used only by the wealthiest farmers and caravaners.

—David R. Lipovitch

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. Oxfordshire, UK: Andromeda Oxford, 2000.
- Borowski, Oded. *Every Living Thing: Daily Use of Animals in Ancient Israel*. Walnut Creek, CA: AltaMira, 1998.
- Grigson, Caroline. "Plough and Pasture in the Early Economy of the Southern Levant." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1992.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford, 2000.
- Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.
- Wenke, Robert J. *Patterns in Prehistory: Human-kind's First Three Million Years*. Oxford: Oxford University Press, 1984.

Wheeled Transportation

Without a doubt, the wheel was invented long before 4000 BCE. Yet the first wheel recovered intact from an archaeological site dates to about 3500 BCE and comes from ancient Sumer.

Wheeled vehicles appear in early cuneiform writing (at this stage still pictographs). These vehicles (if they can be taken as such) were simply wooden planks set atop wheels. By 3000 BCE wheeled vehicles in Sumer were more complex. Artistic depictions of battles feature four-wheeled carts pulled by what may be donkey (or possibly oxen). A similar device emerged in Europe around 3000 BCE. Whether it was based on the Sumerian wagon or a separate European innovation is unclear. The earliest depiction of a wheeled wagon may actually be European. The wheels of these vehicles were massive, cut from a single piece of wood (from trees that would have to have been more than 400 years old). Wagons were buried with warriors in parts of eastern Europe, and some have been fully recovered by archaeologists. Model carts found in the Indus Valley, dating to as early as 2600 BCE, attest to the use of the wagon in that region as well, there pulled by oxen.

In Egypt, wheels were less useful for transportation given the sand and marshes that were typical of the region. Travel on the Nile River was much more efficient (and to some extent still is today). Yet given the Egyptian propensity for constructing monumental architecture consisting of heavy pieces, something was necessary to drag these components across the desert landscape. The solution to this was the sledge. A sledge looked much like a gigantic sleigh. The sledge would be guided onto rollers (usually wooden logs) and could be dragged over the logs. The logs would roll and facilitate the movement of the sledge (and its heavy load). Logs that had already been rolled over would be removed from behind the sledge and resituated in front, allowing the sledge to be pulled with a finite amount of rollers.

The development of the spoked wheel allowed for the construction of the first chariots, primarily intended for combat or display. Drawn by horses, chariots could move substantially faster than wheeled wagons. In combat, the

➤ THE FIRST IMAGE OF THE WHEELED WAGON

In 1976 archaeological excavations at the Neolithic site of Bronocice in Poland uncovered what may be the first image of a wheeled wagon. Incised on what has come to be called the Bronocice Pot were images of what may be five wagons. Each image appears to be a slightly skewed form of a bird's-eye view, although the perspective is quite skewed (if the images are wagons). At the outer edge of each corner of a rectangle is a circle, perhaps a wheel. A circle rests in the middle of the rectangle, perhaps a human or a ceramic vase. A triangular shape extends out of the front of the rectangular shape, terminating in a long single line. Perhaps this was where an ox would have been yoked. Other imagery on the pot depicts a tree, a river, and perhaps roads. Dated from 3635–3370 BCE, if these are wagons then they are the earliest depictions.

—Kevin M. McGeough

chariot functioned as a mobile firing platform, allowing an archer to move over the field. It was also used in parades of kings and higher officials, especially in Egypt. The chariot appeared throughout Asia, from Anatolia to China, and in Africa, Egypt, and eastern Europe.

—Kevin M. McGeough

Bibliography

- Barbieri-Low, Anthony. "Wheeled Vehicles in the Chinese Bronze Age (c. 2000–741 b.c.)." *Sino-Platonic Papers* 99 (February 2000): 1–97.
- Littauer, M. A., and J. H. Crouwel. *Wheeled Vehicles and Ridden Animals in the Ancient Near East*. Leiden: E. J. Brill, 1979.
- Piggott, Stuart. *Wagon, Chariot, and Carriage: Symbol and Status in the History of Transport*. London: Thames and Hudson, 1992.
- Shaughnessy, E. "Historical Perspectives on the Introduction of the Chariot into China." *Harvard Journal of Asiatic Studies* 48(1) (1988): 189–237.

■ Introduction: Thinking about Foreign Lands

As the first states emerged, new conceptions of thinking about the self and others also emerged. Groups were no longer construed solely along familial or tribal lines. Many people came to see themselves as part of a larger ethnic group or polity. Egyptians saw themselves as Egyptians and as distinctly different from other groups that inhabited the Near East. Nubians, for example, could come and live and work in Egypt, but they were not Egyptians. Likewise, Egyptians could move to Syria, but they remained Egyptians. An important part of this development of group self-understanding was the identification of who was not part of the group. This process, which scholars call “othering,” most often involved an explicit discussion of the differences of people conceived as foreign (as opposed to explicit attempts to define what makes members of the group belong). Othering was part of a long-term discourse, as conceptions of who was and was not part of the group changed over time. In studying this ancient discourse of otherness, scholars keep in mind that many of the statements about so-called foreigners in ancient texts and artwork inform more about the group that created the account rather than the group about whom the account was created.

The greater contact among different groups in this period mixed with the more sophisticated means of expression available (most importantly the development of writing) led to new types of descriptions of the “other.” Artists depicted people from other lands using stock imagery that reflected the realities of foreign dress and appearance but marked them as distinctly different from the local population. The first travel stories were written and allowed non-travelers to experience the cultures of distant locales without ever venturing away from their own community. Stories that do not explicitly involve travel were often set in far-off locales, providing insight about regions away from home. Military narratives were numerically the most common types of accounts of foreign lands. More often than not, foreigners were depicted as faceless, dangerous hordes that were valiantly dispatched by the royal army.

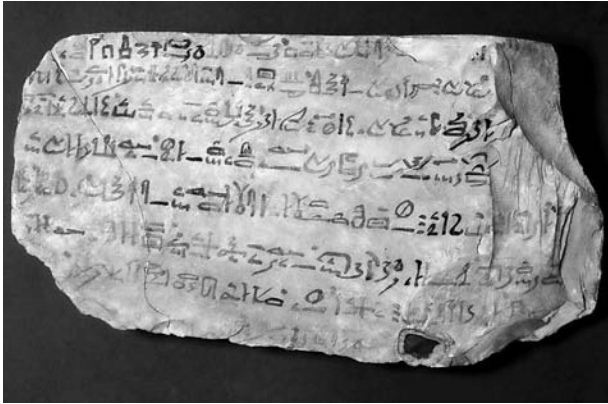
—Kevin M. McGeough

The Tale of Sinuhe

The Tale of Sinuhe ranks as one of the most important and well-documented pieces of literature from ancient Egypt. Surviving versions of the text include 5 papyrus copies from the Middle Kingdom and Eighteenth Dynasty and some 30 shorter excerpts from later in the New Kingdom. The latter group consists primarily of schoolboys’ copies inscribed on potsherds or limestone fragments (both of which are known as ostraca), which were copied as part of the scribal training curriculum. The tale is an acknowledged masterpiece of classical Egyptian verse and abounds with high-flown diction and deliberately crafted grandiloquent narrative.

The story is presented in the form of an idealized funerary autobiography. Early researchers tended to interpret it as being based upon, or even directly copied from, the autobiography of an actual official who lived at the beginning of the Middle Kingdom. However, virtually all research in more recent decades has been unanimous in recognizing Sinuhe’s tale as a self-consciously literary composition that merely uses the autobiographical form as a framing device for the central theme of travel abroad. Despite its fictitious character, the Tale of Sinuhe provides a useful window into Egyptian perceptions of their neighbors, which was informed by their own cultural interaction, trade, and military presence in foreign lands from the Sinai to Byblos.

The basic plot can be summarized as follows. An Egyptian official of modest rank named Sinuhe (“Son of the Sycamore”) is returning from a military excursion near the Egyptian-Libyan border under the command of the crown prince, Senwosret. News reaches them that the king, Amenemhat I, has died. For reasons that are left deliberately ambiguous, Sinuhe becomes gripped with terror at the thought of possible revolt breaking out at the capital, and he flees abroad. Passing from Egypt across the Sinai, Sinuhe’s flight eventually brings him to Retjenu (Syria-Palestine) and the forests of Qedem, a major Lebanese cedar-producing area, east of Byblos. From there, a local chieftain named Amuneshi meets



Ostrakon of *The Tale of Sinuhe*. Probably from Thebes, Egypt, Nineteenth Dynasty, around 1250 BCE. (British Museum/Art Resource, NY)

the wayward Egyptian and is impressed by his stories of Egypt's prosperity and the high praise given to its new king, Senwosret I. As a result, Amuneshi invites Sinuhe into his tribe, elevating him above even the chief's own children. Amuneshi then offers his eldest daughter to Sinuhe as a bride and grants him dominion over a veritable land of milk and honey called Yaa, which he governs with great success, conquering neighboring countries and tribes and siring children of his own. The turning point of the story comes with a duel between Sinuhe and "the strongman of Retjenu . . . a hero without equal," who hoped to seize Sinuhe's considerable landholdings for himself. This episode has often been compared with the much later biblical tale of David's combat with Goliath. Like David, Sinuhe slays the hulking brute and seizes his possessions, thereby growing in fame and importance. Following his victory, Sinuhe is again overcome with emotion, but this time it is a profound longing for Egypt that grips him, in contrast with his earlier desire to flee. A correspondence with King Senwosret ensues in which Sinuhe is assured of his safety if he should return. Sinuhe then leaves his Asiatic family and landholdings and returns to Egypt to throw himself on the king's mercy. When Sinuhe reaches the royal court, the king heaps praise upon him, restores him to his former status, and makes provisions for Sinuhe's proper Egyptian burial, even granting him the highly unusual privilege of a pyramid tomb in the royal necropolis.

—Joshua Roberson

➤ SINUHE'S MORALITY

To the modern reader, Sinuhe appears to be a rather unsympathetic hero. He is egocentric, he exhibits cowardice as a deserter, and he abandons his family when they fail to satisfy his spiritual malaise. The point of the story for the ancient Egyptians, however, would have been much different from our own. Perhaps the most important moral, from the Egyptian perspective, is that life abroad may seem enticing and adventurous, but even great success achieved in a foreign land is a pale reflection of modest happiness in Egypt, a proper burial, and the blessings of the king.

—Joshua Roberson

➤ CONVENTIONS OF "OTHER" IN EGYPTIAN ART

Foreigners were frequently depicted in Egyptian art. Often, foreigners were used to artistically indicate chaos incarnate. Hence, the king is often visualized in Egyptian art slaying foreigners. Related to this, foreigners were portrayed on the sole of the royal sandal, the tiles of the palace, footstools, and other places the king was wont to tread, causing the king to regularly trample over his foreign enemies and thus continually defeat chaos. During some eras, it was common to depict foreigners as being bound not by cords but instead by the two heraldic plants of Egypt, demonstrating that conquering others was a necessary part of unifying Egypt.

Foreigners were featured in other roles in Egyptian art, most notably in the exchange of goods. In contrast to Egyptian clothing, which did not hold dye well, foreigners were often depicted in flamboyantly colorful outfits. Egypt's immediate neighbors were each portrayed in a consistent manner in Egyptian art. The Nubian was typically shown with black skin, tightly woven hair, and jewelry. The Libyan was usually depicted with lighter skin, pointed beard, a penis sheath, and a feather. The Semite was shown with lighter skin and fuller beards. For each group Egypt regularly encountered, an artistic convention developed that allowed the artist to unmistakably convey to his audience the ethnicity of his subject.

—Kerry Muhlestein

Bibliography

- Baines, John. "Interpreting Sinuhe." *Journal of Egyptian Archaeology* 68 (1982): 31–44.
- Bárta, Miroslav. *Sinuhe, the Bible and the Patriarchs*. Prague: Set Out, 2003.
- Parkinson, Richard B. *The Tale of Sinuhe and Other Ancient Egyptian Poems, 1940–1640 BC*. Oxford: Clarendon, 1997.
- Simpson, William Kelly. "The Story of Sinuhe." In *The Literature of Ancient Egypt*, 3rd ed., edited by William Kelly Simpson. New Haven, CT: Yale University Press, 2003.

Patriarchal Travel Narratives

In the Bible, the patriarchs were the male heads of Israelite families or clans. The earliest patriarchs were key and prominent figures in the history of ancient Israel, and their stories are found today in the book of Genesis, the first book of the Bible. The triumvirate of progenitors of early Israelite religion were Abraham, the first father of the ancient Israelites (Gen. 12–24); Isaac, his son, (Gen. 25–36); and Jacob, his grandson (Gen. 25–36). It is their stories that set up the larger narrative of the Hebrew Bible (Old Testament).

Today, the historicity of these patriarchs is largely contested due to the absence of direct archaeological evidence for their existence and a number of anachronisms found in the textual record (e.g., the attestation of Abraham's camels in Genesis 12:16, which were not domesticated until the second millennium), but many scholars agree that the literary depiction of the patriarchs' travels, lifestyle, economics, and social background found throughout Genesis largely support the historical milieu of the second-millennium Near East. No other period in ancient Near Eastern history, for example, supports the widespread travel of nonroyal persons throughout the Fertile Crescent.

Regardless of their historicity, the literary stories of the patriarchs, or what are more commonly referred to as literary cycles, with their origins based in early orality, only preserved later in time with the final written form of the book of Genesis, depict all of the nuances of a peripatetic lifestyle: land, water, and travel are the essential means of survival in the Middle East. The cycles are framed by genealogies that figure so prominently in the book of Genesis.

These genealogies are important for historians and archaeologists for reconstructing birth rights, land tenure and claims, pedigree, and the prestige of Israelite tradition. Family life was also an important concern in Genesis, and religion was practiced through the construction of altars and stone pillars at numinous sites. Commerce, politics, religious custom, and long-distance intertribal marriages form the conflicts of the oral stories and were at the root of the wide scope of travel for the patriarchs.

Abra(ha)m, the earliest patriarch and the father of Israelite religion, was originally from "Ur of the Chaldees" (Gen. 11:10–32). This location is the archaeological site of Tell el-Muqayyar, the famous city of Ur in Babylonia. The Genesis account records that Terah, the father of Abram, took Abram along with his brother Nahor and nephew Lot and moved them northwest of Ur to the city of Haran on the Balikh River. From there, Abram and Sarah, his wife, traveled southwest through Syria into Canaan to Shechem, Bethel, and the Negev. Although he dwelt in southern Canaan for most of his days, specifically the area of Hebron, he journeyed into Egypt twice during times of famine (Gen. 12 and 20) in the so-called wife-sister motifs, where he introduced his wife as his sister to the pharaoh of the day. Abram engaged in military skirmishes with local tribes (Gen. 14), participated in an eternal covenant with a patriarchal deity who changed Abram's name to Abraham (Gen. 17), and promised to him plentiful progeny, land, and a perpetual name (Gen. 12:2–3). Abraham begat a son with his wife's servant, Hagar (Gen. 16), engaged in a rite of circumcision (Gen. 17:27), and finally received his promised hereditary heir, Isaac, at the extraordinary age of 100 years (Gen. 21).

The cycle takes a sudden turn of events in Genesis 22 as Abraham is asked to sacrifice this firstborn and beloved son, Isaac, on Mount Moriah, but the binding of Isaac is overturned as Abraham's proven faith in the midst of his test of devotion demands God's interference: an animal is provided to serve as the replacement for a human sacrifice, and so the narrative serves as an etiology for the institution of animal sacrifice at the Israelite temple in Jerusalem. Abraham's place in the biblical tradition is preserved at the end of the cycle by the fulfillment of the eternal prom-

➤ WHEN DID THE BIBLICAL PATRIARCHS LIVE?

The exact date of the patriarchal periods within the scope of the second millennium is difficult to ascertain, and scholars vary between the Middle Bronze Age (2000–1500 BCE) and the Late Bronze Age (1500–1200 BCE), each one on the basis of the textual attestations to the various nomadic groups of the ancient Near East such as the Amorites, Hurrians, and Arameans. The excavation of key archaeological sites such as Ebla, Mari, and Nuzi along with the discovery of extensive cuneiform library archives in the palaces of these cities have aided in the historical reconstruction of the social background of the world of the patriarchs. For most scholars, then, the textual and archaeological evidences point to the Middle Bronze Age as the most plausible period of time for the travels of Abraham, Isaac, and Jacob. Cuneiform archives from Mari on the upper Euphrates refer to the Amorites, a group of seminomads, moving counterclockwise around the Fertile Crescent. And archaeological excavations at Beni Hasan in middle Egypt have uncovered wall paintings of seminomads entering Egypt from Canaan as part of the ancient donkey caravan routes. Furthermore, the patriarchs are frequently depicted in the book of Genesis as dwelling in tents next to large



Ruins of Ebla in present-day Syria. (James Gordon)

city-gates; architectural features are also attested in the archaeological record of the Middle Bronze period. Thus, the patriarchs were nomadic pastoralists by definition. They lived in tents, moved herds with the various seasons of the year, and eventually were well respected and wealthy in the geographical area of Canaan.

—William Zimmerle

ises of the covenant: he now has progeny, holds land, and has accumulated great wealth. He is interred in the burial plot that he has acquired from the Hittites at Hebron, and his death in Genesis 25 marks the end of a great patriarch but the beginning of a famed name and father of a multitude of Israelites, a fact that is retold many times throughout the entire biblical canon.

Isaac, the son of Abraham and Sarah, is second of the three patriarchs and is depicted in his Genesis cycles as naively innocent in comparison to his father, Abraham, and his son, Jacob. Like Abraham, Isaac traveled to Egypt because of the famine (Gen. 26) and repeated the mistakes of his father in a third wife-sister motif. He also returned to Mesopotamia, the land of his ancestors, in the pursuit of a long-distance marriage with Rebekah (Gen. 25). Although comparisons with the Abrahamic cycles reveal a sparsity of data available for Isaac's life, most of Isaac's

stories indeed center on the Negev Desert, specifically the area of Beer-Sheva.

Jacob, the final patriarch of the three, was probably a northerner, and his cycles place him in the region of northern Canaan, specifically Shechem and Bethel as well as northern Transjordan (Mahanaïm and Penueïl). Forced to flee Transjordan because of fraternal strife with his brother Esau (Gen. 27), Jacob went to Haran to visit his uncle Laban. Along the route, Jacob encountered the theophany of God at Bethel (Gen. 28), eventually married both Laban's daughters Leah and Rachel in Haran, and served Laban as a slave for 14 years before departing from Haran. During Jacob's return to Canaan, he encountered God again at Penueïl and, like his grandfather Abraham, received a name change from Jacob to Israel (Gen. 32). Eventually he reconciled his relationship with his brother Esau (Gen. 33), fathered the 12 sons of Israel, and

returned to Egypt to find his long-lost son Joseph in the final chapters of Genesis. Jacob, too, was buried in the field of the cave of Machpelah at Hebron, as recounted in Genesis 49–50, which serves as a reminder, along with the burial of the other two great patriarchs and their wives, of the covenant promises made between the Israelites' forefather Abraham and the God of their fathers.

—William Zimmerle

Bibliography

- Coogan, Michael D. "Patriarchs." In *Harper's Bible Dictionary*, edited by Paul J. Achtemeier. New York: Harper Collins, 1985.
- Kitchen, K. *On the Reliability of the Old Testament*. Grand Rapids, MI: Eerdmans, 2003.
- McCarter, P. Kyle. "The Patriarchal Age: Abraham, Isaac, and Jacob." In *Ancient Israel: From Abraham to the Roman Destruction of the Temple*, edited by Hershel Shanks. Washington, DC: Biblical Archaeological Society, 1999.

Mesopotamian Diplomacy

Foreign lands were often a source of desirable materials, which could be obtained either by diplomacy and trading or by aggression. Both strategies were variously employed by Mesopotamian states, depending on the nature of the players with whom they had to deal. Other lands could also be the source of aggression, whether raids by tribal groups or full-blown invasions by hostile states, or they might become allies against the aggression of third parties.

Traders and ambassadors played a key role in articulating international relations. The economic and political importance of their activities made it expedient for rulers to protect messengers and merchants traveling through their domains; where the local leader, whether settled king or tribal sheikh, could not maintain law and order, travelers were at risk from highwaymen or hostile natives. A messenger might therefore be a military man, furnished with a fast horse by the first millennium, and accompanied by an armed escort. The Neo-Assyrian kings built royal highways with way stations to expedite the movement of couriers throughout their lands. Rulers often issued their messengers a passport valid for a particular mission: this pre-

vented local red tape impeding his journey, although it did not guarantee safe passage beyond the messenger's own state. However, a reciprocal arrangement developed between states that wished to engage in diplomatic activity, the envoy being furnished with an escort by the state to whom he was sent; failure to supply such an escort was a strongly hostile sign.

Particular events might encourage an exchange of messengers, for instance expressing good wishes for a monarch's recovery from ill health or congratulations on a victory. Envoys (*mar shipri*) bore written messages, although they were often illiterate themselves. A senior envoy, a relative or close confidante of the king, might also be empowered to conduct oral negotiations. Although envoys were often treated well and generously entertained, they were at the mercy of the ruler to whom they were sent and could be visited with the displeasure or hostility he felt toward their masters or held as hostages.

Good relations were promoted and maintained by the exchange of gifts and by treaties negotiated orally or by letter and ratified by solemn oaths, whose breaking would call down devastating divine retribution. Their terms might include a commitment not to aid each other's enemies, agreements to repatriate runaways, and arrangements to support and protect merchants. Despite superficially good relations underwritten by treaties, there were often undercurrents of suspicion or friction between states, and diplomats were expected to keep their eyes and ears open as spies for their own ruler. Although treaties were often sealed by royal marriages, hostages might also be taken to encourage the honoring of commitments. Fugitive princes from overthrown regimes might also be kept as political pawns, to be used as a threat to keep the current monarch in line or installed as a puppet ruler. Failure to return such rival claimants to the throne, on the other hand, was a hostile gesture and could be a source of prolonged friction.

—Jane R. McIntosh

Bibliography

- Bryce, Trevor. *Letters of the Great Kings of the Ancient Near East: The Royal Correspondence of the Late Bronze Age*. New York: Routledge, 2003.

Collins, Paul T. "Diplomacy." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.

Meier, S. *The Messenger in the Ancient Semitic World*. Atlanta: Scholars Press, 1988.

Oller, Gary H. "Messengers and Ambassadors in Ancient Western Asia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000. First published 1995 by Scribner.

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World History Encyclopedia

Era 2: Early Civilizations, 4000–1000 BCE ■ Volume 4

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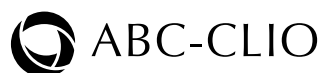
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Politics and Statecraft

For the ancient Egyptians, the Egyptian state was not merely a political entity in the manner in which states are conceived in the present. Egypt was a living entity that required careful maintenance and sustenance, like any organic body requires. Egypt was an inseparable unit, consisting of the land, its people, the animals and plant life, the deities, and anything else that fell within what were thought to be the natural borders. The king (called pharaoh in the New Kingdom) was the chief caretaker of this land. Thought to be of divine descent, the king protected the state from the forces of chaos that threatened the land. Ancient Egyptian literature uses numerous metaphors to describe the king's relationships to his subjects. He is most often described in paternal terms, the chief father of Egypt. Other times, his subjects are referred to as wives of the king. The Egyptians measured the years in reference to the reigns of their kings; thus, cosmology and statecraft were inextricably interwoven. Yet the king's powers were limited, although they may not seem to have been to those who constructed the pyramids designed as tombs for the kings. The concept of *maat*, often translated as "balance," provided a conceptual guideline for the enacting of statecraft, helping to limit gross misconduct and limitless absolutist behavior.

Ancient Egyptian statecraft was unusual in this era in its relatively consistent precepts and its long duration. However, some of the tendencies of statecraft were typical of the first states, which emerged in Mesopotamia (and its periphery) and in China. These first states were organized somewhat similarly, although one needs to be careful to not ascribe too much cross-cultural similarity. Even the act of translating ancient words for statecraft can bring unjustified assumptions. For example, during this period the term "king" implies (incorrectly) a conceptual similarity between ancient rulers and the kings who ruled in Europe and elsewhere in later times. Still, these ancient states were typically ruled by a sole individual, whose authority was derived from a number of possible avenues: divine inspiration, achievements in warfare, or dynastic succession, to list a few possibilities. Yet given the technological constraints of this era, these early states were fairly decentralized. Even when power was centered on an absolutist ruler, it was beyond the political capacities of this absolutist ruler to fully centralize authority.

The king (called pharaoh in the New Kingdom) was the chief caretaker of this land. Thought to be of divine descent, the king protected the state from the forces of chaos that threatened the land.

The formal state was not the only type of polity that developed during this time. By the term “polity,” archaeologists mean the largest autonomous political unit of a given culture. For example, the state of ancient Egypt was an extensive polity ruled by a king but divided into a number of smaller political organizations, called *nomes* (which are best translated as “administrative divisions” or “provinces”). Each nome was governed by a *nomarch* who was answerable, at least in theory and often in reality, to the king. Outside of Egypt, many polities in this period had tribal or familial authority as the highest unit of governance. In these types of polities, everyone in the community knew one another, although actual practices of governance varied considerably. Between these two extremes were city-states and chiefdoms. City-states were polities where authority was centered in the political leadership of a city and extended into that city’s hinterland. Chiefdoms operated on a similar scale but were less bound to an urban center.

For many societies, ancient political structures can be reconstructed through ancient textual evidence, left as a remnant of government activities. For societies that lacked writing (or lacked a writing system that can be translated by modern scholars), this enterprise can be far more difficult. Instead, archaeologists are forced to rely on identifying particular material markers or indicators of government and, by comparing these indicators with better-understood societies, reconstruct governance by analogy. Certain types of monuments and architecture are typical of certain types of governance. Stonehenge, for example, which is found in a rural area away from a major city, is the type of monument that is typical of a chiefdom-level society since it required centralized planning to construct but is located away from any signs of centralized state authority. Likewise, a site with very little difference in the sizes and quality of houses and minimal evidence for public or state architecture likely reflects a less-stratified governance than that found in a state. Population size is one of the best indicators for archaeologists. For example, state-type governance would have been unwieldy for the smaller population groups typical of North America at this time.

Still, archaeological indicators are not always accurate and must always be treated with suspicion. The civilization of the Indus Valley is one culture that seems to defy easy explanation regarding its political organization. The population size and other material culture traits (such as complex infrastructure and writing found in administrative contexts) are indicative of an early state. However, archaeologists are not satisfied that any public architecture relating to governance can be identified in the remains, let alone any typical indications of centralized leadership.

—Kevin M. McGeough

■ Introduction: City-States and Chiefdoms

During this age, city-state- and chiefdom-style political organization arose in a variety of areas throughout the world. These were small-scale polities, usually with populations numbering between 5,000 and 20,000 people. They were internally organized according to rank. Often this rank was tied in to lineage, family groups that claim one common ancestor. Rank could be relatively fluid in these societies, often based on prestige of the family lineage, which could wax and wane. This organization differs from state-level societies where social stratification is connected to class and becomes much more entrenched. Leadership in these societies tended to be hereditary once leadership was entrenched in a particular lineage. The origins of this leadership are more variable. In some cases, leaders come to power because of military prowess and exploits or because of the accumulation of large amounts of wealth. Other times, especially in the case of city-states, a lineage is installed in a leadership position by a stronger external polity. This was the case with the city-states of Syria-Palestine in the Late Bronze Age, where minor kings were established in cities by foreign Hittite and Egyptian overlords. Other powerful officials within the community gained their power through their relationship to the leader. Generally, the closer an individual's relationship to the leader, the more powerful that individual was.

Although city-state and chiefdom types of government are relatively similar, there are some key differences. The most important difference is the role of geography. A city-state is a government that is fixed in a permanent urban location. This city is the center of authority and power within the polity. Typically there is a hinterland that extends beyond the city (essential for provisioning the urban center with food produced through agriculture), and sometimes smaller villages fall within the city's sphere of influence. The real basis for a city-state's power lies in its economic power, most commonly when a city is a major node along an important trade network. Since the city has the ability to command the flow of resources along this trade network and

at the same time has enough locally produced food for its own needs, it may have quite significant regional power.

Chiefdoms usually have permanent settlements, but political authority is not intrinsically tied to economic geography in the same way as with a city-state. The authority of the leader is based more on lineage (and the concomitant prestige of that lineage) than to the governance of a particular city. Chiefdoms usually have a wide variety of economic specialists within the community, like city-states, but the movement and exchange of resources is not as centralized. Chiefdoms of this period do typically have centralized religious or ritual centers, however. The ruler's power is usually associated with the ritual center. Thus, the basis for the leader's authority, on the surface, seems more based on symbolic and religious power.

—Kevin M. McGeough

Authority in Stateless Societies

Not all ancient civilizations knew the institution of statehood. The ancient Indus civilization (ca. 2600–ca. 1800 BCE) and the Danube civilization (ca. 5500–ca. 3500 BCE) were not organized as states but as socioeconomic commonwealths (or oecumenes) where lively trade relations sustained relationships of mutual advantage. Statehood was also absent from the formative period of ancient Chinese civilization, that is, the late Shang dynasty (thirteenth to eleventh centuries BCE), and only gradually developed during the reign of the Western Zhou (eleventh century–771 BCE).

Authority in societies without the organization of a state as their overarching structure does not manifest itself as an instrument of political control as in statehood. Rather, it is anchored in a pool of responsibilities to sustain the community, to safeguard a conflict-free interaction among its members, and to keep up a spiritual balance within the confines of a mythopoetic worldview. The self-supporting functions of state institutions such as bureaucracy and taxation (as revenue for the leadership) have no equivalent

in stateless societies where authority is delegated according to natural abilities of knowledge construction and the fulfilling of communal responsibilities.

In stateless societies, assigned natural authority may lie with a shaman or a person with the authority of a functionary to supervise communal ceremonies and to perform rituals intended to enhance sustainability and social harmony. The authority of such functionaries could easily extend to the organization of collective labor projects for the benefit of the community. In ancient China of the Shang era, shamans—mostly female—were privileged and influential as the keepers of precious knowledge, and this knowledge was identified as the teachings of the ancestors that were handed down from one generation to the next.

The authority of female diviners in ancient China is no exceptional phenomenon when viewing divination in a comparative perspective of cultures in Asia. Female shamans had a prominent status among Siberian peoples. The privileged role of female diviners in society has been preserved, for instance, in Korean society up to the present. Korean women diviners are called *mudang* or *mansin* (ten thousand spirits).

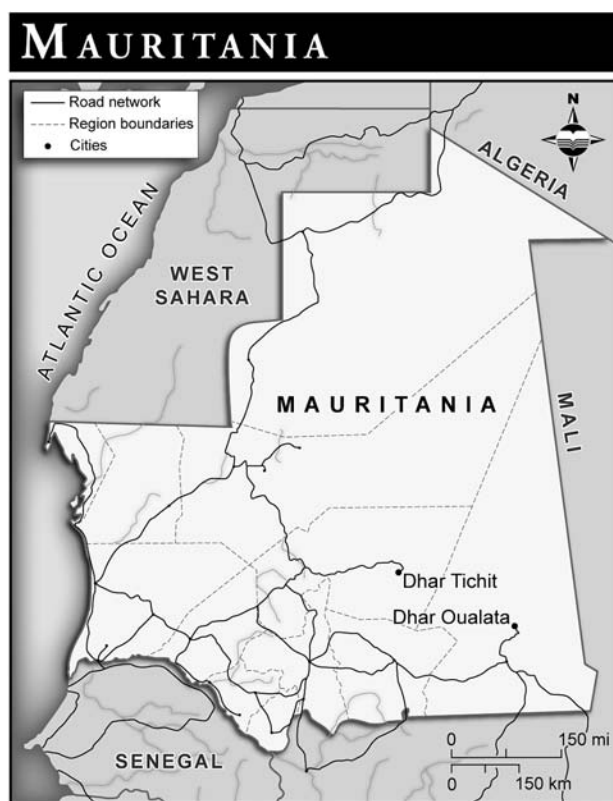
—Harald Haarmann

Bibliography

- Biaggi, Cristina, ed. *The Rule of Mars: Readings on the Origins, History and Impact of Patriarchy*. Manchester, CT: Knowledge, Ideas and Trends, 2005.
- Haarmann, Harald. “Why Did Patriarchy Supersede Egalitarianism?” In *The Rule of Mars: Readings on the Origins, History and Impact of Patriarchy*, edited by Cristina Biaggi. Manchester, CT: Knowledge, Ideas and Trends, 2005.
- Maisels, Charles Keith. *Early Civilizations of the Old World: The Formative Histories of Egypt, the Levant, Mesopotamia, India and China*. New York: Routledge, 1999.

Chiefdoms in Mauritania

From about 2000 BCE to about 800 BCE, a chiefdom civilization appeared in the southwestern Sahara in Tichitt-Oualata (present-day Mauritania). This complex civilization arose in a time of climatic deterioration in which arable land and



good pasturage space were limited. Human over-exploitation (especially related to the overgrazing of herd animals) may have had an impact on the increasing aridity of the region. Rainfall would have been minimal in ancient times; cultivation would have to have occurred in the silt beds associated with seasonal lakes. Aquatic animals were exploited only in the earliest stages of this society; scholars assume that drought conditions forced the people of this region to look elsewhere for food resources. In this difficult environment, people subsisted on the cultivation of domesticated plants (especially millet), wild cereals, and pastoralist practices. Some evidence for the use of cereals is derived from the impressions of plants on the ceramics found at the sites, which allows scholars to identify the particular species of plants that were in use. Cattle, sheep, and goats are the best attested in the archaeological record.

The two best-known sites of this civilization are Dhar Tichitt and Dhar Oualata. These two sites are located about 186 miles (300 kilometers) from one another. Between them smaller villages have been identified, roughly every 3.1

miles (5 kilometers). It is likely that these smaller villages were subject to the authority of the larger villages, although exact boundaries are difficult to identify as is the center (or centers) of authority given the current evidence. Munson has argued that initially some of these villages may have been autonomous, but as arable land became scarce the smaller villages were incorporated into the political structure of the larger villages. An alternative explanation may be that as arable land became scarce, people were forced to settle in more marginal areas farther from the political centers but within manageable proximity to the homes of their families and civic or religious leaders.

Buildings at these sites are constructed of small stones usually arranged as circular compounds. Noteworthy are what appear to be the foundations for granaries and stone-walled coral areas. It is difficult to judge if these structures were in use contemporaneously with one another, and in fact there is considerable scholarly debate on the interpretation of evidence from Dhar Tichitt and similar sites. Some scholars such as Munson have argued that farming, although in use from early on at Dhar Tichitt, was in fact not important until near the end of the site's occupation. Holl has argued that what may appear to be differences in subsistence practices at the site do not reflect long-term change but instead reflect seasonal changes. In other words, at some times of the year farming was most important, and at other times of the year wild grains or pastoralism may have played a more important role.

There are few prestige items that have been recovered from Dhar Tichitt, and what has been recovered is consistent with prestige items found in other parts of the Sahara dating to this period. Beads made of precious stones seem to have been cherished, as were polished bracelets. Polished stone axes have also been found at sites.

—Kevin M. McGeough

Bibliography

Holl, Augustin. "Background to the Ghana Empire: Archaeological Investigations on the Transition to Statehood in the Dhar Tichitt Region (Mauritania)." *Journal of Anthropological Archaeology* 4 (1985): 73–115.

> DHAR TICHITT

Dhar Tichitt is a group of villages in the southwestern Sahara Desert, in Mauritania. Situated on a cliff escarpment, this is an important area for understanding the origins of agriculture in Africa and for the study of complex civilization in Africa. Surrounded by hundreds of Late Stone Age villages, the main village of Dhar Tichitt is about 29.6 acres (12 hectares) in size; its northern side features a stone wall 6.6 feet (2 meters) high. The village itself consists of about 200 stone compounds, with alleys and roads twisting between the structures and larger plazas as public areas. Archaeological remains of animal bones and impressions of plants found on ancient ceramics have allowed scholars to reconstruct the subsistence economy of ancient Mauritania.

—Kevin M. McGeough

Holl, Augustin. "Subsistence Patterns of the Dhar Tichitt Neolithic, Mauretania." *African Archaeological Review* 3 (1985): 151–162.

McIntosh, S. K., and R. J. McIntosh. "Current Directions in West African Prehistory." *Annual Review of Anthropology* 12 (1983): 215–258.

Munson, P. J. "Archaeological Data on the Origins of Cultivation in the Southwestern Sahara and Their Implications for West Africa." In *Origins of African Plant Domestication*, edited by J. Harlan et al. The Hague: Mouton, 1976.

Munson, P. J. "Archaeology and the Prehistoric Origins of the Ghana Empire." *Journal of African History* 21 (1980): 457–466.

Canaan in the Middle Bronze Age

Early in the second millennium BCE, urbanism once again took hold throughout much of the southern Levant. A hierarchical relationship in the size of settlements indicates that large urban centers served as the seat of political power for what may be loosely described as city-states, though there is disagreement with regard to the degree of political complexity reached during the Middle Bronze Age. What would ultimately evolve into one of the great urban cultures of the second millennium BCE had its roots in the tribal societies of the preceding Intermediate

► FORTIFICATIONS AS STATEMENTS OF POWER

The massive earthworks that surrounded many Middle Bronze Age cities also point toward the existence of centralized power structures. They represent a significant investment of resources, above all, labor. The construction of the ramparts at Shiloh required an estimated 250,000 work-days—that is, it would have taken some 3,000 laborers roughly five years to complete the project—and the earthworks at Tel Dan would have taken an estimated 1,000 workers some three years. In a number of cases, such as Dan and Yavne-Yam, small populations relative to the size of the ramparts suggest that much of the labor force responsible for their construction was drawn from beyond the city itself. Those overseeing these projects would also have had access to the expertise of specialists (for example, designers and architects) as well as various other resources, including draft animals and building materials. The function of these massive rampart systems, however, is not always clear. Traditionally, it has been held that the earthen ramparts served as fortification systems, yet recent scholarship has challenged this view. For instance, what armies and types of attack were these structures built to defend against (for example, battering rams)? And would they have been successful against a siege? Numerous other questions have been raised. At Ashqelon, the earthen ramparts were capped by walls, yet it is not clear whether this system was intended to defend against surface attacks or

against tunneling meant to penetrate the city surreptitiously. Some of these ramparts were actually built prior to urban development within them.

Other explanations tend to emphasize the symbolic aspects of these structures. In the central hill country, ramparts formed small citadels, or “highland strongholds,” that served primarily as political centers, hosting large public buildings, temples, and storage facilities. In some cases, such as Ashqelon and Dan, elaborate gates were built into the ramparts, serving, on the one hand, as prestige architecture, and, on the other, as an effective way to monitor the movement of goods and people in and out of the city.

Regardless of their specific function, these massive constructions would have stood as highly visible symbols of power. Surely, there were rivalries between neighboring city-states as they vied for grazing and farmland as well as for access to trade networks. Monumental architecture served to enhance the status of local leaders and the cities in general while fostering a strong sense of identity based on location (for example, hailing from a certain city). The ruling political bodies of the city-states thereby engaged in “competitive emulation” or “one-upmanship.” Visible from afar, these imposing fortresses and lofty citadels could have facilitated the extension of political power from the cities out into the surrounding regions.

—Jonathan Golden

Bronze Age and early Middle Bronze Age. For instance, many of the large earthworks that surrounded the later Canaanite cities were actually established prior to urban development, serving, perhaps initially, as enclosures for the tents and semipermanent structures used by seminomadic tribal groups.

Information about political organization in the early Middle Bronze Age is also offered by Egyptian texts. The Tale of Sinuhe refers to pastoral groups with an internal sociopolitical structure, sometimes including several tribal leaders. The most important source of textual information for this period comes from the Twelfth Dy-

nasty Egyptian inscriptions known collectively as the Execration Texts. This series of curses on foreign places and peoples considered enemies of Egypt in effect creates the equivalent of a rough geopolitical map for Middle Bronze Age Canaan. More important, the texts all date from the mid-twentieth and mid-nineteenth centuries BCE, thereby providing a before-and-after picture for the process of urbanization. The earlier texts, on one hand, tell of tribes, sometimes with multiple leaders, and a landscape dotted with but a few cities (for example, Ashqelon and Jerusalem). The later group, on the other hand, lists the names of numerous cities, including Acre,

Hazor, Jerusalem, Laish, Qadesh, and Shechem, conveying a sense of widespread urbanization.

By the later Middle Bronze Age, the Canaanite countryside was divided up into a series of territorial units, probably distinct city-states or resembling kingdoms. Evidence from archaeological surveys reflects an eight-tier settlement hierarchy system (a system where the relative power of sites is recognized according to their relative size) by the later Middle Bronze Age. Hazor and Avaris (Tel el-Daba) alone may be classified as first-order gateway cities, and both are entirely unique cases. Hazor, which reached some 80 hectares, was more akin to Syrian cities of northern Canaan, while Avaris was a Canaanite city established in northern Egypt. Ashqelon (60 hectares; a hectare is equivalent to roughly 2.5 acres), Yavne-Yam (65 ha), and Kabri (35–40 ha), all located in coastal areas or along central routes, are considered second-order gateway cities. Third-order gateway settlements, such as Tel Dan (16 ha) and Tel Dor (10 ha), also situated along land and sea routes, were smaller, though perhaps equally wealthy. The inland valleys were dominated by regional centers such as Megiddo (more than 20 ha, including the upper and lower cities), Acco, Beth Shean, Kabri, Shimron, and Shechem. Primary centers of the coastal plain and Shephelah also included Tel el-Ajjul, Aphek, Gezer, Lachish, and Tel es-Safi. Survey data from this period also indicate a rise in the number of rural settlements, suggesting that there were a few relatively large centers surrounded by numerous small villages and farmsteads.

By the middle of the Middle Bronze Age, Canaan was divided into distinct political units subsuming urban, rural, and nonsedentary populations. These polities ranged from large chiefdoms to some of the region's first true city-states. Jericho, for example, was a small, autonomous community organized according to family and kinship structures, led, perhaps, by a council of clan heads. Shechem had broad influence in the hill country, which also played host to several autonomous polities of moderate size. Several vast city-states with large urban centers emerged. Hazor, all but abandoned during the Intermediate Bronze Age, saw rapid growth, developing into a bustling urban center that was the core of the consummate Canaanite city-state.

In Syrian texts from this time, Hazor is often mentioned as a contemporary of other kingdoms such as Carchemish, Ugarit, Babylon, Eshnuna, Qatna, Yamhad, and Kaptara (Cyprus or Crete). Reference is also made to emissaries from Babylon who took up long-term residence at Hazor, suggesting that there may have been formal standing political ties between the various city-states. Owing to its status and location, Hazor occupied a unique position as mediator between the Canaanite kingdoms and those of Syria-Cilicia. In many ways, Hazor was more similar to city-states of the Syria-Mesopotamian world system than to the rest of the southern Levant, and it was exceptional with regard to political organization. Avaris (Tel el-Daba) may have played a similar role as Hazor's southern counterpart, mediating between Canaanite city-states and Egypt. In both cases, political development in Middle Bronze Age Canaan must be understood in the context of a land situated between two developed states.

The Canaanite city-states no doubt had kings, but it is not until the end of the Middle Bronze Age, when local Canaanite/Amorite texts first appear, that it becomes possible for historians and archaeologists to speak of specific rulers. Textual sources show that kingship in Syria was passed down along descent lines, and mortuary evidence from the southern Levant suggests that descent groups were recognized and that status was hereditary; it is unclear, though, how this figured into the structure of political power. A number of cylinder seals and at least one scarab with the name of Hyksos rulers (for example, Aa-user-re) discovered at Tel el-Ajjul point to political ties between Egypt and southern Canaan. "Warrior burials" may represent the graves of individuals who served some royal court or guard.

In the absence of direct evidence for specific kings and political institutions, archaeologists may infer from the wealth of evidence for monumental architecture that some political body was able to command the contacts and resources necessary for sponsoring extensive public projects. Such projects are seen throughout Canaan. Palaces and "governors' residences" have been excavated at sites such as Tel el-Ajjul, Kabri, Hazor, Lachish, Megiddo, and Aphek. At the latter site, two governors, Takuhlinu and Haya, are

mentioned by name in cuneiform tablets dated to about 1230 BCE. These massive buildings, some larger than 1,000 square meters (nearly 11,000 sq. ft.), were elaborate in design, with broad, pillared halls, multiple storage rooms, and large courtyards. At both Megiddo and Shechem, the palace was located in the vicinity of the temple, though it is not clear that there was a direct connection. A northern influence is observable in a number of Canaanite palaces, particularly at Tel el-Ajjul and Lachish, which incorporated massive sandstone slabs, or orthostats, reminiscent of those in Syrian palaces. It would appear, therefore, that Canaanite kingship was modeled at least in part on the political structures of Syrian city-states.

—Jonathan Golden

Bibliography

- Bietak, Manfred. "Egypt and Canaan during the Middle Bronze Age." *Bulletin of the American Schools of Oriental Research* 281 (1991): 27–72.
- Bunimovitz, Shlomo. "Middle Bronze Age Fortifications in Palestine as a Social Phenomenon." *Tel Aviv* 19 (1992): 221–234.
- Dever, William G. "The Middle Bronze Age: The Zenith of the Urban Canaanite Era." *Biblical Archaeologist* 50 (1987): 148–177.
- Finkelstein, Israel. "Middle Bronze Age 'Fortifications': A Reflection of Social Organization and Political Formations." *Tel Aviv* 19 (1992): 201–220.
- Golden, Jonathan M. *Ancient Canaan and Israel: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Golden, Jonathan M. "The Middle Bronze Age." In *Encyclopedia of Prehistory*, vol. 8, *South and Southwest Asia*, edited by P. Peregrine and M. Ember. New York: Kluwer/Plenum, 2002.
- Ilan, David. "Mortuary Practices at Tel Dan in the Middle Bronze Age: A Reflection of Canaanite Society and Ideology." In *Archaeology of Death in the Ancient Near East*, edited by Stuart Campbell. Oxford: Oxbow, 1995.
- Ilan, David. "The Dawn of Internationalism: The Middle Bronze Age." In *The Archaeology of Society in the Holy Land*, 3rd ed., edited by T. E. Levy. New York: Facts on File, 2003.
- Kempinski, Aharon. "The Middle Bronze Age." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor. New Haven, CT: Yale University Press, 1992.
- Stager, Lawrence. *Ashkelon Discovered: From Canaanites and Philistines to Romans and Mos-*

lems. Washington, DC: Biblical Archaeology Society, 1991.

Tubb, Jonathan N. "MBIIA Period in Palestine: Its Relationship with Syria and Its Origin." *Levant* 15 (1983): 49–62.

Late Bronze Age Canaan— Under Egyptian Suzerainty

Much of Canaan was under the direct political control of the New Kingdom pharaohs during the Late Bronze Age. Owing to the great interest that the land of Canaan held for the kings of Egypt and Syria, there is a relatively large body of texts from both regions, in addition to some local inscriptions, that complement the archaeological evidence. The thirteenth century BCE, in particular, is illuminated by the extensive correspondence between rulers from Syria-Palestine and the Egyptian King Amenhotep IV, c. 1350 BCE.

Some of the key Egyptian texts yielding information about political organization during Late Bronze Age Canaan are the "Poetical Stele" of Thutmose III, the "Papyrus Anastasi I," the "Onomasticon of Amenemope," and a series of long topographical lists drawn up by the scribes of Thutmose III. Though some scholars have argued that references to Canaan are not explicit and are thus unreliable, others have countered that Canaan was clearly recognized as both a land and a people, which is precisely why this term is taken for granted in these ancient texts. Canaan was divided into independent political entities of various sizes, as indicated by both textual and archaeological evidence. Regional surveys indicate that there was less integration in the Late Bronze Age than during the Middle Bronze Age in most parts of Canaan (for example, Jezreel), with perhaps the exception of the central hill country.

Following the Egyptian king Ahmose's efforts to force the Asiatics out from their seat of power in the Delta, several subsequent pharaohs expanded the scope of the offensive, pursuing the Hyksos deep into southern Canaan in repeated campaigns. This is especially true of Thutmose III, who in year twenty-two of his reign (mid-fifteenth century BCE) launched the first of several attacks on Canaanite cities, including

Gezer, Megiddo, and Taanach, as recorded in inscriptions from Karnak. The Canaanite kingdoms of the Middle Bronze Age had always operated independently of one another, but when confronted with the threat of Thutmose III's armies, the Canaanite and southern Syrian kingdoms formed a coalition under the leadership of the king of Kadesh, with the support of Mitanni. Megiddo apparently served as the headquarters for this "league of Canaanite rulers." Defeat came nonetheless, and Thutmose III established rule over the region, extending the Egyptian sphere of control to as far north as the Orontes.

Much of this information comes from Egyptian sources, and the historical reality of these accounts has been legitimately questioned. Examination of these texts suggests that Egyptian stories about their struggle against a hated foreign power could contain some element of hyperbole. As for the archaeological evidence, destruction levels at southern and inland sites dating to the late seventeenth and early sixteenth centuries BCE seem to support the general historicity of certain events, though the pattern of destruction cannot be so neatly defined. The political upheaval experienced toward the end of the Middle Bronze Age was probably a long, drawn-out process, and some of the problems leading to the Middle Bronze Age collapse were well under way irrespective of Egyptian aggression, a factor that only hastened the process. Convalescence for the Canaanite cities following these events came slowly or not at all. There was a notable decrease in the number and size of Late Bronze Age settlements. Though a number of cities retained their urban character, they seem to have had less control of the hinterlands, where nomadic peoples were once again on the rise.

At the end of the Eighteenth Dynasty, Egyptian hegemony over Canaan appeared to be slipping, but with the transition to the Nineteenth Dynasty, further devastation was visited upon the region. Ramses I and his co-regent, Seti I, set out to reestablish dominance and even to outdo their predecessors, launching a series of campaigns into the region in the early thirteenth century that reached into Syria to the very margins of Hittite territory. Ramses II, whose influence in Canaan is demonstrated by the discovery

at Tel Dan (Area Y) of a scarab bearing his name, further extended control over Canaan, seeking also to contain the rapidly growing Hittite city-states to the north. Peace between Egypt and Hatti was not yet meant to be, and a great battle was fought between the two near Qadesh on the Orontes early in the thirteenth century BCE.

Certain titles used in both Egyptian and Babylonian texts suggest that Egyptians bore ranks and designations in administrations associated with Canaan. A letter from Alashiya, probably Cyprus, indicates Canaan as a "province" of greater Egypt, though some scholars have objected to the specific use of this term. Several sources, including later biblical texts, allude to specific borders delimiting Canaan and its cities. There are also references to Canaanite city kings, suggesting that the region comprised city-states with local rulers under the governance of the Egyptian New Kingdom empire. The Amarna Letters coming from Byblos, Beirut, and Tyre also allude to monarchs.

The pervasive Egyptian presence makes it difficult to distinguish between local, Canaanite political structures and those imposed by Egypt. For much of the Late Bronze Age, Egypt maintained a network of centers and garrisons in order to facilitate its domination in parts of Canaan that were under Egyptian control. It is also unclear whether the Egyptian presence was limited to government and administrative entities, or Egyptian civilians actually settled in Canaan. Political power was played out on an increasingly international stage. A mud-brick fortress dating to the Late Bronze Age has been found at Tel Sera (Str. X), where the material culture included Canaanite and Egyptian as well as Mycenaean and Cypriote goods. This trend is also reflected in the artistic styles of the day. A new form of hybrid iconography known as the "International Style," which combined elements from multiple cultural traditions, emerged during this period. Luxury goods of the hybrid style circulated within a broad supraregional system of interaction, becoming part of a royal vocabulary to which the kings of the day subscribed.

The existence of Late Bronze Age kings and regents is evident in the royal architecture from the period. Egyptian-style residencies, or

“governors’ residences,” have been unearthed at several sites, including Beth Shean, which functioned as an important administrative center and garrison in the Egyptian colony. Elaborate buildings interpreted as palaces have also been found at a number of sites apparently not under Egyptian control, indicating that local rulers enjoyed a certain degree of wealth and power. Whereas during the Middle Bronze Age the temple and palace at Shechem were built as part of one large complex, by the Late Bronze Age the two were distinct and the palace was relocated closer to the city gate. It is possible that this represents a split, perhaps even a rivalry, between the religious and political institutions. The same trend can be seen at Megiddo of the fourteenth century BCE, which has some of the most impressive examples of monumental architecture from the Late Bronze Age. Similarities between the overall plan of the thirteenth- and twelfth-century BCE palace at Megiddo and a contemporary palace at Ugarit have been observed, and, as a general rule, kings of southern Canaan continued to look northward for inspiration in royal architecture and iconography.

—Jonathan Golden

Bibliography

- Bunimovitz, Shlomo. “Socio-Political Transformations in the Central Hill Country in the Late Bronze Iron I Transition.” In *From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel*, edited by I. Finkelstein and N. Na’aman. Jerusalem: Israel Exploration Society, 1994.
- Dever, William G. “The Chronology of Syria-Palestine in the Second Millennium B.C.E.: A Review of Current Issues.” *Bulletin of the American Schools of Oriental Research* 288 (1992): 1–25.
- Golden, Jonathan M. *Ancient Canaan and Israel: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Lemche, Niels Peter. *The Canaanites and Their Land: The Tradition of the Canaanites*. Sheffield: Journal for the Study of the Old Testament (JSOT) Press, 1991.
- Moran, William L. *The Amarna Letters*. Baltimore: Johns Hopkins University Press, 1992.
- Na’aman, Nadav. “Hurrians and the End of the Middle Bronze Age in Palestine.” *Levant* 26 (1994): 175–187.

Na’aman, Nadav. “The Contribution of the Amarna Letters to the Debate on Jerusalem’s Political Position in the Tenth Century B.C.E.” *Bulletin of the American Schools of Oriental Research* 304 (1996): 17–27.

Rainey, Anson. “Who Is a Canaanite? A Review of the Textual Evidence.” *Bulletin of the American Schools of Oriental Research* 304 (1996): 1–15.

Weinstein, James. “The Egyptian Empire in Palestine: A Reassessment.” *Bulletin of the American Schools of Oriental Research* 241 (1981): 1–28.

Northern Levant Coastal City-State System

A city-state system evolved in the Levant—the eastern Mediterranean coast—by 3200 BCE at Byblos, in the land known today as Lebanon. Public buildings, temples, parkland, and massive city walls, which show the result of community decisions, are evidence of the ways in which these people conducted their affairs. These civic activities seem to have grown out of the high-risk nature of sea trade, from which their great wealth developed. In sea trade, the loss of a single ship could devastate all who had invested goods and labor into the ship itself and the rich cargo it carried. As a result, the community appears to have spread the risks and rewards broadly among its members. In any event, it led to the development of councils at Byblos as well as at its daughter cities of Tyre and Sidon.

Councils remained strong despite the presence of kings. In fact, the importance of councils was an identifying mark of these cities—which would be later known as Phoenician—and of the colonies they founded. These included Carthage, where Aristotle commented on the role of the council—and of direct votes of the people—in governing the city. In all these cities, the council seemed to have a role in the selection of the new king, leading to that title being passed among the prominent families.

The cities of Byblos, Sidon, and Tyre maintained a political relationship, the leadership role of which was passed among the three cities from time to time. During their period of leadership, the king at one of those cities was regarded as senior to the others and served in a leadership role in times of duress.

► THE BAALAT GEBAL TEMPLE IN BYBLOS

Ancient public works in the city of Byblos are still visible today thanks to noted archaeologists Ernest Renan, Pierre Montet, and Maurice Dunand. Although some artifacts date from 6000 BCE and individual dwellings remain from 4500 BCE, the major public works are from 3200 BCE onward. The temple of Baalat Gebal (Our Lady of Byblos) began as a simple sanctuary surrounded by an enclosure. Over the years, this sanctuary grew in size and stature. Our Lady was regarded as Mother Nature and embodied love, fertility, and peace. As the goddess of love, her relationship with handsome, young Adonis in the hills above Byblos contributed to the legend of Aphrodite celebrated in Greek lore.

In Ugarit, Athirat/Asherah was similar in nature. But in clear contrast her companion, Anat, was a goddess of war who traditionally wore armor and carried weapons. The later Greek goddess who most resembled her was Athena, whose magnifi-



Baalat Gebal temple in Byblos. (Sanford Holst)

cent statues in Athens stood adorned in traditional armor.

—Sanford Holst

Notably, Ugarit was not a member of this affiliation. Although Byblos and Ugarit originally grew from Canaanite farmers and shepherds, Byblos and its daughter cities—Sidon, Tyre, Beirut, and others—developed the specific society that came to be identified as Phoenician. Ugarit remained Canaanite until its destruction in 1195 BCE. Ugarit had a king, but its use of a council has not been clearly documented. A council may have existed, however, since the religious beliefs of Ugarit included a principal god (El) who consulted with his divine council (Elohim).

—Sanford Holst

Bibliography

- Dunand, Maurice. *Byblos: Its History, Ruins and Legends*. Translated by H. Tabet. Paris: Librairie Adrien-Maisonneuve, 1973.
- Holst, Sanford. *Phoenicians: Lebanon's Epic Heritage*. Los Angeles: Cambridge and Boston Press, 2005.
- Mullen, E. Theodore. *The Divine Council in Canaanite and Early Hebrew Literature*. Harvard Semitic Monographs, no. 24. Missoula, MT: Scholars Press, 1980.

The Greek Palace—Using Homer to Reconstruct Early Greek Government

In Book 1 of Homer's *Odyssey*, Telemachus (the son of Odysseus) anxiously awaits the return of his father from the dangers of distant Troy to his palace home on Ithaca. Telemachus knows nothing of his father's whereabouts or whether or not he is still alive, and he plots with his mother Penelope to keep the greedy suitors at bay until they can figure out what to do. After being inspired by the goddess Athena, Telemachus issues stern commands for the suitors to leave the palace of Odysseus. One of the worst offenders, named Antinous, responds, "I pray that Zeus will never make you king of Ithaca, / Though your father's crown is no doubt yours by birth" (1.443–444). Despite the comment by Antinous, the Greek word for "king" (*basileus*) does not imply hereditary rule by the monarch contained in the English word. In the Mycenaean world of Homer's epics, the monarchy is a government structure headed by a king proclaimed by public approval and superior talent, wealth, victory in

► THE PALACE OF ALCINOUS

Much of Homer's *Odyssey* takes place in the palace of Odysseus, but Homer's description lacks precision because of its focus on heroism. Visual details might be minimized because of the tradition that Homer was blind. Of any Bronze Age palace in Homer, the most fully developed description comes from Book 7, when the Phaeacian king Alcinous receives the ragged, storm-tossed traveler Odysseus. Homer describes Odysseus as brought to a standstill by the enormity and splendor of the palace of Alcinous. Odysseus steps over a bronze threshold to behold the "high-roofed halls" with walls plated in bronze and crowned with a frieze of lapis lazuli. The palace features doors made of solid gold, silver doorposts, and a lintel with statues of golden dogs surrounding the entryway. There is a large main room with two thrones backed against the wall, indicating an equal political status for Alcinous and his wife, Arete. Each throne is draped with "finely spun brocade," the work of Phaeacian women known for their skills with the arts of weaving. The palace is framed with "outer gates" for protection and courtyards surrounded by a "magnificent orchard four acres deep" and with a vineyard. The trees in Alcinous's orchard are pomegranates, pears, apples, figs, and olives that yield year-round because of the westerly wind.

—Jonathan L. Thorndike

battle, and landholdings, not strictly by heredity. In Book 8 of the *Odyssey*, the king of the Phaeacians (Alcinous) declares, "There are twelve peers of the realm who rule our land, / Thirteen counting myself" (8.435–436). The statement by Alcinous implies that the 12 peers are all kings affirmed by public approval, and he is a "first king" among equal monarchs.

Homer's *Iliad* and *Odyssey* are among the earliest written texts in Western civilization, dating from the eighth century BCE but referring to an earlier Bronze Age in which Mycenae was the most powerful Greek city-state. Homer chronicles the heroes of the Trojan War such as Achilles, Hector, Priam, Paris, and Agamemnon and their homecoming following a bloody ten-year conflict. King Agamemnon of Mycenae leads a

loose confederation of Greeks to extract revenge upon Troy for the theft of Helen, wife of Agamemnon's brother Menelaus, king of Sparta. The nature of Agamemnon's political authority is tenuous because kings from other Greek city-states complain about many of Agamemnon's decisions. The Greek city-states are independent from one another and ruled by local kings, but Homer does depict the beginnings of public debate and councils. When the Greek kings do not agree with Agamemnon's commands, they argue before each other and pass the scepter, which grants the speaker the floor. The debates do not have formal rules or clear lines of authority.

In the *Odyssey*, besides the palace of Odysseus, we also find partial descriptions of the palaces of Alcinous (king of Phaeacia), Nestor (king of Pylos), and Menelaus (king of Sparta). The *Iliad* is mostly the story of the closing days of the Trojan War, but the poem presents images of the palaces of Priam (king of Troy) as well as tentative accounts of the nature of Greek government. Both epics refer to Minos, legendary king of Crete, whose palace at Knossos was the most advanced early Greek society.

Heinrich Schliemann's excavations at Mycenae show that the Minoans influenced Mycenaean culture. Mycenaean civilization incorporated aspects of mainland Greek culture and adapted them to form a unique culture of its own. The Minoans had a more highly developed civilization and a more prosperous trading network than the Mycenaeans. The Minoans left their influence around the Mediterranean, where they sent ships with agricultural items and handicrafts. The Minoans left their influence on Greek culture with their frescoes, pottery designs, and palace architecture.

The Mycenaeans, in contrast, developed their own unique architectural style and political philosophy. At the top of their power structure, they probably used a patriarchal king, as did many Indo-European cultures. Evidence from Knossos suggests that the Mycenaean king may have been the head of a federation of rulers. In the *Iliad*, Agamemnon's status is based on a fragile political unity of mainland Greek kingdoms. Later archaeology has discovered actual Mycenaean records of bureaucrats and mayors of surrounding villages. These records contain tax

assessments, property descriptions, and catalogues of slaves, horses, chariots, and military regiments.

As described by Homer, the Mycenaeans developed a unique architectural style for their palaces. They knew about the mainland Greeks' use of the *megaron*. A *megaron* is composed of a series of rooms with a porch and inner rooms connected by a hallway. The Mycenaeans took the concept and placed it at the center of their largest palaces at Pylos, Tiryns, and Mycenae. At these three palaces, the *megaron* included a circular hearth in the center. The Mycenaeans also fortified their palaces with massive "Cyclopean" walls ten feet thick. The cut stones were so massive that later Greeks assumed that they could only have been lifted by a Cyclops, a one-eyed giant of enormous strength. The famous Lion Gate at Mycenae is embedded in Cyclopean walls. The gate inspired generations of artists who tried to imagine life during the Bronze Age in Greece.

—Jonathan L. Thorndike

Bibliography

- Demarkopoulou, Katie, et al. *Gods and Heroes of the European Bronze Age*. London: Thames and Hudson, 1999.
- Fitton, J. Lesley. *The Discovery of the Greek Bronze Age*. Cambridge: Harvard University Press, 1996.
- Homer. *The Iliad*. Translated by Robert Fagles. New York: Penguin, 1990.
- Homer. *The Odyssey*. Translated by Robert Fagles. New York: Penguin, 1996.
- Stierlin, Henri. *Greece: From Mycenae to the Parthenon*. Translated by Simon Pleasance and Fronza Woods. Cologne: Taschen, 2001.

Who Ruled the Minoans?

The presence of palaces on Crete since the Middle Bronze Age has led to the belief that some manner of ruler must have been present at least since the First Palace period. Sir Arthur Evans, inspired by the semidivine kings of the Near East, suggested that a priest-king ruled Crete and reigned over the island from his palace at Knossos. However, Minoan iconography contains no pictures of recognizable kings. Evans originally identified such a monarch in a reconstructed fresco from Knossos known as the Lily Prince

THE HARVESTER VASE

The Harvester Vase shows a group of males carrying what appear to be winnowing tools. One male has what looks like a rattle and has his head back and mouth open as if singing; perhaps he is the group musician. Another man with longer hair than the rest wears an elaborate shawl and carries a long staff over his shoulder. His costume and the length of his hair make him stand out as the older member of the group, most likely the authority figure in charge of the scene. The scene on the Chieftain Cup is a much simpler affair. A taller (perhaps older) youth with elaborate jewelry stands before a smaller (perhaps younger) youth wearing a helmet and carrying a sword over his shoulder. The older youth holds a long staff in his hand that he appears to be handing over to the younger fellow, whose hand is outstretched to receive it.

—Stephanie Lynn Budin

Fresco, which shows a striding male with an elaborate floral headdress (perhaps a crown) and jewelry. Since the original publication, though, it has been shown that the Lily Prince Fresco is actually an amalgam of three different frescos. The head with its fancy cap is actually the head of a sphinx. The two halves of the body—torso and legs—belong to females, which is evident from the white-painted skin (males were usually shown red). The torso belongs to either a boxer or an acrobat; the legs are actually walking in the opposite direction from the torso. The entire fresco would have been dismantled and reconstructed long ago if not for the fact that Crete's largest travel agency had already adopted it as a logo. Nevertheless, with the removal of the "prince," the Minoan repertoire suddenly became king-free. In its place, a new iconography of male authority figures was recognized. One example of this is a staff-bearing male recognizable on such Minoan items as the Chieftain Cup and the Harvester Vase, both from Hagia Triadha. The other is an axe-bearing "priest-king" prominent on Minoan seal stones.

The pose of holding out a staff appears frequently in the Minoan glyptic art (art engraved on seals), where deities hold such implements or hand them to humans. The use of this staff as a

divine symbol suggests that it has an authoritative meaning. In similar art from the Near East, deities often extend staffs to men to show their investiture with kingship. As such, it appears that in the Minoan art the staff is an emblem of either kingship or queenship or of the authority of the person holding it. For the Harvester Vase, the interpretation is fairly straightforward: the staff-bearing male is the leader of the troop. However, we have no idea if this translates into “king,” “priest,” or something else. Concerning the Chieftain Cup, Koehl has argued that the scene is the final act of an initiation ritual in which the young boy “graduates” to adult status in the community. Thus, the helmet and sword show the boy-turned-man’s adult status in the community, and the staff indicates either the authority of the male completing the initiation or the symbolic bestowing of power and authority onto the initiate. Once again, though, although the staff seems to imply authority, the type of authority (king, priest, etc.) remains open to debate.

An equally ambiguous figure is the axe-bearing male in the Minoan glyptic. This character, clearly an older fellow as indicated by him frequently appearing with a beard, routinely appears dressed in a distinctive wraparound outfit that goes from shoulders to feet, a much more elaborate affair than the usual Minoan male garb of a simple kilt. Sometimes this figure seems to be a deity, as he stands next to fantastic creatures such as griffins. Often, the seals depicting these men have a bull’s head on the reverse. As bulls were sacred in Minoan Crete, the males are interpreted as priests, and the bulls—or other animals they are shown holding, such as birds—are interpreted as sacrificial victims.

Some have suggested that the axe the man holds is similar to the later European scepter, serving, like the staffs, as an emblem of authority. If so, then we might have here a portrayal of Evans’s priest-king, a religious functionary who also wields some manner of secular power. However, as this figure never appears with other people, and as he is sometimes shown with fantastic creatures, it is difficult to tell if he is intended as a human at all or if he is a deity, possibly “imported” from the east where both his style of

clothing and axe were common. In the end, it is perhaps safest to suggest that the staff-bearing individual represents an authority figure in the Minoan repertoire, be it a deity or human, and the axe-bearing priest-king is a (perhaps divine) character in need of further study.

Of course, there is a certain irony to this search for the Minoan male authority figure, as most Minoan portrayals of authority figures were female. In fact, the notion of a Minoan matriarchy is still prevalent in some literature, although notions of *any* ancient matriarchies have now come under serious debate. Nevertheless, females, be they women or goddesses, do appear prominently in Minoan art, far outstripping males in most categories.

Amusingly, the most important datum in the search for Minoan royalty has no human portrayals in it at all. This is the throne in the so-called throne room of the palace at Knossos. This elaborately frescoed room has a fancy carved-stone throne attached to one of the walls. Griffins rest on either side of the throne. Evans originally believed that this was the priest-king’s seat and that the griffins’ presence confirmed that this king was somehow beyond mortal realms. However, parallels in Minoan art show that the character usually standing or seated between a pair of griffins was a female. Thus, it seems more likely that the person intended to sit on the Knossos throne was not a “king” but a “queen.” Of course, there are no easy answers in Minoan studies. The females portrayed between griffins, by the very fantastic nature of the griffins themselves, may have been goddesses. Who then, or what, actually sat on the Knossos throne? Perhaps the throne served as a seat for a deity, and no actual human sat there. Or, as is usually suggested, perhaps a priestess serving as a manifestation of a goddess sat on the throne during religious rituals. In such a case, did the Minoans have a priestess-queen instead of the priest-king? Or did they have a secular queen who used divine imagery to enhance her perceived power and closeness to the gods, as Medieval patrons had their portraits placed in paintings of the Holy Family? Such questions are not yet resolved.

In the end, we have little idea concerning who “ruled” the Minoans or even if any one per-

son did, king or queen. Tradition claims an especially important role for Knossos and its supposed king, Minos, but throughout Minoan history the other palaces were often just as wealthy as Knossos. Some have argued that all the palaces belonged to the king of Knossos, who used them as bases of operation throughout the island. Others have argued that there must have been several rulers on the island, each controlling his or her own territory through their personal palaces. The fact that neither the conquest of Knossos circa 1450 BCE nor its destruction around 1375 brought about the total downfall of Minoan civilization suggests that there was some independence among the different palatial regions and even independence among the cities and villas. It is entirely possible that the notion of monarchy did not even exist in Minoan society.

—Stephanie Lynn Budin

Bibliography

- Davis, E. "Art and Politics in the Aegean: The Missing Ruler." In *The Role of the Ruler in the Prehistoric Aegean*, edited by P. Rehak. Aegaeum 11. Liège, Belgium: Université de Liège, 1995.
- Koehl, R. B. "The Nature of Minoan Kingship." In *The Role of the Ruler in the Prehistoric Aegean*, edited by P. Rehak. Aegaeum 11. Liège, Belgium: Université de Liège, 1995.

The Question of Leadership in the Indus Valley

One of the most vexing questions about the Indus Valley civilization (the ancient Harappans) is who were their leaders? The material culture of the ancient Harappans breaks with all of the patterns typical of urban societies from 4000 BCE to 1000 BCE. In an urban society, archaeologists typically expect to find symbols of leadership, markers of social inequality, and explicit displays of force (such as a monument depicting a military victory over an enemy group). Strangely enough, these markers do not appear in any great quantity, yet the Mature Harappan civilization lasted for over 700 years! So far, not even a palace has been located at a Harappan site, yet it is impossible to imagine that a sophisticated urban society could have existed for 700 years without leaders or conflict. Thus, scholars are

THE PRIEST-KING



The so-called "priest-king" making an offering to feed the sacred sheep, limestone cylinder seal, Sumerian, Uruk period, about 3500–3200 BCE. (Réunion des Musées Nationaux/Art Resource, NY)

A figure that appears as part of the shared material culture between Uruk and Susa from 3800–3100 BCE is the so-called priest-king. Depicted on carved plaques, cylinder seals, and other media, the priest-king appears bearded with his hair pulled back behind his hat and sometimes wearing a cap. He wears a skirt and is naked from the waist up. Often he carries a weapon (a bow, spear, or mace) and often attacks or asserts dominance over other figures. But who is this figure? Some suggest that this is an image of the ruler of Uruk and, by extension, the ruler of Susa and other parts of Iran. Others suggest that the priest-king image found at Susa reflects a local adaptation of Uruk symbols and refers to a local ruler. Others suggest that this is simply a generic figure of leadership that refers to no one individual in particular. Whatever the case may be, it does indicate a shared iconographic tradition between Iran and Iraq.

—Kevin M. McGeough

forced to reconstruct Indus Valley governance based on a lack of evidence. Be wary of any scholar who discusses this topic with any certainty; there is not enough evidence to make any strong claims about who the leaders were or how the government operated.

Some candidates for symbols of leadership have been noted. A figure called the priest-king by scholars appears in the artistic repertoire of the Indus Valley. Clay tablets with processional

scenes (individuals marching holding what appear to be standards), such as those found in contemporaneous Mesopotamian sites, have been found. The best evidence for some kind of political or bureaucratic apparatus are the numerous seals and stamps that have been uncovered. Our inability to read Harappan prevents us from being able to understand how these seals would have functioned. However, if they worked anything like they did in Mesopotamia and Egypt, these would have borne an individual's name or title and would have been used in the day-to-day operation of various government activities, standing in for an individual's signature or functioning as a personal or official seal of approval.

The settlement patterns of the Indus Valley may also give some clue as to ancient Harappan governance. The four major centers (so far identified) in the Indus Valley are quite far apart from each other. Harappa and Mohenjo-daro are over 388.4 miles (625 kilometers) apart from one another. This has suggested to many scholars that each of these large cities was an independent city-state, controlling a surrounding hinterland. Most sites, including smaller villages, are located along major river routes, thus indicating participation in a larger trade network.

Some degree of local governance is the most plausible reconstruction of Indus Valley governance at present. However, some scholars still maintain that the Indus Valley civilization may have been organized at the level of the state. These scholars argue that the uniform material culture (especially architectural styles, weights and measures, language, and art) suggest that there was a higher degree of organization. However, a shared material culture does not necessarily reflect a centralized political system. At present, though, the question of Indus Valley leadership must remain unanswered.

—Kevin M. McGeough

Bibliography

- Chakrabarti, D. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.
- Fairservis, W. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.
- Maisels, Charles Keith. *Early Civilizations of the Old World*. New York: Routledge, 1999.

Jomon

The islands of Japan used to be joined to the Asian mainland by a land bridge connecting what is now Korea and Japan. Scholars assume that the earliest population of humans in Japan moved there across this land bridge. By about 11,000 BCE these early settlers had developed into the society that is identified as Jomon, and scholars talk about a Jomon period that lasted until about 400 BCE. Over this long time span a great amount of change occurred, which makes generalizing about this period difficult. The subsistence basis of the Jomon was not agriculture but rather hunting and gathering. However, the traditional image of this type of society has to be applied with caution to the Jomon. The climate and natural vegetation of Japan meant that hunting-gathering was relatively easy; this was especially the case because of the abundance of marine life (fish and shellfish) in the rivers and along the seacoast. Initially the earlier settlers had hunted large mammals, but as these started to become scarce, they switched to smaller mammals such as deer and wild boars and then to even smaller ones such as rabbits and squirrels at least in some areas. Even though hunting for meat remained a feature of Jomon diets, it is clear that fish and shellfish were key elements in Jomon nutrition. This in turn had a very important consequence; the Jomon people created settlements that seem to have been basically permanent. They did not move from place to place like typical hunter-gatherers because it was not necessary. This sedentary style of hunting and gathering is comparatively rare but was successful in Japan.

Settling in one place had a number of important consequences, some of which are verified by scholars and some of which can only be theorized. First and most famously, the Jomon people developed pottery. The term “Jomon” means “cord,” and the period has this name because of the corded design often used in their pottery. They were among the first groups in the world to develop pottery. Their pots served various practical purposes, but they were also richly decorated with clay designs applied to the outside of the pots. Many of them were also quite large. Because the Jomon were not nomadic, they



could develop such skills. Also, they were not concerned about moving their possessions from one place to another, and thus they could have more of them. Further consequences were the development of permanent houses, both pit dwellings and longhouses. They also needed burial sites, and it seems that special places were set aside for this purpose and used continuously over long periods of time. Of course, permanent or at least semipermanent settlements required refuse sites as well, which have provided very interesting knowledge of the Jomon. While the Jomon civilization is believed to have begun on the southern island of Kyushu, as the climate changed and the line of hardwood forests (Beech and Oak) advanced the Jomon people moved northward, gradually forming settlements throughout Japan. There is evidence that Jomon settlements allowed for the elaboration and specialization of certain crafts, which encouraged extensive trading between settlements.

While there is no such thing as a typical Jomon settlement, the site at Sannai Maruyama in Aomori in the far north of Japan gives research-

ers some idea of what the Jomon civilization was like at its height. This site appears to have been occupied continuously for more than 1,500 years (from about 3500 BCE to 2000 BCE), and occupation was probably year-round. While less than half of the site has so far been excavated, more than 500 pit dwellings have been found along with a number of large longhouses. Not all of these would have been occupied at the same time. There was also a large six-pillared building whose purpose is unclear: perhaps it was a shrine, or perhaps it was a watchtower. In addition, they built roads in their settlement by flattening the earth. This indicates a fairly high degree of civil cooperation and perhaps the existence of a stratified society similar to those that developed in agricultural societies. This means occupational specialization (farmers, craftsmen, etc.) and perhaps some type of ruling group. The people produced a large number of things including pottery, stone and bone tools, baskets, and jewelry. They also traded for jade and obsidian with other settlements 300–400 miles (500–600 kilometers) away. Their food consisted of

➤ WHERE DID THE JOMON PEOPLE GO?

Jomon culture was replaced by Yayoi culture over a few hundred years. Yayoi culture became the basis of the traditional culture of Japan. But what happened to the Jomon people? This is far from being an academic question. Yayoi culture clearly came from outside of Japan (especially Korea), but does this mean that there was a mass migration, making these migrants dominant not only in terms of culture but also population? Or was the culture adopted (and adapted) while the population remained the same? Put simply, who are the ancestors of the modern Japanese, or what happened to the Jomon people? Many Japanese people believe that the culture was adopted but that the population continued on to become the modern Japanese. Others believe that the Jomon people were either completely absorbed or pushed to the margins to become a minor element in the genetic makeup of the modern Japanese or even perhaps the ancestors of the Ainu people of Hokkaido. Modern scientific evidence seems to indicate that Jomon people contributed far less than the Yayoi migrants to the genetic composition of the modern Japanese. But much more work is needed, and the final answer may never be known.

—Michael Thompson

meat, fish, fruit, and nuts. Jomon pots were used to reduce salt from seawater so that some early method of preserving food was also possible. There were large numbers of chestnut trees in the area that they used extensively, as they could cook the chestnuts in their pots, thus removing acidity and softening them at the same time. All of this had social consequences as well. Softer food was good for both older people, who had difficulty chewing, and babies. In turn, this probably meant that Jomon people could extend their life expectancy to some extent as well as wean babies earlier and thus have more children. Mortality was still high, however, and the site has large numbers of burial jars, which were probably used for the burial of children.

The Jomon culture, then, was a relatively complex and sophisticated society, though it still suffered from some of the limitations of the hunter-gatherer lifestyle. It persisted for so long

because it was successful. However, this should not be overestimated: at its height, there were probably only 250,000 inhabitants of the whole of Jomon Japan. Eventually, beginning in Kyushu again, the advantages of agriculture became more obvious, and the Jomon were replaced by the Yayoi. However, despite the triumph of agriculture, elements of hunter-gathering persisted in Japan (especially in the mountain areas) until the twentieth century.

—Michael Thompson

Bibliography

- Brown, Delmar. *Cambridge History of Japan*. Vol. 1, *Ancient Japan*. Cambridge: Cambridge University Press, 1993.
- Habu, Junk. *Ancient Jomon of Japan*. Cambridge: Cambridge University Press, 2004.
- Imamura, Kenji. *Prehistoric Japan*. Honolulu: University of Hawai'i Press, 1996.

Tribal Governance in the Americas

The governing practices of prehistoric peoples in the Americas during the Archaic are unknown, although some inferences can be reached based on ethnohistorical, paleodemographic, and archaeological data. Generally speaking, it is assumed that the majority of prehistoric Americans were egalitarian in their political organization until population levels, certain mass resource exploitation practices, and sedentary patterns coalesced, at which point the governing structure changed to one based on ranked societies or chiefdoms. In regions where chiefdoms only partially emerged, such as the Plateau and Plains, tribal governing practices are thought to have been based on a combination of egalitarian and chiefdom-level practices. In this mixed political organization, certain individuals are thought to have been heads of bands or subbands who were members of regional intertribal councils that served some duties in intertribal matters or in resolving issues between bands. Based on paleodemographic and ethnohistorical data, it is hypothesized that the bands seasonally varied in size and that intertribal meetings took place on a seasonal basis. This was primarily because many of their activities would most likely have functioned more efficiently when bands came

together to cooperatively exploit seasonal resources such as anadromous fish runs in the Platteau or the congregating buffalo during the summer months in the Plains. At this level of political organization, leadership roles were most likely also designated for various activities such as wars, hunts, and ritual ceremonies in which individuals acted as task group leaders for specific occasions based on seniority and expertise rather than as permanent political leaders.

For example, on the Plains, evidence indicates that the basic social units of prehistoric peoples during most of the Archaic were extended families organized into seasonally nomadic bands or semisedentary villages, each independent but related to others speaking the same language and sharing the same culture. Paleodemographic evidence indicates that the political integration of bands or villages into larger tribal units was tenuous and incomplete, although social scale was an important variable in forming alliances, as smaller groups were more easily united than larger ones.

On the Northwest Coast, the prehistoric people of the region apparently governed via a ranked society, which was slightly different in that rank at the band level was more formalized and politically structured. However, the large-scale regional organization found in chiefdoms was lacking. In ranked societies such as those found during the middle to late Archaic on the Northwest Coast, social hierarchies were carefully measured and evaluated according to genealogy, wealth, and prestige. The social differentiation and individual political power depended in part on control over social exchanges of wealth within and between communities.

Chiefdoms, on the other hand, were more complex and based in larger forms of tribal governance than the egalitarian social groups of the Great Basin, Plains, and other regions or the ranked societies of parts of the Northwest Coast, California, the Southwest, and the Eastern Woodlands. A chiefdom is generally defined as a centralized polity that organized a regional population in the thousands but is smaller in size than a state. The distinguishing characteristic between a ranked society and a chiefdom was permanent institutionalized leadership patterns, which have been identified as belonging

➤ THE RANGE SITE

The Range site, located in the American Bottom segment of the central Mississippi River valley of southwestern Illinois, shows clear evidence of a Middle to Late Archaic chiefdom. Covering more than 25 acres, the site contained more than 5,500 features, including over 600 prehistoric structures. Evidence indicates that during the Late Archaic, the site consisted of a large village of more than 200 domestic structures that had nucleated from previously separate villages. The configuration of structures, the construction of large courtyards and plazas, and other spatial divisions at the site indicates that the Range site represents an early chiefdom where social ranking was clearly defined. By circa 950 to 1000 CE, evidence indicates that the larger area was under the political control of an emergent chiefdom that controlled the flow of resources up and down the Mississippi River for some distance.

—Peter N. Jones

to either simple or complex chiefdoms. The former had only one subordinate political level, while the latter had two or more subordinate political levels that were typically associated with geographically discrete central settlements. Chiefdoms encompassed the territorial and political control of a chief under which lesser chiefs controlled smaller areas. As such, chiefdom territories were often surrounded by unoccupied or sparsely occupied lands, sometimes called deserts, that were natural barriers and political buffer zones that often corresponded to linguistic differences. Evidence in settlement patterns from the Mississippian region, for example, indicates that between the large centers such as Moundville in Alabama and Etowah in Georgia existed relatively depopulated zones of forest.

Many different theories have been advanced to explain the existence of chiefdoms (also called nonstate complex societies). Explanations of the appearance or decline of chiefdoms have historically emphasized the relations between a society's resource base and its social organization. For example, evidence from the Ohio Valley indicates that social complexity and agricultural intensification increased during the Late Archaic,

resulting in the formation of regional chiefdoms. This evidence indicates that there is a strong association between social complexity and agricultural intensification in the formation of chiefdoms for this region. Likewise, in the Southeast the development of chiefdoms is often associated with the shift to large-scale maize agriculture around 1,200–600 years before the present. Among the best known of the prehistoric Southeast chiefdoms that reached considerable size were the Natchez, Coosa, Calusa, Apalachee, and Cofitachequi chiefdoms.

A proxy means of establishing the type of tribal governance in place in prehistoric societies is through the measurement of material wealth, which is a good indicator of prestige. Prestige is important because it indicates access to resources, which indicates the level of political organization in a particular society. For example, in the political sphere, chiefs have more prestige than common individuals because they have more material wealth. As such, competition for

prestige often results in the emergence of larger chiefdoms because there is a drive to constantly acquire more material wealth. Some archaeologists have argued that sufficient conditions for the emergence of chiefdoms are competition for prestige and a large enough population level to produce a sizable economic surplus, which must be under central control.

—Peter N. Jones

Bibliography

- DePratter, Chester B. *Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States*. New York: Garland, 1991.
- Earle, Timothy K. "Chiefdoms in Archaeological and Ethnohistorical Perspective." *Annual Review of Anthropology* 16 (1987): 279–308.
- Hayden, B., and R. Schulting. "The Plateau Interaction Sphere and Late Prehistoric Cultural Complexity." *American Antiquity* 62 (1997): 51–85.
- Hill, Jack. "Biology, Prestige, and the Origin of States." *Journal of Social and Evolutionary Systems* 17(2) (1994): 213–225.

■ Introduction: The Development of States

The first states emerged during this period, but they were not the formalized nation-states that characterize political life today. For the period before 1000 BCE, archaeologists use the term "state" (or better, "early state") very loosely to refer to relatively complex civilizations that exhibit certain features. Population density is the most important feature; societies considered to be early states typically had populations of greater than 20,000 people. Not all of these people lived in cities, but cities played a more important role in state-level societies than in other types of societies. There are usually cities that wield significant power within the civilization politically, economically, or religiously. We can often distinguish the central places in early states. These central places typically have large public architecture, such as temples or palaces, that make them relatively easy to identify.

Leadership in early states varies considerably, but it was usually centered on the authority

of a king or the equivalent of a king. This individual was seen as the basis of legal life within the society and was empowered to enact laws that did not typically have to be cleared by other decision-making bodies. Likewise, policy decisions and relations with other polities were based on the whims of this leader. The king was almost always male, although there are some notable exceptions to this in ancient Egypt. How the king came to power varies in ancient states. Dynastic succession was very common and typically the most stable means of passing on leadership. Kings also came to power through violent uprisings, brought on by unclear succession policies or by weakened or unpopular leadership. Typically the king had a monopoly on force within the society, but practically this required an army with specialized military leaders (i.e., generals), so it was important for the king to promote loyalty among these generals. Since powerful officials in early states were not simply relatives of

the king (as was often the case in ancient chiefdoms), loyalty could not be guaranteed.

Society in early states was extremely stratified. People were divided into various ranks, classes, or statuses. The vast majority of people were understood to be living on land owned by the king and thus owed tax or military obligations almost as a kind of rent. There was no sense, as in modern North American society, that taxes were paid for infrastructure or social services. Taxes were the private wealth of the king to do with as he saw fit.

One of the most interesting questions that scholars ask about the age is how these states first arose. That they did arise in Egypt, Mesopotamia, and China is unquestioned. The mechanisms through which they arose, however, are far less clear. Ancient historical accounts of the origins of states are often shrouded in myth, seeing the origins of the state in the heroic actions of a legendary king or in the decisions and whims of the polity's gods and goddesses. This topic shall explore some of the evidence for the formation of early states.

—Kevin M. McGeough

The Rise of the Egyptian State

Ancient Egypt poses a unique problem for ancient historians, as it developed a unified government over a relatively large geographic extent significantly earlier than other locations, such as Mesopotamia, Syria-Palestine, India, and China. Why this occurred seemingly so quickly and what the mechanisms for the emergence of the first state where are questions that are debated by scholars yet are fundamental to understanding statecraft from a world historical perspective. It is likely that the agricultural productivity of the Nile Valley facilitated this (as large agricultural surpluses were possible in Egypt), but this has often been overemphasized in reconstructions of the rise of the Egyptian state. Early Egyptologists, such as Flinders Petrie, argued that the Egyptian state arose through the efforts of an invading race that conquered the dwellers of the Nile Valley and imposed a state structure upon them. There is no evidence for this, however, and current scholarship sees the emergence of the Egyptian state as an indigenous phenomenon.

Tradition holds that Egypt consisted of two conceptually distinct regions: the northern delta (Lower Egypt) and the southern floodplain (Upper Egypt). This division of upper and lower is apparent in the earliest iconography of kingship and remained throughout the duration of the ancient Egyptian state. Older models of the rise of the Egyptian state took King Narmer (Menes) as one of the earliest Egyptian kings who unified north and south through an act of military conquest. That warfare played a role in the unification of Egypt is suggested by the iconography of kingship. Three ceremonial artifacts excavated from Hierakonpolis (the macehead and palette of Narmer and the macehead of King Scorpion) depict the king as victorious in warfare and wearing regalia of both the southern and northern kingdoms. Subsequent finds, such as inscriptions in the western desert, likewise indicate the importance of warfare in the conceptualization of the early state. However, archaeological research suggests that the actual rise of a unified Egyptian state was significantly more complex than this.

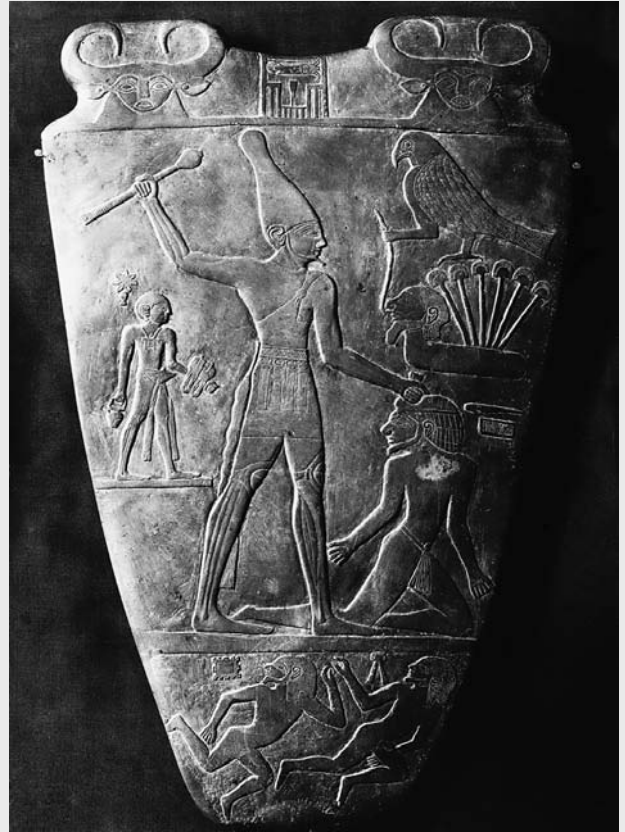
Archaeological excavation of Predynastic settlements shows that the cultures of Upper and Lower Egypt were distinct prior to the rise of unified Egypt. The northern Predynastic culture is usually referred to by scholars as the Maadi Cultural Complex (ca. 4000–3200 BCE). The southern cultures are more heavily subdivided by archaeologists. The earliest is Badarian (ca. 4400–4000 BCE) followed by Amratian/Naqada I (4000–3500 BCE), which is then followed by Gerzean/Naqada II (3500–3200 BCE). By around 3200 BCE, Naqada culture seems to have spread to the north, replacing the Maadi culture, and thus the period from about 3200–3000 BCE is referred to as Naqada III for all of Egypt. A problem for scholars attempting to understand the rise of the Egyptian state is to understand how and why the Naqada culture expanded northward.

Much of the evidence for the Naqada culture comes in the form of cemeteries (which have been more thoroughly explored by archaeologists than other types of settlements). One of the most useful cemetery sites for understanding the transformation of Naqada culture through phases I–III is the Umm el-Qaab cemetery at Abydos. In the Naqada I period, the burials at

► THE NARMER PALETTE

Found in the votive deposit of a temple to Horus in Hierakonpolis, this stone palette was designed for commemorative purposes as well as to house ceremonial eye paint, yet it is most well known for its historical significance. Inscribed on the palette is the earliest readable name of a king, Narmer, marking this king and his palette as the beginning of an epoch in Egyptian history. The two sides of the palette depict the king vanquishing enemies (with the help of a falcon god, presumably Horus), wearing the crown of Upper Egypt on one side and Lower Egypt on the other. Egyptologists long held that this was a representation of the unification of Egypt, but for some time now this point has been called into question. Furthermore, the palette plays a crucial role in Egyptian art history. While continuing motifs of Egyptian predynastic history, such as the smiting scene and the containment of chaotic creatures, it also marks the advent of artistic tools, such as registers, that would become standard convention throughout Egyptian history. Thus, both historically and artistically the Narmer Palette represents a crucial pivot in the study of ancient Egypt.

—Kerry Muhlestein



King Narmer smiting an enemy, from the Palette of Narmer, about 3000 BCE. (Bettmann/Corbis)

Abydos are relatively undifferentiated, meaning that there is not much difference in the construction of the graves or in the types of goods buried with the deceased. Scholars extrapolate from this evidence that this was a relatively egalitarian society. By Naqada II, however, there is significantly more variation in the graves. Especially prominent in the wealthier graves are foreign imports (many from Syria-Palestine) and goods that required highly specialized production. Thus, scholars believe that this reflects increasing divisions within the society whereby the power of the wealthiest members of the society may have been related to control of trade routes and/or the production of elite goods. In Naqada III, Abydos is home to the first kings of Egypt, the kings of the so-called Dynasty 0 (named as such since these kings all predate the

kings of Dynasty 1). Among these royal graves is Tomb U-j, which consisted of 12 rooms and contained over 400 jars from Syria-Palestine. Tomb U-j also contained about 150 small labels, which constitute the earliest attested examples of hieroglyphic writing. No doubt the invention of writing played a major role in facilitating the development of a large administrative structure in the early Egyptian state.

Based on the evidence from Abydos and elsewhere, scholars reconstruct that throughout the Naqada II period, Naqadan society became increasingly stratified and concerned with long-distance trade. This culture gradually spread northward until by Naqada III it had fully replaced the Maadi culture in the north. This replacement may have been through military conquest of the north, but there is no archaeo-

logical evidence for this, and a number of other mechanisms of cultural replacement could equally be postulated. Bruce Trigger has argued that three “statelets” existed (at Naqada, Hierakonpolis, and Abydos), and through competition, one of these statelets emerged as dominant. Barry Kemp argues that the Naqada II, a “proto-kingdom,” evolved out of an originally egalitarian community, and this proto-kingdom conquered the north in the Naqada III. Both of these reconstructions are possible and logical, but there is insufficient evidence to prove either of them.

—Kevin M. McGeough

Bibliography

- Bard, Kathryn A. *An Introduction to the Archaeology of Ancient Egypt*. Malden, MA: Blackwell, 2008.
- Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989.
- Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.
- Trigger, Bruce. *Understanding Early Civilizations: A Comparative Study*. Cambridge: Cambridge University Press, 2003.

The Development of the State in Mesopotamia

Sargon (Sharrum-kin, or “true king”), the founder of the Akkadian empire, epitomized the successful king, beloved of the gods, becoming the role model for later dynasts keen to demonstrate their continuity with the glories of the past. Though there had been other kings over the previous century who had sought to expand their leadership beyond the city-state level, Sargon, founder of the Akkadian dynasty, was the first Mesopotamian king to fully unify the city-states of Sumer and Akkad to create a regional territorial state. Thus, it is Sargon to whom historians look for the origins of the state in Mesopotamia.

Historians are fortunate in having substantial evidence for Sargon’s activities. Many inscribed monuments set up by Sargon and his successors were assiduously copied by later scribes, and a few inscribed objects still survive. These contemporary records provide genuine historical information through which a picture of the Akkadian dynasty can be reconstructed. A body of legend also accumulated around the Akkadian

➤ NARAM-SIN AND THE GODS

In contrast to his grandfather’s heroic status, the third Akkadian king, Naram-Sin, despite his achievements, was remembered in later literary accounts as the epitome of hubristic arrogance and impiety, responsible for the downfall of his dynasty, at least in conservative scribal circles.

In his own inscriptions, Naram-Sin claimed that his defeat of nine hostile kings in a series of battles won him the gratitude not only of the citizens of Agade but even of the gods, who invited him to become the patron deity of Agade. Naram-Sin’s elevation to divine status then allowed him to lay claim to the temple lands and revenues of the city and thence of the empire it controlled. Traditionalist outrage at this impiety was later rationalized in the story the Curse of Agade.

According to this tale, Ishtar (Inanna) gained permission from Enlil to take up residence in Agade as the city deity, bringing wealth, prosperity, and joy. Later, however, Enlil took offense at some action of Naram-Sin and withdrew his favor. Naram-Sin attempted unsuccessfully to change the god’s mind and in his anger and despair sacked Enlil’s temple, the Ekur, demolishing the buildings and carrying off the temple treasures to Agade. The gods fled the city; Enlil brought down the savage hordes of the Gutu upon it, and it was utterly destroyed.

There is no truth in this story. Naram-Sin made pious offerings at the Ekur, where he was held in honor long after his death. He refurbished the temple at great expense, a work completed by his successor, Shar-Kali-Sharri, who ruled for a quarter of a century before the Gutu (invaders from across the Zagros Mountains) made a significant impact on Akkadian affairs.

—Jane R. McIntosh

kings by the time of the next empire, that of the Third Dynasty of Ur (Ur III), and reflects later propaganda more than historical truth. Sargon’s origins are unknown; he was probably from the northern part of southern Mesopotamia and from a humble background. According to legend, he was the son of a priestess and a man from the eastern mountains. After his birth, the priestess cast him adrift on the river in a reed basket; he was rescued by Aqqi, a water carrier, who raised

him as a gardener. In his youth he served Ur-Zababa, king of Kish, whom he succeeded in circumstances whose details are now lost.

Sargon went on to win 34 battles, gaining control of the southern Mesopotamian cities by defeating their king, Lugalzagesi. Parading Lugalzagesi as a prisoner before the Ekur (Enlil's temple) in Nippur in effect demonstrated the transfer of authority from him to Sargon. Sargon also conquered Elam and towns to the north and west including Mari and Ebla. His inscriptions claim that he controlled areas as far afield as "Silver Mountain" (the Taurus range) in Anatolia and that his dominions stretched from the Upper Sea to the Lower Sea, in which he symbolically washed his weapons.

Like Lugalzagesi, who had made similar claims, Sargon's authority was probably closely linked to control of trade and of centers on trade routes rather than involving large-scale territorial conquest. Nevertheless, in southern Mesopotamia at least, Sargon established a unified state that exercised hegemony over all the traditionally independent city-states: a new political form for all that it was couched in the traditional language "King of the Land, King of Kish" and, like Lugalzagesi, "King of the four rims of the world."

Sargon established a new city as his capital. Agade, whose name may mean "ancestral town," was a minor settlement until Sargon brought it to prominence. A later poem, "The Curse of Agade," describes its architectural and cultural splendors, commercial success, and prosperity. Its glory did not survive the Akkadian period, and today its location is unknown. It was probably situated somewhere between Babylon, Kish, and Sippar.

—Jane R. McIntosh

Bibliography

- Franke, Sabina. "Kings of Akkad: Sargon and Naram-Sin." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Kuhrt, Amelie. *The Ancient Near East, c. 3000–330 BCE*. 2 vols. London: Routledge, 1995.
- Leick, Gwendolyn. *Mesopotamia: The Invention of the City*. London: Allen Lane and Penguin, 2001.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.

Roaf, Michael. *Cultural Atlas of Mesopotamia*. New York: Facts on File, 1990.

The Origins of the Chinese State

At some point during the period from 4000 to 1000 BCE, the disparate Neolithic communities in China became somewhat unified, if not politically at least culturally. It becomes possible to speak of China as a political entity. Exactly when this happened and how it happened are some of the more interesting questions that Chinese archaeologists and historians are attempting to solve.

The traditional view of Chinese history describes three main periods in Chinese prehistory: the period of the gods, the period of the demigods, and the period of the sage kings. The last of the sage kings, Yu, inaugurates the first traditional historical period in China, the Xia dynasty. Yu, according to tradition, binds the 10,000 separate states into a unified whole. The Xia dynasty is then followed by the Shang dynasty that is then followed by the Western Zhou period.

Modern historians questioned the historicity of this traditional conception of history. The Xia dynasty was thought to be more mythical than historical. However, as archaeological excavations revealed more about ancient China, it became clear that the traditional genealogies from the Shang dynasty were relatively accurate, and the idea of a real Xia dynasty became less far-fetched. Archaeological work at Erlitou seems to have confirmed that, in fact, there may have been a historical Xia dynasty and that the traditional view of Chinese history was not as inaccurate as modern scholars had assumed.

Yet problems still remained with the traditional schema of early Chinese history. The sequential order of the three dynasties did not work well with the archaeological evidence, which seems to indicate that these dynasties all would have existed at overlapping times. Scholars have posited a more horizontal view of these three dynasties, suggesting that the Xia, Shang, and Western Zhou were just three of many indepen-

dent states that existed prior to the formation of the Chinese imperial state. Traditional historians had simply tried to fit these three dynasties into a sequential order that better fit the traditional view of historical change in China, that single dynasties rose and fell in a unified China throughout China's past. Modern scholars, who no longer feel compelled to recognize that China had always been unified, argue that China, on the eve of the imperial period, was actually ruled by a number of independent states that were gradually unified. Scholars who argue for this conception of Chinese prehistory call this the Three States period. There is significant archaeological evidence of warfare and conflict during this time period, indicating that these smaller states did not coexist peacefully and that the gradual unification of China was brought about through military force.

It needs be noted that there is no consensus that the archaeological discoveries at Erlitou should be considered Xia; many still believe that the Xia is an entirely mythical creation with no basis in history. Only further excavations and research will answer questions on the origin of the Chinese state.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Chang, Kwang-Chih. "China on the Eve of the Historical Period." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

COMMUNIST CHINA AND CONCEPTIONS OF THE SHANG

It was only after the 1950s, under communism, that multi-ethnic nationalism began to affect archaeology, which is evident in the shift of emphasis from the central plains (*Zhongyuan*) to a focus on multiregional development. It is not surprising, therefore, that the choice of locations for early excavations by Chinese archaeologists was based on the primary concern of the search for the indigenous cultural origins of the Han Chinese. Moreover, influenced by the May Fourth Movement of 1919, the traditional Confucian ways of learning were criticized while Western science and field methodology became influential. A group of young historians, referred to as "doubters of antiquity" (*yigupai*) and led by Gu Jiegang (1893–1979), developed a skeptical view of textual accounts of Chinese history. Their mission was to search for scientific evidence to reconstruct Chinese history. Archaeology, therefore, was endorsed by the *yigupai* as a scientific device to achieve this goal.

—Li Liu and Xingcan Chen

Bibliography

- Liu, Li, and Xingcan Chen. "China." In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries. New York: Harry N. Abrams, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

■ Introduction: Secondary States

In the previous section, we discussed the origins and features of early states in this period. These states are what anthropologists call "primary states." Primary states are states that arose through internal causes, not based on

interaction with other states. In other words, there were no other states nearby that provided a model for the development of that form of political organization. During this time, primary states included Egypt and the various states in

Mesopotamia and China. Scholars debate whether or not a state emerged in India at this time; if one posits that there was a state, then this would also be a primary state.

Secondary states are states that arose in the shadow of other state societies. These secondary states appear in close proximity with larger states that appeared earlier. It is usually assumed that at the very least these primary states provided a political model for the secondary state. In this era, most of the secondary states that have so far been identified seem to have coalesced in response to hostile interactions with nearby primary states. The Nubian Kingdom of Kush (located in what is now called the Sudan) formed in response to pressures from its northern neighbor Egypt. The Elamite states in Iran formed into states in response to the imperialistic advances of the Mesopotamian states to the west, in what is now known as Iraq. Mesopotamian incursions into Anatolia may also have played a part in the creation of smaller states in that region. The Hittite state, in what is now Turkey, was in frequent conflict with Egypt and Mesopotamia.

—Kevin M. McGeough

Complex Chiefdoms and States in Nubia

During the Nubian Bronze Age (approximately 3000–1000 BCE), complex chiefdoms arose in the region of Africa now known as the Sudan. Located along the Nile River, Nubia's history is intricately tied to Egypt's. Egyptian material culture (especially pottery) is found in great quantities at most Nubian sites. Nubia's close proximity to Egypt and its wealth of natural and human resources made it the subject of Egyptian imperial aspirations throughout much of the Bronze Age, and the development of chiefdoms in Nubia was certainly influenced by interactions with this larger state.

The region of Nubia closest to Egypt is called Lower Nubia. There is only minimal evidence for habitation in this region from the second Egyptian dynasty to the fifth Egyptian dynasty other than some small Egyptian settlements. It is likely that the Egyptians had driven people

from this region for security purposes. Starting around 1400 BCE, a local population emerges again in this region, referred to by archaeologists as Nubian C-Group, after the distinctive pottery associated with this culture. Archaeological excavations have shown that Nubian C-Group people were warriors; weapons caches have been recovered from a number of burials.

The best evidence for the political organization of the Nubian C-Group people comes from archaeological excavations and Egyptian historical accounts. With the exception of excavations at the city of Areika, most of the archaeological evidence for C-Group people comes from cemeteries. These cemeteries display marked differences in wealth and status through variation in amounts (and values) of associated grave goods and through variation in size and quality of the actual burial structures. Over 1,000 graves have been identified at Cemetery N at the site of Aniba. While most of the grave goods had been looted long ago, excavators were still able to identify elite graves because of their substantially larger size and separate location from smaller graves in the cemetery. This evidence for some elite differentiation is consistent with what scholars expect to find in a society organized into small chiefdoms, where a local elite rules from a small village over a relatively small region.

Egyptian historical accounts support the assertion that Lower Nubia in the Bronze Age was politically organized into small chiefdoms. Most important is the account of Harkhuf's travels through Africa. Harkhuf was a minor Egyptian official of the Sixth Dynasty who was responsible for organizing trade ventures into Africa on behalf of the Egyptian government. Accounts of his deeds are preserved (according to typical Egyptian custom) on the walls of his tomb, located at Elephantine. In Harkhuf's description of donkey caravans that traveled south through Africa, he discusses the regions of Wawat, Irjet, and Setju, which most scholars believe were located in Lower Nubia. This is a relatively small region ruled by three leaders, called *heka* in the Egyptian language. These heka, according to Harkhuf, were governed together by a single, more powerful ruler. This account is consistent with the archaeological evidence from the cem-



eteries. Around 2000 BCE, Egypt invaded Lower Nubia and incorporated the Nubian C-Group people directly into its empire.

Evidence for political governance in Upper Nubia in the south is less clear, but it is possible that a state-level society (and at the very least a powerful complex chiefdom) emerged in this region during the Bronze Age. Archaeologists refer to this as the Kerma culture (named after the large site of Kerma); the ancient Egyptians referred to it (in some periods) as the Kingdom of Kush.

Unlike Lower Nubia, Upper Nubia was not abandoned between the second and fifth Egyptian dynasties. Egyptian pottery is rare at early Kerma sites, indicating that contact between these polities was minimal. Egyptian pottery is much more common at Kerma sites after 2000 BCE, once Lower Nubia had been incorporated into the Egyptian empire. Prior to 2000 BCE, there is ample evidence for social stratification and elite differentiation, primarily in the elaborate graves that have been excavated. Most scholars believe that during this time the Kerma

➤ SCHOLARLY CONTROVERSY—DID THE IDEA OF “THE PHARAOH” ORIGINATE IN NUBIA?

Bruce Williams proposed an interesting idea based on excavations at the cemetery site of Qustul in Lower Egypt. He suggested that the traditional understanding of Egyptian-Nubian relationships was backward and that prior to the Bronze Age, Lower Nubia (the A-Group people) had controlled Upper Egypt and that Nubians had introduced the idea of pharaonic kingship to the Egyptians. Williams came to this conclusion based on the lavish graves in the small cemetery (called “L”) at Qustul. These graves had many elaborate Egyptian artifacts, which is not unusual for a Nubian cemetery. But what was unusual were typical Nubian artifacts (such as incense burners) decorated with iconography that is associated with royalty in later times in Egypt. If this was the case, then it appeared that the Egyptians had imported the idea of a king (and thus a centralized state government) from Nubia. However, subsequent excavations of the royal graves at Abydos (in mainland Egypt and the final resting place of some of the earliest Egyptian royalty) have uncovered royal tombs, and this same royal iconography dates earlier than the Qustul cemetery, so the theory of a Nubian birth-place for kingship has been largely abandoned.

—Kevin M. McGeough

people were organized into small-scale chiefdoms like those in Lower Nubia. Most scholars agree that after Egypt conquered Lower Nubia, the Kerma culture developed into a larger complex state, the state referred to as Kush in Egyptian sources. By 1600 BCE, Kush was a state that rivaled Egypt, usually engaging in friendly trade relations but threatening enough to require the Egyptians to set up defensive outposts and eventually incorporate the region into the Egyptian empire in the New Kingdom.

—Kevin M. McGeough

Bibliography

- Adams, W. *Nubia: Corridor to Africa*. London: Penguin, 1977.
- Connah, G. *African Civilizations: An Archaeological Perspective*. Cambridge: Cambridge University Press, 2004.

Edwards, D. *The Nubian Past*. New York: Routledge, 2004.

O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University Museum of Archaeology and Anthropology, 1993.

Trigger, Bruce. “Kerma: The Rise of an African Civilization.” *International Journal of African Historical Studies* 9(1) (1976): 1–21.

Trigger, Bruce. *Nubia under the Pharaohs*. London: Thames and Hudson, 1976.

Early Iran

Although divided from Iraq by the Zagros Mountains, civilization in ancient Iran developed in tandem with the civilizations of Mesopotamia. In fact, most of our knowledge of ancient Iran comes from historical records left by the ancient Mesopotamians. Mesopotamian scribes referred to Iran as Elam, a name that the ancient Elamites did not use to describe themselves. Elam referred to the western area of the region now known as Iran, which, as in modern times, was a land that is quite culturally diverse. Now, scholars theoretically use the designation “Elam” to refer to the region when the Elamite language was in use, but in actual practice usage varies considerably.

Geographically, Elam can be divided into two zones: the highlands (encompassing the central Zagros Mountains) and the lowlands (encompassing southwestern Iran, the provinces of Khuzestan and Fars). Around 4000 BCE the cultures of these two regions were unrelated. More than 100 small villages (at least) dotted the lowlands, seemingly centered in Fars. These villages were roughly the same size; no one village stands out as a major center. In the highlands a new center was established, probably shortly before 4000 BCE. This center was the city of Susa, which would remain important throughout Elamite history. So far about 40 villages have been identified surrounding Susa, but Susa was four times larger than any of these.

From its earliest foundations, Susa was heavily influenced by Mesopotamia, so much so, in fact, that some scholars suggest that it was actually a Mesopotamian colony from 3800 to 3100 BCE. Others say the city was conquered by Mesopotamians; at the very least there was a very significant mingling of Mesopotamian and Susanian culture. This is the time known to Assyri-



ologists as the Uruk period, a period when Mesopotamian culture appears to spread throughout the Fertile Crescent and the period when writing first develops in ancient Mesopotamia. The excavators at Susa found tablets with numerical notations in cuneiform, similar to the Sumerian tablets found at the site of Uruk in Iraq. Some of these tablets were also impressed by cylinder seals, another typically Mesopotamian form of material culture.

From 3100 to 2900 BCE, Mesopotamian influence at Susa lessened. Clay tablets were still used for writing, but Sumerian was replaced by a language that scholars call Proto-Elamite. This language has not been fully translated by scholars, so it is unclear if it actually is a predecessor of Elamite. Whatever the case may be, this Proto-Elamite culture spread throughout western Iran at this time; it is unclear whether this culture originated in Susa and spread outward or came from outside and gradually incorporated Susa.

References to Iran in the Sumerian King List talk of two polities in Iran during what scholars of Mesopotamia call the Early Dynastic period. One of these regions is called Awan, and the other is called Elam. It is unclear what the geographic extent or political makeup of either of these polities would have been. Certainly both Elam and Awan were hostile to Mesopotamia. The Mesopotamian king Sargon, founder of the Akkadian dynasty, campaigned against numerous cities in Iran. His grandson Naram-Sin made a treaty with an Iranian king (whose name is unfortunately not preserved, but he may have been Hita, king of Awan) and incorporated Iran directly into his empire. Akkadian officials moved to Iran, and the region was formally governed by Mesopotamian rulers. Sites dating to this period show a blend of Mesopotamian and Iranian material culture.

After the Akkadian dynasty collapsed, an independent Iran asserted itself, perhaps the first

➤ MESOPOTAMIAN BOOTY FROM SUSAS

Some of the most important artifacts of ancient Mesopotamia were actually recovered by French archaeologists working at the Iranian city of Susa. Taken as booty during the raids of the Elamite king Shutruk-Nahunte, many of these artifacts may not have survived to the present day had they not been seized so many centuries earlier. Two of these artifacts have been especially important for Assyriologists. The Victory Stele of Naram-Sin is one of the most important artifacts of the Akkadian dynasty, describing the elevation of King Naram-Sin to divine status. The Code of Hammurabi, now on display at the Louvre, was also found at Susa. For most modern students of Akkadian this is one of the first texts that they learn to read, and it has been invaluable in reconstructing ancient Mesopotamian social and legal life.

—Kevin M. McGeough

time coalescing as a unified political entity. A king of Awan, King Puzur-Inshushinak, is mentioned in the Susa King List and in other sources as an enemy of King Ur-Nammu of the Third Dynasty of Ur, in Mesopotamia. Puzur-Inshushinak's origins are unclear. He may have been an Akkadian administrator who rose up through the ranks, taking over as king when the Akkadian dynasty collapsed. Or he could have been an Elamite king, outside of the Akkadian sphere of influence, who took the opportunity to conquer Awan when the Akkadian dynasty collapsed. The titles he used to describe himself vary. He claims to have conquered 81 cities in Iran and most certainly unified (at least briefly) the highland and lowland regions. However, he was eventually conquered by King Ur-Nammu, and the earliest unified Elamite polity was incorporated into the Ur III state.

Iran was a willing participant in Ur III governance until about the forty-seventh year of King Shulgi's reign. Starting then (and lasting until the collapse of the Ur III state), a region in Iran referred to as Shimashki struggled against Mesopotamian rule. It is difficult to know the exact extent of Shimashki. Based on indirect Mesopotamian references, it was found in Fars Province but may have extended as far north as the Cas-

pian Sea. As the Ur III military campaigned against Shimashki, the Shimashkians became more unified against this external threat and eventually allied themselves with Ibši-Sin, a Mesopotamian who was himself vying for control of the Ur III state. Susa and environs were retaken under Iranian control, and a loose confederation of Iranian cities formed in order to battle their common Mesopotamian enemy. The later literary tablet, "The Lamentation over the Destruction of Sumer and Ur," records that Elam and Shimashki dwelt in Ur (meaning that they conquered the city of Ur).

—Kevin M. McGeough

Bibliography

- Algazae, G. *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago: University of Chicago Press, 1993.
- Foster, B. *Before the Muses: An Anthology of Akkadian Literature*. Bethesda, MD: CDL Press, 1993.
- Potts, D. T. *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1999.
- Steinkeller, P. "More on LÚ.SU(A.)=Šimaški." *NABU* 13 (1990).
- Steinkeller, P. "On the Identity of the Toponyms LÚ.SU(A.)" *Journal of the American Oriental Society* 108 (1988): 197–202.
- Vallat, F. "Susa and Susiana in Second Millennium Iran." In *Civilizations of the Ancient Near East*, edited by J. Sasson. New York: Scribner, 1995.

The Elamites

The kings of Susa in Iran began calling themselves *sukkalmaḥ* (a Mesopotamian title with various connotations) after the collapse of the Ur III state in Mesopotamia, a collapse that they helped facilitate. They also used a variety of other titles, which scholars do not understand, to describe other government officials. The relative status of the *sukkulmahs* at this time is apparent from their treatment in international correspondence. A letter to the Mesopotamian king Rim-Sin (of Larsa) speaks of "the great king of Elam." Letters from cities in Syria express deference to Elam, referring to the king as "father," a title of respect acknowledging the king as more powerful than the letter writer, as opposed to a sign of a family connection.

Around 1500 BCE, during the Middle Elamite period (1500–1100 BCE), Elamite kings stop calling themselves *sukkulmahs* and start calling themselves variations of “King of Susa and Anshan.” This title was ceremonial and does not necessarily imply that either of these cities were the capitals of Elam at the time. This period of Elamite history is divided into three subdivisions, based on the different ruling dynasties. In the Middle Elamite I period, five different kings rule, with Susa most likely their capital. It is unclear whether or not any of them were related to one another. Most noteworthy of these kings was Tepti-Ahar, who built an elaborate tomb for himself at Haft Tepe, the site where many Middle Elamite I texts came from.

Around 1400 BCE, Igi-halki founded the Igi-halkid dynasty. Texts found at Deh-e describe how various deities gave Igi-halki his kingship. This is a typically Mesopotamian way of justifying a coup d'état, so it is likely that Igi-halki seized power through violent confrontation. A successor of Igi-halki's, King Untash-Napirisha, founded the huge site of Choga Zanbil. Still preserved there today is a massive ziggurat dating to this time, along with temples, a palace, and wall 2.5 miles (4 kilometers) long. Between 5,000 and 6,500 inscribed bricks have been recovered from the site, which certainly was intended as the capital, replacing Susa. There is no evidence for any of King Untash-Napirisha's successors here, so it is likely that Susa became the capital once again after his death.

It is unclear how the Igi-halkid Dynasty came to an end, but from 1200–1100 BCE, the Shutrukid Dynasty ruled Elam. The first of these kings (and the dynastic namesake) was Shutruk-Nahunte. Archaeologists have found much evidence for his activities at Susa, including over

450 bricks inscribed with his name. Shutruk-Nahunte actively engaged in campaigns to subdue cities all over Iran, as attested by his practice of removing stelae from other cities to display in Susa. He treated Mesopotamia in a similar fashion, attacking cities in Iraq and removing their treasures to Susa.

It was these incursions against Mesopotamia that according to the Mesopotamian poem “The Deeds of Nebuchadnezzar I” led to the eventual downfall of the Shutrukids. According to this poem, Shutruk-Nahunte's son, Kutir-Nahunte, removed the cult statue of the god Marduk from the Esagila (an important temple in Babylon), a blatant demonstration of superiority over southern Iraq. Nebuchadnezzar (not to be confused with the Nebuchadnezzar mentioned in the Old Testament who sacked Jerusalem) who ruled the Sealand dynasty of Babylonia during 1125–1104 BCE, prayed to Marduk to return his people to power. Marduk agreed to do so if Nebuchadnezzar brought his cult statue back from Elam. Whatever Nebuchadnezzar's motivations actually were, he did attack Elam, driving the then king of Elam (Hutelutush-Inshushinak) from power. With that, the Shutrukid Dynasty collapsed, and the Middle Elamite III period drew to a close.

—Kevin M. McGeough

Bibliography

- Foster, B. *Before the Muses: An Anthology of Akkadian Literature*. Bethesda, MD: CDL Press, 1993.
- Potts, D. T. *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1999.
- Vallat, F. “Susa and Susiana in Second Millennium Iran.” In *Civilizations of the Ancient Near East*, edited by J. Sasson. New York: Scribner, 1995.

■ Introduction: The Origins of Kingship

The first kings came to power sometime after 4000 BCE. With the rise of the first states in Egypt, Mesopotamia, and China and the secondary states that they came into

contact with, political governance centered upon the power of one individual came to be the dominant mode of governing large polities. Throughout the Near East and East Asia, royal rule became

the normative model of governance. Although the nature of kingship varied dramatically from place to place, the essential feature—the rule of the state by a single individual—was common to all of these regions.

Ancient kings have often been called “absolutist” rulers, but this is not entirely accurate. Although it is true that ancient monarchs held substantial authority over their polities, the amount of power varied dramatically from region to region. In actual practice, while the king’s decision-making processes may have been unencumbered by legal limits, the power of the king varied depending on a number of factors including military power, the power of other elites within the states, religious considerations, economic might, and the presence of infrastructure that allowed the monarch to carry out his wishes. Ancient polities governed by kings were more often than not very decentralized. Ancient societies lacked the communication and transportation technologies that are essential for enacting centralized authority.

Ancient kingship was often hereditary but not always. The Sumerian King List from ancient Mesopotamia describes ancient kingship as passing from father to son until the gods remove power from that family and give it to another. A similar situation is described in ancient Chinese accounts. The royal line in Egypt also passed between different dynasties, yet in Egypt the king was seen as the offspring of the gods and held a semidivine status. There are isolated examples of kings from other regions who claimed divine connections (such as Naram-Sin of Mesopotamia), but these are relatively unusual situations for the period.

How kingship arose throughout the Near East, the Mediterranean, and East Asia differs in each individual situation. In most regions, kingship was adopted based on contact with regions that already had a king. Either a king was put into a position of authority by a more powerful state, or a king arose from within the community through a number of possible scenarios. How kingship arose in Egypt and China is a more difficult question, as the institution appears in both locations seemingly out of nowhere.

—Kevin M. McGeough

The Development of Kingship in Egypt

The institution of kingship was one of the defining features of Egyptian culture from the very beginning of Egyptian history. The earliest known king to rule over a unified Egypt was Narmer (ca. 3000, “Dynasty 0”), whose famous commemorative stone palette depicts much of the iconography and ideology that would remain fundamental elements of kingship for the rest of Pharaonic history.

On both sides of the palette discovered at an early temple deposit at Hierakonpolis, Narmer is depicted as a triumphant warrior. On one side he wears the white crown, representing his rulership over Upper Egypt, while on the other side he wears the red crown of Lower Egypt. In one scene, Narmer grasps a defeated enemy by the hair and raises a mace over his head, preparing to smite his captive. The smiting scene would become one of the most enduring images of kingship in Egyptian history. Narmer is also depicted wearing a false beard and a bull’s tail (which would also become standard elements in depictions of kings). Scenes of a bull attacking a city and a falcon holding a captive enemy also appear on the palette; both animals had strong connotations of royalty in Egyptian thought.

Another roughly contemporary depiction of Egyptian kingship at its earliest stage is the mace-head of King Scorpion, which depicts a different but equally important aspect of Egyptian kingship. The preserved portion of the middle register of the mace-head depicts Scorpion in the midst of an agricultural scene carrying a plow. The Scorpion mace-head and the Narmer palette both show fundamental aspects of the Egyptian conception of kingship: the king was both a ferocious warrior who conquered enemies and annexed territory and a nurturing ruler who tended to his land like a farmer.

During the Old Kingdom (ca. 2686–2160), the king was represented as a living god who held supreme authority and was responsible for maintaining the well-being of Egypt by means of his magical potency. At death, the king was thought to join with Re and Osiris and to be magically reborn in the form of his successor.

The unification of Egypt had created a massive and powerful geopolitical entity with great potential for wealth and expansion, but it required a complex bureaucracy and large-scale organization and cooperation to function. The state's resources were poured into massive royal construction projects and public works, which necessitated trade and stimulated Egypt's physical and economic growth through an elaborate redistributive system. All of this was justified by the king's divine status and his role as protector of *ma'at*, or cosmic order.

The Old Kingdom's collapse heralded a period of political decentralization and economic decline during which Egypt was ruled by nomarchs, local administrators who rose to the status of petty kings in the absence of a major central political power. In the following Middle Kingdom (ca. 2055–1650), the nature of kingship had shifted slightly: the Middle Kingdom pharaohs, members of a family from Thebes that had fought its way to prominence and reunited Egypt, were distinctly aware of their roots. The pharaohs of the Twelfth Dynasty (ca. 1985–1773) in particular depicted themselves as far more human than their Old Kingdom predecessors. Literature from the time focuses on the wisdom and beneficence of the king.

In the wake of the Second Intermediate period (ca. 1650–1550), a Theban family once again arose to drive out the foreign rulers who had settled in the Delta (the Hyksos) and reunited the fragmented kingdom. The New Kingdom (ca. 1550–1069) again brought about a shift in the way the king was presented: he was now a warrior fighting not only to protect Egypt but also to actively extend its boundaries. The king was also viewed increasingly during the course of the New Kingdom as an agent of the god Amun (the patron god of Thebes), to whom all of the king's successes in battle were credited. In a popular literary genre of the time, the *Königsnovelle*, the king was presented as a master military strategist who decisively rejected his military advisors' cautious advice in favor of a more radical (but always successful) approach.

During the course of Egyptian history, the gap between kings and nonroyal individuals gradually diminished. This trend had already be-

➤ WOMEN AND KINGSHIP IN EGYPT

Kingship was a fundamentally masculine institution. Although several women exercised sole rule over Egypt during the course of Pharaonic history, only one, Maatkare Hatshepsut (ca. 1473–1458), presented herself as a king, during the middle Eighteenth Dynasty (ca. 1550–1069). Although she made some attempts to feminize the traditional royal titulary and iconography (for example, calling herself “the daughter of Re” rather than “the son of Re”), she eventually chose to simply represent herself as male. Hatshepsut's reign was stable and successful, but her experiment in kingship was rejected by her immediate successors, who excised her name from her monuments and left her out of the official King Lists.

The next three pharaohs of the Eighteenth Dynasty did not promote any women to the office of Great King's Wife, a position that had achieved an immense level of importance with the beginning of the Eighteenth Dynasty. This was perhaps a direct reaction to Hatshepsut's assumption of power, since she had at one time held the rank of Great King's Wife herself. Amenhotep III (ca. 1390–1352) revived the tradition. Nefertiti, the principal wife of Amenhotep III's successor Akhenaten (ca. 1352–1336), was depicted wearing kingly attire and participating in traditionally kingly activities (such as smiting captives) and was even called “Lady of the Two Lands” (a feminized version of a kingly title). However, she apparently never achieved full independent kingship status, as had Hatshepsut.

—Megaera Lorenz

gun as early as the First Intermediate period (ca. 2160–2055), when nonroyal individuals began using traditionally royal funerary practices, such as the use of funerary spells based on the Pyramid Texts and the decoration of the corpse with royal accoutrements (diadems, scepters, and the pharaonic bull tail) to identify the deceased with Osiris, the king of the netherworld. By the early Third Intermediate period (ca. 1069–664), in a curious reversal of this process, royal burials began to strongly resemble the traditional burials of wealthy private individuals, with the same standardized set of funerary equipment and texts.

Powerful nonroyal individuals also increasingly began to take on royal attributes. By the end of the New Kingdom the High Priest of Amun was essentially presenting himself as a pharaoh in Upper Egypt, while Ramses XI (ca. 1099–1069) reigned ineffectually in the north of the country. By the Twenty-fifth Dynasty (ca. 747–656), high-ranking officials were building massive funerary monuments to rival royal burials of any period of Egyptian history.

By the Ptolemaic period (332–30), many of the functions once filled by the kingship now lay in the hands of the priesthood of the major religious institutions of the state. The Ptolemies administered over the country, politically and economically, and depicted themselves as traditional Egyptian pharaohs. However, they ruled in relative isolation in Alexandria, and the traditional institution of kingship became, for most of the populace, increasingly symbolic and esoteric. Although a human king technically occupied the throne, the priests of the Horus cult revered the sacred falcon itself as the earthly manifestation of the divine kingship. One of the most striking signs of how abstract the concept of kingship had become is a series of royal cartouches inscribed on the wall of the Ptolemaic temple at Dendara. Inside the cartouches, where one would expect to find the name of the reigning king, there is only inscribed the word “Pharaoh.”

—*Megaera Lorenz*

Bibliography

- Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989.
- O'Connor, David, and David P. Silverman, eds. *Ancient Egyptian Kingship*. *Problème der Ägyptologie* 9. Leiden: E. J. Brill, 1995.
- Shaw, Ian, ed. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.

The Rise of Kingship in Mesopotamia

The early third millennium BCE saw the increasing importance of secular authority at the expense of religious authority within the Sumerian city-states as the need for defense put power into the hands of war leaders. These were probably originally appointed temporarily by the city council but through time gained permanence.

Nevertheless, the ruler governed in the name of the city's deity and had sacred duties, including maintaining the god's shrine with offerings and performing the leading role in religious festivals.

Growing interstate conflict enabled kings to increase and consolidate their power. Kingship came to be vested in dynasties, but the citizens may have selected a king's successor from among his sons or brothers subject to the city god's approval, probably obtained by divination. Misfortunes reflected divine disapprobation, and an unsuccessful monarch could be overthrown.

Each Sumerian city identified itself as the property of its tutelary deity. The prosperity of the city depended on the presence and favor of the city's god, and in turn the god or goddess depended on the service of the citizens, led by their king, the god's representative. Nippur was the city of the god Enlil, who was acclaimed as chief of the gods by the end of the Early Dynastic III period, and Enlil's temple at Nippur became the acknowledged religious center of Sumer. Enlil's approval, given through his priests, was a prerequisite for the success of any city's ruler, and his backing was sought by kings anxious to extend their domains or attack their enemies.

After 2500 BCE individual kings of powerful states began to harbor territorial ambitions, culminating in Sargon's creation of the first empire, of Sumer and Akkad, an integrated state in which authority was centralized in the king's hands and in a newly founded city, Agade. In place of the old Sumerian kings, Sargon and his successors appointed Akkadian governors to administer the individual city-states, backed up by a substantial army. The Akkadian kings nevertheless expressed their authority through traditional roles and titles, invoking the approval bestowed by Enlil through Nippur. Temples still wielded considerable influence through their power to legitimate royal authority, in the name of the gods they served, but the Akkadian rulers gained control over them by appointing members of the royal family and other loyal followers of the regime to fill temple posts. The fourth king, Naram-Sin, claimed to have been invited by the gods to become Agade's patron deity. His elevation to divine status also enabled him to assume the role of tutelary god of the empire itself. Having a divine king as head of state altered the ide-

ology of kingship; nevertheless, even as a god, the king was subordinate to Enlil and therefore still answerable to divine authority.

The years following the collapse of the Akkadian empire saw local dynasties reestablished in many city-states, their ideology consciously recalling earlier days when each city was independent and existed as the estate of its tutelary deity. Within a century, however, the city-states were again united, under the Third Dynasty of Ur (Ur III). Its first king, Ur-Nammu, devoted much time and effort to reestablishing stability, and his son, Shulgi, consolidated the empire. Ur-Nammu instituted major reforms, creating a standing army and reorganizing the economic system, greatly increasing royal power. They created an obsessively efficient bureaucracy in which a vast number of civil servants recorded taxes, tribute, and the yields from state lands, flocks, and herds in minute detail. They ostensibly followed traditional Sumerian political organization, dividing Sumer and Akkad into 20 provinces largely corresponding to the major earlier city-states, often ruled by members of each city's royal house, now governors. However, the Ur III kings circumscribed their power by installing a member of the royal family or some other loyal supporter from outside the province as a military governor to work alongside each local ruler.

The Ur III kings used ideology to win support within Sumer and Akkad, emphasizing their links with the past and their upholding of tradition and their piety and role as divinely appointed protectors of the people. In contrast, beyond this core region they had no need to follow tradition; peripheral lands, to the east and north, were administered by military governors who were granted Crown lands. The Ur III rulers expressed their authority in traditional terms, the king exercising control on behalf of the gods and mediating between them and the people of the land: the accepted role of the city-state's ruler writ large, the whole empire being the estate administered by the king. The relationship between the ruler and the gods became closer when Shulgi proclaimed himself a god. While Ur was their capital, the ancient city of Uruk was the Ur III dynasty's spiritual home, and they claimed kinship with its revered First Dynasty,

➤ SHULGI, THE VIRTUOUS KING

More than 20 hymns as well as inscriptions and other literature celebrate the virtues of Shulgi, the second Ur III king, drawing attention to his place as the descendant of ancient kings, upholder of tradition, and representative of the gods. Shulgi performed the traditional sacred marriage with the goddess Inanna, tutelary deity of the ancient city of Uruk. He promulgated one of the first law codes, laying down rules of conduct and punishments for crime but also setting out the ethical and religious basis for his code and detailing his own reforms. This provided a model that many later kings aspired to follow.

The hymns reveal the benefits that the gods expected Shulgi to bring about when they chose him as king: the prosperity of the country, through both domestic production and the acquisition of foreign treasures; generous support for the gods' shrines, especially that of Enlil; the administration of justice; the enhanced prestige of his capital city of Ur; and the protection of the land against its enemies. In some poems, couched in the first person, Shulgi enumerates his own virtues, including his academic excellence and diligence as a schoolboy. He recounts his bravery and excellent command of martial arts in battle and on the hunting field, where he slays lions to protect his people (both a royal prerogative and a royal duty). His religious virtues include infallibility in divination, superb musical accomplishments, deep piety, the provision of abundant offerings for the temples, and the composition of sublime hymns. He endows schools so that his hymns may be performed in perpetuity. He exhibits supreme wisdom, both in the council chamber and in the law court, promoting righteousness and defending the weak.

—Jane R. McIntosh

whose deeds they glorified by committing to writing the traditional stories of Gilgamesh and his forebears. They undertook extensive restoration and new building in the traditional religious centers, Ur receiving particular attention. In fulfillment of their sacred duty to ensure the prosperity and welfare of their subjects, the Ur III kings undertook many public works, constructing and maintaining canals and roads for irrigation and communications, and regularized many

aspects of life, from the calendar and the official use of the Sumerian language to the standardization of weights and measures.

No later Mesopotamian state attained the degree of control over its dominions exercised by the Ur III dynasty. Nevertheless, from this time onward, sizable territorial states were to be the norm, their extent and power depending on the strength and competence of individual rulers and dynasties. The earlier second millennium saw the rise of competing states centered on Isin, Larsa, Babylon and other cities. With the emergence of Hammurabi's empire, Babylonia became an enduring political entity. Northern Mesopotamia took longer to develop a political identity.

One major change altered the basis of authority in some states and had a wider influence on royal ideology. During the early second millennium many states fell to Amorite sheikhs. In the Sumerian city-states the loyalties of the people and their rulers had always been to their city and its god. Among the nomadic peoples of the west, however, including the Amorites, tribal loyalties took priority over those of place. This for the first time produced states whose basis was ethnic rather than, or as well as, territorial. The ruler's legitimacy now depended on (real or fictitious) descent from earlier kings in addition to the traditional approval of the gods. The earlier ideology was also manipulated to support the new order when, under Hammurabi, supreme divine authority was transferred from Enlil at Nippur to Babylon's god Marduk, henceforth the chief god of the Babylonian pantheon, thus enabling spiritual as well as secular authority to pass to Babylon.

The universally recognized duty of a Mesopotamian king was to ensure the welfare of his subjects: defending them against external threats; promoting prosperity through appropriate construction projects (particularly of irrigation systems), good management of land and resources, and the encouragement and sponsorship of trade and industry; supporting justice; and caring for the most vulnerable members of society such as orphans and widows. To this end some kings issued an edict (*misharum*) cancelling outstanding debts to the Crown. Kings might also fix wages and prices and standardize weights and measures. Rulers also had important ritual duties,

representing the community in making offerings and in some cities taking part in a sacred marriage ceremony. Royal and state success and prosperity were understood to reflect the king's legitimacy and divine approval of his actions; conversely, disasters were attributable to some failure in the monarch's performance of his duties.

—Jane R. McIntosh

Bibliography

- Klein, Jacob. "Shulgi of Ur: King of a Neo-Sumerian Empire." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Nissen, Hans J. *The Early History of the Ancient Near East*. Chicago: University of Chicago Press, 1988.
- Postgate, J. Nicholas. "Royal Ideology and State Administration in Sumer and Akkad." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Saggs, H. W. F. *People of the Past: Babylonians*. London: British Museum Press, 1995.

Divinity and Kingship— Mesopotamia and Egypt

In Mesopotamia as in Egypt, the institution of kingship had close connections to religion and to the gods. In Egypt, kingship was considered a divine institution, a fundamental part of the world as it was ordered by the gods and with the gods themselves named as the first kings. Although it eventually fell to human rulers to govern Egypt, they claimed divine relationships and qualities to legitimate their reigns and were posthumously transformed into gods. In Mesopotamia, while kingship was thought to have been handed down from the gods and although kings served as the intermediaries between the human and divine worlds, the kings themselves were not typically ascribed divine qualities or worship even after death. Those few kings who declared themselves gods during their lifetimes, most notably from the Akkadian and Ur III dynasties, were atypical in the history of Mesopotamian kingship.

The distinction between the divine office of Egyptian kingship and the humans who filled it was an important one, although it was not widely

recognized until G. Posener's publication on the subject in 1960. At issue is the interpretation of the pharaoh's titles, which identified him both as the falcon god Horus and the son of Re, the Egyptian sun god. These claims of divine embodiment and parentage should not necessarily be read literally but were instead part of the symbolic language of kingship. The pharaoh was superior to all other humans, but while he may have exhibited traits of the deities with whom he was associated, he was generally considered to be subordinate to them. This principle is apparent in Egyptian art, where the pharaoh is depicted as much larger in scale than other humans, emphasizing his superior status, but is rarely shown as a true counterpart of the gods. He may be represented as a child being suckled by a goddess, as a powerful king under divine protection, or in the act of offering gifts to the gods to secure their support of his reign. While the myth of the king's divine birth and essence was more aggressively propagated from the time of the Twelfth Dynasty, the human king's apotheosis generally occurred only after death, when he was united with Osiris.

In Mesopotamia, the question of the king's divinity has been less contentious. Although he was of the highest human status, the king remained a servant of the gods. He ruled only by divine consent, and the success of his reign was dependent on ensuring the gods' continued comfort and goodwill. His investiture was carried out in the temple, and his most important tasks included building and repairing the temples in his territory, which served as the houses of the gods, and making regular offerings of food and other gifts. The king also participated in numerous religious rituals in which he interacted with the divine, including the infamous Sacred Marriage Ceremony. This fertility ceremony, which saw the king engage in intercourse with the goddess Ishtar, possibly represented by her priestess, was performed to maintain the prosperity of the land and its people.

Only a few kings in the history of Mesopotamian kingship asserted their divinity, usually in response to extraordinary circumstances. Naram-Sin of Akkad (ca. 2260–2223) was the first to be deified during his lifetime, likely as a political gambit to consolidate his power over the vast

➤ THE BASSETKI INSCRIPTION

In 1975, a life-sized copper statue of a nude male, preserved to the waist and seated on a circular base, was acquired by the Iraq Museum. Discovered near Bassetki in northern Iraq, this statue not only represents one of the few surviving examples of large-scale sculpture from the Akkadian empire but also offers a rare insight into the propaganda accompanying King Naram-Sin's deification. The inscription on the base records that it is the citizens of Agade who request him as the god of their city, both because of his extraordinary military accomplishments and because he is beloved by the gods.

—Karen Sonik

and unruly Akkadian empire rather than as an exclusively religious statement. This same strategy was adopted by Shulgi (ca. 2094–2047) and his successors, who faced similar political difficulties in their rule over the Ur III empire, but was rarely used in later Mesopotamian history.

—Karen Sonik

Bibliography

- Frankfort, Henri. *Kingship and the Gods: A Study of Ancient Near Eastern Religion as the Integration of Society and Nature*. Chicago: University of Chicago Press, 1948.
- Leprohon, Ronald J. "Royal Ideology and State Administration in Pharaonic Egypt." In *Civilizations of the Ancient Near East*, vol. 1, edited by Jack M. Sasson. New York: Scribner, 1995.
- Postgate, J. N. "Royal Ideology and State Administration in Sumer and Akkad." In *Civilizations of the Ancient Near East*, vol. 1, edited by Jack M. Sasson. New York: Scribner, 1995.
- Silverman, David P. "The Nature of Egyptian Kingship." In *Ancient Egyptian Kingship*, edited by David O'Connor and David P. Silverman. Leiden: Brill, 1995.

China—The Sage Emperors

A sage is a person noted for particularly deep wisdom, rather than merely someone who has acquired much knowledge. Among the ranks of holy people, sages are normally male, and those called sages in English are usually not people of

superior scholarly attainment. Instead, the sages appear in the earliest layers of legends of peoples as human beings specially inspired by the gods to provide for the essential needs of human life, such as agriculture, or the arts of civilization, such as writing. Other, more historically traceable holy people of great wisdom are sometimes also called sages (especially the early rabbis of Judaism in the first two centuries of the Common Era, the hakham, who played a heroic role saving the Jewish faith despite the loss of the Temple). The term “sage” is sometimes restricted, however, to the early legendary creative geniuses who made human existence itself possible. It is interesting to note that this role is often played by mortals inspired by gods, rather than gods come to earth, although sages tend in legend to enjoy surprising longevity and sometimes win immortality.

In Chinese traditional lore, six great sage-emperors, dating their reigns to early in the third millennium BCE, brought the accoutrements of civilization to the land. These enlightened rulers (Fuxi, Shen Nong, Huangdi, Yao, Shun, and Yu) established order in the world and the first three are traditionally considered to be divine. For example, Huangdi, the “Yellow Emperor,” is credited with creating the humanities, writing, the

compass, the pottery wheel, and the Chinese social order in about 2000 BCE. Yu the Great is credited both with controlling the flooding of the Yellow River (making agriculture possible) and with beginning the practice of hereditary rule at a slightly earlier time. Like the Mesopotamian sages, these figures are regarded as human, but at the same time they transcend humanity. The first of the group, Fuxi, who taught the use of the fishing net, domestication of animals, music, and casting oracles, was human—but had the body of a snake. Similarly, Huangdi was human—but came into being spontaneously, and attained immortality at the age of one hundred, ascending to heaven on a dragon’s back. As Confucianism and Daoism developed in China, both religions accepted the sage-emperors as founding “culture heroes.”

—Phyllis G. Jestice

Bibliography

- Fischer-Schreiber, Ingrid, et al. *The Encyclopedia of Eastern Philosophy and Religion*. Boston: Shambhala, 1994.
- Jestice, Phyllis G. *Holy People of the World: A Cross-Cultural Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2004.
- Urbach, Ephraim E. *The Sages: Their Concepts and Beliefs*. Jerusalem: Magnes, 1975.

■ Introduction: The Dynasties of Egypt

The political history of ancient Egypt provides the framework that historians use to describe Egyptian chronology: the dynasty. There were 32 dynasties in Egypt numbering from 0 to 31 (Dynasty 0 was discovered later, so rather than renumber all of the other dynasties it was given the designation “0”). Each of these dynasties ideally reflects a period of time in which one family of rulers led Egypt. This is only the ideal, since in actual fact the leadership of Egypt was not always as clear-cut as this. Sometimes there were competing dynasties, and sometimes kingship did not pass between family members. Sometimes the breaks between dynasties seem relatively arbitrary; however, the dy-

nastic system of periodization provides a useful standard that all Egyptologists use, and thus it is important to have a broad familiarity with it.

Every Egyptian dynasty is grouped into a larger unit, referred to as either a “kingdom” or a “period.” Generally, a “kingdom” was a time of centralized political authority and stability in Egypt, whereas a “period” was a time of decentralization and possibly competing leadership. This organizational schema implies that Egyptian history was cyclical, vacillating between centralized and decentralized authority. As with the dynastic system, this itself is an oversimplification, but this kind of periodization does provide a useful common framework for Egyptologists.

Understanding Egyptian history as a successive series of dynasties grouped into kingdoms and periods is an ancient practice. Manetho, a Greek historian who wrote during the third century BCE, seems to have established this system. The ancient Egyptians themselves also kept track of their kings in a similar fashion. Examples of these records include the Palermo Stone, the Turin Royal Canon, and the Abydos King List, all of which have survived to the present. Modern historians use a synthesis of all of these sources to reconstruct the historical chronology of ancient Egypt.

What follows is a discussion of the main political events in each of the kingdoms and periods that fall within the time period. For information on the Predynastic period, see the volumes covering the period up to 4000 BCE, and for the Third Intermediate period and the Late period, see the volumes covering the time between 1000 BCE and 300 CE.

—Kevin M. McGeough

The Early Dynastic Period in Egypt

Egypt's Early Dynastic period, circa 3000 BCE, is defined in this essay as encompassing the First through Second Dynasties. The Early Dynastic period marks the change from warring city-states and polities to a developed nation under one rule. The government of Egypt, headed by a semidivine ruler with an elite class of nobility supporting the bureaucratic structure, became established. Writing, having made its first appearance in the pre-dynastic period, had become an elite skill. Foreign trade flourished. Memphis was founded as the economical and political capital of the country.

The division of the history of Egypt into dynasties is based on accounts by the much-later Greek historian Manetho; Herodotus (fifth century BCE) also provides historical details. Additional sources are the Turin Canon from the New Kingdom and the Palermo Stone, possibly from the Old Kingdom, that list the earliest kings' names. Early Dynastic period resources are often diverse and contradictory but provide a good deal of information. For example, the impressions of two seals have been recently discovered

MEMPHIS

According to tradition, King Menes or King Hor-Aha founded Memphis as the capital city of unified Egypt early in the First Dynasty. Memphis grew to become one of the most important cities in the ancient world and, while not always the capital of Egypt, was often a major power. Much of the city's power came from its strategic location, south of the apex of the delta. Thus, it straddled both Upper and Lower Egypt. It was also located along the major east-west trade routes, providing a good economic vantage point as well. Its prominent position along these trade routes and its political importance led to its development as one of Egypt's most cosmopolitan centers. Foreign merchants settled in the city, foreign mercenaries were recruited here, and the arts and religions of foreign lands were accepted here.

—Kevin M. McGeough

in the First Dynasty cemetery in Abydos. The seals, associated with the mortuary buildings of Kings Den and Qaa, list First Dynasty kings. More information comes from thousands of inscribed objects of the First and Second Dynasties found under the Step Pyramid of Djoser.

The First Dynasty comprises eight kings, a conclusion supported by the seal from Qaa, the Abydos King List, and Manetho. Narmer, the first king, may be conflated with Menes, the first king recorded on the Abydos List. Narmer's influence was widespread; his name appears on artifacts throughout Egypt and even Israel. In contrast, his predecessors are minimally represented, with recognition confined to single regions. Narmer thus appears to have become the sole ruler of a unified Egypt. Pharaoh Den, entombed also at Abydos, enjoyed the longest reign of the period, a reign that brought advances in art and burial architecture. During his reign, the king's title of *nsw-bity* ("he of the sedge and the bee") first appeared. Also, an elite cemetery was established in the Memphis region, although royal burials centered in Abydos near the ancestral city of This.

The succession of the Second Dynasty is not as well known. The order and names of the first three kings are documented because one kings'

list agrees with an inscription on a small statue from the period (currently in the Cairo Museum, CG 1). The kings' lists and contemporary artifacts agree on the next two and the last kings, but intervening individuals are too diversely represented to reconcile the evidence.

The Second Dynasty appears to have been a period of unrest in the formation of the state. The first king, Hetepsekhemwy, buried his predecessor Qaa in Abydos. It is possible that his name, which means "The Peaceful One of the Two Powers," is evidence for a rift that Hetepsekhemwy was able to heal. Furthermore, he was interred in a new style of gallery tomb in Saqqara, near Memphis, instead of in Abydos. His successors Raneb and Nynetjer were also buried there. But under the reign of Peribsen, royal burials returned to Abydos. Additionally, Peribsen was titled "The Seth," correlating his divinity with Horus's brother rather than with the traditional falcon god. Many suggest that the change of burial site and title imply continued political unrest. This disorder was contained by the last king of the Second Dynasty, Kasekhemwy. At first appearance in the city of Hierakonpolis, he used the traditional Horus title and called himself Khasekhem, "The Power Has Appeared." Later, he added the Seth animal to the Horus falcon and "wy" to the end of his name: Kasekhem-wy, or "The Two Powers Have Appeared." Scholars believe that this name change and the addition of Seth to his titles demonstrate his role in ending the conflict. Khasekhemwy is buried in Abydos in a vast, complex site with a stone-lined burial chamber. Although large, most royal mortuary constructions were of mud brick with minimal stone elements. This construct is a precursor to the greatest architectural achievement of the first king of the Third Dynasty, the Step Pyramid.

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Bibliography

- Baines, J. "Origins of Egyptian Kingship." In *Ancient Egyptian Kingship*, edited by D. O'Connor and D. Silverman. Leiden: Brill, 1995.
- Hoffman, Michael A. *Egypt before the Pharaohs: The Prehistoric Foundations of Egyptian Civilization*. Rev. and updated. Austin: University of Texas Press, 1991.

Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. 2nd ed. London and New York: Routledge, 2006.

Wilkinson, Toby A. H. *Early Dynastic Egypt*. London and New York: Routledge, 1999.

The Old Kingdom

The Old Kingdom (OK) is defined as the roughly 560-year period between the beginning of the Third Dynasty (ca. 2686) and the end of the Sixth Dynasty (ca. 2160). There is little that distinguishes the early OK from the Early Dynastic period (EDP) except for a single remarkable innovation: the development of the royal pyramid complex. The Third Dynasty (ca. 2686–2613) was directly descended from the Second Dynasty and shared the same capital at Memphis. Memphis (ancient Ineb-Hedj), near present-day Cairo, would serve as the capital for the duration of the OK. Nothing is preserved of the OK administrative center itself, so current knowledge of OK Memphis derives from historical documentation rather than archaeological evidence.

The royal and elite funerary complexes and their associated temples are the context from which most of our knowledge of OK history, religion, literature, art, politics, and society derives. Although monumental royal funerary complexes had already been in existence since the EDP, they were primarily composed of mud brick and wood, with some elements in stone. It was during the reign of Djoser (ca. 2667–2648), probably the second pharaoh of the Third Dynasty, that the world's first known monumental stone construction—a funerary complex consisting of a stepped pyramid and a stone courtyard—was built at Saqqara. The courtyard was meant to imitate the hall that the king would have used in life for his Heb-Sed festival, a ritual meant to revitalize his authority and magical potency.

This innovation was credited throughout Egyptian history to Djoser's architect, Imhotep. Although there are few contemporary references to Imhotep, his historicity is not in doubt. His name appears on the base of a dedicatory statue of Djoser. Imhotep was revered as a wise man (and even a deity in the Ptolemaic era) up until the time of the Arab conquest in the seventh



View of the Bent Pyramid at Dahshur, built by the Egyptian king Sneferu (2613–2589 BCE). This structure, an early attempt at achieving a classical pyramid shape without steps, is known as the Bent Pyramid due to the way the angle shifts abruptly near the top. Dahshur is also the site of the Red Pyramid, the king's final (and successful) attempt at creating a true (smooth-sided) pyramid. (Corel)

century CE. His status as a high priest of the sun cult at Heliopolis foreshadowed the eventual importance of Heliopolis as a religious capital in the later OK.

Djoser's two successors, the last kings of the Third Dynasty, both attempted to build pyramid complexes. However, both attempts were abortive, probably thanks to the short duration of their reigns. In the Fourth Dynasty (ca. 2613–2494) the pyramid-building tradition flourished. Beginning with King Sneferu (ca. 2613–2589), the rulers of the Fourth Dynasty built a series of massive stone pyramids along the Giza plateau, near present-day Cairo. In addition to superficial differences in the shape of the pyramids themselves (the Fourth Dynasty pyramids were smooth-sided rather than stepped), the orientation and style of the associated pyramid complex was different from that employed by Djoser, suggesting new developments in religious ideas

associated with the burial of the king. These complexes were the focus of the royal funerary cult, which involved the provision of daily offerings to the soul of the dead king. Members of the royal family and important officials were buried in cemeteries that were incorporated into the pyramid complex.

Several major developments took place in the Fifth Dynasty (ca. 2494–2345). First, the cult of the sun god Re, which had already been increasing in importance throughout the OK, was now raised to the status of a state religion. Heliopolis, the city of which Re was the patron god, became Egypt's religious capital (although the country was still administered from Memphis). Several of the kings of the Fifth Dynasty built sun temples, a tradition started by the first king of the dynasty, Userkaf (ca. 2494–2487). These temples were similar in plan and function to the funerary complexes.

Royal pyramids in the Fifth Dynasty were smaller and more cheaply constructed than their predecessors, and the temple complexes were less standardized. The insides of the pyramids were inscribed with magical texts intended to help the soul of the dead king enter the afterlife and take on divine attributes. These pyramid texts were a royal prerogative in the OK, but they were later adapted for use by nonroyal individuals. A large cache of documents from the pyramid complexes at Abusir has survived, shedding light on the administrative, economic, and religious functions of the state.

While the highest offices in the country had been held almost exclusively by members of the royal family in the Third and Fourth Dynasties, the Fifth Dynasty saw an increasing number of nonroyal individuals gaining office through merit. Administration became less centralized, with the creation of new offices to assist with the administration of the remote parts of the kingdom (for example, the overseer of Upper Egypt, an office created in the late Fifth Dynasty). A larger segment of the population was now able to afford decorated tombs. State religious institutions redistributed land and products donated to the temples or levied as tax as salary for their employees, who probably represented a significant portion of the population.

➤ KHUFU AND THE MAGICIANS

The literary work contained in the Papyrus Westcar (P. Berlin 3033), although set in the Old Kingdom, was probably composed in the Middle Kingdom. The papyrus itself dates to the Second Intermediate period. The text is a series of stories within a story, much like the *Arabian Nights*. The framework for the tales is a day in the court of King Khufu of the Fourth Dynasty. Khufu asks his sons to entertain him with tales of miraculous works by magicians and wise men of the past. Three of his sons tell stories (only one of which is still well preserved), but the fourth, Hordjedef, informs his father that he knows of a contemporary magician named Djedi. Djedi is brought into the court, where he performs several miracles including a prediction of the birth of the first three kings of the Fifth Dynasty. The final tale in the cycle describes the miraculous birth of these three kings, supposedly fathered by Re himself. The importance of this text lies in what it reflects about later traditions surrounding the Old Kingdom and its historical figures. Not only does it hint at Hordjedef's long-standing reputation as a wise man, but it also sheds light on the way the ancient Egyptians viewed the transition between the Fourth and Fifth Dynasties.

—Magaera Lorenz

An important literary genre, the autobiography, came to fruition in this period. These texts, commissioned by officials to be placed in their tombs, describe the individual's official duties and major accomplishments. Along with archaeological evidence, they illuminate the state of Egyptian society and the structure of administration at the time. Many contain references to expeditions for the procurement of foreign goods, such as spices and minerals not found in Egypt. Egypt engaged in friendly trade with Byblos, which provided wood that was crucial to the construction of boats and temple furniture.

In the Sixth Dynasty (ca. 2345–2181) the decentralization of authority continued. The dynasty was plagued with intrigue and succession issues. The second king of the dynasty, Userkara (ca. 2323–2321), may have been a usurper. The biographical text of one official, Weni, describes an assassination attempt against King Pepy I (ca.

2321–2287), Userkara's successor. Local administrators became increasingly powerful. The trend of creating provincial administrative offices that began in the Fifth Dynasty was entrenched by the Sixth Dynasty. A provincial governor, under the nominal control of the pharaoh, ruled every district.

The penultimate king of the Sixth Dynasty, Pepy II (ca. 2278–2184), took office as a boy of 6 years old and ruled for a staggering 94 years. The first half of his reign was relatively successful, marked by a lively policy of foreign trade and numerous expeditions abroad. However, by the second half of his reign, Pepy II's administrative power was virtually nil. Local administrators became increasingly independent. A series of low Nile floods put pressure on the already weakened state. By the time Pepy II died, without an heir, Egypt's central administration had dissolved, leaving an agglomeration of ministates run by petty kings. Pepy was succeeded by a queen, Nitigret (ca. 2184–2181), but her reign was brief, and she was unable to reestablish central authority. While several kings succeeded her, their status was nominal. Egypt would not see unified rule again for another century.

—Magaera Lorenz

Bibliography

- Grimal, Nicholas. *A History of Ancient Egypt*. Translated by Ian Shaw. Oxford, UK: Blackwell, 1992.
- Kemp, Barry. *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989.
- Lichtheim, Miriam. *Ancient Egyptian Literature*. Vol. 1, *The Old and Middle Kingdoms*. Berkeley: University of California Press, 1973.
- Malek, Jaromir. "The Old Kingdom (c. 2686–2160 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.

The First Intermediate Period

Following the decline of the Old Kingdom, the First Intermediate period was the earliest major period of political fragmentation since the inception of the Egyptian state. In the traditional scheme of ancient Egyptian history it includes the Eighth Dynasty through part of the Eleventh Dynasty, though more recently some prefer to place the Seventh through Eighth Dynasties in

the Old Kingdom. One by-product of the expanding Old Kingdom bureaucracy was increased wealth and autonomy of those who governed Egypt's nomes (administrative districts). Provincial nomarchs (nome governors) and high-level officials initially were drawn from the ranks of the governing elite, who were buried in royal cemeteries of Memphis. By the late Old Kingdom such officials had, by their own devices and through adjustments implemented by the state, aligned themselves more permanently with their home regions, where they were buried in increasingly elaborate tombs in local cemeteries. High positions were passed through family instead of by royal appointment. Such independence amid the dissolution of national authority led to competition for regional dominance and infighting. Much detail of this period derives from the tomb inscriptions of these nomarch families rather than comparatively sparse royal records.

Historical sources indicate that the Seventh through Eighth Dynasties continued to rule from the Old Kingdom capital at Memphis. The Seventh Dynasty is barely documented and widely treated as fiction. The 70 rulers cited by the ancient historian Manetho as having ruled in a mere 70 days is regarded rather as a statement by later generations about the diminished authority of kingship. If there were claimants to the throne, their reigns were very brief and their influence very slight. The Eighth Dynasty is only slightly less obscure. Up to as many as 18 kings can be recognized in king lists, but archaeological remains are scarce. Some royal decrees survive, while the only substantial royal burial monument located is a small pyramid of Qakare Ibi at Saqqara. Some Eighth Dynasty kings used the throne name of Neferkare, probably to affiliate with late Sixth Dynasty king Pepy II, who had also employed this name.

A destabilizing influx of Asiatic groups into the delta may have contributed to a loss of the Memphite power base, but kingship found new executors near the Fayum region at Herakleopolis with the Ninth through Tenth Dynasties. Of the approximately 18 names assigned, about 5 are well confirmed: 3 kings named Khety (1 of whom founded this dynasty), another named Neferkare, and 1 named Merykare. Though the

➤ CAUSES OF COLLAPSE—SETTING THE STAGE FOR AN INTERMEDIATE PERIOD

Many explanations have been advanced for why the Old Kingdom succumbed to civil unrest in the First Intermediate period. Some have blamed the collapse on the unchecked growth of provincial government, but this is unlikely to have been the sole cause. It may have been due in part to the fact that the last king of the Old Kingdom became too old to successfully rule. (Sources indicate that Pepy II may have reigned for more than 90 years.) Any viable male heirs may have predeceased him, and the dynasty was brought to a close with the rule of Queen Nitocris. The late Old Kingdom experienced a series of lower Nile inundations that would have drastically affected agricultural productivity and food surpluses. The state's inability to assist during a famine would have severely undermined public confidence to the favor of local officials who could independently offer relief.

—Nicholas S. Picardo

full extent of Herakleopolitan rule in northern and Middle Egypt at any one time is unclear, independent competition and alliances among southern nomarchs produced challengers, such as the Eleventh Dynasty based at Thebes. Though tradition traces this dynasty back to an ancestor named Nebhepetre, the first documented figure to consolidate power in the south was Shertawy Intef I. A protracted period of conflict between allies of the Herakleopolitan north and the Theban south followed, with fighting concentrated north of Abydos into Middle Egypt under a significant military push by Wahankh Intef II. Following a third Intef, Nebhepetre Mentuhotep successfully put down the Herakleopolitans. Claiming rule of a unified Egypt, he embarked on a program of reconstruction and began to usher in the Middle Kingdom.

—Nicholas S. Picardo

Bibliography

Assmann, Jan. *The Mind of Egypt: History and Meaning in the Time of the Pharaohs*. Translated by Andrew Jenkins. New York: Metropolitan Books, 2002.

Franke, Detlef. "First Intermediate Period." In *The Oxford Encyclopedia of Ancient Egypt*, Vol. 1, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.

Kemp, Barry J. "Old Kingdom, Middle Kingdom and Second Intermediate Period, c. 2686–1552 BC." In *Ancient Egypt: A Social History*, edited by B. G. Trigger, et al. Cambridge: Cambridge University Press, 1994.

Seidlmayer, Stephan. "The First Intermediate Period." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.

Wilson, John A. *The Culture of Egypt*. Chicago: University of Chicago Press, 1956.

The Middle Kingdom

After the instability of the First Intermediate period subsided with the reunification of the country under Nebhepetre Mentuhotep, the stage was set for a period often considered the classical age of ancient Egyptian culture, the Middle Kingdom (late Eleventh Dynasty–Thirteenth Dynasty, with a tendency to include the Fourteenth Dynasty). As a period during which a higher proportion of the population had appreciable economic resources and expanded access to religious knowledge, it is also sometimes known as an Age of the Middle Class. Sankhare Mentuhotep continued the Eleventh Dynasty's program of restoration begun by Nebhepetre, but by the time of his successor, Nebtawyre Mentuhotep, a concentration of efforts on their native Upper (southern) Egypt had led to a slide in control of the country as a whole. The first king of the Twelfth Dynasty, Amenemhat I, was likely the vizier of this name who had conducted a quarrying expedition for Nebtawyre. He initiated an era that, while reviving some Old Kingdom royal models, also took novel approaches to rule that brought Egypt to new heights of power and cultural achievement.

Amenemhat I presented himself as the bringer of a renewed era, as reflected in his choice of the royal title "Repeater of Births." His most drastic move, the establishment of a new capital city near Lisht, shows an attempt to overcome the failures of his south-focused predecessors and left no doubt about his intentions. He named the city (Amenemhat-) Itj-Tawy, meaning

"Seizer of the Two Lands." Southern roots are evident through the Twelfth Dynasty, however, in the start of the gradual rise of the Theban god Amun to the status of favored state deity. As a response to the influx of foreign peoples into Lower (northern) Egypt from the Syro-Palestinian region across the Sinai Peninsula, a cause of disruption during the First Intermediate period, Amenemhat commissioned the Walls of the Ruler, a defensive project known only from texts that likely included forts.

If Middle Kingdom literary texts such as The Instructions of Amenemhat I and the Tale of Sinuhe are believed, Amenemhat I was assassinated by members of his own inner circle, and his son Senwosret I rushed back to Egypt from a Libyan expedition to assume the kingship. The groundwork having been laid, Senwosret brought the Twelfth Dynasty to its first apogee. Reapportioning the administrative makeup of nome infrastructure, he tightened the links between the central government and the provincial nobility. Trade and resource-gathering expeditions resumed with renewed intensity, and military exploits were directed at all of Egypt's foreign neighbors. Lower (northern) Nubia was for the first time subjected to permanent occupation of Egyptian forces when Senwosret constructed a network of defensive fortresses concentrated at a new southern frontier north of the Nile River's Second Cataract. Egypt's traditional border was the First Cataract at Aswan. Among the monuments erected or restored under his ambitious building program was the first temple at Karnak.

Under Pharaoh Amenemhat II, successful raids into Palestine are recorded, but the following relatively short reign of Senwosret II experienced a constriction in trade and military activity and a reduction in the scale of domestic endeavors. Notable is the site of Kahun (aka el-Lahun/Illahun), where a state-planned community was founded near Senwosret II's pyramid to accommodate his mortuary cult. Some point to this town's grid plan and stark house-size distinctions as architectural representations of Middle Kingdom social structure.

Senwosret III, who located a similar town of his own at Abydos, relieved some of the downward trends of his immediate predecessors. Nomarchs, local governors in the provinces who

were previously conspicuous agents of Egypt's administrative system, fall out of the record. A noticeable expansion of central state bureaucracy followed. At least one area of Palestine was annexed by Egypt, and a series of very harsh campaigns ventured into Nubia to check growing Kushite power beyond the Third Cataract at Kerma. Senwosret's exploits were commemorated on stele inscriptions at Nubian fortresses. He reinforced the occupation by expanding fortresses and adding new ones between the Second and Third Cataracts, taking firm hold of the whole Second Cataract region in the process. He also shifted the staffing of forts from rotating garrison troops to permanently stationed personnel (eventually to include their families).

By contrast, the reign of Amenemhat III was not one of large-scale military pursuits, though he maintained the advancements of his father in both foreign and domestic affairs. His times are characterized by prosperity with a focus on procuring natural resources and building projects. Amenemhat also worked to boost Egypt's internal productivity by reclaiming significant tracts of Faiyum land for farming, approaching the task more intensively than previous efforts starting with Senwosret II. Additional Palestinian expeditions occurred under Amenemhat IV's relatively brief rule. The lack of a suitable heir brought the female pharaoh Sobeknefru to power, but the historical record is fairly quiet on details of this final reign of the Twelfth Dynasty.

The transition from the Twelfth Dynasty to the Thirteenth Dynasty was marked by little change beyond the ruling family itself. Stable at first, a pattern of decline in the power and prestige of kingship led to very rapid successions of kings. Over 60 king names are on record for a period 100–150 years long. Powerful families vying for control—and from whose ranks kings were put forward—became the real political forces in Egypt rather than the office of king itself. Partly contemporary with the Thirteenth Dynasty, an obscure set of kings mostly of local origin in the delta comprised the Fourteenth Dynasty. This group reflects the emergence of regional power bases in Egypt that would characterize the situation of the following Second Intermediate period.

—Nicholas S. Picardo

➤ THE CONUNDRUM OF COREGENCY IN THE MIDDLE KINGDOM

Several Middle Kingdom kings may have adopted a policy of coregency by which a living king named his successor to rule at his side to ensure a seamless transition of power after his death. The impetus for this move might have come under Senwosret I as a response to the assassination of his father and predecessor Amenemhat I. Official documents often record both a calendar date and the year of the current king's reign. Inscriptions listing the regnal years of two consecutive kings at once are interpreted by many as evidence of coregencies. However, even in what at first appear to be clear cases of overlapping reigns, upon further review other scholars feel that sources are still too ambiguous to argue in favor of coregencies in the Middle Kingdom. This practice has repercussions for the modern historian because overlapping reigns affect the chronology of the period. Thus, the field of Middle Kingdom studies endures an ongoing debate over whether a high versus low chronology is appropriate. Coregencies are better documented and less contentious in other periods, such as the New Kingdom.

—Nicholas S. Picardo

Bibliography

- Callender, Gae. "The Middle Kingdom Renaissance." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2002.
- Franke, Detlef. "The Middle Kingdom in Egypt." In *Civilizations of the Ancient Near East*, vol. 2, edited by Jack M. Sasson. New York: Scribner, 1995.
- Murnane, William J. "Coregencies." In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.
- Quirke, Stephen. "Royal Power in the 13th Dynasty." In *Middle Kingdom Studies*, edited by Stephen Quirke. New Malden, Surrey, UK: SIA Publishing, 1991.

Second Intermediate Period

The Second Intermediate period (1650–1550 BCE) marks an era in which Egypt experienced less centralized control and political unity than

> TEL ED-DABA

Tel ed-Daba is a site in the northeast corner of the delta along the Pelusiac branch of the Nile River. It has been identified with ancient Avaris, the capital of the Hyksos kingdom in Egypt, and with the southern part of Piramesse, the famous Rameside capital of Egypt that many have equated with the biblical town of Raamses. In ancient times it possessed an excellent natural harbor and due to its position was a key location for controlling both maritime and land routes into Egypt from the Near East. The site grew rapidly from a small village in the Tenth Dynasty to giant proportions during the Ramesside era.

—Kerry Muhlestein

was typical. Since the lack of political cohesion and power came about slowly, it is difficult to pinpoint exactly where on the continuum of entropy an intermediate period began. The Thirteenth Dynasty began with a strong country and a stable government. However, over time the dynasty lost stability and power and as a result lost the output of monumental architecture, literature, documents, and cultural expressions that usually accompanied periods of prosperity and power. Since the Egyptians stopped producing the types of artifacts that preserve historical data, it is much more difficult for Egyptologists to reconstruct what went on in this period. Thus, it becomes very difficult to understand the processes that brought about the decline or the resulting conditions.

Concomitant with the waning power of the Thirteenth Dynasty and its subsequent withdrawal to southern Egypt, the Levantine Hyksos, who had taken up residence at Avaris (Tel ed-Daba) in the northeastern Delta, grew in power and wealth. Hence, it may have been inevitable that they would replace the ephemeral kings of the later Thirteenth Dynasty as rulers of northern Egypt. Egyptian tradition holds that the Hyksos took over the country via military conquest, but with only meager archaeological evidence supporting this, most Egyptologists have adopted a more nuanced view of the takeover. It seems likely that the Hyksos employed economic and

political endeavors combined with military means (perhaps including chariots, not yet introduced into Egypt at the time) to assume rulership, first in the north and eventually controlling the entire country. This marks the first time in Egyptian history that the country was ruled by foreigners.

The Hyksos ruled the country with a combination of Egyptian and Levantine methods. They adopted Egyptian customs, officials, trappings, and titulary, styling themselves as Egyptian rulers. Yet they maintained several Semitic traits, including the employment of a vassal system of government. During a period of roughly 100 years, the powerful Hyksos kings ruled over kinglets or governors of the various areas of Egypt and probably southern coastal Palestine as well. It is apparent that they even dominated Thebes in southern Egypt, although it is difficult to say to what extent. They also controlled areas south of Thebes and engaged in a lively trade with Kush (Nubia) and the Levant. The most powerful of the Hyksos kings were Khayan and Apophis, the latter ruling for nearly 40 years.

The final phase of the Second Intermediate period was marked by wars between Thebes and the Hyksos. As Kamose, a Theban Seventeenth Dynasty ruler, records the story, the rulers of Thebes rebelled against their status as vassals and waged war with their foreign overlords. Seqenenre Taa fought against Apophis, his mummy's multiple head wounds revealing that he died in battle. The war was continued by Kamose, and eventually the Hyksos were ousted from the country by Ahmose, first king of the Eighteenth Dynasty, who not only expelled the foreigners from Egypt but also besieged them in their Palestinian stronghold of Sharuhén.

—Kerry Muhlestein

Bibliography

- Bietak, M. "Egypt and Canaan during the Middle Bronze Age." *Bulletin of the American Schools of Oriental Research* 281 (1991): 27–72.
- Bourriau, J. "The Second Intermediate Period." In *The Oxford History of Ancient Egypt*, edited by I. Shaw. Oxford: Oxford University Press, 2000.
- Oren, E., ed. *The Hyksos: New Historical and Archaeological Perspectives*. Philadelphia: University of Pennsylvania Museum Press, 1997.

The Early New Kingdom— Consolidation and the Beginnings of Empire

The Egyptian New Kingdom (Eighteenth Dynasty through Twentieth Dynasty, ca. 1569–1081 BCE), often referred to as the empire period, began with expulsion of the foreign Hyksos invaders, who had ruled the country for more than ten years (the so-called Second Intermediate period), following the collapse of the preceding Middle Kingdom. The liberation of Egypt, which began with conflict between a native Egyptian dynasty at Thebes in the South and the Hyksos seat of power at Avaris in the delta, was completed by Ahmose I (r. 1569–1545). Ahmose's forces expelled the Hyksos overlords, pursuing them as far as Sharuhin in southern Palestine and re-establishing Egypt's military and economic foothold in the Levant. By the end of Ahmose's reign, large-scale monumental construction projects had begun again, financed to a large degree by the influx of silver, gold, and other commodities from the Levant and Nubia.

Amenhotep I (r. 1545–1525) succeeded his father Ahmose and enjoyed a largely peaceful and prosperous reign. He erected a temple at Egypt's southern frontier in Nubia and appointed a man named Turi as viceroy over the southern provinces. Amenhotep also consolidated Egyptian control over the oases in the western desert and the turquoise mines of Serabit el-Khadim in the Sinai. The king's tomb has not been discovered, but his posthumous association as patron and founder of the workmen's village of Deir el-Medina, which housed the craftsmen who built the royal tombs in the Valley of the Kings, suggests that he might have initiated construction at that site as well.

Amenhotep I had no surviving male heirs, so the throne fell to Thutmose I (r. 1525–1516), who does not appear to have been directly related to the preceding royal family. His reign initiated the so-called Tuthmosid line of kings, which would control the Egyptian throne for the majority of the Eighteenth Dynasty. Thutmose I began the expansion of Egypt's northern frontier into Syria, pushing as far as the Euphrates River in the vicinity of Carchemesh, where he erected a commemorative stele. This previously unparalleled

northeastern expansion brought Egypt into direct conflict with the Hurrian kingdom of the Mitanni for the first time. On the southern frontier, Thutmose pushed Egyptian domination as far south as the Third Cataract, incorporating both Lower/northern Nubia (Wawat) and Upper/southern Nubia (Kush) as provinces of Egypt. Back at home, building projects were undertaken throughout the country, including a major renovation of the temple of Amun at Karnak.

In addition to the great expansion of the Egyptian empire, the early Eighteenth Dynasty also witnessed considerable changes in the religious sphere. A new kind of royal tomb, cut into the base of the cliffs in the Valley of the Kings, became the standard funerary monument, replacing the earlier royal pyramids of the Old and Middle Kingdoms. In addition, the already rich genre of Egyptian religious literature was further enhanced with the introduction of texts such as the *Amduat* and *Litany of Re* into the decoration of royal tombs, while the *Book of the Dead* gained popularity in the burial equipment of private persons and lesser royalty. Finally, the god Amun assumed a position of preeminence in the Egyptian pantheon as "King of the Gods" due in large part to the patronage of the early Eighteenth Dynasty kings, who hailed from the god's main cult center at Thebes.

—Joshua Roberson

Bibliography

- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford: Blackwell, 1992.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca, NY: Cornell University Press, 1999.
- Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

The Early New Kingdom— Hatshepsut, the Female King

Thutmose I was succeeded by a relatively minor king, Thutmose II (r. 1516–1504). During his reign, Thutmose II managed to suppress uprisings in Lower Nubia and Palestine and also elevated his half-sister Hatshepsut to the position of great royal wife. At the time of his death,



Statue of Hatshepsut, dressed in the regalia of a king, at her mortuary temple at Deir el-Bahri. (Dale Gillard)

Thutmose II and Hatshepsut had produced no male heir, and so the crown fell to a son by a minor wife of the king. The new king, Thutmose III (r. 1504–1452), came to the throne as a child. Practical matters of state fell to his stepmother and aunt Hatshepsut, who served as regent in his stead.

By the second or third year of Thutmose III's reign, Hatshepsut assumed complete control of the country and had herself crowned as king of Egypt, assuming the full titulary and regalia associated with the traditionally masculine ruler. Only as king was Hatshepsut (r. 1502–1482) able to fulfill the cultic and mythological roles ex-

pected of the Egyptian ruler, who was believed to be the bodily son of the sun god. To help legitimize her position as the rightful ruler of Egypt, Hatshepsut commissioned the decoration of her mortuary temple at Deir el-Bahri with a series of scenes depicting the god Amun in the guise of Hatshepsut's father Thutmose I, who presents his daughter as his legitimate successor to the Egyptian gods and the royal court. Of course, no such ceremony ever took place, but the decoration of the temple effectively revised history in Hatshepsut's favor, at least for a time.

Hatshepsut's reign was a peaceful one. Her most enduring accomplishment was not a military victory but instead was a grand expedition to the land of Punt in order to procure exotic goods such as incense and ebony for use in the temple of Amun at Karnak. Upon her death, the throne again fell to Thutmose III. The king, now a young man, ultimately embarked on an extensive campaign against the monuments of his stepmother, usurping inscriptions she had carved and destroying images of Hatshepsut herself, thereby erasing the memory of her rule.

The period of Thutmose III's sole reign, beginning around 1485 BCE, faced an immanent crisis abroad. Because of Hatshepsut's largely pacifistic foreign policy, the kingdom of the Mitanni had managed to wrest control of Syria and much of Palestine from Egyptian hands. To counter this threat, Thutmose III embarked upon an extensive series of military campaigns intended to push back the Mitannian invaders. Ultimately, the king was able to reassert Egyptian control all the way to the borders of Mitanni itself, where he erected a commemorative stele on the banks of the Euphrates alongside that of his grandfather, Thutmose I. By the 33rd year of his reign, Thutmose III had established Egypt as the pre-eminent power in the ancient world, and foreign tribute began to flow in from the kings of distant Babylon, Assyria, and Hatti.

—Joshua Roberson

Bibliography

- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford: Blackwell, 1992.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca: Cornell University Press, 1999.

Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

The Early New Kingdom— The Height of Empire

Amenhotep II (r. 1454–1419), the son of Thutmose III, was officially named as the king's heir shortly before his death. The new ruler quickly established a reputation for personal strength and brutality toward foreign dissidents. Uprisings in Syria, facilitated by Mitannian aid, were swiftly crushed, and the carcasses of seven rebel princes—supposedly killed by Amenhotep himself—were shipped back to Egypt and Nubia to be placed on display as gruesome reminders of the king's military prowess.

Following the death of Amenhotep II, a lesser prince assumed the throne as Thutmose IV (r. 1419–1410). The specific circumstances behind Thutmose IV's accession remain unknown. According to the propagandistic Sphinx stele, it was the sun god Horemakhet-Khepri-Re-Atum who cleared the young king's path to the throne in return for removing the sand that covered the great sphinx at Giza, which was believed to be an image of the god.

Probably already during the reign of Amenhotep II, Egypt's old foes, the Mitanni, had found themselves caught between the unassailable might of the Egyptian empire to the south and the rising power of the Hittites to the north. The Mitanni eventually made overtures of peace toward Egypt, culminating in a treaty between the two countries. The treaty was sealed by the marriage of a daughter of the Mitannian king Artatama to Thutmose IV as a minor wife, thus setting a precedent that would be followed with great zeal by his son and successor, Amenhotep III.

Amenhotep III (r. 1410–1372) inherited an empire at the height of its power. In the realm of foreign relations, he proved himself to be an unparalleled statesman, strengthening ties with Mesopotamian kings eager to exchange their princesses and other tribute for precious Egyptian and Nubian gold. In Egypt itself, Amenhotep embarked upon a building campaign the likes of which had never been seen. Old temples were refurbished and expanded, and new tem-

ples were built from one end of the country to the other including the king's own mortuary complex, the dimensions of which outstripped even those of the great temple of Amun at Karnak. In addition to numerous new endowments to the cults of Egypt's many gods, Amenhotep III initiated a new focus on his own deification as the living earthly embodiment of the solar disk. This development would have a profound effect on the religious philosophy of his son, Amenhotep IV.

—Joshua Roberson

Bibliography

- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford: Blackwell, 1992.
- Hornung, Erik. *Akhenaten and the Religion of Light*. Translated from the German by David Lorton. Ithaca, NY: Cornell University Press, 1999.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca, NY: Cornell University Press, 1999.
- O'Connor, David, and Eric H. Cline, eds. *Amenhotep III: Perspectives on His Reign*. Ann Arbor: University of Michigan Press, 1998.
- Redford, Donald. *Akhenaten the Heretic King*. Princeton, NJ: Princeton University Press, 1984.
- Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

The Early New Kingdom— The Heretic King and the End of the Eighteenth Dynasty

Amenhotep IV (r. 1372–1355) assumed the throne upon his father's death, initially continuing the building projects that the latter had begun at Karnak while also participating in the traditional cults, including that of the god Amun. However, by his fifth regnal year Amenhotep IV had begun construction on a new capital city in Middle Egypt to be known as Akhetaten, "the Horizon of the Solar Disc." At the same time, the king changed his name from Amenhotep ("Amun is satisfied") to Akhenaten ("Effective one of the Solar Disc") and began an iconoclastic campaign against the images and name of the state god Amun in favor of the sole worship of the solar disc. This episode is now known as the Amarna

➤ AKHENATEN, THE RELIGION OF THE DISK, AND THE ART OF AMARNA

King Amenhotep IV, better known as Akhenaten, instituted the first known religious revolution in history. Akhenaten's new religion was personally established by the king as a reaction against the traditional gods of Egypt in general, although its most strident iconoclastic policies were directed against the powerful cult of Amun and his priesthood specifically. According to Hornung, the new religion took focus away from the traditional Egyptian pantheon and the entire cycle of myths relating to the nocturnal journey of the sun as well as the experiences of the dead in the hereafter. In their place, Akhenaten presented the visible manifestation of the sun god—his disk, or *aten*—as the only object of worship. Furthermore, only Akhenaten, the son of the sun, was permitted to worship the disk itself. For the individual Egyptian, Akhenaten assumed the role of god, with his wife Nefertiti as divine consort.

One particularly visible aspect of the changes undertaken during this so-called Amarna heresy was a new style of official art. No longer were the king and his family depicted according to the traditional canon of Egyptian representation. Instead, they were shown as grotesque androgynous caricatures with distended bellies and pendulous breasts on male and female alike, great oblong heads balanced precariously atop sticklike necks, and overly generous lips and eyes. In modern times, speculation has often arisen regarding the possibility that Akhenaten may have suffered from some sort of congenital disease, such as Babinski-Fröhlich or Marfan syndrome, and that the resultant deformities might have provided the template for his new artistic style. More recently, scholarly opinion has swung the other way, noting among other things that



Relief depicting the Egyptian pharaoh Akhenaten with his wife Nefertiti and their children, sitting under the Aten—the divine sun disk. (Ruggero Vanni/Corbis)

Amarna art was itself constantly evolving. By the end of the reign, a mature, less grotesque style had replaced the more disturbing representations of Akhenaten's earlier reign. On the biological level, it has also been noted that disorders such as Babinski-Fröhlich tend to produce sterility, while Akhenaten was known to have fathered numerous children. Instead of a biological rationale, it now appears that Akhenaten sought to incorporate into himself certain iconographic elements of traditional Egyptian fertility gods such as Osiris and Hapy. Because these gods had no place in Akhenaten's new religion, the life-giving bounty they represented was transferred onto the person of the king as the sole provider for mankind through the gifts of his divine father, the solar disk.

—Joshua Roberson

period, after the modern name given to the ancient site of Akhetaten.

Akhenaten died in his 17th regnal year with no male heir and was succeeded by an extremely short-lived and ephemeral king known as Smenkhare (probably ruled ca. 1355). After the disappearance of the latter ruler the throne passed to the young Tutankhaten, who would shortly change his name to Tutankhamun (r. 1355–1346). This change was only the first of many actions,

including the opening of temples closed by Akhenaten and the reinstatement of their priesthoods, that were meant to restore the place of traditional Egyptian religion in the wake of the perceived heresy of the rebel king. Tutankhamun died after a brief reign, around the age of 19. With no clear successor to the throne, Tutankhamun's widow Ankhsenamun took an unheard-of course of action and wrote to the king of the Hittite empire, requesting that they

send a prince to become her husband and the new king of Egypt. Initially suspicious, the Hittite king Suppiluliumas eventually dispatched his son Zananza to Egypt, but the prince was killed en route, souring Egyptian-Hittite relations for many years to come. After the Zananza affair, the throne passed briefly to Tutankhamun's elderly vizier Ay (r. 1346–1343).

The last king of the Eighteenth Dynasty, Horemheb (r. 1343–1315), was a commoner who had served as a general of the Egyptian military under Tutankhamun. During his 27-year reign, Horemheb built prolifically, kept the Hittite empire at bay, and maintained the stability of Egypt's northern border. In addition to his own considerable efforts at restoration following the Amarna heresy, Horemheb also usurped many monuments erected during the reign of Tutankhamun. Subsequent generations would remember him as the first legitimate king following Amenhotep III.

—Joshua Roberson

Bibliography

- Assmann, Jan. *Moses the Egyptian: The Memory of Egypt in Western Monotheism*. Cambridge: Harvard University Press, 1997.
- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford and Cambridge: Blackwell, 1992.
- Hornung, Erik. *Akhenaten and the Religion of Light*. Translated from the German by David Lorton. Ithaca, NY, and London: Cornell University Press, 1999.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca, NY, and London: Cornell University Press, 1999.
- O'Connor, David, and Eric H. Cline, eds. *Amenhotep III: Perspectives on His Reign*. Ann Arbor: University of Michigan Press, 1998.
- Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

The Later New Kingdom— The Nineteenth Dynasty

The last king of the Eighteenth Dynasty, Horemheb, died with no male heir, instead naming his general and vizier Piramessu, later Ramses, as his successor. The brief one-year reign of Ramses I

(r. 1315–1314) inaugurated a new line of kings for whom the so-called Ramessid period of the later New Kingdom (Nineteenth–Twentieth Dynasties) is named. Ramses I was succeeded by his son, Seti I (r. 1314–1304), whose reign was characterized by a clear desire to restore the military and cultural glory of Egypt to the heights of the early Eighteenth Dynasty and to eliminate the last traces of the Amarna heresy.

In the first year of his reign, Seti conducted military expeditions to the Sinai and Gaza, tightening Egypt's control over the borderlands before pushing on through Canaan and into Lebanon. By the second year of his reign he had moved as far north as Qadesh, subdued an uprising of Libyan tribesmen from the western desert, and fought with apparent success against the Hittites for control of northern Syria. Around this same time, the royal residence was moved northward to the ancestral home of Seti's family in the delta, near modern Qantir and the ancient Hyksos capital of Avaris. Seti I also embarked on a number of building campaigns, paying particular attention to the temple of Amun at Karnak and the cult center of Abydos in Middle Egypt, where he constructed his own mortuary temple and an enormous cenotaph, or false tomb, for the local god, Osiris.

Ramses II (r. 1304–1237 BCE), often referred to in modern literature as Ramses the Great, served as coregent in the last years of his father Seti's reign before assuming the throne. His 67-year reign was the second longest in all of Egyptian history, surpassed only by Pepy II of the Sixth Dynasty. The new king's first military campaign resulted in the capture of Hittite-controlled Amurru, which extended Egyptian dominance as far north as Ugarit. This expansion brought down upon Egypt the full might of the Hittite Army, culminating in the famous Battle of Qadesh. The events of this battle were recorded as a great victory for Egypt, as recounted on the walls of temples at Abydos and Karnak. In reality, the Egyptian Army was divided by a surprise attack. Ramses was able to rally his troops, preventing their total destruction, but Amurru was lost to the Hittite Army. Fighting continued in Syria-Palestine for several more years until Hatti, under pressure from its protracted conflict with Egypt as well as territorial squabbles with

Assyria and dynastic troubles at home, finally agreed to a peace treaty in year 21 of Ramses II's reign. The newly forged friendship between Egypt and Hatti would last until the end of the Hittite empire. With the threat from the north removed, Ramses was able to concentrate most of the remainder of his reign on his building program at home and in Nubia. His efforts as a builder would prove to be unrivaled in terms of sheer volume, but the quality of stonework and relief carving also declined dramatically during this time. Nevertheless, many of the most famous monuments in Egypt, including the massive rock-cut temple at Abu Simbel and the so-called Ramessesum mortuary temple at Thebes, stem from this period, while countless stelae, statues, and temple inscriptions of previous kings were also usurped in Ramses's name. During the course of his reign, Ramses II outlived 12 of his own sons before naming his 13th, Merneptah, as his successor shortly before his death at around the age of 90.

Merneptah (r. 1237–1226) proved to be an extremely effective and powerful leader in his own right. He maintained Egypt's friendly diplomatic stance with the major powers to the northeast—Hatti, Ugarit, and Amurru—and even delivered shipments of grain to the famine-afflicted Hittite king in accordance with the alliance forged by his father. However, a new military power had set its sights on Egypt; a coalition of wandering tribes from the Mediterranean and Black Sea areas known as the Sea Peoples had forged an alliance of their own with the nomadic Libyans, who had long been a thorn in Egypt's western flank. The Sea People–Libyan coalition planned a massive assault that finally struck at the fields of Perire in the western delta in Merneptah's fifth regnal year. Historian Colleen Manassa argues that through the skillful deployment of archers, who were intended to break the ranks of the coalition's close-combat infantry, Merneptah was able to crush the invading army. According to the Egyptian records, some 6,000 enemy fighters were slain and 9,000 taken prisoner, securing Egypt from further Sea People incursions for more than 20 years.

The remaining years of the Nineteenth Dynasty were characterized primarily by short-lived reigns and constant dynastic struggle. Amen-

messe (r. 1226–1221), a minor son of Ramses II, usurped the throne briefly before being deposed by Merneptah's son and legitimate heir, Seti II (r. 1221–1215). Following the latter king's death, his young son Siptah (r. 1215–1209) became king, but the actual power lay in the hands of Siptah's mother and regent, Queen Tawosret, and her Syrian adviser, Chancellor Bay. Like Hatshepsut before her, Tawosret (r. 1209–1201) eventually assumed a full royal titulary and, following the early death of her son, carried on as sole king for perhaps two more years. Her death marked the end of the Nineteenth Dynasty.

—Joshua Roberson

Bibliography

- Bierbrier, Morris. *The Late New Kingdom in Egypt*. Warminster: Aris and Phillips, 1975.
- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford and Cambridge: Blackwell, 1992.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca, NY, and London: Cornell University Press, 1999.
- Kitchen, Kenneth A. *Pharaoh Triumphant: The Life and Times of Ramesses II King of Egypt*. Warminster: Aris and Phillips, 1993.
- Manassa, Colleen. *The Great Karnak Inscription of Merneptah: Grand Strategy in the 13th Century BC*. New Haven, CT: Yale University Press, 2003.
- Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: University Press, 1992.

The Later New Kingdom—The Twentieth Dynasty

Not long after Tawosret's death, the throne passed to a man of obscure origins named Setnakht (r. 1200–1198 BCE), who became the founder of the Twentieth Dynasty. Following his brief reign, Setnakht was succeeded by his son, the last great ruler of Egypt's New Kingdom, Ramses III (r. 1198–1166 BCE). Ramses III very deliberately modeled his reign on that of his illustrious predecessor and namesake, Ramses II, whom he copied in everything from his royal titulary to the design and decoration of his mortuary temple. These included representations of the earlier king's battle with the Hittites at Qadesh. Militarily, Ramses III was again faced with

the crisis of foreign invasion. In the 20 years since their defeat at the hands of Merneptah, the Libyans and Sea Peoples had consolidated their strength and again set their sights on the rich lands of Egypt. The Libyans attacked in two waves, six years apart; both were crushed, and the survivors were taken as prisoners of war and incorporated into the Egyptian army as mercenaries. The Sea Peoples, in collusion with Philistines and other groups, struck in the period between the two Libyan invasions during Ramses' eighth regnal year. This invasion was also defeated, the survivors taken prisoner and incorporated into Egyptian service as mercenaries. With many thousands of nomadic Libyans and Sea Peoples taken as prisoners of war together with their families, the Egyptians began a policy of massive resettlement, placing their former enemies in colonies throughout the delta and as far south as Middle Egypt, where they quickly became acculturated into Egyptian society. The remainder of Ramses III's reign was spent in relative peace engaging in numerous construction projects throughout the country. However, corruption in the administration, economic difficulties, and domestic strife heralded the country's waning fortune. Finally, a conspiracy hatched by a minor wife, Tiy, with the intent of installing her son Pentaweret on the throne ended in the death of Ramses III. Ultimately, Tiy and Pentaweret were arrested, along with numerous other conspirators, and sentenced variously to execution, forced suicide, amputation of noses and ears, or, in one case, a stern reprimand.

The remainder of the dynasty was marked by a rapid succession of kings descended from Ramses III. Three of his ten sons became kings

themselves: Ramses IV (r. 1166–1160), Ramses V (r. 1160–1156), and Ramses VII (r. 1149–1141). The latter two rulers both died without male heirs, so the throne went to their respective uncles, Ramses VI (r. 1156–1149) and Ramses VIII (r. 1141–1139). The last three rulers of the New Kingdom—Ramses IX (r. 1139–1120), Ramses X (r. 1120–1111), and Ramses XI (r. 1111–1081)—were beleaguered by constant economic crises, famine, corruption, and strife among the necropolis workmen at Deir el-Medina, plundering of the royal tombs, constant incursions of Libyan raiders from the west, and a rebellious Nubian viceroy from the south. Coupled with these factors was a steady decline in respect for the office of the Egyptian king, both domestically and abroad. By the end of Ramses IX's reign, the king had become little more than a figurehead from his residence in the north, while the high priests of Amun at Thebes assumed greater power, eventually claiming the insignia and epithets of kingship for themselves. With the death of Ramses XI, the Twentieth Dynasty and the once great New Kingdom finally drew to a close.

—Joshua Roberson

Bibliography

- Bierbrier, Morris. *The Late New Kingdom in Egypt*. Warminster: Aris and Phillips, 1975.
- Grimal, Nicholas. *A History of Ancient Egypt*. Translated from the French by Ian Shaw. Oxford and Cambridge: Blackwell, 1992.
- Hornung, Erik. *History of Ancient Egypt: An Introduction*. Translated from the German by David Lorton. Ithaca, NY, and London: Cornell University Press, 1999.
- Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: University Press, 1992.

■ Introduction: The Mesopotamian States

Unlike Egypt, Mesopotamia (ancient Iraq) was rarely a unified state. Mesopotamian political history is a history of constantly changing political entities, sometimes as small as a single city or tribe and at other times encompassing the entire floodplain between the

Tigris and Euphrates rivers. Over the 3,000 years that span this era, numerous governing systems were used and abandoned in ancient Mesopotamia and included systems that some have argued to be primitive democracies (or primitive communal governments depending on the particular

scholars ideological outlook!), kingdoms governed by a ruling family, and formal bureaucratic states. This may seem like a dramatic amount of change for one region to experience, but it probably did not seem drastic to the Mesopotamians. Keep in mind the length of time in which these changes occurred, a period of 3,000 years! One division that remained relatively consistent over those 3,000 years was the division between the north and the south. The Mesopotamians saw these two areas as distinct, and even though there were times when both the north and the south were governed by the same institutions, this distinction remained. In the earliest periods of Mesopotamian history, the south is referred to by modern scholars as Sumer. Starting with the Old Babylonian period (of which Hammurabi was the most famous king), the south is called Babylonia, after the famous city of Babylon. The north is usually referred to by modern scholars as Assyria and was named after the ancient city of Ashur, which was one of the main centers of power in the north.

There is more evidence for political history in Mesopotamia than anywhere else in the world at the time. So even though most knowledge of Mesopotamia had been lost until the nineteenth century CE, historians have been able to reconstruct most of Mesopotamian political history because the Mesopotamians kept voluminous amounts of records on clay tablets and stone monuments. However, this reconstruction is still a work in progress. Historians are constantly making alterations to our established understanding of Mesopotamian political history. What follows here is an overview of the most up-to-date understandings of Mesopotamian political history.

—Kevin M. McGeough

The Uruk Period

During the Uruk period (ca. 4000–3100 BCE), named for the southern Mesopotamian city of Uruk (present-day Warka), numerous social, political, and technological advances crucial to later development in the region were introduced. Among these were the appearance of the first cities and early states, the emergence of writing, the development of the fast wheel for the mass

production of pottery, and the replacement of the stamp seal with the cylinder seal. The events and chronology for the early part of this period are not well known, being reconstructed primarily from survey data and very limited archaeological excavation. Our evidence for the Middle and Late Uruk, however, is supplemented by the earliest known texts, primarily economic records and lists, and by southern Mesopotamian material culture discovered at sites in northern Mesopotamia and Syria, southwestern Iran, and southeastern Anatolia. This latter discovery has prompted recent scholarship on the Uruk expansion, including Guillermo Algaze's contentious theory that a world system, a rudimentary colonial empire controlled by Uruk and other southern Mesopotamian states, was in existence at this time.

In the Early Uruk period, southern Mesopotamia (the alluvial plains) experienced a population increase from the preceding Ubaid period. In the northern plains, around the city of Nippur, settlements were fewer but larger, while in the southern plains, around the city of Uruk, settlements were more numerous yet smaller in size. Uruk itself was an exception, a large site in the southern alluvial plains that grew to become, by the Late Uruk period, the biggest city in southern Mesopotamia. It was constructed around two immense religious complexes: Eanna, the precinct of Uruk's patron goddess Inana, and Kullaba, where the sky god An, the head of the pantheon, was worshiped. These complexes, notable for the size and elaborate decoration of the structures they contained, indicated an ability to draw on a massive and organized labor force.

The late fourth-millennium city of Uruk also yielded clay tablets covered with pictographic writing, described as protocuneiform, and cylinder seals, both tools necessary to the development of increasingly sophisticated economic and administrative systems. The mass-produced pottery from these levels is unremarkable in appearance, notable mainly for the presence of large numbers of beveled rim bowls. These coarse mold-made vessels, which may have been used as ration containers, are found in much of the Near East during the Uruk period and are important indicators of contact with southern Mesopotamia.

The appearance of sites far beyond the alluvial plains showing varying degrees of southern Mesopotamian influence, some indistinguishable from southern Mesopotamian settlements in their administrative technology and everyday objects and others with only a few Uruk-style artifacts, began in the Middle Uruk period and reached a peak in the Late Uruk. This has led Guillermo Algaze to infer the existence of a system of southern Mesopotamian colonies, enclaves, and outposts at sites such as Nineveh in northern Mesopotamia, Habuba Kabira in Syria, Godin Tepe in Iran, and Hacinebi in Anatolia. Generally located on major trade routes, the extent of southern Mesopotamian infiltration at these sites seems at least partially dependent on their population densities: sparsely populated regions drew a greater southern Mesopotamian presence than those that were densely populated. While the nature of the interaction between the local inhabitants of these regions and the southern Mesopotamian settlers remains an open question, with Gil Stein identifying a mutually beneficial system of long-distance trade rather than Algaze's informal southern Mesopotamian empire, it is clear that this interaction broke down quite suddenly around 3100 at the end of the Uruk phase. The succeeding Jemdet Nasr period (ca. 3100–2900) saw the further development of the technical innovations of the Uruk period.

—Karen Sonik

Bibliography

- Algaze, Guillermo. *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. 2nd ed. Chicago: University of Chicago Press, 2005.
- Nissen, Hans J., Peter Damerow, and Robert K. Englund. *Archaic Bookkeeping: Early Writing and Techniques of the Economic Administration in the Ancient Near East*. Translated by Paul Larsen. Chicago: University of Chicago Press, 1993.
- Rothman, Mitchell S., ed. *Uruk Mesopotamia and Its Neighbors: Cross-Cultural Interactions in the Era of State Formation*. Santa Fe: School of American Research, 2001.
- Stein, Gil J. *Rethinking World Systems: Diasporas, Colonies, and Interaction in Uruk*. Tucson: University of Arizona Press, 1999.

THE WARKA VASE

The alabaster Warka vase, standing over three feet (1 meter) tall and carved with five bands of decoration, was recovered from the late-fourth-millennium city of Uruk. Its decorative theme, representing the hierarchy of nature, ascends from a band of water at the bottom to a line of plants, continuing to a row of animals and then to one of nude men bearing offerings. The damaged uppermost band likely depicted a nude servant, with the king standing behind him, presenting an offering to a woman standing in front of two reed bundles, the symbol of Inana, and additional offerings. The woman may be Inana herself or her priestess.

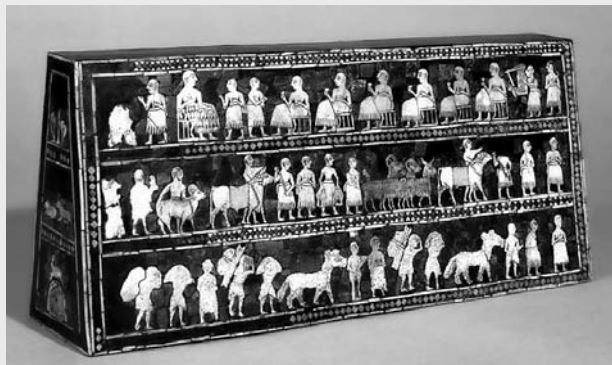
—Karen Sonik

The Political History of the Early Dynastic Period

The Early Dynastic (ED) period in southern Mesopotamia, beginning after the collapse of the Late Uruk period expansion (ca. 2900 BCE) and ending with the rise of the Akkadian empire under Sargon of Akkad (ca. 2334 BCE), saw numerous political developments over its nearly seven-century span. While the division of this period into three phases is based on the archaeological sequence from the Diyala region, each phase roughly corresponds to a different form of political authority. Thus, ED I (ca. 2900–2700) was dominated by assemblies of citizens or tribal elders, ED II (ca. 2700–2600) saw the emergence of wartime kings and the building of city walls, and ED III (ca. 2600–2334) witnessed the rise of kings with dynastic ambitions.

The political configurations of southern Mesopotamia (the alluvial plains) were not uniform, being structured quite differently in the southern plains, the region later known as Sumer, than in the northern plains, the region later known as Akkad. The landscape of the southern plains in ED I was dominated by about 30 city-states, large cities with surrounding villages and farmland. Each city-state was envisioned as belonging to a unique patron god and as having divinely apportioned and thus permanent borders.

STANDARD OF UR



The Standard of Ur, recovered from the Royal Cemetery of Ur, southern Iraq, about 2600–2400 BCE. (The Trustees of The British Museum/Art Resource, NY)

Recovered from Tomb 779 of the ED III period Royal Cemetery of Ur, the so-called Royal Standard of Ur was originally a wooden box of unknown function tapering from base to top. Each of its two long panels and two short ends were decorated with three registers of figural and geometric motifs formed from lapis lazuli, red limestone, and shell set in glue-like bitumen. One of the long sides depicts battle and postbattle scenes, while the other long side depicts a peaceful banquet and processions of men and animals. The king, shown as larger in size than all the other figures, appears on both the war and peace panels.

—Spencer L. Allen

As Nippur had Enlil, the chief god of the Sumerian pantheon, as its patron, it gained special prominence and often served as the arbitrator of intercity conflicts.

The ruler of an ED I city-state was known as *lugal* (great man) or *ensi* (governor) and was responsible for the well-being of the city, serving also as the high priest of the city's patron deity. It is possible that the ruler's political power was granted only at times of crisis by an assembly of citizens, as suggested in legends such as Gilgamesh and Agga. Eventually, however, as the Sumerian city-states began warring regularly among themselves over land and water, both a

full-time king and strong city-walls, two defining characteristics of ED II, became necessary.

Meanwhile, the northern alluvial plains were developing along quite different lines, being structured as a single territorial state usually centered in the city of Kish, although power relocated on occasion. The economy of the northern plains was more secular than in the south. The northern king, known as *en* (lord), was a more secular figure than his southern counterparts, obtaining authority from the city oligarchy rather than from a patron deity.

In time, Kish's influence threatened the south, hastening the collapse of the individual Sumerian city-state. Even when Kish's threat had receded, the city-states fought among themselves for local hegemony. By ED III, kings with dynastic ambitions, claiming divine election and controlling standing armies, replaced the wartime kings of ED II. A conflict between the cities of Umma and Lagash spanning three generations, arbitrated by King Mesalim of Kish (ca. 2500), is typical of the Sumerian rivalries and border disputes that characterized this period.

The reign of King Lugal-zagesi of Uruk marks the end of the Sumerian city-state ideology that characterized the ED III period: Lugal-zagesi extended his rule to include the cities of Ur, Lagash, and Nippur, providing a political model for the succeeding Akkadian empire. Sargon of Akkad, the cupbearer and usurper of King Ur-Zababa of Kish, defeated Lugal-zagesi and unified the northern (Akkad) and southern (Sumer) floodplain under his rule, ending the ED III period.

—Spencer L. Allen

Bibliography

- Crawford, H. *Sumer and the Sumerians*. Cambridge: Cambridge University Press, 1991.
- Kramer, S. N. *History Begins at Sumer: Thirty-Nine Firsts in Man's Recorded History*. 3rd rev. ed. Philadelphia: University of Pennsylvania Press, 1956.
- Potts, J. D. *Mesopotamian Civilization: The Material Foundations*. Ithaca, NY: Cornell University Press, 1996.
- Roaf, M. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Spain: Fournier Artes Gráficas, 1996.

Councils of Elders in Mesopotamian Towns

In general, a Mesopotamian king's influence on the life of the individual depended on the strength of the monarch and his authority. Strong kings could make demands upon their subjects' resources and labors through taxation, military service, the appropriation of land, and the resettlement of people, whereas weak kings might make little impact on life. Although political, economic, and military matters were controlled by the king and his officials, many aspects of civil life were governed by local bodies. In the countryside and particularly in the less urbanized north, villages governed themselves through village councils, under a local headman. Towns were governed by assemblies (Sumerian *unken*, Akkadian *pubrum*) probably composed of all free adult males, although some legal documents suggest that women might also have been included at times. Some matters were dealt with by an inner council of leading citizens or elders (*sbibutum*). Cities, being larger, were divided into wards (*babtum*), each with their own assembly or council. These could issue warnings and convene hearings on local matters such as the unsatisfactory condition of buildings or the unacceptable behavior of domestic animals; they monitored the movement of strangers in the neighborhood, checked local morals, and made good losses sustained through robbery if the thief was not apprehended. They also dealt with cases in civil law, such as divorce and inheritance disputes.

Professional associations also administered their own affairs. Many cities had a separate trading quarter (*karum*) where merchants could set up their offices, often outside the city walls and usually legally and administratively independent although sanctioned by the state government. The archives at Kanesh in Anatolia provide a picture of the running of a major Assyrian trading station. Karum Kanesh was the organizational center to which merchants in other Assyrian trading stations were answerable. The "lords and fathers" here passed on orders from a head office in Assur, collected the taxes and duties payable to the local ruler, arbitrated in disputes, and took

other decisions; when appropriate they could convene an assembly of the whole *karum*, where decisions were taken by majority vote. Back home in Assur, although the city-state was under the ultimate authority of the ruler (*waklum*, or "overseer," a post held by a member of one leading family), many decisions were taken by the council of city elders or the larger city assembly.

Within the tribal society of the nomad groups, the organization was kin-based, each tribe (known as a *bitu*, or "house") having a hierarchy under the authority of its tribal sheikh. When tribal groups such as the Amorites, Aramaeans, and Chaldaeans gained control of substantial areas, these were divided into tribal territories where this organization held sway such as Bit Yakin from which came the dynasty of Chaldaean kings of Babylon. Village communities also had stronger kinship ties than city dwellers.

Considerable information on local government comes from the archives at Nuzi, a town in the province of Arrapha, whose king was a vassal of Mitanni. One of his queens resided in Nuzi as his representative, and the town maintained her household out of local taxation. Local government in the town and its hinterland was run by the mayor (*bazannu*) who, along with other officials, resided in the government house (*ekallu*). The center of local administration, this contained archives, storerooms, and offices as well as public reception rooms. The mayor was responsible for ensuring the military security of the town and its surrounding area. The Assyrians eventually sacked the town, and the administrative texts record the mustering, equipping, and provisioning of troops in the town's final days. The bureaucratic records also detail the taxes collected by the town to support the infrastructure and personnel of local government, including the army and the town's temples, and for payment to the king in Arrapha. These included finished goods and agricultural produce as well as labor and military service.

Some centuries earlier, in the northern Babylonian city of Sippar, documents refer to *hazannu* as the official representing a ward of the city, whereas the mayor was known as *rabianum*, an office particularly concerned with legal matters and held for a relatively short period,

perhaps a year. The state administration was involved in public works such as the maintenance of irrigation facilities, but the responsibility was shared by the city authorities: the assembly (known as “the city”) led by its chairman (*gal. ukken.nal*), the rabianum, hazannu, and other officials. Local affairs, such as leasing local property and maintaining law and order, the courts, and sanitation, were also in the purview of the local authorities.

—Jane R. McIntosh

Bibliography

- Bienkowski, Piotr. “Provincial Administration.” In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- Greengus, Samuel. “Legal and Social Institutions of Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Maidman, Maynard Paul. “Nuzi: Portrait of an Ancient Mesopotamian Provincial Town.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Van de Mieroop, Marc. *The Ancient Mesopotamian City*. Oxford: Oxford University Press, 1997.

The Rise of Akkad

The rise of the Akkadian empire following the Early Dynastic period in Mesopotamia saw the city-states of the northern (Akkad) and southern (Sumer) floodplain united under the centralized rule of a Semitic dynasty based in the capital city of Agade. While its status as the first empire in history is no longer secure, given recent scholarship indicating the complexity of earlier polities in the Near East, the Akkadian empire and its kings achieved a legendary and heroic status unmatched by their successors. It remained a model for future empires and rulers into the Neo-Assyrian period.



Bronze head of Sargon the Great, founder of the First Dynasty of Akkad in southern Mesopotamia. (Time Life Pictures/Getty Images)

Sargon the Great (ca. 2340–2284), the traditional founder of the Akkadian empire, was responsible both for conquering Akkad and Sumer, the latter likely toward the end of his reign, and for military campaigns against Mari, Ebla, northern Mesopotamia, and more far-flung regions in western Iran and southern Anatolia. The extent to which he succeeded in actually integrating these territories into his empire, however, remains uncertain. Sargon also undertook a number of measures to consolidate the territory under his control, destroying defensive city walls in captured cities, replacing the rulers of the powerful southern city-states with Akkadian governors or trustworthy locals, and appointing his daughter, Enheduana, as the high priestess of Nanna at Ur.

The process of expansion and consolidation continued under Sargon's two sons, Rimush (ca. 2284–2275) and Manishtushu (ca. 2275–2260), through campaigns against southeastern Iran and the Arabian coast; the appointment of royal family members to important posts; the redistribution of land, especially from the restive south, to Akkadian elites and military personnel; and the quelling of the rebellions of conquered territories. During the reign of Naram-Sin (ca. 2260–2223), the empire flourished to its greatest extent as the energetic king conducted campaigns in Iran, Magan, and Syria. In an attempt to further secure and legitimate his control over this vast territory, which was still plagued by frequent revolts, Naram-Sin undertook the standardization of imperial accounting and administrative procedures; established the Semitic Akkadian, rather than the agglutinative Sumerian, as the language of imperial administration; set garrisons on the borders of the empire; and took the unprecedented step of proclaiming his own divinity as the god of Agade. This last measure, which had the effect of raising him above the level of any other human king and justifying his dominion over an empire, would later be imitated by kings of other Mesopotamian dynasties.

Although the collapse of Akkad was attributed to the reign of Naram-Sin in the Ur III composition “The Curse of Akkad,” the empire continued to exist into the reign of the last major Sargonic king, Shar-kali-sharri (ca. 2223–2198). The end of his reign, however, was plagued by

revolts against the empire, Gutian raids, and a severe drought that likely affected much of northern Mesopotamia. After his death, a brief interregnum and power struggle was followed by the reign of two more kings, Dudu (ca. 2195–2174) and Shu-durul (ca. 2174–2159), not of the Sargonic line. They ruled little more than the environs of Agade and (possibly) the Diyala Plain, as the Gutians had invaded much of the former imperial territory, and many southern city-states had reasserted their independence.

—Karen Sonik

Bibliography

- Frayne, Douglas. *Sargonic and Gutian Periods (2334–2113)*. Toronto: University of Toronto Press, 1993.
- Hansen, Donald P. “Art of the Akkadian Dynasty.” In *Art of the First Cities: The Third Millennium B.C. from the Mediterranean to the Indus*, edited by Joan Aruz with Ronald Wallenfels. New York: Metropolitan Museum of Art, 2003.
- Liverani, Mario, ed. *Akkad, the First World Empire: Structure, Ideology, Traditions*. Padova: Sargon, 1993.
- Westenholz, Joan G. *Legends of the Kings of Akkade*. Winona Lake, IN: Eisenbrauns, 1998.
- Yoffee, Norman. “The Collapse of Ancient Mesopotamian States and Civilization.” In *The Collapse of Ancient States and Civilizations*, edited by Norman Yoffee and George L. Cowgill, 2nd printing. Tucson: University of Arizona Press, 1991.

Akkadian and Ur III Administration

When Sargon, founder of the Akkadian dynasty, conquered the city-states of southern Mesopotamia, he created the first large-scale territorial state in Mesopotamia, an empire whose administration required the development of a more complex bureaucracy than had existed before. Sargon and his successors, particularly Naram-Sin, imposed a cadre of Akkadian provincial governors, known by the traditional title of *ensi*, to administrate the former city-states. Answering to the Crown, the ensis’ authority was backed by military garrisons. These governors visited the capital, Agade, regularly to confer with the king, who also periodically visited the ensis in their provinces. Although temples continued to enjoy considerable power as the seat of the gods from

AKKAD IN THE ARCHAEOLOGICAL RECORD

While a distinctively Akkadian artistic style has been identified and is characterized by a vivid naturalism and subjects such as presentation scenes (in which kings or gods are presented with goods or people), mythological episodes, and battles of the gods, the Akkadian empire is not well represented in the archaeological record. The royal city of Agade remains undiscovered and unexcavated, and few index fossils for the period have been identified at other sites. The general continuity with the material culture of the Sumerian-dominated Early Dynastic period negates the old theory that the Akkadian empire heralded a radical ethnic shift, with the Semitic Akkadians supplanting the established Sumerians and introducing a new model of political organization.

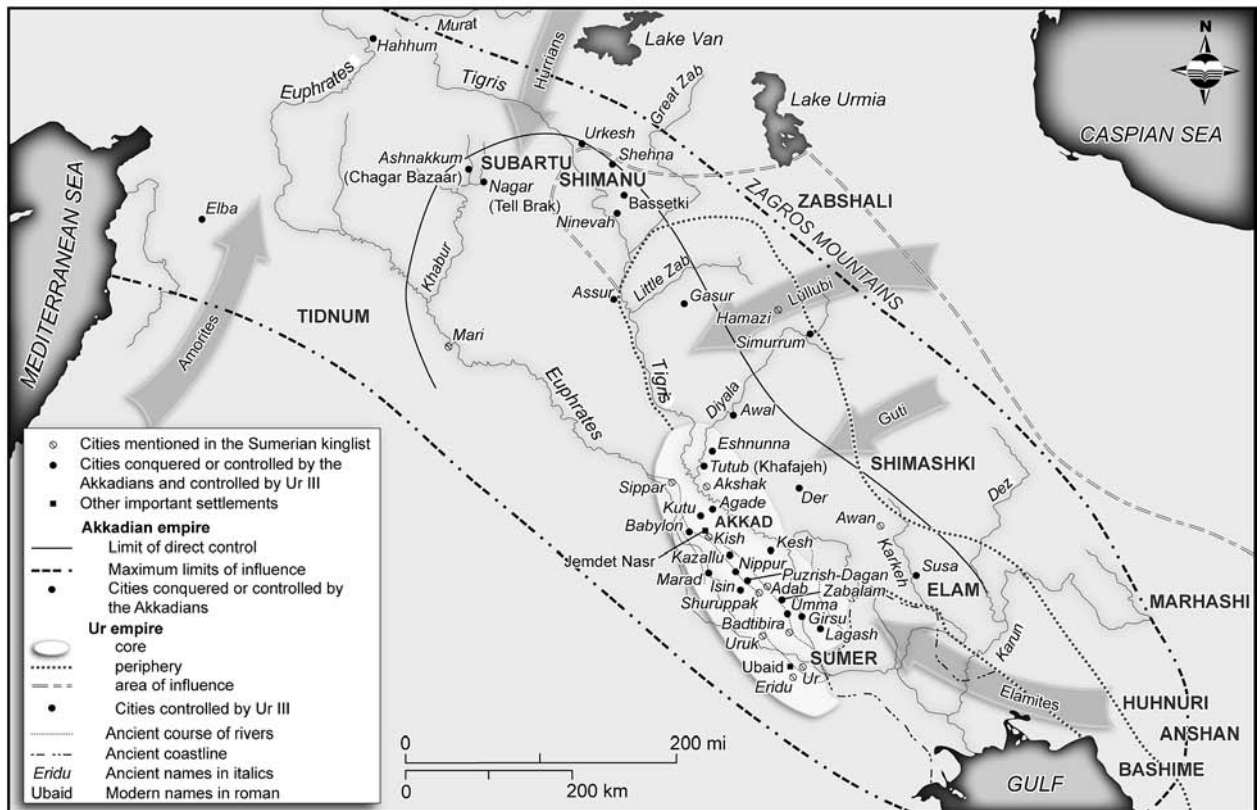
—Karen Sonik

whom monarchs derived their legitimacy, the Akkadian kings took steps to bring them more firmly under their own authority, creating or filling existing temple posts with their own appointees, often members of the royal family. Although the Akkadian kings built and embellished temples, they also seized opportunities to reduce temple estates and the independence of the temples. Nevertheless, there was not a complete break with tradition, the Akkadian kings maintaining the traditional roles and titles derived from control of Kish and Nippur.

Trade, taxation, tribute, and offerings provided substantial resources, but these were swelled by the booty derived from war. Defeated cities yielded not only material booty but also prisoners, who could be employed in public works, and land confiscated from defeated cities and their authorities, which was granted to loyal servants of the crown. Ensis were given estates to support them, located in provinces other than the one they governed in order to prevent the buildup of localized power. Military colonists were settled on expropriated land and contributed to the maintenance of Akkadian authority.

The collapse of the Akkadian empire left a power vacuum out of which the Ur III dynasty eventually emerged as the major power. The Ur III kings elaborated the administrative legacy of

UR AND AKKADIAN EMPIRES



their Akkadian precursors. Ur-Nammu and Shulgi created a bureaucracy of stifling efficiency, with a huge civil service obsessively recording the minutiae of taxes, tribute, and yields from state lands. In principle they upheld traditional Sumerian political organization, dividing Sumer and Akkad into 20 provinces that coincided largely with the main city-states and were governed by ensi who belonged to the local elite. These ensi also controlled the local temples and their households, a major source of state revenue in agricultural produce and the products of industry. On the other hand, the Ur III kings imitated the Akkadians by appointing a military governor (*shagina*) alongside each ensi, drawn from the royal family or from nonlocal sources loyal to the Crown. The names are known of more than 100 princes and princesses, many holding civil or temple posts. The shaginas had responsibility not only for the armed forces stationed in the provinces but also for state dependents settled

on Crown land and were independent of the ensi. From the time of Shulgi onward, the Ur III state maintained a standing army.

Although the Sumerian city-states resented their loss of independence, the Ur III kings created an ideology that helped win them support throughout Babylonia, claiming descent from Uruk's king Gilgamesh. They made much of their piety and role as divinely appointed protectors of the people and promoters of their well-being. They also followed tradition in adopting the system through which temples, and in particular the temple of Enlil in Nippur, were supported by offerings (*bala*) paid on a rotating basis by the individual provinces. Although in principle destined to support the temple, these amounted to taxes. Huge state-run industrial complexes, particularly for making textiles, also contributed to the empire's economic prosperity.

Beyond the core of Sumer and Akkad there was no need for the Ur III kings to subscribe to

traditional ideology; these regions, to the east and north, were ruled by military governors who were granted Crown lands. They were liable for service and paid a tax (*gun mada*) from their produce; settlers on Crown land had paid the same tax under the Akkadians.

Despite the Ur III state's economic efficiency and centralized bureaucratic control and the reverence felt for its kings, it eventually fell apart.

—Jane R. McIntosh

Bibliography

- Franke, Sabina. "Kings of Akkad: Sargon and Naram-Sin." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Klein, Jacob. "Shulgi of Ur: King of a Neo-Sumerian Empire." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.
- Van de Mieroop, Marc. *The Ancient Mesopotamian City*. Oxford: Oxford University Press, 1997.

The Ur III Period

The period immediately following the collapse of the Akkadian empire, which saw the reappearance of autonomous city-states and the entrenchment of the Gutians in the northern floodplain and Diyala region, ended with the emergence of a new and highly centralized state. Ruled by the Third Dynasty of Ur (ca. 2112–2004), its vast territorial extent and complex administrative system have led to its frequent characterization as an empire. Despite reverting to Sumerian as the language of bureaucracy, the Ur III state continued several practices introduced under the Akkadian empire, including the deification of its kings during their lifetimes and the appointment of royal family members as high priests and priestesses of the gods.

Ur-Namma (ca. 2112–2095), founder of the Ur III dynasty, was originally the governor of Ur under Utu-hegal, a ruler of Uruk known chiefly for driving the Gutians out of Mesopotamia. Following the death of Utu-hegal, likely Ur-Namma's father or brother, Ur-Namma established himself as king in Ur and gradually gained hegemony over enough of the northern and southern flood-



King Ur-Nammu makes an offering to the moon god Nanna. Ur-Nammu reigned over the Sumerian city of Ur from about 2112–2095 BCE. The stele dates to around 2060 BCE. (Bettmann/Corbis)

plain to take the title of king of Sumer and Akkad. Prior to his death in battle, he built numerous temples and canals; began construction of ziggurats at Ur, Uruk, Eridu, and Nippur; and appointed a daughter as high priestess of Nanna at Ur and a son as high priest of Inana at Uruk. His successor, Shulgi (ca. 2094–2047), continued his father's building program and guided the Ur III state to its zenith, expanding it to the north and east and consolidating it through a series of sweeping administrative and ideological reforms.

The loosely held territories amassed by Ur-Namma were transformed into provinces of a unified state, with each province overseen by a civilian governor, typically of local origin, and a military commander, often a relation of the royal family. The *bala* taxation system, applied to the core provinces of the state, fostered regional interdependence through the collection of specific goods from each province in central depots for redistribution to the other provinces. Shulgi also created a standing army, introduced standard accounting practices and a new calendrical system, wrote the first Mesopotamian law collection, and established scribal schools to train bureaucrats in Sumerian, likely a dead language at this time, and in literary compositions

THE UR III ZIGGURATS

The practice of placing temples on platforms to lift them closer to the heavens, dating back to the Ubaid period in Mesopotamia, was adapted during the reign of Ur-Namma to form the ziggurat, a series of stepped rectangular platforms with a temple set at the very top. The final form, resembling a mountain, comprised a solid core of sun-dried mud brick with a more durable baked brick lining its exterior surfaces. Whether these structures served a purpose beyond the elevation of the temple is unknown, although Herodotus wrote that the Sacred Marriage Ceremony, part of the New Year Festival, took place atop them.

—Karen Sonik

that promoted the king as the central force in the state. His self-deification, imitated by his successors, furthered his political agenda: declaring himself a “god of the land,” Shulgi simultaneously avoided association with any single city-state and claimed the support of his divine family, the gods themselves, for his rule.

Shulgi’s successors, sons Amar-Sin (ca. 2046–2038) and Shu-Sin (ca. 2037–2027), managed to hold most of the territory he had conquered, although the Amorite raids early in Shu-Sin’s reign signaled a growing political instability. Under Ibbi-Sin (ca. 2026–2004), son of Shu-Sin, increased pressure by the Amorites and the revolt of one city-state after another led to the rapid disintegration of the Ur III state. Soon only Ur and its environs were left, and even these were lost when the Elamites sacked the city in circa 2004, taking Ibbi-Sin prisoner and bringing the Ur III period to a close.

—Karen Sonik

Bibliography

- Bottéro, Jean. *Mesopotamia: Writing, Reasoning and the Gods*. Translated by Zainab Bahrani and Marc van de Mieroop. Chicago: University of Chicago Press, 1992.
- Frankfort, Henry. *Art and Architecture of the Ancient Orient*. 5th ed. New Haven, CT: Yale University Press, 1996.
- Frayne, Douglas. *The Ur III Period (2112–2004 BC)*. Toronto: University of Toronto Press, 1997.

Gibson, McGuire, and Robert D. Biggs, eds. *The Organization of Power: Aspects of Bureaucracy in the Ancient Near East*. 2nd ed., with corrections. Chicago: Oriental Institute of the University of Chicago, 1991.

The Isin-Larsa Period

The Ur III empire broke up into a number of autonomous smaller states, controlling and fighting over other ancient cities. Initially the most important was Isin, whose lands stretched from Mashkan Shapir and Kazallu in the north to Uruk, Eridu, and other southern cities. These included, crucially, Nippur, which gave Isin nominal legitimacy as the successor of Ur III, theoretically appointed by the gods as the ruling state of Sumer. Ishbi-Erra of Isin regained control of Ur and eventually defeated the Elamites, avenging Ur’s fall. He restored many of the buildings of Ur and other cities and deliberately followed many of the practices and norms of the Ur III empire. A number of kings in this period have left law codes, following the earlier example of Shulgi and consciously upholding and imitating ancient values. Sumerian continued to be the language of scholarship but was no longer spoken; Akkadian, in contrast, was used for international communication from Anatolia to Elam.

But times were changing. Whereas king and temple had generally controlled the state economically in earlier times, private enterprise now began to flourish, the government receiving taxes from the success of privately financed ventures rather than the profits of publicly controlled enterprises. The temple authorities, while still of great importance, now gave way politically to the king, who had full control of the state’s administration, as is vividly shown in a number of surviving archives. Frequent records of the construction or restoration of city walls reflect the instability of the times and the need for constant defense. No ruler was strong enough to control all of southern Mesopotamia.

Many of the independent kingdoms, here and farther west, had rulers with Amorite names, now clearly integrated into Mesopotamian society, while in northern Mesopotamia many of the dynasties were Hurrian. These successor states included Susa, Assur, Eshnunna, Yamhad, and,

most significantly, Larsa, which by the reign of Lipit-Ishtar of Isin had thrown off Isin's authority and was challenging Isin's primacy.

Gungunum of Larsa claimed descent from earlier kings of the city, but his forebears were in reality Amorite sheikhs. He and his father had probably been governors of Isin's province of Lagash, which included Larsa. Under Gungunum, Larsa probably came to control Nippur, Susa, and perhaps Uruk and in 1925 seized Ur from Isin, thereby gaining control of the still lucrative Gulf trade, especially in copper, now conducted through the trading entrepôt of Dilmun. Political changes did not affect other traditional aspects of life. For example, Ibbi-Sin's daughter remained entu-priestess of Nanna at Ur until her death, when she was replaced by Ishbi-Erra's daughter; similarly, the Isin incumbent continued in office when Larsa took Ur.

For several centuries, political power was very volatile. States expanded and contracted, and from time to time new ones gained a foothold. Uruk briefly controlled Nippur and under Sinkashid (an Amorite) for a while held the balance of power between Isin and Larsa through its control of the middle Euphrates. In 1834 BCE, Kudur-Mabuk, Amorite ruler of Emutbal on the eastern flank of Mesopotamia, gained control of Larsa, giving the throne to his son Warad-Sin, who reigned until 1823 when he was succeeded by his brother, Rim-Sin I. Their sister became entu-priestess in Ur. The family embarked on an ambitious restoration program in the southern cities, including Ur and Nippur. Rim-Sin defeated Uruk, Isin, Rapiqum, and Babylon, along with Sutu nomads from the west, in 1804, and conquered Isin in 1794, a triumph that he celebrated in his annual year-names throughout the remaining 31 years of his reign; he was to dominate the south until 1763.

Elam, freed of Sumerian domination, was entering a period of expansion and affluence. Its control of a major source of the important and scarce metal, tin, must have played a substantial part in its prosperity and power. Until defeated by Hammurabi in the eighteenth century BCE it was a major player in Mesopotamian politics, closely involved with the states on its borders, particularly Eshnunna, which enjoyed considerable power through its control of trade routes

➤ OLD BABYLONIAN LETTERS

Letters exchanged between Ibbi-Sin, the last Ur III king, and the governor of Isin, Ishbi-Erra, survived as Old Babylonian school texts. Many thousands of letters have been found in palaces and other archives dealing with official matters such as international relations or diplomatic gifts or business concerns such as prices and commodities but also events such as the capture of a lion. The extensive Assyrian palace archives at Nineveh included letters on a wide range of subjects such as omens, military and diplomatic matters, and domestic concerns. Some of the most interesting are personal letters, preserved, for example, in the palaces at Mari and Karana and in the Old Assyrian trading station of Kanesh. They show individuals worrying about their health and personal relationships, sending each other gifts, or complaining about poor-quality slaves. Queen Iltani of Karana received a letter from her sister in Assur reporting her failure to obtain a lapis lazuli necklace that Iltani desired; another sister wrote asking for new slaves and sent some wool and a container of shrimp as a sweetener with her request. Zimri-Lim of Mari and his wife Shibtu exchanged many letters while he was absent about business matters and private concerns, from the birth of twins to Shibtu's request that Zimri-Lim wear the coat and tunic she had made him. An earlier Mari ruler, the ne'er-do-well Yasmah-Addu, received many admonitory letters from his father Shamshi-Adad; those from his "perfect" brother, Ishme-Dagan, were scarcely more conciliatory.

—Jane R. McIntosh

into the Iranian plateau. Competing for power with Der and Kish, Eshnunna's territories fluctuated in extent. It expanded in the later nineteenth century BCE under Ipiq-Adad II, coming into conflict with neighboring Babylon, Assur, and Larsa. Under his successor, Eshnunna gained control of the middle regions as far east as Mari and as far north as the source of the Khabor, conquering Assur, capital of the small city-state of Assur (Assyria).

—Jane R. McIntosh

Bibliography

Kuhrt, Amelie. *The Ancient Near East, c. 3000–330 BCE*. 2 vols. London: Routledge, 1995.

McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1994.

Roaf, Michael. *Cultural Atlas of Mesopotamia*. New York: Facts on File, 1990.

Hittite Political History in the Second Millennium

Hittite hegemony waxed and waned twice in Anatolia between 1650 and 1200 BCE, with the Hittites establishing themselves as a major force in the ancient Near East with their second rise to power. Records of the Hittites, who spoke the earliest written Indo-European language, first appear during the reign of Hattushili I (ca. 1650–1620) in his capital city of Hattusha (present-day Bogazkoy). Hattushili's Testament refers to a previous king and queen, Labarna and Tawananna, indicating that political and social institutions were already in place by Hattushili's reign. The reconstruction of any more detailed events of the preceding 200 years, however, is mostly reliant on the archaeological record.

The history of second-millennium Anatolia begins with the Old Assyrian trading colonies established in Kanesh (present-day Kültepe) by Assyrian merchants. They traded Babylonian textiles and Iranian tin in exchange for Anatolia's

abundant copper, which was a key ingredient of bronze alloy. At the peak, prior to their destruction in 1830 BCE, the Kanesh colonies were populated by about 500 Assyrians. The years between this destruction and the appearance of Hattushili in the mid-seventeenth century BCE were probably characterized by competition and warfare between independent Anatolian city-states. This somewhat chaotic period was brought to an end by Labarna, a ruler from Kussara, who established a power base in the refortified ruins of the city of Hattusha and took control of the other regional cities.

Hattushili I's reign, as well as that of his grandson and successor Murshili I, was spent establishing and maintaining control over neighboring cities. Hattushili conducted six military campaigns during his reign. The first was to the area north of his capital, but with his second campaign he extended Hittite power into northern Syria. This latter campaign prompted an attack by the then-powerful Hurrians in eastern Anatolia, precipitating revolts by all of the regions that Hattushili had previously conquered. Reduced to ruling the areas only immediately surrounding Hattusha, Hattushili appealed to the Hittite sun goddess Arinna and spent his next three campaigns successfully reasserting and extending his control in Anatolia and northern Syria. Indeed, his military conquests were so substantial that he likened himself to Mesopotamia's first true empire builder, Sargon of Akkad (ca. twenty-fourth century BCE).

After Hattushili's death, Murshili I (ca. 1620–1590 BCE) capably consolidated the lands conquered by his grandfather. Under Murshili's leadership, the Hittite kingdom became powerful enough to soundly destroy the city of Alalakh and defeat the kingdom of Yamhad, which was based in Aleppo and had been the dominant power in the region. Murshili then turned his attention to the east in a successful campaign against the great city of Babylon. He did not follow up on this victory but instead returned to Hattusha after sacking the city and leaving behind a power vacuum in Babylon that was ultimately filled by the Kassites, who would maintain their dynasty for nearly 400 years.

The territorial gains and consolidation achieved by Hattushili and Murshili were ulti-



Lions flank the entrance to the Great Fortress at Hattusha in present-day Turkey. Hattusha was the capital and greatest city of the Hittite empire during the second millennium BCE. (Shutterstock)

mately futile because in 1590 Murshili was assassinated by his brother-in-law Hantili. Many years later, Hantili was in turn assassinated by his co-conspirator Zidanta. The first Hittite Golden Age, as described by Telipinu a century later, thus ended with Murshili's death.

In the interim between Murshili's death and the reign of Telipinu (ca. 1525–1500), no dynasty was able to successfully establish itself: one coup d'état followed on the heels of another. Attempting to terminate this vicious cycle, Telipinu defined the order of succession for the Hittite throne in his edict of the late 16th century. He also stressed the importance of clemency—banishing rather than executing—those he deemed guilty of the most recent attempted coup. Unfortunately, Telipinu died without a surviving male heir, and the calm he had inspired during his reign was followed by another half century of political instability.

The 50 years following the death of Telipinu, which marked the close of the Old Hittite Kingdom, is sometimes referred to as the Middle Kingdom. Since so little is known about the period and since the kings of this age do not seem to have accomplished too many deeds of note, scholars have increasingly abandoned this term. The New Kingdom, however, commenced with a distinct bang during the reign of Tudhaliya II (ca. 1450–1420). Despite an Egyptian-Mitanni alliance that initially swayed Aleppo's alliance from Hattusha, Tudhaliya ultimately defeated both Aleppo and Mitanni. The attempt of his successor, Arnuwanda I (ca. 1420–1400), to extend the Hittite sphere of influence to the west led to trouble, however, as the Aegean power Ahhijawa led a revolt to take control of Arzawa, the western half of Anatolia. The stability of the New Hittite Kingdom was further threatened by the encroachment into the Hattusha region of the Kaska, a northern Anatolian people. Rebellion erupted throughout the kingdom, and the capital city was apparently destroyed during the reign of Tudhaliya III (ca. 1400–1380). All rivals now considered the Hittite power dead.

Following the ruin of these rebellions, Tudhaliya III's son Shuppiluliuma I, after an early defeat by Mitanni, eventually proved himself as a great general. Tudhaliya III was killed in a coup by senior military officials who then placed

➤ THE EDICT OF TELIPINU

With his late-sixteenth-century edict, Telipinu set out to reestablish the structure of the Hittite state by strictly defining the order of royal succession and ending the series of coups that had endangered the kingdom. The king was to become accountable to the gods and the *panku*, an ad hoc assembly of nobles and administrators, and even to be held liable for murdering a member of the royal family. In return, the *panku* protected the king from attempted seizures of power. The edict also stated that only an offender was to be held liable for murder. Innocent family members could no longer be executed for the offender's crime, a striking reversal of Mesopotamian legal tradition.

—Spencer L. Allen

Shuppiluliuma I on the throne (ca. 1370–1330). The first half of Shuppiluliuma's 40-year reign was focused on reclaiming Anatolia for the Hittites, forcing the submission of the Kaska, Azzi, and Arzawa. In his second Syrian campaign, he reestablished the Hittite Kingdom as an international power. After attacking the Mitannian king Tushratta and eventually driving him away from the Mitanni capital of Washshukanni, Shuppiluliuma installed a Mitannian prince as a Hittite vassal in western Mitanni. Now free to extend the Hittite sphere of influence over Aleppo and Carchemish, where he installed his son as ruler, as well as Alalakh, Nuhashshe, Amurru, and eventually Qadesh, even the pharaoh of Egypt ultimately recognized Shuppiluliuma's power, referring to him as an equal. Indeed, after Tutankhamen's death, the pharaoh's widow requested one of Shuppiluliuma's sons as her new husband. This son, however, was murdered in Egypt, so the dynastic alliance between Egypt and the emerging Hittite empire never materialized. Shuppiluliuma did, however, form a dynastic alliance in Mesopotamia by marrying a Babylonian princess late in his reign.

The end of Shuppiluliuma's reign was marred by a plague, which lasted 20 years. Brought to Anatolia by prisoners of war, the plague ended the reigns of both Shuppiluliuma and his eldest son Arnuwanda II, leaving the younger son

Murshili II (ca. 1339–1306) to ascend the throne and pray for relief from the plague. With the gods' help, the plague subsided. With the help of his brother, who acted as king in Carchemish and kept northern Syria under control, Murshili II was able to consolidate the territories conquered by his predecessor and to force the submission of the Kaska, Arzawa, and Azzi in Anatolia. Threats from the Assyrians and Egyptians then forced Murshili II to focus his attention on Syria. The power vacuum left by the fall of the Mitannian empire at this time provided the opportunity for the upcoming Assyrian armies to move west into Carchemish. Murshili II quickly reclaimed Carchemish but near the end of his reign had to face an attempt by the Nineteenth Dynasty of Egypt to reestablish its international empire to Qadesh and Amurru in Syria.

The real threat came when Ramses II ascended the throne during the reign of Murshili II's successor, Muwatalli II (ca. 1306–1282). In an effort to maintain Hittite control in Syria, Muwatalli II moved his capital to Tarkhuntassha, nearer the Taurus Mountains. In Ramses's fifth year, the two armies met at the famous Battle of Qadesh in northern Syria. The result was a draw, but the Egyptians withdrew from the region. Years later, Muwatalli II's brother Hattushili III (ca. 1275–1245) and Ramses ratified a parity treaty, later sealed by dynastic marriage. The governor of northern Anatolia, Hattushili III, exiled and usurped power from Muwatalli's son Urhi-Teshub/Murshili III (ca. 1282–1275) and moved the capital back to Hattusha, installing Murshili III's brother Karunta as vassal. Meanwhile, the Assyrians continued their western campaign by seizing Mitanni from Hittite control, first making it a province and then annexing it into the empire. Hattushili turned to Babylon for help, but the alliance was brief. Assyria had become too powerful an international power, prompting Hattushili's peace agreement with Ramses of Egypt in order to concentrate on Assyria.

The reigns of Tudhaliya IV (ca. 1250–1220) and Shuppiluliuma II (ca. 1215–1200) signaled the end of the empire, as the Hittites suffered continued diplomatic and military defeats. Karunta momentarily captured Hattusha from his cousin, while Assyria, Ahhijawa, and the Kaska

remained external threats. An Egyptian letter from the reign of Ramses III claims that Hattusha along with all the eastern Levant was defeated by the so-called Sea Peoples, although no sign of a corresponding foreign attack has been uncovered. The city had been abandoned, but the true identity of the invading peoples is unknown.

—*Spencer L. Allen*

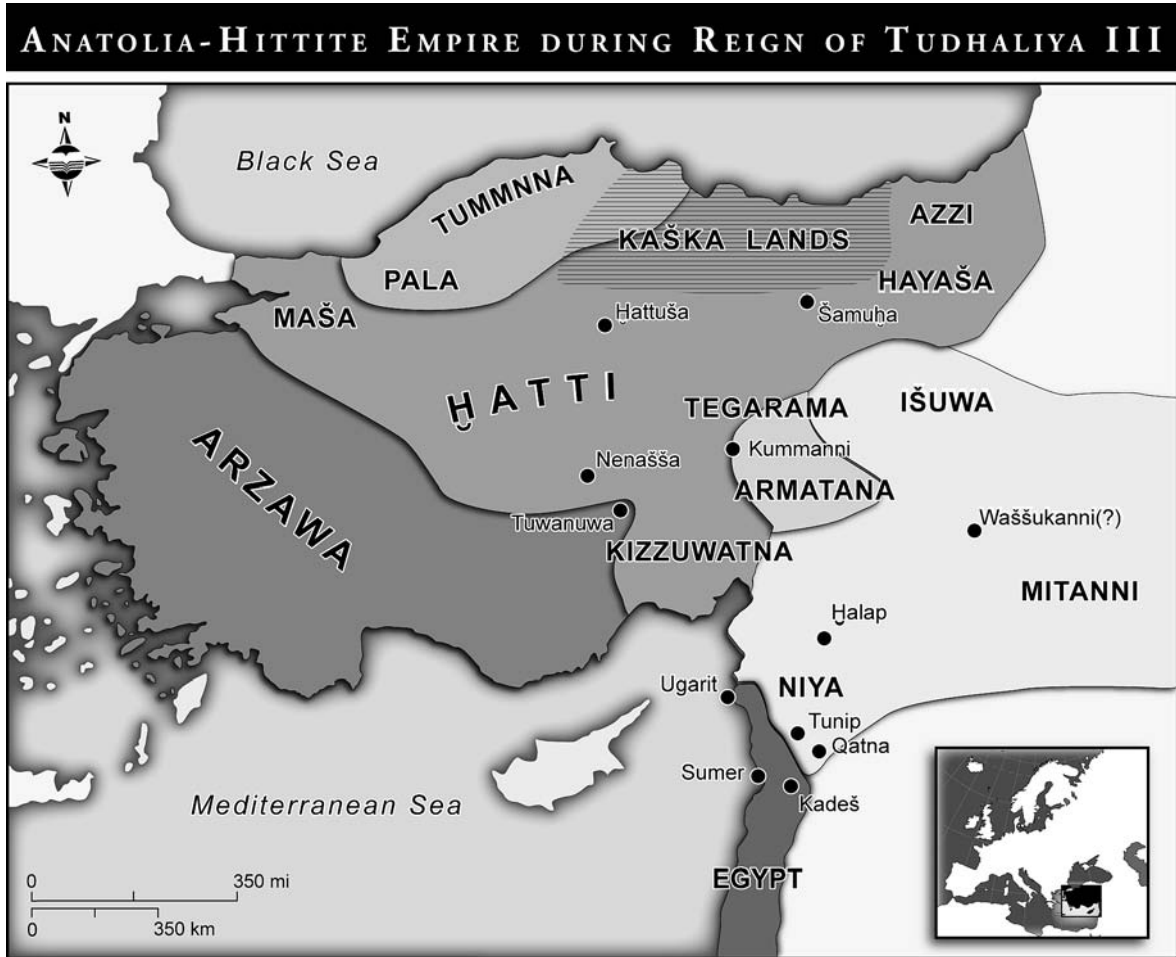
Bibliography

- Beckman, Gary. *Hittite Diplomatic Texts*. Atlanta: Scholars Press, 1996.
- Bryce, Trevor. *The Kingdom of the Hittites*. Oxford, UK: Clarendon, 2005.
- Klengel, Horst. "Problems in Hittite History, Solved and Unsolved." In *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock*, edited by K. A. Yener and H. A. Hoffner Jr. Winona Lake, IN: Eisenbrauns, 2002.

The Cultures of Anatolia, 4000–1000 BCE

The Anatolian Peninsula and its geographical environs were home to numerous ethnic and linguistic groups between 4000 and 1000 BCE. These three millennia can be divided into four periods: the Late Chalcolithic period (ca. 4000–3000), the Early Bronze Age (EBA, ca. 3000–2500), the Middle Bronze Age (MBA, ca. 2500–2000), and the Late Bronze Age (LBA, ca. 2000–1200).

The peoples of Anatolia, many of whom were part of the Transcaucasian culture, were already in the fourth millennium practicing intensive farming and animal husbandry as well as exploiting their natural resources, which suggests that these settlements were already organized by tribal leaders. The pottery of this period in eastern Anatolia was handmade, often with burnished black exteriors and red interiors. Similar pottery from southwestern Europe suggests that a Balkano-Anatolian culture existed in northern Anatolia and the Black Sea region. The most significant achievement of the Chalcolithic period in Anatolia was the discovery of copper's ductility and the creation of copper alloys, particularly bronze, for use in making both weapons and ornamental items. Indeed, metallurgy was first developed in the highlands of Anatolia and spread into Syria and Mesopotamia.



Only toward the end of the fourth millennium did the Uruk cultural expansion, originating in southern Mesopotamia, influence the otherwise indigenous development of the late Chalcolithic Anatolian settlements. While the extent of the political and economic affiliation of Anatolia, especially the Amuq Plain, Anti-Taurus regions, and southeastern Anatolia, with Uruk is debated, Anatolia was likely technically independent at this time. Nonetheless, it was greatly influenced by the cultural, commercial, and political reality of northern Syria and Mesopotamia, which appear to have had enormous range at this time. Certainly, with the collapse of the Uruk expansion around 2900 BCE, the number of urban centers in Anatolia clearly decreased. Furthermore, the urban settlements in southeastern Anatolia regressed during the early EBA, more closely resembling central Anatolia both in its agricultural practices and its architecture. In

the region of Thrace to the west, the city of Troy first appeared as a fortified settlement around 3000 BCE and quickly grew into a state-level complex society as a regional economic and administrative center. Troy's expansion into a political and industrial center over the course of the third millennium is similar to—though independent of—the societal restructuring that occurred in the eastern half of Anatolia in the third millennium.

Defined by the surrounding geography and probably ruled by tribal leaders, most settlements in the early third millennium were mixed-farming villages. While the size and population of most Anatolian EBA sites are difficult to assess because they have been only partially excavated, archaeologists can still identify basic economic activities, organization, and population development. Over the course of the EBA, the settlements producing the best goods became

economic centers, developing into industrial town-sized hubs that would eventually become regional polities. A change reflective of the increase in population rather than of a cultural shift was the switch from the cultivation of emmer and einkorn wheat to bread wheat and barley, which were easier to process after harvest. This agricultural development, along with the large-scale introduction of olive, grape, and fig cultivation, occurred during the EBA. The nomadic peoples also saw a shift in their livelihood as the increase in population and the practice of cultivating any geographical topology pushed them into the mountains. This was especially true in the Black Sea region.

Already home to many indigenous populations, Anatolia, a natural bridge between Asia and Europe, became home to many migratory peoples in the third millennium. Unfortunately, due to the homogeneity of the archaeological evidence, the pottery, and the architecture and the absence of textual documents, it is difficult to determine the identity of a given settlement in Anatolia. Because each invading newly arriving people soon assimilated to the culture of the preexisting inhabitants, a new ethnic group's arrival can only be determined by the disruption in the material culture of the archaeological record.

In the MBA, the number of urban centers declined in Anatolia, again allowing small city-states to incorporate the surrounding towns and villages and transform into larger regional capitals. This may have been the result of increased tribal warfare, made possible through advances in metallurgy near the close of the EBA. Because of the isolation of central and eastern Anatolia from Mesopotamian culture in the MBA as well as their ability to quickly acculturate immigrant peoples, the local cultures continued to evolve slowly until the arrival of the Assyrian merchants in the early second millennium.

Linguistically, scholars have found that the various Indo-European-speaking peoples probably arrived in Anatolia during the third millennium. An analysis of these languages, Neshite or Hittite, Luwian, and Palaic, from the second and first millennia texts indicates that these languages are so closely related that the peoples who spoke them likely arrived in Anatolia as



Relief sculpture, from around 1200 BCE, depicting figures armed with sickle-like objects, at the Hittite site of Yazilikaya, in central Anatolia, Turkey. (Adam Woolfitt/Corbis)

part of small continuous waves of migrations, not as independent groups at different times. Old Hittite Law (ca. 1600) notes that Pala, Luwiyā, and Hattusha, the Hittite capital, were also names of provinces in the Hittite Kingdom. The specific origins of these peoples and how large a portion of the Anatolian population they constituted in the third and second millennia are, however, uncertain. Other groups living in Anatolia at this time include the Hattians, an indigenous people of central Anatolia, and the Hurrians, a group linguistically related to the Urartians of the first millennium. The language of the Hattians survived largely because their gods, festivals, and myth were incorporated into Hittite ritual texts found in the Hattusha archives and because other Hattian words were retained as names of native Anatolian flora and fauna. Knowl-

edge of the Hurrians remains obscure prior to the eighteenth century due to a lack of relevant architectural and textual remains, but their probable origin is the Caucasus region. Their ethnocultural influence in Anatolia is difficult to determine.

Near the beginning of the LBA, merchants from Assyria settled in trading colonies, or *karum*, near the city of Kanesh, introducing Anatolia to cuneiform, the wedge-shaped writing system of Sumer, although cuneiform did not take hold at this time. The earliest Hittite texts date to the late seventeenth century, to the reign of the first historical Hittite king Hattushili I, and are written in a Babylonian script. Hattushili's capital Hattusha was located in central Anatolia, which had grown from a small site in the EBA to prosperity in the nineteenth and eighteenth centuries.

Despite Hittite hegemony during much of the second millennium, many Hittites lived in rural settlements. Like most Anatolians, the Hittites were agriculturalists who also raised livestock and were noted for their beekeeping. An Indo-European-speaking group who referred to their language as Neshite, or "from Kanesh," the Hittite heritage was likely a mix of Indo-European and Hattic peoples. This dual heritage is reflected in the institutions of both kingship and queenship, which were inherited separately, as well as in ritual and mythology. While alive, the king was the gods' regent, judge, and high priest, but he "became a god" at death.

Although Hurrian was first recognized in a tablet from the El-Amarna archives in Egypt, most Hurrian texts have been uncovered at Hattusha. The Hurrians probably settled in Anatolia in the middle of the third millennium and, later, in the Khabor River valley. The presence of Hurrian gods in the twenty-fourth-century Eblaite pantheon supports this early date. Hurrian migration into the Euphrates, Tigris, and Orontes valleys sped up after King Shamshi-Adad I of Assyria's death in the eighteenth century. Within two centuries, they would become one of the largest ethnic groups in southeastern and eastern Anatolia, despite Hittite military campaigns against them during the reigns of Hattushili I and Murshili I. Of obscure beginnings and unknown state organization, the Mitannian King-

➤ HITTITES AND THE BIBLE

English usage recognizes four types of Hittites. Properly, the Hittites are second-millennium speakers of the Indo-European languages of Neshite and Luwian. However, the term can also refer to their geographical predecessors, the indigenous Hattians whose memory is preserved in Hittite texts from Hattusha. In the Bible (Gen. 23), Abraham encounters near Hebron several biblical Hittites, sons of Heth. Although likely contemporaries of Abraham, there is no indication that Hattians, Neshites, or Luwians traveled into southern Palestine at that time. Notably, biblical Hittites are also mentioned as inhabitants of Canaan in the historical books, as in 1 Kings 9:20. A final group, identified as the Neo-Hittites by scholars, likely spoke a Northwest Semitic language rather than an Indo-European one.

—Spencer L. Allen

dom rose to power in the second half of the sixteenth century, and its influence continued through the fourteenth century, as indicated by a dynastic marriage with the Egyptian pharaoh Amenhotep III (ca. 1388–1350). By that century, they compromised the majority population in the kingdom of Arrapha and the city of Nuzi in eastern Mesopotamia, and they also exerted a significant but not majority force as far west as Alalakh of Yamhad, Emar, Ugarit, and even Kiz-zuwadna. Interestingly, Mitanni's ruling elite have personal names betraying an Indo-Aryan affiliation, as do various of their technical words. After its defeats by the Hittite king Shuppiluliuma I in the late fourteenth century, Mitanni became a Hittite vassal until the thirteenth century, when the Assyrian king Shalmaneser I conquered the area. Once incorporated into the Assyrian state, the Hurrian populations assimilated and began speaking Akkadian.

A few other peoples should be mentioned briefly. The Palaicans of north-central Anatolia are another Indo-European-speaking people whose memory survives in a few religious texts. Like Hittite, the Palaic language and religious thought were influenced by Hattic. Displaced by the Kaska, a nomadic people near the Black Sea, the Palaic language is the first known Indo-European

language to have gone extinct. The arrival of the Kaska in the seventeenth century disrupted the continuity between the Black Sea and central Anatolia. Although they were only organized at the tribal level, they continued to fight with the Hittites during the second millennium, sacking Hattusha more than once. Finally, the Luwian-language family was spoken in southern and southwestern Anatolia and was likely spoken by the Trojans. Luwian is first attested in cuneiform from the sixteenth- to the fourteenth-century archives in Hattusha, but a native hieroglyphic writing system called Neo-Hittite is attested from the fourteenth to the seventh centuries, and an

alphabetic system existed in the fifth to third centuries BCE.

—*Spencer L. Allen*

Bibliography

- Hoffner, Harry A. "Some Contributions of Hittitology to Old Testament Study." *Tyndale Bulletin* 20 (1969): 27–55.
- Hopkins, David C., ed. *Across the Anatolian Plateau: Readings in the Archaeology of Ancient Turkey*. Boston: American Schools of Oriental Research, 2002.
- Yakar, Jak. *Ethnoarchaeology of Anatolia: Rural Socio-Economy in the Bronze and Iron Ages*. Jerusalem: Graphit, 2000.

■ Introduction: Political Entities in Ancient China

The origins of the modern Chinese state can be found in this period. Although the region that we now think of as China had been inhabited for thousands of years prior to this, the first unified Chinese state appears during the time under consideration here. Like the ancient Egyptians, ancient Chinese historians saw Chinese history as a series of successive dynasties. Toward 1000 BCE, these historians came to understand that these dynasties ruled according to what they referred to as a "Mandate from Heaven." This mandate implied that the right to rule was granted by the gods and was based on moral principles. Thus, a ruling family, if not acting in accordance with moral values, could be removed from power. Based on this conception of successive dynasties and a cycle in which a ruling family starts out moral, eventually acts immorally, and is replaced by a new ruling family, Chinese historians understood their own political history as inherently linear and cyclical. To a certain extent, this conception of Chinese history is still invoked by historians today, although the moral dimension is often abandoned in favor of other historical explanations. These ancient histories are useful for scholars in the reconstruction of ancient China, although these sources must be used cautiously).

The cyclical conception of successive dynasties, however, does not seem to accurately re-

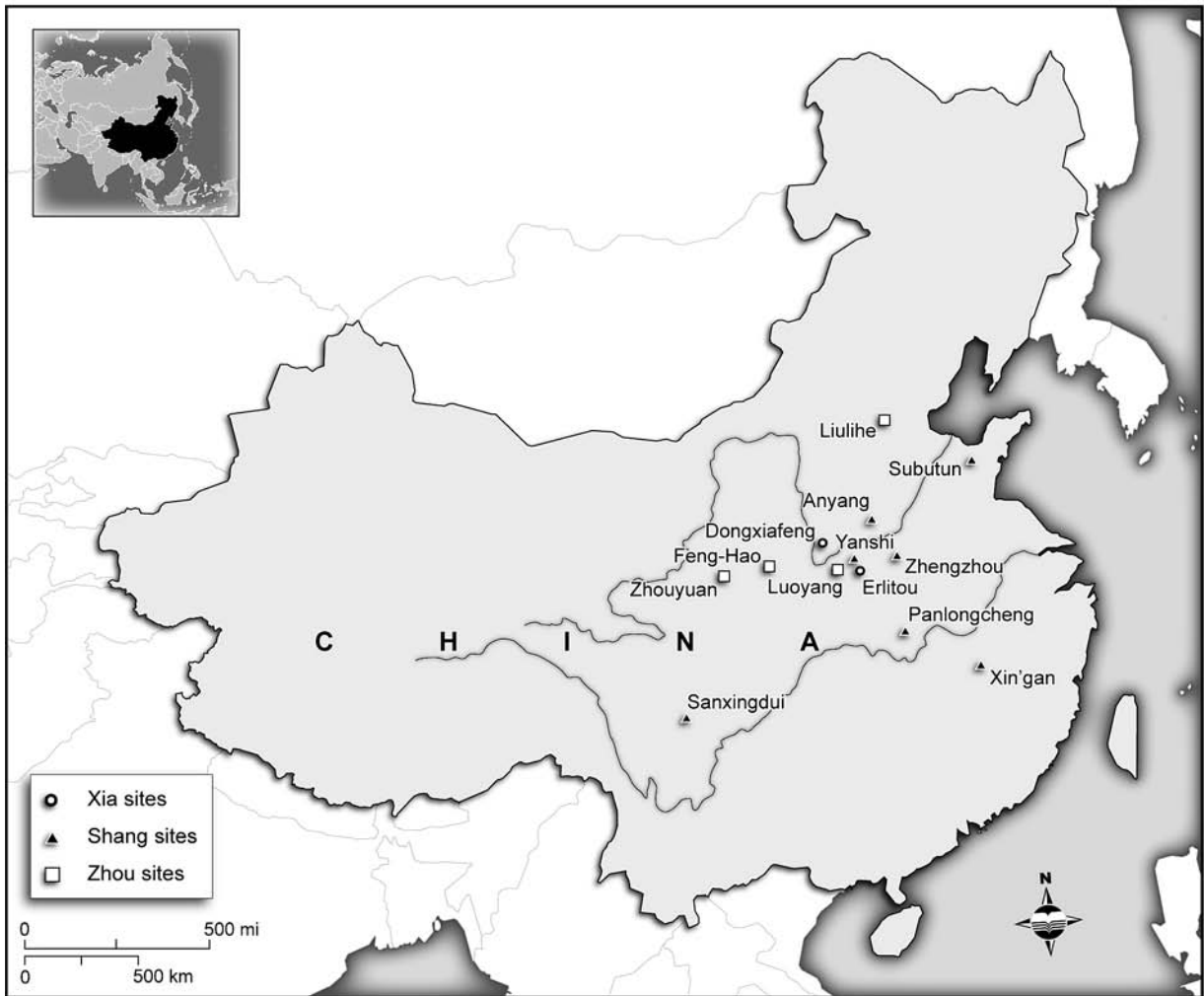
flect the situation in China during the Neolithic Age and the Bronze Age. During these periods, there seem to have been numerous separate power centers, operating concurrently. China is very diverse geographically and during the Neolithic was inhabited by numerous cultural groups. According to tradition, from these Neolithic groups three historical dynasties emerged: the Xia, the Shang, and the Western Zhou. While the traditional accounts and chronologies describe these as successive dynasties, in actual fact they may have overlapped with one another. The following entries explore the problems with reconstructing ancient Chinese political history and provide an overview of what is known about the Xia, Shang, and Western Zhou.

—*Kevin M. McGeough*

China's Mythical Past

China's mythical past is populated by a progression of gods, demigods, and legendary kings stretching from remote antiquity to early historical periods as recorded in traditional accounts of Chinese history. Many ancient myths have come down in fragments, have been lost, or have been altered or transmitted selectively in accordance with varying priorities and worldviews. As a result, much of China's mythical past is inaccessible, appears contradictory from one source to

MAJOR SITES OF THE XIA, SHANG, AND ZHOU DYNASTIES



the next, or came relatively late into the long history of Chinese literature. Nonetheless, China's myths of early times, rulers, and events are important due in part to the fascination with and reverence for China's mythical past.

Categorizing and describing gods, culture heroes, and kings is complex and marked by layers of uncertainty. Some of the gods and kings are also fantastical creatures, including dragons or beings that are part animal or that have the ability to turn into animals. In some accounts, this shape-shifting ability is attributed to the legendary sage rulers of the late third millennium BCE: Yao, Shun, and Yu. Yao and Shun were often portrayed as ideal rulers who chose successors based on merit over their own sons. Yu was awarded rule for his hard work taming the floods. He is

traditionally viewed as the first ruler of China's first dynasty, the Xia (Hsia). In their capacity as sage rulers and moral examples, these legendary figures have been historicized and humanized by Confucian and other scholars who looked to them as virtuous examples for later rulers to emulate. However, other myths and appropriations of these figures emphasized their shamanic abilities and links with the natural world.

Extraordinary powers and divine status are more freely attributed to the still earlier Three Sovereigns who were thought to have advanced Chinese civilization in the early third millennium BCE. Fuxi (Fu-hsi) is the culture hero credited with introducing new weapons for hunting and nets for fishing, domesticating animals, and creating the divination trigrams of the Yijing



This is an image of Pangu, from the *Sancai Tuhui*, a Chinese encyclopedia first published in 1609. In Chinese mythology, Pangu (“Pan” means “Coil up,” “Gu” means “Antiquity”) is the creator of the world, the first divine human who was miraculously born within the cosmos egg. It is he who separates heaven and earth, and when he dies, his body transforms into the universe. (Wang Qi and Wang Erbin, comps. *Sancaituhui*. Jinchang Baohanlou Kanben, 1609. Preserved in the Library of Literature Institute, Chinese Academy of Social Sciences)

(I-Ching). He is often paired with Nu Gua (Nü-kua, Nüwa), the female deity who repairs the cosmos and creates human beings. Both are depicted with human upper bodies and serpent tails. The overlapping categories of deity, culture hero, human, and animal are further illustrated by the other two Sovereigns, Shennong (Shennong) and Huangdi (Huang-ti). Shennong is a nature deity and cultural hero of agriculture whose myths include some animal features and a transparent stomach useful for his advances in discovering plants’ medicinal uses. Huangdi, also known as the “Yellow Emperor,” became synonymous with Chinese civilization through his

associations with writing, silk, medicine, modes of transportation, the calendar, and many other inventions and advances. He remains popular as the ancestor of the Chinese people, a god, and a prototypical Daoist immortal who ascended to heaven on a dragon.

The accumulated myths that transmit China’s mythical past synthesize the past of various regions in, and at times beyond, present-day China. Additionally, these myths partially shape the mythical past of other countries that have been in China’s cultural sphere of influence. The cosmogonic myth of Pangu exemplifies both tendencies. In this creation myth, the birth and growth of Pangu separates heaven from earth, and his death fills both as his breath becomes wind, his blood becomes rivers, and his body yields a variety of new terrestrial and celestial forms. This myth is related to several early creation stories from other cultures including the dismemberment of the Vedic cosmic man, Purusha. That myth provides a rationale for India’s caste system as each of the four main classes emerge hierarchically from the mouth, arms, legs, and feet of Purusha. Similarly, interpretations of the Chinese myth attribute Pangu’s parasites to the origins of the common people. There are other interesting cross-cultural comparisons, such as the later Japanese creation myth where the sun and moon are born from Izanagi’s left and right eyes. For Izanagi, this happened during a purification ritual after witnessing death rather than in death, but the parallel is striking as the sun and moon were born from Pangu’s left and right eyes, respectively, in the Chinese myth. Although intriguing, the similarities are not surprising in this case, as early Japanese histories—including such foundational mythical accounts compiled in the early eighth century CE—were deeply influenced by Chinese models.

The imagery and themes of China’s accounts of a mythical past continuously influenced their own literature as well. While this is particularly explicit in Confucian accounts of sage rulers in an earlier Golden Age, it can be found in Daoist writing and general cosmological assumptions throughout Chinese literature and thought. This same Pangu mythical example of cosmic origins describes the separation of heaven and earth as the differentiation of yang and yin, respectively,

► PROBLEMS ACCESSING CHINA'S MYTHICAL PAST

In his influential essay “Myths of Ancient China,” Derk Bodde describes three key problems responsible for much of the difficulty, complexity, and lack of consensus with regard to these myths. The first concerns euhemerization, a theory that the gods of mythology were derived from extraordinary humans in history. That is, there was an actual human whose exploits and reputation grew over time and attained divine status. Although Chinese religion offers many examples of humans graduating to divine status, Chinese mythology illustrates an inversion of this theory. The mythical gods, culture heroes, and legendary rulers of China appear instead to have been deities originally who were later historicized as human heroes and sage rulers. Certain fantastical and extrahuman elements were stripped out over time rather than added. Remaining incredible characteristics were further removed or rationalized by Confucian scholars who may have viewed some of these elements as implausible embellishments consistent with the original euhemerization theory rather than original remnants disappearing in a reverse euhemerization. Bodde provides the example of a text where Confucius answers a question from a disciple about Huangdi’s 300-year lifespan by asserting that the common mythic age conflated the Yellow Emperor’s 100-year lifespan with the following century of reverence and a further 100 years of following his teachings.

The second set of problems concerns fragmentation and language. Fragments of myths survive in later works. Instead of receiving the full myth from ancient times, we are often left with a puz-

zling reference or several lines from an earlier myth. Bodde points to the circa fourth-century BCE Heavenly Questions in which enigmatic allusions to earlier myths are asked in question form with neither answers nor context provided. Problems from fragmentation are compounded by ambiguity inherent to classical Chinese language. There are multiple interpretive possibilities—due to homophones, similar characters that might be confused with each other, and often no indication of tense, number, or gender—that cannot be narrowed down to one conclusive meaning, as the typically fragmentary account may not provide adequate context.

The third problem addresses chronology. It was during the Han dynasty (206 BCE–220 CE) when past writings were collected, edited, and written about by scholars. Han times, priorities, worldview, and sensibilities were importantly different from early Zhou (Chou) writings and myths, some of which originated a millennium or more before the Han editors wrote, reshaped, or selectively systematized accounts of earlier eras. Aside from earlier archaeological evidence, it is often through these Han compositions and later writings that we have imperfect access to the Zhou and Shang, much less to China’s more ancient mythical past.

—John Harding

Bibliography

Bodde, Derk. 1961. “Myths of Ancient China,” in *Mythologies of the Ancient World*, ed. by Samuel Noah Kramer, pp. 367–408. New York: Anchor.

from a previously undifferentiated whole, Hundun. Literary passages, such as the story from the third-century BCE Daoist classic *Zhuangzi* (*Chuang-tzu*), play with this idea by personifying chaos as a faceless ruler named Hundun (Hun-tun) who dies through the misguided efforts of his friends to give him the openings (eyes, nostrils, mouth, and ears) that he lacked. While these differentiating features would appear beneficial and fit many notions of progress, the ideal direction in Daoism is a return to the chaotic and undifferentiated whole. The interplay between cosmology and the most distant mythical past in this early Daoist work suggests nature as

a guide for spontaneous action in harmony with larger cosmic patterns and relates cosmogonic origins with the ineffable mysterious Dao beyond distinctions. The mythical past is used rather differently in this Daoist example relative to Confucians lauding paragons of virtue such as the rulers Yao and Shun, but for both the mythical past is more representative of an ideal than is the present or future.

—John Harding

Bibliography

Allan, Sarah. *The Shape of the Turtle: Myth, Art and Cosmos in Early China*. New York: SUNY, 1991.

Allan, Sarah. "Myths of Ancient China." In *Essays on Chinese Civilization*. Princeton, NJ: Princeton University Press, 1981.

Kohn, Livia. "Cosmology, Myth, and Philosophy in Ancient China: New Studies on the 'Huainan zi'." *Asian Folklore Studies* 53(2) (1994): 319–336.

Loewe, Michael, and Edward Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.

Waley, Arthur, trans. *The Book of Songs*. New York: Grove, 1937.

Waltham, Clae. *Shu Ching, Book of History: A Modernized Edition of the Translations of James Legge*. London: Allen and Unwin, 1972.

The Xia Dynasty and the City of Erlitou

According to the traditional conception of Chinese history, the Xia dynasty was inaugurated by Yu during the twenty-second century BCE. Seventeen kings led the Xia; the last ruler was Jie, who, according to tradition, allowed his wife to pressure him to rule over China harshly and violently. In response, Tang led a rebellion against him, overthrew him, and founded the Shang dynasty. Modern scholars had long assumed that this was a mythical dynasty, with the stories bearing little or no historicity. Excavations at the site of Erlitou, however, have led many scholars to rethink this position, suggesting that in fact there was a Xia dynasty.

Excavations at Erlitou were the first to identify a material culture tradition that seems to have overlapped with the traditional chronological and geographic range of Xia society. Archaeologists have identified Erlitou cultural features throughout western Henan and southern Shanxi, which is roughly the same region where Xia power was supposedly centered. Chronologically, Erlitou culture is not completely agreed upon, but the rough range of dates running from 2000–1300 BCE lines up well with the expected chronology of the Xia dynasty. More importantly, Erlitou remains are stratigraphically located above Neolithic Longshan remains but beneath Shang remains, precisely where Xia remains would be expected.

The site of Erlitou is the largest Erlitou site so far identified. A large palace, 11,955 square yards

(10,000 square meters) in size, has been excavated. It was built on top of a large rammed earth platform, lifting the palace about 2.6 feet (0.8 meter) above the surrounding parts of the town. The palace has a large main gate, a large open courtyard, and a large hall. Another smaller platform also has a large hall and is associated with a tomb. Some have suggested that this may have been the location of ancestor veneration, although this theory cannot be proven given the present state of knowledge.

Erlitou material culture shows links to earlier Longshan culture and later Shang material culture. Bronze workshops were present at the site; bronze artifacts and manufacturing equipment (such as crucibles) were numerous. Bronze vessels that held a fermented grain drink are typical. The Chinese tradition of jade manufacturing continues into the Erlitou phases; numerous ritual and decorative pieces have been recovered from Erlitou sites. Although there is no writing associated with Erlitou remains, potters' marks have been found on ceramics, and divination equipment (such as sheep scapula) has been found.

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Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Chang, Kwang-Chih. "China on the Eve of the Historical Period." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries. New York: Harry N. Abrams, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

Shang Governance

The Shang dynasty is the first Chinese dynasty to leave written records. The records are not numerous and come in two forms. Oracle bones, the

remnants of Shang divination practices, which played an extremely important role in political decision making, provide crucial information about day-to-day governing. Oracle bone inscriptions also confirm that the last nine kings in the traditional accounts of the Shang did in fact reign in the order in which tradition holds. Small inscriptions on bronze are also used by scholars in the reconstruction of Shang history.

The name “Shang” refers to the ancestral capital of the first rulers of the dynasty. The capitals themselves shifted according to the political climate of the time. Kwang-Chih Chang has argued that secular capitals coexisted along with sacred capitals, although both types of power bases were linked to the Shang king. According to the traditional Chinese accounts, the last ruler of the Xia was overly swayed by an immoral concubine. Tang rebelled against this king, took control for himself, and founded the Shang dynasty. Ancient tradition holds that this happened around 1766 BCE. There is no corroborating evidence that this in fact took place; some scholars assume that there was no Xia dynasty, and most now believe that the these dynasties overlapped chronologically to some extent. Recent attempts to date the beginnings of the Shang dynasty are based on correlating archaeological dates with astronomical phenomenon recorded in the oracle bone inscriptions. Keightley suggests a date of 1544 for the first year of Tang’s reign. Similar dating techniques are used to identify the end of the Shang period. Keightley dates the end to 1045 BCE, which is later than the traditional end date of 1122 BCE (first argued for by a historian in the Han dynasty).

The historical traditions of the Shang kings come from the work of the ancient historian Sima Qian. This account can be difficult for modern historians to use since it appears to mix mythological and historical information. Sometimes the mythological components are obvious, such as the accounts of King Xie’s conception, when his mother swallowed an egg dropped by a flying bird. In fact, prior to the discovery of the oracle bone inscriptions, many scholars believed that the Shang was entirely mythical. It is now clear that Sima Qian’s work reflects a much more complex blending of historical data, Chinese religious belief, and political propaganda.

➤ THE LINEAGE SYSTEM

Wang Guowei, one of the most influential Chinese historians of the late nineteenth and early twentieth centuries, argued that one of the major steps in the development of the Chinese state was the institution of the lineage system (*zong fa*) by the Duke of Zhou, the brother of the founder of the Zhou dynasty. This was a system of patriarchal descent in which the family lineage was passed down through male family members. Eventually these lineages would get quite large, so younger sons might form new lineages. These new lineages were called minor lineages; the older lineages were referred to as major lineages. One of the most respected modern Chinese archaeologists, the late Kwang-Chih Chang, has argued that the beginnings of this system date to much earlier, to the Neolithic period. Chang argues that the spatial distribution of tombs in the Longshan culture reflects a patriarchal segmentary lineage system and that this has been a governing principle in Chinese society (and thus in Chinese political organization) throughout the period of the Three Dynasties and before.

—Kevin M. McGeough

The Shang government was led by a king who derived his authority from his relationship to the ancestors (especially royal ancestors but not entirely). He was the head of a patriarchal pyramid of authority whereby political relationships were conceptualized as filial ties. Shang succession is not entirely understood. Leadership passed directly from father to son, but the rationale behind which son became king is unclear. Some ancient accounts seem to complain about the chaos that ensues when the younger child is chosen to be king, suggesting that while the eldest son was the preferred choice, this was not always the case. The king was at the top of the pyramid, with his adult sons (princes) ranking slightly below him. These princes each headed their own minor lineages, often associated with particular geographic regions within the Shang kingdom. Below the king’s sons was another class of princes. These were members of royal lineages from before the time of the current king (the descendents of royal brothers who never became king). These other members of

the royal family were incorporated into the state structure as heads of minor lineages, owing formal obeisance to the king's ancestors (and thus by proxy to the king if not directly to him). These minor lineage heads may also have been local rulers who were not actually related to the king, but a fictitious relationship was represented as a means of incorporating them into the hierarchical structure of the Shang kingdom. Low-level local officials were also part of the Shang political system but were not necessarily part of the lineage system. Many of these people were powerful individuals within a local community who dealt directly with the state superstructure. Other officials were chosen by divination; their appointment to various positions was seen as ratified by the gods or ancestors.

Royal consorts were well-respected members of Shang society. These women were valued in Shang times for their ability to produce heirs, although enacting of powers beyond the reproductive realm seems to have been discouraged. In death, Shang royal women were highly honored; they became part of the so-called many mothers of the ancestor cult. Numerous individual queens were especially popular for veneration.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries Series. New York: Abrams, 1999.
- Keightley, David N. "The Shang: China's First Historical Dynasty." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

Western Zhou Governance

The Western Zhou has long been considered a paradigm for proper governance in China. The

early rulers in traditional accounts are seen as blessed kings who acted according to proper virtue and the will of the gods, ruling by what is called the Mandate of Heaven. The first of these virtuous rulers was King Wen, who reigned during 1099–1050 BCE according to the traditional accounts. In 1053, this king led the Zhou army through Shanxi Province, bringing his troops into too close proximity of the Shang capital. Territories that had been loyal to the Shang switched their allegiances to the Zhou, seemingly dissatisfied with the Shang leadership. Wen died before conflict with the Shang erupted, but his son, King Wu (who reigned during 1049–1043) began a campaign against the Shang, bringing his army to the Shang capital of Anyang in 1045. There he defeated the Shang army in battle and, with the suicide of the Shang king, became ruler of a large Chinese empire.

King Wu died two years later, and a succession crisis ensued. Precedent held that his oldest son should take the throne. However, Wu's brother Zhou Gong, better known as the Duke of Zhou, declared the king's son (later known as King Cheng) to be too young to rule and declared himself regent. It is difficult to understand precisely why this happened; it seems that King Cheng was in fact old enough to rule. Whatever the case may have been, other relatives of Wu rebelled against the Duke of Zhou and King Cheng, joining sides with surviving members of the Shang dynasty in the east. The Duke of Zhou and King Cheng traveled with an army to the east and put down this uprising, cementing governance over a vast region.

With King Cheng and the Duke of Zhou's quelling of the rebellion in the east, Zhou governance came to take on its more permanent form. Rather than ruling conquered areas directly like the Shang predecessors did, the Zhou kings invested royal family members, local elites, and even previous members of the Shang ruling houses over conquered territories. In the heyday of the Western Zhou, more than 100 separate territories were ruled by administrators established by the Zhou but without internal interference by the Zhou king. These rulers held specific ranks within the Zhou government and were expected to provide military service and tribute

but otherwise operated with relative autonomy throughout their particular regions.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Oldstone-Moore, Jennifer. "Confucianism: Order and Virtue." In *China: Empire and Civilization*, edited by Edward Shaughnessy. Oxford: Oxford University Press, 2000.
- Rawson, Jessica. "Western Zhou Archaeology." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Shaughnessy, Edward L. "Western Zhou History." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

Wu and the Rise of the Zhou

The origins of the Zhou dynasty are preserved in the legend-filled *Shujing* (*Classic of Documents*). Given the nature of this work, historians have difficulty determining the historicity of the near legendary figures discussed within. One such figure is Wu (Wuwang), supposedly the first king of the Zhou dynasty, who, if tradition can be believed, ruled in the mid-eleventh century. Before he established the Zhou dynasty, he was the ambitious leader of a small province on the western frontier of the Shang dynasty. He and his father (Wen, the Cultured King) formed alliances with many other frontier territories and defeated the last Shang king, establishing China's longest-lived dynasty.

During the twelfth century and earlier, the Shang rulers used the Zhou tribe on the western frontier as a buffer against often-aggressive nomadic people who lived farther west. The Shang conferred titles on the militant Zhou leaders and did their best to cultivate good relations with them. By the middle of the eleventh century, Wu's father, King Wen (Wenwang), who had been given the title "King of the West" by the Shang, began plotting against the increasingly unpopular Shang ruler, Zouxin. Wen died

THE DUKE OF ZHOU

In later traditions, Wu's brother, the Duke of Zhou, was a figure of great admiration. According to tradition, when Wuwang was close to death, the duke appealed to heaven that his life be taken instead of his brother's. The appeals did not work, and Wu died anyway, yet the records of the duke's appeals were sealed in a metal box as proof of his steadfastness toward his brother, the king. These records, tradition holds, came in handy later when the duke was accused of having plotted against his brother. The sealed records proved his innocence, and rather than taking the throne himself, he instead supported Wu's underage son.

—Kevin M. McGeough

during one of his many attacks on the Shang peoples. Wu became the leader of the Zhou and continued his father's efforts at forming alliances with other tribes and plotting against the Shang. He gathered a large military force with the assistance of eight other border states to attack the Shang capital.

The attack, aided by mutinous Shang soldiers who were unhappy with the corruption of the Shang court, was a great victory for the Zhou. They sacked the capital, Anyang, and Zouxin committed suicide. Wu founded a new capital at Xian (known earlier as Chang'an) and began consolidating and governing a vast new empire that stretched from Inner Mongolia in the north to the Yangtze River in the south and from the Gansu Corridor in the west to the East China Sea.

Wu's task of establishing a new dynasty was justified by the Mandate of Heaven, which current scholars suggest was an ideology created by the Zhou to justify their overthrow of the Shang. According to that belief, a king held power only as long as he was virtuous. Therefore, when a king was overthrown by rebellion or defeated by an outside force, it indicated that Heaven had revoked the mandate and bestowed it upon someone else. The Shang people had become increasingly unhappy with the Shang king, so when Wu defeated him the people viewed that action as proof of a new mandate of Heaven

THE DUKE OF ZHOU'S THOUGHTS ON GOVERNANCE

Many classics of Chinese literature were composed during the Western Zhou period, some of which were credited to the early virtuous kings although they were actually written more than 250 years after these kings died. The *Shang shu* is credited to the Duke of Zhou and may actually have been written by him. The language of some of the poems contained within is an archaic form of Chinese that dates to early in the Western Zhou. In these poems, various discussions of political philosophy and understandings of government are laid out, giving modern readers direct access to Zhou political doctrine.

—Kevin M. McGeough

being bestowed upon Wu. The Duke of Zhou, one of Wu's brothers who had spent time in the Shang court, aided Wu's ascension to the throne by convincing many of the Shang nobles to support Wu.

Although he was known as a strong and stern leader—he gave himself the title “Martial King”—Wu knew he would need the help of many Shang officials around the empire if he wanted to maintain control over his vast new territory. His brother, the Duke of Zhou, allowed many of the Shang officials to stay in their administrative posts and named his fellow Zhou to fill others. He even allowed the heir of the Shang throne to remain as the nominal ruler of Anyang, but he assigned two of his brothers to carefully monitor Shang activities. Wu parceled out subordinate states to his loyal lords, who ran them on behalf of the Zhou dynasty. That method allowed the Zhou to control the vast territory in a way that the Shang could not.

Wu revealed his virtuous character, earning him the admiration of future Chinese kings and philosophers, when he refused to take credit for the founding of the Zhou dynasty and gave the honor to his father instead. Wu recognized that although he had defeated the Shang in battle, the groundwork for the Zhou victory had been laid by generations of Zhou leaders.

Wu did not have the opportunity to fully consolidate his power because he did not live long after defeating the Shang. He died circa 1104 and was succeeded by his son, King Zheng. Leaving the throne to his son rather than his brother was a break from Shang tradition; future Chinese dynasties would follow that practice. Since Zheng was very young when Wu died, the Duke of Zhou acted as ruler for many years. His guardianship laid much of the foundation of the Zhou dynastic success through incorporation of a system of feudalism upon which later Zhou kings would expand. Many future Chinese rulers and thinkers looked back to the reigns of Wu, the Duke of Zhou, and Zheng as China's Golden Age and paid great tribute to the virtue and wisdom they exhibited as kings.

—Kevin M. McGeough

Bibliography

- Brown, Dale, ed. *China's Buried Kingdoms*. Alexandria, VA: Time-Life Books, 1993.
- Huang, Ray. *China: A Macro History*. Rev. ed. Armonk, NY: M. E. Sharpe, 1997.
- Hucker, Charles O. *China's Imperial Past: An Introduction to Chinese History and Culture*. Stanford, CA: Stanford University Press, 1975.
- Murowchick, Robert E, ed. *China: Ancient Culture, Modern Land*. Norman: University of Oklahoma Press, 1994.
- Perkins, Dorothy. *Encyclopedia of China: The Essential Reference to China, Its History, and Culture*. New York: Facts on File, 1999.

Introduction: The Arts and Ideologies of Governance

In the period from 4000 to 1000 BCE, rulers did not govern according to the whims of the people. Rather, the people were governed

by the whims of their rulers, whether those rulers were kings, priests, or aristocrats. A king was not expected to justify his tax expenditures to

the citizens and usually did not need to explain his rationale or get permission from his advisors before making decisions. Instead, in those areas where strong leadership arose in Era 2, the justification for the ruling elite's authority came from three sources: divine approval, military might, and economic clout.

The clearest statements that justified political leadership in Era 2 were those statements that the leader had been chosen by the gods to rule. This was expressed most strongly in Egypt, where the king was seen as the offspring of the gods and thus semidivine. In Mesopotamia, Anatolia, and China, the gods could grant leadership but could also take it away. Ancient Mesopotamian, Hittite, and Chinese historians explained the rise and fall of political dynasties by arguing that those leaders had gained and subsequently lost favor with the gods. The interpretation of dreams and various divinatory practices were used as means of understanding the will of the gods. Those who could interpret dreams and signs in this manner wielded much power at many ancient courts, since they could inform the king about the will of the deities and thus influence policy.

Military and coercive power also lay at the heart of political power in the ancient world. Kings gained territory through armed conflict; a military presence (or the possibility of a military presence) kept those territories from revolting. Royal monuments can be found throughout the ancient Near East depicting the king's military strength (often idealized as images of the king hunting) and commemorating important battles. Although most would not have been able to read the accompanying inscriptions, all would have been able to interpret the images of the valiant king's army brutalizing its opponents. These messages would not have been meant to simply convey that the king and his army should be feared. The king was also depicted as bringing order to chaos, bringing law to lawlessness, and providing security from danger.

The economic clout of ancient royalty also manifested itself in the arts used to justify governance. Elaborate palace complexes (such as that at Mari), enormous royal tombs (such as the pyramids at Giza), and other architectural marvels

acted as tangible demonstrations of the royal power to command resources and labor. In and of themselves, these monuments demonstrated that the rule of the king was natural and unquestionable. The possession of royal-style objects allowed local elites to aspire to royalty; by being allowed to use items like those of the king or that were given as gifts by the king, these local elites were able to distance themselves from other members of the community. At the same time, this reinforced the support of the king by wealthy members of the community.

—Kevin M. McGeough

Debating Ancient Imperialism

Modern historians debate whether or not imperialism is a valid concept for understanding the relationships between polities in ancient times. Certainly the level of interaction between polities (and thus the level of control held by the dominant group) was significantly less in antiquity than in more recent historical times. Yet without a doubt, from the origins of the first states relationships of inequality developed between more powerful and less powerful polities. When thinking about ancient imperialism, it is thus best to avoid thinking of it in modern terms. Ancient imperialism should be considered an institutionalized relationship of imbalance between a dominant area and a subordinate area.

Ancient imperial relationships were usually construed along geographic lines. The dominant area was considered the core, the center of the empire. The subordinate area was considered to be peripheral, located on the margins of the core area. For example, in ancient Egypt, the region that extended from the delta in the north along the Nile River to the first cataract in the south was considered the center of Egyptian civilization. Yet at many times, Egypt controlled Nubia to the south and Syria-Palestine to the northeast. However, these areas were always thought to be distinct from Egypt proper, peripheral parts of the larger empire.

These core and periphery relationships are always uneven. The core benefits at the expense of the periphery. Benefits to peripheral regions

may emerge from the relationship, but the core is the center of decision making and ideally (although not always in practice) the economic beneficiary of the imperial relationship.

The motivations behind the establishment of an imperial relationship are not always consistent. Often an empire formed almost accidentally, a by-product of military activities engaged in for security purposes or to gain wealth. Resource extraction was another common goal; a core area would occupy a peripheral area in order to gain access to valuable resources unavailable locally.

There were many justifications for the conquest of foreign lands as well as for the structured inequality between the core and periphery. The most common justification was that there need not be a justification; in Egypt's case, the Egyptian worldview saw Egyptians as a better class of human than any other group. Historical precedent was also used to justify the conquest of foreign lands, based on claims that the lands once belonged to the conquerors or that the foreigners had a tradition of aggression. The king is often portrayed as a force of order, bringing that order to the chaotic foreign lands. Divine favor was used to understand why one group dominated another. It was not that one group's gods were stronger than another group's (there are no examples of this kind of logic preserved from ancient times); rather, it was that the gods withdrew their support from a particular group.

—Kevin M. McGeough

Bibliography

- Alcock, Susan E., et al., eds. *Empires: Perspectives from Archaeology and History*. Cambridge: Cambridge University Press, 2001.
- Garnsey, P. D. A., and C. R. Whittaker. *Imperialism in the Ancient World*. Cambridge Classical Studies. Cambridge: Cambridge University Press, 1978.
- Liverani, Mario, ed. *Akkad: The First World Empire*. Padua, Italy: Sargon, 1993.
- Postgate, J. N. "The Economic Structure of the Assyrian Empire." In *Power and Propaganda*, edited by M. T. Larsen. Copenhagen: Akademisk Forlag, 1977.
- Sinopoli, Carla M. "The Archaeology of Empire." *Annual Review of Anthropology* 23 (1994): 159–181.

Royal Inscriptions from Mesopotamia

A Mesopotamian king was expected to ensure the welfare of his subjects, protecting them against aggressors; undertaking public works and promoting trade, agriculture and industry to bring prosperity; supporting the weak and disadvantaged; and upholding justice. He also played a major role in religious rites, mediating between the gods and his people.

In their inscriptions, kings informed the gods of their pious, appropriate, and successful activities following divine wishes; they also addressed the public at various levels and for future monarchs, offering themselves as models of righteous behavior. Success was in itself indicative of legitimacy and divine approval. Nevertheless, royal inscriptions might offer an apologia for unorthodox actions: for example, usurpation was justified by emphasizing the misdeeds of the deposed ruler and the need to restore the status quo. Often stories from history were reworked to give the sanction of tradition to a king's present actions. Those without direct access to the message—for example, villagers—eventually became party to it through hearsay and gossip. Thus, the ordinary citizen gained confidence in the divinely supported actions of the monarch. Like all propaganda, however, what the kings claimed was not always true.

The first historical documents, known from the Early Dynastic (ED) II–III period, were brief inscriptions on votive offerings and buildings, naming the royal donor. By the mid-third millennium, however, narrative texts were being written, explaining and justifying the king's actions and demonstrating that he was acting in accordance with divine will. Around 2400 BCE, Enmetena of Lagash gave an impassioned account of the long-running border dispute between Umma and Lagash. Some 50 years later Uru-inim-gina, also of Lagash, lauded his own efforts at reform and delivered a tirade against Lugalzagesi of Umma, who had sacked Girsu.

From the Akkadian period onward bricks incorporated into public buildings were often stamped with the name of the king who had commissioned them and information about the structure such as the names of the temple, the

deity to whom it was dedicated, and the city in which it was built. Votive clay nails inscribed with the name of the king and a dedication or a longer text were also incorporated into temples.

The Akkadian kings produced rich propagandist inscriptions, describing their wide-ranging conquests and power and the prosperity of the land under their rule, with merchants coming to their city, Agade, from far across the sea. In contrast, in the period following the fall of the Akkadian empire, Gudea of Lagash was more concerned with recording his pious works. A two-cylinder poem describes Gudea's dream of Ningirsu's request that he construct a marvelous temple and his endeavors to bring together all the choice materials needed for the task: timbers from the Cedar Mountains, red stones (agate or carnelian) from Meluhha, gold, and silver. In their royal hymns the Ur III and later Babylonian kings were also more interested in proclaiming their efforts for the welfare of their people than their conquests. Many third millennium-inscribed monuments, stelae, and statues from the courtyard of the Ekur in Nippur were assiduously copied by Old Babylonian (OB) scribes, complete with catalog details describing the monuments themselves.

In the north, kings such as Shamshi-Adad focused their inscriptions on their military achievements. Later Babylonian kings included fuller details of their conquests in their inscriptions but also celebrated praiseworthy aspects of their reigns, such as the construction of canals. Assyrian kings, from Adad-Nirari in the early thirteenth century, developed military inscriptions into longer first-person narratives of their achievements, those of Tiglath-Pileser I and of kings from the late eighth century onward being written because of their length on large clay prisms; stone stelae were also used in the ninth and eighth centuries. These records of conquests and triumphs were written with a dated section dealing with each campaign; later editions contracted the account of the king's earlier campaigns so as to make space for the most recent. Late in a long reign, the annals might omit some campaigns or run several together. These were written as dedicatory inscriptions to be placed in the foundations of buildings, a traditional practice. Royal texts were often written not for the human

reader but for the deity to read and approve. The deeds of Assyrian kings were also celebrated in epic poems and in the inscriptions accompanying the forceful reliefs of the triumph of Assyrian might, carved on the palace walls to impress all who saw them. Kings boasted not only of military deeds but also of their feats of engineering, discovery, and magnificent construction.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. "Akkadian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Liverani, Mario. "The Deeds of Ancient Mesopotamian Kings." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Michalowski, Piotr. "Sumerian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Snell, Daniel C., ed. *A Companion to the Ancient Near East*. Oxford, UK: Blackwell, 2005.
- Van de Mieroop, Marc. *Cuneiform Texts and the Writing of History*. London: Routledge, 1999.

Egyptian Kingship—Order Fighting Chaos

Much of ancient Egyptian ritual, religious thought, and royal ideology was inspired by an urgent need for order to triumph over chaos. This unending and unrelenting demand stemmed from a universal thread present in Egyptian cosmogonical accounts. While Egyptians came to embrace a variety of creation accounts (accompanied by a number of creator figures), all of these traditions reflected a concern that order was in danger of being overcome by chaos.

Universally, Egyptians acknowledged that creation was the result of the organization of chaotic materials. Immediately after creation, the cosmos was in a perfect and pristine state, with everything correctly ordered. In this state the gods, as the original kings of Egypt, lived on earth with mankind. In each account there came a time when some type of rebellion—whether it

be the rebellion of Seth against his brother Osiris, mankind against Re, or Aophis against the gods—introduced chaos into the cosmos and caused the gods to withdraw from the earth. The resulting condition was one in which chaos was constantly impinging upon order, and only the king could stem the tide. It was the primary duty of the king to safeguard the cosmos by destroying chaos and establishing order. This was an urgent, unending task.

A number of texts illustrate the care that kings took to show that they were fulfilling their responsibilities in this regard. For example, Amenemhet I associated himself with the divine as well as demonstrated his importance to Egypt when he claimed to have appeared as Atum (the creator) himself, setting in order that which he found decaying. Ancient scribes praised Thutmose III by claiming that he reinstated the conditions of the mythological time when the god Re was king. It is clear that incumbent kings were obligated to return conditions to the orderly state of the Golden Age when the world was new and pristine.

In order to do this the king had to fulfill his primary duty: to destroy chaos and replace it with order. One Pyramid Text informs us that order is in the presence of Re on the festival of the first day of the year. The sky is content, and the earth is in joy because they have heard that the king put order in the place of chaos. The prophecies of Neferti state that the king will cause order to return to its seat, and chaos is driven out. The king's role in this process is probably made most explicit in a liturgical text: Re has put a king on the land of the living so that he may bring about order, so that he may destroy chaos.

Much of the ideology and iconography of kingship revolved around this concept. It seems that all of the offerings that the king gave to the gods were tokens of offering order, and texts make it clear that only he had the ability and obligation to regularly offer order to the gods. It is likely that all of the scenes of the king smiting enemies, conquering in battle, hunting hippopotamus, or netting wild birds are symbolic of his conquering chaos. In some rituals he offered order to the gods as he concomitantly used the Wedjet eye to destroy chaos. Even the very act of

becoming king was tied up with destroying chaos and restoring order. The death of the previous king was associated with the death of Osiris, an event that introduced chaos into the world. As the new king ascended to the throne, he always stylized himself, like Horus, as having found the land in a chaotic state, a condition that his assumption of power corrected.

—Kerry Muhlestein

Bibliography

- Bonhême, M. "Kingship." In *The Oxford History of Ancient Egypt*, vol. 2, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Frankfort, H. *Kingship and the Gods: A Study of Ancient Near Eastern Religion as the Integration of Society and Nature*. Chicago: University of Chicago Press, 1948.
- Leprohon, R. "Royal Ideology and State Administration in Pharaonic Egypt." In *Civilizations of the Ancient Near East*, vol. 1, edited by J. Sasson. Peabody, MA: Hendrickson, 2000.
- O'Connor, D., and D. Silverman. "Ancient Egyptian Kingship." In *Problèmes d'Égyptologie*, vol. 9. Leiden: Brill, 1995.
- Silverman, D. "Deities and Divinity in Ancient Egypt." In *Religion in Ancient Egypt: Gods, Myths, and Personal Practices*, edited by B. Shafer. Ithaca, NY: Cornell University Press, 1991.

Imperialism and Ancient Art

Empires are formed when one state finds it economically and politically expedient to conquer and rule formerly independent regions or states. All empires rely on various means to appease, assimilate, and otherwise control the different regions under their control. In these attempts, the visual medium of art is a powerful tool. Art and monuments are a very public means that a ruler can assert his control, ideology, and ambitions on a large audience.

We have numerous examples in the art and archaeology of the ancient Near East and Egypt of how royal art reflects the imperialistic aspirations of a particular ruler. This is especially true of the later Assyrian and Persian periods but can be traced all the way back to the third millennium BCE. Take for instance one of the earliest Egyptian historical documents. This is the Narmer palette, a carefully carved stone cosmetic palette. On this luxury object the message

is clear. The pharaoh is supreme ruler of both Upper and Lower Egypt and can conquer all that stands in his way. The king is shown larger than everyone else, occupying his own space. His pose, in the midst of striking his enemies, presents the king as eternally vigorous and victorious.

In Mesopotamia, many kings set up public stelae in city centers. One of the best-known examples and a masterpiece of early Mesopotamian art is the Stele of Naram-Sin. These stelae served as public reminders of the king's role. In the early Sumerian period they showed images of the king as conqueror and builder, but by the time of Hammurabi in the Old Babylonian period there was a new message. Hammurabi set up a stele engraved with his set of laws for all to see. At the top of the cone-shaped stele is a two-foot-high image of Hammurabi receiving the rod and the ring of kingship from the sun god Shamash. The image is a canonical Mesopotamian presentation scene in which a ruler stands before a god. Here, however, there is a new rapport between king and god. The two face each other at virtually the same eye level so that sustained eye contact is possible. The rest of the seven-foot monument is covered with the inscription of Hammurabi's famous law code. The image of the laws in conjunction with the presentation scene complement one another, both conveying the one message that Hammurabi is a wise and just king.

The Hittites in Anatolia were also adept at employing art in their imperialistic goals. Along their border regions, the Hittites carved images of the king and gods on natural rock faces. In this way they were able to mark the boundaries of their state and bring to the farther regions of their empire images of the king. By setting up these eternal monuments to the king and the Hittite worldview, the Hittite kings attempted to unify the far reaches of their kingdom.

—Susan Helft

Bibliography

- Collon, Dominique. *Ancient Near Eastern Art*. Berkeley: University of California Press, 1995.
- Frankfort, Henri. *The Art and Architecture of the Ancient Orient*. 4th rev. ed. Harmondsworth, UK: Penguin, 1970.

Robins, Gay. *The Art of Ancient Egypt*. Rev. ed. Cambridge: Harvard University Press, 2008.

The Stele—State Monuments and Visual Power

In Mesopotamia and Egypt, rulers erected upright, often freestanding stone monuments called stelae to commemorate specific accomplishments or events from their reigns. Decorated with pictorial and written accounts of the event in question, these monuments were frequently dedicated to the gods and were set up in temples and, in the case of Egypt, along territorial boundaries. They served not only to proclaim the king's glory and fulfillment of his royal responsibilities but also to indicate divine support for his reign, often through the depiction of the gods or their symbols with the figure of the king. From the Early Dynastic period in Mesopotamia and the Middle Kingdom in Egypt, most royal commemorative stelae were cut in a standard rectangular shape with a rounded top.

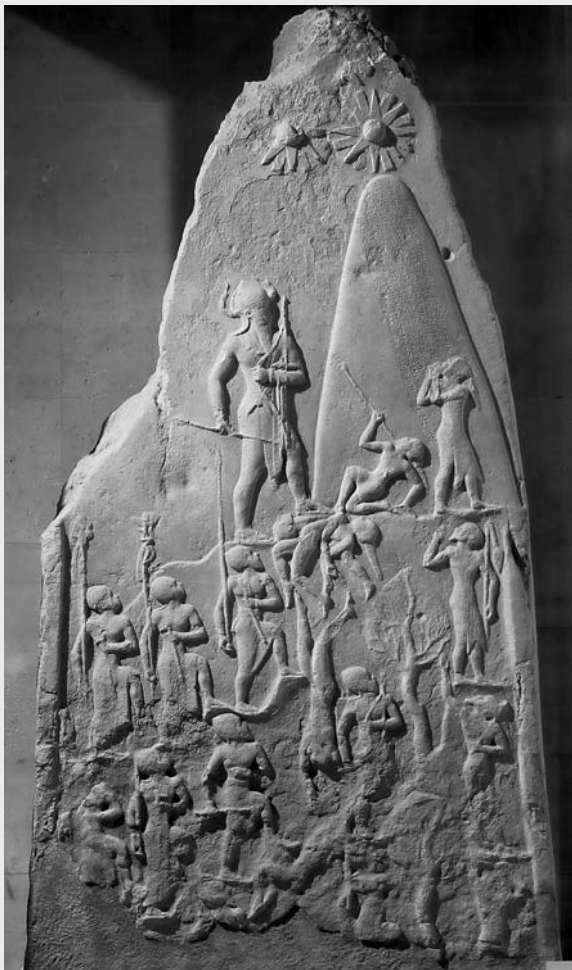
The history of royal stelae in Mesopotamia stretches over three millennia, from the Late Uruk to the Neo-Assyrian periods. Despite significant shifts in style and execution during this time, there is a remarkable continuity in the subjects they portray, which represent the king engaged in uniquely royal activities: he hunts, wins

➤ WHAT IS A STELE?

A stele is an upright, inscribed stone slab or pillar with a curved top; it is used as a gravestone, monument, or marker. Common throughout the Near East and Mediterranean, early stelae, which date from the second millennium BCE during the First and Second dynasties of Egypt, relied solely on inscribed or painted images to communicate meaning. People began incorporating text into stelae as writing became more widespread in the ancient civilizations. Some of the more famous stelae include inscriptions detailing the Code of Hammurabi and the Lhasa rdo-ring (Long Stone of Lhasa) in Tibet, which dates from the early ninth century CE. Stelae were also used in the Mayan civilization.

—Kevin Marsh

THE VICTORY STELE OF NARAM-SIN



Victory Stele of Naram-Sin, First Akkadian dynasty. (Gianni Dagli Orti/Corbis)

This limestone monument commemorating Naram-Sin's victory over the Lullubi tribe of the Zagros Mountains is one of the masterpieces of Mesopotamian art. The surface of the stele is treated as a single visual field rather than being divided into the registers characteristic of older monuments and depicts the king triumphantly ascending a mountain beneath the symbols of the gods, his enemies trampled beneath his feet. Naram-Sin is distinguished not only by his size and lofty position, being larger and standing higher than that of any of the other figures, but also by his horned helmet, a headdress reserved for gods. His soldiers follow in orderly formation, contrasting sharply with the scattered and defeated enemy.

—Karen Sonik

battles, builds temples, and stands in the presence of the gods. The late fourth-millennium Warka Stele, an uninscribed basalt boulder, depicts the priest-king hunting lions, strongly associated with kingship throughout Mesopotamian history, with a spear and bow. The Early Dynastic Stele of Eannatum, the first to combine images with text, celebrates the victory of Lagash over Umma and includes an anthropomorphic depiction of the god Ningirsu holding the soldiers of Umma in a net. A distinct shift in royal ideology occurs under the Akkadian empire, with a stele of Sargon depicting him, rather than a god, as ultimately responsible for victory: it is now the king who holds the net containing his enemies. On the slightly later Stele of Naram-Sin, the first Mesopotamian king to be deified during his lifetime, this shift is even more apparent. Naram-Sin is not only the paramount figure of the composition but also wears divine regalia. The gods are represented only by their symbols, which are placed above his head.

The anthropomorphic form of the gods reappears on the Ur III Stele of Ur-Namma, which portrays the king as temple builder, and the Old Babylonian Stele of Hammurabi, which records that king's famous law collection. In the later periods, however, the gods are again commonly represented by their symbols in scenes with the king.

Egyptian royal commemorative stelae had a similarly long history and comparable purpose to those of Mesopotamia, existing alongside the predominantly private funerary stelae from the time of the Old Kingdom. They generally recorded such events as military victories, successful resource-gathering expeditions, construction projects, and dynastic marriages, although some also published royal decrees or served as boundary markers. Notably, while the events recorded on these monuments are not always accurately presented, being intended to reinforce the glory and invincibility of the Egyptian pharaoh, gods, and people, some of them have made significant contributions to our reconstruction of ancient history. Among these are the Seventeenth Dynasty Stelae of Kamose, which record clashes with the Hyksos (the foreign rulers of North Egypt), the Eighteenth Dynasty Restoration Stele of Tutankhamen, which proclaims a return to the

traditional Egyptian religion after the reign of Akhenaten, and the Nineteenth Dynasty Merneptah Stele, which is inscribed with the earliest known reference to Israel.

—Karen Sonik

Bibliography

- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. Rev. ed. New York: Checkmark Books, 2000.
- Crawford, Harriet. *Sumer and the Sumerians*. 2nd ed. Cambridge: Cambridge University Press, 2004.
- Frankfort, Henri. *Art and Architecture of the Ancient Orient*. 5th ed. New Haven, CT: Yale University Press, 1996.
- Nigro, Lorenzo. "Two Stelae of Sargon: Iconology and Visual Propaganda at the Beginning of Royal Akkadian Relief." *Iraq* 60 (1998): 85–102.
- Stager, Lawrence E. "Merneptah, Israel and Sea Peoples: New Light on an Old Relief." *Eretz Israel* 18 (1985): 56–64.

International Style in the Late Bronze Age

In the Late Bronze Age (ca. 1500–1200 BCE) the eastern Mediterranean region was ruled by various states, both large and small. These states were in close contact with one another, sending each other letters and gifts and marrying one another's daughters. Egypt was particularly powerful during the earlier part of this period and conquered most of the small states in the region now known as Israel-Palestine and northern Syria. During this age of contacts and international diplomacy, a new artistic style arose among the luxury arts of these kingdoms that reflected this new age of internationalism. Scholars have called this the "International Style," for these objects combine different regional styles and motifs, giving them an international flavor. Some see this as the natural outcome of the increased trade and diplomatic contacts of the Late Bronze Age. Others suggest that the mixing of different styles is a deliberate attempt to embrace a culture of equality and brotherhood reflected in the art.

The International Style is restricted to luxury objects made out of the most precious materials, such as gold, silver, or ivory, and these

were in all likelihood made specifically for the royal courts. They are almost exclusively found in either palaces or wealthy tombs. The styles combine features that are generally associated with Egypt, the Aegean realm, or the Levant. They usually revolve around the same themes, that of elaborate vegetal motifs, standing gazelles or goats, hybrid animals, and hunting scenes. These are all very old themes in Mesopotamia and Egypt but became integrated into the artistic repertoire of the eastern Mediterranean world. The objects classified as international represent these themes in similar ways and draw inspiration from the way they are depicted in several areas.

A good example of this new style is a silver bowl found in a tomb at Enkomi. The bowl is in the form of a local Cypriot ceramic vessel, so it was almost certainly made on Cyprus itself. The bowl is silver, but it includes flowers and bulls' heads of ivory and paste done in a technique used by Minoan and Mycenaean metalworkers. The frontal bull with horns was a common Minoan religious symbol. This type of repeating pattern of bulls' heads and vegetation also has parallels farther east in Mesopotamia.

The ivory throne pieces found at Ugarit are another example of the style. Certain aspects of the imagery clearly reflect Egyptian influence. These include the theme of the suckling nurse as well as the style of dress of some of the figures, which is purely Egyptian. On the other hand, it is clear that Syrian artisans manufactured the bed in Syria because of certain local features. Some of the figures in the scene wear local Syrian dress, and certain elements of the representations, such as the type of sword one of the figures carries, are non-Egyptian. The palmettes that surround these figures are a recurrent image in this category of objects.

Another object that well represents the international style is the lid to an ivory box found at Minet el Beida, near Ugarit in Syria. The details of this piece—her dress, the way she is sitting, and her hairstyle—reflect Mycenaean representations, but the overall theme is a Mesopotamian one, a mistress of animals. This is a good example of how cultures freely adopted motifs and ideas from one to the other in this period. Although this was probably made in either Greece

➤ EGYPTIANIZING ART

Egyptian art had a particularly strong influence on the luxury arts of Syria-Palestine. The artists of this region made direct imitations of Egyptian objects but also utilized specific Egyptian elements in original works. In the first example, residents of Syria-Palestine during the fourteenth and thirteenth centuries BCE particularly favored small cosmetic utensils made out of ivory, a very expensive material, although in Egypt these were generally made from wood. Local artists fashioned Egyptian-style ivory spoons, boxes, hairpins, combs, boxes, and figurines. Small boxes shaped like a duck were especially popular.

Toward the thirteenth century BCE local Syro-Palestinian artists created Egyptianized art. Artists did not slavishly copy Egyptian styles but rather incorporated Egyptian imagery such as the sphinx and the lotus or the smiting king into larger compositions. In Syria-Palestine this trend spanned the Eighteenth through the Twentieth dynasties, namely between the fourteenth and twelfth centuries BCE. This is exactly the period when Egypt reasserted its control over the Levantine coast. In fact, it was common practice for the Levantine rulers to send their children to be raised at the Egyptian court to prepare them for the throne. This close familiarity of the elite with Egyptian culture may be one of the reasons that Egyptian-style goods were so popular. It is also true that Egyptian culture, the dominant political power in the region, became a status symbol for Syrian elites as well as a way of demonstrating allegiance to the Egyptian overlords.

—Susan Helft

or Cyprus, the motif of the mistress of animals would have appealed to peoples in the east where it was found who were already familiar with Mesopotamian traditions. One of the main features of this internationalizing tendency is that these objects could appeal to a very wide audience of people, both in the east and west. This also helps to explain their wide distribution from Greece to Syria-Palestine and Egypt.

These luxury objects from the Late Bronze Age eastern Mediterranean demonstrate the extent to which artists and artistic motifs traveled

freely among the political elite at that time. Many of these objects draw from an international repertoire of motifs that these different regions contributed to. These include the spiral and the flying gallop pose from the Aegean, the griffin, the sun disk and the hero in combat from Mesopotamia, and the sphinx and nilotic scenes from Egypt, to name a few. The pieces that show the most hybridization and synthesis of styles and motifs come from Cyprus and the Levant, both crossroads regions with highly cosmopolitan peoples. There is less of a synthetic tendency in Egypt or Greece, although they too participated in these artistic exchanges. The use and distribution of these objects became a way of belonging to a particular international class of wealth and power. The value of the material itself and the very cosmopolitan flavor of this style of objects showed that the owner had access to both wealth and foreign markets and ideas.

—Susan Helft

Bibliography

- Caubet, A. "The International Style: A Point of View from the Levant and Syria." In *The Aegean and the Orient in the Second Millennium: Proceedings of the 50th Anniversary Symposium, University of Cincinnati, 18–20 April 1997*, edited by Eric H. Cline and Diane Harris-Cline. Liège: Université de Liège, 1998.
- Crowley, Janice. *The Aegean and the East: An Investigation into the Transference of Artistic Motifs between the Aegean, Egypt, and the Near East in the Bronze Age*. Jonsered, Sweden: Paul Astrom, 1989.
- Crowley, Janice. "Iconography and Interconnections." In *The Aegean and the Orient in the Second Millennium: Proceedings of the 50th Anniversary Symposium, University of Cincinnati, 18–20 April 1997*, edited by Eric H. Cline and Diane Harris-Cline. Liège: Université de Liège, 1998.
- Feldman, Marian H. "Luxurious Forms: Redefining a Mediterranean 'International Style,' 1400–1200 B.C.E." *Art Bulletin* 84(1) (2002): 6–29.
- Kantor, Helene J. *The Aegean and the Orient in the Second Millennium B.C.* 1947; reprint, Boston: Archaeological Institute of America, 1997.
- Smith, William Stevenson. *Interconnections in the Ancient Near East: A Study of the Relationships between the Arts of Egypt, the Aegean, and Western Asia*. New Haven, CT: Yale University Press, 1965.

The Zhou and the Mandate of Heaven

The Mandate of Heaven (*tianming*) illustrates important principles about Chinese religion and politics from the early Zhou (Chou) era in the eleventh century BCE to the end of China's imperial dynasties in the early twentieth century CE. Although scholars' records of Shang religion in the second millennia BCE are limited, it is clear from oracle bones and inscriptions on bronze vessels that the responsibilities of the Shang kings intertwined political and religious roles. Sacrificial offerings to gods and divine ancestors were followed by divination practices using oracle bones. The divinations guided decisions of state often with simple yes and no questions asked of gods and ancestors with regard to whether hunting, travel, planting, crops, warfare, and other affairs would be auspicious. Religious and political dimensions of this pivotal role played by the king were fundamentally indistinguishable. However, sacrifice served as a system of exchange without a clear moral element evaluating the king's virtue.

Zhou religion added this moral dimension while still maintaining the king's pivotal religious and political role. Tian (T'ien) replaced Shangdi (Shang-ti), the high god of the Shang. There is indication that Tian, typically translated as "heaven," originally may have been a particularly exalted divine ancestor of the Zhou. Early records describe Tian as a high god closely connected with the Zhou rulers and interested in their activities and their virtue. The title "Son of Heaven" (*tianzi*) for Zhou kings demonstrated the close link between the highest deity and the dominant ruler. While this term reinforces the idea that Tian may have been interpreted as a divine ancestor of the Zhou, a "father" whose descendant now rules, it is more certainly and influentially a designation for the ruler who is supported by the Mandate of Heaven. In fact, this sense of a mandate intentionally removed the right to rule and the link to the divine from the confines of a single hereditary lineage. The mandate instead connects kings, gods, and the sanction to rule through morality with the explicit warning that the mandate can be revoked from one lineage and extended to a more worthy royal

➤ TIAN—HEAVEN

Tian has encompassed a range of meanings in Chinese religion. Early Zhou rulers referred to their high god as Tian. This thus became the dominant name for the high god displacing Shang Di (Shang-ti), the high god worshiped by the Shang kings whose rule fell to the Zhou. Tian was portrayed as involved and interested in human activities. The relationship with this personified high god suggests that Tian may have been an especially exalted divine ancestor of the Zhou. In any event, Tian's close attention to earthly affairs included a moral component absent in Shang Di. Over time, Tian became decreasingly personal and gained connotations of heaven as an abstraction for god, as the realm of the gods, or even as nature more generally. The idea of securing and maintaining the Mandate of Heaven (*tianming*) is in connection with the sense of heaven as a moral agent and powerful enforcer of morality capable of ending the reign of the corrupt and supporting the rule of the virtuous, the Son of Heaven (*tianzi*). Heaven, in complementary juxtaposition with earth, also became synonymous with the yang element or phase in yin-yang cosmology. As such, Tian is the name given to the trigram of three yang lines, and along with creativity it is a dominant association of the pure yang hexagram of six yang lines in the Yijing (I-Ching). Earth remains its complement as the trigram of all yin lines and a main association along with receptivity for the pure yin hexagram. This sense of heaven as the yang counterpart of earth in the natural order or pattern is further reinforced by important state ceremonies. Chinese emperors until the fall of the last dynasty in 1911 conducted state rituals such as the Sacrifice to Heaven performed on the Altar of Heaven (*Tiantan*) at the winter solstice. This ritually enacted an offering to heaven and a catalyst to stimulate the natural cycle back in the direction of yang just at the seasonal extreme of yin. Naturally, a complementary Sacrifice to Earth would have been performed at the summer solstice when yang forces peaked and the emperor intervened to stimulate yin.

—John Harding

line. Historian Benjamin Schwartz asserts that regardless of whether or not Tian and Shangdi were distinct gods, the Zhou founders declared Tian to be the same high god, Shangdi, who now favored them. This assertion was used as evidence of the mandate theory as opposed to a more static structure with a high god inexorably tied to one ruling lineage.

Heaven, as a personal deity—and later as a more abstract concept of the divine, the abode of the divine, or even as nature—was invested with a moral will and authority to support a virtuous ruler, heaven's son, or to bring down a degenerate ruler or dynasty who had lost the mandate. This created religious justification both for wielding political power and for usurping political power. According to this logic, the very act of overthrowing the Shang suggests that the Shang lost the mandate. Zhou rulers interpreted heaven's withdrawal of the mandate as a result of what they described as the dissolute practices and ritual neglect of immoral late Shang kings. The Zhou rulers' mandate, on the other hand, was confirmed by the fact of their rule. Because heaven's support of their reign was contingent upon their own virtue, the virtue of sage rulers became a preoccupation from Zhou times onward.

Of course, one can argue that the Zhou concept of the Mandate of Heaven was a political expedient to use religious ideas to justify usurping the Shang and to legitimize their own rule as morally superior and consistent with divine will. It served these ends, but it cannot be brushed aside as merely a political expedient. Early Zhou rulers, including the famous paragon of virtue, the Duke of Zhou, acknowledged that they should not take their mandate for granted, as heaven could bring destruction upon them just as it had on the Shang before them. Religion and politics remained closely intertwined with the Mandate of Heaven as a central component to religious and political philosophy for thousands of years beyond the Zhou overthrow of Shang rule. The late Zhou provided especially fertile ground

for philosophical, political, and religious speculation as many of the great Chinese philosophers sought a return to order, harmony, and righteous rule in a chaotic time. Some struggled with the meaning of this mandate and the will of heaven, as it did not appear to them that a new virtuous ruling lineage had received a mandate or risen to power in place of failing kings and disintegrating rule. Interpretations of this theory and the role of heaven ranged from an active and discriminating arbiter of morality to impersonal natural cycles evident in patterns and phases in the heavens, on earth, in the human body, and in the body politic. Despite this later range of interpretation, the Mandate of Heaven remained important, as philosophers and rulers alike appealed to heaven's authority for aligning and regulating earthly rule.

—John Harding

Bibliography

- Adler, Joseph. *Chinese Religious Traditions*. Upper Saddle River, NJ: Prentice Hall, 2002.
- Chen, Sanping. "Son of Heaven and Son of God: Interactions among Ancient Asiatic Cultures Regarding Sacral Kingship and Theophoric Names." *Journal of the Royal Asiatic Society* 12(3) (2002): 289–325.
- Ching, Julia. "Son of Heaven: Sacral Kingship in Ancient China." *T'oung Pao* 83(1–3) (1997): 3–41.
- DeBary, William Theodore, and Irene Bloom, eds. *Sources of Chinese Tradition: From Earliest Times to 1600*, vol. 1. 2nd ed. New York: Columbia University Press, 1999.
- Loewe, Michael, and Edward Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.
- Schwartz, Benjamin. *The World of Thought in Ancient China*. Cambridge: Harvard University Press, 1985.
- Waley, Arthur, trans. *The Book of Songs*. New York: Grove, 1937.
- Waltham, Clae. *Shu Ching, Book of History: A Modernized Edition of the Translations of James Legge*. London: Allen and Unwin, 1972.

Economics and Trade

About 4,000 years ago, Taram-Kubi, who lived in the Mesopotamian city of Assur, wrote a letter to her husband, Innaya. Innaya was making a living as part of the Old Assyrian trade network and was then residing in Anatolia. In her letter, Taram-kubi states that she cannot find the bracelets that he had left in the house in Assur for her to buy food with. She further informs him that there is a famine in the city and that she does not have the ability to purchase grain, let alone live the extravagant lifestyle that he must have accused her of in a letter that was not preserved. She mentions some other business matters and concludes by asking him why he listens to slander about her and why he writes her such irritating letters! Letters such as this allow scholars to reconstruct the economic lives of ancient Mesopotamians, from complex business matters to day-to-day living.

Even with interesting evidence such as this, questions still remain. Were the motivations of these Old Assyrian traders, such as Innaya—who lived far away from his none-too-pleased wife—really the accumulation of profit? It is hard to understand the evidence in any other way. Yet in many ways, the Old Assyrian situation seems unusual for this era, where the accumulation of capital for its own sake seems to be relatively rare. These issues are at the heart of one of the truly difficult problems facing the study of ancient economy: to determine how similar ancient economic behavior was in comparison to economic behavior today. This is one of the least agreed-upon issues in ancient economics, partially due to difficulties in interpreting the evidence and partially due to current ideological biases.

In less ideologically loaded situations, this problem is still apparent, rooted in what has come to be called the formalist-substantivist debate. Formalists believe that there are universal (or formal) laws that govern all human economic behavior and believe that ancient people were motivated by the same urges that motivate people today. Formalists typically use analytical methods derived from modern economics (such as supply and demand curves) to understand economic behavior, although this is often difficult given that only rarely does enough information survive to allow these methods to be properly used. Formalists see market exchange, where individuals exchange goods without expectation of further social relationships, as the dominant mode of economic behavior. Substantivists believe that there are no universal laws that govern economics and that economic behavior is contingent upon the particular culture. They believe that an ancient economy could have been dominated by any number of types of exchange, such as gift giving (where the building of relationships is very important), redistribution (where a centralized authority collects everything and then redistributes the

goods among the community), and market exchange (such as that presupposed by formalists). As it stands, there has been no satisfactory conclusion to this debate, forcing scholars to work from one or the other of these perspectives.

The complicated business ventures of traders such as Innaya were far from the norm for this time period in world history. Most of the people who lived during this time were more concerned with basic subsistence, such as having enough food to eat. Many households, even

The complicated business ventures of traders such as Innaya were far from the norm for this time period in world history. Most of the people who lived during this time were more concerned with basic subsistence, such as having enough food to eat.

those found in large urban centers in the larger states (such as Egypt and China), were self-sufficient. Most engaged in some kind of food production, whether it was agricultural/horticultural, animal rearing, or some combination thereof. In regions where cereals (such as grain or barley) were grown, each household also had the equipment necessary to engage in secondary food production (e.g., grinding equipment). Clothing was mostly manufactured in the home; textile manufacturing was

one of the most time-consuming chores of everyday life in the ancient world, and thus clothes were tremendously valuable. In Mesopotamian myths and the Homeric tales, clothes are among the most valuable gifts that could be given. In some regions clothes were used as a form of payment, such as at the city of Ugarit on the Syrian coast, where palace workers received payment in wool. Some tools were also made in the household, depending on the complexity and availability of raw materials.

Sometimes, members of a household were able to gain specialized skills, allowing them to produce goods or perform services that could be traded for other goods or services. This ability to produce a surplus was fundamental to any participation in an exchange relationship: a house had to produce more than it needed to survive. If there was a surplus it was probably meager at best, especially after taxes were collected. Some scholars believe that the drudgery of work, the difficulty of trading and storing goods, and the lack of anything to trade for limited the amount of surplus production that a household could produce discouraged the accumulation of excess goods. Other scholars feel that ancient motivations were the same as modern ones and that the urge to make a profit is fundamental. Much of this must have actually depended on the personalities and skills of the members of individual houses, and as with many archaeological debates, the truth probably lies somewhere in between.

—Kevin M. McGeough

■ Introduction: From Hunting and Gathering to Farming—The Development of Social Complexity

The transition from hunting and gathering/scavenging subsistence regimes to agricultural subsistence regimes is usually archaeologically “visible” through an increase in material culture best suited for sedentary (non-mobile) lifestyles. Houses are made out of more permanent materials and are suitable for year-round habitation as opposed to seasonal habitation. Since hunting and gathering groups tend to divide into smaller subgroups during certain seasons, their habitation sites are often much smaller and more ephemeral than year-round sites. Once people shift to permanent houses, they tend to accumulate more “stuff.” People on the move tend to only accumulate necessary objects, usually objects that are well suited for carrying over long distances. Sedentary groups do not have to worry about constantly lugging their possessions around with them, so they are not as careful to discriminate about what they acquire. A marked increase in the utilization of pottery is often a sign of an increasingly sedentary society. Pottery can be heavy to transport and is easy to break but has a wide variety of uses in the storage, production, and consumption of agricultural products.

While the practices that go with this transition (as well as the types of archaeological evidence left behind) are similar worldwide, the ways that scholars describe them are not. Archaeologists who work in the “Old World” (basically everywhere but the Americas and Oceania) usually call this transition the “Neolithic.” The term “Neolithic” is used to refer to a wide variety of time periods, differing from region to region. “Neolithic” is used when a region exhibits these characteristics of the transition to settled agricultural practices. In Europe, the Near East, and East Asia, scholars widely accept the use of this term. Archaeologists working in Africa debate the suitability of this term, and many prefer not to use it. Archaeologists who work in North America rarely use this term, since the system of nomenclature does not have much utility in the description of ancient cultural activities there.

—Kevin M. McGeough

What Do Historians and Archaeologists Mean by “Complexity”?

Historians and archaeologists use the term “complexity” or “complex societies” to refer to societies with forms of social differentiation that go beyond kinship principles. This is when the scale of social interaction surpasses the kin group, and therefore kin hierarchies are not extensive to the society as a whole. Thus, other levels of social difference and hierarchy that incorporate several kin groups are in place. The study of complexity in archaeology and history is comparative and has revolved around the emergence, trajectories, and functioning of complex societies in different times and places.

This approach is different from that used in other disciplines, such as sociology, management sciences, or computer sciences, in which academics see social complexity as part of wider patterns seen in the animal, plant, and inorganic physical worlds and model it for behavioral and decision research that aims to predict organizational trends.

The main body of theory that has guided the study of complex societies in archaeology is cultural evolution. According to this theory, trajectories of social complexity follow a succession in the form of societal types (from simple to complex): bands, tribes, chiefdoms, and states. For a long time, scholars have believed that the fundamental step toward societal complexity happened in chiefdoms, with the appearance of (1) social hierarchies based on ascribed status and (2) forms of social interdependence and specialization.

Ascribed status is when certain groups of people are thought to inherently possess certain qualities that make them superior, which results in institutionalized social differences. This is in contrast to systems of achieved status, when people, through performance, ascend socially. Systems of ascribed status become institutionalized because they are not contingent upon the

► HOW DO ARCHAEOLOGISTS SEE AND ANALYZE COMPLEXITY?

Archaeologists look at a variety of material evidence such as settlement and demographic patterns, public architecture, burials, household items, craft and food production, and consumption practices in order to understand social organization in the past. In this way, they are able to talk about how social differences were delineated in different societies, the nature of political authority and social hierarchy, and how and why these change in time and space.

—Andrea M. Cuéllar

achievements of people but instead build upon fundamental categories of social distinction that can come to reproduce themselves among and within several kinds of social groupings. For example, a social hierarchy based on a distinction between those who have more sacred essence than others could be reproduced on a smaller scale and differentiate between elite men and elite women as possessing differential degrees of sacredness. As other dimensions of social distinction are added, the system of social ranking can become nested and, indeed, very complex.

Social interdependence and specialization has to do with the degree to which individuals or kin groups rely on themselves for the fulfillment of all of their necessities. With specialization, individuals or kin groups depend on others for the acquisition of certain goods or services. These can include material items (ceramics, textiles) or ritual services, for example. It has been argued that specialization contributes to social status, as status is often expressed in the form of conspicuous material displays for which specialized craft production is required.

The evolutionary model has been criticized on both political and intellectual grounds. The political critique is founded on the argument that the model is ethnocentric, as it places the contemporary dominant Western type of sociopolitical organization (the state) on top. As a result, other forms of sociopolitical organization are

defined negatively in terms of what they lack when compared to the state, and thus they come to be seen as less complex, with a pejorative connotation. This in turn has opened fertile ground for several forms of domination.

The intellectual critique argues against the unilineal character of the model, as it has been observed that trajectories of social complexity are typically not a linear transition from one kind of societal type to the next. To the contrary, these trajectories are often full of reverses (when they pass from a superior stage to an inferior one), dead ends (societal types that did not develop into the next expected stage), or social orders that do not quite fit any of those defined in the model. The term “transegalitarian society” has been proposed to refer to complex social orders whereby social differentiation exists in the context of very weak political hierarchies. The term “heterarchical society” has also been proposed recently to account for cases in which multiple forms of political hierarchy coexist in the same society. More and more, the associations that were assumed to change hand in hand in trajectories of social complexity have proven to not hold together in the neat ways proposed by the model of cultural evolution. For example, the assumption that political complexity (a political hierarchy) should come along with economic complexity (specialization of production) cannot always be supported in the study of particular cases. Therefore, archaeologists are now focusing on understanding the great deal of variability among complex societies.

—Andrea M. Cuéllar

Bibliography

- Drennan, Robert D. “One for All and All for One: Accounting for Variability without Losing Sight of Regularities in the Development of Complex Societies.” In *Emergent Complexity*, edited by Jeanne Arnold. Ann Arbor: University of Michigan Press, 1996.
- McGuire, Randall. “Breaking Down Cultural Complexity: Inequality and Heterogeneity.” *Advances in Archaeological Method and Theory* 6 (1983): 91–142.
- McIntosh, Susan K. “Pathways to Complexity: An African Perspective.” In *Beyond Chieftoms: Pathways to Complexity in Africa*, edited by Susan

K. McIntosh. Cambridge: Cambridge University Press, 1999.

Paynter, Robert. "The Archaeology of Equality and Inequality." *Annual Review of Anthropology* 18 (1989): 369–399.

Trigger, Bruce. *Sociocultural Evolution: Calculation and Contingency*. Oxford, UK: Blackwell, 1998.

Wenke, Robert. *Patterns in Prehistory: Human-kind's First Three Million Years*. 4th ed. Oxford: Oxford University Press, 1999.

The Kintampo Complex of West Africa

Archaeologists have unearthed evidence for the transition from hunting and gathering to farming lifestyles around 2250 BCE in what are now Ghana and the Ivory Coast in West Africa. Although there is little evidence for the antecedents of these people and even less for their descendents, the people of what is called the Kintampo Complex had relatively standardized material culture. Every site has a variety of small tools that may include greenstone axes, quartz microliths, arrowheads, milling equipment, and stone rasps. Kintampo people made their own pottery, mostly large jars and bowls. Most sites have evidence for houses; only the stone foundations remain of what would have been rectangular daub huts. Some rock shelters were also used as domestic space. Kintampo sites also have evidence for the exploitation of wild and domestic plants and animals.

Based on the meager evidence we have of their precursors, Kintampo culture does reflect a substantial transformation in economic practices from their predecessors of the Late Stone Age (LSA). LSA sites in the region suggest that these people were hunters and gatherers who lived a relatively mobile lifestyle, seasonally returning to favorite sites including rock shelters. LSA sites have few luxury items and very little in the way of ceramics.

Based on this, it is believed that the Kintampo Complex reflects a movement toward a more sedentary lifeway. Rather than solely hunting and gathering, Kintampo people exploited a variety of food types including wild game, fish, domesticated sheep and/or goats, oil palms, and

WHAT IS A STONE RASP?

A particularly intriguing object, found in abundance at all Kintampo sites, is the stone rasp. These objects are usually made of soft stone (but there are some ceramic ones as well) and are scored very deeply all over the surface. Most rasps are roughly cylindrical. Archaeologists are not entirely sure what they were used for. They may have been used for decorating ceramics or for helping to shape clay pots. Given their resemblance to modern exfoliating devices, some have suggested that they were used to scrape dry skin off the body. Most likely they were used for food production, grating yams or mashing nuts and seeds.

—Kevin M. McGeough

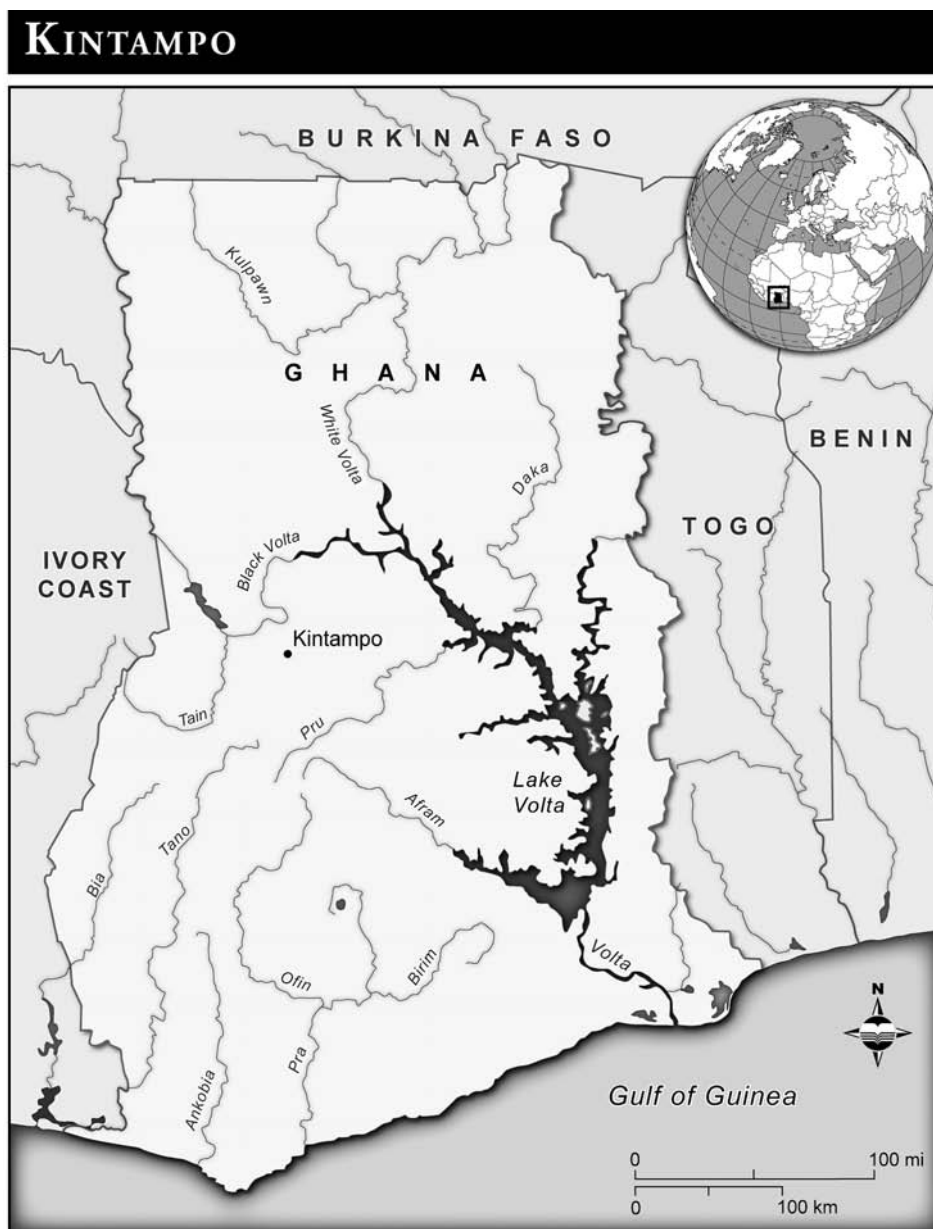
incense tree seeds. It is possible that yam cultivation may have also occurred; however, there is no direct evidence for this.

These sedentary people also traded among each other. Exotic goods (objects that originated outside of the immediate area) are present at Kintampo sites in varying quantities and types. Some artifacts that could be interpreted as jewelry suggest that personal adornment was of interest. By about 750 BCE, the Kintampo Complex disappeared. Who replaced them is unclear; this particular period of West African history is not well understood.

—Kevin M. McGeough

Bibliography

- Anquandah, James. "The Kintampo Complex: A Case Study of Early Sedentism and Food Production in Sub-Saharan West Africa." In *The Archaeology of Africa: Food, Metals, and Towns*, edited by T. Shaw, et al. New York: Routledge, 1993.
- Casey, J. *The Kintampo Complex: The Late Holocene on the Gambaga Escarpment, Northern Ghana*. Oxford, UK: Archaeopress, 2000.
- Connah, G. *Forgotten Africa: An Introduction to Its Archaeology*. New York: Routledge, 2004.
- Davies, O. "Neolithic Cultures of Ghana." In *Actes du IVe Congrès Panafricain de Préhistoire et de l'Etude du Quaternaire, Section III, Pré- et Protobistoire*, edited by G. Mortelmans and



J. Nenquin. Tervuren: Musée Royal de l'Afrique Centrale, 1962.

Insoll, T., ed. *Current Archaeological Research in Ghana*. Oxford, UK: Archaeopress, 2008.

Phillipson, David W. *African Archaeology*. 2nd ed. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1993.

Stahl, A. B. "Intensification in the West African Late Stone Age: A View from Central Ghana." In *The Archaeology of Africa: Food, Metals, and Towns*, edited by T. Shaw, et al. New York: Routledge, 1993.

The Egyptian Predynastic Period

From about 4000 BCE to about 3200 BCE, social complexity increased dramatically in Egypt. From 3200 to 3000 BCE, the first unified Egyptian state arose, but the origins of Egyptian civilization can be found in this earlier Predynastic period. According to Egyptian tradition, Egypt consisted of two distinct regions: the northern delta (Lower Egypt) and the southern floodplain (Upper Egypt). In the Predynastic period, these two regions remained distinct from one another

until sometime between 3500 and 3200 BCE, when Lower Egypt adopted (or was assimilated into) the cultural practices of Upper Egypt.

The Maadi Cultural Complex characterized Lower Egypt from about 4000–3500 BCE. This complex was named after the site of Maadi, located in a suburb of Cairo. Maadi was a village that extended over 0.8 mile (1.3 kilometers), although all of this space was never used at the same time. The houses at Maadi were semi-subterranean (pits); postholes and hearths have been found in association with these houses. The economy of Maadi included cereal cultivation, the exploitation of domesticated animals, and fishing. Evidence for donkey domestication has also been recovered at Maadi, indicating that this animal, which is still fundamental to rural Egyptian economic activity, has been in use for the past 6,000 years. Distinct local pottery forms were utilized by the people of Maadi as well as pottery imported from Syria-Palestine.

Contemporaneous with the Maadi complex was the Naqada I period (also known as the Amratian culture) in Upper Egypt. Naqada culture bears many similarities to the earlier Badarian culture, and scholars debate the relationship between these two cultural complexes. Most of the evidence for the Naqada I culture comes from the excavation of cemeteries. The dead were typically buried in simple oval pits with the bodies contracted, heads facing south and facing the west. The material culture found in these graves is considerably more diverse than that of the Badarian culture. Red-polished pottery continues from the Badarian period but develops into more numerous forms and designs. White-painted geometric designs on this red-polished pottery are especially noteworthy, as are images of riverine fauna. In this and other media, images of hunting and warfare are common. Funerary statuettes, disk-shaped maceheads, fish-tail lanceheads, and cosmetic palettes all appear at this time and are all forms that continue into Dynastic-era Egypt.

The Naqada II period (also known as the Gerzean) runs from about 3500–3200 BCE and is characterized by the expansion of Naqada culture as far south as Nubia and north into Lower Egypt. The site of Buto in Lower Egypt provides archaeological evidence of the transformation of northern society from the Maadi Cultural Com-

➤ PREDYNASTIC CHRONOLOGY

For Egyptologists, the Predynastic period refers to that time period prior to the rise of the Egyptian dynastic state. In the north of Egypt (Lower Egypt) it consists of the Neolithic period (ca. 5300–4000 BCE), which will not be discussed here, and the Maadi Cultural Complex (ca. 4000–3200 BCE). In southern Egypt (Upper Egypt) it consists of the Badarian period (ca. 4400–4000 BCE), the Amratian/Naqada I period (ca. 4000–3500 BCE), and the Gerzean/Naqada II period (ca. 3500–3200 BCE). The Naqada III period (ca. 3200–3000 BCE) is manifest in both Upper and Lower Egypt when the kings of Dynasty 0 ruled Egypt.

—Kevin M. McGeough

plex to Naqada, and by the end of the Naqada II period all of Egypt can be considered Naqada.

Naqada II material culture indicates considerably greater social complexity, with much more differentiated graves and grave goods. The most notable of these graves is Tomb 100 at Hierakonpolis, which has walls painted with images that are found on painted pottery vessels (such as boats and victorious warriors). Cosmetic palettes become less common but more elaborate, featuring elaborately sculpted art, and many of these palettes should be considered ceremonial or artistic as opposed to functional. Copper work and other specialized industries intensified in the Naqada II, concomitant with an increased interest in long-distance trade (especially with Syria-Palestine). Throughout Naqada II, society became increasingly hierarchical, and the roots for the later Egyptian state were established.

—Kevin M. McGeough

Bibliography

- Bard, Kathryn A. *An Introduction to the Archaeology of Ancient Egypt*. Malden, MA: Blackwell, 2008.
- Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989.
- Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.
- Trigger, Bruce. *Understanding Early Civilizations: A Comparative Study*. Cambridge: Cambridge University Press, 2003.

The Neolithic in Nubia

Although Nubia is located along the Nile Valley, the geography of Nubia is substantially different from that of Egypt. Egypt has long stretches of fertile floodplains that allowed the development of irrigation agriculture that could support a large population. Most of Nubia is broken up into significantly smaller patches of floodplain; only the Kerma floodplain was large enough to support a substantial agricultural regime prior to Roman period times. The Nile's course is broken up by cataracts, preventing easy transportation between what are otherwise close regions. However, there is significant evidence for trade among these Nubian communities. It is likely that each community interacted with the communities to the north and south along the Nile; this chain-like trade network allowed goods from northern Egypt and the interior of Africa to be traded, even with minimal long-distance transportation. Within this segmented environment, two regional subdivisions can be identified: Lower Nubia in the north (closest to Egypt) and Upper Nubia in the south.

The Neolithic is best understood in Lower Nubia, where mostly cemetery sites have been excavated. Archaeologists refer to the culture that appears here around 3500 BCE as A-Group culture, after their distinct ceramics (called A-Group Ware by an early excavator). The material culture of A-Group people was influenced by Egyptian material culture. Egyptian objects are found at A-Group sites, as are local variations of Egyptian objects such as stone cosmetic palettes that are distinctive to Predynastic Egypt. Nubian A-Group pottery is found at Egyptian sites in the south, demonstrating that the two cultures traded with one another.

A-Group culture was sedentary, with people living in permanent settlements. At the site of Afyeh, some houses built of stone were found, comprising a village of around seven acres (three hectares) in size. At other sites there is little evidence for architecture, suggesting that most buildings would have been made of materials that do not survive in the archaeological record. Estimates for the total population of A-Group culture vary from 5,000 people to 50,000 people at its height.

Although there is little direct evidence for economic activities, based on analysis of the cemeteries (and associated grave goods) it is likely that small-scale floodplain agriculture was incorporated into their subsistence regime. Given the ecological conditions of Lower Nubia, herding would have been a more important component of the lifestyle of the A-Group people. Given the variety and quality of material culture, especially pottery and stonework, it is likely that there were also craft specialists in Neolithic Nubia who spent most of their working time crafting specialty objects in exchange for the food produced by other members of their community.

A-Group cemeteries point to a marked social stratification as well. There is considerable difference in the wealth of grave goods and elaborateness of burials within A-Group cemeteries. This demonstrates that there was different access to wealth and different ranks within the community.

A-Group culture comes to an abrupt end during the period of the Egyptian First Dynasty. This was the result of Egyptian military incursions into the region, military incursions designed to gain control of the valuable trade resources available there. Local inhabitants are absent from the region until about 2400 BCE, when C-Group culture emerges in the region.

—Kevin M. McGeough

Bibliography

- Adams, W. *Nubia: Corridor to Africa*. London: Penguin, 1977.
- O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University Museum of Archaeology and Anthropology, 1993.
- Trigger, Bruce. "Kerma: The Rise of an African Civilization." *International Journal of African Historical Studies* 9(1) (1976): 1–21.
- Trigger, Bruce. *Nubia under the Pharaohs*. London: Thames and Hudson, 1976.

The Beginnings of the Chalcolithic Period in the Levant

The Chalcolithic period can be characterized as a time of great innovation and imagination, not only in the areas of art and architecture, but in cultural ecology, technology, and economic organization. During this time, people first settled

in the semiarid regions of the northern Negev and lower Jordan Valley. There is evidence that the climate may have been more humid in 4000 BCE than it is today, yet adaptation to these new and challenging ecological niches would still require ingenuity.

Farming remained the primary means of subsistence, and crops were much the same as those first domesticated during the Neolithic period. Barley, which can grow with as little as 200 mm (about 8 in.) of annual rainfall, was the main staple in the semiarid zones, and wheat was grown in the humid Mediterranean zone. A few new items, such as the olive, were added to the diet. In these more arid areas where dry farming was difficult, the Chalcolithic peoples implemented some of the earliest forms of water management systems. Analyses of phytoliths (silica skeletons from plants) conducted by Arlene Rosen indicate that at the small farming village of Shiqmim, floodwater farming and basin irrigation were employed in order to increase agricultural output. At the same time, animal husbandry began to evolve into a specialized form of economic activity, with an increased emphasis on the production of dairy goods (for example, cheese and clarified butter) and wool. This development is commonly known as the “secondary products revolution.” The faunal assemblages and large ceramic churns found at Chalcolithic sites (along with churns made of hide that do not survive) represent dairy production, and a vast number of spindle whorls indicate the spinning of wool.

This focus on the production of pastoral goods was part of a broader trend whereby a division of labor and craft specialization began to develop. Food production systems overall had become more efficient, allowing some people to engage in economic activities other than farming and herding. One of the key developments in the period—indeed, the one for which it is named—was the advent of metallurgy and the emergence of a local copper industry. The production of copper was a new technology that ultimately had a profound impact on society, both reflecting and producing changes in material existence, economic organization, and sociopolitical structure. From the Chalcolithic period, metals played a vital role in the economic his-

➤ EVIDENCE FOR SOCIAL HIERARCHIES IN THE SOUTHERN LEVANT

Several lines of evidence point to disparities in wealth during the Chalcolithic period. To begin, only a limited number of people seemed to have access to luxury goods such as ivory pendants, figurines, and metal scepters. The development of a prestige-oriented metal industry, in particular, seems to reflect the expression of power relations and the emergence of rising elites concerned with ways of legitimizing their authority. Investment in the development of metal technologies required sponsorship. It is possible that resources became concentrated in increasingly fewer hands as a result of control over large herds and/or agricultural surpluses by landholders, with luxury goods representing converted wealth.

The mortuary evidence from the Chalcolithic period also reflects a certain level of social hierarchy. Small children were still buried in the vicinity of the home, usually in the alleys between houses, often in jars. For the first time, adults were buried in clearly designated cemeteries outside of the village itself. The extensive cemetery at Shiqmim included a number of secondary burials involving small circular structures. It is possible that greater investment was made in some of these grave rings, though burial goods were generally modest. The most compelling evidence for social hierarchy during the Chalcolithic era has just begun to emerge over the past few decades with the discovery of a series of wealthy cave tombs. The Peqi'in burial cave included numerous individuals with a demographic distribution and grave goods that suggest it was used over a long period of time by an extended family or kin group with access to considerable wealth. Another noteworthy tomb has been found at Nahal Qanah, where archaeologists discovered a range of expensive items, including the earliest gold in the region.

—Jonathan Golden

tory of the region as an item of import and export, of production and consumption, of display and concealment, of celebration and solemn dedication. Its value was based on its rarity and aesthetic appeal as well as on its strength, for the emphasis on maceheads (for example, at Nahal

Mishmar) no doubt represents an association between metal and warfare.

There appear to have been two different copper industries during the Chalcolithic period. One industry focused on the production of tool-type items using pure copper and a technique of casting in open molds and hammering. The other used exotic, complex metals (copper with arsenic, antimony, and rarely, nickel) and the lost wax casting method to produce a range of more elaborate goods, many symbolically charged. Two primary sources for the “pure” copper are known in the southern Levant at Faynan and Timna, two different branches of the Wadi Arabah. Ores that probably derived from both these regions, along with crucibles, simple furnaces, and prills of raw copper, have been found at workshops in villages such as Abu Matar, and Shiqmim. Donkeys, which were first domesticated during the Chalcolithic era, were probably used to cart ore from the mines to the village workshops.

Information regarding the production of the complex metal castings has been elusive, though some new clues have recently emerged. A small piece of unworked copper with antimony from Bir es-Safadi has come to light, while crucibles and prills from Abu Matar indicate the processing of complex metals. The fact that the complex metals were used exclusively for the manufacture of prestige goods (such as scepters) suggests that this second industry involved attached specialization where production was sponsored by some elite group or political figure.

Another specialized craft was the production of groundstone and lithic goods. Working with hard stones such as basalt and limestone, craftspeople produced a variety of goods ranging from maceheads to elegantly sculpted stands commonly known as fenestrated incense burners, though their precise function remains uncertain. Studies in experimental archaeology suggest that flint tools, especially the adze, were probably used for working the basalt. Claire Epstein, conducting research in the Golan close to sources of raw material, has reported three circular basalt pieces that may represent bowls in the process of manufacture on site that were never completed. It is also feasible that at least some of

the basalt found at sites throughout the Chalcolithic landscape derived from the Golan, but petrographic analysis points to Transjordan as a source for artifacts found at the southern sites, and Epstein suggests that little of the local Golan basalt actually left the area. According to Yorke Rowan, product design became increasingly stylized, and overall quality improved with time. Specialization in flint tool production is evident in the fan-shaped scrapers as well as “proto-Canaanite blades,” both forms making use of a fine-grained material known as tabular flint. Tiny flakes and a blade core of very fine, translucent flint attest to the production of micro-blades, or micro-end scrapers, at Gilat.

Ceramic production also reached a level that would have required the skills of specialists. By the latter part of the Chalcolithic period, a class of pottery known as Cream Ware, notable for its fine quality and delicate design, emerged; one type from this group, the “V-shaped pot,” was made on the slow wheel, or tournette. Ceramic sculptures, best known from Gilat, also attest to an advanced level of craftsmanship.

The extent of exchange networks began to expand during the Chalcolithic period. Contact during the Chalcolithic era between the Golan sites and Syria-Lebanese sites such as Byblos, Ugarit, and the Amuq sites is seen largely through affinities in pottery styles. The discovery of obsidian at Gilat indicates the movement of materials from Anatolia as far south as the northern Negev. Overall, most trade items probably moved without a major overarching structure.

—Jonathan Golden

Bibliography

- Epstein, Claire. “Golan, Chalcolithic Period to the Iron Age.” In *New Encyclopedia of Archaeological Research* 2 (1993): 529–534. New York: Simon and Schuster.
- Gilead, Isaac. “The Chalcolithic Period in the Levant.” *Journal of World Prehistory* 2 (1988): 397–443.
- Levy, Thomas E. “The Chalcolithic Period.” *Biblical Archaeologist* 49 (1986): 83–106.
- Levy, Thomas E. “Cult, Metallurgy and Rank Societies—Chalcolithic Period (ca. 4500–3500 B.C.E.).” In *The Archaeology of Society in the Holy Land*, 3rd ed., edited by T. E. Levy. New York: Facts on File, 2003.

- Rosen, Arlene M. "The Social Response to Environmental Change in Early Bronze Age Canaan." *Journal of Anthropological Archaeology* 14 (1995): 26–46.
- Rowan, Yorke. "Ancient Distribution and Deposition of Prestige Objects: Basalt Vessels during Late Prehistory in the Southern Levant." PhD diss, University of Texas, Austin, 1998.
- Sherratt, Andrew. "Plough and Pastoralism: Aspects of the Secondary Products Revolution." In *Patterns of the Past: Essays in Honour of David Clark*, edited by I. Hodder, G. Isaac, and N. Hammond. Cambridge: Cambridge University Press, 1981.

The Beginnings of Village Life in the Yemen (Southwest Arabia)

From around 7000 BCE, southwest Arabia enjoyed higher rainfall than today, supporting rich vegetation and creating lakes, even in parts of what today is desert. The region's inhabitants lived by hunting and gathering, moving to exploit seasonally available resources that on the coast included fish and shellfish. By or before 5000 BCE some groups also began herding cattle, sheep, and goats. Fourth-millennium evidence suggests that some communities made controlled use of bush fires to manage vegetation. Some groups also began limited cultivation, incorporating agriculture within their seasonal activities. Few traces of settlement survive from this period: the stone foundations of small groups of oval huts, grindstones for preparing plant foods, stone points used in hunting, and coastal shell middens.

It was not until the Bronze Age, from 3100 BCE, that farming communities began making pottery; a small amount of copper also came into use during the third millennium. By this time the monsoon winds had weakened, reducing rainfall. The highlands saw rapid population growth, perhaps partly due to migration from the increasingly arid lowlands. The main areas of settlement were in the mountains and the desert borderlands to their east, probably linked by the seasonal movements of pastoralists. Eastern Hadramawt was apparently more isolated from outside contact, as it remained without pottery until the first millennium BCE. The inhabit-

ants of coastal areas had slight contacts with parts of Africa across the Red Sea.

The main crops were wheat and barley and some pulses, derived ultimately from the Near East. It is possible that sorghum and millet, crops native to sub-Saharan Africa, were also grown, though there is no firm evidence of their early presence here. Villagers also continued to exploit wild plants such as grasses, fruit, and nuts and to hunt a little.

Settlements in the western highlands were generally situated on hilltops or plateaus. Those in Khawlan, the drier northeastern region, were generally small: one or several compounds composed of round houses arranged in a contiguous ring around a central open area. The houses had slightly sunken floors, and their roofs were supported by low walls of upright stone slabs and one or more interior posts. Simple dams were used to slow water running off the hills and capture silt for agriculture. However, pastoralism was the mainstay of the economy and involved raising sheep and goats.

Farther south in the highlands, the Dhamar plains received rainfall from two monsoons. Neolithic settlement in this area left little trace and may have been limited; in contrast, the area saw substantial Bronze Age occupation. Settlements here were larger, especially during the second millennium BCE, sometimes reaching 14.8 acres (6 hectares), and some were walled. There were also small satellite settlements. The houses were rectangular, often with several rooms; although some were similar in their construction to those farther north, others had walls of coursed masonry, some several yards high. In some settlements such as Karraib, the houses were scattered; in others, they were grouped in blocks separated by streets. This was the case at Hammat al-Qa, which also had several internal walls subdividing the settlement. In the northeast side of the perimeter wall were two gateways flanked by orthostats (upright stone slabs); orthostats were also used for the house doorways. Several houses had a walled open space at one end, and many had a square or rectangular annex. A nearby hilltop served as an obsidian-working site, using raw material collected in the valley below.

➤ DESERT TOMBS AND MEGALITHS

Throughout the desert borderlands and in the eastern part of the western mountains, communities built substantial chamber tombs. These were built mainly during the third and early second millennia, though some continued in use for much longer. Built of stone blocks, those in Hadramawt had a small central chamber roofed by stone slabs or corbelling, generally used for a single burial. Farther northwest the tombs were taller, resembling a tower, and had a doorway so that they could be used for many successive burials. Smaller tombs, small cairns, platforms, and other stone features were often associated. Carved stelae were sometimes built into the outer wall of the Hadramawt tombs. These often depict a warrior with a dagger. Bronze daggers and other small objects were recovered from some graves, though most have been plundered. These tombs form part of a wider tradition of funerary architecture among pastoralists over much of Arabia.

In the coastal region, massive lines or clusters of huge stone pillars were erected, such as at Hajar al-Ghaymah. In the disturbed group at al-Midaman on the Red Sea coast excavations revealed burials, usually of an infant, beneath many of the pillars; one covered a cache of daggers and other copper objects, dated around 2400–1800 BCE. Erecting the pillars here represented a huge investment of time and effort. They were massive, some as long as 7.7 yards (7 meters), and were made of granite and basalt, stones not available within a 31.1-mile (50-kilometer) radius of the site.

—Jane R. McIntosh

The available agricultural land was maximized by constructing terraced fields with stone retaining walls on the slopes of the hills bordering the plateau and high valleys; the earliest surviving trace of such a terrace, at Sedd adh-Dhra'ah, is dated to around 3800 BCE. The valley floor provided pasture for domestic animals: sheep, goats, and some cattle. Threshing floors, of which traces survive from the late third millennium onward, were constructed in suitable windy locations among the fields.

In desert borderlands east of the mountains including the western Hadramawt, the way of life was similar, although there may have been some specialized pastoralism. Settlement was concentrated around the oases and wadis through which flowed seasonal torrents from the mountains. In addition to cereals and pulses, date palms may have been grown in this lowland region. Various methods of water management had already been developed. Check-dams in gullies or streams, which slow the flow of spate water, are of considerable antiquity: one example at Wadi Sana, stratified below a later working floor, dates back to around 4500 BCE. In Wadi Idim the remains of *shruj* (low walls or lines of cobbles that diverted sheet wash on to agricultural plots) were found that may have been created in the Bronze Age. Calculations based on the depth of silt deposits indicate that dam irrigation was in use by the third millennium BCE, for example, in the Marib oasis. Canals and revetments that channel slope wash or upstream water onto terraced fields may also date back to the Bronze Age. In the eastern Hadramawt, herding was the main economic base, supplemented by a little agriculture where suitable conditions prevailed.

Traces of small villages have been found in the region. Sh'ib Munayder on the southern Jol plateau was a linear settlement dating back to the mid-second millennium. Its round houses had foundations of stone uprights supporting stone lower walls. Occasionally there was a small structure attached to the outside, presumably an animal pen. Upslope of the houses were large cairns probably containing burials and smaller chambered cairns perhaps used for storage. At Shabwa, mud-brick houses and pottery dating back to around 2000 BCE were found beneath the later town.

The people of the coastal regions continued to exploit marine resources, as is witnessed by the vast shell midden at Sihi and other midden sites, bones from which show that animal husbandry was also important. From the earlier part of the Bronze Age there are slight traces of substantial settlements based on marine fishing and irrigation farming, using simple dams and irrigation channels as in the eastern lowlands. Small

soundings show that the lower levels of the deeply stratified site of Sabr probably date back to the late third millennium.

Southwest Arabia saw major changes in the later second millennium. Interregional exchange and communications and external contacts greatly increased: for example, obsidian from Dhamar now became the main material for stone tools in many parts of southwestern Arabia. Copper objects, previously extremely rare, now came into common use in coastal regions. The development of the lowland wadis east of the mountains began to take off, laying the foundations for the later incense-trading kingdoms of the region. Settlement declined in the arid northern highlands during the second millennium, but elsewhere settlements increased in size, some eventually housing as many as 500 people. New settlements were founded in the late second millennium such as Hajar ibn Humayd in Qataban and Hawagir in Dhamar, the latter a massive (30.89–37.1 acres, or 12.5–15 hectares) unwallled town, unusual in being situated on the valley floor perhaps to take full advantage of the large expanse of cultivable land or to bestride an increasingly important trade route. The excavated upper levels at Sabr, dated to 1400–900/800 BCE, reveal a substantial town. Houses in its center were rectangular mud-brick structures, some with an internal courtyard, while those on the edge of the town were small circular huts with post walls; these differences may reflect social distinctions. Part of the settlement was devoted to industrial activities including metal production, and there was also a central complex of larger buildings, probably public buildings, including a possible temple with storerooms.

—Jane R. McIntosh

Bibliography

- Edens, C., T. J. Wilkinson, and G. Barratt. "Hammatal-Qa and the Roots of Urbanism in Southwest Arabia." *Antiquity* 74 (2000): 854–882.
- Keall, E. J. "Encountering Megaliths on the Tihamah Coastal Plain of Yemen." *Proceedings of the Seminar for Arabian Studies* 27 (1997): 139–147.
- Simpson, St John, ed. *Queen of Sheba: Treasures from Ancient Yemen*. London: British Museum Press, 2002.

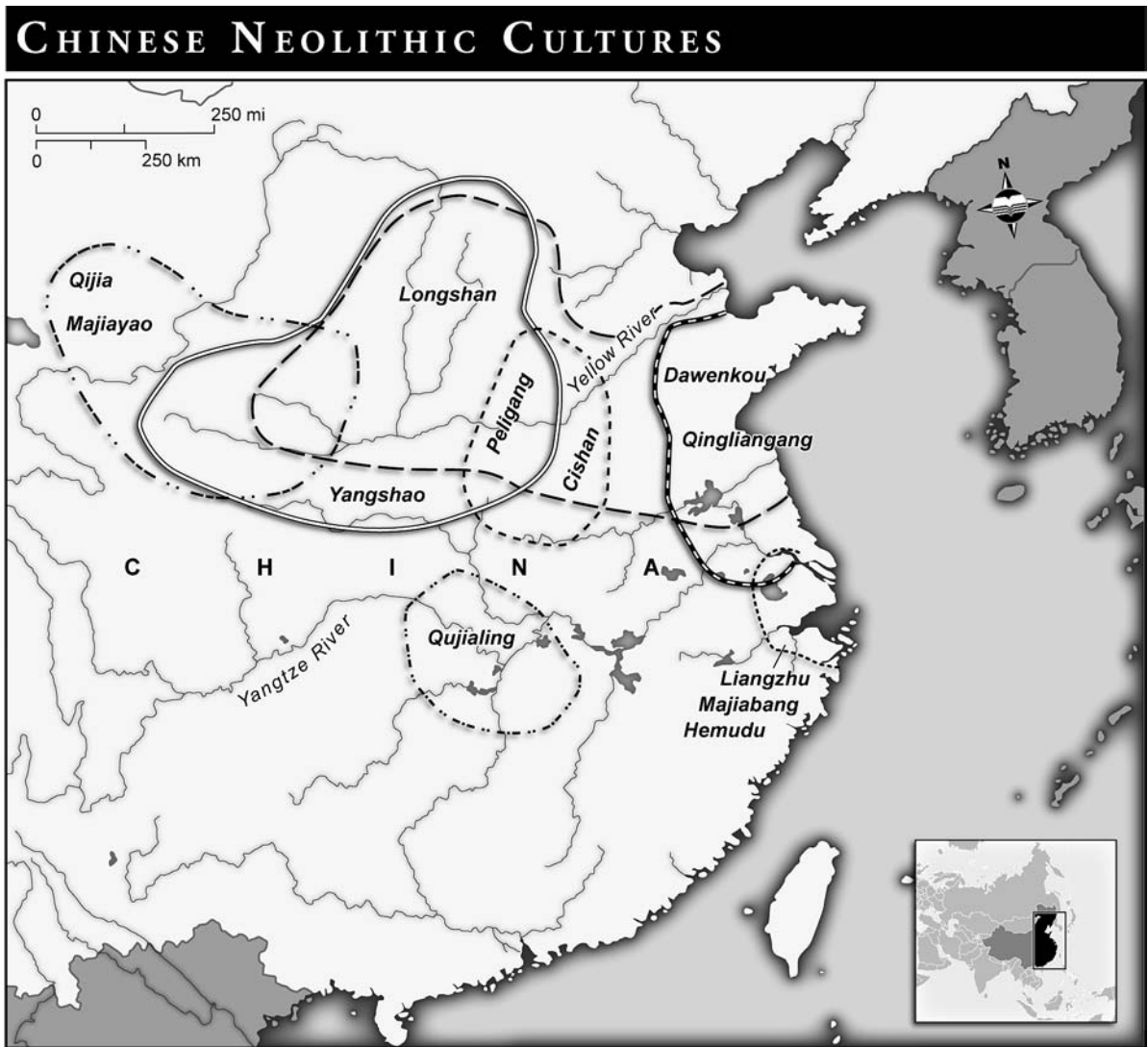
The Neolithic in China

One of the fastest-changing fields of archaeological study is the Chinese Neolithic. Experts' understanding of this period in Chinese prehistory has shifted constantly since the first excavations in the 1920s. Unexpected finds are the norm in this field of study in which thousands of sites all across China contribute to the ever-changing picture. In general, the Chinese Neolithic can be characterized as a series of regional cultures, each emerging as a sedentary agricultural-based society with specific adaptations to the particular regional environment. Given the wide variety of types of Neolithic finds and the environmentally diverse regions in which they are found, it is not clear when it makes sense to think of these Neolithic cultures as Chinese per se. Arguably, the most interesting question to emerge from the study of Neolithic China is how these sites relate to the origins of the Chinese state. Most of the cultures are named after their type site (the first site at which the culture was identified). However, this leads to numerous problems, as different scholars see different connections between sites. A culture for one scholar may merely be a city for another scholar. What follows is a brief summary of the major regional Neolithic cultures that have been identified so far.

Yangshao (5000/ 4500–3000/2500 BCE)

The best known of the Neolithic cultures, the Yangshao culture, is located in the middle of the Yellow River valley. More than 1,000 sites have been identified as Yangshao. The people who lived at these sites were millet farmers, although there is some evidence of social stratification and craft specialization. Perhaps the clearest evidence of social stratification is the tomb at Puyang belonging to the so-called Puyang Shaman. The tomb featured a man buried with a clam-shell effigy of a dragon on the left and a tiger on the right as well as various elaborate grave goods.

Yangshao pottery is very distinctive; it is dark red and painted with brown or black designs. The designs vary from abstract geometric figures to more elaborate schemes, such as mask



and fish combinations. Specialists subdivide the Yangshao period into various subphases based on the stylistic changes in this pottery.

The site of Banpo is particularly important, so much so that some scholars argue for a separate Banpo culture lasting from 4800 to 3600 BCE. This seems to be a relatively egalitarian community; all of the sunken-floor huts were roughly the same size except for one much larger building. Animal enclosures were present, attesting to the importance of domesticated animals for the Banpo subsistence economy. The whole site was surrounded by a circular ditch, probably to help prevent flooding but possibly for defensive purposes as well.

Majiayao (3500–1500 BCE)

The Majiayao represents a western extension of the Yangshao culture. Majiayao sites are easily identified by their distinctive painted pottery, decorated mostly with circles or anthropomorphic figures.

Dawenkou (5000–3000 BCE)

Located on the lakes and shores of the Shandong Highlands, the Dawenkou culture was highly stratified. Most of what is known about the Dawenkou culture comes from the investigation of its burials because most of the excavated sites are cemeteries. Burials follow a fairly standard



Painted ceramic jar, Majiayao/Yangshao culture, China, about 2000 BCE. (Christie's Images/Corbis)

pattern: one large relatively shallow pit is dug followed by a significantly deeper pit in the center of the original. The body of the deceased is interred in the center pit (inside a wooden coffin), and grave goods are spread around the shallow pit. The variety of grave goods is noteworthy; dozens of stone, bone, and jade objects are found. Wheel-made pottery is also found within the graves. The amount and quality of goods varies, indicating a society where individuals had different amounts of wealth and power from one another.

Majiabang (5000–3500 BCE) and Hemudu (5000–3300 BCE)

These two cultures are found along the Yangzi River in Jiangsu and northern Zhejiang. Both cultures engaged in rice agriculture as their primary form of subsistence, supplementing it with the cultivation of various freshwater plants. They also fished and raised dogs, water buffalo, and pigs. What is different about the two cultures is their pottery: Majiabang pottery is brown, and Hemudu pottery is black. Some scholars differentiate these cultures from the later Songze (4000–3000 BCE) and Qinglian'gang (4000–3600 BCE) that are located on the coast. The

Qinglian'gang culture is noteworthy for its early skilled jade craftsmanship.

Daxi (5000–3000 BCE)

Also located along the Yangzi River (in the Yangzijiang Valley), the Daxi culture is one of the first in China to erect walls around its villages. The villages were also home to what appear to be large communal storage facilities, suggesting long-term subsistence planning. Daxi material culture is distinctive, with its highly polished stones and slate sickles.

Hongshan (3000–2500 BCE)

The Hongshan people of Inner Mongolia and Liaoning were millet farmers and cattle and sheep breeders. Elaborately carved jades belonging to this culture have been retrieved from cist graves at Hongshan sites. Many of these jades are carved in the shapes of animals. Loops in the jades suggest that they may have been hung from clothing. Two temples may also have been identified at Dongshanzui and Niuheiliang. Both temples consist of stone platforms. They are set apart from other structures by installations of terra-cotta cylinders near groups of small female figurines.

Dapenkeng (5000–2500 BCE)

Dapenkeng is located in southern China, and the pottery differs from other Chinese pottery in that it is very coarse, with only simple cord-impressed decorations. This was a coastal culture, dependent on fishing and the exploitation of a variety of water plants. Hunting also seems to have played an important role in Dapenkeng culture, even after sedentary agricultural practices were established.

Liangzhu (3300–2200 BCE)

Located on the east coast of China (in Zhejiang, Jiangsu, and Shanghai), the Liangzhu culture created some of the most beautiful artifacts of Neolithic China. The wheel-thrown black ceramics are likely precursors of the fine black Longshan pottery. Many of these artifacts have been retrieved from funerary contexts. One of the

➤ CHANGING CONCEPTIONS OF THE CHINESE NEOLITHIC

Conceptions of the Neolithic period in China have drastically changed over the past century of research. Ancient historical accounts suggested that Chinese civilization began in the Yellow River valley (not surprisingly since these ancient writers lived in the Yellow River valley). This idea, however, was not seriously challenged until the 1920s, when Johan Gunnar Andersson discovered Yangshao and declared that many of the cultural elements found there had originated in western Asia. In the 1930s, Fu Sinian suggested a different understanding: Chinese civilization emerged in two distinct regions, in the interior and along the coast. In the 1960s the majority view shifted once again, suggesting that agriculture emerged first in the central plain and then spread outward. Archaeology then slowed down in China (due to the Cultural Revolution). When it reemerged, scholars now conceived of the Chinese Neolithic as consisting of separate regional interacting spheres, the approach presented above. Given how quickly ideas about the Chinese Neolithic seem to change, one wonders how much longer it will be until this conception is outdated.

—Kevin M. McGeough

most elaborate burial sites is Tomb Number 3 from Sidun in Jiangsu. There, more than 200 ritual objects (including weapons) were recovered. *Cong* (white jade cylinders) were found in the tomb and bear the image of an anthropomorphic deity with feathers for hair and an animal-like face. Small round jade disks with holes in the center (called *bi*) were also recovered. Without a doubt, finds such as this demonstrate that Liangzhu society was far more stratified than earlier Neolithic cultures in China. This is in evidence at the intervillage level as well. The site of Liangzhu, for example, actually consists of more than 12 separate villages of varying size. Power is normally assumed to be related to size (although this is not always a safe assumption), and it is assumed that there was a hierarchical power structure that connected this cluster of settlements. It is estimated that there were hundreds of these clusters of sites.

Longshan (2500–1700 BCE)

Spread along the Yellow River basin, the Longshan culture seems to have had connections to previous Yellow River cultures as well as some of the coastal cultures (especially the Liangzhu). Subsistence was mixed, with heavy reliance on agriculture as well as domesticated animals. With hundreds of sites, Longshan culture was highly stratified and possibly prone to conflict. Many sites have defensive fortifications (the earliest are found in Henan). These fortifications (or *hang tu*) were built by ramming earth between wooden slats and then ramming each layer firmer and firmer.

The stratification of Longshan society is most apparent in its burials. At the site of Taosi, for example, several thousand graves have been identified. Of those that have been excavated, about 6 were large (with abundant high-quality grave goods), 80 were medium-sized (with fewer grave goods, mostly of lesser quality), and about 600 were small (with only minimal grave goods). Archaeologists infer from this that there were a few leaders of great importance, a small amount of upper-class individuals, and a large poorer base.

Longshan material culture is varied, probably coinciding with burgeoning ideas about the value of personal (as opposed to public) wealth. Ceramics are wheel-made; the most elaborate is very fine, thin, black polished pottery. Interesting finds are deer scapula that have been purposefully burnt and subsequently cracked; these may be precursors of a later divinatory tradition.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Chang, Kwang-Chih. "China on the Eve of the Historical Period." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Debaine-Francfort, Corinne. *The Search for Ancient China*. New York: Harry N. Abrams, 1999.

Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

From Fishing to Farming—The Introduction of Rice to Korea

The introduction of rice into the diet of ancient Koreans brought about profound changes and marks the end of the Korean Neolithic Age. It was around 2000 BCE that rice was introduced into Korea from China, although the exact mechanisms of the introduction are unknown. Was rice brought as part of a larger migration of people to the region? Or were rice agricultural practices learned by local peoples from encounters with Chinese rice farmers? The scholarly consensus now favors the latter explanation regarding the 500 years following the first introduction of rice as a gradual period of transition.

Before rice agriculture, ancient Korean culture is often referred to as Chulmun culture. This is a problematic term, since it better refers to the ceramics typical of Korea at this time. Archaeologists call these ceramics “comb-ware” after the incised geometric decorations. The most distinctive form of vessel is the wide-mouthed conical pot. Also typical of Chulmun material culture is the predominance of flaked stone tools (stone tools made by chipping or knapping the stone) as opposed to stone tools manufactured using grinding techniques. Archaeologists are still attempting to refine the dating for this culture, but generally scholars see it as beginning sometime between 6000 and 5000 BCE and ending around 2000 BCE.

Chulmun sites are very small; at most, 10 to 20 houses are occupied at any given time. These houses are semisubterranean and are large enough to accommodate a nuclear family. Sites are often found clustered together, suggesting some sort of larger tribal organization beyond the level of the individual village. Generally these sites are located along the seacoast or on river terraces. Given the location of these villages and the types of material culture in evidence, it is assumed that fishing was one of the primary means of subsistence for the Chulmun. Hunting wild game and collecting wild plants supplemented this diet. Carbonized remains of cereals (especially

millet) have been found in late Chulmun sites, suggesting that toward the end of the Chulmun period, ancient Koreans were also reliant on small-scale horticultural production. These cereals supplemented their hunting and gathering lifestyle.

From about 2000 BCE until 1500 BCE, scholars see a gradual transition from the Chulmun culture to the Mumun culture, culminating in the introduction of rice around 1500 BCE. Over the course of 500 years, gradual changes in the material culture and settlement patterns of the ancient Koreans provide evidence for a profound cultural transformation. Mumun also refers to a specific type of pottery, a plain coarse ware that is very different from the preceding Chulmun pottery. The Neolithic is understood to end around 2000 BCE, and the Bronze Age begins, lasting until 300 BCE (even though bronze does not appear in Korea until 1000 BCE).

Concomitant with the introduction of rice are a number of other changes to Korean society, although it is impossible, given the present state of knowledge, to determine whether rice agriculture led to these changes, came along with these changes, or was facilitated by these changes. Pottery changes dramatically, and flaked stone tools are replaced by ground stone tools. House types and sizes start to vary dramatically, with very small and very large houses within the same site. The goods found within homes also varies; every house has farming equipment like sickles, but not every house has polished stone daggers, indicating some level of social differentiation. Social differentiation is also evident in burials. Grave goods vary in value and quantity, and the graves themselves vary in scale. Megaliths and dolmens are a feature of the Mumun landscape, indicating that these burials are part of a larger symbolic system of social differentiation. Trade in precious stone is somewhat evident, although there is only minimal evidence for any long-distance exchange. The stone daggers and stone maceheads that now appear may suggest that warfare became more common in the Bronze Age. More directly related to the introduction of rice agriculture is a shift in settlement strategy. Bronze Age villages are found inland and are more evenly spread out. No doubt this was to facilitate agriculture. Since the type of rice grown

in this period is grown in a paddy, rivers would have been diverted to flood the fields. Fishing, it is assumed, has become less of an important subsistence practice, possibly due in part to a decrease in fishing stocks because of overfishing during the Neolithic.

—Kevin M. McGeough

Bibliography

- Kim, W. "Discoveries of Rice in Prehistoric Sites in Korea." *Journal of Asian Studies* 41(3) (May 1982): 513–518.
- Nelson, S. *The Archaeology of Korea*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1993.
- Nelson, S. "The Effects of Rice Agriculture on Prehistoric Korea." *Journal of Asian Studies* 41(3) (May 1982): 531–543.
- Norton, C. "Subsistence Change at Konam-Ri: Implications for the Advent of Rice Agriculture in Korea." *Journal of Anthropological Research* 56 (2000): 325–348.

Jomon—Hunters, Gatherers, and Potters

The Middle Jomon period began around 3600 BCE and ended sometime between 2500 and 2000 BCE. Climate during the Middle Jomon is characterized by being warmer and more humid than today. Vegetation was characterized by the expansion of deciduous and evergreen broad-leaved forests.

Settlement size and population density were at their peak during the Middle Jomon period. In northeastern and central Japan, large sites (sites with more than ten pithouses) are common. It has been estimated that the population in the archipelago during the Middle Jomon period was approximately 260,000.

A broad range of resources were used for subsistence during the Jomon periods. Nitrogen and carbon isotope data from human skeletal remains indicate that most of the foods eaten were plants. Hunting of deer and boar was done primarily in the winter. In the spring and summer, grasses, roots, and shoots could be collected and eaten. Acorns, buckeyes, horse chestnuts, and fruits were collected in the autumn, processed, and then eaten. Complex harpoons and fish-



Jomon culture earthenware bowl. The Jomon, thought to be the earliest inhabitants of Japan, are named after their coiled clay pottery. (Sakamoto Photo Research Laboratory/Corbis)

hooks found in shell middens suggest the exploitation of marine mammals and fish. Faunal analyses of several midden sites indicated that a variety of freshwater and marine fish were also eaten. Large shell middens, such as Kasori in Chiba prefecture, point to the exploitation of shellfish during the Middle, Late, and Final Jomon periods.

There is floral evidence that the Jomon cultivated several plants, although they were not a primary source of food. Bottle gourds (*Lagenaria siceraria*), beans (*Vigna angularis*), and mulberry are a few of the plants cultivated by Jomon hunter-gatherers. DNA evidence also suggests that chestnuts may have been cultivated at Sannai Maruyama and elsewhere during the Middle Jomon period.

The Middle Jomon period is also characterized by a variety of elaborately decorated pottery styles. While there are a variety of regional variants, most archaeologists see six major style

zones dating during the Middle Jomon period. In addition to the characteristic cord marking, the various pottery styles are decorated with raised clay reliefs and sculpted rims. Deep jars are the most common vessel form, but shallow bowls were also made. The Umataka, or flame, style of pottery from present-day Niigata prefecture is considered to be one of the most elaborate pottery styles.

The Late Jomon period coincides with the start of deteriorating climatic conditions. Depending on the locality and the evidence used, Neoglacial conditions started as early as 2500 BCE based on evidence from the Kanto region or possibly as late as 2000 BCE based on evidence from the Tohoku region.

There is a marked decline in settlement size in the Late Jomon. While surveys in northeastern Japan indicate that the number of settlements and burial sites increased from the Middle Jomon period through the Late Jomon period, the number of pit dwellings at each site decreased. For example, in Aomori prefecture there are 620 sites, 46 of which are settlement sites that date to the Middle Jomon period. These 46 settlement sites contain just over 600 pithouses. For the Late Jomon period there are 1,518 sites, but only 56 of them are settlement sites. Just over 400 pithouses were excavated at these Late Jomon settlements.

Despite the decline in settlement size during the Late Jomon period, social complexity and ritual activity increased. Stone circles, while seen in earlier periods, are common during the Late and Final Jomon periods of northeastern Japan. Two types of stone circles have been excavated. The first type, exemplified by the site of Komakino in Aomori prefecture, consists of large circular rings of stone. The second group of stone circles consists of groups of small paved stone clusters. The sundials at Oyu in Akita prefecture characterize this second form. Excavations at paved stone circles in Hokkaido indicate that they were used as markers for burials.

—Mark E. Hall

Bibliography

Habu, Junko. *Ancient Jomon of Japan*. Cambridge: Cambridge University Press, 2004.

➤ KOMAKINO SITE

The Komakino site consists of three concentric stone circles. The outer ring has a diameter of 115 feet (35 meters), the next one a diameter of 95 feet (29 meters), and the inner ring a diameter of 8 feet (2.5 meters). Approximately 2,400 boulders were used in its construction. Unlike the stone circles in Europe, most of the stones used at Komakino lie flat on the ground and only a few are set upright. Pit burials were found on the east side of the outermost stone circle, while jar burials were found between the outer and first inner ring. Small paved stone features are associated with the outer two stone circles.

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Imamura, Keiji. *Prehistoric Japan: New Perspectives on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

Kobayashi, Tatsuo. *Jomon Reflections*. Oxford, NY: Oxbow Books, 2004.

Kodama, Daisei. "Komakino Stone Circle and Its Significance for the Study of Jomon Social Structure." In *Hunter-Gatherers of the North Pacific Rim*, edited by Junko Habu, et al. Osaka: National Museum of Ethnology, 2003.

Kudo, Yuichiro. "The Temporal Correspondences between the Archaeological Chronology and Environmental Changes from 11,500 to 2800 Cal BP on the Kanto plain, Eastern Japan." *Quaternary Research* 46(3) (2007): 187–194.

Pearson, Richard. "Debating Jomon Social Complexity." *Asian Perspectives* 46(2) (2006): 361–388.

Settling Down—New Social Organization in Late Archaic North America

During the Late Archaic period in North America, major changes in social organization took place as prehistoric peoples settled down into sedentary or semisedentary lifeway patterns. While populations varied in their internal organization and relations with other groups, prior to the shift in social organization they are generally thought to have been egalitarian, meaning that they lacked institutionalized differences in status and power that would affect access to

► SOCIAL ORGANIZATION ON THE SOUTHERN NORTHWEST COAST

By the Late Archaic (3,000–1,500 years before the present) the people of the southern Northwest Coast of North America lived in permanent villages and had a complex social organization that included long-distance trade and exchange, cooperative resource extraction, and the construction of large architectural structures. Sites such as Ozette, which contains the remains of several large cedar plank houses, 6,000 woven or twisted plant fiber objects, and evidence of trade goods, attest to the complexity of the social organization along the southern Northwest Coast. Furthermore, the distribution of household goods within archaeological sites clearly indicates variation in the social standing of individual nuclear families. Likewise, evidence from La Push, Sooes, and Neah Bay indicate that economic orientation, social standing, and intercommunity relationships were fairly extensive throughout the region by this time. The emergence of larger regional polities began at this time, and there is evidence that these regional polities warred with each other over access to key resources.

—Peter N. Jones

key resources. It is important to note, however, that generalizations about social organization gloss significant regional differences and inter-regional variations. In general, mating networks are thought to have shifted from open to closed, unequal divisions within local groups developed and became solidified, complex trade and exchange networks formed, and populations coalesced in the formation of villages and regional polities.

Evidence from the Northwest Coast indicates that the social organization of the region was highly diverse during the Late Archaic period, as some regions appear to have been highly organized while others were more egalitarian. For example, evidence from the Marpole site argues that peoples of the Fraser River mouth were egalitarian in organization. Very few burials have been found, and those that have been studied show no major differences in the mode

of disposal of individuals or in the accumulation of wealth. However, some evidence indicates that head deformation and tooth abrasion took place, possibly indicating some form of mild social ranking. By 400 BCE–400 CE evidence indicates that settlements increased in size and that people within the same village had different levels of social status. During this period some burials become rich in dentalia, shale, and shell beads, while others lack any forms of burial goods. Likewise, there are individuals with deformed skulls, while others lack this feature, possibly indicating a difference in ascribed status from infancy.

Farther south along the coast of Oregon, evidence indicates that people were organized in local kin-based groups associated with particular localities. These groups controlled camp and village house sites along with specific resource exploitation areas. Inter-marriage was most likely an important mechanism of regional interaction, and evidence indicates that exchange networks linked these people with groups on the other side of the Cascade Mountains and into the Plateau and Great Basin regions.

Evidence from the Plateau indicates that it was not until the Late Archaic period that social organization in the region reached its apex. Disparities in house sizes and variations in the amount, quality, and exotic character of burial furniture on both the middle Fraser and middle Columbia reached their greatest extent during this epoch, evidencing growing social inequality. Social organization reached a level of complexity that involved the cooperative management of resources including anadromous fish along the river bottoms and upland resources. Furthermore, rock art and large cemeteries began to appear, marking the identity of different bands of people at this time and indicating that the landscape was being divided up into various social territories.

In the southern Great Basin, the Late Archaic brought about a great change in social organization among the prehistoric peoples of the region. Prior to the Late Archaic, people lived in small groups practicing a cyclical lifeway pattern based on the availability of seasonal resources. However, around 1,700–1,200 years before the present the people of the region adopted horti-

culture, and evidence indicates that social organization changed greatly as a result. During this period, people lived in relatively small villages in semisubterranean pithouses with masonry and adobe surface structures. Ceramics were also adopted, some of which exhibit evidence of time-intensive decoration, indicating that some individuals were able to spend time on nonutilitarian activities.

In eastern North America there is evidence for the division between the cultural manifestations that were a result of various social organizational changes taking place in the Late Archaic period. For example, evidence from Hopewell indicates that the social organization of the Northeast and the Midwest at this time became highly complex. While long-distance trade and exchange is evidenced for the area during earlier times, it was not until Hopewell that this system reached its peak. Gulf Coast conch shells are found in Michigan and Wisconsin, shark teeth are found in mounds in Illinois, copper from Lake Superior is found in the far South, and obsidian from the Rocky Mountains is found in Illinois and Ohio. Similarly, large mounds as well as what appear to have been regional exchange centers were constructed during this period.

In the Southeast, the complex shell and earthen mound centers dating to 5,000–4,000 years ago reflect the actions of many band-sized groups that were bound together into new social formations by collective ceremonial activity. Evidence indicates that communities consisted of 30 to 50 individuals in several households and that some individuals within the community held a higher social status than others. Likewise, there is scant evidence for communal feasting, ritual, and other behavior associated with the large earthen mounds found at this time. By 2,000–1,500 years ago, however, there is evidence of hierarchically organized societies in some parts of the Southeast.

—Peter N. Jones

Bibliography

Anderson, David G. "The Evolution of Tribal Social Organization in the Southeast." In *The Archaeology of Tribal Societies*, vol. 15, edited by W. A. Parkinson. Ann Arbor, MI: International Monographs in Prehistory, 2002.

Burley, David V. *Marpole: Anthropological Reconstructions of a Prehistoric Northwest Coast Culture Type*. Burnaby, BC: Simon Fraser University, 1980.

Fowler, D., and D. Madsen. "Prehistory of the South-eastern Area." In *Great Basin: Handbook of North American Indians*, vol. 11, edited by W. d'Azevedo. Washington, DC: Smithsonian Institution, 1986.

Mauger, Jeffrey E. *Shed Roof Houses at the Ozette Archaeological Site: A Protohistoric Architectural System*. Pullman: Washington State University, 1978.

Reid, Kenneth C. *An Overview of Cultural Resources in the Snake River Basin: Prehistory and Paleoenvironments*. Pullman: Washington State University Center for Northwest Anthropology, 1991.

Smith, Craig S. *A 4300-Year History of Vegetation, Climate, and Fire from Blue Lake, Nez Perce County, Idaho*. Pullman: Washington State University, Department of Anthropology, 1983.

Struever, Stuart, and Kent D. Vickery. "The Beginnings of Cultivation in the Midwest-Riverine Area of the United States." *American Anthropologist* 75(5) (1973): 1197–1220.

Suttles, Wayne, ed. *Northwest Coast: Handbook of North American Indians*, vol. 7. Washington, DC: Smithsonian Institution, 1990.

Horticulture and Complexity in North America

A sign of developing social complexity in North America is the transition from reliance on wild animals and plants to the purposeful cultivation of these wild species. This type of subsistence, in between hunting/gathering and agriculture, is called horticulture or animal husbandry. This change in subsistence strategy has greater implications than dietary. It points to new forms of sociopolitical organization, new types of settlement patterns, and possibly new senses of ownership and occupational roles.

Horticulture requires people to live a more sedentary existence since they have to be near where their crops grow for much of the year. The exploitation of plant species in this manner also requires that people intervene in the plant's natural environment; otherwise the plants will be fully harvested in a very rapid amount of time. This type of intervention can be very simple and much like what you do in your own garden

➤ HORTICULTURE OR AGRICULTURE— HOW TO TELL ARCHAEOLOGICALLY

Seeds, pits, and other plant remains preserve remarkably well archaeologically in many different environments. Archaeologists use relatively simple practices called flotation techniques to retrieve these very small botanical remains from the soil of sites. When a soil sample is immersed in water, material such as seeds and pits float to the surface. Paleobotanists can easily collect this material to gain direct evidence about what plants were available at a particular site. Other materials can provide indirect evidence; for example, insect body parts can tell us what plant life was present if we know what types of plants those insects fed on.

With this material it is often possible to determine whether wild or domesticated plant crops were present at a site. Generally, wild plants become domesticated through selective harvesting and planting. For example, wheat with a brittle rachis (central axis) breaks quite easily, so wind or the movement of animals can scatter the seeds easily, thus making these particular plants difficult to harvest for seed. On the other hand, wheat with a tough rachis will not scatter easily. Humans can harvest this and then replant it, and the genetic traits that gave the wheat the tough rachis are perpetuated in the human-managed crop. After years of this, differences can become apparent in the seeds themselves. So, in the initial stages of this process, it is very difficult to distinguish domestic plants from wild plants.

—Kevin M. McGeough

today: watering, planting, weeding, and landscaping. In the eastern woodland region of North America, during the period between 1000 BCE and 300 CE indigenous crops (such as sunflowers) were encouraged, as were imported plants (such as gourds and squash).

An interesting question about this period's horticulture in the eastern woodlands is why this transition took place. The first scholars to tackle this question generally assumed that stresses of various sorts played the most important roles. Overpopulation could have forced the people of the eastern woodlands to consider alternative forms of resource management. This

would have involved exploiting food resources that could be stored over longer periods of time or were more easily traded with other groups or between families. Conflict with neighboring peoples could have limited the mobility of eastern woodlands people, forcing them to make do in a smaller area less suitable for hunting and gathering. However, there is limited evidence for these stresses. More recent scholarship has suggested that this transition was a gradual and casual one. People slowly started encouraging certain plants to grow and started to think of certain regions as their own.

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Bibliography

- Otto, Martha P., and Brian G. Redmond, eds. *Transitions: Archaic and Early Woodland Research in the Ohio Country*. Athens: Ohio University Press in association with the Ohio Archaeological Council, 2008.
- Pauketat, T., and D. Loren. *North American Archaeology*. Malden, MA: Blackwell, 2005.
- Smith, Bruce. "The Independent Domestication of Indigenous Seed-Bearing Plants in Eastern North America." In *Emergent Horticultural Economies of the Eastern Woodlands*, edited by William F. Keagan. Carbondale: Center for Archaeological Investigations, Southern Illinois University, 1987.
- Watson, P. J. "Prehistoric Gardening and Agriculture in the Midwest and Midsouth." In *Interpretations of Culture Change in Eastern Woodlands during the Late Woodland Period*. Columbus: Department of Anthropology, Ohio State University, 1988.

The Development of Sedentary Society in Mesoamerica

In the period between 4000 BCE and 1000 BCE, Mesoamerican society became an increasingly more sedentary society. At the beginning of this period, agriculture (especially maize agriculture) provided only a small component of dietary needs. By the end of the period, much of Mesoamerica was heavily reliant on agriculture and firmly situated in sedentary villages.

Beginning at around 8000 BCE, Archaic society was predominant in Mesoamerica. Archaic society is found throughout the Americas; it is identifiable by distinct types of stone tools and

by subsistence practices that incorporate hunting and gathering and some small-scale horticulture. The transition from Archaic society in Mesoamerica has been well studied in the arid Tehuacán Valley. From about 3825 BCE until about 2600 BCE, most of the sites in this region were temporary campsites. People would move seasonally in order to be closer to their food sources. Some permanent sites have been identified, and reliance on wild animals and plants seems to have lessened. There is not as much information for the period from 2600 BCE to 1600 BCE during which sedentary villages became the norm, as did reliance on domesticated plants. During this period the first ceramics appear, often taken as a hallmark of sedentary agricultural subsistence practices since ceramics can be awkward to transport. After 1600 BCE, there were small villages (of perhaps 100–300 people) that depended almost completely on agriculture for their dietary needs.

The Archaic period was over in Mesoamerica by about 2000 BCE. Mesoamerican scholars use a bewildering array of terms to refer to the period after the Archaic period. The two most common are the Initial Formative (which is how it will be referred to here) and the Early Preclassic. The two most distinct changes in Mesoamerican life during the Initial Formative are the development of complex society and the development of regional differentiation. Complex societies begin to emerge throughout Mesoamerica at this time, developing along different lines in different environments.

Large settlements began to appear in Mazatan around 1800, peaking around 1500 BCE and declining by about 1350 BCE. Called the Mokaya (“people of the corn”), the settlements were made up of large central villages (which could support up to 1,000 people) and smaller hamlets. The Mokaya subsisted mainly on crops but also traded obsidian, salt, and possibly cacao. The best-known site is Paso de la Amada, which demonstrates significant social differentiation. An elite residence here was substantially larger than other houses, indicating a disparity in wealth between upper and lower classes. Also of note is the ball court.

Villages in the Oaxaca Valley were not quite as large; the largest held up to 600 people. How-

ever, the same two-tiered settlement hierarchy (large villages and small hamlets) is evident. Rectangular wattle and daub huts are grouped in clusters in the villages. These clusters are often associated with pits, probably used for longer-term food storage. While the huts were about the same size, the amount and quantity of furnishings varied considerably. Likewise, burials exhibit similar patterns of wealth and/or status differentiation, further suggesting that society in the Oaxaca Valley had become stratified by this time.

Sites located near Lake Texcoco, in the Basin of Mexico, also demonstrate a two-tiered hierarchy. This region’s ceramics are very noteworthy, coming into use around 1500 BCE. A cemetery excavated at the site of Tlatilco revealed numerous elaborate ceramic figurines. Each figurine is unique, depicting individuals in a variety of costumes and poses as well as creatures with three eyes or men with two heads.

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Bibliography

- Coe, Michael D., and Rex Coontz. *Mexico*. 5th ed. New York: Thames and Hudson, 2002.
- Evans, Susan Toby. *Ancient Mexico and Central America*. New York: Thames and Hudson, 2004.
- MacNeish, Richard. *The Prehistory of the Tehuacán Valley*. Austin: University of Texas Press, 1967–1972.

The Rise of Sedentism in North America

Considerable debate has focused on the nature of demographic change in North America, centering largely on when sedentism arose and for what reasons. Although it is now fairly well accepted that sedentary processes were unique in each region of North America, general characteristics of the process have been identified: an increase in population size and/or pressure, a certain level of technological development, and the large-scale availability of resources. Within each region these processes, along with regionally idiosyncratic factors, came together to give rise to sedentary lifeway patterns in North America.

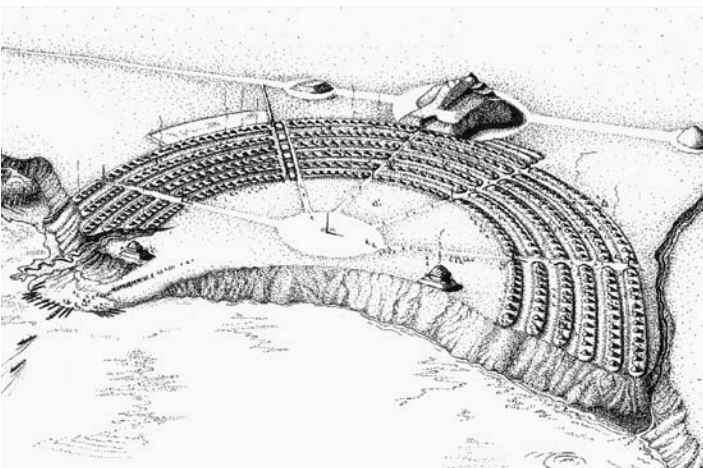
On the Northwest Coast, for example, evidence indicates that the site of Namu was a sedentary village dependent on a salmon economy

SEDENTISM ON THE SOUTHERN PLATEAU

Sedentism is generally thought to occur when population levels reach a certain density and when technologies are developed that permit exploitation of resources to support such population levels. In the southern Plateau region of North America, sedentism was initially thought to have arisen fairly late in prehistory. Archaeological excavations at Rufus Woods Lake on the upper Columbia River, however, have pushed back the date for sedentism on the Columbia Plateau to at least 3000 BCE. Traditional explicators such as intensified salmon fishing, root collection, or the development of storage facilities have not been able to account for early settlements on the upper Columbia River. Site 45-OK-11, with a series of housepit communities dating between 3200 and 2000 BCE, evidences year-round occupation with perhaps as many as four to five dwellings in use at any one time. A broadly based subsistence economy focused on hunting large game and collecting freshwater shellfish, supplemented by fishing and root collection, provided enough resources for sedentism to occur.

—Peter N. Jones

by about 5000 BCE. Furthermore, the evidence from Namu predates by several millennia the first substantial evidence for population expansion or social differentiation in the region, characteristics generally associated with a sedentary population. Because of the abundant salmon



Site layout of the Poverty Point earthworks in Louisiana.
(Jon Gibson/Louisiana Division of Archaeology)

resources, however, people were able to practice sedentary lifeway patterns on the Northwest Coast several thousand years before other regions in North America.

The availability of subsistence resources was not necessarily the driving force in peoples' decisions to adopt a sedentary lifeway in all regions. In southern Arizona, for example, evidence indicates that the earliest farmers in the Hohokam region were not significantly more sedentary than their Archaic era predecessors. In this region population expansion and pressure appear to have been driving forces in the development of sedentary lifeways rather than an overall abundance of subsistence resources.

In the Lower Mississippi River region, on the other hand, people were able to maintain a fisher-hunter-gatherer subsistence economy as they also adopted a sedentary lifeway. For example, evidence indicates that Middle Archaic (5400–3100 BCE) people were not fully sedentary, but by the time the Poverty Point earthwork was built sometime around 1700 BCE, these people had become sedentary. In this region, unlike in the Southwest, the colossal earthwork, the explosion of material culture, complex trade and exchange networks, and the swift accommodations to growing population appear to have been both cause and consequence of the rise of sedentism.

A consequence of the rise of sedentism in North America was a shift in subsistence modes from hunting and gathering to a mixed economy utilizing domesticated plants. Along with the shift in subsistence mode was a subsequent change in prehistoric North American people's skeletal size. For example, evidence from the Georgia coast indicates that when prehistoric peoples became sedentary, a significant postcranial skeletal size reduction occurred. This indicates that as prehistoric peoples shifted to a sedentary lifeway that relied on a mixed economy, there was a decrease in the level of musculoskeletal stress. Along with a decrease in stress came a change in lithic technology and hafting techniques. Because people were no longer moving around the landscape as much, lithic tools became more valuable as access to lithic procurement sites became less available.

—Peter N. Jones

Bibliography

- Cannon, Aubrey, and Dongya Y. Yang "Early Storage and Sedentism on the Pacific Northwest Coast: Ancient DNA Analysis of Salmon Remains from Namu, British Columbia." *American Antiquity* 71(1) (2006): 123–140.
- Dean, Rebecca M. "Site-Use Intensity, Cultural Modification of the Environment, and the Development of Agricultural Communities in Southern Arizona." *American Antiquity* 70(3) (2005): 403–431.
- Gibson, J. "Navels of the Earth: Sedentism in Early Mound-Building Cultures in the Lower Mississippi Valley." *World Archaeology* 38(2) (2006): 311–329.
- Larsen, C. S. "Functional Implications of Postcranial Size Reduction on the Prehistoric Georgia Coast, U.S.A." *Journal of Human Evolution* 10(6) (1981): 489–502.
- Lohse, E., and D. Sammons-Lohse. "Sedentism on the Southern Plateau: A Matter of Degree Related to the Easy and Efficient Exploitation of Resources." *Northwest Anthropological Research Notes* 20(2) (1986): 115–136.
- Odell, G. H. "Prehistoric Hafting and Mobility in the North American Midcontinent: Examples from Illinois." *Journal of Anthropological Archaeology* 13(1) (1994): 51–73.

The Valdivia Culture of Ecuador

Excavations at the site of Valdivia in the 1950s transformed scholarly understandings of ancient Ecuador. What was unearthed there were the remains of an ancient village that had been inhabited during the Early Formative period (3300–1500 BCE), a village that showed signs of stratified social roles, complex economic activities, and elaborate pottery. Until these excavations, scholars had assumed that complex civilization did not emerge in this region until centuries later. As further excavations in Ecuador have demonstrated (especially at the site of Real Alto), this village at the mouth of the Valdivia River valley was not an isolated phenomenon but instead was one village in part of a larger cultural horizon, stretching along the coast of Ecuador. Archaeologists call this the Valdivia culture, named after the type of site (the first site excavated that can be associated with that culture).

➤ SCHOLARLY CONTROVERSIES—JAPANESE VOYAGES TO ECUADOR?

Some aspects of the pottery of the Valdivia culture bear a striking resemblance to that of the Jomon people of Japan, so much so in fact that a scholarly minority (led by Betty Meggers, Clifford Evans, and Emilio Estrada) has argued that pottery was introduced to the Americas from Japan around 3600 BCE. Pottery shards found in western Kyushu (in present-day Japan) have stylistic similarities with Valdivian sherds and possibly common production techniques. Individual sections of the pots, especially bases and rims, also display similarities. However, when whole forms (as opposed to the broken pieces called sherds) are examined, the similarities are less apparent. Further weakening this interesting theory is the fact that the earliest phases of Valdivian pottery show no similarities to Jomon styles. Scholars who believe that there were Transpacific connections in 4000 BCE–300 CE argue that the similarities that are apparent do not reflect a direct borrowing but instead reflect a shared circumpacific style that is associated with ancient maritime cultures.

—Kevin M. McGeough

Donald Lathrap has argued that the Valdivia culture emerged as part of a larger population movement out of the Amazon Basin. The predecessors of the Valdivia engaged in subsistence practices adapted to the tropical forests. An alternative theory holds that early Valdivia culture was more influenced by ancient Japanese travelers to South America, although this theory has largely been abandoned. At Valdivia and other Valdivian sites, a shift toward more sedentary subsistence practices occurred. Permanent houses were built (out of wattle and daub), ceremonial centers were used, and towns were planned along a general U-shape. Now living in permanent houses, the people of Valdivia participated in a mixed economy, exploiting a number of different food sources. Shell middens and shell fish-hooks attest to the importance of seafood in the diet. Hunting and gathering also took place, probably practices continued from the Valdivian origins in the tropical forest. Horticulture was



also practiced, with maize, beans, and root crops being the most important food sources; cotton may also have been exploited. Not every type of economic practice is attested at every site, suggesting that intersite trade and craft specialization connected the various villages.

The ceramics of Valdivia are particularly noteworthy and play an important role in archaeological reconstructions of Valdivian chronology. Most of the pottery is made of fine sand, gray in color (although there are some red vessels), and is made by coiling. Valdivia pottery has a variety of designs and decorations; the most common form is the wide-mouth jar. Valdivia figurines are also quite noteworthy. Made of stone and ceramics, the earliest seem to be humans, although it is impossible to determine which sex is represented. Later figurines are almost entirely nude females. The function of these figurines is unclear.

—Kevin M. McGeough

Bibliography

- Lathrap, Donald W. *Ancient Ecuador: Culture, Clay, and Creativity, 3000–300 BC*. Chicago: Field Museum of Natural History, 1975.
- McEwan, Gordon F., and D. Bruce Dickinson. “Valdivia, Jomon Fishermen, and the Nature of the North Pacific: Some Nautical Problems with Meggers, Evans, and Estrada’s (1965) Transoceanic Contact Hypothesis.” *American Antiquity* 43(3) (1978): 362–371.
- Meggers, Betty. “The Transpacific Origin of Mesoamerican Civilization: A Preliminary Review of the Evidence and Its Theoretical Implications.” *American Anthropologist* 77(1) (1975): 1–27.
- Meggers, Betty, Clifford Evans, and Emilio Estrada. *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*. Smithsonian Contributions to Anthropology 1. Washington, DC: Smithsonian Institution, 1965.
- Muller, Jon D. “Style and Culture Contact.” In *Man across the Sea: Problems of Pre-Columbian Contacts*, edited by Carroll L. Riley et al. Austin: University of Texas Press, 1971.

- Schwarz, Frederick A., and J. Scott Raymond. "Formative Settlement Patterns in the Valdivia Valley, SW Coastal Ecuador." *Journal of Field Archaeology* 23(2) (1996): 205–224.
- Willey, Gordon. *An Introduction to American Archaeology*, vol. 2, *South America*. Englewood Cliffs, NJ: Prentice Hall, 1971.
- Zeidler, James. "Valdivia Culture." In *The Oxford Companion to Archaeology*, edited by Brian M. Fagan. Oxford: Oxford University Press, 1996.

The Growth of Complexity in the Andes during the Late Archaic Period

From 3000 to 1800 BCE during what archaeologists usually call the Late Archaic period, Andean civilizations went through a number of transformations. These transformations were not uniform throughout the region, but some general patterns can be noted. Many of these transformations played an important role in the development of complex state-level civilization in the Andes, culminating in the Inca. Two constants are present throughout the Andean Late Archaic: cotton becomes the textile of choice, and no pottery is used at all.

Throughout the Andes, most sites were relatively small. In some areas, hunting and gathering remained the dominant mode of subsistence. However, at a number of sites, people began living in permanent villages in permanent houses. These villagers came to rely more heavily on domesticated plants (as opposed to wild gathered plants). There is no evidence for one staple crop throughout the Andes at this time; the Late Archaic remains a transitional period where the villagers are better understood to be engaging in horticulture as opposed to large-scale agriculture.

Domesticated animals also play a more important role. The remains of *cuy* (guinea pigs) are found at many sites. These creatures were eaten, and while they would not have provided much food, they would have been a good supplementary source of protein. More important was the more intensive exploitation of camelids (llamas). Wild llamas had been hunted in the past; while they continued to be a good source of meat, they also provided wool and acted as



Kotosh, Late Archaic site in present-day Peru. (Gustavo Madico)

pack animals. During the Late Archaic period, ancient Andeans became better at herd management, making deliberate decisions about when to kill (and consume) certain members of the herd, which animals should be selectively bred (and when), and how to provide fodder for these animals.

Hints of burgeoning social stratification and centralized decision-making also appear in the archaeological record during the Late Archaic period. Three sites in particular demonstrate this, although it is presumed that these trends may be found elsewhere in the Andes in further explorations. At the site of Kotosh, two mounds estimated at 8.7 yards (8 meters) high were in use for more than 1,000 years. Most noteworthy are the many superimposed temples (when one was destroyed or fell out of use, a new one was built directly atop the remains of the previous). The temple layouts are relatively distinct and are referred to by archaeologists as the Kotosh religious tradition. The site of Huaricato, which has not been extensively explored, has ceremonial hearths similar to those at Kotosh. A similar set of superimposed temples was also found at La Galgada. Here in front of the main mound was a circular plaza, walled, with a staircase leading down into the interior.

One area of the Andes that seems to develop along different lines is the Norte Chico region.

► THE PARANA-PAMPEAN TRADITION

Another South American cultural group that seems to transition from hunting and gathering lifestyles to more settled subsistence practices at some point between 1500 BCE and 500 CE is referred to as the Parana-Pampean tradition. The tradition is named after the region in which they lived, which includes parts of Patagonia and some of the lowland stretches of the Andes. “Tradition” is a term that archaeologists use for long-lasting cultural groups (this group seems to survive from 7000 BCE to 1500 CE). Known mostly from their stone tools (and their distinctive triangular stemmed projectile points), what had once been a hunting and gathering culture gradually developed into a settled culture dependent on domesticated plants for their subsistence. The appearance of pottery around 500 CE marks the end of what scholars refer to as the Early Parana-Pampean Tradition.

—Kevin M. McGeough

Here, the first elements of what will later become Inca society are manifest: the sunken plaza and the Staff God. The sunken plaza is similar to that found in La Galgada in the Norte Chico region; more than forty plazas dating to the Late Archaic period have been so far identified, suggesting that the inhabitants of La Galgada modeled their plaza after those found in Norte Chico. The Staff God, who later is understood by the Inca as a creator deity, appears on two carved gourds found in the region. The Norte Chico region also seems to have the largest and most stratified communities. The site of Aspero, especially, is significantly more complex than other Andean sites dating to this period. There was a heavy reliance on domesticated crops, cotton being especially important. Substantial platform mounds have also been identified.

—Kevin M. McGeough

Bibliography

- Haas, Jonathan, and Winifred Creamer. “Cultural Transformations in the Central Andean Late Archaic.” In *Andean Archaeology*, edited by H. Silverman. New York: Blackwell, 2004.
- Willey, Gordon. *An Introduction to American Archaeology*, vol. 2, *South America*. Englewood Cliffs, NJ: Prentice Hall, 1971.

Caral

The Peruvian site known as Caral has been dated to the early third millennium BCE and was one of 20 or more urban centers in that region that together may constitute the earliest complex society in the Western Hemisphere. As the Great Pyramids of Giza rose along the fringes of the Nile floodplain, corps of builders erected stone platform mounds in the arid river valleys that descend from the Andes to the Pacific Ocean along Peru’s north-central coast. While Caral bears some of the traits common among other early complex societies of the world, it may have taken a strikingly different path to civilization. Evidence gathered from human and plant remains at Caral suggests that its inhabitants did not produce the surpluses of staple crops often assumed to be the necessary prerequisite for the emergence of complex societies. Instead, residents of Caral appear to have practiced subsistence agriculture that centered around the cultivation of cotton and gourds, which in all likelihood they bartered for fish and shellfish from coastal residents who in turn needed these products for the production of nets and floats. This intricate symbiotic relationship between harvesters of the sea and harvesters of the land as well as the apparent absence of surpluses of staple crops challenges the commonly accepted model explaining how humans organized themselves into increasingly complex forms of society.

Caral is located 124 miles (200 kilometers) north of Lima in the Supe River valley, 14 miles (23 kilometers) inland from the Pacific Ocean. At more than 270 acres, it is one of the largest archaeological sites in the Andes. Although it was first recorded in 1905, significant studies of Caral have been conducted only since the mid-1990s. The site’s central zone is dominated by six monumental platform mounds, the largest of which, the so-called Piramide Mayor, measures 524 feet (160 meters) by 492 feet (150 meters) and is 59 feet (18 meters) high. At its base is located a large circular plaza, sunken about 3 feet (1 meter) into the ground and connected to the top of the platform via a stairway 32 feet (10 meters) wide. Sunken circular plazas such as the three at Caral are one of the identifying characteristics of many Preceramic sites in the Supe

River valley as well as the valleys of nearby rivers. Also discovered at Caral are numerous smaller platform mounds as well as extensive residential complexes. Some of these residences bear indications of having been home to Caral's elite. Built of dressed stone sheathed in painted plaster, in some cases they are located on top of or connected to platform mounds. More humble abodes were made of wood, cane, and mud, a building technique still in use among residents of the Supe Valley. Radiocarbon dates taken from reed bags used to transport rubble to the site indicate that Caral's platform mounds date to at least 2627 BCE. In total, there are 24 known Preceramic sites in the northern coastal region of Peru, many the contemporaries of Caral and each bearing the common features of large platform mounds, circular ceremonial plazas, residential architecture, and evidence of irrigation agriculture.

Scholars disagree about the sequence of events that led to the emergence of complex societies in Peru at the outset of the third millennium BCE. There are two main theories. The first, popularized in the mid-1970s by Michael Moseley, asserts that the initial steps toward civilization were taken by fishing societies along the central and northern coastal region of Peru. According to this theory, fishing created the demand for specific cultivated crops, such as cotton for nets, that eventually led to the development of large-scale irrigation agriculture along the inland river valleys. The second theory, expounded mainly by archaeologists working at Caral, sees the initiation of civilization in the Andes as originating in the river valleys, with irrigation agriculture then spreading to the coast. In either case, what is clear is that the emergence of complex society in ancient Peru was the result of a unique cooperation between people living in very different communities and occupying very different professions.

Human populations living along Peru's littoral have been taking advantage of the riches of coastal fisheries since as early as 12,000 years ago. However, in order to support growing populations, fishing communities grew increasingly dependent on certain plant products that were not readily available along the coast. In particular, plant fibers were needed for nets, fishing line,

and clothing, and gourds were needed for net floats and other containers. The archaeological record of Preceramic sites along Peru's north-central coast suggest that when coastal peoples began to domesticate plants, they did not choose the kind of staple crops selected by residents of the world's other early complex societies. Instead, they chose to cultivate crops that would supply them with the resources they needed to maximize fishing production: cotton and gourd. The debate among scholars is currently over where the transition from more simple forms of organization to true complex society first took place (along the coast or along inland river floodplains) and why (as a result of the coastal fishing industry or inland irrigation agriculture).

Whichever the case, evidence from sites such as Caral offers further support to the idea that economic cooperation between these two regions and two occupations was a pivotal factor in the transition to complex society. Archaeologists have uncovered human refuse and waste remains at Caral that indicate residents' primary source of protein derived from fish and shellfish, not land animals. The large quantities of sardine and anchovy bones that have been discovered in human coprolites and refuse support this conclusion. In addition to the remains of marine life, archaeologists have discovered large amounts of cotton seeds, fibers, and textiles at Caral. It seems likely therefore that Caral's residents grew crops such as cotton, which they then bartered for the fish and shellfish that were the basis of their diet.

The significance of Caral to our understanding of world history is great. First, the discovery of a complex society in Peru dating to the early third millennium BCE pushes back the earliest dates for the emergence of complex society in the Western Hemisphere by nearly 1,000 years. Prior to this discovery it was believed that complex societies had evolved at this time only in Africa and Eurasia. Second, north-coastal Peru is a unique case study for the evolution of complex societies, one that differs from the commonly accepted pattern followed by societies in the so-called Old World. Caral and the other Preceramic sites of northern coastal Peru stand to offer scholars valuable new insights into why and how humans made the transition from

more simple to more complex forms of social organization.

—Ben Leeming

Bibliography

Haas, Jonathan, Winifred Creamer, and Alvaro Ruiz.

“Dating the Late Archaic Occupation of the Norte Chico Region in Peru.” *Nature* 432 (23 December 2004): 1020–1023.

Moseley, Michael E. “The Maritime Foundations of Andean Civilization: An Evolving Hypothesis.” In

Perú y El Mar: 12000 años del Historia del Pescaríá, edited by P. Trillo. Lima: Sociedad Nacional de Pesquería, 2005.

“Proyecto Arqueológico Norte Chico.” http://www.fieldmuseum.org/research_collections/anthropology/anthro_sites/PANC/default.htm.

Shady Solis, Ruth, Jonathan Haas, and Winifred Creamer. “Dating Caral, a Preceramic Site in the Supe Valley on the Central Coast of Peru.” *Science*, 292 (27 April 2001): 723–726.

■ Introduction: Mining and Resource Acquisition

The acquisition of resources for production is a fundamental component of economic life. From the period 4000–1000 BCE, the acquisition of these resources on a large scale is well attested. Resource-poor regions like Egypt and Mesopotamia organized long-distance trade and/or mining expeditions to acquire mineral and forest resources from locations well away from major centers. Resource-rich locations such as Elam (in Iran) and Nubia profited from their trade with other regions yet also experienced invasions by groups who wanted direct control of these materials.

Smaller-scale mining operations are identifiable throughout the world in the period 4000–1000 BCE. Most of the evidence for these mining or quarrying operations comes in the form of archaeological remains of those activities. Remnants of mining tools or landscapes altered by mining are the best sources of evidence for these activities. Often the evidence for ancient mining has been obscured by the passage of time. Many aboveground deposits that would have been available to the ancients were mined away completely long ago, thus eradicating any traces of those activities. Indirect evidence for mining also takes the form of the artifacts that were produced from raw resources that were mined. Any metal or stone tool is indirect evidence of this type of resource acquisition since the materials the tools were made of were mined or quarried at some point. What follows is a discussion of some of the better-known examples of

ancient mining and resource acquisition activities that occurred between 4000 and 1000 BCE.

—Kevin M. McGeough

Stone Quarrying in Egypt and the Near East

Stone was one of the most important resources for the ancient Egyptians. Modern visitors to Egypt marvel at the monumental stone art and architecture that has endured to the present. The Egyptians were highly skilled stonemasons and incorporated this material into much of their construction. The Mesopotamians were also quite skilled at stonework even though their stone had to be imported from Iran (across the Zagros Mountains). In both Egypt and Iran, quarrying techniques were similar; what differed was the organization of the quarrying enterprises.

In Egypt, most large-scale mining enterprises were commissioned by the king and/or the government. Mining teams were led by military expeditions, staffed with a large bureaucracy to oversee the quarrying. The miners themselves were conscripted laborers, slaves, and foreign soldiers captured during military campaigns. For Mesopotamia the situation is less clear, since the actual mining took place outside of the king's direct sphere of influence. Small-scale quarrying, however, was done by individuals according to their own skills and whims.

The main techniques for removing large amounts of stone from quarries in 4000 BCE–

300 CE were to detach large blocks from cliffs, remove boulders from dried river valleys, and carve trenches around large blocks of stone. Trenching was most effective for large blocks: since large blocks would have been too heavy to lift very high, it was easier to pound out trenches around the block, allowing it to be rolled out of the deposit. An unfinished obelisk (a large free-standing pillar) that was abandoned by Egyptian miners at a granite quarry near Aswan has allowed modern archaeologists to reconstruct these practices in detail. First, the miners stripped off the weathered layers of the stone: the imperfect parts of the stone that would not have made for quality artistic materials. Next, trenches were excavated around the stone, roughing out the shape of an obelisk. The trenches were quite large; in this particular case, more than 50 workers could have been working at one time. Measurement marks left by overseers, dictating where cuts in the stone were to be made, are still evident. Eventually the obelisk would have been undercut, allowing the obelisk to be rolled out of the trench.

Holes for rectangular wedges found in the granite quarry had initially led archaeologists to believe that wet pieces of wood were wedged into the stone and used to leverage out the stone. Experimental archaeology has shown that this technique would not have worked since the wood was not strong enough. These rectangular holes were probably left by later miners, who were using iron tools sometime after 1000 BCE. In the Bronze Age, the tools were modest. Axes and pointed picks were used for roughing out the stone. Chisels were hammered with mallets for finer work. With only these small tools available, the ability to quarry large quantities of stone was dependent on the ability to marshal large labor forces.

The bulk of the large stone resources quarried by the Egyptians came from the deserts and cliffs to the west and east of the Nile Valley and in the Sinai Desert. These quarries were in marginal locations away from major settlements, too far from the Nile to allow for permanent settlements. Settlements designed for the miners were set up in some locations and varied in size. At Umm el-Sawwant, the location of a gypsum quarry, a large settlement of at least 250 stone

➤ DEIR EL-MEDINA—THE WORKERS' VILLAGE



Deir el-Medina is an ancient Egyptian village that was home to the artisans who built the temples and tombs ordered by the pharaohs and other dignitaries in the Valley of the Kings. About 100 stonecutters, artisans, and civil servants lived here during the New Kingdom period. (Erich Lessing/Art Resource, NY)

One of the strategies that the Egyptian state used to organize mass labor was to establish villages devoted to one particular job or craft. Deir el-Medina is one of these villages that has been excavated by archaeologists. Located near the Valley of the Kings and the Valley of the Queens, this village contained the homes of the builders of the tombs of the New Kingdom pharaohs and their families. Anybody involved in the creation of the tombs lived in this village, including the builders of the tombs and the artists who carved and painted the walls. The families of these workers lived in the villages, and so did individuals who worked to support the tomb craftsmen, building their homes, manufacturing their tools, and providing them with food.

—Kevin M. McGeough

structures was built. There, workers not only quarried stone but also engaged in secondary stone production, producing flint tools and stone vessels.

The transport of stone once it had been quarried was a significant undertaking. The Egyptians invested a great deal of resources in constructing roads to facilitate the movement of stone across the sandy deserts to the Nile Valley. These roads were built of paved or dry stone. Transporting stone across the Zagros Mountains

to Mesopotamia was not as difficult since there was no sinking sand to deal with.

—Kevin M. McGeough

Bibliography

- Bierbrier, M. *The Tomb-builders of the Pharaohs*. London: British Museum Publications, 1982.
- Guntner, A. "Material, Technology, and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson, 2000.
- Shaw, I. "Quarries and Mines." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Stocks, D. "Stoneworking." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.

Metals

Metal exchanged hands in the ancient world in the form of both raw material and finished product. In general, it appears that the ancient Near East was mineral poor, but perhaps future systematic survey and scientific investigation of ancient mines will fill the substantial gaps in our knowledge of ancient sources of ore. Much of our knowledge of metalwork comes from hoards or tombs. In the ancient Near East, as in modern times, people valued copper and iron for utilitarian items and gold or silver for decorative objects. Tin was highly prized, for it was used in producing tin-bronze, a versatile copper alloy utilized from the Early Bronze through the Iron Age.

Gold and silver may be found in scattered deposits throughout the Near East. Gold was relatively plentiful in Egypt's eastern deserts and Nubia, although evidence for the mines is scarce. A few artifacts originally identified as pure gold, including pieces from the Ur cemetery, have since been shown to be electrum, which contains both gold and silver. Native silver is rare. More frequently, it must be extracted from lead ore by cupellation, a heating process that oxidizes lead to separate the silver. Sources of lead and silver are known from Asia Minor, especially in the region of the Taurus Mountains. Gold and silver were exploited for the first time during the fourth millennium BCE.

It appears that copper was the first metal to be exploited in antiquity. Weathered copper ap-

pears as an attractive blue color that may have attracted Neolithic people to collect and use the material for ornamental purposes but who soon discovered utilitarian applications for it. Beads, pins, and awls of native copper are known as early as the eighth millennium BCE in Anatolia and the mid-seventh to mid-fifth millennia BCE in Iran, regions where the metal was most accessible. By the fourth millennium BCE, copper technology had spread across the Near East. Most known mines only suggest small-scale production of utilitarian items, but large-scale operations were conducted in several locations. Arsenical copper was the common alloying agent used to produce the harder and more durable arsenic-bronze objects found throughout the Near East from the fourth through third millennia. This alloying agent may have been traded over great distances. Mines in the Wadi Arabah (in Israel and Jordan) at Feinan and Timnah that were exploited heavily for copper from the Chalcolithic through Early Bronze Age do not contain arsenic. There are, however, rich copper deposits in Iran, especially at the Talmessi mine, that carry a high arsenic content. In the early third millennium BCE, the regions around the Persian Gulf (Oman in particular) supplied copper to Mesopotamia. Feinan and Timnah ceased production in the Middle and Late Bronze Ages when the island of Cyprus, known as Alashiya in ancient texts, rose to prominence as a major supplier of copper for the eastern Mediterranean.

Tin appeared in the latter half of the Early Bronze Age and eventually replaced arsenical copper as the primary choice of alloying agent. The reasons for this shift remain uncertain since arsenic-bronze is comparable to tin-bronze in most characteristics. The sources of tin are equally unclear. Despite the discovery of mines and surviving tin deposits in the Taurus Mountains, the certainty of this potential source has been challenged, partially on textual grounds. Early-second-millennium BCE texts discovered at the Anatolian site of the Karum Kanesh reveal a trade network that brought tin into Anatolia from the south to trade for silver and gold. This suggests the lack of tin sources from within Anatolia. Tin sources may be found in Afghanistan, where deposits of alluvial gold and tin (in the form of cassiterite) are known.

Although the origin of ironworking technology is obscure, iron rose to prominence following the end of the Late Bronze Age. Tin-bronze, however, continued to be used especially for complex cast objects such as figurines. Iron served primarily for utilitarian objects, tools, and weapons. The appearance of iron should not be viewed as the arrival of a superior metal. Wrought iron is softer than tin-bronze. In addition, iron is more difficult to produce than bronze, and iron-casting technology did not arrive until the nineteenth century CE. Iron can become harder and more durable if alloyed with carbon (forming steel), quenched, and properly tempered, but there is limited evidence for the common application of this process before the eleventh century BCE. Some suggest that the rise of iron was the result of disruption of the tin supply and trade. Unlike tin deposits, iron ore is relatively plentiful in most regions. Given the scarcity and expense of tin, metalsmiths may have welcomed new technology to work the more abundant resource. Alternatively, the shift toward iron might have been an ecological choice. Less heat is needed to work iron than copper or bronze, and thus less fuel is required. Given that much of the Near East is poor in wood, the benefit of adopting iron is clear.

—Adam Aja

Bibliography

- Eran, A. "Weights and Weighing in the City of David: The Early Weights from the Bronze Age to the Persian Period." In *Excavations at the City of David, 1978-1985*, vol. 4, *Qedem 35*, edited by D. T. Ariel and A. de Groot. Jerusalem: Institute of Archaeology, Hebrew University, 1996.
- Moorey, P. R. S. *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence*. Winona Lake, IN: Eisenbrauns, 1999.
- Muhly, J. D. "Mining and Metalwork in Ancient Western Asia." In *Civilizations of the Ancient Near East*, edited by J. Sasson. Peabody, MA: Hendrickson, 2000.
- Snodgrass, A. M. "Iron and Early Metallurgy in the Mediterranean." In *The Coming of the Age of Iron*, edited by T. A. Wertime and J. D. Muhly. New Haven, CT: Yale University Press, 1980.
- Waldbaum, J. *From Bronze to Iron: The Transition from the Bronze Age to the Iron Age in the Eastern Mediterranean*. Göteborg, Sweden: Paul Åströms Förlag, 1978.

➤ PRECOINAGE MONEY

Some products in ancient marketplaces were exchanged for standardized quantities of precious metal. Coinage was not known until the seventh century BCE, when it appeared for the first time in ancient Lydia. Prior to this period, the monetary system was based on pieces of metal weighed on a scale balance against a standardized system of weights. Different systems of weights existed throughout the ancient Near East. Simple stone weights were commonly used, although more elaborate weights have been discovered. A large cache of animal-shaped (zoomorphic) weights were discovered on the Late Bronze Age Uluburun shipwreck. The metal to be traded for could be molded into regular shapes and sizes, but often the desired weight was simply cut from a larger fragment or even from recycled pieces of broken jewelry. Silver was more common than gold, and small bags of cut-up silver pieces (*hacksilver*), likely intended for use in trade, have been recovered in archaeological sites.

—Adam Aja

Forestry (Silviculture)

Neither Egypt nor Mesopotamia had large sources of timber, yet both societies were heavily reliant on wood and wood products. Wood was necessary for construction as well as for wooden products such as furniture, tools, boxes, and so on. Wood was also needed for use as fuel in the production of pottery and metals. Tremendous amounts of wood are required to produce charcoal, an essential component for establishing the high heats necessary in ancient heavy industries.

Locally available wood in Mesopotamia and Egypt may have been sufficient for small craft projects and utilitarian tools. However, for luxury objects such as furniture and any sort of construction project, the people of these regions had to look elsewhere for supplies. Wood, especially ebony, came from the south, from what is now called the Sudan. The most important source of wood for Egypt was Lebanon, renowned for its cedar and within close proximity to the Mediterranean for easy sea transport. This

» WOODWORKING IN EGYPT

The ancient Egyptians were quite adept woodworkers even though wood was in short supply in the Nile Valley. They used adzes and chisels for small projects and both pull saws and short saws for cutting larger section of wood. The Egyptians sanded the wood and were aware that wood is strongest along the grain, and they utilized it accordingly. Daily life scenes from the walls of the Tomb of Rekhmire depict Egyptian woodworkers in action. And numerous wooden pieces of art have survived from ancient times. In other locations wood rots relatively quickly, so the wooden finds from Egypt are very important. One of the most noteworthy is a statue dating from the Old Kingdom called the Sheikh el-Beled. The statue is a very lifelike rendering of a portly, elderly official; the Egyptian workers who excavated the statue claimed that it was the spitting image of the local sheikh and thus named it after him.

—Kevin M. McGeough

was not as convenient for the Mesopotamians, who did not have a Mediterranean port. For them, wood came from the Zagros Mountains or from Anatolia, shipped downriver as large logs.

The appetite for wood in Egypt was insatiable. The Palermo Stone records that the Fourth Dynasty king Snefru had 40 ships filled with cedar imported from Byblos, the large port on the Lebanese coast. A text from the reign of King Thutmose III of the Eighteenth Dynasty records that a shipyard imported over 2,000 feet of wood from Lebanon over an eight-month period. Wood used in architecture tends not to survive archaeologically. Archaeologists can estimate the amount of wood used in projects by studying the sockets left in stone walls, where the wood has decomposed. A relatively safe estimate is that 2,000 trees would have been needed for a 150-room palace, composed mostly of stone. Even given the huge amounts of wood harvested from Lebanon, it was not until Roman times that deforestation became a significant problem in that region.

Reliefs from the Egyptian Temple of Karnak preserve information about the actual harvest-

ing of trees. One man would cut the base of a tree, while a team of men would hold ropes supporting the tree to control its fall. The tree would then be sawn into lumber and seasoned to reduce its moisture content. The most common method of seasoning the wood was to stack the lumber in such a way as to allow air to circulate throughout the pile, drying out the wood.

—Kevin M. McGeough

Bibliography

- Guntner, A. "Material, Technology, and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Killen, G. "Woodworking." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Kunholm, P. "Wood." In *The Oxford Encyclopedia of Archaeology in the Near East*, edited by E. Meyers. Oxford: Oxford University Press, 1997.

Copper Mining in Southeast Asia

Copper is essential for the manufacture of bronze (which is an alloy usually composed of tin and copper). With the advent of metallurgy in Southeast Asia, sources of copper began to be exploited throughout the region. One mine, located at Phu Lon on the southern bank of the Mekong River, has been excavated by the Thailand Archaeometallurgy Project. Radiocarbon dates of charcoal found at the site suggest that the mine was used as early as 1700 BCE and continued well into the first millennium. It is thought that the site was used seasonally; miners would come to the area for a brief period, spending just enough time extracting the copper ore and processing it into an easily transportable form before moving away again. There is no evidence that this site would have been permanently occupied.

The mine itself is better thought of as a mining complex, since both extraction and processing took place within the vicinity. Copper sulfide ore is present, running in deep veins through the limestone at the site. Ancient miners created numerous shafts as they removed small blocks of copper ore, probably through heating the rock and alternating between smashing and exerting pressure against the limestone. The small

chunks of copper ore were further processed nearby in small workstations at what the excavators called the pottery flat. There, the ancient miners used small cobbles of rock (which they left behind) to further crush the copper ore-limestone that had been removed from the shafts in order to fully separate the copper (and thus not waste effort transporting undesirable limestone). Ceramic crucibles were found, indicating that some of the copper was reduced to a molten state at the site. The remains of molds also suggest that perhaps some casting took place at the site as well. There is no evidence that the copper ore was alloyed with tin here, thus there is no proof of bronze manufacture. The location of the mine near the Mekong River allowed easy transportation of the processed goods.

—Kevin M. McGeough

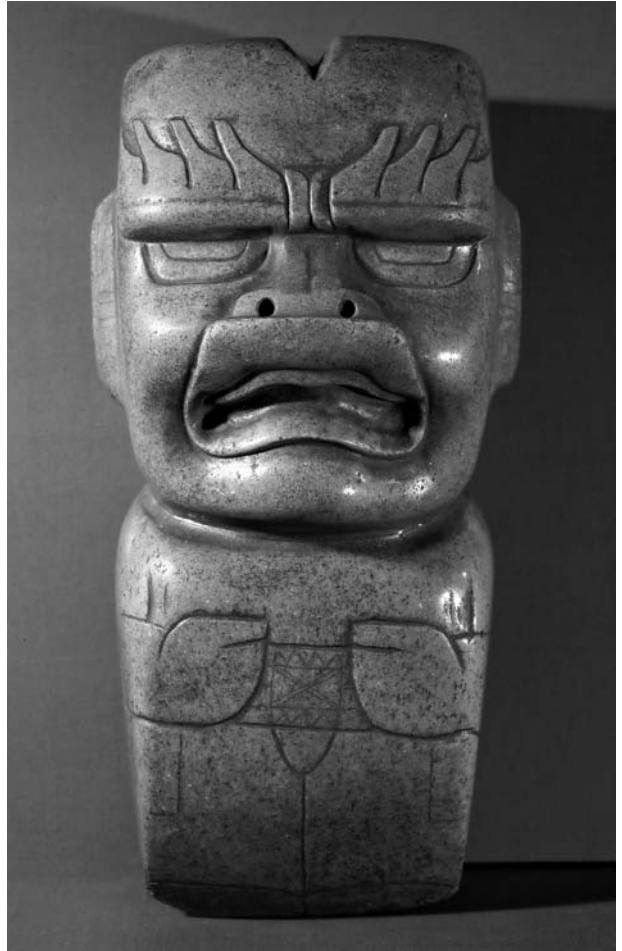
Bibliography

- Higham, C. *The Bronze Age of Southeast Asia*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1996.
- Piggot, V. C., and S. Natapintu. "Archaeological Investigations into Prehistoric Copper Production: The Thailand Archaeometallurgy Project, 1984–86." In *The Beginnings of the Use of Metals and Alloys*, edited by R. Maddin. Cambridge, MA: MIT Press, 1988.

Jade and Precious Stones in Mesoamerica

Jade, or more properly jadeite, was the most important mineral for ancient Mesoamericans. Its value to them was the equivalent of diamonds in modern Western society. Because jade was so precious, great effort was spent in its extraction, shaping, and design. Mesoamerican jade comes in three different colors: blue-green, green, and purple. Blue-green jade was a favorite of the Olmec people, while green jade was desired by the Maya. Purple was not used anciently. The chemical structure of jade, $\text{NaAl}(\text{Si}_2\text{O}_6)$, makes it an extremely hard mineral, 6.5–7 on a scale of 10 (diamonds are rated 10).

Jade-bearing rocks were extracted from the Motagua River basin in Guatemala. River cobbles could be collected from the river itself, but larger pieces were found in seams along the mountain-



Ceremonial adze, representing the Olmec "God I" with his typical flaming eyebrows. Olmec art was a major influence on early Maya art, green jadeite (1200–800 BCE). (Erich Lessing/Art Resource, NY)

ous sides of the river basin. Locally, this basin is known as the Sierra de las Minas, or the mountain range of the mines, a reference to its high mineral content. Once the jade cobbles or boulders were found, they were tested for quality before more effort was put into them. Jade is a hard stone, which means that the only effective way of shaping it was using jade hammer stones to break apart the jade cobbles. This was done with direct percussion, flaking off a corner of the jade cobble to see its quality. Poor-quality pieces were discarded, and high-quality pieces were brought to camp for further processing.

Obsidian was another important stone. Obsidian-bearing strata were followed into hills and deep into the ground, as necessary. This stone

► SCHOLARLY CONTROVERSY—THE ORIGINS OF BRONZE IN SOUTHEAST ASIA

A controversial issue that has yet to be settled by scholars of Southeast Asia is where the technology for the manufacturing of bronze in Thailand and Vietnam came from. Charles Higham has argued that there are two major hypotheses, neither of which can be settled given the present state of evidence. The first is that the technology was gradually acquired from China sometime between 1700 and 1500 BCE. This is consistent with bronze finds from sites such as Dong Dau and Go Mun, where bronze artifacts of utilitarian and decorative functions have been recovered. The second hypothesis is that an independent bronze-making tradition developed in Thailand. This hypothesis was favored after the initial discovery of bronzes from Non Nok Tha and Ban Chiang were dated to about 3500 BCE. Recent reevaluation of these dates suggests that they should be lowered to about 1500 BCE, which is more consistent with the first hypothesis. At present, there is no way to settle the issue one way or the other about the origins of Thai metallurgy, but continued excavation may reveal the answer.

—Kevin M. McGeough

comes in different colors depending on the precise chemical makeup of the volcanic matrix in which the glass formed. Most obsidian is black, but some sources are gray, black and gray mixed, and green. Green obsidian, found in the Pachuca area of central Mexico, was particularly prized for its color. Obsidian was mined by exposing a strata of volcanic glass and chipping off large chunks via percussion blows with hammer stones. The hammer stones were usually quartzite cobbles slightly larger than a human hand. Obsidian fractures in concentric concoidal rings as the force from the blow expands outward from the point of impact. Skilled flint knappers can control the direction of the blow so that the energy flows through the obsidian block and shears it off at a predetermined point. The

chunks of obsidian removed are called tool blanks. The high-quality tool blanks were then brought to camp for further work.

Obsidian processing occurred through a combination of percussion and pressure flaking. Percussion flaking utilizes hammer stones to directly impact on the surface of the obsidian. The transferred energy pulls off flakes. Pressure flaking involved positioning the point of a tool, such as an antler tine, on an edge of the obsidian tool blank and then pushing the tool so that the energy released moved through the obsidian and pushed off a flake. Flakes removed via percussion have different attributes than those removed via pressure. Percussion flaking is generally used to remove large quantities of undesired mass from the obsidian, while pressure flaking is for fine work.

Jade was also percussion flaked. Flint knappers used the same basic techniques on both minerals to create a mass of the proper size. However, jade required a more labor-intensive approach than obsidian. Once the jade was the proper size, it was generally worked with abrasive materials. Jade dust could be wrapped in a cord and rubbed against the surface to smooth out irregularities. Holes were drilled into the jade using hard stone or wood with abrasive dust. Then the entire surface was smoothed and polished for hours on end.

—Zachary Nelson

Bibliography

- Rochette, Erick T. "Investigating Jade Prestige Goods Production, Middle Motagua Valley, Guatemala." Foundation for the Advancement of Mesoamerican Studies, 2000, <http://www.famsi.org/reports/05069/>.
- Taube, Karl, Zachary Hruby, and Luis Romero. "Jadeite Sources and Ancient Workshops: Archaeological Reconnaissance in the Upper Río El Tambor, Guatemala." Foundation for the Advancement of Mesoamerican Studies, 2004, <http://www.famsi.org/reports/03023/>.
- Whittaker, John C. *Flintknapping: Making and Understanding Stone Tools*. Austin: University of Texas Press, 1994.

■ Introduction: Ancient Workshops and the Organization of Production

Given the large amounts of specialized production that must have gone on in the earliest urban states, there is surprisingly little archaeological evidence for craft workshops. Archaeologists have recovered huge quantities of goods from the cities of Egypt, Mesopotamia, Greece, India, and China that would have required specialized training to produce yet have found relatively few workshops. In fact, recent research has shown that sites that were once thought to have preserved workshops were in fact misunderstood by their excavators. For example, the city of Ugarit, located on the coast, was once assumed to have separate industrial zones within the city, with subsections devoted to specific industries. Recent reanalysis of the site has shown that in fact there is no evidence for this kind of urban planning and that there is only minimal evidence that any production activities took place within the city.

The absence of heavy industries within cities is not surprising, in reality. The heavy industries common to the ancient world (brick making, pottery manufacture, and metallurgy) require huge amounts of heat and/or space. The unpleasant environment created by kilns, the difficulties of transporting fuel (wood and dung), and the dangers posed by fires would have made it worthwhile to situate these industries outside of the cities proper. This may explain why so few of these workshops have been uncovered, since archaeologists have tended to concentrate on the excavation of urban areas, only surveying rural regions (of course, there are noteworthy exceptions). It should be noted that the occasional heavy industry workshop has been found within an urban center. At least six kilns have been excavated at Mohenjo-daro in Pakistan, and a bronze foundry has been identified within the ancient city of Erlitou in China.

Archaeologists more often find smaller-scale workshops designed for light industrial production (stone, jewelry, shell crafts) within urban centers. These industries do not require large spaces, nor do they require the large amounts of

heat typical of other industries. They also do not require large storage space for the tools or raw materials. These workshops are usually quite small. The largest workshops are found in Egypt, although these are not really large workshops but rather a series of small workshops, reduplicated over and over in a modular fashion. So unlike modern factories, where production can occur on a large scale, ancient production would have been slow and limited. The Egyptian modular workshops would not have been able to produce substantial quantities of products, although they would have facilitated apprentice-style training and the sharing of equipment.

Apprenticeship training was the norm for the early urban states. There were no formal craft schools, at least none that we know of. Regional standards did develop, and techniques and styles were often relatively standard over long distances, attesting to significant contact between craft specialists throughout regions and hinting at some sort of internal organization of these workers. Some of this organization could have come from royal or temple patronage, since the state, especially in Egypt and China, did seem to sponsor some craft activities. More important in the spread of production techniques and styles were the networks that existed between the different cities and villages within the ancient states.

The networks that connected ancient cities and villages through the exchange of specialized goods played a role in cultivating specialized craft workshops. In the Indus Valley and Mesopotamia, there is significant evidence for regional specialization in certain industries. For example, the Mesopotamian city of Isin was, for a time, a center of leather production, and the city of Chanhudaro was an important center for bead production. In contrast, larger centers do not demonstrate evidence for this kind of specialization, and in general the percentage of space devoted to specialist activities is significantly higher in smaller villages as opposed to larger centers. These larger centers may have relied on facilitating the exchange of specialist

THE EGYPTIAN “SATIRE OF THE TRADES”

One of the most enjoyable Egyptian texts is the *Satire of the Trades*, which dates to the Middle Kingdom. In this document, a father lectures his son on the hardships of the various trades. About coppersmiths, the father says that their skin is like a crocodiles and their stench is worse than fish eggs. Stonemasons and jewelers, according to the father, are exhausted by night, and potters are constantly covered by mud. Carpenters are not paid enough for their backbreaking work, and as gardeners age, the blisters on their necks begin to ooze pus. The father advises his son that the best profession is that of a scribe and goes on to advise him on how to succeed at that trade. In many ways, this text is reminiscent of modern parents advising their children to get a university education!

—Kevin M. McGeough

crafts rather than producing these craft objects themselves.

—Kevin M. McGeough

Bibliography

- Bagley, R. “Shang Archaeology.” In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Guntner, A. “Material, Technology, and Techniques in Artistic Production.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Kenoyer, M. “Socio-Economic Structures of the Indus Valley Civilization as Reflected in Specialized Crafts and the Question of Ritual Segregation.” In *Old Problems and New Perspectives in the Archaeology of South Asia*, edited by Jonathan Mark Kenoyer. Madison, WI: F & H Printing Company, 1989.
- Pracchia, S., et al. “On the Type, Distribution and Extent of Craft Industries at Mohenjo-daro.” In *South Asian Archaeology 1983*, edited by J. Shotsmans and M. Taddei. Naples: Istituto Universitario Orientale, 1985.
- Roth, A. “Work Force.” In *The Oxford Encyclopedia of Archaeology in the Near East*, edited by E. Meyers. Oxford: Oxford University Press, 1997.
- Vidale, M. “Specialized Producers and Urban Elites: On the Role of Craft Industries in Mature Harap-

pan Urban Contexts.” In *Old Problems and New Perspectives in the Archaeology of South Asia*, edited by Jonathan Mark Kenoyer. Madison, WI: F & H Printing Company, 1989.

Ancient Workshops and Manufacturing—The Domestic Mode of Production

The vast majority of people in the ancient world were relatively self-sufficient, from a production standpoint. Even in the oldest urban states, most households produced their own food and clothing. Every member of the household would have contributed to the production of subsistence goods; without formal schools, children would have been expected to help around the house, learning subsistence skills by doing. Scholars of ancient economics call this situation the domestic mode of production.

In a domestic mode of production, the main concern of the members of a household is to produce enough goods to ensure the survival of all of the members of a household. The ability to feed and clothe one’s family was the best one could hope for economically. Economic calculations may have played an important role in many family decisions; for example, having more children could provide a larger labor force but also would create more individuals who have to be fed and clothed, creating less room within the house. Yet without social security programs, parents were reliant on their children to care for them in their old age.

In good economic conditions, a domestic production unit may have been able to produce a surplus, more products than they needed for consumption. This surplus could have been traded for other products, especially specialist products (such as metal tools) that were beyond the manufacturing capacity of a small household. Yet it may have been difficult to trade surpluses for specialty goods, since most of the products manufactured at home were foodstuffs, which could spoil relatively quickly. More often, though, a family would fall into debt. Since these small-scale producers lacked assets that they could pledge for a loan, they were compelled to pledge the labor of family members as collateral or as interest payments, a situation known as debt-

slavery. Once a family entered a debt situation, it could be very difficult to escape debt.

The kinds of productions that domestic producers could engage in were limited by the types of tools required and the level of training needed. Most production involved foodstuffs. Agriculture, animal husbandry, or any combination of these two practices may have been utilized by a family. Secondary food production was also done within the household. Grinding grains, slaughtering animals, preparing meat (for consumption or storage), and meal preparation were all household chores that took up a substantial proportion of time. Just as time consuming was the production of clothing. Textiles were usually made from scratch; hides, however, required more specialist equipment and access to large herds of animals. Sometimes, one or more members of a household would be craft specialists; these individuals would either produce goods within the home or work in factories and be able to supplement the household income.

—Kevin M. McGeough

Bibliography

- McGeough, K. *Exchange Relationships at Ugarit*. Leuven: Peeters University Press, 2007.
- Vidale, M. "Specialized Producers and Urban Elites: On the Role of Craft Industries in Mature Harappan Urban Contexts." In *Old Problems and New Perspectives in the Archaeology of South Asia*, edited by Jonathan Mark Kenoyer. Madison, WI: F & H Printing Company, 1989.

Craft Production at Mehrgarh

Mehrgarh is one of the best-known and important sites in South Asia. It developed from an early farming settlement in the seventh millennium BCE into a prosperous town, flourishing until the beginning of the Harappan (Indus) period. The settlement provides an unparalleled picture of the development of the many crafts that reached their peak during the Indus civilization. From its early days, Mehrgarh's inhabitants worked flint and bone, made baskets and mats, and also made personal ornaments in steatite and copper. Simple pottery making began in period II (sixth millennium). Shell and gemstones were used to make jewelry, and copper was used for tools. Use-wear analysis on tools shows that

DRUDGERY

Alexander Chayanov was a Soviet economist (eventually purged by Joseph Stalin) who was particularly interested in the domestic mode of production and, in particular, how to motivate a peasant family to produce a surplus. The chief difficulty, according to Chayanov, was that work is boring, and people preferred not to do it if they did not have to. Therefore, external factors had to motivate a family to produce beyond a subsistence level. This is an important observation for ancient societies as well. What could compel an ancient family to produce beyond what they needed? There were not many products that could be purchased, so the acquisition of wealth probably did not play as significant a role as it does today. Taxation and enforced tribute (or the threat of punishment if these were not paid) would have been more important motivating factors.

—Kevin M. McGeough

wood and leather were also worked, although no artifacts in these materials survive.

Open-air working areas are known from period I (ca. 7000–5500 BCE onward). By period III (fifth millennium), distinct industrial areas within the settlement suggest the beginning of specialist craft production. From period IV (3600 BCE onward) Mehrgarh was supplying other settlements in the region with fine painted wares.

Flint, bone, and antler tools were abundant in the early periods, becoming less common later as copper tools came into regular use. Flint blades and bladelets were struck by indirect percussion, using a hammer and a small punch set against a prepared core. Some flints were re-touched by pressure flaking. Many were shaped into bead drills or awls for basket making and leather working.

Blades snapped into segments were glued with bitumen into wooden hafts to create sickles. Microliths were also used as sickle elements and as barbs and sometimes points on hunting spears and arrows; in periods VI–VII leaf-shaped jasper or schist arrowheads were used. Other flint tools included scrapers for preparing hides and blades for cutting or working reeds, other

➤ LAL SHAH

A specialized pottery-manufacturing site was discovered at Lal Shah, .6 of a mile (1 kilometer) outside the town, contemporary with Mehrgarh's final period, VIIC. Marks on vessels found here show that they were thrown on the potter's wheel, from which they were cut with a string. At least six updraft kilns were uncovered, along with much debris from pottery manufacture such as sherds from misfired pots. In these kilns the fuel chamber was cut into the ground, with above it the perforated floor of the upper chamber in which the pottery was arranged for firing. Such kilns were essential for firing fine pottery that required controlled conditions.

—Jane R. McIntosh

plants, wood, bone, and antler. Other types of stone were made into axes, adzes, and heavy tools such as grindstones.

In the early periods, bone was used particularly for leather-working tools such as awls, points, and scrapers and later for spatulae used on pottery. Most were made from sheep, goat, and gazelle metapodia. Ribs were used as pottery polishers and weaving and basket-making tools. Bone was also made into needles, punches, chisels, and hafts. Beads, rings, and pendants were made of bone and ivory. An elephant's tusk, grooved for dividing into pieces, was found in period II.

In the early periods, long bones were divided using the groove-and-splinter technique, allowing each to furnish several artifacts. Later, when metal tools became more common, only one object was made from each long bone. Bone artifacts were shaped and finished with flint scrapers and sandstone rasps.

Baskets and mats made by coiling or weaving local reeds or grasses survive only as impressions on other materials. Before pottery was developed, baskets coated with bitumen made watertight containers.

Discarded bones, many points and awls, and chunks of red ochre (used in preparing hides) identify one area as a leather workshop. Leather was used for making garments and many other objects. After period IV, there were fewer leather-

working tools, perhaps indicating a shift to woven textiles. Textile traces inside a bracelet of copper beads from a late period I grave are currently the world's earliest evidence of cotton thread.

A few beads found in period I graves were made of native copper, cold-hammered into a narrow strip that was wrapped around a rod. Although crucibles are known from period II onward, copper slag is absent: smelted copper was perhaps brought in as ingots, to be melted and cast into various objects here. Many traces of copper tools used on other materials, including saws, chisels, and drills, attest to the importance of copper from period III onward. Gold was also worked.

Beads, strung into necklaces and bracelets, were always important at Mehrgarh. In period I, copper, calcite, and steatite beads were made here, while those of shell, lapis lazuli, and turquoise were acquired from external sources. By period III, however, these materials were also worked at Mehrgarh along with carnelian and ivory and later agate and jasper.

The most common bead type was a small thin disk. Steatite roughly shaped by chipping and grinding into a hexagonal or octagonal cylindrical rod was then sawed into bead blanks. Each was perforated from both sides, using a flint drill in periods I and II, probably set in a wooden handle that was spun between the hands. From period III, cylindrical jasper or phthanite micro-drills were used with a bow drill. The disks were tightly strung together on a thread and rubbed against a grindstone with sand and water until the beads were worn circular. Spondylus shells broken into small pieces were made into disk beads in the same way. Other bead shapes, made from shell and a variety of gemstones, were worked individually by chipping, grinding, drilling, and polishing.

From period IIB, some steatite beads were heated to harden them and change their color from black or dark green to white. By period IV, some beads were coated with a copper-based glaze before firing, creating a type of faience; this required a controlled kiln temperature of around 1,000 degrees centigrade.

Shell bangles were also made, mainly using a single *Turbinella* shell. The apex and interior

parts were removed by sawing, then the bangle blank was smoothed and finished by grinding. Small shells were perforated as beads, and large bivalve shells were perforated near one edge as pendants.

A small amount of pottery began to be made in period IIA, built up from slabs of chaff-tempered clay. Clay might also be pressed into the inside of a basket; after drying, the clay vessel was coated in an outer layer of clay. In period IIB some of the pottery was finer and vessels were sometimes given a red slip. By period III, pottery was often of fine quality, made of a finely worked paste without vegetable temper, though chaff-tempered coarse-ware vessels also continued. Vessels were often finished by scraping with a bone spatula while turning on a tournette (slow wheel), then polished with a bone tool. Later, some vessels were also shaped on the tournette. It was not until period VII (around 2700–2500 BCE) that the true potter's wheel came into use.

Often the pots were painted. The designs became more elaborate with the appearance of a sophisticated technique of polychrome decoration in IIIB. Very fine clay mixed with haematite was used as paint. Those parts of the design that were to remain red were executed in paint mixed with a flux (perhaps potassium) that caused it to fuse at a relatively low temperature in the first firing, in oxidizing conditions. Heating to a higher temperature in reducing conditions then turned the remaining painted designs black and fused them. Finally, the vessel was again exposed to oxidizing conditions, returning unpainted areas to a buff color.

A potters' quarter of period V (around 3300 BCE) included an open area for bonfire firing and two storerooms with many finished pots. Other stores of pottery, fuel, pigment, kilns, pottery-making tools, and combs for decorating pots were also found. Mehrgarh's potters apparently produced fine wares and ordinary domestic pottery in separate workshops.

Ordinary pots were fired in a simple bonfire kiln. They were stacked over a layer of fuel and covered with sherds and a layer of dust and ash, then more fuel, and finally a sealing layer of clay, with the mouth of a broken jar in the top as a smoke hole and others around the edges to draw

in and circulate air. After lighting, the bonfire kiln burned for one to three days and was left for a further week to cool.

The people of period I produced a few very simple unfired clay figurines, crudely representing a seated human torso and legs. These gradually became less stylized, with the successive addition of breasts, a rod head, a pinched nose, and hair. Figurines began to be mass-produced in period VI; these were much more naturalistic, with bored circular eyes, spherical breasts, necklaces of applied clay, clasped arms, and a peculiar hairstyle or headdress. From late period VI, naturalistic hair was substituted, painted black, often with a red parting. Designs now included male figurines in turbans or with curly hair and various animals, particularly humped bulls. The majority were now shown standing rather than seated. Realism increased in period VII, with modeled, painted, incised, or appliquéd features, jewelry, hair, and headdresses. Huge quantities of figurines were produced at Mehrgarh in this period.

—Jane R. McIntosh

Bibliography

- Jarrige, Catherine, et al. *Mehrgarh: Field Reports 1974–1985*. Karachi: Department of Culture and Tourism, Sindh/French Ministry of Foreign Affairs, 1995.
- Lechevallier, Monique. "The Flint Industry of Mehrgarh." In *South Asian Archaeology, 1981*, edited by Bridget Allchin. Cambridge: Cambridge University Press, 1984.
- Pracchia, Stefano. "Excavations of a Bronze-Age Ceramic Manufacturing Area at Lal-Shah, Mehrgarh." *East and West* 35 (1985): 458–468.
- Vidale, Massimo. "Early Beadmakers of the Indus Tradition: The Manufacturing Sequence of Talc Beads at Mehrgarh in the Fifth Millennium B.C." *East and West* 45 (1995): 45–80.

The Manufacture of Fine Stone Objects and Jewelry

From the period 4000–1000 BCE, increasingly sophisticated skills developed for the production of gems, jewelry, and fine stonework. The basis of stonework is abrasion, rubbing the stone to be carved with another substance over and over again, which is a lengthy practice. Prior to this,

➤ “ANCIENT KNOCKOFFS”—HARAPPAN STONEWARE

Given the difficulties involved in carving stone, it is not surprising that copies of ancient stone are found in the archaeological record. These skeuomorphs (objects of one material made to look like another material) were cheaper and easier to manufacture but evoked some of the qualities of stone. In the Indus Valley, stone bangles were luxury objects. A cheaper alternative would have been stoneware bangles, ceramic rings that were highly fired. These ceramics were either blackish-gray or pinkish in color, but they were covered with a white mottling that replicated the look of stone.

—Kevin M. McGeough

➤ JEWELRY FROM DAHSHUR, EGYPT



Pectoral with double portrait of Amenemhat III smiting an Asiatic beneath the wings of Nekhbet, Twelfth Dynasty. (Scala/Art Resource, NY)

Most of the Dahshur Jewelry, now in the Cairo Museum, was found by Jacques De Morgan during 1894–1895 in nearly intact tombs within the pyramid complexes of Amenemhat II, Senwosret III, and Amenemhat III at Dahshur. During 1994–1995, the Metropolitan Museum of Art team discovered additional pieces within the pyramid complex of Senwosret III. Belonging to the female members of the Twelfth and Thirteenth Dynasties (1850–1650 BCE) royal family, the jewelry made of various precious metals and stones exemplifies Middle Kingdom Egyptians’ superb skills, creativity, and taste in their decorative art. Similar jewelry was also found at el-Lisht and el-Lahun.

—Kei Yamamoto

stone tools were used along with abrasive substances, such as ground-up quartz or sand, to carve elaborate stone pieces. With the advent of metallurgy, these artisans could use copper and bronze tools to carve the stone, allowing for greater precision. The basic practice, however, remained the same. An abrasive substance was added to the stone being carved, and a drill was twisted back and forth on the spot until the appropriate depth was reached. Sometimes the drill was turned back and forth by hand; more effective was the use of a bow. By attaching a bow to the drill and moving the bow backward and forward (like playing a violin), the drill could be spun faster, more evenly, and for longer periods of time. Stone vessels, gems, and beads were worked on with drills powered by bows. Intricate designs were carved onto gems by gradually moving the drill horizontally across the gem. When these ancient gems are viewed under a microscope, the abrasions from the drill are often apparent. On poorly crafted gems, the circles left from the drill are readily apparent in the decoration.

Bead manufacturing is depicted on the walls of the Tomb of Rekhmire in Egypt; there the bead maker is shown drilling three beads at once. Other evidence comes from archaeological excavations at the site of Chanhudaro, in the Indus Valley. There, a bead-manufacturing workshop was excavated. At Chanhudaro, long carnelian beads were manufactured from materials that were imported from mines in far-off Gujarat. Long pieces of carnelian, after having been brought to Chanhudaro, were left out to dry in the sun for several months. Given the seasonal monsoons in Pakistan and India, there would have been a relatively tight window in which to do this. After drying, the carnelian was heated in ovens to make it easier to work. The outsides of the beads were carved using pressure flaking (a gradual exertion of pressure on the stone) or through indirect percussion (hammering another tool so that it rubbed against the stone). A long drill was then heated and, using a bow, drilled through the bead (possibly while the bead was under water, which would have sped up the process). Given the length of these pieces of carnelian, it would have taken at least 24 hours

to drill a hole straight through. One estimate for the length of time it would have taken to manufacture a typical Indus Valley belt is 480 days!

Nonstone jewelry that has survived archaeologically is mostly made of metal (often, as is the case today, metal and stone were combined to create pieces of jewelry). Metal casting was very common, as was hammering sheet metal into a desired shape. Wire for necklaces was hand wrought, and gilding could be used to make inexpensive materials look more expensive. Much Egyptian art consists of wood gilded with gold, giving the objects a lavish appearance. Enameling, in which powdered glass was heated onto a metal surface, thus fusing the two substances together, was also common.

—Kevin M. McGeough

Bibliography

- Guntner, A. "Material, Technology, and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.
- Markowitz, Y. "Jewelry." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Shaw, I. "Gems." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Stocks, D. "Stoneworking." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.

The First Glass

Glass is a substance that retains some of the properties of a liquid after it has been cooled to a solid state. The first glass used by humans was obsidian, a naturally occurring glass. Obsidian, which is formed when volcanic lava cools very quickly, can be extremely sharp and is very versatile. The first synthetic glass was produced in Egypt. These first glasses, which took the form of ceramic glazes, were probably accidentally discovered during the manufacture of pottery.

For about 1,500 years, glass was used mostly as a glaze. By the Middle Bronze Age in the Near East, glass vessels started to be formed. At this

FAIENCE

While the word "faience" has different connotations in different contexts, Egyptian and Indus Valley faience are types of nonclay ceramics that are glazed and are composed primarily of sand or crushed quartz mixed with lime or a similar substance. Egyptian faience has a blue-green color and was widely used in ancient Egypt due to its relative ease of manufacture, ease of shaping, and brilliant color. The compounds are first ground into powder and then mixed with water into a paste that can be easily shaped by hand. Sometimes, faience was mixed with alkali salts so that when the object was put into a kiln, the salts rose to the surface, giving the object a shiny look. Other times, the object would simply be buried in a mixture so that afterward, when the object was fired, a chemical reaction would occur, fusing the two substances. When used as a ceramic glaze, it is painted directly on the pottery before the vessel is fired.

—Kevin M. McGeough

time, glass appeared throughout the Near East, the eastern Mediterranean, and the Indus Valley, although the finest-made glass was produced in Egypt. Most glass was created in small workshops. In these workshops, glass chunks were created by melting all of the ingredients together and quickly cooling them. Sometimes the first glass would only be melted at a very low heat. After cooling, it would be ground up into a powder or paste and then heated again until melting, creating a much finer quality of glass. These chunks of glass could later be melted and formed into the desired shape.

Glass beads were made by forming the glass around a rod, which could be removed after the glass cooled. Glass figurines were melted in molds, creating elaborate designs. Glass inlays would be cut from long sheets of glass; these pieces of glass would then be inserted into larger pieces of art, furniture, or architecture. Glass vessels were formed around a core that could withstand heating but could also be removed again after cooling, usually a combination

of metal and wood or ceramics. While the glass vessel was still on the core and still hot, it would be marvered (smoothed) along a flat surface. Decoration could be added at this time by winding threads of molten glass along the edge, placing lumps of molten glass on the sides, or attaching cooled glass handles with molten blobs of glass. Mosaic vessels were formed by assembling small rods of different-colored glass (called canes) over a solid core. The canes were then covered by a solid mold, and the whole object was heated. After being heated, the mold was removed, and the surface was marvered. The end product was a multicolored glass vessel with a geometric design.

—Kevin M. McGeough

Bibliography

- Guntner, A. "Material, Technology, and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Nicholson, P. "Faience." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Oppenheim, A. L., et al. *Glass and Glassmaking in Ancient Mesopotamia*. Corning, NY: Corning Museum of Glass Press, 1970.
- Schlick-Nolte, B. "Glass." In *The Oxford Encyclopedia of Ancient Egypt*, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Whitehouse, D. "Glass." In *The Oxford Encyclopedia of Archaeology in the Near East*, edited by E. Meyers. Oxford: Oxford University Press, 1997.

■ Introduction: Taxation and Tribute

Taxation and tribute were two major sources of income for the governments of ancient polities. Taxation refers to regularized payment owed to the government by members of the polity. Payment was made in a number of different media, often either goods or services. Compulsory labor and military service were arguably the most common types of regularized payments. Customs dues on imports, which can be considered a type of taxation, were also levied in certain situations. During this period (4000 to 1000 BCE) taxes were not intended to pay for infrastructure or other services that the government performed for the population at large. An ancient Egyptian or Shang dynasty peasant (in China) would not have thought to ask for a reckoning of how the government was spending "their taxes." These were payments that they were forced to make through threat of violence or legal sanction. It is better to think of ancient taxation as a means that the government had of skimming off the top of economic producers within the polity. These payments could be used by the governments at their own discretion. Typical uses included the payment of military expenses, the construction of royal monuments, and the payment of tribute to other pol-

ities. For the most part, tax revenue was used by the king at his own discretion for his own maintenance and for his own pleasure.

Tribute, on the other hand, typically refers to irregular (or semiregular) payments made between different polities, almost always from a subordinate polity to a more powerful one. The two polities involved in the transaction may have both been independent states, or one of the polities may have been a region that was formally subsumed into the empire of the more powerful polity. These tribute payments were usually referred to as gifts. The more powerful state may have demanded a "gift," or the weaker state may have offered a "gift." In the interstate correspondence in the Near Eastern Bronze Age, weaker states referred to themselves as the "sons" of more powerful states, whose leaders were called "father." This language of gifting and familial relationship was used to smooth over the tribute transaction and to reinforce the relationships that were being built by the tribute payment. Smaller polities often benefited from making these payments, as the relationship with a larger polity could have brought with it security from other rival states as well as access to goods and services available within that larger polity. Items

that were given as tribute varied dramatically, from staple crops and mineral resources to exotic goods (especially products derived from animals available only within the region of the smaller polity). Military service or specialist labor was sometimes provided, and princesses were sent as tribute to become wives in the royal court and further cement the relationship between the two powers.

—Kevin M. McGeough

Egyptian Taxation

The ancient Egyptians are famous for their monumental architecture, such as the pyramids at Giza. Such projects were undertaken by the state and were expensive, requiring thousands of laborers, raw materials for building, and food and lodging for the workers. In order to pay for their public works projects, the Egyptian state collected taxes. Ancient Egypt was a nonmonetary society, and as such things were bought and sold using goods such as food, minerals, or household items. The same is true of wages. A worker was paid in the form of food items (grain, beer, meat) or other objects of necessity (linen, wicks for lamps, etc.). Taxes to the Egyptian state were paid in the form of grain, minerals, meat, leather, textiles, and labor. Called *corvée* labor, people who had to pay their taxes as part of mandatory labor worked on state-run projects such as building a temple, digging a canal, or the like. The collected taxes paid for such things as temple endowments, military garrisons, royal works (e.g., building tombs), the upkeep of the royal household (e.g., all the palaces and their staffs), and governmental employees.

The evidence for taxation in ancient Egypt goes back to the First Dynasty. The Palermo Stone written in the Fifth Dynasty lists the kings from the First through Fifth Dynasties and their tax assessments and census data. Because so many of the taxes were paid using agricultural goods, it was essential for the Egyptian government to know how good the harvest was going to be each year. They did this by assessing each field throughout Egypt according to its potential to be flooded. Those fields that were flooded yearly by the Nile could produce much more grain than those that required artificial irriga-

tion. Nilometers, placed at intervals up and down the Nile River, recorded the height of the river. Complex equations then determined how much the government could expect at harvest time. This, in turn, determined what that year's taxes would be.

A large bureaucracy was created in order to collect taxes and then distribute the goods to the appropriate people and institutions. The department of the granary collected grain taxes, while the treasury of the pharaoh collected everything else. This was coordinated and overseen by the vizier, the highest public official after the king. District officials and town mayors collected taxes at the local level and delivered them to the vizier. Failure to deliver the expected taxes meant harsh punishment at every level. The Sixth Dynasty tomb of vizier Khentika depicts the punishment of five district governors accused of misappropriation of taxes. A person failing to show up for *corvée* duty could be sentenced to serve the government forever.

Throughout Egypt's history it controlled many countries around it. While several of these countries remained largely independent, they paid the Egyptian state tribute (a form of tax) as a show of submission. Refusal to pay tribute was seen as rebellion and could lead to invasion and destruction. Foreign tribute helped Egypt obtain many of the basic goods that it did not produce, such as lumber and gold. Lebanon sent cedar trees, Syria sent boxwood, Nubia sent gold, and grain came from Canaan/Palestine.

No one likes to pay their taxes, and the ancient Egyptians were no different. A tax exemption from the king was highly sought after. Exemptions were most commonly given to temples but could go to individuals. A temple with a tax exemption did not give any revenue to the state, and their employees did not have to report for *corvée* labor. Interestingly, although most temples had lands from which they could sustain themselves, many also received endowments from the state that were funded using taxes.

—Vanessa Smith

Bibliography

Janssen, Jac. J. "Prolegomena to the Study of Egypt's Economic History during the New Kingdom." *SAK* 3 (1975): 127-185.

Katary, Sally L. D. "Taxation." In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. Oxford: Oxford University Press, 2000.

Kemp, Barry. *Ancient Egypt: Anatomy of a Civilization*. 2nd ed. London: Routledge, 2007.

Mesopotamian Taxes

In the earlier third-millennium Mesopotamian cities, substantial estates were owned and administered by temple authorities and kings. Economic texts mainly record the official receipt, storage, and distribution of agricultural produce; the management of state-controlled craft production, particularly of textiles; and details of officially sponsored trade. Land was also privately owned, and as the millennium unwound, kings came increasingly to control land and the bureaucracy as shepherds of the people, answerable to the tutelary god for the well-being of city and state. The most detailed and comprehensive administrative records come from the reign of the Ur III king Shulgi (2094–2047 BCE), when the state had almost total control over the econ-

omy. In succeeding centuries, private enterprise grew in importance. Merchants' private archives give an insight into the organization of production and the flow of goods and materials.

Several mechanisms ensured the movement of goods and services between producer and state or employer: taxation or tribute, rent and the repayment of investments, and waged or compulsory employment. More haphazardly, booty from warfare also filled the state coffers and licensed looting the baggage of private soldiers and army officers.

In the early city-states, offerings of agricultural produce and other commodities were made to the temple; in effect, these were taxes to support the state, which was viewed as the tutelary god's personal estate, maintained by its citizens. A late-fourth-millennium alabaster jar from Uruk vividly depicts a donative ceremony, where people in procession bring baskets and jars of grain and fruit as well as animals and artifacts, which the priest presents to the deity. Making such gifts symbolized the individual's membership of and participation in the community. At a higher

➤ INVESTMENT IN MESOPOTAMIA

Considerable state and private revenue came from rents, investment, and landownership. Both temples and kings were major landowners, and in the case of conquered territory, the state might claim ownership of all the new land or confiscate large tracts from defeated leaders. These lands were granted to members of the royal household, powerful nobles, military or civil administrators, and temple dignitaries, and smaller holdings were granted to lesser officials and state or temple employees in return for military or various forms of civil service. The lands could be farmed directly by these people and their households, managed for them by local officials or smaller landowners, or rented out to peasants. Areas of state land might also be rented by private entrepreneurs, particularly in later times. Land could also change hands privately; the price of a field in Sumerian times was equivalent to a year's anticipated yield, although typically its rent was between a quarter and half of the projected or actual yield, assessed annually. Similarly, contracts were negotiated between

pastoralists and the owners of herds and flocks. More complicated agreements were made whereby a return was not expected within a single year. For example, according to Hammurabi's law code, when land was rented to create an orchard, no rent was payable for five years, at the end of which the land, with its fruit trees, was divided, half going back to the landowner and half to the tenant, with the proviso that the latter include in his share any part of the plot that he had failed to plant with trees. Both state and private investors participated in financing trading expeditions, putting up capital or making loans against interest from the eventual profits. Surplus goods, materials, or foodstuffs accumulated by the temple or palace from their taxes and tithes and from their lands and industrial activities could be sold to merchants, often as futures not yet received by the authorities, introducing legal complications if their tenant or employee failed to produce the goods to which title had been transferred.

—Jane R. McIntosh

level, the Sumerian city-states recognized Nippur, seat of the chief deity Enlil, as their religious and symbolic center, and all contributed to the upkeep of Enlil's temple, the Ekur, by making offerings on a rotating basis. A parallel institution may have united the city-states of the middle and upper Euphrates around the temple of Dagan at Tuttul, and Subartu (later Assyria) may also have had such a confederacy. Such offerings continued later. Under King Shulgi, the provinces, which largely corresponded to the traditional city-states, took turns contributing to the upkeep of Enlil's shrine, in proportion to their wealth. Enormous numbers of animals and quantities of grain and other produce were centrally accumulated and distributed as necessary to maintain the personnel of the temple, bureaucracy, and state industries; these offerings (taxes) were known as *bala*.

The state exacted revenue through other methods and for other purposes than cultic ones. The Ur III empire controlled not only the core region of city-states but also a periphery of conquered lands along its eastern and northern edges. From these, revenue came in the form of rent (*gun mada* tax) paid by their military governors for the lands that they held and from which they in turn extracted revenue in kind. A similar arrangement had operated under the earlier Akkadian empire, where large areas of confiscated land were granted to Akkadian military colonists. In later times, defeated states were left under puppet native rulers or placed under Mesopotamian governors who paid tribute or taxes to the state, collecting these from their own subjects.

A variety of private activities could attract taxes. For example, the merchant houses that conducted trade between Assur and Anatolia in the nineteenth century BCE paid export taxes on their goods when they started out from Assur and import duties to the Anatolian authorities.

—Jane R. McIntosh

Bibliography

- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Millard, Alan. "Money" and "Taxation." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.

- Oppenheim, A. Leo, and Erica Reiner. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Rev. ed. Chicago: University of Chicago Press, 1977.
- Postgate, J. Nicholas. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge, 1994.
- Postgate, J. "Royal Ideology and State Administration in Sumer and Akkad." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Van de Mieroop, Marc. *The Ancient Mesopotamian City*. Oxford: Oxford University Press, 1997.

Minoan Palace Economy

One can expect that at any given time, at least 95 percent of the Aegean economy was dominated by agriculture. Independent or semi-independent farmers raised grains, fruits, and vegetables; pastoralists grazed sheep and goats, and possibly larger cattle, for milk, meat, wool, and even labor; and hunters and fishers supplemented the daily fare. In the home, women and probably children spun wool, wove cloth, sewed clothes, prepared meals, and made the majority of the pottery for household consumption. Trade had existed since the Neolithic period, when obsidian from Melos made its way to all corners of the Aegean. By the Early Bronze Age, copper and then tin appeared throughout the Aegean, copper most likely from Cyprus and tin from much, much farther afield. Also there is evidence that already during the Early Bronze Age, a more organized extra household economy was beginning to develop throughout the Aegean. In Crete, monumental architecture began to appear in Early Minoan II Palaikastro and in Early Minoan III Knossos, revealing the early stirrings of an organized labor force. In Greece, the Early Helladic II town of Lerna had what appears to have been a large central storehouse, where excavators found a collection of clay sealings probably used for identification of producers and for redistribution. Henceforth, one might speak of them having a palace economy, an economic system in which a strong centralized power controlled the production and distribution of non-domestic goods and, presumably, services.

In Palatial Crete, this centralized power consisted of the palaces and, later, the villas. According to Branigan, the five primary economic

functions of Minoan palaces from Middle Minoan III to Late Minoan I were (1) production of manufactured goods, (2) consumption of food and manufactured goods, (3) regulation of local and internal exchange, (4) regulation of international and external exchange, and (5) use as depositories.

The production and storage of manufactured goods are evident from the digs at Phaistos and Mallia. Excavations of the earliest phases at Phaistos (Middle Minoan I–Middle Minoan II) revealed two areas dedicated to economic activity. Unit A contained several large storage vessels originally filled with foodstuffs, including liquids such as wine and oil. Nearby Unit B was the palace workshop. Here, excavators found tools used for stoneworking (a lapidary workshop), several loom weights (a weaving workshop), and two potter's wheels (a ceramics workshop). Clay sealings from a smaller room in Unit B may indicate where finished products were processed for storage or export. By the second phase of the palace, there were even more food storage vessels present, and an actual archive room was created.

Similar finds appeared at Mallia. In the northwest quarter of the palace, excavators discovered obsidian, soapstone, and a reddish stone called rosso antico, all evidently part of the lapidary workshop. A potter's workshop was also present within the palace walls. During the Middle Minoan II period, a bronze smithy was located just outside the palace walls. It is actually surprising that such an industry would be so close to any residential quarters, considering the unpleasant fumes given off by the work and the rather high potential for fires. Nevertheless, by the Middle Minoan III period, the palace walls were actually extended so that the smithy was located within the palace itself. Clearly, this was an industry over which the palace wanted to keep very close control.

The role of Minoan palaces as depositories and regulators of local distribution and trade may be seen in the *koulouras*, large stone-lined pits located at Knossos, Phaistos, and in a slightly altered guise at Mallia. There is continued debate as to the purpose of these huge storage bins. Evans suggests that they were rubbish pits. Some modern scholars believe that they were giant tree planters. But the usual interpretation

is that they were for grain storage, with the *koulouras* at Knossos being able to hold enough grain to feed 1,000 people and the *koulouras* at Phaistos being able to hold enough for 300 people. In such a case, the palace would have received a substantial portion of the agricultural produce of the surrounding farms, stored it, and then distributed it to the more specialized non-agricultural populace of the palace region.

Palatial control over foreign trade is more difficult to prove archaeologically, as there is often no way to determine where on Crete any specific item found abroad was made. One argument often brought to the fore is that only the palaces would have the capital (to use a modern term) to finance the goods and shipping for long trade journeys, not to mention to handle the risks of possible sea wrecks. Another argument, however, lies in the nature of the Minoan goods found abroad. For example, Kamares Ware pottery has come to light on the coasts of Cyprus, Egypt, Palestine, Canaan, and Syria. This Kamares Ware is clearly a product of palatial manufacture. The ceramics from before and after the classical Kamares wares are clearly local creations, Knossian Ware being distinct from Mallian Ware. By contrast, the Kamares Ware made in the palaces is similar from palace to palace but is utterly distinct from the provincial wares. Therefore, we might argue that the Kamares wares found in the Near East are definitely from palatial production centers. The number of foreign goods stored in the palaces, especially Zakro, also gives evidence for the palatial control of international exchange.

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Bibliography

- Branigan, K. "The Economic Role of the First Palaces." In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Skrifter Utgivna av Svenska Institutet, 1987.
- Burke, B. "The Organization of Textile Production on Bronze Age Crete." In *TEXNH: Craftsmen, Craftswomen and Craftsmanship in the Aegean Bronze Age*, edited by L. Laffineur and P. P. Betancourt. Liège, Belgium: Université de Liège, 1997.
- Gillis, C. "The Smith in the Late Bronze Age—State Employee, Independent Artisan, or Both?" In *TEXNH: Craftsmen, Craftswomen and Crafts-*

- manship in the Aegean Bronze Age*, edited by L. Laffineur and P. P. Betancourt. Liège, Belgium: Université de Liège, 1997.
- Killen, J. "The Textile Industries at Pylos and Knossos." In *Pylos Comes Alive: Industry and Administration in a Mycenaean Palace*, edited by C. W. Shelmerdine and T. G. Palaima. New York: Archaeological Institute of America, 1984.
- Pelon, O. "Minoan Palaces and Workshops: New Data from Malia." In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Skrifter Utgivna av Svenska Institutet, 1987.
- Walberg, G. "Palatial and Provincial Workshops in the Middle Minoan Period." In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Skrifter Utgivna av Svenska Institutet, 1987.
- Wiener, M. "Trade and Rule in Palatial Crete." In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Skrifter Utgivna av Svenska Institutet, 1987.

Mycenaean Palace Economy

The Mycenaean palatial economy did not differ in many respects from the Minoan. In fact, the Mycenaeans seem to have taken over the trading posts once used by the Minoans, as well as the palace of Knossos, after 1450 BCE. The fact that the Mycenaean palaces fulfilled the same roles as the Minoan is evident from the archaeology, which reveals palaces on the Greek mainland functioning as producers and storers of manufactured goods. This is particularly evident at the palace of Pylos in southwestern Greece. Surrounding the *megaron*, or main throne room, was a series of rooms used for the storage of oil and ceramics. One room contained 850 pots of varying shapes, and another contained a total of 2,853 drinking cups. To the east and northwest of the palace proper were industrial buildings containing storage jars, pieces of bronze, clay sealings from "packaged goods," and even bits of ivory. Farther on were remains of a potter's kiln with discarded bits of pottery lying about it.

Archives discovered at the Mycenaean palaces containing records written in Linear B, the early Greek script used by the Mycenaeans, give further insight into the functionings of the Mycenaean palace economies. The palaces maintained extensive control of the nondomestic areas

of production through careful control of the acquisition and distribution of raw materials, the maintenance of several key personnel in the palace industries, and the tallying of produced goods. The similarities and contrasts among three separate industries will serve to show the various machinations of the Mycenaean bureaucracies.

Textiles were an important Mycenaean commodity. Beyond just the household production of cloth and clothing, the palaces produced textiles for their own use as well as for export. Numerous Linear B tablets record the various components of this textile industry. For example, the Da-g and Dn series of tablets from the archives at Knossos show that some 80,000 to 100,000 sheep were grazed in central Crete. Some tablets show how much wool was expected from these sheep; others show how much wool and offspring were expected (it seems that one group recorded males, while the other recorded females). Later, the Dk and Kl tablets revealed that these flocks produced about 30–50 tons of wool, which was collected and brought to palatial workshops, where the Lc tablets show how this wool was allocated. Here, the Linear B A-series of tablets reveals that the workers in these workshops were predominately women, usually identified only through what they did or where they were from. Many women were listed with girls and/or boys associated with them. Perhaps they were mothers working with their children or older women training girls and boys too young yet for other employment. It is clear from these documents that food rations were provided for the textile workers. This plus their namelessness and the fact of their foreign origins may suggest that the workers were slaves, although the word *do-e-ro* (= *doulos* = "slave") does not appear.

The L series of tablets covers the target production set for these worker groups, including the allocations of raw materials that they were given to process. These allocations refer to the still rather ambiguous word *ta-ra-si-ja* in the tablets. Currently, researchers think that the *ta-ra-si-ja* were individual units of a raw material, be it wool, bronze, or possibly some other material, that the palace gave to workers to turn into finished products, in this case fabric of some sort. When the finished products were collected

by palace officials, the amount of fabric (or whatever the commodity) was reckoned against the amount of the original ta-ra-si-ja to be sure that all necessary materials were used appropriately. In this way, the palaces could administer and control workshops and factories that were not necessarily located within the palaces themselves.

In contrast to the textile industry, bronze smithing seems to have been under less direct palatial control, and the smiths themselves had a higher status than the textile workers. Unlike the textile industry, not all bronze smiths received raw materials from the palaces (although many did), suggesting that there was also some noncentralized free trade taking place. The smiths likewise received no rations from the palaces, and in many instances they actually owned their own slaves.

It is interesting to note that the palace bureaucracies kept track of the smiths to whom they did not send allocations, showing that the centralized powers kept at least some degree of watch and/or control over what may have been the free sector. It is of note that no smithies have yet come to light in Mycenaean territories except one at Nichoria dating back into Middle Helladic times. This suggests that the smithies were located away from the more populated areas, no doubt due to the fumes produced by the industry.

Finally, let us consider a third, highly specialized industry: perfumed oil. The tablets referring to this industry, the Un series, mention what appears to be a master perfumer who worked at the palace itself and who used several different commodities in the production process, including oil, flowers and spices, wool, and even wine. However, the term ta-ra-si-ja, “allocations,” never appears in these perfume production tablets in spite of the fact that it seems to be very much a palace-centered industry. This is probably because of the highly supervised nature of the industry itself. One might imagine the master perfumer working (and possibly living) at the palace, organizing his materials and disposing of his perfume all within the very hub of the bureaucratic system and therefore without the need for an official to keep track of goods sent outside the palace to him. Such a sys-

tem would also be applicable to other industries that made use of specialty items (flowers, spices, precious stones) that were processed at the palaces themselves by master craftsmen and crafts-women. This stands in contrast to the more spread-out and single-material industries, such as the bronze smiths who required bronze and the weavers who required wool or linen. Only these latter fall into the economic category of the ta-ra-si-ja.

These three examples show a spectrum of industries in the Mycenaean economy. At one extreme were industries such as textiles, for which many steps were required between the most basic raw materials (sheep) and the finished product (fabric); in which many, if not all, of the workers in the industry were maintained directly by the palaces through rations; and in which there did not appear to be a private industry operating alongside the palatial one (except, of course, for basic domestic textile production). We might call this a state-owned monopoly based on factories. We might see this as a more freelance industry, with independent or semi-independent smithies doing contract work for the palaces. Finally, there were the luxury item industries, such as perfumed oils, in which the workers worked directly in the palaces in positions that must have attained considerable prestige.

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Bibliography

- Gillis, C. “The Smith in the Late Bronze Age—State Employee, Independent Artisan, or Both?” In *TEXNH: Craftsmen, Craftswomen and Craftsmanship in the Aegean Bronze Age*, edited by L. Laffineur and P. P. Betancourt. Liège, Belgium: Université de Liège, 1997.
- Killen, J. “The Textile Industries at Pylos and Knossos.” In *Pylos Comes Alive: Industry and Administration in a Mycenaean Palace*, edited by C. W. Shelmerdine and T. G. Palaima. New York: Archaeological Institute of America, 1984.

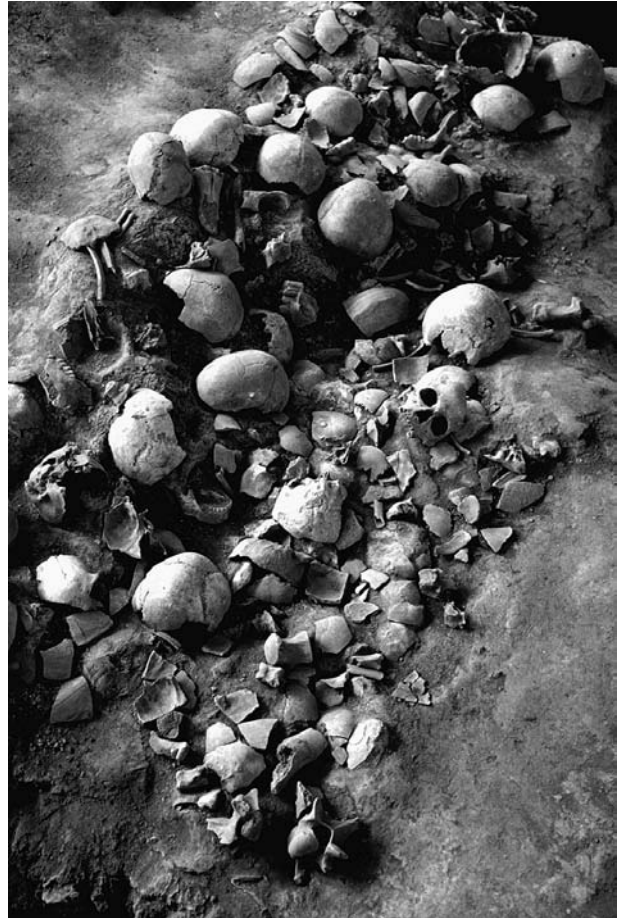
Shang Taxation and Tribute

Since the rise of a communist government in China, scholars have spent much energy studying the relationship between the state and the laboring classes in antiquity. The Shang dynasty

provides the earliest textual evidence for this issue. Given the ideologically loaded nature of this question, any analysis of this problem can be fraught with difficulty. Regardless of modern ideology, it is apparent that the Shang kings were able to marshal a large labor force and had significant authority over the people of the kingdom. The ability of the state to perform human sacrifice demonstrates a significant amount of power. The monumental walls of the Shang cities are a remnant of this state ability to control a large labor force. The construction of such large walls (as well as the platforms on which the palaces of Shang cities were built) would have been impossible without a ready supply of labor.

The residential areas of Shang cities show a wide variety of personal wealth. The most numerous houses are the houses of the poorest. These poorer city dwellers may have been members of the royal workforce. Information about the royal workforce is rather laconic; most of it is gathered from brief notices on divinatory texts, leaving much room for interpretation. It is clear from these texts that lower-status individuals were conscripted for military service, outfitted by the royal armory, and organized into units by royally appointed officials. Laborers were called *zhong* (which translates as “the many”). What exactly was connoted by this term is a heavily debated point. The word *ren* (meaning “person”) also appears in the oracular texts in reference to state service. This term appears to be more neutral than *zhong*, but once again the exact semantic range eludes modern scholars. There is no terminology for slaves, and there are no texts describing the explicit sale of humans. However, the facts of human sacrifice and conscription may mean that distinguishing between slaves and free laborers in Shang society is simply splitting hairs.

A stratified social structure is evident at the intercity level as well. The Shang kings reigned from various capitals but tied the kingdom together through a patriarchal lineage system. As part of the lineage system, smaller localities (and allies that were not formally incorporated into the empire) were compelled to provide the Shang king with tribute. Human labor was an especially important type of tribute; both productive service and military service were compulsory.



Shang dynasty sacrificial site, Zhengzhou, Henen, China.
(Lowell Georgia/Corbis)

Humans for sacrifice were also important tribute offerings. The most frequently recorded forms of tribute were turtle shells and cattle scapulae, the raw materials necessary for divination practices. While there was probably no formal, consistent tribute system, the ability of the Shang kings to exact tribute furthered their political and economic power.

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Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Keightley, David N. “The Shang: China’s First Historical Dynasty.” In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

Lords and Peasants in the Classic of Songs

The *Classic of Songs*, *Shi jing* (*Shih ching*), is the oldest and most revered collection of poetry in a 3,000-year-old literary tradition that places an especially high value on poetry. These songs, primarily from the 9th through 7th centuries BCE, include themes and images that were rooted in even earlier folk tradition and continue to resonate with readers today. Among the 305 poems collected in the *Classic of Songs*, there are numerous folk songs and poetic accounts of daily life that describe the labor, love, experiences, and obligations of aristocrats, officials, and common people. While many early sources in China and elsewhere are written by and about rulers, these songs also transmit folk traditions and commoners' perspectives including a vigorous voice of protest against the exploitation of peasants.

The traditional understanding of the purpose of this collection of songs relates to political di-

mensions as Zhou (Chou) rulers were said to have sent officials to gather these songs in order to assess the welfare and attitudes of commoners. Just as scholars look to these ancient poems in modern times to try to understand the daily life, concerns, and expressions of Chinese people in the Zhou era, this traditional interpretation of the motivation for gathering the songs suggests that rulers of that time were also looking to folk songs as reflections of peasants' sentiments. Admittedly, other traditional attributions about the *Classic of Songs*, such as the idea that Confucius compiled this collection, are quite unlikely. However, regardless of whether the collection came together in accord with that traditional understanding of officials scouring the countryside to survey the populace through their songs, the *Classic of Songs* remains a rich early source for insights about people in the Zhou era.

Each of the following verses from the *Book of Songs* is followed by the initials of the translator (see "Further Reading") and the "Mao num-

► USING ANCIENT CHINESE SONGS AS HISTORICAL EVIDENCE

Traditionally, some of these Zhou (Chou) era songs were attributed to the Duke of Zhou before 1000 BCE, and Confucius has been credited with redacting the *Shi jing* in the middle of the first millennium BCE by selecting and ordering 305 poems from among thousands. Recent scholarship discounts both attributions, as most of the songs were composed from the ninth to seventh centuries BCE, and it is evident that the process of gathering this anthology from a wide array of earlier poems and folks songs preceded the role of Confucius. In fact, Confucius made reference to these songs in his *Analects*. Nonetheless, some of the influence of the *Classic of Songs* stems from the traditional links to the Duke of Zhou and to being among the core Five Confucian Classics. As suggested by the English title, *Classic of Songs*, most or all of the poems/songs (*shi*) in this book/classic (*jing*) were lyrics with accompanying musical scores that have since been lost. The *Shi jing* is alternately translated as the *Book of Odes* or *Classic of Poetry*. However, *shi* does not mean poetry, odes, or songs in general; rather, it is a term for Chinese classical poetry. This form was dominant when the *Classic of Songs* was compiled

circa 600 BCE and remained influential for another 2,500 years. Despite the antiquity of the *Classic of Songs*, the themes and imagery are readily accessible. Some verses were originally folk songs, and others had different origins. Although often adapted to conform to a more consistent poetic form, the various origins and themes are still discernable as distinct types. Along with "Hymns," which may have been ritually chanted in religious ceremonies, there are Greater Elegances, Lesser Elegances, and Airs of the States. While the Greater Elegances include odes to ancient heroes and events, the last two categories offer more glimpses into daily life, with the Airs of the States offering the most direct insight into the daily life of common people. These are the most numerous, and the first 160 of the 305 poems in the traditional Mao order fall into this category. The Airs of the States poems are also the most accessible due to their simpler style and everyday themes, including complaints about peasants' hardships. The Lesser Elegances overlap with this category but are loftier in tone and somewhat more likely to reflect historical events or provide glimpses into aristocrats' lives.

—John Harding

ber”, which identifies the song according to the dominant order for songs in the collection. This order, which was established more than 2000 years ago by two editors named Mao, corresponds to the four divisions of song types. The following song epitomizes the bluntness of a hardly-veiled critique leveled by peasants against their feudal lords and related officials, who are depicted as ungrateful rats rather than esteemed superiors.

Big rat, big rat,
don't eat my millet!
Three years I've served you
but you won't care for me.
I'm going to leave you
and go to that happy land,
happy land, happy land
where I'll find my place.
Big rat, big rat,
don't eat my wheat!
Three years I've served you
but you do me no good.
. . . Big rat, big rat,
don't eat my sprouts!
Three years I've served you
but you give me no comfort. . . (BW, 113)

While the peasants' cries of “big rat” offer blatant complaints of mistreatment and woe, there are other songs ostensibly about something else that have been interpreted as criticism of oppressive rulers. The following is such a song where the common theme of love has also been understood as distress about the pitiless government and perhaps even a call to leave their uncaring rulers for another state.

Cold is the north wind,
the snow falls thick.
If you are kind and love me,
take my hand and we'll go together.
You are modest, you are slow,
but oh, we must hurry!
Fierce is the north wind,
the snow falls fast.
. . . If you are kind and love me,
take my hand and we'll ride together.
You are modest, you are slow,
but oh, we must hurry! (BW, 41)

Some verses describe the work of the common people. For example, Mao #154 is a long song detailing cyclical obligations where each month's tasks are in accord with the seasons. Another verse, Mao #112, contrasts the peasants' agricultural occupation with the lords' hunting. This contrast also suggests tensions both because the lord eats the peasants' produce and because his game and hunting grounds are not available to the peasants for their own welfare.

The two poems below are from the “Lesser Elegances” section and criticize a king's misrule. The first describes how a virtuous ruler is “a pattern for the people” before contrasting such a model with this degenerate successor.

The one of today is aroused and seduced by
disorder in government.
He overturns his own power.
He abandons and dissipates himself in
wine.
You devote yourself only to dissipated
pleasures.
You do not ponder your lineage.
Why do you not apply yourself to seeking the
[Way of] former kings
so that you could hold fast to their enlightened
law? (PG, 256)

The second poem includes the reproach to a ruling lord that “People had land and fields but you possess them” among a litany of complaints that are characterized as “Heaven on high” sending “down these great horrors” as punishment for a mismanaged state (PG, 264). The emphasis remains on the king not fulfilling his obligations as king, but in this song, too, the mistakes, neglect, and abuse of the lords translates to suffering for the peasants.

—John Harding

Bibliography

- Bodde, Derk. “Feudalism in China.” In *Essays on Chinese Civilization*. Princeton: Princeton University Press, 1981. Pp. 85–131.
- Goldin, Paul R. “The Odes.” In *Hawai'i Reader in Traditional Chinese Culture*. Edited by Mair Steinhardt and Goldin. Honolulu: University of Hawai'i Press, 2005. Pp. 35–44.
- Karlgren, Bernhard. *The Book of Odes*. Stockholm: Museum of Far Eastern Antiquity, 1964.

Mair, Victor, ed. "Classical Poetry." In *The Shorter Columbia Anthology of Traditional Literature*. NY: Columbia Univ. Press, 2000. Pp. 61–146.

Shaughnessy, Edward L. "Western Zhou History." In *The Cambridge History of Ancient China From the Origins of Civilization to 221 B.C.* Edited by Michael Loewe and Edward Shaughnessy. Cambridge: Cambridge University Press, 1999. Pp. 292–351.

Waley, Arthur, trans. *The Book of Songs*. NY: Grove Press, 1937.

Watson, Burton, trans. and ed. *The Columbia Book of Chinese Poetry: From Early Times to the Thirteenth Century*. NY: Columbia Univ. Press, 1984.

Yu, Pauline. "The Book of Songs" in *Masterworks of Asian Literature in Comparative Perspective*, edited by Barbara Stoler Miller. Armonk, NY: M. E. Sharpe, Inc., 1994. Pp. 211–221.

■ Introduction: The Myth of the Temple Economy

A common misconception about ancient Mesopotamia, and particularly about the people living in the region often referred to as Sumer, is that the economic life of these people was organized around the temple. Early historians who studied Mesopotamia were influenced by the nineteenth-century evolutionary models purporting to describe the development of civilization. These scholars often interpreted ancient economic practices according to the model rather than through strict analysis of evidence. They assumed that the earliest economic systems reflected egalitarian ideas. As a society became more complex, temples and religious organizations would take over as the economic organizers, eventually to be supplanted by political authorities, such as kings or other governmental authorities. This type of evolutionary framework was appealing to early historians since it was simple to understand and easily fit the evidence at hand. Now, however, most historians find this framework too simplistic, and indeed the more evidence that is found, the more difficult it is to reconcile this evidence with generalized evolutionary models.

It is easy to understand why the first Sumerologists argued that the earliest complex economies were run by religious institutions. Many of the oldest surviving Sumerian documents are tablets from ancient temples. These tablets are not ritual or mythological tablets, as one might expect tablets from a temple to be. Instead, they are economic documents, receipts or contracts that record the exchange of barley, animals, and other agricultural products. These tablets are of-

ten very difficult to read, and usually no information is preserved about why the tablets were inscribed or why it was necessary to record this information. Since there is so much room for historians to interpret these tablets, numerous arguments have been made about what kind of economic transactions they represent and why they were written.

Most historians now working with these materials no longer believe that the temple organized the ancient economy. Instead, historians understand that religious institutions engaged in complex economic activities and practices, activities and practices that would be more often associated with a farm or ranch today. These temples did not control the ancient economy but were simply wealthy organizations that played a prominent role in ancient economic life.

—Kevin M. McGeough

The Economy of Mesopotamian Temples

Temples and temple complexes are far and away the largest structures found at Mesopotamian sites dating to the fourth and third millennia BCE. Sites such as Khafajeh had temples that took up a vast amount of space and used a significantly larger number of building materials than any other buildings. These early temples contained a much wealthier material culture than other types of buildings, most notably the elaborate statuary that was the focus of early Mesopotamian ritual practices. Given the amount of effort expended to construct such monumen-

tal buildings and the sophistication of the wealth and materials found inside, the archaeologists and historians who uncovered these temples in the early twentieth century argued that the religious leaders must have been in control of the economy. Furthermore, many documents found within these abandoned temples attested to a high degree of economic organization. Scholars working in the early twentieth century argued that temples dominated the economy of early Sumerian cities and controlled the economic actions of the people who lived in proximity to the cities.

In contrast to the large temples filled with riches and elaborate goods, what little domestic architecture these early archaeologists uncovered was simple and small. Goods found within the houses were usually utilitarian and included pottery, food manufacturing equipment, and textile manufacturing equipment. The materials found within each house seemed similar, and little social differentiation was readily apparent.

Based on the situation in these early Sumerian sites (large wealthy temples alongside small poor dwellings), early historians described the Sumerian economy as a temple economy. In a temple economy, it was believed that the highest meaningful level of governance was at the city level. Each city was owned by a particular deity. The priests and temple personnel organized production and distribution within the city and in its hinterland, creating a planned economy that Henri Frankfort described as theocratic socialism. The temple owned all of the means of production, from ploughs to draft animals to seed for crops. These resources were distributed to the various individuals as they needed them during the year. The goods produced with these resources were given directly to the temple, and the temple then redistributed these goods to the population at large. It was not only agricultural workers who participated in this temple economy scheme but all workers: fishermen, metalsmiths, and potters. In the reconstructions of some scholars, each worker kept the surplus of goods that he or she produced after reaching a quota required by the temple. Redistribution then was not on such a large scale but would occur periodically at feasts or at certain holidays.

➤ SUMERIAN TEMPLE RECEIPTS

Sumerian economic texts are particularly difficult sources for historians to work with. Usually written quickly, these clay tablets contain minimal information, usually a simple record of a particular economic transaction. The rationale for the transaction is almost never recorded, and only rarely is any information given about the individuals or institutions involved in the transactions. The following texts are translations of tablets found in a drainpipe at the site of Fara describing the deliveries of goats to various temples in the city by a man named Urni. Texts such as these are typical of the materials Sumerologists use to reconstruct ancient economic activities.

Text 1. One kid delivered to the temple of the goddess Sud; one kid delivered to the temple of the God Enlil. Delivered by Urni.

Text 2. Two kids delivered to the temple of the goddess Sud; one kid delivered to the temple of the God Enlil. Delivered by Urni.

Text. 3. One kid delivered to the temple of the goddess Sud; one kid delivered to the temple of the god Utu; one kid delivered to the temple of Enlil. Delivered by Urni.

—Kevin M. McGeough

One of the most compelling arguments in favor of these models was the huge amount of economic records that were recovered from these temples. While the amounts of ritual, religious, and mythological texts found in temples varied from site to site, what almost always remained the same was that there was a significantly higher proportion of economic tablets recovered from these temple complexes. Most of these documents recorded amounts of agricultural products, amounts of crafts, and the names of various people, presumably people who owed or were owed products from the temple. It seemed clear to these early scholars that at least from an administrative perspective, one of the major priorities of these early temples was the organization of economic activities: agricultural production, crafts production, textile production, and the redistribution of such products. Recent scholarship no longer holds this interpretation of temple economic activities as tenable.

—Kevin M. McGeough

Bibliography

- Diakonov, I. "Structure of Society and State in Early Dynastic Sumer." Vol. 1 of *Sources and Monographs: Monographs of the Ancient Near East*. New York: Oxford University Press, 1974.
- Falkenstein, A. *The Sumerian Temple City*. Malibu: Undena, 1974.
- Frankfort, H. *The Art and Architecture of the Ancient Orient*. New Haven, CT: Yale University Press, 1970.

The Reaction against the Temple Economy

Recently the temple economy models have come under attack by Mesopotamian scholars, and it has become apparent that these early scholars misunderstood the evidence. Early historians who studied Mesopotamia were influenced by nineteenth-century evolutionary models of the development of civilization and applied them to their interpretation of ancient economic practices. These historians assumed that the earliest

economic systems reflected egalitarian ideas. As society became more complex, temples and religious organizations took over as the economic organizers, eventually to be supplanted by political authorities (such as kings or governments). This type of evolutionary framework was appealing to early historians since it was simple to understand and easily fit the evidence at hand. Now, however, most historians find this framework too simplistic. Indeed, the more evidence that is found, the more difficult it is to reconcile this evidence with the earlier evolutionary interpretations.

Furthermore, historians such as Henri Frankfort and Anton Deimel had made a significant methodological error. They had not taken into account the context of the tablets that they were studying. Upon reconsideration, it became apparent that these early Sumerologists had only been studying tablets that had come from ancient temples. It was no surprise then that temples had seemed to have been at the center of the economy; of course, the majority of economic records that a temple would have kept would have been about its own economic affairs. These Sumerologists, not recognizing that the tablets that they had read had only come from temples (as opposed to palaces or domestic residences), had created a reconstruction of an economy with the temple at the center.

As archaeologists uncovered more ancient tablets from a variety of settings, it became even more apparent that the models of temple economies had been based on this faulty logic. Texts from other types of buildings, especially palaces and houses, contained similar types of economic information. Each of these archives held information relevant to the particular institution that housed the archive. Thus, palace archives contained information regarding palace economic affairs, domestic households contained economic information about individual families, and temple archives contained information about temple economic activities. None of these distinct types of structures suggested that any one agency centrally planned the economy in Sumer. The reconstruction of an ancient economy controlled by a temple and its priests was proved to be unfounded. Therefore, rather than considering temples to be the dominant economic organizations

THE MESOPOTAMIAN RATION SYSTEM

Ignace Gelb has noticed that there are some elements of temple redistribution that are standard from site to site across time. The core of what Gelb refers to as the Mesopotamian Ration System involves the standardized distribution of grain, wool, and oil. Grain was distributed to people monthly, wool was distributed to people randomly, and oil was distributed sporadically. These patterns perhaps reflect logical seasonal harvests and the necessity of publicly storing agricultural products. Gelb considered other goods (for example, fish and dairy products) to be supplementary and did not identify any overarching patterns. While nobody agrees exactly on who the recipients of these rations were, it is likely that they were people who worked for the temple and not the entire populace of the city, as earlier historians and archaeologists had surmised.

—Kevin M. McGeough

Bibliography

- Ignace Gelb, "The Ancient Mesopotamian Ration System." *Journal of Near Eastern Studies* 24 (1965): 230–243.

in ancient Sumer, scholars now see temples as one type of economic organization among many.

—Kevin M. McGeough

Bibliography

- Foster, B. "A New Look at the Sumerian Temple State." *Journal of the Economic and Social History of the Orient* 24 (1981): 225–241.
- Gelb, I. "On the Alleged Temple and State Economies in Ancient Mesopotamia." *Studi in Honore di E. Volterra VI* (1971): 137–154.
- Zettler, R. "Written Documents as Excavated Artifacts and the Holistic Interpretation of the Mesopotamian Archaeological Record." In *The Study of the Ancient Near East in the Twenty-First Century*, edited by J. Cooper and G. Schwartz. Winona Lake, IN: Eisenbrauns, 1996.

Economic Temples, Not Temple Economies

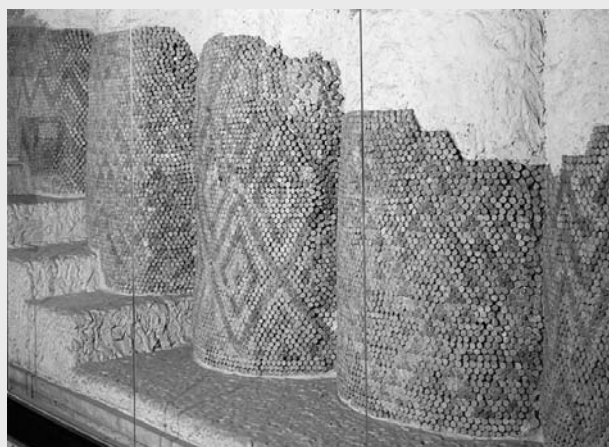
Many Mesopotamian temples seemed to have operated much like large, wealthy Mesopotamian

households. These temples did not simply perform religious roles within the community and on the community's behalf but instead operated manufacturing and production activities similar in scope to other households. Temples owned land that temple personnel farmed directly or rented out to others to farm instead. Temples had their own flocks that could be managed by temple personnel. Although the occasional animal may have been selected from the temple flocks for feasts or sacrifices, mostly the temples used the donations or forced tithes of others in these situations, leaving the temple flocks for the temple personnel's own subsistence. Temples also seemed to have manufactured textiles and engaged in any number of other economic activities rooted in the subsistence practices of daily life.

Richard Zettler has studied the economic activities of the temple of the goddess Inanna (also known as Ishtar) at the site of Nippur during the Ur III period (ca. 2112–2004 BCE). He

THE TEMPLE COMPLEXES AT URUK

The ancient city of Uruk, the supposed home of the legendary Gilgamesh, held many religious complexes. These complexes were used for hundreds of years; when an architectural feature got too old or went out of fashion, ancient builders would simply level out the building and build a new one directly over it. German archaeologists have excavated some of these complexes, reconstructing past temple practices and demonstrating the economic cost of keeping up the temples. Perhaps the most important of these complexes (for the Sumerians and for modern scholars) is the E-anna complex, where some of the earliest Sumerian tablets have been found. This temple precinct was one location of the worship of the goddess Inanna (later known as Ishtar). Earlier than this precinct was the Anu Temple precinct (devoted to the sky god Anu). Here, the best preserved of these temples (also known as the White Temple) contained an offering table and an altar. Perhaps sacrificed here centuries ago were the remains of a leopard and a young lion. The prominence, wealth, and sheer number of these temple complexes at Uruk demonstrate that temples certainly played a prominent role in the economic lives of ancient



Elaborate mosaics adorn walls of the temple of the goddess Inanna (Ishtar) at Uruk, around 3000 BCE. (Erich Lessing/Art Resource, NY)

Mesopotamians. Given that people built them, worked in them, and provided offerings in them, these temples need to be recognized as economic entities just as much as religious entities.

—Kevin M. McGeough

found that during this time the Inanna Temple supported a force of workers and dependents numbering between 250 and 300. These people filled a number of economic roles: millers, festival workers, singers, guards, courtyard sweepers, craftsmen, agriculturalists, animal husbandry workers, and even military personnel. For the services rendered, these people were paid in rations of barley, wool, and oil. One individual was in charge of administering this entire complex. He represented the temple to the rest of the city and organized the distribution of various products. As payment for these services, this head administrator received a large landholding for his own farming where he could be the sole beneficiary of the profits. By studying the tablets recovered from this temple, Zettler was able to demonstrate that this administrative post remained in the same family for at least four generations.

Based on Zettler's study of the Inanna Temple at Nippur and other similar studies, a more nuanced picture of the role of temples in the Mesopotamian economy has emerged than that of the Temple Economy models. Temples were neither self-sufficient economically nor fully de-

pendent on other institutions. Rather, temples participated in economic activities in relationship to other entities: other temples, private houses, and palaces. Some products were produced by the temple. Other products were acquired by middlemen, probably through the exchange of products that the temple did produce. Income also came from performing various religious roles. Private citizens would pay for certain religious services, and on certain festival days, private individuals would have been required to bring certain goods to the temple. The priests would live off of the altar by consuming food that had been originally offered to the deity.

—Kevin M. McGeough

Bibliography

Renger, Johannes. "Interaction of Temple, Palace, and 'Private Enterprise' in Old Babylonian Economy." *Orientalia Lovaniensia Analecta* 5 (1979): 249–256.

Zettler, Richard. *The Ur III Temple of Inanna at Nippur: The Operation and Organisation of Urban Religious Institutions in Mesopotamia in the Late Third Millennium B.C.* Berlin: Dietrich Reimer, 1992.

■ Introduction: Currencies, Trading Media, and the Problem of Money

Coins were not invented during this period (4000–1000 BCE), yet trade was an extremely important component of economic life throughout most of the inhabited world. Money, in the sense used here, refers to an abstract (and nearly arbitrary) unit of wealth that is legitimated with a particular value through the backing of the state. In other words, money works since a recognized state decrees that an arbitrary object represents a specific value, and everyone agrees to "play along." Without money per se, the exchange of goods is much more complex because both the buyer and seller have to have something that the other party wants—in fact, both parties are better thought of as buyers—and they must both also agree on the value of

each other's trade goods. Similarly, the storage of wealth is much more difficult; without a bank to deposit money in, the ancient person would have had to stockpile goods, hoping that he or she had enough storage space to keep the object and that the objects would not go bad (so they could not be food products) and that he or she would be able to find a trader for the goods at a later date. Eventually, this system (or lack thereof) was found to be too unwieldy, and alternative systems emerged to help facilitate exchange and wealth storage.

Prior to the invention of money, different regions used different types of objects as currencies to help facilitate trade. These types of objects arose from the ad hoc activities of traders,

as opposed to being formally invested with value by a state body (although the Near East, the Indus Valley, and ancient China all seem to have measurement standards that were decreed as such by the state). The types of goods used as trading media tended to have some sort of intrinsic value (such as silver or amber) and were relatively rare. If an object was too common and could readily be found, then its use as a trading media would have led to rapid inflation, as the market was flooded with currency. The trading media also had to be semiportable over space and time: it had to be able to be easily (and inexpensively) transported and could not spoil (so food products could not be used). Labor, which could be exchanged in some situations, would not work directly as a trading media. However, with the advent of credit, an individual could pledge future service in exchange for the receipt of goods in the present, and thus a form of labor-credit developed as one of the most important tools for the accumulation of wealth.

—Kevin M. McGeough

Using Weights and Measurements in Trade

Weights and measurements are key tools for the facilitation of exchange. The use of weights allows buyers to know the exact quantity they are purchasing and helps determine abstract equivalents in other goods (essentially prices). Yet for a weight system to be useful, it must be consistent and agreed upon. One has to be able to trust that the weights being used correspond to standard abstract value or else there is no point in weighing the goods. In Egypt, Syria-Palestine, Mesopotamia, and India from 4000 BCE to 1000 BCE, weights were extremely common tools used for the exchange of goods.

In the ancient Near East, legislation in various cities governed the standardization of weights. A tablet found at the site of Ugarit (on the coast of Syria) lists the equivalences of measurement systems from different cities, indicating that this standardization varied from region to region even though the metrological language was consistent throughout the Near East. Mesopotamian legal codes contain rules about the standardization of weights, suggesting harsh penalties for

those who use fraudulent weights in a business transaction. In the Code of Hammurabi, it is stated that prices charged for goods must be the same, whether paid for in measures of silver or measures of grain, thus demonstrating that there was a scale of prices based on the weights of various commodities.

At Syro-Palestinian and Indus Valley sites, weights are found in the greatest frequency in city gateways. This, along with textual evidence from Mesopotamia and the Bible, suggests that the city gate is where one would go to conduct business transactions. The weights in city gates may also reflect taxation on imports and exports. Weights and measures are also found in personal homes, suggesting that many people may have had their own set of weights, perhaps in order to check the weights of those with whom they traded.

The system of weights used in the Indus Valley (the Harappan civilization) was completely different from that used in the Near East. It is still used today in some markets in India and Pakistan. The base weight of the system was the *gunja*, which is a small black and red seed. The next weight is double the weight of one *gunja*. The next weight doubles again, as does the next and the next after that. At a certain point, the system shifts to a decimal-based system, and the weights increase in size at a set rate.

ANCIENT WEIGHTS, ANCIENT ARTISTRY

Many of the weights recovered from archaeological sites appear to be valuable pieces of art themselves, not just tools to be used in financial transactions. Often these weights are carved from exotic types of stone (which may have been quite expensive). Stone carving was time-consuming and difficult. The manufacture of accurate stone weights would have been even more difficult given the necessity of carving the weight to the exact size specifications. Elaborate weights that have been recovered were shaped like birds (especially ducks), lions, cattle, bulls' heads, hippos, and other animals. These would have required even more difficult mathematical calculations in their production to produce the correct proportions in a nonstandard form.

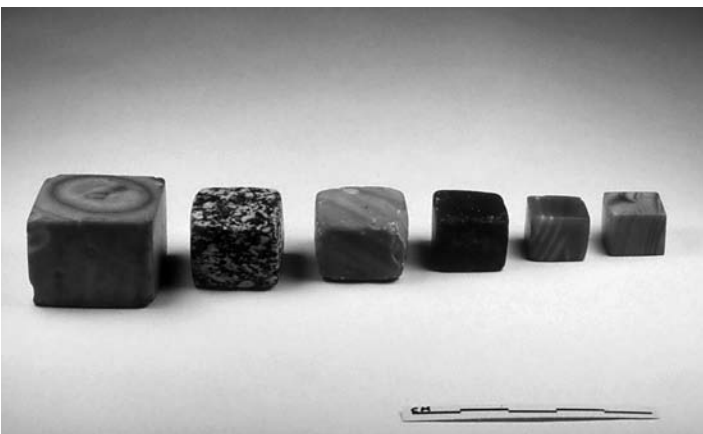
—Kevin M. McGeough

What is truly remarkable about this system is that it remained in use unchanged for 700 years, throughout the Indus Valley. Although there is no evidence for a centralized state-level leadership, over this vast space and over a long period of time this very specific system remained the standard. Archaeologists have found weight sets at every Harappan site. The most common types are cubical weights made out of chert. The largest cubical weights have only been found at the larger sites. Some spheroid weights (of measures in the same system), made of jasper or agate, have also been found.

—Kevin M. McGeough

Bibliography

- Kenoyer, J. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.
- Powell, M. "Money in Mesopotamia." *Journal of the Economic and Social History of the Orient* 39 (1999): 224–242.
- Powell, M. "Weights and Measures." In *The Anchor Bible Dictionary*, vol. 6, edited by D. Freedman. New York: Doubleday, 1992.
- Roth, M. *Law Collections from Mesopotamia and Asia Minor*. 2nd ed. Atlanta: Scholars Press, 1997.



Cubical weights in graduated sizes. These weights conform to the standard Harappan binary weight system that was used in all of the settlements. The smallest weight in this series is 0.856 grams and the most common weight is approximately 13.7 grams, which is in the 16th ratio. In the large weights the system goes to a decimal increase where the largest weight is 100 times the weight of the 16th ratio in the binary system. These weights were found in recent excavations at Harappa and may have been used for controlling trade and possibly for collecting taxes. (J. M. Kenoyer, Courtesy Department of Archaeology and Museums, Government of Pakistan)

Obsidian Trade

Among the earliest examples in antiquity of large-scale long-distance exchange is the trade in Near Eastern obsidian. Obsidian is a type of volcanic glass produced when certain types of lava cool rapidly, such as by flowing into a body of water. Obsidian varies in color, usually from dark green to black depending on the presence of impurities in the glass. Obsidian was highly valued in some cultures that used lithic tools since it can be fractured to produce an extremely sharp edge. Obsidian is still used today in ophthalmic and cardiac surgery, where obsidian blades have a cutting edge much sharper than steel surgical scalpels. Obsidian sources worldwide are very limited in scope and are relatively easily identified through trace element chemical analyses, such as neutron activation analysis and X-ray fluorescence. Obsidian hydration dating even permits absolute or relative dating of a sample by examining the degree of hydration, which corresponds to how long it has been since an artisan exposed the obsidian surface. This makes obsidian an excellent medium for the study of long-distance trade in antiquity.

The main sources for obsidian in the ancient Near East were in the Cycladic Islands off Greece and in central and eastern Anatolia in what is now modern Turkey. Extensive studies have been made of the obsidian sources in Anatolia, and this data has been matched with finds made throughout the Near East of obsidian fragments in early archaeological contexts. For instance, obsidian from Pre-Pottery Neolithic A period (ca. 8000 BCE) sites in Israel and Syria was shown to come from more than 600 miles (1,000 kilometers) away in central Anatolia. This is remarkable given that no domesticated pack animals such as donkeys or camels yet existed. It is likely that this rare material was bartered for equally rare local commodities from the Levant such as bitumen from the Dead Sea or exotic shells from the Red Sea coast.

Since much larger amounts of obsidian were found at the main centers such as Jericho than at outlying sites, it would seem that there was an organized trade network involving these main centers in the Levant with similar such centers in central Anatolia, such as Çatal Hüyük. It is

possible that some of the impetus for the development of such early centers was the control of long-distance trade.

In some cases the trade was in small worked fragments of obsidian. However, in at least one known case from the site of Kabri in Israel, a huge obsidian core has been found, suggesting that in at least some cases whole blocks of obsidian were shipped long distances. The scale of the trade network as reconstructed was immense for its day. Anatolian obsidian was traded throughout the Levant and Mesopotamia and has been found as far south as Beidha in Jordan and as far east as Hassuna in modern Iraq. Anatolian obsidian has also been found on Cyprus, which would have required a boat trip of over 40 miles (70 kilometers) in addition to any land travel to the source. The long-distance trade in this rare commodity continued through the subsequent Pottery Neolithic period, Chalcolithic period, and Early Bronze Age. Analysis of the finds shows that over time, the obsidian comes not only from central Anatolia but also from sites as far east in Turkey as Nemrut Dag.

—David R. Lipovitch

Bibliography

- Bar-Yosef, Ofer. "Earliest Food Producers—Pre Pottery Neolithic (8000–5500)." In *The Archaeology of Society in the Holy Land*, edited by Thomas E. Levy. London: Leicester University Press, 1998.
- Bar-Yosef, Ofer. "The Neolithic Period." In *The Archaeology of Ancient Israel*, edited by Amnon Ben-Tor. Translated by R. Greenberg. New Haven, CT: Yale University Press, 1992.
- Mazar, Amihai. *Archaeology of the Land of the Bible: 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Yellin, Joseph, Thomas E. Levy, and Yorke M. Rowan. "New Evidence on Prehistoric Trade Routes: The Obsidian Evidence from Gilat, Israel." *Journal of Field Archaeology* 23 (1996): 361–368.

Amber Trade in Europe

Amber is found in archaeological contexts throughout Europe in Bronze Age levels. Since amber is found primarily along the shores of the Baltic Sea and in parts of eastern England, it is safely assumed that the spread of amber to other areas indicates extensive trade networks

THE SITE OF FRATTESINA

The site of Frattesina, located near the mouth of the Po River in what is now Italy, was one of the major centers of bead production in Bronze Age Europe. Numerous types of materials including bone, ivory, horn, amber, and glass were worked by the craftspeople living at this site. While the glass was manufactured locally, other types of materials (especially amber) were transported to the site in their raw form along with other trade goods, such as ostrich shells and Greek pottery. Amber beads in the styles manufactured at Frattesina have been found throughout Italy and Greece, although the highest concentration has been along the shores of the Adriatic Sea. The people of Bronze Age Frattesina manufactured beads out of a variety of imported raw materials and then exported those beads in exchange for either more raw materials or other trade goods. The direct extent of the trade network may not have been much farther than beyond Italy and Greece. Indirectly, the site of Frattesina had contacts with locations as far away as Scandinavia.

—Kevin M. McGeough

throughout Europe. In particular, amber has been identified as having been used by Bronze Age Europeans in Mycenaean Greece, the Po Valley in Italy, central Europe, and Brittany in France. All of these regions are areas where amber was not naturally deposited. Scholars debate whether these trade routes were by land or by sea. While most agree that a significant component of this trade must have been overland, the lack of amber finds in the Alps as well as the appearance of English amber on the continent suggest that at least some amber was transported by sea. Working of the amber into its final forms took place in the regions to which it was traded.

Amber is the fossilized remnant of tree sap/resin. It was used primarily for personal adornment in Bronze Age Europe, although religious or symbolic uses cannot be ruled out. In finished form, most amber products are beads or spacers for jewelry (especially necklaces and bracelets). Pendants were also formed out of amber. The

styles of the beads varied from region to region, but some patterns of bead exchange have been identified by archaeologists through the study of the spatial relationships of the various types of amber beads.

Archaeologists do not have direct evidence for what the amber would have been traded for, but they can make some good educated guesses. Bronze Age Scandinavia was a center for elaborate metallurgy, yet the region was completely bereft of natural deposits of the ores needed to manufacture metal. Perhaps amber was traded with the southern regions in exchange for metal ores. Finished products were also imported, including axes from Ireland and daggers associated with the Unetice culture. Animal furs may also have been traded; since these kinds of materials do not survive well in the archaeological record, it is not surprising that there is no evidence for this trade.

—Kevin M. McGeough

Bibliography

- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Sherratt, Andrew. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.

Cacao as "Money"

Chocolate was considered the food of the gods by the ancient cultures of Mesoamerica. It was served frothed mixed with a bewildering array of chilis, nectars, and spices that would scarcely tempt a modern palate. Because the chocolate drink was so highly prized, the beans (actually seeds) of the chocolate tree, *Theobroma cacao*, were valuable. They were used as a kind of currency in the pre-money eras of Mesoamerica. Money really did grow on trees!

Prior to the introduction of currency into Mesoamerica by the Spanish, products were bartered. The relative value of each product was determined through a negotiation process. The seller tried to set a high price for this product, while the buyer was determined to trade as little as possible. Marketplaces were scenes of intense negotiations as each player tried to make the

other raise or lower the price of the product. As negotiations proceeded, each attribute of the product was evaluated. In the case of cacao, attributes include size, origin, weight, wholeness, color, shape, and dryness. Each of these attributes could change the price. Small beans gave less chocolate per bean, so their value was lower. Different trees gave slightly different flavors, so the origin of the beans had to be established, etc. Once the value was established, then the trade took place.

Cacao beans were also required as tribute. Kings required certain quantities of the beans from their subjects twice a year. Tribute bundles from Classic Maya art are explicitly labeled as *kakaw* along with their quantities. Tribute cacao beans were used in the palace for the king and also were stored or bartered for other services. Gonzalo Fernández de Oviedo y Valdés wrote in 1535 that dried cacao seeds, which he called *almendras*, were used like gold coins. A slave could be bought for 100 dried seeds, a rabbit could be bought for 10 seeds, and a prostitute could be hired for 8–10 seeds.

Mesoamerican markets traded by quantity rather than weight. However, in the case of small objects such as beans and cacao, there were standard quantities traded by bag and known varieties. Yet the market was always a dangerous place for the uninitiated. Friar Bernardino de Sahagún noted around 1580 that there were two types of "Cacahuateros," or chocolate merchants (Book X:XVIII). The good merchants sold beans by variety, the high-quality beans apart from the lesser varieties. The bad merchants put a few good beans on top of the lesser varieties and sold them as top quality. The good merchant sold fat beans, while the bad merchant sold beans that were soaked in water so that they looked like fat beans. (Sahagún lists other marketing practices of both good and bad cacao salesmen.) Thus, merchants were evaluated on their produce and sales tactics because cacao was a very valuable form of currency in an age prior to currency.

—Zachary Nelson

Bibliography

- Coe, Sophie D., and Michael D. Coe. *The True History of Chocolate*. London: Thames and Hudson, 2000.

Fernández de Oviedo, Gonzalo. *Natural History of the West Indies*. Translated and edited by Sterling A. Stoudemire. Chapel Hill, University of North Carolina Press, 1959.

Hoard

One of the most puzzling features of Bronze Age Europe is the prominence of hoards of metal objects. Given how valuable metal objects must have been in European society at this time, it is difficult to understand why so much of this material was placed/discarded in the ground. The types of objects most often found in Bronze Age hoards are weapons, pieces of metal armor, metal tools, jewelry, utensils (especially cups and bowls), raw materials (such as ingots), and manufacturing equipment.

Technically, a hoard must include more than one object (although there is no maximum amount of objects that can make up a hoard) and must not be found in a domestic or funerary context. A hoard can be any combination of types of objects, although for Bronze Age Europe hoards primarily consist of metal objects. Sometimes the hoards include unfinished ingots of metal, in other cases they include elaborate crafted pieces of art, and in still other instances used metal tools are included in the mix. Sometimes the hoards consist of only one type of object, while at other times a variety of types of objects are inhumed together.

Anthony Harding has identified four types of hoards that reflect four different types of social contexts for the practice of hoarding: founders' hoards, traders' hoards, personal/treasure hoards, and votive hoards. Founders' hoards contain broken or uncast equipment. These types of hoards were left by itinerant metalsmiths who, rather than carrying heavy metal production equipment and raw materials from town to town, simply buried it in secret locations. When the smith returned to the town or region, he would simply dig up his buried equipment. Traders' hoards reflect a similar economic system, but the objects found in these hoards are finished objects, ready to be traded. Personal/treasure hoards consist of a variety of types of objects (usually with no discernible pattern). These hoards may have been buried in advance of an enemy attack to prevent

THE HAJDÚSÁMSON HOARD

In 1907 an unusual discovery was made in a drainage works in northeastern Hungary. Around 1800 BCE, Bronze Age individuals had left what was clearly a votive hoard in the sandy earth. A sword was set down with its blade pointing directly north. After this, Bronze Age people had laid 12 shaft-hole axes (called so because the hole for the handle was cast directly into the bronze) across the sword, with the ax blades facing west. These pieces were clearly very expensive. Each was individually cast; none were mass-produced. The sword and three of the axes had an intricate c-scroll design incised into them, typical of the design schemes on metal objects produced in the Carpathians. This votive offering represented a significant investment of wealth by the Bronze Age individual, indicating the importance of this kind of offering to Bronze Age people.

—Kevin M. McGeough

soldiers from carting off the valuables as booty, or they may have been buried for everyday security (in the absence of locks or other means of securing valuables in a Bronze Age village). Votive hoards are also made up of finished metal objects, but in these cases the contexts (especially the placement of the materials within the hoard) indicate some ritual, ceremonial, and/or symbolic motivation for the interment of the material.

—Kevin M. McGeough

Bibliography

- Eogan, G. *Hoard of the Irish Later Bronze Age*. Dublin: University College, 1983.
- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Sherratt, Andrew. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.

Credit and Debt in the Ancient Near East

Credit and debt were two of the most important means of structuring financial relationships in the ancient Near East. It is likely that credit

➤ A RECORD OF DEBTS FROM RAS IBN HANI

Located on the Syrian coast and inhabited during the Bronze Age, Ras ibn Hani was a small town located near the large city of Ugarit. Numerous economic texts have been recovered from Ras ibn Hani, including tablets that record debts incurred by individuals. One individual named *mnny* loaned out a significant quantity of silver. The tablet reads as follows:

“Record of the silver of *mnny*.

Seventy shekels of silver debited upon *antrn* the son of *ymr*.

Forty shekels of silver debited upon *tmrtn* son of *urmy*.

Forty shekels of silver debited upon *bnrl* son of *krwn*.

Sixty shekels of silver” (translation by author).

This is all the information that is preserved; the tablet does not say why *mnny* made these loans or provide any other information about the conditions of the loans, even what was expected to be repaid. This is the kind of laconic text that economic historians are forced to work with in order to reconstruct ancient financial practices!

—Kevin M. McGeough

worked similarly in other parts of the ancient world, such as China or the Indus Valley, but given the lack of preserved economic texts, it is impossible to be certain. Credit is an agreement that is made when the debtor receives something of value from the lender in the present and promises to repay the lender in the future. The benefit to the debtor is the receipt of valuable goods in the present without having to supply anything in the present. The benefit to the lender varies. If interest is charged and the lender does not actually require the goods at the present time, then a profit has been gained. In ancient times the benefit may also have been a payment in labor (as opposed to a return of the actual loaned good). For example, an owner of a large agricultural estate would only need laborers at certain times of the year, so providing goods to a laborer at one point in the year with promise of future labor may have been valuable. Likewise, the lender may have wanted future payment in a

product that eventually goes bad, such as food products. By giving an individual seed or agricultural equipment during one season with the promise of future payment from the agricultural yield, the lender can count on a delivery of food later in the year. Since there was no money per se in the period from 4000 to 1000 BCE, debt and credit were used to help facilitate exchange since it allowed two individuals to fulfill each other's economic wants more easily.

In the absence of a monetary economy, credit also allows for the storage of wealth. In Mesopotamia, wealthy individuals gained influence by accumulating debtors. Cuneiform tablets bearing lists of debtors and amounts owed have been recovered from private homes, temples, and palaces. For a person or organization that produces an agricultural surplus that cannot readily be stored (more than can be consumed by the person or organization), the person or institution can convert that surplus into wealth. Poorer individuals or individuals who did not engage in agriculture were able to gain valuable food in exchange for future work or payment. Thus, an organization that had many debtors had converted present wealth into future wealth through debt agreements.

When interest was charged, debtors could be transformed into virtual slaves, never being able to fully repay their principle debt. This was especially common when agricultural workers paid for agricultural equipment or seed with the yield from their crop. Once this cycle began, the farmer would not be able to produce enough of a surplus to pay for necessary equipment in the next agricultural year (let alone any owed taxes) and thus would have to enter into a similar agreement. Eventually the leftover yield would be insufficient for the family's subsistence needs, and one of the members of the family would have to enter into a relationship of debt slavery with the creditor. This was likely a widespread problem in Mesopotamia, as studies of ancient legal literature suggest. For example, the Edict of King Ammisaduqa of Babylon, enacted around 1640 BCE, canceled debts throughout the kingdom and allowed debt slaves to regain their freedom. This kind of decree is also found in the Old Testament; for example, in Leviticus 25 a Jubilee

Year is legislated to occur every 50 years in which all debts are canceled.

In ancient Mesopotamia, numerous laws governed debt and credit relationships, although they varied through time and from city to city. According to some legal codes, the creditor was limited in what he or she could distraint (seize) from the debtor for nonpayment. Agricultural goods and equipment (or other products that could interfere with the creditor's ability to earn a living or subsist) were typically exempt from seizure. In some cities, repayment of interest followed an established scale, and the creditor was compelled to accept payment in goods that were not necessarily originally agreed upon as forms of repayment. Laws also existed that governed the treatment of individuals pledged to the creditor as debt slaves in lieu of payment. Depending on the status of the slave, the creditor faced different punishments for mistreatment of the slave

and was often forbidden from selling the slave to someone else.

—Kevin M. McGeough

Bibliography

- Dercksen, J. G., ed. *Trade and Finance in Ancient Mesopotamia*. MOS Studies 1. Nederlands Historisch-Archaeologisch Instituut te Istanbul, 1997.
- Firth, R., and B. Yarney, eds. *Capital, Savings, and Credit in Peasant Societies*. Chicago: Aldine, 1964.
- Hudson, M., and M. van de Mieroop, eds. *Debt and Renewal in the Ancient Near East*. Baltimore: CDL Press, 2003.
- Roth, M. *Law Collections from Mesopotamia and Asia Minor*. 2nd ed. Atlanta: Scholars Press, 1997.
- Steinkeller, P. "The Renting of Fields in Early Mesopotamia and the Development of the Concept of 'interest' in Sumerian." *Journal of the Economic and Social History of the Orient* 24 (1981): 113–145.

■ Introduction: The Old Assyrian Trade Network

One of the best-understood ancient trade networks is the Old Assyrian network that flourished from about 2000 to 1776 BCE. Trading families in the ancient city of Assur (located in Assyria in northern Mesopotamia) took advantage of Assur's strategic location between north-south and east-west trade routes and organized long-distance trade ventures that profited off of differences in economic landscape between these regions. By bringing goods that had been produced in southern Mesopotamia (such as textiles) and raw materials from the east (such as tin from Afghanistan) to Anatolia, which was rich in other mineral resources, the merchants of Assyria made a tidy profit. No doubt similar commercial ventures existed in other locations in the ancient world, but what makes this situation so unique is the wealth of evidence that has survived documenting ancient economic life and commercial practices. What follows are discussions of the organization of this early commercial network and of the partic-

ular historical situation in which this network emerged.

—Kevin M. McGeough

The Old Assyrian Trade Network—Tin and Textiles for Silver

Beginning around 2000 BCE (middle chronology) and continuing beyond the death of Shamshi-Adad (1776 BCE), private merchants from the town of Assur (present-day Qala'at Sherqat) conducted a profitable trade in tin and textiles with the politically diverse cities of the central Anatolian plain. While the early developments are difficult to trace, business records (in excess of 20,000 texts) provide a detailed picture of commerce during 1900–1845 BCE. Merchants packed and sent their wares by donkey in large caravans along the 745-mile (1,200-kilometer) route across the Syrian steppe, the Euphrates, and the Taurus Mountains to the main terminus of the trade

➤ TIN AND TEXTILES

“‘You only love money! . . . Come back to Assur!’ writes Shīmat-Assur to her husband Imdilum. It took close attention, capital, good representatives, and long stays in Anatolia to become a wealthy merchant and some wives clearly begrudged their husbands’ absence and perhaps also the second houses and wives in Kanesh. Tellingly, Shīmat-Assur also complained sharply to her husband because he delayed her own profits. Imdilum, and Shīmat-Assur as well, benefited greatly from the favorable price difference in tin and textiles between Assur and Kanesh, though other merchants, like Assur-nādā whose father’s small coffers and poor reputation, found success more elusive” (translation by author).

—Edward Stratford

Source

Georges Contenau, ed., *Textes Cunéiformes du Louvre*, vol. 4, *Tablettes cappadociennes, publiées avec inventaire et tables* (Paris: P. Geunther, 1920), text 5.

route at Kanesh (present-day Kültepe), where they converted their wares into silver in any number of ways. Later, it is evident that trade during the reign of Shamshi-Adad was different in nature, less lucrative and smaller in volume due in part to political consolidation on the Anatolian plateau and increasing security problems en route.

To further the operation of private trade, a host of institutions were necessary, both public and private. Assyrian merchants developed business procedures to facilitate shipping, representation, agency, credit, and liquidity of funds. This included caravan procedures, partnerships, joint-capital investments, accounts at the colony office, and exchangeable debt notes. Family in part provided a framework for partnership, cooperation, and contacts. Some merchants lived most of their lives in one Anatolian city or another, doing business for themselves and on behalf of associates who either lived in Assur, specialized in shipping, or frequented a different area of the plateau.

The semirepresentational state, itself benefiting enormously by taxing the trade, served the interests of elite investors manifest in the decision-making powers of the city assembly. Although the king’s position was hereditary, held for life, and involved a relationship with the god of the city, he shared power with the city assembly, divided into the “big” and “small” men, whose decisions the king carried out in an executive role. The state negotiated trade agreements with the cities of the Anatolian plain, regulating taxes on imported goods and outlawing competition, and authorized organizations to represent the state in Anatolia; they possibly also regulated merchant licensing. These organizations, the *karum* (located in larger cities) or *wabartum* office, also regulated the legal affairs of the merchants abroad.

The *karum* (or port) at Kanesh, outside the city walls, included houses inhabited by native Anatolians alongside houses that the merchants purchased, where in strong rooms they stored their wares and important documents. Textual documentation derives almost entirely from these houses, of which roughly five dozen have been uncovered; only a handful have been found inside the palace or within the city walls. Anitta controlled this palace during the Shamshi-Adad phase.

The Assyrian export trade to Anatolia was just one part of a much larger economic exchange network. Tin, an essential ingredient in the contemporary bronze, lapis lazuli, and carnelian came from as far east as the Turan Mountains via the Iranian plateau and Susa. Most woolen textiles were institutionally produced in other Mesopotamian cities and were acquired on the market, while small numbers of textiles were produced for export in Assur by merchants’ wives. Copper, though readily available in Anatolia, was not imported into Assur, as it was available more cheaply from Oman and possibly mines to the north of Assur.

—Edward Stratford

Bibliography

Dercksen, Jan G. *Old Assyrian Institutions*. Leiden: Nederlands Instituut voor het Nabije Oosten, 2004.

ASSYRIAN TRADE ROUTES, CIRCA 1880 BCE



Larsen, Mogens T. *Old Assyrian Caravan Procedures*. Leiden: Nederlands Instituut voor het Nabije Oosten, 1967.

Larsen, Mogens T. *The Old Assyrian City-State and Its Colonies*. Copenhagen: Akademisk Forlag, 1976.

Veenhof, Klass R. *Aspects of Old Assyrian Trade and Its Terminology*. Leiden: Brill, 1972.

The Karum System

The Anatolian town of Kanesh (modern Kültepe) was favorably located at the intersection of several major routes north-south and east-west, the latter connecting Anatolia with Mesopotamia. Archives of clay tablets baked and thus preserved when Kanesh was destroyed by fire around 1820 BCE (end of period II) and again around 1740 (end of period Ib) have yielded a fascinating picture of mercantile activities here. For some three generations in the period II, merchants from the

northern Mesopotamian city of Assur operated a trading colony (*karum*) within the walls of Kanesh's lower town. A ground-floor room within their well-appointed houses was reserved for use as a sealed strongroom in which both valuables and their business archives were kept. Their houses and domestic objects were generally indistinguishable from those of local people, so we would have had no way of identifying them as foreigners were it not for their abandoned archives. Other merchants from cities in the Levant, including Ebla, also traded in the town.

The *karum* was established around 1880 BCE to obtain Anatolian silver and, to a lesser extent, gold in exchange for tin (*annakum*) and textiles brought from the merchants' home city of Assur. Some of the textiles were made by their wives and daughters, but most were the top-quality products of Babylonia (perhaps imported through the Assyrian colony in Sippar). The tin also came

► THE MESOPOTAMIAN QUEST FOR METALS

Given the relative paucity of mineral resources in Mesopotamia, copper and other metals had to be obtained from other lands, either through conquest or trade. Tin was probably traded from Afghanistan or eastern Iran, and during the fourth and third millennia, copper and gold also came mainly from the east, copper from the Oman peninsula and gold from the Indus civilization and beyond. Other copper sources became important in the second millennium, including Alashiya (Cyprus); copper from here was recorded at Mari. Another important source for Mesopotamia was eastern Anatolia. A text written much later than the events it recounts, *King of Battle*, claims that Sargon of Akkad led a military expedition to aid merchants suffering persecution in the Anatolian city of Burushkhanda, although this story probably had little factual basis. However, an inscription of Sargon's grandson, Naram-Sin, at Pir-Hussein in southeast Anatolia confirms Akkadian activity in the general region. Excavations in the central Taurus revealed mines at Kestel and metal processing at nearby Goltepe, suggesting that tin was produced here during the third millennium. The Taurus was rich in other metals too—copper, gold, silver, lead, and antimony—and had been known since the time of Sargon as the Silver Mountain. Lead isotope analysis of silver goods from Mesopotamian sites over a long period has demonstrated that all those tested came from the Taurus sources.

—Jane R. McIntosh

from farther afield, probably traded from Afghanistan across the Iranian plateau. Elam was the transit source of tin imported some years later by Mari and Sippar.

The heads of the trading houses resided in Assur, many of them local aristocrats who sat on the councils that advised the king. Here too dwelt the womenfolk of the merchant families, raising their children and making textiles but often also dealing with the Assur end of the business for their husbands in Kanesh. The trade was strictly regulated by the authorities who, for example, prohibited trade in Anatolian textiles and luxury goods. A tax of 1/120th of the value of the exports was payable to the palace when an expedition set out.

A council of senior family members oversaw the affairs of the karum at Kanesh, extracting a levy from incoming caravans to pay for its day-to-day running. The king of Kanesh received a tax of 2/65th of each shipment of tin and a fifth of the textiles and could purchase 10 percent more at a favorable rate. Then there were the expenses of the caravans carrying the goods, including local taxes in the areas they passed through. Nevertheless, the value differentials between the regions (tin, for example, being valued at more than twice as much silver in Anatolia as it was in Assur) made the exercise highly lucrative, and a profit of 100 percent was not unusual. Expeditions were financed partly out of profits from earlier trading and partly by investments. Individuals could add their own goods to a consignment. Partnerships of a number of merchants could put up capital (*naruqqam*), which was entrusted to a merchant for a long-term trading venture. Each investor bought shares costing 8 minas (4 kilograms, or about 130 troy ounces) of silver each and was guaranteed a return of 100 percent at the end of the term (in one recorded case this was fixed at 12 years).

Kanesh was the head office of Assur's operations in Anatolia, with substantial branch karums or smaller offices (*wabartum*) in other towns, including Hattusas, the future Hittite capital, and Purushhattum (Burushkhanda, modern Acem Hoyuk). Some facilitated the trade in silver, while others dealt locally in less-valuable trade goods such as copper or wool, the profits eventually being converted into silver. With care, using a smuggler's path, merchants could also engage in tax evasion or illegal trade, for example in iron, still a rare and prestigious material whose acquisition was monopolized by the Assur authorities. After one of their merchants had been arrested for smuggling, an Assur house wrote to their karum representative advising him to leave their iron in a safehouse en route, pending further consultation.

The small donkey caravans from Assur were led by experienced carriers along several established routes. Each donkey carried two packs of around 65 minas (ca. 72 pounds or 32.5 kilograms) of tin and a few textiles, making a total weight of around 180 minas (198 pounds or 90 kilograms); sometimes the amounts varied, or

textiles alone made up the saleable part of a load. In addition, the donkeys carried around 10 minas of tin to pay the incidental expenses of the 6 to 12-week-long journey (about 745 miles or 1,200 kilometers) on foot. On arrival in Kanesh the donkeys were probably sold, since the far smaller bulk of silver could be borne home to Assur by the carriers themselves.

Around 1820 Kanesh was sacked, probably by the king of Hattusas, and the karum folded. It was revived, though as a much smaller and more circumscribed operation, when Shamshi-Adad ruled northern Mesopotamia, but it did not outlast his dynasty's collapse.

—Jane R. McIntosh

Bibliography

- Dercksen, J. G. *Old Assyrian Institutions*. Leiden: Netherlands Instituut voor Het Nabije Oosten, 2004.
- Larsen, Mogen Trolle. "Partnerships in the Old Assyrian Trade." In *Trade in the Ancient Near East: Papers Presented to the XXIII Rencontre Assyriologique Internationale*, edited by J. D. Hawkins. London: British School of Archaeology in Iraq, 1977.
- Leemans, W. F. "The Importance of Trade." In *Trade in the Ancient Near East: Papers Presented to the XXIII Rencontre Assyriologique Internationale*, edited by J. D. Hawkins. London: British School of Archaeology in Iraq, 1977.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Moorey, P. R. S. *Ancient Mesopotamian Materials and Industries*. Winona Lake, IN: Eisenbrauns, 1999.
- Veenhof, Klaas R. "Kanesh: An Assyrian Colony in Anatolia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Veenhof, Klaas R. "Some Social Effects of Old Assyrian Trade." In *Trade in the Ancient Near East: Papers Presented to the XXIII Rencontre Assyriologique Internationale*, edited by J. D. Hawkins. London: British School of Archaeology in Iraq, 1977.

Prices in Old Assyrian Times

The Old Assyrian merchant trade functioned on a market basis where supply and demand were major factors in determining prices of goods moving through an interregional network. While

➤ ASSYRIAN MERCHANT COMPLAINTS

Assyrian merchants frequently expressed frustration about market and price in their correspondence. "I didn't buy Akkadian textiles because the price is unfavorable. . . . I will buy and send you tin unless the price of Akkadian textiles has leveled within ten days." Supply was often the problem. Assur-nādā warns an associate, "Silver is difficult [to obtain], don't expect much silver, the commerce is poor." Another merchant dismisses excuses for lack of silver from defaulting debtors: "When I stayed there, they told me, 'There is nothing to trade on the market.' But now I hear there is plenty to trade on the market."

—Edward Stratford

Source

Klaas R. Veenhof, *Aspects of Old Assyrian Trade and Its Terminology* (Leiden, UK: Brill, 1972), 98, 393, 375.

in certain circumstances tin (road tax on the way to Anatolia) and copper (road taxes in Anatolia) were used as bases of exchange, silver was the standard (*valuta*) of the day, and Assyrian merchants normally expressed the value of their commodities in terms of silver. The favorable rate of exchange for silver, cheaper in Anatolia due to its great supply, was perhaps the single greatest force fueling the trade between Assur and the cities of the Anatolian plain. Differences in supply between markets within Anatolia meant that the Assyrians were quick in developing systems to maximize their gain. In Kanesh they exchanged their tin and textiles for wool, trucked it north to the copper mine region, and transported obtained copper west to Purushattum to exchange for silver. Gold was also acquired in Anatolia, but an Assyrian law mandated that gold acquired in Anatolia be shipped back to Assur and converted into silver, the gold being hoarded by the state.

The long distances of the trade, demanding that the goods garner favorable exchanges between Assur and Anatolia, dictated that copper, despite its abundance in Anatolia, was not shipped to Mesopotamia. Carnelian and lapis lazuli, coming from the same direction east as

the tin, were items of sufficient value and scarcity to be included on the trip to Anatolia when available. Tin, essential for making tin bronze, was an obvious choice for export to Anatolia, but the seemingly inexhaustible demand for high-quality woolen textiles is remarkable. In fact, so attractive was the textile trade to the Assyrian merchants that the Assyrian state mandated that a certain percentage of their shipments consist of tin. Their correspondence reflected the merchant's sensitivity to price. One merchant says that tin was too expensive (16:1 tin to silver) and that purchase was deferred until the rate improved (15:1 or 14:1). Likewise, some merchants stockpiled goods in Anatolia, waiting to sell until a supply problem drove prices up. Tin was normally sold between 6:1 and 8:1. Woolen textiles varied greatly. The *kutanum* textile normally cost 4–5 shekels of silver in Assur and was sold in Anatolia for a wide range of prices (11–40 shekels) depending on the urgency to liquidate, access to trustworthy retailers, quality of product, and immediate demand and supply.

Not only goods but also capital and services were priced. A rough division of labor in the merchant system meant that those who had capital lent it out, while merchants paid a price for access to that capital. The state exercised some regulation of these prices, declaring a standard interest rate on loans between two merchants, although friends loaned on (only) slightly better conditions. A disgruntled creditor could take out a loan to recoup his capital on a defaulting loan, forcing the debtor to pay double interest (to the original and new creditor). Merchants also had access to long-term options such as the *naruqqu* investment whereby a merchant combined investors' capital with his own small sum to create a working fund with which to do business for a term of normally ten years. The merchant kept one-third of the profits, investors divided another third in periodic installments, and the last third was reinvested in the fund. Investors received an increase in their capital shares at the end of the term. In similar fashion, merchants paid service providers, such as shipping personnel, by giving them interest-free loans with which the shipper would recoup profits in the same manner as the merchant.

—Edward Stratford

Bibliography

- Larsen, Mogens T. "Naruqqu-Vertrage." In *Reallexikon der Assyriologie und Vorderasiatische Archäologie*, edited by D. O. Edzard. Berlin: Walter deGruyter, 1999.
- Veenhof, Klaas R. *Aspects of Old Assyrian Trade and Its Terminology*. Leiden, UK: Brill, 1972.
- Veenhof, Klaas R. "Prices and Trade. The Old Assyrian Evidence." *Altorientalische Forschungen* 15 (1988): 243–263.

Shamshi-Adad's Covetous Eye

Shamshi-Adad was an ambitious and successful ruler who created an extensive kingdom in northern Mesopotamia. His political career is reconstructed from king lists, several royal inscriptions, and hundreds of diplomatic letters from palace archives. Shamshi-Adad reigned for 33 years according to the Assyrian King List, a document that reports the length of reigns for the kings from Assyria. During this time, he successfully united an extensive kingdom in northern Mesopotamia, which exploited the lucrative trade routes running from Iran to southern Turkey and the Mediterranean coast. His kingdom of upper Mesopotamia, however, did not last more than one generation and collapsed soon after he died.

Shamshi-Adad's early career is obscure, but evidence suggests that he was a native of the city of Akkad, one of Mesopotamia's most ancient capitals. He ascended to the throne of his father, Ila-Kabkabu, but after 18 years was forced into exile to the Babylonian court of Hammurabi. After this exile, Shamshi-Adad enacted a series of military operations aimed at gaining control of strategic cities along east-west trade routes. First, he recaptured the city of Ekallatum, on the Tigris River, from which he launched many of these campaigns. From there, his most significant territorial gains were to the west and north, including the cities of Ashur on the Tigris River and Mari on the Euphrates River. These military successes across upper Mesopotamia resulted in his adoption of the royal title "The one who united the land between the Tigris and Euphrates."

Having secured these newly conquered regions, Shamshi-Adad established Shubat-Enlil (Tell Leilan) as his capital city and appointed his two sons as viceroys: Ishme-Dagan, his elder

son, along the Tigris River at the eastern city of Ekallatum, and Yasmah-Adad, a younger son, along the Euphrates River at the western city of Mari. At this time, Shamshi-Adad and his sons advanced their interests through international treaties. For example, Yasmah-Adad married the daughter of the king of Qatna, Ishhi-Adad, and this resulted in close economic ties between the two kingdoms. Shamshi-Adad also negotiated peace with Dadusha, the king of Eshnunna.

Shamshi-Adad's vast kingdom was in almost constant need of military actions to reinforce his authority and to secure trade routes. Therefore, after stabilizing international boundaries and diplomatic relations with neighboring states, Shamshi-Adad and his two sons redirected their military efforts to the east and northeast. Campaigns commenced to Arrapah south of the Lesser Zab and then spread north as far as the city of Nineveh. Subsequently, Shamshi-Adad campaigned to the west, where Larim-Numaha, the king of Aparaha, had instigated a revolt in the region between the upper Euphrates and the Balih rivers. This revolt persisted for months and was quelled only when Ishme-Dagan arrived with 10,000 troops. Having defeated Larim-Numaha, Shamshi-Adad was confronted with further rebellions fomented by Sumu-Epuh, the king of Yamhad. This rebellion targeted east-west trade routes that crossed the upper Habur, near the Tur-Abdin Mountains, and the upper Euphrates at the city of Emar. The unrest persisted for

many months until the king of Yamhad died, which finally allowed Yasmah-Adad to confront the problem through a combination of military action and diplomacy. Shamshi-Adad's final military victory was recorded against the kingdom of Malgium, located east of Babylon along the Tigris. It was not long after this, however, that his kingdom of Upper Mesopotamia began to crumble. Shamshi-Adad's health failed, and he was no longer able to negotiate the fortunes of his kingdom. Seizing this opportunity, the king of Eshnunna, a former ally, expanded east of the Tigris, while discontented populations throughout the kingdom stirred up unrest and reinstalled local dynastic rulers. Shamshi-Adad's kingdom of upper Mesopotamia did not survive his death (ca. 1776 BCE). As for his sons, Yasmah-Adad was driven from the city of Mari and presumably killed, while Ishme-Dagan retained control of the city of Ekallatum, although his sphere of influence was curtailed to the environs of this city.

—Adam Miglio

Bibliography

- Dalley, Stephanie. *Mari and Karana: Two Old Babylonian Cities*. 2nd ed. Piscataway, NJ: Gorgias Press, 2002.
- Heimpel, Wolfgang. *Letters to the King of Mari*. Winoona Lake, IN: Eisenbrauns, 2003.
- Villard, Pierre. "Shamshi-Adad and Sons: The Rise and Fall of an Upper Mesopotamian Empire." In *Civilizations of the Ancient Near East*, vol. 2, edited by J. Sasson. Peabody, MA: Hendrickson, 2000.

■ Introduction: Regional Exchange Networks

Long-distance trade networks connected many parts of the world during the period between 4000 and 1000 BCE. Rarely were these formally organized enterprises. Rather, they emerged on an ad hoc basis and gradually developed formal institutions and infrastructure. As the networks became more formalized, the regions that participated in these networks became more integrated and interdependent, growing to require goods, ideas, and social relationships from other participants in the network.

Exchange networks centered on major nodes, usually cities that were strategically located near seas or along major rivers. Sometimes these major nodes were not geographically well located from a transportation perspective but instead developed in areas of high population density or regions of considerable economic, political, or religious authority. Within any given network there was a hierarchy of nodes. Major centers would exchange with other major centers. Smaller centers in the hinterland of the major

centers would exchange with the nearby larger center. Even smaller centers in the hinterlands of the medium centers would exchange with the medium centers. Thus, whole regions on the margins of an exchange network had indirect access to the goods and ideas that traveled along these routes.

The nodes of ancient exchange networks were connected in many different fashions. Traders could go to different ports and trade directly with the individuals of those cities, or middlemen could facilitate trade by conveying goods between different regions. Some centers acted as a central place where traders from all over the network could gather to exchange goods and ideas. Enclaves of foreign merchants sometimes appeared in a district of a major center, or political emissaries participated in both trade and diplomacy at the whims of foreign rulers. Goods could also be passed “down the line,” moving between adjacent nodes. Thus, exotic objects could move considerable distances without parties at the beginning or end of the line being aware of one another’s existence.

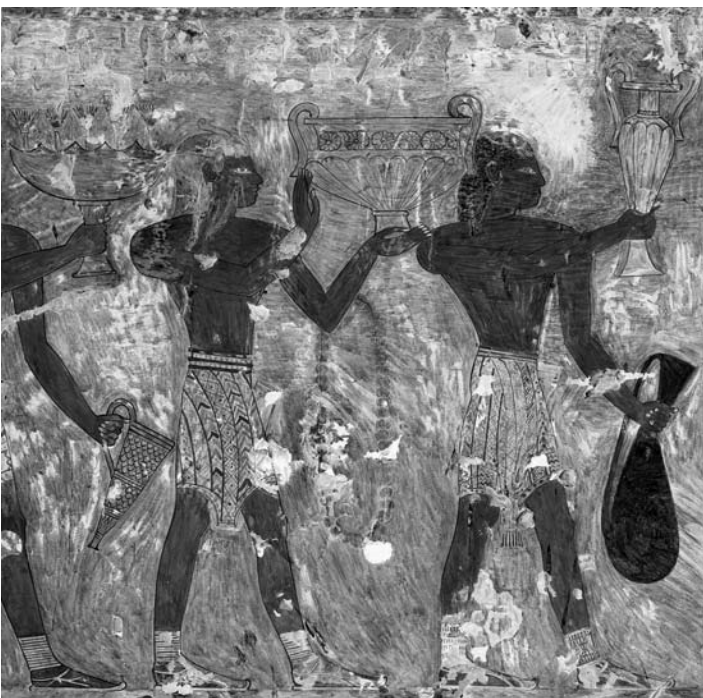
Most of the exchange that took place within these networks was reciprocal; that is, the direct exchange of goods occurred between individuals who knew each other or who had developed an exchange relationship. Credit was less important in these financial situations than in local exchange systems since there was no guarantee that both parties would see each other again and only minimal legal infrastructure existed that could protect parties from different polities. Abstract exchange media (i.e., currency) was not used frequently, given the varied values that goods had in different regions and the difficulties of establishing normative prices across regions. So, parties usually traded directly for goods that were mutually desirable (or that one party knew could be traded elsewhere for a profit).

—Kevin M. McGeough

Eastern Mediterranean Trade

Throughout antiquity, the Mediterranean Sea, known as the Great Sea, has acted as a unifying force for rather than a barrier to the states bordering it. The sea-lanes of antiquity were exploited early on, and the different coastal states enjoyed a lively trade with one another. Evidence for trade between different Mediterranean regions begins in the Neolithic period (sixth millennium BCE). Obsidian, a black glassy stone that was used to make very sharp blades, was imported from Anatolia to the island of Cyprus at this time.

In the Early Bronze Age, around 2400 BCE, Greece and northwestern Anatolia shared several cultural features that showed that these regions were in close contact with one another. The shapes of pottery, metal containers, and jewelry from island sites such as Poliochni and Troy closely resemble one another. A real move forward in interregional relations took place in the Middle Bronze Age. In the Levant, there is an explosion of sites founded on the coast in the Middle Bronze Age. By this time, improvements in shipbuilding allowed the peoples of the Levant to take advantage of their access to other Mediterranean ports. The Levantine states traded with Egypt to their south and to a lesser degree with Anatolia to their north. Regular trade between the Levant and the Aegean world and



Painting of Cretans Bringing Gifts, from the tomb of Rekhmire at Luxor, Egypt, about 1479–1425 BCE. (The Metropolitan Museum of Art/Art Resource, NY)

with the Aegean and Egypt also seems to have increased by this time, although the physical evidence of this trade is sparse. On Crete a few Egyptian scarabs, Mesopotamian seals, and Syrian daggers have been found, and a few examples of Minoan pottery made their way to the Levant and Egypt. Documentary evidence shows, however, that these regions were linked through the demand for tin, an essential ingredient for the forging of bronze. Texts from Mari (present-day Tell Hariri) in Syria show that tin was brought through here from the east and made its way to western ports such as Ugarit. Foreign merchants operating in Ugarit secured tin for transshipment west. In exchange for the tin the Minoans brought textiles, weapons, and pottery, mostly luxury goods.

It is in the Late Bronze Age, roughly 1500–1000 BCE, that all of the eastern Mediterranean states were drawn into a single exchange network, consistently trading with one another. In the early part of the period the Minoan influence was particularly strong, and Minoan artistic styles were copied throughout the eastern Mediterranean. Many of the palaces may even have shared or traded craftsmen. Several Minoan-style frescoes appear at Levantine sites, with the best example found at Tel Avaris in northern Egypt. Much of this trade was controlled by the palaces that had the resources, capital, and ties to secure overseas and land shipments. There is also some evidence for private merchants plying objects overseas at the same time. Overseas shipping linked all of the eastern Mediterranean. By this time, fleets were almost certainly following the sea routes running from Crete to Egypt and then back along the coast of the Levant, the southern shore of Turkey, and back to the Aegean Islands and the Greek mainland.

An archive of letters found at Tell el Amarna in Egypt documents the practice of gift-giving between the royal palaces of the Near East and Egypt. On a semiregular basis the kings of Egypt, Anatolia, Assyria, and Babylonia and possibly also Mycenaean Greece and Cyprus sent each other large shipments of luxury goods as greeting gifts in the fourteenth century BCE. At this time Cyprus played an especially important role, as it seems to have been a major supplier of much of the copper circulating in the Mediter-

➤ MYCENAEAN AND CYPRIOTE POTTERY

Without question the most prized pottery in the Bronze Age eastern Mediterranean world was the painted vessels of Greece and Cyprus. Mycenaean and Cypriot pottery was the most sought-after tableware of the royal courts of the Mediterranean. These were widely traded between the Mediterranean states and are found in surprising numbers at Levantine coastal sites. Both types of pottery, the Mycenaean and the Cypriot, were placed in wealthy tombs and in some sense served as status symbols. The pottery was especially popular in the Late Bronze Age (Cypriot, sixteenth–fifteenth centuries; Mycenaean, fourteenth–thirteenth centuries). The potters on Cyprus were able to achieve very fine thin-walled vessels with a lustrous paint and elegant shapes mimicking metal vases. The light color, decorations, and shapes of Mycenaean pottery made it highly desirable to the Levantine market. The Mycenaean and Cypriot vessels were imported both for the quality of the vessels themselves and also for the products contained within these vessels. Small Mycenaean stirrup jars, for instance, probably held high-quality perfumes. Mycenaean and Cypriot pottery has become an important marker in the archaeological record. When found outside Cyprus and Greece, this pottery helps to establish links between different regions and give rough chronological dates.

—Susan Helft

anean, the other essential ingredient of bronze. A pattern of trade networks for the fourteenth–thirteenth centuries in the eastern Mediterranean is apparent in the textual and archaeological evidence. Cyprus supplied copper to the Aegean centers and to the Near East and Egypt. Egypt traded ivory, ebony wood, and especially gold to the other powers; Greece had silver and pottery, some of which contained expensive perfumes. From the Levant, olive oil and probably wine as well as hippo ivory were important exports, and from the Near East it was textiles. It is unclear exactly who controlled or initiated much of this trade, but the shipping was almost certainly in the hands of Minoans, Mycenaeans, and Canaanites.

—Susan Helft

Bibliography

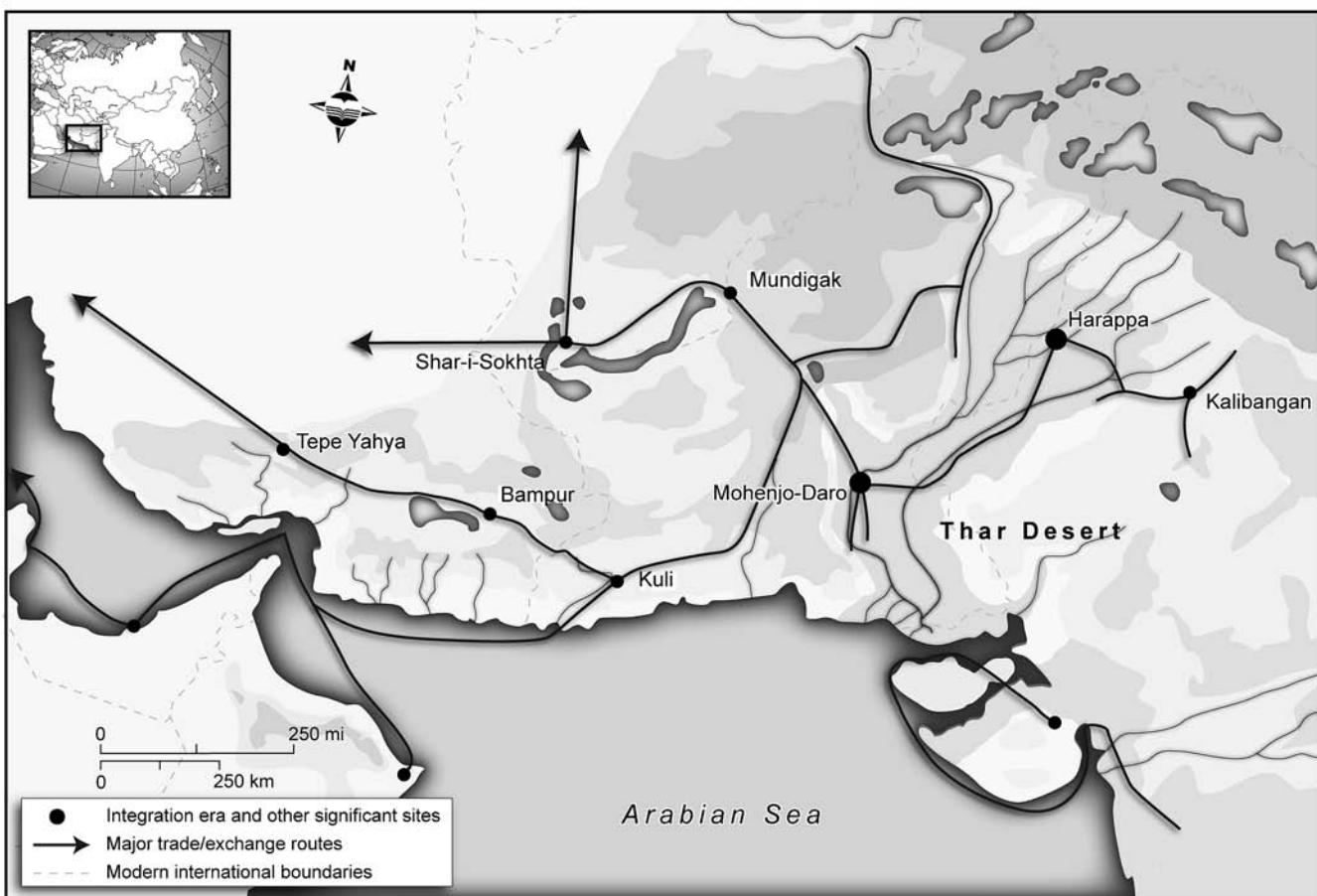
- Cline, E. *Sailing the Wine-dark Sea: International Trade and the Late Bronze Age Aegean*. Oxford, UK: Tempus Reparatum, 1994.
- Dickinson, Oliver. *The Aegean Bronze Age*. New York: Cambridge University Press, 1995.
- Gale, N. H., ed. *Bronze Age Trade in the Mediterranean: Papers Presented at the Conference Held at Rewley House, Oxford, in December 1989*. Jonesred: P. Åströms förlag, 1989.

Iranian Caravans across the Zagros

From early times, desirable materials such as obsidian had circulated widely in the Near East, and by the fifth millennium BCE, turquoise from central Asia and lapis lazuli from Afghanistan were known in Mesopotamia, Susiana, and other lands thousands of miles from their sources.

During the Uruk period, the Sumerians became more proactive in their trade with their neighbors, establishing trading outposts to control the acquisition of resources, such as that located within the settlement of Hacinebi to obtain Anatolian copper. Sumer was closely involved with Susa and Khuzestan, through which it may have imported copper from Talmessi on the Iranian plateau. By 3000 BCE, copper was being alloyed with tin to produce bronze, making it harder and therefore more useful. Thereafter copper and bronze grew in importance, promoting trade.

The fourth millennium saw organized trade networks developing across the Iranian plateau, where more tenuous links had existed for millennia, with towns growing up at nodes in natural routes across the plateau and at places where desirable resources could be obtained. Shahr-i-

INDUS REGION TRADE ROUTES AND SITES, CIRCA 3,000 BCE

Sokhta in southeastern Iran acted as a break-of-bulk point on the route from the lapis lazuli source area at Badakhshan. Here, raw lapis nodules containing impurities were chipped and cleaned into smaller pieces of pure lapis for more efficient transport. Tepe Yahya to its southwest was located close to a major source of chlorite. Many workshops here made chlorite artifacts, particularly decorated bowls, that were widely exported to various Elamite and Iranian towns, sites in the Gulf, Sumerian cities, and Mohenjodaro in the Indus Valley, a fair illustration of the extent of contemporary trade networks.

A Sumerian literary composition, Enmerkar and the Lord of Aratta, probably set around 2700 BCE, recounts how Enmerkar, king of Uruk, wishing to build a temple to Inanna, employed various strategies to obtain lapis lazuli, silver, and gold from Aratta, a land beyond Anshan and seven mountains. Aratta also worshipped Inanna. Enmerkar at first attempted to bully the king of Aratta by claiming that the goddess preferred Uruk. Threats and demands were made on both sides, and at one stage Enmerkar dispatched donkey loads of grain to Aratta, finally receiving the precious materials. Suggestions that Aratta may have been located in southeastern Iran have been given a boost by the recent discovery of a civilized society on the Halil River in Kerman Province, 124 miles (200 kilometers) north of the mouth of the Gulf. Named Jiroft after the local city, it came to international attention after looters ransacked a large cemetery. The cemetery and associated settlement are still in the early stages of investigation, but material believed to be from here appears to be contemporary with Early Dynastic and Akkadian Mesopotamia and includes a large quantity of chlorite vessels.

In another tale (Gilgamesh and Huwawa) Enmerkar's grandson Gilgamesh and his bosom companion Enkidu undertake an expedition into the mountains, where (by very underhanded means) they slay the demon Huwawa, the guardian of the cedar forest, and ship the trees back to Uruk. Although in later times cedar came from Cedar Mountain (Amanus range) in the Levant, it is possible that this poem refers to the importing of such valued timbers from the Zagros Mountains in the earlier third millennium.

—Jane R. McIntosh

Bibliography

- Astour, Michael C. "Overland Trade Routes in Ancient Western Asia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Hawkins, J. D., ed. *Trade in the Ancient Near East: Papers Presented to the XXIII Rencontre Assyriologique Internationale*. London: British School of Archaeology in Iraq, 1977.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ratnagar, Shereen. *Trading Encounters: From the Euphrates to the Indus in the Bronze Age*. Delhi: Oxford University Press, 2004.

Iran—Between the Persian Gulf and Bactria

Mesopotamia was an important trade partner of Iran's but certainly not the only one. Located between the Persian Gulf and the Caspian Sea, Iran is a natural middleman for the Gulf regions and Bactria (modern Afghanistan and Uzbekistan). Ancient Iranians (known as Elamites) took advantage of this position, trading for goods from these regions to the north and south cheaply and making a substantial profit when trading these goods to the Mesopotamians across the Zagros Mountains.

The most important component of this trade was the tin that the Elamites gained from the Bactrians. As tin is an essential component in the manufacture of bronze, this metal was highly sought after throughout the Near East. Other Bactrian objects were also desired by the Elamites. Stone vessels and statues from this region were found at Susa along with numerous other small items.

Archaeologists have unearthed substantial evidence for Elamite trade relations to the south as well. One of the main trading regions was what is now known as Bahrain but in ancient times was called Dilmun. This small island, across the Persian Gulf from Elam, must have had considerable influence at the Elamite city of Susa. The god Enzag (the chief deity of Dilmun) was venerated at a temple there (or a deity from Susa took the name Enzag). Dilmun stamp seals have been found at Susa as well as locally made imitations of Dilmun iconography. A contract stamped with a seal from Dilmun was found

there. Another contract from Susa records the delivery of 175 *minas* (a unit of measurement) of silver that were brought by “the Dilmunite.”

Oman, also across the Persian Gulf, must have traded goods with Elam. In the Bronze Age, Oman was called Magan. Distinct stone vessels from Magan have been found in Iran. It is presumed that traders were interested in the contents of these vessels, which unfortunately have not been preserved.

—Kevin M. McGeough

➤ TRADE AND TRANSPORTATION IN THE INDUS VALLEY



Clay model cart pulled by oxen from the ancient city of Mohenjo-daro, in present-day Pakistan. (Corbis)

Archaeologists have not unearthed any ancient Harappan vehicles that were used for transporting trade goods. Evidence for this comes from indirect sources: miniature clay models and artistic depictions of vehicles. Over land, traders could have used any of several different styles of two-wheeled carts, undoubtedly pulled by oxen or donkeys. Camels and horses were used in central Asia, but there is no evidence that these animals were used by the Harappans. River craft would have been better suited for long-distance trade; models of flat-bottomed boats have been unearthed. These may have been powered by sail or oar or even by being towed by people walking on the shore, slightly in front of the boat. In order to trade with Oman, the Harappans would have required sea-going vessels as well, but there is little evidence for what these looked like.

—Kevin M. McGeough

Bibliography

- Potts, D. T. *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 1999.
- Vallat, F. “Susa and Susiana in Second Millennium Iran.” In *Civilizations of the Ancient Near East*, edited by J. Sasson. New York: Scribner, 1995.

Harappan Trade

Trade was extremely important for the ancient Harappans since the Indus Valley was quite limited in mineral and metal resources. The region was quite agriculturally productive, but the many luxury goods that have been retrieved from excavations could not have been produced from materials located on the Indian subcontinent. Gold, however, was quite widely available on the subcontinent in ancient times, and this was one of the major resources that the Harappans exchanged outside of the Indus Valley. There were two primary regions outside of the Indus Valley where the Harappan traders had established active trade networks: Baluchistan to the west and Oman to the south, across the Oman Gulf. There is less clear evidence for trade with Mesopotamia (ancient Iraq) as well.

Baluchistan, located in parts of what are now known as Iran, Afghanistan, and Pakistan, was a source of much mineral wealth. Copper was exceptionally important, and much of the metallurgical production of the Indus Valley was reliant on a predictable stream of copper from Baluchistan. There may have been some copper sources available in the Indus Valley as well, but given the preponderance of copper at Harappan sites, these local resources must have been supplemented by external resources as well. Lapis lazuli, which was highly regarded by the Egyptians and Mesopotamians, came from Afghanistan and thus likely came into the Indus Valley through Baluchistan. There were substantial lead deposits (and by extension other resources associated with lead such as silver) in Afghanistan that may also have been traded to the Harappans. Finished products from Iran (ancient Elam) also made their way to the Indus Valley probably via Baluchistan, although since the Elamites traded with Oman, the middlemen may have been located across the sea.

Trade with Oman must have been extensive as well given how many Indus Valley artifacts have been found in Oman and how many artifacts of the Oman style have been found in the Indus Valley. Oman also had access to significant copper resources, so this may have been one of the principle imports to the Indus Valley. Precious stone would also have been imported.

No finished Mesopotamian products have been recovered from the Indus Valley, although the stamp seals (and the few cylinder seals) typical of Harappan material culture bear a striking resemblance to those invented in Mesopotamia. Objects constructed with typical Harappan practices have been found at Ur, and some scholars suggest that Harappan artisans may have even settled in Mesopotamia. Textual evidence from Mesopotamia records trade with merchants from Meluhha, which may refer to the Indus Valley. Interestingly enough, Mesopotamian texts record that Meluhhan merchants traded in lapis; since this is not found in the Indus Valley, it may indicate that Harappan traders engaged in a more complicated trade enterprise than the mere conveyance of raw materials; they may have been buying and selling for profit.

Trading within the Indus Valley was conducted primarily after the monsoon season. During the monsoons, the rivers would have been too swollen for safe transportation, and the roads would have been too muddy. Given that most sites are located along rivers, the cities and villages were, without a doubt, connected in a larger trade network. The resources that would have been traded within the subcontinent would have been chert and marine shells; archaeologists have been able to reconstruct extensive routes of movements by comparing the findspots of these objects with where they would have originally come from. No doubt these internal trade networks helped facilitate the movement of goods that had been procured from outside of the Indus Valley as well.

—Kevin M. McGeough

Bibliography

Asthana, Shashi. "Harappan Trade in Metals and Minerals: A Regional Approach." In *Harappan Civilization: A Contemporary Perspective*, edited by G. Possehl. Warminster, UK: Aris and Philips, 1982.

Chakrabarti, Dilip K. *India: An Archaeological History*. Oxford: Oxford University Press, 1999.

Fairservis, William A. *The Roots of Ancient India*. 2nd ed. Chicago: University of Chicago Press, 1975.

Kenoyer, Jonathan M. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

Maisels, Charles Keith. *Early Civilizations of the Old World*. New York: Routledge, 1999.

Chavin de Huantar— Trade between the Andes and Amazon Basin

The monumental site of Chavin de Huantar is located on the eastern flank of the Cordillera Blanca in the north-central Peruvian Andes. It rests at the junction of two Andean rivers, the Wacheqsa and Mosna (Pukcha), that together merge to the north into the Marañón River, a large tributary of the eastern Amazon River basin. Given its location, the site of Chavin de Huantar may have served as a trade center between the Andes, the western coast, and the eastern tropical forest.

In the 1970s, Donald Lathrap proposed that certain species, floral and faunal, depicted in the sculptural iconography at Chavin de Huantar derived from the Amazonian basin and thus identified the origins of the earliest Chavin populations. Lathrap focused his attention on the Tello Obelisk, an 8.2-foot (2.5-meter) granite shaft recovered from the site's monumental plaza. The shaft is carved in high relief on four sides and depicts an amalgam of images interwoven within and around two nearly identical zoomorphic figures. Following John Rowe, Lathrap identified the two main images as caimans; thus, the sculptural program drew from an eastern tropical forest fauna and mythology. Lathrap likewise branded the other stylized figures, such as felines, birds, and serpents, on tropical forest models and their significance to modern Amazonian populations.

Chavin sculptural images thus appear to comprise the fiercest tropical forest predators: jaguars (*Felis onca*), harpy eagles (*Harpyia harpyja*), caimans (*Melanosuchus niger*), and anacondas. Similarly, the floral species illustrated on



Relief sculpture depicting jaguars and snakes covers the ruins of a stairway at Chavin de Huantar, Peru. (Charles & Josette Lenars/Corbis)

the Tello Obelisk depict Amazonian-based cultigens, such as manioc, peanut, chili pepper, and bottle gourd. Such identifications in Chavin iconography have forced scholars to critically address the nature of trade between the Amazonian tropical forest and the Andean site of Chavin de Huantar during the Late Initial (1100–900 BCE) and Early Horizon (900–200 BCE) periods of Peru.

Trade between the Peruvian coast and tropical forest was occurring possibly as early as the Late Preceramic period (2500–1800 BCE). The site of La Galgada in the Tablachaca Valley, for example, produced colorful feathers of tropical forest birds from Preceramic archaeological contexts. During the Initial period (1800–900 BCE), the site of Kotosh, to the south of Chavin de Huantar in the central Andes, shared in a ceramic tradition with the nearby eastern tropical forest. An imported piranha jaw was even found at the site in a contemporary excavated context. Chavin de Huantar succeeded the Kotosh tradition of the highlands and may have readily maintained connections with the tropical forest, as suggested by its centralized location.

The greatest evidence of long-distance trade during the Formative period, however, exists between the Peruvian coast and Ecuador to the north. The warm-water mollusks, *Spondylus*

princeps and *Strombus galeatus*, from Ecuador were actively imported into Peru from at least the Initial period (1800–900 BCE). These mollusk species feature not only in the archaeological record at Chavin de Huantar but also in the iconographic complex of the Tello Obelisk sculpture alongside the identified tropical forest specimens. The representations of the shells as well as their remains in the archaeological site thus reflect the participation of Chavin de Huantar in a trading sphere that encompassed the Peruvian coast and highlands.

During the Early Horizon (900–200 BCE), sites such as Bagua and Huayurco in the northern *ceja de selva* evince a certain degree of active trade between the Andes and the Amazonian region. Chavin religious practices based on the ingestion of hallucinogenic snuff presumably required tropical forest plants and thus further allude to contact between these two geographic spheres. Nevertheless, very little archaeological evidence remains at Chavin de Huantar to substantiate a clear exchange between the Andes and the Amazon at this site. The tropical species, mythologies, and practices identified by Lathrap and supported by subsequent scholarship at Chavin de Huantar thus require continued archaeological investigation to clarify further the nature of trade or interaction with this presumably highly influential eastern tropical forest zone.

—Kimberly L. Jones

Bibliography

- Burger, Richard L. *Chavín and the Origins of Andean Civilization*. London: Thames and Hudson, 1992.
- Elera, Carlos. “El Complejo Cultural Cupisnique: Antecedentes y Desarrollo de su Ideología Religiosa.” In *El Mundo Ceremonial Andino, Senri Ethnological Studies* 37, edited by Luis Millones and Yoshio Onuki. Osaka: National Museum of Ethnology, 1993.
- Lathrap, Donald. “Our Father the Cayman, Our Mother the Gourd: Spinden Revisited, or a Unitary Model for the Emergence of Agriculture in the New World. In *Origins of Agriculture*, edited by C. Reed. The Hague: Mouton, 1977.
- Lathrap, Donald. “The Tropical Forest and the Cultural Context of Chavín.” In *Dumbarton Oaks Conference on Chavín, October 26th and 27th, 1968*, edited by Elizabeth P. Benson. Washington, DC: Dumbarton Oaks Research Library and Collection, Trustees for Harvard University, 1971.

War and Diplomacy

Around 1325 BCE, King Suppiluliuma I of Hatti (the Hittite empire) sent one of his sons to marry a recently widowed queen of Egypt. It is likely that this was the widow of King Tutankhamun, who had died unexpectedly around this time, although the actual name of the deceased king is not preserved. The widowed queen had requested that a royal son be sent to her, an unusual situation since the Egyptians were usually reluctant to allow foreign men to marry into the royal line. These sorts of xenophobic concerns may have been what led someone in Egyptian court circles to have Suppiluliuma's son intercepted and murdered before arriving in Egypt, thus preventing the formation of a dynastic union between two of the most powerful states of the Late Bronze Age: the Egyptians and the Hittites.

The exchange of royal daughters among the great kings of the Near East was only one of the ways that diplomatic ties were created across the Mediterranean and western Asia. Diplomatic messengers moved back and forth freely, bringing with them luxurious gifts to build ties and strengthen alliances. The kings of Egypt, Babylon, Assyria, Mitanni, Hatti, Cyprus, and Arzawa (in Anatolia) treated each other as relative equals (although the kings of Babylon referred to the kings of Assyria with scorn). These kings called each other “brother,” acknowledging that they were the great kings of the world. Kings of smaller polities (most often city-states) called these kings “father,” acknowledging their subservience. This was the milieu of the first treaties. The earliest preserved treaty between equals (known as a parity treaty) was drawn up between the Hittites and the Egyptians. Treaties between nonequals (called suzerainty treaties) were also common.

The Late Bronze Age was a period of relative peace until the so-called Sea Peoples disrupted this international network. In many ways the long period of relative diplomatic stability in the Late Bronze Age was atypical of this period. This was the period when the first states emerged and thus when the first organized warfare between states occurred. The artwork of the

early states in Egypt and Mesopotamia reflects armed conflict. This may be the first propaganda, although scholars debate the suitability of the use of this term for the ancient messages about war communicated in art. From these earliest pieces of art, the king is depicted as skilled in warfare and able to crush his opponents with a violent show of force. Accounts of glorious victories in battle are among the most common historical inscriptions from Egypt and Mesopotamia. Even when the

These kings called each other “brother,” acknowledging that they were the great kings of the world. Kings of smaller polities (most often city-states) called these kings “father,” acknowledging their subservience.

king was not the victor, the king was portrayed as victorious, especially in Egypt. Who would argue these finer points of historical reality with the son of a god?

The tools of warfare became more specialized during this time period. New technologies facilitated the ability to kill. The invention of metal allowed metal weapons to be created, mostly spears, swords, and arrowheads. Armor, made of a combination of leather and bronze, could provide added protection in defense. Chariots allowed archers to move through the battlefield more quickly, avoiding the blows of infantrymen and breaking through the enemy lines. Fortifications—large massive walls—were built to protect the cities. Siege weapons were built to destroy these walls. These technologies developed in China similarly to those that developed in the Near East. In the Americas, warfare continued much as it had in previous centuries, with no new innovations. Metallurgy, as it developed in Europe, seems to have been tied to a warrior culture there. Warriors buried with their elaborate weapons and armor seem to have had a high status within the community, although without textual records their exploits have long been forgotten.

—Kevin M. McGeough

■ Introduction: Technologies of Warfare

Throughout history, many of the great technological advancements have come from military origins. Humans have rarely been as clever at devising new technologies as when they intended these technologies to aid them in war. The concept of an “arms race” is certainly not new; when the first stone tool was used as a weapon, those against whom it was used began to devise better and more effective tools/weapons. The ancient (and still continuing) arms race did not only involve handheld weapons. Ancient fortified cities gave rise to siege equipment, and siege equipment required that fortifications were improved. For each new weapon, large or small, there was a development of better defenses, and for each new defense there were better weapons.

The vast majority of the technological history of tool-using humans has revolved around stone tools, but it was with the advent of metallurgy that the exponential rise in technology began. Bronze first began to be fashioned into tools and weapons sometime in the latter half of

the fourth millennium BCE, and these tools and weapons were generally more durable than their stone counterparts and could also be easily sharpened or recycled if broken. It was, however, many centuries before metal tools and weapons became commonplace. Stone tools were still used for many tasks even into the later Iron Age (ca. 1000–600 BCE), when metals were much more common.

Along with changes in technology came changes in the way in which soldiers were organized. Each new type of weapon required soldiers who were proficient in their use. Siege engines required specialist soldiers just as chariots did. Each new weapon and new type of defense required new manufacturing techniques and the support of other industries. Metal weapons required craftsmen skilled in smelting ores and metalworking, and large-scale fortifications required individuals with knowledge of engineering. Chariots required horse breeders and grooms as well as woodworkers and leatherworkers. As weapons and military technology evolved and

grew, so too did the societies it was used in, and in turn, as societies became more complex, so too did their militaries.

The period from 4000 to 1000 BCE saw the beginning of organized warfare conducted on a level considerably beyond internecine village warfare or even tribal warfare. With the rise of societies such as the Egyptian dynasties and the great city-states in Mesopotamia, the Levant, and India and the Shang dynasty in China, ever-increasing effort was put into the military to both defend these societies and conquer others. As the military bodies grew, hierarchies developed within them, and the culture and society evolved to cope and augment these changes. No study of history can be complete without examining the military and the effects it had on society.

—Thomas D. Hulit

Bibliography

- Carey, Brian T. *Warfare in the Ancient World*. Barnsley, UK: Pen and Sword, 2005.
- Herzog, Chaim, and Mordechai Gichon. *Battles of the Bible*. Toronto: Stoddart, 1997.
- Keegan, John. *A History of Warfare*. New York: Random House, 1994.

Chariots

The chariot was one of the most important military innovations of the ancient world. It changed the way in which battles were fought and greatly affected the social structure and effectiveness of the military. An ancient chariot was essentially a two-wheeled cart of special design that was drawn by two draft animals, usually horses. Chariots, like any technology, evolved over time from heavy four-wheeled wagons pulled by oxen and other draft animals (ca. early to mid-third millennium BCE) into much more refined forms. By the sixteenth century BCE, chariots were widespread and had gone through considerable changes. They were known from Russia to Egypt, from Greece to India. These later forms were a very valuable item of military equipment. The chariots used in the Late Bronze Age Middle East (ca. 1600–1000 BCE) were lightly built and capable of carrying two or three passengers, which allowed individuals to travel from point to point

➤ SHANG CHARIOT

Chariots are known across the ancient world and were in common use from circa 1500 BCE in Egypt, Greece, parts of Europe, India, the Caucasus, central Asia, and China. In each of these regions, except for China, chariots appear to have evolved from heavy four-wheeled vehicles into light two-wheeled vehicles. This suggests that the chariot did not evolve wholly within China but instead was introduced from elsewhere. One current hypothesis is that chariots were first developed in the Caucasus region of what is now southern Russia and spread in all directions, eventually reaching the regions mentioned above.

Chariot remains have been found in Shang dynasty China (ca. 1600–1050 BCE) in the archaeological excavations at Dasikongcun and Xiaomintun in Anyang Province and Laoniupo in Xi'an Province. Unfortunately, the remains are not complete enough to determine precisely how these vehicles were constructed, so there is still considerable discussion as to exactly how these vehicles would have been used. Some work has been done by researchers at the Royal Ontario Museum in Canada by making a comparison of the Shang dynasty chariots with those found in the tomb of Tutankhamun, the famous Eighteenth Dynasty Egyptian pharaoh (ca. 1334–1325 BCE) in whose tomb six complete chariots were found.

Chariots were a valuable item of military equipment in ancient Egypt, usually being used by elite, wealthy soldiers along with body armor and powerful composite bows. The Shang dynasty chariots have also been found with composite bows and other archery equipment, which suggests that China may also have used the chariot in a similar manner. Much further research needs to be done to determine the origins of the Shang dynasty chariots and the uses to which they were put.

—Thomas D. Hulit

much more quickly than before. The military advantage that this provided was that units of highly trained soldiers could be quickly deployed to where they were most needed, which was particularly useful in battle.

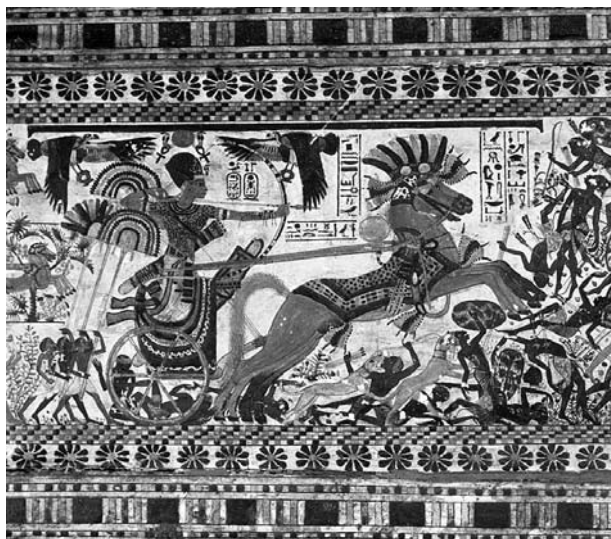
The first known chariots are more accurately called war-wagons. The earliest evidence for the

military use of chariots comes from the Standard of Ur, the decorated sounding box from a musical instrument that was found in the Royal Cemetery at the archaeological site of Ur in 1928–1929. This artifact shows a scene of soldiers, chariots, and draft animals in procession. There are five chariots depicted in the scene, and each is drawn by four hemiones or onagers (draft animals similar to horses). The chariots have four wheels with a chest-high barrier at the front to provide some protection to the driver and passengers. Four of the chariots are shown with a bundle of spears attached to the front, which suggests that the chariots may have been used as mobile platforms from which to fight. Although it is possible that the soldiers fought from the back of the chariot, the four draft animals and the size and weight of the vehicle would have made it slow and cumbersome. It is more likely that these heavy war-wagons were used to transport the elite soldiers to battle as a mark of honor and prestige.

Unfortunately, there is little evidence on the evolution of the chariot between those depicted on the Standard of Ur (ca. 2500 BCE) and those used by the military bodies of the Late Bronze Age (ca. 1600–1100 BCE). However, a great deal of change took place. By about 1700 BCE chariots were of much lighter construction, had only two wheels, and were pulled by two true domesticated horses (*equus caballus*) rather than four. This allowed the chariot to be much faster and more maneuverable.

A chariot or wagon is actually quite a complicated item, and as such it requires considerable technological skills to manufacture. First, the ancient society that desires a wagon or chariot needs to have woodworking skills, the knowledge of how to make wheels, and access to domesticated animals to pull the vehicle. Crude wagons would not be very difficult to manufacture, however. One of the most important technologies needed to manufacture later chariot bodies and wheels is what is called bent wood technology. Essentially, this technology involves using specific types of wood and shaping them in straight sections and then bending them with heat and steam to form the required parts.

The chariots that we are most familiar with are from New Kingdom Egypt (ca. 1570–1070 BCE).



Tutankhamun fighting against the Nubians from his chariot. Panel from the painted wooden chest of Pharaoh Tutankhamun, about 1332–1323 BCE, Eighteenth Dynasty, Egypt. (Roger Wood/Corbis)

Most of the chariots found in Egypt come from the tomb of the famous pharaoh Tutankhamun (r. 1334–1325 BCE). The English archaeologist Howard Carter discovered the tomb in 1923, and in the following years he removed and cataloged all the artifacts within. Included among the thousands of items were six complete but disassembled chariots, each of slightly different design.

In general, the Egyptian chariots were two-person vehicles, some of which were used for military endeavors and some for personal or nonmilitary uses. The cab or body of the chariot is usually about 31 inches (80 centimeters) high (about hip height to allow the passenger to lean against it for added stability), about 39 inches (1 meter) wide, and slightly less than approximately 1 yard (1 meter) long. The wheels are usually about 39 inches or more in diameter, with the axle placed at the rear of the cab. This placement of the axle allows the chariot to be turned quickly but puts more strain on the backs of the horses.

Chariots were often used in the military, but only the elite got to use them. In most instances, the charioteers were members of the social elite, often members of the nobility or royalty. In the Early and Middle Bronze Ages, warriors were infantry along with all the rest of the soldiers. With increasing use of chariots circa 1600 BCE,

elite warriors began to use chariots instead of acting strictly as infantry. Soldiers did not begin to fight from horseback until about 850 BCE, so the chariot was the most advanced weapons and fighting system for almost 1,000 years. The biggest problem was that chariots and horses were very costly to produce and maintain, so there were never as many available to the ancient kings as they would have liked.

Modern literature often makes the mistake of assuming that the chariot was used in a manner similar to modern tanks. This is incorrect for two major reasons: the chariot and horses are not sturdy enough to take the massive impact of colliding with opposing forces, and the chariots and horses were far too valuable to risk in this manner. In the Late Bronze Age, military chariots served several roles. They were often used as vehicles of state, as they were a fine way for the elite to display their wealth, the chariots often being heavily embellished with gold and ornamentation such as those found in Tutankhamun's tomb. They were also sometimes used as fast courier and delivery vehicles, allowing the transport of messages and small quantities of valuable goods.

When the Late Bronze Age chariots were used in battle, they usually served in two ways. They could very quickly transport heavily armed elite soldiers to a point in battle where they were needed, and they also served as mobile platforms for archers. Using the chariots as mobile archery platforms was probably the most common use in the ancient world, as it allowed a small unit of expert archers to travel to the most advantageous place on the edges of the battle to deliver their arrows.

—Thomas D. Hulit

Bibliography

- Littauer, M. A., and J. H. Crouwel. *Chariots and Related Equipment from the Tomb of Tut'Ankhamun*. Tut'Ankhamun Tomb Series 8. Oxford, UK: Griffith Institute, 1985.
- Littauer, M. A., and J. H. Crouwel. *Selected Writings on Chariots and Other Early Vehicles, Riding and Harness*. Edited by Peter Raulwing. Vol. 6 of *Culture and History of the Ancient Near East*. Leiden: Brill, 2002.
- Littauer, M. A., and J. H. Crouwel. *Wheeled Vehicles and Ridden Animals in the Ancient Near East*. Leiden: Brill, 1979.

Moorey, P. R. S. "The Emergence of the Light, Horse-Drawn Chariot in the Near East c. 2000–1500 BC." *World Archaeology* 18(2) (1986): 196–215.

Piggot, Stuart. *The Earliest Wheeled Transport: From the Atlantic Coast to the Caspian Sea*. London: Thames and Hudson, 1983.

Schulman, Alan. "Chariots, Chariotry, and Hyksos." *Journal of the Society for the Study of Egyptian Antiquities* 10 (1979): 105–153.

Tools of Warfare—Metal

Though it might not seem so from the era's name, the use of iron did begin before the end of the Bronze Age. However, the use of iron was not widespread, and in fact almost all metal artifacts that have been discovered from the Late Bronze Age were, not surprisingly, bronze. It was not until the twelfth century that the ratio of bronze to iron goods began to shift. Part of the reason for the change was the massive disruptions of trade routes, which occurred by 1100 BCE. Bronze is made by combining copper with tin; both metals, and especially tin, were rare to begin with, explaining the high cost of bronze armor and weapons. The main source of tin seems to have been the British Isles, and when contact with Britain was lost because of invasions, it became nearly impossible to import tin and hence nearly impossible to make bronze. Iron is far more common than copper and tin and is, of

➤ IRON AND THE INFANTRY REVOLUTION

The introduction of iron also coincided with another very important military development. During the Bronze Age, the most important implement of war was the chariot, and the most important soldiers were therefore those who either drove the vehicle or the archers who fired arrows from it. Large infantry units played a role in Bronze Age warfare but generally did so as support troops. It was only late in the period that foot soldiers developed methods to overcome the chariots and therefore inaugurated a new period of warfare in which the infantry was the most prevalent and most important element on the battlefield. Those infantrymen would, of course, now be armed with iron weapons and, in some cases, iron armor.

—Stefan G. Chrissanthos

course, an element, meaning that no additives are necessary. Iron is therefore easier to procure and far cheaper than bronze. In the Dark Age that followed the collapse of the Bronze Age, people needed metals that were near at hand; therefore, iron was increasingly used to make almost everything. Artifacts recovered from the 900s BCE show that for the first time iron was used more than bronze, a dramatic change from just two centuries before. The gap would grow larger even as the Dark Age finally came to an end and new civilizations, with their accompanying long-distance trade networks, developed. Iron eventually would be the metal of choice for almost all armor and weapons made during the rest of antiquity. This meant that almost all the soldiers, from every army, used iron weapons, and if they used armor, that armor was usually made of iron as well. The impact of this cheaper metal on ancient warfare would be incalculable.

—*Stefan G. Chrissanthos*

Bibliography

- Chrissanthos, Stefan G. *Warfare in the Ancient World: From the Bronze Age to the Fall of Rome*. Westport, CT: Praeger, 2008.
- Drews, R. *The End of the Bronze Age: Changes in Warfare and the Catastrophe ca. 1200 B.C.E.* Princeton, NJ: Princeton University Press, 1993.

Siege Weapons

In the ancient world, siege warfare was an effective, although undesirable, outcome to war. Sieges typically took weeks, if not months or years, and they chiefly involved confining the populace one was attacking within their city and slowly starving them until they either died or surrendered. While this approach allowed for little loss of life to the attackers, it was costly to maintain an army far from home and it was very time-consuming. As such, many forms of heavy weapons and devices were developed to speed the process along. In response to these developments, many new and complex forms of fortifications were also developed.

The first forms of fortified human habitation were simple refuges. These could be as simple as a cave or ravine where a group might seek shelter from an attack. This type of fortification

would probably not have been a good place to stay for extended periods of time, but it would at least limit the direction from which the attacks could come. A better form would be a stronghold, which is similar to a refuge but capable of storing food and other goods. A stronghold is only capable of supporting people as long as its stores of food and water last. Added to this, a stronghold needs to have a group of people to defend it and be situated in a region that is productive enough during times of peace to stockpile a surplus of goods. A very important factor in a stronghold is a secure supply of water. A person can last for some time without food but only a few days without water. Many of the ancient fortified strongholds were built over cisterns or wells (such as ancient Megiddo and Masada).

There is also a form of modified or advanced fortified sites called strategic defenses. These would include outposts (e.g., a series of watch towers) that would serve to warn the main stronghold of imminent attack. Ideally, each outpost or watchtower would be able to signal or send a message to the next tower quickly, thus getting the information to the main fortified center very quickly and giving them ample time to prepare. Strategic defenses may control or overlook quite large distances, such as Hadrian's wall in Britain (approximately 72.7 miles [117 kilometers]) or the Twelfth Dynasty Egyptian forts built on the Nubian frontier between the first and fourth cataracts of the Nile River (31.1 miles [50 kilometers] or more). Strategic defenses can be used to observe the actions and travel of people in a region, but each defensive node or tower in the system is vulnerable. It is a trade between strict defense and the size of the area it controls.

Over time the fortifications were adapted and changed in response to the military methods of the age. As fortifications became more sophisticated, so did the weapons used against them. In order to end a siege more quickly, new techniques and great war machines were developed. The first of these new innovations was the battering ram. The earliest solid evidence for a battering ram comes from a relief in the tomb of Khety, an Egyptian provincial governor of the late Eleventh Dynasty (ca. 2000 BCE). The depictions show infantry soldiers attacking a fortress

while three soldiers use a long pole from within a light shelter to dig at the walls with the intention of making them collapse. It was some centuries later that the true battering ram is first known to have been used to knock down the gates of a city (e.g., the early Iron Age). Initially, it was simply a large log, often with a metal cap, carried by a group of soldiers and used to batter down the gates. Later in history, and certainly by the Assyrian period (ca. 900–600 BCE), this ram was suspended within a movable covered framework to provide protection for the crew and make swinging the ram much easier. An example of this is shown on a relief in the British Museum of the destruction of Balawat's gates and the surrender of King Hamath (Assyrian, ca. 900 BCE).

Large siege engines and siege towers were not common in ancient Egypt due to the lack of wood; however, they did occur in primitive forms. In a relief in the Fifth Dynasty tomb of Inti at Deshasheh (ca. 2450 BCE), there is evidence of tall ladders being used by Egyptian forces to scale the walls and capture a fortress in what is now Israel/Palestine. Later, in the Eleventh Dynasty, there is a relief from the tomb of the general Intef at Thebes showing large ladders or crude siege towers also being used to capture a city. In later centuries, larger wooden siege engines, such as mobile towers covered in wet animal hides (to keep the enemy from burning them), were developed and used in places such as Assyria (ca. 900–600 BCE). Generally, large siege engines were manufactured on site due to the difficulty in moving them over even relatively small distances.

Prior to 1000 BCE siege weapons were in their infancy. The fortifications of the time were designed and evolved primarily to prevent attack by regular infantry soldiers. Steep slopes on the outside faces of the walls called the *glacis* were designed to make it very difficult or impossible for a soldier to climb. These sloping faces would also make it impossible for early siege towers to get close enough to do any damage. Heavy missile-throwing engines such as catapults and trebuchets were only invented many centuries later. True catapults and torsion engines were not developed until later in the first millennium BCE.

—Thomas D. Hulit

Bibliography

- Healy, Mark, and Angus McBride. *The Ancient Assyrians*. Elite Series 39. London: Osprey, 1991.
- Healy, Mark, and Angus McBride. *New Kingdom Egypt*. Elite Series 40. London: Osprey, 1992.
- Keegan, John. *A History of Warfare*. New York: Vintage Books, Random House, 1994.
- Shaw, Ian. *Egyptian Warfare and Weapons*. Shire Egyptology 16. Buckinghamshire, UK: Shire Publications, 1991.
- Wise, Terrence, and Angus McBride. *Ancient Armies of the Middle East*. Men-At-Arms Series 109. London: Osprey, 1981.

Egyptian Execration Texts

The Execration Texts provided a kind of curse that the ancient Egyptians directed against threats that were beyond immediate reach. Such threats included real-world foes as well as perceived supernatural forces and other intangible dangers. Two primary steps comprised the basic execration ritual: identification and destruction. The victim's name was usually applied on an

THE NUBIAN SECTION OF AN EXECRATION TEXT FROM MIRGISSA

"The ruler of Kush, *Triahi*, born of *Kany*, who was born to *Kaa*, and all captives who are together with him. The ruler of Sai, *Khasa*, born of *Ishetken* (called *Wapis*) and all captives who are together with him. The ruler of Webetsepet, *Bekwayt* (called *Tjai*), born of *Ihaas*, who was born to *Wenkat*, and all captives who are together with him. The *Medjay*-Nubian, *Wahib*, born of *luhi*, who was born of *Wenket*, and all the captives who are together with him. The ruler of Aushek and all captives who are together with him. All Nubians of Kush, of Sai, of Webetsepet, and (all) the bowmen in Nubia. Their strong ones, their couriers, and all captives who are with them. Their masses who will rebel, who will conspire, who will fight, who speak of fighting, or who speak of their rebellion in this whole land."

—Nicholas S. Picardo

Source

Yvan Koenig, "Les textes d'envoûtement de Mirgissa," *Revue d'Égyptologie* 41 (1990): 101–125.



Wooden execration figure, Egypt, Middle Kingdom.
(Réunion des Musées Nationaux/Art Resource, NY)

object—a red pot, a figurine (of clay, wood, or wax), or a plaque—in order to give it an identity. This could be accomplished by writing names alone or by using a full execration inscription. However, blank execration figures suggest that verbal naming would suffice, and a complete execration ritual probably included recitations. The final steps in the process were the breaking or burning of the object followed by burial.

This was not so much household magic as a ritual practice used on behalf of the state to help maintain order in the world. Execration rites

were supposed to negate the harmful magic or supernatural influences that could be directed against Egypt by enemies from this world or beyond. The most common targets were foreign peoples, specifically Egypt's traditional enemies: Nubians, Asiatics (from Syria-Palestine and the broader Near East), and Libyans. Many Execration Texts appear on crudely shaped figurines in the shape of captives, often shown bound with arms pulled behind their backs. In Egyptian iconography this posture was a very common mode of depicting foreign enemies. Such human-shaped figurines were not like voodoo dolls, though, as the person or people they depicted were not necessarily expected to experience immediate, direct effects. Also named in some texts are malevolent spirits of the dead, including Egyptians. Conceptual dangers included potential evil acts and even bad intentions harbored against Egypt.

Execration Texts are known from the Old Kingdom until well past the New Kingdom. By the Middle Kingdom a fairly consistent format had developed. Early sections list specifically the leaders of enemy foreign groups, their home regions, and their affiliates. A so-called Rebellion Formula mentions generically anyone who would rise up and fight against Egypt. Groupings of dangerous actions, sentiments, and spirits receive their own sections as well. At the Nubian site of Mirgissa a sizable deposit of broken execration objects dating to the Middle Kingdom may suggest that this kind of ritual was part of the foundation ceremony for the Egyptian fortress there. The remnants of an associated human sacrifice may also indicate that execration rites were not always restricted to just symbolic ritual objects.

—Nicholas S. Picardo

Bibliography

- Redford, Donald B. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.
- Ritner, Robert Kriech. *The Mechanics of Ancient Egyptian Magical Practice*. Studies in Ancient Oriental Civilization 54. Chicago: Oriental Institute of the University of Chicago, 1993.
- Seidlmayer, Stephan J. "Execration Texts." In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by Donald B. Redford. Oxford: Oxford University Press, 2001.

Mercenaries

Throughout history it has always been difficult for governments to find enough good soldiers. A soldier's life was and is often very hard, and there is the ever-present danger of loss of life, so for many a military life was not desirable. Warfare in the period from 4000 to 1000 BCE generally involved either local disputes or in some cases wars waged far from home. For example, Thutmose III (ca. 1504–1450 BCE) waged 17 military campaigns outside of Egypt during his reign. Military life for the Egyptian soldiers at this time included long periods away from home and away from their families and professions. Life in the military was often not popular, and many societies in the ancient world suffered shortages in personnel.

Conscription was one obvious way to deal with the shortage, and many ancient cultures adopted it. In the Old and Middle Kingdoms (ca. 2600–1780 BCE) Egypt conscripted 1 in every 100 men into the army, and by the time of Ramesses II (ca. 1279–1212 BCE) 1 in 10 men were being conscripted. This was very unpopular, and many Egyptians avoided conscription by hiding or running away. The only way for Egypt and other societies to gain enough soldiers to maintain a large enough standing army was by hiring mercenaries. The period from 4000 to 1000 BCE was premonetary, so mercenaries were not paid in coinage but instead were often given grants of land and a share in the loot from the battle. A military career in Egypt, whether as a mercenary or a regular soldier, was one of the only ways for a peasant or commoner to increase his status and fortune in life.

The first solid references to mercenaries are from the reign of King Sargon of Akkad in Mesopotamia and date to ca. 2350 BCE. Sargon employed perhaps as many as 5,000 mercenaries, mostly recruited from the edges of his empire. These mercenaries also sometimes saw regular police duty and were often used to put down internal riots and revolts. Since they were far from home, they would have no connection with the people they had to control, and Sargon did not have to make his soldiers use violence toward their own people. This allowed Sargon to see his will done without much unrest developing



Depiction of Nubian mercenaries, from the tomb of the commander Thanuny, about 1420 BCE, Eighteenth Dynasty, Egypt. (Werner Forman/Art Resource, NY)

within his military. The Egyptian pharaohs often used the famous Medjay Nubian mercenaries in a similar way. By the time of the Egyptian New Kingdom, the Medjay were unofficially known as the Egyptian police force.

The most notable force of mercenaries in the ancient world were the Habiru. This group or culture was known across the ancient Middle East and appears in the documents of many cultures from 2500 BCE through to about 1000 BCE. Its origin is unknown, and there were groups of Habiru in many regions. The ancient texts note that they were sometimes hired for domestic purposes but most often as mercenaries. By the fourteenth century BCE the Habiru had become very successful as mercenaries, and their population had grown to the extent that they were able to take control of various towns and cities in the Levant, including Hazor and Byblos. However, with the collapse of the great city-states at the end of the Late Bronze Age (ca. 1050 BCE), the Habiru disappear from history. It is possible that in all the upheaval of the period they were incorporated into what remained of society after the fall of the elite polities of the period.

—Thomas D. Hulit

Bibliography

- Keegan, John. *A History of Warfare*. New York: Vintage Books and Random House, 1994.
- Yalichev, Serge. *Mercenaries of the Ancient World*. London: Constable and Company, 1997.

Bronze Age Fortifications in Syria-Palestine

Fortifications are large walls and gate systems that are built around cities to act as defensive barriers against military invaders and to regulate the movement of people in and out of a city. Perhaps due to their location between the great powers of Asia (Mesopotamia, the Hittites) and Africa (Egypt) and the city-state political system of the region during the Bronze Age, the cities of Syria-Palestine developed some of the most sophisticated fortification systems in the ancient world. As protection from the larger armies of the states to the south and east of the region and probably more importantly as protection from nearby rival cities, the cities of the Levant built large walls to defend their cities.

The first substantial fortifications appear in the Early Bronze II (EBII) period (3050–2700 BCE), in tandem with a process of intensive urbanization. As large cities began to develop, so did defensive architecture. These first fortifications are simple stone walls, perhaps 9–13 feet (3–4 meters) in width at most. Construction techniques vary. Some sites have towers connected,

most likely to defend weak sections of the wall (especially the gates). EBII towers are rectangular or horseshoe shaped.

The EBII fortifications are enlarged and strengthened in the Early Bronze III period (2700–2300 BCE). For example, the EBII tower at Tell el-Farah (north) was expanded from 9 feet (3 meters) in width to 23 feet (7 meters) in width. Some of these walls were expanded using larger stones; others had retaining walls added. At Yarmuth, which had the largest EB fortification system (surrounding 40 acres of area and preserved archaeologically to a height of 26 feet [8 meters]), the old wall was supplemented by a new outer wall. This outer wall was attached directly to the exterior of the older wall, and the exterior of the new wall was plastered.

Fortification systems fell out of use in the Early Bronze Age IV/Middle Bronze Age I period (2300–2100 BCE), which was a time when cities were abandoned in favor of small village settlement and seminomadic subsistence patterns. When people started building cities again, in the Middle Bronze Age II (MBII) period (2100–1550 BCE), the art of fortification reached a previously unparalleled level of sophistication and size. These fortification systems were so massive that the topographies of entire sites were transformed. The general principle behind MBII fortifications was to raise the level of the city wall high above the surrounding plain. The farther away from the slope of the hill that the city wall could be located, the less useful siege weapons (like battering rams) were for the attackers. Two general types of fortifications were used: the earthen rampart and the glacis.

The earthen rampart was constructed by dumping earth and soil in huge piles on either side of a tall vertical core, creating an artificial mound that wrapped its way around an entire city. These vertical cores could be quite large; at Tell Dan and at Hazor, these cores are 32 feet (10 meters) high and 32 feet (10 meters) wide. As Amihai Mazar describes them, these earthen ramparts created large craters inside of which cities developed. They were usually built in geometric shapes and are very distinctive from natural topography.

Earthen ramparts were most useful for sites that were located on low-lying surfaces. If a slope

➤ KEEPING PEOPLE IN A CITY— WHAT WENT ON AT A CITY GATE?

City gates were lively places in the ancient Near East. People would come to the gate to exchange goods, have goods weighed, and have documents written for them (such as contracts or letters). Beyond these services, in some cities town councils or elders met at the gates to discuss matters of law or civic governance. Guards were likely posted at city gates. The so-called Laws of Eshnunna, which date from around the end of the nineteenth century and the beginning of the eighteenth century BCE, discusses legal actions regarding slaves near gates. Slaves who enter the city are bound to wear marks of slavery, fetters or distinct hair cuts. Anyone bearing these markers of slavery is forbidden from exiting the city. Similar laws in the book of Exodus from the Old Testament suggest that the policing of slaves at city gates was widespread throughout the Near East.

—Kevin M. McGeough

already existed, a glacis was constructed instead. A glacis is based on similar principles to a rampart, but since a large slope already exists, there is no need to use an inner core or build an inner slope. Instead, the angle of elevation of a slope is simply enlarged (usually to around 30 degrees in slope) to undermine the effective use of siege weapons. Glacis are built up of large amounts of earth, stone, or anything else that could be used as fill. The first glacis are found in the EBII/III period, but the size of these artificial slopes is substantially larger in the MBII.

City gates in MBII were protected by flanking towers, as in the EB II/III period. Gate entrances were typically built to provide a bent-axis entrance to the city, which weakens the position of the attackers. Attackers, when running into a city, were forced to turn immediately to their right, exposing their weak side to defenders (presuming that most soldiers fought right-handed) and limiting the speed of wheeled vehicles.

—Kevin M. McGeough

Bibliography

- Ben-Tor, A. *The Archaeology of Ancient Israel*. New Haven, CT: Yale University Press, 1992.
- Kaplan, J. "Further Aspects of the Middle Bronze Age II Fortifications in Palestine." *Zeitschrift des Deutschen Palästina-Vereins* 91 (1955): 1-17.
- Mazar, A. *Archaeology of the Land of the Bible*. New York: Doubleday, 1992.

Fortified Third-Millennium Settlements in China

During the third millennium BCE, a large number of settlements enclosed by walls appeared all across China. Excavations and surveys in past decades have revealed at least 50 such settlements dating to this period. A presumed urbanization of this kind is commonly regarded as marking a development of prehistoric (primitive) society from other forms of sociopolitical organizations, such as chiefdoms, into a state-level society. For China, the prevailing scholarly opinion views the appearance of regional or city-states, thereby marking the beginning of Chinese civilization.

However, enclosed settlements are not an invention of the third millennium BCE. The earliest known walled settlement appeared at Bashidang

in northern Hunan Province, which was dated to the late sixth millennium BCE. Other contemporary settlements were enclosed by a moat. Rather well-known are the fifth-millennium BCE moated sites in north-central China, such as the one at Banpo, Henan Province, the only Neolithic settlement that has been entirely excavated to date. Larger walled settlements, often also surrounded by moats, appear during the fourth millennium both in North and South China. Most of the walls were built using the pounded-earth technique. At the Xishan site in Zhengzhou, Henan Province, the technique to use wooden support frames within which the earth was pounded was first observed. This technique should have been in use during the ensuing thousands of years.

During the third millennium there was a sudden increase in walled sites. Although some earlier ones remain in use and were enhanced, most walls were constructed during this time, sometimes also around previously open settlements. These sites are distributed over vast areas in China with concentrations along the Yellow River in Shaanxi, Shanxi, Henan, and Shandong provinces and the Autonomous Region of Inner Mongolia as well as along the upper and middle reaches of the Yangzi in the provinces of Sichuan, Hubei, and Hunan. Most of these settlements remained occupied throughout the third millennium, and only some of those in Sichuan may have been occupied during parts of the second millennium as well.

Most of the 22 walled settlements along the middle and lower Yellow River were found on elevated areas in the plains or alongside rivers. The majority are square or rectangular in shape and encompass an area from 322,920 to 21.528 million square feet (30,000 to 2 million square meters). The walls were often built on underground foundations made of pounded earth and were surrounded by moats. Almost 20 walled sites were identified in Inner Mongolia. Unlike their counterparts in other regions, their walls were built with stone. They were typically constructed at the feet of mountains or on high banks of the Yellow River; the sizes range from around 107,740 to 2,961 million square feet (10,000 to 250,000 square meters). At least 10 walled settlements can be found along the middle Yangzi. Their irregular shape often follows

➤ TAOSI—A WALLED SETTLEMENT IN XIANGFEN COUNTY, SHANXI PROVINCE, 2500–1900 BCE

One of the most important walled settlements in north-central China is Taosi. Since 2000, large-scale excavations have revealed the eastern, northern, and southern pounded-earth walls, which form a rectangle with rounded corners of approximately 29.06 million square feet (2.7 million square meters) in area. Built during the middle phase of the site (2400–2100 BCE), this larger wall encloses a walled settlement of 6.03 million square feet (560,000 square meters) located in the north-eastern corner, dating to the site's first phase (2500 BCE). Next to the south wall of the larger enclosure another walled settlement of the middle phase (107,639 square feet, or 10,000 square meters) was discovered. It is not clear whether it is a component of the large site.

Although large rammed-earth building foundations, probably of residences, were discovered, the excavations have concentrated on the cemeteries. A huge cemetery dating to the whole period of the site and yielding many thousands of tombs is located at the southeastern corner. Since 1978, approximately 1,300 tombs have been unearthed. Over 90 percent of the tombs contain no or only a couple of grave goods, while only 1 percent were lavishly furnished. These tombs contained painted wooden coffins and various objects, such as painted pottery, wooden and stone artifacts, and musical instruments (e.g., drums and stone chimes). The considerable amount of energy invested into these rich burials may indicate the existence of a social hierarchy at this site. Another mid- to late-period cemetery was found at the northwest of the smaller walled site to the south with mostly large tombs containing jades, lacquerware, and painted pottery.

—Sascha Priewe

natural elevations and river courses. The latter are also often incorporated into the moats that surround the pounded-earth walls. The sizes range from 645,850 to 12,916 million square feet (60,000 to 1.2 million square meters). Around six walled settlements were identified in the Chengdu Plain of Sichuan Province. Ranging in size from 1.064 million to 6.458 million square feet (100,000 to 600,000 square meters), they

were all built on elevated spots. Most are rectangular in shape, and some have up to two walls of pounded earth with moats possibly running between and along the outside of the walls. One large walled settlement of 31.215 million square feet (2.9 million square meters) in size was found in the area of the Yangzi Delta.

Why do we witness an increase in walled sites during the third millennium BCE? The most common explanation regards the fortifications as an outcome of a growing need for protection due to an increase in violent conflicts. Warfare may have been one reason to promote the construction of defensive features around settlements. However, it remains to be studied how defensible these settlements actually were. Thus, other reasons may also play an important part, such as flood prevention, particularly in the monsoon-prone south-central regions. Furthermore, it is thought that these sites were locations of high ceremonial and ritual value. After all, they had often been inhabited for a long time prior to wall construction.

Despite other potential explanations, which have not been fully explored yet, walled settlements are largely seen as political centers of either regional states or city-states. A high degree of sociopolitical organization may be supported by the settlements being surrounded by a large number of smaller open villages that may have depended on and been integrated into such a state. The archaeological search for rulers is considered successful for some sites, such as Taosi in Shanxi Province, where large and elaborate tombs may mark the final resting places of the local elites. Furthermore, the manufacture of richly carved jade objects is believed to imply not only specialized craft production but also ritual activities centering on the elites from whose tombs they were primarily excavated.

Problematically, most of this evidence has been assembled from various sites across China, thereby neglecting regional differences. This paints a misleading picture of a uniform Late Neolithic China in terms of sociopolitical organization. However, this uniform picture is believed to support textual accounts about the *wan guo* (10,000 states), a notion that came to be favored for explaining the existence of walled sites. Needless to say, basing archaeological interpretations

on legendary texts, which were compiled many thousand of years after the archaeological evidence was formed, is devoid of any foundation. Nevertheless, these notions remain very popular despite lacking scholarly rigor.

On the other hand, the notion that third-millennium BCE walled settlements may reflect the existence of states and thus the rise of civilization in prehistoric China, regardless of later texts, would be supported if they indeed represented cities (an urban revolution). But to date we lack generic criteria in order to define the Chinese city. This situation is compounded by archaeological fieldwork that is primarily directed to investigate the walls, cemeteries, and often only limited remains of residential areas. We lack archaeological research directed at identifying the functions and uses of walled sites as well as

their populations. Research also needs to go beyond reliance on ancient texts. This is also true for simply applying the evidence for actual later Bronze Age cities (ca. 1600 BCE and later) to the Neolithic case.

—Sascha Priewe

Bibliography

- Chang, K. C. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1986.
- Liu Li. *The Chinese Neolithic: Trajectories to Early States*. Cambridge: Cambridge University Press, 2004.
- Yang Xiaoneng. "Urban Revolution in Late Prehistoric China." In *New Perspectives on China's past: Chinese Archaeology in the Twentieth Century*, Vol. 1, edited by Yang Xiaoneng. New Haven, CT: Yale University Press; Kansas City: Nelson-Atkins Museum of Art, 2004.

■ Introduction: Experiences of War around the World

Warriors and warfare were glorified in Greece and much of the rest of western Europe during the Bronze Age. The stories of Homer, which were written down after 1000 BCE but likely reflect earlier values, glorify the actions of the ancient warriors involved in the Trojan War. Heroes like Achilles were glorified because of their skills at warfare, and the Homeric epics describe their battles and their accoutrements of warfare in great detail. In other parts of Europe in the Bronze Age, men were buried in elaborate armor and with weapons, suggesting a glorification of warfare beyond the grave.

Warfare was not just glorified in ancient Europe. Hints of the celebration of wars and warriors abound in Mesopotamian culture. Artistic images, such as the so-called Standard of Ur, depict soldiers and war-wagons triumphing over enemies and leading away prisoners. In the mythological text known to scholars as *Erra and Ishum* a group of divinities (personified weapons) describe war in glowing terms, saying that "to go on to the battlefield is as good as a festival for young men." Mesopotamian kings such as Shulgi bragged about their prowess at war and

imply that these skills at warfare are part of what makes them good kings. Egyptian kings similarly boasted about their prowess at war and commemorated their victories in wall reliefs and historical accounts.

The real horrors of warfare were also acknowledged in the ancient world. Antiwar sentiments are present in poetry of Zhou China. Pacifistic tendencies in the ancient Near East seem to have been based more on pragmatic grounds than on moral grounds. For example, arguments against warfare in wisdom literature suggest that it can be a waste of resources and implore careful planning when entering a combat situation. For the most part, war was understood to be an expected (if not always acceptable) component of ancient life. The following entries explore the varieties of experiences of warfare in the period 4000–1000 BCE throughout the world.

—Kevin M. McGeough

Early Israelite Warfare

The Hebrew word for war occurs 319 times in the Hebrew Bible (Christian Old Testament). There

are fewer attestations of the Hebrew words for instruction, covenant, sin, and family than for war. Warfare played a significant role in the formation of religion in addition to the forging of the Israelite state. One reason for this constant warfare was Israel's geographical location, since it was situated between Egypt in the south and Mesopotamia in the north. The superpowers that arose in these regions contended for the land surrounding ancient Israel, which served as a military buffer zone (and vantage point) and provided a monopoly over trade to those in control. According to biblical tradition, in the Period of the Judges, before the reign of King David, Israel had only a militia. It was assigned into units: 1,000, 100, 50, and 10. Adult males, 20 years and older, were expected to participate when called upon (Num. 1:3). They were levied according to family and clan (Num. 1:2), over which certain individuals were named as leaders. There are frequent examples of taking censuses for the levying of soldiers (e.g., Num. 1; 2 Sam. 24:1–9). A soldier may even have had to furnish his own weapons and food (1 Sam. 17:17). Mercenaries may have been brought in for their special military skills, though they are not visible until the time of the monarchy.

In those early days of warfare Israel had neither a standing army nor chariotry. Warfare fell into two wide-ranging divisions: siege warfare and open warfare. In the latter, Israel depended mostly on its infantry, which consisted of three main units: the spearmen, who engaged in hand-to-hand combat; the archers, who assisted the spearmen from the rear; and the slingers, who worked in pairs behind the archers. Strategically, Israel implemented various types of military tactics from psychological warfare to surprise attacks. They made use of guerrilla warfare and manipulated the immediate environs to their advantage. In the case of David and Goliath (1 Sam. 17), we observe the ancient custom of holding a duel to decide who would take home the victor's crown.

In terms of religion and social ideology, as it is presented in the Hebrew Bible (and the ancient Near East), warfare—or so-called Holy War—functioned as much within the realm of the divine as within the national realm. It was not the king who called the troops to battle but rather

Yahweh, the national deity of Israel. Moreover, the battle was not fought by human strength; instead, it was Yahweh who claimed victory over enemies, who in turn were identified as “Yahweh's enemies.” When Yahweh waged war, a kind of “confusing divine terror” overcame his foes, thus putting them to rout. Thus, in warfare as in other social institutions of the ancient world, there was no distinction between religion and affairs of state. In addition, though there is some doubt about certain biblical accounts, in the main the traditions behind the institution of Holy War are ancient and authentic.

—Benjamin D. Thomas

Bibliography

- King, P. J., and L. E. Stager. *Life in Biblical Israel*. Library of Ancient Israel. Louisville, KY: Westminster John Knox, 2001.
- von Rad, G. *Holy War in Ancient Israel*. Translation from the 3rd ed. of the German *Der Heilige Krieg im alten Israel*. Grand Rapids, MI: Eerdmans, 1991.
- Yadin, Y. *The Art of Warfare in Biblical Lands*. 2 vols. New York: McGraw-Hill, 1963.

Mycenaean Warfare and the End of the Minoans

The Mycenaeans emerged on the southern Greek mainland in the seventeenth century BCE, when Minoan civilization was at its height. It is clear from their burials that theirs was a society in which the warrior played an important part. The most magnificent burials are those found in the Shaft Graves at Mycenae, some with gold death masks. Examination of their bones shows that many had suffered injuries and skeletal stress from years of fighting. Their grave goods included plates from boar's-tusk helmets, gold decorative breastplates, and many weapons. Among these was a dagger inlaid with a hunting scene in which warriors are shown armed with swords, bows, and spears, and carrying figure-of-eight shields or tall rectangular (tower) shields with curved sides. The dappled appearance of shields depicted in frescoes shows that they were made from oxhides, presumably over a wooden frame. These shields were particularly suitable for single combat, where they offered a full protective screen between the combatant and his opponent,

but they were less useful in a pitched battle, where attack could come from any side. Depictions on stelae marking the graves show soldiers equipped in the same style. Spearheads from the Shaft Graves and other early contexts included a type with a split shaft mounted into a shoe on either side of the blade; this soon went out of use. A more efficient type, with a socket at its base to take the shaft, was current throughout the Mycenaean period. These spears were used for thrusting; there is no certain evidence of the throwing spear frequently mentioned in Homer's *Iliad*.

Later Mycenaean frescoes and depictions on pottery show that many of these armaments continued in use, and new ones were added including greaves (shin guards) and corselets (cuirasses). A smaller round shield more suitable for maneuvering in pitched battle replaced the earlier types. A set of armor discovered near Midea (the Dendra Panoply) included a helmet, bronze greaves, and a corselet made of overlapping bronze half-rings and plates covering torso, shoulders, neck, and the tops of the arms, combining protection with flexibility. These seem to have been stitched to a linen garment, probably well padded, while the helmet originally consisted of a leather cap to which were added slices of boar's tusk arranged in rows that curved right and left alternately and ear guards made of bronze. Helmets usually had a chin strap and might also have a neck guard. Boar's-tusk helmets would have been restricted to the elite, since each required the tusks from 20 to 40 boars; ordinary soldiers wore helmets and body armor of leather or thick layers of linen to which bronze disks might be sewn as reinforcement.

Swords used by the Mycenaeans changed through time. In the Shaft Grave era, a narrow rapier was used: this was hafted with a very short tang that would easily have broken, and examples with longer tangs were also developed. The rapier was designed for thrusting into the body of an enemy or hunted animal. During the fourteenth century this was replaced by the two-edged slashing sword with an integral hilt to which a handle was fastened with nails. Arrows in this period were tipped with bronze heads, often with tangs; earlier arrowheads had been made of flint or obsidian.



The Warrior Vase, from Mycenae, about 1300–1100 BCE.
(Nimatallah/Art Resource, NY)

Stelae from the shaft graves, terra-cotta models, and pottery decoration show that the elite drove chariots with four-spoked wheels drawn by a pair of horses; chariots, dismantled chariots, and chariot wheels are among the items in storage listed on the Linear B tablets from Knossos and Pylos. These allowed the aristocracy to move with speed as military messengers and to travel in style to the battlefield and, when necessary, in retreat from it; it is unlikely that they were used as mobile fighting platforms.

On a larger scale, ships were used as transports, but the depictions of two ships on a vase from Iolkos show that they were fitted with a ram and thus were also used offensively. A few late Mycenaean sherds may depict sea battles. The Pylos tablets refer to musters of troops as rowers for naval defense. Ships seem generally to have been propelled by oars but also had sails for use when winds were favorable.

By 1450 BCE the Minoans, who had strongly influenced the Mycenaeans in earlier centuries, were in decline. Of the palaces and towns, all but Knossos were destroyed at this time. The cause is still uncertain: it may have been internal strife or natural disasters, such as the earthquakes that frequently troubled the region, or the Mycenaeans may have been implicated. If they were not, they certainly stepped into the power vacuum left by the Minoan collapse, establishing themselves at Knossos sometime around or after 1450 and gradually taking over the eastern Mediter-

► THE TROJAN WAR AND MYCENAEAN WARFARE

The great Greek epic the *Iliad* recounts episodes from a ten-year war between Greeks of the heroic age and the inhabitants of Troy in coastal Anatolia. It is traditionally attributed to the Greek poet Homer, who lived during the eighth century BCE, and probably builds on earlier versions of the story. Long thought to be purely myth, the story was shown to reflect a real period of Greek prehistory when, in the late nineteenth century CE, Heinrich Schliemann excavated at Mycenae and revealed the existence of the Mycenaean civilization.

Some details of Homer's epic poem are anachronistic, but many genuinely reflect Mycenaean society. One of the most famous elements in the *Iliad*, the Catalogue of Ships, has been lent support by information in Linear B tablets recently discovered at Thebes. Many of the places listed as contributors to the war fleet are named in these tablets, some of them settlements no longer occupied in Homer's day. There is a much less good fit, however, between the place names of the catalog and those of the Pylos tablets. And there is no evidence that the Trojan War itself actually took place.

The fall of Troy is dated in Greek tradition to 1184 BCE. Since the late 1990s, excavations at

Troy and elsewhere have been revealing a historic picture into which the Trojan War could well fit. The large city of Troy VI, which may have housed 6,000–10,000 people within a walled citadel and a walled outer town, was destroyed by an earthquake around 1300 BCE. When the Trojans rebuilt their homes (Troy VIIa), they crowded inside the citadel wall as if for protection against an external threat such as a besieging enemy. A few letters exchanged between the ruler of Troy and his overlord, the Hittite king, refer to attacks on Trojan lands during the thirteenth century BCE, in some cases explicitly by Ahhiyawa (probably identifiable as the Mycenaeans). The city of Troy VIIa was destroyed around 1200 (between 1230 and 1180) BCE. Piles of slingshots in the street ready for use by the defenders and bodies, spearheads, and arrowheads in the ruins show that it fell to enemy attack. There are other possible explanations for the sack of Troy. For example, this was the period when the Sea Peoples were actively raiding, but the evidence now available shows it possible that the *Iliad* has its roots in genuine Mycenaean history.

—Jane R. McIntosh

raean trade network that the Minoans had so successfully operated. Warrior graves on Crete, at Knossos, and elsewhere, were probably the burials of Mycenaeans, complete with swords, spears, and helmets. Minoan life on Crete nevertheless continued, though with a strong Mycenaean veneer. Around 1375–1350 BCE Knossos was destroyed, perhaps by the Mycenaeans, and the center of power on the island shifted to Khania in the west.

During the fourteenth century BCE, palaces emerged on the mainland, often on citadels with impressive walls that in some cases were constructed of massive stone blocks (cyclopean masonry). These may initially have been intended as much to impress as to defend, but in the thirteenth century many walls were extended to enclose far larger areas, and defensive measures were added. At Mycenae, for example, the extensions included a bastion with a sally port and a subterranean passage to an underground cis-

tern, giving the inhabitants access to water if besieged. Similar arrangements for access to water were made at Tiryns and Athens, and at Tiryns the extended walls contained corbelled passages and storage chambers, again suggesting provision against a siege. Frescoes and decorated vessels portray sieges, with warriors fighting outside the walls—watched by women at the window—and slain defenders tumbling from the walls. Many of the palaces were destroyed by fire around 1200 BCE, perhaps as a result of social unrest or internecine conflict.

At Pylos in coastal southwest Peloponnese, however, the enemy came from the sea and may well have been raiders belonging to the Sea Peoples who were wreaking destruction in the eastern Mediterranean around this time. One of their victims may have been Crete: the remaining centers were destroyed, and the inhabitants fled to the hills where they established impoverished refuge settlements. At Pylos was found an

archive of Linear B tablets covering the palace's final year; a set of five tablets (headed "Thus the watchers are guarding the coastal regions") deals with the provisions for coastal defense. Eight hundred men were deployed in groups along the coast; their purpose, it seems, was to give the palace early warning of any imminent attack from the sea, presumably so that a large force could be deployed to where danger threatened. Despite these precautions, the palace was sacked and burned, and the kingdom was largely abandoned. Some Mycenaeans who survived the troubles of this period fled to start a new life in Cyprus or farther afield; others, in small numbers, reoccupied many of the towns and citadels, although they did not refortify them. But the glories of Mycenaean society were over.

—Jane R. McIntosh

Bibliography

- Chadwick, John. *The Mycenaean World*. Cambridge: Cambridge University Press, 1976.
- Dickinson, Oliver. *The Aegean Bronze Age*. Cambridge: Cambridge University Press, 1994.
- Fitton, J. Lesley. *The Minoans*. London: British Museum Press, 2002.
- Palmer, Leonard R. *Mycenaeans and Minoans: Aegean Prehistory in the Light of the Linear B Tablets*. 2nd rev. ed. London: Faber and Faber, 1965.
- Schofield, Louise. *The Mycenaeans*. London: British Museum Press, 2007.
- Taylor, Lord William. *The Mycenaeans*. Rev. ed. London: Thames and Hudson, 1983.

Early Warfare in Mesopotamia

In the Early Dynastic (ED) period (2900–2350 BCE) armed conflict arose generally from competition between settled states for land and water or by nomad raiders. Expeditions abroad to obtain commodities not available locally might also need armed protection or aggressive "sales tactics"—hence, for example, the fortifications around the Uruk-period settlement at Habuba Kabira and the military threats uttered by Enmerkar of Uruk against the distant state of Aratta. Unequivocal evidence of armed conflict in Mesopotamia comes in the late fourth millennium BCE, with artwork on seals depicting fights between men armed with spears and bows, and bound prisoners. During the earlier third millen-

nium (ED period) cities, often housing the bulk of their state's population, began erecting walls for defense as well as for territorial demarcation and prestige. Excavation has confirmed the slightly later literary descriptions of Uruk's city walls: a circuit 5.9 miles (9.5 kilometers) long and 13–16 feet (4–5 meters) thick built of typical ED plano-convex bricks enclosed an area of 2.12 square miles (550 hectares). At least two city gates with rectangular towers have been traced, and the wall may have had as many as 900 semi-circular towers. Similar towers have been found in the strong walls around Tell Agrab on the Diyala.

The epic tale of conflict between Gilgamesh, king of Uruk, and his one-time benefactor and overlord, Agga, king of Kish, climaxes when Agga's forces besiege Uruk and Gilgamesh defeats and captures Agga, possibly after a pitched battle. Sieges in the ED period were often decided by force of arms in attacks and sallies rather than by attrition during long investments. However, attempts might be made to break into a fortified settlement using scaling ladders, and defenses began to be enhanced with a glacis.

The walls of captured cities were broken down, partly to humiliate their citizens. Booty and prisoners were taken, and much of the city might be sacked. Some of the spoils of war went by custom to the king and some to the god of the victorious city in his temple. Stone bowls found in the Ekur temple in Nippur bear inscriptions showing they were booty from King Rimush's Elamite wars. Such inscriptions were an important part of the offering, demonstrating to both the god and the people that the king had fulfilled the god's intention in prosecuting war and benefiting his people. Inscriptions quickly grew in length and substance from their terse early-third-millennium beginnings, and by the first millennium, royal inscriptions gave a long and detailed, although often exaggerated and inaccurate, account of the campaign, serving both as justification to the god and propaganda to the people. The form, style, phraseology, and content of inscriptions were dictated by tradition.

In conflicts between Sumerian city-states the victor usually respected the integrity of a defeated city's temples: outrage at King Lugalzagesi's failure to do so is forcefully expressed

in the inscriptions of his enemy, Uru-inim-gina of Lagash. In contrast, attacks by outsiders—nomads of the Syrian Desert and Zagros Mountains, such as the Amorites and Gutu, and foreign states, particularly Elam—were ruthless and spared nothing and no one. Sumerian distress at the devastation wreaked by their attacks—the noble buildings destroyed or infested by the enemy, the fields laid waste, the people slain or taken into captivity—is poured out in a series of lamentations describing the sack of great cities like Akkad, Ur, and Nippur.

ED art vividly captures the citizen armies of the period. “The Standard of Ur” and “The Stele of Vultures” depict foot soldiers armed with spears or pole-mounted axes, their heads protected by leather or felt helmets. A force of heavy infantry carrying large rectangular shields marches in a solid and impenetrable phalanx bristling with couched spears, behind a king armed with a dagger. Maces and throwing sticks were also used as weapons at this time. The leaders ride in ponderous war-carts with four solid wheels, drawn by donkeys or mules. These were used mainly for transport to the battlefield and in pursuit of retreating enemy forces, and as a vantage point from which the leader could see and be seen, to direct his forces and impress friend and foe. The dead of the opposing army lie beneath the wheels of the carts or are heaped up in a communal burial mound, while the living are marched off into slavery, their hands tied behind them, or are held in a net by the god whose approval of the victors’ just cause had precipitated the conflict and ensured its successful outcome. Later wars by larger states enjoyed the support of the war goddess Ishtar (Inanna), Nergal (Erra), god of strife, and the storm god Adad (Ishkur). Defeat, and even more terribly, the loss of the king in battle, betokened the withdrawal of divine favor.

Troops also included archers and soldiers armed with slings and ovoid stones, probably mainly recruited among the hunters and fishermen of the south. An inscribed object from the ED period at the site of Mari shows a Bowman shooting from behind a wicker screen held by a spearman: this combination of archer and shield-bearer continued down the ages in Meso-

potamian armies. The later-third-millennium development of the composite bow revolutionized warfare. Constructed as a sandwich of three contrasting materials, wood glued between a horn inner layer (to resist compression) and a sinew outer layer (for elasticity), it had a far greater penetration and range (around 575 feet or 175 meters) than the conventional bow. The composite bow benefited both attackers and defenders, enabling a wider area to be covered from the walls and troops on the ground to shoot defenders with more success.

—Jane R. McIntosh

Bibliography

- Anglim, Simon, et al. *Fighting Techniques of the Ancient World. 3000 BC–AD 500. Equipment, Combat Skills and Tactics*. London: Greenhill Books, 2002.
- Chapman, Rupert. “Weapons and Warfare.” In *The Oxford Encyclopedia of Archaeology in the Near East*, vol. 5, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Dalley, Stephanie. “Ancient Mesopotamian Military Organization.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Nissen, Hans J. “The City Wall of Uruk.” In *Man, Settlement and Urbanism*, edited by Peter Ucko, Ruth Tringham, and Geoffrey W. Dimbleby. London: Duckworth, 1972.

Order versus Chaos— Egyptian and Near Eastern Justifications for War

The forces of order and chaos waged a constant battle in ancient Egypt and Mesopotamia. The civilized world, as it had been created and organized by the gods, was under constant threat of attack both by untamed forces within its borders, such as wild animals, and by uncivilized human enemies from other territories. In both Egypt and Mesopotamia, wild animal hunts and wars were characterized as cosmic battles between order, as represented by the king and his army, and chaos, as represented by the enemy and its alien customs and appearance.

The Mesopotamian city-state was both the center and the symbol of the divinely ordered

world. The king, as the representative of his city's patron god, was bound to defend the urban and agricultural lifestyle against the constant encroachments of chaos, as represented by the various nomadic groups inhabiting the steppes and mountains on the borders of Mesopotamia as well as by the hostile polities that arose in more distant regions such as Iran. Both nomadic tribes and organized political adversaries were characterized as dangerous sources of disorder in contemporary texts, and their barbaric and uncouth practices were negatively compared to the civilized customs of Mesopotamia. In some cases, human enemies were even bestialized, emphasizing the extent to which they differed from the Mesopotamians and making them legitimate targets of military aggression. In the Marriage of Martu myth the nomadic Amorites, a constant threat to Mesopotamian city-states since the time of the Ur III king Shulgi (ca. 2094–2047), are compared to monkeys in appearance and are described as completely uncivilized in behavior. A royal inscription from the reign of Shu-Sin (ca. 2037–2027), whose reign was plagued by Amorite incursions, similarly dehumanizes them: they are compared to dogs or wolves, wild and undomesticated and completely lacking in urban sensibilities.

In Egypt, the pharaoh played a role similar to that of the Mesopotamian king, ruling a divinely organized realm and entrusted with the task of keeping all chaotic forces, in the form of wild animals and uncivilized foreigners, at bay. The land of Egypt was understood as reflecting *maat* (order), and all its inhabitants, from the pharaoh to his humblest subjects, were expected to fulfill their divinely ordained roles and maintain this order. The pharaoh's military triumph over external and hence chaotic enemy polities was thus imbued with cosmic overtones and was often depicted in temple and palatial contexts. Indeed, these scenes may even have served an apotropaic (to ward off evil) function, protecting the structures they adorned from chaotic human or supernatural influences in the same manner as the pharaoh protected Egypt from its enemies.

The identification of foreign polities with the forces of chaos, which had to be conquered

➤ DIVINE CHAMPIONS OF ORDER

The king's role as the guardian of order in Mesopotamia mirrored the role of various divine warriors, including Ningirsu, Ninurta, Marduk, and Ashur. Ninurta, who was eventually syncretized with Ningirsu, served as the gods' champion in the Anzu myth, recovering the Tablet of Destinies stolen from the god Enlil by the monster Anzu and thus restoring the cosmic order. In the later *Enuma Elish* myth, the Tablet of Destinies was bestowed upon an unworthy deity, Qingu, by the goddess Tiamat. It was recovered in the Babylonian version of the myth by the god Marduk and in the Assyrian version by the god Ashur.

—Karen Sonik

and dominated by the pharaoh, does not accurately represent Egypt's often quite practical foreign policy but instead seems intended to satisfy internal ideological requirements. From the fourteenth century to the twelfth century especially, Egypt interacted with the powerful polities of the ancient Near East, including Mitanni, Babylon, and the Middle Assyrian empire, as equals.

—Karen Sonik

Bibliography

- Assmann, Jan. "State and Religion in the New Kingdom." In *Religion and Philosophy in Ancient Egypt*, edited by J. P. Allen et al. New Haven, CT: Yale Egyptological Seminar, 1989.
- O'Connor, David B. "Beloved of Maat, the Horizons of Re: The Royal Palace in New Kingdom Egypt." In *Ancient Egyptian Kingship*, edited by David O'Connor and David P. Silverman. Leiden: Brill, 1995.
- Oded, Bustenay. *War, Peace and Empire: Justifications for War in Assyrian Royal Inscriptions*. Wiesbaden: Dr. Ludwig Reichert Verlag, 1992.
- Pongratz-Leisten, Beate. "The Other and the Enemy in the Mesopotamian Conception of the World." In *Mythology and Mythologies: Methodological Approaches to Intercultural Influences; Proceedings of the Second Annual Symposium of the Assyrian and Babylonian Intellectual Heritage Project Held in Paris, France, Oct. 4–7, 1999*, edited by R. M. Whiting. Helsinki: Neo-Assyrian Text Corpus Project, 2001.

Was There War in the Indus Civilization?

Warfare seems to have been a feature of all early civilized societies except, it would appear, the Indus civilization. Early excavations in the Indus cities yielded no evidence of warfare or defense, and the Harappans were regarded as peace-loving people. However this view was overturned in the 1940s when Sir Mortimer Wheeler started investigating the Indus civilization.

Wheeler had fought in both world wars, and his distinguished archaeological career had been largely concerned with the warlike Romans. He therefore looked for and believed that he had found evidence of Harappan militarism. At Harappa, Wheeler interpreted the AB mound as a fortified citadel, a view apparently confirmed when excavation revealed remains of a massive mud-brick wall with towers and impressive gateways. At Mohenjo-daro, Wheeler also uncovered solid brickwork including towers, convincing him that this city too had a fortified citadel.

More recent excavations have confirmed that other Indus towns and cities were also surrounded by massive walls constructed of baked bricks, mud brick, rubble, or stone, particularly around one part of the settlement, often elevated, generally known as the citadel. The city walls at Dholavira, for example, were 19.6 yards (18 meters) wide and at least 9.8 yards (9 meters) high. Some were retaining walls for mud-brick platforms, others were freestanding circuit walls, and some were both: for example, the wall around Harappa mound E was a revetment in the northwest of the mound but a freestanding wall around its south. Frequently there were bastions and sometimes towers, and there were generally imposing gateways.

Closer examination suggests that these were not military defenses. The most critical point in a fortification wall is the gateway, which must be designed to allow those inside to attack an approaching enemy while protecting themselves against enemy attack. The design of Harappan gateways did not reflect such military considerations. They were generally a straightforward opening or passage, although strong wooden gates would have allowed them to be closed. Side chambers often flanked the gateway, probably

accommodating gatekeepers who could monitor the flow of people and perhaps collect taxes or customs dues on goods being taken in or out. The walls also demarcated and separated the principal areas of the settlement, particularly the citadel on which were located important public buildings.

The elaboration of Harappan gateways seems designed to increase the impressiveness and solemnity of the approach rather than to facilitate defense. For example, at Dholavira the main gateway to the citadel opened from a terrace approached by a long ramp; two chambers flanked the passage through the gateway, each fronted by pillars on stone bases. A wooden signboard was probably originally set above the gateway.

Another significant nondefensive feature is that there were often several ways into the walled area: the impressive gateway that controlled and could bar access and another more simple entrance. This is exemplified at Kuntasi in Saurashtra. Its double wall of boulders and mud was separated by a passage 21.8 yards (20 meters) wide. In its southwestern corner was a tower, and on the east side there was a gate flanked by guard chambers, the impressive entrance for visitors to the walled town. In contrast, a small postern gate in the northern wall provided easy access for residents of the town's unwallled suburbs.

Many settlements were walled, and a number were wholly or partly founded on artificial platforms of mud brick, earth, and rubble with substantial retaining walls. These required enormous amounts of materials, time, and labor (calculated at around four million man-days for Mohenjo-daro). Rather than being military fortifications, a better explanation for the massive walls and platforms is defense against the annual floods, whose extent and violence were unpredictable. Flood damage has been reported at several Harappan sites, confirming that flooding was a significant hazard. The enormous platforms at Mohenjo-daro, more than 6.5 yards (6 meters) high, raised the city above any possible floodwaters.

Wheeler noted that many Harappan artifacts, such as arrowheads, spearheads, axes, and daggers, could have been used as weapons, although he also admitted that they could have served

other purposes such as hunting, an activity that was important to the Harappans. The guardrooms flanking the gateway at Kuntasi contained clay slingshot; however, these were also found in the village of Kanewal, where they were probably used against wild animals. Absent from the Indus sites are any objects designed specifically for warfare, such as helmets, body armor, or shields.

Examination of the few hundred known Harappan burials has revealed only one skeleton with signs of death from physical damage: a man from Kalibangan who suffered a fatal knee injury, quite possibly accidental.

The Harappans were exceptional in lacking a natural enemy. Other civilizations were constantly threatened by nomads from neighboring hills and deserts, aggressive adjacent states, or internal friction over access to limited agricultural land or water for irrigation. The Harappans, in contrast, had shared ancestry with the people on their western border with whom they maintained good relations. These well-disposed highland cultures provided a buffer between the Harappans and their nearest civilized neighbors, the Helmand culture, and the mountains themselves were a deterrent to armed invasion from the Iranian plateau.

Within the Harappan realms the diversity of resources and economic potential between the different regions and the great productivity of its lands and relatively low population density meant that there was no spur to internal conflict and that there were considerable benefits to be gained from cooperation between the inhabitants of the regions. Population density in other neighboring regions, such as the Aravallis, was even lower and the benefits of peaceful cooperation even greater given the relative technological levels of the Harappans and their neighbors. The sea to the south was the only potentially hostile border. However, Harappan shipping probably commanded the sea-lanes, and the people of the nearest landfall, Magan (Oman), were in friendly collaboration with the Harappans.

It would seem therefore that the Harappans were not subject to external threats, while nothing in the neighboring regions attracted them to use coercive or acquisitive force: adjacent lands were not agriculturally attractive, and it was

➤ THE MOHENJO-DARO "MASSACRE"

Excavations in the upper levels at Mohenjo-daro uncovered many skeletons in the streets and houses in several parts of the city, with clusters of up to 13 haphazardly sprawled skeletons. Mortimer Wheeler, with characteristic narrative zeal, linked all these to a single cataclysmic event, the fall of the city to Aryan invaders and the massacre of its inhabitants. Wheeler's persuasive writing has led to a wide acceptance of this tale.

Like so many good stories based on insufficient data, this one has fallen apart under scrutiny. For a start, although the skeletons were all from late contexts, they were not all contemporary, so their deaths do not relate to a single event. Only two of the supposed victims had signs of physical injury, and in both cases the injury had healed months before death. Instead, most seem to be individuals buried in a perfunctory fashion in abandoned houses or disused streets in a period when civic society was breaking down. Analysis of the bones shows that many individuals had suffered from malaria, and it is possible that cholera was also rife. Disease probably contributed significantly to the collapse of urban life at Mohenjo-daro; there is no evidence that invaders from outside played any part, either at Mohenjo-daro or elsewhere.

—Jane R. McIntosh

economically more efficient to trade with their neighbors than to take direct control of procuring resources such as the copper of the Aravallis.

There is one possible exception to this absence of warfare. In the enigmatic Transition period (2600–2500 BCE) more than three-fifths of Early Indus settlements were abandoned, and many were destroyed by fire. Only a few were replaced by new settlements in the same location. Instead, there were a great many new foundations. An important exception was Harappa, which, far from being abandoned, enjoyed continuous development from the fourth millennium into the Mature Harappan period, during which features characteristic of the Indus civilization gradually emerged.

The fiery destruction at many sites has been interpreted by some scholars as evidence of warfare. However, there is no other supporting

evidence, such as weaponry or dead bodies within the destroyed settlements.

An alternative explanation is that the deliberate destruction of old settlements and the creation of new settlements following certain principles, such as the cardinal orientation of streets and the emphasis on water supply and sanitation, reflect the widespread adoption of a new ideology that was to underlie the unity and considerable uniformity of the Indus civilization. In this scenario, rather than indicating enemy action, the destruction by fire of the settlements would be an act of ritual or ideological purification.

—Jane R. McIntosh

Bibliography

- Dales, George F. "The Mythical Massacre at Mohenjo Daro." In *Ancient Cities of the Indus*, edited by Gregory L. Possehl. Delhi: Vikas Publishing House, 1964.
- Kesarwani, A. "Harappan Gateways: A Functional Re-assessment." In *Frontiers of the Indus Civilization*, edited by B. B. Lal and S. P. Gupta. Delhi: Books and Books, 1984.
- McIntosh, Jane R. *Ancient Indus Valley: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2007.
- Sharma, A. K. *The Departed Harappans of Kalibangan*. Delhi: Sundeep Prakashan, 1999.
- Wheeler, R. E. Mortimer. *The Indus Civilization*. 3rd ed. Cambridge: Cambridge University Press, 1968.

The Zhou Conquest of the Shang and the Consolidation of Empire

In 1045 BCE the army of the Western Zhou defeated the Shang army at the Battle of Muye. Later commentators took the defeat of the Shang by the Zhou as a mandate of heaven in which the gods removed the right to rule from the Shang kings and bestowed it upon the kings of the Western Zhou. The defeat of the Shang at the Battle of Muye proved to be one of the most formative battles in the antiquity of China, ushering in the Zhou era.

Prior to the Battle of Muye, Western Zhou kings had been consolidating their authority in the region of the Fen River to the west of the Shang capital, Anyang. These battles did not bring the Zhou directly into conflict with the

Shang kings; rather, battles in these regions were against Shang allies or cities outside of the Shang sphere of authority. However, when King Wen of the Zhou (r. 1099–1050) defeated an army on the Qin River, the Zhou army lingered near the natural defensive boundary of the Shang kingdom. Wen, however, did not directly attack the Shang. He continued to define his authority in this western region until he died in battle in 1050.

With King Wen's death, his son King Wu came to power, bringing with him a new strategy for military conquest. Wu now directed hostilities at the Shang state, creating a coalition of anti-Shang forces at the fjord of Menjin in 1048. Tradition holds that this coalition consisted of 800 local lords; likely this number is exaggerated, but the hierarchical coalition that Wu created is consistent with later Western Zhou governance. With this force Wu did make an incursion into the central plain (the Shang heartland) but retreated without engaging in a major offensive.

The major offensive came in 1045. According to the *Shi ji*, Wu led a force of 45,000 men and 300 chariots toward Anyang from the south. Shaughnessy has argued that this was a strong tactical movement since the Shang defensive forces were located in the Taihang Mountains, protecting against an incursion from the west. Wu's army met the Shang army at Muye, south of Anyang, the location of the Shang King Di Xin's capital. The battle, in which the Zhou army was victorious, is described in the *Shi ji*. King Di Xin was not captured; he committed suicide. Other members of the Shang aristocracy and government were either dispatched or incorporated into the Zhou governmental structure.

The Battle of Muye did not result in a complete consolidation of the Western Zhou kingdom. The weaknesses in the Zhou state became apparent when a dynastic struggle ensued after the death of King Wu in 1043. The Duke of Zhou, who declared himself regent along with the adult King Cheng (son of Wu), retained control of the Zhou kingdom. On the eastern periphery other relatives of Wu joined forces with Shang leaders who had not yet been routed or incorporated into the Western Zhou kingdom. The Duke of Zhou and King Cheng led a campaign against the rebellious forces in the east and within two

years had extended the Western Zhou kingdom to the east coast of China.

—Kevin M. McGeough

Bibliography

Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.

Rawson, Jessica. "Western Zhou Archaeology." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

Shaughnessy, Edward L. "Western Zhou History." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by M. Lowe and E. Shaughnessy. Cambridge: Cambridge University Press, 1999.

Antiwar Sentiments in Zhou Poetry

The Chinese era of philosophers in the middle of the first millennium BCE is well known for sages, such as Mozi (Mo-tzu), advocating peace and the restoration of harmony. Even before this time, Zhou (Chou) poetry often expressed antiwar sentiments including being weary of war and the sufferings that accompanied warfare, conscription, and prolonged separation from loved ones. The *Classic of Songs* (*Shi jing*) is the earliest anthology of Chinese poetry and includes a number of examples of this war-weary attitude. This highly revered collection includes 305 poems gathered from a vast array of folk songs, hymns, and poetic descriptions of life at court and among common people from primarily the ninth through seventh centuries BCE. The songs were compiled at the end of this time period, but many themes and images are rooted in earlier folk tradition. Although traditional Chinese accounts attribute the *Shi jing*'s compilation to Confucius and count it among the core Five Confucian Classics, it is evident that it had been collected before the time of Confucius, who made reference to this anthology in his *Analects*. The following passages are from Arthur Waley's translation of the *Book of Songs*. Each verse listed below is followed by the Mao number, which identifies the song according to the dominant order for songs in the collection. This order, which

was established more than 2,000 years ago by two editors named Mao, corresponds to the four divisions of song types: *Airs of the States*, *Lesser and Greater Elegances*, and *Hymns*.

"Minister of War,
We are the king's claws and fangs.
Why should you roll us on from misery to
misery,
Giving us no place to stop in or take rest?

. . . Minister of War,
Truly you are not wise.
Why should you roll us from misery to misery?
We have mothers who lack food." (185)

This poem includes direct political critique as well as typical expressions of soldiers' woe, where their own misery is compounded by the knowledge that they cannot look after family members and obligations at home. Another poem uses imagery from the natural world to bemoan the unnatural state of forcibly conscripted soldiers, who were ripped from their homes and families to be treated in a subhuman manner.

"What plant is not faded?
What day do we not march?
What man is not taken
To defend the four bounds?

What plant is not wilting?
What man is not taken from his wife?
Alas for us soldiers,
Treated as though we were not fellow-men!

Are we buffaloes, are we tigers
That our home should be these desolate wilds?
Alas for us soldiers,
Neither by day nor night can we rest!" (234)

This idea of the hardship of living and dying in desolate wilds is common to later Chinese literature as well and can be found in a poignant poem written by Han Yu during his brief exile in the ninth century CE, where he laments the prospect of dying in the wild borderlands far from the capital, palace, and civilization he had sought to protect. However, it is the references

► POLITICAL READINGS OF ANCIENT CHINESE POETRY

The *Shi jing* can be translated as the Classic Book (*jing*) of Songs, Poetry, and Odes (*shi*). Shi, rather than referring to poetry as a whole, is a specific poetic form dominant in early Chinese poetry and influential until modern times. The English title, *Classic of Songs*, usefully emphasizes that most or all of the 305 poems in this collection were set to music. Although the music has been lost, Confucius and others have emphasized the importance of music, and one can better understand and appreciate these poems by recognizing that they were lyrics as well as poetry. This is not only the oldest anthology of Chinese poems and songs; it also served as the template for more than 2,500 years of this especially influential shi form, known as classical poetry. Scholars such as Victor Mair have indicated that these poems were variously understood by Confucius and his followers as “a canonical collection of important moral truths and lessons,” a “guide for moderation in speech and

action,” and “a detailed chronicle of praise of the heroes and heroines or blame of the villains of early Chinese history.” However, during the later Sung dynasty, a “reaction against such historical and political explications” of these poems emerged, and instead a view that the poems were “folk songs devoid of political intent and historical judgment” prevailed. Even without political readings, the different types of poems in this collection offer insights into the daily lives and concerns of Chinese people from the Zhou era. The poems remain relevant and influential, but as with other literary forms, they are open to multiple interpretations.

—John Harding

Source

Victor Mair, “Classical Poetry,” in *The Shorter Columbia Anthology of Traditional Chinese Literature*, edited by Victor H. Mair (New York: Columbia University Press, 2000), 62.

to being taken from one’s wife and marched without rest that resonate most fully with the antiwar sentiments in Zhou poetry. In one example of the perils of being separated from family by military obligation, Waley notes that the imagery and theme of a poem that ends with “This new marriage is very festive; But the old marriage, what of that?” indicates “that during the soldier’s absence his wife has assumed his death and married again.”

A poem from a military campaign circa 800 BCE reinforces sentiments of weariness and the unpredictable length of military service at the whim of the king’s commands. The king is referred to as Son of Heaven, indicating the Zhou concept of divine and natural sanction for the king’s political authority. In the following poem, the suffering soldiers are described as fearing the “writing on the tablets” (the king’s next command) rather than criticizing or challenging the king directly.

“Long ago, when we started,
The wine-millet and cooking-millet were in
flower.
Now that we are on the march again

Snow falls upon the mire.
The king’s service brings many hardships.
We have no time to rest or bide.
We do indeed long to return;
But we fear the writing on the tablets.” (168)

Another poem from the *Shi jing*, this one translated by Burton Watson, uses natural imagery of agricultural seasons to indicate the excessively long military service and to suggest what the soldiers are missing at home. These soldiers place some of the blame for their predicament on the Hsien-yun tribes against whom they are guarding the border, as opposed to the political criticism of their own war minister in the first poem cited above.

“We pick ferns, we pick ferns, for the ferns are
sprouting now:
Oh to go home, to go home before the year is
over!
No rooms, no houses for us, all because of the
Hsien-yun, no time to kneel or sit down,
all because of the Hsien-yun.
. . . Our hearts are saddened, our sad hearts
smolder and burn.

We are hungry, we are thirsty, no limit to our
border duty, no way to send home for news.
... oh to go home, to go home in the closing
months of the year!
The king's business allows no slacking, no
leisure to kneel or rest.
Our sad hearts are sick to death, this journey of
ours has no return!
... Long ago we set out when willows were
rich and green.
Now we come back through thickly falling
snow.
Slow slow our march, we are thirsty, we are
hungry, our hearts worn with sorrow, no
one
knows our woe." (167)

These poems illuminate aspects of Chinese life almost 3,000 years ago in an easily accessible medium, which has long been valued in China as a means for communicating a wide range of experiences and expressions including these antiwar sentiments that often include messages critical of social or political injustice along with bemoaning soldiers' hardships and the pain of separation.

—John Harding

Bibliography

- Bodde, Derk. "Feudalism in China." In *Essays on Chinese Civilization*. Princeton, NJ: Princeton University Press, 1981.
- Goldin, Paul R. "The Odes." In *Hawai'i Reader in Traditional Chinese Culture*. Edited by Victor H. Mair, Nancy S. Steinhardt, and Paul R. Goldin. Honolulu: University of Hawai'i Press, 2005.
- Karlgren, Bernhard. *The Book of Odes*. Stockholm: Museum of Far Eastern Antiquity, 1964.
- Mair, Victor, ed. "Classical Poetry." In *The Shorter Columbia Anthology of Traditional Chinese Literature*. New York: Columbia University Press, 2000.
- Shaughnessy, Edward L. "Western Zhou History." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by Michael Loewe and Edward Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Waley, Arthur, trans. *The Book of Songs*. New York: Grove, 1937.
- Watson, Burton, trans. and ed. *The Columbia Book of Chinese Poetry: From Early Times to the Thirteenth Century*. New York: Columbia University Press, 1984.
- Yu, Pauline. "The Book of Songs." In *Masterworks of Asian Literature in Comparative Perspective*, edited by Barbara Stoler Miller. Armonk, NY: M. E. Sharpe, 1994.

■ Introduction: Egypt and Its Enemies

Ancient Egypt was relatively isolated. Deserts along either side of the Nile River valley kept the region relatively safe from invaders. Two fronts, however, posed intermittent problems to the Egyptians: Nubia and Syria-Palestine. To the south was Nubia, in what is now called the Sudan. Even though the Nile runs through Nubian territory, cataracts along the river made navigation difficult and acted as a natural barrier between the two regions. Although difficult to navigate, travel between Nubia and Egypt was not impossible, and relationships between the two regions vacillated between friendly and hostile.

To the northeast was Syria-Palestine. This territory lay as the land route that connected Asia and Africa (now separated by the Suez Canal) and was thus of vital strategic importance. The Egyptians were occasionally troubled by attacks from this front. However, for much of Egyptian history this was an area that was governed by the Egyptians as part of their empire. Rule over this region was never secure, as the various accounts of military engagements in the region attest. Arguably the most noteworthy conflict in this region during Egypt's New Kingdom was with the Hittites of Anatolia. Hostilities culminated in the Battle of Kadesh (Qadesh), which

resulted in the first known mutual peace treaty between two powerful states. This battle is dealt with in detail at the end of this section.

Egyptian incursions into both fronts were motivated by a number of factors. Ancient texts cite concerns with the security of the Nile floodplain as motivations for taking an aggressive stance in both of these regions. Resource acquisition must also have been a motivator. Nubia was rich in mineral resources, especially gold. Syria-Palestine was rich in many products, most notably timber, which is not readily available in Egypt.

—Kevin M. McGeough

Egypt and Nubia— Cataract Fortresses

The most decisive endeavor in the history of Egypt-Nubia relations was the construction of an impressive system of strategically placed fortresses in Nubia. Although walled fortified structures were known from most periods of ancient Egyptian history, the fortress network developed by the Twelfth Dynasty of the Middle Kingdom was the most intensive investment in such military apparatus. Three primary objectives were served by these military structures: to guard Egypt's changing border with its southern neigh-



View of the Nile from the fort at Buhen, Egypt. (Roger Wood/Corbis)

bor Nubia, controlling northward passage of Nubians; to protect Egyptian mining projects and trade routes; and in regions where Nubian populations concentrated, to monitor their movements and control uprisings against the occupying Egyptian personnel.

Although in the Old Kingdom a fortified industrial operation was situated at Buhen, in general Egyptian occupation of Nubia was limited to periodic raids and expeditions to areas of natural resources and for trade with more southerly regions of Africa. Senwosret I initiated the first major development, setting forts to encompass a frontier in the Buhen region north of the Second Cataract, where one of the better-studied forts (at Buhen itself) was located. Later in the dynasty, Senwosret III was quite aggressive in Nubia, pushing southward to take control of the entire Second Cataract region and, in addition to upgrading old forts, founding several new ones between the Second and Third Cataracts. This program effectively created a buffer zone between Egypt's hold on northern Lower Nubia and the emerging power of the Kushites near the Third Cataract at Kerma.

Fortresses located on the flat desert areas adjacent to the Nile were often rectangular in shape.

► COORDINATING THE FORTRESS SYSTEM—THE SEMNA DISPATCHES

Some cataract fortresses were centers of trade, while others acted as supply stations to provision other forts. The Semna Dispatches indicate that Nubians were permitted past the frontier zone for purposes of trade or other official business. This series of eight reports from the late Twelfth Dynasty were filed together at Thebes. They implicate meticulously coordinated communication among forts. Each account records the date and circumstances of Nubian encounters, whether for trade or for interrogation after intercepting them in the nearby desert. Patrols also reported if they discovered traces of local activity. After conducting business, merchants were provided with a meal and were sent back to their home regions.

—Nicholas S. Picardo

In rugged, uneven areas such as islands and natural coastal outcroppings, irregular shapes ranged from vaguely triangular (e.g., Uronarti and Shalfak) to even L-shaped (e.g., Semna), custom fitted to the terrain to maximize defensive potential. Often fort pairs flanked opposite sides of the waterway to create squeeze points. Most would have had harbors for river access during the annual flood. State foundations of all types had symbolic names that expressed and magically contributed to their functions. For example, two forts in the Second Cataract region received names of That-Which-Repells-the-Medjay (a Nubian group) and That-Which-Opposes-the-Bows.

The defensive nature of the Nubian fortresses is clear in their intricately conceived design. Massive buttressed walls of mud brick, 9 feet (3 meters thick) and reinforced by wooden beams, could enclose areas from just over 32,000 to more than 645,000 square feet (3,000 to 60,000 square meters). Troops could sometimes line up along built-in ledges and wall projections to defend most exterior facades from behind the protection of a defense wall. Interspersed along some exterior walls were angled slits through which archers could fire at attackers while still shielded. Surrounding combinations of ditches, dry moats, and embankments combined with secondary external defense walls and watchtowers as formidable obstacles to enemy forces attempting to get close enough to be a threat. Spur walls sometimes jutted out abruptly from the perimeter walls at various intervals to extend the range of insulated combat. Covered stone passages and stairways led from fort to river to permit access to water even if penned in by attack.

Egypt's hold on Upper Nubia eased with the decline of the Middle Kingdom. However, lasting communities had been established at fort sites by this time. So, although state sponsorship waned, many fortresses show occupational levels to the New Kingdom when reestablished Egyptian presence in Nubia was of a different nature. Final destruction likely followed into the New Kingdom. The construction of the Aswan High Dam through the late 1960s CE formed Lake Nasser, under which the Nubian fort sites were submerged and lost to archaeology.

—Nicholas S. Picardo

Bibliography

- Kemp, Barry J. *Ancient Egypt: Anatomy of a Civilization*. London and New York: Routledge, 1989.
- Smither, Paul C. "The Semnah Despatches." *Journal of Egyptian Archaeology* 31 (1945): 3–10.
- Trigger, Bruce G. *Nubia under the Pharaohs*. Ancient Peoples and Places 85. London: Thames and Hudson, 1976.
- Williams, Bruce B. "Nubian Forts." In *Encyclopedia of the Archaeology of Ancient Egypt*, edited by Kathryn A. Bard. London and New York: Routledge, 1999.

Middle Bronze Age in Syria-Palestine

The Middle Bronze Age (MBA, ca. 2000–1550 BCE) was a period of resurgence of urbanism in Syria-Palestine following the urban collapse at the end of the Early Bronze Age (EBA). It was roughly contemporaneous with the Isin-Larsa and Old Babylonian periods in southern Mesopotamia, the time of Shamshi-Adad and the Old Assyrian colonies in northern Mesopotamia, and the Middle Kingdom and Second Intermediate period in Egypt.

The political situation during this period can be generally characterized as the coexistence of a number of individual city-states, each controlling its hinterland. Urban planning was sophisticated, revealing a high level of social complexity. In some cases larger kingdoms developed, such as Yamhad (centered at Aleppo), Qatna, and Hazor. These various polities both cooperated with and rivaled each other; warfare was a constant reality, as witnessed by the ubiquity of walled fortifications during this period. Many of the MBA cities were built on the ruins of urban sites that had been abandoned at the end of the EBA.

The MBA brought with it significant technological changes in a number of areas, including ceramics, metallurgy, and fortifications. In ceramics, the use of the fast wheel led to a change in pottery shapes and designs. Moreover, tin bronze began to replace copper as the primary metal for making weapons and tools. In the area of urban defense, the building of massive earthen ramparts in many sites in the southern Levant (Palestine) continued traditions of fortification

THE AMORITES

The term “Amorite” comes from the Hebrew Bible, where it refers to one of the groups of peoples living in Canaan before the Israelites entered the land. However, in modern scholarship, it is either used as a catch-all term for the tribal-based peoples with West Semitic names who take over the leadership of most major centers in Syria and Mesopotamia in the first half of the second millennium BCE or to designate the linguistic entity represented by these proper names. The association of Amorites with nomadic pastoralism is discernible from vocabulary in the Mari texts as well as from characterizations of people designated as *martu* (Sumerian) or *amurru* (Akkadian)—both translatable as “Westerner(s)” —in other cuneiform sources. Earlier scholarship took for granted the idea of a nomadic Amorite invasion sweeping across the Near East in the early second millennium BCE, taking their cue from portrayals of Amorites as hostile raiders in southern Mesopotamian texts. However, more recent investigations have emphasized the dimorphic (pastoralists and sedentarists living in mutual dependence) nature of ancient Near Eastern society; the ascendancy of the Amorites was probably a complex process involving gradual infiltration followed by the assumption of leadership during a time of political instability in the early second millennium.

—Joseph Lam

found earlier in the north (Syria); these in turn may have been in response to improved technologies in warfare, such as the composite bow and the battering ram. One further technological innovation, profoundly significant in terms of world history, was the invention of the alphabet: it was toward the end of the MBA that the first signs of alphabetic writing (the so-called Proto-Canaanite and Proto-Sinaitic inscriptions) began to appear in Palestine.

International relations played an increasingly important role in the MBA. All major MBA urban settlements were located close to major trade routes, either land or sea. This is partly connected to the use of tin bronze, requiring the im-

porting of tin from areas such as Anatolia and Afghanistan. In the north where textual documentation was more abundant, we find power struggles among the various Amorite kingdoms (i.e., kingdoms ruled by people with West Semitic names) of Syria and Mesopotamia. A major source for these political developments is the Mari tablets, which reveal tensions between Yamhad and the Upper Mesopotamian kingdom of Shamshi-Adad. During this time, we also find increasing evidence (mostly from proper names) of the presence of another group, the Hurrians, in northern Mesopotamia and Syria.

The fortunes of Palestine, on the other hand, were closely tied with those of Egypt. Unlike the succeeding Late Bronze Age in which Palestine experienced direct Egyptian political domination, the MBA was characterized more by economic interactions between the two regions. The city of Byblos on the Mediterranean coast, as a major seaport for trade with Egypt, is a case in point. Excavations there have revealed a wealth of objects associated with Middle Kingdom Egypt. A number of other Egyptian artifacts provide information on relations between Palestine and Egypt in the MBA. The Execration Texts, which are bowls and statuettes containing inscriptions of people and place names considered enemies of Egypt, give us valuable geographical information as well as insight into the level of Egyptian knowledge of Palestine during this period. The Story of Sinuhe, a Middle Kingdom prose text, sheds considerable insight on the details of everyday life in the northern Levant. A wall painting (ca. 1890 BCE) found at Beni Hasan depicts a caravan of West Semites headed to Egypt, providing evidence of such migrations early in the MBA.

The issue of southward migration relates to the phenomenon of the Hyksos. This term, coming from an Egyptian phrase meaning “rulers of foreign lands,” denotes a group of Semitic peoples who took political control of Egypt during the Second Intermediate period (ca. 1650–1550 BCE) but were subsequently driven out by Ahmose, who became the first king of the Eighteenth Dynasty. It is now recognized that the Hyksos’ rise to power was the culmination of a long process of migrations of foreigners to Egypt

throughout the MBA. Key archaeological evidence for this comes from the site of Avaris (present-day Tell el-Daba) in the Egyptian delta, which was the capital of the Hyksos rulers; excavations have revealed a material culture with strong connections to that of southern Palestine.

—Joseph Lam

Bibliography

- Akkermans, Peter, and Glenn Schwartz. *The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 BC)*. Cambridge: Cambridge University Press, 2003.
- Dever, William G. “The Middle Bronze Age: The Zenith of the Urban Canaanite Era.” *Biblical Archaeologist* 50 (1987): 148–177.
- Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* The Anchor Bible Reference Library. New York: Doubleday, 1990.

Hyksos

Hyksos is the Greek rendering of the Egyptian word for “rulers of foreign countries” and should not be confused with the popular yet false etymology of “Shepherd Kings” promulgated by Josephus. While the term was originally used to designate any foreign rulers, in time it came to refer specifically to the Fifteenth Dynasty. The kings of this dynasty were of Near Eastern origin and ruled Egypt in a syncretistic fashion, mixing both Levantine and Egyptian practices. After approximately 100 years of ruling Egypt, they were expelled by native Egyptians and retreated back to lower Palestine.

The Hyksos capital, ancient Avaris, has been identified with modern Tell el-Daba. The careful excavations of an Austrian team led by Manfred Bietak have done much to help us understand the origins of the Hyksos. Avaris experienced a steady influx of Semitic peoples during the Twelfth and Thirteenth dynasties, consisting of a mix of merchants and warriors. It is quite likely that Avaris’s growth was connected to the seafaring abilities of the Phoenician coastal inhabitants and stemmed from its harbor’s value to maritime trade. Cultural remains, such as houses, burials, and pottery, demonstrate that the immigrants were from northern and northeastern Syria. Just before the advent of the Fifteenth Dy-

nasty and the subsequent takeover of Egypt, there was a sudden influx of peoples from southern Palestine.

The exact method of the Hyksos accession to kingship is not certain. Egyptian tradition holds that it was a military takeover. There is meager archaeological evidence supporting this, leading many Egyptologists to conclude that it was either largely political or economic in nature or a mixture of economic, political, and military means that led to Hyksos domination. Whatever the method of their assumption of power, the Hyksos employed Egyptian officials and adopted much in the way of Egyptian ruling traditions and titular trappings while maintaining Levantine methods as well, such as ruling the differing sections of Egypt (and probably southern and coastal Palestine) in a manner that approximated the traditional Near Eastern vassal system of rule. The Sixteenth and Seventeenth dynasties were likely contemporary vassal dynasties representing differing portions of Egypt whose rulers were beholden, to differing degrees, to the Hyksos kings.

It is difficult to make a one-to-one correspondence between the names of Hyksos rulers provided to us by Manetho and those who are archaeologically attested. Both Manetho and the Turin Canon list six Hyksos kings, all of whose names seem to be West Semitic. Of these, significant archaeological remains are known for two. Seuserenre Khayan, who is probably Manetho’s Apachnan, engaged widely in monumental building and also usurped a number of Middle Kingdom statues. The best-known and probably the most powerful Hyksos king was Apophis (Apepi), who reigned for about 40 years.

The Hyksos engaged in intense trade with southern Palestine and Kush (Nubia). They also regularly exchanged goods with other areas around the Mediterranean, including Cyprus and Crete.

—Kerry Muhlestein

Bibliography

- Bietak, Manfred. “The Center of Hyksos Rule: Avaris (Tell el-Daba).” In *The Hyksos: New Historical and Archaeological Perspectives*, edited by Eliezer D. Oren. Philadelphia: University Museum University of Pennsylvania, 1997.

Redford, Donald. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

Redford, Donald. "The Hyksos in History and Tradition." *Orientalia* 39 (1997): 1–52.

Empire of the New Kingdom

Throughout the New Kingdom period (ca. 1570–1070 BCE), Egypt exercised a degree of military, social, and economic influence in Nubia to the south, Syria-Palestine to the northeast, and, to a far lesser extent, Libya to the west. Initially, Egypt's imperial ambitions may have been a response to the immediately preceding period of domination by the foreign Hyksos rulers. Egypt was determined to be free of any such foreign rule and made attempts to secure its borders and extend its sphere of military influence. The king's office embodied the notion of the preservation of Egypt's borders. His perceived success at maintaining and extending the empire was directly related to his success at home. The Hyksos wars had also provided an outlet for a military class, who would have benefited socially and economically from ongoing warfare throughout the New Kingdom period. Other factors would also have played a role in the ongoing motivation for empire. Imperial expansion provided Egypt with access to particular commodities not readily available at home; control of profitable trade routes, especially to the northeast; and a buffer zone against other large empires.

The nature and extent of Egypt's imperial influence in the three regions differed considerably. In Nubia, the Egyptians adopted a deliberate policy of Egyptianization. They imposed a full-scale Egyptian administrative bureaucracy, built Egyptian-styled temple-centered towns, took the children of the Nubian elite back to Egypt for education and acculturation, and implemented Egyptian agricultural technology in the region. In effect, Nubia became a province of Egypt.

In Syria-Palestine, Egypt adopted a different policy. There, a complex system of independent city-states, each with its own petty king, had already existed. Egypt exploited this system and adopted a vassal-suzerain relationship with the Canaanite rulers. This system of rule was influ-

enced by the presence of the larger empires of Mitanni and Hatti farther north with whom Egypt competed for the loyalty of individual city-states. The archive of fourteenth-century BCE texts found at Amarna contains diplomatic correspondence between these Canaanite rulers and their Egyptian overlords. It allows us a glimpse into Egypt's policy of also pitting these states against each other. As part of its control of the region, Egypt maintained a number of fortresses along the Way of Horus from the eastern Delta, through northern Sinai, and on into southeastern Palestine. However, it is not clear to what extent there was any substantial permanent Egyptian presence in Syria-Palestine itself. Egyptian kings periodically campaigned in the region. Among these was Ramses II, who fought the famous battle of Kadesh against the Hittites. Beginning with Thutmose III's defeat of a coalition of Syrians at the city-fortress of Megiddo (ca. 1457 BCE), imperial policy in the region also included taking the children of vassal kings back to Egypt as hostages where they were educated and acculturated. During the Nineteenth Dynasty, there is a sharp increase in the presence of Egyptian buildings and artifacts in Syria-Palestine. It appears that there was some shift in Egyptian policy toward the region at this time. Egypt may have begun to assume more direct political control of the region or at least the economic burden of maintaining the governance of the region.

The Libyan tribes had always posed a minor threat to the Egyptian western Delta, and in the reign of Ramses II, a series of fortress towns was constructed to secure Egypt's western border. Ramses III made an ill-fated attempt to appoint a Libyan ruler of his choosing to govern these western tribes. However, Egypt never exercised the kind of influence in Libya that it did in Nubia or Syria-Palestine. The west remained a border to be defended rather than a potential new zone for Egyptian imperial expansion.

At the end of the Late Bronze Age, Egypt was one of many Mediterranean empires to suffer collapse. The reasons for this widespread collapse remain obscure. It may have been due to large-scale migrations into the region, a catastrophic infectious disease, an environmental catastrophe leading to widespread famine, or changes in the

➤ BATTLE OF MEGIDDO

The Battle of Megiddo is considered to be the earliest historical battle, meaning that it is the first for which the date, location, and events of the battle are known. Having more information allows scholars to assess the events with greater certainty. The battle was fought in the spring of about 1480 BCE near the ancient site of Megiddo in the Jezreel Valley in what is now northern Israel. The city of Megiddo was an important location, as it controlled the major military and trade routes north to Lebanon and east to the Euphrates River region.

Possibly due to the encouragement of the ancient empire of Mitanni (what is now eastern Turkey and northern Iraq), a coalition of Canaanite and Syrian states rebelled against Egyptian rule and took control of Megiddo. The Egyptian pharaoh Thutmose III, in the first year of his reign (ca. 1504 BCE), led his forces to Megiddo to reclaim it. In a daring and dangerous tactical move, he led his forces through the pass at Aruna where the soldiers and horses would have to pass single-file through the gorge, while the chariots had to be carried by the charioteers. If Thutmose and his forces had been seen, the enemy forces could have destroyed them in the narrow confines of the gorge. The Egyptian forces were not discovered, and this allowed them to arrive at the plain beside Megiddo more quickly than had been expected

and effectively appear between the two halves of the coalition forces led by the king of Megiddo.

Thutmose III deployed his army in three sections. The Northern Division was positioned to the northwest of Megiddo, the Southern Division was located to the south of the city, and a smaller group was in the center (including the chariots and Pharaoh's royal bodyguard) and was commanded by Thutmose III himself. The battle began with a forceful charge that broke the morale of the coalition forces, who fled to the safety of the city. The Egyptian forces laid siege to Megiddo for seven months before the coalition forces surrendered. This battle benefited Thutmose III and Egypt, as Canaan was relatively peaceful for most of the next 20 years.

—Thomas D. Hulit

Bibliography

- Eggenberger, David. *An Encyclopedia of Battles*. New York: Dover, 1985.
- Gabriel, Richard A. *Great Captains of Antiquity*. Westport, CT: Greenwood, 2001.
- Healy, Mark, and Angus McBride. *New Kingdom Egypt*. Elite Series 40. London: Osprey, 1992.
- Wise, Terence, and Angus McBride. *Ancient Armies of the Middle East*. Men-at-Arms Series 109. London: Osprey, 1981.

military tactics employed by subjugated peoples. It is likely that by the end of the Late Bronze Age the social and economic systems of these empires were at such a straining point that even some small shifts in any one of a number of factors could have had widespread repercussions, leading eventually to the collapse of empire. In later times, Egypt occasionally sought to exercise some influence in the political life of Syria-Palestine, but it never again achieved anything approaching its New Kingdom empire.

—Stephen C. Russell

Bibliography

- Fransden, P. J. "Egyptian Imperialism." In *Power and Propaganda: A Symposium on Ancient Empires*, edited by M. T. Larsen. Mesopotamia 7. Copenhagen: University of Copenhagen, 1979.
- Hasel, M. G. *Domination and Resistance: Egyptian Military Activity in the Southern Levant, ca. 1300-1185 B.C.* Boston: Brill, 1998.
- Higginbotham, C. R. *Egyptianization and Elite Emulation in Ramesside Palestine: Governance and Accommodation on the Imperial Periphery*. Leiden: Brill, 2000.
- Kemp, B. J. "Imperialism and Empire in New Kingdom Egypt." In *Imperialism in the Ancient World: The Cambridge University Research Seminar in Ancient History*, edited by P. D. A. Garnsey and C. Whittaker. Cambridge: Cambridge University Press, 1978.
- Morris, E. F. *Architecture of Imperialism: Military Bases and the Evolution of Foreign Policy in Egypt's New Kingdom*. Leiden: Brill, 2005.
- Redford, D. B. *Egypt, Canaan, and Israel in Ancient Times*. Princeton, NJ: Princeton University Press, 1992.

Shaw, I. "Egypt and the Outside World." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw. Oxford: Oxford University Press, 2000.

Weinstein, J. M. "The Egyptian Empire in Palestine: A Reassessment." *Bulletin of the American Schools of Oriental Research* 241 (1981): 1–28.

Egypt and the Hittites

The Late Bronze Age witnessed the rise of two major powers in the Near East, the New Kingdom Egyptians and the Hittites in Anatolia, destined to compete with one another for regional supremacy. Their battleground was Syria, Lebanon, and Palestine, and they fought for control of the Levant's impressive natural resources and access to important Mediterranean ports and islands, especially the copper on Cyprus. Ancient Syria was an important prize for the Egyptians and the Hittites. Both powers sent expeditions to the Syrian coastland to log the cedar, cypress, and pine of the Ammanus and Lebanon mountain ranges and sought access to the Syrian coastal cities whose sea lanes linked Anatolia, Mesopotamia, Egypt, and the Aegean.

The Hyksos invasion and conquest of Egypt in the seventeenth century BCE brought an end to the Middle Kingdom and introduced state-of-the-art military technologies from Mesopotamia to the people of the Nile for the very first time.

The Semitic-speaking Hyksos were originally from the Arabian Peninsula, moving into northern Mesopotamia, Syria, and Palestine in the first centuries of the second millennium BCE. The Hyksos infiltrated Egypt, dominating much of the region for nearly 100 years. During their occupation the Hyksos introduced new ways of making war to the Egyptians, including the horse-drawn war chariot, a heavier bronze sword, and the composite bow. Eventually, the Egyptians made use of these new martial technologies to throw off foreign domination, and under the Theban leader Amose I the Hyksos were expelled, and the Eighteenth Dynasty and the New Kingdom were founded.

During the period of the New Kingdom (ca. 1550–1070 BCE), Egypt became the most powerful state in the ancient Near East, expanding its borders south into Nubia, west into Libya, and northwest into the Levant. Palestine and Syria were occupied, and local princes were permitted to rule but under Egyptian suzerainty. At times, these client kings rebelled against their Egyptian landlords, precipitating military expeditions to deal with the uprisings. Often these wayward client kings sought assistance from the other hegemon in the region, the Hittites.

Ruling from their capital at Hattusas in central Anatolia, the Hittites grew at the expense of the Mitanni empire during the middle of the second millennium, emerging by 1400 BCE as the most powerful group in Turkey and rivaling Egypt as a regional power. During this period, the Hittites were almost constantly at war, either in order to claim territory from their neighbors or to protect their territory from other neighbors. The rise of a capable Hatti ruler named Suppiluliuma in the first half of the fourteenth century and his successful conquests of the Mitanni vassal states in Syria brought the Hittites to the attention of Thebes. After the Mitanni empire finally fell to the Hittites, the power balance in Syria switched in favor of the conquerors, and war between Egypt and the Hittites was inevitable.

The city-state of Qadesh on the Orontes River in Syria would prove to be the major source of friction between the Egyptians and Hittites. The king of Qadesh was a loyal vassal to Thebes and even took military action to block the advance

➤ HITTITES AND IRON

Modern scholars do not know precisely where ironworking began; however, both tradition and archaeological evidence point to ironworking developing in or near the longtime metallurgical heartland of the Bronze Age, the Anatolian plateau. Ancient historians and surviving contemporary documents associate ironworking with the Hittites, who flourished in Anatolia from about 1450–1200 BCE. The Hittites never used iron extensively, but they produced limited quantities of iron daggers and swords before their empire collapsed around 1200 BCE, exporting these precious weapons as gifts to neighboring monarchs in Assyria and Egypt. King Tutankhamen was buried with a Hittite dagger.

—Brian Todd Carey

of the Hatti south of his territory. But Qadesh's army was no match for the Hittite military machine, and the city was taken, precipitating unsuccessful military campaigns to recover this strategically important city by the pharaohs Akhenaten and Seti I. With a strong Hittite military presence in Syria, the balance of power shifted in the region, and soon other vassal states of Egypt fell to the Hittites without bloodshed. Seti's son and heir Ramses II (r. 1290–1224) would launch his own expedition in the fifth year of his reign (ca. 1285), culminating in one of the great battles of the ancient world, the Battle of Qadesh (also known as Kadesh).

—Brian Todd Carey

Bibliography

- Bryce, Trevor. *The Kingdom of the Hittites*. Rev. ed. Oxford: Oxford University Press, 2005.
- Shaw, Ian. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2003.
- Wertine, T. A., and J. D. Muhly. *The Coming of the Age of Iron*. New Haven, CT: Yale University Press, 1980.

The Battle of Qadesh

In 1285 BCE, the young Egyptian pharaoh Ramses II faced the expansionistic Hittites who had moved from their base in Anatolia into Syria. Ramses' target was the city of Qadesh on the Orontes River, and his goal was to end Hittite interference in the Egyptian sphere of influence in Syria by defeating the enemy's main force in the field.

Ramses' expeditionary army marched from Egypt to the city of Qadesh in one month. The Egyptian army contained 20,000 men, composed of four divisions of 5,000 each and some allied contingents. Each of the divisions consisted of charioteers, archers, spearmen, and ax-wielding infantry and were named after the gods Amun, Ra, Sutekh (Seth), and Ptah. Almost half the Egyptian force was comprised of 5,000 chariots. Defending the city of Qadesh was King Muwatallis II's Hittite army of 19,000 men and around 3,500 chariots.

On the morning of May 10, Ramses moved out at the van of the Amun division hoping to seize Qadesh by the end of the day. As the first elements of the lead division of Amun reached



Ramses II on his chariot at the battle of Qadesh, from a wall painting at Abu Simbel. (Pictorial Library of Bible Lands)

the forward camp, two newly captured Hatti scouts revealed under torture that the Hittite army was hidden to the east of Qadesh near the ruins of the old town of Qadesh. Before Ramses could react, the Hittite army quickly forded the Orontes from the southeast and struck the exposed right flank of the Ra division. The heavier Hittite war chariots pushed into the Egyptian files, killing and scattering the invading infantry. The Ra division broke in panic and fled up against the just-arriving Amun division, which routed as well.

The Hittite chariots pushed through the Egyptian column and swung to the northeast and pressed their attack on the western gate of Ramses' encampment. Although the lead Hatti units that penetrated the camp were dragged from their chariots by the pharaoh's bodyguard and killed, Ramses was unable to hold the fort. At this critical moment in the battle, he mounted his chariot and rushed forward without his bodyguard into the thick of the battle. Inspired by the courage of their pharaoh, a small force of Egyptian charioteers sallied forth from the east gate and, wheeling to the northwest, struck the Hittite flank while it was preoccupied looting the camp.

While the Egyptians began a concerted counterattack against the fleeing Hittite forces, King

► THE CHARIOT AT WAR

Egyptian chariots were served by a crew of two and were primarily firing platforms for archers and, accordingly, were light and flexible. The Hittite chariots encountered at Qadesh were heavier six-wheeled platforms crewed by three (a driver, shield-bearer, and soldier) and presumably designed for shock attack, a combat mode that required a sacrifice of speed and flexibility for combat survivability. But a new interpretation suggests that perhaps the composite bow was the primary weapon in Hittite chariots as well and that the heavier platforms were simply better-protected firing platforms and not moving battering rams.

—Brian Todd Carey

Muwatallis acted, committing his remaining 1,000 chariots to the battle. This relief force forded the Orontes north of Qadesh and swung south to hit Ramses in the flank. Unfortunately for Muwatallis, arriving from the north were reformed Egyptian troops, while the third of the Egyptian divisions, the Sutekh, approached from the south. Just as the Hittite chariots spread out onto the plain and into a line of attack, their right was threatened by the arriving rallied Egyptian forces from the north. To make matters worse for the Hatti king, Ramses broke off pursuit of the Hittite chariots trapped between him and the river and, joining forces with the Sutekh division, turned north to intercept the Hittite relief force. Caught between the two converging Egyptian armies, the Hittite relief force was destroyed. As the remnants of the first Hatti force escaped south of Qadesh across the Orontes, the final of the four Egyptian divisions, the Ptah, arrived on the battlefield too late to join the melee.

Tactically, the battle of Qadesh ended in a stalemate. Ramses withdrew from Syria, leaving the Hittites in Qadesh. Strategically, the Egyptians had failed in a major military operation to end Hittite influence in Syria-Palestine. Over the next two decades, the Hatti would instigate revolts in Palestine, forcing Ramses to respond with military action, but never again did the Egyptians threaten the Hittites north of the Orontes.

Eventually, these enemies became allies in the face of a new regional threat, the rise of Assyria in northern Mesopotamia.

—Brian Todd Carey

Bibliography

- Drews, Robert. *The Coming of the Greeks: Indo-European Conquests in the Aegean and the Near East*. Princeton, NJ: Princeton University Press, 1988.
- Drews, Robert. *The End of the Bronze Age: Changes in Warfare and the Catastrophe, ca. 1200 B.C.* Princeton, NJ: Princeton University Press, 1996.
- Ferrill, Arther. *The Origins of War from the Stone Age to Alexander the Great*. Rev. ed. Boulder, CO: Westview, 1997.
- Spalinger, Anthony. *War in Ancient Egypt*. Oxford, UK: Blackwell, 2004.
- Yadin, Yigael. *The Art of Warfare in Biblical Lands in Light of Archaeological Discovery*. 2 vols. New York: McGraw-Hill, 1963.

The Peace Treaty between Egypt and the Hittites

The peace treaty ending hostilities between the warrior-pharaoh Ramses II of Egypt and the Hittite king Hattusili III was a novel document and the first of its kind in many ways in recorded history. Both of these regional powers had sparred over the riches of the Levant for centuries. The treaty eased tension over Syria by creating a clear border between the powers, although it ended Egyptian hegemony over the strategically important city-state of Qadesh. It also secured an alliance when both kingdoms were facing new strategic threats, specifically a resurgent Assyria in northern Mesopotamia and the rise of Libya in North Africa.

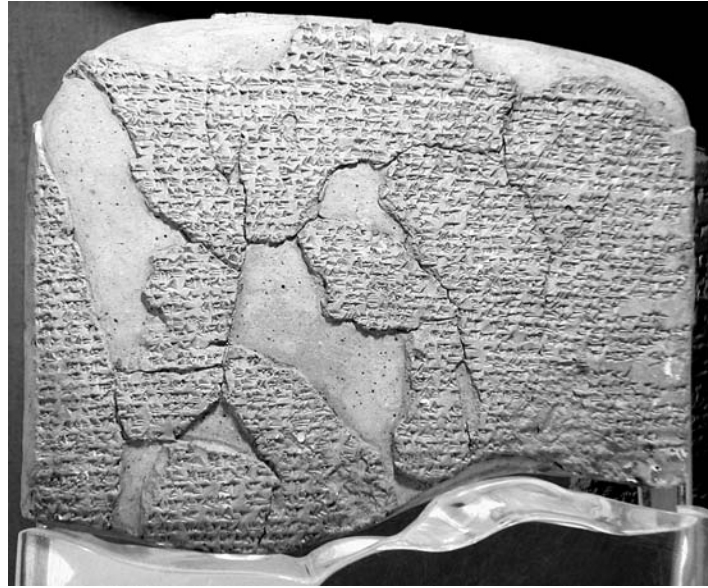
The turning point in relations between the Egyptians and Hittites was the Battle of Qadesh in 1285 BCE. Ramses won the battle but lacked the ability to seize the city, leaving the city-state to the Hittites. But the tactical stalemate did result in an opening of dialogue that would eventually result in a formal treaty, although the process was not without significant complications. After the death of the Hittite king Muwatallis, the throne in Hattusas in Anatolia was seized by Hattusili (later Hattusili III), forcing the prince regent Urhiteshub to seek exile in

Thebes in Egypt. Despite the presence of the Hatti prince, Hattusili and Ramses agreed to a peace treaty after two years of negotiations in the twenty-first year of the pharaoh's reign, or around 1270 BCE.

The treaty itself consisted of 18 articles, beginning with a long introduction exalting the two monarchs' titles and honors. These proclamations were followed by a pledge to end hostilities and establish a mutual alliance against foreign attack on either country and articles establishing a clause to intervene in the internal security of the other should the current regime be threatened by mutiny or coups. Ten articles were dedicated to the extradition of political refugees who sought refuge in the other's court. What made this most unusual is that the treaty did not exclude any person regardless of class. A fugitive seeking refuge was to be returned without being punished. The final articles invoked the major gods of both lands as witnesses to the treaty. The borders of the Egyptian and Hittite empires were not laid out in this treaty, although they were addressed in other documents.

Two copies of the treaty were recorded, one in Egyptian hieroglyph and the other in Akkadian. Both copies still survive and are identical except for their introductions. The Egyptian version states that it was the Hittite king Hattusili who requested peace, while the Hatti version has Ramses sending peace envoys. The Egyptian treaty was recorded on a silver plaque and then copied in stone at the large temple complex at Karnak.

To show good faith, gifts were exchanged between the monarchs, and both royal courts remained faithful to the spirit of the treaty, although friction did exist between Thebes and Hattusas. Despite articles of extradition, Ramses refused to return the exiled Hatti prince Urhiteshub to the Hittites, stating that he would not apply the treaty in retrospect. The exiled prince remained in Egypt for ten years. Possible complication arose in 1257 BCE when the Kassites in lower Mesopotamia began to court Thebes, but King Hattusili offered his daughter's hand in marriage to Ramses, and tensions eased after the union. In time, higher-level dignitaries were exchanged on a regular basis (including the Hatti prince regent visiting Thebes), and both great



Fragment of the Treaty of Qadesh, the agreement that ended the battle between the Hittites and the Egyptians for control of the Levant in 1275 BCE. (Carl Rasmussen <http://www.HolyLandPhotos.org>)

➤ THE FIFTY-TWO SONS OF RAMSES II

Perhaps the most powerful of the New Kingdom Egyptian pharaohs, Ramses II reigned for 67 years and must have been over 90 years old when he died. During his life he is believed to have fathered 52 sons by his several wives and concubines. Perhaps as many as 11 of these sons are buried in a tomb in the Valley of the Kings known to archaeologists as KV5. Partially explored in 1825 by English Egyptologist Sir James Burton, it was rediscovered in 1985 and represents one of the great finds of modern times. The two-level tomb complex consists of 150 chambers and corridors of which only 7 percent has been cleared, making KV5 one of the largest tombs ever found in Egypt.

—Brian Todd Carey

kings even met for a summit, with Ramses meeting the Hatti king in Canaan and escorting him back to Egypt. The personal relationship between these two monarchs helped forge an enduring peace, one that lasted until the fall of the Hittite empire.

—Brian Todd Carey

Bibliography

Bryce, Trevor. *The Kingdom of the Hittites*. Rev. ed. Oxford: Oxford University Press, 2005.

Bryce, Trevor. *Letters of the Great Kings of the Ancient Near East: The Royal Correspondence of the Late Bronze Age*. New York: Routledge, 2003.

Gardiner, Alan H. *The Kadesh Inscriptions of Ramesses II*. Oxford, UK: Griffith Institute, 1976.

Weeks, Kent R. *Kv5: A Preliminary Report on the Excavation of the Tomb of the Sons of Ramesses II in the Valley of the Kings*. Rev. ed. Cairo: American University in Cairo Press, 2006.

■ Introduction: End of the Late Bronze Age

During the Late Bronze Age (ca. 1450–1200 BCE) the eastern Mediterranean world was characterized by strong city-states and dynastic empires. But at the end of the era there was widespread turmoil. Many cities were destroyed, never to be occupied again. The social and political fabric of the region was ripped apart, and there was a major shift in the political economy of the region.

Prior to the end of the period, the eastern Mediterranean was marked by strong urban centers that supported and were ruled by elites living in large palace and temple complexes. Many of the states were literate and kept economic records, diplomatic correspondence, and religious texts. Agricultural production supported the economy and involved some centralized control through taxation or tribute, as is evidenced by central storehouses in many of the large city-states. Centralization enabled specialized production of elite goods, as shown by finely crafted weapons, jewelry, figurines, and ceramic vessels. Bronze was the metal of choice for weapons and metal tools. Long-distance trade of all goods, from raw materials and agricultural products to luxury goods and fine ceramics, occurred throughout the region. Trade took place over long distances and likely involved networks of transactions and the work of specialized traders who used seaborne shipping routes around the Mediterranean Sea.

However, in a roughly 100-year period from about 1250 to 1150 BCE, the Mediterranean world of the Late Bronze Age experienced momentous change. Many of the city-states at the center of empires suffered major destruction, multiple times in some cases, leading to the eventual abandonment of the city or to resettlement on a

much smaller and poorer scale. Long-distance trade ended. Utilitarian goods dominated the material culture, and these were produced locally. Finely made luxury goods disappeared, and the decorative arts, especially as seen in ceramic production, became more crude and rough in style. There appears to have been a shift to less economic diversity and a greater emphasis on subsistence economic activities that concentrated on producing primarily agricultural products. One of the most significant changes was a slow but steady increase in the manufacture and use of iron as the primary metal for tools and weapons at the same time that there is a concomitant drop in the use of bronze.

—D. Bruce MacKay

Collapse of Mediterranean Trade

One of the dominant characteristics of the Late Bronze Age was trade of raw materials and manufactured goods all around the eastern Mediterranean. The cessation of this international trade is one of the key features that marks the end of the Late Bronze Age and the shift to the Iron Age.

Evidence for the networks of Mediterranean trade during the period comes from imported goods recovered in excavations around the region and from spectacular Late Bronze Age shipwrecks off the southern coast of Turkey near Cape Gelidonya and at Ulu Burun. Texts and excavations at the Syrian coastal city of Ugarit (Ras Shamra) indicate that there was trade in both primary agricultural goods (including grains such as wheat and barley; fruits such as olives, dates, and figs; and honey and spices) and in processed agricultural products (such as olive oil, wine, and cheese) and livestock (including cattle, horses,

sheep, goats, mules and donkeys, and birds). Raw materials for textiles (such as flax and wool), metals (including gold, silver, tin, copper, bronze, and iron), stone artifacts (as found in semi-precious beads made of carnelian), and wood (including cedar, juniper, and cypress) were also traded. Manufactured goods, including metal vessels, wood furniture, baskets, garments, and ceramic vessels, were also part of the inventory of trade items.

The extraordinary preservation of the shipwrecks provides an excellent picture of the actual contents of the Late Bronze Age vessels that moved from port to port around the eastern Mediterranean and shows that the networks of trade and commerce linked Egypt, the coast of Syria-Palestine, Cyprus, and the Mycenaean Aegean islands. Jewelry pieces of gold and silver that used Egyptian, Canaanite, and Syrian designs were recovered. Tools and weapons, including daggers, swords, spearheads, arrowheads, axes, adzes, sickle blades, chisels, knives, tongs, and awls, were made with Canaanite, Mycenaean, Cypriot, and Egyptian designs. Smelted metals were also a significant part of the cargo and were transported in ingots of copper of Cypriot origin (over 145 at Ulu Burun) and tin to destinations where metalworkers would turn the raw metals into finished bronzes. Faience beads and vessels and glass ingots, possibly of Canaanite origin, were also part of the cargo, as were stone Egyptian scarabs; Mycenaean, Mesopotamian, and Syrian seals; and amber beads from the Baltic region. Canaanite, Cypriot, and Mycenaean pottery vessels were also found at Ulu Burun. Specialized materials such as hippopotamus teeth, elephant tusk, and ostrich eggshells were also recovered, presumably for sale to craftspeople at different locations for making into luxury items in their typical local style.

Excavations at Late Bronze Age sites in the Levant have also revealed ample evidence for long-distance trade, particularly in beautiful examples of ceramic vessels of Mycenaean and Cypriot manufacture that, if buried in tomb contexts, are often unbroken whole vessels and perfect examples of their types.

Although trade was a dominant feature of the economies of the Late Bronze Age, in the period between about 1250 BCE and 1150 BCE the

eastern Mediterranean trade collapsed. Among the first indications of the collapse were a series of destructions and rebuildings in the Aegean region. The famous sites of Troy and Mycenae both show evidence of more than one destruction in the final years of the era before a final destruction, above which only locally made ceramics are present. The pattern is similar in Cyprus and along the Levantine coast. The Late Bronze Age ends with often more than one destruction layer, which is then followed in some places by rebuilding with a new and smaller settlement often with a different layout than in previous levels. These smaller-scale settlements lack the traded goods that typified the Late Bronze Age, and the ceramics are all produced from local clays.

A consideration for archaeologists has been whether the evidence for these long-distance trade networks indicates centralized city-state control and management or if it suggests instead that there was a class of independent traders and shippers who operated outside of state control. If the traders were independents, they may have been the Sea Peoples described in the Egyptian texts who were involved in conflicts around the eastern Mediterranean as their trading networks collapsed or were disrupted at the end of the era.

A significant issue is why the Mediterranean trade collapsed. The oldest suggestion is that invaders from southern Europe pushed southward into the Mycenaean region in the Aegean seeking new lands to conquer, and as they conquered the Mycenaeans and destroyed their cities, the trade networks upon which the Mycenaeans depended and to which they contributed were disrupted and collapsed. One set of traders could no longer trade goods with other sets that could then no longer trade for new commodities elsewhere in their trading rounds.

A more recent suggestion is that a key commodity in the metal trade, tin, ceased being available for trade when Anatolian tin mines were exhausted. Once this key commodity was no longer available for trade, the network of trading relationships unraveled because traders could no longer make exchanges for the key commodity needed to manufacture bronze. The lack of tin not only brought the Bronze Age to an end but also encouraged metalworkers to shift focus

and to improve their procedures for working with a more widely available metal—iron.

Newer thinking, however, is that the end of Late Bronze Age trade came about as a mercantile class of traders eventually gained independence from the powerful city-states and empires of the Late Bronze Age and gradually reorganized without the centralized administrative authority of a palace and temple economy that controlled access to, production of, and trade in primary commodities such as grains and metals in addition to manufactured items such as jewelry and pottery. What developed was a decentralized array of smaller cities and small kingdoms that, for a time, depended on local subsistence economies and independent local production of nearly everything people needed to live.

—D. Bruce MacKay

Bibliography

- Oren, Eliezer D. *The Sea Peoples and Their World: A Reassessment*. Philadelphia: University of Pennsylvania Museum, 2000.
- Sherratt, Susan. “‘Sea Peoples’ and the Economic Structure of the Late Second Millennium in the Eastern Mediterranean.” In *Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries B.C.*, edited by Seymour Gitin, Amihai Mazar, and Ephraim Stern. Jerusalem: Israel Exploration Society, 1998.

Urban Abandonment

When the Late Bronze Age drew to a close with destructions at many of the major cities of that era, many centers were either abandoned completely or were occupied by a much smaller and poorer population. Examples of cities that suffered such a fate include the famous site of Troy in western Anatolia, Mycenae in southern Greece, Khattusha in central Anatolia, and Ugarit (Ras Shamra) on the coast of Syria.

The famous city of Troy, first excavated by Heinrich Schliemann, suffered a number of different destructions as the Late Bronze Age came to an end. A major destruction in the mid-thirteenth century was followed by a rebuilding before fire again destroyed the central city citadel at the end of the Late Bronze Age. Immediately following the destruction was a poor re-

settlement, which was then followed by another settlement that included handmade ceramics typical of earlier southern European groups. Troy, however, did not regain the magnificence it had enjoyed during the Late Bronze Age.

Mycenae is another famous city that experienced a similar pattern. Approximately a century before the end of the Late Bronze Age, the city suffered some destruction on the perimeter of its massively fortified citadel. This was followed by reconstruction, expansion, and strengthening of the city before it too suffered a serious conflagration. Some parts of the city were never reconstructed before the city was completely destroyed and then abandoned.

Khattusha, the massive and well-constructed capital of the Hittite empire with a strong citadel fortress and huge storerooms, was completely destroyed at the end of the Late Bronze Age in about 1180 BCE and was never rebuilt.

Ugarit was a major city-state throughout most of the Late Bronze Age with a centralized palace and temple economy. Around 1200 BCE the city suffered a massive destruction. Excavation has revealed collapsed walls, burnt plaster and mud bricks, burnt beams, and a random scatter of arrowheads, evidence of the fighting and final defeat of the city. In the level immediately above the destruction and hence dating to years just after, the remains are few and poorer. There was no systematic reconstruction.

The overall pattern at these and other sites suggests a number of possibilities. First is that all over the eastern Mediterranean basin invaders swept through the region systematically attacking and, in many cases, repeatedly attacking major city-states until the urban centers succumbed and finally fell before the invaders swept on to new conquests. However, this assumes that there was a united attacking force with enough power and organization to systematically defeat major city-states in spite of their massive defensive fortifications. There is no evidence to suggest that this was the case. Also, there is no evidence for such a force or for their eventual settlement anywhere in the region.

A more plausible interpretation is that when the centralized palace and temple economies and trade networks connecting the major Late Bronze

Age city-states collapsed, there were relatively minor movements of some groups associated with trade (the Sea Peoples). But the majority of the local population continued to live in the vicinity of the former palatial city-states although now in much simpler and poorer settlements that depended on a subsistence economy. The people lived in what were formerly the hinterlands of the major city-state palace and temple complexes, which were now relatively self-sufficient and able to produce locally all of the food and goods they needed.

—D. Bruce MacKay

Bibliography

- Bryce, Trevor. *The Kingdom of the Hittites*. 2nd ed. New York: Oxford University Press, 2005.
- Levy, Thomas. *The Archaeology of Society in the Holy Land: New Approaches in Anthropological Archaeology*. 2nd ed. New York: Continuum, 1998.
- Yon, Marguerite. "The End of the Kingdom of Ugarit." In *The Crisis Years: The 12th Century B.C. from Beyond the Danube to the Tigris*, edited by William A. Ward and Martha Sharp Joukowsky. Dubuque, IA: Kendall Hunt, 1992.

The Sea Peoples and Their Destructions

The Sea Peoples were a variety of named groups who appear mainly in Egyptian texts that describe skirmishes and battles during the rules of a number of pharaohs, especially Merneptah and Ramses III, who reigned in the years around the end of the Late Bronze Age. Some of these texts say explicitly that some of these "Peoples of the Sea" had conspired in their islands against Egypt and other Late Bronze Age empires. A common interpretation has been that these Sea Peoples caused the destructions at many Late Bronze Age cities.

Many significant cities in the Aegean region suffered one or two destructions before succumbing to a final defeat preceding complete abandonment. Although sites such as Troy and Mycenae were resettled on a much smaller scale by people whose ceramic traditions derived from southern Europe, the argument has been that Sea Peoples were involved in at least some of the destruc-

tions, either as people displaced by the conflict or as attackers themselves.

The Egyptian inscription of the eighth year of Ramses III details that the invading Sea Peoples conspired in their islands and that no nation could stand before them, including Hatti, Kode, Carchemish, Arzawa, and Alashiya. Hatti, the Hittite empire, crumbled, and its major city Khattusha was indeed destroyed and abandoned at the end of the Late Bronze Age. Although the Hittites were based well inland in Asia Minor, the suggestion has been that an overland wave of Sea Peoples may have caused the Hittite and other inland destructions.

At Cyprus, Alashiya in the Egyptian texts, the Late Bronze Age also ended with destruction or abandonment at many sites, many of which were associated with copper mining, and were also reoccupied during the Iron Age. Ugarit, the site of Ras Shamra on the Syrian coast, suffered complete destruction and abandonment. Copies of diplomatic correspondence between Alashiya and Ugarit indicate that seaborne raiders, likely some Sea People groups, were involved in these destructions.

Along the Syro-Palestinian coast many excavated sites have revealed a clear pattern of destruction at the end of the Late Bronze Age followed by resettlement on a smaller and poorer scale in the Early Iron Age. Sites such as Gezer, Bet-Shemesh, Ashdod, and Ekron all suffered destruction at the end of the Late Bronze Age. In the rebuilding that followed the Bronze Age destructions, there were no imported Aegean vessels, and what pottery that is made in Aegean style is made with local clays. The destructions of these sites have traditionally been associated with conquering Sea Peoples, who then occupied the area. Potters who were very familiar with Mycenaean styles continued to manufacture vessels in the style they knew but used local clays.

Although the widespread destructions marking the end of the Late Bronze Age all around the eastern Mediterranean have been attributed to marauding Sea Peoples largely because of the Egyptian texts, it is more probable that the destructions and the movements of groups of people were associated with a general economic shift from a centralized palace- and temple-

controlled economy to decentralized independent localized subsistence economies. The shift generated unrest and turmoil, which resulted in some conflict and the dislocation of some groups of people. The Sea Peoples and the destructions traditionally associated with them are thus a manifestation of a general and widespread breakdown in the socioeconomic system of the Late Bronze Age.

—*D. Bruce MacKay*

Bibliography

- Karageorghis, Vassos. "The Crisis Years: Cyprus." In *The Crisis Years: The 12th Century B.C. from Beyond the Danube to the Tigris*, edited by William A. Ward and Martha Sharp Joukowsky. Dubuque, IA: Kendall Hunt, 1992.
- Oren, Eliezer D. *The Sea Peoples and Their World: A Reassessment*. Philadelphia: University of Pennsylvania Museum, 2000.

Thought and Religion

According to Indian legend, the giant serpent (or dragon) Vritra stole all of the earth's water supply, leaving a horrible drought. Vritra hid within his 99 fortresses, hoarding the water for himself as the rest of the earth's inhabitants suffered. A hero arose in the god Indra. This deity, who in some Indian traditions appears to be the lord of all gods, gained the necessary strength to defeat the serpent by ingesting copious amounts of soma, an ancient intoxicant. Indra subsequently destroyed Vritra's fortresses, finally reaching Vritra himself. In a mighty battle, Indra slew Vritra with his thunderbolt, releasing the stolen water and bringing the rivers back to the earth. This and other early stories of the fair-skinned god Indra appear in the Rig-Veda, which was composed orally in India sometime between 1400 and 1200 BCE. The name "Indra" is also found in earlier Mitannian texts, suggesting that this deity may also have been worshipped in Anatolia, which may also explain some of the similarities between legends about him and legends about other Near Eastern deities.

Without the Rig-Veda, modern scholars would know very little about Vedic religion in this period. Thought and religion are two of the most difficult aspects of ancient life for archaeologists to analyze. Archaeologists often recover the material remains of ancient religious practices, such as temple ruins and long-lost statues or figurines. Yet reconstructing religion and thought based on the objects that are left behind can be exceedingly difficult. Thus, for many of the societies that flourished between 4000 and 1000 BCE, only minimal statements can be made about religion with any degree of certainty. This is truly problematic, for thought and religion are key to how people understand themselves and the world around them. Without this information, our knowledge of a society's history is incomplete.

Writing, one of the great innovations of this period, makes a world of difference for the study of religion. Simply put, there is significant evidence regarding the religion and thought of those societies that did utilize writing (at least writing that can be translated by modern scholars). These include Egypt, Mesopotamia, Syria-Palestine, Anatolia, the eastern Mediterranean, China, and India during the Vedic period. Without a doubt, much is lost in translation regarding the thoughts and beliefs of these ancients. Regardless, scholars are on much safer ground discussing the religion of the Egyptians than that of the Europeans, who built Stonehenge.

While there was a diversity of belief and religious practice throughout the world in this particular era, there were general similarities that are worth bearing in mind. Religion certainly does not seem to have been a separate conceptual category for the ancients, and often there is

no word that can be translated in this manner. The ancients did not see religion as a sphere of life that was separate from other aspects of their lives. However, religious work was a job like any other. Temple workers (often translated as “priests,” although this terminology carries connotations of more modern religious faiths) were responsible for mediating relationships between the people and the gods. Temples were not spaces that were open to the public, as churches, synagogues, and mosques are today. Rather, they were places where priests did their specialized work. Most of this work revolved around sacrifice, a formal type of gift

Temples were not spaces that were open to the public, as churches, synagogues, and mosques are today. Rather, they were places where priests did their specialized work.

giving in which something (often an animal, liquid libation, or burnt offering) was presented to the deity in exchange for the deity’s favor in this world. The precise nature of these offerings varied from place to place, but the underlying principle was relatively similar in many regions during this time.

Complicating the study of thought and religion for this era is the fact that this period is particularly important to many present-day faith communities. For Jews, Christians, and Muslims, this was the period in which many of the events of the Hebrew Bible (Old Testament) were purported to have taken place. Even more complex are the similarities and differences between the Hebrew Bible and the contemporary literature and religious beliefs of Mesopotamia, Egypt, and the rest of the Near East. Similarly, some of the most important texts of the Hindu faith were first written down in the Vedas. Moreover, present-day neopagans and other New Age groups view Stonehenge and other monuments from ancient Europe as part of their own religious heritage, even though there are no direct historical connections with the ancient traditions, and their practices and beliefs today vary considerably from those of the ancient Europeans. Even the Greeks and Romans drew inspiration from this period, believing that the *Iliad* and the *Odyssey* referred to events that occurred in this period. Moreover, classical Chinese texts regarding the Mandate of Heaven and other core ethical concepts purport to date to this era. That many modern beliefs have their origin in this period is unquestioned, but understanding the precise relationship between modern and ancient beliefs can be very difficult. An important caution to keep in mind as a historian is to be aware of the subtle anachronisms that are imposed upon ancient religious texts by members of modern faith communities, who often read contemporary values and beliefs into texts that were written long ago.

As this is the period in which writing was first invented, it provides the earliest evidence for what could be understood as philosophical explorations. Vedic texts suggest what constitutes a proper approach to leading one’s life: the repayment of debts that all individuals owe to the gods, the primordial sages, the ancestors, and to fellow humans. Near Eastern explorations of what constitutes the good life can be found in wisdom literature, a genre of writing that is attested in Egypt, Mesopotamia, and the Hebrew Bible. Usually, wisdom literature takes the form of collections of pithy sayings, passed on from a teacher or elder to a

student. Issues such as how to conduct oneself in different settings, questions of personal morality, and what constitutes success are all dealt with—although not uniformly—across this tradition. Other Near Eastern texts discuss why bad things happen to good people, why suicide is not appropriate, and why things change, all questions that are still being asked in our current era.

—Kevin M. McGeough

■ Introduction: Creation Myths and Cosmology

Many of the traditions about the nature of the universe, its origins and its composition, which are held by religious communities in the present day are derived from observations and understandings that arose in the period from 4000 BCE to 1000 BCE as humans began asking: Where did we come from? How was the world created? What does the universe look like and how does it operate? How do celestial bodies relate to our planet? These are all questions that people asked about their world in this distant past that we are still asking today.

What follows is a discussion of some of the major creation myths and cosmological accounts that date from this early period. Some show remarkable similarities to those held by faith communities today. Some seem completely alien to the present scientific worldview. Attempting to understand how ancient people understood these stories can be very difficult. Often there was more than one creation story circulating at a given time. How did they harmonize the differing accounts or did they even try? How literally did they take these accounts? Did ancient people really believe that the mythological events that transpired to create the universe actually occurred? Or, did they treat these myths as a means of expressing the inexpressible in language that would make sense within their own experiential framework? These viewpoints are heavily debated by scholars. No answer is provided here, but it is important to be aware of this debate when exploring these ancient conceptions of the universe.

Keep in mind that these stories were not just neutral scientific accounts. Many of these an-

cient creation stories and cosmological accounts were intended to explain the lived reality of the ancient world and to justify its institutions and social structure. Lurking beneath many of these stories are justifications for situations that were politically loaded at the time in which the stories were composed (for example, different creation accounts from ancient Egypt justify the location of different political capitals). There is more than one argument in many of these tales. They are not just accounts of how the world was created but are accounts of how the world should operate (from the perspective of the ancient writer).

—Kevin M. McGeough

Egyptian Creation Myths

The creation and continual maintenance of an ordered world from primordial chaos was the foundation upon which virtually all ancient Egyptian myth and ritual rested. Because divine creation, or cosmogony, was beyond the scope of human perception, Egyptian theologians developed a number of different creation myths to account for its processes. Each of these myths approached the question of the world's origin from a different perspective or sought to clarify some aspect of its genesis to which other accounts may only have alluded. It is important to note, however, that the various creation myths do not appear to have been conceived as competing theories. No two cosmogonies were mutually exclusive, even when their explanations involved different physical or magical mechanisms or emphasis upon different groups of divinities. This

THE EGYPTIAN WORLDVIEW

The ancient Egyptians, like many societies, conceived of their land as a sort of *axis mundi*, literally the “center of the world.” The view was based in large part on the geographical isolation of the Nile River valley from the surrounding lands. The river provided a self-contained system that rarely required venturing beyond its naturally defined borders except for acquiring certain foreign commodities, such as Lebanese cedar or Nubian gold. To the ancient Egyptian, the sun rose and fell on Egypt itself, which was felt to represent a bubble of light and order in a sea of chaos. Neighboring countries and their people were, by default, thought to reside outside this ordered realm; many state and private texts attest to the common practice of ritually destroying the names of foreigners as a means of magically holding these chaotic powers at bay. The belief of the centrality and, by extension, superiority of Egypt and its people was even reflected in the language: the word for “people,” *remetch*, was used for Egyptians alone, while those who lived beyond its borders were relegated to the lesser status of *khastiu* (“hill-dwellers”), that is, foreigners.

—Joshua Roberson

multiplicity of approaches instead exploited the flexibility of metaphor and symbol as tools for the expression of concepts that were essentially inexpressible.

Our understanding of Egyptian creation myths is shaped to a large degree by scattered allusions found in royal and private mortuary literature, specifically the so-called Pyramid Texts, Coffin Texts, and Book of the Dead. Additional material may also be extrapolated from oblique references found in hymns to the gods, magical texts, and certain cosmological treatises. However, no comprehensive account of creation is known from any one composition. This may simply be due to the nature of the preserved sources, which were concerned primarily with practical matters such as the protection of the deceased, ritual activity, royal legitimation, etc. Such texts tend to allude to cosmogonic episodes for the purpose of establishing a mythological precedent to some desired outcome. In such cases,



The god Atum, from the Tomb of Nefertari, Valley of the Queens, Thebes (Corel)

therefore, the creation story functions as a means to an end rather than an end in itself.

The so-called Heliopolitan Cosmogony is of central importance for any understanding of the broader concepts relating to creation in ancient Egypt. This mythological tradition derives its modern designation from the city of Heliopolis, known to the Egyptians as Iunu (biblical On), which was the principal cult center for the sun god Re. However, it must be stressed that despite a degree of solar emphasis, this cycle of myths existed independently of Heliopolis or any other city.

In this tradition, the cosmos necessarily begins with the creator god Atum, whose name at once connotes completion, finishing, and not-being as befits a demiurge whose existence precedes creation itself. In addition, Atum is also associated with the setting sun, and his name is frequently compounded with that of the sun itself, as Re-Atum, in the Pyramid and Coffin Texts.

This syncretism serves to reinforce the identification of the creator with his most important manifestation, the sun.

Initially, Atum merely floats, motionless and inert, within the infinite primordial ocean of Nun. This primeval state is frequently described in negative terms as the antithesis of the ordered cosmos: nothing yet exists, neither gods nor light nor time nor space. In a parallel tradition, Nun was quantified by four additional characteristics: boundlessness or flood (*hebu*), water (*nu*), darkness (*keku*), and chaos (*tenemu*). Atum rests within this watery expanse until the creative potential inherent within him—described as *heka*, or magic—results in his awakening and the subsequent emergence of the first mound of earth from out of the waters, the birth of the sun, and initiation of the natural order of the cosmos.

Following this initial act of creation, Atum then begets the first pair of deities, Shu and Tefnut, representing the principles of air or dryness and moisture, respectively. The problem of parthenogenesis—reproduction without sexual union—was circumvented by the Egyptian theologians, who describe the emergence of Shu and Tefnut from Atum's body as the result of an act of masturbation. An alternate explanation relies upon wordplay to describe how Atum sneezed (*ishesh*) Shu and spat (*tef*) Tefnut. The creation of these two deities, one male and one female, introduces the possibility for true procreation, and their resulting union produces an additional male and female pair: Geb (the Earth) and Nut (the Sky). These two gods in turn beget four additional sons and daughters: Osiris, Isis, Seth, and Nephthys. This original Ennead, or group of nine deities, implies the sum of all gods, that is, the totality of creation, given the particular status of the number nine as a superlative plural, or a nonspecific indicator of many deities.

The development of the Ennead represents only one facet of the basic framework upon which Egyptian religion was predicated. The institute of kingship, as personified by Horus, the son and legitimate heir of Osiris and Isis, also forms a critical component of this mythology, linking the political necessity of the state with the environmental reality of the Egyptian cosmos. In addition, the pivotal role of the sun for

both the living and the dead as well as the maintenance of cosmic order, or *ma'at*, cannot be overemphasized. Parallel to the Heliopolitan cosmogony were a number of additional traditions, which both complimented and expanded upon its themes. The theologians of Hermopolis eventually developed the four characteristics of the primordial ocean into an Ogdoad of eight deities, who were seen as the actualizing principle that enabled the development of Atum himself. Other myths expanded upon cosmogonic themes such as the sun's emergence above the primordial mound, described variously as the flight of the *benu* heron (the archetype for the Greek phoenix) or the emergence of the child-god Nefertem from the first lotus blossom. A later tradition cast the chief deity of Memphis, Ptah, in the role of the primordial creator who develops the cosmos through the power of creative speech. This characteristic of the Memphite theology may thus be compared with the Greek *logos*, which finds its most well-known expression in the biblical conception of the Word.

—Joshua Roberson

Bibliography

- Allen, James P. *Genesis in Egypt: The Philosophy of Ancient Egyptian Creation Accounts*. Yale Egyptological Studies No. 2. 1988; reprint, San Antonio, TX: Van Siclen Books, 1995.
- Hornung, Erik. *Idea into Image: Essays on Ancient Egyptian Thought*. Translated by Elizabeth Bredeck. New York: Timken, 1992.
- Lesko, Leonard. Ancient Egyptian Cosmogonies and Cosmology. In *Religion in Ancient Egypt*, edited by Byron E. Shafer. Ithaca, NY: Cornell University Press, 1991.
- Morenz, Siegfried. *Egyptian Religion*. Translated by Ann E. Keep. Ithaca, NY: Cornell University Press, 1973.
- Quirke, Stephen. *The Cult of Ra*. New York: Thames and Hudson, 2001.
- Ritner, Robert K. *The Mechanics of Ancient Egyptian Magical Practice*. Studies in Ancient Oriental Civilization No. 54. Chicago: University of Chicago Press, 1993.

Near Eastern Myths of a Deluge

While stories of a universal deluge, or flood, appear in many cultures, those from the ancient

► THE FLOOD STORY IN THE GILGAMESH EPIC

The Gilgamesh Epic, a masterpiece of Akkadian literature, narrates the adventures of Gilgamesh and his foe-turned-friend Enkidu and the former's search for eternal life. Gilgamesh was an Early Dynastic king of Uruk around whom a number of legends (in Sumerian) eventually gathered, forming the earliest sources for the later Standard Babylonian version of the epic discovered in the library of the Assyrian king Assurbanipal. More than 200 fragments of the story have been discovered in various parts of the Near East, as far as Hattusha (present-day Bogazkoy) in Anatolia and Megiddo in the Levant, and attest to its importance in ancient Near Eastern culture and thought.

—Joseph Lam

Near East are the earliest attested and are therefore of primary interest for investigating the origins of this motif. Some striking similarities between the biblical and Mesopotamian accounts in particular point to a common literary tradition for these stories.

The biblical account of Noah in Genesis 6–9 is undoubtedly the most famous of the ancient Near Eastern flood stories. It tells of how, when wickedness on the earth had increased greatly, God became so grieved that he decided to wipe out all creatures on the earth. However, he chose Noah, righteous among his generation, to build an ark into which he would bring his family as well as specimens of every animal. When God sent the flood, all life on earth was destroyed, but those in the ark rode above the waters and were spared. Afterward, God made a covenant with Noah to never again destroy all life with a flood.

Ancient Mesopotamia retained a number of traditions concerning a universal deluge. This is not surprising given the susceptibility of the area to seasonal flooding. Three major stories of a deluge have been preserved. The Standard Babylonian (Akkadian) version of the Gilgamesh Epic contains an episode in which Gilgamesh approaches Utnapishti to inquire about eternal life. In response, Utnapishti recounts how long ago the great gods decided to send a destructive del-

uge. The god Ea, however, revealed the matter to Utnapishti, commanding him to build a boat. When the flood came and those in the boat survived, the god Enlil became angry that their plan had been thwarted. In the end, it was decided that Utnapishti should be allowed to live but in a faraway land. Although no reason is given for why the gods sent the deluge, parts of the story hint at population control as the underlying motivation.

The theme of population control is more explicit in the earlier Akkadian epic of Atrahasis. In this story, the gods created humanity to alleviate their burdens, only to become annoyed by the excessive noise they made. The result was a number of attempts at decimating humanity: plague, drought, famine, and finally a flood. As in the Gilgamesh account, the hero Atrahasis is told of the plan and survives in a boat.

The hero of the Sumerian flood story (also called the Eridu Genesis) is Ziusudra, who is also the last antediluvian king named in the Sumerian King List. While this text contains a number of gaps in key places, enough has been preserved to show its structure as a kind of primeval history. Xisuthros, the hero in the third-century BCE flood account of Berossus, is clearly a Greek rendering of the name Ziusudra.

Two Egyptian tales are worth mentioning. The Destruction of Mankind tells of the destruction of a large portion of humanity in a beer-based liquid resembling blood, while chapter 175 of the Book of the Dead hints at a future devolution of the earth into an original floodlike state.

—Joseph Lam

Bibliography

- Frymer-Kensky, T. "The Atrahasis Epic and Its Significance for Our Understanding of Genesis 1–9." *Biblical Archaeologist* 40 (1977): 147–155.
- Hallo, W. W., and K. L. Younger Jr., eds. *The Context of Scripture*. Vol. 1, *Canonical Compositions from the Biblical World*. Leiden: Brill, 2003.

Mesopotamian Creation Myths

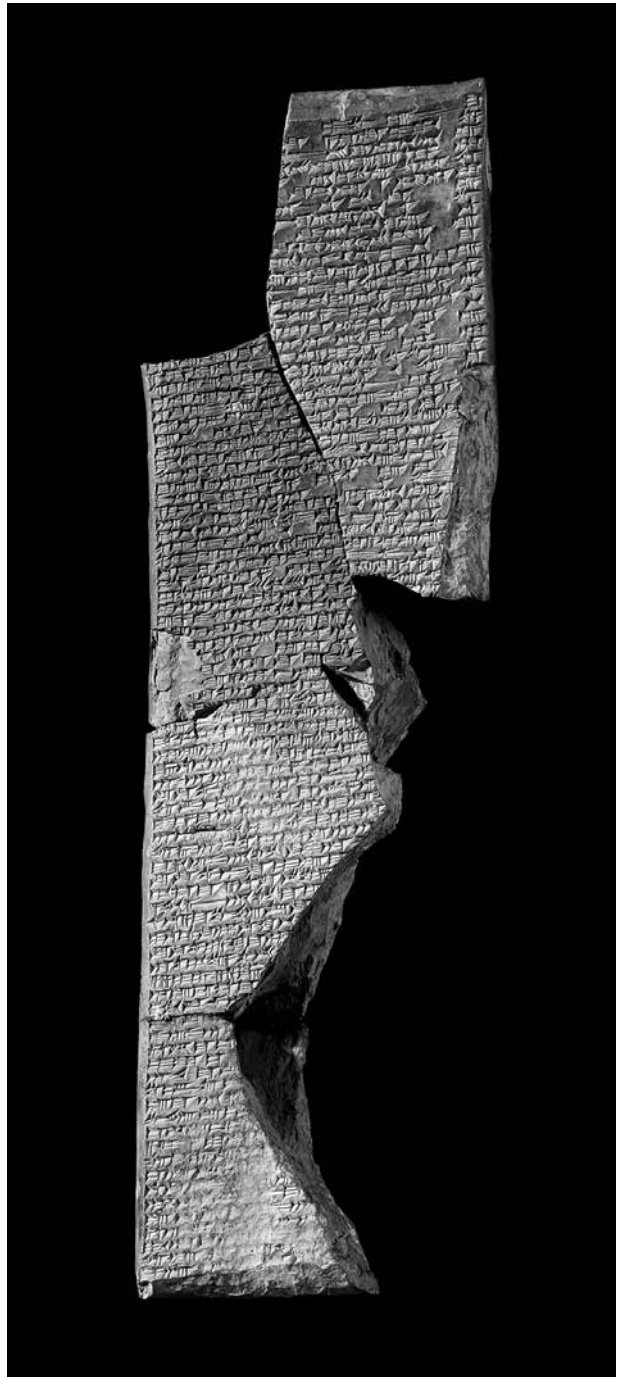
Copies of various Mesopotamian creation accounts, or cosmogonies, written in the cuneiform language on clay tablets have been found throughout the entire Middle East. For the an-

cient Mesopotamians, such cosmogonies were not designed to explain scientific or even historical information but instead were intended to convey information about the contemporary reality of the world through theologically diverse traditions of the myths of the gods.

The sources that contributed to the Mesopotamian study of creation include third- and second-millennium cosmogonies written in the Sumerian language (god lists, narrative texts from both the cities of Nippur and Eridu, and some unique minor texts) as well as midsecond- and first-millennium cosmogonies written in the Akkadian language (anthological cosmogonies such as *Atrahasis* and *Enuma Elish* and minor cosmogonies). Despite the numerous differences in the details and languages of all of these sources, the goal of these creation stories was to give the cosmos order, function, and purpose. All of the traditions emphasized the divine assignment of destiny (Sumerian *namtar*) whose origins were defined by the gods in the plan of the universe. Since the order of the cosmos was perpetually threatened in the ancient Near East, the king and his people limited the spread of chaos through yearly rituals, rites, and festivals.

From the Nippur tradition and the early god lists, scholars can reconstruct the primeval birth of civilization from the parental gods of Mesopotamia. In that day, creation culminated in the single act of the union of heaven (AN) and earth (KI). Vitality, organization, civilization, and social order ensued from this cosmic marriage, but their union was short-lived and separated by the first offspring of the gods, Enlil. From the narrative texts of the Eridu tradition there is a different account whereby creation ensued from the god Enki, the personification of underground spring water, who watered the earth (fertility) and created mankind from human clay (wisdom culture). Water was the source of beauty, being, and form in the Eridu tradition, and so this stream of tradition in Mesopotamia was heavily dependent on the principle of life being from underground, or chthonic and not cosmic sources, as was the case in the Nippur tradition.

Although many of the diverse themes found in the Sumerian cosmogonies listed above are discovered in the Akkadian cosmogonies (e.g., formation of mankind, the decree of destiny, the



Tablet telling the Epic of Creation, from Nineveh, northern Iraq, Neo-Assyrian, seventh century BCE. This particular tablet relates the episode in which the god Anshar summons the gods to celebrate Marduk's appointment as champion following his defeat of Tiamat. (The Trustees of The British Museum/Art Resource, NY)

➤ NEW YEARS' CELEBRATIONS

The New Year's Festival was originally an agricultural springtime ceremony whereby the Mesopotamians gathered to renew the fertility of their land through a series of elaborate rituals. The ceremony evolved into an annual celebration at Babylon for 12 days in the first month of the year, the month of Nissanu (our March 20 or 21), where the rites focused on the cult of the Babylonian god Marduk. In this most elaborate and important Babylonian ritualistic festival, preserved in fragmentary cuneiform tablets from circa 1000–600 BCE and the Hellenistic period, the destiny of the kings as well as the people was decreed and fixed for the year. After the performance of a series of private rituals, including the recitation of prayers by the high priest and the construction of wooden statues as divine images, the high priest would stand before the people and recite the Babylonian Epic of Creation, *Enuma Elish*. The reading was followed by a ritualistic performance of the humiliation of the king whereby the high priest would slap him on the face, force him to kneel before the statue of the god, and strip him of his divine authority. Afterward, the king would utter a negative confession (“I have not . . .”) and thereby reaffirm his humble place in the cosmos. Then, the statues of the gods and goddesses from nearby cities would arrive in Babylon to honor the god Marduk and his supreme place in the pantheon. In the final days of the festival, the king would lead the statue of Marduk by the hand from the temple to the shrine of the destinies, where the fate of the king, his land, and his people would be divinely decreed by the god for the new year. Once the cosmos and land were restored, a processional led participants to a grand banquet, which lasted for three days. The gods and the people would finally return to their cities, assured by the fixing of creation, and would wait to assemble again the next year.

—William Zimmerle

temple as the original place of creation), the Akkadian cosmogonies of the second millennium later discontinued the idea of a cosmic marriage between the heaven and earth and emphasized blood instead of water in the creation of mankind. These later anthological cosmogonies were

complex literary works that probed the divine-human relationship, the limits of mortality, and the dignity of humanity. *Enuma Elish*, for example, the Babylonian creation epic in its completed form of seven tablets, was a political tract that traced the kingship of Marduk to the foundation of the cosmos before any divine authority existed. Its ultimate purpose was defined in its end with the exaltation of Marduk as the most powerful and supreme head of the Mesopotamian pantheon. And in the epic of Atrahasis, humankind, which was first created to serve the gods from the flesh and blood of an Igigi god, overpopulated the earth so much so that the gods, their original creators, set out to destroy them by means of plagues and a flood. Like the biblical story of Noah in Genesis 6, the god Enki instructed Atrahasis and his family to build an ark to survive the flood. In the end, humankind was saved because the Mesopotamian gods realized their own selfish need for humanity and thus repopulated the earth. But new safeguards were designed and implemented, and there were now limits on the mortality and reproduction of humanity set within in the cosmos.

The underlying cosmological realities of the ancient Mesopotamians that were designed to express the universality of the present state of their world are evident in the overall construction of the various cosmologies discussed above, from the minor cosmogonies to the major anthological ones. More broadly stated, these realities include three aspects of function found in the literary structure of the myths: naming, splitting, and role assigning. First, the giving of names was seen as an important way in which creation was accomplished. In the beginning of the Mesopotamian creation myth *Enuma Elish*, for example, the heavens, earth, and the gods were nameless. When the gods Lahmu and Lahamu were born, their names were pronounced. The idea of destroying or splitting the divine was a second functional aspect of creation. Marduk, the divine Babylonian hero in *Enuma Elish*, cut the goddess Tiamat in two, for example, whereby he created the cosmic geography of the universe. But the primary functional aspect of all these myths was the assigning of destinies decreed to both humanity and the gods, an idea

attested in *Enuma Elish* whereby Marduk re-formats the cosmos so that everyone and everything has its place.

—William Zimmerle

Bibliography

- Black, Jeremy, and A. Green. *Gods, Demons and Symbols of Ancient Mesopotamian. An Illustrated Dictionary*. Austin: University of Texas, 1995.
- Bottero, Jean. *Mesopotamia: Writing, Reason and the Gods*. Chicago: University of Chicago Press, 1992.
- Clifford, Richard J. *Creation Accounts in the Ancient Near East*. Catholic Biblical Quarterly Monograph Series 26. Washington, DC: Catholic Biblical Association of America, 1994.
- Oppenheim, Leo. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Chicago: University of Chicago Press, 1977.
- Walton, John H. *Ancient Near Eastern Thought and the Old Testament: Introducing the Conceptual World of the Hebrew Bible*. Grand Rapids, MI: Baker, 2006.

Vedic Creation Myths

An early myth emerges in fragments from the first and tenth books of hymns in the Rig-Veda. In the myth are the familiar themes of the sacrificial basis of creation, incest, and the separation of the first “parents” who, although of opposite gender, resemble the traditional depiction of the Egyptian Nut (heaven) arched over Geb (earth). We are also reminded of the Greek story of the merging of heaven and earth as Uranos and Gaia.

The phallus of Heaven, the male force, reached out to the young girl, his daughter, Earth. Agni, the god of fire, had made the hot passion and seed of Heaven. As the act of union was committed, some seed spilled onto Earth, and words and the rituals were born. The god had satisfied himself with his own daughter. Out of the hot spilled seed came the Angirases, the mediators between gods and humans, who distribute the gifts of the gods. Heaven is our father, and Earth is our mother.

Another Rig-Veda myth, also from the tenth book, emphasizes the traditional creation myth theme, the sacrifice of a being out of whose dismemberment the world is made. The 1,000-

headed, 1,000-footed primal man, Purusa, enveloped earth and was, in fact, the universe, the here and the there, the now and the always. Three-quarters of Purusa are of the undifferentiated immortal sphere, while one-quarter is the sphere of life's forms.

When the gods performed the sacrifice of the primal man, his bottom quarter became the world we know. His mouth, out of which came words, became the wise brahmin priest and the god Indra. His arms became the warrior caste, his thighs the common people, and his feet the lowest of the low. Out of the sacrifice of Purusa came the beasts, plants, rituals, and sacred words and the Vedas themselves. From Purusa's mind came the moon, from his eye the sun, from his breath the wind, from his head the sky, from his feet the earth, and from his navel the atmosphere.

By sacrificing Purusa, the gods sacrificed he who gave of himself. In so doing they made sacrifice to sacrifice and gave birth to the foundation of our order.

In the tenth book of the Rig-Veda there is still another hymn of creation. It speaks of the necessity of opposites. Without Non-Being there cannot be Being; without Being there cannot be Non-Being. It is a human cry for knowledge of origins, for the meaning of Self, the meaning of Being. The poet asks, “Who knows the source of this creation?” If in the beginning there was neither Being nor Non-Being, neither air nor sky, what was there? Who or what oversaw it? What was it when there was no darkness, light, life, or death? We can only say that there was the One, that which breathed of itself deep in the void, that which was heat and became desire and the germ of spirit.

The wise say that Non-Being and Being became one and that chaos became order. Who really knows what happened, whether it came from the One or not? Only the creator knows, and maybe even he knows nothing about it.

—David A. Leeming

Bibliography

- Leeming, David Adams. *Creation Myths of the World: An Encyclopedia, Second Edition*. Santa Barbara, CA: ABC-CLIO, 2009.

Leeming, David Adams. *A Dictionary of Asian Mythology*. New York: Oxford University Press, 2001.
 O'Flaherty, Wendy Doniger. *Hindu Myths*. New York: Penguin, 1975.

Chinese Creation Myths and Cosmogony

Cosmogony concerns theories of the origins of the cosmos. Creation myths communicate traditional versions of these theories. Some creation myths illustrate striking cross-cultural similarities, while others demonstrate variation between cultures or even within a culture. Over time, a number of Chinese myths have addressed the creation or repair of the cosmos, humans, and the Chinese landscape. Mythic themes, such as a great flood or the cosmogonic separation of heaven and earth, are common cross-culturally. However, in the Chinese myths, the flood story concerns righteous rulers and cultural heroes creating a more orderly and inhabitable world rather than divine punishment or the need to create the cosmos or its inhabitants anew. Despite China's long literary tradition, its mythology is fragmentary with relatively little emphasis on creation myths. Moreover, Derk Bodde and twentieth-century Chinese scholars have demonstrated a surprisingly common inverse relationship between the supposed age of a myth and its actual appearance in Chinese literature. That is, creation myths and similar legendary accounts of the very earliest times appear to be later literary contributions rather than myths, songs, and documents addressing less ancient legendary and historical figures.

There are various related reasons that might explain why creation myths have not been as central to Chinese mythology and why the myths we have are fragmentary and often deliberately altered rather than transmitted whole. It is particularly difficult to access myths from Shang and earlier periods, although Sarah Allan has attempted to reconstruct a Shang origin myth that maintained that they were born from one or more eggs that came from blackbirds, who were the ten suns, that are linked to Shang divine ancestors and may be the basis for the Shang ten-day calendar. Elements of this reconstruction appear in various sources and times

and connect with other myths, such as a well-known legend in which nine of the ten suns were shot down by an archer to save the earth from their heat when they mistakenly all came out at once. This reconstruction is speculative due to the fragmentary nature of the sources and the distortion of some early myths by later scholars who disregarded some elements as irrational and transmitted portions of myths that served their purposes.

Confucian scholars have been important transmitters of tradition; however, their interests shaped this transmission by historicizing myths. Legendary figures were recast as more human rulers, heroes, or villains. Their activities were placed in a time line, and they were used as model sages to emulate or as delinquent foils and counterexamples whose negligence led to disasters. The Confucian scholars were not unusual in appropriating myth to support their worldview. Schools of Chinese philosophy in general often employed legendary accounts to exemplify the presence or absence of order and harmony in social relationships, in the natural world, and in an integrated cosmos constantly changing according to interrelated and predictable phases, patterns, and correspondences between heaven and earth, deities and humans, ancestors and living relatives, human bodies and political bodies, social organization and divine governance, and additional pairings and developments in nature, society, and history.

This worldview of correspondences and phases arises from and continues to shape the long and rich Chinese history of literature and thought devoted to cosmology. Cosmology includes cosmogony's concerns with the origins of the universe, but it encompasses a broader study of the nature and ongoing development of the cosmos aimed at understanding its order and patterns and the position, nature, and role of human beings. Cosmogony and creation myths have played a relatively limited and subordinate role within the larger concerns of cosmology. Moreover, the fragmentary and relatively late appearance of the best-known creation myths raises questions of their age, the regional origins within or beyond China, and the direction of influence between these creation myths and cosmological assumptions in China.

➤ CREATION MYTH OF PANGU (P'AN-KU)

The Chinese cosmogonic myth of Pangu tells the story of the separation of heaven and earth and the creation of the cosmos. Derk Bodde paraphrases this myth and indicates that although the myth's subject encompasses the earliest primordial origins of the cosmos, we only know of this account from references to a now lost third-century CE source, which is far from ancient by Chinese standards. This myth does invoke the considerably more ancient idea of an original undifferentiated whole (*hundun/hun-tun*), which like an egg gave birth to Pangu and then 18,000 years later split into heaven above, with corresponding yang connotations, earth below, with corresponding yin connotations, and the still-growing Pangu in between. Pangu's growth over the next 18,000 years further separated heaven and earth, which were also expanding. Just as Pangu's life is inextricably bound to the differentiation and separation of heaven and earth, yang and yin, his death produces the cosmos as we know it. Pangu becomes a cosmogonic organ donor whose "breath became the wind and clouds, his voice the thunder, his left and right eyes the sun and moon respectively, his four limbs and five 'bodies'

(fingers?) the four quarters of the earth and the five great mountains, his blood the rivers, his muscles and veins the strata of the earth, his flesh the soil, his hair and beard the constellations, his skin and body-hair the plants and trees, his teeth and bones the metals and stones, his marrow gold and precious stones, and his sweat the rain. The parasites of his body, impregnated by the wind, became human beings" (Bodde). This creation myth includes themes and images found elsewhere in Chinese literature and beyond China. Creation from the dismemberment of a giant being is similar to the sacrifice of the cosmic man, Purusha, found in earlier Vedic literature. Moreover, the origin of the sun and moon in Pangu's myth recur in the later Japanese creation myths where Izanagi gives birth to the sun and moon from his left and right eyes respectively.

—John Harding

Source

Derk Bodde, "Myths of Ancient China," in *Essays on Chinese Civilization* (Princeton, NJ: Princeton University Press, 1981), 45–84.

There are a number of important myths that convey how legendary culture heroes—such as Yu, Shennong, and the Yellow Emperor—advanced Chinese civilization by carving order out of chaos or inventing technologies to improve agriculture or stimulate cultural progress. References to these myths in the *Shi jing* (*Classic of Songs*) or the *Shu jing* (*Classic of History*) are earlier and more influential than true creation myths. Yu reshapes China in the process of draining the floodwaters, but he does not create it. Nu Gua (Nu-kua, Nüwa), in some legends, creates human beings. She too exists in an already created cosmos, but she is credited with repairing that cosmos and creating humans. The technique by which she creates human beings changes from carefully forming some by hand out of yellow earth to quickly flinging others together by dragging a cord through the mud. This explains and reinforces class distinctions between nobles and common people, respectively.

The legend of Pangu (P'an-ku) is most clearly identifiable as a creation myth. This is a classic tale of cosmogony whereby heaven and earth separate, and humans and the rest of the created world arise from the death of a giant cosmic being. There are additional myths that depict the separation of heaven and earth. Some resonate with myths from around the world in their sense of an earlier time with closer links between heaven and earth, gods and humans. In contrast, later times present greater difficulty communicating between the increasingly separate realms and necessitate a more arduous existence for human beings. In one interesting twist on this theme, there is a Chinese myth that claims that one of the columns separating heaven and earth broke and later became uneven once again despite Nu Gua's cosmic repairs. As a result, heaven and earth slant closer to each other in the northwest and farther away in the southeast. This myth provided explanation for why the heavenly

bodies move to the west while the major rivers in China flow out to the ocean in the east, where water had pooled when the column first broke.

Studying the cosmos and the way the universe is arranged and unfolds becomes important for reasons beyond astronomical or even astrological interests. The latter, in fact, may be a better guide, as there is a strong sense of the predictive power of natural observations due to the premise of shared phases, patterns, and correspondences. Understanding the workings of the cosmos was deemed important to understanding the workings of human beings individually and collectively. To comprehend and help keep in alignment the ways of nature and the ways of society are inseparable from issues of how to lead one's life. Cosmology, in short, has informed the worldview in China on all levels while connecting those same levels and directing the ideal course on one's life and one's role in society and the universe. Cosmogonic stories inform cosmological assumptions, but in the case of Chinese mythology, their relatively late appearance in literature suggests that some of them may have been the product rather than the source of dominant cosmological views.

—John Harding

Bibliography

- Allan, Sarah. *The Shape of the Turtle: Myth, Art and Cosmos in Early China*. New York: SUNY, 1991.
- Bodde, Derk. "Myths of Ancient China." In *Essays on Chinese Civilization*. Princeton, NJ: Princeton University Press, 1981.
- Kohn, Livia. "Cosmology, Myth, and Philosophy in Ancient China: New Studies on the 'Huainan zi.'" *Asian Folklore Studies* 53(2) (1994): 319–336.
- Loewe, Michael, and Edward Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.
- Waley, Arthur, trans. *The Book of Songs*. New York: Grove, 1937.
- Waltham, Clae. *Shu Ching, Book of History: A Modernized Edition of the Translations of James Legge*. London: Allen and Unwin, 1972.

Cosmological Themes in Chinese Art

In the middle to late Neolithic era of 3,500–7,000 years ago, prehistoric people within the modern

boundaries of China had some complicated ideas related to myths. The patterns and decorations molded or carved on stone, jade, bone, wood, and pottery tell mythical stories. Comparing these relics with ancient writings provides clues about the myths of that time. In Hemudu village in Yuyao County, Zhejiang Province, a bone dagger was found in 1973 that dated back to 7,000 years ago. On the handle of the dagger was a carved pattern depicting two symmetrical birds carrying the sun. This motif of a bird carrying the sun can also be widely found on pottery in many cultural relics from modern Gansu, Shaanxi, Henan, and Shanxi provinces.

Classified as the Miaodigou Type of Yangshao culture (a Neolithic culture of central China), these relics are usually dated to 6,000 years ago. In these relics the bird carrying the sun is sometimes depicted with three legs. This same motif can be found in myths recorded in ancient writings, such as *Shanbaijing* (*The Classic of Mountains and Seas*, ca. fourth century BCE to the early part of second century BCE), *Huainanzi* (ca. 139 BCE), and *Lunheng* (*Critical Essays*, written by Wang Chong, 27–ca. 100 BCE). According to these texts, there was a crow settling on the sun (some versions say there were ten crows settling on ten suns). The crow functions as the spirit of the sun or, variously, the one who carries the sun across the sky. Sometimes the bird is said to be three-legged. According to an account in *Shanbaijing*, there was a huge tree named *Fusang* (Leaning Mulberry) in the eastern Tang Valley. In its branches rested the ten suns. As soon as one sun came back from its journey crossing the sky, another sun started forth. Each of the ten suns was carried by a crow.

An earlier text, "Tianwen" ("Questions of Heaven," written by Qu Yuan, ca. 340–278 BCE), ambiguously mentions the crow of the sun in the story about the mythical hero Yi, asking: "Why did Yi shoot down the suns? Why did the crows shed their feathers?" Wang Yi (ca. second century CE), the commentator of "Tianwen," cited a paragraph from *Huainanzi* to explain these questions, stating that at the time of Yao (a demigod of the three sage kings), the ten suns rose together and burned up the woods and grass. Yao then ordered Yi to shoot down the ten suns in the sky, and Yi shot down nine of them. The

nine crows settling on these suns died, and their feathers fell out. In later versions, the crow of the sun is sometimes said to be three-legged.

Thus, it can be concluded to some degree that in the middle to late Neolithic era, the mythical motif of a bird carrying the sun or a bird settling on the sun (the number may be interpreted as plural) is already quite developed. Those ancient written myths are not just single occurrences of such mythical ideas. Instead, they receive support from artifacts found by archaeologists and it can be deduced that these mythical beliefs were widespread. It may be further assumed that the designs carved on bone or other materials were telling the sun myth in an-

other way, not in spoken language, but in drawings and engravings.

—Libui Yang, Deming An, and Jessica Anderson Turner

Bibliography

- Birrell, Anne. *Chinese Mythology: An Introduction*. Baltimore: Johns Hopkins University Press, 1993.
- Bodde, Derk. "Myths of Ancient China." In *Mythologies of the Ancient World*, edited by Samuel Noah Kramer. 1961. Reprint, New York: Anchor Books, 1989.
- Yang, Lihui, Deming An, and Jessica Anderson Turner. *Handbook of Chinese Mythology*. New York: Oxford University Press, 2008. First published 2005 by ABC-CLIO.

■ Introduction: Ancient Deities

From the period 4000 to 1000 BCE, polytheism was, for the most part, the norm in ancient religions. Polytheism is the worship of more than one deity, usually distinguished from monotheism (the worship of one god, which is characteristic of Judaism, Christianity, and Islam). The collection of gods worshipped in a polytheistic community is usually referred to as a "pantheon," although pantheons were not fixed and unchangeable. Sometimes these deities were seen as anthropomorphic and were thought to have the personalities and physical appearance of humans. Other times, the conceptualizations of these deities was relatively abstract. Often deities were associated with particular aspects of earthly life, but these associations were fluid and varied depending on a number of variables.

Polytheistic practices are quite diverse, and it is difficult to make meaningful generalizations. Usually, members of a polytheistic community do not worship all of the gods or goddesses with equal fervor. Some communities had particular deities within the pantheon that had a special relationship with that region. Sometimes groups of individuals within a community (such as a guild of specialized workers) felt that they had a particular relationship to a deity based on shared interests or the individual characteristics of the deity. Other times families and individuals per-

ceived themselves to have a close connection to one particular deity and emphasized the worship of that particular god or goddess. The veneration of specific deities was sometimes emphasized in special circumstances, such as when a member of the community was sick and deities perceived to have a certain healing skills or influences were invoked.

Polytheistic societies often believed in other supernatural or semidivine forces that they did not consider to be gods. Spirits, demons, ancestors, and other unseen beings were often thought to inhabit the world and play a role in the community's life. Scholars who study religion from a comparative perspective often divide the deities and other supernatural beings of polytheistic societies into a number of categories, although one needs to always be cautious about comparative approaches to religion that can overemphasize cross-cultural similarities. Celestial deities are those deities that are related to heavenly bodies, such as the sun, moon, or stars. Cthonic beings, in contrast, are associated with earth or places in the earth, such as bodies of water or caves. The following entries discuss some of the deities of a number of regions but should by no means be considered exhaustive. Rather, they provide a general sense of the diversity of deities worshipped from 4000 to 1000 BCE.

—Kevin M. McGeough

African Deities

African religious systems of antiquity were associated with several theological concepts and assumptions. By 1000 BCE, African deities had evolved out of a particular ecology and spiritual environment. The universe was believed to be populated by numerous spiritual entities and divinities called *neteru* by Egyptians and Nubians and in a later era *orisas* by some West Africans. It was believed that these divinities were a manifestation of divine intelligence and presided over mountains, hills and valleys, seas, rivers, streams, trees, forests, and shrubs.

They controlled the world and facilitated divine action. Some were more important than others. Spirit possession as well as invocations and libations to the divinities became elaborate over time. Protective amulets were worn by people who acted as spiritual intermediaries such as the *kher-heb* of Nubia and Egypt, the Yoruba *babalawo* of West Africa, and the *sangoma* of South Africa. There was also the belief that dead ancestors returned in various earthly forms. In

some parts of the continent, however, including parts of Nubia and Egypt, the heads and limbs of corpses were sometimes amputated in the belief that this act would prevent their return.

Ethiopia is one of the four major regions of ancient northeast Africa, along with Nubia, Punt, and Egypt. Arwe and Atete are two female deities who played a prominent role in the Ethiopian pre-Judaic and pre-Christian era. According to an Ethiopian sacred narrative, one of the eponymous deities was Arwe, who was the supreme deity of the land, particularly northern Ethiopia. Arwe was believed to be half human and half animal. His father was a *zendo* (serpent), and his mother was human. He presided over many gods and goddesses.

One of the famous female deities of Ethiopia was known as Atete, but Arwe may have been more prevalent prior to the mastery of highland agriculture, particularly crop farming. Legend has it that Arwe was supplied annually with cows, goats, sheep, and milk. The sacrificial offerings were also made up of humans and animals. This suggests that the tradition of Arwe may have been observed by pastoralists.

Atete, a female deity, originated in southwestern Ethiopia at a nonspecified time. The deity is more popular with the Oromos even though there are some Amhara and Gurage followers. She was believed to have supernatural powers and was capable of shaping the destiny of believers. Unpropitiated, Atete may spread misfortune, such as untimely death, poor harvest, poor health, and misery. Atete was considered an intermediary between human beings and the divine. She was regarded as a representative of the gods on earth (and later of the Judeo-Christian God). According to her followers, the criterion for a smooth life was to offer to her annual gifts.

Atete was known by many names: Atete Ginbi, Atete Hara, Atete Dula, Atete Borona, and Atete Gurage. These were regional, activity oriented, and leadership Atetes. In other words, additional designation may be included to highlight specific activities or desires. For instance, Atete Hara is a lake or sea deity and is regarded as kind and forgiving. On the other hand, Atete Duala is a deity of war recognized for toughness. All of these Atetes may be evoked together or simply as Atete depending upon special circumstances.

➤ DIFFICULTIES IN THE STUDY OF AFRICAN TRADITIONAL RELIGIONS

There are a number of difficulties which historians who attempt to study traditional African religions face. The most problematic is the issue of sources. Much of the knowledge about these religious beliefs has been passed down in oral (as opposed to written) form. Over time, these oral traditions have been altered to reflect changing historical circumstances and it can be very difficult to identify the period that different traditions reflect. One of the approaches that scholars have taken is linguistic. Christopher Ehret, for example, has studied the history of the African languages in which these oral traditions are preserved and by looking at linguistic changes, he identified various phases in African religious history. Studying this historical-linguistic evidence in tandem with archaeological evidence helps scholars reconstruct ancient African religion.

—Kevin M. McGeough

Source

Christopher Ehret. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.

Atete was symbolized by chains of fine multi-colored beads, or *chale*, which were kept in a straw basket. Atete was celebrated on September 11 or 12, which coincided with the Ethiopian New Year. The ceremony was usually conducted by a woman who took ground barley and spread this over a handful of fresh green grass. The *chale* were taken out of the basket and were held in both palms, wet with fresh butter and perfume. The woman moved these gently over her face and torso before she evoked Atete for good omen. This ceremony evolved over the centuries.

Ta-Seti, Kerma, Napata, and Meroe were some of the major centers of power associated with ancient Nubia. These kingdoms and empires prevailed between 3800 BCE and 200 CE. Auset (Isis), Heru (Horus), Hapi, Ra, Tehuti (Thoth), Amen, Apedemak, and Ausares (Osiris) were some of the various deities worshipped and recognized by the Nubians. Some of the deities are of Egyptian origin, but Dietrich Wildung does not rule out the possibility that basic aspects of Egyptian religion may have originated in Nubia and northern Sudan in the first instance. By 1000 BCE, the Kushite kingdom of Napata was in its early stages, and so too was the religious awe associated with Gebel Barkal, the holy mountain of Napata. Apedemak, the god of war, was represented as a snake with a lion head, and Ausares, the god of immortality and resurrection, was also revered. Numerous temples were built in their honor.

Many of these spiritual entities may be perceived also as energies, agents, gates, angels, spiritual helpers, and conscious thought forms. They represented principles and concepts as well. They were associated with specific head gear and dress, animals, plants food items, gestures, sacred objects, symbols, chapels, temples, and also pyramids, about 200 of which were constructed within the millennium in the case of Napata and Meroe.

—*Ayele Bekerie and Gloria T. Emeagwali*

Bibliography

- Bianchi, Robert. *Daily Life of the Nubians*. Westport, CT: Greenwood, 2004.
- Ephirim-Donkor, Anthony. *African Spirituality: On Becoming Ancestors*. Trenton, NJ: Africa World Press, 1997.

Wildung, Dietrich. "Kushite Religion: Aspects of the Berlin Excavations at Naga." In *Sudan: Ancient Treasures*, edited by Derek Welsby and Julie Anderson. London: British Museum Press, 2004.

Egyptian Gods

In ancient Egypt, the gods themselves were called *netjer (ntr)*, a hieroglyph represented as a staff with a cloth. While no word for religion exists in ancient Egypt, the concept is expressed abstractly through the term *dsr*, or the sacred, as well as the *mdw-ntr*, or the writing of the gods. The ancient Egyptian writing system in its pictographic form was the means by which the oral stories of the origin of the gods were preserved and their symbols represented. In a sense, art and writing were one in ancient Egypt, and the gods were given immortality through the carving of hieroglyphs on temple and palace walls.

Ancient Egyptian worship was not only polytheistic but also theologically diverse throughout its history. According to mythology, the oldest Egyptian deities were created through bodily fluid (spitting, sneezing, or masturbating), while the later gods of the pantheon were engendered as their offspring. Multiple gods and goddesses with a multiplicity of names were worshipped daily in various geographic areas throughout ancient Egypt. While the sacred triad at Memphis was Ptah, Sekhment, and Nefertem, at Thebes it was Amun, Mut, and Khonsu, and at Abydos it was Osiris, Isis, and Horus. These deities in all their diversity, often depicted in familial constellations (two adults and one offspring), served systematically as anthropomorphic representations of the various dimensions of the life cycle. The dialectic conflict of two forces—*maat* (order) and *izfet* (chaos)—was at the center of the mind of ancient Egypt.

Such theological diversity is also evident in the mythological streams of the origin of the gods known as cosmologies. The most common cosmology, for example, speaks of the begetting of the original nine deities known as the ennead of Heliopolis. In this myth, the original creator Atum emerges into existence on a mound from the midst of watery chaos and spits Shu and Tefenet, his offspring, into existence. Shu and Tefenet engender Geb (earth) and Nut (sky), and Geb

and Nut in turn produce Osiris, Isis, Seth, and Nephthys. Another creation stream originating at Hermopolis begins with a procreative force of eight gods, the *ogdoad*, and these gods produced an egg that produced all living life. Finally, and probably most interesting, is the creation tradition at Memphite. In this tradition, and much like the creation in Genesis 1, the god Ptah creates life through an act of speech.

Daily religious life in ancient Egypt was infused with official, state, funerary, and personal worship. Official or normative religion was comprised of rites and festivals that were performed daily and also yearly. The official duty of the king was to care for the cult statue of the god, which was housed in the temple. Multiple hours throughout the day, the king, or more likely the high priest acting on behalf of the king, would draw the bolt of the door of the temple shrine and enter into the presence of the cult statue to feed, cloth, and care for the needs of the deity. In return, the god would not withdraw his face from the land of the pharaohs and would maintain and restore *maat* throughout the kingdom. In this sense, the king, whose office was divine, served society and cult as the intermediary between humanity and the divine. Similar to the metaphor of the good shepherd in the ancient Near East, the king's primary duty was to care for his subjects.

Most gods began their rise locally, but some were elevated to universal status and were worshipped throughout all the land of ancient Egypt. Such state gods include the Memphite Ptah, the Theban Amun-Re, and Re-Horakhty from Heliopolis. Most of the other gods were worshipped locally at town temples, while the fate of some over time was mere assimilation or even extinction. Since it is virtually impossible to construct broad categories of ancient deities without reducing their complexities, the most frequently mentioned Egyptian gods and goddesses are described with particular reference to the iconography of the deity, the personality and purpose, and the cult center of worship.

First known as a primordial deity, Amun becomes one of the deities of the Hermopolitan system whose epithet is "the hidden one." He is often depicted with a crown of feathers. In the New Kingdom (2000–1360 BCE), he combines

with Re to form Amun-Re, an amalgamated supreme deity who encompasses all creative aspects of the divine.

In the mythology of Osiris and Seth, Osiris falls victim to death by his murderous brother Seth. He is often portrayed in Egyptian art with the crook and flail and serves the gods as the ruler and judge of the underworld in the Book of the Dead. He is associated with kingship in the netherworld and is a universal god. His cult center was at Abydos. Isis, the wife of Osiris, serves as a guardian and magician and is a member of the Heliopolitan Ennead. She too was universally worshipped throughout Egypt.

Horus, the son of Osiris and Isis, is the god of kingship and represents the incarnated pharaoh. He appears in many local forms, and like his parents he is a member of the Heliopolitan Ennead. He represents order in contrast to Seth, his brother, and is frequently depicted as a hawk.

Seth, the murderer of Osiris in the myth of Osiris, represents antiorder, or chaos, and is a member of the Heliopolitan Ennead. Seth was mostly worshipped in the eastern delta and was considered lord of the foreign lands. While he is often depicted as a fantastic human-headed animalistic composite creature representing the forces of *izfet*, the visual representation of Seth is unidentifiable.

The god of writing and the moon, Thoth, is depicted with an ibis head. He was worshipped at Hermopolis and is often found in scenes from the Book of the Dead in which he is recording the weighing of the heart in the judgment scene of the deceased.

During the reign of the Eighteenth Dynasty pharaoh Amenhotep IV, more commonly known as Akhenaten, the divine sun disk, the Aten, was elevated as the god of worship. Akhenaten's elevation of one deity over the other gods was short-lived, but he introduced monotheism, or pseudo-monotheism, into the ancient world, drastically shocking ancient Egyptian theology with the sole worship of the Aten at the city of Amarna.

The main creator god of the Memphite creation tradition, Ptah, created the world through the spoken word.

—William Zimmerle

Bibliography

- Assmann, Jan. *The Mind of Ancient Egypt*. New York: Metropolitan Books, 2002.
- Baines, John. "Society, Morality and Religious Practice." In *Religion in Ancient Egypt: Gods, Myths and Personal Practice*, edited by Byron E. Shafer. Ithaca, NY: Cornell University Press, 1991.
- Baines, John, and Jaromir Malek. *Cultural Atlas of Ancient Egypt*. New York: Checkmark, 1980.
- Hornung, Erik. *Conceptions of God in Ancient Egypt: The One and the Many*. Translated by John Baines. Ithaca, NY: Cornell University Press, 1982.
- Silverman, David P. "Divinities and Deities in Ancient Egypt." In *Religion in Ancient Egypt: Gods, Myths and Personal Practice*, edited by Byron E. Shafer. Ithaca, NY: Cornell University Press, 1991.

Canaanite Gods and Goddesses

Archaeological excavations since 1929 at the ancient Canaanite city of Ugarit (Ras Shamra) along the northern Syrian coast have revealed thousands of cuneiform tablets written in Ugaritic, the oldest complete alphabetic script. In these tablets, scholars of the Ugaritic language have translated rituals and offering lists, economic and administrative texts, and mythological and religious literary cycles, all of which have aided such scholars in the reconstruction of the Canaanite pantheon from the second millennium BCE onward. The more important tablets are a series of short stories, or cycles, that depict the gods in mythological pursuits. These include the Baal Cycle, Aqhat, the Kirta epic, and stories about El, the chief deity of the pantheon. From the textual evidences, the gods and goddesses of Canaan are promethean yet anthropomorphic in their stature, and their personalities and problems represented in the cycles mirror the very human conflicts on earth. The mythological and religious archives from Ugarit depict a changing pantheon that was neither static nor fixed but dynamic and fluid.

The chief deity of the Northwest Semitic pantheon, El (literally the Semitic word for God), is the father of Baal. In the literary texts, his epithets include "the King" and "Father of the Gods." He dwells in a tent on a mountain at the base of which flows two fertile rivers. Although he is often depicted as a dignified benevolent



Bas relief depicting El, father of the gods, with a priestess. Serpentine stele, Late Bronze Age, from the acropolis at Ugarit (Ras Shamra), Syria. (Erich Lessing/Art Resource, NY)

and bearded patriarch, this image is contradicted by one Ugaritic text that depicts him as an impotent drunkard. Nonetheless, the remaining Ugaritic archives paint a literary picture of El as the trusted father of the pantheon who serves the other gods and goddesses.

Baal, popularly known from the Old Testament, is the younger and more dynamic deity of the Northwest Semitic pantheon, in contrast to the aging El. Baal's Semitic title means "Lord," and he is depicted in the Baal Cycle as a major contender for head pantheon, rapidly advancing as ruler of the gods. He is depicted iconographically on a stele from Ras Shamra with a club and lightning bolt and is portrayed similarly in the texts as a storm god wielding the natural elements of clouds, wind, and rain. His complexity as a deity ranges from his associations with fertility and agricultural cycles to his participation in the divine battles against the sea and death gods, Yamm and Mot. Archaeologists have found

a temple dedicated to Baal at the archaeological site of Ugarit, a fact that attests to his worship and reverence by the Canaanites. He is frequently depicted as a false and illicit sexual deity in the prophetic books of the Old Testament (I Kings 18).

Dagan, probably a grain god, is found throughout the Northwest Semitic pantheon including the cities of Ebla, Emar, Mari, and Ugarit. Although there are no myths found to date to chronicle his rise and fall in the pantheon, he is attested in offering lists and administrative archives from Ebla as early as the Late Bronze Age. He is mentioned frequently in the book of Samuel (especially 1 Sam. 5–6) as the object of worship of the Philistines, who have adopted him from their Canaanite predecessors.

Although the largely patriarchal world of the Canaanites dominates in the mythological texts, the role of goddesses such as Asherah, the consort of El, as the queen of the gods cannot be overlooked. Like Baal, she is often associated with fertility. She is often identified with Astarte, the Phoenician goddess of fertility and reproduction, and serves the gods as queen mother.

Anat, a warrior goddess with a ferocious temper, is the adolescent sister and consort of Baal. In the myths, Anat frequently crosses gender and social barriers in her endeavors to save Baal from Mot (death).

Kothar-wa-Hasis is a minor deity who serves as the great craftsman of the gods. He lives far off in Crete or Egypt and serves as the inspiration for artisans and craftsmanship. He serves Baal by supplying him with two weapons to defeat Yamm (sea).

—William Zimmerle

Bibliography

- Coogan, Michael D. *Stories from Ancient Canaan*. Louisville, KY: Westminster, 1978.
- Parker, Simon. *Ugaritic Narrative Poetry*. Atlanta: Scholars Press, 1997.
- Smith, Mark S. *Untold Stories: The Bible and Ugaritic Studies in the Twentieth Century*. Peabody, MA: Hendrickson, 2001.
- Walton, John H. *Ancient Near Eastern Thought and the Old Testament: Introducing the Conceptual World of the Hebrew Bible*. Grand Rapids, MI: Baker, 2006.

Minoan Deities

The earliest known possible representation of a goddess in the Minoan repertoire is the so-called Goddess of Myrtos from Room 92 of the Early Minoan II settlement of Myrtos Fournou Koriphi. The presence of this image, the presence of a bench structure, and the proximity of storerooms suggest that Room 92 was a shrine. The figurine is a hollow, bell-shaped image with a long, solid neck; tiny head; molded breasts; and spindly arms holding a water jug. Paint decorates the body with what appears to be a skirt, a necklace, and a pubic triangle. Although this piece looks like a kindergartener's arts and crafts project, its identification as a deity is based on the thin neck and other nonrealistic attributes, in contrast to Early Minoan images of humans, which were basically realistic. The weird appearance puts the female outside human realms, thus, divine. Furthermore, the fragile yet unbroken condition of the figurine indicates that it could not have been useful for any "practical" functions.

Another possible goddess image is a figurine from a funerary complex at Koumasa dating between the Early Minoan III and Middle Minoan I periods. This is a stylized image with a simplistic head and a trapezoidal body, molded breasts, and painted clothing. Of special interest is the roll of clay around the figurine's shoulders, which may represent a snake. As snake goddesses were common in the later Minoan repertoire, this may be the earliest portrayal of one. The fact that an early version of a snake tube was also found at the site seems to confirm this identity, as snake goddesses and tubes usually came in pairs.

Four more possible goddess images come from the Middle Minoan. Two of these come from Phaistos—an offering table and a fruit bowl, each of which feature two females with somewhat bird-like beaks dancing on either side of some manner of supernatural female creature. The other two Middle Minoan images are the faience "snake goddesses" from the Temple Repositories at Knossos. Further examples of Minoan goddess iconography are present in glyptic art, scenes that appear on jewelry such as signet rings. It would appear that the Minoan goddesses

➤ MINOAN SACRED OBJECTS

The Minoans had many objects that they understood to be divine; their presence on an object or in a picture indicated a religious context or setting. Three of the most important of these were labrydes, horns of consecration, and baetyls. A labrys (sing.) is a double-headed axe. How it came to be a sacred symbol is still in debate, although some suggest that it was because of its use as a sacrificial weapon. This image appears in several media and sizes in a wide variety of religious contexts on Crete. The Arkalokhori cave sanctuary produced dozens of fine labrydes in gold, silver, and copper/bronze sheet metal. Images of labrydes appear on art ranging from gold signets to pottery.

Real (i.e., functional) labrydes have come to light in caves, shrines, villas, and palaces. The palace of Knossos, with its elaborate and confusing architecture, was specifically known as the Palace of the Double Axe, leading to the modern word “labyrinth.” Artistic representations offer only a few clues as to the use of these objects (assuming they had a specific use). There are no portrayals of anyone killing anything with a double axe. There are, however, images of either goddesses or priestesses holding aloft labrydes in either hand or of labrydes standing upright during rituals. The fact that labrydes were erected in Minoan shrines is supported by the presence of stone bases with holes for axe shafts found in a number of sacred sites as well as by depictions of labrydes on Knossian frescoes.

Horns of consecration are U-shaped images that began to appear in Minoan iconography in the

Middle Minoan period. The U shape is understood by scholars to be a stylized rendering of a bull’s head with horns, thus the name “horns of consecration.” Another possible origin is that they represent a valley between two mountains, an image from Egypt. Although horns of consecration started out as smallish images on vases and altars, by the Late Bronze Age they existed in three types: monumental, medium decorative, and miniature. The only monumental examples come from the palace of Knossos and its related peak sanctuary at Mt. Jouktas. Medium horns of consecration (4 inches to 3.2 feet [10 centimeters to 1 meter] high) come from palaces and mansions in central and eastern Crete. In general, no more than two examples come from any given context; usually only one is found. Miniature examples appear in vase paintings and in glyptic representations. Even in the glyptic art, their presence tended to be associated with architecture, suggesting that some of the miniature versions depict the monumental ones.

A baetyl is a nonrepresentational depiction of a deity, usually a stone. The word comes from the Semitic languages and means “house of God” (*beth* = house, *el* = god). Several pieces of Minoan glyptic art suggest that such images played a role in Minoan worship. In some instances, worshippers, often nude, appear to be embracing baetyls, while birds or butterflies (perhaps manifestations of the deity) float nearby. A possible baetyl is located in the west court of the palace at Mallia, where the baetyl may have served in rites of epiphany (appearance of the deity to humans).

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were associated with flowers, trees, snakes, monkeys, and even birds—in short, they were nature goddesses. But, we must remember that for the Minoans, there was not really a life outside of the natural (unlike today, when people go camping or hiking to “get back to nature”). For the Minoans, to be a goddess of nature implied being a goddess of life, health, sustenance, healing, technology, and the economy.

Until recently, it has been assumed that there were no gods in Minoan religion. However, it has become apparent that there were gods in the Mi-

noan pantheon, although there appear to have been fewer gods than goddesses; there are certainly fewer artistic representations of gods. But these representations do exist, and they tell us something about the male elements of Minoan religion.

One piece of Minoan god iconography is the master impression from Khania. Here is shown a male, nude save for a tight belt, a codpiece, sandals, a necklace, and an armband. He poses in proud fashion holding a staff on what almost resembles a tripartite shrine, except one would

really have to call it a multipartite shrine, since there are so many levels and architectural elements. Many of these elements are capped with horns of consecration, suggesting a religious orientation. Below the architecture is what appears to be a beach, and at the bottom of the seal there is water. In short, the god stands upon a city that is located on a beachfront. The male's size in relation to the city identifies him as a deity, as does the fact that he stands between two horns of consecration. All this shows his dominion over the city with its adjacent beach. Judging from this, it appears that we have here a city god, owner and protector of the urbs (city).

Perhaps the most important piece of Minoan god iconography is the Palaikastro Kouros, a chryselephantine (gold and ivory) statuette from Palaikastro. The statuette is one-half meter tall and stands in a standard worship pose for Minoan males. Rather than a worshipper, though, this image appears to be a god. This is evident first in the materials used in its construction. Both the gold and the ivory had to be imported, probably from Egypt. Such precious materials were probably reserved for divine images; male votives were made of clay. The elaborate workmanship that went into making the Kouros also speaks for its importance, thus its divine nature. In contrast to the rather rude votive images from Crete, there is exceptional anatomical detail in the Palaikastro Kouros, even down to the veins in its arms. It appears that the Palaikastro Kouros is a cult image of a Minoan god.

Some data about Minoan religion can be derived from the Linear B tablets: specifically, the deities' names and where they were worshipped. Linear B tablets come from Mycenae, Thebes, and Pylos on the mainland, and from Knossos and Khania on Crete. A handful of divine names appear on tablets from both the mainland and the island: Zeus, Poseidon, Ares, Dionysos, Dri-mios, Diwiya, Hermes, and Marineus (thought to be some manner of wool god). Otherwise, the deities mentioned were specific to either the Minoans or the Mycenaeans, and it is here where we derive some information about Minoan religion from the tablets. Names specific to the Knossos archive are Atana Potnija, Potnija Dapurito, Pade, Qerasija, Pipituna, Eluthia, Erinus, En-

ualios, and Paiawon. In spite of the odd spellings, many of these names are familiar to the student of Greek mythology. Eluthia is probably Eil-eithia, goddess of childbirth. According to the Linear B tablets, this goddess had a cave sanctuary near Amnissos, where she received, among other things, dedications of honey. Erinus may refer to the Erinyes, also known as the Furies, those dread goddesses who punished crimes against blood kin. Enualios is a later epithet for Ares, just as Paiawon becomes an epithet for Apollo in his healing aspect; both may have been Minoan deities absorbed/replaced by Greek gods. Potnija Dapurito is the Mistress of the Labyrinth, probably a goddess associated especially with Knossos. Atana Potnija is almost certainly Athena, the Mistress of Athens. Finding this goddess in Knossos but not on the mainland is particularly surprising, suggesting that there was probably more overlap between the deities of the island and the mainland than the tablets reveal.

—Stephanie Lynn Budin

Bibliography

- D'Agata, A. L. "Late Minoan Crete and Horns of Consecration: A Symbol in Action." In *Aegean Bronze Age Iconography: Shaping a Methodology*, edited by R. Laffineur and J. Crowley. Aegaeum 12. Liège, Belgium: Université de Liège, 1992.
- Gesell, G. "The Minoan Palace and Public Cult." In *The Function of the Minoan Palaces*, edited by R. Hägg and N. Marinatos. Stockholm: Skrifter Utgivna av Svenska Institutet, 1984.
- Hägg, R. "Religious Syncretism at Knossos?" In *La Crète Mycénienne: Actes de la Table Ronde Internationale organisée par l'École française d'Athènes*, edited by J. Driessen and A. Farnoux. Athens: École française d'Athènes, 1997.
- Lebessi, A., and P. Muhly. "Aspects of Minoan Cult: Sacred Enclosures: The Evidence from the Symi Sanctuary (Crete)." *Archäologischer Anzeiger* 105 (1990), 315–336.
- Nilsson, M. P. *The Minoan-Mycenaean Religion and Its Survival in Greek Religion*. 2nd rev. ed. Lund, Sweden: C. W. K. Gleerup, 1950.
- Nowicki, K. "Minoan Peak Sanctuaries: Reassessing Their Origins." In *Potnia: Deities and Religion in the Aegean Bronze Age*, edited by R. Laffineur and R. Hägg. Liège, Belgium: Université de Liège, 2001.

- Peatfield, A. "Rural Ritual in Bronze Age Crete: The Peak Sanctuary at Atsipodhes." *Cambridge Archaeological Journal* 2, no. 1 (1992), 59–87.
- Peatfield, A. "After the 'Big Bang'—What? or Minoan Symbols and Shrines beyond Palatial Collapse." In *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*, edited by S. E. Alcock and R. Osborne. Oxford: Clarendon Press, 1996.
- Peatfield, A. 2001. "Divinity and Performance on Minoan Peak Sanctuaries." In *Potnia: Deities and Religion in the Aegean Bronze Age*, edited by R. Laffineur and R. Hägg. Liège, Belgium: Université de Liège, 2001.

Mycenaean Deities

The clearest evidence about the Mycenaean pantheon lies in the Linear B texts. Only a handful of the deity names in these texts appear both on the mainland and on Crete. We might consider those deities mentioned only on Crete as being Minoan. For those deities mentioned on the mainland, we have at least two possibilities. On the one hand, they may be Greek, meaning that they may derive from the Indo-European civilization that gave rise to the Greek language. Some divine names do have Indo-European etymologies and cognates. On the other hand, they may be pre-Greek, belonging to the indigenous population of Greece before the Greek speakers arrived. These deities may then have been adopted into the Greek pantheon. Some gods do have a blatantly Indo-European heritage, such as Zeus and Poseidon. Others are more difficult to determine.

The deities attested to among the Mycenaeans are Zeus, Poseidon, Ares, Dione, Marineus, Hera, Artemis, Hermes, Dionysos, Posideia, Trisheros, Manasa, Pereswa, Dopota, Dipsioi, Drimios, Iphe-medeia, the Mother of Animals, the Queens, the King, the Lady of Upojō, the Lady of Asiwia, the Lady of Iqeja, the Lady of Newopeo, and the Lady of Grain as well as simply Lady (Potnia). Much can be learned from these names not only about Mycenaean religion but also about continuity of Greek religion into the historical periods. Many deities, such as Hera and Hermes, remained in power throughout Greek history, showing that the Greek Dark Age was hardly the utter devastation and re-creation of Greece that scholars

originally believed it was. Other names in the corpus either ceased to exist after the Bronze Age or morphed into nondivine titles, such as Dipsioi, "the Thirsty," possibly referring to the dead.

Most Mycenaean iconography takes after the Minoan. Nevertheless, some elements of Mycenaean iconography are distinct. Two especially prominent Mycenaean icons are the tau, phi, and psi figurines and the Warrior Goddess. The tau, phi, and psi figurines are named after the Greek letters that they most resemble. Tau figurines (τ) have simple straight bodies with arms extended to the sides; psi (ψ) have similar bodies to the tau but with arms curving out and up on either side of the head. Phi (φ) figurines are discoid in the torso. All frequently have small applied breasts and are clearly female. They began to appear by the Late Helladic IIB period and derived from a simplification of Minoan iconography. This is clearest in the phi figurines, which are a simplified rendering of a Minoan stance of prayer and possibly ecstasy, where the worshipper holds her arms around the body. The psi figurines were also derived from Minoan iconography, especially the Minoan Goddess with Up-raised Arms. All three varieties of figurines were quite crude. The faces were extremely simplistic, and decoration consisted of painted vertical stripes. It is only because they showed up in shrines as well as in graves and households that scholars believe that these common images represented goddesses.

Goddesses were not totally devoid of weaponry in Minoan iconography. Some divine females were shown wielding swords in glyptic representations. But goddesses with prominent weapons and armor become more blatant in the mainland imagery. In one instance, a large-scale goddess appears on a shrine fresco at Mycenae. Only her feet are preserved, but the white paint of the flesh indicates that she was female. Extending down to her toes is the point of a sword with a fuller; its proximity to her body indicates that the goddess is holding the grip. Such imagery is also reflected on a plaque from Mycenae that, like the fresco, dates to the Late Helladic IIB period. This painted plaque, partially preserved, shows a white-skinned being in the center. The fact that she is a goddess is emphasized

➤ WHAT'S IN A NAME? PROBLEMS IN INTERPRETING GREEK DIVINE NAMES

Much of our knowledge about early Greek deities comes from the study of names, which is often a frustrating task for historians. The most vexing of these is the name/title Potnia. By Homer's day, the term meant "revered female," referring either to a mortal or to a goddess. Sometimes the title was specific, as with the Potnia Theron (Mistress of Animals), used in reference to Artemis. The question of who the Bronze Age Potnia was/were, however, is problematic.

The name/title Potnia appears 12 times at Pylos, 5 or 6 times at Knossos, 3 times at Mycenae, and once at Thebes. Thus, it is common to both Greece and Crete. In some instances, the word appears alone; in others, it is modified by a concept or place-name. At Knossos we have the a-ta-na-po-ti-ni-ja, which translates to something like Lady of Athens, and the da-pu-ri-to-jo-po-ti-ni-ja, or Lady of the Labyrinth. At Pylos we have a po-ti-ni-ja-a-si-wi-ja, Lady of Asia, and po-ti-ni-ja-i-qe-ja, Lady of Horses, and at Mycenae there is the si-to-po-ti-ni-ja, or Grain Lady.

The question is whether Potnia is one goddess or many. Is Potnia similar to the Christian "Our Lady," in the way that Our Lady of Lourdes is also Our Lady of Fatima? Or is Potnia a title applicable to several separate goddesses at once? In both linguistics and occurrence, Potnia is related to the god Poseidon. The "Pot" portion of her title may derive from the Indo-European word for "possession" or "ownership," just as Poseidon means "Lord of the Land." Her strongest cult is attested

to at Pylos, where Poseidon was clearly the chief god, and she even has the title of i-qe-ja, relating her to horses, just like Poseidon. One could argue that Potnia was the consort of Poseidon. Furthermore, we know from later Greek mythology that Poseidon once mated with Demeter, both of them in the form of horses. If we add this to our study and combine it with the fact that at Mycenae there was mentioned a Grain Lady (possibly an epithet for Demeter), we might say that Potnia was one universally acknowledged Aegean goddess, understood to be a grain/horse deity and a consort of Poseidon and later manifesting as Demeter.

But then how do we understand titles such as a-ta-na-po-ti-ni-ja, "Lady of Athens," which is certainly a title of an Athena-like goddess? How could an apparently Indo-European word like "Potnia" be identified with a blatantly Minoan term like "labyrinth"? Why does the name/title "Potnia" appear more than once on some Linear B tablets? Should we understand that Potnia, as one goddess, received different dedications in her different guises or that the different Potnias referred to distinct goddesses? In the end, it seems probable that Potnia was a title given to various goddesses in the Aegean pantheons. In some instances, such as at Pylos, one goddess was so prominent that she could be referred to merely by the title "Lady." At other times, adjectives were used to differentiate among goddesses.

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by the small altar directly before her. She holds before her body a giant figure-eight shield and carries what appears to be a sword in her right hand. Two women stand on either side of this goddess, presumably helping her to arm herself. Both of these frescoes argue in favor of a prominent Warrior Goddess revered in Mycenae, possibly some manner of Athena forerunner.

—Stephanie Lynn Budin

Bibliography

Cosmopoulos, M. "Mycenaean Religion at Eleusis: The Architecture and Stratigraphy of Megaron B." In *Greek Mysteries: The Archaeology and Ritual*

of Ancient Greek Secret Cults, edited by M. Cosmopoulos. London: Routledge, 2003.

Killen, J. T. "Religion at Pylos: The Evidence of the Fn Tablets." In *Potnia: Deities and Religion in the Aegean Bronze Age*, edited by R. Laffineur and R. Hägg. Liège, Belgium: Université de Liège, 2001.

Nilsson, M. P. *The Minoan-Mycenaean Religion and Its Survival in Greek Religion*. 2nd rev. ed. Lund, Sweden: C. W. K. Gleerup, 1950.

Price, S. *Religions of the Ancient Greeks*. Cambridge: Cambridge University Press, 1999.

Rehak, P. "New Observations on the Mycenaean 'Warrior Goddess.'" *Archäologischer Anzeiger* 99 (1984): 535–545.

- Taylor, W. *The Mycenaeans*. Rev. ed. London: Thames, 1990.
- Wright, J. C. "The Spatial Configuration of Belief: The Archaeology of Mycenaean Religion." In *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*, edited by S. E. Alcock and R. Osborne. Oxford, UK: Clarendon, 1996.

Mesopotamian Gods

In the present era it is nearly impossible to construct a comprehensive history of ancient Mesopotamian religion because of the cultural and intellectual barriers that divide the ancient-modern mind; however, Assyriologists and other specialists of Near Eastern culture have constructed an almost complete picture of the ancient world of the Mesopotamian gods from archaeological and textual sources. These sources for the present state of our knowledge of Mesopotamian religion include material culture, such as stele, cylinder seals, palatial and temple reliefs, ceramics and other public monuments, and written sources, such as cuneiform tablets written in various genres of Sumerian and Akkadian from the three millennia. Of the more significant literary genres important for the study of Mesopotamian gods and goddesses are the hymns and prayers.

In Mesopotamia, the representation of the gods mirrored the very political office of kingship on earth. Gods were often depicted gathering together at heavenly banquets while debating and working out the problems of Mesopotamian government. Like the earthly kings who worshipped them, the gods dwelt in individual houses, or temples, of their own city-states. In this respect, religion and politics were inseparable in ancient Mesopotamia, and kings and scribes used religion and the gods to advance their political positions. When Hammurabi took the city Babylon as his seat of power, for example, he likewise elevated the status of Marduk, a lesser-known deity, above the other gods. And when the Assyrians in the first millennium made Assur their political capital, the god Assur was exalted as the national god.

Although there is no word in the Mesopotamian cuneiform languages for religion, the gods of ancient Mesopotamia were designated by the

cuneiform signs *dingir* in Sumerian and *ilu* in Akkadian. Both words are translated as "god" or "divine being." In pictographic Sumerian the sign is an astral star, probably linking divinity with the highest level of the heavens. For the ancient Mesopotamians, then, the "sacred" was the collection of many personalities, or divine beings. Known as polytheism, Mesopotamian religion organized its divinities into a pantheon of at least 1,000 to 2,000 deities. Such deities were indeed free from human toil but were also depicted in very anthropomorphized ways. Like humanity, gods ate, drank, often intervened in human affairs, and sometimes behaved badly. In this entry, the dominant Mesopotamian gods and goddesses are surveyed with the focus on their character, fate, and individual personalities.

In Mesopotamian literature, An (or Anu) is the patriarch and founder of the earliest pantheon. Begotten of Anshar and Kishar, he is the source of vegetation with the responsibility for granting earthly kingship. Although archaeologists have found a temple devoted to him at Uruk, it was indeed the case that by the third millennium he was largely removed from the cultic sphere and played little role in the daily life of the Mesopotamian.

By the third millennium, Enlil succeeds his father An as head of the pantheon and is bestowed with sovereign authority. Enlil's exercise of power is acknowledged in the *Epic of Gilgamesh*, the Tale of Anzu, and the *Epic of Atrabasis*. Enlil decrees kingship and controls the position of deities within the pantheon. He wields the weather and often is perceived as the destructive force of the wind. Archaeological evidence supports the textual attestations that his earthly abode was in Nippur, the chief religious city of Mesopotamia in the third millennium.

Although An and Enlil were conceived of as the heads of the pantheon in Sumer, other deities play prominent roles as well. The god of wisdom and magical arts (divination and omens), Ea (Sumerian Enki), is exceedingly cunning and crafty, serving as the intelligent advisor to Enlil. Along with An and Enlil, Ea completes the triad of principal deities in Mesopotamia. Attested most often in hymns, Shamash (Sumerian Utu), the sun god, is the god of omens and law. The offspring of Nanna, the moon god in Sumerian,

and brother of Nana, as well as the son of An or Enlil in Akkadian, Shamash serves to illuminate humanity and testify to all things, including truth and justice. He is depicted visually in the cylinder seals as holding an arc-shaped blade saw with jagged teeth.

Ishtar (Sumerian Inanna), the patron goddess of Uruk and one of the most important goddesses of the pantheon, is viewed as the goddess of love, and her lover is described as Dumuzi. Her marriage is reenacted in the Sacred Marriage rite, a ritual performed between the human king and the goddess. Although numerous traditions regarding her origins exist, the most widely circulated tradition cites her origins as the daughter of An. Other textual traditions make her the daughter of the moon god Nanna (Sin) and sister of the sun god (Utu), while still others cite her as the daughter of Enlil. In the myths Inana and Mount Epih, *Epic of Gilgamesh*, Inana and Bilulu, Inana and Shukaletuda, and Gilgamesh, Enkidu and the Netherworld and Inanna's Descent to the Underworld as well as various hymns praising her, Inana/Ishtar is depicted in three major ways: first, often as a goddess of love with a sexual appetite, possibly connected with prostitution; second, as a powerful warrior-goddess with strong impulses toward violence; and third, as the planet Venus, the evening and morning star. In cylinder seals she is represented as a winged and armed warrior-goddess. Her symbol is a star, and she is sometimes depicted standing on a lion. In Neo-Assyrian visual representations, she is usually nude, depicted with the horns of divinity, and is often called Ishtar of Arbail in Assyrian tablets as a symbol of her warlike nature.

Numerous other mythological stories provide detail about the character and personality of other Mesopotamian deities. In Nergal and Ereshkigal, Ereshikigal, "Queen of the Great Below," reigns as queen of the netherworld. She marries Nergal, the son of Enlil and Ninlil, and dwells in the palace at Ganzir as guardian of the opening to the netherworld. Ninurta, the warrior-god and hero whose initial function was associated with fertility, is the hero of the Tale of Anzu. He is the son of Enlil, and his cult dwelt at Nippur. Neo-Assyrian kings frequently make mention of Ninurta in their annals.

The object of multiple hymns and praises, Marduk was a minor deity elevated by Hammurabi of Babylon in the early second millennium. Marduk's evolution to the head of the pantheon was complete by the twelfth century BCE under the Kassites, when *Enuma Elish*, the epic of creation, was recorded as a mythological account of Marduk's rise in political rule. Like Ninurta, he is a hero-god with cosmic proportions. During the yearly New Year's ceremony, *Enuma Elish* was performed by the procession of a statue of Marduk through the city of Babylon. In Assyria, many of Marduk's traits are ascribed to the god Assur. Supreme god of the Neo-Assyrian empire and sole granter of kingship over Assyria, Assur's evolution and history is vague. In the historical texts, he is exalted to the head of the pantheon throughout Mesopotamia and travels into battle with the Assyrian armies.

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Bibliography

- Bertman, Stephen. *Handbook to Life in Ancient Mesopotamia*. New York: Facts on File, 2003.
- Black, Jeremy, and A. Green. *Gods, Demons and Symbols of Ancient Mesopotamia: An Illustrated Dictionary*. Austin: University of Texas Press, 1995.
- Bottero, Jean. *Mesopotamia: Writing, Reason and the Gods*. Chicago: University of Chicago Press, 1992.
- McIntosh, Jane. *The Mesopotamians: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Oppenheim, Leo. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Chicago: University of Chicago Press, 1977.
- Walton, John H. *Ancient Near Eastern Thought and the Old Testament: Introducing the Conceptual World of the Hebrew Bible*. Grand Rapids, MI: Baker, 2006.

Harappan Deities

The Harappan or the Indus Valley civilization is the earliest archaeologically attestable urban civilization in South Asia, which flourished from circa 2600–1900 BCE. Like other great river civilizations of the ancient world (Egypt, Mesopotamia, China), the Indus civilization, whose size is estimated at approximately 386,102 square miles (1 million square kilometers), was highly

advanced. The complexity of this ethnically and culturally diverse civilization is suggested by archaeological evidence that indicates a complex economy, technological achievements (aqueducts, standard weights), markers of urbanization (baked bricks of standard shape, paved streets, urban planning), and cultural products (including a writing system and art).

As the oldest civilization in the subcontinent, scholars have looked to it as the source of culture and religion in South Asia, particularly as the cradle of Hinduism. However, the nature of the so-called religion of the Indus people, which has received the attention of archaeologists, scholars of religion, historians, and other scholars, remains a subject of much interest and debate. One reason for the ongoing debate is the inaccessibility of the written records that have been excavated from the various Harappan sites. Scholars remain unable to identify the language or translate the so-called Indus script, in which the language of the Indus was represented. Without recourse to textual evidence, scholars have depended on material such as seals, sculptures, and architectural structures to conjecture about the nature of the beliefs, practices, and institutions concerned with the world of deities of the Indus people.

The work of Sir John Marshall (1876–1958) and his analysis of Indus religion continues to shape our understanding of a cult of a mother goddess and a great male god occupying a central role in Harappan religion. According to Marshall, the worship of a goddess or goddesses seems to have also occupied an important place in the religious life of Indus people. He reached this conclusion based on the large number of human terra-cotta figurines, both male and female as well as some of indeterminate gender, that have been discovered in Harappan sites. Many of these female figurines, found for the most part in Harappa and Mohenjo-daro, usually wear short skirts, jewelry, necklaces (sometimes neck rings), and various types of headdresses. They are regularly depicted with exaggerated breasts and thighs, which suggested an association of female procreative activity with a concern for fertility. Marshall connected these figurines with a Great Mother Goddess cult found in Baluchistan, Northwest Territory, and other parts of West Asia.

However, several scholars have argued that the evidence for a mother goddess cult as being central to a monolithic Harappan religion is far from irrefutable. It is not certain whether these figurines in fact represented goddess images or functioned as cultic artifacts. Marshall himself classified these terra-cotta figurines into three general types: toys, objects for magical purposes, and mother goddesses.

Another key piece of evidence for our understanding of the religion of Indus is the now famous Seal 420 from Harappa, perhaps the most speculated upon artifact from the Indus civilization. The seal was discovered by Ernest J. H. MacKay (1888–1943) and identified by Marshall as Proto-Shiva. The image presents a male figure seated on a platform with legs bent double underneath, heels together, arms outstretched and hands on knees, and thumbs out in the style of a practitioner of yoga. Marshall further noted that on close examination an erect phallus could be detected but also suggested that the so-called phallus could also represent the end of the waistband that the figure seems to have worn around the waist. The figure depicted is either three-faced or is wearing a three-faced mask and has horns of a water buffalo emerging out of a central headpiece. The seated figure is surrounded by four animals; clockwise from the upper right hand corner of the seal are a rhinoceros, a water buffalo, a tiger, and an elephant. In addition, two other animal figures, identified as antelopes, can be seen underneath the platform.

Marshall's identification of the figure in Seal 420 implicitly draws on parallels from the religious practices of the majority of the population of India, Hinduism, and in particular with the textual history and iconographic elements of the classical Hindu deity, Shiva. The horns of the headpiece are reminiscent in form to one of Shiva's characteristic emblems, the *trishula* (trident). In classical Hindu mythology texts, the Puranas, Shiva is referred to as Mahadeva, "the great god," who is depicted as having three faces with different expressions, as can be seen from the famous sculptures of Shiva at Elephanta Island in Bombay Harbor. The appearance of animals surrounding the seated figure draws a connection with the god Rudra, a minor deity in the Vedas, who has several epithets including

pashupati (“lord of animals”). In the Puranas, Shiva is regularly called *mahayogi* (“great yogi”) and is intimately associated with both eroticism and asceticism. The erect phallus, which may also be visible in other seals illustrating a similar horned-figure seated in a yogic pose, is symbolically connected to the *linga*, the aniconic representation of Shiva in classical Hinduism, which has been analyzed as representing Shiva’s ascetic and erotic/fertility dimensions.

Although Marshall also found further support for his views of Indus religion in the numerous conical objects and ring stones, which he identified as *linga*-s and *yoni*-s, his proto-Shiva thesis has been challenged by several scholars, who posit a Dravidian affiliation for the Indus Valley. Hiltebeitel has suggested that the horned figure represents Mahisha, the buffalo-demon well known from Puranic mythology, who is defeated by the goddess Durga. Parpola has suggested that the seated figure is a seated bull, very similar to those found in early Elamite seals.

Another artifact that scholars have debated as shedding more light on Harappan deities is Mackay’s Seal 13 from Chanhudaro. This seal depicts a short horned bull, identified as *Bos gaurus*, standing over a less clearly identifiable figure, which Allchin identifies as a female figure. The seal shows the bull about to take a female goddess. This scenario is indicated by the bull, with an erect penis, standing on its hind legs, slightly elevated above the female figure, and construes the female’s genitals as being open and exposed, which suggests to him that the female figure is a willing participant in this event. He interprets the scene as a representation of the Father Heaven-Mother Earth motif found in the Vedas.

The interpretations of the archaeological material that has been debated by scholars regarding the gods of the Harappans provided an entry point to access a complex system of beliefs, which remains open to further analysis and debate. Like broader questions of the nature of the religion of the Indus, it remains an open question whether the mother goddess, the great male deity, or even the buffalo cult were Pan-Indus deities or merely reflect local regional cults, and this debate will be shaped by new dis-

coveries in the ongoing excavations of the Indus civilization.

—Carlos Lopez

Bibliography

- Allchin, F. R. “The Interpretation of a Seal from Chanhudaro and Its Significance for the Religion of the Indus Valley.” In *South Asian Archaeology 1983*, edited by J. Schotsmans and M. Taddei. Istituto Universitario Orientale, Dipartimento di Studi Asiatici, Series Mionr 23, Naples, 1985.
- Doniger, Wendy O’Flaherty. *Shiva, the Erotic-Ascetic*. Oxford: Oxford University Press, 1973.
- Hiltebeitel, Alf. “The Indus Valley ‘Proto-Shiva’: Re-examination through Reflection on the Goddess, the Buffalo, and the Symbolism of the *Vahanas*.” *Anthropos* 75(5–6) (1978): 171–199.
- Marshall, John Hubert, Sir. *Mohenjo-daro and the Indus Civilization*. London: Arthur Probsthain, 1931.
- Parpola, Asko. *Deciphering the Indus Script*. Cambridge: Cambridge University Press, 1994.
- Possehl, Gregory L. *The Indus Civilization: A Contemporary Perspective*. Walnut Creek, CA: Alta Mira, 2002.
- Srinivasan, Doris. “Unhinging Shiva from the Indus Civilization.” *Journal of the Royal Asiatic Society of Great Britain and Ireland* 1 (1984): 77–89.

Vedic Deities

Several of the deities in the contemporary Hindu pantheon were known and venerated as far back as the earliest Sanskrit-language text, the Rig-Veda (ca. 1800 BCE). However, it is clear that wholesale shifts in the makeup of the pantheon have occurred since then and that those deities who still remain have changed significantly. Western scholarship has employed a number of different methods for categorizing the Vedic deities: according to their cosmic residence (celestial, atmospheric, or terrestrial), according to their relationship to the four classes of human beings (*brahmana*, *kshatriya*, *vaishya*, or *shudra*), and according to their rank, treating each deity as the highest member of the entire pantheon, each in his turn. What follows is a brief catalogue of the deities who inhabit the Vedic world. They will be ordered here according to the traditional method employed in the books of

the Rig-Veda: Agni comes first, with subsequent deities appearing in order of their frequency of appearance.

The Rig-Veda begins with a hymn to Agni, the god of fire and thus of Vedic ritual. In the opening verse, we are met with a description of one of the primary conceptions of Agni throughout the Vedic canon and ritual system: he is praised as, above all, the god who is the priest of the sacrifice. Agni's primary responsibility, in addition to being present in the three fires of the ritual setting, is to convey the offerings of clarified butter and other vegetal and animal offerings to the gods, even though Agni is also, in other hymns, requested to bring the invited gods to the sacrificial space that has been prepared for them. Thus, unlike many of the other Vedic deities who are associated with warriors, with nature or with morality, Agni is intimately related only to the rites of the Vedic fire ritual.

Appearing more often than any of the other deities is Indra, the god of warriors and of the rains. Indra's rise to prominence came at the expense of the older Vedic deity, Varuna, the Vedic equivalent of the Greco-Roman deity Uranus. Indra is frequently invoked by warriors who are on their way to battle, and sometimes opposing generals are shown invoking him simultaneously. But veneration of Indra in the Rig-Veda does not go uncontested; we see in one Vedic hymn a defense of Indra against those who say "He does not exist," with the refutation "He, my people, is Indra." One of the most famous stories in the Rig-Veda is that of Indra slaying the serpent Vritra. This story, while providing a prototype for subsequent and post-Vedic tales of the wars between the gods and the demons, establishes Indra's second function as the god of the rains. His defeat of Vritra let loose the summer monsoon rains that remain necessary to this day for the agricultural sustenance of South Asia. In some regions of contemporary South Asia, Indra continues to be annually celebrated for the martial and agricultural benefits he provides.

Soma, like Agni, is both a ritual substance and the deity of that substance. While the identity of this deity remained essentially the same throughout Vedic history, the identity of the substance was quickly forgotten. The substance

➤ THE SEMIDIVINE KING

Although the king was a major figure in the Vedic world and although his body was said to be constructed of and by the gods, he was never precisely deified. It was the Vedic priests who were said to be the gods' representatives on earth, and the king was their primary benefactor. Thus, there was always a degree of tension between the king and the priests, who belonged to different caste groups. It was the responsibility of the king to patronize the priests with gifts, and the priests in turn provided the authority that the king required to rule, often through the production of lineages that stretched back to the gods. This dichotomy between the king and the priests is best seen in the king's inauguration ceremony whereby the priests announce the newly inaugurated king to the people but immediately declare that their own king is King Soma, the deified form of the intoxicating beverage drunk during Vedic rituals. While the king is the one who, through his excessive use of power, "eats" his people and the one whose office is said to be the equivalent of 10,000 slaughterhouses, he is actually closer in nature to the common people than to the priests.

—Michael Baltutis

Soma, a nonleafy stalk that can be pressed for its juice, was originally some type of intoxicant (some have posited that it was a hallucinogenic, others a stimulant) that was pressed out and drunk during Soma rituals; it was also the substance that induced the authors of the Rig-Veda to see and then transmit the text.

These three deities—Agni, Indra, and Soma—are easily the three most important deities of the Vedic period, and they reflect the general content of much of the Vedic canon: sacrifice, war, and material success. While the other deities of the pantheon do not receive the same amount of attention as these three, the hymns in which they occur communicate to their audience important facets of Vedic culture and society. Vishnu, one of the most prominent deities in the classical Hindu pantheon, appears relatively briefly in the Rig-Veda but is credited with the creation of the universe. With his three great

strides, Vishnu marked out the three divisions of the world: earth, middle atmosphere, and sky. In later Vedic texts, Vishnu is said to reside in the thunderbolt (*vajra*) that Indra uses to slay the serpent Vritra. And throughout the ritual-oriented Brahmana texts, Vishnu is said to *be* the sacrifice itself.

While goddesses do not hold the special place that they do in later Hinduism, a few goddesses are mentioned in the Vedas. The most significant goddess, and the only one to be invited to participate in Vedic rituals, is Speech (*Vac*); more specifically, she is the sacred speech (*brahmana*) of the brahmana priests. Her relationship to the creator god Prajapati carries over to classical Hinduism, where their new incarnations, the deities Sarasvati and Brahma, are also said to be married.

Vedic deities also tend to come in multiples. Thus, we see many groups of divinities, their individuals often unnamed, who are assistants to a more primary deity. The Maruts, a set of eight storm gods, assist Indra in his battles. The Adityas, led by Varuna, are a group of divinities whose members change throughout Vedic history; the same can be said for the eight (or ten) protectors of the directions (*lokapala*). A peculiar subset of multiple divinities is that of dual divinities, two deities whose names are compounded, of which nearly 20 different pairs are mentioned in the Rig-Veda (e.g., Indra-Agni).

While various types of demons are mentioned in Vedic literature, they do not play a major role. Rather, forces of evil tend to be depicted as terrestrial enemies who must be eliminated, thus the emphasis on battle and the weapons of war. The enemies of the authors of the Vedas are *dasyu* or *dasa*, but these have no cosmic counterpart. The role of divine enemy is filled by the abstract groups of *rakshasas* and *asuras*. One of the more concrete instances of a divine enemy is Rudra (“the howler”), who must be kept at bay. Eventually contributing to the person of the Hindu deity Shiva, Rudra invades the sacrifice and is placated with a small portion of the offerings.

—Michael Baltutis

Bibliography

Doniger, Wendy O’Flaherty. *The Rig Veda*. New York: Penguin Books, 1981.

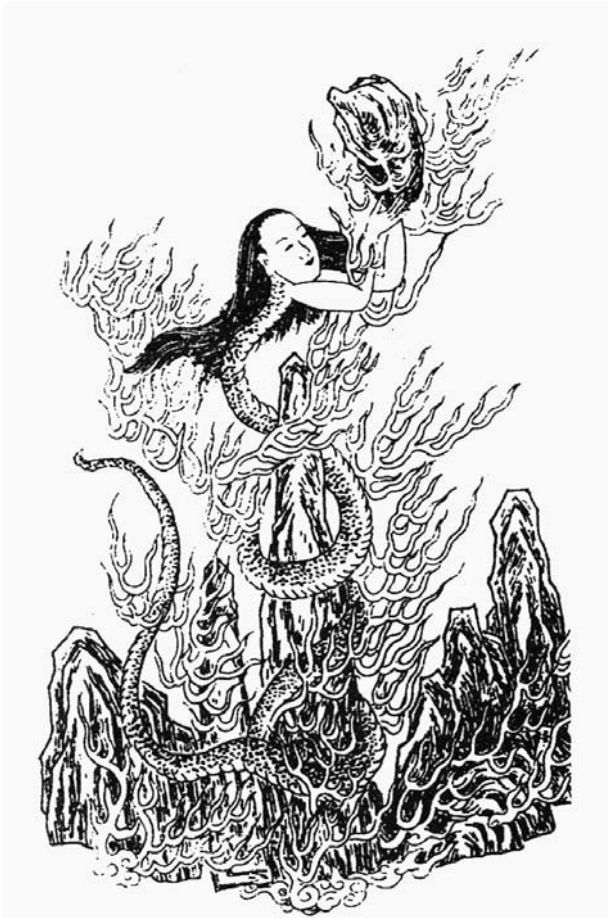
Keith, A. B. *The Religion and Philosophy of the Veda and Upanishads: Part 1, Hinduism and Its Sources Series*. Delhi: Motilal Banarsidass, 2007.

Renou, Louis. *Vedic India*. Translated by Philip Spratt. Delhi: Indological Book House, 1971.

The Gods of China

Chinese religion is characterized by a rich hierarchical pantheon of local, regional, and more universal gods including divinized ancestors, Daoist Immortals, Buddhas, bodhisattvas, and a comprehensive divine bureaucracy. However, the vast majority of the gods who remain popular through worship, art, myths, and novels entered Chinese beliefs, practices, and literature in the past two millennia. The gods of ancient Shang and Zhou China were a less ordered mix of ghosts, spirits, gods, and fantastic creatures. Even though not all of these deities were as integrated into a unified system as would later be the case, there was the sense that the Shang high god, Shang Di (Shang-ti), ruled over various nature gods and divine ancestors. One dominant divine ruler with subordinate ministers mirrored terrestrial political structures. Rulers in turn, at least as early as the Shang kings, venerated a high god and a ministry of lesser gods and divine ancestors as an integral part of their political duties. Commoners also sought favors through their offerings, but their practices were more personal than the official state rituals, and they may have been more concerned with avoiding, propitiating, or even exorcizing harmful ghosts, spirits, and demons. In this broad range of gods and spirits, many were located in a specific place or region, most were mortal, and few if any appear to have operated as agents of a moral universe.

Although many of these beliefs and practices of offerings, veneration, and propitiation continued throughout the history of Chinese religions, new or altered gods and spirits have displaced many of the ancient gods in popular consciousness. Even as the ranks of gods multiplied with a surge of moral and relatively universal Buddhist and Daoist deities, familiarity with and veneration for many ancient gods and spirits decreased as their legends were lost, altered, or fragmented. The ancient gods are rarely depicted, and the



Nüwa mending the sky. Originally drawn in the seventeenth century by Xiao Yuncong. (Yang Lihui. Rethinking on the Source Area of the Cult of Nüwa, 1999)

distinctions among early gods, nature spirits, mythic animals, and extraordinary humans are often unclear. In fact, some of the gods popular after the Han dynasty are rooted in earlier animal and nature deities, but their transformations over centuries, or even millennia, require diligent scholarship to recover their more ancient origins.

There are numerous difficulties accessing the gods and mythical past of ancient China due to the fragmentary myths that have been transmitted, compounded by the problem of transmitters historicizing ancient gods and various fantastical creatures as essentially human culture heroes and sage kings. Thus, an exploration of gods in ancient China requires surveying the overlapping categories of gods, fantastic zoomorphic beings, culture heroes, and legendary sage kings.

The earliest culture heroes retain their extraordinary powers and divine status more clearly than do later sage kings. The Three Sovereigns—Fuxi (Fu-hsi), Shennong (Shen-nung), and Huangdi (Huang-ti)—have been incorporated into traditional accounts of Chinese history as culture heroes of the early third millennium BCE. Their formative roles in the progress of Chinese civilization have been transmitted through legends that include divine and zoomorphic attributes such as the serpent tails of Fuxi, who is famous for taming animals, inventing divination trigrams, and advancing hunting and fishing techniques, and his mate Nu Gua (Nu-kua, Nüwa), a female deity who repairs the cosmos and creates human beings. The agricultural god, Shennong, remains closely tied to nature in his mythology, and Huangdi, also known as the “Yellow Emperor,” was widely worshipped as a prototypical Daoist immortal and popular god as well as a culture hero credited with introducing writing, boats, silk, carts, medicine, and the calendar.

Culture heroes, gods, and kings associated with later times may have been more prone to historicized transformations from earlier mythic portrayals. Nonetheless, some retain connections to their earlier worship as nature spirits or animal-shaped beings, and they may still manifest related extraordinary abilities. For example, myths of Yao, Shun, and Yu, who are heralded by traditional Chinese historical accounts as exemplary sage rulers of the late third millennium BCE, include references to their shamanic abilities including shape-shifting into animal forms. However, other accounts domesticate their supernatural capacities by placing them into a time line of Chinese civilization and dynastic history where they can be appreciated as paragons of morality and pillars of Chinese culture.

Sacred mountains, long revered as the pillars of the entire cosmos, continue to serve as focal points of religious activity from the meditations and adventures of religious aspirants or the site of temples and monasteries to the home of a vast array of gods and spirits. Terry Kleeman’s article “Mountain Deities in China” describes mountains as deities in their own right as well as being home to various deities including “a frightening collection of freaks and monstrosities.” Mountains as deities exemplify that gods in China are not

➤ DIVINE ANCESTORS AS GODS

In Chinese religion, practices for the veneration of ancestors are almost identical to the burning of incense and to offerings typical for worship of the gods. These categories are in fact permeable, as ancestors can become gods and some of the most popular gods, such as Mazu, were once living family members in human history. In Mazu's case, she was an unmarried woman who died at age 27 in a fishing village in the late tenth century. She was then progressively elevated from a local and then regional object of veneration thought to provide help to seafarers, beginning with her family members, while she was alive and reaching out to an ever-widening number of devotees after death. Her reputation, power, and base of devotees continued to grow over the past millennia, with multiple official promotions in the divine bureaucracy—instigated by state officials and popular devotion—capped by the lofty titles of “Holy Mother in Heaven” and “Empress of Heaven” along with enduring devotion, most fervent in Taiwan and Southeast China today. These overlapping categories of ancestor and god appear to have been true in ancient times as well.

Shang religion in the second millennium BCE emphasized sacrifice (offerings made to gods and

ancestors) and divination (attempts to communicate with gods and ancestors in order to ensure that the offerings were adequate and to receive guidance or assistance). Bronze vessels from the Shang era record some of the sacrifices including communications to ancestors. The Shang Oracle bones provide approximately 200,000 pieces of evidence for this popular form of divination. Nobles appear to have directed sacrifice to their ancestors, and the dominant state practices involved offerings to the ancestors of the Shang kings and to Shang Di (Shang-ti), the high god. Records of sacrifice and divination demonstrate a preoccupation with directing appropriate offerings to the correct ancestor to ward off harm or secure benefits. Shang Di ruled the realm populated by these divine ancestors, although it is unclear whether the high god too may have been understood as a more remote and elevated divine ancestor. The Shang maintained their ancestor worship even after conquest by the Zhou, who displaced Shang Di with Tian (T'ien), their high god who originally may have been their divine ancestor as well.

—John Harding

always anthropomorphic or even in recognizable animal forms. The vast array and supernatural power of deities, ghosts, spirits, and animals inhabiting sacred mountains testify to the diversity and regional particularities of deities in China. However, Kleeman's article also analyzes how integrative and syncretistic characteristics of Chinese religion incorporates this vast array of deities into an overarching popular pantheon in which even the mountains themselves order and define Chinese space in accord with and support of an imperial bureaucratic model.

—John Harding

Bibliography

Adler, Joseph. *Chinese Religious Traditions*. Upper Saddle River, NJ: Prentice Hall, 2002.

Allan, Sarah. *The Shape of the Turtle: Myth, Art and Cosmos in Early China*. New York: SUNY, 1991.

Bodde, Derk. “Myths of Ancient China.” In *Essays on Chinese Civilization*. Princeton, NJ: Princeton University Press, 1981.

Kleeman, Terry F. “Mountain Deities in China: The Domestication of the Mountain God and the Subjugation of the Margins.” *Journal of the American Oriental Society* 114(2) (1994): 226–238.

Loewe, Michael, and Edward Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.

Waley, Arthur, trans. *The Book of Songs*. New York: Grove, 1937.

Waltham, Clae. *Shu Ching, Book of History: A Modernized Edition of the Translations of James Legge*. London: Allen and Unwin, 1972.

■ Introduction: Atenism

The earliest known monotheistic or henotheistic religion so far identified is the worship of the Aten disk, which rose to prominence in the Egyptian New Kingdom during the reign of Akhenaten (ca. 1352–1336 BCE). During what was later known as the “Amarna heresy,” King Akhenaten moved his court to the city of Amarna and rejected the traditional gods of Egypt, replacing the worship of Aten (the sun disk) as the official state religion. To what extent Akhenaten limited the worship of other deities in Egypt is debated by scholars. Some scholars argue that this was true monotheism and that Atenism demanded recognition that there was only one god, the Aten disk. Other scholars suggest that Aten worship was merely henotheism, the worship of one god as significantly more important than other deities but while still accepting the existence of other gods. Whatever the case may have been, the Amarna period was one of the most significant moments in religious history, a period of about 20 years when centuries of Egyptian religious traditions were overturned.

—Kevin M. McGeough

Akhenaten

The worship of Aten and the brief movement toward monotheism in Egypt was inextricably linked with the character of Akhenaten, a Pharaoh of the Eighteenth Dynasty of the New Kingdom. Although there is much evidence for the life of Akhenaten, his character and motivations are heavily debated by archaeologists and historians. Akhenaten was often referred to as the heretic king, and later Egyptian kings obliterated his monuments and removed his name from king lists. James Henry Breasted, one of the founding scholars of American Egyptology, once referred to Akhenaten as the “First Individual in Human History” since the personal interests of Akhenaten had such a profound effect on events in Egypt.

When Akhenaten ascended to the throne after the death of his father Amenhotep III, he was named Amenhotep IV. He was crowned pharaoh in Thebes along traditional lines, but not much of his reign could be considered tradi-

tional after this. Soon after, he changed his name to Akhenaten (which reflects his worship of Aten) and moved the capital of Egypt from Thebes to a new city named Akhetaten (modern el-Amarna). Textual sources from Akhenaten's reign describe the “evil words” that Akhenaten, his father, and grandfather heard at Thebes, perhaps an allusion to antimonarchic sentiments in that city.

With Akhenaten's move away from Thebes, he initiated a systematic repression of the worship of other deities. Other gods' names were sabotaged and removed from monuments. Amun's name was particularly desecrated, and there seems to have been significant animosity directed toward this deity in particular. Many scholars have suggested that extreme repression of Amun worship is indicative of one of Akhenaten's motivations for the elevation of Aten to authority as the sole god of Egypt. This may have been an attempt on the part of Akhenaten to stem the growing power of the temple of Amun at Karnak, a religious body that eventually rivaled the pharaohs for control of Egypt. By the Eighteenth Dynasty, the cult of Amun was the most powerful religious force in Egypt and Amun worship the most prominent religious practice in the state cult. Scholars believe that the Temple of Amun was formally closed during Akhenaten's reign, but this is not fully proven. Whether or not the move to Amarna was politically motivated, Akhenaten's belief in Aten as a supreme deity cannot be denied, and religious belief must be understood to be one of the king's key motivating influences.

The depiction of Akhenaten in the art of the period deviates from the typical portraiture of royal individuals. Much of this reflects a change in artistic style that is associated with the Amarna Age. The peculiarities of the depiction are many: exaggerated hips and facial features, thin limbs, and extended stomach. Members of his family are also depicted similarly. Some scholars have suggested that perhaps the odd depiction of the king reflected his physical features, and some have gone so far as to suggest that he had an endocrine disorder that corresponds with those

➤ TALATATS

Talatats are small stone blocks of a standardized size that were used for the construction of Aten temples at Karnak during the reign of Akhenaten. Many of these stone blocks were decorated with segments of Egyptian images that, when put together, depict a larger scene, much like a jigsaw puzzle. After the Amarna Age came to a close, later pharaohs took apart the Aten temples and used them for construction fill. Archaeologists working at Karnak have excavated these talatats and have reconstructed many of the artistic scenes from the temples. This was painstaking work, since tens of thousands of these construction blocks were used in the construction of the temples.

—Kevin M. McGeough

types of features. If Amarna art was meant to be realistic, then this marks a dramatic change in Egyptian artistic styles, which traditionally emphasized idealism over verity. These changes in art appear in paintings, reliefs, and sculpture.

Akhenaten's family was also noteworthy. He was married to Nefertiti, a queen who is well known today because of the stunning bust of her excavated from Amarna. Nefertiti was often depicted alongside Akhenaten and sometimes in a more prominent position, unusual for an Egyptian queen. At Thebes, Nefertiti was depicted in traditional kingly roles (such as smiting scenes) and, from an artistic standpoint, appears to be prominent in Egyptian governance. Yet interestingly, she is not mentioned in Akhenaten's diplomatic correspondence, suggesting that her role in governance, if any, was limited. Akhenaten had at least six daughters with Nefertiti, although some scholars (especially those who believe that he had an endocrine disorder that would have limited his fertility) have suggested that these children were actually fathered by another man.

After the move to Amarna, Nefertiti's importance, at least in the iconography of governance, declined, although what this is indicative of is unclear. In his later years, Akhenaten was also

married to a woman named Kiya and possibly a number of other wives whose names have not been preserved. His successors, Smenkhare and Tutankhamun, may also have been his sons; the names of their mothers have not been preserved. After Tutankhamun's death, the Amarna heresy was brought to an end, and Egyptian religion and statecraft returned to its traditional manifestations.

—Kevin M. McGeough

Bibliography

- Aldred, Cyril. *Akhenaten: King of Egypt*. New York: Thames and Hudson, 1988.
- Freed, Rita E., Yvonne J. Markowitz, and Sue H. D'Auria, eds. *Pharaohs of the Sun: Akhenaten—Nefertiti—Tutankhamen*. New York: Bulfinch, 1999.
- Martin, Geoffrey. *A Bibliography of the Amarna Period and Its Aftermath*. London: Kegan Paul International, 1991.
- Redford, Donald B. *Akhenaten: The Heretic King*. Princeton, NJ: Princeton University Press, 1984.
- Reeves, Nicholas. *Akhenaten: Egypt's False Prophet*. New York: Thames and Hudson, 2001.

Aten Worship

Aten first appears in Egyptian Middle Kingdom texts as a word that literally refers to the disk of the sun, the physical disk that one sees if one looks up into the sky. Later, Aten is seen as one manifestation of the solar deity Re. It is in the reign of Akhenaten, and seemingly under the direct influence of that king, that Aten came to be understood as a deity in its own right, although some scholars argue for a slightly earlier appearance of a deity named Aten. Whenever the Aten was first understood to be a deity, it is during Akhenaten's reign that the physical disk of the sun becomes worshipped as the state deity of Egypt and perhaps the only deity of Egypt.

In Amarna era art, the Aten is depicted as a disk in the sky. Rays extend down from the sun disk and terminate in hands. Often these hands reach toward images of Akhenaten and his family—specifically toward their noses—indicating the life-giving force of the Aten. Schlögel has argued that this and other linguistic evidence suggests that it was the light that radiated from the sun

disk that was worshipped. This is also consistent with the layout of temples to Aten, which were unroofed and thus open to the sun.

The worship of Aten marks a distinct break from traditional Egyptian religion in a number of ways. Unlike other Egyptian deities, the direct worship of Aten seems to have been reserved for the king and the royal family. In the “Hymn to the Aten,” it is suggested that only the king could communicate with Aten. The king’s family, especially his wife Nefertiti, was depicted on cult stelae (plaques with images of the royal family in the presence of Aten) that have been found in the private homes of Amarna.

Unlike other Egyptian deities, there was no cultic statue associated with Aten worship. The temples were open-aired, thus allowing the rays of the sun direct access to the sacred space. Because there was no cultic statue, the usual Egyptian ritual practices, such as the feeding and caring for the divine image, were unnecessary and did not play a role in Atenism. Rather, Akhenaten (acting as high priest) and/or his family members would enter the sanctuary and lead ritual services in honor of Aten.

The most significant break with Egyptian traditions, however, has to be in the primacy with which Aten was placed over other gods in Egypt. While the popularity of various gods and goddesses waxed and waned throughout Egyptian history, there was never a situation in which a god was revered with such a singular status. Under Akhenaten, the worship of other gods was suppressed and their names and monuments desecrated, although the extent to which this occurred is not clear. It seems unlikely that people throughout Egypt gave up the worship of other gods on the command of the pharaoh, and so Aten worship likely occurred primarily at Amarna and in Upper Egypt.

—Kevin M. McGeough

Bibliography

- Allen, James P. “The Natural Philosophy of Akhenaten.” In *Religion and Philosophy in Ancient Egypt*, edited by J. Allen et al. New Haven, CT: Yale Egyptological Studies 3, 1989.
- Foster, John L. “The Hymn to Aten: Akhenaten Worships the Sole God.” In *Civilizations of the Ancient Near East*, vol. 3, edited by Jack Sasson.

➤ MOSES AND AKHENATEN

In order to explain the origins of Hebrew monotheism, biblical scholars in the late nineteenth and early twentieth centuries argued that perhaps Moses had known Akhenaten or had been aware of Aten worship. These scholars further postulated that Moses adapted the monotheistic tendencies of Atenism to Hebrew religion and the worship of the Hebrew God. The father of psychoanalysis, Sigmund Freud, argued in his last book *Moses and Monotheism* that Moses was an Egyptian monotheist who was killed by the Hebrews but that in subsequent years the Jewish population had suppressed this traumatic memory. Despite the appealing nature of this theory, there is no evidence to suggest that any Hebrew populations encountered Akhenaten; the first historical attestation of “Israel” does not occur until centuries later, and the emergence of the Israelites does not occur until the Iron Age.

—Kevin M. McGeough

1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.

Hornung, Erik. *Akhenaten and the Religion of Light*. Translated by David Lorton. Ithaca, NY: Cornell University Press, 1999.

Murnane, William J. *Texts from the Amarna Period in Egypt*. Writings from the Ancient World Series. Atlanta: Society of Biblical Literature, 1994.

Schlögel, Hermann. “Aten.” In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by D. Redford. Oxford: Oxford University Press, 2001.

Life and Worship at Amarna

In the fifth year of his reign, Akhenaten began construction of a new capital city, on virgin soil, and he and his family left Thebes for the new capital. The pharaoh’s new city was called Akhetaten (modern al-Amarna), which means “the horizon of the Aten” and was the center of Aten worship as well. This move marked a radical break in New Kingdom governance and likely reflected an attack on the power of the cult of the god Amun at Karnak at Thebes. This was an abrupt move, so abrupt that the king and his family lived in tent quarters at Amarna while

➤ PSALM 104 AND THE “HYMN TO THE ATEN”

A poem known variously as the “Hymn to the Aten” or the “Sun Hymn of Akhenaten” is one of the most important sources for understanding the theology of Atenism. The poem was preserved in the tomb of Ay, who acted as courtier to King Akhenaten and later became king himself after the unexpected death of the boy king Tutankhamun. It is 13 lines long and may have been composed by Akhenaten himself. Akhenaten is certainly the presumed speaker in the poem.

In some ways, this hymn can be seen as part of a longer Egyptian literary tradition of solar hymns. What makes it different is its treatment of its subject, Aten, which differs from the treatment of solar deities in other hymns. As with other hymns, the “Hymn to the Aten” praises Aten. Yet it also notes the king’s special relationship to the deity, and the tone of the poem is one that borders on religious ecstasy. Aten is also said to be the creator of all, a universal deity. The poem is filled with references to nature, the creations of Aten, and time itself is even understood to be a manifestation of Aten’s creative powers.

What is also remarkable about this particular poem is the amount of similarities between it and Psalm 104 found in the Hebrew Bible. In Psalm 104, the Hebrew God is compared to the sun, and a number of the themes explored and expressions utilized are very similar to those in the “Hymn to the Aten.” Verses 20–26 of the psalm are so similar that they seem to have been directly borrowed from the Aten hymn. Despite the similarities, it is not clear what relationship existed between the two poems, which were composed centuries apart in different languages and locations.

—Kevin M. McGeough

the buildings were constructed (which themselves were built and designed rapidly and to a much lesser level of quality than typical Egyptian royal structures). Motivations for residing at Amarna were primarily connected to the worship of Aten. So after Akhenaten’s death (and the collapse of Aten worship in Egypt), the city was abandoned, and Thebes was made the capital of Egypt once again.

Because Akhetaten was abandoned shortly after Akhenaten’s death, much of the city has

survived for archaeological study and provides a snapshot of life during the “Amarna heresy.” This is one of the few Egyptian sites that was preserved to a large enough extent to demonstrate ancient Egyptian urban planning. Noteworthy are the 14 boundary stelae that mark the “official” extent of the city of Akhetaten. Each stela is inscribed with hieroglyphic text and an image of the royal family worshipping Aten, thus directly demonstrating the connection between the foundation of the city and Atenism.

The residence of the royal family has been discovered, and tombs have been excavated on the outskirts of the city. Only one royal tomb was actually used (presumably the others were not used because the site was abandoned), but a number of nobles’ tombs located in the north were used. The studio of the sculptor Thutmose was also discovered here; the famous bust of Nefertiti was found in this building. It was not meant as a piece of art itself but rather as a study piece for other sculptors to follow, although it is now considered a masterpiece of world art. Along with this more famous piece, a number of plaster casts of other members of the royal family were also discovered here.

The site of Amarna is also the location where the so-called Amarna Letters were recovered. These were diplomatic letters written in cuneiform in the Akkadian language (a Mesopotamian language) that was used as the language of international correspondence at this time. Kings from Mesopotamia, Cyprus, Canaan, and northern Syria all wrote letters that were preserved at the site of Amarna. This correspondence sheds much light on the relationships between states during the Bronze Age.

In one of the Amarna letters, a writer complains that his messengers were forced to stand outside in the hot Egyptian sun. This complaint is consistent with the archaeological remains of the temples that have been excavated at Akhetaten, all of which were unroofed. It is quite understandable why a visitor to Akhetaten would have complained about standing in the unshaded Egyptian sun in the middle of the day; no doubt this architectural design was to allow the Aten to shine its rays directly onto the temple, the people inside the temple, and the offerings presented there.

The largest temple complex at Amarna was the so-called House of the Sun-disk. This was a large walled enclosure that actually contained several temples within. All of the courts of the temples were open to the sky, although there were sun-shades and chapels that allowed some relief from the Egyptian sun. The walls were, for the most part, decorated with reliefs typical of other Egyptian temples. However, the *sed*-festival (in which the king ritually renews his power) was not depicted, suggesting that Akhenaten no longer followed this practice. Another deviation from Egyptian religious norms at the site is that the typical obelisk (representing the *ben-ben* stone, the mound where creation began) was replaced with a round-topped stone on a dais.

Another complex dedicated to Aten was located near the southern cliffs at the outskirts of the city. Donald Redford has called this a “gazebo” for Aten. Called the Maru-Aten, this was a walled enclosure that contained gardens, pools, open-air kiosks, and an artificial island. Inscryp-

tions at the site mention Akhenaten’s daughter Meritaten (and an erased name was likely his wife, Kiya), suggesting that this area may have been designed for their use.

—Kevin M. McGeough

Bibliography

- Bryan, Betsy. “Amarna, Tell el.” In *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, edited by D. Redford. Oxford: Oxford University Press, 2001.
- Foster, John L. “The Hymn to Aten: Akhenaten Worships the Sole God.” In *Civilizations of the Ancient Near East*, vol. 3, edited by Jack Sasson. 1995; reprint, Peabody, MA: Hendrickson Publishers, 2000.
- de Garis Davies, Norman. *The Rock Tombs of El Amarna*. Parts 1–6. London: Egypt Exploration Society, 1903–1908.
- Kemp, Barry. *Egypt: Anatomy of a Civilization*. London: Routledge, 1989.
- Redford, Donald B. *Akhenaten: The Heretic King*. Princeton, NJ: Princeton University Press, 1984.

■ Introduction: Temple Architecture and Practices

A popular joke among archaeologists is that if you do not know what an artifact that you have found was used for, say that it had a religious function. This joke reflects the fact that it can be extremely difficult to identify religion and religious practices (normally called cultic practices by archaeologists, without intending any of the connotations that the term “cult” has in modern times). Archaeologists were once not as careful when identifying temples and cultic equipment in the archaeological record. Now there is a growing recognition that it is important to be careful in applying these designations.

In ancient times, cultic structures were not usually intended to be used by all of the worshippers in a community. Unlike a modern church, mosque, or synagogue, an ancient cultic structure was not typically a place for personal worship. Rather, cultic specialists, such as priests, would be in charge of performing the rituals

intended for the deities; this was their job, and they were considered experts in the subject. These expressions of reverence or worship toward the deity were the main foci of temple practices in ancient times. In some traditions, the temple was thought to be the actual house of the deity on earth; in other traditions, this was merely a location where earthly worshippers could gain access to that deity. Often a physical representation of the deity was present in the temple. Archaeologists find statues of the deities, images of the deities, iconography that represents the deities, and even niches built directly into the architecture where the deity may have been thought to be present. These are the strongest pieces of evidence that a particular excavated structure was in fact a temple.

There are a number of other criteria that can be used by archaeologists to distinguish a temple (or other type of religious structure) from other buildings. These structures were often set

off from the rest of the community, since the space was considered sacred. Archaeologists may find walls around the complex or other markers that would have indicated to the ancient population that they were leaving the profane world for the sacred. Within this enclosed space there must be enough room for sacred activities to take place. Sometimes these activities incorporated the architecture of the building directly into the ceremonies, such as when offerings were placed directly onto benches or altars attached to the walls. Other evidence that ceremonies may have taken place include the remains of offerings. Animal bones from sacrifices are found most frequently, and pottery containers that once held libations are also common. The events that went on within a sacred structure can sometimes be accurately reconstructed if textual or artistic records survive that explain what was done. In Mesopotamia, for example, priests kept written records of what was supposed to happen during a ritual. For many other places, we have less direct evidence.

—Kevin M. McGeough

Egyptian Temple Architecture and Practices

The ancient Egyptians built their temples to reflect the ideal universe; every part of the temple was imbued with symbolic meaning corresponding to Egyptian concepts of the cosmos. At its most basic level, Egyptian ideology can be summed up by one metaphor: the eternal fight between order, justice, or truth, known as *maat*, and chaos, known as *isfet*. The purpose of the gods and kings was to bring, restore, and maintain order, or *maat*, to every aspect of Egyptian life. In the Egyptian conception of the universe, Egypt (specifically the Nile Valley) was *maat*, and everything desert or foreign was considered chaotic and evil.

Every architectural element in an ancient Egyptian temple has some mythical and/or religious symbolism attached to it. An enclosure wall surrounded every temple and marked the boundary between the sacred world and the secular world, but on a symbolic level the wall marked the boundary between order and chaos. Inside

the enclosure wall were not only the temple but also priests' houses, gardens, storage facilities, and kitchen facilities for preparing the daily offerings for the gods. On the outside walls of the temple were images of kings defeating foreign enemies and hunting lions and bulls, which depicted the king's triumph over the forces of chaos. These victory scenes are apotropaic, meant to keep the forces of evil out of the temple. The temple's axis, from its pylon, or entrance gateway, to its rear where the holy shrines were located, is oriented on the same path that the sun, the god Re, takes through the sky, from east to west. The pylon is shaped like the hieroglyph for the horizon, with two mountain peaks on either side of a valley. At sunrise, the sun climbs between the two peaks of the pylon. As one progresses through the temple, the rooms get darker until at symbolic sunset, in the sanctuaries, there is complete darkness and the ceiling is covered in drawings of stars.

Beyond the pylon is a peristyle hall, which has rows of columns encircling an open-air court. The peristyle hall represented the land of Egypt, which the Egyptians perceived as having two parts: Upper Egypt (from Aswan to near present-day Cairo) and Lower Egypt (the delta of the Nile). The capitals of the columns in the peristyle hall were in the shape of lotus flowers or papyrus plants. The papyriform (papyrus-shaped) and lotiform (lotus-shaped) columns represented Upper and Lower Egypt, respectively. Installed in the peristyle hall were statues of kings and high officials who wished to take part in the offering cult of the gods. Every level of priest—and on special feast days the public—was allowed into the peristyle hall to present offerings to the gods and statues.

Through a tall doorway and up a ramp or short flight of stairs is the hypostyle hall (a type of hall where pillars support the roof). This hall is completely roofed and is filled with closely packed rows of columns. The columns represent the reeds growing out of the primordial marsh represented by the floor, and the ceiling is covered in a star pattern representing the sky. Dimly lit, the hypostyle hall represents a transitional space between the earth (the peristyle hall) and the mound of creation (the sanctuary beyond).

► THE TEMPLE OF KARNAK AT LUXOR

The temple of Karnak at Luxor is perhaps the most important of ancient Egyptian temples. Karnak was built to venerate the god Amun, who by the Middle and New Kingdoms was considered to be the king of the gods and an important creator god. Karnak temple was established in the Middle Kingdom, but the earliest parts still standing date to the reign of Amenhotep III in the New Kingdom.

The Karnak temple complex is almost 250 acres in area and consists of about 20 temples and chapels all dedicated to Amun, his family, or kings who dedicated buildings to him. Almost every king built something in the Karnak temple complex. Seti I and his son, Ramses II, built a huge hypostyle hall with 134 columns. Queen Hatshepsut erected four obelisks, symbols of the sun god Re, who was often syncretized with Amun. Even the so-called heretic king Akhenaten built a temple within the complex to his god Aten, which was the sun's disk and one aspect of Amun-Re.

The temple of Amun itself is huge in comparison to most temples and has ten pylons (most temples only have one pylon), each of which was built by a different king. The first six are aligned with the east-west axis of the temple and direct the worshiper to the sanctuary in the rear. The other four pylons branch off between the third and fourth pylons and direct the worshiper south to the temple of the goddess Mut (the wife of Amun), whose temple was outside of the Karnak complex enclosure wall. An avenue of ram-headed and human-headed sphinxes leads from the Karnak enclosure wall to Luxor temple, another temple of Amun, that was built to celebrate the Opet festival.



Temple of Luxor at Karnak. (Gloria Euyoque)

Another avenue of ram-headed sphinxes leads from the first pylon to the Nile River and marked the path that the barque of Amun took during the festival of Amun, when the god visited the mortuary temples of the kings located on the west bank of the Nile.

The priesthood of Amun was one of the most important in all of Egypt. In the Nineteenth and Twentieth Dynasties, only two families held the position of high priest of Amun. The high priest of Amun held considerable political power due to the large amount of land controlled by the temple. By the Twenty-first Dynasty, Egypt was politically divided, with two kings ruling simultaneously: one from Tanis in the Delta and the other made up of high priests of Amun ruling Thebes and Upper Egypt.

—Vanessa Smith

Perhaps the most famous hypostyle hall is that built by Seti I and completed by Ramses II in the temple of Karnak.

Past the hypostyle hall, a second smaller doorway demarks the entry to the sanctuary. At each door along the processional route the floor is raised and the ceiling is lowered, symbolizing the journey to the mound of creation. The sanctuary represents the primordial mound where earth and life were created and the chaos of the void was put to an end. The primordial mound is also where the gods themselves were created

and lived before humans were put on the earth. There are usually several rooms in the sanctuary area, each dedicated to a different god. Although most temples were dedicated to a specific god, that god's family, usually his or her spouse and offspring, were worshipped alongside the primary god. The sanctuary is the most sacred part of the temple, only accessible to the king and high priests. It is where the gods lived and where the statues of the gods were tenderly looked after. The walls of the sanctuary are covered in depictions of the king presenting offerings to the

god. The ancient Egyptians believed that writing and art were filled with magical powers; a drawing of a king offering food to a god was akin to the actual offering ritual.

Although there was a standardized form to most ancient Egyptian temples consisting of a pylon, peristyle hall, hypostyle hall, and sanctuary, there was variation in how these elements were realized, especially in the Old and Middle Kingdoms. The earliest temples consisted of an enclosure wall with a square mound on one end, which may or may not have had a sanctuary atop. Most of the known temples from the Old and Middle Kingdoms are mortuary temples, dedicated to a deceased king who at death is transformed into the god Osiris, the king of the afterlife. These temples were often either directly attached to a pyramid or part of its larger complex of buildings. Few gods' temples survive from the Old and Middle Kingdoms because these early temples were dismantled and replaced by newer, larger, and better temples in the New Kingdom. Far from being considered sacrilegious, it was every king's duty to renew and improve the houses of the gods. In so doing the king established his direct relation to the god or gods in question. And because it was that king's image on the sanctuary walls presenting offerings to the god, the king permanently connected his name with not only the god but also the preservation of *maat*, which emphasized the effective rule of that king.

The ancient Egyptians considered the state and religion to be irrevocably linked. As the embodiment of the god Horus on earth, the living king was the intercessor between the divine plane and the mortal world. In theory, only the king could act as the caretaker of the statues of the gods, but with so many temples and so many gods this was not practical. High priests acted in the king's stead, performing the daily offering rituals and officiating at festivals. Except for high priests, the position of priest was not a full-time job. Men and occasionally women from the upper classes spent several months a year serving as priests and the rest of the time in the military, royal court, local government, etc. There were several different levels within the priesthood, and each level was responsible for different duties within different parts of the temple. Only a very

few high-ranking priests were ever allowed in the sanctuary to conduct the daily ritual. Most priests were in charge of cleaning the temple, purifying the offerings, or handling other non-ritual duties. There were very strict rules concerning the purity of each priest while on duty; the priests had to bathe often, shave their heads and bodies, abstain from sexual activity, and not eat certain foods that were considered unclean.

The daily temple ritual helped to restore and retain *maat*, the order in the universe, through the worship of the divine statue. The day began before sunrise when the king or high priest bathed and ritually purified himself. At sunrise, the sanctuary door was opened and light was allowed to enter, and incense was burned to purify the air. The king or high priest entered the sanctuary and opened the shrine, which held the divine statue. The veil was removed from the face of the statue, and the king or high priest knelt before it, intoning hymns of adoration. The statue was removed from the shrine, and the shrine was ritually cleaned. The statue was then bathed, oiled, clothed, and adorned with jewelry, and cosmetics were applied. The divine statue was replaced in the shrine and was offered wine, beer, and trays of food. Once the statue was sated, the food and drink were removed for redistribution to the priests (priests were paid using these food offerings, as the ancient Egyptians had no monetary system). Then the shrine was closed and sealed, and finally the door to the sanctuary was closed. This daily ritual occurred as many as three times a day but usually only once.

The ancient Egyptians celebrated numerous festivals that were related to astrological, mythical, or seasonal events. During the festival, the shrine of the god with the divine statue inside was placed on a barque, or boat, that the priests carried. The god was then carried either to the peristyle hall or out of the temple. On some occasions the god would travel to a different temple to visit another god. The festivals allowed the people to view the god, celebrate the bounty bestowed by him, and ask for the god's favor. When a god ventured out of his temple, he could directly intercede in the mortal world by acting as an oracle. People would ask questions, and the movement of the barque would indicate either a

positive or negative response. Other festivals involved the staging of mystery plays in which certain episodes in the god's mythology were acted out. On festival days the temple made additional food offerings, which were often distributed to the people as a form of charity.

—Vanessa Smith

Bibliography

- Quirke, Stephen, ed. *The Temple in Ancient Egypt*. London: British Museum Press, 1997.
- Shafer, Byron, ed. *Temples of Ancient Egypt*. Ithaca, NY: Cornell University Press, 1997.
- Snape, Steven. *Egyptian Temples*. Princes Risborough, Buckinghamshire, UK: Shire, 1996.
- Wilkinson, Richard H. *The Complete Temples of Ancient Egypt*. New York: Thames and Hudson, 2000.

Places of Worship in the Bronze Age Levant

Places of worship in the Bronze Age Levant have been of particular interest to researchers of the Hebrew Bible. Given that this is the region where Israel would later emerge and where many of the narratives from the Old Testament take place, it is no surprise that scholars of the Old Testament hoped to find direct biblical connections. Now, the study of religion in the Levant has become a scholarly discipline in its own right, and archaeologists have identified a long tradition of religious activity, primarily through religious architecture and structures.

The site of Gilat, located along the Wadi Patish northwest of modern-day Beer Sheva, provides some of the earliest evidence for cultic architecture and public worship. The cult center includes a large complex comprising several buildings that appear to have served as some form of cultic center. The cultic area incorporates open courtyard space and several buildings, including Room A, which had a high concentration of symbolic items, including more than sixty "violin-shaped" figurines. The site of Teleilat Ghassul also featured a cultic center (Area E) with several temples. Vivid murals were painted directly onto plastered walls using a variety of materials for pigment, including red ochre. Other motifs seen in the murals include a schematized star, several

human figures with pronounced eyes, and a horned animal. At both Gilat and Ghassul, the temples were in use over a considerable length of time. Another cultic complex, at En Gedi, included four separate structures and a large open-air courtyard. This site is located on a high cliff overlooking the Dead Sea, far from any settlement. Open-air sanctuaries made up of large, walled, circular enclosures and *massebot*, or stele-like standing stones, have been found throughout the Sinai and Negev. Based on their form and location, it is thought that these served the pastoral transhumant population.

There is little evidence for cultic architecture at the beginning of the Early Bronze Age, with the major exception of Megiddo. By the mid Early Bronze Age, however, places of worship appear at a number of large centers. The basic plan for Early Bronze Age cultic architecture is traditionally known as the "broad room": a rectilinear structure with an entrance near the center of the long side. Over the course of the period, temples generally increased in size and scale, and there were elaborations on this basic temple plan, such as at Megiddo. A large structure at Erani, with nine pillars lined in three rows, has also been interpreted as a temple. Plaster-coated walls were also found at a temple at Yarmuth, hence the name, the "White Building." A raised platform opposite the entrance may have been used for rituals and/or to support a cultic figure. Cultic installations and features included raised platforms and large, flat *massebot*, which often appeared in groups, as seen at Hartuv. It is not clear what their function was, though they may have represented deities.

One recurrent motif from the seal impressions depicts a group of figures with arms interlocked, perhaps engaged in a dance. In at least one example from an EBIII jar, the dancers appear above a row of rectangles that recalls the "palace facade" motif, known from many seals, suggesting public ceremonies involving dance. Dancing may have played a vital role in rituals associated with the harvest, and it is possible that in this instance the dancers performed in or near some monumental structure, such as a temple. At Bab edh-Dra, one scene shows four figures with upraised hands, bracketing what may be a palm branch.

► THE LACHISH FOSSE TEMPLE

The site of Lachish hosted the “Fosse Temple,” a unique example of religious architecture standing just outside the city wall in the Middle Bronze Age moat. This temple had a small entrance corridor leading to a main hall with rows of wooden columns, and though it was rebuilt several times during the fifteenth to thirteenth centuries BCE, the plan remained largely the same. The floor of the thirteenth-century temple, which saw violent destruction, was permeated by *favissae*, small caches of valuable goods (for example, an ivory statue). A building similar to the Fosse Temple has also been found at Tel Mevorakh, and it is possible that these unique temples represent a separate current of ritual practice distinct from the main Canaanite cult of the Late Bronze Age.

—Jonathan Golden

The archaeological evidence for religious and ritual activity during the Middle Bronze Age, including burial offerings, sacred deposits, artistic representations, and cultic architecture, is vast. By the later Middle Bronze Age, large temples stood at a number of Canaanite sites, including Tel el-Hayyat, Hazor, Tel Kitan, and Shechem. These imposing structures were built with massive stone foundations that generally followed a plan incorporating one long main hall, though these varied from the broad-room design. One form, the “Migdal temple,” had a symmetrical, direct-axis plan, and there was often a small niche at the back of the broad hall that may have been used for ritual practice or display. One of the best examples of this tradition was the massive Migdal temple at Shechem. The temple had walls reaching up to 5 meters (6.4 ft.) thick and was erected atop a large earthen platform similar in construction to the ramparts, creating an “acropolis” effect.

Several of the basic design elements in the Canaanite temples display a distinct northern influence. The general floor plan of temples in Canaan has parallels with structures found in the great Syrian cities of Alalakh, Ebla (Tel Mardikh), and Ugarit (Ras Shamra), but it is not clear whether this represents the spread of a widely

held belief system or the emulation of architectural style. A similar plan, in fact, was also employed in a temple from Avaris (Tel el-Daba), the center of Hyksos-Asiatic life in the Egyptian Delta. Temples and chapels have also been identified at a number of Middle Bronze Age sites on the coastal plain, including Ashqelon, Tel Mevorakh, and Tel Michal.

Buildings and open courts designated for religious practice were often grouped together within a city, forming cultic precincts. At Megiddo, a small platform mound may have been reserved for cultic activities, while the religious precinct from the Early Bronze Age was transformed into an open plaza with *massebot*. The cultic area at Nahariyah had a similar open plaza, and the open-air site at Jebel el-Rukba in southern Samaria had an oval platform, built of stone, which may have functioned as a gathering place for rituals. *Massebot* have been found at a number of sites, the most outstanding example being Gezer, where the “high place” featured a group of eleven massive *massebot*, which still straddle the mound’s crest today. Byblos, too, featured a cluster of large standing stones.

Despite the fact that Egyptians dominated Canaan for much of the Late Bronze Age, much of the Canaanite religious tradition remained intact, which is not surprising considering that religion is often one place where cultural identities find refuge when threatened. Temples dating to the period have been discovered at several sites, including Beth Shean, Lachish, and Tel Mevorakh. At Megiddo and Hazor, temples originally built at the end of the Middle Bronze Age were used right through to the Late Bronze Age. At this point, both were renovated, but with limited changes to the basic broad-room design, where the main hall was entered via a front porch. Some of these temples contained a small room where access was limited, which probably served a specific cultic function, that is, as “holy of holies.” As during the Middle Bronze Age, these temples had affinities with the temples of Syria. The temples at Ugarit, Alalakh, and Hazor had similar building plans and main halls of similar dimensions, and at Alalakh the temple had lion orthostats and a basalt altar similar to that from Hazor.

Despite the continuation of Canaanite customs, in certain places the Egyptian impact can

be clearly seen in religious practice. A temple at Beth Shean departs from what is typical of Canaanite cultic architecture, being squarer in plan (200 square meters, or about 2,150 sq. ft.) and entered via a bent axis. It also featured benches along part of the wall, and two columns in the center of the hall supported the roof. A “holy of holies” was approached via a seven-stepped staircase, and a small adjacent chamber may have served as a treasury. One of the more unique features at the Beth Shean temple is the use of Egyptian-style papyrus-shaped capitals. This temple was destroyed at the end of the thirteenth century BCE, but it was subsequently rebuilt during the time of Ramses III, this time with an Egyptian frieze. The Egyptian influence at Beth Shean is also reflected in a stele that depicts an Egyptian official performing some sort of ritual or act of supplication before the Canaanite god Mekal, which suggests the integration or fusion of practices.

—Jonathan Golden

Bibliography

- Beck, Pirhiya. “Bronze Plaque from Hazor.” *Israel Exploration Journal* 33 (1983): 78–80.
- Beck, Pirhiya. “Note on the ‘Schematic Statues’ from the Stelae Temple at Hazor.” *Tel Aviv* 17 (1990): 91–95.
- Devries, L. “Cult Stands: A Bewildering Variety of Shapes and Sizes.” *Biblical Archaeology Review* 13 (1987): 26–37.
- Hestrin, Ruth. “The Lachish Ewer and the Asherah.” *Israel Exploration Journal* 37 (1987): 222–223.
- Mazar, Amihai. *Archaeology of the Land of the Bible, 10,000–586 B.C.E.* New York: Doubleday, 1990.
- Ottosson, Magnus. *Temples and Cult Places in Palestine*. Stockholm: Almqvist and Wiksell International, 1980.
- Yadin, Yigael. “Symbols of Deities at Zinjirli, Carthage and Hazor.” In *Near Eastern Archaeology in the Twentieth Century: Essays in Honor of Nelson Glueck*, edited by James A. Sanders. Garden City, NY: Doubleday, 1970.

Early Mesopotamian Temples and Shrines

Probable shrines are apparent in the earliest levels of Mesopotamian sites. A few Ubaid and Uruk buildings have been excavated, the location and contents of which suggest a ritual function. In

➤ THE GOD AT HOME

The temple, known simply as *E/Bitu* (“house”), was both the home and, in some transcendental sense, the embodiment of deity. Within the temple the god was more precisely located within his or her image, made, according to written descriptions, from the most precious materials, including gold covering a wooden core, and clothed in the finest raiment and the choicest jewels. The manufacture and installation of a divine image was a major event, undertaken as a pious duty by kings. Solemn and secret rituals attended the transforming moment when the image changed from a mere human creation into the god himself.

The temple was the god’s house, staffed by his servants, in which he or she lived a life similar to that of a king. The image was bathed, anointed, and dressed in fine garments and was served food and drink. Sweet-smelling incense was burned in braziers during meals, served in the morning and afternoon. Beer, water, or wine was served in a cup or poured into channels in the altar, while the food, including bread, cakes, fish and meat dishes, and fruit, was set on a table before the deity. Often a curtain was then drawn to allow the god to eat in privacy. After a decent interval, the remains of the god’s repast were removed, to be sent to the king or consumed by priests. On occasion the god might entertain a visiting deity, his servants laying on a special feast.

Records show that huge quantities of food were brought into the temple as regular offerings: some was prepared for the deity, while the rest was fed to the temple staff. To keep the gods pleased with their devotees and happy to reside in their city, hymns were sung in their praise, music was performed, and dramas were enacted that glorified their achievements.

—Jane R. McIntosh

some sites, such as Eridu and Uruk, structures dating from the fifth or fourth millennia onward were periodically reconstructed, enlarged, and embellished, reaching by the third millennium a form that became standard for Mesopotamian shrines. Uruk period temples were often strikingly decorated with mosaic patterns created from clay cones with painted heads embedded in the wall plaster or, in one case, using cones of

white alabaster and red and black limestone. The interior walls of a temple at Uqair bore paintings of people, leopards, and other animals.

The earliest shrine at Eridu was a single room, raised on a platform, with an altar set in a niche opposite the entrance and an offering table before it. The shrine was periodically leveled and reconstructed, becoming increasingly elaborate, with a tripartite plan of central nave and side chambers and with the later addition of further rooms, buttresses, niches, and an increasingly substantial platform with access ramp. In historical times Eridu belonged to Enki, god of the waters; numerous fish bones found on the floor of the shrine—offerings or the remains of ritual meals—suggest that it was dedicated to him from the outset. A similar association is assumed between other prehistoric shrines and the deities historically associated with their city, notably the shrines in the Kullaba and Eanna districts of Uruk with An and Inanna.

The tripartite temple plan continued in the Early Dynastic (ED) period as a large hall flanked by side chambers, with a cella (sanctum) at the far end and its entrance in one of the long sides. Although this bent-axis approach did continue later, most temples from late ED onward had their entrance in the short front wall, often through a monumental gateway with towers. Instead of a hall, a courtyard flanked by rooms often lay between gate and cella, which might be raised, with steps giving access to its interior. This basic temple unit could be multiplied to form a much larger temple complex. For example, the Ishtar-Kititum temple at Nerebtum (Ishchali) contained three temples of different sizes, fitted together to form a rectangle with a massive buttressed outer wall.

Temples were usually built of baked brick, their external walls elaborated with buttresses and niches. The desire for valuable materials to embellish the temple was a major incentive to international trade, as an inscription of Gudea, *ensi* of Girsu, exemplifies. To build a temple to Ningirsu he obtained timber from Meluhha and Magan and copper, gold, silver, and “red stones” (carnelian) from Meluhha. He had trees felled in the Cedar Mountains and Pine Mountains and floated downriver and brought stone from new quarries.

The temple lay within a precinct, often walled, generally in the center of the city. This was the hub of the huge organization that was the temple establishment. It included granaries and storerooms for the products of the temple's lands and industry; offices and archives of records for the administration of the temple and its dependents; the residences of at least some of the full-time temple staff, including the chief priest of the god to whom the precinct was dedicated, and in some cities the *gagum* (“cloister”), a substantial walled enclosure that housed women dedicated to the god's service; sometimes workshops, particularly for the manufacture of textiles; kitchens for the preparation of the god's food; and rooms for the performance of ritual activities, such as ablution to purify officiating priests. In Ur the precinct contained the *giparu*, the palace of the high priestess (*en/entum*) of the city's patron god Nanna, which included the temple of Nanna's spouse Ningal, storerooms, public rooms, and private quarters as well as a crypt where priestesses were buried. Other cities may have had similar establishments within their precincts. As well as the shrine of the principal deity, the precinct generally included smaller temples dedicated to his or her spouse and offspring, with associated buildings.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. *Religion in Ancient Mesopotamia*. Chicago: University of Chicago Press, 2001.
- Jacobsen, Thorkild. *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven, CT: Yale University Press, 1976.
- Oppenheim, A. Leo, and Erica Reiner. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Rev. ed. Chicago: University of Chicago Press, 1977.
- Roaf, Michael. “Palaces and Temples in Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Robertson, John. “The Social and Economic Organization of Ancient Mesopotamian Temples.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Wiggermann, F. A. M. “Theologies, Priests, and Worship in Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

Mesopotamian Temple Practices

Though the precinct was its central focus, the temple institution also owned substantial lands and buildings outside. These included urban houses for temple personnel and workshops, such as the weaving establishment (North Palace) at Eshnunna. Others lay in the countryside, where the temple might have large industrial complexes, such as the workshop at Guabba outside Lagash staffed by 6,000 workers, and storage facilities, such as those maintained in various villages by the Sin temple at Khafajeh, to store grain grown on temple lands. Although much is known about the major precincts, some smaller neighborhood shrines have also been excavated. These included the Small Temple at Khafajeh and the Single Shrine at Eshnunna. Not all rituals took place in temples; for example, there were rural festivals to which the statue of the god was brought.

The temple combined ritual activities with the practical business of running the god's household and estate. The more important or specialist cultic officials ("priests," although there was no blanket Mesopotamian term with this meaning), administrative staff, scribes, and artisans would have been permanent employees of the temple, as were a number of other essential personnel, such as barbers to shave the priests' heads and cooks to prepare the gods' daily meals.

At their head was the *sanga/shangum* (chief priest), whose role was as much administrative as religious. Others had a more exclusively ritual role, headed by the *en* priest or *en/entum* priestess, who was the spouse of the city deity. This post lapsed after the Old Babylonian (OB) period, although it was revived by the Neo-Babylonian king Nebuchadnezzar II. Other cultic personnel included snake charmers, acrobats, musicians, and singers, and more senior staff included diviners, exorcists, and lamentation priests; the latter may have been homosexuals, transvestites, or eunuchs.

The administrative staff included managers, overseers, surveyors, foremen, scribes and architects, and servants and slaves. Many posts that did not require specialist skills were filled by members of the community who performed regular but limited duties and received rations,

PERSONAL PIETY AND MESOPOTAMIAN WORSHIP

While scholars are well informed about temple and clerical practices in general in Mesopotamia and the role of the king in particular, rather less is known about how private devotions were performed. For example, it is not clear whether ordinary people could enter the cella of the city temple. Smaller neighborhood shrines probably served their needs, and they could participate in processions and festivals. They addressed and made offerings to their own personal god in their domestic shrine and through him might also approach the city deity, a scene shown on numerous seals. When people were in particular need of divine favor, such as when someone was ill, they sought the help of a priest such as a diviner (*baru*) or exorcist (*ashipu*) to perform the appropriate rites and incantations.

Prayers enabled the individual to communicate with the gods. Figurines probably representing an individual or his or her personal god could be set up in the temple. They show the reverent pose adopted by the worshipper, hands clasped against the chest or holding a cup or animal, presumably representing offerings. An extreme form of these perpetual worshippers was the *naditum*, a girl dedicated to the god by her family to keep him mindful of their needs. Children destined for the clergy studied versification, singing, and instrumental music in addition to a normal scribal education, probably in a school attached to the temple. Temples had an orchestra of harps and lyres, wind instruments, and drums and a chorus of singers directed by a lamentation priest (*gala/kalum*) or singer (*nar/naru*). The making of instruments for the temple was important enough to be recorded in date formulae.

—Jane R. McIntosh

wages, or the use of temple land in return. These prebends (as these posts are conventionally known) became the closely guarded privilege of individuals; they were heritable and could be bought and sold. Over the years they frequently became subdivided, and by OB times an individual might be called upon to perform his task as rarely as once a year. Prebendary duties included sweeping the temple courtyard, acting as water carriers or doorkeepers, and baking bread or

brewing beer for the temple. Some ritual duties were performed by prebendary priests known as *gudu/pashishum*.

The temples commanded enormous manpower, in dependents and corvée labor. In Early Dynastic (ED) Girsu, around a third of the city's population of circa 100,000 worked for the temples. Sharecroppers who worked temple lands could be required to undertake corvée labor, receiving daily rations. The temple also maintained many people whom adverse circumstances had made its dependents or slaves: widows, orphans, physically disabled people, and other unfortunates; those who had sold themselves or been sold by their family in payment of debts; children offered as neophytes when their parents could no longer feed them, through destitution or during famine or sieges; and war captives donated to the temple by kings or citizens. Their labor was entirely at the disposal of the temple, which supported them with daily food rations and periodic issues of other necessities or perquisites. These people cultivated temple fields and orchards, tended temple herds and flocks, and worked in temple industries manufacturing textiles and objects of wood, stone, metal, clay, and leather.

Temples often owned substantial estates; for example, around 10 percent of the lands of Girsu in the ED period belonged to the temples. From these, the temple drew enormous revenues in grain and other produce including wool, which was then converted by temple workers into textiles for local use or export by merchants employed or commissioned by the temple. Usury also brought in revenue. The temple made loans at the relatively low rate of 20 percent (the norm being 33.3 percent) to fund private enterprise or buy back prisoners of war or debt slaves and sometimes waived the interest altogether. The temple also entered into business partnerships.

Food and other offerings came both from the community as obligations and from the king and individuals as gifts (*arua*) when divine help was sought or as thank-offerings. *Arua* included land and slaves as well as precious materials and fine objects, often inscribed with the donor's name, and the humbler gifts of private citizens. Many of the everyday objects and materials were issued to the temple staff. For instance, textiles

and wool were among the recorded rations. Gifts of fine clothing, jewelry, and other valuables, however, accumulated in far larger quantities than the god could wear or use. The surplus was stored in what became substantial temple treasuries. A magnet for plunderers when cities were sacked, such treasures have not survived but are known to have existed from detailed inventories kept in temple archives, which list large numbers of metal vessels, fine robes, seals, precious jewelry, drapes for the god's throne, and many other valuable items. Owned by the temple, these nevertheless represented the wealth of the community as a whole, and their loss in war would have had devastating economic consequences.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. *Religion in Ancient Mesopotamia*. Chicago: University of Chicago Press, 2001.
- Jacobsen, Thorkild. *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven, CT: Yale University Press, 1976.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Oppenheim, A. Leo, and Erica Reiner. *Ancient Mesopotamia: Portrait of a Dead Civilization*. Rev. ed. Chicago: University of Chicago Press, 1977.
- Roaf, Michael. "Palaces and Temples in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Robertson, John. "The Social and Economic Organization of Ancient Mesopotamian Temples." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Wiggermann, F. A. M. "Theologies, Priests, and Worship in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

Mesopotamian Festivals— The New Year's Celebration

The Mesopotamian religious calendar was filled with festivals and events where the human and divine communities mingled. Mesopotamian gods paid each other formal visits in the person of their statues, often traveling by water in a sacred boat. In third-millennium Sumer and Ak-

kad, city gods visited their mentor Enki in Eridu and their leader Enlil in Nippur and also engaged in more local visits between deities of similar status. The occasion of these visits might be a festival in which the deity wished to participate or an important event such as the consecration of a major temple. In addition, a god's statue, or more commonly his emblem, often traveled locally to support situations where an oath was to be taken or divine authority required, such as in a lawsuit or for official validation of the size of a harvest. Major public enterprises such as temple construction were attended by rituals at every stage, beginning with the king molding the first brick or carrying the first basket of soil, a theme frequently appearing in dedicatory art. Public rituals were performed to protect the king or the state, for example, to safeguard the army when it went to war. The investiture of a new king was a solemn religious occasion during which his symbols of office—crown, scepter, and throne (actually hat, rod, and stool)—were presented to him in the temple and sacrifices were made.

The Babylonians' most important religious celebration, the Akitu festival, was celebrated in Babylon at the New Year, from the 1st to the 12th days of the first month, Nisannu (March/April). Only the 2nd to 5th days are well known, from surviving fragments of a detailed Neo-Babylonian text. Although *akitu* in Babylon was the New Year festival, the term was widely used in earlier times for a variety of rural festivals, not necessarily associated with the New Year. Though little is known of festivals other than the Babylonian akitu, they probably generally included processions, music and dancing, feasting, and other communal activities. People probably traveled from a wide area to attend festivals. Individual deities had their own special festival days, and smaller-scale celebrations were widely held for the phases of the moon, on the 1st, 7th, and 15th days of each month.

The main purpose of the Babylonian akitu festival was to inaugurate the New Year, when the gods not only began the annual cycle anew but also re-created the world. For this reason, a complete reading of *Enuma Elish* (the Babylonian creation account) had become an integral part of the ceremonies in Babylon by the first millennium. The New Year also coincided with

➤ THE SACRED MARRIAGE CEREMONY

The sacred marriage was a major festival about which, unfortunately, tantalizingly little is known. Probably originating in Uruk, the city of Inanna, the goddess of love, and celebrated by the Ur III kings and early-second-millennium kings of Isin, it may have been more widespread, possibly elsewhere involving a marriage between the king and a different deity. The entum priestess at Ur was regarded as the bride of the city's god Nanna, and there are indications that a sacred marriage formed part of the New Year festival here, presumably with the king enacting the part of Nanna and the entum representing his wife, Ningal. A bedroom in the shrine in her residence, the *giparu*, was probably intended for this celebration. Accounts of the ceremony make it impossible to say whether the ritual was purely symbolic, the king spending a night in the goddess's chamber in her spiritual presence, or entailed the actual physical union between the king, representing Inanna's husband Dumuzi, and the goddess, personified by a priestess. Nor is it known whether this took place annually as part of the New Year festival or more infrequently, for example, at the first New Year after the king's accession.

—Jane R. McIntosh

the time of the barley harvest in Babylonia, the high point of the agricultural year. Marduk, as chief of the gods in later Babylonia, creator of the universe according to *Enuma Elish* and city deity of Babylon, played the central role in the festival.

It opened with purification ceremonies, and rituals began in earnest on the second day. One priest known as *sheshgallu* rose early each morning, washing in river water and offering prayers before the statue of Marduk before opening the doors of the shrine to admit other priests, who performed a number of rituals. On the fourth day the curtains were drawn back from the images of Marduk and his wife, and the Esagila was blessed. Later in the day the sheshgallu recited the whole of *Enuma Elish*.

On the fifth day an exorcist purified Marduk's shrine by sprinkling it with water. The shrine of Marduk's son Nabu, patron of the nearby city of

Borsippa, was also purified, ready for his arrival in the person of his statue. The shrine was wiped ritually clean with the body of a sacrificed sheep, which was then thrown in the river, carrying away any evil. In Marduk's temple prayers were said, and he and his wife were served a meal. Now came one of the high points of the festival, when the king answered to Marduk for his year's care of Babylonia. Everyone left the cella (the central area of the shrine) except the sheshgallu and the king. The priest removed the king's regalia—scepter, circle, and sword—and placed them before Marduk. He then slapped the king's face and dragged him by the ear before Marduk, forcing him to bow. The king assured the god of his righteousness in avoiding sin and fulfilling his duties throughout the year; he “took Bel [i.e., Marduk] by the hand,” and the priest restored the regalia to him. He then slapped the king again hard. If tears came to the king's eyes, this signified that Marduk was pleased and well disposed. At sunset of the fifth day, a trench was dug in the courtyard outside Marduk's sanctum. Into it were poured oil, honey, and cream along with reeds. The king set this alight and sacrificed a white bull, reciting prayers along with a priest.

What happened during the rest of the festival is not well known. One of the ceremonies involved breaking and burning two divine images made earlier in the festival from valuable wood covered by sheets of precious metal. Statues of Marduk and his divine court were brought together to discuss the fate of the king and the Babylonians, with Nabu recording their decisions. The climax was a great procession that carried these statues in palanquins along the magnificent Processional Way paved with limestone slabs, its walls and the magnificent Ishtar Gate decorated with glazed bricks, blue for the background contrasting with orange low-relief figures of the dragon of Marduk (*mushbusshu*) and the bull of Adad on the gate and lions on the wall. This road led from Esagila through the Ishtar Gate to the Akitu temple outside the inner city wall. The procession, which may have taken more than a day to complete, had seven stages, including each god crossing the Euphrates in his own boat. At the Akitu temple, Marduk was installed in the central shrine, and it is likely that

a ceremony took place commemorating and perhaps reenacting Marduk's great victory over Tiamat.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. *Religion in Ancient Mesopotamia*. Chicago: University of Chicago Press, 2001.
- Dalley, Stephanie. *Myths from Mesopotamia*. Rev. ed. Oxford: Oxford University Press, 2000.
- Jacobsen, Thorkild. *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven, CT: Yale University Press, 1976.
- Kilmer, Anne Draffkorn. “Music and Dance in Ancient Western Asia.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Postgate, J. Nicholas. *Early Mesopotamia*. London: Routledge, 1994.

Where Did the Harappans Worship?

As compared to the great ancient river civilizations of Egypt and Mesopotamia, one feature that stands out when examining the archaeological evidence from the Harappan or Indus civilization is the lack of monumental architecture, especially structures with clear religious functions. In other words, no clear evidence has emerged from ongoing excavations that religious structures such as temples, which abound in modern India, were part of the religious or political landscape of the Indus civilization. However, although there are no temples, some architectural structures from Mohenjo-daro, which along with Harappa is one of the two most significant urban centers, inform us about where the Indus people may have worshipped. From the Great Bath and the College of Priest, both of which are located on the Great Mound at Mohenjo-daro, we have been able to draw some conclusions about the nature of communal worship in the Indus civilization.

The Great Bath and the College of Priests are located in the Mound of the Great Bath, an area set aside and elevated from the Lower Town. The structure of the Mound area indicates that its planners carefully considered the symbolic func-

tion and effect of architecture, since the Mound's elevation effect on a resident of the Lower Town would be to stress the areas' separateness, exclusivity, and dominance. The structures housed in the Mound also shared the symbolic effect of the Mound's elevation. The Mound of the Great Bath stands as a unique structure in the Indus Valley, as there are no other similar mound structures in any other sites except at Kalibanga, which has a separate High Mound but lacks a Great Bath or other related structures.

The most religiously significant structure found in the Mound is the Great Bath. It consists of an open quadrangle with verandas on each of its four sides. On three sides, there are galleries and rooms. There is a series of seven, possibly eight, chambers along the eastern side of the Great Bath. At the center of the open quadrangle there is a large swimming-bath (approximately $39 \times 23 \times 8$ feet). There are two sets of stairs at opposite ends of the swimming-bath leading down into the bath. These stairs are reminiscent of the steps leading to the *ghats* along rivers such as the Ganges and Yamuna. At the time that Mohenjo-daro was occupied, the Great Bath was fully functional. The archaeological evidence suggests that the bath was filled with water. The chambers along the east side of the bath seemed to have functioned as bathing rooms. The universal function and significance of water as both physically cleansing and symbolically purifying is strongly intimated by this structure. Because of its location in the Mound, access to the Great Bath is unlikely to have been universal but rather was limited to individuals within this society who were permitted to use the Great Bath for particular religious rituals.

The College of Priests, excavated by Ernest J. H. MacKay (1888–1943), is a very large building, approximately 230×78 feet (70.3×23.9 meters), located across the street from the Great Bath. The principle entrance to the college seems to have been located along the western wall, facing the Great Bath. Some of the spaces within the college follow the same pattern as that of the northern wall of the Great Bath. Due to its proximity to the Great Bath, the college probably functioned as a building by religious specialist or residential facility for persons who were permitted access to the Great Bath.

Other large houses in Mohenjo-daro that do not fit the general pattern and character of domestic buildings have been excavated, but there is no convincing evidence to indicate that they were used as temples or had any other religious function.

Besides these two structures, there is hardly any evidence of monumental architecture in Mohenjo-daro or in other part of the Indus civilization. No clear examples of structure with a religious function, such as temples, have been found. From the lack of such architecture, archaeologists agree that the primary expression of worship in the Indus civilization was an individual or family obligation.

—Carlos Lopez

Bibliography

- Jansen, M., M. Mulloy, and G. Urban. *Forgotten Cities on the Indus: Early Civilization in Pakistan from the 8th to the 2nd millennium B.C.* Mianz: Verlag Phillip von Zabern, 1991.
- Marshall, Sir John Hubert. *Mohenjo-daro and the Indus Civilization.* London: Arthur Probsthain, 1931.
- Possehl, Gregory L. *The Indus Civilization: A Contemporary Perspective.* Walnut Creek, CA: Alta-Mira, 2002.

Changes in Chinese Ritual Practice during 4000–1000 BCE

The vast area known as China experienced great cultural diversity during the late Neolithic and Early Bronze Age. Attempts at grasping this diversity in general terms would not do justice to it, nor would it be possible. However, some regions in northern and eastern China have been better researched than others, thereby offering valuable case studies on ritual practice for the period toward the end of the Neolithic (ca. 4000–2000 BCE). Even better evidence for ritual exists for the Early Bronze Age (ca. 2000–1000 BCE), which saw the advent of the first historical dynasties in China.

Unlike the Mediterranean world, where temples were made of durable materials such as stone, monuments of this kind are notably absent from the Chinese archaeological record. Most buildings were made of ephemeral wood on earthen platforms, and the exact function of

► BRONZE RITUAL VESSELS FROM A TOMB AT ANYANG

A set of bronze ritual vessels was unearthed from the late Shang period (ca. 1250–1050 BCE) tomb no. 18 at Anyang, Henan Province. These vessels were the typical funeral trappings of a lesser member of the Shang elite. Their presence in the tomb illustrates the emphasis on wine over food vessels, which is characteristic of the ritual vessel assemblages of this period. It is not clear if this reflects the importance of wine in Shang ritual or a more generalized importance of wine in Shang society.

—Sascha Priewe

these remains open for debate. Thus, the overwhelming evidence for ritual and religious activities comes from excavated cemeteries. One notable exception to the use of ephemeral materials is the complex at Niheliang, near Chifeng city in Inner Mongolia, that consists of a group of cairns and a semisubterranean structure that may have been a temple, all dated to circa 3500 BCE. The cairns were furnished with large amounts of jade objects in the shape of turtles, birds, tubes, and coiled creatures identified as dragons. Jade has always been a conspicuous medium in China due to its durability and translucency. Its appearance in Neolithic tombs may not only mark the deceased's status but may also have some ritual significance. The structure is a cross-shaped pit building from which sculpted clay in the form of a pregnant female and a face with inset jade eyes were recovered. These finds were linked to a fertility cult, but we cannot be sure what activities were actually carried out since the building was only partially excavated. However, we can reasonably conclude that some sort of ritual was played out in this landscape.

A comparison between two regions of Neolithic China illustrates the different forms of ritual activities prevailing during this period. The first example is the Dawenkou culture (ca. 4200–2500 BCE) in Shandong Province on the east coast. Evidence from cemeteries reveals that the pottery buried with the deceased included tall-stemmed goblets, known as *gu*, and high-

stemmed food serving dishes, known as *dou*. This shows that the consumption of beverages, possibly alcohol, and of food may have been central to the funerary rites of this region. By contrast, the funerary rites as mirrored in the grave goods of the Machang phase of Majiayao culture (ca. 2300–2000 BCE), along the upper reaches of the Yellow River in China's northwest, show a different emphasis. Most tombs contained large numbers of a type of globular jar with a lavishly painted upper half. These jars may have been used for storing grains, although the jars buried with the deceased may have only been a symbol of this function and were not actually used in this way. This suggests that rituals emphasizing the communal accumulation of goods in the case of the death of a community member were in place. This comparison illustrates the diversity of ritual during the late Neolithic and particularly the different ways in which societies took care of their deceased.

The use of goblets made of eggshell-thin pottery and associated ritual practices continued into the following period, known as Longshan culture (2500–2000 BCE). Roughly contemporary with this period is the so-called Liangzhu culture (ca. 3300–2200 BCE) in the Lower Yangzi Delta. Its burials illustrate the entirely different nature of ritual in this region. Here, large man-made mounds constitute what is considered to be the burial grounds of the elite. The tombs on these mounds were furnished with large numbers of jades, such as disks with a circular central hole, called *bi*, and square tubes with a circular cross section, called *cong*. Although we cannot know the exact function or meaning of these objects, there is a high probability that these were used in rituals. Many scholars have inconclusively argued that these jades were used in the communication between heaven and earth, and some have even gone so far as to say that they were employed in shamanist activities. However, the exact nature of these practices remains elusive; notably, the question of shamanism as part of religion in late Neolithic and Bronze Age China remains unresolved. What is definite is that during the Neolithic, people cared for their dead in a very thoughtful and orderly fashion in relation to philosophical and religious beliefs.

The worshipping of ancestors was a central concern in Bronze Age religion, and some aspects of ancestral cults may have already been in place during the Neolithic. From circa 1800 BCE onward, when bronze vessels were cast for use in ancestral rituals, ritual practice in North-Central China was transformed dramatically. The first vessels were found in tombs at the Erlitou site in Henan Province. Architectural foundations, such as that of a courtyard with a central building on a pounded-earth platform, were also unearthed at Erlitou. Although the function of this complex is unclear, it can be estimated that if used for religious activities, it would have been big enough to accommodate a large audience.

During the following Erligang phase (ca. 1600–1300 BCE), commonly regarded as the early stage of the Shang dynasty, the bronze vessel repertoire became more varied. The finest vessels come from three pits believed to be sacrificial deposits at Zhengzhou, Henan Province. They all contained *fangding*, or large square food vessels on four feet, as well as a number of wine vessels. Assuming that these vessels were used together in offerings to the ancestors, it is important to note that both food and wine vessels are found in approximately similar numbers. Unlike the later Anyang period (ca. 1250–1050 BCE), the ritual did not primarily involve the consumption of alcohol. This impression derived from the bronze vessel assemblages found in tombs dated to the end of the Shang dynasty. The majority of vessels were goblets, pouring vessels, and containers for wine. At Anyang we may also have evidence for an actual ritual site, since a small building was found to have stood on top of the tomb of Fu Hao (Lady Hao, d. ca. 1200 BCE), a consort of King Wu Ding, of what may have been a shrine to worship her memory. Additional evidence for late Shang ritual comes from the many pits containing human and animal sacrifices that accompanied the burials of high-ranking members of Shang society. Although human and animal sacrifice also occasionally occurred during the Neolithic, the Shang nobles realized them on a hitherto unprecedented scale.

Just as important as the bronze vessels—which were not only used in life for offerings to the ancestors but were also buried in tombs for the occupants to continue this practice in the

afterlife—is the divination practice associated with so-called oracle bones. There is evidence that the shoulder blades of oxen and the shells of turtles had been used for foretelling the future since circa 3500 BCE. The bones were deliberately cracked by applying heat to them. The cracks were then read by ritual specialists. Only by circa 1250 BCE do we know of the precise nature of the divination, since oracle bones began to be inscribed with the questions asked to the ancestors and the answers given as result of the interpretation of the cracks. This form of divination was employed to investigate the success of the king in a number of matters such as military endeavors, the health of the king and his consort, and also the weather and agriculture. Thus, in using both bronze vessels and oracle bone divination, the Shang rulers attempted to secure the benevolence of their ancestors for the benefit of the state.

Only during the Early Bronze Age can we speak of ritual forms reasonably identifiable on the basis of the oracle bone inscriptions and increasingly also inscriptions on bronze vessels. The wide distribution of very similar bronze vessels across parts of North and central China during the Erligang period suggests that similar religious practices were in effect across a large territory, although this may have only affected major centers. This appears to have changed during the Anyang period when local cultures, for example, along the Yangzi River in southern China created their own very distinct bronze vessels. This suggests that very different ritual practices were carried out in these southern regions at this time. It appears that at no time during 4000–1000 BCE can we speak of ritual unity in China, as there does appear to be great regional diversity.

—Sascha Priewe

Bibliography

- Allard, Francis. "Mortuary Ceramics and Social Organization in the Dawenkou and Majiayao Cultures." *Journal of East Asian Archaeology* 3:3–4 (2001): 1–22.
- Chang, K. C. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1986.
- Rawson, Jessica. "Ancient Chinese Ritual Bronzes: The Evidence from Tombs and Hoards of the Shang (c. 1500–1050 BC) and Western Zhou

(c. 1050–771 BC) Periods.” *Antiquity* 67 (1993): 805–823.

Thorp, Robert L. *China in the Early Bronze Age: Shang Civilization*. Philadelphia: University of Pennsylvania Press, 2006.

Shang Religious Practices—Burial Pits, Human Sacrifice, and Ancestor Veneration

Sacrifices of humans, animals, and objects were important components of the Shang belief system. Archaeologists find the remains of sacrificial ceremonies preserved in pits; the burying of the sacrificial victim seems to have been the final step in the ritual. Roasting meat and sweet millet wine were, it was thought, pleasing to the various deities worshipped by the Shang. Dismemberment of animals and humans was similarly important. Human sacrifice seems to have been an important part of the veneration of Shang kings, both living and dead.

More than 2,000 of these sacrificial pits have been identified at the late Shang capital of Anyang (ancient Yin) alone. Most of these pits are oriented north to south and are rectangular in shape. There is not much consistency about what is contained in the pits. Sometimes they are full of skeletons, sometimes only heads, and some-

times headless torsos, and they often contain more than one person. Animals and objects are frequently included in the burial pits as well. Who these sacrificial victims were is not entirely clear. They were probably a combination of people captured in battle and offered by subservient villages or regions as tribute, but this is far from certain. Regardless of the theological justifications, the fact that a king or religious functionary could demand a human sacrifice marks a substantial degree of power.

David Keightley has argued that it is possible to discern social ranking among the sacrificial victims interred directly in tombs, especially at the cemetery of Xibeigang. Guardians were buried with weapons, their bodies intact close to the bottom of the tomb so as to protect the deceased. Dogs were also buried in this level, possibly also for protection. Some were buried with bodies intact in their own coffins; they were probably relatives or servants of the deceased. Young decapitated males were buried in the earthen fill of the tombs; given the violent nature of their execution and the lack of care given in the treatment of their remains, these may have been enemies captured in battle.

A few Shang rituals, known from textual sources (mostly offhand references in divination texts), involved the veneration by the Shang king of his ancestors. The *bin* ritual and the *xiang* ritual (both of which are not well understood for this period) involved some kind of interaction with the ancestors. Divination texts also record a five-ritual cycle in this type of veneration. The people of the Shang culture believed that departed ancestors still played a role in the living world and that one's social ranking remained relatively constant after death. It was of vital importance that rituals surrounding funerals were performed accurately in order to facilitate the transformation of the deceased into a living ancestor.

Royal ancestor veneration was thus more elaborate since these ancestors were still perceived as holding power in the earthly realm. In fact it was the king's relationship to these deceased ancestors that legitimized his authority on earth. Each royal ancestor was given a spirit tablet, which was kept in a temple. Some individual kings and royal consorts had temples created

► THE SACRIFICIAL PITS AT SANXINGDUI

One of the most spectacular finds in Chinese archaeology is of a sacrificial burial pit, contemporaneous with the Shang dynasty but outside of the Shang sphere of influence, at Sanxingdui in Sichuan. Two great pits had been dug in antiquity and filled with animals and ritual objects. The contents were set afire and, after burning, were buried. Archaeologists have unearthed more than 700 artifacts from the two pits along with the carbonized remains of the animal sacrifices. Objects of gold, bronze, and jade were preserved. Forty bronze human heads and masks were found; these were not realistic human images but highly stylized figures. Cowrie shells and tusks were also included in the ritual burning and burial.

—Kevin M. McGeough

specifically for their veneration; these temples were maintained long after the death of the venerated ruler.

—Kevin M. McGeough

Bibliography

Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.

Bagley, Robert. "Shang Archaeology." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by

M. Lowe and E. Shaughessy. Cambridge: Cambridge University Press, 1999.

Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.

Debaine-Francfort, Corinne. *The Search for Ancient China*. Discoveries Series. New York: Harry N. Abrams, 1999.

Scarpari, Maurizio. *Ancient China: Chinese Civilization from the Origins to the Tang Dynasty*. Vercelli, Italy: White Star, 2000.

■ Introduction: Diviners, Shamans, and Other Specialists of the Unseen World

Those who understood the will of the gods and knew how to communicate with them, those who knew how to harness some of the powers typically reserved for deities, and those who claimed to fully understand the unseen or supernatural world were among the most influential individuals in the societies of the ancient world. These people could exert influence over the king, advising him on particular courses of action. These people also ran the risk of seeming too dangerous to their community, given the kinds of sentences given to those found guilty of practicing witchcraft according to the legal records of ancient Mesopotamia. It can be difficult to differentiate science and magic in the ancient world, especially since these were not conceptually separate areas of study in antiquity. Medicine and the interpretation of dreams certainly could be considered as either.

Of these arcane types of knowledge, the most rigorous was divination. Not really fortune-telling in the way that we think of it today, diviners attempted to communicate with the gods or attempted to understand signs that the gods had sent to the earth as messages. Astrology and hepatoscopy (the study of entrails, usually the livers, of animals) were the most common and the most rigorous in the ancient Near East. In China, tortoise shells were the medium of choice for these kinds of practices. These were scientific, in one sense of the term, in that they were based on empirical observations: correlations of

various phenomena with sociopolitical events. Divination was incredibly complex and sophisticated, requiring years of training and practice. These practices were taken quite seriously, and in fact writing may have been invented in China for this purpose. These practices were especially important in planning military strategy; a good or a bad omen could help a king decide when to go on a military campaign. In some cases, magicians were part of the military strategy.

—Kevin M. McGeough

Hepatoscopy

Hepatoscopy (from a Greek term meaning "inspection of the liver") is the practice of examining the liver of a sacrificial animal, usually a goat or sheep, to look for encoded communications from the gods. Although hepatoscopy developed independently as a divination technique in several world cultures, it is first attested in cuneiform sources from ancient Mesopotamia in the third millennium BCE. In fact, hepatoscopy was among the most important techniques of Mesopotamian omen science, the evidence for which has come down to the present through cuneiform clay tablets written in the Sumerian and Akkadian languages. The most common animal used for hepatoscopy was a sheep or lamb, although goats and birds were also sometimes used. In this context, ancient peoples believed that a divine message appeared in the condition

► LIVER MODELS

Beginning in the third millennium BCE, diviners in Mesopotamia manufactured models of the sacrificial animal's organs. These models are readily identifiable today because of their anatomical precision and realism. Liver models are the most common, but the lungs, spleen, and intestines were also represented. Such models have been discovered throughout Mesopotamia, the Levant, Cyprus, and Anatolia in houses, palaces, and temples. The primary material that the diviners used for these models was clay, although a few ivory models are also known from the thirteenth-century Ugarit on the Syrian coast. By the late first millennium the practice of manufacturing liver models had spread to Italy, where an Etruscan bronze liver model was found.

The earliest known piece is a model spleen from mid-third millennium Mari on the Euphrates. By the early second millennium BCE diviners in southern Mesopotamia, the Diyala River basin, and at Mari began to inscribe some liver models with cuneiform texts in the Akkadian language. Later models also used the Hittite or Ugaritic languages native to Anatolia and Syria. The production of inscribed liver and lung models continued in first-millennium Mesopotamia.

The models appear to fit into the two broad categories of hepatoscopy: reports and compendia. The difference from the other sources is that liver models physically represent the marks and abnormalities that texts can only describe. Some



Clay model of a liver for divination, early second millennium BCE. (Erich Lessing/Art Resource, NY)

models appear to represent a single act of hepatoscopy and are therefore like the written reports. Others appear to have been used for educational purposes. These models would teach the diviner the appearance and interpretation of various possible configurations of the liver, reinforcing what he learned from copying omen collections.

—Matthew T. Rutz

of the animal's liver: its shape, color, and general anatomy. The arrangement of these anatomical features was thought to come as the answer to a specific question about one of the many universal anxieties of the human condition. Personal, political, military, economic, and religious affairs are all prominent in the hepatoscopy literature. More general terms used by modern scholars to refer to hepatoscopy are "extispicy" and "haruspicy" (both meaning "inspection of the internal organs"), which derive from the Latin vocabulary used much later by the ancient Romans to describe similar divination methods.

The earliest historical evidence comes from the mid-third millennium BCE. King Ur-Nanshe of Lagash (ca. 2500 BCE) reports that he chose a

high religious functionary by means of hepatoscopy (literally "chosen by means of a goat"), a practice that continued into the early second millennium BCE. In the mid-third millennium there were also lists of various professional titles, among which were the titles used by the practitioners of hepatoscopy, the diviners. The diviner bore the title "he who extends (his) hand (into) the goat" or simply "he of the goat." In the second millennium another common word for the diviner was "seer." Calling a diviner a seer did not mean that he was a clairvoyant or medium. "Seer" was simply a shorthand description of the diviner's ability to examine and interpret an animal's internal organs. This craft was no innate, psychic ability: there is evidence that diviners

undertook many years of education and apprenticeship to train for a career as a diviner. Once established, the diviner frequently went out on military campaigns to ensure divine approval of the king's attack strategy or peace negotiations. Because of these political and military involvements, there is good reason to believe that diviners functioned in part as diplomats, spies, and military consultants. Because of their enmeshment in international and court intrigue, diviners were made to swear oaths of loyalty to the kings who employed them. Much of our knowledge about diviners comes from letters between kings and their diviners.

There are four important types of sources for the practice of hepatoscopy in the second millennium BCE: rituals, reports, omen collections, and models. The diviner's ritual was a complex affair. First, he had to purify himself using cedar and tamarisk. The animal that was to be sacrificed had to be pure, unshorn, and without blemish. The animal, usually a sheep or goat, was referred to as an offering. The diviner posed a question on behalf of his client, whispering the question in the ear of the sacrificial animal. The diviner then requested that the gods write favorable signs on the animal's entrails, which in some texts are referred to as the (cuneiform) tablet on which the gods wrote their answer. The animal was dedicated to both Shamash, the sun god, and Adad, the storm god, and then slaughtered. Some of what the diviner said was fixed in writing. He typically addressed the sun god in his role as lord of justice as well as the storm god, who was the lord of hepatoscopy. The materials and symbolism of this exchange are derived from Mesopotamian legal tradition. The diviner then recited a prayer in which he requested the specific configuration of the animal's internal organs that he hoped to see. The diviner interpreted and sometimes recorded the results of the examination in a hepatoscopy report.

In the second millennium BCE diviners in Mesopotamia would occasionally write short reports of the results from the examination of a specific animal's organs. Many of these texts are dated to the reign of a particular king. The reports contained a basic physical description of certain aspects of the entrails: the position, condition, and features of the liver, gall bladder, lungs,

stomach, and intestines. Some reports were included in letters, but the most detailed texts contained only the description of the procedure's results. Using his specialized training in anatomy and interpretation, the diviner would tally up the total number of positive and negative marks on the various organs. If there were more positive marks than negative portents, the overall outcome of the inquiry was positive and vice versa. Results of a report were only valid for a particular period of time. Because it was necessary to repeat the procedure over time, hepatoscopy was big business. One record notes the numbers of sheep required for hepatoscopy each month, typically between 300 and 700. In a few instances a report contained brief mention of the reason for the query: the prospects of a new business venture, the likelihood that a god will cease to be angry (probably a euphemism for illness or other misfortune), or the meaning of a recurring dream. The report texts are particularly important for the history of hepatoscopy because they sometimes contain the name of the person for whom they were produced. Reports are thus one realm where we see figures other than the king using hepatoscopy to shape their lives. The hepatoscopy reports also give some hints as to how diviners earned their daily income.

The collections of hepatoscopy omens are often called compendia. The first systematic records of hepatoscopy date from the eighteenth century BCE. The omen tradition was already highly structured by this point, which has led scholars to believe that the first organization of the material came much earlier. If it existed, this earlier stage is not preserved in the archaeological record we have before us. Hepatoscopy tablets were probably copied as educational tools for apprentice diviners and as reference works for the practice of divination. By the latter half of the second millennium these collections were found throughout Mesopotamia, southwestern Iran, Syria, and Anatolia. These hepatoscopy omen collections later became long, elaborate treatises attested in the first millennium. Near the end of the second millennium, some unknown diviners brought together a variety of different texts and created an ancient composition called the seer's craft. This work consisted

of thousands of omens collected in about 100 sections, or tablets, that in turn were organized into ten chapters. In all periods these texts list omens that correlate the state of some aspect of the liver or entrails with a particular event in the world. The liver omens follow the basic “If A, then B” pattern common to all facets of Mesopotamian omen science. For example, an early second-millennium liver omen recounts the meaning of the appearance of “Weapon marks” on different areas of the part of the liver called the “View”:

“If at the top of the View there are two Weapon marks on the right and left facing each other: some king will write to you about a peace settlement; you will accept his peace settlement; in a revolt you will keep away from his cattle.

“If in the middle of the View there are two Weapon marks on the right and left facing each other: undecided result.

“If at the base of the View there are two Weapon marks on right and left facing each other: you will write to some king about a peace settlement; you will accept his peace settlement; in a revolt he will keep away from your cattle.”

Most of the results (“then B”) of these omens bear some relation to the fate of the king and the land: the death of the king or someone in his family; plots against the king; uprisings in the land; a long, enduring reign and victory in battle against some enemy; natural catastrophes; or a bountiful harvest. Sometimes the omens are even cast in the first-person “my troops” as opposed to “the king’s troops,” even though we have no reason to believe that the king himself actually authored any of these texts.

—Matthew T. Rutz

Bibliography

- Farber, Walter. “Witchcraft, Magic, and Divination in Ancient Mesopotamia.” In *Civilizations of the Ancient Near East*, Vol. 3, edited by Jack M. Sasson. 1995; Reprint, Peabody, MA: Hendrickson, 2000.
- Heimpel, Wolfgang. *Letters to the King of Mari*. Mesopotamian Civilizations 12. Winona Lake, IN: Eisenbrauns, 2003.

Jeyes, Ulla. *Old Babylonian Extispicy: Omen Texts in the British Museum*. Publications de l’Institut historique-archéologique néerlandais de Stamboul 64. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul, 1989.

Koch-Westenholz, Ulla. *Babylonian Liver Omens: The Chapters Manzāzu, Padānu and Pān Tākalti of the Babylonian Extispicy Series Mainly from Aššurbanipal’s Library*. Carsten Niebuhr Institute Publications 25. Copenhagen: Museum Tusculanum Press, 2000.

Lambert, Wilfred G. “Questions Addressed to the Babylonian Oracle. The *Tamītu* Texts.” In *Oracles et prophéties dans l’antiquité: Actes du Colloque de Strasbourg, 15–17 juin 1995*, edited by Jean-Georges Heintz. Paris: De Boccard, 1997.

Michalowski, Piotr. “How to Read the Liver—In Sumerian.” In *If a Man Builds a Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty*, edited by Ann Guinan et al. Cuneiform Monographs 31. Leiden: Brill, 2006.

Richardson, Seth. “Ewe Should Be So Lucky: Extispicy Reports and Everyday Life.” In *Mining the Archives: Festschrift for Christopher Walker on the Occasion of his 60th Birthday*, edited by Cornelia Wunsch. Babylonische Archive 1. Dresden: ISLET, 2002.

Starr, Ivan. *The Rituals of the Diviner*. Bibliotheca Mesopotamica 12. Malibu: Undena Publications, 1983.

Veldhuis, Niek. “Divination: Theory and Use.” In *If a Man Builds a Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty*, edited by Ann Guinan et al. Cuneiform Monographs 31. Leiden: Brill, 2006.

Mesopotamian Omen Science

Mesopotamian omen science was not science as it is understood today. Though based on empirical observations about the natural world, Mesopotamian omen science blurred the boundaries between what we know as science and religion, which did not exist as separate categories in Mesopotamian thought. Rather, omen science was a specific kind of knowledge derived from detailed observations of the natural world. Specifically, this knowledge was concerned with looking for and reading signs encoded by the gods in the fabric of everyday life. These empirical observations were then coupled with a belief that the correct interpretation of the signs could predict seemingly unrelated events. Using the

cuneiform writing system, ancient diviners wrote down these observations and predictions on clay tablets. The format of these omen collections was “If A: then B.” The proposition made in the statement “If A” is called the protasis. The result, “then B,” is called the apodosis. This formulation of cause and effect is common to omens, Mesopotamian medical texts used for diagnosis and prognosis, and Mesopotamian law collections, such as the famous Code of Hammurabi. Sometimes modern scholars can discern what connects A and B in a particular omen. More often than not, the ancient thought process behind the association is completely obscure. The schematic nature in which Mesopotamian omens were written was also the basis for theoretical elaboration. As written, omen traditions developed in the second and first millennia BCE, and there was an increasing tendency to move beyond what was strictly observable in the natural world. The result of this creative process was that the omen collections sometimes came to treat physically impossible or improbable cases.

Diviners looked for divine signs almost everywhere. Some of the earliest collections of omens are from the realm of hepatoscopy, the examination of an animal’s entrails. Other omens were taken from the casting of oil onto water or water onto oil and then observing the visual effects such as color or brightness. Still other omens were drawn from the behavior of smoke from incense sprinkled on a censer. For example,

“If when you sprinkle incense (on the censer) the glow varies in intensity: Your army will defeat an enemy.

If when you sprinkle incense (on the censer) the coals consume it, and afterwards the glow varies in intensity: An enemy will defeat your army.”

The next lines in the same text deal with the right-left symbolism that occurs throughout Mesopotamian omen literature, where the right is positive and the left negative.

“If when you sprinkle the incense (on the censer), (the smoke) goes to its right and does not go to its left: You will prevail over your adversary.

If when you sprinkle the incense (on the censer), (the smoke) goes to its left and does not go to its right: Your adversary will prevail over you.”

These omens are what modern scholars call provoked omens, since the diviner does something, provoking the gods to respond, and then observes and interprets the signs.

Other omens were unprovoked. Celestial omens were derived from observing the sky by night and day. Omen traditions were also constructed around good and bad days of the calendar year for performing certain activities, such as building a house or eating a particular food. Still other omens were derived from the human world, for example,

“If a city is set on a high place: Living in that city will not be good.”

In these cases the diviner simply observed the world around him. Unusual natural occurrences must have particularly grabbed diviners’ imaginations. For example, teratology, the study of abnormalities in babies at birth, provided one source for signs:

“If an abnormal birth is like a wolf: There will be a plague in the land.

If an abnormal birth is like a brick: Hard times will seize the land, and the value of the standard measure will fall.

...

If an abnormal birth has no bladder: The torrent in the river will be stopped; rain in the sky will be scarce.

If an abnormal birth has the face of a lion: There will be a harsh king, and he will weaken that land.

If an abnormal birth has the face of a bird that is an evil omen: That land will experience famine; its enemy will prevail over it.

...

If an anomaly has no tongue: The reign will be the reign of a wicked person; liars will rise up and destroy the land.”

There were relationships among various types of divination. As in ancient Rome in the

first millennium BCE, these omens show that Babylonian diviners sometimes observed the behavior of birds as ominous events. Other omens could be derived from animal or human behaviors, such as the behavior of a sheep just before it was to be sacrificed. Human behaviors and appearance were also sources for signs. For example,

“If a man’s clothes keep falling off: There will be confusion.

If a man looks at another man he knows and does not recognize him: That man is entrusted to the hands of death.

If a man winks with his right eye when he looks at something: He will experience hardship.

If a man winks with his left eye when he looks at something: He will experience righteousness.

If a man blinks with both of his eyes: His head has been struck, and just as his head has been struck, so also his mind will be struck.

If a man’s hair is red like dyed wool: That man will never have peace of mind.”

Dreams were an obvious source for omens. Necromancy, asking questions of the dead, is only very rarely attested in ancient Mesopotamia.

Divination and diviners are described in Sumerian texts from the third and early second millennia BCE. However, it is significant that almost no omens are known to have been written in Sumerian, and those that have been identified appear to be later translations from Akkadian. Observations of the natural world were written down in Akkadian and compiled for the first time to form extensive divination handbooks in the early second millennium. The vast majority of this literature was written in Akkadian, which continued to be the primary language of omen science throughout the first millennium BCE as well. In some regions outside of Mesopotamia omens were composed in or translated into local languages. Many Hittite and Hurrian omen collections are known from Anatolia and Syria. A few collections of omens were written in alphabetic Ugaritic in Syria, and Elamite omens have been discovered in present-day Iran. In the first

millennium BCE a magical system was developed to try to avert the dangers foretold by bad omens.

—Matthew T. Rutz

[Translations by Matthew T. Rutz.]

Bibliography

- Bottéro, Jean. *Mesopotamia: Writing, Reasoning, and the Gods*. Translated by Zainab Bahrani and Marc Van De Mieroop. Chicago: University of Chicago Press, 1992.
- Brown, David. *Mesopotamian Planetary Astronomy-Astrology*. Cuneiform Monographs 18. Groningen: Styx, 2000.
- Finkel, Irving L. “Necromancy in Ancient Mesopotamia.” *Archiv für Orientforschung* 29–30 (1983–1984): 1–17.
- Guinan, Ann K. “A Severed Head Laughed: Stories of Divinatory Interpretation.” In *Magic and Divination in the Ancient World*, edited by Leda J. Ciruolo and Jonathan L. Seidel. Ancient Magic and Divination 2. Leiden: Brill/Styx, 2002.
- Guinan, Ann K. “Divination and Prophecy: Mesopotamia.” In *Religions of the Ancient World: A Guide*, edited by Sarah Iles Johnston. Cambridge: The Belknap Press of Harvard University Press, 2004.
- Koch-Westenholz, Ulla. *Mesopotamian Astrology: An Introduction to Babylonian and Assyrian Celestial Divination*. Carsten Niebuhr Institute Publications 19. Copenhagen: Museum Tusculanum Press, 1995.
- Larsen, Mogens Trolle. “The Mesopotamian Luke-warm Mind: Reflections on Science, Divination and Literacy.” In *Language, Literature, and History: Philological and Historical Studies Presented to Erica Reiner*, edited by Francesca Rochberg-Halton. American Oriental Series 67. New Haven, CT: American Oriental Society, 1987.
- Leichty, Erle. *The Omen Series Šumma izbu*. Texts from Cuneiform Sources 4. Locust Valley, NY: J. J. Augustin, 1970.
- Maul, Stefan M. “How the Babylonians Protected Themselves against Calamities Announced by Omens.” In *Mesopotamian Magic: Textual, Historical, and Interpretative Perspectives*, edited by T. Abusch and K. van der Toorn. Ancient Magic and Divination 1. Groningen: Styx, 1999.
- Rochberg, Francesca. “Old Babylonian Celestial Divination.” In *If a Man Builds a Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty*, edited by Ann K. Guinan et al. Cuneiform Monographs 31. Leiden: Brill, 2006.

Shang Oracle Bones

At the turn of the twentieth century, scholars noticed that some so-called dragon bones were inscribed with ancient writing and other marks consistent with traditional accounts of divination practices from the Shang era. Rather than grinding these bones for medicinal purposes, growing numbers of scholars and scavengers searched for the source of these bones, which led to a series of important discoveries beyond these records of divination and the earliest form of Chinese writing. Subsequent excavations near Anyang have unearthed approximately 200,000 oracle bone fragments from the late Shang, twelfth, and early eleventh centuries BCE. The modern discovery of these bones excited great interest because they provided archaeological evidence both of early divination practices and of the historicity of the second millennium BCE Shang Dynasty, whose kings reigned from around the eighteenth or seventeenth centuries to the eleventh century BCE. Prior to the discovery of these bones, the oldest written records in China came from the Zhou (Chou) dynasty, which became powerful in the eleventh century BCE. Now the Shang is earliest of the traditional eras with written records to unambiguously verify its historicity. Furthermore, analysis of the oracle bones provide insights into Shang practices and concerns without the filter of Zhou historians, who justified their dynasty's rule by recounting how virtuous Zhou rulers displaced dissolute Shang kings. The Shang may yield this status of earliest verifiable dynasty to the Xia (Hsia) if ancient sites, such as Erlitou, can be more definitively associated with Xia rather than Shang culture; however, traditional notions of sequential succession from Xia to Shang to Zhou have given way to models of overlapping eras.

In addition to advancing the understanding of early dynastic history and culture, the oracle bones are particularly instructive for understanding divination practices in ancient China. Shoulder blades (scapulae), taken from cattle and related large animals, along with the underside portions of turtles' shells (plastrons) were especially popular for divination, as each provided a broad, flat surface. Shang-era diviners made partial holes in the reverse side of oracle bones, ap-



Shang dynasty oracle bone, Henan, China, second millennium BCE. The bones were used for divination, but provide historians with information about rulers, battles, folk religion and religious rites. (Lowell Georgia/Corbis)

plied heat (some type of fiery poker), observed the resulting cracks, and then wrote out the charge, or proposition, as a record of the divination. In fact, this early form of divination is synonymous with crack making, and the corresponding Chinese character signifying divination, *pu* (卜), retraces the most common crack form, which was guided by the hollows bored into the reverse side of the oracle bones. Although it is not entirely clear how the cracks were read, many of the bones include writing that announces the subject of the divination, such as a proposition concerning crops, health, royal excursions, alliances, childbirth, weather, or warfare. Some oracle bones even include notes of how the Shang kings had interpreted the divination, and a very few report the outcome.

These charges inscribed onto oracle bones were often asked in both the negative and affirmative to more conclusively determine whether a sacrificial offering had been received satisfactorily, whether a planned sacrifice was appropriate in terms of the offering and recipient, what had gone wrong in the past, or what prognostication could be discerned about the future well-being of crops, kings, and their kingdoms. Although often discussed as questions directed to gods, spirits, and ancestors, most charges are in the form of statements, which might be seeking favor more than a mere forecast. For example, "If millet is planted in ten days, the outcome will

➤ SACRIFICE AND DIVINATION

Shang oracle bones provide evidence of how sacrifice and divination worked together in ancient times much as they do in Chinese religion today. Sacrifice and divination were complementary practices in the reciprocal relationship between humans and gods. Sacrifice involves carefully orchestrated rituals of providing offerings to ancestors and other spirits and gods. While animal sacrifice was most common, written and archaeological records confirm that Shang rulers offered human sacrifices as well. Whatever the offering and to whomever it was directed, there was typically an expectation of obtaining certain practical benefits in return. Divination helps both to confirm the acceptability of a sacrifice and to discern, or perhaps even influence, the will or plans of gods and spirits whose favor and intervention may have been solicited or whose wrath may have been propitiated through sacrifice improperly performed.

—John Harding

be favorable.” “There will be rain.” “There will not be rain.” “We should offer to Father Xin three sheep.” “An alliance with such and such a kingdom will lead to benefit.” “Shang Di might not offer assistance if the king should join Zhi Guo in an alliance.” “There will be no misfortune this evening,” or “there will be no misfortune this ten-day ritual week.” “It is an auspicious time for a battle,” or “it is an auspicious time for a hunt.” “The king’s illness is due to Father Geng cursing him.” This last statement is representative of a category whereby some disaster has happened already and divination is used to determine whether the misfortune is due to an ancestor, such as this deified former king, or a ritual mistake. Divining the cause of misfortune helped to determine and direct subsequent sacrifices and divination.

While much of the later divination in Chinese religion relates to more abstract concepts of chance or cosmic change, Shang oracle bone divination was often direct, personal, and focused on practical concerns of the present or near future. For example, in late Shang times,

the king and his court made offerings to the High God, Shang Di (Shang Ti), and to previous kings understood as deified ancestors. Lesser individuals made offerings to lesser spirits including nature deities and their own ancestors. In fact, ancestors may have been the most frequent intended recipients of sacrificial offerings, requests, and propositions presented to them and recorded on oracle bones. Sacrifices and offerings provide for gods and spirits, including ancestors who were thought capable of becoming gods or spirits with a continued interest in their descendants’ welfare. Divination could then be used to see if the offerings were well received. Satisfied gods and spirits can, in turn, assist humans with advice and beneficial intervention. Divination is then the art and science of interpreting their advice, predictions, or plans for intervention through a process of reading propositions, or charges; applying heat to rows of hollows bored into the back of the scapula or plastron; interpreting the resulting cracks; and thereby divining the success of the sacrifice or the recommendation of gods, spirits, or ancestors as well as whether they are likely to provide benefit or at least refrain from harm.

Translations of oracle bones demonstrate that these charges were often composed as rather simple statements. Numerous oracle bones record that the proposition was repeated two or more times in both its affirmative and negative forms to more fully verify the response divined from gods and spirits. Avoiding ambiguity in the proposition and repeatedly performing the charge in each of these forms is consistent with practical aims of sacrifice and divination in this era as opposed to the more abstract and philosophical readings, interpretations, and commentaries that develop around later forms of I-Ching divination.

While maintaining clear goals of present benefits, Shang divination did evolve. The last phases of Shang oracle bone divination are characterized by more scheduled charges to deified ancestors designed more narrowly and consistently to ward off harm or misfortune or to confirm good fortune rather than the format of paired affirmative and negative statements or the earlier breadth of divinatory topics. Nonetheless, the vast array

of oracle bone records demonstrate closely related religious and political concerns that emphasize the important role of proper ritual activity performed to please or at least propitiate gods and spirits. To propitiate is to appease or pacify gods or spirits who might otherwise be angry and might cause harm in their anger or dissatisfaction. There is clear evidence from later eras of Chinese history of related practices and relationships with gods, spirits, and ancestors who were understood to be active in the world and capable of both benefit and harm. Although oracle bone divination declined during the long Zhou period, these underlying principles continued to influence Chinese religious beliefs and practices in ways that remain evident today. As a result, divination and sacrifice remain popular even as religious practices shifted long ago from using scapulae and plastrons to divine the will of gods, spirits, and ancestors to using yarrow stalks, coins, or moon blocks (wooden crescents with convex and flat sides) to confirm divinatory messages.

—John Harding

Bibliography

- Allan, Sarah. *The Shape of the Turtle: Myth, Art and Cosmos in Early China*. New York: SUNY, 1991.
- Chang Kwang-chih. *Shang Civilization*. New Haven, CT: Yale University Press, 1980.
- Keightley, David N. "Late Shang: China's First Historical Dynasty." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by Michael Loewe and Edward Shaughnessy. Cambridge: Cambridge University Press, 1999.
- Keightley, David N. "The Shang Divination: The Magico-Religious Legacy." In *Explorations in Early Chinese Cosmology*, edited by Henry Rosemont Jr. JAAR Thematic Studies 50/2. Chico, CA: Scholars Press, 1984.
- Keightley, David N. *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China*. Berkeley: University of California Press, 1979.
- Royal Ontario Museum and Hsu Chin-hsiung. *The Menzies Collection of Shang Dynasty Oracle Bones*. 2 vols. Toronto: Royal Ontario Museum, [1972]–1977.
- Shirokauer, Conrad, and Miranda Brown, eds. *A Brief History of Chinese Civilization*. 2nd ed. Belmont, CA: Thomson/Wadsworth, 2006.

Early Evidence of the I Ching

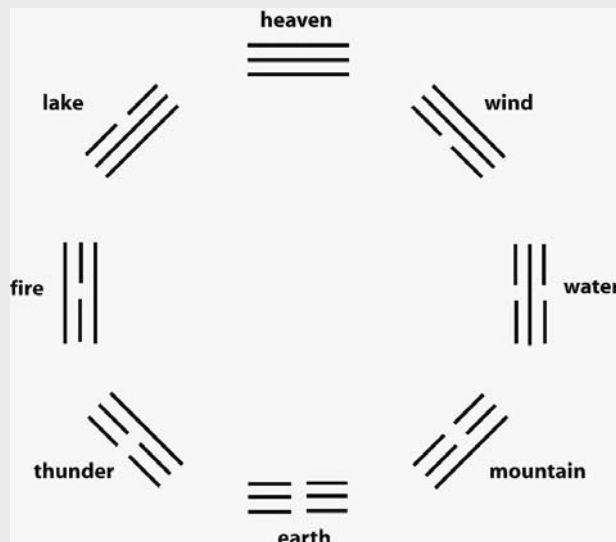
The *Yijing* (*I Ching*) is understood to be one of the most ancient and important texts of traditional Chinese culture. It has served as the key manual for divination for approximately three millennia. Moreover, it is an influential source for Chinese cosmology, the first of the Confucian classics, and a guide for individual situations and decisions that remains popular today. Modern scholars in China and abroad now reject traditional beliefs that *I Ching* divination originated with Fuxi (Fu Hsi), the divine culture hero who is also credited with inventing hunting, fishing, and the taming and sacrificing of animals at the beginning of the third millennium BCE. Although the earliest authors are unknown and modern scholars continue to debate dates for various layers of the text, most agree that the *I Ching* has provided guidance since early Zhou times (from near the turn of the second to the first millennium BCE).

Oracle bones provide records of widespread divination in China at least since the earlier Shang era, and the *I Ching* came to be understood as the oldest and most authoritative divination text. According to tradition, Fuxi invented *I Ching* divination and developed the eight foundational trigrams, each possible three-line combination of whole (yang) or broken (yin) lines. Traditional accounts suggest that this vertical set of three lines may have corresponded with the interrelated trio of heaven, humans, and earth. The trigrams endured but were later paired together into the full 64 combinations of six-line hexagrams.

The next three seminal figures in traditional accounts of the *I Ching*'s development are heroes of the Zhou era: King Wen, the Duke of Zhou, and Confucius. King Wen is said to have developed and ordered the 64 hexagrams including an interpretive judgment for each at the transition between the Shang and Zhou dynasties in the eleventh or twelfth century BCE. Consistent with divination elsewhere, these brief summaries of the meaning of each hexagram are open-ended and highly symbolic. Wen's son, the Duke of Zhou, is thought to have composed an analysis of each line of each of the 64 hexagrams.

➤ HEAVEN AND EARTH

Of the 64 hexagrams in the *I Ching*, the first two represent the extremes of yang and yin. The first, called *Qian*, doubles the trigram of heaven, three long unbroken yang lines over three more unbroken yang lines. Its associations are most purely yang with connotations of heaven, male, the ultimate source, and processes of more actively initiating, creating, transforming, asserting, and changing. The second hexagram, *Kun*, doubles the trigram of earth, three short broken yin lines over three more broken yin lines. Its associations are purely yin with connotations of earth, female, and processes of more passively responding, yielding, or receiving. The other 62 variously blend yang and yin lines and are consistent with Chinese cosmology, which sees natural patterns of change in accord with these two complementary yang and yin modes of vital energy, *qi* (*ch'i*). For example, the seasons in an annual solar cycle begin to move toward yin (dark, cold) after attaining the extremity of yang (light, hot) at summer solstice and then return back toward yang after the extremity of yin at the winter solstice. Similarly, the recommendations accompanying these hexagrams represent related complementary extremes rather than opposites, with one hexagram deemed positive



The eight trigrams of the *I Ching*.

and the other negative. Both indicate auspicious possibilities but recommend different ways to approach a situation consistent with more active and transformative yang characteristics or more receptive and harmonizing yin sensibilities.

—John Harding

Finally, traditional accounts maintain that a half millennium later Confucius wrote extensive commentaries on the *I Ching* known as the “Ten Wings.”

It is difficult to ascertain precise origins of the *I Ching*. While legends of Fuxi clearly belong to a mythological past, contributions attributed to King Wen and the Duke of Zhou could have originated at the onset of the Zhou era. These early Zhou dates for the *I Ching* are plausible but far from certain. Some scholars maintain that the text was a more recent product dating back only as far as the third century BCE, though this position emphasizes the text in a form that comes to have canonical status more than the earliest layers and origins of the *I Ching*. Scholars who favor either dates or positions in between agree in dismissing the traditional account that Confucius wrote the influential “Ten Wings” commentaries.

Naturally, the *I Ching* has changed significantly over time. In addition to various insertions of later language and values, the text evolved during the first millennium BCE from a guide for divination to an increasingly comprehensive compendium of advice and wisdom. We can also surmise how *I Ching* divination grew in complexity and scope. While early *I Ching* divination may have been closely related to the charges presented to the gods in oracle bone divination, later use of the *I Ching* divines the patterns of the cosmos in undulating and complementary alternations of yin and yang forces. Early means of this divination seems to have involved randomly selecting milfoil or yarrow stalks, some that were long and unbroken, signifying yang, and others broken off short, signifying yin. Each draw could then be represented with a long mark or two short marks (yang or yin), and the next yin or yang line could then be

written under the first. Two lines led to four combinations, and three lines yielded eight possibilities: the eight trigrams traditionally traced back to Fuxi. These eight trigrams were important from early on, and an elemental name drawn from nature was assigned to each: heaven, wind, water, mountain, earth, thunder, fire, and lake. The eight trigrams in turn were combined in each possible pairing to yield 64 hexagrams of six lines each. These have been the main units for divination from Zhou times to the present, with meanings attributed to each hexagram read line by line and read as a pair of trigrams with one element over the other.

Early interpretations coupled with commentaries from more than 2,000 years ago provide extensive guidance for the application of each hexagram. Whereas much divination with oracle bones served as a means for rulers to determine if their sacrifice had been accepted or to divine the answer to “yes or no” questions concerning key issues of state, the *I Ching* has long offered insights on these divinatory matters as well as insights into life decisions more generally for rulers and common people alike. Drawing stalks was not the only way to arrive at the six lines needed for each hexagram. Tossing coins is another way popularized since Sung times. Luminaries and literati of that age turned to the *I Ching* to better understand their world. Even today, commentaries, interpretations, and translations of the *I Ching* testify to its enduring influence and multilayered meanings for various audiences and practices, past and present.

—John Harding

Bibliography

- Lynn, Richard John. *The Classic of Changes*. New York: Columbia University Press, 1994.
- Lynn, Richard John. “The Formation of the Classic of Changes (Yijing).” In *Sources of Chinese Traditions*, vol. 1, edited by Wm. Theodore deBary and Irene Bloom. 2nd ed. New York: Columbia University Press, 1999.
- Marshall, S. J. *The Mandate of Heaven: Hidden History in the I Ching*. New York: Columbia University Press, 2001.
- Riegel, Jeffrey K. “A Textual Note on the I Ching.” *Journal of the American Oriental Society* 79(4) (1959): 275–280.
- Smith, Kidder, et al. *Sung Dynasty Uses of the I Ching*. Princeton, NJ: Princeton University Press, 1990.

Willhelm, Hellmut. “I-Ching Oracles in the Tso-chuan and the Kuo-yu.” *Journal of the American Oriental Society* 103(3) (1983): 601–605.

Celestial Divination—Omens from the Sun, Moon, and Stars

“Enuma Anu Enlil” (“When the gods Anu, Enlil . . .”) is the first line of the mythological introduction to the Mesopotamian collection of celestial omens. Sometime during the second millennium BCE, Babylonian scribes wrote down these omens in cuneiform and organized them according to the different natural phenomena they describe. These phenomena include observations of the phases of the moon, lunar eclipses, solar phenomena (such as halos and sun dogs), solar eclipses, cloud formations and atmospheric phenomena, and the movements of the planets, such as Venus, in the night sky. Early astronomy in Mesopotamia was a mixture of precise observations and speculative thinking about the meaning of what happened in the sky. In the first millennium a tradition of mathematical astronomy evolved as a parallel discipline. Early on the various celestial bodies were identified with gods, and some subtle relationships appear to exist between the astronomical-astrological texts and literary narratives, but there is much we still do not know. Astrology as it is known today was practiced in Mesopotamia only sparingly in the first millennium BCE, but many of the Greek names for the signs in the Zodiac can be traced back to Mesopotamia. Ancient Babylonian scholars made note of the fixed stars, constellations, and planets, though naturally the planets were identified as different only by their movement, not their nature.

The two most prominent bodies in the sky were given important status as the objects of divination. Both the moon and the sun were closely observed and probably had been since at least the domestication of agriculture. Understanding the phases and path of the moon is a vital means of keeping track of time, which is necessary for a successful agricultural cycle. Any peculiarities in the color, shape, or appearance of the moon and sun were noted. For example, “If when the sun rises it is covered with a dark mist: There will be no rain.”

Rarer events were cause for even closer scrutiny. Thus, some of the earliest collections of omens describe lunar eclipses occurring on various days of the 12 Babylonian months. For example, during the fourth month, the summer month called Du'uzu (roughly June–July):

An eclipse (of the moon) takes place on the 16th of Du'uzu: There will be want of straw; downfall of cattle will take place; the cattle pen will be surrounded.

An eclipse (of the moon) takes place on the 20th of Du'uzu: Downfall of Elam; it will perish at the gate of the land.

An eclipse (of the moon) takes place on the 21st of Du'uzu: Adad will destroy the produce of the sea.

Eclipses of the sun were even less common. As anyone who has experienced a solar eclipse firsthand will attest, it is a singularly unsettling experience to see the sunlight fail in the middle of the day. It is not surprising that solar eclipses were typically viewed as dangerous events. For example:

First month: Nisannu (March–April)

If the sun is eclipsed in the month of Nisannu on the 1st day: The king of Akkad will die.

If it is eclipsed on the 11th day: A large army will be diminished.

If it is eclipsed on the 13th day: The king will go into exile.

Second month: Ayyaru (April–March)

If it is eclipsed on the 9th day: There will be famine.

If it is eclipsed on the 14th day: Rain in the sky will be scarce.

Ninth month: Kislimu (November–December)

If it is eclipsed on the 21st day: There will be headaches.

If it is eclipsed on the 16th day: Pregnant women will miscarry.

Eleventh month: Shabatu (January–February)

If it is eclipsed on the 11th day: An important person will perpetrate a rebellion in the palace.

—Matthew T. Rutz

[Translations by Matthew T. Rutz.]

Bibliography

- Brown, David. *Mesopotamian Planetary Astronomy-Astrology*. Cuneiform Monographs 18. Groningen: Styx, 2000.
- Hunger, Hermann, and David Pingree. *Astral Sciences in Mesopotamia*. Handbuch der Orientalistik I/44. Leiden: Brill, 1999.
- Koch-Westenholz, Ulla. *Mesopotamian Astrology: An Introduction to Babylonian and Assyrian Celestial Divination*. Carsten Niebuhr Institute Publications 19. Copenhagen: Museum Tusculanum Press, 1995.
- Rochberg, Francesca. "Old Babylonian Celestial Divination." In *If a Man Builds a Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty*, edited by Ann K. Guinan et al. Cuneiform Monographs 31. Leiden: Brill, 2006.
- Rutz, Matthew T. "Textual Transmission between Babylonia and Susa: A New Solar Omen Compendium." *Journal of Cuneiform Studies* 58 (2006): 49–82.
- Walker, Christopher B. F., ed. *Astronomy before the Telescope*. London: British Museum, 1999.

Egyptian Magic

The use of "magic," or *heka* to use the Egyptian term, was understood as the de facto privilege of the gods, granted to mankind as a boon and a "weapon to ward off the blow of events," according to a wisdom text of the Tenth Dynasty (ca. 2156–2040 BCE). As opposed to the western (i.e., Greek and Judeo-Christian) intellectual tradition, the Egyptians made no practical or moral distinction between the mechanics governing religious rituals, medical practices, or magical acts. The same power was thought to underlie each of these activities, and this power was nothing less than the vital force by which the creator god set in motion the universe itself.

Egyptian magic was understood as a legitimate and effective means to attaining virtually any end. From the cares of the individual to those of the state, magic permeated all levels and aspects of society. In the private sphere, a large number of the preserved texts are concerned with practical matters of protection and healing. The most popular such spells concern warding off harm from all manner of sickness- and injury-causing demons; protection against dangerous animals such as scorpions, snakes, and crocodiles; and the protection of mothers and infants.

At the same time, offensive spells intended to bring about harm or force the compliance of another individual are also attested. In fact, the genre of love spells, which was of limited popularity prior to Greco-Roman times, consists entirely of injunctions against the desired individual, threatening horrible suffering and all manner of punishment should he or she fail to succumb to the magician's will.

At the state level, magical emphasis lies predominantly upon the destruction of enemies and foreigners. This practice is perhaps best exemplified by the ritual destruction of clay figurines inscribed with the names of foreign peoples (the so-called execration texts). Identical in intent if not outward form were the popular smiting scenes, which depicted the king holding a group of bound and conquered foes in one hand with a mace held poised to smash the enemies' skulls in the other hand. Such images were ubiquitous throughout Egyptian history and eventually found their way into private Greco-Roman love magic, where the magician's desired paramour took the place of the bound foreign prisoner. This ritualized torture of magical figures and images predates the medieval use of voodoo dolls by thousands of years and is demonstrably Egyptian in origin.

The mechanisms by which magic was made to work were quite numerous. The ritual destruction or torture of images, which were thought to be linked sympathetically with the desired victim, has already been mentioned. The same principal of like affecting like could also be used for protective means, as illustrated by the countless amulets designed for both the living and the dead, whose power derived from the object represented or some aspect symbolically associated with it. Spitting, licking, and swallowing formed another crucial means of activating magical power; in each case, the desired effect was predicated upon the concept of either ingesting magic or hurling it orally to either heal or harm. Another fundamental magical concept was the act of encircling (Egyptian, *pekyher*), which could manifest as a literal circumambulation or the drawing of protective circles.

Equally important as physical action were the words and incantations to be spoken (*djed-medu*) by the magician. While the specific phrases em-

ployed obviously varied from context to context, all genres of spells made frequent allusion to mythological events for the purpose of establishing a divine precedent to the desired outcome. To this end, the magician would often cast himself in the role of the relevant god or goddess, and injunctions of "It is not I who commands you, it is this god!" are common. Egyptians also recognized the magical efficacy of foreign languages, which occur as alphabetic transcriptions of otherwise untranslatable magic words.

—Joshua Roberson

Bibliography

- Andrews, Carol. *Amulets of Ancient Egypt*. Austin: University of Texas Press, 1994.
- Borghouts, J. F. *Ancient Egyptian Magical Texts*. Vol. 8, *Nisaba*. Leiden: Brill, 1978.
- Leitz, Christian. *Magical and Medical Papyri of the New Kingdom*. Hieratic Papyri in the British Museum, VII. London: British Museum Press, 1999.
- Ritner, Robert K. *The Mechanics of Ancient Egyptian Magical Practice*. Studies in Ancient Oriental Civilization No. 54. Chicago: University of Chicago Press, 1994.

Magic and Witchcraft in Mesopotamia

The practice of magic, the invocation of the supernatural to influence events in the human world, was an integral part of religion and medicine in Mesopotamia. It was not itself regarded as either good or evil but rather was defined by the purposes to which it was put. White magic was protective, used to treat bodily and mental ailments, to counter bad luck and bewitchment, to avert ill omens, and to ward off or counteract supernatural attacks by ghosts or demons, which were thought to cause illness and ill fortune. Black magic, though it called upon the same gods and utilized the same techniques as white magic, was intended to harm, often aimed at driving off the guardian personal gods of its victims and leaving them defenseless against ghostly or demonic attacks. Divination, the prediction of future events through the observation of natural phenomena, was generally distinct from magic although it did occasionally include magical practices such as necromancy: the raising of the dead for questioning.

► THE BURNING OF WITCHES

The practice of burning witches, especially widespread during the European Middle Ages, has a lengthy history. By the third millennium in Mesopotamia, witches using black magic were burned in person or in effigy. As death by burning barred an individual from the underworld that all humans otherwise entered, this forced the witch into limbo and rendered her magical powers useless. She was thus prevented from further tormenting her victims. Following the redefinition of the witch as a major adversary of the exorcist, she or a figurine representative of herself might still be burned, but this action was redefined as just another means of sending her to the underworld, which was now within the exorcist's sphere of influence.

—Karen Sonik

Prior to the second millennium BCE, magic was legitimately practiced by both private citizens and public officials. Witches, though capable of evil, often served as community healers, offering magical and medicinal treatments to those who had fallen sick. Their public counterparts were the exorcists (*āšiputu*), who magically treated illnesses caused by ghosts or demons, and the physicians (*asû*), who treated naturally occurring diseases with more mundane remedies such as potions and poultices. The division of labor between these two types of public officials was not absolute: patients could consult both an exorcist and a physician when the cause of their ill health was in doubt, and physicians could fortify or supplement their treatments with magical spells or incantations.

With the evolution of increasingly complex social, political, and religious institutions at the beginning of the second millennium, the practice and perception of magic changed significantly. Tzvi Abusch argues that the predominantly female witches and their unregulated magic came into conflict with the male exorcists, magicians who had gained legitimacy through their attachment to the temples. Many of the exorcists' rituals, previously intended to combat ghosts and demons, were reworked to also target witches, now depicted as malicious and illegitimate magicians intent on harming or destroying innocent



Amulet with a figure of a Lamashtu (the type of creature that it was designed to ward off), from Mesopotamia, around 800 BCE. This Lamashtu has the head of a lion, the teeth of a donkey, naked breasts, and the talons of a bird. She holds snakes in her hands and stands on her sacred animal, the donkey. A Lamashtu's principal victims were unborn and newborn babies. (Erich Lessing/Art Resource, NY)

victims. The most important antiwitchcraft text to survive is *Maqlû* (Burning), a compilation of incantations originally composed to combat miscellaneous supernatural forces. The combination of these incantations in the first millennium to form a single lengthy antiwitchcraft ritual attests to the fear of witches during this period. Additional magical texts existed to deal with other everyday worries. A collection of spells known as *Šurpu* (also translated as “Burning”) was intended to purify individuals of any moral infractions they had intentionally or unintentionally

committed, keeping them in good standing with their protective personal gods.

Magic was not only verbal in Mesopotamia but also was visual. Amulets and apotropaic figures were common in all periods, although Neo-Assyrian examples are especially well known. Amulets, often worn around the neck, could combine text and image, being inscribed with protective incantations and bearing images capable of warding off evil. Magical figures, often monstrous or demonic in form, were buried in architectural foundations, stood at the gates or doorways of temples, and appeared frequently on the wall reliefs decorating the Neo-Assyrian palaces. Their terrifying appearance was thought to be especially efficacious in warding off other dangerous supernatural forces.

—Karen Sonik

Bibliography

- Abusch, Tzvi. *Mesopotamian Witchcraft: Toward a History and Understanding of Babylonian Witchcraft Beliefs and Literature*. Leiden: Brill Academic, 2002.
- Abusch, Tzvi, and Karel van der Toorn, eds. *Mesopotamian Magic: Textual, Historical, and Interpretative Perspectives*. Groningen: Styx, 1999.
- Cunningham, Graham. *Deliver Me from Evil: Mesopotamian Incantations, 2500–1500 BC*. Roma: Editrice Pontificio Istituto Biblico, 1997.
- Farber, Walter. "Witchcraft, Magic, and Divination in Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. New York: Scribner, 1995.
- Geller, M. J. "Freud, Magic and Mesopotamia: How the Magic Works." *Folklore* 108 (1997): 1–7.

The Wu (Shamanic) Tradition in China

The most popular religious practice in China 3,000–4,000 years ago was the *wu* (shamanic) tradition, and magic and witchcraft were a part of it. The *wu* (shamans) were prominent religious and political figures as well as healers during the Shang dynasty (1600–1066 BCE).

Most English publications describe the *wu* as wizard, witch, sorcerer, shaman, medium, or magician. Their role in ancient China, however, was much more expansive than such terms might imply. The commonly accepted translation for the ancient *wu* is "shaman" or "shamanic" because

they played similar roles in rituals and healing. As recorded on oracle bones and in writings from more than 3,000 years ago, the *wu* were ritual specialists, diviners, imperial officers, and healers. At the time, *wu* (shaman) and *yi* (healer) referred to the same person. The classical Chinese writing for healing (*yi*) even contains *wu* as a part of the character.

The *wu* were the first professional healers and ritual leaders in ancient China. Because they were considered to have special knowledge and supernatural powers, some of them were appointed imperial officers during the Shang and early Zhou dynasties (1600s–771 BCE). In these positions, they conducted imperial rituals and divinations for military operations.

Most contemporary researchers inside and outside China agree that the *wu* tradition laid the foundation for early Chinese civilization. Some argue that the *wu* were the earliest Chinese intellectuals and played a fundamental role in advancing astronomy, healing (both spiritual and with medicine), and folklore. The *wu* are known to have contributed to anonymous classics such as the *Book of Changes* (*I-Ching* or *Yi Jing*) and the *Classic of Mountains and Seas* (*Shang Hai Jing*).

It is uncertain when the *wu* first achieved important roles in Chinese history, but records show that they had great influence during the Shang and early Zhou dynasties. Later, Daoism (Taoism) and Confucianism emerged, and technological advances were made in many areas. Traditional Chinese medicine gradually became a profession, and there were medical officers at the imperial court and local levels. Because of this development, the remaining *wu* gradually lost their power in the healing tradition and political system.

The *wu* tradition, however, had a great impact on the evolution of the Chinese civilization for many centuries. It merged with the dominant political system, enriched traditional Chinese medicine and folklore, and gave rise to Daoism.

—Kun Shi

Bibliography

- Waley, A. *The Nine Songs: A Study of Shamanism in Ancient China*. London: Allen and Unwin, 1955.
- Zhang, Z. *Zhongguo Wu Shu* (The Wu Practice in China). Shanghai: Sanlian Shudian (Joint Press), 1990.

■ Introduction: Ancient Near Eastern and Mediterranean Literature

Soon after the invention of writing in the ancient Near East came the first florescence of world literature. The writing of the Near East (and perhaps the Mediterranean, depending on when one dates Homer's works) is the earliest body of literature in human history. From this body came many genres of writing that are still used today as well as many that have been abandoned. Economic texts, administrative texts, and legal texts fall within this time period and are dealt with elsewhere in the encyclopedia. Religious texts including hymns, mythological accounts, creation stories, ritual guides, and votive inscriptions all reflect written expressions of human understanding of the divine. Scientific texts and religious texts are difficult to differentiate, as both reflect conscious attempts to understand the world and record these observations in writing. The first letters between friends, family members, and strangers appear at this time along with the first diplomatic cor-

respondence. The first historical texts were written, as were the first texts meant to commemorate important events. Biographies recorded the lives of individuals, some fictional and some accurate. And tales of heroic figures like Gilgamesh entertained and instructed ancient audiences.

Who the audiences for these texts were is less clear. Many texts are found walled up within buildings or sealed within tombs; undoubtedly these were intended to be read by the gods or by the dead. Other texts have been preserved as school practice texts, copied over and over again by students learning how to write at the scribal academies. Given how few people actually would have been literate, it is thought that much of this literature was intended to be read aloud. In some instances, these written versions of stories were probably based on originally oral compositions.

—Kevin M. McGeough

➤ THE TROUBLE WITH TRANSLATION

Historians who wish to use ancient literature should heed a few warnings if they intend to work from translations of ancient texts (although a good historian should become familiar with the languages of the time and the place of study!). Remember, a translation of an ancient text is actually a modern piece of literature, and depending on how true to the original source the translator was, the translation could vary significantly. Since most of the languages of this period were forgotten and relearned, there are many words that still remain obscure and grammar that is incomprehensible. A translator does his or her best to understand these, but there is much room for error. Often texts are not fully preserved. Where there are breaks in an ancient text, a modern translator usually places square brackets: []. All of the writing found within the square brackets are reconstructions made by the translator. Sometimes

these are very trustworthy, since ancient writers were fond of repetition. But beware of any translation with too many square brackets! It is not just our understanding of ancient languages that is imperfect; our understanding of ancient context is also problematic. The context of these texts is very different from the modern one: many of the values and ideas of ancient literature feel remarkably alien, and any attempt to harmonize these values with modern ones is misguided. Joseph Campbell, who wrote popular accounts of mythology, habitually oversimplified ancient literature to make it seem more like modern writing. Thus, any of the conclusions he drew about ancient literature are really just conclusions about his own renditions of the stories. Be very careful with any translation: read the critical notes, and do not trust the translator.

—Kevin M. McGeough

Egyptian Literature: Love Poetry

Love poetry from ancient Egypt presents variations on the theme of love and how it is experienced, although the actual term for love (*meri*) appears somewhat infrequently. These lyrical compositions were termed “utterances” or “songs” by the Egyptians themselves. The latter term is appropriate, as they were likely sometimes sung or chanted with musical accompaniment. Four primary compendia survive in varying states of preservation: three collected on papyrus documents and one carried on a broken vase. All are written in the Late Egyptian phase of the language and date from the Nineteenth and Twentieth Dynasties of the New Kingdom (roughly 1300–1100 BCE).

Ancient Egyptian lyrical style does not appear to have been dictated by one set of rigid structural rules. Rather, it seems to have had a freedom of form similar to lyrics of modern rap compositions, as Redford has suggested. Arrangement by couplets, though, appears to have been one favored approach, and some poems are divided into cohesive stanzas of variable length. Although phrasing reflects an economy of words, these are not simplistic compositions. Literary devices such as complex puns and wordplay appear, and translation is not always straightforward.

Narration of most love poems is in the first-person voice. A poem is usually fashioned as the monologue of a love-struck young man or woman or rarely both alternating between each other (but still not as a dialog). In an exceptional group of poems, speakers take the form of trees in an orchard or garden, some telling of couples who meet under the shade of their branches. Those in love refer to each other as brother or sister, here meant to stress the intimate closeness of two people rather than to indicate family relationship. In almost every case the reader is provided with neither the name of the narrator nor the object of affection. The tone of the poems ranges from lighthearted and playful to serious and pining.

Unlike many genres of ancient Egyptian literature, the content of most poems does not seem especially foreign to the modern reader. Common themes include love sickness, being ensnared by love (or one's lover), admiration of a

➤ A LOVE POEM FROM PAPYRUS HARRIS

The discomforting symptoms of intense longing for love, often called love sickness, is a recurrent theme in poetry through the ages. In this brief example from ancient Egypt the narrator puts a novel spin on this motif by faking sickness as a ruse to attract his beloved:

“I will lie inactive at home,
And I will pretend to be sick.

And then my neighbors will enter to look,
And my sister will be among them.

And she will send the doctors out,
For she knows my malady” (translation by author)
—Nicholas S. Picardo

Source

John L. Foster, *Love Songs of the New Kingdom* (Austin: University of Texas Press, 1992).
(Original hieroglyphs from p. 73)

lover's desirable features, wishes to be closer to the object of desire, frustration over awaiting a lover's return home, a rendezvous, reluctance to depart from a lover's side in bed, and effusive professions of love and devotion. Often an emphasis on spontaneity and the physical side of love and intimacy is detectable, reinforced by both subtle and explicit allusions to anatomy, fertility, and productivity.

—Nicholas S. Picardo

Bibliography

- Foster, John L. *Love Songs of the New Kingdom*. Austin: University of Texas Press, 1992.
- Lichtheim, Miriam. *Ancient Egyptian Literature*. Vol. 2, *The New Kingdom*. Berkeley, Los Angeles, and London: University of California Press, 1976.
- Redford, Donald B. “Ancient Egyptian Literature: An Overview.” In *Civilizations of the Ancient Near East*, Vol. 4, edited by Jack M. Sasson. New York: Scribner, 1995.
- Tobin, Vincent A. “The Love Songs and the Song of the Harper.” In *The Literature of Ancient Egypt*. 3rd ed., edited by William Kelly Simpson. New Haven, CT: Yale University Press, 2003.

Hymns and Wisdom Literature

A substantial part of Sumerian literature is made up of hymns, addressed to individual gods and to their temples. The earliest surviving hymns (and also the earliest literary work whose author is known) were composed by Enheduanna, daughter of Sargon of Akkad and entu-priestess of Nanna at Ur, who also edited a collection of hymns. In one Enheduanna paints a picture of the magnificence, power, awesomeness, and unpredictability of the goddess Inanna, manipulating the great gods who dare not take a decision without her approval, controlling the lesser deities, ferocious in her wrath, raising the lowly and abasing the lofty. In another, *The Exaltation of Inanna*, however, Enheduanna rages about her expulsion from the temple by Lugalane (leader of a revolt against Naram-Sin), exhorting the gods, Inanna, Nanna, Enlil, and An, to recognize Lugalane's impiety, turn their hearts toward her, and restore the status quo.

A number of Lamentations, poems dating mainly from the late third and early second millennia, were also concerned with the way the will of the gods was reflected in human destinies. They began by painting a picture of desolation in a city forsaken by the god, the people dead in the streets, the buildings torn down or in flames, the empty fields choked with weeds, and foreign troops spreading carnage. Then the spirit of the poem lightened: the gods had relented, and the city and the land were being put to rights. The context of these poems was probably the restoration of temples and other sacred buildings after their destruction in warfare. The fate of the city was bound up with the will of the gods: its fall reflected their displeasure, its restoration the return of their favor. Later compositions in this genre, not related to specific cities, became part of the liturgy, performed on certain days in the cultic calendar. Laments were also composed to mark the death of Dumuzi or the passing of kings, the latter perhaps modeled on the Sumerian poem lamenting the death of Gilgamesh.

Individual illness and misfortune were also seen as coming from the gods as punishment for known or unwitting faults. Medical treatment by the exorcist or the doctor involved the recitation of incantations and formulaic prayers, emphasizing

the sufferer's piety, expressing contrition for any offense they might knowingly or unknowingly have committed, praising the gods, and begging for the punishment to be lifted. Sumerian and Akkadian literature contains many such prayers. These might also be addressed to the gods in the form of letters, written by a scribe and laid before the god's image.

In the later second millennium, scholars developed the philosophical train of thought of these prayers, exploring the inscrutability of the divine mind in a number of poems, including "Ludlul" and the "Babylonian Theodicy." These are the major works in what is known as Wisdom Literature, a genre of reflective writing that also includes collections of Sumerian proverbs, riddles, and fables as well as disputations in which various materials, such as copper and silver, tools, plants such as Datepalm and Tamarisk, animals, and other features of the natural world such as Winter and Summer, debated their relative importance, putting forward their own merits and disparaging their rival. One collection of proverbs and wise advice, the "Instructions of Shuruppak," couched in the form of a father's instructions to his son, was among the texts known from Early Dynastic Shuruppak and Abu Salabikh.

—Jane R. McIntosh

Bibliography

- Black, Jeremy, and Alan Millard. "Hymns and Prayers." In *Dictionary of the Ancient Near East*, edited by Piotr Bienkowski and Alan Millard. London: British Museum Press, 2000.
- Foster, Benjamin R. *From Distant Days: Myths, Tales and Poetry of Ancient Mesopotamia*. Bethesda, MD: CDL Press, 1995.
- Hallo, William W. "Lamentations and Prayers in Sumer and Akkad." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Jacobsen, Thorkild. *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven, CT: Yale University Press, 1976.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

The World's First Author, Enheduanna

The Akkadian priestess and poet Enheduanna is one of the first known authors of literature whose

name has survived. She thrived in Mesopotamia in circa 2334 BC, after her father, Sargon of Akkad, conquered a large portion of Mesopotamia and established one of the world's first great empires throughout the Tigris-Euphrates Valley and up into present-day Turkey. At the time, each city in the region worshiped its own god or goddess, who seemed particularly to protect the residents of its city. Sargon faced the problem of how to unite the peoples of his expanded kingdom, and he chose religion as the unifying principle. He assigned the task of unification to Enheduanna, who performed the job with astonishing creativity and success.

Enheduanna served as high priestess of the Sumerian goddess Inanna, the queen of heaven, and also fused that worship with the praise of the Sumerian goddess Ishtar. The advocacy of the supremacy of Inanna over the other gods served as a religious counterpart to Sargon's political empire. Enheduanna proved so successful in joining the worship of the favorite goddesses, thus linking people's political loyalties to some degree, that Sargon's successors continued the practice of making their daughters high priestesses and thus forging a link between the cultures of the region. That political and religious accomplishment is remarkable enough, but Enheduanna distinguished herself in another way. She wrote magnificent poetry in praise of Inanna, and that poetry has survived today, making Enheduanna the earliest known author of literature.

Enheduanna's most famous poems are her cycle of hymns to Inanna. Those hymns provide a glimpse into the religious feelings of the ancient Sumerians and also show the transformation of religious interests on the part of Enheduanna. In the first hymn, "The Myth of Inanna," Enheduanna almost exclusively celebrates the goddess's power; Inanna is portrayed as a fierce warrior goddess who crushed the people of Mount Ebih. This hymn may refer to a historical event commemorating one of Sargon's triumphs, and if so it serves as a perfect fusion of political and religious propaganda promoting the rule of Sargon and Inanna. Sargon's priestess-daughter served her function beautifully. The poetess departs from this traditional warlike function of the goddess in her second hymn, "Stout-Hearted Lady," for in this her principal theme is Inanna's omnipresent role in human affairs. Once the political

conquest is over, the goddess and the ruler are involved in governing.

—Joyce E. Salisbury

Bibliography

- Hallo, William W. "The Women of Sumer." In *The Legacy of Sumer*, edited by Denise Schmandt-Besserat. Malibu, CA: Undena Publications, 1976.
- Hallo, William W., and J. J. A. van Dijk. *The Exaltation of Inanna*. New Haven, CT: Yale University Press, 1968.
- Hirshfield, Jane, ed. *Women in Praise of the Sacred: 43 Centuries of Spiritual Poetry by Women*. New York: HarperCollins, 1994.
- Salisbury, Joyce E. *Encyclopedia of Women in the Ancient World*. Santa Barbara, CA: ABC-CLIO, 2001.

Narrative Literature

The deeds of heroic mortals were the subject of many Mesopotamian poems. Some were originally historical figures, embellished versions of their lives woven into folk stories or later propaganda. The earliest surviving poem, dated before 2500 BCE, concerns the adventures of King Lugalbanda of Uruk. The stories of Lugalbanda's son Gilgamesh were particular favorites down through the ages.

Stories probably dating from the Old Babylonian period recount the obscure birth of Sargon of Akkad, son of a priestess and an unknown man from the mountains, who was cast adrift on the river in a basket and rescued by a palace gardener in Kish. Growing into a youth personally favored by Inanna, he becomes the king's cupbearer. The old sick king soon conceives a secret hatred for the golden youth and attempts to kill him by various means, but Inanna's advice saves Sargon every time. Eventually the king of Kish is deposed, and Sargon's rise to power begins.

Sargon is the great heroic king who is favored by the gods and is the founder of the first empire in Babylonia. All that was considered good about this empire was attached to him in later times, embellished by legend. In another poem, "King of Battle," he personally leads an expedition to rescue merchants trapped in the Anatolian city of Burushkhanda. Here the heroic image of Sargon is polished up to support the activities of a later king, Shamshi-Adad. In contrast, in the poem "The Curse of Akkad," probably

composed in the Ur III period, Sargon's grandson Naram-Sin is depicted as the antihero, sacrilegiously opposing the will of the gods. Fragments of history are woven into these tales, but they are manipulated for the sake of the story and the moral that it has to convey.

In the late second millennium, many Babylonian cities were sacked, part of a wider picture of international disintegration. These disasters and the people's sufferings may have been the inspiration for the magnificent poem, the "Epic of Erra," composed by Kabti-ilani-Marduk (probably fl. ninth or eighth century BCE) who claimed that it had been revealed to him in a dream. In this, Erra (Sumerian Nergal), god of plague and strife, by subterfuge obtains the opportunity to create universal chaos, inciting wars, rebellion, and savage reprisals; killing people and animals; destroying cities; and promoting sacrilege. The other gods abandon their cities, sick with disgust at the wanton destruction and anarchy. Erra exults in the universal devastation but is eventually persuaded to turn his savagery upon an external enemy.

The actions of the gods were explored in a wealth of mythological poetry, retelling stories probably familiar to every Mesopotamian in oral form. Some dealt with how the world was created, ordered, and peopled. These included *Enuma Elish*, the great Babylonian poem composed in the late second millennium that tells how Marduk saved the gods from destruction and thereafter set the world in order and created humanity. In an earlier Sumerian poem, "Enki and the World Order," it is Enki who allots to every part of the world its characteristics and to each deity his or her sphere of influence.

Other poems tell the story of individual deities. Many revolve around the seductive, capricious, and at times terrifying and merciless figure of Inanna: the adolescent courted by her future husband in a pastoral idyll, the calculating young goddess determined to win the benefits of civilization for her own city, the woman scorned exacting her vengeance, the greedy goddess demanding additional powers from Enki, the enthusiastic patroness of sexual indulgence in all forms and the magnificent tutelary deity of the glorious new city of Akkad.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. "Akkadian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Foster, Benjamin R. *From Distant Days: Myths, Tales and Poetry of Ancient Mesopotamia*. Bethesda, MD: CDL Press, 1995.
- Jacobsen, Thorkild. *The Treasures of Darkness: A History of Mesopotamian Religion*. New Haven, CT: Yale University Press, 1976.
- Michalowski, Piotr. "Sumerian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Snell, Daniel C., ed. *A Companion to the Ancient Near East*. Oxford, UK: Blackwell, 2005.

Historical Texts

Sifting the historical truth from a diverse range of sources is a task that has occupied many students of Mesopotamia's past. Literary compositions such as The Legend of Sargon and The Curse of Akkad are largely unhistorical, although there may be fragments of historical information within them. More subtly, genuine contemporary historical records might also contain both truth and spin, because they were often intended not only to record the achievements of rulers, individuals, or communities but also to present their actions in a favorable light to both human and divine audiences. Much historical information can also be gleaned from more mundane written sources, such as letters and legal and economic records.

The earliest written materials, from the late Uruk and Jemdet Nasr periods, were mainly economic and administrative documents. Early Dynastic texts also included historical, religious, and mythological compositions. From the Ur III empire there is an enormous number of administrative documents, recording economic and personnel matters in meticulous detail, and a few literary works. Many other compositions of these and earlier periods survive as copies made in the Old Babylonian period, including mythological and historical poems, law codes, and religious texts. Even the latter often contain some historical material. For example, poetic lamentations described the destruction and rebuilding

of particular cities, couched in terms of the withdrawal and restoration of the gods' favor but reflecting the troubled conditions of the period, when city-states warred among themselves and were subject to devastating attacks by external enemies. A growing body of Akkadian literature accumulated through the later second and first millennia, among them epic poems about historical monarchs, including fictive autobiographies.

Scribes and scholars often composed works in imitation of earlier texts, drawing on and adapting earlier material for contemporary purposes. The Sumerian King List was probably composed in the Ur III period to emphasize Ur's place in the divinely ordained scheme whereby from hoary antiquity a principal city was given rule over all the cities of Sumer and Akkad, an anachronistic fiction. One Old Babylonian text, known now as the Weidner Chronicle, was a piece of religio-political propaganda in the form of a letter to a king pointing out the disastrous fate of former kings who had failed to honor Marduk's temple in Babylon (a city that in reality had not existed in the time of these earlier kings). Also composed by scribes following genuine earlier historic models was *Naru* literature (Akk. *stele*): spurious documents purporting to be copies of royal inscriptions that were produced by royal scribes for the purposes of propaganda, storytelling, or justifying current action or argument on the basis of falsified or misused ancient precedents.

Beginning with Uru-inim-gina of Lagash in the twenty-fourth century BCE, kings occasionally issued law codes, policy statements in which they laid down some rules of conduct and appropriate punishments for crime. Many other legal documents survive. These include court records and private deeds and contracts. More obviously historical are the international agreements, treaties, tribute lists, and other texts devoted to relations between states.

Royal inscriptions began in the Early Dynastic period with simple dedications of objects or structures by a named monarch to a deity but by the late Early Dynastic period had developed into considerable narrative descriptions. Royal propaganda grew progressively more detailed, eulogizing the military and civil achievements of

the king. By early Neo-Assyrian times, substantial records were created as texts and inscriptions, giving full details of campaigns and other achievements. The great reliefs on the walls of the Assyrian palaces provided a particularly vivid visual message: reassuring citizens of the power and piety of their ruler and the effectiveness of their army and striking terror into the hearts of visiting foreigners. Great public works, such as the creations of canals, were also the subject of Assyrian and Babylonian inscriptions.

—Jane R. McIntosh

Bibliography

- Bottero, Jean. "Akkadian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Foster, Benjamin R. *From Distant Days: Myths, Tales and Poetry of Ancient Mesopotamia*. Bethesda, MD: CDL, 1995.
- Liverani, Mario. "The Deeds of Ancient Mesopotamian Kings." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Michalowski, Piotr. "Sumerian Literature: An Overview." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Oppenheim, A. Leo, and Erica Reiner. *Ancient Mesopotamia. Portrait of a Dead Civilization*. Rev. ed. Chicago: University of Chicago Press, 1977.
- Seters, John Van. "The Historiography of the Ancient Near East." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Van de Mieroop, Marc. *Cuneiform Texts and the Writing of History*. London: Routledge, 1999.

Gilgamesh

The Sumerian and Akkadian cuneiform legends about Gilgamesh are arguably Mesopotamia's most enduring and most approachable contribution to world literature. The Babylonian *Epic of Gilgamesh* is a literary masterpiece that should be counted among other ancient classics such as Homer's *Odyssey*, the *Mahabharata*, and *Beowulf*. The literary traditions about Gilgamesh deal with many basic themes familiar to the human experience: political oppression, the dynamic between civilization and wildness, sex,

➤ GILGAMESH AND THE FLOOD

Tablet 11 of the first-millennium Standard Babylonian *Epic of Gilgamesh* contains a version of the Babylonian Flood myth. This composition was not original to the Gilgamesh stories but was borrowed from the Akkadian composition about Atrahasis, who is said to have survived the flood. In the *Epic of Gilgamesh*, the hero who tells of surviving the flood is named Utanapishtim, meaning “I/He has found life.” At the beginning of Tablet 11 of the epic, Gilgamesh has traveled to the ends of the earth and found Utanapishtim, who gains immortality by surviving the flood. Gilgamesh is told the story of the flood and realizes that Utanapishtim’s immortality was simply a one-time event and that he possessed no secret of immortality. The exhausted Gilgamesh then falls into a deep sleep. Upon waking Gilgamesh realizes that he is destined to die a mortal death. Utanapishtim gives Gilgamesh one last chance and tells him of a sea plant that provides rejuvenation. Gilgamesh finds and loses the plant and ultimately returns home to Uruk, where he climbs the city walls to look out over his city.

—Matthew T. Rutz

friendship, adventure, violence, grief and loss, and facing the limits of human mortality.

According to literary sources Gilgamesh, king of Uruk, was two-thirds god and one-third human. He was said to be the offspring of the king Lugalbanda and the goddess Ninsun. So far there is no evidence for a real historical Gilgamesh, but it is quite possible that a leader by that name did exist. If Gilgamesh was a historical figure, he would have reigned sometime around the first quarter of the third millennium BCE. The first large collection of Sumerian and Akkadian literature about Gilgamesh is from the Old Babylonian period (ca. 1900–1600 BCE). Sometime during the second millennium the Akkadian Gilgamesh texts were organized and expanded into the 12-tablet epic that was transmitted throughout the first millennium.

The Sumerian Gilgamesh cycle consists of six separate literary narratives, all of which were composed and copied in the Old Babylonian period (ca. 1900–1600 BCE). In the tale known by

modern scholars as Gilgamesh and Agga Gilgamesh is threatened by an attack from Agga, ruler of the city-state Kish. Gilgamesh is able to bring together the assembly of young men to defeat Agga, but it is Gilgamesh’s radiance that eventually cows Agga. In this tale Enkidu is Gilgamesh’s servant, not his companion. In “Gilgamesh and the Bull of Heaven” the goddess Inana offers herself in marriage to Gilgamesh, who refuses. Enraged, Inana gets the Bull of Heaven from her father, the sky-god An, and the divine bull attacks the countryside around Uruk. Gilgamesh and Enkidu confront and kill the bull, and Gilgamesh offers the bull’s horns to Inana’s temple in Uruk. In *The Death of Gilgamesh* Gilgamesh lies on his deathbed while the gods debate his destiny. Gilgamesh then dies and is made a god of the underworld. The people of Uruk build Gilgamesh a tomb and bury him. In the tale Gilgamesh, Enkidu, and the Nether World Gilgamesh makes furniture and sports paraphernalia for himself using a special tree of Inana. While Gilgamesh and Enkidu are playing, the ball and stick fall through a crack into the underworld. Enkidu chases after them but then gets stuck down in the underworld, a common motif in Mesopotamian mythology. The god Enki assists Gilgamesh and allows him to talk with Enkidu’s ghost, who tells Gilgamesh all about what it is like in the underworld. “Gilgamesh and Huwawa” circulated in two versions that had both major and minor differences in plot. Gilgamesh leaves Uruk to cut down cedar trees and create an illustrious reputation for himself. He is attacked by the fearsome forest monster Huwawa, whom he defeats using his wits and takes captive. Against Gilgamesh’s wishes, Enkidu then kills Huwawa. Only “Gilgamesh and Agga” and “The Death of Gilgamesh” do not have Akkadian-language parallels in Mesopotamian literature.

In the early second millennium Akkadian-language stories about Gilgamesh also circulated in written form. Only a few substantial fragments from this period have been found. It appears that in some scribal centers a unified Gilgamesh literature began to take shape in the early second millennium BCE, and the ancient Babylonians referred to this composition by the name *Surpassing All Other Kings*. In subsequent Babylonian tradition the compilation of the *Epic of*

Gilgamesh was attributed to a scholar named Sin-leqi-unninni about whom virtually nothing is known. This version consisted of 12 tablets, which can be thought of as being almost like chapters. For instance, Tablet 11 contains a version of the flood story. Tablet 12 is almost like an appendix and contains an Akkadian version of some of the Sumerian myth Gilgamesh, Enkidu, and the Netherworld. At present only about three-quarters of the epic are preserved, although future discoveries may eventually allow us to reconstruct the whole narrative. The *Epic of Gilgamesh* was called “He Who Saw the Deep” and also simply “Series of Gilgamesh” in ancient Babylonia. All of the manuscripts for the *Epic of Gilgamesh* come from the first millennium BCE, but many elements of the epic can be found in the fragmentary Old Babylonian stories, such as the episodes involving Enkidu, Huwawa, and Utanapishtim. The epic was probably compiled during the later second millennium BCE, when many works of Babylonian literature were organized and edited.

The *Epic of Gilgamesh* links together all of the known Akkadian episodes into a coherent whole. Gilgamesh, king of Uruk, oppresses his people, driving the gods to create for him a fitting rival, the wild man Enkidu. In a dream Gilgamesh foresees the coming of Enkidu, who is raised by animals. A prostitute from the city seduces him and makes him civilized. Gilgamesh and Enkidu do battle and then become fast friends. Together they embark on an adventure to cut down cedar trees in the cedar forest, which is guarded by the fearsome divine protector Humbaba, whom they slay. After the two have returned to Uruk, the goddess Ishtar propositions Gilgamesh, who rebuffs her advances. In a fit of rage, Ishtar sends the Bull of Heaven, which Gilgamesh and Enkidu slay. Because of these actions, the gods sentence Enkidu to death, and he becomes ill. When Enkidu finally dies, Gilgamesh is bereft at losing his friend, becomes terrified of death, and sets off on a quest for immortality. He crosses the Waters of Death and comes to the dwelling place of Utanapishtim, who has survived the Flood and gained immortality. Utanapishtim reveals to Gilgamesh that there is no secret way of attaining immortality. By grasping his mortal limits Gilgamesh gains

wisdom, and when he returns home to Uruk he sets down his story for future generations.

—Matthew T. Rutz

Bibliography

- Damrosch, David. *The Buried Book: The Loss and Rediscovery of the Great Epic of Gilgamesh*. New York: Henry Holt, 2007.
- Foster, Benjamin R., Douglas Frayne, and Gary M. Beckman. *The Epic of Gilgamesh: A New Translation, Analogues, Criticism*. New York: Norton, 2001.
- George, Andrew R. *The Babylonian Gilgamesh Epic: Introduction, Critical Edition and Cuneiform Texts*. 2 vols. Oxford: Oxford University Press, 2003.
- George, Andrew R. *The Epic of Gilgamesh: The Babylonian Epic Poem and Other Texts in Akkadian and Sumerian*. London: Allen Lane, 1999.
- Mitchell, Stephen. *Gilgamesh: A New English Version*. New York: Free Press, 2004.
- Moran, William. “The Gilgamesh Epic: A Masterpiece from Ancient Mesopotamia.” *Civilizations of the Ancient Near East*, vol. 4, edited by Jack M. Sasson. New York: Scribner, 1995.

Ugaritic Literature

The inscriptions found at modern Ras Shamra (ancient Ugarit) near the Mediterranean coast of Syria from 1929 onward have revolutionized the world of Near Eastern studies. Not only did the West Semitic language of Ugarit comprise one of the earliest known alphabetic scripts (roughly the fourteenth and thirteenth centuries BCE), but much of its contents was closely related to the Hebrew Bible (Christian Old Testament) in both language and literary themes. Even if Ugaritic literature is incomplete in comparison to the Hebrew Bible, it represents the only other corpus of Syro-Palestinian literature from pre-Hellenistic times. Eight languages other than Ugaritic are used in the texts from Ras Shamra. They are normally encountered in texts concerning ordinary day-to-day affairs (i.e., administrative, legal, and epistolary texts). In sharp contrast, the ritual and literary texts of local custom and belief are written solely in Ugaritic.

Although there are many types of prose besides literary texts—divinatory, astrological, ritualistic, medical, and lexical texts—the literary genre of mythology has had special impact on

➤ UGARITIC RITUAL TEXTS

It is tempting when reading Ugaritic literature (e.g., *The Baal Cycle*, *Aqhat*, and *Keret*) to give interpretations to the texts from the cultic affairs practiced at the city of Ugarit. There is a sound basis for this interpretation, since nearly all of the mythological texts are religious in nature and at least in one instance are explicitly combined with ritualistic liturgy. Such is the case for *The Birth of Shahrū and Shalimu*, a text that does not correspond to the mythological texts just mentioned but is still ostensibly literary in character. It has been interpreted in terms of sacrificial rites (mainly with regard to the agricultural diet) and possibly even in terms of sacred marriage rites. Besides the allusions in mythological literature, there are more than 100 explicitly ritual texts from Ras Shamra (ancient Ugarit), most of which are written in the local Semitic dialect known as Ugaritic. They are brief. Typically, a text lists an animal along with a deity and the specific type of sacrifice. That ritual played an important role in the development of Ugaritic literature cannot be denied. It must be conceded not only that those who were writing and copying the texts were closely tied to the temple but also that the populace at large was heavily imbued with religious and ritualistic dispositions. The relationship between *Mythos* and *Ritus* (myth and ritual) is intriguing indeed.

—Benjamin D. Thomas

Ugaritic studies. Three stories in particular have gained much attention, all of which were likely copied by the famous scribe Ilimilku. They may all be classified within the genre of myth: any text centered upon a deity or hero. The first, *The Baal Cycle*, is made up of a series of myths surrounding the central West Semitic deity of Ugarit, the storm god Baal, and recounts his victory over Yamm, god of the sea, for kingship of the cosmos. Next Baal has a palace built to vaunt his newly attained position of king. Finally, he does battle with Mot, the god of death, a story that reflects the reality of the vegetational seasons.

Kirta narrates the story of a king whose dynasty has almost perished, and because he is bereft of children, it is mended with the aid of the creator god El. El tells the king to appeal to Baal



Poem about the death of Baal, fragments of a tablet from Ugarit (modern Ras Shamra), fourteenth century BCE. (Réunion des Musées Nationaux/Art Resource, NY)

and instructs him to march the entire population to a foreign town to take a bride who would provide him a family. The plan meets with success, and she bears him eight sons and eight daughters. Unfortunately, as King Kirta has forgotten to fulfill a previous vow to the goddess Asherah, she vexes him with a deadly illness, reflected in nature in the form of a drought.

Aqhat is similar to the former in subject matter. The hero, Danel, is childless. He performs a ritual, inciting Baal to respond. Baal beseeches El to provide Danel a son. After Danel receives his son, Aqhat, the subject of the next scene is the bestowal of a bow forged by the craft gods, Kothar and Khasis, onto Danel, who in turn bestows it upon Aqhat. Aqhat appears then before the goddess Anat, who covets the bow, offering Aqhat first silver and gold and then immortality. Aqhat refuses, and Anat has him assassinated. The story breaks off with Aqhat's sister in pursuit of her brother's assassin.

The stories hold in common themes of kingship, longevity, and bereavement of or appeal for offspring. Of special importance is the resemblance between the stories and the vegetation cycle, one that also had significance for the cult at Ugarit. Moreover, these themes remain important for biblical as well as for Greco-Roman literature. We may immediately recognize ar-

chetypal characters similar to Abraham, David, Job, Apollo, Andromeda, Dionysus, and Perseus, among others.

More formally, Ugaritic literature tells a story but in highly literary language, calling to mind the epic poetry of Homer. Characteristic of West Semitic poetry is the exhaustive use of the poetic device known as parallelism (A // B), for example:

I'll let you count years with Baal,
With the son of El will you count months.
ašsprk. 'm. b'l šnt = A
'm. bn il. tspr. yrb}m = B

Line B mirrors or is parallel to line A. Both A and B have the verb “to count” (*spr*). A reads “years” and B uses “months,” but each of them corresponds to units of the calendar. A says “Baal,” and B expands the latter by the title “son of El.” They each refer to the same deity, but the second employs the father/son imagery in terms of the head deity El, typical in ancient Near Eastern mythology when a deity-king has risen after his father. Not only is there semantic parallelism, or parallelism between the meaning of words, but there is also syntactic parallelism wherein the grammatical structures are (nearly) identical. Although the word order is distinct in the Ugaritic lines, the basic underlying structure is: verb (*spr*) + preposition (*'m*) + proper-noun (*b'l // bn il*) + object (*šnt // yrb}m*). This type of parallelism is even more recognizable since the same verb and preposition combination is present in both lines. In sum, Ugaritic literature continues to bring into sharper relief aspects of ancient Semitic poetry.

—Benjamin D. Thomas

Bibliography

- Bordreuil, P., and D. Pardee. “Ugarit, Texts and Literature.” In *The Anchor Bible Dictionary*, Vol. 6, edited by D. N. Freedman. Toronto: Doubleday, 1992.
- Parker, S. “The Literatures of Canaan, Ancient Israel, and Phoenicia: An Overview.” In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson, 2000.
- Parker, S., ed. *Ugaritic Narrative Poetry*. Society of Biblical Literature Writings from the Ancient Near East No. 9. Atlanta: Scholars Press, 1997.

Hittite Literature

The cuneiform wedge-shaped writing system was first introduced to Anatolia in the early second millennium by the Assyrian merchants who had set up trading colonies near the city of Kanesh, but the earliest surviving archives in Hattusha were written by scribes who lived more than a century after the destruction of the trading colonies and were trained in the Old Babylonian script. Nevertheless, Hittite literature may have begun in Kanesh since the Hittites refer to their language as Neshi, the language of the city (Ka) nesh. The documents from Hattusha include edicts, annals and chronicles, sagas and epics, and myth and rituals as well as hymns, wisdom literature, and law collections. Not only have the Hattusha libraries provided native Hittite history and literature, but many older Hattic and Hurrian documents have survived in Hittite or in bilingual texts as well, providing windows into these lesser-known cultures.

Like the political and social institutions of the Old Hittite Kingdom, the earliest Hittite literature appears in a fully developed form, the previous stages wholly lost to us. The oldest extant Hittite text, and thus the oldest extant Indo-European text, is the Proclamation of Anitta of Kussar. Anitta himself relates the history prior to the founding of the Hittite state through his series of victories and devotion to the storm god. Ironically, Anitta condemns the city of Hattusha, which would become the Hittite capital and is where the tablet was found. In their own proclamations and annals as well as in later legendary narratives, early Hittite kings are portrayed as confident and wise rulers. In legend, Hattushili I traveled to the end of the world, where he encountered cannibals, and once “he became a bull” with “horns . . . slightly curved” as he charged through the Taurus Mountains against the Aleppo Army. Another story resembles the David and Goliath legend. Hattushili's chariots are outnumbered more than seven to one against the Hurrians at the Siege of Urshu, so he risks his life in one-on-one combat with the enemy's champion to secure his troops' safety. These portrayals of the king fit in well with a larger reoccurring Hittite theme of liberation and release. These themes are also found in anecdotal

➤ KUMARBI

Originally a Hurrian myth, the Kumarbi Cycle is celebrated as a second-millennium Near Eastern link with Hesiod's Theogony; however, whether the Greeks learned the myth from Hittite merchants or simply inherited the myth from a common background is unknown. The myth begins with the succession of four generations of ruling gods. Nine years after Anu (the personification of Heaven), the Hurrian counterpart of Greek Ouranos, usurps Alalu's throne, Kumarbi usurps Anu by biting off his manhood. However, Anu warns that Kumarbi, Kronos's counterpart, will eventually be overthrown by the storm god Teshub, Zeus's counterpart. Another similarity may include Kumarbi's wish to eat his offspring, as does Kronos, although any conclusion is tentative since the text is fragmentary at this point.

—Spencer L. Allen

admonitions and wisdom literature, which further stress the rewards of the good life and punishment of evil deeds.

The myths and rituals form a natural pair in Hittite culture and comprise most of the surviving Hittite texts. The mythic structure consists of a simple two-part scheme. First, an event disturbs the natural cosmic order, and then a deity intervenes to reestablish the proper order. The ritual recorded along with the myth functions as the mechanism by which the deity is prompted to action. For instance, the myth of the Disappearance of Telipinu describes how when the angry storm god Telipinu vanished the crops stopped growing, the earth dried up, and the gods and humans began to die of hunger. Upon his return, prompted by a bee sting, he was offered a dozen rams and other offerings in order to calm his anger and restore health to the land. The ritual aspect of this text, the bulk of the text, appeals to the angry god and effects his return and calm, ensuring humanity's and the god's survival.

—Spencer L. Allen

Bibliography

Güterbock, Hans Gustav. "The Hittite Version of the Hurrian Kumarbi Myths: Oriental Forerunners of

Hesiod." In *Perspectives on Hittite Civilization: Selected Writings of Hans Gustav Güterbock*, edited by H. A. Hoffner. Saline, MI: McNaughton and Gunn, 1997.

Hoffner, Harry A. *Hittite Myths*. Atlanta: Scholars Press, 1998.

Ünal, Ahmet. "The Power of Narrative in Hittite Literature." *Biblical Archaeologist* 52 (1989): 130–143.

Homer

Greek literature begins with Homer, a semi-mythic, supposedly blind poet who composed the *Iliad* and the *Odyssey*, both several thousand lines long and rendered in dactylic hexameter. The *Iliad* records a brief episode in the last year of the Trojan War, when "the Best of the Achaeans," Achilles, got into a spat with the "King of Men," Agamemnon, over the woman Briseis. Infuriated that Agamemnon took Briseis from him, Achilles refused to join his comrades, the Greek Army, in battle while simultaneously asking the gods to give extra strength to the Trojans. The Greeks—called Achaeans, Argives, and Danaans—suffered so terribly at Trojan hands as a result that Achilles' close friend Patrocles finally disguised himself as Achilles to frighten off the enemy. Unfortunately, in so doing he was mistaken for Achilles and was killed by the best of the Trojans, Hector. This angered Achilles even more than the loss of Briseis; he reentered the war and killed Hector, thus eventuating his own death beneath the walls of Ilion, the citadel of Troy.

The *Odyssey* tells the story of the king and hero Odysseus and the trials he suffered on his way home from Troy, a ten-year journey. On his way home, Odysseus met with giants; Cyclopes; Sirens; the goddess Circe, who turned his crew into pigs; the goddess Calypso, who wanted to marry Odysseus; and the Phaiakians, a blessed population who lived at the edge of the civilized world. He even traveled to Hades to meet with the great prophet of Thebes, Tiresias. Arriving on Ithaca, his home island, Odysseus had to rid his palace of several dozen suitors who had been courting his wife Penelope and eating him out of house and home. Through all this, Odysseus had to rely on his wit and perseverance and on occasional help from his patron goddess, Athena.

THE EPIC CYCLE

The *Iliad* and *Odyssey* were only two, although apparently the best, of a series of epics recounting the lives of the gods and the events surrounding the Trojan War. Unfortunately, these other poems no longer exist and can only be vaguely reconstructed through references in other poems, such as the *Iliad* and *Odyssey*, and through commentaries written about them during the Hellenistic period and after. According to a quote preserved in the writings of Photius, the Epic Cycle dealt with everything from the marriage between Heaven and Earth through the death of Odysseus. Arranged chronologically according to subject, the first are the three Theban epics: the *Oedipodea*, the *Thebaid*, and the *Epigoni*. The *Oedipodea* was some 6,600 lines long and was attributed to a man named Kinaithon. It recounted the story of Oedipus (Oidipous), his murder of his father, and his ill-fated marriage to his mother. The *Thebaid*, possibly written by one Kallinos, told the tale of Oedipus's family, from Oedipus's curse on his sons Eteocles and Polyneices to the death of both in the Battle of the Seven against Thebes (referred to often in the Homeric epics). The city of Thebes is finally seized in the next generation according to the *Epigoni*, which Herodotus somewhat dubiously ascribed to Homer. The *Kypria*, composed by Stasinus, Hegesias, or possibly Hegesinos, tells in 11 books the story of the Trojan War before the events of the *Iliad*: the meeting of Helen and Paris,

their escape to Troy, and Menelaus's attempt to negotiate a return and settlement. In mythic time, the *Kypria* is followed by the *Iliad*, which itself is followed by the 5 books of the *Aithiopis*, ascribed to one Arctinus of Miletos. This poem deals with the final exploits of Achilles: his fight with the Amazon Penthesilea; his fight with Memnos, son of the dawn goddess; and his final death at the hands of Paris and Apollo. All of this is followed by Arctinus's second poem, the *Iliu Persis*, or *Sack of Troy*, in which the final days and eventual destruction of Ilion are recorded. An alternate version, attributed to Lesches or Kinaithon, is recorded in the so-called *Little Iliad*.

The *Odyssey* is but one narrative in the general collection of homecoming stories that took place after the fall of Troy. These tales are called Nostoi ("Homecomings") and were composed either by Homer or by Hagias from Troizen. The final poem in the Epic Cycle is the *Telegonia*, which is a continuation of the *Odyssey*. Part of this tale is foreshadowed in the *Odyssey*, when Odysseus must go on a final journey to placate the wrath of Poseidon. Odysseus is killed by Telegonos, his son with Circe (not mentioned in the *Odyssey*). In the end Penelope, Odysseus's widow, marries Telegonos, and Circe marries Telemachus, Odysseus's son with Penelope.

—Stephanie Lynn Budin

For years, the study of these epics focused on two problems: when were they composed and how. The question of when became especially acute once Schliemann discovered that places such as Troy and Mycenae actually existed, showing that the epics had some basis in historical fact. The problem was that although the epics seemed to be primarily Bronze Age in feel, some of the details were clearly from a later date. References to iron, for example, simply could not have originated in a strictly Bronze Age composition. However, many of the details, such as the importance of the "capital" city of Mycenae, not only were inaccurate after the Bronze Age, but they would have been unknown after the Dark Ages, by which time Mycenae was

little more than a shantytown with some old walls. When, then, could the stories have been composed so as to take into account cultural facts from so many periods?

Even before the issue of historicity arose, though, there was an interest in how the poems came into being. The Iron Age Greeks did not adopt a writing system until the eighth century (in fact, some people have suggested that writing was specifically adopted to record the Homeric epics). As at least some of the Homeric poetry derives from the Bronze Age and the Dark Ages, it is generally agreed that the poems were not originally written down but instead were composed and performed orally. How, then, could one individual remember so much

poetry off the top of his (or her) head? And was Homer one individual, a composite of several composers, or maybe the last in a long line of composers?

For a long time, the debate was dominated by two schools: the Unitarians and the Analysts. The Unitarians believed that the *Iliad* and the *Odyssey* were the work of one extremely gifted poet. The Analysts suggested that both were composed by several poets, only one of whom might be dubbed the mythic Homer. But in the early twentieth century, Milman Parry and Albert Lord conducted field research in one of the few closely related places where an oral epic tradition still thrived, Yugoslavia. Parry and Lord discovered that oral epic creation was a combined process of learning stories and memorizing formulae in the appropriate meter. So, the young would-be poet (usually someone who was illiterate and seldom a poet by trade) would spend several years of his or her youth listening to elders recite the great epics. From this, the poet would at least learn the tales, just as modern children learn about Cinderella and Peter Pan. But more importantly, the poet would learn what Parry and Lord called the formulae: groups of words, possibly even as long as entire lines, that were in the appropriate meter and that could be combined in various ways to narrate a story (much like the way limericks always seem to begin with “There once was a . . .”). What this means is that the poet did not have to memorize a poem verbatim (hardly possible, anyway, with the length of the poems in question). He or she merely learned the plot and then combined the formulae to tell the story in the appropriate poetic form. As such, there was no one standard form of any epic; in each recitation, the epic poem was created anew, an eternal re-creation.

This discovery answered many questions about the Homeric epics. The time range perceptible in the verses was attributed to changes that occurred in Greek society over the centuries when the epics were being re-created. The hypothesis of there being one single artist—Homer—was abandoned in favor of the Parry-Lord model, with possibly one fellow named Homer who popularized the tales just before they were written down.

This act of writing down crystallized the epics, that is, turned them from mutable oral poems into authoritative texts. Perhaps Homer dictated this finalized version, giving his name to epics that had been in existence for centuries before he was born. This writing down probably occurred in the eighth century BCE. Although there are several elements in the epics that clearly belong to the Bronze Age and the Dark Ages, many references seem appropriate for the dawn of the Archaic Age, and there is little in either poem that suggests a later date. Thus, although some have argued that the poems may have to be down-dated to as late as the sixth century, it is generally accepted that the *Iliad* and *Odyssey* began being written down somewhere between 750 and 700 BCE.

—Stephanie Lynn Budin

Bibliography

- Athanassakis, A. *The Homeric Hymns: Translation, Introduction, and Notes*. Baltimore: Johns Hopkins University Press, 1976.
- Lesky, A. *A History of Greek Literature*. Indianapolis: Hackett, 1996.
- Lord, A. *The Singer of Tales*. 2nd ed. Cambridge: Harvard University Press, 2000.
- Schein, S. L. *The Mortal Hero: An Introduction to Homer's Iliad*. Berkeley: University of California Press, 1984.

Prophecy in the Ancient Near East

Prophecy is a social phenomenon found around the world in which certain persons are understood to deliver messages on behalf of a deity or other extrahuman agents to other people. Commonly associated with predictions of future events, prophecy has also been used to disclose past events and the meaning of the past. The specific forms this practice takes vary widely from one culture to the next. Prophecy is also closely related to other practices, including divination and astrology. Prophecy, however, is typically understood as a more intuitive means of gaining special insights. This means that unlike the inductive practices that rely on the practitioner's skill or training in interpreting signs or omens in the natural world or random events,

prophets may receive messages through visionary experiences, dreams, or ecstatic experiences. One problem in understanding prophecy cross-culturally is that the ancient cultures had multiple terms and titles for the act of delivering divine messages and for those engaged in it. The English terms “prophecy” and “prophet” often enjoy only a partial correspondence to the diversity of ancient conceptions of how one might speak on behalf of the gods.

Although prophecy was probably widespread across the ancient Near East from 4000 to 1000 BCE, extensive written evidence of prophecy has survived from a relatively limited number of locales. There are two basic kinds of texts that provide information about prophets and their activities. A number of documents preserve actual oracles purportedly delivered by prophets, while other references to prophets and prophetic activity are made in writings such as letters, literary works, and administrative documents. It appears that much prophecy in the ancient world was an oral exercise, so recovering the actual words (the *ipsissima verba*) of the prophets from the oracular documents is not a straightforward procedure, as these texts may not be directly quoting the prophet.

The largest group of prophetic texts from this period in the ancient Near East are from Mari in present-day Syria on the west bank of the Euphrates River (modern Tell Hariri). Mari’s long history began before 4000 BCE, and the city enjoyed a second period of prosperity during the early second millennia BCE before being destroyed by Hammurabi in 1759 BCE. Among the approximately 25,000 clay tablets found in the city’s archives were some 50 letters reporting the words of prophets to the king and other kinds of material with references to prophets.

Some additional references to prophets appear in a wide variety of other documents as well. For instance, at about the same time as Zimri-Lim of Mari (ca. 1775–1761) was receiving reports of prophetic activity, the king of Eshnunna (northeast of Babylon) received two written oracles purportedly from the goddess Kititum (Ishtar). In the fourteenth century BCE a letter to Pharaoh Amenhotep III from the king of Mitanni (a region in present-day northern Syria)

quoted a prophetic oracle of Ishtar/Shauska, while in the next century prophets known as *munabbitu* are referred to in texts from Emar (modern Tell Meskene, Syria).

In the Mari documents, the most frequent label for someone whom modern people would call a prophet was *āpilum* or *āpiltum* (“answerer”). The vast majority of uses of the term identifies men and holders of the title as being of relatively high status. Another title was *mubhu/mubhum*, derived from a verb meaning “to go into a frenzy.” The evidence also suggests that the majority of these ecstasies were men, although not to the same degree as the answerers. Neither of these classes of people were priests, but they often functioned in the temple as spokespersons for a deity, often in response to queries by the king.

The prophets could speak for a variety of deities, including the gods Addu, Dagan, and Marduk and the goddesses Annunitum and Nin-hursagga. In a variety of guises the goddess Ishtar was very often involved in prophetic communications. One class of her spokespersons was the functionary known as the *assinnum* (“cult singers”), who also participated in ecstatic rituals.

There were other categories of prophets as well, although the evidence of their activities is sparse. A number of texts refer to the delivery of divine messages by people who are not given any formal title. In these latter cases, however, women outnumber men by a small margin. It is likely that other practitioners served people of lower social standing, but given that these activities were most probably exclusively oral, no record of them remains.

The prophets we can read about seem concerned with the relationship between political power and the divine. Many of the messages delivered by these prophets or reports of prophetic activity concern the outcome or dangers involved in upcoming situations such as war or diplomatic relations. A number of others concern proper practice of sacrifice and ritual, and some criticize the king for neglecting his religious responsibilities. A smaller number of the letters to the king of Mari report prophetic oracles delivered to a wider audience.

It is clear that prophets were taken seriously within the political and religious institutions of the day, although they were not of the highest status. The reliability of prophecy could be doubted, and so sometimes prophets and their pronouncements were subject to examination and confirmation of their reliability by other divinatory means (which themselves might be held suspect). Mari prophets would sometimes send a lock of their hair and a cutting from their clothing, which would then be the subjects of inquiry by extispicy, divination through examination of the entrails of sacrificed animals.

—James Linville

Bibliography

- Ben Zvi, Ehud, and Michael H. Floyd, eds. *Writings and Speech in Israelite and Ancient Near Eastern Prophecy*. Symposium 10. Atlanta: Society of Biblical Literature, 2000.
- Kaltner, John, and Louis Stulman, eds. *Inspired Speech: Prophecy in the Ancient Near East; Essays in Honour of Herbert B. Huffmon*. Supplement Series 378, *Journal for the Study of the Old Testament*. New York: T&T Clark, 2004.
- Nissinen, Martti, ed. *Prophecy in Its Ancient Near Eastern Context: Mesopotamian, Biblical, and Arabian Perspectives*. Symposium 13. Atlanta: Society of Biblical Literature, 2000.

■ Introduction: Early Works of the Hebrew Bible

The Old Testament (or Hebrew Bible as it is also known) consists of a number of smaller works (usually called “books”) that were compiled well after 1000 BCE. Some of these books, however, were first written down in an earlier age. Other books within the Hebrew Bible purport to describe events that date to the time before 1000 BCE but were recorded later. Some of the books (or sections of books) are similar to literature and ideas that date to this period. The history of the composition of the Old Testament is a complex subject that is dealt with in more detail in later volumes. What is presented in the following entries are discussions of those parts of the Old Testament that were first written down before the end of this period.

Most of the early works of the Hebrew Bible are poetry or songs; the difference is difficult to identify in the absence of preserved music. Scholars are convinced of the antiquity of these sections of the Bible mostly based on the language used. The history of the Hebrew language is well understood. Subtle differences in the grammar, spelling, and word choice within the Bible help scholars to identify the original date of various sections. However, there is often much disagreement about individual sections or passages. What follows are examples that are usu-

ally taken to be the earliest parts of the Bible (although you will always be able to find scholars who disagree on the dates).

—Kevin M. McGeough

Early Biblical Oral Tradition

Early biblical oral tradition of the late second millennium BCE was an important means of preserving historical and cultural beliefs. It is possible to imagine a family around their home’s hearth or elders speaking at the gates of a city. The importance of oral tradition was not because there was a high level of illiteracy among average people. Many people possessed the ability to read, although it was likely limited to specific concerns such as business transaction and basic military reports. More complex reading and almost all writing would have been left to trained individuals, such as scribes or possibly religious leaders or members of the ruling class. When someone else required a learned ability to read or write, they would have hired someone who had been educated. Most stories and beliefs were much more likely to be passed on through a system of oral tradition.

One of the common misconceptions concerning oral tradition is that the transmission through communities would lead to changes in

ways that transmission through texts would prevent. However, the changes in retelling were likely limited to a culturally determined level of creativity and performance around a recognized tradition. Thus, when a parent told a child the story of Joshua, it may have changed based on the development of culturally normative ideas or the narrative style of the parent. The child would have learned the same narrative kernel that had been passed on from generation to generation. The preservation of central themes and narratives allowed oral tradition to be a relatively consistent form of transmission in a world without widespread writing.

A further scholarly question about oral tradition concerns what level of complexity could be preserved reliably. Early biblical scholars, such as Hermann Gunkel, theorized that oral tradition necessitated short, simple pieces to be effectively passed through cultures. When scholars looked back on texts to discover which would likely have originated in oral composition, they searched for sections representative of these theories. Since the work of William Foxwell Albright, this has been viewed as a misconception, underestimating the abilities of those dependent on oral traditions. Through this illumination scholars have recognized that many complex portions of the Old Testament text likely originated in oral traditions.

Without the general guideline of length, scholars were left with the question of what is indicative of an originally oral text. The clearest answer that has been offered is that texts of original oral composition present large amounts of repetition. This can be something as simple as the constant repetition of a word or phrase, as seen in the text of Genesis 1, verses 4, 10, 12, 18, 21, 25, and 31. Here, the text repeatedly refers to the acts of creation as being good. Such repetition would likely have been used by the original composer to emphasize a point. In this case, the composer was likely attempting to convey a positive nature to the acts of creation.

Beyond repeating words may be the repetition of quotations from an earlier work. This can be seen in Exodus 2:2, where a similar phrase to that used in the Genesis 1 creation narrative is used to label the pregnancy of Moses's mother as being good. Because the textual dating of Ex-

➤ REPETITION AS A MNEMONIC DEVICE?

Related to early scholarly theories that oral texts had to be simple to aid in memorization and retelling is the hypothesis that the repetition of words, phrases, quotations, and forms found in originally oral texts made them simpler and served as mnemonic devices. However, this idea has recently been seen as less important to other uses of repetition, as many have moved toward a model of oration that poses frequent reinterpretation of a basic story. The repeated nature of certain items may have been of greater use in quick oral composition than memorization of previous composition. The orator could easily compose a presentation of history each time by using common narrative conventions. A modern example might be ending a story with "and they lived happily ever after." It does not require great forethought for a person to pull this forth and fit it as an immediate conclusion. Just as these phrases would come easily to the orator, they would also be familiar to his or her audience. This would then allow them to link the orator's speech to other cultural ideals that they possessed. In the example of "and they lived happily ever after," many people would immediately be taken into the world of fairy tales and a specific type of culturally defined narrative.

—Thaddeus Jacob Nelson

odus 2:2 predates that of Genesis 1, it is likely that they both call to a common tradition in their authors' culture. Their shared repetition serves to link the Genesis 1 narrative and the conception of Moses to an antecedent cultural understanding of positive creation found in a preexisting tradition.

A final form of repetition to be concerned with is that of narrative patterns. An example of this can be found in the pattern of battle reports in 1 Samuel 4 and 2 Samuel 18. Both use a narrative form, giving information in the specific order: movement, military conflict, the battle's outcome, and the conclusion. In a manner similar to the repetition of words or quotes, the utilization of forms was likely meant to call on common understanding within the culture of the orator. In this case, listeners would have been

made aware that they were listening to the outcome of a battle.

Another example of oral tradition can be found in Joshua and Judges, books of the modern Old Testament that were written between 642 and 609 BCE but told of much earlier events. Modern scholarship has shown that the narratives they contain are anachronistic, telling about a much more glorious campaign of conquest than what historically occurred. This does not negate the accuracy of the narrative kernel as it was originally composed. Thus, as orator after orator presented the campaigns of Joshua and the Judges in a different time period, they adapted them to remain relevant. While doing so, they were able to maintain a central historical narrative that was in essence the same as in its first telling.

—*Thaddeus Jacob Nelson*

Bibliography

- Culley, Robert. "Oral Tradition and Biblical Studies." *Oral Tradition* 1 (1986): 30–65.
- Gunn, D. M. "Narrative Patterns and Oral Tradition in Judges and Samuel." *Vetus Testamentum* 24 (1974): 286–317.
- Mendenhall, George E. *Ancient Israel's Faith and History: An Introduction to the Bible in Context*. Edited by Gary A. Herion. Louisville, KY: Westminster John Knox, 2001.
- Niditch, Susan. *Oral World and Written Word*. Louisville, KY: Westminster John Knox, 1996.

The Song of the Sea

The Song of the Sea (also sometimes called the Song of Moses or the Song of Miriam) is an old poem preserved in the pages of the Hebrew Bible (Exod. 15:1b–18) for which there is evidence that it reflects events from the twelfth century BCE and therefore may provide clues concerning the origin of the people of Israel and their appearance in the Levant.

The poem describes an encounter between the Egyptians and the people of Yahweh at the Suph Sea ("Reed Sea," commonly identified with the Red Sea). The Egyptians, armed with chariots and led by their pharaoh, are intent on attacking and destroying Yahweh's people and give chase. At the Suph Sea, Yahweh himself comes to the rescue and envelops the Egyptian army in the

waters and drowns them. Afterward, he leads his people to his sacred mountain, where his holy sanctuary is located.

Although not all scholars agree on the date of the poem, a substantial mass of evidence and argumentation has been assembled pointing to a very early date for its composition. The poem is written in archaic Hebrew (although later Hebrew forms are found in the poem as well) and likely predates the prose account of the same events in Exodus 14. Like the Song of Deborah, the Song of the Sea belongs to the genre of victory hymn, examples of which have survived from neighboring cultures, such as the Egyptian poems that celebrate the victories of Ramses II over the Hittites at Qadesh on the Orontes and of Merenptah over the Libyans and others as well as the Assyrian poem about Tukulti-Ninurta's triumphant campaign against the Kassites of Babylon. All three of these date to the thirteenth century BCE and are therefore somewhat older as well as much longer than the biblical examples.

One passage in the poem, which refers to the sanctuary of Yahweh in Yahweh's hereditary mountain, suggests to some interpreters that the poet had knowledge of the construction of Solomon's Temple on Mount Zion in Jerusalem. If true, the poem would have to be dated after circa 980 BCE, when the temple was built. However, others have argued that the mountain mentioned is in fact Sinai and that the poet imagines the sanctuary to be a heavenly temple built by Yahweh himself in the heavens above the mountain. Since the trek to the mountain appears to follow immediately after the defeat of the Egyptian forces at the Suph Sea, it seems best to understand the mountain as Sinai. Other than this passage, the poem reflects no knowledge of a later period. There is no mention or presumption of an entry into and settlement of Canaan. In other words, the scope of Exodus 15 appears to be limited to the victory at the Suph Sea and its immediate consequences: the march through the wilderness and the settlement at the holy mountain there.

Another passage having a bearing on the date of this poem is to be found in verses 14–15. The verse lists four peoples shocked at the news of the Egyptian disaster: Philistia, Edom, Moab, and Canaan. From a historical and chronological

point of view, there is only one period during which these four peoples coexisted in the area from the border of Egypt to the northern perimeter of Palestine somewhere between 1175 and 1100 BCE.

If this dating is correct, then the encounter with Egypt mentioned in the Song of the Sea would have occurred after Egyptian pharaoh Merenptah boasted of a victory over the people of Israel in a stele he erected in 1207 BCE. Some may see a problem with this interpretation, since it is assumed that the Song of the Sea recounts events associated with the Israelite exodus from Egypt, and they cannot envision any Israelites in Canaan prior to that exodus. To them, any exodus would have to precede the time of Merenptah. However, there is no reason to assume that the people referred to in the Song of the Sea are the same Israel that Merenptah refers to in his stele. Israel is not even mentioned in the Song of the Sea; the community pictured in the poem is simply called Yahweh's people. This movement is described as a new society that came into existence at the revelation of their God Yahweh at his sacred mountain. Ultimately this new community found a permanent home in Canaan and would have become an integral component, if not the central component, in the tribal league of Israel, but they may not have been part of this confederacy at the time of the events recounted in the poem. Indeed, as there are only ten tribes mentioned in the Song of Deborah, it would seem as if there were other tribes yet to join the league. These may be the tribes associated with the exodus and the Song of the Sea.

—David Miano

Bibliography

- Freedman, D. N. "Temple without Hands." In *Temples and High Places in Biblical Times*, edited by A. Biran et al. Jerusalem: Nelson Glueck School of Biblical Archaeology, 1981.
- Freedman, D. N., and David Miano. "His Seed Is Not": 13th-Century Israel." In *Confronting the Past: Archaeological and Historical Essays in Honor of William G. Dever*, edited by S. Gitin et al. Winona Lake, IN: Eisenbrauns, 2006.
- Halpern, B. *The Emergence of Israel in Canaan*. Chico, CA: Scholars Press, 1983.
- Propp, W. H. C. *Exodus 1–18*. New York: Doubleday, 1999.

THE SONG OF THE SEA—AN EXCERPT (VV. 3–10)

"Yahweh is a warrior; Yahweh is his name.
Pharaoh's chariots and his army he cast into the sea,
And his elite officers sank in the Suph Sea.
The Deep covered them;
They went down into the depths like a stone.
By your right hand, Yahweh, resplendent among the mighty.
By your right hand, Yahweh, you shattered the enemy.
By your great superiority you threw down your antagonists;
You sent forth your anger, which devoured them like stubble;
By the blast of your nostrils the waters were heaped up,
The waves mounted as a bank,
The Deep congealed in the heart of the sea.
The enemy boasted, 'I'll pursue; I'll overtake, I'll seize the booty; my gullet will be filled with them;
'I'll bare my sword; my hand will dispossess them.'
You blew with your nostrils—the sea covered them;
They sank like lead in the dreadful waters."

—David Merneptah

Source

David Noel Freedman, *Pottery, Poetry, and Prophecy* (Winona Lake, IN: Eisenbrauns, 1980), 195–197.

Smith, Mark S. "The Poetics of Exodus 15 and Its Position in the Book." In *Imagery*. Washington, DC: Catholic Biblical Association of America, 2001.

Stager, L. E. "The Impact of the Sea Peoples (1185–1050 BCE)." In *The Archaeology of Society in the Holy Land*, edited by T. Levy. New York: Facts on File, 1995.

The Song of Deborah

The Song of Deborah is the common name for an ancient Hebrew poem now found in the fifth chapter of the biblical book of Judges. The poem is of interest to historians because it appears to be quite old, older in fact than the prose surrounding it, and may provide some clues about

► THE SONG OF DEBORAH— AN EXCERPT (VV. 19–22)

“Kings came, they fought,
At that time, they fought, the kings of Canaan,
In Taanach, near the waters of Megiddo
But spoils of silver they did not take.
From the skies the stars fought,
From their courses they fought against Sisera.
The torrent Kishon swept them away,
The torrent attacked them, the torrent Kishon.
(May you press down the necks of the powerful!)
Then the hoofs of the horses clattered,
From the charges of the charging steeds.”
(Judg. 5:19–22)

Translated by David Miano

the history of the people of Israel in the early Iron Age.

Regarding the date of the poem, its language appears to be quite archaic. There are several forms and elements within the poem that are examples of Hebrew usage prior to circa 1000 BCE. To be sure, some scholars have taken issue with this observation, arguing that the original author of the poem deliberately archaized the Hebrew to give it an authentic feel. However, it is unlikely that later writers would have knowledge of some of the older forms we find in the poem. There are later Hebrew forms in the poem as well, but these are more likely to be later unconscious updates by scribes than original readings.

The poem is a victory hymn. The setting of the poem is the period before the Israelite monarchy (thus before ca. 1000 BCE), and in it is recounted a battle between the tribes of Israel and the Canaanites near the city of Taanach, as a result of which the Israelites brought to an end Canaanite political hegemony and military superiority in the land. The battle, if it is historical, likely took place in the mid- to late twelfth century BCE, after the Egyptian empire had lost control of the area but when the Canaanites still held sway over the land. Archaeology has indicated that significant sections of the city of Taanach were destroyed in about 1125 BCE. The poem was written no more than a century or two after

the battle and most likely immediately after it, if we can take the other victory hymns of this period as parallel.

The Israelite campaign appears to have been prompted by an economic crisis. There are indications in the poem (verses 6–8) that the Israelite tribes were profiting from trade through the hill country and across the Jezreel Valley. Sisera and the Canaanite allies were stifling the caravan traffic through the plain, and this was having a detrimental effect on the Israelite economy. The tribes went on the offensive to protect their economic interests.

The poet attributes the defeat of the enemy not to the superior might of the Israelite armies (they were in no way superior) but rather to forces of nature (i.e., divine intervention). The stars of the skies fight in the battle, and the kings of Canaan are said to have been swept away by the river Kishon. This may indicate that the battle was waged during a storm. The image is reminiscent of the conflict recounted in the Song of the Sea in which the chariots of Pharaoh are sunk in the Suph Sea.

The central section of the Song of Deborah describes the mustering of the tribes or political units for the battle. All indications are that the units listed in the roll call were expected to supply troops for the engagement. Some participated, and others did not. Noteworthy is that there are only ten names. Several tribal names that appear in the more traditional lists elsewhere in the Bible are absent here. The tribes known more commonly as Manasseh and Gad are likely to be associated with the names Machir and Gilead in the poem. More significantly, Simeon, Levi, and Judah do not appear at all in the poem. A common explanation is that these southern tribes were cut off from the others by a line of fortified Canaanite city-states and thus did not merit mention here. However, it is important to note that tribes that did not take an active part in the struggle (Reuben, Gilead, Dan, and Asher) are listed along with those that did. This means that the list does not derive from the circumstances of the battle but rather reflects an already-existing organization, that is, a confederation of some kind united under the name “Israel.” It therefore is best to suppose that at the time of the battle (or at the time of composition),

the southern tribes were not a part of the Israelite tribal confederacy.

An interesting feature that separates the Song of Deborah from many of the other early poems of the Bible (e.g., Num. 23–24, Gen. 49, Deut. 33, 2 Sam. 23, and Ps. 78) is that the name “Israel” does not appear alongside of, or in parallel with, the name “Jacob.” Instead we find the expression *‘am Yahweh* (“Yahweh’s people”). In the later days of the monarchy, there was a distinctive correlation between the name “Israel” and the ten northern tribes. That correspondence is fully attested at the time of the divided kingdoms, when the northern group of ten tribes separated from the dynasty of David to establish its own realm under the name “Israel” (see 1 Kings 11:26–39, esp. vv. 30–32, 35–36). That this move was a restoration, rather than an innovation, is confirmed by the fact that after Saul’s death, his son Ishbaal was crowned king only of Israel (2 Sam. 2:8–9), while David became king of Judah at Hebron (2 Sam. 2:1–4; cf. also 2 Sam. 19:41–44). It thus is not that surprising to see the ten northern tribes called “Israel” in the poem. These data also imply a relationship between the southern tribes and the name “Jacob,” both of which are absent from this poem. Thus, the distinction between the northern and southern confederacies appear to go back to the time of the Song of Deborah (or even before).

—David Miano

Bibliography

- Freedman, D. N. “Early Israelite History in the Light of Early Israelite Poetry.” In *Unity and Diversity: Essays in the History, Literature, and Religion of the Ancient Near East*, edited by H. Goedicke and J. J. M. Roberts. Baltimore: Johns Hopkins University Press, 1975.
- Naaman, N. “Literary and Topographical Notes on the Battle of Kishon (Judges iv–v).” *Vetus Testamentum* 40 (1990): 423–436.
- Robertson, D. A. *Linguistic Evidence in Dating Early Hebrew Poetry*. Missoula, MT: Scholars Press, 1972.
- Schloen, J. David. “Caravans, Kenites, and Casus Belli: Enmity and Alliance in the Song of Deborah.” *Catholic Biblical Quarterly* 55 (1993): 18–38.
- Soggin, J. A. *Judges: A Commentary*. Philadelphia: Westminster, 1981.
- Stager, L. “Archaeology, Ecology, and Social History: Background Themes to the Song of Deborah.” In

Congress Volume: Jerusalem, 1986, edited by J. A. Emerton. Leiden: Brill, 1988.

Early Ancient Israelite Poetry before 900 BCE

Assigning composition dates to any biblical psalm is a difficult task. This is largely due to the poetic nature of the psalms, as poetry is more difficult to date than prose texts. Generally, when composition dates are assigned to prose texts, scholars examine the vocabulary, orthography (or spelling), and grammar of the text. Just as English has changed over time, with the disuse of words (“thou/thee/thy”) and of grammatical forms (“doeth/does”), the language of the Bible also changed. Poems containing older forms are considered archaic, although, as in modern English, a biblical poet could intentionally use older words and grammar to elevate his rhetorical style, a process known as archaizing. However, archaizing poets often misunderstand the old grammar and vocabulary, leaving cues as to the poem’s later date. Such cues are not always identifiable, however, as a later copyist might alter an older text to conform to the grammar or orthographic practices of his own day, leaving behind only a bare residue of the archaic forms. The biblical scholar must then attempt to determine which aspects of a seemingly archaic poem have been intentionally archaized by poets and then modernized by scribes. The poetry from the book of Amos (ca. eighth century BCE) offers one useful standard against which to compare archaic grammatical and orthographic differences in such determinations.

About a dozen poems are routinely accepted as examples of early Hebrew poetry with composition dates preceding the divided monarchy (ca. 920 BCE). Of these, the Song of the Sea (Exod. 15) and the Song of Deborah (Judg. 5) likely date to the twelfth century BCE. The Song of Moses (Deut. 32) and the Royal Psalm of Thanksgiving (2 Sam. 22 = Ps. 18) likely date to the eleventh century BCE. The Blessings of Jacob (Gen. 49), the Balaam Oracles (Num. 23–24), the Blessing of Moses (Deut. 33), and the Song of Hannah (1 Sam. 2) may also date to the eleventh century BCE, but because they exhibit fewer archaic forms, such early dates are less reliably

▶ PSALM 29

Ascribed to David, this psalm portrays the Israelite god Yahweh as a storm-god. Yahweh thunders over the waters, breaking cedars and stripping oaks in a manner characteristic of the Canaanite storm-god Baal. In 1935, H. L. Ginsberg published five proofs claiming that the psalm was originally a Canaanite song of praise to Baal and was only later adapted to Yahweh by Israelites. Indeed, later scholars even suggested that “Yahweh” was simply inserted into a Baal hymn in a cut-and-replace fashion. Among these proofs were the pagan elements referring to the “sons of gods” (v. 1), the praising of “God’s voice” (vv. 3–9), the geographic names from Lebanon (vv. 6, 8), the enclitic *mem* (v. 6), and the so-called climatic parallelism (vv. 1–2). Later scholars suggested several additional proofs. Ginsberg’s article was heavily influenced by the discovery at Ras Shamra in 1929 of the Ugaritic language, a second-millennium Canaanite language. Undoubtedly, Psalm 29 contains themes, motifs, and grammar common to Canaanite and Ugaritic myths about Baal; however, further investigations have also found these elements elsewhere in the Bible. Thus, the resemblances between Psalm 29 and the Canaanite poetry reflect the common heritage of the Israelites and the Canaanites. The archaic enclitic “mem” suffix and the climatic parallelism, however, which are found in the oldest Hebrew poems in Exodus 15, do suggest an early date for this poem, potentially as early as the united Israelite kingdom.

—*Spencer L. Allen*

attributed to them. Thus, both the Blessing of Jacob and the Blessing of Moses likely consist of ancient sayings that had existed in oral form but were only compiled and transcribed in later periods. A third group, dating to the tenth century BCE, includes three psalms written by King David: David’s Lament (2 Sam. 1), the Oracle of David (2 Sam. 23), and the Royal Psalm of Thanksgiving (2 Sam. 22 = Ps. 18). Psalms 78, 68, and 72 are, respectively, attributed to David, Asaph, and Solomon by the superscripts and may date to the tenth century BCE, although a ninth-century BCE date is also possible. Finally, there are several poems embedded within other passages that also display early Hebrew characteristics. These

include Habakkuk 3, Psalm 74:13–17, Psalm 77:14–21, Psalm 89:6–15, and Psalm 92:9–10.

Indeed, all but 24 psalms begin with a superscription. These include 73 that are associated with David, of which 13 explicitly relate the psalm to a moment in David’s life (as in Ps. 51:1). Twelve superscriptions are associated with Asaph, a contemporary of David, and one each with Solomon and Moses. Although usually translated into English as “a psalm of David,” the precise meaning is obscure and likely is not meant to signify authorship. Therefore, these superscriptions alone should not be used as a criterion for dating psalms. The superscriptions’ lack of reliability is demonstrated by the differences between the Hebrew and Greek textual traditions. Psalm 29, which has a superscription associating it with David, does display archaic tendencies and may even predate King David by as many as 200 years.

That the earliest poems are located in the Pentateuch and the historical books rather than the book of Psalms reflects their relative religious importance. The content and status of the Pentateuch and historical books were secured as scripture and canonized well before the unit containing the book of Psalms. By the time the psalms were canonized, a long and multistaged process, there was little reason to add the earliest, already canonized poems to the collections that would become the book of Psalms. One notable exception is the Royal Psalm of Thanksgiving, which is found in both 2 Samuel 22 and Psalm 18, with the two chapters actually reflecting two variant traditions. The version in 2 Samuel 22 was composed in the northern kingdom of Israel, while Psalm 18 was composed in the kingdom of Judah. The grammatical and orthographic differences between the two versions are indicative of the dialectal differences between Israel and Judah and, more importantly, allow scholars to identify the poem’s archaic characteristics. For instance, the orthography of 2 Samuel 22 reflects the contracted diphthongs common to Israelite and Phoenician pronunciation of the ninth and eighth centuries BCE. These contractions, in which *ay* is shortened to *ê* and *aw* is shortened to *ô*, are indicated by the lack of the letters *yodh* and *waw* in the spellings. In contrast, the Judahite dialect of this time retained

the diphthongs, so *yodh* and *waw* appear in the spellings as expected in Psalm 18. As these different spellings are attested numerous times between the versions, they likely represent actual ancient traditions, in this case dating to no later than the eighth century BCE rather than modernizations by copyists. A second archaic feature is the presence of the so-called enclitic *mem*, a suffix indicating emphasis. The enclitic *mem* is common in the language of Ugarit (ca. 1400–1200 BCE), an older sister language of Hebrew, but grew increasingly less common as biblical Hebrew developed. The Hebrew text in 2 Samuel 22:16 is *'pq ym* (“sea channels”), while the Hebrew in Psalm 18:16 has *'pq mym* (“water channels”). Note the extra “m” in the latter. Likely, a scribe transposed the first “m,” thus changing *'pqm ym* to *'pq mym* because he no longer understood the value of the archaic enclitic *mem*. Finally, a change in the meaning of certain words can be seen between these two versions. The preposition “b” in Psalm 18:14 has the meaning “from” instead of the common meaning “in/on.” This meaning is unexpected

for the biblical Hebrew preposition, although it takes both meanings equally well in Ugaritic. The parallel preposition in 2 Samuel 22:16 is *min*, the expected Hebrew word for “from,” again highlighting both the scribal practice of modernization and the archaic forms underlying these changes in the two versions of the Royal Song of Thanksgiving.

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Bibliography

- Avishur, Y. *Studies in Hebrew and Ugaritic Psalms*. Jerusalem: Magnes, 1994.
- Cross, F. M., and D. N. Freedman. *Studies in Ancient Yahwistic Poetry*. Grand Rapids, MI: Eerdmans, 1997.
- Orton, D. E., ed. *Poetry in the Hebrew Bible: Selected Studies from Vetus Testamentum*. Leiden, UK: Brill, 2000.
- Robertson, D. A. *Linguistic Evidence in Dating Early Hebrew Poetry*. Missoula, MT: Society of Biblical Literature, 1972.
- Watson, W. *Classical Hebrew Poetry: A Guide to Its Techniques*. New York: T&T Clark Biblical Languages, 2005.

■ Introduction: Vedic Religion

From about 1800 to 1400 BCE (although the exact dates are heavily debated), Vedic society emerged in India. Although the relationship between Vedic society (or Aryan society, as it is also called) and the Indus Valley civilization is contested, by 1200 BCE Vedic culture was predominant in the Indian subcontinent. Although not politically united, Vedic society shared a common ethnic identity and many other cultural traits. Vedic religion was one of these common features, and many of the elements of early Vedic religion are still important in Hinduism today. Sometime between 1200 and 800 BCE, the oral traditions of Vedic religion were written down in Sanskrit into collections of religious poetry known as Vedas. What follows is a discussion of this Vedic literature along with discussion of some of the main themes of early Vedic religion.

—Kevin M. McGeough

Vedic Cult and Rituals

The religious and ritual cult operative within the Vedic literary corpus, though referred to as early as the Rig-Veda, reaches its creative apex only several centuries later in the ensuing Brahmana ritual texts. This mode of ritual focuses primarily on the element of fire and its successful maintenance, a similar cult also having been practiced among the Parsi communities in South Asia since the time of the composition of their own sacred text, the Zend Avesta.

The Vedic fire cult has two primary, and interrelated, manifestations: the solemn (*sbrauta*) rites and the domestic (*grihya*) rites. Whereas the domestic rites focus on a single fire that is to be kept continually burning—or at least smoldering—inside the house, the solemn rites require the generation and maintenance, for the duration of a particular ritual, of three fires within a separate

► THE HORSE SACRIFICE

One of the most interesting and controversial of all Vedic rituals was the royal horse sacrifice (*asvamedha*). This is one of several festivals performed only by the king, and its successful performance led not only to increased fame for the king but also to additional land and income for his kingdom. The king and his priests would send a consecrated horse, accompanied by an army, around the borders of the kingdom; should the horse travel into the territories of neighboring kingdoms, its kings would be obligated to pay tribute to their new master. The alternative outcome was, of course, a pitched battle. Following the horse's successful return to the city, he would be sacrificed and his body cleansed. The king's three wives, who had regular duties in all standard animal sacrifices, then would decorate the dead horse with auspicious objects (e.g., gold and silver coins). The texts finally prescribe (although the early Western translators often omitted this section or even translated it into Latin) that the king's chief wife, in order to most fully imbibe the essence (*medha*) of the horse (*asva*), is to lay down with the deceased horse to the accompaniment of bawdy songs, jokes, and dancing.

—Michael Baltutis

enclosure (*vihara*). The circular western fire is called the *garhapatya* (the lord of the house), and it is generated in one of two different ways: it is either taken directly from the previously existing single domestic fire, or it is produced by drilling with two pieces of wood. In order for an individual to be qualified to establish the fires (he is called an *abhitagni*), it is required that he be married; during the performance of the Vedic rites, his wife will be seated to the southwest of this western fire with her face turned toward the northeast. Many of the ritual preparations will occur here. The semicircular *dakshinagni* (southern fire) is in the south, and this fire is to be taken from the house of a rich man and is the recipient of offerings to the ancestors. The square *abhavaniya* (offering fire) is placed in the east; its fire is to be taken in a vessel directly from the western fire, and the majority of the offerings made during the course of any Vedic rite

are placed into this fire. Placed in the center of these three fires is a central space (*vedi*) that runs from west to east and is measured to correspond precisely to the height of the sacrificer. The *vedi* is both the place where many of the ritual implements are kept and the place the gods are invited to inhabit for the duration of the ritual.

Each rite requires the involvement of three elements: a particular deity, chant, and offering material (*devata*, *mantra*, and *dravya*). The content of these three elements not only distinguishes one ritual from another, but the common process of the replacement of one particular deity, chant, or material for another allows for significant flexibility and variation within the particular ritual framework. Thus, the texts not only allow for the replacement of *soma*, the intoxicating, inspiring, and rare substance consumed by the priests, but even the milk offered in the twice-daily *agnihotra* rite has its own list of substitutes, listed in decreasing order of desirability: rice and barley, herbs, fruit, and water. The deities and Sanskrit-language chants employed in the Vedic cult are extraordinarily numerous. While the *agnihotra*, the simplest of all Vedic rites, employs only one priest who recites mantras from only one of the Vedas (the Yajur Veda) and only Agni, the god of fire, receives this offering, all other and more complex rites will utilize priests who will chant mantras from all of the Vedas, and multiple deities and groups of deities will benefit as the recipients.

A sacrificer's ritual career begins with his marriage and the ensuing establishment of his domestic fire and ends with his death, when his ritual implements are burned along with him on his funeral pyre. The Vedic cult, being a predominantly calendrical one, is composed of a set of rituals that marks off the series of chronological junctions (*parvan*) throughout the lifetime of the sacrificer: days and nights, half-months, seasons, half-years and years. These junctions are traditionally seen as dangerous times, moments that sit between established units of time. As the intervals of time grow larger, so also do these rituals grow more complex: in addition to an increase in the number of priests required for each, the fundamental category of rite also changes, requiring the offering of a different substance.

The Vedic cult functions to maintain ultimate continuity in spite of these junctions, and it is supported by the myth of the reconstitution or perfection of a cosmological whole that has become flawed (the body of the god Prajapati) using the medicine of earthly ritual (via the body of the properly initiated sacrificer).

The Vedic ritual cult is composed of three categories of ritual, although the daily agnihotra rite, which requires the offering only of milk and also possesses a domestic (*grihya*) counterpart, is considered a *havir-yajna* (sacrifice) and sits outside this traditional system. The first of the three ritual categories is the *ishtī* (offering), whose prototypical rite is the twice-monthly full- and new-moon offerings. These rites, along with the agnihotra, are the only ones whose performance is said to be necessary for all ahitagni. Unique in these rites are the baking of bread, which is offered to the gods on a number of potsherds, and the offerings made to the ancestors on the southern fire during the new-moon rites. The three agriculturally oriented four-monthly rites (*caturmasya*) closely follow the full- and new-moon rituals, though employing five priests.

While the second category, the semiannual animal sacrifice (*pashubandha*) that adds a sixth priest, may be performed as one piece of the larger soma rite (the third category of Vedic ritual), it also constitutes its own independent rite. Although an animal is sacrificed in this rite, there is a high degree of ambivalence toward the taking of the animal's life. The animal is initially tied to a wooden post that is placed exactly on the eastern border of the ritual space, thus half inside and half outside. The animal is then led to and killed in a place outside the ritual space, and the priest who is responsible for the killing is a minor figure who must kill the animal by strangulation without shedding any blood.

The final ritual category is the annual soma sacrifice (*agnistoma*), which requires the fullest possible complement of 16 priests and involves the gathering, transportation, purchasing, preparation, and consumption of the soma drink by each of the priests, who each possess a uniquely formed wooden cup from which they drink. While it is required that ritual fees (*dakshina*) are given by the sacrificer to the priests of all the

aforementioned rites, those given for the agnistoma are the highest and can include 1,000 cows or even the sacrificer's daughter.

—Michael Baltutis

Bibliography

- Heesterman, Jan. *The Inner Conflict of Tradition: Essays in Indian Ritual, Kingship, and Society*. Chicago: University of Chicago Press, 1985.
- Kane, P. V. *History of Dharmasastra*. Vol. 2, Pt. 2. Poona, India: Bhandarkar Oriental Research Institute, 1974.
- Staal, Frits. *Ritual and Mantras: Rules without Meaning*. Delhi: Motilal Banarsidass, 1996.

Vedic Priesthood

The priesthood required to perform the set of rituals commonly categorized as Vedic ritual (*yajna*) was intimately tied to this set of religious procedures. Therefore, with the historical shift of religious performance away from Vedic ritual and toward what has become contemporary Hindu temple worship, a style of performance that requires at the most a single officiating priest, the fate of this priesthood was sealed.

From as early as the text of the Rig-Veda (ca. 1800 BCE), we begin to see references to the names and functions of the priests (*ritvij*) who would eventually form a cohesive though variable group in the ensuing genre of the ritually oriented Brahmana texts. There are two main categories of Vedic rites, one solemn (*shrauta*) and the other domestic (*grihya*). In addition to the differences in location at which these rites are performed (in public and at home, respectively) and the number of fires required (three and one), each of these two types requires a priesthood that varies both in number and identity. For the domestic rites, only one priest is required—the *adhvaryu*, about whom more will be said below—although some texts allow for the householding and sponsoring ritualist (*yajamana*) himself to act as the priest. The numerical variability of and within the shrauta rites follows directly from the type of ritual that is being performed. Due to the relative lack of requisite priesthood in the domestic ritual, the often extensive priesthood required in the shrauta rites will be discussed.

➤ MAGICAL SPELLS IN THE ATHARVA VEDA

While the language of the Atharva Veda is just as archaic as that of the Rig-Veda, its status in this early period is still unclear. It was not until several centuries later that this text, which is so closely associated with the *brahmana* priest, attained an orthodox status. One reason for this delay is simply the content of the Atharva Veda. Instead of providing sacred hymns or instructions for the *shruta* ritual, it contains a variety of charms and spells. One section of the text includes hymns that protect its user from fever, jaundice, and constipation, while other hymns ensured long life, the obtaining of a good wife, and the birth of a son. Hymns specifically for use by women are also present, including those that prevent miscarriage and those that arouse the love of a man. And there were also special spells for kings whose goals included the assurance of his successful rule and his restoration to the throne if he were deposed.

—Michael Baltutis

The Vedic priesthood is structurally based on the textual corpus of the Vedas. Although eventually this canon came to include four Vedas, it was originally only the first three—Rig, Yajur, and Sama, representing the triple wisdom (*trayi-veda*)—that supplied a set of priests: one primary priest and a coterie of three assistants from each. A fourth and overarching main priest was present, however, and with his three assistants and with the occasional attendance of one additional and mainly honorary member (*sadasya*), a maximum of 17 priests could be present at some of the more major Vedic rites. But this was quite rare.

Vedic ritual is calendrical, and the less frequent the performance the more extensive is the priesthood. Thus, for the daily offering (*agnihotra*), just as for the daily domestic rite, only one priest may be required. This priest is the *adhvaryu*, the priest from the Yajur Veda, the text most concerned with ritual performance. The cumulative effect of Vedic ritual requires the presence of the *adhvaryu* at all subsequent rites. The semimonthly new- and full-moon rites (*darsha-purna-masa*) add the *bota*, the priest of the Rig-Veda; the *brahmana*; and the *agnidbra*,

an assistant of the *brahmana*. Three times each year, one of the four-monthly seasonal rituals (*catur-masya*) was celebrated; these performances added the *prati-prasthata*, the assistant and double of the *adhvaryu*. The semiannual animal sacrifice (*pasubandha*) added the *maitra-varuna*, a Rig Vedic assistant. And the annual Soma offering (*agnistoma*) required the full complement of 16 priests.

The jobs of each of these priests are clearly delineated according to their textual associations. Thus the *adhvaryu* and his assistants, seated near the eastern *abhavaniya* fire where most of the ritual substances are offered, are responsible for the majority of ritual performances; the *bota*'s job is to chant mantras from the Rig-Veda; and the *udgata* is to sing songs from the Sama Veda, though he is present only at the annual Soma rite. For performing their priestly duties, all of the priests will receive a gift (*dakshina*), preferably of either cows or of gold.

The *brahmana*, who was mentioned above and who is nominally associated with the Atharva Veda, the fourth of the four Vedas, served as the doctor of the ritual and is responsible for ensuring that each priest correctly performs his duties. This means, of course, that must he be fluent not only with the content of the Atharva Veda, even though this text was not often used in these rites, but also with the content of the three other Vedas, for which the three main priests are responsible. This comprehensive knowledge granted him a position that was at once the highest within the priestly hierarchy yet also one that was somewhat outside of it completely due to his lack of relevant textual affiliation and relatively inactive role within the rites. But his extensive knowledge granted him the power to assign expiation (*prayascitta*) to all of the priests for inevitable ritual mistakes. While lists of such mistakes run into the thousands and include many that were rarely if ever made, an example of one of the more practical expiations would be the purifying of the wooden drills used to create fire should they become defiled through contact with an unclean object (such as a crow or a dog). On the other hand, since his primary duty is to remain silent throughout the proceedings, it has been said that his

function was merely to maintain the structural continuity of the ritual while the other priests were inactive.

There are additional ritual officiants present throughout the more complex Vedic rites who are not deemed to be priests. Two of these ancillary priests appear in the rite of the animal sacrifice (*pasubandha*). The carpenter (*takshan*) is responsible for fashioning the wooden stake to which the sacrificial animal is temporarily attached. And the *shamita* (“the pacifier”) is responsible for the bloodless sacrifice, usually strangulation, of the animal.

Throughout later Vedic and post-Vedic texts, the brahmana priest, with his purported (if not real) knowledge of all three Vedas and also with his knowledge of Atharva Vedic rites specific to kingship, was granted a royal position in the king’s court. This priest, the king’s domestic purohita, appears frequently in the Sanskrit epics as the king’s personal priest who performs rites ensuring the king’s success in battle or the successful continuation of the king’s lineage. Within descriptions of popular festivals, the authors’ frequent emphasis on the activities of the purohita and the king (e.g., the recitation of mantras) has the effect of shifting the focus of the text from the contemporary and the common to the ancient and the Vedic.

—Michael Baltutis

Bibliography

- Heesterman, Jan. *The Broken World of Sacrifice*. Chicago: University of Chicago Press, 1993.
- Inden, Ronald. “Changes in the Vedic Priesthood.” In *Ritual, State and History in South Asia*, edited by A. W. Van Den Hoek, D. H. A. Kolff, and M. S. Oort. Leiden: E. J. Brill, 1992.
- Kane, P. V. *History of Dharmasastra*. Vol. 2, Pt. 2. Poona: Bhandarkar Oriental Research Institute, 1974.

Vedic Worldview

Any description of a Vedic worldview is necessarily limited by the texts available to us. The ritually oriented Vedic canon was composed by a related though not monolithic group of literate high-caste Brahmins who never specifically posited anything like a worldview—or any other doctrine, for that matter—in their texts. Thus,

elements that would comprise a tradition’s coherent worldview—origins, ethics, cosmology—are somewhat scattered throughout the ritual and mythic details contained in these texts.

Generally speaking, there are three types of myths in the Rig-Veda: myths of sovereignty, of war, and of reproduction. Thus, the Vedic worldview can be said to be more immanent than transcendent: while concerned to some degree with a life after death, the early Vedic authors and ritualists placed more emphasis on earthly success in regard to kingship, victory in battle, and the procreation of children. The Vedic emphasis on battle and victory, themes that permeate much of the Vedic cult, focus on one particular and apparently historical battle, the so-called Battle of the Ten Kings. This battle, led by the warrior-king Sudas, solidified the Aryan jurisdiction over northwestern India, established Indra as the primary Vedic deity, and allowed for their migration throughout the whole of northern India. Later stories and epic tales modify this original story to narrate the victories of other clans and of the victory of the gods over their demonic adversaries. The Rig-Veda also possesses hymns that could be described as naturalistic (e.g., a hymn of praise to Parjanya, the god of rains) and others concerned with magic (e.g., a hymn in which Indra uses the ritually important plant soma to cause crops to grow).

The Vedic worldview includes no single creator of the world; rather, different passages provide different deities with different creative functions. The dual divinity Dyaus-Prithivi—the male Sky and female Earth—are most frequently said to account for the creation of the universe, but they are not creators in the traditional sense of the word. In the later Brahmana texts, Prajapati (the lord of creatures) is the creator who is identified with both the year and, like Vishnu, with the sacrifice itself. Visvakarman (he who creates all) and Tvashtri (the fashioner) are also deities who create, yet their creations are typically limited to the weapons of the gods and the ritual implements of the priests.

The structure of the Vedic universe represents one of the most consistent components of the Vedic worldview. It is composed of three distinct portions—earth, the middle atmosphere, and the sky (*bhumi*, *antariksha*, and *svarga*)—

➤ ANCESTOR VENERATION

In the Vedic ritual calendar, following the single day, the half-month was the basic unit of time: the auspicious bright half concluded with the full moon, and the inauspicious dark half concluded with the new moon. The dark half of the month, and especially the day of the new moon, was defined by the worship of the ancestors (*pitar*), a practice that continues in South Asia today. Vedic ritual texts prescribe the monthly worship of the ancestors of the three preceding generations—father, grandfather, and great-grandfather—on this day with the production of three rice balls (*pinda*). The sacrificer, wearing his sacred thread over his right shoulder rather than the usual left shoulder—cooks the rice, feeds the middle ball to his wife in order that she will produce a heroic son, and disposes of the other two in either water or fire. At the end of this ritual, the ancestors are requested to depart to heaven after bestowing wealth and welfare upon the sacrificer and his family.

—Michael Baltutis

and is sometimes said to be supported by bolts or ropes. Each portion is populated with its own set of divinities, led by Agni (the sacrificial fire), Indra (the god of storms and warriors), and Vayu (the wind), respectively. The earth is also populated by humans, the descendants of Manu, the original man, and the seven primordial *rishi* (sages). Also said to be the first ancestor of all humans is Yama, who early on additionally becomes the god of the dead. While this three-part system does not include a heaven or hell—earth is the lowest of the three places—a full and successful life is rewarded with eternal life in *svarga* (the sky), the place of all the ancestors.

Prayer and sacrifice are the two primary means of propitiating the gods, and it is these religious performances that serve as the very foundation of the Vedic worldview. While it is not the case that every Vedic hymn is used in one or another ritual, as some early Western scholars had thought, it is the words (*mantra*) themselves, whether alone or in the context of a ritual, that are effective. In order for humans to

receive worldly benefits from the gods, they must shower the gods, who have the priests as their earthly manifestations, with praise and material offerings. And these offerings, when made in the context of a ritual and when equated with the constituent components of the universe, have the ability to correct and re-create the inherently imperfect world.

The definition of a full and successful life is defined not by a strict ethical system—such a thing is not worked out in the Vedic texts—but the individual is said to be born with four debts (*rina*) to four different entities, and each must be paid off in its own way. One's debt to the gods is paid off through the proper performance of Vedic ritual: that to the ancestors with sufficient progeny, that to the *rishi* with the study of the Vedas, and that to fellow humans with proper hospitality. Vedic and post-Vedic texts are replete with tales of kings, warriors, *rishi*, and gods fulfilling each of these four debts, of the faithfulness with which they perform them, and of the obstacles that demonic enemies create in order to prevent their proper performance.

Though it is assumed that the concept of history is not a significant element within Vedic literature, it is evident that the Vedic authors had exerted some effort in relating certain events with an aura of historicity. The Battle of the Ten Kings is related in several different books of the Rig-Veda and thus by authors from several different families, and the actions of the participating kings and warriors reads, at some points, like a narrative account of the battles. The Vedic concept of history is, on the other hand, often placed in cosmological terms likening one's own side to the gods and the enemy's side to the demons. The establishing of family lineages and textual schools represents another important example of the Vedic notion of history.

—Michael Baltutis

Bibliography

- Ghurye, G. S. *Vedic India*. Delhi: Motilal Banarsidass, 1979.
- Patton, Laurie L. *Bringing the Gods to Mind: Mantra and Ritual in Early Indian Sacrifice*. Berkeley: University of California Press, 2005.
- Smith, Brian K. *Reflections on Resemblance, Ritual, and Religion*. New York: Oxford University Press, 1989.

Vedic Literature

The term Veda derives from the Sanskrit root *vid*, meaning “to know,” and constitutes a body of wisdom revered by the Indo-Aryans, the people to whom it belonged. Even today, among all their varied scriptures, orthodox Hindus who claim to be of Aryan descent hold the highest regard for Vedic literature, which espouses Indo-Aryan beliefs and values. The language of this literature is Vedic Sanskrit, an ancient form of Sanskrit related to Avestan, an archaic form of Iranian, both of which belong to the Indo-Iranian subgroup of Indo-European languages. The term “Vedic literature” is ambiguous, although it is mostly used to refer to four textual types: the Samhitas, Brahmanas, Aranyakas, and Upanishads. However, it may also include supplementary works, collectively labeled the Vedangas, or “appendages of the Vedas.” Since the category of Veda carries substantial religious prestige, it is not unusual to see other texts broadly designated as part of the Vedic corpus, sometimes as Upangas (“secondary appendages”), or merely included in lists of Vedic literature, because they are deemed to resonate with the culture of orthodoxy associated with Vedic teachings. However, apart from the Samhitas, Brahmanas, Aranyakas, and Upanishads, which are regarded as *shruti*, all other literature is classified as *smriti* (from *smri*, “to remember”), namely, teachings that have been composed by human beings and passed down through generations as “tradition.” In contrast, shruti literature is believed to have not been authored by human beings but divinely perceived and chanted (*sru*, “to hear”) by semi-divine seers (*rishi*). Although this literature was eventually committed to writing, it was originally a completely oral textual tradition whose procedures of memorization and recitation still endure among select families of the priestly class known as Brahmins (*brahmana*). While the shruti literature is certainly religious in its content, even the peripheral works, which include topics such as grammar and medicine, could arguably be considered religious, since they are said to be forms of knowledge necessary for the cultivation of members of the priestly class and the proper performance of their duties.

—Hillary Rodrigues

Bibliography

- Dandekar, R. N. *Vedic Mythological Tracts*. Delhi: Ajanta Publications, 1979.
- Gonda, Jan. *Vedic Literature (Samhitas and Brahmanas [Samhitās and Brāhmaṇas])*. Wiesbaden: Harrassowitz, 1975.
- Jamison, Stephanie W. *The Ravenous Hyenas and the Wounded Sun: Myth and Ritual in Ancient India*. Ithaca, NY, and London: Cornell University Press, 1991.
- Santucci, James A. *An Outline of Vedic Literature*. Missoula, MT: Scholars Press, 1976.
- Witzel, Michael. “The Development of the Vedic Canon and Its Schools: The Social and Political Milieu.” In *Inside the Texts, beyond the Texts: New Approaches to the Study of the Vedas*. Harvard Oriental Series. Opera Minora, vol. 2. Cambridge: Harvard University Press, 1997.

The Samhitas

The oldest text in the corpus of Vedic literature is the Rig-Veda Samhita, a collection (*sambhita*) of 1028 hymns (*rig*, meaning “verse”) of praise, mostly to deified aspects of the natural world, such as Fire (Agni). These hymns are divided into ten books, or *mandalas*. The first and last mandalas are acknowledged as being compiled later than the inner core containing the family books attributed to the lineages of particular patriarchal seers (*rishi*), who are believed to have intuitively received the divine compositions. Book nine is dedicated entirely to Soma, a deified plant and the intoxicating beverage extracted from it, that played a central role in Vedic religious rituals. It has been difficult for scholars to pinpoint when the hymns of the Rig-Veda (RV) were composed and when the collection was compiled. Cuneiform Hittite-Mitanni treaty tablets discovered at Boghazkoy (in Cappadocia in modern Turkey) from about 1400 BCE mention the gods Mitra, Indra, and Varuna, who are also praised in RV hymns. The tablets suggest that portions of the RV were composed at this time and contribute to a conservative dating by scholars of the formation of the core of the hymn collection between 1500 and 1200 BCE, with the first and last books perhaps added within the next few centuries. This would arguably make the RV the oldest religious scripture still in use in the world. Geographical references in the

hymns, such as to the seven rivers (*sapta-sindhu*), suggest that they derive from the northwest of the Indian subcontinent around the region of the Punjab. Linguistic style is one of the main criteria used for assigning dates to the various literary genres within the Vedic corpus.

The Sama Veda and Yajur Veda Samhitas are liturgical hymn collections that developed some centuries after the RV. The verses in the Sama Veda (SV) are mostly derived from the RV and are presented in melodic forms for an Udgatr, a special class of priest, to chant (*saman*) during Soma offering rites. Similarly, the Yajur Veda (YV) pertains to the rituals of the Adhvaryus, providing these priests prose instructions for the construction of fire-altars, the performance of the elaborate horse sacrifice, and so on as well as the appropriate short verse prayers (*yajus*) drawn from the RV to chant when engaged in these rites. These three Samhitas appear to have formed the core of Vedic orthodoxy for many centuries, until a fourth hymn collection, the Atharva Veda (AV), was included in the fold. Named after the Atharvan, a type of priest, the AV contains over 700 hymns, less complex in metrical style and grammar and different in content from those of the RV. Many of the hymns of the AV are pragmatic, including charms against diseases or to acquire love, spells to inflict harm or counteract sorcery, and prayers to obtain good crops, secure peace, and raise healthy livestock. The magical (both black and white) concerns of this text suggest the presence of religious practices on the subcontinent that differed from Brahminic priestly rituals and that subsequently found expression in alternate spiritual paths such as Tantra. The AV is the first text to mention iron, which only appears in India in about 1200–1000 BCE. Thus, although certain portions of the AV may well belong to earlier centuries, the compilation of the bulk of the text likely derives from this period or later and therefore is contemporaneous with the composition of the SV and YV as well as the Rig Veda Khila, a collection of supplemental verses added to the RV.

The transmission of the Samhitas belonged to various Brahmin theological schools known as *shakhas*, each maintaining the integrity of its version and interpretation. Early Sanskrit texts

mention 5 shakhas (recensions) of the RV, 12 of the SV, more than 40 of the YV, and 9 of the AV. However, only a few of these are extant today, and some only in partial forms. For instance, the YV is found in two branches, designated as the Black YV and the White YV, perhaps because the former is murkier in its structural arrangement than the latter. There are two fairly identical shakhas of the White YV, the Kanva and the Madhyamdina, whose hymn collections are better known as the Vajasaneyi Samhitas. The Black YV is found in three recensions (there is also a fragmentary corrupted fourth version), one of which is the Taittiriya Samhita, whose school has preserved the corpus of its Vedic literature remarkably well.

—Hillary Rodrigues

Bibliography

- Atharvaveda Samhitā*. Edited by C. R. Lanman. Translated by William Dwight Whitney. Cambridge: Harvard University Press, 1905.
- The Hymns of the Rigveda*. 2 vols. Translated by T. H. Griffith. Benaras, India: E. J. Lazarus, 1920–1926.
- The Hymns of the Samaveda*. Translated by Ralph T. H. Griffith. 1963; reprint, Whitefish, MT: Kessinger, 2004.
- Gonda, Jan. *Vedic Literature*. Wiesbaden, Germany: Harrassowitz, 1975.
- Jamison, Stephanie W. *The Ravenous Hyenas and the Wounded Sun: Myth and Ritual in Ancient India*. Ithaca, NY: Cornell University Press, 1991.

The Brahmanas, the Aranyakas, and the Upanishads

The Brahmanas constitute the next genre of texts following the Samhitas within the corpus of Vedic literature and arguably derive from about 1200–800 BCE if we do not include the later textual genres sometimes embedded within them. The term “Brahmana” refers to teachings on Brahman, the power believed to inhere in the sacred utterances (*mantra*) of the Vedic hymns and in the rituals that developed in tandem with them. These texts are prose commentaries on Vedic rituals that reflect on diverse priestly concerns, such as why a rite is performed, what constitutes its proper performance, and even the cosmic parallels between priestly actions and the forces of nature. Each of the Vedic *shakhas*

traditionally has a Brahmana associated with it, although only some have survived to the present day. The Aitareya and the Kaushitaki Brahmanas belong to Shakala and Bashkala schools of the Rig-Veda (RV), respectively. The Panchavimsha and Jaiminiya Brahmanas are associated with schools of the Sama Veda (SV), and the Gopatha Brahmana with the Paippalada shakha of the Atharva Veda (AV). Although the Brahmanas of the Taittiriya school of the Yajur Veda (YV) are mixed in with the Samhita portions of the Black YV, contributing to their designation as black, the school does have its own appended Taittiriya Brahmana. One of the most influential members of the genre, due in part to its size and the organization of its contents, is the Shatapatha Brahmana (Brahmana of a Hundred Paths), so-named because it is divided into 100 lessons. It exists in two similar recensions derived from the Madhyamdina and Kanva schools of the White YV.

Chronologically next in the genre of *shruti* literature are the Aranyakas or wilderness (*aranya*) texts, which bridge the focus of the Brahmanas with those of the Upanishads, the last of the four genres. The Aranyakas promoted ascetic renunciation in wilderness retreats. The texts often extend the symbolic interpretation of ritual so that links are made between Vedic deities, natural phenomena, and the human microcosm. For instance, intuitive penetration into the mystery of the vital breath (*prana*) is said to reveal its connection to all sacred utterances (mantra) and to the deities who have created the universe itself. The Aranyakas teach that masterly comprehension of one's interior reality and its fundamental connection to the whole of exterior reality is sufficient to make all of one's ritual acts successful. Thus contemplative realization is valorized in tandem with the priest-craft of the earlier literature.

The relationship between one's authentic self (Atman) and Absolute Reality (Brahman) is extensively developed in the Upanishads. The term *upanishad* ("sit down beside") evokes the image of a student seated at the knee of a spiritual mentor (guru) to receive secret instructions, and the texts are often framed as master-disciple teachings. There are hundreds of Upanishads, but only about a dozen early ones are regarded as

major, granted the status of shruti, and associated with the major Vedic schools. For instance, the Kaushitaki Upanishad is associated with the Bashkala school of the RV, while the Aitareya Upanishad is associated with the RV's Shakala shakha. The Kena and Chāndogya Upanishads belong to the SV, the Taittiriya Upanishad to the Black YV, and the Brihadaranyaka Upanishad to the White YV. As its name suggests, the Brihadaranyaka Upanishad, probably the oldest of the Upanishads, is an Aranyaka classified as an Upanishad. Its linguistic style resembles Brahmana prose, and the text could well derive from as early as the eighth century BCE. These early prose Upanishads evidently predate Buddhism and may be placed in the period from about the seventh to the fifth centuries BCE. The Chandogya Upanishad was once a part of a Brahmana, and the Aitareya Upanishad was contained within the Aitareya Aranyaka, which itself is sometimes classified as part of the Aitareya Brahmana. These six Upanishads form the earliest strata within this genre and are composed in Vedic Sanskrit prose similar to the literature that precedes them. The Kena Upanishad does have two of its four sections in verse that belong to the next strata. Upanishads that belong to this second, later phase, and are composed in verse, include the Isha, Katha, Shvetashvatara, and Mundaka Upanishads. In content they prefigure the theistic devotionism expressed in the Bhagavad-Gita. The Shvetashvatara Upanishad, for instance, associated with the Black YV school is dedicated to the deity Rudra-Shiva.

—Hillary Rodrigues

Bibliography

- Rigveda Brāhmanas*. Translated by Arthur Berriedale Keith. Cambridge: Harvard University Press, 1920.
- The Śatapatha-Brāhmana*. Translated by Julius Eggeling. 5 vols. Oxford, UK: Clarendon, 1882-1900.
- The Veda of the Black Yajus School Entitled the Taittiriya Sanhita*. Translated by Arthur Berriedale Keith. Cambridge: Harvard University Press, 1914.
- Upanishads*. Translated by Patrick Olivelle. Oxford and New York: Oxford University Press, 2008.

The Sutras

The final group of texts associated with particular Vedic schools are the Sutras, although these

are not granted status as *śruti*. There are three main categories of these texts: the Śrauta Sūtras, the Grihya Sūtras, and the Dharma Sūtras. Śrauta rites include seasonal public and grand royal rituals such as the horse sacrifice (*ashvamedha*) and kingly consecration (*rajasuya*), while the Grihya texts outline routine domestic ritual procedures, as well as rites of passage. Their linguistic style would place them in the late Vedic period, around the sixth century BCE. The Dharma Sūtras explore duties incumbent on members of the various classes of Hindu society. The earliest of these may derive from the sixth to the fourth centuries BCE. An early representative of the Śrauta Sūtra literature, the Baudhayana Śrauta Sūtra, for instance, along with later compositions such as the Apastambha Śrauta Sūtra, belong to the Taittiriya Samhita of the Black YV. There is also a corresponding Baudhayana Grihya Sūtra, and a Baudhayana Dharma Sūtra also belonging to the Taittiriya school. The Grihya and Dharma Sūtras belong to the first strata of *smṛiti* literature and are thus sometimes called Smṛta (derived from *smṛiti* Sūtras).

The Mundaka Upanishad makes first mention of the Vedāṅgas, or appendixes to Vedic

literature. The Sūtra works mentioned above, together with the Shulva Sūtras, texts on the geometry and construction of altars, are collectively known as the Kalpa Sūtras (Treatises on Ritual) and form one of the six major Vedic limbs or appendages (*āṅga*). The other five are *śikṣā* (phonetics and articulation), *chandas* (metrical structure), *vyākaraṇa* (grammar), *nirukta* (etymology), and *jyotiṣa* (study of luminaries, or, astrology). Panini (ca. seventh to fourth centuries BCE), author of the *Ashtadhyāyī*, a renowned treatise on Sanskrit grammar often dated to the fifth century BCE, provided the foundation for the development of Classical Sanskrit, and marks the end of the period of Vedic Sanskrit literature.

—Hillary Rodrigues

Bibliography

Dharmasūtras: The Law Codes of Apastamba, Gautama, Baudhayana, and Vasishtha. Translated by Patrick Olivelle. New Delhi: Motilal Banarsidass Publishers, 2000.

Gonda, Jan. *The Ritual Sūtras*. Wiesbaden: Harrassowitz, 1977.

Science and Technology

Some of the most skilled chemists in the period between 4000 BCE and 1000 BCE were the bronze smiths of the Shang dynasty in China (ca. 1600–1046 BCE). Not only were these metallurgists highly proficient technically, understanding the subtleties of the reaction of metals to differing amounts of heat, but they were also creative artists. Producing their art on the outskirts of villages, since the fire and smoke produced in ancient metallurgy would have been too dangerous and unpleasant in the midst of people's homes, these smiths forged elaborate designs that are still striking today in their complexity and, in the words of many art historians, in their ferocity. Most of the bronze vessels were highly stylized forms of ritual vessels that already existed in other media, mostly ceramic and wood. In the Shang dynasty, the technological skill developed enough to allow bronze to be sculpted into equally complex designs. Mostly this was done through the use of composite molds; some vessels that were formed used at least eight individual molds.

The Shang bronzes are representative of the scientific and technological achievements of this era. Combining art, religious tradition, and functionality, these bronzes are evidence of new innovations during this period. Archaeologists reconstruct the science and technology of this period less from written self-conscious treatises on science (although there are a few of these) and more on analysis of the scientific and technical skills required to produce the material culture found in excavations. There seems to have been little interest (with a few major exceptions) in writing down and articulating scientific theory in words. Yet given the technological leaps that are made in this era, this lack of interest in writing about science and technology certainly was not indicative of a lack of practical interest in science.

The basis of the major technological developments between 4000 BCE and 1000 BCE was a more complex understanding of pyrotechnology. Better abilities to control fire and to create greater amounts of heat allowed synthetic materials to play a more prominent role in people's everyday lives. The ability to control fire and heat had existed long before this time, and some of the most important synthetic materials (such as ceramics) had first been produced centuries before. However, greater control of these materials allowed ceramics, metals, and glass to play an equal role with unaltered materials—such as stone, bone, and wood.

The basis of the major technological developments between 4000 BCE and 1000 BCE was a more complex understanding of pyrotechnology. Better abilities to control fire and to create greater amounts of heat allowed synthetic materials to play a more prominent role in people's everyday lives.

The direct result of more sophisticated pyrotechnology was the ability to produce stronger, more complex, and more aesthetically pleasing synthetic objects. Because ceramics, metals, and glass all are similarly dependent on the ability to control high amounts of heat, innovations in the production of one of these materials led to innovations in the others. Kilns, which were typically built of clay and stone, were the most important means of utilizing fire to create synthetics. Pottery or metal in molds usually sat on a small platform in the kiln, under which the fire was built. Building the fire in an enclosed space allows significantly higher temperatures to be reached than building open fires. Fire in an enclosed space allows the amount of oxygen around the ceramics and metal to be reduced, either by limiting how much air enters the kiln or by adding unburned fuel (especially wood) to the flames. It is unclear precisely how hot kilns could get. Since copper was worked and its melting point is 1,981 degrees Fahrenheit, temperatures exceeding this were certainly reached. Iron production does not begin until close to the end of this period; to be worked it has to be kept at a temperature between 1,832 and 2,012 degrees Fahrenheit, which was slightly beyond the abilities of these artisans (or at least was not easy enough for them to make it worthwhile).

The indirect results of these advances were any of the artifacts and buildings that were produced from tools made in a kiln. Metal tools allowed greater sophistication in architecture. Woodworking improved when metal tools were used to sculpt the wood; stonecutting likewise could be done with a greater degree of polish with metal tools. Engineering benefited greatly, as the pyramids at Giza and the palaces of Mesopotamia can attest. Agriculture benefited from less-porous pottery and finer metal tools. Innovations in warfare were deeply rooted in metallurgical advances. Bronze tools gave a significant advantage in combat. Weapons made of wood, such as bows, became more complex, and the advanced woodworking skills allowed the invention of the chariot. Agricultural tools such as the plow came to be widely used in this period, making life much easier for farmers attempting to prepare the ground for planting. Along with these achievements in synthetic production came deforestation. Given the huge amounts of wood required for the kilns (often first converted into charcoal, which smolders longer, or supplemented by animal dung), the first evidence of human-caused deforestation indicates the link between technological achievement and environmental mismanagement.

It should not be assumed, however, that science between 4000 BCE and 1000 BCE was solely geared toward technological development. In those areas where writing was utilized, ancient scholars recorded their observations of the natural world. Although most historians locate the first secular natural sciences in the Greek world of this period, the stirrings of this kind of work began in the preceding era. Mesopotamian scholars were especially concerned with observing nature. These ancient naturalists left behind long lists of animals, plants, and stones, grouped according to taxonomic categories. This type of observation seems to have been driven partly by many of the same motivations that move naturalist today, a profound and genuine interest in the world

around them. These were not the only motivations, however. Many of these ancient observations were made in order to better understand the will of the gods, which were believed to be manifest in the behavior of animals or in the movements of heavenly bodies. By carefully recording observations and attempting to identify patterns, these ancient scholars felt that they could decode messages sent by deities, and much of the science of this period cannot be separated from divinatory practices.

The astronomical skills of the people of this period are attested indirectly in monuments such as Stonehenge (aligned with astronomical phenomena), which reflect a predictive knowledge of astral events. Our most direct evidence for astronomical skills are the writings of ancient sky gazers. Mesopotamian and Egyptian astronomical records are very detailed, and much of our knowledge of Near Eastern chronology is due to the accuracy of these observations.

In order to make astronomical or astrological observations, highly developed mathematical skills were essential. Complex mathematical documents are well attested in Egypt and Mesopotamia, where the equivalent of math textbooks—papyri and tablets that explain how to solve certain mathematical problems—have been recovered. Indirectly, the engineering feats of many of the people of this period reflect knowledge of physics and engineering. Mathematics for the people of this time was mostly a practical skill, although there is number play in the mythological texts of Mesopotamia.

The practical approach to science is also manifest in the approaches to medicine throughout this era. Once again, the best direct evidence for medical science comes from the Egyptians and Mesopotamians, cultures that utilized writing in this period. It is not meaningful to separate religio-magical approaches to healing and scientific approaches in this period, as both were used in tandem. Snakebites (common problems in Egypt and Syria-Palestine) were “cured” through incantations, for example. Diseases in Mesopotamia were often thought to be caused by harmful spirits. Mesopotamian medical practitioners checked their patients for symptoms but not because they thought there was a physiological relationship between the illness and the symptom. Rather, it was believed that symptoms were signs from the gods explaining what the problem was. However, many of the medical practices were efficacious. The Egyptians had an expert knowledge of anatomy, which was utilized in mummification and in surgical practices. Medical examination of mummified bodies has shown that diseases and injuries were often treated successfully.

—Kevin M. McGeough

■ Introduction: Metallurgical Production

Gold, silver, copper, and iron served as the main metals employed in the production of both utilitarian and ornamental objects. The ancient smith could manipulate these metals in their relatively pure state or alter them through alloying or the application of various pyrotechnologies. Copper, typically alloyed in various percentages with tin or arsenic, forms bronze, a harder and more durable metal better suited than pure copper for tools and weapons. Iron technologies followed bronze, but it was not until the tenth century BCE that the percentage of iron tools and weapons increased over the percentage of bronze tools and weapons, and bronze continued to be better suited for some duties.

Smiths require approximately 1,085°C to melt copper and 950°C for bronze, depending on the level of impurities in the alloy. To achieve this heat, smiths could blow air into their furnace either by mouth via blowpipe or through a bellows. The most primitive furnace was essentially a clay-lined hole in the ground known as a bowl furnace. Perhaps the oldest form of bellows was

a simple bag of sewn animal skins or stomach. The bag was attached to an incombustible ceramic pipe (tuyere), which could be inserted into or near the fire and fitted with an opening to introduce fresh air into the bag. The opening was then sealed and the bag compressed to force a stream of air into the furnace. Additional bellows could be added for increased or continuous airflow.

Metalsmiths could either hammer copper/bronze, gold, and silver into a desired shape or cast it in intricate forms. Cold hammering (forging) copper/bronze will increase its brittleness, but this may be counteracted through heat treatment (annealing). Gold is prized for its ability to sustain significant deformation, which allows it to be hammered into paper-thin gold leaf. Casting involves pouring liquid metal into a shaped mold of baked clay, stone, metal, or sand. The lost wax method (*çire perdue*) of casting requires that a representation of the object to be cast be modeled in beeswax (or similar material) and then covered with clay. Specially created risers and vents are added to the wax models of more complex shapes to allow for the escape of gases from the cooling metal. Heating this clay-coated model melts the wax, which runs out through holes provided in the mold. When the mold is sufficiently baked, liquid metal is poured into the spaces left by the wax. The single-use clay mold is broken free from the cast object once the metal has cooled.

In the Bronze and Iron Ages of the Ancient Near East, iron could not yet be cast. Pure iron's melting point is around 1,540°C, a temperature not attainable until the nineteenth century CE. Iron reduced from ore was removed as a lump or bloom (a mixture of solid iron, slag, and pieces of unburned charcoal) that was broken up to remove the iron pieces. Hot iron is ductile (or spongy) and can flatten upon hammering. Wrought iron work can be done by hammering at approximately 700°C. Although wrought iron is softer than alloyed copper, the ductility of iron allows it to survive a blow without breaking, making it a valuable material for tools and weapons. Iron can be welded into larger pieces



Detail of a relief in the tomb of Mereruka at Saqqara depicts metalworkers using blowpipes to force the forge fire, about 2350–2181 BCE. (Werner Forman/Art Resource, NY)

by heating to white heat (1,100°C) in a smith's fire and hammering. An iron tool or weapon could thus be repaired or could be built up and shaped through repeated heating and beating.

Alloying iron with carbon produces steel, which can be stronger than copper alloys. Carburization occurs when an iron object is placed in a charcoal fire, where it may absorb carbon through solid-state diffusion. There is evidence that smiths were intentionally carburizing by at least 1000 BCE, although the quality of the objects was inconsistent. The full potential of steel, however, is only realized when it is heated and cooled under careful conditions. If hot steel is plunged into water or another liquid (known as quenching or fast cooling) a hard, brittle martensite forms. Unless reheated (tempering), the martensite is too brittle for use in weapons and some tools. This reheating could be done at temperatures well below red heat (750–900°C). Quenching has no effect upon bronze or upon iron that is not alloyed with carbon.

The equipment of metalsmithing appears fairly standardized. A hammer and a working surface/anvil were essential for forging, and a ceramic or stone crucible was required to hold molten metal for casting procedures. The crucible served equally well for smelting, melting (or remelting scrap), and refining operations. The removal of excess metal from a cast and the breaking up of scrap would require a heavy-duty chisel, commonly known as a cold chisel. Stone tools, rounded without handles, appeared in the metalsmith's tool kit for use in hammering, pounding, grinding, or crushing. Stones were also used as whetstones for sharpening edges and as polishing abrasives. Specialty tools, such as swages (used to create a rod or tube) or forceps (to move and hold hot objects) might also appear in the smith's tool kit along with tools for detailing or decorating the finished pieces.

Part- and full-time craftsmen lived and worked among the population, with many smithies integrated into residential areas rather than separated in purely industrial quarters. Some metalsmiths traveled between settlements carrying their tools, raw materials, and techniques with them, although this was likely not commonplace.

—Adam Aja

THE ULUBURUN SHIPWRECK

A late-fourteenth-century BCE shipwreck discovered near Uluburun, Turkey, revealed a shipping cargo that included tons of Cypriot copper and other raw materials. The copper was shipped in several forms that included two-handled, pillow, planoconvex discoid (bun), and four-handled ingots. The four-handled ingots, also known as oxhide ingots because of their similarity to dried ox hides, each weighed approximately 52.9 pounds (24 kilograms). Ingots of nearly pure tin were also part of the cargo. The raw material from the ship would have been enough to manufacture well over ten tons of bronze. In addition to the metallurgical material, the cargo included glass ingots, food-stuffs (olives, figs, pomegranates, spices, and nuts), terebinth resin, ivory, and manufactured goods such as jewelry, Cypriot pottery, tools, and weapons. While the origin of the ship, its crew, and most of the cargo is uncertain, it is apparent that the ship was at home along the Syria-Palestine coast.

—Adam Aja

Bibliography

- Craddock, P. T. *Early Metal Mining and Production*. Edinburgh, UK: Edinburgh University Press, 1995.
- Evely, R. D. G. *Minoan Crafts: Tools and Techniques*, Vol. 2. Jonsered: Paul Åström Förlag, 2000.
- Moorey, P. R. S. *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence*. Winona Lake, IN: Eisenbrauns, 1999.
- Tylecote, R. F. *A History of Metallurgy*. 2nd ed. Brookfield, VT: Institute of Materials, 1992.
- Wheeler, T., and R. Maddin. "Metallurgy and Ancient Man." In *The Coming of the Age of Iron*, edited by T. Wertime and J. Muhly. New Haven, CT: Yale University Press, 1980.

Egyptian Goldsmithing

The eastern deserts of Ancient Egypt were rich with gold. There were three main regional concentrations: at Qena and Qift, at Elkab and Edfu, and at the mouth of the Wadi el-Allaqi in ancient Nubia. Gold existed in the alluvium of the wadi beds, from which it could easily be panned by unskilled labor, and in veins of white quartz to be mined from the igneous rock of the hills

➤ GOLDEN BODY-PART REPLACEMENTS

Amulets in the form of human body parts were discovered among the golden ornaments adorning mummies. These were not, however, intended as purely decorative pieces. The Egyptians believed that the miniature parts would function as substitutes in the afterlife should the original part of the body become damaged or destroyed. The use of these body-part replacements increased after the First Intermediate period. In the New Kingdom, the practice of covering the mummy's fingers and toes with gold replicas was introduced. Fingers and toes were especially delicate parts of the mummified corpse. The gold replacement digits even included gold fingernails and rings.

—Adam Aja

between the Nile River and the Red Sea. Gold preparation was often done near the mines, and craftsmen would typically receive their gold bagged as dust or nuggets or molded into ingots. Scenes painted on the walls of the Tomb of Rekhmire (late fifteenth century BCE) depict goldsmiths receiving a weighed allotment of ring-shaped gold ingots. Most Egyptian gold was impure, containing up to 20 percent silver (technically termed “electrum”). A considerable amount of Egyptian goldwork was melted down in antiquity, and with only a few exceptions (notably from the tomb of Tutankhamun), most surviving pieces of goldwork are small. These limited glimpses, however, inform us of the high level of skill attained by Egyptian goldsmiths.

Craft production was often associated with the palace or temple, institutions that could afford the investment in long training and slow labor-intensive work. The best craftsmen were trained from boyhood and might attain high social status as adults. It was unlikely that many nonelites owned or worked gold, a metal that was prized for its role in international diplomacy and religious symbolism. Gold was considered the flesh of the gods. Its color was like that of the sun and did not tarnish, so it served as a symbol of the purity and everlasting nature of the gods.

Goldsmiths could produce finely crafted objects from either cold-worked or molten gold. Gold is extremely ductile and can flatten into

paper-thin sheets of gold leaf through repeated hammering with simple rounded stones. Gold sheet was used to decorate wood furniture, statues, architecture, and funerary items. Thick sheets of gold could be hammered directly onto wood and held in place by small gold rivets, while thin sheets were attached by adhesive. The rough surfaces seen on some recovered artifacts indicate that they were robbed of their original gold covering. Thick sheets of gold could also be shaped on an anvil to raise intricate forms, including masks and vessels. Predynastic gold ornaments were simple beads of sheet metal or foil over a core, but soon after gold was being cast like bronze into intricate forms. Gold could be used by itself or combined with semiprecious stones such as lapis lazuli, turquoise, or carnelian. Gold jewelry was worn on most parts of the anatomy by both men and women. The basic types of jewelry were generally established by the end of the Old Kingdom, although earrings appeared later at the end of the Second Intermediate period. Not all jewelry was purely decorative. Jewelry could indicate rank, represent a military or civil award, and provide protective power. Ornamental flies made of gold, ivory, or semiprecious stones were awarded for acts of military bravery.

Decoration could be applied by several techniques. Relief designs could be pressed into the surface of the object with a hand punch from the back (repoussé) or from the front (chasing). Although repoussé and chasing tools varied in size and shape, the edge was generally rounded since the tool was required to groove, not cut the metal as it was stamped or punched onto the surface by a series of hammer blows. There were no cutting shears in ancient Egypt. Panels could be cut out by punching through the gold sheet with a sharp chisel. Wire was made by chiseling off strips from the edge of the gold sheet or by cutting a spiral pattern for longer threads.

—Adam Aja

Bibliography

- Hornung, E., and B. Bryan, eds. *The Quest for Immortality: Treasures of Ancient Egypt*. Washington, DC: National Gallery of Art, 2002.
- James, T. G. H. *Pharaoh's People: Scenes from Life in Imperial Egypt*. London: Tauris Parke Paperbacks, 2003.

Quirke, S., and J. Spencer, eds. *The British Museum Book of Ancient Egypt*. New York: Thames and Hudson, 1992.

Syro-Palestinian Weapons

Opponents in war often sought to gain superiority over enemies in mobility, security, and fire-power. Superior mobility could come through chariots or cavalry, while armor and constructed defenses provided security. Weapons provided the long-, intermediate-, and short-range fire-power needed to strike at a foe. Combatants used shock weapons for striking and thrusting in hand-to-hand skirmishes and missile weapons for shooting and throwing. Most armies in Syria-Palestine were organized into units linked with specific types of weapons since it was impossible for soldiers to carry all weapons for all ranges. Given that most weapons were composed, at least in part, of degradable material such as wood or leather, our knowledge of Syro-Palestinian weapons must come from several sources, including textual references, iconography, and archaeological remains.

Handheld shock weapons included the club, mace, ax, knife or dagger, sword, and spear or lance. A simple club, which consisted of a heavy length of wood, was similar to the form of the mace. Both the mace and ax consisted of a short wooden handle set with a stone or metal head. Ax heads were light and sharp, while mace heads were blunt and heavy. The bladed ax heads of the Early Bronze Age changed toward a more pointed profile in the Middle Bronze Age. This evolution may have been necessary to penetrate bronze body armor, which had not previously existed. In comparison to the mace and ax, sword and dagger production required a large amount of metal. Consequently, it is not until the development of iron technology following the Late Bronze Age that we see a rise in the use of blades. Swords could be long and heavy, requiring great skill to wield, although few examples survive. Most swords would be considered long daggers for stabbing with a straight blade tapering to the tip. The striking sword had only one sharp edge, with the thickest part along the blunt side. The sharp edge could present either a convex or concave curve. The term “knife” is



Man with a sling-shot, from Tell-Halaf, Syria, mid-tenth century BCE. (Erich Lessing/Art Resource, NY)

generally reserved for single-edged blades used for domestic, agricultural, and industrial purposes. These blades could vary a great deal in size and had a variety of specialized forms and functions. Blades with lengths of less than four inches (ten centimeters) were likely never intended for warfare. It seems possible that large domestic knives served as fighting blades in times of need. The spear was heavier and bigger than the javelin and was used to thrust like a very long stabbing sword. It had a stout wooden shaft and a metal head and was sometimes capped with a metal base. The socketed spear-head of the Middle Bronze Age largely replaced the tanged head (the base of which was inserted into the shaft) used in earlier periods.

Intermediate and long-range weapons (slings, bows, and javelins) were normally used at the outset of battle to thin out and weaken an enemy for the charge of the shock troops using hand-held weapons and served equally well in hunting. The sling was made from a small strap of leather or cloth with attached cords. A slinger

➤ NAHAL MISHMAR

A hoard of Chalcolithic (ca. 4300–3300 BCE) metal objects was discovered near the Dead Sea in Nahal Mishmar, at the so-called Cave of the Treasure. The hoard of more than 400 artifacts included chisels, axes, decorated standards, and crowns and over 200 mace heads wrapped in a fiber mat. The objects may have served as ceremonial or prestige items rather than as utilitarian tools or weapons. The artifacts were made by the *çire perdue* technique of a copper-arsenic-antimony ternary alloy, a blend apparently reserved for ceremonial objects and only appearing during the Chalcolithic period. The source of the metal ore is uncertain, although it may be sought in eastern Anatolia.

—Adam Aja

placed a stone in the strap and swung the apparatus overhead until it gained sufficient momentum. Releasing one of the cords fired the stone missile. One rare example of a preserved bow made from olivewood was recovered in the Chalcolithic Cave of the Warrior. This self-bow, constructed of a single piece of wood, was quite accurate over short distances but was a bit unwieldy in terms of length. Later technology allowed for shorter bows to be constructed of laminated wood, sinew, and horn; these bows had a range of more than 820 feet (250 meters). These composite bows may have originated in Mesopotamia during the mid-third millennium BCE. The body of the arrow to be fired had to be long, straight, and light. Reed made the best arrows, but wood was quite common. The tail, made of feather, was designed to keep the arrow on its course in smooth and straight flight. The point could be stone, metal, bone, or hardened wood. The javelin (or light spear) was constructed similarly to the arrow. It was composed of a straight wooden shaft affixed with a hard point for piercing flesh. The javelin was hurled by hand, and soldiers could have several. To increase the javelin's range, a cord could be attached. This was wound around the shaft and held so that as the javelin was hurled, the unwinding of the

cord would give a spin and thus a steadier flight to the projectile. The base of the shaft might be fitted with a metal point to allow the javelin to be stuck in the ground during a rest period. This base would contribute speed and balance to its flight. Points that are considerably longer and heavier are generally spearheads.

—Adam Aja

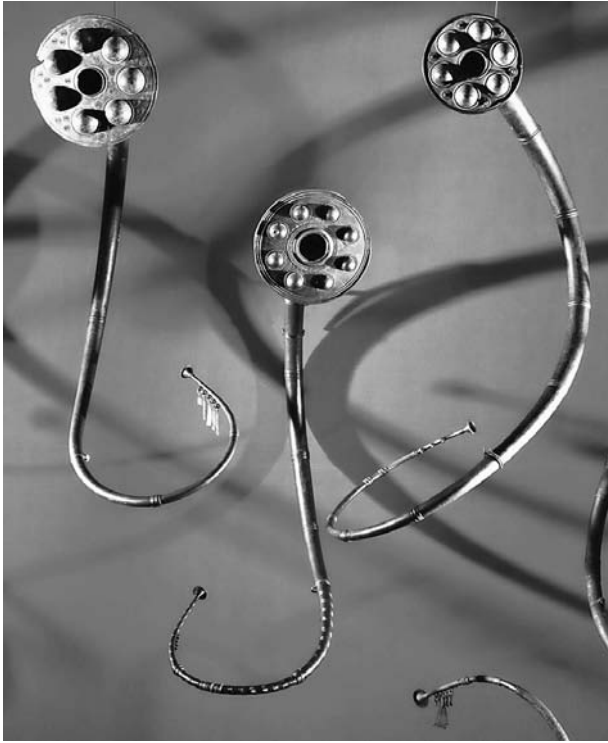
Bibliography

- Bar-Adon, P. *The Cave of the Treasure: The Finds from the Caves in Nahal Mishmar*. Jerusalem: Israel Exploration Society, 1980.
- Emory, A. C., III. "Weapons of the Israelite Monarchy: A Catalogue with Its Linguistic and Cross-Cultural Implications." PhD diss., Harvard University, 1998.
- Ferrill, A. *The Origins of War: From the Stone Age to Alexander the Great*. Boulder, CO: Westview, 1997.
- King, P., and L. E. Stager. *Life in Biblical Israel*. Louisville, KY: Westminster John Knox Press, 2001.
- Schick, T. *The Cave of the Warrior: A Fourth Millennium Burial in the Judean Desert*. IAA Reports 5. Jerusalem: Israel Antiquities Authority, 1998.
- Yadin, Y. *The Art of Warfare in Biblical Lands in the Light of Archaeological Study*. Vols. 1 and 2. New York: McGraw-Hill, 1963.

European Metallurgy

While metal production developed as early as the sixth millennium in some parts of Europe (such as the Balkans), the use of metal becomes significantly more widespread around 3000 BCE and is associated with the Late Neolithic period. Advances in archaeological knowledge have made it clear that copper actually came into use before what is referred to as the Copper Age (Chalcolithic period) and that bronze came into use before what is referred to as the Bronze Age.

The two most important components of metallurgy are the ores from which the metals are derived and the fuel that is used to heat the metal. Throughout the Copper and Bronze Ages in Europe, there is clear evidence of wide deforestation that may be related to the chopping down of trees to produce charcoal for fuel. It is less clear where ancient Europeans procured their ores. It is likely that much of the metal re-



Bronze lurs (wind instruments) from Bronze Age Denmark. (Erich Lessing/Art Resource, NY)

sources came from above-ground deposits that have long since been completely mined away. There are, however, isolated mine sites that may have been in use as early as the Bronze Age. Metal ores were likely traded widely throughout Europe. Metal was transported in unfinished form in what are called *ossenringe*, metal coils of varying sizes.

Metallurgy in northern Europe during the Bronze Age is quite noteworthy. Since metal is not found in this region, it must have been imported from the south. Archaeologists have not recovered much metal from settlement sites; most has come from hoards found in the northern marshes. The types of metal tools are quite diverse. What is peculiar is that many look quite nice but would not have been very functional. Wide-bladed axes make up a significant component of the corpus; these look quite fierce but are too weak to have been useful in a battle (or against a tree). Lurs are long horns with a smooth surface and rough interior, meaning that not much care was taken in the type of

THE THREE AGE SYSTEM

Metal technology has been one of the most important diagnostic features for European archaeology for the period from 4000 to 1000 BCE. In 1836, the Danish scholar C. J. Thomsen published a system of chronological nomenclature (Stone Age, Bronze Age, Iron Age) for Europe based on the appearance of various types of tools. This system is still in use today although in significantly modified form. Most notable is the addition of the Copper Age (or Chalcolithic Age) to the system.

—Kevin M. McGeough

THE LOST WAX METHOD

In the period between 1000 BCE and 300 CE, metalsmiths had a simple but ingenious method of producing elaborate metal objects. Called the lost wax method (a translation of the French name *çire perdue* more typically used by scholars), this technique was used all over Europe, Asia, and Africa during this period (and is still used worldwide today). The artist starts by carving the desired object out of a piece of wax. For instance, if the artist wanted a sword, he would carve a wax sword. Once finished, the artist would cover the wax with wet clay and put the whole object into a kiln. As the clay hardened in the heat of the oven, the wax would melt away, leaving a ceramic mold of the object. Once the mold cooled down, the smith would add molten metal to the mold and then wait for the metal to harden and cool. Once this was complete, the artist would break off the ceramic mold and reveal an elaborate metal object, a very close replica of the original (although now lost) wax sculpture.

—Kevin M. McGeough

sound that they would produce. Dots, circles, arcs, and ribbons were typical decorations on this metalwork.

It is the Carpathian Basin, in what is now Transylvania, where the most innovative European metallurgy occurred during the Bronze Age. In this region, smiths added arsenic to copper to

make it harder and improve the ability to cast it. The most typical metal item produced in this region is the battle-ax, made with a two-piece mold. Usually it is only the ax head that is found but because of the shaft hole built into the ax head, we can be certain that a handle (probably wood) would have been inserted into the tool. In terms of design, the c-scroll is typical of this region, although it became popular throughout the rest of Europe as the Bronze Age progressed.

—Kevin M. McGeough

Bibliography

- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Sherratt, Andrew. "The Emergence of Élites: Earlier Bronze Age Europe, 2500–1300 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.
- Sherratt, Andrew. "The Transformation of Early Agrarian Europe: The Later Neolithic and Copper Ages, 4500–2500 BC." In *The Oxford Illustrated History of Prehistoric Europe*. Oxford: Oxford University Press, 1997.

■ Introduction: Subsistence Technologies

From 4000 to 1000 BCE, changes in subsistence technology are apparent throughout the world. Where agriculture developed or continued to develop, the invention of tools such as the plow increased agricultural production. Innovations in production technology (such as manos and metates) improved the ability of people to transform crops into food that was tastier and in some cases more nutritious. In those locations where metallurgy developed, the use of metals in the manufacture of food-production tools likewise contributed to the ease and diversity of food production. Stone tools also continued to be utilized and improved upon, especially by those societies that were reliant on hunting and gathering forms of subsistence. In Australia, for example, changes in stone tool manufacture in this period are apparent, especially the utilization of more diverse types of stone. In North America, smaller projectile points come to be used during this time, setting the stage for the later development of the bow and arrow.

Pottery was one of the most important subsistence technologies found throughout much of the world from 4000 to 1000 BCE. Due to how well ceramics survive archaeologically, they are important artifacts in the archaeological analysis of cultural change and the dating of sites. Their importance to the subsistence practices of ancient people should not be underestimated. Their appearance in North America has been charac-

terized as a "container revolution," and although they appear much earlier in the Near East, Europe, and Asia, ceramic production technology improves dramatically over this period.

—Kevin M. McGeough

The Plow

Plows are one of the oldest agricultural tools still in use today and were fundamental in the spread of cereal agriculture throughout the world. The term "plow" covers a wide variety of types of tools, but all are used to prepare soil for planting crops. Farmers use plows to dig up the top layer of soil, making the ground more suitable for sowing; to bring fresh nutrients to the surface; and to bury other plant remains to facilitate decomposition. Although presumably invented around 6000 BCE, the earliest archaeological evidence for the use of the plow dates to about 3500 BCE. Advances in metallurgical technology later led to significant advances in plowing technology.

The earliest plows were used like hoes, with humans dragging the plow behind them through the field. Called scratch plows today, using these tools would have been back-breaking labor. Where available, the human labor was replaced by animals or teams of animals. In ancient times oxen were yoked together (in Europe and the Near East), and the plow was attached to the

yoke. The oxen would be led across the field, dragging the plow behind them through the soil.

Bronze Age plows have survived in the European archaeological record. These plows take one of two forms, but both forms are primarily made from wood. Two-piece plows have a long main pole that is attached to a smaller ard that points backward 30 degrees. The end of the ard is shaped like a point. One-piece plows were shaped the same but were formed out of one piece of wood and generally worked better than the two-piece plows. However, one-piece plows would have broken more readily. In the Near East, metal ards have been recovered from sites in Israel. These ards are shaped like pipes (so that the pipe end can fit over the top of a wooden pole). The other end of the metal ard is pointed just like the wooden types.

There is much other archaeological evidence for the use of plows from 4000–1000 BCE. Plow marks in the dirt are often preserved at sites. Plows yoked to oxen are depicted in Egyptian tomb paintings and are the subject of models left in the tombs, since the Egyptians believed that these models could be used as real plows and plow teams in the afterlife. Plows are also frequently depicted in art. Plows appear on very early Mesopotamian cylinder seals, in Mesopotamian wall reliefs and stelae, and in European rock art.

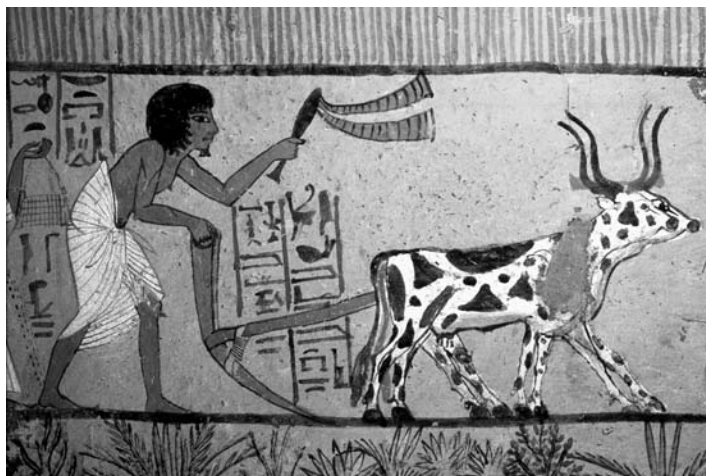
—Kevin M. McGeough

Bibliography

- Borowski, O. *Agriculture in Iron Age Israel*. Boston: American Schools of Oriental Research, 2002.
- Harding, A. F. *European Societies in the Bronze Age*. Cambridge World Archaeology. Cambridge: Cambridge University Press, 2000.
- Postgate, J. N. *Early Mesopotamia: Society and Economy at the Dawn of History*. New York: Routledge, 1992.

Sub-Saharan African Technologies

The development of technology in Africa south of the Sahara between 4000 BCE and 1000 BCE was necessitated by the needs of Neolithic societies transitioning from food gathering to a sedentary life. Thus, archaeological finds reveal that many settlements south of the Sahara in this pe-



Detail of a fresco in the tomb of Sennedjem showing the tomb owner plowing and his wife seeding flax or wheat, Nineteenth Dynasty, about 1295–1186 BCE. (Bojan Breceelj/Corbis)

ANCIENT PLOW MARKS

Archaeologists occasionally find plow marks at sites, presumably left by ancient farmers who, for whatever reason, did not return to farm that particular patch of land. In Europe, many of these plow marks are found under large burial mounds, called barrows. Under barrows, these plow marks often intersect one another at right angles, indicating that plows were not used in these to prepare the land for farming. Rather, it seems that plows were used to prepare and level the ground for construction projects. Thus, the plow is not just an ancient farming tool but is an ancient building tool as well.

—Kevin M. McGeough

riod were already engaged in technological production such as microlithic industry (small stone tools), bone industry, and ground stone axes. Some settlements even produced pottery alongside the lithic industry. The microlithic technology was used for hunting and food gathering in most locations, but at the coastal and lacustrine areas it was also used for fishing and the gathering of shells.

Prior to archaeological finds in the equatorial forest of Africa, it was often stated that human beings may not have lived in that zone before

➤ TYPES OF TOOLS FOUND AT IWO ELERU

Archaeological excavations at Iwo Eleru revealed a production industry for small flakes of quartz and chalcedony. There were tools with varied shapes, which implies that they were used as convenient for different tasks. Among them are:

- Struck stone: Used as a hammer.
- Chopper: Piece with bifacially flaked chopping edge.
- Pick: A trihedral piece flaked on three faces that converge to a point.
- Heavy-duty scraper: A pebble or tabular piece with very steep scraper retouch.
- Chipped axe: Adzelike pieces showing no ground surface.

—*Tolulope Lawrence Akinbogun*

the advent of the Iron Age due to the thick vegetation that had made the environment difficult for human beings to exploit. However, Thurstan Shaw's discovery of a rock shelter in this ecological zone at Iwo Eleru in western Nigeria revealed the activities of people in the environment during the Stone Age.

Late Stone Age materials excavated at the rock shelter of Iwo-Eleru in western Nigeria included stone axes. Also, at another rock shelter in Rop on the Jos Plateau in northern Nigeria, ground stone axes as well as pottery that were associated with microliths were found. At Mejiro Cave in Old Oyo Nigeria, microliths were found; this site is distinctive in having a high proportion of tool kits and a high number of flakes per core. At Dutse Kongba, also in Nigeria, excavators divided the lithic industry into three phases: aceramic microlithic industry (fifth to fourth millennium BCE), concentration of microliths with some pottery (fourth to third millennium BCE), and mixed deposit of microlith and some pottery, two pieces of ground stone axes and some iron (ninth century BCE and seventeenth CE).

Other Late Stone Age traditions in Nigeria (Daima, Kursakata, and Shilma in Borno, 1000 BCE) have no microliths at all but do have a bone industry, ground stone axes, and pottery. The Bama Road site in Borno Nigeria extends back

to the second millennium BCE. Its inhabitants produced ground stone axes, bone points, a few quartz flakes, and pottery. However, along the same zone in Rim Burkina Faso, microlithic industry with plentiful segments and backed pieces were produced, without pottery and ground stone axes. The Rim site is dated before 3000 BCE.

The geographical areas of present-day Ghana also yielded archaeological finds that revealed much about the subsistence technology of the Late Stone Age. The Achimota Cricket Pitch site produced an aceramic microlithic industry. Among the stone artifacts found in this site are blades, points, crescents, scrapers, burins, and fabricators. The Bosumpra Cave, in Abetifi in Ghana, yielded an association of pottery, ground stone axes, and microliths; the items were dated 3400 BCE–1200 CE.

To the west of Nigeria in the northern fringes of Ghana, a rock shelter excavation yielded ground stone axes, pottery, and microliths. Excavation at Nsuta produced assemblage of Late Stone Age materials (an association of microliths, ground stone axes, and pottery). And the Kumasi University sites in Ghana produced an assemblage of Late Stone Age materials of Kintampo culture. The Kintampo culture is characterized by thick soft pottery that is much decorated, small ground stone, axes, and microliths (fluted stone cylinders, grooved bead polishers, arrow polisher, stone arm rings, and burnt daub). It is also characterized by terra-cotta cigars, pieces of abrasive material of elongated almond shape. The name "terra-cotta cigar" derived from its cigar-shaped profile. A typical artifact assemblage found at Late Stone Age East African sites includes microliths, stone bowls, pestle rubbers, polished stone axes, ostrich egg shell, and beads. The ceramics are generally round-bottomed pots, decorated incisions, and stamps.

Flaked stone was used by the Nubians for cutting up meat and for cicatrizing themselves. Pieces of flint were used by the mountain people of New Guinea in the carving and sharpening of arrows. Scholars have argued that in the Late Stone Age of southern Africa, there was a relationship between the occurrence of small convex scrapers and leather working, and such artifacts in profusion may indicate that their mak-

ers were wearers of leather clothing. Such finds made likely the probability of leather working among the Iwo Eleru in Nigeria due to the increasing occurrence of complete scrappers over time in the area.

However, at the Ntereso site in Ghana, an Iron Age technology was found to have existed contemporary with Late Stone Age technology. This and other finds make the site unique in the Late Stone Age of West Africa. The site revealed a subsistence technology that was a mixture of elements recognizable as normal to the terminal Late Stone Age of the area and other elements regarded as intrusive.

Aside from the lithic and bone industries, pottery was the other vocation of the Late Stone Age south of the Sahara. Pottery from Rop in Nigeria were bowls with inward-directed rims and pots with averted rims above a neck. The pottery of the Neolithic in Africa south of the Sahara was decorated on the surface by roulette and incision. In Rop pottery, roulette was achieved with the use of plaited fiber. At Afikpo, the Ukpa rock shelter revealed the production of thick coarse red ware with heavy temper decoration made by channel grooving and comb stamping. The Late Stone Age pottery from Ntereso is one of the largest collections of excavated Neolithic pottery in West Africa. The commonest are cooking pots with everted rims (turned out and up) and globular or open bowls. The pots were decorated by grooving and comb impression. Some of them were burnished. Kintampo pottery on the other hand is characterized by the use of comb stamping, often with oblique impression on the shoulder. Most of the pottery from the Bama Road site in Borno, Nigeria, is described as being plain, although some were decorated with toothed stamp or incisions.

—Tolulope Lawrence Akinbogun

Bibliography

- Duerden, D. *African Art: An Introduction*. London: Hamlyn Publishing Group, 1974.
- Murdock, G. P. *Africa: Its Peoples and Their Culture History*. New York: McGraw-Hill, 1959.
- Oula, Seitsonen. "Lithics after Stone Age in East Africa: Wadh Lang'o Case Study." Master's thesis, University of Helsinki Institute for Cultural Studies, April 2004.

Shaw, Thurstan, and S. G. H. Daniel. "Excavation at Iwo Eleru Ondo State, Nigeria." *West African Journal of Archaeology* 15 (1984): 1-269.

Projectile Point Technology in North America

Over the span of the Holocene era projectile point technology changed greatly in North America, beginning with the large bifacially flaked points of the earliest Americans (e.g., Clovis and Folsom points) to small side-notched points used with bows and arrows. Overall projectile points were reduced in size as flaking techniques became more sophisticated, and the means by which these points were projected became more efficient. Although large flaked points continued to be used until about 5000 BCE across much of North America, evidence indicates that smaller projectile points did not become common until around 3000 BCE. Subsequently, when the bow and arrow was adopted around 450 BCE, projectile point technology reached its climax. During this progression in projectile point technology, prehistoric North Americans also changed the means by which they projected these points. Beginning with the atlatl and its use of spears and darts, the technology slowly shifted until the bow and arrow was almost universally adopted.

Throughout the Early and Middle Holocene, prehistoric North Americans used the atlatl, which was a stick or board used for throwing spears or darts, as their primary form of projectile technology. The earliest evidence for atlatl use in North America comes from Lake Winnemucca, Nevada, and dates to the Early Holocene period. Atlatls consisted of two parts: a handle and a mechanism for articulation with the spear or dart. The handle was either carved or possessed one or two loops through which the hand or two fingers were inserted. Opposite this end the handle contained either a male or female member. The male type contained a projecting part, usually a spur or a hook, that was inserted into a concavity of the spear or dart. The female type consisted of a depression in the board into which the end of spear or dart was inserted. Evidence indicates that spears or darts thrown from the atlatl were able to travel greater distances with more force than if just thrown by

► PROJECTILE POINT TECHNOLOGY IN THE GREAT BASIN

Like other regions of North America, projectile points became progressively smaller in the Great Basin as technology allowed the scaling down of large bifacially flaked spear points to small side-notched points used to tip arrows. The Great Basin provides a particularly clear record of this technological progression beginning with early Clovis, Folsom, Scottsbluff, and other large stemmed and unstemmed points. By 6000 BCE, side-notched points appeared as hafting technology developed, and by 4000 BCE projectile point sizes decreased in overall size, as exhibited in Elko and Pinto series points. Beginning around 2,000 years ago, projectile points reached their apex in design with the introduction of the bow and arrow. The other unique characteristic of Great Basin projectile point technology was the fact that the bow and arrow, despite its superior technology, was not adopted in the region until relatively late in prehistory, while other regions adopted the technology much earlier.

—Peter N. Jones

hand, a fact that would have given prehistoric North Americans greater range in their hunting pursuits. Dart and spear points were usually large bifacially flaked stone points suitable for hafting on the end of a shaft. Like arrow shafts, very few dart or spear shafts have been recovered, making it difficult to determine exactly how lithic points tipped the shaft of the dart or spear.

The archaeological evidence from the Lower Columbia River valley is characteristic of the shift from dart and spear technology to bow and arrow technology. Beginning in the Early Holocene, prehistoric peoples used large bifacially flaked points that were projected either by hand or by use of the atlatl. Data indicates that by 2,500–2,100 years ago subsequent broad-necked, corner-notched points used with spears or darts gave way to small narrow-necked points and that by 1000 CE small side-notched arrow points had become common.

A similar progression is found in projectile point technology for the Great Basin. Beginning

with large bifacial knives and stemmed and concave-base projectile points with edge grinding, the technology gave way to smaller points that tipped atlatl darts by 5000–3200 BCE. The atlatl, which may have been present in the Great Basin as early as 7000–6500 BCE, continued until at least 2,900 years before the present, while atlatl spurs or hooks from the southern San Joaquin Valley in California date to 6360–5650 BCE. Atlatls in the Great Basin were often carved from a very hard wood, usually mountain mahogany (*cercocarpus ledifolius*). It is not possible to determine precisely when the atlatl was replaced in the Great Basin by the bow and arrow, although evidence from Hogup and Danger caves in western Utah suggest that it was around 1000 BCE–1 CE.

The question of when bow and arrow projectile point technology emerged in other parts of North America is still unknown, and the organic parts of the technology have only been preserved in some regions such as the Great Basin, the Southwest, and the Ozark Mountains. Evidence indicates that the bow and arrow first appeared in the Columbia River area around 500–100 BCE, replacing the use of the atlatl in the region. In the Northeast, the bow and arrow arrived much later. For example, evidence from Klunk Mound 8 indicates that the bow and arrow did not arrive in the area until circa 600 CE. Prior to this, projectile point technology consisted largely of various stemmed or notched points such as the Palmer, Kirk, Cypress Creek, and various other bifurcated-base forms that were used to tip spears or darts of various sizes.

Not all regions appear to have developed the bow and arrow. For example, on the northwestern coast evidence indicates that prehistoric peoples never used the bow and arrow and that projectile points remained either fluted or stemmed in design throughout the Holocene era. These projectile points are thought to have been used in hunting various mammals of the region, primarily by means of spears.

—Peter N. Jones

Bibliography

Carlson, Roy L. "The Far West." In *Early Man in the New World*, edited by R. Shutler Jr. Beverly Hills, CA: Sage, 1983.

- Elston, Robert G. "Prehistory of the Western Area." In *Great Basin, Handbook of North American Indians*, vol. 11., edited by W. D'Azevedo. Washington, DC: Smithsonian Institution, 1986.
- Emerson, Thomas E. *Archaic Societies: Diversity and Complexity across the Midcontinent*. Albany: State University of New York, 2009.
- Fowler, Melvin L., and Robert L. Hall. "Late Prehistory of the Illinois Area." In *Northeast, Handbook of North American Indians*, vol. 15, edited by B. G. Trigger. Washington, DC: Smithsonian Institution, 1978.
- Funk, Robert E. "Early Man in the Northeast and the Late-Glacial Environment." *Man in the Northeast* 4 (1972): 7–39.
- Jennings, Jesse D. "Prehistory: Introduction." In *Great Basin*, edited by Warren d'Azevedo. Handbook of North American Indians, vol. 11. Washington, DC: Smithsonian Institution, 1986.
- Jennings, Jesse D. *Prehistory of Utah and the Eastern Great Basin*, volume 98. Salt Lake City, UT: University of Utah Press, 1978.
- Mildner, Michael P. "Descriptive and Distributional Notes on Atlatls and Atlatl Weights in the Great Basin." In *Great Basin Atlatl Studies*, edited by T. R. Hester, M. P. Mildner, and L. Spencer. Ramona, CA: Ballena, 1974.
- Pettigrew, Richard M. "Prehistory of the Lower Columbia and Willamette Valley." In *Northwest Coast, Handbook of North American Indians*, vol. 7, edited by W. Suttles. Washington, DC: Smithsonian Institution.

The Australian Small Tool Tradition

The so-called Small Tool Tradition appears in temperate Australia around 2000 BCE. The name refers to the distinct types of microliths that first date to this period in Australian prehistory. Most typical are what archaeologists call backed points, so-named because one edge is designed to be dull so that the tool can be held in the hand (without cutting the hand) or can be placed into a haft or handle. Bondi Points are one type of these backed Australian Small Tools, which were used until about 500 CE (about 2,500 years). It should be noted that some scholars, such as Kamminga, argue that this should not be considered a unified tradition, since many of the tools look very different. Most Australian archaeologists, however, still see some unity in

THE DINGO

Around the same time as the Australian Small Tool Tradition, the dingo made its first appearance in Australia. Scholars are divided as to whether or not these two phenomena are related. The Small Tool Tradition seems to have developed out of local styles; dingoes came from elsewhere, suggesting that the correlation is coincidental. While clearly having been imported from outside Australia (probably from Southeast Asia), once the dingo arrives it quickly spreads throughout the continent. It is not entirely clear who would have brought the first dingoes; the best candidates are Austronesian traders who exchanged goods with the Australian Aboriginal population. It is also not clear if dingoes spread across the continent on their own (in packs) or as companions of Aborigines, although a combination of these two factors is most probable. Modern ethnographic analogy shows that Australian Aboriginals would use dingoes to help with hunting and that dingoes sometimes lived alongside the human population. Very likely this was the case in the period between 1000 BCE and 300 CE as well.

—Kevin M. McGeough

the design of these tools, especially in the backed microliths.

Scholars initially thought that these microliths were introduced to Australia from Southeast Asia. So far it has not been possible to identify Southeast Asian precursors to these tools. Thus, scholars have reevaluated this thesis, and now most believe that this is an Australian innovation. Although the Small Tool Tradition is attested throughout temperate Australia, there is significant local variation in the types and styles of tools. This probably reflects regional adaptation based on specific environmental differences and cultural preferences. The significant regional variability further suggests that these microliths were not tools introduced from elsewhere but instead were tools first knapped in Australia. The dates available for the earliest microliths are contested by archaeologists; however, the earliest examples of the Small Tool Tradition seem to come from southeastern Australia, which is not what one would expect if these had been brought to Australia by Southeast Asian traders.

The Small Tool Tradition coincides with a drastic increase in Australian sites. Scholars initially thought that this reflected a growth in population density and subsequently greater intensity of food-acquisition practices (mostly hunting and gathering). Recently, the scholarly consensus has shifted somewhat and regards this increase in amounts of sites as reflecting better archaeological preservation. The small tools do reflect a growing use of more exotic stone materials (stone materials that are rarer, found in only certain locations). So while these microliths may not reflect a growth in population, they most certainly reflect a complex exchange and transportation network.

—Kevin M. McGeough

Bibliography

- Frankel, David. "Aboriginal Peoples of Australia." In *The Oxford Companion to Archaeology*, edited by Brian M. Fagan. Oxford: Oxford University Press, 1996.
- Kamminga, J. *Over the Edge: Functional Analysis of Australian Stone Tools*. University of Queensland Occasional Papers in Anthropology 12. Queensland: University Museum, 1982.
- Mulvaney, D. J. *The Prehistory of Australia*. London: Thames and Hudson, 1969.
- White, J. Peter, and James F. O'Connell. "Australian Prehistory: New Aspects of Antiquity." *Science* 203 (January 5, 1979): 21–28.

Regional Ceramic Traditions

During the period 4000 to 1000 BCE, ceramics take the same general form, and thus archaeologists have relatively standardized means of describing different types of vessels. Generally, vessels are described as either open or closed. The difference between open and closed is somewhat loose, but usually if the mouth of the vessel is the widest part, the vessel would be considered open. Plates and bowls are typically considered open vessels. If the mouth is narrow, then the vessel is closed. Jars and bottles are usually considered closed since they are intended for storage and/or transportation. Beyond this basic division, the forms and styles of vessels vary around the world. In most regions there seem to be many types of ceramic vessels that were designed to resemble vessels made of other mate-

rials, such as woven baskets or fishnets. What follows is a brief introduction to some of the most noteworthy ceramics of this period.

Egyptian ceramics were made of two types of materials—Nile silt or marl clay—and these materials determine the color and texture of the particular vessel. Some early Egyptian ceramics were painted with elaborate scenes. Others have red-colored bottoms and uneven black tops, created by embedding the vessel top-down into the kiln. The carbon from the smoke colored the top of the vessel black but left the bottom a rich reddish color. The most common pottery finds at any Egyptian site are bread and beer vessels. Bread vessels were molds in which bread was baked. These molds changed in shape throughout Egyptian history but were usually quite roughly made, and the walls were very thick. Beer vessels also changed shape, but most were also quite rough and porous. The porous beer vessels sweated, actually helping to cool the beer and make the rough ceramics more pleasant to drink from.

In Greece, from the earliest Greek times, pottery making was an art. Greek pottery was traded around the Mediterranean; its beauty and fine quality (along with the contents of these vessels) made Greek pottery a luxury item and an object of social status. Mycenaean ceramics are particularly noteworthy for their fine manufacturing quality (made on a wheel and highly fired) and their elaborate painted decorations (ranging from abstract geometric designs to birds to chariot scenes). Kraters were a very common form of Mycenaean pottery; these were large bowls used for mixing wine. Cypriot pottery is also noteworthy. Small vessels called bilbils were traded around the Mediterranean. Bilbils are shaped somewhat like poppy seeds, leading some scholars to suggest that these may have been ancient opium containers, although there is minimal positive evidence to support these conclusions.

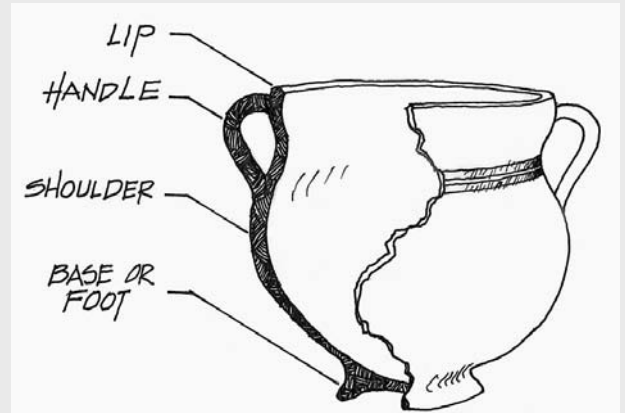
In the Near East, Syria-Palestine has a long history of elaborate ceramic manufacturing, exporting their ceramics to Egypt and Mesopotamia. The repertoire is truly vast, so only a few types can be mentioned here. Fundamental to ceramics of this period were the large store jars called pithoi (or in the singular, pithos). These

were large oval-shaped vessels. The bases were rounded, which may seem unusual for a store jar. However, floors were usually dirt in Syria-Palestine, making flat-based vessels difficult to balance. Rounded bases could be jammed into the dirt and stabilized. Pilgrim flasks, a much smaller type of vessel, look like modern canteens; archaeologists often find these within the building walls, likely left as foundation deposits or offerings to the gods during the construction of the building.

In the Indus Valley region, pottery forms—unlike many classes of Harappan material culture—varied significantly from city to city, which speaks to a diversity of local ceramic traditions. Both wheel- and hand-made pottery were manufactured, and some larger vessels were made out of separate components, put together just prior to firing. The actual forms of the pots show a familiar range of styles; the large pedestaled store jars, though, are distinctive of the Indus Valley. Also unique are perforated cylindrical jars, which were probably used as strainers given that the entire vessel was perforated with tiny holes. Cooking vessels were likewise distinct, with very rounded bottoms that allowed even heat distribution and prevented the vessel from tipping. The rounded bottom often appears exaggerated by the tall, straight neck and outward-flaring rim. Most Indus Valley pottery was covered with a red slip; black paint was used to add designs on top. Other color paints, while not unknown in the Indus Valley prior to the rise of the Harappans, were not very common, or at least polychrome paint has not survived well archaeologically.

In China, ceramics show marked regional differentiation, which is consistent with the current consensus that the Neolithic period in China hosted numerous small and independent cultures. Among many of these cultures and extending well past the Neolithic in its usage was the traditional Chinese water jar. Water jars were oblong in shape, with small handles located at the midpoint of the vessel. Ropes were drawn through these handles, and the vessel would be extended into a river, mouth down. The vessel would fill up with water and then would be pulled out of the water. As the vessel was pulled out, its center of gravity would cause it to flip

➤ IMPORTANT CERAMIC TERMINOLOGY



(Joseph K. Crea)

Ceramicists use specialized terminology to describe the various components of a ceramic vessel. The main part of the vessel is the body. The very bottom is the base, which is often further specified by shape. So, for example, a ring base is a base that is shaped like a ring. The top of the vessel is the rim, and the opening is usually referred to as the mouth. Handles are obvious, but the neck may not be. The neck is the part of some vessels where it narrows toward the rim. An everted neck, however, flares outward. A sherd (not a shard) is a broken piece of pottery. Often archaeologists are familiar enough with ceramic traditions that they can reconstruct an entire vessel based on a single diagnostic sherd. Typically a diagnostic piece is a base, rim, handle, or painted fragment. Decorations are also referred to with this type of standard language. Appliqué is any smaller pieces of pottery added on to the main vessel; handles are the most common type of appliqué. Incised decorations are carved directly into the vessel. Slip is similar to paint but is essentially a ceramic-based dip that the vessel is covered in prior to firing in the kiln. Wash is a very light slip. Monochrome pottery has one color, bichrome pottery has two colors, and polychrome pottery has more than two colors. Burnished pottery is very shiny; the shine is the result of a harder object being rubbed vigorously against the vessel.

—Kevin M. McGeough

over, and the mouth of the vessel would then face upward so as not to spill any of the water.

Chinese potters also produced ceramics with very elaborate design schemes. Vessels with tripod and ring bases become increasingly common throughout China during the Neolithic period. This may be a functional development because tripod bases conduct heat well, so these were likely cooking vessels. Tripods with hollow legs made especially good steamers. Eggshell pottery is very thin, feeling fragile to the touch. Frequently, different sections of the vessels would be constructed separately and then fitted together just before firing. Eggshell pottery is often black in color, not from paint (although vessels painted in other color schemes are well attested) but from the addition of wet firewood to the kiln, causing smoke (and thus carbon) to envelop the pottery. Many other types of Neolithic pottery were also colored a blackish-gray through this process.

For some Neolithic cultures, ceramics were an important part of the burial assemblage. Members of the Yangshao culture were interred in ceramics urns, which were subsequently buried. Atop these urns, painted basins with elaborate painted images were set. One particularly noteworthy vessel, excavated from Shaanxi Province, had a human face with fish for ears painted on it. Other types of burial vessels were painted with bright colors in elaborate geometric designs.

➤ GOURDS

Many scholars believe that gourds and ceramic vessels were connected in ancient societies since some have similar shapes and were used similarly in these cultures. A gourd is a hollow shell taken from a number of different types of fruit (especially squash and melons). Ancients would dry out these shells and use them as containers. Once dried, they are relatively waterproof and durable, and some varieties look a lot like wood. Unfortunately, in most areas gourds do not survive very well archaeologically, so scholars are left to reconstruct their ancient uses.

—Kevin M. McGeough

Burial pottery associated with the Dawenkou culture sometimes bears incised symbols that some scholars have argued may be an early form of writing. Pottery of the Liangzhu culture also occasionally bore signs, seemingly unrelated to those of the Dawenkou.

—Kevin M. McGeough

Bibliography

- Allan, Sarah. *The Formation of Chinese Civilization*. New Haven, CT: Yale University Press, 2005.
- Amiran, Ruth. *Ancient Pottery of the Holy Land*. Piscataway, NJ: Rutgers University Press, 1970.
- Chang, Kwang-Chih. *The Archaeology of Ancient China*. 4th ed. New Haven, CT: Yale University Press, 1985.
- Dales, George F., and John Mark Kenoyer. *Excavations at Mohenjo Daro Pakistan: The Pottery*. Philadelphia: University Museum Press, 1986.
- Kenoyer, John Mark. *Ancient Cities of the Indus Valley Civilization*. Oxford: Oxford University Press, 1998.

The Container Revolution in North America

In an important article, Bruce Smith argued that the introduction of pottery into the eastern woodlands of North America during the period 1000 BCE–300 CE points to more substantial cultural changes than just the introduction of a new technology, a cultural change that he refers to as a container revolution. The use of ceramics by the people of the eastern woodlands suggests a more sedentary way of life, the exploitation of new or different resources, and the use of new production techniques. Along with these changes, it is presumed that the societies of the eastern woodlands became more socially complex during this period, with the emergence of new leaders and new craft specialists. While the introduction of pottery likely did not cause this, it is symptomatic; this is an important clue for archaeologists who are forced to work with very little evidence.

Since pottery is easy to break and inefficient to transport, the fact that it appears in the region around 2500 BCE indicates that the inhabitants were settling down to a less mobile way of life. It is unclear where the first pottery came from, but after 2500 it was locally manufactured.

It is not particularly elaborate pottery. It is rough and gritty, and there was no wheel to allow for very fine forms.

The earliest pots seem to have been designed for transforming wild seeds into edible foods. The seeds would have been crushed and then boiled in these pots. After 2000 BCE, the pottery became more waterproof, possibly for liquid storage. These more waterproof pots may also have been used for the collection of seeds themselves. By submerging masses of dirt into water, seeds will float to the top, and the rest of the material will settle to the bottom. Therefore, rather than trying to pick out individual seeds

by hand, it may have been possible to skim the floating seeds off of the surface.

—Kevin M. McGeough

Bibliography

Smith, Bruce. "The Archaeology of the Southeastern United States: From Dalton to Soto, 10,500 BP to 500 BP." In *Advances in World Archaeology* 5 (1986): 1–92.

Smith, Bruce. "The Independent Domestication of Indigenous Seed-Bearing Plants in Eastern North America." In *Emergent Horticultural Economies of the Eastern Woodlands*, edited by William F. Keagan. Center for Archaeological Investigations. Carbondale: Southern Illinois University, 1987.

■ Introduction: Seals, Stamps, and Gems

One of the distinctive technological skills that developed in the time between 4000 and 1000 BCE was the ability to engrave very hard and very small objects in a great deal of detail. Called "glyptic" art, this type of craft was prominent throughout the Mediterranean, the Near East, and the Indus Valley. With most glyptic art, the engraving actually appears as a mirror image on the surface of the object. These objects were meant to be impressed on clay or another malleable medium, thereby impressing the engraved image or writing on the clay. Like a modern stamp, they were tools used to mark other objects.

In Mesopotamia, these small pieces of art are shaped like cylinders with inscriptions that wrap fully around the seal. These cylinder seals were rolled along clay, leaving a continuous image. In Syria-Palestine and Anatolia, stamp seals were more common; these were shaped like a button and engraved on only one side. Egyptian stamp seals are called "scarabs" since the stamp is carved in the shape of a scarab beetle. In the Greek world, stamp seals were common as were gems, engraved stones that were sometimes placed in another setting, such as a ring.

The engravings on the seals varied widely; abstract images, mythological scenes, animal scenes, and written inscriptions were all com-

mon. Written inscriptions typically bore information about the user of the seal, such as name, title, occupation, and ethnicity. Religious motifs or blessings can be informative about the religious values of the bearer as well. Stamps had many functions. One of the most important uses was analogous to the way signatures are used in modern times. They could be impressed onto a legal document as a guarantee that the individual had actually been present when the contract was drawn up and agreed to its terms. They could function as signatures on administrative documents and as symbols of authority. Seals were also used to lock doors: a lump of wet clay was put across the door handle, and the seal was impressed into it. To open the door, one had to break the seal and could not properly shut it again without having the appropriate seal. Jar tops and other containers were also stamped, sometimes with information about the contacts or with information about who sealed the jar. Most seals could be worn; string could be run through small holes, allowing the seal to double as a personal adornment, a marker of status or beauty. In some cases the seals were thought to have magical functions. Scarabs bearing the names of certain pharaohs were thought to be lucky and thus were quite popular.

—Kevin M. McGeough

Mesopotamian Cylinder Seals

Seal cutting was a specialist craft, distinct from other forms of stoneworking. Designs were usually carved into the surface of seals, so they made an impression on clay in which the design was raised and the background depressed, but occasionally seals have the background cut away, leaving the design in relief. The flat surface of stamp seals was relatively easy to carve, but the curved surface of cylinder seals required considerable skill both in layout and in execution. A text of the Achaemenid period stated that a seal cutter served an apprenticeship of four or more years, and a similar period must have been required to attain the level of craftsmanship shown by Mesopotamian seal cutters. The details of the designs and particularly of the inscriptions are so small that they seem to demand that seal cutters employed magnifying glasses, and indeed a polished rock crystal disk with one flat and one convex face found at Nimrud might have been a magnifying lens. Attractive and colorful materials were favored for seals: they varied through time, with steatite, serpentine, and limestone used in the earlier third millennium; lapis employed in some quantity from the mid-third millennium; and jasper, banded agate, and rock crystal coming into fashion from Akkadian times. Haematite was the preferred medium in the earlier second millennium. Carnelian and chalcedony were also used in later times, as was glass.

The art on seals ranges widely in its themes. Among Uruk-period examples are seals depicting a king surveying bound prisoners, people bearing offerings to the temple, contests between bulls and lions, and real and mythical beasts. The skill in the design lay in filling the surface but creating a design that would be equally satisfactory if only a portion of the design was rolled out or if the design was rolled out to a considerable length so that it began to repeat. The Brocade style of the Early Dynastic period fulfilled this by cramming the cylinder surface with small repeated motifs, such as a line of goats surrounded by stars, fishes, rosettes, or geometric figures. Contests between animals or between man and beast similarly filled the space and continued smoothly throughout the seal impression. The modeling on the seals improved, producing

figures that were more three-dimensional. Akkadian seals became less cluttered and increasingly emphasized narrative themes, with the gods frequently shown. Thereafter seal design declined until revived in the later second millennium by the Assyrians, who produced a wealth of vivacious naturalistic and narrative scenes, often featuring animals.

—Jane R. McIntosh

Bibliography

- Collon, Dominique. *First Impressions: Cylinder Seals in the Ancient Near East*. Rev. ed. London: British Museum Press, 2005.
- Frankfort, Henri. *The Art and Architecture of the Ancient Orient*. 5th ed. New Haven, CT: Yale University Press, 1996.
- Gunter, Ann C. "Material, Technology and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Pittman, Holly. "Cylinder Seals and Scarabs in the Ancient Near East." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

Egyptian Scarabs

The ancient Egyptians used small sculptures of the scarab beetle as amulets and seals. These figurines were both realistically and stylistically carved, but certain features of the beetle were always present: the scarab always stands on an oval disc upon which a text is carved, the scarab itself is represented with a semicircular head and an oval prothorax (the body), and finishes in two side-by-side ovals represent the hard wing cases or elytra. Scarabs were made in a variety of materials: faience, clay, stone, semiprecious stone including carnelian and amethyst, and even gold or silver. Scarabs were often pierced longitudinally, which allowed for the scarab to be put on a string and worn around the neck or mounted on a wire to be worn as a ring.

The scarab beetle was the animal form of the god Khepri, who was one aspect of the sun god. The beetle could be seen rolling balls of dung across the landscape; these balls of dung held the beetle's eggs. Once the eggs hatched, newborn scarab beetles crawled out of it. The Egyptians thought that the scarab beetle died

and was resurrected inside the dung ball. In other words, they thought that the scarab beetle was capable of immortality. The mythological travels of the sun paralleled the scarab beetle's life cycle. The sun was born in the morning, traveled across the sky, and died every evening, spending the night traveling through the underworld, only to be resurrected the next morning. The god Khepri's job as a scarab beetle was to roll the sun disk across the sky all day, but he was also a god revered for having regenerative powers.

Representations of scarab beetles were considered to have magical protective powers. The ancient Egyptians placed scarab amulets over the heart in a mummy as part of the funerary ritual. The heart was not removed when the mummy was embalmed; it was believed to be the seat of consciousness and personality, and a successful journey to the afterlife depended upon its presence. Every dead person underwent a trial where his heart was weighed on a scale in order to determine if the person had lived a good enough life to gain admittance to the afterlife. The scarab amulet was supposed to protect the dead person against evil and lies at his final judgment. The living used scarab amulets as protective charms. In the New Kingdom, scarabs often had prayers inscribed on their undersides. Scarabs were also used as early souvenirs to commemorate important events in the reign of a king.

During the First Intermediate period, the Egyptians started using scarabs as seals. The oval bottom of the scarab was inscribed with a variety of motifs, some decorative (such as interlocking scrolls), others with a hieroglyphic text that could identify the owner of the seal. Those scarabs that had texts on them were usually inscribed with the name of the seal owner, which may or may not have included a list of his jobs (such as mayor and high priest). The seal was impressed in wet clay that was applied to an object or room that was being accounted for. Seals were used to ensure that property such as jars, boxes, bags, baskets, and doors to rooms (storage magazines and tombs) had not been tampered with. Seals were also used to close papyrus documents to prove that the documents were authentic. The king often gave his seal to a person as proof that that person had the authority to act

for the king. As such, the seal represented a system of accountability to the undamaged contents of a box, room, etc.; the authenticity of documents; and the authority of people to act in their office. Scarabs were not the only form of seals used by the ancient Egyptians. Seals also came in a variety of geometrical shapes (shields, rectangles, ovals), representations of animals (lions, hedgehogs, ducks, frogs, fish, etc.), and representations of objects (cowrie shells).

—Vanessa Smith

Bibliography

- Giveon, Raphael. *Egyptian Scarabs from Western Asia from the Collections of the British Museum*. Göttingen: Vandenhoeck and Ruprecht, 1985.
- Martin, Geoffrey Thorndike. *Egyptian Administrative and Private-Name Seals, Principally of the Middle Kingdom and the Second Intermediate Period*. Oxford: Griffiths Institute, 1971.
- Newberry, Percy. *Ancient Egyptian Scarabs: An Introduction to Egyptian Seals and Signet Rings*. Chicago: Ares Publishers, 1979.

Minoan and Greek Gems and Seals

Minoan and Greek gems and seals are important archaeological finds. Like sherds of pottery, they assist in the dating of archaeological levels, and their well-preserved images are small windows into the living cultures of their time. Furthermore, early Minoan gems and seals are the first tangible proof of a form of European writing.

In Athens in 1893, Arthur Evans came across small three- and four-sided stones, oblong in shape and drilled along the axis. These beads, which appeared to be seals, originated from Crete and were engraved with symbols that appeared to belong to a pictographic system of writing. These bead-seals led him to Crete, where some of the young women wore these brightly colored gems around their neck during the fertile years of motherhood. They believed that the bead-seals had talismanic power to guarantee lactation. The local name for these bead-seals was *galopetres* (milk stones).

In Evans's excavations of Knossos he found large hordes of seals and gems, and on the altars and other votive objects he found hundreds of

clay impressions of the seals, known as sealings. These sealings were also used as ornaments, amulets, and marks of ownership, and they can be found on doors and boxes. In excavations of the Diklaean Caves on Crete, D. G. Hogarth found a sacrificial altar covered with over 6.5 feet (2 meters) of votive offerings, including significant hordes of gems, seals, and sealings.

These large hordes, which had been collected over 1,000 years of Minoan history, can be classified into four distinct periods: Pre-Palace period (2600–2000 BCE), Old Palace period (2000–1700 BCE), New Palace period (1700–1450 BCE), and Post-Palace period (1400–1100 BCE).

In the Pre-Palace period, the seals were made of soft material such as ivory, bone, and faience. They display an amazing array of shapes and designs including geometric shapes such as pyramids, cylinders, and prisms, and they also include abstract shapes of animals, insects, fruit, and sea creatures. Particularly important from this period are the small three- and four-sided stones, which depict the hieroglyphic symbols, the earliest Cretan writing, that drew Evans to Crete. This hieroglyphic writing on the seals has still not been deciphered. The gems and seals of this period are distinctively Minoan, and the patterns cover the entire surface; however, the influence of the Egyptian scarabs and the Babylonian cylinder seal is evident.

In the Old Palace period, the gems and seals differ from the previous period in material, shape, and design. The material is harder, in particular the Cretan steatite, and a few imported semiprecious stones have been excavated. There is less variation in the shapes than in the Pre-Palace period, with three-sided prisms, button shapes, and disk shapes being the most popular. The designs became less geometric, and there is an increase in the depiction of human and animal forms.

The most sublime Minoan gems and seals come from the New Palace period. The Cretan stone steatite is used, but there is an increase in the use of imported semiprecious stones such as amethyst, sard, chalcedony, green and red jasper, agate, sardonyx, onyx, rock crystal, Spartan basalt, and haematite. Some of these seals are partially covered with gold. The carving into these small and hard stones demonstrates the

skill of Minoan craftsmanship. There is a wide range of motifs, which depict detailed scenes. The motifs fall into two main categories: scenes from nature and religious scenes. The religious scenes evolve around a goddess figure often flanked by two animals such as lions or griffins. The scenes from nature include lions, dogs, bulls, insects, birds, and marine life; these motifs depict the abundance of nature. In this same period large gold seal-rings have been excavated, and these engraved seal-rings depict scenes of worship to the Minoan goddess. Many of these seal-rings are extremely large, and the scenes are allegorical in nature.

After the fall and the abandonment of the Minoan Palaces there was a rapid decline in craftsmanship of Cretan art, and there have been few seals and gems excavated in the Post-Palace period. With the lack of organization and wealth after the fall of the Minoan civilization, there was little call for the practice of sealings, and seals and gems disappeared from the archaeological record. They began to reappear in what is now the Greek Mainland and Islands in the sixth century BCE.

—Tessa Morrison

Bibliography

- Boardman, John. *Intaglios and Rings: Greek, Etruscan and Eastern*. London: Thames and Hudson, 1975.
- Boardman, John. *Island Gems: A Study of Greek Seals in the Geometric and Early Archaic Periods*. London: Society for the Promotion of Hellenic Studies, 1963.
- Evans, Arthur. *The Palace of Minos: A Comparative Account of the Successive Stages of the Early Cretan Civilization as Illustrated by the Discoveries at Knossos*. New York: Biblo and Tannen, 1964.
- Kenna, V. E. G. *Cretan Seals*. Oxford, UK: Clarendon, 1960.

Harappan Seals

Thousands of small stone seals of around 2500 BCE with enigmatic script and more than 400 pictographic symbols have been excavated from Harappa. Even though these were the first objects discovered in excavations at Harappa and Mohenjo-daro, the pictographic code has not yet

been deciphered. Some experts believe that these seals could have been used as markers in trade, while others assume that some of these seals might have religious significance.

The usual material for Harappan seals was steatite, a soft stone. These seals were emblazoned with animal figurines or sacred entities. These figures were located in the center of seals, and above them was a short line of Indus script writing. According to one view, these seals were used to stamp clay as a form of trademark for accounting purposes to indicate ownership. Stamped bricks were excavated from the Indus settlements, and the same way of stamping bricks is seen in present-day Pakistan. In another view, people relied on these seals to create protective spiritual amulets.

The seals carried a wide range of motifs. Certain seals show various mathematical formulas and numbers. For instance, the presence of pi confirms the awareness of sophisticated and complex mathematics by these people. Female figurines are also portrayed on these seals with well-designed hair furnished with heavy metal jewelry. This shows that Indus Valley people were rich in art and aesthetics. Some seals have motifs of a man sitting in yoga-like position surrounded by animals, which depict the central and important position of humanity in their cosmic beliefs. Most scholars are agreed that the horned bull that appears on Indus seals should not be recognized as Nandi or Shiva's bull, while elephants adorned on these seals have nothing to do with Hindu beliefs. Osteological evidence proved the absence of horses in Indus Valley civilization before 2000 BCE, and indeed horses are not found on these seals.

Signet ring seals were very common all over Bronze Age West Asia, especially in Halaf times in Syria and in the Tal-i-Bakun phase of southern



Steatite seals from Mohenjo-daro. (Borromeo/Art Resource, NY)

Persia. But it is interesting that Mesopotamian cylinder seals are absent from the Harappan sites. The presence of certain Harappan seals in Mesopotamia also suggests a strong trade and cultural connection between the two civilizations.

—Muhammad Aurang Zeb Mughal

Bibliography

- Kenoyer, J. M. "Seals and Sculptures of the Indus Cities." *Minerva* 9 (2) 1998: 19–24.
- Kenoyer, J. M., and R. H. Meadow. "New Inscribed Objects from Harrapa." *Labore Museum Bulletin* 9(1) 1996: 1–20.
- Parpola, Asko. *Deciphering the Indus Script*. Cambridge: Cambridge University Press, 1994.
- Parpola, Asko. *7000 Years of Seals*. Edited by Dominique Collon. London: British Museum Press, 1997.
- Possehl, Gregory. *The Indus Age: The Writing System*. Pennsylvania: University of Pennsylvania Press, 1996.

■ Introduction: Archaeoastronomy

Archaeoastronomy is best defined as the study of beliefs and practices concerning the sky in the past, and especially in pre-history, and the uses to which people's knowl-

edge of the skies were put. It can be misleading to think of archaeoastronomy as the study of ancient astronomy, since people in the past might have related to the sky in very different ways

from people in the modern Western world. For this reason many people prefer to avoid the word astronomy altogether. Some speak of astronomies to emphasize this point, as is evident in the title of books such as *Astronomies and Cultures*.

Why are archaeoastronomy (and ethnoastronomy) worth doing? If we want to understand more about why certain human communities did what they did in the past, then we need to try to understand aspects of their cosmologies—the ways in which they perceived the world. Astronomy is an essential part of nearly every cosmology, because all human communities have a sky, and the sky and the objects in it form an integral part of the perceived world. The objects in the night sky are immutable, regular, reliable, predictable; for communities who did not live inside brightly lit buildings and whose skies were not polluted by modern city lights, they were there for people to watch and contemplate night after night, season after season. They become imbued with meaning.

The advantage that the sky holds for us in seeking clues about how people in the past understood the world that they lived in is that it forms a part of the ancient environment that is directly accessible to us, unlike things in the terrestrial landscape, which are often transitory. We can use modern astronomy to reconstruct, with considerable accuracy, the appearance of the night sky at any place and time, including the motions of the sun, moon, stars, and planets. And this capability offers a considerable advantage, whether we are concerned with myths and beliefs relating to the sky, monumental alignments upon celestial objects, or other kinds of evidence.

—Clive Ruggles

Bibliography

- Aveni, Anthony F., ed. *Archaeoastronomy in the New World*. Cambridge: Cambridge University Press, 1982.
- Aveni, Anthony F., ed. *World Archaeoastronomy*. Cambridge: Cambridge University Press, 1989.
- Heggie, Douglas C., ed. *Archaeoastronomy in the Old World*. Cambridge: Cambridge University Press, 1982.
- Ruggles, Clive, ed. *Archaeoastronomy in the 1990s*. Loughborough, UK: Group D Publications, 1993.

Ruggles, Clive, ed. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

Ruggles, Clive, ed. *Astronomy in Prehistoric Britain and Ireland*. New Haven, CT: Yale University Press, 1999.

Ruggles, Clive, and Nicholas Saunders, eds. *Astronomies and Cultures*. Niwot: University Press of Colorado, 1993.

The Earliest Egyptian Astronomical Records—Coffin Lids!

Unlike those of Babylonia, the astronomical records of ancient Egypt, if they once existed, have generally not survived. It is possible that they were recorded on papyrus rather than on clay tablets, as was the Babylonian case. So-called Pyramid Texts, found inside tombs and coffins dating back as far as Old Kingdom times (c. 2600–2100 BCE), and the younger Coffin Texts of the First Intermediate period and the Middle Kingdom, do list various celestial bodies that represent deities, but they are in no way records of observations. Their primary concern is with the passage of the soul to eternal life. The architecture of temples and pyramids in Old Kingdom times gives us some insights into how astronomical considerations affected and determined their construction. However, our main source of information about the development of astronomy and calendrics during Middle Kingdom Egypt comes from wooden coffin lids.

A modest number (about twenty) of such lids survive, dating mainly from the Ninth and Twelfth Dynasties (c. 2160–1780 BCE). Painted scenes preserved on the inside incorporate arrays of hieroglyphs, typically forty rows long by thirteen columns wide. Each box in the array contains a name, and these were, for the most part, repeated along diagonals. The overall effect is of a checkerboard pattern with diagonal stripes, but there are numerous glitches—where a diagonal alignment of symbols jumps by a column, for example.

What was their purpose? The remarkable broad consistency between them, despite individual differences, suggests an elegant answer that makes sense in view of our broader knowl-

edge of ancient Egyptian calendars and clocks. Each box in the grid contains the name of a star or star group known as a *decan*. In a typical table, three rows contain each of the names that appear elsewhere: these are a list of the thirty-six available decans. The remaining thirty-seven rows, containing the nearly diagonal grid, with its occasional glitches, represent the thirty-six weeks of the Egyptian civil calendar—each ten days long—together with the *epagomenal* period of five additional days that made up the year. For any given week, the names reading across the row represent the decans whose rising marked the successive “hours” during the night (these divisions of the night, unlike our hours, varied in length). A week later, each will rise roughly an “hour” earlier, which explains the diagonal pattern. However, since the position of the stars is irregular, it would not have been possible to choose decans that were evenly spaced across the sky, and this helps to explain the glitches.

Although they are often called *diagonal calendars* or *diagonal star clocks*, these were not instruments as such, but arrays of tabulated data. They helped the priest determine the time of night for nocturnal observances. For any given week in the civil year, the user could read off the stars whose appearance in the east would mark a particular hour in the night. We must also bear in mind that the data tables we find on the coffin lids were not actually functional—except, presumably, in the sense that the deceased would take them to use in the afterlife. The tables that actually served as priestly aids have not survived. In any event, each of them must have become obsolete relatively rapidly, because of the slippage of the civil calendar relative to the seasonal year by one day in every four years, and by a whole ten-day “week” after only forty.

The coffin-lid calendars were probably copies of the tables that the priests actually used. It is likely that these copies were made by artists who were not astronomical experts (unlike the creators of the actual tables). Perhaps they made mistakes in the transcription. Indeed, this may well explain other anomalies in some of the coffin-lid tables that do not seem to have an astronomical explanation. Reasonable as this sounds, it creates a headache for the modern interpreter.

Do particular features reflect astronomical reality or were they merely errors in the transcription? To what extent did accuracy actually matter? It is hardly surprising that a definitive identification of all of the decans has eluded modern scholars and continues to do so at the present time.

—Clive Ruggles

Bibliography

- Faulkner, Raymond. *The Ancient Egyptian Pyramid Texts*. Oxford: Oxford University Press, 1969.
- Faulkner, Raymond. *The Ancient Egyptian Coffin Texts*. Oxford: Aris and Phillips, 2004.
- Krupp, Edwin C., ed. *In Search of Ancient Astronomies*. New York: Doubleday, 1977.
- Neugebauer, Otto. *The Exact Sciences in Antiquity*. 1951. Revised and corrected edition, New York: Dover, 1969.
- Neugebauer, Otto, and Richard A. Parker. *Egyptian Astronomical Texts, I: The Early Decans*. Providence, RI: Brown University Press, 1960.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.
- Walker, Christopher, ed. *Astronomy before the Telescope*. London: British Museum Press, 1996.
- Wallin, Patrik. “Celestial Cycles: Astronomical Concepts of Regeneration in the Ancient Egyptian Coffin Texts.” PhD diss., Uppsala University, Sweden, 2002.

Astronomy in Egyptian Temples and Tombs

Controversial amongst Egyptologists is the relationship between temples, tombs, and astronomical observations. While most scholars agree that there is some connection between the heavens and Egyptian temples and tombs, there is little agreement on the nature of this relationship. The most obvious clues to astronomical associations of temples and tombs are found in the inscriptions within them. A number of New Kingdom tombs and temples, for example, contain painted “astronomical ceilings,” listing and depicting stars, constellations, and even planets.

But why should these be placed inside tombs? The answer is that ancient Egyptians’ understanding of the sky was framed within a worldview that bound together inextricably the gods, the otherworld *Duat*, the afterlife, and what was

seen in the night sky. It had long been engrained in ancient Egyptian minds that the sun god Ra traveled nightly through *Duat*, the world beyond the horizon, on his journey to the eastern side where the sky goddess Nut would give birth to him once again. Similarly, most of the stars in the sky disappeared from view for a period of some weeks in the year, between their heliacal set and heliacal rise; during this time they too were understood to pass through *Duat*. Likewise, the deceased were required to pass through the twelve parts of the underworld in order to join the gods in the sky. As far back as Old Kingdom times, pharaohs' tombs contained sets of spells known as Pyramid Texts that were designed to ensure a safe passage. Circumpolar stars, on the other hand, were immortal: ever present in the night sky, they never crossed the horizon into *Duat*, never died, and were never reborn. It was these stars that the human soul, striving for immortality, endeavored to join.

These beliefs, and especially the deep importance attached to the north direction with its imperishable stars, may well have given rise to a practice during Old Kingdom times of aligning tombs and temples with the cardinal directions. Pyramids from Saqqara onwards were oriented to the cardinal points, and at the Pyramids of Giza this was achieved with remarkable precision. This practice of cardinal orientation also appears to have been followed, though not necessarily with such great precision, at Old Kingdom temples such as those at Abu Ghurab. Other celestial alignments have also been discovered at Old Kingdom temples and tombs. The great pyramid of Khufu, the largest of the three pyramids at Giza, contains two long shafts connecting the King's Chamber directly to the outside world. Thought for many years to be mere ventilation shafts, it was discovered in the 1960s that one was aligned upon the star Thuban in the north, the closest thing to a pole star at the time, and the other upon Orion's belt in the south. While it is possible that the alignments are fortuitous, it is more likely that they had a very real purpose relating to the journeys to the stars that the pharaoh would need to make in the afterlife.

Various New Kingdom temples seem to have been aligned with the sun. The central axis of

the Great Temple of Amun-Ra is aligned toward winter solstice sunrise. The main enclosure at Karnak also contains several other temples with solstitial orientations. This is scarcely surprising, given that it was the center of a sun cult, but the reasons that particular importance was attached to the winter solstice are unknown. The main axis of another great New Kingdom temple, Abu Simbel, was aligned upon sunrise on (in our calendar) October 18 and February 22. (This temple was moved in the 1960s out of the way of the floodwaters created by the Aswan Dam, but the alignment was carefully preserved.) These dates were probably significant for calendrical reasons, but precisely what these were is hotly disputed.

A number of enthusiasts have investigated possible astronomical alignments at Egyptian temples and tombs over the years, going back to the pioneering efforts of the German scholar Heinrich Nissen and the British physicist Sir Norman Lockyer in the late nineteenth century. Not only solar but also stellar and even lunar alignments have been claimed, but there are inherent dangers in all this. The mere existence of an alignment does not prove that it was intentional, and the number of different structures in each temple complex provides many putative alignments. Only recently have systematic studies of temple and tomb orientations in ancient Egypt, sensibly interpreted in the light of the broader knowledge that has been obtained over the years from a range of archaeological evidence, begun to be undertaken. Preliminary results seem to indicate that temples in the Upper Egyptian Nile valley were predominantly topographically oriented, although some astronomical orientations were included as well, especially upon the winter solstice sun. According to another recent idea, the builders of Old Kingdom pyramids perfected (over time) their orientation and proportions so as to achieve impressive illumination effects at the summer solstice and equinoxes.

—Clive Ruggles

Bibliography

Belmonte, Juan. "Some Open Questions on the Egyptian Calendar: An Astronomer's View." *Trabajos de Egiptología [Papers on Ancient Egypt]* 2 (2003): 7–56.

- Clagett, Marshall. *Ancient Egyptian Science: A Source Book, Vol. 2: Calendars, Clocks, and Astronomy*. Philadelphia: American Philosophical Society, 1995.
- Hodson, F. R., ed. *The Place of Astronomy in the Ancient World*. London: Royal Society, 1976.
- Krupp, Edwin C., ed. *In Search of Ancient Astronomies*. New York: Doubleday, 1977.
- Neugebauer, Otto. *The Exact Sciences in Antiquity*. 1951. Revised and corrected edition, New York: Dover, 1969.
- Neugebauer, Otto, and Richard A. Parker. *Egyptian Astronomical Texts, III: Decans, Planets, Constellations and Zodiacs*. Providence, RI: Brown University Press, 1969.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ruggles, Clive, ed. *Records in Stone: Papers in Memory of Alexander Thom*. Cambridge: Cambridge University Press, 2002.
- Shaltout, Mosalam, and Juan Antonio Belmonte. "On the Orientation of Ancient Egyptian Temples: (1) Upper Egypt and Lower Nubia." *Journal for the History of Astronomy* 36 (2005): 273–298.

Ancient Egyptian Calendars

The kingdom of Ancient Egypt was remarkable in having two different calendars in simultaneous operation. Each arose in response to different social needs and developed a distinct function. At least, this is the standard interpretation of the evidence.

The oldest Egyptian calendar was lunar. It arose in Predynastic times (prior to c. 3000 BCE) from the simple need to keep agriculture in track with the seasons. Twelve lunar phase-cycle (synodic) months only amount to 354 days, so a mechanism is needed for adding an additional (intercalary) month every two to three years in order to keep the calendar in track with the seasons. It is generally supposed that in Upper Egypt (the Nile valley) the calendar was regulated by Sothis, or Sirius, whose first appearance before dawn each year (heliacal rise) coincided with the regular annual flood of the Nile, the most critical event in the agricultural year. Whenever Sothis was not seen until late in the twelfth month, an additional (intercalary) month was added.

Some scholars have argued that a lunar calendar had also developed independently in Lower Egypt (the Nile Delta), but that there it was regulated by observations of the sun. A myth of central importance for the Egyptians was the daily rebirth of the sun god Ra by the sky goddess Nut, who stretched from one side of the sky to the other. This legend was played out in the sky. If the Milky Way was seen as Nut herself, as has been suggested, the legend would doubtless have accounted for its shifting position with respect to the rising and setting positions of the sun, according to the time of year. This would have provided the conceptual basis for what we might too easily see as the purely pragmatic process of keeping track of the seasons by tracking the movement of the sunrise and sunset along the horizon. When the two parts of Egypt became unified into a single kingdom, these luni-stellar and luni-solar calendars would have merged.

The Early Dynastic period (c. 3000–2686 BCE) was the time of the first pharaohs and the development of written records. The lunar calendar was fine for regulating agricultural activity on a local scale but became unworkable for satisfying the needs of a complex economy and state bureaucracy. Recording and regulating the movement of perishable commodities, for example, demanded absolute agreement about the date. Yet the beginning of each month, and the insertion of intercalary months, was determined by observation, and observations could differ; as a result, it was often difficult to be certain either about the month or the day in the month. The result was the development of a quite independent civil calendar used for administration purposes. This comprised twelve “months” of exactly thirty days each, divided into ten-day periods known (rather confusingly, given that the word is commonly taken to mean “ten years”) as *decades*, followed by a five-day period known as the additional or *epagomenal* days, making a total of 365. Once the calendar was set up, it was defined indefinitely; there was no need to regulate it by observations of nature. It was so fit for its purpose that it survived well beyond the end of ancient Egypt itself and was still being used by astronomers in medieval times.

It may seem surprising to suggest that the lunar calendar did not die out when the civil calendar was introduced. Yet this is precisely what has generally been believed for many years, following the work of the great Egyptian scholar R. A. Parker in the 1940s. According to this view, the purpose of the lunar calendar became the regulation of religious observances. Responsibility for determining the correct month and day within this calendar, and with it the timing of religious festivals, became the responsibility of certain priests. At some stage, and possibly as early as Old Kingdom times (c. 2600–2100 BCE), Egyptians started to use the heliacal rise of other stars to help regulate the calendar and to develop the system of *decans*. These were thirty-six stars or star groups whose heliacal risings occurred in succession, roughly ten days apart—in other words, marking successive decades (ten-day periods) in the civil calendar. This meant that the two calendars could easily be synchronized.

Only recently has a different view emerged, proposed by the Spanish archaeoastronomer Juan Antonio Belmonte. This is that different Egyptian calendars did not in fact coexist. In Belmonte's view, sun observations were used initially to establish the 365-day calendar, but thereafter the dates of lunar-related religious festivals were simply established within this calendar, rather as Christians determine the annual date of Easter to this day.

Whatever the outcome of this debate, it is clear that the decans also heralded a hugely important innovation: they could be used as “clocks” to mark the passing of time during the night. Instead of focusing just on the heliacal rise, that is, on the decan rising immediately before dawn, one simply had to view the risings of successive decans through the night. On this basis, the Egyptians were the first to divide the night into approximately equal time intervals. Theoretically, at the equinoxes, when sunrise and sunset are exactly twelve hours apart, eighteen ideally placed decans should rise between sunset and sunrise at intervals of 40 minutes. In practice, however, the length of the night varies through the year, and twilight renders the first and last risings invisible. Furthermore, it could not have been possible to find stars to use as decans that were precisely evenly spaced across the sky. Finally, the Egyptian

kingdom stretched sufficiently far from north to south for latitude to make a difference. The most decans that could actually be seen in one night, during the longest nights of the year around the winter solstice, was twelve. This fact, it is widely believed, led to the concept of the night being divided into twelve “hours,” whose length varied through the year, but which were nonetheless a precursor to the modern concept of dividing the day-night cycle into twenty-four equal hours. There is a scholarly consensus on the identification of several of the decans, but the identification of others remains extremely speculative.

The Egyptian civil calendar was simple, useful, and all-pervasive. It worked unfailingly for almost three millennia, and although it gradually slipped with respect to the seasons (historical sources confirm that the civil new year once more coincided with the heliacal rising of Sirius in CE 139), this never seems to have created a problem during any particular epoch. Not until the third century BCE was any attempt made to add leap years.

—Clive Ruggles

Bibliography

- Belmonte, Juan Antonio. “Some Open Questions on the Egyptian Calendar: An Astronomer's View.” *Trabajos de Egiptología [Papers on Ancient Egypt]* 2 (2003): 7–56.
- Clagett, Marshall. *Ancient Egyptian Science: A Source Book. Vol. 2: Calendars, Clocks, and Astronomy*. Philadelphia: American Philosophical Society, 1995.
- Depuydt, Leo. *Civil Calendar and Lunar Calendar in Ancient Egypt (Orientalia Lovaniensia Analecta)*. Leuven, Belgium: Departement Oosterse Studies, 1977.
- McCreedy, Stuart, ed. *The Discovery of Time*. Naperville, IL: Sourcebooks, 2001.
- Neugebauer, Otto, and Richard A. Parker. *Egyptian Astronomical Texts, I: The Early Decans*. Providence, RI: Brown University Press, 1960.
- Neugebauer, Otto, and Richard A. Parker. *Egyptian Astronomical Texts, III: Decans, Planets, Constellations and Zodiacs*. Providence, RI: Brown University Press, 1969.
- Parker, R. A. *The Calendars of Ancient Egypt*. Chicago: University of Chicago Press, 1950.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

Spalinger, Anthony, ed. *Revolutions in Time: Studies in Egyptian Calendars (Varia Aegyptiaca)*. San Antonio, TX: Van Siclen Press, 1994.

Babylonian Astronomy and Astrology

Ancient Babylonia occupies a pivotal place in the history of modern scientific astronomy. In great part this is due to the conscientious nature of the astronomical observations that were made there and the meticulous way in which they were recorded for generation after generation. In time, the existence of a huge, cumulative database of past observations made possible the development of mathematically based rules for predicting future events. The Babylonian legacy of careful observation and recording combined with mathematical modeling went on to influence developments in ancient Greece and beyond. The other reason ancient Babylonia is so important to modern historians of astronomy is the fortunate choice of medium on which many of the ancient astronomical observations (along with many other documents) were recorded. Clay tablets do not tend to disintegrate with time like (say) parchments or papyri and are unaffected by subsequent fire, so they frequently survived the looting or destruction of buildings and other cataclysmic events of history.

Most of the written evidence that comes down to us is in the form of clay tablets from the Seleucid period from 311 BCE onward. Those including astronomical data are of various types: astronomical diaries containing nightly observations; records of sightings of astronomical events such as planetary conjunctions and eclipses; and (increasingly with time) almanacs containing predictions of the length of the month, the positions of the planets among the fixed stars, and many other things. These documents demonstrate beautifully how the systematic accumulation of carefully recorded passive observations led in time to the ability to predict using mathematical models. One thing that made this development possible was the Babylonian system for representing numbers: like ours it used a fixed base, but instead of ten, the base was sixty. In other words, each “digit,” itself a set of strokes representing tens and ones, represented a value

➤ BABYLONIAN ASTROLOGY IN LATER TRADITIONS

Ancient Babylonia was also the birthplace of modern horoscopic astrology, or at least the earliest known example of the belief in the predictive capabilities of charts recording planetary positions at the moment of a person’s birth. (Actually, the horoscopes of modern popular astrology represent a revival of this belief rather than any sort of continuity of tradition.) An important prerequisite was the division of the zodiac (through which the planets move) into twelve regions of equal size. Birth charts began to appear in the second half of the first millennium BCE and represented a move away from the astrologers having to watch the skies passively, waiting for omens to appear, to the more active pursuit (performed on demand) of calculating where the planets would have been among the stars at a particular time. It also represented a shift away from observational astronomy toward intensive mathematics. It is ironic, in view of the way in which modern astrology is seen as the very antithesis of modern science—irrational and unscientific—that this astrological innovation in Babylonian times necessitated making full use of the most up-to-date scientific knowledge and methods that had been developed by this time.

From the late third century BCE onward, two fundamentally different schools of thought emerged for generating predictions from the extensive records of existing observations. These seem to have coexisted throughout the final few centuries of ancient Babylon (until the late first century CE), to judge by two types of works—mathematical ephemerides and almanacs known as Goal Year Texts—that were evidently produced in parallel. The ephemerides represent the height of Babylonian scientific achievement, using sophisticated mathematical models to predict phenomena of the moon and planets with remarkable accuracy. The Goal Year Texts, on the other hand—each one a sort of astrological handbook for a given year—seem to represent an independent tradition of prediction based upon repeating cycles that had been discovered by studying the existing diaries of observations (the Saros cycle was one of these).

—Clive Ruggles

from zero to fifty-nine, with subsequent digits representing “units,” multiples of sixty, multiples of sixty times sixty, and so on. (The Maya, in contrast, used a base of twenty.)

In the Babylonian calendar, the new day began at sunset and the new month began when the thin crescent moon was first sighted in the evening sky after sunset. Back in the third millennium BCE, two calendars seem to have existed in parallel: an “ideal” calendar that was theoretical, with each month containing thirty days, and a common calendar based on actual lunar observations. The first of these calendars is used in early clay tablets that are essentially business documents. This is hardly surprising, since people had to agree on the day something had been signed or a commitment had been made, and this could not be dependent upon the vagaries of whether or not the new crescent moon had been seen (which could be a matter of some dispute, especially if it had been cloudy in certain places at critical times). This civil calendar needed to be the same all over Babylonia and not subject to disputes between different local officials.

Nonetheless, it seems that the actual astronomical calendar (rather than the abstract “ideal” calendar) was used for civil purposes from the second millennium BCE onward, despite the attendant problems. Gradually, the analysis of accumulated observations of first sightings of the new crescent moon enabled Babylonian astronomers to develop mathematical “rules of thumb” that permitted month lengths to be accurately and reliably predicted.

Furthermore, by about the fifth century BCE, the nineteen-month (Metonic) intercalation cycle had been discovered and established. It provided a rule whereby the additional (intercalary) months needed to keep the lunar calendar in step with the seasonal (solar) year could be added in a mechanical, deterministic, yet reliable way. Astronomers no longer had to depend upon independent astronomical observations, such as the heliacal rising of Sirius.

One of the most remarkable consequences of the Babylonian astronomers’ attention to detail and the sheer volume of records that they accumulated over many generations was the recognition of the so-called Saros cycle: it described

the fact that if a lunar eclipse occurs, others will tend to follow at regular intervals of eighteen years and eleven days for many centuries thereafter. This discovery was quite a feat, since approximately forty different Saros cycles run simultaneously, and the conditions for visibility of any particular eclipse vary considerably. Many are completely invisible from any given location on the earth (if they occur during daytime, for example). They simply cannot be revealed by casual observations of lunar eclipses over a few years or even decades, even if clear skies were permanently assured.

In view of its undoubted influence on the development of modern astronomy, it is tempting to view the Babylonian tradition as the birthplace of scientific investigation of the heavens. But this would be highly misleading. The main motivation for the Babylonians’ intense interest in the skies was astrological. Different days in the common calendar were associated with different prognostications, and by the seventh century BCE, scholars were advising the Assyrian king of the calendrical omens. A particular concern was the issue of whether the forthcoming month would have twenty-nine or thirty days. Other concerns included the length of day and night, the heliacal events of stars, the positions of the planets, and of course the occurrence of solar and lunar eclipses. One of the most important series of celestially related clay tablets has become known as the *Enuma Anu Enlil*, meaning “When [the great gods] Anu and Enlil . . .” (the first line of the text). This document, which dates to around the end of the second or the beginning of the first millennium BCE, runs to seventy tablets, and multiple copies exist. It contains around seven thousand omens accumulated from past experience and provides advice as to whether certain celestial configurations and events—signals from the gods—would indicate their pleasure or displeasure.

This was not astrology in the sense that celestial configurations were perceived as the direct cause of terrestrial events (although this did become a widespread philosophy from the fourth century BCE onward in Hellenistic Greece) but rather that they provided portents of events that could then, if necessary, be averted by taking appropriate action. In this, astronomical predic-

tions were used along with a variety of other forms of divination.

—Clive Ruggles

Bibliography

- Aaboe, Asger. *Episodes from the Early History of Astronomy*. New York: Springer, 2001.
- Hunger, Hermann, and David Pingree. *Astral Sciences in Mesopotamia*. Boston: Brill, 1999.
- Neugebauer, Otto. *The Exact Sciences in Antiquity*. 1951. Revised and corrected edition, New York: Dover, 1969.
- Rochberg, Francesca. *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge: Cambridge University Press, 2004.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.
- Steele, John. *Observations and Predictions of Eclipse Times by Early Astronomers*. Dordrecht, Neth.: Kluwer, 2000.
- Thurston, Hugh. *Early Astronomy*. Berlin: Springer-Verlag, 1994.
- Walker, Christopher, ed. *Astronomy before the Telescope*. London: British Museum Press, 1996.

Megalithic “Observatories” in Prehistoric Britain and Ireland

All over Britain and Ireland, and particularly in the more remote northern and western areas of Britain and the western side of Ireland, the traveler is quite likely to encounter one of the hundreds—indeed, several thousands—of megalithic monuments (monuments built of large stones) that form a conspicuous legacy of the prehistoric past of the British Isles. Erected in the Neolithic period or the earlier part of the Bronze Age, between the later part of the fourth millennium BCE and the later part of the second millennium BCE, this category of monuments includes huge passage tombs such as Newgrange in Ireland and Maes Howe in Scotland, and spectacular settings of standing stones such as Calanish in Scotland and Avebury and Stonehenge in southern England. It also includes a great many more modest tombs and temples, often found in remote fields and farmlands, as well as stone circles, short stone rows, and many single standing stones. In the mid-twentieth century, the engineer Alexander Thom proposed that many British

megalithic monuments functioned in prehistory as devices for observing the sun, moon, or stars.

Actually, the horizon was the real observing instrument. Given a sufficiently distant horizon, and provided that the observing position is closely enough defined, then any clear, unmistakable horizon feature such as a jagged hilltop or a sharp notch between two steep slopes can be used to pinpoint a particular direction. From the right observing position, the notch or other feature can be used as a foresight marking the rising or setting point of a celestial body to remarkable precision, perhaps to as little as a few arc minutes. For instance, the difference in the rising or setting position of the sun on the solstice and a couple of days earlier or later is normally imperceptible. However, by choosing a suitable observing position and horizon notch, an observer could distinguish the solstice, Thom observed, on the basis of whether or not a brief flash of sunlight from the very edge of the sun's disk appeared in the notch. Many megalithic monuments, he claimed, marked both the place to stand and the direction in which to look. They could, in this sense, appropriately be labeled “observatories.” Classic examples include the stone row at Ballochroy and the standing stone at Kintraw, both near the coast of Argyll, western Scotland.

Thom's ideas of high-precision alignments have not withstood the test of time. During the 1970s and 1980s many problems came to light, including day-to-day variations in atmospheric refraction, and extinction in the case of stars; and many difficulties were found with Thom's selection of data. Many archaeologists were deeply suspicious from the outset of the idea of “observatories” in prehistory. They did not necessarily dismiss out of hand the possibility of deliberate astronomical alignments; what disturbed them was the idea that monumental alignments were used primarily as observing devices. Surely, if the aim was merely to mark a rising or setting position, one could simply use a temporary marker such as a wooden stake, as is done by sun-watchers among the Mursi in Ethiopia. There would be no need to go to all the bother of erecting big stones. Given that big stones *were* used, it would seem more likely that they were encapsulating an alignment that was

➤ “MEGALITHIC” CALENDAR

Sir Norman Lockyer, writing early in the twentieth century, was one of the first to suggest that there was a widespread calendrical practice in Neolithic and Bronze Age Britain and Ireland that involved dividing the year into eight equal parts. This calendrical practice fed through into Celtic times two millennia later, and thence to medieval pagan and Christianized calendrical festivals. It has nothing to do with lunar months but instead involves counting the days from one of the solstices. The eight division points are the two solstices themselves, the two equinoxes, and the four mid-quarter days.

When Alexander Thom started to survey scores of British megalithic monuments several decades later, and to examine their astronomical potential, he noticed accumulations of alignments upon the position of sunrise or sunset at each of these eight dates. There was even some hint of an interest in the dates halfway in between them. On the basis of this evidence Thom proposed that there existed in Neolithic Britain a “megalithic calendar” dividing the year into sixteen equal parts, each twenty-two or twenty-three days long, demarcated by “epoch dates,” which in the modern (Gregorian) calendar would correspond, to within a day or so, to June 21 (solstice), July 14, August 6 (mid-quarter day), August 28, September 20 (equinox), October 13, November 5 (mid-quarter day), November 28, December 21 (solstice), January 12, February 4 (mid-quarter day), February 27, March 22 (equinox), April 14, May 6 (mid-quarter-day), and May 29.

While the sixteen-division calendar never gained wide acceptance, there was a great attraction in the idea that the eight-fold division of the year represented a thread of continuity stretching

through the Celtic calendar and into the even more remote past. Indeed, mid-quarter day alignments have been found among stone circles, such as Beltany in County Donegal, Ireland; among Neolithic passage tombs dating back to the late fourth millennium BCE, such as Dowth (one of the large tombs in the Boyne valley) and Bryn Celli Ddu on the Isle of Anglesey (Ynys Môn) in Wales; and even in one Earlier Neolithic site (a U-shaped setting of timber posts) at Godmanchester in Cambridgeshire, England.

Yet this argument may be circular. There is a distinct danger of our picking out “calendrical” alignments because they seem interesting—because they form part of our list of astronomical targets deemed worthy of attention—while ignoring many other alignments that do not point at calendrical targets. Lockyer was certainly aware of existing ideas about the Celtic calendar, as was Thom. Reassessments of Thom’s data, paying stricter attention to the fair selection of data, have failed to duplicate his results regarding the calendar, as have systematic studies of local groups of monuments. Added to this, the whole notion of a precise “Celtic” calendar, confidently assumed by Lockyer and Thom and their contemporaries, is now known to be highly problematic and questionable in itself.

Finally, one of the other criticisms of Thom’s megalithic calendar was that he did not find calendrical sites as such (although the site at Brainport Bay in Argyll, Scotland, was subsequently claimed as one), but rather a scatter of individual monuments with isolated alignments, each of which indicated sunrise or sunset on just one of the various calendrical epoch dates.

—Clive Ruggles

already well known, perhaps using it for symbolic or ceremonial purposes. This would be entirely consistent with the human tendency, identified by anthropologists, to encapsulate relationships of cosmological significance in monumental architecture. This sort of explanation also fits well with the lower-precision alignments that are more commonly indicated by research in archaeoastronomy today.

—Clive Ruggles

Bibliography

- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ruggles, Clive. *Astronomy in Prehistoric Britain and Ireland*. New Haven, CT: Yale University Press, 1999.
- Ruggles, Clive, ed. *Records in Stone: Papers in Memory of Alexander Thom*. Cambridge: Cambridge University Press, 2002.
- Thom, Alexander. *Megalithic Lunar Observatories*. Oxford: Oxford University Press, 1971.

Astronomical Alignments in Prehistoric Tombs and Temples in Europe

Scattered through western Europe from Scandinavia and Scotland down to the Mediterranean (and extending into North Africa) are a staggering variety of later prehistoric monuments that still remain conspicuous in today's landscape. Built in some areas as far back as the fourth millennium BCE and even earlier, and in some places only a few centuries before the coming of the Roman empire, many hundreds of great constructions in stone have stood the test of time remarkably well. More modest examples, however, tend to be little known, and many remain under serious threat. Some were tombs, some undoubtedly functioned as temples where sacred rites took place, and some—like the great alignments of hundreds of standing stones at Carnac in Brittany, northwest France—seem to defy explanation. Within this broad custom of constructing monumental architecture were a wealth of local traditions, resulting in groups of monuments as diverse as the recumbent stone circles of eastern Scotland, Irish wedge tombs, Causse-type dolmens of southcentral France, Portuguese antas, Sardinian nuraghi, Menorcan taulas, and many more.

Orientation is a basic and relatively uncontroversial aspect of most of these monuments, in that they have an axis of symmetry and face in some direction. The study of the orientations of these monuments, and in particular of their possible astronomical associations, has been extensive in Britain, Ireland, and Brittany. Indeed, Britain was the birthplace of modern archaeoastronomy, which has resulted in a great deal of attention being lavished on sites such as Stonehenge. Yet, surprising as it seems, there was little or no interest in, let alone large-scale investigations of, monumental orientations in the remainder of western Europe until a systematic survey was undertaken by the British historian of astronomy Michael Hoskin during the 1990s. Hoskin measured and documented the orientations of over three thousand later prehistoric tombs and temples in Portugal, Spain, southern France, and the islands of the western Mediterranean. Within this considerable area and time span one

can identify numerous local traditions resulting in characteristic types of monument broadly consistent in their design and methods of construction. Some occur in large numbers, like the Sardinian *tombi di giganti* ("tombs of giants"), of which over 250 remain; others consist of only a handful of extant examples, such as the *dolmenic hypogea* of the Fontvieille region of southern France, of which there are only four.

The remarkable fact that emerges is that nearly every local group has a discernible orientation signature, as characteristic as the architectural design of the tomb or temple itself. The vast majority of the three thousand monuments face broadly toward the east, southeast, or south. Some local groups cover the whole range from northeast to south, while others fall exclusively within a much narrower span. A few groups of monuments, on the other hand, face predominantly westerly or southwesterly. South-facing groups are rare and north-facing monuments are virtually unheard-of, there being only two examples in the whole set. This shows beyond any doubt that, throughout a significant area of the world and through three or more millennia of prehistory, the orientation of a monument was of almost universal importance—as important, evidently, as the materials used or the techniques of construction. At the same time, it is clear that dominant practices with regard to orientation varied from place to place and time to time just as much as those relating to design and construction. The orientation data give us some clues about how certain practices may have propagated from one region to another. West-facing tombs, for example, are rare in the Iberian peninsula and western and central France, but predominate in the Mediterranean coastal region of France. It seems likely that this practice developed in Provence or Languedoc, where it prevailed, spreading both east toward Italy and southwest toward Spain, but then (in both cases) became increasingly mixed with rival traditions.

It is much trickier to identify the targets that determined a set of orientations, let alone their meaning and significance to the people who built and used the monuments. However, one thing is clear: even the most modest local groups of similar monuments are scattered through a sufficiently large area, and placed in a sufficient

variety of landscape situations, to rule out any suggestion that the determinant was topographic, or even that the orientations were due to factors such as the prevailing wind. We are forced to conclude that reference must have been made to the north-south line defined by the diurnal motion of the heavens. This demonstrates, at least at the most basic level, that reference was made to the skies.

How reliably particular targets, astronomical or otherwise, can be identified for particular groups is debatable. One of the clearest cases is that of the seven-stone antas (dolmens) of central Portugal, where the orientations of all 177 examples measured fall within the sunrise arc on the eastern horizon. A common orientation signature stretches from northeast round to due south, and Hoskin suggests that the motivation here was to orient monuments either in the direction of sunrise or of the sun climbing in the sky. Similarly, some of the westward-oriented groups correspond to the range of directions of sunset and/or sun descending in the sky. An exceptional group of monuments are the taulas of Menorca, whose orientations fall in a range centered upon the south. It is dangerous to try to fit stellar alignments in such a case, since there are many bright stars, and their positions shift significantly over the centuries, owing to precession. However, there is quite strong independent evidence to support the argument that the taulas were associated with particular stars, most notably the Southern Cross and Pointers.

Later prehistoric tombs and temples farther north, in Britain and Ireland, have been much more intensively studied. In some cases, more specific astronomical associations have been identified: for example, the Scottish recumbent stone circles appear to be related to the midsummer full moon. However, taking a broader European view it is clear that their general orientation signatures are very similar to those found elsewhere in western Europe. This implies that more detailed investigation of the monuments in continental Europe may have a great deal more to tell us.

—Clive Ruggles

Bibliography

Chapman, Robert. *Emerging Complexity: The Later Prehistory of South-East Spain, Iberia and the*

West Mediterranean. Cambridge: Cambridge University Press, 1990.

Hoskin, Michael. *Tombs, Temples and Their Orientations*. Bognor Regis, UK: Ocarina Books, 2001.

Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

Chinese Astronomy

Many aspects of Chinese astronomy, from ancient times to the later imperial dynasties, are quite distinctive. Some of the earliest Chinese records of astronomical events, for example, are found on divinatory devices known as oracle bones that date to the Shang and Zhou dynasties. These were animal bones or turtle shells heated with a hot needle until cracks appeared in their surface. The shape of the cracks provided prognostications used by kings to assist in affairs of state. Fortunately for modern scholars, the prognostication was recorded on the bone itself, together with the eventual outcome (tending to confirm that the prognostication was correct). Some oracle bones relate to astronomical events, including both solar and lunar eclipses, and form the earliest Chinese records of such phenomena.

In the ensuing centuries and millennia of China's imperial era, the recording of occurrences in the skies became systematized. Yet in China, unlike (for example) in ancient Babylon, a clear distinction was maintained between what we might see as scientific (astronomical) and divinatory (astrological) traditions. The first was predicated on the regularity of calendrical cycles, which could be established through careful observation and recording and then reliably predicted. The latter concerned unpredictable phenomena, which had divinatory significance: these were omens to be noted and acted upon. There were even separate practitioners: experts in calendrical methods and experts in celestial patterns (whom we might choose to categorize as astrologers). Both were highly valued state employees. The goal of the state astronomers, and their principal *raison d'être*, was to produce ever more detailed and accurate almanacs that would reinforce (perceptions of) the emperor's control of order in the cosmos. The purpose of the astrologers, on the other hand, was to warn

the emperor of portents in the skies and aid him in making crucial decisions. Rulers felt they had a mandate from heaven, but if they ignored signs of approval or disapproval and failed to act accordingly, consequences could be dire. The two sets of records—calendrical and astrological—combine to bequeath us an unparalleled data set of observations of astronomical events, both regular and recurrent (such as planetary motions) and transient (on-off), such as the appearance of comets, novae, meteor showers, aurorae, sunspots, and of course eclipses.

Occasionally, a form of celestial phenomenon would pass from the domain of divination to that of calendrics when its underlying regularity was discovered. The classic example of this in the Chinese case is that of lunar eclipses. Around the year 0, the Chinese discovered a cycle of ten years and 334 days (135 lunations), which, like the longer Saros cycle discovered by the Babylonians, defines a period after which a lunar eclipse will tend to recur. With this discovery lunar eclipses essentially became predictable, and while they continued to be recorded, they ceased from this point to have any significance as omens.

A landmark in ancient Chinese astronomy was the development of a distinctive reference system that enabled specialists to map stars, to note the positions of the sun, moon, planets, or transient phenomena, and to reckon time at night. This was the system of twenty-eight *xiu* or lunar lodges. These are best conceptualized as twenty-eight regions into which the sky was divided like the segments of an orange and which were identified by convenient stars and asterisms situated within them. If the *xiu* had been of equal width, the moon would have moved from one to the next in each twenty-four-hour period. However, the widths varied considerably, and the moon could spend two or three nights in a very wide *xiu*, but only a few hours in a narrow one.

—Clive Ruggles

Bibliography

- Aveni, Anthony F., ed. *Empires of Time: Calendars, Clocks and Cultures*. New York: Basic Books, 1989.
- Aveni, Anthony F., ed. *World Archaeoastronomy*. Cambridge: Cambridge University Press, 1989.

- Harley, J. Brian, and David Woodward, eds. *The History of Cartography, Volume Two, Book Two: Cartography in the Traditional East and Southeast Asian Societies*. Chicago: University of Chicago Press, 1994.
- Needham, Joseph. *Science and Civilisation in China. Vol. 3: The Sciences of the Heavens and Earth*. New York: Cambridge University Press, 1959.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ruggles, Clive, and Nicholas Saunders, eds. *Astronomies and Cultures*. Niwot: University Press of Colorado, 1993.
- Selin, Helaine, ed. *Astronomy across Cultures*. Dordrecht: Kluwer, 2000.
- Thurston, Hugh. *Early Astronomy*. Berlin: Springer-Verlag, 1994.
- Walker, Christopher, ed. *Astronomy before the Telescope*. London: British Museum Press, 1996.
- Xu, Zhentao, David Pankenier, and Jiang Yaotiao. *East Asian Archaeoastronomy: Historical Records of Astronomical Observations of China, Japan and Korea*. Amsterdam: Gordon and Breach, 2000.

Astrology in the Vedas

The religion of the Vedas, which is one of the oldest known in the world, was based on the natural world. This consisted of three worlds: the sky, the atmosphere, and the terrestrial. The sky, which consists of the stars and planets visible to the naked eye, influenced the early Indians to develop an advanced astrological system. This system consisted of a detailed cosmography, a calendar with specific auspicious and inauspicious days, and sky deities. All of these worked together to form the majority of the Vedic religious system.

To understand the religious aspects of the sky, one must first understand the tradition's theory of the universe. In Vedic society, the *risbis*, or learned sages, explained the cosmos as a system of disks, each so large that from a panoramic view they seem as if they are flat. At the center of these disks is the *Bhumandala*, or the sphere of the *devas*, with Mount Meru at its center. Mount Meru is typically referred to in the Vedas seemingly as a mountain within the Himalayan range. Mount Meru is represented in an upside-down conical shape that is 80,000 miles high with the flat top forming the plateau where the pantheon

of sky deities abide, much like Mount Olympus in Greek mythology. With Mount Meru as the center, this forms a geocentric model of the universe with the earth as the focus of the orbit of the universe.

The view of the cosmos in the Vedas formulates the lunar calendar. Within this calendar each month consists of 30 days. According to the *Surya-Siddhanta* (Knowledge of the Sun), there is a corresponding solar calendar from which the days of the week receive their names based on the sun's orbit through the paths of the traditional planets (Mercury-Saturn, the sun, and the moon). Auspicious or inauspicious days were determined by the lunar *rasi* or zodiac. These were determined much like the days of the week: by figuring out which planet the moon's orbit was passing through. The days of the new moon and full moon were considered the best for religious practices. Other auspicious dates for marriages, pilgrimages, and important events could be figured by using the lunar calendar. The 13th day of each lunar fortnight called *Ashtami* was viewed as very inauspicious due to the tension between the sun and moon. Also, any day associated with the planet Saturn was considered quite unlucky and a day on which no venture should begin.

This calendar also dictated the construction of the altar for the Vedic fire sacrifices. The altar would be erected according to the specific deity to which the sacrifice was to be made and in ac-

cordance with the day of the week and month on which it was to take place. Many of these deities, or devas, to whom the sacrifices were offered were manifestations of celestial bodies. Surya, a prominent deity in the Rig-Veda, was an anthropomorphism of the sun. Dyaus was the personification of the sky itself and was possibly the chief deity within the Vedic religious tradition. He is analogous with Zeus from the Greek pantheon. Therefore, all aspects of the fire sacrifice had a tie to the celestial objects.

The objects found in the sky were an integral portion of the Vedic religion, specifying dates for ritual and the gods themselves. They also had an effect on the mundane portion of everyday life from the names of days to the dictation of the proper time to begin and end significant events.

—Caleb Simmons

Bibliography

- Chandekar, Shankar B. *Vedic Vision of the Universe*. Ganeshkhind, Pune: Pune University Press, 2000.
- Iyengar, T. R. R. *Hinduism and Scientific Quest*. New Delhi: D. K. Printworld, 1997.
- Machwe, Prabhakar. *Hinduism: Its Contribution to Science and Civilisation*. New Dehli: Machwe Prakashan, 1994.
- Nagar, Shantilal. *Indian Gods and Goddesses*. In vol. 2, *The Vedic Deities*. Dehli: B. R. Publishers, 2000.
- Thompson, Richard L. *Vedic Cosmography and Astronomy*. Los Angeles: Bhaktivedanta Book Trust, 1989.

■ Introduction: Engineering and Construction

One of the aspects of life from 4000 BCE to 1000 BCE that moderns often find amazing is the sophisticated construction and engineering feats of societies that lacked access to the kinds of power resources available in later periods. This amazement has led to numerous nonsensical pseudoscholarly arguments that the construction work of cultures such as the Egyptians and Olmecs could only have been achieved by access to some sort of mystical energy or outer-space technology. In fact, there is

no need to presume these kinds of fringe explanations; ancient construction techniques are not as mysterious as they are often made out to be.

For the builders of massive stone monuments such as Stonehenge and the Great Pyramid of Giza, the main power source was a substantial supply of people as a labor force. The main physical limitation on the ability of humans to move objects is the ability for a sufficient number of individuals to grip the object. Often, to facilitate the movement the object to be moved was

placed on a sledge or wagon, allowing it to be dragged along the ground with less friction and more easily by more individuals. The use of ramps and leverage allowed heavy objects to be lifted high above the ground. Animal power could also be utilized to move heavy objects; teams of oxen, for example, could pull very heavy loads although generally quite slowly. Monumental architecture such as that found in Egypt and at Stonehenge point to a high degree of planning, authority, and mathematical skill. The following entries explore some of the specific approaches to ancient construction and engineering from the regions where these ancient skills are best understood.

—Kevin M. McGeough

Construction of the Great Pyramid of Khufu—Giza, Egypt

In the western suburbs of modern Cairo 130 feet above the Nile stands a 1-mile (1.6-kilometer) square artificial rocky plateau called Giza (El-Jizah) by the Arabs. It is the site of three Fourth Dynasty pyramid tombs—Khufu's (also known as Cheops), Khafre's (also known as Chephron), and Menkhaure's (also known as Mycerinus)—named by the ancients among the seven wonders of the world. The largest of them, built at the command of Khufu, has been called a “unique monument” because of its internal disposition. While it is clearly part of an evolving architectural type, there is little doubt that in terms of engineering and logistics, this so-called Great Pyramid was a superlative achievement.

Khufu (Khnum-Khufwy, “Protected by Khnum”) was the second king of the Fourth Dynasty and reigned from 2589 to 2566 BCE. Although little is known of him, he is believed by some scholars to have been a tyrannical and cruel ruler. Whatever the case, clearly he was able to lead and coordinate, because the building of his tomb involved sophisticated social planning to harness an immense team of workers, both on and off the site, together with all the backup resources needed for such a daunting task. The fifth-century BCE Greek historian Herodotus calculated that 100,000 slaves would have taken 30 years to build the Great Pyramid. But it was not constructed by slave labor; rather,

Egypt's peasant farmers, displaced from July through November when their fields were inundated by the annual flooding of the Nile, were deployed on the project as well as on other public works. The cost of their food and shelter (there were workers' villages built nearby) was met from their own surplus production, levied as taxes. Modern scholarship suggests that only 20,000 men could have completed Khufu's tomb in only 20 years.

The base of the Great Pyramid (Akhet Khufu, the “Horizon of Khufu”), oriented within 0.3 minute of accuracy to the cardinal compass points, is 756 feet (230.5 meters) square, covering 13 acres (5.2 hectares). The extensive base means that the tremendous weight of the tall 479-foot (146-meter) building, amounting to an estimated 6.99 million tons (6.35 million tonnes), does not overload the foundation; it is also very stable because its center of gravity is very low. Although of simple design, such an engineering feat challenges even the modern imagination. The pyramid is estimated to contain 2.5 million limestone blocks, each weighing from 3 to 17.7 tons (2.5 to 15 tonnes), rising in 200 steps to the height of a 40-story office block. The joints between the blocks are about 0.02 inch (0.5 millimeter). As originally designed, the pyramid was encased in a layer of polished white limestone 16 feet (5 meters) thick from the quarries at Tura, east of the Nile. Most of it was plundered in the sixteenth century and used to build mosques in Cairo. At the pinnacle of the Great Pyramid there was a solid capstone of polished Aswan granite, standing on a 33-foot (10-meter) square platform.

All this, from quarrying to setting the stones, was achieved with copper and stone tools. Barges were used to transport blocks from a quarry on the far side of the Nile. How were they raised as the pyramid progressed? It is thought that ramped causeways, lubricated with water, were used to haul the sleds; these may have been built at different levels on each side of the pyramid, or a single ramp may have wound around the whole structure as it rose. While oxen were used to move stone blocks in the quarry, the accuracy demanded on-site required wooden sleds hauled by men, and fewer than ten were needed to maneuver a block into place using wooden rockers.

For all the looming size of the Great Pyramid, its interior spaces are relatively tiny. An entrance passage—not the original—connects with a narrow descending passage 345 feet (105 meters) long that leads to a 46-by-27-foot (14-by-8.3-meter) subterranean room, a little over 11 feet (3.5 meters) high. It has been suggested that this was the first location chosen for Khufu's burial chamber; that was quickly abandoned, probably on theological grounds. From the junction of the two passages, an ascending passage 129 feet (39 meters) long leads to the outer end of the "great gallery." From that point, a horizontal corridor gives access to the so-called Queen's Chamber, vaulted with inclined blocks; a second alternative burial chamber, it was never completed and never used. The great gallery, 154 feet (47 meters) long and 28 feet (8.5 meters) high, with a finely crafted corbel vaulted ceiling, leads upward to the final location of the King's Chamber, built of pink Aswan granite. The chamber still contains the huge red granite sarcophagus that must have been put in place while the pyramid was being built. Above it a series of five relieving chambers distributes the weight of the structure above away from the chamber. There are two shafts sealed at the extremities through which the king's *ka* (spirit) could come and go from the underworld.

Several ancillary buildings were associated with Khufu's pyramid. Members of the royal family were buried in mastaba tombs, and three small pyramids to the east were probably for his sister-wife, Merites, and perhaps other queens. Nobles and courtiers were interred in the royal cemetery to the west of the Great Pyramid, where there were also funerary temples and processional ramps. All that remains of Khufu's Mortuary Temple is some of the basalt paving.

—Donald Langmead and Christine Garnaut

Bibliography

- Pemberton, Delia. *Ancient Egypt*. San Francisco: Chronicle Books, 1992.
- Stierlin, Henri, and Anne Stierlin. *The Pharaohs, Master-Builders*. Paris: Terrail, 1995.

Mesopotamian Construction

Houses were generally built of locally available materials, but for palaces and temples, city walls,

and other public buildings the materials, which often included such things as cedar beams, decorative stones, and precious metals, were drawn from a wide area, and the work of their construction would be undertaken by large sectors of the community, including both laborers and specialists such as architects, builders, stonemasons, carpenters, painters, and those skilled in creating inlays. Some of the reliefs in the Neo-Assyrian palaces depict the work of quarrying stone and creating and transporting the huge statues of winged bulls that guarded the palace entrances; texts often detail the materials used and the effort expended in obtaining them, and the records indicate the size of the labor force. The quantities of bricks required for public buildings could be vast. For example, the archaeologist Max Mallowan calculated that the city wall at Kalhu required approximately 70 million bricks, which at the rate of brick-laying recorded in Assyrian times would have taken 700,000 man-days to lay.

Building materials used in Mesopotamian construction varied dramatically depending on the local environment and needs of the community. The nomads who traveled through regions of Mesopotamia dwelt in tents, probably constructed of skins or cloth over wooden poles or branches, but the majority of Mesopotamians lived in houses.

In southern Mesopotamia and particularly in the marshy region around the head of the Gulf, buildings could be constructed of reeds, bound together in bundles and covered with reed mats. Some fourth-millennium seals depict houses or farm buildings of reed bundles, and the rarity of early settlements detected in the region could reflect the widespread use of such structures. Reed structures built by the Marsh Arabs of modern times demonstrate the material's versatility, allowing the construction of substantial and beautiful halls (*mudbifs*).

The most widely available material for construction was mud, which was mixed with straw, dung, or another temper such as sand. This could be simply used as *tauf* (pisé—packed mud) to build house walls but was generally made into bricks. The latter were shaped by hand or formed in molds and dried in the sun. Early bricks were rectangular, but in the Early Dynastic period

plano-convex bricks were made. Shaped like a low loaf of bread, they had the advantage of allowing unskilled laborers to rapidly construct walls by laying them in herringbone courses of alternating bricks on their sides, held in place by liberal applications of mud mortar. Later bricks were generally square.

Bricks could also be fired in a kiln or brick stack. Baked bricks were used for the lowest courses of walls; for drains, where bitumen was employed to make them watertight; and for paved courtyards and other exposed architecture such as the facades of buildings. Important buildings, such as the ziggurat at Ur, might be encased in baked bricks as a protection against the elements. The use of bitumen as a mortar, particularly in the construction of large structures such as city walls, also provided an effective protection against dampness. Courses of reed matting and layers of bitumen were interspersed between those of brick in the construction of ziggurats to counteract rising dampness from the foundations, and weep holes also assisted drainage and prevented decay from dampness. Bitumen was also employed as a waterproofing material for bathrooms and constructional timbers such as doors. Brick walls were often plastered to protect them against rain, using mud or a stronger, more attractive plaster of gypsum or lime. Floors could also be plastered but were often just of beaten earth.

By the later second millennium, bricks were occasionally molded into more ambitious shapes. An early example of this is in the Kassite temple of Innin (Inanna) at Uruk, where walls were decorated with statues of water and mountain deities built up of courses of specially molded bricks, each bearing a section of the design. The glazed low-relief images of dragons, bulls, and lions that adorn the Ishtar Gate and the walls of the Processional Way and the bricks that decorate the throne room entrance at Babylon are the culmination of the technique. Flat glazed ornamental bricks were also found in some Assyrian cities.

Early brick-built temples were strengthened with buttresses, which soon became a decorative feature too, relieving the monotony of the brick walls and creating patterns of light and shade. These were echoed in the interior by re-

➤ DECORATION

Uruk-period temples were often decorated with cone mosaics, geometric designs constructed from clay cones whose flat surface was painted, usually red, black, and white, and that were embedded into the wall plaster so that only the painted surface was visible. In one example from Eanna in Uruk, the clay cones were replaced with cones of colored stone. As well as being decorative, cone mosaics reinforced the surface of these structures, which at Uruk included semiengaged pillars. Using a similar technique, large clay nails with glazed heads were used to decorate the temple of Nabu in the Assyrian city of Dur-Sharrukin.

The plaster walls of buildings could be brightened up by being painted, although traces of these paintings have rarely survived. One exception is the Uruk-period temple at Uqair, where the inside walls were painted with geometric designs and animals, including leopards. Another is the early-second-millennium palace at Mari. Here many of the public rooms had painted decoration: murals showing offerings to the god Sin and the goddess Ishtar in the latter's shrine, the investiture scene in the Court of Palms, and the hunting scenes and other royal activities on the walls of the king's apartments. Paint was probably applied to many of the stone reliefs and statues of Assyrian palaces and to the tiers of ziggurats. These traditionally were colored (from bottom to top) white, black, red, blue, orange, silver, and gold.

Panels of aromatic wood might also decorate the walls of major buildings, or they might be hung with carpets or textiles. Carpets may also have been laid on the floors. In Nineveh, stone imitations of such carpets (beautifully patterned and with tasseled edges) were carved on some of the floors. From the later second millennium external walls were sometimes decorated with glazed bricks, of brilliant blue, orange, green, yellow, red, and white.

—Jane R. McIntosh

cesses. The constraints of roofing using brick also led to the early development of arches, used above doors in houses and tombs, and brick-built barrel or corbelled vaults, seen, for example, in Early Dynastic tombs at Ur.

In northern Mesopotamia where stone was more easily acquired, the foundations and lower

courses of houses and walls were often made of stone. Stone came into more common use in first-millennium Assyria when the brick walls of palaces were clad in stone slabs decorated with low-relief carvings. In the south, where most stone had to be imported, it was less commonly used, but construction in stone did occur. An early example was the Limestone Temple in the Eanna precinct of fourth-millennium Uruk. Another early temple here was built of limestone and a mixture of crushed baked brick and gypsum, which formed a sort of concrete. Some of the tombs in the Ur Royal Cemetery were built of stone. Diorite and other types of stone were used for some architectural elements, such as the sockets in which the door pole turned. Sometimes the bottom of the pole was fitted with a copper or bronze shoe. Limestone slabs were used for paving, such as in Fort Shalmaneser at Kalhu.

Most roofs were constructed of timber beams over which reed mats or palm fronds were laid and then covered with mud plaster. House roof beams could be made from local timbers, such as date palm, pine, and poplar, but for larger buildings such as temples, more massive beams were required. These came from imported trees, particularly cedar from the Amanus Mountains. Timber was also used to make doors, window frames, and other fittings. Cedar, being aromatic, was also favored for constructing palace and temple doors, giving off a delightful scent when used, but for most people and buildings, lesser timbers such as pine and boxwood sufficed. Wooden pillars might support a first-floor balcony in houses, and timber centering could be used to give support to brick and stone vaults.

—Jane R. McIntosh

Bibliography

- Dunham, Sally. "Ancient Near Eastern Architecture." In *A Companion to the Ancient Near East*, edited by Daniel C. Snell. Oxford, UK: Blackwell, 2005.
- Frankfort, Henri. *The Art and Architecture of the Ancient Orient*. 5th ed. New Haven, CT: Yale University Press, 1996.
- Gunter, Ann C. "Material, Technology and Techniques in Artistic Production." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Potts, D. T. *Mesopotamian Civilization: The Material Foundations*. London: Athlone, 1997.
- Spycket, Agnes. "Reliefs, Statuary, and Monumental Paintings in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.

The Construction of Stonehenge

The magnificent stone circle in southwestern England known as Stonehenge is Europe's most familiar prehistoric monument, and its construction has mystified and challenged archaeologists for generations. The gorgeous setting of Stonehenge on a windy Wiltshire hillside a mile and a half above the river Avon lends to its mystery and allure. Stonehenge dates from approximately 3000 BCE. Archaeologists cannot agree on whether the site was built for sacred purposes such as performing religious rituals or secular purposes such as a solar calendar.

The construction of Stonehenge took place in three distinct stages ranging over a period of 1,500 years, between 3000 and 1500 BCE. In stage one beginning around 3000 BCE, the low earthwork bank and ditch were dug in a circular shape approximately 380 feet in diameter, allowing for an entrance gap in to the northeast. On the site, archaeologists discovered fragments of ancient hand tools such as picks made of deer antlers, scoops made from oxen bones, and pottery fragments. The large circle on the top of a hill might have served as a political meeting place or site of religious offerings, but the northeast entrance implies a connection with the sun's arch at the height of summer. Within the outer circle are found exactly 56 Aubrey Holes, named after seventeenth-century English biographer and antiquarian John Aubrey, who first described their location. The Aubrey Holes are round pits dug two to four feet into the earth and originally held wooden posts.

The second phase of Stonehenge construction lasted 300 years, between approximately 2900 and 2600 BCE. Additional timber postholes were dug within the outer earthworks bank and ditch circle. Archaeologists discovered fragments of wood buildings with a complex pattern of

postholes nearer the center of the circle, but it is impossible to know the size, shape, or purpose of these buildings. With the passage of time, the outer circle ditch began to fill in with rainwater and soil erosion. The ditch as well as the Aubrey Holes were used for the burial of cremated remains, indicating that Stonehenge was a center of religious practice for Neolithic people.

The third phase of Stonehenge construction took place between 2600 to 1500 BCE and saw the import of bluestones from the Preseli Mountains in Wales 250 miles away, in the northwest of England. Ancient architects designed a double crescent pattern for 60 bluestones, weighing up to 8,000 pounds, in the very center of the earthwork and ditch circle. The bluestones range in size, but the average length is six and a half feet.

Around 1500 BCE or about 300 years following the installation of the bluestones, Bronze Age builders began the construction of the sarsen stone inner circle at Stonehenge. Sarsen stones were a type of sandstone and weighed up to 50 tons and were cut from dense rock hills at Marlborough Downs in the Kennet River valley 20 miles to the north. Archaeologists estimate that it may have taken 600 people to drag one of the sarsen stones over that distance and terrain. At the very center of Stonehenge, five enormous trilithons (two upright stones topped with a horizontal stone or lintel) were added. At the same time, 30 additional sarsen stones were arranged in a circle. The original bluestones were moved and rearranged in a horseshoe configuration. Three Portal Stones highlighted the main northeast entrance. The only one of these remaining is called the Slaughter Stone because it was originally upright before tipping over and then sinking deep into the ground. The flat surface of the 21-foot-long stone was imagined by scholars to be used for some kind of ritual slaughter, though there is no evidence for this. Farthest out from

➤ TRANSPORTING ANCIENT STONES

One of the enduring mysteries of Stonehenge is how ancient craftsmen managed to haul large bluestones and sarsen stones distances of up to 250 miles using only human muscle power, rafts, or oxen. One theory posits that bluestones from the Preseli Mountains were brought by rafts along the southern coast of Wales. First, the stones were cut and dragged from the Welsh Mountains and loaded on rafts to travel along the coast and then up the Avon and Frome rivers. From near the present-day city of Frome, the bluestones needed to be carried overland about six miles to reach Warminster in Wiltshire to be loaded on rafts again to reach the site.

The sarsen stones quarried from the Marlborough Downs needed to be pulled or pushed entirely on land because of their enormous size. Hundreds of workers would be needed to pull on ropes made of vines or cowhide and lay wooden rollers in front of the stones as they moved. The whole process probably took as long as one year for each sarsen stone weighing up to 100,000 pounds. To get the stones upright, Stonehenge workers first dug a pit with one upright wall and one wall slanted toward the stone. Wooden poles were inserted to reinforce the pit walls as the stone was levered and pulled into place.

—Jonathan L. Thorndike

the circle is the Heel Stone that is set to align with the sunrise in midsummer.

—Jonathan L. Thorndike

Bibliography

- Burgess, Colin. *The Age of Stonehenge*. London: J. M. Dent, 1980.
- Chippindale, Christopher. *Stonehenge Complete*. 3rd ed. London: Thames and Hudson, 2004.
- Hawkins, Gerald S., and John B. White. *Stonehenge Decoded*. New York: Doubleday, 1965.

■ Introduction: Ancient Mathematics

Historians trying to understand the mathematics of other cultures largely have to rely on written sources. What is not written down is not preserved. Mental calculations leave no trace, figures drawn in the sand are soon erased, and computations performed with counters on a board may leave no archaeological record. The history of mathematics is thus restricted to cultures that had writing and is further restricted in scope to what people in those cultures chose to write down. For example, we can understand how some complicated mathematical problems were solved because the solution procedures were written down but not how addition was performed because no ancient scribe thought to explain it in writing.

For the period from 5,000 to 3,000 years ago, the sources are mostly restricted to those from Egypt and Mesopotamia. In both cases, mathematics was the preserve of scribes, who learned it as part of their literacy and administrative training. The sources, however, go beyond the utilitarian. There is much in them that would not be needed in the daily life of a bureaucrat, and there is much in terms of skills and knowledge that would be useful on a daily basis but is not preserved in the texts.

The most common writing material in Egypt was papyrus, which is fragile and decays unless kept in very dry conditions. Very few mathematical texts have survived, and although the large Rhind Mathematical Papyrus displays a wide spectrum of mathematical problems, the paucity of sources means that historians have difficulty delineating the boundaries of Egyptian mathematics. There is also no real chance of understanding how Egyptian mathematics changed over the centuries.

In contrast to the situation in Egypt, scribes in Mesopotamia generally wrote on clay. Once discarded in the ground or even used as building material, clay tablets and the writing on them could survive for thousands of years until excavated by archaeologists. The accidents of archaeology and the fact that many mathematical texts came from unrecorded excavations in the nineteenth century and suffer from a loss of context

mean that there are still large gaps in our knowledge, but it is possible to give a more detailed picture than is the case for Egypt. Additionally, in Mesopotamia, one can trace the development of mathematics from the first writing in about 3200 BCE since there are sources, in greater or lesser abundance, from each period.

—*Duncan Melville*

The Mesopotamian Sexagesimal System

The sexagesimal (base-60) system was an abstract number system developed in Mesopotamia for performing calculations, especially multiplication and division. The sexagesimal system allowed a uniform approach to computation, regardless of size from very large to very small and regardless of the type of quantity being calculated.

Writing developed in Mesopotamia around 3200 BCE as a means of recording administrative information, especially the movement of goods in and out of large organizations such as temples. Along with signs designating what goods were involved, there had to be signs signifying the quantities of goods. The quantity notation used depended very much on the particular type of goods, so that different symbols were used to record a number of sheep, an amount of grain ration, or areas of fields. Within each series, different symbols were used for different-sized units. There were no abstract numbers.

Over the next 1,000 years, these metrological systems evolved and simplified. Toward the end of the third millennium, much of Mesopotamia was ruled by a large centralized state based at the city of Ur. The state kept detailed administrative records and required standardized reporting from scribes throughout its territory, and there were various administrative reforms aimed at simplifying record keeping and computation. At some point during this period an abstract numerical system was born that aimed solely at calculation. The notation used derived from the archaic symbols used to denote discrete goods, a system that had been simplified and expanded

during the intervening time. Actual quantities of goods were still recorded in appropriate notation.

Scribes wrote on damp clay by impressing a sharpened reed. The resulting writing is called cuneiform, meaning wedge-shaped. The sexagesimal system is built out of just two signs, a vertical wedge ∇ for 1 and a corner wedge $\angle$ for 10. Numbers from 1 to 9 were made by bundling the vertical wedges, so 5 would be written $\nabla\nabla\nabla$. From 10 to 59, numbers were made by bundling the 1s and 10s, with the 10s always appearing to the left of the 1s so that 45 would be written as $\angle\nabla\nabla\nabla$. Sixty was represented as a 1 ∇ in the next column to the left (hence the name “sexagesimal” or “base-60”), and larger numbers could be written using the same symbols in place-value notation. For example, $1111 = 10 \times 60 + 8 \times 60 + 3 \times 10 + 1$ was written $\angle\nabla\nabla\nabla\nabla\nabla\nabla\nabla\nabla$. Modern translators write these numbers with commas separating the sexagesimal places, so decimal 1111 is sexagesimal 18, 31. Arbitrarily large numbers can be represented, and the system was also used for sexagesimal fractions, as we write in decimals. For example, $\frac{1}{2}$ is 0.5 as a decimal and 30 as a sexagesimal fraction. The sexagesimal system is a floating-point system; there is no designation of the absolute size of numbers (no equivalent of the decimal point) and thus no notation for empty columns. Thirty and one-half are both written as 30.

A floating-point system is excellent for multiplication and division but not so well suited to addition and subtraction. Mesopotamian students practiced sexagesimal number notation through writing out standard tables. Division was performed by multiplying by the reciprocal so that instead of dividing by 2, multiply by one-half, or 30 (as half an hour is 30 minutes). There were standard tables of reciprocal pairs such as 2~30, 3~20, and so on. Each of these numbers was used for multiplication tables, listing multiples of a given number. Students appear to have worked through the complete set of tables one at a time over a period of perhaps a year and then reviewed by writing out compound tables including several individual tables on one clay tablet.

The advantages of the sexagesimal system were recognized later by astronomers, who need

to do a great deal of complicated calculations, and we still retain the base-60 divisions in minutes and seconds of both time and angle.

—Duncan Melville

Bibliography

- Neugebauer, O., and A. Sachs. *Mathematical Cuneiform Texts (MCT)*. New Haven, CT: American Oriental Society, 1945.
- Nissen, H. J., P. Damerow, and R. Englund. *Archaic Bookkeeping: Early Writing and Techniques of the Economic Administration in the Ancient Near East*. Chicago: University of Chicago Press, 1993.
- Robson, E. *Mathematics in Ancient Iraq*. Princeton, NJ, and Oxford: Princeton University Press, 2008.

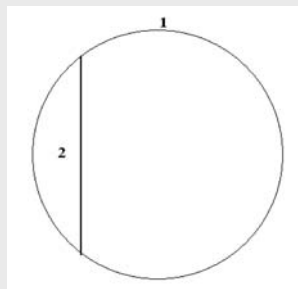
Mesopotamian Word Problems

Mathematics in Mesopotamia was learned by scribes as part of their training in literacy and preparation for administrative positions. The best-documented period is the Old Babylonian (ca. 2000–1600 BCE), and it is on this period that we will focus. Scribal trainees began with the basics of making cuneiform (wedge-shaped) impressions on damp clay tablets. They proceeded to learn the signs used in the Akkadian and Sumerian languages, some 600 altogether, and to practice words and phrases. Students wrote out extracts from long lists of words such as names, places, or objects made from wood. In this list-oriented phase they also copied out metrological lists of lengths, areas, weights, and capacities in the various units. Later they wrote out multiplication tables in the sexagesimal place-value system.

In the more advanced stages of the curriculum, students improved their Sumerian by copying extracts from lists of proverbs, hymns, and literature. Advanced mathematics was conveyed by word problems. Before the Old Babylonian period, most identifiable word problems had to do with rations of the areas of fields. Ration problems could be solved using addition and a good grasp of metrology. Determining the area of a field given its length and width was probably done using a good knowledge of metrological conversion ratios. It is still not clear how students solved the inverse problem of finding a side of a field given its area and the length of

➤ FINDING THE CHORD OF A CIRCLE

On a large tablet containing a variety of different problems housed at the British Museum (BM 85194), one problem involves finding the chord of a circle (a line segment with both endpoints on the curve of a circle) using the Pythagorean rule.



A circle of circumference 1. I have gone down 2 nindan. What is the chord? You, (double) 2, you see 4. Subtract 4 from 20, the diameter, you see 16. Square 20, the diameter, 6,40 you see. Square 16, you see 4,16. Subtract 4,16 from 6,40, you see 2,24. What is the square root of 2,24? 12 is the square root, the chord. Such is the procedure.

The problem is to find the length of a chord of a circle that is a distance 2 nindan from the circumference. A nindan was a standard length unit. The circumference is to be interpreted as 1,0 (that is, 60 nindan). The student is expected to know that the diameter of a circle is a third of the circumference (corresponding to setting π to be 3). The procedure generates a rectangle with diagonal equal to the diameter and solves for the chord using the Pythagorean rule.

—Duncan Melville

Bibliography

O. Neugebauer and A. Sachs, *Mathematical Cuneiform Texts*, American Oriental Series 29 (1945; reprint, New Haven, CT: American Oriental Society, 1986), 159ff.

another side before the advent of the sexagesimal system.

By the Old Babylonian period, represented by some 200 published texts, mathematics had developed to cover a variety of topics, but at its core was a collection of techniques for manipulating lengths, areas, and volumes using multipli-

cation, division, and extraction of square roots via abstract numbers.

Some texts only give the statement of a problem or the statement and the answer. Such texts tell us about the range and scope of Mesopotamian mathematics but not about how solutions were found. Fortunately, some texts do describe procedures. Procedure texts tend to follow a fairly standard format. The problem is set up and the initial data introduced as “I (the teacher) have done such and such.” Then, “You (the student) perform thus . . . ,” and the student is given a set of step-by-step instructions to follow using the specific data from the problem.

Although procedures used the given data from the problem, in many cases it is clear that the algorithms are quite general. In other cases, the data have been tailored to fit the problem. There are a number of texts with collections of problems on related topics. For example, tablet 4652 in the Yale Babylonian Collection (YBC) originally had 22 problems to do with manipulating a stone weight (not all the problems survive), and tablet YBC 7164 has 18 problems on digging a small canal (irrigation was an important part of agriculture). In these cases, the text starts with easy problems and works, often quite quickly, to harder ones.

A large number of problems concern quadratic mathematics, involving lengths, widths, diagonals, and areas. For a long time it was thought that these were essentially algebraic in character. Recently, Høyrup has shown that they can be interpreted in a very geometric fashion. Lengths can be added to areas by the convention of a thick line of unit thickness; pieces of rectangles are torn out and moved around. Squares are literally completed, and finding a square root means determining the side of a square area. Høyrup’s argument is detailed, technical, and complicated but very convincing. Problems involving the diagonal of a rectangle were solved using application of the Pythagorean rule, as the example in the sidebar shows.

—Duncan Melville

Bibliography

Friberg, Jöran. *A Remarkable Collection of Babylonian Mathematical Texts*. New York: Springer, 2007.

Høyrup, J. *Lengths, Widths, Surfaces: A Portrait of Old Babylonian Algebra and Its Kin*. New York: Springer, 2002.

Neugebauer, O., and A. Sachs, eds. *Mathematical Cuneiform Texts*. New Haven, CT: American Oriental Society and the American Schools of Oriental Research, 1945.

Mesopotamian Metrology

Metrology refers to the systems of weights and measures used in a society. The systems vary from place to place and change over time. Understanding metrology requires determining the relationships between the different units in a system and, if possible, comparing ancient units to modern ones. A *sila* in one city at one time may be a different size from a *sila* in another city hundreds of years later, even though the same term is used, and it can be very difficult or impossible to tell whether some units have varied.

The earliest writing in Mesopotamia, dated to around 3200 BCE, is in the form of administrative documents concerning the movements of quantities of goods controlled by large institutions, particularly temples. From these sources it has been possible to uncover the relationships between many of the measurement units. The basic notation for the archaic metrological systems gave each unit a specific symbol. Multiples of the unit were denoted by multiple copies of the symbol until the next unit was reached. For example, in the grain capacity system, a wedge represented the basic unit. Five wedges were represented by a wedge in a different direction. Six of the larger units made a circular impression. Ten circles made a large circle. Three large circles made a large wedge. Ten large wedges made a combination of large wedge and small circle. The systems were specific to the quantities being measured. About 60 metrological signs are known, grouped into about a dozen series. The signs were made by impressing a stylus made from reed onto a clay tablet. There are a limited number of simple impressions to make. Pushing the end straight in gives a circular impression, and pressing at an angle gives a wedge-shaped sign. Similar signs were used in different contexts with different relationships between them.

In the capacity system 6 wedges made a circle, in the discrete system there were 10 wedges to a circle, and in area notation it was 18 to 1.

Over the next thousand years, these complicated notational systems were gradually simplified, and the discrete system, which had units in alternating ratios of six and ten, became used for more and more goods and was the forerunner of the abstract sexagesimal number system developed in the Ur III period (ca. 2100–2000 BCE). In later periods, such as the Old Babylonian period (ca. 2000–1600 BCE), we have abundant evidence for metrological units, not least because trainee scribes practiced writing out long tables of them.

The basic Old Babylonian metrological series measured lengths, areas, weights, and capacity. Relationships between the units are conveniently represented in factor diagrams whereby $nindan \leftarrow 12 \leftarrow kush$ means that there were 12 kush in a nindan.

Length: $danna \leftarrow 30 \leftarrow ush \leftarrow 60 \leftarrow nindan \leftarrow 12 \leftarrow kush \leftarrow 30 \leftarrow shu-si$.

The nindan was about 20 feet (6 meters), giving a kush (cubit) of 20 inches (50 centimeters) and a shu-si (finger) of about 7 inches (17 millimeters) and making the *ush* around 1,181 feet (360 meters) and the danna (stage) about 6.7 miles (10.8 kilometers).

Area: $bur \leftarrow 18 \leftarrow iku \leftarrow 100 \leftarrow sar \leftarrow 60 \leftarrow gin \leftarrow 180 \leftarrow she$

The basic area unit is the sar of 1 nindan², about 387.5 square feet (36 square meters). The iku is about 0.9 acre (0.36 hectare). A bur is an area of length 1 beru and width 1 nindan.

Volume units used the same name as the area units and were equivalent to the area times 1 kush height, so a volume-sar was a volume equivalent to an area-sar times a kush.

Weight: $gu \leftarrow 60 \leftarrow mana \leftarrow 60 \leftarrow gin \leftarrow 180 \leftarrow she$
The basic weight unit is the mana of around 500 grams.

Capacity: $gur \leftarrow 5 \leftarrow bariga \leftarrow 6 \leftarrow ban \leftarrow 10 \leftarrow sila \leftarrow 60 \leftarrow gin$

Capacity was used for measuring grain, beer, and other liquids. The basic capacity unit is the sila of about a liter.

—Duncan Melville

Bibliography

Nissen, H. J., P. Damerow, and R. Englund. *Archaic Bookkeeping: Early Writing and Techniques of the Economic Administration in the Ancient Near East*. Chicago: University of Chicago Press, 1993.

Mathematics in Pharaonic Egypt

Almost all we know about Egyptian mathematics originates from chance discoveries of a relatively small number of documents known as mathematical papyri. These and other sources indicate that mathematics constituted an important part of a scribe's daily work and therefore his education. Only around half a dozen sources are extant, most of which date to the Middle Kingdom (2055–1650 BCE).

However, the beginnings of Egyptian mathematics can be traced back as far as around 3000 BCE to the invention of writing and the number system. Already the earliest written sources indicate that the invention of the number system (and writing) was motivated by the administrative needs of an elite. The mace head of King Narmer (ca. 3000 BCE) provides evidence that the Egyptian number system was fully developed before the First Dynasty (ca. 3000–2890 BCE). It was a decimal system without positional notation with individual signs for each power of ten: a stroke  for 1; a curved sign , possibly representing a hobble for cattle, for 10; a coil of rope  for 100; a lotus plant  for 1,000; a finger  for 10,000; a tadpole  for 100,000; and the seated god Heh  for 1 million. In order to write a specific number, each sign was written as often as necessary (i.e.,  would be 320). On the mace head of King Narmer, a tribute to the king is depicted listing 400,000 bulls, 1.422 million goats, and 120,000 prisoners.

While we have no direct sources from the Old Kingdom (2686–2160 BCE), it has left us many indirect sources indicating the use of mathematics within Egyptian culture. Administrative papyri with ration lists for grain products, meat,

and other items indicate the importance of mathematics in running the Egyptian state. The construction of pyramids, most notably that of King Cheops (2589–2566 BCE) at Giza, must have involved a significant amount of mathematical techniques for the building itself as well as for the necessary logistics (supplies and workforce). However, no concrete information about mathematical techniques of that period has survived. Evidence from administrative papyri and reliefs from tombs representing scenes of daily life indicate the existence of various metrological systems for measuring fabrics, liquids, grain, and other products. Again, the evidence suggests that the creation of these systems was prompted by the administrative needs of the king and the temples.

The first detailed information about mathematical practices can be gained from the mathematical texts that are extant from the Middle Kingdom on. They are written in hieratic, a cursive form of hieroglyphs. The two most important sources are the Rhind and Moscow mathematical papyri.

The Rhind mathematical papyrus was written during the Second Intermediate period (1650–1550 BCE), but its introduction indicates explicitly that it was based on an earlier (Middle Kingdom?) document. It consists, like all Egyptian mathematical texts, of a collection of table texts and problems with their respective solutions. The table texts are lists of mathematical data used in fraction reckoning and metrological conversions.

Fraction reckoning constituted an intrinsically difficult part of Egyptian arithmetic. The concept of fractions evolved from a few simple fractions (i.e., $\frac{2}{3}$, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$), which were written with special signs. On this basis, fractions were conceived as inverses, indicated by what we think of as a denominator along with the hieroglyphic sign for “part” that was placed above it. However, for the simple fractions, their original notation remained in use. What we express as a general fraction was written as the sum of Egyptian fractions (e.g., $\frac{3}{4}$ would be written as $\frac{1}{2} \frac{1}{4}$). The most important table to aid fraction reckoning, the so-called 2:N table, which is found at the beginning of the Rhind mathematical papyrus, indicates the result of the

divisions $2:N$ in the form of Egyptian fractions for $N = 1-101$.

The problem texts first of all teach basic mathematical techniques (e.g., pRhind, nos. 24-29: how to determine an unknown quantity from a given manipulation of that quantity and its result, what we achieve with algebraic equations). The texts also provide the mathematical solutions to practical problems from administration and architecture, for example, the distribution of rations (pRhind, nos. 39-40, 63-65), volumes of granaries (pRhind, nos. 41-46), work rates (pRhind, no. 67), the slopes of pyramids (pRhind, nos. 56-59), and others. The problems are always phrased rhetorically with specific numerical values, and their solutions are indicated in the form of procedures consisting of sequences of arithmetic operations. Arithmetic operations for which specific technical terms were known include addition, subtraction, multiplication, division, doubling, halving, squaring, and the extraction of a square root. Of all these, only multiplications and divisions were carried out in written form using a layout of two columns and splitting up the multiplication and division into steps that could easily be carried out mentally (most frequently doubling but also decupling and others). From the arrangement of problems in the Rhind mathematical papyrus, it can be concluded that its focus was on mathematical practices needed by scribes in their daily working lives. This indicates the educational context of the extant Egyptian mathematical texts: they were schoolbooks and not research papers. Consequently, they give practically no indication about how specific procedures were found or developed.

The Moscow mathematical papyrus is a collection of 25 problems, the first 3 of which are badly fragmented. It contains most notably the calculation of the volume of a truncated pyramid (pMoscow, no. 14) as well as a problem that has been interpreted as the calculation of the surface of a hemisphere, that of a cylinder or that of a segment of a circle (pMoscow, no. 10).

The evidence from these two major papyri is supplemented by several further sources, most of which are only fragments: the Lahun mathematical fragments (UC 32107A, 32114, 32118, 32134, 32159, and 32162), which comprise another copy

of the $2:N$ table as well as several problems and calculations; the mathematical fragment Berlin 6619 (parts of 4 problems); the Cairo Wooden Boards (calculations concerning a grain measure); and the mathematical Leather Roll BM EA10250 (a table for fraction reckoning).

From the New Kingdom (1550-1069 BCE) only two very fragmentary, and therefore insignificant, mathematical texts are extant: Ostrakon Turin and Ostrakon Senmut. However, a large number of administrative texts and some literary texts (most notably Papyrus Anastasi I, a fictional letter from a learned competition between two scribes) from that period indicate that mathematics continued to play an important part in the scribal work life. Evidence from these sources is again mostly unspecific, as the calculations in administrative texts are confined to data and results, and literary texts only give an idea of the uses of mathematics (e.g., to record the harvest) but not of specific mathematical techniques.

—Annette Imhausen

Bibliography

- Baines, John. "The Earliest Egyptian Writing: Development, Context, Purpose." In: *The First Writing: Script Invention as History and Process*, edited by Stephen D. Houston. Cambridge: Cambridge University Press, 2005.
- Claggett, Marshall. *Ancient Egyptian Science: A Source Book*, Vol. 3, *Ancient Egyptian Mathematics*. Philadelphia: American Philosophical Society, 1999.
- Collier, Mark, and Stephen Quirke. *The UCL Lahun Papyri: Religious, Literary, Legal, Mathematical and Medical*. BAR International Series 1209. Oxford, UK: Archaeopress, 2004.
- Imhausen, Annette. "Calculating the Daily Bread: Rations in Theory and Practice." *Historia Mathematica* 30 (2003): 3-16.
- Imhausen, Annette. "Egyptian Mathematics." In *The Mathematics of Egypt, Mesopotamia, China, India and Islam: A Sourcebook*, edited by Victor J. Katz. Princeton, NJ: Princeton University Press, 2007.
- Ritter, Jim. "Measure for Measure: Mathematics in Egypt and Mesopotamia." In *A History of Scientific Thought: Elements of a History of Science*, edited by Michel Serres. Oxford, UK: Blackwell, 1995.
- Rossi, Corinna. *Architecture and Mathematics in Ancient Egypt*. Cambridge: Cambridge University Press, 2004.

■ Introduction: The Natural World, the Human Body, and Medicine

Most scholars identify the origins of biological sciences in the Greek world after 1000 BCE. Yet the people of earlier periods were keenly interested in the natural world and engaged in rigorous study of that world, although their aims and practices varied considerably from the secular science devised by the Greeks. The biological sciences, in ancient Mesopotamia, Egypt, and China, were rooted in careful observations of the natural world and understanding these observations within established cosmological systems. These were sciences of observation, not of experimentation. Fundamental to these sciences was the naming and listing of phenomena. Mesopotamian natural scientists were very concerned with taxonomy and categorization, and the roots of pre-Darwinian taxonomic practices can be found in this time. There are no attested examples of formulations of natural or physical laws, such as those devised by the Greeks. The concerns seem to have been more with identifying each type of bird, animal, fish, stone, plant, tree, or other class of creature and categorizing it appropriately.

Ancient understandings of the human body were not very sophisticated, with a few exceptions. Anatomy was fairly well understood. The Egyptians who practiced mummification knew the structure of the body well, basically dissecting cadavers in order to preserve them. The liver was well studied in ancient Mesopotamia given its use in hepatoscopy, divination through variations in the form of the liver. Medical practitioners from both regions used herbs and drugs to heal the sick, surgery to heal the wounded, and magical incantations in most situations. The Code of Hammurabi details quite severe penalties for doctors who are not successful in healing their patients or who could be considered guilty of malpractice. Chinese tradition holds that internal medicine was developed there concurrently, although there is little positive evidence to support these claims.

—Kevin M. McGeough

The Natural World

The people of Mesopotamia had a good practical knowledge of the properties of clay, sand, metal ores, bitumen, stone, and other natural materials, using them to manufacture pottery, faience, glass, soap, metals, lime plaster, waterproofing, and other useful things. Metallurgy involved scientific skills such as smelting and cupellation; textile manufacture, the chemical treatment of hides and the manipulation of various dyes and mordants; the creation of glass required particular skills and knowledge; and extraction and distillation may also have been practiced. Surviving literature, however, suggests that the Mesopotamians had little intellectual interest in the pure investigation of the physical and chemical properties of materials, which had no place in the school curriculum, and the emphasis in learning was on copying and repetition rather than investigation and inquiry. Technological knowledge seems largely to have been transmitted orally and by example, from practitioner to pupil (and often from father to son). Only doctors, astronomers, exorcists, and other ritual specialists have left volumes of observational data concerning their disciplines. The rare exceptions to this were recipes, for alloying metals, for making glass in various colors, for mixing dyes, and for making perfumes—generally with a colophon urging the initiated reader to keep the information from unauthorized eyes.

The Mesopotamians were, however, deeply interested in the way the world was ordered by the gods. Many different versions of the creation story were current: literary accounts generally included a section on the creation of humanity and the organization of the world. Among the earliest texts, when writing was still in its infancy, are classificatory word lists, which are a form of taxonomy and were to become a regular part of education in school. These divided the world into categories such as domestic and wild animals, birds, fish, trees, plants, and minerals. Within each category the entries were listed in an or-

► MESOPOTAMIAN CARTOGRAPHY

Among the Mesopotamian clay tablets from the later third millennium onward are a number of maps and plans giving designed layouts for houses or temples, with written measurements. A seated statue shows King Gudea with a temple plan and architect's rule on his knees. Others are land survey plans, setting out measured arrangements of fields, with information on the quality of the soil and their current use. One tablet of particular interest shows a scale plan of the city of Nippur, dated around 1500 BCE. It is carefully labeled, with measurements, and shows the city's walls and gates, the river Euphrates and canals, and a number of temples including the Ekur, temple of Nippur's patron god Enlil.

One large area is labeled "garden in the city." Another map gives details of royal and temple properties around Nippur, and there are area maps on which the Euphrates, canals, roads, and a city are marked, including one of the Akkadian period showing mountains and cultivated land near Nuzi and labeled with compass directions.

The most ambitious map ("the Babylonian Map of the World") schematically represents the world as known to the Babylonians around 700 BCE, surviving in a later copy. Two concentric circles surround the mapped area, representing the ocean, and two parallel vertical lines represent the Euphrates, running down to the marshes in the south, which are identified with a label. Another label placed across the river marks the location of Babylon. At the top a semicircle indicates the mountains and around the right side Urartu, Assyria, and Der are named, with Susa at the bottom. Outside the ocean captions identify strange lands inhabited by fabulous creatures.



The "Babylonian Map of the World," showing Babylon, Mesopotamia, the surrounding ocean, and the lands beyond, described in the text at the top of the tablet. (HIP/ Art Resource, NY)

This is the earliest known attempt to map the world.

—Jane R. McIntosh

dered or hierarchical fashion: for example, the body parts started with the head and worked down. Technical terms and chemical substances were also listed. Another popular literary form was the disputation, in which two opposing parties discuss their contribution to a particular activity or field of operation, boasting of their own achievements and denigrating their rival. For instance, Hoe and Plough dispute their relative importance in agriculture; other disputations take

place between Sheep and Grain, Bird and Fish, Ploughman and Shepherd, and Ox and Horse.

Biology was generally written about only insofar as it had a bearing on the accepted forms of scholarship. Animal physiology was studied in minute detail for divination, with attention focused on particular organs, notably the liver. Animal behavior was also relevant to divination. One practical text deals with training horses. Again, it is probable that there was a great body

of knowledge transmitted orally: those who worked with animals, such as shepherds, would have had practical expertise in treating the ailments of their charges, gaining knowledge that was only occasionally recorded in veterinary medical texts.

—Jane R. McIntosh

Bibliography

- Dalley, Stephanie. *Myths from Mesopotamia*. Rev. ed. Oxford: Oxford University Press, 2000.
- Glassner, Jean-Jacques. "Progress, Science, and the Use of Knowledge in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Nemet-Nejat, Karen Rhea. *Daily Life in Ancient Mesopotamia*. Peabody, MA: Hendrickson Publishers, 2002.
- Pearce, Laurie E. "The Scribes and Scholars of Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Snell, Daniel, ed. *A Companion to the Ancient Near East*. Oxford, UK: Blackwell, 2005.

Language and Lists

By the Old Babylonian period, although Sumerian had become a dead language, it was still an important part of the curriculum. Schoolchildren therefore had to copy and learn long lists of Sumerian words and their Akkadian equivalents; these were also important reference tools for working scribes. The first sign lists showing how to write and read individual signs come from the Early Dynastic period and contained only Sumerian logograms and their pronunciation. Later versions also gave a translation of the Sumerian word: these are known in Eblaite, Akkadian, Hittite, Kassite, Hurrian, Ugaritic, and even Egyptian, and often also showed how to pronounce the Sumerian signs. One major list, which became the main "textbook" in the later second millennium, started in the early Old Babylonian (OB) period as less than 1,000 lines of text but was added to over the years, eventually running to forty-four tablets and having around 14,400 entries. A concise version of this (*Ea A = naqu*) was also used: it had most of the same Sumerian single-cuneiform signs but gave only the main

translation into Akkadian, whereas the complete version (*A a = naqu*—"A pronounced 'a' means complain") listed all known translations. Different forms of lexical lists existed, some dealing with etymology, some with themes, some with phonology, some giving synonyms; one gave standard Sumerian equivalents for *emesal* words and their Akkadian translation. *Emesal* (Akkadian *luru*), was a dialect used in some liturgical works, such as lamentations, and in love poetry: it was apparently spoken by women.

Thematic lists began in the late Uruk period and included the earliest version of what became known as the Standard Professions List. These lists were repeatedly copied, revised, and augmented over the following millennia. Those regularly used included the names of animals, trees, plants, gods, stars, wooden objects, pottery, food and drink, human kinship terms, and many others. The OB canonical version of these lists, *HAR-ra = hubullu*, covered twenty-four tablets and had around 10,000 entries. Originally these were only in Sumerian, but later they were also listed with Akkadian translations; finally, when many of the Akkadian words themselves had become unfamiliar, another column provided an up-to-date explanation of their meaning.

—Jane R. McIntosh

Bibliography

- Civil, Miguel. "Ancient Mesopotamian Lexicography." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Pearce, Laurie E. 2000. "The Scribes and Scholars of Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Taylor, Jon. "Babylonian lists of words and signs." In *The Babylonian World*, edited by Gwendolyn Leick. New York: Routledge, 2007.

Mesopotamian Medicine

Human biology has not changed significantly in the last 6,000 years, and the peoples of ancient Mesopotamia must have faced many of the same health problems that humans still deal with to this day. We know very little about healing practices in Mesopotamia before about 2600 BCE. Scientific analysis of human remains from the

archaeological record can give some general indication of diet and overall health in the late prehistoric period. Sometimes there is evidence of traumatic cause of death, and skeletal remains and dental wear patterns provide indications of sex, age, and diet. Wear patterns on other bones can indicate stress injuries from repetitive daily activities. There are limits on what we can know about the diseases circulating in ancient Mesopotamia, but paleopathology, the study of ancient diseases, continues to make scientific advances. Material culture from the archaeological record is also illuminating, since certain implements, architectural spaces, and materials in this early period were certainly used for healing. For instance, in third-millennium Ebla in Syria there are indications of a healer using a physician's kit with an array of medical implements, such as blades, tweezers, and needles, among other devices. It is the record of documents inscribed in cuneiform that is Mesopotamia's primary contribution to the study of ancient medicine. These texts describe different types of healers and their methods for reaching a diagnosis based on a patient's symptoms, offering a prognosis for recovery, and using magical and herbal remedies to affect a cure. Herbal treatments of symptoms are common, and many of these were likely effective at alleviating symptoms.

By the mid-third millennium the title "physician, healer" appears. In this same period there are a few magical incantations against illness. Modern scholars often struggle to comprehend the medical texts from this earliest period of writing. Toward the end of the third millennium we find the first real medical prescription, but this is probably merely an accident of archaeological discovery. Mesopotamian medical prescriptions present their own problems, since many of the dozens of plants and minerals named in these texts are now very difficult to match with modern species and geologic classifications.

In some instances letters and literary texts make reference to disease epidemics. Before the advent of epidemiology and germ theory, waterborne or airborne epidemics were devastating and must have been terrifying for these societies to deal with. Other letters contain communications about the activities of physicians and their prescribed courses of treatment.

The view from Mesopotamian texts is essentially that wellness and illness are the products of either divine favor or disfavor, though there also seems to be recognition of some natural causes of illness. The main Babylonian gods of pestilence were Nergal and Erra, and these were identified with the Syrian god Rashap. An angered personal or ancestral god, malicious sorcery, and demonic spirits were all possible supernatural causes of disease.

A number of innovations occurred in the cuneiform documents from the early second millennium BCE. In addition to the developments in mathematics, omen science, and astronomical observation, in the Old Babylonian period (ca. 1900–1600 BCE) medical documents started to include detailed descriptions of symptoms and diagnoses. Medical prescriptions continued to be written in this period as well. A small but important group of bilingual word lists record the names of various diseases in both Sumerian and Akkadian, though these texts may date to a few centuries later.

During the latter half of the second millennium BCE medical handbooks continued to be written and used. An attempt was made in the Kassite period in Babylonia and the Middle Assyrian period in Assyria to organize these large bodies of medical knowledge. For example, the major handbook used for diagnosis and prognosis was edited, and the various symptoms were organized. Following a tradition known earlier in Babylonia, the entries were arranged so that the symptoms proceeded from head to toe.

Two main medical professionals are evident in the second millennium. One figure, known as the pharmacist or herbalist healer, was responsible for producing poultices, tinctures, potions, suppositories, and dressings and may have recited some incantations. The other medical professional, the physician/incantation-priest, seems to have used various handbooks to establish the correct diagnosis and prognosis, and he was also responsible for reciting incantations and performing healing rituals. The practice of surgery was probably limited to very minor procedures and desperate attempts to control traumatic injuries. In any case, the therapeutic texts do not discuss surgical procedures. These specialists and their vast medical knowledge persist in the

➤ COPING WITH ILLNESS IN MESOPOTAMIA—DIAGNOSIS, PROGNOSIS, INCANTATION, PRESCRIPTION

Just as in the present day, in ancient Mesopotamia various physical symptoms were sometimes thought to point to the cause of illness. This cause was usually perceived to be divine or supernatural in origin, as in the following Old Babylonian (ca. 1700 BCE) text.

“If the patient’s hands and feet hurt, nothing stops him from constantly crying out, and his body is not at all warm: it is an attack of witchcraft.”

However, in the same text, there are instances where the diagnosis is unclear, but the prognosis can be determined by specific symptoms alone.

“If the patient’s eyes are bloodshot, he continues to have heart palpitations, and he thrusts out his hand: that patient will not recover. If the patient has a frightened expression, but his face still looks better than when he is healthy: that patient is not healthy.”

The following is an Old Babylonian incantation against a dog bite. The incantation appropriately invokes the goddess Gula, who was associated with both dogs and healing. The ritual illustrates the use of clay to create a model of the attacking animal, by means of which the patient could undo the effects of the dog’s bite.

“Incantation: the goddess Gula lives in the temple Egalmah, and her throne is established there. Her puppies crouch together. A dog leapt up and has bitten a man. The incantation is thus.

Its ritual: you take some clay, and you rub it on the wound. Then you make a model dog with the clay, and you place it on the north wall in the sun. You should then recite the incantation, given above, over it three times, until the clay dog exudes moisture and the man’s bite wound dries up as well.”

In some instances, Mesopotamian physicians would address the specific symptoms with a prescription. The following prescription against incontinence is from the Kassite period (ca. 1300 BCE).

“If a man is sick with incontinence: on an empty stomach he should keep drinking the following concoction with water, all day, for five days: one measure of ashes from a male sheep’s hoof and one measure of ashes from a male *pillu*-plant. He will then recover.”

—Matthew T. Rutz

[Translations by Matthew T. Rutz.]

Mesopotamian record well into the Persian and Seleucid periods in the first millennium BCE. Other specialists were involved with medicine as well. For example, a sick person could consult a diviner, who would use hepatoscopy to determine whether a god would continue to be angry and thus prolong the illness.

A number of symptoms have been identified in Mesopotamian texts. These include many that are familiar to us today: headache, fever, toothache, skin disorders, a crying infant, disorders of the eyes, neurological disorders such as epilepsy, sexual dysfunction, and mental illness. Despite some recent attempts to the contrary, matching clusters of symptoms with modern scientific medical diagnoses is imperfect at best. The sci-

ence and craft of making medical diagnoses is difficult enough in a living, breathing doctor-patient relationship. At such a remove in space and time, the evidence from ancient Mesopotamia, though informative and exciting, should be approached with an appreciation for what we can and cannot know.

—Matthew T. Rutz

Bibliography

- Abusch, Tzvi. “Illnesses and Other Crises: Mesopotamia.” In *Religions of the Ancient World: A Guide*, edited by Sarah Iles Johnston. Cambridge, MA: Belknap Press of Harvard University Press, 2004.
- Avalos, Hector. *Illness and Health Care in the Ancient Near East: The Role of the Temple in*

- Greece, Mesopotamia, and Israel*. Atlanta: Scholars Press, 1995.
- Biggs, Robert D. "Medicine, Surgery, and Public Health in Ancient Mesopotamia." In *Civilizations of the Ancient Near East*, vol. 3, edited by Jack M. Sasson. Peabody, MA: Hendrickson Publishers, 2000.
- Finkel, Irving L., and Markham J. Geller, eds. *Disease in Babylonia*. Leiden: Brill, 2006.
- Horstmanshoff, H. F. J., and M. Stol, eds. *Magic and Rationality in Ancient Near Eastern and Graeco-Roman Medicine*. Leiden: Brill, 2004.
- Scurlock, JoAnn, and Burton R. Anderson. *Diagnoses in Assyrian and Babylonian Medicine: Ancient Sources, Translations, and Modern Medical Analyses*. Chicago: University of Illinois Press, 2005.

Egyptian Medicine

Information on Egyptian medicine comes from a number of sources. Many textual sources, especially the medical texts, have been preserved. Artistic representations also contribute to our understanding of Egyptian medicine. In addition to this, several kinds of nontextual sources are available, including paleopathology, paleobotany, environmental analysis, and dietary analysis.

The diet of wealthy Egyptians would have included a wide variety of foods, including fruits, vegetables, grains, meats, fish, and legumes. Ordinary Egyptians, on the other hand, subsisted primarily on beer, bread, fish, and vegetables. Based on our knowledge of dietary habits, it is possible to generalize about Egyptian health. More direct evidence is also available on this; evidence of both malnutrition and obesity are found in mummies.

Paleopathologic and artistic sources provide evidence of some of the diseases suffered by the ancient Egyptians. Several different kinds of congenital disorders are found: acondroplasia, scoliosis, spina bifida, Spengel's deformity, osteogenesis imperfecta, clubfoot, cleft palate, and hydrocephalus. In addition to these, several kinds of acquired diseases are known to have occurred: tuberculosis (especially of the spine), leprosy, poliomyelitis, cysts and tumors (benign and malignant), gout, ankylosing spondylitis (fusing of the spine), and three kinds of arthritis (septic, osteo, and rheumatoid). Osteophilosis (boney outgrowths on the spine) is frequently encoun-

tered on mummies of persons who died after age 50. Parasitic conditions also existed, including Bilharzia, guinea worm, hookworms, roundworms, tapeworms, and malaria.

Mummies often show evidence of various kinds of physical trauma. Head wounds, some fresh and some partially healed, have been found. Several different kinds of bone fractures also occur, many healed or with splints in situ showing evidence of treatment by a healer. Forearm fractures are particularly common, many of which Joyce Flier suggests resulted while warding off attacks. There is also evidence of successful amputations. Male circumcision was practiced. Dental conditions are also found: attrition (caused by sand in the food), periodontal disease, abscesses, cavities, and hypoplasia.

Collections of so-called medical papyri provide the richest source of information on Egyptian medicine. The earliest of what is traditionally considered the medical corpus, the Kahun Papyrus (1800 BCE), deals exclusively with gynecological conditions. Ramesseum Papyri III, IV, and V (1750 BCE) deal with general ailments including some that are similar to those found in the Kahun. Papyrus Edwin Smith (1550 BCE) contains remedies for trauma and structural breaks as well as for the plagues attributed to the goddess Sekhmet, aging, freshening the house, and one gynecological prescription. The Ebers Papyrus (1500 BCE) deals exclusively with internal diseases of every part of the body and includes over 900 individual remedies. The Hearst Papyrus (1450 BCE) and the Berlin Medical Papyrus (1200 BCE) are almost identical in content to Ebers. Carlsberg VIII (1300 BCE) deals with pregnancy, fertility tests, and eye conditions. The London Medical Papyrus (1300 BCE) contains treatments for bleeding, especially the kind associated with miscarriages. Papyrus Chester Beatty VI (1300 BCE) deals exclusively with conditions of the anus and rectum.

The attribution of modern disease terminology to conditions described in ancient texts is, unfortunately, unreliable and highly problematic. This is due not only to gaps in our lexicographic knowledge but also to Egyptians' own theories of disease, which often differ substantially from our own. From the Ebers Papyrus and those like it, we learn about the *metu*, or vessels,

➤ MAGIC IN EGYPTIAN MEDICINE

Early scholarship regarding Egyptian medicine was guided by a Western bias, which undervalued the intellectual and practical significance of magic to the ancient audience as a component in the treatment of injury and disease. Those aspects that could be made to conform to modern medical science were emphasized. Elements identified (often arbitrarily) as magical were dismissed as superstition. The result was a skewed and incomplete picture of Egyptian medicine. The idea that magic is somehow opposed to true medicine is decidedly contrary to the ancient Egyptian worldview. The combination of what we might consider magical and physical remedies allowed the Egyptian physician to apply the same divine power used by the gods themselves to the practical treatment of earthly ailments.

Healing spells and rituals are first attested in the Old Kingdom and continued to be used throughout Egyptian history. Spoken incantations could be used as remedies either alone or together with amulets or with ingredients to be taken internally. Even when no incantation is present, substances with both physical and magical properties are often found in medical prescriptions. The Ebers papyrus includes general spells to be used to increase the efficacy of any treatment, including those that do not incorporate magical elements.

The ubiquitous application of magic in Egyptian medicine contradicts the traditional categorization of Egyptian healers as either rational surgeons or recipe-hawking physicians. Any Egyptian doctor of mention would have maintained a host of magical remedies in his repertoire of treatments. The priests of certain deities, especially those of Sekhmet and Selqet, were considered to be especially adept at healing. Off-duty lector priests generally served the magical needs of the largely illiterate community, including in matters of health. Egyptian physicians often bore priestly titles in addition to medical ones.

Nonliterate Egyptians could also use magic to aid the healing process. Amulets, especially the udjat eye, were used to protect the wearer from disease. These could occasionally include short spells inscribed upon their surfaces whose ben-



Stele with relief sculpture of Horus as a youth, standing on two crocodiles. He holds serpents and animals, including a lion, showing his power over them. These stelae were intended to prevent attacks by harmful creatures and cure victims of snake bites and scorpion stings. (Werner Forman/Art Resource, NY)

efits would be conferred to the wearer. Household, local, and national deities could be called upon in the form of prayers and votive offerings. From the New Kingdom and later, small stelae known as Horus *cippi* (singular *cippus*) were created that depicted the child Horus triumphant over various dangerous marsh creatures. Water poured over the stele would become charged with the magical power of the spells inscribed upon it, to be consumed by the afflicted individual. This practice enabled one to benefit from the spell without having to actually read it. Originally used for scorpion stings and snake bites, Horus *cippi* were later employed to cure many other ailments.

—Rachel Suvorov

that constitute an all-purpose circulatory system through which blood, air, food, and waste travel. This system could become blocked by *wekbedu*, waste or decay, that could cause disease, aging, and other ailments unless purged from the body. A canal, roughly analogous to the digestive tract, could also become blocked and require purging. Women were thought to possess another pathway that stretched from the mouth to the vagina. Testing whether this canal was closed or open could ascertain conditions pertaining to pregnancy and fertility. The organs were also thought to be capable of moving out of place in the body, such as with the uterus.

Diseases were also thought to result from forces outside of the body, such as plagues that fell under the purview of the lion goddess Sekhmet. Demons and vengeful spirits were feared as agents of disease, a danger to which pregnant women were especially vulnerable due to their risk of miscarriage. Finally, scorpions, snakes, and other noxious creatures indigenous to the Nile Valley posed a constant risk to the health of all Egyptians.

Egyptian medicine employed a wide range of treatments. Structural breaks and trauma, such as those found in the Edwin Smith papyrus, were treated with bandages, splints, sutures, and salves. For internal conditions, a wide range of plants, animals, and minerals were utilized for both their physical and magical properties. Incantations and magical procedures were often used, many times in conjunction with internal remedies. Incantations could also be employed in order to increase the efficacy of any treatment: structural, internal, or otherwise.

The Egyptian physician probably received the same scribal training as other members of the elite literate class. In the Old Kingdom most physicians were priests, but by the New Kingdom fulltime physicians emerged, forming part of a bureaucracy in which some even specialized in various parts of the body. Members of the literate elite were responsible for copying and compiling the medical texts in the House of Life (the temple scriptorium that houses all kinds of texts) as well as making notations as to the effectiveness of various prescriptions.

Egyptian physicians, or *sewnu*, were held in high regard throughout Egypt's long history.

Several instances of foreign rulers requesting the services of Egyptian physicians are attested in the New Kingdom, such as Dushratta king of the Mitanni and Hattusili III king of the Hittites. Greek and Roman writers also referred to Egyptian physicians as skillful and knowledgeable.

—Rachel Suvorov

Bibliography

- Flier, Joyce. *Egyptology Bookshelf: Disease*. Austin: University of Texas Press, 1995.
- Ghalioungui, Paul. *The House of Life, Per Ankh: Magic and Medical Science in Ancient Egypt*. Amsterdam: B. M. Israel, 1973.
- Ghalioungui, Paul. *The Physicians of Pharaonic Egypt*. Mainz am Rhein: Verlag Philipp von Zabern, 1983.
- Nunn, John F. *Ancient Egyptian Medicine*. Norman: University of Oklahoma Press, 1996.
- Ritner, Robert K. "Innovations and Adaptations in Ancient Egyptian Medicine." *Journal of Near Eastern Studies* 59 (2000): 107–117.
- Ritner, Robert K. "The Cardiovascular System in Egyptian Thought." *Journal of Near Eastern Studies* 65(2) (2006): 99–109.
- Ritner, Robert K. *The Mechanics of Ancient Egyptian Magical Practice*. Studies in Ancient Oriental Civilization 54. Chicago: Oriental Institute, 1993.

Conceptions of the Female Body in Ancient Egypt

The most comprehensive collection of gynecological texts known from the ancient world derive from Egypt. The earliest, the Kahun papyrus (1800 BCE), is entirely gynecological. The Ramesseum papyri III and IV (1700 BCE) contain gynecological prescriptions and contraceptives. The Edwin Smith papyrus (1550 BCE) contains a lengthy prescription for menstrual problems. A large section of the Ebers papyrus (1500 BCE) deals with a variety of gynecological and obstetric problems. Papyrus Carlsberg VIII (1300 BCE) contains birth prognoses. The London Medical papyrus (1300 BCE) contains remedies for miscarriages. The Berlin Medical papyrus (1200 BCE) contains contraceptives and birth prognoses.

A passage, which could open and close, was believed to connect the mouth to the uterus. An opening of the womb was necessary for sex, menstruation, miscarriage, and childbirth; a

WOMEN'S REPRODUCTIVE HEALTH IN ANCIENT EGYPT

While Egypt has by far the most evidence for women's health in the ancient world, most of the evidence reflects concerns about pregnancy and childbirth. There is little evidence for medical care specific to women that is unrelated to reproductive health, and almost no mention of menopause survives. Due to a low life expectancy, menopause may have been a rare occurrence. Great efforts were made to protect the pregnant woman from miscarriage, which was believed to result from stress, injury, demons, or other malevolent forces. Various herbs, spells, and amulets were commonly employed to ward off such threats and seal the womb from danger. Contraceptives were also known and are particularly well represented in Egypt. Certain plants, when taken orally, may have had antifertility effects. Vaginal suppositories could act like a sponge or physically block the opening of the uterus.

—Rachel Suvorov

closed womb protected the fetus during pregnancy but could also cause infertility. Much of the gynecological texts aim to regulate these processes. Birth prognoses attempted to determine whether the passage was open or closed in order to ascertain fertility or pregnancy. One such fertility test was to place an onion in a woman's vagina; if the smell was on her breath in the morning, she was considered fertile. Pregnancy could also be determined by other methods such as urinating on grains, a method whose effectiveness has been demonstrated through modern research.

During pregnancy, menses flowed inside the body and filled up the womb. A premature opening of the womb would cause a miscarriage, and the resulting hemorrhaging was interpreted as menstrual blood. Vaginal injections, spells, and amulets were used to seal the womb against malevolent forces that could cause a miscarriage. Menstrual problems and discharges not related to pregnancy were also treated.

The opening of the womb at childbirth could be aided by spells, vaginal injections, fumigations, and amulets. The Ebers papyrus contains

several passages to loosen a child from the womb or to empty everything from the womb. Generally regarded as the hastening birth or the expulsion of the afterbirth, some are also interpreted as abortifacients.

A number of contraceptives existed that combined physical, chemical, and magical properties. The gum arabic from acacia needles may have been used as a spermicide; Crocodile dung may have been used as a sponge or a magical substance. The infertility that often accompanies periods of nursing was often used to space out pregnancies.

Uterine disease is dealt with extensively in the Kahun papyrus and, to a lesser degree, in the Ramesseum papyri. Symptoms in the extremities are ascribed to disorders of the uterus, which was thought to roam about the body. In addition, the Ebers papyrus contains several prescriptions intended to make the uterus fall to its proper place. Both the Kahun and Ebers papyri commonly employ vaginal injections and fumigations to treat disorders of the womb.

—Rachel Suvorov

Bibliography

- Ritner, R. K. "A Uterine Amulet in the Oriental Institute Collection." *Journal of Near Eastern Studies* 43 (1984).
- Robins, G. *Women in Ancient Egypt*. Cambridge: Harvard University Press, 1993.
- Suvorov, R. R. "The Kahun in Context: The 'Floating Uterus.'" *Current Research in Egyptology 2004: Proceedings of the Fifth Annual Symposium Which Took Place at the University of Durham, January 2004*, edited by Rachel J. Dann. Oakville, CT: Oxbow Books (2006).
- Febvre, Lucien Paul Victor. "Civilisation: Evolution of a Word and a Group of Ideas." In *A New Kind of History: From the Writings of Febvre*. Edited by Peter Burke. New York: Harper & Row, 1973.

The Mythical Origins of Chinese Medicine

As one of the great contributions that Chinese people have made to the world, the theories of Chinese medicine claim that the human body is an integral whole and that each part of it is intimately connected to other parts. Furthermore, the human body is closely connected to nature.

Disease is caused because of the internal imbalance of *Yin* and *Yang* (the two opposing principles in nature; the former represents the feminine and negative qualities whereas the latter represents the masculine and positive ones) and therefore can be treated by balancing the two elements in the body through the use of such traditional practices as herbal medicine, acupuncture, and moxibustion. Today many Chinese people believe that Chinese medicine can fundamentally put the body into a healthy and harmonious state whereas Western medicine only cures the superficial disease instead of the root cause of that disease.

The most prominent myth about the discovery of Chinese medicine acknowledges the contributions of the practitioner Shennong. Shennong is popularly said to have tasted hundreds of herbs in order to figure out their medicinal characteristics and functions. Then he attained complete knowledge of their flavors and properties of coldness, warmth, mildness, or toxicity, and thereafter used them to cure people's diseases. He once consumed seventy poisonous plants in one day. Sometimes Shennong is described not only as the primogenitor of Chinese traditional medicine but also as a general practitioner of medicine. He is depicted as the first to carefully study the pulse conditions, discern the different characteristics of medicines, and start the therapies of acupuncture and moxibustion. Shennong also wrote a medical book, *Shennong Bencao Jing* (*Classic of Shennong's Materia Medica*), which was attributed to Shennong but

was probably written anonymously around the third century BCE; it was one of the earliest Chinese medical books). Some sources even suggest the sites where Shennong tasted or thrashed the herbs. A text in *Shuyiji* (*A Record of Accounts of Marvels*, written by Ren Fang, 460?–508? CE, chapter 2) states that the tripod caldron that Shennong used to taste medicine could be found on the Shenfugang (literally meaning the “Sacred Cauldron Hill”) of Taiyuan. On Mount Chengyang, there is a place where Shennong purportedly thrashed herbs. The spot came to be known as “Shennong Plain,” and the mountain was sometimes called “Mount Medicinal Herb.” A Taoist temple named Ziyang was built on it. For years it was popularly said that Shennong distinguished the medicinal herbs there.

—Libui Yang, Deming An, and
Jessica Anderson Turner

Bibliography

- Birrell, Anne. *Chinese Mythology: An Introduction*. Baltimore: Johns Hopkins University Press, 1993.
- Bonnefoy, Yves, comp. *Asian Mythologies*. Translated under the direction of Wendy Doniger. Chicago and London: University of Chicago Press, 1993. Originally published as *Dictionnaire des mythologies et des religions des sociétés traditionnelles et du monde antique*. Paris: Flammarion, 1981.
- Yang, Lihui, Deming An, and Jessica Anderson Turner. *Handbook of Chinese Mythology*. Santa Barbara, CA: ABC-CLIO, 2005. Reprint, New York: Oxford University Press, 2008.
- Zhong, Zongxian. *The Cult of Yan Di Shennong* (in Chinese). Beijing: Xueyuan Chubanshe, 1994.

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World History Encyclopedia

Era 3: Classical Traditions, 1000 BCE–300 CE ■ Volume 5

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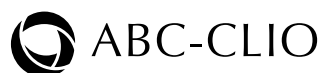
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 3 Classical Traditions, 1000 BCE–300 CE

“Herodotus of Halicarnassus: His inquiries are published here, in the hope of preserving the memory of what men have done and of preventing the great and awe-inspiring actions of the Greeks and the Barbarians from being forgotten and to demonstrate the basis of their conflicts.”

—Herodotus

Sometime before 440 BCE, the Greek historian Herodotus delivered these words or ones like them in the *agora*, or public area, of Athens as the opening to what has become known as *The Histories*. While the Egyptians, Mesopotamians, and Chinese had all recorded information about events that had happened in the past, this work by Herodotus is the first attempt at crafting history in the way that we think of it today. For this work, the title “Father of History” was bestowed upon Herodotus by Cicero, for Herodotus was interested in not just recording events of the past but in trying to understand them as well. In particular, he was interested in the nature of the conflict between the Persians (the “Barbarians”) and the Greeks. In practice, his *Histories* goes beyond that conflict and ventures into the practice of world history, recording and interpreting accounts of the many civilizations located around the Mediterranean Sea and beyond. Even in antiquity, though, his account was not considered trustworthy, and some later ancient scholars referred to him as the “Father of Lies.” Regardless of the veracity of the many details of Herodotus’s *Histories*, this work is a benchmark in historical writing, providing a model of inquiry and evaluation that is fundamental to history writing and a narrative structure that has become typical for the rendering of the past into words. Even our word for history is based on his use of the Greek word for “inquiries” as a description of his work.

Writing slightly later than Herodotus, Sima Qian (ca. 145/135–86 BCE) wrote a history of China from legendary times to his own time and established himself as the father of Chinese history. Like Herodotus, Sima Qian was not interested in merely listing what had happened in China’s past but instead was interested in learning why events had played out as they had. Thus, he abandoned the more traditional approach to writing Chinese history in terms of merely listing chronological events and dynasties. Rather, he presented a general history of Chinese life, often through biography, and organized it into themes, such as music and economics, and in many ways he can be seen as the father of the type of encyclopedia you are currently reading.

What Do We Mean by “Classical”?

The Histories of Herodotus is one of the many works that are deemed “Classics” in the Western canon. In the West, the first and, arguably, most important Classics have traditionally been regarded as the works of Greek and Roman authors that have been judged to be distinguished, among the highest class of writing. Until the mid-twentieth century, these classics were foundational in Western education for at least eight centuries because they were thought to provide models for emulation and to instill senses of honor and correct secular behavior in readers. These works were to be studied and mastered; the reader was expected to strive to understand these writings in depth but not to alter or change them in any way. They were to be preserved in their original form and understood in their original languages and thus evoke a direct continuity to Greek and Roman times.

While in its traditional Western usage the term “Classical” has been applied exclusively to Greco-Roman texts and works of art, it is correctly evocative of the entire era under consideration, the period that lasts from 1000 BCE to 300 CE. For it is not just the ancient writings of the Greeks and Romans that are still read today; during this period, Classical texts were composed all over the world, especially Afro-Eurasia, and this literature, both sacred and secular, still provides profound meaning to much of today’s population. This was the period in which the Jewish and Christian Bibles were created and began to be canonized; Buddhism arose, became a world religion, and articulated its beliefs in a wide variety of sutras, or sacred books; ancient Hindu texts (such as the *Upanishads*) were composed and preserved in their final form; and many of the masterpieces of Chinese civilization were written down. All of these ancient texts have grown beyond their original historical contexts and, as noted, still touch the lives of readers today. For a number of reasons that will be explored in this encyclopedia, people today feel a profound connection with the people who lived between 1000 BCE and 300 CE.

Egypt and Africa

From 1000 BCE to 300 CE, Egypt’s fortunes changed dramatically. It went from being one of the foremost powers in the eastern Mediterranean to a province within the Roman empire. The Third Intermediate period in Egypt began in 1069 BCE and lasted until 664 BCE. Over the course of those 400 years, Egyptian civilization changed dramatically. No longer a culturally and politically unified region, Egypt of the Third Intermediate period was dominated by fragmented local centers of powers and external rulers (from Libya to the west and Kush, or Nubia, to the south). The Late period began in 664 BCE and lasted until 332 BCE. This was the last period of indigenous rule of Egypt until modern times and is often taken as the last resurgence of ancient Egyptian civilization, although there are two points within the Late period in which the Persians occupied the land of the Nile. In 332 BCE, Alexander the Great was welcomed to Egypt, and he absorbed the Nile Valley into his

empire. After Alexander's death, Egypt was ruled by the Ptolemaic dynasty, a Macedonian Greek family. Cleopatra VII, the last Ptolemaic ruler, is famous for her dalliances with the Roman statesmen Julius Caesar and Mark Antony. Egypt's interaction with Rome eventually led to the Roman conquest of Egypt.

South of Egypt at this time in what is now Sudan was the Nubian kingdom of Kush. Nubia had been home to a civilization that stretched back as far (and some argue further) than Egyptian civilization. Around 800 BCE, Kush reasserted itself as a formidable force in Africa, so much so that it eventually took over much of Egypt (and saw itself as the actual bearers of Egyptian culture as opposed to the pharaonic groups to the north). Kushite control of Egypt was not maintained, however, and in 591 BCE the Egyptians invaded and sacked the capital, Napata. After the sack of Napata, power in Kush moved farther south, and by about 300 BCE the dominant center of authority was the city of Meroë. The Nubian kingdom centered at Meroë continued as a powerful African state until around 250 CE, when it seems to have declined.

Part of the reason for Nubia's decline may have been the rise of the kingdom of Aksum (Axum) located to the south, in Ethiopia. Beginning in the first century CE, the city of Aksum and its ports on the Red Sea grew in importance as sailors learned to use the monsoon winds to travel the Indian Ocean. This transportation innovation made the Red Sea an important location in a maritime trade route that connected India, Persia, and Rome directly (and indirectly connected China with the Mediterranean). The Aksumite kingdom became rich, trading African goods (such as gold and ivory) with foreign merchants.

In North Africa, there is evidence for the ancestors of the Berbers. The Berbers were ancient traders who traveled across the Sahara utilizing beasts of burden. Originally these beasts of burden were donkeys, but by the end of this period the traders were using dromedary camels, which were well suited for long-distance travel. Thus, the foundations for long-distance trans-Saharan trade were established. The northern end points of these Berber trade networks were the Phoenician cities located on the Mediterranean coast of Africa, the most famous of which was Carthage. The Phoenicians, who were originally from the coastal regions of what is now called Lebanon, established large colonies throughout North Africa and Iberia that served as important trading centers.

The history of the rest of Africa at this time is not nearly as well understood. From the period 1000 BCE to 300 CE the introduction of iron technology brought important changes to African society. This was an interesting development, since there was only minimal prior use of copper or bronze. Because iron requires such substantial temperatures in order to be smelted, it is likely that this technology was introduced from elsewhere, although Africans undeniably made significant innovations in iron-smelting techniques. In central Africa, especially in the Congo region, there is evidence for early ironworking communities

Cleopatra VII, the last Ptolemaic ruler, is famous for her dalliances with the Roman statesmen Julius Caesar and Mark Antony. Egypt's interaction with Rome eventually led to the Roman conquest of Egypt.

from around the time of the first century CE. Unfortunately, given the current political climate of this region, not much archaeological research is being done there. Similarly, some survey work in Zaire indicates that there were numerous communities in this region in the first few centuries of the Common Era, but little archaeological investigation has actually gone on.

Iron technology certainly played an important role in the continuation of the so-called Bantu Expansion during this period. Bantu speakers continued to spread through Africa, settling in the Great Lakes region of eastern Africa (up to the Indian Ocean) and as far south as present-day South Africa. The newly learned skills of ironworking allowed Bantu speakers to migrate into these less hospitable regions. Bantu-speaking populations also began banana farming and cattle herding although after 1000 BCE. Bantu groups were, in fact, quite culturally diverse and were distributed over a vast geographic area. The Bantu groups that moved into the Great Lakes region developed into centralized polities with significant social stratification. In central and southern Africa, however, Bantu-speaking groups did not develop politically centralized governance. Rather, power was vested in small villages and high-status individuals within those villages, although social stratification and territorial divisions developed as in the Great Lakes region.

Unlike central and West Africa, there seems to have been a high degree of homogeneity among the iron-using cultures of eastern and southern Africa from 1000 BCE to 300 CE. Archaeologists call these cultures the Chifumbaze complex. The pottery of these people is found at a number of sites, ranging in size from substantial villages to small rock shelters, suggesting that the subsistence strategies of these southern Africans were considerably varied. Both farming and hunting-gathering economies are in evidence. In the eastern parts of southern Africa at this time, the dominant subsistence regime was small-scale herding. Unlike the Chifumbaze people, these herders relied mostly on stone tools. The animals they herded were sheep; because sheep are not native to the region, it is likely that these herders migrated from elsewhere in Africa, although this is far from proven.

There is less evidence for the cultures that inhabited West Africa at this time. Best understood is the Nok culture, which was located in present-day Nigeria. Nok terra-cottas are particularly noteworthy, some of which are life-size human figures. Several non-Nok iron-using sites in Nigeria were contemporaneous with the Nok culture, indicating that there were a variety of different cultures inhabiting West Africa in this period.

The Classical World—Greece and Rome

When we think of ancient Greece or Rome, we undoubtedly think of the period from about 800 BCE to sometime after 300 CE in which these two regions flourished as centers of learning and intellectual sophistication. The achievements of Greece and Rome during this time have long been understood as fundamental in the development of European civilization, the birthplace of concepts that are taken for granted

in our own lives. In fact, the Greco-Roman world was only one of many roots of later European civilization, and many of the supposed inheritances may be misconceptions.

By 1020 BCE, the Mycenaean civilization that had characterized much of the early Greek world had vanished. This is not to say that human communities vanished from Greece, for in fact numerous settlements have been explored through archaeology that date to this time, which is otherwise known as the Greek Dark Ages (1020–900 BCE). Rather, life in the Greek world came to take new forms, and while there were certainly inheritances from the Bronze Age, much of what was to come was new. Scholars had initially explained this transformation of Greek life by postulating a “Dorian invasion” or “migration,” a movement of people who spoke Doric dialects of Greek into the south. The historicity of this invasion or migration is debated by scholars today.

At some point at the end of the period between 4000 and 1000 BCE, or more likely within the first 500 years of the period 1000 BCE and 300 CE, the Homeric epics were written down for the first time.

The *Iliad* and the *Odyssey* were initially oral compositions, and much of the style of the written versions that survive today reflect this oral setting (the various uses of repetition, for example). Scholars debate the precise date of the Homeric epics’ oral composition(s) as well as the dates of the fixing of the traditions in writing. Scholars likewise question the historicity of Homer, the supposed single author of the epics, suggesting that the recording of these compositions may have been more complex than one individual simply writing down an oral composition. Whatever the case may be, the Homeric epics (in various guises) were one of the unifying features of the Greek world.

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Around 900 BCE, at the end of the Dark Ages, there was probably not a drastic change in the way in which the Greeks had lived their lives, but there was a change in evidence discernible to archaeologists. This evidence was manifest in pottery, first discovered in Athens, that archaeologists call “Geometric,” and thus the period from 900 to 700 BCE is referred to as the Geometric period. By about midway through this period, it is apparent that the polis, or city-state, has come to be the dominant organizing polity of Greek civilization, and this remained the case until the conquest of Greece by Alexander the Great. Throughout the Geometric period, Greek populations grew and prospered, and colonizing movements began in Italy and Asia Minor. The number of Greek colonies in southern Italy was substantial, and this region came to be known as Magna Graecia (Great Greece). Colonies on the Ionian Coast of western Anatolia were more numerous and spread Greek influence to the Near East. By the end of the period, Near Eastern influence on Greek culture had become profoundly influential. One of the cultural elements in which this contact was manifest was in ceramic artistic styles, and thus the period from approximately 700 to 600 BCE is called

the Orientalizing period, reflecting the Near Eastern influence on Geometric pottery styles.

Much of this contact in the Orientalizing period came about through a fluidity of movement in the eastern Mediterranean. The Greek colonies that had been established in Ionia brought Greek populations into close contact with the peoples of the Near East. The Phoenicians (whose homeland was in northern Syria) established colonies in the western parts of Greece and Crete. The establishment of Greek colonies in Italy and Sicily not only spread Greek culture westward but also brought Greek and Phoenician cities into closer proximity with one another. Renewed Greek contact with the Near East in the Orientalizing period led to important developments within the Greek world beyond just changes in pottery. Greek artists who worked in other media incorporated Near Eastern aesthetics (especially Phoenician aesthetics, themselves adapted from Egyptian aesthetics) into their own art, and some Near Eastern literary and mythological themes may have been reinterpreted in light of Greek practices. For example, Greek kouros are statues of human figures that bear a striking resemblance to Egyptian sculptural art. Near Eastern technological knowledge, such as metallurgy and textile manufacture, was introduced to the Greeks, as was Near Eastern knowledge about astronomy/astrology and divinatory practices. Coinage was introduced to Greece by way of Lydia, making trade transactions significantly easier. The Greek alphabet emerged during this time, adapted from the Phoenician alphabet (itself adapted from an alphabet attested in its earliest form by Semitic speakers in the Egyptian desert).

The Near East was not the only region that came into contact with Hellenic civilization at this time; Greek colonies were the intermediaries of trade between the Mediterranean and peoples of inland Eurasia. Greek luxury goods have been found as far away as Russia and Bulgaria, and while this contact may not have been direct, the desire for Greek objects stimulated long-distance exchange. Cultures, such as the Etruscans of Italy who lived in close proximity to the Greek colonies to their south, adopted many Greek customs and material culture. The Greeks may also have adopted some elements of these inland Eurasian cultures. The ancient Greeks certainly believed that the worship of Dionysus originated in Anatolia or Thrace (mostly present-day Bulgaria), although the fact that the name “Dionysus” exists in Mycenaean tablets suggests that this may be incorrect.

The Greek colonies in Ionia (central coastal Anatolia in present-day Asian Turkey) did not just adapt Near Eastern traditions into Greek forms; they were themselves locations of artistic and intellectual fluorescence. Ionian art at this time laid the foundations for a naturalist approach that would come to typify Greco-Roman art. The sixth-century philosophers at Miletus in Ionia were the first Greek natural philosophers. Indebted in some ways to Near Eastern approaches to science, the Ionians attempted to understand the physical universe and laid the foundations for Greek science.

The period from about 600 to 500 BCE is called the Archaic period, and this is the beginning of the Classical period of Greek history. From

the Archaic period until the middle of the fourth century BCE, Greek life was organized primarily by the polis. While these cities would join together in alliances (especially against the Persians) or war with one another, there was rarely an overarching governmental structure. Athens from the fifth century on was the birthplace of many intellectual achievements and home to some of history's intellectual giants: the philosophy of Socrates, Plato, and Aristotle; the art of Phidias; the histories of Herodotus and Thucydides; the plays of Sophocles; and the democracy of Themistocles and Pericles. Yet at the same time that the arts, sciences, and democracy were thriving, Athenian life was based on systemic inequalities against women, slaves, and foreigners, especially non-Greeks. Sparta, another prominent city-state, was a militaristic society, dominated by a strong sense of discipline and desire for structure in life. Other poleis (the plural of "polis"), such as Corinth, Thebes, and Syracuse (in Sicily), were noted centers of artistic and intellectual activity whose influence within the Greek world waxed and waned throughout this period.

As the Greek city-states fell into political disarray, a peripheral Greek state rose to power. Macedon, located in the northeastern corner of the Greek world, was led by Philip II (r. 359–336 BCE), who had steadily expanded his empire and become more involved in the affairs of the Greek city-states, unifying many of them under his own authority. In 336 BCE he was assassinated, and many of these states rebelled. His son, Alexander, who is remembered as Alexander the Great, became king of Macedon and not only gained control of the rebelling states but also went on to invade Egypt, Syria-Palestine, Persia, and even northwestern India. Alexander and his successors spread Greek culture, languages, and institutions and mixed together many disparate cultural elements into a cosmopolitan *ecumene* (a Greek word meaning "household" that has come to mean an interconnected and cross-fertilizing entity of various cultures). This new blending of cultures, which had a profound Greek overlay, has come to be known as the Hellenistic world (as opposed to the previous parochial Hellenic world centered on poleis). In 323 BCE Alexander died unexpectedly, and his vast empire (the largest in history up to that point) was, after much conflict, divided among the Diadochi (his successors): the Antigonid dynasty gained Macedonia and Greece, the Seleucid dynasty controlled Mesopotamia and Persia, and the Ptolemaic dynasty took Egypt and Palestine. While these dynasties fought and competed with one another, eventually all of them were absorbed by the Roman empire.

Despite the political turmoil that at times typified the Hellenistic Age, the cultural interchanges that occurred were of world historical significance. This was a true merging of cultures from around the eastern Mediterranean, the Near East, and farther into Southwest Asia. Greek became the lingua franca of Hellenistic society, although local

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languages were not completely displaced. Especially among elites in the Near East, hybrid cultures (mixtures of Greek and Near Eastern elements) arose. Negotiations about which foreign cultural elements to accept and which should be rejected created tensions within communities. The Jewish text, *The Wisdom of Ben Sirah* (or *Ecclesiasticus*), exemplifies these kinds of cultural interchanges. The text is written in a typically Near Eastern genre called wisdom literature in which advice is given by the author. In Ben Sirah's case, his wisdom is clearly informed by Greek philosophy, yet at the same time he warns against the adoption of certain Greek practices, such as the use of the gymnasias.

The cultural interchanges that typified Hellenistic society did not just involve the transmission of Greek practices elsewhere. Near Eastern and Southwest Asian culture also spread into the Greek lands, and Eastern practices were adopted as Greek. The city of Alexandria, founded on the Mediterranean coast of Egypt, became something of a cultural (not political) capital of Hellenistic society. The famous Library of Alexandria is said to have held over 700,000 volumes, writings collected from the Near East and elsewhere. The learning of the Greeks is referenced positively in Indian texts; the *Mahabarta*, for example, praises Greek scholars as "all-knowing."

Unlike Greek history, the history of Rome begins as the history of one city and traces the expansion of that city's power throughout the Mediterranean world. Scholars debate who were the cultural precursors of the Romans, but undoubtedly Etruscan civilization, which flourished from about 800 BCE to after 300 CE, was an important influence (which was incorporated politically into Roman society well before 300 CE). Etruscan society was itself heavily influenced by Greek culture, even adopting the alphabet from the Greeks. Tradition holds that Roman history began on April 21, 753 BCE, when Romulus supposedly founded the city of Rome. While it is unlikely that Romulus was an actual king or founder of Rome, 753 BCE is taken as the beginning of the Regal period, and Romulus is counted as the first king. After Romulus, tradition holds that six more kings ruled Rome, although historians debate which of these kings were historical figures. Some have argued that this was a period of Etruscan dominance, but scholars debate this. The Regal period lasted until 509 BCE, when the king was expelled and an oligarchic republic replaced the monarchical form of government.

The period of the Roman republic lasted for about 500 years, until Augustus seized sole authority, and the state became an empire after 31 BCE. Throughout the republican period, Rome was governed as an oligarchy by a number of legislative bodies. From the earliest days of the Republic, Rome warred with its neighboring cities, gradually conquering them and either incorporating them directly into Roman society or making them unequal allies. By 272 BCE, Rome gained control of all of southern Italy. After cementing authority over Italy, Rome was drawn into conflicts with the Greeks and Carthaginians (in Sicily, Iberia, Gaul, and North Africa). As the Romans expanded into Greek territory they brought much of Greek culture back to Italy, although not all Romans approved of this Hellenizing process (Cato the Censor, for example, warned that Greek culture was contaminating Roman morality and val-

ues). Greek culture, literature, and theater were adopted in Rome and adapted to suit Roman tastes. Roman attitudes toward Carthage, however, were less deferent, and after the Second Punic War (218–201 BCE), the Roman populace favored a militarily aggressive stance toward Carthage, which led to the Third Punic War (149–146 BCE) and the destruction of Carthage.

As Rome grew in power and wealth, its Republican governing structure became too unwieldy. Disparities in wealth exaggerated these problems, as did the power struggles among prominent men and families. The ruination of large numbers of farmers due to costly wars and their subsequent movement into the city of Rome also strained the Republican political system. The end of the Republican form of government was foreshadowed when Julius Caesar took power as dictator, although the Senate assassinated Caesar to stem this power. This return to Republican governance was short-lived, and eventually Augustus, after defeating Antony and Cleopatra at the Battle of Actium (31 BCE), became emperor and the sole ruler of Rome.

After Augustus's death the imperial period began, typified by political authority being held in the hands of one man. Under the emperors, Rome's influence expanded into Europe (up to the Rhine, Danube, and Scottish lowlands), into Southwest Asia, and across North Africa. Where the Romans went, they brought with them Roman culture. Roman construction was unparalleled, and Roman cities were built according to a similar plan throughout the empire. Scholars refer to this process as "Romanization." Aqueducts provided the cities with extensive water supplies, and roads and naval paths connected the different ends of the empire with a thoroughness that had never before been achieved. Roman theaters (adapted from Greek designs) and amphitheaters are still used today in Jordan, Israel, France, Germany, and elsewhere in Europe and North Africa.

It was not just "Roman" culture that was spread with Rome; the expansion of the Roman empire continued the expansion of Hellenistic culture and the transregional tendencies of Hellenism. The Romans brought Hellenistic ideas (or at least Roman versions of these ideas) to the farthest regions of the empire and to people who lived outside of the boundaries of the empire, such as the Celts in Gaul and Britain and the Germanic tribes north of the Rhine and Danube. Roman thinking was heavily dependent on and in many ways grew out of Hellenistic thinking. Roman literature, for example, while initially dependent on Greek forms, blended Greek styles with Roman ideas. Virgil's *Aeneid* took the traditional Greek story of the Trojan War and recast it as a means of understanding the foundation of Rome.

Rome's reach was felt far beyond the boundaries of its territorial empire. Trade connected the Romans with more distant regions of Asia and Africa. Via the Red Sea, Roman traders traveled back and forth from Syria to India, encountering the Ethiopian Aksumite empire along the

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way. The hunger for spices in Rome drove the profitable trade of the Nabataean kingdom across the string of oasis that traversed Arabia. The Nabataeans were eventually conquered by the Roman emperor Trajan, and their previously distinct culture was absorbed into Roman culture. Rome was also the westernmost of four great empires that spanned Eurasia, connected by the Silk Roads. Along with the Parthian empire and later the Sassanid empire, the Kushan empire, and China, Rome participated in a vast exchange of goods and ideas. Pliny the Elder (d. 79 CE), for example, tells us of the mania among Rome's women for silk from the land of the Seres, attesting to the importance of these distant connections.

Romanization was not just a unidirectional flow of ideas; Roman culture was itself influenced by the interchanges of ideas across Afro-Eurasia. The Parthians, who were often rivals of Rome, influenced Roman policies of imperial expansion in the East and perhaps influenced the development of Roman court politics and the organization of power structures under the emperor. Likewise, religions of the Near East were very popular among the Romans. Some of the mystery religions (so-called because participation in the cults was reserved for initiates) were Eastern in origin, although the Eastern pedigree of these religions was sometimes exaggerated in Rome to give them an antique mystique. Mithraism (the mystery religion devoted to the god Mithras) likely originated in Persia. The worship of the Egyptian goddess Isis was popular throughout Roman society, as was the worship of the Anatolian deity Cybele. The Eastern religion of Christianity, while not a mystery religion, grew in popularity within Roman society in part due to the relative safety and ease of travel for Christians within the Roman sphere of influence. These Eastern religions were also spread by Roman soldiers to the peoples beyond the Alps, setting the stage for the later spread of Christianity throughout Europe.

The Near East

The period from 1000 BCE to 300 CE saw the rise of the kingdom of Israel and the concomitant development of Judaism and Christianity. Scholars debate the extent to which the biblical narratives (found in the books of Samuel, Kings, and Chronicles in the Hebrew Bible/Old Testament) reflect historical circumstances. The biblical account suggests that the kingdom of Israel formed into a monarchical state around 1000 BCE and divided into two kingdoms (Israel in the north and Judah in the south) in 922. Eventually both kingdoms were destroyed and incorporated into larger Mesopotamian empires. Part of this incorporation involved large-scale population deportation, and many Israelites found themselves living in Babylon after 586 BCE, when the Neo-Babylonians destroyed the Temple in Jerusalem. This exile was short-lived but important. The experience of living in exile and encountering other traditions (such as Zoroastrianism) may have played a significant role in the development of the impulse to collect the various writings of the Israelites into one set of works; this set of works would eventually become

the Tanakh, or Hebrew Bible. After the Persians conquered Babylon in 539, many of the Israelites were allowed to return to Jerusalem. By this time, the Israelites had started to think of themselves as Jews and monotheists, bound together by their religious beliefs and cultural heritage. Many of the large number of Jews who did not return to the land of Israel maintained their identities as Jews, a situation referred to as the Diaspora.

The Jews who did return to Israel were allowed to rebuild the Temple and institute local governance due to the tolerant imperial practices of the Persians. Eventually this region was conquered by the Romans and directly incorporated into the Roman empire. Under Roman rule, divisions among various groups of Jews developed over a number of different matters. One of these groups abandoned Jerusalem to live at Qumran near the Dead Sea. It is likely that this group compiled the Dead Sea Scrolls, although this is debated by Scrolls-scholars. Another Jewish movement that developed at this time was Christianity, based on the teachings of Jesus and his later followers, especially Paul. From 66 to 73 CE, the Jews revolted against Rome. The Romans responded by destroying the Temple in Jerusalem. The destruction of the Temple, while a devastating event in Jewish history, played a large role in the development of Rabbinical Judaism and the synagogue as the primary location of Jewish worship. The first synagogues can be dated to this period. The oral teachings of the early rabbis living in Israel were written down around 200 CE in the Palestinian (or Jerusalem) Talmud. Written in Hebrew and Aramaic, this collection of rabbinical notes about the Bible reflects the debates and teachings of rabbis from about 70 to 200 CE. The larger and more influential Babylonian Talmud, written by the Jewish community that lived in Mesopotamia, was not edited into its current form until about 300 years later.

Whereas Judaism was transformed and survived during this age, this was the last period of Mesopotamian civilization, located in what is now called Iraq. By 1000 BCE, the Neo-Assyrian empire, centered in the north of Mesopotamia, was one of the largest powers in the Near East. At its maximum extent, the empire included all of Mesopotamia and much of Anatolia and Syria-Palestine. In the seventh century BCE, Assyrian control over the south started to wane, and Babylon began to rise as a power, supported by its ally, the Medes, located in what is now known as Iran. Eventually Babylon conquered Assyria, and the Neo-Babylonian empire (sometimes referred to as the Chaldean empire) expanded almost as far as Egypt.

The Neo-Babylonian empire did not survive long. In 539 BCE, the Persian empire (also known as the Achaemenid empire after its dynastic founder) conquered Babylon. Based in Iran, the Persians had recently risen as a major regional power, and they quickly gained control of the Neo-Babylonian territories. Persian rule over foreign regions was relatively mild, and they were content to let local regions govern themselves so long as tribute was paid. Despite this relatively benign attitude toward rule, the Persian attempts to expand into the Greek world were halted. The wars between the Greeks and the Persians are well documented in ancient sources, most notably in the works of Herodotus and

Aeschylus who, not surprisingly, provide a Hellenic-centered account of these conflicts. Eventually, Greek power eclipsed Persia when Alexander the Great conquered the empire. The incorporation of Persia into the Hellenistic empire brought the land of Darius into a vast and richly diverse empire, an empire that facilitated cultural interchange from Thrace to northwestern India to Trans-Oxiana (west-central Asia). Culture and ideas from this diverse collection of regions flowed into Persia, and Persian culture itself was transmitted throughout the Hellenized parts of the globe.

After Alexander's empire fell apart, one region of Persia, Parthia, began to assert authority. The origins of the Parthians are somewhat obscure, but references to Parthia in the Behistun Inscription (dated to the reign of Darius I, ca. 520 BCE) suggest that the Parthian homeland spanned what is now eastern Iran and parts of Pakistan and Afghanistan. In 139 BCE, Parthia defeated the Seleucid kings who had taken control

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of the region in the wake of Alexander's death. At its height, the Parthian empire extended westward up to (and sometimes including) Mesopotamia and east into central Asia. The Parthians played an important role in policing the Silk Roads and seem to have had peaceful diplomatic relations with Han China. In many ways, the cultural mosaic that was the Parthian empire facilitated the transmission of ideas and goods between regions as geographically distant as Rome and China, and some

eastern Roman cities, such as Palmyra in Syria, were deeply influenced by this relationship. The Parthian relationship with Rome was frequently hostile, however, and eventually the empire disintegrated.

Around 226 CE another empire, based in what is now Iran, arose: the Sassanid dynasty. The Sassanid dynasty controlled a vast empire that stretched from eastern Turkey as far as west-central Asia and Pakistan. Under the Sassanids the arts and sciences flourished until its abrupt fall around 651. In particular, Manichaeism and Judaism prospered in the initially tolerant and cosmopolitan Sassanid empire. Manichaeism was a Gnostic religious tradition, founded by Mani (ca. 216–276 CE), that combined elements of Zoroastrianism, Christianity, and other traditions and spread extensively throughout Asia and parts of the Roman empire. Manichaeism fell out of favor at the Sassanid court, which became more militantly Zoroastrian and eventually began persecuting followers of Mani. In its over 400 years of existence, the Sassanid empire vacillated between policies of tolerance and extreme intolerance to the various groups living within its borders. Outside of its borders, the influence of the Sassanid dynasty was especially felt in the arts and sciences. The art and textiles of the Sassanids were desired and emulated from Egypt to China. After the era ending in 300 CE the Sassanid kings became patrons of philosophy and literature and continued some of the traditions of Greek philosophy.

South Asia

By 1000 BCE, the northern Indus-Ganges region of South Asia could be characterized as the home of an Indo-Aryan civilization. This was a time when there was no centralized authority throughout South Asia; rather, the region was divided into numerous small city-states and other forms of polity. The period from 1800 BCE to about 600 BCE is often referred to as the Vedic Age (since this was the culture in which the Vedic texts were written). It was in this culture that Hinduism was born, and it was in this culture that the Indian caste system (which was eventually dominated by Brahmins) developed. The Brahmins were the highest class in what is called the *varna* system and held authority over priestly and religious matters, although this dominance was initially contested by the Kshatriya, who were the previously dominant aristocratic class.

From 600 BCE on, the authority of the Brahmins was gradually questioned. This questioning manifested itself in numerous new religious traditions. Wandering philosophers, called *shramanas*, questioned the meaning of life and the current social order. Some of these shramanas gained large followings, and schools developed based on their teachings. One of the longest lasting of these traditions surrounds Siddhartha Gautama, the Buddha. The Buddhist tradition seems to have been established around 500 BCE, although there are problems with precisely dating when the Buddha lived. The followers of Siddhartha Gautama believe that he attained enlightenment, and his teachings became the core of Buddhism. (The term “Buddha” means “awakened one” and is a title, not a personal name.) Another important teacher, roughly contemporaneous with the Buddha, was Vardhamana, the Mahavira (Great Man), an important figure in the establishment of Jainism (named after Vardhamana’s title “*jina*,” or “conqueror”). The early stories of the Mahavira are similar to those of Siddhartha, and it is difficult to untangle history and tradition. However, most Jains see the Mahavira as the last teacher in a long line of teachers rather than the founder of this movement, which emphasizes *ahimsa* (total nonviolence toward all living beings) and believes that there are immediate consequences (karma) for individual actions.

The larger political context of these religious changes, especially manifest in Buddhism and Jainism, was one in which numerous small kingdoms had arisen. While only minimal archaeological work has been done on sites dating to this period, current evidence suggests that this was a period of increased urbanization, especially in the Ganges.

Alexander the Great’s armies entered northwestern India in 326 BCE, but this Hellenistic incursion was not long-lived. In the aftermath of the Macedonian king, India was divided into numerous small kingdoms that warred and competed with one another. By 322 BCE one of these kingdoms, led by Chandragupta Maurya, arose and united much of South Asia into a large unified state. This marked the beginning of what scholars call the Mauryan period, which lasted until the collapse of Mauryan authority around 185 BCE. The empire extended over most of the Indian subcontinent (as far as Kalinga along the eastern coast) and north to the Himalayas in the northeast and into Afghanistan in the

northwest. The most noteworthy of these Mauryan kings was Chandra-gupta's grandson, Aśoka (r. ca. 269–232 BCE). Aśoka converted to Buddhism and sent missionaries to Ceylon, Burma, Egypt, Anatolia, and west-central Asia to spread the teachings of the Buddha. Modern historians know much about Aśoka's reign because he set up numerous pillars and rocks throughout his empire inscribed with his royal proclamations that extolled the virtues of the Buddhist Dharma (Law) and prescribed behavior consonant with those teachings.

In 185 BCE, a coup within the Mauryan empire led to its collapse after an extended period in which the size of the empire had shrunk. Northern India divided into numerous small kingdoms. These small kingdoms fell prey to numerous foreign invaders from the north. One of these groups was led by a Greco-Bactrian king named Demetrius, who around 180 BCE conquered southern Afghanistan and Pakistan and established an Indo-Greek kingdom, under which Buddhism thrived.

A succession of foreign powers competed over this northern region. The most successful of these foreign groups was the Kushans (called the Yuezhi by the Chinese), an Indo-European group whose vast territory ranged from Tajikistan and Afghanistan to north-central India and across the Pamirs into east-central Asia. The most famous Kushan leader was Kanishka (r. 127–147 CE) who, like Aśoka, was a follower of the Buddha's teachings, although true to the syncretic ways of the Kushans, he incorporated Mithraic elements into his religion. Kanishka was responsible for convening the famous Fourth Buddhist Council in Kashmir, where the Buddhist canon of sacred sutras, known as the *Tripitaka*, or *Three Baskets*, was established. His extension of the Kushan empire as far east as the Tarim basin probably was a factor in the early transmission of Buddhism into western and northern China. Indeed, the Kushan empire maintained contact with Rome, Persia, and China throughout its existence and was a major intermediary between Europe and Asia. Under the Kushan empire a major revolution in Buddhist art and iconography occurred, associated with Gandhara (a region in southern Afghanistan/northern Pakistan). This new form of Buddhist art fused Greco-Roman-Mediterranean designs and styles with those from India. This Gandharan Buddhist art was brought east to China and beyond, where it fused with East Asian styles and led to the emergence of a new distinctly East Asian art that incorporated significant Greco-Roman and Indian elements.

Beginning around 230 CE, at the same time as the Kushans ruled the north, the Satavahana dynasty ruled the south of India. Under the sponsorship of the Satavahanas, Hinduism spread to Southeast Asia. Buddhism also thrived in this context. Some of the finest Buddhist art was created under the patronage of the Satavahana kings, and great Buddhist stupas were erected throughout the Krishna River valley.

China and East Asia

Around 1027 BCE, the Western Zhou dynasty conquered the Shang dynasty in China and instituted a system of subordinate territorial rulers who were left to their own devices. By 771 BCE the power of the Zhou

had eroded, and the borders were threatened by people to the west. A confederation of rebel vassals and Rong tribespeople overran the Zhou capital, and the king was killed. The Zhou moved their capital east to Luoyang in 770 BCE, never again controlling the territory west of the Wei River, thus beginning what historians call the Eastern Zhou period. Until 256 BCE the Zhou continued to reign in China, if only in name. In practical terms, China had become a vastly decentralized collection of individual polities.

The first half of the Eastern Zhou period is also known as the Spring and Autumn period (722–481 BCE). This name is derived from the *Spring and Autumn Annals*, which chronicles historical events from this time and was supposedly edited by Confucius but was actually edited later. This was the period of Kongfuzi (Kong the Eminent Philosopher), known in the West as Confucius (ca. 552/551–479 BCE). It is impossible to exaggerate the importance of Confucian thought to China, and while none of his own writings survive, The Analects (Lun Yu, which means “ethical dialogues”) preserve his supposed words as assembled by his students after his death. Daoism was likely formulated prior to the age under consideration here, although tradition holds that Laozi, one of the most important Daoist thinkers and the supposed author of the *Daodejing* (*Classic of the Way and Virtue*), the core Daoist text, was a contemporary of Confucius. Along with the intellectual achievements of the age came a number of other important innovations. Iron was first used, and direct taxation systems were introduced. The soybean was introduced to the rest of China from Manchuria and became an important staple of the Chinese diet.

In the latter half of the Eastern Zhou period another great thinker, Mozi (ca. 470–391 BCE), influenced students in China, emphasizing self-reflection over ritual obedience and offering arguments against Confucian values (many of which reemerged in twentieth-century Chinese political discourse). His writings coincide with what is called the Warring States period (traditionally understood as running from 453 to 221 BCE), a name that aptly describes the final stages of the Eastern Zhou. The Mohist school and its system of logic were prominent during the Warring States period but did not survive the suppression of learning that took place after the Qin conquest, referred to as the “burning of books and burying of scholars” (213–206 BCE).

The Warring States period was a time of intense warfare, as conflict and competition between states intensified. In this period of war and conflict intellectual life flourished, and many classics of Chinese philosophy were composed in a political environment characterized by conflict between regional warlords. Mencius, or Menzi (ca. 371–289 BCE), was an important philosopher, concerned especially with good governance. His interpretation of Confucius was extremely influential to later Chinese philosophers. Xun zi (298–238 BCE) developed an elaborate theory of human nature and society that became very important in the later

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Han dynasty. His works were extremely critical of Daoism, Mohism, and competing Confucian views. Sun Tzu (Sunzi) wrote his *Art of War* during the Warring States period, a classic in military theory that applied Daoist philosophy to military strategy. This ancient work has played an important role in warfare well beyond Warring States China. Traditionally, historians have credited the book with providing the First Emperor of Qin with the strategies to end the Warring States period and unify China. The samurai of Japan revered the book after its introduction there in 760 CE. Napoleon is thought to have absorbed its teachings and used some of its principles in his European wars.

By the end of the period, the Qin was the last remaining state, itself ruling China from 221 to 206 BCE. Qin incorporated Legalist principles of statecraft, a doctrine that arose in the Warring States period and is most memorable for its harsh punishments. The Qin dynasty did not last long after the death of its first emperor, Qin Shi Huangdi (r. 221–210), but two of the most memorable monuments of ancient China date to this period. Tradition holds that construction began on the Great Wall under the reign of the First Emperor. In fact, this was not the Great Wall that visitors to China see today (which dates to the later Ming dynasty). Rather, the First Emperor's wall actually consisted of a number of older walls in the north and west that were upgraded and in places connected. The First Emperor's tomb outside present-day Xi'an also holds splendors of the Qin dynasty. This is near where the numerous life-sized terra-cotta soldiers and officials were interred, probably to guard the emperor's tomb. The main chamber of the tomb has yet to be excavated. After the death of the First Emperor, numerous states revolted against the harsh Qin rule. Eventually a commoner named Liu Bang (usually called Han Gaozu or Han Gaodi, the title granted him posthumously) conquered China in 202 BCE and founded the Han dynasty (202 BCE–9 CE; 25–220 CE).

It took until 154 BCE for the Han dynasty to conquer the remaining Chinese kingdoms that had also rebelled against the Qin. Like the Qin and unlike the Zhou, authority was fully vested in the figure of the emperor, but the bureaucracy enacted actual governance. Emperor Han Wudi (141–87 BCE), the Martial Emperor of Han, was one of the most noteworthy rulers and oversaw the expansion of the Han state concomitant with an intellectual florescence and important agricultural innovations (such as the improved plow). Han Wudi extended the boundaries of the empire far into central Asia. He defeated the Xiongnu (a confederation of nomadic tribes in that region) and opened up the Hexi Corridor, an act that ushered in the first Golden Age of the Silk Roads. With this, Han Wudi sent ambassadors as far as west-central Asia and received horses from the Ferghana Valley in present-day eastern Uzbekistan. The historian Sima Qian lived at this time and fell into disfavor with Han Wudi, who sentenced him to execution. Sima Qian had his execution commuted to castration and was thus able to finish writing his history.

From 9 to 23 CE, the Wang family wrested control of China from the Liu family and attempted to reorganize China along the decentralized lines of the Zhou dynasty. These reforms proved to be undesirable, and

the Liu family regained authority in 25 CE, thus beginning the Later Han dynasty, which remained in power until 220. Also called the Eastern Han (since the capital was moved from present-day Xi'an to Luoyang in the east), the Later Han was initially quite successful. This was a period of tremendous achievements in history writing, philosophy and statecraft, poetry, and the fine arts. However, when the fourth emperor came to power as a child, systemic weaknesses became more apparent as various consort families battled among themselves for control of the Han state.

The first real attack against Han authority came from a sect known as the Yellow Turbans (because of the kerchiefs they wore). The Yellow Turbans rebelled in 184, and while they did not succeed, this revolt led to power being redistributed among military leaders supported by great families throughout China. In 220 one of these military leaders, Cao Cao, gained power in the north. Two other powers arose in the south and southwest, and it was from these three kingdoms that the Period of the Three Kingdoms (220–280 CE) received its name. These three states warred for 60 years until Jin managed to reunite the land in 280. This unification was not long lasting, and in 316 Chinese central authority once again collapsed.

Alongside the political turmoil of the latter stages of the Han dynasty was the spread of Mahayana Buddhism into the northern and western regions of China. The spread of this form of Buddhism into China was made possible by the translation of Buddhist writings into Chinese. A Buddhist monk, Lokaksema (b. ca. 147), is credited with this achievement. Lokaksema was of Yuezhi ethnicity and traveled to the Han court via the Silk Roads. He was not the only central-Asian Buddhist who brought these teachings to China; throughout the last few hundred years of the period, the Silk Roads facilitated the movement of Buddhist missionaries into China, establishing the foundation for the spread of Mahayana Buddhism throughout East Asia.

Japan

In Japan, the Jomon culture, which had begun around 11,000 BCE, continued on until about 300 BCE. This culture, whose name derives from its distinctive rope-pattern pottery, developed numerous innovations in fishing technology in its final years. The Jomon was gradually replaced by the Yayoi culture, which ran from 300 BCE to 250 CE. There is no marked break between the two cultures; the major distinctions lie in styles of pottery made and the introduction of wet-field rice cultivation, probably from China. The introduction of rice agriculture led to larger changes in social structures, and by the end of the Yayoi culture, Jomon elements are no longer prominent. The end of the Yayoi period and the beginning of the Tomb period is also not marked by any fundamental break. Around 250 CE, there is evidence of increasing social stratification. The name “Tomb period” is based on the prominent appearance of elaborate tombs in large tumuli (earthen mounds). The Tomb period lasted until 552 CE, when Buddhism was becoming widely accepted in Japan.

Korea

In Korea, the agricultural economy continued on as it had since before the beginning of this age. As populations grew, so did the social complexity of the region. Sometime between the seventh and fourth centuries BCE (the exact dates are debated by historians, and mythological dates suggest that it was founded during 3000–2000 BCE), the small cities of Korea banded together into a federation called Gojoseon. In the first century BCE the kingdom of Gojoseon fell apart, and although the exact causes are debated by scholars, it is apparent that numerous regional powers sprang up in the aftermath. Most prominent were the three polities that would come to dominate Korea in the following centuries: Koguryo (Goguryeo) in the north, Paekche (Baekje) in the south-central region, and Shilla (Silla) in the southeast. Known as the Three Kingdoms period, this tripartite division of Korea began in 57 BCE and lasted until Shilla conquered Koguryo in 668 CE.

Europe and Western Central Asia

Around the periphery of Greek and Roman civilization in Europe and western Asia, barbarian groups thrived from 1000 BCE to 300 CE. The term “barbarian” was a relatively pejorative term coined by the Greeks (and adopted by the Romans) to refer to those people who did not speak Greek or Latin. While this term has been understood as problematic since its earliest uses, it is still frequently used to refer to the non-Greeks and non-Romans who lived in Europe until the Middle Ages. During this period, the Romans referred to the Celtic groups on both sides of the Alps as Gauls, whom they distinguished from the Germans who lived beyond the Rhine and Danube and spoke Teutonic languages.

Although in modern times Celtic culture is associated with Ireland, Scotland, Wales, Cornwall, and Brittany (in France), Iron Age Celtic culture was much more widely spread across Europe and into Southwest Asia.

These barbarian groups were actually quite diverse. Some were nomadic or semi-nomadic. Others lived in small villages. Most of these people were organized into small political units (usually tribal-based), although there may have been some larger intertribal organizations. Our knowledge of these different groups comes from two primary sources: Greek and Roman accounts (which are intrinsically biased) and archaeological evidence (which is un-

even throughout Europe). Despite these problematic types of evidence, much is known about these barbarian groups from 1000 BCE to 300 CE.

Perhaps most well known are the Celtic tribes, who are first identifiable in this period but developed out of earlier Bronze Age groups. Although in modern times Celtic culture is associated with Ireland, Scotland, Wales, Cornwall, and Brittany (in France), Iron Age Celtic culture was much more widely spread across Europe and into Southwest Asia. The origins of Celtic culture are unclear, but most archaeologists associate the Iron Age Hallstatt culture (1200–500 BCE) and central European La Tène culture (600–100 BCE) with later Celtic populations.

Apart from Celtic culture, numerous other groups inhabited Europe past the borders of Greek and Roman civilization. In eastern Europe, the largest known non-Celtic group was the Thracians, who were concentrated in the Balkan Peninsula. Greek sources tell us quite a bit about one of these Thracian groups, the Dacians, who controlled territory around the Carpathian basin.

Horse-based nomadic and seminomadic cultures were the norm in western Asia from 1000 BCE to 300 CE. The best known of these groups are the Scythians, who roamed the Pontic steppe of eastern Europe/western Asia (that area around the Black Sea that includes much of present-day Ukraine and Russia) throughout this period. The Scythians lived on the outskirts of Greco-Roman and Persian/Parthian civilization, and they may have had contact with the ancient Chinese. Probably speaking an Iranian language, this horse-based society left massive burial mounds (called kurgans) to honor their dead leaders. Archaeologists have discovered volumes of elaborate metalwork in these kurgans, attesting to the highly developed artistic skills of the ancient Scythians.

Kurgans of the Scythian type can be found from the Black Sea to Mongolia, and Scythian culture shared many similarities to the people of central Asia. The nomadic groups of central Asia played important roles as intermediaries between the culture regions of China, India, the Near East, and Europe. The Xiongnu, for example, were a nomadic confederation that lived in the steppe regions to the northwest of China and traded extensively with the Chinese. Conflicts with them encouraged the Qin emperor to build a wall system across northern China, an early predecessor of the later Ming dynasty's Great Wall of China. The Yuezhi, another nomadic group, are well attested in Chinese sources (Sima Qian writes about them, for example), who inhabited east-central Asia and had extensive dealings with the Chinese and likely spoke an Indo-European language. The best evidence for Indo-European languages in central Asia is associated with Tocharian society of the Tarim basin. It is not clear how the Tocharians related to the Yuezhi, although many scholars believe that they were one and the same. The Tocharians lived along the Silk Roads, and much of their wealth must have stemmed from their control of these routes, where they acted as middlemen or charged taxes/tolls on caravans. Central Asia was not only inhabited by nomadic groups. Settled cultures that resided in the oasis towns and cities along the outskirts of the Taklamakan Desert engaged in agricultural and metallurgy and also lived off of the profits of Silk Roads trade. In many ways the settled communities lived in tandem with the nomadic cultures, trading agricultural goods for the animal-based products of a pastoralist economy. The relationship was not always friendly; often the nomadic groups would extort the settlers just as they extorted long-distance traders.

North America

By 1000 BCE, lifeways in North America varied tremendously, much depending on the environmental conditions in each region. Many of these patterns of subsistence continued on much as they had prior to

1000 BCE. Major changes, however, did occur in the American Southwest, the Eastern Woodlands, and the Arctic.

California was home to diverse cultural traditions from 1000 BCE to 300 CE. Many of these continued traditions very similar to those from earlier periods. Most of these groups were hunter-gatherers, subsisting on the rich resources available in the region. In the Great basin, traditions remained similarly stable; numerous lakeside villages suggest that these people exploited a wide variety of wild game, fish, and plant life. On the Great Plains, this was roughly the period known as the Late Plains Archaic (typically dated from 1000 BCE to 500 CE). Life on the plains remained relatively similar to earlier periods. The significant change associated with this period is a change in projectile point technology. Most important is what scholars refer to as the Pelican Lake point, found first in Alberta and Saskatchewan, that improved hunting (especially bison hunting).

There is a significant degree of cultural continuity among the people of the American Southwest prior to 1000 BCE and continuing well past 300 CE. However, throughout this period numerous local variations, especially in technology, created a variety of unique cultural groups. One of the most noteworthy changes in Southwest culture at this time was the gradual adoption of maize agriculture, which coincided with an extended drought in the region.

The Eastern Woodlands of North America saw drastic changes from 1000 BCE to 300 CE. From about 500 BCE on, elaborate mound burials were erected from the Appalachians to the Mississippi Valley and north to Wisconsin. The most elaborate were those in the Ohio Valley, associated with the Adena ritual tradition. This tradition seems to have been a series of ritual practices shared by diverse groups throughout the Eastern Woodlands. The burial mounds and sacred earthen circles of this tradition are still easy to spot to this day. One of the best-understood groups that developed out of the Adena Tradition are the Hopewell People centered in the Ohio Valley, who first appeared around 200 BCE and disappeared around 400 CE. The Hopewell continued the Adena traditions of elaborate burial mounds and large earthen enclosures. They also became the center of a large trade network (called the Hopewell Interaction Sphere by archaeologists). This network extended a considerable distance, all the way to Florida. From about 1 CE on, there is strong evidence of greater social stratification in Hopewell society, most evident in the increasing variation in wealth in the burial mounds.

From 1000 BCE to 300 CE, three distinct cultural traditions emerged in the Arctic: the Norton, the Thule, and the Dorset. While much is still poorly understood about the early stages of these cultures' history, it is apparent that this was a seminal period for them. The Norton and the Thule thrived in the western Arctic, whereas the Dorset developed in the eastern Arctic. It is apparent that from around 700 BCE the Arctic started to become colder and colder, thus forcing these groups to develop new survival practices.

The Norton people are most associated with Alaska and especially the shores of the Bering Strait. It is likely that they maintained close contact with people living in Siberia, although the extent of these inter-

actions is not yet well understood. As temperatures got colder from 700 BCE on, the Norton moved farther and farther away from Siberia. The origins of the Norton people are not entirely clear, but since they used tools reminiscent of the earlier Arctic Small Tool tradition (2500 BCE–1000 BCE), there was likely some connection. The Norton lived in permanent settlements along the coast and exploited both caribou and maritime resources. The Thule tradition developed out of the Norton tradition (ca. 700 BCE); this new group concentrated on marine mammal hunting for its subsistence, developing kayaks and harpoon technology.

The Dorset people, located in the eastern Arctic, appear around 550 BCE, seeming to develop out of the earlier Pre-Dorset tradition. The Dorset are often taken as the ancestors of the modern Inuit, and Inuit legend describes these people as giants and legendary hunters. Archaeological evidence suggests that they lived in semi-subterranean homes and relied primarily on seals for food. Archaeology and Inuit legend both agree that these early ancestors lacked dog sleds and sophisticated hunting technology. Harpoons allowed them to eke out a living based primarily on hunting, and some of their artwork still survives to the present.

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Mesoamerica

The period from 1000 BCE to 300 CE marks a time of tremendous change in Mesoamerica (Mexico and Central America) in which many of the most important trends for the next 1,000 years were established. This was the period when the Olmecs, the first complex civilization in the region, reached their apogee and then disappeared (merged into other cultures in the region). It is the period in which the first stirrings of Maya culture can be safely identified. And it is during this period that the urban center of Teotihuacan emerges as a regional powerhouse.

Starting around 1200 BCE, the Olmec civilization emerged in the tropical lowlands of south-central Mexico. The Olmecs were long thought to be the “mother civilization” of the later Mesoamerican societies, although this theory is coming under increasing attack as more contemporaneous but non-Olmec sites are explored. Regardless, the Olmecs were an important early complex civilization who developed an elaborate writing and iconographic system and were highly urbanized. Many of their cultural developments (such as human sacrifice, bloodletting, ball games, a complex calendar, mathematics, and mythology) were adopted and adapted by the later Mesoamerican civilizations. Other traits did not continue and remain specific to the Olmec culture, most notably the gigantic stone heads and altars. The first center seems to have been the site of San Lorenzo, which was abandoned around 900 BCE. Following this, the site of La Venta rose to prominence and

remained the largest and most elaborate Olmec city until the decline of the civilization around 400 BCE, when the population of the region declined significantly. It is unclear what exactly brought Olmec civilization to an end, but a number of diverse city-states developed in the region immediately afterward.

From about 400/300 BCE to 250 CE (the Late Preclassic period), Maya civilization began to develop the traits that would typify the Classic Maya (usually understood to date from 250 to 925 CE). Here are the origins of the complex civilization that consisted of independent city-states that interacted through warfare and trading alliances and dominated much of Mexico. The elaborate architecture, advanced writing system, and mythological traditions seem to have their origins in this Preclassic period, although writing is not common until very late. While Maya culture certainly originated much earlier (as early as 1800 BCE), this is the period in which those cultural, artistic, and technological features most associated with the Maya are first apparent. While the Maya certainly shared many characteristics with the Olmec and likely adapted much of Olmec culture, scholars are divided about whether the Maya should be considered the descendants of the Olmec or if they developed out of a variety of ancient traditions.

Around 200 BCE the first buildings were constructed at Teotihuacan, which would grow to become one of the largest and most powerful cities in Mesoamerica. Located in the Teotihuacan Valley in Mexico, the site could not support a large population until the development of sophisticated irrigation technologies made large-scale farming feasible. Once the subsistence base was established, the city grew tremendously. Its highly organized grid plan was relatively unique in Mesoamerica, but its sprawling pyramid and temple complexes may have been the basis for later ritual centers. The population was highly stratified, with extremes in wealth and status apparent in the size and opulence of the structures. The city exerted a powerful influence throughout Mesoamerica, linking much of the region through the exchange of prestige and agricultural goods and through the exaction of tribute upon less-powerful centers. By 300 CE Teotihuacan had a population of over 100,000 people and was nearly 8 square miles (over 20 square kilometers) in size, one of the largest cities in the world.

South America

At the same time as these movements toward greater social complexity and urbanization occurred in Mesoamerica, parts of South America underwent similar changes. In the central Andes a number of complex cultures flourished: the Chavín, the Moche, and the Nazca. The Chavín culture appeared first, in the north-central Andes, developing out of a variety of earlier traditions. Notable for its distinctive art, the major center of the Chavín was the site of Chavín de Huántar, which was most substantially occupied from 900 to 200 BCE. Around 1 CE and lasting until about 600 CE, the Moche culture appeared on the northern coast of Peru. Skilled metallurgists and ceramicists, the Moche also built elab-

orate pyramid complexes supported by large urban populations. Concurrently, the Nazca (or Nasca) culture blossomed in southern Peru, creating their own unique pottery styles. They dotted the landscape with large lines, shapes, and figures by removing the stones from the desert, revealing the lighter-colored topsoil underneath. These Nazca lines, as they are popularly known, are still evident in the Peruvian landscape today, although their original use is debated by archaeologists.

A number of complex societies emerged in the southern Andes as well. From about 1300 to 100 BCE, the Chiripa culture built large stone architecture. This was followed by the Pucara culture (100 BCE to 100 CE). However, the largest group to arise in the southern Andes was the Tiwanaku culture, located near Lake Titicaca. The Tiwanaku first emerged around 400 BCE and lasted until about 1000 CE. However, it is not until about 400 CE that the Tiwanaku reached its maximum extent.

Oceania

The human settlement of Oceania from Southeast Asia continued throughout this age. The migration of the people of the Lapita Complex had extended Southeast Asian culture as far as New Caledonia by around 1000 BCE. The further establishment of human communities on the Pacific Islands continued elsewhere in the Pacific. The islands of Melanesia were settled by horticulturists associated with the Lapita Complex only starting at around 1100 BCE, despite the fact that New Guinea had had a human presence for centuries longer. Starting around 400 BCE, ceramics manufactured in Papua, New Guinea, began to be extensively traded, and by about 1 CE extensive trade networks had been established with the islands of Southeast Asia.

Micronesia likewise saw an intensification of human settlement after 1000 BCE despite the fact that beachside middens (garbage heaps) and tools dating to earlier times have been recovered by archaeologists on some of the islands. Many of the Micronesian sites established during this age were coastal; structures were suspended on stilts built directly on top of reefs. The site of Nan Madol (Pohnpei), which seems to have been first occupied about 2,000 years ago, was one such site, which eventually grew into a series of 93 artificial islands linked by canals. The Polynesian Triangle (bordered by Hawaii, Easter Island, and New Zealand) was the location of the most easterly Lapita movement, and distinctive Polynesian culture can be said to have emerged by 800 BCE. These early Polynesians had come via Fiji, spoke an Austronesian language with origins in Malayasia, and were primarily horticulturalists who brought pigs and dogs with them. By about 500 BCE, the distinctively Lapita material culture had given way, and Polynesian culture began to diversify into separate traditions.

In Australia, artistic and material culture forms that had emerged prior to the period here considered (1000 BCE to 300 CE) continued in their use and elaboration. The so-called X-ray style of rock art (the earliest examples probably date to around 2000 BCE) was elaborated on throughout this age and continues to develop in the present. This is a

distinct style of rock art in which humans and animals are drawn in silhouette. Their internal organs and/or skeletons are depicted within the line and thus the images look like X-rays. The rock paintings at Ubirr (in the Kakadu National Park) may be the best known, and while painting in the rock shelters there may have begun as early as 40,000 years ago, the majority of the paintings that are still visible today date from about 2,000 years ago.

The Stirrings of Late Antiquity

Many scholars of the Mediterranean regions and Europe see the third century CE as a transitional phase between Classical Antiquity and the Medieval Age. Scholars who see this as a meaningful periodization describe this transitional time as “Late Antiquity,” although they rarely agree on finite beginning and end points. Whether or not one accepts this designation of a distinct transitional phase of history, many elements of culture worldwide from the latter half of the third century onward point to greater continuity with what comes after than what came before.

Politically, much of the unity brought by the rise of major world empires began to fragment. Up until the third century, much of Eurasia was connected by four major empires centered in the Roman Mediterranean, Persia/Mesopotamia, central Asia/India, and China, but as the interconnectedness brought by these empires collapsed, the connections and lifeways among the peoples of Afro-Eurasia were transformed. From about 235 to 284, the Roman empire experienced what is often called the “Crisis of the Third Century,” in which the empire almost collapsed due to civil war, outside invasion, and internal pressures such as plague and hyperinflation. Around 258–260, the Roman empire split into three somewhat competing states, and although it was reunified under Diocletian, his division of the empire into east and west set the stage for the later more permanent division of the Roman world into East and West. In India by about 220 CE the Satavahana empire disintegrated, leaving in its place several dynasties ruling over a largely decentralized India that was not centralized again until the rise of the Gupta empire (around 320). China also experienced a period of disunity beginning in 220 and extending for the next three and a half centuries. Although briefly reunified by the Western Jin dynasty (between 280 and 304), much of China’s north was lost to nomadic peoples, precluding anything even approaching a unified imperial state. In contrast to Rome, India, and China, the mid-third century was a period of growing centralized control in Persia under the Sassanian dynasty. After a disastrous defeat by the Romans in 298, the Sassanians ceded control of some of their western provinces but established a peace with Rome that allowed them to develop stability in Persia.

The transitional features of Late Antique Europe were in many ways influenced by the nature of contacts with the rest of Eurasia from the mid-third century onward. The most overt examples of this Eurasian influence were the barbarian invasions (which began around 259) of

the Roman empire that, in various waves, altered the demographic makeup of Europe. Related to this, the later medieval tendency toward the construction of defensive walls around cities arguably began with the construction of the Aurelian wall (271–275) around Rome to protect the city from barbarian invaders. Similarly, the plague that ravaged Roman society around 265 may have been transmitted along the Silk Roads, prefiguring the periodic plagues that would devastate the Mediterranean and regions beyond in the sixth and fourteenth centuries.

The transformations in religion that began during the third century (but fully took root in the fourth century) are some of the most dramatic breaks with what had come before. By the end of this period, the “ancient” religions of Egypt, Mesopotamia, Greece, and Rome had begun to vanish. Christianity became a mainstream religious movement within the Roman empire, so much so that in 337 the Roman emperor Constantine was baptized as a Christian (on his deathbed). Concomitant with its growing population of worshippers, the distinction between Christian laity and clergy became more distinct. The growth of Christian monasticism in third-century Egypt was one manifestation of the separation of sacred and secular, and although initially monasticism developed outside of the authority of the Church, it became a fundamental component of the medieval Church. As Peter Brown has argued, holy people replaced holy sites as centers of refuge, help, and solace. The beginnings of the spread of European Christianity beyond Rome can be found in the missionary movements of the mid-third century. For example, tradition holds that Saint Denis was martyred by pagan priests in Paris in 250, who were alarmed at his successful conversion of the local population. Whether or not this story can be taken as historical, the conversion of pagan populations (often from the top down) became a hallmark of Late Antiquity. Missionary tendencies in other parts of the world had developed earlier. The beginning of the spread of Mahayana Buddhism into northern and northwestern China and the rise of Daoism as a religion in China in the third century dramatically altered the landscape of belief in that region, setting the stage for a Buddhism that was centered in East Asia and a Daoism that competed with Buddhism and Confucianism for influence in China.

In Mesoamerica, however, scholars take the “Classical Age” to have just begun in the mid-third century. Archaeologists employ the periodization “Classic” for the cultural transformations that began around 250 CE, just as “Classical Antiquity” was drawing to a close in the Roman world. As the Classic period began in Mesoamerica, Teotihuacan rose to become the largest city of the Americas (and one of the largest cities in the world at its time). The Maya cities of the southern lowlands (such as Tikal, Palenque, and Copan) entered their era of greatest florescence.

Thus, both the ends and beginnings of Classical Traditions can be seen in the mid-third century. The end of ancient history began in the mid-third century, and over the next 700 years many of these Late Antique trends continued, with the spread of Buddhism and Christianity, the rise of India and China as cultural innovators, and the growth of densely populated Maya, Andean, and Amazonian civilizations.

—Kevin M. McGeough

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Environment and Population

Life in the Arctic changed dramatically between 1000 BCE and 300 CE when the first villages appear along the coast. These villages are part of what archaeologists call the Norton tradition, which first appears along the coasts of Alaska (adjacent to the Bering and Chukchi seas) coincident with a massive warming period. The considerable variation in material culture from village to village along the coast suggests that these communities remained relatively isolated from one another. What these villages did share was an increased reliance on marine resources, especially marine mammals, for subsistence. Advanced harpoons, well suited for hunting seals and even larger prey such as walruses and whales, have been recovered from these sites. Most of these villages would have been permanent settlements, although some campsites may have been used by hunters only in certain seasons. The wealth of marine resources allowed the people of northern Alaska to remain in one location throughout the region's radically different seasons. Even after 700 BCE, when temperatures became dramatically colder, the wealth of marine resources allowed the people of the Norton tradition to thrive until about 800 CE.

Throughout the period 1000 BCE to 300 CE, extreme environments, such as the Alaskan coast, came to be more fully exploited by human populations. Arid areas, such as the Transjordan, became more heavily settled. The domestication of the camel allowed human populations to begin crossing the deserts of Asia and Africa. The spread of agricultural techniques from China to Southeast Asia and Japan allowed greater security in subsistence practice in those regions. Maize agriculture had become an essential component of Maya life. The Pueblo people of the American Southwest also began planting maize in this period, one of the brief times when that region of the world was suitable for this kind of agricultural production.

This was a period of massive population movements and demographic shifts. Many scholars believe that this was a period in which Bantu-speaking peoples spread throughout much of Africa. The steppes of Eurasia were heavily traveled by a variety of groups, including the so-called barbarian tribes that would come to cause problems for the Romans after 300 CE. Throughout Western Europe, Celtic and Germanic groups moved around the fringes of the Roman empire. In parts of Mesoamerica that had been previously settled, larger cities began to form, including the sprawling city of Teotihuacan (the largest city ever in the pre-Columbian Americas) that would come to dominate the region near modern-day Mexico City until its decline in the sixth and seventh centuries CE.

With these population movements came some of the first systematic attempts to map the world. The Greek philosopher Hecataeus of Miletus (ca. 550–ca. 476 BCE) is often described as the first geographer and is credited with writing two major works on geography, although these survive only in fragmentary form. In China, Pei Xiu (224–271 CE) introduced numerous advances into the practice of cartography, and although his critical studies of cartography and mathematics are preserved in some forms, none of his maps are extant.

In China, Pei Xiu (224–271 CE) introduced numerous advances into the practice of cartography, and although his critical studies of cartography and mathematics are preserved in some forms, none of his maps are extant. By far the most influential geographer in this period was Ptolemy, who lived in Roman Egypt from 83 to 161 CE. Best known now for his geocentric view of the universe (that the earth is the center of the universe), he produced numerous other influential works. His *Geographia* summarized much of what was known about and beyond the Roman empire in his time. Pliny the Elder (d. 79 CE) could also be classified as a geographer as well as a natural scientist. His work *Natural History* purports to cover all fields of knowledge and includes extensive discussion on geography and the natural world. In many ways, *Natural History* is a precursor of today's encyclopedias.

The Romans, whose empire spanned major portions of Europe, Southwest Asia, and North Africa from the period of the Roman republic to well beyond 300 CE, ruled over numerous diverse environmental regions. The Italian peninsula, with its Mediterranean climate, had significantly different environmental characteristics from Rome's arid Levantine holdings in the eastern Mediterranean and its highland and boreal North European holdings. Despite the immense varieties in the Roman landscape, Roman cities and infrastructure were relatively standardized. Aqueducts allowed the Romans to bring vast amounts of water into their cities and freed them of the need to build their cities directly by a water source. Roman building technology allowed them to create structures that could withstand the harsh winters of the north and the hot summers of the desert. Heating and cooling technology meant that these buildings could be comfortable no matter where they were located. Of course, this Roman environmental mastery was not without its costs; ancient deforestation is apparent (through the analysis of ancient pollen) in many areas where the Romans once held power. Human costs were also apparent; the utilization of vast amounts of slave labor had profound demographic consequences.

Roman technology, however, could not prevent major environmental catastrophes. The rich volcanic soil located around modern-day Naples is present because of the still-active Mount Vesuvius, which erupted in 79 CE and destroyed the Roman cities of Pompeii and Herculaneum. Mount Etna, located on the island of Sicily, had previously erupted in 122 BCE, causing much devastation on that Roman island. It was not just the Romans who suffered through a volcanic eruption during this period. Around 50 BCE, the town of Cuicuilco was covered by a lava flow, forcing the inhabitants to flee the region.

Earthquakes were equally destructive. The Phrygian city of Laodicea (located in Anatolia) was destroyed by an earthquake around 65 CE. An earthquake in Syria in 89 CE may have killed upwards of 100,000 people. In 226 BCE, one of the Seven Wonders of the World, the Colossus of Rhodes, was toppled by an earthquake. The fallen colossus remained a tourist spectacle for the next 800 years.

Agriculture, the dominant subsistence practice for a vast proportion of the world's population, was also susceptible to environmental problems. Drought was one of the major concerns. In China, droughts beginning in about 18 CE led to varying degrees of famine. In 25 CE the flooding of the Yellow River further weakened the already fragile Chinese agricultural economy. In 92 CE locusts exacerbated the problems even further. Locusts were a problem for the Romans as well. In 125 CE locust plagues in North Africa led to grain shortages in Rome (and a concomitant rise in prices).

—Kevin M. McGeough

■ Introduction: Climate Change and Natural Disasters

Archaeologists thrive on past natural disasters. Whether it be an earthquake that toppled ancient buildings or a volcanic eruption that covered a city in ash, these unexpected disasters ironically preserve ancient life in a way that no other depositional processes do. When people prepare for change or change willingly, they will take their valuables away; usually they do not leave their homes in the condition in which they lived in them. That is why the eruption of Vesuvius in 79 CE and the concomitant destruction of the Roman cities of Pompeii and Herculaneum have been so important for archaeologists. Herculaneum was a small seaside resort located near Neapolis (modern Naples), and Pompeii was a larger center, inhabited since Greek times. When Pompeii was covered by volcanic ash from Vesuvius in 79, it had not fully recovered from an earthquake that had damaged much of the city in 62 CE. The eruption of Vesuvius itself was well documented by Pliny the Younger. Pumice fell for almost 18 hours following the eruption of Vesuvius. Following this, poisonous gasses and lava surged periodically, and slow lava flows emptied down the south and southeast of Vesuvius.

Similarly devastating was the eruption of the volcano Xitle in the Valley of Mexico, whose

lava flows covered the ancient site of Cuicuilco. The ash falls and lava flows were so dense that archaeologists have to use jackhammers to reach the ancient artifacts. The exact dates of Xitle's eruption are debated, but it must have been sometime between 400 BCE and 400 CE. Earthquakes in this period were similarly disruptive. Earthquakes damaged the sites of Laodicea, Rhodes, and other locales in this period. Climate change on a less rapid scale was just as devastating. The gradual desertification of North Africa in the last 1,000 years before the Common Era has dramatically altered the settlement patterns of that region. The following entries detail some of the examples of climate change and natural disasters that are well attested for this period.

—Kevin M. McGeough

The Destruction of Pompeii

The major Roman city of Pompeii was destroyed by a volcanic eruption originating from Mount Vesuvius on August 24, 79 CE. The explosion covered Pompeii and the neighboring city of Herculaneum under layers of volcanic ash and pumice, preserving the cities for posterity and

➤ DEATH IN POMPEII—THE ERUPTION OF MOUNT VESUVIUS

On the morning of August 24, 79 CE, the eruption of Mount Vesuvius, which lasted for nearly an entire day, caused widespread panic in Pompeii. As some people streamed to leave the city amid a hail of ash and pumice, many others felt that it would be best to stay behind under shelter. However, as the pyroclastic flow (torrent of pumice, hot ash, rock, and volcanic gas) rushed toward the cities of Herculaneum and then Pompeii, hundreds met their end from the intense heat emitted by the surge. Those who survived the hail of pumice were asphyxiated by the noxious gases emitted by the flow. As a result of the layers of ash and pumice that covered the corpses amid multiple panicked deaths, archaeologists were able to find preserved remains of people whose body language strongly suggests the apprehension and terror at the moment of their death.

—*Abraham O. Mendoza*

thus allowing contemporary archaeologists and historians to delve into the quotidian existence of ancient Rome. Excavations in the past century have given archaeologists a glimpse into Roman society in the first century CE and have thus contributed significantly to the development of both historical and anthropological scholarship. Notwithstanding the historical value of the ruins of Pompeii, the eruption of Mount Vesuvius itself stands as a significant natural disaster that was regarded as a catastrophe by contemporaries such as Pliny the Younger.

Pompeii and Herculaneum were part of a series of towns surrounding the base of Mount Vesuvius, adjoined by an agriculturally prosperous region near the city of Naples in Campania. Pliny the Younger (61–112 CE), who observed the eruption of Mount Vesuvius from Misenum across the Bay of Naples, provided the first account of the disaster (though he wrote it 25 years after the event). Death by asphyxiation from the poisonous gases or the mass of ash unleashed by the eruption immediately killed many of the city's residents, many of whom were unable to evacuate in time from the environs of the city or from their own residences. Pliny the

Younger's uncle, Pliny the Elder, as Admiral of the Imperial fleet, died trying to assist in evacuation efforts in the midst of the disaster. Due to Pliny the Younger's documentation as well as that of other historians, the destruction of Pompeii was preserved as part of the Roman historical record.

The actual excavations of Pompeii and Herculaneum did not occur until well into the fourteenth century CE. A local aristocrat contracted the construction of water channels, which necessitated digging in the vicinity of the ruins of Pompeii in 1549. While laborers found antique artifacts and inscriptions in the midst of their work, they were met with indifference. More extensive excavations did not occur until 1709, when a local resident digging for a well discovered marble from the ruins. The land was bought to be used as marble quarry for the construction of a villa for an Austrian military official, which led to the excavation of the theater of Herculaneum. However, the Spanish ousted the Austrians from this region of Italy, and it became part of the Spanish dominions. As a result, Spanish military engineer Giocchino de Alcubierre supervised the excavations of the site, followed by Swiss engineer Karl Weber. By 1738, the site was identified as the ruins of Herculaneum, and by 1748 excavations had begun on the adjacent site of Pompeii.

During this period, significant finds were made amid the excavations such as bronze sculptures, libraries of papyri rolls (such as the Villa of Papyri), and other examples of Roman architecture, art, and technology. Preserved houses, public buildings, and theaters were found, which allowed archaeologists to view well-preserved manifestations of Roman architecture and daily life. Art, in the form of sculpture, inscriptions, paintings, and mosaics, also gave scholars a glimpse into the culture and aesthetic appreciation of the ancient Romans. Many of these findings were intact, as the layers of ashes protected these artifacts from the wear and tear of the centuries since the eruption. With the identification of Pompeii in 1763, local efforts were made at converting the site into a tourist destination.

In the nineteenth century further excavations were made, albeit with a more scientific approach and a will to preserve the sites for his-

torical and archaeological reasons. Systematic excavation of the sites was conducted under the aegis of Italian archaeologist Giuseppe Fiorelli from 1863 to 1875 (commissioned during the process of Italian unification by King Victor Emmanuel). The sites were excavated by sector, and the findings and process were documented meticulously by Fiorelli, with greater efforts made at preserving the sites and allowing findings to remain in location rather than being extracted. These practices have continued into the present, as Pompeii remains a major tourist destination (it was declared a UNESCO site in 1997). Despite the catastrophic nature of the disaster and the mass death of the inhabitants of the region, Pompeii remains an important archaeological find for posterity, as it offers the modern world a snapshot of life in ancient Rome.

—Abraham O. Mendoza

Bibliography

- Beard, Mary. *The Fires of Vesuvius: Pompeii Lost and Found*. Cambridge, MA: Belknap Press, 2008.
- Berry, Joanne. *The Complete Pompeii*. London: Thames and Hudson, 2007.
- Cooley, M. G. L. *Pompeii: A Sourcebook*. New York: Routledge, 2004.

The Destruction of Cuicuilco

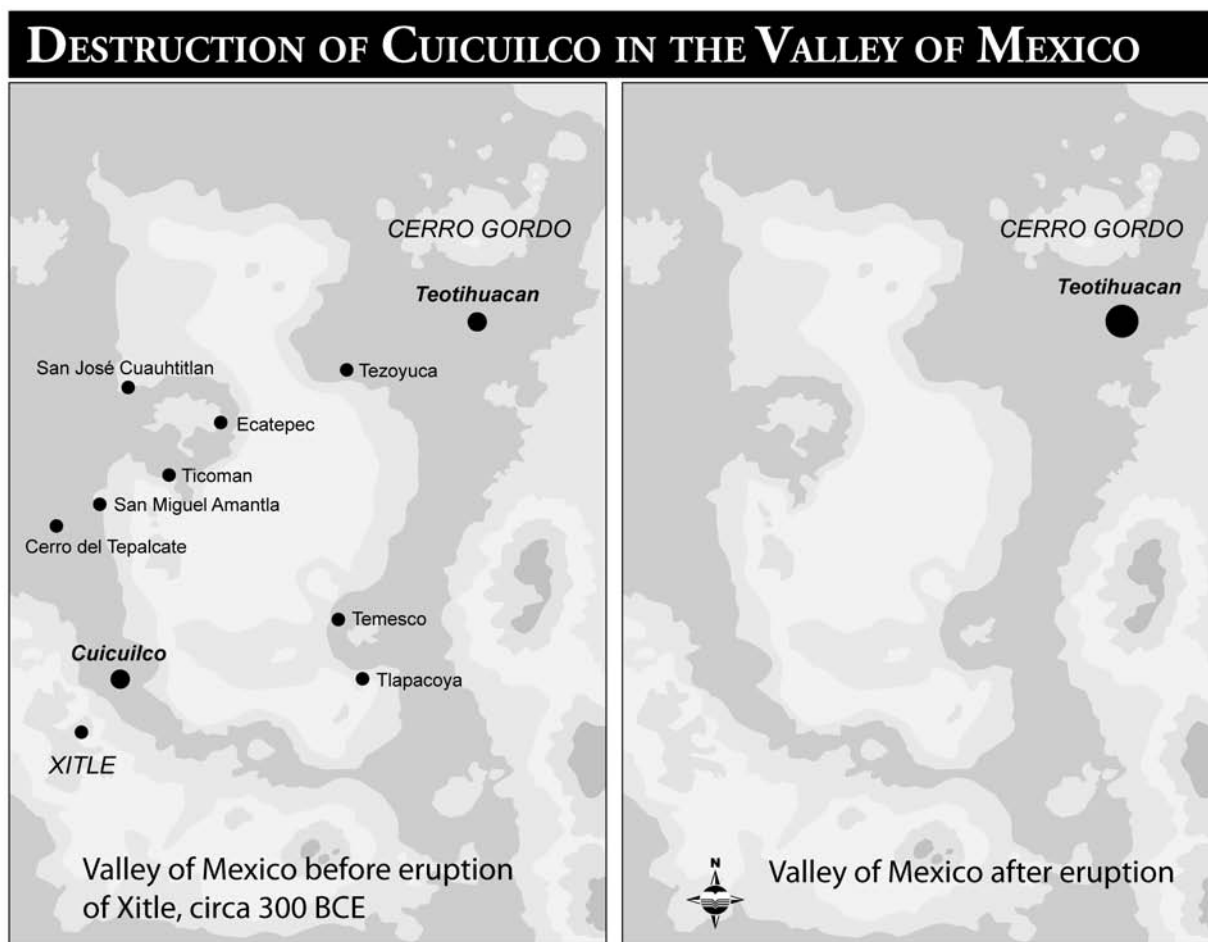
Cuicuilco is a little known but important ruin situated within the southern urban footprint of Mexico City. It is arguably the oldest city of central Mexico, the precursor for a series of great cities—Teotihuacan, Tenochtitlan, and Mexico City—located in the same valley, each of which have been the largest American city of its era. Cuicuilco, which may have had 20,000 inhabitants at its peak in about 100 BCE, exhibited political specialization, organized religion, ceremonial architecture, complex burial practices, long-distance trade, and calendrical astronomy. The city was composed of temple mounds, ceremonial plazas, pools for irrigation, and extensive residential housing. Compared to other ancient American ruins, we know relatively little about Cuicuilco's origins or history. We do know the cause of its demise, however, which is often the most difficult question of archaeology. A



Cuicuilco's main temple mound, Mexico City.
(Shawn W. Miller)

massive eruption of the nearby Xitle volcano covered the entire city in as much as 33 feet (10 meters) of lava, leaving only the very tops of Cuicuilco's largest pyramids exposed. Molten rock reached to Lake Texcoco, blanketing 30.8 square miles (80 square kilometers) of the valley floor. The cataclysm helped preserve many artifacts from the period, but the tomb of solid rock has made Cuicuilco's extent difficult to visualize and has made archaeological investigation, which requires jackhammers and heavy equipment, expensive.

Cuicuilco's presence beneath its lava vault was not discovered until the early 1920s. Manuel Gamio, after studying at Mexico City's School of Mines and then completing a PhD with Franz Boas in anthropology at Columbia University, recognized San Cuicuilco, what had long been thought a hill, as a temple mound protruding from the lava field's surface. After a few minor excavations that proved the mound to be man-made, Gamio invited Byron Cummings from the University of Arizona to join his investigations. Cummings arrived with funding from the National Geographic Society that permitted the purchase of machinery to remove the encumbering rock layer. Beginning in April 1922, workers unearthed the 89-foot (27-meter) pyramid that was unusual for its circular form and, hence, not a true pyramid but a truncated cone built in tiers from its 394-foot (120-meter) diameter base. It had a stone (rather than earth) core and was dressed in rough volcanic rock. The Xitle



volcano had probably been partially active for much of Cuicuilco's existence, which placed the fire god Huehuetēotl at the top of the local pantheon. The temple mound's conical form may have been in imitation of Xitle's near-perfect volcanic cone. Two ramps, on the east and west, accessed the mound's sacred platform from which the smoke of sacrifice and incense, like Xitle's exhalations, would have risen to the heavens. As excavations tunneled into the top of the mound, Cummings revealed a number of unusual altars, some oval in shape. He estimated that the pyramid, in typical Mesoamerican fashion, had been rebuilt upon itself some five times.

Gamio identified the ceramic and burial objects found under the lava as related to a period and people previously known as the Culture of the Sierra but that he now denominated as the *Cultura Subpedregalense*, that is, the culture found beneath the Pedregal lava field. Pottery

styles proved links to the Olmec culture. Gamio's ceramic series dated Cuicuilco in the Middle and Late Formative periods, roughly 700 BCE to 150 CE. Cummings, however, believed the city to be more than 8,000 years old based on estimates of the lava's age and of deposition rates of the ash beneath the lava. His claim would have made Cuicuilco one of the world's oldest cities and its pyramid the world's first. His claim would remain controversial for half a century. Unfortunately, Cummings published little of his work on Cuicuilco because the briefcase in which he kept all his papers was stolen from a local train station.

In the 1950s, new studies provided a better sense of Cuicuilco's extent: a total of 17 pyramids were identified. And in the late 1960s, a number of new excavations were commenced in a rush to salvage artifacts that were to be built over by facilities for the 1968 Olympic Games.

Dozens of residential foundations were uncovered, both circular and rectangular, most of them with finished stucco floors. Radiocarbon dating finally made a reliable challenge to Cummings's initial estimate. After many trials testing charred vegetation just below the lava layer, scholars believe that the eruption could not have occurred before 50 CE or any later than about the year 300, corroborating Gamio's ceramic evidence that placed Cuicuilco's origins about 600–400 BCE. The city was abandoned at the time of the eruption, and the presence of household images of Huehuateotl, Cuicuilco's fire god, in Teotihuacan suggests that some of Cuicuilco's inhabitants migrated north to live beyond the reach of the valley's southern volcanoes. Cuicuilco's ruins remained a place of pilgrimage for centuries after the disaster.

The most recent major discovery at Cuicuilco is a 13-foot (4-meter) stele, or obelisk, buried vertically beneath the footing of the main pyramid. Covered with a variety of decorations, some associated with Huehuateotl, it is believed to have served an astronomical purpose and is the oldest stele discovered in the Americas.

Because of its location within an ever-expanding city and despite its importance, Cuicuilco's archaeological zone remains under constant threat. Much of the complex has been

built over, including by many edifices on the National University campus. More recently, in the late 1990s, despite laws that protect Mexico's cultural patrimony, a large shopping mall, the Plaza Cuicuilco, and an office complex have superimposed themselves on portions of the ruins, which upset many Mexicans. From one perspective, new buildings form just one more layer in the archaeological stratigraphy. But much has been lost that might help us understand the origins of civilization in the Americas. What remains of Cuicuilco's original site is a fenced island of desert plants clinging to the lava substrate, surrounded and threatened on all sides by multilane highways and commercial and residential development.

—Shawn W. Miller

Bibliography

- Cordova, Carlos, Ana Lillian Martin del Pozzo, and Javier López Camacho. "Paleo Landforms and Volcanic Impact on the Environment of Prehistoric Cuicuilco, Southern Mexico City." *Journal of Archaeological Science* 21 (1994): 585–596.
- Cummings, B. "Ruins of Cuicuilco may Revolutionize Our History of Ancient America." *National Geographic Magazine* 44 (1923): 203–220.
- Heizer, R., and J. A. Bennyhoff. "Archaeological Investigations of Cuicuilco, Valley of Mexico, 1956." *Science* 127 (1958): 232–233.

■ Introduction: Changes in Food Production and Water Management

Food and water are fundamental human needs, and any changes in practices associated with acquiring either have a significant impact on human populations. For archaeologists, identifying differences in subsistence strategies (strategies for acquiring food and water) are indicative of significant cultural changes as well. For example, around 1000 BCE the people of the Arctic developed hunting technologies that allowed them to take advantage of the wealth of marine life located on the Alaskan coast. The stable migration patterns of sea mammals and the abundance of food (and subsidiary products) led to the establishment of permanent settlements.

From the period 1000 BCE to 300 CE, one of the most notable changes through Asia and Africa is the spread of rice cultivation, which required significant alterations in the landscape and day-to-day work life of the people who adopted rice into their diet. Agriculture also spread throughout the American Southwest at this time, allowing year-round settlements in what had previously been marginal regions.

This period is also noteworthy in that food- and water-management practices developed that allowed people to make use of land that was previously inhospitable or underutilized. It is in this time that grape and olive production spreads

from the eastern Mediterranean to the west (the ancestors of the Italian, French, and German vineyards that provide such a large percentage of today's world wine and olive supplies). Water systems throughout the Americas allowed more stable permanent settlements as people learned to control their water resources. Simple (but effective) hydraulic systems were put into place in the desert fringes of the Near East and central Asia, allowing land that was previously uninhabitable to sustain small centers and caravan stopping points.

—Kevin M. McGeough

The Beginning of Banana and Rice Cultivation in Africa

The development of cultivation in sub-Saharan Africa is still poorly known, but recent discoveries have shed new light on this subject. Apart from evidence of domestic pearl millet in the early second millennium BCE and probably cowpea slightly later, domesticated plants are not attested in sub-Saharan Africa until the first millennium BCE or the early centuries CE. Archaeological finds outside Africa, however, do not suggest a complete picture: crops of African origin, sorghum (bicolor type), pearl millet, cowpea, and hyacinth bean have been reliably identified from parts of South Asia in contexts of the late third or earlier second millennium BCE. This must indicate that these, and probably other crops, were already under cultivation in Africa by this date and probably considerably earlier.

Settlements with ground-stone tools, grindstones, and pottery are known from the rain forests of central Africa. Most date from the first millennium BCE or early first millennium CE, but some may have had pottery by 3000 BCE or even earlier. The people occupying these settlements probably lived by hunting and gathering but also planted oil palms and encouraged useful forest species such as bush-candle trees. In later times bananas (plantains) were the main staple of rain forest horticulture; it has been suggested that yams provided the staple until the

introduction of bananas, although yams do not grow well in the rain forest, which lacks the dry season they require.

The earliest literary reference to bananas in Africa dates to the sixth century CE. Until recently, bananas and other Southeast Asian crops were thought to have been first introduced when Madagascar was settled by people from Island Southeast Asia sometime in the mid-first millennium CE. These people probably also settled on the East African coast or at least were in contact with communities there.

However, some scholars had begun to suggest, on linguistic grounds, that bananas had been introduced to the east coast of Africa much earlier, before 1000 BCE; the diversity of plantain varieties in the African rain forest also indicates an early introduction. Recent discoveries now provide support for this theory. Excavations at Nkang in Cameroon yielded phytoliths (microscopic silica plant remains) from the domestic banana, *Musa* sp., dated to 840–350 BCE. (There are as yet no criteria established to distinguish between phytoliths of the different banana varieties; however, it is assumed that the Nkang phytoliths are from plantains.) This is currently the only direct evidence for early horticulture in the African rain forest. Contacts between groups across the continent presumably carried bananas to the forest region, where they, rather than yams, may have been the first crops cultivated by the region's inhabitants. Anthropologists Edmond De Langhe and Pierre de Maret suggest that the introduction of the plantain may have been responsible for the first-millennium increase in rain forest villages.

The domestic banana has a long and complex genetic history, not yet fully known, involving the development and hybridization of several varieties, principally *Musa balbisiana* (B phenotypes), whose distribution today extends from southwestern China through Burma into India, and *M. acuminata* (A phenotypes), which has a more restricted distribution, within Southeast Asia. Hybrids between these species developed at an early date, as did diploid and triploid varieties. Genetic research indicates that *M. acuminata* var *banksii*, which was cultivated in

New Guinea perhaps as early as 7000 BCE, contributed the AA genome in the plantain, an AAB hybrid. Where the plantain developed is not yet established; both New Guinea and eastern Island Southeast Asia have been suggested. The plantain spread into western areas including southern India, which became a secondary center of development. Phytoliths of domestic banana were recently discovered at a Harappan site, Kot Diji, in the third millennium BCE. It is therefore possible that it was from South Asia that bananas were introduced to Africa, perhaps through the same contacts that took African crops to South Asia.

In contrast to the rain forest, farmers in the highlands of East Africa, and particularly the Great Lakes region, today cultivate a sweet banana, the triploid (AAA) *M. acuminata*, known as the East African cooking banana. Its introduction may date from the Southeast Asian colonization of Madagascar. While domestic animals were kept in East Africa from the third millennium BCE by groups who also hunted, fished, and exploited local plants, cultivation is currently not evidenced until the mid-first millennium CE.

However, a startling discovery was made in 2005: banana phytoliths, apparently much earlier, in sediment cores from Munsa, a papyrus swamp in the Ugandan highland. The paleoenvironmental evidence from the cores reflects a forested environment without agriculture in the immediate vicinity until relatively recently (second millennium CE), but banana phytoliths appear at irregular intervals throughout the sequence, from the basal deposits dated before 3500–3100 BCE and others before 2000 BCE as well as from much more recent dates. The deposits in the swamp include organic materials that eroded from sediments in the surrounding area, some possibly considerably earlier than the swamp deposits. If the dates reflect the age of this material, this would provide a possible explanation for the puzzling date of this find. If, however, the phytoliths genuinely date from before 3500 BC, there must have been contact between Africa and South or Southeast Asia far earlier than is currently accepted, an exciting and challenging prospect.

➤ JENNÉ-JENO

The location of Jenné-jeno close to the confluence of the Bani River with the Niger gave its inhabitants access to rich supplies of fish, abundant land for grazing during the dry season, and extensive floodplain suitable for rice cultivation during the inundation, when domestic stock were probably moved to upland areas. During the first period of the settlement's occupation, from around 250 BCE to 99 CE, its inhabitants fished, raised domestic cattle and caprines, and exploited local wild plants and animals but also cultivated rice, pearl millet, and sorghum. Wild plants remained important throughout the settlement's history. The town reached its apogee in the period 300–800 CE, probably growing to more than 98 acres (40 hectares). Local agricultural productivity, combined with its situation at the interface between river-borne trade to the north and trade with the highlands to the southeast, enabled Jenné-jeno to grow into a major town with well-developed craft industries, trading fish and rice in exchange for copper, iron, gold, and stone as well as fruit and probably salt. Even in the first period there were stone beads and iron at the site, brought in through interregional trade. Jenné-jeno's agricultural produce helped maintain the trading towns farther north at the Niger bend such as Timbuktu, which were the contact points for trans-Saharan trade. After 800 CE the town began to decline, and by the fifteenth century it had been abandoned in favor of a settlement 1.8 miles (3 kilometers) to its northwest.

—Jane R. McIntosh

Bananas and plantains became important staples in parts of Central and East Africa. Farther north in the western regions of West Africa, this role was taken by African rice (*Oryza glaberrima*). The harvesting of wild rice is known by 1200 BCE at Gajiganna in Nigeria. Rice cultivation is still believed to have been a relatively late development, probably in the Inland Niger Delta. Jenné-jeno, the principal settlement of this region, was established around 250 BCE; crops present throughout the occupation included rice, grown on the floodplain during the inundation, and sorghum and millet, grown as

décru crops, planted on moist soils left by receding floodwaters and requiring neither rain nor irrigation. Recent excavations have pushed back the date of rice cultivation in the region to around 800–700 BCE, a period for when a large quantity of domesticated rice was recovered at Dia, on the Diaka River, 62 miles (100 kilometers) northwest of Jenné-jeno.

It is likely that the first cultivation used floating rice, a variety that grows long stalks as the flood waters rise and that is often harvested from a canoe; cultivation may subsequently have spread to regions where nonfloating varieties could be grown in shallower water and finally to upland areas where varieties suited to dry cultivation were developed. Rice provided a staple crop that in some areas probably eclipsed other earlier cereals, but the seasonal differences in crop requirements meant that in many cases both rice and other cereals could be raised. This was the case, for example, at Jenné-jeno.

—Jane R. McIntosh

Bibliography

- De Langhe, Edmond, and Pierre de Maret. "Tracking the Banana: Significance to Early Agriculture." In *The Prehistory of Food: Appetites for Change*, edited by Chris Godsen and J. Hather. London: Routledge, 1999.
- Lejju, B. Julius, Peter Robertshaw, and David Taylor. "Africa's Earliest Bananas?" *Journal of Archaeological Science* 33 (2006): 102–113.
- Mbida, C. M., et al. "Yes, There Were Bananas in Cameroon More Than 2000 Years Ago." *Info-Musa* 13 (2004): 40–42.
- McIntosh, Susan Keech, ed. *Excavations at Jenné-Jeno, Hambarketolo, and Kaniana (Inland Niger Delta, Mali): The 1981 Season*. Berkeley: University of California Press, 1995.
- McIntosh, Susan Keech, and J. Roderick. "Initial Perspectives on Prehistoric Subsistence in the Inland Niger Delta (Mali)." *World Archaeology* 11 (1979): 227–243.
- Neumann, Katharina. "The Romance of Farming: Plant Cultivation and Domestication in Africa." In *African Archaeology: A Critical Introduction*, edited by Ann Brower Stahl. Oxford, UK: Blackwell, 2005.
- Shaw, Thurston, et al., eds. *The Archaeology of Africa: Food, Metals and Towns*. London: Routledge, 1995.

The Spread of Agricultural Development South of the Yellow River in China

Beginning from the ninth century BCE, the state of Chu emerged in the central Yangtze River basin, south of the Yellow River. When the Yellow River basin became one of the five areas in the world where agriculture developed the earliest, the vast land of the Yangtze River was primarily covered by forest and sparsely settled by different tribal peoples. Since the founding of Chu, the ongoing migrations from the North were greatly accelerated; as improved technology spread, agriculture in the southern land developed rapidly. Also, the Chu state made many attempts to promote economy to finance its continuous warfare, which further stimulated the agricultural development southward in China.

Exactly how the state of Chu started up remains a question. The legend claims that its ruling house, the Xiong family, descended from a clan that originated in the Yellow River region. After gaining a foothold in the central Yangtze River basin, the Xiong family gained the recognition of the reigning dynasty of Zhou in the ninth century BCE and thus began its ruling lineage. While the story may reflect the southward migration of the people from the more densely populated north, the reality may be more complicated. The Chinese records referred to the tribal peoples originally settled in the Yangtze River basin as Bai Pu and Bai Man, or "various tribes of Pu and Man." Most of these tribal peoples spoke languages other than the Chinese in the North; they grew rice but relied on an earlier farming technique, that of burning and slashing. The ruling family of Chu might well indeed come from the North, but as a newcomer and likely smaller in numbers, the Chu must have had to work with these various local peoples. The result was more likely a hybrid culture that grew out of the continuous marriage between the northern and the southern cultures. In fact, two centuries after the founding of Chu, the more Chinese states in the North refused to accept the Chu as an equal on the ground that it was of Man, a degrading term for the non-Chinese peoples. The Chu ruler did not defend himself, though; instead, he was

proud of being a Man, saying that in that way he would not observe the rules and norms of the North.

The continuous fusion between the northern migrants who came with the Chu ruling lineage and the local tribal peoples resulted in the rapid spread of agricultural development southward in China. The migrants from the Yellow River basin brought with them to the South more advanced technologies. Among these technologies were iron metallurgy and irrigation. Irrigation, in particular, had been developed in the North for many centuries and was instrumental in the success there. On the other hand, the South enjoyed some natural advantages: more rainfall, warmer temperatures, and better access to rivers and lakes. The technological advantage of the North when combined with the natural advantage of the South resulted in the fast growth of thriving agriculture in the Yangtze River basin. The power and influence of Chu grew most significantly during the reign of King Zhuang (613–591 BCE) and the growth owed largely to the building of many state-sponsored irrigation projects in its territory. Of these, the largest one was in present-day Gushi, south of Henan province, that allowed the Chu to more effectively harness the water resources of the Huai River. Since its founding the Chu expanded in all directions, with the most gains in the South. Unlike elsewhere, the aborigines across the land south of the Chu were tribal peoples; the absence of well-organized resistance was key to the Chu's great success there. By the fifth century, the Chu influence had reached much of the middle and lower Yangtze River basin as well as present-day Yunnan province in the Southwest. As the Chu continued to expand, farming technology spread farther, and agriculture developed consequently.

The agricultural development in the Yangtze River basin owed much to the state policy of the Chu. In addition to building irrigation projects, the Chu rulers also adopted other policies to promote the opening of the South. Because the acquisition of land in the South outpaced the movement of people, the Chu statesman and one of the most well-known strategists Wu Qi formulated a reform, forcibly moving wealthier fami-

➤ GENERAL WU QI, THE CHU REFORMER

Wu Qi was one of the best military strategists in ancient China, usually paired with the world-famous Sun Zi; together they are usually referred to as Sun-Wu. Another important part of Wu's life, one that is less known, is that he was also a political statesman and a reformer. A native from the state of Wei in the north, Wu spent most of his youth in search of a career but did not get his best chance until he moved to Chu in 390 BCE. He was first made a general responsible for border defense, and after his unusual vision and talent were well proven, he became the prime minister of Chu in charge of political reform. His reform consisted of a series of policies to strengthen the military and to enrich the country, and the centerpiece of it was to weaken the aristocratic power by relocating the wealthy families to the frontiers. Wu's reform brought about agricultural development and greatly enhanced the king's power but also alienated the aristocracy. After King Dao of Chu died in 381 BCE, Wu was killed by the aristocrats in a coup d'état. When the reform came to an abrupt end, the fortune of Chu also started to go downhill.

—Yi Li

lies within the kingdom and resettling them in the frontiers. While such a reform policy might have encountered opposition from these wealthier families, the government-led migration brought immediate effects. Among the warring states, the Chu had long built a reputation as a state that had all its granaries filled, so its people did not have to worry about famine. To encourage his soldiers to fight harder, the Chu king often rewarded them with large amounts of grain. For example, Wu Zixu, an enemy of Chu for the great damage he did to the state, was wanted at 50,000 *shi* (one *shi* is about 100 pounds) of grain. The agricultural development in the South gained for the Chu necessary and valuable resources in its bid for dominance in China.

—Yi Li

Bibliography

Cook, Constance. *Defining Chu: Image and Reality in Ancient China*. Honolulu: University of Hawaii Press, 2004.

Eberhard, Wolfram. *China's Minorities: Yesterday and Today*. Belmont, CA: Wadsworth, 1982.

Wiens, Herold J. *Han Chinese Expansion in South China*. Hamden, CT: Shoe String Press, 1967.

Roman Aqueducts

While the Romans did not invent the concept or basic design of aqueducts, they certainly perfected their efficient application in supplying reliable water to the cities throughout their empire.

In Roman aqueducts, the principle of gravity flow carried water through an enclosed conduit (*specus*) that usually ran on the surface or underground, from the source in neighboring hills to a distribution tank (*castellum*) in the city, located at the highest attainable point to allow widespread distribution. Settling tanks (*piscinae*) were usually built both at the source and along the course to settle out impurities and to aerate the water. Within the city, pipes (*fistulae*) of either terra-cotta or lead were tapped off the *castellum*, run below the stone pavement of

streets, and fed into fountain houses (*nymphaea*) and other points of use.

The requirements for a suitable source of water were stringent: pure water, year-round flow, sufficient elevation to allow a constant gradient into the city, and yet enough distance from human and animal habitation to be uncontaminated. Vitruvius gives detailed recommendations on how to find sources of groundwater and determine its purity: an examination of the topography, the nature of the soil, surface vegetation, the presence of moisture, and even water diviners for the former; and, for purity, a study of the appearance of the water, suspended particles, and even the health of those who live nearby. Other sources, including the medical writer Hippocrates and Pliny the Elder, rank rainwater as the most pure, but acknowledge that underground springs are most commonly used for feeding aqueducts, in part because of their reliability. Despite this, at least two of the aqueducts that supplied Rome took their water directly from the Anio River northeast of the city.

➤ FRONTINUS AND THE AQUEDUCTS OF ROME

When Frontinus became curator of Rome's water supply in 97 CE, nine aqueducts had been built to feed the city, beginning with the relatively short *aqua Appia* in 312 BCE and eventually totaling 272 miles (438 kilometers) in length. The first two were largely subterranean; thereafter arcades were used to carry the channels across the plain that lay between Rome and the hills to the east. To save on expenses, several separate channels could be superimposed one on another, making use of the same arcade, or channels from different sources were joined together and their waters mingled.

These conduits fed elevated cisterns, from which the water was distributed through clay or lead pipes first to innumerable fountain houses (*nymphaea*) that supplied water for drinking and cooking to most of the inhabitants; public baths (the smaller *balnea* and the immense *thermae*) contributed to a relatively high standard of personal and public hygiene; and the presence throughout the city of public latrines and drains helped prevent regular outbreaks of disease. Rome

in 100 CE boasted a water management system unequalled in Europe until the nineteenth century, with a bureau of the civil service in charge of maintenance and of ensuring equitable distribution.

The maintenance of such an essential and complex system, and the need to supervise the fair distribution of the water to baths and industries as well as to individuals, required an equally complex bureaucracy. We are fortunate to have Frontinus as our guide to this system, a curator of the water supply who was so determined to encourage his successors to maintain his rigorous standards of maintenance and enforcement that he composed a two-volume handbook, which still survives, containing detailed descriptions of the hydraulic and engineering elements of the system, of the laws that governed the distribution of the water, and of the creative ways that Romans surreptitiously tapped into the public system to bring a private supply to their homes.

—John W. Humphrey

Wisely, the water was first channeled into a settling tank, where it would be held motionless to allow the coarsest of sediment to fall to the bottom. From there it was led into the conduit for its journey to the city. If the water was not clear and potable when it entered the city (and several aqueducts brought muddy and even foul-tasting water into Rome), the inhabitants had a variety of techniques for purifying it: by boiling, by filtering it through porous amphorae, sand, charcoal, and wool, by desalination (evaporation followed by condensation), and—most commonly—by mixing it with wine to camouflage the taste and, at least in theory, to counteract impurities.

To those unfamiliar with the details of Roman water conduction, the term “aqueduct” conjures up images of stately arches marching across the plain of Latium toward the walls of Rome. While this is not imaginary, it is unusual: both finances and security made such elegant structures relatively uncommon, though they are even now the most visible remnants of the system. In fact, most channels were by preference built along the surface of the ground or in a shallow trench, and covered with slabs to prevent evaporation. To avoid long detours around hills, the channel was occasionally accommodated in a subterranean tunnel, and only when traversing a deep gorge or a flat plain was the gradient maintained by elevating the conduit on arcades.

Because many of the water sources were heavy with calcium carbonate, the floor and walls of the conduit would often become encrusted with lime, a deposit that archaeologists call by its German name, *sinter*. By building settling tanks, particularly at the source, the Roman engineers tried to precipitate out most of the limestone, but regular removal of the accumulated (and remarkably hard) sinter was necessary to maintain the proper flow of the aqueduct. Very occasionally and (so far as the evidence suggests) only in a few regions of the empire—southern France and Asia Minor particularly—did the Romans avoid the necessity of arcades by connecting the gravity-flow conduit to a kind of “inverted siphon” based on the principle that water in a closed system finds its own level.

Regular access holes from the surface allowed regular maintenance and cleaning of the channel, at least annually to remove the accumu-

lated sinter and other deposits. Repairs were to be done speedily, because the regular flow could be shut off only at the source, thus temporarily depriving thousands of city folk of their water supply.

—John W. Humphrey

Bibliography

- Evans, H. B. *Water Distribution in Ancient Rome*. Ann Arbor: University of Michigan Press, 1994.
Hodge, A. T. *Roman Aqueducts and Water Supply*. London: Duckworth, 1992.
Humphrey, John W. *Ancient Technology*. Westport, CT: Greenwood, 2006.

The Introduction of Rice into Southeast Asia

Although wild rice was exploited from early times in Southeast Asia, domesticated rice and agriculture were apparently introduced rather than developed locally. Strong similarities between the distinctive pottery of Yunnan in southern China and that found, along with agricultural tools, domestic animals, and sometimes rice remains, in settlements in mainland Southeast Asia, such as Non Nok Tha in Thailand, Samrong Sen in Cambodia, and Phung Nguyen in Vietnam, suggest that rice farmers spread south from China along the Red (Hong) River, Mekong, and other major rivers around 2500–2300 BCE. By 2000 BCE probable farming settlements are known as far south as the coastal plains of Malaysia, such as at Jenderam Hilir in Selangor.

Settlements were established along streams and tributaries in these river valleys. Stone or wooden hoes and digging sticks were used to clear the land of weeds. Often no ground preparation was required before sowing, though domestic cattle might be used to puddle the soil. Rice was probably sown by broadcast on seasonally inundated land, the plants growing in the moisture left as the floodwaters receded. The rice was harvested with slate or shell knives. At first, the areas settled by farmers were limited. For example, in the Red River valley, early farming settlements were mainly upriver of its confluence with the Black River. From around 1500 BCE, agriculture became much more widespread, mainly in inland areas. Rice, along with

PHILIPPINE AGRICULTURAL TERRACES

Remarkable terraced paddyfields on the slopes of Luzon's Cordillera Mountains were probably constructed around 2,000 years ago. Those of Ifugao Province are now a UNESCO World Heritage site. The terraces follow the hillsides' contours and were artificially built up. A drystone wall forms the outer edge of each terrace, behind which gravel was packed, topped by a thick layer of hard-packed soil and finally a layer of topsoil, creating a terraced field that holds water for growing paddy rice. Using a complex system of earthen channels, wooden and bamboo pipes, sometimes with dams and sluices, water from springs and rainfall on the rain forests of the higher slopes is supplied to the staircases of paddyfields, finally collecting in the rivers below. Conservation and sustainable use of the forest are an integral and vital part of the system's maintenance and viability. The slow and managed descent of the water protects against flash floods and erosion. Modern neglect of terrace maintenance in some areas is having serious consequences. Similar hillside terracing for rice cultivation exists elsewhere, including Nepal, China, Vietnam, Thailand, and Indonesia, but the Luzon terraces on their precipitous slopes are the most spectacular.

—Jane R. McIntosh

domestic animals and often fish, provided considerable prosperity, reflected in elite burials furnished with valuables made of imported and local materials including copper and bronze, which were now worked.

Some scholars argue that this spread of farming can be correlated with the region's colonization by speakers of Austro-Asiatic languages. These are spoken today in parts of mainland Southeast Asia and pockets in India. An early Austro-Asiatic language may have been spoken in southern China. Formerly it appeared that rice was domesticated once, in China, and spread from there through Southeast Asia into India; correlating this with the spread of Austro-Asiatic speakers then seemed plausible. Now, however, genetic evidence has shown that there are two distinct varieties of rice, separately domesticated in China (*Oryza sativa japonica*, by around

4500 BCE) and India (*Oryza sativa indica*, probably during the third millennium BCE). Moreover, it now seems likely that India's Austro-Asiatic (Munda) languages were widely spoken at an early date, making it possible that the Austro-Asiatic language family originated in India. Whatever the truth of this, it is now necessary to decouple the spread of rice cultivation and the spread of Austro-Asiatic languages, which should be investigated separately.

Both *japonica* and *indica* rice are now grown in Southeast Asia, which lies within the range of the wild ancestors of both. At some stage another variety, tropical *japonica* rice (formerly known as *Oryza sativa javanica*), developed in Southeast Asia. This resembles *indica* but actually developed from *japonica*. The problems of confidently distinguishing among the three varieties, using the limited rice remains recovered from early Southeast Asian sites, make the delineation of their history in the region exceptionally difficult.

Although colonists introduced rice agriculture, the onward spread of farming through Southeast Asia is likely to have involved a mosaic of mechanisms: further movement by the colonists' descendants, acculturation of local hunter-gatherers by their farming neighbors, and the circulation of agricultural produce and technology among hunter-gatherers themselves through the wide-ranging exchange networks. This is exemplified at the coastal settlement of Khok Phanom Di in Thailand, occupied during 2000–1500 BCE, where foragers exploiting local wild resources used rice probably obtained from an inland farming settlement. However, for a short period when the sea level fell, creating a freshwater environment, the villagers, while still using local wild resources, also grew their own rice, using granite hoes and shell harvesting knives, which appear in this period and disappear after it.

The spread of agriculture through Island Southeast Asia has also been linked with the spread of a language family, Austronesian, in this case more persuasively. By 2500 BCE farming was established in Taiwan, home of the Proto-Austronesian language. The spread of agricultural settlements through much of Island Southeast

Asia and into the Pacific and the regional cultural groupings that developed are consistent with the evolution and distribution of the Austronesian language groupings across this region.

Rice cultivation was established in the northern Philippines (where it is known at Pamittan on Luzon around 2000 BCE). Rice grains or rice impressions in pottery have been found at a few sites farther south, dated to 2500–1900 BCE, including Gua Sireh and Niah in Sarawak, Kimanis Cave in East Kalimantan, and Ulu Leang Cave in Sulawesi. However, conditions within the equatorial belt are not ideal for growing rice. It is possible that cereal farmers moving into central Island Southeast Asia abandoned rice in favor of tree crops and tubers (as certainly happened in the eastern part of the region). This could explain why there is no evidence of rice cultivation in islands farther south (such as Java and Bali) until later, when it may have been introduced from the mainland or by traders from India. Sembiran in Bali, dated to 200 BCE–300 CE, has rice phytoliths, implying local rice cultivation; much material here relates to Indian contacts. Pollen evidence from Java and Sumatra indicating permanent forest clearance around the end of the first millennium BCE probably reflects the beginning of agriculture on these islands.

Farming settlement was largely confined to coastal regions and river valleys in the Southeast Asian islands, where rice was probably grown using slash-and-burn (shifting) agriculture, which is still common here. In this, a cleared plot is cultivated for a few years and then left fallow for a far longer period to recover its fertility through secondary forest growth.

Rice cultivation intensified during the later first millennium BCE. Agricultural occupation spread from the river valleys to higher river terraces and uplands. Chinese involvement in northern Vietnam from the second century BCE probably gave this region access to new agricultural ideas. Bronze tools interpreted as plowshares appear at this time; the buffalo-drawn plow made it possible to prepare much larger areas of land for cultivation. Historical records show that wet rice agriculture, practiced in China for millennia, began in northern Vietnam by 200 BCE. Productive but labor-intensive, this involved

creating permanently flooded paddyfields using bunds to retain rainwater. Rice seedlings were raised in nursery beds and transplanted into the inundated fields. Fertility in paddy fields is maintained by the oxygen in the water and by the presence of blue-green algae, which fix nitrogen. Wet rice cultivation was probably not practiced in other regions of Southeast Asia until the early first millennium CE. Such intensive cultivation allows double-cropping or even continuous cropping; it was generally confined to areas with high population densities, while less intensive systems continued elsewhere.

Ironworking became widespread on the mainland around 500 BCE; at a similar time, knowledge of copper/bronze and iron metallurgy was spreading in Island Southeast Asia. Iron tools facilitated forest clearance and ground preparation for agriculture.

Construction of large moated settlements in northeastern Thailand, Cambodia, and Vietnam probably began around 400 BCE; they later became more widespread. These dominated good agricultural land and other natural resources, housed substantial populations, and were centers of industrial production. Moats and bunds retained water from natural streams; some settlements also had reservoirs. In the early centuries CE more substantial water-control systems were constructed in some areas, including irrigation channels, tanks (reservoirs) and river weirs and sluices at Beikthano Myu in Burma, and networks of canals in the lower Mekong plain.

—Jane R. McIntosh

Bibliography

- Bellwood, Peter. *Prehistory of the Indo-Malaysian Archipelago*. Honolulu: University of Hawai'i Press, 1997.
- Glover, Ian, and Peter Bellwood, eds. *Southeast Asia*. London: Routledge-Curzon, 2004.
- Harris, David R., ed. *The Origins and Spread of Agriculture and Pastoralism in Eurasia*. Washington, DC: Smithsonian Institution Press, 1996.
- Higham, Charles. *The Archaeology of Mainland Southeast Asia*. Cambridge: Cambridge University Press, 1989.
- Higham, Charles. *Prehistoric Thailand*. London: Thames and Hudson, 1988.

Development of Peruvian Water Systems along the Coast and in the Mountains

In the dry coastlands of western South America as well as in the steep terrain of the Andes mountains, water has been a significant concern of human populations, a limiting factor in population growth and the sustainability of agriculture, and a possible factor in the development of centralized political and social structures. Rivers may flow only intermittently in dry coastal valleys, providing no surface water to directly sustain plant and animal life. In the mountainous areas, runoff can be rapid due to steep slopes, and even pasture land may need additional water in order to support domesticated herds of animals. With water such a precious commodity, it is not surprising that many early cultures focused on water as a source of economic well-being as well as an object of veneration. Unique and ingenious water-control systems developed independently at the highland center of Chavín de Huántar, in the Nazca drainage on the southern coast, and in the Moche region along the northern coast. In all of these places, water became a source of both economic and social power.

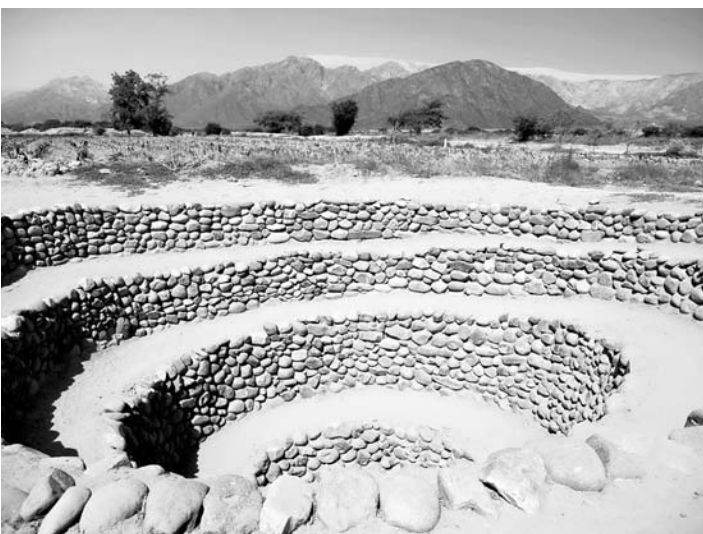
Chavín de Huántar is a famed Early Horizon (800–200 BCE) ceremonial center at the conflu-

ence of two rivers in the Callejon de Huaylas. Chavín grew from a small village before 460 BCE into an important and imposing religious pilgrimage center by 390 BCE. Surface irrigation of the valley floor augmented the agricultural capacity of the area to the point of sustaining a village population of 2,000–3,000 people. The field irrigation system was effective but unremarkable. It was the monumental architecture at Chavín that made it a center of religious attention, however.

Far more remarkable than the irrigation of the valley is the complicated water-control system associated with the Chavín's ceremonial architecture. The architectural complex called the Castillo was constructed of cut stone interlaid with clay as opposed to adobe bricks of other contemporaneous monuments throughout the Andes. Additionally, drains ran throughout the structure and under its plazas to redirect water away from the architecture and into the Mosna River. More importantly, however, the drains could be flushed with water drawn from the irrigation system, creating spectacular sound effects during important ceremonies. That the sound of rushing water may have had ceremonial significance testifies to its immense social and spiritual importance.

Nazca culture (100 BCE–1000 CE) straddled several different water regimes encompassing the Ica Valley to the north and the northern and southern sections of the Rio Grande de Nazca drainage. While there is evidence that this area may have been more humid in the past, for ancient Nazca people water control was important. Nazca people from the beginning probably made use of seeps, springs, and water from seasonal flooding. These sources were important enough, especially seasonal water flowing down from the mountains, that many of the triangular and rectangular geoglyphs may have been created as part of a system of worship honoring mountain deities as the givers of water and fertility.

People began creating the most sophisticated of Nazca irrigation systems during the Middle Nazca period (Nazca 5, 450–550 CE). Colloquially referred to as *pukios*, the filtration galleries of the Middle and Late Nazca (Nazca 6, 7, and 8, 550–1000 CE) tapped into the subsur-



Remains of a Nazca irrigation system. The system appears to have consisted of a number of subterranean aqueducts and canals to siphon off water from natural sources. (Jarno Gonzalez Zarraonandia)

face water table in the southern Nazca drainage and made it accessible for human use. Reservoirs and surface canals were fed by stone-lined tunnels dug horizontally into the water table. *Ojos*, or smaller round openings along the subterranean portions of the galleries, allowed light and air to reach people digging and maintaining the filtration system below in addition to providing access to the water itself. Development of this water-control system allowed Nazca people to expand their settlements significantly in the southern Nazca drainage.

Moche people and their predecessors along Peru's northern coast also developed extensive systems of irrigation canals in order to reclaim land and make it arable. Canals were dug with digging sticks, but only some were lined. The size and length of canals grew over time from a longest length of 4.3 miles (7.0 kilometers) in the earliest phases to up to 17.3 miles (28.0 kilometers) in the later phases of construction. Irrigation of the Moche Valley began as early as the Guañape phase (1800–400 BCE) when small canals maintained and used by social groups of 900 people or less expanded the cultivated area of the lower and middle valley to approximately 10,131 acres (4,100 hectares). Irrigation grew substantially during the Salinar phase (400–1 BCE) and again in the Galinazo (1–200 CE), Early Moche (200–400 CE), and Middle Moche (400–800 CE), reaching more than 30,888 acres (12,500 hectares) of irrigated land supporting tens of thousands of people. Even more land became arable during the Late Moche (800–900 CE) and Early Chimú (900–1000 CE) when people built an intervalley canal of more than 43 miles (70 kilometers) directing water from the Casma Valley to the Moche Valley.

Even with the irrigation canals in place, water would have been in short supply in the Moche Valley, and periodic water shortages would have occurred, maybe as frequently as every three years or so by the end of the Moche period. Control over agricultural production and food surpluses through control of water provided a significant basis for social, political, and economic integration in the Moche Valley during both the Guañape and Moche phases. At least some scholars, however, now reject the idea that bureaucratic and managerial control

➤ A TRADITION OF WORSHIPPING WATER

Water is essential everywhere, but in the Andes water had spiritual as well as economic significance. Some of the earliest ceremonial architecture along the coast faced the mountains, the source of water running through dry valley floors. The Chavín prized rare seashells of strombus and spondylus as symbols of fertility and included images of fishlike and shrimplike creatures in its iconography. The Nazca imagined a killer whale as a powerful supernatural being and may have used zigzag and spiral designs on pottery and in geoglyphs as part of a water cult. The Moche depicted elaborate fishing scenes and culture hero-deities that battled fierce fishlike and crablike monsters.

—Jo Ellen Burkholder

was needed for the initial construction of these features.

—Jo Ellen Burkholder

Bibliography

- Bawden, Garth. *The Moche*. Oxford, UK: Blackwell, 1996.
- Billman, Brian R. "Irrigation and the Origins of the Southern Moche State on the North Coast of Peru." *Latin American Antiquity* 13(4) (2002): 371–400.
- Burger, Richard L. *Chavin and the Origins of Andean Civilization*. New York: Thames and Hudson, 1995.
- Moseley, Michael E. *The Incas and Their Ancestors: Archaeology of Peru*. 2nd ed. New York: Thames and Hudson, 2001.
- Silverman, Helaine, and Donald A. Proulx. *The Nasca*. Malden, MA: Blackwell, 2002.

Arctic Hunting Strategies

For people who have never lived there (and for some who have), the word "Arctic" conjures up a landscape that is almost incredibly forbidding. However, the Inuit, over the course of thousands of years, learned to live successfully in that cold, rugged country. Inuit (plural of Inuk) means "People" in the native language. In recent years, and especially in Canada and Greenland, it has replaced Eskimo, an Algonquian word meaning

THE KAYAK

Although kayaks varied somewhat from place to place, they were basically one-man, closed-deck hunting canoes. They were made of a wooden frame lashed with sinew and covered with sewn seal or caribou skin. Men propelled them with double-bladed paddles and used them mainly for hunting. Skin-covered umiaks were larger, open boats, used either for whale hunting or simply for transportation, depending on the region. In the latter case they were rowed or paddled by women. Sleds, pulled by dogs and/or people, were used for winter travel. These were built of a wood frame lashed together with rawhide. The wood, hide, or bone runners were often covered with moss and then ice to ensure a smooth ride.

—Barry M. Pritzker

“eaters of raw meat” and one that many Inuit find offensive. The Unangan, or Aleut, are also generally considered to be Arctic, rather than Subarctic, residents.

The Arctic is a remarkable region in several ways. It stretches 5,000 miles (over 8,000 kilometers) from Asia (Siberia) to Greenland and 1,800 miles (2,900 kilometers) from southeast Labrador to the Queen Elizabeth Islands. It encompasses well over 2,000 miles (3,200 kilometers) of the Alaska coast and is generally considered to include the 1,000-mile-long (1,600 kilometer) Aleutian Island chain. Another way to think of the vastness of the Arctic region is that it is roughly 12,000 miles (20,000 kilometers) from the eastern Aleutian Islands and along the coast of northern Alaska and Canada to Greenland. Four modern nations claim Arctic lands: Canada, Denmark, Russia, and the United States.

Arctic winters are long, dark, and extremely cold, but are not as cold right along the Pacific Ocean and adjacent waters. Although the interior may be colder in winter, fierce winds blow relentlessly along the coast. The flat tundra is covered with ice and snow in winter, but owing to poor drainage and the presence of permafrost it becomes boggy in summer, a perfect environment for mosquitoes, black flies, and other such insects. Although there are few or no trees in most of the Arctic, there are, during the brief summer,

dwarf flowers, mosses, and lichens. As little as four inches (101 millimeters) of precipitation may fall in a year, except for Labrador and especially southwest Alaska. It is fortunate that ocean ice tends to lose its salinity after a year or so; otherwise finding fresh water would have been a serious problem for many Arctic residents.

A hunting tradition known as Arctic Small Tool (Denbigh Flint complex) arose around the Bering Sea from the Paleo-Arctic peoples of the rest of Alaska and northern Canada around 5,000 years ago. After about 1,000 years it had diffused throughout much of Alaska and Canada. These people made small flint blades, skin-covered boats, bows and arrows, needles, semiexcavated houses, and stone lamps. In the east, this complex was further refined into the somewhat more sea-oriented Dorset Tradition by about 1000 BCE. Dorset people also adapted well to snow and ice, possibly originating the snow house.

Again beginning in the Bering Sea area, the Norton culture materialized about 2,000 years ago. It in turn gave way to the Thule culture, which gradually overtook all other cultural traditions save the Aleutian by about the twelfth century. Thule people had dogs and sleds, umiaks and kayaks, the bow and arrow, and the harpoon thrower (atlatl), and they hunted whales. Through increased specialization and adaptation to local environments, this culture led directly to those found by non-natives.

Hunting sea mammals—ringed and bearded seals, walrus, narwhal, and whales—was the main occupation of most Inuit men. Hunting walrus was considered inordinately dangerous, owing to the animals’ size and aggressive nature. (Polar bears presented the same problem and were taken, if at all, mainly for their hides.) Most men hunted seals from ice floes in winter. This was an extremely demanding task. Seals must come up for air, so men waited with their dogs and various equipment (see discussion of key technologies that applied to hunting) at breathing holes. In order to catch one seal, a man might have to guard a hole for hours, motionless in the dark and bitter cold. Breathing-hole sealing was done communally, so that a number of holes could be covered at once.

Whaling was a special occupation practiced mainly in northwest Alaska. The whaling umi-

aks were led by a captain and chief harpooner. Once the great animal was fatigued by the initial thrust and from the drags, it would slow down enough for other men to spear it to death. The whale was then either towed to shore or left to drift back. In the case of seals and whales, the kill was divided according to very precise and respected formulas.

Depending on the season, a number of subsistence activities took place. Men stalked seals on the ice or harpooned them on open water from kayaks. Birds such as ptarmigan, ducks, and geese were taken, as were their eggs. In some areas, people gathered berries. Fishing was a three-season or in some areas a four-season activity.

Among the land animals, caribou were by far the most important source of food. Most groups took advantage of the great seasonal migrations, particularly those in late summer and fall. Men working together generally shot or speared the beasts from land or from kayaks as they crossed bodies of water or forced them, with corrals and/or stone cairns, into narrow places and shot them there. Other land animals used for meat and/or fur included musk ox, wolf, fox, wolverine, and squirrel.

In addition to food, caribou also provided the single most important source of raw material. From the caribou, and other animals as well, came clothing, shelter, bedding, boats, thread, and lines (sinew). The people made a variety of tools and weapons, such as harpoons, bows and arrows, needles, thimbles, knives, axes, adzes, drills, scrapers, and shovels, primarily from bone and antler. The defining women's tools, reflecting their main activities, were the ivory or bone needle, the semilunar, sinew-backed knife, and the stone skin scraper.

People used a number of chipped stone (flint, slate, or quartz) items, such as points, blades, pots, and scrapers. Some copper was also used around Coronation Gulf. Many people depended on soapstone (pottery in southwest Alaska) oil- or blubber-burning lamps with moss wicks for heat and cooking. Wood, mainly driftwood, might provide boat and house frames, boxes, tool and weapon handles, and dishes. Depending on the location, baleen could also be worked into boxes or other items. Other key technologies included movement indicators (for breathing-hole sealing), various types of harpoons (especially with detachable heads), throwers (atlatls), seal nets, bird bolas, three-pronged spears, fishhooks, stone fish weirs, and small animal traps and snares. Most people started a fire either by striking two pieces of pyrite or by friction generated with a thong drill.

Chipped stone work was well developed among the Native Arctic people, but they were particularly adept at carving figurines, amulets, toys, and other items out of bone, antler, and ivory. Tailored clothing was decorated with finely sewn furs. Some groups, mainly in Alaska, carved and painted wooden ceremonial and dance masks. Baskets were particularly fine among the Unangan, but people in southwest Alaska and in Labrador made them as well. In some areas, music and storytelling were considered high arts.

—Barry M. Pritzker

Bibliography:

- Fagan, Brian. *Ancient North America*. London: Thames & Hudson, 2005.
- McGhee, Robert. *Ancient People of the Arctic*. 2nd ed. Vancouver: University of British Columbia Press, 2001.
- Pritzker, Barry M. *Native Americans: An Encyclopedia of History, Culture, and Peoples*. Santa Barbara, CA: ABC-CLIO, 1998.

■ Introduction: Urbanization

By 1000 BCE, urban centers are the most powerful hubs throughout the world. While much of the world's population continued to live in rural areas, the city became

the center of economic, political, religious, and social life for most of the civilizations of the world (the people of Oceania being a major exception to this).

One of the most significant changes to urban life is that urban planning became much more sophisticated in the period from 1000 BCE to 300 CE throughout the globe. Whereas the first cities (located in the Near East) were built on an almost ad hoc basis, with planning occurring gradually in relation to preexisting structures, by 1000 BCE there develops a tendency to conceptually organize the city before construction begins. In some cases this may have involved very detailed planning and zoning. In most cases, however, this would involve establishing a few cardinal points and perhaps a basic grid in which builders would have to work.

In the Near East, the Assyrians (an empire based in what is now known as northern Iraq) would level cities that they conquered and rebuild them on orthogonal plans. After Assyrian power had vanished and Greek civilization was flourishing, Hippodamus of Miletus (498–408 BCE) established a type of city grid plan that was emulated by the Greeks and Romans for centuries. As Roman civilization expanded be-

yond the city of Rome and colonies were constructed, these colonies were built according to strict organizational principles. Rigidly planned cities were also built in the Americas around this time. Olmec ceremonial centers were built according to cosmological principles, and later Mesoamerican cities, such as Teotihuacan, were structured similarly.

—Kevin M. McGeough

Meroitic Cities

At the height of their power, the kings of Meroe ruled over a population of an estimated 500,000 individuals. Many of these subjects continued to live in simple reed huts and shelters; others lived in more durable houses of mud brick, the rectangular floor plans of which usually contained two or three rooms.

There is little evidence for town planning. The settlement at Karanog, which covered a maximum surface area of about 20 acres (80,000

THE TEMPLE COMPLEX AT MUSAWWARAT ES-SUFRA

The most unique sanctuary in Nubia is doubtless the complex at Musawwarat es-Sufra. Its confusing ground plan led earlier scholars to reach erroneous conclusions about its function, claiming that this complex in its distinctive enclosure was either a Meroitic queen's summer residence, a theater for the training of elephants, a secular educational complex, or a seminary for Meroitic priests. One now realizes that the complex in its present state is the result of the rebuilding and modification over time of a pilgrimage center. The focal point of the center consists of at least seven temples, three of which are located within the Great Enclosure, one of these having been erected on a terrace. These are surrounded by a maze of courts and individual rooms of varying size, some of which are connected by a network of corridors.

The so-called Great Temple within the enclosure at Musawwarat es-Sufra was erected on an elevation. Its principal facade abandons the twin towers of the pylon in favor of a shrine-shaped entrance, crowned with a series of cavetto cornices, each decorated with its own winged sun

disk, which is set into a long, proportionately not very tall wall. Its design appears to recall that of the facade of the second story of the Lake Edifice of Taharqa at Karnak. This was fronted by a series of remarkably designed columns, the shafts of which feature sculpted decoration erected on bases in the form of animals. Monumental statues of Meroitic gods, suggested to have been Arensnuphis and Sebiuemker, flanked the entrance on the model provided by ancient Egyptian temples. A unique detail was a wall projection depicting an elephant. Behind the colonnade of the facade was a one-chambered sanctuary surrounded by a columned ambulatory. Its roof was supported by four interior columns, and its interior walls were provided with niches, perhaps for statues. Its facade and two lateral walls contained doorways as well, but the rear wall did not. Its ground plan, although unusual, appears to have been specifically designed to accommodate efficiently the circulation of pilgrims. There is no indication, however, of the deity to whom this innovative sanctuary was dedicated.

—Robert S. Bianchi

square meters), was home to an estimated 4,000 residents. A description of the town does not seem to differ from that of contemporary rural villages in Roman Egypt, such as Karanis (Kom Ouchim). The streets were not laid out in any perceptible, predetermined pattern, but meandered as if at will and resembled narrow alleys. The houses were constructed of a variety of materials, the use of which was doubtless a reflection of wealth and status, which included mud brick, stone, and rubble, with an occasional mud-brick veneer. Mud-brick houses consisting of three stories are still regarded by the inhabitants of the region as castles or palaces but were, in all probability, the residence of the most elite member of society, whom some identify as a “governor.”

Larger settlements, such as that of Kawa with its 8,000 inhabitants, are worthy of designation as towns, and the 24,000 residents of Meroe justify its designation as a city. Despite the size of these last two urban areas, the archaeological remains are not sufficient for one to present even a cursory description of the dwellings. Occasionally a site such as Wad Ban Naga provides sufficient remains of a royal complex to warrant comment. Here was found the residence of Queen Amanishakheto and several temples. Her mud brick palace is one of the largest identified to date. It measures some 200 feet (61 meters) in length and covers an area of nearly 40,000 square feet (3,700 square meters). The ground floor contained over 60 rooms for various purposes. This palace originally had a second story as the remains of columns found on the ground floor indicate, and this may have contained an atrium, a design feature paralleled elsewhere.

—Robert Steven Bianchi

Bibliography

- Bianchi, Robert S. *Daily Life of the Nubians*. Westport, CT: Greenwood, 2004.
- Bianchi, Robert S. *The Nubians: Peoples of the Ancient Nile*. Brookfield, CT: The Millbrook Press, 1994.
- O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: The University Museum of Archaeology and Anthropology, University of Pennsylvania, 1993.
- Wildung, Dietrich. *Sudan: Ancient Kingdoms of the Nile*. Translated by Peter Der Manuelian. Paris: Flammarion, 1997.

Israelite Cities

A distinctive vocabulary of royal architecture can be observed in the archaeological record of the Iron II period (1000–600 BCE). Typical features include casemate walls, six-chambered gates, and Proto-Aeolic capitals; ashlar masonry using dressed stones represents an appropriation of the Phoenician royal style. Many of these elements have been observed at Megiddo, the seat of an administrative center during the tenth century BCE. Two large public buildings (1723 and 6000) at the site were probably palaces. Palace 1723 was part of a larger complex enclosed by a field-stone wall and piers of ashlar. It also had a four-chambered gate with stone Proto-Aeolic capitals, a feature considered a standard in royal Israelite architecture by many scholars. Other buildings display northern Syrian and southern Anatolian influences. The city also had a massive six-chambered gate, 60 by 66 feet (18 by 20 meters) built of ashlar, though the dating of the gate is uncertain. Near the gate, a wall built in the elaborate offset-and-inset style was found. Another structure at Megiddo, consisting of small individual units, has been the centerpiece of one of the great debates of southern Levantine archaeology.

There are questions concerning the dating of this feature, that is, whether it belongs to the tenth or ninth century BCE. Even more controversial is the interpretation of its function. It was initially said that the units represented royal stables, such as those ascribed to Solomon in the Bible, but others have argued that they were storage units.

Six-chambered gates have been discovered at a number of sites, including Hazor, Megiddo, Tel Ira, Lachish, and Gezer. Recently, some scholars, such as Niemann and Finkelstein, have downplayed the importance of these gates as evidence for state architecture, arguing that at the very least there are no grounds for attributing them to Solomon or to any specific king for that matter. The gates clearly had a practical purpose as part of the city's defensive works. The Gezer gate system included a platform atop the tower from which to defend the city against would-be intruders while providing a way to monitor movement in and out of the city. Furthermore, gates of the same style have been

THE ARCHAEOLOGY OF JERUSALEM

The Canaanite city of Jebus was first established sometime during the Middle Bronze Age, perhaps around 1800 BCE, on a low hill surrounded by the mountains of Judea. Located near the Gihon Spring in the Kidron Valley, Jebus was one of the first sites in a wave of settlement in the central hill country. The city probably served as a commercial center where people from nearby villages would congregate and as a central point in the long-distance trade networks emerging at the time.

The Middle Bronze Age occupation is attested by archaeological evidence, including a long stretch of wall dating to the eighteenth century BCE, and the city enters the historical record with its mention in the Execration Texts (ca. 1900–1800 BCE). In 2009 archaeologists discovered a section of an MBA wall that was 79 feet (24 meters) long and 26 feet (8 meters) tall outside the Old City of East Jerusalem on a slope of the Silwan Valley. One of the most intriguing and controversial topics in the archaeology of the southern Levant concerns the occupation of Jerusalem during the Iron II period. The beginning of the Iron II is generally understood to be the time when the biblical kings David and Solomon ruled from Jerusalem. Yet the archaeological evidence dating to this period is slim. Some scholars have cited the general lack of

archaeological remains from this period as evidence against the existence of a Jerusalem-based monarchy at that time, and the historicity of the biblical account has been called into question. Others have countered that this “negative evidence” proves little, as Herod (first century BCE) is supposed to have razed the entire area during his extensive building projects, wiping out the traces of earlier structures.

The density of modern occupation in this critical area of ancient Jerusalem as well as the current political situation have limited the amount of archaeological research on the Iron Age occupation. Nonetheless, a few outstanding archaeological features dating to this period have been excavated. On the eastern slope of the Iron Age city, archaeologists have uncovered a large stepped structure preserved to a height of about 54 feet (16.5 meters) that can be tentatively dated to the tenth century BCE. Though some have been tempted to associate this structure with David’s “fortress of Zion” (Metsudat Zion) as described in 1 Chronicles 11:5, it is more likely that it served as a retaining wall employed in the construction of the citadel. But where the early part of the Iron II is concerned, opinions about the history of the city vary widely.

—Jonathan M. Golden

found at Canaanite and Philistine sites (for example, Ashdod), raising questions about whether they should be regarded as unique to Israelite architecture.

Regardless of who was responsible for the construction of these monumental works, they suggest a number of things about Iron Age societies. Clearly, all of these monumental structures point to a developed urbanism, which is indicative of both population growth and agglomeration. They also reflect the command of extensive resources, including materials and, above all, labor. Politically, they contributed to the identities of these cities. Huge residential buildings served as palaces for local rulers, while other structures were the focal point of political and administrative activity. The massive walls and gate systems represent defensive measures as well as prestige architecture designed to project an image of prominence.

The key question with regard to these projects concerns to what extent they represent political integration at a broader level. That is, were they independent undertakings, or was the centralized state involved? David Ussishkin, excavating at Lachish (Level IV), ascribed the construction of the massive brick fortification wall and triple-chambered gate to a Judahite king, either Rehoboam or Jehoshaphat. Cities of the Negev, such as Arad, Beer Sheva, and Malhata, also had great walls and other monumental works in the late tenth and ninth centuries BCE, and it is likely that their construction was financed, at least in part, with state funds from Jerusalem.

—Jonathan M. Golden

Bibliography

Abu el-Haj, Nadia. “Translating Truths: Nationalism, the Practice of Archaeology, and the Remaking of Past and Present in Contemporary

- Jerusalem." *American Ethnologist* 25(2) (1988): 166–188.
- Ben-Tor, Amnon, and Doron Ben-Ami. "Hazor and the Archaeology of the Tenth Century BCE." *Israel Exploration Journal* 48 (1998): 1–37.
- Finkelstein, Israel. "Ethnicity and the Origin of Iron I Settlers in the Highlands of Canaan: Can the Real Israel Stand Up?" *Biblical Archaeologist* 59 (1996): 198–212.
- Finkelstein, Israel, and Neil Asher Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Golden, Jonathan M. *Ancient Canaan and Israel: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.
- Master, D. M. "State Formation and the Kingdom of Ancient Israel." *Journal of Near Eastern Studies* 60 (2001): 117–131.
- Matthews, Victor Harold. *A Brief History of Ancient Israel*. Louisville, KY: Westminster John Knox, 2002.
- Niemann, Hermann Michael. "The Socio-Political Shadow Cast by the Biblical Solomon." In *The Age of Solomon*, edited by L. K. Handy. Leiden: Brill, 1997.
- Shiloh, Yigal. "Megiddo, the Iron Age." In *The New Encyclopedia of Archaeological Excavations in the Holy Land*, Vol. 2, edited by Ephraim Stern. New York: Simon and Schuster, 1993.
- Ussishkin, D. "The Destruction of Lachish by Sennacherib and the Dating of the Royal Judean Storage Jars." *Tel Aviv* 4 (1977): 28–60.
- Ussishkin, D. "Level VII and VI at Tel Lachish and the End of the Late Bronze Age in Canaan." In *Palestine in the Late Bronze Age: Papers in Honor of Olga Tufnell*, edited by J. N. Tubb. London: Institute of Archaeology, 1985.

Urban Fires in the Roman World

Ancient Rome was prone to gigantic fires that caused massive destruction over vast parts of the city, devastating immense sections and involving the loss of tenements, palaces, granaries, warehouses, and public buildings. Endemic urban fires in ancient Rome were prevalent due to its narrow streets and alleys along closely packed tenements made of flammable building materials. A lack of proper facilities for handling large fires also played a part in allowing these fires to break out uncontrollably over much of the city. Fire proved

to be a much more potent force of annihilation for Rome than the destruction caused through invasion and decomposition over time.

The great fire of 64 CE attributed to Emperor Nero is perhaps the most historically recognized of the destructive fires that plagued Rome. This fire began on the night of July 18 and lasted a full six days. The ancient allegation that Nero deliberately set this fire to create a backdrop for his musical performance is not accepted by historians as historical fact but rather is viewed as evidence for the disdain that ancient Rome felt toward this particular emperor. The subsequent casting of blame on the local Christian community to unleash state-sanctioned persecution, which resulted in the martyrdom of St. Paul and St. Peter, is also attributed to Nero. The ultimate effect of this fire was the destruction of huge parts of the central city, ultimately rebuilt under Nero.

The proximity of cultural, public, and commercial centers around the central parts of the city allowed the rapid spread of the fire throughout various districts of the city. The lack of an efficient fire department to stem the growth of such fires further contributed to the spread of the destruction.

The end result of these massive fires that plagued ancient Rome was the immediate rebuilding that resulted. Under various emperors, such as Augustus who "found the city made of wood and left it in marble," the fires presented an opportunity to rebuild the city along more efficient and beautiful lines. Many of these fires were particularly prevalent around the Circus Maximus, the Forum, the Campus Martius, and the Sacra Via. The constant plague of urban fires throughout Rome, while immensely destructive, was utilized as an opportune time to rebuild certain rundown areas.

—Abraham O. Mendoza

Bibliography

- Canter, H. V. "Conflagrations in Ancient Rome." *Classical Journal* 4(27) (1932): 270–288.
- Hülse, Christian. "The Burning of Rome under Nero." *American Journal of Archaeology* 1(13) (1909): 45–48.
- Pyne, Stephen J. *Vestal Fire: An Environmental History, Told through Fire, of Europe and Europe's Encounter with the World*. Seattle: University of Washington Press, 2000.

Mediterranean Deforestation

Since the Mediterranean basin is diverse, which makes it difficult to talk about similar ecological processes occurring in this area since antiquity, recent archaeological and environmental data point to a trend toward deforestation caused by human activity. Farming and grazing over the past 9,000 years and demand for wood have required an alteration of Mediterranean landscapes. The steady proliferation of farming communities across the Mediterranean during the Late Neolithic marked the beginning of a continuous process of clearings and intense impact over the land cover, but many specialists argue that the most intense clearing performed by ancient civilizations in the Mediterranean basin occurred since the Roman Classic period, when agriculture became the basis of the empire.

However, the transition from foraging to farming economies during the Neolithic and the later stress caused by the Roman empire cannot be blamed as the root causes of major land clearings and the consequent deforestation of the Mediterranean. The uses of wood were also key to large areas of technological and economic development in antiquity prior to the Roman empire. Trees and timber were useful for the construction of ships; to build bridges, palaces, and other public buildings; and to make furniture and wooden statuary during the Bronze Age and the Iron Age in eastern Mediterranean societies. For example, the Old Testament and the Epic of Gilgamesh are among the first historical sources to talk about the social and economic importance of timber. Both texts mention the value of Lebanese cedar forests, not only admired for their beauty but also because they provided the timbers needed for the temples. Cedar and cypress were the most desired trees because of their fragrances. Phoenicians also provided the backbone of the Persian fleet, which was built from the forests of Cilicia, Syria, and Phoenicia.

We have several historical documents and archaeological and pollen data from the Roman Classic period. This information confirms that under the empire, agriculture continued to expand at the expense of the forest. Several au-

thors mention that the most spectacular expansion of agriculture was in the Roman province of Africa, an area that corresponds to present-day Tunisia, Algeria, and Morocco. This area, previously occupied by Carthaginians, was said to be sending sufficient grain to Rome to maintain a population of nearly one million people. The increase of production was due in part to more skillful management but also to the addition of new land.

—Apen Ruiz

Bibliography

- Leveau, Philippe, et al., eds. *Environmental Reconstruction in Mediterranean Landscape Archaeology*. Oxford, UK: Oxbow Books, 1999.
- Meiggs, Russell. *Trees and Timber in the Ancient Mediterranean World*. Oxford, UK: Clarendon, 1998.

Ceremonial Cities of Iran

Along with administrative practices, engineering techniques, and writing, the Achaemenid dynasty (550–330 BCE) appropriated and greatly adapted the use of art and architecture as a ceremonial stage from the cultures it incorporated. As opposed to other important cities in the empire such as Susa (which served as the empire's true administrative center on the lower Mesopotamian plain), Babylon, or Ecbatana in northwestern Iran, the Persian kings created and maintained two imperial capitals in the heart of the Achaemenid home province of Parsa (Persia). Located in southwestern Iran, Pasargadae and Persepolis appear to have fulfilled a more symbolic ceremonial function than the aforementioned older urban centers. Although we refer to them as “cities,” the palatial cores of Persepolis and Pasargadae dominated the sites' topography and significance. Persepolis survives in a greater state of preservation than Pasargadae and provides us more information, although archaeological and inscriptional evidence suggests that both were used through the end of the dynasty. The most prominent ceremonies that took place at these sites were royal audiences, large-scale military parades, tribute ceremonies, investitures, and religious and funerary observances.

The founder of the empire, Cyrus the Great (559–530 BCE), established Pasargadae. Two rectangular audience halls, a quadripartite garden with water channels provisioned with two pavilions, a gatehouse, a stone tower 13 feet (4 meters) high, and the masonry tomb of the king formed the main features of the palace of Pasargadae. The garden itself is the earliest surviving Persian royal garden, and its fourfold organization, as well as the presence of the king of kings dominating it, symbolized Cyrus's designation of himself as king "of the four quarters of world" (*Cyrus Cylinder* 11.20–21). The function of the tower (referred to by scholars by its New Persian nickname as the Zendan-e Solayman) as well as that of the nearly identical tower at the site Naqsh-e Rostam (the Kaba-ye Zardosht) is unknown, though a treasury, fire altar, temple, and ossuary have all been offered as interpretations. Nevertheless, the fact that it was replicated at Naqsh-e Rostam and parallels with earlier Urartian towers suggests that it was religiously significant. The monumental tomb of Cyrus, constructed on a high platform 10.9 feet (3.35 meters) long by 40.3 feet (12.3 meters) wide of ashlar masonry, lay 3,280 feet (1 kilometer) to the south of the palaces and garden and itself appears to have been the focus of ceremonial attention beyond just serving as the resting place of the dynasty's founder.

Originally a pretender to the Persian throne in the years of confusion after the death of Cyrus, Darius I (522–486 BCE) founded Persepolis once he consolidated power as an architectural expression of his newly developing royal ideology. Persepolis lies about 37 miles (60 kilometers) northeast of the modern city of Shiraz on a vast plain and is built against a rugged mountain range. Rising as much as 46 feet (14 meters) on an artificial terrace from the plain below, the precincts of the palace cover an area 1,476 by 984 feet (450 by 300 meters). Some architectural features in the site, such as the audience hall and gatehouse, can be traced to precedents at Pasargadae; however, Persepolis presents a much grander, coherent, and developed manifestation of Achaemenid art and architecture, which took form under Darius I.

The ceremonial core of the palace was founded around a grand audience hall (Old Per-

➤ PALACE AS A PREFIGURATION OF A WORLD RENEWED

Palace building was not only an architectural and engineering achievement in the eyes of the Achaemenid kings but was also a religious achievement. According to Darius's Susa inscription, workers from all over the empire brought what was best from their land: cedar from Lebanon, gold from Lydia and Bactria, silver and ebony from Egypt, etc. In assembling the whole, the palace becomes a divine vision of what is best on the earth. In fact, Darius uses a word in Old Persian to describe his palace, *frasha* (a wonder), that is intentionally the same as the one the Avesta uses to describe the Great God's postapocalyptic renovation of creation.

—Matthew Canepa

sian: *apadana*) measuring 1,173 square feet (109 square meters) raised on an 8.5 foot (2.6 meter) platform, although the site eventually contained a multitude of public and private structures. At 62.3 feet (19 meters) high, the 36 stone columns of apadana would have given the interior the effect of a forest of columns. An elaborate composite capital crowned the columns, with symmetrical bull capitals marking the external porticos and main hall.

Persepolis's apadana presented three ritually significant focal points, both from the point of view of the king of kings and any potential military or diplomatic spectators. In all three cases a six-column portico performed as both a dramatic backdrop for the king of kings enthroned and ritual interface with those gathered in audience. The western portico of the apadana looked outside of the palace grounds over the plain below. This provided an elevated vantage point for the sovereign to view military parades below and for an assembled multitude to behold the king of kings in glory. Those lucky enough to gain entry to the palace were compelled to ascend a ceremonial way that led onto the platform up a double switchbacked stairway and then into the palace grounds through a monumental gateway flanked by composite enormous human-headed winged bulls. The inner faces of the apadana—that is, the north and east faces—fronted an

internal L-shaped courtyard, each provided with a symmetrical double stairway richly embellished with relief sculpture. The interior of the apadana and the private palace (Old Persian: *ta-cara*) of Darius to the south potentially offered successively more intimate ceremonial venues for royal audience and entertainment.

What we know securely about Persepolis's ceremonial usage comes almost entirely from the surviving relief sculptures that cover its lower walls. The fronts of mirror-image apadana stairway reliefs portray representatives of all peoples subject to the Persian empire identified through inscriptions and distinctive dress, bearing gifts to the Persian king. A Persian or Median courtier leads the leader of each of the 23 delegations by the hand. Row after row of Persian soldiers flanked the rear of the stairway, reinforcing the idea that this vision was created because "a Persian man's spear has gone far," as Darius I claims in his inscriptions (*Naqsh-e Rostam*, A 41–47). Much like the actual presence of the king of kings, the central image of a king of kings enthroned with his son and successor behind him was the focal point of the northern apadana stairway. The reliefs are the only Iranian sources on such a tribute ritual; however, Herodotus mentions that the Persian kings constantly demanded that the Greek city-states bring him "soil and water" as a ritualized token of submission. In the last century, the archaeologist Roman Ghirshman conjectured that the Achaemenids constructed Persepolis for an elaborate ceremony that took place in conjunction with the spring celebration of the Iranian New Year; however, while it has often been repeated, this theory lacks any evidence to support it. The tribute bearers could just as likely reflect a composite vision of delegations that visited the king of kings (either in Persepolis or elsewhere) severally rather than in a single ceremony. In either case, the overall effect is the same. The apadana sculptures reflect a world, both its human and material components, that the king of kings has ordered and melded into a harmonious whole, a terrestrial reflection of the god Ahura Mazda's divine work.

While Persepolis had a special symbolic role in the Persian heartland, the palaces of Susa and Ecbatana had their own ceremonial significance

too, as evinced by the remains of apadanas with similar features and, in the case of Susa, similar measurements as Persepolis. Both were built at sites that had been the capitals of peoples held in high esteem by the Persians who had been incorporated into the empire. Susa had been capital of the Elamites, and Ecbatana had been capital of the Medes, and with the creation of an apadana at these former imperial capitals, the Achaemenids put a distinctly Persian stamp on the urban fabric. While Ecbatana has not been well studied, from the extensive excavations at Susa we learn that the palace there had an artistic program similar to that of Persepolis. Executed in brightly colored glazed brick rather than relief sculpture, the dominant programmatic theme consisted of tribute bearers from all over the empire, Persian and Median courtiers and soldiery, and fantastic composite creatures.

Given their close proximity to palatial and religious structures, the royal tombs in Parsa were themselves important ceremonial centers dedicated to the memory of the kings of kings and, in the case of Pasargadae, were used for investiture ceremonies. Beginning with Darius I, the majority of the Achaemenid kings of kings created their tombs at the site of Naqsh-e Rostam, which lay about 5 miles (8 kilometers) from Persepolis. Later in the dynasty, three other kings carved theirs at Persepolis. Naqsh-e Rostam's Achaemenid remains consist of four identical rock-cut tombs and a tower constructed of finely dressed ashlar masonry called the Kaba-ye Zardosht ("Kaba of Zoroaster"), itself identical in plan and size to the Zendan-e Solayman at Pasargadae. Like the apadana, the visual program of the tombs presented a vision of "the world as it ought to be" to Persian and subject alike. In the upper register, the king of kings stands on a throne (Old Persian: *gathu*) before a fire altar, raising his right hand in respectful address to a winged divine figure symbolizing the Great God Ahura Mazda. Below, figures of all the peoples of the empire, identified by distinctive dress (and in the case of Darius I's tomb, an inscription) support the throne with their upstretched arms, while Persian soldiers stand at attention on the flanks. Darius I's tomb contains a monumental trilingual inscription carved on its surface, which commands the viewer to behold the images if he

should wonder—"How many were those lands which Darius the king holds?"—and orders him to "See the images which bear the throne. There you will learn, it will become known: A Persian Man's spear has therefore gone far" (Darius, *Naqsh-e Rostam* A 41–47). Although not contemporary, the Hellenistic historian Arrian (*Anabasis* 29.1–11) states that up until Alexander's invasions, Magi tended the tomb of Cyrus at Pasargadae, offering a sheep and a measure of grain daily as a sacrifice for his benefit. Again, according to Greek historians, succeeding Persian kings would receive their investiture at Pasargadae, where they would eat a ritual meal and ceremonially don a cloak that had belonged to Cyrus (Plutarch, *Artaxerxes* 3.1–2; see also Xenophon, *Cyropaedia* 2.4.1, 8.1.40–41, 8.8.15; Herodotus, 1.135). A monumental stone plinth and altar found at Pasargadae are likely the physical remains of the ritual portrayed on the tombs' upper panel, which represent the king on a platform venerating a fire altar. It is probable that the Achaemenid sovereigns performed such ceremonies of public fire veneration in front of an audience of assembled armies and courtiers as a public display of piety and divine favor.

Following Alexander the Great's conquest of the Achaemenid empire, the traditions of the Persian ceremonial cities were radically disrupted as Hellenistic ideas of urbanism and royal rituals, as well as new city foundations, supplanted those of the Achaemenids. Persepolis was the site of several impromptu ceremonies on the part of the Greeks, the most infamous of which was Alexander's destruction of the palace complex after victory games and a banquet at the site in 330. Although Diodorus Siculus (17.20–22), the source who records the event, presented the conflagration as a spontaneous drunken event, done in "revenge" for Xerxes' destruction of Athens, it surely was not done without Alexander's approval as a means to obliterate this site, which was so symbolic of Achaemenid power, especially considering that Darius III was still alive and a threat at the time. In an interesting reversal of policy, once Darius III had been killed, Alexander began to associate himself with the Achaemenid dynasty, including modified court ceremonies and care for symbolic structures such as the tomb of Cyrus.

After Alexander's death, one of his companions, Peucestas, whom he had appointed governor of Parsa, chose Persepolis to stage an elaborate banquet for his army and conducted lavish sacrifices to Alexander and Philip II under its shadow (Diodorus Siculus, 19.22–23). The site's prominence and ceremonial role, however, were permanently eclipsed by the new foundations of the Seleukids (312–64 BCE), the Hellenistic dynasty that held power over Iran after the death of Alexander, although later regional Persian dynasties continued to marvel at the ruins and sponsor small-scale interventions on and near the platform. Seven centuries later, under the Sassanian dynasty (224–642 CE), Naqsh-e Rostam again became a focus for royal ceremonies and was instrumental in forging connections between the dynasty to its ancient—though imperfectly remembered—Persian heritage. Six kings and one cleric sponsored monumental rock reliefs directly underneath the Achaemenid tombs. Shapur I (r. 239–270) carved a trilingual inscription on the Ka'ba-ye Zardosht that described the foundation of sacred fires "for the soul and memory" of himself and his family (Shapur I, *Ka'ba-ye Zardosht* 33–34). The sites' most recent use for large-scale ceremonials occurred in 1971 when Reza Pahlavi staged massive and expensive spectacles at Pasargadae and Persepolis for the world's heads of state in hopes of associating his short-lived dynasty with the glories of the Persian past. Ironically, these ceremonies have often been marked as the beginning of the end of his regime, overthrown in the revolution of 1979.

—Matthew Canepa

Bibliography

- Briant, P. *From Cyrus to Alexander: A History of the Persian Empire*. Winona Lake, IN: Eisenbrauns, 2002.
- Lincoln, B. "Old Persian *Fraša* and *Vašna*: Two Terms at the Intersection of Religious and Imperial Discourse." *Indogermanische Forschungen* 101 (1996): 147–167.
- Root, M. *King and Kingship in Achaemenid Art*. Leiden: Brill, 1979.
- Schmidt, E. F. *Persepolis*. 2 vols. Chicago: University of Chicago Press, 1939–1953.
- Stronach, D. *Pasargadae*. Oxford, UK, and New York: Clarendon, 1978.

Urban Features and Foreign Influences in Gandhara

Gandhara, in northwestern South Asia, was a cosmopolitan region in ancient times, culturally both part of South Asia and an international melting pot. For a while it formed part of the Achaemenid empire; subsequently the region fell to Chandragupta and was incorporated into the Mauryan empire that he created, which reached its peak under his grandson Aśoka. When the Mauryas declined, Gandhara passed to the Indo-Greek kings who controlled the eastern remnants of Alexander's empire, after them to Shakas (Scythians) and Parthians from western central Asia and Iran, and finally to the Kushans, originally central Asian nomads, who gained control of much of northern India. Gandhara lay across major trade routes, from the West going south to Indian cities and east to China and up the Indus from the Indian Ocean and beyond. It was therefore open to influences from people of many nations.

These influences are apparent particularly in Gandharan art and architecture and in the mixture of religions represented by shrines in its cities. At Taxila, for example, these included a probable Zoroastrian fire-temple as well as small Buddhist, Jain, and Hindu shrines. A statue from Taxila depicted the Egyptian child-god Harpocrates, and other sculptures also reflected religious plurality.

Taxila, capital of the Mauryan northern province, well illustrates the interplay of native and foreign urban forms. The first city, known today as the Bhir Mound, was founded or expanded by the Persians around 400 BCE; little of this (Period IV) has been exposed. A rubble wall probably originally surrounded the city but has since been robbed out. More recent deposits belong to the later period of Persian control and the early Mauryan occupation (Period III) and to the later Mauryan period (Period II). Excavations of part of the Mauryan city reveal a straight main street with irregular blocks of housing and side streets off it. Two other major streets, roughly parallel to the first, are narrower and far from straight, and the end of one is blocked by houses. The houses themselves are irregular in size and layout, the basic plan consisting of a courtyard and

a number of rectangular rooms. Narrow soakwells were a regular feature of the houses.

This both resembles and contrasts with the cities of the Mauryan heartland in the Ganges Valley. Soakwells were a usual feature of these cities. The houses in cities such as Bhita had similar but more regular plans, and the streets were laid out straight, following cardinal directions. This more closely matches the ideal prescribed by Kautilya in the *Arthashastra*: a square city with a fortification wall and four gates, divided by straight regular streets leading to the center where religious buildings should lie, flanked to their north by the royal palace.

The Indo-Greeks at first occupied the Bhir Mound (Period I) but soon moved to a new site, Sirkap, where they laid out a walled city (levels 6–5) in Greek style following a formal grid plan with straight streets crossed at right angles by smaller side streets that divided the buildings into blocks. This plan was preserved in later periods under the Scytho-Parthians (levels 4–3) and Parthians and Kushans (levels 2–1). Excavations were concentrated in the two upper levels where, for the most part, the blocks of buildings consisted of houses of one or more courtyards surrounded by rooms. Ground-floor rooms were used as cellars or basements or were filled in as solid supports for the main occupation level on the first floor, the level at which one entered the house. Often the house had a small shrine on its street front, accessible to the public from the street. Other small rooms in front of the houses may have functioned as shops. One block was entirely taken up by a courtyard housing an apsidal shrine containing a stupa. Several other blocks were large complexes of courtyards and public and private rooms, probably the mansions of wealthy citizens, the largest possibly a royal palace. The structures in Sirkap show a blend of Indian and Greek features: the general grid layout of the city and many decorative elements, such as pilasters, were of Greek inspiration, but the courtyard layout of the houses and their construction with flat mud roofs supported by timber beams followed long-established Indian traditions. The acropolis on the Hathial ridge, separated from the lower town by an internal wall, was also a standard feature of Greek

town planning, although not without local antecedents. Structures excavated here include several stupas as well as courtyards and rooms that may have belonged to a palace.

Outside the successive cities (including a third, Sirsukh, built by the Kushans in the late first century CE but largely unexcavated) the Taxila Valley had many Buddhist religious complexes as well as a few shrines of other religions. This again follows the ideal recommended in the *Arthashastra*, which mentions religious settlements as one of the urban features that should be located outside the city walls; others include cemeteries and gardens. Many of these complexes were located in small valleys or on leveled hilltops, at once secluded to encourage religious contemplation, and within easy range of the city to enable the monks to beg alms. The complexes varied in size and detail but usually were comprised of a stupa and a monastery. The main stupa was usually located in the center of a walled courtyard, with small chapels around its walls housing small stupas, or stucco reliefs or statues of the Buddha, often flanked by attendants. Sometimes other small stupas were placed adjacent to the main stupa. A number of the stupas in the Taxila Valley were founded by the Mauryan emperor Aśoka and later enlarged. Pre-eminent among these is the Dharmarajika stupa, part of a large complex around 2 miles (3.2 kilometers) from the Bhir Mound.

Beside the stupa courtyard, and often opening from it, was the monastery. This had a main courtyard surrounded on all four sides by the individual monks' cells. A stair led to another range of cells on the upper story. Wooden pillars supported a veranda on both levels. Often a large square depression, lined with stone, in the center of the courtyard caught the rainwater running off the veranda roof; from here it could be drained away or used as a reservoir. A bathroom was often positioned at one corner. The cells were very plain but had a high window and often a niche in which an image could be placed. A doorway or passage from one side of the courtyard led to a further suite of rooms: the Assembly Hall where the monks met to pray, hold discussions, and listen to sermons; a kitchen with store-rooms; and the refectory where the monks ate.

➤ CHARSADA

Situated in the Vale of Peshawar, Charsada (ancient Pushkalavati), like Taxila, lay at a cross-roads for trade routes. Here occupation began in the fourteenth century BCE on the Bala Hissar mound as a settlement of post-built and later mud-brick houses, perhaps surrounded by a small ditch. Incorporated into the Achaemenid empire from 518 BCE, Charsada became the capital of Gandhara Province. A massive fortification ditch and rampart around the mound probably dates to this period. This was later superseded by a substantial retaining wall. Little of the city's interior has been investigated. The city's fall to Alexander is recorded by Arrian.

The Indo-Greek settlement at Charsada, on the Shaikhani Dheri mound, was probably founded in the second century BCE and has a similar layout to Taxila. Within city walls now visible only as robber trenches, the city was laid out in a grid of straight streets with a Buddhist shrine at the center. This layout was preserved in the later, Kushan, occupation of the settlement. One house here, which follows the usual arrangement of a courtyard with surrounding rooms, included a bathing place in the courtyard; it was rebuilt and modified several times, finally being remodeled as a Buddhist temple complex. Eventually extensive flooding drove people from this site to settle on the other side of the Zinde River on what is now the Rajar Mound.

—Jane R. McIntosh

Similar monastic complexes were constructed the length and breadth of South Asia. Initially simple huts sheltered monks and nuns during the rainy season, but already by Mauryan times monasteries were more permanent and substantial establishments, attracting the generosity of lay devotees, from craftsmen to kings, who provided gifts of money to pay for buildings, goods such as cloth for the monks' use, and money and land to support them. Royal grants of land might also include the labor of its inhabitants, who would undertake day-to-day tasks for the monks. By the first century CE many monasteries were wealthy. As well as offering charity to those in need, from individuals suffering personal

distress to whole communities suffering famine, monasteries had a prominent role in trade and industry, providing venture capital and a safe depository for goods as well as hospitality to travelers. Many monasteries lay on major routes. Those of Gandhara were no exception since the region was a major crossroads for international trade, something that is reflected in the diversity of goods recovered from hoards in the cities. These were buried at times of trouble. The last, the invasion of the White Huns in the later fifth century CE, is vividly attested by the evidence of burning and destruction throughout the secular and monastic buildings of the Taxila Valley.

—Jane R. McIntosh

Bibliography

- Allchin, F. R. *The Archaeology of Early Historic South Asia*. Cambridge: Cambridge University Press, 1996.
- Dani, Ahmad Hasan. "Shaikhan Dheri Excavation (1963 and 1964 seasons)." *Ancient Pakistan* 2 (1966): 17–215.
- Marshall, John. *Guide to Taxila*. 4th ed. Cambridge: Cambridge University Press, 1960.
- Ray, Himanshu Prabha. *Monastery and Guild*. Delhi: Oxford University Press, 1986.

Central Asian Commercial Cities

Many commercial centers developed in central Asia on or near the major Silk Roads routes, the inter-Eurasian trade routes that linked China with the Mediterranean. Besides serving as markets, commercial cities provided merchants with supplies, money changers, warehouses for goods, new transportation, lodging, food, religious centers, entertainers, and prostitutes. These Silk Roads cities were located near a source of water, be it a river, spring, or man-made water source. Freshwater supplies were so important that in some areas under Chinese control bamboo pipes were used to bring water from the mountains to the trade route, or *kariz* were built to move water underground to cities, towns, and garrisons.

Cities also grew up near sources of production or local resources, such as jade from Khotan or mineral resources along the Northern Road of the Silk Roads. Others developed around religious centers or grew up around garrisons or centers of administration. Documents found at Turfan, also on the Northern Road, show the types of materials that were traded and taxed by weight including turmeric, gold and silver, am-

THE CITY OF LOULAN

Loulan is typical of cities along the northern Silk Roads. Located near Lop Nor in China's Xinjiang province, the region was an extensive oasis until the fourth to fifth century CE. Loulan was laid out on a grid pattern and surrounded by walls from 3 to 15 feet (1–5 meters) high and 1,300 feet (400 meters) long. The walls had four gates, one on each side. The city was divided into three sections with religious structures in the northeast, government buildings south of the center, and a residential area in the southwest. In the third century CE the Chinese built fortifications and established an administrative center in Loulan to ensure the safety of travelers and merchants. The Chinese withdrew early in the fourth century CE when the region underwent an environmental change. It became more arid, and Lop Nor became alkaline as the rivers supplying the lake dried up.

—Rebecca Wendelken



(Shupeizhang)

monium chloride (used as a flux to help with fusion in metalwork and as a mordant that fixes colors in dyeing), brace, medicines, and sugar.

Farther west there were other major commercial centers such as Kashgar in the present-day Chinese province of Xinjiang. This city was at the crossroads where the northern and southern routes converged. In present-day Uzbekistan, the cities of Bukhara and Samarkand were trade centers from its founding around 700 BCE. Alexander the Great reached the city of Samarkand in 328 BCE when it was known as Marakanda. Samarkand also served as the summer capital of the Sogdian empire, and for part of its history Samarkand was called Sa-mo-kien and was the westernmost province of China. Other major cities included Merv, Herat, Balkh, and Termez. Many cities that were active during the period of trade along the Silk Roads still exist today, showing the continued importance of their location.

—*Rebecca Wendelken*

Bibliography

Tucker, Johnathan. *The Silk Road: Art and History*. London: Art Media Resources, 2003.

Cultures in Central Asia, 1000 BCE–300 CE

Eurasia, the combined landmass of Europe and Asia, is a physiogeographic concept, while Inner Asia (interior Eurasia) includes central Asia, Siberia, and the nomadic cultures that inhabited the area from China through contemporary eastern Europe. Historically, Inner Asia incorporates the civilizations of central Asia, Mongolia, Tibet, and adjacent areas and cultures that during certain prehistoric and historic times had cultural, political, or linguistic affiliations with these regions. Central Asia's frontiers have shifted through time, varying according to the balance of power between the civilizations of Southwest Asia, the Asian subcontinent, and Southeast Asia. The most commonly used definition is that central Asia covers about 3.47 million square miles (9.03 million square kilometers), or 21 percent of the continent, and includes the region from eastern Europe, Belarus, and Ukraine on the west side; the

Chinese provinces of Sinkiang, Xingang, and Qinghai on the east side; Mongolia to the northeast; Siberia to the north; and the Indian Ocean to the south. Another definition includes the Transcaucasian countries, Iranian Azerbaijan, the Turkic-Muslim regions of southern Russia, Afghanistan, northern Pakistan, and southern Siberia. A third definition considers central Asia as comprising only the five former Soviet central Asian republics. Recent archaeological research focusing on the periods since 3000 BCE has led scholars to propose the term "Middle Asia," which includes the region bounded by Southwest Asia, southern Siberia, China, and the Indian Ocean that was home to a number of early civilizations.

Middle Asia is thus a geographically complex region of high plateaus (Iranian Highland) and high-altitude mountains, most of the latter running east-west (Kopet Dag, Hindu Kush/Paropamisos/western Himalayas, Pamirs, Turkmen-Khorasan, Tian Shan), vast deserts (Dasht-i Margo, Dasht-i Luft, Kara Kum, Kyzyl Kum, Taklamakan), and treeless grassy plains or steppes and semideserts rich in flora (Turkistan Plain, Ferghana Valley). The primary rivers include the Amu Darya (Oxus), Syr Darya (Jaxartes), Vakhsh, Murghab, Helmand, Hari Rud, and Kabul/Upper Indus; the major bodies of water are the Aral Sea and Caspian Sea to the west and the centrally located Lake Balkhash and Lake Issyk Kul.

From 1000 BCE to CE 300, central Asia played a significant intermediary role in the transmission of culture, languages, religions, ideas, and artifacts east-west and north-south. The dates and geographical distributions for this vast, culturally complex area's cultural periods are derived from archaeological data and evidence from architecture, epigraphy, numismatics, burials, and hoards. There are no reliable written sources for the region prior to the Achaemenids.

The rise of chiefdoms or kingdoms and states accompanied by urbanization during the Bronze Age occurred in the region from the Indus to the Oxus and into eastern Iran. Cities and smaller settlements show marked evidence of social stratification (notably variations in housing and burial practices), craft specialization, and intensive trading between the different areas at the same time as the spread of Indo-European

➤ CENTRAL ASIAN CULTURAL PERIODS TO 450 CE

Lower Paleolithic	<50000 BCE
Middle Paleolithic	50000–30000 BCE
Upper Paleolithic	18000–10000 BCE
Epi-Paleolithic	10000–8000 BCE
Neolithic	8000–3000 BCE
Bronze Age	4000–500 BCE
Early Iron Age	1000–800 BCE
Later Iron Age	800–400 BCE
Achaemenid Persian Empire	550–330 BCE
Seleucid	312–60 BCE
Mauryan Indian (southeastern central Asia)	322–185 BCE
Graeco-Bactrian	250 BCE–125 CE
Parthian Empire (western central Asia)	238 BCE–226 CE
Saka (east and southeast central Asia)	200 BCE–20 CE
Indo-Greek	155 BCE–10 CE
Indo-Scythian	120 BCE–50 CE
Indo-Parthian (eastern central Asia)	20–80 CE
Greater Kushan (north and east central Asia)	60–375 CE
Early Sassanian	226–450 CE
Kushano-Sassanian	345–450 CE

—Charles C. Kolb

languages. The vast Eurasian steppes from the Carpathian Mountains to the Altai included diverse livestock-breeding nomadic tribes and ethnic groups.

At the beginning of the first millennium, horse-riding pastoral nomadic tribes (such as the Karasuk) practiced seasonal transhumant migrations and participated in economic symbiosis with settled cultures. The first third of the first millennium BCE (early Iron Age) is associated with considerable economic diversity as seen in the wide-scale introduction of ferrous metallurgy, which contributed to specialized craft production including weapon making (notably in Transoxiana and the Chust and Dahistan cultures). Sedentary communities expanded oases

and irrigation cultivation, constructed monumental architecture, participated in overland caravan trade (especially along the Silk Roads), and witnessed the accumulation of wealth by the elite and nobility. The period between 700 BCE and 250 to 300 CE is characterized by the movements of populations; the continuation of local economic traditions in Parthia, Margiana, and Bactria; and the interrelations of their cultures in this region with the emergence of several nomadic and sedentary civilizations occupying parts of both the steppe and oasis zones. Groups of armed riders emerged from these nomadic tribes and initiated military conflicts with sedentary settlements that in turn led to the institutionalization of power, and tribal leaders often became absolute petty rulers. The horse-riding pastoral nomadic Scythians, or Scyths, were confederated tribes that occupied areas of the central Asian steppe from the Urals to the Altai Mountains from the eighth century BCE to 600 CE. The Persians called the Scythians “Saka,” but the term “Scythian” has sometimes been misapplied and has also been used to designate many horse-riding steppe cultures.

The contrast between the nomads and sedentary farming cultures was accentuated by the rise of the Achaemenid Persian empire, which extended from Egypt and Turkey through Afghanistan and was divided politically into administrative tribute-paying units called satrapies. The central Asian satrapies included Parthia (eastern Iran); Aria (western Afghanistan); Bactria (northern Afghanistan); Drangiana (the lower Helmand Valley and Seistan); Arachosia (the upper Helmand Valley and Kandahar); Sattagydia, later called Paropamisadae (the areas of Kabul, Bamiyan, and the Panjshir valleys); Gandhara (Jalalabad and Peshawar); and Gedrosia (Pakistani Baluchistan). Chorasmia, located northwest of Bactria and south of the Aral Sea, became an Achaemenid satrapy before 522 BCE and was an independent kingdom by 330 but later became a Parthian satrapy. Sogdiana, a politically divided Achaemenid province situated between the Amu Darya and Syr Darya, was a rich land of farmers and traders centered at the modern city of Samarkand. Margiana (Margu) was another Achaemenid satrapy centered at modern Merv by 515 BCE.

The defeat of Darius III at Gaugamela in 331 BCE by Alexander the Great transformed central Asia as the Greeks conquered Bactria and Sogdiana (330–327 BCE) and swiftly secured most of Afghanistan, Swat, and Punjab (327–325 BCE). The Greeks established a series of Hellenistic cities named for Alexander: Margiana (Merv), Aria (Herat), Arachosia (Kandahar), ad Caucasum/Kapisa (near Begram), and Oxiana (Eucratidia/Ai Khanoum). The nomads were expelled or integrated, and sedentary civilization was strengthened and became rapidly predominant. Hellenistic Seleucid kings controlled the provinces of Parthia and Bactria, but following the brief rise of the Graeco-Bactrian kingdom, a resurgent Parthia regained the western Graeco-Bactrian territories. During this time the civilizations of central Asia underwent a significant change whereby a progressive religious syncretism among Zoroastrianism, Greek beliefs, and Buddhism developed that would influence subsequent central Asian civilizations up to the Arab conquest.

Beginning around 160 BCE, Yuezhi and Saka tribes migrated westward from Sinkiang into the Pamirs, Herat, Seistan, and territories north of the Hindu Kush. During the first century BCE the Saka established kingdoms in eastern Iran and northwestern India, but in the first century CE these territories came under Parthian jurisdiction so that the Parthian empire incorporated eastern lands from Sistan to the Indus and absorbed the Saka by 100 BCE. Subsequently, the Indo-Parthians from the Indus Valley and Punjab under King Gondophares extended their control over Seistan, Arachosia, and Paropamisadae (20–80 CE).

The Kushan empire, which had Greco-Roman influence (seen in Gandharan sculpture, Buddhist art, and Kushan coinage), emerged to precipitate the collapse of the Parthians and annexed their subcontinent provinces. Prosperous long-distance caravan trade extended from the Mediterranean and China through central Asia via the Silk Roads. Despite the development of the sea routes, this intercontinental set of overland commercial highways continued for centuries. By 234 CE the powerful Persian Sassanians challenged the Kushans, and the Kushan empire disintegrated; the subsequent history of the Kushano-Sassanians in central Asia is obscure.

—Charles C. Kolb

Bibliography

- Cribb, Joe, and Georgina Hermann, eds. *After Alexander: Central Asia before Islam*. Proceedings of the British Academy 133. Oxford and New York: Oxford University Press, 2007.
- Dani, A. H., and V. M. Masson, eds. *History of Civilizations of Central Asia*, Vol. 1, *The Dawn of Civilization: Earliest Times to 700 B.C.* Paris: UNESCO, 1992.
- Harmatta, J., ed. *History of Civilizations of Central Asia*, Vol. 2, *The Development of Sedentary and Nomadic Civilizations: 177 B.C. to A.D. 250*. Paris: UNESCO, 1994.
- Kohl, Philip. *Central Asia: Palaeolithic Beginnings to the Iron Age*. Editions Recherche sur les Civilisations, Synthèse 14. Paris: DeBoccard, 1984.
- Mair, Victor H., ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*. 2 vols. Philadelphia: Institute for the Study of Man, 1998.
- Yarshater, Ehsan, ed. *Encyclopedia Iranica*. 14 vols. Costa Mesa, CA: Mazda Publishers; New York: Encyclopedia Iranica Foundation, 1992.

Biskupin—Poland's Pompeii

The site of Biskupin is located in Bydgoszcz Province in northwestern Poland. It is an early-Iron Age fortified settlement belonging to the late Lusatian culture and dates to approximately 750–550 BCE. Biskupin is the country's best known archaeological site both within Poland and outside of it.

The settlement at Biskupin was situated on an island, defended by timber breakwaters, and fortified by ramparts of timber compartments filled with earth and stones. The earth embankments were usually built on a foundation of beams and secured by vertical piles. The gateways to the settlement were an important part of fortifications, and the main feature of each was an approach that was lined on both sides by massive palisade walls and was probably covered on the top.

The settlement inside was constructed according to a plan, with a regular network of streets and communication tracks. The main arterial road was the street leading around the ramparts, and there were eleven parallel streets perpendicular to the arterial road. There was a small square near each of the gateways. The settlement consisted of 104–106 rectangular timber

MULTIDISCIPLINARY EXCAVATIONS AT BISKUPIN

The fortified settlement of Biskupin was found in 1933 and excavation began in 1934. Fieldwork was directed by Józef Kostrzewski and Zdzisław Rajewski. Excavations were carried out in the years 1934–1939, and when they resumed in 1946 after World War II, they continued until the 1960s. Various specialists from complementary disciplines participated: soil and geological studies, palynological analyses, botanical and dendrological studies, and ethnographic research of the Biskupin architecture. Photographic documentation of the site was very important. Wojciech Kocka developed the technique of taking pictures from a small balloon, and there were very successful attempts to produce color photographs as early as 1939.

Research at Biskupin marked enormous progress in Polish archaeological studies. It was truly comprehensive, owing to the fruitful cooperation with specialists from other disciplines. This cooperation was characterized by real partnership, and it led to the development of new methods of excavation. The large scale of the research was also significant. After World War II, Biskupin was the place where practical courses on excavation methods for students of archaeology, history, and the history of art were organized. As a result, the great majority of students of that time gained their archaeological experiences in Biskupin. Biskupin is now a well-known archaeological open-air museum. It was, and still is, an important center for experimental archaeology, especially in building, tillage, food preparation, stone and flint work, antler and bone work, wood and wool work, clay processing, and the obtaining of tar.

—Arkadiusz Marciniak

houses laid out on a regular street system, and they may have housed up to 1,000 people. Each house interior was divided into two parts with the entrance fulfilling economic functions. Two phases of occupation have been distinguished, and 75 percent of the site has been excavated thus far.

—Arkadiusz Marciniak

Bibliography

Marciniak, Arkadiusz. "Biskupin." In *Encyclopedia of Archaeology: History and Discoveries*, edited

by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.

Piotrowska, Danuta. "Biskupin 1933–1996: archaeology, politics and nationalism." *Archaeologia Polona* 35–36 (1997/98): 255–285.

Rajewski, Zdzisław. *Biskupin: Polish Excavations* [translation by Leopold Widymowski]. Warsaw: Polonia, 1959.

Olmec Ceremonial Centers

The ancient Olmecs occupied the Gulf Coast of Mexico, specifically parts of the present-day states of Veracruz and Tabasco. Between 1000 and 400 BCE, they erected structures at La Venta, Laguna de los Cerros, and, toward the end of the period, Tres Zapotes. Recently discovered residential units have altered the original conception of the empty Olmec ceremonial center, used only for ritual purposes. Indeed, these sites are among the earliest instances of urbanism in Mexico. La Venta, located in Tabasco and occupied for the entire period, exemplifies a uniquely Olmec adaptation to a swampy environment and the development of centralized sacred space. The sheer size and placement of La Venta's ceremonial center indicates its importance, as does the evidence of long-term modification and rebuilding.

Many raised platforms and open plazas characterize La Venta, but a large undulating pyramid clearly separates the ceremonial center from the rest of the site. This man-made mountain adjoins two contiguous rectangular plazas lying to the north. Long low-lying platforms flank the first plaza on either side. Large mounds bound the plaza to the north and guide movement into the second smaller plaza, also enclosed by mounds.

Access to this area was highly restricted, solidifying the sacred nature of the space in contrast to the other open and thus more public plazas located throughout La Venta. Offerings, such as massive mosaic pavements, were buried under the ceremonial plaza floors and may refer to a watery underworld; although never seen after interment, the mosaics further sanctified the area. Additionally, the site's north-south axial orientation, dramatized by bilateral symmetry, adapted to the surrounding topography through

an alignment with the large mountain to the south.

The La Venta landscape of sacred space can be found at other sites outside the Olmec's Gulf Coast heartland. In central Mexico, roughly contemporaneous with La Venta, non-Olmec people inhabited the sites of Chalcatzingo, Morelos, and Teopantecuanitlan (originally Tlacozoltitlan), Guerrero. Both reflect Olmec organizational patterns. They occupy a series of terraces and, like La Venta, include ceremonial cores oriented to the natural geography: at Chalcatzingo, the ritual center occurs at the base of a mountain, while Teopantecuanitlan's ceremonial mound seems to mimic nearby mountain ridges. As at La Venta, strong north-south directionality created by earthen mounds distinguishes sacred space from the day-to-day world. Furthermore, similar cosmological imagery is found in comparable contexts at all three sites.

Chalcatzingo and Teopantecuanitlan introduce non-Olmec elements, though. At Teopantecuanitlan, monolithic sculptures are found aboveground, apparently replacing the La Venta buried offerings. Teopantecuanitlan and Chalcatzingo both utilize sunken plazas as a way of defining ceremonial space, a technique not found among the Olmec. Finally, residential spaces are more closely associated with the ceremonial precincts; in fact, the two may be combined at Teopantecuanitlan.

The early concept of the Olmec heartland as the origin of a mother culture that spread throughout Mesoamerica is now largely outmoded. Olmec characteristics are evident in non-Olmec areas far from the Gulf Coast heartland, though, as evidenced by the central Mexican sites of Chalcatzingo and Teopantecuanitlan.

—Maline Werness

Bibliography

- Benson, Elizabeth P., and Beatriz de la Fuente, eds. *Olmec Art of Ancient Mexico*. Washington, DC: National Gallery of Art, 1996.
- Grove, David C. *Chalcatzingo: Excavations on the Olmec Frontier*. London: Thames and Hudson, 1984.
- Reilly, F. Kent, III. "The Landscape of Creation: Architecture, Tomb, and Monument Placement at the Olmec Site of La Venta." In *Heart of Creation: The Mesoamerican World and the Legacy of*

THE MOTHER CULTURE–SISTER CULTURE DEBATE

Originally, similarities between the Olmec type-site of La Venta and non-Olmec sites such as Teopantecuanitlan and Chalcatzingo led to the Mother Culture hypothesis that culture spread from the Olmec heartland through military incursions or colonization. Alternatively, the Sister Culture argument suggested that Olmec and contemporaneous non-Olmec cultures developed independently, not as the result of one-way dissemination. Currently, all three sites are known to have had complex and enduring trade-based relationships. Each site provided goods not available at either of the other two sites, resulting in commercial interaction among the three as well as dramatic visual similarities.

—Maline Werness

Linda Schele, edited by Andrea Joyce Stone. Tuscaloosa: University of Alabama Press, 2002.

Vela, Enrique, ed. *Olmecs*. Special edition of the journal *Arqueología Mexicana*. México, D.F.: Imprenta Madero, 1996.

Kaminaljuyu

Kaminaljuyu, a Maya site in the Guatemalan highlands (under present-day Guatemala City), was first populated around 1000 BCE and not fully abandoned until around 800 CE. Most known for its initial development, early Kaminaljuyu (Maya for "Hill of the Dead") exhibits many of the elements—the erection of monuments, massive architectural precincts, and written records—associated with later lowland Maya civilization (ca. 200–900 CE) farther to the north and east in Belize, the Petén region of Guatemala and Mexico's Yucatan Peninsula. In fact, Kaminaljuyu is one of the first examples of major site development in the region and evidences an effort, on a monumental scale, connected with urban lifestyles and the needs of large populations to adapt to the surrounding environment.

Situated on the shores of the now nonexistent Lake Miraflores, with its fertile agricultural conditions, Kaminaljuyu controlled trade routes connecting the highlands with the Pacific coastal,

➤ KAMINALJUYU STELE 11



(Gianni Dagli Orti/Corbis)

Kaminaljuyu Stele 11 presents the clear image of a ruler wearing a bird mask and standing between two incense burners. Such imagery was probably meant to justify the lord's position as ruler through his ability to communicate with the supernatural realm. Many of the steles from early Kaminaljuyu incorporate hieroglyphic texts in a language close to, if not the same as, that found in the lowlands to the north. Stele 11 lacks such a lengthy inscription, but it does seem to include an early form of the *ajaw* ("lord" or "king") glyph on the ruler's skirt.

—Maline Werness

Caribbean, and lowland regions by the period 1000–400 BCE. Major building programs were undertaken, and other modifications to the site included an extensive water management system. Steles—tall freestanding stone monuments—also began appearing. Architectural platforms were another innovation, oriented to the cardinal directions and designed for public display. Some

structures were decorated with large stucco masks, a typical development found farther north in the lowlands. The growing complexity of architectural features, the control of trade routes, and the erection of monuments all seem to indicate the development of a social hierarchy centered on elite control.

By the period 400 BCE–200 CE, Kaminaljuyu had become an extremely powerful chiefdom or state with increasingly hierarchical social structures, as evidenced by the many elaborate and valuable offerings found in elite burials. By the end of the period, Kaminaljuyu is estimated to have had 4,500 people living within the city itself, with an additional 5,700 people living in areas linked to and sustaining the great site. Major building and rebuilding programs were also conducted during the period, and five distinct areas developed, each with discrete clusters of large earthen mounds. These different regions within Kaminaljuyu may have been associated with important lineage seats and the burial of significant individuals. Ancestor veneration was probably practiced at this time, given the evidence of grave reentry. Furthermore, many steles, such as Stele 11, were erected, and writing developed. In fact, all the hieroglyphic inscriptions found at Kaminaljuyu are associated with early steles.

Occupation continued until around 800 CE when the city was abandoned, as were many other Maya centers in the lowlands. Kaminaljuyu was the center of the first Maya state, and its organization and administration paralleled those of lowland Maya centers. In fact, it is possible, even likely, that Kaminaljuyu provided the model for the later kingdoms of the lowland Maya. Despite its importance as an archaeological site in Guatemala, much of Kaminaljuyu has been destroyed by modern development because it lies beneath Guatemala City. Fortunately, early surveys of Kaminaljuyu exist, and the nation is engaged in ongoing and concerted efforts to preserve sections of the site.

—Maline Werness

Bibliography

Fahsen, Federico. "From Chiefdoms to Statehood in the Highlands of Guatemala." In *Maya, Divine Kings of the Rainforest*, edited by Nikolai Grube. Bonnerstrabe, Cologne: Könemann Verlagsgesellschaft mbH, 2000.

Fields, Virginia M., and Dorie Reents-Budet. *Lords of Creation: The Origin of Sacred Maya Kingship*. Los Angeles: Los Angeles County Museum of Art, 2005.

Kaplan, Jonathan. "The Incienso Throne and Other Thrones from Kaminaljuyu, Guatemala: Late Preclassic Examples of a Mesoamerican Throne Tradition." *Ancient Mesoamerica* 6(2) (1995): 185–196.

Michels, Joseph W. *The Kaminaljuyu Chiefdom*. University Park: Pennsylvania State University Press, 1979.

Formation of Teotihuacan and the Building of the First Pyramids

The ancient city of Teotihuacan was located in an alluvial valley in the northeastern side of the Valley of Mexico, where the San Juan River and its tributaries drain into Lake Texcoco.

Based on ceramic typology and stratigraphy, archaeologists have delineated six phases for this site, lasting from around 200 BCE to 700 CE. Though its incipient period (phases Cuanalan and Patlachique) is poorly understood, archaeological data shows that the next two centuries (Tzacualli to Miccaotli phases, 1–200 CE) were characterized by monumental construction during which time Teotihuacan quickly became the largest and most populous urban center in the New World, reaching around 200,000 inhabitants.

Archaeologists have interpreted the earliest occupancy of the Teotihuacan Valley as a group of small dispersed farming villages located strategically in an area with rich agricultural potential, close to freshwater springs, and maguey plantations (to extract *pulque* and fibers). The area was also near the Otumba and obsidian deposits as well as clay and basalt sources. For the duration of this formative period, Teotihuacan was still a marginal place compared to Cuiculco, which was one of the largest sites of the Basin of Mexico with unique monumental pyramids.

As a result of the eruption of the Xitle volcano Cuiculco was abandoned, and the consequent demographic rearrangements led to massive migrations to the northern part of the Basin of Mexico. At some point in the phases

Patlachique and Tzacualli, the first urban center in the Teotihuacan Valley was founded in the northwestern sector, far away from previous occupancy and far from the agricultural lands and water resources for irrigation. There are no apparent defensive reasons that explain the election of this area in the valley. However, the existence of several cave entrances in this new area, with strong ritual connotations in Mesoamerica, could explain the new concentration of populations. The urban development of this moment was characterized by three temple plazas surrounded by the dwellings of the inhabitants. Sometime later came the construction of the Pyramids of the Sun and the Moon, and the Street of the Dead was also planned at a later date.

—Apen Ruiz

Bibliography

Coe, Michael D., and Rex Koontz. *Mexico: From the Olmecs to the Aztecs*. 5th ed. New York: Thames and Hudson, 2002.

Evans, Susan Toby. *Ancient Mexico and Central America*. New York: Thames and Hudson, 2004.

Cultures in the Valley of Mexico—Cuiculco and Teotihuacan

Modern archaeological research in the Basin of Mexico began with stratigraphic tests at the archaeological site of Teotihuacan (located in a valley with the same name in the northeastern basin) by Manuel Gamio in the 1920s and Preclassic village site excavations by George Vailant during 1928–1936. Beginning in the 1960s, meticulous surface reconnaissance and selected site excavations as a part of settlement pattern research became a standard research protocol. Large-scale research began in urban Teotihuacan by Rene Millon and his colleagues and with intensive surveys and excavations in the rural Teotihuacan Valley and then the entire Basin of Mexico by William Sanders and his associates. Instituto Nacional de Antropología e Historia archaeologists conducted important research in Teotihuacan and the Aztec capital, Tenochtitlan-Tlatelolco (Mexico City).

BASIN OF MEXICO RELATIVE CHRONOLOGY

Sidereal Periods Time	Basin of Mexico/ Teotihuacan Valley	Major Archaeological Phases
1520–	Colonial	Colonial Hispanic
1190–1519	Aztec I, II, III, IV	Late Postclassic/Late Horizon
950–1200	Toltec Mazapan	Early Postclassic/Second Intermediate Phase 2
750–950	Toltec Coyotlatelco	Early Postclassic/Second Intermediate Phase 1
650–750*	Metepiec	Epi-Classic/Middle Horizon
550–650	Late Xolalpan	Late Classic/Middle Horizon
450–550	Early Xolalpan	Middle Classic/Middle Horizon
300–400	Late Tlamimilolpa	Middle Classic/Middle Horizon
200–300	Early Tlamimilolpa	Early Classic/Middle Horizon
150–200	Miccaotli	Early Classic/First Intermediate Phase 5
1–150 CE	Tzacualli	Terminal Preclassic/First Intermediate Phase 4
150–1 BCE	Patlachique/Cuicuilco	Terminal Preclassic/First Intermediate Phase 3B
300–200	Tezoyuca/Cuicuilco	Terminal Preclassic/First Intermediate Phase 3A
650–300	Cuanalán/Ticomán	Late Preclassic/First Intermediate Phase 2B
900–650	Chiconautla/La Pastora	Middle Preclassic/First Intermediate Phase 1B
1000–900	Altica/El Arbolillo	Middle Preclassic/First Intermediate Phase 1A
1150–1000	Bomba	Early Preclassic/First Intermediate Phase 2
1300–1150	Manantial	Early Preclassic/Early Horizon Phase 2
1400–1300	Ayotla	Early Preclassic/Early Horizon Phase 1
1500–1400	Coapexco	Early Preclassic/Early Horizon Phase 1
1700–1500	Nevada-Tlalpan	Initial Ceramic
2000–1700		Initial Ceramic
3500–1800 BCE		Archaic
>19,000–2500 BCE		Paleo-Indian

* The terminal date for Classic period Teotihuacan is now disputed; older chronologies indicate circa 750, but reinterpretations favor 650 CE.

—Charles C. Kolb

Paleo-Indian and Archaic period artifacts occurred as scattered stone tools (projectile points and scrapers) used by hunters and gatherers. The earliest habitation with hearths and imported stone tools is at Tlapacoya (19,000 BCE), while the Tequixquiac site produced a carved camelid sacrum (18,000 BCE). Occasionally, artifacts are found in context with Pleistocene/Early Holocene megafauna such as mammoth bones with projectile points at Santa Isabel Iztapan (9000 BCE). A female skeleton and a mastodon were recovered

at Tepexpan on the shore of Lake Texcoco in the Teotihuacan Valley (11,000 BCE). Megafauna became extinct due to climatic change and human exploitation, and a big-game hunting tradition changed to desert adaptations during a dryer era when smaller fauna and a variety of flora were exploited by family groups and small bands (20–25 persons) using smaller projectile points, scrapers, and grinding tools to process wild seeds. During the Archaic, bands migrated seasonally to exploit food resources; the Chalco complex provides evi-

dence for the graduate domestication of maize and other cultigens in Puebla's Tehuacan Valley (4200 BCE), Tamaulipas, and more recently the Basin of Mexico. Ceramic vessels were fabricated to store and cook foodstuffs; bands gradually became sedentary, occupying caves and constructing small settlements.

The fertile basin provided an ideal climate, soils, growing season, and sufficient water to grow maize, beans, squash, amaranth, sunflower, and other cultigens. Farming communities developed and expanded in size, occupying new areas, and spring-fed irrigation systems allowed greater productivity, leading to demographic expansion accompanied by craft specialization and socioeconomic diversity. Ceramics, stone tools, sculpture, and painting evolved, and ceramics and architectural styles became the primary sources for dating sites. Political specialists emerged in Early Preclassic tribal and incipient chiefdom-level communities, and there was competition for local resources that led to the cooperative construction of irrigation works and farmlands and the need to secure territory and resources. Intercommunity cooperation against other groups of villages may have fostered the development of military forces. Nucleated settlements were clustered in the northern and central parts of the basin, but the maximum demographic intensity was in the southeast, such as Coapexco, of 988 acres (400 hectares) and 1,000 inhabitants. By 1000 BCE, 90 percent of the basin's population was concentrated in the south.

The farming village of Cuicuilco (Middle through Terminal Preclassic, 1000 BCE–150 CE) arose as the first monumental civic-ceremonial urban polity in the southwestern basin, occupying 370 acres (150 hectares) with a population of 7,500 during the Middle Preclassic and expanding to 988 acres (400 hectares) with 20,000 inhabitants by 150 CE. The city had pyramids—one truncated seeped conical pyramid (400–200 BCE) was 65 feet (20 meters) high and 360 feet (110 meters) in diameter—and other public architecture but was apparently abandoned following the eruption of a nearby volcano, Xitle, in 150–200 CE due to ash fall and lava flow. The flow from this eruption covered 30 square miles (80 square kilometers) to a depth of 32 feet (10 meters), and the flow is today known as Pedregal

➤ BASIN OF MEXICO

The Basin of Mexico lies near the southern end of the Mexican Meseta Central, a broad upland located in the Mexican Neovolcanic belt composed predominantly of Quaternary volcanic extrusives with additional Tertiary solidified magma in the north, while the southern sections have Mesozoic sediments and Paleozoic-Cenozoic metasediments and extrusives. Geologically, it is an internally draining hydrographic unit located on a highland plateau at an average elevation of 7,349 feet (2,240 meters) above mean sea level and encompasses an area approximately 43 miles (70 kilometers) east-west and 74 miles (120 kilometers) north-south (approximately 3,088 square miles, or 8,000 square kilometers) surrounded by mountains and volcanoes (some still active). Although located in the tropics, because of its elevation the climate is temperate. Five interconnected lakes (Texcoco, Chalco, Xochimilco, Zumpango, and Xaltocan) covered most of the basin floor until the past century. Today, these lakes are drained, and the terrain is altered significantly. The area is nearly coterminous with the Distrito Federal and the eastern half of the Estado de Mexico; Greater Mexico City covers about 65 percent of the basin. Humans have inhabited the basin for 20,000 years, and in the Prehispanic era it was the center of several civilizations: Teotihuacan (Classic, ca. 150–650 CE) and Aztec (Late Postclassic, 1190–1519) with Early Postclassic Toltec (ca. 950–1150) immigration from north of the basin.

—Charles C. Kolb

de San Angel. In 2000, volcanologists reported a new set of radiocarbon dates for a Xitle eruption: 245–315 CE. It is unclear if this documents a second eruption or if the other dates are in error. The lava field preserved the ancient settlement but makes conventional archaeological methods difficult, as has the twentieth-century sprawl of Mexico City (therefore, settlement size and demographics should be regarded with caution). Another basin volcano, Popocatepetl, erupted during the first century CE and affected areas to the southeast (the Tetimpa Puebla site was abandoned) and likely impacted Cuicuilco. Other eruptions occurred during 3195–2830 BCE and in 800 BCE, 215 BCE, 675 CE, and 1095 CE.

Cuicuilco-Ticomán culture was defined on the basis of excavations by George Vaillant in Preclassic villages in the western basin at the type sites of Zacatenco, Ticomán, and El Arbolillo. Sites reached up to 247 acres (100 hectares), and architecture and elaborate grave goods facilitated the creation of relative chronologies based on ceramics and clay figurines. During the Terminal Preclassic (200 BCE–200 CE), two regional centers buffered from one another were comparable in population (approximately 20,000 persons each): Cuicuilco (988 acres, or 400 hectares) in the southwest and Teotihuacán (1,482 acres, or 600 hectares) in the northwest basin; the latter was situated around natural springs in the middle Teotihuacán Valley. Although there were small heterogeneous farming settlements scattered in the eastern basin's Texcoco Plain (and likely to the west and north), the Cuicuilco and Teotihuacán were competitive polities.

Marked regional resettlement with a major demographic increase at Teotihuacán resulted from Cuicuilco's abandonment and migrations; whether peaceful or forceful is not known. Within a century, Teotihuacán's population more than doubled, and vast city planning initiated an urban grid system, the construction of monumental architecture (square-based pyramids, temples, palaces, elite and commoner residences), a trade system based on the control of obsidian resources, and unique art styles and ceramics. A state-level society and eventual empire would emerge. By 450 the urban zone was 9.5 square miles (24.5 square kilometers) with 125,000–200,000 inhabitants.

—Charles C. Kolb

Bibliography

- Evans, Susan Toby. *Ancient Mexico and Central America: Archaeology and Culture History*. New York: Thames and Hudson, 2004.
- Headrick, Annabeth. *The Teotihuacán Trinity: The Sociopolitical Structure of an Ancient Mesoamerican City*. Austin: University of Texas Press, 2007.
- Sanders, William T., Jeffrey R. Parsons, and Robert S. Santley. *The Basin of Mexico: Ecological Processes in the Evolution of a Civilization*. New York: Academic Press, 1979.
- Sanders, William T., et al. *The Teotihuacán Valley Project Final Report*. 5 vols., 14 parts. Occa-

sional Papers in Anthropology. University Park: Pennsylvania State University, Department of Anthropology/Matson Museum of Anthropology, 1975–2007.

Wolf, Eric R., ed. *The Valley of Mexico: Studies in Pre-Hispanic Ecology and Society*. Albuquerque: University of New Mexico Press, 1976.

Oaxaca Valley and Early Monte Alban

Like the Basin of Mexico, the Valley of Oaxaca was the scene of major coordinated regional archaeological efforts by Mexican and American scholars. Beginning in the 1940s, Alfonso Caso, Ignacio Bernal, and Jorge Acosta were pioneers of Oaxacan research and were followed by American archaeologists John Paddock, Kent Flannery, Joyce Marcus, Richard Blanton, Robert Drennan, Steve Kowalewski, Gary Feinman, and Linda Nicholas, among others. Settlement pattern research in Oaxaca beginning in the late 1960s was an outgrowth of Basin of Mexico research.

Paleo-Indian artifacts are less common in comparison to the Basin of Mexico but occur at Late Pleistocene Cueva Blanca (near Mitla, Oaxaca) and the early Naquitz phases. Guilá Naquitz (Río Salado Valley) was a small Archaic period cave encampment at 6,318 feet (1,926 meters) elevation and 984 feet (300 meters) above the valley floor with eight occupation levels and was inhabited by small bands (5–15 persons) during circa 8000–6400 BCE that foraged for wild plants, collected and hunted fauna, and gradually shifted from food procurement to the incipient farming of beans, squash, and maize, which sustained larger populations (25–40 persons). They made chipped and ground stone tools from local resources, created cordage and basketry, and were similar to contemporaries living in the Tehuacán Valley to the northwest between Oaxaca and the Basin of Mexico. Gheo-Shih and Cueva Blanca (winter and summer macroband hunting campsites, respectively) had a variety of projectile point types that provide documentation for the Jícaras and Blanca phases, while the Martínez Rockshelter, 1,968 feet (600 meters) from Guilá Naquitz, was a final stage of the local Preceramic.

The establishment of sedentary village life was a critical change in the development of civi-

➤ VALLEY OF OAXACA RELATIVE CHRONOLOGY

The chronology of the Valley of Oaxaca is complex, with gaps and regional variations. A conflated version, largely depending upon settlement and ceramic studies, linguistic analyses (glottochronology), and radiocarbon dating, appears below.

Sidereal Periods	Valley of Oaxaca	Major Archaeological Phases
Time		
1521-	Colonial	
1100–1520	Monte Alban V	Late Postclassic
750–1000	Monte Alban IV	Early Postclassic
500–750	Monte Alban IIIB	Late Classic
300–500	Monte Alban IIIA	Early Classic
100 BCE–300 CE	Monte Alban II	Proto-Classic
300–200	Monte Alban Late I or IB	Late Formative
500–300	Monte Alban Early I or IA	Late Formative
700–500	Rosario Phase	Middle Formative
850–700	Guadalupe Phase	Middle Formative
1150–850	San José Phase	Early Formative
1500–1150	Tierras Largas Phase	Early Formative
1800–1500	Espiridión Complex/Phase	Initial Formative
+/- 2000	Martínez Phase	Preceramic
3300–2800	Blanca Phase	Preceramic
5000–4000	Jícaras Phase	Archaic
8900–4800	Naquitz Phase	Paleo-Indian to Archaic
>11,000 BCE	Early Ajuereado Phase	Paleo-Indian

—Charles C. Kolb

lization in the Valley of Oaxaca, leading to tribal and incipient chiefdom societal types. The site of San José Mogote in the northern Etla arm yielded the remains of a wattle-and-daub house and the earliest pottery (bowl and jar forms derived from gourds) thus far discovered from the Valley of Oaxaca (Espiridión phase, ca. 1900–1400 BCE). The subsequent Tierras Largas phase, named for a site in the Central Valley northeast of Monte Alban, saw a proliferation of tribal-level village sites along the Atoyac and Salado rivers and a dramatic increase in ceramic vessel shapes and decorations and clay figurines related to the growing of maize and teosinte. Village architecture included elite and nonelite do-

mestic habitations and public ritual structures. Rapid demographic growth and regional organizational differences occurred in the various arms of the valley. Each arm formed a coherent region separated by a buffer zone, or no-man's-land. The San José phase was characterized by a ceramic complex with Gulf Coast Olmec ceramic motifs and shell and is similar to artifacts from Tlatilco in the Basin of Mexico (1150–850 BCE). By 850–700 BCE there were 45 communities and a total of 2,000–2,500 persons of different statuses in the valley.

By the Rosario phase (700–500 BCE) the valley had 3,400 inhabitants, while the San José site, covering 173 acres (70 hectares) and with

➤ VALLEY OF OAXACA

The Valley of Oaxaca, a Y-shaped geological basin covering approximately 965 square miles (2,500 square kilometers), is located in Mexico's rugged southern highlands and has a basal complex of Precambrian gneisses and schists, Mesozoic limestones, and Miocene volcanic tuffs. The valley includes the upper drainage basin of the southward-flowing Atoyac River (the northern or Etna arm of the valley) and its tributary, Rio Salado (flowing east to west through the eastern or Tlacolula arm) conjoining in the Valle Grande (Central Valley). The Atoyac then flows south through the southern or Ocotlán region and then west outside of the basin to join Rio Verde, emptying into the Pacific Ocean. Four smaller valleys (Ejutla, Sola, Miahuatán, and Chichicapan) join or lie near the valley on the south. The Central Valley has an average elevation of 5,085 feet, or 1,550 meters (range 4,658–5,708 feet, or 1,420–1,740 meters), and the valleys are surrounded by mountains that rise to 9,842 feet (3,000 meters) above sea level. Three topographic zones—alluvium and piedmont (together approximately 617 square miles (1,600 square kilometers) and mountains—provide diverse resources. The climate is semiarid, and like the Basin of Mexico, moisture is critical for farming. The Oaxaca Valley was a location of early Mesoamerican plant domestication, the evolution of early writing, and the locus of Mesoamerica's first city, Monte Alban, that remained one of its larger settlements 500 BCE–700 CE and the archaeological precursor to the ethnohistoric Zapotec and Mixtec civilizations.

—Charles C. Kolb

1,000 persons, represented the final stage of an early chiefdom period in the valley. Direct evidence for social conflict and raiding was seen in a purposefully burned temple and other dwellings and in the bas-relief depiction of a slain or sacrificed male captive at San José. The first glyphic writing in Mesoamerica dates to 600 BCE at this site. The Rosario phase immediately preceded the founding of a new political capital, Monte Alban, an urban center situated on a mountaintop in the buffer zone in the center of the three-armed valley that would dominate the valley for a millennium. New data indicated that

it was not until 20 BCE that Monte Alban overcame its main rival, San Martín Tilcajete, a chiefdom located in the southern arm of the valley. Other evidence documents an in situ development of the center formation rather than formation by migrants from the Olmec Gulf Coast or Mixteca Alta suggested by John Paddock. By 400 BCE, Monte Alban had 5,200 inhabitants, approximately half of the region's total population, with another 5,000 living in more than 260 villages of fewer than 100 inhabitants.

Within 300 years (Late I) the bulk of the population was aggregated at Monte Alban, and its population exceeded 17,000. It exhibited other characteristics of an incipient state-level society, notably a densely settled community with a heterogeneous population, social stratification, and economic and craft specializations. There were three distinct barrios (neighborhoods) in Monte Alban Early I likely housing migrants from the separate regions of the Valley of Oaxaca. Although the monumental architecture of this civic-ceremonial center associated with the Main Plaza, measuring 984 by 656 feet (300 by 200 meters), dates to later periods and much of the Early I construction was obliterated by later building, the plaza itself was a large open space on an artificially leveled ridge and was planned early in the city's history. Arrowhead-shaped Building J dates to the Late Preclassic. Dating initially to Early I were 320 *danzante* (dancer) nearly life-size bas-relief portrait sculptures—so-called because of their contorted postures—that represent tortured or sacrificial victims (lifeless positions and genital mutilation) or clinical surgical cases (childbirth and deforming illnesses). The true nature of these depictions is unknown, but the numbers of reliefs increased during Late I. A larger and more complex political administration, standardization in ceramic manufacture, and the construction of hundreds of artificial terraces for housing and dozens of architectural clusters covering the ridge and flanks of the mountain characterize Late I. By Monte Alban II defensive walls were completed, and the capital's population had decreased slightly to 15,000, while the valley's demographics increased to 40,000 and military outposts were established outside of the valley. The evidence for statehood is unmistakable, and

Monte Alban's political power grew and expanded into a regional polity that was encompassed by military conquest, cooption, and colonization of external areas, Cañada de Cuicatlán to the north and the Ejutla and Sola de Vega valleys to the south.

—Charles C. Kolb

Bibliography

- Blanton, Richard, et al. *Ancient Oaxaca: The Monte Alban State*. Cambridge: Cambridge University Press, 1999.
- Flannery, Kent. *Guilá Naquitz: Archaic Foraging and Early Agriculture in Oaxaca, Mexico*. Orlando, FL: Academic Press, 1986.
- Flannery, Kent, ed. *Prehistory and Human Ecology of the Valley of Oaxaca*. Ann Arbor: Museum of Anthropology, University of Michigan, 1973.
- Flannery, Kent, and Joyce Marcus. *Excavations at San José Mogote 1: The Household Archaeology*. Ann Arbor: Museum of Anthropology, University of Michigan, 2005.
- Flannery, Kent, and Joyce Marcus, eds. *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*. Clinton Corners, NY: Percheron, 2003.
- Marcus, Joyce, and Kent V. Flannery. *Zapotec Civilization: How Urban Society Evolved in Mexico's Oaxaca Valley*. New York: Thames and Hudson, 1996.

The Early Civilizations of Peru

The west coast of South America is dominated by the Andes mountain range, home of some of the world's highest mountains. The central Andes comprise two parallel ranges known as the Cordillera Negra or Occidental in the west and the Cordillera Blanca or Oriental in the east. The Andean environment, although rich and varied, is an exceptionally difficult one for human survival. The elevation changes drastically over short distances, water is often scarce, and climatic fluctuations cause frequent droughts. Andean society was profoundly affected by this challenging environment and was in many ways uniquely adapted to it.

Despite the fact that only about 2 percent of the land area is suitable for agriculture, this region became one of the world's great centers of civilization. Prior to the rise of the Incas, a multi-

tude of cultures flourished and died out in ancient Peru, each one adding its unique contributions to the Andean cultural legacy inherited by the Incas. Only a few of these are well known and have been studied by archaeologists.

The earliest widespread cultural influence is manifested in the style associated with the religious cult of Chavín. By 1400 BCE, this new religious movement had begun to spread across northern Peru. It incorporated elements from older Peruvian coastal religions and combined them with religious elements such as the caiman and jaguar from the tropical forests of the *montaña* and Amazon basin.

Although named for the site of Chavín de Huántar, a ceremonial center and temple complex on the eastern watershed of the north-central highlands, the cult seems to have originated throughout a broad area of northern Peru and represents a synthesis of a variety of traditional religious beliefs. By 1300–1200 BCE, temples and artworks associated with this cult had been built in the northern highlands and on the northern coast of Peru. By 1000 BCE, the influence of Chavín had appeared as far south as the area near where the modern city of Lima now stands. The cult continued to expand, and by 500 BCE, Chavín influence had extended from the modern cities of Cajamarca in the north to Ayacucho in the south. The local culture in the Inca heartland at this time is called Marcavalle by archaeologists, named for the site where its remains were first discovered near the city of Cuzco. Very little is known about these people. They seem to have been farmers who probably occupied a number of villages and lived under a relatively simple political system. In terms of material culture, the Marcavalle peoples seem to be related to those of the Lake Titicaca basin to the south.

In the southern Andes, in what is today Bolivia, a large ceremonial center developed on the shores of Lake Titicaca. This magnificent city, called Tiwanaku, was built at an elevation of 12,630 feet (3,850 meters) above sea level on the cold, treeless plateau called the altiplano. The exact dimensions of the city are not yet known, but preliminary studies indicate an urban center of nearly 1.54 square miles (4 square kilometers). Although Tiwanaku is above the tree line,

the altiplano produces abundant grass, making it prime grazing land for alpacas and llamas. Some high-altitude crops such as potatoes, *ocas* (a sweet potato-like tuber), and quinoa (a grain high in protein) could also be grown. The cold waters of Lake Titicaca, the world's highest navigable freshwater lake, also provided resources such as fish and waterfowl.

Although this severe environment seems hostile, in prehistoric times this area supported one of the densest population concentrations in the ancient New World. Population estimates for the city of Tiwanaku and its sustaining area range between 570,000 and 1,111,500 people.

First settled around 1000 BCE, the site of Tiwanaku was occupied for nearly 2,000 years. It began as a small farming village, but around 100 CE the people began to construct monumental architecture, and the site grew to be the capital city of an empire that dominated the southern Andes between 500 and 1000 CE.

The other great culture of the Middle Horizon (540 CE–900 CE) that originated before the Common Era is that of the Wari. About 600 miles (965 kilometers) to the north of Tiwanaku, the Wari capital was located in the Ayacucho Valley of the central Peruvian Andes, at an elevation of 9,000 feet (2,743 meters). The Wari empire is represented archaeologically by large architectural complexes found throughout the Peruvian highlands. Wari and Tiwanaku shared some of the same religious iconography, but they seem to have been separate entities. There is no evidence that one ever dominated the other, although the exact nature of their relationship remains unknown. The only place where Wari and Tiwanaku archaeological remains are found together is on the site of Cerro Baúl in the Moquegua Valley on the south coast of Peru, where there is some evidence of a violent confrontation.

The site of Wari was first occupied around 200 BCE. Like Tiwanaku, it was only a small settlement until around 500 CE. A new religion is presumed to have been introduced to the Wari through contact with Tiwanaku, but little is understood about this religion. As with most agricultural societies, the Wari religion was undoubtedly concerned with ensuring fertility and a water supply and protecting against natural disasters such as drought or flood.

Religious iconography suggests that there were several deities in a ranked hierarchy, some with several aspects. Most prominent and presumably most important was the staff god or front face deity derived from the Chavín staff god. This deity is often shown grasping staffs that take the form of serpents, which are associated in Andean cosmology with lightning and rain. It is also sometimes depicted as either male or female, grasping various plants in place of the staff, perhaps indicating a connection with fertility and agriculture. Another motif is a figure shown with a knife and severed human heads who is interpreted as the “sacrificer.” Human sacrifice seems to have been practiced. Offering caches have been discovered containing the bodies of sacrificed young women and ritually broken, elaborately painted pottery. Other caches contain high-status goods including objects of gold, bronze, and shell as well as human skulls. Two temples have been excavated at Wari, but the rituals that took place within them are not yet understood to any great extent.

—Gordon F. McEwan

Bibliography

- Bragayrac, Enrique. “Archaeological Excavations in the Vegachayoq Moqo Sector of Huari.” In *Huari Administrative Structure: Prehistoric Monumental Architecture and State Government*, edited by William Isbell and Gordon McEwan. Washington, DC: Dumbarton Oaks, 1991.
- Burger, Richard L. *Chavin and the Origins of Andean Civilization*. London: Thames and Hudson, 1992.
- Cook, Anita G. “Huari D-Shaped Structures, Sacrificial Offerings, and Divine Rulership.” In *Ritual Sacrifice in Ancient Peru*, edited by Elizabeth P. Benson and Anita G. Cook. Austin: University of Texas Press, 2001.
- Kolata, Alan L. *The Tiwanaku: Portrait of an Andean Civilization*. Oxford: Blackwell, 1993.
- McEwan, Gordon F. *The Incas: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2006.
- Moseley, M. E., et al. “Colonies and Conquest: Tiahuanaco and Huari in Moquegua.” In *Huari Administrative Structure: Prehistoric Monumental Architecture and State Government*, edited by William Isbell and Gordon McEwan. Washington, DC: Dumbarton Oaks, 1991.

Chavín de Huántar in the Andes

Chavín de Huántar has long been considered one of the most influential places in the Andean region. The site never became a true urban center, but the temple there figured prominently in the development of Andean ideas and cosmology. People's beliefs and practices from both the coast and the Amazon basin influenced the specific iconography and ideology propagated by the adherents of the Chavín religion, and the Chavín style became one of the most widely distributed in the Andean region. Because of this, the Chavín has been compared to the Olmec of Central America as a kind of mother culture for many later traditions. New suites of carbon dates, however, place final construction phases ending before 500 BCE, suggesting that Chavín rose and fell alongside many Andean religious centers.

Chavín de Huántar is located at the confluence of two rivers, the Huachecsa and the Mosna, near the Callejon de Huaylas in the northern highlands of present-day Peru. The Mosna is a tributary to the Marañón and thus indirectly to the Amazon. The location puts Chavín de Huántar equidistant from the Pacific Coast and the lower slopes of the Andes on the edge of the Amazon basin in terms of walking distance. This placed Chavín de Huántar ideally on the landscape to serve as a center for exchange of coastal and Amazonian goods and ideas. The junction of the rivers lies at 10,334 feet (3,150 meters) above sea level, where it receives ample rain averaging more than 33 inches (850 millimeters) per year, a climate well suited to a combination of camelid herding and an agriculture based in high-altitude crops such as potatoes and quinoa.

Three or four factors figured prominently in Chavín's economic success. First, long-distance trade across many ecological zones facilitated by Chavín's location contributed significantly to the economy. Second, irrigation agriculturalists working on the valley floor interacted and exchanged products with highland animal husbandry experts specializing in the meat and wool of llamas and alpacas. A third factor in the economy may have been technological innovations developed by local people in the areas of metallurgy and textile production. Innovations included combined

wool and cotton textiles, tapestry techniques, dyed wool, annealed gold and silver, and the production of three-dimensional forms. Finally, at an early date tribute or offerings brought to the temple of a religious cult centered at Chavín also contributed significantly to the community's success. The importance of these factors changed over time at Chavín as the temple grew, flourished, and eventually failed.

Archaeological discussions of Chavín de Huántar have long been based on artistic and ceramic chronologies. John Rowe defined four artistic styles of stone carving without specific reference to absolute dates. Style AB, represented by the Lanzon, cult image, and carvings in the circular plaza, are placed earliest in the sequence. The famous cayman image on the Tello Obelisk defined Style C. Archaeologists associated all three early styles with the construction of the northern section of the architectural monument known as the Old Temple and with Urubarriu ceramics dated as early as 1200 BCE. Rowe used the Black and White Portal to define Style D and the Raimondi Stone to define Style EF. These late styles became associated with construction of the southern portion of the monument referred to as the New Temple or Castillo and with ceramics classified as Chakinani and Janabarriu. New analysis of the major architectural components suggests that Chakinani and Janabarriu ceramics date to an occupation phase after major construction ceased around 500 BCE. Carbon dates still support the continued use of the site through about 200 BCE as proposed by archaeologists Richard Burger and Luis Lumbreras.

Work in the 1990s and the early twenty-first century conducted by research teams from Stanford University used sophisticated mapping techniques and computer-aided design to reanalyze the architectural sequence of the temple monument. Based on increasing standardization in the construction of internal passageways, or galleries, and the superposition of architectural volumes, archaeologists can now discern 15 construction phases. Earliest construction at the temple created separate platform mounds with internal gallery spaces. One of these, at the heart of what has been called the Old Temple, housed and provided access to the Lanzon, an anthropomorphic image with both feline and serpentine attributes carved

THE DIFFERENCE A DATE MAKES

The ability of archaeologists to date materials and the cultures that produced them has improved dramatically over the last 100–150 years with the introduction of seriation techniques, stratigraphic excavations, and an array of radiometric and nonradiometric dating technology. We can now add to this suite of improvements advanced computer mapping techniques that allow archaeologists to better understand the spatial and temporal relationships between archaeological remains. In many cases archaeologists expected that improved dating would provide subtle refinements in our understanding of early history. In the case of Chavín de Huántar, however, new understandings of construction sequences require us to think about the site and its place in prehistory in entirely new ways. Where Chavín was once seen as a late synthesizer of Early Intermediate period religious traditions and the innovator behind the Early Horizon, it now appears that Chavín was only one of many cult centers of the time and that the major expansion of ideas came after the temple system collapsed.

With so much change in archaeological conceptions of Chavín, it is interesting to note what seems to be relatively stable: our understanding of Chavín religion. Of course, revised chronology of the temple's construction does impact how we think the religion was organized and how it interacted with its adherents. The basic understanding of Chavín's central ideas and practices, however, have remained fairly constant: ideas centered on a series of animal images, ideas of shamanic transformation, the power of water, and a balance of complementary elements. Why have these con-

cepts remained when so much else has changed? Largely this appears to be due to the differences in the kinds of data used to support our hypotheses. While so much of archaeology relies on temporal and spatial patterning, our understanding of religion has come from interpreting the images in Chavín art, and though patterns have changed, our ability to see and interpret birds, cats, cactus, and other images has remained the same.

Focus on 3 chronological phases of development is based on radiocarbon dates, stratigraphy, and stylistic seriation of materials. New research on the construction of the major architectural features suggests as many as 15 separate phases. The Urabarriu phase (1000–500 BCE) saw the initial settlement of two distinct residential sectors: canalization of part of the Huachecsa River and construction of the first large religious structure, the Old Temple. The site saw social, economic, and geographical reorganization during the Chakinani phase (500–400 BCE). These changes included a shift to a single contiguous settlement on either side of the Huachecsa River, construction of the New Temple, and an economic shift toward specialized craft production and away from self-sufficiency. It is not until the Janabarrui phase (400–200 BCE) that the site reached its population peak of 2,000–3,000 people and exhibited signs of social differentiation and what has been called proto-urbanism. After 200 BCE, however, construction and repair of the major buildings ceased. In time, people with Huarás pottery occupy the site, building homes in ceremonial plazas and robbing stone from the temple walls for construction material.

—Jo Ellen Burkholder

on a large granite prism. This image remained a major focus of cult activity throughout the site's construction and use. As the power and authority of temple leadership grew, construction raised the height of the buildings, added internal passageways, and eventually consolidated the platforms into a single large stone-faced building by about 750 BCE. As suggested by earlier chronologies, the final phases of construction realigned the central axis of the complex with the Black and White Portal and the Monumental Stairway, considered part of the New Temple.

Changes in later construction focused on expanding and altering access to ritual. This included the construction of plazas with elaborate decoration. These added large amounts of formally defined public space. The last construction phases also covered patios associated with the internal galleries. Combined, these changes suggest a dramatic shift from individual and small group rituals to those involving the participation of hundreds of people or more. This shift in architectural style represents conscious attempts of the temple leadership to ma-

nipulate its growing constituency of religious adherents.

Based on thematic content of the art of Chavín, the religion focused on what were to become prominent and repeated images and ideas in Andean cosmology. One aspect was the importance of water, particularly moving or flowing water. Marine mollusks—strombus and spondylus—may have represented the ocean, while the cayman deity of the Tello Obelisk recalled the waters of the Amazon basin. The temple itself was located at the confluence of two rivers, and hydraulic features inside of the Old and New Temples might have been flushed with water to make the building reverberate, or roar. Other repeated animal images include raptorial birds, snakes, and felines, all of which may relate to the other hypothesized aspect of the Chavín religion, shamanic transformation. Sculptures such as the tenoned heads illustrate metaphysical aspects of transformation from human to feline, avian, or other animal form. Inhalatory drug paraphernalia with Chavín-style images and depictions of San Pedro, a mescaline-bearing cactus, suggest that hallucinogenic drugs played an important role.

The ideas and images from Chavín became popular and widespread in association with Janabarrui-style ceramics after 400 BCE. Early interpretations questioned whether new popularity necessitated the expansion of the temple or an expanding temple provided the base for extending religious and economic influence. New understanding of construction sequences would now place the expansion of Chavín, or Chavín-like iconography, in the period after the temple had fallen into disrepair and its sacred precincts were inhabited by people not associated with the temple's operation. Images created by or in imitation of Chavín artists were distributed from the Lambayeque Valley on Peru's northern coast to as far south as Karwa on the southern coast where cotton textiles with male and female versions of the Lanzon/Raimondi stone deity came to light. While many credit the power of the Chavín ideology for the wide distribution of the iconography, some suggest that the technological advances in metallurgy and textile production associated with Chavín drove the demand for Chavín products.

—Jo Ellen Burkholder

Bibliography

- Burger, Richard L. *Chavin and the Origins of Andean Civilization*. London: Thames and Hudson, 1995.
- Kembel, Silvia Rodriguez. *Architectural Sequence and Chronology at Chavin de Huantar, Peru*. Doctoral dissertation submitted to the Department of Archaeological Sciences, Stanford University, 2001.
- Miller, G., and R. L. Burger. "Our Father the Cayman, Our Dinner the Llama: Animal Utilization at Chavin de Huantar, Peru." *American Antiquity* 60(3) (1995): 421–458.
- Rick, John W. "The Evolution of Authority and Power at Chavin de Huantar." *Archaeological Papers of the American Anthropological Association* 14(1) (2004): 71–89.

The Nazca and Moche Cultures

The Early Intermediate period (200 BCE–600 CE) of western South America witnessed the development of two different complex social-political systems. On the northern coast of Peru isolated clusters of settlements coalesced into the Southern Moche state, incorporating territory from Chicama to the Huarney Valley and centered in the Moche Valley and a northern polity or polities encompassing the Piura, Lambayeque, Zana, and Jequetepeque valleys. In southern Peru inhabitants of the Rio Grande de Nazca Valley and perhaps the Ica Valley developed signs of social and political complexity but probably never developed into a full-fledged state. During the early development of the south the site of Cahuachi on the Nazca River acted as a major pilgrimage and religious center but was never a densely populated urban site. Both the Moche and Nazca cultures developed distinctive artistic traditions with complex iconography associated with pervasive religious beliefs.

Nazca culture (100 BCE–1000 CE) emerged first in the Rio Grande de Nazca drainage, which encompasses several small and sometimes intermittent tributaries: the Grande, Palpa, Ingenio, and Nazca are the most significant. The presence of early versions of Nazca pottery in the neighboring Ica Valley to the north suggests very early expansion or cultural continuity with

ART AND LIFE

The art of Nazca and Moche is noted for its realism, but does it represent real life and how can we tell? In the case of the Nazca and Moche fact is as strange as fiction, and myth and reality were not that far apart.

For decades archaeologists studying Moche thought that they could tell the difference between mythical narratives and portrayals of the mundane world. But there might be more to Moche myth than meets the eye. Elite tombs excavated in the 1990s contained individuals buried with the costumes of people depicted in the Presentation Theme and the Burial Theme, scenes once thought to be purely mythical. Excavations near the Huaca de la Luna also located the remains of sacrificial victims like those in Moche myth. Thus for the Moche, myth was sometimes reality. On the other hand, some now suggest that scenes showing human warriors, fishermen, medical conditions, various sexual acts, and even images of food stuffs represent elements of complex mythical narratives, not scenes from real life.

What then do we make of Nazca art? Nazca art also depicts both natural and supernatural themes. In addition to identifiable images of the natural world, Nazca artists rendered a seemingly endless variety of anthropomorphic creatures sporting rayed projections, animal-like appendages, fanged mouths, and long tongues and carrying severed human heads. But we have clear evidence that the Nazca actually collected human heads. Discoveries of elaborate masks, once thought the property of lords, now suggest that some Nazca may have donned costumes of supernatural beings to reenact sacred stories, as did the Moche. At the same time, the fact that realistic renderings of animals in Nazca pottery mimic geoglyphs created



Double spout and bridge pottery vessel with a bird deity, Nazca culture, Peru, 200 BCE–600 CE. This globular jar depicts a fantastic bird in flight with a human face, adorned with a mouth mask and a diadem. The bird holds a human trophy head. (British Museum/Art Resource, NY)

as part of Nazca religion suggests that the smaller images may reflect spiritual belief, not just the natural world. Like the Moche, the Nazca may have lived in a world where supernatural and natural worlds were not separate places.

—Jo Ellen Burkholder

that area. While the Nazca people are famous today for the construction of the Nazca Lines, identity of Nazca people appears to have been more closely tied to artistic and iconographic traditions and the construction of specific types of civic-ceremonial complexes.

The site of Cahuachi is the largest of the Nazca civic-ceremonial complexes. It had a small residential population, and excavations at the site suggest the presence of textile specialists

there. There has been no evidence so far of specialized pottery production, although its existence has been posited. In addition to the small residential community, Cahuachi was predominantly a place of pilgrimage and ceremony, not an urban center. Some corporate religious structures exist, but many of the complexes of flat-topped pyramids, modified natural hills, plazas, and cemeteries were probably created and maintained by corporate kinship groups. Construc-

tion using *chala*—cornhusks either singly or in bundles—is a unique feature of the artificial construction. Pilgrimage at Cahuachi peaked between 200 and 400 CE and was likely related to the use or creation of many of the well-known geoglyphs in the neighboring pampa. Nazca culture became increasingly secular after the Middle Nazca period (450–550 CE). This corresponds with the decline in importance of Cahuachi as a pilgrimage center and with development of filtration gallery irrigation systems in the southern part of the Nazca drainage.

Nazca residential sites tended to be small, especially in the Rio Grande de Nazca drainage. Sites occupied gentle slopes and artificial terraces. Construction materials for houses were largely ephemeral, although some sites made use of more durable naturally occurring materials. Size of sites does not seem to be related to architectural differentiation, nor is it a predictor of intrasite status differentiation. Cemeteries occupied areas in and adjacent to residential areas as well as discrete locations with tomb types highly variable across time and space.

Nazca people produced a distinctive style of representation seen in both ceramic and textile art. From it we can recognize specific examples of plants and animals and many human activities. These representations included comestible plants, flowers, cactus, birds, fish, monkeys, and camelids as well as men and women both clothed and naked. In addition to portrayal of the real world, Nazca artists paid special attention to a supernatural world rich in anthropomorphic creatures that harvested plants and human heads, wore elaborate costumes, and sprouted rays, streamers, feathers, and other projections.

The northern valleys of the Peruvian coast from Piura to Huarmey witnessed the development of the first centralized state and urban centers with the development of the Moche culture (100–900 CE). Moche political centralization drew upon a common cultural base of economic reliance on agriculture and aquatic resources, spiritual beliefs, and probably patterns of kinship and political organization. People in adjacent northern valleys shared these traits despite being known today by their different pottery styles: Salinar, Gallinazo, Moche, and Vicus. Emergent leaders used common cultural ties,

their control of food surpluses and luxury goods, and a developing religious and political ideology to gain control. The shared cultural base was a remnant of the pervasive Chavín culture of the previous millennium, while a growing system of irrigation canals allowed for the production and manipulation of food surpluses. The ideological component appears to have been a new invention of the increasingly powerful elite, although it was likely based on extant myths and practices of the northern coast.

Scholars have begun to debate the specific nature of Moche political organization. One point of agreement in this debate is that the extensive area in which Moche material culture is found never experienced a unified political system. There is also considerable consensus that the southern valleys from Chicama to Huarmey were unified as a polity, with a political and social capital on the Moche River. Debate continues as to whether the northern sphere from the Jequetepeque Valley north ever saw a cohesive political system emerge and what characterized the relationship between the Southern Moche state and the northern polity.

The most impressive Moche center was probably Cerro Blanco (also known as Moche), which served as the capital of the southern state. Cerro Blanco, like other Moche centers, was dominated by large platform mounds, or *huacas*, of molded adobe bricks. The Huaca del Sol and Huaca de la Luna at Cerro Blanco are among the largest adobe constructions in South America. Workers built mounds in stages, creating multiple conjoined segments and marking their labor with distinctively incised bricks. Some huacas were sites of deity worship and human sacrifice, while others served as places for elite burial. Although the Huaca del Sol was almost completely destroyed in colonial times, extravagant burials from the site of Sipan hint at the wealth and power of the elite interred in these artificial mountains.

Between and around the huacas were residential areas where Moches lived behind high adobe walls in extended-family compounds. These compounds functioned as residential, social, and economically productive spaces. Specialized workshops led by master craftspeople developed in these compounds under elite

patronage. Some produced finely crafted gold, silver, and copper objects alone or inlaid with shells and semiprecious stones. Others produced fine pottery either using molds or modeling clay by hand. Ceramic artists depicted people wearing a wide variety of decorated garments, suggesting that textile specialists also plied their craft in specialized compounds. Regardless of the media, however, Moche artists, like those of Nazca, focused most if not all of their attention on depictions of a mythical world filled with demons, warrior deities, and bloody rituals.

—Jo Ellen Burkholder

Bibliography

- Bawden, Garth. *The Moche*. Oxford, UK: Blackwell, 1996.
- Donnan, Christopher. *Moche Art and Iconography*. Los Angeles: UCLA Latin American Center Publications, 1976.
- Moseley, Michael E. *The Incas and Their Ancestors: Archaeology of Peru*. 2nd ed. New York: Thames and Hudson, 2001.
- Silverman, Helaine. *Cabuaichi in the Ancient Nazca World*. Iowa City: University of Iowa Press, 1993.
- Silverman, Helaine, and Donald A. Proulx. *The Nazca*. Malden, MA: Blackwell, 2002.

■ Introduction: Religion and Environment

Scholars used to believe that ancient religions (especially mythology) were simply elaborate attempts to make sense of the natural world. While this is now understood to be a gross oversimplification (ancient religions were complex and sophisticated systems of thought, just as modern religious traditions are), it is clear that ancient religious perspectives did inform people about the natural world. Likewise, the natural world informed ancient people about religion and spirituality. Mesoamerican pyramids, for example, were thought to be symbolic of cosmic mountains and reflected the initial creation of the world. For the Greeks, the natural world was the location of chaotic and dangerous elements as well as life-giving forces. For readers of the Hebrew Bible, the natural world was something granted by God for human stewardship. This topic seeks to explore some of the ways in which religion and environment informed one another in the period from 1000 BCE to 300 CE.

—Kevin M. McGeough

Hebrew Bible and the Natural World

In recent years, a number of writers have argued that the Bible is environmentally unfriendly in that it urges mankind to exploit the natural world.

Most such accusations point to God's words to the newly created humans in Genesis 1:28:

“and God said to them, ‘Be fruitful and multiply, and fill the earth, and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on the earth.’”

It should be noted that the Hebrew word translated as “subdue” does not necessarily entail destruction; indeed, the Israelites “subdue” the Promised Land when they enter it, but they certainly do not destroy it. Clearly, though, the message of this passage is that humanity is given mastery over the world. This position appears to contrast sharply with that of the nonmonotheistic religions, in which humans are part of the natural world rather than somehow above it.

But what form is this mastery to take, exploitation or stewardship? The biblical laws do express concern about the overcultivation of land (e.g., the fallow laws of Exodus 23:10–11 and Leviticus 25:2–5) and overworking domesticated animals (who, like humans, are covered by the Sabbath commandment). In addition, a survey of poetic passages with naturalistic themes suggests that the biblical authors were not as environmentally insensitive as is sometimes alleged. Psalm 104, for example, highlights God's concern for nature (see especially vv. 10–18), while

God's answer to Job (Job 38–41) is a tour de force of naturalistic imagery, extolling the wonder and beauty of the natural world. These and other examples suggest that while the Hebrew Bible cannot be said to be as green as, say, Native American faiths, it does reflect, both in law and poetry, an appreciation and concern for nature.

—John Walton Burnight

Bibliography

Hillel, D. *The Natural History of the Bible: An Environmental Exploration of the Hebrew Scriptures*. New York: Columbia University Press, 2006.

Tucker, G. "Rain on a Land Where No One Lives: The Hebrew Bible on the Environment." *Journal of Biblical Literature* 116(1) (1997): 3–17.

Ancient Near Eastern Flood Myths

The book of Genesis contains an account of a catastrophic flood that wiped out all of humanity except one righteous man, Noah, and his family (6:5–9:17). According to the biblical story, God regrets having created man because humanity has become corrupt. In order to destroy mankind, God releases a flood upon the earth. Before sending the flood, God warns Noah to build an ark and to board it with his family and with a variety of animals. After the floodwaters recede and upon descending from the ark, Noah offers a sacrifice to God. When God smells the pleasing odor of the sacrifice He promises to never wipe out man again with a flood. God sends a rainbow as a sign of this promise, and humanity is reborn from Noah's seed.

The Genesis flood story contains both inconsistencies as well as redundancies. For example, in one verse God commands Noah to bring one pair of every kind of animal upon the ark (6:20), and later He instructs Noah to bring seven pairs of every clean animal and one pair of every unclean animal (7:2–3). The account also contains redundant and stylistically diverse descriptions of God's decision to send the flood (6:5–6 and 6:11–13). Most scholars attribute these features to a blending of two different versions of the same flood tradition.

THE HEBREW BIBLE (RSV) ON ENVIRONMENTAL RESPONSIBILITY

Exodus 23:10–11: "For six years you shall sow your land and gather in its yield; but the seventh year you shall let it rest and lie fallow, that the poor of your people may eat; and what they leave the wild beasts may eat. You shall do likewise with your vineyard, and with your olive orchard."

Deuteronomy 20:19: "When you besiege a city for a long time, making war against it in order to take it, you shall not destroy its trees by wielding an axe against them; for you may eat of them, but you shall not cut them down. Are the trees in the field men that they should be besieged by you?"

God the Naturalist, Isaiah 41:19–20: "I (God) will put in the wilderness the cedar, the acacia, the myrtle, and the olive; I will set in the desert the cypress, the plane and the pine together; that men may see and know, may consider and understand together, that the hand of the LORD has done this, the Holy One of Israel has created it."

—John Walton Burnight

A similar flood account is recorded by Berossus, a third-century Babylonian historian. Although Berossus's history is only preserved in citations by later Greek scholars, among these quotations is an account of a calamitous flood. The passages refer to a flood that destroyed everyone except for Xisuthros, the tenth king of the Babylonians. Warned by the god Cronus, Xisuthros builds a boat and survives.

For many years the Bible's account and excerpted quotes from Berossus were the only two ancient Near Eastern flood stories known to scholars. Beginning in the 1850s, however, a slew of new material began to emerge. In 1851 an archaeologist who was excavating the mound of Kuyunjik, under which lay the ancient city of Nineveh, hit upon the library of the Assyrian king Ashurbanipal. Among the many clay tablets found in Ashurbanipal's chamber was a Babylonian flood account. This seventh-century flood story is part of a larger epic about a king named Gilgamesh who, after witnessing the death of his friend, engages in a pursuit for immortality. On the eleventh tablet of the 12-tablet narrative, Utnapishtim, someone who has achieved

ACCOUNTS OF THE FLOOD

When translating cuneiform texts into English, scholars use square brackets [] to denote parts of the inscription that are missing but have been reconstructed by the translator and parentheses () to indicate words that are not in the original text but have been supplied to make the translation more understandable.

Bible (NRSV)	Gilgamesh	Atrahasis
In the six hundredth year of Noah's life, in the second month, on the seventeenth day of the month, on that day all the fountains of the great deep burst forth, and the windows of the heavens were opened: And the rain fell upon the earth forty days and forty nights: On the very same day Noah. . . entered the ark. . . and the Lord shut him in: The flood continued forty days upon the earth and the waters increased and bore upon the ark and it rose high above the earth. . . . And the waters prevailed so mightily upon the earth that all the high mountains under the whole heaven were covered . . . all flesh died that moved upon the earth, birds, cattle, beasts, all swarming creatures that swarm upon the earth and every man: Everything on dry land in whose nostrils was the breath of life died.	In the evening the leader of the sto[rm] caused a destructive rain to rain down. I viewed the appearance of the weather. The weather was frightful to behold. I entered the ship and closed my door. . . . A black cloud came up from out the horizon. Adad thunders within it. . . . Like a battle [it ca]me over the p[eo]ple. No man could see his fellow. The people could not be recognized from heaven. (Even) the gods were terror stricken at the deluge. They fled (and) ascended to the heaven of Anu. The gods cowered like dogs (and) crouched in distress. Ishtar cried out like a woman in travail. The lovely-voiced Lady of the g[ods] lamented. . . . The Anunnaki wept with her. When the seventh day arrived the tempest, <i>the flood</i> which had fought like an army, subsided in (its) onslaught. The sea grew quiet, the storm abated, the flood ceased . . . and all mankind had turned to clay.	After he had bolted the door Adad was roaring in the clouds. The winds became savage as he arose . . . the flood. . . . Its might came upon the peoples [like a battle array]. One person did [not] see another. They were [not] recognizable in the destruction. [The flood] bellowed like a bull. . . . The darkness [was dense] there was no sun. [Enki] was beside himself. . . . Nintu the great lady, Her lips were covered with feverishness. The Anunnaki, the great gods, were sitting in thirst and hunger. The goddess saw it as she wept. For seven days and seven nights came the deluge, the storm, [the flood].

—Deena Grant

Sources

Column 1: Bible, Genesis 7:11–22. New Revised Standard Version.

Column 2: Alexander Heidel, *The Gilgamesh Epic and Old Testament Parallels* 2nd ed. (Chicago: University of Chicago Press, 1949), 84–86.

Column 3: W. G. Lambert, Alan Millard, and Miguel Civil, *Atra-Hasis: The Babylonian Story of the Flood with the Sumerian Flood Story* (Winona Lake, IN: Eisenbrauns, 2009), 95–97.

immortality, tells Gilgamesh about a time when the gods wiped out humanity with a flood. Warned by the god Ea, Utnapishtim builds a boat and brings his family, friends, animals, and possessions inside it until the rains cease and the floodwaters recede. Utnapishtim descends and offers a sacrifice to the gods. Subsequently the god Enlil blesses Utnapishtim with immortality.

In 1898 a scholar published a seventeenth-century fragment of a Babylonian flood story that differs from Ashurbanipal's Gilgamesh nar-

ative. It took until 1956 for this fragment to be joined with other relevant tablets and for the narrative to be fully understood. This forerunner to the Gilgamesh narrative is referred to by scholars as Atrahasis, after the name of the protagonist. The discovery of Atrahasis reveals that in its earlier incarnations the flood tradition was not connected to a hero's pursuit for immortality. Atrahasis also fills in some gaps in the Gilgamesh story. For example, the Gilgamesh story does not explain why the gods send a flood to

wipe out humanity. Atrahasis explains that Enlil, the god consigned to govern the earth, is unable to sleep because of the noise emanating from the human populace. Therefore, the distraught god decides to reduce the population.

After Enlil's attempts to diminish mankind through a plague and a drought are thwarted by the god Enki, Enlil decides to annihilate man with a flood. In the course of the flood many gods weep. They grieve over the loss of human life and because humans were originally created to provide food for the gods. Luckily for these grieving and hungry gods, Enki again thwarts Enlil by surreptitiously warning Atrahasis to build a boat and with it save himself and his family. When the floodwaters recede Atrahasis alights and offers a sacrifice. The hungry gods "[sniffed] the smell" and crowded around the sacrifice.

The similarities between the Bible, Atrahasis, and Gilgamesh are striking and suggest that all three accounts stem from a common tradition. Nevertheless, the accounts diverge in significant ways. For example, in Atrahasis although the flood rids the world of noise, it is not a permanent solution to Enlil's problem because the gods still need men to work to provide food. As a more workable solution, the gods limit the number of human births. "In addition let there be a third category among peoples . . . women who bear and women who do not bear . . . the Pasittu-demon to snatch the baby from the lap of her who bore it." In the Bible, after the flood God commands Noah's family to procreate: "Be fruitful and multiply, and fill the earth."

The impermanent nature of the flood solution in Atrahasis and the consequent regulation of births can perhaps illuminate the role of the divine laws that follow the biblical flood. After the deluge God promises that he will never again destroy man with a flood because "man is evil from his youth." Instead, God establishes laws proscribing acts such as murder. While the flood provides a temporary antidote to wickedness, perhaps the divine laws are intended to more permanently curb the evil impulses that provoked God to release the flood in the first place.

Since the original discoveries of Gilgamesh and Atrahasis, other versions of these works as well as other works that mention a flood, rang-

ing from the Old Babylonian period through the Late Assyrian period, have emerged. For example, in 1914 a similar flood story was published and, despite its being written in Sumerian (a language spoken in the third millennium), is probably no older than the earliest Atrahasis tablets.

—Deena Grant

Bibliography

- Lambert, W. G., Alan Millard, and M. Civil. *Atrahasis: The Babylonian Story of the Flood with the Sumerian Flood Story*. 1999; reprint, Winona Lake, IN: Eisenbrauns, 2009.
- Matthews, Victor, and Don Benjamin. *Old Testament Parallels: Laws and Stories from the Ancient Near East*. Mahwah, NJ: Paulist Press, 2006.
- Sarna, Nahum. *Exploring Exodus: The Origins of Biblical Israel*. New York: Schocken Books, 1996.

Early Chinese Views of Nature

The peoples who inhabited what we now call China from prehistory through the end of the Han dynasty (202 BCE–220 CE) developed a set of assumptions about the natural world that influenced all subsequent Chinese cultural history as well as neighboring civilizations throughout East Asia. Early Chinese thinkers observed that while the natural world clearly operated according to cyclical patterns and processes, it was not entirely predictable and could inflict great harm on human populations. From this observation emerged the view that the natural and human worlds formed a harmonious, organic, and interdependent whole.

Several environmental factors conditioned early Chinese views of nature. The advent of agriculture (ca. 2000 BCE) made it both possible and necessary to sustain a large human population. The hot summers, freezing winters, and regular floods of the Yellow River valley complicated this task. Early agriculturalism inspired two basic metaphors used by many later thinkers—the flow of water and the growth of plants—as well as the myth of a devastating flood quelled by the heroic sage Yu, founder of the legendary Xia dynasty (ca. 2183–1752 BCE). The earliest known writing in China (ca. 1700 BCE), known as scapulamancy, was inscribed on



View of a River and Mountains from Album of Eight Landscape Paintings by Shen Zhou. This Ming dynasty (1368–1644 CE) painting is typical of earlier Chinese views of nature by locating human figures at the bottom of the picture plane and dwarfing them with much larger landscape features. (Burststein Collection/Corbis)

animal bones, which then were heated in order to divine the answers to questions from rulers, many of which had to do with natural events such as weather. This attests to the confidence of the early Chinese in their ability to understand and even predict natural processes.

While the investigation of nature was not a major concern among early Chinese thinkers, those who did focus on the natural world did so primarily in order to enable human beings to predict and control natural events and processes. Followers of Mozi (ca. 468–376 BCE), now known as Mohists, developed sophisticated theories of geometry and optics primarily for military applications. Astrologer-scribes (*shi*) at royal courts studied the natural world in the hope of deciphering omens and portents. By the late Warring States (403–221 BCE) and early Han eras, the Chinese had developed a comprehensive correlative cosmology. According to texts such as the *Lüshi Chunqiu* (*Spring and Autumns of Mr. Lü*, ca. third century BCE) and thinkers such as Dong Zhongshu (ca. 179–104 BCE), human actions naturally trigger reactions in the nonhuman world and vice versa. For this reason, Chinese rulers from this period onward were advised to conduct their affairs in such a way as to prevent natural disasters and effect natural events that would benefit their subjects.

—Jeffrey Richey

Bibliography

- Allan, Sarah. *The Way of Water and Sprouts of Virtue*. Albany: State University of New York Press, 1997.
- De Bary, William Theodore, and Irene Bloom, eds. *Sources of Chinese Tradition*. New York: Columbia University Press, 1999.
- Elvin, Mark. “The Environmental History of China: An Agenda of Ideas.” *Asian Studies Review* 14(2) (1990): 39–53.
- Tu, Wei-ming. “The Continuity of Being: Chinese Visions of Nature.” In *On Nature*, edited by Leroy S. Rouner. Notre Dame, IN: University of Notre Dame Press, 1984.

Nature in Greek Myth and Religion

To the Greeks, the natural world—the world outside the boundaries of the inhabited regions—was the diametric opposite of the civilized world of the city-states. Unlike the city-states, the natural world was perceived as an inherently lawless place of both miracles and monsters. Greek religion and mythology reflect the difference between the natural and the civilized worlds in the character of the gods associated with the natural world and in the myths told of the interactions of men and women with the natural world.

We can recognize three spheres of influence within the Greek world, based on human ability to tame the region: the urban world of the city-states, where laws and customs maintain order; the domesticated world of fields and crops, which could be bent to the will of humans, with the consent of the beneficent Demeter; and the natural world, in particular the mountains and the ocean, which could be exploited but never trusted or controlled.

The natural world provided necessary food, wood, and pastures but was also home to real and metaphorical monsters, such as the Centaurs and Amazons, threats to the civilized world; various uncivilized humans lived in the mountains, where they violated the traditional social order with impunity before finally being destroyed by the Athenian culture-hero Theseus.

The gods associated with the natural world were powerful, hostile, and more apt to harm rather than to help. Poseidon, the god of the sea,

had a changeable and inherently untrustworthy nature, just like the sea. He could have been propitiated with sacrifices before a sea journey and thanked upon its successful completion but never fully trusted. Artemis, the god of animals and wild spaces, was dangerous, unpredictable, and quick to punish mortals who crossed her, even inadvertently. Dionysus, the god of ecstasy and release from social constraints, quickly and happily destroyed those who offended him. The best that one could have hoped for from the gods of the natural world was that they would leave you alone.

—Kelly MacFarlane

Bibliography

- Alcock, Susan B., and Robin Osbourne, eds. *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*. Oxford, UK: Clarendon, 1994.
- Buxton, R. G. A. *Imaginary Greece: The Contexts of Mythology*. Cambridge: Cambridge University Press, 1994.
- Cole, Susan Geuttal. *Landscapes, Gender, and Ritual Space: The Ancient Greek Experience*. Berkeley: University of California Press, 2004.

The Cosmological Symbolism of Mesoamerican Pyramids

Mortuary pyramids in Mesoamerica have deep symbolic roots. These man-made structures were built by commoner labor over a period of several months. Rotating gangs of laborers toiled to bring in rocks, dirt, plaster, and paints to build and decorate a structure 98 feet (30 meters) on a side and upwards of 32 feet (10 meters) high. This investment, under the direction of the current ruler, honored the deceased ruler with a permanent home for his remains.

There were many kinds of pyramids, and each was identified with particular deities or dedicated for particular uses. Prominent deities included the gods of the sun, moon, stars, wind, water, and lightning, and each required its own sacrifices and distinct ceremonies. In addition to god-houses, pyramids were constructed to mark time's passage, to identify prominent lineages, for ancestor cults, to honor the gods of war, and as astronomical devices.

SEMONIDES ON ENVIRONMENT

Setting aside the issue of misogyny, this text by Semonides clearly exemplifies the Greek mindset toward the sea and reflects its concern with the natural world.

"Then the god made another woman out of the sea, one who has two minds. One day she laughs and is happy. . . . But another day she will not tolerate being looked at or approached. She rages fiercely, just like a dog with puppies, harsh and hateful to both enemies and friends equally. Just so the sea often stands motionless, harmless, a great delight to sailors during the summer, but often rages, bearing loud-thundering waves, so this type of woman is very like the sea in anger. And the sea has a different nature at different times" (translation by author).

—Kelly MacFarlane

Source

Semonides fr. 7.27–42.

Yet symbolically, pyramids were more than buildings. They were living structures with their own spiritual life forces. The first layer of symbolism was that of mountains. Because these structures generally towered above the forest line, they resembled small mountains from the distance. This imagery reminded the viewers of their own creation myths. Once the world was full of water until the gods raised the mountains and separated the heavens. In another legend, the creator gods lived on the summit of a mountain, and creation events began there. Mankind's origins were associated with mountains. Man was created from the bones of a previous creation pulled from the underworld. Thus, dead rulers were interred into a man-made cave under the pyramid awaiting rebirth.

An early Classic Maya version of this symbolism was found at San Bartolo, Guatemala. The north wall of the Piramide de las pinturas, sub-1, showed a mythological scene of creation and rebirth. On the left side of the mural was the cave mouth in the shape of a serpent's mouth, similar to monuments elsewhere in

► FLOWER MOUNTAINS

For Mesoamerican peoples, Mountains of Sustenance, or Flower Mountains, were primordial places of creation. They were uncivilized spaces where wild animals attacked and roamed. Into such savagery, it was believed, the first humans emerged onto the earth. Mesoamerican pyramids evoked that imagery and thus were linked to cosmic ideas of order. Gods and men subdued nature and created civilized space. Pyramids, as significant sacred spaces, then become the axis mundi or pivot of the world for each city and the point of origin for the territory. Each ruler sought to extend his civilized space by increasing the borders around his built sacred mountains.

—Zachary Nelson



Pyramid of the Sun and the ruins of the ancient city of Teotihuacan. (Corel)

Mesoamerica. The stalactite formed the fang. On the rear of the serpent's head were scenes of wild animals hunting and devouring one another in a flowery forest setting. Inside the cave, the stretched-out serpent formed the floor upon which the Maize god was being dressed in preparation for his rebirth. Feathers along the serpent identified it as a plumed serpent, important in Mesoamerican legend. This treatment of "Flower Mountain" coincided with Aztec concepts of the "Mountain of Sustenance" from which the sun was born.

—Zachary Nelson

Bibliography

- Agurcia Fasquelle, Ricardo. "Rosalila, Temple of the Sun-King." In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello Canuto, and Robert J. Sharer. Philadelphia: University of Pennsylvania Museum Press, 2004.
- Saturno, William A., Karl A. Taube, and David Stuart. "The Murals of San Bartolo, El Petén, Guatemala, Part 1: The North Wall." *Ancient America* 7, Center for Ancient American Studies, Barnardsville, 2005.
- Taube, Karl. "Flower Mountain: Concepts of Life, Beauty and Paradise among the Classic Maya." *RES: Anthropology and Aesthetics* 45 (2004): 69–98.

■ Introduction: Envisioning the Landscape

The natural world was replicated in a number of ancient artistic media. We have the best evidence for Greek and Roman artistic endeavors along these lines. Poems extol the virtues of nature, and paintings (especially as preserved at Pompeii) celebrate idyllic conceptions of the environment. Greek and Roman gardens, however, are perhaps the most direct attempt to envision the landscape in a controlled setting. While these gardens are preserved only

indirectly, they offer great insight into the aesthetic sensibilities of the ancient Greeks and Romans as well as their conceptions of a more controlled natural landscape.

Gardens and landscape art were not unique to the Greeks and Romans. The Mesopotamians had long had a tradition of depicting the art in sculpted reliefs. And, of course, the Hanging Gardens of Babylon, one of the Seven Wonders of the Ancient World, were celebrated in their

own time as a momentous site to behold. In China, the walls of tombs were decorated with illustrations of the natural world and the cosmos. For the people of Peru, the landscape was depicted on pottery and textiles, and the landscape itself was altered on a monumental scale in the form of what have come to be called the Nazca Lines.

—Kevin M. McGeough

Assyrian and Persian Gardens

Suburbs outside the walls of Mesopotamian cities were set among gardens and fields, and within the city there were often parks. Texts show that wealthy households often had private gardens with grapes, fruit trees, vegetables, and other plants and furnished with pools.

One text describes the shade-tree garden belonging to the eighth-century Babylonian king Marduk-apla-iddina II (Merodach-Baladan), with 67 different kinds of plants divided into 14 groups, possibly the contents of separate beds. Of these, only 26 can confidently be identified, including garlic, onions, leeks, lettuces, cucumbers, radishes, beetroot, turnips, Indian gram, and various herbs and spices, among them at least 5 varieties of mint.

Sennacherib (704–681 BCE) constructed a temple at Assur for the *akitu* festival, during which the god's statue was taken to a garden. Within this temple's courtyard and around its outside were gardens destined for divine courtship according to texts. Excavations have revealed neatly laid-out rows of root pits and the remains of trees or shrubs.

The ancient Mesopotamians required their gardens to provide shade, fruit, and fragrant

THE HANGING GARDENS OF BABYLON

Tradition has it that the most splendid gardens were the Hanging Gardens of Babylon. Classical authors described the gardens as resembling a mountain, with terraces of brick, bitumen on stone foundations, and planted with trees. A hidden mechanism, a remarkable feat of engineering, raised water to the highest terrace, and there were pavilions among the vegetation. They attributed this to Nebuchadnezzar II, although the king's own inscriptions do not mention such a garden.

The gardens' remains have not been located, although it is possible that they lie within an unexcavated area between the river, the North Palace, and the Western outwork. However, many scholars find this unconvincing. It is puzzling that Herodotus, who probably visited Babylon in the fifth century BCE, made no reference to the gardens although he described the city's other impressive features.

Recently, Stephanie Dalley has suggested that the Hanging Gardens of Babylon were actually the gardens of Sennacherib at Nineveh, a misattribution due to Classical confusion about names: Herodotus and later Classical writers often did not distinguish between the Babylonians and the Assyrians, and Nineveh, the Assyrian capital, was known in later times as Old Babylon. Babylonia had no tradition of

creating gardens on artificial hills, while these are well known from Assyria. The description of the Hanging Gardens closely matches what is known of Sennacherib's palace gardens. In particular, Sennacherib describes a device he had made for lifting water to the top of the garden. Although the meaning of the words used for the device's components is uncertain, Dalley shows that they probably describe a bronze cylinder containing bronze spirals, in effect an Archimedes' screw centuries before Archimedes. This matches the description in Classical texts of a hidden mechanism and some explicit references to it as a water screw (though there remains the possibility that this device was introduced into the gardens after Assyrian times). On balance, Dalley's theory seems convincing.

—Jane R. McIntosh

Bibliography

- Dalley, Stephanie. "Ancient Mesopotamian Gardens and the Identification of the Hanging Gardens of Babylon Resolved." *Garden History* 21(1) (1993): 1–13.
- Dalley, Stephanie, and John Peter Oleson. "Sennacherib, Archimedes, and the Water Screw: The Context of Invention in the Ancient World." *Technology and Culture* 44(1) (2003): 1–26.



Spectators at a lion hunt climb a wooded hill surmounted by a pavilion, stone relief from the palace of Ashurbanipal, about 645 BCE. (Werner Forman/Art Resource, NY)

scents; these were places to relax and eat and to enjoy courtship. When Assyrian kings built new capital cities or embellished earlier ones, they considered it important to include parks and gardens within their designs. Royal gardens were constructed on artificial hills, providing topographic variety much appreciated in the generally flat local landscape and recreating the natural pleasures of other lands. Assyrian kings delighted in growing exotic trees and other plants acquired during their conquests or as tribute. Sennacherib planted “trees bearing wool,” the earliest Mesopotamian reference to cotton.

Ashurnasirpal (883–859 BCE) created a garden at his new capital, Kalhu (Nimrud), constructing a canal to supply it with water from the upper Zab River in the Zagros Mountains. He claimed to have planted 41 varieties of trees that he had collected in foreign lands, including cedar, cypress, box, myrtle, oak, fir, willow, ebony, acacia, juniper, almond, date-palm, pistachio, pomegranate, olive, plum, pear, quince, and fig. He repeatedly expressed his pleasure in his scented garden, a place of delight where he often gathered fruit and where “waterfalls glisten like the stars in heaven.”

Sargon II created royal hunting parks and orchards when he founded Dur-Sharrukin (Khorsabad) in 713 BCE. A relief shows an artificial hill clad with pines and full of birds, with an altar on the summit; behind it is another slope with pines and fruit trees, and there is a pillared pavilion before which is a lake with two small boats. Sargon likened his park to Mount Amanus and said that it contained every kind of tree from the Hatti lands (Syria); the pavilion as an architectural feature was also borrowed from this region. A surviving letter to the king from a provincial governor reported that several consignments containing thousands of apple trees, hundreds of medlar trees, and almond, quince, and plum trees were on their way to Dur-Sharrukin.

A relief in the palace of Ashurbanipal (668–627 BCE) shows the gardens that his grandfather Sennacherib created around the vast “Palace without a Rival” in his new capital, Nineveh: they rise up over tree-clad slopes to a terrace with a pillared pavilion, and through them run many streams fed by an aqueduct. Sennacherib took a keen interest in civil and hydraulic engineering. He created an artificial swamp outside Nineveh that was stocked with wild boar, deer, and fish and attracted heron and other birds; the swamp was inspired by the marshlands of southern Babylonia. This acted as a reservoir, absorbing the excess winter flow of water from the canals. The aqueducts, weirs, dams, and tunnels that he constructed to bring water to Nineveh from the mountains, some of which are still in use, watered a huge area of arable land and orchards around the city as well as parks and gardens within it. The most sumptuous was the royal pleasure park beside his palace, which he planted with vines and all kinds of spices, fruit trees, and trees for timber. Cypress and mulberry trees from the garden along with reeds from the artificial marsh were used in Sennacherib’s building works.

Assyrian kings also created hunting parks outside the city walls in which many wild animals were kept for royal sport, vividly pictured in the magnificent reliefs of Ashurbanipal’s palace. In some reliefs the king and his attendants ride after wild asses, or beaters drive gazelle toward the king hidden in ambush. Others include sensitive portraits of Mesopotamian lions

(smaller than African lions and only recently extinct) relaxing in the park among trees, flowers, and vines. In one sequence, lions are transported in cages to the hunting ground, its perimeter surrounded by soldiers and keepers with mastiffs, while eager spectators climb an overlooking hill. As the lions are released, the king pursues them with bow and arrow in his chariot or on foot, protected by a shield bearer, and finishes off a wounded beast with his sword in hand-to-paw combat, grasping the rampant lion by the throat.

A long tradition in Mesopotamia made it both the prerogative and the duty of the king to hunt lions. The earlier king Ashurnasirpal claims to have captured 15 adult lions and 50 lion cubs to provide breeding stock for his park, where he also kept wild bulls, elephants, ostriches, bears, wild asses, deer, panthers, and monkeys.

The Persians also constructed royal gardens (*pairadaeza* or “enclosed space,” whence “paradise”). These shared with Mesopotamian gardens the emphasis on fruit trees and trees providing fragrance; their function as places of recreation, relaxation, and privacy; the incorporation of pavilions; and the provision of hunting parks. However, while Mesopotamian gardens were designed to re-create natural landscape, those of the Persians were laid out in formal geometric arrangements and were planted with trees in lines, luxuriant grass, and other plants. The excavated garden of Cyrus the Great’s capital at Pasargadae filled the areas around and between two open-sided pillared palaces, with porticos and stone benches and two similar but smaller pavilions. The gardens were laid out in formal rectangles beside which ran stone watercourses with deep basins at intervals. A throne in the center of the principal palace portico allowed the king to sit in shaded ease. The rectangular garden in front of this palace was divided into four by water channels: this perhaps symbolized the traditional Four Quarters of the World of which Cyrus was now master.

Persian kings spend much time in their gardens, of which they created examples in the Persian cities of Ecbatana, Pasargadae, Susa, and Persepolis as well as in conquered lands. According to the Greek author Xenophon, the Spartan general Lysander visited the royal garden at Sardis in the company of Cyrus the Younger, who was

delighted by his guest’s appreciation of its beauties since he himself had designed it and had even planted some of the trees with his own hands.

—Jane R. McIntosh

Bibliography

- Gleason, Kathryn. “Gardens in Preclassical Times.” In *The Oxford Encyclopedia of Archaeology in the Near East*, Vol. 2, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Reade, Julian. *Assyrian Sculpture*. London: British Museum Publications, 1983.
- Stronach, D. *Pasargadae: A Report on the Excavations Conducted by the British Institute of Persian Studies from 1961 to 1963*. Oxford: Clarendon Press, 1978.
- Wiseman, D. J. “Mesopotamian Gardens.” *Anatolian Studies* 33 (1983): 136–144.
- Wiseman, D. J. *Nebuchadrezzar and Babylon: The Schweich Lectures*. Oxford: Oxford University Press, 1991.

Greek and Roman Gardens

In Greece, the formal garden does not seem to have existed. Natural gardens abound in Greek mythology, from the Gardens of Hesperides to the rose garden of King Midas. But apart from Homeric gardens, only a few sacred groves are mentioned. They are laid out near temples and represent a magic, idealized, and separate place apart from the rest of the natural world.

Shady trees were planted around gymnasia, markets, and meeting places, such as Plato’s Academy and Aristotle’s Lyceum. It was only after Alexander’s conquests in the fourth century BCE, when the Greeks developed a taste for “Persian paradises,” that attractive places began to arise in cities. In book seven of the *Odyssey*, Homer provided a colorful description of Alkinoos’s garden.

By contrast, the Romans loved nature, and vegetation played a major role in their houses. Deeply attached to their homes, they considered gardens to be the most important element in a harmonious life. At first, gardens were designed as real sacred landscapes with pergolas and kiosks, reminiscent of what we find in Hellenistic paintings.

The courtyard (atrium) of a house might be planted with shrubs and succulents. Behind the

THE GETTY VILLA



(Propix)

The Getty Villa Museum in Malibu, California, built in 1970 to display the art collection of J. Paul Getty, houses an array of Greek and Roman antiquities. The main peristyle of the Getty Villa is intended to be a copy of the villa of Papyri at Herculaneum, the owner of which might have been Julius Caesar's father-in-law.

The open spaces of the different peristyles feature pools, bronze sculptures, fountains, benches, and about 300 varieties of plants used by the Romans in cooking, ceremony, and medicine.

—Marie-Luce Muracciole

atrium extended a pleasure garden (peristyle) where more utilitarian plants such as vegetables and fruit trees as well as plants for preparing aromatics and dyestuffs would be found. These gardens consisted of trees, flowers, fishponds, fountains, and carefully selected statues arranged in a complex design. The main rooms opened out to the garden, where summer dining rooms would be located in some cases. Gardens were also used as status displays to show how cultivated a patron might be. Roman gardens were enriched by the introduction of new species gained through conquest of Asia Minor. Lucullus, who led the Roman army to victory over King Tigranes the Great and Mithridates in Armenia, introduced the cherry tree to Rome at the beginning of the first century BCE. In addition, Roman gardeners advanced the pageantry of the formal garden by creating a new technique that consisted of trimming shrubs in geo-

metrical shape or in the shapes of animals. The apogee of this design was reached at Hadrian's Villa in Tivoli (118–138 CE), where gardens were conceived as an “imaginary place.”

When the house was too small to have its own garden or when rooms did not open to the outside, landscapes were painted in *trompe l'oeil* (a painting style with photographically realistic detail) on the walls with trees and flower-covered banks around which birds fluttered. Gardens were intended to serve as a living environment. Many examples from Pompeii or the house of Livia (wife of the emperor Augustus) in Rome illustrate these bright sceneries.

—Marie-Luce Muracciole

Bibliography

- Conan, Michel. “Nature into Art: Gardens and Landscapes in the Everyday Life of Ancient Rome.” *Journal of Garden History* 6 (1986): 348–356.
- Jashemski, Wilhelmina. *Gardens of Pompeii, Herculaneum and the Villas Destroyed by Vesuvius*. New Rochelle, NY: Caratzas Bros., 1979.
- McDougall, Elizabeth. *Ancient Roman Gardens*. Washington, DC: Dumbarton Oaks Foundation, 1981.

Greek Landscape Painting

Ancient literary sources indicate that the Greek artist Parrhasios wrote a book about painting and that Agatharchos wrote a book on wall painting, while the painter Nikomachos was active in the late fourth century BCE and was admired for his skillful painting. His contemporary, the Greek philosopher Plato, in the fourth century BCE wrote of artists then capable of reproducing earth, mountains, rivers, forests, sky, and all that encompasses them. Unfortunately, only a small percentage of these fragile works of art have survived. Surviving works include Roman wall paintings, but there were probably hundreds if not thousands of freestanding paintings rendered on wood or cloth, designed to hang on walls or rest on shelves. Nearly all of this is lost, particularly any examples of Greek monumental painting.

The earliest images that we can call landscape painting in Western Europe come from the ancient Minoan civilization on the Greek is-

► THE TOMB OF THE DIVER IN PAESTUM

Another important ancient landscape scene that has survived from the Greek Classical period is the fresco from the Tomb of the Diver in Paestum, in southern Italy. The scene shows the astonishing vitality of a young man diving from a stone structure with stylized trees and plants. Painted around 480 BCE, the diving scene is accompanied by banqueting scenes on the four inner walls of the sarcophagus. They are similar to other scenes on Classic vase painting except for the fact that the tomb painter used vivid colors such as blacks, greens, reds, and earth tones. The style is strongly linear, as we find in the vase painting of the era.

—Anton Rajer



Fresco from the Tomb of the Diver in Paestum, about 470–460 BCE. (Erich Lessing/Art Resource, NY)

land of Crete. The huge palace at Knossos was elaborately decorated with dozens of wall murals that convey a lively impression of the palace life from 2000 BCE. Several of the murals show stylized landscapes with plants in bloom and rocky outcroppings in vivid colors such as ochres, reds, and blacks. Another mural, over 21 feet (6.4 meters) long, is an amazing maritime seascape with playful dolphins, mountains, a port city, and dozens of ships filled with people.

In northern Greece is the tomb of Philip, father of Alexander the Great, dated to around 340 BCE. The walls of the inner chamber are decorated with a long mural over 12 feet (3.5 meters) in length and 3 feet (1 meter) high. The subject is Pluto seizing Persephone. Set in a landscape, the god is in his chariot and clutches the young woman. Painted in a colorful, expressive, and confident manner, the multifigured composition was first drawn in the wet stucco and then rapidly painted, showing that the artist worked free-hand with mastery of the medium. He used warm tones, including violets, yellows, and reds, to convey a dynamic and animated composition. Alas, this is the only mural that has survived from this period in mainland Greece, but it does indicate an advanced and highly developed skill level that may have been widespread. It serves to illustrate an important principle in the ancient arts: that landscape painting was almost always associated with mythological scenes and

did not exist as a separate genre except on rare occasions.

—Anton Rajer

Bibliography

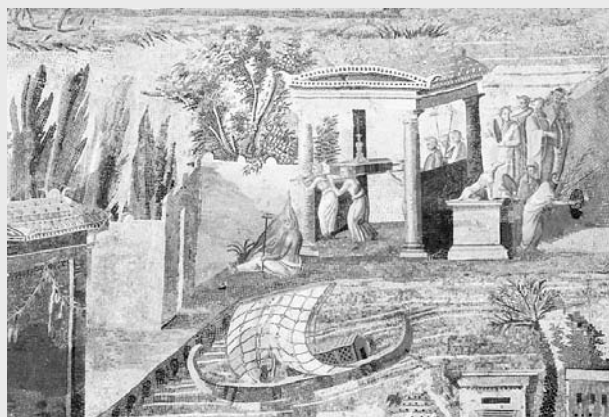
- Hedreen, Guy. *Capturing Troy: The Narrative Functions of Landscape in Archaic and Early Classical Greek Art*. Ann Arbor: University of Michigan Press, 2001.
- Osborne, Robin. *Archaic and Classical Greek Art*. Oxford: Oxford University Press, 1998.

Roman Landscape Painting

Ancient Roman painting had two primary sources, Etruscan and Greek cultures, both of which contributed important styles and techniques that Roman artists found useful in their own work. Roman artists borrowed heavily from these sources but imbued them with their own distinct idiom. Like their predecessors, Roman artists painted mythical and historical subjects but added new genres such as landscape, still life, and architectural illusion. Etruscan tomb paintings, of which there are over 100 extant examples, show a lively interest in the human figure, strong narrative, a mature sense of design, and sophisticated use of color. Because they are located in underground tombs they have survived, protected from the ravages of time. Though the scenes are mostly mythical, some

THE MOSAIC OF THE NILE FROM POMPEII

The mosaic of the Nile from Pompeii deserves discussion. Although made of thousands of small color pieces, the mosaic is the work of a gifted artist familiar with both painted images and mosaic decoration. Conceived of on a grand scale, the Nile mosaic of Palestrina is a virtual tour of the river and the many monuments that dot its shores in Egypt. Made of thousands of pieces of colored stone and glass, the mosaic conveys in graphic form the flooded Egyptian landscape. It is probably a Roman copy of a Hellenistic original from a workshop in Alexandria and was made as a floor decoration for the religious sanctuary of Fortuna at Praeneste, Italy, around the first century BCE. Greek names identify the many animals found throughout, such as crocodiles and hippopotamuses. Nile boats, huts, temples, and figures enliven this fantastic scene that includes plant and water life. The artist used the bend of the river as a device to convey perspective and recession into space as well as to give views of buildings from different angles. These multiple perspectives convey the wonder and monumental quality of the Nile life. This is the grandest landscape image from antiquity and



Detail from the mosaic at Palestrina shows the Nile River delta during flood season. (Sandro Vannini/Corbis)

demonstrates the ability of ancient artists to create landscape images.

Although only a limited number of landscape paintings have survived from antiquity, the few that we have demonstrate a clear interest on the part of ancient artists to portray the natural world around them, filtered through their eyes and time.

—Anton Rajer

show banquets, industry, battles, and portraits and even allude to idyllic landscapes, mostly composed of stylized trees and plants but based upon, at least in part, observed nature. As Rome had already conquered Etruria by 290 BCE, Roman artists would have been aware of these artistic developments. In fact, it is likely that Etruscan artists worked in Rome or contributed to artistic developments in the fast-growing city.

An example survives from an upper-class house from the late republican period, around 30 BCE, that illustrates the influence of Greek art on Rome. The house, located near the Farnesina and the Tiber River, has a number of wall paintings, essentially depicting small imitation pictures in the early classic Greek style of art. Painted on a white ground, the linear composition of human figures is reminiscent of Greek vase painting, done in water-based paints called tempera. The other remarkable thing about this work is that it is signed in Greek “Seleukos made it,” implying

the artist responsible for the artwork but also possibly the adjoining stucco work. In another area of the house is a series of maritime scenes with sea battles sketched in a light and rapid but confident manner; the murals clearly indicate a proficient artist capable of portraying a sense of perspective and three-dimensional illusion.

The most extraordinary example of the highly developed style of Roman landscape painting comes to us from the Villa of Livia, the wife of Augustus Caesar. Located on the Via Flamminia north of Rome, the “garden room” is a painting without parallel, conceived of on a monumental scale: a virtual environment, an entire room, floor to ceiling. Between several low fences rises a dense forest of trees, botanically correct, with lush details including oleander, cypress, laurel, and pomegranates. Birds animate the scenes, often against open blue sky, conveying a realistic effect. This stunning example indicates Roman interest in nature not as mere decoration but as

exact in its rendering. The murals today are located in the Palazzo Massimo in Rome along with several dozen other Roman frescoes preserved in a safe museum environment.

Another extraordinary example is the series of mythological murals found in a house on the Esquiline hill in Rome and today located at the Vatican Museums. The theme is the Odyssey and the life of Ulysses as he wanders from one country to another. The murals are signed with an inscription in Greek, though they may be copies done by a Roman artist around 50 BCE copying a Hellenistic original from about 150 BCE. The paintings have a strong narrative and are painted in an impressionistic, sketchy quality, with the small figures of Ulysses and his men painted in swift, confident strokes. The artist used a coloristic device to convey the sense of perspective and recession into space by using pale colors for the distance, like the optical effect of a hazy distance and atmosphere.

Most ancient wall paintings fall within two painting techniques: true fresco executed on wet plaster or tempera on dry plaster. Both techniques employ essentially the same pigments, mostly earth pigments, such as raw sienna or burnt umber. The Roman architect Vitruvius mentions that some colors, because of their high cost and rarity, such as ultramarine blue, were bought directly by the patron and given to the artist for his work. Furthermore, Vitruvius mentions that fresco requires at least seven layers of plaster, each one progressively finer up to the finish coat, in which the wet pigments were applied.

Housed at the Metropolitan Museum of Art in New York are a group of ancient Roman landscape paintings from the archaeological site of the villa of Boscotrecase, near Pompeii. Painted in about 10 BCE, several mythological scenes tell the story of the Cyclops Polyphemus. He is seated in a large illusionary landscape with his goats, and the sea nymph Galatea is on a dolphin. Another mural depicts the gods Perseus and Andromeda. The works are painted in vivid greens with rock outcropping and a sense of recession into space. The murals, taken as a whole along with others in the room, show a high level of development and sophistication in the mural arts at this imperial Roman villa.

—Anton Rajer

Bibliography

Eliav, Yaron Z., Elise A. Friedland, and Sharon Herbert, eds. *The Sculptural Environment of the Roman Near East: Reflections on Culture, Ideology, and Power*. Leuven, Belgium, and Dudley, MA: Peeters, 2008.

Leach, Eleanor Winsor. *The Rhetoric of Space: Literary and Artistic Representations of Landscape in Republican and Augustan Rome*. Princeton, NJ: Princeton University Press, 1988.

Representations of the World and Cosmos in Chinese Tomb Decor

Tomb construction in China dates to its Neolithic period (10,000–2000 BCE) and continues today. But it underwent significant changes between the end of the Zhou period (1027 BCE–256 CE) and the Han dynasties (206 BCE–220 CE). These material changes represent the shifting ways in which the Chinese understood their relationships to both world and cosmos.

Early evidence of Chinese tomb decor surfaces in the form of funerary urns made of pottery and unearthed from sites located in central China that date to the end of China's Neolithic period. During the Xia (2000–1500 BCE), Shang (1500–1050 BCE), and Zhou periods, use of sacrificial bronze becomes prominent in the artwork found within underground tombs, although pottery vessels are still present. In addition to the finding of sacrificed humans and animals, excavations from some of these early tombs have also revealed items made from bronze, jade, stone, and pottery. Many objects found in these ancient tombs were designed as items through which the dead could continue sacrificing to the higher powers after death.

In the middle and late Eastern Zhou period (770–256 BCE), an important change occurred in Chinese tombs. Made primarily of wood or clay, small figurines representative of humans and other living beings are present. These objects do not signify sacrifice but instead represent companions used to accompany the dead into the afterlife. In the case of the figurines used in the north of China during the Warring States period (475–221 BCE), most were made of



Figure of a charioteer, Eastern Zhou, Warring States period, fourth–third century BCE. (The Metropolitan Museum of Art/Art Resource, NY)

clay and measured no more than 2.5 to 4 inches (7 to 10 centimeters) tall, most likely viewed metaphorically as part of a posthumous cosmos.

These small grave figurines served as models for those found in the later tomb of the famous First Emperor, Qin Shi Huangdi (259–210 BCE), who united China during the Qin period (221–206 BCE). However, Qin Shi Huangdi's enormous tomb complex, found at Lintong, a city near the present-day city of Xi'an in Shaanxi province, comprises multiple halls that spread across acres of land and contains thousands of life-size terracotta figures of warriors and horses. Unlike the miniature figurines found in the tombs of his predecessors, the figures accompanying Qin Shi Huangdi's tomb measure between 70 and 75 inches (180 and 190 centimeters) in height and are collectively called the terra-cotta army. The scale of Qin Shi Huangdi's tomb represents the emperor's envisioning of an actual army, as opposed to a metaphorical one, that would serve and protect him posthumously.

During the early Han period, the use of smaller grave figurines became prevalent again. In one such tomb, the Mawangdui tomb located in Changsha in Hunan province, small wooden figurines accompany the body of a female Han aristocrat named Lady Dai (ca. 168 BCE). Thousands of objects including figurines, documents, and clothes were also found at Mawangdui after the tomb's discovery in 1972. Of extreme intrigue, however, is the painted silk banner found to have covered the coffin containing the woman's preserved corpse. Painted in six pigments, the large banner depicts four cosmological levels: one for the heavens, located at the banner's top and including symbols and images of sun, moon, immortals, and dragons; two for the earthly realms and including a depiction of Lady Dai as an old woman; and one for the underworld, which is located at the banner's bottom.

Archaeological and iconographical studies continue to examine the intriguing religious and metaphysical significations of tombs such as Mawangdui and that of Qin Shi Huangdi.

—Anna Hennessey

Bibliography

- Clunas, Craig. *Art in China*. Oxford and New York: Oxford University Press, 1997.
- Paludan, Ann. *The Chinese Spirit Road: The Classical Tradition of Stone Tomb Statuary*. New Haven, CT, and London: Yale University Press, 1991.
- Watson, William. *The Arts of China to AD 900*. New Haven, CT, and London: Yale University Press, 1995.
- Wu Hung. "Realities of Life after Death: Constructing a Posthumous World in Funerary Art." In *China: 5,000 Years—Innovation and Transformation in the Arts*, edited by Sherman Lee. Bilbao: Guggenheim Museum, 1998.

Nazca Art

Three of the greatest artistic traditions of South America, those of the Moche, the Nazca, and the Paracas cultures, are remarkable not only for the fine quality of the details in the artwork but also for the combination of realism and recognizable icons with mythical and supernatural elements. Though each tradition took a very different approach, all three are also notable for their treat-

➤ MANY TYPES OF ENVIRONMENTAL ART

Non-portable artistic expression has a long history dating back more than 35,000 years, but South America may be unique. Like many regions it has a tradition of rock art going back almost as long as human habitation, but the peoples of South America created art in their environments in a wide variety of forms for a wide variety of purposes. Painting, carving, and geoglyphs represent three basic categories.

The UNESCO World Heritage site in Patagonia, Cueva de las Manos represents the work of some of the earliest settlers in the Americas 13,000 to 9,500 years ago. At this site early Patagonians painted animals from their environment in mineral pigments and signed their work with hand prints leaving a permanent record on cave walls. People continued painting rock surfaces through the Colonial and republican periods including modern graffiti.

Later people also created engraved images known as petroglyphs. The famous Toro Muerto site near Arequipa is only one of hundreds of petroglyph sites in the desert environments around

the colonial city of Arequipa dating from the first millennium BCE through the second millennium CE. These images include animals as seen in the earliest rock art but add anthropomorphic figures and also include strange mythical animals such as two-headed serpents. This suggests that rock art began to represent the supernatural landscape as well as the natural one. Today many rock art sites in the Andes still are regarded as special, supernatural places. Sites with postcolonial uses often have crosses superimposed over ancient glyphs.

Finally, the Nazca were far from the last people in the Andes to create giant artwork from the desert pavement. In the Atacama Desert of Chile people created giant geometric, zoomorphic, and anthropomorphic geoglyphs in a manner similar to the Nazca Lines to mark routes and destinations for camelid caravans particularly after 800 CE. The art possessed an economic or managerial function that transcended representation of the supernatural or natural world.

—Jo Ellen Burkholder

ment of landscape: the Moche for their setting of scenes from mythical narratives in recognizable locations, the Nazca for their monumental treatment of landscape, and the Paracas for their detailed characters that seem to float in infinite and boundless space.

People of the Paracas culture from the Ica region of southern Peru (750 BCE–100 CE) were perhaps the best producers of textiles in the Andean region. By comparison their pottery, though well formed and decorated with incision and postfire paint, is unimpressive. Due to the dryness of the environment along Peru's southern coast and the Paracas Peninsula in particular, natural mummies were preserved in large underground tombs. It is from these tombs, both excavated and looted, that specialists have recovered these textiles.

Paracas weavers were some of the first to combine cotton and camelid wool, creating a variety of fabric types as fine as several hundred threads per inch. These they then embellished with elaborate embroidery and needlework borders. In most of the elaborate embroidery, myth-

ical anthropomorphic figures appear to float in a featureless sea. Head position sometimes appears to suggest flying or swimming, but the terrain is not given any firm indication: no mountains, seas, or plains. We have some sense of what Paracas people valued in their environments from their needlework borders, such as the one on the famous Brooklyn Museum textile that depicts a profusion of animals, plants, and anthropomorphic figures.

People of the Nazca culture (300 BCE–800 CE) also inhabited the dry coastal plains of southern Peru. Overlapping in time and space with the Paracas people to the north, the Nazca were clearly influenced by Paracas ideals, though they developed their own unique styles of textiles and ceramics. One of the aesthetics that Nazca artisans appear to have adopted from the Paracas people is the tendency for the plants, animals, and anthropomorphic figures to float in featureless space. Exceptions to this tendency notably include images of people engaged in fighting and carrying out rituals at flat-topped pyramids.

In addition to more ordinary art forms, the Nazca are also renowned for the construction of large geoglyphs known as the Nazca Lines. Nazca people created a diversity of shapes in the desert pavement. The most noted configuration lay between the Nazca and Ingenio valleys, but glyphs of the same sort can be found in many valleys of the Nazca Drainage. People created the earliest glyphs through an additive technique, piling up rocks from the desert floor. Later, people used a subtractive technique, clearing stones away to reveal the pale earth beneath the dark desert stone. Forms include spirals, zig-zags, straight lines, polygons, and representational figures recalling the animals and plants seen in Nazca pottery and textiles. Based on this association and discovery of pottery fragments associated with the lines themselves, the majority of the geoglyphs can be confidently dated to the Nazca culture and perhaps a little earlier.

The animal and plant figures have captured the most attention. Some suggest that the biomorphic figures were emblematic of clans or representative of supernatural beings and/or constellations. Others have suggested association with specific geological features, natural aquifers, and artificial irrigation systems. In the end the exact purpose for which the Nazca constructed and used the glyphs remains unknown despite the many hypotheses put forth. One point of consensus among scientists, however, is that the Nazca created these many forms to serve a combination of social and religious purposes that likely changed over time.

The Moche people of the Peruvian north coast (100–800 CE) gave rise to the concept of a master craftsman period in Andean prehistory and were easily the most sophisticated ceramic artisans in South America. They created pottery in specialized workshops, producing mold-made and hand-built pieces that they finished with smooth polished surfaces, polychrome slip paint, and complex fine-line drawings. Unlike the art produced in the southern traditions of Paracas and Nazca, Moche art presents a well-developed sense of space and landscape whether rendered in two or three dimensions.

Famous for the realism in human portraiture, Moche artists rendered images of landscape with equal superiority. They manufactured

hand-built pieces in the form of long-necked bottles that depicted the built environment of roofed buildings and flat-topped pyramids as well as three-dimensional representations of rituals taking place among steep mountain peaks. It is in the stylistic conventions of the fine-line drawings, however, that Moche artists achieved the most complex renderings of landscape.

Fine-line drawings reproduced mythical Moche scenes in dark slip paint on a white or creamy ground. Artists created depth of field by one of two methods. First, like some traditions in East Asia they created horizontally arranged panels, the uppermost panel representing the most distant part of the scene. Second, they rendered more distant figures in a smaller scale above the larger foreground figures. Though the scenes, like those of monsters and warriors doing battle, were surely mythical, artists provided a good sense of location by including conventional representations of the environment in which a scene took place. Wavy lines stood for irregular terrain of mountain foothills, volutes represented ocean waves, and tall vertical lines conveyed a sense of marshes of grasslands.

Lesser-known groups of the same period as the Paracas, Nazca, and Moche also represented and used landscape in their art. For example, the Nazca were not the only group to create geoglyphs. Peruvian archaeologists led by Ruth Shady have identified a large geoglyph associated with the site of Caral dated between 1600 and 200 BCE. In the south, archaeologists have identified both large geoglyphs and small rock art panels around Arequipa, Peru, such as at the site of Toro Muerto in the Majes Valley. The style of representation at many sites is consistent with art of the local Sihuas and La Ramada cultures, rough contemporaries of the Nazca. The bounty of environmental art in the south documented up through the Inca and early colonial periods suggests that the tradition of creating enduring and visible art may have changed functions but did not die out with the Nazca.

—Jo Ellen Burkholder

Bibliography

Aveni, Anthony F. *Between the Lines: The Mystery of the Giant Ground Drawings of Ancient Nasca, Peru*. Austin: University of Texas Press, 2000.

- Bawden, Garth. *The Moche*. Oxford, UK: Blackwell, 1996.
- Briones-M, Luis. "The Geoglyphs of the North Chilean Desert: An Archaeological and Artistic Perspective." *Antiquity* 80(307) (2006): 9-24.
- Donnan, Christopher B. *Moche Art of Peru: Pre-Columbian Symbolic Communication*. Los Angeles: Museum of Culture History, University of California, 1977.
- Silverman, Helaine, and Donald A. Proulx. *The Nasca*. Malden, MA: Blackwell, 2002.

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Society and Culture

The ancient monuments most closely associated with the Olmecs of Mexico are symbols of leadership. Immensely skilled sculptors, the Olmecs have left behind at least 17 colossal stone heads at four different sites. Varying significantly in size and quality, these heads probably depicted ancient Olmec leaders. Each head wears a type of protective headgear, possibly the helmets of ancient ball players. The basalt from which these heads were carved was transported a considerable distance and probably at great expense. These heads undoubtedly held important social meaning for the Olmecs. As with all societies, values change over time, and the respect that ancient Mexicans held for these heads was no different. Now, these statues bear pock marks from ancient vandals, signs of mutilation. Although it is not clear when the mutilation took place, the fact that the sculpting of statues came to an end almost 3,000 years ago attests to the ever-dynamic nature of culture.

From 1000 BCE to 300 CE, Mesoamerican cultures underwent elaborate changes. During this time Olmec civilization vanished, the city of Teotihuacan became a thriving urban center, and the first stirrings of Maya culture can be discerned. Noteworthy about all of these Mesoamerican cultures is the primacy of the city. People began living together in close proximity in large centers. While cities had long existed, it was in this period that urban life became predominant in ancient Mexico. Most extreme was Teotihuacan where, according to one estimate, 200,000 people lived, making up 90 percent of that culture's population. For the Maya even the layout of the city was meaningful, and their cities were laid out in a manner that reflected their understanding of the cosmic order of the world. Beyond Mexico, the city was central to many of the cultures that inhabited the world during this era. For the Greeks, the city (which they called the polis) was the fundamental organizing principle and the largest recognizable polity, although these cities did band together as leagues. For the Romans, the city of Rome was the center of a vast empire stretching all around the Mediterranean Sea. Major cities were present throughout the world from 1000 BCE to 300 CE; Meroe in Nubia, Aksum in Ethiopia, Persepolis in Persia, and the well-planned cities of Zhou China are just a few of the many examples of important urban centers. However, the vast majority of the world's

While cities had long existed, it was in this period that urban life became predominant in ancient Mexico. Most extreme was Teotihuacan where, according to one estimate, 200,000 people lived, making up 90 percent of that culture's population.

population lived outside of cities, and the produce of rural areas was absolutely essential.

These urban centers of the period came to be centers of culture and art, with some of the most important artistic achievements of the human heritage having been conceived and executed during this time. For students of European art, the works of the Greeks and Romans have been especially formative in terms of the development of techniques, skill at naturalistic depiction, and choice of subject matter. Myron's fifth-century *Discobulos* and the bronze charioteer of Delphi, both considered masterpieces of world art, were sculpted during this time. The friezes of ancient Persepolis blended Mesopotamian and Greek artistic aesthetics. Art outside of the western canon is just as noteworthy. Jadeite monuments from Mexico are as striking today as they were 3,000 years ago. The terra-cotta warriors buried along with Qin Shi Huangdi, (d. 210 BCE), the first emperor of China, are remarkable for their individual detail as well as the striking scale of their manufacture. Celtic designs (especially as preserved in ancient jewelry) are still utilized in modern craftworks. Scythian depictions of animals in gold and bronze are exquisite examples of art that was created in nonurban settings.

Architecturally, this period has many marvels. Greek classical temples are instantly recognizable to modern visitors, and much of the architectural sensibility that was established by the Greeks was perpetuated in later European design. Roman architecture was vast in scale and technical sophistication. Roman monuments can be found today in any of the regions of their former empire. Roman cities such as Jerash in Jordan remain nearly intact partially due to the monumentality of their construction. Many of the dark-gray marble monumental buildings of the Persian city of Persepolis still stand today. The first emperor of China, Qin, constructed a massive wall along China's northern frontier, little of which survives today, having been replaced by what is now called the Great Wall of China in the Ming dynasty.

There is a significant amount of architecture from the period 1000 BCE to 300 CE that was devoted to entertainment. In many ways, this period can be seen as the period in which formal entertainment on a large scale was truly born. For the Mesoamericans, public ball courts, designed at the end of the preceding era and the beginning of this era, were utilized for the next 3,000 years. Greek theaters, shaped in a semi-circle, were the settings of the earliest plays. It is in Greece that the dramatic arts first appeared as a formal art, and many of the plays written by Greek authors are still performed today. Musical performances and orations also took place in these theaters, providing the basis for modern concerts and literary readings. Although the architecture of ancient Chinese musical performance is not preserved, its importance is well attested, and *The Classic of Poetry* preserves the lyrics of a number of ancient folk songs. Roman amphitheaters (oval in shape), where gladiatorial combat and other spectacles took place, provide the model for many of today's sports arenas. Roman amphitheaters, like our own arenas, were laid out according to class, with the best seats located closer to the event and the cheap seats being available at the very top of the stadium (the equivalent to modern box seats were available for dignitaries).

Inhabitants of the ancient Indian city of Nagarjunakonda could play board games on boards carved onto slabs covering riverside steps.

The social stratification that was so characteristic of the preceding era continued into the period from 1000 BCE to 300 CE, and if anything, this stratification became more institutionalized. In Greece, the concept of citizenship provided some individuals with the rights of free citizens but explicitly excluded women and foreigners from civic life. In Rome, clothing marked the social status of an individual in a way that was immediately recognizable to everyone. In India, the caste system that had originated in the preceding era rigidly fixed a person's social standing based on birth, preventing social mobility; this system continued to evolve down into the Gupta Age. Slavery was common throughout much of the world from 1000 BCE to 300 CE.

A remarkable feature of the world cultures of this period is the extent to which people still derive their identities from these ancient cultures. This is the period that gave birth to the Greeks (in the sense that we think of them today), the Romans, the Celts, the Han dynasty of China, the Persians, the Maya, and the first Indian empires in South Asia. Rightly or wrongly, many people today feel a direct cultural continuity with the societies of this ancient era.

—Kevin M. McGeough

■ Introduction: The Family

Without a doubt, the family is the fundamental social unit of human relationships. The daily life of most ancient people would have been spent in close proximity to individuals deemed family. The biological reality of human reproduction was usually the basis of family life, but the actual structure of a family—who was considered family and which relationships were most meaningful—varied considerably from culture to culture and from period to period.

There was great continuity in family structure in many regions of the world during the period from 1000 BCE to 300 CE. Family life in the Near East (Egypt, Mesopotamia, and the Levant) remained relatively stable from the periods prior to this.

Family structure in the Greek world became rigidly formalized at this time. Members of a Greek family had carefully prescribed roles and responsibilities within the family, and these roles carried the weight of law behind them. Roman

family structures were similar to that of the Greeks, but the ideal roles were not as rigidly prescribed. This is most apparent in the alternative ideals of family that develop out of Christianity in Roman times. An increasing formalization of family roles can be seen in India and China at this time. Vedic traditions in India and Confucian traditions in China facilitated the development of formal models of family relationships, many of which still inform people's notions of family today.

—Kevin M. McGeough

The Greek Family

The Greek family revolved around the household (*oikos*). The *oikos* encompassed not only the nuclear family (husband, wife, and children, both natural and adoptive) but also members of the extended family (particularly unmarried females and orphaned children) and slaves as well as household property, including animals.



Greek funerary stele depicting a family group, fourth century BCE. (Jupiterimages)

It was also the fundamental economic unit of ancient Greece, not least because inheritance passed linearly from one *oikos* to the succeeding generation.

The Greek conception of the family was both patriarchal and hierarchical. As Aristotle notes (*Politics* 1.1253b), there were three relationships within the *oikos*: master and slave, husband and wife, father and child. The dominant person in each of these relationships was the senior male member of the family, who served as the head of the household (*kyrios*). The *kyrios* not only had final say over household matters (although in actual practice this was probably often done through consultation) but also presided over any transactions (whether business or personal) with the community beyond the *oikos*.

An inheritance was usually divided among male offspring upon the death or retirement of their father. Men in this period customarily established their own *oikoi* by marrying, usually in their early to mid-thirties. Female offspring received their portion of the inheritance in the form of a dowry, which they took with them to their new *oikos* when they married, typically at a much younger age than their brothers. Upon marriage, a woman became part of a new *oikos*, with either her husband or one of her husband's senior male relatives serving as her *kyrios*. She would return to her original household only in the case of divorce or widowhood. When there were no surviving sons, the inheritance was left to daughters, who were then married off to the nearest male

➤ EUPHILETUS

Euphiletus, the speaker in a speech written by the orator Lysias, indicates the ideal family relationship he enjoyed with his wife before she began an adulterous affair:

When I, Athenians, decided to marry, and brought a wife into my house, for some time I was disposed neither to vex her nor to leave her too free to do just as she pleased; I kept a watch on her as far as possible, with such observation of her as was reasonable. But when a child was born to me, thenceforward I began to trust her, and placed all

my affairs in her hands, presuming that we were now in perfect intimacy. It was true that in the early days, Athenians, she was the most excellent of wives; she was a clever, frugal housekeeper, and kept everything in order.

—Frances Pownall

Source

Lysias, Lysias, Loeb Classical Library, trans. W. R. M. Lamb (New York: G.P. Putnam's Sons, 1930): 1.6–7.

relative to ensure continuation of both the family line and its property. Thus the family in ancient Greece could be both complex and fluid.

The nature of the family in Sparta was anomalous. Spartan women enjoyed a much higher degree of personal freedom than their counterparts in other city-states and could own land. Because boys were educated communally by the state and husbands were not allowed to live with their wives until they were 30 years old, the Spartan *oikos* was mostly composed of women.

—Frances Pownall

Bibliography

- Cox, Cheryl Anne. *Household Interests*. Princeton, NJ: Princeton University Press, 1998.
- Golden, Mark. *Children and Childhood in Classical Athens*. Baltimore: Johns Hopkins University Press, 1990.
- Lacey, W. K. *The Family in Classical Greece*. Ithaca, NY: Cornell University Press, 1968.
- Patterson, Cynthia B. *The Family in Greek History*. Cambridge: Harvard University Press, 1998.
- Pomeroy, Sarah B. *Families in Classical and Hellenistic Greece*. Oxford, UK: Clarendon, 1997.

The Roman Family

The Roman *familia*, or household, had a variety of meanings: it included not only a group of persons possessing a common kinship or legal association such as their relationship to a *paterfamilias* but also slaves and the family estate. In the strictest sense it meant all persons subject to the legal authority (*patria potestas*) of the senior male member of the family, the *paterfamilias*.

During the early republic the status of women was defined by their male relations. Upon marriage the wife would be transferred from the authority (*potestas*) of her *paterfamilias* to the control (*manus*) of her husband. The validity of a marriage was not based on the performance of a ceremony but on *conubium* (the right to enter into a marriage) and the permission of the male who wielded *potestas*. If a woman was found to be without the jurisdiction of a father or husband, she was placed under the authority of a male guardian (*tutor*).

The *paterfamilias* exercised legal authority over his children from birth. They could not own property, marry without parental consent, or



The Arch of Trajan at Benevento, 114–118 CE, celebrating the establishment of the *alimenta*. (Benjamin Lowe)

draw up a will; the father could expose (abandon to the elements) unwanted children at birth and had the power of life and death over them. Unless otherwise emancipated, children remained subject to the legal authority of the *paterfamilias* until his death. Infant mortality was high; less than half of children reached the age of five.

By the late republic there was a loosening of marital ties. *Manus* marriages became rarer, with women remaining under the jurisdiction of the *paterfamilias* even after marriage. Divorce became more common, the only obstacle being the return of the dowry (*dos*) to the family of the bride.

In order to preserve marital ties, Emperor Augustus introduced legislation in 18 BCE preventing senators from marrying ex-slaves (the *lex Julia de maritandis ordinibus*) and prohibiting adultery (the *lex Julia de adulteriis coercendis*) in an attempt to encourage Roman citizens to marry and have children, legislation under which Augustus's own daughter Julia would be condemned in 2 CE. The purpose of the Augustan legislation seems to have been to encourage the birthrate that had declined under the effects of the civil wars and the declining importance of marriage. Privileges were granted to families with three or more children.

A system to assist poorer families in raising children was established by the emperors Nerva and Trajan at the end of the first century CE. Building upon private schemes such as that of the Younger Pliny at Comum, the *alimenta* provide 16 or 12 sesterces per month to maintain

boys and 12 or 10 sesterces per month for girls. According to Pliny, the purpose of the scheme was to encourage the birthrate among lower-class families.

—Benedict Lowe

Bibliography

- Bradley, K. R. *Discovering the Roman Family*. New York: Oxford University Press, 1991.
- Dixon, Suzanne. *The Roman Family*. Baltimore: Johns Hopkins University Press, 1992.
- Gardner, Jane F., and Thomas Wiedemann. *The Roman Household: A Sourcebook*. New York: Routledge, 1991.
- George, Michelle, ed. *The Roman Family in the Empire: Rome, Italy, and Beyond*. Oxford: Oxford University Press, 2005.
- Rawson, Beryl, ed. *Marriage, Divorce and Children in Ancient Rome*. New York: Oxford University Press, 1991.

Early Christian Families

The evidence indicates that Jesus of Nazareth was unmarried at the time of his public career, an unusual though not unprecedented situation for a 30-year-old Jewish man of the first century CE. Many of his followers, including Peter, certainly were married (Mark 1:30; 1 Corinthians 9:5), and Paul indicates that wives often accompanied their husbands on missionary tours and could be missionaries themselves (Romans 16:3; 1 Corinthians 16:19). Paul himself was unmarried, a state he preferred because of the impending return of

Jesus with its concomitant transformation of all reality (1 Corinthians 7:25–31).

There is a strong ascetic impulse preserved in Jesus's teachings and in the teachings of Paul. While neither rejected marriage for others, their own itinerant lifestyles appear to have precluded raising families. In addition, Jesus appears to have placed allegiance to himself and his movement above allegiance to one's biological family (Matthew 8:21–22; 10:35–37; Luke 14:25–27; Mark 3:31–35). There is very little in early Christian teachings about children, most likely because the movement was infused with a sense that marriage, birth, and child rearing would all soon come to an end (Mark 12:25; 1 Corinthians 7:14, 26–28). As the decades went by, however, Christians increasingly became concerned about family issues. The New Testament contains letters attributed to Paul (1 and 2 Timothy and Titus) that are either forgeries or were written by an older Paul who had changed his views from what he had written in 1 Corinthians 7. In these later letters, the author advises remarriage for widows, marriage for virgins, raising submissive children, and mandatory marriage for Christian bishops (1 Timothy 2–5).

Other Christian authors of the second century CE put forth an ideal of renunciation of marriage, especially for women, as an avenue to spiritual and social power in the church. One example of this was the famous *Acts of Paul and Thecla*, which was not found in the New Testament but enjoyed wide popularity in the

▶ EARLY CHRISTIAN TEXT ON FAMILY

The *Acts of Paul and Thecla* was a popular apocryphal text in early Christianity that was generally considered to be fiction and thus excluded from the Bible. In this passage, the apostle Paul speaks about the virtue of chastity, which was valued by some followers of Christ as a path to a higher spiritual union with God:

“Blessed are the pure in heart, for they will see God. Blessed are those who have kept the flesh chaste, for they shall become a temple of God; blessed are the continent, for God shall speak with them; blessed are those who have kept aloof from

the world, for they shall be pleasing to God; blessed are those who have wives as not having them, for they experience God. . . . Blessed are the bodies of the virgins, for they shall be well-pleasing to God and they shall not lose the reward of their chastity.”

—Jeffrey Trumbower

Source

J.K. Elliot, ed., “Acts of Paul and Thecla” in *The Apocryphal New Testament* (Oxford: Oxford University Press, 1993), 365.

early Christian centuries. Some groups, especially certain Gnostic Christians who denigrated the physical world, denounced marriage and sexual relations altogether. The proto-orthodox Catholic churches gradually developed a middle ground, one that validated monogamy and procreation for most Christians but also held in higher esteem a voluntary celibacy for those who wished to devote their lives exclusively to God. Gradually this ideal of celibacy spread from the lay movements where it had originated into the hierarchical clergy. Virginity for both men and women became prized, and Mary, Jesus's virgin mother, came to symbolize a unique combination of both sexual renunciation and loving parental care. Monogamy, albeit with widespread sexual use of concubines and slaves, was already an ideal of Caesar Augustus and the Roman empire. Christianity, however, emphasized the notion that the legal wife was the only legitimate sexual partner for a man.

—Jeffrey Trumbower

Bibliography

- Balch, David L., and Caolyn Osiek, eds. *Early Christian Families in Context: An Interdisciplinary Dialogue*. Grand Rapids, MI: Eerdmans, 2003.
- Cooper, Kate. *The Virgin and the Bride: Idealized Womanhood in Late Antiquity*. Cambridge: Harvard University Press, 1996.
- Elliott, J. K., ed. *The Apocryphal New Testament*. New York: Oxford University Press, 1993.
- Ruether, Rosemary Radford. *Christianity and the Making of the Modern Family*. Boston: Beacon, 2000.

The Chinese Family from the Zhou to the Han Periods

From the beginning of the Western Zhou (ca. 1045–771 BCE) dynasty to the end of the Eastern Han (25–220 CE), the structure of commoner families remained stable, while that of elite families changed immensely. During the Western Zhou and Spring and Autumn (722–481 BCE) periods, the elite lived in relatively large kinship groups that were politically autonomous and economically autarkic. However, due to the latter period's internecine warfare, by the Warring

States era (403–221 BCE) both nobles and commoners lived in nuclear families. Commoner households, while remaining small throughout this period, were subject to marked change in who their masters were and the circumstances under which they labored.

Although the details are sketchy, elite kinship groups dominated politics, society, and the economy in the Western Zhou. Among the elite, the most important kin unit was the lineage *zu*, which was a group of patrilineal kin (brothers and uncles) that lived in the same place and acted as one in war, politics, and worship. In Zhou times each lineage established a town, erected an ancestral temple, and controlled numerous commoner families. Since each lineage had its own army, land, and workers, it was autonomous and self-sufficient. These lineages were in fact merely lesser versions of the royal lineage that ruled the capital. Succession to a family's hereditary title, fief, or office was based on primogeniture. Lineages belonged to even larger ritual units known as the *zong* (clan). A clan was a larger descent group in which a number of lineages worshipped a common ancestor and paid special heed to the head of the clan (*zongzi*). Commoner households, on the other hand, were fairly small and usually consisted of nuclear families. They communally worked the land of their lord.

By the time of the Warring States, many noble lineages had annihilated each other, and rulers consolidated their states through bureaucratic rule. Sovereigns detached commoner families from their previous lords, issued them land, and collected taxes from each family. To make sure that noteworthy families no longer posed a threat to the state, nobles were given revenue from a particular area's households, but they were not given control of that region. The kingdom of Qin went even further: it decreed that fathers and adult sons could not live in the same room and doubled the taxes of households where a father resided with more than two adult sons. Consequently, during the Warring States and Western Han (206 BCE–20 CE) periods, both elite and nonelite households were uniformly small; they usually contained five or six members.

These small households were nuclear but often briefly became stem families, meaning that a



Model of a house from the Eastern Han period, 25–220 CE. (Museum of East Asian Art)

family might contain three generations (grandfather, father, and son). They were patriarchal, patrilineal, and patrilocal and employed partible inheritance whereby each son inherited an equal amount of the patrimony. Since daughters married out of the family and took part of the patrimony in the form of a dowry, they were usually viewed as less desirable unless the family had no male heirs. A daughter might then stay with her parents and marry uxorilocally (i.e., her husband would move to her commu-

nity rather than the reverse). Families would frequently split the patrimony when adult sons wed even if their parents were still alive. At the center of these nuclear families was not the father-son dyad but that of husband-wife. Elderly fathers resembled advisers rather than dictators.

By the Eastern Han period (25–200 CE), due to the weakening of the central government's authority, local elite households once again became larger, and extended families appeared more frequently. Members of the elite idealized families that could stay together for several generations. The Wei (220–265 CE) made it illegal for fathers and sons to have separate finances.

—Keith N. Knapp

Bibliography

- Chang, K. C. *Early Chinese Civilization: Anthropological Perspectives*. Cambridge: Harvard University Press, 1976.
- Hinsch, Bret. *Women in Early Imperial China*. Lanham, MD: Rowman and Littlefield, 2002.
- Knapp, Keith N. *Selfless Offspring: Filial Children and Social Order in Medieval China*. Honolulu: University of Hawaii Press, 2005.
- Lewis, Mark Edward. *The Construction of Space in Early China*. Albany: State University of New York Press, 2006.
- Lewis, Mark Edward. *Sanctioned Violence in Early China*. Albany: State University of New York Press, 1990.

■ Introduction: Social Classes

From 1000 BCE to 300 CE, social classes worldwide became more rigidly conceptualized than in the past period. While these distinctions may not have been as extreme as in the period from 4000 BCE to 1000 BCE—there was not the disparity of wealth that was evident in Egypt between pharaoh and slave, nor was human sacrifice a prominent practice—the “rules” regarding social classes became more fixed. In Greece, the distinctions between citizen and noncitizen as well as between property

holder and nonproperty holder was paramount. In Rome, class differences manifested themselves in any number of ways, from the clothes that one was able to wear to the part one could play in governance. For both the Greeks and the Romans, slavery was a fundamental and unquestioned part of day-to-day life. In India, this is the period when the caste system becomes fully formed, a system of social organization that is still important in Hindu culture today, 3,000 years later. In China, the writings of Confucius

and the Legalist scholars articulate a rigidly organized social system. In Mesoamerica, the cultures of the Olmecs, Maya, and the people of Teotihuacan lived in highly stratified societies.

—Kevin M. McGeough

Greek Social Classes and Social Organization

Greek social classes varied enormously in composition and terminology between the different city-states (poleis), each of which was an individual unit in terms of its social and political organization. In general, however, it can be said that social organization in most city-states centered upon two basic factors: land ownership and citizenship.

When Greece emerged from the poverty and isolation in the eighth century BCE caused by the collapse of the Mycenaean civilization during the twelfth century BCE, a gradually widening gulf developed between the rich landowners, who wielded all the political power in each city-state as a result of their economic dominance, and the landless poverty-stricken majority. In order to justify their monopoly on political power, the wealthy minority propagated the notion that they were morally as well as socially superior to the nonpropertied majority.

During the seventh and sixth centuries BCE, however, new economic opportunities arising from the growth of trade and commerce allowed many nonaristocrats to become as wealthy as members of the landed aristocracy. These wealthy nonaristocrats began to challenge the stranglehold of the elite on political power, which usually resulted in violence and civil strife. In many city-states, disaffected aristocrats in the seventh and sixth centuries BCE took advantage of popular discontent with the status quo to seize power and rule as tyrants. Tyrannies generally lasted only two or three generations, when the tyrants themselves became the object of popular discontent and were overthrown. They did, however, succeed in diluting the political power of the narrow aristocracies. This led, in most city-states, to more broadly based political and social organizations in the Classical period, either oligarchies or democracies, although status was still usually tied to landownership.

> A CRITIC OF ATHENIAN DEMOCRACY

“The Old Oligarch,” author of a satirical pamphlet probably written in the 420s BCE, offers an analysis of the Athenian democracy from the perspective of an oligarchic sympathizer:

“In every land the best element is opposed to democracy. Among the best, there is least discipline and injustice, and most accurate knowledge of what is good. But among the common people are the greatest ignorance, ill-discipline, and depravity. For poverty tends to lead them into base behavior, as do lack of education and lack of learning because of lack of money, at least in the case of some people.

Someone might say that they ought not to allow everybody to make speeches and serve on the Council, but only the cleverest and the best. But in this too they are best advised, in allowing even the bad to speak. For if the good spoke and served on the Council, there would be excellent consequences for those like them, but not excellent consequences for those sympathetic to the common people. . . .

Such a way of life could never produce the best city, but this is the way democracy would be best preserved. . . . It is slaves and metics who lead the most undisciplined life in Athens; there, one is not permitted to strike them, and a slave will not stand out of the way for you. I will explain why this is their local custom. If the law permitted a free man to strike a slave or a metic or a freedman, he would often think that the Athenian was the slave and would have hit him; for, so far as clothing and general appearance are concerned, the common people here are no better than the slaves and metics.”

—Frances Pownall

Source

Robin Osborne, trans., *The Old Oligarch: Pseudo-Xenophon's Constitution of the Athenians* (London: London Association of Classical Teachers, 2004), 18–19.

It was only in Athens' democratic reforms of the fifth century that, in theory, even the poorest citizens could hold office. The wealthy minority's continuing desire to justify its status was reflected in the moral terminology used to designate the political division between oligarchs and democrats, beginning with Homer and Solon and becoming more explicit in the political texts of the later fifth and early fourth centuries BCE. In this period terms such as "the good," "the best," and "the noblest" were used to refer to the oligarchs, whereas terms such as "the bad," "the scoundrels," and "the mob" were used to refer to the democrats.

Citizenship was the other great determinant of social status. It was necessary to be an adult male citizen in order to hold political office, to vote, or to own land. Citizenship was determined by legitimate birth from a citizen father in most city-states. In Athens after 451 BCE, descent from a citizen mother as well as father was a necessary prerequisite for citizenship. Women, freedmen, and slaves remained outside the social and political organization of the city, as did *metics*, permanent residents of a city-state who were not citizens. Despite their noncitizen status, many *metics* were extremely wealthy and moved in the highest social circles, such as the Syracusan Cephalus, whose house in the Piraeus furnishes the setting for Plato's *Republic*. The Spartans were unique in determining citizenship through both birth and the successful completion of the state education system (which emphasized discipline and military training). Spartan citizenship also required male citizens to maintain a lifelong membership in a common dining hall, and citizenship could be taken away if they could not continue to make their financial monthly contribution to it. In Sparta, citizenship was limited to a degree that it was not elsewhere because it brought with it an allotment of land and the manpower to work this land for its produce. Accordingly, there were a number of inferior classes in Spartan society including the *perioikoi*, noncitizen residents who maintained personal and economic freedom but were required to serve in the Spartan army, and *helots*, who were the property of Spartan citizens and were required to work the land for them.

—Frances Pownall

Bibliography

- Austin, M. M., and P. Vidal-Naquet. *Economic and Social History of Ancient Greece: An Introduction*. Translated and revised by M. M. Austin. London: B. T. Batsford, 1977.
- Cartledge, Paul. *The Greeks: A Portrait of Self and Others*. 2nd ed. Oxford: Oxford University Press, 2002.
- de Ste. Croix, G. E. M. *The Class Struggle in the Ancient Greek World*. Ithaca, NY: Cornell University Press, 1981.
- Finley, M. I. *The Ancient Economy*. Rev. ed. Berkeley: University of California Press, 1999.
- Ober, Josiah. *Mass and Elite in Democratic Athens*. Princeton, NJ: Princeton University Press, 1989.

Etruscan Social Classes and Organization

Etruscan society was originally organized into two specific social classes, the aristocracy and the lower class, each relegated with their own characteristic roles to play within the existing social structure. The aristocracy would play a substantial role in the government, economic development, and leadership of Etruscan society. Much of what scholars know about Etruscan society is based on archaeological findings in Etruria and scholarship written by later Roman historians attempting to unravel the mysteries of Etruscan society. The most useful data in deciphering the structure of Etruscan society is from inscriptions written on their monuments, especially their famous tombs. From this evidence, it is illustrated that the growth of commerce created a rift within the Etruscan lower class, creating a social divide between those who benefited from economic expansion and those who did not. Many of the social structures prevalent in ancient Roman society were influenced by their Etruscan predecessors in Italy.

From the Villanovan period of Etruscan history (1100 to 700 BCE) to its gradual assimilation into Roman civilization (700 to 100 BCE), Etruscan society was increasingly dominated by a firmly entrenched aristocracy that exercised strict control over the political, military, economic, and religious aspects of the average person's life. In their development as a primarily agrarian society, the Etruscans gradually devel-

oped an aristocratic elite filling the top ranks of the military, the government, and the priesthood from this landed wealth. They increasingly depended on what is believed to be a substantial class of serfs who were utilized primarily as agrarian laborers. As commerce and wealth increased due to the development of Etruscan agriculture a social order gradually emerged, with the aristocracy holding most of the landed wealth and the serfs relegated to working the land and other forms of labor. This led to Etruscan cities having bifurcated neighborhoods, with the aristocracy living in luxurious stone palaces while their serfs resided in meager wood houses. Most of the archaeological remnants of Etruscan society and their long-term cultural contributions are heavily influenced by aristocratic elites rather than the common lower classes. The lower classes shared much more in common with the neighboring Italic and Latin tribes in Italy.

During the Classical (fifth century BCE) and Hellenistic (fourth century to first century BCE) periods of Antiquity, Etruscan cities began to have an increase in trade with the eastern Mediterranean Hellenistic kingdoms and Carthage in North Africa. The emergent Mediterranean trade networks established cultural and economic links between the Italian, Greek, and Middle Eastern civilizations. The wealth that trickled into the Etruscan cities led to the development of commercial elites who benefited from this process. As a result, a vibrant commercial class emerged that mirrored the merchant classes of the Hellenistic kingdoms. In spite of all these changes, commercial expansion did not yet have an adverse effect on the social structures of Etruscan cities given that aristocratic elites retained a high level of political control over daily affairs. In this respect, Etruscan society reflected the oligarchic city-states still prevalent in the eastern Mediterranean world. The Etruscan aristocracy was careful to preserve its hold over society, maintaining the societal divide that existed between them and the lower classes. Etruscan society benefited from increasing wealth as evidenced by the growing number of moderately adorned tombs of the middling classes in addition to those by the urban lower working classes. The economic and political re-



*Painted sarcophagus of Seianti Hanunia Tlesnasa, Etruscan, found near Chiusi, Tuscany, about 150–140 BCE.
(The Trustees of The British Museum/Art Resource, NY)*

lationship between the Etruscan cities with the greater Italic and Latin peoples of Italy also contributed to the growing wealth and influence of Etruscan society. With Etruscan goods traded across the Mediterranean the Etruscan cities prospered, resulting in the growing affluence of the merchant and artisan lower class.

In the Late Hellenistic period (first century BCE), social cleavages within the Etruscan lower classes appeared due to the impact of the growth of trade on the emergence of artisans and merchants. Not much information exists about the average Etruscan, and depictions of the average person's daily life do not exist, as most artifacts and relics portray only images of wealthy aristocrats, their families, and their ostentatious lifestyles. A majority of the archaeological data about day-to-day Etruscan life comes from imagery and personal items found in Etruscan tombs, accessible to those who could afford them. Many paintings and illustrations on the walls of the larger tombs illustrate worship rituals, elaborate banquets, games, ostentatious ceremonies, weddings, and other Etruscan cultural rituals. The growing importance of trade and craftsmanship to the livelihood of the Etruscans, those who were not involved in those occupations were seen as a lower class, and the once peaceful Etruscan social existence soon began to give way to social divisions and conflicts. This resulted in social cleavages that encompassed all Etruscan society, now composed of the newly developing

THE HARUSPICES

Perhaps one of the main contributions of the Etruscans to ancient Rome would be the haruspices. The haruspices were Etruscans with the duty of interpreting omens and portents in the Roman republic and the Roman empire. While the origin of such fortune-tellers or their name is not well known, it is assumed that it means someone who looks at something. Some Etruscans were acknowledged for their gift to discern the will of the gods by examining marks on the livers of animals to predict natural disasters and other catastrophes. A major part of Roman religious practices was animal sacrifices to the gods to augur good fortune for a major venture. Subsequently, the entrails of the sacrificed animals were examined by haruspices for marks on the liver, the shape of organs, or any other sign that the gods were inclined to look favorably or unfavorably on an enterprise. While such work typified interpreting signs from the gods, haruspices were never considered to be religious by the Romans. Rather, haruspices were considered to occupy a particular skill that proved useful for making decisions in political, military, and economic ventures. In this capacity, this Etruscan institution served the ancient Romans as a relic of ancient Etruscan civilization.

—Abraham O. Mendoza

rift in the lower classes between the well-to-do mercantile and artisan classes and those below them. Much of the evidence of this increasing internal social strife is found in the remains of Etruscan cemeteries from the Late Hellenistic period. The social and economic disparity between the social classes is illustrated in the tombs in terms of both the quality of the graves and the goods included within them. Much of this social strife is mirrored in the adjacent Italic and Latin communities surrounding the Etruscan cities. In spite of these growing social rifts prevalent in Etruscan society, the aristocracy maintained their hold on political power.

The eventual conquest (509–207 BCE) of the Etruscan cities by the Roman republic ultimately subsumed their social organization and structure to that typified by the Roman model, which

was heavily influenced by the Etruscan example. Having been ruled by a series of kings that constituted an Etruscan dynasty, the Tarquins (fourth century BCE), Rome was exposed to the social and economic class influences stemming from Etruria. The Etruscan aristocracy is considered to have been the model for the Roman patrician class, while the middling commercial and artisan classes along with their poorer lower orders were similar to the Roman plebeians.

—Abraham O. Mendoza

Bibliography

- Banti, Luisa. *Etruscan Cities and Their Culture*. Berkeley: University of California Press, 1973.
- Barker, Graeme, and Tom Rasmussen. *The Etruscans*. New York: Blackwell, 1998.
- Hall, John F., ed. *Etruscan Italy: Etruscan Influences on the Civilizations of Italy from Antiquity to the Modern Era*. Provo, UT: Brigham Young University, 1996.
- Haynes, Sybille. *Etruscan Civilization: A Cultural History*. Los Angeles: Paul Getty Museum, 2000.

Roman Social Classes and Organization

Roman social classes evolved from a dualistic social arrangement based on birth in the Roman republic (509–27 BCE) to one based on merit and wealth in the Roman empire (27 BCE–late fifth century CE). The social division of Roman classes into wealthy patricians, as the political and economic elites, and the plebeians, on the lower social end of the scale as the peasants, craftsmen, and commoners, lasted for two centuries. In later periods, social mobility was not easily attainable due to the rigid social arrangements that existed in both the Roman republic and the Roman empire between Roman citizens, subject peoples, and slaves. While there was a level of autonomy within certain client-states and provinces, Roman citizens were still regarded as the top echelon of society across the Roman dominions, having greater access to the wealth and spoils of the empire. Even within the Roman citizenry, the social status of the senatorial class (*senatores*) and the equestrian aristocracy (*equites*) persisted from the republican period of Roman history into that of the late empire.

Roman social classes in the early Roman republic were organized into two broad classes, that of the patricians and the plebeians. Only men had any sort of political agency, with women considered as wards of their fathers or husbands. Patricians were members of the wealthy or privileged class of citizens, distinguished from the plebeians, descendants of the oldest powerful families responsible for the overthrow of the Etruscan Tarquinii tyrants and the establishment of the republic in 509 BCE. Patrician status was granted only by birth into a patrician family. Plebeians consisted of the general populace of the Roman republic. Their struggle for political and legal equality with the patrician aristocracy was known as the Conflict of the Orders (494–287 BCE). During this two-century struggle, the plebeians eventually increased the political rights to which they felt entitled given their military and economic roles within the republic. Intermarriage between the classes became common. Government positions that had once been designated only for the patrician class, such as magistracies and priesthoods, eventually admitted plebeians. By 287 BCE, patrician and plebeian aristocrats (*nobiles*) emerged as the unified ruling class of the Roman republic.

As the Roman military acquired wide swaths of land in Italy, Gaul (France), Spain, and North Africa and annexed much of the Hellenistic East, the incorporation of foreign subject peoples created a different social system in the late Roman republic and through much of the empire period. Elites in many of the newly incorporated areas were given citizenship to foster loyalty to authorities in Rome. Foreign subjects not granted citizenship were allowed to retain their indigenous social hierarchy so long as they recognized the authority of Rome through the payment of tribute and allegiance.

The massive acquisition of lands throughout much of the empire increased the political and economic importance of the Roman aristocracy that composed the Senate. The farmer-soldiers who had characterized the Roman republic had been replaced by professional soldiers, loyal to their general rather than to the Senate or the republic. This vastly increased the power of the military and in the years of the empire the power of the emperors. Nevertheless, the sena-

THE TWELVE TABLES

Roman law was mostly unwritten and based on unofficial customs in the early Roman republic. This system of unwritten laws and customs allowed the patricians to maintain their political and social control of the republic at the expense of the plebeians, who had no knowledge of the law and were subject to abuses at the hands of corrupt officials, typically working for patrician interests. In the mid-400s BCE, the first official legal code, the *Lex XII Tabularum* (*Law of the Twelve Tables*) was formally established. The Twelve Tables established reverence and adherence to the rule of law as an essential value of Roman society for nearly a millennium.

This project was initiated in 451 BCE when Roman lawmakers appointed ten patrician officials (*decemviri*) to codify the first written Roman legal code. However, after a year's work, it remained largely incomplete, resulting in the creation of a new panel of officials that included five plebeians assigned the task. After many squabbles among the patricians and the plebeians on the panel, the law code was completed in approximately 450 BCE. The new legal code reinforced existing rights and legal procedures and reflected the value system of the existing patrician class in terms of property and family issues. The Law of the Twelve Tables was placed in the Roman Forum to be accessible to all Roman citizens and to ensure that plebeians had knowledge of their legal and political rights within the Roman republic.

—Abraham O. Mendoza

torial aristocracy and the equestrian aristocracy, which owned many of the lands conquered by the legions, retained much of their own political influence in Roman domestic affairs although to a lesser degree in those of the empire period.

Elites in the provinces, protectorates, and client-kingdoms retained their own social systems but were also allowed some access to political agency in Rome. The Gallic aristocracy, for example, actually became part of the Roman Senate in the second century BCE. While merchants, artisans, and soldier-farmers constituted a substantial middling class, they did not possess many of the privileges held by the higher orders (military authority, hereditary offices, honors and titles, etc.)

but still held substantial political rights guaranteed to them as citizens of Rome. Furthermore, the urban poor, the majority of subject populations and particularly slaves, were relegated to the bottom of the social ladder of the late Roman republic and much of the Roman empire period.

—Abraham O. Mendoza

Bibliography

- Garnsey, Peter. *Social Status and Legal Privilege in the Roman Empire*. New York: Oxford University Press, 1970.
- MacMullen, Ramsay. *Roman Social Relations, 50 B.C. to A.D. 284*. New Haven, CT: Yale University Press, 1974.

Slavery in Greek and Roman Society

In both Greek and Roman societies there was a heavy reliance on slave labor, and an active trade in slaves persisted to the end of the classical



Latin inscription on the Gate of Mazeus and Mithriadates at the entrance to the Agora of Ephesus, present-day Turkey. The gate is named for the two slaves who erected it in honor of Emperor Augustus who granted them their freedom. (Lyn Gateley)

► ARISTOTLE'S DEFENSE OF SLAVERY IN *POLITICS*, I.5

"Where then there is such a difference as that between soul and body, or between men and animals (as in the case of those whose business is to use their body, and who can do nothing better), the lower sort are by nature slaves, and it is better for them as for all inferiors that they should be under the rule of a master. For he who can be, and therefore is, another's and he who participates in rational principle enough to apprehend, but not to have, such a principle, is a slave by nature. Whereas the lower animals cannot even apprehend a principle; they obey their instincts. And indeed the use made of slaves and of tame animals is not very different; for both with their bodies minister to the needs of life. Nature would like to distinguish between the bodies of freemen and slaves, making the one strong for servile labor, the other upright."

—Joseph P. Byrne

Source

Aristotle, *The Politics of Aristotle*, Vol. 1., translated by Benjamin Jowett (Oxford, UK: Clarendon, 1885), 8–9.

world. Enslavement occurred under many circumstances, including capture in battle, bondage for debt, and seizure by slave traders; one's race or ethnicity, however, played no role. A child of slave parents generally inherited their status unless claimed by the master to become the master's child. Slaves labored in the fields of wealthy landowners, manned the oars of galleys, and toiled on construction sites. Greek and Roman householders displayed their wealth and status by the number of domestic slaves who cooked, cleaned, and otherwise served and maintained their owners' townhouses and country residences. Trustworthy male slaves handled their masters' personal and financial affairs, while attractive women were often reduced to sexual playthings. The newly enslaved sometimes possessed valuable skills—fluency in multiple languages, expertise at an art or craft, a high level of education, or athleticism—that made them especially valuable and even respected. For example, Romans prized well-educated Greek men as teachers for their children and athletic men of all ethnicities as gladiators. Business owners purchased slaves to perform manual labor ranging from mining to dock work to manuscript copying.

In Greek poleis such as Athens, even modest households had one or more slaves, a fact that

some historians see as critical in freeing the adult males to participate actively in civic matters, the precondition for Athenian democracy and the flowering of Greek culture. Greco-Roman slaves were considered personal property (chattel), though norms and laws for proper treatment (and acceptable mistreatment) evolved in classical society. Slaves could achieve freedom by informal or formal manumission either at the owners' command or through their last wills or by purchasing it from their owners.

—Joseph P. Byrne

Bibliography

- Bradley, Keith. *Slavery and Society at Rome*. New York: Cambridge University Press, 1994.
- Finlay, Moses. *Classical Slavery*. London: Frank Cass, 2003.
- Garlan, Yvon. *Slavery in Ancient Greece*. Translated by Janet Lloyd. Ithaca, NY: Cornell University Press, 1988.

Early Christian Society

The early Christian movement was diverse, permeating all levels of Roman society. Recent historical studies have demonstrated that from the beginning, Christianity included both rich and poor as well as Jew and Gentile among its numbers.

Christianity moved initially within Jewish communities of the eastern Roman provinces. However, it quickly broadened to include non-Jews. During the time of Paul, small Christian communities represented a cross section of society. From the second century CE onward, Christianity spread predominately throughout the pagan world. Although Christian communities were composed largely of the lower classes as was Roman society, there were upper-class members. Early Christians had a variety of occupations ranging from artisan to soldier to government official.

Until Constantine legalized Christianity in the fourth century CE, Christianity appealed to those who were on the margins of Roman society. Christian beliefs differed dramatically from traditional Roman religious thought. The worship of Roman gods was an inseparable part of being a Roman citizen. There were gods for all

➤ CELSUS'S ON THE TRUE DOCTRINE

In the second century CE, Celsus wrote an influential attack on Christianity called *On the True Doctrine*. Celsus was an otherwise unknown author, but his work generated considerable opposition among Christian theologians although a formal rebuttal to his argument was not made until a generation after its publication. Amid his criticism of Christian doctrine, Celsus claimed that Christians were comprised of the lowest, most ignorant members of Roman society. Origen of Alexandria wrote a lengthy reply to Celsus, the *Contra Celsum*, arguing at length that Christians were drawn from all ranks of society, including the educated classes. While both authors admittedly engaged in hyperbole, Celsus's work and Origen's reply represent two distinct views of Christian society. Celsus's claims are representative of many Romans; such accusations appear in other works and are addressed in many early Christian writings. Origen, on the other hand, not only tried to refute Celsus's claims but also tried to emphasize that Christianity was in fact a religion comprised of people from all walks of life.

—Lisa Holliday

aspects of life, including the welfare of individual cities and the figure of the emperor himself. Monotheism was considered by many to be atheism because it denied the Roman pantheon. Those who converted to Christianity renounced the society they lived in by their adherence to monotheistic beliefs. No longer able to participate in civic religious festivals or to sacrifice for the well-being of the emperor, Christians were viewed as outcasts by other Romans. Christian concepts of salvation and a personal god as well as its ethical teachings did not have a counterpart in Roman religious belief with the exception of some philosophical schools of thought. Initially, Christianity attracted members who were dissatisfied with their current practices. After the conversion of the emperor Constantine in the early fourth century CE, however, people began to convert because they sought to curry favor with the emperor.

Within the early Church, social status influenced one's position and responsibilities within

the community. Early communities emphasized the equality of all members, but as the number of Christians grew, this notion dissipated, and Christian communities began to mirror Roman social structure. Women went from being able to hold positions of authority within the church, such as deacon, to having relatively low status. The upper classes in particular were vital to the success of the Christian mission. From the first century CE onward, wealthy members offered their homes as meeting places for their fellow Christians. Until the third century CE, house churches were the primary means by which Christians gathered inconspicuously to worship. Upper-class members provided the funds for charitable work as well. Clement of Alexandria, for instance, urged wealthy Christians to donate generously to Christian charities, such as those that provided care for widows and orphans. Lastly, prominent members of the congregation willed tracts of land to the church. Thanks to these bequests, the church controlled a significant amount of land by the fourth century CE.

Following Constantine's reforms, which included the legalization of Christianity as well as the granting of imperial support to the religion, Christianity spread rapidly throughout the empire.

—Lisa Holliday

Bibliography

- Freund, W. H. C. *The Early Church*. Philadelphia and New York: Lippincott, 1966.
- Meeks, Wayne. *The First Urban Christians: The Social World of the Apostle Paul*. New Haven, CT: Yale University Press, 2003.
- Theissen, Gerd. *Social Reality and the Early Christians*. Minneapolis: Fortress, 1992.

Social Structure in Late Vedic India—The Caste System

The first literary reference to the social structure now known as a caste is found in a late hymn of the *Rig-Veda* titled the “Purusha Sukta,” or “Hymn of the Cosmic Man.” In this hymn, found in the *Rig-Veda*’s tenth *mandala*, or book, the entire universe is described as having arisen

from the sacrifice of a primordial cosmic being called simply, “the Man,” or Purusha. In the verses of this hymn, a variety of natural phenomena and deities are described as coming from this being’s body parts. “The moon was born from his mind; from his eye the sun was born. Indra and Agni came from his mouth, and from his vital breath the Wind [Vayu] was born. From his navel the middle realm of space arose; from his head the sky evolved. From his two feet came the earth, and the quarters of the sky from his ear. Thus they [the deities who performed the sacrifice] set the worlds in order.”

In addition to natural phenomena and deities, the various groups making up late Vedic society are also described as having emerged from the sacrifice of the cosmic man. “His mouth became the Brahmin; his arms were made into the Warrior, his thighs the People, and from his feet the Servants were born.”

The degree to which the hierarchical grouping described in the *Purusha Sukta* reflects the caste system of later centuries is a topic of debate among scholars. Over time, the ideal of a society in which Brahmins, the intellectual and priestly class, are located at the top, followed by the warriors (Kshatriyas), the common people (Vaishyas), and the servants (Shudras) gradually became more central to Indian society, as reflected in the later *Dharma Shashtra* or legal literature of the post-Vedic, classical period. It is possible to read the *Purusha Sukta* as referring to such a social reality in the late Vedic period (the first half of the first millennium BCE). But it is unlikely that the caste system existed in its fully developed form at this stage.

Scholars have noted the resemblances between this fourfold hierarchy and similar threefold social structures found in other Indo-European societies, consisting of a priestly intellectual class, a class of warriors, and a class of commoners. The addition of a fourth class, that of servants, in the Vedic system has been interpreted by some as evidence of an Indo-Aryan invasion or migration in which the indigenous peoples of India were made into a servant class subordinate to the three Indo-European classes. But this theory is debatable, and there is evidence that the relations among the various classes of Indian society were more complex in

ancient times than a reading of late Vedic and post-Vedic texts might suggest.

The word “caste” is derived from the Portuguese *casta* (“color”), which in turn is a translation of the Sanskrit term *varna*. Varna also means “color” and is the Vedic term for the four primary categories of ancient Indian society: the Brahmins, the Kshatriyas, the Vaishyas, and the Shudras. An earlier generation of scholars saw this term “color” as further evidence that the caste system reflected an invasion of ancient India by an ethnic group with a lighter skin tone than that of the indigenous population. This theory, too, is debated among scholars, some of whom point out that the colors traditionally assigned to the four varnas are not skin tones but are derived from the system of *gunas*, or qualities, derived from the ancient Samkhya system of Hindu philosophy. Each varna is believed to have a particular set of characteristics, derived from the mix of *gunas*, or fundamental qualities, that constitute it. Brahmins are thus characterized by the *sattvic guna*, which is associated with consciousness and intelligence and symbolized by the color white. The warrior class, appropriately, is characterized by the *rajasic guna*, which is associated with ambition and energetic activity and is symbolized by the color red, and so on.

How was varna determined in late Vedic India? The system that predominated by the time of the Buddha, around the fifth century BCE, and that was already ancient by this time was a system of assigning varna through birth. The caste system, in other words, is hereditary. One is a member of the caste of one’s parents.

That such a system was questioned by some members of the society is clear from texts such as the *Chandogya Upanishad*, a part of the late Vedic corpus, that includes a story in which a young man of indeterminate caste approaches a renowned Brahmin for Vedic instruction, a privilege reserved exclusively for Brahmins. When the young man is truthful regarding his lineage, the Brahmin accepts him as a student, exclaiming, “Who but a Brahmin could speak like that!” (*Chandogya Upanishad* 4.4). One possible interpretation of this story is that the Brahmin regards caste not as a matter of birth but as a matter of individual character. Such an attitude,

➤ THE MYTHIC ORIGINS OF THE CASTE SYSTEM

In the *Rig-Veda*, there are many creation stories. One of these depicts the various parts of the universe as arising from the body parts of a cosmic deity who offers his body in sacrifice. Each body part becomes a different part of the natural world. Similarly, the text also sees the various *varnas*, or castes, as emerging from this same sacrifice.

“His mouth became the brahmin; his arms became the warrior; his legs became the common man; the servant was born from his feet. The moon was born from his mind; from his eye the sun was born. Indra and Agni came from his mouth, and from his vital breath the Wind was born. From his navel the middle realm of space arose; from his head the sky evolved. From his two feet came the earth, and the quarters of the sky from his ear. Thus they set the worlds in order” (*Rig-Veda* 10.90.12–14).

—Jeffery D. Long

Source

Wendy Doniger, trans., *The Rig-Veda: An Anthology* (New York: Penguin Classics, 1983), 30.

suggested in the *Upanishads*, is made explicit in Buddhist texts, such as when the Buddha is attributed with saying that “One is not a Brahmin by birth, nor by birth a non-Brahmin. By action is one a Brahmin, by action is one a non-Brahmin” (*Vasettha Sutta*).

Whether caste membership was widely viewed as a matter of individual character in the late Vedic period or whether statements to that effect are idiosyncratic and made in protest of a dominant view of caste as hereditary, by the Classical period (from approximately 320 CE to 550 CE) caste membership was most definitely a matter of birth (*jati*), as presumed in the *Dharma Shashtra* literature of that period. Over the course of time, the four main varnas of the late Vedic period became less relevant in practice than the subcastes, or *jatis*, into which the main varnas are divided: profession-based hereditary groups arranged hierarchically in terms

of the purity or impurity of the profession in question.

—Jeffery D. Long

Bibliography

- Doniger, Wendy, trans. *The Laws of Manu*. New York: Penguin, 1991.
- Nanamoli, Bhikkhu, and Bhikkhu Bodhi, trans. *Va-seṭṭha Sutta*. Boston: Wisdom Publications, 1995.
- O’Flaherty, Wendy Doniger, trans. *The Rig-Veda*. New York: Penguin, 1981.
- Olivelle, Patrick, trans. *Dharmasutras: The Law Codes of Ancient India*. Oxford: Oxford University Press, 1999.
- Olivelle, Patrick, trans. *Upanisads*. Oxford: Oxford University Press, 1996.

Changing Social Concepts under Jainism and Buddhism

Around the middle of the first millennium BCE, a movement emerged that questioned the basis of the *varna* (caste) system that had developed centuries earlier during the Late Vedic period. According to an orthodox Brahmanical understanding of this system, the human social order is a divinely sanctioned reality, inscribed into the fabric of existence. According to Jainism and Buddhism, however, caste is merely a human construct, a way of organizing society, having no divine sanction. Jainism and Buddhism share

the Vedic belief in karma and rebirth but do not view one’s membership in a specific caste as a measure of spiritual evolution. Rather, it is the character of the individual, illustrated in his or her deeds, that is important.

In the caste system as it eventually came to be practiced, society is organized into a hierarchy, with the Brahmins, the priestly and intellectual class, at the top followed by the Kshatriyas (warriors and secular leaders), the Vaishyas (the common people), and the Shudras (the servant class). Coupled with the doctrines of karma and rebirth, the result is a worldview in which one’s location in society is a measure of one’s spiritual evolution. Karma is the principle of moral cause and effect according to which one’s circumstances are the results of one’s actions, with good actions leading to pleasant results and evil actions to suffering. Because one lifetime is not sufficient time to reap the rewards and punishments that one has coming for all of one’s actions or to explain one’s current situation with respect to happiness and suffering, a corollary of the principle of karma is the doctrine of rebirth. This holds that due to one’s karma, one is born in particular circumstances to experience the results of one’s past actions. Put simply, the deeds of this life are insufficient to explain why one is experiencing the particular mix of happiness and suffering that one is experiencing. Nor at death has one typically reaped the rewards and punishments that one should expect from the deeds of this life. Thus, at least some of one’s current experiences must be due to actions one committed before this life. And the fruits of current acts that one does not experience now will come later.

Because Brahmins are at the top of the social hierarchy, the conclusion is drawn that such a fortunate rebirth must be due to highly meritorious action performed in past lives. This suggests a soul that is highly evolved, making great progress in the direction of the spiritual goal of liberation from the rebirth process. Similarly, to be reborn as a Shudra is seen as an unfortunate rebirth and consequently as a punishment for misdeeds and as evidence of a less-evolved spiritual state.

The movement that challenged the assumptions underlying the caste system was called the *śramana* (striver) movement. The *śramana*



Ceremony outside a Jain temple, India. (Tim Schapker)

movement included among its many subgroups the Jains and the Buddhists, the two shramana groups that survive as religious communities to the present. The shramanas, as their name suggests, held that individual striving, rather than the caste of one's birth, was the true measure of moral development. Anyone willing to put forth the necessary effort to become a Buddhist or a Jain monk or nun could attain liberation from rebirth regardless of the caste into which they were born. In the Jain and Buddhist communities, birth caste was superseded by individual effort as measured by one's ability to maintain religious vows of nonviolence, nonpossession, and celibacy. In these communities, monks and nuns, who could come from any birth caste, held preeminence, supported in their spiritual efforts by the laity, the householders, whose religious merit was derived primarily from their material support of the monastic community.

—Jeffery D. Long

Bibliography

- Dundas, Paul. *The Jains*. London and New York: Routledge, 1992.
- Gombrich, Richard. *Theravada Buddhism: A Social History from Ancient Benares to Modern Colombo*. New York: Routledge, 1988.
- Jaini, P. S. *The Jaina Path of Purification*. Delhi: Motilal Banarsidass, 1979.
- Robinson, Richard H., Willard L. Johnson, and Thanissaro Bhikkhu [Geoffrey DeGraff]. *Buddhist Religions*. 5th ed. Belmont, CA: Thomson, Wadsworth, 2005.

Social Structures of Warring States and Qin China

From the Warring States period to the Qin dynasty (403–207 BCE), the social structure of China underwent several fundamental changes, transforming from an urban-based feudal state to a full-blown territorial empire.

The Western Zhou dynasty is often characterized as a decentralized state founded on feudalism. The central court directly controlled the capital city and surrounding countryside only. Dividing the vast territory into a series of autonomous vassal states, the Zhou king assigned

them to his relatives and merited ministers. As miniature versions of the Zhou court, these vassal states enjoyed differing levels of administrative, military, and economic autonomy. Within each state, the ruler shared his political power with prominent lineages established by his kinsmen and allies. He appointed them as high officials and endowed them with fiefs (land gifts). As regional replicas of the Zhou ruler's court, these fiefs were de facto independent kingdoms ruled by Zhou nobles.

Noble lineages were the building blocks of the aristocratic world in the old Zhou dynasty. Zhou society was characterized by the classification of the population into different social ranking categories. While the Son of Heaven or *tianzi* (namely the Zhou king), the feudal lords (*zhubou*), the ministers (*qing*), and the senior officials (*dafu*) constituted the top echelons of the social structure, commoners were at the bottom. Between them were the gentlemen (*shi*), the lowest-ranking Zhou aristocrats. The ministers and the senior officials usually came from powerful lineages with independent fiefs and domains, served by the gentlemen who were related to them by blood or by marriage. The commoners, such as peasants, craftsmen, servants, and slaves, were bonded to the fief and counted as private properties of the Zhou aristocrats.

During the Spring and Autumn period (722–481 BCE), there was a greater decline in the authority of Zhou court. In quarrels among the vassal states, where larger ones conquered and annexed the weaker ones, and within states, powerful lineages fought against each other for dominance. In order to acquire a competitive edge, several states adopted profound institutional reforms, reforms that not only lasted into the Warring States period but also established the basic patterns of the social structure of the Qin dynasty.

First, the institution of feudalization was abolished, and directly administered districts were established in their stead. The fiefs of the recently dispossessed and newly conquered territories were no longer endowed to individuals. They were demarcated into commandaries and countries, governed by officials appointed by the central court. With the development of centralized administration, the original fiefs that

were dispersed over a vast territory were integrated into one political entity.

Second, once the feudal structure disintegrated, small family households emerged as the basic units of production and taxation. In the old Zhou, the peasants were obliged to work on the fiefs, and their production belonged to their lord. Beginning in the Spring and Autumn period and completed in the Warring States period, various states, one after another, institutionalized land taxation based on crop yield. This illustrates that the government tacitly recognized the land tenure of small households and that the peasants were transformed from the private property of Zhou aristocrats into the subject of the state.

Third, the state imposed universal military service on the population, extending its control into the rural hinterland. In the old Zhou, there was a clear boundary between people of the city (*guoren*) and people of the field (*yeren*). City people were supposed to join the army and defend their state, whereas people of the field, living in remote rural areas, maintained some degree of autonomy and were only responsible for paying taxes in kind and fulfilling certain corvée duties. During the Warring States period, the numerical and geographic scale of warfare was remarkably escalated, and chariots of the aristocrats were gradually replaced by mass infantry and cavalry armies. In order to efficiently recruit soldiers and collect tax to boost the ruler's military ambition, major states began to register their populations and mobilize the peasants for military service. In this way, the old Zhou world, which focused on fortified towns, was transformed into a full-blown territorial state.

Fourth, new methods of recruiting officials were introduced, which facilitated social mobility. In the old Zhou, an individual's official career was primarily determined by his family's status. During the Warring States period, because of the severe competition between rival states, a meritocracy was gradually developed, replacing the established recruitment system. Stories regarding talented men distinguishing themselves by their administrative and military accomplishments were well circulated during this time, inspiring people with obscure backgrounds to laboriously seek appointments within the various states.

Along with these reforms, there were other significant changes in the social structure: the emergence of the artisan and merchant classes. In the Zhou feudal structure, products were manufactured primarily for the nobles and were distributed according to political authority, being exchanged through the channels of gift giving, tribute, rationing, and corvée labor. With the collapse of this network, goods were produced for the market, and artisans were gradually differentiated from others and designated as a special group among commoners. At the same time, trading was also developed to circulate products and resources, which gave birth to the merchant social class. During the Qin dynasty, it became a standard understanding that the society consisted of four categories of people: gentlemen (*shi*), peasants (*nong*), artisans (*gong*), and merchants (*shang*). The gentlemen group was commonly well educated and possessed professional skills. Replacing the declining high nobilities, they constituted the main pool of the official candidates. The peasant group designated a wide range of people who worked in agriculture, including independent farmers, tenant cultivators, and hired labor. Merchants as a group were discriminated against in terms of legal status and occupied the lowest rung of the social ladder, only slightly higher than slaves, even though there are well-known stories about rich merchants who actively participated in and even manipulated the politics of the Warring State and Qin China.

—Cai Liang

Bibliography

- Bodde, Derk. "The Idea of Social Classes in Han and Pre-Han China." In *Thought and Law in Qin and Han China: Studies Dedicated to Anthony Hulsewé on the Occasion of His Eightieth Birthday*, edited by W[ilt] L. Idema and E. Zürcher. Sinica Leidensia 24. Leiden: Brill, 1990.
- Hsu, Cho-yun. *Ancient China in Transition: An Analysis of Social Mobility, 722–222 B.C.* Stanford Studies in the Civilizations of Eastern Asia. Stanford, CA: Stanford University Press, 1965.
- Li Xueqin [Li Hsüeh-ch'in, q.v.]. "Social Classes." In *Eastern Zhou and Qin Civilizations*, translated by K. C. Chang. Early Chinese Civilization Series. New Haven, CT, and London: Yale University Press, 1985.

- Loewe, Michael, and Edward L. Shaughnessy, eds. *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Cambridge: Cambridge University Press, 1999.
- Von Falkenhausen, Lothar. "The Inscribed Bronzes from Yangjiacun: New Evidence on Social Structure and Historical Consciousness in Late Western Zhou China (c. 800 BC)." *Proceedings of the British Academy* 139 (2006): 239–296.
- Von Falkenhausen. "Social Ranking in Chu Tombs: The Mortuary Background of the Warring States Manuscript Finds." *MS* 51 (2003): 439–526.
- Yates, Robin D. S. "Social Status in the Ch'in: Evidence from the Yün-meng Legal Documents. Part One: Commoners." *HJAS* 47(1) (1987): 211–248.
- Zhang, Zhong-pi. "The Social Structure Reflected in the Yuanjunmiao Cemetery." *Journal of Anthropological Archaeology* 4(1) (1985): 19–33.

Social Structures of Han China

Inheriting the political structure of the short-lived Qin dynasty, the vast territorial empire of Han China was organized into directly administered districts in hierarchical order. Under the central government, where the highest political power resided, were commanderies (*jun*). Each commandery was composed of varying numbers of counties (*xian*), the smallest administrative unit that was governed by officials appointed by the central government. Because political power was the fundamental force that both dictated the distribution of social wealth and determined social status, the whole society, based on the state, can be categorized into two major groups: the ruler and the ruled.

The ruling class included the emperor, the nobility, and government officials. The emperor, commonly referred to as the Son of Heaven, was at the apex of the social pyramid. Claiming to have received the mandate of heaven to rule the multitudes, the emperor was the source of all power, possessing the ultimate legislative, judicial, and administrative authority. Consort families and eunuchs, taking advantage of their intimate relationships with the emperor, manipulated the throne and became dominant forces who controlled the bureaucracy at the end of the Western Han and most of the Eastern Han dynasties.

The nobility consisted of imperial relatives, consort family members, and meritorious high officials. While the nobility was hereditary, their status was bestowed by the emperor and could be deprived by him at any time. A golden principle—that only members of the imperial family could be ennobled as kings and only the ones who had offered great contributions could be ennobled as marquises—had been often cited during court debates. However, it became a standard practice to elevate consort family members, especially the father and the brothers of the empress or the empress dowager, to the status of marquises. During the early Western Han dynasty, the kings had their independent courts and enjoyed economic and political autonomy in their fiefs, which presented some serious threat to the central government. Through a series of reforms, the sizes of the kingdoms were reduced, and the kings lost their power to directly rule their kingdoms. The marquises in Han China, different from the kings, seem to never possess any territorial authority over their fiefs but received a definite amount of tax revenue from the number of households assigned to them by the emperor.

While the nobility enjoyed a prestigious social status, they could only share the political power with the emperor when they were in the bureaucracy, serving as government officials. Government officials were a prominent group in Han China. First, their high incomes—including salary, gifts from the emperor, land, business, and handicrafts, etc.—brought them enormous wealth, enabling them to live extravagant lives that commoners did not. Second, they officially monopolized certain material goods according to their rank, a prestige that was protected by sumptuary laws. The special garments, carriages, horses, and attendances visibly distinguished officials from commoners. Third, officials enjoyed legal prerogatives and could not be arrested or sentenced by legal authorities without the emperor's approval. Fourth, the recruitment system of the Han bureaucracy worked to the benefit of current officials, facilitating the ability for their descendants to enter the officialdom. High officials had the privilege to appoint their children and junior relatives directly as Gentlemen of the Palace, the candidates for future positions as

officials. Furthermore, the offspring of officials were favorably recommended to the court as official candidates by the local authority, a phenomenon that was particularly noticeable during the Eastern Han.

In contrast to the ruling classes, the ruled were traditionally classified into four categories according to occupation: scholars, peasants, artisans, and merchants. Scholars were a social group characterized by blurred boundaries. It might refer to the potential official candidates who actively sought employment in the officialdom or those who refused to serve in the government but made a living through teaching or farming. The social and economic status of scholars also varied: some came from rich families that had long histories of service in the bureaucracy; some were poor and were the first generation in their families to receive an education. Due to the advocacy of Confucian ideology by the Han government, some Confucian scholars established countrywide reputations and attracted thousands of students.

Peasants' work was often celebrated as productive and fundamental to society, whereas the peasants generally occupied the lower stratum in the social structure because of their poor economic conditions. Sources show that a nuclear peasant family with around 20 acres of land could barely meet its expenses, surviving on sparse food and coarse clothing. During emergency situations, such as famine or where there was an exceptional taxation, they either had to sell their land at low price or secure loans at high interest. This meant that small landowners were often reduced to poverty, eventually becoming tenants of wealthy landowners and thus being exploited through high rents that were usually more than 50 percent of their harvest.

Little knowledge is available about artisans because of scarcity of available sources. Generally, artisans were richer than peasants and sometimes were treated as a group, as were merchants. Merchants in Han China were typically people who were involved in various businesses including trading, shopkeeping, salt and iron manufacturing, cattle and pig breeding, and money lending. In terms of legal status, merchants were discriminated against. Various edicts against them were issued by the emperor

prohibiting them from wearing silks and brocades, owning land as property, and serving as officials. However, the economic power that the large merchants had accumulated enabled them to easily transgress such regulations. Powerful merchants not only owned a large amount of land but also associated with the nobility and high officials. Some of them also successfully entered the status of officials through the purchase of positions or bribery. Their tremendous wealth was successfully translated into political power and social position, making them a privileged group comparable to the ruling class in Han China.

At the bottom of the Han society were slaves, either owned by the state or by powerful families. Criminals, their relatives, and captives of war were major sources of slaves. Both domestic slaves, who were responsible for housework, and productive slaves, who primarily labored in mines and farms, existed. Although slaves were treated as the private property of their owners and could be freely exchanged in the market, their lives were protected by the law, and it was a serious crime in Han China to murder one's slaves.

—Cai Liang

Bibliography

- Ch'u, T'ung-tsu. *Han Social Structure*. Edited by Jack L. Dull. Han Dynasty China 1. Seattle and London: University of Washington Press, 1972.
- Ebrey, Patricia [Buckley]. "The Economic and Social History of Later Han." In *The Cambridge History of China*, Vol. 1, *The Ch'in and Han Empires, 221 B.C.-A.D. 220*, edited by Denis Twitchett and Michael Loewe. Cambridge: Cambridge University Press, 1986.
- Lewis, Mark. *The Early Chinese Empires: Qin and Han*. Cambridge: Harvard University Press, 2007.
- Nishijima Sadao. "The Economic and Social History of Former Han." In *The Cambridge History of China*, Vol. 1, *The Ch'in and Han Empires, 221 B.C.-A.D. 220*, edited by Denis Twitchett and Michael Loewe. Cambridge: Cambridge University Press, 1986.
- Powers, Martin J. "Artistic Taste, the Economy and the Social Order in Former Han China." *Art History* 9(3) (1986): 285–305.
- Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch'in and Han Empires, 221 B.C.-A.D. 220*. Cambridge: Cambridge University Press, 1986.

Evidence for Social Stratification in Hopewell Burials

Although the origins of the archaeologically defined Hopewell peoples are still under discussion, their cultural manifestations are generally considered to be the climax of the Middle Woodland period (2,000–1,500 years before the present) of the Eastern Woodlands region of North America. Evidence indicates that Hopewell populations either originated in western New York and moved south into Ohio, where they built upon the local Adena mortuary tradition, or they originated in western Illinois and spread by diffusion to southern Ohio and up the Illinois River and into southwestern Michigan. A number of other Middle Woodland period cultures are also classified as Hopewellian, including the Swift Creek culture, the Santa Rosa–Swift Creek culture, the Marksville culture, and the Copena culture. Across all of these Hopewellian populations several cultural manifestations are shared, linking these disparate archaeological cultures together. One of these is the evidence for social stratification in the larger Hopewellian society, stemming from the archaeological excavation and analysis of burials and burial mounds.

Archaeological evidence from Hopewell burials indicates that the nature and quantity of grave goods associated with the burials reflected an individual's status or role in the larger regional cultural system. Many of the raw materials—meteoric iron, obsidian, bighorn sheep, silver, copper, grizzly bear canines, galena, conch shell, rock crystal, freshwater pearls, sharks' teeth, mica, chlorite, and certain flint types—came from distant geographic places and are believed to have held significant social and cultural values among the Hopewell peoples. Both the quantity and the quality of the materials found in different burials from different archaeological sites across the region are considered evidence for the social stratification of Hopewell society. This conclusion is further exemplified by the fact that most of the nonlocal materials imported into Hopewell culture were often subsequently used to carefully craft even more exotic classes of highly conventionalized artifacts, such as ear ornaments, smoking pipes, panpipes, mirrors, containers, necklaces, costumes, and celts.



Crafted out of mica, this bird claw-shaped sculpture comes from a prehistoric earthwork of the Hopewell culture from the Ohio River valley. (Barbara Heller)

Further evidence for social stratification within Hopewell society comes from the range of earthen materials used in burial mound construction. For example, sod blocks and other kinds of earth used in Hopewell burial mounds apparently had important symbolic dimensions in addition to their structural properties. However, not all Hopewell burial construction incorporated sod blocks, indicating that some burials were given a higher value in the social stratification of the society, as they were constructed of a more specialized material.

—Peter Jones

Bibliography

- Dancey, William. "The Enigmatic Hopewell of the Eastern Woodlands." In *North American Archaeology*, edited by Timothy R. Pauketat and Diana Dipaolo Loen. Oxford, UK: Blackwell, 2005.
- DeBoer, Warren R. "Little Bighorn on the Scioto: The Rocky Mountain Connection to Ohio Hopewell." *American Antiquity* 69(1) (2004): 85–107.
- Seeman, M. F. *The Hopewell Interaction Sphere: The Evidence for Interregional Trade and Structural Complexity*. Prehistory Research Series, vol. 5, no. 2. Indianapolis: Indiana Historical Society, 1979.
- Van Nest, Julieann, et al. "Sod Blocks in Illinois Hopewell Mounds." *American Antiquity* 66(4) (2001): 633–650.

■ Introduction: Ethnic Identities

The English word “ethnic” is a derivation of the ancient Greek term *ethnos*, which referred to a group of people who lived together and shared some sense of common affiliation. This was a new conceptualization of a long-held belief that certain qualities connect people into a larger community or culture. Language, religion, beliefs, and other such traits mark individuals as members of one ethnic group and mark others as not being part of that group.

As in previous periods, new ethnic groups seem to emerge from 1000 BCE to 300 CE. This is particularly noticeable in Mesoamerica, where the emergence of a number of new but related cultures, such as the Maya, appear in the region. The Maya seem to have been bound by common cultural conceptions, languages, and religious traditions rather than by political authority.

Noteworthy in the period from 1000 BCE to 300 CE is the development of ethnic identities in diaspora settings, that is, in locations other than an ethnic group’s perceived homeland. It is in this kind of setting that Judaism developed as an ethnic group, as opposed to merely a national or religious group.

—Kevin M. McGeough

Jews in the Diaspora

The term “diaspora” is derived from the Greek and simply means “scattered seed.” Yet it has taken on a specific connotation for Jews who were forced to leave the land of Israel, their homeland, and to settle in new Jewish communities outside of Israel. In 722 BCE massive deportations of northern Israelite (pre-Jewish) populations were carried out by Assyria, the strongest nation to the north of Israel. During 605–586 BCE a second stroke of warfare and deportations took place under Nebuchadnezzar II, king of Babylon. The temple of Jerusalem (the capital of Israel) was thoroughly devastated, and thousands were carried away to Babylon in exile (2 Kings 25; 2 Chronicles 36). Others fled to Egypt. When Persia conquered Babylon in 539 BCE, Jewish com-

munities may have already begun to form in Babylon and Egypt. The Jews never lost hope, however, of returning to the Holy Land. Cyrus, the Persian king, was highly tolerant toward foreign religions. He allowed the Jews to return to their homeland and rebuild their temple.

Babylon still remained a holy city during Persian rule (539–331 BCE). It was made up of mixed ethnic populations (including Jews, Egyptians, Medes, and Arabians). At another city nearby Babylon, called Nippur (on the Chebar River; Ezekiel 1:1), records belonging to a certain Murashu were found, written between 455 and 403 BCE. They deal with moneylending, mortgages, leased land, taxes, and rent. Also, in these records are found Jewish names. Here, Jews were involved in the military, were shepherds, and were lessors of land. Some Jews became agents of the Persian government, with important responsibilities of state. We also find a small number of Jewish slaves, since most at this time belonged to the lower classes. By the time of Ezra and Nehemiah (445 BCE), Jewish leaders sought to bring the diaspora back to Palestine, but many Jews in Babylon were content and had no desire to leave.

In Egypt at the city of Elephantine, Jewish military colonists built a temple for YHWH, their deity (compare to Yahweh of the Hebrew Bible). This was problematic for the Jewish religion, since Yahweh was to be worshipped only in Jerusalem. As Jews became more comfortable with their temple in Egypt, they slowly severed their ties to the homeland. Meanwhile, a specific genre of literature was being produced in Jewish culture, namely the so-called polemic against idolatry. Jews were admonished not to worship gods of foreign nations, which were merely gold, silver, stone, and wood, but rather to worship the one true invisible God, Yahweh. We know that some Jews took these admonitions seriously, while others were indoctrinated with foreign religion.

In the Hellenistic and Roman eras, the diaspora was not only affected by the homeland, but the opposite was also true as new developments from within it began to affect Palestine. The di-

aspora introduced new communal places of worship called synagogues and *proseuchae* ("houses of prayer") into Israel. Greece allowed the Jews to form their own communities called *politeumata*, which were autonomous and could practice religion freely. This freedom prevented Jews from taking part in war and paying certain taxes, though they were still not granted state citizenship. Such exemptions led to envy and strife between Greek and Jewish populations. Constant squabbling between the two was exacerbated to the point of destroying Jewish synagogues and even expelling Jews from certain cities. Jews formed major communities in Alexandria, Antioch, and Rome. In both the diaspora and Israel, Hellenism was having a heavy influence. There were many opportunities for the Jew who spoke the Greek language competently. Some who aspired to rise up in Hellenistic culture were obliged to compromise their beliefs to remain at their status. This sort of modernization led to factions within the diaspora and within Israel proper. Nevertheless, the diaspora demonstrated a resiliency to remain alive amid hardship and confrontation.

—Benjamin D. Thomas

Bibliography

Davies, W. D., and L. Finkelstein, eds. *The Cambridge History of Judaism*. 3 vols. Cambridge: Cambridge University Press, 1984–1999.

Foreigners in the Greco-Roman World

In both the ancient Greek and Roman worlds, foreigners were treated with varying degrees of tolerance and prejudice. Given the geographical scope of Greek and Roman conquests, colonization, and trade networks throughout the ancient Mediterranean world, contact with foreigners was quite common. Foreign residents lived in Greek and Roman cities or provinces in the form of slaves, traders, or permanent residents. In the imperial expansions made by both ancient civilizations, foreigners were co-opted to some extent through cultural assimilation, the granting of citizenship, and some aspects of political agency. The cultural diffusion that existed in antiquity



Relief depicting a "Barbarian" fighting a Roman legionary, second century CE. (The Gallery Collection/Corbis)

also meant that foreigners made their mark on both Greek and Roman culture and civilization.

In the Classical Greek period of antiquity, many Greeks acknowledged the existence of foreigners as different from that of other Greeks. Even though various Greek city-states were locked in a state of constant warfare, there was recognition of the common attributes of Greek culture among them. Foreigners existed outside of this arrangement and were regarded as barbarians. Greeks had also established contact with foreigners in excursions abroad due to trade, warfare, and conquest. The four kinds of foreigners prevalent in the Greek world were *metics* (permanent residents), foreigners not yet recognized as metics, temporary visitors, and slaves. Athenian metics were to have an Athenian patron and had to be registered in the local community in addition to paying a tax. They were not allowed to marry Athenians or own property. Temporary visitors included traders and merchants from abroad doing business in Greek city-states. Slaves were typically foreign people in bondage attained through war with neighboring non-Greek and neighboring Greek countries.

Perceptions of Greek cultural supremacy ebbed over time as greater contacts were created

► ROME AND THE *FOEDERATI*

During the second and third centuries CE, the Roman authorities found it increasingly difficult to protect the border from northern incursions by Germanic tribes. The Roman legions, known in their heyday as the greatest military organization of antiquity, proved increasingly incapable of defending the frontiers of the far-flung boundaries to the north. The use of provincial auxiliaries to defend the borders had also proven to be unreliable. An effective solution to this problem was to co-opt some segments of the Germanic tribes, known as *foederati*, by allowing them to settle within Roman provinces on the condition that they provide defense for the empire.

From the third to fourth centuries, the migration of Germanic tribes into the Roman empire was particularly acute given that these border tribes did not particularly remain settled in outlying Roman provinces. Some segments of the populations of the Germanic tribes did become somewhat Romanized during the course of this time. The inability of Roman society to absorb these groups through policies of assimilation and citizenship eroded any loyalty that these might have had to Rome. As the Roman state crumbled, it was readily overwhelmed by the Germanic tribes, who in combination with the cultural legacy of Rome created medieval Christian Europe.

—Abraham O. Mendoza

with countries abroad during the Hellenistic period. The expansion of the Greek world under Alexander the Great (356–323 BCE) brought Greek culture to areas previously not encountered by Greeks, such as Bactria and India. Alexander sought to integrate his dominions through cultural and political policies of marriage and cooperation under Greek and Macedonian tutelage. The successor kingdoms to Alexander's empire found themselves populated with substantial populations of non-Greeks, resulting in a significant amount of cultural assimilation within the Greek world. Resistance to Hellenistic cultural hegemony, particularly in the case of the revolt of the Maccabbes in Judea against the Seleucid kingdom (168 to 143 BCE), illustrated that not all foreigners approved of Greek cultural and political supremacy. Nonetheless, in

the Hellenistic Seleucid and Ptolemaic kingdoms there was a blending of the various cultures of the eastern Mediterranean with Greek culture to a limited extent, creating a unique and diverse Hellenistic civilization with heavily Hellenic overtones.

The Roman interaction with foreigners differed in many ways with that of the Greek city-states and Hellenic kingdoms. The Roman republic managed to absorb its neighboring Latin and Italic tribes gradually through co-opting them as citizens through alliances and warfare. Much like in Greece, Romans also practiced slavery, which brought large amounts of foreigners into Rome. In fact, many Greeks were brought in as Roman slaves due to various wars between Roman republic and the Hellenistic kingdoms. While Romans showed an admiration for Greek culture in the form of art, literature, and architecture, they also had a level of contempt for the Hellenistic Greeks. Many Greek slaves managed to achieve various positions of leadership when they became freedmen in Roman society. The co-optation of Greek society into Roman rule led to an increased level of Greek influence in Roman culture. Much of the art, architecture, medicine, and education of the Roman world were introduced by Greeks in the Late Republic and Empire periods. Many Greeks found themselves in positions of power under the rule of various emperors, such as Claudius.

The massive expansion of the Roman empire brought Romans directly into contact with various peoples throughout Europe and the Mediterranean world. Various policies of co-optation through the granting of Roman citizenship, autonomy, and political agency allowed foreigners some level of participation in Roman politics and society. Through expanded trade networks and military conquest, the Romans ruled a vast empire composed of multiple nationalities, and such policies allowed various individuals to thrive under Roman rule. Many future senators, military leaders, and emperors would come from these provinces as Romans, not as foreigners. Emperors such as Trajan (Spanish), Antoninus Pius (Spanish), Diocletian (Dalmatian), and Constantine (Illyrian) among others descended from peoples who would have been deemed foreigners in the early republic. In the course of several centu-

ries, multiple Roman provinces adopted Roman culture and became thoroughly Roman in outlook, but there were exceptions to the rule, such as Judea. Some Roman provinces retained their own cultural autonomy within the Roman empire while their elites participated in Roman culture as a sign of their growing civility.

Changing attitudes in regard to foreigners among Roman elites in late antiquity, particularly in the fourth and fifth centuries CE, illustrated chauvinistic perceptions of the Germanic tribes in the north. While many of these tribes were allowed to live within the boundaries of the Roman empire so long as they offered protection of the borders from other tribes, they were regarded as barbarians. While this perception existed since the republic, there had been little effort to co-opt these groups in the same way as peoples such as the Gauls and the Greeks. Some Germanic individuals, such as the Roman general Stilicho (Vandal), were part of the late Roman leadership, but mostly German tribes were seen as foreign and undesirable elements. The failure to assimilate these groups into greater Roman society has been viewed as one of the many reasons that brought the Roman empire to a gradual end in the late fifth century CE.

—Abraham O. Mendoza

Bibliography

- Grant, Michael. *A Social History of Greece and Rome*. New York: Scribner, 1992.
- Nagle, D. Brendan. *The Ancient World: A Social and Cultural History*. 3rd ed. Upper Saddle River, NJ: Prentice Hall, 1996.

Non-Chinese in China

Although Chinese historians often portray China as having been culturally homogenous since ancient times, the situation has actually been much more complex. Determining who was and was not Chinese can be very subjective, but one powerful indicator of ancient difference is language. Groups that did not speak Chinese likely differed (culturally) in other ways from the ancient Chinese population. The Yue and Xiongnu were two non-Chinese-speaking groups that emerged as powers within what is now known as China in the first millennium BCE.

IMAGE FROM WU HUNG



(Feng, Yunpeng and Feng Yunyuan 1821: "Shi Suo," 3.62)

The mural above is from a shrine dating to the mid-second century CE in Northeast China. It depicts a Xiongnu prince, Jin Midi, who was a hostage at the court of Wudi (140–87 BCE). According to Eastern Han authors, Wu had a portrait of Jin Midi's deceased mother made and displayed it in the palace. Whenever Jin Midi would go to the palace, he would pay his respects and weep until tears had drenched his garments. The fact that a Xiongnu prince was held up as a filial exemplar by Han elites reveals that at least some of them believed that their enemies shared the same basic moral impulses.

—Miranda Brown

The origins, identity, and geographic parameters of the Yue are a source of scholarly controversy. The Yue presumably lived south of the Yangzi River, possibly living as far as the southern and southeastern coasts of present-day China. The Yue probably engaged in wet rice agriculture and spoke a language that belonged to the Austroasiatic language family, one distinct from the language spoken by the inhabitants of the Central Plains. The first references to the Yue occur in the *Spring and Autumn* annals (*Chunqiu*). It appears that by the fifth century BCE the Yue had emerged as a regional power after King Goujian (r. 496–465 BCE) conquered another

southern state, Wu. The power of the Yue, however, came to an end in 333 BCE when they were conquered by the southern state of Chu.

The Xiongnu were a nomadic group living in the northern and northwestern regions of the Han empire, possibly speaking a Turkic or Altaic language. Little is known of Xiongnu culture or language, as no contemporary records of the Xiongnu by Xiongnu authors survive. Some archaeological evidence now supplements information presented in Han dynasty (206 BCE–220 CE) *Historical Records (Shiji)*, circa 90 BCE. The Xiongnu figure in early records and appear to have been a menace to states in the Central Plains before the unification of China in 221 BCE. Late in the third century BCE the Xiongnu formed a confederacy under the leadership of Maodun. From this time on, the Xiongnu presented a formidable threat to the Han empire. Although they signed a treaty with the first Han emperor in 209 BCE, they frequently raided border areas. As a result, the Han court was forced to make conciliatory gestures, such as providing luxury goods and Han princesses as consorts to the Xiongnu. This policy of appeasement was known as the *heqin* policy. The costs of appeasement, however, were high. Historians estimate that the appeasement cost no less than 8 percent of the gross national product of the Han empire. Seeing that appeasement was not only costly but also ineffective, the Han emperor Wudi (r. 145–87 BCE) decided to pursue a more aggressive policy toward the Xiongnu. Sending large armies into Central Asia, Wudi established military colonies that protected the Han population against raids and pressured the Xiongnu and other local tribes into accepting Han suzerainty. In order to pay for his armies, Wudi instituted state monopolies on salt, iron, liquor, and coinage. But after his death in 87 BCE, the court held a series of debates known as the Debate on Salt and Iron (Yantielun) in which Wudi's policies were discussed. Not long afterward, his policies were discontinued. Fortunately for the Han, the Xiongnu tribe split into two federations and engaged in internecine warfare, with one side allied with the Han. From this time on, the Xiongnu ceased to pose a serious military threat.

—Miranda Brown

Bibliography

- Brindley, Erica. "Barbarians or Not? Ethnicity and Changing Conceptions of the Ancient Yue (Viet) Peoples (~400–50 B.C.)." *Asia Major* 16(1) (2003): 1–32.
- Di Cosmo, Nicola. *Ancient China and Its Enemies*. Cambridge: Cambridge University Press, 2001.
- Wu Hung. *The Wu Liang Shrine: The Ideology of Early Chinese Pictorial Art*. Stanford, CA: Stanford University Press, 1989.
- Yü, Ying-shih. *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations*. Berkeley: University of California Press, 1967.

The Tocharians

The Tarim basin is a vast expanse, over 150,000 square miles (388,000 square kilometers), located in what is now China's far west. In antiquity, this was one of the major locations that connected China with South Asia and the Middle East, and as archaeologists continue to work in this region, evidence for the intermingling of groups here points to a complicated history. From at least 1000 BCE (and perhaps as early as 2000 BCE) and lasting until about the second or third century CE, a group of people known to scholars as the Tocharians inhabited this region.

The name "Tocharian" is based on the language that these people spoke. Tocharian was an Indo-European language and was the easternmost spoken Indo-European language. There are actually two branches of Tocharian: eastern and western. Archaeological discoveries in the twentieth century brought to light textual evidence of this language—written in a unique writing system—dating to the eighth century CE. Linguistic analysis has shown that this language was spoken in the Tarim basin much earlier and thus has been associated with the Tocharians mentioned in Greek sources. This clearly Indo-European language suggests that cultural contacts between Eurasia and the Far East were substantial in the period 1000 BCE to 300 BCE.

Further complicating the issue are the hundreds of mummies that have been excavated in the Tarim basin, dating to the period 2000 BCE

➤ GENETICS AND NATIONALISM

The genetic study of the mummies of the Tarim basin has been controversial, since it involves a number of nationalist concerns. The Chinese government has been reluctant to acknowledge the possibility that non-Chinese populations once inhabited this region. The Uighur people, who currently live in the Tarim basin, some of whom have developed anti-Chinese impulses, have also contested the results but on the grounds that the Tarim Mummies should be related to

them. However, for the most part, the Uighurs have embraced the genetic evidence as evidence that their people have ruled the region, independently of the Chinese, for centuries. In fact, the evidence does not seem to suggest that these mummies were related to the Uighurs either. What is not controversial is that the issue of who the Tocharians were is complex and far from settled.

—Kevin M. McGeough

to 300 CE. These mummies were well preserved in the arid Tarim basin, and physical anthropologists have been able to do extensive genetic analysis of the human remains. Generally, these mummies look more like what one would expect Europeans to look like in this time period; many of them had blond or reddish hair. Other analyses have shown that many of these mummies have features that could be associated with South Asia as well. DNA analysis has further shown that these people were, in fact, genetically linked to Europeans, although many scholars contest these findings. Since this genetic link is not present in the modern-day inhabitants of the region, if this is accurate it is likely that its extinction is related to the extinction of the Tocharian language as well.

The Greek historian Strabo (63/64 BCE–24 CE) writes about the Tocharians, associating them with the nomadic Scythians, and discusses how they participated in the destruction of the Bactrian kingdom. Some have suggested that Chinese sources refer to them as Daxia, although this may actually refer to Bactria in those texts. Whatever the case may be, their location on the Silk Roads brought them into contact with people from throughout Asia, Europe, and Africa.

—Kevin M. McGeough

Bibliography

Lalueza-Fox, C., et al. "Unravelling Migrations in the Steppe: Mitochondrial DNA Sequences from Ancient Central Asians." *Proceedings: Biological Sciences* 271(1542) (May 7, 2004): 941–947.

Liu, X. "Migration and Settlement of the Yuezhi-Kushan: Interaction and Interdependence of Nomadic and Sedentary Societies." *Journal of World History* 12(2) 2001: 261–292.

Mallory, J. P., and Victor H. Mair. *The Tarim Mummies: Ancient China and the Mystery of the Earliest Peoples from the West*. London: Thames and Hudson, 2000.

Xu, W. "The Discovery of the Xinjiang Mummies and Studies of the Origin of the Tocharians." *Journal of Indo-European Studies* 23(3 & 4) (Fall/Winter 1995): 357–369.

Han People of China

Since the last days of the Roman republic, those in the West have been calling the land of silk in East Asia "China" after "Qin" (Ch'in in the old way of transliterating Chinese), the name of the dynasty of the first Chinese empire; hence, the people there are "Chinese." The majority of the people living in China have been calling themselves "the people of the Han," after the long-lasting Han dynasty (206 BCE–220 CE), since at least 100 BCE. The Chinese call their language group Hanyu and call characters used to write Hanzi. Those who spoke the different Chinese languages from this language group, used the Chinese characters, learned Confucianism (in family affairs and governing outlook), and farmed millet, sorghum, wheat, and rice were, by self-made definition, Han Chinese. Yet Chinese historians have constantly made it clear that even nomadic peoples in the north who

► THE CONCEPTUALIZATION OF THE HAN IN MODERN CHINA

The Han Chinese make up over 90 percent of the population of today's China but are a majority in less than half the country. But when the Chinese Communist Party government wants to punish an ethnic group—like the Tibetans from the 1960s through today—or when there is an economic boom that brings jobs to an area—like in Xinjiang Province since the year 2000, where the mostly-Muslim Uighurs live—tensions can grow between the regional majority ethnicity and the Han into animosity. In July 2009 a series of confrontations between Uighurs and Han led to riots in which 150 people died and over 800 suffered injuries. Since then, Uighurs have been arrested for using syringes to stab or threaten Han Chinese; over 500 assaults with needles have been reported to authorities within a two-month period.

—William Ashbaugh

copied Han Chinese languages, writing, and ways of living should not be considered Han Chinese. This emphasized difference includes the mixed Han/nomadic founder of the Sui dynasty, the Mongols and their Yuan dynasty, and the Manchu and their Qing dynasty. Han Chinese today make up over 90 percent of the population of the People's Republic of China's (PRC) plus a significant majority of overseas Chinese.

The arguments in anthropology revolve around whether Han Chinese are an ethnicity or simply a self-identifying group. There seems to be some correlation with DNA for those calling themselves Han Chinese yet not for all, and this genetic marker is also found among Japanese and other East Asians. In terms of symbolism, some scholars today look at the flag of the PRC not as the color of communism used to govern Mao Zedong's state—red for socialism, the big star for the Chinese Communist Party, and the four small stars for the classes helping the revolution—but instead as a symbol of the Han dynasty (red was its traditional color), with the largest star the Han majority and the four small stars the larger minority groups (the Manchu, the Mongols, the Uighurs, and the Tibetans). Of course, this leaves out the Zhuang of southern China, considered to-

day by China's government the largest of all minority groups with 16 million people, and the Hakka, who before the twentieth century were considered non-Han. Today, the PRC considers China's population a mix of fully 56 ethnic groups, again neglecting the Hakka. Yet among the myriad ethnic groups are many who look, act, and behave more like their neighboring Han Chinese than do two groups of Han Chinese living 1,000 miles (1,610 kilometers) apart; not all people calling themselves Han Chinese are alike in dress, diet, or discourse.

—William Ashbaugh

Bibliography

- Brown, Clayton D. "Making the Majority: Defining Han Identity in Chinese Ethnology and Archeology." PhD dissertation, University of Pittsburgh, 2008.
- Safron, William. *Nationalism and Ethnoregional Identities in China*. Portland, OR: Frank Cass, 1998.
- Shih, Chih-yu. *Negotiating Ethnicity in China's Citizenship as a Response to the State*. New York: Routledge, 2002.

The End of the Jomon in Japan

The Final Jomon period began circa 1000 BCE and gradually ended between 800 and 300 BCE. The downward trend in settlement size continues going from the Late Jomon period through the Final Jomon period. Further, while settlement size decreased, the number of sites also decreased. For example, in Aomori prefecture there are 1,518 sites that date to the Late Jomon period, 56 of which are settlement sites. Those 56 settlement sites had a total of 420 pit houses. For the Final Jomon period 724 sites have been discovered, 16 of which appear to have been settlement sites. A total of 33 pit houses have been discovered at these 16 sites. This trend is mirrored elsewhere throughout the Japanese Archipelago.

This paucity of settlements has led many to believe that the Final Jomon people were mobile foragers and probably depended on hunting for subsistence. The abundance of lacquerware from Final Jomon sites, though, indicates that at least part of the population was sedentary for

several months out of the year, so they could produce lacquerware.

One example of a Final Jomon site in north-eastern Japan is the Kamegaoka site in Aomori prefecture. Although the site has been looted over the centuries, excavations at the site have yielded a large number of spouted vessels in the Obara/Kamegaoka style, lacquered wood and pottery, and numerous clay figurines. Due to looting, it was uncertain how many pit houses existed at the site, but the presence of fishhooks, fish harpoons, and chestnut and walnut remains suggest that the site was also used as a residence. Another Final Jomon settlement site was found at Aota in Niigata prefecture. This was also a waterlogged site that yielded large amounts of basketry, lacquered objects, and organic remains.

Stone circles and other stone monuments continue to be built in the Final Jomon period. One example is the stone circles at Oyu, Aomori prefecture. The Manza site at Oyu consists of two concentric stone circles with a diameter of approximately 164 feet (50 meters). The outer ring also contains a sundial type of stone circle. At Tenjinbara in Gunma prefecture there is a stone circle with three upright stones nearly 3.2 feet (1 meter) in height. The upright stones are oriented toward Mount Myogi and sunset at the spring equinox.

Another type of ritual site found dating to the Final Jomon period is wood circles. Examples have been excavated at Mawaki in Ishikawa prefecture and Teraji in Niigata prefecture. At these sites, large wooden posts were used to enclose a circular space. It is uncertain if the wooden circles served the same purpose as stone circles. Their purpose may be quite different, since there is no evidence of burials associated with these structures.

A variety of studies on the funerary practice and rituals during the Final Jomon period have been done. Grave goods appear in about 50 percent of the Final Jomon burials. For at least the Kamegaoka culture in northeastern Japan, the grave goods are seen as marking elite status. The presence of grave goods in approximately 20 percent of the graves of children may indicate hereditary ranking.

At the Final Jomon cemetery of Yudeno in Akita prefecture, the grave pits are aligned on either a north-south axis or an east-west axis.

THE JOMON IN HOKKAIDO

While the Jomon came to an end in most parts of the Japanese Archipelago, this was not the case for Hokkaido. In Hokkaido, the time period from circa 300 BCE until circa 500 CE is known as the Epi-Jomon period. The inhabitants of Hokkaido at this time still made cord-marked pottery, used stone tools, and had a subsistence economy based on hunting and gathering.

By 500 CE the Okhotsk culture is present along the coast of northern Hokkaido. This culture is characterized by a heavy dependence on marine resources; the use of deep pottery decorated with appliqué, incision, and stamping; and residence in pentagonal- and hexagonal-shaped houses. The origins of the Okhotsk culture are debated by archaeologists. The Japanese archaeologists U. Maeda and K. Yamaura see the cultural complex originating in either Sakhalin Island or northeastern Hokkaido. Others have argued that the Okhotsk culture developed in the Amur River region and migrated southward to Sakhalin and northern Hokkaido. Skeletal analyses do indicate that at least part of the population in the Okhotsk settlements came from outside of Hokkaido.

Elsewhere in Hokkaido is the Satsumon culture. This culture is characterized by the use of round pit houses, pottery with brushed decoration, and small mounded tombs. In terms of subsistence, the Satsumon cultivated wheat, sorghum, millet, and beans; fished for salmon; and hunted deer and other wild animals.

—Mark E. Hall

Given that the summer and winter solstice is oriented along a north-south line and the spring and autumn equinoxes are oriented along an east-west axis, the grave orientation may indicate the season that the grave was dug. A similar situation is at the Final Jomon cemetery of Oshide in Gunma prefecture.

In terms of studies of the skeletal remains, tooth crown measurements and nonmetric cranial traits have been used to address postmarital residence patterns during the Final Jomon. Studies of the skeletal remains from Ikawazu shell midden in Aichi prefecture indicate that there was a bilocal postmarital residence pattern. This means that community members could marry

one another and remain in the community. Similar results were found for the Final Jomon cemetery at Tsukumo in Okayama prefecture.

Archaeologists see the elaborate crafts, ritual sites, and burial patterns as evidence for increasing social complexity during the Final Jomon period. The scope of the ritual monuments would have required the labor of numerous people, and someone would have had to organize the construction of the monuments. The grave goods in the burials are suggestive of a weakly ranked society.

Two distinctive style zones are evident in the pottery from this period. In northeastern and eastern Japan, burnished pottery with limited zones of cord marking demarcated by incised lines is prevalent. The characteristic styles are Fusenmon, Maeura, and Obora/Kamegaoka. In the southwest, a variety of new vessel forms having continental parallels appear. The characteristic Jomon cord marking is replaced by black burnishing.

As noted above, the Final Jomon inhabitants are believed to have been mobile hunters and gatherers. The elaborate harpoons and fishhooks plus the shell middens in the eastern Kanto region are all evidence for the exploitation of marine resources. In central and southwestern Japan, analysis of floral remains from several Final Jomon sites has yielded the following cultigens: beans, bottle gourds (*Lagenaria*), barley (*Hordeum vulgare*), and rice. It needs to be stressed that these cultigens comprised only a small portion of the Final Jomon people's diet. Two sites that show evidence of rice cultivation while Final Jomon pottery was still in use are Itatsuke in Fukuoka and Nabatake in Saga prefecture. A short transitional phase, dubbed the "Initial Yayoi," marks the gradual adoption of wet rice agriculture and the gradual development of Yayoi-style pottery.

Outside of Hokkaido and Okinawa, the Final Jomon period gradually came to an end. Wet rice agriculture, metallurgy, and Yayoi-style material culture were gradually adopted between 800 and 300 BCE.

—Mark E. Hall

Bibliography

Aikens, C. Melvin, and Takayasu Higuchi. *Prehistory of Japan*. San Diego: Academic Press, 1982.

Habu, Junko. *Ancient Jomon of Japan*. Cambridge: Cambridge University Press, 2004.

Hall, M., U. Maeda, and M. J. Hudson. "Pottery Production on Rishiri Island, Japan: Perspectives from X-ray Fluorescence Studies." *Archaeometry* 44 (2002): 213–228.

Hudson, Mark. *Ruins of Identity: Ethnogenesis in the Japanese Islands*. Honolulu: University of Hawai'i Press, 1999.

Imamura, Keiji. *Prehistoric Japan: New Perspectives on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

Kobayashi, Tatsuo. *Jomon Reflections*. Oxford, UK: Oxbow Books, 2004.

Kodama, Daisei. "Komakino Stone Circle and Its Significance for the Study of Jomon Social Structure." In *Hunter-Gatherers of the North Pacific Rim*, edited by Junko Habu, James Savelle, Shuzo Koyama, and Hitomi Hongo. Osaka: National Museum of Ethnology, 2003.

Matsumara, Hirofumi, et al. "Embodying Okhotsk Ethnicity: Human Skeletal Remains from the Aonae Dune Site, Okushiri Island, Hokkaido." *Asian Perspectives* 45(1) (2006): 1–23.

Pearson, Richard. "Debating Jomon Social Complexity." *Asian Perspectives* 46(2) (2006): 361–388.

Tanaka, Yoshiyuki. "Reconstructing Final Jomon Post-Marital Residential Patterns in Western Japan." *Indo-Pacific Prehistory Association Bulletin* 21 (2001): 43–48.

The Celts

Historical accounts on the origins of ancient civilizations typically focus on the Mediterranean world, especially the contributions of the ancient Greeks and Romans, and tend to overlook the myriad of Celtic peoples (collectively called Keltoi) to the north. This oversight of the Celts may be attributed to their less-developed political and military structures, leading to frequent defeats in battle and eventual relegation to the fringe areas of Britain and northeastern France. Furthermore, lacking any recorded tradition, their story was most often told by their more literate conquerors. Yet the Celts, whose settlements (signified by the prefix "Gal") stretched from the present-day countries of Spain (Galicia), Turkey (Galatia), Poland (Galacia), and Ireland (Galway), can be credited for having the first truly European culture.

This preclassical civilization originated with the dawn of the Iron Age, around the early eighth century BCE, and centered around the nexus of Europe's four great river systems: the Rhine, the Rhone, the Danube (Inn), and the Po—in the Alps. Hence, the early Celtic cultural epoch is called Hallstatt (750–500 BCE) from the site near Salzburg, Austria, where archaeologists uncovered the most abundant remains of this period. These peoples, transformed by developments of the Neolithic revolution, made horse-shoes, iron-rimmed wheels for chariots, and iron plows. Later Celts are identified as La Tène (500–52 BCE) from discoveries of their remains at Lake Neuchatel near Bern, Switzerland.

To a great extent this transformation resulted from the incursion of the Scythians, a people from southern Russia, in the sixth century. Thereafter, the Celts established trade networks, exchanging such commodities as salt, copper, tin, cattle, iron, pork, and slaves. They also adopted the Scythian custom of wearing trousers (*bracae*) and relying more on the horse as a vital component of their economic and military system. Such modern cities as London, Paris, Geneva, Marseilles, Vienna, Milan, Bonn, Budapest, Belgrade, and Ankara originated as Celtic settlements from this period. It was a tribe called the Parisii who first settled Paris, the Remi who founded Rheims, and the Belgae who resided in what is now Belgium and the Helvetians in Switzerland. But the most distinctive regions were Cisalpine Gaul (now northwestern Italy) and Transalpine Gaul (present-day France).

It was likely the horse that had the most profound impact on Celtic culture. The horse not only provided greater mobility in warfare, in contrast to the deliberate movements of the Roman infantry, but also imparted to the Celts a greater love of freedom and individuality. The Celts became impetuous, spirited, intuitive, mystical, melancholy, and more prone to follow individual proclivities than those of society. The typical warrior is depicted with long hair and a drooping moustache, fierce in battle and emotional and having an obsession for war and an ungovernable temper.

In contrast to the balanced and orderly configurations of the Greeks and Romans, Celtic art was flamboyant and meant to be enjoyed rather



The Gundestrup Cauldron is a richly decorated silver vessel found in Denmark, thought to date from the second or first century BCE. The cauldron may have been designed by Celts of the La Tène culture, though some scholars believe it may be the work of Thracians from southeastern Europe. (Jupiterimages)

than contemplated. The Celts loved jewelry, bright colors, plaids, tartans, and intricate designs, curves rather than straight lines. They liked to decorate their chalices, swords, broaches, bracelets, and especially torques, a distinctive Celtic appurtenance. Their art was abstract, with circles and faces predominant. Celtic pottery and weapons are among the most decorative in the ancient world. Even their bodies were tattooed or dyed in bright colors, and warriors, not unlike the ancient Spartans, would enter battle naked, believing that this would provide protection. The courts of Celtic chiefs were graced with jugglers, buffoons, and bards, with the latter regaling listeners with stories about their leaders' valor in war and mercy in peace and tribal sagas that blurred the bounds between reality and myth.

Celtic religion was polytheistic, but the principal deity was the horse goddess, Epona, from which the Latin equus and English equestrian are related. The druids served as custodians of the faith, dictating the nature of sacrifices, regulating individual conduct, and divining the future. Women played a more prominent role than in most early societies. They were not only priests but could also own and inherit property and become warriors and communal leaders.

► HOW DO THE ANCIENT CELTS RELATE TO MODERN CELTS?

In the aftermath of Roman conquests, Celtic culture was largely obliterated. Despite further devastation by the Germanic Franks and Anglo-Saxons in France and England, respectively, Celts still made up the great mass of the population. Only in the peninsulas and islands of northwestern Europe—Wales, Scotland, Ireland, Brittany, Cornwall, and the Isle of Man—did Celtic nationality and culture survive and even flourish. Ireland and Scotland became early centers of Christian fervor and proselytism. But the growth of stronger political and military institutions in France and England made steady inroads on the independence and vitality of the Celts. While the Cornish and Manx were easily absorbed, other Celtic nationalities engaged in centuries of fruitless insubordination to their superior and better-organized enemies.

Eventually they were conquered and subjected to successive acts of union: Wales (1536 and 1543), Scotland (1707), Brittany (1789), and Ireland (1801). In the face of determined efforts to suppress resurgent Celtic nationalisms in the nineteenth century, these countries both compromised and retained their cultural identities. The latter sometimes took a violent turn as in Ireland, which won its independence from England after an early-twentieth-century rebellion. Subsequently, a Celtic diaspora resulted in settlements around the world, but variations of the native tongue are spoken by only slightly more than two million people. While Brittany remains an integral part of France, the creation of a Scottish Parliament and a Welsh Assembly in the 1990s brought political autonomy from England.

—John D. Fair

The most enigmatic Celtic attribute was the significance placed on heads, which were collected as trophies in battles and used to decorate horses and houses. The head no doubt represented the essence of one's being.

The Celtic political and social system was based on the tribe, led by a chief or king, and loyalties tended to be personal rather than institutional. Success or failure often hung in the balance. Much depended on the king's leadership qualities, and youthful energy was valued over the wisdom of age. Disgrace in battle or some other adversity might lead to a ritualistic killing whereby the king would be slain by a priest and the fortunes of the tribe divined from his convulsions or emissions of blood. A new leader might be chosen by a duel or the chase of a wild boar, the winner being rewarded with the animal's thigh and elevation to the kingship.

Generally, it was the political and military diffusion and the nomadic nature of the Celts that was most critical to their fate. Despite their fierce attacks and obsession with war, it was the disciplined Roman legions, not the Celtic horsemen, who ultimately prevailed. The former responded to sporadic raids (Rome was sacked in 378 BCE and Delphi in 279 BCE) by decisively

defeating the Gauls in 225 BCE at Telamon. The Celts' greatest misfortune, however, stemmed from their encounter in the first century with Julius Caesar. Alleging provocation from the Helvetians in the nearby Rhone Valley, he launched an eight-year conquest of Gaul that featured dozens of battles, the destruction of many settlements, and the massacre of countless Celts. The conquest eventually led to Caesar's elevation to supreme power in Rome.

A final defeat occurred in 52 BCE when Vercingetorix, chief of the Averni tribe, formed a large confederation of Gauls. But he utilized the un-Celtic strategy of defense, allowing his army to be trapped in a fortress at Alesia (near Dijon) and besieged by Caesar's smaller army within a circumference of 9.5 miles (15.3 kilometers). Despite Celtic reinforcements that surrounded the Romans within a 14-mile (22.5-kilometer) perimeter, the latter, through a combination of walls, ditches, booby traps, and firm discipline, were able to surmount the double siege, conquer their Celtic foes, and capture Vercingetorix. The remaining Celts were either assimilated or relegated to the fringes of the civilized world.

—John D. Fair

Bibliography

- Cunliffe, Barry. *The Celtic World*. New York: McGraw-Hill, 1979.
- Dillon, Myles, and Chadwick, Nora. *The Celtic Realms*. London: Phoenix, 2000.
- Duffy, Kevin. *Who Were the Celts?* New York: Barnes and Noble, 1996.
- Maier, Bernard. *The Celts: A History from Earliest Times to the Present*. Notre Dame, IN: Notre Dame University Press, 2003.
- Severy, Merle. "The Celts." *National Geographic* 151 (May 1977): 582–633.

The Peoples of Mesoamerica

The term "Mesoamerica" was introduced by German anthropologist Paul Kirchhoff in 1943. Literally meaning "Middle America," the concept encompasses different social, cultural, and economic characteristics that were and still are partially shared by indigenous peoples living in the modern countries of Mexico, Guatemala, Honduras, Belize, El Salvador, western Nicaragua, and Costa Rica. This vast geographic area includes a great ecological diversity, perhaps the most striking feature of Mesoamerica. Economic interdependence is in fact the primary factor that led historically to the formation of a common heritage.

Northern Mesoamerica is characterized by a particularly dry climate with very low precipitation, concentrated in the month of August. The highland regions of central and southwestern Mexico, on the other hand, are very fertile, and intensive agriculture was practiced since the first millennium BCE. The southern stretches of Mesoamerica as well as the Pacific Coast are tropical; constant humidity and high temperatures create a thick forest.

Following common evolutionary theories of his times, Kirchhoff summarized Mesoamerican characteristic features as markers of a greater social complexity in comparison to neighboring regions of North and Central America. In ancient Mesoamerica, settled lifestyle developed from the intensive cultivation of the maize plant. As a consequence, state structures such as Maya city-states in the south and the vast empire of Teoti-

CHRONOLOGY—MESOAMERICA

1000 BCE–300 CE: Preclassic or Formative period

Gulf Coast: Olmec 1200–600 BCE

Central Mexico: Teotihuacan 200 BCE–600 CE

Tropical Lowlands: Maya 400 BCE onward

huacan in central Mexico as well as large urban settlements arose. Typically, the ceremonial core centered on a plaza (open gathering place) surrounded by large raised platforms and temples, often taking the shape of a stepped pyramid. Other striking features of Mesoamerican complexity are the glyphic writing system, which combines pictographic and phonetic elements and long-distance trade, carried out by human porters (no pack animal existed in prehispanic Mesoamerica). The religious life was structured along a ritual calendar of 260 days and included human sacrifice and the ballgame, a team sport that was played in ceremonial centers during special ritual occasions.

Later studies revised Kirchhoff's model, but the general validity of the term "Mesoamerica" to designate a specific geographic and cultural region has not been questioned. Among the most important changes in the current definition of Mesoamerica are its geographical boundaries, recognized to be much more flexible and fluctuating depending on the historical period. The people of Mesoamerica's northern borders, encompassing the modern northern states of Mexico and the American Southwest, engaged in trade networks with the Mesoamerican core. They exchanged important luxury items, such as turquoise. In the south, tropical bird feathers, animal pelts, and cacao were exchanged with peoples from the isthmian region. In both cases, the symbolic value assigned to the consumption of raw and manufactured materials resulted in the creation of a common cultural heritage.

Knowledge of early Mesoamerican civilizations and their cultural peculiarities and historical developments in this period derives only from archaeology. Excavations and surface evidence contribute to the understanding of subsistence

systems (i.e., agricultural products, exchange of primary sources and crafted materials, and the general distribution of settlement patterns). Maize, beans, and squash were cultivated on *chinampas* (raised fields) in the plateau of central Mexico, while hill terraces were more common in the mountainous regions to the south. Obsidian, an intrusive volcanic rock, was the only cutting tool employed in ancient Mesoamerica. Obsidian sources can be traced easily through an analysis of their chemical composition, allowing for a general understanding of trade routes and exchange network throughout Mesoamerica.

Assessments of political institutions and class structures are quite difficult to make based solely on an analysis of material culture. The deciphering of the Mayan script, beginning in the 1960s, has allowed the reconstruction of dynastic histories, warfare activities, and ceremonial practices in the southern lowlands of Mesoamerica. Inscriptions are generally found on stone

monuments that were erected to commemorate events of political importance.

—Alessia Frassani

Bibliography

- Blanton, Richard E., Gary M. Feinman, and Stephen A. Kowalewski, eds. *Ancient Mesoamerica: A Comparison of Change in Three Regions*. New York: Cambridge University Press, 1993.
- Kirchhoff, Paul. "Mesoamerica: Its Geographic Limits, Ethnic Composition and Cultural Characteristics." In *Ancient Mesoamerica*, edited by John Graham. Palo Alto, CA: Peek Publications, 1981. First published in Spanish in 1943.
- Manzanilla, Linda. "Teotihuacan: Urban Archetype, Cosmic Model." In *Emergence and Change in Early Urban Societies*, edited by Linda Manzanilla. New York: Plenum, 1997.
- Martin, Simon, and Nikolai Grube. "Maya Superstates." *Archaeology* 48(6) (1995): 42–46.
- Sharer, Robert J., and David C. Grove, eds. *Regional Perspectives on the Olmec*. New York: Cambridge University Press, 1989.

■ Introduction: Law

The period from 1000 BCE to 300 CE is a Classical period in terms of legal traditions. The legal traditions of China and India are rooted in this time period, and those components of the Western legal tradition that are rooted in Greek and Roman jurisprudence find their origins in this time. Even biblical traditions, which reflect traditions much earlier than this period, were first codified within the biblical text during this time. Written laws and codified legal practices became common throughout much of Asia and southern Europe in this transformative period.

—Kevin M. McGeough

Biblical Law

According to rabbinic tradition, there are 613 laws (Hebrew *mitzvot*) in the Torah (Genesis, Exodus, Leviticus, Numbers, and Deuteronomy), the first and most sacred part of the Hebrew Bi-

ble, thought to have been given to Moses by God at Mount Sinai. These laws cover a wide range of topics, including religious observance, criminal behavior, civil disputes, and even proper washing and health codes. The German scholar Albrecht Alt divided the laws found in the Torah into two broad categories: casuistic (case) law and apodictic law (commands). Casuistic law generally follows an if-then format; Exodus 22:1, for example, stipulates that "If a man steals an ox or a sheep and slaughters it or sells it, he shall pay five oxen for the ox and four sheep for the sheep." Scholars have long noted that a number of the casuistic laws found in the Bible show similarities to other ancient law codes, particularly those of Mesopotamia; some scholars have suggested that the biblical laws may have been influenced by these older codes.

Apodictic law, on the other hand, is concerned with absolute, necessary truths, commands that are not dependent on an if-then formulation. Alt theorized that such law was an

Israelite innovation; while this may be overstating the case, it is true that this commandment formulation is not emphasized in other ancient Near Eastern law codes.

The most famous of these apodictic laws are, of course, the Ten Commandments; the first of these contains a prologue explaining why God has a right to impose these laws on Israel (because He brought them “out of the house of Egypt, the house of bondage”). These commandments appear in their full form twice in the Bible, in Exodus 20:2–17 and Deuteronomy 5:6–21. Interestingly, while nine of them are virtually identical, the two recitations differ in their presentation of the fourth, which enjoins Sabbath observance: in Exodus 20:9–11, Israel is commanded to rest on the Sabbath because God rested on the seventh day after creating the world during the previous six (cf. Genesis 1). In Deuteronomy 5, on the other hand, the creation is not mentioned; instead, the Sabbath is to be observed to commemorate the deliverance of Israel from slavery in Egypt.

These differences, along with other discrepancies between the Deuteronomic laws and those found in Exodus through Numbers (e.g., the instructions for tithing found in Numbers 18 and Deuteronomy 12 and 14, or the emancipation of Hebrew slaves in Exodus 21 and Deuteronomy 15) suggest that far from being a single, unchanging code delivered to Moses during his lifetime, biblical law evolved during Israel’s history, changing to reflect different historical contexts and the perspectives of different groups. The Exodus version of the commandments, for example, is thought to have been transmitted by the priests; it is logical, then, that it alludes to Genesis 1, the priestly story of creation. The biblical authors apparently felt at least an element of creative freedom in reporting even these, the most sacred of God’s commands to His people.

—John Walton Burnight

Bibliography

- Alt, Albrecht. “The Origins of Israelite Law.” In *Essays on Old Testament History and Religion*. New York: Oxford University Press, 1966.
- Dooley, William J. *The Laws of Yabweb: A Handbook of Biblical Law*. Costa Mesa: Paulist Press, 2002.

➤ EYE FOR AN EYE—JUSTICE IN ANTIQUITY

“If a man put out the eye of another man, his eye shall be put out. If he break another man’s bone, his bone shall be broken. . . . If a man knock out the teeth of his equal, his teeth shall be knocked out.”—*Code of Hammurabi*, lines 195–196, 200 (Old Babylonian, eighteenth century BCE, translated by Leonard W. King)

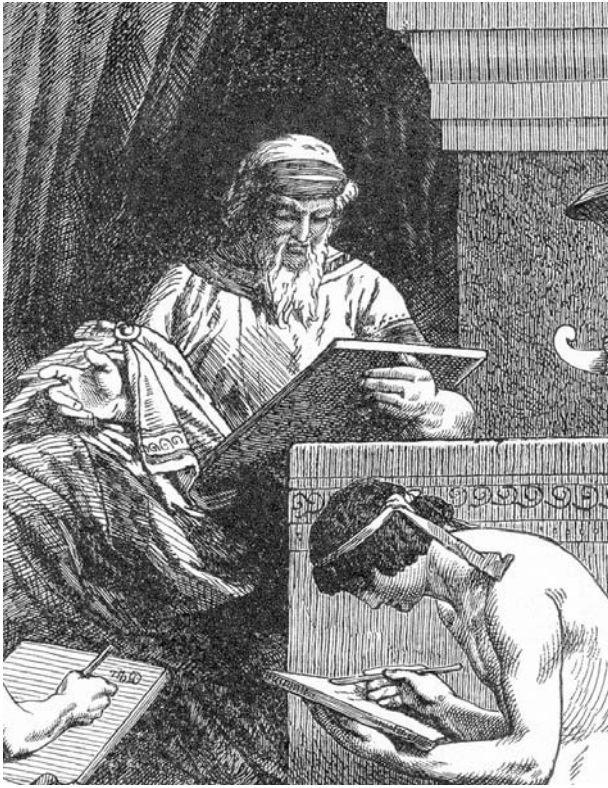
“If a man injures his neighbor, just as he has done, so it shall be done to him: fracture for fracture, eye for eye, tooth for tooth; just as he has injured a man, so it shall be inflicted on him.”—Leviticus 24:19–20 (NASV)

—John Walton Burnight

Greek Law

The Greek word for both “law” and “custom” is *nomos*, and so it stands to reason that written law codes developed out of customary rules transmitted through oral tradition. The social and political pressure placed on the elite by the middle classes during the sixth century BCE led to the gradual process of writing down the laws. This was most likely done in order to mitigate accusations of arbitrary judgment by the aristocratic magistrates.

The first law code in Athens is traditionally attributed to the shadowy figure of Draco (even his existence is doubted by some) in 621–620 BCE, probably in response to a failed attempt at tyranny a decade earlier. Draco’s law code was remembered as exceedingly harsh (draconian), with death prescribed as the penalty for even trivial offenses. With the exception of its regulations on homicide, Draco’s law code was superseded in 594–593 BCE by the reforms of Solon. Solon established a people’s court of appeal (the *Eliasia*) against the judgments of the magistrates and made it legal for any citizen to launch a prosecution on behalf of an injured party or of the community as a whole. Previously this right had been limited to the injured party or his family. This measure gave the lower classes recourse



Solon (depicted here), using his power as archon, dictates the new laws of Athens. Mounting conflicts between the rich and poor, added to the oppressive laws of the former tyrant, Draco, called for rapid legal reform in seventh-century Athens. Solon was picked as the arbiter of these new laws. (Ridpath, John Clark. *Ridpath's History of the World*, 1901)

against the elite in the short term but in the long term contributed toward Athens' reputation of litigiousness. Solon's law code was inscribed on wooden pillars and erected for all to see. It remained the basis for Athenian law throughout the Classical period.

After the democratic reforms of Cleisthenes, the Athenian Assembly began making laws. This process, naturally, was piecemeal and led to the unsystematic grafting of new laws onto old ones, making it difficult to keep abreast of what laws were currently in force. The disadvantages of this system apparently became obvious during the oligarchic revolution of 411 BCE. During this period the restored democracy of 410 BCE began the complete revision of Athens' law code. The fact that this process was not completed until 399 BCE indicates that the state

of confusion must have been great. In an attempt to achieve consistency, the revised law code mandated a distinction among laws, permanent rules of general application, and decrees (decisions made for a particular occasion). The Assembly continued to issue decrees on an ad hoc basis, whereas the making of laws was reserved for a special board of magistrates, the lawmakers (*nomothetai*).

Another consequence of Cleisthenes' democratic reforms in Athens was the transfer of all litigation from the magistrates to the Eliaia. One court, however, was unable to keep up with demand, and eventually the Eliaia was split into a number of courts staffed by juries. Every year, a list of 6,000 potential jurors was drawn by lot from all male citizens over 30 years old who had volunteered for jury duty. The jurors were then divided into juries as the need arose; the number of juries varied but typically numbered no more than 200 to hear specific cases. The allocation of individual jurors to cases was done by lot to prevent bribery or other judicial tampering. In order to ensure that the courts represented the entire citizen body, payment for jury service of two obols a day was instituted by Pericles as a way of encouraging the poor to serve. Even though Cleon later (425 BCE) increased the rate of pay to three obols a day, it was still less than half the wage that the average laborer could earn. The unintended effect of the payment for jury service was that it tended to attract the elderly poor, who had time to spare and did not need to support a family.

—Frances Pownall

Bibliography

- Christ, Matthew R. *The Litigious Athenian*. Baltimore: Johns Hopkins University Press, 1998.
- Hansen, Mogens Herman. *The Athenian Democracy in the Age of Demosthenes*. Translated by J. A. Crook. Oxford, UK: Blackwell, 1991.
- Harris, Edward M., and Lene Rubinstein, eds. *The Law and the Courts in Ancient Greece*. London: Duckworth, 2004.
- MacDowell, Douglas M. *The Law in Classical Athens*. Ithaca, NY: Cornell University Press, 1978.
- Todd, S. C. *The Shape of Athenian Law*. Oxford, UK: Clarendon, 1993.

WASPS

In *Wasps*, Aristophanes satirizes the (probably exaggerated) eagerness of the old men of Athens to serve as jurors for the daily payment of three obols. In this passage, translated by David Barrett, one slave explains why his master has put his father under guard in the house:

“He’s what they call a *trailophile*, or litigious maniac—the worst case I’ve ever come across. What he’s addicted to is serving on juries, and he moans like anything if he can’t get a front seat at every trial. He never sleeps a wink at night—or if he does drop off, his dreams go fluttering round that water-clock till he wakes up again. He’s so used to clutching his voting pebble that he wakes up with his thumb and two fingers glued together, as though he’d been sprinkling incense for a new-moon sacrifice. Why, if he goes past Demos’ house and sees what someone’s written on the gatepost—you know the sort of thing: ‘Beautiful Demos, what charm you have got!’—he goes and writes underneath: ‘Beautiful urn, how I long for your slot!’ It’s true, honestly.

Once he complained that the cock was late calling him—and it was well before midnight! Said the retiring magistrates must have bribed it, because their accounts were coming up for review the next day. Oh, he did have it badly: as soon as supper was over he’d shout for his shoes, and off he’d go to the court, and sleep through the small hours at the head of the queue, clinging to the doorpost like a limpet. And mean! He’s so mean that he scratches the long line on his tablet every time they get a conviction—full damages; honestly; he comes home with enough wax under his fingernails to finish a beehive. He’s so afraid of running out of voting-pebbles that he keeps a whole beach of them inside the house here.”

—Frances Pownall

Source

Aristophanes, *The Wasps/ The Poet and the Women/ The Frogs*, translated by David Barrett (New York: Penguin Books, 1964).

Roman Law

Roman law developed out of the necessity to have a standard legal code from which to delineate prohibitions and regulations in early Roman society. Scholars trace the beginnings of Roman law to the issuance of the Twelve Tables in 451 BCE during the Conflict of the Orders (494–294 BCE), in which plebeians (commoners) demanded that laws be written down to ensure that abuses of their societal status on the part of patricians (elites) would be prosecuted. Distinctions between patricians and plebeians were taken into account, as were issues related to family law, the status of slaves, criminal offenses, and property. Much of the authority of early Roman law came not only through state enforcement of such laws but also through the prestige of specialists in legal scholarship who issued edicts. In later periods, edicts issued by the emperor or the Roman Senate would also carry binding legal authority. The extension of Roman law as Rome acquired territory through the Re-

publican (510–27 BCE) and Imperial (27 BCE–476 CE) periods brought a common codified legal system to much of the Mediterranean world. It is suggested by many scholars that Roman law is the basis of the legal systems of much of the Western world.

The Twelve Tables were the founding template of Roman law and continued to be relevant throughout the existence of the Roman state in its multiple political forms. Due to the constant strife between plebeians and patricians, a committee of ten patricians (the *decemviri*) was assigned to draft a set of laws to offer legal and social protections to both groups and also to delineate their specific rights. While scholars have been unable to decipher all the laws and their explicit meanings, they have been able to interpret many items that offer clues as to what the Romans deemed important in their society. Issues regarding legal procedures, answering court summons, debt, family relations (women and children), obligations between patricians and plebeians, property,

▶ ROMAN FAMILY LAW

Roman family relations were a pivotal part of early Roman law, as issues of inheritance, guardianship, and property were deemed important enough to enter into the Twelve Tables, the original law code of the Roman republic instituted in the years following the ejection of the Tarquins in 510 BCE.

“Table V

1. A dreadfully deformed child shall be quickly killed.
2. If a father sells his son three times, the son shall be free from his father.
3. As a man has provided in his will in regard to his money and the care of his property, so let it be binding. If he has no heir and dies intestate, let the nearest agnate (relative on father’s side) have the inheritance. If there is no agnate, let the members of his gens (family) have the inheritance.
4. If one is mad but has no guardian, the power over him and his money shall belong to his agnates and the members of his gens.
5. A child born after ten months since the father’s death will not be admitted into a legal inheritance.”

—Abraham O. Mendoza

Source

“The Twelve Tables—451–450 BCE,” in *Primary Source Reader for World History*, Vol. 1, *To 1500*, edited by Elsa A. Nystrom (Belmont CA: Thomson-Wadsworth, 2006), 69.

inheritance, reciprocity, criminal offenses, slavery, and sentencing are addressed. Furthermore, prohibitions against capital offenses such as murder, social relations such as interclass marriage, or societal offenses such as the burning of corpses within the city are also addressed within the early rendering of the Twelve Tables.

As the complexity of Roman society changed over time due to territorial expansion, the granting of greater political rights for plebeians, and the inclusion of vast numbers of Roman citizens, new laws were enacted that reversed or contributed to the initial foundation of the Twelve Tables. In addition, legal edicts formed another important element in the formulation of Roman

law, as the legal profession became an important element within the expansive Roman state. Legal edicts, particularly during the republican period, came from praetors (elected magistrate) and were typically a general statement, principle, or prohibition. Issuing from elected officials representative of republican institutions, these laws reflected the societal belief that such individuals held the interests of Roman society supreme. However, in the Imperial period, legal edicts were issued at the discretion of emperors, sometimes as an example of their arbitrary whim, illustrating the changing conceptions of law under the empire as distinct from the republic. Nonetheless, during the Principate the profession of the jurist came to have a significant role in the issuance of laws. Jurists, who were highly trained legal scholars, were typically aspiring politicians who were well versed in law, legal procedures, and rhetoric. Jurists were primarily responsible for writing on law, its meaning, and its interpretations. This allowed for the creation of a set of standards and precedence to be used for case law throughout the empire.

—Abraham O. Mendoza

Bibliography

- Harries, Jill. *Law and Crime in the Roman World*. New York: Cambridge University Press, 2007.
- Mousourakis, George. *A Legal History of Rome*. New York: Routledge, 2007.
- Scullard, H. H. *A History of the Roman World: 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

Ancient Chinese Law, 1000 BCE–220 CE

When the Zhou dynasty (1040–256 BCE) was established, the leaders employed two concepts to justify their reign that had been developed during the previous Shang dynasty: the righteous or just war and the mandate of heaven (*tianming*). Subsequent dynasties followed this example.

The Zhou dynasty governed with an elaborate administrative system and a complex military organization. Laws were developed to manage them. The king or high officials served as judges, issuing verdicts against subordinate officials for dereliction of duty and against the

common people for criminal acts. Evidence concerning the legal system and its statutes is light. Extant sources, however, reveal the existence of both tort and property cases. As the technology improved and the economy developed, the frequency of property cases increased. The Zhou primarily maintained social order, political control, and diplomatic relations through the harmony of ritual (*li*) rather than the rule of law that dominated Greco-Roman (and later Western) cultures. The hallmark contribution of Confucius (Kongzi, d. 479 BCE) and his disciples was the codification of the proper forms of deportment and virtuous action under the practices of ritual, clan morality, and family values that regulated almost every form of human behavior from simple gestures, such as bowing, to national order and international diplomacy. Ritual was the Chinese panacea for all personal, social, and national problems or disagreements. Laws to control, sanction, permit, or punish behavior were primarily employed in the government administration and military. As Zhou culture changed and trade prospered, the mercantile class developed, gaining social status and some political influence. The system of ritual and the laws were modified to accommodate the needs of the state, the king, and the officials.

When the Zhou dynasty was founded, the king enfeoffed his relatives and supporters. After the Zhou capital was moved toward the east (770 BCE), the feudal lords gained power. During the Spring and Autumn period (772–481 BCE) the number of small states had grown, and the most powerful among the feudal lords gained prominence, declaring themselves to be lord protectors (*ba*) of the Zhou house. By the Warring States period (403–221 BCE) the feudal lords had declared themselves to be kings, and under the protection of the concepts of just war and the mandate of heaven they vied for political and military power. The geopolitical sphere extended south of the Yangzi River. After the sixth century BCE the literary references to legal codes increase greatly. The *Book of Documents* (*Shujing*) and the *Spring and Autumn Annals* (*Chunqiu*) praise the tradition of ancient laws established by the sage kings. The Confucian respect for and appeal to the past created a histori-

cal tradition of legal and ritual precedent. In the *Zuo Zhuan* commentary to the *Chunqiu*, there are records of speeches admonishing rulers to reform their governments and laws. Later the Legalists (Fajia) became the advocates for legal reform (*bianfa*). In 536 Zi Chan in the state of Zheng had the penal law cast onto bronze tripods. In 621 Fan Xuanzi reformed the laws of Duke Wen during the reign of Duke Xiang in the state of Jin. These laws were revised and finally cast onto a tripod in 513. Subsequently, Deng Xizi's *Bamboo Penal Code* and Li Kui's *Classic of Law*, which drew on the laws of the various states, were published.

In 256 BCE the Qin house vanquished the Zhou, ending the dynasty. The state of Qin eventually defeated the remaining kingdoms and unified the empire in 221 BCE. To manage the newly formed multiethnic empire, the Qin established ritual and legal codes. The complete Qin legal code has not yet been excavated. The evidence shows that the Qin code was sophisticated and extensive. After the short-lived Qin dynasty (221–206 BCE), the Han dynasty (206 BCE–220 CE) was established. The Han legal code has not survived intact either. The surviving evidence reveals that the Han code was even more extensive than the Qin code. Because the legal codes contained harsh punishments for dereliction of duty, criminal acts, and treason, they probably were among the first documents to be destroyed during the collapse of the dynasties. The Qin and Han legal systems were complicated, with various bureaucratic layers and offices. There was a great deal of concern about documenting the investigation and the trial. Beatings and coercion were employed to obtain the facts or a confession. The texts claim that the best investigation discovered the facts of a case without harming the witnesses. The statutes focused primarily on public law. The Qin and Han statutes emphasized legal duties. The concept of legal rights is absent. They practiced a privileged legal system in that people with high social status were given lighter sentences than those with low status. The Qin and Han legal codes and practices established the patterns and precedent that all subsequent dynasties employed to maintain social order.

—James D. Sellmann

Bibliography

- Bodde, Derk, and Clarence Morris. *Law in Imperial China*. Philadelphia: University of Pennsylvania Press, 1967.
- Creel, H. G. *The Origins of Statecraft in China*. Chicago: University of Chicago Press, 1970.
- Hsiao, Kung-chuan. *A History of Chinese Political Thought*. Translated by F. Mote. Princeton, NJ: Princeton University Press, 1979.
- Hulsewé, A. F. P. *Remnants of Han Law*, Vol. 1. Leiden: Brill, 1955.
- Sellmann, James D. "On the Origin of Shang and Zhou Law." *Asian Philosophy* 16(1) (March 2005): 49–64.
- Twitchett, Denis, and Michael Loewe, eds. *Cambridge History of China*, Vol. 1, *The Ch'in and Han Empires*. Cambridge: Cambridge University Press, 1986.

■ Introduction: Gender

There is substantial evidence for a diverse variety of understandings of gender within the period from 1000 BCE to 300 CE. Historians are only now beginning to grapple with the true complexity of understanding ancient conceptions of gender that in many ways do not neatly align with our current experiences of gender. As most scholars understand gender, it is different from sex, which is a biological distinction between male and female. Gender is the cultural and social distinction, which is related to sex but is not necessarily divided along the same bifurcated lines.

This section of the encyclopedia attempts to identify these different conceptions of gender found throughout the world from 1000 BCE to 300 CE. In some cases, as in Greece and Rome, these differences were explicitly discussed by ancient authors, and thus we are able to come to more concrete conclusions. In other instances, as in the case of the people of the Americas, historians must use indirect evidence, such as art-historical gender depictions, in order to reconstruct ancient gender.

—Kevin M. McGeough

Concepts of Gender, Gender Distinctions, and Roles in the Ancient Near East

The concept of gender, as interpreted by the Near Eastern peoples of antiquity, assigned specific roles to men and women within both the household and the public sphere within their respective

Mesopotamian societies (which varied over time and space). Typically, these roles were shaped by both societal expectations and religion. Gender roles and relations shaped the interactions that men and women had with each other, within their families, and with greater Mesopotamian society. It also marked their specific life trajectories as daughters and sons and subsequently as wives and husbands and mothers and fathers.

As children, both boys and girls were socialized by their parents for their specific gender roles in later life. Typically, most children would learn from their parents within the household. Boys were expected to adapt themselves for later life by acquiring an education or an apprenticeship in order to later pursue a suitable profession in adulthood. Girls acquired the skills of running a household from their mothers among other skills that would be deemed valuable later in life as they became wives and mothers. Young women were considered ready for marriage by their teens. In contrast, young men would marry later, typically in their mid to late twenties. Marriage was arranged by the fathers of households, taking into consideration political and economic factors that would benefit the family. An engagement would be marked by a verbal contract and an exchange of bridewealth (for the bride's family) and dowry (the bride's family's contribution to the marriage).

Upon marriage, a woman and her dowry became part of her husband's household. While monogamy was considered ideal, extramarital affairs, polygamy, and concubinage did occur. Divorce laws varied from time to time in ancient Mesopotamia, with certain stipulations desig-

nated on both men and women, often granting them either equal status or higher regard toward the men at the expense of their wives. However, if divorce occurred after a woman had given birth to sons, the husband would incur a significant financial penalty, such as the loss of his house and property. Women were scrutinized before divorce proceedings, taking note of a woman's moral behavior before a divorce would be granted. Upon divorce, she could retain her dowry and had the right to remarry.

Husbands and wives had differing roles within the household. While men were expected to make a living to bring sustenance into the home, women also contributed to the running of the household in the absence of the husband. In the running of day-to-day business affairs, the wives of skilled artisans and merchants would handle daily transactions at the behest of their husbands. In large households, wives were in charge of conducting the affairs of the home by supervising servants, apprentices, and other members of the household. As mothers, women were primarily in charge of the rearing and education of the children. Men were relegated to roles in the political sphere and in military affairs as part of their responsibility to the Mesopotamian state. However, women, through their husbands, possessed a level of informal and indirect political power, particularly aristocratic and elite women.

—Abraham O. Mendoza

Bibliography

- Kuhrt, Amelie. *The Ancient Near East, ca. 3000–330 BCE*. 2 vols. London: Routledge, 1995.
- McIntosh, Jane R. *Ancient Mesopotamia: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.
- Nissen, Hans J. *The Early History of the Ancient Near East*. Chicago: University of Chicago Press, 1988.

Concepts of Gender Encoded in the Development of Kouros and Kore Statues

During the seventh century BCE, the Greeks learned the art of carving sculpture in the round from the Near East. Large sculpture was presum-

SEXUALITY AND GENDER IN THE ANCIENT NEAR EAST

While deemed inappropriate and immoral, premarital sex and promiscuity were common in ancient Mesopotamia. Marriage was still expected to be the norm for both women and men. Prostitution was a common practice in ancient Mesopotamia, practiced in certain areas around the city walls or taverns, as long as it did not infringe on or threaten marriage. Sexuality was an accepted part of life in these societies, playing a function in the quotidian existence of the people not only for purposes of procreation but also for recreation and pleasure.

—Abraham O. Mendoza

ably attempted earlier in wood but does not survive well in the archaeological record. The first Greek stone sculptures were almost exclusively of two types: the kouros (meaning “boy”), a nude youth, and the kore (“girl”), a well-dressed young lady. Both of these types continued to develop throughout the sixth century BCE. Their poses were selected due to the influence of Egyptian stone sculptures, and they were rendered in the style of the artwork of Southwest Asia. Yet they were infused with a uniquely Greek set of aesthetic values. Used both as dedications in sanctuaries and as grave markers, these monuments were a way in which members of the aristocracies of the Greek city-states could display their ideals for both men and women. A most prized quality for both genders was that of youth, so both kouros and kore statues always depicted young people. Kouros were fit and vigorous as well as clean shaven, denoting unmarried status. These males were also shown in the nude, implying that the figures were engaging in athletics, which Greek men performed naked.

Korai were young women, ideals of feminine beauty. They were elegantly dressed in fine clothes, and they often daintily hold up their long skirts showing that they were accustomed to wearing fancy dresses. The clothing styles on korai changed often, reflecting transformations in fashion. Kore statues often had attachments in metal or carved representations of jewelry,

► THE KORE OF PHRASIKLEIA AND KOUROS FROM MERENDA

This pair of statues from the sixth century BCE was used as grave markers in a cemetery near Athens. They were found together and probably were sculpted by the same artist, Ariston of Paros; however, only the kore statue is signed. The female statue is identified as a memorial for Phrasikleia, a girl who died before she was married. We lack the base for the male, but many statues of this type were grave monuments for unmarried men. In overall appearance and hair-styles the two figures are so similar that they could be twins. However, the artist paid a great deal of attention to the dress of the female statue, showing her in a long gown and jewelry. Meanwhile, the male is a fit athlete, and his anatomy was shown in close detail. It was important in permanent memorials to show each of the figures at the moment in their lives when they were at the height of their beauty.

—Angela Murock Hussein



Kore of Phrasikleia and Kouros from Merenda, by Ariston of Paros. (Rene Mattes)

implying the wealth of the girls' families. Well-dressed women implied that they were from prosperous families and were well cared for. They also often held fruit or flowers, denoting the fertility and potential value of these nubile women as brides. Both kouroi and korai were shown with long elaborate hairstyles, which identified them as members of the wealthy class that did not have to do physical labor. The statues may also have been painted with different skin tones, darker for males and lighter for females. Men were expected to be robust and to

spend much of their time outside, while women were expected more often to remain indoors.

—Angela Murock Hussein

Bibliography

- Boardman, J. *Greek Sculpture: The Archaic Period*. London: Thames and Hudson, 1978.
- Palagia, O., ed. *Greek Sculpture: Function, Materials, and Techniques in the Archaic and Classical Periods*. Cambridge: Cambridge University Press, 2006.
- Richter, G. M. A. *Kouroi, Archaic Greek Youths: A Study of the Development of the Greek Kouros*

from the Late Seventh Century to the Early Fifth Century B.C. Oxford: Oxford University Press, 1942.

Ridgway, B. S. *The Archaic Style in Greek Sculpture*. Princeton, NJ: Princeton University Press, 1977.

Etruscan Women

The Etruscans were a people who emerged in central Italy sometime before 800 BCE and who developed an advanced civilization that reached its height in the seventh and sixth centuries BCE. Scholars still argue over the origins of these people—some claim they came from the east, and others suggest that they developed from the indigenous peoples of Italy. Regardless of their origin, scholars agree that they produced a society that was highly influential, for by the sixth century BCE they ruled over an extended area that included the early settlers of Rome. They were a great trading people and competed with the Greeks and Carthaginians for the wealthy trade of the western Mediterranean. The Etruscans also were master builders, and they were skilled at reading omens; subsequent Roman society was to take many of these Etruscan developments and make them their own. In one area, however, the Etruscans contributed little to the rest of the Mediterranean world—their treatment of women. The Etruscan women took a strikingly public role, which shocked the Greeks and Romans who observed it.

It is difficult for historians to get a full picture of Etruscan society because we cannot read their language. Therefore, we must use only others' accounts of their customs, which are highly biased, and archaeological evidence, which fortunately is very rich. The most shocking thing that the Greek authors observed was that men and women dined together. Aristotle said that Etruscan husbands and wives reclined together at dinner (instead of sitting in chairs, ancient Mediterranean people reclined on couches around a table). In Greek society, the only women who joined men at banquets were prostitutes, so it seemed to the Greeks that all Etruscan women were therefore sexually free.

The longest description of the Etruscans comes from the fourth-century Greek historian

THEOPOMPUS ON ETRUSCAN WOMEN

Although no literature survives from Etruscan civilization itself, later Roman sources, as well as Greek historians, preserve legends of the vanished Etruscan culture of the seventh and sixth centuries BCE as well as of the licentious behavior of its women. Theopompus of Chios wrote as follows in the forty-third book of his *Histories*:

“Sharing wives is an established Etruscan custom. Etruscan women take particular care of their bodies and exercise often, sometimes along with the men, and sometimes by themselves. It is not a disgrace for them to be seen naked. Further, they dine, not with their own husbands, but with any men who happen to be present, and they pledge with wine any whom they wish. They are also expert drinkers and are very good looking.”

Such literary accounts are probably highly exaggerated, and are in addition meant to be a systematic inversion of Greek culture and the restricted sexuality and license of Greek women.

—Kelly Olson

Theopompus. He said the Etruscan women were “extraordinarily pleasure-loving,” for they dined not only with their husbands, but with other men. Furthermore, they had free sexual lives: “It is not shame for the Etruscans to be seen having sexual experiences . . . for this too is normal: it is the local custom there.” He goes on to say that people shamelessly call sexual intercourse by its name if telling someone the master is busy making love.

Archaeologists are able to confirm some of these accusations on the basis of rich tomb paintings and sculptures in the Etruscan burial vaults. In the wall painting of a banqueting scene, Etruscan women are shown enjoying a dinner party in the company of men. So it appears that women did join men in public in a way that respectable Greek and early Roman women did not. Furthermore, there are paintings of women joining men to watch games and contests in public. The clothing of the women in paintings and sculptures also suggests a public life for women, for there

were many more shown in shoes and mantles—public attire—than were present in comparable Greek portrayals.

Etruscan art also indicates affectionate family relationships. Most show men and women reclining together on a couch, with their arms affectionately around each other. One even shows the married couple naked together on their marriage bed. The Greeks would have found such a portrayal shocking, for although men were frequently nude, respectable women—even in a marriage bed—were not. It may be that such figures offer evidence to confirm the Greek historian's assessment that the Etruscans—men and women—were comfortable with their sexuality.

Theopompus also commented on the Etruscans' affection for their children. In contrast to Greece and Rome, where the father could determine whether the child would be raised or exposed to die, the Greek historian noted that the Etruscans raised all the children who were born, even if they did not know who the father was. The only independent confirmation we have of differing attitudes toward children is the presence of small statues of women nursing their babies. These statues are unique in the ancient world—this was not an artistic theme for the Greeks. Some scholars suggest that these figures indicate that Etruscan women personally raised their babies.

The Roman sources imply that Etruscan women of the royal family had a strong role in governing the society. According to one legend, an ambitious Etruscan couple arrived in Rome in about 630 BCE. As the man and his wife looked down from their wagon on the city that was to be their new home, an eagle came down and plucked the man's hat off. It then swooped back down and replaced the hat. The woman—who like most Etruscans was skilled at reading omens—joyfully embraced her husband, for she explained that this was a sign that he would be king. The prophecy came true, and Lucius Tarquin became king of Rome. His wife was the powerful Etruscan queen Tanaquil. This story repeated the reputation Etruscan women had for prophecy and reading omens, which was continued throughout their history.

If Etruscan women reputedly had more freedom than women in the rest of the Mediterra-

nean world, they also had the same opportunities as men for political intrigue and cruelty. The Roman historian Livy tells of an Etruscan queen named Tullia who violated the laws of family to forward her ambitions. According to Livy, the Etruscan princess persuaded her husband to kill her own father so they could rule, and she brazenly rode in an open carriage to the forum to see the results. Her husband, Tarquin, told her to go home, as the crowd might be dangerous. As she was leaving, her driver stopped the cart, for her father's mutilated body lay in their path. The "crazed woman" drove the carriage over her father's body so that blood from the corpse splattered her clothing. This story told by a Roman recounted the fall of the Etruscan monarchy, which restored a society in which women did not have the freedom they had under the Etruscans. Did he exaggerate the woman's cruelty to prove that the Etruscan way was corrupt? Perhaps. It would be centuries before respectable women again would experience the public life enjoyed by the Etruscan women of the ancient world.

—Joyce Salisbury

Bibliography

- Bonfante, L. *Etruscan Life and Afterlife*. Detroit: Wayne State University Press, 1986.
- Fantham, E., et al. *Women in the Classical World*. New York: Oxford University Press, 1994.
- Macnamara, E. *Etruscans*. London: British Museum, 1990.
- Macnamara, E. *Everyday Life of the Etruscans*. London: Batsford, 1973.
- Salisbury, J. "Etruscan Women." In *Encyclopedia of Women in the Ancient World*, edited by J. Salisbury. Santa Barbara, CA: ABC-CLIO, 2001.
- Sprengrer, M., and G. Baroloni. *The Etruscans*. New York: H. N. Abrams, 1983.

Concepts of Gender, Gender Distinctions, and Roles in Rome

In constructing gender identities, ancient Romans considered a variety of factors, including sex, social status, legal status, marital status, wealth, age, and sexual behavior. As a result, there were not simply the two gender distinctions of man and woman but a multiplicity of dif-

➤ VESTAL VIRGINS

The Vestal Virgins were essential to the Roman religion, as their rites ensured the continued prosperity of the Roman state. In addition to participating in certain rituals during the year, the Vestals were chiefly responsible for maintaining the goddess Vesta's fire and guarding the sacred storehouse where Rome kept important objects that it believed were integral to the preservation of its society. Because most religious positions were reserved for men, it is significant that the Vestal Virgins were six female priestesses who were selected between the ages of 8 and 10 to serve for at least 30 years.

As Robin Wildfang argues, the Vestal Virgins held a unique status. Beginning with their initiation, the Vestals occupied a liminal, or threshold, position between the two respectable statuses for female citizens: virginal unmarried women and chaste married women. To emphasize this publicly, the Vestals wore the hairstyles of brides along with the clothing of wives. In this position, the Vestals were not bound to familial cults, as were virgins and wives, but they were bound to the state. It is perhaps for this reason that the punishment for Vestals



This nineteenth-century engraving, based on a painting by Hector Le Roux, depicts the school of Vestal Virgins of Rome. The Vestal Virgins tended the eternal flame of Vesta. The priestesses were recruited as children and made a commitment of 30 years, during which they must remain celibate, and after which they were free to marry. (Ridpath, John Clark. Ridpath's History of the World, 1901)

who failed in their duty by losing their virginity was especially harsh; they were buried alive.

—Kate McGrath

ferent possible genders. Each of these conceptions of gender conferred unique understandings of the individual's function and status in Roman society. Underlying all of these conceptions of gender, however, was the importance of the Roman virtue of *virtus* ("manliness"). In the early Roman republic, *virtus* described the courage and military valor of Roman male citizens. Even when it later evolved into meaning something closer to our own use of the term "virtue," scholars, such as McDonnell, argue that it still retained its classical association with virility and masculinity. Moreover, the Romans, drawing on the biological teachings of the Greeks that women were imperfect—and even deformed—men, associated femininity with passivity and thus the antithesis of *virtus*. As a result, the ideal Roman citizen continued to be defined as a man.

Such idealization perhaps accounts for the tremendous power held by certain men. During the republic, Roman male heads of households, the *paterfamilias*, commanded absolute author-

ity over their families by holding the power of life or death. They also held control over all the family's property, and their permission was needed in order for members of the family to marry or divorce. This power was so expansive, in fact, that the *paterfamilias* could initiate the divorces of his children and even sell them into slavery. When the *paterfamilias* died, his sons would become the *paterfamilias* of their own households. Although Roman society recognized the adulthood of male citizens at the age of 17 in a religious ritual, called the *Liberalia*, in which the new adult man formally put on his citizen toga, a man was still bound to his father's authority, like his sisters, until his father's death.

In contrast to male citizens, male slaves could never become fully adult men because of their low servile status. They were instead considered to be permanent *pueri*, or boys, who were thus incapable of exhibiting masculinity. Male slaves' legal status as property coupled with the construction of their gender as

effeminate and passive influenced their relationships with male citizens. As with female slaves, Roman men considered their male slaves to be sexually available for their pleasure. While some scholars have defined such male citizens as homosexual, many argue that it is an anachronistic label. Roman men did not conceptualize their sexual behavior in terms of sexual orientation; rather, they were concerned with who was the passive or active sexual partner in discrete sexual acts. As long as they were the penetrators of a passive partner, either a woman or a male slave, there was no risk to their masculinity and thus no need to express a sexual preference for either men or women or both.

Likewise, the patriarchal nature of Roman society greatly influenced the construction of female status. Roman female citizens could occupy one of two socially acceptable categories: *virgines* (“virgins”) or *matronae* (“wives”). Virgins were the daughters of citizens who conformed to social norms in regard to virtue and celibacy before their marriage, while wives were those who continued to exhibit appropriate virtue by remaining faithful to their spouses. Both categories demanded that women remain sexually virtuous in order to be viewed as respectable. The most honorable women were the *univira*, or those who had only ever been married once. This is noteworthy, because many wives remarried after divorce or widowhood. For all wives, chastity was so important that they were expected to display their sexual virtue, known as *prudicitia*, publicly so as to bring honor to their husbands by thwarting any suspicions of adultery. They did so by dressing appropriately, conducting themselves appropriately (keeping their eyes averted in public, refraining from talking excessively with other men), and participating in religious rites for chaste wives.

In addition to being sexually restrained by Roman norms of virtue, Roman women were often constrained legally as well. Most Roman women were under the authority of a man, either their husbands or their fathers. In the republic, the common form of marriage involved the transfer of authority from the father to the husband. This is typically referred to as a *manus* (“hand”) marriage, because the groom takes the hand of the bride and hence jurisdiction over

her, from the bride’s father. By the time of the Roman empire, however, most brides were not transferred to the authority of their husband but instead remained under the authority of their father and thus remained part of their birth families. Such daughters would have been expected to act as intermediaries between their birth families and their new husband’s families. Even at the death of their husbands or fathers, most wives remained under male supervision because they were required to have tutors, or guardians, to conduct economic or legal transactions. While these guardians maintained the image of patriarchal authority, they did not often wield much influence over the lives of elite widows. Under Augustus Caesar, female citizens who had three children and freed slave-women who had four children were rewarded with emancipation from their tutors. Even before this change, however, elite women were able to exercise considerable financial control over their assets, with women frequently being granted the right to choose their own tutors and even being able to appeal the decisions of their tutors.

A similar experience was possible for lower-status women, whose economic roles were not always distinguishable from those of men. Evidence shows that these women regularly worked as artisans, shopkeepers, grocers, etc., alongside their husbands, fathers, or sons or independently as widows. Also, all Roman women were charged with the management of the household and its expenses. This involved monitoring consumption and servants. All of this suggests that while Roman women may have been constrained by certain social and legal conceptions of their gender, nonetheless there remained a considerable amount of freedom in the negotiation of their economic lives.

—Kate McGrath

Bibliography

- D’Ambra, Eve. *Roman Women*. Cambridge: Cambridge University Press, 2007.
- Dixon, Suzanne. *Reading Roman Women: Sources, Genres, and Real Life*. London: Duckworth, 2001.
- Hallett, Judith, and Marilyn Skinner, eds. *Roman Sexualities*. Princeton, NJ: Princeton University Press, 1997.

- Langlands, Rebecca. *Sexual Morality in Ancient Rome*. Cambridge: Cambridge University Press, 2006.
- McDonnell, Myles. *Roman Manliness: Virtus and the Roman Republic*. Cambridge: Cambridge University Press, 2006.
- Wildfang, Robin Lorsch. *Rome's Vestal Virgins: A Study of Rome's Vestal Priestesses in the Late Republic and Early Empire*. London: Routledge, 2006.

Hellenistic Queens and Roman Matrons

The rise of the Hellenistic queens and Roman matrons eased social restrictions on women. They used wealth to gain access to male social circles. The economic collapse that began in the third century CE, however, led to the loss of women's rights.

The role of women in Classical Greece was extremely restricted. Then, beginning in the fourth century BCE, several powerful royal women changed their contemporaries' notions about women's roles in society. While most Hellenistic women still led cloistered lives, these queens broadened the social possibilities for all women, in part by taking on the attributes of men. For instance, Eurydice, Philip II of Macedon's daughter, wore armor when she met Olympias, Alexander the Great's mother, on the battlefield.

Coinage, inscriptions, and records on papyrus give us details of several women's lives. Contemporary writers generally presented negative portraits of powerful women, largely because they behaved against their gender stereotype. Unpopular sons also resulted in the vilification of the mother, as was the case with Tiberius's mother, Livia, and Commodus's mother, Faustina the Younger.

The Hellenistic queens rarely held power in their own right. Arsinoe II married her brother, Ptolemy II of Egypt, and used war and murder as well as her beauty and administrative skills to maintain her position. Cleopatra VII, the most infamous of the Hellenistic queens, married her brother, but contemporaries considered her to be the real ruler of Egypt. The Roman matrons never held power directly, but they were very

> EUMACHIA

Some of what we know about women's occupations and influence comes from their tombs. One of the best examples is that of Eumachia of Pompeii. Although she came from a family of brick makers, she was a public priestess who used her inheritance and business skills to become the patroness of the fullers of Pompeii, who erected a statue to her. From her own funds Eumachia built a porch, a colonnade, a covered passage, and a tomb for her household. She secured an excellent marriage for herself, and she sponsored her son's political activities, possibly in imitation of the empress Livia.

—Linda Malcor

much the power behind the men. For instance, Hadrian was required to marry Sabina, Trajan's great-niece, in order to secure his throne.

As royal women expanded their power, social roles widened for other women. An increasing number of them earned citizenship, held property, and funded public works projects. These women studied with philosophers, held minor government positions, and enjoyed better legal rights, such as the ability for women without male protectors to represent themselves in legal matters.

The Roman matrons' greater wealth accounted in part for the greater social freedom they enjoyed than their Greek counterparts. While Hellenistic queens apparently did not take lovers, literary sources suggest that Roman matrons enjoyed sexual freedom akin to that of their husbands. The virtuous Cornelia, Scipio Africanus's daughter and mother of the Gracchi, gave birth to 12 children before she engaged in activities formerly reserved for men, and her overzealousness in this traditionally female role may have been what spared her the criticism aimed at other Roman matrons.

As with the Hellenistic queens, the Roman matrons gained political power when their men were at war. The high divorce rate, a declining birthrate, and a scarcity of women in the upper classes, partially due to mortality during childbirth, inspired Augustan laws that enabled

women in general to enjoy greater control over their own lives. Raising children was also a path to political power. Octavia, Antony's second wife and the sister of Augustus, secured her place in society by raising her own children as well as most of Antony's from his two other marriages, to Fulvia and Cleopatra.

As the empire experienced difficulties in the third century CE, many women's rights were taken away, not to be recovered for many centuries. The great queens of later years, such as Eleanor of Aquitaine and Victoria of the United Kingdom, owed a great deal to the Hellenistic queens and Roman matrons.

—Linda Malcor

Bibliography

- Macurdy, Grace Harriet. *Hellenistic Queens: A Study of Woman-Power in Macedonia, Seleucid Syria, and Ptolemaic Egypt*. Johns Hopkins University Studies in Archeology, No. 14. Baltimore: Johns Hopkins Press, 1932.
- Pomeroy, Sarah B. *Goddesses, Whores, Wives, and Slaves: Women in Classical Antiquity*. New York: Schocken Books, 1975.
- Shelton, Jo-Ann. *As the Romans Did: A Sourcebook in Roman Social History*. Oxford: Oxford University Press, 1997.

Women in Rome

It would be impossible to describe all of the roles that were available to women in ancient Rome. But an interesting avenue of research is to study the kinds of roles that were glorified in literature and art. But as with all people, it was possible to fill many roles and have many identities. The average modern individual plays various roles throughout a lifetime. It should be assumed that the ancient world had similar levels of complexity regarding the roles women could play.

One of the primary roles associated with women in Roman times was that of mother. This is not surprising; it is a biological fact of human existence. But what makes this category interesting in Roman times is the centrality of the mother in Roman culture. A woman's virtue was intrinsically linked to her reproductive skills and to her responsibilities as a mother. A common

notion in scholarship is that women's activities were closely guarded to ensure the paternity of their children, because in antiquity, fatherhood could not be proven scientifically. One of the best sources for these attitudes toward women is mortuary monuments. One of the glowing qualities most often commemorated in funerary inscriptions was the description of the woman as an ideal mother.

Funerary inscriptions also tell much about another role of women—that of wife. Because eulogies tended to describe positive qualities only, the descriptions in ancient eulogies (while not necessarily true of the actual person) were indicative of wider cultural values. The highest virtue that a Roman woman could possess was *pudicitia*, devotion to her husband. For all Roman women, with the exception of the Vestal Virgins, it was expected that they should have a husband. A woman without a husband (unless widowed) was seen as aberrant, and the fringe position of prostitutes within Roman society attests to this.

There were many roles that women could play in religious life. The Vestal Virgins were among the most powerful cultic officials in Rome. Likewise, the wife of the *rex sacorum* (the religious official who acted on behalf of the king) played an important role in Roman religious ceremony. There were deities and festivals that were exclusively the purview of women. The *pax deorum* was held twice every year. This was a feast only for married women, held in honor of the goddess Bona Dea.

One of the problems with the study of Roman women is that most of the available evidence has been distorted through male eyes. Almost all of the texts are from a male perspective, and artistic evidence is likely just as phallogocentric. This makes it imperative to understand the social beliefs people held about women in order to make use of these sources. If the biases of one's sources are known, there is a much better chance of understanding why a given source says what it does.

One of the traditional male views of women in Roman times was that they required male guardianship in most of life's stages. Before marriage, women were seen in relation to their fathers, with the father acting as the sole guardian.

From the father's house, the normative next step for a Roman woman was marriage and the guardianship of her husband. It certainly seems that in an ideal biography (from a Roman male perspective), a woman was in a man's care at all stages in her life. Even in the absence of a father or husband (through death, for example), there was usually a male who could step in as *paterfamilias*, from an ideal perspective. In actual practice, however, the constancy of male guardianship would have differed considerably in every situation.

The roles of women in the myths of the foundation of Rome are compelling. Consider the story of the rape of the Sabines. From this myth, Roman society is cast as initially completely composed of males. These males (in the male-only society) seize and rape a group of women from another city. In antiquity, the emphasis on the rape aspect did not cast the males in a negative light, but rather emphasized the sexual purity and virtue of the female ancestors of the Romans. Likewise, the rape of Lucretia demonstrates the qualities of a virtuous woman in terms of sexual chastity. On the other hand, women are seen very negatively in the story of the sacking of the Capitoline Hill by the Sabines. A woman, according to Livy, showed the Sabines a secret route in exchange for payment.

Women were not allowed to vote, nor were they allowed to run for public office. Although they could participate in public gatherings, their direct participation in civic government was barred. This meant that any influence on government activity during the republican period was indirect, and as such, is very difficult for historians to trace. In the Imperial period, the status of women in regard to political life did not change. But historians are better able to trace the effect of some notable women on political life. These women were people who were close to the emperor. Because of the emperor's power, anyone close enough to personally influence him could also influence public life.

In Roman literature, the influence of women on male politicians was not looked upon favorably. Women who attempted to act in the public sphere were described as liars, overemotional, and unable to control their desire or temper. As a means of discrediting a male politician, accusa-

➤ WOMEN IN THE PUBLIC SPHERE

For all who argue for the cultural superiority of the Greeks over the Romans, the position of women in the public sphere is perhaps the best counterargument. In Greek society, women were curtailed from participation in public life to an extreme degree. Although in actual practice it may not have been the case, the ideal Greek woman never left the house. This was certainly not the situation for Roman women, who were allowed a significantly higher degree of civil liberty than most ancient women. Women were a constant presence in Roman public. They were not restricted in their ability to move around the city, and they participated in spectacles, baths, and other public activities.

There are also recorded instances of women acting in the public sphere as a collective. One occasion came as a response to sumptuary laws passed in the wake of the second Punic War. The *lex oppia* (opulence laws) limited the amount of gold women were allowed to possess. In 195 BCE, women demonstrated in the streets to have this law repealed, and it was. This event is known from the writings of Cato the Elder, who warned about the dire consequences of women who possess too much wealth. There are other examples of women acting as a group. In 309 BCE, women were said to have gathered 1,000 pounds of gold to bribe invaders to leave the city. And supposedly, under Emperor Elagabalus, a women's Senate was formed to create a code of female etiquette.

—Kevin M. McGeough

tions about the influence of his wife could be levied. More prominent in Roman history than the wives of politicians were the mothers of politicians. There was a considerable degree of variation in the influence that mothers had over male political actors. On the one hand, there was the influence the mother had as the earliest role model for the child, an influence that should not be ignored, but one that is more difficult to see historically. On the other hand, there are the infamous mothers (e.g., Agrippina, mother of Nero) who wielded considerable influence at court.

The stories about barbarian women provide very interesting insights into Roman conceptions of gender and otherness. Boudicca, who lived c.

26–60 CE, was the queen of the Iceni tribe, a Celtic tribe in Britain. She led a revolt against the Romans and had many military victories, but was eventually defeated. Queen Zenobia of Palmyra, who lived around 260 CE, also went to war against Rome, but was eventually defeated. The Roman descriptions of these women are very interesting. Both were described in a virtuous light, and they seem to have commanded the respect of the Romans. On the other hand, there is a very romanticized otherness about these women and their people. That these barbarians would allow themselves to be led by women was more evidence of their savagery.

—Kevin M. McGeough

Bibliography

- Balsdon, J. V. P. D. *Roman Women: Their History and Habits*. London: Bodley Head, 1962.
- Dixon, Suzanne. *The Roman Mother*. Norman: University of Oklahoma Press, 1988.
- Fantham, Elaine, et al. *Women in the Classical World: Image and Text*. New York: Oxford University Press, 1994.
- McGeough, Kevin M. *The Romans: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2004.

Gender Distinction in Early Christianity

During the first five centuries of Christianity, the Catholic Church of the West invented a gender distinction in Christian leaders' consistent struggles against the Roman imperial authorities and their complicated interactions with the Jewish faith and other pagan religions in and outside the empire. This culturally constructed distinction based on the doctrine of Original Sin degraded women morally, and while being transformed into institutionalized powers by the leadership of the Church throughout the Middle Ages, it resulted in alienating women from their normal social functions and political participation in the traditional West.

In the early centuries of Christianity the stories of what Jesus did and said were circulated among peoples under Roman imperial dominance and interacted with diverse pagan religious traditions. Those traditions were, in general, socially and culturally patriarchic, view-

ing women as a weaker gender than men, practicing taboos against women's participation in official religious rituals during their menstrual periods, and limiting women's functions more or less within domestic spaces. These misconstrued ideas and discriminative practices against women were founded on a superstitious understanding of women's physiology and served various sociological purposes of agrarian societies. However suppressive the ideas and practices were, the militaristic Romans never stopped venerating the duties of the Vestal Virgins by tending either the flames of their household's hearths or of the hearth in the House of Vesta to ensure the prosperities of both their families and Rome as a whole. Women all over the empire continued to demonstrate their devotion to female deities such as Isis in Egypt and North Africa, where unique religious rites and celebrations were closely linked to crucial life experiences, such as happy marriage, fertility, safe childbirth, health of family members, and deaths. Although different norms reflected different religious ethics and social expectations were in place to marginalize women's roles in public spaces, women's voices and participation in public life were never completely suppressed.

The new Christian faith offered women a liberating inspiration because the recorded acts of Jesus did not discriminate against anyone on the basis of ethnicity, social status, or gender. The early Christian movements eventually attracted women's conversions and encouraged them to spread the faith to other women, mothers to their children, wives to their husbands. The early Gospels, including the ones that were not later included in the New Testament, bore witnesses to Mary (the mother of Jesus), Mary Magdalene, and a few other women as the most humble and faithful followers of Jesus and the most patient and effective prophets of his messages. Moreover, in his letter to the Romans, Paul mentioned about a dozen female converts and activists. Among them, he showed his intention to give a certain female deacon Phoebe "a welcome worthy of God's holy people" and thanked her for "the help of many people, including myself" (Romans 16:1–2). Most recent historical researches have acknowledged that quite a few female prophets, patrons, teachers,

and missionaries are recorded in the New Testament and suggest that some of them were ordained to fulfill a variety of religious duties in the same manner as their male counterparts during the time period when church structure was not formally established.

In the second and third centuries charismatic leaders, activists, and scholars of Christian movements were able to gradually organize themselves and build up a consensus on the components of the New Testament. In denouncing the Roman earthly kingdom and popularizing a new universal covenant with God, they began to provide their faithful followers with coherent norms to be observed on a range of theological and moral issues against the pollutions of external pagan teachings and philosophical insights. Meanwhile, they also began to fight against the internal dissents, or heretics, in their attempt to establish Christian orthodoxy. Moral purity and ethical disciplines were therefore pushed to the forefront of their agenda. At the turn of the third century Tertullian (ca. 155–222), a convert to Christianity in North Africa, publicized a series of treatises in his battle against the movement of Montanist apocalypse led by two women, which provides us with some insights into the moral concerns of the Christian thinkers of the time. On the one hand, he relentlessly advocated monogamy and blamed both men and women for their promiscuous affairs out of wedlock. In this respect, the upcoming Christian canons of marriage would become very distinguishable from marriage codes of other religions. At the same time, while affirming the virtues of virginity, chastity, modesty, and other ascetic values of his cherished faith, he aggressively accused each and every woman of being “Eve” and the “devil’s gateway.” His condemnation went so far as to argue that on account of women’s desertion of divine law, they ought to be responsible for the death of Jesus and the fall of men, who were created according to God’s image. Tertullian’s rhetoric translated the Greek myth of Pandora, the first woman as the bringer of evil, from a mythic allegory to a theory and planted the roots of Original Sin, which is to be constructed as a misogynic doctrine of Christianity.

Emperor Constantine changed the destiny of Christianity through his personal conversion in

➤ TERTULLIAN, “ON FEMALE DRESS”

“Do you know that you are each an Eve? The sentence of God on this sex of yours lives in this age; the guilt must of necessity live too. You are the devil’s gateway; you are the unsealer of that forbidden tree; you are the first deserter of the divine law; you are she who persuaded him whom devil was not valiant enough to attack. You so carelessly destroyed man, God’s image. On account of your desert, even the Son of God had to die.”

—Wenxi Liu

Source

Tertullian, “On female Dress,” in Karen Armstrong, *A History of God: the 4000-Year Quest of Judaism, Christianity and Islam* (New York: Knopf), 124.

the early fourth century, which was followed by Christianity being declared as the imperial religion at the end of the century. The Christian leaders and thinkers were therefore no longer passive defenders of their faith for its survival but became determined and enthusiastic engineers for reconstructing the social and moral orders of the Roman empire, which was suffering from internal decay and external intrusions of Germanic peoples. In the whole empire, women began to be barred from priestly activities as the fourth-century Apostolic Constitution had declared. In the western part of the empire, the ideas of integrity and universality motivated bishops in Rome to patronize more aggressive intellectuals to formulate doctrines and take more assertive actions to change the religious attitudes and ethic norms of the people, including Germanic peoples migrating into the empire. To St. Ambrose (ca. 338–397), the Church should preserve its doctrines intact and prevent itself from the penetrations of false ideas by the “barbarians.” He reinvented and theorized the virginity and purity of Mary, the mother of Jesus, to protect the integrity of the Church. St. Augustine (354–430), in analyzing the fall of Rome, traced the fallibility of all humans to the original cause of Eve’s seductive persuasion of Adam to

eat the apple. Eve poisoned Adam, and Adam passed in turn the inherited guilt to all of his descendants through sexual acts. Therefore, marital sexual acts with the purpose of reproducing children were necessary, but irrational desires for sexual pleasure, which he termed “concupiscence,” ought to be condemned because they prevented humans from loving God and holding, contemplating, and enjoying happiness in God. This reasoning appears to echo Tertullian’s rhetoric, but St. Augustine aimed less to repudiate any specific heresies of his time than to invent and elaborate a general and intrinsic moral flaw of the female gender and therefore, founded the universal doctrine of Original Sin. This idea was quickly adopted by the Catholic Church as a very fundamental terminology in its constructions of theological doctrines and canon laws through its successive campaigns to denigrate sexuality in general and degrade women specifically.

The total exclusion of women from priestly missions and the theological doctrine of Original Sin constituted two of the most crucial components of the female gender distinction of the Catholic culture. It was excessive, because no other peoples in the Roman world, including the Orthodox Christians, cast such a catastrophic light on Eve and thus condemned women by the misogynic and general term of Original Sin. It was also ironic, because women living with such negative and pervasive judgment continued to fight for their liberation through their faith in Jesus and through their defiant ideas against the perversity and absurdity of the gender distinction.

—Wenxi Liu

Bibliography

- Fiorenza, Elisabeth Schussler. *In Her Memory: The Feminist Theological Reconstruction of Christian Origins*. New York: Crossroad Publishing, 1983.
- Kraemer, Ross S., ed. *Her Share of the Blessings: Women’s Religions among Pagans, Jews, and the Christians in the Greco-Roman World*. New York and Oxford: Oxford University Press, 1992.
- Kraemer, Ross S., ed. *Maenads, Martyrs, Matrons, Monastics: A Sourcebook on Women’s Religions in the Greco-Roman World*. Philadelphia: Fortress, 1988.

Liebeschuetz, J. H. W. G. *Continuity and Change in Roman Religion*. Oxford: Oxford University Press, 1979.

Pelikan, Peroslav. *Mary through the Centuries: Her Place in the History of Culture*. New Haven, CT, and London: Yale University Press, 1996.

Pomeroy, Sarah B. *Goddesses, Whores, Wives, and Slaves: Women in Classical Antiquity*. New York: Schocken Books, 1975.

Changing Definitions of Gender and Gender Roles in Jainism and Buddhism

As with caste, traditional gender roles as conceived in the orthodox Brahmanical Vedic worldview were challenged by the *śramana* or “striver” movement, of which both the Jain and Buddhist traditions were a part. Although there is some evidence of relative independence for women in ancient Hindu texts such as the *Bṛihadaranyaka Upanishad* and the *Mahabharata*, both of which include strong, assertive female characters, the eventual trajectory of the Brahmanical tradition was in the direction of a subordinate role for women of all castes to their fathers, husbands, and sons (each of these male characters being dominant at varying stages of a woman’s life).

The more relatively liberal and flexible attitudes toward both caste and gender evident in the Jain and Buddhist traditions can be explained in part on the basis of the process of urbanization. It was in urban centers that Jainism and Buddhism had their greatest appeal, and it was in such centers, increasingly common in the middle to late first millennium BCE, that one typically found less rigidly defined caste and gender roles. In fact, such a pattern remains in place in India to the present and is arguably universal. In rural areas, traditional social roles tend to be more rigidly fixed. In urban areas, there is greater social mobility. Besides the textual evidence just mentioned, there is also a good deal of archaeological evidence for a more prominent role for Indian women in urban areas in ancient times, such as inscriptions in which wealthy women have donated funds to the Jain or Buddhist communities for the establishment of mo-

nastic centers or for the feeding on a mass scale of Jain and Buddhist monks.

The first and most obvious place in which Jainism and Buddhism give greater prominence to women is in their monastic traditions. Both Jainism and Buddhism make allowance for women as well as men to take monastic vows. There are Jain and Buddhist nuns, *sadhvis* and *bhikshunis*, respectively, as well as Jain and Buddhist monks, *munis* and *bhikshus*, as they are commonly known in their respective traditions.

The presence of nuns as well as monks in both traditions suggests a belief that women as well as men are capable of attaining the ultimate spiritual goal: liberation from rebirth, known as *moksha* or *nirvana* in both traditions. Indeed, Jain and Buddhist texts are quite explicit in this regard. In the Brahmanical tradition, on the other hand, by the time of the rise of Jainism and Buddhism, it had become customary to believe that one had to be born a male Brahmin in order to be eligible to engage in the monastic practices necessary for the attainment of liberation.

The relative prominence of women in Jainism and Buddhism, however, should not be taken to suggest that these movements were feminist in any sense that would be likely to be recognized in the modern era. In both traditions, women are still subordinate to men. A Buddhist nun, even if she is in her nineties and has been a nun for most of her life, is still junior to a Buddhist monk, even a small boy who has been ordained only a few hours earlier. Indeed, the Jain tradition is divided with regard to the ability of women to engage in monastic practice and attain liberation. The Digambara tradition asserts that a woman is not eligible to engage in the needed practices (which, for Digambara monks, include the practice of mandatory nudity). The Shvetambara Jains, on the other hand, see women as being as capable as men of attaining liberation.

Despite the relative prominence of women in Jainism and Buddhism as compared with the Brahmanical traditions, rebirth as a woman is still seen in both traditions as an unfortunate rebirth and as an impediment to the process of achieving enlightenment. All three traditions—Jain, Buddhist, and Brahmanical—have undergone change



Nuns at the entrance to a temple on Mandalay Hill, Myanmar (formerly Burma). (Marcus Brown)

in subsequent centuries, and versions of feminism now exist in all three. But in ancient times, this was not yet the case.

—Jeffery D. Long

Bibliography

- Cabezón, José Ignacio, ed. *Buddhism, Sexuality, and Gender*. Albany: State University of New York Press, 1992.
- Jaini, P. S. *Gender and Salvation*. Delhi: Munshiram Manoharlal Publishers, 1991.

Gender Roles in China

The Chinese classics, which represent a wide spectrum of views and perspectives, say different things about the role of women within society. Like parts of the Old Testament, some classics, such as the *Book of Odes* (*Shijing*), eighth century BCE, celebrate expressions of female sensuality and erotic love. By contrast, other classical texts, which date much later than the *Book of Odes*, stress the importance of disciplining female desires and erotic power. Liu Xiang's (ca. 79–8 BCE) *Account of Exemplary Women* (*Lienüzhuan*), for instance, glorifies a beautiful widow who was pursued by a king. Refusing to remarry because she saw it as an act of unfaithfulness to her deceased husband, she cut off her nose so as to discourage future suitors. Some other texts, such as the *Spring and*

➤ MOTHERS AND SONS IN HAN CHINA

The great eulogist and official Cai Yong (132–192 CE) wrote an inscription for Ma Lun (d. 183), on the request of her two sons.

“She did not enjoy old age
With long years.
She is gone and will not return,
She has sunken deep into the great darkness.
Alas, sorrowful, indeed!
Tables and mats are set but unused.
The curtains and canopies have been put out in
vain.
Her things are still there.
We do not see her person.
Her ghost drifts about.
How could we pacify her spirit?”

Although scholars tend to see Chinese society as patriarchal, early Chinese elite men, such as Cai Yong, recognized the central importance of the mother-son tie. In the passage above, Cai Yong depicts that the loss of a mother could alter the survivors’ perception of their home environment. Quite strikingly, accounts of sons mourning their mothers far outnumber those by fathers in the Han period.

—Miranda Brown

Source

Cai Zhonglang *ji*, 6:5b–6b, translated by author.

rose to become virtual heads of state. During the Western Han (206 BCE–25 CE) period, Lü Zhi, wife of the first Han emperor, ruled the empire from 187 to 179 BCE. Assessments of Lü Zhi are mixed. Ancient historians, such as Sima Qian (ca. 145–90 BCE) made much of Lü Zhi’s personal ambitions for her own natal family, which almost led to the end of the Han dynasty. They also stressed her ruthlessness and capacity for violence. Yet by most accounts Lü Zhi was an able ruler and stateswoman. She helped her husband, the first emperor, establish Han rule over the empire during the civil war. More strikingly, her rule coincided with a period of great prosperity and peace for commoners, and she appears to have been a benevolent ruler. The second female virtual head of state was Deng Sui (81–121 CE), who had been the consort of Emperor He (r. 89–105 CE) of the Eastern Han (25–220 CE). Widowed at the age of 25, Deng Sui became the dowager empress, and she ruled the Han empire as the *de facto* ruler from 106 to 121 CE. Modern commentators generally agree that she was an able ruler.

Aside from the consorts of emperors, noble women acquired fame and influence in Han China through their scholarship. Although it is not clear to what extent noble women were literate, a number of them distinguished themselves through their writing. The most famous woman author was Ban Zhao (ca. 48–120 CE), the sister of the famous historian Ban Gu (32–92 CE). Ban Zhao was the author of a number of influential memorials, which she forwarded to the court when it was under the control of Deng Sui. Ban Zhao was also a noted historian. After the execution of her brother, Ban Gu, Ban Zhao took responsibility for completing the court-sponsored *History of the Former Han* (*Hanshu*), on the instigation of Emperor He. She is also famous for her *Precepts for Women* (*Nüxun*), which was addressed to her daughters. There, she urged them to be faithful to their husbands and avoid remarriage.

In contrast to noble women, information about low-status women is rather thin. Yet what evidence survives suggests that low-status women had considerable control over property. As a will dating to 5 BCE reveals, they had the power to inherit property and to distribute it as

Autumn Annals of Lü (*Lüshi Chunqiu*, ca. 237 CE) and *Master Han’s Illustration of Didactic Application of the Classic of Songs* (*Hanshi waizhuan*, ca. 150 BCE), present women as stern and sagacious counselors who used their eloquence and wisdom to persuade rulers to adopt effective policies. Still other texts, such as the *Sayings of the State* (*Guoyu*, fourth–third century BCE), depict the licentiousness of women and the chaos that ensues when women are allowed to interfere with state business.

Noble women wielded considerable power at court during the Warring States (453–221 BCE) and Han (206 BCE–220 CE) periods. Less is known about powerful Warring States women, but during the Han dynasty a number of women

they pleased, even if it meant disinheriting sons in favor of daughters.

Han households drew a distinction between principal wives (*fu*) and concubines (*qie*). Wives tended to be from families of close to equal or equal status to the husbands' families. The sons of wives were the true heirs of their fathers. Concubines, which were the luxury of high-status men, tended to come from lower-status families and enjoyed fewer privileges than principal wives. Women from families with means tended to marry early, most likely in their midteens. Marriage was arranged, and generally their husbands, unless they were widowers, were only a few years older. Women in ancient China faced high infant mortality and the dangers of death from childbirth. While classical authorities frowned on divorce and widow remarriage, both appear to have been fairly common in elite circles as well as lower down the social ladder.

—Miranda Brown

Bibliography

- Brown, Miranda. "Mothers and Sons in Warring States and Han China, 453 B.C.-A.D. 220." *NAN NÜ: Men, Women and Gender in Early and Imperial China* 5(2) (2003): 137-169.
- Hinsch, Bret. "Women, Kinship, and Property as Seen in a Han Dynasty Will." *T'oung Pao* 84(1-3) (1998): 1-20.
- Nylan, Michael. "Golden Spindles and Axes: Elite Women in the Archaemenid and Han Empires." In *Early China/Ancient Greece: Thinking through Comparisons*, edited by Steven Shankman and Stephen W. Durrant. Albany: State University of New York Press, 2002.
- Raphals, Lisa. *Sharing the Light: Representations of Women and Virtue in Early China*. Albany: State University of New York Press, 1998.

Gender Roles as Revealed on Moche Pots

The Moche, most likely the first ancient Andean society to achieve state-level social complexity, organized specialized centers of production for elite sumptuary goods in the form of textiles, metals, and ceramics. The hand-modeled and -molded ceramics that artisans produced, many elaborately painted, provide scholars with an



Stirrup-spouted vessel depicting a copulating couple, Moche culture, Peru, 100–600 CE. (Werner Forman/Art Resource, NY)

iconographic database for interpreting how women were depicted in Moche art and, by extension, the roles they assumed in Moche society. Generally speaking, women infrequently appear in the entire Moche ceramic inventory, but when they do, they are represented most often as mothers or sexual partners on the vessels produced during Phases I–II (ca. 100–400 CE). Beginning in Phase III and continuing throughout Phases IV and V (ca. 400–800 CE), high-status women occupied more prominent roles in scenes of sacrifice, death, and other religious activities painted in the fine-line style.

Painted and sculptural figures are typically identified as female if they manifest one or more of the following qualities: visible genitals; long hair, often braided; a long shirt or dress with a wide waistband; paraphernalia strongly associated with women (e.g., needles, spindles); and a relationship between figures in which it is reasonable to assume that one of the figures is female (e.g., mother and child, couples engaged in sexual intercourse). One of the earliest and most common iconographic representations of women is that of mother. Moche women are portrayed delivering newborns, nursing infants, and nurturing small children. Moche women are also seen engaged in a variety of sexual relations (anal sex, vaginal sex, and fellatio) with human men but

also with supernatural and skeletal beings. Moche artisans painted other feminine roles pertaining to the domestic sphere with less frequency, but they include preparing food; the making of *chicha*, a type of beer brewed from maize; and weaving with backstrap looms. A Moche IV flaring bowl in the British Museum illustrates a specialized weaving workshop according to Cristobal Campana, who cites it as evidence of women's economic activity during the transition to state organization. Archaeologists working in the Virú Valley have also uncovered weaving implements in female burials, providing additional support to the supposition that women produced wealth by weaving either in a domestic or extradomestic context or perhaps both.

The rise of the Moche state in Phases IV and V coincides with the portrayal of women in positions of social, political, and religious importance. Women operated as shamans and healers, provided a supporting role in organized hunts of both deer and sea lion, and participated in mortuary practices as offering bearers and musicians. At the same time they also entered the iconographic record as supernatural beings according to scholars Anne Marie Hocquenghem and Patricia Lyon, who identified four contexts in which anthropomorphic supernatural fe-

males appear: animated objects, moon/boat, the Presentation or Sacrifice Ceremony, and the Burial Theme. Negative evidence culled from the corpus of Moche imagery suggests that women did not participate in many types of activities (e.g., ceremonial coca chewing, gathering land snails, engaging in ritual battle), and only one of the famed portrait jars known to iconographers displays a female portrait.

—Whitney Leeson

Bibliography

- Alcalde, Cristina. "Leaders, Healers, Laborers, and Lovers: Reinterpreting Women's Roles in Moche Society." In *Ungendering Civilization*, edited by K. Anne Pyburn. New York: Routledge, 2004.
- Arsenault, Daniel. "The Representation of Women in Moche Iconography." In *The Archaeology of Gender: Proceedings of the Twenty-second Annual Chacmool Conference*, edited by Dale Walde and Noreen D. Willows. Calgary: University of Calgary Press, 1991.
- Bourget, Steve. *Sex, Death and Sacrifice in Moche Religion and Visual Culture*. Austin: University of Texas Press, 2006.
- Hocquenghem, Anne Marie, and Patricia J. Lyon. "A Class of Anthropomorphic Supernatural Females in Moche Iconography." *Nawpa Pacha* 18 (1980): 27–48.

■ Introduction: Education

For most people who lived from 1000 BCE to 300 CE, formal education played a minimal role in their lives if it played any role at all. Education was primarily informal. People learned what they needed to know first at home with their families and then while working within the community at large. Most knowledge was gained through practice (learning by doing) or through informal oral means, perhaps from elders within the community or certain individuals (like religious practitioners) with specialized knowledge. However, this was not the case in all parts of the world. The following section of the encyclopedia introduces those types of formal education for which there is evidence from 1000 BCE to 300

CE. Education in the Near East and Egypt remained similar to that in previous periods, so those interested in those regions should consult that section of the encyclopedia.

—Kevin M. McGeough

Greek and Roman Education

Education in ancient Greece and Rome developed on different sets of priorities given the current political and social necessities viewed as important by contemporaries. In classical Greece, Greek city-states such as Athens and Sparta sought to implant good citizenship as

well as provide a well-rounded education for mostly their male population. Greek philosophy, rhetoric, and literature were incorporated into the curriculum, as they were seen as pivotal in provoking thought and stirring pride in Greek cultural achievement. In Hellenistic Greece, Greek education reached its zenith as the fields of medicine, law, and philosophy were extended across the successor kingdoms of Alexander's realm. As Rome expanded in the Mediterranean world, its contact with Greek culture had a significant impact on Roman views on education. While Roman education remained primarily aimed toward practicality, Greek philosophy, language, and rhetoric made headway from the Republic to the Empire periods.

Greek education in classical Athens was geared toward molding mostly elite Athenian men into model citizens who were not only capable of defending the city-state from its enemies but were also familiar with the civic responsibilities and duties of the citizen. Furthermore, Athenians were also well rounded in Greek literature, arts, drama, and philosophy, as these were seen as key in the development of the mind and to instill pride in Greek culture. Greek education emphasized such work as Homer's *Iliad* and *Odyssey* to inculcate myriad Greek historical origins. Early in their education, Athenian boys were made to learn proper grammar, as they would later be expected to use the Greek language for rhetoric and philosophy. Rhetoric, or the art of constructing a persuasive argument, was a key component in Greek education, as it was seen as a means to prepare men for professions in law or for their expected political roles in Athenian democracy. Physical education was also deemed important in the Greek curriculum as a means to imbue students with strength, grace, and beauty through exercise and sport. Greek education in Sparta differed from that of Athens in that it emphasized martial skills far more than it emphasized reading and writing. Women were excluded from learning altogether in classical Greece, as they were relegated to the household and were deemed intellectually inferior to men.

In the Hellenistic period of Greek history, as Greek civilization spread throughout vast regions of the Mediterranean world, the emphasis



Greek red-figure vessel shows students at the Athenian school learning to play the lyre (left); and being instructed in speech, from Cerveteri, 480 BCE. (Jupiterimages)

on instilling pride in Greek civilization became manifest in Hellenistic education. The concept of *paideia* (translated loosely as “education”) became prevalent during this period, as education was seen as a means to instill proper virtues as well as pride in Greek civilization across the Hellenistic ecumene. While emphasizing proper grammar, diction, and elocution, *paideia* also instilled a set of common Greek values. It provided elite men with indoctrination into the ideals and expectations of the Hellenistic intellectual and cultural elite similar to what had been expected in the days of the independent city-states but more associated with the current political situation. *Paideia* created a network of individuals who shared a common education, language, and set of values that extended throughout the Hellenistic world. Furthermore, new centers of learning emerged in the expanded Greek world, such as Alexandria, and these centers became symbols of the extension and glory of Greek civilization. Developments in astronomy, medicine, philosophy, and law, among other scholarly disciplines, further augmented the progress of Greek academia during this period. The great philosophers, Socrates, Plato, and Aristotle, became prevalent as works studied by Greeks throughout the Hellenistic world.

As it existed in the orbit of Hellenistic civilization for centuries, Roman society was deeply

THE LYCEUM

The Lyceum, a gymnasium (school) outside the city of Athens, was a sanctuary to the god Apollo. Greek philosopher Aristotle founded his school of philosophy, known as the Peripatetics, there in 335 BCE and was head of the Lyceum until 322 BCE. The Lyceum was somewhat of an informal educational institution where scholars conducted philosophical and scientific projects and debated over the results. The Lyceum served as a center for Greek learning for centuries, most notably in the field of philosophy, until it was sacked by the Roman general Lucius Cornelius Sulla in 86 BCE. It was subsequently rebuilt, but it never again reached its prior prominence as the intellectual center of the Hellenistic world.

—Abraham O. Mendoza

influenced by Greek educational institutions. Early Roman education focused on shaping Roman men as soldiers and citizens, with the greater focus on the latter. Much as in classical Greece, Roman education emphasized Roman origins, particularly using Livy's *Virgil*, which offered a founding myth for Roman civilization, to stress what were deemed Roman virtues as well as to instill republican values. As the Roman republic gradually absorbed the Hellenistic kingdoms of the eastern Mediterranean as an integral part of its domains, it also attained the cultural and educational legacy that came along with it, with its emphasis on rhetoric and law. However, in Roman education, philosophy was generally deemed as pivotal only so far as it provided moral examples for Roman pupils to follow rather than ruminations on metaphysical questions.

Moreover, the Roman education system developed its own particular pattern of progression in terms of educational levels. Roman education often began in the home under the auspices of a hired tutor or educated Greek slave. While some Romans chose to hire private tutors for their children, many others chose to send their children off to school. At beginning levels, a *ludi magistor*, sometimes a slave or a poorly paid instructor, would teach at an elementary school focusing primarily on reading, writing, and arithmetic primarily in Latin but

also Greek. Papyrus, wax tablets, and the abacus were among the educational implements utilized by students for their lessons. At approximately the age of 12, Roman students advanced to the Grammaticus, where they studied Greek and Roman literature and poetry to instill proper grammar, style, composition, and history. In both these types of schools, discipline was harshly imposed on pupils. Many students were also accompanied by a pedagogue, who was a person specifically hired to make sure the student was attentive to his studies and not easily distracted. At the next level, students wishing to enter careers in politics or law studied under the *rhetor*, where they learned the skills of rhetoric, much like those emphasized under Greek learning. Compositions, speeches, and debate were heavily stressed under the rhetor.

—Abraham O. Mendoza

Bibliography

- Morgan, Teresa. *Literate Education in the Hellenistic and Roman Worlds*. New York: Cambridge University Press, 1998.
- Too, Yun Lee, ed. *Education in Greek and Roman Antiquity*. Boston: Brill, 2001.

Education in Early China

Indicative of education's overwhelming importance in China is that its greatest historical figure, Confucius, was a teacher. His goal of perfecting one's self could only be obtained through the study of classical texts, which furnished past sages' words and actions. From ancient times, the establishment of schools was an essential government duty. By 500 BCE, education was so important that private education overshadowed its public counterpart. During the Han dynasty (206 BCE–220 CE), Confucianism increasingly dominated school curriculums, thereby securing its grip on Chinese society.

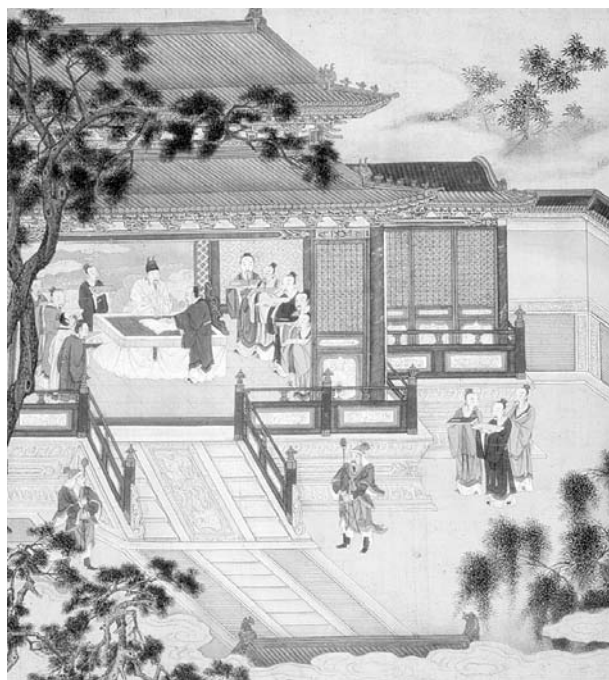
We know little about Chinese schools before 500 BCE. It is clear, though, that governments set up schools for nobles, where they were taught the six arts: ritual, archery, charioteering, music, writing, and mathematics. At this point, martial training was still an essential component of education. During the tumultuous Warring States period (481–221 BCE), the acute need for

talented men led to the emergence of private teachers who would accept paying students from any social class. The first of these masters that we know of is Confucius. This period also saw the first state-funded university, which was founded in the mid-fourth century BCE. Jixia Academy in Qi, which through generous stipends, enticed talented scholars from across China. These academicians became known as *bosbi* (gentlemen of broad learning).

During the Qin/Han period, the government once again attempted to place education under its control. The Qin state did this by banning private education and forcing students to study with officials. The Han did so by establishing public schools. The most important of these was the Taixue (Grand School), which Emperor Han Wudi (r. 140–87 BCE) established in the capital in 124 BCE. In preparation for government service, students here would receive teachings from *bosbi*. Significantly, only the Five Classics (*wujing*) were to be taught at the Grand School. These texts' primary interpreters were Confucian scholars who dominated classical learning. Wudi further mandated that local officials establish a school in each commandery (the empire was divided into 130 commanderies). Creating these institutions was the means by which officials executed their Confucian duty of *jiaohua* (transforming behavior through education). Nevertheless, by 100 CE government schools were in decline.

During the Eastern Han (25–220 CE), private schools educated most people who could afford schooling. Many scholars informally established a school in their hometown. Their disciples could number in the hundreds and even thousands. Younger students were often taught by older students rather than by the master himself. Many students would *youxue* (travel to study) with famous teachers. Private instructors taught a broader array of books than just the Five Classics.

Upon reaching the ages of seven to nine years old, boys would begin to be schooled. Adolescents between ages 15 and 18 could enter the Grand School. By the first century BCE, aristocratic girls also received classical training. Many pupils started their education by reading primers, such as the *Jijiu pian* (*Chapter on Arriving Quickly*). It was organized into seven-character



Qin dynasty emperor Hsien Ti (reigned about 189–220 CE) with scholars translating classical texts, from a history of Chinese emperors, seventeenth century. (Bibliothèque Nationale, Paris/The Bridgeman Art Library)

➤ THE STUDENT LIFE, 100 BCE

The following remarks are from the first century BCE Confucian text, the *Guanzi*. The “Dizi zhi” (Duties of Disciples) chapter furnishes the best early description of student life.

“The master’s teachings are the standards that disciples should follow. A student should be mild, respectful and self-effacing. Upon viewing good, he imitates it; upon hearing of righteousness, he submits to it. . . . He rises early and retires late. His robes and belt must be properly worn. During the day, he increases his knowledge; at night, he reviews it.”

—Keith N. Knapp

Source

Guanzi. “Dizi zhi.” XIX, 59. Translated by author.

sentences and rarely repeated words; teaching literacy was its primary object. Students would then read the *Classic of Filial Piety* and Confucius's *Analects*. Basic mathematics would also be taught. Having acquired a basic literacy, they would then study the Five Classics. It is important to note that students were primarily educated through reading classical texts that bore a strong Confucian imprint.

—Keith N. Knapp

Bibliography

- Galt, Howard Spilman. *The Development of Chinese Educational Theory*. Shanghai: Commercial Press, 1929.
- Galt, Howard Spilman. *A History of Chinese Educational Institutions*. London: A. Probsthain, 1952.
- Hagman, Jan L. "Private and Government Schools in the Han Dynasty." In *Outstretched Leaves on His Bamboo Staff: Studies in Honour of Göran Malmqvist on his 70th Birthday*, edited by N. G. D. Malmqvist and Joakim Enwall. Stockholm: Association of Oriental Studies, 1994.
- Kinney, Anne Behnke. *Representations of Childhood and Youth in Early China*. Stanford, CA: Stanford University Press, 2004.
- Lee, Thomas H. C. *Education in Traditional China: A History*. Leiden: Brill, 2000.

First Developments in Writing in Mesoamerica

The earliest Mesoamerican writing appeared more than 2,500 years ago prior to the rise of ancient states or the existence of urban centers. Four different pre-Hispanic Mesoamerican writing systems are known: the Maya, Zapotec, Mixtec, and Aztec. Each appears to include a mixture of pictographic, ideographic, and phonetic elements. The Mixtec and Aztec are known from texts written on prepared bark paper or deer skin; the Zapotec system is preserved on inscriptions carved in stone. The Mayan writing system has been preserved in late pre-Hispanic folding books (codices) as well as in a body of texts and painting on stone and pottery.

The most distinguishable feature of all Mesoamerican scripts is the highly intricate and pictorial form of signs. They are often called hieroglyphic in analogy to Egyptian hieroglyphs since their symbols are highly pictorial. For this

reason, a sign from Mesoamerican scripts is often called a glyph, as a short form of the term "hieroglyph." Visually, Mesoamerican scripts resemble each other and share many similar glyphs.

The principal subject matter of these texts was historical and sociopolitical "propaganda" regarding rulers' histories, state histories, conquests, and genealogies. These included dates, place names, and captives conquered and then sacrificed, but writing was also linked to counting of time and astronomy.

Bar-and-dot numerals are among the first recognizable written signs in Mesoamerica and probably were part of a representational system ancestral to all Mesoamerican scripts. By circa 1100 BC in the area of the Gulf Coast of Mexico appeared the first signs of what is known as the Epi-Olmec script. La Mojarra Stele is one of the first readable scripts in Mesoamerica. Discovered in southeastern Veracruz, Mexico, in 1986, this stele is a basalt slab measuring 7.6 by 4.6 feet (2.34 by 1.42 meters) with two long-count dates: May 1, 143 CE, and June 23, 156 CE. The text describes ritual bloodletting, warfare, and political intrigue during the reign of the Harvester Mountain Lord, the figure depicted on the stele. However, Stele 1 of La Mojarra is not the only example of this writing system. Most of the monuments that bear glyphs in the same (or similar) writing system are also found near the Isthmus of Tehuantepec. The famous Tuxtla Statuette bears a long-count date of 162 CE as well as noncalendric glyphs. Other famous inscriptions include Stele C of Tres Zapotes, with a long-count date of 32 BCE. In the site of Cerro de las Mesas, Veracruz, highly eroded monuments also bear long-count dates but from the Early Classic period of around 450 CE, as does a large stone version of the Tuxtla Statuette, which is devoid of any text.

—Apen Ruiz

Bibliography

- Benson, Elizabeth. *Mesoamerican Writing Systems*. Washington DC: Dumbarton Oaks, 1973.
- Justeson, John. "The Origin of Writing Systems: Pre-classic Mesoamerica." *World Archaeology* 17 (1986): 437–458.
- Kaufman, Terrence, and John Justeson. "Epi-Olmec." *Encyclopedia of the World's Ancient Languages*, edited by Roger D. Woodard. Cambridge: Cambridge University Press, 2004.

■ Introduction: Food and Cuisine

Food is not just for eating. It can act as a means of bringing people together or demonstrating differences between groups. Meals are profoundly social times, and taste in cuisine is highly variable. Given how distinctive food is from one culture to another, it should not be surprising that the experiences of cuisine vary dramatically throughout world history. While many ancient cuisines are lost to us, it is often possible for historians and archaeologists to reconstruct ancient eating habits and their cultural significance.

The following set of entries seeks to explore the different social roles of food that can be identified throughout the world from 1000 BCE to 300 CE. The religious roles of food are examined, from the use of food in ritual banquets to the establishment of dietary restrictions (such as kosher laws) based on spiritual values. Food as a status symbol and especially as a means of displaying wealth is also an important topic discussed here. And of course, the importance of food in building social relationships and, as in the case of alcohol, facilitating good relations between people is discussed as well.

—Kevin M. McGeough

Development of Dietary Restrictions in the Ancient Near East

Dietary restrictions in the ancient Near East emerged at different times and under different circumstances. In most cases, the reasons why certain plants or, more commonly, animals became prohibited for human consumption are not clear; however, issues of hygiene and health and of inappropriate behavior on the part of the animal and its reflection, if eaten, on the larger society are among the stronger candidates. Other factors were also at work. Dietary restrictions may be confined to certain time periods or events (say, a holy month or the dedication of a temple) and may include prohibitions against all food and drink (in the case of fasting). While they universally served to set off one group from

another and generally served as a religious symbol of purity, devotion, and/or status, dietary restrictions varied from region to region and changed over time. Given these complications, they should always be considered on a case-by-case basis, with careful attention to not only their historical contexts but also the nature and limitations of the evidence, which is often contradictory.

Egyptian dietary restrictions in the first millennium BCE are largely influenced by Herodotus, the “father of history.” According to him, the principal taboo animal was the pig, which was not even touched by the Egyptians because of its association with Seth, their chief deity, and his representation, the so-called Typhonic animal. The scarcity of the pig in Egyptian art lends support to this theory; however, the numerous attestations of pigs in offerings to other deities, not to mention textual and archaeological data showing that they were both reared and eaten in Egyptian society, speak against Herodotus’s claim, at least for earlier periods. Perhaps the taboo arose just before Herodotus’s day (i.e., the fifth century BCE) or was limited to certain individuals or events, as considered above. In addition, Herodotus mentions a taboo against fish, as does Diodorus of Sicily, the two differing on whether it applied to priests alone or to the entire population, respectively. Both their claims may be supported by Piya’s victory stele, which mentions such a taboo in the eighth century BCE. Here too, however, archaeological and artistic evidence suggests that the prohibition was not strictly followed.

Dietary restrictions from ancient Israel and Judah are among the best known and most comprehensive from the ancient Near East. The early roots of *kashrut*, the general set of laws dealing with religious correctness that is particularly associated with diet, are found in the Hebrew Bible (or the Christian Old Testament). There, dietary restrictions are found against the consumption of blood (Genesis 9:3–6), the “sinew of the thigh” (Genesis 32:33), the boiling of a kid “in the milk of its mother” (Exodus 23:19 and 34:26 and Deuteronomy 14:21), and the eating

► BIBLICAL DIETARY REGULATIONS—RABBITS EATING CUD

The dietary restrictions found in Leviticus 11 and Deuteronomy 14 often give further details on why a particular animal is permitted or prohibited. In elaborating on the condition that land animals must have divided hoofs and cleft feet and chew the cud, it offers the following: “But among those that chew the cud or have divided hoofs, you shall not eat the following: . . . [t]he hare, for even though it chews the cud, it does not have divided hoofs” (Leviticus 11:4–6; New Revised Standard Version). Of course, the rabbit does *not* chew the cud, but it is very reasonable—even charming—to see why this statement is here: As anyone who has seen a rabbit will attest, the constant motion of their noses makes it look like they are chewing! That is assuredly what the ancient author had in mind. Nevertheless, some commentators consider the author technically correct here since the rabbit practices refection, a process whereby it eats its own waste, thus “bringing up” the cud (i.e., chewed food) again. Had the author written the passage with this in mind, they would most assuredly have given a very different reason for prohibiting the rabbit.

—Benjamin Studevent-Hickman

of the Passover sacrifice (Exodus 12:8–14), but these are difficult to date. Aside from the prohibition against blood, which formed part of the covenant with all humanity after the flood, by far the most extensive set of prohibitions is found in the list of permitted and prohibited animals in Leviticus 11 and Deuteronomy 14, many of which bear additional explanations. According to these laws, permitted animals include land animals that have divided hoofs and cleft feet and chew the cud, with exceptions; water animals with fins and scales; birds, with certain exceptions; and winged insects with jointed legs that are used specifically for jumping (i.e., the locust, cricket, and grasshopper). These laws no doubt date to the first millennium and form part of a larger historical development whereby the ancient followers of what would become biblical texts further defined themselves and their devotion to Yahweh, their God. Of particular note

among these laws is the fact that the pig is not considered particularly unclean: it is simply one among a number of land animals that do not fit the criteria. Needless to say, the notion of dietary restrictions went to the core of Israelite thinking. According to the biblical tradition, the fact that Eve and Adam violated a dietary restriction by eating from the Tree of Knowledge of Good and Evil—the only food in the Garden of Eden narrative that was off limits to them—is the very reason that humans must ultimately work for their food.

—Benjamin Studevent-Hickman

Bibliography

- Douglas, Mary. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*. Reprint. London and New York: Routledge, 1994.
- Ikram, Salima. “Diet.” In *The Oxford Encyclopedia of Ancient Egypt*, edited by Donald B. Redford. 4 vols. Oxford: Oxford University Press, 2001.
- Schramm, Gene. “Meal Customs (Jewish).” In *The Anchor Bible Dictionary*, edited by David Noel Freedman. 6 vols. New York: Doubleday, 1992.
- Sorre, Max. “The Geography of Diet.” In *Readings in Cultural Geography*, edited with introductions and translations by Philip L. Wagner and Marvin W. Mikesell. Chicago: University of Chicago Press, 1962.

The Wine-Based Symposium in Greek Culture

The wine-based symposium served an integral social and cultural function in ancient Greece. While often translated as a “dinner party” or a “banquet,” the symposium was literally a “drinking-together” and involved only the consumption of wine, although it was preceded by a communal meal. It reflected the social segregation characteristic of ancient Greek society, as participation was limited to aristocratic males.

During the Archaic period the symposium served as an important nexus for the transmission of aristocratic values through both the performance of poetry (the poetry of Theognis is particularly illustrative of this aspect) and male bonding. The homoerotic element of the symposium was intertwined with its initiatory function during this period, for young aristocrats served



Reclining man and aulos player depicted on an Attic red-figure cup, about 500–464 BCE. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

as cupbearers and sometimes lovers to their older mentors. By the Classical period in Athens and many other cities, aristocracies had lost their dominant role in politics and society to democracies, and the symposium became marginalized, offering a private (elite) alternative to the public fora of the democracy, sometimes with a subversive political focus. Accordingly, the earlier initiatory function was no longer relevant, and the participants were now all adult male citizens.

The symposium was a highly ritualized occasion. It took place in the *andron*, the domestic chamber limited to males. Participants, usually numbering between 7 and 15, reclined on couches (a custom imported from the East) with 2 people per couch. After the removal of the dinner, which did not include wine, the guests cleansed their hands, put on garlands, and anointed themselves with perfumed oils. Then a libation (a type of offering) was made with undiluted wine (this was the only time when the Greeks did not mix their wine with water) accompanied by a hymn to the gods. One participant, the symposiarch, was selected to lead the proceedings, and he determined the ratio of water to wine (usually between three and four parts of wine to one part water), the size of cups to be used, and the number of drafts. The entertainment then commenced and consisted of conversation (facilitated by the square ar-

▶ PLATO'S SYMPOSIUM

Plato provides a literary representation in the *Symposium*. This extract, in which the doctor Eryximachus assumes the role of *symposiarch*, illustrates the unusually intellectual and erotic atmosphere of the symposium in Plato's dialogue:

"Well then," said Eryximachus, "now that it's agreed that each of us should drink as much as he wants, without any kind of compulsion, my next proposal is that we should send away the flute-girl who's just come in, and let her play for herself, or for the women in their part of the house, if she prefers, and that we should spend the evening in conversation. Also, if you're willing, I'd like to propose a topic for discussion. . . . I propose that each of us should make the finest speech he can in praise of Love, and then pass the topic to the one on his right."

—Frances Pownall

Source

Plato, *Symposium*, trans. Christopher Gill (New York: Penguin Books, 1999), 176e–177d.

range of couches in the andron), the singing of poetry (to the accompaniment of flute girls), the playing of drinking games, and the performance (sometimes overtly erotic) of dancing girls. The symposium concluded when the allotted number of drafts had been consumed, sometimes with a ritual (often drunken) procession in the street.

—Frances Pownall

Bibliography

- Davidson, James N. *Courtesans and Fishcakes*. New York: St. Martin's, 1997.
- Hunter, Richard. *Plato's Symposium*. Oxford: Oxford University Press, 2004.
- Lissarague, François. *The Aesthetics of the Greek Banquet*. Translated by Andrew Szegedy-Maszak. Princeton, NJ: Princeton University Press, 1991.
- Murray, Oswyn, ed. *Sympotica: A Symposium on the Symposium*. Oxford: Oxford University Press, 1990.
- Slater, William J., ed. *Dining in a Classical Context*. Ann Arbor: University of Michigan Press, 1991.

Roman Banquet and the Use of Food and Setting for Status Displays

Romans ate three meals during the day: breakfast (*ientaculum*), lunch (*prandium*), and dinner (*cena*). Breakfast and lunch were slight affairs often consisting of little more than a cold snack. The poet Martial ate bread and cheese for lunch, and Seneca ate a piece of bread for lunch.

The main meal of the day was the dinner that began at the eighth hour and continued until dusk. Dinner would take place in a *triclinium* (named as such after the three couches upon which the guests would recline while eating). The couches would be placed around three sides of a square table and would each house three diners. Placement was hierarchical, with the most distinguished guests reclining on the couch facing the empty side of the table—the *lectus medius*—upon which the right-hand place was the most senior. The meal itself was an elaborate one consisting of up to seven courses: the hors d'oeuvres, three entrées, two roasts, and the dessert followed by drinks.

The most famous account of a dinner party is that of C. Pompeius Trimalchio that is recounted in Petronius's satirical *Satyricon* written during the reign of the emperor Nero (54–68 CE). Trimalchio dazzles his guests with an array of fabulous foods: iced water from Alexandria, dormice in honey and poppy seed, peahen eggs, a dish made

up of foods representing the different signs of the zodiac, and an imitation goose garnished with fish and birds that is in fact made of pork. In Juvenal's account of a dinner hosted by Virro, the guest of honor enjoys crayfish, goose livers, African truffles, and freshly baked bread. Dinners were enlivened with suitable entertainment: Trimalchio has acrobats, trumpeters, a flautist, and comic actors. According to Suetonius, the emperor Augustus entertained his guests with performers, pantomimes, circus performers, and storytellers. The emperor Hadrian provided tragedies, comedies, farces, musicians, readers, and poets.

Although the Roman Senate sought to restrict the excesses of dinner parties, the Lex Fannia of 161 BCE sought to limit the number of guests and the amount that could be spent on food. These events remained important opportunities for high-class Romans to display their wealth and patronage. According to Cicero, it was important for a man of status to enjoy housing appropriate to his status. The efforts of the Senate were not successful, and the owner of the House of the Moralist in Pompeii decorated his triclinium with admonishing graffiti: "Keep your wanton expression and flirty eyes off another's wife. Show some restraint!"

—Benedict Lowe

Bibliography

- Dalby, Andrew. *Empire of Pleasures: Luxury and Indulgence in the Roman World*. New York: Routledge, 2000.
- Donahue, John F. *The Roman Community at Table during the Principate*. Ann Arbor: University of Michigan Press, 2004.
- Faas, Patrick. *Around the Roman Table: Food and Feasting in Ancient Rome*. Chicago: University of Chicago Press, 2005.
- Gowers, Emily. *The Loaded Table: Representations of Food in Roman Literature*. New York: Oxford University Press, 1993.
- Slater, William J., ed. *Dining in a Classical Context*. Ann Arbor: University of Michigan Press, 1991.

Social and Religious Uses of Food in Vedic India

In ancient India, religious merit, social status, political power, and interpersonal relations all depended on food and food transactions. From



Triclinium of the House of the Ephebe, Pompeii. (Benedict Lowe)

at least the time of the Vedas (ca. 1300 BCE), food was a central requirement for religious rituals. During the Vedic fire sacrifice, priests placed a variety of food substances into the ritual fire. The fire sacrifice was said to be a powerful way of acquiring benefits in both this world and the next. Agni, the god of fire, was thought to carry the oblations to the rest of the deities. Offerings of milk, clarified butter, grains, and meat were common, as was a hallucinogenic drink made from the plant soma. The priests performing the sacrifices and the sponsors paying them would receive a share of many of these foods. For example, a sacrificed animal would be butchered, with part placed in the sacrificial fires and the remainder given to the priests and sponsor. The rise of Buddhism and Jainism in the sixth century BCE challenged this system. Both religions rejected the Vedic claim that sacrifices would ensure the sacrificer a heavenly reward. Instead, they stressed the horrific karmic consequences of such sacrifices. Jainism in particular required that its adherents maintain a vegetarian diet, and likely due to Jainism's influence on general Indian culture, vegetarianism came to be adopted by many Hindus.

When Vedic sacrifices were replaced by temple-based worship in the first millennium CE, people continued to use food in worship. During the typical *pūja* (worship ritual), a statue of the deity is given fruit or cooked food to eat and is bathed in milk, melted butter, honey, and similar substances. The foods and liquids from the ritual are called *prasād* and are consumed afterward by worshippers. This was thought to convey the deity's blessing to the devotee. Many deities are thought to have a fondness for particular foods, such as the god Krishna's fondness for butter. That Krishna spent his youth as a cowherd likely contributed to the Hindu avoidance of beef.

Food and food transactions signaled social status and shaped interpersonal relations. Different social groups followed different diets. At the beginning of the Common Era, legal codes such as *The Laws of Manu* provided guidelines on what foods were permitted. They also forbade members of different castes from dining together. The higher in status a caste, the more restrictions existed on what foods its members

➤ LAWS OF MANU ON FOOD

"You may eat meat that has been consecrated by the sprinkling of water, or when priests want to have it, or when you are properly engaged in a ritual, or when your breath of life is in danger. The Lord of Creatures fashioned all this (universe) to feed the breath of life, and everything moving and stationary is the food of the breath of life."

—Katherine Ulrich

Source

Wendy Doniger with Brian K. Smith, trans., *The Laws of Manu* (New York: Penguin, 1991).

might eat. Although it is difficult to say how widely the rules were followed, some at least would have adopted them. Many high-caste groups were vegetarian, particularly members of the priestly caste. The third-century BCE emperor Aśoka, influenced by Buddhism and Jainism, claimed in one of his edicts that the many animals once killed in the royal kitchens had been reduced to a single deer and two peacocks. Kings were expected to provide alms for religious mendicants, and many left records indicating that they did so.

—Katherine Ulrich

Bibliography

- Achaya, K. T. *Indian Food: A Historical Companion*. Delhi: Oxford University Press, 1998.
- Bühnemann, Gudrun. *Puja: A Study in Smarta Ritual*. Vienna: Institut für Indologie der Universität Wien, 1988.
- Khare, R. S., ed. *The Eternal Food: Gastronomic Ideas and Experiences of Hindus and Buddhists*. Albany: SUNY, 1992.

Food and Its Uses in Chinese Religion and Social Life

Food was of overriding significance in early China. It was the glue of Chinese political, religious, and social life. It bound men to each

➤ WARNINGS ABOUT FOOD IN THE *DAO DE JING*

The *Dao De Jing* warns readers about the dangers of concerning oneself with material luxuries such as food in place of religious and spiritual issues. Chapter 35 argues that whereas food and music may appear to be more interesting than philosophical inquiries, the value of following Daoist practices is priceless. It reads: “Passersby may stop for music and good food, But a description of the Dao Seems without substance or flavor. It cannot be seen, it cannot be heard, And yet it cannot be exhausted.” Chapter 53 warns about hoarding wealth, including food. It reads: “Some wear gorgeous clothes, Carry sharp swords, And indulge themselves with food and drink; They have more possessions than they can use. They are robber barons. This is certainly not the way of Dao.” Both are situations where the love of food was thought to lead practitioners away from the Dao.

—Kevin M. McGeough

Source

Translations from Gia-fu Feng and Jane English, *The Tao Te Ching* (New York: Vintage Books, 1989).

other, the living to the dead, and even people to the gods. Food was used to demarcate social status; in this society you truly were what you ate. How one ate was also a serious matter that disclosed one’s moral character and upbringing. What one consumed also could earn one religious merit or even immortality.

During China’s earliest historical dynasties, the Shang and the Western Zhou (1045 BCE to 771 CE), food was of central political importance. Early rulers believed that their state’s welfare depended upon their powerful ancestors’ goodwill. Nothing was more important than keeping them happy. Rulers did so by nourishing them with offerings of food and drink. Doing so was of such importance that the dead were interred with ritual bronzes, enabling them to continue to make sacrificial offerings in the afterlife. By the late Warring States period, the sacrifice of food was so momentous that the possession of nine mythical bronze tripods, a type of offering vessel, became a symbol of imperial

legitimacy. Food connected humans to deities and ghosts who likewise needed offerings of food and drink. However, the food offered to them was raw or uncooked, indicating their separation from humans.

Food was an essential indicator of social status and hierarchy. In pre-Qin China, meat left over from the sacrifice (since the spirits will only ingest the meat’s essence) would then be distributed to friends and allies. The quantity of blessed meat one received indicated one’s importance; as a result, aristocrats were called meat-eaters. In early imperial times, food continued to be used to indicate one’s status. People regarded meat, wine, and rice as upper-class foods, while vegetables, millet, beans, and water were lower-class foods. For instance, upon inviting the well-known literatus Guo Tai to his home, the filial son Mao Rong slaughtered a chicken, which Guo thought was meant for him. Mao instead fed it to his mother, while he and Guo shared a meal of vegetables. By treating his mother with such esteem, he earned Guo’s admiration. Upper-class people who wanted to display frugality and selflessness would eat lower-class fare.

Feasting was the central feature of all social events. For the vast majority of people, these must have been among the brightest moments of life: sharing good food, drink, and conversation with people who mattered to you. Since music was performed and acrobats and jesters supplied entertainment, banquets among the upper class must have been particularly enjoyable. This is probably why depictions of feasts are so common in Han dynasty mortuary art. Nevertheless, banquets fulfilled important social functions as well. They reinvigorated feelings of solidarity and group identity while underscoring the group’s hierarchy; those who sat closest to the host were obviously the most important. Feasts were also a means to motivate a person to act on your behalf; lavishly feeding someone was a means of creating a debt of obligation in the recipient. Since elaborate regulations governed behavior at these communal meals, they also furnished an opportunity to gauge a man’s character and knowledge of etiquette.

Eating in itself was an important religious act. For Daoists, one could achieve immortality by avoiding consumption of ordinary food; in-

stead, one ingested spiritually enriching nutrients, such as *qi* (energy, ether), medicinal plants, and mineral-based elixirs. Daoists and Buddhists thought that at sacrificial banquets lay devotees should avoid impure food, such as meat or the five strong-smelling vegetables (such as garlic and onions). Concerns with the ethical implications of killing animals for food later led Chinese lay Buddhists to embrace vegetarianism.

—Keith N. Knapp

Bibliography

- Chang, K. C., ed. *Food in Chinese Culture: Anthropological and Historical Perspectives*. New Haven, CT: Yale University Press, 1977.
- Kleeman, Terry F. "Licentious Cults and Bloody Victuals: Sacrifice, Reciprocity, and Violence in Traditional China." *Asia Major*, 3rd series, 7(1) (1994): 185–211.
- Knapp, Keith N. "Reverent Caring: The Parent-Son Relationship in Early Medieval Tales of Filial Offspring." In *Filial Piety in Chinese Thought and History*, edited by Alan K. L. Chan & Sor-hoon Tan. London: RoutledgeCurzon, 2004.
- Knechtges, David R. "A Literary Feast: Food in Early Chinese Literature." *Journal of the American Oriental Society* 106(1) (1986): 49–63.
- Lagerwey, John, and Marc Kalinowski, eds. *Early Chinese Religion, Part One: Shang through Han (1250 BC–220 AD)*. 2 vols. Leiden: Brill, 2009.
- Sterckx, Roel, ed. *Of Tripod and Palate: Food, Politics, and Religion in Traditional China*. New York: Palgrave Macmillan, 2005.

Use of Wine, Beer, and Mead in Celtic Society

Consumption of alcoholic beverages was an important element in Celtic cultures in late prehistory. Containers for alcoholic drinks have been found in many of the elite burials across prehistoric Europe and testify to the importance of alcohol in burial rites. The most prominent examples are the Krater (mixing bowl) from the late Hallstatt burial in Vix, France, a Greek import, with a volume of approximately 37,206 ounces (1,100 liters), and the bronze cauldron from the late Hallstatt burial from Hochdorf, Germany, with a volume of approximately 16,912 ounces (500 liters). The contents of the latter have been analyzed and produced evi-



Bronze krater, the "Vase de Vix," from the tomb of a princess of Vix, Greek, sixth century BCE. (Musée Archéologique, Chatillon Sur Seine, France/Giraudon/The Bridgeman Art Library)

dence that it contained honey-mead or sweetened wine. The Hochdorf burial also contained nine drinking horns, the largest of which was 4 feet (1.2 meters) long and had a volume of approximately 186 ounces (5.5 liters). Similarly, the two flagons from the early La Tène burials 1 and 2 from Glauberg, Germany, most likely contained honey-mead, with the honey used at least partially imported from areas well over 62 miles (100 kilometers) from the actual burial site.

Further evidence is provided by the goods imported into Iron Age central and western Europe from the Mediterranean zone, most of which clearly are associated with the consumption of alcoholic beverages. This starts out as early as the late Hallstatt period, with Greek wine amphorae and wine drinking cups being the primary import goods. It continues throughout much of the early La Tène period, where northern Italian beaked flagons as well as local imitations frequently appear in elite burials as the main item of southern import. The peak of imported wine, however, is reached during the late second and first centuries BCE during which

► A GREEK HISTORIAN DISCUSSING THE GAULS' DRINKING HABITS

They [the Gauls] are so exceedingly given to wine, that they guzzle it down as soon as it is imported by the merchant, and are so eager and inordinate, that making themselves drunk, they either fall dead asleep, or become stark mad.

—Raimund Karl

Source

The Historical Library of Diodorus the Sicilian: In Fifteen Books. To which are Added the Fragments of Diodorus, and Those Published by H. Valesius, I. Rhodomannus, and F. Ursinus By Diodorus, translated by George Booth (London: Published and Printed by W. McDowall for J. Davis, 1814), 313.

imported wine amphorae are found in Gaul, southern Germany, and southern Britain, in such high numbers that estimates speak of more than 353,000 cubic feet (10,000 cubic meters) being imported annually.

While consumption of alcoholic beverages seems to have generally been widespread in late prehistoric Celtic Europe, high-status drinks, particularly imported wine and possibly also locally produced honey-mead, seem to have played major roles in the region's political economy and the legitimization of power. There is historical evidence of Celtic chieftains providing lavish feasts for their respective communities in which the consumption of imported wine seems to have played a major role, indicating that the ability to procure larger amounts of such drink was important in creating and maintaining power relationships.

—Raimund Karl

Bibliography

Arnold, B. "Drinking the Feast: Alcohol and the Legitimation of Power in Celtic Europe." *Cambridge Archaeological Journal* 9(1) (1999): 71–93.

Dietler, M. "Driven by Drink: The Role of Drinking in the Political Economy and the Case of Early Iron Age France." *Journal of Anthropological Archaeology* 9 (1990): 353–406.

■ Introduction: Leisure

The origins of many of the types of leisurely pursuits that we engage in today can be found in the world cultures that existed from 1000 BCE to 300 CE. This was the time when reading (as opposed to listening to stories read aloud by another) became an important activity in Europe, Asia, and parts of North Africa. Music and dance continued from previous periods, but the traditions of Europe, India, and China today are in many ways still influenced by the traditions of this earlier time. Likewise, the Greek theater provided a model for dramatic performances that has been so powerful that Greek plays are still performed today. Even the basic layout of a modern theater is that established by the Greeks and further modified by the Romans. Sport, as we think of it today, is rooted in this Classical period, from the activities that one might pursue in a gymnasium (an

institution first found in Greece) to watching a football match (with its origins in Mesoamerica) in a large public arena (with its origins in the amphitheaters of the Romans).

—Kevin M. McGeough

Development of the Concept of Sport in the Greek World

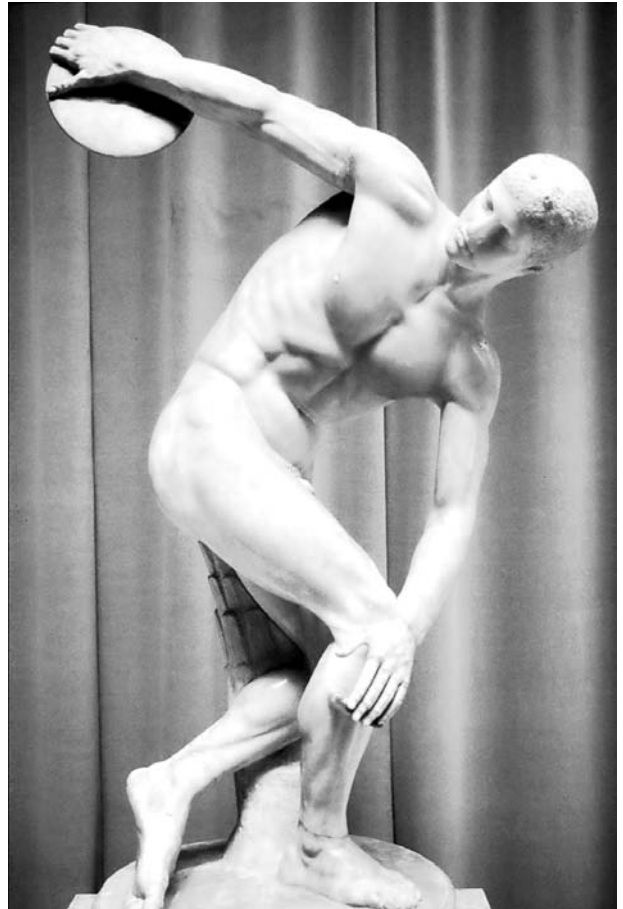
Athletics and religion were inextricably linked for the ancient Greeks from the first recorded references to athletic contests in Homer. In the *Iliad*, Achilles holds funeral games in honor of his close friend, Patroclus, that include a chariot race, a footrace, wrestling, and boxing. These became the main athletic contests in later periods of Greek history. The belief that the gods

were interested in and pleased by the results of excellence (*arete*) in individual competition is omnipresent throughout the Homeric epics and resulted in the incorporation of athletic contests into religious festivals in honor of specific deities.

By the beginning of the Archaic period, regular Panhellenic (that is, open to all Greeks) festivals arose in which the wealthy elite competed with one another outside their local community. The athletes competed in the contests, whereas the spectators competed in the wealth and splendor of the offerings they made to the gods (eventually large treasure houses were built at the sites of the festivals to hold these costly gifts). These Panhellenic festivals contributed to the cultural unity of the Greeks, who remained politically divided especially in opposition to their foreign neighbors, whom the Greeks called barbarians (non-Greek speakers).

The earliest Panhellenic festival was the Olympic Games in honor of Zeus in the remote site of Olympia in the northwestern Peloponnese. According to a list of Olympic victors compiled in the fifth century BCE, the first games were held in 776 BCE, although Greek tradition holds that the games were founded either by Heracles or by the hero Pelops to commemorate his victory in the chariot race over a local king. The only event in the first Olympics was a sprint of about 656 feet (200 meters), but over time more footraces along with other events were added. The Olympic Games were held every four years in the late summer. By the fifth century BCE the Greeks had developed a standardized dating system based on the four-year periods in between the Olympic Games.

During the late seventh and sixth centuries Panhellenic festivals were instituted at other sanctuaries. The Pythian Games at Delphi honored Apollo, the Isthmian Games honored Poseidon and took place near Corinth, and the Nemean Games were held in Argolid in honor of Zeus. These festivals formed a circuit around central Greece, more specifically the commercial hub of Corinth, and were held at either two-year or four-year intervals. They were staggered in order to allow a competitor to compete in either one or two major venues each year. The Olympics remained the most prestigious venue



Roman copy of the fifth-century-BCE bronze original of Myron's Discobolus. (Corel)

and was normally accompanied by a sacred truce banning interstate conflict. This permitted safe travel to Olympia from far-flung regions of the Greek world. There were also local festivals held in individual city-states.

The athletic competitions included only individual events and thus remained true to the warrior ethos of the Homeric epics. Most athletic competitions centered around six main categories of events. The footraces included the *stadion*, a race slightly under 656 feet (200 meters), or the length of the stadium; another longer race of approximately 1,312 feet (400 meters); and a distance race of varying lengths. By the end of the sixth century the Greeks had added a race run in full hoplite armor, which illustrated the close connection between athletic competitions and military training. There was no marathon, although the modern marathon springs from the apocryphal tradition that an Athenian runner

ran from Marathon to Athens to announce the Greek victory over the Persian invaders in 490 BCE and then immediately dropped dead from exhaustion.

Wrestling and boxing were two other standard Olympic events. Boxers did not wear gloves but instead wrapped their arms and forearms in heavy leather thongs. There was also the *pankration*, an aggressive and dangerous combination of boxing and wrestling in which the only restrictions were biting and eye-gouging. One unscrupulous athlete was famous for his penchant for bending back the fingers of his opponents. The pentathlon was a combination of five different events: the stadion, javelin, discus, long jump, and wrestling. The equestrian events included both horse races and two- and four-horse chariot races. These differed from the other events in that the owner of the horses rather than their rider or driver was the winner.

Prizes at the major Panhellenic festivals held only symbolic value. Winners received wreaths of leaves: olive at the Olympic Games, laurel at the Pythian, pine at the Isthmian, and wild celery at the Nemean. At other festivals, however, the prizes sometimes included generous monetary compensation. Upon their return home the winners did receive fame and often fortune, such as statues, free board for life, and other civic honors. Poets such as Pindar composed victory odes for the winners at the Panhellenic festivals.

Competition in the Panhellenic festivals was open to any free-born Greek-speaking male. Separate competitions were held for men and for boys. Women were not allowed to compete (although they could enter chariots in the competitions), nor were married women permitted as spectators. Unmarried women could attend, presumably to allow marriage arrangements to be made. There were separate women's games, the most famous of which were footraces held at Olympia in honor of Zeus's wife, Hera.

—Frances Pownall

Bibliography

- Golden, Mark. *Sport and Society in Ancient Greece*. Cambridge: Cambridge University Press, 1998.
- Harris, H. A. *Greek Athletes and Athletics*. London: Hutchinson, 1964.
- Miller, Stephen G. *Ancient Greek Athletics*. New Haven, CT: Yale University Press, 2004.

Sansone, David. *Greek Athletics and the Genesis of Sport*. Berkeley: University of California Press, 1988.

Sweet, Waldo E. *Sport and Recreation in Ancient Greece*. New York: Oxford University Press, 1987.

Role of Leisure in the Hellenistic and Roman Worlds

Leisure played a distinctive role in the lives of both the ancient Greeks and Romans that fit within their worldview on the dual roles of work and play. The ancient Greeks perceived leisure as a time devoted to the pursuits of pleasure for the sake of enjoying the greatness of the Greek city-states. This attitude carried on from the ancient period to the Hellenistic period of Greek history. In this sense, leisure was perceived as an outlet to pursue the joys of life in a manner that sated body, mind, and soul. On the other hand, Romans perceived pleasure with extreme distaste as something that corrupted morals and created opportunity for corruption and vice. However, elite Romans disdained work as something that fouled human relations and was to be avoided by people of their life station. Both Greeks and Romans developed entertainments and recreations to fit their perceptions of how to enjoy their time not at work. Leisure took on a distinct and unique shape in ancient Western civilization in both these cultures.

Hellenistic Greek philosophy discussed the duties of the citizen of the Greek states to his polis and how this fit within his own betterment as an individual. Stoicism, the philosophy of thriving in one's duty, was perhaps the only Greek philosophy that did not advocate such a stance. Epicurean philosophy encouraged partaking in pleasures in one's leisure time as a way to live life to its very fullest. While work was important to the day-to-day life and productivity of the average Greek, leisure time was seen as an opportunity for individuals to enjoy the benefits of Greek culture. Taking pleasure in life was seen as an outlet for which to partake in the joys of life, which contributed to the mental and social edification of the individual. Leisure time allowed citizens of

the polis time to find substance in recreational activities that not only allowed them to enjoy their time off work but also enjoy the material and intellectual wealth of their city-state.

Greek leisure time was devoted to pursuits that enriched both the body and the mind and were generally accessible to all citizens, with the exclusion of slaves. Greek athletics, in the form of gymnastics, sports, and competitions such as the Olympics, encouraged individual Greeks to display their physical prowess and the natural beauty of the body. Physical strength and endurance illustrated the military might of a particular city-state, such as Sparta and Athens, while also displaying the beauty of the human body. The ancient Greeks viewed physical beauty (*kalos*) as representative of the good (*agathos*). Festivals and celebrations, particularly religious festivals, were also opportunities for Greeks to come together and enjoy the benefits of the city-state. The rituals and religious processions, in addition to feasts, allowed average Greeks to partake of events together while appeasing their gods. Much like athletic events, religious festivals and feasts allowed people to come together and enjoy the bounties of life in the form of entertainments, food, and recreation.

Greek entertainments involved the adoration of beauty, the edification of the mind, and the flourishing of culture to illustrate the greatness of being Greek. Theater, music, and art not only entertained Greek citizens but also allowed them to enjoy the fruits of Greek culture. Greek theater, typically Athenian theater, allowed epic tales, moral stories, and political satire, to be enjoyed by all. Music gave the soldier, the tradesman, or the politician the ability to take the time to blow off some steam and enjoy himself through playing an instrument. Arts gave the artist the ability to sculpt something that brought praise and glory to his city-state or deity and that his fellow citizens could enjoy and take pride in. Greeks partook of these venues and forms in their leisure time, pursuing activities and recreations that edified them and that they could justifiably take pride in. The great monuments of the Hellenistic world attest to the attitudes inherited from Classical Greek civilizations.

Roman perceptions of leisure are far more bleak and negative than that of their predeces-

➤ ROMAN BATHS

The Roman bath in the late republic and early empire was a place to transact business, discuss matters of state, and partake in the relaxation that it offered to patricians and plebeians. Roman elites frequented baths as a venue from which to simultaneously conduct issues of business while taking a refreshing bath. Politicians, ranging from senators to prefects, also went to baths to carry on their duties. Tradesmen, merchants, and scholars also enjoyed their leisure time in the refreshing and social atmosphere of the baths. The Roman baths included people from all social classes and backgrounds and served as a center for the community at large to congregate in a common activity. Equipped with facilities to encompass substantial amounts of people and with both hot and cold water readily accessible and piped in directly, Roman baths were also a rather modern convenience in antiquity.

However, Roman baths were perceived as places of vice and immorality. Heavily criticized for the prevalent illicit prostitution trade and widespread homosexual activity, the baths became notorious for contributing to the decay of Roman society in the minds of moralists. The presence of prostitutes, pederasts, and homosexuals shocked Romans into perceiving baths as the representation of all that was wrong with Roman society. However prevalent that perception, baths remained popular places for average Romans to take a refreshing dip and talk business.

—Abraham O. Mendoza

sors. While Romans did partake in entertainments in their leisure time, leisure itself was seen as the disruption of productive activity, something to be avoided at all costs. The perception of leisure as an opportunity for *otium*, or idleness that allowed the individual to seek corruption, vice, and immoral activity, was shunned by Roman moralists. Extreme productivity in all walks of life was the norm, to be attained and practiced by everyone. A life of leisure was an immoral life. This position, usually advocated by Roman elites, posed a huge contradiction to the perception they had of work. Roman elites, such as Cicero and Cato, viewed work as something that sullied a man, typically lower-class men,

who exchanged their work for currency like prostitutes. Men of their stature could engage themselves only in pursuing productive lives as politicians serving the good of the state or men of letters pursuing intellectual interests while enjoying the benefits of the wealth of the landed estates. While the perception of leisure during the republic and the early empire (principate) disparaged both work and leisure, recreations and entertainments were readily available to people of all classes. However, *otium* was always blamed for the perceived cultural and political decline of Rome, weakening Roman citizens who were partaking in the pleasures of the flesh.

Roman leisure, enjoyed by both patricians and plebeians, took the form of various entertainments available to the ancient Romans. Feasts, festivals, and games allowed Romans to come together to enjoy food, community, and entertainment. Art, music, and literature allowed them to enjoy the bounty of Roman culture. However, decadent recreations such as brothels, gambling, and recreational sexual activities in baths were also prevalent in Roman society. Some Roman emperors who sought a life of luxury and decadence in supposed immoral activities were subsequently demonized by their moralistic peers as encouraging the moral detriment of the people and thus the decay of the Roman state.

—Abraham O. Mendoza

Bibliography

- Balsdon, J. P. V. D. *Life and Leisure in Ancient Rome*. New York: McGraw-Hill, 1969.
- Garland, Robert. *Daily Life of the Ancient Greeks*. Westport, CT: Greenwood, 1998.
- Toner, J. P. *Leisure and Ancient Rome*. Cambridge, MA: Polity Press, 1995.

Development of the Greek Novel

By the first century BCE a new type of prose literature, commonly referred to as the Greek novel, had developed in the Greek-speaking eastern part of the Roman empire. These works were generally romances, written in Greek, of which only five extant texts survive: Chariton's

Chaereas and Callirhoe (ca. first century BCE to second century CE), Xenophon's *Ephesiaca* (second century CE, no earlier than 116), Achilles Tatius's *Leucippe and Clitophon* (second century CE), Longus's *Daphnis and Chloë* (mid- to late second century CE), and Heliodorus's *Aethiopica* (third or fourth century CE). Most of the scholarship centers on the debates about the intended audience and whether a nineteenth-century literary term should be applied to ancient texts.

Some of the authors were Roman citizens, though they wrote in Greek. Their formulaic novels featured a basic plot in which lovers meet, are separated, undergo a series of adventures, and are eventually reunited. Papyri fragments of other texts, however, show variation from this pattern. Originally akin to historical novels, later texts utilized more mythic content. These stories grew out of oral tradition, as people drew a distinction between true tales and intentionally false ones.

Contemporaries dismissed the Greek novel as substandard literature because the stories were false and generally poorly written. Close study of the texts has led scholars to rethink original assumptions about the intended audience, once thought to be middle- and upper-class women because modern romance novels are written for such readers. The ancient authors use the Greek plural masculine for their audience, indicating that the readers were a mixture of men and women, if not all male, and suggesting that the texts were read aloud. The audience therefore was roughly the same as for any other literary genre.

The Greek novel impacted many other genres, including romance, the epistolary novel, biography, hagiography, Christian writings, and Jewish novellas. The ancient Greek novel also inspired the twelfth-century Byzantine novels.

—Linda Malcor

Bibliography

- Cueva, E. *Studies in the Canonical Greek Novel*. Ann Arbor: University of Michigan Press, 2004.
- Morgan, J. R., and R. Stoneman, eds. *Greek Fiction*. London and New York: Routledge, 1994.
- Reardon, B. P., ed. *Collected Ancient Greek Novels*. Berkeley: University of California Press, 1989.

➤ DAPHNIS AND CHLOE

The story depicted in *Daphnis and Chloe* is attributed to Longus, who is thought to have lived on the Greek island of Lesbos in the second century CE. *Daphnis and Chloe* is a classic example of the early Greek novel, containing all of the hallmarks of the ancient romance story. A man and woman meet, fall in love, are separated for one reason or another, and then are finally reunited.

The story begins with the discovery of an infant boy (Daphnis) who has been exposed to the elements and left to die by his parents. The goatherd who discovers Daphnis raises him as his own son. Similarly, a shepherd discovers an infant girl (Chloe) who was also left out by her parents to die. The story progresses, with the two children growing up together and falling in love with one another. They are confused by these emotions and even with the guidance of others and are unable to

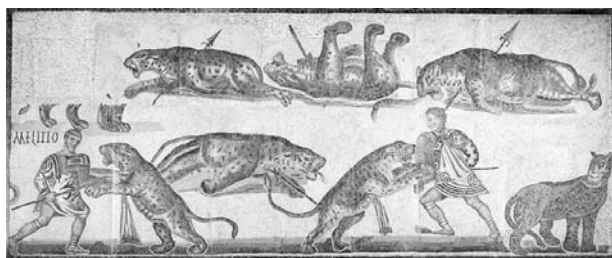
figure out how to consummate their love. Eventually Daphnis is educated in the arts of love by a woman from the city, but he chooses not to pursue Chloe sexually for fear that she may be physically hurt by the act. From this point forward, Daphnis and Chloe are separated from one another. Chloe is pursued by various suitors and at one point is saved from kidnappers by the god Pan. Daphnis, among other misfortunes, is abducted by pirates. After a series of misadventures Chloe is depressed, thinking that Daphnis has forsaken her, and while in this state she is kidnapped again. Daphnis returns and rescues her, and the two decide to get married. The story ends with a wedding (in which Daphnis and Chloe are recognized by their parents), and their love is finally consummated in the bridal chamber.

—Kevin M. McGeough

Entertainment in the Greek and Roman World

Entertainment in both ancient Greece and Rome consisted of a variety of forms and venues inclusive of most all elements of society. Some entertainments were relegated to particular strata of ancient society, particularly elites. However, popular entertainments geared toward all of society typically were more widespread. Greek entertainments were characterized by imbuing the citizenry with civic pride and displaying the best attributes of Hellenic culture. Roman entertainments, particularly those within the city of Rome, were illustrative of the resources available to the emperors and the patrician classes to present gigantic spectacles to appease the masses on whose votes and support they counted on. Both ancient Greek and Roman entertainments sought to create a sense of communal cohesion among their respective citizens. Greeks desired to imbue themselves with civic virtue and pride when enjoying their entertainments. Romans wished to regard their entertainments as a way to display the greatness and power of Rome in addition to sating the bloodlust of the masses.

Ancient Greek entertainments consisted of athletic competitions, theater performances, musical events, and religious festivals. Among the most famous of Greek sporting events are the Olympics, held every four years in Olympia and consisting of a variety of events framed to show the physical prowess and beauty of the athletes. They were also opportunities for the Greek city-states to display their very best athletes to the rest of the Hellenic world in all their glory, in essence displaying their superiority in military prowess and strength. So important were the Olympics to the Greeks that a sacred truce (*ekecheiria*) remained in effect through the games between all the city-states. Ancient Greek theater, in the form of dramas, tragedies, and comedies, graced the stages of antiquity. Playwrights, such as Sophocles (fifth century BCE) and Menander (342–293 BCE), composed pieces imbued with biting satire, political commentary, and the everyday trials of humanity in a venue that most Greeks were capable of grasping. Musical events attracted much attention in the Greek world, attracting the sponsorship and active participation of elites. Religious festivals, involving processions, music, and much revelry in addition to large community feasts, were held



Detail from a Roman mosaic of circus scenes shows leopards fighting. (Scala/Ministero per i Beni e le Attività culturali/Art Resource, NY)

on religious days in commemoration of the Olympian deities.

Roman entertainments are renowned for their gigantic displays of military processions, gladiatorial games, chariot races, animal exhibitions, and festivals. Roman emperors, politicians, and patricians subsidized these massive spectacles for the masses to assure their support and propagate their own popularity. Imperial acquisitions and military victories were typically followed by a huge procession in commemoration of the victor. Large feasts accessible to all Roman citizens provided massive amounts of food and drink and were accompanied by raucous celebration and revelry. Gladiatorial combat was widely popular in Roman society, consisting of hand-to-hand combat between well-trained warriors, typically slaves, against similar warriors, convicts, prisoners of war, or animals. Huge animal fights would typically accompany these gladiatorial matches, pitting lions against bulls, bears, or groups of people. Massive groups of armed gladiators would sometimes also take part in mock battles, resulting in multiple deaths in one day. Among the most popular of Roman entertainments are the chariot races. These races typically pitted two racing factions, the Reds and the Whites, against each other. Chariot races attracted much attention from societal elites, who heavily subsidized the sport. The driver would have to drive various laps around the track, with only a lash and a knife (to cut the harnesses in case of a crash), and skillfully outmaneuver the competition to win successfully.

—Abraham O. Mendoza

Bibliography

Balsdon, J. P. V. D. *Life and Leisure in Ancient Rome*. New York: McGraw-Hill, 1969.

Garland, Robert. *Daily Life of the Ancient Greeks*. Westport, CT: Greenwood, 1998.

Toner, J. P. *Leisure and Ancient Rome*. Cambridge, MA: Polity Press, 1995.

The Greek and Roman Theater

Costumed performances are known from many cultures, but it was in classical Athens that true tragedy and comedy emerged. The first formal tragedies, in which an actor engaged in dialogue with a chorus, were evidently produced by a man named Thespis in the 530s or 520s BCE. None of Thespis's plays survive, and scholars are uncertain about the circumstances of his production and the ritual or poetic precedents for it.

The fifth century BCE witnessed an explosion of theatrical creativity in Athens. Enough plays by Aeschylus, Sophocles, and Euripides survive to give us some sense of these playwrights' contributions to the genre. Although tragedies were produced in groups of three (trilogies) at the festivals of Dionysus, most of the ones that we now have survive as individual dramas (the exception is Aeschylus's complete *Oresteia* trilogy). Tragedies were almost exclusively about the mythical cycles of the Greek gods and heroes, including myths about Thebes (Antigone and Oedipus), Athens (Theseus), and above all the Trojan War. The only surviving exception is Aeschylus's *Persians*, which was about the war with Persia in the early fifth century BCE. Only men were allowed to be actors.

The seven surviving tragedies attributed to Aeschylus (ca. 525–456 BCE) reveal a playwright fascinated with the workings of vengeance and justice between gods and human beings. These themes are on display especially in the *Oresteia*, which is about Clytemnestra's murder of her husband Agamemnon on his return from the Trojan War and the way his son Orestes murdered his mother in retaliation.

Sophocles (ca. 490–406 BCE) is probably best known for *Oedipus the King* in which Oedipus discovers that he has killed his father and married his mother. Tragic irony—in which the protagonist is unaware of the significance of his actions—is especially characteristic of Sopho-

THE THEATER OF DIONYSUS AT ATHENS

Drama was born in Athenian festivals dedicated to Dionysus. The festivals, such as the Rural Dionysia, Lenaea, and City Dionysia, only occurred once a year and entailed a number of rituals, but productions of comedies and tragedies were the culminating events. At first, in the sixth century BCE, dramatic performances seem to have been conducted in the agora, the public square in Athens, where temporary wooden seating was installed for the spectators. It was said, however, that on one occasion the seating stands collapsed, and the Athenians decided to build a permanent stone seating area against the side of the hill of the Acropolis.

This theater became a model for the future development of all theaters in ancient Greece. The seating area could accommodate some 14,000 people in the fifth century. Spectators faced an orchestra, an area in which the chorus would dance. A fourth-century BCE renovation left the orchestra in a circular shape, but it is not at all clear that this was the shape in the fifth century. Beyond the orchestra was the stage on which actors performed their parts, and it was backed by a stage building, the *skene*. The *skene* might serve as a palace facade. Occasionally, stage action might call for a god to appear on the roof or even



Theater of Dionysus, at the base of the Acropolis, was built during the fourth century BCE. The amphitheater was the site of the annual Athenian festival in honor of the god Dionysus, and was the venue for performances of works by notable playwrights Aristophanes, Euripides, Sophocles, and Aeschylus. (Chris Brown)

to fly down onto the stage; this could be accomplished with a *mechane*.

The Roman adaptation dispensed with the orchestra and chorus, and they often built impressive stage buildings, sometimes composed of two or three stories.

—Kenneth Rothwell

cles. In the *Antigone*, similarly, Creon realizes too late what he has done by sentencing Antigone to death.

Toward the end of the fifth century, Athens and Sparta found themselves locked in the grueling 27-year-long Peloponnesian War. The war ushered in a period of pessimism and caused many Greeks to reconsider their social and religious values. This darker, more skeptical view is reflected in many of the tragedies of Euripides (ca. 480–407 BCE). In the *Medea*, although spectators are horrified that Medea would kill her own children, we are also brought to see that her complaint against Jason was fully justified. Euripides does not necessarily display the nobler side of humanity.

Also produced during the Peloponnesian War were the comedies of Aristophanes. Comedy had been introduced to the festivals earlier

in the fifth century BCE, and we know relatively little about the first generation or two of comic playwrights, but Aristophanes frequently focuses on a vigorous central protagonist who finds ways to impose his or her will on the world. Whether these characters' ways obey the laws of the state or even of nature is secondary. In the *Clouds* of 423 BCE, an Athenian citizen named Strepsiades tries to get training from Socrates in sophistic rhetoric so that he can outwit his creditors, but it all goes wrong when Strepsiades' son turns out to be the better student and tries to outwit his father. Strepsiades' solution was to burn down Socrates' schoolhouse.

Aristophanic comedy focused heavily on social and political satire at the expense of sophisticated plots and subtle characterizations. By the late fourth century BCE, however, comic poets were writing carefully plotted comedies with

deeper insight into psychology and human relationships. This came to be known as New Comedy, thus distinguished from fifth-century Old Comedy, and is best represented by Menander of Athens (344–292 BCE). Only one comedy has survived in its entirety, the *Dyskolos* (*Grouch*). The plot revolves around a young man who has fallen in love with a girl and must overcome the objections and resistance of her father if he is to marry her.

New Comedy is better known from Rome, where the Latin comedies of Plautus and Terence were performed in the late third century BCE and early second century BCE. Their plots also entailed love between a young man and woman, but the interest is often drawn elsewhere. Plautus, for example, perhaps devised and certainly exploited the character of the wise-cracking and inventive *servus callidus* (“tricky slave”). In the *Miles Gloriosus* (*Braggart Soldier*) it is the slave, Palaestrio, who helps a young man’s girlfriend escape a military officer. Terence followed this tradition, although his six comedies are more literary and refined than the episodic and boisterous Plautus.

All that has survived of Roman tragedy are six works written by (apparently) Seneca in the first century CE. Most of these dramas revived stories of Greek mythology, but they missed no opportunity for bloodshed. Seneca wrote a version of *Medea* in which he portrayed the title character as being more passionate than Euripides’ *Medea*. The speeches assigned to characters in Senecan tragedy are marked by the rhetorical tradition of the empire.

Classical drama has had a profound influence on European theater since the Renaissance. Although the plays of Terence continued to be read by schoolboys in the Middle Ages, the rediscovery of Plautus’s comedies in the fifteenth century revitalized the genre. As Greek tragedy became better known in the sixteenth and seventeenth centuries, it too became a touchstone.

—Kenneth Rothwell

Bibliography

Beacham, Richard. *The Roman Theater and Its Audience*. Cambridge: Harvard University Press, 1992.
Green, J. R. *Theatre in Ancient Greek Society*. London and New York: Routledge, 1994.

Greene, David, and Richmond Lattimore, eds. *The Complete Greek Tragedies*. Chicago: University of Chicago Press, 1992.

Henderson, Jeffrey, trans. *Aristophanes: Acharnians Lysistrata Clouds*. Newburyport, MA: Focus Publishing, 1997.

Gladiators

Although the origins of gladiatorial combat have been debated in the past, the current scholarly consensus is that it originated in Campania (southern Italy). The fact that, for example, the earliest stone amphitheaters as well as the most prominent gladiatorial schools in Italy emerged in Campanian centers such as Capua supports a proposed Campanian origin for gladiatorial games.

The first recorded combat of Roman gladiators was staged in a funerary context. In 264 BCE the sons of Junius Brutus Pera staged a combat among three pairs of gladiators in honor of their recently deceased father. The purpose of such early gladiatorial exhibitions was evidently to honor the deceased through the spilling of human blood as well as to illustrate his importance to the community through the provision of such a lavish sacrifice. Over the next few centuries the performance of such a *munus* (obligation) became an ever-more important aspect of aristocratic funerals in Rome, and the scale of such contests increased accordingly. Titus Flamininus, for example, enlisted 74 gladiators to fight at his father’s funeral in 174 BCE.

By the late Roman republic, gladiatorial exhibitions were used as a means of gathering political support by ambitious aristocrats, who would commonly stage these events for members of the public in hopes of gaining their votes in an upcoming election. A common practice during this period was for *aediles*, the magistrates responsible for the staging of public games (*ludi*) in Rome, to provide additional gladiatorial games at their own expense so as to (hopefully) facilitate their subsequent election to one of the higher magistracies, such as the consulship. Gladiatorial contests were still ostensibly being staged at this time in the name of a deceased relative. The fact, however, that those staging such events could delay them, or attempt to delay

them, until a more auspicious occasion in terms of their political ambitions had arisen indicates that the original purpose of gladiatorial spectacles by this time was being overshadowed by their political usage. Julius Caesar, for example, staged a display of gladiators in honor of his deceased daughter Julia as part of the lavish public entertainments that he put on for the Roman populace in 45 BCE despite the fact that she had been dead for almost a decade at that point in time.

The first Roman emperor, Augustus, in an effort to consolidate his authority and curb the rise of potential political rivals, took steps to ensure that such a potent means of currying popular favor would henceforth be firmly under imperial control. Magistrates and wealthy citizens outside of Rome continued to stage gladiatorial spectacles on occasion, but the most lavish events, those staged in Rome itself, were subject to imperial discretion. Early in his reign, for example, Augustus placed limitations on both the number of gladiatorial displays that could be staged by Roman magistrates each year as well as the number of gladiators involved in these displays. Imperial control increased over time until by the reign of Domitian, in the late first century CE, only the emperor or an official or relative acting on his behalf could legally produce gladiatorial spectacles in Rome. The lavish gladiatorial spectacles staged by Augustus and his successors to ingratiate themselves with the Roman populace certainly surpassed any event that could be found outside the capital. In his autobiography *Res Gestae*, for example, Augustus claims that 10,000 gladiators participated in the eight spectacles that he staged on his own or his relatives' behalf during his reign.

As such events grew in scale and spread throughout Roman territory under the late republic and empire, the infrastructure associated with gladiatorial spectacles increased as well. Even before the Roman empire, a number of *ludi* (training schools) were established in Italy to meet the ever-growing demand for gladiators. The most famous of these early *ludi* was located in Capua. It was here in 73 BCE that Spartacus and his fellow gladiatorial trainees began their famous revolt against Rome. Not surprisingly, the most elaborate training facilities were lo-



Gladiator fight, mosaic from a Roman villa in Nennig, Germany, second century CE. (Jupiterimages)

cated in Rome itself. Four *ludi*, most notably the *Ludus Magnus* (Great School), were established for the training of gladiators as well as wild-beast fighters (*venatores*) in the heart of the city.

The gladiators trained at such venues as the *Ludus Magnus* were not all uniformly equipped but instead used a variety of weapons and armor. Perhaps the two most famous categories of gladiator were the *secutores* (followers) and *retiarii* (net-fighters), who were often pitted against one another. The *retiarius* was armed with a net and trident but had only a belt, a loin-cloth, and covering on the left arm (*manica*) for protection. He relied instead on his speed, hoping to incapacitate a more heavily armed opponent with his net before the latter could come to close quarters. The *secutor*, by contrast, fought with a sword and was typically protected by a shield, a helmet, and greaves. Although he could not move as quickly as a *retiarius*, he relied on his armor to protect him while he advanced upon his foe. The different weapons and armor employed by the other categories of gladiator are not always clear, and it may be that the equipment used by different types was less standardized than has been assumed by some scholars in the past.

► BEAST HUNTS

A popular spectator event in ancient Rome was the *venatio*, a staged combat involving wild animals. Originally, such events consisted of displays of elephants captured after victories over Pyrrhus and the Carthaginians in the third century BCE, but by the next century, perhaps because of the popularity of contemporary violent gladiatorial events, these processions of exotic animals were evidently no longer entertaining enough for Roman spectators. In 187 BCE Marcus Fulvius Nobilior staged the first beast hunt in Rome as part of the celebrations associated with his recent military triumph.

The scale of *venationes*, in terms of the number and variety of animals involved, steadily increased thereafter, particularly as new sources of exotic animals were made available by Roman conquest. The largest beast hunts on record are those staged over 123 days by the emperor Trajan in the early second century CE in which 11,000 animals are said to have perished. In the later empire, as Roman prosperity and territory dwindled, it became ever more difficult to stage such costly events. Ultimately, it was these factors that led to the disappearance of beast hunts in the sixth century CE.

—Christopher Epplett

Gladiators enjoyed an ambiguous status in Roman society. On the one hand, gladiators, most of whom were slaves or criminals condemned to fight in the arena, were legally regarded as *infames*, a status they shared with such other social deviants as actors, pimps, and prostitutes. Those branded with *infamia* were not allowed to vote in elections or hold office, and they possessed very few other rights in the eyes of the law. The gladiator, in particular, could be treated as his *lanista* saw fit, without any recourse to legal appeal. It was considered disgraceful for any Roman citizen, particularly one of good family, to debase himself by choosing to fight in the arena.

Not all Romans, however, despised the gladiator. Successful gladiators could achieve a following among spectators, much like modern athletes; in particular, Roman women are sometimes said to have lusted after the brawny war-

rriors they saw in the arena. This is likely one of the reasons why Roman citizens, including members of the aristocracy, sometimes chose to debase themselves by entering the gladiatorial ranks despite the disparaging attitudes mentioned previously. Roman writers such as Seneca, taking a more philosophical approach, pointed out the potential edifying effect of a gladiatorial spectacle upon the audience. The bravery that a gladiator displayed while facing death in the arena fostered courage in the face of adversity on the part of spectators.

Although gladiatorial combat was a very popular form of entertainment for centuries, a change in societal attitudes, largely brought about by the conversion of the Roman empire to Christianity, ultimately brought about its demise. In the early fourth century CE the emperor Constantine extended official toleration to Christianity, and over the course of the next century it became the dominant religion in Roman territory. Christian attitudes toward many long-standing Roman spectator events were hostile, in part because of their pagan associations. In the case of gladiatorial combat, the objections of Christian writers included the murder and violence perpetrated on the arena floor as well as the negative effect that the viewing of such a spectacle might have on a Christian spectator. Faced with such growing opposition, gladiatorial spectacles gradually disappeared from Roman society. In 325 CE Constantine banned the practice of condemning criminals to fight in the arena, and by the mid-fifth century at the latest, gladiators were no longer to be seen in Roman arenas.

—Christopher Epplett

Bibliography

- Gabucci, Ada, ed. *The Colosseum*. Los Angeles: Getty Museum, 2001.
- Jacobelli, Luciana. *Gladiators at Pompeii*. Translated by Mary Becker. Los Angeles: J. Paul Getty Museum, 2003.
- Köhne, Ekart, and Cornelia Ewigleben, eds. *Gladiators and Caesars: The Power of Spectacle in Ancient Rome*. Berkeley: University of California Press, 2000.
- Kyle, Donald G. *Sport and Spectacle in the Ancient World*. Malden, MA: Wiley-Blackwell, 2007.
- Wiedemann, Thomas. *Emperors and Gladiators*. New York: Routledge, 1992.

Entertainment in India

Some idea of the pastimes current at the time of the Buddha can be gained from a list in the *Tripithaka* of activities he thought unsuitable for those following his doctrines. These included many sports and public entertainments, such as cockfights, various games played with toys, guessing games, and riddles. Gambling and playing dice were also mentioned, as were board games.

Dice games in early Indian literature generally involved gambling. A poem within the *Rig-Veda*, "The Gamester's Lament," paints a vivid picture of the joys and sorrows of a compulsive gambler. A turning point in the *Mahabharata* was a dice game in which Yudhishthira progressively lost his wealth, his kingdom, and his own and his family's freedom. Such games have a long history in South Asia: cubical dice and gaming counters were found in the third-millennium BCE Indus cities.

In later times cubical dice were still used, but cowrie shells and tetrahedral dice were also used. In one game the player took a handful of the dicelike five-faced *vibhitaka* nuts (*Terminalia bellerica*) from a pile and threw them; he had to correctly predict the resulting score or throw a multiple of four. A game called *pashaka* used three tetrahedral dice; its object was to throw a previously agreed score. Gambling dens were regulated by the state, which taxed the stakes, the cost of the premises, and the hire of the establishment's dice. State spies kept an eye open for cheating.

Board games included the forerunner of chess, *chaturanga* (Sanskrit for, "army of four parts"), played on a board divided into eight by eight squares. The pieces represented the divisions of an army: a king, his chief minister or general, chariots, elephants, cavalry, and foot soldiers.

The antiquity and even the Indian origin of the game are uncertain. References in the *Mahabharata* to board games involving dice and colored ivory pieces do not say what game was played; other early Indian references are similarly unspecific. However, several seventh-century CE Persian texts refer to this game, in one case indicating that it came from India. A Chinese game, Xiangqi, is remarkably similar to



Ivory gaming die from the ancient region of Gandhara in present-day Pakistan, first-third century CE. (The Metropolitan Museum of Art/Art Resource, NY)

chess; it is probably known by the sixth century CE. The earliest surviving indubitable chess pieces, an incomplete set, come from central Asia, dated around 700 CE, but two possible chess pieces were found at the Kushan site of Dalverzin-tepe in Uzbekistan and one at Mantai in Sri Lanka, all dating to the second century CE.

Chess may be descended from an earlier Indian board game, *ashtapada*, or from a blend of features of *ashtapada* and a Greek war board game, *pettaia*. Alternatively, Xiangqi may be its ancestor, reaching India via the Silk Roads, possibly amalgamated with features of an Indian race game by the Kushans or by Silk Roads merchants. The question is still unresolved.

Ashtapada, mentioned in the *Tripithaka*, used an eight-by-eight square board and was played with dice, but nothing else is known; it may have been a race game. The name later came to refer to the board itself, on which various games could be played, and the earlier game fell into disuse.

Board games were popular even in the Harappan period. Some boards were engraved on bricks or made of terra-cotta. The arrangements of boxes and lines suggest there were a number of different (still unknown) games.

Pachisi, which is still played in South Asia, resembles modern ludo. Traditionally, six or seven cowrie shells were thrown to determine the number of spaces a player should move. Unlike ludo, the *pachisi* board includes 12 castle squares in which a player's piece is safe from

SEX AS ENTERTAINMENT

Sexual activity was treated with considerable tolerance, and under the Mauryas prostitution was officially accepted and taxed. Prostitutes had their own guild and often worked in state-supervised brothels. The state also utilized prostitutes' access to a broad cross-section of society by employing them as spies. Prostitutes could acquire additional income by performing as dancers or musicians at private parties. They spent some of this on instruction both in the skills of love making and in general cultural, intellectual, and practical subjects. A well-educated prostitute could hope to become the valued mistress of a wealthy man and might amass an independent fortune. Prostitutes could become important and well-respected citizens; some former prostitutes married or became Buddhist nuns.

—Jane R. McIntosh

being taken. An earlier race game, *Ashta-kashte*, may have been played in Early Historic times. This used a 7-by-7 square board around which the pieces were moved in a spiral to the center.

The elaborate forerunner of snakes and ladders, *Moksha Patamu*, was played partly for didactic reasons, teaching students about rewards (ladders) and punishments (snakes) in the cycle of rebirth. Many squares were decorated with symbolic designs that gave instruction on morality, ethics, cosmology, and religion.

Gambling was not confined to dice games. Bets were also taken on sporting fights between birds, such as cocks, quails, peacocks, or pigeons, or on animals including elephants, rams, goats, horses, bulls, and buffaloes. The South Indian *Sangam* literature describes a dangerous sport in which an unarmed young man wrestled a bull, watched by admiring girls.

Birds were also kept as pets, especially parrots and mynah birds that could be taught to speak and decorative peacocks; ladies often had a pet goose. Kings might keep a private zoo, and wealthy private individuals often had an aviary.

Bathing was a popular pastime, and many wealthy town households had a bathhouse with a sweat bath and a plunge pool. The houses of the well-to-do also had gardens containing fruit and vegetables, trees and flowering plants, a large

swing, and streams and pools. Public parks with pavilions, bright flowers, and sheltering trees gave city dwellers a place to picnic or relax.

Excavations at the third-century CE city of Nagarjunakonda in South India revealed a wide range of recreations. Games boards were carved on slabs covering the riverside steps (*ghats*), and brick platforms elsewhere in the city were probably used for playing dice and other games. There were a number of public bathing pools and a fine stepped tank on the citadel for the royal household. A recreation hall had pillars decorated with scenes of drinking and dancing. The city boasts a square amphitheater with stone seating for around 1,000 people. This structure, unique in ancient India, was possibly inspired by the Roman world, with which South Indians traded. It was perhaps a venue for sporting events or for performances of dance, music, or dramas since it has good acoustics.

Religious festivals provided high points in the year, with singing, dancing, and processions; sporting competitions; and performances by acrobats, conjurers, jugglers, illusionists, musicians, and other entertainers, including snake charmers. Kings and wealthy individuals sponsored dramas involving dancing and mime as well as recitation and dialogue. Musicians accompanied the performance and included drummers, flautists, vina players, and singers. At the spring festival, Holi, people used syringes filled with colored water to spray each other and engaged in other lighthearted behavior. During the three-day autumn festival of lights, called Diwali, taxes on liquor were lifted for the duration of the festival, and this encouraged uncontrolled imbibing of drinks such as palm toddy, sugarcane wine, and spirits flavored with flower blossoms.

Boxing with bare fists and wrestling are mentioned in the *Mahabharata*, and wrestlers are among the carvings at Nagarjunakonda. By historical times these sports were confined to lower-caste professionals. Wrestling matches were often sponsored by kings and nobles as public entertainment.

The Tamil *Sangam* poetry mentions stave fighting (*silambam*), combat with swords or spears, and archery contests, and martial arts were also popular in northern India. Archery was a sport particularly of the nobility. In the

Mahabharata the hero Arjuna won Princess Draupati in an archery contest in which the competitor had to shoot at a target on the ceiling while looking at its reflection in a pool of oil.

Many town and city dwellers were well educated and cultured, so they took pleasure in the arts and intellectual pursuits. There were competitions with generous prizes in which contestants had to speak extempore on a given topic, compose puns or riddles, or improvise poems. Kings or wealthy citizens sponsored poetry recitations and other literary events. The wider public took pleasure in storytelling such as the epic tales captured in the *Mahabharata* and *Ramayana*. Verse composition was actively pursued. In the *Sangam* poetry descriptions of an idyllic pastoral life are interwoven with love poetry and tales of war. Love and dalliance were indulged pastimes of the young throughout the subcontinent; when separated from their lovers, girls spent their leisure time conversing with their friends, playing ball, making garlands, and playing on swings, to judge by the art of the time. Both genders also enjoyed painting. Art was often used didactically, from an entertainer illustrating his tales of gods and ancient heroes with a painted scroll to the official guide taking visitors around the paintings and sculptures of earlier kings and saints in the palace galleries.

—Jane R. McIntosh

Bibliography

- Auboyer, Jeannine. *Daily Life in Ancient India*. London: Orion, 1965.
- Basham, A. L. *The Wonder That Was India*. 3rd ed. London: Sidgwick and Jackson, 1967.
- Burma Pitaka Association. "Ten Suttas from Digha Nikaya: Brahmajala Sutta: Majjhima Sila." 1984. <http://web.ukonline.co.uk/theravada/brahmal.htm#3>.
- Cazaux, Jean-Louis. "Another View on Chess." N.d. <http://history.chess.free.fr/index.htm>.
- Sarkar, H., and B. N. Mishra. *Nagarjunakonda*. New Delhi: Archaeological Survey of India, 1999.

Early Popular Literature in India

The earliest popular literature of India includes animal fables, tales and stories, dramas, and secular poems. The hallmark is formed by its col-

THE ORIGIN OF INDIAN DRAMA

Indian drama emerged in the last centuries BCE. By the time of Bharata's *Natya Shastra* (between 100 BCE and 300 CE), or textbook on theater, drama was already fully developed. Its origin is sometimes traced back to the dialogue hymns of the *Rig-Veda*, one of the Holy Books of the Hindus (late second millennium BCE). Sanskrit drama may also have been inspired by Hellenic drama. No archaeological evidence survived to substantiate such claims. Sanskrit drama perhaps evolved from recital of the epics, possibly with accompanying music and explanatory gestures, or may have come forth from *samvadas*, conversations or dialogues in Prakrit. This possibility is hinted at by the Prakrit jargon in Bharata's textbook. The *vidushaka*, or jester, in early Sanskrit dramas spoke Prakrit as well. He typically interrupted the play for a witty comment in order to reduce tension. Bharata himself ascribed a mythical origin to drama: it was invented by the god Brahma to amuse the other gods.

—Alexandra van der Geer

lection of animal fables and tales, known as *Panchatantra*. It had a profound influence on works such as *1001 Nights* and the fables of De la Fontaine. The Buddhist Jataka stories traveled along with Buddhism to the rest of the world. The earliest surviving Sanskrit drama is the *Mricchakatika*, a light comedy of the second century BCE, that was staged in the United States in the early twentieth century. Southern India is renowned for its Sangam literature, a body of more than 2,000 secular poems on everyday life.

The *Panchatantra* is a collection of animal fables in verse and prose, composed in Sanskrit by Vidyapati between 100 BCE and 500 CE. Likely the fables preexisted in an oral form before they were written down. It was originally intended as a manual for royalty, and each fable or tale contains a wise lesson on political ethics and practical moral philosophy. The individual stories are inserted within a framework of a single narrative. They are told by the brahmin Vishnu Sharma to three dull-witted princes. Practical wisdom and common sense in the affairs of life are the main ingredients.

Translations into Persian (sixth century) and Arabic (eighth century) are known as *Kalila and Dimna*, after the two jackals of the first fable. The Greek version (eleventh century) was in turn translated into Latin and Slavic (twelfth century), whereas the Hebrew version (twelfth century) was translated into other European languages, known as the *Fables of Pilpai* (or Bidpai), a corruption of Vidyapati. Pilpai's fables formed the basis for the second compilation of fables of Jean de La Fontaine (1678). The *Panchatantra* also inspired sculptors of Hindu temple reliefs on Java. A seemingly independent but more copious treatment of the same animal fables is the *Hitopadesha* of Narayana, written in Sanskrit in the twelfth century.

The *Jatakas* are popular stories about the previous births of the Buddha. They form part of the Buddhist Canon, written in Pali. Each story ends with a moral lesson. The *Jatakas* were spread to Buddhist Southeast Asia, where they provided popular motives for temple reliefs. Likely the stories were not wholly invented by the Buddhist but preexisted in oral form.

Drama emerged as a distinct genre of popular literature in the last centuries BCE. One of the earliest is the Sanskrit play *Mricchakatika*, composed by King Shudraka (second century BCE). It is a light comedy about the love affairs of a young man and a noble man for a rich courtesan. Thieves, romance, and mistaken identities are the receipt for its hilarious character. Outside India, the play was staged in Berkeley as *The Little Clay Cart* in 1907 and in New York in 1924. Shudraka is said to have written two more plays, the *Vinavasavadatta* and *Padmaprabhritika*.

A somewhat later Sanskrit dramatist was Bhasa, who lived perhaps during the first or second century. Thirteen plays have been ascribed to him, but these were not all written by him. There is consensus that he wrote at least *Svapnavasavadatta* and *Carudatta*, both light comedies. Perhaps contemporaneous was Ashvagosha (ca. 80–ca. 150), who wrote the drama *Cariputra* in Shaurasena Prakrit. He also composed the *Buddhacarita*, a court epic narrating the life of the Buddha.

Early popular poetry from Tamil Nadu is known as Sangam literature, written between

200 BCE and 200 CE in Tamil. Tradition holds that the more than 2,000 poems were composed by hundreds of poets in Sangams, or literary academies, that lasted for thousands of years. The poems are secular in nature and deal with the aspects of everyday life. The poems are mainly known to us by anthologies, compiled around 1000 CE.

—Alexandra van der Geer

Bibliography

- Bhattacharji, S. *History of Classical Sanskrit Literature*. London: Sangam Books, 1993.
- Gonda, J., ed. *A History of Indian Literature*. Wiesbaden: Otto Harrasowitz, 1976.
- Keith, A. B. *The Sanskrit Drama in Its Origin, Development, Theory and Practice*. 1964; reprint, Delhi: Motilal Banarsidass, 1992.
- Vatsyayan, K. *Bharata: The Nattyasastra*. New Delhi: Sahitya Akademi, 1996.
- Winternitz, M. *History of Indian Literature*, Vol. 3, Part 1. Translated and revised by S. Jha. Delhi: Motilal Banarsidass, 1998.
- Zvelebil, K. V. *Tamil Literature*. Leiden: Brill, 1975.

Olmec Rubber Balls and Ball Games

Ball games were conducted throughout Mesoamerica. The Olmecs are regarded by most scholars as Mexico's first great civilization, which arose somewhere around 1200 BCE in western Tabasco and southern Veracruz. Olmec culture/civilization reached its apex between 700 and 400 BCE. They remain a mystery as to their origins yet were able to devise their own language (as evidenced by their hieroglyphs) and a rudimentary calendar (akin to the more advanced one of the Maya). Accompanying Olmec evolution was the introduction of the ball game and ballcourt, although further elaboration and expansion occurred throughout Mesoamerica. Archaeologists have located spectacular examples of Olmec ballcourts in such places as La Venta and San Lorenzo. These early Mexican Indians were able to create rubber balls from the sap of the *guagule* tree found within their tropical domains. (The earliest known rubber balls were unearthed by archaeologists at El Manatí.)

While there existed a number of variants of ball games played throughout Mesoamerica, the ballcourt was the most typical type. Normally the ballcourt was formed via an alley, with two parallel structures with end zones opposite one another. A solid rubber ball was struck by players, who aimed for a ring or markers found along the alley or hit the ball into the end zones. Although the rules varied over time and also location, the two teams that competed were usually composed of two to three members (which meant normally no more than six contestants). In the most popular variant of the ball game the players utilized their upper arms and thighs to strike the ball (the use of hands was not allowed with the exception of placing the ball into play).

Another variant/type of the game, according to paintings found by archaeologists in Teotihuacan (central Mexico), contestants used instruments similar to hockey sticks and a small ball. Ball games were generally an all-male sport, as only at Yaxichilán within the Maya heartland have images showing women involved in the sport been located by scholars of Mesoamerica's past heritage.

Many peoples of Mesoamerica viewed the ball game in association with the movements of heavenly bodies such as the sun, the moon, and Venus. Yet the games also were reenactments of warfare and human sacrifice. For one team the outcome could mean not only defeat but also death, resulting in decapitation or perhaps being tossed along a gauntlet of victors culminating with being thrown down a flight of stairs. The actual rubber balls, which were initially made by the Olmec culture, could range in weight between 1 pound and 7.5 pounds (0.5 and 3.5 kilograms). In reality, depending upon the glance received by the player, he might be either maimed or killed.

—John S. Leiby

Bibliography

- Coe, Michael D. *Mexico*. 3rd rev ed. London: Thames and Hudson, 1986.
- Diehl, Richard A. *The Olmecs: America's First Civilization*. London: Thames and Hudson, 2004.
- Miller, Mary, and Karl Taube. *The Gods and Symbols of Ancient Mexico and the Maya*. London: Thames and Hudson, 1993.

Chinese Musical Theory and Instruments, 1000 BCE–300 CE

In ancient China, musical theory was based on the notion of harmony (*he*); this idea was expressed through the consonance of the five sounds (*wusheng* or *wuyin*), or five notes, that were called *gong*, *shang*, *jue* (also *jiao*), *zhi*, and *yu*. These terms are used even in present-day Chinese music. The earliest texts on ancient Chinese musical theory, dating from the fourth to the second centuries BCE, record attempts to integrate music into a correlative cosmological system. According to these texts, the Five Sounds, or Notes, were related to the Five Processes, the

➤ CALCULATING NOTES AND TEMPERAMENT WITH THE *SANFEN SUNYI-FA*

Notes and temperament (*lü*) were calculated with the *Sanfen sunyi-fa*, a method of subtracting or adding the third part. This method consists of alternatively adding and subtracting one-third the length of the vibrating object: the length is divided into three equal parts if the whole is taken as a basic note; shortening the length by a third produces a fifth higher, whereas lengthening by a third produces a fourth lower. In this way 12-pitch standards (*shi er lü*) can be obtained, relying on the alternation of rising fifths and falling fourths, with ratios 3:2 and 3:4. For example, if 81 (3×27) is the starting length, the second length would remove one-third, making it 54 (2×27). In order to obtain the third length, one-third of 54 (or 18) would be added, generating 72 (4×18). When one-third of the third value (72) is subtracted, the fourth value is created: 48 (3×16). The fourth one originates the fifth one, again, by adding one-third (or 16) to create 64 (4×16). In this way, the five lengths will be 81, 54, 72, 48, 64. From these pitch standards, we get the five notes of the pentatonic scale that has five sounds per octave. The pitches of the five notes were not fixed, but they designate movable notes, depending on the pitch of *gong*, which was decided to be the first; hence, there were 12 possible pentatonic scales, 12 modes starting on different pitches.

—Elisa Sabattini

Five Directions, the Five Tastes, and the Five Colors. Concerning the Twelve Pitch Standards, they were matched to the Twelve Months, the Twelve Terrestrial Branches, and so forth. In this way, the human society was deeply linked to the impersonal forces of the cosmos.

In Han times (206 BCE–221 CE) a system of music developed that included 12 keys (as with the Western chromatic scale), with a five-note, or pentatonic, scale applying to each. The five-note system and the calculation for the temperament appeared very early. They are first mentioned in the *Guanzi* (*The Book of Master Guan*), dating to the fourth to the second centuries BCE, for calculating the five notes of the pentatonic gamut, but not the pitch standards. Both the *Lüshi chunqiu* (*Spring and Autumn Annals of Mr. Lü*) dating to 241–235 BCE, and the *Huainan zi* (*Book of the Prince of Huainan*), compiled sometime before 122 BCE, use the *Sanfen sunyi-fa* for producing 12 pitches. Around the turn of the first century BCE, Sima Qian wrote the *Shiji* (*Records of the Grand Historian*) in which he included one chapter on music (*yue*) and another on temperament. The five notes appear also in the inscriptions on the set of bells found in the tomb of the Marquis Yi of Zeng, which were cast before the imperial unification in the fifth century BCE. The musical terminology was finally standardized during the Qin empire (221–207 BCE), together with the rectification of weights and measures.

The *Zhou Li* (*Rites of Zhou*), dating to the third century BCE, classifies Chinese musical instruments under eight categories (*ba yin*, or “eight sonorous substances”) according to the materials used in their construction. These eight categories are metal (e.g., bells and gongs), stone (chime stones), clay (ocarinas and clay pots played as percussion instruments), leather (drums), silk (including plucked, bowed, and struck string instruments), wood (mainly wooden percussion instruments), gourd (mouth organs and wind instruments), and bamboo (mainly woodwind instruments such as flutes, oboes, and reed-free pipes). However, the historical validity of this traditional combination is problematic: archaeological discoveries show that instruments were not always made of the material under which they were classified, meaning that there was much more variety in their construction. Af-

ter the middle of the Western Zhou period (1050–771 BCE), the search for melody and exact tuning took priority over timbre. Consequently, some instruments, such as wind and string instruments, assumed the leading role instead of drums and percussion instruments, which provided rhythmic and timbric accompaniment.

—Elisa Sabattini

Bibliography

- DeWoskin, Kenneth J. *A Song for One or Two: Music and the Concept of Art in Early China*. Ann Arbor: University of Michigan Center for Chinese Studies, 1982.
- Falkenhausen von, Lothar. *Suspended Music*. Berkeley: University of California Press, 1993.
- Needham, Joseph, with Kenneth G. Robinson. “Sound (Acoustics).” In *Science and Civilisation in China*. 4 no. 1(1962): 126–228.
- So, F. Jenny, ed. *Music in the Age of Confucius*. Seattle: University of Washington Press, 2000.
- Thrasher, Alan. *Chinese Musical Instruments*. New York: Oxford University Press, 2000.

The Religious Music of Ancient Israel

Music in ancient Israel and late antiquity Judaism served a predominantly religious function. Accordingly, major changes in Israelite musical style coincided directly with pivotal transitions in the worship cultus, thus yielding three musical periods: the pre-Temple folk music of the House of Israel (before 957 BCE), music performed in or intended for the Jerusalem Temple (957 BCE–70 CE), and synagogue service music (after 70 CE).

Salient features of the earliest Israelite music are discernible from study of the oldest oral and written sources now making up the Pentateuch. Composed during the tribal period of Israelite history, this music bears close resemblance to the traditions of the similarly nomadic Bedouin Arabs, which have been passed down for millennia with little change. Such Jewish folk music was marked by terse lines, understandable text, abundant repetition, and simple stepwise melodies centering upon a few pitches. It was punctuated by formulaic shouts designating the deity and/or the tribal group, such as “Return, O Yahweh, to the countless hosts of Israel” (Num.



Clay tamborine and aulos player figurines, Israelite, about 800 BCE. (Erich Lessing/Art Resource, NY)

10:36). Primarily vocal with instrumental accompaniment and led by lay women and men (Ex. 15:1, 20–21), its wild, noisy, and vigorous timbre coupled with an infectious beat immediately lent itself to physical movement and induced ecstatic experiences. Instruments from two string families typically served accompanying roles: *kle shir* (lit. “the tools of singing,” normally translated as “lyres”) and *Isbarim* (lit. “for the singers,” normally translated as “harps”).

Temple music was led by a professional and official body of musicians dubbed the levitical cantors and featured all manner of instruments, including the *shofar* (curved ram-horn trumpet), *kinnor* (lyre), *nebel* (kithara), between 2 and 12 *balil* (cane pipes), and *mezaltaim* (cymbals). This elaborate instrumentation fashioned a ceremonial splendor unsurpassed elsewhere in the Ancient Near East. The biblical psalms, compiled from the reign of David to the constitution of the Second Jerusalem Temple (ca. 1000–500 BCE), occupied the central role in Temple liturgy, with a different sevenfold arrangement of psalms governing each week (e.g., Pss. 24, 48, 82, 94, 81, 93, 92 for Sunday through Shabbat). While the tonal particulars of psalmic settings are unknown, the Hebrew poetic structure discloses their general musical features. Sophisticated antiphonal (call and response) devices provided numerous possibilities for dialogue between a soloist or solo group and the larger assembly. Musical rhythm was governed by the text of each psalm, and voice leading featured drones of unisons, fourths, and fifths rather than harmonies.

Originating in the Babylonian Exile but assuming centrality after the Roman destruction of the Second Jerusalem Temple (70 CE), synagogues embodied a modified Temple worship style that omitted music attending the sacrifices

and simplified professional musical sections for amateur performance. Led by laypeople, the service structure comprised readings from the *Torah* and the *Nevi'im* (Prophets), psalmody, teaching, prayer, and benediction. The readings, psalms, and prayers were cantillated, or recited in embellished speech resembling simple song. Mirroring the grammar of its text, each chant gravitated around one note from which concise melodic movement would occur.

—Kirk R. MacGregor

Bibliography

- Braun, Joachim. *Music in Ancient Israel/Palestine: Archaeological, Written, and Comparative Sources*. Translated by Douglas W. Stott. Grand Rapids, MI: Eerdmans, 2002.
- Gillingham, S. E. *The Poems and Psalms of the Hebrew Bible*. Oxford: Oxford University Press, 1994.
- Sendrey, Alfred. *Music in Ancient Israel*. London: Philosophical Library, 1969.
- Wilson-Dickson, Andrew. *The Story of Christian Music*. Minneapolis: Fortress, 1992.

PSALM 18

Discovered at Qumran in 1947, the Dead Sea Scrolls shed light on all facets of the music of ancient Judea. The following psalm (first century BCE) furnishes an incisive glimpse into the devotional life of a professional Temple musician and the assortment of instruments played by this ancient artist.

“I raised a bitter lament
and made a doleful moan and groan
and plied my harp in
mournful dirge . . .
suddenly I perceived
that there was no more affliction. . . .
Then did I ply my harp
with music of salvation,
and my lyre to the tune of joy;
yea, I plied the pipe . . .
in ceaseless praise.”

—Kirk R. MacGregor

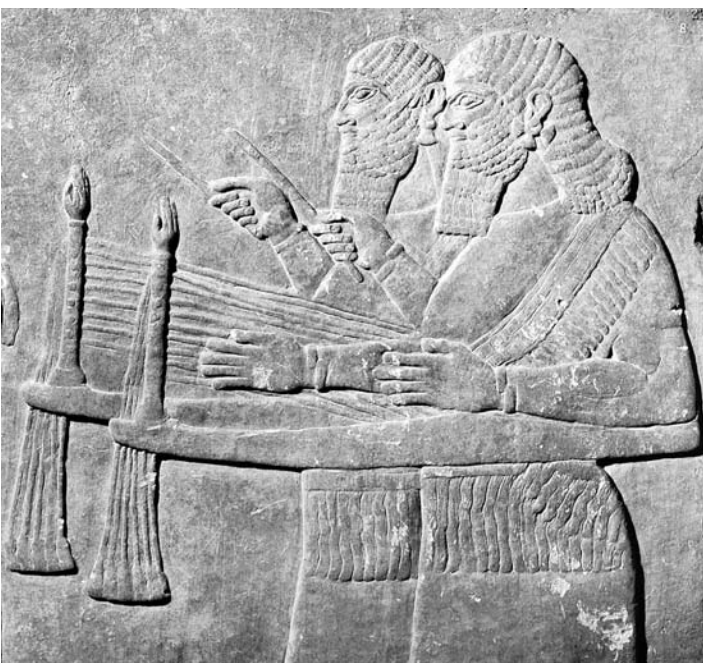
Source

Psalm 18 of the Dead Sea Scrolls, quoted in Alfred Sendrey, *Music in Ancient Israel* (London: Philosophical Library, 1969), 193.

Music in the Ancient Near East

The first Sumerian documents (ca. 3200 BCE) attest that music making was integral to the temple economies around which the earliest cities developed. Celebration singers (*nar*) hymned the gods with harps, lyres, and double pipes, while lamentation singers (*gala*) soothed and forestalled their wrath. Most temple musicians had nonmusical duties too. As kingship developed, music was also incorporated into palace life, as shown by numerous representations and the magnificent instrument remains from the royal cemetery of Ur (ca. 2600 BCE).

The Sumerian tradition was widely influential. At Mari on the middle Euphrates, temple singers adopted Sumerian names and priestly costume around 2300 BCE. In contemporary Ebla in North Syria, the Sumerian model of musical management was also current, although the distinctive local character was maintained. The Babylonians and Assyrians in turn adopted the offices of *nar* and *gala* and continued to cultivate Sumerian liturgical repertoire down through the first millennium, long after the Sumerian language itself was no longer spoken (ca. 1800).



Stone relief from the palace of the Assyrian king Sennacherib depicts musicians leading a religious procession to the temple of Ishtar, 705–681 BCE. (Barbara Heller)

The Sumerian system of diatonic scales was translated into Akkadian by circa 1800, and scribes learned it throughout the second-millennium Near East. At Ugarit, a Canaanite city on the Syrian coast in close cultural contact with Mycenaean Greece, a schematic musical notation (still undeciphered) was based on the Sumerian scales around 1400. But musicians were more important than scribes for spreading the tradition. Palace and temple records throughout the Near East, including Egypt and Hittite Anatolia, reveal musicians traveling far and wide between courts and temples. They were bought, sold, and traded by kings who craved variety (much like collecting CDs today). Especially prized were female performers, specifically trained as a commodity for royal gift exchange. They typically had to perform other less savory services too. But even women of the king's own family were trained in music, with an eye toward diplomatic marriages, as well as in general cultivation. As to the music of ordinary people, scholars have virtually no information for any period.

According to biblical traditions, when David and Solomon organized the First Temple in the tenth century, they adopted a system of hereditary musicians' guilds that are strongly reminiscent of those at Ugarit and ultimately reflect standards of royal attainment established by the Sumerian and Akkadian monarchs (the Hebrew words for "palace" and "throne" were both Mesopotamian loanwords). Solomon allegedly commissioned 40,000 lyres and harps of precious woods, stones, and electrum so that the Levites could sing the Lord's praises. He clearly desired a royal apparatus equal to that of his peers.

The neo-Assyrian emperors (ca. 912–609) replaced royal reciprocity with a conscious program of centralization. Their archives and reliefs attest to the frequent transfer of musicians to the Assyrian palaces as booty or tribute. The emperors exploited music to symbolize the *Pax Assyriaca* (Assyrian Peace) proclaiming a feast of music for the princes of the four regions who had submitted to the yoke. The Assyrian Peace was a cosmopolis in which music served as a common language in the banquet halls of The Willing. The best evidence for this comes from Lydia, a client-state in western Anatolia with which the Greeks

had close contact circa 675–547 BCE, where Mesopotamian harps and concert ensembles make a sudden appearance under the local dynasty.

—John Franklin

Bibliography

- Braun, Joachim. *Music in Ancient Israel/Palestine: Archaeological, Written, and Comparative Sources*. Grand Rapids, MI: Eerdmans, 2002.
- Farmer, H. G. “The Music of Ancient Mesopotamia.” In *New Oxford History of Music*, Vol. 1, *Ancient and Oriental Music*, edited by E. Wellesz. London: Oxford University Press, 1957.
- Manniche, L. *Music and Musicians in Ancient Egypt*. London: Dover, 1991.
- Polin, C. C. J. *Music of the Ancient Near East*. Westport, CT: Greenwood, 1974.
- Sachs, C. *The Rise of Music in the Ancient World East and West*. New York: Norton, 1943.

Music in Ancient Greece

The Minoan and Mycenaean palaces (ca. 1700–1100 BCE) both housed professional musicians who performed religious hymns, royal praise poetry, and various other musical rituals. To understand this period, scholars have relied on the physical remains of instruments, musical scenes in various media, and later myths about magical musicians such as Orpheus, Thamyras, and Amphion. Double pipes (*auloi*) and seven-stringed lyres indicate that the classical tonal system of Mesopotamia was known. During the Dark Age (ca. 1100–750 BCE) that followed the mysterious collapse of palatial society, Mycenaean traditions were replaced with local traditions. Religious music survived through continued worship of Mycenaean gods, especially in Lesbos, Athens, Thebes, Sparta, and Cyprus. Praise poetry—epic song celebrating famous deeds of gods and men—reached new heights in the Ionian migration to the eastern Aegean (ca. 1000–800). Homer (ca. 700) is the last great representative of this school, which used formulaic metrical expressions to improvise performances accompanied by the *phorminx*.

In the Archaic period (ca. 750–500), renewed prosperity and Pan-Hellenism brought musical innovations. While liturgical music continued, secular personal expression was cultivated by

THE DIATONIC CYCLE

Translations of cuneiform tablets published in the 1960s prove that the Sumerians knew a cyclical system of diatonic tunings by circa 2100 BCE. This conception, the ancestor of modernity’s own circle of fifths and heptatonic scales, was previously credited to the ancient Greeks of the fourth century BCE. It reflects the high musical development achieved in the early Mesopotamian temples and palaces. The system was certainly transmitted to Greece, probably in the Mycenaean period. It may also lie beneath the Persian, Arabic, and even Indian modal traditions. But this is an area that has received little attention since the system’s discovery.

—John Franklin

singer-songwriters in lyrics accompanied with the lyre. These songs are preserved as the works of the lyric poets such as Archilochus, Sappho, Alcaeus, and Anacreon. Musical skill became synonymous with polite breeding. The lyre teacher (*kitharistes*) drilled children in music, letters, and classics such as Homer; girls were similarly educated in places such as Sappho’s Lesbos. Throughout Greece, choral performance was a second pillar of education for both genders. Music motivated physical and (for the boys) martial training and sweetened poets’ moral lessons; athletic victories and civic rituals were also celebrated. Terpander, Alcman, Pindar, and Bacchylides were famous singers. Men contributed musically to symposia, the drinking clubs central to aristocratic society. Increasingly technical art-music was pursued in tyrants’ courts and at the festivals of Delphi, Olympia, Delos, Sparta, and Athens. An Assyrianizing fashion in the Lydian capital of Sardis, the Paris of the times, meant renewed exposure to contemporary Near Eastern music. Complex new tonalities were introduced by the *aulos* to choral music, including its fifth-century Athenian outgrowths, tragedy and comedy.

This aulos revolution culminated in the controversial New Music (ca. 425), with Euripides its most famous exponent. An evolving new tonal system was given final form by Aristoxenus,

KEY INSTRUMENTS

Lyres (defined by two arms, a crossbar, and equal-length strings) were common throughout antiquity. Harps (single arm and tapering strings) were more typical of the Near East and Egypt. Both came in many varieties. Greek epic singers used the *phorminx*, a round-based lyre with perhaps only a few strings. The later *kithara* was a grand seven-stringed concert lyre with a flat base; Hellenistic models could have nine or more strings. *Lyra* typically meant the tortoise-shell instrument of students and amateurs. Double pipes (Greek *aulos*) were widespread both for solo and ensemble play; they had a clarinet's cylindrical bore but the double reeds of an oboe. Percussion varied regionally, but frame drums, hand cymbals, castanets, and sistrums were widely used.

—John Franklin



Marsyas plays the double pipes and Apollo plays the lyre, detail of a red figure lekythos, Greek, from Peastum, fourth century BCE. (Musées Nationaux/Art Resource, NY)

Aristotle's musicologist and author of the earliest extant work of music theory, *The Harmonic Elements*. A musical notation system was based on his theory and used modified letter forms written over a text's syllables. A later source indicates the musical key that these refer to, so extant scores can be deciphered. More than 60 of these, mostly fragmentary, are known from manuscripts, inscriptions, and papyri. Two hymns to Apollo, inscribed on the Athenian treasury at Delphi in 127 BCE, best represent the mature style. *Mousike* had by this time become sophisticated entertainment, often purveyed by traveling companies such as the Technicians of Dionysus. In the cosmopolitan Hellenistic period (ca. 323–31 BCE) that followed the unification of the Eastern Mediterranean and Near East by Alexander and his successors, Greek theaters and concert halls were widely erected, and *Mousike* became a staple of cultured life. With Rome's first conquest of Greece in 197 BCE, this art came to Rome alongside drama, literature, and philosophy. As Horace famously recalled, "Greece, though captive, captured its wild victor."

Music, melody, harmony, rhythm, meter, tone, tune, ode, chord, and chorus all derive from Greek (often via Latin) and are shared in

one form or another by most European languages. Thus, while the artistic use of sound is a human universal, present ideas of music are fundamentally indebted to Greek *Mousike*.

—John Franklin

Bibliography

- Anderson, W. D. *Music and Musicians in Ancient Greece*. Ithaca, NY: Cornell University Press, 1994.
- Barker, A. *Greek Musical Writings*. 2 vols. Cambridge: Cambridge University Press, 1984–1989.
- Henderson, I. "Ancient Greek Music." In *New Oxford History of Music*, Vol. 1, *Ancient and Oriental Music*, edited by E. Wellesz. Oxford: Oxford University Press, 1957.
- Landels, J. G. *Music in Ancient Greece and Rome*. London: Routledge, 1999.
- Maas, M., and J. Snyder. *Stringed Instruments of Ancient Greece*. New Haven, CT: Yale University Press, 1989.
- Mathiesen, T. J. *Apollo's Lyre: Greek Music and Music Theory in Antiquity and the Middle Ages*. Lincoln: University of Nebraska Press, 1999.
- Pöhlmann, E., and M. L. West. *Documents of Ancient Greek Music*. Oxford: Oxford University Press, 2001.
- West, M. L. *Ancient Greek Music*. Oxford: Oxford University Press, 1992.

■ Introduction: Domestic Architecture

By domestic architecture, historians and archaeologists mean buildings that people made their homes in. These are the buildings of everyday life, where families were raised, meals were eaten, and people slept. As such, there was tremendous variety in the types of homes that people lived in throughout the world from 1000 BCE to 300 CE, from small temporary campsites to block-length apartment complexes to large country villas. It is difficult to make generalizations about this variety of experiences since much of the architectural design was contingent on cultural values, environmental issues, and availability of resources.

Yet houses were not just places for people to sleep. The home carried significant social messages and was a means of communicating information about the identities of the owners/residents. These status messages are particularly noteworthy in the urban societies of 1000 BCE to 300 CE. The following entries explore how status and social relationships were communicated through domestic architecture in a number of these urban settings.

—Kevin M. McGeough

Roman Houses

Roman houses in the city had few or no windows, and from the outside, a house would seem like a blank wall. The center of the house, and its focal point, was the atrium—a courtyard with a large opening in the ceiling to admit light. The entryway to the house, called the *vestibulum*, usually connected directly to the atrium. In the center of the atrium there was often a pool of water, the *impluvium*. Opening onto the atrium was a raised platform called the *tablinum*, which was where the paterfamilias would sit when receiving visitors of lower status. For example, when a man's clients came every morning to pay their respects at the *salutatio*, the patron would greet them seated in the tablinum. The dining room, or *triclinium*, also usually opened onto the atrium. In the back of the house was a series of tiny rooms that served as bedrooms. Each of

these was called a *cubiculum*. The quarters for slaves and women were also at the rear of the house. Some Roman houses also included a walled area at the back that was open to the sky and served as a garden. Roman houses were more or less the same range of sizes as modern houses, with the average house measuring around 1,980 square feet (184 square meters).

The most obvious and famous feature of these houses was the lavish decoration of the walls and floors. Much of the expense and effort that, in a modern home, might be spent on furniture and decorative objects, the Romans directed toward ornamenting the structure itself. In many rooms, all four walls were plastered over and then completely covered with elaborate wall paintings, while the floors were coated with intricate mosaics.

To a modern viewer, the palette of colors employed in Roman wall paintings might well appear strange, dominated as it was by large expanses of black, gold, and a distinctive, deep blood-red shade. Art historians have divided the types of wall paintings into four basic styles, a system that, while being somewhat reductionist and arbitrary, nonetheless gives a sense of chronological development.

The earliest phase, known as First Style wall painting, features panels painted to look like marble blocks, along with three-dimensional molded cornices and other elements protruding from the wall in low relief. The Second Style is characterized by columns painted on the wall at regular intervals and, between them, increasingly complex illusionistic panels that attempt to give the impression of three-dimensionality and depth as if the viewer were looking through a series of windows. These scenes often consisted of fantastic cityscapes or architectural vistas of arches, tripods, gardens, and buildings. The Third Style employs large, plain rectangles of solid colors within which are painted smaller rectangular paintings, creating an effect reminiscent of a series of pictures hung on a wall. Mythological scenes and human figures were frequent subject matter for these pictures. The Fourth Style encompasses a variety of effects, such as

► INSULAE—APARTMENT BUILDINGS

In Rome and other big cities, only a tiny percentage of urban Romans could afford their own homes. The rest lived in high-rise apartment buildings. The Romans called them *insulae*, or “islands,” because of the way they often occupied entire city blocks. *Insulae* were located all over the city of Rome, and some of the larger ones might have had 10 or more stories. Because of the destruction caused by poorly built *insulae* collapsing, emperors set limits on the height of *insulae* several times. Usually these limits were around 60 or 70 Roman feet (58–68 feet or 20–25 meters), and the fact that the emperors felt the need to repeatedly pass such legislation suggests that these limits were routinely ignored. The poet Martial, in *Epigrams*, mentions one wretched *insulae* dweller who had to trudge up 200 stairs to reach his squalid apartment in the attic.

Insulae housed a wide variety of tenants of differing socioeconomic classes. The ground-floor apartments would have been rented to the wealthiest tenants, who did not want to have to climb up many flights of stairs to reach their dwellings. Often, the row of rooms opening onto the street was rented out as shops and small businesses. As you climbed up the levels of the *insulae*, the wealth of the tenants declined and the number of people per room increased. The least desirable rooms, located under the eaves of the roof, frequently leaked and were inhabited by vermin. A chamber pot served as a toilet, and despite legislation

prohibiting such actions, full pots were routinely dumped out the window.

Romans living in such apartments would have had a much more rudimentary set of possessions than was owned by wealthy Romans in a *domus*. Their sum total of worldly goods may have been nothing more than some clothing, bedding, footwear, a lamp, cookware and utensils, and perhaps some crude furniture. The poet Juvenal, in *Satires*, lists the belongings that one unfortunate *insulae* dweller lost in a fire, which consisted only of an undersized bed, a cupboard, an old storage chest, six cups, a flagon, and a statue.

Ancient sources record numerous instances of *insulae* collapsing, but Roman law did not offer tenants much protection. Juvenal (in his work *Satires*) describes the walls of a typical *insulae* as having gaping cracks, which the unscrupulous landlord attempted to conceal, and only the liberal use of wooden props prevented the whole edifice from immediately crumbling to the ground.

The owners of *insulae* included many famous Romans, and the orator Marcus Tullius Cicero was one such slumlord who owned several *insulae*, including one that collapsed because it was so poorly made. Cicero, in *Letters to Atticus*, expressed no concern for the lives lost in the disaster and cheerfully noted that he would rebuild it and be able to charge higher rents for the new building.

—Gregory S. Aldrete

painted architectural elements rendered in a spindly, attenuated style and small, delicately painted garlands, designs, and figures.

Floor mosaics were made by taking very small, cut pieces of colored stones and pressing them into wet mortar to create images ranging in complexity from simple black-and-white geometric patterns to astonishingly detailed color pictures. The subject matter of these mosaics was extremely diverse, with some of the most elaborate examples depicting historical scenes, mythological stories, wild beasts both exotic and mundane, and realistically rendered sea life.

By current standards, Roman houses would have appeared surprisingly empty. Much of the basic furniture was made of bronze. To sit on,

Romans could choose from an assortment of bronze chairs, stools, and sofas with varying numbers of legs. Several types of low, bronze braziers testify to attempts to heat the cold house interiors in the winter. Marble was also employed for benches and tables, and some of the more elegant types featured elaborately carved legs and supports. In addition to furniture, smaller household objects would have included a full range of pots and pans, eating utensils, wood and wax tablets to write on, and the ubiquitous olive oil-burning clay lamps that brought light to dark interiors.

The *domus*, or aristocratic Roman house, was not so much the dwelling place of a nuclear family but rather of an extended household, includ-

ing relatives, slaves, and servants. Roman homes do not seem to have had pronounced internal divisions among areas inhabited by men, women, and children or even between master and slave, and standards of privacy were probably less than what many modern people are accustomed to.

The rooms tended to serve multiple purposes as well. The atrium, for example, was a site where the male head of the household might receive clients, meet with peers, and conduct business, but it was also a space shared by his wife, and it served as a playground for his children. The Romans believed that a person's house reflected the owner's character and status, and the social function of the house included significant public as well as private uses. The patron-client system that bound together Romans of different ranks and statuses involved a number of social rituals that took place in the main rooms of the domus or on the street in front of it.

—Gregory S. Aldrete

Bibliography

- Adkins, L., and R. Adkins. *Handbook to Life in Ancient Rome*. New York: Facts on File, 1994.
- Aldrete, Gregory S. *Daily Life in the Roman City: Rome, Pompeii, and Ostia*. Westport, CT: Greenwood, 2004.
- Clarke, John. *The Houses of Roman Italy*. Berkeley: University of California Press, 1991.
- Wallace-Hadrill, A. *Houses and Society in Pompeii and Herculaneum*. Princeton: Princeton University Press, 1994.

Four-Room Houses and Israelite Ethnicity

The broad-room house, four-room house, and the pillar-courtyard house are common terms for a structure that came into prominence during Iron I (ca. 1200 BCE) and lasted until the monarchical period (ca. 900 BCE) in biblical Israel. It has a rectangular or square shape, one or two rows of pillars forming a courtyard, and two or three adjoining rooms. Some sites have stone steps, indicating that the pillars supported a second story. The central courtyard contains a cistern and a hearth. Side rooms were likely pens with domestic living space upstairs. Such houses were typically arranged in clusters, with the vil-

TEL MASOS

Tel Masos, containing about a dozen pillar courtyard houses, lies just south of the central hill country and appears to have linked trade between the coast, the Negev Desert, and the central hill country. Because of the village's location and trade connections, it may indicate that the pillar courtyard house was not specifically Israelite. Yet the economic base of the village was dry farming and the herding of small cattle, which is in keeping with the Israelite villages of the central hill country. The site has been identified with the biblical cities of Hormah (Israelite) and Amalek (Canaanite).

—Laura M. Zucconi

lage itself laid out as an oval compound. A concentration of pillar-courtyard houses is found in the central highlands, but some sites are in the northern plains, Philistia, and Transjordan. Antecedents for a pillared private dwelling can be found at Tel Batash in Late Bronze II (ca. 1300 BCE).

In order to determine the ethnicity of the pillar-courtyard house, several key points are usually addressed: the language of associated inscriptions, pottery association, layout of the site, and the link between settlement patterns and the Hebrew Bible. Finding inscriptions in either Hebrew or Canaanite can indicate the linguistic ethnicity of the site's population, but mixed-language populations are possible. The presence of collar-rim jars may mark Israelite ethnicity since their occurrence, like the pillar-courtyard house, increased during Iron I and II with a concentration in the central hill country. Archaeologist Ann Killebrew refrains from assigning ethnicity to the jars but does see its distribution as a marker of a social boundary. The clustered grouping for pillar-courtyard houses is linked to the idea of *mishpaha*, or clan, found in the Hebrew Bible and is thus called Israelite. The settlements themselves tend to be in an oval shape, causing Fritz, and later Finkelstein, to argue that the pillar-courtyard house developed from bedouin tents that used the space in front of the tents for meetings. They link these structures to the sedentarization of nomadic Israelites in Iron I. Yet the Tel Batash site may indicate that the courtyard developed from Egyptian-style palaces at Late Bronze (LB) Megiddo and

Ugarit. From the Middle to Late Bronze Age there was a reduction in size and number of urban settlements, but they retained continuity in the material culture. The transition from LB to Iron I saw not only a shift in the settlement pattern but also an accompanying change in the material culture, such as house and jar designs, that could be more regionally defined. This development is thought to correspond with stories in Joshua and Judges of the Israelite conquest and settlement in the thirteenth to twelfth centuries BCE.

Attributing Israelite ethnicity to the pillar-courtyard house impacts four key theories for the emergence of Israel: the peaceful infiltration theory whereby nonindigenous seminomads permanently settled in the central highlands, creating biblical Israel; social revolution theory whereby Israel developed from an indigenous peasant population revolting against a Canaanite elite ruling class; pastoral Canaanite theory whereby Israelite Iron Age central highland settlements developed from those Canaanites forced into pastoralism during the LB period; and the mixed multitude theory whereby loosely organized indigenous groups developed ties with infiltrating external groups.

—Laura M. Zucconi

Bibliography

- Dever, William G. *Who Were the Early Israelites and Where Did They Come From?* Grand Rapids, MI: Eerdmans, 2003.
- Finkelstein, Israel. *The Archaeology of the Israelite Settlement*. Jerusalem: Israel Exploration Society, 1988.
- Fritz, Volkmar. "Bestimmung und Herkunft des Pfeilerhauses in Israel." *ZDPV* 93 (1977): 30–45.
- Killebrew, Ann E. *Biblical Peoples and Ethnicity: An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300–1100 BCE*. Archaeology and Biblical Studies, no. 9. Atlanta: Society of Biblical Literature, 2005.

Classical Chinese Domestic Architecture, 1000 BCE–300 CE

The classical Chinese architectural style with origins now associated with the Han dynasty (206 BCE–200 CE) and the Han ethnic group

emerged during the Han period from technologies and architectural styles that can be accredited to earlier periods and regions. These include the Shang dynasty (roughly 1600–1100 BCE), the Zhou dynasty (1122–221 BCE), and the Qin dynasty (221–206 BCE). The Shang and Zhou dynasties can be regarded as Bronze Age, whereas the Qin and Han dynasties indicate the commencement of the Iron Age with its new technologies. In the Qin-Han period, building techniques and structural designs were rejuvenated and entered completely new phases of development. In terms of continuity, techniques and typologies rather than aesthetics and style characterized Chinese architecture.

Chinese buildings of these periods were constructed from natural materials: *tu* (earth) and *mu* (timber), and so architecture was commonly referred to as *tu mu*. Timber frames bear the roof, and earthen walls enclose the building and stabilize the timber frame. Many building techniques were utilized, including laying mud brick and ramming earth. Two main categories of timber structures may be found: *tailiang* and *chuandou*. Tailiang structures employed a column and beam frame characterized by the placement of beams on columns repeatedly until the ridge was formed. Its basic structural unit is a bay consisting of four columns and beams. When a large space was required, it could be achieved by manipulating the dimensions of the skeleton or expanded by adding a bay (or bays) either at the front, the rear, or both. The chuandou style involved a post and tie framework with longitudinal purlins (horizontal supports for rafters) resting directly on posts and with beams tying the posts together in the transverse direction.

The pitched roof was a characteristic component of Chinese architecture. To prevent leakage, the roof was thatched or topped by roofing tiles. In the early Zhou or Western Zhou (which lasted until 770 BCE), tiles were used to cover the ridge, hips (or diagonally sloping roof edges), and eaves. Early tiles were made with pins or hoops to be received by the clay mortar or secured in place by fiber lashings. Roofing tiles were heavy. The heavyweight roof added stability to the timber-framed building and drove the development of timber structure; the impact of

tiled roofs was profound during this period. The ridge and hips were terminated by end tiles of particular design; the ridge end tiles (*chiwei*) in particular served both technical and symbolic functions. Tiles used as the first course along the eaves of a roof were shaped differently. They were starter-over-tile (*wa dang*) and eaves-under-tile. The starter-over-tile had a flat end: half round (before the Qin) or round (from the Qin-Han). The end was decorated with motifs that varied in different times. Building structures were of mortised column and beam framework. There were many types of mortis-tenon developed to ensure the joints. A bronze fastener (*jingong*) was used for holding together two or more timbers to reinforce the rigidity of the structure. This bronze device was decorated with silver and gold inlay in palace buildings of the Spring and Autumn (770–476 BCE) period.

Owing to the development of iron tools for woodworking during the Qin and Han dynastic periods, wooden joints became stronger. The bronze fasteners gradually lost their structural function, but their ornamental function continued. Timber structures required painting for weather protection, and the intricate pattern and motif found in the bronze fastener continued in such decorative painting. Viewed from an aesthetic point of view, the painting accommodated the influence of the fastener design.

The basic construction techniques of such timber buildings are column-beam networks joined together with the assistance of blocks and brackets (*dou gong*). The blocks and brackets, one of the important characteristics of Chinese architecture, were developed to sophistication in the Han dynasty period. Architecture that has survived from the Han includes stone gate towers (*que*) in Sichuan, Hebei, and Henan provinces. They represent storied building of timber structure with block-bracket sets.

Pottery models and pictorial bricks (*huaxiang zhuan*) unearthed from Han tombs represent many different types of buildings, including storied buildings in courtyard compounds. These architectural representations reveal that local traditions and regional peculiarities remained and influenced each other in the Han dynasty, when China achieved a new measure of imperial unity.



Ceramic end of an eave cover tile, late Han dynasty. (AsiaStock)

Column bases were used, which may be made of wood, bronze (during the Bronze Age), or stone (Iron Age). From the mid-Shang onward, columns rest on top of foundation stones rather than piling into the soil, which reveals that the wooden structure was much more stable than before.

Floor bricks were used to pave the foundation platform to protect it against rain and damp. Stairs leading up to the platform level were made of hollow bricks. The bricks were decorated with impressed or molded patterns to aid steady footing on the stairs. The decorated steps of stone in the Forbidden City, Beijing, are remnants of this ancient tradition. During this period, people sat on the floor, and furniture was developed to accommodate them. In the Warring States period (403–221 BCE), the low table (*an*), arm rest (*ji*), screen (*ping*), and coatrack were popular. Both archaeological evidence and pictorial representations reveal that a big wooden bed (*ta*) was utilized not later than 500 BCE. In the north, the heated bed (*kang*), originally a platform heated prior to retiring for the night but later a bed built over an oven, still remains common in rural villages.

—Qinghua Guo

Bibliography

Knapp, Ronald G. *China's Old Dwellings*. Honolulu: University of Hawai'i Press, 2000.

Needham, Joseph. *Science and Civilization in China*, Vol. 4. Part 3, "Civil Engineering and Nautics." Cambridge: Cambridge University Press, 1971.

Watson, William. *The Arts of China to AD 900*. New Haven, CT: Yale University Press, 2000.

Evidence for Elite Architecture in the Andes

Monumental complexes arose very early in the Andean region and along the Peruvian coast. The earliest monumental complexes date to several millennia BCE. Archaeologists have often accepted the construction of monumental works as implicit evidence for status differentiation and the existence of an elite socioeconomic class, supposing that an elite managerial class was needed to plan and direct the construction of such monuments. This common assumption is contradicted by evidence from the Andean region, since the best evidence for social differentiation is often the corporate architecture itself rather than other markers of elite status or control. Relatively little research that would provide needed insight into status differentiation has been conducted in residential areas outside of monumental architectural cores.

Early monumental complexes in the Andes are unwaveringly interpreted as religious in nature. Such complexes embrace several religious traditions: (1) a coastal tradition of large U-shaped complexes of platform mounds and square

sunken courts known as the Paraiso tradition, (2) a northern highland tradition of small rooms with ceremonial fireboxes known as the Kotosh religious tradition, and (3) a southern highland tradition of sunken plazas surrounded by multiple rooms associated with the Yayamama religious tradition. People had largely ceased using the U-shaped and Kotosh complexes by the middle of the first millennium BCE. They were replaced by monuments of the Chavín tradition, while the Yayamama tradition persisted until the middle of the first millennium CE.

One of the best-studied early complexes is that of Chavín de Huántar located in the Andean highlands at the confluence of the Mosna and Huachecsa rivers. Archaeologists have investigated both the ceremonial architecture as well as the surrounding habitation areas at Chavín. The site is well known for its massive ceremonial architectural core, where construction probably began around 850 BCE. The earliest structures center on the Old Temple, a symmetrical stone-faced, U-shaped platform fronted by a sunken circular plaza. After 390 BCE, the Old Temple was partly remodeled and substantially enlarged with a larger square-shaped court, a fancy gateway, and additions to the platform mound, creating the New Temple. By the time temple modifications began, the site had grown to maybe 3,000 inhabitants, many times larger than any surrounding village. Evidence for craft specialization, complex engineering, and differential access to space, rare goods, and the best food support the idea of growing social differentiation at the site.

Less well known is the southern Yayamama religious tradition represented by the sites of Pukara and Chiripa in the Lake Titicaca basin. Chiripa's complex dates slightly earlier (800–250 BCE) compared to Pukara (400–100 BCE). Both sites have similar ceremonial complexes comprised of square stone-lined sunken courts surrounded by detached one-room structures with cut stone foundations along three or four sides of the courtyard. The restricted access to the courtyards and the fine quality of the associated cut stonework has led to interpretation of these complexes as products of an elite priestly class. Early archaeologists originally interpreted the rooms surrounding the sunken courts as residences of elite priests, although today they are



Ruins at the Andean site of Pukara, Chile, 400–100 BCE. (Dreamstime)

seen as storerooms. Evidence of socially differentiated urban populations surrounding these sites is currently lacking, leaving doubt as to the degree to which the architecture represents the dictates of an elite class.

—Jo Ellen Burkholder

Bibliography

- Burger, Richard. *Chavin and the Origins of Andean Civilization*. London: Thames and Hudson, 1992.
- Chavez, Sergio J., and Karen L. Mohr Chavez. "A Carved Stela from Taraco, Puno, Peru and the Definition of an Early Style of Stone Sculpture from the Altiplano of Peru and Bolivia." *Ñawpa Pacha* 13 (1975): 45–83, plus 8 plates.
- Hastorf, Christine A., ed. *Early Settlement at Chiripa, Bolivia: Research of the Taraco Archaeological Project*. Number 57, Contributions of the University of California Archaeological Research Facility, Berkeley, 1999.
- Moore, Jerry D. *Architecture and Power in the Ancient Andes: The Archaeology of Public Buildings*. New York: Cambridge University Press, 1996.

YAYAMAMA

What is the Yayamama religious tradition? In the local Andean language, "yaya" refers to man and "mama" to woman. Thus, the tradition literally translates as "Man-woman." It was given this designation based on several pieces of stone sculpture in which both a male and a female anthropomorphic beings was represented. Pieces with this same basic theme of male-female duality have come to light all around the Lake Titicaca basin. The anthropomorphic figures in these sculptures are associated with a variety of animals including frogs, wild cats, llamas, and what may be either a snake or catfish. Unfortunately, many of the pieces have been removed from their original contexts. Some were moved in ancient times, but others have been set up in local school yards as public sculpture gardens. This makes it difficult to confirm how closely related the sculptural tradition is linked to the use of the square sunken courts.

—Jo Ellen Burkholder

■ Introduction: Art

The Classical traditions of the period from 1000 BCE to 300 CE are readily apparent in the art that was produced at this time. This was the period in which many of the artistic traditions of world visual culture were elaborated; many of these traditions are still apparent in art that is produced today. The Greek and Roman art that was produced throughout this period had a profound influence on later European art (on the artistic traditions normally thought of as Western). Greco-Roman artists established some of the fundamental types of artistic media; the styles of sculpture and painting created in Greek times are still made today. They also established much of the thematic content of Western art that remained prominent until the artists of the early twentieth century CE broke from these traditions.

One of the most influential changes in world art in this period is the development of the idea of the portrait. While there are some hints of early portraiture in Near Eastern and Egyptian

art (it is possible to identify some individualized traits in some of the art of Mesopotamia and Egypt), the dominant aesthetic was to produce stylized and conventionalized images of people based on their social standing. Individualized traits were depicted through the objects people held, the clothes they wore, or their posture. From 1000 BCE to 300 CE, individualized portraits that reflected the physical appearance of the subject became increasingly more common. By Roman times, it is apparent that the goal of the artist was often to depict a real-life image of the person. This transformation is well demonstrated in the evolution of Egyptian coffins, which at the beginning of this period lack the real-life individualized features of the deceased but by the end of the period are decorated with a realistic portrait that the deceased must have posed for at some point during his or her life.

The Greeks and Romans were not the only ones producing art that would have a formative

effect on later artistic traditions. The art of Mesoamerica at this time created traditions that were prominent until the Spanish conquest of the Americas and are still present to some extent in indigenous art. Chinese art continued some of the themes in many of the same media that were used in earlier periods. However, they continued to elaborate on these patterns, producing art that would influence generations to come. In the case of African art, it is less clear how much of the art produced from 1000 BCE to 300 CE is based on new traditions and how much is derived from earlier art, since the earliest African art is not well preserved. Certainly Egyptian influence can be seen in Meroitic art. Likewise, it is unclear how much of the art produced at this time directly influenced later African art. In many ways, though, the African art of this period can at least be viewed as representative of formative artistic traditions.

—Kevin M. McGeough

Meroitic Style

Meroitic style follows ancient Egyptian artistic conventions but integrates distinctive Nubian characteristics and certain influences from the Mediterranean world. This unusual amalgamation of ideas was once thought to be the result of poor Egyptian craftsmanship. Nowadays, this distinctive style is described as typical Meroitic style.



Relief from the west wall of the Apedemak Temple at Naga.
(Caroline M. Rocheleau)

Egyptian artistic traditions were adopted during the Napatan period, particularly during the Twenty-fifth dynasty (716–656 BCE). Yet the Kushites reinterpreted Egyptian art and gave it a subtle Nubian twist. (The Kushites never denied their cultural roots.) The Meroitic period, which lasted from approximately 275 BCE to 350 CE, is characterized by an affirmation of more traditional values, a change highly noticeable in art and architecture. Via peaceful relations with Hellenistic (Greek) Egypt and later with the Roman empire, the Meroites came in contact with ideas of the Mediterranean world. All of these influences are visible in painting, relief, sculpture, and architecture.

In painting and relief, Meroitic style is distinguished by stout proportions of figures, particularly of the female body. This tradition goes back thousands of years to prehistoric Nubia. Males are depicted with broad shoulders and muscular limbs, while females have generous breasts and imposing curves. Such representations symbolized the fertility, wealth, and power of the person depicted. The bodies are nonetheless drawn in the typical Egyptian manner, a combination of both frontal and profile views that allowed each part of the body to be immediately identified.

The Meroites innovated when faced with artistic challenges, as seen on the west wall of the Apedemak Temple at Naga. Although it may appear as if Apedemak was a three-headed lion deity, this was not the case. Apedemak was shown with three heads because both King Natakamani and Queen Amanitore were simultaneously offering to him. To show that the god was receiving both rulers at the same time, the artist gave Apedemak two heads in profile, each facing a ruler, and one head in frontal view to ease the awkward link between the two profiles.

In sculpture the Meroitic *ba* statue of Lower Nubia is derived from the ancient Egyptian concept of the *ba* (soul), which was represented as a human-headed bird. The *ba* statues are winged human figures that were placed outside tombs, perhaps so that offerings would be made to the deceased. These *ba* statues are some of the most expressive examples of Meroitic art.

In architecture, both the pyramid and the temple were concepts adopted from Egypt. However, the Kushites adapted the buildings to

their own religious ideas. The pyramids are smaller and steeper (more like the Egyptian non-royal pyramids of the New Kingdom than the enormous royal structures of the Old and Middle Kingdoms), and the temples have different layouts of rooms than those in Egypt.

Musawwarat es-Sufra is home to puzzling Meroitic architecture and innovative concepts. The Great Enclosure continues to baffle scholars. The various buildings (currently labeled temples), ramps, and enclosure walls have been interpreted as anything from pilgrim lodgings to war elephant training grounds. Nonetheless, Musawwarat shows beautiful architectural details, such as the end of a wall sculpted in the shape of an elephant.

—Caroline M. Rocheleau

Bibliography

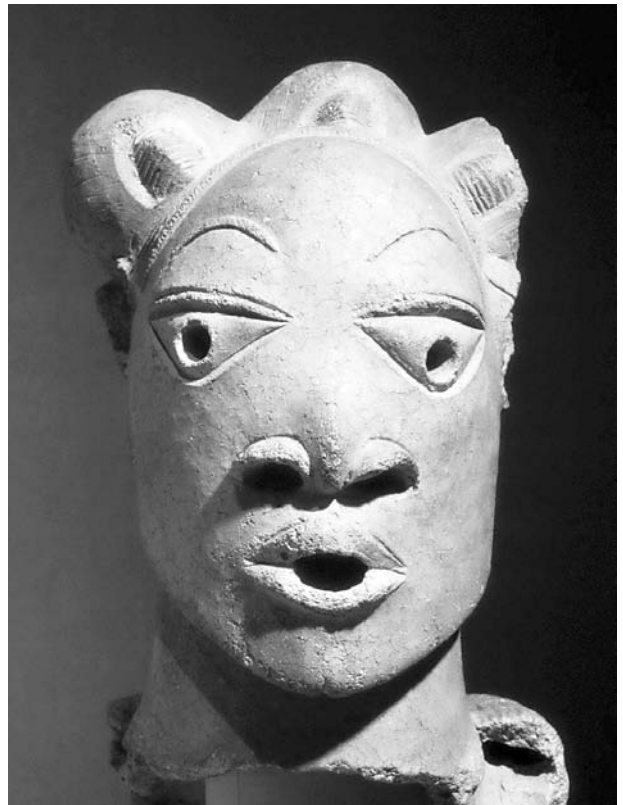
Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. London: British Museum Press, 1996.

Wildung, Dietrich, ed. *Sudan: Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

Nok Terra-cotta Sculpture

South of the Sahara in the central part of Nigeria, the Nok civilization thrived from approximately 1000 BCE (and possibly quite earlier) to 1000 CE. It was named after a village called Nok, a small settlement located in north-central Nigeria near Jos, that may have been settled as early as 4580 or 4290 BCE. As indicated by its terra-cotta artifacts, Nok culture was one that encouraged high artistic expression. Scholars believe that Nok civilization and art were at their height of cultural expression circa 500 BCE and then mysteriously vanished toward the end of the first millennium CE. Contradictory dates for Nok artifacts abound in the literature, and two modern scholars, Maurer and Langevin, argue for the period spanning 1000 BCE to 300 BCE. Nok terra-cotta sculpture consists of the oldest known examples of African artifacts depicting animals and human heads/busts.

Much of the sculpture is highly stylized and sophisticated. Sizes of figures range from a few inches tall (e.g., 48 centimeters) to nearly life-size depictions (e.g., 4.5 feet, or 1.4 meters). Fig-



Terra-cotta head, Nok Culture, Nigeria, 900 BCE–200 CE. (Werner Forman/Corbis)

urines include people in standing, kneeling, or sitting positions. Some of the sculptures are of fused groups to suggest “Janus” or multifaced figures. In all these sculptures the heads are larger than the rest of the body, well out of proportion. Heads are geometric and can be conical, cylindrical, or spherical. The faces are serene, with the eyes often elongated downward-pointed triangles and the eyebrows also angled in a simple geometric fashion. Beards, hairstyles, bangles, neck collars, and bracelets as well as adornments of ears, nose, and lips are carefully rendered. Statues of elites depict the subjects in cotton clothes, whereas commoners wear small aprons. Some sculptures are of horse riders, while others fuse human and animal characteristics.

The first major discovery of the Nok terra-cotta was made by an Englishman, Lt. Col. J. Dent Young, and his team during a mining expedition in the early twentieth century. They discovered a group of terra-cotta artifacts including a monkey head, a human head, and a foot, which

were later placed in a museum in Jos. When later alerted to these discoveries, extensive archaeological work was carried out in the 1940s by Bernard Fagg, then employed as an archaeologist by the government of Nigeria; his research led to a collection bequeathed to the Nigerian National Museum that opened in Jos in 1953. Other pieces have made their way into private collections especially in Europe.

Terra-cotta are burnt effigies produced from alluvial mud or clay dating back to 2,500 years ago; the Nok terra-cotta exhibits similarities with later Ife terra-cotta of the Yoruba kingdom. One theory posits that the Nok artwork was culturally transmitted and evolved into the Ife terra-cotta. The Nok terra-cotta was characterized by a unique style and a fine finish carried out to a high degree of refinement using bare hands without tools. While the Nok style did not survive into contemporary times, similar methods of terra-cotta production are still being used by local artisans. These methods involve forming, molding, and rolling of the coarse grain clay materials, which may be sun dried or burnt in an open hearth of temperature over 572 degrees Fahrenheit (300 degrees Celsius). The Nok terra-cotta artifacts indicate a society that was hierarchical and sophisticated, with an elite served, in part, by artists able to devote themselves full-time to their trade while others farmed, worked iron, and completed daily tasks.

—*Oluseyi Odeyale*

Bibliography

- Akintoye, S. A. *Revolution and Power Politics in Yoruba Land, 1840–1893*. Ibadan Historical Series. London: Longman Group Limited, 1971.
- Fagg, Angela. “Thoughts on Nok.” *African Arts* 27(3) (July 1994): 79–83, 103.
- Fagg, Bernard. “The Nok Culture—Excavations at Tura.” *West African Journal Archeological Newsletter* 10 (1968): 27–29.
- Fagg, Bernard. “Recent Work in West Africa: New Light on the Nok Culture.” *World Archaeology* 1(1) Recent Work and New Approaches (June 1969): 41–50.
- Walker, Robin. “Primitive Peoples Do Not Produce Artwork of Anything Like This Quality.” *New African* 455 (2006): 22–23.

Hellenic Art

The ancient art of the Greek mainland and Aegean region, known as Hellenic art, provided the foundation for an entire Western tradition. Hellenic art, which includes architecture, is organized into stylistic periods that document the eventual dispersion of Greek artistic theory and culture around the Mediterranean world. The Greeks deliberately cultivated their unique artistic style by adopting characteristics from the arts of neighboring peoples and adapting these characteristics to appeal to their sensitivities.

By the dawn of the tenth century BCE the impoverished people of the region, having been invaded by the Dorians in a century prior, were producing small ceramic pieces and minor bronze objects, such as garment pins. These Dark Ages gave rise to the stylistic period called Geometric (1000–700 BCE) during which ceramic vases became large scale and were commonly used as grave markers. Painted on them in black were rigid geometric patterns and figures of humans and animals in silhouette. Statuettes of men and animals were formed of bronze, since stoneworking skills had not yet been regained. The architectural remains that do exist, few of which are large scale, reveal construction materials of mud brick, wood, and thatch.

Once confronted with the arts of the Near East, the Greeks abandoned the Geometric style for another known as Orientalizing (700–600 BCE). It is on pottery from the city of Corinth where the Orientalizing motifs of floral and vegetal origin developed, usually in combination with Eastern animals, such as the panther. The black-figure vase painting technique, in which the painted black figure has incised detail and added color, was introduced in Corinth. Since the Greeks had established a colony in Egypt and Greek mercenaries were routinely hired by the Egyptians, Greeks became aware of immense Egyptian architecture in the forms of pyramids and temples. Impressed, they adapted to their needs the Egyptian concepts of permanence and splendor. At that moment, the development of Greek temple architecture, one of the greatest contributions of Hellenic art, was propelled forward; the two architectural orders, Doric and Ionic, were born.

The Archaic period (600–480 BCE) provided for the development of monumental stone architecture and sculpture. Temple plans and architectural orders became increasingly standardized. Temples consisted of a central room, the *cella*, for the display of the cult statue. A colonnade defined the edge of the rectangular platform, upon which the *cella* stood. Doric was the less ornate of the two orders and possessed an alternation of grooves and square panels along the upper temple exterior. Columns appropriate to the order had a shaft with vertical channels and a top element composed of a cushion-like member beneath a square slab. At the temple peak was a triangular element, the pediment, that contained a sculptural program. The Ionic order was more decorative and slender. The grooves and panels of the Doric order were replaced with a horizontal course upon which sculpture was pinned. The Ionic order column was provided a carved base and a top element composed of volutes. The principal freestanding statuary types of the Archaic period were the stone male *kouros* and female *kore* figures, both revealing the influence of Egyptian style over life-size statuary. Greek sculptors borrowed the basic stance of the Egyptian figure type (frontal pose, arms at side, one extended leg) but made one important change. The *kouros* figure was sculpted as a nude, which was acceptable in Greece where men exercised in the nude. As the style of the Archaic period developed, sculptors improved the anatomy of the nude *kouros* and the drapery of the *kore* figures. The Greeks also developed a casting technique allowing for life-size hollow bronze statues. In vase painting, Athens gave rise to the red-figure technique in which the background was painted black, which allowed the painter greater freedom. Greek panel and wall painting was produced but is no longer extant.

Art of the Classical period (480–323 BCE) focused primarily on sculpture for the first 30 transitional years. The *kouros* and *kore* types were replaced with the anatomical realism of the Early Classical Severe style. Marked improvement in the sculptors' understanding of how the human body moves took place. In vase painting, genre scenes of everyday life increased in frequency. The pinnacle of fifth-century Greek art, known



Left: Doric column from the Temple of Hephaestos in Athens. Right: Ionic column at Delphi, Greece. (Dreamstime)

as the High Classical, fulfilled anticipations of prior periods. Athens, under Pericles' leadership, initiated a building program on the Acropolis with construction of the Parthenon. Dedicated to the goddess Athena, this temple is an unusual combination of Doric and Ionic orders. Pediment statuary exhibited contrasts between light and dark with deeply carved drapery folds. The sculptor Polyclitus, who worked beyond Athens, wrote a treatise on human proportions. His studies culminated in figures that stood with counterbalanced limbs in a pose known as *contrapposto*. Idealism was a primary goal. Regardless of provenance, the sculptures, with expressionless faces, seemed distracted and distant. Although the red-figure technique was prevalent, the white-ground technique became popular in vase painting and allowed for the application of many colors. The political decline of Athens initiated a later Classical stage during the fourth century in which sculpture became deeply personal and the artist was free to foster his own style. Idealism was no longer the goal, and subject matter became increasingly secular, not only in sculpture but also in vase painting and mosaics. The circular-planned temple was developed during the period, as was a new columnar order with sculpted leaves called Corinthian.

After the death of Alexander the Great, the dispersion of Greek culture among non-Greeks

THE PERICLEAN BUILDING PROGRAM UPON THE ATHENIAN ACROPOLIS

With the transfer of the Delian League's treasury to Athens in 454 BCE, Pericles had the funds to begin a large-scale building program upon the Acropolis. Four buildings were planned, with the sculptor Phidias supervising. The Propylaia and the Parthenon, both with Doric and Ionic characteristics, were constructed prior to the first Peloponnesian War in 431. During breaks in hostilities and after the death of Pericles in 429, the Ionic Uruktheion and Temple of Athena Nike were built according to plan. Visitors to the Acropolis would pass through the monumental gateway known as the Propylaia. Once beyond it, they were confronted with the massive scale of the Parthenon. This temple served as the home of Phidias's 38-foot (11.6-meter) cult-statue of Athena Parthenos. Steps from the Parthenon was one of the most complex temples upon the Acropolis, the Uruktheion. The Uruktheion was dedicated to Poseidon, Uruktheus, and Athena; it was composed of at least three rooms on four different levels. Upon one projecting porch stood life-size female statues, known as Caryatids, that supported the roof overhead. Upon a bastion near the Propylaia, the small Temple of Athena Nike was constructed. Around the bastion, a balustrade was constructed to keep worshippers safely near the temple.

—Bridget Vasterling McDaniel

gave rise to the Hellenistic period (323 BCE–31 CE). The demand for genre art representing different age groups, classes, and races was high. Realistic, not idealistic, portrait sculpture purchased by private patrons indulged personal tastes. Expressive faces and variety of pose became the norm. People of this period invented art history as they looked back to the Classical period with appreciation and a desire to revive it.

After 31 CE, Hellenistic art was inherited by the Romans. With the Roman conquest of Greece, a new era of looting and copying of original Greek artwork ensued. The Romans had become Hellenized.

—Bridget Vasterling McDaniel

Bibliography

- Biers, William R. *The Archaeology of Greece*. Ithaca, NY: Cornell University Press, 1987.
- Pedley, John Griffiths. *Greek Art and Archaeology*. Upper Saddle River, NJ: Prentice Hall, 1993.
- Robertson, Martin. *A Shorter History of Greek Art*. Cambridge: Cambridge University Press, 1981.

Roman Portraits and Historical Reliefs

The Romans produced portraits and historical reliefs to commemorate prominent citizens and events. At times these works seem realistic, but what they really are is plausible. The portraits of the first century BCE depict sitters, usually male, with all of their wrinkles, moles, and bald patches. But because these portraits were produced in a period of civil war and were generally of old men, they transmitted the message that these were wise and hardened survivors and therefore ideal leaders.

That Roman portraiture is more than just a faithful rendition of appearance is demonstrated by the emperor Augustus (27 BCE–14 CE), who overturned previous trends and chose youthful, confident types of portraiture that reflected the new prosperity of Rome under his rule. Augustus was young when he came to power, but artists continued to produce youthful portraits of him even after his death in old age. That they were adjusting more than just age is suggested by the biographer Suetonius's *Life of Augustus* in his description of Augustus's appearance, which disagreed on a number of points with the portraits.



Head of an old man,
Roman, first century BCE.
(Alinari/Art Resource, NY)

In the second century CE, when luxurious hair came to symbolize manliness, the emperor Hadrian (117–138 CE) adopted a beard. Both private citizens and subsequent emperors followed his example and were depicted with beards and exceedingly thick, curly hair. Since it seems incredible that most Roman men were bald in the first century BCE but virtually none were bald by the second century CE, Roman portraits were likely less about how people actually looked than about how they wanted to be perceived.

Roman state reliefs often created the same illusion of realism. One of the earliest Roman historical reliefs now extant is the relief depicting the Battle of Pydna (168 BCE) between the Romans and a Macedonian king. This relief decorated a monument in Greece, and its narrative details indicate that we are looking at this battle and no other. Such detail can create the illusion of realism. Nevertheless, the combatants are separated into elegantly composed groups and displayed on a blank background. The composition is pleasing, and the viewer can make out the action from a great distance, but the result does not bear much resemblance to the messy experience of battle.

Romans were also fond of reliefs that depicted the daily activities of their officials, and in this respect Roman art could indeed be realistic. The subjects of Roman historical reliefs included census taking and animal sacrifice (the so-called Altar of Domitius Ahenobarbus), processions (the Altar of Peace), or highlights from the deeds of a Roman emperor (the Arch of Trajan at Beneventum). Such works provide historians with a great deal of information that would be lost to us if the Romans had not been in the habit of producing historical reliefs.

—Ellen Perry

Bibliography

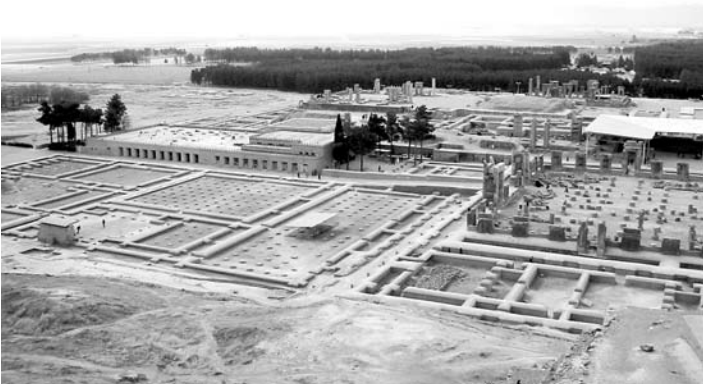
- Holliday, P. J. *The Origins of Roman Historical Commemoration in the Visual Arts*. Cambridge and New York: Cambridge University Press, 2002.
- Kleiner, D. E. E. *Roman Sculpture*. New Haven, CT: Yale University Press, 1992.
- Nodelman, Sheldon. "How to Read a Roman Portrait." *Art in America* 63 (January–February 1995): 26–33.

Achaemenid Architecture, 550–330 BCE

In the history of pre-Islamic architecture in Persia, the Achaemenid age is often considered to be the period of critical development. In addition to the grandeur, splendor, and power of its architecture, the Achaemenid age was also marked by a capacity for large-scale planning of structures for the ruling elite as well as more general urban planning. Moreover, at a social, cultural, and political level, this age is highlighted by a practical administrative ability reinforced by a noble faith that inspired great religious and cultural tolerance. The Achaemenid empire included Iran, Mesopotamia, Syria, Egypt, Asia Minor, Thrace, and parts of northwestern India. Within this culturally diverse empire a unique international Persian architecture formed and developed. This architecture adapted and synthesized several cultural characters under the supervision of Persian masters. This eclectic mix of tastes, styles, and motifs is evident in the architecture of three Achaemenid complexes: Pasargadae, Susa, and Persepolis.

Pasargadae, a complex of palaces and temples built in the southern province of Fars in 550 BCE by Cyrus the Great, was the capital of Persia under Cyrus's reign. The city was the physical embodiment and expression of political and divine power of a king who promised peace and justice to not only Persians but also other nations. Although much of Pasargadae now lies in ruins, some parts are still preserved. These include the rock-cut tombs of Darius the Great and his successors, Ka'be Zartosht (which is a sanctuary or a tomb tower), some royal palaces, and the tomb of Cyrus the Great. Made of white limestone, the gabled-shape tomb of Cyrus was placed on a stepped platform. Measuring 36 feet (11 meters) in height, it was built like a ziggurat with Ionian and Lydian features. It has a small entrance and double doors leading to a room with no windows, which once contained Cyrus's golden coffin. This tomb still survives after 2,500 years.

After the death of Cyrus the Great, Pasargadae was abandoned. In 518 BCE Darius founded a new capital at Persepolis that was more elaborate



View of the ancient ceremonial center of Persepolis, southwestern Iran. The site was constructed in the sixth century BCE and served as a residence for Achaemenid kings. (Gerard Meijssen)

than Pasargadae. One of the earliest complexes built on such a grand scale, Persepolis spread over 1.3 million square feet (120,000 square meters) on an immense artificial platform and consisted of several public and residential buildings. It is an exhibition of royal magnitude, power, and wealth rarely exceeded by other cultures. Persepolis served not only as a royal palace for Darius I but also as a national shrine and setting for the Persian spring festival (*nowruz*), which agents and ambassadors of all regions of Iran and other countries attended. To create the impressive architecture at Persepolis, the Achaemenids erected numerous columns, wide stairs, grandiose gates, thick walls, decorative reliefs, colored mosaics, royal inscriptions, column capitals, and sculptures of animals. To construct this complex, Darius ordered materials and workers from other parts of the Persian empire. The Achaemenids took the artistic forms and architectural elements, spaces, and decorations from other civilizations and combined them into a hybrid form with a Persian identity in erecting Persepolis.

The palace of Darius at his winter capital of Susa (of which only a couple of column bases survive today) was built over an Elamite site. With a rational and impressive layout, its main trait was a large columnar reception hall, measuring 375 by 180 feet (114 by 55 meters). There are detailed surviving documents about the construction of Darius's palace at Susa. In one of

these texts, Darius explains the internationality of this architecture, listing materials used in its construction from the following locations: Lebanon, Gandara, Carmania, Sardis, Bactria, Sogdiana, Chorasmia, Egypt, Ionia, Ethiopia, Sind, and Archosia. The craftspeople who helped construct the palace are equally international, including Ionians, Sardians, Medes, Egyptians, and Babylonians.

—*Mohammad Gharipour*

Bibliography

- Curtis, J., and N. Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. Berkeley: University of California Press, 2005.
- Pope, Arthur. *Persian Architecture*. New York: George Braziller Publications, 1965.
- Porada, Edith. *Ancient Iran: The Art of Pre-Islamic Times*. London: Methuen, 1965.

Parthian Art and Architecture, 250 BCE–226 CE

The Parthians (250 BCE–226 CE) controlled most of the trade routes between Asia and the Greco-Roman world, which brought great wealth that was used for widespread artistic and building activities. The reconquest of the Iranian plateau by the Parthians brought a slow return to traditionalism and a renewal of the Iranian national spirit. The development and evolution of the art and architecture of the Parthians was strongly connected to the social and cultural events of the era. During the first century BCE, the Parthians added Greek elements to some buildings, particularly to the facade and interior decorations of the buildings. One example of this was the palace at Asur. Although the use of stucco was an influence of the Greeks, it was developed by the Parthians, who also used Ionic, Doric, and Corinthian capitals with Persian column shafts in their architecture. The architectural plans of these temples combined elements found in both Achaemenid Persepolis and Greek temples. For example, Greek and Persian styles are evident in such architectural details as distinctly Persian columns with Corinthian capitals. The plan of the temple at the site of Khurkha is wholly Greek, but it contains columns that widely depart from the classic proportions be-

tween height and diameter (an Iranian practice already in use at Persepolis in this period).

Parthian architecture and art lack strong unity and instead reflect significant diversity. Artistic production does not represent one coherent style and is divided into two distinctive periods. The first of these periods maintained the Hellenic ideals of the Seleucids, while the second witnessed a metamorphosis in artistry and creativity. After the first century of the Parthian era, the empire never maintained a powerful central government. Instead, the Parthian empire consisted of many local governments ruled by Parthian kings, and from time to time one of these local governments would revolt and seriously challenge the central government. Nevertheless, the power of the local governors produced both diversity and variety in Parthian art and architecture.

After the second century BCE, local schools of art flourished, and the Greek elements were gradually replaced by a distinctive Parthian style. Artists and architects in this era enjoyed a greater extent of freedom than had their predecessors in the Achaemenid and Seleucid dynasties. This increase in the ability of artists to create works that differed from traditional Achaemenid and Greek styles was the result of the independence that local governors enjoyed in the second century BCE. This was a century of growth in terms of wealth and influence of the caravan cities of Palmyra, Hatra, and Mesene. Whereas earlier Achaemenid and later Sassanid art were royal, imperial, religious, and mostly monumental, the Parthian art can be characterized as popular. Parthian works reflected the cultural trends among the populace. Many projects were ordered by rich clients from the private sector and had no royal or religious function. These works illustrated the creativity of the artists and the power of the wealthy patrons. The creation and development of Arabesque style and zigzag molding are examples of Parthian artistic innovation. By the late first century CE artists and architects had begun to create a different style of art that reflected a new freedom and led to a series of important artistic and architectural achievements. In Mesopotamia, figures often came to be represented frontally, or full face, giving the images an otherworldly quality. The *iwan*, a great hall open on

one side with a high barrel-vaulted roof (examples in Asur, Hatra, and Uruk), supplanted Greek forms that had been introduced during the Hellenistic period in Mesopotamia and Iran. To construct these huge vaults and halls, architects used fast-setting gypsum mortar. Often walls were plastered with gypsum. Stucco decoration was uncommon in Iran before the Parthian period, and it was during the Parthian era that interior stucco decoration and wall painting using geometrical, vegetal, and figural ornaments came into vogue in the region.

—*Mohammad Gharipour*

Bibliography

- Colledge, Malcolm A. R. *Parthian Art*. New York: Cornell University Press, 1977.
- Ferrier, R. W. *The Arts of Persia*. New Haven, CT: Yale University Press, 1989.
- Pope, Arthur Upham. *Persian Architecture*. New York: George Braziller, 1965.
- Porada, Edith. *Ancient Iran: The Art of Pre-Islamic Times*. London: Methuen, 1965.

Didactic Themes in Chinese Art

In China, the first painted images of people were not portraits of powerful sovereigns but instead were morally perfect humans. This reflects the importance that the ancient Chinese placed on self-cultivation and using the past as a mirror for the present. These didactic images adorned both public places, such as the walls of government buildings and schools, and private spaces, such as tomb decor and everyday items. As a result, their messages touched not only their rich patrons but also illiterate commoners. These moral stories became popular as Confucianism became more socially entrenched.

Based on textual evidence, the practice of decorating items and walls with the images of exemplars was a comparatively late development. In the late Warring States period (480–221 BCE), sovereigns adorned their palace and ancestral temple walls with the images of good and bad rulers of high antiquity. In the Western Han (206 BCE–25 CE) period, nobles adorned their palace walls with paintings of sage kings, evil rulers, loyal retainers, filial sons, and virtuous women.

Upon reaching the first and second centuries CE, these depictions spread to government offices and schools as well as to the tombs and shrines of the educated elite. Archaeological data indicates that they became particularly widespread in the tombs of the second- and third-century literati.

The exemplars that were portrayed were primarily Confucian. In one of the earliest illustrated tales, a wise minister tells a duke to get rid of three powerful warriors by offering them two peaches. In trying to possess one of these peaches, the three generals kill each other. This tale shows that wisdom is more important than brawn, a typical Confucian message. By the second century CE, the didactic narratives that appear most frequently are those of filial sons, outstanding women, and loyal retainers. One of the most common filial piety stories is that of Ding Lan who, overwhelmed with grief, carves out a wooden image of his deceased father and serves it as if it were alive. A frequently illustrated tale of an outstanding woman is that of Gao Xing of Liang who, when under pressure to remarry, cut off her nose to make herself unattractive to would-be suitors. As for steadfast retainers, the most frequently depicted tale is that of Jing Ke, who willingly assumed the suicide mission of assassinating the First Emperor of China to redress the insulted honor of his patron. The greatest example of the use of didactic narratives can be found engraved on the walls of the Wu Liang funerary shrine (151 CE), which included images of 8 legendary sage kings, 8 outstanding women, 17 filial sons, and 8 loyal retainers.

The existence of these images of exemplars reflects the importance that the early Chinese placed on moral cultivation. History's basic purpose was to teach good behavior. Images of past exemplars would remind the viewer of the exemplar's deeds and inspire him or her to copy them. Due to this emphasis, early Chinese figure painting was devoted to glorifying past moral heroes rather than powerful contemporaries. It is important to note too that the growing popularity of these images coincided with the rise of Confucianism; consequently, educated men adorned their goods and tombs with these de-

pictions to show their commitment to Confucian virtues. Of course, images could be "read" in many ways; thus, more than one emperor was scolded for viewing images of outstanding women more for the beauty of their looks than their virtue.

—Keith N. Knapp

Bibliography

- Knapp, Keith N. *Selfless Offspring: Filial Children and Social Order in Medieval China*. Honolulu: University of Hawai'i Press, 2005.
- Powers, Martin J. *Art and Political Expression in Early China*. New Haven, CT: Yale University Press, 1991.
- Wu Hung. *The Wu Liang Shrine: The Ideology of Early Chinese Pictorial Art*. Stanford, CA: Stanford University Press, 1989.

The Scythian Animal Style

The Scythian Animal Style was a type of art practiced by a pastoral nomadic group of tribes of Indo-European cultural and linguistic heritage who ranged widely over the Pontic steppes north of the Black Sea during the seventh to the third centuries BCE. The Scythians, as the Greeks called them, were the westernmost group of a very widespread steppe nomadic horse-riding culture that covered much of central and western Asia and had a strong tradition of Animal Style Art.

Animal Style Art has great antiquity and is present in a unique stylized form from the earliest period of recognizable Scythian culture. In a larger context it is possible to think of it as a widespread Scytho-Siberian Animal Style with roots going back perhaps as far as the third millennium BCE and covering much of western and central Asia and the Near East. Some clues as to the early origins of the Scythian Animal Style might derive from widespread Bronze Age rock carvings of north-central Asia such as at Yelagash or Kalbak-Tash that seem to have similar stylistic themes.

Scythian Animal Style Art was most often rendered in finely crafted bronze or gold work that perhaps developed from earlier widespread nomadic traditions of carving animal forms in

bone and wood. The symbolism in the Scythian Animal Style must have imparted not just social but also cosmological and mythological significance that made sense to members of Scythian society. For pastoral nomads in general, animal representations were undoubtedly symbols of power and authority within the social hierarchy. They must have also represented desirable traits such as strength and vigor. As such, they were perhaps a means to imbue their owners with such traits. Animals represented in Scythian art include real and imaginary as well as wild and domesticated varieties, with perhaps the most common being the stag. Other commonly represented animals included horses, goats, felines, griffins, and dragons. Animals were often placed in artistic scenes depicting predation or combat, with imaginary beasts and felines often attacking antlered or hooved varieties.

The essence of the Scythian Animal Style was that in a single rendering, the artist attempted to represent the full range of attributes of a particular animal. This was often accomplished by depicting the animal as if simultaneously both in motion and at rest. Among the artwork of the ancient world, the Scythian Animal Style was unique in that its characteristics included an effect of monumentality and an emphasis on intensity and power intended to create profound psychological impact. These effects were accomplished by rendering animals as if in action with muscles tensed. Real animals were often placed in artistic contexts that contrasted with imaginary beasts along with intermediary animals that seemingly provided a connection between them. Much of the worldview of Indo-European peoples such as the Scythians was informed by an ideology of tripartite wholeness that pervaded aspects of society, religion, and art. Three hierarchically divided functions would thus perhaps serve to provide order and harmony within aspects of Scythian cosmology. It is therefore possible that the Scythians ordered various classes of animals within such a three-tiered cosmology that perhaps represented life, death, and passage to the netherworld.

Although the animal representations in Scythian Art are at their core uniquely Scythian in character, they also betray stylistic influences

▶ ANIMALS REPRESENTED IN SCYTHIAN ART

Although the popularity of different types of animals varies through time in Scythian art, among the most basic representations are recumbent deer or goats, coiled felines, and birds with enormous beaks. These usually occur with a repertoire of fantastic animals such as lion-bulls or griffins of various forms. A common artistic technique was to combine body parts from different animals to create such strange beasts as horse-dragon-lions, griffin-horses, or griffins with fish-wings. Interestingly, horse representations are rare and seem to occur most often either as part of fantastic animals or in predation contexts. Other animals represented include elk, boar, dog, hare, fish, dolphin, cattle, sheep, lion, ibex, ram, bear, elk, and eagle.

—Kerry D. Nichols

from other cultures that Scythians frequently encountered in their travels. From the sixth to the fourth centuries BCE the stylized character of Scythian animal forms slowly gave way to Hellenistic influences to create a more naturalistic art style that included both animals and humans. Overall, the impression over time is one of changing style and subject matter, perhaps due to increased cultural contact and interaction with many different parts of the ancient world.

—Kerry D. Nichols

Bibliography

- Akishev, Kimal A. "Origin of the Animal Style in Saka Representational Art." In *Foundations of Empire: Archaeology and Art of the Eurasian Steppes*, edited by Gary Seaman. Los Angeles: University of Southern California Ethnographics Press, 1992.
- Jacobsen, Esther. *The Art of the Scythians: The Interpretation of Cultures at the Edge of the Hellenic World*. Leiden and New York: Brill, 1995.
- Rice, Tamara Talbot. *The Scythians*. New York: Praeger, 1957.
- Tillisch, Soren Skriver. *Scythians Is a Name Given Them by the Greeks: An Analysis of Six Barrow Burials on the West Eurasian Steppe*. Oxford: John and Erica Hedges, 2008.
- Winn, Shan M. M. *Heaven, Heroes, and Happiness: The Indo-European Roots of Western Ideology*. New York: University Press of America, 1995.

Olmec Style Horizon

The Olmec constitute one of the most widely recognized contributors to the Preclassic era (ca. 1450–300 BCE) of Mesoamerican cultures, as they were the first in the region to excel in the production of monumental art. They are often thought of as a kind of “mother culture” for the Mesoamerican region because of the many contributions made to mathematics, writing, architecture, and artistic endeavors of later civilizations such as the Maya, Zapotec, and Teotihuacan. Though the largest and most influential Olmec centers developed on the Gulf Coast side of the Mexican Isthmus, Olmec influences have been noted at least as far away as Costa Rica. Early research even postulated connections between the Olmec style horizon (that is, the diffusion of the Olmec style) in Mesoamerica with the Early or Chavín horizon in western South America. Modern archaeologists now recognize two phases of the Olmec style horizon: an earlier San Lorenzo horizon and a later La Venta horizon, each marked by different distributions of Olmec ceramics and other goods.

Definition of the Olmec style horizon largely derives from archaeological investigations of four major sites in the Gulf Coast region of Mexico: San Lorenzo, La Venta, Tres Zapotes, and Laguna de los Cerros. Outside of this Gulf Coast “heartland” region, Olmec and Olmec-style materials are widely dispersed and show up in significant numbers at major sites in the Oaxaca Valley, the Mixteca Alta region, and farther south at sites in Honduras and Costa Rica. The distribution of Olmec-style pieces across a broad region of Mesoamerica has long raised questions about the nature of interactions between the Olmec and their neighbors.

Two competing hypotheses have framed the debates over the nature of the Olmec style horizon. One, often called the “sister culture” hypothesis, suggests that what is known as “Olmec” style is really a material expression of widespread religious ideas shared by people across Mesoamerica. Accordingly, Olmec sites in the Gulf Coast such as San Lorenzo and La Venta are merely two of many chiefly centers between which interactions grew substantially after about 1350 BCE. Other hypothesized cen-

ters include San Jose Mogote and Etlatongo in the Oaxaca Valley. Differences in site assemblages with Olmec-style materials can thus be understood as regional adaptations of this larger shared set of ideas.

The second hypothesis, that of the Olmec as a “mother culture,” states that the Gulf Coast centers were in fact originators of the materials and iconography associated with Olmec style and that these materials were distributed to other regions through long-distance elite exchange networks beginning after 1350 BCE. According to this hypothesis, the Olmec dominated an interaction sphere in Mesoamerica, and differences in assemblages are understood as reflections of the different relationships that the Olmec had with various people, trading some materials to one group and not to another.

Until recently, several problems have complicated the debate over Olmec style and its meaning. One major problem has been looting at Mesoamerican sites to furnish display pieces for private and public collections. In a fever to collect the best pieces, even monumental examples of Olmec art have been removed from their original contexts, and their exact provenience has been put in doubt. A second, less onerous, problem has been methodological. Archaeologists have relied heavily on outward appearances of artifacts—surface finish, colors, shapes, iconography—that might be easily mimicked. Detailed studies of manufacturing techniques, organization of production, and the resulting composition of artifacts have been lacking.

Recent chemical analyses of ceramics and lithic materials may be close to resolving this debate. Neutron activation analyses of ceramics from the site of San Lorenzo and from other Preclassic centers suggest that Olmec-style materials from San Lorenzo are distinctive in their composition, and these distinct materials appear at other sites, but materials from other sites are not represented in San Lorenzo collections. The influence flowed from San Lorenzo outward, not in an equitable pattern of exchange. Similarly, chemical analysis of green stone axes has suggested a homogenous source located somewhere in the Olmec heartland. These studies tend to support the “mother culture” hypothesis of Olmec originality and cultural influence.

► THE FATE OF OLMEC ART

Olmec art may have become a victim of its own fame. Up until the early twentieth century, little attention had been paid to the remains of Olmec culture. It was not until the swell of petroleum exploration in the early twentieth century that many people went far into the tropical forests that then surrounded Olmec sites. Unprotected by national or international laws, pieces of Olmec sculpture were often given away or sold to various dignitaries and collectors. In fact, the earliest understandings of Olmec art and culture came from the pre-Columbian art market.

The slow trickle of pieces into various private collections gained momentum after the 1940s when the work of Matthew Stirling at the Olmec site of San Lorenzo made headlines and the glossy pages of *National Geographic*. Both national and international museums became eager to collect Olmec pieces. Within Mexico especially, as the country worked to forge a unified Mexican identity, museums sprang up that then needed representative collections of the country's glorious past. As

an originator of one Mesoamerica's great art styles, Olmec art was a necessary element of such collections.

As local people began to realize the value of Olmec art to outsiders, they began to come together. In general their goals were not to protect their local patrimony but instead to essentially hold it for ransom until they received desired infrastructural improvements like schools, roads, and electricity. At the same time, local people have also come to understand the economic impact of tourism and have also asked that particularly spectacular pieces be left in local community museums. This has often led to heated political debates and confrontations among people in the region.

Today, with many sites insufficiently guarded, pieces of Olmec art still make it onto the pre-Columbian art market. Looters, seeking personal gain rather than betterment of some resident community, continue to find ways to take advantage of the allure of one of America's earliest art styles.

—Jo Ellen Burkholder

Repeated themes and specific stylistic aspects of the way artists rendered those themes define the Olmec style horizon. At the largest sites, materials include large basalt sculptures (colossal heads and altars), smaller sculptures and engraved stelae, figurines and other portable art, and ceramic vessels. For reasons of size and weight, the large basalt monuments appear to have been placed only at major Olmec centers in the heartland.

Sculpture is the most widely recognized element of Olmec art, and several repeated themes distinguish the style. On a small scale are polished stone celts and the so-called were-babies, anthropomorphic representations with babylike limbs and torsos and elongated heads depicted with a snarling mouth and animal-like fangs. At the large end of the scale are Olmec altars and colossal heads. Based on distinctive details, the colossal heads probably represent portraits of important people. Olmec portrait heads range in size from about 5 to 11.5 feet (1.5 to 3.5 meters) tall and weigh up to 50 tons. Altars, carved rectangular blocks with sculpted details, may actu-

ally have served as thrones. Often the sculptural element depicts an individual emerging from a niche or cave, sometimes holding a small prone figure in its arms. These pieces range in weight up to 40 tons. Other repeated themes in Olmec sculpture include jaguars and serpents as well as early depictions of deities associated with rain, maize, and the moon. The earliest examples of numbers and name glyphs also appear in Olmec sculpture.

In general, Olmec depiction of human and other anthropomorphic figures is characterized by several stylistic elements. This includes a tendency toward full, rounded features: round faces sometimes with jowls and fat or pudgy limbs and belly. Lips are also depicted as full or slightly turned out. Eyes are often hollow, and hollow earspools decorate elongated earlobes. Heads are distinctively flattened and elongated, suggesting a practice of cranial modification. Pronounced clefts in the top of the head of some figures may refer to a second form of cranial modification or represent a variant depiction of the maize deity, usually shown with an ear of maize sprouting

from a furrow in the head. Though chronology of Olmec style has been difficult, recent studies suggest that in general Olmec art, especially stone sculpture, tended to move from full, round figures to those cut in low relief.

Materials favored by Olmec artists varied and suggest a degree of craft specialization for at least some artisans. The Olmec favored white kaolin clay for figurines and ceramic vessels. Green stone such as jade, jadite, or serpentine were favored for small sculptures like stone celts. The Olmecs cut and polished magnetite to make mirrors. Olmec artists carved monumental art—heads, altars, stelae, and other freestanding sculptures—from volcanic stone brought from the Tuxtla Mountains in the Olmec heartland.

—Jo Ellen Burkholder

Bibliography

- Adams, Richard E. W. *Prehistoric Mesoamerica*. Norman: University of Oklahoma Press, 1991.
- Cyphers, Ann. "From Stone to Symbols: Olmec Art in Social Context at San Lorenzo Tenochtitlán." In *Social Patterns in Pre-Classic Mesoamerica: A Symposium at Dumbarton Oaks, 9 and 10 October 1993*, edited by David C. Grove and Rosemary A. Joyce. Washington, DC: Dumbarton Oaks Research Library and Collection and Trustees for Harvard University, 1999.
- Cyphers, Ann, and Lucero Morales-Cano. "Community Museums in the San Lorenzo Tenochtitlán Region, Mexico." In *Archaeological Site Museums in Latin America*, edited by Helaine Silverman. Gainesville: University Press of Florida, 2006.
- Diehl, Richard A. *The Olmecs: America's First Civilization*. London: Thames and Hudson, 2004.
- Pool, Christopher A. *Olmec Archaeology and Early Mesoamerica*. Cambridge: Cambridge University Press, 2007.

Chavín Style Horizon

The term "horizon" was coined in pre-Columbian Peruvian studies to define periods of shared stylistic features across a broad expanse of the Andean region. The Chavín style horizon arguably remains the most enigmatic of these phases, defining the first Pan-Andean visual program. This early stylistic horizon is presumed to have re-

sulted from the spread of a highly influential religious cult throughout the Andes and coast during the Formative period (1800–200 BCE). Its spatial breadth and influence are generally defined by the sites and material culture that share in the style found at the site of Chavín de Huántar, in the north-central Andes of Peru. Numerous stone sculptures once decorated the monumental facades of this ancient site. These elaborate sculptures as well as the ceramic styles associated with the early settlement at Chavín readily compare with contemporary sites throughout the Andes and coast. As such, these features have served to define Chavín de Huántar as the matrix of early pre-Hispanic Peruvian cultures.

The Chavín style horizon may be defined in formal terms based on the sculptural designs and their representations. Drawing upon literary parallels, Chavín style may be identified through its vocabulary (the visual elements and their progressive forms and design) or its grammar (manners of representation). The visual elements that often define Chavín style include pendant eyes, mouths with interlocking fangs, agnathic mouths, mouth bands, serpent forms, geometric markings, etc. These features regularly appear at the joints or body parts of larger idealized images. Based on a presumed literary parallel in Norse poetry, these applied and substituted features—for example, a serpent appearing as the whisker of a larger idealized feline figure—have been called kennings. The presence of such visual kennings in a representation serves as a key identifying feature of Chavín style.

The manners of representation, however, are also used to identify Chavín style. These consist of representing figures through bilateral symmetry, modular width, anatomic design, or contour rivalry. Anatomic design occurs when an object creates an equally legible image when rotated 180 degrees from the original design. Contour rivalry is a manner of representation in which an image may be read both frontally as one object and in profile as two opposing figures. Such visual modes presumably become more formalized, repetitive, and angular throughout the Chavín stylistic sequence. They appear in regions throughout the Andean coast and sierra in various media such as gold, textile, shell, and ceramic. The manners of representa-

tion thus have a considerable developmental history and distribution. They interact with local styles and systems of representation within a broad spatial and temporal range.

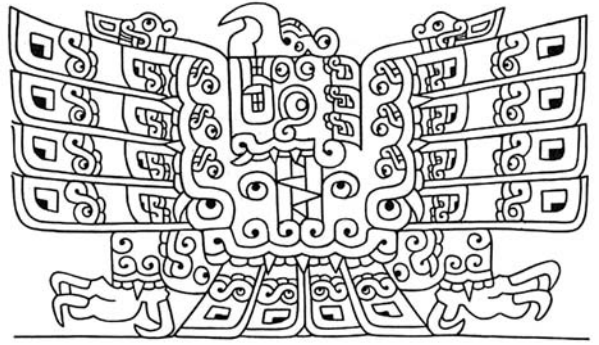
The ceramic styles that correspond to the monumental phase at Chavín de Huántar reflect a similar breadth of distribution and interaction with outside regional styles. Along with other identifiable cultural features, they may provide a key set of materials for further demarcating the Chavín horizon. Indeed, it is the cross-comparison of these data sets, visual style, and material culture that may present the most valuable tool for examining this enigmatic early Andean horizon.

—Kimberly Jones

Bibliography

- Burger, Richard L. *Chavín and the Origins of Andean Civilization*. London: Thames and Hudson, 1992.
- Rowe, John H. *Chavín Art: An Inquiry into Its Form and Meaning*. New York: Museum of Primitive Art, 1962.
- Rowe, John H. "Form and Meaning in Chavín Art." In *Pre-Columbian Art History*, edited by Alana Cordy Collins and Jean Stern. Palo Alto, CA: Peek Publications, 1977.
- Stone-Miller, Rebecca. *Art of the Andes: From Chavín to Inca*. London: Thames and Hudson, 1995.

➤ CHAVÍN DE HUÁNTAR



Avian figure cornice sculpture from Chavín de Huántar, Peru. (After Rowe 1977, figure 11)

This black-and-white reproduction is of a granite sculpture from the east (frontal) facade of the largest building at Chavín de Huántar, Peru. Stylized faces occur at numerous points within the larger avian image, which is identified by its prominent beak, wings, and talons. The torso displays a central face (two symmetrical eyes, nostrils, upturned mouth curls), which may also be read as two opposing profile faces. This is a clear example of contour rivalry.

—Kimberly Jones

■ Introduction: Death and Dying

The period from 1000 BCE to 300 CE can well be designated a Classical period in regard to world understandings of death and dying, as this is the period in which much of the world's current beliefs on this subject were established. This is when Christian beliefs in the afterlife originated and a period in which Jewish beliefs regarding death and dying became recognizable in regard to beliefs still held today. Buddhist conceptions of reincarnation and nirvana arose in this time, as did many of the other traditions that inform East and South Asian funerary practices today.

While Greek and Roman beliefs about what happens after death have not lasted until the

present day, much of the modern architecture for the dead is based on Greco-Roman traditions. The mausoleums and funerary monuments that could be found on the outskirts of a Roman city (the Romans normally forbade the burying of the dead within city limits) influenced the construction of monuments throughout later European history.

In other regions, funerary traditions continued on in much the same way as they had in previous periods. Egyptian mummification continued, although by the time Romans controlled the Nile Valley the Egyptian practices had merged with various Hellenistic beliefs. Throughout northern Europe and central Asia, a variety

of approaches to treating the dead continued to be used. The two most prominent were cremation of remains and the internment of bodies in large funerary mounds (known in eastern Europe and Asia as *kurgans*). Chinese funerary practices in this period also continued some of the traditions established in earlier periods. Elaborate bronzes continued to be used in funerary customs as they had been used in the previous Shang dynasty (1766–1122 BCE). Perhaps most notable is the final resting place of the Qin emperor and his elaborate terra-cotta army.

—Kevin M. McGeough

Burials of the Kings and Queens of Kush

Kushite kings and queens were buried in two types of monument: the tumulus and the pyramid. The tumulus refers to a mound of earth (of varying size), often outlined by stone blocks, that covers a burial chamber dug directly into the ground. The pyramid is a well-known Egyptian burial monument, but the Kushite version is of much smaller size—rarely more than 98 feet (30 meters) in height—and its angle is much steeper.

THE TREASURE OF AMANISHAKHETO

By the nineteenth century, most Kushite royal tombs had been robbed except that of the kan-dake (ruling queen) Amanishakheto. Her pyramid in the Northern Cemetery at Meroe (Pyramid N6) remained virtually intact until 1834. That year an Italian physician named Giuseppe Ferlini explored Meroe. Unfortunately, in his search for gold he completely dismantled several well-preserved pyramids, yet only that of Amanishakheto yielded treasure.

The discovery included beautiful Meroitic jewelry—necklaces, bracelets, ear studs, and rings—as well as bronze bowls and a wooden funerary bed. Amanishakheto's treasure is now displayed at the Egyptian museums in Berlin and Munich.

—Caroline M. Rocheleau

The tumulus was part of centuries-old burial traditions in Nubia prior to the rise of the Kingdom of Kush. The earliest of all tumuli were circular, but rectangular ones also existed, supposedly to make easier the construction of the abutting chapel, where offerings to the deceased were made. The burial chamber included grave goods, which were much simpler than those found in Egyptian tombs and consisted of pottery vessels, weapons, tools, and jewelry. Following earlier Nubian traditions—found in the early tumuli at El-Kurru—the body of the deceased was placed on a wooden burial bed. The tumulus itself blocked the access to the burial chamber; therefore, the tumulus could only be built after the burial took place.

The earliest kings of the Napatan period (before King Piye) were buried in such tumuli at the site of El-Kurru, a cemetery on the east bank of the Nile, downstream from Gebel Barkal. The Kushite rulers, however, soon abandoned the tumulus grave in favor of the pyramid and Egyptian burial practices: mummification, anthropoid (human-shaped) coffins (supported by a stone bench, not a wooden bed), occasional stone sarcophagus, and canopic jars, for example. King Piye may have been the first Kushite ruler to build a pyramid, although too little is left of the superstructure of his tomb to effectively distinguish it from a large rectangular tumulus. The earliest pyramids are at El-Kurru, but there are also royal pyramid fields at Nuri and Gebel Barkal (near the Fourth Cataract) as well as Meroe (downstream from the Sixth Cataract).

Kushite pyramids could be built in two ways: by laying down rows of masonry blocks or creating a revetment (exterior casing) and filling it with rubble. The construction of chambers inside pyramids was therefore impossible, although Ferlini claimed to have found Amanishakheto's treasure in such a room. The pyramid was also fronted by an offering chapel (on the east face) and was built over the underground burial chamber. Unlike the tumulus, however, the pyramid did not always block the access to the burial chamber. A descending passageway (sometimes with steps) dug into the bedrock led down to the burial chamber. This indicates that the pyramid and the burial chamber could be built before the

burial took place. After the funerary ceremony, the chamber was sealed, and the passageway was completely back-filled.

Both tumuli and pyramids were also used by the nobility and important individuals, but on a smaller scale, throughout Kushite history.

—*Caroline M. Rocheleau*

Bibliography

Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. London: British Museum Press, 1996.

Wildung, Dietrich, ed. *Sudan Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

Etruscan Funerary Monuments

Most information about Etruscan civilization on the Italian peninsula (seventh century to second century BCE) comes from graves. The grave was the place where the dead survived in the living world, which is why the Etruscans took particular care of them.

The earlier Villanova Civilization (eighth century BCE) produced handmade biconical urns decorated with incised geometric motifs to contain the ashes of the dead after cremation. A bowl for women or a helmet for men covered these urns. Another type of urn is in the shape of a hut.

Throughout the sixth century BCE the Etruscans used canopic jars (so-called after similar Egyptian examples) with a lid in the form of a human head and sometimes with the addition of arms at the level of handles, humanizing even more the egg-shaped vase. These were for cremations and were placed in a larger clay vase and then buried in the ground or sometimes just placed on a model throne in tombs.

Beginning in the seventh century BCE chamber tombs designed with several sepulchral chambers, probably imitating the forms of wealthy houses, were built to contain a whole family over several generations. At Cerveteri monumental circular graves up to 165 feet (50 meters) in diameter covered with a tumulus (mound) of soil indicate the importance of the families buried there.



Pyramids of the North Cemetery at Meroe. (Caroline M. Rocheleau)

THE SARCOPHAGUS OF THE MARRIED COUPLE

During excavations at Cerveteri in 1845, a sarcophagus of polychrome terra-cotta that was made for an elite couple during the archaic Etruscan period (530–510 BCE) was discovered. The artistic motif on the sarcophagus of a couple reclining at a banquet and the treatment of the figures likely reflect the influence of sixth-century BCE Greek art. The woman is about to pour some drops of perfumed oil onto the palm of her husband's left hand as part of the funeral rites. The couple's slightly ironic smiles, their distant glance, and the presence of a wineskin (under the left elbow of the diners) and perfume vessels symbolize the dead couple's hope for a life of eternity. Here the wife is placed on the same level as her husband, indicating that a woman's social status was higher in Etruscan than in Greek society.

—*Marie-Luce Muracciole*

The tombs at Tarquinia include well-preserved paintings on the walls that provide information concerning Etruscan social life, customs, and beliefs. In the "Tomb of the Hunter," a clever painter's device transforms the interior of the tomb into a hunter's tent, a vivid evocation of aristocratic values on the part of the tomb's owners. The recurrent subject matter remains the banquet, for which there are two interpretations: the funeral banquet, which took place after the burial, or the everyday banquets that reveal the lifestyle of the upper classes.

In the third and second centuries BCE, despite the drastic decline of the south, the northern cities kept up production of funerary art for the use of aristocracy. Volterra has provided the most important collection of funerary urns in alabaster and travertine. Both sarcophagi and urns represent the deceased richly dressed, reclining on a dining couch, the men holding a phiale (a shallow bowl) or a writing tablet and the women holding a fan. The face of the sarcophagus is often decorated with scenes of dancing, with mythological allegories, with funeral banquets, or frequently with journeys in a carriage representing the departure of the deceased toward the underworld.

—Marie-Luce Muracciole

Bibliography

- Haynes, Sybille. *Etruscan Civilization: A Cultural History*. Los Angeles: J. Paul Getty Trust Publications, 2000.
- Spivey, Nigel Jonathan. *Etruscan Art*. London and New York: Thames and Hudson, 1997.
- Torelli, Mario. *The Etruscans*. New York: International Rizzoli Publications, 2000.

Greek Funerary Customs

In the Greek world, death was prevalent among persons of all age groups, whether as a result of warfare, accident, or illness, or, in the case of women, as a consequence of giving birth. It was incorporated into the life of the community to a degree that would strike many people today as morbid.

Although we occasionally hear of undertakers, known as *klimakophoroi* or “ladder bearers,” *nekrophoroi* or “corpse-bearers,” and *tapheis* or “buriers,” the duty of these hired hands consisted merely in transporting the corpse from the house to the grave and preparing the ground for burial. They were not, for the most part, specialists but merely odd-job men. Nor did they attend to the corpse’s needs prior to its departure from the house, as modern undertakers do. Everything suggests that the Greeks would have regarded the idea of handing over the corpse of a dead relative to strangers as offensive and incomprehensible.

This attitude had much to do with the belief that in the period between death and burial the

deceased are in need of the solicitous attention of their relatives. Until inhumation or cremation has taken place, the dead were thought to be in what anthropologists describe as a liminal stage—a word that derives from the Latin word *limen* meaning “threshold.” They were between two worlds, having not yet fully disengaged from this one while awaiting incorporation into the next. Entry to Hades, the world of the dead, did not occur automatically but was the consequence of strenuous activity on the part of the living. This betwixt and between status was regarded as extremely perilous, for which reason the unburied dead were believed to be at considerable risk. The primary obligation upon the living was thus to perform the burial as expeditiously and efficiently as possible. To fail in this sacred duty was to condemn the dead to wander up and down the banks of the River Styx, which surrounded Hades, for thousands of years.

Unlike many modern cultures, which encourage the presentation of a stiff upper lip in the face of loss, Greek culture not only tolerated but also expected highly demonstrative manifestations of grief. There are frequent references in literature to men and women tearing out their hair, rending their garments, beating and lacerating their breasts, rolling on the ground and wallowing in the dust, and going without food or drink for several days. This kind of behavior was prompted in part by a desire to honor the deceased, who were believed to take pleasure in witnessing the exaggerated displays of grief that their death occasioned.

No ritual was treated with more importance than that of burial. A popular view quoted by Plato (*Hippias Major* 291de) was that the best thing of all for everyone was “to be rich, healthy, honored by one’s fellows, reach old age, and, after burying one’s parents well, to be laid out well by one’s own children and be buried in magnificent style.” The Greek funeral, like our own, was a three-act drama. This comprised the laying out of the body in the home (*prothesis*), the funeral cortege from the home to the place of burial (*ekphora*), and the burial.

The prothesis was performed by the female relatives of the deceased. At the moment of death, the deceased’s eyes and mouth were closed. A chin strap was commonly tied around

the head and chin to prevent the unsightly sagging of the jaw. The body was washed, anointed in olive oil, clothed, and wrapped in a winding sheet. Finally, it was laid out on a couch with its head propped up on a pillow and its feet facing the door. This last practice, which seems to be nearly universal, has given rise to the expression about carrying someone out “feet first.” From the fourth century BCE onward, there developed a tendency to dress the dead more ornately, sometimes even to place a crown made of gold foil on the head, whereas in earlier times a simple wreath of ivy, laurel, or olive sufficed. When the body had been laid out, relatives were permitted to view the deceased and dirges were sung.

On the day of the funeral—which, in Athens, had to take place within three days of the death—the mourners accompanied the corpse to the place of burial. Some corpses were laid in a simple wooden coffin. However, because of the scarcity of wood, the poor had to make do with only a winding sheet, strewn with a few branches. The corpse was either borne by pallbearers or transported in a cart to the grave. The Athenian lawmaker Solon (ca. 640–560 BCE) regulated that a corpse had to be transported from the house before sunrise to avoid unseemly displays of grief that could cause a public nuisance and draw too much attention to the family.

The Greeks had no conception of a necropolis in the literal meaning of the word (though necropolis is, of course, a Greek word)—a city of the dead that is separate from the living. Those who dwelled in the country tended to bury their dead in a field on their estates, while city dwellers buried the dead beside a main road. The highways leading out of Athens were lined on either side with tombs, in much the same way that advertising billboards clutter the sides of our highways today. The most frequented roads provided the most favored burial spots for wealthy families, as indicated by the number of tombs located on the west side of the city in the area known as the Kerameikos or Potters’ Quarter.

Expenditure on the dead came very high on the list of a rich citizen’s financial priorities. We hear, for instance, of one family tomb erected in the final decade of the fifth century BCE that cost at least 2,500 drachmas, although the defendant actually claims that the true figure was

➤ FESTIVALS IN HONOR OF THE DEAD

Festivals in honor of the dead formed a major feature of the calendar. The most spectacular was the annual ceremony held in honor of the war dead. Known as the *taphai*, or burials, it took place at the end of the campaigning season in early winter. Other festivals in honor of the dead include the third day of the Anthesteria, known as the Chytroi, or Pots, which was so named because pots of porridge were offered on that day. Chytroi, in other words, was the Athenian equivalent to All Souls’ Day, when the souls of the dead left their graves and wandered abroad. To counter their noxious presence, people would chew buckthorn and smear the doors of their houses with pitch. The dead were also celebrated at the Genesia and Nemeseia. The Genesia was in origin a private ritual celebrated on the birthday of the deceased, though under Solon it became a national festival. The Nemeseia (derived from *nemesis*, meaning vengeance) took place at night and was intended to placate those who had come to a violent end.

—Robert Garland

twice that amount (Lysias, *Against Diogeton*, 21). This was at a time when a rower in Athens’ navy earned merely one drachma per day. Grave monuments increased in elaboration as the fourth century progressed and remained in vogue until 317 BCE, when Demetrios of Phaleron introduced legislation severely limiting their costliness, evidently to curb unnecessary expenditure in a period of economic decline. Henceforth, the commonest form of grave marker was a simple marble column known as a *kioniskos*, some 2–3 feet (0.5–1.0 meters) in height above the ground and about 1 foot (0.3 meters) in diameter. The great age of honoring the dead with sumptuous monuments was over.

Bereaved relatives continued to maintain a close attachment to the deceased long after death had occurred, because their welfare in Hades was thought to depend on the attention they received from the living. Women were expected to pay regular visits to the grave, particularly on the anniversary of the day of death but also at other intervals throughout the year. Because the dead were believed either to dwell in the

proximity of their grave or at least to be capable of visiting it periodically, a variety of gifts judged necessary for their physical welfare were buried with the dead and deposited periodically afterward beside the tomb. The most common grave gift in fifth-century Athens was the oil flask or *lekkythos*, which was decorated with images relating to the care of the dead set against a white background. Common objects that were deposited at the tomb include branches of myrtle, wreaths, cakes, and drink. It was also customary to anoint gravestones with olive oil and wind colored sashes around their shafts, almost as if gravestones in some sense embodied or ensouled the dead.

—Robert Garland

Bibliography

- Demand, N. *Birth, Death, and Motherhood in Classical Greece*. Baltimore: Johns Hopkins University Press, 1994.
- Garland, R. S. J. *Daily Life of the Ancient Greeks*. 2nd ed. Westport, CT: Greenwood, 2008.
- Garland, R. S. J. *The Greek Way of Death*. Ithaca, NY: Cornell University Press; London: Gerald Duckworth and Company, Ltd., 1985.
- Plato. *Plato: Complete Works*. Edited by J. M. Cooper. Indianapolis, IN: Hackett Publishing, 1993.
- Rohde, E. *Psyche: The Cult of Souls and Belief in Immortality among the Ancient Greeks*. Translated from 8th edition by W. B. Hillis. Chicago: Ares Publishers, 1987.

Roman Funerary Practices and Monuments

Death was an important event in ancient Rome. It was essential to have a proper funeral, and the very worst thing for a Roman was to die under catastrophic circumstances and have his or her body lost. When this occurred, an empty tomb, a cenotaph, might be erected. Otherwise, Romans would be either buried or cremated. In a cremation the ashes of the deceased were placed in an urn in the tomb, while for burial the body was laid in a sarcophagus, a kind of richly decorated stone coffin.

It was forbidden to bury the dead within the sacred confines of the city according to the ancient Law of the Twelve Tables (quoted by Ci-

cero, *De Legibus*, II, 58). Cemeteries extended along the roads beyond the cities' gates (e.g., the Via Appia at Rome), and monumental design was governed by strict conventions. The tomb was the way an individual highlighted his personal beliefs and indicated his role in society. There was a great variety among tombs; some were impressive buildings while others were simple graves nearby consisting of amphoras stuck in the ground, the mixture of social categories typical of the Roman empire in life repeated in death.

Inscriptions on tombs recalled both the identity of the deceased and his family's grief. Ideally, a monument was placed on a frequently traveled road so that by reading his name passersby might confer on the deceased a kind of momentary survival. Inscriptions often called upon passersby by means of a formula such as "remember X, you who read this."

Petronius's *Satyricon* tells us much about Roman funerary customs, including the fact that a grave was often constructed in the lifetime of the intended occupant. The rich former slave Trimalchio provided precise instructions concerning the decoration and size of his funerary monument. It was to enclose a space 100 feet wide on the facade and 200 feet deep (approximately 30 by 60 meters). This was exaggerated for comic effect; the usual enclosure might measure only 39 square feet (12 square meters). Trimalchio was also very particular with regard to his heir, who was not to repossess his grave. Similar injunctions occurred frequently in wills and are often inscribed on the facades of monuments (as at Isola Sacra of Ostia). Heirs might otherwise sell a grave in order to make a profit and to avoid paying for upkeep.

Old families had relatively modest graves, but the newly rich often constructed conspicuous tombs to advertise their social success, such as the extravagant grave in the form of an oven of the baker Eurysaces near the Porta Maggiore in Rome.

Roman funerary art was imaginative and included tombs in the shape of round towers, temples, vaults, and simple gravestones, altars, or sarcophagi carved with mythological scenes. Imperial tombs stand a little apart but reflected contemporary practice; they were the burial places of personages who had distinguished

➤ SARCOPHAGUS OF ARIADNE AND DIONYSUS, MUSÉE DU LOUVRE, PARIS

The Sarcophagus of Ariadne and Dionysus is a marble sarcophagus of the third century CE, made in Rome but found in Saint-Médard-d'Eyrans in France. It is a beautiful example of Severan art. The myth of Ariadne rescued by Dionysus on Naxos lends itself to a funerary interpretation and to the hope of eternal life. The detail of the craftsmanship illustrates how sarcophagi were made. The craftsman would make a certain number, leaving the head of the intended occupant unfinished; a portrait would then be made at the time of purchase.

—Marie-Luce Muracciole



(Alinari Archives/The Image Works)

themselves above other citizens (e.g., Trajan's Column or Hadrian's Mausoleum, modified during the Renaissance and now called Castle Sant'Angelo).

—Marie-Luce Muracciole

Bibliography

- Toynbee, J. M. C. *Death and Burial in the Roman World*. 2nd ed. Baltimore: Johns Hopkins University Press, 1996.
- Walker, Susan. *Memorials to the Roman Dead*. London: British Museum, 1985.

Early Christian Funerary Monuments

The funerary monuments of early Christians (first to third centuries CE) took the form of catacombs. The catacombs of ancient Rome include more than 60 underground burial sites that house Christians, pagans, and Jews. Christians naturally favored burial over cremation, given the belief in bodily resurrection on Judgment Day. These cemeteries reflected diversity in religion as well as social status and housed families, martyrs, and popes. The purpose and use of the catacombs transformed over time, often over centuries, with the addition of layers of tombs.

Beginning in the second century CE, the catacombs were built as a response to a shortage of land, overcrowding, and, particularly for Christians, the need to bury their dead privately due to widespread persecution. Roman catacombs were

typically located along roads outside of the city limits (Roman law did not permit burial within cities) and are named for martyrs buried there.

The soft volcanic earth of ancient Rome proved suitable for tunneling. Roman excavators built complex systems of passages on top of each other. Narrow steps joined each level, and individual catacombs were built with as many as four stories. Bodies were clothed, bound in linen, and placed into stone sarcophagi that were then situated in the narrow chamber walls of the catacombs. The niche was sealed with marble or terra-cotta and sometimes inscribed with the person's name, age, and death date.

Early Christians, similar to the early Etruscans and pagan Romans, memorialized the tombs of their loved ones with decorative arts. The front of the sarcophagus might include personalized portraits on shields or medallions, with reliefs depicting the tales of biblical figures and the miracles of Jesus displayed beneath them. Symbols of the cross were uncommon during the first three centuries of the Christian Church. The Romans' persecution of Christians during this time, especially during the reign of Emperor Decius in 250 CE, made it unlikely that Christians would have been comfortable displaying crosses and thus revealing their faith. Instead, crosses might have been disguised as the masts of boats, anchors, the Greek letter "chi," or St. Andrew's cross (an "X"). Other crypt adornments were the Ichthys (or Ikhtus), the ancient Greek word and symbol for "fish," commonly accepted as a universal symbol of

➤ FRESCOES IN THE SAINT PRISCILLA CATACOMBS

Some of the earliest surviving frescoes displaying Christian themes are found in the catacombs of Saint Priscilla, dating from the second century CE. In one of the oldest parts of the cemetery, the ceiling is decorated with several frescoes including the Good Shepherd, a symbol of Christ, and one of the oldest images of the Madonna and Child. The catacomb's Capella Greca (Greek Chapel) houses the fresco titled *Fractio Panis* that depicts a group of six men and one woman breaking bread around a table. Joseph Wilpert, a Jesuit art historian, discovered the fresco in 1893, delicately removed the crusts covering the surface, and published his account in 1895.

—Kim Kennedy White

Jesus Christ, and the Chi-Rho, the first two letters of “Christ” in Greek (XP).

The earliest and most well known of the catacombs used by Christians prior to the fourth century include the catacombs of Domitilla and San Callisto. The catacombs of Domitilla are among the oldest and house frescoes depicting biblical themes dating from the second century CE. It was also during the second century when San Callisto (named for St. Callixtus) became the official catacomb of the Roman Church where more than 50 martyrs and 16 popes, among others, are buried. San Callisto is one of largest catacombs, containing around 500,000 tombs.

Following the Edict of Milan, signed by the emperors Constantine and Licinius in 313 CE proclaiming religious toleration, the persecution of Christians decreased, and the practice of catacomb burial declined in favor of Christian Church cemeteries.

—Kim Kennedy White

Bibliography

- Lowrie, Walter. *Monuments of the Early Church*. New York: Macmillan, 1923.
- Marucchi, Orazio. *Manual of Christian Archeology*. Patterson, NJ: St. Anthony Guild Press, Franciscan Monastery, 1935.
- Pergola, Philippe. *Christian Rome: Early Christian Rome Catacombs and Basilicas*. Rome: Vision, 2000.

Webb, Matilda. *The Churches and Catacombs of Early Christian Rome: A Comprehensive Guide*. Brighton, UK: Sussex Academic Press, 2001.

Yasin, Ann Marie. “Funerary Monuments and Collective Identity: From Roman Family to Christian Community.” *Art Bulletin* 87(3) (2005): 433–457.

Jain and Early Buddhist Funerary Monuments

According to Buddhist scriptures, after the death and *parinirvana* (the ultimate goal of Buddhist practices) of the Buddha, his body was cremated. A group of his lay followers, the Malla clan, then gathered his bones and ashes with the intention of building a stupa over them. The Mallas were challenged by seven other groups of lay Buddhists from various cities who also wanted to honor the Buddha's relics. A wise Brahmin divided the Buddha's bones and ashes among these eight rival groups, and each group built its own stupa in honor of the Buddha.

What is a stupa, and why should the Buddha's lay followers want to build one over his physical remains? A stupa is a dome-shaped funerary monument that encloses the remains of an important person. In ancient India, by the Buddha's time (roughly the fifth century BCE), the practice of cremating corpses had already become the norm. In Hindu practice, the ashes of the deceased are typically scattered over a sacred body of water, such as the river Ganga (Ganges) or are placed in a clay bowl that is then sent down the river. However, the remains of holy men (*sannyasis* or *sadhus*) are often not cremated but instead are buried and are frequently placed at the foundation of a sacred site, such as a temple or monastic complex.

Buddhist practice in ancient India seems to have been a blend of Hindu practices with regard to the remains of both laypeople and ascetics. Like the physical remains of a layperson, the remains of the Buddha were cremated. However, sacred monuments were then erected over these remains and became sites for Buddhist pilgrimage and worship.

The shape of the stupa is suggestive of even more ancient Indo-European burial mounds, and the practice of placing the remains of an impor-

THE GREAT STUPA AT SANCHI

In ancient India, devotees would enter the large gate and walk around the stupa clockwise (a practice called circumambulation), careful to keep the stupa to their right side. Sacred Hindu and Buddhist icons are revered in this way to the present day.

—Jeffery D. Long



(Nitya Jacob)

tant person in a dome-shaped monument may have been derived from the Indo-European practice of burying kings and warriors beneath earthen mounds. The fact that royal imagery, such as an umbrella and a throne, is also connected with the stupa reinforces the notion that by having his remains placed in a stupa, the Buddha is being accorded regal honors.

From a Buddhist philosophical perspective, the stupa is a bit of a paradox. On the one hand, according to the Buddhist scriptures, the Buddha commanded his disciples not to mourn the death of his physical body or to have any great regard for it at all, saying that his true body, his true remains after his death, would consist of his teaching. On the other hand, the practice of erecting stupas over the physical remains of the Buddha and of other Buddhist saints during the ancient period suggests an attachment to those remains or at least to the person whose remains they are. The erecting of stupas can be seen as an early step in the direction of a devotional form of Buddhism, emphasizing not only the practice of the Buddha's teachings but also love for and attachment to the person of the Buddha himself (as well as other early Buddhist saints whose remains were similarly entombed).

Jains as well as Buddhists placed the physical remains of their saints, the Jinas, in stupas during the ancient period. The most famous Jain

stupa is located in the northern Indian city of Mathura, a site sacred to Jains, Buddhists, and Hindus alike. The most famous Buddhist stupa is at Sanchi in central India. Both stupas were re-discovered by archaeologists in the nineteenth century after centuries of disuse.

—Jeffery D. Long

Bibliography

- Jaini, Padmanabh S. *Collected Papers on Jaina Studies*. Delhi: Motilal Banarsidass, 2000.
- Ray, Reginald. *Buddhist Saints in India: A Study in Buddhist Values and Orientations*. Oxford: Oxford University Press, 1994.
- Strong, John S., ed. *The Experience of Buddhism*. 2nd ed. Belmont, CA: Wadsworth, Thomson Learning, 2002.

Construction of the Tomb of the First Emperor of Qin

Excavated in the 1970s, the building of the tomb of Qin Shi Huang, or the First Emperor, is presently located about 3 miles (5 kilometers) east of Lintong County of Shaanxi Province. The building of his burial compound was initiated by and for the First Emperor after he was enthroned and was expanded after his unification of China in 221 BCE until the time when his dynasty was deposed. "According to the *Records of the Grand Historian* by Sima Qian, 700 workers

allegedly labored upon this unfinished construction project for a period of over 30 years.”

The mausoleum was planned as a rectangle encircled by two layers of earth-pounded walls. The inner walls are oriented north and south about 4,445 feet (1,355 meters) long and east and west about 1,900 feet (580 meters) wide. The outer walls are oriented north and south about 7,100 feet (2,165 meters) long and east and west about 3,080 feet (940 meters) wide. The tomb, built with pounded earth, is in the southern part of the inner walls. The extant lower part of the tomb was formed as a square, with each side 1,150 feet (350 meters) long and 240 feet (73 meters) high. The tomb, a pyramidal construction yet with a flat upper platform about 80 feet (24 meters) long and 34 feet (10 meters) wide, was not able to survive time completely. Under the pyramidal tomb is the underground palace where the First Emperor was buried. The underground palace is a squarish construction about 1,500 feet (460 meters) long and 1,300 (400 meters) wide. Three paths leading to the palace underneath the ground were found in the east, west, and north of the tomb, respectively. Two painted bronze chariots were excavated in the west path, each of which was drawn by four bronze horses reined by a bronze charioteer.

In the northern part of the inner walls a large-scale palace compound was constructed. In the east, west, and south sides of the inner walls, where some porchlike buildings were built attached to the inner walls, ceramic food and drinking vessels were found, and some of them bear inscriptions. Toward the west of the mausoleum there are tombs for those who died for its construction and workshops in which stone, bricks, tiles, and other materials were prepared for the buildings. To the east, finds included 17 tombs of princes, princesses, and close subordinates of the First Emperor and pits of horses buried alive as well as terra-cotta soldiers and terra-cotta horses. The terra-cotta soldiers and horses are the most well-known finds from the site.

The pits of terra-cotta soldiers and horses are located about 1 mile (1.5 kilometers) east of the First Emperor's mausoleum. This complex includes four pits. The No. 1 pit has been fully unearthed, the No. 2 and No. 3 pits have been partly excavated, and the No. 4 pit was aban-

doned during construction. In an area occupying 28,955 square feet (2,690 square meters), 2,200 terra-cotta soldiers, 32 chariots, and 157 terra-cotta horses have been excavated. Experts estimate that several thousand more terra-cotta soldiers and several hundred more terra-cotta horses are still buried in the unexcavated parts of the pits. Such an astonishing discovery provides invaluable information on the Qin Army arrangement, equipment, warfare, and even plastic arts.

—Hanmo Zhang

Bibliography

- Fagan, Brian M., and Charlotte Beck, eds. *The Oxford Companion to Archeology*. New York: Oxford University Press, 1996.
- Portal, Jane, and Hiromi Kinoshita. *The First Emperor: China's Terracotta Army*. Cambridge: Harvard University Press, 2007.
- Zhang, Wenli. *The Qin Terracotta Army: Treasure of Lintong*. New York: Scala Books, 1996.

Chinese Burials of the Han Periods

The Han periods witnessed the epochal change of the early Chinese burial system. The landmark was that the Han people adopted horizontal caves instead of vertical pits as the tombs for the dead, which both in building materials and in forms were imitations of the houses of the living. Such a change first happened in the middle of the Western Han period in the Yellow River drainage area and then expanded over time to the northern frontiers and the Huai River and Yangtze River valleys. However, in some places, especially in the northern and southern frontiers, the high-ranking officials and landowners chose the Zhou burial system characteristic of strict differentiation among different social classes. Therefore, they used vertical pits and wood coffins for the dead from the Western Han period (207 BCE–9 CE) until early in the Eastern Han period (25–220 CE).

The horizontally oriented tombs had different styles. The most common style was an earthen cave, small in scale, that lacked complicated structure, and the occupiers were usually small landowners in the Yellow River valley and

northern areas. Such a style remained popular in these areas beyond the Eastern Han period. Some aristocrats built their tombs into cliffs, which were called cliff tombs, the representatives of the horizontally oriented tomb style popular since the middle of the Western Han dynasty. During the middle and late Western Han periods, a kind of brick-made tomb appeared in the central plain and Guanzhong areas. It soon became popular during the Eastern Han period. The brick-made tombs for the aristocrats and high-ranking officials usually imitated their house compound and thus consisted of complex structures and beautiful frescoes. Stone tombs also came into existence in the Western Han and continued to the Eastern Han period. On the stone walls of some of the stone tombs, both realistic and mythical figures, plants, and animals were carved or painted. During the Western Han, the kind of tomb made of air bricks (bricks that are hollow in order to facilitate ventilation) was fashionable in the Central Plain area. However, it gradually faded out of history until the Eastern Han period. In the Sichuan basin, some of the brick-made tombs also bore carved figures on bricks.

Compared with previous periods, fewer bronze but more lacquered vessels and objects were found in Han tombs. Large ceramics also appeared among the buried vessels. In the Western Han, the main objects buried with the dead were utensils of daily use; after the Western Han, vessels, objects, and models of constructions made exclusively for burial, which are called *mingqi*, came onto the stage. This was another dramatic change in the early Chinese burial history. The main kinds of *mingqi* included wells, mills, kitchens, barns, dogs, pigs, and chickens, to name a few, and both the sorts and number increased in the Eastern Han tombs. In the Eastern Han period, real chariots and horses buried with the dead were also gradually replaced by wood or ceramic models. Few examples of human victims buried alive with the dead can be found in Han tombs because, according to the Han laws, using human beings as victims in burial was illegal. As a result, wood and ceramic servant figures were also included in *mingqi*.

A large Han tomb usually included an underground grave, a mount on the grave, a memorial

temple constructed in the front of the mount, a que building (freestanding tower) before the tomb, stone statues of animals, and stele. The Han imperial mausoleum was usually planned as a square and was walled, with a gate in each of the walls and double que buildings outside each gate. The Han emperors and empresses were buried together but had different mausoleums. Accompanying their husbands, the Han empresses usually had much smaller mausoleums beside those of the emperors.

—*Hanmo Zhang*

Bibliography

- Brown, M. "Did the Early Chinese Preserve Corpses? A Reconsideration of Elite Conceptions of Death." *Journal of East Asian Archaeology* 4(1-4) (2002): 201-223.
- Li Min. "Jinan in the First Millenium B.C.: Archaeology and History." *Journal of the Economic and Social History of the Orient* 46(1) (2003): 88-126.
- Wang Zhongshu. *Han Civilization*. Early Chinese Civilization Series. New Haven, CT, and London: Yale University Press, 1982.

Hsuan-Nu and Scythian Kurgan Burials

The Eurasian steppes have been occupied by a variety of nomadic tribes from circa 900 BCE to the present day. The term "Scythian" is used in this entry to indicate horse-riding Indo-Iranian or Indo-European nomads who lived on the Eurasian steppes from circa 900 BCE until 300 CE. These nomads are also characterized by their distinctive animal style art. The term "Hsuan-nu" is used to collectively refer to horse-riding nomads of Asiatic ancestry occupying present-day Mongolia, northern China, and southern Trans-Baikal from circa 250 BCE until circa 200 CE.

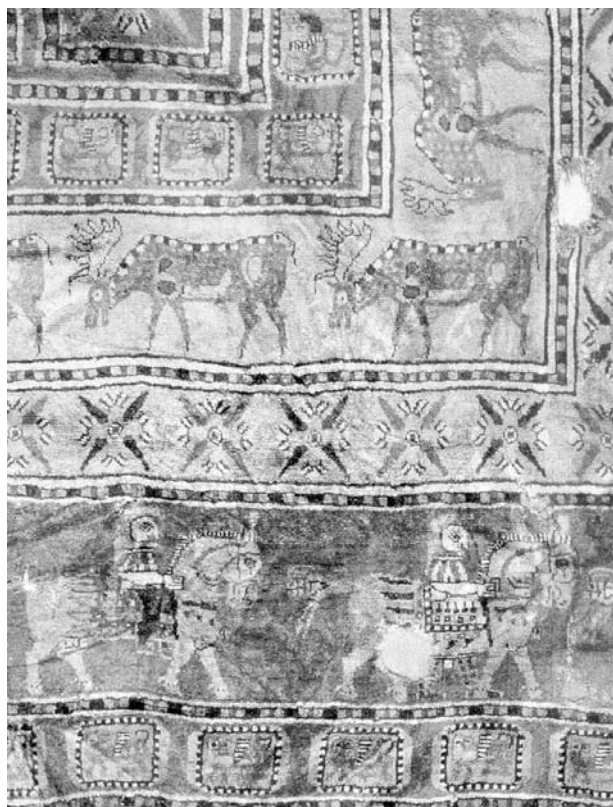
One of the oldest Scythian-style burial monuments is Arzhan (Arjan) in the Sayan Mountains of Tuva. Radiocarbon determinations place its construction at around 850 BCE. The main mound at Arzhan was nearly 394 feet (120 meters) in diameter. The mound itself was made of earth and stones over a series of wooden chambers. Inside were the remains of more than 100

horses, several individuals, and a rich assemblage of bronze artifacts. Given its size and the number of horses in the tomb, Gryaznov, the excavator, believes that this was the tomb of a king.

The oldest Scythian-style burial in the Black Sea region is barrow 15 of the Steblev group. Both typological and radiocarbon dating dates this tomb to the early eighth century BCE.

The relationship, if any, between the Scythian monuments in central Asia and those in the Black Sea region are debated. The only consensus is that the Indo-European and Indo-Iranian nomads occupied the Eurasian steppes when the climate became cooler and wetter than it is today. The increased rainfall made more pasture for their animals, and their dependence on sheep, goat, and cattle for subsistence enabled them to settle areas that were marginal to agriculture.

The most celebrated complex of Scythian burials is at Pazyryk in the Altai Mountains.



Pile carpet depicting horses and riders, fallow deer and griffins, from the Pazyryk Burial Mounds, fifth–fourth century BCE. (Hermitage, St. Petersburg, Russia/The Bridgeman Art Library)

These barrows consist of a stone cairn over a grave shaft leading to a wooden burial chamber. What made these and other tombs in the Altai so unique is that ice formed in them and froze the contents. Despite being robbed in antiquity, these naturally refrigerated tombs yielded a rich assemblage of wooden artifacts, textiles, leather objects, and other organic materials. Even the tattooed skin of the dead in barrows 2 and 5 was preserved. Sergei Rudenko excavated the first barrow in 1929, with the other seven being excavated by Rudenko between 1947 and 1948.

Barrow 2 is the oldest of the tombs at Pazyryk and has been radiocarbon dated to circa 450 BCE. The most recent barrow (barrow 6) dates to circa 250 BCE. Despite being nomads, the people at Pazyryk had a rich material culture and were part of an active trade network. Felt and wool carpets, elaborately carved wooden figures, and bronze tools and weapons were found in the barrows. Silk and Chinese bronze mirrors were found in barrows 3, 5, and 6. Glass beads, possibly from Southeast Asia or the Near East, were also contained in the tombs.

Other frozen tombs were found in the nearby Ukok plateau in the 1990s. One of the tombs excavated by N. Pilsomak is believed to be that of a priestess or shaman. Her burial occurred sometime during the fifth century BCE. Her clothing, elaborate headdress, and other organic materials were all preserved. Other grave goods included a silver mirror, glass beads, wooden serving bowls and ladles, and six horses.

Catacomb tombs were popular among the Scythians of the Black Sea region during the fifth century BCE. Before the earthen mound was built, a descent shaft and chamber were dug into the ground. The descent shaft did not lead directly into the burial chamber but instead led into an anteroom or short corridor. The burial chamber was beyond this small room or corridor. After the placement of the body or bodies, the descent shaft was filled in, and the mound was constructed. At a later date, many of the mounds had a secondary burial placed in them. Unlike their Eastern counterparts, the Black Sea Scythians did not place the body in a wooden coffin. Some of the larger Scythian cemeteries are outside of Neapolis Scythica in the Crimean peninsula and in Georgia along the Kuban River.

The Hsuan-nu confederacy existed from approximately 250 BCE to 200 CE. This confederacy of nomadic tribes ruled the areas of present-day Inner Mongolia, Mongolia, and the southern Baikal/Transbaikal region. In most cases, a small ring of stones around the grave shaft demarcates Hsuan-nu burials. The burial chamber was usually paced about 3 feet (1 meter) below the surface. Burial was usually in a wooden coffin, which was often contained in either a stone chamber or wooden chamber.

One of the most famous Hsuan-nu cemeteries is Noin-Ula in central Mongolia. This cemetery consists of more than 200 burials that are marked by a low rectangular-shaped mound over the grave shaft. The area of the mound ranges from around 32 square feet (3 square meters) to more than 3,230 square feet (300 square meters). During 1924 and 1925, P. K. Kozlov excavated five tombs in this cemetery.

The burial chambers of the tombs excavated by Kozlov were all below the water table. The water-logged conditions were conducive to the preservation of the wood, textiles, and other organic materials placed in the tombs. Wood was used for the construction of the burial chambers. A rich assemblage of wool, felt and silk textiles, and Chinese lacquerwares were found in these tombs. The inscription on a lacquered bowl from Tomb No. 6 dated the tomb to the first century CE and suggests that it is the tomb of the Hsuan-nu Shanyu, Wu-chu-lü.

—Mark E. Hall

Bibliography

- Alekseev, A., et al. "A Chronology of the Scythian Antiquities of Eurasia based on New Archaeological and ¹⁴C Data." *Radiocarbon* 43(2B) (2001): 1085–1107.
- Ishjamts, N. "Nomads in Eastern Central Asia." In *History of Civilizations of Central Asia*, Vol. 2, *The Development of Sedentary and Nomadic Civilizations: 700 BC to AD 250*, edited by J. Harmatta. Paris: UNESCO, 1994.
- Rolle, Renate. *The World of the Scythians*. Berkeley: University of California Press, 1989.
- Rudenko, Sergei. *Frozen Tombs of Siberia: The Pazyryk Burials of Iron Age Horsemen*. Berkeley: University of California Press, 1970.
- Trever, Camilla. *Excavations in Northern Mongolia*. Leningrad: Institute of Material Culture, 1932.

Textiles as Marks of Status in Central Asian Burials

Central Asian grave goods offer us a glimpse of the daily life and belief systems of the dead, particularly through the remains of textiles regarded as highly important by people of the region. Burial finds in general denote the social status of the occupant in life. Gold, silver, jade, precious stones, fine metalwork, and ceramics can stand the test of time, but organic materials such as textiles are often destroyed by the elements. In central Asia, however, the extremely dry conditions have preserved many textile remains.

Before 300 CE, silks in central Asia were at a premium. Expensive and rare, they were accessible in quantity only to the wealthy. By way of comparison, it is useful to look at a Chinese grave of approximately the same period. Here the lavish amount of silk points to a wealthy noble person but also points to a far greater access to silk products. The grave of the Marchioness of Dai, who died around 168 CE near Changsha, gives an idea of how sumptuous a burial could be. She was buried with 46 rolls of silk and numerous silk dresses, accessories, hangings, banners, and articles of clothing in a wide variety of silk weaves as well as more than 40 pieces of embroidery.

Silk made its way to central Asia in many different ways, through trade and as booty or gifts. As early as the first millennium BCE the Chinese used silk cloth and silk thread to buy off the nomadic tribes and confederations that constantly threatened their borders. Referred to as annual gifts, this tribute was redistributed by leaders to help cement loyalty contracts. In some regions such as the Caucasus, people were actually paid with strips of silk that were sewn to the regular clothing as decoration and provided a readily available source of currency in emergencies.

In Loulan and the region of Lop Nor, numerous graves from the third and fourth centuries CE contained silk fabrics. Most of these were produced in Sichuan province, a major textile center. The goods consisted of clothing and accessories of monochrome and polychrome Chinese textiles and Chinese embroideries. At Astana, 24 miles (40 kilometers) southeast of Turfan, 400 Chinese-style tombs were located.

THE GRAVES AT NOIN ULA

The burial grounds at Noin Ula, 62 miles (100 kilometers) north of Ulaanbataar, Mongolia, hold remains from the Xiongnu, a nomadic group that was active along China's northern border (ca. fourth century BCE–ca. first century CE). The largest tomb is thought to be that of Huhanye, a Xiongnu king who died in 13 CE. His tomb contained numerous objects of woven silk textiles and embroideries believed to have come from the Han imperial workshops in Xianyi, Henan Province. Some of these may have been received as gifts during his visit with the Chinese emperor. The variety of textiles covers almost the entire catalog of Chinese production at that time, including polychrome patterns, patterned gauzes, monochrome textiles with woven patterns, and even textiles with patterns woven in pile like modern velvet.

—Rebecca Wendelken

Dating from the late third century CE, these textile finds included fabrics, clothing, funeral banners, and even a bouquet of silk flowers. In some burials the deceased was covered with a blanket of tabby silk embroidered with mythological creatures, birds, and cloud patterns or with polychrome Chinese silk.

The importance of clothing for burials, especially silk, shows that the mourners were interested in providing the deceased with the best, a sort of conspicuous consumption that continued beyond the grave. However, not all had access to luxury goods such as silk and had to make do with other goods. Some grave finds show small pieces of silk as trim on woolen garments or scraps of silk pieced together to make small bags or sachets. However, woolen clothing could also denote rank. Many woolen finds from Xinjiang show complex weaves including gauze and polychrome patterning, some of which mimic those of silk fabrics. Finds from Shanpula in Xinjiang contain complex locally made woolen tapestry bands but also imported tapestries from the West. These finds dating between the third century BCE and the fourth century CE show that expensive textiles could be recycled, as was a pair of pants made from a woolen tapestry.

Fabrics were not the only materials used in grave goods for clothing. In Astana, grave clothing and shoes were made from recycled papers, showing a need to clothe the occupant in the afterlife even if unable to afford to do so in a grand way in the present.

—Rebecca Wendelken

Bibliography

- Keller, Domink, and Regula Schorta, eds. *Fabulous Creatures from the Desert Sands: Central Asian Woolen Textiles for the Second Century BC to the Second Century AD*. Riggisberger Berichte 10. Riggisberg, Switzerland: Abegg-Stiftung, 2001.
- Zhao Feng, ed. *Recent Excavations of Textiles in China*. Hangzhou: China National Silk Museum, 2002.

Paracas Burials and Their Textiles

In the Paracas Peninsula, on the southern coast of modern-day Peru, over 500 mummy bundles were preserved in shaft tombs and subterranean structures. Associated with the Paracas culture, the bundles were filled between 300 and 175 BCE. They possibly constitute the largest ancient textile find yet discovered. The high degree of preservation of these otherwise fragile artifacts is due to the dry climate of the southern coastal regions of Peru. Burials were discovered in the 1920s, and many were almost completely intact, another exceptional factor of Paracas textiles' preservation.

Shaft tombs are usually referred to as *cavernas* ("caverns"), but they are in fact human-made chambers built underground. They hosted up to 40 mummies and could be reached through a shaft about 30 feet (9 meters) deep. These tombs are found on Cerro Colorado (Colored Hill), a mound covered in purple gravel that can be seen from a distance rising from the desert plain. Not far is the so-called Necropolis (City of the Dead), which yielded the largest number of mummies, preserved inside multiple and often interconnected quadrangular masonry chambers that were constructed a few feet below the earth's surface. Each room could host several different bundles, placed on top of one another, while sometimes a (presumably) more

important one is found in the center. Necropolis burials show a greater degree of variety in terms of offerings and textiles than the previous shaft tombs.

Only a few (and particularly large) bundles have been thoroughly researched and fully unwrapped, providing information on the complex procedure by which a bundle was created. The deceased was first placed in a seated fetal position inside a basket. The naked body was adorned with a headband, bracelets, and necklaces. On the legs, a gourd was placed containing food offerings of corn, potatoes, and beans. Other common objects include gold sheets, obsidian blades, a pouch containing powder possibly used for body paint, a sling, a feather fan, and a few unspun camelid fibers. These latter items indicate a particularly wealthy status or an occupation such as warrior, long-distance merchant, or powerful priest. All the unwrapped bundles are males, but so far only the largest ones have been unwrapped. The smaller ones probably contain females and children. The body was eventually wrapped in a plain loin-cloth and placed on the basket with the objects. Several layers of rather plain, fragmentary, or unfinished cloths (up to 15) were wound around the body. A second layer of textiles was then wrapped around the bundle, including the basket and the mummy and objects therein. These were rough cloths, which could be as long as 33 feet (10 meters). Secured with stitches, their only purpose was to increase the size of the bundle. The bulk of the head was accentuated by more material tightened with a string. At this stage, a wooden staff was placed vertically, as a sign of authority, together with a varying number of lavishly embroidered textiles. These could take the shape of tunics (knee-long rectangular garments with a neck slit, sewn on the sides), ponchos (a short and open rectangular garment with a neck slit), turbans for head decorations, and extraordinarily long mantels, averaging 42 by 85 feet (12 to 26 meters), decorated on most of their surface with fine embroidery (needlework). A single mummy could be wrapped in as many as 140 mantels. Finally, the bundle was covered with a large plain cloth, and the bottom was protected by a woven mat.

—Alessia Frassani

➤ PARACAS TEXTILE DESIGNS

The complex iconography displayed on Paracas textiles bespeak a complex spiritual world populated by animals, plants, and human performers. Highly repetitive patterns of embroidery depict birds (herons, condors, and falcons), felines, snakes, and sharks. Fish-eating birds were probably venerated because of their ability to dominate the sea, the sky, and the earth. Human figures in rich costumes also reflect the importance of the natural realm. Most impersonators in fact show a combination of bird, feline, and fish features (e.g., wings, a beak, a cat tail, or fins) while at the same time holding musical or ritual instruments employed by shamans during religious ceremonies (rattles, batons, hallucinogenic plants, trophy heads).

—Alessia Frassani

Bibliography

- Dwyer, Edward, and Jane Dwyer. "The Paracas Cemeteries: Mortuary Practices in Peruvian South Coastal Tradition." In *Death and the Afterlife in Pre-Columbian America*, edited by Elizabeth P. Benson. Washington, DC: Dumbarton Oaks Research Library and Collection, 1973.
- Paul, Anne. *Paracas Ritual Attire: Symbols of Authority in Ancient Peru*. Norman: University of Oklahoma Press, 1990.
- Paul, Anne. "Procedures, Patterns, and Deviation in Embroidered Paracas Textiles." In *To Weave for the Sun: Ancient Andean Textiles in the Museum of Fine Arts, Boston*, edited by Rebecca Stone-Miller. London: Thames and Hudson, 1994.
- Rowe, John H. "Behavior and Belief in Ancient Peruvian Mortuary Practice." In *Tombs for the Living: Andean Mortuary Patterns*, edited by Tom D. Dillehay. Washington, DC: Dumbarton Oaks Research Library and Collection, 1995.

Role of Human Sacrifice in Olmec Society

Human sacrifice was a widespread phenomenon in the ancient Americas. It was the ultimate and most powerful of all acts of sacrifice, which ranged from simple offerings to dangerous bloodletting, during which the practitioner reached altered states of consciousness. Sacrifice

was the primary means of communication between the human and the supernatural in pre-Columbian American religiosity.

Among the Olmecs, human sacrifice is perhaps depicted on Monument 1 from Las Limas (now in the Museo de Antropología de Xalapa, Veracruz) and Monument 5 at La Venta (La Venta Archaeological Park, Villahermosa, Tabasco), where seated men hold a lifeless baby on their lap. The complete lack of written sources dating to this period prevents any definitive interpretation. The cleft head, flaring lips, and almond-shaped eyes clearly identify the baby as the so-called Olmec Supernatural, or Dragon, one of the most important images in Olmec Art. The ritual killing of a supernatural or deity is consistent with later information on human sacrifice practices in Mesoamerica. In the sculpture from Las Limas, the person holding the infant has incisions on the body. The iconography relates to different realms of the Olmec cosmos: the sky on the shoulder, represented by the profiles of bird creatures, and a shark and serpent on the knees, representing the watery underworld.

At the site of Chalcatzingo, Guerrero, low-carved reliefs show captives being killed by deity impersonators or dominated and devoured by feline creatures. The images probably mark the site of the sacrifice. Performers were likely local rulers, as images of enthroned personages at the site indicate. The ability to successfully perform human sacrifice gave rulers political legitimacy and sanctified their authority in front of the community. While ideological underpinnings point to an incipient sociopolitical complexity in Formative period Mesoamerica (roughly 1800 BCE to 200 CE), the ultimate goal of human sacrifice lay in the necessity of maintaining the balance of the cosmos through the constant renewal of life and death.

—Alessia Frassani

Bibliography

Joralemon, Peter David. "The Olmec Dragon: A Study in Pre-Columbian Iconography." In *Origins of Religious Art and Iconography in Preclassic Mesoamerica*, edited by Henry B. Nicholson. Los Angeles: University of California, Latin American Center, 1976.

Olmec World: Ritual and Rulership. Princeton, NJ: Art Museum, Princeton University, 1996.

Reilly, Kent F., III. "Olmec Iconographic Influences on the Symbols of Maya Rulership: An Examination of Possible Sources." In *Sixth Palenque Round Table*, edited by Virginia M. Fields. Norman: University of Oklahoma Press, 1986.

Role of Human Sacrifice in the New World Burials

Human sacrificial burials are found across time and space in the New World. During the Classical era (1000 BCE–300 CE), sacrificial burials are associated with monumental architecture, wartime activities, and peacetime sacrifices during times of societal and economic hardships. Animals, stone tools, ceramics, and rare materials (jade, metals, and incense) often accompany these human sacrifices.

Sacrifices can be differentiated by context. Wartime sacrifices usually consist of groups of able-bodied males captured in battle, as at Sechin Alto in South America or at Monte Alban in Mesoamerica. War captives were buried en masse and show evidence of extreme violence. Skull racks (*Tzompantli*) and sacrificial altars (*chacmool*) are common in Mesoamerica, while trophy head cults were more common in South America. Torture, broken jaws, bloodletting, decapitation, and mutilations are evident. Human sacrificial burials in peacetime demonstrate a great deal of respect with formal burials, ritual objects, drugs to lessen pain, and mortuary music.

Sacrificed mummies in the South American Andes are often fed and worshipped for thousands of years, as at Nazca culture sites in southern Peru. Andean mummy sacrifices are often so well preserved that details of sacrificial rites such as last meals and drugs administered can be determined. Strangulation was used in the south, while blows to the head with an unusual mace-spear weapon were common in the northern Moche civilization. The Moche used institutionalized sacrifices to appease the gods at their mud-brick pyramid cities along the northern coast of Peru, perhaps in response to El Niño events. The Moche rituals were part of an elabo-

rate belief system in which power, control, and human sacrifice were intertwined.

In Mesoamerica, Maya families might sacrifice their children in times of drought or hardship at wells and caves. Maya city-states practiced institutionalized sacrifice similar to the Moche in South America. Because the Maya left a written record, researchers can delve deep into the beliefs behind sacrifice. Mayan texts tell of twin corn brothers who must use self-human sacrifice to appease the underworld gods of Xibalba. Maya nobles practiced blood offerings and sacrifice of captured rivals. At Teotihuacan (1–650 CE), the largest city of the pre-Columbian Americas, a preplanned pyramid sits over sacred caves that contained nearly 60 sacrificed individuals from several ethnic groups. Obsidian and jade stone knives were used in sacrificial rituals in Mesoamerica. Monumental architecture and religious beliefs throughout the Americas were often associated with human sacrificial rites.

In North America, nomadic plains cultures sacrificed and cremated a chosen juvenile in seasonal rituals to keep celestial bodies moving. Bows and arrows were common sacrificial tools. Sacrificial burials are also known from mound-building cultures in the East and farming villages in the Southwest, but it is difficult to determine if violent deaths were always sacrificial due to limited contexts for those finds. Despite stringent archaeological criteria for separating violent deaths into subcategories such as sacrifice, murder, accident, warfare, and the like, the smaller-scale societies of North America often lack enough context to come to certain conclusions.

—Christopher Howell

Bibliography

- Isbell, William, and Elaine Silverman, eds. *Andean Archaeology III: North and South*. New York: Springer, 2006.
- Sugiyama, Saburo. *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacan*. Cambridge: Cambridge University Press, 2005.
- Turner, Christy. *Man Corn: Prehistoric Cannibalism and Violence in the American Southwest*. Salt Lake: University of Utah Press, 1998.

➤ MAYA HUMAN SACRIFICE

The Maya civilization of Mesoamerica left behind an unparalleled record for New World civilizations with glyphic writing, classical urban centers, and modern Maya descendants. Sacrifice and bloodletting were integral to the Maya worldview for a balanced cosmos. Maya peasants and elites practiced human sacrifice in times of peace and war. Family might be sacrificed in stressful times, and elites practiced bloodletting and sacrifice of captives in ritual ball games. Maya art, writing, and archaeology all indicate the presence of human sacrifice, though not on the scale associated with later central Mexican warlike societies.

—Christopher Howell

Shaft Tombs from Western Mexico

The burial sites of the ancient peoples of western Mexico consisted mostly of shallow pits with few grave goods. However, the remains of those in the higher social classes were housed in shaft tombs. The amount of labor required to build these tombs and their rich contents indicate that they were reserved for elite families.

Shaft tombs appeared in western Mexico during the Mesoamerican Formative period (1500 BCE–200 CE) but particularly during the “Teuchitlan tradition” of the Late Formative (Pre-Classic) period in western Mexico (300 BCE–150 CE). The peoples in the Teuchitlan tradition lived in pre-Columbian societies noted for circular central plazas, four-tiered hierarchical settlements, and conical pyramids.

Prior to the 1993 discovery of the first unlooted tomb at Huitzilapa in Jalisco, information about the shaft tomb tradition came solely from looters. Shaft tombs are primarily found in three modern-day western Mexican states: Jalisco, Nayarit, and Colima. The tombs of Jalisco are the most elaborate, and the region is considered to be the core of the shaft tomb tradition.

The shaft tomb occupants shared lineage. Analysis of DNA from the remains from the Huitzilapa site shows that most of the individuals

➤ FIGURINES FROM SHAFT TOMBS

Grave goods from the shaft tombs of western Mexico demonstrate a wide variety of materials, techniques, and subject matter. In Jalisco, tombs contained figurines modeled from clay, depicting humans with elongated faces, high foreheads, and prominent noses engaged in everyday activities.

Craftspeople in the Nayarit region painted details onto their sculptures and represented humans with widely separate eyes and ample body adornments, including ear and nose piercings. These figures are often called “Chinesco” for their supposed Chinese-like appearance.

The ancient peoples of Colima are well known for their hollow figures of animals, humans, and plants in round, smooth forms made from warm-brown slip (watery clay molded by hand). The most common animal in Colima art is the hairless dog. The widespread appearance of ceramic dog figurines shows their multipurpose roles as watchdogs to the dead, healers, and sources of food.

—Kim Kennedy White

buried in the tomb were genetically related. The shaft tombs therefore housed extended families of the elite.

The tomb builders dug down into the ground to create oval-shaped vertical shafts leading into side chambers, where the dead and burial goods were placed. These shafts varied from 10 to 65 feet (3 to 20 meters) deep and were often built under structures within the community’s complex.

The contents of the shaft tombs demonstrate social status. Grave goods consisted of prestige goods (luxury items) as well as ceramic figures and pottery containing food and precious materials such as beads, crystals, pyrite, jade, turquoise, and conch shells. Materials used to create these grave goods were both local and imported from outside the region. Unlike other Mesoamerican cultures, the contents of the shaft tombs provide little evidence for religious or symbolic meaning.

Anthropomorphic figurines depict valued people in the community: warriors, political figures, and shamans. Dioramas discovered in the tombs and looter sites replicate housing, shaft tombs, and people engaged in everyday activities.

Researchers continue to study recently discovered intact tombs in order to understand the relationship of the ancient peoples of western Mexico with the whole of Mesoamerica and the role of shaft tombs within these societies.

—Kim Kennedy White

Bibliography

- Austin López, Alfredo. *Mexico’s Indigenous Past*. Norman: University of Oklahoma Press, 2001.
- Foster, Michael S., and Phil C. Weigand, eds. *The Archaeology of West and Northwest Mexico*. Boulder, CO: Westview, 1985.
- Garcia, Maria Teresa Cabrero, and Carlos Lopez Cruz. “The Shaft Tombs of El Piñon, Bolaños Canyon, State of Jalisco, Mexico.” *Ancient Mesoamerica* 18 (2007): 239–257.
- Kleiner, Fred. *Gardner’s Art through the Ages: Non-Western Perspectives*. 13th ed. Boston: Wadsworth, 2009.
- Townsend, Richard F., ed. *Ancient West Mexico: Art and Archaeology of the Unknown Past*. New York: Thames and Hudson, 1998.

Migration and Travel

“By the Rivers of Babylon—there we sat down and there we wept
when we remembered Zion.”

—Psalm 137:1

This lament was written by Judean exiles living in the Mesopotamian city of Babylon after the destruction of Jerusalem in 586/587 BCE. When the Babylonian king, Nebuchadnezzar, destroyed the Temple in Jerusalem and brought an end to the kingdom of Judah, he deported many Judeans to Mesopotamia. These Judeans, most of whom had never left Judah before, lived together in Babylon and maintained their ethnic identity in this foreign setting. The difficulties of preserving their Judean heritage were immense, and in fact exilic culture underwent a number of transformations, including the adoption of Aramaic (in place of Hebrew) as their language of daily use. These difficulties, however, likely played an instrumental role in motivating this community to preserve its writings, stories, and legal traditions, a process that led to the compilation of the books of the Tanakh (Old Testament).

These exiles did not remain in Babylon long, eventually returning to Judah after the conquest of Babylon by the Persians. With the growth of the Persian empire, travel around the Near East became easier, safer, and more common. Concomitantly, in the Greek world, travel throughout the Mediterranean came to be more common as the economic relationships between the Greek city-states became more intertwined.

By the time the Judahites had been sent into exile in Babylon, the Phoenicians, whose homeland was situated north of Judah (in modern Lebanon) began expanding out of the Levant. The Phoenicians traveled throughout the Mediterranean trading purple dye and the cedars of Lebanon for tin and other precious commodities found elsewhere. They established trade colonies in North Africa, most notably at Carthage, as well as on the Spanish coast. These Phoenician colonies eventually came into conflict with the Romans and were destroyed or incorporated into the Roman empire.

After the Phoenicians had established their colonies, the conflict between the Greeks and the Persians was settled when Alexander the Great, king of the Macedonians (and leader of the Greek world), routed the Persians in 331 BCE. Alexander continued the westward expansion of the Greeks, and by his death in 323 his Hellenistic empire controlled Egypt, the Levant, Mesopotamia, Persia, and parts of Afghanistan and India. Although Hellenistic military authority over these regions did not extend much past his death, Hellenistic culture became firmly entrenched

in western Asia. Hellenistic city types, institutions, and beliefs remained, as did many of the veterans of Alexander's army, merging Greek culture with the indigenous traditions of the East.

When power shifted from Greece to Rome, the opportunities for travel increased even further. The Roman talent for road construction was immense, and as Rome expanded so did the infrastructure for transportation. At its largest extent, the Roman road system spanned 52,195 miles (84,000 kilometers). Many of these Roman routes are still

in use today, although the Roman materials have mostly been replaced. Maritime travel also connected people throughout the Roman world, which was made safer by the Roman ability to suppress piracy.

As travel became easier in the more heavily settled regions of the world, transportation became possible in more marginal regions. The domestication of the

camel allowed travelers to pass through large expanses of desert, opening up a number of trade routes. The Nabataeans took full advantage of these advances and created a trade route between Arabia and the Levant, traveling through southern Jordan. Similarly, Bedouin culture was able to expand. While there had been people living in the deserts of Egypt and the Levant for centuries, the camel allowed these desert dwellers to travel farther, utilizing arid land that had been previously out of reach.

The longest of these new trade routes were the Silk Roads, which tradition holds were first opened in 114 BCE by the Han dynasty in China but which were in operation long before then. Connecting Asia, Europe, and Africa, these were the first truly global roads, although it should be noted that what generally traveled along them were high-profit luxury goods that were transferred along the way from hand to hand. The Silk Roads are better thought of as a series of interconnected, parallel, and often shifting caravan routes that connected China with the Mediterranean; in fact, many of the routes that made up the Silk Roads were in use for centuries before. Connecting and policing these routes was an innovation made possible by a number of factors: the political and military authority of the Han state, the commercial interests of the nomadic tribes who benefited more from taxing and protecting these caravans than raiding them, and the wide variety of beasts of burden suitable for every climate and terrain, most notably the Bactrian camel. This long-distance route system allowed people of all sorts to experience the world, and new types of travelers emerged.

Religion became a motivating force for travel in a way that it had never been before. Pilgrims now had the opportunity to visit sites of religious significance to their traditions, and gradually this came to be an important component of the spiritual life of many believers. Holy locations and temples thought to be particularly efficacious for the fulfilling of certain needs (such as dream interpretation or physical healing) were popular destinations. Missionaries, such as Buddhist missionaries from India who went into Ceylon, Burma, central Asia, and elsewhere,

At its largest extent, the Roman road system spanned 52,195 miles (84,000 kilometers). Many of these Roman routes are still in use today, although the Roman materials have mostly been replaced.

also began traveling, spreading the messages of their particular traditions throughout the world. Buddhism became the first world religion (especially the Mahayana form). Some religions stopped being just something that was part of one's local cultural traditions, becoming messages that needed to be spread to the other people of the world. Thus, throughout this period, the religious traditions of India began to spread through East and South Asia, and Christianity began its movement through the Near East and Europe.

It was not just merchants and missionaries who traveled between 1000 BCE and 300 CE. Large-scale population migrations altered the landscape of human settlement patterns. The migration of Bantu-speaking people in Africa continued and intensified after 1000 BCE. Nomadic groups in central Asia moved into new lands and displaced other inhabitants of the region. Celtic populations similarly spread through continental Europe. Polynesian populations continued to expand through the South Pacific, settling on previously uninhabited tropical islands. Maya people expanded the scope of their culture into the lowlands of Mesoamerica.

—Kevin M. McGeough

■ Introduction: Migration

What causes people to migrate from their homes to unfamiliar regions? This is a fundamental question that historians are forced to ask when trying to understand the complex movements of ancient people. For most of these ancient immigrants it must have been a combination of factors that led them to take the risk of abandoning the security of a known lifestyle to try something new. The Phoenicians, for example, were spurred on to expand their territorial holdings from the Lebanese coast into North Africa in order to gain material advantage in trade and because of the different resources available in Africa. Greek and Roman expansion was influenced both by the urge for new trade and resource acquisition and as a means of creating opportunities for growing populations that could not be sustained by their local environment.

Many of these immigrants may not have had much choice other than to move. The military aspirations of larger or more powerful states were likely major influences on the movement of people from 1000 BCE to 300 CE. Forced de-

portation was a tactic that the Mesopotamian empires of Assyria and Babylon used to great effect in the Iron Age (1200 BCE–332 BCE). By moving wealthy and powerful members of a group away from their homeland, these Mesopotamian kings were better able to control large territories far from their capitals. The effects of such forced migrations on the indigenous populations are well illustrated by the accounts in the Hebrew Bible.

Other forced migrations were not based so much on military threat as they were on environmental change or resource stress. Refugees from the eruption of Cuicuilco in what is now known as Mexico exemplify the type of migration that is compelled when a local environment is changed dramatically.

The following entries detail some of the major migrations (and forced migrations) that took place in the period from 1000 BCE to 300 CE. Some of these migrations, such as those of the Greeks and Romans, are well known from written sources. Other movements, such as the gradual settlement of the islands of the Caribbean

are known primarily from the archaeological record, through tracking the spread of distinct types of material culture from one island to the next.

—Kevin M. McGeough

Bantu Expansions, circa 1000 BCE–500 CE

The history of the Bantu expansions is a story that is told with an unfamiliar historical source—linguistic data—about historical actors who were first and foremost speakers of related languages rather than residents of the same territory or citizens of the same polity. It is nonetheless a history of significant achievement from both the perspective of change over time and continuity through time. From a shared linguistic and cultural heritage with origins some 5,000 to 7,000 years ago, speakers of Bantu languages innovated a diverse range of economic practices, types of political organization, and means of forming relationships with others even while they retained words and ideas that had brought their ancestors success many generations earlier.

By 1000 BCE speakers of Bantu languages had carried their ways of speaking and living to the edges of the equatorial rain forest and were poised to spread into the Great Lakes region of eastern Africa and the southern savannas of central Africa. A number of innovations from 1000 BCE to 500 CE transformed the ways in which Bantu-speaking people made a living and built communities. The processes of independent, multiple innovations and widespread diffusion worked in tandem as Bantu speakers learned to grow new crops, smelt ores into fine-grade irons, and intensify their use of cattle. Changes in the economy proceeded in lockstep with equally influential changes in social life; as Bantu speakers invented new ways to make relationships, they could organize their efforts to better use new technologies, and conversely, new technologies could and did drastically reshape social and political relationships.

Bananas, including starchy plantains, entered Africa from the Indian Ocean coast and spread westward into the equatorial rain forests by the last centuries BCE and perhaps as early as

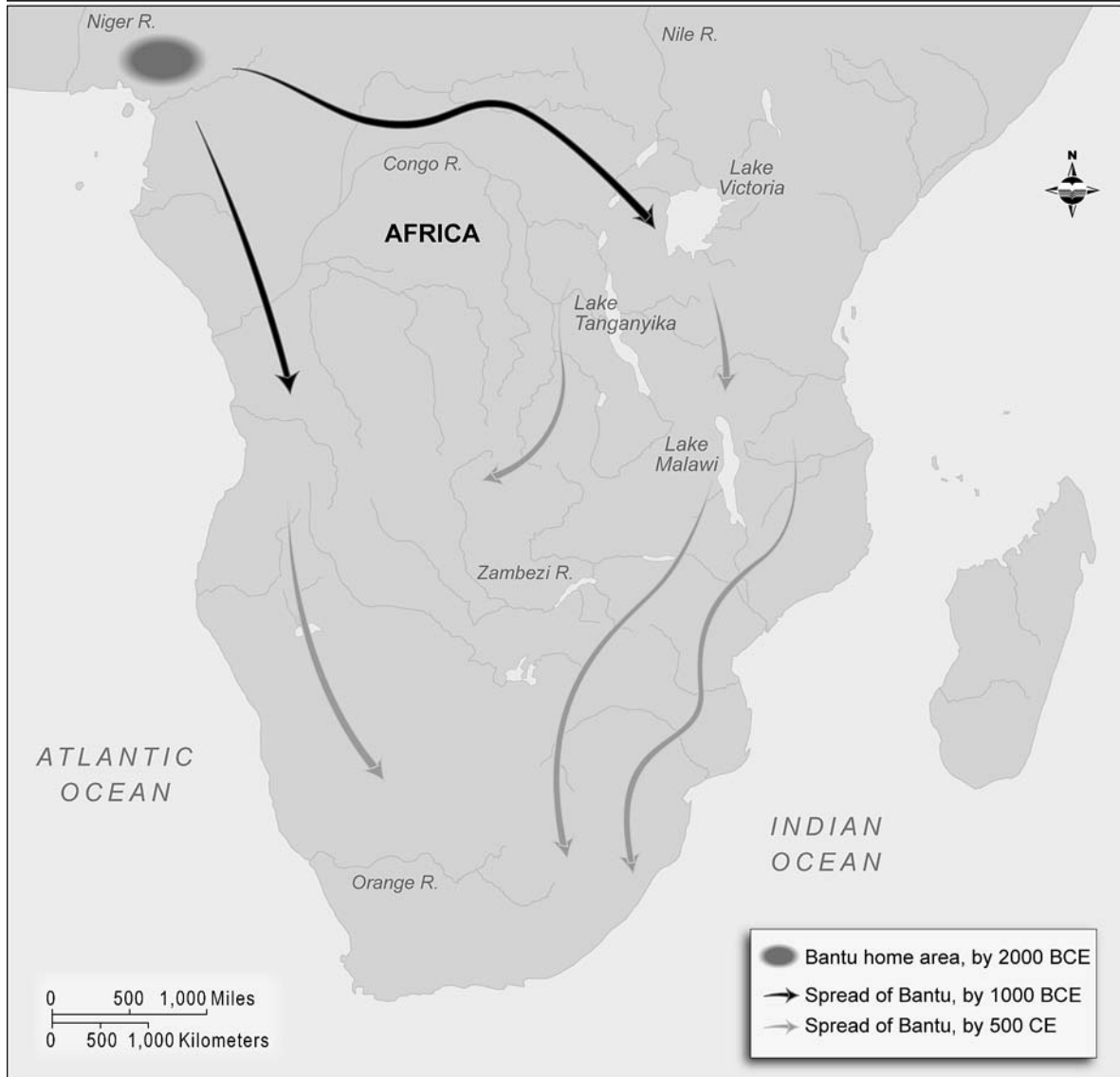
the early first millennium BCE. This Asian crop required little labor input once trees were planted and had a far greater output than yams. Banana gardens allowed people to live in more sedentary communities and focus their efforts on learning other technologies such as iron smelting. Moreover, steady selection of bananas for particular characteristics such as flavor and pest resistance led to an impressive variety of cultivars, a testament to the technological virtuosity of African peoples.

Scholars now believe that iron smelting was invented several times in different locations in Africa. Ores were smelted into iron by at least the sixth century BCE in present-day Nigeria and perhaps as early as the first centuries of the first millennium BCE in the Great Lakes region. New evidence suggests that one of these centers of innovation was the source of the smelting technology that spread into the equatorial rain forests certainly by the closing centuries of the last millennium BCE, although smelting might have been practiced in the rain forests of present-day Gabon several centuries earlier. Iron working transformed where people could settle because iron tools were more efficient for cutting gardens out of the forests and breaking up dense soils.

From the eastern margins of the rain forests, several Bantu-speaking communities created the conditions that supported a rapid spread eastward into the Great Lakes region, as far east as the Indian Ocean, and as far south as present-day South Africa. Early and prolonged contact with speakers of non-Bantu languages made an important contribution to the knowledge of Bantu speakers as they learned new crops, herding strategies, and ironworking technologies. The successful manipulation of these new technologies helped propel the rapid spread of some Bantu languages down the East African coast during the last millennium BCE and the first millennium CE.

In the Great Lakes region (present-day Rwanda, Burundi, Uganda, western Kenya, and northwestern Tanzania), speakers of different Bantu languages transformed the forest-oriented root-cropping system they had learned from their ancestors into a food system suitable for the drier lands east of the rain forest. Great Lakes Bantu speakers learned about cereal crops and

BANTU MIGRATION



livestock raising from Sudanic, Cushitic, and Sahelian peoples and combined these forms of farming with their own knowledge of root cropping, hunting, and fishing to create a dynamic mixed-food system. Iron smelting was widely established by the closing centuries of the first millennium BCE; lexical evidence suggests that Bantu speakers also learned this skill from their non-Bantu neighbors. Together, these technological innovations helped Bantu speakers to settle the diverse environments surrounding Lake Victoria by the sixth century CE.

During the first millennium CE Bantu-speaking inhabitants of the Great Lakes region increasingly turned their attention to growing bananas along the coastlines of Lake Victoria and to intensive cattle keeping in the savannas between the highlands of the Western Rift and the lakeshore. By the turn of the first millennium CE specialization in banana farming and cattle herding had redefined the content of wealth and the ways in which people sought to access and control productive herds and banana plantations. Concerns about the risks associated

➤ RACIAL POLITICS AND THE BANTU CONCEPT IN SOUTH AFRICA

For many people, the word “Bantu” evokes the racial politics of twentieth-century South Africa rather than the genetic classification of African languages. Racism was not unique to South Africa; indeed, it characterized relations long before the colonization of the continent by Europeans. Yet racism in South African politics took a unique path. As ideas about white supremacy began to wane in most parts of the world after World War II, they strengthened in South Africa under the legalized discrimination and segregation of the apartheid (separateness) system. A series of laws enacted in the late 1940s and early 1950s created racial classes of people and segregated all forms of association between them, from marriage to residence, from transportation to education. In these policies, the term “Bantu” was applied to black Africans, transforming a linguistic category into a racial identity. The Bantu education policy of the apartheid government sought to acculturate black Africans to a traditional rural lifestyle at the same time that housing policy removed black urban wage workers to rural, segregated Bantu-

stans. Bantustan policy was a divide-and-conquer strategy that segregated black Africans along ethnic lines, undermining black resistance to white minority rule. Yet throughout the twentieth century, Africans debating the future of independent African states and the content of shared African culture also used the root word of the term Bantu, *ntu*. In South Africa, the concept of *ubuntu* (humanity) was a founding principle of the African National Congress (ANC) government that came to power in 1994, ending apartheid.

—Kathryn M. de Luna

Bibliography

- Dubow, S. *Racial Segregation and the Origins of Apartheid in South Africa*. London: Macmillan, 1989.
- Marks, Shula, and S. Trapido, eds. *The Politics of Race, Class, and Nationalism in Twentieth Century South Africa*. London: Longman, 1987.
- Worden, Nigel. *The Making of Modern South Africa*. 2nd ed. Oxford, UK, and Cambridge, MA: Blackwell, 1995.

with pastoralism and banana farming were mediated through new ideas about social organization, religious authority, and routes to political power. For example, those with banana gardens sought to protect their perennial banana trees by inventing the custom of reckoning family and inheritance through the father’s side (patrilineality). Owners of large herds developed special relationships of dependence and friendship to enlarge the people to whom they could loan cattle from their herds, thereby hedging against the risks of localized disease and drought. In some areas the invention of the concept of chiefly leadership supported the centralization of political power. In other areas specialists in appeasing territorial and ancestral spirits or in healing afflictions such as infertility provided alternative avenues to wealth and power and ways of contesting centralized chiefly and, eventually in the second millennium, kingly power.

During the first millennium many Bantu-speaking peoples in east-central and southern

Africa were, like their counterparts in the Great Lakes region, shifting toward intensified cattle keeping. These two shifts were independent changes, taking place thousands of miles apart; the simultaneous shift toward cattle keeping in both places is not surprising, however, for cattle herds are a mobile, transferable, self-reproducing form of wealth. Cattle were both a food supply and an object with which to cement ties between families when youths married, between friends, and between patrons and clients. Generally, then, early experimentation in banana farming in the Great Lakes region and cattle raising in eastern and southern Africa and later efforts to specialize in these skills during the first millennium CE were important processes underpinning later innovations in political centralization in Bantu-speaking societies during the second millennium CE.

In other parts of central and southern Africa Bantu-speaking communities followed a different trajectory. In south-central Africa iron tools,

cereal crops, and even the adoption of cattle keeping and wealth from copper working helped people settle new drier environments and increase the size of their villages. However, these changes did not necessarily lead to political centralization as they did in the Great Lakes region and southern Africa during the second millennium. While social stratification, organization into lineages and clans, and membership of distinct political territories were an increasingly important part of life during the first and even second millennia CE, some peoples in the savannas of central Africa invented unique paths to status. In south-central Africa the cultivation of personal reputation in certain crafts such as cooking, hunting, and sowing seeds gave some individuals particular economic and social advantages, advantages that shifted by season or by level of success. In the Kalahari Sands region of west-central Africa collective ideas about society as an interplay of statuses, roles, and individual distinction led to a variety of local elaborations on a shared institutional foundation of villages, vicinages (collectivities of villages), and associations based on age and gender.

—Kathryn M. de Luna

Bibliography

- Ehret, Christopher. *An African Classical Age: Eastern and Southern Africa in World History, 1000 B.C.E. to A.D. 400*. Charlottesville: University of Virginia Press, 1998.
- Klieman, Kairn. *"The Pygmies Were Our Compass": Bantu and Batwa in the History of West Central Africa, Early Times to c. 1900 C.E.* Portsmouth, NH: Heinemann, 2003.
- Nurse, Derek, and Gérard Philippson, eds. *The Bantu Languages*. London and New York: Routledge, 2003.
- Schoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.
- Vansina, Jan. *How Societies Are Born: Governance in West Central Africa before 1600*. Charlottesville: University of Virginia Press, 2004.
- Vansina, Jan. *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa*. Madison: University of Wisconsin Press, 1990.

The Arrival of New People in Japan and the Founding of the Yayoi

Compared to the Jomon period, the succeeding Yayoi period is short. This does not downplay its importance, though. Three important cultural items—rice agriculture with paddy fields and bronze and iron metallurgy—were introduced from the Asian mainland into the Japanese Archipelago. Various other new techniques were also introduced, including advanced pottery technology, polished stone tool technology, irrigation systems, and weaving. The Yayoi period is also characterized by some clear evidence of social stratification and the emergence of a social elite.

Traditionally, the Yayoi period has been divided on the basis of pottery chronology into four phases: Initial (ca. 500–300 BCE), Early (ca. 300–100 BCE), Middle (ca. 100 BCE–100 CE), and Late (ca. 100–300 CE). In recent years, though, a debate has erupted on dates for the Yayoi period. At several sites, Middle Yayoi pottery was associated with bronze mirrors of the Former Han period (206 BCE–9 CE) in China, which seemed to confirm the reliability of this conventional chronology. However, in the 1990s dendrochronological studies of wood excavated from Yayoi and Kofun period sites are raising questions about the reliability of the absolute dates for the Yayoi subphases. More recently, results of radiocarbon dates from Initial Yayoi sites indicate that the beginning of the Yayoi period in Kyushu goes back to as far as 900–1000 BC.

It must be kept in mind, though, that the Final Jomon did not end at about 900 BCE throughout the entire Japanese Archipelago. Scholars agree that the Yayoi culture was first established in northwestern Kyushu and then spread quickly toward the northeast and next into the Kinki region. By the middle of the Early Yayoi period, sites associated with Yayoi pottery can be found up to the Tokai region. Dispersal of the Yayoi culture to the Kanto, Chubu, and Tohoku regions was slow, and thus the majority of Yayoi sites in these regions are dated to either the Middle or Late Yayoi periods.

What is the definition of the Yayoi period? Until the 1950s, the definition was the period

during which Yayoi-style pottery was used. This definition was acceptable when the earliest evidence for rice agriculture was associated with the earliest Yayoi pottery. In the 1960s some archaeologists began to suggest that in northwestern Kyushu, rice agriculture was adopted prior to the adoption of the new style of pottery. In 1975 Makoto Sahara, an authority of Yayoi archaeology, redefined the Yayoi period as the period in which food production (in this case, rice agriculture) first formed the economic basis of Japanese society. In the 1980s excavations of the Itatsuke site and the Nabatake site in Kyushu revealed that the adoption of wet rice cultivation preceded the adoption of the new style of pottery: both sites were originally classified as Final Jomon sites on the basis of stylistic characteristics of pottery, but clear evidence of rice paddy fields was found.

Typical Yayoi-style pottery is quite different from Jomon pottery. It is much thinner than Jomon pottery and is generally better fired. One of the main differences between Jomon and Yayoi pottery is in the shape of vessels. The most common shape of Jomon pottery is the deep bowl for cooking, with a small number of pottery with other forms, including shallow bowls and incense burners. The assemblage of Yayoi pottery is usually characterized by several different types of vessels, including the storage jar, the cooking pot (similar to the Jomon deep bowl), the serving dish, and the pedestaled dish. This variety of vessel shapes is related to rice agriculture; the new pottery forms account for the storage of rice and changes in cooking methods.

It is agreed that wet rice agriculture was introduced into Japan from mainland Asia. Furthermore, early evidence of rice cultivation in Japan is concentrated in northwestern Kyushu. Scholars also agree that rice cultivation techniques of both the Yayoi culture and the Mumun culture in Korea share a number of characteristics with the rice cultivation practice in the Yangzi Delta region of China. What scholars do not necessarily agree about is the adoption route of rice agriculture.

Three possible routes have been suggested: the Southern Route, the Direct Route, and the Indirect Route. The Southern Route hypothesized that the route stemmed from the Fujian

area in southern China or Taiwan and traveled straight up to the Ryukyu Islands. This was originally suggested in the 1960s by Kunio Yanagita, who was an influential folklorist. This hypothesis is not supported by archaeological data, however, as there is no evidence of rice cultivation from this period in the Ryukyu islands and southern Kyushu.

The second possibility is the Direct Route, which assumes that rice diffused directly from the lower reaches of the Yangzi River to northern Kyushu across the China Sea. This hypothesis is not considered likely either, since the lower reaches of the Yangzi River has both the round and slender grain varieties. In Japan, only evidence for the round grain varieties has been recovered.

The Indirect Route also starts from the lower reaches of the Yangzi River, but it is a roundabout route via the Shandong Peninsula and then through northern Korea. Most scholars support the Indirect Route hypothesis, although there are several possible subroutes, and the possibility of less frequent contact via the Direct Route is also suggested.

In terms of the physical anthropology, excavations of Yayoi sites in southwestern Japan have revealed the existence of two distinct types of human remains: indigenous Jomon type and an immigrant population from the continent. Both of these skeletal remains are associated with Yayoi-style artifacts. The Jomon type people were shorter, more robust, and round-faced, whereas the immigrant type people tended to be taller, less robust, and long-faced.

According to Kanaseki, although skeletal remains from Early Yayoi sites in Kyushu include both types of remains, the immigrant type is distributed mainly in northern Kyushu and the western edge of the Honshu Island. In southern Kyushu, Early Yayoi skeletal remains are the indigenous Jomon type. This would imply that in Southern Kyushu, the indigenous inhabitants accepted the Yayoi culture. Based on these lines of evidence, Kanaseki concluded that the presence of Yayoi culture does not always indicate the presence of immigrants.

According to Kanaseki, these immigrants came from the southern part of the Korean Peninsula. For the moment, there is not much com-

parative data available from the Korean Peninsula. Nevertheless, we can say that the original immigrants who brought the Yayoi culture lived originally in northern Kyushu and the western edge of the Honshu Island and then gradually mixed with the indigenous people.

The next question is, How many immigrants came to Japan? Hanihara's population simulation work published in 1987 is one of the few attempts to estimate the amount of immigrants during the Yayoi and Kofun periods. He uses two simulation models based on population growth and on morphological changes. Both models suggest that the number of immigrants must have been much greater than previous estimates.

Hanihara's work is based on several assumptions. First, he assumed that, based on Koyama's work, the population in Japan declined drastically during the Final Jomon period. According to Koyama's estimate, there were only 75,800 people at the end of the Jomon period, but by the end of the Kofun period (ca. seventh century CE), the estimated population was as high as 5.4 million. Hanihara points out that if there had been no immigrants to Japan, then such a dramatic population increase would have involved an annual population growth rate of 0.427 percent per year, which is an extremely high rate for most small-scale agricultural societies. He further states that most agricultural societies had a growth rate of less than 0.1 percent.

If the rate of 0.1 percent had been the case (i.e., if there had been no immigrants), then the population of 700 CE would have been only 200,000. Therefore, in order to make up the 5.4 million estimated by Koyama, we need more than 3 million immigrants from the beginning of the Yayoi period to the seventh century CE. Even if we assume that the annual population growth rate was 0.2 percent and that the Final Jomon population was 160,300 (alternative population estimate in the end of the Jomon period), we still need 1.3 million immigrants. While these estimates are based on several assumptions that can be questioned, nevertheless his work indicates that the number of immigrants is likely to have been quite large.

In recent years, DNA research on the modern male population has also contributed to this debate. Research by Hammer and Horai on the Y

chromosome has found that approximately 61 percent of the male Japanese population carry a Y-chromosome polymorphism that is not found in other Asian male populations. They equate this with the Jomon inhabitants of Japan. The remaining 39 percent who do not carry the polymorphism are equated as being descendants of the Yayoi immigrants.

—Mark E. Hall

Bibliography

- Aikens, C. Melvin, and Takayasu Higuchi. *Prehistory of Japan*. San Diego: Academic Press, 1982.
- Barnes, Gina. *The Rise of Civilization in East Asia: The Archaeology of China, Korea and Japan*. New York: Thames and Hudson, 1999.
- Hudson, Mark J. "From Toro to Yoshinogari: Changing Perspectives on Yayoi Period Archaeology." In *Hoabinhian, Jomon, Yayoi, Early Korean States*, edited by Gina Barnes. Oxford, UK: Oxbow Books, 1991.
- Hudson, Mark J. *Ruins of Identity*. Honolulu: University of Hawaii Press, 1999.
- Imamura, Keiji. *Prehistoric Japan: New Perspectives on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.

The Origins of the Gojoseon of Korea

Various tools from the Paleolithic Age uncovered in all parts of Korea indicate that human beings have inhabited the area for half a million years. It is not clear when their ancestors began to inhabit the peninsula, but most scholars agree that present-day Koreans are not the ethnic descendants of those Paleolithic people. Contemporary Koreans descended from Neolithic groups who entered the peninsula from areas north of Manchuria, probably in several successive migrations between 5500 and 2000 BCE.

The Koreans are Tungusic peoples, cousins of the Mongols, and their ethnic origin may be traced from those who lived in and around the Altaic Mountains in central Asia. Some of the strongest evidence for this origin is the fact that modern Korean is part of the language family of northeast Asia called Altaic.

The early tribal peoples had a fishing, hunting, and gathering culture. They produced

comb-pattern pottery similar to that found in northern Europe and Siberia and later, after the emergence of agriculture, built large above-ground tomb chambers of stone blocks, often mounded over with earth. Evidence of rectangular huts and burial sites in the form of dolmen and stone cysts is widespread. The early Koreans believed in animism and thought all natural objects had spirits. Artifacts were closely connected to their religious practices.

The standard account of the origins of Ancient Gojoseon (Old Joseon) is contained in the legend of the first great ruler, Tangun, who was born of a union between the son of the divine creator and a female bear that had achieved human form. Tangun made the walled city of Pyongyang the capital in 2333 BCE, called his country Gojoseon (Land of the Morning Calm), and ruled for fifteen hundred years. No evidence has been found that supports whatever facts may lie beneath this myth, but over the centuries the legend has contributed to the Korean sense of identity as a distinct and proud race.

The walled-town state of Gojoseon in time combined with others to form a single large confederation, the head of which came to be designated as its king. The use of iron hoes, plowshares, and sickles brought significant social changes. Food production increased, particularly benefiting the ruling elite. Artifacts from this period also include bronze and iron daggers and spears. Families still lived in pit dwellings, but the use of *ondol* devices (heating of flues under the floor) appeared.

—Mary E. Connor

Bibliography

- Connor, Mary E. *The Koreans*. Santa Barbara, CA: ABC-CLIO, 2009.
- Lee, Ki-baik. *A New History of Korea*. Seoul: Ilchokak Publishers, 1984.
- Nahm, Andrew. *A Panorama of 5000 Years: A Korean History*. Seoul: Hollym, 1987.

Celtic Migrations and the Rise of Hallstatt and La Tène Cultures

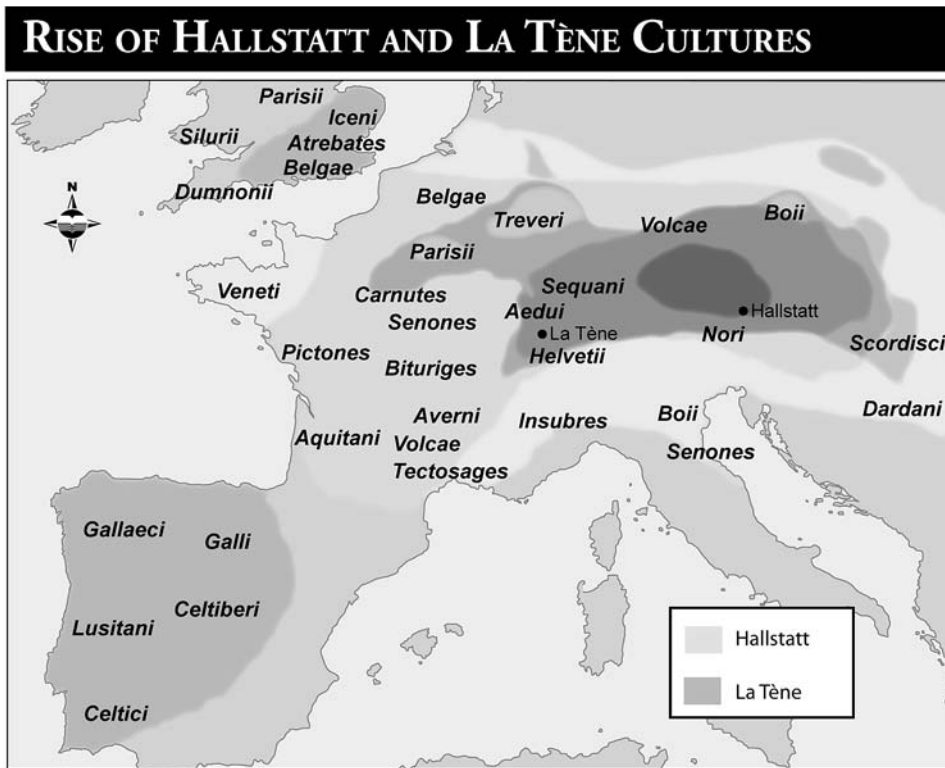
Hallstatt and La Tène are the two archaeological cultures most commonly associated with the

late prehistoric Celts. The Hallstatt culture, named after a small town in upper Austria, started in the Late Bronze (ca. twelfth through ninth centuries BCE) and continued into the early Iron Age (ca. eighth through fifth centuries BCE). Its main area of distribution encompasses eastern France, southern Germany, Bohemia, Austria, western Hungary, Slovenia, parts of northern Italy, and Switzerland. The La Tène culture, named after a find spot at Lake Neuchatel in Switzerland, is the archaeological material culture of much of central and western Europe in the later Iron Age (ca. fifth century BCE through first century CE).

The so-called west Hallstatt chiefdoms of the early Iron Age were located in eastern France, southern Germany, Bohemia, and northern Switzerland. These areas were frequently considered to have been the birthplace of Celtic culture. It is this area that is associated with Celts in the earliest historical attestations: the Greek author Hekataios (sixth century BCE) speaks of Celts in the hinterlands of Massalia in southern France, while Herodotos (fifth century BCE) mentions the Celts as settling between the upper Danube and the Atlantic coast. The first evidence for Celtic languages also comes from this period: short texts in a Celtic language, Lepontic, dating from as early as the sixth century BCE, are found in the area of the so-called Golasecca culture in northwestern Italy, which has very close links with the southern German and Swiss Hallstatt chiefdoms.

The La Tène culture seems to have originated on the northern periphery of the west Hallstatt chiefdoms in the first half of the fifth century BCE. From there, it quickly spread across much of central and western Europe, reaching its greatest extent in the third century BCE. At this point it covered an area between Ireland in the northwest to Galatia in modern Turkey in the southeast. This is also the period of the historically attested Celtic migrations, which peaked in the sacking of Rome in 387 BCE, and the migration of the Galatians to Asia Minor in 287 BCE.

However, while migrations definitely played a role in the expansion of the La Tène culture to the south and southeast, its spread to the west and northwest is no longer primarily explained



by migrations. Other processes, such as trade, adoption of elite identities and associated material cultures, marriage alliances, and fosterage of children of elites and artisans abroad, were probably at least as important as migrations. As a consequence of these processes, small-scale communities, which were essentially locally constituted and never achieved any kind of political unity, created very similar objects, culminating in a relative uniformity of some aspects of material culture, particularly those associated with social elites, across much of Europe in the last three centuries BCE. At the same time, most other aspects of culture clearly continued local traditions, indicating that no massive displacement of earlier populations by newly arrived ones was taking place.

As a consequence of this, the idea of a uniform Celtic people that expanded, by military conquest, to control much of Europe by about 300 BCE has collapsed. Scholars now agree that there never were Celts but rather many different locally constituted societies that shared some similarities but were fundamentally different from each other. While the term “Celtic” continues to be used and remains useful to describe

these similarities, particularly in the fields of language and art, it has lost much of its explanatory power where actual historical processes in late prehistory are concerned and has mostly been abandoned in archaeology.

—Raimund Karl

Bibliography

- Collis, J. R. *The Celts: Origins, Myths & Inventions*. Stroud, UK: Tempus, 2003.
- Cunliffe, B. W. *The Ancient Celts*. Oxford: Oxford University Press, 1997.
- Moscatti, S., et al., eds. *The Celts*. Milan: Bompiani, 1991.
- Oldfather, C. H., ed. and trans. *Diodorus of Sicily: The Library of History, Books IV.59–VIII*. Loeb Classical Library 340. Cambridge: Harvard University Press, 1939.

Assyrian, Babylonian, and Persian Deportations

Deportation was a typical strategy utilized by the major powers of the ancient Near East after conquering a new territory. The goal was to spread the various groups of conquered peoples

➤ AN OUTSIDER VIEWS THE GAULS

Diodorus Siculus, a Greek author who lived in Sicily, wrote an extensive text called *Library of History* between 60 and 30 BCE. This text is particularly important as an account of the Celts because it incorporates the earlier text of another Greek author, Posidonius, whose original first-hand observations of the Celts have otherwise been lost.

“The Gauls are tall of body, with rippling muscles, and white of skin, and their hair is blond, and not only naturally so, but they also make it their practice by artificial means to increase the distinguishing colour which nature has given it. For they are always washing their hair in lime-water, and

they pull it back from the forehead to the top of the head and back to the nape of the neck, with the result that their appearance is like that of Satyrs and Pans, since their treatment of their hair makes it so heavy and coarse that it differs in no respect from the mane of horses. Some of them shave the beard, but others let it grow a little; and the nobles shave their cheeks, but they let the moustache grow until it covers the mouth.”

—Raimund Karl

Source

Diodorus Siculus, *Library of History* (Cambridge: Loeb Classical Library, Harvard University, 1967), 5.28.1–3.

throughout the empire, thus weakening the pre-existing social and political bonds and making it less likely that these groups could organize and foment rebellion against their new rulers. The degree of assimilation of the dislocated peoples varied widely depending on the population in question. Some groups, such as the Ammonites and Moabites, largely disappeared from the historical record; others, such as the Jews, managed to maintain their distinct cultural identity and exist to this day.

➤ DEPORTATIONS IN THE BIBLE

“Then he [Nebuchadnezzar] led away into exile all Jerusalem and all the captains and all the mighty men of valor. . . . None remained except the poorest people of the land. . . . For through the anger of the LORD *this* came about in Jerusalem and Judah until He cast them out from His presence” (2 Kings 24:14 NASB).

“Thus says Cyrus king of Persia, ‘The LORD, the God of heaven, has given me all the kingdoms of the earth and He has appointed me to build Him a house in Jerusalem, which is in Judah. Whoever there is among you of all His people, may his God be with him! Let him go up to Jerusalem which is in Judah’ (Ezra 1:2–3 NASB).

—John Walton Burnight

Although the Neo-Assyrian, Neo-Babylonian, and Persian empires of the first millennium BCE all made use of deportations, the methods and accompanying imperial rhetoric utilized by each showed significant differences. The Assyrians generally removed one population and replaced it with another from a different part of the empire; the Babylonians, however, merely took vanquished groups to the heart of the empire, with little or no attempt to move other peoples in to take their place. Both empires, though, used tactics and rhetoric that seemed designed to terrify the subject peoples into submission; this terror is reflected, for example, in the prophetic literature describing the fall and subsequent deportations of Samaria and Jerusalem to Assyria and Babylonia, respectively. As a result, the threat of exile became a proverbial punishment in the Hebrew Bible.

After the Achaemenid ruler Cyrus the Great conquered Babylon in 539, the Persians initiated their own large-scale transportations of subject peoples. Unlike the Assyrians and Babylonians, however, the new empire generally preferred the rhetoric of persuasion to that of terror and coercion. Indeed, Cyrus’s famous decree that the Jews be allowed to return to Judah en masse (cf. Ezra 1) was in all likelihood the catalyst for the biblical authors proclaiming him “messiah” (i.e., “anointed” to rule; cf. Isaiah 45:1), a title that previously had been reserved only for Israel-

ite/Judahite kings and reflected a new universalism in biblical religion. Cyrus's successors would not always enjoy such a positive reputation with their subject peoples, however; Darius (522–486 BCE), for example, forcibly deported Greek-speaking peoples after the Ionian revolt, transferring large groups to the eastern part of his empire. Like the Judeans before them, though, some of these groups managed to maintain their cultural identity; indeed, Alexander found Greeks still living in central Asia during his campaigns over 150 years later.

These deportations had a number of interesting, if unintended, effects on the development of Western culture, including the spread of alphabetic writing (Aramaic became the lingua franca of all three empires) as well as the transformation of the Jewish conception of YHWH from a national god to omnipotent creator of the universe. In addition, the intermingling of cultures from as far west as Anatolia and the Aegean with those from as far east as India produced a considerable development in the philosophy, religion, and literature of the ancient Near East as a whole.

—John Walton Burnight

Bibliography

- Arrian. *Anabasis of Alexander*. Translated by P. A. Brint. Cambridge: Harvard University Press, 1976.
- Herodotus. *Histories*. Translated by A. D. Godley. Cambridge: Harvard University Press, 1990.
- Miller, J. Maxwell, and John H. Hayes. *A History of Ancient Israel and Judah*. Philadelphia: Westminster, 1986.
- Stern, Ephraim. *Archaeology of the Land of the Bible*, Vol. 2, *The Assyrian, Babylonian, and Persian Periods (732–332 B.C.E.)*. New York: Doubleday, 2001.

Phoenician Exploration and Colonization

From their cities in the land known today as Lebanon, the Phoenicians swept westward in search of new sea trade and established colonies all across the Mediterranean. The greatest of these was Carthage in North Africa, located on the point of land that reaches upward from that continent toward Italy, where Rome would one day rise.

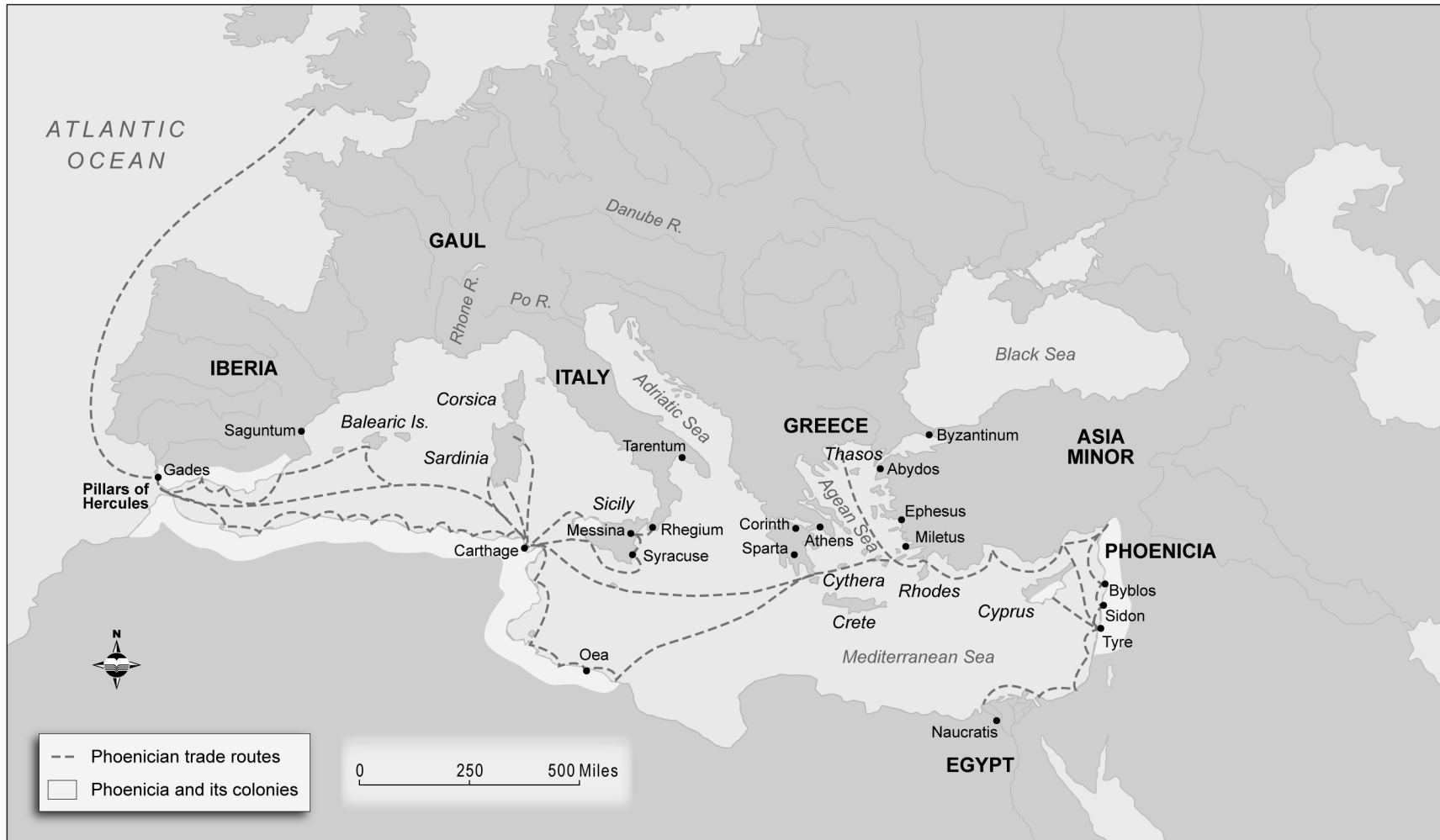
Even before Carthage, the Phoenicians had already established a broad network of colonies. Gold, silver, and other goods came from Cadiz in Spain, a city that the Phoenicians called Gadir. Pliny the Elder and others dated this settlement from 1104 BCE. Similarly, the historical founding date for the colony at Lixis (modern Larache) in Morocco is 1180 BCE and at Utica in North Africa is 1101 BCE. It should be noted, however, that archaeological work at these sites has so far produced findings from no earlier than the eighth century BCE. Addressing this issue, historians have suggested that early Phoenician trade may have been conducted at temporary facilities, with permanent structures coming at later dates. Additional archaeological work is needed to clarify what happened during this period. Fortunately, Phoenician pottery found on Cyprus at Kition (modern Larnaca) demonstrates that their trade existed here from the twelfth century BCE. The grand Phoenician temple at Kition, with images of ships carved in stone, reflects the wealth of this colony. From Morocco came exotic spices and from Cyprus came copper for making bronze, while North Africa yielded abundant food and raw materials.

➤ CIRCUMNAVIGATION OF AFRICA

Herodotus described an intriguing voyage around Africa by Phoenician sailors and Egyptian passengers that took place about 600 BCE. They took three years to circle the continent, departing from the Red Sea beside Egypt and finally arriving through the Pillars of Hercules into the Mediterranean Sea. The strongest proof that this journey actually took place is that the entire Mediterranean is well above the equator, so ships headed West always had the sun on their left. Yet on this westward trip below Africa, the Egyptians reported the amazing discovery that the sun was on their right. This means that the voyagers passed well below the equator and lends credibility to their account. More than 2,000 years later in 1497–1498 CE, Vasco da Gama made a similar trip and thought that he was the first to do so.

—Sanford Holst

PHOENICIAN EXPLORATION AND COLONIZATION



The establishment of Carthage in 814 BCE marked the beginning of a dramatically more active wave of Phoenician colonization. These new trading centers included the cities of Panormus (modern Palermo), Solus (Solunto), and Motya in Sicily; Karalis (Cagliari) and Nora in Sardinia; many locations on the islands of Melita (Malta) and Goulos (Gozo) in Malta; Oia (Tripoli), Lep-tis, and Sabrata in Libya; Hippo Diarrhytos (Bizerte), Hadrumetum (Susah), Thapsus, and Acholla in Tunisia; Ikosim (Algiers) and Hippo (Annaba) in Algeria; Tingis (Tangier), Sala (Rabat), Zili (Asilah), and Mogador (Essaouira) in Morocco; Malaka (Malaga), Abdera (Adra), Sexi (Almuñécar), and the island colony of Ibshim (Ibiza) in Spain; and many smaller colonies.

Thucydides tells us that when the Greeks came to colonize eastern Sicily, they found the Phoenicians already living there in trading posts all around the island. However, many of these outposts were eventually abandoned or covered up by later settlers, especially in eastern Sicily. Ancient writers refer to numerous Phoenician trading posts other than the major ones noted here, with Strabo estimating that number to be in the hundreds. The work of finding and excavating them continues today.

During the Punic Wars (264–146 BCE) the growing city of Rome wrested virtually all these colonies from the Phoenicians and built a great empire of its own.

—Sanford Holst

Bibliography

- Herodotus. *The Histories* [4:42]. Translated by Robin Waterfield. Oxford: Oxford University Press, 1998.
- Pliny the Elder. *Natural History*. 10 vols. Translated by H. Rackham. Cambridge: Harvard University Press, 1971–1992.
- Thucydides. *History of the Peloponnesian War*. Translated by Rex Warner. New York: Penguin, 1972.

Greek Exploration and Colonization

Greek expansion in the ancient world is characterized by two distinct waves of colonization, one in the eighth century BCE and the other follow-

ing Alexander the Great's conquest of the greater eastern Mediterranean world in the fourth century BCE. Between these two periods, colonization proceeded according to the economic and political expansions of the various Greek city-states into North Africa, the western Mediterranean basin, and the Black Sea region. The spread of Greek culture, trade, and immigrants contributed to the development of these regions of the ancient world and their Hellenistic attributes.

Between 850 and 700 BCE in what is known to historians as the Archaic age, Greek civilization experienced a recovery from political and economic stagnation prevalent in the previous period. Economic prosperity and population growth had contributed to a need for both economic expansion and immigration. Between 750 and 500 BCE, coastal regions around the Black Sea, southern Italy, North Africa, and southern Spain were settled by Greek colonists. Greek colonization was characterized by the dependency on the col-

➤ GREEKS IN THE BLACK SEA

The ancient Greeks' name for the Black Sea was Pontus Euxinus, which means "hospitable." The name is somewhat curious given the nature of the Black Sea and how it is treated in Greek literature. The waters of the Black Sea are considerably colder than those of the warmer Mediterranean already heavily settled by Greek colonizers. The straits of the Dardanelles adjacent to the colony of Byzantium (Constantinople) and the Bosphorus are plagued with tumultuous water currents that were difficult for ships going from the Aegean Sea to the Black Sea. Greeks considered the Black Sea dangerous and mysterious, allowing only epic Greek heroes, such as Jason and the Argonauts, the ability to travel in its confines. While the forbidding nature of the Black Sea discouraged many Greeks to settle there, many settlers from Miletus proceeded to colonize many coastal areas within the region around 700 BCE. In subsequent centuries, many of the established Greek colonies contributed to the diffusion of Greek culture in adjacent regions and contributed to the trade routes established in the region with the greater Mediterranean basin.

—Abraham O. Mendoza

GREEK EXPLORATION AND COLONIZATION



ony to a city-state back in Greece. A Greek *oikist* sent from the founding city-state, typically an aristocrat, was given the responsibility of founding and developing the new city under the authority of the government. The formation of a founder-cult would also establish the civic religion of the nascent colony, further developing its identity as a city in its own right. This new city would have commercial ties and continual immigration from the founding city-state.

Greek expansion during the Archaic period was also characterized by the level of expansion deep into areas distant from the Aegean. Colonies in the Black Sea region, southern Spain, Sicily, and North Africa, while relatively distant from the Greek homeland, retained vital economic and political ties to Greece. They mirrored the simultaneous expansion of Phoenician colonization to areas adjacent to Greek colonization. The development of these regions depended on economic and political tutelage from Greece, leading to the expulsion of natives and the eventual Greek political and economic domination of these new colonial regions in the form of fully autonomous Greek city-states. These colonies were primarily homogeneously Greek, unlike those of the later Hellenistic period.

During the Classical era (ca. 490–350) of ancient Greek history, the expansion of city-state commercial empires characterized Greek colonization. In particular, Athenian expansion emphasized the importance of maintaining colonies for commercial growth. Athens maintained a commercial alliance in the form of the Delian League, which eventually became a military alliance against Sparta. In the wake of the Peloponnesian Wars (431–404 BCE), Athenian control over its former allies became more centralized. Commercial and political control emanated from the dominating city-state over other formerly independent city-states.

In the subsequent Hellenistic period of Greek history (323–31 BCE), Alexander the Great and his successors established far more expansive Greek colonies throughout the Mediterranean world. In his conquests, Alexander established the precedent for the settlement of frontier regions through the use of military veterans. He also encouraged intermarriage with local natives to foster alliances and cultural solidarity under

Hellenistic auspices. His successors, in the form of the Macedonian kingdom of Antigonius, the Egyptian kingdom of Ptolemy, and the Asian kingdom of Seleucus, took this lesson and founded many new cities in this fashion, many named after royal family members to project Greek control (e.g., Alexandria, Antioch, Seleukeia, etc.). The success of these kingdoms rested on maintaining Greek control over the newly subjected ethnicities through political and economic settlement in the form of these new cities. However, the relegation of Greeks to these settlements restricted the expansion of Hellenistic culture to native elites who wished to enjoy the benefits of Greek domination.

—Abraham O. Mendoza

Bibliography

- Billows, Richard A. *Kings and Colonists: Aspects of Macedonian Imperialism*. New York: Brill, 1995.
- Bradley, Guy, and John-Paul Wilson. *Greek and Roman Colonization: Origins, Ideologies, and Interactions*. Swansea, UK: Classical Press of Wales, 2006.
- Cohen, Getzel M. *The Hellenistic Settlements in Europe, the Islands, and Asia Minor*. Berkeley: University of California Press, 1995.
- Malkin, Irad. *Religion and Colonization in Ancient Greece*. New York: Brill, 1987.

Roman Expansion into Northern Europe

As the Roman legions pushed into northern Europe starting in 197 BCE, they brought with them more than just a military presence. The Roman bureaucracy traveled with them, and its policies fostered a resettlement of Mediterranean peoples and their culture northward, the impact of which is still evident.

Greek and Roman historians kept extensive records of this expansion. Writers such as Polybius, Julius Caesar, Josephus, Livy, Tacitus, Plutarch, and Ammianus Marcellinus filled many volumes with information about the spread of the Mediterranean peoples into Europe, and many of these works were preserved by medieval scribes. Archaeological and other evidence clearly shows the reliability of these accounts.



Ruins of the Roman imperial baths at Trier, Germany. Augusta Treverorum, later named Trier, was founded by Emperor Augustus in 16 BCE. Trier became an imperial residence and regional capital of the Roman empire. (Corel)

➤ THE ROMAN VILLA

The villa, a country house built for the upper class, was a popular home for the ancient Romans. In the last years of the republic, villas appear all throughout Italy, and as the Romans spread throughout Europe, so did the villa. Generally, the Romans mention two types of villas, the *villa urbana* and the *villa rustica*. The villa urbana was built in close proximity to cities. These villas did not have enough land to be self-supporting, and the wealthy families that owned them tended to own a villa rustica as well, which would have been run by the servants as a productive agricultural estate. The villa rustica in many ways provided the basis for some forms of medieval architecture. The villa rustica began as a basically defensive structure surrounded by farmland, a form that eventually developed into medieval castles. The less defensive form of the villa rustica was a country estate. This latter form inspired medieval manors, and some were converted for use into monasteries in the Middle Ages.

—Linda Malcor

The Punic Wars of the late third century BCE left Rome in control of most of the Mediterranean, and by 51 BCE Julius Caesar had pushed north to the Rhine. Augustus Caesar, the first emperor, claimed territory as far north as the Danube. In 43 CE Claudius brought Britain and its valuable trade routes under Rome's control, and Trajan conquered the areas north of the Danube that would become Dacia and part of Moesia in the wars of 101–102 CE and 105–106 CE. By the second century CE Rome had reached its greatest extent, and Mediterranean peoples and culture flowed easily throughout northern Europe.

As the Roman legions pushed north, populations followed. Each legion had a large retinue of civilian support personnel and camp followers who traveled with it. The Romans also drew large groups of non-Roman soldiers together, forming them into auxiliary and special units called *numerii*. These units were usually stationed outside their native territory, and when the soldiers were discharged, the pattern was to settle them in regions that needed to be stabilized. Roman roads and the security and stability created by its military presence provided a system by which goods as well as people moved. As the Romans spread, so did their luxury items: bronze, pottery, glass, perfume, jewelry, art, wine, and foodstuffs among other items that the citizens living in the north demanded. Non-Roman nobles began to view such items as a sign of power and wealth and demanded them as well. Religions also traveled the Roman roads. For instance, mystery religions from the Middle East, most notably Christianity, swept into northern Europe.

The Roman plan for drawing provinces into the empire involved the creation of Roman cities. When Rome conquered new territory, several hundred families were enticed to settle at points where there was unrest or some vital interest, such as a port or mine, that needed to be controlled. They created cities, which were staffed with bureaucratic personnel who were drawn from Rome. Non-Roman settlers in such towns often became full or partial Roman citizens, and with citizenship they also adopted Roman culture. Political marriages between Roman noblewomen and non-Roman nobles established

alliances that often led to further Romanization of the native peoples.

Not only did the Romans leave their cities, roads, and aqueducts all over northern Europe, but they also left their language and the bureaucratic divisions they imposed on the northern provinces. As the empire declined, the Christian Church filled the power vacuum, modeling itself on the Roman bureaucratic structure. Latin mixed with local tongues and changed through usage into Spanish, French, and other Latinate languages. Many of the Roman baths and aqueducts continued to function for many years after the western Roman empire no longer existed, and some of the Roman roads are still in use today.

—Linda Malcor

Bibliography

- Cunliffe, B., ed. *The Oxford Illustrated Prehistory of Europe*. Oxford and New York: Oxford University Press, 1994.
- Grant, Michael. *The Ancient Historians*. New York: Barnes and Noble, 1970.
- Liberati, A. M., and F. Bourbon. *Ancient Rome: History of a Civilization That Ruled the World*. China: White Star and Barnes and Noble Books, 2004.
- Millar, F., ed. *The Roman Empire and Its Neighbors*. New York: Delacourte, 1966.

Refugees from the Cuicuilco Eruption

Cuicuilco is the earliest known city founded in the Valley of Mexico between 700 BCE and 200 CE. It was destroyed by a series of volca-

nic eruption associated with the nearby Xitle volcano. Some of its refugees may have helped build the largest city in the pre-Columbian Americas, Teotihuacan, a preplanned city of 150,000 people that emerged between 100 and 650 CE. Historic and archaeological sources date eruptions at 150 BCE, 30 CE, 76 CE, and 300 CE. Eruption evidence includes a massive lava flow covering roughly 30 square miles (80 square kilometers) and a nearby volcanic vent connected to Xitle.

Cuicuilco is significant for various reasons in central Mexican prehistory. In Mesoamerica, it has the earliest written solar date, 679 BCE; the earliest stone pyramid complex at 400 BCE; and the earliest irrigation system and shrine site. Cuicuilco may also be a successor civilization to the earliest Mesoamerican civilization, the Olmec. Moreover, the city has the oldest circular pyramid in the region. Circular structures are often associated with Ehecatl, the wind god, and perhaps later with Tlaloc, as rain god. They later become common in western Mexico cultures. Cuicuilco is located at the southern end of Lake Texcoco in the central Mexico basin at an elevation of over 7,000 feet (2,134 meters). The basin is surrounded by active volcanoes. Its population may have reached 20,000 people and was probably an ancestral home to many elites who founded other city-states in the region. Not surprisingly, the old fire god Huehuetotl was associated with the site when it became a pilgrimage center in post-Classic times.

Recent volcanic research has placed an eruption of Xitle at about 2,000 years ago, roughly the same time that an even larger city-state, Cholula, was impacted by the volcanic eruption of Popocatepetl, yet another active volcano in the region.

LEGENDARY CIVILIZATIONS AND THE CUICUILCO DATING PROCESS

Some researchers believe that Cuicuilco is 10,000 years old. Byron Cummings excavated it in the 1920s before radiocarbon dating. Cummings believed that artifacts dated the site to 2,000 years ago but that sediments formed with the volcanic debris took 8,000 years to deposit, making the city an incredible 10,000 years old. Radiocarbon dating

in the 1960s and 1994 redated Cuicuilco from 700 BCE to 300 CE. However, recent writers interested in legendary ancient civilizations prefer to cite Cumming's early dates and avoid the later radiocarbon dates. Thus, you will see Cuicuilco sometimes incorrectly cited as a 10,000-year-old city!

—Christopher Howell

If accurate, both Cuicuilco and Cholula refugees may have migrated to Teotihuacan. Cholula was already replacing Cuicuilco as a major power with the 150 BCE eruption of Xitle. Volcanic activity from two volcanoes within the same human generation may have put too much stress on the food production of the region. Refugees then moved to the north end of the basin and helped expand Teotihuacan. This would help explain Teotihuacan's great size, multiethnic character, and preplanned urbanism. Xitle was eventually covered by volcanic flow and became a major pilgrimage center. Cholula, located in the next valley east of the volcanic Lake Texcoco basin, eventually returned to power and was the second-largest center in Aztec times, known for massive pilgrimage festivals.

Researchers have suggested that city planning, celestial alignments, ceramic styles, and Mesoamerican elite marriage practices all tie Cuicuilco refugees to Teotihuacan. The highly active volcanic region periodically disturbed this growing basin of central Mexico and has complicated archaeological abilities to decipher the migrations of peoples at Cuicuilco, Cholula, and Teotihuacan.

—Christopher Howell

Bibliography

- Adams, R. E. W. *Prehistoric Mesoamerica*. 3rd ed. Norman: University of Oklahoma Press, 2005.
- Cummings, Byron. "Cuicuilco and the Archaic Culture of Mexico." *University of Arizona Bulletin* 4(8) (1933):38.
- Sheets, P. *Interhemispheric Climatic Linkages*. Edited by Vera Markgraf. Burlington, MA: Academic Press, 2000.

The Settlement of the Caribbean

At about 1000 BCE during what archaeologists call the Archaic Age, the Caribbean islands were sparsely populated by Amerindians who lived mainly in small extended family groups and moved frequently within and between islands. Interisland transportation and travel was frequently based on stone tool materials found at sites far from their geologic sources. This evidence for trade and direct acquisition of raw materials suggests regular navigation of maritime

routes, most likely by canoe. These preceramic Archaic Age Amerindians were still present when the islands were first colonized by larger populations of pottery-making farmers around 500 BCE.

This second major wave of colonization initiated what archaeologists refer to as the Early Ceramic Age, which continued until around 300 CE. Contemporaneous dates for sites attributable to the two culturally distinct populations indicate that they likely coexisted in the region for several centuries if not longer. Based on the stylistic similarity between finely made ceramic vessels with polychrome white-on-red painted and incised crosshatch designs found at archaeological sites in the Antilles and artifacts from sites in mainland South America, the first Ceramic Age populations to travel to the islands originated from the Orinoco River region of what is now Venezuela. The migration of these people into the Lesser Antilles and up the archipelago was a purposeful and rapid process.

In just 400 years, by around 100 BCE, large settlements had been established up the island chain from Trinidad in the south to Puerto Rico in the north. Colonization was made easier by the closeness and visibility of islands to one another, with only a few major open water gaps. These seafaring peoples settled in large circular villages such as that recorded archaeologically at the Trants site in Monsterrat and the Maisabel site in Puerto Rico. While watercraft from this period have yet to be recovered, Amerindians of the Early Ceramic Age likely traveled in large oceangoing dugout canoes such as those recorded for the Taino who, a millennium later, were the first Caribbean peoples to encounter Christopher Columbus and other Europeans. Stylistic similarities between artifacts recovered from sites on distant islands indicate a high degree of maritime travel, trade, and overseas communication. For several centuries following initial migration and settlement, island colonists of the Early Ceramic Age traveled back and forth to their mainland homeland, transporting exotic trade goods.

In addition to introducing substantial human populations to the islands, the Early Ceramic Age colonists also transported plant species

THE SETTLEMENT OF THE CARIBBEAN



including cassava (manioc) and animals including dogs and agoutis (large rodents). As was recorded for the Taino at the time of European contact, Amerindians of the Early Ceramic Age (and the Late Ceramic Age) likely spoke an Arawakan language. Arawak is the largest family of languages spoken by indigenous peoples of South America.

—John Crock

Bibliography

- Rouse, Irving B. *The Tainos*. New Haven, CT: Yale University Press, 1992.
- Wilson, Samuel Meredith. *The Archaeology of the Caribbean*. New York: Cambridge University Press, 2007.
- Wilson, Samuel Meredith, ed. *The Indigenous People of the Caribbean*. Gainesville: University Press of Florida, 2007.

■ Introduction: Nomadic and Seminomadic People

One of the remarkable changes that took place in the period from 1000 BCE to 300 CE was the growing ability of humans to take advantage of what had previously been marginal landscapes. This is especially noteworthy for the arid and semiarid landscapes of central and western Asia, North Africa, and North America, all regions in which water is abundant only in certain seasons and where permanent settlement involves a substantial amount of alteration to the environment. Rather than alter the environment to suit their needs, some groups chose to develop a nomadic and seminomadic lifestyle that allowed them to take advantage of the landscape in resource-rich seasons and abandon these regions in the times of year when living there was too difficult. In some cases, as with the Bedouin, this involved traveling with herds in such a way as to take advantage of the changing vegetation (needed for their herds to graze) throughout the year. In North America, however, the emphasis was on following the migration patterns of different animals, such as the bison of the northwestern plains. What follows is an exploration of some of the major nomadic or seminomadic groups that first appear in the period from 1000 BCE to 300 CE.

—Kevin M. McGeough

Rise of the Arab-Bedouin Populations

The Arabian Peninsula (Jazirat al-Arab) is the cradle of Arabian culture. The peninsula covers 1,750,000 square miles (4,532,480 square kilome-

ters) and includes a mountain range, Sarat, that reaches from Yemen in the south and runs along the Red Sea to the Mediterranean in the north. The average annual rainfall for the entire peninsula is about 6–9 inches (15–23 centimeters); however, the presence of microenvironmental areas divides the territory among arid and semiarid regions. Two different anthropological niches are also defined by a more urbanized south and the northwest region, where a pastoralist tradition has remained until the present.

The first chronicles that mention the presence of a native population of the Arabian Peninsula, geographically located outside the peninsula itself, are the Assyrians. In 853 BCE sources describe Gindib Arbaya (Gindib, the Arab) who had taken part in the Battle of Qarqar with its 1,000 camel fighters, in support of an Aramean (not Armenian) sovereign of Damascus against the Assyrian king Shalmaneer III (859–824 BCE). Other Assyrian chronicles refer to Tiglath-Pileser III, nicknamed “Queen of the Arabs,” priestess of the Bedouin clan of Qedar, who in 738 BCE had to pay a monetary tribute to the Assyrian empire for having sided against the Assyrians with a Palestinian coalition.

The cultural identity of the first population, of which we possess written sources, are the Banu Taym and the Banu Lihyān (or Dedan, as referred to in biblical sources), who used a Semitic alphabet. However, both of these were sedentary populations who still engaged in pastoralist traditions. The archaeological traces that remain of Tadmor (Palmyra) in Syria and Petra (the famous capital of the Nabatean reign) in Jordan indicate, centuries later, a syncretic civiliza-

tion that was deeply stimulated by contact with the Greco-Roman culture, creating a unique fusion with cultures from the peninsula. The encounter of the Bedouin Arab tradition with the urbanized Hellenistic and Roman culture nevertheless thoroughly modified the lifestyle and pastoralist background of these tribes.

—Marco Demichelis

Bibliography

- Hitti, P. K. *A History of the Arabs*. London: Macmillan, 1937.
- Hourani, Albert. *A History of the Arab People*. Cambridge, MA: Belknap, Harvard University Press, 1991.
- Lewis, Bernard. *The Arabs in History*. Oxford: Oxford University Press, 1993.
- Pedersen, Johannes. *The Arabic Book*. Princeton, NJ: Princeton University Press, 1984.

Formation of Indigenous Nomadic Peoples of the North American Plains

The Plains region of North America is defined as the region of tall-grass prairies and short-grass high plains extending west from the upper Mississippi River valley to the Rocky Mountains and from the Saskatchewan River valley in Canada south to the Rio Grande on the Mexico border. Prior to European contact in the sixteenth century from the south and in the seventeenth century from the east, this region was inhabited by the Caddoan-, Siouan-, Algonquian-, and Uto-Aztecan-speaking peoples. These Plains people practiced a subsistence regime based largely on hunting and gathering, with minimal agriculture, along with a cyclical nomadic lifeway pattern. Based on archaeological and ethnological evidence, this subsistence regime and lifeway pattern began during the Early Holocene but did not coalesce into recognizable groups until around 1,000 years before the present.

The entire Archaic, Woodland, and precontact periods on the Plains and adjoining mountains were characterized by band-level-sized groups that continually fragmented and aggregated in response to subsistence resources. This level of social organization continued to be viable across the Archaic because of the wide range

THE BANU GHASSANIDS' REIGN

The Banu Ghassanids were a southern Arabian Christian tribe who emigrated at the beginning of the third century from Yemen to southern Syria and Jordan and became a Hellenized reign incorporated into the Roman empire. Subject to the Romans, the group was able to defend the entire region from Arab invasions, and one of their chiefs became a Roman emperor (with the Latinized name of Philip the Arab [204–249]). Until the Islamic invasion of the seventh century CE, the Ghassanids limited the movements of Arab peoples in the region.

—Marco Demichelis

of alternative food resources available throughout the Plains region. However, the unpredictable nature of both floral and faunal resources each season did not allow any long-term permanency in settlements to form for the Plains people, requiring them to maintain a nomadic and cyclical lifeway pattern.

In the northern Plains, for example, Plains peoples focused much of their subsistence reliance on hunting bison. To make bison the focus of subsistence required the northern Plains peoples to follow the seasonal movements, aggregations, and dispersals of the herds. Of necessity, all their material possessions were portable. During good years the northern Plains people could turn to communal hunting of large animals, but in less favorable periods a return to smaller groups and a more nomadic hunting and gathering subsistence pattern took over.

In the southern Plains horticulture played a much larger role, as archaeologically evidenced by specialized facilities including storage pits and hearths, although hunting and gathering still dominated the subsistence regime. Furthermore, archaeological evidence indicates that the formation of these indigenous nomadic peoples on the Plains brought about an increase in intergroup conflicts as different nomadic groups encountered each other and as they competed for access to bison herds and other natural resources.

—Peter N. Jones

Bibliography

- Frison, George C. "Hunting and Gathering Tradition: Northwestern and Central Plains." In *Handbook of North American Indians*, Vol. 13, *Plains*, edited by Raymond J. DeMallie. Washington, DC: Smithsonian Institution Press, 2001.
- Larson, Mary Lou, and Julie E. Francis, eds. *Changing Perspectives of the Archaic on the Northwestern Plains and Rocky Mountains*. Vermillion: University of South Dakota Press, 1977.
- Vehik, Susan C. "Cultural Continuity and Discontinuity in the Southern Prairies and Cross Timbers." In *Plains Indians, AD 500–1500: The Archaeological Past of Historic Groups*, edited by Karl H. Schlesier. Norman: University of Oklahoma Press, 1994.
- Yellen, John, and Henry Harpending. "Hunter-Gatherer Populations and Archaeological Inference." *World Archaeology* 4 (1972): 244–253.

Eurasian Steppe Migrations

From the Early Bronze Age to the Middle Ages, nomads migrated in the vast Eurasian steppe belt that extends from Ukraine over southern Russia and central Asia to southern Siberia. In most cases, the direction of the migratory movement was from east (Asia) to west (Europe). However, at least one major migration was directed out of Europe into central Asia. This was the oldest migratory movement of steppe people in world history that is traceable by its archaeological remainders. The movement of early Indo-Europeans from the Russian steppe was directed to the west (i.e., into southeastern and central Europe), starting in the fifth millennium BCE, and later to the east (i.e., into central Asia). Those early steppe nomads have been identified as Kurgan people on the basis of the most typical remainder of their culture: huge burial mounds known as kurgans, a term of Tatar origin. Kurgans were built by nomads over a long period and were also built by the Scythians.

Numerous groups migrated in the steppe zone of eastern Europe and central Asia in later periods. The names of many of those steppe migrants have not come down to us. The only populations known by their names are those whose movements have been recorded by authors and chroniclers in the literate societies with which the nomads came in contact. This is true for the

Scythians, the Sarmatians, and others. The people in the state-level civilizations (i.e., classical Greece, Assyria, China) took notice of the nomads from the steppe because the so-called barbarians impressed their neighbors with their mobility, their skills in horse riding, and their use of the bow and arrow. The steppe nomads were feared by their enemies and highly appreciated by their allies.

The ethnic composition among the groups of steppe people was diversified, and a name such as "Scythians" cannot be compared to modern labels of national unity such as "Greeks," "Russians," or "Finns." Often, the group that is mentioned in antique sources was the elite of a conglomerate of groupings of diverse ethnic affiliation. This is true in particular for the Scythians and Hsiung-nu (i.e., Huns). The Hsiung-nu would not have been in the position to threaten both the eastern Roman (Byzantine) empire and western Rome without their command over various kin groups and the allegiance of foreign ethnic groups.

In the chronological sequence, the Cimmerians (called Gomer in the Bible and Kimmerioi by the Greeks) were the first steppe people to exert political influence in southern Russia. They controlled the northeastern shores of the Black Sea. The memory of the Cimmerians lives on in the name of the Strait of Kerch, which separates the Black Sea from the Sea of Azov. The ancient Greeks called that strait Bosphoros Kimmerios. The Cimmerians destroyed the Phrygian kingdom in Anatolia and were later driven off by the Lydians. After circa 600 BCE there is no more reference to the Cimmerians in sources.

The history of the Scythians (who called themselves Skolots) is complex since it is divided between the main group in Europe and another group in central Asia. Their homeland is the steppe zone of southern Siberia. From there, the early Scythians—tribal groups of Iranian ethnic stock—migrated to the west and reached eastern Europe soon after circa 1000 BCE. Those Scythians who remained in Asia later became known as Scythians of the Altai. The oldest references to the Scythians in Europe (called Skuthai by the Greeks and later Scythae by the Romans) date to the sixth century BCE (by Anakreon) and the fifth century BCE (by Herodotus).

The Scythians took control over the steppe zone, ousted the Cimmerians in the mid-seventh

century BCE, and founded their first kingdom. With their political power increasing, the Scythians enlarged their territory and, in the sixth century BCE, even threatened the Persian empire, which prompted a military campaign of the Persian king Dareios I against the steppe people (in 514 BCE). From the fifth century BCE onward, the Scythians came under military pressure from the Macedonians in the west and the Sarmatians in the east. The Scythians withdrew to the Crimean Peninsula, where they founded their last kingdom. In the third century CE the Crimea was conquered by the Goths, and most of the Scythian population migrated to the area north of the Caucasus, where the remainder of the ethnic group became involved in the ethnic formation of the Ossetian people.

The Sarmatians (called Sauromatai by the Greeks and Sarmatae by the Romans) were known to the Greeks since the fifth century BCE. Like the Scythians, the Sarmatians were of Iranian affiliation, and the languages of these two peoples are akin. Among the Sarmatian warriors, there were special detachments of women. The Greeks thought that those women warriors were the Amazons whom they knew from their myths, and the Scythians believed that the Sarmatians were the descendants of Amazons and Scythian men. These popular beliefs added to the appreciation of Sarmatian warriors and their valor.

Since the second century BCE, the Sarmatians engaged in continuous military clashes with the Greeks in the colonies on the northern shore of the Black Sea. In the third century CE the Sarmatians lived under Gothic supremacy, and later the political pressure of the Huns made the Sarmatians withdraw to the northern Caucasus. The rest of their population also participated in the formation of the Ossetian people.

On the eastern periphery of the Eurasian steppe belt, groups of nomads formed an alliance in the third century BCE; engaged in border clashes with the Middle Kingdom, China, under the Han dynasty; and prompted counterattacks by the Chinese Army. The political leadership of the nomads lay with a group that is known as the Hsiung-nu from Chinese sources. Ethnically, the Hsiung-nu were the earliest iden-

➤ HELLENIZED SCYTHIANS—THE ACCULTURATION PROCESS OF SCYTHIANS IN THE GREEK COLONIES

In the cultural memory of later periods, the Scythians have been known as steppe people, as nomads whose mobility relied on horse riding. And yet the true picture of Scythian civilization is much more varied. In contact with Greek culture, some groups of Scythians also adapted Greek lifeways and became sedentary themselves. The process of acculturation was amplified when the Scythian aristocracy settled down in the Crimea. There, the third Scythian kingdom was founded in the third century BCE, with Neapolis Skythike (near present-day Simferopol) as its capital.

During the times of the Scythian presence in the Crimea, a bilingual and bicultural community emerged. Scythians married Greeks, and their offspring grew up in two cultures and with two languages. Those acculturated Scythians were called Ellenes Skuthai (Hellenized Scythians). The interaction of Greek and Scythian cultures becomes visible in the handicraft for which the Scythians are famous: metalworking (of gold and silver). From the motifs for decoration and their compositions as applied on vessels (i.e., gorytoi, rhytons), bracelets, and diadems, it is evident that the workshops where these pieces were crafted “employed craftsmen of diverse origin, including Bosporan Greeks and Scythians.”

—Harald Haarmann

Bibliography

Reeder, Ellen D., ed. *Scythian Gold: Treasures from Ancient Ukraine*. New York: Abrams, 1999.

tifiable group of Turkic peoples. The Chinese succeeded in defeating the steppe people, and their alliance dissolved. The majority of the Hsiung-nu started migrating to the west. They moved through central Asia and reached the Volga River in southern Russia around 350 CE.

They continued their migration into central Europe and established their political center in southern Hungary. The Greeks called the intruders Unnoi, while the Romans called them Hunni (hence the name forms in Western languages). In the early fifth century CE, the Hunnic state extended from the Rhine Valley in the west to central Asia in the east. Like their predecessors

in the eastern steppe, the Huns of Europe also formed an alliance. Under Hunnic political leadership were united groups of various ethnic affiliation: Turkic (e.g., Onogurs), Iranian (e.g., Sarmatians), Slavs (e.g., eastern Slavic groups), and Germanic tribes (i.e., Ostrogoths, or eastern Goths and Gepids).

Chinese chronicles of the Han dynasty mention the Yuezhi who settled in the Gansu province. In 176 BCE the Hsiung-nu defeated the Yuezhi and drove them to the west. The majority of the Yuezhi migrated to central Asia, where they founded new homesteads in the valley of the upper Oxus. The area of new Yuezhi settlement that extended in the south of Uzbekistan and Tajikistan and into northern Afghanistan is known as the historical landscape of Tocharistan. The Yuezhi were also known as Tocharians. Their language and culture, though, were different from those of an Indo-European people who settled in the area in a later period (sixth to eighth centuries CE). Their name was confounded with that of the genuine Tocharians (Yuezhi). The Tochari-

ans of Indo-European affiliation migrated to central Asia from eastern Europe and became known to the world by their well-preserved mummies, the mummies of Ürümqi.

—Harald Haarmann

Bibliography

- Anthony, D. W. *The Horse, the Wheel and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World*. Princeton, NJ: Princeton University Press, 2007.
- Barber, E. W. *The Mummies of Ürümchi: Did Europeans Migrate to China 4,000 Years Ago?* London and Oxford: Pan Books, 1999.
- Bell-Fialkoff, A., ed. *The Role of Migration in the History of the Eurasian Steppe: Sedentary Civilization vs. "Barbarian" and Nomad*. London: Macmillan, 2000.
- Haarmann, H. *Encyclopedia of Extinct Peoples*. Munich: C. H. Beck, 2005.
- Thompson, E. A. *The Huns*. Oxford, UK, and Cambridge, MA: Blackwell, 1996.
- Wendelken, R. W. "Horses and Gold: The Scythians of the Eurasian Steppes." *Bell-Fialkoff* (2000): 189–206.

■ Introduction: Armies and Associated Travelers

Along with the vast empires that appeared from 1000 BCE to 300 CE rose great armies that traveled long distances in order to acquire and keep those empires. This is truly a remarkable change from what had come before. Although the ancient Egyptians had in earlier times kept small standing armies or platoons in parts of their empire for extended periods of time, the distance traveled and the size of the armies was significantly smaller than the traveling armies that appeared in this period.

Perhaps the most remarkable of these traveling armies was that of Alexander the Great, which traveled from Macedon to as far away as India and Afghanistan. Alexander's Army suffered what one would expect from an army that traveled so far from home: homesickness and weariness of traveling to distant lands. These were substantial problems for the traveling armies in this period, a period that lacked fast

overland transportation technology. Similarly, supply lines were also problematic; thus, it was important to keep control of the vast distances that the armies traveled. However, most of the supplies for the traveling armies came from the spoils of the conquered lands; food, shelter, and payment usually came when a city was conquered. The Romans were exceptional in this way in that their army, composed of professional soldiers, for the most part received payment directly from the state infrastructure.

As these armies spread to far-off locations and as those same armies spent longer periods of time in the new region, they brought their culture and values to these new locations. This is most apparent in the Hellenistic and Roman armies that spread Greek and Roman culture throughout Europe, western Asia, and North Africa. Mediterranean institutions (such as baths and amphitheaters) were built in these distant lands,

Mediterranean products were imported into these lands, and even the languages of Greek and Latin became the dominant languages in the territories held by Greeks and Romans outside of Greece and Italy. While the changes brought by the Greek and Roman armies are the most apparent to historians today, it is without a doubt that the traveling armies in other regions similarly spread their own cultures to newly conquered lands.

—Kevin M. McGeough

Alexander the Great's Military Forays into Asia

Greek military incursions into Asia occurred under the leadership of Alexander the Great (356–323 BCE), resulting in the integration of the former Persian empire and vast tracts of central Asian territories bordering India. His multiethnic armies, composed of his Macedonian troops, hoplites from various conquered Greek city-states, and eventually Persian cavalry, moved eastward from 334 to 323 BCE, steadily accumulating territories and founding new cities. This massive expansion resulted in the extension of Hellenistic civilization, trade, and migration eastward. The defeat of the Persians and his campaigns in central Asia proved successful until the exhaustion of his multinational troops ended his wars of expansion.

Following the conquest of the Greek city-states, Alexander mustered Greek troops in his plans to invade the Persian empire. In 334 BCE he led an army consisting of 30,000 hoplites and 5,000 cavalry troops into Asia Minor. He planned to destroy the Persian Army in a swift and effective campaign. Unwilling to rely on the Greek Navy, he decided to engage the Persians entirely with a land campaign. His first engagement with the Persians was at the Granicus River near the Hellespont in 333 BCE. There he smashed the Persian cavalry along with its Greek mercenary contingents. Alexander proceeded in a piecemeal fashion to conquer the Greek city-states in Asia Minor from the Persians. He then moved to confront a large force of Persians led by Darius III at the Battle of Issus in 334 BCE, which resulted in a decisive defeat for the Persian forces. Alexander then proceeded through the



Alexander the Great (on horseback) defeats Darius III at the Battle of Issus in 333 BCE, detail of a floor mosaic from Pompeii. (Jupiterimages)

➤ ALEXANDER THE GREAT'S EMPIRE, 323 BCE

Macedonian king Alexander the Great not only managed to unite the entire Greek world under his authority but also successfully conquered the territories of Egypt, the Levant, Mesopotamia, and Persia and regions of central Asia bordering India.

—Abraham O. Mendoza

Levant and into Egypt, adding those dominions to his already enlarged empire.

In 331 BCE Alexander advanced his armies northward through Syria into Mesopotamia. Crushing more Persian forces along the way, particularly at the pitched battle at Gaugamela, he conquered Babylon and moved into the Persian heartland. Entering Persepolis in the Iranian plateau, his forces had finally destroyed Persian hegemony over western Asia. Darius took flight but was betrayed by his men and stabbed to death in 330 BCE. Subsequently, Alexander decided to ensure the protection of his domains by ending the incursion of nomadic invaders from the north and the east through conquest of regions farther east. From 330 to 323 BCE his forces pushed into Bactria, Media, and the banks of the Indus River. Some of his Macedonian subalterns began to have doubts over his strategy and his adoption of Persian mannerisms. He had also solicited Persian regiments into his armies. Despite grumblings and instances of near treason, Alexander held a tight grip over his forces.

In the years between 330 and 327 BCE, Alexander succeeded in crushing the remnants of the Persian forces holding out in the northeastern provinces of the former Persian empire. At this point, he was ready to prepare for the conquest of India. After defeating a local Indian ruler in 326 BCE at the Battle of Hydaspes, Alexander's armies would fight no more, forcing a retreat. Returning to Persia, Alexander decided to consolidate his holdings by promoting policies of intermarriage between Greeks and non-Greeks and founding new cities to be inhabited by army veterans and Greek settlers.

—Abraham O. Mendoza

Bibliography

- Billows, Richard A. *Kings and Colonists: Aspects of Macedonian Imperialism*. New York: Brill, 1995.
- Bradley, Guy, and John-Paul Wilson, eds. *Greek and Roman Colonization: Origins, Ideologies, and Interactions*. Swansea, UK: Classical Press of Wales, 2006.
- Hollister, C. Warren. *Roots of the Western Tradition: A Short History of the Ancient World*. 6th ed. New York: McGraw-Hill, 1996.

Spread of Hellenistic Culture

As Alexander the Great (Alexander of Macedon) and his armies crossed the Hellespont in 334 BCE and subsequently conquered Asia Minor, Syria, Egypt, Mesopotamia, and Persia, a significant process of cultural diffusion of Hellenistic (Greek) culture enveloped a vast geographical span, well to the borders of India. In the Hellenistic successor states of this region that followed Alexander's death this process continued, at least in major cities composed of Greek settlers. In spite of the prevalence of Greek culture, religion, language, and learning in major cities of the Hellenistic world, much of this was limited to Greek settlers and native cosmopolitan elites who assimilated Greek ways. Many of the non-Greek native populations of these newly colonized regions, in places such as Egypt and Palestine, resented foreign rule and its associated cultural Hellenistic forms and preserved their own cultural forms and paradigms.

As the Persian empire succumbed to the rule of Alexander, the entry of Hellenistic culture into its various regions followed. Following Alexander's death, the successor kingdoms of the Seleucids (312–63 BCE) and the Ptolemies (305–30 BCE) also propagated Hellenistic learning, language, and philosophy within their realms. However, there was already familiarity with Greek culture, as these regions already had long-established trade networks with Greek cities. The main difference was the impact of Greek settlers, many of them former soldiers, in these regions. As these Greek settlers entered Egypt, Persia, Syria, Palestine, and Mesopotamia, they founded Greek cities and retained Greek culture with many non-Greek native elites who had recognized Greek sovereignty, adapting to the culture of their new foreign leaders. The most successful Greek settlement of this period, Alexandria in Egypt, became an important hub for trade and culture in the Hellenistic world. The only other Ptolemaic settlement, aptly named Ptolemais, was a small town and never reached the stature of Alexandria. In the Seleucid provinces of Syria and Mesopotamia, the Seleucids founded the cities of Antioch, Seleucia, Apamea, and Laodicea, which consisted mainly of Greek settlers. The Seleucids also founded several military settlements named after Greek or Macedonian cities, and these were basically towns. However, in spite of the number of Greek settlers, they never amounted to more than a fraction of the large populations of non-Greek natives in the provinces, which preserved their own cultures while viewing Greek settlers with suspicion.

As the influx of Greek merchants, soldiers, and settlers entered Persia, Mesopotamia, and Egypt following Alexander's death, they along with native elites created a hybrid culture dominated by Greek cultural forms. The primacy of the Greek language, art, religion, and philosophy influenced the conquered cultures, but the new culture also incorporated ideas and practices from these conquered territories. The Greek language provided a powerful conduit for the spread of Hellenization in the successor kingdoms. As Greek was the official language of bureaucracy, the upper levels of government administration, and the sovereign, it was neces-

➤ SELEUCUS I NICATOR

Seleucus I (ca. 358–281 BCE) was one of Alexander the Great's top Macedonian generals who served with distinction in the campaigns in India. Following Alexander's death in 323 BCE, Seleucus squabbled with the other major generals over the spoils of conquest and managed to retain the largest portions of the new empire. These included Persia, Mesopotamia, Palestine, Syria, and the regions bordering on India. He established the Seleucid dynasty, which reigned over these immense regions for almost three centuries (312–63 BCE). Seleucus's greatest contribution to the spread of Hellenism was in continuing Greek settlement throughout his dominions. This ensured the diffusion of Hellenistic culture. In spite of his efforts, the vast majority of his subject populations



Seleucus I Nicator was the king of Syria from 312 to 281 BCE and founded the Seleucid empire. Roman copy of an original from the second century BCE. (Jupiterimages)

continued to preserve many of their own non-Greek native cultures amid the rapid acculturation of their elites into Hellenistic civilization.

—Abraham O. Mendoza

sary to learn the language as a means to work within the confines of the government apparatus. Non-Greek native elites seeking to work within or function in Hellenistic society, mostly to profit and retain their privileges, took to learning Greek and adopting elements of Hellenistic culture. In Ptolemaic Egypt, local scribes fluent in Greek worked to translate the grievances of local Egyptians to the Hellenistic administration. Greek education and Greek learning, primarily through the establishment of schools and academies modeled on that of Athens, promoted the diffusion of Greek philosophy, history, and language throughout the successor kingdoms. The Library at Alexandria serves as the most notable example of the importance of learning as a means to spread and propagate Hellenistic culture throughout the Mediterranean littoral, as scholars from regions came here to exchange ideas.

Intermarriage with the local populations, while considerable, was not widespread enough to create a significant change in the view of Greeks in the native populations. Greek intermarriage with subject peoples was promoted by Alexander, who married a Persian princess himself. Although the Greeks did view many of their subject peoples as barbarians, those who were willing to adopt Greek culture and language

were sometimes viewed as akin to Greeks. On the other hand, Greek supremacy was viewed by many subject peoples, such as Persia, as evidence of their greatness in comparison with their own decline prior to Alexander's conquests. While resentment remained, this attitude helped many elites rationalize their own adoption of Greek culture as their own. In contrast, resistance to Seleucid political power and religion in Palestine by the Maccabbes (167–160 BCE) illustrates that not all non-Greek elites viewed Hellenistic authority with admiration, especially when it trampled on long-standing religious traditions.

As Greek soldiers followed Alexander into India, many of them also stayed and settled. Greek coins and artwork illustrate the cultural exchanges that existed between the Hellenistic kingdoms and Mauryan India. Significant Greek populations settled in the northwest, allowing for the spread of Hellenistic religion, language, and philosophy into this particular region of the Indian subcontinent. However, these Greek settlements slowly assimilated to native ways, creating a more syncretic regional culture while retaining minor elements of Hellenistic culture evident in art, religious practices, and language.

—Abraham O. Mendoza

Bibliography

- Green, Peter, ed. *Hellenistic History and Culture*. Berkeley: University of California Press, 1993.
- Walbank, F. W. *The Hellenistic World*. Cambridge: Harvard University Press, 1993.

Roman Military Movement around the Mediterranean and Europe

Throughout the existence of both the Roman republic and the subsequent Roman empire, there was considerable military expansion carried out by Roman legions throughout the Mediterranean basin and Europe. The Roman republic engaged in wars of expansion to ensure its defense and later for the sake of expansion. The Roman empire pursued territorial gains to ensure Roman hegemony over the known world. In the midst of these wars of expansion for nearly a millennium, Romans managed to attain rule over vast areas of Europe, North Africa, and the Middle East.

Roman expansion began within the confines of the Italian peninsula. Rome was situated in the crossroads of Italy, centrally located on an important crossing point along the Tiber River. Having expelled the Etruscans around 509 BCE and established the Roman republic, the nascent city-state began its ascent as the greatest military power of antiquity. Rome and other Latin cities in the region of Latium were threatened by the Oscans, from the north of Italy, and this resulted in a series of wars lasting nearly a century (ca. 500–400 BCE). The formation of the Latin League, composed of Rome and its Latin allies, led to the expulsion of the Oscans and the eventual domination of the Latin cities by Rome. However, the sack of Rome by the Gauls in 390 BCE led to the dissolution of the Latin League. The revolt of the Latin League was suppressed by Rome between 340 and 338 BCE with the assistance of its Samnite allies. In order to placate the Latins, Rome granted them citizenship and the amenities that came with it. Further conflicts with the Samnites and Tarentum eventually resulted in Rome's control of the entire Italian peninsula by 275 BCE.

Additional Roman expansion during the years of the republic resulted in massive gains at

the expense of Carthage and the Hellenistic kingdoms of the eastern Mediterranean. The wars against Carthage in North Africa and Spain, known as the Punic Wars (264–241 BCE, 218–202 BCE, and 149–146 BCE), resulted in Roman conquest of its provinces greatly expanding its dominions. Farther east, Rome came into contact with the Hellenistic kingdoms, heirs to Alexander the Great's conquests. Increasing involvement in their quarrels led to eventual Roman conquest and their incorporation as provinces of the Roman empire. Macedonia fell to Rome, having fought as an ally of Carthage. Conflict with individual Greek city-states resulted in greater Roman authority exerted after the Romans stamped out their ability to make war. Such an example would be the sack of Corinth in 149 BCE, which was followed by the destruction of Carthage in 146 BCE. Further wars of expansion were fought under Julius Caesar (100–44 BCE) and Augustus (63 BCE–14 CE), which resulted in the acquisition of Gaul and Egypt, respectively.

The institution of the Roman empire under Augustus resulted in a consolidation of power within the domains attained under the republic and a further expansion in Britain, Dacia, the Levant, and Mesopotamia and regions around the Black Sea in the first and second centuries CE. Although Caesar had first landed on Britain, permanent expansion into Britain was begun during the reign of Emperor Claudius (43–47 BCE). Excursions into the Parthian empire (Persia) resulted in the acquisition of the province of Mesopotamia. Incursions along the Rhine brought the Roman legions into contact with the Germans, whom they held at bay through a series of strategic defenses. The rebellious kingdom of Dacia was defeated and occupied by Roman forces. Where the Romans did not rule directly, they managed to set up client kingdoms, such as Judea under King Herod (73–4 BCE).

—Abraham O. Mendoza

Bibliography

- Alston, Richard. *Aspects of Roman History, AD 14–117*. New York: Routledge, 1998.
- MacMullen, Ramsay. *Romanization in the Time of Augustus*. New Haven, CT: Yale University Press, 2000.
- Millar, Fergus, ed. *The Roman Empire and Its Neighbours*. New York: Delacorte, 1967.

Han Chinese Military Movement to the West

Han Chinese military movement to the west was the inevitable result of the war against the Hsiung-nu in the north and northwest, who built their powerful polity a few years before the establishment of the Han under the strong lead of their new ruler. After an unsuccessful military adventure against the new Hsiung-nu polity at the beginning of the Western Han, the Han government had to make a peace with them through marriage and tributes. Such a situation did not dramatically change until the time of Emperor Wu of the Han, when the Han became strong enough to launch a large-scale war against its overbearing neighbor and secure its border. The attack on the Hsiung-nu in a frontier market in the autumn of 129 BCE marked the beginning of a strategic war against this neighbor. In 127 BCE the Han Army, led by the General-in-chief Wei Qing, drove the Hsiung-nu off Erduosi plateau and two commanderies were established soon after the military victory. Several years after this crucial victory, another Han general, Huo Qubing, defeated the Hsiung-nu in the Gansu corridor zone and forced one of their rulers, King Hunye, to surrender soon afterward. All the Hsiung-nu were soon moved out of their territory, including the whole Gansu corridor and the areas west to Luobupo, and four Han commanderies were set up. Following this victory, the above two generals were able to drive the main Hsiung-nu ruler and his court to the northern Gobi Desert area in 119 BCE. Though there was still a long way to go for the Han people to win the war against the Hsiung-nu, these key victories helped the Han government establish a solid foundation on which the Han influences were able to be expanded continually to the west.

The western polities had long been controlled by the Hsiung-nu as an extremely important base against the Han. When the Han government realized this, they sent an envoy team led by Zhang Qian as the representative of the government to seek allies against the Hsiung-nu in 138 BCE. Nevertheless, Zhang Qian and his team were not able to achieve their original goal, for they were detained by the Hsiung-nu for a long time. Afterward he and other team

members fled the Hsiung-nu to the western area and returned to the Han capital, Chang'an, in 126 BCE with invaluable political, social, and economic information on the western polities. Soon after the defeat of the Hunye, Zhang Qian led another envoy to the western zone, and some diplomatic connections were successfully established. This was the beginning of the Han expansion to the western zone.

The decisive win in the western zone came only after their wins in battles. The heavy attack on Loulan and Cheshi in 108 BCE made the western polities aware of what a shocking threat the Han power was. After the successful conquest of the Fergana Valley in the far west in 101 BCE, most of the western polities began to pay tribute to the Han emperor. In order to control the strategic Turfan area, Han military forces had been involved in serious struggles against the Hsiung-nu and local governments from 90 BCE to 67 BCE until it finally controlled that area completely. However, toward the end of the Western Han and the beginning of the Eastern Han when the Han people focused on their internal affairs, the Hsiung-nu regained control of the western zone and again became a serious threat on the western border of the Eastern Han. Like its predecessor, the Eastern Han was forced to initiate a war against the Hsiung-nu since it wanted to secure its border and exert its influence on the western zone. In 73 and 74 CE, General Dou Gu defeated the Hsiung-nu twice and restored Han domination of the Turfan area. The connection between the Han and the western zone was again cut off by the Hsiung-nu in 77 CE, which led to Hsiung-nu's fiasco in war in 89 CE. This definitive victory made it possible for the Eastern Han to employ its full influence on the western zone's polities. During the time when Ban Chao and his son Ban Yong were in charge of the western zone, all the main polities paid tribute to the Han government.

—Hanmo Zhang

Bibliography

- Di Cosmo, Nicola. *Military Culture in Imperial China*. Cambridge: Harvard University Press, 2009.
- Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch'in and*

Han Empire, 221 B.C.–A.D. 220. Cambridge: New York, 1986.

Yu Yingshi. *Trade and Expansion in Han China: A Study in the Structure of Sino-barbarian Economic Relations.* Berkeley: University of California Press, 1967.

Rise of Militarized Nomads

The rise of the horse-riding nomadic empires in Eurasia had an enormous impact on the nonnomadic peoples they encountered. The increasingly specialized weaponry and growing concentration of wealth among the horse-riding elite set the stage for the horse-riding aristocracy that governed most of Eurasia during the Middle Ages. Treaties formed between the nomadic peoples and their nonnomadic neighbors during the first centuries CE eventually developed into the medieval stratification between the warrior elite and the agricultural specialists and craftspeople who supported them.

Although the first horse-riding nomads concentrated their efforts on herding, conflicts inevitably arose with their nonnomadic neighbors. Most of the nomads ransomed hostages or adopted them into their cultures since they had no means of keeping permanent prisoners. Plunder needed to be small enough to be worn or carried in a wagon, as most of these nomadic groups did not have settlements where large quantities of valuables could be stored. Since

ongoing conflict was impractical, raids tended to be seasonal. Some nomadic empires (such as the Xiongnu) forged treaties to collect tribute from their neighbors. Some groups found a niche protecting the nonnomadic peoples from other nomads in exchange for the goods they needed and the wealth they craved. Iron and gold in addition to foodstuffs were among their favorite items, and some nomads developed a taste for art, particularly that produced by Greek artisans.

The earliest horseback-riding, sword- and bow-wielding steppe nomads whom the nonnomadic peoples of Eurasia noticed were the Scythians. They rose to power in the sixth century BCE and ruled lands from Germania to as far away as Siberia until the third century BCE.

The Scythians were supplanted by the Sarmatians, or “Sauromatians,” who added the kontus, a weapon similar to the medieval knight’s lance, to their arsenal. The Sarmatians were also known for wearing scale armor and using shields marked with tamgas, signs that may have been the inspiration for medieval heraldry. Since the Alans shared a similar culture and fighting style, the groups are often referred to as the Alano-Sarmatians. The Alano-Sarmatians also began their rise to power in the sixth century BCE, but they outlasted the Scythians, maintaining identifiable units until at least the fifth century CE. The Ossetians of the Caucasus Mountains are the modern descendants of the Alans.

The Alans shared traits with the Huns, who arose in Mongolia. While most of the militarized nomads were Indo-European cultures, the Huns spoke an Altaic language. Greco-Roman authors became aware of the Huns in the fourth century CE, and some enclaves of Huns survived in the Caucasus region until the eighth century CE.

The Saka roamed central Asia, but little is known about them since they did not have extensive contact with the Greco-Roman world. The Saka arose in the seventh or sixth century BCE, but by the third century BCE cultural differences caused them to develop into a variety of smaller groups.

Greco-Romans had a love-hate relationship with the nomads. Some of the groups, such as the Sarmatians, controlled vast sources of gold and iron. The Romans often found themselves

➤ WARRIOR WOMEN

The Greek legends of the Amazons likely had their roots in the historical warrior women of the Alano-Sarmatians. According to Herodotus, these women had to kill three men in battle before they were deemed worthy of marrying. Although Amazon legends abound in Greco-Roman writings, few female graves with military equipment have actually been found. The women may have given up their warrior ways upon marriage, rising to defend their herds and offspring only when their men were not around or needed help.

—Linda Malcor

fighting the nomads one moment and allied with them the next. Units of Sarmatians and Alans were also found in the Roman Army. Since most of the nomadic groups of Eurasia did not have a written language, modern scholars rely heavily on the ethnographic records of the Greco-Romans and other adjacent peoples to re-create their histories. Archaeology, toponymy, and anthropology also contribute to what we know about the rise of these groups.

—Linda Malcor

Bibliography

- Cunliffe, B., ed. *The Oxford Illustrated Prehistory of Europe*. Oxford and New York: Oxford University Press, 1994.
- Davis-Kimball, J., V. A. Bashilov, and L. T. Yablonsky, eds. *Nomads of the Eurasian Steppes in the Early Iron Age*. Berkeley: Zinat, 1995.
- Davis-Kimball, J., with Mona Behan. *Warrior Women: An Archaeologist's Search for History's Hidden Heroines*. New York: Warner, 2002.
- Sulimirski, T. *The Sarmatians*. New York and Washington, DC: Praeger, 1970.

■ Introduction: Pilgrims and Missionaries

The first known pilgrims and missionaries date from between 1000 BCE and 300 CE. Throughout much of Asia as well as southern Europe and North Africa, people began traveling because of their religious convictions to fulfill certain spiritual needs or spread theological teachings to others.

The earliest clear evidence for pilgrimage is in the Greek world, where people would travel long distances to take advantage of the benefits of holy places. In some cases these benefits would be medicinal, as was the case with pilgrimages to sites associated with the god Asclepius. In other cases it would be to gain access to divine knowledge, such as from the oracle at Delphi. Greek travelers also visited important worship sites such as Olympia, long an important location of the god Zeus.

One of the great motivating forces of pilgrims and missionaries in the last half of the first millennium BCE was the teachings of the Buddha. Buddhist missionaries spread the teachings of the Buddha from India through East Asia. As these teachings were spread and Buddhist communities developed outside of India, Buddhists were inspired to travel to experience locations that had become important for their community.

In the first century CE Christianity was born, and almost immediately a missionary and pilgrimage tradition emerged with it. An important component of the beliefs of this new religion was to spread its teachings to others. The first missionary for whom historians have good evi-

dence was Paul, whose work in spreading the teachings of Jesus is preserved in the New Testament. As Christianity spread out of Palestine throughout the Roman world, Christians desired to visit locations that were mentioned in the Bible. Christian pilgrims traveled to these cities, especially Jerusalem, as a means of experiencing the divine and gaining a greater understanding of the teachings of their traditions.

—Kevin M. McGeough

Pilgrimages to Panhellenic Sanctuaries

Sanctuaries and temples dotted the landscape of the ancient Greek world, from the cities of Syracuse in Sicily to Phasis on the eastern Black Sea coast, serving the religious needs of the local people. But some temples had a reputation that extended over the entire Greek world, such as Zeus's sanctuary at Olympia or Apollo's oracular center at Delphi. These sites were termed "Panhellenic," important to all the Hellenes (i.e., to all the Greeks). To these sites the ancient Greeks made religious pilgrimages. Some pilgrimage destinations celebrated regular festivals. These might be annual, biennial, or even, as in the case of the Olympia and the Great Panathenaia at Athens, every four years. Individuals and state embassies would make their way to these sites when the festivals were about to be celebrated. Other sacred sites attracted visitors all year

► WHO WENT ON PILGRIMAGES TO PANHELLENIC SANCTUARIES?

Pilgrimage in ancient Greece involved travel by private individuals or small groups as well as state-appointed ambassadors to various temples and sanctuaries throughout the ancient Greek world. At these sacred sites visitors would worship the gods and often expect specific benefits in return. Pilgrims sought cures at the healing sanctuaries of the god Asklepios, honored Zeus by attending and participating in his sacred games at Olympia, or asked for advice in the form of oracles from the god Apollo at Delphi. The Greeks placed such emphasis on pilgrims and pilgrimages that a sacrosanct truce would be proclaimed a sacred site celebrated its special religious event.

Pilgrims would be required to observe various regulations at sacred sites, particularly relating to the clothes they wore and the food they ate while participating in sacred rites. Some pilgrimage centers were only for certain Greeks such as the festival of Apollo on the island of Delos, solely for the Ionian Greeks, particularly the Athenians and the cities claiming kinship with them. Non-Greeks were not allowed to participate in the Olympic Games or to consult certain oracles. Women were prominent among pilgrims, with their special concerns relating to sanctuaries concerned with fertility and childbirth. While every major town and city had temples, worshippers would nevertheless travel some distance to sacred sites considered to be particularly holy and where the god was believed to be especially powerful.

—Matthew Dillon

round, such as oracular centers and healing sanctuaries. At any one time in the Greek world, there would be numerous people making their way to religious centers for religious purposes. Although the Greeks had a word (*theoroi*) for the official visitors, the term “pilgrims” can be used to apply to all those who went on long journeys to worship the gods.

At Epidauros in southern Greece, the god Asklepios had a famous healing sanctuary to which pilgrims came from the ancient Greek world in search of a cure. Along with the Olympic festival, this was the most common pilgrimage in the Greek world, but unlike with the

Olympic festival, people would travel to Epidauros at any time. Asklepios's cult was basically one of faith healing. Those who were sick made their way on foot or borne on litters and even came across the Aegean in ships to the port that lay 3.7 miles (6 kilometers) away from the site. At Epidauros, they would bathe, make sacrifice, and pray to Asklepios, and then they would go to sleep overnight in a special building known as an *abaton*. Sick and long-suffering, they hoped that the god would appear to them in a dream while they slept. Some may have despaired of doctors or may have simply put greater faith in the god. They hoped that as they slept he would appear to them in a dream and would lay his hands upon them to cure them or that he would speak to them in their dreams and instruct them on a course of action that would cure them.

Most famous of all pilgrimage destinations was the oracular temple and sanctuary of Apollo at Delphi. Consultations took place at the temple on only one day, once a month. Individuals and delegations sent by their states put their questions to a priestess, known as the Pythia, who sat in the temple on a tripod, a lidded cauldron with three legs. She listened to their questions and provided advice, either in verse or in prose. Unlike in later Roman accounts, the Greek historians and playwrights describe her delivering her oracles in a lucid frame of mind in verse or prose, which the listener could easily hear though some degree of interpretation could be required. She was seen to be the mouthpiece of the god Apollo himself, delivering his opinions and advice.

The Greeks believed that the gods took a close interest in mortal affairs and that it was important to avoid offending them and to gain their support by seeking divine approval for undertakings such as the sending out of colonies and declaring war. The longest war in Greek history, the Peloponnesian War of 431–404 BCE between Athens and Sparta and their various allies, was undertaken by the Spartans in 432 only after they asked the god through his priestess at Delphi if they would win if they declared war against Athens. In an enigmatic reply in a style that was not uncommon for her, the priestess told them that they would win if they fought hard. Cities also sent an embassy to Delphi if the

crops had failed, if there was a plague or pestilence in the land, or if there had been some prodigy such as a meteor in the sky. They wanted to know which god to sacrifice and pray to in order to cure the problem or to explain the meteor: was it a sign that they had offended a god and needed to make amends? Private individuals also came to ask the god for advice on personal matters, such as marriage or childlessness.

Olympia in southern Greece was a famous Panhellenic destination, but its popularity was limited to once every four years in late July or early August when the five-day festival in honor of the god Zeus was celebrated. Zeus's temple there housed one of the seven wonders of the world: the seated gold and ivory (that is, chryselephantine) statue of Zeus created by the Athenian sculptor Pheidias in the fifth century BCE. But what people came especially to see were the athletic contests and chariot races. Facilities were primitive, and there were no grandstands, so spectators stood and watched the contests. Most people camped out in tents, some of those belonging to the wealthy being large and elaborate. Official guests were housed in a special hostel.

Contests in particular included the four-horse chariot race, which attracted entries from throughout the Greek world but particularly from Sicily. The tyrants of Greek cities there demonstrated their power and wealth by sending chariot teams and drivers to the motherland. While the mortal pilgrims enjoyed the spectacle, the Greeks believed that Zeus and the gods also watched, taking an interest in the events and their outcomes. Competitors had to swear an oath to Zeus not to cheat. The path to the stadium at Olympia was lined with statues of Zeus known as *Zanes*, which had been paid for by competitors who had cheated: their misconduct was an offense against Zeus. Those who did not compete fairly were known as *mianteres* ("defilers") because they had polluted the festival of Zeus. Athletic and musical contests were held at Delphi for Apollo, and an inscription records the elaborate arrangements that the island of Andros in the Aegean made in sending an official embassy, including a choir, to honor Apollo at his special festival. Pilgrims at these festivals worshipped the gods by spectating and taking part in sacrifices to the gods, who were honored by their presence.

While the official pilgrims were male, women were also active as pilgrims. The cure inscriptions at Epidauros, for example, indicate that women were over one-third of Asklepios's worshippers there. One woman in the fourth century BCE, Andromacha, traveled all the way from northern Greece to Epidauros. Olympias, mother of Alexander the Great, from northwestern Greece, met her future husband Philip while she was participating in the mystery celebrations on the Aegean island of Samothrace; she had traveled several hundred miles to participate in the sacred rites. In the realm of myth, Creousa traveled from Athens to Delphi to ask the god Apollo for advice on having a child. The temple attendant asked her whether she had come to ask about crops or childbirth; her presence and request were not considered to be unusual. While women were excluded from the male world of politics, they had specific physiological and personal needs that were met by religion, and these found expression in their role as pilgrims.

Large numbers of religious devotees, regardless of their piety, created administrative needs and organizational problems for the sites to which they traveled. Sanctuaries had rules regulating the behavior of pilgrims, as misbehavior could be a problem. The priest at the shrine of the healing god Amphiaraos at Oropos, on the border between Thebes and Athens, was authorized to punish slight offenses; others were to be judged by a court. The Athenians empowered the superintendents of the Eleusinian Mysteries to fine those who misbehaved. Officials took care of ensuring that there was an adequate supply of food to be sold during festivals. Markets are known for Olympia and particularly the festival of the Isthmia at the Corinth, where jugglers, fortune-tellers, and peddlers all vied for attention from those who had come from other cities and pitched their tents for the duration of the festival in honor of Poseidon. Some religious rites had provisions regarding the purity and dress of the worshippers. Consultants of the important oracular shrine of the hero Trophonios in Boeotia had to undergo purificatory rites extending over several days, including bathing, and had to wear a linen garment. There were also very specific regulations regarding dress for

the mysteries at Andania that drew large crowds from all over the Peloponnese. These rules were designed to prevent ostentatious dress.

During the long-running Peloponnesian War, the Athenians and Spartans in 421 BCE signed the Peace of Nikias, named after the Athenian general who was its main organizer. Both sides guaranteed that all Greeks would be able to travel in safety to Panhellenic sanctuaries to worship the gods and participate in the major pilgrimage festivals. Pilgrimage was a matter of international concern, and representatives of the cities of both sides swore to uphold these provisions. Sacred truces, as they were called by the Greeks, were also proclaimed before major events. Officials known as *spondophoroi* (“peace bearers”) were sent out by pilgrimage sites such as Elis for the Olympic festival and Athens for the Eleusinian Mysteries, proclaiming that all could travel in peace, unmolested, to the religious events. Any states that did not observe the sanctity of pilgrims and official delegations would be debarred for the future from attending.

Pilgrimage to sacred sites was voluntary and was determined by whether a particular individual could afford the expense. But crowds of thousands attended the Panhellenic festivals, with Olympia often attracting 20,000 or more visitors and the Eleusinian Mysteries attracting thousands as well. Pilgrims were motivated by piety: they wished to express their devotion to the gods so that other people, and of course the gods themselves, would witness it. But pilgrims were also motivated by the need for direct divine assistance (such as the need for a cure) or for guidance (and so sought an oracle). Fundamental to Greek pilgrimage was the notion that a particular god had a particular place where his powers were more efficacious than elsewhere or that specific benefits, such as initiation, were only offered at certain places, explaining the pilgrims’ willingness to travel long distances for religious fulfillment.

—Matthew Dillon

Bibliography

- Coleman, Simon, and John Elsner. *Pilgrimage: Past and Present in the World Religions*. Cambridge: Harvard University Press, 1995.
- Dillon, Matthew. *Pilgrims and Pilgrimages in Ancient Greece*. New York: Routledge, 1997.

Elsner, Jas, and Ian Rutherford. *Pilgrimage in Graeco-Roman and Early Christian Antiquity: Seeing the Gods*. Oxford: Oxford University Press, 2005.

Paul the Missionary

Paul the Apostle—the most important of all the early Christian missionaries and theologians, and one of the key writers of the New Testament—has done more than any other individual to shape the history of the Jesus movement. Radically converted to Christ as a young man, Paul devoted the rest of his life to proclaiming Him as the Savior and Lord of the world. The passionate Christ-centered letters he wrote to the early Christians reveals his understanding of Jesus as the messianic redeemer whose atoning death and resurrection offer salvation and life-transforming power to all who put their trust in Him. For Paul, the real significance of Jesus lay not in His earthly life and teachings, but in His death and resurrection, through which God brings salvation to the world.

According to Luke’s account (Acts 22.1–16; 23.6; Phil. 3.5), Paul was raised in a traditional Jewish home and educated in Jerusalem as a Pharisee by one of Judaism’s leading rabbis, Gamaliel. As a zealous young Jew, Paul actively persecuted the early Christians. But as a result of a visionary encounter with the resurrected Jesus (Acts 9.3–19; 1 Cor. 9.1), he came to realize that Jesus is the long-awaited Jewish Messiah and that salvation is mediated through Him—not through careful observance of the law of Moses, as most Jews thought. This understanding, he later emphasized, did not originate in the mind of some human, but was revealed to him by Christ Himself (Gal. 1.12, 15–17). It is his understanding of Jesus—as Messiah, Son of God, Savior, and Lord—that sets Paul apart from his Jewish contemporaries. Everything else—his distinctive views of the law, salvation, and Christian life—is shaped by this insight.

As a result of his visionary experience of Jesus, Paul came to understand salvation as now available to all people, Gentiles as well as Jews, just as the prophets of the Hebrew Scriptures had predicted. In Paul’s view of the new family of Christ, where Jews and Gentiles are united as

► THE LIFE-TRANSFORMING POWER OF THE SPIRIT OF CHRIST

Because God's ultimate goal for His people is that they become like Christ, in Paul's view, believers are called to "put on the Lord Jesus Christ" (Rom. 13.14), to "clothe" themselves with "the new self" (Eph. 4.24) and the characteristics of Christ (Col. 3.12). They are actively to imitate Christ in how they live, just as Paul does (1 Cor. 11.1)—especially in the area of love. When Paul speaks of the imitation of Christ, his emphasis is almost always on the sacrificial love expressed in the death of Jesus, not on the love expressed in His earthly life. Believers are to have the same kind of sacrificial love for one another (Rom. 15.2f., 7; Eph. 4.32; 5.2; Phil. 2.3–8). This selfless, Christlike love is the primary characteristic of the Christian life in

Pauline thought—the single most important virtue for believers to seek (Col. 3.14). Love is the primary ethical expression of Christian faith ("The only thing that counts is faith working through love," Gal. 5.6). For Paul, the law of love is the most important of all the moral commandments in the Hebrew Scriptures (Rom. 13.8–10; cf. Mark 12.31); this principle is what he means by the "law of Christ" (Gal. 6.2). So it is not surprising that love occurs first in his list of character traits produced by the Spirit of Christ in a believer (Gal. 5.22f.; cf. Phil. 1.8). Sacrificial love, above all, is the mark of a life transformed by the Spirit, a Christlike life.

—Roger Mohrlang

God's forgiven people in a single messianic community, ethnic distinctions are no longer significant. One's identity as a person of God is defined only by his or her relation to Christ (Col. 3.11). Convinced that God had called him to proclaim this "good news"—the message of salvation through Christ—to the entire Gentile world (Gal. 1.15f.), Paul devoted the rest of his life to this mission.

Because salvation is for all people, Christ spells the "end of the law" in Pauline thought. No longer is the law of Moses to be understood as the way of salvation or the primary guide for life (Rom. 10.4), as it was in traditional Judaism. Salvation is received personally by faith—that is, by putting one's trust in Christ as Savior—quite apart from one's observance of the law. And a believer's life is now understood as directed and empowered by the Spirit of Christ who lives within, not by the hundreds of stipulations prescribed in the law of Moses (Rom. 7.4–6).

—Roger Mohrlang

Bibliography

- Beker, J. Christiaan. *Paul the Apostle*. Philadelphia: Fortress, 1980.
- Gager, John G. *Reinventing Paul*. Oxford: Oxford University Press, 2002.
- Hooker, Morna D. *Paul: A Short Introduction*. Oxford: Oneworld, 2003.

Martin, Ralph P. *Reconciliation: A Study of Paul's Theology*. Atlanta: John Knox, 1981.

Mohrlang, Roger. "Paul." In *Jesus in History, Thought, and Culture: An Encyclopedia*, edited by Leslie Houlden. Santa Barbara, CA: ABC-CLIO, 2003.

Wenham, David. *Paul: Follower of Jesus or Founder of Christianity?* Grand Rapids, MI: Eerdmans, 1995.

Ziesler, John. *Pauline Christianity*. Rev. ed. Oxford: Oxford University Press, 1990.

Pilgrimages to Jerusalem

For Jews, Jerusalem in its entirety is considered the holiest place on earth and as such is the real and symbolic religious center to which all Jews yearn to return. It is the highest point in Israel's central mountain range, with views to both the Mediterranean and the Dead seas. It is the traditional site of Mount Moriah, where Abraham bound his son Isaac and was stayed from his sacrifice by the hand of God (Gen. 22:2–19). Jerusalem is situated on the mountain called Zion. Jerusalem was the capital city of King David, the place where he brought the Ark of the Covenant, and the site of the temple that Solomon built to house that ark. In biblical times Jerusalem was the focus of the Shalosh regalim, the three

➤ CHRISTIAN PILGRIMAGE

The traditions of pilgrimage in Christianity developed soon after Jesus's death. At least a thousand years before the Christian era, Jerusalem had been established as the principal holy site of Judaism and the locus of a thrice annual pilgrimage to the Temple to pray, to give thanks for the harvest, to offer sacrifices, and to pay one's taxes. Because so many of the events of Jesus's life and crucifixion took place in Jerusalem and its environs, the continuity of Jerusalem's holiness into the new religion was a natural consequence. Jesus's immediate followers held the places where He had lived, died, and worked His miracles in special reverence. By early extension, the sites connected to the biographies of His apostles, who were venerated almost immediately as saints, also attracted adulation. So, too, did the places considered sanctified by the sacrifice of the early Christian martyrs during the three centuries in which the Romans held the new religion to be illegal. No one knows precisely when the first pilgrimages to the Holy Land began. But by the early fourth century numerous documents speak of the practice in a way that suggests that even though Christianity was still illegal under Roman law, pilgrimages to the Holy Land were long established, common, and therefore unremarkable.

—Linda Kay Davidson and David M. Gitlitz

mandated annual agricultural festival pilgrimages of Passover (Pesach), Pentecost (Shavuot), and Tabernacles (Sukkot).

When Solomon's Temple was destroyed by Nebuchadnezzar II in 587 BCE, initiating the Babylonian captivity and the first of the Jews' many Diasporas, Jerusalem was instantly transformed into the focus of the exiles' longings for return. This emotion is beautifully expressed in Psalm 137: "By the rivers of Babylon, / there we sat down, yea, we wept, / when we remembered Zion. . . . If I forget you, O Jerusalem, / let my right hand wither." In 538 BCE King Cyrus II of Persia let the Jews return, and the Second Temple was built. Since the destruction of that Temple by the Romans, in 70 CE, almost every Jewish religious service in the Diaspora has invoked the longing for return to Jerusalem. The

fourteenth blessing of the morning prayers and the prayer after eating include the passage: "Rebuild Jerusalem, the holy city, quickly in our day." Jewish pilgrims have been returning to Jerusalem over the millennia in ones and twos, in twenties and fifties, to visit the holy city and, if they could, to take up residence there.

A portion of the exiled Jewish community returned from Babylon to Jerusalem in 536 BCE and over the next hundred years completed the Second Temple. In 332 BCE Alexander the Great incorporated the city into his Hellenistic empire. During this long period, and until the suppression of Jewish ritual by Antiochus IV Epiphanes in 175 BCE, the Temple remained the focus of the Jews' thrice-annual pilgrimages to Jerusalem for the agricultural festivals. Greek repression led to the Hasmonian revolt under Judah Maccabee, which recaptured Jerusalem in 164 BCE, cleansed the Temple, and allowed the pilgrimages to continue. If they were able, Jewish pilgrims from cities in Egypt, Mesopotamia, Anatolia, and other parts of the Jewish world came to Jerusalem for the three pilgrimage festivals. If they were not able, they might come just for Passover, or just once in their lifetimes.

The various communities maintained hostels for pilgrims, and several erected communal prayer houses or synagogues for pilgrims from their areas. Care was taken to protect the property left unguarded during the pilgrim's journey (Exod. 34:24). Jews who were unable to make the pilgrimage during their lifetimes might have their ashes sent for burial in the shadow of Jerusalem's walls. The fact that for many pilgrims of this period the visit to Jerusalem was a joyful, spiritual highlight of their lives is reflected in the opening to the pilgrimage Psalm 122: "I was glad when they said to me, 'Let us go to the house of the Lord!' / Our feet have been standing within your gates, O Jerusalem!" The Temple's splendid architecture and sumptuous decoration were also seen by some to mimic heaven on earth or to hearken back to Eden, so that pilgrimages there became a foretaste of paradise or a return to a place in which the relationship between God and humanity was natural, complete, and fulfilling.

The Roman period represents a hiatus between the agricultural festival pilgrimages of

Bible times and the pilgrimages from the Diaspora to visit holy sites. During the first hundred years of Roman rule, at the time of Jesus, Jewish Jerusalem prospered. The schools of the Pharisees, the Sanhedrin, and the splendor of Temple worship began to attract Jewish pilgrims from abroad unconnected with the traditional agricultural festivals. Some established themselves in the city to study, do business, and aid pilgrims from their language groups and preferred modes of worship. Tensions between the Jewish groups added to the general deterioration of the political situation in the 60s and helped to set the stage for open revolt against Rome in 70 CE.

Rome destroyed the Temple in 70 CE and much of the rest of the city of Jerusalem in 135. For the next two centuries the Romans barred both Jewish and Christian access to the holy sites of the city.

—Linda Kay Davidson
and David M. Gitlitz

Bibliography

- Davidson, Linda Kay, and David M. Gitlitz. "Jerusalem: Jewish Pilgrimage (Israel)." In *Pilgrimage: From the Ganges to Graceland, An Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2002.
- Davidson, Linda Kay, and David M. Gitlitz. "Roman Catholicism and Pilgrimage." In *Pilgrimage: From the Ganges to Graceland, An Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2002.
- Gonen, Rivka. *Biblical Holy Places: An Illustrated Guide*. New York: Macmillan, 1987.
- Hollis, Christopher, and Ronald Brownrigg. *Holy Places: Jewish, Christian, and Muslim Monuments in the Holy Land*. New York: Praeger, 1969.
- Kerkeslager, Allen. "Jewish Pilgrimage and Jewish Identity in Hellenistic and Early Roman Egypt." In *Pilgrimage and Holy Space in Late Antique Egypt*, ed. David Frankfurter. Boston: Brill, 1998.
- Peters, F. E. *Jerusalem: The Holy City in the Eyes of Chroniclers, Visitors, Pilgrims, and Prophets from the Days of Abraham to the Beginnings of Modern Times*. Princeton, NJ: Princeton University Press, 1985.
- Safrai, Shmuel, and Menahem Stern, eds. *The Jewish People in the First Century: Historical Geography, Political History, Social, Cultural and Religious Life and Institutions*. 2 vols. Philadelphia: Fortress, 1987.

Early Buddhist Missionary Activity

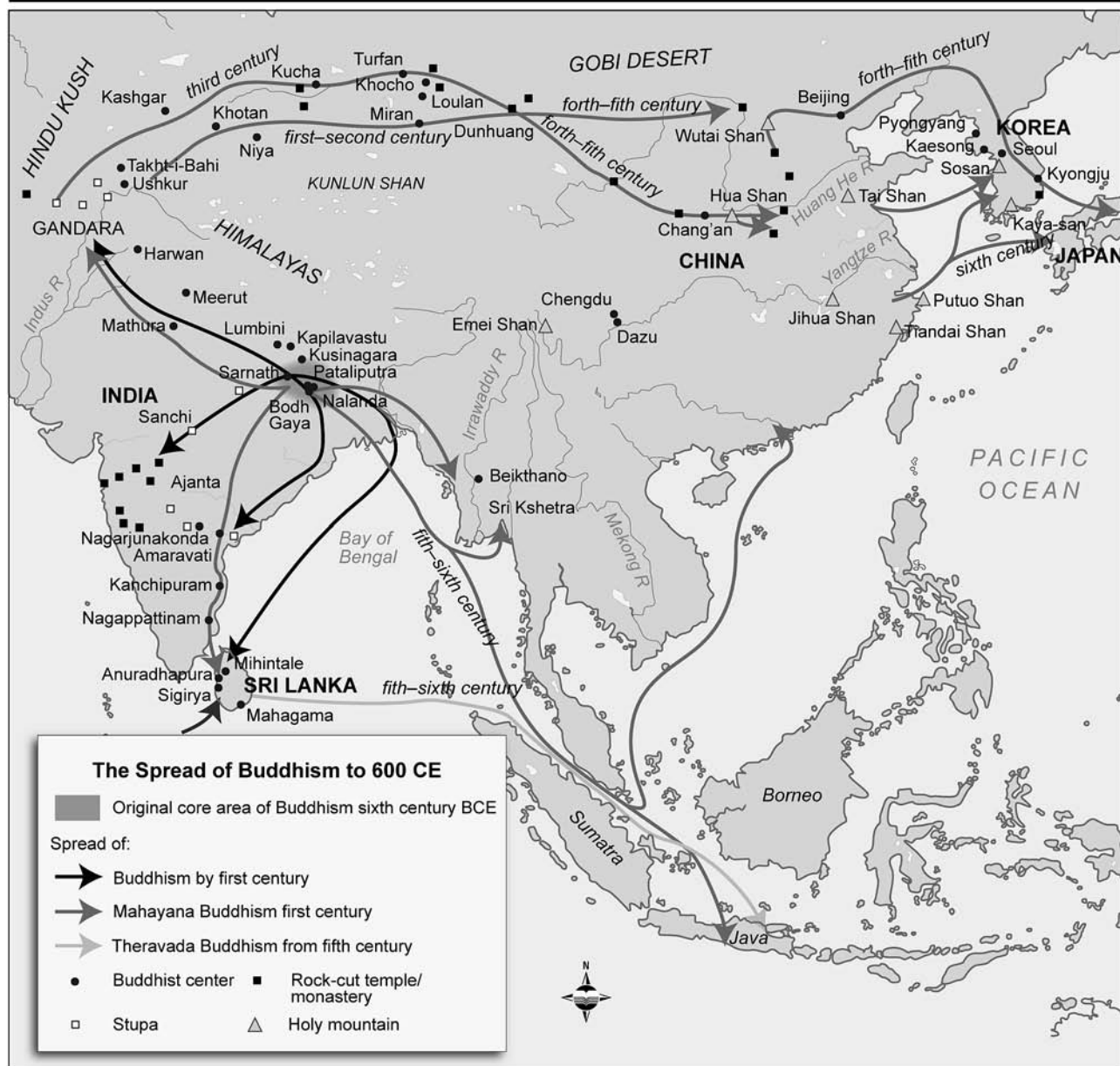
Since its inception, Buddhism has been a remarkably successful missionary religion. For 45 years, from shortly after his enlightenment (*bodhi*) in circa 400 BCE until the end of his life, the Buddha traveled throughout northern India teaching and winning over converts and supporters. Like other renouncers of his day, the Buddha had no permanent home, and he traveled light, carrying few possessions besides his begging bowl and robes. He sometimes traveled alone or with one or two companions, but often he trailed hundreds and even thousands of monks and nuns in his ever-growing community, the *sangha*.

The Buddha wanted his teachings, the *dharma*, to be made available to all, and he considered missionary activity to be a crucial responsibility of his followers. Once he had gained his first 60 disciples, he immediately sent them into the world to spread the dharma and to gain new adherents. Monks zealously followed this injunction year in and year out until lay supporters complained that to travel during the monsoon months was unseemly for peaceable renouncers, given that travel during the rains meant trampling over the many insects born during this time. So the Buddha prohibited all monks and nuns from traveling during what was termed the rains retreat. This served the additional function of centering the monastic community and counterbalancing its constant movement and dispersal during the rest of the year.

After the Buddha, the most effective missionary for his religion was the great Mauryan king Aśoka (third century BCE), whose edicts, carved in pillars and stones erected across a vast empire, pronounced his support of Buddhism and his disapproval for Brahmanical animal sacrifice. He sent his son Mahinda as a Buddhist missionary to Sri Lanka, a Buddhist nation to this day. He planted trees for shade and dug wells along the travelers' routes throughout his lands, and Buddhist missionaries clearly took advantage of these avenues to establish the Buddha's dharma.

Buddhism flourished under the Indo-Greek Bactrians and expanded exponentially as trade

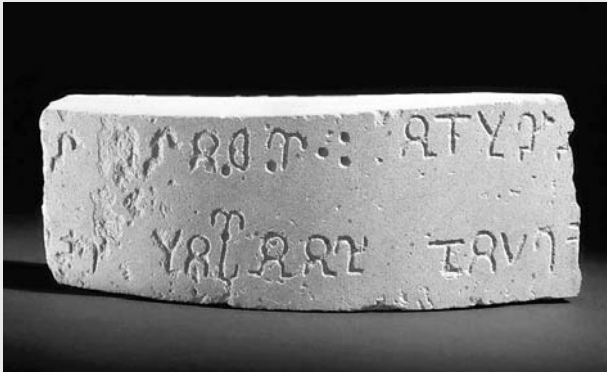
EARLY BUDDHIST MISSIONARY ACTIVITY



grew under the Kushan empire (first to third centuries), when all of northwestern India was plugged into the branch of the Silk Roads that came down from the Taklamakan region through these areas in today's Afghanistan and Pakistan. Old Buddhist monuments are prominent across central Asia, Afghanistan, and Chinese Turkestan. From there, Buddhist missionaries were able to move farther eastward

still into China proper. Some early translators of the dharma into Chinese gained fame there during the second century, beginning not with an Indian but rather a Parthian known to Chinese history as An Shigao and followed by the great Dharmaraksa. Both established large schools of translation so that by the end of the fourth century more than 1,500 Buddhist texts had been translated into Chinese. By the mid-third cen-

➤ AŚ OKA'S ROCK EDICT XI



Pillar edict of Emperor Asoka, Mauryan dynasty, probably from the Meerut Pillar, Ut, 238 BCE. The inscription is in Brahmi, the ancestor of all modern Indian scripts. (British Museum/Art Resource, NY)

The Buddhist edicts of Mauryan king Aśoka (third century BCE), were carved in pillars and stones erected across the vast Mauryan empire. The following is one such carving.

“King Priyadarshi says:

There is no gift that can equal the gift of Dharma, the establishment of human relations on Dharma, the distribution of wealth through Dharma, or kinship in Dharma.

That gift consists in proper treatment of slaves and servants, obedience to mother and father, liberality to friends, acquaintances, relatives, priests and ascetics, and abstention from the slaughter of animals.

Father, son, brother, master, friend, acquaintance, or even neighbor ought to say, ‘This has merit. This ought to be done.’

If one acts in this way, one achieves by the gift of Dharma happiness in this world and infinite merit in the world to come.”

Aśoka inscriptions were influenced by his Buddhist leanings but tended to express a general morality that would have been acceptable to most if not all of his subjects. Important exceptions include his prohibition of the slaughter of animals and his equal respect for all religions, both of which indirectly countered traditional Brahmanical practices and beliefs.

—Jonathan C. Gold

Source

N. A. Nikam and Richard McKeon, eds, *The Edicts of Asoka* (1959:repr., Chicago: University of Chicago Press, 1978), 44–45.

ture Chinese Buddhist pilgrims reversed the flow, traveling from China to central Asia and India in search of new scriptures.

—Jonathan C. Gold

Bibliography

- Allchin, F. R. *The Archaeology of Early Historic South Asia: The Emergence of Cities and States*. With contributions from George Erdosy, R. A. E. Coningham, D. K. Chakrabarti, and Bridget Allchin. New York: Cambridge University Press, 1995.
- Litvinskij, Boris A., & Zejmal', Tamara I. *The Buddhist Monastery of Ajina Tepa, Tajikistan: History and Art of Buddhism in Central Asia*. Rome: Istituto Italiano Per L'Africa e L'Oriente, 2004.
- Nikam, N. A., and Richard McKeon, eds. *The Edicts of Asoka*. Midway Reprint. Chicago: University of Chicago Press, 1959.

Zurcher, E. *The Buddhist Conquest of China: The Spread and Adaptation of Buddhism in Early Medieval China*. Leiden: Brill, 1959.

Early Buddhist Pilgrimages

The main sites for Buddhist pilgrimage are places sanctified and empowered by the Buddha's presence both during his life and after his final passing into nirvana. The *Mahāparinibbana Sutta*, which tells the story of the Buddha's final days, records the Buddha himself recommending that his relics be placed in a burial mound called a stupa for the benefit of those who wish to come to pay their reverence. He also recommended that dedicated followers

➤ MAHABODHI TEMPLE, BODH GAYA

The Mahabodhi Temple at Bodh Gaya commemorates the Buddha's enlightenment. The main objects of worship here are the throne and tree that framed where the Buddha sat for this greatest meditation session ever. A cutting of the original Bodhi tree is said to have been brought by Mahinda, the son of King Aśoka, as part of his mission to Sri Lanka in the third century BCE. Descendants of that ancient tree remained a major site of pilgrimage in Sri Lanka even after Buddhism had essentially died out in India (by the fourteenth century). When the ruins at Bodh Gaya were discovered by British archaeologists in the nineteenth century, a cutting from the Sri Lankan tree was planted at the site of the Mahabodhi Temple pictured here, and Bodh Gaya once again became the most prized destination for Buddhist pilgrims.

—Jonathan C. Gold

Mahabodhi Temple, Myanmar. (Pavel Pospisil)



should visit in particular the locations of especially significant events in his life: his birth at Lumbini, his enlightenment at Bodh Gaya, his first sermon at Sarnath, and his passing at Kushinagara. Those who died on a pilgrimage to these sites, he said, would be reborn in a heavenly realm. Lumbini is in Nepal, the others in India. The most sacred site is Bodh Gaya, where the Buddha achieved enlightenment sitting on the Diamond Throne (*vajrasana*) under the Bodhi tree. Other early pilgrimage sites include places where the Buddha is said to have performed miracles and left his footprints in stone.

In one of his famous edicts, the great Mauryan king Aśoka (ca. 269–ca. 232 BCE) declares

that rather than engaging in the royal pleasure tours of the past, he has become a religious devotee and now regularly undertakes a religious tour (*dharmayatra*) instead. Aśoka was not exclusively a supporter of Buddhism, but if we interpret his religious tour as a Buddhist pilgrimage, then Buddhist pilgrimage enters the historical record with the very earliest datable Buddhist source. Pilgrimage sites helped to cement trade routes both within India and with its neighbors and eventually all along the eastern branches of the Silk Roads, and in turn better-established trade routes allowed for the increasing popularity and ease of pilgrimage. Already by 300 CE, Chinese and central Asian Buddhist

pilgrims were tracing back the travels of the Buddhist missionaries who had brought Buddhism to them from central Asia and India, respectively.

Buddhist pilgrims seek out the physical presence of the Buddha. The fact that the Buddha, having entered final nirvana, might be absent from the world and therefore beyond the reach of devotees has caused more consternation among scholars than worshippers. Few premodern Buddhists seem to have doubted the effectiveness of receiving the Buddha's blessings at his pilgrimage sites.

—Jonathan C. Gold

Bibliography

- "*Mahāparinibbāna Sutta*: The Great Passing/The Buddha's Last Days." In *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya*, translated by Maurice Walshe. Boston: Wisdom Publications, 1995.
- Schopen, Gregory. *Bones, Stones and Buddhist Monks: Collected Papers on the Archaeology, Epigraphy and Texts of Monastic Buddhism in India*. Honolulu: University of Hawaii Press, 1997.
- Strong, John. *The Legend of King Aśoka: A Study and Translation of the Aśokāvadāna*. Princeton, NJ: Princeton University Press, 1983.

■ Introduction: Changes in Trade Networks

One of the strongest motivating forces for travel from 1000 BCE to 300 CE was trade. Throughout this period, the globe became connected in a way that it had never before been connected as new trade routes were opened up and new trade networks were developed. The most significant of these networks was the Silk Roads, which connected the vast continent of Asia with Europe. While few people (if any) would have traveled the length of this route, these networks allowed goods to travel from the most distant regions in China to the farthest regions of the Roman empire.

The Americas also became increasingly more connected at this time. There is evidence for trade connections throughout Mesoamerica. Some trade is also in evidence between Mesoamerica and South America as well as from Mesoamerica to some of the southern reaches of North America. The south and eastern portions of North America were well connected through trade networks in the first few centuries of the Common Era.

Other significant changes in trade networks came with the development of new transportation technologies. The domestication of the camel allowed large expanses of arid land to be

traversed, opening up new trade routes. New understandings of monsoons allowed new seasonal travel. River and sea transportation in Europe and Asia also allowed greater flexibility of movement.

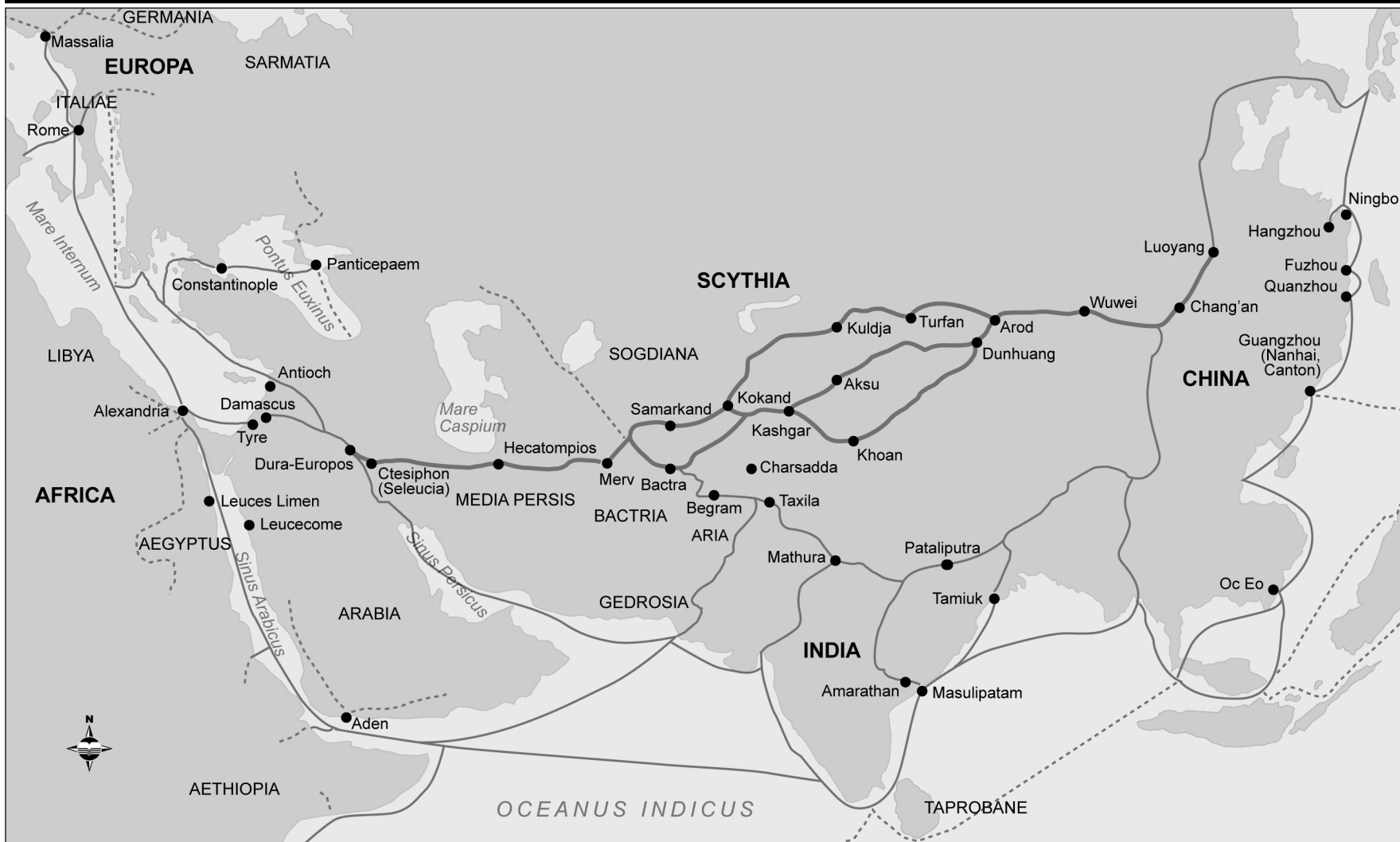
—Kevin M. McGeough

Formation of the Oasis Trade Network across Central Asia

Although the Silk Roads connected China and the Mediterranean Sea through the medium of the oasis towns of central Asia, it is difficult to conceive of the Silk Roads cohering without the domestication of camels, particularly the Bactrian camel. With an arid but often cold climate and with many deserts, central Asia could be a difficult region to traverse.

Horses were too high-maintenance, as they required a considerable amount of water and fodder. When traveling through desert or semi-desert regions, merchants had to transport food and water for the horses, thus requiring more animals for that purpose. The Bactrian camel, however, can carry a considerable load as well as survive days without food or water. In addition, the camel possesses thick pads on its feet

OASIS NETWORKS ACROSS CENTRAL ASIA



that allow it to traverse the sand and stones of the desert with ease.

With the use of the camel, Chinese merchants could now cross central Asia. Although they tended to avoid crossing the Taklamakan Desert, the camel allowed them to skirt the edges and thus make contact with the oasis towns of central Asia. From the west the camel, both Dromedary and Bactrian, allowed merchants from Iran to cross not only the deserts in Iran but also the Kizilkum Desert in central Asia. At the same time, the desert benefited trade. Whereas the oasis towns were sources of water, food, and commerce, the deserts held fewer predators than routes across the steppes. The camel greatly facilitated the use of the routes that skirted the desert from China to central Asia but also those through Iran from the West and even routes from India.

During the first and second centuries BCE, central Asia consisted of small kingdoms, particularly in the regions of Bactria and Sogdiana. Their cultures were strongly influenced by Iranian culture and Hellenism. With such a syncretic atmosphere, it was relatively easy for a variety of merchants from the western lands to do business with Chinese and Indian merchants. This is not to say that no issues arose. The Parthian empire (247 BCE–224 CE) greatly supported the trade routes in the portion of central Asia it controlled. The Parthians established caravanserais at many oases along the trade routes. However, they were often accused of reserving use of the routes for their own merchants and discouraging foreign merchants as much as possible.

—Timothy May

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Pre-history to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

> CARAVANSERAIS

Caravanserais were the truck stops of their era. Found at most oases along trade routes, a caravanserai provides food and shelter for merchants as well as a safe area to keep their goods and animals overnight. Routes that had caravanserais saw increased use due to the assurance of shelter and provisions. Furthermore, caravanserais served as information clearinghouses, as merchants could exchange news of the territories they had recently passed through.

Although the Parthians and the Hans built caravanserais to promote trade through their territories, in central Asia they were built and maintained by local notables. Managing a caravanserai could be a very lucrative business. As with restaurants and hotels today, word-of-mouth reputation can make or break a business. If a caravanserai earned a bad reputation due to theft or other corrupt business, news could spread quickly through the oasis network.

—Timothy May

Development of Phoenician and Greek Trade Networks in the Mediterranean

By 1000 BCE the Phoenicians were expanding their trade network across the Mediterranean, opening the way for the classical Greeks who then spread their own network. Plying routes from the land now known as Lebanon in the east to the Atlantic side of Spain and Morocco in the west, the Phoenicians carried basic goods needed by people in Egypt, Anatolia, and the Aegean who were still recovering from the destruction caused by the Sea Peoples (ca. 1200 BCE). Their cargoes included tin and copper, which craftsmen forged into bronze farm implements and weapons. Foodstuffs and clothing were also delivered to these subsistence societies, including olive oil and wine. These Phoenician merchants also brought with them high-end luxury goods and jewelry, and the artistic styles of these goods influenced art in Europe.

Since these latter goods were produced in excellent quality and quantity on the islands and mainlands around the Aegean Sea, an increased trade in olives and grapes began to pull these Greek communities out of the Dark Age into which they had fallen after the collapse of the bright Mycenaean society. With increasing trade in the agoras and the proliferation of luxury



Relief of a Phoenician trading ship, known as the Ship of Tarsus, carved into a Phoenician sarcophagus. (Gianni Dagli Orti/Corbis)

➤ SILVER PRIZED IN ANTIQUITY

Even before silver became a medium for exchange, it was used for luxury goods that were widely traded. At Troy, the great Achilles gave the winner of a footrace an exceptional Phoenician silver bowl. It was made in Sidon and exceeded all others in the world for beauty, as told in Homer's *Iliad* (23:740–749), which was written around the eighth century BCE.

—Sanford Holst

items, thriving Greek city-states, or *poleis*, began to form, and the light of learning flickered to life again. With this growing prosperity, the mining of gold and silver became more advantageous, not only for its beauty and use in luxury items but also as a valuable medium of exchange in conducting the increasing business of trade.

As the bustling Greek trading ships began serving all ports in the Aegean, the Phoenicians became marginalized in that region, serving only the long-haul connections outward bound to Sicily and points west or to distant Egypt and lands in the East. Beginning in 734 BCE, however, when Greek colonists set foot on Sicily, Greek trading ships began to push farther west and south, causing the picture of trade networks to become much more complex. Some ports belonged to a specific network, while others—when wars were not raging—might be visited by Greek as well as Phoenician ships.

From their major city of Carthage on the coast of North Africa, the Phoenicians controlled trade in the Mediterranean west of Sardinia. Gold and silver from the Rio Tinto region of Spain were important trade goods on these lines, as were spices from Morocco as well as traditional foodstuffs, cloth, and raw materials. The exception to their dominance was a collection of Greek trade emporia established at Marseilles and environs.

To the east, the trade activity was much more open. In Egypt, for example, the Phoenicians used their earlier arrival to establish their district in Memphis, the major city located near where Cairo stands today. So the Greeks simply developed the city of Naucratis in the Nile Delta and took on a strong presence.

With these two major sea-trade networks serving the Mediterranean, Aegean, and Black seas, many cities were able to grow, populations increased, and trade thrived. When Alexander the Great conquered the Phoenicians in Lebanon, the eastern Mediterranean essentially became a Greek sea. Then, when Rome defeated Carthage and extended its hold over Greece, the entire Mediterranean became a Roman sea.

—Sanford Holst

Bibliography

Grant, Michael. *The Ancient Mediterranean*. New York: Scribner, 1969.

Homer. *The Iliad*. Translated by Robert Fagles. New York: Viking, 1990.

Markoe, Glenn E. *Phoenicians: Peoples of the Past*. London: British Museum Press, 2000.

Moscatti, Sabatino, ed. *The Phoenicians*. New York: Rizzoli, 1999.

Monsoon Travel on the Indian Ocean

In the ancient world, the Indian Ocean was the only open sea regularly traversed by Eurasian navigators. The wind systems of the Atlantic pinned Europeans and Africans to their coasts, and the people of East and Southeast Asia did not venture into the Pacific. What allowed and encouraged the use of the Indian Ocean were the monsoon winds that blow across the northern Indian Ocean and the waters of Southeast and East Asia.

The term “monsoon” comes from the Arabic *mawsim*, meaning “season.” The blustery southwest monsoon prevails in summer, and the milder northeast monsoon blows in winter. In simplest terms, the monsoons are determined by the relative temperatures of the Asian landmass and the Indian Ocean. In winter, when the

land is colder than the water, warm air rising over the Indian Ocean draws the northeast monsoon winds from China and Japan toward the Strait of Malacca and from South Asia toward Africa. In summer, when the Asian landmass warms, the southwest monsoon blows from Africa toward India and Southeast Asia and from the Strait of Malacca toward China and Japan. The southern limit of the monsoon winds is about 10°S, near the Tanzania-Mozambique border in Africa, below which blow the trade winds. Winds are variable between the equator and 5°N and north of 20°N.

The winds of the northeast monsoon (December to March) rarely exceed 11–16 knots in the Indian Ocean, but the southwest monsoon averages 22–27 knots in June and September and a strong 28–33 knots in July and August. This made navigation along India’s long exposed west coast very dangerous.

It is difficult and sometimes impossible to make progress against an oncoming wind. However, sailors were reluctant to sail into the unknown with a following wind for the simple reason that if the wind never or rarely reverses direction, it may be impossible to return to one’s point of origin. Because the direction of

➤ EUDOXUS OF CYZICUS

Eudoxus of Cyzicus was probably the captain chosen to lead the voyage from Egypt to India with the shipwrecked Indian sailor in 120 BCE. He is said to have returned with perfumes and precious stones only to have them confiscated by the king. Eudoxus led a second expedition, “But on his return voyage,” according to the first-century Greek historian Strabo, “he was driven south of his course by the winds to the south of Ethiopia, and being driven to certain places he conciliated the people by sharing with them bread, wine, and dried figs (for they had no share of such things), and in return therefore he received a supply of fresh water and the guidance of pilots, and he also made a list of some of their words.” If on this voyage Eudoxus sailed from India on the northeast monsoon and without an experienced pilot, he could easily have been driven south of his destina-

tion. The fact that he could hire pilots on the African coast shows that he was still within the orbit of an active maritime trading world. He returned home with a piece of flotsam that sailors in Alexandria told him was the stem post of a vessel unique to Carthaginian Spain. Concluding that Carthaginians must have circumnavigated Africa from west to east, he fitted out an expedition to do the same. Frustrated by contrary winds in the Atlantic, he returned to Spain. His second expedition, around 100 BCE, sailed into oblivion.

—Lincoln P. Paine

Bibliography

Strabo. *The Geography of Strabo*. 8 vols. Translated by Horace Leonard Jones and J. R. Sirlington Sterrett, London: Heinemann, 1917–1932.

the monsoon winds reverses seasonally, Indian sailors, for example, could sail to Africa or Arabia with the northeast monsoon in the winter, confident that they could return home on the southwest monsoon in the summer. Until the coming of steamships in the nineteenth century, virtually all shipping on the Indian Ocean and in the South China Sea was dictated by the monsoons.

When sailors began to entrust themselves to the monsoons for long-distance voyages is unknown, but maritime commerce on the Indian Ocean is of great antiquity. The earliest record of trade that was likely dictated by the monsoons was that between Mesopotamia and the Indus Valley, via the Persian Gulf and Arabian Sea, in the third millennium BCE. The Achaemenid Persian emperor Darius attempted to open trade between the Persian Gulf and the Red Sea, which suggests that the monsoons were known, if not fully exploited, in the late sixth century BCE. When Alexander the Great turned back from the Indus River two centuries later, he sent part of his army by sea under command of Nearchus. According to the historian Arrian, after building a fleet near modern Hyderabad, Pakistan, Nearchus had to wait until “the seasonal winds had sunk to rest, which continue blowing from the Ocean on to the land all the summer season, thus making it impossible to sail.”

The second century BCE represents a watershed in the development of Indian Ocean trade. One theory holds that this is when sailors from Ptolemaic Egypt discovered the seasonal nature of the monsoon winds, although Nearchus had remarked on these a century before. Whatever the reason, direct trade between Egypt and India seems to have begun after 120 BCE, when a shipwrecked Indian merchant was rescued on the Red Sea and brought to Alexandria where, restored to health, as Strabo (64 BCE–23 CE) chronicled “he promised to act as guide on the trip to India for the men who had been previously selected by the king.”

From this period, there was more or less regular traffic between the Indian Ocean and the Mediterranean via Egypt. Although the written record of Mediterranean and later European authors provides the greatest detail about this commerce, Asian merchants probably profited more

from the monsoon trade, which sent spices and silks west in exchange for bullion. The balance of trade began to turn only in the eighteenth century CE, 100 years before the steamship enabled seafarers to all but ignore the monsoons that had set the rhythm of trade for millennia.

—Lincoln P. Paine

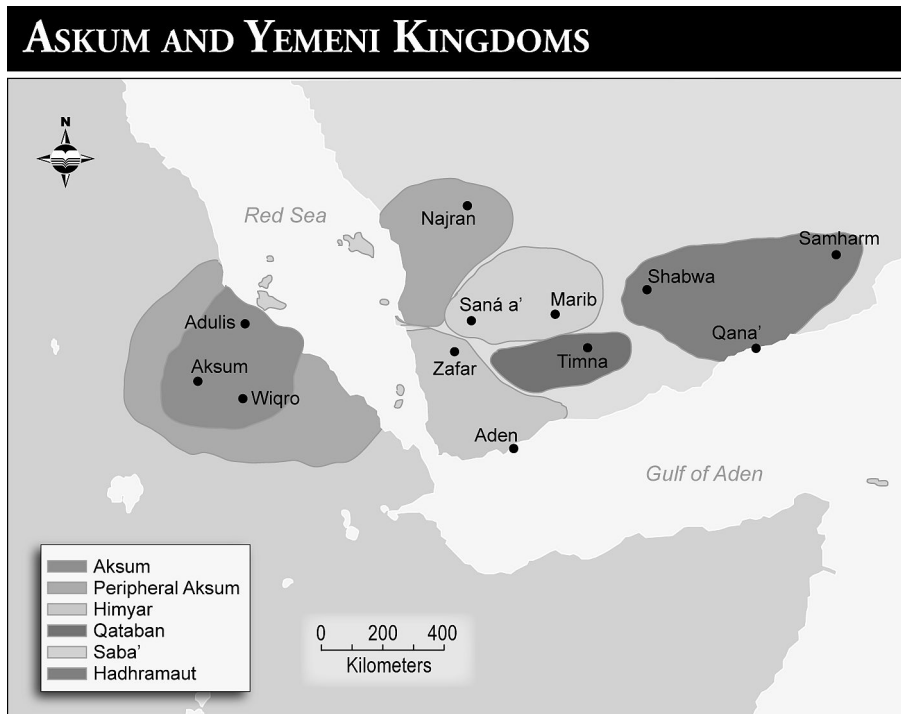
Bibliography

- Arrian. *The Anabasis of Alexander and Indica*. 2 vols. Translated by P. A. Brunt. Cambridge: Harvard University Press, 1976–1983.
- Hourani, George F. *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*. Revised and expanded by John Carswell. Princeton, NJ: Princeton University Press, 1995.
- Reade, Julian. *The Indian Ocean in Antiquity*. London: Kegan Paul, 1996.
- Strabo. *The Geography of Strabo*. 8 vols. Translated by Horace Leonard Jones and J. R. Sitlington Sterrett. London: Heinemann, 1917–1932.

Ancient Aksum—An Ethiopian Trade Kingdom

The Ethiopian city of Aksum (also Axum) was once the capital of an African trading empire that took advantage of its strategic position near the trade routes of the Red Sea. Roman, Persian, and Indian merchants traded goods along this route, which itself connected (in India) to the Silk Roads. Goods from Africa, the Mediterranean, and Asia all passed through Aksum's harbors, making it an extremely cosmopolitan center. The trade route is mentioned in the ancient Greek *Periplus of the Erythraean Sea* (a periplus was a type of ancient text that listed ports in the order in which they were located on a route).

Aksum itself was located inland, but it controlled two major harbors: Adulis and Avalites. These two harbors were connected to a series of African inland trading routes that brought goods from northwestern Africa to Aksum that were sold for the exotic goods of the Romans, Indians, and Persians. Aksum's own resources were diverse. Gold and iron deposits, agricultural products (especially wheat and barley), animal products (such as ivory and rhinoceros horn), and slaves were all goods that the Aksumites sold to Red Sea traders.



The origins of Aksumite culture are somewhat obscure. Scholars used to argue that these were the descendants of Sabaean (southern Arabian) immigrants. More recently, scholars have suggested that the Aksumite kingdom was an indigenous development and that the Semitic language spoken in the kingdom was spoken in Africa long before Sabaean. Ge'ez, the language of Ethiopia, was spoken there from at least 2000 BCE and possibly earlier. Ge'ez was the main language of the Aksumites (for which they developed their own alphabet), and it is still used in liturgical contexts in the Ethiopian Christian Church today. Around 324 CE, Christianity is adopted by the Aksumite Kingdom. Prior to that, the religion of the Aksumites seems to have been a mixture of southern Arabian and Egyptian deities; most of what is known has been reconstructed from epigraphic sources (especially personal names that mention various deities) and iconography found on artifacts.

During the first century CE, the city of Aksum became a major power in the Horn of Africa; its imperial expansion was fueled by profits from the recently developed Red Sea routes, routes made possible through innovations in the

use of monsoons for sailing in the Indian Ocean. At its height, the empire of Aksum encompassed northern Ethiopia, northern Sudan, and Eritrea in Africa. At some points, it also wielded influence over what is now known as Yemen on the Arabian Peninsula.

—Kevin M. McGeough

➤ THE ARCHAEOLOGY OF AKSUM

Much of the archaeological work at the city of Aksum has concentrated on the elite residences and elite graves associated with the city. Many of the larger structures were constructed on stone bases, and the buildings would have been entered through monumental staircases. Most noteworthy of Aksumite material culture are the monumental stelae that were presumably used as grave markers for elites. The largest of these is over 108 feet (33 meters) in height. It has been suggested that they represent many-storied buildings, as various inscribed drawings of architectural features can be discerned on some of them.

—Kevin M. McGeough

Bibliography

- Fattovich, Rodolfo, et al. *The Aksum Archaeological Area: A Preliminary Assessment*. Naples: Istituto Universitario Orientale, 2000.
- Michels, Joseph W. *Changing Settlement Patterns in the Aksum-Yeba Region of Ethiopia: 700 BC–AD 850*. BAR International Series 1448. Oxford, UK: Archaeopress, 2005.
- Mukhtār, Muhammad Jamāl al-Dīn. *Ancient Civilizations of Africa: General History of Africa, 2*. London: Heinemann, 1981.
- Phillipson, David W. *Ancient Ethiopia: Aksum; Its Antecedents and Successors*. London: British Museum, 1998.

The Promotion of Trade through Buddhist Sanghas

Since at least the first century CE, Buddhism has been an important vector of Asian trade. Reliant as they were on alms for funding their sanghas, or temples, Buddhists were sympathetic to merchants with whom many Buddhist missionaries traveled from India through the Hindu Kush and Karakoram mountains into central Asia and

China and across the Bay of Bengal to Southeast Asia and China. The intimate relationship between Buddhism and trade is seen in the *Jatakas*, stories about the Buddha's past lives as a Bodhisattva (enlightened being). A number of these tell of the Bodhisattva as a merchant traveling to Southeast Asia for jewels, herbs and spices, aromatic woods, and other rarities.

Buddhist monks were particularly well known for their study of the medicinal use of herbs, ointments, plants, and other items. This knowledge was collated in pharmacopoeias (treatises on drugs and their uses) that were highly sought after as were the medicinals prescribed, many of which came from tropical areas. Traffic in these goods, together with religious texts and paintings, proved a major stimulant to trade in the early centuries of the Common Era, especially between India and Southeast Asia to the south and central Asia and China in the north. Relics of the Buddha were another popular item of exchange, and among the first so traded was a branch of the bodhi tree under which the Buddha achieved enlightenment in northern India. The tree was trans-

► BUDDHIST BOOKS OF DISCIPLINE

Between 399 and 414 CE, the Chinese Buddhist Faxian traveled from China to India “in Search of the Buddhist Books of Discipline.” In crossing the deserts of the Tarim basin of western China and the mountains of Tibet, Pakistan, and India, he followed a route carved out—sometimes literally—by generations of intrepid traders. In the following extract, Faxian offers a vivid account of the terrifying track that all travelers, whether monk or merchant, had to traverse along the upper reaches of the Indus River in Jammu and Kashmir, the northernmost state in India.

“The travellers went on to the south-west for fifteen days (at the foot of the mountains, and) following the course of their range. The way was difficult and rugged, (running along) a bank exceedingly precipitous, which rose up there, a hill-like wall of rock, 10,000 cubits from the base. When one approaches the edge of it, his eyes become unsteady; and if he wished to go forward

in the same direction, there was no place on which he could place his foot; and beneath were the waters of the river called the Indus. In former times men had chiseled paths along the rocks, and distributed ladders on the face of them, to the number altogether of 700, at the bottom of which there was a suspension bridge of ropes, by which the river was crossed, its banks being there eighty paces apart.”

Faxian returned to China by ship across the Bay of Bengal and the South China Sea.

—Lincoln P. Paine

Bibliography

- Fa-hien [Faxian]. *The Travels of Fâ-hien: A Record of Buddhistic Kingdoms, Being an Account by the Chinese Monk Fâ-hien of His Travels in India and Ceylon (A.D. 399–414) in Search of the Buddhist Books of Discipline*. Translated by James Legge. 1886; reprint, New Delhi: Master Publishers, 1981.

planted at Anuradhapura, Sri Lanka, in the third century BCE.

Buddhism reached China from the west via the Silk Roads in about the first century CE. Its further growth there was fostered by the opening of a direct sea route from the Strait of Malacca across the South China Sea, and indeed the oldest account we have of such a trip is from a Buddhist monk named Faxian who made the passage in about 413 CE. Shortly before this time, Buddhism had taken on the aspect of a state religion in northern China, and this state Buddhism, which justified rulers in their power, was emulated by the Korean kingdoms of Koguryo, Silla, and Baekche and in the sixth century by the Yamato kingdom in Japan. Relations between Korea and Japan were long-standing, and the Japanese relied on Baekche as a source of iron. But the most conspicuous of the Korean kingdom's exports was the gift, in 538 CE, of Buddhist texts. Buddhism thereafter became a major religious and philosophical force in Japan. The terms by which Japanese Buddhism was augmented are sometimes curious. In response to an appeal from Baekche for help in their war against Koguryo in 544 CE, for instance, the Japanese agreed to send men, horses, and ships in exchange for hostages including a prince, a Confucian scholar, and a Buddhist priest.

It is not always possible to distinguish between sacred and secular trade goods, but the identification of certain exotic plants and animals with Buddhist imagery made them particularly attractive. Peacocks and *kalavinka* birds were the subject of dances that told stories based on Buddhist texts, and dancers, musicians, and their instruments as well as birds made their way to China from India and Southeast Asia, often as official gifts. The *kalavinka* originated in India and spread from there to southern Vietnam, China, and, in the ninth century, Japan, where the dance is still performed. Plants and incense woods were also popular as adornments to temples, as medicinals, and for perfuming homes.

Most notable of the material goods traded between various centers of Buddhism were copies of the sutras and other religious texts. Originals were frequently sought from India, especially in China, while the kingdom of Silla sent a collec-

tion of sutras to the emperor of China in the ninth century. Buddhists are credited with introducing the art of writing from India to Southeast Asia, but they also carried intangible musical, painting, and calligraphic styles from India to central Asia and China. Such transplantation was vital to the survival of Buddhism, which remains strongest in Sri Lanka, Southeast Asia, China, Korea, and Japan centuries after its disappearance from central Asia and India.

—Lincoln P. Paine

Bibliography

- Schafer, Edward H. *The Golden Peaches of Samarkand: A Study of Tang Exotics*. Berkeley: University of California Press, 1963.
- Sen, Tansen. *Buddhism, Diplomacy and Trade: The Realignment of Sino-Indian Relations, 600–1400*. Honolulu: University of Hawaii Press, 2003.
- Wang Gungwu. *The Nanhai Trade: The Early History of Chinese Trade in the South China Sea*. Singapore: Times Academic Press, 1998.

Merchants and Trade in Qin and Han China

In early imperial China, merchants embodied a contradiction. On the one hand, many people engaged in commercial activities, and wealthy merchants commanded respect and influence. On the other hand, deeply suspicious of their wealth, the state sought to control and repress them. Hence, even though both internal and external trade flourished, the government never viewed commercial activity positively.

Trade flourished in early imperial China as never before. A number of factors were responsible for this situation: the Qin dynasty's creation of an extensive infrastructure in roads and canals; its unification of weights, measures, and currency; and the Han dynasty's peace and stability. As the great historian Sima Qian (ca. 145 or 135 BCE–86 BCE) tells us, "After the Han rose to power, the barriers and bridges were opened and the restrictions on the use of the resources of the mountains and lakes were relaxed. As a result, the rich traders and great merchants traveled all around the empire distributing their wares to every corner so that everyone could

► "THE GATE OF THE EASTERN MARKET"



This is a second-century CE rubbing of an impressed brick from Sichuan. On the left side, there is the gate. Written above it are the words, "The gate of the Eastern Market." On the right-hand side there is the tower, with a drum on the second story that was struck to signal the market's opening and closing. From this tower, officials also kept watch of market dealings. On the lower left, there is a man selling cooked food.

—Keith N. Knapp

Source

Richard C. Rudolph and Wen Yu, *Han Tomb Art of West China* (Berkeley: University of California Press, 1951), 93.

buy what he wanted." Indicative of trade's profitability, Sima Qian tells us that commoners could expect a 20 percent annual profit on any investment; consequently, "If a man is trying to work his way up from poverty to riches, then farming is not as good as handicrafts, and handicrafts are not as good as trade." Those merchants who dealt in the commodities that were most in demand, such as iron, liquor, and salt, could amass huge fortunes. Wealthy traders commanded so much respect that Sima Qian devoted a whole chapter of his history to them. He described them as having wealth that rivaled the most privileged members of society: "A family with a thousand catties of gold may stand side by side with the lord of a city; the man with a hundred million cash may enjoy the pleasures of a king. Rich men such as these deserve to be called 'untitled nobility,' do they not?" A few of these mer-

chants translated their wealth into political influence: Lü Buwei (d. 235 CE) became chancellor of the Qin kingdom, and Sang Hongyang (152–80 BCE) was chief economic minister under Emperor Wu of the Han.

During the Han period (206 BCE–220 CE) external trade expanded to a phenomenal degree. When Han armies conquered the Tarim basin, China became connected to the famed Silk Roads, and the Han capital of Chang'an became the route's eastern terminus. China's greatest export was silk. Pastoral nomads from the north were so eager to trade their animals for Chinese silk, iron, and luxury goods that if the Chinese government denied them access to the frontier markets, they would make war on the Chinese. The so-called barbarian market in the city of Wuwei, in the Gansu Corridor, was so popular that it opened four times a day. Han China also had extensive overseas trade in the southern seas. Foreign merchants congregated in Hanoi (in present-day Vietnam) and Panyu (Canton or Guangzhou) to exchange pearls, ivory, slaves, glass, amber, ivory, and incense for Chinese goods.

Despite their wealth and influence, the governing class despised merchants. By the Warring States period (476–221 BCE), philosophers of all schools viewed them as parasites who produced nothing and earned their profits deceptively. During the Qin, merchants were viewed as so lowly that they, along with other despised groups such as convicts and marrying-in sons-in-laws, were banished to the frontier. The Han government forbade merchants from wearing silk, riding in chariots, carrying weapons, and becoming officials. Merchants also had to pay much heavier poll and property taxes than others. This disdain for commerce also caused authorities to closely regulate market activities. Urban trading had to take place in government-controlled walled markets. Officials decided which traders to let into the market and watched them from an observation tower located in the middle of the marketplace. Those who sold the same wares had to be in the same location. Goods had to have price tags, and contracts had to be drawn for large purchases. Rural markets were much less tightly supervised.

Despite the Qin and Han governments' efforts to discourage farmers from becoming mer-

► MOVEMENT OF MEN OF TALENT IN WARRING STATES CHINA

The Warring States period (453–221 BCE) in China saw an increase in travel for employment and patronage as opportunities increased for men outside the native aristocracy. Rulers and nobles supported talented men, both for the benefit of their service and for prestige. The best-known group was gathered by the king of Qi.

States were becoming larger, and warfare was becoming more intense during this time. Rulers were willing to do almost anything to gain advantages over other states. They also wanted to weaken aristocratic families at home. These factors led them to look for outsiders to employ. Talented men had a better chance of being noticed and employed. If they were not successful at home, they could try other states.

Not all travelers had talents that were directly beneficial to the state. There are stories of rulers who assembled swordsmen or men who made up logical puzzles. In some cases, rulers supported men with lodging and a stipend and did not require any service from them. However, most of the travelers were involved in diplomacy and statecraft,

and they had an important impact. Qin, the state that unified China, increased its power through employing men from other states as ministers.

The most famous group of talented men was in Qi. The Jixia group at times included many of the most significant thinkers of the day, including Mengzi (Mencius), Xunzi, and Zou Yan. It is sometimes known as the “Jixia academy,” but this is a misnomer. It was not a group of students gathered under one teacher, as in Plato’s Academy, nor was there a set curriculum as in the later Imperial Academy. The king supported them mainly for prestige, not for teaching.

—David Elstein

Bibliography

Crump, J. I., trans. *Chan-kuo Ts’u*. Rev. ed. Michigan Monographs in Chinese Studies No. 77. Ann Arbor, MI: Center for Chinese Studies, 1996.

Loewe, Michael, and Edward L. Shaughnessy. *The Cambridge History of Ancient China*. Cambridge: Cambridge University Press, 1999.

chants, many peasants engaged in commercial activities. Farmers could sell either cash crops or goods they manufactured during the agricultural calendar’s slow periods. In fact, farmers might travel as far as 124 miles (200 kilometers) away to sell their goods. A humorous mock contract that describes the duties of a slave gives us some insight into the farmer’s commercial life: “He shall buy mats at Mianting, and when traveling between Du and Luo he should trade in small markets to get powder [money] for the ladies. When he returns to Du he shall carry hemp about on his pole, transporting it out to the side markets. He shall lead dogs [for sale], and peddle geese. At Wu-yang, he shall buy tea, and he shall carry lotus on his pole from the Yang family pool. . . . He shall make many knives and bows, and take them to Yizhou to barter for oxen and sheep.” Indicative of how interwoven commercial activities were with agricultural life, a second-century manual, the *Monthly Commands for the Four Classes of People*, instructs

estate owners to buy and sell goods during nine months of the year: one buys the staples in the season when they are cheap and sells them when they are much more expensive. This combination of agrarian and commercial enterprises led to the emergence of large landholding families that often dominated local politics. Liu Xiu, Emperor Guangwu (6 BCE–57 CE), established the Eastern Han dynasty with the aid of three such farmer-merchant families.

In sum, in both theory and law, early imperial governments loathed merchants and endeavored to discourage farmers from becoming them. Nevertheless, due to the unity and stability that the two governments established, trade flourished as never before, both within China and with other countries. Since commerce was so important and lucrative, many Chinese became merchants or engaged in mercantile activities. Some of the wealthiest of these merchants became men of great political influence.

—Keith N. Knapp

Bibliography

- Barbieri-Low, Anthony J. *Artisans in Early Imperial China*. Seattle: University of Washington Press, 2007.
- Ch'u T'ung-tsu. *Han Social Structure*. Edited by Jack Dull. Seattle: University of Washington Press, 1972.
- Ebrey, Patricia. "Estate and Family Management in the Later Han as Seen in the *Monthly Instructions for the Four Classes of People*." *Journal of the Economic and Social History of the Orient* 17(2) (1974): 173–205.
- Hsu Cho-yun. *Han Agriculture: The Formation of Early Chinese Agrarian Economy (206 B.C.–A.D. 220)*. Edited by Jack L. Dull. Seattle: University of Washington Press, 1980.
- Watson, Burton, trans. *Records of the Historian: Chapters from the Shih Chin of Ssu-ma Ch'ien*. New York: Columbia University Press, 1969.
- Xiong, Victor Cunrui. "The Four Groups and Farmer-Merchant Antithesis in Early Imperial China." *Chinese Historians* 8 (1995): 85–144.
- Yü Ying-shih. *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations*. Berkeley: University of California Press, 1967.

Opening of the Arabian Sea

Trade between the Mediterranean region and India had been reliant on land routes for centuries. For this reason, goods such as spices passed through the hands of numerous middlemen, thus causing prices to soar. Three basic routes existed, all of which entailed some land route. The all-land route from the Levant to In-

dia was one, while sea travel through the Persian Gulf and land was the other. Finally, a route from the Mediterranean to the Red Sea and then through the Arabian Seas was used. Although for Mediterranean civilizations this may have seemed the most obvious route, it was actually more difficult simply due to the fact that the strong monsoon winds made it quite hazardous for inexperienced sailors. The need and desire for more affordable spices combined with military expeditions helped open the Arabian Sea as a viable route.

Not until sailors mastered the monsoon winds did the Arabian Sea become a practical route. Until this occurred, ships tended to hug the coastline or prefer to sail to ports and then rely on land caravan routes. For Indians and others used to the monsoons, the Arabian Sea was opened very early, as trade between India and East Africa existed for centuries. By using the monsoon winds, sailing across the Arabian Sea becomes relatively easy for at least four months of the year. The first recorded instance of Europeans, such as the Romans, realizing the importance of the monsoon winds appears in the first century CE. If any Mediterranean societies used the monsoon winds on a regular and recognized basis prior to this, it is unrecorded. Although Alexander the Great's fleet entered the Arabian Sea, it followed the coast in order to maintain contact with the Macedonian Army.

The key moment in the Arabian Sea trade, however, occurred in the first century BCE when sailors began to use the southwest monsoon

➤ RIDING THE MONSOON WINDS

The seasonal monsoon winds predicated the Arabian Sea trade. The term "monsoon" comes from Arabic and means "seasonal wind." Roughly from April to October, the winds blow from Africa in the southwest to the northeast due to the heat waves emanating from Africa and Arabia. Then in the winter, the winds reverse direction and blow from the northeast to the southwest. These seasonal winds not only cut down travel time but also dictated trade cycles. Thus, certain objects

would typically appear in markets at certain times of the year. For instance, Roman merchants would sail to India in the summer and then could return to their homes in the winter. Although such climatic conditions cut travel times significantly, the journey could still be fraught with peril, as in June and July when tropical storms made it particularly dangerous for small ships to leave port.

—Timothy May

ARABIAN SEA AND ROUTE NORTH TO CENTRAL ASIA



winds to sail from ports in the Gulf of Aden to India. By the time of the Roman empire, Roman merchant colonies began to appear in India and along the Arabian Peninsula. These tended to be populations that had always been involved in the trade across the Arabian Sea such as Greeks, Egyptians, and Arabs but whose motherlands were now part of the Roman empire. Indeed, it was the expansion of trade through the Red Sea to the Arabian Sea that was driven primarily by Roman demand for silks and spices. During the Hellenistic age, the Arabian Sea route was largely neglected. Once Rome extended its control over Syria and Egypt, the Roman elites developed a taste for Eastern luxuries.

The opening of the Arabian Sea had a tremendous impact on ancient trade routes. Water routes have always been more affordable for the simple fact that a boat can carry significantly more goods than any animal. Although trade between India and Africa thrived for centuries, with the opening of the Red Sea in the first centuries BCE and CE, Eastern luxury items such as silks and spices entered the Mediterranean region in unprecedented numbers. Indeed, Romans reported that in addition to spices such as cinnamon and pepper, the Indian ports were filled with multicolored textiles, tin, diamonds, sapphires, pearls, and Chinese silk, not to mention numerous foreign merchants. Even though wars between the Roman empire and the Parthian empire disrupted the overland routes known as the Silk Roads, it had relatively little impact on the sea routes. While Roman influence had little impact on India, other facets of Mediterranean culture and society entered regions between the Mediterranean and Arabian Sea, including the spread of Christianity into Aksum (present-day Ethiopia) in the fourth century CE. Aksum also derived architectural forms from Syrian, Roman, and Indian styles.

—*Timothy May*

Bibliography

- Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

Spice-Trade Kingdoms of Yemen

Southern Arabia is the home of a number of plant species that are used in the production of aromatic oils and spices (such as frankincense and myrrh). Demand for these spices by the Romans, Parthians, and Kushans led to the formation of very wealthy kingdoms in what is now known as Yemen. Over the course of the period from 1000 BCE to 300 CE, numerous small polities in Yemen competed and colluded in providing Eurasia and Africa with these valuable spices.

The people of ancient Yemen spoke Old South Arabian, which they wrote using the Old South Arabian script, and much of our historical evidence for the Yemeni kingdoms comes from inscriptions. These inscriptions have been particularly important in helping scholars reconstruct the religions of the region. Generally, the religions of Old South Arabia emphasized solar, lunar, and stellar deities, some of whom were related to deities known from the Levant (such as Athtar).

The largest (and best understood) of the Yemeni kingdoms was the kingdom of Saba, which some have suggested was the Sheba of the Hebrew Bible. The Sabaeans were located in southwestern Yemen, with their capital city being Marib, near the modern city of Sana'a. The Sabaeans were farmers, a subsistence practice made possible in southern Arabia through intensive irrigation schemes involving massive earthworks. The most notable of these irrigation projects was the Marib Dam, which was located upstream from Marib on the Wadia Adhanah. Construction on this massive dam began around 750 BCE. It consisted primarily of packed earth attached to two groups of stone outcroppings located on each side of the river.

Other kingdoms that participated in the spice trade throughout the period from 1000 BCE to 300 CE were the Qataban, Ma'in (the Minaeans), and Ausan (or Awsan) kingdoms, all located within southern Arabia. The kingdom of Himyar also played a role in the spice trade but first arose around 100 CE, later than the other Yemeni kingdoms. The relationships among these kingdoms vacillated between commercial partnerships and outright warfare. Most of these conflicts stemmed from attempts to control various elements of the

➤ FRANKINCENSE AND MYRRH

Frankincense and myrrh were the two foundations of the southern Arabian spice trade in antiquity and were highly prized by the Romans and by the peoples of South Asia. Frankincense is an aromatic oil made from the milky sap of the *Boswellia* tree. When burned, it gives off a sweet smell. Myrrh is similar in that it is also derived from tree sap, but many trees produce sap that can be classified as myrrh. Those trees are generally found in Yemen, Somalia, Ethiopia, and Jordan, all

regions that may have been connected during the period from 1000 BCE to 300 CE by spice routes. Myrrh was especially valuable as a constituent element in a variety of perfumes. Roman demand for myrrh was especially high because it was used to mask the smells of bodies being cremated, and thus Roman funerary practices can be seen as one of the driving forces of the southern Arabian spice trade.

—Kevin M. McGeough

spice trade. The military conflicts within Old South Arabian society are evidenced by the fortifications that surrounded the major urban centers. The earliest city walls were constructed of large boulders; later fortifications were constructed of cut ashlar masonry, a sign of the growing wealth of the cities. Generally, the Arabian Desert acted as a natural boundary against outside invaders, and the fortifications can be safely presumed to reflect warfare between the kingdoms. However, under Augustus, the Romans attempted to conquer this region (what they referred to as *Arabia Felix*), an invasion that was unsuccessful.

The spice trade was the source of much wealth for these kingdoms. Among later Arabic-speaking communities, the word “Marib” evoked images of wealth beyond reckoning, and no doubt this reflects the historical situation to some extent. Spices and aromatics were exported to the Mediterranean, Persia, India, and Africa from their production center in southern Arabia. Imported Roman, Parthian, and Nabataean pottery found at Old South Arabian sites demonstrates direct trade connections with these cultures. Old South Arabian traders had a monopoly on frankincense, but myrrh and other products were also shipped from this region by camel through the Arabian Desert or by the Red Sea trade routes to India. Scholars used to believe that the rise of the Red Sea maritime trade routes undermined the use of overland camel routes. Recent archaeological excavations, however, have demonstrated that both trade routes flourished throughout the first centuries of the Common Era.

—Kevin M. McGeough

Bibliography

- De Maigret, Alessandro. *Arabia Felix*. Translated by Rebecca Thompson. London: Stacey International, 2002.
- Korotayev, Andrey. *Ancient Yemen*. Oxford: Oxford University Press, 1995.
- Korotayev, Andrey. *Pre-Islamic Yemen*. Wiesbaden: Harrassowitz Verlag, 1996.
- Potts, Daniel T. *The Arabian Gulf in Antiquity*, Vol. 1, *From Prehistory to the Fall of the Achaemenid Empire*. Oxford: Oxford University Press, 1991.
- Tosi, Maurizio. “The Emerging Picture of Prehistoric Arabia.” *Annual Review of Anthropology* 15 (1986): 461–490.

The Nabataeans

The Nabataeans were a nomadic people who controlled the territory and the trade routes of what is today known as Jordan and northern Arabia from at least 312 BCE until their conquest by the Romans in 106 CE. Their exact origins are unknown, but it is likely that they moved into this region from northeastern Arabia as a northern Arabian trade route between Egypt and Babylonia developed. Through controlling a major node along the northern and southern Arabian trade routes, the Nabataeans became very wealthy in a relatively short span of time.

The development of the Nabataean kingdom is an interesting example of the manifestation of Hellenistic society in the Near East. The political culture first appears as a fully Hellenized kingdom, with the Nabataean kings utilizing

THE AL KHAZNEH AT PETRA

One of the most awe-inspiring moments for visitors to Petra in Jordan is when, after passing through a narrow and twisting canyon wall, they get their first glimpse of the Al Khazneh (“The Treasury”), a building with an elaborate facade carved directly into the sandstone of the canyon wall. The facade reflects a striking Hellenistic influence, incorporating the pediments, tholos, and Corinthian columns that one expects to find in Greece. Yet visitors are often disappointed when they enter the building and realize that its name is misleading and that it was not a treasury at all (a name given it because of local legend). Rather, it was the monumental tomb (now emptied) of an ancient Nabataean leader. The “Treasury” is not the only tomb facade found at Petra, and the prominence of tomb facades at the site reflects an interesting fusion of Hellenistic aesthetics within Nabataean society.

—Kevin M. McGeough

Hellenistic titulary and models of governance and organizing their army along Hellenistic lines. The material culture and architecture of the Nabataeans was heavily influenced by Hellenistic aesthetics: buildings are designed according to Greek architectural concepts, towns are planned according to Greek principles, and material culture such as coinage (with Hellenistic themes) is common.

The capital of the Nabataean kingdom was Petra, in modern-day Jordan. The kings who ruled from Petra likely ruled a relatively decentralized kingdom, which is perhaps better thought of as a political alliance of diverse groups spread throughout the Nabataean territory. Petra’s strategic location at the center of the Arabian trade routes and its fortresslike natural caverns made this a logical location for a desert community and regional power base. The hydrological skills of the Nabataeans allowed them to take advantage of Petra’s natural water resources (a perennial spring) and create a lush community in the rose-red cliffs. These hydrological skills allowed the Nabataeans to engage in agriculture, which allowed the community to

survive after the decline of the overland trade routes.

Nabataean inscriptions have been found in the Sinai and Egyptian deserts, suggesting that there was a Nabataean presence beyond Jordan along the northern Arabian trade route. This trade route that linked Egypt with Babylon was only one of the routes that Petra was located along. The southern Arabian trade of aromatic oils and spices from the Far East continued through Jordan to the Levantine coast. This was one of the major routes that linked Arabia with Roman and Mediterranean culture, and both Strabo and Josephus provide accounts of these people and their relations with the communities of the Mediterranean. The Nabataeans were also known by the Han court in China; the city of Petra was called Li-kan in Chinese.

—Kevin M. McGeough

Bibliography

- Graf, David. “Nabataeans.” In *The Oxford Encyclopedia of Archaeology in the Near East*, Vol. 4, edited by Eric Meyers. Oxford: Oxford University Press, 1997.
- Joukowsky, Martha. “Nabataean Petra.” *Bulletin of the American Schools of Oriental Research* 324 (2001): 1–4.
- Levy, Thomas, et al., eds. *Crossing Jordan: North American Contributions to the Archaeology of Jordan*. London: Equinox, 2007.
- Schmid, Stephen. “The Hellenistic Period and the Nabataeans.” In *Jordan: An Archaeological Reader*, edited by Russell Adams. London: Equinox, 2008.

North and South Routes of the Taklamakan

Traveling from the Chinese capital of Chang’an (Xian) toward the west, the merchants eventually reached the town of Anxi where the route diverged, skirting the northern and southern rims of the 204,634-square mile (530,000-square kilometer) Tarim basin. The basin, surrounded by mountains on both sides, contains the huge Taklamakan Desert, “the place from which no living thing returns alive.” At Anxi, merchants traveling west traded their horses and mules for Bactrian camels, which were better able to tra-

THE BACTRIAN CAMEL

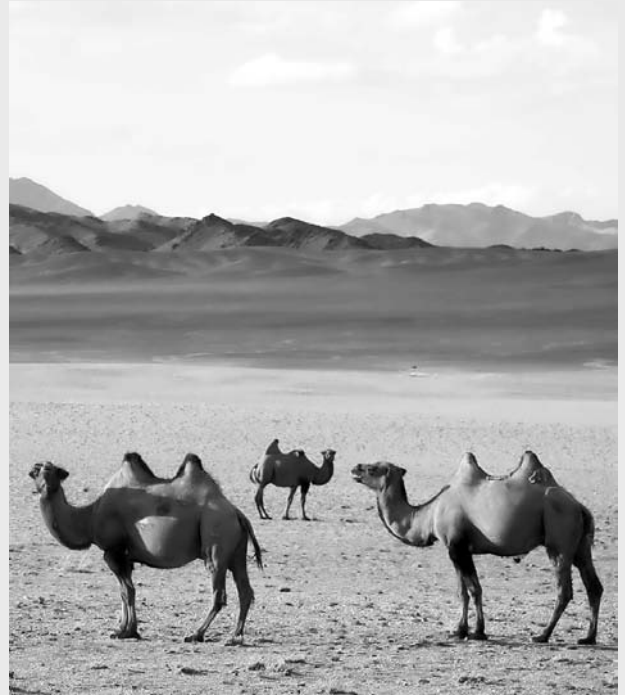
The Bactrian camel (*Camelus bactrianus*) is indigenous to central Asia. It is distinct from its Arabian cousin, having two humps. In the winter, the Bactrian camel grows a long shaggy coat to help protect it from the bitter cold weather. From central Asia the Bactrian camel spread both east and west. The animal appears in Persian art and Greek vases as early as the fifth century BCE but was unknown in central China until the fourth century BCE. With the opening of the trade routes through central Asia, the Chinese became familiar with the camel, and it was used as a pack animal for the route around the Taklamakan Desert.

—Rebecca Wendelken

Bibliography

Knauer, Elfriede Regina. *The Camel's Load in Life and Death*. Zurich: Akanthus, 1998.

Bactrian camels in the Gobi Desert, Mongolia. (Midkhat Izmaylov)



verse the hostile, arid route to Kashgar on the other side of the basin.

The northern route was known as Tianshan Bei Lu, or the “road north of the Celestial Mountains.” Leaving Anxi, travelers endured a two-week journey across the Black Gobi with its dry climate and frequent sandstorms, finally reaching Hami, the first of the oasis towns. Water was brought from the Tianshan Mountains to Hami and other northern oasis towns through underground canals called *kariz*. From Hami the route crossed the southern foothills of the Tianshan Mountains to Turfan, the second-lowest place on earth at 492 feet (150 meters) below sea level. It was known for its oppressive heat and lack of rain. Cities along the northern route engaged in agriculture like Hami but also exploited the mineral deposits in the surrounding mountains, which became import trade items. Copper, lead, iron, gold, orpiment (a yellow oxide of lead used in cosmetics by the Chinese), and sal ammoniac (used in leather making) were mined and traded along with many other minerals.

Leaving Turfan, travelers continued their journey westward and passed through Jiaohe (Yarkhoto), Toksan, Karashahr, and Kuqa (Kucha, Qiuci). In the second century CE Kucha had a population of 150,000 and was another crossroads. From Kucha you could travel northward and cross the Tianshan Mountains and turn southward and cross the desert to Khotan or turn southeast to Dunhuang. If you continued westward you passed through Aksu, finally arriving at Kashgar, 2,299 miles (3700 kilometers) from Chang’an.

The Southern Silk Road was called Nan Shan Bei Lu, or the “road north of the Southern Mountains.” It was shorter and somewhat safer than the Northern Route with fewer brigands, but it was also more difficult to travel on. There were fewer oases and towns, and they were farther apart. Leaving Anxi, the traveler passed through Dunhuang with its Buddhist caves and traveled through the Yangguan pass to Loulan. This region had a very strong Chinese influence from at least the second century BCE. Loulan, Niya, and

other cities near Lake Lop Nor were abandoned in the third and fourth centuries as the rivers dried up, leaving them without a source of water. The main road then shifted to the south. Farther on was Khotan, founded in the third century BCE and known for its jade. It was also the first oasis kingdom along the Tarim basin to embrace Buddhism. Continuing, a traveler passed through Yarkand and finally to Kashgar. In Kashgar, west-bound merchants either traded their goods and returned home or traded their camels for mules and horses and continued on their way. Merchants traveling east exchanged their carts for the hardy Bactrian camels for the dry and dusty trip to Anxi.

—*Rebecca Wendelken*

Bibliography

- Li Jian. "The Ancient Sites on the Silk Road: Expeditions and Explorations from the Taklamakhan to Chang-an." In *The Glory of the Silk Road: Art from Ancient China*, edited by Li Jian. Dayton, OH: Dayton Art Institute, 2003.
- Sheng, Angela. "Textile Finds along the Silk Road." In *The Glory of the Silk Road: Art from Ancient China*, edited by Li Jian. Dayton, OH: Dayton Art Institute, 2003.
- Tucker, Johnathan. *The Silk Road: Art and History*. London: Art Media Resources, 2003.
- Wood, Francis. *The Silk Road: 2000 Years in the Heart of Asia*. Berkeley: University of California Press, 2002.

Development of River-Based Trade in Celtic and Roman Europe

Later prehistory (ca. fifteenth century BCE to first century CE) in central and western Europe and the history of the Roman period (ca. second century BCE to fifth century CE) was characterised by increasingly wide-ranging intercultural contacts. These contacts led to a growing similarity in material culture across much of Celtic and Roman Europe. From the available evidence, it is quite clear that trade played a significant role in this process. European waterways facilitated large-scale trade and brought peoples into closer contact with one another.

Diodorus of Sicily (5.26), states that "many Italian merchants see Gaul as the opportunity for quick riches. These traders bring the wine by boat on the rivers and by wagon through the plains." The distribution of archaeological evidence of imported goods, particularly imports from the Mediterranean—often associated with wine in later prehistory—broadly confirms this statement. Starting out with the earliest southern imports, wine amphorae from Massalia (Marseilles), and wine-drinking cups from Athens, the distribution patterns reveal clustering along the main rivers, at first mostly along the Rhone, the Rhine, and the upper Danube. The same general pattern is later found in the distribution of wine amphorae of the late second and first centuries BCE. The importance of the river-based trade is further illustrated by the finds of port facilities (e.g., in Geneva) and a relatively dense network of bridges and roads, connecting the rivers to the surrounding countryside, as evident from numerous archaeological finds from Switzerland, which was one of the main late prehistoric routes connecting the Rhone with the Rhine.

However, while the southern imports help to illustrate the river-based trade networks that crisscrossed later prehistoric Europe, it would be wrong to assume that they were the main driving force in its evolution. Rather, much of this trade network must have developed locally to transport various kinds of unevenly distributed raw materials such as copper, tin, and salt across much of central and western Europe. For instance, the massive exploitation of inland salt sources—both salt springs and the alpine salt mines—seems to have taken off in the late Bronze Age, with the main distribution of the central and western European Hallstatt culture closely corresponding to the likely distribution zones of inland salt. Similarly, large amounts of tin had to be transported across much of Europe throughout the Bronze Age, with river-based transport being the most likely vehicle for trade in this valuable resource.

With the increasing importance and even wider distribution of mass-produced generic goods during much of the Roman period in temperate Europe, the significance of river-

based trade grew even greater. Even though many Roman roads were reasonably well built and maintained, large amounts of any kind of goods were still much more easily and efficiently transported along the navigable rivers. As a consequence, most of the major urban centers of Roman Europe are located conveniently along the main waterways.

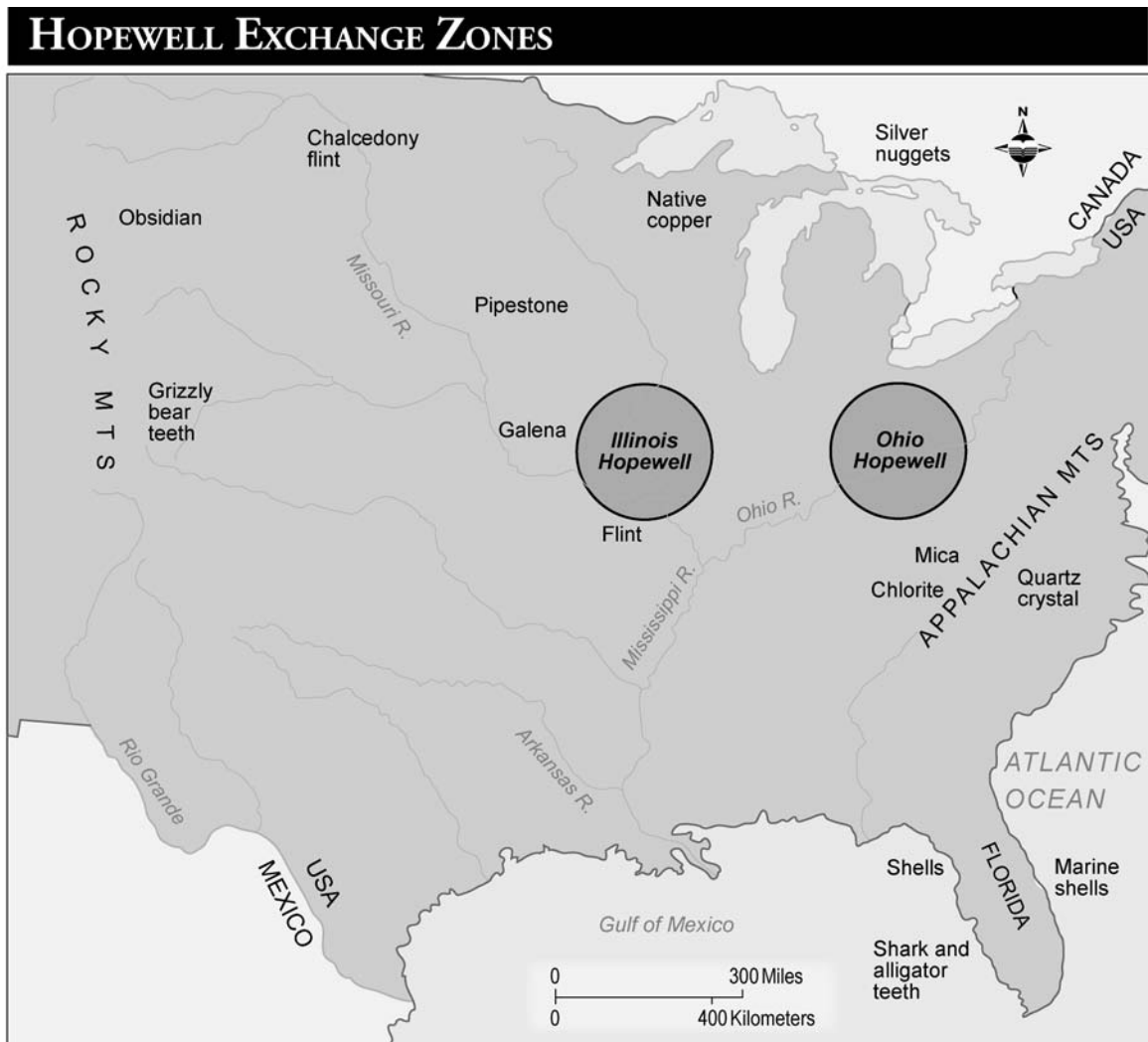
—Raimund Karl

Bibliography

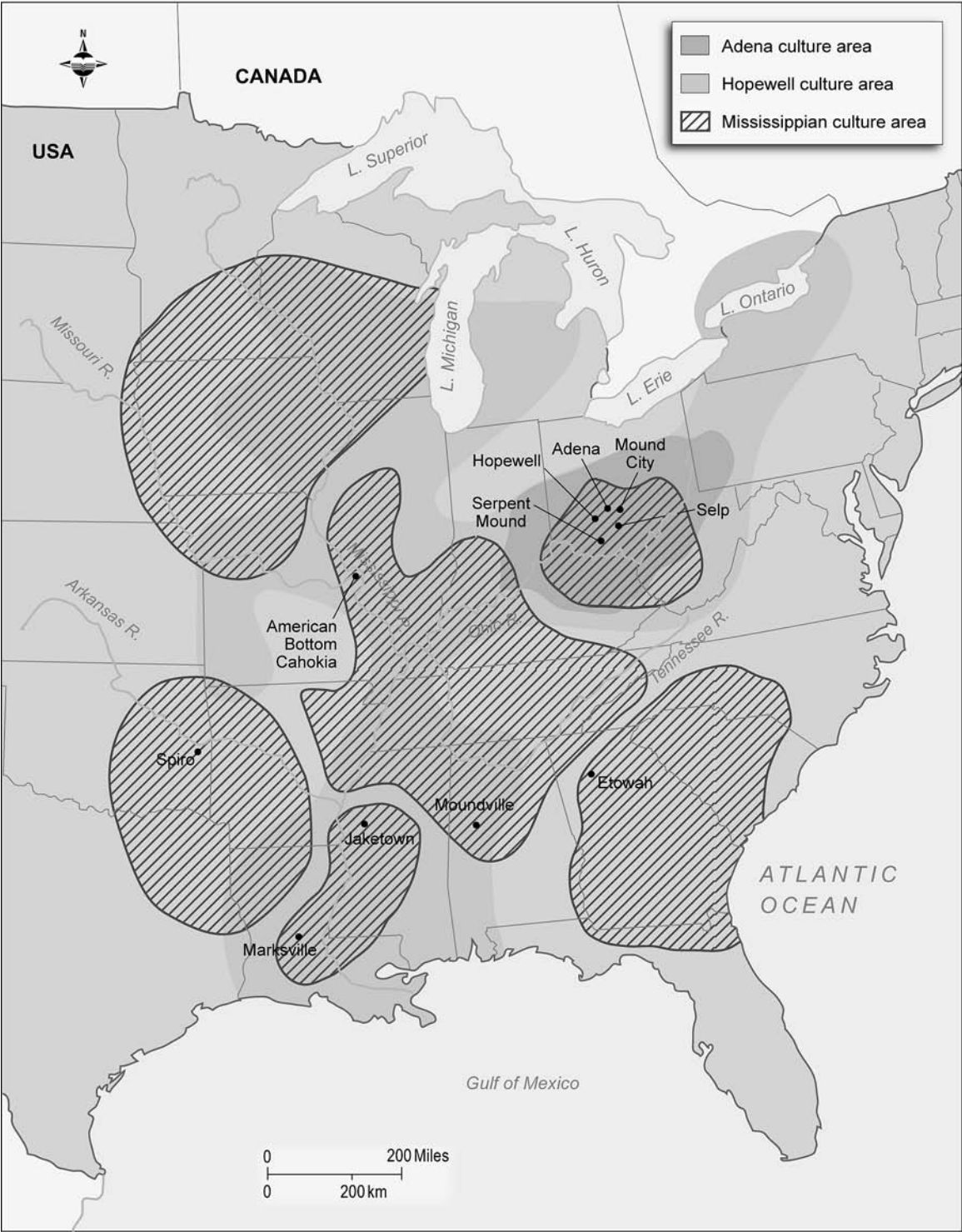
- Cunliffe, B. W. *Facing the Ocean: The Atlantic and Its Peoples, 8000 BC-AD 1500*. Oxford: Oxford University Press, 2001.
- McGrail, S. *Ancient Boats in North-West Europe: The Archaeology of Water Transport to AD 1500*. London: Longman, 1998.

Adena and Hopewell Exchange

The Adena and Hopewell trade networks of eastern North America developed from earlier Late Archaic period patterns of exchange. The movement of Great Lakes copper, marine shell, and various cherts are three important materials that show some continuity from the Late Archaic through the Hopewell period. Another important component of these Late Archaic, Adena, and Hopewell practices is that the nonlocal objects were deposited (at least eventually) in caches or with burials. Adena and Hopewell communities often covered these burials and ritual caches with mounds.



TRADE NETWORKS OF THE ADENA AND HOPEWELL



Early Adena societies emerged in the central Ohio River valley around 500 BCE and developed in southern Ohio into Hopewell communities around 50 BCE. However, Late Adena communities in West Virginia and Kentucky overlap in age with the Hopewell societies of southern Ohio. Lake Superior copper, mica, tubular pipes, steatite (soapstone), and various cherts are some of the nonlocal materials that were acquired by Adena communities. Some Late Adena iconographic styles also appear in the lower St. Lawrence drainage and the Delmarva Peninsula.

The beginning of the Hopewell Horizon is often based on the presence of particular ceramic designs that first appear in the Lower and central Mississippi River valleys as well as the Illinois River valley. Southern Ohio peoples incorporated these influences into their pottery around 50 BCE, and the Hopewell period continues to about 400 CE. Ideas, materials, and finished objects moved widely throughout eastern North America during this period. Characteristic iconographic motifs include raptorial birds and spoonbill ducks depicted on a variety of material media, such as pots, copper plates, and engraved into bone. Hopewell peoples procured a number of important raw materials, which were often crafted into exquisite ceremonial objects, include Lake Superior copper, mica, marine shells, channel coal, pearls, exotic chert, obsidian, galena, meteoric iron, silver, and a small quantity of gold. However, not all the communities of eastern North America participated in these interregional exchange networks, and there is a marked spatial discontinuity to the distribution of many nonlocal objects.

Ohio Hopewell communities appear to have differentially acquired a wide variety of nonlocal materials and ceremonial objects, including animal effigy pipes, that were sometimes deposited in ritual caches. One important example is the 300 pounds (136 kilograms) of obsidian interred under Hopewell Mound 11, located northwest of Chillicothe, Ohio, which appears to have been directly procured from Yellowstone National Park. The direct acquisition of this obsidian is also supported by depiction of big horn rams in Hopewell iconography. Big horn rams are not local to east-

➤ ANIMAL EFFIGY PIPES

Large caches of exquisitely carved Hopewell animal effigy platform pipes were deposited in fired clay basins under Mound 8 at Mound City and the Tremper mound. Smaller quantities of animal effigy platform pipes also occur with burials at various Hopewell mounds. These animal effigy pipes depict in a naturalistic style a veritable menagerie of different mammals, reptiles, and birds, although some stylized motifs occur. While archaeologists believed that most of these pipes were made of Ohio pipestone, recent mineralogical analyses suggest a variety of different pipestone sources from different areas in eastern North America.

—Bretton Giles

ern North America but instead live in the western United States near the obsidian sources indicated by recent chemical analyses. Despite early suggestions that most of these nonlocal objects moved down the line exchange, many nonlocal objects in addition to obsidian may have been directly acquired from distant sources, including meteoric iron and some copper. It is becoming increasingly clear that these objects, materials, and ideas moved through the Hopewell interaction sphere by means of a variety of different cultural mechanisms, including through ritual pilgrimages, the purchase of ritual prerogatives, direct acquisition, and gift exchange.

—Bretton Giles

Bibliography

- Brose, D. S. "Trade and Exchange in the Midwestern United States." In *Prehistoric Exchange Systems in North America*, edited by T. G. Baugh and J. E. Ericson. New York: Plenum, 1994.
- Carr, C. "Rethinking Interregional Hopewellian 'Interaction.'" In *Gathering Hopewell: Society, Ritual, and Ritual Interaction*, edited by C. Carr and D. T. Case. New York: Kluwer Academic/Plenum, 2005.
- DeBoer, W. "Little Bighorn on the Scioto: The Rocky Mountain Connection to Ohio Hopewell." *American Antiquity* 69 (2004): 85-107.
- Mills, W. C. "Explorations of the Tremper Mound." *Ohio Archaeological and Historical Quarterly* 25 (1916): 262-398.

■ Introduction: Modes of Transportation

For the most part, transportation technology in the period from 1000 BCE to 300 CE remained relatively similar to the technologies available prior to this time. Shipbuilding technology altered to some degree, but the fundamental components remained the same. The most intensive use of seafaring vessels was by the cultures bordering the Mediterranean Sea—the Greeks, Persians, Phoenicians, and Romans—who developed substantial navies and shipping fleets.

Land transportation continued much as it had prior to this period as well, although horse-based travel became more prominent in northern Europe and central West Asia than it had been in previous periods. Roman road construction is near legendary; these roads allowed chariots and animal-drawn carts to be used as favored sources of transportation. In other parts of the world it is unclear whether or not chariots and carts were used to travel substantial distances. Certainly use of these vehicles within towns would have been common, but between villages it is less likely. Thus, despite the fact that Chinese chariots and carts have been discovered dating to this time, it is most likely that the Chinese (and other cultures in East and South Asia) trav-

eled predominantly by horseback, given the lack of paved roads. In Mesoamerica, the jungle and marsh terrain and the lack of beasts of burden meant that wheeled vehicles never gained the prominence that they did in other societies. Most traffic in that region was on foot or by water.

Arguably the most dramatic change in this period is the widespread use of the camel. While the camel had been domesticated in earlier periods, its use for transportation seems to have been limited to Mongolia and Arabia. By 1000 BCE the use of the camel had become more widespread, allowing desert regions to be traversed with large quantities of supplies and trading wares.

—Kevin M. McGeough

The Domestication of Camels and the Opening of the Deserts

Despite the importance of the camel to desert dwelling communities, both the *Camelus dromedaries*, or one-humped camel, and the *Camelus bactrianus*, or two-humped camel, were domesticated relatively late. Nonetheless, the camel played a central role in the economic development of ancient Asia, especially in opening trade and travel routes through the desert, whether

➤ CAMELS AND THE ENVIRONMENT

Whether dromedary or Bactrian, the camel is a perfect example of an animal evolving to meet the challenges of its environment. Its nostrils are able to close and shut out wind-blown sands. Long eyelashes serve a similar function for the eyes. The feet of both camels are tough and heavily padded, allowing the animal to endure the hot desert sand as well as sharp and irregularly shaped rocks. Furthermore, it can survive on many plants from which other domesticated animals cannot derive any nutrition.

The most noticeable feature of either camel is its hump(s). The hump is a mass of fat and serves as a reservoir of calories, which provide the

camel energy when it cannot graze. Thus, when the camel is fed regularly and well the hump will stand erect, as the fat reserve is not used. As the camel begins to burn calories from the hump fat, it gradually becomes somewhat floppy.

Although the camel can drink almost 13 gallons (4 liters) of water and possesses a three-chambered stomach, it does not store water. The camel's ability to go for days without water is due not to the camel storing water but rather to conserving it. The camel's body efficiently distributes the water and filters waste.

—Timothy May

the hot and sandy deserts of Arabia and the Sahara, where the dromedary ruled supreme, or the cold and gravelly deserts of the Gobi and Taklamakan, where the Bactrian camel was the pre-eminent animal of transport. The two types met in the central Asian deserts of Sogdiana and Khorezmia (largely present-day Uzbekistan, Tajikistan, and Turkmenistan).

Both camels were perfectly adapted for arid climates, although the Bactrian camel was better suited to colder environments and the dromedary for warmer ones. The dromedary was a common animal in use in Mesopotamia by 1000 BCE and even earlier (3000–2500 BCE) in Arabia, where it is believed to have originated. It is difficult to ascertain when the Bactrian camel was first domesticated, but evidence indicates that it was a domesticated animal in the steppes of Mongolia around 2000 BCE.

The spread of camel domestication went hand in hand with the opening of trade routes. Without the camel it was almost impossible to access desiccated interior regions, such as those of Arabia. By the second millennium BCE, inland trade routes emerged and radiated out from Arabia's coastal trade routes along the Red Sea. The primary purpose of these trade routes that now connected Arabia to the cities of Mesopotamia and Syria as well as Egypt was the transportation of incense from Yemen, its place of origin. A side effect of the incense trade was that it also led to Semitic migrations into these regions. In central Asia (present-day Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, and China's Xinjiang Autonomous Region) and Inner Asia (Mongolia, Siberia, Manchuria) the camel functioned in a similar way, allowing goods from the deserts to travel to trading cities and vice versa.

As either type of camel can carry roughly 400 pounds (about 180 kilos) for 20 to 25 miles (32–41 kilometers) without pausing (and larger loads for a shorter distance), it was the natural animal for merchants to use. Unlike wheeled vehicles, the camel could travel easily across broken terrain through regions where roads were unknown. Furthermore, it did not require as much water as horses, donkeys, or oxen. This aspect alone fundamentally changed trade routes, as now one could travel across a desert rather

than following watering holes at regular intervals. Despite the ability to traverse a wide range of terrain, camels of either type did not do it rapidly. The average speed of a camel is 2 or 3 miles (3–5 kilometers) per hour. Of course, the camel, as evinced in racing camels today, can gallop 12 miles (19 kilometers) per hour but only for short distances.

Beyond their use as beasts of burdens, camels were also used in warfare. During mating season, bull camels can be quite dangerous, and this carried over to the battlefield. Still, their primary military purpose was for transportation across the desert and as beasts of burden. Nonetheless, they could prove effective in combat; ancient writers commented that cavalry horses often shied away from camel-riding enemies, possibly due to the aroma emitted by camels.

Camels also produced numerous products that provided sustenance, clothing, and even shelter. Camel milk from the dromedary and Bactrian has a lower fat and lactose content than that of cows, yet it has higher amounts of Vitamin C, iron, and potassium. Camel meat could also be eaten, but because of the value of camels, it was considered a delicacy or eaten only out of necessity. As with all animals, its skin was converted into leather or worn with its wool. The undercoat of the Bactrian camel can also be plucked, like cashmere from goats, and woven into warm blankets and garments. Finally, camel dung was also a useful product. Dried, it could be burned as fuel, but also when mixed with other materials such as sand or clay, it functioned as plaster and even mortar for building purposes.

—Timothy May

Bibliography

- Bulliet, Richard W. *The Camel and the Wheel*. New York: Columbia University Press, 1990.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Pre-history to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Knauer, Elfriede Regina. *The Camel's Load in Life and Death*. Zurich: Schöck Söhne, 1998.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

Greek Periploi

Throughout most of history in most places of the world, people have navigated on the basis of practical knowledge handed down from one generation of navigators to the next. Literacy added a new dimension to the navigator's art by enabling experienced seamen to transmit information about distant waters to people unknown to them and, conversely, to sail waters unknown to them by personal experience. The earliest such navigational instructions that survive today comprise a small corpus of ancient Greek and Latin texts known as *periploi*, from the Greek word meaning “to sail around” or “to circumnavigate.” In addition to navigational instructions, these frequently include ethnographic details about the people and information about goods available in various places, this information being every bit as important to merchant sailors as details about the availability of restaurants, showers, and ship chandlers are for cruising sailors today.

Although it does not survive, the oldest *periplus* known from any description was written by Scylax of Caryanda (in Caria, Asia Minor), whom the Persian emperor Darius commissioned to sail from the mouth of the Indus River to the Red Sea in the late sixth century BCE. His

30-month voyage followed the coast of southern Pakistan and Iran across the Gulf of Oman to the Arabian Peninsula and the Red Sea. Scylax completed his voyage, but his description of the waters he traversed is lost.

The oldest extant periplus is that of Agatharchides of Cnidus (also in Caria), *On the Erythraean Sea*—the ancient Greek name for the Indian Ocean, Persian Gulf, and Red Sea—written in about 140 BCE but based to a large extent on texts from the previous century, the heyday of Ptolemaic Egypt's trade with the Indian Ocean. None of Agatharchides' work is preserved by itself, but portions of books 1 and 5 have survived in the later works of Diodorus Siculus, Strabo, and Photius who in the custom of the age borrowed liberally, and often verbatim, from other writers. *On the Erythraean Sea* described not only the places that a merchant sailor would visit and their distances from one another but also the goods available for purchase and what the people would accept in exchange.

The anonymous first-century CE *Periplus of the Erythraean Sea* is the oldest work to survive in and of itself. A handbook for Indian Ocean traders in the first century of the Roman empire, it provides a wealth of information about trading places and goods along two primary itineraries leading south from Egypt. One follows the coast of East Africa as far as Rhapta (near Dar es-Salaam, Tanzania), and the other hugs the coast of the Arabian Peninsula from present-day Saudi Arabia to Yemen and Oman and from there across the Arabian Sea to the South Asian ports between Barbarikon on the Indus River and Muziris (Cranganur) in southwest India. The author of the *Periplus* distinguishes five primary trading areas: the Red Sea, East Africa, and southern Arabia in the west, the Persian Gulf (about which he writes little), and India in the east. The author focuses on goods imported to and exported from Egypt. Utilitarian objects such as raw metals, tools, blankets and clothing, and horses and mules make up the bulk of the exports. The most important imports were Yemeni myrrh and frankincense, so important in religious rituals of the day, and Indian pepper. Other high-value items included tortoise shell, ivory, rhinoceros horn, and nauti-

➤ A DIFFERENCE OF DEGREES—ERATOSTHENES, PTOLEMY, AND COLUMBUS

When floating his idea to sail west from Europe to Asia in 1492, Christopher Columbus had to overcome the fear that the distance was too great. Although the Greek geographer Eratosthenes (ca. 275–194 BCE) had accurately calculated the circumference of the earth at 250,000 stades, Ptolemy used a figure of only 180,000 stades. Relying on Ptolemy's unimpeachable authority, Columbus determined that Japan was 2,400 miles (3,863 kilometers) west of the Canary Islands and China 3,550 miles (5,713 kilometers) from the islands rather than 10,600 and 11,760 miles (17,059 and 18,926 kilometers), respectively. Without these miscalculations, however, it is unlikely that he could have found either patrons or crew for a westward voyage of discovery.

—Lincoln P. Paine

lus shell from Africa and Arabia; turquoise, lapis lazuli, onyx, agate, pearls, diamonds, and sapphires from greater India; and Chinese silks imported via India. The author mentions the Indian port of Barygaza (Bharuch) more than any other, but he names 17 more between there and Cape Comorin (the southern tip of India), which clearly indicates the growing scope of Roman interest in the trade of the Konkan and Malabar coasts.

That these Indian Ocean *periploi* garner most of our attention is an accident of history: they are almost the only ones to have survived. Classical literature is replete with descriptions and quotations of comparable trading itineraries and inventories from the Mediterranean Sea and the Black Sea that are no longer extant. A fifth-century BCE *periplus* from Greek Massilia (Marseilles, France) is known to have described the Atlantic coast as far as Britain. The fifth-century CE *Ora Maritima* by Avienus, but probably based on earlier sources, originally covered the Black Sea, Mediterranean, and Atlantic coasts. The only extant chapters treat the coast from Massilia to Gades (Cadiz), just west of the Strait of Gibraltar.

—Lincoln P. Paine

Bibliography

- Agatharchides of Cnidus. *On the Erythraean Sea*. Translated by Stanley M. Burstein. London: Hakluyt Society, 1989.
- Avienus, Rufus Festus. *Ora Maritima (Description of the Seacoast from Brittany to Marseilles)*. Translated by J. P. Murphy. Chicago: Ares, 1977.
- Casson, Lionel, trans. *The Periplus Maris Erythraei*. Princeton, NJ: Princeton University Press, 1989.

Changing Shipbuilding Technology around the Mediterranean

Shipbuilding techniques in the ancient Mediterranean can be traced through both pictorial and archaeological evidence; written documentation is virtually nonexistent until the last millennium. Generally speaking, there are two ways to build a ship's hull. In shell-first construction, the planks that form the sides of the hull are fastened to one another to create the hull (or shell),

and lateral frames and ribs are inserted to stiffen the form afterward. In frame-first construction, the ship's frame is erected first, and planks are fastened to this skeleton. Shell-first construction was the standard method of shipbuilding in the Mediterranean until 500 CE.

The methods of fastening planks, frames, and ribs varied considerably, but again there were two primary practices. The oldest seems to have been the sewn-boat tradition in which holes were drilled in the planks and cordage passed through the holes to stitch the planks one to another. Many boatbuilders penetrated the plank completely so that the stitching is visible from both inside and outside the hull. This method is especially common among Indian Ocean boatbuilders, and the rather ramshackle appearance gave foreign observers a negative view of the sewn-boat tradition, although sailors have traversed the Indian Ocean in sewn ships for millennia, often with complements of 200 or more people and large or unwieldy cargoes such as elephants and horses. Egyptian shipwrights drilled holes obliquely from the broad side of the plank to the narrow edge so that the stitching was only visible from the inside.

More common in the ancient Mediterranean was the use of mortise-and-tenon joints. Mortises were cut into the edge of the planks and tenons inserted into them, a system that prevented the planks from sliding against each other. The disassembled hull of the Khufu ship found alongside the Great Pyramid at Giza, where it was buried about 2500 BCE, was fastened with both mortise-and-tenon joints and cordage. Tenons could be further secured by inserting pegs perpendicular to them to lock them in place and prevent the planks from pulling apart. Such a process is described in book five of Homer's *Odyssey*, when Odysseus builds himself a small ship to escape Calypso's isle.

Mortise-and-tenon fastening remained the norm in the Mediterranean until about the seventh century CE. A ship found in the waters off Yassi Ada, an island on the south coast of Turkey, belongs to a transitional shipbuilding phase midway between hull-first and frame-first techniques. In the lower part of the hull the shipwrights edge-joined the planks using unpegged widely spaced mortise-and-tenon joints,

► INDUSTRIAL SHIPBUILDING IN THE ANCIENT MEDITERRANEAN

Although it is technically more difficult to reproduce the shape of a hull built using the shell-first technique, widely scattered evidence indicates that ancient shipwrights developed systems for doing just that. Reassembly of the Khufu ship (2500 BCE) was facilitated by the presence of carpenter's marks in the ancient hieratic script on various pieces of the hull. Likewise, the hull pieces of a third-century BCE Carthaginian ship discovered off the coast of Sicily bore shipwrights' marks to indicate their placement in relation to one another. Such sophisticated industrial planning and organization was not matched again until the Industrial Revolution.

—Lincoln P. Paine



Reconstructed Khufu ship, or Solar Barge of Cheops, found near the Great Pyramid at Giza, 2500 BCE.
(Paula Stanley)

a process doubtless faster and cheaper than the elaborate joinery of earlier vessels. Above the waterline, however, the shipwrights simply nailed the strakes and wales to existing frames. The advantages of frame-first construction are considerable. The joinery is less labor-intensive and requires less wood, ships can be built faster, hull forms can be duplicated more easily, and damage can be repaired more quickly. The shift to frame-first construction helped set the stage for the next evolution in naval architecture in the fourteenth century.

—Lincoln P. Paine

Bibliography

- Casson, Lionel. *Ships and Seamanship in the Ancient World*. Baltimore: Johns Hopkins University Press, 1995.
- Landström, Björn. *Ships of the Pharaohs: 4,000 Years of Egyptian Shipbuilding*. New York: Doubleday, 1970.
- Paine, Lincoln P. *Ships of the World: An Historical Encyclopedia*. Boston: Houghton Mifflin, 1997.
- Ward, Cheryl A. *Sacred and Secular: Ancient Egyptian Ships and Boats*. Boston: Archaeological Institute of America and Dubuque, Iowa: Kendall/Hunt Publishing, 2000.

Watercraft in North America

Direct archaeological evidence of indigenous watercraft in North America is rare and suggests ephemeral watercraft such as reed boats or rafts, skin boats, and bark canoes whose perishable materials do not survive well in saturated soils. Consequently, the archaeological record tends toward overrepresentation of the far more durable log dugouts and plank canoes. The best empirical evidence for making and maintaining canoes comes from southern California and has sparked a lively debate on the origins of the Chumash plank canoe.

Along California's coast, indigenous peoples tied bundles of reeds together to form simple rafts or canoe-shaped watercraft called *balsas*, which they poled and paddled on lakes, rivers, and coastline. The three- and five-bundle reed boats were quick to make, buoyant, and easy to handle and could be coated with asphaltum to prevent the watercraft from becoming waterlogged. The five-bundle balsa with its higher and more durable hull was a more substantial watercraft with a greater carrying capacity, and noted

archaeologist Brian Fagan has made the case that it served as the prototype for the early planked canoe, perhaps as early as 8,000 years ago. No direct evidence of reed boats, however, has survived in the archaeological record. The most common watercraft in the Arctic region prior to contact was the kayak, a one-person skin boat used for hunting and fishing, and the umiak or “womens’ boat,” a larger skin boat used for transporting people and cargo. Direct evidence for prehistoric skin boats is scarce (e.g., portions of a paddle blade), and the earliest of what is available does not predate 1400 CE (e.g., wooden kayak parts found at the Nukleet site at Cape Denigh in Alaska). But given the maritime expertise of the Denbigh people, who spent their summers hunting seals and other marine mammals on the Bering Sea coast circa 3000–1000 BCE, it appears that skin boats were under development as early as 5,000 years ago. The ethnographic and ethnohistoric record indicates that throughout temperate North America indigenous groups used the bark canoe to ply the rivers and lakes from Maine to central Alaska. The bark canoe engineered in North America had many advantages: speed, the strength to withstand heavy use, easily repairable, able to carry heavy loads in shallow water, and lightweight enough to be carried overland. Unfortunately, it remains impossible via the archaeological record to determine how or when the bark canoe came into existence.

Archaeological evidence indicates that native groups living along the coastlines of California, Florida, and other parts of the eastern seaboard as well as on the banks of the Mississippi River and across the Great Lakes made use of dugouts. Archaeologists have recovered a dugout canoe of white oak with a radiocarbon date of 1600 BCE from the waters of Lake Erie, and in Florida the remains of a pine-log dugout yielded a radiocarbon date of 300 CE. Iconographic evidence for the dugout includes a petroglyph 13 feet (4 meters) long of a canoe carrying six individuals recorded in Valle Verde County, Texas. Associated artifacts suggest an Early or Middle Archaic date. Dugouts are labor-intensive to make and are generally found in more settled cultures with the tools (e.g., adzes, gouges, and wedges) and resources (e.g., suitable trees, surplus food supply) necessary for their manufacture. They can be

➤ CHUMASH TOMOLS

The origins of the Chumash plank canoe, or *tomol*, is currently under debate. Based on archaeological evidence from Eel Point on San Clemente Island and other early Holocene sites in the Santa Barbara Channel region, Brian Fagan, Jim Cassidy, and others make a case for the local development of a tomol prototype by 6000 BCE. While the mariners of Eel Point certainly needed a durable and swift canoe for big-game fishing and regular passage between the islands and the mainland, Jeanne Arnold and Lynn Gamble propose a much later date of 500 CE for the appearance of the plank canoe itself. Both camps, however, repudiate the idea that a tomol prototype hails from Polynesia.

—Whitney Leeson

widened by forcing the sides apart with wooden struts after softening them with fire and water. If a group had the necessary skill set and tool kit (e.g., asphaltum canoe plugs, caulking, trifacial stone drills) to manufacture planks, then the sides of the dugout could be extended by fastening planks to the watercraft, a boatbuilding technique that helps prevent swamping in rough seas. The Chumash along the southern coast of California depended upon either the *tomol*, a sophisticated planked canoe, or its prototype to hunt for tuna, swordfish, and dolphin off the islands of the Santa Barbara Channel circa 300 CE, as evidenced by the abundant remains of harpoons, bone barbs, and deep-sea fish remains.

—Whitney Leeson

Bibliography

- Arnold, Jeanne. “Credit Where Credit Is Due: The History of the Chumash Oceangoing Plank Canoe.” *American Antiquity* 72(2) (2007): 196–209.
- Fagan, Brian. “The House of the Sea: An Essay on the Antiquity of Planked Canoes in Southern California.” *American Antiquity* 69(1) (2004): 7–16.
- Gamble, Lynn H. “Archaeological Evidence for the Origin of the Plank Canoe in North America.” *American Antiquity* 67(2) (2002): 301–315.
- Gould, Richard A. *Archaeology and the Social History of Ships*. Cambridge: Cambridge University Press, 2000.
- Greenhill, Basil, and John Morrison. *The Archaeology of Boats and Ships*. Annapolis, MD: Naval Institute Press, 1995.

■ Introduction: The Origins of the Pacific Peoples

For many people, the Pacific Ocean and its islands bring a vision of sun, beach sand, coconut palms, and a languorous life. This vision was largely created in the eighteenth century by European explorers of Polynesia who, weary after months at sea, thought they had found “man in a state of nature.” The painter Gauguin, the author Robert Louis Stevenson, and others fostered this view in the nineteenth century. More recently it is mostly used by travel agents. Recognizing that it is a vision is the first step to appreciating the Pacific.

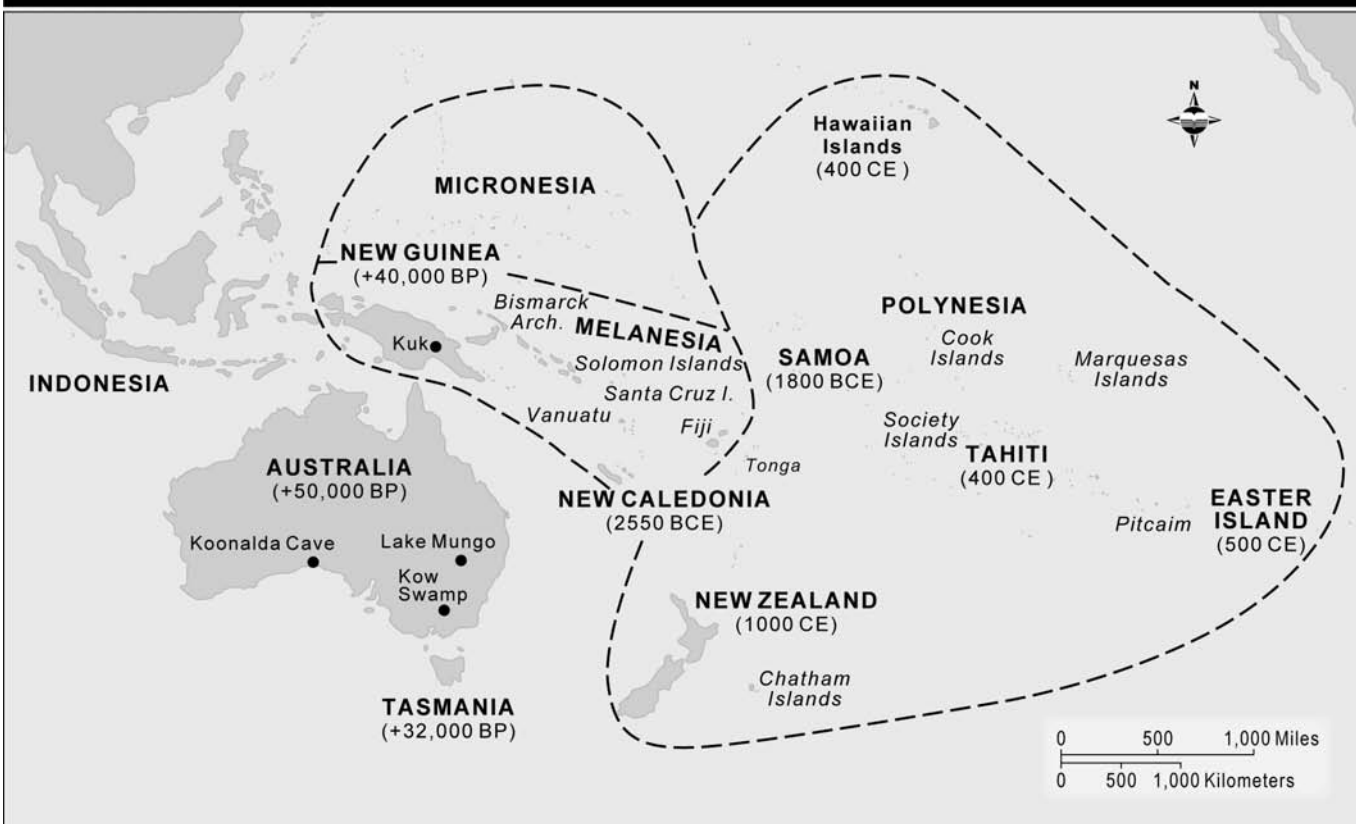
The Pacific Ocean is, in reality, a complex of natural and human environments. On the western side, islands are large and high; moving east, there are fewer and smaller islands that are farther apart. Many are atolls, just 3–7 feet (1–2 meters) above sea level, with an extremely limited range of plants and animals and no surface water. In some parts of the Pacific destructive cyclones

are common, while in others droughts are regular. In the west, malaria and other diseases are rife. Life is not easy on many islands.

Peoples of the Pacific were divided by early Europeans into three groups: Polynesians (many islands), Micronesians (small islands), and Melanesians (islands of black people). These groupings were thought then to be internally united—or at least distinguished from each other—by race, language, and culture. Today the divisions are maintained largely for convenience of discourse and as a result of modern political realities, for Polynesia is the only one that anthropological research shows to be based in deep sociocultural realities.

Prehistorians and some linguists divide the Pacific differently, into Near and Remote Oceania. The former includes New Guinea and the large islands as far as the southern Solomons, all of which people have occupied for at least

MAP OF PACIFIC SETTLEMENTS



40,000 years. Remote Oceania consists of all the rest of the Pacific islands, none of which were settled more than 3,500 years ago.

—Peter White

Bibliography

- Green, R. C. "Near and Remote Oceania: Disestablishing 'Melanesia' in Culture History." In *Man and a Half*, edited by A. Pawley. Polynesian Society Memoir No. 48. Auckland: Polynesian Society, 1991.
- Smith, B. *European Vision and the South Pacific*. Oxford, UK: Clarendon, 1960.
- Thomas, N. "The Force of Ethnology: Origins and Significance of the Melanesia/Polynesia Division." *Current Anthropology* 30 (1989): 27–41.

Micronesia

Micronesia consists of 2,400 islands covering about 1,040 square miles (2,700 square kilometers) lying in more than 2.7 million square miles (7 million square kilometers) of ocean. Guam, the largest island, occupies one-quarter of the total landmass. Nearly all the islands are tiny. Most of them are also atolls, ringlike coral islands.

The oldest settled locations are in the west. Sites in several islands of the Marianas chain date to about 3,500 years ago. These are beach-side middens with red-slipped shell-tempered pottery, shellfish, and fish bone and, in some sites, *Tridacna* shell adzes. The pottery is similar in form and decoration to that of the same date in the Philippines, about 1,600 miles (2,600 kilometers) to the west. Languages in the Marianas also link these islands to the Philippines, and prevailing winds suggest that colonization from this direction is the most probable.

Claims for human arrival 1,000 or more years earlier have been made for several Mariana islands on the basis of increases in charcoal particles and the presence of possible plant domesticates in pollen cores. Climatic causes and site-specific stratigraphic uncertainties render these claims problematic.

The history of the islands of the rest of Micronesia is different and apparently shorter, with the oldest reliable dates being no more than 2,000 years ago. All of these early sites are coastal, semisubmerged, and on fringing reefs,



Ruins of the human-made canals at Nan Madol. (C. T. Snow)

implying that houses were built on wooden stilts. Artifacts include many *Conus*-shell ornaments such as earrings and shell adzes. Shell-tempered undecorated small bowls and globular jars with everted rims are very much like ceramics from the southeastern Solomons and northern Vanuatu of the same date. The languages of eastern Micronesia strongly confirm this area as a likely source of settlers.

Many of the Micronesian islands are atolls, tiny areas of land perched 3 to 10 feet (1 to 3 meters) on top of a coral reef. Maintaining human life on these required particular adaptations based around the rain-fed shallow freshwater aquifer (Ghyben-Herzberg lens) that underlies many of them. While coconuts and Pandanus species could be planted anywhere, the cultivation of the starchy staple the giant swamp taro (*Cyrtosperma chamoissonis*) required a pit excavated into the aquifer and mulched with organic debris. The oldest pits date from the time of earliest settlement, which suggests that the technique was based on considerable prior knowledge of the plant and its requirements.

Archaeologically, Micronesia is probably best known for its two dramatic monumental sites, both on high islands: Nan Madol (Pohnpei) and Leluh (Kosrae). These have been the focus of many fantastic interpretations, but archaeological research over a century shows a long history and slow growth.

Nan Madol consists of 93 artificial islets built of stone walls with coral and stone fill, the whole surrounded by massive seawalls. Much of the stone used is natural columnar basalt, which is not available in the immediate vicinity, and thus the site is evidence for considerable organization and effort. Occupation of the areas starts about 2,000 years ago, when wooden stilt houses were built in the tidal zone. Small artificial islets, using stone, were first built about 500 CE, with megalithic building occurring some 500 years later and continuing for several hundred years. The site in this last period was the administrative center, residences, and burial area for the Saudeleur elite, which may for a time have ruled over the entire island. Burials and many artifacts, including thousands of shell beads, have been recovered from this time.

The history of Leluh and its methods of construction are basically similar to those of Nan Madol.

—Peter White

Bibliography

- Kirch, P. V. *On the Road of the Winds*. Berkeley: University of California Press, 2000.
- Rainbird, P. *The Archaeology of Micronesia*. Cambridge: Cambridge University Press, 2004.
- Rainbird, P. "Prehistory in the Northwest Tropical Pacific: The Caroline, Mariana, and Marshall Islands." *Journal of World Prehistory* 8 (1994): 293–349.
- Wickler, S. "Modelling Colonization and Migration in Micronesia from a Zooarchaeological Perspective." In *Colonisation, Migration and Marginal Areas*, edited by M. Mondini, S. Muñoz, and S. Wickler. Oxford: Oxbow Books, 2004.

Melanesia

Melanesia, Near Oceania, consists of New Guinea, the Bismarck Archipelago, and the Solomon Islands, all of which were settled in the Late Pleistocene. New Guinea itself was probably settled at the same time as Australia, at least 50,000 years ago, since the two were physically joined until about 8,000 years ago.

Pleistocene environments in the area were a few degrees cooler and rather drier than today. This made the highland areas—greater than 4,900 feet (1,500 meters) above sea level—less

hospitable to humans. In the lowlands, pollen analysis shows relatively little change in the coverage of tropical rain forest and wet sclerophyll.

The earliest evidence of humanity is found on the Huon Peninsula and consists of some large axlike tools, with a waist for hafting, made on slices of water-worn boulders. A few of these are stratified between layers of volcanic tephra dated by potassium-argon dating to more than 40,000 years ago.

Sites dated by radiocarbon to 30,000–40,000 years ago are found throughout Near Oceania. Most of them contain only stone artifacts, used primarily for making wooden tools and in food processing. In New Ireland, where a steep coastline means that sites were near the shore even at times of lowered sea level, the record shows that shellfish were collected and small fish were caught. The same is likely true elsewhere, but the sites have been drowned by the rising sea.

Obsidian, found in the Willaumez Peninsula of New Britain, was used locally for artifacts from the time of first settlement. From 20,000 years ago it was exported to other areas up to 375 miles (about 600 kilometers) away, one of the world's oldest long-distance trades. In the Holocene, before 3,500 years ago, silled Willaumez artisans made large, elegant crescent-shaped tools from obsidian. Probably ceremonial and certainly very difficult to make, these have been found throughout Near Oceania, hinting at an exchange system of which we know nothing else.

Apart from New Guinea, Near Oceania was faunally depauperate. On New Ireland, the only mammals were bats. In the Solomons there were also five species of endemic rats, two weighing 2 pounds (1 kilogram) or more. Between 20,000 and 5,000 years ago several animal species, including a wallaby, two phalangers, and rats, were moved from New Guinea and New Britain to other islands. With the larger animals this must have been deliberate, but whether it was for food, their decorative fur, or originally as pets is hard to determine.

Settlement of higher altitudes also began by at least 30,000 years ago. At Kosipe, 6,500 feet (2,000 meters) above sea level, waisted blades, thinner and finer than those of the Huon, are stratified between dated tephtras. The site is near a swamp, where edible pandanus fruit grows. A

core from the site shows human disturbance, including charcoal from firing. Other Pleistocene sites, such as Nombe, show that people were hunting and gathering. Their prey may have included a now-extinct diprotodon. While there is no clear evidence of agriculture older than the Kuk site, tree curation and planting of taro and sugarcane is likely.

Studies of present-day languages and human biology confirm that the area has been inhabited for tens of thousands of years. The original language groups of the area cluster into at least 23 families, all of them completely unrelated either to each other or to languages elsewhere in the world. Biologically, there is a suggestion that some highlanders may be related to Australian Aboriginals, but the link is very indistinct and is disputed.

Island Melanesia, stretching south and east of the Solomons, was populated only from about 1100 BCE. It was settled within only two centuries by people who made Lapita pottery. Their languages were all within the Austronesian family, and they were certainly horticulturalists. Since some of these islands are long distances apart and not intervisible, these explorations and settlements are considerable achievements, and the term “Vikings of the Pacific” has been used about them.

—Peter White

Bibliography

- Araho, N., R. Torrence, and J. P. White. “Valuable and Useful: Mid-Holocene Stemmed Obsidian Artefacts from West New Britain, Papua New Guinea.” *Proceedings of the Prehistoric Society* 68 (2002): 61–81.
- Attenborough, R. “Introduction to the Chapters on Biological Anthropology and Population Genetics.” In *Papuan Pasts*, edited by A. Pawley et al. Canberra: Pacific Linguistics, 2006.
- Hope, G. S., and S. G. Haberle. “The History of the Human Landscapes of New Guinea.” In *Papuan Pasts*, edited by A. Pawley et al. Canberra: Pacific Linguistics, 2006.
- Pavlidis, C. “Life before Lapita: New Developments in Melanesia’s Long-Term History.” In *Archaeology of Oceania*, edited by I. Lilley. Oxford, UK: Blackwell, 2006.
- Spriggs, M. *The Island Melanesians*. Oxford, UK: Blackwell, 1997.

Polynesia

The Polynesian triangle, bounded by Hawaii, Easter Island, and New Zealand, was reached only when people settled in Samoa and Tonga about 800 BCE. These people were the most easterly part of the Lapita Diaspora, pottery-making horticulturalists who spoke Austronesian languages. Their immediate homeland was Fiji, and before that, islands to the west, to which they are linked by language, biology, and material culture, including the plants they grew, such as taro and breadfruit, and the domestic animals (pig, dog) they brought with them.

These settlements and the populations that grew from them developed their distinctive Polynesian culture, which included new forms of stone adze and the giving up of pottery and elaborate fishing gear, in these islands. Reconstructions of their languages suggest that *tapu* (sacredness) and *mana* (spiritual power) were at the core of their belief system.

As populations grew so did social complexity and with it monumental building and intensified forms of food production, such as irrigated pondfields for taro. Monuments included star-shaped mounds, walled fortifications, and, on Tonga, rectangular burial platforms faced with stone blocks and a massive trilithon. Tongan power in the last millennium reached beyond Tonga to many smaller islands, and its warriors went as far as Fiji.

The settlement of eastern Polynesia begins with the Society Islands and the Marquesas about 500 CE. From somewhere in this central region, the more distant islands were settled, Easter Island and Hawaii about 800 CE, New Zealand only about 1200 CE. These migrations must have been quite large and well equipped. New Zealand oral history speaks of several (perhaps seven) canoes, and certainly more than a handful of people were required if the migrants were to survive and prosper. Evidence in the form of stone artifacts geologically identified to particular sources shows that not all migrations led to permanent isolation. Notably in the first millennium CE, exchange between island groups occurred, implying large sailing canoes and good navigational techniques.

Each island group developed its own version of Polynesian culture after settlement. In Hawaii,

population growth led to very highly hierarchical societies, which put much energy into building enormous temples, and a similar pattern occurs on many islands in the Society and Cook groups.

New Zealand is probably the most distinctive Polynesian society since the climate restricted the growing of most known crops to the far north. Additionally, when people arrived the islands were home to many species of birds and no mammals except bats. Some of the *moa* birds were larger than a human, and for the first century or more many settlers made a living from hunting these, fishing, and collecting prolific wild bracken root. Their experiments showed, however, that sweet potato (*Ipomoea batatas*) could be grown throughout the North Island but required careful storage over winter. It was on this staple that large populations developed there, while the South Island remained nonagricultural until the arrival of the common white potato (*Solanum tuberosum*) with Europeans in the nineteenth century.

Polynesian exploration and settlement did not stop at the large islands. The tiny, isolated Norfolk Island, 130 square miles (345 square kilometers), was occupied for a brief time around 1400 CE by New Zealanders who brought with them obsidian from Raoul Island and possibly New Zealand. The low, cold Chatham Islands, 500 miles (800 kilometers) east of New Zealand,

were settled at the same time: those people remained because there was no way of returning to New Zealand. The same is true of Easter Island, where giant human faces were sculpted, adorned with red topknots and white eyes, and set up in rows on temple platforms.

Polynesians almost certainly reached South America. It is now certain that sweet potato was grown in Polynesia by 800 CE, and it can only have been obtained from that continent. There is no other evidence that South Americans reached Polynesia (Heyerdahl's theories of a South American migration are demonstrably wrong), while Polynesian voyaging capabilities made a trip to South America and back quite feasible.

—Peter White

Bibliography

- Bellwood, P. *The Polynesians*. London: Thames and Hudson, 1987.
- Furey, L., and S. Holdaway, eds. *Change through Time: Fifty Years of New Zealand Archaeology*. New Zealand Archaeological Association Monograph 26. Auckland: New Zealand Archaeological Association, 2004.
- Irwin, G. *The Prehistoric Colonization and Exploration of the Pacific*. Cambridge: Cambridge University Press, 1992.
- Kirch, P. V. *On the Road of the Winds*. Berkeley: University of California Press, 2000.

Politics and Statecraft

In 27 BCE, the Roman Senate conveyed the titles of Augustus (illustrious one) and princeps (first citizen) upon Octavian, the man who had defeated Marc Antony and Cleopatra at the Battle of Actium and who had been gradually consolidating his authority as sole ruler of the Roman empire. From this point forward, historians refer to him as Augustus, and many see this moment as a fundamental turning point in Roman history, when the republican form of government was replaced by a government with sole authority vested in one man, a form of governance that would remain dominant throughout the Mediterranean and beyond for over 1,000 years. Gaining these titles was one example of Augustus's skills at political machination. He was in fact a master of behind-the-scenes manipulation and coercion and was one of the first true masters of self-conscious political propaganda. By carefully controlling his image at the same time that he had it duplicated throughout the Roman world, he was able to portray himself as the embodiment of the Roman state: a soldier, a priest, a scholar, and a politician. Those who criticized Augustus were dealt with harshly; the poet Ovid, who dared criticize Augustus's blatant propaganda, was expelled from the city of Rome.

This self-conscious political engineering, which seems so natural a part of political life today, was not unique to Rome. It was in ancient Athens that the notion that the people should govern themselves first arose and concomitantly the arts of political rhetoric thrived. Of course, Athenian democracy was not democracy for everyone. Only citizens of Athens were allowed to vote, and citizenship was very strictly defined (excluding women and slaves, for example). Whereas power was vested in the citizenry of Athens (even if definitions of who composed the citizenry were relatively strict), the situation in Qin dynasty China was significantly different. In 221 BCE, China was unified for the first time under a strictly centralized monarchy. This strict rule did not last long, and in 206 BCE the Western Han dynasty arose, gaining the throne in 202 and ruling China until 8 CE. Under the Western Han, China reached the height of its power with a centralized state run by bureaucrats who operated, at least in theory, according to Confucian principles. After a series of dynastic struggles beginning in 8 CE, the Han regained power, inaugurating the Eastern Han dynasty in 25 CE that lasted until 220. Once Han authority collapsed, the Chinese political system splintered into a number of separate polities, leaving China disunited until unification under the Sui dynasty in 589.

The Indian subcontinent was also first united at this time. From circa 322 to 185 BCE, the Mauryan dynasty ruled the Indian subcontinent.

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Under the Mauryans, the religions of Jainism and Buddhism thrived alongside of Hindu traditions, and the subcontinent was ruled as four provinces under the control of one emperor.

Under the Mauryans, the religions of Jainism and Buddhism thrived alongside of Hindu traditions, and the subcontinent was ruled as four provinces under the control of one emperor. The emperor controlled this diverse region through a large standing army, perhaps the largest standing army that had yet existed. This army initially allowed the Mauryan emperors to greatly expand the territory of their empire. However, Emperor Aśoka (304–232 BCE), after his conversion to Buddhism, attempted to practice the nonaggressive way of Dharma in which his rule of the subcontinent was not based on violence but rather by sup-

porting Buddhist *sangha* and developing a close relationship between state and religion.

The period from 1000 BCE to 300 CE was the time of the first world empires, meaning situations in which a large state-based multiethnic polity formally rules over other polities. Arguably, Egypt held land outside of what were considered its natural borders centuries earlier; the administration, however, was relatively ad hoc and informal. Starting with the Assyrians and later the Babylonians, Kushans, Persians, Macedonians, Parthians, Mauryans, Han Chinese, and Romans, bureaucratic structures associated with empires arose. For example, the Cyrus Cylinder (called a cylinder because it was a cuneiform inscription written on a clay cylinder), written after the Persian conquest of Babylon in 539 BCE, decrees a limited amount of ethnic autonomy to different groups within the empire, although scholars debate how much this reflects genuine tolerance and how much it reflects political propaganda. New technologies of warfare and transportation allowed rule over much greater distances and allowed for a greater economic integration of far-off parts of the empire.

Even writing on the art of statecraft appears for the first time in this period. There is a vast amount of literature on this topic that has survived to the present day. Plato's *The Republic*, in which a vision of an ideal state is espoused, is one of the most important examples of these. Aristotle's *Politics* discusses different types of governments. Political speeches, while not in reality verbatim accounts of ancient speeches, are preserved, most famously "Pericles' Funeral Oration" in the history of Thucydides. Political biography and analysis appear in this period; Suetonius's *Twelve Caesars* compares the lives of 12 rulers of Rome. In the Maurya empire in India, Kautilya Chanakya (ca. 350–283 BCE) is credited as author of the *Arthashastra*, which is an extended treatise on statecraft that includes discussion of state military strategy, economic policy making, and the conduct of government officials. Much Chinese literature on statecraft has also survived; government was of interest to Daoist, Legalist, and Confucian writers, among others. Chinese writing on government is tremendously varied in this period. Sometimes the literature explored very specific problems, such as the first-century BCE *Discourse on Salt and Iron*, which discusses state

monopoly on the production and distribution of salt and iron. Other texts are more philosophical in nature, such as the *Guanzi* (edited around 26 BCE), which purports to preserve the writings of Master Guan, a government official of the seventh century BCE.

—Kevin M. McGeough

■ Introduction: Political Life in Ancient Africa

From 1000 BCE to 300 CE Africa was the home to societies of widely differing sizes. On the one hand, the civilizations of Egypt and Kush were among the largest states the world had yet known. On the other hand, archaeologists have unearthed evidence of small villages scattered throughout much of the continent (although many of these have not yet undergone extensive excavation and study). The following entries illustrate some of the diversity of African political life in this period through the examination of some of the societies that are best known archaeologically.

—Kevin M. McGeough

The Meroitic Period

The Meroitic period was the second historical phase of the Kingdom of Kush. Although Meroe was the location of the royal residence from the fifth century BCE onward, the move of the royal cemetery from Nuri to Meroe is actually considered the start of the Meroitic period at around 300 BCE.

The Meroitic period was characterized by a greater emphasis on Kushite culture and traditions, as demonstrated by the adoption of Meroitic as the official language of the kingdom, the incorporation of indigenous Kushite gods in the pantheon, and the development of typical Meroitic style in art.

Life in the Meroitic period was similar to that of the Napatan period. The *qore* (Meroitic word referring to the king as “commander”) or the *kandake* (Meroitic word meaning “ruling queen”) dealt with the political affairs and maintained order in a kingdom that at its greatest expansion might have extended from Lower Nubia

to the region of Sennar on the Blue Nile. Like a pendulum, Lower Nubia was at times controlled by the Kushites and at other times by the Greek rulers of Egypt, the Ptolemies. When Egypt became a province of the Roman empire, the Kushites laid claim to Lower Nubia by raiding the cities of Philae, Syene (Aswan), and Elephantine, all in the First Cataract region. The Roman Prefect Petronius retaliated, and the Roman Army marched as far south as Napata, which it sacked. After much negotiation, an agreement with Rome was reached. The kandake Amanishakheto is believed to be the one who negotiated with the Romans and gained control of the southern half of Lower Nubia. The Romans controlled the northern half.

As their Napatan ancestors did before them, the Meroites built new temples dedicated to Amun, notably at El-Hassa and Naga (near Meroe) as well as at Dangeil (Fifth Cataract), Amara East (Second Cataract), and Dabod (Lower Nubia).

➤ MEROITIC LANGUAGE AND SCRIPT

Meroitic was the native language of the Kushites. This language might have been spoken in Nubia for millennia, but it did not have a written form until the Meroitic period, when it became the administrative language of the Kingdom of Kush.

Meroitic was written using hieroglyphs or a cursive script. The 23 signs of the Meroitic alphabet are derived from ancient Egyptian hieroglyphs and demotic (a cursive script). The phonetic (sound) value of the Meroitic signs is known, but the meaning of most words is unknown. Until Meroitic is fully deciphered, much of the culture will remain a mystery.

—Caroline M. Rocheleau

This flurry of architectural activity also included the construction of several temples to the local lion-headed god Apedemak, such as at Meroe, Naga, and Musawwarat es-Sufra. Restorations of earlier New Kingdom and Napatan temples were also deemed important especially to King Natakamani and Queen Amanitore, who are known for their active building program. This royal couple even repaired the Great Temple of Amun at Napata after it was sacked by the Roman Army.

The reasons for the collapse of the Meroitic period Kingdom of Kush remain unclear to this day. From two inscriptions found at Aksum in Ethiopia, it appears that an unnamed Aksumite king captured the city of Meroe during the fourth century. Scholars wonder, however, if this and other attacks by the Kingdom of Aksum were enough to bring the mighty Kingdom of Kush to its end. It has been suggested that the royal family's wealth and power might have been crumbling compared to a now very powerful and extremely wealthy nobility. However, until the Meroitic language is fully understood, the collapse of the Meroitic Kingdom of Kush will remain a mystery.

—Caroline M. Rocheleau

Bibliography

- Shinnie, P. L. *Ancient Nubia*. London and New York: Kegan Paul International, 1996.
- Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. London: British Museum Press, 1996.
- Wildung, Dietrich, ed. *Sudan Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

The Kushite Twenty-fifth Dynasty of Egypt

The Kushite Twenty-fifth Dynasty of Egypt refers to the five Napatan kings of Kush who conquered Egypt and controlled it between 716 and 656 BCE. The first of these Napatan kings was Piye (Piankhi), who moved north into Egypt during the 21st year of his reign and seized control of the country. The account of Piye's triumphant campaign is told with great detail on a block of pink granite known as the Victory Stela of Piankhi (at the Egyptian Museum, Cairo). The Kushites' motive for the invasion was the restoration of the cult of Amun at the time when

Egypt was fragmented and ruled by competing dynasties: the Twenty-second and Twenty-third Dynasties (both from Libya) and the Egyptian Twenty-fourth Dynasty. In the Kushites' minds, they were the legitimate heirs of the Pharaohs because Egypt and Kush were once united under the god Amun in the past.

Despite the fact that he controlled Egypt, Piye preferred ruling from Napata. At his death his vassals (subordinates) rebelled, and it was his brother and successor Shabaka who reinvaded Egypt and established the capital at Memphis, where he resided. Shabaka enthusiastically embraced Egyptian customs and religious rituals and was even interested in traditions dating back to the Egyptian Old and Middle Kingdoms (2686–2184 and 2040–1650 BCE). The Shabaka Stone (at the British Museum) is a good example of the Kushites' cultural interests. Shabaka, horrified to see the decay of a papyrus containing the creation myth of Memphis, had it copied on stone lest it be lost forever.

Shabaka's reign is also marked by the rise of Assyria in Near Eastern politics. Although he managed to keep the Assyrians at bay, the nephews who succeeded him were not so lucky. Sha-



Reerected column of the Taharqa kiosk at the Temple of Amun at Thebes. (Caroline M. Rocheleau)

baka supported Palestine and Phoenicia in a revolt against their Assyrian master, which did nothing but increase the threat against Egypt. His brother Taharqa crossed swords with the Assyrians. In 673 the Kushites managed to ward off the enemy; however, in 671 the Assyrians invaded Egypt and sacked the capital of Memphis. Taharqa evaded capture and fled south to Thebes. A later uprising brought the Assyrians back to Egypt, and Taharqa lost Memphis again. This time he fled south to Napata, leaving the mayor of Thebes to surrender.

Taharqa's reign was nonetheless the most outstanding of that dynasty. Architectural monuments commissioned by this king abound in both Egypt and Kush. At Thebes, Taharqa constructed a colossal kiosk at the Temple of Amun, demonstrating—like several pharaohs before him—his piety and power. In Nubia, Taharqa refurbished

earlier New Kingdom temples and also built new temples to Amun in various cities.

Taharqa's successor was his cousin and co-ruler Tanwetamani, who was crowned at Napata. Tanwetamani's ambition was to reconquer Egypt. As he moved north, he reclaimed Aswan, Thebes, and eventually Memphis. The Assyrians retaliated by sacking Memphis yet again. Thebes was not spared; its magnificent temple was pillaged, and its treasury was plundered. Tanwetamani fled to Napata. At his death in 656, the Kushite Twenty-fifth Dynasty of Egypt died with him.

—Caroline M. Rocheleau

Bibliography

- Morkot, Robert G. *The Black Pharaohs: Egypt's Nubian Rulers*. London: Rubicon, 2000.
- Wildung, Dietrich, ed. *Sudan Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

■ Introduction: The Waning of Egypt and Mesopotamia and the Rise and Fall of Persia

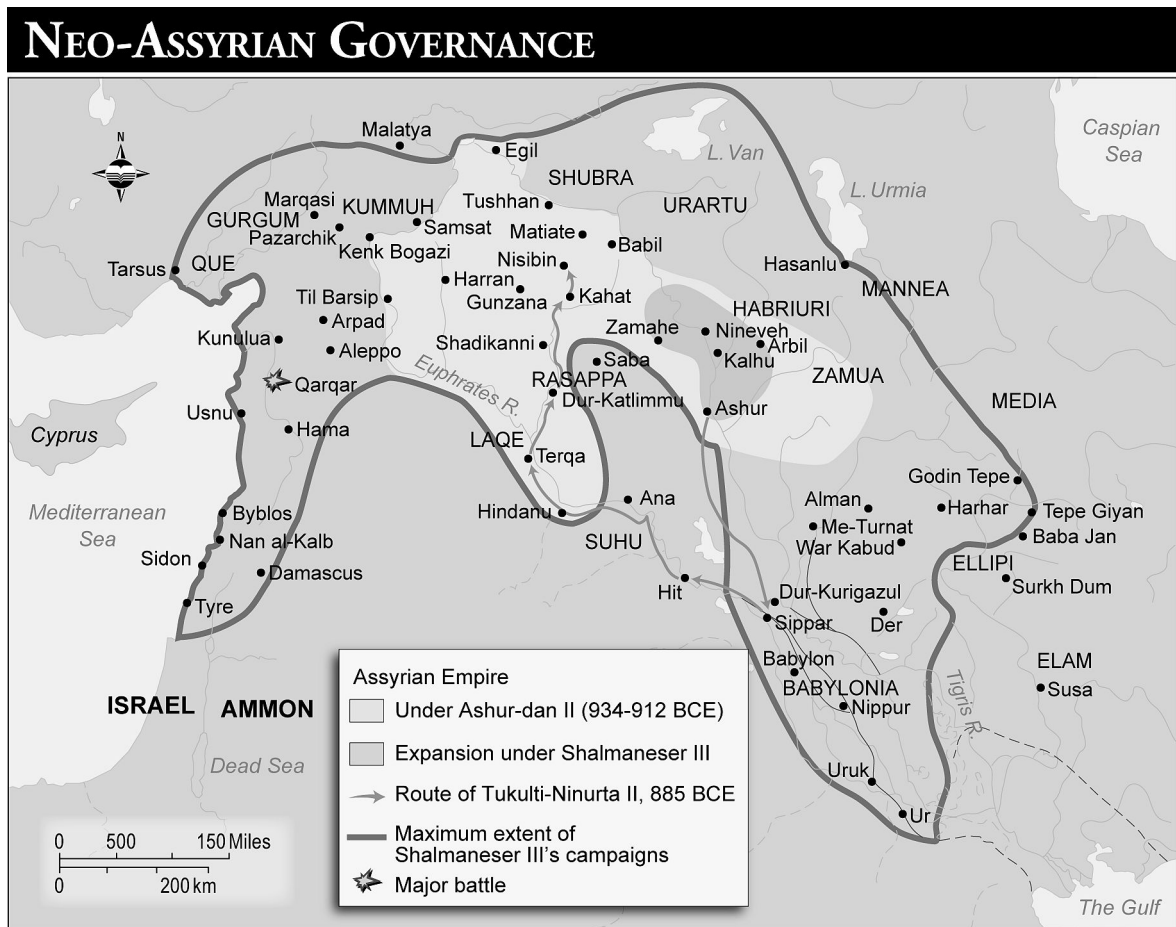
The Iron Age II (1000–586 BCE) was the last period in which Mesopotamia and Egypt were major autonomous powers in the Near East. Egyptian scholars refer to this as the Third Intermediate period, in which power in Egypt shifted between various competing dynasties. Egypt vacillated between being a major world power and being fraught with internal turmoil. Mesopotamia, on the other hand, was relatively stable. For most of this period power was concentrated in the Neo-Assyrian kings, whose capitols were located in northern Mesopotamia. Toward the end of the Iron II, Assyrian power weakened, partially in response to the growing strength of the Neo-Babylonian power in southern Mesopotamia. Eventually these Babylonian kings took over the Neo-Assyrian empire. Throughout the Iron Age II, Egypt and Mesopotamia were often engaged in military conflicts with one another. These intensified toward the end of the period, and the financial expenses of these conflicts may have had a hand in undoing both world powers.

It was the Persians who brought an end to the supremacy of both Egypt and Mesopotamia. Conquering both polities, the Persians grew to have one of the largest empires ever held up to that point. The growth of the Persian empire was arrested by its conflicts with the Greek city-states, but it was not until Alexander the Great of Macedon brought his army to Asia that the Persians were destroyed. All of the Near East fell under the sway of Alexander the Great, and when he died in 323 BCE these lands were passed down to his various successors. Thus, Egypt and Mesopotamia came to be ruled by Greek families (until the Romans laid hold of Egypt), and the Parthians took control of Mesopotamia.

—Kevin M. McGeough

Neo-Assyrian Governance

As Assyria became the dominant regional power in Mesopotamia in the mid-fourteenth century BCE, it sustained its hegemony through efficient



political organization and brutal military force until its defeat in 612 BCE to the Neo-Babylonians. During their heyday in the eighth century, when they are known to historians as Neo-Assyrians, they controlled much of the Levant from the borders of modern-day Turkey to Iran and Egypt. Much of their success in political control over this wide region was due to a powerful and much-feared army.

While allowing many Mesopotamian vassal states to conduct their own affairs at the local level, fear of Assyrian military might ensured steady payment of tribute and domestic stability. Military officials loyal to the Assyrian king served as government officials, governors, and bureaucrats in addition to serving in the Assyrian military organization. While the Assyrians were feared for their coercive military measures in instances of rebellion, they were also known for maintaining a respectful relationship with Babylon, recognized by Assyrian leaders as an important center of Mesopotamian culture and trade.

The Assyrian heartland, or land of Ashur, in northern Mesopotamia was placed at a strategic juncture between the inland kingdom of Babylon while flanked to the west by the Hittites and the coastal trade regions of Syria and Palestine adjacent to Egypt. This central position put Assyria in conflict with these other states as it grew in power. After throwing off their Mitanni overlords in the mid-fourteenth century BCE, Assyrian military expansion in Mesopotamia at the expense of its neighbors lasted well until the seventh century BCE. Resistant populations and the threat of powerful neighbors required Assyria to maintain a large powerful army under the centralized control of the king, who served as commander in chief. As such, the army became the main tool of the king to administer his multiple realms and developed into a highly professional force, with a strong cavalry contingent of Assyrian elites.

Initially, the governors of vassal kingdoms were drawn from local elites who paid sizable

tribute to the Assyrians. Much of this tribute was funneled back to the establishment of Assyrian capital cities and to the immense wealth of the royal court. However, the development of military control in conquered territories led to increased centralized control by Assyrians themselves by the ninth century BCE. When local rulers rebelled, they forfeited their right to rule, and immediately the region came under Neo-Assyrian governance and taxation, thereby becoming Assyrian provinces rather than tributary states. Military force in these conquered regions extended the control of the Assyrian bureaucracy, as mostly all officials were already part of the military.

While the Assyrian king served as the main focus of power throughout the Assyrian realms, the political structure and bureaucracy maintained his authority in tandem with the military hierarchy. The main high officials in the Assyrian bureaucratic structure were the majordomo (*rab sha muhbi*) who served as the king's main deputy, the vice chancellor (*ummanu*) who was the king's scribe, and the two field marshals (*turtannu*) who conducted the king's military policies directly. Governorships of Assyrian provinces were granted to high court officials, with smaller and less important provinces run by subordinate officials. Provincial governors administered their respective Assyrian provinces as if their own state and rule were often hereditary. The standing army provided the necessary force to ensure stability in the region. Bureaucrats also held considerable authority under Assyrian governance, and many of them were educated eunuchs who were loyal and not a threat to local elites. Local affairs at the village level were handled by local governmental bodies such as town assemblies and village councils, which while responsible to the king's authority had significant levels of autonomy in the day-to-day operations of local governance.

—Abraham O. Mendoza

Bibliography

- Pollack, Susan. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press, 1999.
- Postgate, J. Nicholas. *Early Mesopotamia*. New York: Routledge, 1994.

➤ ASSYRIAN KING ASHURBANIPAL

King Ashurbanipal (r. 668–672 BCE) was an effective administrator, a promoter of the arts, and an exceedingly cruel conqueror. In addition to constructing the ornate palace at Nineveh, he also commissioned a great library. For this latter project he contracted many scribes to copy ancient texts, thus ensuring the cultural vibrancy and legacy of Assyrian and greater Mesopotamian culture for posterity. Ashurbanipal could not have foreseen the success of this project, since it is through excavations of his library that modern scholars were able to recover much of Mesopotamia's lost literary heritage. In spite of his popularity at home, he also was widely feared by his enemies for his cruelty to defeated states and their leaders. Accounts and images of Ashurbanipal depict him publically demeaning the leaders of his enemies with little mercy, by torturing and decapitating them as a means of displaying Assyrian might and brutality, to deter other potential enemies and internal discontent.

—Abraham O. Mendoza

Neo-Babylonian Politics

Neo-Babylonian political institutions (also known as Chaldean in reference to the name of the dynasty) were instituted after the removal of Assyrian power in 626 BCE, following the death of Assurbanipal in 627 BCE. While Babylon had attained a relatively autonomous and prominent status within the greater Assyrian empire, with military assistance from the Medes, the Chaldeans were able to destroy Assyrian power and sack Nineveh in 612 BCE. Nabopolassar, who led the revolt against the Assyrians, was installed as the first king of the Neo-Babylonian empire in 625 BCE. After a short 87-year history of Babylonian rule of the Fertile Crescent and eventually the greater Levant region encompassing all of Mesopotamia, Palestine, and Syria, the empire eventually fell to Cyrus the Great and his Persian forces in 539 BCE.

While Babylon had held a privileged position within the greater Assyrian empire, it did experience periods of misrule under Assyrian administration. During the instability that followed the

► THE BABYLONIAN CAPTIVITY

The deportation and exile of the leading citizens of the kingdom of Judah occurred following its conquest by Neo-Babylonian king Nebuchadnezzar II in 586 BCE. The Babylonian exile stands as a pivotal event in Jewish history, given that it also marks the end of independent Judah and the destruction of the First Temple in Jerusalem. Furthermore, Judah was the remaining core of the land of Israel, most of which had been annihilated by Assyria and its people dispersed. Those exiled to Babylon were mostly elites, taken to ensure compliance in Judah. According to biblical prophesy, the Babylonian Captivity occurred as a result of God's punishment. Biblical accounts of the Babylonian exile also depict Nebuchadnezzar II and his interactions with Jewish exiles; Nebuchadnezzar is generally categorized in a negative light, and the time spent in Babylon is generally characterized as a period of mourning. As the Neo-Babylonian empire fell to Persian forces, Cyrus the Great allowed the Jews to return to Judah, rebuild their temple, and freely practice their religion in 537 BCE.

—Abraham O. Mendoza

death of the Assyrian ruler Assurbanipal, Nabopolassar, the founder of the Neo-Babylonian empire, sought an alliance with the Medes, also enemies of the Assyrians, to destroy and annex the dominions of the Assyrian empire. The Assyrian realm was dissolved by 612 BCE with the fall of Nineveh, with much of its territory falling to the Neo-Babylonians. Nabopolassar's son, Nebuchadnezzar II, continued the struggle against the rival power of Phoenicia (particularly centered around the city of Tyre and areas in modern-day Lebanon, Syria, and Israel) and against Judah, ultimately absorbing these regions into the Neo-Babylonian empire. Nebuchadnezzar II sacked Jerusalem in 587 BCE and deported many of the city's elites to Babylon. After this, he captured Phoenicia and campaigned in Egypt, which he failed to take successfully. At its greatest extent, the Neo-Babylonian empire included all of Mesopotamia, southeastern Anatolia, Phoenicia, Syria, and Judah, from the Persian Gulf to the Mediterranean Sea. Furthermore, it secured the primacy of Babylon as the center

of Mesopotamian civilization, removing Nineveh as the political hub of the region, as it had been under the Assyrians for centuries.

Nebuchadnezzar initiated vast construction projects in an attempt to establish the primacy of Babylon as the renewed political center of Mesopotamia. Materials and wealth from the various territories were brought to Babylon to illustrate the cohesiveness of the Neo-Babylonian empire. Great temples, walls, and bridges were constructed to illustrate the grandeur of Babylonian rule. The construction of the Mede Wall between the Tigris and the Euphrates rivers, an attempt to prevent a potential invasion by their former allies, is also an example of a massive project undertaken under Nebuchadnezzar's rule. Most famously, the mythical Hanging Gardens of Babylon, made specifically for Nebuchadnezzar's Median wife Amytis, were supposedly constructed during his reign. The Hanging Gardens, as one of the Seven Wonders of the Ancient World, illustrate the reputation of Babylon as a center of wealth and power in the last powerful Mesopotamian-based empire.

Following Nebuchadnezzar's death, the Neo-Babylonian empire held together for a few more decades. Chaldean rule from Babylon bred discontent. Unlike the Assyrians before them, the Chaldeans did not have as powerful a hold on the provinces, whose inhabitants welcomed the invading Persians. According to ancient sources, when Cyrus the Great entered the city in 539 BCE, there was little resistance, and Chaldean power quietly fell, with the locus of power in Mesopotamia passing on to the Persians.

—Abraham O. Mendoza

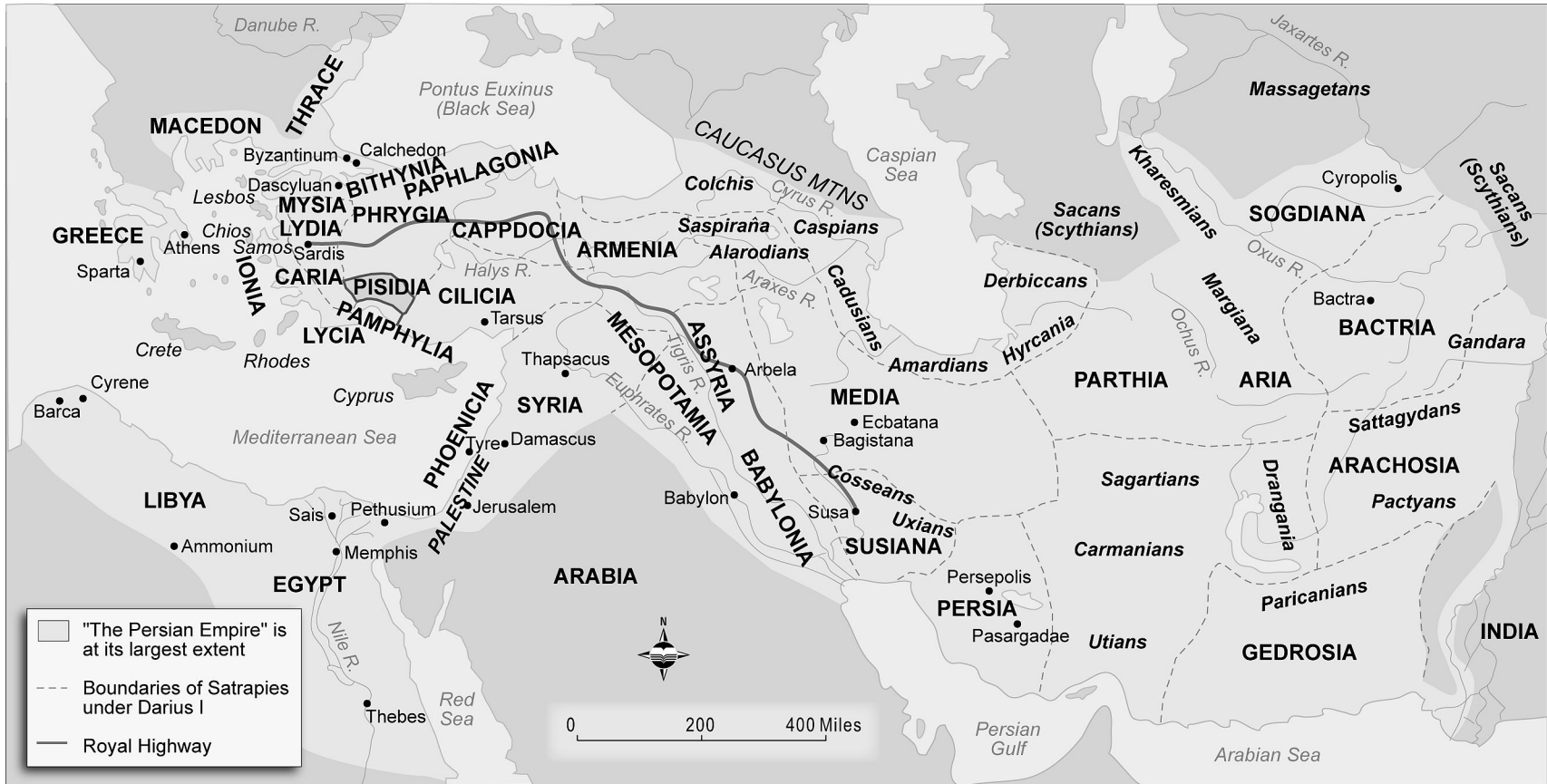
Bibliography

- Pollack, Susan. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press, 1999.
- Postgate, J. Nicholas. *Early Mesopotamia*. New York: Routledge, 1994.

The Rise of Persia

The Persians emerged from the central Asian steppes in the late second millennium to settle in the Iranian plateau. They were one of several nomadic groups to migrate into the region,

RISE OF PERSIA



➤ CYRUS THE GREAT IN THE BIBLE

Persian emperor Cyrus the Great's accommodating foreign policy registered as compassionate and tolerant to many of his newly conquered populations, particularly the Israelites. In the book of Isaiah, Cyrus is regarded as anointed by God: "I am the Lord who says of Cyrus, 'He is my shepherd and will accomplish all that I please.'" Given that he ended the Babylonian captivity of the Jews and allowed for their return to Judah to reconstruct the temple, Cyrus is well regarded as a benign foreign leader, unlike the leaders of Assyria and Babylon.

—Abraham O. Mendoza

bringing with them military expertise gained from hunting skills honed on the steppe. In particular, they were known for being expert horsemen able to shoot arrows with accuracy. Along with the Medes, the Persians settled across the central plateau, forming a large state stretching from the Zagros Mountains in the west to the city of Tehran in the east. As they came into contact with the more sophisticated civilizations of the Neo-Assyrians and Neo-Babylonians in Mesopotamia, they gradually became involved in Mesopotamian affairs. Ultimately, the Persians would rule most of the Fertile Crescent, the Levant, and Egypt. They would come into contact with the Greeks in the west and with Indian civilization in the east, making theirs the largest land empire up to that time.

The Persians had a contentious relationship with the Mesopotamian empires, even while remaining peripheral to events within the Mesopotamian heartland. They fought against and paid tribute to both the Neo-Assyrians and the Neo-Babylonians. Cyrus the Great (r. 559–529 BCE) became Persian emperor and eventually conquered all of these regions and placed them under Persian hegemony. Cyrus united the Persians and defeated the Medes, incorporating their lands in eastern Anatolia (modern Turkey) into the Persian realm. In 564 BCE, the Persians defeated the Lydians in southwestern Anatolia and annexed their lands. By far, their greatest successes were the defeat of the Neo-

Babylonians and the Egyptians, which allowed the incorporation of these wealthy regions into the greater Persian empire. Cyrus demonstrated considerable compassion in the conquest of the Persian empire, as he did not use brutal force like the Assyrians, gaining sympathy among the conquered populations by allowing them to continue with their cultural and religious customs and incorporating them to a limited degree within the Persian bureaucracy of their own states.

The control over these vast domains, which were composed of multiple ethnic groups and cultures, posed a challenge to the administration of the Persian empire. Rather than force Persian customs on the conquered, the Persian administration allowed local cultures and languages to flourish under their hegemony. So long as the Persian king was honored and tribute was paid, regions were granted significant cultural autonomy (in terms of religion, language, and customs) as satrapies of the Persian empire. Unlike the Assyrians, who used brutal force to impose their will, the Persians ruled through the accommodation of regional interests. The Persian empire was divided into roughly 20 satrapies (provinces), ruled by intimates of the king and bureaucrats and officials who were under the watchful eye of the Persian military. Satraps (meaning "protector of the kingdom") served as governors, collected tribute, maintained stability, commanded troops, and raised military levies. Infrastructures, such as roads, were also developed as a means to promote trade throughout the Persian empire. Such roads provided efficient and rapid transit of military and government officials across the wide expanses of the empire.

The Persian empire eventually collapsed when it was conquered by Macedonian and Greek forces under the leadership of Alexander the Great in the late fourth century CE.

—Abraham O. Mendoza

Bibliography

- Briant, Pierre. *From Cyrus to Alexander: A History of the Persian Empire*. Translated by Peter T. Daniels. Winona Lake, IN : Eisenbrauns, 2002.
- Cook, J. M. *The Persian Empire*. New York: Schocken, 1983.

Seleucid Governance

The Seleucid political structure was modeled on the precedent that Alexander the Great had established upon his conquest of the former Achaemenid territories of the Levant, Mesopotamia, and Persia in the fourth century BCE. In essence, Seleucid governance was characterized by the pseudodeification of the monarch by the conquered populations (primarily the Persians), the acceptance of the satrapy (province) as a political subunit ruled by regional elites, and absolute control and loyalty of the military as the primary source of political legitimacy. The Seleucid monarchy relied on an extensive administrative bureaucracy staffed not only by the requisite Greeks and Macedonians (who considered themselves Greek), which characterized the upper echelons of Hellenistic rule, but also by non-Greek-assimilated elites steeped in the Greek language and culture. Seleucid control of vast regions of the former Achaemenid empire required that control be delegated to non-Greeks at the local level to prevent resistance to foreign rule. Nonetheless, the majority of the subject population did not consider themselves Greek and continued to practice their religion, language, and customs. In the case of the Persians and the Jews, this rejection of cultural hegemony created problems related to the authority of the Seleucid monarchy and the loss of territory.

Following the death of Alexander the Great in 323 BCE, disunity ensued in his vast dominions, which were divided by his generals into a series of dynastic kingdoms, all of which shared in the goal of spreading Hellenistic civilization in the Mediterranean littoral and western Asia. After a prolonged civil war with several other former generals who had served under Alexander, in 312 BCE Seleucus I established himself as the sovereign of the Seleucid empire, which encompassed the Levant, Mesopotamia, Persia, and areas of central Asia bordering on Mauryan India. As Alexander's successor to the Achaemenid empire, Seleucus fashioned himself as a Persian monarch, as had Alexander, to be revered and placed hierarchically above all other members of the realm. Unlike the Macedonian concept of kingship that merely placed the king as one of many elites, in Persia, kingship was defined by the status of the

➤ CATAPHRACTS

Among the many cultural elements that the Seleucids absorbed from their subject populations was the military formation known as the cataphract. The cataphract was a heavily armored cavalry unit that emerged from military practices used by nomads in the central Asian steppes. Cataphracts often served as shock battalions, and both soldier and horses were heavily clad to protect them from infantry attacks and other lesser-armed cavalry units. Greek armies encountered these formations in their campaigns east. The Seleucids adapted this form of military unit to use for their own armies. Cataphracts proved to be successful in battle against ancient armies and illustrate the diffusion of military tactics in antiquity.

—Abraham O. Mendoza

monarch as a semidivine leader with absolute rule, to which people had to prostrate themselves according to the hierarchical rituals of greeting known as *proskynesis*. While this proved to be a way to legitimize Greek rule to non-Greek elites, it did not quell dissent against what was seen as a foreign monarchy imposing its culture and authority over non-Greek peoples.

The Seleucids retained the Persian provincial unit or satrapy, which though nominally ruled by the Seleucids was administered at the local level by non-Greek elites. This gave the local administration a level of autonomy designed to prevent dissent and resistance to Greek rule. However, Seleucid rulers also founded cities and sponsored the spread of Greek culture and language in many of these newly conquered territories; non-Greek elites embraced Hellenistic culture, wishing to partake in Hellenistic civilization and the benefits of expanded trade and status that came with it. Inter marriage between Macedonians and Greeks with non-Greek elites formed a significant link to intertwine the different peoples who made up the Seleucid empire. The integration of these non-Greek elites into the Seleucid bureaucracy, trade networks, and other institutions created a cohesive stratum of society that was truly multiethnic and multicultural.

The Seleucid empire was vastly overextended and fraught by not only internal dissension but

also by external threats from its peripheral regions. In spite of its efforts to present itself as a successor to the ancient empires of Mesopotamia to its subject populations, albeit while propagating the benefits of Hellenistic civilization, the Seleucid political structure was overwhelmed by multiple problems. With its political center in Syria in Antioch, it faced the Mediterranean world, contending for power with rival Hellenistic states and the emergent Roman republic while attempting to retain a swath of central Asia amid the growing power of India and the emergence of various nomadic peoples who threatened its borders. Furthermore, internal resistance from Persians (Parthians) and Jews, who sought to break free from growing Seleucid authority in terms of culture and religion, eventually resulted in the loss of territory. Seleucid power would collapse due to both these centripetal and centrifugal forces and its inability to successfully retain its power over its subject populations. By 63 BCE when Roman general Pompey made Syria (which was by then the remaining territory of the former empire) into a Roman province, the Seleucid state was effectively obsolete.

—*Abraham O. Mendoza*

Bibliography

- Austin, M. M. *The Hellenistic World from Alexander to the Roman Conquest*. Cambridge: Cambridge University Press, 1981.
- Sherwin-White, Susan, and Amélie Kuhrt. *From Samarkhand to Sardis: A New Approach to the Seleucid Empire*. Berkeley: University of California Press, 1993.
- Shipley, Graham. *The Greek World after Alexander, 323–30 BC*. London: Routledge, 2000.

The Ptolemies in Egypt

The short but spectacular career of Alexander II of Macedon (Alexander the Great) culminated in the overthrow of the great Persian empire including its province (satrapy) of Egypt. Alexander and his successors brought with them Greek culture and religion. These blended with the indigenous cultures of the Near East to create a rich civilization called Hellenism that lasted 1,000 years. Hellenism also came to Egypt but in a unique way.

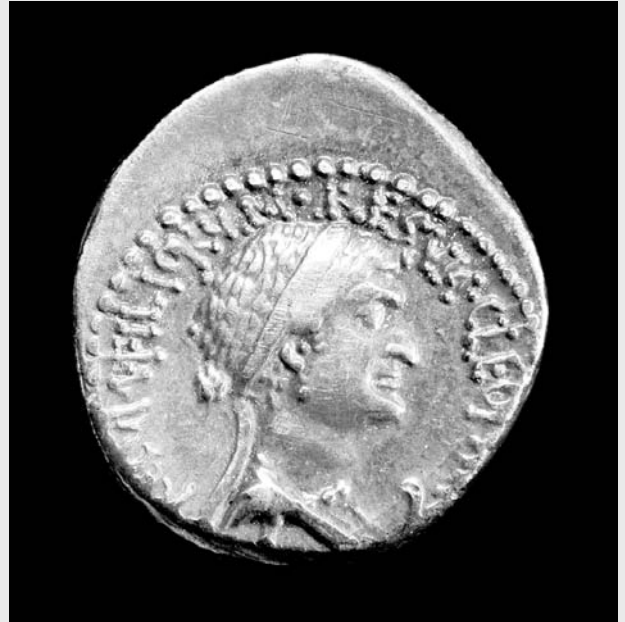
After Alexander's death in 323 BCE, his successors divided the Near East among themselves. His friend and general Ptolemy received Egypt and Libya as his share. By 306 he had taken the title of king, and two years later he was crowned pharaoh at Memphis, Egypt's ancient capital. During his brief visit to Egypt in 332–331, Alexander had been acknowledged as divine ruler of Egypt by the oracle of the god Amun at Siwa in the Libyan desert, had been crowned at Memphis, and had selected the site and laid out the ground plan for the city of Alexandria on the Mediterranean at the mouth of the Canopic branch of the Nile delta.

Ptolemy I (305–282) built on Alexander's legacy. To authenticate his claim to kingship he married a daughter of Nectanebo II (360–343), the last native Egyptian pharaoh. Ptolemy I titled himself soter (savior) and made Alexandria his capital, which as a city would become the most magnificent in the eastern Mediterranean. In 322 he had kidnapped Alexander's body, brought it to Egypt, and interred it in a splendid tomb in Alexandria, the Sema, where the Ptolemies were also buried. Ptolemy I and his son, Ptolemy II Philadelphus (Lover of his Sister), built the Pharos, the lighthouse of Alexandria, one of the Seven Wonders of the ancient world. They founded the Museum as a center for intellectual and artistic life. Its library would ultimately contain 700,000 papyrus scrolls, the ancient equivalent of the holdings of the Library of Congress in Washington, D.C. Ptolemy I created the composite Hellenistic cult of the god Sarapis. The Apis bull, earthly manifestation of the god Ptah of Memphis, at death became identified with Osiris as Osiris-Apis/Sarapis. Ptolemy I combined this with aspects of the Greek gods Zeus, Apollo, and Asklepios to form a composite deity whose cult, linked to that of Isis, became popular in the Greco-Roman world. In Egypt itself the cult was confined to Alexandria. Manetho, a priest at Heliopolis, was invited to write a history of Egypt. Ptolemy I also invited Jews to settle in Alexandria, where they became the largest urban Jewish community in the eastern Mediterranean. In the reign of Ptolemy II the first major translation of the Jewish Torah took place from Hebrew into Greek, the spoken language of Alexandrine Jews.

► CLEOPATRA

Ironically, Cleopatra (VII), the last Ptolemy, became the most famous and fascinating. She is the subject of seven movies, portrayed among others by the silent movie star Theda Bara and by Claudette Colbert and Elizabeth Taylor. Cleopatra's profile on coins and her sculptures do not show a particularly beautiful woman but rather one of strong character. She had considerable charm, sexual allure, and political savvy, using all these qualities to keep Egypt peaceful and the Romans at bay. She was the only Ptolemy to speak Egyptian. When she met Julius Caesar, she entranced him and won his support for her monarchy. His association with Cleopatra and her opulent court was one of the factors in his assassination. Their son, Caesarion, was killed on the orders of Octavian. Following Caesar, Mark Anthony fell under her spell and married her, producing twins (a boy and a girl) and another son, none of whom would remain in Egypt. Returning to Alexandria after their defeat at Actium, Anthony, believing Cleopatra to be already dead, fell on his sword. He was taken to her and died in her arms. Later she too famously committed suicide, traditionally by the bite of an asp. Shakespeare wrote that any description of her beauty would be inadequate, "For her own person, it beggared all description" (*Anthony and Cleopatra* II/2).

—John Barclay Burns



Roman coin depicting Cleopatra VII Thea Philopator.
(Sandro Vannini/Corbis)

These actions demonstrate the form of both Ptolemaic rule and Hellenistic culture in Egypt. The Ptolemies prided themselves in their descent from the Macedonian royal family, whose mythic ancestor was Herakles. They and their courts continued to speak the local Macedonian dialect of Doric Greek. They married within their own family or with other Macedonian-descended royal houses such as the Seleucid in Syria. Beginning with Ptolemy II Philadelphus and Berenice, each king married his sister. This reflected the sibling marriages among the gods, both Greek and Egyptian; the divine status that the Ptolemaic dynasty accorded itself; and Ancient Egyptian practice, the latter not as common as is popularly supposed. The Greeks in Egypt tended to remain in Alexandria, creating an inward-looking cultural and religious enclave while coexisting with the native culture 3,000

years old. This effectively meant that there were two cultures living side by side, occasionally amicably but more often in mutual distrust and hostility. The Ptolemies created a royal court that became notorious for *tryphē*, a Greek word for decadent luxury. The abundant resources of Egypt provided the means to support this and also Ptolemaic political and military ambitions in the eastern Mediterranean.

In theory, the entire land of Egypt was owned by the royal family. In reality, temples were still significant landowners; gifts of land were made, and veterans of the Ptolemaic armies received plots. Greek proprietors often rented their estates to Egyptians to work and thus produce the necessary taxes. During Persian rule some coins had been minted and used, but the Ptolemies introduced a regular monetary economy to Egypt. Greeks were heavily dependent

on the native Egyptians for their understanding of Egypt's agriculture, irrigation, and animal husbandry. Despite this dependence, native tenant farmers and peasants were subject to heavy taxation and were exploited by an often corrupt bureaucracy. The dynasty and its administration were Macedonian Greek, and Greeks were needed to staff it, especially at its upper levels. There had been a Greek presence in Egypt for several centuries. Necho II (Twenty-sixth Dynasty, 610–595) brought in Ionian Greeks to form an Egyptian Navy. In 570, the pharaoh Ahmose II had granted trading rights to foreigners, mostly Greeks, at the port of Naucratis in the Delta. However, Greeks suitable for government were always in short supply. As a result, Egyptians did enter the government but rarely reached the highest levels.

As it had done for millennia, their ancient religion continued to provide the Egyptians with focus and support for their cultural identity. Temples and priests remained important in their lives. Whatever their motives, the Ptolemaic rulers presented themselves as true Egyptian pharaohs, appearing on temple walls in traditional royal garb, offering to the gods, and taking their rightful place in the divine and mythic order. From the reign of Ptolemy II Philadelphus, kings and their wives were gods united, like the Ancient Egyptian pharaohs, with their dead predecessors who had “become Osiris.” The living ruler was still Horus. Beginning with Ptolemy I Soter, the dynastic rulers built and endowed temples and supported their priests on a grand scale. The high priests of the god Ptah at Memphis usually held considerable influence at the royal court. The famous Rosetta Stone, whose discovery in 1799 CE led to the deciphering of the hieroglyphic script, is a record of gifts, privileges, and tax exemptions granted by Ptolemy VI Epiphanes (God Manifest) in 196 to the Egyptian clergy to gain their support. The most-visited and best-preserved temples in Egypt come from the Ptolemaic era: those of Horus at Edfu, Isis at Philae (now on Agilkia), Hathor at Dendera, and the double shrine of Haroeris (Great Horus) and the crocodile god Sobek at Kom Ombo.

The Ptolemaic empire reached its greatest extent in the reigns of Ptolemy III and IV (246–

205 BCE) and included Nubia, Libya, and Syria-Palestine. Although Egypt continued to prosper during the reigns of Ptolemy V Epiphanes and Ptolemy VI Philmetor (205–145), possessions around the Mediterranean such as Syria-Palestine were gradually lost. The last century of the Ptolemaic dynasty was characterized by bitter family rivalries and plots that regularly led to assassinations and the increasing power of Rome in the eastern Mediterranean. In 51 BCE, Cleopatra VII became pharaoh and married her older brother Ptolemy XIII; she was only 17 years old. Ptolemy XIII died attacking Julius Caesar when he arrived in Egypt in 48. Caesar was captivated by Cleopatra and confirmed her rule alongside her younger brother Ptolemy XIV. She also made her son by Caesar, Ptolemy XV Caesarion, ruler in 36. After Caesar's assassination, she entered into an alliance with and then married Mark Anthony. At the naval Battle of Actium in 31, Anthony and Cleopatra lost to Caesar's adopted son Octavian. They fled back to Egypt. In August 30, Cleopatra committed suicide rather than end up in Octavian's triumphal parade in Rome. The era of the Ptolemies in Egypt was over.

—John Barclay Burns

Bibliography

- Bingen, J. *Hellenistic Egypt: Monarchy, Society, Economy and Culture*. Berkeley: University of California Press, 2007.
- Ellis, W. M. *Ptolemy of Egypt*. London and New York: Routledge, 1994.
- Höbel, G. *A History of the Ptolemaic Empire*. London and New York: Routledge, 2001.
- Manning, J. G. *Land and Power in Ptolemaic Egypt*. Cambridge: Cambridge University Press, 2003.
- Shaw, Ian, ed. *The Oxford History of Ancient Egypt*. Oxford: Oxford University Press, 2000.

Cleopatra and the End of Ptolemaic Egypt

The decline of the Hellenistic kingdoms vis-à-vis the Roman republic in the second and first centuries BCE left Ptolemaic Egypt as the last independent kingdom in the Mediterranean littoral. The Seleucid empire, Macedonia, and most all the Greek city-states and independent kingdoms had

succumbed to Roman authority, either as client-kingsdoms or directly held Roman provinces. In spite of these developments, Ptolemaic Egypt retained its independence, albeit while facing a long-term economic and political decline. Internal dissent on the part of non-Greek Egyptians, the loss of Cyprus and other provinces, and the contentious dynastic disputes during this time contributed to this decline. Most importantly, the last Ptolemaic ruler, Cleopatra VII Philopator, in the process of entangling herself in Roman politics through her liaisons with Julius Caesar and Mark Antony, ensured the destruction of Ptolemaic independence in 30 BCE at the hands of Octavian (the future Roman emperor Augustus Caesar), who saw her as a threat to his power in the Mediterranean region.

Prior to Cleopatra VII's accession to power, the reign of her father Ptolemy XII had been a period of significant decline. Ptolemy XII's attempt to centralize his authority led to dissent among the non-Greek populations and the loss of Cyprus and Cyrenaica. Corruption in the administration and the exploitative taxes demanded of the mass of the non-Greek Egyptian population for the past century had proved to be detrimental to the Ptolemaic dynasty. Upon Ptolemy XII's death in 51 BCE, Cleopatra was made comonarch with her brother and husband Ptolemy XIII. While Egypt was engulfed by economic crises, floods, and famine, Cleopatra conspired against her husband, which resulted in her exile from Egypt in 48 BCE as he became sole ruler.

Ptolemy XIII became embroiled in Roman affairs during the Roman Civil War of 49–45 BCE. When Roman consul Pompey sought sanctuary in Alexandria, he was captured and beheaded in 48 BCE. Ptolemy believed that this gesture would win him the gratitude of Julius Caesar. Caesar, while Pompey's rival in the conflagration, nevertheless was upset by the situation and seized Alexandria, making himself the arbiter between Ptolemy and Cleopatra. Cleopatra sought to gain Caesar's favor and managed to charm him in their first meeting, and they became lovers. Caesar backed Cleopatra's claims to the throne, reinstating her along with her new brother-husband Ptolemy XIV as comonarch. In 44 BCE Caesar was murdered in Rome. Cleopa-

➤ PTOLEMAIC ADOPTION OF EGYPTIAN KINGSHIP TRADITIONS

The Ptolemaic dynasty of Egypt, which ruled from 305 to 30 BCE, was essentially a Hellenistic Macedonian family, descended from one of Alexander the Great's top generals. However, the founder of this dynasty, Ptolemy I Soter, recognized, much as had his predecessor Alexander, that by adopting the non-Greek native traditions of kingship of the newly conquered territories of the East he could legitimize his rule more efficiently and diminish dissent and resentment against foreign rule. He presented himself as Pharaoh to his newly conquered subjects after he centralized his control of Egypt in the wars of succession. He also introduced certain traditions to his dynasty that would legitimize them to the non-Greek populations, such as incestuous marriage practices and claiming the status of deities. While retaining Greek language and culture at court, the Ptolemies simultaneously continued Egyptian traditions to secure their rule and appease the non-Greek Egyptians. From Ptolemy I Soter to Cleopatra VII Philopator, the Ptolemies continued these traditions, thereby illustrating the hybrid nature of Hellenistic civilization in the ancient Near East.

—Abraham O. Mendoza

tra, who had born Caesar a son, Caesarion, made Caesarion her coregent and successor to the Egyptian throne upon the death of her husband Ptolemy XIV. In the midst of a minor civil war, Ptolemy XIV drowned in the Nile River in 43 BCE, thereby removing him as a potential rival and ending all internal hostilities.

Mark Antony, one of the triumvirs (one of three who rule) of Rome in the aftermath of civil war, met with Cleopatra in 42 BCE. Mark Antony and Cleopatra fell in love and had multiple children. After spending several years in the East fighting in campaigns against the Parthians, Mark Antony settled in Alexandria. Most of his conquered territories in the East were given to his three children with Cleopatra (Alexander Helios, Cleopatra Selene II, and Ptolemy Philadelphus) in 34 BCE. Caesar's successor, Octavian, who was also in the triumvirate with Mark

Antony, along with most of the Roman Senate was outraged by Mark Antony's actions. Octavian persuaded the Senate to declare war against Ptolemaic Egypt. At the Battle of Actium in 31 BCE off the Ionian coast of Greece, Mark Antony and Cleopatra's fleets were destroyed by Octavian's forces. As Octavian's force entered Egypt, Mark Antony's legions deserted, thereby leaving Mark Antony and Cleopatra. Both Mark Antony and Cleopatra committed suicide rather than face Octavian's wrath, with Egypt subsequently falling to Roman rule in 30 BCE. As the last of

the independent Hellenistic kingdoms, this event marked the end of the Hellenistic era.

—Abraham O. Mendoza

Bibliography

Ashton, Sally-Ann. *Cleopatra and Egypt*. Malden, MA: Blackwell, 2008.

Burstein, Stanley Mayer. *The Reign of Cleopatra*. Westport, CT: Greenwood, 2004.

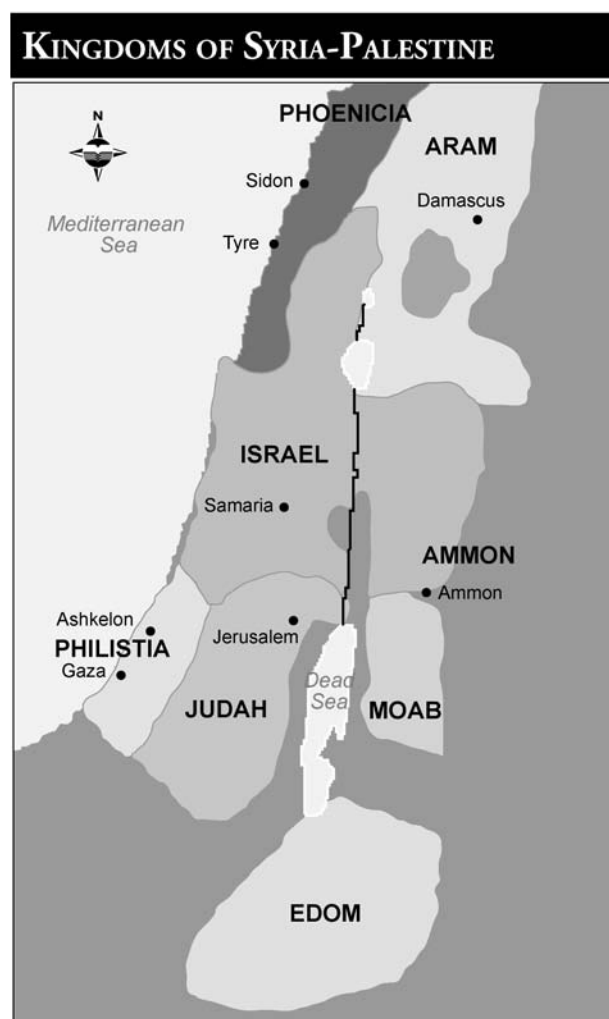
Hölbl, Günther. *History of the Ptolemaic Empire*. Translated by Tina Saavedra. New York: Routledge, 2001.

■ Introduction: The Kingdoms of Syria-Palestine

For modern Jews, Christians, and Muslims, the political history of Syria-Palestine from 1000 BCE to 300 CE is of profound importance. This is the location and period in which most biblical events are said to have occurred. Much of the Old Testament/Hebrew Bible explicitly recounts the political history of the kingdoms located in this small but important region.

The Old Testament describes the rise and fall of a number of Iron Age states within the region. The kingdoms of Israel and Judah are of most interest to the biblical authors; however, they also discuss Philistia (on the coast of Israel) and a number of kingdoms in what is now known as Jordan. The Old Testament also attests to relations between the kingdoms of Israel and Judah with the Phoenicians (in what is now Lebanon) and other polities in Syria.

Most of the kingdoms of the Levant had lost their autonomy by 586 BCE, having been conquered by first the Assyrians and then the Babylonians. When the Babylonians were conquered by the Persians, many of these states were incorporated into the larger Persian empire until Alexander the Great defeated the Persians in 332 BCE. Then this region fell under his control. Alexander the Great brought Hellenistic-Greek culture and political institutions to the region. When Alexander died, the Levantine portion of his kingdom fell under the control of the Seleucid dynasty. After numerous powers within the



region rose and fell, the Romans incorporated it directly into their empire.

—Kevin M. McGeough

The United Monarchy of Saul, David, and Solomon

According to the Old Testament, the tenth century BCE saw the emergence of the first kingdom of Israel. The books of Samuel and Kings (and a later account in Chronicles) describes the movement of Israel from a decentralized polity with an ad hoc system of leadership to the formation of a structured hierarchical state analogous with those of surrounding states. In the biblical tradition, Israel was ruled by judges, who are best thought of as temporary rulers as opposed to the judicial meaning that is implied by the word today.

A judge would arise in a situation of crisis, and once the crisis was resolved, the leadership structures disappeared. In the biblical tradition, this system eventually became unsatisfactory to the people of Israel, who requested that one of these temporary leaders, the prophet Samuel, provide them a king like the other nations had. According to the Bible, God agrees to provide the people with a king and, using Samuel as an intermediary, chooses Saul. Saul reigns briefly but falls out of favor with God, while at the same time a young shepherd boy named David finds favor with God. Eventually David supplants Saul as king and has a long and successful reign. The biblical stories of David are interesting since they do not always portray him in a favorable light. When David dies, his son Solomon becomes king. According to the Bible, Israel under Solomon expands its territory and becomes an economic powerhouse in the region. According to the biblical text, though, Solomon's most important achievement is the construction of the Temple in Jerusalem for which he enlists the help of Phoenician architects. After Solomon's death, the people in the north revolt and form an independent state. From this point on (in what is referred to as the Divided Monarchy), the northern kingdom is known as Israel, and the southern kingdom, which retains Jerusalem as its capital, is known as Judah.

ANTIMONARCHICAL SENTIMENTS IN THE BOOKS OF SAMUEL

Scholars and close readers of the Old Testament have noticed two seemingly disparate attitudes toward kingship in the books of Samuel. There are seemingly promonarchical sentiments in which the development of kingship is seen as a type of progress. Most importantly, a king will help provide Israel with security against her enemies. But even though God grants the people a king, there are some very clearly negative sentiments regarding kingship in the Bible. Perhaps the strongest example of this is 1 Samuel 8:7 in which God explains to Samuel that the people's request for a king is tantamount to a rejection of God. Samuel, the prophet through whom God is said to have implemented the institution of kingship, seems unenthused for it. Samuel warns the people of the negative consequences of kingship (especially taxation and conscription) and foresees a day in which they will regret the choice.

—Kevin M. McGeough

Bibliography

Dietrich, Walter. *The Early Monarchy in Israel: The Tenth Century B.C.E.* Translated by J. Vette. Biblical Encyclopedia. Atlanta: Society of Biblical Literature, 2007.

This period of the United Monarchy is referred to in archaeological periodization as the Iron IIa period (1000–925 BCE). There is considerable disagreement among scholars regarding the veracity of the biblical account. Scholars who feel that the biblical account is wholly reliable are maximalists, whereas those who do not trust the account at all are known as minimalists. Most mainstream scholars fall somewhere between the two, but there is considerable variation among scholars regarding which elements of the biblical account reflect historically accurate data and which do not. This problem is magnified by the fact that the biblical account of the United Monarchy is highly literary and was not meant to serve as a historical account in the way in which historians write today.

One of the key problems in the debate regarding the historicity of the United Monarchy

lies in the lack of external corroboration. For the later kings of Israel and Judah, the historical accounts of the Assyrians and others attest to the general accuracy of the presentation of the order of kings in the Old Testament (with a few minor problems). There is only one strong piece of external evidence for any of the figures of the United Monarchy: an inscription that dates to the Iron IIb period (after the presumed time of the United Monarchy) found at Tell Dan. The Dan inscription refers to the “house of David,” which proves that in slightly later times people believed that a man named David had founded the dynastic line that ruled Israel.

Archaeological evidence is much more open to interpretation regarding the historicity of Saul, David, and Solomon. Without an inscription that labels that a building was built by one of these figures, it is difficult to safely attribute these structures. However, one biblical passage, 1 Kings 9:15, provides a possible evidentiary basis for attributing certain buildings with Solomonic construction projects. The passage reads: “Now this is the account of the forced labor that King Solomon conscripted to build the house of the Lord (the Temple) and his house, the Millo, and the wall of Jerusalem, Hazor, Megiddo, Gezer.” Excavations at Gezer, Megiddo, and Hazor as well as some excavations at Jerusalem have revealed similar architecture that is best understood as part of a centralized royal building project. However, some scholars have recently argued that these structures have been misdated and that they should in fact be associated with the construction projects of the later Omride dynasty of the Iron IIb period.

—Kevin M. McGeough

Bibliography

- Finkelstein, Israel, and Neil Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Lemaire, André. “The United Monarchy: Saul, David and Solomon.” In *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Rev. and expanded ed., edited by Hershel Shanks. Upper Saddle River, NJ: Prentice Hall, 1999.
- Mazar, Amihai. *Archaeology of the Land of the Bible*. New York: Doubleday, 1992.

Miller, John, and John Hayes. *A History of Ancient Israel and Judah*. 2nd ed. Louisville, KY: Westminster John Knox, 2006.

Kingdom of Israel

The Kingdom of Israel emerged as a separate political entity from the Kingdom of Judah circa 930 BCE, a period in biblical history known as the Divided Monarchy through which the Kingdom of Israel lasted well until circa 722 BCE when conquered by the Assyrians. According to the biblical accounts, upon the death of King Solomon (ca. 930), his son Rehoboam succeeded him and traveled to the northern territories of the realm to lay claim to his father's dominions. However, northern tribal leaders attempted to negotiate with him over high taxation and forced labor policies that had been instated by his father. Much of this labor was conscripted from non-Hebrew populations, but these peoples affected the livelihoods of northern Hebrews in terms of subjecting them to economic control emanating from the House of David in Jerusalem. Rehoboam found himself at odds with the tribal leaders' demands; he refused to accede to their demands and attempted to impose more stringent labor policies. In the aftermath, Rehoboam's official Adoram, sent north to enforce Rehoboam's labor conscription policy, was stoned to death by rebellious Israelites. Rehoboam was forced to return to Jerusalem, which resulted in the de facto separation of the kingdoms.

Biblical tradition further asserts that Jeroboam became king of Israel after formerly having served Solomon as an administrator of corvée labor in the north and then having fled to Egypt after treasonous activity against the Monarchy. Upon Solomon's death Jeroboam returned to Israel and was a key figure in the secession of Israel from Rehoboam's realms. Jeroboam established religious centers at the cities of Dan and Bethel in an effort to dissuade Israelites from making pilgrimages to Jerusalem. He was apprehensive that if this continued, Israelites would reestablish their loyalty to Rehoboam. However, this was a violation of Deuteronomistic law and as such is depicted in the Bible as a major of-

fense to the Hebrew religion. The historicity of these events have come into question by scholars since much of this account reflects the values of a later time period.

Whatever its origins, the first century of the Divided Monarchy was fraught by endemic warfare between Israel and Judah. The political center of Israel at Tirzah became a rival to Jerusalem for the loyalty of Hebrews in both realms. However, Israel attempted to persuade its neighbors to join in the struggle against steadfast Judah, thereby bringing Philistia and Damascus into its foreign policy adventures. Judah followed suit by also offering tribute and territorial concessions for viable alliance against Israel. As a result, these intrigues between Israel and Judah allowed Damascus to extend its dominion along the coast and thereby secure its own territorial expansion vis-à-vis the western regions of Canaan.

Israel's emergence as an important center of trade in the Mediterranean and the Near East occurred in the reign of Omri (ca. 883–872 BCE). Omri successfully secured his power by creating a stable dynasty and founding the new capital of Israel in Samaria. In establishing this new capital, Omri ensured better communication and trade networks with the Phoenician cities, particularly Tyre. Phoenicia benefited from stable relations with Israel to ensure inland access to trade networks for its Mediterranean mercantile enterprises. This commercial relationship benefitted both Israel and Phoenicia but brought Israel into conflict with Damascus over control of trade routes. However, these rivals would put aside their differences to meet their common enemy, Assyria.

Assyrian rise to hegemony in the region brought it into conflict with the coastal regions of the Fertile Crescent. Ahab, Omri's successor, found it expedient to form an alliance with Damascus to counter this growing threat emanating from northern Mesopotamia. Assyrian kings gave their potential adversaries two options: pay them tribute or face destruction. In the mid-ninth century BCE, Israel and Damascus formed a coalition with other polities in the coastal regions of the Levant to counter the advance of Assyrian forces under Shalmaneser II. While Assyrians were successful at engaging this coalition in a series of confrontations, they also indi-

➤ LEADERS OF THE KINGDOM OF ISRAEL, CIRCA 930–722 BCE

Jeroboam I	ca. 930–908
Nadab	ca. 908–907
Baasha	ca. 907–884
Elah	ca. 884–883
Zimri	ca. 883
Omri	ca. 883–872
Ahab	ca. 872–851
Ahaziah	ca. 851–850
Joram	ca. 850–841
Jehu	ca. 841–818
Jehoahaz	ca. 818–802
Joash	ca. 802–787
Jeroboam II	ca. 787–748
Zechariah	ca. 748–747
Shallum	747
Menahem	747–738
Pekahiah	738–737
Pekah	737–732
Hoshea	732–724

Source: Hershel Shanks, ed., *Ancient Israel: From Abraham to the Roman Destruction of the Temple* (Upper Saddle River, NJ: Prentice Hall, 1999), 137.

—Abraham O. Mendoza

rectly assisted the growing strength of Damascus, which became the hegemonic power in the region in spite of coalition defeats. As a result, Israel was subjected to domination from Damascus. An unsuccessful revolt by King Jehu (ca. 841 BCE) against anti-Assyrian factions (which meant pro-Damascus cadres) in effect led to more direct influence from Damascus when this revolt was crushed. King Hazael of Damascus annexed various regions from Israel and added these to his own kingdom, thereby enhancing his control over Israelite affairs.

In the early eighth century, Israel managed to survive by pitting Damascus and Assyria against each other while maintaining peaceful relations with Damascus and paying heavy tribute to

Assyria. However, late in the eighth century, as Damascus's power began to wane, Israel asserted itself militarily. It managed to regain many of its former territories and also reestablish its commercial prosperity in the region. By the mid-eighth century BCE the situation was reversed, and Damascus was subservient to Israel and reliant on Israel for its own security. However, with the reassertion of Assyrian military expansion in the late eighth century, Israel faced this threat mostly on its own.

Israel recognized its position of weakness with regard to the Assyrian threat and thus secured its stability by serving as a loyal vassal. However, under the reign of Hoshea (732–724 BCE), Israel conspired with Egypt against Assyria and withheld tribute, which led to an Assyrian siege of Samaria (725/724 BCE). Assyrian kings Shalmaneser V and Sargon II campaigned in the Levant against Israel, Phoenicia, Damascus, and Egypt, effectively destroying their military forces and absorbing their territories. It was during this period that the mass deportations of Israelite captives to Assyria proper began. The Kingdom of Israel was effectively dismembered and defunct by circa 722 BCE. Judah managed to stave off conquest and destruction by paying heavy tribute to the Assyrian forces.

—*Abraham O. Mendoza*

Bibliography

- Finkelstein, Israel, and Neil Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible*. New York: Doubleday, 1992.
- Miller, John, and John Hayes. *A History of Ancient Israel and Judah*. 2nd ed. Louisville, KY: Westminster John Knox, 2006.
- Shanks, Hershel, ed. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Upper Saddle River, NJ: Prentice Hall, 1999.

Kingdom of Judah

According to biblical tradition, the dissolution of the Kingdom of Israel under the House of David resulted in the formation of the two kingdoms of Israel and Judah in what is known as the Divided

Monarchy. Upon the death of Solomon in circa 930 BCE, his son Rehoboam asserted his claim to the throne in Jerusalem and subsequently went northward to ensure his control of the northern territories. However, he was unable to affirm his control of these territories, given the resentment against his father's forced labor policies by northern leaders. His reluctance to withdraw his father's labor policies enraged the leadership of the northern tribes. This resulted in the secession of the northern territories, which coalesced into the Kingdom of Israel under King Jeroboam. The rump state that remained, centered in the city of Jerusalem, became the Kingdom of Judah. Recently, scholars have come to question the historicity of the biblical accounts of the United Monarchy, although no clear consensus on this issue has been reached.

Regardless of its historical origins, Judah became a pivotal region for trade in the Levant during the Iron IIB period due to its position in relation to Egypt in the south, which ensured trade and commercial networks in the eastern Mediterranean. However, it was effectively cut off from the inland trade networks that Israel possessed. Nonetheless, Judah retained its autonomy from Israel, regardless of the attempts of the latter to subjugate it. Much of the early period of the Divided Monarchy is characterized by constant warfare between Israel and Judah. As a consequence, King Asa of Judah (ca. 911–870 BCE) plotted against Israel by securing an alliance with its adjacent regional rival Damascus. By ensuring Damascus through tribute of its loyalty, Judah ensured that Damascus would effectively prevent Israelite forces from attacking its northern border. However, the emergence of Assyria led to Israel and Damascus finding a mutual cause in terms of having a common enemy and thereby ended mutual hostilities, effectively isolating Judah. In turn, Judah had to recognize Israel's hegemony and its own subservience.

During the reign of King Jeroram (ca. 846–841 BCE), Judah became further subjected to Israel due to pressure exerted by Assyria in the region and the coalition formed by regional powers in combating Assyrian expansion. Judah's alliance with Israel also resulted in Judah becoming entwined in Israel's domestic political disputes

and foreign wars. Intermarriage between the royal houses, while ensuring a solid alliance (more likely suggesting a marriage of convenience both literally and figuratively), did not mean a union of the kingdoms. Damascus eventually established its own hegemony over the region, and both Israel and Judah were subjected to its indirect political domination from the 830s BCE to the early eighth century BCE.

The resurgence of Assyrian military power in the early eighth century contributed to the waning of the power of Damascus. This resulted in a relative restoration of Judah's autonomy in the region. The dissolution of the anti-Assyrian coalition also resulted in a rift between Israel and Judah. King Joash of Israel laid siege to Jerusalem after King Amaziah of Judah overreached his forces and tried to assert his power in the region, believing that Israelite forces were engaged with Damascus. By 783 BCE, Judah was again subservient to Israel's domination in the region. Nonetheless, Judah was able to assert itself in the region regardless of Israel's domination, particularly against weaker enemies. During the reign of King Azariah (ca. 783–732 BCE), Judah was able to defeat Philistine and Arab forces and ensure its control over important trade routes to the Hejaz.

Resurgent Assyrian power contributed to the destruction of the Kingdom of Israel by 722 BCE, leaving only Judah as an autonomous yet subservient kingdom to the Assyrian empire. With the fall of Samaria and the establishment of Assyrian power in the Levant, Judah was forced to pay tribute to its Assyrian overlords in order to ensure its survival. While initial resistance against Assyria, such as King Hezekiah's revolt, led to the invasion of Judah by Assyrian forces, Assyria's siege of Jerusalem and other important Judean cities failed due to stiff resistance by Judah's forces and Hezekiah's leadership (ca. 727–697 BCE). As a result, Judah retained its status as a vassal state of Assyria but did not suffer the same fate as Israel, which had been dismembered and had much of its population deported.

Conflict between Egypt and Assyria in the seventh century directly involved Judah as it sought to wrest itself from indirect foreign domination. The gradual decline of Assyria allowed Judah to assert itself as an independent polity

LEADERS OF THE KINGDOM OF JUDAH, CIRCA 930–587/586 BCE

Rehoboam	ca. 930–913
Abijam (Abijah)	ca. 913–911
Asa	ca. 911–870
Jehoshaphat	ca. 870–846
Jehoram	ca. 846–841
Ahaziah	ca. 841
Ataliah	ca. 841–835
Jehoash	ca. 835–801
Amaziah	ca. 801–783
Azariah (Uzziah)	ca. 783–732
Jotham	750–735
Ahaz	735–727
Hezekiah	727–697
Manasseh	697–642
Amon	642–640
Josiah	640–609
Jehoahaz	609
Jehoiakim	609–598
Jehoachin	598–597
Zedekiah	597–586

Source: Hershel Shanks, ed., *Ancient Israel: From Abraham to the Roman Destruction of the Temple* (Upper Saddle River, NJ: Prentice Hall, 1999), 137.

—Abraham O. Mendoza

and to acquire lands from the former Kingdom of Israel. However, as the Assyrian empire succumbed to its enemies in Mesopotamia, most notably the Neo-Babylonians and the Medes, Judah also felt the pressure exerted by these forces. While Judah paid tribute to Babylon during its expansion in the region vis-à-vis Egypt, it also secured an alliance with local states in the Levant also apprehensive about Babylonian power.

Judah's policies of assuaging the Babylonians of their loyalty and simultaneously attempting to counter their power by forming an alliance was eventually ended when King Zedekiah (r. 597–586 BCE) led a revolt against Neo-Babylonian forces in an attempt to ensure Egypt of its

support. However, this elicited a harsh response from Neo-Babylonian king Nebuchadnezzar, who laid siege to Jerusalem and ordered the destruction of the Temple in 586 BCE. Furthermore, this also led to the Babylonian captivity of Judean elites, who were deported to Babylon, while Judah came under the direct control of Babylon.

—*Abraham O. Mendoza*

Bibliography

- Finkelstein, Israel, and Neil Silberman. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Its Sacred Texts*. New York: Free Press, 2001.
- Mazar, Amihai. *Archaeology of the Land of the Bible*. New York: Doubleday, 1992.
- Miller, J. Maxwell, and John H. Hayes. *A History of Ancient Israel and Judah*. 2nd ed. Louisville, KY: Westminster John Knox, 2006.
- Shanks, Hershel, ed. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Upper Saddle River, NJ: Prentice Hall, 1999.

Judah under the Persians

In 538 BCE, a decree by Cyrus of Persia, attested in archaeological and biblical sources, granted the Judean exiles permission to return to Jerusalem and rebuild their Temple. Though many remained in Babylonia forming the nucleus of a Jewish Diaspora in the east, many others returned. The Second Temple was completed between 521 and 515 BCE, an event seen by many as fulfilling the words of the prophet Jeremiah, who had predicted an end to the exile after seventy years (2 Chronicles 36:22). There was great friction, however, between the Jews who had remained in Judea at the time of the exile and the returning exiles who, though few in number, enjoyed imperial support. These self-styled “children of the exile” referred to the local Judeans as “peoples of the land”—a derogatory term that questioned the latter’s very status as Jews. Conflicts over Jewish identity and the boundaries of the Judean community were bitter during this period.

In keeping with their policy of creating stability through local, religious, and legal reform, later Persian emperors promoted the establishment of the Torah as the authorized law of the

Jews. This task is associated with two figures whose chronological sequence is uncertain—Ezra and Nehemiah. Ezra, a Babylonian Jew from a priestly family described as a scribe expert in the Torah of Moses, was commissioned by the Persian emperor to supervise the Temple, establish the Torah of Moses in the Judean province, appoint scribes and judges, and administer civil and moral order. As the Persian-appointed governor of Yehud, Nehemiah instituted a number of economic and social reforms.

According to the biblical books that bear their names, Ezra and Nehemiah sought to regulate and unify Jewish life in the Restoration community. They instituted some radical reforms aimed at strengthening the religious identity of the Judahites and preventing the decline of exclusive Yahwism by enforcing a policy of social and religious separatism. Their most radical act was the dissolution of foreign marriages and insistence on a genealogical standard for Jewish identity. Ezra objected to marriages between the returning exiles and the “peoples of the land”—foreigners, but possibly also Judeans who had remained in the land during the exile and who, according to the book of Ezra, had adopted many of the customs and religious practices of their neighbors. He described these unions as a great sin and called upon the exiles to divorce their foreign spouses and expel from the community children born of such unions. The prohibition of intermarriage with any foreigner and the refusal to assimilate foreigners within the community was an innovation on Ezra’s part. The Torah prohibits marriage with certain, but not all, foreigners and in any event allows for the assimilation of, and marriage to, foreigners who renounce idolatry and agree to the terms of Israel’s covenant with Yahweh.

Ezra called a public assembly to present an extended public reading of, and communal rededication to, the Torah of Moses—which probably consisted of something like the Deuteronomic and priestly traditions. The biblical account describes the pledge of all the people who “join with their noble brothers, and take an oath with sanctions to follow the Teaching of God, given through Moses the servant of God, and to observe carefully all the commandments of the Lord our God, His rules and laws” (Nehemiah

► THE HISTORICITY OF EZRA

The historicity of Ezra has evoked controversies as deep as those surrounding the figure of Moses, to whom Ezra is often compared because of his putative role in reconstructing a postexilic Jewish community in Palestine. Some scholars consider Ezra to be the invention of the Maccabean era, while others read the biblical books of Ezra and Nehemiah as the later elaboration of a basically historical tradition. The matter is further complicated by chronological problems in the sources that make it impossible to date Ezra with certainty. He appears to have some connection with Nehemiah, the governor of Judah in the fifth century, but whether he preceded or followed Nehemiah (465–425 BCE or 405–359 BCE are the common alternatives) is not clear. Ezra is described as both a priest and a

scribe, expert in the Torah of Moses. Evidently, a man of some importance in Babylon, he assumed some sort of leadership role in the Jewish community in Jerusalem. To what degree he was a Persian functionary is debatable but his mission appears to have been the teaching and implementation of the Torah of Moses. Since the books of Ezra and Nehemiah contain references to a wide range of Pentateuchal traditions, it is thought that Ezra's "Torah of Moses" was much like the Pentateuch we currently possess. Ezra is particularly identified with efforts to quash intermarriage. In rabbinic tradition, Ezra is praised for rebuilding Judaism. It is said that he would have been worthy of receiving the Torah from God, had Moses not preceded him.

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10:30). There then follows a long list of obligations to which the people commit themselves. Significantly, the ban on intermarriage and the observance of the Sabbath top the list as central covenantal obligations.

Many scholars believe that this was the moment when the Torah, backed by Persian imperial power, became the official and authoritative norm for Israel. In this period, Judaism took the decisive step toward becoming a religion of Scripture. The zeal of Ezra and Nehemiah with the sponsorship of the Persian imperial authority, helped to preserve—or more properly, create—a national and religious identity for Jews at a time when their numbers were small and they were surrounded by enemies.

However, the reforms of Ezra and Nehemiah met with resistance, as evidenced in various postexilic sources that protest the policy of extreme separatism, and the bans on intermarriage and conversion. Isaiah 56:1–7 reassures foreigners who have joined themselves to God that they will be welcome in the holy Temple to worship and offer sacrifices. The postexilic book of Ruth is the story of a foreign woman who chooses to join the community of Israel. Welcomed by those who know of her righteous and compassionate deeds, Ruth will become the great-grandmother of Israel's most famous and beloved king David. One cannot imagine a story standing in greater con-

trast to Ezra's policy of separatism and nonassimilation of foreigners than the book of Ruth. The assimilation of foreigners at this time was widely viewed as possible, and we have much evidence that non-Jews became Jews and that Jews felt no compunction about marrying them, despite Ezra's campaign to the contrary. For example, the powerful and influential Tobiads were originally Ammonite, but adopted Jewish identity and were fully assimilated by the Ptolemaic period.

The Torah of Moses may have become the unchallenged norm and source of authority for Jews in the Persian period, but this did not in itself result in a uniform or monolithic set of Jewish practices and beliefs. It simply meant that practices and beliefs were perceived as authentic to the degree that Scriptural warrant could be found for them. Various techniques of scriptural interpretation arose, enabling widely divergent Jewish groups to claim authenticity for their practices and beliefs. The Second Temple period spawns a variety of Jewish subgroups—Pharisees, Sadducees, Essenes, and more—each claiming scriptural or divine authority for its interpretation of the common heritage of the nation. Thus, although Ezra succeeded in unifying Israel around a common text, he did not succeed in unifying Israel around a common interpretation of that text.

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Bibliography

- Grabbe, Lester. *Judaism from Cyrus to Hadrian*. 2 vols. Minneapolis, MN: Fortress, 1991.
- Schiffman, Lawrence H. *From Text to Tradition: A History of Second Temple and Rabbinic Judaism*. Hoboken, NJ: Ktav Publishing House, 1991.
- Shanks, Hershel, ed. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Upper Saddle River, NJ: Prentice Hall, 1999.
- Stern, Ephraim. *Archaeology of the Land of the Bible. Volume II: The Assyrian, Babylonian, and Persian periods, 732–332 B.C.E.* New Haven, CT: Yale University Press, 2001.

Hellenistic Palestine

Alexander of Macedon's conquest of the Ancient Near East was concluded in the 320s BCE. In Alexander's time tens of thousands of Greeks and Macedonians migrated to all parts of his vast empire. Greek culture flourished from Italy to Central Asia until the rise of Islam in the seventh century. In political terms, the Hellenistic period in Palestine extends from 332 to 167 BCE, when the Jews asserted their political independence from the Greeks. In cultural terms, however, the Hellenistic period in Palestine extends until the rise of Islam, for even under native Jewish rule, Roman rule and later Byzantine rule, Jews in Palestine were thoroughly immersed in Hellenistic culture.

Rulers of the Hellenistic period encouraged the construction of new cities and the conversion of old cities into towns with Greek institutions such as: the assembly of citizens, the election of magistrates, educational athletic centers (the gymnasium), and civic cults honoring the Olympian gods as well as local deities. In addition, there was a wide adoption of the Greek language, of Greek dress, material culture, art, and modes of thought particularly among the upper middle classes of the Ancient Near East. That Jews participated in and were deeply influenced by Hellenistic culture is attested in an array of writings expressing new ideas, and in the formation of sectarian movements with diverse understandings of God's will for Israel: Sadducees, Pharisees, Essenes, and messianic and apocalyptic movements.

After Alexander's death in 324, his generals fought for control of the empire. By 301 Egypt was held by Ptolemy, while Mesopotamia and the Levant (Palestine) were held by Seleucus. However, the Ptolemies occupied most of the Levant and for a century the two great powers struggled for control of the region, the Seleucids finally prevailing by 198 BCE.

The struggle had a significant impact on the internal politics of Jerusalem and Judah, with pro-Ptolemaic and pro-Seleucid factions in conflict. After gaining control of Judea in 198, the Seleucids rewarded the pro-Seleucid faction by providing support for the Temple, granting tax concessions, and confirming local autonomy. But the early second century BCE saw a struggle over the office of high priest in which various contenders for the position paid the Seleucid king, Antiochus Epiphanes, for his support. Problems arose when a man named Menelaus attempted to raise money to buy the king's support by taking treasures from the Temple. Fighting broke out between the supporters of Menelaus and a certain Jason, who favored establishing Jerusalem as a polis. Antiochus suspected a revolt, recaptured the city, and plundered the Temple in 169–168 BCE. He garrisoned troops in Jerusalem and reorganized the Temple under pagan rites to accommodate his soldiers. The Temple was rededicated to Zeus Olympius (the Syrian god Baal Shamem) and Menelaus presided as high priest over the proceedings. Many Jews were outraged however, and the suppression of traditional Jewish observances, such as circumcision and Sabbath observance, prompted a full-scale revolt known as the Maccabean Revolt.

The Maccabean Revolt was led by Judas Maccabeus of the Hasmonean family, and his sons. Among the rebels were Hasidim or "pious ones," whose goal was to purge the Temple of its "pagan pollution" and restore it to Yahweh. This was achieved in December, 164 BCE—an event commemorated by Jews to this day in the Festival of Hanukkah. During the revolt many zealots were tortured and killed, generating the first written accounts of Jewish martyrs, that is, persons who willingly accept death rather than violate the injunctions of their religion against, for example, eating pork or offering sacrifice to the king's god.

► PHILO OF ALEXANDRIA

Philo Judaeus was a Jewish philosopher from Alexandria (ca. 20 BCE–50 CE). He was born into a noble family with connections to the Herodian dynasty, but little is known of his life. It is evident from his knowledge of classical literature, philosophy, rhetoric, and general science that he received training well beyond the Greek general education of the encycia (literature, rhetoric, mathematics, music, and logic). His writings display an excellent command of Greek language and literary style. The source of his Jewish knowledge is less clear and it is thought that he did not know Hebrew, but read the Tanakh in its Greek translation (the Septuagint). He apparently attended Sabbath synagogue services and occasionally consulted learned members of the community about aggadic traditions. He undertook a pilgrimage to Jerusalem once in his life. Philo was a devout Jew who nevertheless took an active part in the social life of Alexandria, attending the theater, horse races, and banquets of the city. Following a series of anti-Jewish pogroms in Alexandria in 38 CE, Philo headed a delegation of the Alexandrian Jewish community to emperor Caligula in Rome (40 CE). Although the mission failed, the increasing unrest was settled by Claudius who ascended the throne in 41 CE.

Philo's writings may be divided into three general categories. The first consists of expositions of the Pentateuch as a legal code. In addition to biographies of biblical characters (the patriarchs, Moses) Philo wrote an exposition of the biblical commandments, classifying them under the various commandments of the Decalogue. The second category of works consists of philosophical interpretations of the Pentateuch. These works are allegorical treatments that ignore the plain narrative content of the Tanakh, reading it instead as a system of abstract philosophical-mystical concepts. The third category of writings consists of commentaries on Genesis and Exodus presented in a question and answer format. Philo also wrote treatises devoted to purely philosophical topics, as well as contemporary historical books. His works are strongly influenced by Stoicism, Platonism, and neo-Pythagoreanism.

Philo's writings were preserved by the Christian Church, some in Greek and some in Armenian translation. No Jewish source (other than Josephus) refers to Philo explicitly. While his influence on rabbinic Judaism was negligible, his influence on the Church Fathers was great because of his systematic allegorical readings of the Hebrew Bible.

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The Hasidim, concerned only about the pure worship of Yahweh and not about national independence, broke with the Hasmoneans once it was clear that the latter were bent on the further goal of national independence. Though they lost the support of the Hasidim, the Hasmoneans met with military success, assisted in their efforts by a mutual defense treaty with Rome. In 142 BCE, independence from the Seleucids and expulsion of their army was achieved. The Hasmonean family ruled the small kingdom of Judea for several generations, assuming the offices of both king and high priest even though the high priesthood was a hereditary office to which they had no legitimate claim. The Hasmoneans ruled until Pompey's armies captured Jerusalem in 63 BCE and established Roman hegemony.

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Bibliography

- Baumgarten, Albert. *The Flourishing of Jewish Sects in the Maccabean Era: An Interpretation*. Leiden: Brill, 1997.
- Cohen, Shaye J. D. *From the Maccabees to the Mishnah*. Philadelphia: Westminster Press, 1987.
- Hayes, Christine Elizabeth. *The Emergence of Judaism*. Westport, CT: Greenwood, 2006.
- Levine, Lee. *Judaism and Hellenism in Antiquity*. Seattle: University of Washington Press, 1998.

Jewish Movements in the Second Temple Period

Various Jewish groups emerge in Judea in this period, each drawing to different degrees and with different emphases on these two ideological complexes to create a unique ideological

profile. Scholars have used the word “sect” to describe the distinct groups that arise in Second Temple Judaism, but this term is not entirely appropriate, implying as it does a normative orthodoxy from which organized splinter groups separate. We cannot speak of a single normative Judaism at this time; we may speak of a larger Jewish society, within which diverse movements arose. These groups certainly viewed themselves as distinct from other groups and may have marked that distinction through different modes of dress, behavior, and thought, but most were not strongly separatist.

The motivations for the formation of diverse movements within Jewish society are complex and varied, but divisions crystallized around certain focal issues and institutions—particularly the Temple and the Torah. The Temple and its sacrificial service were critically important symbols for all ancient Jews. Performed properly, the Temple rituals and sacrifices would attract and maintain the presence of God, ensuring blessings and bounty for the community. But a series of political realities compromised the integrity of the Temple leadership in the eyes of many. The Hasmonean usurpation of the high priesthood and Herod’s transformation of the position from a hereditary and lifelong office to an annual appointment were viewed by some as unacceptable deviations from God’s instruction. In addition, different standards of ritual and sacrificial purity led to conflict. Ritual purity was required of those who offered sacrifice, entered the Temple, or officiated within. Some Jews practiced an extreme form of ritual purity that went far beyond the biblical prescriptions. These Jews were angered by what they considered to be the laxity of those in control of the Temple and boycotted the Temple as long as their own higher standards were not in force.

The Jewish historian Josephus (d. ca. 100 CE) mentions three main Jewish movements beginning in the late second century BCE—the Sadducees, the Pharisees, and the Essenes. We have two additional sources of information about these movements—the Christian New Testament and the writings of later Jewish rabbis. Unfortunately each of these three sources has significant limitations. Josephus’ presentation is slanted toward the interests of the Roman audience for

whom he wrote and by his own political agenda. The Christian New Testament is a polemical work with strong theological and ideological reasons for discrediting first-century Jewish movements. It paints the Pharisees in particular as villains and hypocrites. Rabbinic writings contain some old and authentic traditions about Jewish movements in the late Second Temple period, but these traditions passed through a lengthy process of oral transmission and editorial revision before reaching the written form we possess. Due to the nature of our sources, any reconstruction of the major movements in Second Temple period Judea is necessarily tentative.

The Sadducees (Hebrew, *Zadokim*) appear to have originated in opposition to the Hasmoneans as a party that believed the priesthood belonged to the Zadokite line within the priestly fold. They appear to have been associated with the Temple leadership and are described by Josephus as wealthy and powerful. The Pharisees emerged also in the Hasmonean period as a kind of political interest group promoting certain goals for Jewish society. Josephus describes the differences between Sadducees and Pharisees as doctrinal in nature: the Sadducees denied immortality and reward and punishment after death while the Pharisees believed the souls of the righteous pass to other bodies after death; the Sadducees believed in a determinative fate with no free will while the Pharisees affirmed the interplay of fate and free will. Another point of disagreement was over the nature and source of Jewish law. The Pharisees were skilled in jurisprudence and claimed to possess in addition to written Scripture, a body of unwritten ancestral traditions—oral teachings, laws, and interpretations that adapted the Bible to the needs of a new age. The Sadducees rejected the notion and authority of ancestral teachings.

In stark contrast to Josephus’ testimony, rabbinic sources detail disputes between Pharisees and Sadducees that center on matters of law, ritual purity, the Temple cult, tithing, Sabbath observance, and the interpretation of Scripture. The Pharisees were probably a kind of educated, voluntary association with members drawn from all walks of life that promoted the observance of Sabbath laws, purity, and tithing—all important in maintaining Jewish identity. They practiced a

kind of table fellowship (*bavurah*) of persons who aspired to a higher level of purity in connection with consuming food. The Pharisees hoped for a Jewish community dedicated to the covenant, as they interpreted it, and sought to transform daily activities into sacred or semi-sacred occasions. The word Pharisee is from the Hebrew word “*parush*” meaning “separated.” The name may derive from the fact that the Pharisees separated themselves to some degree from those who were less observant of the laws of purity and tithing.

For all their differences over questions of authority and leadership the Pharisees and Sadducees were both involved in the community. Other groups gave up on Jewish society, rejected the existing leadership, and withdrew to form small holy communities. According to Josephus, the Essenes formed separatist associations throughout the country. Admission to their community required a three-year period of preparation and probation and culminated in the taking of oaths, including an oath to be obedient, to guard the secrets of the sect (including the names of the angels), and to “hate forever the unjust and fight the battle of the just.” The community followed a rigorous discipline centering on ritual and moral purity. Property was in some way communal and members practiced celibacy, though Josephus mentions a second order of Essenes that did marry. Dress was simple and daily communal meals included prayer and recitation of Scripture. Essenes believed in the immortality of the soul and were possibly dualists.

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Bibliography

- Collins, John J. *Between Athens and Jerusalem: Jewish Identity in the Hellenistic Diaspora*. 2nd ed. Grand Rapids, MI: Eerdmans, 1999.
- Feldman, Louis. *Jew and Gentile in the Ancient World: Attitudes and Interactions from Alexander to Justinian*. Princeton, NJ: Princeton University Press, 1983.
- Grabbe, Lester. *Judaism from Cyrus to Hadrian*. 2 vols. Minneapolis, MN: Fortress, 1991.
- Hayes, Christine Elizabeth. *The Emergence of Judaism*. Westport, CT: Greenwood, 2006.
- Levine, Lee. *Judaism and Hellenism in Antiquity*. Seattle: University of Washington Press, 1998.
- Shanks, Hershel, ed. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Upper Saddle River, NJ: Prentice Hall, 1999.
- Schiffman, Lawrence H. *From Text to Tradition: A History of Second Temple and Rabbinic Judaism*. Hoboken, NJ: Ktav Pub. House, 1991.

Roman Rule over Palestine

Roman governance over Palestine developed from Roman military excursions and interventions in the Levant, which brought it into contact with the Hasmonean (a Hellenistic) kingdom centered in Judea in 63 BCE. Following the defeat of Mithradates VI of Pontus, Roman general Pompey remained in the area to ensure stability. Roman intervention in Hasmonean affairs led to the establishment of the client-kingdom status of Judea under the nominal leadership of Herod the Great. Roman interference in the selection of Judean leadership drew it deeper into internal affairs. Roman authority gradually increased at the expense of regional autonomy. As a consequence, three major rebellions took place against Roman rule of Palestine: the Great Revolt (66–70 CE), the Kitos War (115–117 CE), and Bar Kokhba’s Revolt (132–135 CE), which resulted in Roman direct rule, the destruction of the Jewish state in Palestine, and the dispersion of the Jews (the Diaspora) throughout the Roman empire.

Following the defeat of the Hellenistic king Mithradates VI of Pontus and the annexation of its lands to Rome, the Roman general Pompey remained to ensure the stability of these newly acquired provinces in 63 BCE. In the neighboring Hasmonean Jewish kingdom of Judea, dynastic feuding brought Pompey’s influence to internal affairs, as he helped install Hyrcanus II as leader. This brought Roman interests into Judean politics, thereby ending Jewish political sovereignty. Pompey’s successor Antipas was officially a Roman procurator (provincial governor or prefect) who brought the realm into the indirect political control of Rome while maintaining the semblance of autonomy. Herod the Great, Antipas’s son, became king of Judea in 44 BCE with the blessing of the Roman Senate, thereby illustrating how Roman approval for leadership of the kingdom had become completely necessary. While

➤ JOSEPHUS

Flavius Josephus, otherwise known to posterity simply as Josephus, was a Jewish historian whose major work, *The Jewish Wars*, chronicles life during the early Roman rule of Palestine and the Great Revolt (66–73 CE). Initially a Jewish priest fighting against the Romans, he surrendered and was taken captive to Rome in 71 CE. He became a Roman citizen and served the Flavian dynasty in power, taking the name Flavius. While in Rome, Josephus wrote his works on Roman Palestine and the Jewish resistance, discussing the various Jewish sects and the major events of the revolt. While much of his work is essential to scholars of the Jewish revolt and Roman Palestine, his Roman sympathies are prevalent throughout the work. His reputation is therefore that of a Roman apologist, regardless of the value of his writings as a primary source for the period.

—Abraham O. Mendoza

Herod was nominally a client-king under Roman authority, the realm was still characterized by a Roman military and a growing Roman bureaucratic presence. Herod's heirs, who ruled as tetrarchs over portions of the former Jewish kingdom as it was divided upon his death (in 4 BCE), were also dependent on Roman goodwill to maintain their political position and legitimacy.

Judea was incorporated into the greater Roman province of Iudaea in 6 CE while remaining nominally under the rule of Herod's successors. As a province of Rome, Judea was subject to taxation and the census, which were resented by many Jews as infringements on their culture and religion. Prefects of Rome, such as Pontius Pilate, were directly responsible for the governance of the kingdom regardless of the client-king in power. While able to maintain varying degrees of power, Herod's successors depended on Roman support for their rule. It was during this time that the various Jewish sects (such as long-standing sects-cum-political factions such as the Pharisees, the Sadducees, and the Essenes) were driven to resist Roman authority and the compliance of Jewish elites with Roman rule. Furthermore, the historical Jesus also emerged in this

period as part of this greater Jewish resistance against Roman cultural hegemony.

Growing tensions with Roman hegemony eventually led to three major Jewish revolts against Roman authority and their alleged Jewish collaborationist elites in Palestine: the Great Revolt, the Kitos War, and Bar Kokhba's Revolt. Superior Roman military forces ended each of these revolts, and these military victories led to direct Roman rule of Palestine, thereby ending any pretence of sovereignty under a native Jewish client-king. Furthermore, tens of thousands of Jews were executed or sold into slavery during the onslaught of the Roman legions quelling these various Jewish insurgencies. Historians debate whether the Jewish Diapsoa began with the destruction of the Second Temple in 70 CE or with the end of Bar Kokhba's Revolt in 135 CE. After the destruction of Jewish forces in Bar Kokhba's Revolt, Roman emperor Hadrian reorganized the province as Syria Palestina and changed the name of Jerusalem to Aelia Capitolina. This suggests an attempt by the Romans to eliminate any cultural remnants of Jewish culture and religion in Palestine, regardless of the remaining scattered communities in the region.

Roman Palestine remained an important trade and strategic center of Roman rule in the eastern Mediterranean, as it served as a link for trade with the East and for military ventures against the Parthian empire. With the end of Jewish resistance, other regional cultural groups under direct Roman rule became prominent in the region along with remaining Jews. Furthermore, from the second century to the fifth century Christianity grew in this region in particular, given the efforts of the early Christian apostles and their followers in spreading the faith regardless of the consequences under Roman persecution.

During the reign of Diocletian (284–305 CE) the region was divided into Palestina Prima, Secunda, and Tertia for administrative purposes. Following the division of the Roman empire into western and eastern administrative regions under Constantine I (306–312 CE), Roman Palestine essentially became Byzantine Palestine, which would last until its conquest by Muslim Arabs in 638 CE.

—Abraham O. Mendoza

Bibliography

- Edwards, Douglas R. *Religion and Society in Roman Palestine*. London: Taylor and Francis, 2007.
- Josephus, Flavius. *The Jewish War*. Translated by Geoffrey Arthur Williamson. New York: Penguin Classics, 1981.
- Schäfer, Peter. *History of the Jews in the Greco-Roman World: The Jews of Palestine from Alexander the Great to the Arab Conquest*. New York: Routledge, 2003.

Philistia and Phoenicia in the Iron II Period

Philistia and Phoenicia were both located on the Levantine coast, Philistia in the south (in what is today known as Israel) and Phoenicia in the north (in present-day Lebanon). Throughout the Iron II period these regions were not centrally unified, but both consisted of independent city-states that were loosely affiliated and sometimes ruled by other larger polities (especially the Assyrians).

The Philistines had settled along the coast of Israel at the end of the Late Bronze Age and the beginning of the Iron I period. Originally a Greek group, one of the Sea Peoples as they were called in ancient texts, over the course of Iron II the Philistines were gradually acculturated into Israel and Judah, although ethnically they were considered distinct. In the biblical accounts, the Philistines were the enemies of Israel, with Goliath the most notable villain. This animosity between Israel and Philistia has colored the biblical accounts of the Philistines, portraying them as ruthless savages when in fact archaeological excavations have demonstrated that they were a highly sophisticated urban culture.

There were five main cities of ancient Philistia (Ekron, Gath, Gaza, Ashkelon, and Ashdod), referred to by modern scholars as the Philistine Pentapolis. Ekron, Ashdod, and Ashkelon have been extensively excavated by archaeologists. Gaza has not been excavated, and excavations have recently begun at a site that most scholars believe is Gath. These excavations, most of which have been conducted over the past 30 years, have dramatically increased our understanding of Philistine culture. In the tenth century BCE at the be-



Ruins of the ancient Philistine city of Ashkelon, Israel, photo from 1921. (Library of Congress)

ginning of the Iron II period, the cities of the Philistine pentapolis were independent but affiliated with one another. Their territory had shrunk significantly from the Iron I period. With the advent of the Iron IIB period (the period of the divided monarchies of Israel and Judah), relations between Philistia and Israel were relatively peaceful. Relations between Philistia and Judah became more complex in the Iron IIC period during which Philistia may have been conquered by the Judean king Hezekiah very briefly. Soon after the Assyrians conquered Philistia, and the region became part of the larger Neo-Assyrian empire. Under Assyrian control, the cities of the Philistine pentapolis thrived, growing much larger than previously. Much of this growth was stimulated by relations with Assyrians, who seemed to have established Philistia as a region of extensive agricultural and industrial production. Philistia passed briefly into Egyptian control before it was destroyed by King Nebuchadnezzar of Babylon once and for all in 586 BCE.

Unlike Philistia, which seems to have lost regional power and territory at the beginning of the Iron II period, Phoenician power seems to have expanded at this time. The Phoenicians were the descendants of the Canaanites, but by the Iron II period this civilization continued on only in the north, having been displaced by the Philistines and the Israelites. Centered on the

THE PHOENICIANS AND PUNIC IDENTITY

Along with the expansion of their trade networks, the Phoenicians established colonies in North Africa, Sicily, Sardinia, and Spain. Carthage, located in North Africa, was arguably the most important of these colonies and would eventually develop an empire of its own until its defeat by Rome in the Punic Wars. “Punic” is the term used for the Phoenician language as attested in North Africa. The issue of what constituted Punic identity is a difficult one for archaeologists. There certainly seem to have been strong ties between Carthage and the other Phoenician colonies, but there are also significant differences between the various sites. It is also unclear how significant a role indigenous traditions at these locations played in Punic culture.

—Kevin M. McGeough

coast of Lebanon, Phoenicia consisted of a series of independent city-states oriented toward maritime trade. The most prominent of these cities in the Iron Age were Tyre and Sidon. The boundaries of Phoenicia were fairly circumscribed: the Mediterranean Sea on the west, the Lebanon and Anti-Lebanon Mountains to the east, around the city of Arwad in the north, and near the city of Akko in the south. Since Phoenicia is better thought of as a group of culturally connected city-states rather than an integrated state, these boundaries are best thought of as approximate.

The geographic location of Phoenicia defined much of the commercial opportunities and character of the people. The Lebanese mountains provided rich sources of timber yet at the same time limited the agricultural possibilities for the Phoenicians. Thus, the Phoenicians cities relied on maritime trade as the basis of their economic livelihood, selling wood and dye produced from murex shells found on the Mediterranean coast as their main commodities. The Phoenicians expanded their trade system so that they came to be middlemen for many products sold throughout the eastern Mediterranean. The most important class of item that the Phoenicians distributed throughout the Mediterranean was raw metals, essential for the production of bronze and iron.

While the Phoenicians never seemed to have developed a centralized state government, they did attract the attention of other imperial states. By the mid-eighth century BCE, Phoenicia had fallen under the control of the Assyrian empire. The Egyptians took control of Phoenicia away from the Assyrians briefly in the seventh century, only to be conquered again by the Assyrians and then the Babylonians. In 539 BCE the Persian empire conquered Phoenicia and controlled it until Persia was routed by Alexander the Great. From 332 until 198 BCE, the Seleucids and Ptolemies (the successors of Alexander the Great) fought for the region, with the Seleucids eventually becoming victorious. From this point forward until the conquest of the region by the Romans, the Phoenician cities grew more politically autonomous, although their naval mercantile ventures had remained relatively unaffected by these shifts in imperial power.

—Kevin M. McGeough

Bibliography

- Herr, Larry G. “The Iron Age II Period: Emerging Nations.” *Biblical Archaeologist* 60 (3): (1997) 114–183.
- Markoe, Glenn. *Phoenicians*. London: British Museum Press, 2000.
- Moscato, Sabatino, ed. *The Phoenicians*. New York: Rizzoli, 1997.
- Seymour Gitin. “Tel Mique: A Type-Site for the Inner Coastal Plain in the Iron Age II Period.” In *Recent Excavations in Israel: Studies in Iron Age Archaeology*, edited by S. Gitin and W. Dever. Annual of the American Schools of Oriental Research, 49. Winona Lake, IN: Eisenbrauns, 1989.
- Stager, Lawrence. “Forging an Identity: The Emergence of Ancient Israel.” In *The Oxford History of the Biblical World*, edited by M. Coogan. Oxford: Oxford University Press, 1998.
- Trude Dothan. *The Philistines and Their Material Culture*. New Haven, CT: Yale University Press, 1982.

Emergence of the Phoenician Cities

The Phoenician cities in Lebanon existed prior to 1000 BCE, but their fortunes increased tremendously after the Sea Peoples passed through the Mediterranean basin. Tyre rose to prominence as

the Phoenicians' leading city under King Hiram, whom the Bible described as making peace with Israel and helping to build the Temple of Solomon in Jerusalem.

Having achieved peace at home, Tyre accelerated the planting of Phoenician colonies across the Mediterranean, including the great city of Carthage. Their widespread sea trade brought many exotic goods and innovations and much wealth to themselves and to the lands around them. One of their most significant contributions was the 22-consonant Phoenician alphabet. The Greek alphabet was developed from this by adding vowels, which enabled the great works of Socrates, Euripides, and others to be written.

The Phoenicians created royal purple cloth, delicate glass bottles, and intricately carved silver bowls. They developed city councils and a representative government, which Aristotle admired. Yet the Phoenicians' great success upon the seas was tempered by difficulties at home. In 738 BCE the Assyrians established themselves as overseers of the northern Levant and demanded tribute from the Phoenicians. As previously done with the Egyptians (1479–1176 BCE), the Phoenicians used their ability to create wealth through sea trade to obtain a semi-independent status. Some sea-trade activities were transferred to Carthage, their main colony in North Africa, where they operated with complete freedom.

In 604 BCE the defeat of Assyria by Babylon simply meant a change of overlords for Lebanon. Tribute was paid as before, but this time it bought somewhat less freedom. Another change came in 539 BCE when the Babylonians fell to the Persians. This time the Phoenicians took the initiative and offered their services to the Persian king, Cyrus the Great. The king was pleased and extended a higher degree of freedom in exchange for the customary tribute. Herodotus noted that when the Persians wanted to seize Carthage, the Phoenicians strenuously objected to this attack on their daughter city. Surprisingly, the Persian king deferred to them and abandoned his campaign. This influential relationship continued to greater or lesser degrees during the Greek-Persian War, when the Phoenician cities provided a considerable navy to support the vast armies of Persia.

Then in 333 BCE, Alexander the Great defeated the Persians in Anatolia and marched south to confront the Phoenician cities. All of these Lebanese towns surrendered to him except for Tyre, which sat astride an island with massive defenses. In its long history, Tyre had never been taken. But Alexander brilliantly built a causeway to the island. In 332 BCE his army poured over the causeway and forced the last Phoenician city in Lebanon to fall.

When Alexander died a few years later, the Phoenicians continued their tributary status to one of his successors. Their modest freedom of action continued because of their ties to Carthage, which was now a great city in its own right. When Carthage lost the Punic Wars to the rising city of Rome in 146 BCE, the North African city and all its colonies dropped into Roman hands. With that, the Phoenician society in Lebanon, having no further outside support, finally faded from view.

—Sanford Holst

Bibliography

- Herodotus. *The Histories*. Translated by Robin Waterfield. Oxford: Oxford University Press, 1998.
- Holst, Sanford. *Phoenicians: Lebanon's Epic Heritage*. Los Angeles: Cambridge and Boston Press, 2005.
- Markoe, Glenn. *Phoenicians*. Berkeley: University of California Press, 2000.

The Rise and Fall of Small States in Jordan—Ammon, Moab, and Edom

During the Iron II period (ca. 1000–586 BCE), three small states arose in the area now known as Jordan: Ammon, Moab, and Edom. These three polities are mentioned frequently in the biblical accounts, but little was known about them until archaeologists began exploring the region. Our knowledge of these three states is still in flux and is subject to change as more archaeological discoveries are made.

According to the Hebrew Bible, the state of Ammon was located between the Arnon, Jabbok, and Jordan rivers, although the exact borders probably fluctuated throughout Ammon's

THE LANGUAGES OF ANCIENT JORDAN

The languages of ancient Jordan were all long forgotten until archaeological excavations unearthed ancient inscriptions in these languages. Since the Jordanian languages are very similar to Hebrew and Aramaic, it has been possible for language specialists, known as epigraphers (people who study ancient writing), to reconstruct these languages even though very few long inscriptions have been discovered. The most important inscription is the lengthy Mesha Stele. However, most inscriptions are found on seals, which were used as ancient means of signing a person's name. Thus, the inscriptions usually are simply a personal name with perhaps an occupational title or brief sentence, usually indicating a particular religious affiliation. Ammonite, Moabite, and Edomite have all been identified as individual languages; all are related but have distinct grammar, spelling, and vocabulary.

—Kevin M. McGeough

The Mesha Stele is a large basalt stele that details the Moabite king Mesha's rebellion against the Israelites, ninth century BCE. (Singer, Isadore, ed. The Jewish Encyclopedia, 1901)



existence. Although the Bible describes Ammonite culture as contemporary with King David, there is little evidence for it prior to the Iron IIb period (925–720 BCE). At that time a large city, Rabbath-Amman, emerged and was located in the downtown of the modern city of Amman. Since this ancient capital is still occupied, archaeological explorations have been limited (although there have been a number of small-scale investigations). A palace dating to the Iron IIc period (720–586 BCE) may have been identified at the site. This was a building with large walls, a large courtyard, and plastered floors in which numerous international objects were found, all characteristics of palace or administrative complexes in the Near East in the Iron Age. The best information regarding Amman comes from excavations of outlying settlements. The Madaba

Plains project has sought to investigate the Ammonite state outside of the capital with a major emphasis on the study of subsistence practices. One of the sites excavated under the aegis of this project is Umayri, where a large administrative complex has been excavated that likely functioned on behalf of royal authority over the farmland in the region. Scholars disagree on whether or not the site of Heshbon was part of the Ammonite kingdom. A large water reservoir dating to Iron IIa has been identified here and was likely built as a royal project. The small city of Jawa has been well excavated and provides much information on the nature of Ammonite urban areas. Jawa was surrounded by a city wall, and a city gate has been identified by the excavators. Houses at Jawa were made up of numerous interconnected rooms. Ammonite for-

tresses have also been identified, one of which (located at Rujm al-Henu) featured rectangular and circular towers. Numerous Ammonite inscriptions have been recovered that provide important information about Ammonite religion, the main deity of which was Milkom.

Moab was located south of Ammon. The earliest reference to Moab, so far identified, is in an Egyptian inscription dating to sometime between 1304 and 1237 BCE (within the Late Bronze Age) that commemorates Egyptian military successes in Jordan. It seems likely that the Egyptians held some authority in this region until the end of the Late Bronze Age, although evidence for this is meager. During the Iron I period (1200–1000 BCE), the population in this region began to grow. Only a few archaeological sites have so far been excavated in the region, but a number of smaller fortress-style settlements have been identified that may indicate the beginnings of an organized defensive strategy. Early in the Iron IIb period a centralized state arose, likely centered at the capital city of Dhibon. Dhibon was the location of the Mesha Stele, one of the most important archaeological finds for the study of Moabite. The Mesha Stele is a large basalt stele, now broken, that details King Mesha's rebellion against King Omri of Israel (a historical event described from another perspective in 2 Kings 3 in the Old Testament). Mesha credits the Moabite god Kemosh with his success in establishing the state of Moab independent of Israel's rule. Moab thrives through the rest of the Iron IIb period but seems to have declined in the Iron IIc period. Part of this decline may have been the result of Assyrian imperial expansion. After the military campaigns of King Tiglath-Pileser of Assyria in 734–732 BCE, the region fell under the authority of this Mesopotamian empire and was obliged to make heavy tribute payments to them.

Edom, which was located south of Moab, came into existence much later than Ammon and Moab. Throughout the Iron IIa and IIb periods pastoral groups lived within the region, and during the eighth century a fortress was built in the region. In the Iron IIc period as the state of Moab started to decline, the state of Edom arose, with its capital at Bozrah (Buseirah). Many of the other Edomite settlements are located in out-of-the-way locations and rocky crags. Fortresses were also

typical Edomite structures, with Kheleifeh (north of the Gulf of Aqaba) the best understood. As the Iron IIc period progressed, the Edomites expanded across the Jordan River into the Negev Desert, gaining the territory from the kingdom of Judah. One southern Judean fortress, Uza, was briefly captured by the Edomites, as suggested by the presence of an ostrakon written in Edomite. The Edomites used a script that combined elements of Hebrew and Aramaic script. The deity Quas was the chief god of the Edomites.

—Kevin M. McGeough

Bibliography

- Herr, Larry G. "The Iron Age II Period: Emerging Nations." *Biblical Archaeologist* 60(3) (1997): 114–183.
- Levy, Thomas, et al. *Crossing Jordan: North American Contributions to the Archaeology of Jordan*. London: Equinox, 2007.
- MacDonald, Burton. "Archaeology of Edom." In *The Anchor Bible Dictionary*, Vol. 2, edited by David Noel Freedman. New York: Doubleday, 1992.
- MacDonald, Burton, and Randall Younker, eds. *Ancient Ammon*. Leiden: Brill, 1999.
- Porter, Benjamin W. "Authority, Polity, and Tenuous Elites in Iron Age Edom (Jordan)." *Oxford Journal of Archaeology* 23(4) (2004): 373–395.
- Routledge, Bruce. *Moab in the Iron Age: Hegemony, Polity, Archaeology*. Philadelphia: University of Pennsylvania Press, 2004.

Adiabene

Adiabene (Hebrew, *Hadyab*; Syriac, *Hadayeb*) was a district in ancient Mesopotamia (present-day Iraq) along the upper Tigris River valley. During the Hellenistic period Adiabene was nominally a vassal kingdom of the Parthian empire; like most Parthian vassal-states, it was largely independent. It was inhabited by a primarily Aramaic-speaking population, likely among the ancestors of Iraq's modern Assyrian and Chaldean communities (although some Kurdish nationalists claim that Adiabene was a Kurdish principality).

Little is known about Adiabenean politics and history prior to the early first century CE. Judaism became the official religion of the kingdom under Izates (the son of Monobaz), who became king of Adiabene in around 36 CE. Izates

THE ADIABENE-JUDEAN CONNECTION

In the decades following their conversion to Judaism, the Adiabenean royal family encouraged settlement of Jews in their kingdom and brought scholars from the Jewish communities in Babylonia to instruct them in their new religion. It is likely through these teachers that the Adiabenean royal family established strong ties with the Jews of the Levant, particularly with the community in Jerusalem. According to the Talmud and other rabbinical writings, many of the ritual implements used in the Temple of Jerusalem in the mid-first century CE were donated by Helena, Izates, and Izates's brother and successor Monobaz II.

When Helena visited Judea around 45 CE, she earned the admiration and love of the inhabitants by purchasing huge quantities of grain and figs to provide famine relief. Not content with this gesture, Izates supplemented his mother's charity with large sums of money. Helena constructed a palace just outside Jerusalem where she spent much of her time until her son's death around 60 CE, at which time she returned home and died shortly thereafter. Monobaz II sent his brother's and mother's bodies to be buried in a mausoleum north of the city that was topped with a pyramid and known to posterity as the Tomb of the Kings. Adiabene and its rulers continued to inspire the Jews of late antiquity, and Izates, Helena, and Monobaz II are remembered quite fondly in rabbinic literature.

In 1863 the French archaeologist Felicien de Saulcy began excavations at the Tomb of the Kings. Some 48 sarcophagi were discovered, including 1 identified as that of Queen Helena of Adiabene.

—Brian Gottesman

had been exposed to Judaism while a youth in Characene (a kingdom around present-day Basra, where Izates may have been sent as a hostage). He and his mother Helena both converted to Judaism upon his return to Adiabene. Josephus relates that Ananias, a Jew of Characene, and Eleazar, originally from Galilee, were instrumental in their conversion.

Izates became very influential within the Parthian empire in 37 CE when the Parthian king Artabanus II was driven from his throne by the Roman-supported usurper Tiridates. Artabanus fled to Izates's court where the Adiabenean

king, through a combination of military support and skillful negotiation, aided Artabanus in his struggle. For his efforts Izates was granted extensive territories in northern Mesopotamia, including the city of Nisibis.

During the Jewish rebellion against Rome (ca. 66–70 CE), the royal family of Adiabene took an active role in providing support. It is likely that the Parthian government encouraged this assistance as a means of disrupting Roman rule in the Middle East. Two Adiabenean noblemen, Monobaz (a relation of the king) and Cenedaeus, were, according to Josephus, “the most distinguished for valor” in the Jewish ranks.

A ruler of Adiabene named Meheraspes is recorded as having been defeated by the Roman emperor Trajan during his conquest of Mesopotamia in 116. It is uncertain whether the dynasty of Monobaz II and Izates was still in power. During the second and third centuries it appears to have been ruled by Parthian governors before being conquered and subsumed within the Sasanid Persian empire.

Judaism appears to have been well established in Adiabene by the late second century CE. Christianity, which probably spread through the Jewish community and then to the population at large, began to dominate by the third century. It was a major center of the Church of the East (the so-called Nestorian or Assyrian Church). By the time of Constantine the Great, Adiabene is described in church sources as almost entirely Christianized.

The region's subsequent history is largely subsumed within that of Kurdistan.

—Brian Gottesman

Bibliography

- Josephus, Flavius. *The Jewish War*. Translated by Geoffrey Arthur Williamson. New York: Penguin Classics, 1984.
- Josephus, Flavius. *Jewish Antiquities*. Translated by William Whiston. Ware Hertfordshire, UK: Wordsworth Editions, 2006.
- Neusner, Jacob. “The Conversion of Adiabene to Judaism: A New Perspective.” In *Journal of Biblical Literature* 83 no. 1. Society of Biblical Literature, 1964.
- Neusner, Jacob. *A History of the Jews in Babylonia*, Vol. 1, *The Parthian Period*. Atlanta, GA: Scholars Press, c1969, 1999.

■ Introduction: Greek Democracy

The development of democracy in Greece is one of the most important stories in world political history. Greek democracy and its institutions and political theorists have been profoundly influential in the course of world history, and today democracy is one of the most common forms of political governance. The democratic structures of the United States, for example, were directly inspired by the Greek traditions, and much of the architecture that stands in Washington, D.C., reflects Greek deals and aesthetics.

For the Greeks, democracy was a form of government in which the *demos* (which can be translated as “the people” but also refers to “the village”) governed itself. This was a novel type of political organization. Like much of the world, the largest polity in ancient Greece was the city-state, but what was unusual was the proportion of the population who participated in the political and governing process. This did not mean that everyone was included in the decision-making process. Only citizens were allowed to vote, and the definition of who was a citizen was narrowly defined (and excluded women). Despite this, the idea that people should govern themselves is one of the major contributions that the ancient Greeks made to world civilization.

—Kevin M. McGeough

The Origins of Greek Democracy

In ancient Greece political organization was dominated by the polis, or city-state. Each polis was governed by its own customs and laws, although there were many similarities in social and political structure throughout the Greek world. The political organization, or constitution, in an individual polis could range from a tyranny, or power residing solely in the personage of a single individual, to a democracy where the citizenry of the polis determined the selection of magistrates and even state policy.

In discussing the development of ancient Greek democracy, it is important to note that

the conception of democracy in ancient times is radically different than what is considered a true representative democracy today. While only citizens could participate in the election of officials and the formations of policy, the citizen body lacked the inclusiveness that is indicative of modern representational governments. Ancient citizenship was restricted to males and generally required a certain property qualification, which would allow the citizens to equip themselves as hoplites, the backbone of the ancient Greek fighting machine.

The need for hoplites and corresponding social and political developments that lead to democracy sprung from the Greek Dark Age. Dark Age social and political organization centered upon the strongman/king (*basileus*), who counted upon a group of retainers and companions (*hetairoi*) as a fighting force and as a council for his decisions. The position of the *basileus* was not that of an absolute ruler but instead was closer to a position as first among equals. The *basileus* could not simply command his *hetairoi* to do his bidding but instead had to convince, cajole, threaten, or otherwise influence his retainers that his plans and course of action were worth following.

The positions of the *basileus* and the *hetairoi* were hereditary, leading to a governing aristocracy that ruled the less economically prosperous farmers, merchants, and other societal members, in large part due to their exclusive control of violence through their armaments. This kind of society is reflected in the works attributed to Homer (the *Iliad* and the *Odyssey*), books that show the social organization of Greece in the eighth and seventh centuries BCE. The *hetairoi* in this context formed a kind of council, where theoretically the plans of the *basileus* were debated. The *basileus* would then present the course of action to the assembly of citizens (the *ecclesia*), where they were expected to affirm his decisions. While there was not a formal mechanism in place to compel the *basileus* to pay heed to the assembly, a king could only ignore the wishes of his assembled warriors at his own peril.



In the mid to late seventh century hoplite warfare began to take on a recognizable form. In this style of fighting, soldiers (hoplites) fought side by side in tightly packed ranks in a formation known as a phalanx. In this formation the shield of the hoplite would be protecting the hoplite to his left, creating a situation in which each man was forced to rely on another for protection, and thus the cohesion of the phalanx was critically important to survival. Therefore, the military necessity of this new form of warfare created a situation whereby any citizen who could afford the armor required for fighting could contribute in battle to the same extent as a wealthy aristocrat. This created a situation in which middle-class farmers who could afford armor were fighting with the same risks for the polis as a wealthy aristocrat, which in turn led to a desire for more equitable treatment in the political system at home.

Eventually, tensions between wealthy aristocrats and poor farmers reached a critical point. Poor farmers who suffered through an inade-

quate harvest could find themselves in debt to wealthier individuals and could even reach a state of debt slavery whereby the formerly free citizen was required to sell himself to his creditors to pay for his debt. This led to demands from the poor for land and debt reform, while the aristocracy was concerned with keeping their wealth and social position.

The Athenians then turned to Solon around 594 to construct new laws to govern the state. Solon, a man known for his wisdom, also composed poetic verses that are still known today. His reforms were not in any sense a radical democracy wherein every citizen in the state is on equal political footing. What Solon was trying to do was alleviate some of the main complaints of the poor and the masses of citizens while still preserving some privileges for the wealthy aristocracy. He abolished debt slavery, freed citizens who were already debt slaves, and expanded Athenian citizenship (an expansion that was to be later restricted in the fifth century). In order to placate the more privileged classes of aristo-

THE MILITARY AND ATHENIAN DEMOCRACY

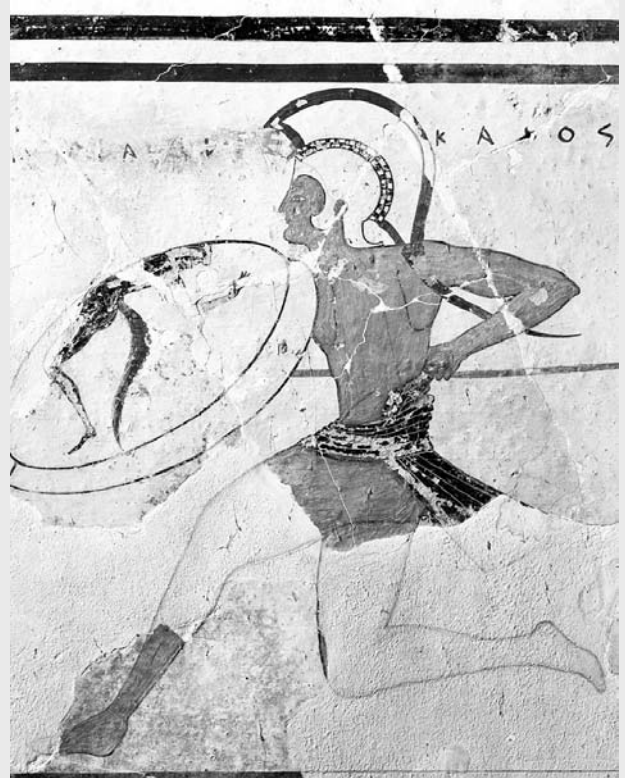
Greek democracy was an outgrowth of the Dark Age system of warrior bands, where the king (*basileus*) would command his companions (*hetairoi*) in raids. While the people were represented in an assembly (the *ecclesia*), they existed primarily to affirm the intentions of the *basileus* and his council of *hetairoi*.

This system began to change with the introduction of hoplite warfare in the eighth and seventh centuries BCE. Hoplite warfare required dense masses of a fighting force that any individual citizen who could afford the armor was expected to participate in. Since these middle-class citizens shared the same burden in warfare as the aristocracy, they began to seek greater political equality at home.

This rising middle class was distinct from lower-class farmers and landless citizens who could find themselves reduced into debt slavery following bad harvests or other calamities. In protests of exclusive aristocratic control over the political system, the tensions between the poor and the aristocrats could erupt into civil discord (*stasis*), the outcome of which depended on the sympathies of the hoplite class.

If the hoplites were not supporters of the very poor, then such unrest could be quashed or alleviated through very limited reforms. If the hoplites found common cause with the poor, then it was possible for the aristocrats to lose control of the city-state (*polis*) and for a tyranny or democracy to take root. The hoplite class was supportive of the poor in the *polis* of Athens, where the best-documented development of democracy occurred.

In Athens, the citizen body succeeded in forcing the aristocrats to adopt some basic economic and



Fresco of a hoplite warrior, late fourth century BCE. Hoplites were heavily-armed and shielded volunteer infantrymen. (Gianni Dagli Orti/Corbis)

social reforms issued by Solon and, following the tyranny of Peisistratus and his son Hippias and the subsequent attempt at a coup by Isagoras, finally created a more representative system after the reforms of Cleisthenes.

—Ryan Horne

crats and hoplites, Solon also constructed a sliding scale whereby the highest offices of the state were restricted to citizens with the most wealth, and lesser offices required the officeholder to possess lesser amounts of wealth (in grain, oil, or produce). Solon also allowed any citizen to serve on a jury chosen by lots, which allowed even the poorest members of society to have a voice in the legal governance of the *polis*.

In 560 a relative of Solon named Peisistratus was able to seize the highly fortified central hill

of Athens (the acropolis) and declared himself a tyrant. He was expelled around 555 but was able to return and reassert his political control, was driven out again, and then went into exile until 546. In 546 Peisistratus returned to Athens with a force of mercenaries, and he was able to seize control once more until he died in 527. Although Peisistratus was a tyrant, or sole ruler of Athens, he continued to follow the law codes of Solon (even though he ensured that the councils were packed with his own supporters). After his death

his son Hippas (perhaps with his brother Hipparchus) inherited the tyranny, but Hipparchus was killed as a result of a lover's quarrel by two men, Harmodius and Aristogiton. Hippas then became a hated tyrant and was finally expelled in 510 by Spartan king Cleomenes, aided by an exiled Athenian family called the Alcmaeonids.

Factional strife followed, with an aristocrat named Isagoras being elected as archon in 508. Isagoras was a rival with another politician, Cleisthenes. Isagoras succeeded in exiling Cleisthenes and in convincing the Spartan Cleomenes to return in order to set up an oligarchy, but he was eventually driven out of the acropolis by masses of poor Athenians, who invited Cleisthenes to return to Athens. Cleisthenes then changed the legal system of Athens, establishing ten tribes based on separate geographic areas rather than kinship. This helped to break the old hereditary system of power and privilege, a holdover from earlier Dark Age social organization. In addition, Cleisthenes established the *boule*, or council of 500, randomly chosen from men of each tribe. Each tribe would be in charge of the *boule* for a tenth of the year, and these 50 men would be referred to as the *prytaneis*. Each tribe would also elect one *strategos*, an infantry commander, and a cavalry commander. Under this system the *boule* would present business to the *ecclesia*, who would then approve or reject the proposals of the *boule* and, with the assignment of archons by lot beginning in 486, paved the way for direct citizen votes on state policy.

This system stayed relatively intact until after the Persian wars, when citizenship began to be restricted and measures were passed for the payment of juries, the radicalization of the rowers of the Athenian Navy, the establishment of an oligarchy after the Peloponnesian War, and the eventual reestablishment of the Athenian democratic system.

—Ryan Horne

Bibliography

- O'Neil, James L. *The Origins and Development of Ancient Greek Democracy*. Lanham, MD: Rowman and Littlefield, 1995.
- Pomeroy, Sarah B., et al. *Ancient Greece: A Political, Social and Cultural History*. Oxford: Oxford University Press, 1999.

Raaflaub, Kurt A., Josiah Ober, and Robert W. Wallace. *Origins of Democracy in Ancient Greece*. Berkeley: University of California Press, 2007.

Development, Administration, and Legal Structure of the Greek Polis

The polis, usually translated as “city-state,” was the central political unit of the ancient Greeks. The polis was an independent, self-governing, economically self-sufficient community and usually consisted of an urban center together with its surrounding countryside. While some of the physical features of the polis, such as walled cities and communal meeting places, are found as early as the Homeric poems, which may reflect developments of the period from 1200 to 800 BCE, the social and political framework of the polis did not arise until the eighth century BCE.

After the political and social infrastructure of the Mycenaeans had been obliterated during the twelfth century BCE, the Greeks were forced to start afresh at the village level. At first, local chieftains ruled over individual villages. This changed, however, following the drastic rise in population during the eighth century that resulted in the political integration of neighboring villages into urban centers, often at the base of a fortified citadel that served as a place of refuge. The process of political union brought with it administrative changes, as the powers of the local chieftains were distributed among the land-owning aristocracy, who ruled collectively as annual magistrates, guided by a powerful council of aristocratic elders. These leaders drafted policy and created laws for the polis as a whole.

By the late seventh century BCE the new economic opportunities afforded by the growth of trade and colonization resulted in a larger number of prosperous but nonaristocratic individuals who began to challenge the social and political dominance of the landed elite. In response to this social conflict, many lawgivers developed written law codes, which limited the arbitrary powers of the aristocratic magistrates. In some poleis (the plural form of polis), disaffected aristocrats took advantage of both popular discontent and the new hoplite (heavily armed infantry)

citizen army to seize power and rule as tyrants. While most tyrannies lasted no more than a couple of generations, the tyrants did succeed in limiting the power of the aristocracies and provided benefits to the masses in order to stay in power. Once the tyrants were overthrown, most poleis did not return to the status quo but instead began to develop more inclusive forms of government. These included democracies, in which every citizen theoretically had equal rights (although who counted as a citizen was severely restricted), and oligarchies, in which the full range of citizenship privileges was restricted to those above a certain income level.

In this period the rights of the citizen of the polis also began to be defined. These rights included the privilege to own land, to fight in the army, to participate in the assembly, and to hold office and serve as judges (these last rights only in democratic poleis, since in oligarchic poleis the eligibility to be elected as a magistrate was linked to income). Citizenship in a polis represented membership in a homogeneous community and excluded outsiders such as women, slaves, former slaves, and resident aliens (*metics*). By the Classical period in oligarchic as well as democratic poleis, the role of the assembly in the decision-making process began to rival that of the elected magistrates. In these systems all citizens, regardless of social or economic status, had a vote, and there was an emphasis on structured discussion to determine policy, although demagogic political leaders were often able to sway public opinion.

The legal structure mirrored the administrative structure of the polis in that as a whole, the body of citizens gradually absorbed the legal functions of the elected magistrates. In fifth-century Athens, laws were made by the majority vote of the Assembly. By the fourth century, the Assembly continued to pass decrees (ad hoc measures to address specific contingencies), whereas special boards of magistrates, elected from the people, continued to promulgate laws (permanent rules) in order to ensure consistency. In Archaic Athens, as elsewhere, judgments were pronounced by the elected aristocratic magistrates. Solon's reforms (ca. 594–590 BCE) created a People's Court of appeal, although the magistrates continued to make verdicts. By the Classi-

➤ ARISTOTLE'S VIEW OF THE POLIS

For Aristotle, the polis (city) was a natural part of human life and an integral part of human development. A person, in Aristotle's view, needs to be a member of a city, since people are what he considers to be political animals, and in this quotation Aristotle discusses how the polis is integral to human life.

"The final association, formed of several villages, is the polis. For all practical purposes the process is now complete; self-sufficiency has been reached, and while the polis came about as a means of securing life itself, it continues in being to secure the good life. . . . It follows that the polis belongs to the class of objects which exist by nature, and that man is by nature a political animal. Any one who by his nature and not simply by bad luck has no polis is either too bad or too good, either subhuman or superhuman—he is like the war-mad man condemned in Homer's words as 'having no family, no law, no home'; for he who is such by nature is mad on war; he is a non-cooperator like an isolated piece in a game of draughts."

—Frances Pownall

cal period, courts composed of representatives of the people took over from the magistrates (the process of transferal is obscure) the rendering of verdicts as well. After the reforms of Pericles (who led Athens during approximately 461–429 BCE), those elected to serve as jurors were paid for their service, a measure that ensured that the juries represented a cross-section of the population in that it was (theoretically) possible for a poor man to forego his wages and serve on a jury. The concept that an accused should be judged by a jury of his peers is one of the greatest legacies of the ancient Greeks to Western civilization.

—Frances Pownall

Bibliography

Hansen, Mogens Herman, ed. *The Ancient Greek City-State: Acts of the Copenhagen Polis Centre*, Vol. 1. Copenhagen: Royal Danish Academy of Sciences and Letters, 1993.

- Morris, Ian. *Burial and Ancient Society: The Rise of the Greek City-State*. Cambridge: Cambridge University Press, 1987.
- Murray, Oswyn, and Simon Price, eds. *The Greek City from Homer to Alexander*. Oxford, UK: Clarendon, 1990.
- Starr, Chester G. *Individual and Community: The Rise of the Polis, 800–500 B.C.* New York: Oxford University Press, 1986.
- Stockton, David. *The Classical Athenian Democracy*. Oxford and New York: Oxford University Press, 1990.

Greek Concepts of Citizenship

In ancient Greece, the concept of citizenship was intertwined with an individual city-state (polis) due to the lack of political unification of Greece itself. For the Greeks in the Classical period, citizenship was participation in the political life of the polis, although this civic involvement could vary greatly between different cities. In general, citizenship focused on several factors including the ability to fight for the polis as a hoplite, the ability to participate in the decision-making process (even if the assembly was functioning as a rubber stamp to aristocratic or oligarchical governments), ownership of property, and the ability to run for (or be selected for) office, which was restricted to males. Citizenship was also tied into notions of ethnic homogeneity whereby membership in one of the ethnic groups comprising the polis was critical. Citizenship also had religious overtones, with citizens being expected to take place in festivals and other religious events to reinforce the cohesion of the community. While the specific definitions and requirements for citizenship could vary from polis to polis, the two best-attested systems in the ancient Greek world were that of Athens and Sparta.

Athens held to the same general rules of male citizenship as other cities, although with the increasing importance of poor ship rowers after the Persian wars of 481–479, citizenship was extended to the lower strata of men with property, which was insufficient to arm themselves as hoplites. This enfranchisement would lead to later tensions between the democratic and aristocratic factions within the polis and

would have disastrous results following the Peloponnesian War. Men were allowed to vote in the assembly and could potentially be selected for office by lot or could run for elected offices such as one of the generals, or *strategoi*.

While women were considered part of the community of a polis (they were still part of one of the *phratries*, or an ethnic group comprising the polis), they were almost invariably banned from participating in any civic offices, military functions, or court proceedings. Athenian women were still important in conceptions of citizenship, as in 451 BCE the statesman Pericles was able to force legislation that restricted citizenship to individuals who had two Athenian parents. Women were essential to the conception of who could be considered an Athenian citizen, but they were themselves in no way equal to the status of the male citizens. Women were not allowed to truly own or inherit property but served as a method for transferring property between two males.

Women were not the only residents of a polis who did not enjoy full political participation. In Athens there were large numbers of nonresident aliens who were called *metics*. These metics were generally merchants, craftsmen, and businessmen who were attracted to Athens due to economic opportunities, especially after the construction of the Athenian empire. Metics were unable to purchase property, attend the assembly, or hold public office, but they were able to participate fully in the social life of the city.

Slaves were another class of people who lived within Athens and were not given any form of political involvement. Slavery in ancient Greece was not seen as a socially unacceptable institution, and slaves could be found in a wide variety of jobs, from mining and unskilled agricultural work to banking and specialized clerical functions. While slaves could be freed, in Athens such slaves would generally join the ranks of the metics unless the assembly decided to honor them as citizens (a rare but not unheard of event).

Citizenship in another major polis, Sparta, featured many similarities to and some differences from the Athenian model. Sparta's system of government was on a permanent militaristic footing, where Spartan citizens (Spartiates) were supported by two underclasses, the *perioeci* and

the *belots*. The development of hoplite warfare in Sparta (no earlier than 675) created a requirement, much like other poleis in Greece, for heavily armored hoplites to fight in close formation while wearing expensive bronze armor. In order to create a fighting force that met the requirements of hoplite warfare, the Spartans created a unique system of military training and citizenship status. This system was attributed by the Spartans to Lyscurgus, a possibly mythical lawgiver. In the Spartan system, training and selection began at birth: if a male child was seen as possibly unfit to enter the training system, then the infant was exposed and left to die. When the child was 7 years old he was enrolled in the *Agoge*, or Spartan education system, where he would learn to be a proper Spartan warrior. When the Spartan child reached the age of 18, promising candidates were selected to elite positions, while others had to wait until the age of 20 to be enrolled into a Spartan mess.

The Spartan mess was the centerpiece of Spartan male citizenship. A young Spartan had to be voted into a mess by its members, and a Spartan who was unable to join any mess would be seen as outside the Spartan community. Membership in the Spartan mess was contingent upon an individual providing a base allotment of food, which the Spartan warrior gained from his parcel of land, known as a *klaroi*.

The Spartan citizen did not work the land himself, however. Since citizenship in Sparta was so fixated on the development of military capabilities and discipline, the thought of a full Spartan citizen reducing himself to agriculture work was unthinkable. Instead, each Spartiate's land allotment was worked by a number of *helots*, or slaves owned by the state. These helots were inhabitants of the areas surrounding the polis of Sparta who had been subjugated early in the formation of the Spartan city-state. These people were seen as nearly subhuman by the citizens of Sparta even though they would occasionally serve a valuable role as auxiliaries in the Spartan Army in times of emergency. The helots had absolutely no citizen rights, civic participation, or legal protection, and the Spartan state would annually declare war on the helot population, removing any guilt if a full Spartiate happened to kill a helot.

➤ GREEK CLASSES

In ancient Greece, the concept of citizenship was intertwined with an individual city-state (polis). The citizen of a polis was a male member of the ethnic group (or groups) comprising the polis, generally produced enough produce from his land to equip himself as a hoplite, was able to own property, participated in communal religious festivals, and was able to participate in some level in the communal assembly (*ekklesia*).

Women, while considered part of the ethnic makeup of the polis, were not considered citizens. Women could not participate in the military, were unable to hold office, were unable to speak or vote in the *ekklesia*, and were severely restricted in land ownership.

In both Athens and Sparta there was a class of resident noncitizens who contributed to the economic prosperity of the polis. In Athens these people were referred to as *metics*, and although they were not allowed to participate in the city politically, they were afforded no particular social stigma for their position. In Sparta noncitizen residents were called *perioeki* and were the only individuals allowed to engage in commerce and craftsmanship. The *perioeki* could receive some measure of local autonomy, but they were still dominated by Sparta.

Finally, slaves were a ubiquitous presence in ancient Greece. Slaves were afforded no political voice and no citizen rights, and they faced minimal (if any) legal protection. Slaves could be owned by an individual or the state. In Sparta the state-owned slaves were known as the *helots*. The helots were forced to work the fields for Spartan citizens, and the suppression of helots became one of the central tenets and rationales for the Spartan militaristic system.

—Ryan Horne

There was another class of residents in Sparta, the *perioeki*. These people were merchants, craftsmen, and traders and generally functioned as the economic production arm of the Spartan state since full Spartiates were restricted to military pursuits. The *perioeki* also served as lighter-armed auxiliaries far more regularly than the helot population, and the Spartans would refer to their towns as a polis. However,

unlike a real Greek polis, the perioeki were unable to formulate any policy in relationship to Sparta, but they still retained some level of local political rights. The perioeki then provided essential economic and military services to the Spartan state but were unable to share in the full citizen rights.

As in other Greek cities, Spartan women were not considered full political citizens in the same way as men, but they had some unique freedoms and roles in the state. Women in Sparta were educated by the state, an almost unique phenomenon in the Greek world. Women were also allowed to own and inherit land in their own name, not just serving as a method for transferring land from one male to another. Spartan women who died in childbirth were also allowed a tombstone, an honor that Sparta allowed only to those women and warriors who had died in battle. Despite these rights, many above the rights granted by democratic poleis such as Athens, women were still unable to address or vote in the assembly, hold public office, be any of the two Spartan monarchs, or serve in the military. Women were still not full Spartan citizens in the same way the fighting men were.

—Ryan Horne

Bibliography

- Cartledge, Paul. *The Spartans*. New York: Vintage Books, 2004.
- Farenga, Paul. *Citizen and Self in Ancient Greece*. Cambridge: Cambridge University Press, 2006.
- Pomeroy, Sarah B., et al. *Ancient Greece: A Political, Social and Cultural History*. Oxford: Oxford University Press, 1999.

Politics in Athens

During the first millennium BCE, a unique combination of factors came together in Greece that led to the development of democracy. The very word “democracy” is a Greek word, meaning “people” (*demos*) and “rule” (*kratos*). Several Greek poleis (city-states) experimented with forms of democracy; however, the first purely direct democracy evolved at Athens. Believing in the fundamental ideal of liberty, the Athenians exercised their freedom to participate in government, to live as they pleased, and to speak

their minds. Although limited to male citizens, Athenian democracy was still a revolutionary form of government in a world of hereditary monarchs, theocrats, and god-kings. Slow to evolve and imperfect in many ways, Greek democracy set the stage for the development of modern democracies.

Perhaps the single most important factor that opened the way for democracy was the period of Greek history from 1100 to 800 BCE, known as the Greek Dark Ages. During this era, foreign invaders weakened the indigenous Mycenaean monarchies and brought about a period of population decline and cultural stagnation. When stability resumed and the Greeks began gathering in their newly emerging poleis, they were free to develop whatever forms of government they chose. Contributing to that independent spirit was the mountainous terrain of Greece that separated the various poleis and allowed them to develop individually. Add to those factors the humanism found in Greek religion, the competitive spirit of Greek athletics, the open questioning of Greek philosophy, and the primacy of Greek rhetoric and oratory, and the stage was set for an entirely new form of government: democracy.

The most complete record for the evolution of Greek democracy comes from Athens, the largest of all the Greek poleis. Like most poleis, Athens was originally a monarchy, but in 683 BCE the first step toward democracy was taken when the *basileus* (king) was replaced by a board of administrators called *archons*. Archons were elected each year by an assembly of adult male citizens. At first there were 3 archons: the *basileus*, who oversaw religion; the archon, who oversaw political life; and the *polemarch*, who oversaw the military. Later, 6 archons called *thesmothetai* were added to oversee judicial matters, and 1 additional archon was added to serve as secretary to the thesmothetai, for an eventual total of 10 archons serving on the board. Following their year in office, archons moved on to the Areopagus, which was a permanent council that increased in numbers until it reached about 300 members.

In theory, all Athenian citizen males could vote in the assembly and hold office, but in practice, only the wealthy aristocrats wielded enough

power to get elected. At the beginning of the sixth century BCE, a reformer by the name of Solon was able to break the stranglehold that the hereditary aristocracy had on political opportunity by dividing the Athenian citizenry into four classes based on the incomes derived from their farms. Members of the top two classes could hold major offices, the third-tier class could hold minor offices, and the lowest-tier class was permitted only to attend the assembly. Although still based on wealth, Solon's system provided an opportunity for advancement to any individual who was willing to work hard and increase his class standing. Solon is also credited with creating a *boule* (council) of 400, whose responsibility it was to prepare issues for the assembly, and with creating a new set of laws.

During the late sixth century another Athenian reformer, Cleisthenes, reorganized the citizen population into 139 units called *demes* (people), which were then grouped into 30 *trittyes* (thirds) and 10 *phylai* (divisions), thereby separating established tribal groups into new political units. Cleisthenes increased the *boule* to 500 members, with 50 members drawn from each of the 10 *phylai*. Cleisthenes' reforms brought politics to the local level, where ordinary men could participate in the workings of government. The term *demokratia* (democracy) was perhaps first coined during this time. Cleisthenes is also credited with the introduction of ostracism, named for the *ostraca* (pottery shards) upon which the Athenians scratched their votes. Ostracism was a process wherein an unpopular individual could be voted out of Athens for ten years. The practice of ostracism served to eliminate political opponents and dissidents.

In 501 BCE the polemarch was replaced by a board of ten *strategoi* (generals) to oversee the military, with one *strategos* elected annually from each *phyle*. Over time, the power of the *strategoi* expanded beyond just military matters, and the *strategoi* became important political leaders as well, as in the case of Pericles, the popular fifth-century Athenian general and statesman. In 487–486 the method of selecting archons changed from election to sortition (selection by lot) wherein archons were selected at random from a prepared list. Sortition reduced



View of the rock-cut platform (the bema) on the hill of Pnyx, just west of the Acropolis in Athens. This was the site where an assembly (the Ecclesia) met during the fifth–fourth centuries BCE to consider issues raised by the town council. All citizens could speak, and majority rule was the method for decision making. (Carl Rasmussen/Holy Land Photos)

the dominance of the wealthy aristocrats and offered citizens of all classes the opportunity to serve and to gain political experience. In 462 Ephialtes introduced reforms that took power away from the Areopagus and divided it among the assembly, the *boule*, and the courts. Pericles then introduced pay for individuals serving on juries and the council, opening the way for even the poorest citizens to participate in the Athenian democracy.

In 411 and 404 antidemocratic factions blamed democracy for the losses that Athens incurred during the Peloponnesian Wars, and oligarchies (rule by a few) replaced democracy. Each time, the oligarchies were overturned and democracy was reestablished within a few months. Perhaps the most notable complaint against democracy was brought by the philosopher Plato, who blamed democracy for trying and condemning to death his teacher and mentor, Socrates, in 399 BCE. In his writings, Plato questioned the ordinary citizen's capacity for rational thought and action, and he proposed that only educated specialists (philosopher-kings) be permitted to rule.

In spite of these antidemocratic movements, democracy continued on into the fourth century,

PERICLES OF ATHENS

Pericles was born at the beginning of the fifth century BCE, a time when democracy was just taking root in Athens. His father, Xanthippus, was an influential general, and his mother, Agariste, was the niece of the great reformer Cleisthenes, considered by the Athenians to be the founder of democracy. The family's wealth and position gave Pericles access to important Athenian social and political spheres within which he could utilize his intellect and ambition. Rather than using his position to advance the interests of his own aristocratic class, Pericles spent his career supporting and promoting Athenian democracy and working to extend participation in that democracy to all classes of citizens.

One of Pericles' first acts was to join with his fellow general Ephialtes in an effort to weaken the power of the Areopagus, an assembly of wealthy retired archons, by taking away their important political judicial powers and dividing them among the assembly, the *boule*, and the courts. Pericles

again joined with Ephialtes in overthrowing Cimon, a powerful aristocrat who outspokenly favored a limited democracy controlled by the aristocracy. In the mid-fifth century, Pericles succeeded in convincing the Athenian assembly to pass laws that gave citizens the direct vote both in the assembly and in the courts and that provided for most public offices to be selected by lot, thereby opening up those offices to all classes.

Pericles was the first to introduce the practice of pay for jurors, which meant that poorer citizens could serve on juries and have their voices heard without fear of loss of income. Soon after, payment for service was extended to citizens who served in capacities such as members of the Council of 500, archons, public officials, and active members of the army and navy, allowing many Athenians the ability to participate fully in their democracy for the first time. The strong foundation that Pericles laid for Athenian democracy lasted for over a century.

—Sonia Sorrell

with a few notable changes. The power of legislation and the jurisdiction in political trials were shifted from the general citizen body to a panel of 6,000 citizens who were selected annually by lot. The courts met about 200 days each year, and each day jurors were selected by lot from the panel of 6,000 to serve on juries ranging in size from 201 in private actions to 501 or more in public actions. During this period, Athens had about 1,200 magistrates, with about 100 of those elected by the assembly and 1,100 chosen by lot, who presided over the law courts and the decision-making bodies. The *boule* and the Areopagus prepared business for the assembly and heard homicide cases, respectively. Only catastrophic circumstances could halt the advance of the Athenian democracy, and those circumstances came in the form of Macedonian monarchical rule imposed on Greece in 322, followed by the advance of the Romans who snuffed out all vestiges of democracy within their conquered territories.

For all its positive features, Greek democracy still had its weaknesses. The greatest weakness was the fact that Greek democracy was

direct, not representative, and participants had to be physically present at a vote to raise their hands to be counted. If one was a farmer with fields to tend, a soldier serving in the military, a merchant abroad for trade, or sick or elderly, attendance would be problematic. Typically only the wealthy aristocrats, who had slaves to attend to their businesses and lands, could be present at most of the votes. There was also the issue of franchise. Only male citizens were eligible to participate in the democracy, which left 85 percent of the population disenfranchised, including women, metics (resident noncitizens), and slaves. Ostracism, developed to support democracy, in practice served to stifle opposition. Regardless of its drawbacks, Athenian democracy lasted from 500 BCE to 322 BCE, and during that period it served as the world's first and only example of a functioning direct democracy.

—Sonia Sorrell

Bibliography

Kagan, Donald. *Pericles of Athens and the Birth of Democracy*. New York: Free Press, 1991.

- Raaflaub, Kurt A., Josiah Ober, and Robert W. Wallace. *Origins of Democracy in Ancient Greece*. Berkeley: University of California Press, 2007.
- Rhodes, P. J., ed. *Athenian Democracy*. New York: Oxford University Press, 2004.
- Robinson, Eric W., ed. *Ancient Greek Democracy: Readings and Sources*. Oxford, UK: Blackwell, 2004.
- Woodruff, Paul. *First Democracy: The Challenge of an Ancient Idea*. New York: Oxford University Press, 2006.

Greek Writing on Governance

Ancient Greek discourse on high politics and governance appears not only in the writings of philosophers such as Plato and Aristotle but also in that of historians and dramatists. Many of these writings focus on the establishment of a perfect government form amid a world of chaos and human failings. However, they also recognize that human liberty, as interpreted by the ancient Greeks, necessitates a certain degree of freedom (at least for men) and a degree of political participation by the population. However, in consideration of multiple interests that derive from Greek society due to political participation in the polis (Greek city-state), there is a need for a government structure that can impose its will for the benefit of all. Greek historians like Thucydides and Herodotus offer their perspectives on the failings or successes of governments through their works; dramatists such as Aristophanes also offer nuanced criticism of politics and governing structures. In contrast, philosophers such as Plato and Aristotle suggest models of government that create greater stability amid the chaos of everyday life, according to their respective philosophical perspectives.

Greek historians Thucydides (ca. 460–ca. 395 BCE) and Herodotus (ca. 484–ca. 425 BCE) discuss Greek government in their work, typically in the context of warfare. Thucydides' *History of the Peloponnesian War* discusses the importance of political entities drawing their relations from a position of military strength. Furthermore, while he approved of Athenian statesman Pericles and his leadership, Thucy-

dides remained skeptical of the concept of democracy and the excesses that it allowed for demagogues. Therefore, he was critical of democracy in its allowance of social chaos within the city-state, necessitating strong leadership. However, this leadership, ironically, was a threat to Greek democracy. In contrast, while Herodotus also wrote about high politics in his works, most notably in *The Histories* and *The Persian Wars*, he tended to be more supportive of Greek democracy than was Thucydides. In Herodotus's work, he wrote disapprovingly of the despotism associated with Persia while exalting Greek democracy as encapsulated in Athens.

Greek drama also incorporated political themes as integral elements. Tragedies such as Sophocles' *Antigone* (ca. 442 BCE) and Aeschylus's *Seven against Thebes* (ca. 467 BCE) included various political themes that represent the paradigms that existed in Athenian society in regard to governance and citizenship. *Antigone*, in particular, discusses such political themes as the control of the state in the lives of individuals, the conception of law in the lives of individuals, and the duties and responsibilities of citizens to the state. Greek playwright Aristophanes' play *Ecclesiazusae* (ca. 390 BCE) also discusses politics in the context of his satirical criticism of egalitarianism in Athenian democracy. In this play, women under the leadership of Praxagora convince the male citizenry of allowing them to rule Athens. They thereby institute an egalitarian form of government that abolishes property and marriage as well as decreeing that all people share equal status by law. In this context, this comedic play was a warning against excessive democracy, which was of concern to some elites in Athenian society. *Ecclesiazusae* also represented ancient Greek patriarchal views of women in perceiving them as incapable of asserting any viable or responsible political agency in greater society.

Greek philosophers wrote about ideal forms of political structures in governing society, based on their philosophical ideals and the viable realities of their respective eras. Writings on rhetoric imparted a high value on providing viable argumentation as a valued skill of not only politicians but also citizens of the polis. Most notably, the works of Plato and Aristotle have had the most

➤ PERICLES' FUNERAL ORATION—ON ATHENIAN DEMOCRACY

Notable Greek statesman Pericles exalts Athenian democracy in this funeral oration, delivered to the Athenians after a year of fighting the Peloponnesian War (431–404 BCE). The following excerpt was recorded (and according to historians probably embellished and polished) by Greek historian Thucydides. This type of discourse was common in the descriptions of Greek governance by historians of antiquity.

“Our constitution does not copy the laws of neighboring states; we are rather a pattern to others than imitators ourselves. Its administration favors the many instead of the few; this is why it is called a democracy. If we look to the laws, they afford equal justice to all in their private differences; if no social standing, advancement in public life falls to reputation for capacity, class considerations not being allowed to interfere with merit; nor again does poverty bar the way, if a man is able to serve the state, he is not hindered by the obscurity of his

condition. The freedom which we enjoy in our government extends also to our ordinary life. There, far from exercising a jealous surveillance over each other, we do not feel called upon to be angry with our neighbor for doing what he likes, or even to indulge in those injurious looks which cannot fail to be offensive, although they inflict no positive penalty. But all this ease in our private relations does not make us lawless as citizens. Against this fear is our chief safeguard, teaching us to obey the magistrates and the laws, particularly such as regard the protection of the injured, whether they are actually on the statute book, or belong to that code which, although unwritten, yet cannot be broken without acknowledged disgrace.”

—Abraham O. Mendoza

Source

Thucydides, *History of the Peloponnesian War* (New York: Penguin Classics, 1954), Book 2.34–46.

resonance of Greek political philosophy. Plato wrote extensively on the ideal form of government in his two main works on the subject, *Republic* and *Laws*. In *Republic*, Plato discusses how man's ability to control his existence is akin to the function of state governance. According to Plato, a rational man is analogous to a state administered by a philosopher-king, for the benefit of the citizenry, while an irrational man is like a city-state run by a mob, subject to chaos. In *Laws*, Plato discusses the organization of an ideal political body, taking into consideration such factors as education and the makeup of the population. Aristotle's main work on politics, aptly titled *Politics*, discusses the origins of the state, economics and trade, the constitutions of city-states, citizenship, democracy, oligarchy, and education, among other subjects related to state administration. Through his thorough analysis of political structures and governance, Aristotle attempted to decipher what is possible amid the realities of classical Greek society, offering a more empiricist perspective than the idealistic models espoused by his mentor Plato.

Political philosophy in the Hellenistic period of Greek history extended primarily to writings by Stoic philosophers. Ethical concepts espoused by Stoic philosopher Zeno (ca. 334–ca. 262 BCE) were imparted to the responsibilities of the citizens to the state and the reciprocal relationship that the state held to the citizen. Virtue and reason were held to be crucial in the functions of the daily lives of individuals and politics, without which quotidian existence would be ruled by chaos. Stoic philosophy was significant in shaping later Roman and Christian beliefs regarding political administration and conceptions of the role of the citizen.

—Abraham O. Mendoza

Bibliography

- Salkever, Stephen, ed. *The Cambridge Companion to Ancient Greek Political Thought*. New York: Cambridge University Press, 2009.
- Saxonhouse, Arlene W. *Fear of Diversity: The Birth of Political Science in Ancient Greek Thought*. Chicago: University of Chicago Press, 1995.
- Thucydides. *History of the Peloponnesian War*. New York: Penguin Classics, 1954.

■ Introduction: Rome—from Monarchy to Republic to Emperor

When most people think of ancient Roman politics, the absolute power of the emperor is the first thing that comes to mind. In fact, Roman political organization varied considerably over the nearly 1,500 years of Rome's existence. The stories of Rome's founding suggest that the earliest government of Rome was that of a monarchy and that the founder of Rome (Romulus) ruled as king. Although scholars are divided on how much of these early accounts are historically accurate, no one doubts that the first government was led by a king, and thus this stage of Roman history is referred to as the Regal period. This monarchical state seems to have emerged within the context of the Etruscan city-states, which predated Roman civilization, but the exact relationship between early Rome and the Etruscans remains debated by historians.

The Regal period, according to tradition, extended for the reign of seven kings. The final king was expelled from Rome, and the republic—a type of government somewhat akin to Greek democracy—was declared. Under the republic, Roman authority expanded through Italy and eventually through Greece, western Europe, North Africa, and the Near East. Eventually the republican form of leadership became too unwieldy, and Julius Caesar seized control. Caesar's control over Rome did not last; he was assassinated by a group of senators. However, the return to the republic was short-lived, and after a series of political machinations and open warfare, Augustus gained absolute control over the Roman empire, and power became centralized in the figure of the emperor.

—Kevin M. McGeough

Formation and Development of the Etruscan City-States

The culture and politics of the Etruscan city-states were predominant in Italy from the end of the Iron Age Villanovan culture until the rise of Rome in the fifth and fourth centuries BCE, al-

though little is known about their formation and the relationships between them due to the lack of a large corpus of primary texts. Generally, Etruscan politics were structured as a large urban center that maintained individual control over its dependent region and was allied with other urban centers overall by cultural factors and, at times, by political arrangement.

While debate has ranged over the origin of the Etruscans, there is little evidence to support a cultural break from the Villanovan civilization. The Etruscans did choose to found many of their regional urban centers on the site of well-established former Villanovan habitations. In the eighth century, a period of rapid growth caused by the increased demand in trade converted the villages into pre-urban centers, allowing for more social stratification and specialization. However, the regions of Etruscan civilization each developed at a slightly different pace, with various emphases on political and cultural themes until the end of the sixth century BCE.

The major Etruscan cities were distributed between the Arno and Tiber rivers, focusing their population and wealth within central and southern Etruria. Northern Etruria—from the Arno to



Ruins of the Etruscan city of Veii in present-day Italy, seventh–sixth century BCE. (SEF/Art Resource, NY)

the Po—and the Etruscanized region south of the Tiber and into Campania comprised the remainder of their territory. Southern Etruria and Etruscanized Campania demonstrate advanced cultural and political development earlier, while the other two regions adopt similar patterns at slightly later dates. The dominant urban centers in each region were Mantua, Atria, Spica, and Felsina in the north; Felathri, Arretium, Curtun, Perugia, Clevsin, Fufluna, and Vetluna in central Etruria; Velzna, Velch, and Tarchna in the south; and Caisra, Veii, and Rome in the northern Campanian region. Each major center was surrounded by a variety of smaller urban settlements as well as agricultural land, all of which was militarily dependent upon the major city.

In the eighth and seventh centuries BCE, archaeological evidence suggests that the Etruscans were primarily oriented toward trade and seafaring, with many descriptions of Tyrrhenian pirates surviving in later Latin and Greek literature, indicative of a simplistic political system for Etruscan culture similar to the marauding kings whom Homer describes in the *Iliad*. Local hereditary kings (*lucumoni*) ruled by force of power and personality and made their own international arrangements with Carthaginian, Sicilian, and Greek contacts. Lucumoni maintained authority only over their city and its surrounding region but would negotiate alliances with other local kings for military purposes. This is the period in which Rome was ruled by the Tarquin dynasty and in which Etruscan civilization first begins to adopt cultural practices from the influence of Greek colonies in southern Italy, Sicily, and the northern Tyrrhenian coast.

After the Orientalizing period in the seventh century BCE, the evidence shows that the Etruscan political system is still dominated by the lucumoni, likely including both religious and military leadership. However, by the beginning of the sixth century BCE it is an elected position, but there is no indication about which classes of Etruscans would have voted. Dionysius of Halicarnassus describes the regalia of the king as including a purple robe, an eagle-topped scepter, and a portable ivory chair. He was also preceded in public by a magistrate carrying the *fascēs*, an axe bundled with rods, to symbolize his power to punish and execute. This idea of kingship

seems to have lasted into the period of Roman expansion, perhaps terminating around the end of the fifth century BCE as Roman culture began to spread northward.

Livy and other early historians argue that the Etruscans developed a *concilium Etruriae* in the Sanctuary of Voltumna (Fanum Voltumnae), which the leaders of the 12 most important cities attended. It is extremely difficult to ascertain membership within the League of Twelve cities, as there are more than 12 possible urban centers. It is also likely that membership shifted over time, connected to the economic and military fortunes of the individual cities. This gathering included an important festival, as the main connection between these urban centers was a cultural one. Here, the leaders would elect a *praetor Etruriae* to oversee the entire Etruscan sphere. The details and context of this position are not well understood, and hypotheses range from just a designated title to an active role primarily focused upon religious aspects and the organization of the yearly *concilium Etruriae*. Dionysius also relates a joint command of Etruscan military forces as a result of this meeting, noting that the *fascēs* of the 12 cities were handed to one individual, but it is not likely that this was a regular occurrence.

While little can be said with certainty about the Etruscan political structure, it is clear that after contact with the Greeks it was based upon kingly elections in each urban center and may have included a Pan-Etruscan council. The change in governmental style allowed the Etruscans to expand their trade and exhibit their culture throughout the western Mediterranean. Their political symbols were influential upon the Roman republican state, with the use of the *fascēs* and magisterial chair continuing for elected leaders and the eagle as a state emblem. The model of the *concilium* is either replicated in Roman politics or retrofitted to the Etruscans by Latin historians.

—T. Brice Pearce

Bibliography

- Banti, Luisa. *Etruscan Cities and Their Culture*. Translated by Erika Bizzarri. Berkeley: University of California Press, 1973.
- Barker, Graeme, and Tom Rasmussen. *The Etruscans*. Malden, MA: Blackwell, 1998.

- Pallottino, Massimo. *A History of Earliest Italy*. Translated by Martin Ryle and Kate Soper. Ann Arbor: University of Michigan Press, 1991.
- Torelli, Mario. "History: Land and People." In *Etruscan Life and Afterlife*, edited by Larissa Bonfante. Detroit: Wayne State University Press, 1986.

Regal Period in Rome

Much of what historians know about the Regal period in Roman history (753–510 BCE) is based on commentaries written by historians later in the subsequent Roman republic and from archaeological evidence gathered in the past century. While to some historians of antiquity this evidence suggests the Etruscan origins of the city of Rome, others argue for an independent origin on the part of Latin migratory groups. While much of the work done by ancient Roman historians, such as Livy and Emperor Claudius, focuses on the mythical foundations of Rome and its experiences with the institution of kingship, some of their data can also be interpreted as a reliable source in discussions of the early Roman relationship to the Etruscans and the purported development of Roman republican institutions such as the Senate. However, since much of this material is imbued with mythological connotations, many dates and persons are deemed fictional by scholars of the period.

Evidence suggests that the development of the Roman city-state was akin to the establishment of adjacent Etruscan settlements, most notably those centered in ancient Tuscany (Etruria). The mythological stories about the foundation of Rome also hint at Roman interaction with their Etruscan neighbors. Sources from later periods of Roman history designate as the first king of Rome the mythological Romulus, who founded the city in 753 BCE. The subsequent six kings—many of whom are thought by historians to be mythological—represent important figures in the development of Roman institutions that would later become integral parts of the republic. Kingship during the Regal period was not hereditary; kings were selected by elites from top government officials who had served the previous king. Historians have attempted to piece together relationships between the multiple kings

THE RAPE OF LUCRETIA—ROMAN STATE-FOUNDING MYTHS

The mythology of the foundation of the Roman republic centered on the fall of Tarquin the Proud and his association with the rape of Lucretia as illustrative of the corruption of the institution of kingship. She was the wife of Tarquin's nephew Collanitus and allegedly was raped by Tarquin's son Sextus. Lucretia was the typical virtuous Roman woman, dutiful and loyal to her husband. She committed suicide rather than live with the shame of rape, thereby illustrating her Roman female virtue. Popular discontent over this episode resulted in widespread rebellion against the tyrannical rule of Tarquin, whereupon the Tarquins were expelled from Rome and the republic was established. While evidence suggests that the story of the rape of Lucretia is mythical, the story itself is illustrative of Roman values and expectations of women, thereby showing the value of myths as a way to extrapolate societal mores.

—Abraham O. Mendoza

using sketchy evidence from mythological texts, which has proven to be problematic.

Following the rule of the eponymous Romulus, the six kings of Rome are assumed to come from ethnicities (Latin, Sabine, or Etruscan) other than specifically Roman. This suggests to some historians that Rome was a complex multi-cultural society rather than a specific Latin-based one. The influence of Etruscans in the Roman Regal period has proved to be another contentious issue, based on what can be extrapolated from ancient written sources. Etruscan rule of Rome is interpreted by historians from surviving manuscripts. According to some accounts, Tarquin I (Tarquinius Priscus) the fifth king during the Regal period, introduced Etruscan culture to Rome. However, some historians suggest that perhaps the link made by ancient historians about Etruscan influence is based on a desire to create a linkage between the origins and development of Rome and adjacent Etruscan civilization.

The development of Roman republican institutions has also been attributed to the Regal period, mostly as innovations by the kings to



create more efficient means to administer through the inclusion of elites. The development of the Senate, attributed to the third king, Tullus Hostilius, is one of the most notable of these institutions that Roman scholars during the republic attributed to an earlier period.

However, it is likely that these are merely mythological origins given to political structures whose establishment was perhaps unknown to these later historians constructing Roman history, who imparted their own contemporary values on a little-known past.

The last king of the Regal period, Tarquin the Proud (Lucius Tarquinius Superbus), is alleged to have assassinated the prior king to usurp the throne. Tarquin's abuse of power and supposed tyranny led to a rebellion that resulted in his overthrow and the establishment of the republic in 510 BCE. Evidence suggests that major changes in the governing structure did occur during this time and that the institution of kingship was replaced by a more inclusive republican form of government run by elites. Nonetheless, much of the history of the Regal period remains enigmatic and mythological, and thus historians must tread lightly on taking the overly patriotic Roman republican historians' words at face value.

—*Abraham O. Mendoza*

Bibliography

- Fox, Matthew. *Roman Historical Myths: The Regal Period in Augustan Literature*. New York: Oxford University Press, 1996.
- Garland, Lynda, and Matthew Dillon. *Ancient Rome: From the Early Republic to the Assassination of Julius Caesar*. New York: Routledge, 2005.
- Scullard, H. H. *A History of the Roman World, 753–146 BC*. 4th ed. New York: Methuen, 1980.

The Fall of the Monarchy and the Rise of the Republic in Rome

The archaeological record of the period suggests that the site of Rome expanded in the mid-seventh century, becoming more heavily urbanized. This is consistent with other sites in the region. Larger, more urbanized sites are often associated with the rise of what has been called the city-state system. This was the major organizational system of the Etruscans as well. The city-state usually consisted of a large settlement, with a defensive position and communal areas within the city itself. Cemeteries and farmsteads were outside of the settlement proper. Governance was local and centered in the city.

Theories of how the city-state came to be the dominant mode of settlement in Italy at this time are many. The fundamental difference among the various theories is the rate at which scholars assume that change occurs. Some suggest that city-states are founded all at once. Others

suggest that urbanization occurs gradually. Rate of change is a problem in historical and scientific fields in general (e.g., the debates surrounding Stephen Jay Gould's notion of punctuated equilibrium, which suggests that change occurs very quickly between periods of change and very long periods of stasis) and is not likely to be resolved anytime soon.

The archaeological evidence for city-state settlements and the historical evidence for the kings of Rome are consistent with each other. Although the details and personalities of the kings of the Regal period may not represent real historical personages, the institution of kingship within the context of a city-state form of government probably accurately describes the Regal period.

The beginning of the Roman republic coincides with the expulsion of the Tarquins from the city itself. With the forced exit of the Etruscan monarchy came the formation of the republican form of government. Whether or not the expulsion was an actual historical event at this stage, history can now be discussed more confidently.

Concomitant with the rise of the new form of government was the rise of an order of people known as the plebs (or plebeians). In contrast to the patricians (elite families who claimed descent from the original senators chosen by Romulus), the plebs were a heterogeneous group of underprivileged people who organized themselves into a collective political unit. In 494 BCE the plebs withdrew from the city of Rome (likely on account of mounting debts) and gathered on the Sacred Mount. There they voted to create their own governing body, the *concilium plebis*. This event, according to ancient historians, led to the codification of Roman law in the so-called Twelve Tables. These laws gave equality to all citizens but also formalized the differences between the two orders. Modern scholars often refer to the conflict between these two groups as "The Conflict of the Orders."

As Rome grew in size, it found itself in conflict with numerous neighboring Latin cities. These cities had banded together centuries earlier for shared cultic and religious purposes. With Rome's rise to prominence, this league of cities took on a militaristic aspect as well. Modern scholars refer to this organization as the Latin League, although it must be mentioned

that this was not a name used in antiquity. The exact nature of this organization is not well understood, nor is the sequence of events that led to war with Rome. It is clear that the Latin League went to war with Rome sometime after 504 BCE, and victory was gained by the Romans at the Battle of Lake Regillus in 499 BCE. The causes of the war were probably rooted in Rome's growing economic and military might.

Although Rome had been victorious in 499 BCE, relations between the two entities did not normalize until a formal treaty was agreed upon six years later. The *foedus Cassianus*, between Rome and the Latin League, was formed in 493 BCE, marking the end of the Latin War. Named after the Roman consul who was instrumental in its creation, the treaty viewed Rome and the rest of the league as equal partners, with Rome the only city able to call all of the cities to war. It established certain rights between the citizens and established a system of common defense. Spoils of war were divided, giving half to the league and half to Rome. The conditions of the treaty were preserved by a summary in the writings of Dionysius of Halicarnassus.

Perhaps some of the motivation behind the *foedus Cassianus* was the desire for mutual security. Migrations of people known as the Volsci, the Sabines, and the Aequi led to attacks by these peoples against Roman and Latin territory. Throughout the fifth century, Rome was forced to fend off attacks from these three groups and various others. It is difficult to determine, from the accounts preserved by Livy regarding this period, what were historical events and what were literary tales. It is clear that war prevented the region from gaining stability for the first half of the fifth century. Through the second half of the fifth century, however, the raids of the Volsci and Aequi became more infrequent, and those of the Sabines seemed to have stopped completely.

—Kevin M. McGeough

Bibliography

- Adkins, Lesley, and Roy Adkins. *Handbook to Life in Ancient Rome*. Oxford: Oxford University Press, 1994.
- Scullard, H. H. *A History of the Roman World, 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

Governance in the Roman Republic

When the monarchy was driven out of Rome, the body of elders who advised the king remained in the form of the Senate. Senators were responsible for advising the two consuls (elected annually) on which legislation of the proposals submitted by the consuls should be submitted to the popular assemblies for voting. Although the Senate itself could not pass laws, it strictly controlled which legislation reached the assemblies and was therefore one of the most powerful political institutions within the republic. The Senate could also issue decrees that had the force of law if not an actual designation as law. The Senate was also responsible for governing the provinces, and senators were often sent as governors to the provinces. The Senate usually met at the Forum, in the northwest corner known as the Curia Hostilia. However, Senate meetings theoretically could be held in any public place within a certain distance of Rome.

It was especially important to have the support of the assemblies when running for a political position. Voting was organized by assembly. Eligible voters met with their assembly outdoors and voted there. In order to vote, the citizen had to physically attend the assembly and, by extension, had to be in Rome. It is difficult to know how many Italian citizens actually made the journey to Rome to vote after they gained the right in the Social War. Certainly this hampered the voting ability of many citizens who lived outside of the capital. Until 139 BCE, votes were cast aloud; after 139 BCE, secret ballots were used.

There were four different assemblies in the republican period: the *comitia curiata*, the *comitia centuriata*, the *comitia tributa*, and the *concilium plebis*. *Comitia* does not have the same meaning as the English word “committee.” It is better translated as “assembly.”

Dating from the period of the monarchy, the *comitia curiata* reflected the ancient tribal divisions of Rome. Each of the three tribes was divided into ten wards (*curiae*). In the republican period, this assembly ceased to have a practical function. Its role was ceremonial, conferring imperium on some elected officials. The *comitia centuriata* met in the Campus Martius (Field of

Mars). In the period of the monarchy, the *comitia centuriata* was organized into units of 100 men; this is where the name *centuriata* derives from. But throughout the republican period, the actual number of members varied greatly. At the Campus Martius, each century had its own meeting enclosure. During the monarchy it was a military assembly, but by the republic it had become a general assembly. There were 373 centuries. As with the *comitia tributa* (assembly of tribes), voters voted as a block, meaning that if the majority of votes within a century were “yes,” then that would be considered 1 “yes” vote and tallied along with the 372 other possible votes. The division into century was based on age and property value. Because there were fewer centuries of the poorer classes, the wealthier classes could vote as a block against the poor. At the beginning of the republican period this was the major assembly, voting on whether to go to war, electing magistrates, and acting as an appeal court for capital cases. As the republican period progressed, more and more power was in the hands of the *comitia tributa* and the *concilium plebis*.

The *comitia tributa* was the assembly of the tribes. The name derives from the division of voters into 35 tribes, based on the supposed origins of one’s ancestors and/or one’s own geographic origin. Voting occurred at the Forum in Rome, with basically the same system as the *comitia centuriata*, when summoned by a consul, praetor, or tribune. The function of this assembly was to vote for some magistrates, vote on some legislation (legislation put forward by a magistrate), and act as a court of appeal in noncapital cases.

The *concilium plebis* was structured as 35 blocks, and like the *comitia tributa* the plebeian assembly also met in the Forum, with participation restricted to plebeians. Established early in the republican period after 287 BCE, it made decisions that were binding on all citizens, not just plebeians. The actual power of this assembly depended on the mood in the Senate at the time. When the senators supported the *concilium plebis*, this group could be very influential. But when the group was not favored, the Senate could find ways to restrict its powers.

The magistrate was an elected governmental office in Rome. Two individuals filled each office; individuals holding the same office were called



Remains of the Forum of Augustus in Rome. Inaugurated about 2 BCE during the reign of Caesar Augustus, the Forum was a practical complex of buildings used for Senate functions and other civic and religious activities. (Phillip Minnis/Dreamstime.com)

collegae. Most of these positions were held for one-year terms. Once an individual had been elected a magistrate for the first time, that citizen was eligible to be a senator, a nonelected position. Magistrates held one of two types of power in Rome. The upper-level offices held *imperium*, which gave power in a military setting and the power to enact the death penalty. The *comitia curiata* theoretically granted *imperium*, but this was, practically speaking, a symbolic role. Lower-level magistrates held *potestas*, which was the power granted by their specific office.

Quaestor was the lowest level of magistrate and ideally the first step in the *cursus honorum*. A man could be elected quaestor at the age of 27 (true of most of the republican period) and at this time would be able to gain entry into the Senate. The number of quaestors varied along with the size of Rome’s external holdings. Serving a variety of functions, quaestors were responsible for both public records and the treasury. Outside of Rome, they were responsible for paying the army and administering finances for the governor.

There were usually four *aediles* at a given time, serving one-year terms. Elected by the *comitia tributa*, two were plebeians, and two were *curule* (officials with state authority). These individuals were in charge of much of the Roman infrastructure. From the maintenance and build-

► THE OFFICE OF DICTATOR IN THE ROMAN REPUBLIC

During a state of emergency, the Roman Senate had the power to nominate a dictator, who acted as supreme commander for six months, which was the length of time that war was engaged in during a year. The nomination of a dictator did not mean that other magistrates lost their powers. However, the dictator did gain complete control over military and judicial matters. Julius Caesar was the last dictator in Rome (until the twentieth century, at least).

—Kevin M. McGeough

ing of public works (e.g., aqueducts) to the regulation of weights and measures, the aediles kept the city of Rome running smoothly. Until the reign of Augustus, the aediles were also responsible for public games. This responsibility placed aediles in a very public setting and provided them with much exposure. Throwing expensive games was a sure way of attracting votes, so even though the position of aedile was not a mandatory position along the *cursus honorum*, it was a useful political stepping stone.

At least 39 years of age, praetors were judicial figures. With the initial dissolution of the monarchy, praetors took over responsibilities that had been the king's, including military power, although this office later came to be known as consul. As the republican period progressed, the military responsibilities of the praetors ceased, but they retained the power of *imperium*. Elected annually by the *comitia centuriata*, the praetors also issued an edict of law annually. The number of praetors varied, as did their jurisdiction. For example, the *praetor urbanus* was responsible for law within the city of Rome. These responsibilities somewhat overlapped with those of the *praetor peregrinus*, who dealt with foreigners.

The consul was elected for one year. The exact regulations concerning who was eligible for election to this office changed throughout the republican period. Two consuls served at a time; this acted as a check and balance on their individual authority. Citizens had to be 36 years old

(later 42 years old) to be elected consul. Until 150 BCE, consuls could not be reelected until a 10-year span had elapsed. After 150 BCE reelection was banned outright, although in fact many consuls were reelected after this ban. Nominated by the Senate, consuls were elected by *comitia centuriata*. The consul chaired Senate meetings and ensured that the decisions the Senate made were carried through. Primarily, though, the consul was the commander of military forces. In this role, the consul would lead the Roman military on foreign campaigns.

Censor was the highest position that could be held by a magistrate in a nonemergency situation. The office was held for an 18-month period and was elected by the *comitia centuriata*. The specific responsibilities of the censor made it a very powerful position in Rome. The censor registered all citizens, ensuring that they were classified properly for tax and voting purposes. He was also responsible for commissioning public works and the use of public land. As a moral authority in Rome, the censor could expel senators from the Senate.

—Kevin M. McGeough

Bibliography

- Adkins, Lesley, and Roy Adkins. *Handbook to Life in Ancient Rome*. Oxford: Oxford University Press, 1994.
- Scullard, H. H. *A History of the Roman World, 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

Politics in the Roman Republic

After the expulsion of the Tarquin monarchy, the leadership of the state was invested in the office of *praetor* (later *consul*), which was held by two individuals, elected for a one year term. The praetors held symbols of leadership that were different from (although related to) the monarch's, but they did have the king's power of *imperium* (the power to command). Although the powers of the head of state were curtailed with the beginnings of the republic, the powers of the aristocracy grew. The gradual growth of aristocratic power led to what scholars call the "Conflict of the Orders." The conclusion of this conflict led to new powers for various institutions in the political life of Rome.

The Senate was composed of men who had once held an elected position as a magistrate. At the beginning of the republic the Senate was limited to 300 men, but by the time of Julius Caesar there were 900. Once the man's term of service came to an end, he became a senator and remained a senator for life, although he could be expelled for misconduct. Roman senators were nonelected officials serving life terms. These men were not paid for their work as senators, but it was an avenue through which prominent Roman families sought political gain. Indeed, participation in the Senate was a luxury of the wealthy. Because one had to have held office to become a senator, it was necessary to have amassed enough wealth to pay for an expensive election campaign. The interests of the Senate corresponded with the interests of the wealthy and well-established families of Rome. But class-based self-interest cannot be seen as the sole motivating force of the Senate. There were senators whose actions in government were based on ideals rather than on personal political achievement. And at certain periods, senators would work on behalf of the masses to sway their votes in the assemblies.

There were two main areas of civic life that were voted upon during the republican period. Citizens voted on legislation, and they also elected government officials. Legislation was never debated or discussed at an assembly, only voted upon. Roman citizens engaged in direct democracy, in which the voters themselves were in attendance at legislative assemblies.

Although the issues could not be discussed at the assembly, often a few days before the assembly was to meet informal meetings called *contio* were held. Anyone could attend these meetings, including foreigners, women, and slaves (although none of these categories of people could vote). Normally a *contio* was held to familiarize the general public with an issue that was to be voted on or to introduce the candidates for election.

After 180 BCE, the offices for which a citizen was eligible to run were determined by his age and which offices he had previously held. This was called the *cursus honorum* (the course of honors). The course of honors (in this usage the word "honors" is best rendered in English as

"political offices") was a legalized system, but occasionally an individual would advance ignoring these rules. Pompey's rise to prominence is an example of someone ignoring the *cursus honorum*. The ideal path was that a citizen would have spent at least ten years in a military or judicial position. After this period, he would be eligible to run for the lowest level of office—that of *quaestor*—and with usually a two-year interval between each office slowly progress to higher offices. Practically, the upper-level honors were dominated by a select group of powerful Roman families.

—Kevin M. McGeough

Bibliography

- Adkins, Lesley, and Roy Adkins. *Handbook to Life in Ancient Rome*. Oxford: Oxford University Press, 1994.
- Scullard, H. H. *A History of the Roman World, 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

The Augustan Principate

Octavian returned to Rome in 29 BCE after reorganizing the eastern provinces that had been devastated in the wars of the previous years. At this time Octavian had tremendous power and controlled the military. He was extremely popular in Rome, and his victory over Egypt, which now supplied free grain to Rome, certainly aided this popularity. The Battle of Actium had left him in near-complete control, but he lacked a constitutional position. Calling himself "Emperor Caesar Augustus, Son of a God" (referring to his adoptive relationship to the now-deified Julius Caesar), he claimed to have restored the republic, but at the same time he had amassed near-absolute governing authority. It was Octavian's consistent use of republican terminology and public dedication to republican principles that made his power palatable to the citizens of Rome. He never took on the grandiose titles that Julius Caesar had used, nor did he take the position of dictator.

In 27 BCE, Octavian, in an infamous speech to the Senate, turned over his powers. This announcement had been carefully staged, and his supporters protested his resignation, claiming that Rome could not survive without Octavian.



The Ara Pacis Augustae (Altar of the Augustan Peace) in Rome, was built by order of the Roman emperor Augustus and dedicated in 9 BCE. The altar and walls of the shrine are adorned with floral motifs, representations of Roman legends, and scenes from its dedication ceremony. (Simone Manzoni/Dreamstime.com)

Octavian's response was theatrically reluctant, and he agreed to act as consul for ten years, overseeing the provinces of Egypt, Spain, Syria, and Gaul. Because these were the provinces where most of Rome's legions were based, Octavian had control of the military. In response to Octavian's "generous" sacrifice of power, the Senate bestowed upon him the name "Augustus," which means "revered one." From this point on, Octavian was referred to as Augustus. Even though Augustus's control was complete, he had learned from the example of the murder of Julius Caesar (his adopted father) that he required the support of the Senate to retain control. Referring to these acts in 27 BCE as "The First Settlement," Augustus claimed to have restored the republic. In fact, he had gained powers that at one time had been held by numerous offices and brought an effective end to republican government.

With these powers, Augustus left Rome for Gaul and Spain. He remained on the periphery of the empire until 24 BCE. From 27 to 24 BCE he accomplished military victories in Spain (the Cantabrian Wars), although he was not a particularly brilliant military tactician. He wrote his autobiography at this time, but it did not survive. The best records from this period are the writ-

ings of Dio Cassius. After falling almost fatally sick, Augustus apparently shifted his strategy for leadership. In 23 BCE he resigned his consulship. He gained the position of *tribunicia potestas* (tribune of the people) for life and gained *imperium maius* (power greater than all others). By virtue of his *imperium maius*, Augustus was de facto leader of the Roman empire.

In 19 BCE Augustus once again shifted the nature of his powers, having officially received consular powers for life. Scholars have debated the reasons for these periodic strategy changes. Were they attempts to combat problems, or were they opposition to Augustus? Or did they represent the growth and development of Augustus's understandings of proper governance? Whatever the case, after 19 BCE Augustus was in a position whereby his political power was no longer questioned. What was in doubt was who would take over supreme power after Augustus's death. The powers that Augustus had accumulated in his office were not hereditary, but neither was there a system of succession in place, as his position had been created on an essentially ad hoc basis. So although it was not constitutionally binding, Augustus made certain to indicate who he would designate as his heir.

The first individual who would be heir to the throne was Marcellus, nephew of Augustus. Augustus himself lacked a son, although his second wife, Livia, had sons from a previous marriage. But Augustus wanted an heir from his own bloodline (the Julian bloodline). His first wife had a daughter named Julia, so Augustus had Marcellus and Julia marry (25 BCE). This seemed like a clear statement of intent that Marcellus was the favored heir. However, in 23 BCE when Augustus thought he was dying, he handed his signet ring (the symbol of his power) over to his longtime friend Agrippa, not to Marcellus. Perhaps a power struggle would have ensued had Marcellus not died that same year. Agrippa had been a close friend and general to Augustus for many years and was the military intelligence behind him. In 21 BCE Augustus had his widowed daughter Julia married to Agrippa. They had five children, and Augustus adopted the three sons. By 12 BCE Agrippa's powers were fast approaching those of Augustus when Agrippa died unexpectedly of illness.

At this time, Agrippa's sons (adopted by Augustus) were too young to rule. So Augustus turned to Livia's sons from her previous marriage. The eldest of these sons, Tiberius, was forced to divorce his wife and marry the once-again-widowed Julia. Tiberius married Julia in 11 BCE, but because he was very attached to his now ex-wife, Tiberius was quite bitter. By 6 BCE Agrippa's sons Lucius and Gaius had entered public office but had proven themselves to be unworthy heirs. Augustus attempted to rein in their power by elevating Tiberius above them. Tiberius refused, left Julia, and exiled himself to Rhodes. However, by 4 CE Lucius and Gaius were both dead.

There were now three viable candidates to be Augustus's heir: Tiberius, Agrippa's surviving son Agrippa Postumus, and Augustus's great-nephew Germanicus. All three candidates were adopted by Augustus in 4 CE. Soon enough, Agrippa Postumus proved to be too volatile and was permanently exiled. This left Tiberius and Germanicus as the two possible candidates, with Germanicus the only Julian. When Tiberius adopted Germanicus, the problem was solved. When Augustus died in 14 CE, the office of emperor had become firmly established, but the method of succession had not been entrenched. Without a mechanism in place for providing incontestable succession, the identity of the next emperor would always be insecure. But the continued existence of the office itself was secure and would remain so for more than 300 years.

—Kevin M. McGeough

Bibliography

Adkins, Lesley, and Roy Adkins. *Handbook to Life in Ancient Rome*. Oxford: Oxford University Press, 1994.

Scullard, H. H. *A History of the Roman World, 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

Politics in the Roman Empire

When Augustus became the first emperor of Rome in 27 BCE during the politically chaotic period that followed Caesar's death two decades prior, the Roman political system underwent a massive transformation. Authority was fully cen-

tralized in the figure of the emperor, who was emperor for life. Augustus modernized, clarified, and restructured much of the Roman political system. Through a series of carefully calculated steps, he built upon republican principles to centralize leadership in one personality.

The emperor was the supreme commander of the empire, with authority derived from popular support and, most importantly, his complete authority over the military. In Rome, the emperor's military authority was displayed through the Praetorian Guard. Popular support came from the holding of games, the presiding over of public functions, and a variety of other means. Imperial patronage curried and reinforced popular support. The emperor's role as a legislator must not be overlooked, because he was the main source of law. The emperor chose which of his sons would succeed him, and if he had no sons he would designate a successor by adopting him and declaring his adopted son the next emperor.

Theoretically, under the empire the Senate's powers were extended. Its decrees came to have the rule of law behind them and did not require ratification by a popular assembly. However, in practice the powers of the Senate were drastically reduced, beginning with the granting of increased powers to Augustus. He reduced the Senate—which had grown to more than 1,000 members—to 600 members. It remained at around this number until the last years of the Imperial period. Furthermore, Augustus added a property qualification. Individuals had to possess a certain amount of land before being eligible for senatorial service.

The Senate did retain a certain number of powers. It retained control over the state treasury, and individuals sent by the Senate governed some of the provinces. Certain legal proceedings were enacted in the Senate (usually proceedings that involved one of its members or an upper-class family). Various matters of infrastructure were controlled by the Senate, and the occasional foreign embassy was received. But for the most part, the Senate as a body had lost much of its power. Individual senators, however, could gain a great deal of power through their relationship to the emperor, although depending on the emperor this was not always a safe venture.

The emperor, technically, received his power as a gift from the Senate. Although Augustus and the first emperors after him attempted to demonstrate some deference (though only in speech) to the Senate, later emperors lost the sensibility that deference to the Senate was a political necessity. Indeed, as the Senate became increasingly less important as a political body, the disdain of the emperor only grew. Furthermore, the Senate lost much of its influence to the class directly below it, the equine. More and more, positions that previously had been senatorial jobs went to the equites, further undermining senatorial authority and power.

In the Imperial period, the *cursus honorum* (the established order of offices in increasing rank that ambitious Roman politicians would seek) grew even more, and the number of magistrates was greatly increased. Election to magistrate was no longer a responsibility of the comitia. This body ceased to have an effective function. Rather, the Senate gained control of the power to elect magistrates, many of whom came from senatorial ranks.

Magistrates after Augustus officially shared their power with the emperor. And the emperor had the power to appoint magistrates. This power was fundamental in retaining the emperor's absolute control over the Senate. The institution of the office of city prefect was an important imperial appointment to this end. The city prefect had many responsibilities that overlapped with those of the other magistrates, but his authority superseded that of all of the other magistrates. In many ways, these other magistrate offices became more honorific than politically effective.

One of the fundamental developments in the history of governance that occurred during the Imperial period was the transference of administrative powers from the hands of elected magistrates to nonelected government officials. At this time, a true institutionalized bureaucracy arose. Many of these new permanent bureaucrats came from the house of the emperor or from the equine class. Although technically the equine class was below the senatorial class, this group gained in power through the patronage of the emperor.

Augustus installed a standing army in the city of Rome itself that became known as the Praetorian Guard. This guard consisted of nine

cohorts of 500 men and acted as the emperor's personal military force. The Praetorian Guard enforced the emperor's will within the city of Rome and was under his direct control. Under normal circumstances, there were two commanders who wielded considerable power.

—Kevin M. McGeough

Bibliography

- Bowman, Alan, et al., eds. *The Cambridge Ancient History*, Vol. 10, *The Augustan Empire, 43 BC–AD 69*. London: Cambridge University Press, 2000.
- Campbell, J. B. *The Emperor and the Roman Army*. Oxford, UK: Clarendon, 1984.
- Goodman, Martin, and Jane Sherwood. *The Roman World, 44 B.C.–A.D. 180*. New York: Routledge, 1997.
- Le Glay, Marcel, et al. *A History of Rome*. 2nd ed. Translated by Antonia Nevill. Malden, MA: Blackwell, 2001.
- Salmon, Edward T. *A History of the Roman World from 30 B.C. to A.D. 138*. London: Methuen, 1968.
- Stockton, David. "The Founding of the Empire." In *The Oxford Illustrated History of the Roman World*, edited by John Boardman, Jasper Griffin, and Oswyn Murray. Oxford: Oxford University Press, 1988.

The Emperors of Rome

Much is known about the lives of the Roman emperors, and given the immense power wielded by these individuals, many played very significant roles in world history. What follows is a brief outline of the major groups of emperors who spanned the first 250 years of the empire.

The first five emperors (including Augustus) were of the Julio-Claudian family and thus are frequently referred to by their family name. With the death of Augustus, the imperial period can truly be said to have begun. Since Tiberius already shared a great deal of the powers of Augustus, the transition to Tiberius as emperor was a given. The transition itself was not particularly smooth. Whereas Augustus's feigned reticence to accept power had endeared him to the Senate, the same approach by Tiberius simply annoyed this political body. He has a bad reputation due to the writer Tacitus, who portrays him in a

shockingly negative fashion. Initially Tiberius attempted to allow the Senate freedom of action but became frustrated by its lack of ambition. Toward the end of his reign Tiberius had become increasingly paranoid about treason, and numerous treason trials engulfed Rome. Eventually Tiberius withdrew to the island of Capri, where he spent his last ten years.

As with Augustus, dynastic succession was complicated under Tiberius. While Tiberius was on Capri, Sejanus became the virtual ruler of Rome. This came to an end when Sejanus plotted against Tiberius's named heir, Gaius (Caligula). Sejanus and all of his supporters were killed. When Tiberius died his only heir was Caligula, who took the throne, becoming one of Rome's most notorious emperors. Caligula became seriously ill shortly after becoming emperor. Whether the illness was physical or psychological is unclear, but his later actions are not those of a well-balanced individual. After killing numerous possible rivals, Caligula depleted the treasury for massive spectacles (such as creating a bridge of ships across the Bay of Naples in 39 CE). His favorite racehorse dined with him and was dressed in the garb of emperors. Toward the end of his life Caligula declared himself a god and was said to have wandered about talking to the god Jupiter and the moon. Caligula's incestuous union with his sister Drusilla was looked upon with contempt. In 41 he was assassinated at the Palatine Games, an assassination with widespread support.

With Caligula's death, some members of the Senate had hoped for a return to the republican system. But when Claudius was discovered hiding behind a curtain of the palace, according to Josephus, he was quickly elevated to emperorship. Claudius was the son of Drusus but had some sort of physical disability that embarrassed the imperial family, so he had been kept out of public affairs. Claudius is most notable for his successful invasion of Britain and his poor judgment in wives. His third wife Messalina was notorious for killing her numerous lovers and rivals. In 48 she actually married one of these lovers (while still married to Claudius), an action that led to her execution. Claudius's luck with wives was just as bad with wife number four, Agrippina, daughter of Caligula. After having

THE EMPERORS OF ROME FROM 31 BCE UNTIL 305 CE

THE JULIO-CLAUDIAN EMPERORS

Name	Regnal Years
Augustus	31 BCE–14 CE
Tiberius	14 CE–37 CE
Caligula	37 CE–41 CE
Claudius	41 CE–54 CE
Nero	54 CE–68 CE

THE FLAVIAN EMPERORS

Name	Regnal Years
Vespasian	69–79
Titus	79–81
Domitian	81–96

"THE FIVE GOOD EMPERORS"

Name	Regnal Years
Nerva	96–98
Trajan	98–117
Hadrian	117–138
Antoninus Pius	138–161
Marcus Aurelius	161–180

THE ANTONINE DYNASTY

Name	Regnal Years
Antoninus Pius	138–161
Marcus Auerilius with Lucius Verus	161–169
Marcus Aurelius	161–180
Commodus	180–193

THE SEVERAN EMPERORS

Name	Regnal Years
Septimius Severus	193–211
Caracalla	211–217
Geta	211
Macrinus	217–218
Elagabalus	218–222
Alexander Severus	222–235

secured position of heir for her son Nero, Agrippina poisoned her husband, Claudius. Nero, who had his mother killed after coming to power, was one of the most notorious emperors. His love of playing the lyre as accompaniment to the singing of songs he had written was also not well received. In 64 when a fire broke out at the *circus maximus* and engulfed Rome, people accused Nero of starting it. This is unlikely, and Nero did substantially deplete the treasury through relief measures, but the story that he sang a song while watching the fire consume Rome has long held great power in historical writings. Nero exacerbated his unpopularity by blaming the fire on Christians and persecuting members of this group. After a number of attempts, Nero was finally overthrown by supporters of a man named Galba who was declared emperor in Spain.

Galba was overthrown shortly thereafter. Two new emperors came in and out of power in quick succession until Vespasian gained control. Vespasian's accession to the throne inaugurated the second great hereditary line of emperors, the Flavians. The Flavians came out of the equestrian class and brought stability back from the chaos that had engulfed Rome after the uprising against Nero. Vespasian's reign was peaceful and stable. From a political perspective the same could be said for his son Titus's reign (79–81). However, breaking the stability was the eruption of the volcano Mount Vesuvius, which destroyed Pompeii and Herculaneum. When Titus died unexpectedly, his brother Domitian took the office of emperor and ruled during 81–96. Domitian was a capable but unpopular ruler. He was very afraid of conspiracies, and from 93 until his death he executed and banished people at will, based on his paranoia. Eventually realizing that they would all be killed, Domitian's wife and numerous high-ranking officials had the emperor killed, ending the Flavian control of Rome.

After the fall of the Flavians, there is a line of five emperors who had orderly successions and generally good relations with the Senate, hence their designation "The Five Good Emperors." Trajan, the second of these emperors, was the first emperor born in the provinces (Spain). Under Trajan, the Roman empire grew to its largest, pushing all the way to the Persian Gulf. Trajan

was also an energetic builder. His most impressive monument, Trajan's Column, still stands in Rome but has been adorned by a statue of St. Peter since 1588. Trajan's successor, Hadrian, gave up Trajan's Eastern conquests and solidified pre-existing borders. (Hadrian's Wall between England and Scotland is a remnant of this policy.) A lover of Greek culture, Hadrian traveled the empire. Before dying, he named Antoninus Pius as his heir, who was followed by his adopted son Marcus Aurelius as emperor. This emperor is most famous for his work *Meditations*, which still survives. Much of Marcus Aurelius's reign was spent in war, first with the Parthians, then with German invaders, then against Cassius the governor of Syria (who probably mistakenly thought that Marcus Aurelius was dead), and again against the Germans. The empire that had been solidified by Trajan and Hadrian had begun to fall apart. Plague hit Rome in 167 and lasted for at least 10 years. Before dying of illness, Marcus Aurelius named his son Commodus as his successor, the first successor linked by heredity in 80 years.

Historians consider the period after the death of Marcus Aurelius to be a time of decline for Rome. Up until this time Rome had been the center of the empire and the center of imperial power. After the death of Marcus Aurelius power shifted to the provinces, where centralized control was minimal. In addition, the Roman borders were almost continually under attack and gradually shrank. After a particularly unpopular reign Commodus died, resulting in a civil war. After a period of conflict the Severan dynasty came to power, the most noteworthy of which was Elagabalus, a 14-year-old Syrian boy who attempted to elevate a Syrian deity over Jupiter, much to the chagrin of the Roman populace. After he was assassinated, his adopted son Alex-
 andrius (Alexander Severus) came to the throne but was executed shortly thereafter.

—Kevin M. McGeough

Bibliography

- Christiansen, Erik. *A History of Rome*. Wavcunda: Bolchazy-Carducci Publishers, 1995.
- Ferril, Arthur. "Historical Summary of Rome." In *Civilization of the Ancient Mediterranean: Greece and Rome*, edited by Michael Grant and Rachel Kitzinger. New York: Scribner, 1988.

Garzetti, A. *From Tiberius to the Antonines*. Translated by J. R. Foster. London: Methuen, 1974.

Goodwin, Martin, and Jane Sherwood. *The Roman World, 44 BC–AD 180*. New York: Routledge University Press, 1997.

Scarre, Chris. *Chronicle of the Roman Emperors*. New York: Thames and Hudson, 1995.

The Decentralization of Rome under the Barracks Emperors and Reunification under Diocletian

For 50 years after the death of Alexander Severus, the Roman empire was beset with problems. At least 27 emperors were selected, most from the ranks of the military (hence the term “barracks emperors”), and most were killed, often by their own troops. Alongside of these 27 emperors were approximately 50 usurpers to the throne. Those emperors raised from within the military ranks were often the biological sons of the previous emperor. The armies frequently supported this kind of transition, as it ensured their continual payment. However, frequently enough the army would turn against its own chosen emperors.

The instability within the military led to a weakening of the empire’s defenses. Rome’s frontiers were besieged from almost every side (the Sahara proved to be an exception). Frontier battles were difficult, since frequently the emperor had to return his army to Rome to quell an internal uprising. The Franks and Alamenni (who would later become the French and Germans) attacked across the Rhine River. The Vandals and Goths attacked across the Danube River. These forces were the first enemy forces to kill a Roman emperor in battle (Decius in 251 BCE). And in the East, the Sassanian’s mighty army brought instability and became the first army to capture a Roman emperor in battle (Valerian in 260 BCE).

When news of Valerian’s capture was made known, two major provinces broke off from Rome and became independent. The Gallic province, supported by British and Spanish legions, declared independence and set up a capital at Trier. Independence was maintained until

THE MAJOR BARRACKS EMPERORS AND THE LEADERS OF THE GALLIC EMPIRE

MAJOR BARRACKS EMPERORS

Name	Regnal Years
Maximinus I	235–238
Gordian I	238
Gordian II	238
Balbinus	238
Pupienus	238
Gordian III	238–244
Philip the Arab	244–249
Decius Trajan	249–251
Trebonianus Gallus	251–253
Aemilian	253
Valerian	253–260
Gallienus	253–268
Macrianus	260–261
Claudius II	268–270
Quintillus	270
Aurelian	270–275
Tacitus	275–276
Florianus	276
Probus	276–282
Carus	282–283
Numerian	283–284
Carausius	286–293
Diocletian	284–305

THE LEADERS OF THE GALLIC EMPIRE

Name	Regnal Years
Postumus	260–269
Laelianus	269
Marius	269
Victorinus	268–271
Tetricus	271–274

274. Similarly, in the East, centered on the city of Palmyra, the Palmyrene province broke away until 274. These provinces were brought back under control by Emperor Aurelian in 274. Aurelian was a general who managed to quell numerous rivals to the throne and reunify Rome. He was dedicated to the worship of the Unconquered Sun, a popular deity within the army. The worship of this deity, in Aurelian's time, became a cultural phenomenon that united the otherwise very separate cultures in the empire. After Aurelius's murder, another six emperors would reign before Diocletian stabilized Rome.

Diocletian is often painted as a dark and evil emperor by Christian historians, in juxtaposition to Constantine who inaugurated Christianity as the official religion of the empire. Indeed, Diocletian did bring a revived intolerance for Christianity through edicts in 297, 298, and 304, which demanded that all soldiers and administrators offer sacrifice on pain of death (an activity prohibited by the Christian religion). Diocletian, who reigned during 284–305, restructured the Roman empire and restructured the nature of leadership. At a fundamental level, the nature of the emperor's mandate changed under Diocletian. The emperor was no longer the chosen of the people but rather the chosen of the gods, in particular Jupi-

ter. The new title that went with this was *dominus* (which means “master”), and an emperor's reign was no longer called a *principate* but rather a *dominate*. The origins of the divine right of European medieval kings to rule can be found in this philosophy of Diocletian's. Determining that the empire was too large to govern single-handedly, Diocletian installed Maximian as caesar of the West. Furthermore, to ensure a smooth succession, Diocletian and Maximian each adopted a caesar to assist in governance and to take over after their own deaths. Diocletian chose Maximianus, and Maximian chose Constantine. These four rulers became known as the Tetrarchy. Each ruler ruled from his own palace (none of which were in Rome). Diocletian engaged in massive building projects and reorganized the Roman governmental system. He retired in 305.

—Kevin M. McGeough

Bibliography

- Brown, Peter. *The World of Late Antiquity, A.D. 150–750*. London: Thames and Hudson, 1971.
- Christiansen, Erik. *A History of Rome*. Wavcunda: Bolchazy-Carducci Publishers, 1995.
- Ferril, Arthur. “Historical Summary of Rome.” In *Civilization of the Ancient Mediterranean: Greece and Rome*, edited by Michael Grant and Rachel Kitzinger. New York: Scribner, 1988.

■ Introduction: Politics in India

The period from 1800 to 600 BCE in India is referred to as the Vedic Age, the period in which the Vedic texts were written and the religious traditions of Hinduism were born. At this time India was not governed by a sole ruler but instead was divided into numerous small city-states. Across India, society was rigidly divided by the strictly hierarchical caste system that would come to dominate Indian social life for centuries.

After the Vedic Age came to a close, India continued to be ruled as a separate series of city-states until the invasion of the Macedonian king, Alexander the Great, in 326 BCE. Alexander did not remain in India long, and after his departure

the region was divided into a series of larger competing kingdoms. The most powerful of these kingdoms was in the south, led by Chandragupta Maurya. By 322 BCE much of the south was unified under Chandragupta, and until its collapse in 185 BCE the Mauryan dynasty controlled much of the Indian subcontinent. It was the Mauryan king Asoka (304–232 BCE) who converted to Buddhism and sent Buddhist missionaries throughout Asia.

In 185 BCE a coup led to the collapse of the Mauryan dynasty, and the subcontinent was fragmented into a number of small kingdoms. By 230 CE an Indo-European group, the Kushan tribe, had conquered much of northern India, where

Buddhism continued to thrive. In the south, Hinduism remained the dominant worldview under the governorship of the Satavahana dynasty.

—Kevin M. McGeough

Mauryan Kings

The Mauryan dynasty was established in north India during the sixth century BCE. The center of action and power, as it has remained to the present day, was the so-called Aryan heartland (Aryavarta), the Gangetic plain. The battle for preeminence was reduced from many small states to four, with Magadha, under Bimbisara (540–493 BCE) and his patricidal son, Ajatashatru (493–461 BCE), becoming dominant. By 321, perhaps in part inspired by the example of Alexander of Macedon, who had arrived in northwestern India, Chandragupta Maurya, the founder of the Mauryan line, made Magadha the first empire in India, with its capital at Pataliputra (modern Patna), east of Banaras on the Ganges.

Chandragupta did not establish his empire from nothing, for he built upon the work of his predecessors. Bimbisara had expanded his rule through marriage and conquest and had established an administrative system and built roads. His successors had continued expansion through military conquest and built a strong army and an efficient land-tax system. Chandragupta took control by skillfully stepping into a power-vacuum left by the decay of the Magadha kingdom and the abrupt departure from northwest India of Alexander. He can certainly be given credit for starting the imperial dream and founding a strong government, albeit somewhat totalitarian and under the firm guidance of his mentor and capable minister, Kautilya (also known as Chanakya), author of a rather Machiavellian treatise on running government (*Arthashastra*). The empire was expanded by Chandragupta's son, Bindusara (297–273 BCE), and consolidated by his grandson, Asoka (273–232 BCE), described by the nineteenth-century British historian and novelist H. G. Wells as the greatest emperor the world has ever seen.

Asoka inherited a system that was essentially a police state. He also extended the empire until it covered a greater area than in any other time



Third-century coin depicting Chandragupta Maurya and Queen Kumaradevi. Chandragupta, founder of the Mauryan dynasty, was the first to unify India and serve as its emperor. (Scala/Art Resource, NY)

in Indian history. But after the last bloody battle, he experienced remorse and, also strongly influenced by Buddhism, renounced force (though not implied force) as an instrument of state policy. Concurrently, he developed the idea that the monarch had an obligation to his subjects. He exercised a policy known as *dhamma* (the vernacular for the Sanskrit term *dharma*, moral duty), described by the eminent historian Romila Thapar as a policy of paternal despotism and social responsibility.

Dhamma was a secular policy, not a religious doctrine, stressing social responsibility on the part of the subjects of the empire. It stressed mutual respect and moral behavior, based on human dignity, as the means for the smooth running of society, the basis for law and order. It was, in turn, the responsibility of the ruler to provide structure and policies geared toward the well-being of the people. The policy was expounded in a series of rock edicts and on pillars, and it espoused dhamma as replacing force for



the means of conquest. Though dhamma was an ethical concept, its purpose was clearly practical: to make a better society, and one easier to govern. Often and somewhat superficially labeled Buddhist, it owed considerably to the Hindu concept of dharma, for the key was not nonviolence so much as it was responsible social behavior. It certainly did not come out of a vacuum but was a culmination of a rising social and intellectual consciousness.

It should be pointed out that the empire had been conquered, so war was really no lon-

ger necessary, though it remained as a potential—but only to be used as a last resort (e.g., against unruly tribes). Aśoka's empire was united administratively and, equally as important, economically. Indeed, the administrative and economic unity was paramount; Aśoka resisted militarily campaigning in the south, allowing the four separate kingdoms there to go their own ways. After all, he had the hegemony on the subcontinent; the added territory would do him no economic good and would just be an administrative burden.

Unfortunately, dhamma disappeared with Aśoka. Indeed, with the death of Aśoka, political and economic decline set in and the structure soon collapsed. Politically, loyalty was geared to the king rather than to the system, which retained much of the inherent tension of a highly centralized administration. Just the logistics of running such a vast extent of territory (said to have been larger than that of Rome at its height) must have been technologically insurmountable. Further, there was no concept of nation or state: primary group identity was focused on village and caste. Without the leadership—in terms of charisma as well as ability—of an Aśoka, the structure may well have collapsed in on itself.

Within a century or so of Aśoka's death, northern India had entered a period of invasion, with the development of peripheral regional kingdoms (e.g., the Indian territory of the Kushans, part of a central Asian empire, first century CE). Nonetheless, considerable cultural development occurred, especially in terms of Buddhist thought and art, both indigenously and from outside influences. The Mauryan capital, Pataliputra, did not arise again as a center of power until 320 CE, although it should be remarked that much of the classical or so-called Golden Age of the Gupta dynasty had antecedents in the Kushan period.

—Fritz Blackwell

Bibliography

- Blackwell, Fritz. *India: A Global Studies Handbook*. Santa Barbara, CA: ABC-CLIO, 2004.
- Thapar, Romila. *Asoka and the Decline of the Mauryas*. 2nd ed. Delhi: Oxford University Press, 1973.
- Thapar, Romila. *Early India: From Origins to A.D. 1300*. Berkeley: University of California Press, 2002.

Kautilya's *Arthashastra* (Manual on Administration and Politics)

The *Arthashastra* is an extraordinary treatise on statecraft, in 15 books and 150 chapters, traditionally written by Kautilya (also known as Chanakya), chief minister of Chandragupta, the

first Mauryan emperor. In it, Kautilya provides practical and imaginative advice on how ideally a king should organize, govern, defend, and expand his realm, being just and benevolent though prescriptive and watchful at home but aggressive and deceitful in his foreign policy.

Book 1 introduces the treatise's contents. Kautilya then argues that Dandaniti (the science of government) is the most important of the social sciences, particularly concerned with the appropriate use of legitimate force: a ruler must achieve a just balance between excessive severity, which excites revolt, and excessive mildness, which encourages contempt for authority. Book 1 continues with the education of a prince, the value of self-control, the importance of wise counselors whose advice the king heeds, and their selection and the use of spies to check their probity. It discusses the administrative work of the king's council; the role of envoys to foreign governments; how the king should ensure his personal safety, including protection against his wives and sons; the duties of a good king; and the organization of the harem.

Book 2, "The Duties of Government Superintendents," first considers the ideal human landscape: the form and distribution of settlements; the foundation of new villages to make unoccupied areas productive through agriculture, mining, and forest management; and the creation and layout of fortified cities. It then focuses on the bureaucracy: the duties of senior officials, such as collecting taxes, monitoring work, debriefing spies, and keeping accounts; detecting and punishing fraudulent or neglectful officials; and assessing the quality of goods for the royal treasury. It discusses how officials should monitor and manage industry; the mint; tax revenues; trade and forest production; the armory; weights and measures; toll collection; the agricultural productivity of Crown lands; game and butchery; taxing and protecting prostitutes and educating their children; shipping; the welfare of state-owned cattle, horses, and elephants; military matters, including chariot construction, training, equipment, and regimental organization; and passports and road security. It ends with recommendations on tax assessment, recruiting spies to observe people throughout society, and a city superintendent's various duties.

➤ WHO WROTE THE *ARTHASHASTRA*?

Did Kautilya really write the *Arthashastra*, as he claims in Book 1? Opinions among scholars are divided.

The political landscape and many things mentioned in the treatise closely match what is known of the Nanda-Mauryan period from other literature, Asokan inscriptions, and archaeology. In discussion of various viewpoints, Kautilya's is always last and decisive. Many scholars therefore support the attribution to Kautilya, arguing that some apparent anachronisms and alterations in viewpoint can be explained as interpolations and alterations by later commentators.

Others, however, find these discrepancies more significant and argue that the text was compiled later, perhaps by Vishnugupta, named at the end (alternatively, this is another name for Kautilya). Thomas Trautman undertook a detailed computer-based statistical analysis of the text, revealing stylistic inconsistencies that imply multiple authorship. He considers that the author was a later scholar, working perhaps around 250 CE, who brought together a number of earlier treatises, abridging but not otherwise altering them.

It seems probable that the core of the work derives from Kautilya. The main question is the degree to which it has been reshaped by later scholars.

—Jane R. McIntosh

In Book 3 Kautilya discusses all aspects of the law: legal agreements and the settlement of disputes; marriage and inheritance; property, land disputes, and agriculture; debt and financial affairs; slavery and employment relations; theft; defamation; assault; state regulation of gambling; and a range of offenses. He offers guidance on proper legal procedures; individuals' legal rights and duties, including provisions to protect slaves from ill-treatment; and appropriate punishments, generally fines but also public humiliation, banishment, mutilation, or death.

Book 4, titled "Removal of Thorns," is concerned with ensuring public order and welfare. It discusses the regulation of work and employment; commerce and protection against commercial deception; provisions for averting natural hazards, including preventing famines by "thinning the

rich" (taxing them heavily); crime prevention, including using spies as *agents provocateurs* to entrap would-be criminals; methods to identify the cause of suspicious deaths; the legal use of torture and when it is not permitted; the indispensability of reliable evidence; and the punishments for many crimes.

Book 5 discusses ways of preventing treason, including underhanded secret measures to get rid of untrustworthy ministers. Kautilya recommends salaries for state posts and considers how to raise emergency revenue, such as through public donations, using spy donors to inspire generosity and shame those backward in giving. He then discusses what makes a good courtier, including advising the king well; counselors should also conceal a king's terminal illness or sudden death until the heir-apparent is fit to take over.

Book 6 takes a closer look at the virtues required of the king. It then discusses foreign policy: in principle, all neighboring states are natural enemies, against whom more distant states are potential allies. Book 7 develops this theme, discussing situations favoring policies of peace, alliances, neutrality, deterrent war preparations, and war itself, aiming always to benefit the king's own state. For example, weaker states should be attacked; alliances should be made with stronger kings and broken when circumstances change. Kautilya discusses how a king may break up alliances against him; discusses how to defeat a powerful enemy by creating alliances, encouraging tribal raids or other stratagems; and in the last resort advises flight or negotiation rather than a heroic death. Finally Kautilya discusses making and breaking peace: the security of oaths, the selection of expendable hostages, and ways to engineer one's hostage's escape.

Book 8 considers how to deal with disasters. Kautilya shows the interdependence of the king, his ministers, and his people. The king is responsible for appointing suitable ministers, ministers for ensuring that everything is properly run, and the people for working to create wealth and maintain defenses; thus, disasters in one sphere will have repercussions in others. Kautilya examines potential sources of problems, such as defects in the king's character, natural

disasters, inappropriate behavior by officials, robbers and wild tribes, and mismanagement.

Book 9 returns to international relations, arguing that in achieving conquests, skill in intrigue is more effective than power or enthusiasm. Kautilya considers the factors involved in planning and executing a campaign, including terrain, timing, and military strength. He discusses the desirable size and composition of the army, its equipment and training, how to avert treachery at home or external threats while in the field, and how to assess the advantages and disadvantages of military action. Book 10 concerns the practicalities of warfare, such as routes, encampments, and provisioning; when, where, and how to attack; the disposition of infantry, cavalry, chariotry, and war elephants; various strategic formations; and the army's command structure. The single chapter of Book 11 returns to the subject of intrigue, describing ways to suborn or destroy the corporations of enemy states.

Book 12 considers how a king may make the best of submission to a more powerful enemy: on the one hand, by placating him with gifts of men, wealth, or lands, using the opportunity to off-load unreliable troops, uncontrollable horses or elephants, unsaleable goods, or land threatened by other enemies; on the other, by undermining the enemy's power by intrigue, such as using spies to create dissension, encouraging guerrilla warfare, and provoking attacks on the enemy by other states. Kautilya also describes ways to murder or capture the enemy ruler, and if all else fails, how the king may make his own escape.

Book 13 is titled "Strategic Means to Capture a Fortress." Initially the king should foster belief in his own powers and the gods' favor toward him, heartening his followers and discouraging the enemy, undermining the standing of the enemy king, and planting spies to create dissension in the enemy's court. When an enemy is safe in his fortress, other states should be encouraged to lay waste to his lands while the king destroys the enemy's trade, industry, and agriculture. Only when the enemy's resources are thus reduced should the king attack the fortress, using siege engines, men, and fire; tempt the enemy out by pretending to lift the siege; and send spies to infiltrate the fortress. Once the king

has conquered the enemy lands, he must win over its population by his generosity and good governance.

Book 14 considers secret means to rid the kingdom of wicked individuals: for example, using spies to poison them or set their houses on fire. Kautilya discusses various concoctions and their uses, including medicines, coloring agents, and potions to protect the army or cause harm to the enemy; some are accompanied by rituals.

Book 15 rounds off the work with a description of its form and the various ways its contents are presented, ending with justifications for its compilation: rescuing political science after Nanda misrule and the inadequacies of other scholars' commentaries.

—Jane R. McIntosh

Bibliography

- Boesche, Roger. *The First Great Political Realist: Kautilya and His Arthashastra*. Lanham, MD: Lexington Books, 2003.
- Thapar, Romila. *Asoka and the Decline of the Mauryas*. 2nd ed. New Delhi: Oxford University Press, 1997.
- Trautmann, Thomas R. *Kautilya and the Arthashastra*. Leiden: Brill, 1971.

Governance after the Collapse of the Mauryan Empire

The Mauryan empire reached the height of its power and grandeur under Emperor Aśoka. Aśoka's successors, however, were not as adept as he at holding together such a vast and internally diverse empire. The Mauryan empire weakened and fragmented relatively quickly and collapsed completely within 50 years of Aśoka's death. In 185 BCE the last of the Mauryan emperors, Brihadratha, was assassinated by his general, Pushyamitra Shunga.

The Shunga dynasty, which succeeded the Mauryas, never reached the extent of the Mauryan empire at its height. The Shungas were dominant mainly in the central part of the Ganges River valley.

The Shungas were Brahmins and seem to have had a negative view of Buddhism. Buddhist chronicles claim that the Shungas persecuted

the Buddhists, destroying temples and monasteries. Some scholars suspect that these accounts are exaggerations, reflecting not so much an active persecution as the fact that Buddhists no longer held the position of favor that they had under the Mauryas, especially Aśoka. On the other hand, there is archaeological evidence that some Buddhist monuments and monasteries fell into a state of disrepair during this period, and later renovations carried out upon them may have been to repair damage inflicted by the Shungas.

One reason the kingdom of the Shungas never rose to the level of prominence held by the Mauryan empire is that Pushyamitra Shunga's successors, like Aśoka's, did not have their forefather's ability to hold together and administer a large and internally diverse realm. The Shunga kingdom was eventually divided into feudatory states, which held nominal allegiance to the Shunga monarch but were largely autonomous in their day-to-day administration.

Another reason the Shunga kingdom did not rise to the level that the Mauryas did was a series of invasions from the northwest. The first group to seek to take advantage of the power vacuum left by the fall of the Mauryan empire was the Indo-Greeks. These were the descendants of Alexander's armies that had invaded northwestern India prior to the rise of the Mauryas. The Indo-Greek kingdom of Bactria, located in what is now northeastern Iran and Afghanistan, sought to expand farther into Indian territory. As the name "Indo-Greek" suggests, the cultural practices of these people were drawn from both Greek and Indian sources. At least one Bactrian king, Menandros (known from Indian sources as Milinda), practiced Buddhism. The famous Gandhara style of Buddhist art is drawn from this culture, an art style that in content is Indian, depicting the Buddha and various events from the Buddha's life, but in its mode of presentation is Greek, with the same realism in the depiction of the human form that one finds in statues of Greek gods in the eastern Mediterranean region.

The Bactrians were overthrown by the Parthians who, in turn, were overthrown by the Shakas, or Scythians. All of these groups managed to make major inroads into Indian territory, sometimes as far south as the Deccan plateau.

Subsequently, a central Asian tribe known as the Kushanas managed to conquer much of Central Asia and a substantial portion of northern India. However, their realm would also eventually disintegrate, being broken up into smaller political units until the rise of the Gupta dynasty around 320 CE.

—Jeffery D. Long

Bibliography

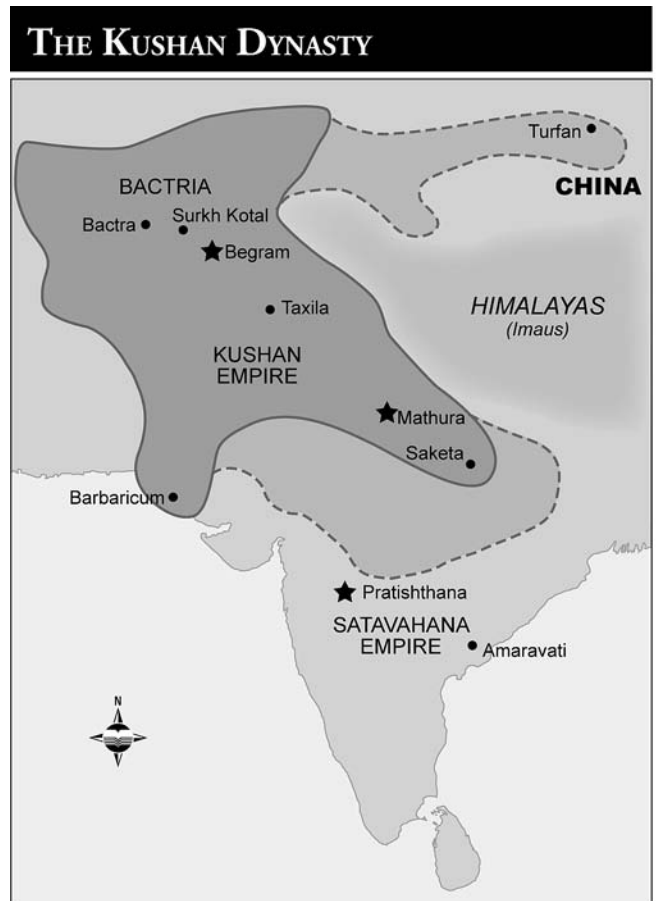
- Keay, John. *India: A History*. New York: Grove, 2000.
- SarDesai, D. R. *India: The Definitive History*. Boulder, CO: Westview, 2008.
- Schwartzberg, Joseph E. *A Historical Atlas of South Asia*. New York: Oxford University Press, 1992.
- Thapar, Romila. *The Penguin History of Early India: From the Origins to AD 1300*. New Delhi: Penguin Books India, 2002.

The Kushan Dynasty

A number of dynasties rose and fell in northwestern India between the fall of the Mauryan empire (185 BCE) and the rise of the Gupta empire (320 CE). One such dynasty was that of the Kushans, who were a power to be reckoned with during the first two centuries CE. They were one of the five branches of a nomadic central Asian people, the Yueh-Chi, who lived on the western frontiers of China with another large group called the Hiung-nu. Periodic battles over lands and scarce resources in the harsh environment of the steppe characterized the relationship between the Yueh-Chi and the Hiung-nu. By the first century BCE the Yueh-Chi ceded their lands to the Hiung-nu and were forced to move farther west and southwest toward Bactria, a part of Afghanistan that lies between the Oxus River and the Hindu Kush Mountains. After defeating another group from central Asia, the Shakas or the Scythians, they established their roots in Bactria-Afghanistan and gradually transformed themselves from a nomadic into a settled and sedentary people. Sometime in the second quarter of the first century CE the Kushan chief Kajula Kadphises not only united the five branches of the group but further established a powerful kingdom centered in Bactria and extending to parts of Afghanistan. Under his successors Wima and Kanishka, the dynasty prospered, and from its capital at Purushapura

(modern Peshawar), it ruled over a great empire stretching from the Aral Sea, covering a large area of central Asia, Afghanistan, Kashmir, Punjab, and down into central India, reaching up to the gates of the old Mauryan capital of Pataliputra.

Initially foreign to India, the Kushans gradually learned to adapt to and absorb Indic cultural and religious values. The personality of their most remarkable ruler, Kanishka, symbolizes this transformation. Historians are not entirely sure about the exact dates during which he ruled; it could be any time between circa 78 and 147 CE. But leaving aside arguments of chronology, there is enough historical testimony from archaeology, numismatics, and Chinese documents to establish his lasting fame. His gold coins give us an idea of both the territorial expanse of his empire and the multifaith world of India and central Asia. Under his well-organized administration there lived people who followed a variety of beliefs: Persian Zoroastrianism, Greek and Roman paganism, Buddhism, Chinese Confucianism, Jainism, and numerous Hindu Vedic traditions. Appreciating the broad Indian tradition of social and religious tolerance, Kanishka gave space to differing cultural values and ideas. For Buddhists, however, Kanishka remains a figure as important for the development of their faith as King Aśoka (ca. 269–232 BCE) of the Mauryas. This was because Kanishka was an active patron of Buddhism. He called a great Buddhist Council to resolve differences among their



scholars, built many *stupas*, and supported Buddhist monasteries. Both under him and the Kushan dynasty generally, two great schools of art—Gandhara and Mathura—produced some of the finest sculptures of the Buddha, using both

➤ MERCHANTS AND MISSIONARIES OF THE KUSHAN ERA

The strategic location of the Kushan state between India and China provided Indian merchants with greater opportunities as middlemen in the Silk Roads trade between China and the West. The Chinese emperors, concerned by the tension between Rome and Parthia (Iran) resulting in Parthian impediments to the free flow of goods through their territory, permitted Indian merchants to transport the silk destined for the Roman market to the port of Barbaricum on the Sind coast. From there the Roman ships carried away the silk and left behind goods such as silver, topaz, coral, or glass, which too were handled by the Indian merchants on their overland route to China.

These merchants, individually or in guilds, established themselves in such places on the Silk Roads as Kashgar, Yarkand, Khotan, Turfan, and Miran. To these outposts of Indian commerce also came Buddhist missionaries from India to establish monasteries and teach Buddhism to the central Asians and the Chinese. As Buddhism spread in these lands, the demand for Buddhist artifacts from India greatly increased. Both China and the Kushan state earned revenues from levies charged on goods moving through their territories.

—Burjor Avari

the Greco-Roman and Indic styles. A headless statue from Mathura, possibly of Kanishka, demonstrates the vitality of Kushan art.

The atmosphere of calm and tolerance that prevailed under the Kushans was also greatly enhanced by the general material prosperity that came about through India becoming the hub of international trade by land and sea. This trade continued for a few more centuries, even after the Kushan dynasty had disappeared owing to pressures from both the new Persian Sassanian dynasty and minor Indian principalities. By 226 CE, the Kushans became minor vassals of King Ardashir of Persia.

—*Burjor Avari*

Bibliography

- Benjamin, C. "The Kushans in World History." *World History Bulletin* Volume 25(1) (Spring 2009): 30–32.
- Frye, R. N. *The Heritage of Central Asia: From Antiquity to the Turkish Expansion*. Princeton, NJ: Princeton University Press, 1996.
- Khazanov, A. M. *Nomads and the Outside World*. Cambridge: Cambridge University Press, 1984.
- Kumar, B. *The Early Kusanas*. New Delhi: Sterling, 1973.
- Liu, X. *Ancient India and Ancient China: Trade and Religious Exchanges, AD 1–600*. Oxford: Oxford University Press, 1994.
- Saletore, R. N. *Early Indian Economic History*. London: Curzon, 1973.

The Satavahana Dynasty

During the first century BCE two particular regions of the Deccan plateau of India that had once formed part of the Mauryan empire—northwestern Maharashtra and the lands of Andhra between the rivers Godavari and Krishna—came to be controlled by a regional family known as Satavahanas, sometimes also called the Andhra dynasty. The power of the dynasty was consolidated by one of its early kings, Satakarni; for nearly a century after him, however, his successors had to concentrate only on Andhra and the eastern Deccan, having lost Maharashtra and the western Deccan to the Shakas who originally came from central Asia. Evidence that the Shakas were ultimately defeated comes in the form of remnant coins from the Nasik dis-

trict of Maharashtra that have their original Shaka images overstruck with the Satavahana images. The dynasty lasted until 236 CE, reaching its heyday during the reigns of Gautamiputra Satakarni and Vasisthiputra Sri Pulumayi during the second century CE.

The Satavahana kingdom was highly prosperous due to a decentralized administration and diligent investment in agriculture and commerce. Grand-sounding imperial titles were eschewed by the monarchs who divided their kingdom into small provinces, devolving power onto a variety of civil and military officers with the necessary initiative and responsibility in the governance of their territories. Farming was strongly encouraged through land grants issued by the monarchs. Those with knowledge and skills, such as the Buddhist monks and the higher-caste Hindu Brahmans, were provided with special incentives such as the retention of land revenues, as many contemporary epigraphic inscriptions would testify. The export of agricultural goods was much promoted, and for this reason, merchants and traders were supported by the state to develop trade routes from the hinterlands to the ports. Inland trade was given a considerable boost as a result of this; commercial links were made with the Kushans, who controlled most of north India. Large and small urban centers developed and flourished throughout the Deccan; their function as markets was facilitated by networking with rural people in their neighborhoods. Skilled craftsmen were organized in guilds (*srenis*) that monitored the quality of products and provided loans at varying rates between 2 percent and 5 percent, depending on the credit rating of borrowers. Individual merchants and guilds were engaged in long-distance international trade with Greece and Rome, the countries of the Persian Gulf, Southeast Asia, and China. Along both the east and west coasts of India the Satavahanas controlled a number of ports, with the great entrepôt of Dharanikota on the river Krishna being the most important. Roman, Greek, Egyptian, and Persian ships were the carriers of long-distance trade in which the Satavahana merchants had a considerable stake.

Another contributing factor to the prosperity of the Satavahana kingdom was their monarchs' pragmatic decision to respect the rights of all

people, irrespective of their religious beliefs. As Hindus they followed the Brahmanic faith but showed no hesitation in exalting Buddhism. They supported the building of Buddhist cave monasteries across the Deccan. These sites, also serving as semicommercial outposts, attracted a huge number of pilgrims and travelers, among whom the richer ones bequeathed some of their wealth for the upkeep of the monastic institutions. The epigraphic inscriptions give scholars various details of the religious philanthropy of Andhra merchants. Philanthropy also sustained artistic creativity. There was a profusion of Buddhist and Hindu sculpture, and some of the best examples of this art have been recovered from the great stupa of Amaravati, near Dharanikota.

—*Burjor Avari*

Bibliography

- Dhavalikar, M. K. *Satavahana Art*. Delhi: Sharada Publishing House, 2004.
- Knox, R. *Amaravati: Buddhist Sculptures from the Great Stupa*. London: British Museum Press, 1992.
- Ray, H. *Monastery and Guild: Commerce under the Satavahanas*. Oxford: Oxford University Press, 1986.
- Raychaudhuri, H. *Political History of Ancient India*. Delhi: Oxford University Press, 1996.
- Yazdani, G. *The Early History of the Deccan*, Vol. 1. Hyderabad: Oxford University Press and Government of Andhra Pradesh, 1960.

AMARAVATI SCULPTURES

Amaravati, situated in the valley of the River Krishna, had attracted Buddhist settlements from as early as the time of the Mauryan emperor Aśoka, and under the later Satavahanas and their successors, the Ikshvakus, a great stupa (Buddhist mound structure) was built. A marble railing surrounded it, and marble slabs covered the dome. The stupa has been destroyed, but the extraordinary pieces of sculpture, recovered from its ruins, were listed and recorded in 1816 by Colonel Colin Mackenzie, later surveyor general of India. He also made numerous drawings that are preserved at the India Office of the British Library. It was in 1880 that a total of 133 exhibits were permanently deposited at the British Museum. These exhibits visually educate us into the life of the Buddha and the Buddhist social order in India. Some exhibits are also to be found in the Madras (now Chennai) Museum, where sculptured panels depict scenes such as the disposal of Buddha's relics, the subduing of a mad elephant, or the veneration of the Buddha's begging bowl. The Musée Guimet in Paris possesses a beautiful head of the Buddha in the style reminiscent of the Kushan Mathura Art School style. Altogether, the Amaravati sculptures had a great influence on later Indian art, particularly on the carvings of the southern dynasties.

—*Burjor Avari*

■ Introduction: The Rise and Fall of Chinese Dynasties

Traditional Chinese historical accounts describe Chinese political history as a sequence of rises and falls of various dynasties, and with these rises and falls China alternates between being very centralized and being very decentralized. This traditional conception well matches the political reality of China from 1000 BCE to 300 CE, a period in which China saw some of its greatest philosophical achievements and some of its most brutal warfare.

In 1027 BCE the Shang dynasty of China was conquered, and the Western Zhou dynasty came to power. Conquering much of China, the Zhou

did not directly rule the country but instead instituted a series of territorial leaders who were allowed to govern as they saw fit. In 771 BCE the Zhou moved their capital to the east (beginning the Eastern Zhou dynasty) in the wake of military threats from the west and an erosion of power caused by their hands-off approach to governance.

Although the Eastern Zhou dynasty survived until 256 BCE, China under the Eastern Zhou was not a unified country but in practical terms had become vastly decentralized. The first half of this period is also called the Spring and

Autumn period (722–481 BCE), the time when Confucius taught. The second half of the Eastern Zhou is also known as the Warring States period (403–221 BCE), a period in which the decentralized polities of China were in open warfare with one another and the Zhou dynasty collapsed.

The Warring States period extends past the end of the Eastern Zhou period, as various polities battled for authority. In 221 BCE the conflicts came to an end when the Qin dynasty gained control. The Qin did not last long. By 206 BCE the authority of the Qin had waned, and Chinese politics had devolved into warfare again. In 154 BCE the Han dynasty had conquered most of China, which other than a brief loss of control to the Wang family (from 9 CE to 23 CE) led China until 220 CE. From 220 CE until 280 CE, three independent kingdoms that warred with one another ruled China. In 280 CE China was unified once again under Jin, a unification that lasted until 316.

—Kevin M. McGeough

Western Zhou and Spring and Autumn Government

The Western Zhou and Spring and Autumn periods began as a time of stability, but the power of the Zhou kings declined, and vassal states struggled for power. Government structures became more complex to better mobilize resources for the state. By the end of the Spring and Autumn

period, the Zhou king was a figurehead with no power. The former vassals continued fighting among each other in the Warring States period.

The Western Zhou period (1045–771 BCE) was considered the standard of perfect government for much of Chinese history. The Zhou dynasty began when King Wu led the conquest of the Shang dynasty. The Zhou managed their new territory by parceling it out to the king's relatives. They established essentially independent states. They ruled under the authority of the Zhou king, shown by their lower titles such as duke or marquis. The king could make some appointments and command them to go on military expeditions, but outside of that each noble ruled his own state with little interference in daily administration.

Traditional histories and inscriptions on bronze vessels suggest that this system worked well initially. However, as time went on family ties between the ruling families broke down and were no longer sufficient to hold the states together under the king's rule. Struggles between the states for power became more frequent, as did rebellion against the Zhou king's authority. Royal power further declined in 771 when the capital was sacked and the king was killed. His successor established a new capital to the east, inaugurating the Eastern Zhou.

The first part of the Eastern Zhou, the Spring and Autumn period (770–481 BCE), takes its name from the *Spring and Autumn Annals*, the court chronicle of the state of Lu. This chronicle is very terse, and the best source for information is the *Zuo zhuan*, a narrative history of the time. The period was marked by increased competition among the many states for supremacy. There were about 150 states at the beginning of the Spring and Autumn period. This number shrank as smaller states were swallowed by more powerful neighbors. Most states consisted of a fortified capital city surrounded by countryside where the government had little authority. The challenge for governments was to mobilize the resources in the countryside to strengthen the state.

One way they did this was through the county system. States divided outlying areas into counties headed by a governor, who collected taxes on behalf of the ruler. Another practice was establishing smaller fiefs within the state. A

THE PROTECTOR SYSTEM

As the power of the Zhou king declined in the Spring and Autumn period, the protector institution arose. The protector (*ba*) was the ruler of one of the more powerful states. He had the authority to summon the rulers of other states for conferences and could carry out military campaigns on behalf of the king. The protector was supposed to enforce the king's authority and maintain political stability. Duke Huan of Qi was the first protector, appointed by the king in 671 BCE. The system died out later, as no ruler was strong enough to take the title.

—David Elstein

worthy minister might be granted a certain area within the state. The government could thus indirectly administer areas that it could not control directly. The problem was that this gave potential rivals a way to increase their own power and challenge the ruler. This in fact happened. Toward the end of the Spring and Autumn period, several families of ministers usurped power and took over the state.

—David Elstein

Bibliography

- Creel, Herrlee G. *The Origins of Statecraft in China: The Western Chou Empire*. Chicago: University of Chicago Press, 1970.
- Watson, Burton, trans. *The Tso Chuan: Selections from China's Oldest Narrative History*. New York: Columbia University Press, 1989.

Empire and Elites in Zhou and Spring and Autumn China

The Zhou royal family completed their conquest of the Shang at an uncertain date, sometime around 1050 BCE. The Zhou royal family encouraged its members to expand the Zhou influence to other areas as widely as they could. It not only enfeoffed (meaning incorporated into a vassal relationship) important members of the Ji and Ji-ang families as vassal states in strategic locations, such as the states of Lu, Qi, Wei, Jin, and Yan, but also led the joint army, made up of troops from different vassals, to put down the invasion of nomadic nations and any insurgencies that might arise.

At the beginning of the dynasty, the Zhou kings mainly concentrated on conquering the eastern nations. Afterward, the Zhou kings launched wars against the northern, western, and southern nations. These wars expanded the Zhou influence throughout the areas they reached; however, they nevertheless impaired the Zhou royal power, especially when the kings' armies were defeated by rebellious vassals or nomadic nations. For example, King Zhao was killed during the campaign against the Chu state in the south. When King Xuan, the penultimate Western Zhou king, lost the armies in battles against the Chu state, the dynasty became

extremely vulnerable and was finally deposed by the combined force of the states Shen, Zeng, and a nomadic state, Quanrong. During the Spring and Autumn period, the situation of the Zhou royal power grew more tenuous, while some of the local vassals became increasingly powerful and independent. They began to ignore the authority of the Zhou royal family and became involved in a competition for dominance. The first vassal who achieved the position of hegemon was Duke Huan of the Qi who, assisted by the famous reformist Guan Zhong, subdued those who did not accept the Zhou authority with the slogan "respect the Zhou king and fight against the nomadic nations." Qi lost its hegemony after the Duke Huan died and the State of Jin came to the stage. The turning point for Jin to achieve its hegemony was its defeat of the Chu in the time of Duke Wen of the Jin. His successor was able to continue Jin's hegemony. The State of Chu became strong during the time of Duke Mu of the Chu, while from then on the Jin began to go downhill. Finally, in the time of Duke Zhuang of the Chu, the Chu took revenge by winning a battle against the Jin at a place named Bi and began to take the position of hegemony. However, the Jin returned to its hegemony during the time of Duke Jing of the Jin. From then on, there was a seesaw between the Jin and Chu, and a number of smaller polities were also involved in this seesaw.

When Jin and Chu became exhausted in their competition for hegemony in the central Plain area, two other strong states, Wu and Yue, began to play their roles in the southeast. Both of them were able to achieve hegemony by defeating their northern adversaries. The division of the Jin into Han, Zhao, and Wei states in 453 BCE marked the end of the Spring and Autumn period and the beginning of the Warring States period.

—Hanmo Zhang

Bibliography

- Adshead, Samuel Adrian Miles. *China in World History*. 3rd ed. New York: Palgrave Macmillan, 2000.
- Cho-yun, Hsu, and Katheryn M. Linduff. *Western Chou Civilization*. New Haven, CT: Yale University Press, 1988.
- Wright, David Curtis. *The History of China*. Westport, CT: Greenwood, 2001.

Warring States Administration

Administration in the Warring States period (481–221 BCE) established the model for government in imperial China. Power was concentrated in the hands of the ruler. Government offices became more bureaucratic, filled by appointment rather than inheritance. The ruler could hire and dismiss at will, and institutions evolved to establish government control over larger populations. This increased the military and economic power of the states.

States in the Early Spring and Autumn period were city-states. Many offices were inherited, and a powerful aristocracy limited the ruler's authority. By the middle of the Warring States period, there were just seven important states, each with multiple cities and controlled by strong rulers. These leaders took the right to appoint their own officials, often from outside the state. Many of these were educated commoners rather than aristocrats. They were paid a salary in grain instead of being given land of their own. Fiefs in this time provided income from an area without the power of administration and were usually not hereditary. These changes concentrated power in the hands of the ruler.

The Grand Scribe's Records is a major source for the history of this time. This work describes the decline of the Zhou king and the struggle to unify the warring states. All of the rulers of the seven states took the title of king. This had previously been reserved for the Zhou ruler. In this way, they signaled that they no longer

recognized the authority of the Zhou. The states were now independent in name as well as in reality.

The county system of the Spring and Autumn period was expanded. Many of the states at this time divided their entire territory into counties. Another innovation was requiring all adult males to register with local officials. Officials used these registers for tax collection and military recruitment. The kings could collect more taxes and raise larger armies than before, making the state stronger. Sometimes several counties were grouped into a larger administrative unit called a commandery. Rulers appointed governors for the counties and commanderies. The governors could be reassigned or dismissed by the ruler, so it was more difficult for them to build a power base. The state of Qin was most effective in administrative reform and eventually conquered the other states to form a unified empire.

—David Elstein

Bibliography

Lewis, Mark Edward. *Sanctioned Violence in Early China*. Albany, NY: SUNY Press, 1990.

Sima Qian. *The Grand Scribe's Records*, Vol. 7, *The Memoirs of Pre-Han China*, edited by William H. Nienhauser. Bloomington: Indiana University Press, 1995.

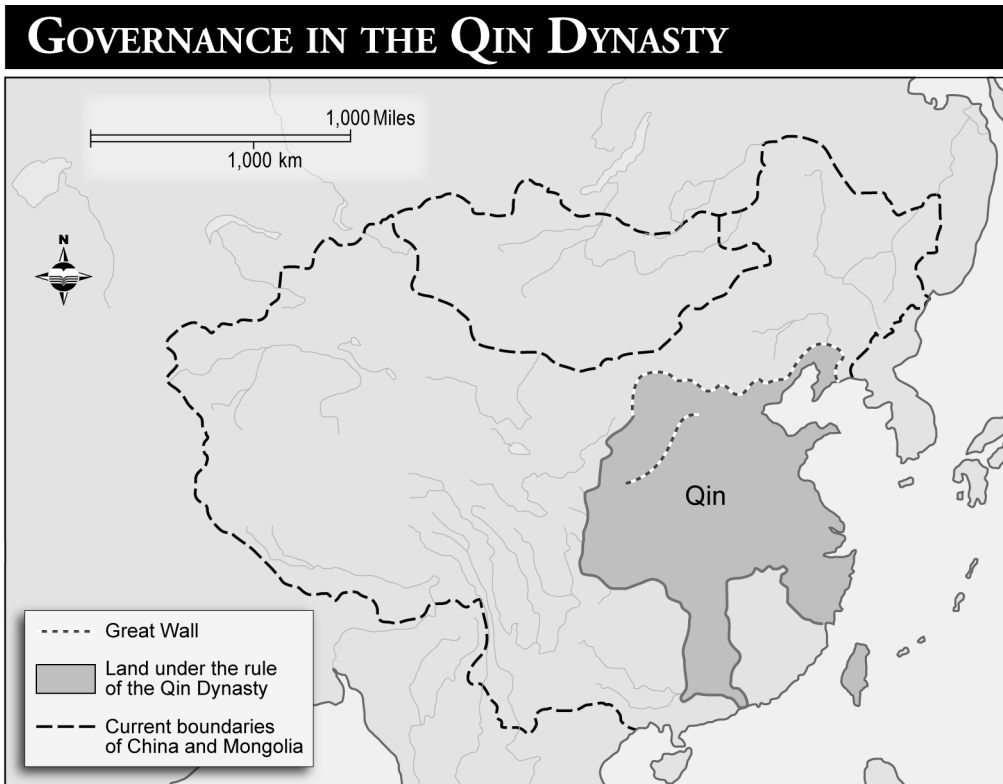
Governance in the Qin Dynasty

In 221 BCE, King Ying Zheng of Qin unified the seven major kingdoms in China. Ying Zheng replaced the title “king” (*wang*) with a new term, “emperor” (*huangdi*). This change had a symbolic importance, because Ying Zheng wanted to emphasize the superiority of the Qin dynasty. The capital city of the Qin dynasty was Xianyang, near modern Xi'an. The new Qin governing system had a centralized administration. This administration had a tripartite structure that consisted of the *sangong* (“three excellencies”), the three officials who stood at the highest level of the civil service and imperial administration. Sometimes the excellencies were two officials rather than three. The *sangong* were the chancellor (*chengxiang*), the great military commander

➤ LORD SHANG

Shang Yang is credited with most of the reforms that made the state of Qin a major Warring States power. He was a native of Wei who traveled to Qin looking for advancement. He became a minister of Qin in the mid-fourth century BCE. The *Book of Lord Shang* attributes several policies to him, but much of it was probably written after he died. Shang Yang developed a strict penal code, expanded military service, and instituted a system of ranks to reward service to the state.

—David Elstein



(*taiwei*), and the great inspector (*yushi dafu*). The chancellors, who were second only to the emperor and were responsible for assisting him, were two officials at times: the “right” and the “left” chancellor.

Under the Qin dynasty, the empire was divided into 36 commanderies, each of them subdivided into counties. Like the central government, each commandery had an administrative triumvirate: a governor, a commander, and an imperial inspector. Magistrates administered the counties. These posts were not hereditary and had fixed salaries. This system of centralized jurisdiction became the norm for later dynasties.

In addition to changes in political structures, other important institutions were standardized: the law code, written characters, weights and measures, metal currency, and the gauge (wheel spacing) of chariot wheels. All of these reforms helped unify China in different ways. The standardization of written characters was pivotal to the cultural unification of the empire. Before the Qin empire, characters varied across regions. The orthographic simplification was fundamental for political unity, and further

reforms were carried out by the subsequent Han dynasty. Weights, measures, and metal currency were standardized to encourage economic development and simplify transactions. The gauge of chariot wheels was standardized to allow easy transportation within the empire’s territories.

The Qin also sponsored infrastructural improvements in an effort to expand their influence. In 220 BCE a series of imperial roads was constructed, originating from the capital city, Xianyang, and proceeding north, northeast, east, and southeast. By 212 BCE a major north-south highway was built, known as the “straight road,” starting from north of Xianyang and proceeding northward for a distance of around 497 miles (800 kilometers). By 221 BCE construction on the Great Wall had begun.

During the Qin dynasty, the ideas of Shang Yang (ca. 385–338 BCE), together with those of Shen Buhai (d. 337 BCE), shaped the framework for guiding political decisions. Li Si (d. 208 BCE), an early chancellor under the Qin, brought a strong legalist policy to Qin government policies.

In 210 BCE the first emperor suddenly died from unknown causes. His heir was supposed to

ANCIENT ACCOUNTS OF THE COLLAPSE OF THE QIN DYNASTY

According to Han dynasty (206 BCE–220 CE) sources, the reasons for the downfall of the Qin dynasty were mainly moral ones. The first emperor was self-satisfied and did not seek advice. The second emperor did not correct this fallacious behavior but instead followed it. When Zi Ying became king, he stood alone and had no good assistants with him. Other ancient stories explain the collapse as the result of a misunderstanding. In 215 BCE Emperor Qin Shi Huangdi returned from a fruitless voyage in search of an elixir of immortality, a quest that the first emperor of Qin was said to have become obsessed with. Back at the capital, Master Lu presented an oracular text that stated: “That which will destroy Qin is Hu.” The emperor thought that “Hu” referred to the Inner Asian barbarians and sent his general, Meng Tian, to attack these barbarians. However, “Hu” was also the first word of the personal name of Hu Hai, the emperor’s younger son, who eventually took over the throne.

—Elisa Sabattini

be the emperor’s eldest son, Fu Su, who at the time was in the northern frontier along with the general Meng Tian. Zhao Gao, who had been a tutor of another of the emperor’s sons, Hu Hai, in legal matters persuaded Li Si to place Hu Hai on the throne instead of Fu Su. Subsequently, Fu Su and Meng Tian were forced to commit suicide as Hu Hai mounted the throne as the second emperor, Er Shi Huangdi.

By 208 BCE, all power was in the hands of the advisor Zhao Gao, who convinced the second emperor to arrest, mutilate, and finally kill the chancellor, Li Si. After this, Zhao Gao took the role of chancellor. The second emperor reigned for three years, until 207 BCE. By then the authority of the Qin dynasty was already very weak, and a few years later the second emperor was also killed. Zi Ying, a grandson of Shi Huangdi, took the throne and assumed the title of “king” instead of “emperor.” Zi Ying killed Zhao Gao, but the country was already in a state of disorder due to rebellions. A few days after Zi Ying’s accession,

the Han leader Liu Bang occupied the capital city, and the state of Qin came to an end.

—Elisa Sabattini

Bibliography

- Loewe, Michael. *The Government of the Qin and Han Empires, 221 BCE–220 CE*. Indianapolis and Cambridge, UK: Hackett, 2006.
- Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch’in and Han Empires, 221 B.C.–A.D. 220*. Cambridge: Cambridge University Press, 1986.

Bureaucracy in the Qin and Han Dynasties

Qin (221–206 BCE) bureaucratic rule is known as the *junxian* system. In brief, junxian was a system of rule whereby the dynastic court dispatched a limited number of provincial administrators to administer the realm on their behalf. Its name derives from the basic organization of territory along the lines of 36 commandaries (*jun*) and counties (*xian*), counties being subunits within commandaries. Qin officials (*li*) were appointed for a number of reasons. Some of the reasons include former military achievement, success at passing an exam, and demonstrated knowledge of legal or administrative procedures. Offices in the Qin dynasty were also sometimes passed down from father to son. Qin officials were ranked, and their salaries, given in bushels of grain, were commensurate with the scope of their responsibilities as well as their experience. Finally, officials were evaluated annually, and these evaluations were forwarded to the capital and used to determine whether or not to promote or demote the individual in question.

The Han (206 BCE–220 CE) bureaucracy was established along the basic principles of the Qin system. At its height, the Han bureaucracy encompassed a total of 130,000 men, of which 4,000 received their commission or appointment in the capital. The rest were appointed locally. By the end of the Eastern Han dynasty (25–220 CE), there were slightly over 100 commandery-sized administrative units. The commandery would have been headed by a centrally appointed offi-

cial, the governor (*taishou*), who was responsible for all civilian and military affairs as well as for administering criminal and civil law. Below the level of the commandery was the county, numbering over 1,000, each of which was headed by another centrally appointed official, known as the magistrate (*zhang* or *ling*). Both the governor and the magistrate maintained staffs. The Han court devised various measures to strictly limit the authority and power of governors and magistrates. For monitoring and evaluating governors, there were 13 censors (*cishi*), each with a staff of 9 men. The responsibility of monitoring magistrates fell to governors and an assistant, the inspector (*duyou*).

In theory, governors and magistrates could have come from virtually any background. While the possibility of being an administrator was theoretically open to all, economic realities militated against broad participation of men who were not independently wealthy. This is because Han society exhibited a high degree of social stratification: up to three-quarters of all land under cultivation was owned by large landholders, and more than half of the population consisted of landless tenant farmers. Officials came into the Han bureaucracy through a variety of tracks. One less common track involved being brought into the bureaucracy through nomination (*chaju*). Nominated by the governor in his home commandery, a man would be catapulted into the commissioned ranks. A more common track was for a commissioned officer to begin his career as a local appointee either at the county or commandery level and move gradually into the commissioned ranks.

—Miranda Brown

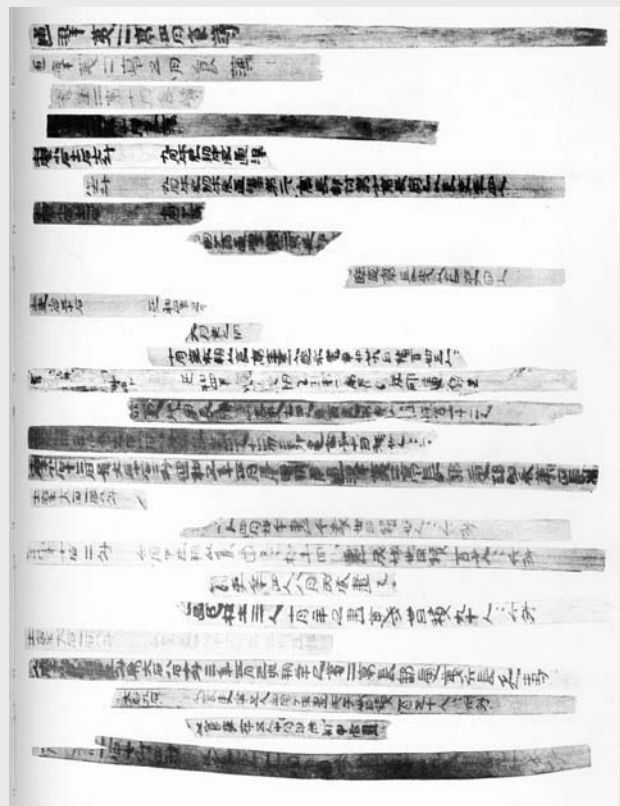
Bibliography

- Bielenstein, Hans. *The Bureaucracy of Han Times*. Cambridge: Cambridge University Press, 1980.
- De Crespigny, Rafe. "The Recruitment System of the Imperial Bureaucracy of Later Han." *Chung Chi Journal* 6(1) (1966): 67-78.
- Loewe, Michael. *Records of Han Administration*. 2 vols. University of Cambridge Oriental Publications. London: Cambridge University Press, 1967.
- Yates, Robin D. S. "State Control of Bureaucrats under the Qin: Techniques and Procedure." *Early China* 20 (1995): 331-365.

QIN AND HAN COMMUNICATION—WOOD AND BAMBOO SLIPS

In Qin and Han times, official communications were written on bamboo and wood slips. The photograph below shows wood slips from the Juyan site (ca. 100 BCE–100 CE). The strips featured below contain information about ratios allotted to local and military officers. Documents like those found at Juyan suggest that the Han government had developed a sophisticated and extensive communication system.

—Miranda Brown



Portion of a Han dynasty bamboo ledger documenting disbursements of grain. (Loewe, Michael. *Records of Han Administration: Volume II Documents*, 1967)

Politics and Governance of the Western Han Dynasty

The Han dynasty had the good fortune to follow a very efficient but brutal dynasty. They were able to retain their predecessors' efficiencies while denouncing their harsh rule. The Han presided, with one brief interruption, from about 202 BCE until 220 CE. The first period, about 202 BCE to 9 CE, is generally known as the Western (or Former) Han dynasty. The unpopular Qin dynasty began dissolving under pressure from rebels in 209, followed by a series of court murders starting in 208 BCE. Liu Bang, a Qin functionary from the Chu region, occupied the Qin capital in 207 BCE. The next year, Liu's former commander, Prince Xiang Yu, sought to subdue Liu by sacking the city and burning the palaces. Xiang's goal was to reestablish the confederacy of small, roughly independent kingdoms that had existed before the Qin, while Liu was intent on continued centralization. Liu assumed the title "King of Han" in 206, but many historians believe it more accurate to date the Han dynasty's beginning to 202, the year that Liu defeated Xiang and established control over the area previously claimed by the Qin. Liu is commonly known by his temple (or posthumous) name, the Gaozu emperor.

The Han gained popular support by publicly condemning the ferociously punitive characteristics of the Qin legalism while preserving much of the previous dynasty's administrative organization, a pyramid structure with statesmen

charged with overseeing the administrative apparatus. As with the Qin, the Han emperors personally retained ultimate power, including the prerogative of directly appointing regional governors and princes over the patchwork of administrative territories as they worked to institute a more orderly centralization. Centralization reached its apex under the reign of a brilliant successor, Han Wudi (r. 141–87 BCE).

Han Wudi was the first to clearly articulate the ideological basis of the dynasty, promoting Confucianism although expanding its precepts to include anything useful to bureaucratic management while maintaining a very legalistic reliance on penal codes to enforce the government's will. Cooperative weather patterns and good management combined to produce a generally affluent era. In times of local distress, such as flooding or crop failures, Han Wudi, like others of the dynasty, was able to provide support from imperial stores. With a broad base of support, Han Wudi was able to field huge armies to face incursions of the Xiongnu and to establish military colonies to protect the frontier lands without destroying the prosperity of the country.

Despite Han popularity, there was always a strong tension between powerful local forces and the central government. The Han tried to keep landlordism at a minimum in order to preserve a solid base of small cultivators, maximizing tax revenues by eliminating the expenses of rent and crop sharing. The Han collected land taxes as well as poll (or head) taxes. It was relatively simple to keep track of land, although at times fraud in ownership or production records had an impact on returns. Poll taxes were more difficult to collect; population mobility and a failure to record all male births diminished the available base. These problems in assessing and collecting taxes have been characteristic of Chinese bureaucracies from the Qin conquest until the modern era.

—Carolyn Neel

► INTERRUPTION OF HAN RULE

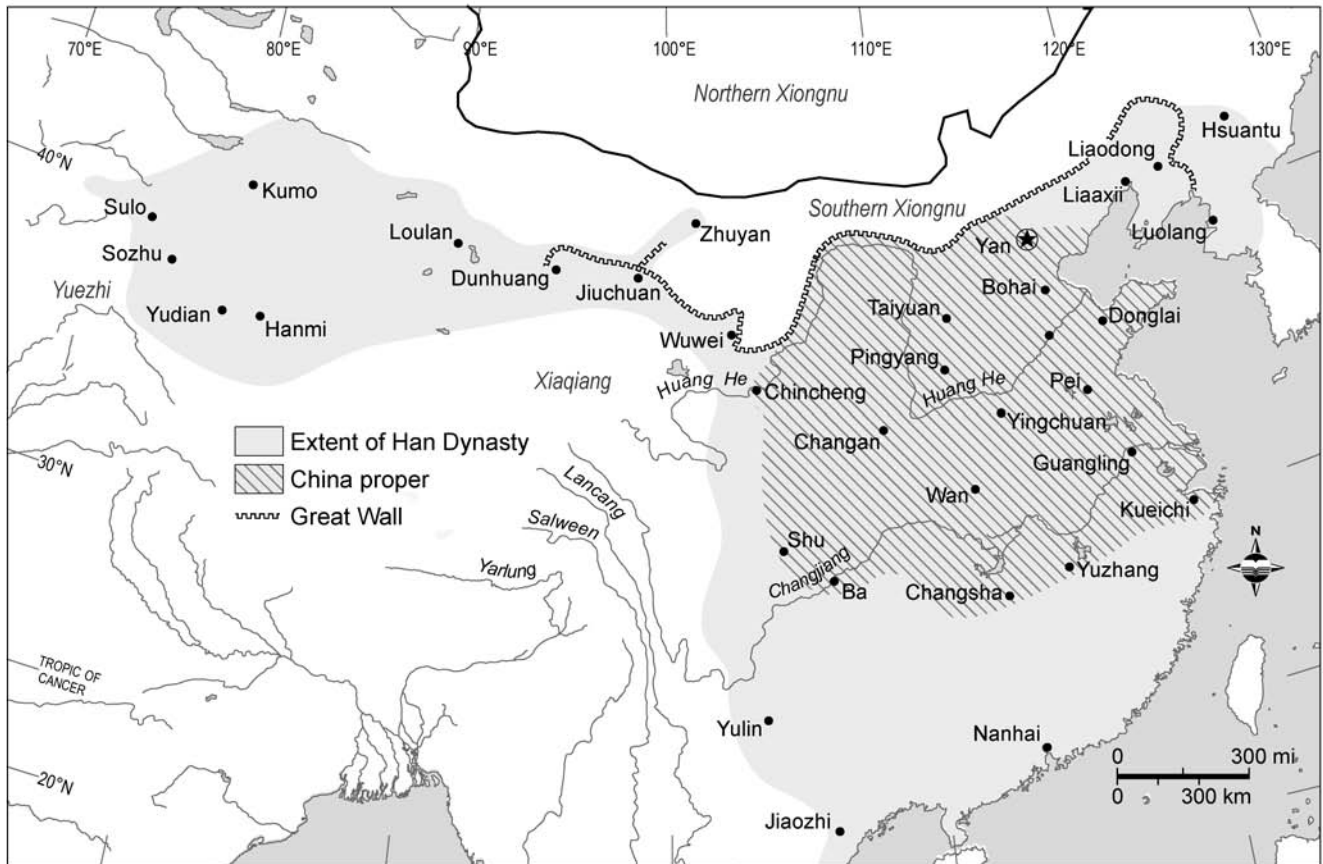
The brief interruption of Han rule occurred in 9 CE, when Wang Mang, the regent for a child emperor, named himself emperor of a short-lived Xin dynasty. He instituted controversial economic policies—such as nationalizing ownership of land and indentured labor—causing great turmoil even before the Yellow River's change in course convinced peasants that Wang had lost the Mandate of Heaven. He was killed by rebels in 23 CE. Before the end of the Western Han, the Chinese government had taken the form that was to dominate its political system until the twentieth century.

—Carolyn Neel

Bibliography

- Lewis, Mark Edward. *The Early Chinese Empires: Qin and Han*. Cambridge: Belknap Press of Harvard University Press, 2007.
- Loewe, Michael. *The Government of the Qin and Han Empires, 221 Bce–220 Ce*. Indianapolis: Hackett, 2006.

CHINA DURING THE HAN DYNASTY, 100 BCE



Politics and Governance of the Eastern Han Dynasty

The Eastern Han dynasty (also called the Later Han) arose out of the ashes of the Western Han and the self-proclaimed Xin dynasty in 25 CE, lasting officially until 220 with the advent of the Three Kingdoms period of Chinese history (220–280). Although having a set of ministers focused on governance to help the emperor rule, the dynasty was plagued with conflicts for political control of the capital, increased power of landlord families and their private armies, and provincial governors becoming lords unto themselves.

The control of the empire theoretically rested in the hands of the emperor, with a large retinue of bureaucrats to help him in his ruling tasks. These included the three excellencies (of finance, state, and works) and nine ministers (of ceremonies, palace, guards, transportation, justice, state visits, imperial clan, agriculture, and

household treasurer). But after the first three emperors of the Later Han, only minors were placed on the throne, leaving members of court to fight over the control of the child through consorts. To ensure success, courtiers relied on court eunuchs to help win these struggles, whereby victory meant placing one of their relatives as the imperial bride to become chief adviser to the emperor. This made the eunuchs powerful quickly.

In one outrageous act, a group of eunuchs managed to crush and kill all the members of a particular consort clan as well as 100 Confucian scholars protesting eunuch power. Soon it was different eunuch groups who were in charge of picking the youthful emperor to gain control over him, but without military strength, the central government lacked power. It had ended conscription, worried that teaching peasants how to fight would lead to better-prepared peasants during any possible future rebellions.

➤ NOMADIC NEIGHBORS AND NORTH CHINA

The Eastern Han had succeeded in defending the northern and northwestern frontiers from the Xiongnu (the Huns) by using “barbarians to fight barbarians” (nomad against nomad). These allies—the Qiang and the Wuhuan during this period—had settled within China’s frontiers, following their own customs and leaders with only minimal supervision by a Chinese official. Their job was to defend against the Xiongnu or the Xianbei, who had started a new confederacy of northern nomads after the Xiongnu had weakened. With the start of the civil wars of the Eastern Han, these nomadic groups would increase the lands under their control and serve as cavalry for hire to those seeking to retake control of China. Despite a brief period of unification following the Three Kingdoms period, China lost its northern half to a series of nomadic invasions that lasted for the next three centuries.

—William Ashbaugh

The hand of the Chinese state did not reach down to appoint administrators at or below the county level, leaving police, judicial, and taxation powers in the hands of the richest local families in return for tax-free status. These families often overstepped their authority, cheating the central government out of revenues either through outright graft or by buying land cheaply from peasants with the understanding that the subsequent rental rates would remain much lower than the earlier taxes collected. These families, due to disruptions at the end of the Western Han dynasty (206 BCE to 9 CE) and the Xin period (9–25 CE), kept control of their private armies for protection from bandits, peasant rebels, and, in northern China, potential nomadic invasion. Even provincial governors, chosen by the imperial bureaucracy for their capabilities and loyalty, changed their roles after the first 100 years of the dynasty. No longer simply inspector generals, these governors began amassing power through private armies to become real generals. Depending upon the province’s distance from the capital in Luoyang, the governor might rule as a lord unto himself and use his military not solely to put down rebel-

lions but also to increase or keep power. That was particularly true of those based on the northern frontier among the allied nomadic tribes. And sometimes local leaders and governors were led by the same great families.

Peasant uprisings began in 126 due to increased tax burdens and concentrated landownership. The private armies easily defeated these first rebellions and incidentally provided more power to the provinces and away from the central government. With the rise of the Daoist peasant rebels, the Yellow Turbans, 58 years later, control of the emperor and capital became unimportant. The private armies defeated the peasant armies and then proceeded to fight each other for control of China in a massive civil war. In 220 CE the Han dynasty officially ceased to exist, and China was divided into three equally powerful states for the next two generations, the famous Three Kingdoms period.

—William Ashbaugh

Bibliography

- Bielenstein, Hans. *The Bureaucracy of Han Times*. Cambridge: Cambridge University Press, 1980.
- De Crespigny, Rafe. *Generals of the South: The Foundation and Early History of the Three Kingdoms State of Wu*. Canberra: Faculty of Asian Studies, Australian National University, 1990.
- Lewis, Mark Edward. *China between Empires: The Northern and Southern Dynasties*. Cambridge: Belknap Press of Harvard University Press, 2009.
- Lewis, Mark Edward. *The Early Chinese Empires: Qin and Han*. Cambridge: Belknap Press of Harvard University Press, 2007.
- Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch’in and Han Empires 221 B.C.–A.D. 220*. New York: Cambridge University Press, 1986.

Governance in the Period of the Three Kingdoms

The Three Kingdoms period (220–280 CE) in Chinese history has been widely romanticized through novels, television programs, movies, and even video games due to the Machiavellian nature of the struggle for domination of Wei, Wu, and Shu. The Three Kingdoms also heralds the start of the Period of Disunity, an era stretch-

ing from the fall of the Eastern Han dynasty in 220 until the rise of the Sui dynasty and its conquest of the south in 589. During the Period of Disunity, China, except during 280–316 (the Western Jin dynasty), broke up into two or more competing states, with the northern half of the country usually under control of one nomadic conqueror after another and then fought over by Chinese generals. Yet even while the three states fought one another to try to re-create a single Chinese empire, leaders within Wei, Wu, and Shu worried about the ties to the great families and their private militias that had led to the fall of the Han empire.

Although the official date for the fall of the Eastern Han dynasty is 220, a civil war for control of the empire that led to the split and formation of the Three Kingdoms came about starting in 184. A peasant uprising led by a secretive Daoist sect threatened the empire. Powerful families already controlled powerful militias for a few generations, and the forces at their disposal in the late second century had grown greatly along with their lands. These families, provincial governors, and frontier seminomadic tribes all sent their private armies to fight the peasant threat. It became apparent that the central government—unarmed on purpose for fear that its trained soldiers would help any peasant rebellion—did not matter in the struggle. Soon these powerful armies fought one another for control of the empire, and when no single leader could achieve victory, China was split into the states of Wei, Wu, and Shu, officially in 220.

All three leading families in the states—Cao (replaced by Sima) in Wei, Sun in Wu, and Liu in Shu—considered themselves the true heirs to the Han dynasty but worried that their strength was so tied up with the wealthy families and their private armies that they too might fall into constant civil war. Something needed to be done to bring these families in the provinces unsupervised into the capital and a close relationship with the state. Wei was the first to work on promoting able and trustworthy bureaucrats from these powerful families. Wei and then the other states no longer sought virtuous Confucian gentlemen to run the government. Using a system called Nine Ranks, impartial judges ranked official aspirants for jobs on the basis of talent and

➤ WISE BUREAUCRAT OF THE THREE KINGDOMS PERIOD

Chancellor Zhuge Liang of Shu is famous throughout the Chinese-speaking world for his wisdom and military genius. The hugely popular Ming-era novel *Romance of the Three Kingdoms*—written 1,200 years after the events—even has Zhuge causing the wind to blow to send fire ships at his enemy. The novel also records a more truthful tale. In order to secure Shu's border during offensive operations in the north, Zhuge was called upon to attack the non-Chinese "barbarians" to the south led by Meng Huo (the novel changes the situation somewhat to make Zhuge even more of a hero, while Meng Huo is a rebel leader, very much Chinese). Zhuge proceeded to defeat and capture Meng Huo seven times, each time releasing him until Meng finally agreed not only to stop his fight against Shu but instead to work with Zhuge to attack Wei in the north. Zhuge's magnanimity achieved more than execution or imprisonment.

—William Ashbaugh

character. High-ranking officials, believing that they were themselves highly talented, thought that they could detect talent and other traits through examining the face and voice of the job seeker. They also believed that these traits, especially loyalty and ability, passed on from father to son, so the government bureaucracy would henceforth be hereditary. Although clearly talent, ability, and loyalty cannot be estimated based on facial or vocal characteristics, the fact that a new nobility arose with this hereditary system made the king more secure—his relatives joined him in the government—and allowed most great families into the halls of power. People incapable of leadership either lost their important positions or never received appointment to them, instead finding themselves shunted off into a post with few responsibilities. Officials employed during the Three Kingdoms gained entrance into the bureaucracy by birth but did not have a guarantee for a powerful place within the government, leading to a stable system.

—William Ashbaugh

Bibliography

- De Crespigny, Rafe. *Generals of the South: The Foundation and Early History of the Three Kingdoms State of Wu*. Canberra: Faculty of Asian Studies, Australian National University, 1990.
- De Crespigny, Rafe. *Man from the Margin: Cao Cao and the Three Kingdoms*. The Fifty-first George Ernest Morrison Lecture in Ethnology. Canberra: Research School of Pacific Studies, Australian National University, 1990.
- Huang, Walter T. *Seven Times Freed*. 2nd ed. New York: Vantage, 1967.
- Lewis, Mark Edward. *China between Empires: The Northern and Southern Dynasties*. Cambridge: Belknap Press of Harvard University Press, 2009.
- Wright, Arthur, ed. *Chinese Civilization and Bureaucracy: Variations on a Theme*. New Haven, CT: Yale University Press, 1964.

Chinese Unification under Jin

The Three Kingdoms period came to an end in 280 CE when the state of Wei under the Jin emperor finally defeated the state of Wu for control over China as a whole. This victory was possible because Wei had access to nomadic allies, with

► REBELLION OF THE EIGHT PRINCES ENDS JIN'S UNIFICATION OF CHINA

Sima Yan of Wei won the wars of the Three Kingdoms to become the emperor of the Jin dynasty, unifying all of China in 280 CE. The new emperor passed out lands to his 15 sons. Two years after he died, most of his sons tried to take power for themselves in the Rebellion of the Eight Princes (291–307). Fighting only ended when all the major princes but one were dead. During the rebellion, all sides turned to nomads and seminomads to help win their battles, with cavalry where geography allowed it. It did not take long before the nomads realized the weakness of the Chinese empire. The Xiongnu (Huns) sacked first the eastern capital and then the western capital. Their leader, understanding the ways of the Chinese, declared himself the new emperor of the northern China plain. The Jin dynasty fled south, leaving China split for more than three centuries.

—William Ashbaugh

their useful cavalry, and because the population of Wei was more than double that of the Wu. Emperor Sima Yan placed his relatives in positions of power and his sons into control over much of the newly conquered countryside. When he died, the sons rose up in the Eight Princes' Rebellion, using nomadic allies to try to take control of China. The end result was the realization by the nomads that the Chinese were weak and the split of China into two or more states until the Sui dynasty and reunification in 589.

The state of Wei fought well under the Cao family from even before the official end of the Han dynasty. But their southwestern enemies, the Shu, had as chancellor one of China's greatest military leaders, Zhuge Liang. Even though Wei outnumbered Shu by three to one, the presence of this genius and the fact that Wu also challenged Wei for supremacy allowed the smaller states to continue the struggle and avoid early surrender. Once Zhuge died in 234, Shu leaders began to rely on court eunuchs to administer their state. This proved a huge error; eunuch corruption made military matters difficult. A massive invasion by Wei in 263, partly through seemingly impassible terrain, meant the defeat of Shu and its southwestern territory added to that of Wei.

Within Wei itself threats of violent change convinced Cao Huan, the king of Wei, to abdicate in 265 CE. Sima Yan took control of Wei and declared himself the first emperor of the Jin dynasty, even though Wei controlled only two-thirds of China. Some scholars take this date to be the end of the Three Kingdoms period (as only two states remained, with one of them the eventual victor and unifier of China), but that system of dating would mark the Jin dynasty start before it completed the conquest of China.

For the next 13 years, only sporadic fighting occurred. In 279 Wei finally launched its all-out assault on Wu, including a fleet full of soldiers trained as marines sailing down the Yangzi River. With its best general dead seven years earlier and its capital sacked in early 280, the leader of Wu surrendered in exchange for a fiefdom to call his own. The Jin dynasty militarily reunified China.

In order to run the bureaucracy of first the Wei and then the Jin dynasty, first the Cao family

and then the Sima family relied on finding talented bureaucrats through the belief that high officials could spot loyal and worthy job seekers through facial features and speaking abilities. And talent was passed from father to son. This hereditary bureaucracy was full of supposed talent rather than Confucian virtue (part of the Han dynasty officialdom), although the more important jobs in the bureaucracy belonged to those who had proven themselves through excellent efforts. Those related to the Sima family were also rewarded with governmental positions. The emperor gave his 15 sons control over vast areas of his empire, thinking that this would keep them loyal to him and avoid the troubles that plagued Wei with the competition between brothers. This strategy worked, at least during Sima Yan's lifetime. Upon his death, his sons' internecine war forced the Jin to retreat south-

ward and give up northern China to a series of nomadic invaders until the Sui unified China once more.

—William Ashbaugh

Bibliography

- De Crespigny, Rafe. *Generals of the South: The Foundation and Early History of the Three Kingdoms State of Wu*. Canberra: Faculty of Asian Studies, Australian National University, 1990.
- De Crespigny, Rafe. *Man from the Margin: Cao Cao and the Three Kingdoms*. The Fifty-first George Ernest Morrison Lecture in Ethnology. Canberra: Research School of Pacific Studies, Australian National University, 1990.
- Graff, David Andrew. *Medieval Chinese Warfare, 300–900*. New York: Routledge, 2002.
- Lewis, Mark Edward. *China between Empires: The Northern and Southern Dynasties*. Cambridge: Belknap Press of Harvard University Press, 2009.

■ Introduction: Agriculture, Trade, and Social Stratification in Asia

From 1000 BCE to 300 CE, the spread of agriculture throughout Asia and the growth of trade, spurred much in part by the influence of China, facilitated the development of more complex forms of governance and more highly stratified societies. The situation is most clearly understood in Korea, which first developed agriculture around 1300 BCE; from that point on, the gulf between the wealthy and poor grew substantially. By the first century of the Common Era, powerful chiefdoms had emerged in Korea that competed with one another for political authority. Thus, the period of the Three Kingdoms (ca. 1–300 CE) was a time of intensive competition and shifting political alliances.

The situation is less straightforward in Japan, as scholars have only the archaeological record to rely on. From 300 BCE on as Japan became a more agricultural society with closer ties to China and Japan, evidence for wealth and status differentiation becomes more apparent. Most exemplary of this are the differentiated

graves (burials that display differing levels of wealth) associated with what archaeologists call the Yayoi culture.

In central Asia it is not agriculture that spurs on the developing social and political complexity but rather trade. Monarchies centered upon city-states emerge in towns centered on oases. Although the societies are not agriculturally based, the new divisions in society emerged when the societies settled in permanent locations.

—Kevin M. McGeough

Early Korean History through the Three Kingdoms

The Koreans, who are descended from Tungusic tribal peoples, are one of the world's most ethnically homogeneous peoples. The Korean Peninsula has been inhabited since Paleolithic times, and Korean historians have traced the ethnic roots of the Korean people as far back

THE HORSE RIDER THEORY AND THE FOUNDING OF THE YAMATO DYNASTY

Japanese historian Egami Namio in 1948 proposed a theory, popularly known as the Horse Rider theory, that Japan was conquered around 300 CE by a large invasion of horse-riding nomads from Korea who then founded the Yamato dynasty, which still rules Japan to this day. According to one version of this theory, the horse rider conquerors were from the northern state of Puyo and were driven southward by constant turmoil in northern China and Manchuria. They then are said to have crossed the Korea Strait to Japan.

The Kofun period of early Japanese history, which takes its name from huge keyhole-shaped tomb mounds that began to appear around 300 CE, is closely tied to the Horse Rider theory. Hundreds, if not thousands, of these tombs are scattered across central Japan. It is hard to know the exact number of these mounds because they are often indistinguishable from large hills except from the air, where their distinctive keyhole shape can be discerned. Only a few of these tombs have been excavated because they are considered to be sacred, but those that have been investigated have produced hollow pottery statues as well as stirrups and bridles. These are the first evidence of horses in Japanese history.

It is also known that a new ruling elite emerged in Japan around 300 CE that seems to have

commanded the obedience of the people and to have had a surplus of resources to build such massive tombs. It appears that they also used horses as important symbols of their power. Little is known of the Kofun period until the sixth century CE, when writing became widespread.

The Horse Rider theory differs from the quasi-mythological history *Nihon Shoki*, written in 720 CE, that details the rise of the Japanese Soga clan to control of court affairs in the 550s, Prince Naka's overthrow of the Sogas in the Taika coup of 645, and the rise of Emperor Temmu in the Jinshin War of 672. In 710 Temmu's daughter-in-law and niece Empress Gemmei moved the capital to Nara, starting the Nara period of Japanese history.

Although several other scholars have embraced the Horse Rider theory, many others have not. A lack of written records for this period makes the theory nearly impossible to prove or disprove.

—Daniel Metraux

Source

Gari Ledyard. "Galloping along with the Horse Riders: Looking for the Founders of Japan," *Journal of Japanese Studies* 1(2) (Spring 1975), 217–254.

as pottery-using cultures dating back to 6000 BCE. Around 700 BCE the use of bronze began in Korea. Agricultural settlements date back to 4000 BCE. Early peoples in Korea lived in small self-sufficient communities, originally hunting bands and later farming or fishing settlements. It was only in the late first millennium BCE that larger political units were formed. Korea's progress was strongly influenced by developments in northern China, where several kingdoms appeared as early as the middle of the second millennium BCE.

The first Korean state to emerge is Gojoseon (Old Joseon). Although later Korean historians would assert that the legendary figure Tangun founded their first state in 2333 BCE, Gojoseon probably got its start between 194 and 180 BCE. Chinese Han emperor Wudi (141–87 BCE), seek-

ing to consolidate the frontier regions of his empire, launched a successful invasion of Gojoseon. Chinese forces subsequently conquered (ca. 100 BCE) the eastern half of the peninsula. Lolang, near modern Pyongyang, was the chief center of Chinese rule. Chinese rule proved to be very important for Koreans because it brought Koreans into contact with China's sophisticated civilization. It is clear that many Chinese immigrated to Korea and that this region had become an integral part of Han dynasty China. The result was a major sinification and modernization of Korean society including the introduction of Chinese writing, religion, philosophy, industry, architecture, and ideas about government organization. Even independent tribes to the south of Lolang became influenced by the diffusion of Chinese civilization.

Several tribal groups including the Puyo and the Koguryo developed tribal federations to the north of Chinese-occupied Korea. The Koguryo, a Manchurian-based power, were an aggressive and warlike people who began launching attacks against the Chinese as early as 12 BCE. The Koguryo tribal federation grew in power in the north, while the Han empire waned and finally collapsed in 220 CE. Subsequent Chinese states lacked sufficient power to maintain their presence in Korea, and Chinese influence gradually disappeared in the third and fourth centuries CE, leaving a power vacuum soon filled by Koguryo and two emerging rival states, Paekche and Silla. Paekche, located in southwestern Korea, developed as a major power by the fourth century CE.

Located in the southeastern part of the Korean Peninsula farthest away from direct contact with China, Silla was late in receiving influence from the continent, and its civilization initially lagged behind its two rival states. While all this was transpiring, there is evidence that large numbers of Koreans migrated to Japan, where they introduced rice agriculture, bronze and iron working, and other technologies.

—Daniel Mettraux

Bibliography

- Barnes, Gina L. *State Formation in Korea: Historical Architectural Perspectives*. Richmond, Surrey, UK: Curzon, 2001.
- Henthorn, William E. *A History of Korea*. New York: Free Press, 1971.
- Seth, Michael. *A Concise History of Korea from the Neolithic Period through the Nineteenth Century*. Lanham, MD: Rowman and Littlefield, 2006.

Early Oasis Kingdoms of Central Asia

With the flourishing of agriculture around the oases of central Asia, the populations of the established towns grew. Eventually, some emerged as kingdoms in their own right. Although small and often absorbed into larger empires such as the Persian or the Han or dominated by nomadic confederations, the early oasis kingdoms played a significant role in world history.

The origins of the oasis kingdoms can be traced simply to the basic fact of real estate: lo-

THE KUSHAN EMPIRE, 50–250 CE

The Kushans arrived in central Asia as part of another round of nomadic migrations. Beginning their existence as part of the Yuezhi confederation based in what is now Kazakhstan, the Kushans migrated south of the Syr Darya as more powerful tribes moved out of Mongolia due to the expansion of the Xiongnu. By 130 BCE, they dominated much of Sogdia. Initially, the Kushans were just one of four other Yuezhi groups in the region. By 50 CE, Kujula Kadphises (d. 80 CE) defeated the other four groups and established his hegemony over the region. By 100 CE, Kushans dominated the Indus Valley as well.

Under Kaniska (127–147 CE), the empire reached its peak and served as a powerful rival to the Parthians and was influential in northern India. Even Chinese records noted Kaniska's power. It is during this period that the Kushan empire moved its center from the oases near the Amu Darya and through the Khyber Pass into present-day Pakistan. This left a power vacuum in central Asia that the nascent Sassanid empire (205–651) filled in the early 200s as well as new nomadic groups entering from the steppes.

—Timothy May

cation. In arid and semiarid regions, control of a source of water and thus life was important. The fact that merchants and other travelers went from oasis to oasis only increased the city's importance. These manifested mainly in ancient Bactria and Sogdia. Bactria overlapped modern Afghanistan, Uzbekistan, Tajikistan, and Turkmenistan and dominated the Upper Amu Darya River, while Sogdia was just northeast of Bactria and extended into modern Afghanistan, Uzbekistan, Tajikistan, Kirghizstan, and the southernmost part of Kazakhstan. Much of this fell under the sway of the Achaemenid empire of Persia (550–330 BCE).

Yet not all oasis cities and kingdoms could be considered spontaneous. In many instances they were planned. Perhaps the best example of this was Alexander the Great's creation of military colonies along the Amu Darya River and the city of Merv, located in the Margiana oasis area. Like many other oasis towns, the building

of high walls was crucial for defense against nomads. Eventually many of the cities developed a common identity through culture and conquest and could rightfully, albeit often tenuously, be called kingdoms. From the Greek and Macedonian conquest came a Greco-Bactrian state centered in Ai Khanum, another city founded by Alexander the Great in Afghanistan in 328 along the Amu Darya. These blended features of Greek culture such as architectural and art forms with local customs. Settlers identified local gods with their Greek equivalents.

By 148 BCE, much of the region consisted of petty principalities with only a loose identity of a larger polity. Nomadic pressure from north of the Syr Darya and the eastward expansion of the Parthian empire (238 BCE–226 CE) appear to be the culprit. Although there is little evidence of destruction to the oasis cities, political centralization declined as cities located near nomadic confederations or the Parthians could seek new allegiances rather than one powerful city. Indeed, many of the oasis kingdoms thrived in their era of independence with ties to nomads. The nomads provided security for the trade routes as well as markets in return for access to manufactured and agrarian products

that they could not produce. In this environment, city-states such as Yarkand, Khotan, Kashgar, and Turfan thrived in the area of modern Xinjiang. In the regions of Bactria and Sogdia, the cities gradually came under the dominance of the Kushan empire (50–250 CE), nomads who eventually migrated south of the Syr Darya and into these regions and eventually dominated Afghanistan and northern India. The Kushan state became representative of the intermingling and commingling of culture in central Asia as multiple cultures, ethnicities, and religions traveled the trade routes between the oasis cities.

—Timothy May

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Frye, Richard N. *The Heritage of Central Asia: From Antiquity to the Turkish Expansion*. Princeton, NJ: Markus Wiener, 2001.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

■ Introduction: “Barbarian” Politics in Europe and Asia

For the Romans, the people living beyond the boundaries of their empire were barbarians. The word “barbarian” is onomatopoeic, since it is meant to sound like the random sounds that a Roman would hear when a barbarian spoke. These barbarians were threats to be dealt with through physical force because their curious cultural practices were markedly “un-Roman.” Yet archaeology has revealed that these cultures, though significantly smaller in scale than the Romans, were very diverse with rich aesthetic traditions. Most of these cultures were chiefdoms, that is, societies with between 2,000 and 5,000 members at any given time. Some lived in permanent settlements, and others lived nomadic and seminomadic lives along the steppes

of central Asia. The following entries discuss what archaeologists can reconstruct of the political organizations of these groups.

—Kevin M. McGeough

Steppe Nomads

The dominant way of life on the central Eurasian steppe (grassland), which stretches from Mongolia to Hungary, was pastoral nomadism. Although nomadism varied across the globe, steppe pastoral nomads were dependent on the so-called five snouts (horses, sheep, goats, cows or yaks, and camels), all of which were used not only as a food source but also for their by-products, such

➤ WHO WERE THE NOMADS?

Herodotus, known as the Father of History, wrote about the nomads of his era in his *Histories*. Much of what we know about the Scythians originates from Herodotus, but it is clear that many of his contemporaries knew little about them. In an attempt to explain to his countrymen that not all of the nomads were the same, Herodotus wrote:

“The Androphagi are the most savage of men, and have no notion of either law or justice. They are herdsmen without fixed dwellings; their dress is Scythian. . . . The Melanchlaeni all wear black cloaks—hence their name. In all else they resemble the Scythians.”

One of the problems of studying the steppe nomads is that most of the information about them during the period 1000 BCE–300 CE is beyond archaeological finds; most of the information about them comes from sedentary and often hostile cultures. So who were they?

By and large, most sources in the West (Greek, Roman, Persian) refer to the steppe nomads of this area as Scythians. In the East, the Chinese sources refer to them as Xiong-nu. Were these

different tribal confederations? Perhaps. In short, it is difficult to say because the identity of a tribe and also a tribal confederation—a conglomeration of tribes under a single leader—was rather fluid. The identity came from the upper levels of society and was applied to all groups.

During this period, a wide variety of ethnicities and linguistic groups populated the central Eurasian steppes, including Iranians and early Turkic and Mongolian groups. For instance, it is possible that the Scythians were Iranian but included Turkic and Mongolian elements. Meanwhile, the Xiong-nu were viewed as a proto-Mongolian group. However, it most certainly included non-Mongolian groups as well. Thus, when discussing the steppe nomads, it is important to realize that while the culture was often similar through the steppe, the people living in that culture were not homogenous at all.

—Timothy May

Source

“Herodotus: The Histories” translated by Aubrey de Sélincourt and John Marincola. Penguin Classics, 2002. London, pp. 275–276.

as wool, hair, and leather. Contrary to the idea that nomads wandered aimlessly, they made planned migrations so as not to exhaust the pasture. In the summer the nomads migrated to the cooler highlands, and in the winter they migrated to the lowlands and into valleys.

The nomads lived in round shelters known most commonly as *yurts*, constructed from wooden lattice walls and covered by layers of felt. These tents could be easily disassembled and either loaded onto camels or placed on ox-drawn wagons, making them easily transportable.

The nomads were organized into tribal groups with clans and subclans based on kinship, although that kinship was often fictive. For instance, the ancestor may have been a mythical figure. The tribes were led by a chieftain, and at times a number of tribes could form a confederation. Leaders were elected from a body of qualified leaders. The leader had to prove competence not only in warfare but also in taking care of the tribe. If that leader failed

to fulfill his obligations, he risked losing his status. There was some stratification within nomadic society. Thus, potential leaders would only come from the aristocracy.

The steppe nomads subsisted primarily on dairy products supplemented by meat, usually mutton. Milk from all of the animals produced a variety of food forms such as cheese, yogurt, and cheese curds. Throughout history, observers have noted one particular item in the nomads’ diet made from fermented mare’s milk: *kumiss*. During the summer, kumiss was consumed in large quantities due to the abundance of mare’s milk after the foaling season.

Despite the steppe nomads’ dependence on their animals, self-sufficiency was nearly impossible. Thus, the nomads had a symbiotic commercial relationship with their sedentary neighbors, typically states in China, oasis towns in central Asia, and the Russian principalities. From these sedentary agrarian communities, the nomads traded or raided for goods they could

not produce, such as silk, grains, tea, metal tools and weapons, and other luxuries.

Sedentary societies feared the nomads for their military abilities. As virtually all of the men, and many women, learned to ride horses and archery from an early age, they were formidable foes. For the most part, though, the nomads had little interest in actively ruling sedentary populations. Instead, they preferred to extract goods they needed. If they could not gain them through amenable terms, then the nomads could form large tribal confederations and invade.

—*Timothy May*

Bibliography

Golden, Peter. *Nomads and Sedentary Societies in Medieval Eurasia*. Essays on Global and Comparative History Series. Washington, DC: American Historical Association, 1998.

Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.

Soucek, Svat. *A History of Inner Asia*. New York: Cambridge University Press, 2000.

Celts

Early written sources on Celtic political organization are exclusively Greek and Roman, while Celtic law codes survive only from early medieval Ireland. Never effectively unified beyond the local level, classical Celtic societies constituted loosely associated tribes, each of which was headed by a man known to the Greeks and Romans as king (Latin *rex*; Celtic *rí* or *rix*). In

some places and times this position was strictly hereditary, while in others it was elective, a process that could be contentious, but this ensured that a qualified adult would rule. Even when elective, however, the candidates were drawn from the same ruling family. Kings appear to have ruled in conjunction with noble councils, whose members were probably drawn from among the constituent subtribes or clans. In first-century CE Gaul, kingship gave way in some tribes to rule by a local oligarchic council that Julius Caesar called the Senate.

Tribes were divided into smaller units—extended kin groups or clans—that were headed by chiefs. These men were generally the leading warriors, which placed them in command of the principal social institution, the war band. Communities, known as *tuatha* in Ireland, were formed at this level. The males of the warrior class dominated these communities, and together they formed the councils that made the principal communal decisions. Successful leaders possessed the correct lineage augmented with proper and charismatic behavior that included success in battles and raids, gift giving, hospitality, and conspicuous wasting of precious resources (potlatch). Traveling bards celebrated chiefs' and kings' battles and generosity, an important source of group prestige and power. Successful leadership also depended on one's patronage over a large clientele whose economic, military, social, and political support the chief secured by gifts of land, tools, and weapons. A strong Gallic king might command several thou-

➤ JULIUS CAESAR ON GALLIC PATRONAGE

"In Gaul there are factions not only in all the states, and in all the cantons and their divisions, but almost in each family, and of these factions those are the leaders who are considered according to their judgment to possess the greatest influence, upon whose will and determination the management of all affairs and measures depends. And that seems to have been instituted in ancient times with this view, that no one of the common people should be in want of support against one more powerful; for, none [of those leaders] suffers his party to be

oppressed and defrauded, and if he do otherwise, he has no influence among his party. This same policy exists throughout the whole of Gaul; for all the states are divided into two factions."

—*Joseph P. Byrre*

Source

Julius Caesar, *Caesar's Commentaries on the Gallic and Civil Wars*, trans. W. A. McDevitte and W. S. Bohn (New York: Harpers, 1870), book 6, chap. 11.

sand clients. Relations among clans and tribes were generally competitive rather than cooperative, ensuring weakness in the face of Roman and Germanic aggression.

—Joseph P. Byrne

Bibliography

- Champion, Timothy. “Power, Politics, and Status.” In *The Celtic World*, edited by Miranda Green. New York: Routledge, 1995.
- Ellis, Peter Berresford. *The Celts: A History*. Revised ed. London: Carroll and Graf, 2003.
- Freeman, Philip. *War, Women, and Druids: Eyewitness Reports and Early Accounts of the Ancient Celts*. Austin: University of Texas Press, 2002.

The Scythians

The Scythians dominated the Eurasian steppe for much of the ancient period (from roughly 1000 to 200 BCE); however, it is difficult to pinpoint exactly who the Scythians were. They appear to have been Iranian or possibly proto-Turkic and dominated the region from the Carpathian to the Altai mountains. Yet scholars have not concluded that the Scythians were an empire or more than a tribal confederation, with the name “Scythian” being derived from the dominant tribe. Thus, it is probably more accurate to conclude that the Scythians were not a single ethnicity but rather several cultures and ethnicities that shared some common features. These may be listed as being pastoral nomads who used composite bows, had knowledge of iron metallurgy, used the *akinakes* (a short sword of a particular design often used in religious ceremonies), carried artistic motifs of stags and other animals in combat, demonstrated widespread use of bronze cauldrons, created deer stones, and most importantly rode horses before anyone else.

Generally speaking, the lifestyle of pastoral nomads changed relatively little over the centuries. The Scythians migrated between pastures during the winter and summer to prevent overgrazing. At times these migrations could range hundreds of miles. In hilly and mountainous areas, the migration tended to be more vertical. During the summer the Scythians moved their flocks and herds to higher altitudes, while in the winter they tended to be in valleys.

➤ BATHING WITH THE SCYTHIANS— EXCERPT FROM HERODOTUS

Historically, Eurasian pastoral nomads have been averse to bathing. Although it developed into essentially a religious and cultural taboo, the basis arises out of a desire to not pollute the rivers and water sources that they and their animals depended on for their very lives. The Scythians found other methods for cleanliness that were recorded by the Greek historian Herodotus.

“Anyway, the Scythians take cannabis seeds, crawl in under the felt blankets, and throw the seeds on to the glowing stones. The seeds then emit dense smokes and fumes, much more than any vapor-bath in Greece. The Scythians shriek with delight at the fumes. This is their equivalent of a bath, since they never wash their bodies with water. Their women, however, pound cypress, cedar and frankincense wood on a rough piece of stone, and add water until they have a thick paste which they then smear all over their bodies and faces. This not only makes them smell nice, but when they remove the paste the day after they turn out to be all clean and shining.” Herodotus 4.75.

—Timothy May

Like later pastoral nomads, such as Turks and Mongols, the Scythians’ diet tended to be based largely on dairy products and meat. Much to the surprise of their more civilized neighbors, such as Greek colonists in the Black Sea, the Scythians preferred fermented mare’s milk and mutton over grape wine and wheat. From their animals, usually a combination of horses, cows, sheep, goats, and camels, the Scythians could produce most of the basics of life. They dwelled in yurts (round felt-covered tents) that were often placed on wagons and kept erect as they migrated.

Although somewhat patriarchal, the division of labor among the Scythians was much more egalitarian than among their contemporaries in China or ancient Greece. Scythian women did the labor surrounding the household, while men tended to herding the animals and warfare. Nonetheless, as households tended to be separated by

several miles, it was not uncommon for men to perform the duties of the women and vice versa out of simple necessity. Indeed, the fact that Scythian women handled the composite bow with ability may have spawned the legend of the Amazons.

In terms of religion, the Scythians practiced shamanism but also built temples or shrines to gods. The veneration of the sky and earth was common among all Scythian groups. Their shamans served not only as intermediaries between the spirit world and the mundane but also as healers, as most illnesses were thought to be caused by spirits. Some concept of an afterlife also existed, judging from the burial remains of the Scythian elites. Ornate jewelry and gilded

weapons and tools were common along with the burial of slaves and horses intended for use in the afterlife.

—Timothy May

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Herodotus. *The Histories*. Translated by Robin Waterfield. New York: Oxford University Press, 1998.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Soucek, Svat. *A History of Inner Asia*. New York: Cambridge University Press, 2000.

■ Introduction: Political Life in the Americas

The political organization of the people of the Americas from 1000 BCE to 300 CE was diverse, and in many cases scholars are divided as to the precise nature of the governing structures. This is most apparent in North America, where some larger polities (such as the Hopewell) display evidence that could be understood as indicative of egalitarian social structures or of emerging elites and political hierarchies. Similar problems exist in attempting to reconstruct the political organization of South America. The Chavín culture (located in the Andes) displays evidence of significant social stratification and thus of hierarchical political organization. The question for scholars, then, is if this is the first stratified society in Peru or if earlier cultures were similarly hierarchical.

In Mesoamerica the situation is more clear. Olmec society demonstrates clear evidence of significant social stratification. Although the exact nature of Olmec governance remains obscure, there is significant evidence (especially the famed colossal heads and altars) to indicate that there was a ruling elite at least at the city level. Evidence for early Maya civilization reflects a similar concentration of leadership within a city-state framework; for the most part

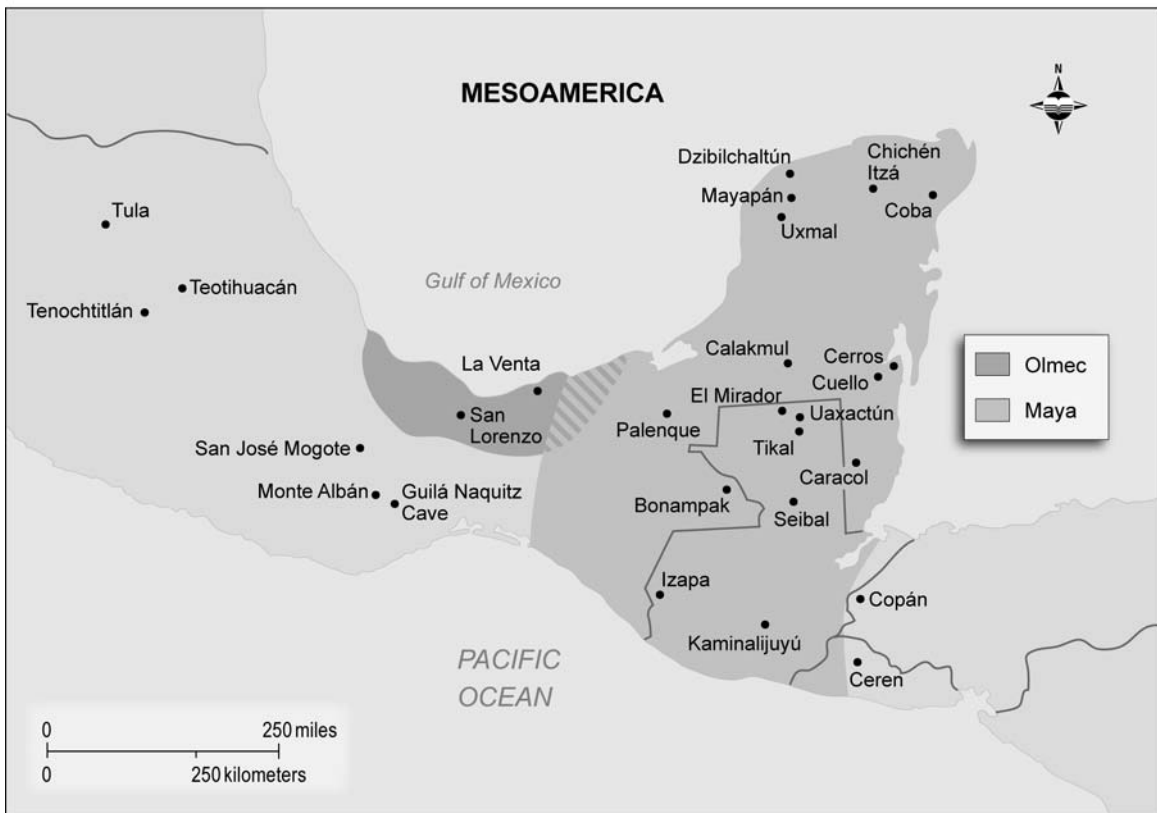
the highest level of Maya governance was at the city-state level. The city-state was the largest type of polity for much of Mesoamerican civilization, and this type of governance reached its largest extent with the massive city-state of Teotihuacan, which eventually developed into the largest pre-Columbian city in the Americas.

—Kevin M. McGeough

Development of Chiefdoms in the Olmec Region and Lower Central America

Most scholars agree that one of the cornerstones of civilization both now and in the past is a system of governance. In the case of the first true civilization of Mexico that emerged within the larger Mesoamerica—the Olmec—they developed a network of extended villages that as time progressed might be called a city-state or state. Because of the increasing complexity of life and organization, the headmen of one of the villages within the network over time became the chief of all of the villages, making him the chieftain. From the available evidence, this pattern seems to have occurred among the Olmec. Accompa-

DEVELOPMENT OF CHIEFDOMS IN THE OLMEC REGION



nying this political change, the position ended up eventually being passed down among the male members of the chieftain's extended family. Hence, the chief's immediate family had the highest social ranking.

Through this ranking system, social stratification existed so that certain families within each village dictated the winners and losers in terms of the possession of positions of authority and, more importantly, control over whatever agricultural surplus might be achieved. This shift to a more hierarchical society was not unique to the Olmec, as it occurred over and over again in other similar societies. Each time society became more stratified a tribal village would elect to find a headman (chief) to oversee the interests of the villagers, which represents a time-tested process in terms of the selection of a headman. However, once a chieftain/chiefdom becomes more permanent, the use of coercion (especially in a passive nature) solidified the existing social stratification. This was what oc-

curred in the Olmec heartland. One of the principal functions of rulers was to lead and defend the village from external threats. The chieftain thus became the primary warrior for the village, urbanite, and countryside adventurer.

In reality the chief was both the symbolic and functional part who enabled people such as the Olmecs as well as others to operate as a political unit. Most often the primary function for the chief, other than being a mighty head warrior, was that of the preserver/keeper of the sacred rituals (ceremonies to the gods and/or the ancestors), which thereby invested him with semidivine authority in the eyes of his people. On a more practical level, chiefs derived their income/wealth from the trade emanating from their domains with others both nearby and in faraway places. This trade included mostly rare or exotic products such as ivory, coral, jade, grizzly bear teeth, shells, and amber. While some commoners might obtain some of these products, most were obtained by the elites. Chiefs also commissioned

and encouraged artisans to make exotic things such as insignia for the ruler. We can see from the extensive network of *caciques* (a hereditary ruler from a locality who was akin to a chief) across the breadth of Latin America that tradition favored the persistence of chiefdoms.

The power or authority of the chief was not total but instead was contingent upon consensus rather than absolute power. Indeed, a chief really possessed no independent powers and could not undertake any policy or project that the majority of his people did not want carried out. Nonetheless, the images of chiefdoms as personified by plazas, mounds, stone monuments, and sculptures can be found throughout Mesoamerica yet are almost totally nonexistent in monumental architecture. Only in states do rulers have total power (until they are reined in by forces of democracy and constitutionalism) and can undertake nearly anything they want because they control the apparatus of the courts, police, and military force. It is largely believed by a large number of scholars that states arose because of a need such as is evidenced by the vast irrigation system of ancient Egypt, where central coordination was needed to ensure ample harvests. Only the states of the central Mexican basin developed anything that might be called states. The Maya as well as others relied on a network of chiefdoms to achieve the ends similar to what might be called a state. What we call states of the ancient world are not on the scale and extent of what we call nation-states in the more modern world.

—John S. Leiby

Bibliography

- Evans, Susan Toby. *Ancient Mexico and Central America: Archaeology and Culture History*. London: Thames and Hudson, 2004.
- Miller, Mary, and Karl Taube. *The Gods and Symbols of Ancient Mexico and the Maya*. London: Thames and Hudson, 1993.

Late Pre-Classic and Early Classic Maya City States

Many of the best known Maya city-states (Tikal, Copan, Uxmal), as well as those less well-known (Calakmul, El Mirador, Uaxactún), rose to prominence in the Late Pre-Classic and Early Classic

periods of Mesoamerica (300 BCE to 450 CE). This florescence created a kind of “golden age” in Mesoamerica marked by elite, literate societies, advanced mathematics, and the massive architectural complexes that became the hallmark of Maya civilization. The early city-states shared a degree of influence from contemporaneous civilizations—Teotihuacan, Monte Alban, Izapa—as well as a historical influence from the Olmec civilization, from which they derived traditions of bar-and-dot numeration, ritual ball games, and blood sacrifice. Despite these similarities, each city-state maintained distinct characteristics and political autonomy.

Kaminaljuyu at its apex may have been one of the most impressive early Maya centers, though the site has been subject to deterioration and looting as a result of its location under the rapidly spreading Guatemala City. Unlike many other Maya cities renowned for their stone architecture, inhabitants built house platforms, temples, and other structures at Kaminaljuyu from hardened adobe brick that they then adorned with carved stucco masks and painted murals. Scattered among the architecture, archaeologists and others have recovered a wide variety of effigies including images of flattened frogs (*ranas aplastadas*), bats, jaguars, serpents, and fat human figures in a variety of styles suggesting a cosmopolitan or multiethnic community. Also included in the sculptural elements of Kaminaljuyu are large stelae on which people recorded some of the earliest calendar dates in the Maya world as well as relief images of important personages attired in lavish costumes and performing acts associated with divine Maya rulership. The city inhabitants also created significant water control features and earthworks, which attest to the early development of social hierarchy, high population density, and concentration of political power.

Tikal would not reach its apogee until the end of the Classic period (200–900 CE), but its early architecture and sculptural traditions demonstrate a precociousness when it comes to the power of the elite and their ability to command. Tikal initially occupied only a secondary status compared to its northern neighbors, Uaxactún and El Mirador. However, as those other early centers fell into decline after about 1 CE, Tikal

► CREATING DIVINE KINGS

One of the most notable features of Maya civilization is the concept of rulers who were not just elite, but actually divine. While this concept was not unique to the Maya, it does raise questions as to how people were able to change their status from that of an ordinary mortal to a deity incarnate with supernatural powers. Some archaeologists have suggested that by studying the emergence of Maya city-states we may be able to see how people and societies made that transition. To do so, however, requires looking not only at the monumental architectural complexes so closely associated with the Maya elite, but also at residential compounds.

One argument suggests that as households promoted their social status through public rituals and ancestor veneration, they were able to claim divine origins not only for their ancestors but eventually for themselves as well. Elites may have used their ties to distant cultures such as Teotihuacan, incorporating foreign images and icons, as a way of demonstrating their esoteric knowledge.

Archaeologically, funeral remains from early Maya sites are found earliest in household contexts. As burials became more lavish, people established separate funerary chapels with important dead relatives buried in chambers in the base. Over time these structures were renewed and reconstructed with the newer construction encasing the older structure.

Also critical to this process was the creation of agricultural and other forms of surplus which in turn required control over water supply and trade routes. Evidence suggests that the ability of the elite to control essential water supplies directly influenced population density and dense populations were critical for building projects and for staging ever-larger public rites. Control of trade routes provided the elite with rare items such as obsidian, jade, stingray spines, hematite, and marine shell that were used to indicate their elite status and complete the ritual attire that marked them as deities.

—Jo Ellen Burkholder

emerged as a major Maya center, though it was often at war with other Maya cities. This difficult position may explain the many miles of dry moats and ramparts along the northern and southern perimeters of the site. Funerary customs at Tikal indicate the emergence of elites in that city. After death, elites at Tikal (beginning in the Late Pre-Classic) were placed in stone-lined tombs and furnished with luxury items of jade, jadite, stingray spines, spondylus shells, ceramics, and human sacrifices. Many of the early tombs, platforms, and temples at Tikal cannot be seen today because Middle and Late Classic structures were built over and around them. Still, many of these early structures established the location and basic spatial organization of the city's monumental architecture. As early as the third century, stelae record evidence of dynastic succession, the earliest in the Maya realm.

Copan, like Tikal, is better known today for its Late Classic architecture, but also had an earlier history. Located in a pocket created by a meandering Copan River, archaeologists have struggled to get a sense of early Copan. Sparse

textual references and materials indicate that Copan was a significant center in the last centuries BCE. This is in part confirmed by erosional cuts at the site which have revealed traces of earlier architecture within the city's core. The history of royal succession at Copan begins in 426 CE when K'uk Mo' Ajaw from the city of Tikal established a new dynasty under the name K'inich Yax K'uk Mo'. This foreign royal likely married a local elite woman. Building and structural modification begun under early dynastic rule employed an architectural style reminiscent of Tikal, Kaminaljuyu, and Teotihuacan, suggesting an awareness of, if not participation in, a broader Mesoamerican sphere of interaction. Later generations produced more uniquely Copan-styled materials including figures nearly in the round.

Uaxactún is significant as one of the Maya cities that has been inhabited the longest, with initial occupation dating to the first or second millennium BCE and lasting through the ninth century CE. By the last centuries BCE stone architecture had begun to replace earlier structures of wood and thatch. As at other Maya sites

with long histories, these early architectural units formed the foundation for later building complexes. At Uaxactún these include structures at the heart of a complex known as Group E, noted for its astronomical alignments for the solstices and equinoxes. Many early public structures supported large stucco masks in the form of a *witzob* or Witz Monster, the mythical representation of a living mountain. Archaeological work in domestic sectors of Uaxacatun has revealed the importance of household rituals and craft production, such as weaving and shell working, to the processes of gender and class differentiation that marked Classic Maya civilization. Early Classic Uaxactún engaged in competition and warfare with its neighboring cities and like Copan also came under the influence of Tikal in the early part of the Classic period.

Several characteristics evident in all of these early Maya city-states reflect the beginning of traits that define Maya civilization as a whole. The cities themselves underwent tremendous growth, many evolving from essentially rural settlements to true urban concentrations with the aid of water control features essential to supporting large populations. Within these cities, social differentiation led to the formation of elite classes of nobility and ultimately to divine rulers who were entombed in the base of what became stepped-pyramid temples. These early structures formed the basis for the monumental architectural core at many sites. Divine rulers created the tradition of erecting monumental stone stelae to record their accession to the throne, battles with other cities, and temporal landmarks in their reign. It is as a result of this tradition that archaeologists and epigraphers have been able to piece together so much of the complex history of the Maya people. Later Maya dynasties expanded and elaborated on these traits, giving a unique cultural stamp to the ever more powerful realms they controlled.

—Jo Ellen Burkholder

Bibliography

- Adams, Richard E. W. *Prehistoric Mesoamerica*. 3rd ed. Norman: University of Oklahoma Press, 2005.
- Bell, Ellen E., Marcello Canuto, and Robert Sharer. *Understanding Early Copan*. Washington D.C.: Society for American Archaeology, 2004.

Ferguson, William M., and Richard E. W. Adams. *Mesoamerica's Ancient Cities*. Rev. ed. Albuquerque: University of New Mexico Press, 2001.

Henderson, John S. *The World of the Ancient Maya*. 2nd ed. Ithaca, NY: Cornell University Press, 1997.

McKillop, Heather. *The Ancient Maya: New Perspectives*. New York: Norton, 2004.

Monte Alban and the Zapotec Civilization

The site of Monte Alban stands as the foremost reminder of the grandeur that was Classic period Zapotec civilization. Located in the heart of the Oaxaca Valley, this mountaintop city and ceremonial complex emerged as a small settlement after 500 BCE, but by 200 BCE Monte Alban had become the preeminent center of religious, political, and economic life in the Oaxaca region and one of the largest cities in the Americas at the time. In doing so it eclipsed the influence of settlements in the three branches of the Oaxaca Valley and came to exert an influence on places much farther afield. The secret to Monte Alban's success, and with it the rise of Zapotec civilization, is still a matter of debate, and scholars have attributed it to combinations of military/strategic, economic, and religious causes. The influence of other large polities contemporaneous with Monte Alban, such as Teotihuacan, impacted but did not determine or control developments in Oaxaca.

Archaeological surveys of the mountain on which Monte Alban sits have found no evidence that people occupied its slopes prior to the Monte Alban I phase (500–200 BCE) even though the Oaxaca Valley itself has a long history of human occupation. In fact, the center of the valley surrounding the site appears to have been a kind of no-man's-land separating smaller political units in the valley's three branches: Tlocolula, Etla, and Valle Grande. After 500 BCE a fast-growing settlement developed on the mountain slopes. By about 200 BCE the site incorporated 160.6 acres (65 hectares), including three discrete but adjoining settlement zones that some archaeologists interpret as areas domi-

➤ CHANGING PERSPECTIVE ON CERAMICS AND EMPIRE

How do archaeologists know when one prehistoric culture came to dominate another, and how do they determine the nature of that relationship? Because archaeologists traditionally deal with preliterate societies, they have no written documents to use as guides to understanding these relationships and must rely on physical remains instead. A perennial source of this information has been ceramics, but what those ceramics indicate about ancient social relationships has been evolving over time due to changes in both technology and interpretation. This has impacted the way we think about the nature of places like Monte Alban and the influence it had on the Mesoamerican world.

Earlier generations of archaeologists interpreted the spread of ceramic styles as the spread of people themselves, an argument sometimes referred to as pots = people. The dramatic appearance of Monte Alban-style ceramics known as gray-ware and cream-ware represented to archaeologists the intrusion of people from Monte Alban into neighboring and distant sites. The dominance of the Monte Alban wares in ceramic assemblages further suggested not just the

presence but the actual domination of people by the Zapotec state.

Three things have begun to change this basic pots = people argument. First, the introduction of fine-scale analysis of ceramic pastes, including chemical analyses such as neutron activation analysis, now allows archaeologists to look beyond the superficial similarities of ceramic style and allows them to identify important differences between “imported” original pottery and local reproductions of the same style. Second, ethnoarchaeological studies of modern small-scale pottery production have given archaeologists better insight into what the processes of production really are, allowing for better interpretation of why people would either import or make copies of different pottery styles. Finally, realizing that ancient states used a variety of tactics to achieve political and economic control over other regions has led to a broader consideration of the role that pottery styles might play in imperial expansion. As a result, archaeologists still view Monte Alban as a powerful pre-Columbian state but no longer think that its influence was exclusively military.

—Jo Ellen Burkholder

nated by former residents of the different valley branches. The site also included the beginnings of a ceremonial center on the top of the mountain, though many of the original structures were later obscured by expansion and remodeling. A defensive wall 1.8 miles (3 kilometers) long along one side of the burgeoning city suggests that defense may have been a significant factor in site selection. Population estimates for the city by 200 BCE top 16,000.

The initial development of the urban center at Monte Alban happened in conjunction with major population shifts in the greater Oaxaca Valley, attested to by archaeological settlement surveys. The Oaxaca Valley grew in overall population, but this growth was not evenly distributed. San José Mogote in the Etla branch of the valley had previously been the largest and most influential settlement in the region, but with the development of Monte Alban, however, San José Mogote and other large sites in other branches

of the valley lost significant population or became uninhabited. At the same time, several other new settlements sprang up clustered in the area covering 7.7 square miles (20 square kilometers) around the emerging city of Monte Alban. Elite people living at Daínzu, Monte Negro, Abasalo, Tomaltepec, and other sites probably competed initially for economic and social status with the elite at the emerging center of Monte Alban.

Archaeologists believe that during the Monte Alban II phase (200 BCE–250 CE) a distinctively Zapotec state began to develop, with its capital at Monte Alban. Evidence cited for a more unified state emerging includes the massive terracing and construction work in the mountaintop ceremonial complex at Monte Alban. These large public projects speak to the ability to generate food surpluses and to control significant amounts of labor as well as to increased formality in religious practices and social/political organization.

Buildings of the Monte Alban II phase exhibit a distinctive architectural style including terraces, colonnades, sloping balustrades, two-room temple design, and subterranean elite tombs, all echoed at other Zapotec sites. Monuments incorporated into the new buildings at Monte Alban bear inscriptions understood as dates and place-name glyphs, and many include an inverted human head, suggesting conquest or dominance.

The Monte Alban III phase (250–700 CE) marks the apogee of the Zapotec state at Monte Alban. The mountaintop city reached its peak population of about 24,000 residents, with an additional 31,000 in small communities surrounding the larger site. Monuments in the principal ceremonial area on the flattened mountaintop reached their final forms. This included additional inscribed stelae that depict a bound captive standing on a small pyramid with a place-name glyph; a glyph signifying conquest appears within the pyramid below the captive. Zapotec artists perfected their skills during this period, producing colorful murals; exquisite pottery; jade, shell, and metal ornaments; elaborate masks; feather work; and clothing.

During the Monte Alban III period the Zapotec also expanded and maintained relationships with people well beyond the Oaxaca Valley. Most certainly this included Teotihuacan and the intermediate Ñuiñe region but may also have included places such as Cholula, Kaminaljuyu, and the Isthmus of Tehuantepec. Evidence of this relationship includes the presence of imported and imitation trade ceramics at Monte Alban, Zapotec ceramics and inscriptions at other sites (e.g., Teotihuacan and Chiapa de Corzo), and carved representations marking the visits of foreign emissaries. The equity expressed in the depiction of emissaries and the continued distinction in regional ceramic styles suggests that diplomacy rather than warfare characterized these relationships.

After 700 CE Monte Alban as a city fell into decline. Though expressions of Zapotec culture remained strong into the colonial era, Zapotec and Mixtec cultures began to blend as people from the rising Mixtec polities moved down the Etlá branch of the Oaxaca Valley.

What prompted the changes in the Oaxaca Valley is uncertain. On one hand, archaeologists

note that the drastic change in settlement patterns in Oaxaca resemble the *synoikism*, or rapid coming together, seen in some Greek city-states in times of threat. While the depictions of mutilated enemies in early monuments (like Building L at Monte Alban) certainly suggest that warfare played an important role, the use of personal name glyphs rather than place-name glyphs in these same monuments suggest intra-ethnic conflict rather than threat or warfare from people outside of the Oaxaca Valley; the monuments appear to name other Zapotecs rather than people from places farther away.

On the other hand, some archaeologists have looked to the environment to explain changes at Monte Alban. Development of irrigation technology that allowed for agricultural exploitation of valley flanks, or piedmont zone, coupled with an existing wealth of biodiversity provided for an economic surplus that could be manipulated by the elite to fund status-enhancing activities such as monument construction and for sponsorship of ball games and religious rituals. Through expansion, the Zapotec branched out to control and manipulate the resources of other areas as well, spreading their influence and concentrating even more resources in the hands of Zapotec elite. Given the relatively small population of the Oaxaca Valley (40,000), it is likely that economic imperialism rather than military domination played a significant part in the Zapotec expansion. In this sense, the individual actions of aspiring elite, rather than the environment, played an essential role in the concentration, manipulation, and exploitation of social, economic, and technological resources.

—Jo Ellen Burkholder

Bibliography

- Blanton, Robert. "A Consideration in the Causality in the Growth of Empire: A Comparative Perspective." In *Aztec Imperial Strategies*, edited by Francis F. Berden, et al. Washington, DC: Dumbarton Oaks Research Library and Collection, 2006.
- Marcus, Joyce, and Kent Flannery. *Zapotec Civilization: How Urban Society Developed in Mexico's Oaxaca Valley*. London: Thames and Hudson, 1996.
- Palerm, Angel, and Eric R. Wolf. "Ecological Potential and Cultural Development in Mesoamerica." In

Studies of Human Ecology, edited by L. Krader and A. Palerm. Washington, DC: Anthropological Society of Washington, 1957.

Zeitlan, Robert, and Arthur Joyce. "The Zapotec-Imperialism Argument: Insights from the Oaxaca Coast." *Current Anthropology* 40(3) (1999): 383-392.

Cultures of the Andes

As Chavín influence receded and then collapsed after 200 BCE, an increasingly decentralized, militarized landscape emerged in the pre-Hispanic Andes. Two powerful civilizations arose. Neither of them united the region as the Chavín had. These civilizations are called the Paracas/Nazca, who inhabited southern Peru, and the Moche, or Mochica, who dominated the northern coast. This period, through approximately 600 CE, is termed ancient Peru's Early Intermediate period.

The Paracas culture (ca. 600-175 BCE) inherited and then improved upon earlier Pan-Andean traditions, including religious practices involving anthropomorphic imagery and highly sophisticated mummification techniques. Andean peoples and cultures, particularly those occurring in desert environments, had mummified their dead for thousands of years. Paracans clothed their mummified dead in what remain the finest, most elaborately embroidered textiles in the pre-Hispanic Andes.

The Nazca culture (ca. 200 BCE-600 CE) is associated with the Paracas culture for geographic, technological, and artistic reasons. They are separated for chronological reasons; furthermore, they occupied the same specific sites in southern Peru. Trophy heads, to cite but one common thread, appear in Paracas textiles and at the Nazcans' ceremonial center, Cahuachi. Such centers, it is believed, drew people on pilgrimages from the surrounding area for religious purposes. But few if any resided there. Indeed, no capital cities or evidence of social hierarchies appear in Nazcan remains. The Nazca culture does not appear to have represented an empire or other kind of state, then. Little is known about Paracas/Nazca political history.



Peruvian mummy bundle from the Nazca culture on the southern coast of Peru, 200 BCE-600 CE. (Gianni Dagli Orti/Corbis)

DEVELOPMENT OF NAZCA AND MOCHE



► SIPAN'S LORDS AND MOCHICA MILITARISM

Ancient Peru's Early Intermediate period featured decentralized, militaristic peoples and cultures. Mochica elites and their sacrificial rituals, as seen through the royal tombs at Sipan and as correlated with the art-historical record, illustrate this.

The Mochica limited their military adventures to individual combat primarily designed to capture sacrificial victims. Warrior-elites employed large clubs, spear throwers, slings, and shields on open battlefields. They stripped their captives, tied their hands behind their backs, and led them by ropes around their necks to ritual centers. Costumed warrior-priests—men and women—then treated their captives with anticoagulants, cut their throats, and consumed their blood. Later, they dismembered the bodies and displayed trophy heads.

This ritual occurred across time and space during the Moche period, implying a regionwide state-religion. Furthermore, the art-historical record suggests that by capturing and tying their victims and then consuming their blood, these warrior-priests consciously emulated spiders. Ethnohistorian Alana Cordy-Collins has shown how those playing the decapitator role resemble spiders in Mochica art.

—James Douglas Lockhart

Nazca culture is also associated with the large-scale man-made geoglyphs and other abstract geometrical imagery—including straight lines—that appear in the landscape. This imagery covers more than 1,000 miles (1600 kilometers) of space in southern Peru. It has long intrigued scholars and other observers. The geoglyphs include, for example, a killer whale, a condor, and a hummingbird. Since these giant geoglyphs can only be appreciated from above, in the air, some have assumed that the Nazcans engineered them for religious purposes; the geometrical shapes and lines may have related to astronomical observations.

Ethnohistorians Anthony F. Aveni and Gary Urton have challenged this interpretation. They suggest that Nazcan engineers intended ground-based purposes. When viewed as footpaths, they appear as a network of trails that converge on strategic points related to waterways and ca-

nals. The interpretations, based on little data, remain inconclusive. It is not even certain that the Nazca culture designed and constructed all the imagery. That is, others—for example, any of their neighbors or successors—may have imitated them and superimposed at least some of the imagery for their own purposes, perhaps even long after the Nazca period.

Meanwhile, the Moche civilization (ca. 0–800 CE) emerged on Peru's northern coast in or near the region's river valleys from the Piura to the Huarmey. Archaeologist Max Uhle discovered and excavated the pyramids at and around the Moche in 1899 CE; Uhle named the entire civilization Moche. As with the Paracas/Nazca, it is not known what the Mochica called themselves. The Mochica, too, inherited and improved upon earlier Pan-Andean traditions. Their political economy likely involved redistribution, for example.

What is known of the Moche civilization derives from monumental remains, those royal burials that private collectors have not sacked, and the art-historical record. Mochica elites appear to have ruled independent kingdoms connected by a regionwide state religion. These elites wielded immense power, accumulated vast wealth, and radiated grandeur. They presided over trade networks that reached into modern Ecuador and northern Chile. They had little or no contact with the lower classes.

Mochica elites buried their wealth with them when they died. This included solid gold head-dresses and gilded tunics, among numerous other lavish artifacts. Their successors demanded their own clothing, furniture, and artwork. And this dynamic engendered and cultivated a technological and artistic florescence in north coastal Peru through the end of the Moche period. The Moche civilization declined and fell after an apparently unusually powerful and long-lasting El Niño (ENSO) weather pattern flooded the region circa 600 CE.

—James Douglas Lockhart

Bibliography

Alva, Walter, and Christopher Donnan. *Royal Tombs of Sipán*. Los Angeles: Fowler Museum of Cultural History, University of California Los Angeles, 1993.

Aveni, Anthony F. *Between the Lines: The Mystery of the Giant Ground Drawings of Ancient Nasca, Peru*. Austin: University of Texas Press, 2000.

Paul, Anne. *Paracas Ritual Attire: Symbols of Authority in Ancient Peru*. Norman: University of Oklahoma Press, 1990.

Development of Chavín

The Early Horizon Chavín civilization united Andean peoples and cultures in the first millennium, roughly between 800 and 200 BCE. This Pan-Andean politico-religious force originated from the northern highland Chavín de Huántar site, strategically located in modern-day Peru's Cordillera Blanca, roughly midway between the northern and southern coastal lowlands to the west and Amazonian tropical rain forests to the east, where natural trade and communications routes intersected. The Chavín influenced regional politics, religion, commerce, architecture, and art from this center.

Although historians associate the Chavín with the origins of Andean civilization, just as

they associate the Olmecs with the origins of Mesoamerican civilization, the Chavín, like the Olmecs, absorbed and incorporated earlier regional developments in food production, textiles and ceramics, and architecture and art. Like many from the Late Initial period, the Chavín apparently relied on religion as their primary organizing mechanism.

The Chavín began construction at their earliest monumental center, the so-called Old Temple, circa 900 BCE. Here they performed rituals that played on Native Americans' understanding and fears of the supernatural world. The U-shaped Old Temple featured architecturally based illusions, including larger-than-human anthropomorphic heads that towered above observers. A sunken circular plaza seated approximately 500 people outside the building. This plaza also displayed the Chavín's typically anthropomorphic and zoomorphic imagery, including fanged human faces growing snakes for hair, for example.

Inside, the Old Temple contained several hidden passageways and rooms. Many received little or no sunlight. Archaeologist Julio C. Tello

► PRE-HISPANIC ANDEAN HISTORY AND ITS PROBLEMS

Historians face several challenges and obstructions with respect to pre-Hispanic Andean history, particularly pre-Incaic peoples and cultures such as the Chavín. Did the Chavín civilization represent an empire or a religious cult, for example? Who built Chavín de Huántar, for that matter, and why? What were their politics? Experts lack direct historical records that might address such issues.

That which is known derives entirely from the archaeological and art-historical record. Consequently, archaeologists and art-historians—not historians—dominate this field. Pre-Hispanic Andean peoples and cultures apparently expressed their language orally and, in some cases, pictorially. But they did not develop writing. They did record much information on *quipus*, a unique data storage and retrieval system. Ethnohistorian Gary Urton believes that quipus potentially carry historical narratives. But scholars cannot read them at this time. And, in any case, precious few remain available for study.

This means, for example, that experts lack the equivalent of the Homeric legends that adventurer Heinrich Schliemann relied on when he searched for Mycenae in the nineteenth century. The Chavín apparently lacked a Herodotus or Thucydides who might have recorded their political history as well. Thus, one cannot describe Chavín and pre-Hispanic Andean history the way one might describe Mycenaean and classical Mediterranean history at this time.

Compounding this, the Incas revised Andean historical traditions after they built their empire. The oral traditions treating pre-Incaic Andean history that sixteenth-century Spanish chroniclers recorded include these distortions and corruptions. Moreover, many Western concepts and much Spanish-language vocabulary pervade early colonial chronicles and much of the scholarship that has followed. These limitations may not prove fatal to scholars' endeavors, but it is important to keep them in mind when exploring pre-Hispanic Andean history.

—James Douglas Lockhart

discovered El Lanzón, the Chavín's 15-foot (4.5-meter) tall supreme deity and idol, a massive anthropomorphic figure upon which the entire structure centered, in the early twentieth century. Art-historian Rebecca Stone-Miller has pointed out that there is no evidence to show or suggest that any humans ever observed El Lanzón directly. Nevertheless, scholars believe that Chavín shamans or other authorities might have consumed mescaline and other hallucinogenics to consult this oracle, apparently their primary conduit to the supernatural world.

The Chavín's authority spread over the Andes from this temple. Local peoples and cultures constructed and maintained Chavínoid (the scholarly term for material culture that imitates or is influenced by Chavín styles) subsidiary religious centers as earlier independent Late Initial period societies collapsed. They also exchanged Chavín-style artifacts and artwork far and wide. Chavín de Huántar functioned as the center of exports and imports with respect to these cultural and commercial exchanges. And archaeologists at this site have uncovered what appears to have been tribute—including gold, exotic shells, and other precious commodities—from northern and southern coastal areas.

Meanwhile, the Chavín continued to renovate and expand the Old Temple. By circa 500 BCE the so-called New Temple, a much larger structure, appeared at Chavín de Huántar. It featured more sophisticated imagery, particularly depicting the supreme deity, culminating in the Raimondi Stone. But by approximately 200 BCE Chavín influence had declined and collapsed, however.

Widespread upheavals of an unknown origin and nature precipitated this collapse. At many sites, including Chavín de Huántar, archaeologists have uncovered unfinished construction projects, entire monumental centers abandoned, and destruction. Archaeologist Richard L. Burger, perhaps the most authoritative English-language source on the Chavín, also points to an increasingly militarized Andean landscape, featuring newly constructed hilltop fortresses and other defensive architecture, after 200 BCE. Thus, the Early Horizon's unity fragmented into the Early Intermediate period's isolated polities.

—James Douglas Lockhart

Bibliography

- Burger, Richard L. *Chavín and the Origins of Andean Civilization*. London and New York: Thames and Hudson, 1992 and 1995.
- Davies, Nigel. *The Ancient Kingdoms of Peru*. New York: Penguin, 1997.
- Stone-Miller, Rebecca. *Art of the Andes: From Chavín to Inca*. 2nd ed. London and New York: Thames and Hudson, 2002.

Debating Hopewell Social Structure—Chiefdoms or Egalitarian Communities?

Hopewell-style sites, famous for large-scale geometric patterns, stretch from the Great Lakes to the Gulf Coast and radiocarbon date between 200 BCE and 400 CE. Part of the 2,000-year “moundbuilder sites” earthwork tradition of eastern North America, Hopewell society fits chronologically between the less complex Adena phase and the more complex Mississippian phase. The 1848 survey project by Squier and Davis confirmed the vast spatial extent and complexity of moundbuilder sites and began a debate over the proposed complexity of societies in ancient North America. The Hopewell phenomenon was the logical intermediate link between an egalitarian past and complex societies of the future, but a century of research has failed to clarify the picture.

Hopewell sites are more complex in size, use, construction, and function than earlier Adena sites with geometric forms, astronomy alignments, larger populations, and larger interaction zones. Trade items from across North America, especially obsidian from the Rockies, cold-hammered copper from Lake Superior, and mica from southern Appalachia, indicated complex trade by land and rivers. Larger sites and mounds such as at Hopewell contain burials with exclusive goods (copper and stone decorative items) in far greater quantities than at smaller sites. Road systems may have linked sites together, suggesting hierarchy across the landscape. The presence of site-size hierarchy, differential burials with scarce goods, and exclusively linked sites all suggested a stratified society by individual and by group/site. But was the Hopewell phenomenon really a complex society?

Genetic evidence in a study by Bolnick and Smith from burials at several Hopewell sites, including the Hopewell Mound Group and the Pete Klunk Mound Group, examined maternally inherited relations in and between sites. Surprisingly, no evidence of rank or status was found. This contradicted the archaeological evidence noted above. Instead, migration and gene flow were evident between the Hopewell sites examined. So, were the Hopewell and other moundbuilders negotiating social power by other means?

Researchers must now answer more difficult questions such as who built the Hopewell sites, who used them, and when and for what purposes? Insights may lie in comparing Hopewell to other societies that modified large landscapes such as Chaco Canyon in the U.S. Southwest, the Nazca in Peru, and megalithic builders in Europe. A holistic adaptation seems shared by such groups that code their worldviews into a complex built environment that evolves over time and space. These modified landscapes and sites share integration of geometric patterns, astronomical observations, natural cycles, the world of the living (villages), and the world of the dead (mortuary sites), representative of the local social adaptation to a complex environment.

Perhaps the questions we ask need reframing. Did the Hopewell see themselves as complex compared to their neighbors? Were Hopewell populations sufficient to warrant social complexity? Both questions are difficult, as we need to get at the ancient Hopewell worldview. For instance, did the Hopewell see their society served by these sites as just the living, or were the ancestors included? Were neighboring societies seen in the same worldview?

—Christopher Howell

Bibliography

- Bolnick, D., and D. Smith. "Migration and Social Structure among the Hopewell: Evidence from Ancient DNA." *American Antiquity* 72(4) (2007): 627–644.
- Byers, A., and D. Wymer, eds. *Hopewell Settlement Patterns, Subsistence and Symbolic Landscapes*. Gainesville, FL: University Press of Florida, 2010.
- Connolly, R., and B. Lepper, eds. *The Fort Ancient Earthworks: Hopewell Culture in Southwestern Ohio*. Columbus, OH: Ohio Historical Society, 2004.
- Squier, E. G., and E. H. Davis. *Ancient Monuments of the Mississippi Valley*. Smithsonian Institution Contributions to Knowledge, Vol. 1. 1848; reprint, Washington, D.C.: Smithsonian Institution Press, 1998.

■ Introduction: Imperial Structures, Bureaucracies, and Administration

Large empires appeared throughout the world during the period from 1000 BCE to 300 CE. The growth of empires is one of the hallmarks of this period, including the Han in China; the Romans in Europe, Africa, and Asia; and the Parthians in Asia. Although historians use the term “empire” in a number of ways, usually it refers to a type of political organization in which a small core territory controls a larger periphery, usually acting to the advantage of the core at the expense of the periphery. The following entries seek to illustrate some of the varieties of imperial governance and administration from 1000 BCE to 300 CE.

—Kevin M. McGeough

Neo-Assyrian and Neo-Babylonian Empires—Imperial Structures, Bureaucracy, Administration

In the earlier first millennium BCE, Assyria became the dominant power in the Near East due largely to its professional and effective army. Within Assyria proper (*mat asshur*, “the Land of Ashur”), which stretched as far west as the Euphrates Valley, the Crown made grants of land to dependents in return for a proportion of their produce, corvée labor, and military service as irregulars, continuing the ancient *ilkum* system. Militarism underlay the whole state, with most

➤ NEBUCHADNEZZAR AND BABYLON

Building records extol the major works that Nebuchadnezzar undertook in restoring many cities of Babylonia and repairing and embellishing their shrines. Babylon benefited especially. To defend the city, Nebuchadnezzar restored, strengthened, and extending its walls, later regarded by the Greeks as one of the Wonders of the World. He rebuilt and extended the quays and canals within the city and the canal network beyond, facilitating water transport. One use of this was to bring in the valuable timbers, such as cedar, ebony, and sissoo wood, and precious materials, including gold, silver, lapis lazuli, and ivory, to embellish major buildings of the city. These included the Southern palace, which Nebuchadnezzar restored, adding new courtyards with many rooms, and a new North palace. He rebuilt the great Processional Way and constructed the Ishtar Gate, decorating both with glazed brick friezes of bulls, lions, and dragons. In the precinct of Marduk, vandalized by Sennacherib, Nebuchadnezzar completed the restoration work undertaken by his predecessors, overlaying the shrines with gold. He also completed the reconstruction of the great ziggurat, Etemenanki (the “Tower of Babel”).

—*Jane R. McIntosh*

officials holding both civil and military posts and every man being obliged to serve in the army if required, while the king was also the commander in chief. All landowners were directly responsible to the king, who, as in former times, was answerable to the gods, especially Ashur. Through time, power was transferred away from the traditional landowning elite; as the Crown gained control of an increasing proportion of the land, it granted estates to bureaucrats and generals.

In the conquered lands beyond the Assyrian heartland, vassal kingdoms were ruled by governors drawn from local dynasties or prominent local families. They paid tribute (often enormous quantities) to their Assyrian overlords and acted in concert with them. Much of the wealth from provincial tribute was used to create and decorate new Assyrian capitals and to support the royal court and central administration.

In the ninth century the Assyrians began to establish military outposts in conquered territory, supported by local taxes. These became administrative centers, developing into regional capitals. It was not until the eighth century under Tiglath-Pileser III that the Assyrians actually began to take direct administrative control of conquered territories, dividing them into numerous small provinces under Assyrian governors instead of local rulers. The changeover occurred gradually, vassal states passing into direct rule when they rebelled.

Military force backed bureaucratic authority, and Assyrian actions were seen as the will of the national god, Ashur. The highest officials were the majordomo, who had direct access to the king; the vice-chancellor, who acted as the king's scribe; and two field marshals, who could deputize for the king on the battlefield. Other high-ranking courtiers who also held senior military offices included the cupbearer, the steward, and the palace herald. Under Tiglath-Pileser the army became a professional body with an elite cavalry core. A network of roads and an efficient messenger service kept the king in control of the army and the administration. Tiglath-Pileser deported troublesome conquered peoples on a scale hitherto unknown. The deportees were often kept together as a community, frequently working as farmers or on large state construction projects, and were generally well treated.

High court officials held the governorships of provinces, and lesser provinces were ruled by less senior officials. A provincial governor maintained his own court and was backed by a standing army, supported from local taxes. The province was regarded as the governor's private estate, a temptation to extortion or the exercise of independent rule, though governors were generally honest, loyal, and conscientious. Bureaucrats were frequently illiterate, but the administration employed many scribes. Although most officials were Assyrians, foreigners in principle could also become part of the bureaucracy.

The Assyrians increased agricultural productivity, founding new settlements and estates in both the Assyrian heartland and the provinces under Assyrian generals and senior bureaucrats and using deportees as labor. Conquered peoples

also made up an increasingly large proportion of the armed forces; by weakening loyalty to the regime this contributed to its eventual downfall. Another factor was the imbalance between the center and the provinces: the latter were drained of manpower and resources to aggrandize the former, causing economic depression.

Among the Assyrian provinces, Babylonia was a special case. Assyria needed peace along its southern frontier, and periodic hostility had to be dealt with. For several long periods Babylonia was under Assyrian control, but the respect felt by the Assyrians for the elder state meant that it was not treated as a conquered land and not administered as an ordinary province but instead was brought directly under royal control. When Babylonia attempted to throw off Assyrian rule, it did not suffer the usual brutal retribution for subordination. When Sennacherib sacked Babylon after a long succession of wars, this was widely viewed as hubristic and impious, and his son Esarhaddon lost little time before attempting to restore the city. After the long reign of Esarhaddon's son Ashurbanipal under whom Babylonia prospered, Assyria rapidly declined, enabling Babylonia to gain control of the whole Assyrian empire by 610 BCE.

For much of the first millennium Babylonia had been riven by internal conflict, particularly between the urban north and the powerful Chaldean tribes of the south; had been undermined by Aramaean raids; or was at war with Assyria. A literary text, "King of Justice," describes the abuses that prevailed in periods of disorder: the weak oppressed by the strong, unable to obtain redress, and judges perverting justice. There had, however, also been significant periods of peace and prosperity, some under Assyrian control, others under native kings. One such was Marduk-apla-iddina, originally the sheikh of the powerful Chaldean Bit-Yakin tribe, who in 722 succeeded for a time in uniting the disparate factions within Babylonia. Little documentary evidence of Neo-Babylonian administration survives; political texts mainly recorded the pious acts of kings. Marduk-apla-iddina, acting as Marduk's representative on earth, claimed to have acted as a model ruler, restoring temples, maintaining irrigation systems, and following tradition, such as upholding cit-

ies' ancient privileges. Officials mentioned in a *kudurru* (land grant) text show that governors of cities and leading officials of major temples as well as the king and his entourage played important roles in Babylonian administrative organization.

A later text, from Nebuchadnezzar's reign, shows that officials were bound by an oath of allegiance sworn personally to the king. Documents refer to various different local authorities: tribal sheikhs in Chaldean and Aramaean districts, governors of cities and Babylonian districts, and client kings or pro-Babylonian native officials in provincial districts where possible, though some were under Babylonian governors. Their responsibilities were probably similar to those of earlier Assyrian administrators, including collecting taxes and promoting agriculture, industry, and trade. The Babylonians derived substantial tribute from subject lands, as had the Assyrians. Babylonian texts, however, emphasize the role of the king as the source of justice and fair rule for subject peoples as well as Babylonians. Like the Assyrians, the Babylonians used people deported from rebellious regions to settle land and increase agricultural production or to work in various industries.

Under Neo-Assyrian and Neo-Babylonian kings, the temple became an integrated part of the political structure. Endowed by the king with substantial lands, the temples were given a considerable measure of responsibility for their local community, with temple officials acting as local judges and presiding over district assemblies. They collected tithes from the citizens of their districts and paid a proportion of these to the Crown. They also had to provide labor and resources as the palace required, such as pasturing royal herds and provisioning royal officials. Temple accounts and activities were open to scrutiny by royal officials.

Some texts refer to traditional privileges enjoyed by the citizens of Babylon, Nippur, and Sippar, including exemption from corvée labor, taxation and army service, and some degree of civic and judicial autonomy. This privileged status (*kidinnutu*) was formally recognized not only by Babylonian kings but also by many Assyrian rulers.

—Jane R. McIntosh

Bibliography

- Grayson, A. Kirk. "Assyrian Rule of Conquered Territory in Ancient West Asia." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson, 2000.
- Kuhrt, Amelie. *The Ancient Near East*. London: Routledge, 1997.
- Postgate, J. Nicholas. "Royal Ideology and State Administration in Sumer and Akkad." In *Civilizations of the Ancient Near East*, edited by Jack M. Sasson. Peabody, MA: Hendrickson, 2000.
- Wiseman, D. J. *Nebuchadnezzar and Babylon: The Schweich Lectures*. Oxford: Oxford University Press, 1991.

Achaemenid Empire—Imperial Structures, Bureaucracies, and Administration

When Cyrus the Great created the Persian empire through his conquests, he faced the task of governing a vast territory made up of many different cultures. His practical solution was to make use of the administrative systems already in place in the different conquered regions. In major states such as Media and Babylonia he inherited complex bureaucracies; in much of the Levant and Anatolia he was dealing with city-states and small kingdoms, while in many other regions there were looser political structures, including tribal groups under petty chiefs. Cyrus appointed Persian nobles to supervise many regions but retained some local rulers and most lower-ranking local officials.

Cyrus derived considerable wealth from the treasuries of conquered states. Revenue was raised in several ways but was conceived of as gifts. The king rewarded his supporters with gifts, such as land confiscated from defeated enemies. In return they presented him with some portion of their estates' annual produce and provided troops as required. The support of local elites was secured with gifts and honorable but largely powerless appointments.

When Darius I seized the Persian throne in 522 BCE, he completely overhauled the administrative organization of his empire, creating an enduring system that was efficient but flexible. He commissioned the compilation and codification of each region's laws to enable his adminis-

tration to uphold and enforce them. Similarly, although Imperial Aramaic was used throughout the empire in the higher tiers of government and administration, regional languages were used at a local level.

Darius divided the empire into provinces (usually referred to as satrapies), each under a Persian governor (satrap) drawn from the king's family or inner circle. The number of satrapies varied through time due to further conquests and other political changes. Herodotus, writing in the mid-fifth century, lists 20. Many corresponded to previous political divisions, including Egypt, Media, and Babylonia, later divided into Babylonia (including Assyria) and Abarnari (Beyond the River), comprising western Syria and the Levant. The number and extent of satrapies in Anatolia varied in response to revolts and conflicts between local rulers. Other provinces divided up the Iranian plateau and the lands to its north and east. The Persian homeland, in southwestern Iran, was treated differently from other provinces, such as being exempt from taxation. The king maintained a substantial royal staff: some traveled with him, while others resided in the imperial capitals (Susa, Persepolis, Ecbatana, Pasargadae, and Babylon) and other important centers. Neither the king nor his nobles were literate. The Persians set more store on active skills, such as horsemanship and excellence with the bow and spear, and on oral learning, particularly by observing in the law courts.

Darius assessed the wealth and productivity of the provinces and fixed the tribute due from each, calculated in talents of silver although in reality some of the tribute was delivered in kind, as is so vividly depicted on the Tribute Reliefs at Persepolis. Gone was the notion of gifts except in the case of communities under looser control; these included Zagros nomads and the Scythians, who provided many soldiers for the imperial armies, and the Arabians, who gave annual gifts of incense. In return the king presented prestigious gifts to their leaders and might also offer them military assistance.

The satrap was responsible for collecting tribute and other taxes and transmitting them to the king; using taxes in kind to support himself and his staff, local garrisons, and the workforce

on state projects; and storing some of the silver locally, mainly to pay mercenaries in emergencies although he probably required royal authorization to use it. He also administered justice and maintained the peace, promoted agriculture, and generally ensured the well-being of his province. Treasuries were maintained in some other fortified centers under the control of a treasurer, but much of the silver, along with booty from captured cities and precious gifts from client rulers, was stored in royal treasuries in the imperial capitals. Within each satrapy there were subdivisions, usually under Persian governors but not always: for example, within Abarnari, the kingdoms of Cyprus and the city-states of Phoenicia were governed by their traditional rulers, all answerable to the satrap, who kept them under strict observation. Native officials familiar with the local language and customs controlled smaller administrative units.

Another important satrapal duty was to raise troops from the province. These were under the authority of a military commander, who often cooperated with the satrap but who was directly answerable to the king and personally selected by him from among the highest nobility. Coastal and island communities instead supplied oarsmen for the navy, manning ships built by the state and commanded by noble Persian officers. Nobles favored with gifts of land had variously to supply infantry, cavalry, or chariotry. Their lands might be worked by tied labor; alternatively they could be parceled out to individuals who, when required, had to either serve as soldiers themselves or pay for a substitute. In other cases such individuals held “bowman land” directly from the king. Census records were maintained of all from whom such service was due. In periods of greater stability when troops were not required, landowners paid a tax in silver instead. Armies were raised to conquer new territories or to put down revolts. Troops were present throughout the empire; not only did the king and satraps maintain permanent garrisons in sensitive places, including cities, river crossings, border regions, and imperial strongholds with treasuries, but landowners had their own soldiers to defend their estates. Garrison soldiers could be granted land in the vicinity as well as receive rations from

➤ THE PERSEPOLIS TEXTS

Fascinating details of Persian administration are revealed by Elamite cuneiform tablets found at Persepolis: more than 30,000 Persepolis Fortifications Tablets and 753 Treasury Tablets. Produce from royal estates and other sources was gathered into storerooms at Persepolis and many local centers, while silver and other valuables were stored in the Persepolis treasury. In overall charge of these, answerable directly to the king, was the chiliarch and under him the treasurer, both Persians of noble birth. A few senior officials were responsible for allocating personnel to tasks and authorizing the disbursement of rations to support them, while a large number of lesser officials gave out the orders and rations and assembled the work parties for particular tasks, such as digging irrigation channels or undertaking building work at Persepolis. It is not entirely clear who these workers were: local people performing *corvée* labors instead of military service, laborers deported from other parts of the empire, slaves, or free state employees. There were also groups of craftsmen brought in from all over the empire to exercise particular skills. Work was paid in rations of barley, 30 and 20 quarts per month, respectively, to ordinary male and female workers and 5 quarts to children, while foremen and women and skilled workers received 40–60 quarts of barley and rations of wine or beer.

—Jane R. McIntosh

the state. Documents reveal that Judean soldiers, under Persian officers, garrisoned the fortress on the island of Elephantine, near Egypt's southern border. Across the river in the city of Syene, the district governor maintained a separate garrison.

Taxes were collected on many things including farm produce, fisheries, imports, and access to irrigation water, and the state also derived produce from royal estates. Cuneiform documents found at Persepolis and small numbers of archived texts from regional capitals across the empire refer to the use of taxes in kind as rations issued to state workers, soldiers, and travelers on official business. Occasionally, as shown in the Persepolis Treasury texts, people were paid a part of their ration entitlement in silver,

generally when there was a shortage of barley. It was only in Anatolia, where coinage was used before the emergence of the Persian empire, that a monetary economy operated. Darius created a new coinage in gold (*darics*) and silver (*sigloi*); this was rarely used beyond Anatolia. Later Persian kings and occasionally satraps under license also minted coins, mainly to pay foreign mercenaries.

At the head of the state was the Great King, all-powerful, motivated by the highest principles, and embodying the highest virtues, answerable to none but the god Ahuramazda who had chosen him to counter disorder and uphold peace and prosperity. The king employed local experts to advise him on affairs in different parts of the empire and to act as his agents. There was also a network of spies, the King's Eyes and Ears. Texts show that the king sometimes consulted with his highest nobles, but whatever the advice he might receive, his was the final decision, which none could question but could only obey.

—Jane R. McIntosh

Bibliography

- Briant, Pierre. *From Cyrus to Alexander: A History of the Persian Empire*. Winona Lake, IN: Eisenbrauns, 2002.
- Cook, J. M. *The Persian Empire*. London: Dent, 1983.
- Curtis, John, and Nigel Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. London: British Museum Press, 2005.
- Gershevitch, Ilya, ed. *The Cambridge History of Iran*, Vol. 2. Cambridge: Cambridge University Press, 1985.
- Kuhrt, Amelie. *The Ancient Near East*. London: Routledge, 1997.

The Parthian Empire

The Parthians were a Persian dynasty from the northeastern Iranian plateau that eventually came to conquer much of the eastern Seleucid empire between the third and first centuries BCE. While we do not have many sources written from the perspective of any of the ancient Persian empires (Achaemenid, Parthian, or Sassanian), the problem is particularly acute when it comes to Parthian history. In order to re-create

a historical narrative of the Parthian empire, historians have been forced to rely on Roman sources, unearthed Parthian coins, and archaeological research. Thus, much of our knowledge about Parthian history dates to the period following Parthian-Roman contact in the first century BCE and deals mostly with Parthian-Roman relations. Still, it bears mentioning that even though the Parthians did not leave behind an abundance of written materials, between the third century BCE and the third century CE they established themselves as the chief power in Iran and parts of Mesopotamia and were able to successfully challenge Seleucid and later Roman power in the east.

Historians do not know exactly when the Parthians appeared on the scene, but by either the early 240s or the late 230s BCE the Parthians had staged a successful local revolt against Seleucid authority in northeastern Iran. After establishing themselves as a small kingdom independent of Seleucid rule, the Parthians conducted diplomacy with their former masters, sometimes forming alliances and other times engaging in armed conflict. During the mid-second century BCE the Parthian king Mithradates I, taking advantage of a weakened Seleucid empire that had recently come into conflict with the expanding Roman state to the west, conquered much of Iran and parts of Mesopotamia up to Syria. Following Mithradates I's death in 138 BCE, the Seleucids went on the offensive and were able to recapture much of Mesopotamia and Iran, possibly even penetrating into the Parthian homeland in northeastern Iran. The Parthians soon turned the tables after a surprise attack that led to the death of the Seleucid leader and struggled to reconquer Iran and Mesopotamia since several independent kingdoms had risen in the wake of the power vacuum following years of Parthian-Seleucid warfare.

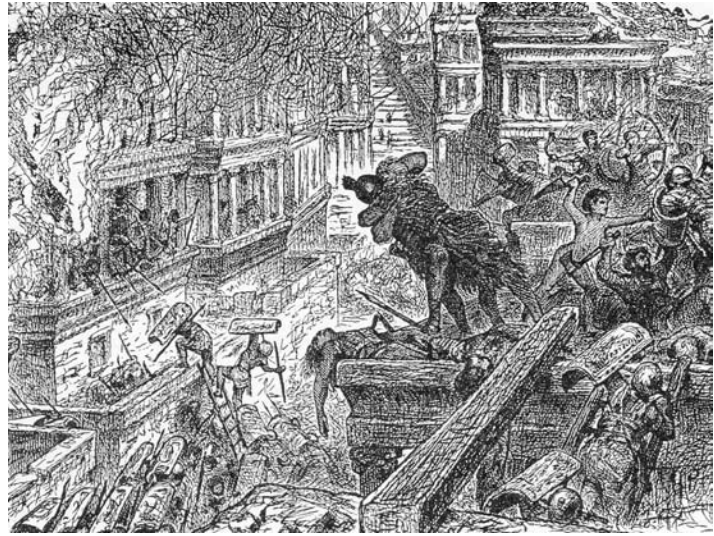
At this point, however, a new Parthian leader, Mithradates II, acceded to the throne and led his forces in the successful reconquest of Mesopotamia. Mithradates aided in the creation of an independent Armenian kingdom, which soon became a point of contention between the Parthians and Romans and later the Sassanians and Romans. During the later part of Mithradates' reign (ca. 90 BCE) the Parthians estab-

lished contact with the Romans, although this led to neither immediate conflict nor peace. By this point the Parthians had conquered and secured a large empire that stretched from eastern Iran into eastern Syria and from the Caspian Sea to the Persian Gulf.

By the mid-first century the Romans and Parthians had become the most formidable powers in the ancient Near East. During the first Roman triumvirate, Marcus Crassus—the period's wealthiest but least-capable military leader—used his position as governor of Syria to invade Parthian territory, where his forces were soundly defeated and he lost his life at the Battle of Carrhae. Although the Parthians won the battle, they did not press their advantage but instead preferred to fortify their positions near Roman territory.

Over the next century and a half the Romans and Parthians maintained relatively stable borders, although in terms of overall military strength the Romans were clearly the superior power. Under Augustus and Tiberius the Romans and Parthians exchanged diplomats and even political hostages (members of each group's imperial families who spent time in the other's territory). Both also attempted to use the independent Armenian kingdom to their advantage by intervening in internal Armenian politics. By the late first century CE the Parthians may have suffered from local revolts within their empire, although modern authors are unsure. Regardless of the specific internal events, the Roman emperor Trajan invaded and conquered much of Mesopotamia in the early second century CE, including the Parthian capital at Ctesiphon near the ancient city of Babylon (and also near the present-day city of Baghdad). Trajan's forces advanced as far as the Persian Gulf, although they eventually fell back to the expanded boundaries of the Roman territory in the Near East.

Following Trajan's death, Roman leaders turned their attention elsewhere for the next 50 years until Marcus Aurelius once again invaded Parthia in the mid-160s CE and sacked Ctesiphon before once again falling back to Roman territory. After the death of Marcus Aurelius's son Commodus in 192, the Romans endured a short period of civil war in which the Parthians recaptured minor territories along the Parthian-



Roman soldiers ravage the Parthian city of Ctesiphon, second century CE. (Ridpath, John Clark. Ridpath's History of the World, 1901)

Roman border. The eventual victor of the civil war, Septimus Severus, then invaded Parthia before retreating back into Roman territory to deal with problems in Gaul. In 198 following increased Parthian raids, Severus reinvaded Parthia and once again sacked Ctesiphon.

Although the Parthians had been able to maintain central rule during the second century CE, their military defeats against the Romans had badly damaged the dynasty's prestige among its subject peoples, including many Persian groups. During the 220s CE Ardashir, the patriarch of the Sassanian dynasty, staged a successful revolt against the Parthians, leading to the Parthians' total defeat sometime between 223 and 227 CE. According to two Roman sources, the new dynasty, likely enraged by successive Parthian defeats at the hands of the Romans, announced their intention of recapturing the lands held by the former Achaemenid empire, which would have included Roman Syria, Palestine, Egypt, and Anatolia. Over the next four centuries the Romans and Sassanians would engage in a series of wars that were much more closely contested than the Parthian-Roman wars had been during the second century CE.

—Jonathan Sciarcon

Bibliography

Frye, Richard. *The History of Ancient Iran*. Munich: C. H. Beck, 1984.

Yarshater, Ehsan, ed. *The Cambridge History of Ancient Iran: The Seleucid, Parthian, and Sassanian Periods*, Vol 3. Cambridge: Cambridge University Press, 1983.

Alexander and the Hellenistic Kingdoms

Alexander the Great of Macedon (356–323 BCE) is known to posterity for his military genius and the vastness of his military conquests throughout the known world of antiquity. His campaigns fostered a new epoch in world history when Greek culture was infused into various world regions (such as Egypt, Persia, central Asia, and India). His successors (known as the *diadochi*) adopted his so-called cult of the ruler to augment their political control of their subject populations and continued Alexander's policy of Hellenizing the empire through the influx of Greek culture in the newly acquired dominions. In the aftermath of Alexander's death in 323 BCE, his generals Seleucus I, Ptolemy I, and Antigonus I, among other minor rulers, fought over and, in the process, divided the spoils of the overextended empire. In subsequent centuries,

the dynasties they established would contribute to the creation of the thriving Hellenistic world of the eastern Mediterranean.

The Seleucid empire, founded by Seleucus I (ca. 358–281 BCE), encompassed the provinces of Asia Minor, Babylonia, and Syria. At its greatest geographical zenith, it included vast tracts of central Eurasia from Thrace in the Greek peninsula to India along the Indus River valley. Of the three major successor kingdoms, Seleucus controlled the largest of the three but was constantly at war with the other Hellenistic kingdoms, losing provinces in the process. While Seleucus established his capital in the ancient city of Babylon in 312 BCE, he spent the duration of his life suppressing revolts by his satraps (Persian provincial governors). His attempt to adapt to the political arrangements of the former Persian empire (the satrapy) won him some successes with the local populations; however, his wars with the other Hellenistic kingdoms did not. However, under his reign and that of his successors, Seleucus was able to promote the expansion of Greek language and culture throughout his empire through Greek veterans' settlements, intermarriage, and commercial expansion.

Ptolemy I (ca. 367–285 BCE) was the founder of the Ptolemaic dynasty in Egypt, having served as a general for Alexander and having fought against Alexander's successors, establishing his dominion over the province of Egypt. Ptolemy managed to obtain Alexander's body in transit to Macedonia and proceeded to bury it in Egypt to legitimize his rule as successor of Alexander. Taking note of the Egyptian belief system regarding the afterlife and their king-deities, Ptolemy buried Alexander in an elaborate tomb in Alexandria. Ptolemy then proceeded to refer to himself as pharaoh, invoking the reverence of some of his Egyptian subjects. However, despite his efforts and that of his successors, most Egyptians did not accept Greek rule, and while some members of the ruling bureaucracy were Hellenized Egyptians, most of the administration was Greek in origin. Nonetheless, large-scale projects such as the Lighthouse and the Library at Alexandria (both later destroyed) were a testament to the efforts of the Ptolemaic dynasty at Hellenizing Egypt and the cultural exchange between Greek and Egyptian civilizations.

THE MUSEUM AT ALEXANDRIA

The Museum (*mouseion*) at Alexandria was an ancient Greek temple for the Muses, constructed specifically for the nine goddesses of music and literature but also as a ploy to solidify Greek hegemony in Egypt. The Hellenistic Egyptian ruler Ptolemy I founded the Alexandria Museum in the late third century BCE. The Museum served as more of a research institute than a temple for the Muses, and thus the pursuit of scientific investigations was central in the work of scholars there. The Museum developed as a center of Hellenistic science and drew visiting scholars throughout the Hellenistic world. Despite the Museum's gradual decline in the second century BCE, it survived well into the Roman period, serving as an example of the Greek intellectual tradition and as a conduit for cultural exchange between Greek and Egyptian civilizations.

—Abraham O. Mendoza

The Antigonid dynasty in Macedonia was founded by Antigonus I (ca. 382–301 BCE), a Macedonian general who served under Alexander. In the wars against Ptolemy and Seleucus, Antigonus succeeded in maintaining control over Macedon and most of the Greek peninsula. Utilizing the pretext of Macedonian unity over the Greek world, he succeeded in solidifying his control over Greece and continued support for his wars. Under his dominion and that of his successors, Greek life retained an element of cultural continuity from previous historical periods while shaped by contact with the Hellenistic kingdoms to the east and the emergent Roman republic to the west.

The Hellenistic successor kingdoms that replaced the massive empire of Alexander the Great lasted from approximately 323 to 30 BCE. Throughout this period, Greek culture, language, and values spread throughout much of the Mediterranean and the Middle East and, to a lesser degree, central Asia and India. Alexander the Great's conquests spurred Greek influence throughout the ancient world as it came into contact with older civilizations and empires, such as that of the Persians, Egyptians, Babylonians, Hebrews, and Indians. New Greek cities and settlements in colonial territory, initially founded by Alexander and then by his successors, further spread Greek commerce, religion, and values, becoming themselves centers of Greek culture. This led to an influx of ideas and a mixture of cultural influences, contributing to advances in architecture, sculpture, science, literature, and the arts. In turn, Hellenistic culture was influenced by central Asian and Indian traits, particularly in philosophy. While the Hellenistic Age ended in 30 BCE, finally succumbing to Roman hegemony, its influence continued to be felt for centuries.

—Abraham O. Mendoza

Bibliography

- Bosworth, A. B. *The Legacy of Alexander: Politics, Warfare, and Propaganda under the Successors*. New York: Oxford University Press, 2002.
- Erskine, Andrew. *A Companion to the Hellenistic World*. Malden, MA: Blackwell, 2003.
- Habicht, Christian, ed. *The Hellenistic Monarchies*. Ann Arbor: University of Michigan Press, 2006.
- Walbank, Frank William. *The Hellenistic World*. Rev. ed. Cambridge: Harvard University Press, 1993.

Death of Alexander and Division of His Empire

The death of Alexander the Great in 323 BCE created a power vacuum in which his top generals clashed over the spoils of empire. Controversy over his death plagued the battle over succession, as various persons were accused of having conspired to poison Alexander. Commentators from antiquity until the present still debate the nature of Alexander's death as to whether or not he died from illness or extreme drunkenness or was assassinated by a potential usurper. As speculation over the nature of his death is further confounded by testimonies and accusations made at the time, the exact reason for his death at an early age is still an issue of contention. Regardless of the cause, his death created an untenable situation in which various contenders for power fought to legitimize their position as his proper successor. His death and the divisions among his generals over the future of the empire resulted in a series of wars and conflicts. Ultimately the major regions of Alexander's empire were passed on to three of his generals, with much of the rest achieving differing levels of autonomy or sovereignty.

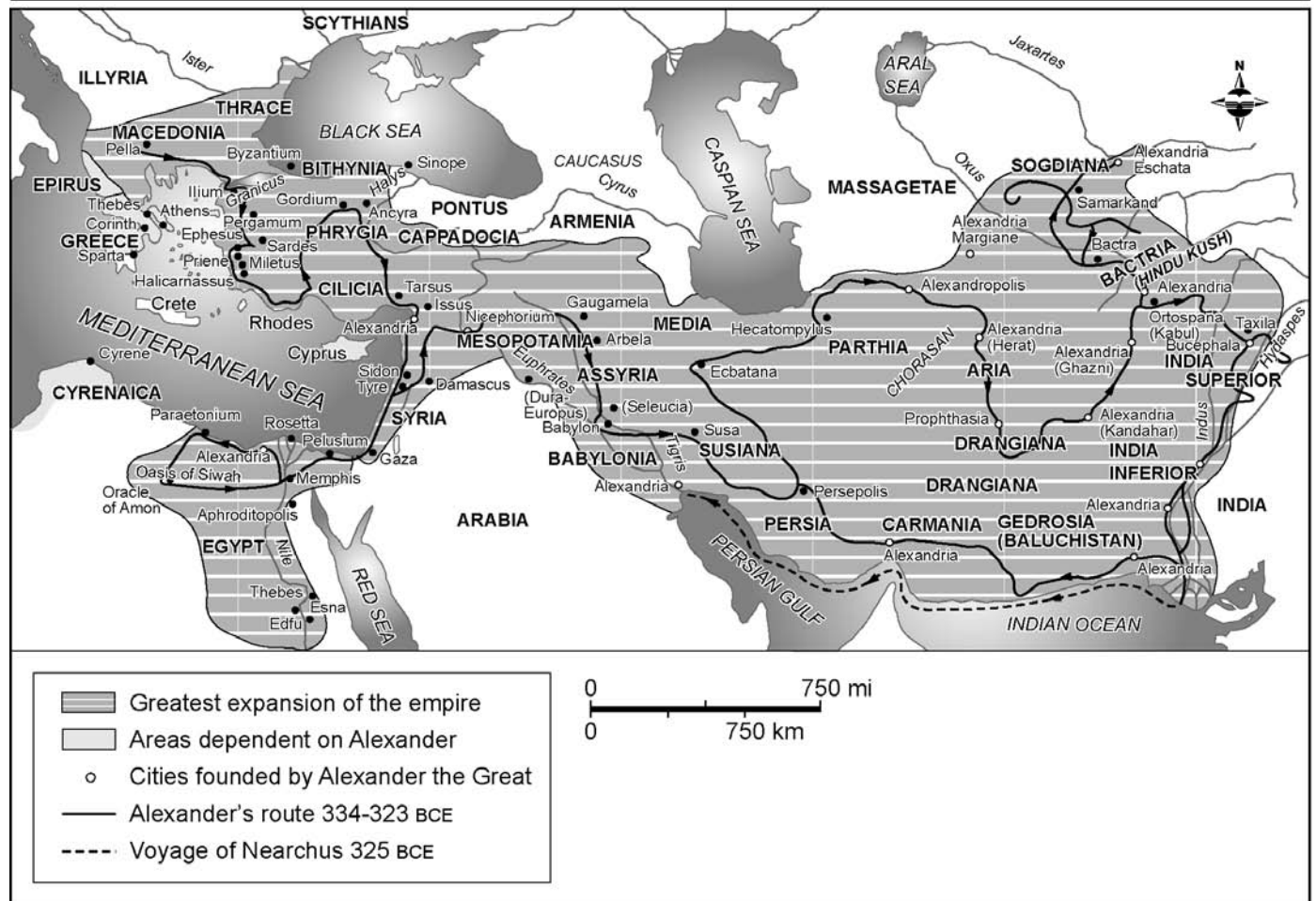
Alexander the Great died in the city of Babylon on June 10, 323 BCE, after suffering from an illness, thought to be malaria, for approximately ten days. Almost immediately, rumors circulated that he had been poisoned by conspirators,

➤ ALEXANDER THE GREAT'S LEGACY IN ROME

While famous in his own time, Alexander the Great also remained a major historical figure throughout much of antiquity. Major figures in ancient Rome such as Pompey, Julius Caesar, and Augustus paid tribute to Alexander, admiring his greatness and imitating what they believed were aspects of his personality. Julius Caesar supposedly wept before a statue of Alexander in Spain. Allegedly, Pompey searched far and wide for Alexander's 260-year-old cloak and later wore it to ape Alexander's greatness. Augustus broke the nose of Alexander's sarcophagus in his enthusiasm while laying a wreath at his tomb in Alexandria.

—Abraham O. Mendoza

THE EMPIRE OF ALEXANDER THE GREAT



among them some of his top generals such as Antipater. However, it is also documented in some historical sources, such as the *Alexander Romance(s)*, that he might have possibly died from excessive drinking or a bout with a mysterious illness, thought by contemporary historians to have possibly been malaria. However, since such historical records are known to be questionable, given the mythical content attributed to Alexander's exploits their reliability is dubious at best. Moreover, recent studies about primary documentation from the period suggest that commentators were motivated by their own political loyalties to certain factions contending for power over Alexander's empire.

After Alexander's death, rule was passed on to Alexander's half brother Phillip Arridaeus and Alexander's son Alexander IV, who were put under the regency of Perdiccas and Cra-

terus, both Macedonian generals. Craterus was soon ousted from any real power, leaving Perdiccas as the sole regent and thus in control of the vast regions of Alexander's domain. However, in the process of consolidating his power, Perdiccas annihilated most of his opponents, murdering approximately 30 of them. At the Partition of Babylon in which the empire was designated to heir by compromise, Perdiccas named many of Alexander's former generals as satraps of the regions of the former empire. In 321 BCE Perdiccas was assassinated by his own troops during his war with Ptolemy, another one of Alexander's top generals. This led to the Partition of Triparadisos (321 BCE) in which Antipater was named as regent of the whole empire and also led to the satrapies again being redistributed among Alexander's former generals.

It was around this time that most of Alexander's top commanders were now bent on forming their own states, creating conflict with other potential successors. Antipater (397–319 BCE) and his family, primarily Cassander and Nicanor, were seen by many in Alexander's top circles to have perhaps been responsible for the alleged assassination. When Alexander's mother returned from exile to Macedon in 317 BCE, she had Nicanor killed for his alleged complicity in the murder of her son.

Nearly 20 years of fighting between rival monarchs plagued the Greek world following the death of Antipater in 319 BCE. All of the rivals claimed to be Alexander's alleged successor, as he did not designate one on his deathbed. After the Battle of Ipsus in Phrygia in 301 BCE, most of the major fighting ended as Alexander's empire was divided into four major states ruled by four of Alexander's top generals. Antipater's son Cassander ruled Macedon and some of the Greek city-states, Lysimachus controlled the province of Thrace, Seleucus I ruled the provinces of Mesopotamia and Persia, and Ptolemy I Soter ruled the Levant and Egypt. While Antigonus controlled Anatolia and Syria, he was eventually defeated by the other generals at Ipsus in 301 BCE, with his sons returning to Macedon. Finally, rule over Alexander's conquests in India passed to Chandragupta Maurya, who was also the first Maurya emperor. He was further able to expand his dominions after an agreement with Seleucus. Eventually, by 270 BCE, the three main kingdoms that were consolidated from the former territories of Alexander's empire were the Seleucid empire (Syria, Mesopotamia, and Persia), the Ptolemaic kingdom (the Levant and Egypt), and Antigonid Macedon (with some control over Greece).

—*Abraham O. Mendoza*

Bibliography

- Bosworth, A. B. "The Death of Alexander the Great: Rumour and Propaganda." *Classical Quarterly* 21(1) (1971): 112–136.
- Doherty, Paul. *The Death of Alexander the Great: What or Who Really Killed the Young Conqueror of the Known World?* New York: Carroll and Graf, 2004.
- Green, Peter. *The Hellenistic Age: A Short History*. New York: Modern Library-Random House, 2004.

Holt, Frank L. *Alexander the Great and the Mystery of the Elephant Medallions*. Berkeley: University of California Press, 2004.

Carthaginian Empire Structure

Control of the Phoenicians' vast trading-colony empire around the Mediterranean Sea was gradually transferred to their leading colony at Carthage in North Africa. While the ability of Phoenician cities in Lebanon to conduct independent trade became limited by powerful neighbors, Carthage was free to expand this empire, which stretched from the lands now known as Spain and Morocco all the way to Cyprus and Lebanon.

An excellent description of how the people of Carthage conducted their affairs was given to us by the philosopher Aristotle, who described a remarkably democratic system. He noted with surprise that even though the constitution of Carthage contained democratic features, it endured for a long time. Its citizens never mounted a rebellion worth mentioning and were never ruled by a tyrant.

➤ PEACE VERSUS WAR

According to Polybius, the government of Carthage faced a rebellion by its mercenary soldiers after the First Punic War. The soldiers had been retained but not completely paid because of the city's losses. This dependence upon mercenaries to augment its colonial troops was due to the Phoenicians originally being a very peaceful society with no military tradition. Even the founding of Carthage was described in Virgil's *Aeneid* as having arisen from a peaceful negotiation with local people. However, this tradition was broken when Carthage became the first Phoenician city ever known to raise an army and march off to a foreign war. This general lack of military experience was reflected in Carthage's poor results against the Greeks and Romans. Hannibal was the shining exception. But even Hannibal, with all his victories, never eliminated the weakened Rome. As a result, the Romans eventually fought back and were victorious against his troops.

—*Sanford Holst*

The magistrates of Carthage were elected based on merit rather than chosen by lot. Likewise, the kings of the city were not hereditary but instead were chosen from different families. Carthage also had a council of elders, which counterbalanced the judicial and executive branches of government. Even more surprising, the kings and elders of that time were required to submit major matters to a vote by the people, giving the community a direct say in the conduct of their affairs. In some respects, this system echoed a modern democratic government and may even have been more democratic than many are today.

The colonies of Carthage were believed to have been governed in the same loose manner as all Phoenician colonies. Their main obligation was to provide a share of their earnings as a donation to the male god of the parent city and to abide by the parent city's decisions on major issues. In keeping with this practice, Carthage was able to go into battle on Sicily in 480 BCE at the head of a vast army of 300,000 soldiers drawn from its colonies.

Carthage also continued to show deference toward its parent, the city of Tyre. In 332 BCE Carthaginian ships were reported to be on their way to Tyre with their annual share of earnings when that ancient city finally fell to Alexander the Great. After that time, Carthage continued to rule its large empire from North Africa until it perished at the end of the Punic Wars in 146 BCE.

—Sanford Holst

Bibliography

- Aristotle. *The Politics*. Translated by B. Jowett. Mineola, NY: Dover, 2000.
- Mokhtar, G., ed. *General History of Africa*, Vol. 2, *Ancient Civilizations*. London: Heinemann, 1981.
- Polybius. *The Histories* [1.66–1.70]. Translated by W. R. Paton. New York: Putnam, 1922–1927.
- Virgil. *The Aeneid* [1.365–1.368]. Translated by Robert Fagles. New York: Penguin, 2008.

Formation and Administration of the Roman Empire

After the destruction of the combined forces of Mark Anthony (82–30 BCE) and Cleopatra (96–30 BCE) at the Battle of Actium in 31 BCE, Octavian found himself master of the Roman world. In this tenuous situation, wishing to spare himself of the fate of his uncle Julius Caesar (100–44 BCE), Octavian assumed the office of emperor and declared the restoration of the Roman republic. This fictitious declaration veiled the fact that the Roman empire had replaced the Roman republic, taking the former institutions of the venerated republic and transforming them to suit the administrative needs of the far-flung dominions of the city of Rome. Under the ultimate leadership of the emperor, the Roman Senate, the patrician caste, and the military each occupied official positions responsible for the administrative duties of governance of the empire.

► CLIENT-KINGS AND ROME—KING HEROD

Roman administration of distant provinces rested on the ability to have available personnel on hand to carry out the day-to-day duties of governance. In some instances, Roman authorities allowed for local leaders, known as client-kings by contemporary scholars, to effectively administer for Rome, retaining some vestiges of autonomy. By installing, offering support to, and manipulating local friendly rulers, Roman authorities were able to rule vast tracts of territory throughout the Mediterranean world.

Perhaps the most famous (or infamous) of these client-kings is King Herod the Great of Judea (73–4 BCE) of biblical notoriety. In the midst

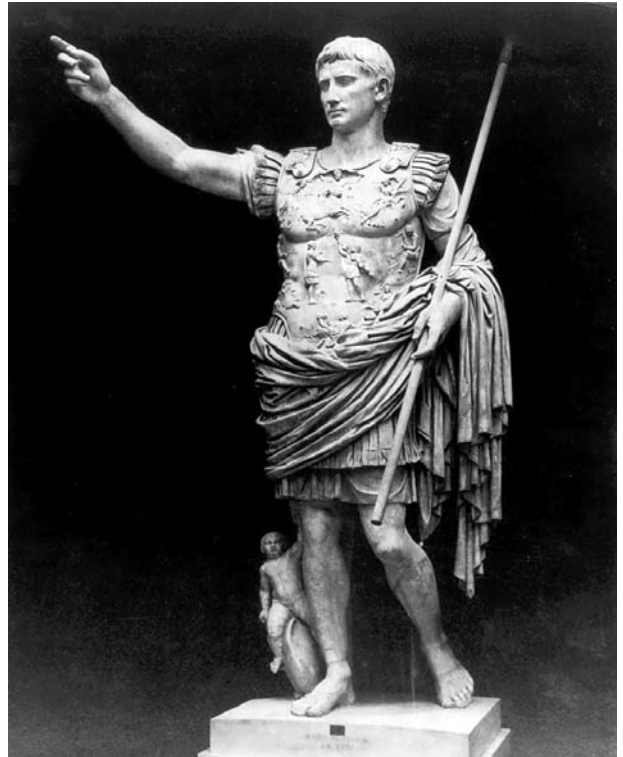
of the war between Parthia (Persia) and Rome over the provinces of the Levant, Herod allied himself with Rome and ultimately won the office of king with imperial support. Under Roman auspices, Herod stabilized Jewish civil unrest and attempted to Romanize the locals. Much like the Hellenistic kingdoms in their final days, Herod ruled only because he acquiesced to the demands of Rome, which is where his authority ultimately rested. Later in the first century CE, following Herod's death, growing Jewish civil unrest against Roman authority resulted in direct Roman rule.

—Abraham O. Mendoza

In order to prevent the association of his position with that of kingship reviled in Roman society since the days of the Etruscan Tarquin tyrants, Octavian instituted the office of emperor, which gave him an inordinate amount of duties and responsibilities that he would delegate to others in the Senate. In this way, he was able to create the impression of the preservation of the Roman republic. The establishment of the Principate between 33 and 27 BCE, which this new governmental structure is commonly known as, facilitated the transition from the chaos of the late republic into the stability of the empire.

The office of emperor gave Octavian (known as Augustus, or “Revered One,” after 27 BCE) a great deal of authority over the destinies of the empire. He also acquired multiple titles and office that conferred on him the ultimate leadership of the Roman empire while maintaining the trappings of the republic. The office of imperator gave him full authority over the Roman legions. The title of princeps acknowledged his position as first citizen and first among equals with members of the Roman Senate. He shared proconsular power with the Senate, giving him governing authority of various provinces and direct command of the legions in them. He also had greater proconsular power, which gave him authority over all other governors in the provinces that he did not directly control. Tribunician power granted him the authority of the tribune, giving him the right to call assemblies, the right of veto power, and the right to appeal to citizens. Consular power granted Augustus the power to call the Senate and chair meetings and also gave him vast legal and administrative powers. Upon taking all these offices, Augustus effectively replaced what had previously been delegated to single magistrates under the republic.

Under Augustus, the old institutions of the republic continued to function, albeit in a subordinate capacity to his office, in the administration of the day-to-day existence of the Roman empire. The Senate remained the governing council of the republic and was composed of senators generally hailing from elite Roman families. They served the emperor as governors and generals of armies in the provinces. Offices within the Senate continued to exist although with different roles to be fulfilled. Consuls con-

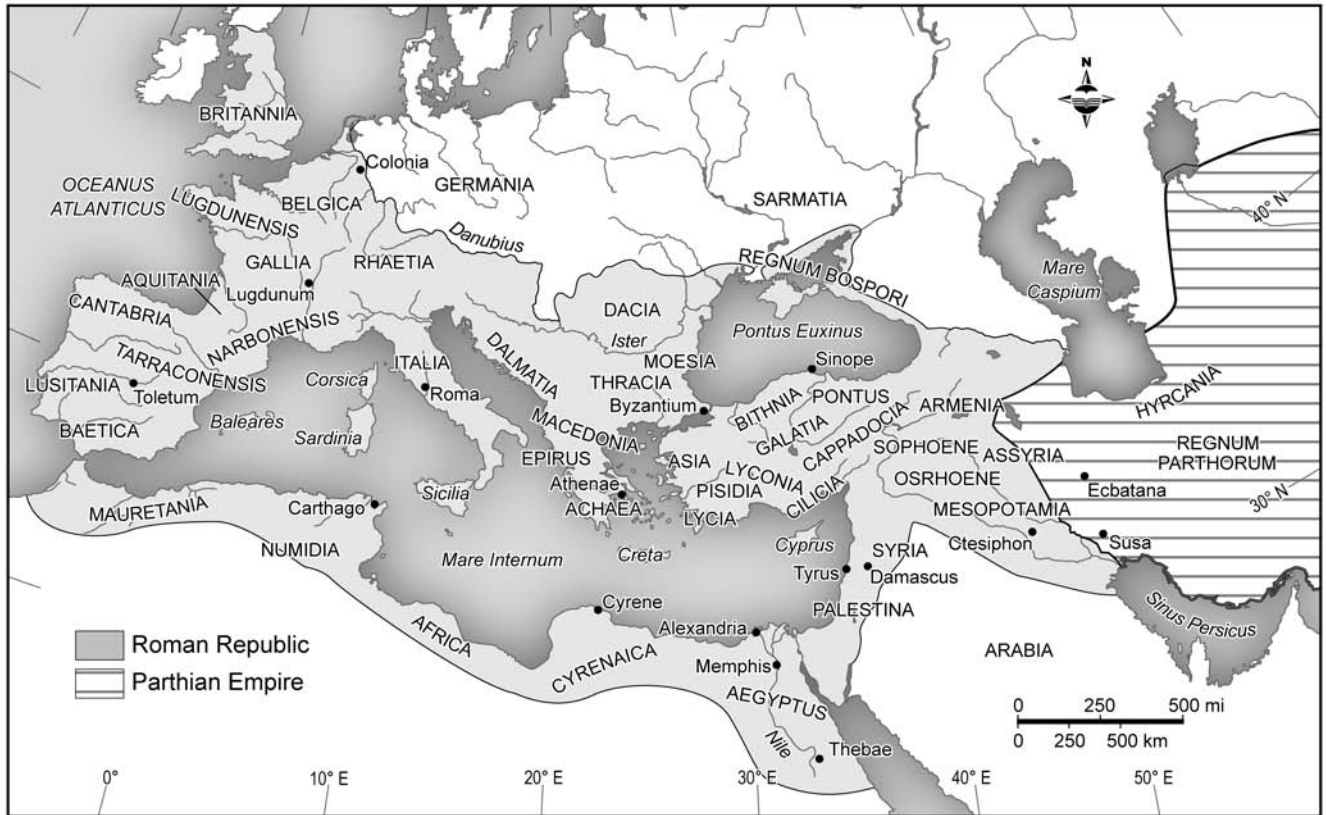


Roman emperor Caesar Augustus rose from near obscurity to become the most powerful man Rome had ever seen. He ushered in an era of stability and prosperity, exercising shrewd and subtle control over the government, enacting popular reforms, and harnessing the symbolism of Rome's history. (Library of Congress)

tinued to preside over the Senate and over all government business. Subordinate to them were praetors, who functioned as legal officials who could aspire to be governors in the provinces. Tribunes continued to represent the interests of the plebian classes. Aediles were officials in charge of the city of Rome. Most of these offices came with much prestige and privilege in the days of the republic, but in the new political arrangement created under the principate, they were related to the role of administrative tasks and ceremonial roles to preserve the illusion of the existence of the republic. In essence, most of the powers formerly bestowed on the Senate had now been assumed by the emperor.

Rule over the Roman provinces rested directly with the emperor and with governors appointed by the Senate. Imperial provinces were ruled by legates, typically former consuls or praetors appointed directly by the emperor.

THE ROMAN REPUBLIC AT THE DEATH OF TRAJAN IN 117



Provinces under the rule of the Senate were under the supreme authority of the governor. The governor was responsible as chief financial, judicial, and military leader of the province along with his staff. Taxes were collected by freedmen (former slaves) accountable to the authority of the governor. Depending on the size of the military garrison of the province, the governor could conduct much of his administrative duties with the assistance of the military. When this option was not available, the governor had only limited manpower available to carry out the duties of running the province. The legates administering the imperial provinces were in the same situation.

The provinces, while under the authority of the Roman emperor and Senate, retained various degrees of autonomy. This situation rested on the ability of the local Roman magistrate to rule effectively given his resources. If he lacked the support of the Roman legions or enough subalterns, the governor or legate would have to increas-

ingly rely on local cities, townships, and communities to govern themselves. Local elites and town councils in various provinces were held accountable for the day-to-day administration of their affairs to the governor. Their autonomy was granted due to lack of resources and not typically for any other reason. Governors and legates would typically visit cities on formal occasions to oversee how governmental duties were being carried out and to collect taxes. However, the ability to enact effective governance differed from province to province and was contingent on the resources available to governors.

In later centuries the administration of the Roman empire increasingly relied on the cooperation of provincial elites in managing their own affairs. By granting universal citizenship in 212 CE to the entire Roman empire and in effect giving Roman citizens agency in the offices of government in Rome, there was an expansive development in the inclusion of non-Italians in

the running of the empire. In the late Roman empire, reforms in administration included dividing the empire into two parts (West and East) and including greater numbers of non-Romans, such as Germanic settlers, into administrative roles.

—*Abraham O. Mendoza*

Bibliography

- Alston, Richard. *Aspects of Roman History, AD 14–117*. New York: Routledge, 1998.
- MacMullen, Ramsay. *Romanization in the Time of Augustus*. New Haven, CT: Yale University Press, 2000.
- Millar, Fergus. *The Roman Empire and Its Neighbours*. New York: Delacorte, 1967.

Aśoka and the Formation of an Indian Empire

King Aśoka is perhaps the most well-regarded ruler of ancient India. He is the first Indian whose life dates are known with relative accuracy (272/268–ca. 231 BCE), he was one among the few Pan-Indian rulers ruling over the major part of the subcontinent, and by issuing edicts on rocks and stone pillars, he was also the first Indian king to employ writing on a larger scale. In fact, the Brahmi script he used for the edicts (and from which all Indian alphabets derive) may have been created during his time. Finally, Aśoka had an important afterlife as an exemplary ruler.

Under Aśoka's grandfather Chandragupta, the Maurya dynasty emerged successfully from the struggle among the competing Vedic city-states in the Ganges plains. In his conquests, Chandragupta extended the Mauryan empire from its heartland around the capital Pataliputra (modern Patna) to northwestern India. This expansion brought the Mauryas in contact with various non-Indian cultures such as the Greeks and the Achaemenids (Persians). After a short regency under Chandragupta's son during which the new kingdom threatened to fall apart again, Aśoka came to the throne in 272 BCE. At first he reconquered the regions subdued by his grandfather before he was formally crowned in 268 BCE. Not content with the conquests already made, Aśoka expanded his kingdom farther to-

ward southern and southwestern India and finally to the regions along India's east coast. This last campaign against the Kalingans proved to be a bloody one, as thousands of people were killed, abducted, or driven from their villages. Full of remorse, the king changed his style of governance, replacing conquest by force with conquest by *dhamma*.

The term "dhamma" may have several meanings in India. To Hindus, it is linked to the duties of caste, while Buddhists take it to mean their religion at large. Aśoka freed the term from these religious connotations and used it in a more general sense: For him, dhamma meant to live in accordance with cosmic laws, to lead a life of morality and good behavior. Moreover, the king embarked upon a program of public welfare, which included the digging of wells and the establishment of hospitals and the like. Even though this dhamma propagated by the king was by and large nonsectarian in outlook, there was a certain anti-Brahmanic sting in Aśoka's edicts. In Vedic society, Brahmins held a distinct status as masters of religious ceremonies, which Gautama Buddha, Mahavir (the founder of Jainism), and other religious dissenters had rejected. Aśoka sanctioned their efforts to reform Brahmanism by proscribing sacrifices particularly of animals, which formed an important part in Hindu ritual.

In fact, Aśoka's conquest by dhamma appears to have come along with the king's personal conversion to Buddhism. He visited several sites of India associated with the career of Gautama Buddha such as Bodhgaya (the place of enlightenment), Lumbini (birthplace), and Sarnath (first sermon). As Aśoka stated, he had adhered to Buddhism rather loosely for some time before becoming a zealous follower. Though technically remaining a layman, the king increasingly meddled with the internal affairs of the Buddhist monks' order (*sangha*), for instance warning monks not to cause a split of the sangha by quarreling over texts and interpretations. In this context, the king was invited to and presided over the Third Buddhist Council, which allegedly resulted in the standardization of the Buddhist scriptures and the expulsion of dissident monks from the sangha.

➤ AŚ OKA'S ROCK EDICTS

In his edicts, which represent the oldest dated writings from ancient India, King Aśoka advocated morality among his subjects. The third major rock edict states:

“King Piyadasi, Beloved-of-the-Gods, speaks thus: This has been ordered twelve years after I became king. Everywhere in my domain, [officers such as] Yuktas, Rajjukas and Pradeshikas shall go on inspection tours every five years for the purpose of moral instruction. It is good to respect mother and father, relatives, Brahmins and ascetics, it is good to abstain from killing living beings, it is good to be moderate in spending and saving” (translation by author).

—*Tilman Frasch*

Source

Ulrich Schneider, *Ashoka* (Die grossen Felsedikte, Wiesbaden: Harrassowitz, 1978).

Very broadly, three groups of edicts can be distinguished. In the first group are the minor rock edicts (MREs), which were concentrated in the region on the border between the modern Indian states of Karnataka and Tamil Nadu. The MREs were written in the third regnal year and contain in a nutshell what the major rock edicts (REs) would later on repeat. The REs were written after a brief interval in the twelfth–thirteenth regnal years that mark the time of the Kalingan War. They are distributed all over the Indian subcontinent from present-day Afghanistan and northwestern Pakistan (Shahbazgarhi, Mansehra) to the Upper Yamuna River (Kalsi) and Orissa (Dhauili and Jaugada) through to South India (Eragudi, Sannati) and the Indian west coast (Sopara, Girnar). Both their distribution and linguistic peculiarities suggest that they were meant to outline the border of Aśoka's empire.

The last set of inscriptions, written mainly on pillars, was commissioned by the king toward the end of his reign. The pillar inscriptions are remarkable in that the sandstone on which

they are incised comes from two quarries close to the Ganges River, from where they had to be transported to the sites with considerable effort. Likewise, the pillars are normally crowned with animal-shaped capitals representing lions, bulls, horses, and elephants. The four lions from the Sarnath pillar have been selected as modern India's coat of arms. In addition to the pillar inscriptions, a few more inscriptions record donations to religious ascetics (e.g., at the Barabar caves) and regulate Buddhist monastic life, as mentioned above.

Aśoka's empire appears to have consisted of five parts. The core area around the capital Pataliputra was surrounded by four provinces, arranged very roughly according to the points of the compass and each standing under a capital city of her own. These were Ujjain in the west, Taxila in the north, and Jaugada in the east. No capital has been identified in the south so far, but the concentration of MREs suggests where it may have been. While the king governed the core area himself, the provinces were ruled by vice-roys. Moreover, a number of other administrative officers are mentioned in the inscriptions. These include Rajjukas, Yuktas, Pradeshikas, spies, and most notably special officers to look after morality (*dhammamamahamattas*). Given that these special officers for the dhamma had to be familiar with general principles of morality and be prepared to travel (i.e., walk) over huge distances, it seems possible that the king recruited them from among the Buddhist monkhood.

The last reference we have for the king is the pillar inscription from his twenty-ninth regnal year. If the calculation is based on his proper coronation in 268 BCE, the inscription was written in 239 BCE. This last edict is somewhat different in tone, especially in strengthening the powers of the judicial officers (Rajjukas). Possibly the king began to realize that he could not improve the behavior of his subjects without sanctions threatening those who continued to misbehave. The king was coming of age by that time and may have felt his life's achievement failing. Indeed, when Aśoka passed away after an alleged reign of 37 years, the empire quickly dissolved, and Brahmanism revived in the form of horse sacrifices and royal support for Hindu temples.

However, Aśoka was kept in high esteem by Buddhists, who saw him as an exemplary Buddhist ruler. This process first culminated in Sri Lanka in the fourth–fifth centuries CE, when the Buddhist chronicles *Dipavamsa* and *Mahavamsa* were written. In these works, Aśoka is credited with convening and presiding over the Third Buddhist Council, which resulted in the purification of both the Buddhist scriptures and the sangha. Later Buddhist kings would invariably refer to this council when attempting to exert a similar measure of royal patronage and control. Moreover, Aśoka sent out Buddhist missionaries to countries outside the subcontinent, most notably the Near East, Southeast Asia, and Sri Lanka. It was Aśoka's own son Mahinda who brought the Buddha's teachings to this latter place, while the king's daughter founded the order of nuns on the island. In the eyes of the Lankan chroniclers, Aśoka was thus not only instrumental in making Sri Lanka the home of Buddhist orthodoxy (Theravada), he was also

the disseminator, patron, and purifier of the religion.

—Tilman Frasch

Bibliography

- Falk, Harry. *Asokan Sites and Artefacts: A Sourcebook with Bibliography*. Mainz: Philipp von Zabern, 2006.
- Norman, K. R., and F. R. Allchin. "Guide to Ashokan Inscriptions." *South Asian Studies* 1 (1985): 43–50.
- Sarma, I. K., and Varaprasada Rao. *Early Brahmi Inscriptions from Sannati*. New Delhi: Harman, 1993.
- Scialpi, F. "The Ethics of Ashoka and the Religious Inspiration of the Achaemenids." *East and West* 34 (1984): 55–74.
- Seneviratne, Sudarsan. "The Mauryan State." In *The Early State*, edited by Henri J. M. Claessen. The Hague: Mouton, 1978.
- Thapar, Romila. *Asoka and the Decline of the Mauryas*. Revised ed. New York: Oxford University Press, 1997.

■ Introduction: Politics and Art

Some of the greatest art of the ancient world was created as a celebration of political life. The colossal Olmec heads of Mesoamerica likely represent important political personages (although the possibility that they depict athletic heroes cannot be ruled out), and certainly much early Maya art celebrates the ruler directly. The palaces and statuary of Mesopotamia celebrate the achievements of ancient kings, and the temple walls of Egypt are filled with accounts of the exploits of the pharaohs. The architecture of the Athenian acropolis not only serves a political function but also celebrates democratic achievements. Roman imperial statuary, some of the greatest sculptural portraits ever created, was designed to glorify the leaders of public life. The following entries explore some of the different ways in which art and politics intersected from 1000 BCE to 300 CE.

—Kevin M. McGeough

Images of Kushite Kingship and Queenship

Kushite kings and queens were depicted in a manner closely resembling an Egyptian ruler in their roles as political leader, priest, and military commander. These images were meant to illustrate the power of the king and queen.

As political leaders, the rulers of Kush are distinguished from the rest of the population by their clothing and their headdresses. The Napatan kings wore clothing, jewelry, and various crowns similar to that of the Egyptian pharaoh, but they often preferred wearing a very distinctive Nubian crown. This crown—never seen on an Egyptian pharaoh—is referred to as the Kushite skullcap. It is a close-fitting cap with two uraei (rearing cobras) on the brow. Two ribbons are also attached at the back of the cap and reach past the shoulders.



Pylon of the Apedemak Temple at Naga depicts King Natakamani (left) and Queen Amanitore smiting their enemies. (Caroline M. Rocheleau)

Although the Meroitic kings and queens also wore this skullcap, their royal costume differed even more. Among the different clothes, we note a fitted white tunic, a red-colored sash with tassels, and a cloak. Queens wore long form-fitting dresses that revealed ample curves and pleated shawls. Meroitic jewelry was also distinctive, and the royal family is often shown wearing large earrings, necklaces with large round beads, or chokers, pendants, and rings decorated with rams representing the god Amani (the name of Amun in the Meroitic language).

The Kushite king, just like the pharaoh, was also a priest and a religious leader. Temple reliefs show the Kushite king and queen, and occasionally the crown prince, worshipping various deities. The royal family is depicted in full royal regalia, standing one behind the other, facing the deity. Often they hold what has been interpreted as clappers in their hands as they raise their arms, palms outward, to greet a god or a goddess. By offering in the temple, the king ensured that the gods bestowed upon Kush all that was good and beautiful for its population. This was a symbol of the king's power, his ability to take care of his people and his land.

The king's military prowess and his might were depicted for all to see on the pylons of funerary chapels and temples. The ruler's power is evident in the so-called smiting scene, which de-

picts the Kushite king with an arm swung backward, ready to smite the enemies held tightly by the hair with the other hand. This scene, however, is the typical depiction of the Egyptian king's power. From the time of Narmer (ca. 3000 BCE), the Egyptian king demonstrates his might by smiting his enemies. The Nubians were famed for their archery skills, and rulers might be shown holding a bow and arrows as well as a sword in a scabbard or a spear.

Meroitic queens were also shown wielding weapons and smiting enemies, and it should not be surprising that history records powerful women as military leaders and rulers in Nubia. Several queens held the title of *qore* (commander) together with that of *kandake*, indicating they were considered the actual ruler of the Kingdom of Kush.

—Caroline M. Rocheleau

Bibliography

- O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University of Pennsylvania Press, 1993.
- Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. London: British Museum Press, 1996.
- Wildung, Dietrich, ed. *Sudan: Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

Hellenistic and Roman Ruler Portraits

The portraiture of Alexander the Great broke with tradition by rejecting the beard of his father, Philip II of Macedon. Instead, Alexander opted for a clean-shaven appearance, luxurious curly hair, and an inspired glance. The Hellenistic kings who succeeded Alexander then adopted many of these features for their own portraits. A number of coins and a handful of extant Hellenistic royal portraits testify to the fact that it became common for the portraits of royal men to depict these rulers as clean-shaven, curly-haired, and generally youthful looking.

Hellenistic kings were, however, perfectly capable of selecting only certain features from Alexander's portraits. Some wore beards, for example, or commissioned portraits that alluded to their more advanced age. They also adapted

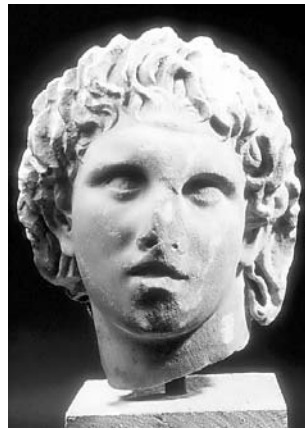
ruler iconography from outside the Greek repertoire, as in Egypt, where the dynasty founded by Alexander's general, Ptolemy I, employed sculptural types (the sphinx) and attributes (the *nemes* and uraeus) that had long been used by the pharaohs.

Roman exposure to Greek culture in the late republic led to the occasional importation of elements from the Alexander type into the Roman repertoire. We see such elements, for example, in the portraiture of Pompey the Great. In the first century BCE, this strand of ruler iconography existed alongside an indigenous Roman trend known today as verism. At first glance, veristic portraiture can seem to be simply a sort of hyperrealism: the sitters appear with all of their defects, wrinkles, moles, bald patches, and the like. Consideration of the entire corpus, however, reveals that outside of funerary contexts, these portraits are almost always of men, and many were likely of high status. Veristic portraiture did not just show how they really looked but transmitted the message that at a time of ongoing civil war (the first century BCE) these leaders were hardened, that they both acknowledged the difficult situation and had the wisdom and cleverness to survive.

When the Roman republic collapsed after a century of civil war, the first emperor of Rome, Augustus (27 BC–14 CE), rejected veristic portraiture in favor of youthful depictions. He came to power at a young age, but these youthful portraits continued to be employed until (and after) he died in his seventies. The portraits of Roman emperors continued to be clean-shaven until the reign of the emperor Hadrian (117–138 CE), who adopted a beard and set an example for male portraits during the remainder of the second century.

During the republic, women and children had sometimes been represented in funerary art, but they rarely appeared in contexts that reflected high social status. The trend toward including women and children in the iconography of power likely began with the profamily policies of Augustus and can already be seen on the Altar of Peace in Rome, but this trend also reflected the increased influence of anybody who was close to the emperor.

—Ellen Perry



*Alexander the Great, late Hellenistic period, from Pella, Greece.
(Jupiterimages)*

Bibliography

- Kleiner, D. E. E., and S. B. Matheson. *I, Claudia II: Women in Roman Art and Society*. Austin: University of Texas Press, 2000.
- Smith, R. R. R. *Hellenistic Royal Portraits*. Oxford, UK: Clarendon; New York: Oxford University Press, 1988.
- Varner, E. R. *From Caligula to Constantine : Tyranny & Transformation in Roman Portraiture*. Atlanta: Michael C. Carlos Museum, 2000.

Near Eastern State-Sponsored Art and Architecture

First-millennium BCE state-sponsored art and architecture had their roots in earlier traditions: the tripartite temple with antechamber, main chamber, and inner sanctum; the palace centered on the throne room, with flanking courtyards from which opened public and residential rooms; carved stones recording royal deeds; and the use of precious materials in palace and temple construction. Though the Neo-Assyrians still honored their gods, particularly Assur, frequently represented by a winged sun-disk, their architecture and accompanying art laid more emphasis upon their own power and irresistibility: massive city walls with great towers, vast palaces, huge winged bulls and lions guarding entrances and gateways, and graphic reliefs decorating the palace walls, reinforcing the message that the Assyrian king was universally victorious in battle, on the hunting field, and against the forces of nature. Guardian figures

and reliefs were also part of contemporary state architecture in the Levant, but the subject matter ranged more widely, with little emphasis on dominance. It was in this region that several architectural developments occurred. A feature of earlier palaces, the *bit hilani*, now reached its mature form: a pillared portico leading into a throne room or major reception hall. In some, the portico columns were sculptured human figures, while others had wooden shafts, set on a column base of one or a pair of animals such as lion or sphinx and topped by a capital. Such pillars found their fullest flowering later in the great pillared halls of the Persians. The Persians, often employing Near Eastern craftsmen, also adopted the Mesopotamian traditions of massive guardian figures and reliefs, the latter combining Greek naturalism, Babylonian-inspired royal figures, and images of ethnic diversity to create a new message of universal power and beneficial peace. The crowning glory of Babylonian architectural decoration was the use of colored glazed bricks to create magnificent friezes of bulls, dragons, and lions; this the Persians also adopted, for example to depict royal soldiers in the palace at Susa.

—Jane R. McIntosh

Bibliography

Frankfort, Henri. *The Art and Architecture of the Ancient Orient*. 5th ed. New Haven, CT: Yale University Press, 1996.

Polis-Based Public Art

As with any ancient society, state patronage was one of the most significant sources for the creation of art and architecture. The state unit of ancient Greece was the polis, or city-state. Poleis used art as a way to compete for prestige and to promote state propaganda. Throughout their history, poleis had three main governmental systems: oligarchy, tyranny, and democracy.

Many of the most important sanctuaries of Greece were established during the eighth and seventh centuries BCE as part of the development of the poleis. Poleis were governed by a ruling elite class of citizens or oligarchy. Sanctuaries, such as that of Apollo at Thermon, included wooden temples with terra-cotta roof tiles, very costly constructions at that time.

These efforts were community projects and were the focal points of public festivals that were expressions of civic identity.

During the sixth century BCE civic competition intensified with ever grander building projects. The increase in scale of interpolis competition was due in part to the fact that many city-states were ruled by dictators with popular support. These dictators, called tyrants, used public building and artistic programs to advertise their might. Stone temples were planned and constructed in most major Greek sanctuaries in the sixth century BCE. Some of the most lavish examples, such as the colossal temple of Hera at Samos, were the showpieces of tyrants.

The Athenian democracy of the fifth century BCE was one of the greatest sources of artistic patronage. In the city center, or agora, was the Painted Stoa, a building displaying paintings of the Athenian victory at the Battle of Marathon. Also in the agora was the sculpture of the Tyrant Slayers, statues of the two Athenian citizens whose actions had led to the foundation of the democracy. The grand building plan on the Athenian Acropolis, with its spectacular temples the Parthenon, the Uruktheion, and Athena Nike, were all extremely elaborate celebrations of Athens' part in the Greek victory over the Persians in 479 BCE. The architectural program of the Acropolis promoted the superiority of the city and its democratic ideals yet was built using the tribute from the Delian League, Athens' de facto empire. With this source of wealth, Athens was able to afford structures that strove for perfection and spared no expense. The temples and the monumental gateway on the Acropolis were made entirely of high-quality marble. Temples traditionally were built of limestone, while fine details were completed in marble. Dozens of optical refinements were included in the building architecture. These refinements were not necessary for structure but required a great degree of extra work merely to improve the harmony of the buildings' appearance. The sculptures on the Acropolis buildings were more numerous and elaborate than had ever been seen on Greek temples. The Parthenon in particular bore sculpture in every space allowable in its Doric order and even included the addition of a sculpted frieze, which usually only occurred on buildings

THE PARTHENON METOPES

The four sides of the Parthenon contain sculptured panels. Each one represents one mythological story. The four stories were unified by a theme of civilization over barbarism. On the east side of the building was depicted the battle of the Olympian gods against their divine predecessors, the Giants. The gods had won this battle and the right to rule the universe. On the north side was shown the Trojan War, a tale of a unified Greece defeating a powerful kingdom of the east. On the west side were panels of the Greeks fighting the semianimal centaurs. The south side showed a battle between the Greeks and the Amazons. Amazons were legendary women warriors from the edge of the world who represented a reversal of the natural order.

—Angela Murock Hussein



Frieze depicting a centaur battling a Lapith, from the metope on the south side of the Parthenon, 447–438 BCE. (Allan T. Kohl/Art Images for College Teaching)

of the Ionic order. The sculptures themselves were also of extremely superb quality.

—Angela Murock Hussein

Bibliography

- Boardman, J. "Greek Art and Architecture." In *The Oxford Illustrated History of Greece and the Hellenistic World*. Oxford: Oxford University Press, 2001.
- Hansen, M. H. *Polis: An Introduction to the Ancient Greek City-State*. Oxford: Oxford University Press, 2006.
- Lawrence, A. W. *Greek Architecture*. New Haven, CT: Yale University Press, 1996.

The Development of an Imperial Art Associated with the Palaces of the Assyrians and Persians

When Cyrus II (550–522) founded the Achaemenid empire (sixth to fourth centuries BCE), the Persians were a relatively new ethnic group in Iran, speaking an Indo-European rather than a Semitic tongue. Unlike their Mesopotamian neighbors, they had little familiarity with monumental

art and architecture and enlisted the skills of foreign craftsmen to create their imperial palaces. The result was a unique international style that incorporated motifs from across the empire, including Egypt, Greece, Elam, Babylonia, and Assyria. The influence of Greek artistry is readily apparent in Achaemenid art, but most of the imperial themes were selected and reformulated from Assyrian prototypes, revealing two distinct cultural philosophies and two forms of imperial identity making in the ancient world.

The Neo-Assyrian empire (ninth to seventh centuries BCE) had long vanished when the Achaemenids became the new rulers of the ancient Near East, yet they left an indelible legacy of imperial art. The Assyrian palaces at Nimrud and Nineveh were decorated with monumental wall panels carved in relief, an innovation of Ashurnasirpal II (885–859). The reliefs narrated the king's duties and achievements, which included ritual ceremonies, tribute processions, hunting expeditions, building projects, and, most famously, battle campaigns that revealed the details of the assault and the enemy's ignominious fate. The Assyrians valued accurate portrayals of events, and the narratives provide



Assyrian assault on an Egyptian town as depicted on a relief from the wall of the North Palace of Ashurbanipal, Nineveh. (Erich Lessing/Art Resource, NY)

information about ancient architecture, landscapes, clothing, and military technology.

Assyrian palace art was as vigorous and dynamic as its kings, designed to evoke fear and awe in the viewer. The Achaemenids emulated the majesty of the wall reliefs but in an abbreviated, figural style that conveyed a sense of universal harmony and stability. The remains of Achaemenid palace art can be found at Susa, the old Elamite capital, and at Pasargadae and Persepolis in the Persian heartland. Persepolis, the celebrated capital of Darius I (521–486), is the best preserved of the Achaemenid sites and exhibited the mature art of the Persians. The visual program revolved around royal themes lifted from Assyrian narratives: the king was shown walking with palace attendants, sitting enthroned, and receiving an audience and as a royal hero, battling fierce animals. The various cultures of the empire, distinguished by dress and accoutrements, were prominently featured as gift-bearing delegations in a ceremonial procession and as individuals supporting the weight of the royal throne. In Assyria and most ancient Near Eastern traditions, the conquered were shown humbled or prostrate before the king, but at Persepolis they stood upright, led by the hand into the royal presence. We are given the impression of a political encomium, where the delegates were eager to greet their sovereign.

The art of Persepolis was more persuasive than coercive; the realities of imperial conquest, such as warfare, forced submission, and the extraction of material resources, were not displayed. Instead, conquered peoples were portrayed as willing participants in a cooperative state, one based on the kind of moral rulership that was embodied, according to Herodotus, by

Cyrus II. By cleverly manipulating known idioms of imperial power, the Achaemenids propagated an idyllic state of unity in diversity and a new imperial model in the ancient world.

—Stephanie Reed

Bibliography

- Barnett, Richard D. *Assyrian Palace Reliefs and Their Influence on the Sculptures of Babylonia and Persia*. London: Batchworth, 1982.
- Curtis, John E., and Nigel Tallis, eds. *Forgotten Empire: The World of Ancient Persia*. Berkeley: University of California Press, 2005.
- Reade, Julian. *Assyrian Sculpture*. London: British Museum Press, 1993.

Greek Art and Culture in Hellenistic Administration

Upon the death of Alexander the Great in 323 BCE, his empire stretched from Greece to India. His generals divided up his empire, creating the Hellenistic kingdoms. These Greek rulers reigned over numerous and diverse cultures. The Hellenistic monarchs were foreign to most of their subjects. They faced the problems of how to unify their subjects and how to convince the considerable populations to follow them as rulers of these vast states.

To achieve both of these ends, Hellenistic kings promoted their own culture as a common one to be shared by everyone, particularly the upper classes, throughout their empires. Greek art was a way in which this cultural koine, or commonness, was promoted and communicated throughout the Hellenistic world.

Secular architectural projects helped to spread the Greek cultural institutions for which they were used, such as gymnasia (schools of philosophy and physical education) and theaters. Temples and altars to Greek gods were constructed to promote Greek religion, such as the temple of Pythian Apollo at Daphnae near Antioch, Syria, and the numerous temples to Greek divinities in Oxyrhynchus, Egypt.

Stone and bronze sculpture was one of the most favored art forms in Greece. Greek sculptures of gods or heroes or even vanquished ene-

► THE PERGAMON ALTAR

The Attalids were a Greek dynasty that ruled over the kingdom of Pergamon on the coast of present-day Turkey. A gigantic altar to Zeus, the Greek king of the gods, was built in a prominent place in the capital city of Pergamon. This altar was set atop a podium decorated with a relief sculpture of the battle between the Greek gods and the giants. This story was one that paralleled the story of the Greek rulers conquering numerous lands to create their kingdoms. It was rendered in impressive high-relief sculpture with the figures well over life size, making it a powerful and impressive work. At the top of the altar were sculptures telling the story of Telephos, mythical founder of Pergamon who was the son of Herakles, the Greek hero. This story connected Pergamon to Greece and served to link this nation of diverse people to its Greek ruler.

—Angela Murock Hussein



Great Altar of Zeus from Pergamon (180–160 BCE), as displayed at the Pergamon Museum in Berlin. (Luis Villa del Campo)

mies showed their subjects as physically fit, beautiful, and often nude. These statues could be used to promote Greek ideals such as athleticism. These images gave people models to strive for, particularly in cultures of the Near East where it was considered inappropriate to be nude in public. Compositions that recounted myths or portrayed gods not only promoted Greek religion and literature but also could be selected to convey political messages. Portraits of rulers were sculpted realistically but semi-idealized. These helped to familiarize the populace with the rulers and also to promote a heroic image of the monarchs.

—Angela Murock Hussein

Bibliography

- Burn, L. *Hellenistic Art: From Alexander the Great to Augustus*. Malibu: Getty Trust Publications, 2005.
- Ling, R. "Hellenistic and Graeco-Roman Art." In *The Oxford Illustrated History of Greece and the Hellenistic World*, edited by John Boardman, Jasper Griffin, and Oswyn Murray. Oxford: Oxford University Press, 2001.
- Pollitt, J. J. *Art in the Hellenistic Age*. Cambridge: Cambridge University Press, 1986.

Urban Planning in the Roman Empire

Rome's victory in the three Punic Wars against Carthage (264–146 BCE) led to the acquisition of vast overseas territories in the western Mediterranean, including Sicily, North Africa, and southern Spain. Later, western Asia Minor, Greece, and the Balkans including Macedonia were conquered. The rapid expansion of Rome's domain—once limited to the central Italian peninsula—created a huge overseas empire that required defense and administration. Rome had gone from a small city-state to an empire in the span of 200 years, roughly between 150 BCE and 50 CE. Two of the major issues confronting the victorious Romans were how to settle the thousands of Roman war veterans, many of whom were poor and landless, and how to convey through administration the culture and power of Rome to the conquered peoples in some 30 provinces with dozens of languages. To deal with the challenge of rule, ensuing Roman armies and the administrators operated within these newly conquered lands with a mixture of force, coercion, and

THE LEGACY OF ROMAN URBAN PLANNING

One of the great legacies of Roman civilization was the systematic use of the grid pattern in urban planning. Fifteen hundred years after the Romans started the process, the Spanish empire modeled its overseas colonies on the same Roman grid. Many cities in the Americas today still bear this imprint and are testimony to ancient Roman urban planning. They include Buenos Aires, Argentina, Lima, Peru, Havana, Cuba, and many others. To a lesser extent, American cities established in the nineteenth century such as Chicago follow this same pattern of well-organized streets and civic structures with a central town square. The ancient Roman empire is long gone, but its genius for urban planning is still alive in many cities of Europe and the New World.

—Anton Rajer

propaganda, identifiable in the urban planning throughout the empire.

Roman urban planning had two sources of inspiration: Roman military forts and the planned Greek cities of Magna Graecia (greater Greece) such as Naples in southern Italy and Syracuse in Sicily. Both systems employed rectangular grid patterns with streets running perpendicular to each other. Civic buildings were in the center of the grid and included forums, temples, basilicas, and theaters. During the expansion of Roman territory into what had been Magna Graecia, the Romans encountered Greek cities with orderly straight streets and forums surrounded by government and religious structures. The Greek cities, such as Priene in Asia Minor, followed the Hippodamian urban plan, which is based on the grid pattern. It is ironic that the Roman genius for urban planning never was expressed in the empire's own capital city. Rome remained a maze of narrow streets and alleys.

The Roman military camp layout served as a model for permanent Roman colonies, especially on the empire's frontier. During military campaigns the Roman Army established camps based on the square with orderly rows of legionnaire tents. At the head of the camp would be the commander's headquarters. The entire campsite, or *Castra Romana*, would be surrounded by an

earthen wall and a provisional wooden barricade patrolled by sentries. Some of these camps became semipermanent enclaves and later evolved into towns such as Turin and London.

Combined with the pragmatic Roman approach to hygiene—including public latrines, fountains, and aqueducts for water—Roman engineers created a template for establishing and building Roman colonies virtually anywhere within the empire, with certain modifications to adapt to local climate and ecology. In time, these colonies served to spread Roman culture and the Latin language over a huge area. Numerous modern European cities, such as Arles in France, Valencia in Spain, and Trier in Germany, still bear the imprint of the ancient Roman camps and towns that preceded them. In addition, abandoned Roman cities, such as Leptis Magna in Libya and Timgad in Tunisia, remain as archaeological relics in North Africa.

Roman urban planning was quite different in the eastern Mediterranean, where Rome encountered ancient cities and well-established cultures such as those in Egypt, Greece, and Judea. Nonetheless, in places such as Antiochia in Syria, Roman engineers imposed their standard grid pattern and added forums, basilica, public baths, temples, aqueducts, theaters, and stadiums. On occasion in the older cities of the East, Rome was content to modify the urban fabric with the necessary structures of their rule, superimposing aqueducts and baths on these ancient towns.

Latin culture, law, language, and social values accompanied the systematic founding of Roman towns and colonies throughout the empire, which stretched eventually from the north of Britain to the Sahara Desert and from the Euphrates River to Portugal. Today, 30 different nations comprise what once was the Roman empire. Roman cities that sprang up along trade routes included Paris, London, Avignon, Cologne, and Tarragona. Despite continued political feuding in Rome that led to sporadic civil war, the program of settling veterans and promoting Roman culture went on. Beginning with the rule of Emperor Augustus Caesar, the empire's administration was based at the Tabularium building in Rome on the Capitoline Hill.

Using Hellenistic Greek architectural models for temples and covered markets, trade and com-

merce flourished between the colonies, which were linked to each other and Rome by a vast network of roads and sea routes. These paved roads began in 312 BCE with the Via Appia, which was built by Appius Claudius. They eventually included more than 70,000 miles (112,000 kilometers) of all-weather roads that stretched across plains, mountains, and deserts and spanned hundreds of rivers with bridges made of stone, some of which are still in use today. On a paved Roman road, it is estimated that a legion of 1,000 men could march 20 miles (32 kilometers) per day fully loaded with gear. At this pace, it would have taken about 21 days to go from Rome to the empire's northern frontier at Trier, Germany.

The typical sequence for establishing a Roman *urbis* or *colonia* included several steps. Skilled survey teams would complete the *centuriatus*, or plotted survey of the land. All conquered lands underwent some form of survey, which facilitated a basis for taxation and gifting of land to veterans or public sale. Survey teams would identify the most promising location for a colony and then plot a grid pattern for the principal buildings: temples, law courts, baths, and theaters. The *urbis* would be built in stages as money permitted and need required. For example, in western Mauretania (present-day Morocco and Algeria), Emperor Augustus established 12 colonies for 40,000 retired soldiers and their families. As the empire grew more prosperous, so did colonial desires to imitate the monumental art and architecture of the type found in Rome. Each colony vied for the construction of grand civic structures that indicated loyalty to Rome and its social values.

—Anton Rajer

Bibliography

- Giannelli, Giulio. *The World of Ancient Rome*. New York: Putnam, 1967.
- Gibbon, Edward. *The History of the Decline and Fall of the Roman Empire*. Philadelphia: Henry Coates, 1954.
- Heichelheim, Fritz, and Cedric Yeo. *A History of the Roman People*. Englewood Cliffs, NJ: Prentice Hall, 1962.
- Masson, Georgina. *Ancient Rome from Romulus to Augustus*. New York: Viking, 1974.
- Payne, Robert. *The Horizon Book of Ancient Rome*. New York: American Heritage, 1966.

The Emergence of Buddhist Art in Association with Aśoka's Reforms

Aśoka inherited the throne of the Maurya empire from his father, Bindusara, in 272 BCE. A little more than a decade into his reign, Aśoka converted to Buddhism. Most of our knowledge of Aśoka comes from Buddhist chronicles and his own words, carved into rock edicts that he had erected in locations throughout his vast empire.

According to these sources, after the final battle that resulted in the consolidation and expansion of his empire to its greatest height, Aśoka felt remorse for the bloodshed he had caused. This was the point at which he apparently became very serious about his practice of Buddhism, which began to exert a profound influence on his policies. He sought to reform ancient Indian society in order to bring it more into line with dharma. This is a term used frequently in Aśoka's edicts. It does not seem to suggest an exclusive adherence to Buddhism but rather to the Buddhist ideals of truth, nonviolence, and compassion.

Prior to Aśoka's conversion, Buddhism was only one of the many religious sects with followings in ancient India. There was, of course, Brahmanism (the tradition that would eventually become Hinduism) but also the various *śramaṇa* traditions, such as Buddhism, Jainism, and other now-extinct groups, such as the Ajivikas.

With Aśoka's conversion, Buddhist art first became apparent as a distinctive artistic tradition in India. Aśoka, following the pattern of earlier rulers, showed his support for religious groups by providing them with material support: monastic institutions, temples, and clothing, food, and writing materials for monks. Aśoka was not exclusive in his support for Buddhism, providing other groups, such as the Ajivikas, with monasteries as well. But Buddhism did receive his special patronage, which was a significant impetus for the creation of Buddhist art.

The most ancient forms of Buddhist art are the stupas, or burial mounds, holding relics of the Buddha and of various early Buddhist saints. The most famous such mound, the great stupa at Sanchi, in central India, dates from the Aśokan period.

Early Buddhist art, interestingly, does not depict the Buddha's physical, human form. It instead simultaneously represents both his presence and absence from the world by means of abstract imagery. The stupa itself is such an image. By containing the relics of the Buddha, it conveys the fact that the Buddha was once physically present in the world but has since left for the realm of nirvana.

Other Buddhist monuments associated with Aśoka are the pillars and rock edicts that he had erected at pilgrimage sites connected with important events in the life of the Buddha. Particularly important sites commemorated by Aśoka include Lumbini, where the Buddha was born; Bodhgaya, where he attained nirvana; the Deer Park at Sarnath, in which he preached his first sermon after attaining nirvana; and Kushinagari, where he left his body, entering the state of *parinirvana*.

—Jeffery D. Long

Bibliography

- Ray, Reginald. *Buddhist Saints in India: A Study in Buddhist Values and Orientations*. Oxford: Oxford University Press, 1994.
- Robinson, Richard H., Willard L. Johnson, and Thanissaro Bhikkhu [Geoffrey DeGraff]. *Buddhist Religions*. 5th ed. Belmont, CA: Thomson, Wadsworth, 2005.
- Strong, John S., ed. *The Experience of Buddhism*. 2nd ed. Belmont, CA: Wadsworth, Thomson Learning, 2002.

Images of Filial Piety in China

Filial piety, generally speaking, is a kind of virtue that children display in their treatment of their parents. Zengsen, Confucius's student and grandson, defines filial piety as a virtue including three layers of meanings. The primal filial piety is to pay respect to one's parents, obey them always, and honor them by virtues and achievements throughout one's life; the next is not to shame one's parents, which denotes that one must protect him or herself from any harm, have dignity in society, and not hesitate to take revenge for one's parents when they are humiliated by others; the third is that one must support

the parents when they are old, take care of them when they are sick, and offer them respectful funerals when they are dead. All these ideas are expressed in the *Classic of Filial Piety*, allegedly a collection of Confucius's didactic teaching on filial piety compiled at the beginning of the Warring States period (fifth to third centuries BCE).

China has a long tradition of portraying ancient virtuous, sage figures and their stories on walls, screens, and other materials in order to admonish later generations to follow their moral deeds and teachings. The images of filial piety show themselves as successors of the age-old tradition on the one hand and convey some new social information on the other. The filial figures vary from legendary kings to common people, and their ages range from five to the seventies, but no matter who and how old they were, they were all portrayed as children in style, which denotes the definite moral example calling for others, no matter how old, to follow. For instance, in the portrait of Laolaizi, Laolaizi had to pretend to be dressed and behaving in the manner of a child in order to entertain his parents, even though he was in his seventies. On the other hand, Xiang Tuo, a five-year-old boy distinguished for his enormous Confucian knowledge and wisdom, was portrayed as a gentleman discussing questions with Confucius and Laozi.

The popularization of images of filial piety in Han China also indicated a certain social trend that Han people adopted and promoted. From the Western Han dynasty, filial piety became part of the governmental ideology on which a certain governmental recruitment system was built. Those who had remarkable reputations for being filial and uncorrupt were recommended by local government to the court on a regular basis. As a result, those who were considered filial sons and daughters won not only fame and respect from within the family but also concrete gains from outside, such as the rewards of money, tax exemptions, and official appointments. Such an ideal pattern of extending the management of family affairs to that of the state affairs nevertheless produced a counterreaction once people focused mainly on realistic benefits instead of the essence of real filial piety. In that case they would exaggerate their grief and so-

lemnity by offering lavish funerary rituals and monuments in order to show to the public how filial they were. As a matter of fact, it was very fashionable during the Eastern Han dynasty to decorate family shrines with the images and stories of famous filial figures, which seemed to indicate that at least they were following the good examples. The expression of individual grief became a kind of public performance.

—Hanmo Zhang

Bibliography

- Chan, Alan Kam-leung. *Filial Piety in Chinese Thought and History*. New York: Routledge, 2004.
- Ebrey, Patricia Buckley. *Chinese Civilization: A Sourcebook*. 2nd ed. New York: Simon and Schuster, 1993.
- Wu Hung. *Monumentality in Early Chinese Art and Architecture*. Stanford, CA: Stanford University Press, 1995.

Maya Images of Power

Maya elite used images of power to help maintain their esteemed positions in society. Their images of power included costumes, fine furnishings, imposing architecture, and decorated monuments known as stelae. Power, as discussed here, is the ability to command respect or fear in others. In the stratified society of Early Classic Maya, rulership was inherited along the patriline. Each new ruler acquired the position but still needed to prove that he was capable of rule.

One way of maintaining respect in the polity was by ostentatious displays of wealth. The outfits that high nobility, especially kings, wore showed that they were different than commoners. Rare gems adorned their bodies, and exotic plumage was embroidered into their head-dresses. Furthermore, their clothing bore the signs of supernatural entities, which the rulers were believed to embody and control. (The culmination of these traditions can be seen in the monuments of later kings, such as at Yaxchilan and Tikal and in the Bonampak murals.)

Portable wealth was not the only way to emphasize power. Architecture could also be a permanent sign of power, especially when coupled with religious symbolism. The temples

➤ DEPICTIONS OF THE MAIZE GOD

The San Bartolo murals depict sacred scenes of ritualized power. The murals were recently discovered by William Saturno and are still under investigation. They were painted on the interior of a small building that was later incorporated into a large pyramid. The walls contain narratives of early Classic beliefs concerning man's creation and the role of the Maize God. Symbolically, the Maize God was a metaphor for resurrection and rebirth. Kings were ritually dressed as the Maize God and often impersonated him during festivals. In this way, kings were potentially tied to a principal deity and incorporated his essence into themselves.

—Zachary Nelson

of the Maya were constructed by nonelites under the direction of elites. These multitier imposing edifices were often dedicated with human sacrifices and precious materials placed in the interior. The exterior of the buildings also ritualistically embodied images of power. Early architectural masks—such as at Nakbe, Guatemala; Tikal, Guatemala; Cerros, Belize; and Copan, Honduras—were impressive feats of architecture in their own right, but they were considered parts of a living entity (the building) by the Maya. Architectural masks showed aspects of gods, supernatural beings, and the organized cosmos. The buildings themselves were charged with supernatural forces and generated power for the rulers through their creation and use. An overlooked aspect of placing different kinds of images on different levels of the structure is that the composite image changes depending on the visitor's perspective. It may resemble a hill or witz-monster from afar, then shift into a water-monster as one approaches the steps. These shifting essences were purposely constructed into the building to enhance its power in the eyes of the beholder.

Architecture was not the only permanent display of power. Most rulers in ancient Maya civilization are known solely through stelae. A stele (singular) is a carved monument, often rectangular, set vertically in front of pyramids and significant structures. These monuments

were decorated with images of rulership. Often incised, stelae record the exploits of the king. A typical stele shows the king receiving tribute from foreign lords on its front. On the back is an image of the king celebrating the new year's arrival. On either side of the stele appears text. The text begins with the date that the stele celebrates. Frequently, this is a katun ending, or a 20-year cycle. Next, the text mentions the ruler's birth, his parentage, and his accession to the throne. Following this is his bibliography, written in terms of battles won, wrongs avenged, and an occasional pious reference to the gods. Stelae are permanent images of powerful rulers, eternally crowned.

—Zachary Nelson

Bibliography

- Agurcia F., Ricardo. "Rosalila, Temple of the Sun-King." In *Understanding Early Classic Copan*, edited by Ellen E. Bell, Marcello Canuto, and Robert J. Sharer. Philadelphia: University of Pennsylvania Museum Press, 2004.
- Coe, Michael D. *The Maya Scribe and His World*. New York: Grolier Club, 1973.
- Fields, Virginia M., and Dorie Reents-Budet. *Lords of Creation: The Origins of Sacred Maya Kingship*. London: Scala, 2005.
- William A., Karl A. Taube, and David Stuart. "The Murals of San Bartolo, El Petén, Guatemala, Part 1: The North Wall." *Ancient America* 7. Barnardsville, N.C.: Center for Ancient American Studies, 2005.

Olmec Heads

The Olmec civilization of ancient Mesoamerica is arguably most famous for its colossal sculptures of human heads. It is unclear who is supposed to be depicted on these heads, which were carved in the Early Formative period (ca. 1200–800 BCE). All of the portraits are of young men, and each presents an individual face. No two heads are alike. Given the size and other physical characteristics of these sculptures, it is likely that they reflect important members of the community, be they political leaders, economic leaders, deities, athletes, or others who made notable contributions to the community. Regardless of whom these were meant to represent, it

is likely that they reflect the use of art for political reasons in ancient Mesoamerica.

Each of the heads has been carved from a single piece of volcanic basalt. Although some seem to have been carved with much more skill than others, most display a high degree of skill in stone sculpture. These heads are quite heavy, and it would have taken considerable effort to drag the large basalt boulders from the quarry to the cities in which the heads were found. Very likely, the boulders were floated downriver for much of the distance.

So far, 17 heads have been discovered in total of varying size and workmanship. The largest are around 9 feet (3 meters) tall. All of the heads wear some sort of headgear, which scholars often assume is the protective headgear of a ball player. Every piece of headgear is different, and some scholars have suggested that the different iconography may reflect symbols for different peoples or groups. The treatment of the ears in the sculptures varies. Some ears are covered by the headgear. Other ears have representations of spools, made by inserting large polished stones into a hole in the lobe.

In their present state, most of the heads are covered in intentional pockmarks. Some have suggested that these pockmarks reflect a ritual of desanctification, when the head was taken out of ritual use by the community. Other scholars have suggested that these pockmarks reflect purposeful vandalism. If the sculptures do represent ancient rulers, perhaps they were vandalized by people from other communities or by opposing individuals from within the community. In later times, some of the sculptures were broken up to be reused in the manufacture of other stone artifacts.

Part of the difficulty in interpreting these colossal heads comes from their unclear context, as few if any have been found in what would appear to be their original location of display. At the site of San Lorenzo, for example, a number of the heads had been buried in antiquity. The site of La Venta may shed some light on their original use, as one head was found at the base of a pyramid. Perhaps this reflects the original setting for these heads.

—Kevin M. McGeough

➤ ALTARS AT LA VENTA

Seven sculptures that have come to be known as “altars” have been recovered from the site of La Venta. These “altars” are rectangular structures that are about 6.5 feet (2 meters) high by about 13 feet (4 meters) wide. Each looks like an altar or table in that the top is a large flat surface, slightly longer than the base of the object. Each “altar” bears a carving on one side. The carving on Altar 4 is perhaps the most famous. It features an individual seated in what appears to be a cave.

The figure holds a rope that runs all the way around the base of the “altar.” Altar 5 has a similar image, but instead of a rope the seated figure holds a “were-jaguar baby,” a figure that was thought to be able to change between human and jaguar form. Despite the fact that scholars call these sculptures “altars,” most believe that they were thrones for Olmec leaders to sit upon during important events.

—Kevin M. McGeough

Bibliography

- Diehl, Richard. *The Olmecs: America's First Civilization*. Ancient Peoples and Places Series. London: Thames and Hudson, 2004.
- Evans, Susan Toby. *Ancient Mexico and Central America*. 2nd ed. New York: Thames and Hudson, 2008.
- Pool, Christopher A. *Olmec Archaeology and Early Mesoamerica*. Cambridge World Archaeology. Cambridge and New York: Cambridge University Press, 2007.

Possible Moche Ruler-Portraits

The Moche civilization (ca. 0–800 CE) emerged on Peru's north coast, in or near the region's river valleys from the Piura to the Huarmey, as Chavín influence receded. We do not know what the Moche called themselves; they left no written records. Archaeologist Max Uhle named the entire civilization after the Moche River, where he discovered pyramid complexes in 1899 CE. The Moche, like their predecessors and successors, inherited and built upon earlier Pan-Andean political, economic, and cultural traditions to serve their own ends.

Specific Moche contributions and innovations include the approximately 900 portraits we currently find among the more than 160,000 photographs in the Moche Archive at the University of California, Los Angeles. These portraits appear on stirrup-spout ceramic vessels shaped as three-dimensional human heads. They

mostly depict adult males in fine nuanced detail. Scholars remain interested in the following questions: Why did the Moche produce these portraits? How did they produce and distribute them? What did they mean to those who received, viewed, and used them?

The circumstances surrounding scholars' discovering these portraits have tended to obstruct their answering of the above questions. Scholars found some of them in what appear to be high officials' burial sites. They found none of them in rulers' burial sites such as those at Sipan, for example. And most portraits surfaced only after looters removed them and then sold them to private collectors. Data on these portraits' provenance, then, remains scarce and at best inconclusive.

This notwithstanding, the available evidence tells us much. The Moche produced these particular portraits for approximately 100 years, roughly from 400 to 500 CE. Before and after this period, their artistic and other cultural artifacts primarily reflect their concern with the supernatural. For a time, then, Moche elites supported artists concerned with realistic, natural expression and representation. When they produced these portraits, the Moche used sophisticated molds and related technology. They likely produced several copies of each portrait and perhaps at different locations as well. The portraits themselves seem to represent individual historical human beings, sometimes at

different moments in their lives. They clearly show human emotion and even, in some cases, idiosyncratic characteristics and deformities, such as harelips.

Archaeologist Christopher Donnan speculates that during this 100-year period in Moche history wealthy political leaders and other secular elites supported craftsmen who in turn produced and distributed their portraits. These elites directed these portraits' distribution to lesser elites and officials who apparently used them as vessels in their everyday lives, although at least some of them took the portraits with them to their graves. This, then, tended to affirm and maintain regional and local political alliances and trade agreements. If this is correct, then we might view these portraits as somewhat analogous in purpose, meaning, and use to U.S. presidents' autographed photographs that appear in political contributors' and high bureaucratic officials' offices at the federal, state, and local level in America today.

However this may be, following this brief period the Moche suddenly stopped producing these portraits. They then reverted to their earlier preoccupation with the supernatural. Thus, Donnan further speculates that the Moche embraced a revivalist movement after 500 CE, and this coincides with the Moche's subsequent decline.

—James Douglas Lockhart

Bibliography

Donnan, Christopher. *Moche Portraits from Ancient Peru*. Austin: University of Texas Press, 2004.
 Pasztor, Esther. *Pre-Columbian Art*. New York: Cambridge University Press, 1998.

The Mounds of the American West

Debate has raged since the days of Ephraim Squire and Edwin Davis concerning America's moundbuilders. Squire and Davis were commissioned in the 1840s by the American Ethnological Society to examine and analyze the mounds found in the Ohio Valley. They subsequently published in 1848, under the auspices of the re-

cently established Smithsonian Institution, *Ancient Monuments of the Mississippi Valley*. They argued that the mounds could not have been constructed by Indians. Rather, they contended that these earthworks had been result of the labor of defensive experts who had been descended upon by hostile Indians. Previously, in 1840, historian George Bancroft stated that the mounds were a natural phenomenon. Samuel Haven thereupon weighed in on the controversy by stating that the mounds were indeed the product of indigenous Americans, as they paralleled what was being unearthed and discovered in Europe, Mesopotamia, and Mesoamerica by archaeologists.

Near the modern-day city of St. Louis are the remains of the largest earthwork system in the U.S. Midwest. Other sites are located in the expanse of the region extending both eastward and southward along the Mississippi River. They possess certain common elements: they are located near or on the shores of rivers and their tributaries. Cahokia, because of its location at the juncture of the Missouri, Illinois, and Mississippi rivers, offers a glimpse into the mounds found in the Midwest and elsewhere. Before the decline of Cahokia there is evidence that it was a vibrant port for trade. The central part of the community flourished from about 700 to 1300 CE. Excavations beginning in 1924 and lasting into the 1960s revealed that its existence was not happenstance. Because Cahokia housed and supported a population of maybe 10,000, it was almost certainly a major civil center for the region. Scholars believe that this is true for all or most of the mounds found in North America. They had been constructed and designed to mark territory. Though Cahokia was not a traditional city from a European point of view, it provided goods to and received products from the many farming settlements surrounding it. It is also clear that Monk's Mount was the focal point of the city. Scholars can decipher the day-to-day lives of its inhabitants from the available evidence. It is likely that there men were building and repairing structures within the settlement as well as hauling in wood or maybe water to supply its dwellings on a quotidian basis. Moreover, perhaps there would be women carrying

baskets of fish and other produce as a normal daily routine. It is clear from the evidence from Cahokia and other mound cities that careful planning took place and that they were intended as permanent settlements. They were important centers where people assembled for social, economic, and ceremonial purposes.

—John S. Leiby

Bibliography

- Adovasio, J. M., with Jake Page. *The First Americans: In Pursuit of Archaeology's Greatest Mystery*. New York: Random House, 2002.
- Fagan, Brian M. *The Great Journey: The Peopling of Ancient America*. London: Thames and Hudson, 1987.
- Mann, Charles C. *1491: New Revelations of the Americas before Columbus*. New York: Knopf, 2005.

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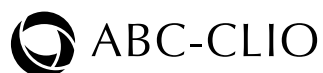
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Economics and Trade

According to tradition, the Silk Roads that connected China to Rome was established when the Chinese official Zhang Qian was dispatched by the Han emperor Wudi to establish a military alliance with the Yuezhi, a steppe people who had migrated west. Zhang Qian was unsuccessful in that enterprise, but he brought back to China word of far-off lands: Anxi (Parthian Persia) and Tiaozi (Parthian Mesopotamia). In response to overtures from Emperor Wudi, envoys from Anxi visited the Han court and brought with them “conjurers” (perhaps acrobats) from Lijian, which is thought to be the Levant, the eastern Mediterranean region of the Roman empire. Archaeological investigations have called into serious question this account of the foundations of this system of trade caravan routes, suggesting that it may have been established centuries before the Han dynasty. Despite the fact that the term “the Silk Road” has become a popular phrase, it was not a single road but a series of many different parallel and intersecting routes that connected China with India, central Asia, Southwest Asia, the Mediterranean, Southeast Asia, and various other locales. Most merchants and travelers, if any, did not travel the entirety of the Silk Roads during this period. Rather, people traveled along set stages of the various routes, and goods were passed down the line. Moreover, Chinese silk was only one of many luxury goods traded along these routes. For the Chinese, it was the exotic goods that came from central Asia and farther away that were of primary interest. People, technology, flora, and fauna were also transferred; viticulture traveled east, and Chinese artistic designs were adapted throughout central Asia in part through this trade network. Of particular importance to the Han court were the large and powerful horses imported from central Asia, horses that were far larger than those indigenous to China.

The Silk Roads were not the only major trade route that connected disparate regions of the world during the period 1000 BCE to 300 CE. The Phoenicians, who moved from the Lebanese coast to settle in North Africa during this period, created trade networks throughout the Mediterranean, with themselves as the major merchants and shippers. Under Roman rule, the entire Mediterranean became an extended trade network. Roman efforts to reduce piracy and the construction of port and shipping infrastructure greatly facilitated the economic connections between North Africa, western Asia, and Europe. An overland route connected the Red Sea with the Mediterranean Sea and thus connected India with Mediterranean ports. The so-called Incense Route, or South Arabian trade network, brought spices from Yemen to the Mediterranean. Much of Europe was connected by an extensive system of roads

and riverine traffic that allowed for relatively easy and safe transportation within the Roman realm. Across the Bay of Bengal, traders could travel from Tamil India to coastal Southeast Asia. Water routes along the coast of Southeast Asia further let travelers voyage to China.

In the Americas, new trade routes developed in a number of regions. In what archaeologists call the Middle Woodland period (1–500 CE), much of the eastern United States was joined together in an extensive trade network. The evidence for this extensive trade network is the large amount of exotic goods (goods that could not have been manufactured or gathered locally) found throughout eastern U.S. archaeological sites at this time. In the Great Lakes region of the United States, copper was heavily traded. Extensive trade networks are also evident in Peru at this time, where the coasts, mountains, and jungles were connected through the exchange of goods.

The period from 1000 BCE to 300 CE also sees a dramatic change in agricultural economics. It is in this period that the first industrial-scale agriculture is established. This is a dramatic transformation in human subsistence practices and today is the dominant mode of food production and distribution in North America and Europe. In ancient times, industrial agriculture was usually associated with larger empires and often with slave labor, as was the case with Roman *latifundia*. Agriculture on this large a scale would be encouraged in the outer areas of the empire as a means of providing for urban populations. The Neo-Assyrian empire, with its center in Mesopotamia, established industrial-scale agriculture and production on the Philistine coast after conquering this region. Recent excavations at the city of Tel Mique-Ekron have shown that the Neo-Assyrians encouraged the cultivation of olives there and the subsequent production of olive oil, which was then transported back to the Assyrian heartland. A similar situation is apparent at the site of Ashkelon; in this case though, grapes and grape products (such as wine) were the primary commodities. In Roman times, the population of Rome grew to such an extent that the surrounding agricultural regions could not supply enough food for the population. Given the difficulties of overland transportation, wheat was not typically imported to Rome from other parts of Italy. Rather, it was shipped to the city directly from North Africa, and especially Egypt, after these regions fell under the authority of the Roman empire.

Despite the appearance of industrial agriculture, small-scale farming remains the most common type of subsistence practice in much of the world at this time. In Roman culture the family farms remained an idealized form of production, and Roman public figures would claim to be descendants of family farmers as a means of gaining public support. Given the difficulties in transporting and storing large quantities of agricultural products, industrial-scale agriculture remained limited to regions with sizable populations and stable transportation infrastructure. Typically it involved foodstuffs that take longer to spoil, such as olive oil and wine products.

Arguably the most significant innovation in economics and trade that arose in the period from 1000 BCE to 300 CE was coinage. Coinage and money have become such essential components of everyday eco-

conomic life that people rarely consider its importance. Coinage greatly facilitates the exchange of goods; it allows exchange to occur in situations where only the buyer has to have something that the seller wants. Thus, buying and selling become much easier, and the storage of wealth is greatly eased since one does not have to worry about that wealth spoiling. The first coins appear in Anatolia, and this system was quickly adopted by the Greek city-states.

As coinage became a more established method of facilitating exchange, stores and markets became more important locations for the exchange of goods. Rather than accepting goods in kind, storekeepers could now accept money in exchange for products and services. This particular kind of exchange system became very common in the Greek and Roman worlds. People living in Rome had access to a number of different malls, structures that housed a number of different stores. The largest of these malls was Trajan's Market in Rome, which opened in 114 CE and held over 150 shops.

—Kevin M. McGeough

■ Introduction: The Development of Industrial-Scale Agriculture

Between 1000 BCE and 300 CE one of the most profound changes in the history of agriculture occurred: the widespread development of industrial agriculture. This was a new type of agriculture, farming at a large scale well beyond what the local producer (and the local producer's tax-collector) could consume. It is frequently associated with the growth of large empires; conquered territories were compelled to produce agricultural goods for the dominant power. Although hints of industrial-scale agriculture appear in earlier times, it is in this period that it begins to have wide-reaching effects. Since this type of agriculture involved growing large amounts of crops, it usually required that those crops be converted into some kind of secondary resource (such as olive oil or wine), which would not spoil over the time it took to transport these crops long distances. In some instances, these crops were clearly grown and sold for profit. In other instances, these crops were produced for distribution throughout an empire. In either situation, this new scale of agricultural production allowed people to grow crops that were most suited for their local cli-

mate and at the same time to gain access to crops from more distant locations. It also reduced the self-sufficiency of local farmers and compelled them to be integrated into a larger network of economic interest.

—Kevin M. McGeough

Industrial Olive Oil and Wine Production in Philistia

During the Iron II period (ca. 1000–586 BCE), industrial-scale agricultural production emerged in coastal Philistia (located in the modern nation of Israel). These Philistine cities were often governed by external powers and throughout this period developed economic strategies to produce large amounts of specialized surplus goods to be used as trade items for goods produced in other centers. In some situations, this surplus production seems to have been organized by external (imperial) authorities; in other cases, surpluses were produced in tandem with other mercantile groups in the region.

➤ WHAT DID AN OLIVE OIL FACTORY LOOK LIKE AT TEL MIQNE-EKRON?

The olive oil installations at Tel Miqne-Ekron were concentrated in one particular zone of the city, a zone that the excavators refer to as the industrial zone. Each factory consisted of three rooms. One of these rooms in each factory contained an olive oil press and other stone equipment, such as basins and weights, that were used to crush olives and allow oil to be extracted. The finest oil was made first. Olives were crushed in a basin with a roller, and the oil was extracted. The remnants of these olives were then put into a circular press; pressure was applied by adding stone weights to a large wooden lever. The other two rooms in the factories were used for a variety of other oil-production activities, such as storage of manufactured goods.

—Kevin M. McGeough

Recent excavations at the site of Tel Miqne-Ekron in Israel have provided important information about the development of industrial-scale agricultural production within an imperial context. Tel Miqne-Ekron was a Philistine city that was incorporated into the Neo-Assyrian empire during the Iron II period (Tel Miqne is the modern name of the site, and Ekron was its ancient name). The conquest and incorporation of this city into the Neo-Assyrian empire led to a reorganization of the city's economic infrastructure and production activities, according to the excavators of the site.

The Neo-Assyrian empire was a massive empire centered in Assyria, the northern portion of Mesopotamia (in modern-day Iraq). During the reigns of Tiglath-Pileser III (r. 744–727) and Sargon II (r. 721–705), Assyria expanded its territorial control beyond its traditional western boundary of the Euphrates River and began integrating foreign territory directly into its imperial framework. Assyrian treatment of these new territories varied substantially. In some cases, these lands became provinces within the Assyrian government. In other cases, these territories became vassal states where local rulers were required to pay substantial tribute to Assyria and

remain loyal to the empire, although they were allowed to govern themselves to some extent. As is well documented in regard to the kingdom of Israel, the Assyrians were not reluctant to dramatically alter the makeup of these incorporated territories; much of the population of Israel was deported and resettled in the eighth century, although it is debated how many individuals were actually removed.

Assyrian intervention in local affairs extended beyond the political and social. Economic activities within the conquered lands were reorganized to better serve the needs of the Neo-Assyrian empire. This is most evident at the city of Tel Miqne-Ekron, which was dramatically reorganized in the eighth century so as to provide Assyria with olive oil both for its own use and as a relatively nonperishable commodity that could be traded for other goods.

Excavations at Tel Miqne-Ekron, led by Trude Dothan and Seymour Gitin, have revealed much about the Assyrian restructuring of the economic basis of the site. Ekron, prior to the seventh century, was a relatively small city, and there is no evidence that there was any olive oil manufacturing at the site. Numerous nearby cities, however, had small olive oil installations. These sites were destroyed by the Assyrians, and it is quite likely that the inhabitants of these cities were moved to other parts of the Assyrian empire. The city of Ekron was expanded during this time and developed into a center of specialized olive oil production. The excavators calculate, based on the quantity of olive oil production facilities found, that Ekron, after its integration into the Neo-Assyrian empire, would have been able to produce around 290,000 gallons of olive oil annually, which is roughly 20 percent of what is produced and exported in modern Israel. This amount is well beyond what would have been needed locally; no doubt the olive oil that was produced at Ekron was redistributed throughout the Neo-Assyrian empire and was sold to other polities in the eastern Mediterranean.

Textiles were also produced at Tel Miqne-Ekron. The excavators believe that textile production was also engaged in at an industrial scale, although the evidence for the amounts of textiles produced is more difficult to interpret. Tools for textile production were found within the olive oil

workshops. The excavators suggest that since olive oil production could only have taken place during a few months of the year, given the agricultural cycle of olive farming, the inhabitants of Ekron would produce textiles in the off season. These textiles may have been produced not only for the Ekronites' own consumption but for consumption throughout the Neo-Assyrian empire and for trade with other locales.

The archaeological evidence from Ekron and its environs is indicative of the type of economic restructuring that may have gone on in other parts of the Neo-Assyrian empire, the concentration of what had once been small cottage industries into larger industrial-scale production centers.

Evidence from other neighboring sites has shown that industrial-scale agricultural production was not just an Assyrian phenomenon at the time. The Leon Levy Expedition to Ashkelon led by Lawrence Stager of Harvard University has demonstrated that this coastal Philistine city was a large-scale wine production center. There, excavators uncovered a building that measured 4,305 square feet (400 square meters) that they refer to as a "royal winery." This building was capable of producing massive amounts of wine that was traded with other cities and regions (although there is little direct evidence of trade with Assyria). Two Phoenician shipwrecks off the coast of Ashkelon each held 400 large wine amphorae, wine that had been purchased at Ashkelon and that the Phoenicians intended to trade in other parts of the eastern Mediterranean. Similar finds from the Philistine city of Ashdod suggest that it was also a thriving industrial-scale wine production center.

—Kevin M. McGeough

Bibliography

- Ballard, R. et al. "Iron Age Shipwrecks in Deep Water off Ashkelon, Israel." *American Journal of Archaeology* 106(2) (April 2002): 151-168.
- Faust, A., and E. Weiss. "Judah, Philistia, and the Mediterranean World: Reconstructing the Economic System of the Seventh Century B.C.E." *Bulletin of the American Schools of Oriental Research* 338 (May 2005): 71-92.
- Gitin, S. "Philistia in Transition: The 10th Century and Beyond." In *Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries*

B.C.E., edited by S. Gitin, A. Mazar, and E. Stern. Jerusalem: Israel Exploration Society, 1998.

Gitin, S., ed. *Recent Excavations in Israel: A View to the West*. Dubuque, IA: Kendall/Hunt, 1995.

Master, D. "Trade and Politics: Ashkelon's Balancing Act in the Seventh Century B.C.E." *Bulletin of the American Schools of Oriental Research* 330 (May 2003): 47-64.

Stern, E. *Archaeology of the Land of the Bible*, Vol. 2, *The Assyrian, Babylonian, and Persian Periods, 732-322 BCE*. New York: Doubleday, 2001.

Slave Labor in Roman Agriculture

Although there are no reliable statistics, it has been estimated that there were approximately two million slaves in Italy at the end of the first century BCE. According to Strabo, the slave market on Delos would sell tens of thousands of slaves in a single day. The main supply of slaves came as prisoners of war from Rome's wars of expansion in the second and third centuries BCE.

This influx of slaves provided the labor force for slave-run plantations, or *latifundia*. Latifundia originated at the end of the second century BCE and were owned by members of the Roman upper class. The use of slave labor together with the concentration of land and money enabled the owners to specialize in the bulk production of cash crops such as olive oil and wine. The villa at Settefinestre near Cosa in Tuscany is a fine example. Owned by the family of Lucius Sestius, the consul of 23 BCE, the complex includes the building (the *villa urbana*) that housed wine and olive oil processing and the farm (the *villa rustica*) that contained granaries and storage facilities. The wine was shipped to central and southern France in amphorae that were likewise produced on the estate.

Shipwrecks carrying cargoes of Italian wine and olive oil have been found throughout the Mediterranean from the end of the second century BCE and offer evidence of how the slave-based large-scale agriculture led to the production of market-based commodities such as wine. The *La Grand Congloué B* sank off the coast of Marseilles between 110 and 80 BCE. The cargo consisted of 1,200-1,500 wine amphorae that were manufactured in the vicinity of Cosa, most of

▶ SPARTACUS' REVOLT

Three major slave revolts threatened Rome in the first and second centuries BCE. The first two took place in Sicily in 135–132 BCE and 104–100 BCE. The slaves, led by Eunus and Kleon in the first war and Salvius and Athenion in the second, sought to establish an independent kingdom.

The third and most famous revolt broke out among gladiators in the Campanian town of Capua in 73 BCE. Led by a Thracian gladiator, Spartacus, the slaves were able to defeat the Roman forces sent against them and ravaged southern Italy. At the height of the revolt, Spartacus was said to have commanded as many as 120,000 slaves and was able to defeat both the consuls of 72 BCE (L. Gellius Publicola and Cn. Cornelius Lentulus Clodianus) as well as the governor of Cisalpine Gaul. The slaves were finally routed in Lucania in 71 BCE by forces under the command of the praetor M. Licinius Crassus. Spartacus was killed in the battle, and the survivors were crucified.

—Benedict Lowe

them on the estate of Sestius at Settefinestre. The volume of wine production at the expense of cereal cultivation prompted the emperor Domitian (r. 81–96 CE) to ban the planting of more vines in Italy and to order the destruction of half of the vineyards in the provinces.

—Benedict Lowe

Bibliography

- Bradley, K. R. *Slaves and Masters in the Roman Empire*. Oxford: Oxford University Press, 1987.
- Bradley, K. R. *Slavery and Rebellion in the Roman World, 140 B.C.–70 B.C.* Bloomington: Indiana University Press, 1989.
- Hopkins, K. *Conquerors and Slaves*. Cambridge: Cambridge University Press, 1978.
- Wiedemann, T. *Greek and Roman Slavery*. Baltimore: Johns Hopkins University Press, 1981.

Large-Scale Cotton Production in India

Cotton production and the spinning of high-quality textiles are ancient economic activities in India dating back to the Harappan, or Indus

Valley, civilization, which was at its technological height from 2600 to 1900 BCE. Complex textile impressions have been discovered on a variety of items from this civilization, suggesting widespread use of cotton cloth. Archaeological evidence suggests that the Harappans used spindle whorls for spinning and wove cloth of both cotton and wool. The spinning wheel would not be introduced in South Asia until many centuries later, by Muslim weavers.

Indian cotton production may also have developed independently in the eastern part of India. This is suggested by the fact that linguists have traced Indo-Aryan terms related to the use of cotton to the Munda language group, which is spoken primarily by tribal peoples in eastern India. But given the fact that scholars also do not yet know what language the Harappans spoke, it is possible that these terms came from the Harappans (if the Harappans spoke a Munda or Munda-related language, as some have suggested).

In whatever part of the subcontinent it was first developed, cotton production was gradually disseminated throughout India, being particularly prominent in the centrally located Deccan plateau and western India, the black soil of both regions being conducive to cotton growth. Threads made of cotton silk have been found in the western state of Maharashtra dating to 1000 BCE and earlier. These fine threads indicate a high level of expertise in cloth manufacture.

By the fifth century BCE cotton production was common throughout South Asia. Farmers in northern India produced cotton as well as rice, barley, and lentils at this time, all of which would continue to be staples of Indian agriculture for centuries.

During the Mauryan period, cotton—in both raw and woven form—was a common item of trade, both internally to India and for export abroad. Although cotton production was associated primarily with the western and central regions, the *Artha Shastra*, a text of political theory attributed to Chandragupta Maurya's mentor, Kautilya, claims that the cotton of Madurai, in today's state of Tamil Nadu in the southernmost part of India, is of particularly high quality.

Fine Indian textiles were highly popular export items, attracting Greek, Roman, Arab, and later European merchants. Megasthenes, the

Greek ambassador to the court of Chandragupta Maurya, described cotton production on such a vast scale that his accounts were widely regarded in Europe as exaggerations. And Herodotus, in his *Histories*, also describes the Indian warriors in the armies of the Persian emperor Xerxes as having been dressed in cotton. Even the Greek word for fine cloth, *sindom*, is derived from Sindh, a region of India in which cotton was produced from a very early period. Clearly, cotton production was widely associated with India in the ancient world.

—Jeffery D. Long

Bibliography

Herodotus. *The Histories*. Translated by Aubrey de Selincourt. New York: Penguin Books, 1954.
 Keay, John. *India: A History*. New York: Grove, 2000.
 Sharma, R. S. *India's Ancient Past*. New Delhi: Oxford University Press, 2005.

Oasis Agriculture in Central Asia

The arid climate of central Asia was not always conducive to productive agriculture. While the Neolithic Revolution (8000–4000 BCE) and the spread of agriculture blossomed in the regions of Egypt, Mesopotamia, and China, central Asia took another route. Indeed, the first known agriculturalists in central Asia do not appear until between 7000 and 6000 BCE, 2,000 years after agriculture appeared in Mesopotamia. Some scholars believe that farming only spread in central Asia because of a slightly warmer and wetter climate that occurred in central Asia from circa 6000 to 2500 BCE.

However, with the invention of the *karez* irrigation system, agriculture became more widespread throughout central Asia. Although the oasis provided water, without the *karez* form of irrigation, accessing sufficient water for personal use and agricultural use would have been impossible. Even with this and the resulting agricultural production, the oases could not support larger populations.

While the oasis towns of central Asia were better known for being trading centers along the ancient Silk Roads, travelers also noted the quality of the fruits and vegetables of the region, es-

HAN MILITARY-AGRICULTURAL COLONIES IN XINJIANG

As the Han dynasty (206 BCE–220 CE) expanded westward toward central Asia, its leaders discovered that imposing their will over central Asia was impossible. The nomads could easily cut their lines of supplies and communication. Logistical difficulties were compounded, as much of the route was through the Taklamakan Desert in modern Xinjiang Autonomous Region of the People's Republic of China. While a large Han army could impose a brief period of Chinese domination over the region, the local population's recognition of Han authority was fleeting.

Beginning in 100 BCE, the Han began a systematic effort to exert their influence westward. To do this they established garrisons in marginal lands. However, the cost to feed them was enormous; therefore, it was expected that the garrisons become self-sufficient. *Karez* irrigation systems provided water and gradually increased the productivity of the soldiers' farming. While they provided security, the garrisons also were a boon to trade, as they became another stop on the Silk Roads between central Asia and China.

—Timothy May

pecially the melons. Farmers also grew other crops such as wheat, barley, chickpeas, and grapes. While the oases could be self-sufficient and even produce surpluses for trade, most of the intensive agriculture of central Asia was based in the Zarafshan and Fergana valleys.

Sedentary agriculturalists and pastoral nomads are typically viewed as diametrical opposites with a long history of animosity. However, in most regions there was a symbiotic relationship. For farmers of the oasis, the nomads were not only potential customers for crops that could not be grown in the steppes but were also a source of animals for farm labor. As the nomads possessed numerous animals in their herds and flocks, a ready surplus existed for trade purposes. Thus, the trade between agriculturists and nomads was not uncommon.

In addition to the animals, primarily horses, gained from the nomads, central Asian agriculturists also domesticated goats and cattle during

the Bronze Age (3000–1000 BCE). Onagers, or wild asses, were also domesticated and used as beasts of burden or as draft animals. Indeed, during the Bronze Age cattle and donkeys were used with the plow by oasis cultures throughout central Asia.

—Timothy May

Bibliography

- Grousset, René. *The Empire of the Steppes: A History of Central Asia*. New Brunswick, NJ: Rutgers University Press, 1988.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2004.

Expansion and Development of Silkworm Cultivation in China

The first use of silk is unknown, but dyed silk gauzes dating from 3600 BCE have been excavated in China. However, even by that date sericulture had a long history there. Until the Warring States period (475–221 BCE), China was the only country in the world that practiced silkworm breeding, silk reeling, and silk weaving, and by that time it had achieved a high level of technical competence. A great variety of fabrics were produced, including brocades that required draw looms, gauzes, crepes, taffetas, and leno (cross-woven fabric).

Very early Chinese silk was made from wild moths. The cocoons were collected when the moths emerged, but enzymes used by the moth to break free of the cocoon damaged the silk, preventing it from being removed in one long strand. This meant that the shorter filaments of silk had to be spun together to make thread, and the result was a less lustrous fabric more like modern raw silk. Eventually the moth *Bombyx mori* was domesticated and became the main source of silk filament. Around the year 1000 BCE silkworm production was formalized, and silkworms were brought inside the house for rearing. Women were placed in charge of the labor-intensive task of rearing the silkworms. Silkworms had to be fed fresh mulberry leaves several times a day and kept warm, dry, and clean. After about five weeks they were transferred to racks, where they wove their cocoons. Before they could break out of their cocoons and the sericin that bound the silk fibers together could harden, the fiber from several cocoons was soaked in water and then reeled together to form a thread. This meant that the fibers had to be reeled within a few days of their completion. Special ceremonies were held to encourage the people to reel as quickly as possible, and even the empress showed the importance of the task by reeling silk. By the Han dynasty (206 BCE–220 CE) a new method of storing the cocoons in salt killed the pupae and allowed the reeling process to continue over a longer period of time. It was not until the Tang dynasty (618–907 CE) that the current method of boiling and then drying the cocoons to allow longer storage before spinning became common practice.

China's silk industry began in the middle reaches of the Yangtze Delta, and that region remained the center of production until the Warring States period. Gradually, sericulture spread to the lower reaches of the Yangtze. The states of Qi and Lu were especially well known for their silk production. Groups began to specialize in spinning or weaving, which improved the end product. It became an unwritten law in China that all unmarried young women, even those of noble families, had to learn to reel and weave silk. In an attempt to further improve the quality of production, the Chinese government began to regulate spinning

STANDARDIZING SILK

During the Zhou dynasty (1050–221 BCE) the Chinese government codified the standard length and width of a bolt of silk. Fabrics not meeting the criteria could not be sold. *The Book of Institutions of the Zhou Dynasty* set the width at 2.2 *chi* and the length at 40 *chi*, or about 30.3 feet (9.24 meters). This was not a random choice. It represented the amount of cloth needed to produce a court dress for an average-sized man. This bolt size remained standard through the Han dynasty and is mentioned in the Han fictional work *The Book of the Prince of Huainan*.

—Rebecca Wendelken

and weaving workshops in the Zhou dynasty (1050–221 BCE).

As sericulture grew, new tools and processes were developed. Metal tools were easier to keep clean, and other special devices, including shallow trays that set in frames, decreased the amount of disease among the silkworms. By the Han dynasty the tools needed to breed silkworms were highly developed and changed very little over the next millennium.

—Rebecca Wendelken

Bibliography

- Boulnois, Luce. *Monks, Warriors and Merchants on the Silk Road*. New York: Norton, 2004.
- Wei, Chen, chief compiler. *History of Textile Technology of Ancient China*. New York: Science Press, 1992.
- Zhao, Feng. *Treasures in Silk*. Hongkong: ISAT/Costume Squad, 1999.

Development of Cacao Production in Central America

Pre-Hispanic Mesoamericans prized their chocolate drinks. Chocolate was an unsweetened drink composed of ground cacao, chili peppers, and various fruit nectars served frothed in enormous highly decorated mugs. In Mesoamerica, chocolate beverages were served to important guests. This custom was similar to the elaborate tea ceremonies of Japan or the fine wine service of the French. The mugs were straight-walled vessels with highly decorated exteriors. Along the top of the mug were calligraphic inscriptions that identified it as the drinking vessel for chocolate-fruity drinks. It is difficult to know when cacao was first harvested, but cacao residues have been found in early contexts, the most notable one from Rio Azul dating to 460 CE. The ancient Maya called it *kakaw*, while Aztecs called their beverage *chocolatl*.

Cacao trees (*Theobroma cacao*) grow best in warm, wet areas. Cultivated groves of cacao were found along both coasts of Central America in antiquity, climate permitting. Wild cacao trees are still found from southern Mexico to Brazil and Ecuador. Cacao trees thrive in shade and at low densities. In dry areas, they were carefully tended in sinkholes.

> CACAO BEANS AS MONEY



Fresh cacao pod and dried cacao beans.
(iStockPhoto)

Money did grow on trees. Cacao beans were used as barter in the ancient cultures of Central America. Gonzalo Fernández de Oviedo y Valdés wrote in 1535 that dried cacao seeds, which he called *almendras*, were precious like gold. A slave could be bought for 100 dried seeds, a rabbit could be bought for 10 seeds, and a prostitute could be procured for 8–10 seeds. Anything that could be bought or sold had an equivalent price in cacao. Some merchants tried to increase their profits by filling old cacao husks with dirt and mixing them in with real beans. Drinking cacao was the modern equivalent of grinding up money.

—Zachary Nelson

The fruit, while edible, was less valuable than the bean. Cacao beans were a luxury food of the ancient cultures of Mesoamerica. They were required as tribute by the rulers and were bartered for goods and services in marketplaces. Palaces were large consumers of cacao. In the household of King Nezahuacoyotzin of Texcoco (1402–1472 CE) about 50 pounds of cacao were used daily.

Cacao was a form of wealth that could also be easily stored and transported. Tribute bearers were sent out with sacks to the lord. Each sack held 24,000 beans and constituted a *carga*, or load. The sacks were then stored in warehouses near the palace until needed. Maya tribute scenes often included similar sacks, carefully labeled as *kakaw*.

—Zachary Nelson

Bibliography

- Coe, Sophie D. *America's First Cuisines*. Austin: University of Texas Press, 1994.

Coe, Sophie D., and Michael Coe. *The True History of Chocolate*. London: Thames and Hudson, 1996.

McNeil, Cameron, ed. *Chocolate in Mesoamerica: A Cultural History of Cacao*. Gainesville: University of Florida Press, 2006.

Herding and Breeding of the Alpaca

Alpacas and llamas are the two species of domesticated camelids of the American Andes. Both are high-altitude animals valued for their fur and meat. As domesticated animals they supplemented and eventually replaced their wild hunted ancestors as a source of meat. However, it was as wool producers and sources of meat that llamas and alpacas most deeply influenced the ancient Andes.

Evidence for the earliest domestication of camelids comes from the Andean highlands, where the wild relatives are indigenous. Domestication as documented at places such as Telarmachay Rockshelter suggest a gradual shift to domesticated species beginning with a preference for camelids as hunted prey beginning around 5200 BCE to early domestication at 4000 BCE and a reliance on herding by 3500 BCE. Telarmachay may be anomalous in its early domestication, however, given that evidence from many sites throughout the Andean highlands suggests that hunting continued to predominate

until after 1600 BCE. Scenes painted on Nazca pottery continue to show hunting of wild camelids in addition to herding well into the first millennium CE.

Differentiating domesticated from wild camelids and between individual species in the archaeological record is difficult. Size distribution of skeletal elements overlaps in all four species, and teeth have only small variations. Similarly, hair fineness on the four species varies by age, breeding, and the location sheered, and the overlap between species is considerable. Even biology has been mystified by the relationships between the species until recently because both domesticated species and their wild relatives, the vicuña and guanaco, could all interbreed and produce viable offspring. The most recent genetic evidence indicates that llamas are more closely related to wild guanacos (genus *Lama*), whereas alpacas bear a closer genetic affinity to vicuña (genus *Vicugna*).

Based on analogy to historically documented and contemporary uses, it has often been assumed that the alpaca was domesticated for its fine wool and the larger llama for its meat. Archaeologists, however, have given little consideration to testing this precise hypothesis. Combinations of both species appear in the remains of transhumant agropastoral groups, and both domesticated species show signs of butchery. Age profiles for butchered animals and estimated percentage contributions of alpacas and llamas to herds vary widely across time and space. This suggests that different regions with access to puna environments for herding developed different economic production strategies and adjusted those strategies to prevalent socio-political, economic, and environmental conditions as needed.

Archaeological data from the Lake Titicaca region, the southern Peruvian and northern Chilean coast, and the northern Peruvian highlands reveals several ways in which alpaca and llama influenced cultural development in the Andes. These include both economic and religious contributions.

First, highland sites in both the north and south document the importance of camelid pastoralism to the economy of sedentary agri-



Alpacas pasture in the Peruvian Andes. (Uros Ravbar)

culturalists. Early pastoralists near places such as Chavín de Huántar and in the puna near Junín established trading relationships with sedentary high-altitude farmers, exchanging meat and maybe wool for agricultural products that provided desirable protein to diets heavy in starchy tubers and a supplement to hunted game and smaller domesticates such as guinea pig.

Second, probably always seminomadic pastoralists began to function as caravan traders transporting goods, especially luxury items, long distances north and south along the spine of the Andes as well as between tropical forests, the highlands, and in time the drier coastal regions. Today llamas are the preferred pack animal carrying as much as 133 pounds (60 kilograms), but there is no reason why alpacas or mixtures of the two species could not be used in caravans. Archaeologists have long held that the society at Chavín de Huántar and complex cultures developing in the Lake Titicaca area owe much of their regional preeminence to their relationships with transhumant pastoralists and economies of prestige goods.

Third, wool became a very desirable commodity among coastal and presumably highland weavers. Wool has many advantages over the cotton domesticated in the dry Andean coastal region. Wool from both llama and alpaca comes in a number of naturally occurring hues from white to tan, brown, gray, and black, absent from cotton. The animal fiber is longer and more lustrous than cotton as well as a better insulator. Wool is also a better vehicle for organic dyes, making the vivid array of colors seen in coastal textiles possible. Wool likely became a desired trade item from the highland regions.

Finally, camelids had important ritual significance. Bones appear as parts of burnt and ritually interred offerings in many early religious centers. Camelids, however, held particular importance in the Lake Titicaca region. There the “Camelid Woman” theme became a popular motif in Pucara religious art. Camelids, both alpacas and llamas, continued to appear in fancy pottery and textiles and as modeled votive offerings among Nazca, Tiwanaku, and Huari cultures, a

➤ MILKING IT

Most known pastoral people subsist off a combination of resources that include not only the meat of their animals but also the blood and milk. This includes the milking of horses, yaks, goats, sheep, and camels. We know that early Andean people made use of camelid meat, perfecting the science of cured ch’arqi (the original jerky). Early textiles point to the demand for camelid fiber. Did the early pastoralists also make use of milk and blood from llamas and alpacas, or were they among the few pastoral people not to do so?

Traditional Andean agropastoralists today do not milk their llamas or alpacas, and veterinary and breeding literature outside of the Andes where camelids have been exported cites small quantities of milk produced by nursing dams as a significant issue in the care of neonates. This does not preclude the possibility of ancient breeds producing enough milk that it could be collected and consumed, but it does make it seem unlikely that either llamas or alpacas were ever used for their milk. On the positive side, an inability to produce a storable protein surplus in the form of milk products may have helped to push the freeze-drying of camelid meat and the production of charqui.

—Jo Ellen Burkholder

tradition preserved through Inca times and into the present.

—Jo Ellen Burkholder

Bibliography

- Mongoni Goñalons, Guillermo Luis. “Camelids in Ancient Andean Societies: A Review of the Zooarchaeological Evidence.” *Quaternary International* 185, no. 1 (2008): 59–68.
- Shimada, Melody, and Izumi Shimada. “Comment on the Function and Husbandry of Alpaca.” *American Antiquity* 52(4) (1987): 836–839.
- Wheeler, Jane, Lounes Chikhi, and Michael W. Bruford. “Genetic Analysis of the Origins of Domestic South American Camelids.” In *Documenting Domestication: New Genetic and Archaeological Paradigms*, edited by Melinda A. Zeder. Berkeley: University of California Press, 2006.

■ Introduction: The Exploitation of Natural Resources

New technologies, new trade routes, and new extensive empires led to the exploitation of new resources or, in many cases, the consumption of resources on a more significant scale than previously. The period from 1000 BCE to 300 CE saw the beginnings of the Iron Age in much of Asia and Europe, which required the exploitation of more metal resources than previous periods. This new technology of iron also led to the ability to exploit more resources, especially mineral, as it allowed for the development of significantly stronger tools (for example, tools used in mining and construction) than had been known previously. New extensive trade routes, most notably the Silk Roads that connected much of Asia to Europe, led to the development of larger global markets for local resources and a concomitant rise in the harvesting and consumption of those resources. This was also the period of the first large empires. The Persians, the Romans, the Han Chinese, and the Mauryans of India, for example, consumed the resources of their conquered lands at an incredible rate. Gaining access to these local resources may have been one of the major impulses behind the growth and development of these large empires. The following entries explore some of the major new resources that are exploited at this time and

some of the major changes in exploitation strategy that occurred.

—Kevin M. McGeough

Development of the International Slave Trade

The ancient world relied heavily on the labor of both male and female slaves, and slave markets grew to meet the demand. Although a person could be born a slave, most slaves began their lives as free people but were enslaved in wartime or by pirates. When the Romans conquered Epirus in 167 BCE they created nearly 150,000 new slaves overnight. Victorious commanders or their agents chose first from among the captives; others were sent to the royal palace or to markets run by the state. The remaining slaves were sold to traders who plied their goods throughout their world. Traders also acquired stock from tribes and villages on the periphery of great states, along the Rhine and Danube and the shores of the Black Sea and from various North African communities. Merchants bought and sold slaves as they did any valuable commodities, seeking to acquire those with good health and extraordinary skills, strength, or beauty and to sell them to well-paying custom-

► WHEN AUXILIARIES GO BAD, CIRCA 84 CE

In 84 CE a cohort of the Usipi (a German tribe) that had been transferred to Britain committed a crime remarkable enough to deserve record. The Romans had attached to the Usipi a centurion and soldiers, to teach them Roman military discipline and thereafter serve as models and directors. However, the Usipi murdered the centurion and soldiers. They boarded three warships, and forced the Roman pilots to do their will. Two of these pilots incurred suspicion and were put to death, while the third did as he was told. As the story of the Usipi was still unknown, they sailed along the coasts. But the time soon came when they had to put into land to get water and other necessities. This brought

them to blows with the Britons, who defended their property. Often successful, the Usipi were occasionally repulsed and were finally reduced to such straits of famine that they first ate the weakest of their number and then victims drawn by lot. In this fashion they sailed right round Britain, then lost their ships through bad seamanship, were taken for pirates, and were gradually defeated. When they landed in Suebi and Frisii territory (along the northern European coast) they were captured by those tribes. Some of them were sold as slaves and passed from hand to hand till they reached the Rhine, where they gained notoriety from the circumstantial account of their great adventure.

ers. Female slaves were most valuable during their child-bearing years, and most males were valuable during the years of their greatest physical endurance. Since entire urban populations could be enslaved at a stroke, mature people of great learning, talent, and experience could be found for sale beside illiterate peasants.

Celts, Scythians, North Africans, Germans, Greeks, and Persians were transported to markets by ship and caravan and along Persian and Roman roads. Most major cities had public slave markets where merchants would make rounds. In the Classical period the markets in Rome, Alexandria, and Constantinople flourished. Rome had a market for common laborers in the Forum, but people went to the market in the Saepta Julia to find those with special skills. On the Cycladic Island of Delos, as many as 10,000 slaves were sold on a single day at the end of the second century BCE.

—Joseph P. Byrne

Bibliography

- Bradley, Keith. *Conquerors and Slaves*. New York: Cambridge University Press, 1978.
- Meltzer, Milton. *Slavery: A World History*. New York: Da Capo, 1993.
- Wiedemann, Thomas. *Greek and Roman Slavery*. New York: Routledge, 1989.

—Joseph P. Byrne

The Acquisition of Horses in Han China

A chronic issue for all Chinese empires was securing sufficient horses for their military. As the major opponent for any empire tended to be the pastoral nomadic horse archers of the steppe, an adequate number of cavalry was necessary not only to counter their attacks but also to carry the battle into nomadic territory. Thus, a major component of the frontier trade between China and the nomads consisted of trading Chinese luxury goods and necessities for horses.

Of course, the quality of the horses would vary considerably depending on the political relations between the nomads and the empire. During the Han period (206 BCE–220 CE), the conflict with the steppe confederation known as the Xiongnu (Huns) necessitated a new source

REPORTED ENSLAVEMENTS OF ROMAN WAR CAPTIVES, 297–167 BCE

Third Samnite War (297–293 BCE)	58,000–77,000
First Punic War (264–241 BCE)	107,000–133,000
Gallic War (225–222 BCE)	32,000
Second Punic War (218–202 BCE)	172,000–186,000
Various wars (201–168 BCE)	153,000
Sack of Epirus (167 BCE)	150,000
Total	672,000–731,000

Source: From “The Roman Slave Supply” by Walter Scheidel, Princeton/Stanford Working Papers in Classics, <http://www.princeton.edu/~pswpc/pdfs/scheidel/050704.pdf>.

—Joseph P. Byrne

of horses. Due to the threat of the Xiongnu, Emperor Wu (141–87 BCE) greatly expanded the number of cavalry used in the Han Army, reaching 30,000 to 40,000 troops.

Rumors of blood-sweating horses descended from a heavenly horse reached the Han court during the reign of Emperor Wu. The horses were located in Dayuan or the Ferghana Valley found in central Asia, divided today by present-day Uzbekistan and Tajikistan. The emperor sent an embassy led by Zhang Qian to achieve two goals. The first and foremost was to secure an alliance with the Yuezhi nomads who dwelled in central Asia. This would create a potential two-front war for the Xiongnu, thus relieving considerable pressure on the Han’s northern frontier. Second, Zhang Qian was to find and procure a number of the horses of Ferghana who were known for their phenomenal strength and speed, which according to legend surpassed all other horses. The Dayuan horses were known as heavenly or celestial horses.

Although the horses of the Dayuan were considered the best, the Han were also able to procure large numbers of horses from the Wusun, a tribe that had recently been subjugated by the Xiongnu. Their horses were also of considerable quality and thus became known as Superior Western horses. Both types of horses were not pasture-fed animals like the horses of the Xiongnu, so the Han also brought back fodder for

► BLOOD-SWEATING HORSES

Most of what is known about the fabulous horses of Ferghana is derived from the *Shiji*, a Chinese chronicle from the Han period that recounted Zhang Qian's embassy to the west. In this, these heavenly horses are known as the blood-sweating horses. Despite the colorful sobriquet, the *Shiji* does not elaborate on what "blood sweating" meant.

It is known that the blood sweating was viewed as part of the celestial qualities of the horse in addition to their strength and speed. Indeed, it was how one could be assured that it was indeed a heavenly horse. However, any actual blood sweating had little to do with divine grace but instead had to do with a parasite known as *Parafilaria multipapillosa*. This parasite is found in waters of the Gorgan and Ferghana rivers. During its life cycle the parasite breaks through the skin, thus causing bleeding. The parasite can still be found in livestock in the Ferghana Valley.

—Timothy May

their nourishment. Indeed, the sparse pasture of China would have been insufficient for their needs. Thus, the Han also introduced alfalfa as a crop to China in order to feed their prized steeds.

—Timothy May

Bibliography

- Barfield, Thomas J. *The Perilous Frontier: Nomadic Empires and China, 221 BC to AD 1757*. Cambridge, MA: Blackwell, 1992.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.
- Soucek, Svat. *A History of Inner Asia*. Cambridge: Cambridge University Press, 2000.

Trade in Spices and Medicinal and Dye Plants in Central Asia

As Edward Schafer notes in his book *The Golden Peaches of Samarkand*, the distinction between medicine and food was not clear-cut in the Far East. The same can be said for the Roman em-

pire where particular spices and foods were prescribed for a variety of ailments. It is difficult to tell, in many cases, whether the materials were traded on the open market or whether they were sent as tribute, but it is important to note that not just the plants but also knowledge about how to use them was transmitted.

Mabuang, or ephedra, the original source of ephedrine, which was used to treat respiratory diseases in China, was transported to western Asia and Europe. Sugar from India and Persia reached the Roman empire, where it was used exclusively for medical purposes. Spinach, which originated in Persia or perhaps India, moved westward. Daoists believed that it could be used as an antidote for an overdose of cinna-bar, a red lead used in Daoist potions and pills of immortality. Ginseng from Korea (used as a restorative) and a type of seaweed (used as a diuretic) also traveled from east to west.

Many aromatic gums from the west also traveled to central Asia and China. Gum guggul from the west, probably from Syria or Persia, was an aromatic and was often used to adulterate frankincense. Galbanum or asafoetida from Persia was used to remove odors from the air, despite its rather strong smell. It was also a food additive but could also be used, it was thought, to dispel demons. Frankincense and myrrh, collected from plants in the Middle East, were not only aromatics but were also used in medicines. Frankincense was used to treat ulcerated skin and intestinal ailments. Myrrh was used exclusively in medicine to treat wounds made by metal blades and for pain from specific causes including a fall from a horse or miscarriages.

Dyes utilized in China included oak galls from Persia, which would dye cloth black. Indigo was grown in China as a dye but was imported from Persia to be used in cosmetics. Tumeric, also used as a spice, came from Southeast Asia. As a dye it turned cloth a brilliant yellow orange and also imparted a fragrant scent. Saffron, used in cooking and as a yellow dye, was introduced to China from the west. It was quite expensive, however, and the Chinese used it as a perfume and to flavor wines.

Spices such as pepper, ginger, cardamom, turmeric, nutmeg, mace, and cloves were traded across central Asia and traveled both east and

west along the Silk Roads, and most had medical applications. Cinnamon from Southeast Asia was used in Europe for religious and medical purposes. It was a key ingredient in Jewish anointing oil. Cloves, also from Southeast Asia, were used to sweeten the breath during the Han dynasty and, mixed with ginger extract, was used to dye graying beards black again.

—Rebecca Wendelken

Bibliography

Boulnois, Luce. *Silk Road: Monks, Warriors and Merchants on the Silk Road*. New York: Norton, 2004.

Schafer, Edward H. *The Golden Peaches of Samarkand*. Berkeley: University of California Press, 1963.

Salt and Salt Mines

Sodium chloride is one of the minerals essential to human and animal life. The Celts at Halstatt mined it to use as a trading commodity. The Celts and the Romans exploited salt mines for rock salt, and the Egyptians had naturally occurring salt-pans in the western desert, but the main supply of salt was obtained by evaporating seawater in coastal areas. In the Roman empire part of a man's pay was made in salt; hence the term *salarium*, or salt money, and the modern term *salary*. In Egypt, salt was an acceptable commodity for bar-

➤ RHUBARB—A MEDICAL MIRACLE

Many medicinal plants were transported over the Silk Roads, and a number of them are still used today but as foods rather than medicines. One of the most popular and lucrative plants traded was rhubarb. Rhubarb, grown in China, was dried to reduce its weight and preserve it. The dried stems were then transported from China to the west. When the stems reached Europe they were marketed as a highly effective cure for constipation. Given the diets of the time, this must have been a very welcome relief.

—Rebecca Wendelken

tering. Salt was a necessity in culinary preparation and was the most efficient preservative known at the time. It also ensured that the proper flavor-producing organisms developed in bacon, ham, cheese, and fish products. Salt is a natural drying agent, which draws water out of a product by osmosis. Food could be rubbed with it or put into casks between layers of salt and pressed with stones so that the natural juices flowed out. Only high-quality products and good-quality salt would ensure a decent result, because poor-quality salt will not penetrate quickly enough and the inner part of the product will deteriorate before the salt or brine reaches the center.

➤ PEPPER AND CUMIN

Pepper was vital in cooking. It was known in Greece by the fifth century BCE as a rare commodity and was probably the long pepper from northeast India. Diphilus of Siphnos (a Greek medical writer of the second century BCE) is said to have put pepper on scallops in the third century BCE, the first known use of the spice in food. Once the trade route to the Far East had been established, pepper became more abundant. Long pepper is hotter than black pepper and was twice its price—so prized was it that it could be used as a currency. It became vital in cookery. Emperor Domitian built special warehouses, *horea piperatoria*, for its storage. Peppercorns, however, do not seem to have

been known in Egypt until the Greco-Roman period.

Cumin, a spicy seed, was well known in the ancient world. Poseidonius (a Greek traveler in the first century BCE) records its use by the Celts to flavor fish and wine. It was usually ground before use and acted as a cheap flavoring. Apicius was lavish in its use, especially for fish. Ground cumin could be mixed with salt in classical Greece to enhance both appearance and flavor. It was widely used in medicine, being recommended in particular for stomach pains. A basketful of cumin seeds was found in the burial place of Khe, architect to Amenophis, at Deir el-Medina, Egypt.

—Joan P. Alcock

The Romans kept salt production under imperial control, organized by a procurator, although extraction and distribution could be leased to private contractors. The salt produced was of a grayish color, so it was often mixed with herbs when placed on the table. Brine mixed with vinegar could be used in preparation of *liquamen*, and the use of this produce often canceled the need for salt. Several different types of salt were known. Herodotus mentioned that in Libya a purple salt was mined. Different types of salt named in lists in Egyptian tombs mention a red salt. Salt producers could have important status. In Egypt, Ramses III granted them special privileges. Salt sprinkled on bread was offered to guests as a sign that they were welcomed, and acceptance of this meant that the guest agreed that no harm would be done to the household. Natron, a crystalline mixture of sodium carbonate (washing soda), sodium bicarbonate (baking soda), and sodium chloride (salt), was not used in Egypt for cooking but was used extensively in preparing bodies for mummification, as its dehydrating action decreases fatty tissue.

—Joan P. Alcock

Bibliography

- Alcock, Joan P. *Food in the Ancient World*. Westport, CT: Greenwood, 2005.
- De Brisey, K. W., and K. A. Evans. *Salt: The Study of an Ancient Industry*. Colchester, England: Colchester Archaeological Group Publications, 1975.
- Hyman, P., and M. Hyman. "Long Pepper: A Short History." *Petits Propos Culinaires* 6 (1980): 50–52.

Exploitation of Jade Resources in Central America

Spanish conquerors invaded the New World in search of gold, but for the natives jade was more highly valued. It was prized throughout Mesoamerica for its symbolism, medicinal value, and hardness. This was not true mineralogical jade (nephrite) but rather a type of stone known as jadeite, although the incorrect designation "jade" is usually used by Mesoamerican archaeologists. Jade objects were used as barter, and fine pieces were passed down as heirlooms. By the Ojochi ceramic phase of the Olmec civilization

(1500–1350 BCE), manufactured jade objects were already being buried in ceremonial contexts at El Manatí, located in Veracruz, Mexico. Jade lapidary production blossomed by 900 BCE and continued in importance through the arrival of the Spanish. After the conquest, production ceased because Europeans valued gold, not *chalchibuitl* (jade).

Because jade objects are found in archaeological contexts from central Mexico to Costa Rica, it has been assumed that there were multiple loci of naturally occurring jade deposits. Chemical compositional tests performed on jade objects seem to bear this out, as they display different chemical signatures. However, only a single area has been archaeologically verified as having jade sources. The Montagua River valley in Guatemala is the only verified source of jade in Central America. The steep volcanic mountains provided nature with the perfect ingredients to make this tough silicate. Naturally occurring jade is present as outcrops, boulders, and river wash.

From archaeological reconnaissance in the area, jade outcrops of particular hues (for jade ranges in color from purple to blue-green to deep green) were sought out at different times. Olmec cultures prized translucent blue-green, while the later Maya and Aztec valued greens. All of these varieties are present in the Montagua region. Due to its hardness, jade was originally removed from exposed outcrops probably via heating with fire. When pieces spalled off due to the heat, they were examined for homogeneity. Minute fractures in the jade spalls would cause severe difficulties later, so only the best pieces were selected. Alternatively, jade prospectors could examine the river for jade pebbles and smaller rocks, but always with an eye for high-quality stone. The spalls and large raw jade fragments are known as preforms.

The jade preforms were flint knapped with percussion blows using a jade hammerstone. Sometimes the preforms were placed on a jade boulder (anvil) and then struck to facilitate removing large unwanted flakes. The preforms were rough-shaped near the source and then exported for final shaping to centers with flint-knapping specialists. Irregularities in the stone were removed with pressure, sanding, pecking,

► JADE'S MANY SHADES

Jade symbolized many things for the ancient cultures of Mesoamerica. First, its green-toned color represented vegetation. Jade also symbolized the breath of life. Jade beads were often placed in the mouths of the deceased so that their souls could be aided on its journey. Rulers incorporated jade in their regalia. The Aztecs used jade as a medicinal aid for urinary tract ailments. Finally, jade was one of the hardest stones known to the premetal societies of ancient Mesoamerica. It was difficult to fashion into objects, hard to polish, and hence valuable in terms of the effort imparted in its manufacture.

—Zachary Nelson



Jade votive axe, olmec, 1200–400 BCE
(Jupiterimages)

► EXPLOITATION OF COPPER NEAR THE GREAT LAKES

The prehistoric exploitation of Great Lakes copper by Native American societies in eastern North America emerged in the Late Archaic period (approximately 3000 BCE) and continued until European contact. However, the intensity of these copper-mining activities fluctuated through time. The three most concerted periods of copper exploitation in eastern North America were during the Late Archaic period from 3000 BCE to 1000 BCE, the Early to Middle Woodland period from 500 BCE to 400 CE, and the Mississippian period from 1000 to 1300 CE. Prehistoric copper artifacts are primarily found with burials and in caches that often occur in mounds; they were not generally deposited in domestic contexts.

The majority of prehistoric mines in eastern North America are located around Lake Superior on the Keweenaw Peninsula and Isle Royale in Michigan as well as the eastern edge of Lake Superior, north of Saint Mary's River in Ontario, Canada. The amount of copper estimated to have been prehistorically mined from these Lake Superior sources ranges from 5.6 million to 2 billion pounds. Float copper, deposited from glacial-fluvial processes, and other natural deposits of copper, especially those in the southern Appalachian Piedmont, also constitute important prehistoric sources.

Prehistoric copper implements in eastern North America were consistently associated with ritual practices instead of utilitarian uses. Cold hammering and annealing methods were employed to work the copper into a particular shape by pounding it and alternately heating and cooling it. During the Late Archaic, most of the copper implements generally resembled utilitarian forms, but ceremonial copper objects became dominant during subsequent periods. During the Middle Woodland and Mississippian periods, many copper artifacts, such as earspools, breastplates, and repoussé plaques, were worn in various ceremonial regalia.

—Bretton Giles

Bibliography

- Drier, R. W., and O. J. Du Temple. *Prehistoric Copper Mining in the Lake Superior Region: A Collection of Reference Articles*. Calmet, MI: Drier and Du Temple, 1961.
- Griffin, J. B. *Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes Prehistory*. Anthropological Papers 17, Museum of Anthropology. Ann Arbor: University of Michigan Press, 1961.
- Trevelyan, A. M. *Miskwabik, Metal of Ritual: Metallurgy in Precontact Eastern North America*. Lexington: University of Kentucky Press, 2004.

and string sawing to make the rough jade into a beautiful object.

—Zachary Nelson

Bibliography

- Bishop, Ronald. "Jade." In *Archaeology of Ancient Mexico and Central America: An Encyclopedia*, edited by Susan Toby Evans and David Webster. New York: Garland, 2001.
- Lange, F. W., ed. *Precolumbian Jade: New Geological and Cultural Interpretations*. Salt Lake City: University of Utah Press, 1993.
- Seitz, Russel, et al. "Formative Jades and Expanded Jade Sources in Guatemala." *Antiquity* 75 (2001): 687–688.

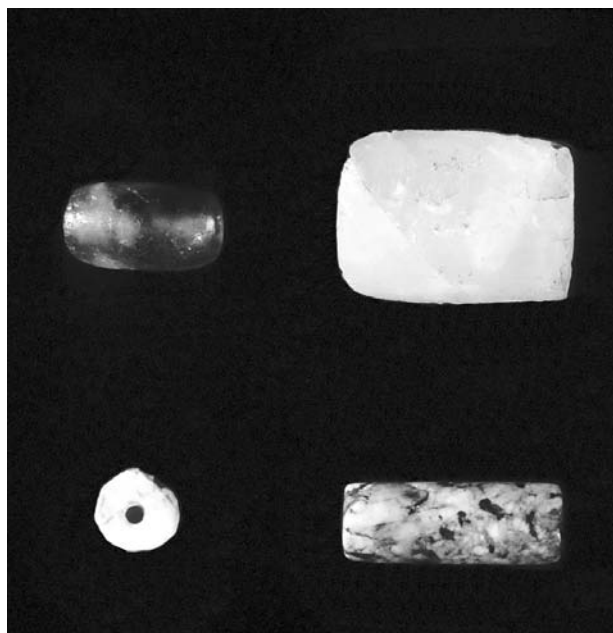
Exploitation of Natural Resources in the Caribbean

Between 1000 BCE and 500 BCE in the Caribbean, during what archaeologists call the Archaic Age, the Amerindian economy varied between islands based on the plants and animals that were locally available. Trade and exchange between communities and between islands during this period can be reconstructed using stone tools and other artifacts made of raw materials for which the geological source is known. For example, the

wide distribution of a specific type of chert traceable to a source on Long Island, Antigua, indicates that Amerindians living in the Caribbean islands during the Archaic Age were either going to the source themselves or more likely obtaining the material through a series of exchanges.

During the subsequent Early Ceramic Age (ca. 500 BCE to 300 CE), larger populations of seafaring people established permanent settlements throughout the region and developed an extensive network of interisland and island-mainland trade and exchange to support their socioeconomic needs. They balanced reliance on introduced domesticated crops such as cassava and naturally present terrestrial resources such as land crabs and rice rats with marine resources, including fish and shellfish. Archaeological evidence indicates that these Amerindians were expert mariners, trading and exchanging a variety of goods and materials between communities on different islands, some located great distances from one another.

Long-distance trade and exchange is best represented by the presence of gemstones and other materials not naturally present on the islands on which they were recovered archaeologically. Evidence of continued travel and transportation between the islands and the mainland indicates that islanders maintained contact with their mainland homeland for several centuries after they had settled in the Caribbean. In terms of the production of beads and other lapidary items, certain villages appear to have specialized in the manufacture of ornaments such as beads made out of certain raw materials. For example, the village of Pearls on Grenada apparently produced beads from amethyst, while the village of Trants on Montserrat yielded extensive evidence of bead making using the reddish-orange mineral carnelian. Many of the gemstones represented in Early Ceramic Age sites are naturally available in the islands, while others are more clearly of more distant mainland origin. For example, the amethyst likely was traded into the southern islands from sources on the mainland, perhaps Brazil. Other materials such as nephrite, jadeite, and turquoise are also believed to have originated on the mainland and were ultimately traded or exchanged into island communities during the Early Ceramic Age.



Stone beads from the Early Ceramic Age Trants site on the island of Montserrat, West Indies. (John Crock)

In addition to ornaments made of locally available materials such as carnelian and crystal quartz, the site of Royalls on Antigua has yielded a stone ax made of jadeite, which has been chemically sourced to Guatemala. Other materials exchanged likely included ceramic bowls, jars and other vessels, and shell tools as well as perishable items that do not preserve to be studied, such as feathers and foods that were available on some islands but not on others. By the end of the Early Ceramic Age (ca. 300 CE), the trade in exotic gemstones and other ornaments

dropped off in favor of greater volumes of utilitarian goods and ornaments made of locally available materials such as shell.

—John Crock

Bibliography

- Rouse, I. B. *The Tainos*. New Haven, CT: Yale University Press, 1992.
- Wilson, S. M. *The Archaeology of the Caribbean*. Cambridge: Cambridge University Press, 2007.
- Wilson, S. M, ed. *The Indigenous People of the Caribbean*. Gainesville: University Press of Florida, 1999.

■ Introduction: Industrial Developments and New Types of Manufacturing

When ancient historians discuss industry, they are not referring to industry in the manner in which we think of it today. The technologies and systems of organization that developed in the European Industrial Revolution transformed the scale of production dramatically from what had come before. What historians are referring to by the term “industry” is the production of goods beyond what can be consumed by the individual producer, usually in order to trade or sell those goods for other types of goods.

Throughout the period from 1000 BCE to 300 CE, the scale of manufacture of goods increases throughout much of the globe. The speed of production and the amount of goods produced grew substantially, with changes in the organization of production and the technologies used in workshops. In the parts of the Americas where an increase in manufacturing is apparent (mostly parts of Mesoamerica and South America), the increase in production developed with the increased urbanization and demographic growth of the region. In Europe and Asia, the development of more extensive trade networks and the growing interdependency of people on these trade networks necessitated the development of production techniques that allowed goods to be produced quickly and cheaply. The growth of large empires also

spurred the development of industrial-scale manufacturing, as the core areas of the empire were anxious to consume the products made in the periphery.

—Kevin M. McGeough

Greek Building Projects of the Fifth and Fourth Centuries

In the fifth and fourth centuries BCE the Greek city-states had achieved a high level of literacy and democracy. During this period, temple-building projects were carried out using public funds. Official records were carved on stone slabs called stelae and were prominently displayed to inform citizens of how the building projects were organized and on which specific items and services the money was being spent. Surviving temple-building accounts from Athens, Epidauros, Delos, and Didyma provide detailed records of how large-scale construction projects were coordinated and include the costs of different materials and labor in classical Greece.

The structures on the Athenian Acropolis were built in the second half of the fifth century BCE and were commissioned by the Athenian statesman Perikles to replace structures that had been destroyed in the Persian invasion of Greece

THE TEMPLE OF ASKLEPIOS AT EPIDAUROS



(Sharon Mollenus)

The temple of Asklepios at Epidauros was built during roughly 380–375 BCE. Its construction is described in the detailed building accounts from the site. This Doric temple was designed by the architect Theodotos, who was paid a salary of one drachma per day. The sculptures in and above each end of the roof were crafted by three sculptors. Their names are listed as Timotheos, Hektoridas, and a third sculptor whose name begins “THEO...”; however, the end of this name is cut off on the marble stele. The building was constructed using limestone from nearby quarries except for the sculptures, which required imported marble. The gold and ivory cult statue of Asklepios was the work of a specialist, Thrasimides of Paros. All together the temple cost almost 100,000 drachmas, or about 200 pounds (440 kilograms) of silver.

—Angela Murock Hussein

in 480 BCE. The project was paid for in part by funds collected from the Delian League, an alliance of cities formed and led by Athens. There were four major components to the reconstruction project on the Athenian Acropolis. The Parthenon was part temple to Athena and part treasury to house tribute money from the Delian League. The Uruktheion was a temple that housed objects from the most important religious cults of Athens. The Temple of Athena Nike was a small shrine to victory. And the Propylaia was a monumental entranceway to the Acropolis. To oversee these projects, the city appointed separate commissions to each one. Every year the names of the commissioners were

recorded at the head of each new entry on the building account stelae before the financial information for that year. Workers on the buildings were paid according to their trades, such as stone quarryman or sculptor. Evidently, the largest expense was the transport of the high-quality white marble overland from Mt. Pentelikos. Excess building materials were sold to help pay for the structures.

In the fourth century Epidauros planned an elaborate series of buildings for the doctor god Asklepios. His cult places were pilgrimage destinations for the sick that had increased in popularity after a plague in the late fifth century BCE. The sanctuary of Asklepios at his birthplace, Epidauros, was the largest. It included a temple, a theater, a tholos or round building of uncertain function, and an abaton or place to house the sick. The construction accounts for this sanctuary are the most complete to have survived from ancient Greece. The tasks mentioned in the construction lists were divided up according to the part of the building (i.e., floor, colonnade, main structure) and also according to the craft involved (i.e., quarrying, transport of stone, polishing the finished walls and floors, ironwork on the roof and doors). Contractors were paid a part of their fee in advance, but money was deducted if the tasks were not completed on time.

—Angela Murock Hussein

Bibliography

- Burford, A. *The Greek Temple Builders at Epidauros*. Liverpool: Liverpool University Press, 1969.
- Dinsmoor, W. B. *The Architecture of Ancient Greece: An Account of Its Historic Development*. New York: Norton, 1975.
- Hurwit, J. *The Athenian Acropolis: History, Mythology and Archaeology from the Neolithic Era to the Present*. Cambridge: Cambridge University Press, 2000.

Glass Manufacture

By 1000 BCE, glass had been made for centuries in the Near East, Egypt, and parts of Europe, Iran, and India. Objects were formed in or over molds or were carved from glass ingots. Most vessels were made by dipping a clay-and-dung core into viscous liquid glass or by winding a

trail of glass around a core; when the vessel cooled, the core was scraped out.

After a late second-millennium dip, Near Eastern glass production revived from around 900 BCE, and from the eighth century glass again became common. Its main center of production was Phoenicia; Phoenician glassmakers were also active in Mesopotamia. Glass was probably produced in a few centers and the ingots traded to be worked more widely.

Recipes for different types of glass survive mainly in the seventh-century library at Nineveh, although earlier ones are also known. Most concerned the production of small glass objects such as inlays; from the eighth century BCE these were cast in open or closed molds as decorations for furniture, ivory objects, and jewelry. Colored opaque glass was made in imitation of gemstones. In Neo-Assyrian Mesopotamia clear blue and purple glass imitating rock crystal was preferred.

Distinctive rod-formed pendants were made by the Phoenicians in the shape of animals and human and demonic heads and masks. The principal products of both Near Eastern schools were carved, core-coated, cast or molded vessels, sometimes with engraved or painted decoration; they also included fine molded mosaic glass vessels. Polychrome mosaic glass tiles were popular in Assyria from the eighth century; these were assembled in a mold from glass canes, giving a mosaic pattern right through, or the mold was filled with a blue glass matrix into which white glass petals were pressed to form rosettes visible only on one side. Mesopotamia continued as a center of glass production under the Persians, particularly producing luxury tableware in shapes imitating those in precious metals.

Trade spread Phoenician glass products through the Mediterranean lands, and by the seventh century new centers sprang up in Italy and Greece, making polychrome core-formed perfume and unguent containers decorated with trails.

A separate glass-making industry developed in barbarian Europe, mainly producing decorative elements for jewelry, often patterned with glass trails. Some central European settlements made distinctive handled small bowls decorated with vertical ribs. In the late centuries BCE Celtic

GLASS IN INDIA

In early India, glass was used almost exclusively to make huge quantities of beads, but from the later centuries BCE glass bangles and earspools were also made. China acquired glass beads from the West in the fifth century BCE but soon developed its own industry, making glass containing barium and a high proportion of lead. This resembled jade for which glass was used as a cheaper substitute. The glass objects, which included beads, decorated plaques, small model animals, and even plates for burial suits, were either carved from blocks or formed in a mold.

—Jane R. McIntosh

Europe also manufactured bangles, massive ring beads, and small figurines. While Mediterranean centers now used Egyptian natron for the alkali in glass, the Celts continued to use plant ash.

By the late first millennium many colors were available: opaque yellow, from antimony with lead; white, from tin oxide or antimony; amber, from iron oxide; violet, pink, and purple, from manganese; brown, from manganese with iron oxide; blue, from cobalt; and blue, turquoise, and green, from copper. In Germanic Europe (and occasionally elsewhere) sealing-wax red glass was made by adding cuprous oxide and lead to the glass mixture and heating it in reducing (oxygen-free) conditions; it was used particularly for decorative inlays in bronze vessels and jewelry.

Most significantly, it was now possible to reliably produce colorless glass. This had occasionally been made before by adding antimony to neutralize the colorant effects of the iron oxide present in sand (a principal ingredient of glass), which imparted a green-yellow-brownish hue. Now, however, glassmakers substituted manganese for antimony or used fine silver iron-free sand from Belus in Syria and the Volturnus River in Campania. Colorless glass became very popular in the Roman world from the first century CE, probably in imitation of highly valued rock crystal.

Enameling, known from the thirteenth century, only became common in the late first millennium BCE when it replaced glass inlays,

particularly in Celtic Europe where it decorated fine objects such as jewelery, parade armor, and horse trappings. A thick paste of very finely ground glass and water was used to fill raised (cloisonné) or cutaway (champlevé) cells in a metal object. After drying, the glass was fused by heating and finished by grinding and polishing.

Glass production virtually ceased in Egypt in the eleventh century BCE. Successive political changes did not affect the major role that coastal Syria played in the glass industry, but in Hellenistic times the Mesopotamian school declined, and its place as a major glass-producing center shifted (along with its craftsmen) to Alexandria. From the late first century BCE the Romans became major patrons of glass production, and Alexandrian craftsmen established a glass industry in Rome.

Syria produced mosaic glass vessels, which were popular with the Roman market. The technique dates back to the second millennium. Thick canes were made by fusing together a number of multicolored glass rods. Canes of concentric colored rings were formed by taking successive gathers of different colors. Hellenistic glassmakers also created spiral and star-shaped canes. After stretching to miniaturize their pattern, they cut canes into segments that were arranged as a disk and fused by heating. This was generally sagged over a mold to form a bowl. Some of the finest pieces were designed to imitate variegated stone. A variant, network ware, used canes made of contrasting colored rods spirally twisted together, producing a pattern resembling a net. Pictorial enamel inlays and medallions were similarly built up in a mold using rod or cane segments.

The Mediterranean glass industry was transformed in the mid-first century BCE when Syrian craftsmen discovered how to blow glass both into a mold and by free blowing, techniques that under Roman patronage were brought to a level of sophistication from which there has since been almost no further development. Glass-blowing technology was spread by Syrian craftsmen who settled in Europe.

Complex vessels, including novelty shapes such as fishes or human heads, could be blown in molds made in several pieces. Molds allowed vessels to be blown in standardized sizes and in

various useful shapes, such as square-based containers with straight sides that packed easily, making them ideal for transporting goods. As mold blowing was very quick, by the later first century CE blown-glass vessels largely superseded those made by other methods. Glass vessels might be decorated with engraved, facet-cut, or enamel-painted designs or with applied glass trails, which were also used to add bases and handles. Bases might also be pulled out with pincers, as might the rim and neck and the decorative ribs of ribbed bowls, popular in the first century CE.

The mold could be decorated. Often the base held an inscription, and first century CE designs included chariot races and gladiatorial combat. From the second century, however, mold-blown vessels became generally plain and utilitarian. Fine glassware now comprised colorless or clear monochrome cast vessels, beautifully finished, imitating the shapes and sometimes the appearance of valuable rock crystal, bronze, and silver vessels.

Glass blocks, like gemstone, were cut into various shapes, particularly jewelery, amulets, and seals but also figurines and small vessels; more commonly the same lapidary techniques were used to finish or decorate glass objects. A separate body of Roman craftsmen, the *diatretarii*, created finely decorated pieces from cast or blown blanks, using lathe cutting, wheel engraving, grinding, and polishing. The designs were mainly floral or geometric but could also be figural.

The most elaborate pieces, such as the famous Portland Vase, had bas-relief designs in a color contrasting with that of the background vessel, produced by the extremely skilled technique of casing, blowing an inner layer of dark-colored glass into a thick cast outer shell of opaque glass while the latter was still hot, then blowing the coalesced two-layered blank. An alternative was flashing. A heated inner vessel was dipped into molten glass to form the outer layer, or a heated gob of glass was similarly dipped into molten glass, and the combined layered glass was blown, an extremely difficult process that the Romans occasionally used to produce glass with up to six differently colored layers. After the outer layer was cooled,

it was selectively cut away to leave the design. Cameo vessels, architectural plaques, and jewelry were made for about 75 years from around 25 BCE.

Impressive gilded vessels were made in Hellenistic Alexandria by casting two clear glass vessels that fitted tightly one inside the other. Intricate designs in gold foil were applied on the outer surface of the inner vessel, and the two vessels were sandwiched together and fused at the edges. More simply, gold-leaf designs could be sandwiched between two pieces of colorless glass. In the third and fourth centuries CE in Rome the technique was used to produce gold-glass disks as vessel bases, with a huge range of secular and religious designs.

The first century CE saw the first production of glass panes. These could be cast in a mold or made by pulling a heated glass disk into a rectangular shape. Alternatively, a blown-glass cylinder was cut along one side, reheated, and flattened. Glass panes were initially expensive but later became common.

—Jane R. McIntosh

Bibliography

- Harden, D. B., et al. *Masterpieces of Glass*. London: British Museum, 1968.
- McClennan, Murray C. "Vitreous Materials: Artifacts of the Persian through Roman Periods." In *The Oxford Encyclopedia of Archaeology in the Near East*, Vol. 5, edited by Eric M. Meyers. Oxford: Oxford University Press, 1997.
- Moorey, P. R. S. *Ancient Mesopotamian Materials and Industries*. Oxford, UK: Clarendon, 1994.
- Nicholson, Paul T., and Ian Shaw, eds. *Ancient Egyptian Materials and Technology*. Cambridge: Cambridge University Press, 2000.

Development of Standardized Mud Brick in Moche Construction

From 200 BCE to 600 CE, the Moche people molded, marked, and transported billions of sun-dried mud bricks to administrative and religious centers along Peru's northern coastline for the purpose of building such state-sponsored structures as pyramids, platforms, palaces, and canals. Two mountainous flat-topped pyramids located at the Moche capital of Cerro

Blanco, the renowned Huaca del Sol and Huaca de la Luna, were comprised of over 143 million and 50 million bricks, respectively. Anthropologists Michael Moseley and Charles Hastings observed that even though the Moche made all the bricks at Cerro Blanco in four-sided molds, open on the top and bottom, the bricks nevertheless varied in terms of composition, dimensions, mold marks, and makers' marks. An analysis of the distribution of these variables revealed a brick sequence useful for understanding the production and use of bricks as well as chronologically ordering building phases. Over time thick bricks replaced thin bricks, flat-sided bricks made in molds constructed of smooth slats replaced cane-marked bricks made in molds of cane sections stacked horizontally, and bricks with makers' marks replaced those without. The Moche built both *huacas* in segments of columns of bonded bricks stacked one beside another; the columns themselves were not mortared together. The manner of construction coupled with evidence that the adobe bricks within each construction segment typically exhibited uniform composition, dimensions, and a single unique maker's mark led Hastings and Moseley to conclude that Moche lords required their subjects to contribute building materials and corvée labor to large-scale architectural projects. The work accomplished by Moseley and Hastings in the Chan Chan-Moche Valley Project has prompted further systematic studies of Moche bricks such as Donald McClelland's efforts to develop a brick typology and seriation at Pacatnamu and Izumi Shamada's examination of the organizational significance of marked bricks and associated building techniques for both the Labor Tax Model and the Sponsor Model.

—Whitney Leeson

Bibliography

- Hastings, C. Mansfield, and M. Edward Moseley. "The Adobes of Huaca del Sol and Huaca de La Luna." *American Antiquity* 40(2) (1975): 196–203.
- McClelland, Donald H. "Brick Seriation at Pacatnamu." In *The Pacatnamu Papers*, Vol. 1, edited by Christopher B. Donnan and Guillermo A. Cock. Los Angeles: Museum of Cultural History, University of California, Los Angeles, 1986.

■ Introduction: New Features for Promotion of Commerce and Trade

Global trade and commerce expand dramatically throughout the period from 1000 BCE to 300 CE. The development of new trade routes and the growth of empires and larger polities meant that many parts of the world were significantly more interconnected than in previous times. With this greater interconnection came new advances that promoted commerce and trade. Better transportation infrastructure, such as Roman roads, made the transportation of goods easier (and the suppression of piracy made traveling with expensive goods safer). The use of the Semitic alphabet by Phoenician and Greek traders may have been of benefit, but certainly the appearance of formal market centers and port facilities enhanced trade.

The most significant of these advances, however, was the development of coinage. This was the period in which currency, in a form close to what is used globally today (although the basis of the value of today's currency is significantly more complex), first appeared. Coins, minted by some form of governmental body, made trade and commerce easier. Instead of having to find a seller who wanted the specific kind of goods that the prospective buyer possessed in order to be able to trade (as was typical in a barter system), the buyer would already have converted this wealth into an abstract form that any seller would want. Similarly, this type of wealth did not go bad (like foodstuffs might). Although inflation and other issues could devalue the currency, the bearer of the coins still had the metal that the coin was made from, unlike a farmer whose crops only last for a certain length of time before spoiling. This ability to convert wealth into a permanent form allowed people to have savings. Coinage is a fundamental underpinning of economics today, and its development is one of the most significant events in global history from 1000 BCE to 300 CE.

—Kevin M. McGeough

The Greek Adoption of the Phoenician Alphabet

By the thirteenth century BCE, at the very latest, the inhabitants of the Greek mainland and the island of Crete were speaking Greek. Indeed, some scholars, from the analysis of place names and archaeological data, believe that Greek speakers (or people speaking proto-Greek) had arrived by 2000 BCE. This makes Greek the oldest of all European languages with a continuous history lasting at least 3,300 years, possibly even 4,000 years. Although its origins are unclear, it belongs to the Indo-European family of languages, which extends from Iceland to Bangladesh. This includes Latin and all the Romance languages, the Germanic languages, Sanskrit, and many others.

Until the Hellenistic period, Greek existed in a number of different dialects, the most important of which were Aeolic, Doric, Ionic, and Attic. These dialects do not, however, invariably correspond to ethnic divisions within the Greek “race.” For instance, the inhabitants of Halikarnassos, modern Bodrum on the Turkish coast, who were Dorians, spoke in an Ionic dialect. Following the conquests of Alexander the Great, a dialect called *koine*, or “common,” became the educated tongue of the entire Hellenistic world. Koine is the dialect in which the New Testament is written.

The evidence for the existence of the Greek language in the Bronze Age derives from a pre-alphabetical Greek script called Linear B, which was deciphered by a 30-year-old English architect named Michael Ventris in 1952. It is so named in order to distinguish it from an earlier, still undeciphered, script called Linear A, which may or may not have been Greek. (Linear A was used extensively throughout the Minoan world in the period from 1800 to 1450 BCE. Because it has not been deciphered, it is not known whether the Minoans were in fact Greek speakers.) Linear B was based on the principle that one sign represents one syllable. Objects are de-

ANCIENT GREEK LITERACY

For many years after the alphabet was first introduced, only a small number of Greeks would have been literate. We do not know whether Homer was literate, though he certainly knew about writing because he makes reference to it in the *Iliad*. However, his poems were transmitted primarily through the oral tradition by rhapsodes (literally “song-stitchers”), professional reciters of poetry, who may or may not have been literate.

We do not know what percentage of the population could read and write at any period of Greek history. What is abundantly clear, however, is that mass literacy never existed on the scale that it exists today. Historian William Harris has estimated that no more than 30 percent of the Greek population was literate at any one time. Levels of literacy varied from one place to another and from one social group to another. One of the highest levels was achieved by Classical Athens, whose democratic constitution was based on the principle that a substantial proportion of the (male) citizenry could read the often lengthy and extremely detailed documents that were recorded on stone, and that the majority at least achieved craft literacy, that is, they were able to read material related to their sphere of work. In Sparta, by contrast, where few written records were kept, most of the population was probably completely illiterate.

Literacy is likely to have been practically nonexistent among women, those who belonged to the lower social classes, and slaves. In each group, however, there were exceptions. Evidence from vase painting, including an Attic red-figure vase dated around 440 BCE that depicts a seated woman sometimes identified as the poetess Sappho reading a roll, suggests, however, that some Athenian women were literate. Informal graffiti indicates that literacy was not exclusively limited to the elite. Lastly, the job of some slaves was to keep accounts of financial transactions or to read aloud to their masters and mistresses. It was slaves, too, who made multiple copies of literary works that went on sale.

Despite the importance of literacy in Greek society, much more information and learning was passed down by word of mouth than is the case in our society. At all periods and places, there was a ready audience for recitals of all sorts, not just musical but also literary. The historian Herodotus, for instance, first promulgated his work through oral recitation in Athens, and oral recitation remained a popular form of communication throughout antiquity.

—Robert Garland

noted by ideograms—that is, signs that were originally pictorial. Clay tablets engraved in Linear B by means of a sharp instrument have been found at Mycenai, Tiryns, Thebes, Pylos, and Knossos (Crete). Most of them date to the thirteenth century BCE. There is very little regional variation, which suggests a high degree of administrative centralization. It was used mainly for accounting records, as in the following tablet from Pylos: “Kokalos repaid the following quantity of olive oil to Eumedes: 648 liters; from Ipsewas 38 stirrup-jars.” With the collapse of the Mycenaean world, the script died out and literacy disappeared.

Greece remained illiterate for over four hundred years. Then, in the early eighth century BCE, the Greeks came into contact with a seafaring people called the Phoenicians, who inhab-

ited cities on the coast of Syria. They adapted the Phoenician alphabet to their own language by adding 7 vowel sounds (i.e., a, short and long e, i, short and long o, and u) to the original 16 consonants, making it a much more flexible script. Many of the Phoenician names for the letters entered the Greek alphabet virtually unchanged, including aleph (alpha) meaning “ox-head” and beth (beta) meaning “house.” The same letters also functioned as a numerical system and were used for musical notation.

The earliest surviving examples of the Greek alphabet are dated around 740 BCE. Some scholars maintain that the Greeks first used the alphabet for trade and commerce, others for preserving epic poetry. The earliest examples of Greek writing are, in fact, lines written in epic verse. Before long, however, letters had come to serve a variety

of purposes. Although some states had a few local variants, the alphabet became standardized by the early fourth century BCE. The Greek alphabet was destined to become the basis for other European scripts, including Latin, modern Greek, and Cyrillic.

—Robert Garland

Bibliography

- Chadwick, J. *Linear B and Related Scripts*. Berkeley: University of California Press; London: British Museum Publications, 1987.
- Finley, M. I. *The World of Odysseus*. Introduction by B. Knox. 2nd rev. ed. Harmondsworth, Middlesex, UK: Penguin Books, 1978.
- Garland, R. S. J. *Daily Life of the Ancient Greeks*. 2nd ed. Westport, CT: Greenwood, 2008.
- Harris, W. V. *Ancient Literacy*. Cambridge, MA: Harvard University Press, 1989.

Coinage

When people live in complex societies, they often need a way of storing up savings, a measure of value by which different items can be compared and/or a means of payment or exchange. Money fulfills all these needs, and one form of money is coinage. Coins are made of metal, of standard alloy and size, with a design that symbolizes the authority that made them and guarantees their value. Coins were first developed in two areas: China and Lydia (western Turkey). With no contemporary written account of either invention, early coins need to be studied in

their full archaeological context to learn more about them.

In China, the role of high-value money was taken by gold, silver, silk, or other precious goods, but bronze also gained status through its use in ritual vessels. Bronze coins in the shape of spades were first issued by rulers of the Eastern Zhou states perhaps as early as the late seventh century or the early sixth century BCE. Other states then began to issue coins in the shape of spades, knives, shells, or disks with a hole in them. The bronze was cast in stone molds and was often inscribed with a weight, place name, or clan name. When Emperor Shihuang of Qin subdued all the other states circa 221 BCE, Qin coins became legal tender throughout the empire. They were bronze disks with a square hole in the center, marked with the weight “half-liang.” This shape of cash would persist in China and throughout East Asia for more than 2,000 years.

In Lydia, coins originated around the same time but in more precious metal. Lydian kings dominated the (mainly Greek) cities of western Asia Minor in the seventh century to the mid-sixth century BCE. Their capital, Sardis, lay on the Pactolus River out of which electrum, a natural alloy of gold and silver, could be panned. The Lydians spread this natural wealth by standardizing the alloy and issuing pellets of set weights, from a unit to tiny fractions weighing 1/96th of that. Some just had punch marks on one side, but many pellets were placed on a carved die to be punched, resulting in coins that

► SILVER TETRADRACHM FROM ATHENS, GREECE, CIRCA 480 BCE

Silver tetradrachm from Athens, Greece (around 480 BCE). On the obverse (front) is the head of the goddess Athena, and on the reverse the owl, a bird associated with the goddess. These designs remained unchanged on Athenian coinage for over three hundred years, and the ‘owls’ of Athens became familiar coins throughout the Greek world.



(British Museum/Art Resource, NY)

showed the die's pattern in relief. The coins, whose punch marks and standards fall into six groups, have scores of symbols (lion, bull, deer, etc.), but most have no writing; only the Lydian lions and the seal (*phoke*) of the Greek city Phokaia seem certain. Several mints were in operation by circa 650–625 BCE, when a hoard of electrum coins was buried in a pot of that date under the Temple of Artemis in Ephesos. It is likely that the coins were issued and circulated at a value higher than their intrinsic one within their home territories and simply at their metal's value elsewhere.

Lydia's last king, Croesus (ca. 561–546 BCE), minted separate coins of gold and silver, while cities in his realm began to coin silver, deposits of which were more common than electrum or gold. Silver coinage spread farther than electrum. The tribes of Macedonia, the island city of Aegina, Athens and Corinth on the Greek mainland, and Greek cities of southern Italy and Sicily all began to issue coins of varying standards and designs. Persia, which conquered Lydia (ca. 546/547 BCE), used coins far less but allowed some Lydian-type coinage to continue, later substituting its own coins in a similar form but with the image of a Persian archer.

By the end of the sixth century BCE, more than 100 Greek cities were minting coins, often with their names and symbols of civic pride. One possible reason for the popularity of coinage among Greek cities is their frequent interaction and rivalry: if one issued coins with its name and symbols, others did the same in order to show that they were of equal wealth, status, or sophistication. Another motive might have been within the city, where one group in power could foster its own political program and freeze others out by issuing coins, but little is known of internal politics for any city except Athens, and Athens was not typical. Outside any city, its coins were valued at their weight in silver. The Carthaginians and Phoenicians, known to be great traders, used these or uncoined silver, only issuing their own coins later, in the fifth century BCE.

No matter what the original motives, coinage strengthened a city as a central power, giving it prestige and profit and enabling it to collect fines and taxes, supply armies and na-

vies, and build temples and public amenities. Coinage also let people set prices, sell, buy, lend, borrow, give dowries, and establish credit for businesses. Coinage is not a requirement for any of these but tends to intensify them all. Small-scale exchanges were eased by the introduction of bronze instead of tiny silver fractions for low denominations in the late fifth century BCE. Although a bronze coin had little intrinsic value, it was accepted insofar as a set number of them could be exchanged for silver.

Some cities in central Italy had used weighed bronze as money, and one of them, Rome, added a Greek-style silver coinage around 300 BCE. Rome's conquests and empire would gradually extend the first trimetallic coinage (gold and silver with bronze often minted locally, ca. 27 BCE–268 CE) around the Mediterranean world. Although based on Greek coins, Roman coin images were more variable, and from the mid-second century BCE on often referred to powerful men and families, politics, or patriotic themes. Roman moneyers (the technical term for people who make money) embraced portraiture, first of past leaders and then of living ones starting with Julius Caesar (d. 44 BCE); afterward it became usual that the living emperor (or occasionally members of his family) should appear on coin obverses. The reverse side could depict a variety of images, usually focused on the emperor's (or for local bronzes, the city's) patron gods, buildings, or achievements. Roman imperial coins, though struck in enormous numbers, achieved both regularity and fine detail for most of their history.

—Barbara Burrell

Bibliography

- Howgego, Christopher J. *Ancient History from Coins*. London: Routledge, 1995.
- Schaps, David M. *The Invention of Coinage and the Monetization of Ancient Greece*. Ann Arbor: University of Michigan Press, 2004.
- Williams, Jonathan, ed., with Joe Cribb and Elizabeth Errington. *Money: A History*. London: British Museum Press, 1997.
- Zhou Weirong. "A Study of the Origins of Bronze Coinage in China." *Bulletin of the Metals Museum/Kinzoku Hakubutsukan kiyo* (Sendai, Japan) 27 (1997): 16–25.

Greek and Roman Port Facilities and Market Structures

Commerce in the ancient Mediterranean world, particularly in Greece and Rome, was characterized by the reliance on foreign trade links established in North Africa, the Levant, Egypt, and the Black Sea region. The establishment of such vital trade links was ensured by naval and military might, imperial expansion, and effective commercial fleets. It was also made possible by the maintenance of important port cities attached to the imperial capitals. Classical Athens, the Hellenistic capital cities, and the city of Rome all had their port structures, which were pivotal in funneling the wealth of the Mediterranean into their market structures.

Ancient Greece, dominated by rocky soils that made cultivation difficult, relied on foreign supplies of grain to feed the native populace. Greek colonization abroad and merchant fleets were responsible for creating important commercial connections abroad to ensure consistent supplies of grain from the greater Mediterranean world to the Greek city-states. The rise of Athens as an important power in ancient Classical Greece not only rested on its naval and military power but also on its ability to supply its empire with grain from abroad. In exchange for finished goods such as ceramics, Athens was able to expand its trade networks as far as the Black Sea.

Athens' port of Piraeus, five miles (eight kilometers) from the city on the Saronic Gulf, served as a major hub of trade for the Athenian empire. A road between Athens and Piraeus secured by the Long Walls of Athens ensured that grain supplies were always accessible. A powerful Greek fleet ensured that important maritime trade routes were secured from pirates and foreign attacks. Vulnerability to famine demanded that Athens ensure the security of grain from overseas.

Hellenistic Greece established far more expansive markets by building on the trade networks established by the Greek city-states and through conquest of eastern provinces at the expense of the Persian empire and Egypt. The successor kingdoms of Alexander also depended to a large extent on foreign grain but in addition developed a lucrative system of exchange with foreign markets farther east, namely India and China. The development of the island of Rhodes as a trade hub for grain for the Hellenistic world ensured it centuries of wealth and importance, with its ports teeming with grain fleets. The mere expanse of the Hellenistic kingdoms in addition to the stability of the Mediterranean ensured the growth of trade in the region. The powerful Ptolemaic fleet stabilized the eastern Mediterranean from piracy and the incursions of invaders. Important centers of trade such as Alexandria, Antioch, and Athens thrived from the vast wealth made possible through the greater expansion of commerce in the Hellenistic world.

The city of Rome had long-established trade connections within the Hellenistic world and through its own territorial expansion managed to integrate the Mediterranean world into a common market. Throughout the republic and the later empire, the Roman economy rested on a vast trade network spanning Europe, North Africa, the Middle East, and the former Hellenistic kingdoms. Imperial conquests brought tribute and wealth to the city of Rome in addition to establishing its hegemony over most of the Mediterranean world. The Roman port of Ostia served as the artery of Mediterranean trade funneling into the imperial capital. Efficient distribution networks ensured that the port of Ostia supplied the needs of the capital. Roman roads, famous for their efficiency and durability, were built throughout the dominions, ensuring land-

➤ OSTIA—PORT OF THE ROMAN EMPIRE

Ostia's importance in the Roman empire rested on its status as the principal port for the city of Rome. The city served as a commercial hub for all trade to and from Rome, connected to the capital through the Tiber River. As a major port city, Ostia served as the main conduit of grain from the greater Roman empire to Rome. As the most important port in the Roman world, Ostia was privy to vast amounts of wealth, illustrative in its monuments, buildings, and cultural life. Furthermore, its development as a resort city for wealthy Romans added to its luster as an important city in the Roman empire.

—Abraham O. Mendoza

transport accessibility for trade. The maritime trade routes of the Hellenistic world were adopted and expanded during the Roman empire, drawing vast amounts of wealth from the Mediterranean world. The increasing dependence on foreign grain to support Roman citizens at home demanded that emperors pay attention to the defense and stability of trade routes.

—Abraham O. Mendoza

Bibliography

- Casson, Lionel. *Ancient Trade and Society*. Detroit: Wayne State University Press, 1984.
- Parkins, Helen, and Christopher Smith, eds. *Trade, Traders, and the Ancient City*. New York: Routledge, 1998.

Piracy in the Mediterranean

Piracy is first referred to in the legends of the Cretan King Minos. Acts of piracy feature commonly in the *Iliad* and *Odyssey*, although Homer does not specifically refer to the perpetrators as pirates.

Specific acts of piracy are difficult to determine: the Greeks and Romans did not distinguish between brigands, pirates, or privateers. An individual could be called a pirate even though his actions were no different than those of a soldier or a mercenary. According to Greek law, victims were entitled to seek redress by seizing property from their attacker. The commercial rivalries of the Greek city-states fostered piracy, and in 416 BCE, in response to Athenian attacks from Pylos, the Spartans encouraged attacks on Athenian shipping.

During the fifth century BCE the growth of Athenian naval power meant that piracy was on the wane; however, the turmoil caused by the Peloponnesian War (431–404 BCE) and the destruction of the Athenian Navy allowed a resurgence of piracy. By 380 BCE the Athenian orator Isocrates complained that the seas were infested with pirates, and in 362–361 BCE pirates ravaged the Cyclades and even raided Athens' port of Peiraeus itself.

The Hellenistic period marked the heyday of ancient piracy, with pirates being frequently employed by the successors of Alexander. The main activities of the pirates seem to have been the



Pirate ship approaches a Greek merchant vessel. Drawing of a painting on an Athenian cup located in the British Museum, late sixth century BCE. (British Museum/SSPL/The Image Works)

plundering of coastal communities and the kidnapping of men and women. An inscription from Amorgos records a night attack in which pirates were able to carry off more than 30 men and women, and an inscription from Naxos records Aetolian pirates holding 280 people for ransom. According to the Greek geographer Strabo, the most notorious pirates were Italians, Cilicians, and Cretans; the rugged terrain and lack of agricultural resources in their homelands prompted locals to turn to piracy as a source of revenue. Their numbers were swollen by refugees from the warfare and economic dislocation resulting from the collapse of the Greek states and the gradual Roman conquest. Illyrian piracy was so endemic under Queen Teuta that it prompted the Roman government to intervene in 230–228 BCE. However, Illyrian piracy continued, necessitating further campaigns in 219 BCE.

Roman efforts to suppress piracy were not entirely successful, as the republic did not maintain a permanent fleet, relying instead on allied states. Roman negligence allowed pirates from the mountains of Cilicia in southern Turkey to become more assertive following the destruction of Seleucid power at the Battle of Magnesia. To escape the attentions of the pirates, cities would either pay tribute to them or enter into alliances that allowed them harbor facilities and refuge. Although figures for the scale of piracy are scarce, Livy records that the Cretan city of Gortyn alone handed over 4,000 Roman and Italian prisoners

in 189 BCE. Cilician pirates frequented the slave market on Delos, where tens of thousands of slaves would change hands in a single day.

Although there were a few occasions when the Greek city-states were strong enough to suppress piracy (the legendary exploits of the Cretan King Minos, the Athenians in the fifth century BCE, and the Rhodians during the Hellenistic period), it was only at the end of the second century BCE that the Romans made a concerted attempt to stamp out piracy.

The earliest Roman operations against the Cilician pirates were the campaigns of Marcus Antonius in 102 BCE. Despite being granted a triumph, Antonius's campaigns seem to have had little appreciable result, and Roman campaigns continued with mixed success until the campaigns of Pompey in 67 BCE. In 74 BCE Marcus Antonius Creticus was granted a three-year command to eradicate piracy, which presages the powers given to Pompey seven years later. Pompey was granted command for three years over the entire Mediterranean and up to 50 miles (80 kilometers) inland. Although the figures for the troops at his disposal are disputed, he may have had as many as 20 legions and 270 ships. A coordinated campaign on this scale proved too much for the pirates, and Pompey was able to claim victory in three months.

Piracy continued to be a problem. Sextus Pompey was accused of having used pirates to control Sicily in 43–36 BCE, and it was only with the establishment of permanent fleets at Misenum and Ravenna in 27 BCE that the Roman government was finally able to control piracy.

—*Benedict Lowe*

Bibliography

- De Souza, P. *Piracy in the Graeco-Roman World*. Cambridge: Cambridge University Press, 1999.
- Ormerod, H. A. *Piracy in the Ancient World*. 1924; reprint, Baltimore: Johns Hopkins University Press, 1996.
- Rauh, N. K. *Merchants, Sailors and Pirates in the Roman World*. Stroud, UK: History Press, 2003.

Roman Road System

The principal routes of the Roman republic and empire were *viae publicae*, roads that were built at public expense for official use. Early roads were constructed to facilitate Rome's conquest of Italy: the Via Appia was built by the censor Appius Claudius Caecus in 312 BCE to link Rome with Capua and to facilitate the movement of troops during the wars against the Samnites. The road was subsequently extended south to Brundisium. The Via Flaminia was built in 220 BCE from Rome to Ariminum and extended as the Via Aemilia to Placentia in 187 BCE linking the Roman colonies of the Po Valley. The Via Postumia was built in 148–147 BCE and linked Cremona to Aquileia at the head of the Adriatic.

Main roads were used by the *cursus publicus*, or public post, that carried goods, people, and messages on official business. *Mansiones*, or inns, were provided at intervals of one day's journey, and *mutationes*, or rest stations, were provided every 10 miles (16 kilometers). During the republic maintenance of the road system fell under the jurisdiction of the Senate but was usurped in 20 BCE by the emperor Augustus, who undertook the maintenance of the roads of

▶ ROMAN MAPS

Maps did not attempt to be geographically accurate but instead attempted to aid the traveler by showing the distances between towns along the major roads. The most famous map of this kind survives as a medieval copy called the Peutinger Table that was found at Worms at the end of the fifteenth century CE. The table consists of a long scroll, 21 feet (6.4 meters) long, depicting roads elongated from east to west together with towns

and distances as well as the principal rivers and mountains. A list of *mansiones* and distances without a map survives as the Antonine Itinerary that may have been prepared at the end of the third century CE for the emperor Diocletian, although it originated in a list drawn up for the emperor Caracalla (211–217 CE).

—*Benedict Lowe*

Italy. Roads in the provinces fell under the jurisdiction of the provincial governor. Local roads (*viae rusticae*) were maintained by local town councils or by landowners for private use.

Travel by road was an arduous affair. The poet Horace describes a journey along the Via Appia to Brundisium in 37 BCE, a journey that took 13 days to cover the distance of 364 miles (586 kilometers). Recent studies have emphasized the high cost of land transport, costing perhaps as much as 20 times more than transporting by sea, and have concluded that bulk quantities of goods could not have been profitably traded overland.

The fullest account of Roman road construction comes from the poet Statius who describes the construction of the Via Domitiana linking Sinuessa to Puteoli in the later first century CE. First the line of the proposed route was marked out: surveyors or *agrimensores* would lay out the route using a *groma* that consisted of a rod surmounted by a horizontal crossbar and plumb bobs that enabled the surveyor to calculate right angles. The roadbed was then dug away to reach bedrock or a suitably firm foundation that could be achieved by beaten earth, piles, or brushwood. The trench was filled with layers of stones, gravel, and sand. The road was surfaced with paving stones held in place by a kerb and revetment. The surface was cambered to drain away water.

Roads attempted to follow as direct and straight a route as possible, requiring impressive works of engineering. In order to allow the Via Appia to follow the coastline past Terracina, a cutting was dug through the promontory of Pisco Montano that was 98 feet (30 meters) in depth. To facilitate travel from Cumae to Puteoli and Naples the emperor Augustus constructed tunnels extending for 3,280 feet (1,000 meters) at Cumae and 2,296 feet (700 meters) at Puteoli.

Rivers were crossed by bridges (*pontes*). One of the best-preserved Roman bridges is at Alcantara. Built in 105–106 CE by Caius Iulius Lacer, the bridge is 669 feet (204 meters) in length and rises to a height of 147 feet (45 meters) above the waters of the river Tagus. The emperor Trajan was also responsible for the construction of a bridge across the river Danube that is depicted on Trajan's Column in Rome and described by the historian Dio Cassius. It stood on 20 stone piers, 150



The Appian Way, an ancient Roman road, connects Capua and Rome, Italy. It was begun by the censor Appius Claudius Caecus in 312 BCE. (Paolo Cipriani)

feet (46 meters) high, 60 feet (18 meters) wide, and 170 feet (52 meters) apart.

—Benedict Lowe

Bibliography

- Casson, L. *Travel in the Ancient World*. Baltimore, MD: Johns Hopkins University Press, 1994.
- Chevallier, R. *Roman Roads*. Berkeley: University of California Press, 1976.
- Della Portella, I. *The Appian Way from Its Foundation to the Middle Ages*. Los Angeles: J. Paul Getty Museum, 2004.
- Duncan-Jones, R. *The Economy of the Roman Empire: Quantitative Studies*. Cambridge: Cambridge University Press, 1982.
- Laurence, R. *The Roads of Roman Italy: Mobility and Cultural Change*. London: Routledge, 1999.
- O'Connor, C. *Roman Bridges*. Cambridge: Cambridge University Press, 1993.

Silk Trade in China and Central Asia

Although perhaps not the most important trade item on the Silk Roads, silk fabric and floss were nonetheless highly valued and were traded overland long before the Silk Roads became an organized trade route. Fragments of silk cloth have been found in tombs in southeastern Turkmenistan dating from the late third millennium BCE, and strands of silk were found in the hair of an Egyptian woman from 1000 BCE. Silk was also

➤ THAT DECADENT FABRIC—SILK

Silk fabric arrived in Rome in the second century BCE. The Romans were unsure about the origin of this wonderful new fabric. But whether it was manufactured from dried bark in India or harvested from trees by the Seres or Silk People of East Asia, it soon developed a flock of detractors who saw the thin, filmy material as evidence that morality in Rome was plummeting. One of the greatest critics was Seneca (4 BCE–65 CE), who said that “wretched flocks of maids labor so that the adulteress may be visible through her thin dress, so that her husband has no more acquaintance than any other outsider or foreigner with his wife’s body.” He called on Roman women to embrace the modesty that was practiced by their ancestors and to beware of appearing in public “naked hardly less obviously than if you had taken off all your clothes.” (*Epistulae morales ad Lucilium*, Seneca the Younger, 4 BCE–5 CE)

—Rebecca Wendelken

found in the fifth-century BCE tomb at Pazyryk in the Altai, in Hallstadt sites in Germany, and in Sarmatian tombs in Poland. Many of these were likely gifts from one ruler to another or tribute payments that were then redistributed to followers. During the first millennium BCE the Chinese used silk cloth to buy off the nomadic tribes and confederations that constantly threatened their borders. Silk for tribute called annual gifts were sent to nomadic peoples as protection money. In 25 BCE, 20,000 bolts of silk and 20,000 bolts of silk floss, or 10 percent of the state revenues for that year, were sent as tribute to the Xiongnu. Between the first and fifth centuries CE cloud- and animal-patterned textiles found their way to Mongolia and Russia and eastward to Syria and beyond, where their designs influenced the wool weaving in the west. It is also important to remember that silk was used as a medium of exchange, in some places taking the place of coins.

In China during the Zhou dynasty (1050–221 BCE) silk production became the work of women, and new weaves were developed. During the Qin (221–206 BCE) and Han (206 BCE–220 CE) dynasties the Chinese government set

up workshops to provide high-quality fabrics for imperial use, and Chinese technical expertise grew. Great advances were also made in dyeing and finishing fabrics. There was also a switch from warp-based to weft-based patterning, an innovation introduced to China from central Asia. This illustrates the contact between weavers in the two regions.

While we know that silk moved through central Asia, its provenance is often difficult to ascertain. Silks from China do not bear their maker’s marks, although those found in Buddhist settings often have the names of donors. Silk production outside of China lacks conclusive evidence for identification and could be woven from Chinese silk floss, further complicating the identification of where they were woven.

There is evidence that Chinese weavers took the tastes of foreign consumers into consideration, since Han textiles found in northwestern China differ greatly from those of the same period excavated at Mawangdui. The textiles from the northwest often contain animal motifs, rarely seen in textiles from Mawangdui. But the first real evidence of the transfer of motifs takes place during the Northern and Southern dynasties (420–588 CE) when the Sassanid Persian pearl-edged medallion began to be used in China.

Outside China proper, Xinjiang is believed to be the first area to practice sericulture. From there silk production spread slowly through central Asia, becoming especially important in Sassanid Persia. In response, Chinese weavers began to design forms and patterns that were attractive to their central Asian markets to compete with locally produced fabrics and to meet the market at home that had developed a taste for central Asian forms and motifs.

—Rebecca Wendelken

Bibliography

- Rossabi, Morris. “The Silk Trade in China and Central Asia.” In *When Silk Was Gold: Central Asian and Chinese Textiles*, edited by John P. O’Neill. New York: Metropolitan Museum of Art, 1998.
- Sheng, Angela. “Textile Finds along the Silk Road.” In *The Glory of the Silk Road: Art from Ancient China*, edited by Li Juan. Dayton, OH: Dayton Art Institute, 2003.
- Weiji, Cheng, ed. *History of Textile Technology of Ancient China*. New York: Science Press, 1992.

Wood, Frances. *The Silk Road: 2000 Years in the Heart of Asia*. Berkeley: University of California Press, 2002.

Development of Formal Market Centers in Mesoamerica—Pochteca

In Mesoamerica, formal market centers emerged in the Formative period, while professional merchants became common in the following Classical period (100–900 CE). Mesoamerican markets and merchants were both stimulated and stymied by the lack of domesticated transport animals, making the wheel unimportant and emphasizing human foot traffic using tumplines and backpacks. Few navigable rivers and wet dry seasons also restricted watercraft traffic primarily to coastal canoes.

Mesoamerica was a region of Stone Age technology societies, and resources such as stone (chert and obsidian for tools and ritual items), limestone (cooking and building surfaces), salt (cooking and preservation), wood (cooking, heating, construction, and tools), cotton (clothing, rope, and bedding), and ceramics (storage, cooking, and ritual items) as well as basic foodstuffs were necessary to village, town, and farm hamlet survival by the Formative period. Since all of these goods were rarely available in one local region, regional trade through formal markets and market days emerged. The Olmec followed by Monte Alban were the first to formalize trade over distance in Mesoamerica during the last millennium BCE. Olmec traders appear to have carried a variety of raw and finished items across regions including obsidian blades and cooking vessels of stone and clay and perhaps even spread the tortilla or flatbread so ubiquitous with the region today. They may even have moved goods by canoe, indicated by a sunken watercraft with a large Olmec stone head in the Usumacinta River.

Elite goods of rare, exotic, and ritually favored qualities also moved along these emerging trade networks. Professional merchants later known as Pochteca in Aztec Nahuatl probably emerged with this trade that moved slaves, cacao beans, turquoise, jade, quetzal feathers, rubber balls, iron ore mirrors, seashells, and more.

➤ CACAO BEANS AS A MEDIUM OF EXCHANGE—CHOCOLATE AND MONEY

Cacao beans are used to produce the Mesoamerican drink of the gods, bitter chocolate. In Mesoamerica cacao also doubled as a medium of exchange or money. Since it had value both as a ritual item and as a foodstuff, it was used to negotiate the finer details of a trading price. In historic times, the annual labor of a peasant was worth between 2,000 and 6,000 cacao beans, and a turkey could be had for 300 beans. Prices varied with market conditions, but cacao was traded alongside Spanish silver coins well into the sixteenth century.

—Christopher Howell

These merchants were either sponsored by or were members of elite lineages from Olmec chiefdoms. By the rise of Monte Alban (500 BCE) in the Mixtec and Zapotec homelands, trade had become important enough that entire settlements and chiefdoms were organized to control the regional economy.

In the following Classical period state-level civilizations had emerged throughout Mesoamerica, and trade was an essential local element, with formal markets and a desired interregional element of elite goods moved by professional traders. Teotihuacan and the emerging Maya city-states provide the best-known examples. Teotihuacan specialized in the mass production and distribution of household goods such as effigy ceramics and obsidian materials. Maya city-states like Tikal were major consumers of finished obsidian for ritual and status purposes.

In the first millennium CE signs of mature markets and international trade were evident in Mesoamerica. Metals and metallurgy moved up from the west coast of South America, especially copper tweezers, bells, and body ornaments followed by silver and gold metallurgy. Maya canoes were moving goods like salt along the Caribbean coasts of Mesoamerica. Turquoise, shells, and ceramics were moving along the so-called Turquoise Road to and from southwestern North America. Most importantly, ideas, beliefs, power, and people became associated with the established trade

routes and products, helping to create the core civilization zone of Mesoamerica.

—Christopher Howell

Bibliography

Masson, M. A., and D. Friedel, eds. *Ancient Maya Political Economies*. Gainesville: University of Florida Press, 2003.

Smith, M. E., and F. Berdan, eds. *The PostClassic Mesoamerican World*. Salt Lake City: University of Utah Press, 2003.

Wells, E. C., and K. L. Davis-Salazar, eds. *Mesoamerican Ritual Economy: Archaeological and Ethnological Perspectives*. Boulder: University Press of Colorado, 2007.

■ Introduction: Types of Labor Forces

The organization of labor varied significantly throughout the world from 1000 BCE to 300 CE. In much of the Near East at this time, labor forces consisted of corvée laborers, laborers who worked for the state as a means of paying their taxes. This had long been a common form of tax paying. In the absence of currency, states often preferred to have people perform military, industrial, or construction services rather than extracting resources (such as agricultural goods that eventually spoil) from the commoners. Slave labor had also been common throughout the Near East, and this practice came to be common in the Greek and Roman worlds. Specialized labor increased during this period as well; this is labor in which people learned certain trades or skills and were hired (or compelled) to perform these services in exchange for money or subsistence products. Specialized work became incredibly common in Greek and Roman cities and in fact seems to have become a major marker of identity in these cultures (people started thinking of themselves as carpenters, for example). The following entries demonstrate some of the most important labor patterns throughout the world (beyond subsistence practices) from 1000 BCE to 300 CE.

—Kevin M. McGeough

Development of Specialized Labor in the Greek Polis

Although agriculture demanded the largest percentage of workers throughout antiquity, the specialization of labor occurred very early in the development of the polis (Greek city-state). Both

Homer and Hesiod refer to a wide variety of occupations. In the seventh and sixth centuries BCE, craftsmen and their workshops were associated chiefly with the great Panhellenic sanctuaries they constructed. As craftsmen became more diverse, the number and variety of technical subspecialties increased, and workshops began to proliferate in the *poleis*. The early polis became the nexus for the exchange of commodities, which created an intrapolis commercial network and also fostering trade with other poleis and the outside world.

The growth of new markets contributed to further specialization of labor, as can best be seen in the case of Athens. The opening up of lucrative new markets during the heyday of the Athenian empire in the fifth century BCE led directly to Athens' dominant role in technological innovation. This was fostered by Pericles' policies, which lured skilled craftsmen from all over the Greek world to Athens.

In the *Republic* (369e–372d), Plato identified five large categories of industry necessary for the polis to operate efficiently: production (both agricultural and industrial), trade, transport, retail, and manual labor. While simplistic, Plato's list encompassed most of the occupations present in Classical Greece.

Although the elite relied upon the manufacture and exchange of goods by specialized craftsmen to maintain their lifestyles, they continued to believe that the only respectable occupation was that of landed property owner. They accordingly held artisanal (*banausic*) activity in contempt, particularly when it involved manual labor. This attitude arose from the association of manual labor with slaves, freedmen, or resident

➤ XENOPHON'S SOCRATES REFLECTS THE CONTEMPT OF THE ELITE FOR BANAUSIC LABOR

“‘Well said, Kritoboulos,’ replied Socrates, ‘For the trades of artisans as they are called are decried and are understandably held in contempt in our cities, for they disfigure the bodies of those who work at them and supervise them, compelling them to remain seated and stay within doors, and sometimes to spend all day at the fire. When bodies become enervated, the souls become much more sickly. And moreover these artisans’ trades as they are called leave no free time for attending to one’s friends and the city, with the result that such men appear to be inadequate both in their relationships with friends and as defenders of their coun-

tries. And in some cities, and especially those which have a warlike reputation it is not permissible for any of the citizens to work at the trades of artisans.’”

—Frances Pownall

Source

Xenophon, *Oeconomicus* 4.2–3, in *Ancient Greece: Social and Historical Documents from Archaic Times to the Death of Socrates*, by Matthew Dillon and Lynda Garland, 2nd ed. (London and New York: Routledge, 2000), 386–387.

foreigners, those who had few, if any, political rights in the polis.

—Frances Pownall

Bibliography

- Burford, Alison. *Craftsmen in Greek and Roman Society*. London: Thames and Hudson, 1972.
- Finley, Moses. *The Ancient Economy*. 3rd ed. Berkeley: University of California Press, 1999.
- Garnsey, Peter, ed. *Non-Slave Labour in the Greco-Roman World*. Cambridge, UK: Cambridge Philological Society, 1980.
- Harris, Edward M. “Workshop, Marketplace and Household: The Nature of Technical Specification in Classical Athens and Its Influence on Economy and Society.” In *Money, Labour and Land*, edited by Paul Cartledge, Edward E. Cohen, and Lin Foxhall. London and New York: Routledge, 2002.

Specialized Labor in the Roman City

Romans who were not farmers and who were not in the army mostly lived in cities, and, for them, there was a variety of ways to earn a living. The upper-class Romans who wrote all the surviving sources had very definite ideas about work and employment. For them, how you earned an income had strong moral overtones. In fact, they believed that most forms of employment were degrading and that truly civilized

people should not work at all. This is quite an extreme way of viewing employment, since nearly everything we would consider a form of work today was considered to be morally degrading by aristocratic Romans. Earning a salary, buying or selling goods, manufacturing goods—all of these activities were considered vulgar, and a true aristocrat could not dirty himself with them. Thus, to the upper-class Romans, only those people who were so rich that they did not have to do anything to earn a living were considered fully human and civilized.

The things that aristocrats did that we would consider to be jobs, like serving as a lawyer or being elected to a magistracy such as a praetorship or consulship, were not considered jobs because their practitioners received no pay. Politics and the law were truly the preserve of rich men since these fields entailed spending a lot of money but did not grant any in return. In keeping with the republican ideology of virtue exemplified by Cincinnatus, the only profession that did not degrade someone was farming. Rich men were expected to acquire and maintain their wealth primarily by owning land. By the empire, aristocrats did not do any real farming themselves, however, and in fact spent almost all their time in Rome rather than on their estates. They lived off the labor of hundreds or thousands of slaves who did the actual farming on their estates. The sources are full of expressions of contempt for anyone who made a living

➤ BUYING LOCALLY

The overwhelming majority of foodstuffs grown, and goods manufactured, in the Roman world was consumed or utilized very close to its site of production. Most items were sold by the growers or manufacturers themselves in their own neighborhoods or villages. The local marketplace was the center for most trade and transactions, and whatever goods were available regionally formed the entirety of most people's economic world. While small regional markets did a lively trade in local commodities, true long-distance trade was a daunting proposition. Moving anything in large quantities overland was both expensive and hazardous. Bulky cargo could be transported more easily by water, and it is no coincidence that most major cities grew up along coasts or on navigable rivers. However, seafaring technology was rudimentary, there was no effective way to predict storms at sea, and piracy was rampant, so there had to be either very strong motivations or very high profit margins to justify shipping goods across the sea. Despite these hazards, one of the most lucrative businesses in which one could make fantastic profits was the long-distance trade of luxury goods by ship. A single shipload of spices, fabrics, or dyes from the East could make one a millionaire overnight. However, building a merchant ship and buying its cargo required substantial capital up front, and it was an extremely risky investment.

—Gregory S. Aldrete

by working or through commerce. This was the Romans' ideology, but in reality, the picture was more complex. Many rich Romans gained and maintained their fortunes through means other than farming. Some were moneylenders who charged up to 60 percent annual interest on a loan. Some were in essence factory owners who had shops that produced goods such as lamps, bricks for building, and plates and containers made out of clay.

A few aristocrats got very creative in the ways they amassed wealth. The best example of this was a man named Crassus, who lived during the late Republic. Crassus became the richest

man in Rome at least partially through an original and clever strategy. He prowled the streets of Rome at night, accompanied by a huge band of his slaves carrying buckets and axes. As soon as one of the frequent fires broke out, Crassus and his slaves would rush to the spot, and Crassus would offer to buy the burning building from its owner. He would usually offer between one-quarter and one-third of its real value. The poor owner, faced with the choice of one-quarter of the value or losing everything when it burned down, usually sold it to Crassus. As soon as the document was signed, Crassus would order his well-trained gang of fire-fighting slaves into action, and they would put out the fire. In this way, Crassus ended up owning much of Rome, which he acquired literally at fire sale prices.

While the upper classes could afford to be choosy about employment, the vast majority of people in cities had to work. The working classes can be divided into two basic groups: those whose profession required some sort of training, talent, skill, or capital and those who were unskilled and sold their labor for wages. One of the ironies of Rome is that most poor citizens fell into the second category, that of the unskilled wage laborer. The skilled workers were often slaves and ex-slaves. In inscriptions on tombstones, about two-thirds of those who identify themselves as some sort of skilled worker are freedmen. Over 200 different jobs are mentioned on tombstones from the city of Rome. Many of these professions listed were specialty jobs manufacturing luxury items, such as the *plumarii*, who apparently made a living doing embroidery exclusively using feathers, or the *fabri ocularii*, whose full-time employment was to manufacture the eyes for statues. There were six or seven different makers of footwear, including those who made only boots, those who made only women's shoes, and those who only wove sandals. Another large category was people who provided specialized services to the rich. Among these was one full-time job consisting of memorizing the names of a patron's clients. Perhaps one of the most unappealing service specialties belonged to the *alipilus*, whose job was to pluck out underarm hair.

Although aristocrats regarded work and moneymaking with scorn, many freedmen seem to have taken great pride in their work. This can be seen most clearly on their tombstones, which often featured a sculptural relief showing the deceased practicing whatever profession he or she had followed. Even if they lacked a picture, tombstones would often include symbols that indicated the job the owner had held. For example, a butcher might have a selection of knives and cleavers on his tombstone. Sometimes, freedmen got quite creative with their funeral monuments. One man named Eurysaces, who owned a shop that baked bread, had his tomb carved into the shape of a giant bread oven, onto the sides of which were carved pictures of the baker overseeing his workers grinding grain, kneading dough, and cooking it. Another famous tomb belongs to a man who owned a construction company, and his monument mostly consists of a carving of a building crane used to erect structures. This pride in work can also be seen in the decoration found in the homes of some of these people: one worker at Pompeii had set into the floor of his house the phrase "Profit is happiness."

In addition to tombstones, another way that we know about Roman jobs is that all the people who practiced the same profession formed professional associations. These trade associations were called *collegia*, and often the members of such a group would put up a monument commemorating their accomplishments. The *collegia* also seemed to play a role in politics, and much of the graffiti on Roman walls consists of *collegia* urging other people to vote for a certain politician.

Many Romans owned small shops where they sold goods. One common type of small business was the *popinae*, which was a Roman combination of bar and fast food restaurant. These were housed in small rooms usually located at the intersections of major streets. Across the front was a counter with two or three large clay pots set into it. Underneath the pots were places where small fires could be built to keep the pots warm. These pots probably contained an assortment of gruel, fish stew, and *garum*, and pedestrians passing by who felt hungry

could purchase a ladleful of whatever fast food they wanted.

The lowest form of employment was unskilled workers who had nothing to offer except their labor. They hired themselves out for a salary to perform various menial jobs. Such wage labor was considered the most degrading sort because the Romans thought that it was the equivalent of becoming someone's slave. These wage laborers were called *mercenarii*, which is the root of our word *mercenary*. Today, wage labor is usually calculated on an hourly basis, but in ancient Rome, the standard unit of labor for a *mercenarius* was one day's work. A day's worth of work was known as an *operae*, and contracts would specify a certain number of days of labor that the *mercenarius* was selling to his employer. The most common type of day-labor job was simply to carry things around. A sizeable percentage of the free inhabitants of Rome would have found employment in two fields: the supply of food and other commodities to Rome and the construction industry. Especially during the early empire, the emperors built lavishly, and these projects would have employed thousands of people merely to dig the foundations and carry away the dirt. A single construction project of the emperor Claudius employed 30,000 men for 11 years as diggers.

—Gregory S. Aldrete

Bibliography

- Aldrete, Gregory S. *Daily Life in the Roman City: Rome, Pompeii, and Ostia*. Westport, CT: Greenwood, 2004.
- D'Arms, J. *Commerce and Social Standing in Ancient Rome*. Cambridge, MA: Harvard University Press, 1981.
- Finley, Moses. *The Ancient Economy*. 2nd ed. Berkeley: University of California Press, 1973.
- Garnsey, P., ed. *Non-Slave Labour in the Greco-Roman World*. Cambridge: Cambridge Philological Society, 1980.
- Greene, Kevin. *The Archaeology of the Roman Economy*. Berkeley: University of California Press, 1986.
- Loane, H. J. *Industry and Commerce of the City of Rome, 50 B.C.-200 A.D.* Baltimore: Johns Hopkins University Press, 1938.

Slave Labor in the Ancient Greek and Roman Societies

Slavery in antiquity was a vital institution in terms of establishing both a viable labor pool and the structure of social organization in the Mediterranean. Both ancient Greek and Roman civilizations held slavery as a fundamental component to the functioning of their societies. Greek slaves functioned at the bottom of Greek society, handling the quotidian functions of households, agriculture, and other jobs that Greek citizens found undesirable. Roman society also valued slaves as an integral component of their labor force, particularly in *latifundia* (large-scale agriculture), as gladiators, and as tutors (particularly Greek slaves) for their children. Typically prisoners of war or debtors, slaves constituted a significant portion of the population of classical societies (particularly in Sparta and Rome under the Principate). However, in spite of being at the lowest end of the social ladder, many slaves had a significant amount of agency within these societies,

and small numbers of them were able to gain their freedom and some level of access to social mobility.

Slaves in ancient Greece were typically conquered populations from neighboring regions. After major military engagements, women and children from subdued populations were taken into slavery after the men who constituted the bulk of the enemy forces were killed off. This process occurred from early in the Mycenaean period well up to the Hellenistic period. Therefore, times of warfare were directly associated with the infusion of slaves for a victorious Greek city-state or kingdom. Greek societies preferred non-Greeks as slaves, typically people from Anatolia, Scythia, and Thrace. Slaves from these regions were valued for their functions. For example, Scythians were considered to be good policemen, as they were known to be skilled archers. Moreover, foreign slaves of many ethnic groups were seen by Greeks as being less likely to revolt or escape, as they would feel less familiar with Greek culture and language, thereby inhibiting communication. However, the case of the Spartans and their subject population of helots proves that this was not always the case, given that Spartan society and its characteristic militarization was created from fears of a major slave revolt, which were not uncommon.

In spite of their subordinate position, some Greek slaves did enjoy some level of rights and social mobility. Slaves were given some rights under the law and were able to buy their freedom or attain manumission from their owner. Household slaves who gained their master's trust and affections were able to gain their freedom upon their master's death. At times, wills would grant land and other forms of wealth to favored slaves in addition to their freedom. Moreover, manumitted slaves were able to graft themselves as members of Greek society in some instances, sometimes even as citizens of the polis. Nonetheless, more often than not slaves and their children remained at the lowest rung of Greek society and had few rights and protections.

Roman slaves, much like those of ancient Greece, also consisted of prisoners of war and subdued populations from defeated enemy states. However, debtors, kidnapped foreigners, criminals, and unwanted children could also be

► CLASSICAL SLAVERY AND THE DECLINE OF THE ROMAN REPUBLIC

Slavery constituted a significant factor in the decline of the Roman republic in that it provided a large labor force for Roman aristocrats, at the expense of the small yeoman farmer. The yeoman farmer, who was considered the backbone of the Roman republic and constituted the soldier-citizen of the Roman legions, could not compete with the growing wealth of the Roman *latifundia*. Thus, in the late republic in the first century BCE, these farmers could either join the growing urban masses or join the Roman legions as professional soldiers, beholden to their generals for booty and wealth. As these generals (such as Marius, Sulla, and Julius Caesar) could promise land and wealth for their soldiers, they were more than ready to usurp the power of the republic and set themselves up as dictators. With the establishment of the Principate under Augustus (formerly Octavian), the pretense of the republic continued, while the reality was that power was retained by a military general.

—Abraham O. Mendoza

forced into slavery. Roman slaves could be bought and rented from slave traders, who hawked their goods through auctions. Slave labor in Rome ranged from forced employment in mining, construction, and agriculture to the relatively more comfortable roles involved in the administration of a Roman household. Some slaves were craftsmen; they worked in relative autonomy and were able to keep their own wages. However, slaves were expensive, due to associated costs, and were considered more of a status symbol for wealthy Romans (or even well-to-do Romans) than anything else, given that it was cheaper to hire laborers.

Slaves in Roman society were considered to be at the bottom of the social structure and thus had few rights and protections. However, they were granted some level of agency depending on the master's favor. The lot of the vast bulk of slaves was in doing the work that Romans did not want to do, but there were exceptions. Household slaves who held their master's favor were able to hold significant power amid the

running of large agricultural estates (*latifundia*) or business firms. They were also able to attain or buy their freedom through the granting of their manumission at the death of their owner. The most famous of slaves, the gladiators, attained glory and fame in Roman societies and were a key component in Roman entertainment. Slave revolts, such as the famous revolt led by Spartacus (73–71 BCE), were a grave threat to Roman society given the large numbers of slaves throughout the empire. Therefore, the punishment of slaves was key in preventing and deterring any potential for stirring a large rebellion.

—*Abraham O. Mendoza*

Bibliography

- Budin, Stephanie Lynn. *The Ancient Greeks: An Introduction*. New York: Oxford University Press, 2009.
- Finley, M. I., ed. *Classical Slavery*. London: F. Cass, 1987.
- Wiedemann, Thomas. *Greek and Roman Slavery*. Baltimore: Johns Hopkins University Press, 1981.

■ Introduction: Art and Economy

Visitors to museums that display Greek antiquities are often overwhelmed by the sheer volume of painted ceramics. Vases with elaborate decoration and beautiful images are treated as pieces of art in modern museum contexts. Yet the initial production of these extremely fine ceramics was spurred on for commercial purposes. The art was not art for art's sake but art for profit. Similarly, the elaborate Roman sculptures that fill museums today were produced for monetary gain by the artist, whether through payment from a wealthy patron or as statues commissioned and purchased on one occasion by a particular buyer. The commercial motivations of artistic enterprises are less apparent in other situations, but undoubtedly there were two fundamental commercial motivations that surrounded artistic production beyond the value of the raw resources from which the art was produced. For the artist, artis-

tic production was a specialized skill that allowed the artist to make a living. For the commissioner of the art (whether they were a private individual or a state body), the piece of art was an investment in status and standing within the community, a means of displaying wealth or communicating certain messages about the possessor to the rest of the society.

—*Kevin M. McGeough*

Vase Painting in Athens and Corinth

By the seventh century BCE, the Greek city of Corinth possessed one of the most powerful trade empires in the Mediterranean. The city was ideally situated near the narrow Isthmus of Corinth with access to sea routes both east and west. Seventh-century BCE Corinth was

➤ IMAGE OF THE FRANÇOIS VASE

Many of the best-preserved Athenian black- and red-figure vases were found in Italy. The Etruscans, the ancient people of what is the present-day region of Tuscany, imported large amounts of decorated Greek pottery and interred it with their dead. The so-called François Vase, named for the man who discovered it, was crafted in Athens around 570 BCE and was exported to the Etruscan city of Vulci. The vessel is a krater, or mixing bowl for wine and water. The François Vase was signed by its painter, Kleitias, and bears labeled images of many gods and heroes from Greek myth who are all labeled by name. The names of the figures may have been written on the vase because the painter was aware that in a foreign land the buyers may not have been familiar with Greek stories.

—Angela Murock Hussein

Detail from the François Vase, an Attic black-figure volute krater from Chiusi, about 570 BCE. (Scala/Art Resource, NY)



controlled by a powerful dynasty of tyrants (similar to dictators) who reigned in an era of increasing interest in overseas trade and settlement. Two of the most important products of the city were perfumed oil and wine. Corinthian potters developed a distinctive pottery painting style for perfume bottles and wine wares that was based on Near Eastern metalwork, with dark painted silhouette figures on a light background and incised detail lines. This pottery painting technique is known as Black Figure or miniature style. The favored motifs were animals, both real and mythological, and small filler shapes such as rosettes. Corinthian-style pottery was exported to all parts of the Mediterranean via an extensive network of trade colonies, such as Epidamnus and Corcyra, to the northwest of Greece and Syracuse in Sicily. These helped to ensure a wide distribution for the products of the mother city.

In the sixth and fifth centuries BCE, the Mediterranean market for luxury wine wares was dominated by Athens at a time when the city was greatly expanding its own overseas trade interests. Expanding on the manufacturing

style of Corinthian pottery, Athenian potters were able to produce a more impressive product in the Black Figure technique. The region of Athens possessed high-quality clay with a high iron content. When fired, shiny black figures on a brilliant orange background mimics gold and silver wares (silver tarnishes to black); this type of pottery is referred to as Black Figure ware. Athens' potters tended to represent mythological scenes on their vases. Images on the wares were taken particularly from tales of war, love, and of course wine.

Around 530 BCE, some Athenian potters began to experiment with a technique whereby the background of the vase was painted black while the figures were left orange and had painted detail lines. This technique, known as Red Figure, eventually became the typical fine ware produced in Athenian pottery workshops. Red Figure allowed artists greater freedom to experiment with painting techniques such as shadow and perspective that were not easy to achieve in the silhouette shapes of Black Figure. The themes represented on Red Figure vases

were initially similar to those from the Athenian Black Figure vessels. However, painters showed increasing interest in scenes from daily life, particularly the *symposion* (symposium). The symposion, an all-male gathering for feasting, wine drinking, and discussion, was one of the most important Greek cultural institutions and was adopted by many cultures in contact with the Greeks. Athenian wine wares were desirable imports not just in Greek cities but also in many non-Greek regions. This phenomenon intensified with the rise of the Athenian empire in the fifth century BCE, particularly in the Athenian-controlled cities in the region of the Black Sea for which a Red Figure style with gilded details was developed. In the Greek cities of southern Italy and Sicily, imitation wares were developed to meet high local demand for Athenian symposion vessels.

—Angela Murock Hussein

Bibliography

- Boardman, J. *The History of Greek Vases*. London: Thames and Hudson, 2006.
- Cook, R. M. *Greek Painted Pottery*. London: Routledge, 1997.
- Robinson, M. *The Art of Vase Painting in Classical Athens*. Cambridge: Cambridge University Press, 1994.

Roman Sculpture Industry

Roman stone sculpture tended to be produced in workshops. These workshops consisted of master sculptors and of apprentices at different stages of training. The sculptor's profession, like many crafts in the ancient world, appears to have been passed down through family lines. Stoneworking tended to be a particularly conservative craft because of the limitations of the material, so in order to ensure successful results, apprentices reproduced the techniques and styles of their masters quite closely. What evidence we have suggests that workshops tended to specialize in particular genres of sculpture so that artisans who produced figures of gods and humans probably did not produce sarcophagi (carved stone coffins), and vice versa.

In the late Republic (first century BCE) Roman patrons often commissioned Greek sculp-

THE SARCOPHAGUS TRADE

Sarcophagi first became fashionable in the second century CE, and many (though not all) were mass-produced. This meant that they (or parts of them) could be roughed out at the quarry and finished, or nearly so, in the workshop before a buyer was ever found. We have examples of sarcophagus lids that were abandoned in the quarry and of sarcophagi that were complete except for the portrait of the deceased, which was merely roughed out and awaiting completion when the identity of the deceased became known.

—Ellen Perry

tors, who signed their names to their works. There were simultaneously, however, Italian sculptors working in a vernacular tradition that clearly identified them as Italians. This tradition, which is most easily seen in the funerary reliefs of the time but which can also be found on major state monuments such as the Altar of Peace, includes a marked preference for particular tools and techniques. For example, Italian sculptors of the first century BCE tended not to smooth away tool marks from the flesh of their figures. They would finish their work with a curved or flat chisel, whereas a Greek sculptor might go on to use a rasp and even an abrasive such as emery in order to remove any tool marks. The Italian sculptors may have avoided such finishing because they trained with local stones such as travertine and tufa, which were coarser than Greek marble and therefore took detail and polish less readily.

What made a sculpture Roman necessarily changed when Rome became an empire and workshops from around the Mediterranean began to produce commissions for Roman patrons. Some of our best evidence for sculptural production from the first through fourth centuries CE came from the city of Aphrodisias in Turkey, where excavators discovered a sculptor's workshop (apparently destroyed in the fourth century CE) that contained unfinished statues. Aphrodisias has also produced a number of apprentices' trial pieces. From the unfinished statues, we learn that Roman figures tended to be carved from front to back and that sculptors

relied on a keen eye more often than on measuring devices. From the trial pieces, we learn that Aphrodisian apprentices were, at least occasionally, tested on their ability to produce isolated body parts, such as feet or hands.

—Ellen Perry

Bibliography

- Conlin, D. A. *The Artists of the Ara Pacis: The Process of Hellenization in Roman Relief Sculpture*. Chapel Hill: University of North Carolina Press, 1997.
- Grossman, J. B. *Looking at Greek and Roman Sculpture in Stone: A Guide to Terms, Styles, and Techniques*. Los Angeles: J. Paul Getty Museum, 2003.
- Rockwell, P. "Unfinished Statuary Associated with a Sculptor's Studio." In *Aphrodisias Papers 2: The Theatre, a Sculptor's Workshop, Philosophers, and Coin-Types*, edited by R. R. R. Smith and K. T. Erim. Journal of Roman Archaeology Supplemental Series, 2. Ann Arbor, MI: 1991.

Elite Craft Art in Mesoamerica

Elite craft art in early Mesoamerica developed in a variety of media. Various artifacts have come to light thanks to archaeological excavations. Carved reliefs and mural painting of ancient cit-

ies often depict Olmec, Maya, and Teotihuacan leaders in sumptuous and complex attires. Historical information can only be gathered from early Classic Maya monuments, mostly stelae (upright carved slabs), that bear inscriptions related to the personages portrayed and their deeds and qualities. From these sources of evidence, archaeologists and art historians have been able to reconstruct the kinds of art that ancient Mesoamericans used to signal their eliteness.

The oldest and most important luxury item in Mesoamerica is jade. While pure jade is a rare item, any greenstone could be worked into a luxury artifact and bear the same symbolic meaning. Jade stones were exchanged as raw pieces or beads or were carved in elaborate ways. Most important among the Olmec, the first civilization in Mesoamerica to develop a recognizable style and iconography on stone, greenstone objects could vary in size from small portable pieces to heavy monumental objects. So-called Olmec celts, for example, come in the shape of a maize god or ear of corn. They were deposited in large caches, offered to people who had served important roles in their lifetime. Dignitaries had masks carved for them to be placed on their tombs. Most of these pieces are effigy masks (i.e., small replicas of actual masks) and could not be worn. Rather, they functioned as tokens of the transformative possibilities of the ruler, with each mask symbolizing a different divine impersonation.

Body adornments of jade or conch ear spools and necklaces are part of the iconography of rulership as evidenced in Olmec sculpture, where personages firmly carrying a staff with both hands on a transversal position are shown in sumptuous attires. So-called mirrors were often carried on the back. Made of a variety of materials from obsidian to iron ore, these were not glass mirrors but rather polished concave surfaces whose reflective qualities were associated with the shamanic vision, or the ability of a priest to look into the past (i.e., communicate with the ancestors) and the future. Although they were not used to light fire, the concave surface refers to a possible function as incense burners, which were typical instruments of the shaman's vision quest.

The Maya of the southern lowlands of Mexico and Guatemala continued the traditions of

▶ ELITE SYMBOLISM

The symbolic construction of an elite status in ancient Mesoamerica passed through the successful completion of certain rituals. During public ceremonies, fertility rituals (for the propitiation of rain and good harvests) were performed that involved the display of exotic and finely crafted objects. Jade was widely employed in this context because its green color was also associated with the young maize plant. Royal masks typically include a foliated headband, another clear indication that political authority heavily rested on the manipulation of agricultural symbolism. Many elite art objects were found in tombs, where they continued their propitiatory function of regenerating life after the death of the ruler.

—Alessia Frassani

small and fine carvings, borrowing directly from their Olmec ancestors. Olmec jades were reused, and Mayan inscriptions were added to testify to their new ownership (the name of an elite or his/her dynastic record). Body ornaments, such as earrings, pendants, necklaces, and even teeth adornments made of jade and shell, symbolized the privileged position of elites (including priests and political leaders) in their intermediary role between the human and supernatural realms.

Other important elite items are feathers, obtained from rare tropical birds such as quetzals and macaws. Quetzals give only two long emerald green feathers (from the tail), while macaws give bright red, blue, and yellow feathers. Although no feather headdress survived from early Mesoamerica, frequent depictions of rulers in full royal attire (such as in painted reliefs) show extremely elaborate head decorations, consistent with information that was later provided by the Spanish at the time of the conquest (1520s).

—Alessia Frassani

Bibliography

- Berrin, Kathleen, and Esther Pasztory, eds. *Teotihuacan: Art from the City of the Gods*. New York: Thames and Hudson, 1994.
- Carlson, John B. "Olmec Concave Iron-Ore Mirrors." In *The Olmec and Their Neighbors*, edited by Elizabeth P. Benson. Washington, DC: Dumbarton Oaks Research Library and Collection, 1981.
- Freidel, David A., Kathryn Reese-Taylor, and David Mora-Marín. "The Origins of Maya Civilization: The Old Shell Game, Commodity, Treasure, and Kingship." In *Ancient Maya Political Economies*, edited by Marilyn A. Masson and David A. Freidel. Walnut Creek, CA: AltaMira, 2002.
- Guthrie, Jill, ed. *Olmec World: Ritual and Rulership*. Princeton, NJ: Art Museum, Princeton University, 1996.

Development of Elite Craft Art among the People of the Andean Region

High-ranking people in the ancient Andes devised several ways to express and assert authority over their subjects. Archaeological excavations have revealed incredibly rich tombs in different places in the Andean region. Gold, silver, and

DEVELOPMENT OF ANDEAN METALLURGY

Since the Early Horizon (1050–650 BCE), complex alloys to smelt copper, gold, and silver were produced in the northern Andes, where the site of Sipan is located. The close interaction with people from coastal Ecuador and the Columbian Highlands, where the precious metalworking also developed early, may have played a role. A peculiarity of Andean metallurgy is the use of alloys that appear as pure silver or gold on the surface. Through a process known as depletion gilding, a combination of copper and gold was chemically treated to dissolve the copper on the surface and let the gold shine through.

—Alessia Frassani

copper artifacts, together with elaborate embroidered textiles, bespeak of a complex system of production, exchange, and consumption of luxury goods. However, in the absence of any historical information, it is rather difficult to elaborate on the significance of the elite status ascribed to these luxury artifacts. What type of privilege, for example, did members of the elite enjoy? The nature of political leadership, religious powers, or systems of economic dependency is rather difficult to assess with the data currently available to archaeologists. Also, almost all elite art objects were retrieved in tombs (where they were preserved through the centuries, protected from the elements), and much less is known about their original context of use (outside of a funerary setting).

The earliest form of status display is found in the necropolis of Paracas (650–200 BCE), a vast burial site on the southern coast of Peru. More than 400 mummies were found inside underground chambers, where they filled up entire rooms. Hundreds of feet of elaborate embroidered textiles were wrapped and sewn around the bodies, creating larger-than-life bundles. While some textiles show signs of wear, others appear to be brand new and were most likely produced to be directly worn by the dead. Only a few bundles have been unwrapped, all of which carried a staff, a symbol of authority. The textile decorations consist of serial patterns,

mostly depicting animals and plants. The animals and plants depicted are not those commonly found in the surrounding region, nor were they a part of common consumption. On the other hand, exotic plants, such as beans, and animals, such as pampas cats, llamas, and condors, are present. They all inhabited the Andean highlands, hundreds of miles away from the coastal and desert plains of Paracas. The exclusive depiction of exotic goods in the textiles may parallel economic privileges over their exchange and consumption among elite members of Paracas society.

In the Moche site of Sipán on the northern Peruvian coast, three tombs were excavated in the late 1980s inside a large platform pyramid. The deceased were adorned with an astonishing amount of metal jewels, including gold and silver round ingots measuring 2 inches (5 centimeters) in diameter and 0.5 inches (1.3 centimeters) thick, decorated standards, pectorals, nose ornaments, effigy earrings, necklaces, rattles, head-dresses, and scepters. In one tomb, the face of the deceased was covered with several gilded sheets in the shape of the mouth, teeth, nose, and eyes. His blouse and sandals were also made of precious metal. The most striking feature in the profuse use of metal in these royal tombs is

the combination and meaning assigned to gold, gold plating, silver, and copper. Gold and silver are associated with male-female duality in the Andean world. The universe was conceived as divided in two parts: the right side was masculine and golden, while the left side was female and silvery.

—Alessia Frassani

Bibliography

- Alva, Walter, and Christopher B. Donnan. *Royal Tombs of Sipán*. Los Angeles: Fowler Museum of Cultural History, University of California, Los Angeles, 1994.
- De Leonardis, Lisa, and George F. Lau. "Life, Death, and Ancestors." In *Andean Archaeology*, edited by Helaine Silverman. Malden, MA: Blackwell, 2004.
- Lechtman, Heather. "Issues in Andean Metallurgy." In *Pre-Columbian Metallurgy of South America*, edited by Elizabeth P. Benson. Washington, DC: Dumbarton Oaks Research Library and Collections, 1979.
- Lechtman, Heather. "A Pre-Columbian Technique for Electrochemical Replacement of Gold and Silver on Objects of Copper." *Journal of Metals* 31 (1979): 154–160.
- Paul, Anne. *Paracas Ritual Attire: Symbols of Authority in Ancient Peru*. Norman: University of Oklahoma Press, 1990.

War and Diplomacy

“All warfare is based on deception”

—Sun Tzu, *The Art of War*

The *Art of War* by Sun Tzu is one of the oldest treatises on military strategy and tactics that survives to the present day. Living during a period of military conflict within China, Sun Tzu compiled his insight about combat into what has come to be thought of as a masterpiece of military writing. The book is divided into 13 sections, each detailing a different aspect of military planning, tactics, or description of common combat situations. Within the work, Sun Tzu argues that tactics is not merely an approach to planning out combat before it occurs but being able to foresee and respond to different situations as they occur. In its ancient context the book was simply titled *Sun Tzu* after the honorific title used as the author's name. It has come to be called *The Art of War* and continues to be inspirational to military leaders in current times, and in the 1980s it was recontextualized as a motivational guide for the business world.

While the period 1000 BCE to 300 CE was not likely the first era in which military tactics were conceived, this is a period in which the diversity and complexity of tactics increases. Prior to 1000 BCE, military campaigns took on three major forms: naval battles, free-for-all meetings of armies on fields, and city sieges. While these three arenas of combat remained the main loci of battles from 1000 BCE to 300 CE, the type of combat that went on in these arenas became significantly more varied.

The Neo-Assyrian military adopted powerful siege weapons and techniques and utilized siege warfare as a means of bringing the cities of Israel and Judah under its suzerainty. The siege weapons they used were designed as a means of destroying powerful city walls and encircling cities so as to cut them off from supplies. The Romans further mastered the art of siege warfare, and the massive Roman siege ramp at the site of Masada is still present (allowing tour buses to drive up to the top of the site to this day). Fortifications in Mesoamerican cities indicate that city sieges were a feature of life in the Americas as well. The site of Becán in the Río Bec region of the southern Maya lowlands had a system of fortifications that surrounded about 19 acres (8 hectares) of the city. A 1.2-mile-long (2 kilometer) ditch and parapet system created a 33-foot-high (10 meter) vertical barrier, which would have severely disadvantaged invaders.

Advances in projectile technology between 1000 BCE and 300 CE were directly incorporated into military technology. The Greek trebuchet was a type of siege weapon that worked on the principle of leverage. This device was capable of propelling stones farther and more accurately than a catapult and was used to smash walls or cause damage

behind walls. The development of the crossbow was a development of projectile technology on a smaller scale. A crossbow consists of a bow mounted on a stock and shoots bolts. The crossbow was used throughout the Greco-Roman world, and during this period the Chinese also made significant advances in this technology. One of the most noteworthy was the repeating crossbow, which allowed the crossbow to be loaded and fired with one hand, greatly increasing the speed of its use.

Tactics on the field shifted from 1000 BCE to 300 CE. New strategies and equipment would force armies to come up with new approaches. The city-states of the Greek world relied primarily on heavy

Hoplites fought together in a phalanx position, each one protecting the soldier on his left with a shield. Presuming that no one broke rank, the hoplite phalanx could move forward and attack the enemy army as a unified mass.

infantry in their skirmishes. The most noteworthy type of Greek heavy infantry was the hoplite, an armored soldier who held a shield and spear. Hoplites fought together in a phalanx position, each one protecting the soldier on his left with a shield. Presuming that no one broke rank, the hoplite phalanx could move forward and attack the enemy army as a unified mass. The Macedonian Army brought further innovations to combat on the field

through the use of longer spears and the integration of cavalry.

The development of cavalry was one of the most significant innovations in combat between 1000 BCE and 300 CE. Soldiers mounted on horseback had certain tactical advantages: speed, mobility, height, and inertia. The earliest cavalry seem to have come from central Asia, where the horse-mounted steppe warriors pioneered horse-based warfare. From central Asia, horse-based warfare techniques spread to East Asia, South Asia, the Near East, and the Greco-Roman world. Neo-Assyrian reliefs depict men riding bareback on horses and shooting arrows at enemies. The development of the recurve bow, which was shorter than a typical bow with tips that curve away from the archer, facilitated horseback archery, as larger bows were cumbersome to handle while riding.

Naval warfare also developed from 1000 BCE to 300 CE. Naval combat appears for the first time in China during the Warring States period (481 BCE–221 BCE). Combat on water had already been a feature of life in the Mediterranean for centuries. The Persian Wars between Greece and Persia were the first wars (at least the first known wars), though, to feature large-scale naval combat as well as integrated land and sea battles. The Romans, while not initially a naval power (since the city of Rome is located inland), developed a navy and naval strategies during the Punic Wars with Carthage. The most noteworthy Roman development was the *corvus*, a tool that allowed Roman ships to grapple enemy ships and board them.

The period from 1000 BCE to 300 CE also saw the development of the first standing armies. Whereas armies in the Greek world were composed of soldiers who acted as soldiers only in certain seasons, the Romans built armies out of professional soldiers who worked as soldiers for much of the year. It was possible for a Roman man to build a career within the military. Although soldiers were encouraged to have other skills and to be trained in a trade, it was possible to spend an entire ca-

reer in the military. In China, large standing armies were made possible by the development of mass-produced iron weapons, which allowed states to draft nonspecialists as soldiers. Warfare in China was no longer solely an aristocratic venture.

Similarly, veterans came to be a recognized group in the Roman world. Roman veterans gained certain rights, statuses, and economic privileges at the end of their terms of service. They became an important force in Roman society. This is a dramatic transformation in the manner in which soldiers were thought of by the state. It was a new recognition that the state had an obligation to those who fought on its behalf. Prior to this, in much of the Classical and Near Eastern world, military service had been thought of as an obligation owed by individuals to their state (akin to taxes) and not something worthy of reward or notice.

The period from 1000 BCE to 300 CE is also a period of great military leaders. Arguably the most successful military leader was Alexander the Great, the Macedonian king who spread Hellenistic culture as far as India through his aggressive military campaigning and skill at military strategy. The Carthaginian general Hannibal, who led an army across the Alps and terrorized the people of the Italian countryside, is another of these famous military figures; his tactics are still studied in military academies today.

This was also a period in which antiwar sentiments flourished, especially from within religious traditions. Confucian thinkers argued that war was symptomatic of bad leadership and articulated approaches to end conflicts and create sustainable peace. Christian writers such as Origen made antiwar arguments based on the teachings of Jesus, which stressed peace and love for one's neighbors. Some of the art of this period also reflects antiwar sentiments. Aristophanes' play *Lysistrata* (411 BCE) provides a humorous account of Greek women who, tired of constant warfare, withhold sexual relations from their husbands until fighting comes to an end.

Warfare was not the only means through which ancient peoples interacted; diplomacy played an important role in facilitating relationships between polities. In the cities of ancient Greece, foreign ambassadors were hosted by the *proxenos*, a citizen who hosted these foreigners within the community at his own expense. The *proxenos* received various honors from the state for fulfilling this role and worked to build peaceful relationships between the two cities. In times of war in Greece, heralds were special envoys who held immunity from conflict and were thought to be protected by the messenger god Hermes. During times of war, diplomatic messages between warring cities could be safely communicated by these divinely protected messengers. Wars were often brought to a close by peace treaties, a practice that began in the Near East before 1000 BCE but is in evidence in Asia and Europe as well after 1000 BCE. In China, for example, Emperor Wen of the Han dynasty ratified a treaty in 162 BCE that guaranteed that lands on the south side of the Han-era Great Wall belonged to the Han Chinese and the lands to the north belonged to the Xiongnu, a group of nomadic peoples originally from central Asia. This treaty was negotiated many times over the course of the Han dynasty and prevented nomadic raids to the south with varying degrees of success. *Heqin* ("peace marriages") were also offered to

build peaceful relationships between the Han and Xiongnu people. By marrying princesses off to foreign rulers, it was thought that peaceful relationships could be established. Marriage alliances were not unique to China at this time, there being a long history of this type of peaceful relation building in the Near East and the Mediterranean as well.

Theoretical writings on diplomacy and statecraft also appear for the first time after 1000 BCE. Sun Tzu argued that diplomatic actions such as building alliances, negotiating land rights, and signing peace treaties were important strategic activities and discusses them in his *The Art of War*. The *Arthashastra* is a Mauryan-era treatise on statecraft that includes instructions on appropriate diplomatic behavior. As Sun Tzu does, the author of the *Arthashastra* argues that the wise king builds alliances as part of a long-term strategy.

—Kevin M. McGeough

■ Introduction: The Rise and Fall of Empires

Truly massive empires—a type of political organization in which a strong core region governed a significantly larger and politically weaker periphery—became normative for much of the world between 1000 BCE and 300 CE. Prior to this, the Egyptians and Mesopotamians had built empires that included parts of Africa and Asia Minor outside of their perceived homelands.

From about 800 BCE to 650 BCE, the Mesopotamian kingdom of Assyria expanded Mesopotamian holdings to an extent never before seen. By 612 BCE, however, the Assyrian empire had been taken over by the Neo-Babylonians (also from Mesopotamia). In 539 BCE the Neo-Babylonian empire was taken over by the Persians, whose massive empire, at its largest extent, covered much of western Asia and Egypt. The Persian empire was one of the most powerful forces in Asia, Africa, and Europe until its defeat by Alexander the Great's Army in 332 BCE, when it became incorporated into the Hellenistic Greek empire, a short-lived empire that extended from Greece to India and Afghanistan. In 322 BCE after the collapse of the Hellenistic empire, a new political force emerged in India under King Chandragupta Maurya. The so-called Maurya period that followed saw the development of the first massive Indian empire, under the leadership of King Aśoka (304–232 BCE). In 185 BCE

this empire collapsed, and India became divided into smaller kingdoms. Farther east, the Qin state had gained control of much of China by 226 BCE. This empire was short-lived but laid the foundations for the much longer-lasting Han dynasty, which ruled China and its empire (with a brief interruption) from 206 BCE to 220 CE. Starting around 500 BCE, the city of Rome began its gradual expansion throughout Italy, an expansion that would lead to its eventual conquest of Egypt and North Africa, the Near East, and much of Europe. Concomitant with the rise of Rome was the rise of the Parthian empire, which emerged in northeastern Iran.

—Kevin M. McGeough

The Kingdom of Kush

The Kingdom of Kush was Egypt's powerful southern neighbor, located south of the Third Cataract of the Nile River in upper Nubia (present-day Sudan). The history of Kush spans more than 1,000 years (from approximately 1000 BCE to 350 CE) and is divided into two periods, the Napatan period (ca. 1000–310 BCE) and the Meroitic period (ca. 275 BCE–350 CE). Each period is sometimes called a dynasty, a kingdom, or an empire.

After the withdrawal of the ancient Egyptian administration, which had controlled most of

➤ KUSHITE RELIGION

Kushite religion is an amalgamation of ancient Egyptian religious traditions and deities with traditional Nubian customs, beliefs, and gods of which very little is known.

Archaeological evidence shows that ram cults held much importance for the Nubians prior to the Egyptian conquest. In order to legitimize their claim over Nubia, the Egyptians associated their god Amun with the Nubian ram cults, declaring that the (new) ram-headed form of Amun had resided in Nubia from times immemorial and that the Pure Mountain (Gebel Barkal) was the seat of kingship. Centuries later the Napatans reversed the roles and used Amun to claim dominion over Egypt.

The ram-headed Amun was worshipped all over Nubia during the New Kingdom and Kushite periods. Amun of Napata dwelt within the Pure Mountain, and other local forms of Amun were

worshipped at Kawa, Pnubs, Meroe, and Naga, among others. As the god who granted kingship, Amun was deemed the most important in the Kushite pantheon; however, he was not the only Egyptian deity worshipped in Nubia. Isis, Osiris, Hathor, Anukis, and Bastet are attested, among others.

During the Meroitic period, local Nubian gods took their righteous place in the pantheon. The most celebrated Meroitic deity is the lion-headed god of war Apedemak. Other Meroitic deities include Sebiemeker and the goddess Amesemi. Until the Meroitic language is deciphered, very little can be understood of Meroitic religion and deities other than that they were worshipped in a manner similar to those of Egypt, attended by priests in magnificent temples.

—*Caroline M. Rocheleau*

Nubia during the New Kingdom (ca. 1540–1075 BCE), a local Nubian chiefdom emerged at the turn of the millennium. This new political power was centered at Napata, the city at the foot of the so-called Pure Mountain at Gebel Barkal near the Fourth Cataract. Very little is known of the formative years of the Kingdom of Kush. Archaeological evidence is scant and written documents nonexistent, because at the time the Nubians did not have a writing system of their own.

Around 785 BCE a local chief known as Alara united upper Nubia. He is acknowledged by later kings as the founder of the Napatan dynasty of Kush and is believed to be the one who restored the cult of the god Amun in Nubia at the sacred site of Gebel Barkal. The Kushites also adopted ancient Egyptian and the hieroglyphic writing system as the administrative and religious language of their kingdom. Kashta, Alara's successor, united upper and lower Nubia into a single political entity, and he called himself "King of Upper and Lower Egypt," as mentioned on his small stele at Elephantine.

However, it was Piye (formerly known as Piankhy) who actually conquered and took control of Egypt and annexed it to the Kingdom of Kush (747–716 BCE) during the third year of

his reign. Piye founded the Kushite Twenty-fifth Dynasty of Egypt, and his successor Shabaka (Shabaqo) established the capital at Memphis. The Kushite kings held sway over all of Egypt for almost a century, following traditions established by earlier Egyptian kings. In honor of the god who granted them kingship, they added new monuments to the architectural complex of the Temple of Amun at Karnak (Thebes), the religious center of this god in Egypt. The Kushites remained active in their homeland, erecting new temples to the god Amun and refurbishing ruined ones built by the Egyptians during the New Kingdom. The Kushite Twenty-fifth Dynasty was expelled from Egypt by the Assyrians, who sacked Thebes in 663 BCE. King Tawetamani had already taken refuge at Napata.

Most of what is known of the remainder of the Napatan period comes from Kushite royal documents, which were still written in Egyptian using hieroglyphs despite the fact that the Kushites had lost control over Egypt. These documents—stelae and wall inscriptions—come mostly from temples and royal burials and concern mostly the north of the kingdom. Very little else is known of this period, especially regarding the local general populace. Few village settlements dating to this period have been discovered

and excavated by archaeologists. As for Meroe and the south of the kingdom, practically nothing is known. From what can be gleaned from the archaeological record and literary documents, the Kushites kings continued managing affairs of the state, building and renovating temples, and mounting military expeditions. The Kushites were defeated by the Egyptian king Psammetichus II, possibly during the reign of Aspelta (ca. 593 BCE) at a battle near the Third Cataract. However, beliefs that Psammetichus II reached the Fourth Cataract and sacked Napata are unsubstantiated. This might have encouraged the Kushites to move farther south.

Although there is archaeological evidence that Meroe had been occupied since at least the eighth century (notably as the Napatan royal residence since the fifth century), the focus of the Kushite kingdom had been until then on Napata and the north. The Meroitic period begins shortly after 300 BCE with the relocation of the royal cemetery from Nuri to Meroe, the first pyramid there being that of King Arkamani I (ca. 275–250 BCE).

From that moment on, Meroe became the center of the Kingdom of Kush. Important cultural changes occurred during the Meroitic period as the Kushites gave their own traditions and customs prominence over many borrowed from Egypt. The most significant change is that of the language. For the first time in Kushite history, the native language, Meroitic, became the official language of the kingdom, and a hieroglyphic alphabet derived from Egyptian signs was created to write it.

Temples were built not only to the Egyptian god Amun but also to the indigenous lion-headed god Apedemak (the best known of the Kushite gods). The architecture favored for the lion temples is much simpler than Egyptian temples (although inspired by it) and generally consists of a single room with a large pylon (main gate). Even the relief decorations on temple and tomb chapel walls changed to suit the Meroitic idea of beauty, power, and fertility. The *qore* (Meroitic word designating the king as commander) and the *kandake* (ruling queen) wore a different royal costume, which was modified from that of Egyptian kings. The Kushites used centuries-old pharaonic influences and ideas from

the Mediterranean world and incorporated them with their ancestral customs to create something different and truly their own: Meroitic culture.

At the time when Egypt had become a province of the Roman empire, the Meroitic Kingdom of Kush was a force to reckon with. The wrath of the Meroites was provoked when the Romans tried to take over Lower Nubia. Led by mighty leaders, the Kushites sacked Aswan, Elephantine, and Philae. The Romans retaliated by sacking Napata, but both parties eventually worked out an agreement. The great *kandake* who held strong against the Roman Army is believed to be Amanishakheto.

The Meroites still held power over lower and upper Nubia until the mid-fourth century CE. Military campaigns by Ethiopian rulers of the Kingdom of Aksum as well as the decline in wealth and political power of the royal family appear to have brought the Kingdom of Kush to an end.

—Caroline M. Rocheleau

Bibliography

- O'Connor, David. *Ancient Nubia: Egypt's Rival in Africa*. Philadelphia: University of Pennsylvania Press, 1993.
- Shinnie, P. L. *Ancient Nubia*. London and New York: Kegan Paul International, 1996.
- Welsby, Derek A. *The Kingdom of Kush: The Napatan and Meroitic Empires*. London: British Museum Press, 1996.
- Wildung, Dietrich, ed. *Sudan Ancient Kingdoms of the Nile*. Paris and New York: Flammarion, 1997.

The Carthaginian Empire

Carthage is well known as the Phoenician city whose brilliant general, Hannibal Barca, defeated Roman legions many times during the Punic Wars. Yet Carthage was also heir to a much older Phoenician society and the leader of a colonial empire that extended the length of the Mediterranean, ruling from this sprawling metropolis in what is today known as Tunisia on the coast of North Africa.

The society, culture, and many of the people of Carthage came from the land now called Lebanon. By tradition, this city was founded in 814 BCE by Princess Elissa (also known as Dido)

from the Phoenician city of Tyre. She was said to have brought a large fleet bearing many people and great wealth to start this colony on the part of North Africa closest to Sicily and Italy. Carthage soon outshone the earlier Phoenician settlements, which extended from Lebanon and Cyprus in the east to Spain and Morocco in the west. Its ideal location at the midpoint of the long line of Phoenician trading posts allowed it to rise to a position of leadership among them.

When Greek settlers came westward in 734 BCE and began to plant colonies on eastern Sicily at Naxos and Syracuse, Carthage rushed to place many more Phoenician colonies across western Sicily, Sardinia, Corsica, Spain, and the long coast of North Africa. Tyre had been the leading Phoenician city up to this time, but now Assyria began to establish itself as overseer of the northern Levant, including Phoenicia. While the Phoenicians retained considerable independence in exchange for the tribute they paid, the constraints were gradually tightened. As a result, Carthage was thrust into a leadership role among the Phoenicians, and the vast carpet of colonies across the Mediterranean came to be called the Carthaginian empire.

The sixth century BCE marked the emergence of military leaders in Carthage, a rare occurrence in the Phoenicians' long history. General Mago raised an army and went to Sicily to push the Greeks out of Carthage's claimed lands in the western part of that island. After 70 years of fruitless fighting, a peace was reached that produced little change in territory. It did, however, give the people of Carthage a taste for the Greek sculpture and artworks captured during these battles.

It should be mentioned that almost all our written knowledge of Carthage and the Phoenicians came from their enemies. The Phoenicians wrote no surviving histories of their own, so we rely on accounts by Greeks and Romans, who regularly battled with the Phoenicians.

Some of those sources claimed that child sacrifice was practiced by people at Carthage. However, other scholars have cast doubt upon that conclusion. Archaeological finds of special plots called *tophets* for young children raised serious questions, yet natural mortality followed by special rites have also been offered as reason-

➤ HANNIBAL'S END



Often compared to Alexander the Great, Julius Caesar, or Napoleon I, Hannibal was the greatest Carthaginian general during the Second Punic War. This bust dates from the first century BCE. (Bettmann/Corbis)

Hannibal (247–182 BCE) is well known for his successful battles against Rome. However, he also survived the Second Punic War and led Carthage through a difficult peace. When Rome ordered Carthage to hand him over, Hannibal escaped to Anatolia. There he continued to fight against the Roman forces seeking footholds in that region. Ultimately, however, Roman soldiers pursued him to Libyssa near present-day Istanbul in Turkey, where he is said to have taken his own life rather than let himself be captured.

—Sanford Holst

able explanations. A complete explanation remains elusive.

In the peace that followed the fighting in Sicily, Carthage returned its full attention to sea trade and prospered as never before. It became a widespread metropolis whose population may have reached 700,000 people. Many beautiful public places were built in its districts, which showcased the artworks that it so highly prized. Carthage even concluded treaties for additional trade with a small but growing city in Italy known as Rome.

In 333 BCE Alexander the Great entered the Levant on his march of conquest from Greece, and by the next year he had taken all of the ancient cities on the Lebanese mainland. From that point on, Carthage was unquestionably the last remaining leader of the Phoenicians.

Just after this time, Rome established itself across Italy by taking the lands that had belonged to the Etruscans to its north and to Greek

colonists to its south. Its legions then turned southward toward Sicily and the empire of Carthage, launching the Punic Wars in 264 BCE. The Romans were keenly aware that Carthage was a Phoenician city, and it is from their Latin word for Phoenicians (*Poeni*) that the Punic Wars received their name. After 23 years of fighting, the Romans managed to take all of Sicily, and a peace treaty ended the first war. However, when Rome then seized Sardinia and Corsica from Carthage, the stage was set for more fighting.

Hannibal Barca became Carthage's commander of the army at 26 years of age and two years later replied to perceived Roman encroachment into Carthaginian land in Spain by sacking the city of Saguntum, a Roman ally. The following year, 218 BCE, Hannibal famously led his force of soldiers and elephants across the Alps to attack Rome. Thus began the Second Punic War. Throughout this conflict Hannibal was invincible in Italy, defeating the Roman legions many times. When the Roman general Scipio counterattacked into North Africa, Carthage sought to negotiate a peace treaty and recalled Hannibal to that city. Those peace talks failed, and a final battle was fought at Zama. The battle went in Rome's favor, and the war came to an end. By taking virtually all of the Phoenician colonies, Rome was able to create its first foreign provinces, including lands as far as Spain and Morocco.

A third and decisive Punic War was fought, which resulted in Carthage being totally destroyed in 146 BCE. The vast empire of Carthage and the Phoenicians was no more.

—*Sanford Holst*

Bibliography

- Appian. *Wars of the Romans in Iberia*. Translated by J. S. Richardson. Warminster, UK: Aris and Phillips, 2000.
- Bradford, Ernle. *Hannibal*. New York: McGraw-Hill, 1981.
- Grant, Michael. *The Ancient Mediterranean*. New York: Scribner, 1969.

The Assyrian Empire

At the end of the tenth century BCE Assyria was little more than a narrow strip of land on the banks of the Tigris. But this same period was

marked by weakness in its neighbors. Babylonia was struggling, Egypt was ruled by chieftains from Libya, and Assyria's other three great rivals had not yet come to fruition. Furthermore, Assyria, while small, was not an insignificant power. Assyria had a powerful well-trained and well-equipped army and a stable dynastic line that had ruled for more than 200 years. The time was ripe for the rise of a new Assyria.

In 911 BCE Adad-Nirari II became king of Assyria and took the first steps toward building a Neo-Assyrian empire. After numerous successful Assyrian conquests in the vicinity of Mesopotamia the wealth of Assyria grew, and even more could be spent on warfare. With the accession of Shalmaneser III (in 858 BCE), empire building became a key goal of Assyrian kings. Shalmaneser spent 31 of his 35 years as king of Assyria making war against his neighbors. He campaigned in Cilicia, in the Levant, into the Taurus and Zagros mountains, and on the shores of the Persian Gulf. The Assyrian Army was not, however, always victorious during his reign, and many of his victories were offset with defeats and setbacks. Shalmaneser never managed to completely subdue his enemies. After one of his failed attempts he headed south into the Levant and accepted tribute from local rulers including Jehu of Israel, who is depicted as giving Shalmaneser tribute on a Black Obelisk. In 851 BCE Shalmaneser was called to help the Babylonian king put down a coup that brought his forces all the way to the Persian Gulf, but no territorial gains were made in the process. In Shalmaneser's final years one of his sons revolted, and another son, Shamshi-Adad, was placed in charge of stemming the revolt.

After numerous kings spent much of their reigns attempting to quell revolts, Tiglath-Pileser III conducted administrative reforms that finally gave Assyria some internal stability. He also restructured the army, creating a standing military force instead of the conscript army of his predecessors. He instituted policies of mass deportations in conquered territories to destabilize them and reduce the chances of rebellion. He conducted campaigns in southern Iraq and in Syria, gaining control of Phoenicia and much of Syria. With the west under control, he turned to the east and the territory of the Medes. He fol-

lowed that with a campaign against Assyria's great rival of Urartu, though the siege of its capital of Tushpa was unsuccessful. In 734 BCE he intervened in Tyre and Sidon to deal with unrest sparked by restrictions on trade with Egypt. This was followed by putting down a revolt led by the Philistine cities of Gaza and Ashkelon and shortly thereafter by his intervention in affairs among Judah, Israel, and Damascus. This led to the annexation of large parts of Israel to the Assyrian empire and the capture of Damascus.

Shalmaneser V, Tiglath-Pileser's son, ruled only briefly, and little is clearly known of his reign. He is known to have besieged the Israelite capital of Samaria for three years, but it is unclear whether he or his successor, Sargon II, was the actual conqueror of the city.

Sargon II came to the throne in a period of international crisis. Tiglath-Pileser's conquests had affected the economies of Elam and Egypt, which had lost key trade routes and partners, and it was clear that they would need to find new sources of revenue in the region in order to survive. As a result, both of these states began meddling in what was deemed to be Assyrian spheres of influence. Elam supported the revolt of Merodach-Baladan in Babylonia, while the Egyptian Army supported revolts in the Levant. Sargon was forced to campaign in both regions several times during his reign. Assyria's other great enemy, Urartu, was also challenged, and its sacred city of Musasir taken. While Urartu was not crushed it was weakened but not before it could spread further dissension. By 710 BCE Assyria was in control of most of the Near East and was surrounded by mostly ineffectual rivals. Sargon took the opportunity to deal with Babylonia and took the city of Babylon. This resulted in many of the remaining rivals, including Phrygia, offering him friendship.

Sargon's son Sennacherib inherited a kingdom that was less threatened than that of his father. It was also difficult to maintain, so he really did not try to expand it and instead spent his reign trying to solidify his hold on it. With the appearance on the scene of the Cimmerians, Urartu and Phrygia became less-significant threats, as their attentions were drawn elsewhere. Sennacherib took the opportunity to consolidate Assyrian holdings in the area adjoining the lands of

the Medes and Cimmerians with four campaigns in the north and west. In 701 he faced a coalition of rebellious kings in the Levant, including Hezekiah of Judah. Sennacherib was not entirely victorious, and while he was preparing to invade Egypt, some mysterious fate afflicted his army, which was forced to return to Assyria. In 694 he assembled a fleet of ships manned by Phoenician and Cypriot seamen and sailed down the Tigris to attack Elam. This resulted in the conquest of new territory but more importantly in the angering of the Elamites, whom the Assyrians spent the next seven years fighting. In 689 Babylon revolted yet again, and after putting down the rebellion Sennacherib destroyed the city.

Sennacherib's successor, his son Esarhaddon, put down revolts and maintained relative peace in Iraq. In the Levant he put down a Sidonian revolt that resulted in Sidonian territory being given to the rival city of Tyre. In 679 a new threat reared its head in the form of Scythian nomads whom he promptly repelled. In 671, with all of his borders secured, he attempted what no other Assyrian king had tried before: he attacked Egypt. Resistance was unsuccessful, and Taharqa was forced to flee south to Ethiopia. Esarhaddon's hold over Egypt was spurious, however, and Taharqa returned several years later and retook the country.

Following Esarhaddon's death, his son Ashurbanipal inherited the task of putting down the Egyptian revolt. The Assyrians attacked Egypt with a large force, including auxiliaries from 22 Levantine cities, and took the capital at Memphis. The Assyrians were never really successful in maintaining control over Egypt, and several successful rebellions ensued. With every successful revolt in Egypt came revolts on the Levantine coast from Egyptian-supported Assyrian vassals like Tyre and Arvad. This forced Ashurbanipal to besiege Tyre in order to force its surrender.

In 665 Psamtik of Egypt rebelled and, with the help of Greek mercenaries, was able to overthrow the Assyrians. Much of this Assyrian failure stemmed from Ashurbanipal being forced to keep the bulk of his army in the east dealing with Elam. While he was successful there, events were more complicated in the south. Shamash-Shumukin of Babylon revolted and formed a coalition of Assyria's enemies stretching as far as Egypt and the

Levant. For three years the Assyrians fought the Babylonians before they surrendered. Mop-up operations followed as he sought to punish some of the groups who had aided the Babylonians, such as the Arabs and the Elamites. Over time, Assyria gained control over all of Elam and destroyed its capital at Susa. Toward the end of the reign of Ashurbanipal our historical information becomes sparse, but in 639 the Medes attacked unsuccessfully. A subsequent Median attack was thwarted by the newly appeared Scythians.

After the death of Ashurbanipal, Nabopolassar, the governor of Babylon, revolted and established the Neo-Babylonian kingdom. For 12 years Assyria and Babylon fought a back-and-forth war over control of southern Mesopotamia. With greater successes on the part of the Babylonians, the Assyrians under Sinsharushkin appealed to the Egyptians for help but failed to receive timely or adequate aid. In 615 the Medes, seeing the opportunity, attacked Assyria and took Arrapha and Ashur. The Babylonians established a treaty of mutual friendship with the Medians and spend the next five years slowly dismantling Assyria. By 612 most of its major cities had been captured and destroyed, but under Ashurbanipal II a remnant of the empire managed to hold out until 610, when Harran finally fell and brought to an end the Assyrian empire.

Egypt had attempted to come to Assyria's aid but had been unsuccessful. After the fall of Assyria, the Egyptians moved into the Levant to fill the power vacuum. In 607 Nebuchadnezzar, the Babylonian crown prince, was called upon to deal with them. By 605 he had driven them from their stronghold at Carchemish and eventually campaigned throughout the Levant on several occasions, resulting in the destruction of such great cities as Ashkelon and Jerusalem. By 586 the Neo-Babylonian empire stretched from the border with Egypt in the west to Mesopotamia in the east.

—David Lipovitch

Bibliography

- Kuhrt, Amelie. *The Ancient Near East, c. 3000–330 BCE*. 2 vols. London: Routledge, 1995.
- Roaf, Michael. *Cultural Atlas of Mesopotamia and the Ancient Near East*. Oxfordshire, UK: Andromeda Oxford, 2000.

Roux, Georges. *Ancient Iraq*. 2nd ed. Middlesex, UK: Penguin, 1986.

Van de Mieroop, Marc. *A History of the Ancient Near East ca. 3000–323 BCE*. New York: Blackwell, 2004.

The Achaemenid Empire

The Achaemenid empire (550–330 BCE) was one of the largest empires of the ancient world, based in Persia and stretching as far as Egypt and Pakistan. The name “Achaemenid” refers to the royal family; while the members of the Achaemenid royal family believed that they could trace their roots back to the possibly mythical Achaemenes, it was not until the arrival of Cyrus II that the empire began to develop. Cyrus began by consolidating his control over Iran. Initially, Cyrus was ruler of a Persian kingdom that was subservient to the Medes. In 554 he revolted against the Medes and took their capital at Ecbatana. With control over Media and Persia, Cyrus became a power to be reckoned with, controlling much of Iran, Syria, northern Mesopotamia, and Anatolia. Around 546–547, Cyrus conquered Lydia and occupied its capital of Sardis. Croesus, the king of Lydia, had sought the help of his allies in Egypt and Babylon, but they arrived too late when Cyrus attacked during winter instead of waiting for the spring thaw. Lydia had been one of the wealthier of the powers in the region. Conquering Lydia provided Cyrus a huge war chest. Around the same time as Croesus's defeat, Cyrus offered terms to the Greek cities on the coast of Turkey, but only Miletus capitulated. The remaining cities, which had previously been vassals of Lydia, revolted and, with Spartan help, tried to stand their ground but failed. As a result, Cyrus now controlled the coast and islands of Ionia, Caria, and Lycia.

With his successes in the west, Cyrus turned to the unconquered territories of eastern Iran. Following the conquest of these lands, he controlled as far east as Bactria (now northern Afghanistan and southwestern Uzbekistan). The remaining thorn in his side was Babylon, which was at a weak point in its history. Babylon was ruled by Nabonidus, and he had alienated the Babylonian priesthood and many of the elites in

his country. Cyrus met and defeated the Babylonian Army at Opis in October 539. On October 10, Persian troops entered Babylon and encountered no resistance. With the conquest of Babylon came control of all of Babylon's vassals, including the cities of Phoenicia, Philistia, and Judah.

After the death of Cyrus, his son Cambyses II became ruler of the empire. Cambyses's empire included most of the ancient Near East with one very significant exception, Egypt. Cambyses, well aware of this serious threat to his empire's size and security, set out to remedy this. The new ruler rallied his troops, arranged with the Phoenicians and Arabs for the supply of fresh water via camel caravans, and attacked. In 525 Cambyses defeated the Egyptian armed forces at Pelusium and established himself as king of Egypt and founder of its Twenty-seventh Dynasty.

While Cambyses was in Egypt, a coup occurred in the Persian heartland that ultimately resulted in Darius I Hystaspes taking the throne. With this change in rulers began a consistent pattern in the future history of the Near East in the Achaemenid period. At the death of virtually every Persian king, a period of instability ensued in which vassal states rebelled. In this case, revolts broke out in Persia, Elam, Media, Assyria, Egypt, Parthia, Margiana, Sattagydia, and Scythia. The first job of almost every new Persian king became solidifying control over the Persian heartland and reestablishing control over the empire. Within a year Darius had events under control.

In 517 Darius I began his campaigns against Greek city-states and over the next five years conquered the islands of Samos and Chios followed by Thrace and Macedonia. He even crossed the Danube and campaigned against the European Scythians. In the east he added the new province of the Indus to the empire. In 499 Greeks in Cyprus and along the Aegean coast rebelled and sacked the satrapal capital of Sardis. The Persians, with the help of the Phoenicians, put down the revolt on Cyprus, but the Aegean cities were not reconquered for another five years.

The Persians also engaged the Athenians for the first time but were defeated at the Battle of Marathon in 492. Shortly thereafter Egypt, sensing weakness, revolted against Persian rule, which caused political disturbances throughout

the region. In the midst of the chaos Darius I died and Xerxes I ascended to the Persian throne. Egyptian independence was short-lived when the Persians, under Xerxes' own command, reconquered Egypt. Xerxes punished the Egyptians severely for their revolt. He also put down two rebellions in Babylonia.

In 483 Xerxes began his preparations for what would eventually be the campaign against Greece. This campaign lasted until 479 and ended with a series of defeats for the Persians at the battles of Salamis, Plataea, and Mount Mykale. In a subsequent campaign, the Persian fleet was destroyed while attempting to attack the Greeks. With these defeats there was a dramatic change in the balance of power. The Persian Army was weakened and no longer seen to be invincible, while Persia's mighty fleet had been destroyed and would have to be rebuilt.

In 449 the Greeks and Persians negotiated the Peace of Callias. With this change in policy toward the Aegean world, Persia was now able to divert resources from military preparations against the Greeks to other more pressing issues such as stabilizing their hold over their extant territory. Furthermore, shortly thereafter the Peloponnesian Wars began in Greece, and as a result the Persians did not need to worry about problems stemming from the Aegean, since not only did they have a peace agreement with the Greeks, but the embattled Greek cities were in no position to harass them.

Following the conclusion of the Peloponnesian Wars, the period of calm and peace that had been in existence for the previous half century ended. In 404 Artaxerxes II Memnon replaced Darius II on the throne. A weak king, Artaxerxes II's reign marked the beginning of a weak point in Persian rule. During his and part of his successor's (Artaxerxes III) reigns, Egypt experienced a period of independence from Persia. With a weak Persian emperor in place and the Greek world at peace with itself, the Spartans were again able to trouble the Persian empire. Shortly after the end of the wars, they joined in an alliance against Persia with the Egyptians. In 401 Artaxerxes' brother Cyrus, satrap at Sardis, rebelled and with an army of Greek mercenaries marched against his brother. Cyrus was killed at the Battle of Cunaxa, and

10,000 Spartan mercenaries were forced to fight a retreat back to the Black Sea, a story recorded by Xenophon in the *Anabasis*.

A brief period in which a revitalization of Persian control over Phoenicia occurred when Artaxerxes III led a force under his direct command to quell a revolt there and succeeded where his general had failed. In order to set an example, Artaxerxes destroyed the city of Sidon. Since the Persian policy of relative benevolence had largely proven to be a failure, he deported a large number of the Sidonian population in the manner of the Assyrian and Babylonian kings who preceded him. By 344 all of the rebellious Levantine cities surrendered to Persian authority. Artaxerxes severely punished some of the cities and deported many Phoenicians. After the success of his Levantine campaign, Artaxerxes III turned his attention once more to Egypt and succeeded in retaking Egypt. After a string of successes, a sudden end came to Artaxerxes' luck when he was assassinated in 338. His death marked the beginning of the end for the Achaemenid empire. Egypt again rebelled, and Darius III was forced to invade again. But the empire was already in its death throes. Its final years were a period of upheaval in the heartland of the empire stemming from weak kings and court intrigue. Furthermore, the empire was beset with trouble from the outside with the onslaught of the Macedonian Greeks. In 334 Alexander II of Macedon marched against the Persians. After a string of unexpected victories by the Macedonians at Granicus, Issus, and Gaugemela, Darius fled, abandoning his possessions, and was murdered by one of his own courtiers. With his death, Alexander became ruler of what had been the Achaemenid empire and was now to become the Hellenistic empire.

—David Lipovitch

Bibliography

- Briant, Pierre. *From Cyrus to Alexander: A History of the Persian Empire*. Winona Lake, IN: Eisenbrauns, 2002.
- Gershevitch, I., ed. *Cambridge History of Iran II: The Median and Achaemenian Periods*. Cambridge: Cambridge University Press, 1985.
- Kuhrt, Amélie. *The Ancient Near East, c. 3000–330 BC*. Vol. 2. New York: Routledge, 1995.

The Hellenistic Kingdoms

During his lifetime Alexander the Great greatly expanded the Macedonian empire that had been left to him by his father Philip, which included Macedonia and most of the Greek peninsula to encompass all of the former lands of the Persian empire and parts of what is now western India. Beyond Alexander's military accomplishments, this conquest changed the face of the ancient world by spreading Greek ideas throughout the Near East. Since Alexander died en route and, following his death, the lands were divided, the resulting political structure is generally referred to as the Hellenistic Kingdoms, which lasted until Rome's annexation of Egypt following Octavian's defeat of Marc Antony and Cleopatra.

Alexander died without establishing a line of succession, which resulted in a civil war among his generals that lasted 20 years. By 306 BCE, although the war had not officially ended, two leaders, Seleucus and Ptolemy, had emerged triumphant, and these men divided the lands of the former Persian empire among themselves. Seleucus won the lands of the former Persian empire to the east of Egypt, while Ptolemy established his rule in Egypt, perhaps the wealthiest of these territories. Macedonia and the Greek peninsula remained sporadic war zones as various rulers fought for the right to rule the former seat of Greek power.

When Alexander departed for the conquests in the 330s BCE he had left Antipater in Macedonia to rule in his name. Following Alexander's death and shortly before his own, Antipater chose a man named Polyperchon as his successor. In 316 BCE shortly after Antipater's death, his son Cassander overthrew his father's successor and maintained control of Macedonia and much of the Greek peninsula until his own death in 298 BCE. Over the next 22 years this region would have five short-lived rulers until in 276 BCE Antigonus Gonatas (r. 276–239 BCE) established the Antigonid dynasty in Macedonia and Greece, which lasted until its final successor was defeated by the Romans in 168 BCE.

The Antigonids were never able to maintain absolute control over the Greek mainland, and even within Antigonus Gonatas's lifetime various

city-states, including Corinth, Athens, and Sparta, rose up against the new dynasty. In several of these instances the Ptolemaic rulers directly aided these city-states in order to undermine the position of the Antigonids. The period cannot be viewed as one of continuous Antigonid domination of the Greek mainland but rather as an era in which Greek city-states sometimes played one regional power against the other and sometimes were forced to submit to the will of one of the powers.

By the late third and early second centuries BCE the Antigonids found themselves competing with their non-Greek neighbors for control of the seas and influence over the Greek mainland. After entering into a treaty with Hannibal during the Second Punic War (218–202 BCE) the Antigonids, under Philip V, found themselves in conflict for the first time with the Roman republic, a rising power in the western Mediterranean world. Philip fought two unsuccessful wars against the Romans and their allies (211–205 BCE and 201–197 BCE) and subsequently became a loyal Roman ally. Following Philip's death in 179 BCE, Perseus rose to power, and after angering Rome by apparently attempting to spread his influence over parts of the Greek world now deemed by the Romans to be outside the Macedonian sphere of influence, the Antigonids again found themselves at war with the Romans. The Third Macedonian War (172–168 BCE) witnessed the ending of the Antigonid dynasty, as Perseus was defeated and captured by the Roman general L. Aemilius Paullus in 168 BCE at Pydna. This did not end Roman interference in the Greek world nor did it mark the end of independent city-states in Greece, but this date does mark the end of the Antigonid kingdom.

Unlike the Ptolemaic and Antigonid kingdoms, the Seleucids ruled over a vast kingdom populated by multiethnic peoples. The Seleucids were able to build upon the infrastructure established by the former Achaemenid Persian empire and thus fostered the development of large urban centers such as Antioch and enjoyed the accompanying generation of cultural and economic capital. The first ruler of this dynasty, Seleucus I, ruled consistently from 305 to 281 BCE, although he had also controlled much of this area in the

years immediately following Alexander's death. It is unknown whether Seleucus attempted to invade Macedonia in the 280s BCE, but either way he never gained control of this region. Perhaps learning from the succession problems that had accompanied Alexander's death, in 292 BCE Seleucus named his son, Antiochos I, as coregent. This paid dividends for the new dynasty following Seleucus's assassination in 281 BCE, as Antiochos seamlessly gained full control of the empire. The combined reigns of Seleucus and Antiochos (305–261 BCE) represent a golden age for the dynasty but may also have laid the foundation for future problems. Although it remains a topic of debate among modern scholars, one argument is that both Seleucus and Antiochos concentrated their energies on western Iran and Asia Minor. This in turn brought their empire into conflict with the neighboring Ptolemies and allowed the eastern parts of the kingdom to gradually slip out of their control.

During the reigns of Antiochos II (261–246 BCE) and Seleucus II (246–226 BCE) the Seleucids began to lose their grip on the eastern provinces. It was in this period that the Parthians, the first new Persian dynastic group to emerge after the fall of the Achaemenids to Alexander in the fourth century BCE, began to gradually conquer the northeastern parts of the Seleucid empire. While the Parthians continued to recognize the Seleucids as the legitimate rulers of all of these areas, in practice they succeeded in creating their own empire in this period.

Another breakaway state in the Seleucid empire was the polis of Pergamum, which eventually developed its own miniempire in northwestern Asia Minor. It broke away in 283 BCE but became a major power a century later when its leader allied with the Romans in a way against the Seleucids. The king of Pergamum willed his throne to the Romans who, later on, were only too happy to collect on their inheritance, thus ending this period of independence. Pergamum, however, represents a dynamic independent city-state in the Hellenistic period that, for a time, was able to play larger Mediterranean powers against one another and reap the benefits.

By the late second century BCE the Seleucids, like the Antigonids, met the Romans on the

battlefield (192–189 BCE). Like the Antigonids, the Seleucids lost these battles and by 189 BCE had lost their possessions in Asia Minor. Over the course of the next century the Seleucids continued to lose territory as the Romans worked to undermine the dynasty in the eyes of its subjects. Ethnic groups such as the Jews and Nabataeans took advantage of this situation and created autonomous enclaves. The kingdom also suffered through civil wars and again came into conflict with the Romans in the 60s BCE, resulting in the cessation of the dynasty in 63 BCE at the hands of the Roman general Pompey.

The third major Hellenistic kingdom was Ptolemaic Egypt. Ptolemy had been named a satrap (governor) of Egypt in 323 BCE and eventually won outright control of the new territory during the civil wars that followed Alexander's death. Perhaps Ptolemy's greatest feat was in keeping both native Egyptians and the newly arrived Macedonian and Greek elites and soldiers simultaneously loyal to his rule.

From the beginning Ptolemy linked his rule to Alexander's and even built up Alexandria, one of the cities that the deceased conqueror had founded and named after himself, into the greatest intellectual center of the Hellenistic world. It was in this period that Alexandria boasted the Great Library, which housed many of the greatest philosophical, historical, and literary tracts of the ancient Mediterranean world. Alexandria, beginning in this period but continuing for many centuries during the subsequent Roman period, was also a cosmopolitan melting pot that included native Egyptians, Greek elites, and a significant Jewish community.

During the third and second centuries BCE the Ptolemaic dynasty, though it suffered through internal power struggles and native uprisings, acted as one of the major powers in the eastern Mediterranean. The dynasty possessed a formidable navy and often interfered in its neighbors' affairs, in many instances Seleucid and Antigonid affairs. By the late second century and early first century BCE controversy over dynastic succession brought the Romans into Ptolemaic affairs, as prior to his death Ptolemy X (r. 107–96 BCE) left Egypt to Rome in his will. Although the Romans did not immediately take over Egypt, they now had a legitimate reason to interfere in the

kingdom's internal politics. The first century BCE witnessed the end of the Ptolemaic dynasty but not before one last instance of power. During the Roman civil wars that accompanied the 1st and 2nd Triumvirates of the mid-first century BCE, Cleopatra, for a while, successfully played one side against the other, first as Julius Caesar's mistress and, following his death, as Marc Antony's lover. Unfortunately for both Marc Antony and Cleopatra, Octavian, Julius Caesar's great-nephew, unexpectedly won a series of key victories against Marc Antony's armies and eventually defeated the couple's naval fleet at the Battle of Actium in 31 BCE. This marked the end of the Ptolemaic dynasty, as Rome soon annexed this wealthy region. Although it lasted longer than the other kingdoms, the Ptolemaic dynasty weathered periodic native revolts and eventually succumbed, as did the other kingdoms, to the rising power of Rome.

—Jonathan Sciarcon

Bibliography

- Green, Peter. *Alexander to Actium: The Historical Evolution of the Hellenistic Age*. Berkeley: University of California Press, 1990.
- Habicht, Christian. *Athens from Alexander to Antony*. Translated by Deborah Lucas Schneider. Cambridge: Harvard University Press, 1997.
- Shipley, Graham. *The Greek World after Alexander, 323–30 BC*. London: Routledge, 2000.
- Walbank, F. W. *The Hellenistic World*. 3rd ed. Cambridge: Harvard University Press, 1992.

The Emergence of the Roman Empire

The rise of Rome into the world's dominant power, stretching from Britain into the Middle East, resulted in an unprecedented political union as well as an awesome cultural force, the remains of which have survived into the present day. This development had an unlikely starting place: a small village on the banks of the Tiber River at war with surrounding towns and struggling to survive. The mythical stories of Rome's founding—as in the *Aeneid* of Vergil and in Livy's *History*—are consistent with the evidence of archaeology: by the middle of the eighth-century BC a civic and political center existed, and as those Romans confronted the Etruscans

to the north and the Latins to the south, uneasy alliances or outright annexations allowed them to gain some measure of ascendance over their less-energetic neighbors.

What seems to modern eyes as well as to later Roman historians as a relentless, inevitable drive to world dominance was a bit more fitful at the time. In 390 BCE the Celts sacked Rome itself, an event that remained long in Roman memory. But the drive was real, and the Romans quickly recovered. By the 270s BCE affairs in Italy had been largely resolved in Rome's favor until a new threat arrived from across the Adriatic Sea: Pyrrhus of Epirus, a military leader from western Greece, who invaded Italy and Sicily and showed the Romans that their interests extended overseas. The Romans undertook their first truly overseas wars over Sicily, coming into conflict with Carthage, an African colony of the Phoenicians, in the First Punic War (262–241 BCE). Twenty years of exhausting warfare left Rome supreme over Sicily, Corsica, and Sardinia. The Second Punic War (219–202) began with Hannibal's invasion of Italy and forced Rome to confront Carthaginian allies in Spain, Greece, and Africa. Carthage was reduced to a small powerless city. Rome was now the undisputed master of the western Mediterranean.

In the next century, Rome was forced to engage repeatedly with regional leaders and coalitions. The Battle of Cynoscephalae (197 BCE) and the Battle of Pydna (168) in Greece suggest that Rome's forays were defensive rather than an unmitigated drive for dominance, but the culmination of these campaigns was the sack of Corinth in 146. The destruction of Carthage in the same year was a testimony to Rome's power but not its wisdom; border disputes between the Carthaginians and their African neighbors could have been mitigated by Rome. Spain, parts of Northern Africa, and Greece were now under Roman rule.

This military history mirrors a domestic political flowering that created the Roman republic, a generally lawful system of government in Rome. According to tradition, Rome's first 250 years—from the founding circa 750 BCE to the establishment of the republic in 510—were spent under the rule of seven kings, from the warlike Romulus and his successor Numa, who estab-

lished religious rituals and temples, a calendar, and political institutions, up to a period of three successive Etruscan kings. The last king, Tarquinius Superbus, or Tarquin the Arrogant, was portrayed as an evil degenerate and was driven out by a Roman hero, Brutus. The Romans then established their republic. So go the stories.

The literal truth of these details is less important than the overall truth of Rome's orderly system of self-government. By the early fifth century BCE, the so-called Struggle of the Orders had led the aristocracy to make slow but permanent concessions to the plebeians. The office of tribune was created to represent plebeian interests. The publication of the so-called Twelve Tables of Roman Law in the 450s BCE began a progressive unveiling of the law that resulted in the first truly independent legal profession in the second century BCE. Roman dramatists, such as Plautus and Terence, borrowed from the Greeks and brought a literary and artistic culture to Rome. As the Romans came to dominate the Mediterranean, they made changes to their political institutions, adding offices and dealing with the demands of friends and foes. Increasing territory and population contributed to the growing social tensions that threatened to engulf Rome and its Italian allies.

By the late second century the social and political tensions reached a peak, especially in the matter of land reform. In 133 BCE the tribune Tiberius Gracchus proposed agrarian legislation; vetoed by a fellow tribune, he brought his bill directly to the people, thus bypassing the Senate. An enraged group of senatorial supporters murdered him in the street. By 123 the drama was being replayed when his brother Gaius Gracchus succeeded in establishing boards to take jurisdiction over matters of land. Within a few decades these issues led to a flux of political activity, at times violent. Marius, a plebeian military commander who enjoyed successive consulships, contended with the supporters of Sulla during the years that followed a social war between Rome and its Italian allies. Sulla's dictatorship was strong but not long lasting. It ended in 79, and after a brief political ascendancy by Cicero, Rome by 60 BCE was under the control of a few powerful men with strong factions (the so-called First Triumvirate).

Although the pretense of republican offices was maintained, once Crassus was killed in battle Pompey ruled jointly with Caesar until the latter defeated him in battle and attained sole power. Republican forms remained, but the essence was fading. Historically, Rome had appealed to dictators in the face of desperate situations but for limited durations; Caesar was made dictator beyond the period of any singular emergency. He was murdered in the Senate in 44 BCE, plunging Rome back into chaos, war, and the ascension of Caesar's heir Octavian, acclaimed Augustus in 27 BCE. Any semblance of republican forms was now subordinated to imperial rule.

Roman history from this point can be subdivided in terms of dynastic families. The Julio-Claudian emperors controlled Rome until the death of Nero in 68 CE. After months of civil war the Flavians took power until Domitian was killed in 96 CE. After two years under Nerva—selected by the Senate—the Antonines could boast of generally peaceful successions (by adoption) until the deranged Commodus was killed in 192 CE. Civil war—not seen in three generations—was ended by Septimius Severus and the Severan dynasty. That this was a family of Syrian and African extraction is symptomatic of the decline in importance of the city of Rome itself; the murder of the teenaged Severus Alexander in 235 CE presaged 50 years of de facto military rule, when emperors were chosen by the acclamation of soldiers and when rival claimants settled their ambitions on the battlefield. Diocletian succeeded in bringing the empire back together in the 280s, followed by another struggle after 305 and the rise of Constantine and his neo-Flavian successors. In 385 the death of Theodosius led the Romans to accept the inevitable: the formal division of the empire between his two sons. Over the next century, the west fragmented into early medieval Europe, and the east became the Byzantine empire.

The imperial age of Roman history—if it is a single age—had periods of cultural and intellectual brilliance. The first and second centuries CE were defined by writers such as Vergil, Livy, Horace, Ovid, Seneca, Juvenal, Lucan, and Apuleius. Philosophy was transmitted through various schools. The Stoics, for instance, passed on Greek thought as interpreted by Cicero, through Muso-

nus Rufus (“The Roman Socrates”), the slave Epictetus, and the emperor Marcus Aurelius. Following the Greek Jewish philosopher of Philo of Alexandria, various mergers of Greek philosophy with religious exegesis followed. The last expression of Greek philosophy was Neoplatonism, the product of Plotinus, Porphyry, Iamblichus, and others. Roman law, which mutated in ways consistent with imperial rule, could boast of the *Handbook* of Pomponius, the code of Gaius, the *Quaestiones* of Papinian, and the *Digests* of Ulpian, culminating in the massive compilations completed under the emperors Theodosius and Justinian. With the collapse of paganism, the Christian movement became the dominant cultural force for centuries.

Rome ended politically with the onrush of the barbarians. Various Goths, Vandals, Gauls, and German tribes swept over the borders, and Rome became one city of many, a ghost of its once-glorious past. But it would be erroneous to place the cause of Rome's fall primarily on external challenges. The Roman empire itself was a mix of many cultural influences, united politically but subject to internal dissension, usurpation, and fragmentation. Even Julius Caesar, in the first century BCE, had enrolled Gauls and other non-Romans into his army. The political unity of Rome could not survive the tensions among the values, aspirations, and traditions of its many citizens and subjects. Rather than ask why the Romans selected a “barbarian” emperor in 476 CE, it might be better to ask whether the term had any validity in such a melting pot of contending ethnic and cultural identities.

—John Lewis

Bibliography

- Cary, M., and H. H. Scullard. *A History of Rome*. Houndmills, Basingstoke, Hampshire, UK: Macmillan, 1975.
- Cherry, D. *The Roman World: A Sourcebook*. Oxford, UK: Blackwell, 2001.
- Galinsky, K., ed. *The Cambridge Companion to the Age of Augustus*. Cambridge: Cambridge University Press, 2005.
- LeGlay, M., J.-L. Voisin, and Y. Le Bohec, Y. *A History of Rome*. 3rd ed. Oxford, UK: Blackwell, 2005.
- Ward, A. M., F. M. Heichelheim, and C. A. Yeo. *A History of the Roman People*. 4th ed. Upper Saddle River, NJ: Prentice Hall, 2003.

Roman External Relations

Roman external relations were defined by territorial ambitions and interests on the part of the Roman state at different stages of its development. These relations shifted during Roman history as it evolved from a republican city-state based in Italy and eventually became a vast empire encompassing three continents. Early in the republic, most of Rome's relations were primarily with its Latin, Italic, Greek, and Etruscan neighbors in the Italian peninsula and were focused on guaranteeing its economic health and security in the region. However, Roman military and economic expansion into Europe, the Mediterranean littoral, and the Near East brought the Roman republic (and then the empire after the principate of Augustus) into direct contact and conflict with the Celts (Gauls), the Carthaginians, the Hellenistic kingdoms, and the Parthians, thus expanding its relations from the circumscribed world of the Italian peninsula. Later in the third and fourth centuries CE, in light of its declining military and political strength, the preservation of the Roman empire rested on maintaining friendly relations and alliances with Germanic ethnic groups in its European borderlands, which were characterized by vast German migrations from central Eurasia.

Early in the republic, much of Rome's interaction with local Italian city-states in terms of trade, alliances, and warfare centered on Roman expansion vis-à-vis these entities. Growing Roman preeminence in the central Italian peninsula brought it into direct conflict with other Latin city-states (collectively referred to by historians as the Latin League). Direct military confrontation between Rome and the Latin League in the Latin War ultimately resulted in Roman victory in the Battle of Lake Regillus in 499 BCE. The Latin War ended with a formal treaty (*foedus Cassianus*) that established normal relations between the Romans and the Latin League and created an alliance for collective security. However, this diplomatic maneuver on the part of Rome was in response to the growing threat of migrations of Volsci and Sabines into Roman and Latin areas in the fifth century. Subsequent warfare with the Volsci and the Gauls made the alliance with the Latins pivotal to Italian secu-

➤ HOSTAGE TAKING AS DIPLOMATIC STRATEGY— ROME AND PARTHIA

The exchange of hostages in antiquity as a form of diplomacy created ties between states in an effort to ensure peace. This was particularly evident between Rome and Parthia in late antiquity. Typically, elites from either realm were exchanged and functioned as representatives of their states at the respective courts of their hosts. Frequently these were the younger sons of Roman senators and their equivalents in the Parthian realms. While this was done for relatively short periods of time, it did form a basis for short-term security in terms of diplomatic relations and establishing a level of amiability among these otherwise contentious states. Hostage taking functioned as an example of diplomatic means of resolving international issues and maintaining stability.

—Abraham O. Mendoza

urity. However, in the midst of the Samnite Wars (the Samnites were erstwhile allies of the Romans) the Latin League grew suspicious of Roman hegemony, resulting in a revolt in 340 BCE. Upon the defeat of the Latin League, Rome pursued a policy of incorporating the Latin cities through intermarriage, citizenship, and growing economic bonds, thereby securing their hegemony in Italy. By the end of the Third Samnite War in 290 BCE, they too became incorporated as part of the Roman state, as did the Etruscans and Gauls in subsequent years.

Roman diplomacy shifted onto the great Mediterranean region with the defeat over Epirus in the Pyrrhic Wars and Carthage in the Punic Wars in the third and second centuries BCE. Rome and Carthage had maintained friendly relations prior to the Punic Wars, only insofar as they saw a common enemy in the Greeks and Etruscans. However, with Roman incorporation of these regions, hostility against Carthage in Sicily, Spain, and North Africa resulted in the Punic Wars. In the midst of these wars, Rome garnered support and hostility from adjacent Hellenistic states (some were Carthaginian allies), bringing them into the orbit of Roman national interests. While there were Roman emissaries and what could be construed as diplomats and diplomatic institutions in

the modern sense sent or exchanged with these kingdoms, the actual work of diplomacy was done through the Roman military and bureaucracy following orders from the Senate.

In the second to first centuries BCE, small Greek kingdoms, seeking greater autonomy from the Hellenistic kingdoms (that is, the empire of Alexander the Great and his generals), sought Roman support. Roman intervention in Greek affairs brought them into dynastic intrigues and regional disputes, resulting in Roman military actions against Macedon (200 BCE–197 BCE), Syria (190 BCE), and Greek city-states (particularly illustrative with the Roman sack of Corinth in 146 BCE). Rome gradually incorporated these Greek regions as Roman provinces as they were defeated. Roman acquisition of Pergamum in Asia Minor through the will of its last monarch in 133 BCE granted them substantial territory in the East as well. While friendly relations existed with Ptolemaic Egypt, the last of the great Hellenistic kingdoms, Roman political strife combined with Mark Antony's alliance with Cleopatra also resulted in the conquest of that region by Octavian in 30 BCE.

The Roman empire, particularly during the principate, was a potent force in the ancient Mediterranean world, bringing it into contact with the Parthians in the East and with German cultural groups along its European borderlands. As Rome expanded into Britain, the Levant, and Mesopotamia, it was expedient to rule through client-kings in a form of indirect rule. However, due to revolts such as those in Judea by the Jews (particularly the Zealots) and in Britain by the Icenii in the first century CE, Roman authority was established through the direct incorporation of these regions as Roman provinces subject to direct political and military authority. Relations with Parthia were also characterized by the establishment of formal diplomatic recognition of this Persian kingdom as an equal through the exchange of hostages during times of peace. While wars did characterize this relationship, the inability of either power to force the other to complete capitulation forced this mutual recognition. However, as Rome's military and political power declined in the third and fourth centuries CE, Rome was forced to develop a series of alliances with neighboring Germanic tribal states

along its periphery for mutual defense by allowing Germanic settlement in Roman lands, for Germanic mercenaries, known as *foederati*, were crucial to Roman defense. In the midst of a massive migration of Germanic peoples coming from central Eurasia and exerting pressure on Roman borderlands, it was pivotal for Rome to establish such relationships to counter its weakening military. While some of these Germanic peoples became thoroughly Romanized and adopted Christianity, by the fifth century the Roman empire in the West was no more, having gradually evolved into a series of Germanic successor states. In the East, the Byzantine empire survived for another millennium but through most of its existence as primarily a Greek state based in Anatolia and the Greek peninsula.

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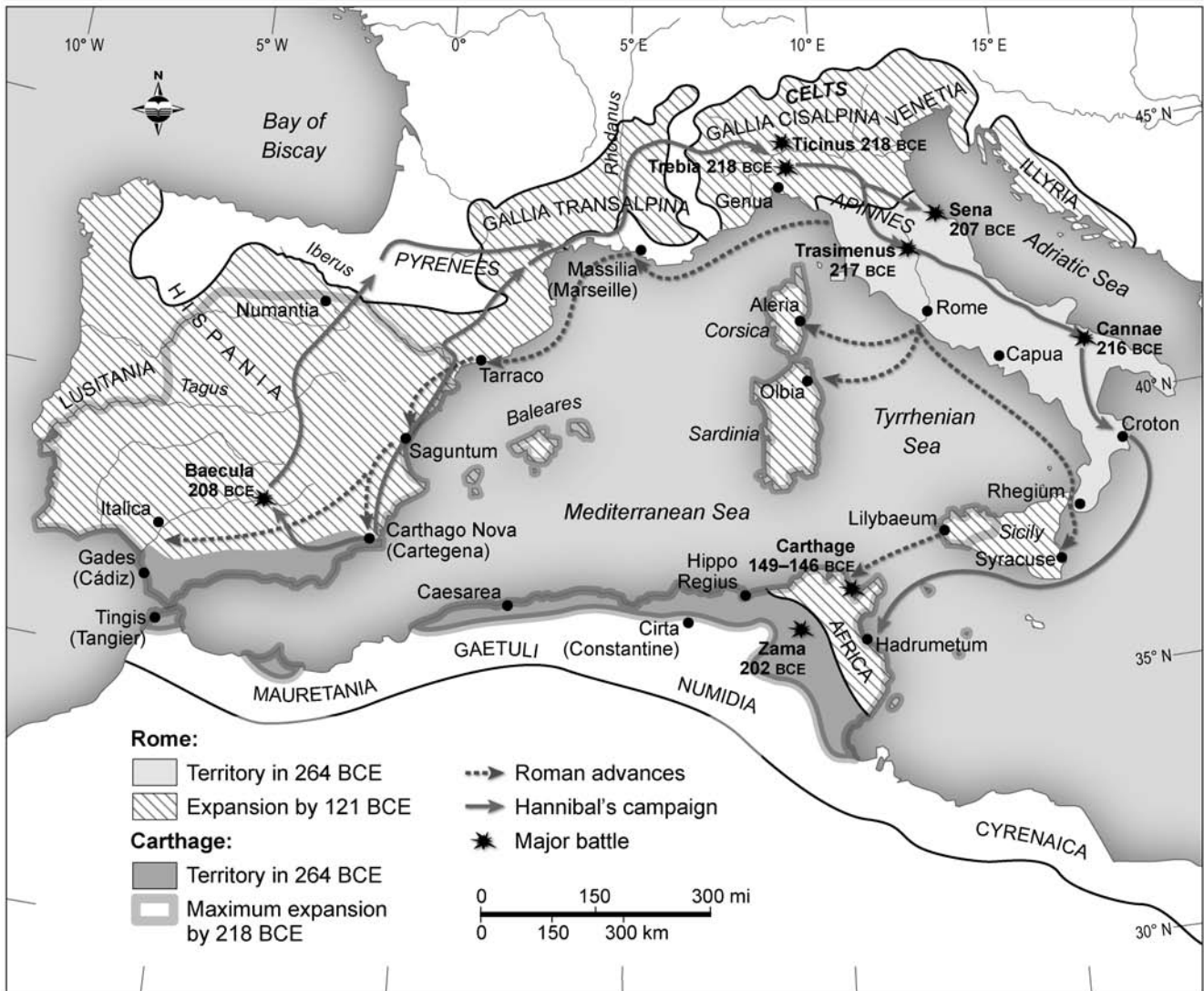
Bibliography

- Eilers, Claude, ed. *Diplomats and Diplomacy in the Roman World*. Boston: Brill, 2008.
- Lee, A. D. "The Role of Hostages in Roman Diplomacy with Sassanian Persia." *Historia: Zeitschrift für Alte Geschichte* 40(3) (1991): 366–374.
- Mattern, Susan P. *Rome and the Enemy: Imperial Strategy in the Principate*. Berkeley: University of California Press, 1999.
- Scullard, H. H. *A History of the Roman World: 753–146 BC*. 4th ed. New York: Methuen, 1980.

The Punic Wars

As the Roman republic solidified its control over the Italian peninsula and began its expansion with the development of colonies in Greek regions in the third century BCE, it entered into proximity with the neighboring regional power of Carthage. Carthage had developed into a major power centered in North Africa and had been established as a Phoenician colony in previous centuries. Initially, Rome and Carthage were allies against their common regional enemies, namely the Etruscans and Greeks in southern Italy. However, as they both developed ambitions in the greater western Mediterranean region, they eventually came into conflict. Through three major wars, Rome and Carthage fought for the control of various Mediterranean regions, namely Sicily, Spain, and North Africa. Ultimately, Rome would

THE PUNIC WARS, 264–146 BCE



destroy Carthage in 146 BCE and emerge as the master of the western Mediterranean world.

Intervention in the internal affairs of Sicily brought both Rome and Carthage into direct conflict in what is known as the First Punic War (264–241 BCE). A Roman alliance with the Greek city of Syracuse, which was engaged in conflict with Greek mercenaries known as the Mammerines after the seizure of the city of Messana, brought Rome into Sicily. This Roman intervention led to greater influence throughout most of the large island. In spite of their friendly relations, Rome could not allow Carthaginian influence in Sicily due to its strategic location in the

central Mediterranean. While the Romans were able to trounce Carthaginian forces decisively in Sicily, they were unable to control the sea, as they lacked adequate naval forces vis-à-vis Carthage. However, the adoption of a drawbridge (known as a *corvus*) that allowed Roman troops to board Carthaginian vessels from their own ships led to Roman naval supremacy. By 241 BCE Rome and Carthage sued for peace with Carthage, agreeing to withdraw from Sicily and to pay Rome a large indemnity. Subsequently, Sicily and Sardinia became Roman territories.

The Second Punic War (218–201 BCE) began as a result of Roman and Carthaginian claims in

➤ WAR ELEPHANTS

As part of his brilliant strategy to engage the Romans in battle in their own homeland, Hannibal brought war elephants along for his Italian campaign in the early stages of the Second Punic War (218–201 BCE). War elephants had also been used by the Persians in their first confrontations against Alexander the Great (331 BCE) and later by the Greek Pyrrhus of Epirus in his struggle against Rome in southern Italy (280 BCE). Other military forces in India, Egypt, and North Africa were also keen on the use of elephants as draft animals for battle in this period. Elephants were also useful in battle, given that they were used in cavalry and their skins were thick enough to fend off attacks by archers and infantry.

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Spain. The town of Saguntum, which Rome claimed as a protectorate, was attacked by Carthaginian general Hannibal in 218 BCE. Hannibal believed that the town was a threat to Carthaginian interests. The Romans argued that an informal agreement banned Carthaginian forces south of the Ebro River, where Saguntum was located. Therefore, this action was seen as an act of war by the Romans and immediately led to the outbreak of war. Hannibal attacked Italy directly by moving his troops through the Alps, thereby bypassing Rome's naval forces in the Mediterranean entirely. En route Hannibal acquired as allies the Gauls, whom the Romans had recently defeated, and was able to engage Roman forces successfully in northern Italy.

Under the dictator Quintus Fabius, Roman forces never openly engaged Hannibal's forces in major battles, instead deploying small raids against the Carthaginian Army. This strategy, known to posterity as Fabian tactics, displeased the Roman public and led to a more aggressive Roman engagement of Carthaginian forces. However, in 216 BCE Roman forces were annihilated by Hannibal's Army at the Battle of Cannae, in which an estimated 70,000 Roman troops were lost. This major defeat also led to the loss of many Roman allies. Hannibal remained in Italy for nearly two decades fighting Roman armies but cut off completely from Africa. The Roman gen-

eral Scipio destroyed the Carthaginian forces coming from Spain to assist Hannibal's Italian Army. Scipio subsequently invaded Carthage's African territories, leading to Hannibal's return. Scipio ultimately defeated Hannibal's Army at the Battle of Zama in 202 BCE, thereby becoming known as Scipio Africanus for conquering Africa.

Following this defeat, Carthage was forced to cede all possessions outside of Africa to Rome and lost its independence in terms of foreign policy. Carthage also had to pay a large yearly tribute to Rome as part of a peace treaty formally ending hostilities. In spite of Carthaginian compliance with these terms, Roman hostility remained throughout the first half of the second century BCE. Cato the Elder supposedly famously stated that "*Carthago delenda est*" ("Carthage must be destroyed"), illustrating how Roman politicians and the public argued that Roman security could not be assured unless Carthage was eliminated. In 151 BCE Roman ally Numidia staged a crisis to provoke Carthage into war and thus allow for Roman intervention. The Third Punic War (151–146 BCE) led to the destruction of Carthage, with its population taken as slaves and its fields razed with salt in 146 BCE. All remaining Carthaginian North African provinces were absorbed by Rome. At this point, Rome was the hegemon of the western Mediterranean littoral.

—Abraham O. Mendoza

Bibliography

Bagnall, Nigel. *The Punic Wars: Rome, Carthage, and the Struggle for the Mediterranean*. New York: Thomas Dunne Books, 2005.

Scullard, H. H. *A History of the Roman World: 753 to 146 BC*. 5th ed. New York: Routledge, 2003.

Jewish Revolts against Roman Rule

As Roman political and military authority increased in Palestine at the expense of local Jewish sovereignty during the first century CE, the resultant Jewish resistance in Judea eventually led to full-scale rebellion. The first Jewish-Roman war, known as the Great Revolt, occurred from 66 to 73 CE in the Roman province of Iudaea (Judea), which included Judea, the remaining core of ancient Israel. The war ended with the disper-

sal of the majority of the Jews (known as the beginning of the Jewish Diaspora) throughout the Roman empire and the destruction of the Second Temple of Jerusalem in 73 CE. The Kitos War, which occurred from 115 to 117 CE, was constituted by various Jewish Diaspora communities in the eastern Mediterranean rebelling against Roman rule, some under Parthian auspices. The third and last major Jewish revolt, known as the Bar Kokhba Revolt, occurred from 132 to 135 on the part of the remaining Jews of Judea as a last-ditch effort to reestablish a Jewish state in Palestine through the ouster of the Romans. Smaller-scale revolts followed in later centuries but were never of the same magnitude.

The Great Revolt began in 66 CE, partly as a result of anger toward Roman disrespect of Jewish religious observances but more as a consequence of long-term Roman infringement on the political autonomy and religious identity of Judea. According to Jewish-Roman historian Josephus, the revolt began after the Roman authorities in Jerusalem ignored Jewish complaints regarding Greek sacrifices in front of a Jewish temple. In reaction, Eliezer bin Hanaina led an attack on the Roman troops stationed in Jerusalem that ultimately ended in a Jewish victory. The Jewish client-kings, who were affiliated with the Romans, subsequently fled the city. Roman reinforcement troops sent from Syria were defeated by Jewish forces at the Battle of Beth Horon. Roman legions under the command of Vespasian were sent by Emperor Nero to pacify Palestine, resulting in the defeat of Jewish resisters in northern Judea.

As the Roman forces neared Jerusalem, killing and enslaving huge numbers of Jews along the way, many Jewish refugees joined the rebellion to preserve their lives from the Roman onslaught. The Zealots and the Sicarii, who were the core factions of the Jewish rebels, also began their own campaign of retribution against Jews allied with or thinking of surrendering to the Romans, thereby igniting a civil war between pro-Roman and anti-Roman factions in Judea. Nonetheless, superior Roman numbers in terms of troops ultimately destroyed Jewish forces with the fall of Jerusalem in 70 CE after a protracted siege of the city by Roman forces. The Second Temple was destroyed by Roman forces,

➤ THE SICARII

In the midst of the civil war in Judea during the Great Revolt against Roman rule from 66 to 73 CE, a faction of Jewish rebels was responsible for the assassinations of pro-Roman Jewish aristocrats. Known as the Sicarii (meaning “daggers”), this subfaction of the greater Zealot movement murdered Roman officials and Jewish sympathizers, who were typically part of the Herodian establishment in Judea, and relied on public stabbings as their trademark. The Sicarii were also responsible for murdering anyone advocating surrender or compliance with Roman authority. Modern scholarship suggests that the Sicarii are an example of what might be termed a terrorist group during antiquity, given that these assassinations were purposely used to give Roman officials and greater Jewish society an example of what happens to collaborators or those who would surrender.

—Abraham O. Mendoza

and large numbers of Jews were exiled or sold into slavery, ending Jewish autonomy under Roman rule. However, remaining Jewish resistance, particularly the Jewish stronghold of Masada, famous for the mass suicide of the defenders, held out until 73 CE.

With the dispersal of the population of Judea, various Jewish diasporic communities developed throughout the Roman empire and in neighboring Parthia. The Kitos War (Rebellion of the Exiled), which constituted a series of Jewish rebellions among various Diasporic communities, began in 115 in reaction to Roman rule. While Roman forces were in the East fighting against Parthia, revolts broke out in Cyrenaica (Libya), Egypt, Cyprus, Judea, and Mesopotamia. Many Jews fought in tandem with the Parthians, preferring their patronage over Roman rule. Ultimately, all these revolts were quashed by Roman forces under the command of Emperor Hadrian in 177 CE. Mass executions and the exile of Jewish survivors was the fate for those captured by the Romans.

The third and final of the major Jewish revolts against Roman authority was the Bar Kokhba Revolt, which occurred from 132 to 135 CE. Emperor Hadrian's promise to rebuild the

city of Jerusalem came with the condition to rebuild it as a Roman city with requisite Roman temples. A new temple, to be built on the ruins of the Second Temple, for the Roman god Jupiter, infuriated the remaining Jews of Judea. Furthermore, Jerusalem was to be refounded as the city of Aelia Capitolina. Hadrian further exacerbated an already tense situation by banning circumcision throughout the empire. Simon bar Kokhba, proclaimed as a Jewish messiah, led Jewish forces against the Roman garrison and was successful in its ouster. This led to a two-year interim whereby an independent Jewish state in Judea existed, given the vacuum of Roman authority. Hadrian sent Roman troops from across the empire to quash this final revolt, which lasted three years. Subsequently, Hadrian attempted to destroy any remnants of Judaism in Judea, which he saw as the root cause of these revolts. The city was reestablished as Aelia Capitolina, with remaining Jews further scattered, sold into slavery, or killed, all on a far larger scale than in punitive acts during or after prior revolts. The core of the remnant Jewish community in Palestine made Galilee its cultural and religious center, while Jewish Diasporic communities thrived elsewhere in eastern Europe, Mesopotamia, and the Mediterranean littoral in later centuries.

—*Abraham O. Mendoza*

Bibliography

- Edwards, Douglas R. *Religion and Society in Roman Palestine*. London: Taylor and Francis, 2007.
- Josephus, Flavius. *The Jewish War*. Translated by Geoffrey Arthur Williamson. New York: Penguin Classics, 1981.
- Schäfer, Peter. *History of the Jews in the Greco-Roman World: The Jews of Palestine from Alexander the Great to the Arab Conquest*. New York: Routledge, 2003.

Parthian Imperialism

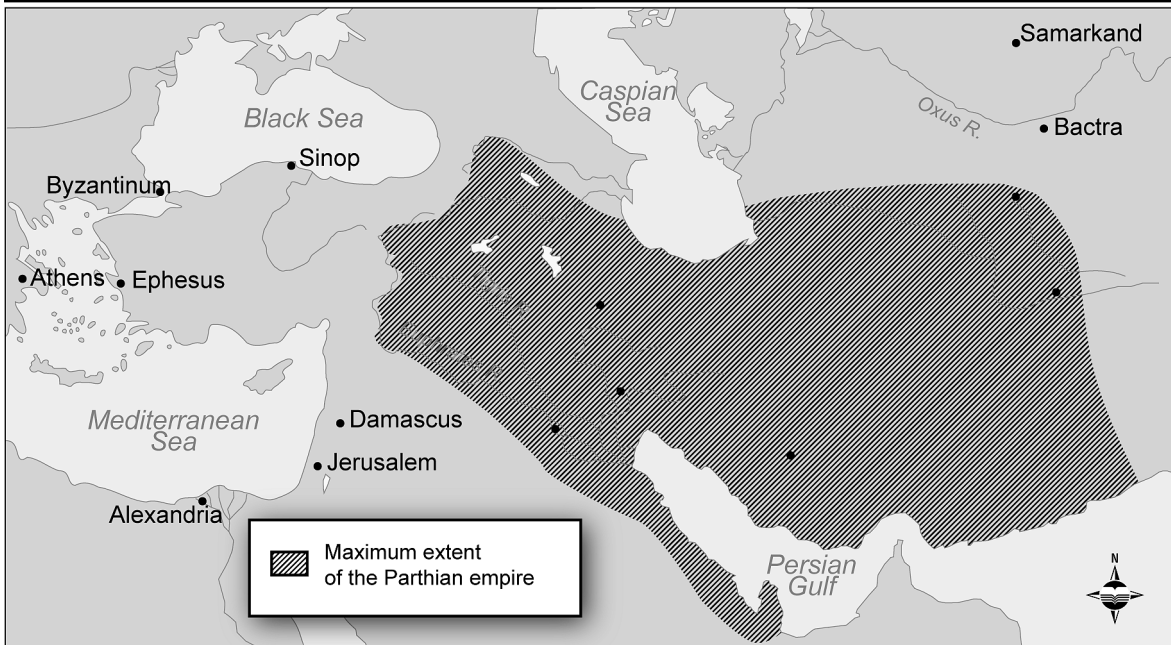
The Parthians, a confederation of tribes, probably of Scythian origin, inhabiting the area between the Hari Rud River and the Caspian Sea (with a center near modern Ashkhabad), united under a king named Arsaces and rebelled against Greek rule around 238 BCE. Arsacid kings would hold various parts of Iran for some 400 years,

but they constitute the most obscure period in all of Iran's history. No Parthian historical records, if they bothered to keep any, have survived, and the dynasty that replaced them had little interest in recording their accomplishments. Consequently, most information about them comes from classical sources, which give a distorted view in that they deal almost exclusively with the wars between the Parthians and the Greeks and Romans.

Parthian rule was mostly confined to eastern Iran until the decline of the Seleucids, under increasing pressure from the Romans, following the death of Antiochus IV Epiphanes. About 155 BCE, an Arsacid king, Mithridates I, moved into western Iran and, in 141, captured the most important city in Mesopotamia, Seleucia on the Tigris. A crushing defeat of the Roman Army led by Crassus at the Battle of Carrhae in 53 BCE confirmed the position of the Parthians as a major power in southwest Asia and the chief rival of Rome. Roman armies had great difficulty dealing with the Parthian use of light and heavy cavalry as well as their tactics of feigned retreat and massive volleys of arrows launched from horseback. Marc Antony continued to skirmish with the Parthians; Augustus negotiated a peace and the return of the legionary standards captured at Carrhae. Subsequent campaigns against the Parthians took place under Nero (55–63), Trajan (115–117), Marcus Aurelius (163–165), and Septimius Severus (194–198). Much less is known about Parthian relations with their neighbors to the east, but contacts with the Han Chinese and the Kushans seem to have been extensive and generally amicable.

Politically and culturally, the Parthian empire was remarkably decentralized and diverse. Discrete areas were under the direct rule of the king, but most of the territory was controlled on his behalf by aristocratic warrior families, vassal kings, relatives, and local governors. According to traditional accounts, there were, as in the Achaemenid period, seven of the great feudal families (vazorgan). They held large provinces and maintained their own armies of freemen (azadan), which provided service to the Arsacid monarch as necessary. Among the most famous of these families were the Suren of Sistan, the Mehran of the central Elburz, and the Karen of Media.

FORMATION AND DECLINE OF THE PARTHIAN EMPIRE



Classical authors emphasize the pride Parthian rulers took in being regarded as philhellenes, and they do seem to have been quite comfortable with Greek culture. Up to the middle of the first century CE, they used Greek and Greek characters for their inscriptions and coinage; they did, however, have their own language and script, and it eventually appeared on coins, ostraca, and other material. Insofar as there was a Parthian literature, it was largely if not completely oral. Parthian bards and minstrels were responsible for preserving the cycles of stories about epic heroes so important in the east Iranian tradition. In much later centuries, these were written down in the Iranian national epic immortalized by the poet Ferdowsi and in popular romances such as the story of the star-crossed lovers *Vis and Ramin*.

—Elton L. Daniel

Bibliography

- Dandamaev, M. A. *The Culture and Institutions of Ancient Iran*. Cambridge: Cambridge University Press, 1989.
- Daniel, Elton L. *The History of Iran*. Westport, CT: Greenwood, 2000.
- Frye, Richard N. *The Heritage of Persia*. New York: New American Library, 1963.

➤ PARTHIAN TOLERATION

The Parthians certainly tolerated various religions: the mystery cults, Christianity, and Buddhism all had adherents in the Parthian empire. The Parthians themselves may have blended elements of Hellenistic religion with Iranian ones. In general, however, they must have followed some form of Zoroastrianism since they maintained fire temples and practiced exposure of the dead; they are also credited in later tradition with having started a compilation of the Avesta.

—Elton L. Daniel

Ghirshman, R. *Iran: From the Earliest Times to the Islamic Conquest*. New York: Penguin, 1954.

Wiesehofer, Josef. *Ancient Persia*. London: I. B. Tauris, 1996.

The Origins of the Sassanids

In the early third century CE, the Parthian empire, beset by both internal problems and endemic warfare with Rome to the west and Kushans to the east, allowed the Sassanids to

► SASSANID EMPIRE—CROSSROADS OF LATE ANTIQUITY

Much as the Parthians before them, the Sassanids continued to maintain its position as the conduit of international trade that existed between the Roman empire to the west and China and India to the east. The Sassanid empire maintained significant commercial relationships with all these states and ensured the stability of the Silk Roads within its territorial domain. Furthermore, merchants carried their native religions (i.e., Christianity, Zoroastrianism, Buddhism) along these trade routes. As the crossroads of late antiquity, the Sassanids held a considerable amount of influence on cultural and economic diffusion during the period of its existence.

—*Abraham O. Mendoza*

assume the mantle of power in the Persian realms. The Sassanids, based in Persepolis, were a family of hereditary Zoroastrian high priests who led a rebellion against Parthian rule in 220 CE. Under the leadership of Ardashir, the Sassanids rapidly expanded their control of the southern Iranian plateau and subsequently acquired Babylonia and Media as Parthian power disintegrated. By 227 Parthian rule was essentially removed, with the Sassanids effectively assuming the levers of power.

Sassanid ascendancy was met by Roman opposition, given that Rome had a vested interest in preventing the existence of an aggressive Persian state. This led Rome to subsidize and support Armenian intervention against the Sassanids under the leadership of Chosroes I. Chosroes secured support from Romans, Albanians, and Georgians and engaged Sassanid forces. However, Ardashir proved successful in destroying this Armenian-led coalition through a series of successful military engagements. By 228 the Armenians were left alone to confront the Sassanids as they lost Roman, Kushan, and Scythian support. However, Armenia was able to resist a successful incursion by Sassanid forces and thus maintain its sovereignty after reconciliation with the Romans.

In retaliation for Roman support for Armenian aggression, Ardashir's Sassanid forces seized

Roman Mesopotamia in 230. His forces were able to quickly overrun the province due to scant Roman resistance in the region and were soon on the border of Roman Syria. Roman diplomacy under Emperor Severus Alexander immediately quelled further aggression by the Sassanids. However, peace between the Romans and the Sassanids was not long lived, and within a year Severus Alexander was amassing Roman legions from across the empire to recover Mesopotamia. Roman forces were able to attack the Sassanid empire along three fronts in Mesopotamia but were unsuccessful in defeating Persian forces and recovering the province. Roman defeat left the Armenians on their own to face the Sassanids, who now viewed them as a dangerous ally of Rome within striking distance of the Persian heartland. Upon the death of Chosroes, the Armenian state was unable to resist Sassanid military incursions and was effectively annexed, thereby establishing a new boundary with Rome to the west.

Following the rapid expansion of Sassanid power and the removal of the Roman threat at least for the time being, Ardashir went to work in consolidating his territorial gains and establishing his authority throughout the provinces. The vast Parthian empire that the Sassanids now effectively controlled encompassed many of the lands of the former Achaemenian empire of Cyrus the Great. Under the Sassanids, Zoroastrianism was instituted as the state religion of the entire realm. Ardashir viewed Zoroastrianism as a means to create a more cohesive unity of the empire and to solidify state authority. Other religions in the empire would suffer marginalization and periods of persecution by Sassanid authorities. Nonetheless, the Jewish religion thrived in Babylonia under Sassanid auspices.

Through much of the remainder of the third century, the Sassanid empire continued to face external threats on its western and eastern borders. In the west, Roman and Sassanid forces continued to vie for control of the Levant, ensuring endemic warfare among them with intervals of peace. In the east, the Sassanids faced the Kushans and the Bactrians whom the Sassanids were able to defeat and force into accepting Sassanid hegemony. Nonetheless, the Sassanids continued to face Roman and later Byzantine military

power to the west for several centuries more, until finally succumbing to Arab Muslim armies in the mid-seventh century.

—*Abraham O. Mendoza*

Bibliography

- Daryaei, Touraj. *Sasanian Iran (224–651 CE): Portrait of a Late Antique Empire*. Costa Mesa, CA: Mazda Publishers, 2008.
- Dignas, Beate, and Engelbert Winter. *Rome and Persia in Late Antiquity: Neighbours and Rivals*. Cambridge: Cambridge University Press, 2007.
- Sicker, Martin. *The Pre-Islamic Middle East*. Westport, CT: Praeger, 2000.

The Mauryan Empire

In 330 BCE, Alexander the Great, king of Macedonia, defeated and killed Darius III of Iran. Alexander and his army then headed east through Iran to northwestern India, which had been conquered by the Iranians almost 200 years earlier. Alexander reached Indian Punjab, but when his army threatened to mutiny, he withdrew. A man named Chandragupta Maurya, and his Brahmin advisor who is called Kautilya, Chanakya, or Vishnugupta, apparently took advantage of the disorder that followed the Macedonian withdrawal to seize territory in Punjab. From this base, they moved eastward, and, about 325 or 321 BCE, defeated the king of Magadha. Chandragupta founded the Mauryan dynasty of Magadha. In 305 BCE, he seems to have defeated Seleucus Nicator, a Greek general who had made himself king of Syria and Iran after Alexander's death, and added parts of Afghanistan to his dominions.

Chandragupta ruled Magadha until about 297 BCE, when his son Bindusara became king. Bindusara probably conquered territory in the vast Deccan plateau of peninsular India (the modern states of Maharashtra, Karnataka, and Andhra Pradesh). He died about 272 BCE. The next king was his son Aśoka, one of the greatest monarchs in the history of India. Thanks to the conquests of previous kings of Magadha, Aśoka ruled a huge empire, extending from Afghanistan to Karnataka, and from Gujarat to Kalinga on the Bay of Bengal, even if he did not (as is sometimes said) rule the whole subcontinent. Kalinga played a pivotal role in Aśoka's life, as

SOURCES ON MAURYA HISTORY

Besides Aśoka's inscriptions, we have two major sources of information about Mauryan India. One is the fragments of a book by Megasthenes, a Greek ambassador to Chandragupta's court. The other source is a Sanskrit book called *Arthashastra*, which is said to have been written by Chandragupta's adviser Kautilya. The existing version of *Arthashastra* was edited 500 years after Kautilya's time, but many scholars believe it contains passages by Kautilya, along with later additions. Kautilya supposedly wrote *Arthashastra* to show Chandragupta how to rule Magadha. The book contains information on Mauryan government, although it is unclear how much of it is what Kautilya (or later authors) wanted and how far it reflects the way things really were. In any case, *Arthashastra* describes a centralized administration, under the personal control of the king. It recommends that the king have secret agents all over the country, both to detect dissent and to keep in touch with the people. Whether this was actually done or not, we know that Aśoka ruled through a large body of paid bureaucrats.

—*John McLeod*

eight years after he became king, he subjugated the region in a bloody war. Aśoka claimed to have been transformed by remorse over the loss of life in Kalinga. Whether he really was or not, he apparently became a Buddhist and adopted a new ethical system in his administration.

Aśoka was the first known ruler in South Asia to set up inscriptions, texts carved in stone and publicly displayed. His inscriptions, which are found all over India, include a pillar at Sarnath, where Buddha is said to have preached his first sermon. Its capital bears sculpted lions, which have been adopted as a symbol of modern India. Thanks to his inscriptions, we know more about Aśoka than any previous Indian king. The inscriptions suggest that Aśoka was a devout Buddhist. But despite what has sometimes been said, Aśoka's personal Buddhist beliefs seem to have been distinct from the ethical policy that he adopted after the Kalinga war. He used the Prakrit word *dhamma* for this policy, which called on his people to make kindness to other living

things the guiding principle of their lives. He led the way by providing medical care for humans and animals, planting fruit trees along the sides of roads to give shade and food, and becoming a partial vegetarian. It is likely that the policy of dhamma agreed with Aśoka's own beliefs, but it was also politically useful: the king probably hoped it would bridge the many divisions (religious, linguistic, economic, cultural) among his subjects with an ideology that almost everyone could accept, all under his leadership.

The majority of the population of Mauryan India was rural. As they do today, peasants lived in villages near their fields. Their main food crops were wheat and barley in the north, rice in the Gangetic plain, and millet in dryer areas (such as the Deccan). From before the time of the Mauryas, the principal tax in India was the land revenue, later called the *lagaan*, which was collected at a rate of between one sixth and one third the value of the crop.

By the time of Chandragupta, cities existed in the old Aryan world of north India, and probably also in the Deccan. Elsewhere, the Mauryas may have established new cities, for by the end of the dynasty, urban settlements existed in all parts of India except the extreme south. Nevertheless, outside of the Gangetic plain, Mauryan cities fall into distinct clusters. These were apparently separated from one another by regions inhabited by Tribals, where the Mauryas may have only controlled the roads linking the urbanized areas.

Cities were centers for administration, manufacturing, and commerce. Mauryan India had an extensive trade with the Mediterranean world. Its significance is shown by the fact that Indians called all foreign merchants *Yavanas*, Greeks. Merchants had used writing for several centuries before the accession of Aśoka, and it was now employed by the government as well. The language of administration was Magadhi, the Prakrit spoken in Magadha. There is little evidence that Sanskrit was written before Mauryan times, but *Arthashastra* is in Sanskrit, and it is difficult to believe that it was handed down orally. This suggests that Brahmins like Kautilya now wrote in Sanskrit, most likely in the Brahmi script that was already used for Prakrits.

The greatest Mauryan city was the capital, Pataliputra, in the modern state of Bihar. In Pat-

aliputra, archaeologists have found a pillared hall, apparently built by Chandragupta, which is the oldest known stone building in India. In keeping with his Buddhist leanings, Aśoka built at Buddhist holy places. The Mauryan period seems to mark the beginning of Buddhist construction in permanent materials.

Aśoka died about 235 BCE. The Mauryan empire began to disintegrate almost immediately, showing that dhamma was insufficient to hold together so vast a territory. The decline has been connected with economic decay, poor communications, problems in managing the bureaucracy, or war. About 185 BCE, the last Mauryan king of Magadha was overthrown, but the Mauryas had played a key role in the development of South Asia. By bringing Gangetic civilization to more of India than ever before, they created lasting cultural and economic ties over much of the country, particularly among the urban areas. India was politically divided after the death of Aśoka, but cities and the Gangetic civilization (which now becomes Classical Indian civilization) continued to spread, and trade grew steadily.

—John McLeod

Bibliography

- Basham, A. L. *The Wonder That Was India: A Survey of the History and Culture of the Indian Sub-Continent before the Coming of the Muslims*. 3rd ed. London: Sidgwick & Jackson, 1982.
- Kulke, Hermann, and Dietmar Rothermund. *A History of India*. 3rd ed. New York: Routledge, 1998.
- Majumdar, R. C., H. C. Raychaudhuri, and Kalikinkar Datta. *An Advanced History of India*. 4th ed. Delhi: Macmillan India, 1978.
- McLeod, John. *The History of India*. Westport, CT: Greenwood, 2002.
- Wolpert, Stanley. *A New History of India*. 6th ed. New York: Oxford University Press, 2000.

The Qin and Han Chinese Empires

China during the Eastern Zhou period was chaotic and divided. Ultimately, a rival state named Qin (pronounced “cheen”) prevailed militarily over all other states and unified China under its rule in 221 BCE. The Qin then imposed its name

► THE MARTIAL EMPEROR

Wudi (who came to power in 147 BCE), the greatest Han emperor, was also surely one of the most important emperors in Chinese history. A strong-willed ruler with passionately held opinions, he aggressively pursued his program for increasing China's greatness. Internally, he wanted to break the power of the merchants who were amassing huge fortunes. Fearing that the merchants' enormous wealth might eventually lead to subversive political ambition, he forbade them to purchase land and took other steps to stop their participation in land speculation and landlordism. He established exclusive government rights to the production and distribution of essential commodities such as salt and iron. His official government monopolies over salt and iron enabled him to sell these commodities at artificially high prices, thus driving salt and iron merchants out of business and guaranteeing the

government a steady stream of tax revenue. Wudi also launched a very aggressive campaign against the Xiongnu who lived along China's northern borders in the steppes and constantly attacked China for material advantage. His warfare against them led to the expansion of China's borders and to the eventual submission of the Xiongnu, although not during his lifetime. Wudi also ruled during a time of great cultural efflorescence. He was the emperor who made Confucian thought China's official state ideology, and during his reign he sought to foster Confucian education for government employees. The great Chinese historian Sima Qian wrote the first comprehensive history of China during this time. Han power declined after the death of Wudi, and his successors were mostly mediocre men who lacked vision and the instinct to govern effectively.

—David Curtis Wright

on the rest of China, and it is from "Qin" that we get our term "China" in English and also the various pronunciations of "China" in many other European languages.

Several factors contributed to the Qin victory. Geography played an important role; the Qin was relatively isolated in western China from the rest of the states. The Qin was a rugged, semifrontier region located in the very fertile valley of the Wei River, a tributary of the Yellow River. The Qin's natural geography made it easy to defend but very difficult to capture, which also worked to the Qin's advantage. Because most of the great battles during the Eastern Zhou were fought in other areas of China, the Qin escaped with its economy and polity relatively unscathed.

The Qin government was also an aggressive recruiter of administrative and military talent. The Qin early on saw the value of Legalists and the political ideology they espoused and promoted, and the Qin more than any other state in China actively recruited them into government service. Legalist advisers helped the Qin transform itself from a feudal government to a highly centralized, unitary state. The Qin stripped feudal lords of their land and allowed common peasants to use it. This may seem like a positive

and progressive step for the Qin to take, but the Qin, of course, did not do it for completely altruistic reasons. Like the feudal governments it was dismantling, the Qin government financed itself largely through agricultural taxation. What distinguished the Qin from feudal governments was that the Qin wanted all of the tax revenue from agriculture and was unwilling to share a portion of it with any feudal hierarchy.

Legalist advisers reduced all formerly feudal regional and local governments to levels of the central government. The Qin largely abolished the system of hereditary nobility because it considered it a potential threat, and in its place it instituted an administrative system staffed by people who had proven their fitness for leadership by their tangible accomplishments. Commoners who proved themselves competent in civilian or military spheres were promoted and rewarded; incompetent aristocrats in military or civilian leadership were dismissed from their posts and deprived of their salaries. What mattered to the Qin was individual merit, not family background or bloodline. In other words, the Qin transformed itself from an aristocracy to a meritocracy. To protect this new centralized meritocracy from challenges from within, the Qin accepted the Legalists' advice and instituted

a system of mutual surveillance and responsibility on the local level. It also handsomely rewarded informers.

The Qin was undone and overthrown because of the very Legalist ideology that had helped establish it in the first place. In retrospect, it seems that the main contribution of Legalism and the Qin state that applied it was the unification of China and the creation of a structural model for future dynastic governments. Legalism as an ideology was later abandoned during the Han dynasty.

Two great rebel alliances emerged, and by 206 the Qin was deposed and its capital city sacked. China was well rid of a harsh dynasty and totalitarian government. By 210 BCE, the Qin's subjects had been pushed to the limits of their endurance. There followed a four-year civil war between the two rebel alliances, one under the leadership of Xiang Yu, an aristocrat from one of the powerful states before the Qin unification, and Liu Bang, a coarse and unrefined commoner who had risen to military leadership by dint of his native intelligence, resourcefulness, and widespread popular appeal. Liu Bang was originally under Xiang Yu's command but broke away from him because he disagreed with Xiang Yu's military tactics and found him to be unnecessarily cruel and vengeful toward the Qin. The two commanders eventually came into conflict, and in 202 BCE a dramatic and decisive clash, celebrated ever since in Chinese literature, ended with Liu Bang's triumph and Xiang Yu's suicide.

In 202 BCE Liu Bang became the founding emperor of the Han dynasty, a regime that endured until 220 CE with one brief interruption, which occurred during the life of Christ. Liu Bang was one of only two commoners in Chinese history ever to found a major dynasty. (Zhu Yuanzhang, the founder of the Ming dynasty in 1368 CE, was the only other.) He had the common touch and exuded the common man's sense of decency and fair play, and for this the Chinese have loved him ever since.

He is remembered for understanding the importance of relying on competent and educated men for advice and expertise in government and for ameliorating some of the harshest Qin ex-

cesses. As a commoner, Liu Bang had considerable instinctive sympathy for the ordinary peasant and took measures to relieve his plight. He reduced the agricultural tax rate from over one-half the crop to one-fifteenth and also reduced the number of capital offenses. General peace and prosperity characterized his reign and the reigns of his immediate successors, and the Chinese people were finally able to rest after centuries of turmoil and suffering. China's population exploded between 200 and 150 BCE, and the economy grew by leaps and bounds. A brief domestic revolt broke out in 154 BCE, but it was quickly quelled. These were quiet and content decades.

It is possible to give Liu Bang too much credit for the positive aspects of his reign. After all, he never faced the monumental task of unifying China; the Qin, for all of its totalitarian excesses, had accomplished that. He could well afford to reduce the tax rates because he never had to fund the enormous armies necessary for achieving national unity. Neither did he have to break the power of the feudal ruling class and invent an effective governmental structure and administrative framework; credit for those belongs, once again, to the Qin. The Han was built upon Qin foundations and took much of the credit, and very little of the blame, for what the Qin had accomplished. In retrospect it is quite apparent that the Qin's contributions to China were unity and imperial order. Once this had been accomplished, the dynasty had outlived its usefulness and was ready to be overthrown by a fundamentally different regime. While the Qin was Legalist in its ideology, the Han eventually proclaimed its Confucian orientation. The ideological difference showed up in the different policies pursued by the two dynasties.

—David Curtis Wright

Bibliography

- Barfield, Thomas J. *The Perilous Frontier: Nomadic Empires and China*. Cambridge, MA: Basil Blackwell, 1989.
- Gernet, Jacques. *A History of Chinese Civilization*. 2nd ed. Cambridge: Cambridge University Press, 1996.
- Wright, David Curtis. *The History of China*. Westport, CT: Greenwood, 2001.

Qin and Han External Relations

The foreign policies of both the Qin and Han dynasties centered on securing the northern frontier. The Qin aggressively pushed the border deep into the steppe, while the Han had to deal with the powerful pastoral nomadic Xiongnu empire and its successors. It did so through a variety of measures, including war, peace treaties, wall building, diplomatic alliances, and co-option. None of these measures had lasting success, but diplomacy and war eventually led to contact with western Asia and the Chinese takeover of the Tarim basin.

In 215 BCE the Qin general Meng Tian conquered all the territory south of the Yellow River, thereby displacing the Xiongnu people. The Qin then erected long walls north of the Yellow River to enclose the area. In response, a charismatic leader named Modun unified the Xiongnu into a state headed by a hereditary leader known as the Shanyu. In 198 BCE, to stop Xiongnu incursions, Emperor Gaozu (r. 206–194) personally led an army to the frontier. In short order, the Xiongnu soundly defeated and surrounded Gaozu and his army.

After this terrible calamity, the Han government sued for peace and signed a number of peace treaties, which are known as the Heqin (harmony through kinship) policy. In exchange for peace, the Han government recognized the Xiongnu state as a diplomatic equal; gave a Chinese princess in marriage to the Shanyu; furnished annual payments in silk, wine, and grain; and opened border markets. Nevertheless, this appeasement policy never truly ended Xiongnu raids.

Emperor Han Wudi (r. 140–87 BCE) decided to aggressively deal with the Xiongnu through war and diplomacy. Using large cavalry expeditions that struck deep into the steppe, he pushed the Xiongnu north of the Gobi Desert. In the conquered areas, he erected long walls and beacon towers to protect the Han's gains. At the same time, to deprive the enemy of the Tarim basin's resources, the Han government sent military expeditions to subdue and control that region's oasis cities.



This beacon tower in Dunhuang in Gansu province was erected during the Western Han to warn China of Xiongnu movements along the border. (Panorama Media Beijing Ltd.)

This western expansion also came as a result of the Chinese search for allies against the Xiongnu. In 139 BCE Emperor Wu sent Zhang Qian to the far northwest to enlist the help of the Yuezhi people. Although Zhang was unsuccessful in doing so, he returned with an extensive knowledge of central Asia's peoples and conditions. By 101 BCE the Han had militarily defeated the kingdom of Ferghana (in present-day Kirghizstan), which brought all the other Tarim basin oasis cities to heel. This victory secured Chinese control of the eastern end of the Silk Roads.

The Han also tried to turn the tide by letting surrendered pastoral nomads resettle within China's borders along the frontiers. They were allowed to keep their leaders and were encouraged to follow their traditional pastoral nomadic lifestyle. In exchange, they served in the Chinese military against other steppe people; this was called using barbarians to fight against barbarians. Unfortunately, due in large part to

exploitation by frontier officials, these resettled steppe people often rebelled, frequently in league with Chinese who lived in the frontier zone.

Chinese rulers also tried to entice steppe leaders into submission through the tributary system. Due to the pressure of the Chinese attacks and a succession crisis that caused civil war, in 51 BCE Huhanye, the Shanyu of the Southern Xiongnu, came to Chang'an to pay tribute to the Han emperor. Even though Huhanye became the throne's vassal, he was amply rewarded with gold, silk, cash, clothing, grain, and autonomy.

—Keith N. Knapp

Bibliography

- Barfield, Thomas J. *The Perilous Frontier: Nomadic Empires and China, 221 BC to AD 1757*. Cambridge, MA: Blackwell, 1989.
- Di Cosmo, Nicola. *Ancient China and Its Enemies: The Rise of Nomadic Power in East Asian History*. Cambridge: Cambridge University Press, 2002.
- Yü Ying-shih. *Trade and Expansion in Han China: A Study in the Structure of Sino-Barbarian Economic Relations*. Berkeley: University of California Press, 1967.

Fall of the Eastern Han

The fall of the Eastern Han in 220 CE was the result of several factors. The first was that toward the end of the dynasty the land of the nation had been monopolized by only a few large landowners, which inevitably led to the serious problem that millions of peasants lost their land and had to be either attached to the big landowners or become destitute and homeless. Peasants, the traditional smallholders, were the main source of tax and therefore the foundation of governmental finance. Toward the end of the Eastern Han, the situation became so desperate that the emperor had to collect money by selling ranks and official positions; meanwhile, a large homeless population that had once been taxpayers became a big threat to the security of the government.

Second, the continuous war against the Qiang people in the empire's western border

(in Liangzhou) not only worsened its financial condition but also intensified the social conflicts. Finally, the Liangzhou insurge developed into an allied rebellion against the central government by both the Qiang and the Han people living in that area. While the Qiang insurge dragged the Han government into a mire of war lasting more than three decades in its western border, the Yellow Ribbon Rebellion destroyed the empire from the inside. The violence, carried out mainly by the peasants who had lost their land and become destitute and homeless, swept most of the provinces in the central Plain area, the Yellow River drainage, and Yangtze Valley, which not only drained government finances but also paralyzed the imperial governance.

Third, since the reign of Emperor He, various factions had arisen among the literati, eunuchs, and the families of the empresses, who vied for dynastic power. From Emperor He to the last emperor of the Eastern Han, the emperors all dealt with a situation in which they had to rely on the families of the empresses at court because they were too young to exert imperial power when they were elevated to the throne. However, when the young emperors grew up and realized that they were under the control of their maternal relatives, they often attempted to make changes, usually with the help of the eunuchs who served the emperors with great loyalty. Consequently, imperial power was abused as one clique fought against another and was inevitably weakened during the battles between the eunuchs and the emperors' powerful maternal relatives.

At last, accompanying the increasing wealth and power was the greater independence of the local powerful families. The tensions between the royal family and local powerful families existed from the beginning of the Eastern Han dynasty (25 CE), but the first three kings were able to control the powerful families by marriage or other means, preventing them from achieving independence. Such a balance was gradually broken when the young emperors had to concentrate themselves on their struggles for the power that should have been in their own control. As a result, the same force that supported

the founding father to establish the Eastern Han dynasty buried the dynasty 200 years later. When Cao Cao, a member of the powerful Cao family, was able to smash other local warlords supported by local big families in northern China, he actually prepared the way for his son Cao Pi to usurp the Han royal power. On December 11, 220, Cao Pi was enthroned, and the Eastern Han dynasty faded out of history.

—Hanmo Zhang

Bibliography

- Adshead, Samuel Adrian Miles. *China in World History*. 3rd ed. New York: Palgrave Macmillan, 2000.
- Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch'in and Han Empire*. New York: Cambridge University Press, 1986.
- Wright, David Curtis. *The History of China*. Westport, CT: Greenwood, 2001.

Nomadic Confederations and Conflicts on the Steppes

The Xiongnu, Yuezhi, and Sakas (Scythians) were nomadic peoples who lived in the steppe areas northwest of China during the latter half of the first millennium BCE. This area stretched from contemporary Mongolia into the western regions of China's Xinjiang Province, which further connected to central and western Eurasia and is generally referred to as the steppes. The steppe lands have provided migratory connections for all peoples living in Eurasia for millennia. Generally, civilizations are seen as separate entities with their own identities, but the history of the Xiongnu, Yuezhi, and Sakas (Scythians) gives us a window on how ethnic identities have changed depending on migratory and political conditions on the steppes. The Xiongnu lived in the steppe north of China during the second century BCE through the second century CE and were a strong nomadic confederation led by a single ruler—the Shanyu—who needed to trade with sedentary civilizations, such as China, for merchandise unavailable to their nomadic economy. This trade served dual

purposes by providing the steppe nomads with access to luxury goods, which were distributed to the nomadic elites while keeping border raiding down to a minimum.

Also during this time (second century BCE) China emerged as a united empire under the short-lived Qin dynasty, which was later succeeded by the Han dynasty, but regardless of which dynasty ruled the newly unified China, horses were needed for the Imperial Calvary as well as other trade items that came across the northwestern frontiers. The nature of relations between China and the northern steppe nomads was a perpetual problem of war or peace—raiding or trading—for the entirety of China's history until the Qing (Manchu) dynasty, which was the last dynasty to rule China (1644–1911). It is important to understand that China's long history has been one of interactions, sometimes peaceful, sometimes warring with their nomadic neighbors to the north. These interactions with Eurasia's steppes were not secondary to China's history but instead were quite the opposite; they were central to China's existence and development. From the preunified period to the dynastic era of a united China (second century BCE) the ruling dynasties had to contend with well-organized nomadic confederations on their northern borders. These nomadic confederations controlled territories known to us as the Silk Roads and served as a link between the eastern and western lands of Eurasia. In those early centuries the Silk Roads could have been called the horse or jade road, as those were the major commodities desired by the Qin and Han dynasties. The history of united China did not start as an isolated unit on the eastern extreme of Eurasia; it began with interactive relations between nomadic and sedentary societies and continued in connection with migrations and interactions from peoples living in the steppe borderlands.

First and foremost among the steppe's nomadic confederations during the second century BCE was the Xiongnu, which is preserved in the accords of China's historians from the period. Indeed, many of the names for the nomads are recorded by the literate sedentary civilizations (Chinese, Indian, and Greek), as the nomads of



this time did not leave any written records for posterity to interpret and directly understand the nature of nomadic life.

What scholars know about the steppe confederations is largely limited to Chinese sources. The very name “Xiongnu” originates on the Chinese side, as do surviving descriptions of nomadic lifestyles. Scholars do not have Xiongnu sources to illustrate their perspective, nor do we know how they referred to themselves, as the name “Xiongnu” is of Chinese origin. It was the sedentary Chinese civilization that defined and named many nomadic peoples’ identities for posterity. The Xiongnu were a confederation of many social groups, some of whom may not have shared a common language but nevertheless were united under the banner of one leader called the Shanyu. The Xiongnu were able to challenge and threaten the Chinese empire to get what they wanted, largely bolts of silk and other goods unavailable in the northern borderlands. Under the Qin and Han dynasties, China could not defeat the nomads and instead had to

develop methods to placate them. There had been a tradition of wall building among the individual Chinese states before they were forcefully united under the Qin emperor. However, once unification occurred in the second century BCE, the Qin emperor built a new wall system stretching across most of northern China. This tradition of wall building was passed to the succeeding Han dynasty, which assumed an aggressive posture attempting to defeat the Xiongnu once and for all. It was at this point in their relations with the northern nomads that the Han thought it advantageous to garner support among steppe rivals to defeat the Xiongnu. It is here where the Yuezhi emerge onto the historical stage as they began a journey that eventually changed where they lived and how they were identified.

The Yuezhi were another confederation of steppe nomads who lived south of the Xiongnu and traded with Chinese dynasties. The Yuezhi also fought the Xiongnu and lost, so they did what nomads historically have always done: the

Yuezhi retreated to lands south of the expanding Xiongnu Confederacy, eventually deciding to migrate west away from perpetual risk of conflict. At some point during the second century BCE the Yuezhi began migrating west toward central Asia; it was during this time that the Han dynasty sent an emissary to find and secure an alliance with the Yuezhi against the increasingly powerful Xiongnu Confederation. This proved difficult because the Chinese emissary first had to find the Yuezhi before engaging any negotiations for an alliance. As nomads, neither the Yuezhi nor Xiongnu had fixed locations for the Chinese diplomatic mission to easily locate, so the Chinese diplomats traveled in the general direction of areas where they knew the Yuezhi pastured their animals and hoped for the best. As luck would have it, the Han envoy Zhang Qian did not reach his objective, as he was captured by the Xiongnu and spent the next decade as their “guest.” After nearly 10 to 15 years Zhang Qian escaped, along with his new Xiongnu family, and found his way back to China. Eventually the Chinese made contact with the Yuezhi in the western lands and tried to persuade them to return as allies of the Han dynasty in their struggle against the Xiongnu. The Yuezhi declined the Chinese offer and thus ended attempts by the Han to forge a nomad-sedentary alliance to counter the growing threat of the Xiongnu Confederacy.

However, the story of the Yuezhi does not end here. It was a rather usual occurrence on the steppe for one nomadic group to push another group away, which in turn usually displaced other groups, a pattern of behavior on the steppe that fostered east-to-west migrations across Eurasia for thousands of years. What was unusual during this time was the attempt by the Han dynasty to forge an alliance with one nomadic society in the hopes of positioning it against the powerful Xiongnu. However, no alliance with the Yuezhi ever materialized. Instead, the Yuezhi embraced a familiar nomadic strategy by migrating to the western lands to escape conflict with the Xiongnu, which in turn created conditions for a remarkable transition for the Yuezhi. By the first century CE the Yuezhi had migrated from the steppes of northern

China into central Asia, eventually leaving their nomadic life. Some branches became the sedentary trading societies of the Tocharians, and others became the Kushans in the lands northwest of India. In short, the Yuezhi migrated and eventually settled in the areas of modern-day Uzbekistan, Kyrgyzstan, and Afghanistan. During the first century CE the former Yuezhi were known as the Kushan Kingdom, which was a major central Asian trading civilization that served as a nexus for Eurasian-wide commercial and cultural interactions. The transformation from pastoral nomads on the northwestern steppes of China in the second century BCE to a sedentary civilization that served as a hub of trade and cultural activities is a poignant example for understanding how identities change during the course of mass migrations.

In a similar migration pattern, it is believed that the Scythians, also known as the Sakas, made an earlier migration from the steppes north of China into the area of contemporary Afghanistan, Iran, and Ukraine. Many early accounts of the Sakas (Scythians) come from ancient historians and modern paleoanthropologists, but the Sakas vanished from the historical record as they eventually blended with the sedentary civilizations of central Eurasia. Therefore, nomadic peoples who once lived in the steppes north of China would in a matter of several centuries become sedentary Tocharian merchants and Kushan kings, no longer keeping their Yuezhi or Saka identities. In this way, identity, language, and lifestyle changed as a result of migrations and interactions between settled and nomadic peoples in the heartland of Eurasia.

—David M. Kalivas

Bibliography

- Frye, Richard N. *The Heritage of Central Asia: From Antiquity to the Turkish Expansion*. Princeton, NJ: Markus Wiener, 1996.
- Liu, Xinru. “Migration and Settlement of the Yuezhi-Kushan: Interaction and Interdependence of Nomadic and Sedentary Societies.” *Journal of World History* 12 (2001): 261–292.
- Liu, Xinru, and Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange of the Silk Roads*. New York: McGraw-Hill, 2007.

■ Introduction: Captains and Common Soldiers

From 1000 BCE to 300 CE, the standing and social position of soldiers changed dramatically in many parts of the world. In the Near East prior to this, soldiering and military service were done as an obligation, like paying taxes, and the bulk of the obligation was felt by the poorer classes. Yet this does not seem to have been the case in much of the world from 1000 BCE to 300 CE, as the ability to be a soldier, in many cases, was seen as a marker of nobility or citizenship. In the Greek city-states, for example, the armies consisted of the citizens of those states, the individuals responsible for governing their cities, and the individuals with the most rights and powers. Many historians see democracy as a development that went hand in hand with military service in the Greek world. Similarly, the professional soldiers of the Roman empire were well respected, and as Roman rule expanded throughout Europe, veterans were settled in these new regions, becoming the most influential citizens in those new centers and the bearers of Roman culture in new lands. In India and China military service was related directly to class, in China associated with the aristocracy and in India with a new caste, the Kshatriyas. In Celtic Europe and in the Americas, the warrior was a figure of honor and respect

within the communities and held a privileged position within those societies.

However, it is not the common soldiers who lived from 1000 BCE to 300 CE who capture the imaginations of historians today so much as their ancient captains. This is the period of Alexander the Great of Macedon and Hannibal the Great of Carthage, renowned for their daring military exploits and especially the distances with which they led their armies. These figures were idolized and feared and, in Alexander's case, even deified. Their tactics are still studied by military scholars today.

—Kevin M. McGeough

Development of the Hoplite Structure

A shift in ancient Greek social and political organization resulted in the emergence of the hoplite military structure, which represented the land-owning classes with a stake in society, replacing the aristocratic military caste that preceded it. The Greek Dark Ages (1200–1800 BCE) had been characterized by horse-mounted warriors representing the wealthier strata of Greek society. The hoplite reform that emerged at the end of this period resulted in the inclusion of citizen-farmers of the evolving city-states, which while granting political representation also required military obligations for the defense of the state. The hoplite structure also created new tactical military strategies exemplified by the phalanx.

For 300 years, between approximately 650 and 350 BCE, the hoplite military structure dominated the Greek world. During this period, no other military tactic was able to engage the Greek phalanx effectively. The phalanx consisted of a close formation of heavily armed warriors, characterized by their round shields known as *hoplons*. They also carried a long spear, usually as long as the height of the soldier. In terms of armor, they would have a breastplate, which made them vulnerable at the neck and at the groin. It did not provide any protection for the back. Hoplites would also have greaves to protect their legs,

► THE SALPINX IN HOPLITE WARFARE

In the chaos of warfare in classical Greece, the lack of ability to hear and the limitations of headgear on sight made battle communications difficult. Bronze helmets severely limited the ability of hoplites to see and hear due to small openings for the eyes and none for the ears. The hoplites were only able to see directly in front of them with no peripheral vision. The *salpinx* was an instrument used in Greek battles to overcome these obstacles to communications in the midst of battles. This instrument, similar to the modern trumpet, was characterized by a narrow cylindrical tube with a bell and was composed mainly of bronze. It was utilized by making loud distinctive sounds that served as military calls.

—Abraham O. Mendoza

from their kneecaps to their ankles. A Corinthian helmet would cover most of their face but would allow limited eyesight for close combat. Leather padding would create a level of protection for the hoplite, but a strong enough impact could still cause considerable bodily harm.

The main difference between the hoplite phalanx and previous and subsequent military procedures in ancient Greek tactical formations is the efficient combination of military service with the civilian sense of duty to the nation-state. The inclusive and egalitarian nature of the phalanx placed friends, family, and locals fighting for the defense of the community and for *esprit de corps*. Rather than reliance on a caste of elites fighting in a small-scale engagement, the phalanx pitted citizen-soldiers from one polis (city-state) against another. The auxiliary forces in the form of archers and skirmishers were typically formed from the lower strata of the city-states and did not command much respect in the hoplite ranks.

Distinctive military traditions emerged as a result of the development of the hoplite organization. Among the most famous example is the city-state of Sparta, renowned for the military prowess and the lifelong commitment of its hoplites. Young boys would enter military training at the age of five and carry on in military life past middle age. The spirit of fighting for the honor and glory not only of the city-state but also for family honor was important for Spartans. The weight of the armor necessitated Spartans to maintain a proper physique, which resulted in intense physical preparedness in the form of gymnastics and an intense exercise regime. Strength and agility were necessary to be able to carry heavy armor while engaging in battle. Other Greek city-states maintained comparable rituals to those of the Spartans in regard to physical preparedness.

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Bibliography

- Hanson, Victor Davis, ed. *Hoplites: The Classical Greek Battle Experience*. New York: Routledge, 1991.
- London, J. E. *Soldiers and Ghosts: A History of Battle in Classical Antiquity*. New Haven, CT: Princeton University Press, 2005.
- Martin, Thomas R. *Ancient Greece: From Prehistoric to Hellenistic Times*. New Haven, CT: Yale University Press, 2000.

The Military Career of Alexander the Great

Alexander the Great of Macedon (356–323 BCE) became one of the greatest generals in world history as a result of his ability to raise and lead a vast composite army into Asia and North Africa, unifying the eastern Mediterranean and the Near Eastern worlds under the aegis of Greek civilization. The trajectory of his military career began as a subaltern commander under his father Philip II of Macedon in his efforts to conquer the Greek peninsula from Athenian and Spartan dominance. Upon his father's death in 336 BCE, Alexander assumed command of the Macedonian and Greek armies and continued eastward, conquering the Achaemenid Persian empire well into the central Asian borderlands of India. His military advances and tactical alliances in the Mediterranean and Near Eastern regions exemplified not only his daring but also his strategic genius and diplomatic nuance, all of which characterized Alexander's legacy in the expansion of the Hellenistic world of the fourth century BCE.

In the midst of Greek power struggles among Athens, Sparta, and Thebes in the mid-fourth century BCE, Macedon was emerging as a significant player in the region. Macedon was allied to Thebes and as such had a vested interest in the affairs of the Greek peninsula. Ultimately, Macedon defeated the Athenians and Thebans in the Battle of Chaeronea in 338 BCE, with young Alexander at the helm of the Macedonian cavalry. Macedonian hegemony in Greece was established by the League of Corinth, instituted to legitimize Greek autonomy under Macedonian tutelage. When his father Philip II was assassinated in 336 BCE, young Alexander rapidly succeeded as Macedonian king and as commander of the military forces of the realm. Initially, Alexander consolidated Macedonian rule within the newly acquired Greek domains. Furthermore, he also sought to secure the northern borders along Illyria and Thrace while continuing to quell Greek revolts against his rule.

Having consolidated his rule in the Balkan Peninsula, Alexander the Great decided to conquer the Achaemenid empire of the Near East, which had been his father's goal. In 334 BCE

➤ BACTRIA

The region of Bactria, which was in the borderlands of Persia and India along the Hindu Kush Mountains, was conquered by Alexander before his turn to India. After Alexander's death, the region developed a syncretic culture that typified its position as a borderland between the Hellenistic and Indian worlds. Bactria succeeded in throwing off the yoke of Seleucid rule in 255 BCE and securing control of vast portions of central Asia at the expense of both the Greeks and the Indians. While eventually succumbing to foreign rule by India, Bactrians did retain various Greek characteristics in their culture, mostly represented in coins and art that lasted for centuries, thereby illustrating the far-reaching influence of Hellenistic culture that Alexander had aspired to in his expansion east.

—Abraham O. Mendoza

Alexander led a force of 37,000 troops, an ethnically diverse army composed of Greeks and Macedonians, among others, into West and central Asia. He left a significantly large force under Antipater, one of his most trusted generals, to ensure stability at home. Later that year, Alexander met the Persian Army at the Battle of Granicus and soundly defeated them. By 333 BCE Alexander had smashed the Persian Army directly under the leadership of Darius III at the Battle of the Issos River. Subsequently, Alexander conquered Syria, Palestine, and Egypt. In Egypt, he was proclaimed pharaoh and thus divine, securing the support of the Egyptian elite as a legitimate ruler. He also founded the city of Alexandria, which later became an intellectual beacon of the Hellenistic and Roman worlds.

By 331 BCE Alexander was actively campaigning in Mesopotamia, defeating Persian forces at the Battle of Gaugamela and occupying the ancient capital of Babylon. When Darius was assassinated by a usurper, known as Bessos, Alexander proclaimed himself the rightful heir to the Persian throne to gain local legitimacy. By 329 BCE his forces promptly defeated the remaining Persian forces and ensured regional stability by allowing local control under Greek rule. In 327 he entered Sogdiana (modern Afghanistan) and married a native princess, Roxana, to secure diplo-

matic recognition as well as legitimacy of his rule. He advocated intermarriage between his military leaders and that of local elite women as a way to promote ethnic integration throughout his domains. While he was in fact able to secure victories along the periphery of India, his men mutinied due to the fact that they had been campaigning for years, and Alexander subsequently returned to Babylon to consolidate his gains. While he desired to create a multiethnic consolidated empire infused with Greek culture under Macedonian rule, his death in 323 BCE prevented this, as his domains quickly fragmented into multiple Hellenistic successor kingdoms under the rule of his myriad military leaders.

—Abraham O. Mendoza

Bibliography

- Budin, Stephanie Lynn. *The Ancient Greeks: An Introduction*. New York: Oxford University Press, 2009.
- Holt, Frank Lee. *Alexander the Great and Bactria: The Formation of a Greek Frontier in Central Asia*. New York: Brill, 1993.
- Tritle, Lawrence A. *The Greek World in the Fourth Century: From the Fall of the Athenian Empire to the Successors of Alexander*. New York: Routledge, 1997.

Cult of Alexander

The deification of Alexander the Great (356–323 BCE) is illustrative of his attempts to solidify his imperial conquests into a cohesive political unit under his rule. His recognition of the diverse elements of his massive conquests throughout the Mediterranean world and well into central Asia, in terms of ethnicities, religions, and geographical regions, made him privy to the belief systems of subject people and thus able to use them as a means of Hellenic hegemony. This concept was easily adaptable in regions such as Egypt, where people recognized their monarch, the pharaoh, as a deity. The Hellenistic ruler cult created by Alexander the Great, who in his short but significant reign was able to rule over much of the known Mediterranean world, brought about an important change in the concept of kingship, one that emphasized that kings were incarnations of gods. The cult of the ruler created by

Alexander would set a precedent taken up by later rulers in antiquity who claimed that the monarch was a god.

During his conquest of Egypt in 332 BCE Alexander had been addressed as pharaoh, which was a title reserved for Egypt's kings regarded as divinities. While in Egypt he visited the oracle of Amon in the city of Siwa. During this visit, the local priest of the oracle acknowledged Alexander as the son of Amon, regarded as the equivalent of the Greek Zeus and considered the chief god of Egypt. This recognition of Alexander as the son of a god gave him a great degree of credibility by the locals. There is some debate among historians as to whether he truly believed he was a god or saw this as an opportunity to rally political support among subjugated populations.

This supposed equivalency of Alexander with gods, conferring on him a status as a deity, did not go over well among some city-states back in Greece. His demands in 324 BCE to be considered a god were highly controversial and ultimately ineffective. The concept of divinity in Greece still rested upon the distinction of gods and mortals, which did not grant mortals any of the same qualities reserved for gods. While individuals were recognized with honors akin to gods, usually posthumously, they ultimately remained mortals.

Alexander proved to be more successful elsewhere during his campaigns in the East. The belief of his divinity accorded with local belief systems and strengthened his ability to advocate for political rule over lands far from Macedon and Greece. In the city of Alexandria, he created his own cult without the trappings of being related to existing deities. His supposed slaying of a giant snake and the resulting shrine added to his prestige as the namesake of the new city. In this instance, he was able to capitalize on this myth that surrounded him as the founder of the city. A foundation myth for ancient cities, such as that of Romulus and Remus in Rome, typically created deity status for political leaders in civic religions.

Alexander's Hellenistic successor kingdoms would attempt to create the same sort of relationship between the office of the king and that of the deity. The inclusion of statues of kings in temples, the recognition of the king as a civic god, or the growing adhesion of some priests to create the myth of the king were attempts by

➤ ALEXANDER THE GREAT AT THE TEMPLE OF AMON IN EGYPT



Alexander the Great is hailed as the son of Amon at the Temple of Amon at Siwa, Egypt, in 331 BCE. As the new ruler of Egypt, Alexander was considered a living deity or "pharaoh." (Ridpath, John Clark. Ridpath's History of the World, 1901)

When Alexander's army entered Egypt, he was greeted as a liberator, freeing Egypt from Persian rule. There, Alexander adopted the ideology of Egyptian kingship and came to be understood as a living deity, as the pharaoh traditionally was. After being deified, Alexander used this as a tactic to solidify his political rule over subject peoples. This idea was also adopted by his successors in the Hellenistic kingdoms.

—Abraham O. Mendoza

Hellenistic monarchs to further legitimize their political rule. The development of the mystery religions during the Hellenistic period, with their focus on the individual, did much to buttress the development of the cult around the god-king. The savior gods of these sects could be easily related to the current Hellenistic king in power. In later centuries, Roman emperors and medieval kings would utilize similar tactics to legitimize their rule by claiming to be gods or holding the office of king through divine right.

—Abraham O. Mendoza

Bibliography

Hollister, C. Warren. *Roots of the Western Tradition: A Short History of the Ancient World*. 6th ed. New York: McGraw-Hill, 1996.

Robinson, C. A., Jr. "Alexander's Deification." *American Journal of Philology* 64(3) (1943): 286–301.
 Taylor, Lily Ross. "The Cult of Alexander at Alexandria." *Classical Philology* 22(2) (1927): 162–169.

Hannibal the Great

Carthaginian general and political leader Hannibal (248–183 BCE) is perhaps more famous for crossing the Alps with war elephants than for sustaining his armies in the heartland of his Roman enemies for more than a decade during the Second Punic War (218–201 BCE), even while lacking supplies and reinforcements from Carthage. Much is known of his exploits due to the works of Greek historian Polybius (203–120 BCE) and Roman historian Livy (59 BCE–17 CE), who both chronicled Hannibal's military expeditions and cultivated his myth. Hannibal's military prowess led to the defeat of the Roman legions in the Battle of Lake Trasimene (217 BCE) and the even more famous Battle of Cannae (216 BCE), which were two major blows to the powerful Roman republic in terms of strategic and manpower losses. While his military career is marked by legendary successes, strategic decisions by Roman generals and his inability to secure logistical support from home

doomed any progress made on his overall strategy to annihilate Roman power on the Italian peninsula.

Hannibal was born in 248 BCE in the midst of the First Punic War and came of age as his father, General Hamilcar Barca, began Carthaginian expansion into the Iberian Peninsula. Upon his father's death, Hannibal was made into a military officer serving under his brother-in-law Hasdrubal. Hannibal served in Iberia, where he gained valuable military experience in the Carthaginian conquest of the Iberian peoples. Hasdrubal sought a conciliatory approach in his Iberian policy, even arranging a treaty with Rome promising not to expand north of the Ebro River. However, when Hasdrubal was assassinated in 221 BCE, Hannibal was made military commander of Carthaginian forces in Spain, and he embarked on a more aggressive expansionist foreign policy vis-à-vis Iberia and Rome. Roman apprehension of Carthaginian expansion led them to make the city of Saguntum (modern Spanish city of Sagunto), south of the Ebro River, a Roman protectorate. Hannibal viewed Roman designs on Saguntum as a violation of Hasdrubal's treaty and subsequently sacked it in 219 BCE. Roman outrage and Carthaginian support for this action led to the Second Punic War.

The Second Punic War was characterized primarily by Hannibal's invasion of the Italian peninsula, not from the Mediterranean as would be expected but instead by a land invasion from Spain through the Pyrenees and Alps and down to the Po Valley in Italy. Moreover, Hannibal's armies were composed not only of Carthaginians but also of Numidians, Libyans, Iberians, and Gauls, which made it a truly multiethnic military force. According to ancient historians Polybius and Livy, the treacherous terrain and weather of the Alps led to the death of vast numbers of Hannibal's soldiers and pack animals, among them many of his famous war elephants. Along the way, he also encountered resistance by Iberian and Gallic peoples, some of whom ultimately joined forces with Carthage against the common enemy of Rome. Entering northern Italy, Hannibal also succeeded in securing an alliance with Italian peoples wary of Roman hegemony.

Hannibal's military leadership led to a series of major victories against the Romans during the

➤ SCIPIO AFRICANUS—THE ROMAN HANNIBAL

Scipio Africanus (236–183 BCE) was a Roman general and politician during the Second Punic War and was known for his defeat of Hannibal at the Battle of Zama. Scipio is portrayed in Roman history as the antithesis to Hannibal, as his ultimate foil. Amid the series of defeats that Rome had suffered at the hands of Hannibal's Carthaginian forces in Italy, Scipio attacked the Carthaginian North Africa homeland, forcing Carthage to recall Hannibal. At the Battle of Zama in 202 BCE Scipio crushed Hannibal's forces, thereby ensuring the defeat of Carthage and ending the Second Punic War. Subsequently, Scipio was given the name Africanus in honor of his victory in North Africa. He was mythologized as a near-mythical Roman hero who defeated the alleged invincible Hannibal.

—Abraham O. Mendoza

nearly 15 years he spent in Italy. The Battle of Trebia (218 BCE) allowed him to deal the first blow to Roman forces in Italy and secure the alliance of local disaffected Gauls. At the Battle of Lake Trasimene (217 BCE), Hannibal forced the bulk of the Roman Army into a major battle, resulting in a significant defeat for Rome and the loss of many of its Italian allies. Subsequently, the Romans avoided a pitched battle with the Carthaginian forces, advocating delay tactics (known as the Fabian strategy, named after the military commander Fabius Maximus). However, this tactic was seen as cowardly by the Roman leadership and the populace, who advocated a more aggressive strategy. This resulted in the ruinous Battle of Cannae (216 BCE) in which Roman forces were annihilated by inferior Carthaginian numbers by Hannibal's tactical genius. An estimated range of 50,000 to 70,000 Roman soldiers were either killed or captured, which was catastrophic in terms of its impact on Roman manpower. However, Hannibal failed to follow up on his victory. He neither destroyed the remnants of Roman forces nor sacked Rome due to his lack of reinforcement and supply. After that, Rome resumed a Fabian strategy in terms of confronting Hannibal's forces in Italy, who were already cut off from their supply base in Spain and North Africa and had to live off the land or through the auspices of their Italian allies. The Romans also pursued a scorched earth policy, burning crops and preventing the Carthaginians from securing food from the Italian countryside. While Hannibal did win minor victories in Italy, he was never again able to secure a major victory against Rome and thus lingered in the Roman countryside fighting a war of attrition without any hope of North African or Spanish logistical support.

After 15 years of wandering around Italy, Hannibal was recalled to North Africa to defend his homeland from a Roman invasion in 203 BCE. Attempts to secure a peace treaty by both powers proved illusory, and fighting continued. At the Battle of Zama (202 BCE) in North Africa, Hannibal's forces were crushed by the Romans, thereby ending his invincibility myth and ensuring Roman victory.

After the Second Punic War, Hannibal remained a powerful figure in Carthaginian poli-

tics regardless of his declining popularity as a soldier. However, Rome eventually demanded his surrender, forcing him into exile first to Tyre and then to the court of Antiochus III of Syria. In Syria, Hannibal served as a military adviser for the Seleucids, again plotting against Rome yet ultimately defeated again by Roman forces in 190 BCE. Hearing that Antiochus might hand him over to Rome, Hannibal again sought exile, this time in Bithynia. Unwilling to fall into Roman hands, he committed suicide by consuming poison in 183 BCE upon hearing that his Bithynian hosts were handing him over to Rome.

—Abraham O. Mendoza

Bibliography

- Bagnall, Nigel. *The Punic Wars: Rome, Carthage, and the Struggle for the Mediterranean*. New York: Thomas Dunne Books, 2005.
- Cottrell, Leonard. *Hannibal: Enemy of Rome*. Cambridge, MA: Da Capo, 1992.
- Livy, Titus Livius. *The War with Hannibal: Books XXI-XXX of the History of Rome from Its Foundation*. New York: Penguin Classics, 1965.
- Polybius. *The Rise of the Roman Empire*. Translated by Ian Scott-Kilvert. New York: Penguin, 1979.
- Prevas, John. *Hannibal Crosses the Alps: The Invasion of Italy and the Second Punic War*. Cambridge, MA: Da Capo Books, 2001.

Roman Military Careers after the Reforms of Augustus

The Roman emperor Augustus (r. 31 BCE–14 CE) had extensive experience dealing with the men in the military, dating back to 44 BCE. He knew how to entice them and how to keep them happy, and he knew what displeased them. He had experienced enough mutinies to understand their causes. With this knowledge, he was able to implement wide-ranging reforms to the army. By 13 BCE, Augustus had created Rome's first professional army. No longer would temporary armies be created to deal with temporary threats. Each of the 28 legions had 5,500 men plus cavalry reinforced by a similar number of auxiliary units. Altogether, there would be a permanent standing force of about 300,000 men. These men would serve for defined periods of time. Originally, the term called for 16 years of

➤ PRAETORIAN GUARD

The Praetorian Guard represented another important element in Augustus's efforts to control the army. Since 44 BCE, he had made use of elite units, not only the Praetorian Guard but also foreign cavalry, such as his German bodyguards. He knew how important these units were to maintaining control of his camp and protecting him against attack. It should be no surprise that he would keep these units once in control of the empire. The Praetorian Guard was raised to 9,000 men and stationed around central Italy. Guardsmen would be paid double the salary of the average soldier (1,800 sesterces rather than 900), would have shorter tours of duty (16 years active service followed by four years in reserve, rather than 20 and 5), and would be given nearly twice the retirement bonus (20,000

to 12,000 sesterces) and/or more land. The purpose of the imperial guards was the same as that of the republican guards: to protect the emperor and to help him control the other soldiers. Stationed in Italy, they would be entirely separate from the rest of the legions. This meant they would be unaffected by any mutinous movements in the frontier legions and then could be used by Augustus against rebellious troops. Despite their small numbers, these separate, loyal, elite units could be used to overawe regular legionnaires and to support a besieged general. The guards also allowed Augustus to control Rome and potential rivals in the capital. In short, they provided him with the necessary power to run the empire.

—Stefan G. Chrissanthos

active service followed by four years in reserve. Those periods were extended in 6 CE to 20 and 5. The key to this system of enticing volunteers and keeping soldiers happy while performing a difficult job was, of course, money. During the republic, problems with money, including irregular pay, unfair or infrequent distribution of plunder, and dissatisfaction with discharge bonuses of cash and land, often led to mutiny.

Thanks in large part to the wealth of Egypt, Augustus was able to make significant economic improvements to military service. He provided pay of 900 sesterces, the same amount distributed by Caesar, which was itself a doubling of the previous stipend provided by the state. This pay would be distributed regularly and would not be subject to the whim of a general or the senatorial government. This was important because republican soldiers often did not receive pay in a timely fashion. Though the pay was not extravagant, the key to the system was the retirement benefits. Augustus provided either a cash bonus or land or both to men who had served their time. It seems that after 13 BCE, men received, instead of land, 12,000 sesterces, or about 12 years' pay. Estimates vary, but possibly as many as 200,000 men received benefits during the first three decades of Augustus's reign. These included mass discharges in 30–28 and 14 BCE. To cover all these expenditures, Au-

gustus established the *aerarium militare* (military treasury) in 6 CE. To help fund this treasury, Augustus donated his own money and later imposed sales and inheritance taxes.

These economic reforms, at least for much of Augustus's reign, helped keep the soldiers happy (or happy enough), removing one important cause of rebellion. The soldiers knew that if they remained loyal, the emperor and the state would provide for them. The soldiers now became defenders of the status quo. At least for the time being, mutinous officers could not use money as an incentive to spark a rebellion. At the same time the Augustan system was attempting to keep the men happy, it also encouraged divisions among the rank and file to prevent rebellion. The new, professional nature of the military led to a definite hierarchy among the regular soldiers.

Keeping the average soldier happy was only the first step. The second step involved the centurions. Thanks to his civil war experiences, Augustus realized the importance of the centurion in the chain of command. He had to do everything he could to bind these men closer to the state and to himself and at the same time worked to separate them in certain ways from the average soldier. Men became centurions on the basis of their military and leadership qualities, and certainly also of their loyalty to the regime. They inspired

great respect among the men, unlike higher officers, who were often political appointees. As such, the centurions were crucial in a commander's control of the camp and were the backbone of the army, vital for its continued discipline. They could act as an early warning system; since they were close to the men, they would know if any problems developed. Without their support, it would be nearly impossible for a commander to regain control and punish his men.

During the republic, the centurions did not always remain loyal to their commanders. Instead, they shared many of the grievances of the men and therefore often took a leadership role in these rebellions or remained neutral and allowed a mutiny to spread without acting to quell it or reporting it to superiors. Augustus's system, in contrast, dramatically increased the status and wealth of the centurions through increased pay and retirement bonuses; it also increased their opportunities to rise up within the army and offered greater opportunities after discharge. Centurions' pay was raised to between 5 times (for an ordinary centurion) and 20 times (for the *primus pilus*) the average soldier's pay.

More money meant more separation between the centurion and the men, despite their similar origins. They also now had the opportunity to rise into the Praetorian Guard, which enjoyed better conditions of service in the capital and higher pay. They could rise through the ranks to become military tribunes or even camp prefects. The *primus pilus* was now granted equestrian status at discharge. This represented a huge opportunity for social mobility. No longer would a centurion join a mutiny and risk his future; he simply had too much to lose. The centurions were now in a privileged position and were therefore willing to defend Augustus's government, which guaranteed their newfound wealth and status.

A chasm opened up between the centurions and their former comrades. Though he did rise from the ranks, a centurion would no longer feel the same strong kinship with the men. Conversely, the soldiers no longer believed that their centurions shared their views or grievances. Instead, many soldiers now disliked their centurions, not least because of their role as the camp disciplinarians. Augustus's reforms, which included increased pay and discharge bonuses and

numerous opportunities for social advancement, had successfully created a gulf between the men and the centurions, separating the centurions from the ranks from which they sprang while binding them to the princeps.

Augustus's reforms were also designed to control his generals and officers. By 14 CE, there were nine military provinces in which legions were stationed. Because of Augustus's greater imperium, all were subordinate and ultimately responsible to him, and none governed in his own right on his own independent authority. They were rarely allowed to remain in one place for any length of time. Instead, they were moved from province to province at the discretion of the princeps. The obvious purpose of this policy was to discourage the development of loyalty among a governor, his soldiers, and the provincials. Last, but definitely not least, these men were chosen not only for their competence but also for their reliability and their close relationships, sometimes very close, with Augustus and other members of the royal family.

The distribution and dispersion of legions and the proliferation of commanders and officers served Augustus's purposes. There were so many commanders and so many subordinate officers that each could provide a check on the others; mutiny would be very difficult because numerous officers in numerous different camps would have to join an uprising to mount a credible threat, and with so many people involved in different locales, the chances of detection would be much greater. Commanding officers were no longer in a position to acquire the wealth and military glory independent of Augustus that could be used to challenge his authority or sap the loyalty of the men to him.

—Stefan G. Chrissantbos

Bibliography

- Chrissantbos, Stefan G. *Warfare in the Ancient World: From the Bronze Age to the Fall of Rome*. Westport, CT: Praeger, 2008.
- Goldsworthy, A. *The Roman Army at War, 100 BC–200 AD*. Oxford: Oxford University Press, 1996.
- Sumi, G. S. *Ceremony and Power*. Ann Arbor: University of Michigan Press, 2005.
- Watson, G. R. *The Roman Soldier*. Ithaca, NY: Cornell University Press, 1969.

Development of the Warrior Caste—Kshatriyas, in India

The Kshatriya varna or warrior division of ancient Indian society was the source of many rajas or Indian kings and led to the emergence of the world's largest classical empire in India. Classical Indian and Mediterranean sources indicate that the Kshatriyas emerged with the blending of Indus (Harrapan) civilization and migrating Aryan tribes by 1000 BCE. Later classical Indian literature indicates just how pervasive and powerful the warrior class became as identity makers of India involved in king making, militarism, and the formation of regional *jatis*, or castes.

South Asia's first known civilization, the Harrapan, existed in the Indus River drainages between 2500 and 1500 BCE. By 1900 BCE Harrapan civilization was in decline, possibly due to environmental changes. Their script remains undeciphered, so the presence of a military class is unknown. The resulting power vacuum was filled over the next few centuries by migrating cattle and horse tribes from Asia, referred to as Aryans (nobles). Over 40 Aryan tribes recorded their deeds in oral verses eventually written down in Sanskrit in the first millennium BCE as the Vedic epics. Aryan chariot warriors armed with bows helped priestly leaders spread nomadic cattle culture into agricul-

tural India proper, with its large population. These two groups emerged as the Brahmins and Kshatriyas. The Aryan tribes fought among each other and overran the indigenous Dasas, as evidenced in the Vedic epics and the *Mahabharata*, eventually spreading influence into southern India and the island of Sri Lanka, as written in the *Ramayana*. These epics all indicate conflict and cooperation between the civilizations that resulted in a four-division society across northern India by 500 BCE. Both varnas and color castes needed each other to gain and maintain power among the large populations of agricultural societies of India. Both held power over the Vaishya (merchant) and Shudra (labor) varnas as well as untouchables outside any division. It was in this system that the Kshatriya Siddhuarta Guatama (Buddha) developed the movement leading to Buddhism. Kshatriyas eventually cut across Hindu and Buddhist civilizations by incorporating invading warrior groups, local populations, and lower varna members with martial skills. The challenge to Kshatriya power from the priestly and merchant varnas led to a subculture of Kshatriyas so successful that most kings of India were drawn from it and not from the other castes.

Later classical works from India and from visitors of the Greco-Roman world indicate that Kshatriyas were associated specifically with elite weapons and fighting units, had their own special marriage and training laws, held most command positions, and became the source for most Indian rajas. Mahapadma, born of a Shudra mother, formed the Nanda dynasty at Pataliputra at the time Alexander was invading northwestern India in the fourth century BCE. Kshatriya Chandragupta Maurya, following the ideas of Brahmin Kautalya, formed the Mauryan empire from a takeover of Nanda and Greek territories. India's first empire and the world's largest classical military force and capital city at Pataliputra had all emerged with direct impetus from the Kshatriya warrior caste. By 100 BCE this varna proved so adaptable to internal and external threats that it remained the primary defender and absorber of power changes in India for the next millennium.

—Christopher Howell

➤ PROBLEMS OF CLASSICAL WRITTEN SOURCES

The history of India is difficult to find from written sources. Most sources no longer exist, are undecipherable, or survive as filtered fragments copied by later writers. Though the Harappan civilization (2500–1500 BCE) had a written system, it remains undeciphered. The Aryan tribes only wrote down oral hymns hundreds of years afterward, and few of those initial writings on perishable materials survive. Only a few stone carvings and metal tablets remain even from the Mauryan empire. Classical Greco-Roman and Chinese sources have the same problems and survive only as fragments of lost works (Megasthenes, as an example) referenced by other Classical and post-Classical writers.

—Christopher Howell

Bibliography

- Dikshitar, V. R. R. *War in Ancient India*. 2nd ed. Dehli, India: Motilal Banarsidass, 1987.
- Kulke, H., and D. Rothermand. *A History of India*. New York: Barnes and Noble Books, 1996.
- Majumdar, R. C., ed. *The Classical Accounts of India*. Calcutta, India: Mukhopadhyay, 1960.
- Singh, S. D. *Ancient Indian Warfare*. Reprint ed. Dehli, India: Motilal Banarsidass, 1997.

The Celtic Cult of the Warrior

Organized violence was a constant feature of Celtic societies. Because most people were engaged in farming or herding, the trained fighting men constituted a social elite that not only protected the people, farmland, and herds but also came to play a central role in Celtic culture. The importance of the warrior is evident not only from the care and skill lavished upon his weapons and armor but also from literary evidence, both Celtic and classical. Warriors were expected to live lives that were extraordinary for their daring and bravery, especially in battle. Their finely honed skills were reinforced by their belief in divine protection, symbolized by the nearly circular metal torque they wore around their necks and that can be seen in artistic depictions. Though the evidence is scant, it seems clear that within their communities the warriors had most of their needs met by the willing labor of the lower classes. In return, the heroes were expected to treat their social inferiors well and not arrogantly.

The warrior on the battlefield comes alive in the rather late Irish legends like the *Tain Bo Cualnge* and the pages of Greek and Roman observers from the third century BCE to the third century CE. He has long, perhaps elaborately braided hair and probably wears little more than trousers. A long iron slashing sword hangs from a chain at his belt, and he wields a number of spears and a shield of wood and leather or bronze. He may fight from horseback or a chariot or war cart from which he might descend to fight or from which he may hurl his spears while a driver maneuvers. They did not fight in formations like the Greeks or Romans and seemed to have little in the way of battlefield organization or even lead-

FROM THE IRISH EPIC *TÁIN BÓ CUALNGE*

"Ferdiad came with them [to fight the hero Cu-chullain] for the sake of his own honor . . . forasmuch as he deemed it better to fall by the shafts of valor and bravery and skill, than to fall by the shafts of satire, abuse and reproach. And when Ferdiad was come into the camp . . . he was honored and waited on, and choice, well-flavored strong liquor was poured out for him till he became drunken and merry. . . . Great rewards were promised him if he would make the fight and combat . . . [namely] a chariot worth four times seven bondmaids, and the apparel of two men and ten men, of cloth of every color, and the equivalent of the Plain of Murthemne of the rich Plain of Ai . . . free of tribute . . . without duress for his son, or for his grandson, or for his great-grandson, till the end of time and existence."

—Joseph P. Byrne

Source

Joseph Dunn, *The Ancient Irish Epic Tale Táin Bó Cualnge* (London: David Nutt, 1914), 219–220.

ership. Their essential tactic was the headlong charge that followed a period of ritual taunting, singing, and challenges to the single combats that were celebrated in song and legend.

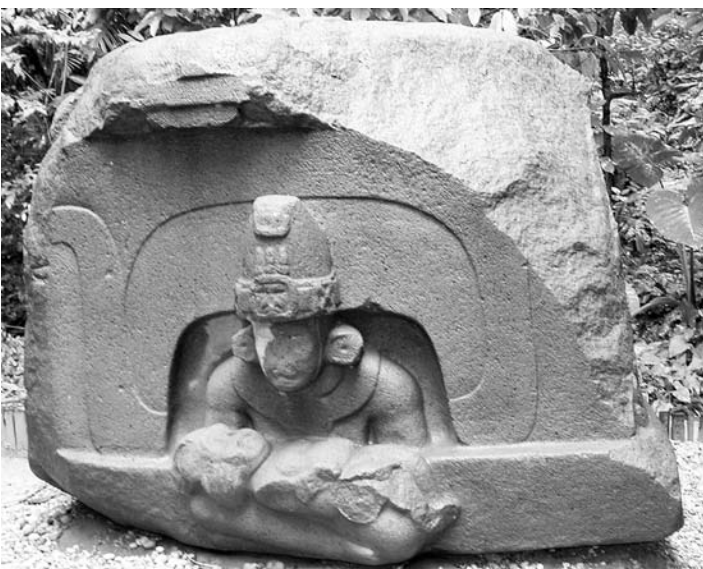
—Joseph P. Byrne

Bibliography

- Allen, S. *Celtic Warrior*. Osceola, WI: Osprey, 2001.
- Freeman, P. *War, Women, and Druids: Eyewitness Reports and Early Accounts of the Ancient Celts*. Austin: University of Texas Press, 2002.
- Kinsella, T. *The Táin*. New York: Oxford University Press, 2005.

Sacrificed Captives among the Peoples of the Americas

The activity of sacrificing captives in the ancient Americas during 1000–300 BCE can be inferred from archaeological evidence. The Western Hemisphere peoples' (Americas) emphasis on



Stone sculpture of a figure emerging from a niche holding a baby or a jaguar-like god from the Olmec settlement of La Venta in present-day Mexico. Half-human and half-jaguar beings were often depicted in Olmec art. It is believed the Olmec equated shamans with jaguars. (Ruben Charles)

sacrificing human captives is related to religious-cosmological beliefs in universal life cycles. Specifically, gods had sacrificed to create humans, and reciprocity was called for to keep the universal cycles in balance. Both agricultural and nomadic societies from the period 1000 BCE to 300 CE have left evidence in the form of human remains, artifacts, and images suggesting human war-captive sacrifice, usually of rival elite groups and warriors. In peacetime, internal cultural sacrifices of families including children took place, often associated with catastrophic events such as droughts and evidenced in sacrificial burials at sacred locations such as caves or wells. However, it is the wartime sacrifice of captives, often associated with early monumental architecture, that is best documented. This was a practice that had parallels in most major early civilizations around the globe.

In North America the moundbuilding cultures such as the Adena and Hopewell (500 BCE–700 CE) may have sacrificed small groups at effigy mounds such as the Great Serpent Mound, where headless burials are located near stone knives found at the mouth of the mound. A number of North American monumental archi-

tecture sites such as Poverty Point in Louisiana and early Hohokam and Pueblo sites in the U.S. Southwest have human bone fragments associated with them, but interpretation remains ambiguous, highlighting the difficulties of identifying human captive sacrifice in the archaeological record.

In Middle America (Mesoamerica) the Olmec culture (1500–300 BCE) may have sacrificed children with certain jaguar traits based on imagery and burial evidence. The Zapotec culture and its city-state of Monte Alban (500 BCE–900 CE) show evidence of human captive sacrifice on architectural reliefs known as *danzantes* (dancers). Early Maya culture sites (500 BCE–300 CE) also contain such evidence and human sacrifices of elite war captives. In peacetime, families, including children, were sacrificed during high stress events such as starvation episodes, but their status as captives is unclear. Later Classic Maya city-states (300 CE–1000 CE) also contain evidence of both wartime and peacetime sacrifices. Maya evidence of human sacrifice in the Mesoamerican Classic period is prolific and is found on ceramic vase imagery, in murals at sites such as Bonampak, in stone sculptures, in burials, and in Mayan glyphs. The giant city-state of Teotihuacan (0–650 CE) in central Mexico has captive sacrifice events associated with architectural constructions including some in which hundreds of captives were sacrificed.

In South America the Casma Valley and the Sechin Alto complex (2000–500 BCE) provide early iconographic and burial evidence of large-scale human sacrifice associated with monumental architecture. Moche culture (100 BCE–700 CE) of the coastal Andean region has evidence of human war captive sacrifice on three-dimensional ceramics, architectural reliefs, sacrificial knives, and burials. War captives from adjacent regions were captured and sacrificed en masse in a religious ritual at earth-brick pyramid sites.

—Christopher Howell

Bibliography

- Bruhns, Karen Olsen. *Ancient South America*. Cambridge: Cambridge University Press, 1994.
- Fagan, Brian. *Ancient North America*. 4th ed. London: Thames and Hudson, 2005.
- Hassig, Ross. *War and Society in Ancient Mesoamerica*. Berkeley: University of California Press, 1992.

■ Introduction: Practicing Peace

Although it may seem like a modern conception, antiwar sentiments are probably as old as warfare itself. From 1000 BCE to 300 CE, calls for peaceful action and critiques of warfare appeared in the Classical literature of Greece and Rome, in early Christian writings, and in the practices of new South and East Asian religions and belief systems. The reasons for desiring peace and criticizing war vary, but all condemn the destructive power of war. Undoubtedly antiwar sentiments were prevalent in other places and expressed in other ways. These are merely the types of expressions that have been preserved in a manner that historians have access to. The following entries explore some of the different ways in which peace was practiced from 1000 BCE to 300 CE.

—Kevin M. McGeough

Antiwar Thought in Classical Athens

The Greek city-states too often found that what divided them was more important than what united them, and as a result war was a constant feature of life. The Peloponnesian War, fought by Athens and Sparta from 431 to 404 BCE, was particularly brutal, however, and reasonable citizens began questioning the wisdom of continuing it. One factor was that the war was being promoted by Athenian democrats, whereas their oligarchic or aristocratic political opponents were more sympathetic to Sparta. A further issue was that as the war dragged on, atrocities against civilians became more common. In one especially vicious incident in 415 BCE, the Athenians captured the island of Melos, which had been neutral, slaughtered all the men, and enslaved the women and children.

Several of Aristophanes' comedies reflect the uneasiness that many Athenians felt about the war. The *Acharnians* (425 BCE) depicts the efforts of Dikaïopolis, an Athenian citizen whose farm has been damaged by the invading Spartans and who had fought for his city-state, to make a private, separate peace with the Spartans. This

was, some may have argued, a selfish decision, but others would have agreed that it was a rational response to an irrational world. Even more escapist is Aristophanes' comedy *Peace* (421 BCE) in which an Athenian named Trygaeos climbs on a giant dung beetle in order to fly off and rescue the goddess Peace. Similarly, in the *Birds* (414 BCE) a pair of Athenians leave their native city in order to establish an alternative city-state among the birds. The play is more utopian than explicitly antiwar, but it reflects the discontent that Athenians felt in those years.

Most important is Aristophanes' *Lysistrata* (411 BCE). It is not disgruntled Athenian men but a woman, Lysistrata, who organizes opposition to the war. Her technique for bringing it to an end is, in the world of this comedy, effective. The women of Greece (she has collaborated with women in Sparta and Thebes) will refuse to have sexual relations with their husbands until the war is over. At the same time, the women seize and blockade the Acropolis, where the Athenian state treasury was located. They succeed and bring about the end of the Peloponnesian War. It was impossible for women to participate in Athenian politics with the directness that Lysistrata did, yet with many men away at war and with widowed women becoming more conspicuous over the years, women were probably playing a larger role in public life than they had before the war.

The darker side of the war was on display in Euripides' works. The plots of many of his tragedies were drawn from the myth of the Trojan War, and it came to be an analogue to the Peloponnesian War. The *Trojan Women* (415 BCE) was about the mistreatment of captured Trojan women after Troy had fallen, and it is difficult to read it without thinking of the enslavement of the Melians during the previous year. The play does not explicitly call for an end to the Peloponnesian War, but the vivid dramatization of the cost of war must have caused many Athenians to reconsider the course of the war. Euripides' *Hecuba* (ca. 424 BCE), about the postdefeat fate of the widow of Troy's king Priam, would have had a similar sobering effect.

—Kenneth Rothwell

► LYSISTRATA: ANCIENT PEACE ACTIVIST

In this speech, Aristophanes's character of Lysistrata chastises the Athenians and the Spartans, who had been fighting one another in the Peloponnesian War for 20 years, for failing to resolve their differences. She reminds them that they had been allies. In circa 463 BC the Athenians, under the general Kimon, sent an infantry force to Sparta to assist it in the wake of a slave revolt. The Spartans had intervened in 510 BC to overthrow the Athenian tyrant Hippias, paving the way for democracy.

I'm female, yes, but still I've got a brain.
I'm not so badly off for judgment, either.
My father and some other elders, too,
have given me a first-rate education.
In no uncertain terms, I must reproach you,
both sides, and rightly. Don't you share a cup
at common altars, for common gods, like brothers,
at the Olympic games, Thermopyli and Delphi?
I needn't list the many, many others.
The world is full of foreigners you could fight,
but it's Greek men and cities you destroy!
And that's the first reproach I have for you. . . .

Now, Spartans, my next reproach is aimed at you.
You must remember, not so long ago,
you sent a man to Athens begging us,

on bended knee and whiter than a ghost,
to send an army? All your slaves were up
in arms when that big earthquake hit you.
We sent you help, four thousand infantry,
a force that saved your entire country for you.
And now you pay the Athenians back by ravaging
their country, after all they did for yours? . . .

Do you Athenians think I'll let you off?
You must remember, not so long ago,
when you wore rags, oppressed by tyranny,
and Spartans routed the army of occupation,
destroying the tyrant's men and all his allies,
and drove them out on a single glorious day,
and set you free, and then replaced your rags
with clothes befitting democratic people? . . .

Considering all these mutual benefactions,
why prosecute the war and make more trouble?
Why not make peace? What keeps you still apart?

—Kenneth Rothwell

Source

Aristophanes, *Lysistrata*, translated by Jeffrey Henderson (Newburyport, MA: Focus Publishing, 1988), lines 1124–1156.

Bibliography

- Croally, N. T. *Euripidean Polemic: The Trojan Women and the Function of Tragedy*. Cambridge: Cambridge University Press, 1994.
- MacDowell, Douglas M. *Aristophanes and Athens: An Introduction to the Plays*. Oxford: Oxford University Press, 1995.

Early Christian Antiwar Responses

Early Christian antiwar responses were inspired by the doctrines of Christianity as outlined in the New Testament. The Gospels contain the teachings of Jesus of Nazareth, whose message was one of peace and loving one's neighbors and enemies. Among Jesus's many sayings concerning peace, the most direct are from Matthew

5:44 and Luke 6:27. Both encourage Christians to love their enemies. The apostle Paul continued this message of peace in his letters, and many other early Christian figures, including Tertullian, Origen, and the military martyrs, which include Maximilian and Marcellus, opposed Christian involvement in war.

Origen (ca. 185–253 CE) of Alexandria, an important early Christian thinker, wrote at length about Christian attitudes toward war. Origen's primary work concerning war, *Contra Celsum* (*Against Celsus*, 248 CE), addressed the attacks of Celsus, a pagan author, who had questioned the allegiance of Christians to the emperor because of their refusal to participate in the army and defend the Roman empire.

Origen claimed that the doctrines of Christianity did not allow Christians to join the mili-



Origen, a father of early Christianity, was both a biblical scholar and a theologian. (Art Resource, NY)

tary, learn the art of war, or even defend themselves against their enemies. Furthermore, Origen argued that Christians should be given the same treatment as pagan priests who were exempted from military service because both pagan priests and Christians demonstrated their allegiance and provided assistance to the emperor through their prayers.

Although Origen did not allow for direct Christian involvement in war, he did not condemn war entirely. In fact, he claimed that Christians helped righteous emperors win wars through their prayers. While Origen did not condemn the wars of the Roman empire, he did hope that eventually war would cease when the entire empire was converted to Christianity. According to Origen's vision, if the entire Roman empire were Christian, Romans would no longer need to fight because God would protect the empire.

—Kevin Scull

Bibliography

Burns, J. Paout, Robert J. Daly, and John Helgeland. *Christians and the Military*. Philadelphia: Fortress, 1985.

Cadoux, John C. *The Early Christian Attitude toward War*. London: Allen and Unwin, 1940.

Jains and Ahimsa

Ahimsa is a Sanskrit word often translated as “nonviolence.” But a far more adequate translation of this word would be “the absence of the desire to do harm.” Contemporary Jain monks and nuns frequently describe ahimsa as “nonviolence in thought, word, and deed.” Ahimsa, in other words, is a state of existence characterized by the absence of any harmful thought, feeling, or action toward any living being. Contemporary Jains will also explain that far from being a state of indifference, ahimsa is not only the absence of the desire to do harm but is also a positive state of benevolence toward all beings.

All of the major Indic traditions—Hindu, Buddhist, and Jain—affirm the centrality of ahimsa as a virtue. The importance of ahimsa is proclaimed in Hindu texts such as the *Mahabharata*, and the first of the Buddhist Five Precepts is a vow to avoid deliberately harming any living thing.

But ahimsa is arguably even more central to Jainism than to either the Hindu or the Buddhist traditions. Jainism has exerted a strong influence on both of these traditions such that Jain practices, such as vegetarianism, have found wide acceptance among both Hindus and Buddhists to the present day. Even if these claims are somewhat debatable, it is definitely the case that Jains take the practice of ahimsa to lengths unparalleled in at least the mainstream practices of Hinduism and Buddhism.

Ahimsa is the central ethical principle of Jainism. It is foundational to the Jain way of life and is the operating principle behind a wide array of Jain practices, both lay and ascetic. For the layperson, ahimsa is a relatively straightforward matter of avoiding, as in Buddhism and Hinduism, deliberate harm to any living being. Jain laypeople are expected to follow a strict vegetarian diet and to avoid trades that would necessitate acts of violence or close involvement with violence. For this reason, Jains have tended

to gravitate toward business professions, generally avoiding careers that involve the actual manufacture of goods due to the harm to living beings that such manufacture entails.

For Jain monks and nuns, the expectations are even greater. A Jain monk or nun is expected to not only avoid deliberate harm to any living being but also to take great care to avoid even the accidental destruction of life involved in, for example, treading upon an insect in the dark. The strictures of ahimsa give rise to a host of rules that regulate the movements of Jain monks and nuns. Jain ascetics cannot, for example, travel at night. They must walk barefoot. Many wear a *muhpatti*, or mouth covering, that prevents the accidental ingestion of insects and microorganisms in the course of talking and breathing. Travel in modern conveyances, such as planes, trains, and automobiles, is forbidden due to the harm to small life forms inevitably involved in the process of internal combustion.

The difficulty of observing the Jain monastic rules has made Jain ascetics greatly respected across sectarian boundaries in India and is one reason that the Jain value of ahimsa has proven influential upon other traditions, such as Hinduism. Though practiced by few, the total ahimsa espoused by the Jains is seen as a noble, if difficult, ethical ideal in all of the Indic traditions.

—Jeffery D. Long

Bibliography

- Dundas, Paul. *The Jains*. London and New York: Routledge, 1992.
- Jaini, P. S. *The Jaina Path of Purification*. Delhi: Motilal Banarsidass Publishers, 1979.
- Jaini, P. S. *Collected Papers on Jaina Studies*. Delhi: Motilal Banarsidass Publishers, 2000.

Buddhist Rejection of Violence

Early Buddhists shared with Jainism and many orthodox Brahmanical sects the belief in the doctrine of *ahimsa* (“nonviolence”). Like other ancient Indian ascetics and voluntary renunciators (*śramanas*), Buddhist monks denounced the violence required to perform the traditional sacrificial rituals of the home and the state, and they rejected the violence inherent within the

law enforcement responsibilities of the ruling class. Nonviolence was cultivated primarily for the spiritual benefits accruing to a mind suffused with compassion as opposed to the dangers brought on by a mind disrupted by violent or hateful thoughts. One of Buddhism’s basic doctrinal goals is to articulate the causes of suffering for living beings so that suffering might be eliminated, and violence is of course counted among the major causes of suffering. In addition, Buddhist scriptures describe how violence and conflict arise as a causal result of negative states of mind (selfishness leads to stinginess, which leads to guarding possessions, which in turn leads to taking up weapons).

The Buddha’s rejection of violence did not prevent him from dispensing advice even to the most dangerous and intractable of kings. It is instructive to consider his polite exchanges with Ajatasattu, a king who was a convert to Buddhism, but can hardly be said to have genuinely restrained his violent impulses.

Buddhist scriptures record Ajatasattu as having been incited by the Buddha’s nemesis, Devadatta, to kill his father and usurp the throne. Furthermore, after assisting Devadatta’s many failed attempts on the Buddha’s life, Ajatasattu eventually meets with the Buddha in person, hears a sermon, confesses his wrongdoings, and accepts the Buddha as his teacher. Later, shortly before the Buddha’s passing, Ajatasattu is planning an attack on the Vajjian tribal confederacy, and believing the Buddha to be omniscient, he sends a representative to ask the Buddha’s advice. The Buddha’s reply is not, as one might have expected, a discourse on the immorality of offensive war but rather a declaration that the Vajjian tribes cannot be conquered as long as they are secure in their mutual support and moral behavior, behavior taught to them by the Buddha himself. The explicit message is that there is strength in righteousness, but the implication is that the tribes can be conquered if they can be divided. Ajatasattu’s representative sows dissension among the Vajjians, which eventually allows Ajatasattu to prevail.

Two other famous early kings are legendary for having converted to Buddhism in the name of nonviolence. A popular Pali text, *The Questions of King Milinda*, describes a series of de-

➤ EXCERPT FROM “THE FRUITS OF THE HOMELESS LIFE”

The Buddha’s teaching “The Fruits of the Homeless Life” tells of king Ajatasattu’s rather cynical and skeptical request that the Buddha describe some genuine benefits of renunciation that can be seen in the here and now if there are any. The Buddha replies with a variety of clear and positive answers, and the king is converted.

“At this King Ajatasattu exclaimed: ‘Excellent, Lord, excellent! it is as if someone were to set up what had been knocked down, or to point out the way to one who had got lost, or to bring an oil-lamp into a dark place, so that those with eyes could see what was there. Just so the Blessed Lord has expounded the Dhamma in various ways. And I, Lord, go for refuge to the Blessed Lord, to the Dhamma, and to the Sangha. May the

Blessed Lord accept me from this day forth as a lay-follower as long as life shall last! Transgression overcame me, Lord, foolish, erring and wicked as I was, in that I for the sake of the throne deprived my father, that good man and just king, of his life. May the Blessed Lord accept my confession of my evil deed that I may restrain myself in the future!”

—Jonathan C. Gold

Source

“*Sā maññaphala Sutta*: The Fruits of the Homeless Life,” in *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya*, trans. Maurice Walshe (Boston, Wisdom Publications, 1995), 91–109.

bates between the Indo-Greek Bactrian king Menander and the brilliant Buddhist monk Nagasena. At the end of the story, Milinda is said to have accepted conversion to Buddhism and even to have renounced the throne and become a monk. Also legendary is the great Mauryan king Aśoka’s conversion to Buddhism after experiencing great regret at the slaughter he caused during his Kalinga military campaign.

—Jonathan C. Gold

Bibliography

- Horner, I. B., trans. *Milinda’s Questions*, v. 22–23, *Sacred Books of the Buddhists*. London: Luzac, 1963–1964.
- Kraft, Kenneth, ed. *Inner Peace, World Peace: Essays on Buddhism and Nonviolence*. Albany: State University of New York Press, 1992.
- “*Sā maññaphala Sutta* The Fruits of the Homeless Life.” In *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya* translated by Maurice Walshe. Boston: Wisdom Publications, 1995.

Confucian Contempt for War

In Early China the search for harmony was the natural answer to the political crisis that culminated in the so-called Warring States period

(481–221 BCE). The decline of the house of Zhou and the fragmentation of the political power brought great changes to Chinese society. Although war and disorder created economic and social dimensions tension, these problems stimulated great intellectual discussions. It is in this specific context that early Confucians proposed concrete solutions in order to both end wars between states and guarantee sustainable peace. For this reason the quest for equilibrium and harmony (*zhong he*) is one of the pivots of the Confucian tradition.

The Confucian contempt for war has to be considered as one of the central themes in the development of political ideas. Basically, in ancient China Confucians articulated their debates on the assumption that conflicts arise because the way (*dao*) was lost. Education had to be fundamental for those who held power and authority. From a Confucian point of view, war was the evidence of the improper methods of the ruler. The combination of learning and practice and the closeness of a good teacher were necessary in order to ensure the self-cultivation of the ruler and, by consequence, both the preservation of social harmony and the prevention of conflicts. Pacifying the world was the goal toward which the self-cultivation of the sage ruler was directed.

► CONFUCIUS ON WAR

Confucius said: “To lead an uninstructed people to war is to throw them away” (*Analects*, XIII.30).

“The things in reference to which the Master exercised the greatest caution were: fasting, war and sickness” (*Analects*, VII, 12).

—Elisa Sabattini

Source

James Legge, *The Chinese Classics*, Vol. 1 (Oxford, UK: Clarendon, 1893), 198 and 275.

The ideal order that existed in remote antiquity was the utopia that Confucians referred to, and harmony was the highest good. To prevent war and to guarantee a stable government, Confucians proposed an ideal orderly society whose foundations were based on the importance of ritual (*li*), music (*yue*), filial piety (*xiao*), benevolence (*ren*), and the sense of justice (*yi*), that is, related to another *yi* fitting. If the ruler's conduct had followed all these practices, people's attitudes would have become naturally harmonious, and the state would have been at peace. In this way, everybody could fulfill their role in the society and family (considered as a microcosm of the so-

ciopolitical order) without being unhappy; on the contrary, people could fully realize themselves. The hierarchy of roles was based on five relations that had to be respected: ruler-minister, father-son, elder brother-younger brother, husband-wife, and friend-friend. The sense of ritual would foster social virtues such as filial devotion, brotherliness, righteousness, and loyalty. All public life as well as private life could then be stable.

Together with the sage ruler, the vital role of scholars—as perpetuators of the cultural heritage—was fundamental. They were supposed to transmit ethical principles and the proper moral values to the ruler in order to show him the right techniques by which to govern the state and to avoid political and social conflicts. In preimperial China, if a scholar was not satisfied with the work and behavior of the ruler, he could leave him and look for another ruler interested in his teaching. In this way, the Confucian contempt for war was part of the fundamental education for the ruler searching for a good government.

—Elisa Sabattini

Bibliography

- Legge, James. *The Chinese Classics*, Vol. 1. Oxford, UK: Clarendon, 1893.
- Nivison, David S. *The Ways of Confucianism*. Chicago: Open Court Press, 1997.
- Roetz, Heiner. *Confucian Ethics of the Axial Age*. Albany: State University of New York Press, 1993.

■ Introduction: Changes in Warfare

The designation of Iron Age for the period that begins in the Near East around 1200 BCE and in Europe around 800 BCE is a relatively arbitrary marker of cultural change, coinciding with the widespread appearance of iron technology in these regions. Scholars have made much out of the appearance of iron, suggesting that this provided a distinct military advantage to those who had it over those who only had access to bronze, since iron weapons can be much stronger than bronze ones. In fact, the sit-

uation is more complex than this, as the strength of iron can vary dramatically.

The technological advance of iron is just one example of the many technological and tactical advances that occurred in warfare between 1000 BCE and 300 CE throughout the world. Improved fortifications, warships, crossbows, and composite bows gave distinct advantages in combat. New tactical strategies changed the ways in which battles were fought as the weaknesses were in one type of tactic exploited and a

new type of tactic came to be used (until its weaknesses were exposed). The following entries explore the major changes in warfare that occurred from 1000 BCE to 300 CE.

—Kevin M. McGeough

New Types of Defensive Architecture in Asia

In Asia proper new types of defensive architecture emerged in the classical world in response to changing military technology and methods of warfare. The large walls and fortified cities of the classical world were the end result. Warfare in the last millennium BCE was altered by the change from bronze to iron, the change from chariot to horse and elephant, and by new siege technologies that exposed Bronze Age architecture. The Assyrians of the Near East, the Warring States in China, the Macedonians of Europe, and the Mauryan empire of India were the first to integrate all of these changes into new military systems and methods of warfare. Bronze Age kingdoms with single-site defensive architecture and chariot-based armies became obsolete. Integrated systems of defensive walls and cities were developed as part of new grand strategies aimed at building empires and unifying regions. Siege engines, rams, sappers, elephants, and infantry all became specialists in constructing and destructing defensive architecture of the period.

Populations in the classical world grew until most classical empires had around 50 million people by 2,000 years ago. This coupled with the emergence of iron and the horse transformed defensive architecture. To survive and thrive, old kingdoms grew into competing states and empires in India and China. Even nomadic peripheries were impacted by these growing populations, and in turn they raided the great civilizations, prompting massive defensive walls or co-option as hired mercenaries. Kingdoms like Maghada in India and Qin in China needed complex military systems and methods of warfare to survive. Grand strategy was developed, as seen in *The Art of War* by Sun Tzu in China and the *Arthashastra* by Kautilya in India. Defensive architecture was only one part of this approach.

> ONE GREAT WALL OR MANY?

When the first Chinese emperor unified the warring states he did so with a grand strategy that included outlasting other states economically. He then turned the energies of China to rebuilding the infrastructure, including the wall systems. Long walls had been built for defense throughout the first millennium BCE and became prolific in the Warring States period. The emperor had them repaired, connected, and lengthened into the interior along the emerging Silk Road trade routes. Thus, the 10,000-li (3,100 mile or 5,000 kilometer) long wall was born. Much later it was refurbished in stone by the Ming dynasty, the wall we see today on postcards.

—Christopher Howell

Defensive architecture in China was transformed in the Warring States period (480–221 BCE). The competition to unify northern China and pacify the horse nomads resulted in massive defensive architecture programs by the warring states. Cities were turned into stone and rammed-earth forts, and entire travel routes were blocked by long walls. Ultimately the Qin state alone was left standing by 221 BCE and was unified under the first Chinese emperor, Qin Shi Huangdi. He completed road systems and unified long walls into the ten “li” great or long walls that stretched for over 12,800 li (4,000 miles or 6,400 kilometers) into the interior. The walls were modified many times and protected both the Silk Roads trade routes and a new unified China.

In India, enormous fortifications surrounded the capital city of Pataliputra, which was the center of the Mauryan empire (323–185 BCE), developed under Chandragupta Maurya. It was protected by a huge earth and timber wall with 64 towers that stretched for almost ten miles (16 kilometers) and was surrounded by a 300-foot-wide (90-meter-wide) moat. The wall was later strengthened with stone.

Both India and China had enormous walled cities and long walls that were used as part of a larger grand strategy to unify each region. However, the enormous cost in civilization resources kept the life span of each empire short.

—Christopher Howell

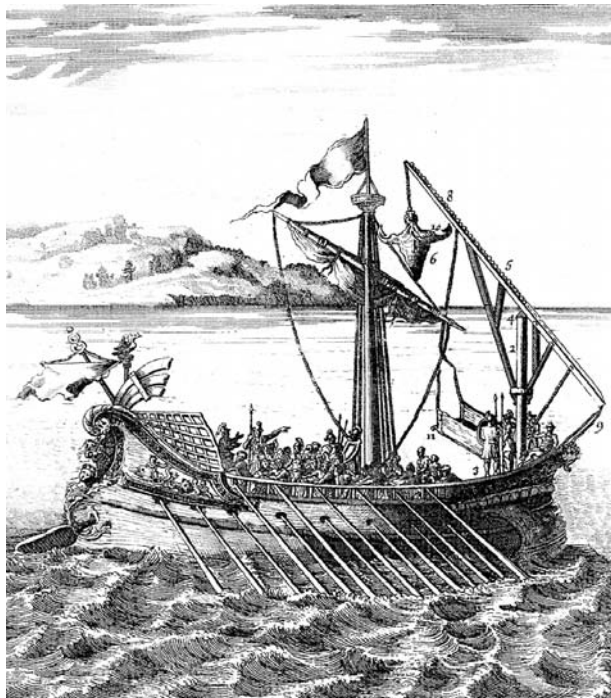
Bibliography

- Di Cosmo, N. *Ancient China and Its Enemies*. Cambridge: Cambridge University Press, 2002.
- Mishra, R. *Military Architecture in Ancient India*. Dehli, India: Motilal Banarsidass, 2002.
- Quiao, Y. *Defense Structures (Ancient Chinese Architecture)*. Translated by Zhou Whenzheng. New York: Springer-Verlag, 2001.
- Xinian, F. *Chinese Architecture*. Edited by Nancy Steinhardt. New Haven, CT: Yale University Press, 2002.

Mediterranean Warships

The standard warship of the ancient Mediterranean was the galley, a relatively long and narrow ship powered by oars, although they carried sails when not in battle. Until the first millennium BCE, the object of a sea fight was to capture a ship in hand-to-hand battle between the crews. Ninth-century BCE pictorial evidence reveals a shift toward using ships themselves as weapons by fitting waterline rams at the bow.

By the fifth century BCE, Greek warships were generally described by the number of rowers they carried, the most common being tria-



Roman warship with catapult mounted on the front, eighteenth-century engraving. (Jupiterimages)

conters (thirties) and penteconters (fifties). With all the rowers on the same level, a penteconter would measure about 98 feet (30 meters) long, making for a large, slow vessel. To overcome this, two-banked ships (biremes) were developed; these carried the same number of oarsmen on two levels in a hull roughly half as long. With stronger, more compact hulls, ships could better support rams as well as a raised deck for fighters. The first true biremes are depicted on eighth-century BCE reliefs at Nineveh, in Iraq, showing the king of Tyre fleeing an Assyrian fleet.

Developed in the seventh century BCE, the trireme carried a third bank of oarsmen. Unlike triaconters and penteconters, which could be single- or double-banked, triremes had a more or less fixed number of oarsmen arrayed in a standard configuration: 54 oarsmen on the lowest and middle banks (called thalamians and zygiants, respectively) and 62 thranites on the upper bank, for a total of 170. Triremes also carried a helmsman, people to keep rhythm with flutes and drums, lookouts and boatswains, and a contingent of warriors. The number of the latter varied depending on available manpower and the fleet's preferred tactics. At the Battle of Salamis in 480 BCE, Athenian ships carried about 10 marines, while the Persians carried 30.

The trireme remained the warship par excellence for seven centuries, but in the fourth century BCE central Mediterranean navies began to put more than one rower to an oar. Such ships were designated by the numbers of oarsmen in a single vertical file of rowers—fours (quadriremes), fives (quinqueremes), eights, twelves, and so on—regardless of whether there were one, two, or three banks of oars. A five might have three banks of oars with one man at the thalamian oar, two zeugites, and two thranites, or it might be a single-banked vessel with seven men per oar. (Early modern European galleys had a maximum of eight rowers per oar, so an ancient 24 was probably a vessel with three banks of oars with eight men to an oar.)

In addition to soldiers—Roman quinqueremes carried 300 rowers and 120 marines—larger ships could mount catapults. The oldest form of long-range shipboard artillery, catapults could shoot arrows or grapnels, pots of vipers and scorpions, or fire pots. Ramming remained an important as-

► THE HELLENISTIC NAVAL ARMS RACE

A major factor in the strategic calculus of Alexander the Great's Hellenistic successors was control of the timber trade in Macedonia, Asia Minor, Cyprus, and Lebanon. Because access to forests was essential for shipbuilding and maritime trade and for the naval forces required to protect the trade and access to the wood, the naval contest of the third century BCE fed on itself. The appetite for wood was further whetted by the development of ever-larger ships, including twin-hulled vessels of the Ptolemys' Egyptian navy described as "thirties" and a "forty." The historian Athenaeus's description of the latter is fantastic but credible: 50 feet (15 meters) wide and 400 feet (122 meters) long with room for 4,000 oarsmen, 2,850 marines, and 400 officers and crew of various sorts. It is

thought that this vessel actually comprised two "twenties"—that is, with 20 oarsmen in a single file working oars in the thranite, zeugite, and thalamian positions—joined by a raised platform that spanned the hulls and supported the marines. Twin-hulled ships were not complete rarities, and some were credited with speed and effectiveness. But the most extreme of these creations were intended to magnify the power of the rulers who built them rather than for any practical purpose. "Hardly differing from buildings that are fixed in the ground," wrote Plutarch of Ptolemy IV's forty, "it moved unsteadily and with difficulty, to make appearance for display, not use," a showboat in the truest sense of the word.

—Lincoln P. Paine

pect of naval warfare, but taking enemy ships by boarding was also a standard tactic, as it would be until the coming of steam-powered warships in the nineteenth century.

By the 260s BCE, the strongest Mediterranean naval power was Carthage, which ruled vast tracts of North Africa, southern Spain, the Balearics, Sardinia and Corsica, and western Sicily. Carthage and Rome first came to blows over control of Sicily. After a three-year stalemate on land (during which time they relied on allies to ferry supplies to Sicily), the Romans decided to build their own fleet. Acknowledging the Carthaginians' superior ship-handling ability, the Romans focused on winning by capturing ships and developed a combination of grapnel and boarding ramp called a *corvus* (crow) to fasten their ships to the enemy's and facilitate boarding. The *corvus* proved effective in battle, but when not in use it would have made ships top-heavy. *Corvi* may have been partially responsible for the loss of 280 ships and 35,000 men in a storm in 255 BCE, and this in turn may explain why they are not mentioned after that.

Smaller vessels were used for scouting and patrolling. In the fourth and third centuries BCE, the Rhodians patrolled the Aegean with the *trierarchy*, which is thought to have resembled a trireme but with only two and a half banks of oarsmen: 120 rowers rather than 170. The Ro-

mans also used *liburnians* and *lembi*, which originated as Adriatic pirate vessels and were well suited for scouting and raiding expeditions. The river fleets posted on the Rhine and Danube rivers, which more or less defined imperial Rome's northern border between the North Sea and the Black Sea, featured slender open vessels called *lusoriae*.

—Lincoln P. Paine

Bibliography

- Athenaeus. *The Deipnosophists*. 7 vols. Translated by C. B. Gulick. Loeb Classical Library. Cambridge: Putnam, 1927–1941.
- Casson, Lionel. *The Ancient Mariners: Seafarers and Sea Fighters of the Mediterranean in Ancient Times*. Baltimore: Johns Hopkins University Press, 1991.
- Casson, Lionel. *Ships and Seamanship in the Ancient World*. Baltimore: Johns Hopkins University Press, 1995.
- Goldsworthy, Adrian. *The Punic Wars*. London: Cassell, 2000.

Greek Warfare—Hoplite Fighting Forms

Hoplites were Greek heavy infantrymen during the period of the city-states (roughly 700–300 BCE). The name "hoplite" derives from the word *hopla* (sing., *hoplon*), meaning items of armor

➤ HOPLITE ARMS AND EQUIPMENT

Hoplites wore a corselet (covering the chest and back), greaves (covering the lower legs), and a helmet with cheekplates into battle. These pieces of armor plating were made entirely of bronze and were approximately half an inch (1.3 cm) thick, which provided substantial protection against enemy swords, spears, and missiles. Each hoplite also carried thick concave shields (called an *aspis*), wooden with a bronze veneer, that were 3 feet (1 meter) in diameter and weighed 15–20 pounds (6–9 kilograms). These shields were held on the left arm, which meant that each hoplite relied on the soldier to his right to protect his unshielded right side. They carried a wooden spear (*doru*), 7–10 feet (2–3 meters) in length, as well as an iron short sword made for thrusting (called a *xiphos*) because their spears frequently broke in battle.

—Andrew Byers

or military equipment, because hoplites wore heavy armor and helmets and carried large wooden shields, spears, and iron short swords. The total weight of hoplites' arms and equipment was between 50 and 70 pounds (20–30 kilograms). Hoplites were citizen-militia rather than permanent professional soldiers and were primarily drawn from the middle class, who could afford to purchase and maintain the required equipment.

Because hoplites were militia and were unpaid, military campaigns were generally short and were conducted in the summer months. The enormous weight of the hoplites' equipment meant that hoplite battles were often quick and were intended to be decisive. Hoplites would usually meet their enemies on a level field. Both forces would then mass into phalanxes, lock shields together, and charge straight at enemy formations. These direct charges were usually brutal matches, with the first few ranks of hoplites extending their spears through the interlocked shields, with each row of hoplites using their shields to push against the backs of the men in front of them. If cavalry forces were present, they would generally guard the flanks of the hoplites. Lighter infantry forces and missile troops were often not present at all during hoplite battles.

The goal of hoplite warfare was to break or encircle the enemy's line. If that failed to happen, the battle often degenerated into a shoving match, with men in the rear trying to push the front lines through those of the enemy (this tactic was called the *othismos*). Because of the intensity of hoplite shock combat and the weight of their equipment, battles rarely lasted longer than an hour. Battles were usually decided by one side breaking, with survivors generally being allowed to flee the field without being pursued. Casualties were typically light, but the dead and injured were often disproportionately the most influential citizens, who led their hoplite forces from the front. This also meant that wars could be decided by a single battle if key enemy leaders could be captured or killed. Captives were then ransomed back to the defeated side.

Hoplite warfare's rise and fall was connected with the rise and fall of the Greek city-state system (the polis structure). During the Greeks' wars with the Persians, hoplites were forced to adapt to changing conditions of warfare, carry less armor, and become more mobile. By the time of the Peloponnesian War (431–404 BCE), hoplite warfare was already in decline, with greater reliance on naval combat and siege warfare, all of which caused a greater emphasis on attrition warfare and increased casualties in battle. Philip II of Macedonia's forces defeated the last major hoplite force at the Battle of Chaeronea in 338 BCE, after which Athens and its allies were forced to join the Hellenistic empire. This led to the adoption of the more versatile combined arms tactics of the Macedonians. The Greek style of hoplite warfare did, however, leave a lasting legacy around the Mediterranean region. The Roman legions—dominant in Western military history for centuries—were derived from hoplites.

—Andrew Byers

Bibliography

- Adcock, Frank E. *The Greek and Macedonian Art of War*. Berkeley: University of California Press, 1957.
- Anderson, John Kinloch. *Military Theory and Practice in the Age of Xenophon*. Berkeley: University of California Press, 1970.
- Hanson, Victor Davis, ed. *Hoplites: The Classical Greek Battle Experience*. New York: Routledge, 1991.

Krentz, Peter. "Fighting by the Rules: The Invention of the Hoplite Agôn." *Hesperia* 71(1) (2002): 23–39.

O'Connell, Robert L. *Soul of the Sword: An Illustrated History of Weaponry and Warfare from Prehistory to the Present*. New York: Simon and Schuster, 2002.

Sekunda, Nicholas. *Greek Hoplite, 480–323 BC*. Oxford, UK: Osprey, 2000.

Greek Phalanx

The phalanx was an ancient Greek battle formation composed of heavily armored hoplites that fought in columns closely packed together in a mass, usually eight ranks deep. Typically armed with a large circular shield known as a *hoplon*, a large spear, an obtrusive helmet, and additional bronze body armor, hoplites would engage in tight formation, vulnerable to attacks by archers or spear attacks. The hoplites themselves were composed of citizen-farmers of the various city-states, which had gradually been included in the military after the hoplite reform at the end of the Greek Dark Ages (1200–1800 BCE). The phalanx became a prevalent battle tactic among the quarrels of the Greek city-states during the Classical period as a result of its comparative efficiency as a form of warfare in comparison with previous hand-to-hand engagements of aristocratic cavalry.

Phalanx tactics involved engaging the opposing phalanx with skirmishers, archers, and spear attacks to deplete their numbers in the vulnerable areas of their bodies not covered in armor. The roundness of the shields typically provided enough exposed areas for penetration: around the neck and the top of the shoulder in addition to parts of the legs not covered with bronze greaves. The back was typically not covered by armor, leaving anyone in retreat

➤ HOPLITE BATTLE EXPERIENCE IN VERSE

"With a sudden rush he turns to flight the rugged battalions of the enemy, and sustains the beating waves of assault.

And he who so falls among the champions and loses his sweet life, so blessing with honor his city, his father, and all his people,

With wounds in his chest, where the spear that he was facing has transfixed

That massive guard of his shield, and gone through his breastplate as well." (Tyrtaios 12.21–26)

—Andrew Byers

Source

Tyrtaios, fragment 12, verses 21–26; translation by Richard Lattimore, *Greek Lyrics* (Chicago: University of Chicago Press, 1960).

➤ THE DEFEAT OF THE SPARTAN PHALANX

Sparta, long known for its martial prowess, was defeated at the Battle of Leuctra in 371 BCE by the Theban general Epaminondas, who devised an innovative phalanx tactic. Epaminondas thinned out the center and right portions of his force in order to field a massive phalanx 50 ranks deep on his left, what was traditionally the weakest flank of a phalanx formation. This oblique phalanx, as it has come to be called, allowed the Thebans to turn the Spartan right flank, striking a decisive blow and routing the Spartan king and his elite bodyguard (the *agema*). Sparta's defeat in battle had far-reaching political effects, with the Greek balance of power permanently altered, Sparta becoming a second-rate power, and Thebes being freed from Spartan

domination and achieving a preeminent position in Greek politics. The battle was witnessed by a young Philip of Macedon, father of Alexander the Great.

—Andrew Byers

Bibliography

Adcock, Frank E. *The Greek and Macedonian Art of War*. Berkeley: University of California Press, 1957.

Anderson, John Kinloch. *Military Theory and Practice in the Age of Xenophon*. Berkeley: University of California Press, 1970.

Hanson, Victor Davis. *Warfare and Agriculture in Classical Greece*. Berkeley: University of California Press, 1998.

THE PHALANX OUTSIDE GREECE

Classical Greek heavy infantry known as hoplites customarily fought in a rectangular column—known as a phalanx—designed for shock encounters against enemy forces similarly armed and organized. The earliest known evidence of a phalanxlike formation is a depiction on a Sumerian stele dated around 2450 BCE; similar formations are known to have been used by Egyptians as well. The relationship of the Greek phalanx to these Sumerian and Egyptian predecessors is unclear, but it is likely that the Greek phalanx was introduced around the seventh century BCE in the city of Argos, which adopted the *aspis* shield, thereby making the formation possible. The word “phalanx” (pl., phalanxes or phalanges) is derived from the Greek word for “finger” (*phalangeros*). The phalanx was a formation in which hoplites would line up and lock their shields together, and the first three ranks of hoplites would extend their spears over the first rank of shields, thereby creating a wall of tightly packed spears and shields. The Greeks did not invent the concept of the phalanx, since ancient Sumerians and Egyptians are also known to have fought in phalanxlike formations, but the Greeks refined the concept into neat ranks and lines.

The phalanx was nearly indestructible from the front, but it was slow moving—due to the hoplites’ heavy equipment—and had difficulty in protecting

its flanks and rear. Enemy archers or slingers could also stay at a safe distance from the phalanx, peppering it with missile fire. The phalanx was weakest when fighting enemies possessing significant numbers of lighter, more flexible forces. Eventually the Greeks embraced the use of skirmishers, sea battles, and siege warfare, which spelled an end to the almost choreographed set-piece battles of phalanx warfare. The phalanx and similar formations did not die out completely, however, for many centuries. The phalanx inspired the Roman legions as well as the Anglo-Saxon shieldwall, the Swiss pike square, and the Spanish *tercio* of the sixteenth and seventeenth centuries, which combined the sturdiness of the phalanx with the greater flexibility and firepower of muskets.

—Andrew Byers

Bibliography

- Adcock, Frank E. *The Greek and Macedonian Art of War*. Berkeley: University of California Press, 1957.
- Anderson, John Kinloch. *Military Theory and Practice in the Age of Xenophon*. Berkeley: University of California Press, 1970.
- Hanson, Victor Davis. *Warfare and Agriculture in Classical Greece*. Berkeley: University of California Press, 1998.

completely vulnerable to enemy fire (in the form of arrows and spears). After an initial opening strike, the phalanxes would engage in a full frontal attack. Before such an attack, much drinking and morale boosting would take place among the troops, led by their commanders. As representatives of their polis (city-states), they would typically let out battle cries praising their city or the god or goddess representative of their city and offering animal sacrifices to such deities. The allies of each respective city-state would usually be on either flank, with the center reserved for the city’s own hoplites.

In actual battle, the phalanxes would typically attempt to flank each other when they met in tight formations on the battlefield. However, the front ranks would typically be the ones to engage in combat directly, typically hand to hand,

after the run and push. Armed with a spear with a butt-spike on the backside, hoplites would attempt to smash through their enemies and render them completely vulnerable. Also armed with a short slashing sword, hoplites at close range could stab their opponents in the heat of battle. Any attempts to retreat or surrender on the part of an individual hoplite were discouraged due to the fact that they had no armor on their backs. In addition, due to a sense of honor and esprit de corps, hoplites typically would not surrender and would fight to the death.

Much of the historical evidence regarding the Greek phalanx comes in the form of archaeological remains and in ballads composed by various eyewitness poets or those recounting the events in common poems passed on through oral traditions. While many of these engage-

ments were among the feuding Greek city-states, typically in warm weather, which was the usual campaigning season, the Greek phalanx was also used as a battle formation against foreign troops. An example would be the Battle of Marathon in 490 BCE that pitted Athens against the invading Persians.

—Abraham O. Mendoza

Bibliography

- Hanson, Victor Davis, ed. *Hoplites: The Classical Greek Battle Experience*. New York: Routledge, 1991.
- Hanson, Victor Davis. *The Western Way of War: Infantry Battle in Classical Greece*. 2nd ed. Berkeley: University of California Press, 1989.
- Winks, Robin W., and Susan P. Mattern-Parkes, eds. *The Ancient Mediterranean World: From the Stone Age to A.D. 600*. New York: Oxford University Press, 2004.

The Roman Legion

The Roman legion was a critical component for the success of the Roman empire and its growth from city to Mediterranean power. The legion was a well-trained and well-equipped fighting force that allowed the Romans to defeat many rival empires such as the Carthaginians and Greeks. During the Imperial period the legion was so feared that revolting cities would often surrender their leaders rather than have to fight such formidable opponents.

The legion's composition varied as Rome grew from a small republic to a vast Mediterranean empire. The legion of the early republic could hold as many as 6,000 soldiers but normally contained about 4,200. The soldiers provided their own equipment and were divided into four classes: *velites*, *bastati*, *principes*, and *triarii*. Each legion was divided into 30 maniples for greater maneuverability during battle. The maniples were further subdivided into centuries, which were each led by a centurion. The maniples were flexible, and each class of soldier carried different equipment and filled a different function. Under Marius, the 30 maniples were replaced by ten cohorts, and all soldiers carried the same equipment.

Originally the legion consisted of temporary fighting units composed of landowning Roman

> MARIUS AND HIS MULES

Marius and his mules is a phrase used by Plutarch to describe the troops of Marius because each soldier carried his own bulky equipment in order to limit the number of baggage trains necessary to support the legion. The Senate allowed Marius, newly elected consul in 107 BCE, to draft an army to campaign against Jugurtha, king of Numidia. Due to the increasing need for more soldiers, drafting an army was difficult and unpopular. Marius's popularity as a *novus homo* (new man) threatened the power of the Senate, which hoped that allowing Marius to raise an army would substantially diminish his popularity. However, Marius did not follow the standard procedures for drafting an army and allowed landless citizens, *capite censi*, to volunteer for legionary service. This maneuver actually increased his popularity with the poor. Marius then led his well-trained volunteer mules to North Africa and captured Jugurtha, which Metellus had previously failed to accomplish.

—Kevin Scull

citizens obligated to fight for one campaigning season, from March to October. However, by the middle of the republic, Rome had conquered distant lands that required permanent military garrisons and frontier legions in order to protect them. Roman citizens were now required to serve in the army for 6 continuous years (16 maximum), and landowning citizens were forced to leave their fields to be tended by family and friends. In addition to lengthier commitments, more soldiers were needed, and it was becoming difficult to enlist soldiers who met the minimum standards of property ownership.

This difficulty in recruiting soldiers prompted Marius to take drastic steps during his consulship in 107 BCE. Among the many reforms of the Roman Army credited to Marius, the most important was his decision to enlist and equip voluntary, landless Roman citizens (*capite censi*) in his legion. This important reform alleviated the problems of the farmer-soldier, made it easier to maintain a permanent army, and provided opportunities for Romans to pursue a career in the military. However, this innovation is often blamed for

the civil wars that followed, as powerful generals such as Sulla, Pompey, and Julius Caesar all recruited massive volunteer armies and used them to gain power.

Augustus's further reforms continued the army's transition to a permanent professional fighting unit. Under Augustus, the army was entirely composed of volunteers who committed to serve for 15 years (later expanded to 20) and were paid a yearly wage, and upon retirement those who survived were given a large monetary payment for their service. In the second and third centuries Italians became less eager to join the military and were replaced by men from Rome's many provinces seeking a military career. This change completed the transition of the Roman legion from a temporary army composed of Roman citizens to a permanent professional force of voluntary provincials seeking a military career.

—Kevin Scull

Bibliography

- Carney, T. F. *A Biography of C. Marius*. Chicago: Argonaut, 1970.
- Keppie, Lawrence. *The Making of the Roman Army*. London: Batsford, 1984.
- Southern, Pat. *The Roman Army: A Social & Institutional History*. Oxford: Oxford University Press, 2006.
- Webster, Graham. *The Roman Imperial Army*. Totowa: Barnes and Noble Books, 1985.

Military Engineering in Greece and Rome

Military engineering has a long history in the ancient Mediterranean, with Greco-Roman practices stretching back to the Bronze Age and evolving through late antiquity. Citadels were often defended by cyclopean walls, so-called because of the mythical strength and size supposedly needed for their construction. In some cases such as at Mycenae and Tiryns, such defenses were repaired and reused by the later inhabitants following the fall (ca. 1200 BCE) of the Mycenaean palace culture.

Despite the centrality of the siege of Troy in the *Iliad*, the nature of Greek warfare and society precluded sophisticated offensive siegecraft until the early fourth century BCE. Fairly simple

curtain walls incorporating natural strong points such as a city's acropolis (e.g., Athens, Corinth, etc.) provided protection against most direct assaults and thus became regular urban fixtures. Such circuits could be fairly far flung, and Long Walls such as those running from Athens to its port, Piraeus, presented operational and strategic challenges to opponents.

In the fifth century the Greeks' internecine conflicts resulted in a general increase in the use of siege warfare driven by the funds of the Athenian empire and Persian gold as well as the desperate nature of the Peloponnesian War (431–404). However, the main Greek offensive siege technique did not progress beyond circumvallation by construction of blockade walls until the war's aftermath. Fortification in an offensive role also became more common with the construction of works (*epiteichismos*) within enemy territory to aid in devastation and subversion such as the Athenian fort at Pylos and the Spartan fortification of Decelea.

The Syracusan tyrant Dionysius I ushered in a new era by demonstrating a wide range of siege techniques in his wars with the other inhabitants of Sicily. In addition to incorporating much from his Carthaginian opponents, he is generally credited with the invention of the rudimentary arrow-firing catapult in 399 BCE. His techniques spread to the rest of the Greek world by midcentury. In addition to rams, towers, escalades, and tunneling, the sponsorship of Philip II and the developments of the wars of Alexander and his successors soon added more powerful torsion catapults (attested at the siege of Perinthus in 340 BCE) and stone-throwing artillery (attested at the siege of Halicarnassus in 334 BCE). The defensive response included accommodations for defensive artillery, the more scientific siting and design of fortifications to take better advantage of terrain and enfilade, outworks to hinder the advance of engines, and postern gates to allow sallies by defenders mounting an active defense.

Alexander's siege of Tyre in 332, though costly, demonstrated the effectiveness of these new techniques and included a massive mole, shipborne artillery, and rams. Hellenistic siegecraft would go on to reach its most grandiose apogee during the career of Demetrius Poliorcetes (the Besieger) who, despite his enormous

siege tower, the *belepolis* (city-taker), was unsuccessful in his spectacular attempt to take Rhodes in 305–304.

Republican Roman fortification and siege techniques should be seen in the context of developments occurring in the Greek Mediterranean. By the third century BCE and Rome's expansion out of Italy proper, the Romans seem to have at least begun assimilating the Hellenistic arsenal of artillery, assault techniques, and equipment, bringing their typical determination in war to the prosecution of sieges. Claudius Marcellus's 213–212 BCE siege of Syracuse in the Second Punic War brought the Romans face-to-face with some of the most sophisticated city defenses of the Greek world, ingeniously designed and deployed by Archimedes. Only sheer persistence and exploitation of internal divisions eventually allowed the Romans to overcome the superiority of the Syracusan fortification and engines.

While the Roman-fortified marching camp is most famously described by Polybius (6.27–34) in the second century BCE, Greek castramentation and fieldworks consisting of earthworks and palisades are attested as early as the *Iliad* and continued in use through the Hellenistic period. Roman practice, as discussed by Polybius and confirmed by physical remains, was more formal and called for a precisely surveyed and planned square camp surrounded by a rampart and internally organized on a grid plan.

The art of military road building was not unknown among the Greeks, as Herodotus mentions some responsibility on the part of the Spartan kings for the maintenance of roads. Moreover, there does seem to have been a road network that formed part of the defense system of Athens' land frontier. Additionally, there are traces of well-constructed routes leading across the frontiers into neighboring territory for a presumably offensive purpose. The Romans would pursue these practices on a much larger scale, constructing formidable routes into their theaters of conflict. The famous Via Appia, begun in 312 BCE and originally running from Rome to Capua, was undoubtedly instrumental in the final stages of the Samnite Wars and the conquest of southern Italy. Later additions through the Imperial period would eventually spread a network across the empire. On the march, bridges were

➤ COMPARISON OF THE GREEK AND ROMAN CAMPS

Greeks, in choosing a place for a camp, thought primarily of security from the natural strength of the position, first because they were averse to the toil of digging a foss and second, because they thought that no artificial defenses were comparable to those afforded by the nature of the ground. Accordingly, they not only had to vary the whole configuration of the camp to suit the nature of the ground but also had to change the arrangement of details in all kinds of irregular ways so that neither soldier nor company had a fixed place in it. The Romans, on the other hand, preferred to undergo the fatigue of digging and of the other labors of circumvallation for the sake of the facility in arrangement and to secure a plan of encampment that would be one and the same and familiar to all.

—Joseph Frechette

built on piles of masonry or timber or, alternatively, laid out across pontoon boats.

By the Imperial period the Romans had mastered all the now traditional elements of siegecraft, with each legion having its own surveyors, engineers, and workmen as well as artillery and siege trains that included, by the late first century CE, the small, powerful, all-metal framed *carroballista*. In the realm of fortifications, the Romans could and did make greater and more sophisticated use of concrete. The tumult of the third century CE would see a resurgence in the relevance of urban fortification. While western barbarians were not generally capable of assaulting sophisticated fortifications, the Sassanian Persians were, as testified by the number of cities captured by Shapur I in the 250s and 260s. Of these, Dura Europus is of particular note, as its excavations have uncovered dramatic evidence of its final siege.

—Joseph Frechette

Bibliography

- Kern, P. B. *Ancient Siege Warfare*. Bloomington: Indiana University Press, 1999.
- Marsden, E. W. *Greek and Roman Artillery: Historical Development*. Oxford, UK: Clarendon, 1969.
- McNicoll, A. W. *Hellenistic Fortifications from the Aegean to the Euphrates*. Oxford, UK: Clarendon, 1997.

- Ober, Josiah. "Hoplites and Obstacles." In *Hoplites: The Classical Greek Battle Experience*, edited by V. D. Hanson. New York: Routledge, 1991.
- O'Connor, Colin. *Roman Bridges*. Cambridge: Cambridge University Press, 1993.
- Polybius. *Histories*, Vol. 1. Translated by Evelyn S. Shuckburgh. London and New York: Macmillan, 1889.
- Pritchett, W. K. *The Greek State at War*, Vol. II. Berkeley: University of California Press, 1974.

Greek and Roman Arms and Armor

Following the collapse of the Mycenaean palace culture but sometime before 1000 BCE, the use of iron began to be adopted by the Greeks from the Near East for use in weapons and equipment. The designs of the Bronze Age cut-and-thrust swords were initially simply reproduced in the new material, although gradually they became shorter and stouter in the ninth and eighth centuries. Grave-finds of multiple spearheads become common from 900 BCE onward and sug-

► THE HOPLITE PANOPLY

During 650–350 BCE, hoplite military tactics allowed the Greek armies to outperform the armies of other regions. Whether or not the adoption of hoplite equipment occurred suddenly or as a result of a gradual process is a point of some debate, as is the exact nature of the tactics it must have dictated. However, the double-grip of the shield is noteworthy because it was wholly innovative and, unlike its single-grip predecessors, implies a particular suitability for the close-order fighting of developed phalanx warfare in which each soldier had shelter behind the shield of the man to his right. The chronology for the adoption of such tactics suggests that they might have played a significant element in the formative period of the Greek polis as a political institution. Since the hoplite phalanx structure is egalitarian and required a soldier to depend on his comrades-at-arms, it is thought that this egalitarianism may have been instrumental in the development of democracy.

—Joseph Frechette

gest that in the Greek Dark Ages multiple spears would be carried and thrown as javelins. There is no evidence for the use of metal body armor in the Dark Ages until the end of the eighth century, although perishable materials such as leather or linen may have been used.

The typical weapons of hoplites (heavily armed Greek soldiers) began appearing in the late eighth through the mid-seventh centuries, eventually spreading through the Greek world into Italy. This panoply of helmets, bronze breastplates, greaves, thrusting spears, short swords, and double-grip shields, although somewhat lightened over time, saw service down through the fourth century BCE. Light-armed troops demonstrated their value on several occasions during the Peloponnesian War and its aftermath, but it is difficult to trace the evolution of such items as the bow, sling, javelin, and wicker shield because they were mainly constructed of perishable materials.

The Macedonian phalanx that finally superseded that of the classical Greeks in the late fourth century differed markedly in armament. Notably, the metal cuirass (metal breastplate) seems to have been dispensed with as a standard piece of infantry equipment. Instead, Philip and Alexander's infantrymen wore greaves, helmets, and a smaller shield that seems to have been slung around the neck, leaving both hands free to wield their main offensive weapon, the *sarissa*, a pike of 18–21 feet (5.5–6.5 meters). The relative lightness of the infantry contrasts with the Macedonian cavalry, which was equipped heavily enough with various types of cuirasses, helmets, slashing swords, and stout spears that it could operate as the striking arm of Alexander's army. In the third century the Macedonian cavalry panoply would become even heavier with the addition of a large shield.

Although the soldiers of the early Roman republic were likely armed with the hoplite panoply, by the time of Rome's expansion beyond Italy their equipment had evolved considerably often, incorporating the weapons of their opponents. Among the heavy infantry, the thrusting spear gave way to the heavy javelin, or *pilum*, along with the Spanish sword, the *gladius hispaniensis*, while the large round shield was replaced by the oblong *scutum*. Armor consisted



Hoplites in combat. Red figure pelike-type vase attributed to the Greek vase painter Smikros, sixth century BCE. (Réunion des Musées Nationaux/Art Resource, NY)

of small breastplates or mail coats and hemispherical helmets.

In the Roman Imperial period, chain mail continued in use along with scale armor, while the famous *lorica segmentata* formed from iron bands held together by internal straps was used through the second century CE, and the legionary scutum evolved into the curved rectangular-shaped shield prominently displayed on various monuments. Various other types were used by auxiliaries.

More dramatic changes begin to become visible in the third century. Although the long sword, or *spatha*, was originally adapted from Celtic types for use by Roman cavalry, it eventually came into more general use. Perhaps more significantly, finds of scale armor horse trappings on the eastern frontier dating to 250 CE indicate the presence of heavy cavalry, which would play a more significant role on the battlefields of late antiquity and the Middle Ages.

—Joseph Frechette

Bibliography

- Bishop, M. C., and J. C. Coulston. *Roman Military Equipment: From the Punic Wars to the Fall of Rome*. Oxford, UK: Oxbow, 2006.
- Connolly, Peter. *Greece and Rome at War*. London: Greenhill Books, 1998.
- Snodgrass, Anthony. *Arms and Armour of the Greeks*. Ithaca, NY: Cornell University Press, 1967.

Development of Iron Arms and Armor

Iron arms and armor led to a revolution in warfare during the early first millennium before the Common Era. Although iron had been known and used by men for centuries, it was not used in great quantities before this period because of the difficulties in working and refining most deposits. Gradually, iron replaced bronze in weapons and armor after 1000 BCE. When it did, it helped “democratize” warfare by making warfare more affordable and enabling states to field larger armies.

Iron was known to men by 2500 BCE. At first, it was considered a rare and valuable material because of its scarcity and the difficulty in working it. The first examples of iron objects were made from meteoric iron, which includes large amounts of nickel. Later, smiths found that beads of iron, which were a residue from smelting copper, could be hammered into a larger mass. This wrought iron was shaped into ornaments and objects that were reserved for royal or religious uses. Unlike copper or bronze objects, iron ornaments lacked pleasing colors and easily rusted. Their dark colors were somber and associated with death and war. Copper, especially when mixed with tin to form bronze, was much easier to work. The melting temperature was lower than iron, allowing smiths to develop techniques to cast copper and bronze products.

For warfare, bronze weapons and armor were harder and lighter than early iron ones. They offered many advantages, which calls into question why iron arms and armor replaced them. Early craftsmen were not able to control the amount of carbon in their iron, often resulting in iron that was brittle and unsuited for warfare. One reason may be the relative scarcity of

➤ SARGON II

Sargon II was one of the most militaristic rulers of a militaristic society. During his 16-year reign, the Assyrian Army carried out at least ten major wars or suppression campaigns. Sargon's victims included the kingdom of Israel and its capital of Samaria as well as Egypt, Elam, and Babylonia. Cyprus accepted Assyrian rule during this time, as did other states throughout the Middle East. Sargon's best-known campaign was against Urartu, beginning in 714 BCE. The terrain over which the Assyrians marched was difficult, but the highly organized and disciplined army was able to cope with it. Sargon defeated Rusa, king of Urartu, and his allies in a winter battle in late 714. As he marched on the Urartu capital of Tuspar, Sargon destroyed the cities and villages along the way. The Assyrians slaughtered the inhabitants in a calculated attempt to destroy the enemy's morale. Rusa fled without a fight, and the Assyrians destroyed Tuspar. Sargon later recorded in his description of the campaign that the despairing Rusa took his own life with his iron sword like a pig.

—Tim J. Watts

copper and tin deposits and their relative expense. As sources were depleted in some areas or when peoples were cut off from their supplies, such as those found in Syria, they tended to explore other options. The Hittites, for example, are widely regarded as the first group to use iron arms and armor on a large scale. Located in modern Asia Minor, their supplies of tin and copper came from as far away as Bohemia and Syria. When hostile powers controlled these trade routes, the Hittites were motivated to use other materials.

By around 1500 BCE, the Hittites had discovered techniques of heating and reheating iron in a charcoal fire to produce an iron that was harder than bronze and kept its sharpness longer. The process of mining iron and smelting it was expensive and time consuming. Only a limited number of weapons were made. The secret to forging iron weapons was closely guarded by the Hittites, and their use of iron weapons is often credited as the reason for Hittite successes.

After the Hittite empire broke up around 1200 BCE, however, the process became more widely known throughout the Middle East. As the ability to make iron weapons from widespread deposits of iron ore became more common around 800 BCE, iron arms and armor became cheaper.

The first people to use iron weapons on a large scale were the Assyrians. Iron daggers were issued to elite troops by 880 BCE, and by the eighth century BCE the term “iron dagger” became synonymous with warfare and bloodshed. At first, iron weapons remained exceptional. In the lists of tribute and spoils from different Assyrian conquests at this time, iron joins gold, silver, and bronze as a rare and valuable prize. As late as the sixth century BCE, contemporary Babylonian documents reveal that many spearheads were made from metals other than iron.

The Assyrians were surrounded by hostile states, and they responded aggressively. To carry out their policy of expansion and repression, the Assyrians required a large well-trained army. Most of their army consisted of heavy infantrymen. Under Sargon II, who ruled from 721 to 705 BCE, the infantry was completely equipped with iron arms and armor. The creation, storage, and distribution of these iron weapons to soldiers who needed them were major logistical accomplishments.

Assyrian infantrymen were armed with long spears with iron heads and a straight iron sword. They wore knee-length iron mail armor and carried small iron shields. A conical iron helmet, lined with wool, protected their heads. High leather boots, reinforced with iron plates, protected their legs. Archers and cavalrymen were also equipped with iron weapons and armor. Between 890 and 650 BCE, the iron-equipped Assyrians were the most important army in the region.

—Tim J. Watts

Bibliography

- Bryce, Trevor. *The Kingdom of the Hittites*. New York: Oxford University Press, 2005.
- Buehr, Walter. *Warriors' Weapons*. New York: Crowell, 1963.
- Saggs, H. W. F. *The Might That Was Assyria*. London: Sidgwick and Jackson, 1984.

The Invention of Crossbows

Crossbows are a further variation on the basic concept of the bow and arrow. Although there have been a variety of designs of this type of device, in general a bow is attached to a stick (called a stock), and the string is cocked and released by some sort of mechanism. The projectiles fired from them are usually referred to as bolts in ancient contexts. Crossbows provide a number of improvements to simple bow and arrow technology depending on the particular design, but usually they lower the amount of force required to draw the string (and thus fire the projectile) and can increase the speed at which projectiles can be fired.

The writer Heron of Alexandria describes a fourth-century BCE innovation called a *gastrophetes*, which means “belly-bow.” This type of crossbow was called this because the user would rest one end of the device against his belly. By pushing down with much force, the user could fire with much more power than by simply drawing a bow. The *gastrophetes* was large and consisted of a stock made of two cases, an upper and a lower (the lower was the part of the stock attached to the bow). The Greeks also utilized a larger-sized version of this device called an *oxybeles*, which was essentially a bow attached to a stand and used primarily as a siege weapon. The development of torsion spring technology (springs that are twisted) allowed for the development of a better form of the *oxybeles* called the *ballista* that fired lighter projectiles faster and farther. The Romans adopted this technology and advanced it; their *ballistae* were more accurate and could fire farther.

Another ancient Greek device that represented experimentation in ballistic technology was the *helepolis*, a moving siege tower that fired *ballistae* from different levels. Its name means “taker of cities,” and that well reflects its function. The wheeled *helepolis* was pushed during combat, while two sets of stairs in the interior allowed people to travel between the different stories within the tower. The bottom of the tower fired large *ballistae* with catapults, intended to destroy fortifications. The upper level

THE COMPOSITE BOW

The composite bow is a bow made of more than one material; usually the differing materials are joined together with some tension, and this allows for a smaller bow that fires faster and farther than a simple bow. The earliest composite bows so far recovered were found in Egypt in King Tutankhamen’s tomb, and likely they have been in use since chariots were first used in combat (as arrows would have been shot from moving chariots). From 1000 BCE to 300 CE, the use of the composite bow became much more common, and various styles developed, being used specially by the Chinese and Parthians. Many of the innovations in these types of bow may have come from the dwellers of the Eurasian steppes, who certainly introduced some of these technologies to Europe. Various changes in composite bow form and style seem to be first attested on the steppe regions, and Roman writers credit these nomadic groups with various advances.

—Kevin M. McGeough

fired *ballistae* that were much smaller, intended to kill human opponents.

Crossbows may have been invented earlier in East Asia, although the first documentation of them in China is roughly contemporaneous with that of the Greeks. Mohist writers (the followers of Mozi writing as early as the fourth century BCE) write about giant crossbows used as catapults in the sixth century BCE. There is little supporting evidence for the crossbow’s use as early as that time, but certainly by the time the Mohists were writing, this type of weapon was common. *The Art of War* by Sun Tzu also mentions crossbows, attesting to their use. Bronze and iron artifacts that may be ancient crossbow bolts have been found dating to the Warring States period (403–221 BCE), and certainly by 200 BCE the crossbow was a staple weapon in Chinese warfare.

The repeating crossbow was a particularly effective weapon developed in ancient China. Ancient Chinese historians credited its invention to Zhuge Liang (181–234 CE), but it was likely invented much earlier. This particular type of

crossbow allowed all of the main actions of firing a crossbow to be performed one-handed and more quickly than with a regular crossbow.

—Kevin M. McGeough

Bibliography

- Campbell, D. *Greek and Roman Artillery, 399 BC–AD 363*. Oxford, UK: Osprey, 2003.
- Gurstelle, W. *The Art of the Catapult*. Chicago: Chicago Review Press, 2004.
- Needham, J. *Science and Civilisation in China*, Vol. 5, Part 6. Cambridge: Cambridge University Press, 2006.
- Wagner, D. *Iron and Steel in Ancient China: Second Impression, with Corrections*. Leiden: Brill, 1993.
- Warry, J. *Warfare in the Classical World*. Norman: University of Oklahoma Press, 1995.

Roman Forts

The building of forts was an important part of Roman military discipline: legions on campaign in hostile territory were expected to build fortified camps at the end of a day's march to ensure their safety. The ancient historian Polybius has provided us with perhaps the best description of these marching camps. According to his account, such forts were rectangular in shape and were protected by both a ditch and a wall of wooden stakes. The tents within the camp were set up according to a regular pattern, which re-

flected the subdivisions of the Roman Army. This preset arrangement in turn helped ensure that Roman troops could erect their camps in as little time as possible. It has been suggested that the regularized layout of Roman forts may ultimately hearken back to the colonies, similarly built to a regular plan, that the Romans established as early as the fourth century BCE during the course of their expansion in Italy. A number of marching camps from the republican period have been excavated, although contrary to Polybius's account some of them are polygonal rather than strictly rectangular in shape, showing that the Romans could alter the standard fort plan when they saw fit.

In general, however, Roman forts of the late republic and early empire continued to be rectangular in shape and standardized in the layout of interior buildings. The two most important buildings, located at the center of a typical fort, were the *praetorium* and *principia*. The praetorium was the residence of the fort's commander, while the principia housed the standards and military shrine of the troops occupying the fort as well as administrative offices.

Roman forts of this period did not always take advantage of local topography like later medieval castles. The former were not meant to withstand long sieges by an enemy army but instead were intended to act as staging posts for Roman troops before they marched out and drove off the en-

➤ HADRIAN'S WALL

Unlike his expansionist predecessor Trajan, the emperor Hadrian consolidated the territory that Rome already held. In line with this policy, construction on Hadrian's Wall, much of which is still extant, was begun in the early 120s CE. In its final form, Hadrian's Wall consisted of a line of fortifications extending some 80 Roman miles (about 75 miles or 120 kilometers) between the Tyne and Solway rivers in northern England. The fortifications were made up of a stone wall some 13 feet (4 meters) in height, with watchtowers and fortlets incorporated into the wall at regular intervals. A ditch with earthworks, some 118 feet (36 meters) wide in total, was situated north of the wall.

—Christopher Epplett



Hadrian's Wall, England. (Corel)

emy. Over time, however, the Romans did make their forts defensible by, among other things, building them in stone instead of wood and by building larger projecting towers, with a wider field of vision, into the fort walls. Both of these developments began in the second century CE as the Romans sought to consolidate the territory they had conquered up to that point. Other examples of this consolidation include the elaborate fortified zones that the Romans built on the frontiers, most notably the Limes in Germany and Hadrian's Wall in England.

In the later empire as the frontiers increasingly came under military threat, the design of Roman forts changed significantly. Forts of this period were built to be much more defensible and were designed to be able to withstand sieges until reinforcements could arrive. Late imperial Roman forts, unlike their predecessors, often were built on high points of land or other defensible topographical features and were often irregular in shape so as to take advantage of such features as much as possible.

—Christopher Epplett

Bibliography

- Breeze, David J., and Brian Dobson. *Hadrian's Wall*. New York: Penguin, 2000.
- Johnson, Anne. *Roman Forts of the 1st and 2nd Centuries AD in Britain and the German Provinces*. London: St. Martin's, 1983.
- Miller, M. C., and James G. DeVoto, trans. *Polybius and Pseudo-Hyginus: Fortification of the Roman Camp*. Chicago Ridge, IL: Ares, 1994.
- Schönberger, H. "The Roman Frontier in Germany: An Archaeological Survey." *Journal of Roman Studies* 59 (1969): 144–170.

Trophy Head Cult

Trophy head cults are associated with Stone Age societies across the world. However, the practice was not limited to a few individual shrunken heads that captured the spirit and power of an enemy or ancestor. Crossover evidence of human sacrifices, war captives, ancestor veneration, and modified craniums indicates that trophy head cults were not uncommon before the modern era. The practice was most widespread along the Pacific Rim and reached its height in the pre-Columbian Americas.

SKULL RACKS IN MESOAMERICA

Skull racks represent the largest scale evidence of trophy-head taking. The practice was common throughout Mesoamerica, based on archaeological finds. Even the Mixtec codices or bark books feature skull racks in their portrayals of cities and civic centers. Most racks were associated with war captives and the sacking of cities. The practice has some similarities with Bronze Age warfare displays of the dead in other parts of the world. Mediterranean and Asian practices of displaying dead bodies on poles was often done one at a time, thus indicating the efficiency and development of the practice in Mesoamerica.

—Christopher Howell

Indonesian and Australasian indigenous societies practiced the cult into the twentieth century, and Stone Age Papua New Guinea groups may still do so. Africa and central Asia had some war trophy cults too. In southwestern North America rock art depicts trophy heads, while moundbuilding societies of eastern North America also employed the practice, probably in warfare. Amazonian and circum-Caribbean peoples have evidence of trophy cults as well.

However, in the Andes and Mesoamerica trophy head cults reached their greatest extent. In the Andes by the last millennium BCE evidence of the cults is found in iconography at Cerro Sechin, with sacrificed captives having heads and other body parts removed. The sacred site of Chavín displayed trophy heads in its temple area, the first known instance of trophy heads in association with a civilization's most sacred architecture. By the first millennium CE the Nazca culture regularly portrayed trophy heads on ceramics and textiles while also mummifying them. One study of 150 Nazca trophy heads found that 93 percent were adult and 7 percent were children. Men became much more common than women as time went on. Cerro Carapo alone yielded 48 male trophy heads. The Moche on the northern coast of Peru ritualized human sacrifice and head taking on their pottery and in their temple pyramids. They developed a special crescent-shaped copper knife, or *tumi*, for the rituals, although obsidian knives were the common choice for most North

American indigenous trophy head cults. The Wari, Tiwanaku, and Inca civilizations continued this tradition of taking trophy heads. Trophy heads in the Andes were often displayed in roped groups and were hung by holes drilled in the cranium, based on iconography and skeletal evidence.

In Mesoamerica the practice reached its greatest scale. Although early Olmec, Maya, and Teotihuacan cultures have evidence of the cult, it was warlike nomads from the north who institutionalized it into their warfare systems. These Chichimec peoples developed the skull rack, or *Tzompantli*, to display sacrificed war-captive trophies. A pole was run through a series of heads, and the poles were stacked up in skull racks that could number in the hundreds or even thousands of trophy heads. The practice reached its height in later Toltec and Aztec times. Even the few bark books left indicate that skull racks had become an integral part of civic architecture by that time.

—Christopher Howell

Bibliography

- Chacon, Richard, and Ruben Mendoza. *Latin American Indigenous Warfare and Ritual Violence*. Tuscon: University of Arizona Press, 2007.
- Tung, Tiffany. *The Taking and Displaying of Human Body Parts as Trophies by Amerindians*. Edited by David Dye and Richard Chacon. New York: Spring Press, 2007.

Replacement of the Atlatl by Bow and Arrow in North America

The earliest known atlatl from North America comes from Lake Winnemucca, Nevada, located in the Great basin, and dates to the early Holo-

cene (10,250–8,000 years before the present). Others have been recovered from rock shelters and caves throughout the Great basin, the Southwest, and Baja California and as far east as the Ozarks in Arkansas and Missouri.

Operationally, the atlatl was composed of two parts: a handle and a dart. The handle was either carved or possessed one or two loops through which the hand or two fingers were inserted. Articulation with the dart occurred at the end opposite of the handle and was effected by a “male” or a “female” member or a combination of both. The “male” type dart handle contained a projecting part that was inserted into a concavity in the dart. The “female” type, on the other hand, possessed an indentation at its contact point with the dart. Consisting of these two parts, the atlatl was used by indigenous North Americans from the Late Pleistocene through the Middle Holocene, when it was slowly replaced by the bow and arrow.

When exactly the bow and arrow replaced the atlatl is unclear. In many parts of North America there was a significant temporal overlap between these two technologies. Based on arrowheads found in the Southwest, the Great basin, and the Ozark region, the first bow and arrows began to appear around 5950–3950 years before the present. For example, a decrease in projectile point size around 4,000 years before the present is commonly regarded as marking the replacement of the atlatl by the bow and arrow across the Great basin. On the other hand, replacement of the atlatl with the bow and arrow in the Plateau region appears to have happened several hundred years later. As indicated by a decrease in the overall width, and especially neck size, of the projectile points found along the Columbia River, the shift from atlatl to bow and arrow was complete approximately 2,000 years before the present. However, in parts of the eastern Woodlands, evidence indicates that the bow and arrow was not universally adopted until around 1,400 years before the present. Across all regions, however, adoption of the bow and arrow appears to have varied largely in response to social, historical, and environmental conditions.

—Peter N. Jones

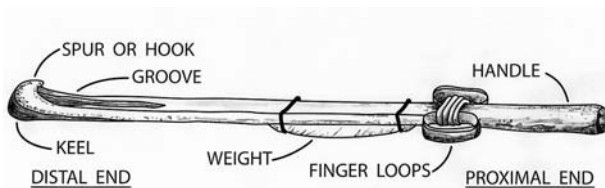


Illustration of an atlatl, or spear thrower. (Gail Saunders-Boyle, U.S. Forest Service)

WARFARE IN THE SOUTHEAST

During the Late Woodland period (ca. 500–1000 CE) in the region now referred to as the Southeast in the United States, evidence indicates that relatively large-scale forms of intergroup warfare took place. This period was characterized by population increases, growths in settlement size, and the saturation of the landscape with scattered family groups and small communities. As a result of these factors, prehistoric peoples of the Southeast during this period constructed palisaded villages as a defensive measure to the increasing

intergroup warfare. Furthermore, several small triangular arrow points have been found embedded in human skeletal remains from the period, indicating that peoples of the region were in regular conflict with other groups. Because these arrow points were manufactured from nonlocal chert, it has been concluded that warfare took place on an interregional scale and was not confined to just a few communities in one region.

—Peter N. Jones

Bibliography

Hester, T. R., M. P. Mildner, and L. Spencer. *Great Basin Archaic Studies*. Ramona, CA: Ballena, 1974.

Nassaney, Michael S., and Kendra Pyle. "The Adoption of the Bow and Arrow in Eastern North

America: A View from Central Arkansas." *American Antiquity* 64(2) (1999): 243–263.

Patterson, L. W. "Current Data on Early Use of the Bow and Arrow in Southern North America." *La Tierra* 19 (1992): 6–15.

Introduction: The Arts and War

The celebration of warfare, the accomplishments of the state's military, and the heroic deeds of individuals have long inspired the creation of art. In many cases this art is state sponsored, that is, leaders commission the creation of this art for their own political purposes, as was the case in Rome and Assyria. In other instances, the art is inspired by the individual artist's own interests, such as Sun Tzu's desire to write a manual on warfare, a desire that led to the creation of one of the world's great literary masterpieces. Sometimes what is now considered ancient art was not intended as such initially, as is the case with the Chinese terra-cotta warriors, clearly masterpieces of sculpture, yet the ancient sculptors never intended these life-size statues to be viewed by humans. What follows are some examples of the different ways in which the theme of war was explored by artists from 1000 BCE to 300 CE.

—Kevin M. McGeough

Sun Tzu and *The Art of War*

As the progenitor of East Asian military texts, *The Art of War* was purportedly written in the late sixth century BCE by Sun Tzu, also known as Sun Wu. From military strategy to modern business practices, from the formation of Chinese empire in the third century BCE to the establishment of the People's Republic of China in 1949, *The Art of War* remains one of the most influential treatises in political and military thought in East Asia to the present day.

The life of Sun Tzu is shrouded in obscurity. There is no mention of him in sixth-century records; an early Han period history compiled by Sima Quan (145–85 BCE) states that he was a contemporary of Confucius and was originally from the state of Qi but gained notoriety as a renowned general serving the state of Wu. If this is accurate, Sun Tzu wrote his treatise at the height of the Hundred Schools of Thought (722–221

➤ IMPACT OF *THE ART OF WAR*

Perhaps no other military treatise in the world has been applied to so many nonmilitary issues as has *The Art of War*. Throughout Chinese history, this treatise was a model for some Daoist movements that sought solutions to conflict embedded in everyday life. Even certain Daoist sexual practices that instructed men on how to “conquer” women by acquiring their Yin essence without transferring the men’s Yang essence are couched in the terminology of *The Art of War*.

The application of Sun Tzu’s wisdom to nonmilitary subjects continues to this day, most notably in the dog-eat-dog world of business. Inspired by postwar Japanese business tactics, many Western corporate executives adopted *The Art of War*, formulating in turn the “Art of Business.” Book after book promoting the tenets of Sun Tzu has been published since the 1980s interpreting the vocabulary of war for the average, ambitious Western businessperson. The “enemy” became business competitors, “territory” was reinterpreted as “the market,” and “planning” became “market analysis” in the lingo of the warriors of the capitalist world.

Sun Tzu, however, is not just limited to Asian history and business. Football coaches attribute their teams’ victories to its counsel. Self-help gurus proclaim its value as a guidebook for self-improvement. Political analysts proffer *The Art of War* solutions to government gridlock. Sun Tzu inspires strategies for improved Internet security. Even in Hollywood, *The Art of War* finds a place on the shelf of Tony Soprano. Wherever competition and conflict affect human society, individuals have been inspired by the words of Sun Tzu for over 2,000 years.

—David G. Nelson

BCE) when, amid the conflict of warring feudal kingdoms, Chinese culture experienced a proliferation of philosophical traditions such as Confucianism, Legalism, Daoism, and Yin-Yang. Whether or not Sun Tzu was a historical or merely legendary military figure, by the fourth century BCE the Sun family held a reputation as military strategists. Sun Bin (380–316 BCE) of Qi was a highly regarded military adviser and an author of his own military treatise that reflects the influence of *The Art of War*.

The origins of *The Art of War*, therefore, are uncertain. The earliest extant versions, written on bamboo strips tied together by silk thread, only date back to the third century BCE. The work in its current form is divided into 13 chapters, but these divisions do not always present a coherent theme. This seeming disorder combined with a succinct, sometimes overly simple writing style, similar to many other early Chinese texts such as *The Book of Changes* or the *Dao de Jing*, leaves the passages open to interpretation and readily applicable to nonmilitary pursuits. The influence of Daoism, Legalism, and Yin-Yang are apparent throughout the work, giving evidence to the treatise’s assembly, if not its creation, during the intellectual milieu of the Hundred Schools of Thought.

The Art of War presents overarching principles of military strategy, seldom delving into specific instructions for military organization, troop movements, or battlefield tactics. Underlying all of Sun Tzu’s writing is the concept of *shi*, or potential energy/advantage. Victory, the text proclaims, comes through the understanding and use of the *shi* in any given set of circumstances that a military force may face. In all of this, Sun Tzu reminds the reader that the successful general adheres to a sort of economy of energy, avoiding the wasteful use or destruction of resources, even those of the enemy. *The Art of War*, then, is a guide to attaining victory through the least-destructive means and proffers four basic principles that have guided military strategists for more than 2,000 years, namely adaptation, planning, deception, and leadership.

Adaptation refers to the use of *shi*. Like the Daoist sage, a superb general is aware of the natural ebb and flow of a given situation and has the ability to select the most economical means of attaining victory or, if need be, to avoid conflict altogether if the *shi* indicates imminent defeat. In order to understand the *shi*, the general must know both his own and the enemy’s strengths and weaknesses, the overall morale of the men in both camps, and the climate and the topography of the land. *The Art of War* returns several times to the subject of geography, providing an in-depth analysis of the kinds of land in which an army may find itself and the kind of offensive or defensive action to which the ter-

rain is best suited. All of these factors determine the shi, and the victorious general then accordingly adapts in order to align the shi with campaign objectives. Because every situation is unique, Sun Tzu excluded specific formulas for victory. Relying upon previously successful strategies will not necessarily lead to victory because it is impossible for the variables of any two similar situations to be identical.

The Art of War proclaims that planning and preparation are the key to victory, that the battle is merely an epilogue. After determining the shi of the circumstances at hand, one makes the appropriate preparations. The victorious general is one who has assessed his own battle readiness, improved the country's strength through alliances, and gathered intelligence on the enemy. *The Art of War* emphasizes the role of espionage for this reason; spies are a vital source of information about the adversary and hostile terrain and are to be carefully cultivated. Through proper planning and preparation—a show of force and strength—war may not even be necessary, thus adhering to the Daoist ideal that a true warrior will never have need to go to war.

Perhaps the most famous line of *The Art of War* is “The Way of War is a Way of Deception” (Minford, 6). After assessing conditions, the able general does everything in his power to redirect the shi to work in his favor. Trickery and espionage play an important role in the development of strategy. For example, Sun Tzu counsels against attacking a well-fortified enemy; instead, a wise commander encourages the defenders to take the offensive, thus negating their strength of defense. It is through deception that the skilled commander convinces the enemy that the weaknesses and strengths of the opposing armies are greater or lesser than they are in reality. By doing so, the enemy is convinced to act precipitously. Sun Tzu hints at several methods of achieving this deception on the battlefield, such as simulating disorder in the ranks or feinting at secondary targets to disguise the real object of attack. In addition, *The Art of War* promotes the use of spies to confuse the enemy and sow the seeds of discontent. Even enemy spies can be useful by turning them into double agents, thereby feeding false information to the enemy and fostering doubt or overconfidence in

order to encourage the enemy to make a move not in their best interests.

Ultimately, however, the character and ability of the commander determines victory or defeat. For Sun Tzu, a great general must be able to multitask. The general must be a tireless and astute observer of ground conditions and be shrewd enough to interpret gathered intelligence. He must be able to recognize or create key opportunities and exploit them immediately. Finally, he must have complete authority over his forces and be able to inspire loyalty and discipline among his subordinates. It is in this way that the general, adhering to the ideals of *The Art of War*, embodies the various strands of Chinese thought. He is the embodiment of Daoist harmony through an intuitive understanding of the universe. At the same time, he is grounded by Legalist principles of discipline that reinforce his authority and is tempered by an almost Confucian sense of moral leadership though a basic concern for the morale and well-being of his troops and a hesitancy to utilize destructive means. This combination of ideals makes Sun Tzu's precepts appealing and approachable to a broad spectrum of East Asian society, making *The Art of War* influential throughout the millennia not only in China but also in Japan, Korea, Vietnam, and more recently the Western world.

—David G. Nelson

Bibliography

- Lord, Carnes. “A Note on Sun Tzu.” *Comparative Strategy* 19 (2000): 301–307.
- Sawyer, Ralph D. “Military Writings.” In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.
- Sun Tzu. *The Art of War*. Translated by John Minford. New York: Penguin, 2003.
- Waley, Arthur. *The Way and Its Power: The Tao Te Ching and Its Place in Chinese Thought*. London: Waverly, 1934.

The Chinese Terra-Cotta Warriors

Terra-cotta figurines of humans or animals, made of baked or hardened clay, were a common form of artistic expression by ancient people. Terra-cotta has been unearthed across much



Terra-cotta warrior from the mausoleum of China's first emperor, Qin Shi Huang. (Lihui/Dreamstime)

of China and can be found across a wide range of historical periods. A highly significant discovery was of the terra-cotta warriors unearthed in the 1970s near Xian, China. These terra-cotta warriors were manufactured and interned more than 2,000 years ago as part of the elaborate burial site of the First Emperor of China, King Zheng of Qin, who died in 210 BCE. The artifacts discovered at this site remain unsurpassed in terms of the number, scale, variety, and level of technological sophistication as well as how much they reveal to us about the past. The Chinese terra-cotta warriors have been exhibited all over the world since their discovery, making them a symbol of the past glory of China along with other historic icons such as the Great Wall and Grand Canal.

Xian, located in the northwest of China in the basin of the Yellow River, is an area known

as the cradle of Chinese culture. With its strategic location and rich resources, it served as the base of the capital for the powerful Qin, Han, and Tang dynasties. By the nineteenth century, however, the region's glory faded as the desert crept in. In the 1970s, locals launched a large-scale well-drilling movement in this now-barren land. One of the drilling teams, while working near the ancient burial site of the First Emperor, stumbled into a terra-cotta statue, and thus began the unveiling of a unique historical site.

The digging has continued since this first accidental discovery. There are three pits, occupying an area as large as about 5 acres (56 square kilometers). The best preserved and best restored is Pit Number Two, which most visitors see. In this pit alone, about 8,000 warriors, 600 horses, and 100 chariots are housed by a large well-designed hall, all positioned in various battle formations. The warriors stand about 6 feet (180 centimeters) tall, larger than life-size. Many of the warriors wear armor made of leather or metal plates. Some of the warriors are standing, while others are kneeling on one leg, apparently prepared for battle. All of the warriors are equipped with actual weapons; while the wooden staffs of a spear tend to be rotted or entirely vanished, many metal swords remain intact, some still razor-sharp. The consistency in these weapons reveals that the state must have maintained arsenals that mass-produced weapons to specified standards.

Many parts of the terra-cotta warriors are apparently mass-produced, too. Their hands come in two forms, for example, either open or holding onto something. But each one of these warriors bears unique facial features, so much so that the scholars speculate that the makers modeled the terra-cotta after actual soldiers. Some warriors have beards, whereas others do not. Since their size is slightly larger than the average adult, it is assumed that the physically fit royal guards served as the models for the sculptors.

The Chinese terra-cotta warriors tell us a great deal about the dramatic social and political changes that occurred during the Qin dynastic period. The statues indicate that all of the warriors bound their hair together to make a notch on the top of the head, apparently a common practice in the military at that time, similar to

short hair for today's soldiers. This presents a sharp contrast to earlier practices related to hair. During an earlier period, the Western Zhou political order, founded in the eleventh century BCE, enforced elaborate rituals. Central to this political order was extended kinship groups that permeated the whole of society. Consistent with this attitude, body hair was considered one's inheritance from forefathers and was treasured; keeping one's hair long was a sign of filial piety. Gentlemen's hair tended to grow long and was left spread on the back. This custom might have worked during peacetime but likely was a nuisance on the battlefield. The Qin soldiers adopted a new hairstyle, perhaps better adapted to their social role.

Anyone who has seen the Xian terra-cotta warriors may well remember the confident and inspired expressions on the soldiers' faces. Indeed, the Qin soldiers were known for their high morale, earning a reputation as "troops of wolves and tigers" among their contemporary rivals. Such high morale stemmed from reforms initiated in the 330s BCE that continued through the next century. As a result of the reform, anyone, regardless of his family background, was promoted according to military achievement. Assigning roles based on merit was a new concept at that time, for most other warring states still held onto the old norms that only the noble of birth could move up the social ladder. It is no wonder that it was the Qin state that eliminated all other states and unified China.

The grandeur of the terra-cotta warriors also reflects the awe-provoking state power of the Qin. Located on the edge of the then-Chinese world, the Qin had long been a marginal polity, insignificant to the intrigues of the warring states. In his reforms, however, the Qin prime minister, Shang Yang, followed the principles of Legalist thinking that emphasize royal power, often at the expense of the hereditary nobility. For example, the state recognized and legalized private land ownership and thus levied taxes directly from the peasantry. This allowed the state to tap into a much larger pool of resources rather than relying on the smaller resources of the nobility; consequently, the state grew more powerful and took control of many aspects of social life. The standardization in the

manufacturing of military equipments as well as of the mass production of the terra-cotta warriors is only one manifestation of this strong state power.

The creation of the Chinese terra-cotta warriors owed much to one single person, Yin Zheng, who presided over the unification war in the late third century BCE. After the unification in 221 BCE, King Yin Zheng believed that his achievement surpassed any other rulers in the past and that the title "king" could no longer reflect his great accomplishment. He therefore adopted for himself a new title, *huangdi*, or "emperor." He thus became the First Emperor of China, while his son, in this design, would be the second, with the imperial line intended to last forever. Yin Zheng began to build his mausoleum long before his death. Believing that he might continue his powerful rule in the afterlife, he devoted a large share of the state resources to the building of this mausoleum. His imperial line did not last long, however, and his dream of carrying on his power in the afterlife was a vanity as well, but his intent and effort left behind among other things an invaluable treasure in his stern guardians, the terra-cotta warriors.

—Yi Li

Bibliography

- Ebrey, Patricia B. *Cambridge Illustrated History: China*. New York: Cambridge University Press, 1996.
- Fairbank, John K., and Merle Goldman. *China: A New History*. Cambridge: Harvard University Press, 2006.
- Hansen, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.

Assyrian Battle Reliefs

The Assyrians of northern Iraq dominated the ancient Near Eastern world from the ninth through the seventh centuries BCE. This period is called the Neo-Assyrian period, when the kingdom was at the height of its power and its charismatic rulers built palaces in the cities of Nimrud, Nineveh, and Khorsabad. Monumental relief sculptures on the palace walls celebrated the king in his various roles of office, illustrating royal feasts, religious ceremonies, building

► STELE INSCRIPTION OF KING TIGLATH-PILESER (737 BCE)

“[Foreign] lands larger [than] the territory of Assyria I captured.

Countless people unto its people I added;
I continuously herded them in safe pastures.
I [am] Tiglath-Pileser, king of Assyria,
who from East to West, personally conquered all
the lands.”

—Stephanie Reed

Source

Hayim Tadmor, *The Inscriptions of Tiglath-Pileser III, King of Assyria* (Jerusalem: The Israel Academy of Sciences and Humanities, 1994), 105, Col. II B, 15ff.

projects, hunting expeditions, and military campaigns. The fierce battle sequences documented the aggressive territorial expansion of Assyria and are rich with historic details that provide information on military equipment and techniques as well as the architectural and environmental features of enemy lands.

The late palace reliefs evolved with the growing complexity of the state, focusing on the king's role of heroic warrior. Battle narratives became more prevalent and more intricate in the palaces of Sennacherib (704–681) and Ashurbanipal (ca. 668–627) at Nineveh, whose reigns were incidentally plagued by rebellions. The sculptors began to release the narrative sequences from traditional registers, creating sweeping intricate landscapes. A famous example was Ashurbanipal's *Battle of Til-Tuba*, where the artist crafted a battleground of ordered chaos: the viewer was guided through the melee by following the doomed flight of the Elamite king, culminating in the gruesome display of his head in Ashurbanipal's arbor.

Although an Assyrian victory was always assured, the sequences were action-oriented and compelling, unfolding the siege from its initial assault to victorious conclusion. By portraying the invincibility of the Assyrian war machine and the harsh consequences of rebellion, the narratives discouraged potentially disloyal visi-

tors and palace officials. In Assyrian royal ideology, war was justified as a divine ordinance: a worthy monarch expanded the land of the state god Ashur and his peoples, bringing foreigners into the god's "flock." A fascinating yet disconcerting aspect of the Nineveh narratives was the prevalence of foreign captives and the care taken to represent them. The Assyrian artists documented the progression of deported families from their ravaged homelands, illustrating fathers carrying children on their shoulders and mothers with babies at their breasts. One special rendering captures a Chaldean woman stooping to give water to her thirsty child. A few scenes even depicted captives guarded in Assyrian camps, eating and making lively conversation with one another. Their faces were standardized and seemingly impassive, but the clever use of body posture and gesture conveyed actions and emotions.

The late battle narratives juxtaposed rebel warriors being tortured or killed with deportees who were relatively well treated and often illustrated with startling sensitivity. Like any good story, there is a thematic tension between triumph and tragedy, drawing the audience into the action. This perceptible tension may, however, have been more than a narrative device: scholars observe the existential anxiety that pervaded Mesopotamian art throughout the millennia, reflecting the belief that man's purpose was to placate a capricious pantheon of gods. The reigning monarch was the human mediator of their desires; the seeming ironies within palace propaganda may therefore have reflected the king's struggle to visually harmonize his practical and theological responsibilities as well as his dual role of invincible conqueror and moral shepherd.

—Stephanie Reed

Bibliography

- Barnett, Richard David. *Sculptures from the North Palace of Ashurbanipal at Nineveh (668–627 BC)*. London: British Museum Press, 1976.
- Barnett, Richard David, Erica Bleibtreu, and Geoffrey Turner. *Sculptures from the Southwest Palace of Sennacherib at Nineveh*. London: British Museum Press, 1998.
- Reade, Julian. *Assyrian Sculpture*. 2nd ed. London: British Museum Press, 1998.

The Greek Celebration of Victory over the Persians

In 479 BCE King Xerxes of Persia attempted to conquer Greece with an enormous army. Many of the Greek city-states formed an alliance and, against the odds, successfully repelled the invaders. While Greece had never been a politically unified region, the Greeks did have a sense of their collective identity through a common language, religion, and culture and a sense of pride in that identity. Their defeat of the Persians gave the Greeks an idea that their victory was due to divine favor. According to the Greek point of view, their civilization was part of an ongoing righteous struggle against the forces of tyranny. Their victory represented the greatness of Greece, civilization's triumph over barbarism, and divine punishment of the impious. These themes were expressed in the artistic programs on monuments of the fifth century BCE using mythological allegory.

The Temple of Zeus at Olympia, begun around 470 BCE, carried a sculptural program consisting of two decorated pediments at each end of the temple, six sculpted panels behind the columns of each porch, and the colossal cult statue of the god. The themes of this sculptural program were a tribute to the greatness of the Greeks. The east pediment showed the story of the founding of the Olympic Games. Games such as these were shared by all Greeks, a symbol of their unified front. The west pediment displayed an allegory of the savage versus the civilized, a battle between the savage centaurs (half-horse creatures) and the Greek warriors who were defending their women. The panels, or metopes, showed the labors of Hercules, the national hero and ancestor of the Greeks. The story of his labors recounted how he won glory defeating not only the monsters he fought but also the tyranny of the king whom he was serving. On the throne of the statue of Zeus inside the temple was a depiction of the Niobids who were killed because their impious mother had claimed to be greater than a mother of gods. Although a connection to the Greek victory over the Persians is not made explicit, implicitly the Greek viewer would be reminded of the Persian threat to Greece through these allegorical references.

THE PARTHENON METOPES

The four sides of the Parthenon contain sculptured panels, unified by a theme of civilization triumphing over barbarism. On the east side of the building was depicted the battle of the Olympian gods against their divine predecessors, the Giants. The gods had won this battle and the right to rule the universe. On the north side was shown the Trojan War, a tale of a unified Greece defeating a powerful kingdom of the east. On the west side were panels of the Greeks fighting the semianimal centaurs. The south side showed a battle between the Greeks and the legendary women warriors, the Amazons.

—Angela Murock Hussein

The decorative program of the buildings of the Athenian Acropolis was a celebration of Athens and its essential role in the defeat of the Persians. This was a significant place to celebrate the victory because the Acropolis had been sacked and occupied during the Persian invasion. Beside the entrance to the Acropolis was the small Temple of Athena Nike, a shrine to victory, specifically that of Athens over Persia. The Parthenon, an impressive temple to Athena, displayed decorated pediments, sculpted metopes on all four sides of the structure, a sculpted frieze around the inner building, and a large statue of Athena inside. The myths pictured in the metopes were all stories of warfare in which the forces of civilization defeated the forces of barbarism, more allegorical references to the war with Persia. Three of these same stories appeared again in elements of the cult statue of Athena inside the building. The pediments and the frieze on the temple's exterior glorified Athena and her city.

—Angela Murock Hussein

Bibliography

- Ashmole, B., and N. Ylouris. *Olympia, the Sculptures of the Temple of Zeus*. London: Phaidon, 1967.
- Brommer, F. *The Sculptures of the Parthenon: Metopes, Frieze, Pediments and Cult Statue*. London: Thames and Hudson, 1979.
- Hignett, C. *Xerxes' Invasion of Greece*. Oxford, UK: Clarendon, 1963.

Roman Battle Reliefs and Arches

The Romans celebrated their successful military campaigns in a variety of visual formats, but two genres of military commemoration that are well preserved today are historical reliefs and arches. One of the earliest Roman historical reliefs now extant depicts a battle from the monument of L. Aemilius Paulus at the sanctuary of Apollo at Delphi, Greece. This depicts the Battle of Pydna (168 BCE) between the Romans and the Macedonian king Perseus. The theme of pitched battle continued to be a popular one on Roman reliefs for many centuries, with some of the most famous examples including the second-century CE Column of Marcus Aurelius and the fourth-century CE Arch of Constantine, both in Rome.

Some of the most famous martial reliefs in the Roman tradition are, however, depictions not of battles themselves but of events preceding or following the battles. Examples include the reliefs that depict triumphal processions

(victory parades) such as those on the Arch of Titus, which commemorates the capture of Jerusalem in 70 CE. Another example is the ribbon of scenes spiraling up the Column of Trajan (second century CE) that depict camp building, *adlocutio* (speechmaking), sacrifice, and other scenes related to Trajan's two Dacian Wars. The fact that these scenes far outnumber the few actual battle scenes on the column may have been intended to demonstrate that Trajan, whose background was military, also had the necessary civilian skills to make a good emperor.

Roman commemorative arches are sometimes known as triumphal arches because many of them are associated with generals who were granted a triumphal procession after a successful military campaign. The first commemorative arches were constructed in Rome by Lucius Stertinius in 196 BCE in the Forum Boarium and in the Circus Maximus to celebrate Stertinius's victories in Further Spain. Shortly thereafter, in 190 BCE, the victorious general of the Second Punic War, Scipio Africanus, built an arch on the Capitoline Hill.

These earliest commemorative arches served as bases for statues and statue groups. None of the arches from the second and first centuries BCE is now extant, but evidence suggests that they probably had a single passageway. The first arch to break from this pattern may have been the so-called Parthian Arch, built to celebrate the Parthians' peaceful return of the Roman military standards that were lost in battle in 53 BCE. This arch was built in the Roman Forum in 19 BCE, and both excavations and numismatic (coin) evidence suggest that it had three passageways. The coins also depict a four-horse chariot (*quadriga*) above the central arch.

Extant arches that still stand in Rome today include the Arch of Titus, the Arch of Septimius Severus, and the Arch of Constantine, the latter of which commemorates, among other things, the Battle of the Milvian Bridge in 312 CE, a key moment in Constantine's rise to power.

—Ellen Perry

THE ARCH OF SEPTIMIUS SEVERUS



Arch of Septimius Severus at the Forum in Rome. (Andrew Kuchling)

The Arch of Septimius Severus commemorates that emperor's Parthian campaign in 197 CE. Reliefs over the side bay depict scenes from this campaign and may have been based on contemporary paintings.

—Ellen Perry

Bibliography

Dillon, S., and K. E. Welch, eds. *Representations of War in Ancient Rome*. Cambridge and New York: Cambridge University Press, 2006.

Kleiner, D. E. E. *Roman Sculpture*. New Haven, CT: Yale University Press, 1992.

Kleiner, F. S. *The Arch of Nero in Rome: A Study of the Roman Honorary Arch before and under Nero*. Rome: G. Bretschneider, 1985.

Ceramic Images of Moche Warriors

The Moche culture of Peru (100–800 CE) is noted for its particularly elaborate ceramic arts. Historians use the designs on these ceramics to reconstruct ancient Moche culture. One particularly noteworthy aspect of Moche life that can be reconstructed through the study of this pottery is warfare. Moche ceramics are replete with images of warriors, both modeled and painted. These figures are identifiable by their head-dresses, warrior garb, and implements. When modeled in three-dimensional form, they often appear kneeling and holding a club and shield. In the popular fine-line paintings, which occur on the bodies of numerous stirrup spout ceramics, the warriors perform a series of actions, termed the “Warrior Narrative.”

Warriors in Moche iconography commonly wear a conical-shaped helmet. Its displacement during combat signifies the defeat of the warrior. The warriors also regularly sport a back-flap, a trapezoidal metal sheet attached to the belt behind the body. The warriors commonly carry a shield—circular or square and too small to offer full-body protection—and a club, occasionally with a star or cone-shaped mace at the end. These objects have been found archaeologically in Moche contexts. There is further evidence of their use upon actual human sacrificial victims, based on osteological remains and objects recovered from the site of Huaca de la Luna in the Moche Valley, Peru. Other weaponry known from archaeological and visual contexts include spear throwers, spears, darts, and lances. Noting the verisimilitude of Moche iconography with material objects, it is significant that illustrated warriors fight largely with clubs and shields.

In the fine-line paintings on Moche ceramics, the warriors appear to progress through a series of actions (the Warrior Narrative). While

➤ MOCHE FINE-LINE PAINTING OF A WARRIOR AND EVENTUAL SACRIFICIAL VICTIM



The above image comprises half of a fine-line painted scene on a Moche stirrup spout bottle from a private collection. It depicts a nude victim with a rope around his neck and tattoos on his body. His conical helmet and club are carried by the victor behind him, who retains his apparel, helmet, club, and shield. The victor escorts the defeated captive through his grasp on the rope.

—Kimberly Jones

Source

Moche Archive, University of California, Los Angeles. Drawing by Donna McClelland.

many bottles show only one aspect of the narrative, those that show more than one allow for a sequencing of events. In the opening scenes, Moche warriors are seen running in a row carrying their weapons. By the following scene, they are engaged in one-to-one combat, fighting with clubs. The victors often grab the hair of the defeated or apply a harsh blow to the chin. The defeated opponent, who often bleeds from the nose, is then stripped of his weapons and garments, which are tied in a bundle taken by the victor. The naked prisoners, with ropes tied around their necks, are paraded through a site plaza. The narrative concludes with prisoners having their throats cut and their blood

collected, to serve to a high class of individuals in the Moche ritual system.

Significantly, Moche warriors never engage in large-scale battles or fight identifiable non-Moche individuals. The warriors are uniformly Moche in dress and nature. Therefore, current scholarly consensus maintains that the Warrior Narrative scenes depict ritual battles and their resultant sacrifices, a sociopolitical system established by the height of Moche society, from around 400–700 CE. The representation of anthropomorphized animal and plant warriors in Moche iconography, such as deer and bean warriors, supports the interpretation of a ritual and symbolic nature of the various warrior scenes. Nevertheless, the presence of ritual warfare and its representation does not negate the possible role of warfare in a larger political arena of Moche conquest and control. The full nature of Moche warfare and the role of Moche warriors

may be clarified through ongoing research and debate in Moche studies.

—Kimberly Jones

Bibliography

- Bourget, Steve. "Rituals of Sacrifice: Its Practice at Huaca de la Luna and Its Representation in Moche Iconography." In *Moche Art and Archaeology in Ancient Peru*, edited by Joanne Pillsbury. Washington, DC: National Gallery of Art and Yale University Press, 2001.
- Donnan, Christopher B. "Deer Hunting and Combat: Parallel Activities in the Moche World." In *The Spirit of Ancient Peru: Treasures from the Museo Arqueológico Rafael Larco Herrera*, edited by Kathleen Berrin. New York: Thames and Hudson, Fine Arts Museums of San Francisco, 1997.
- Donnan, Christopher B., and Donna McClelland. *Moche Fineline Painting: Its Evolution and Its Artists*. Los Angeles: UCLA Fowler Museum of Cultural History, 1999.

Thought and Religion

At some point in the first millennium before the Common Era, Siddhartha Gautama (the Buddha) was born, became “awakened,” and died. Scholars debate much regarding the life of the Buddha, but all agree that his teachings arose out of a period of Indian history in which wandering philosophers, known as *shramanas*, sought answers about the meaning and purpose of life. Siddhartha found his answers after first giving up a highly privileged existence and second after giving up a highly ascetic lifestyle. For the Buddha, a life based on moderation (the Middle Path) and contemplation was the path to awakening. His teachings formed the basis of the spiritual/philosophical practice that came to be known as Buddhism, which spread throughout Asia in the period from 1000 BCE to 300 CE and remains today one of the major world religions.

One of the truly remarkable aspects of Era 3 is the flourishing of religious and philosophical thought that occurred throughout Asia, Africa, and Europe at this time. During this period, Judaism emerged as a distinct religion (as opposed to an ethnic/political identity), and the religions of Zoroastrianism, Christianity, Buddhism, Confucianism, Jainism, and Brahminical Hinduism, among others, emerged. Religious traditions that have not lasted to this day but remained influential also emerged; for example, this is the period in which the Greek myths as they are known today appeared. This was the time in which philosophy emerged as a distinct sphere of intellectual activity and the foundations for modern philosophical thought were established.

Based on the observation that these major revolutions in philosophical and religious thinking occurred in China, India, the Near East, and Europe at around the same time, Karl Jaspers described the period from 800 BCE to 200 CE as “the axial age” in his 1949 work *The Origin and Goal of History*. The name “axial” refers to the pivotal role that this period was thought by Jaspers to have played in world history, establishing norms of philosophical and intellectual meaning that were to have long-lasting impact. What Jaspers found particularly interesting was the similarity in thinking that occurred seemingly simultaneously in Greece, the Near East, India, and China and the similarities in the sociological context in which that thinking developed. Most similar among Axial Age thought was the newfound desire to attempt to understand the meaning of human life. In all of these regions, in Jaspers’s view, new groups of intellectual elites arose to grapple with these problems. Regardless of whether or not one agrees with Jaspers’s thesis about the similarities in revolutionary ideas in Greece, the Near East, Indian, and China at this time, it is without question that the period from 1000 BCE to 300 CE saw some of the most important developments in human thought.

Philosophy emerged as a systematic intellectual endeavor in sixth-century Hellenic Anatolia, an area known as Ionia where Thales attempted to understand how a world that constantly changes kept from falling apart. These abstract speculations may not have appealed to the majority of Greeks, but the idea of articulating reasoned opinions about the nature of the world did, and rhetoric (the art of speaking) and dialectic (the art of persuasive logical analysis) became skills taught by professional teachers called Sophists. However, it was in fifth-century Athens that the true giants of Hellenic philosophy emerged: Socrates, Plato, and Aristotle. Socrates believed that truth exists and that it can be discovered through reason. Socrates' follower Plato developed methods to explore philosophical questions and established the Academy in 386 BCE to train philosophers and statesmen. Aristotle, a student of Plato, broke away from his master. Aristotle and his students attempted to gather, order, and explain the world through observation and logic.

Numerous other philosophers and philosophies developed in the later Hellenistic period. Epicurus (ca. 341–ca. 270 BCE) and his followers (Epicureans) argued that the absence of pain was the greatest pleasure that one could achieve and argued that humans should attempt to live happy lives by leading simple lives. The Cynics argued for a different approach to life, rejecting any type of convention in order to pursue virtue. The Stoics also sought virtue and believed that control of one's emotions and behaviors would help lead to moral excellence. Platonic philosophy continued to inspire thinkers, and modern scholars refer to these later scholars who built on the works of Plato as Neoplatonists. This school of thought had a tremendous impact on Christian thinkers.

Despite the fact that most modern philosophers see the origins of their discipline in the Greek world, philosophy developed concurrently and possibly in tandem with thinkers in India and East Asia. It is difficult (and perhaps meaningless) to separate philosophy from religion in Asia between 1000 BCE and 300 CE. The religions of Confucianism, Jainism, and Daoism, all of which are still practiced today, originated in this period and offered complex philosophical systems to help understand the world. Hinduism, better thought of as a family of religious beliefs and practices rather than a single religion, continued to develop alongside these traditions.

Similar philosophical concepts found across Eurasia may have been shared, although scholars are often divided as to where these ideas originated. For example, the concept of transmigration of souls, in which the dead forget their past memories and move on to a new existence, can be found in both India and Greece after 1000 BCE. The earliest references to this idea can be found in the Indian *Bhagavad Gita*, and it later appears in Greek Pythagorean thinking. South Asian thought may very well have influenced Greek thought, although the exact nature of this transmission of ideas is unclear.

The spread of Gnosticism is another situation in which it is clear that many diverse traditions were blended together. Gnosticism itself was a diverse series of belief systems and movements that, generally speaking, understood the Hebrew Bible in light of Christian teachings and Greek philosophical and mystery traditions. Beliefs and practices varied

considerably, but in general, Gnostics believed that the human soul is divine but is trapped in a material world created by an imperfect god (usually understood as the god of the biblical Patriarchs), referred to by Gnostics as the demiurge. A superior divinity, often called the Godhead or Pleroma, although the nature of this divinity is not consistent through Gnostic teachings, exists above the material world. Some have suggested that Gnostic notions were inspired by the Upanishadic tradition (in India), which teaches that the individual *atman*, or soul, is a spark of Brahman, the Universal Soul, and release from suffering (*abimsa*) comes with knowledge of that cosmic divinity within oneself. Whether or not there was a direct connection (the origins of Gnosticism are debated by scholars), this was certainly a religious system that was seen as relevant outside of the Greco-Roman world. Mani (ca. 216–276 CE) was greatly influenced by Gnosticism, and his teachings became foundational for Manichaeism in Persia. Gnostic ideas were also transmitted along the Silk Roads; some Gnostic texts have been found in Turfan (in what is now China).

As with Gnosticism, Greek mythology was influential well beyond the Greek world. The stories of the gods and goddesses of the Greeks continue to capture the imagination of people today, long after the religious values associated with these stories have vanished. Western art continues to be imbued with images derived from these Greek stories. While myth and mythology have relatively general meanings (and very different meanings depending on the context), Greek mythology is typically taken to be the stories of the gods and heroes of the ancient Greeks; often these stories were told as a means of understanding natural phenomena, understanding the origins of humans and the world, and understanding the basis of ritual and cultic practices. Unlike Judaism, Christianity, and Islam, there was no prescribed canon of religious texts and beliefs. Although much mythological material was written down by Greek authors, none of these writings were considered authoritative in the way that the Bible came to be understood.

For other religious traditions, religious writings became or started to become authoritative after 1000 BCE. Many of the sacred scriptures produced between 1000 BCE and 300 CE are still used in worship communities today. Compilation of the Jewish and Christian Bibles began at this time, the literature of Hinduism was written down, and the seminal texts of Confucianism and Daoism appeared. Texts started to become fixed, that is to say, the religious traditions established certain works as holy and different from other types of writing. Thus, Christian writers could compose commentaries on the Bible, but these had a different sacral quality than the books of the New Testament.

Sacred scriptures were not the only innovations of this era. This was when monotheism (the belief that there is only one god) first appeared, a religious concept that would eventually come to dominate the religious

Beliefs and practices varied considerably, but in general, Gnostics believed that the human soul is divine but is trapped in a material world created by an imperfect god (usually understood as the god of the biblical Patriarchs), referred to by Gnostics as the demiurge.

traditions of much of the world. Prior to 1000 BCE, there is evidence for *henotheism* or *monolatry*, the belief that one god is significantly better than other gods and that it is best not to worship the other deities. However, it is really sometime after 1000 BCE (although scholars disagree about the details of this development) that the people of the kingdom of Judah began to believe that there was actually only one god. This became a central belief of Rabbinical Judaism and Christianity, which emerged out of the belief and worship system that certainly was evident in post-Exilic Jerusalem, that is, after the sixth century BCE.

Another elemental religious concept that emerged in late Hellenistic times and found expression in the so-called Mystery Religions, especially the cults of Isis, Serapis, and Mithras, Mahayana Buddhism, Bhakti (the cults of Shiva and Vishnu in Tamil India and across the waters of the Bay of Bengal), Christianity, and Manichaeism, among others, was that of a universal savior deity. This savior was a deity who took on himself or herself the sins and cares of all believers and offered devotees some sort of release from the burdens of suffering and often, also, offered protection in this world. Thus were born world religions in many respects, since these were deities that, at least from the perspective of their faith communities, held universal appeal. This idea of a savior was so widespread that a number of Hellenistic rulers claimed the title, such as the mid-second-century BCE convert to Buddhism, Menander I Soter (Savior).

Fundamental to the emergence of this notion of a savior was the phenomenon of personal piety in which believers felt that they had a personal relationship with the deity. This had existed to some extent in Egypt and Mesopotamia and among the Israelites prior to 1000 BCE. Believers would offer prayers or sacrifices directly to deities in return for the favor of that deity (as opposed to other traditions whereby these offerings would be made through a cultic or political intermediary). However, the notion of a personal relationship with a deity became more central to the Mystery Religions of Greece and Rome and in Christianity and Judaism. Prior to 1000 BCE, temple worship had mostly been limited to cultic specialists, and in many ways temples were better thought of as the houses of the deities rather than places for humans to worship. The movement toward personal piety did not just occur in the Greco-Roman world. In India and Southeast Asia, individual worshippers, Hindus, and Mahayana Buddhists would enter temples or shrines in order to encounter the divine directly. Between 1000 BCE and 300 CE, temples, churches, shrines, and synagogues emerged as places where believers could enter to participate as members of a worship community.

Another new phenomenon that emerged in this era was monasticism, from the Greek *monas*, a solitary thing or person. Monasticism first emerged in India and then spread to East Asia and the Greco-Roman world. The core concept underpinning monasticism is that it is beneficial for worshippers to remove themselves from the profane everyday world and devote themselves solely to the worship of their deity. Monastic communities emerged in which participants solely focused on religious practices and the cultivation of theological understanding. By the end of this period, around 300 CE, these monastic communities had become very influential in matters of ritual and theology throughout

Eurasia and parts of North Africa. Later some of these monasteries, especially in India, would also become centers of secular learning.

With these notions of personal piety, the notion of a universal value to the relationship with the deity emerged. Christians, Buddhists, Manichaeans, and Saivites began to believe that their religious teachings were applicable to all people. Thus, missionaries spread universal religious messages in an effort to save all of humanity, not just those humans with whom they felt an ethnic or political connection. This approach to religion appears on a massive state-sponsored scale in Aśoka's Maurya empire but comes to be a hallmark of political enterprises in later periods. Likewise, the spread of religions throughout the Afro-Eurasian ecumene is readily apparent by 300 CE.

—Kevin M. McGeough

■ Introduction: Development of Philosophy in Greece

The development of philosophy in Greece was one of the most significant intellectual developments in human history. The philosophical practices of the ancient Greeks have shaped our thinking about our world (and how we think about thinking about our world) and have profoundly influenced Western thought. Even today, Plato is the most-quoted philosopher of the European tradition; the intellectual ponderings of the ancient Greeks have had relevance far beyond the Hellenic world.

This Greek philosophical system lies at the foundation of the modern European discipline of philosophy. Generally, Greek philosophy is subdivided into two broad historical frameworks. The first stage of Greek philosophy began with Thales of Miletus (ca. 600 BCE), and he and those who followed him are normally referred to as the pre-Socratics. These thinkers, best thought of now as natural philosophers, looked to the natural world and tried to understand its origins and workings. They explicitly rejected mythology (as well as the writings of Hesiod and Homer) as legitimate explanations for the natural world and looked to find explanations within the natural world itself. This was a profound break from the types of scientific inquiry that had come before and established the separation between philosophy and theology that has remained fundamental in the West up to the present.

The second stage of Greek philosophical inquiry comes with Socrates of Athens (469–399 BCE). His works, which are preserved in the works of his student Plato (427–348 BCE), profoundly altered Greek philosophy. Socrates turned the examination of the world inward and pioneered the use of inductive reasoning to gain understanding in hopes of finding universal truths. His student Plato constructed an entire philosophical system on these universal truths (referred to as Platonic ideals), which, especially in the metaphysical arena, profoundly influenced Western thinking. Here, for example, is the intellectual basis of beliefs about the soul and body dualism that lie as fundamental in Western religious systems. Plato interacted with students in what must have been one of the most inspirational learning environments in world history, the Academy in Athens. One of Plato's students there, Aristotle (384–322 BCE), would come to be at least as influential and arguably more influential than Plato (their relationship was marked by significant disagreements). Aristotle provided the foundation for many intellectual pursuits in fields as varied as ethics, the natural sciences, law, and politics. Later philosophical schools developed out of these traditions, and it is usually possible to identify Platonic or Aristotelian tendencies in the writings of later thinkers.

It is not possible to detail all of the main features of Greek philosophy. The following entries provide a historical introduction to this ancient intellectual pursuit with guides to further reading on the subject.

—Kevin M. McGeough

The Questions of Ancient Greek Philosophy

Philosophy asks the most basic questions of life. These include questions about how to achieve knowledge, about the nature of reality, and about what ought to be done. There is an important sense in which every human society has answers to these questions. Explanations to basic questions are given in order to find meaning in the world. However, philosophy arises when traditional answers are questioned and solutions sought through analysis. When explanations fail to provide meaning, it is a common pattern that the antithesis will be given as an alternative explanation. The move to the antithesis raises new logical problems that if not successfully addressed result in the failure to find meaning and the rejection of the new explanation in favor of skepticism.

The development of philosophy in the West is traced to a shift from personal/supernatural explanations to naturalistic explanations that occurred in Greece around the sixth century BCE. Personal explanations, referring to the activities of gods or other personal beings, were commonly given as explanations for events: fertility or famine, health or plague, victory or defeat. They were also relied upon to explain origins: the origin of the cosmos, of good and evil, and of humans and human history. These are exemplified in the Homeric epics that served as the foundation for the Greek worldview.

Thales is said to have started traditional Western philosophy when he correctly predicted an eclipse in 585 BCE. He identified the fundamental substance out of which all things are made as water. He seems to have come to this conclusion for empirical reasons, such as the different forms that water takes (solid, liquid, gas) and that it is necessary for life. Others followed his empirical approach but identified

other fundamental substances, such as air (Anaximenes) or fire (Heraclitus). In contrast, some argued for a substance that is beyond empirical investigation, such as Anaximander's *apeiron*. This is said to be unrestricted, unlimited, and boundless in its nature; it is the substance underlying all phenomena of experience but is not any specific phenomena. Similarly, Parmenides argued that ultimate reality is permanence (in contrast to Heraclitus's fire/change) and that any experience of change is unreal.

This search for the underlying substance of reality led to new logical problems, the most important being the "one and the many." If all things are made of water, then how can there be a diversity of beings, some of which are not wet? Or if plurality and diversity are the fundamental reality, then in what sense can there be sameness or one? This raises questions about the validity of sense experience: Is change an illusion? Can the senses be relied upon for ultimate truth, or must the mind reason beyond the senses to get to reality?

The inability to come to unity about the nature of reality and the approach to take in seeking knowledge led to a rejection of the basic beliefs that formed the foundation of naturalism. Because supernaturalism had also been rejected, the result was skepticism about foundational questions. This has been a pattern that is repeated in the history of Western philosophy. Questions about the nature of ultimate reality are addressed, but because of uncritically held assumptions (both about reality and about how to come to knowledge about reality) the answers are seen to be insufficient, and the foundational questions are not answered.

The age of the first Greek philosophers was followed by an age of skepticism in which sophists focused on rhetoric and persuasion rather than knowledge. Using cultural relativism and the failure of earlier philosophers to support their skepticism, the transition to persuasion provided a framework for Socrates to begin his questioning. Socrates has stood out as a paradigm for the philosopher because he asked questions to address the assumptions of others. These two patterns can be helpful in understanding the development of subsequent philosophy in the West: uncritically held as-

sumptions lead to skepticism due to a failure to establish a foundation for knowledge; critical examination of those assumptions through raising questions about them brings greater clarity about the issues and greater understanding of how to solve philosophical problems at the foundational level.

—Owen Anderson

Bibliography

- Allen, Reginald E., ed. *Greek Philosophy: Thales to Aristotle*. New York: Free Press, 1991.
- Barnes, Jonathan. *Early Greek Philosophy*. New York: Penguin, 2001.
- Long, A. A., ed. *The Cambridge Companion to Early Greek Philosophy*. Cambridge: Cambridge University Press, 1999.

Fifth- to Fourth-Century BCE Philosophical Developments

The hallmark of Greek philosophy was the courage to trust argument as much as observation and to trust both in preference to tradition. The major philosophical figures of fifth- to fourth-century Greece are the pre-Socratics, Socrates (469–399 BCE), Plato (ca. 428–ca. 348 BCE), and Aristotle (384–322 BCE).

The pre-Socratics attempted primarily to explain the world as a whole and the physical objects in it. For the development of philosophy, Parmenides is perhaps most important, for much of ancient physics and metaphysics consists of attempts to refute or modify Parmenides' difficult claims.

Socrates, however, found such things unfulfilling and focused almost exclusively on ethics. By exploring what it means to become excellent (or "virtuous") as an individual human being, he sowed the seeds of ancient ethical theories to come but never found his own or others' ideas satisfactory. He assumed that human excellence was or would lead to the goal of humans, well-being/happiness, that he called "eudaimonia." Subsequent ancient theories were all eudaimonistic. His "intellectualism" assumed that excellence is exclusively a matter of knowledge: knowing the good is sufficient for doing it, he claimed. He was condemned to death by the

➤ WHY SOCRATES STAYED IN PRISON

In *Crito*, Socrates speaks to Crito, who wants to help Socrates escape from prison and the death sentence:

"We must therefore examine whether we should act in this way or not, as not only now but at all times I am the kind of man who listens only to the argument that on reflection seems best to me, I cannot, now that this fate has come upon me, discard the arguments I used: they seem to me much the same . . . if we have no better arguments to bring up at this moment, be sure that I shall not agree with you."

—Jacques Bailly

Source

Plato, *Crito* 46b, translated by G. M. A. Grube, in John M. Cooper, *Plato: Complete Works* (Indianapolis, IN: Hackett, 1997).

Athenians for his teachings and beliefs and became a martyr for philosophy.

Plato, our single best source for Socrates' thought, apparently began as an explicator of Socratic ideas and then moved on to explaining his own ideas, largely via synthetic explanation of large ideas. The *Republic*, for instance, starts out with the question "What is justice?" and proceeds to lay out an explicit epistemology, ethics, and metaphysics as well as political philosophy and psychology. Combining a Socratic ethical question with the Parmenidean challenge and Pythagorean mathematical ideas, Plato espoused an ideal unchanging reality of Forms that are only imperfectly found in sensible things. In his "late" dialogues, he severely questioned and may have abandoned the Forms. Plato's writings present a problem, however: they are almost entirely dramatic rather than in propria persona. They seem to be divisible into an early and more tentative Socratic ethical phase, which involves more lively drama, and a middle and later phase that is more dogmatic and expands into epistemology, physics, politics, aesthetics, cosmology, and ontology.

Aristotle surpassed Plato's breadth of interest but took an analytical turn. Aristotle's huge

surviving corpus of works consists of analytical explorations of particular topics. He constantly classifies and analyzes into constituent parts. Logician, biologist, botanist, physicist, metaphysician, ethicist, political theorist, rhetorician, literary theorist, psychologist, meteorologist, and more, Aristotle looms preeminent in Western thought. Aristotle's formal logic was the first and was not superseded until modern times.

There were a number of other important philosophers of this era. Pyrrho (ca. 365–ca. 275 BCE), about whom little is known, was the first to proclaim skepticism as a philosophy, which was to blossom in various forms in the next centuries. Protagoras, Socrates' contemporary, claimed that human perception and thought were the arbiters of reality (Plato's *Theaetetus* expands and attempts to refute that claim) and was thus a relativist. The atomists, Democritus (born ca. 460 BCE) and Leucippus (fifth century BCE), claimed that atoms (invisible units having only size and shape) and void were the bedrock of a purely materialistic philosophy that was the chief ancient alternative to the teleological philosophies of others.

Ancient philosophy was an alternative to and supplement to traditional education of youths, which made it politically and societally important. In Athens, Plato set up his Academy, a private school, and Aristotle his Lyceum, more open to the public, both distant precursors to modern higher education.

—Jacques Bailly

Bibliography

- Roochnik, David. *Retrieving the Ancients: An Introduction to Ancient Philosophy*. Malden, MA: Blackwell, 2004.
- Shields, Christopher. *Classical Philosophy: A Contemporary Introduction*. New York: Routledge, 2003.

Pre-Socratic Philosophy

“Pre-Socratic philosophy” refers to Greek thought mostly preceding Socrates and explaining primarily the world as a whole (the “cosmos”) and objects in it via rational original theories rather than through traditional divinities and mythology. In distinction from their non-Greek neighbors, these Greeks pursued

causal and generalized explanations. They did not simply observe that something happens or exists; they theorized why.

The traditional groupings of the major pre-Socratic thinkers are Ionian Physicists (Thales, Anaximander, and Anaximenes), Heraclitus, Eleatics (Xenophanes, Parmenides, Zeno of Elea), reactions to Parmenides (the pluralists Empedocles and Anaxagoras and the atomists Democritus and Leucippus), and Pythagoreans. For each, compiling the ancient evidence (which consists of paraphrase and fragmentary quotations from their writings) yields a largely consistent but speculative picture, some highlights of which are as follows.

The Ionian Physicists offered explanations of the origins, structure, and material causes of the universe based on analogy, logic, and mathematics. Thales (sixth century BCE), the first philosopher, a monist, claimed that water was the only basic stuff of the world. He introduced geometry and astronomy to Greece (from Babylonians). Important assumptions he made, which his successors shared, were that the universe is structured, intelligible, and teleological in nature. Anaximander (610–ca. 546 BCE) said that the basic stuff was *to apeiron*, “the unlimited” (an undifferentiated stuff to which things return eventually), created a geometric model of the universe, and made a map of the earth and the heavens. Anaximenes (fl. ca. 545 BCE) said the basic stuff was air and explained the apparent diversity of the world as density variations: a quantitative principle that explains qualitative difference as well as a principle of conservation of matter through change.

Xenophanes (ca. 560–ca. 478 BCE) argued, based on the logic of divinity, that there was only one entirely good god but that humans thought of gods in their own image.

Parmenides (born ca. 515 BCE) argued by force of logic that everything is one, with no past, present, or future, unchanging and unchangeable, for no thing can come from nothing. His poem contains the first extant sustained pure logical argument of the Western tradition. In a way, much of subsequent ancient philosophy attempts to resist Parmenides' conclusions. Like Parmenides, however, his successors thought that the real world is quite different from the world we perceive.

Heraclitus (ca. 540–ca. 480 BCE) claimed that the world consists of processes rather than stable things and that opposites are merely different aspects of the same thing.

Anaxagoras (ca. 500–428 BCE) held that everything has infinite parts, among which are the “seeds” of every other thing: a thing appears to be X because of the predominance of X seeds in it. The differentiation of things is caused initially by the principle of intelligence, but subsequent developments are mechanical.

Zeno of Elea (495–430 BCE) was a follower of Parmenides whose arguments start from the assumption that Parmenides was wrong and deduce paradoxical results. His paradoxes reflect the difficulty that humans have comprehending continua. Often dismissed, the paradoxes are fundamental and in many cases still defy solution.

Empedocles (ca. 490–ca. 430 BCE) held that there are four basic stuffs (earth, air, fire, and water) acted upon randomly by two principles (love and hate) and that something like survival of the fittest accounts for the currently existing living beings.

Leucippus (fifth century BCE) and Democritus (460–370 BCE) met Parmenides’ arguments with the claim that two things exist, the void and atoms. Atoms are microcosmic and indivisible and have no sensible qualities other than tactile qualities such as shape and texture, which are used to account for the apparent variety in the macrocosmic world.

While all of the above are historically connected to each other, Pythagoras (ca. 580–ca. 500 BCE) is distinct from the rest. He apparently imported the doctrine of the transmigration of souls from the eastern Mediterranean, but he also claimed that the fundamental basis of things is a matter of number and numerical proportion. His Pythagorean successors discovered that certain relationships cannot be formulated as a ratio of integers (the sides of a regular square and regular pentagon, for instance), a fundamental fact that led to great mathematical advances.

—Jacques Bailly

Bibliography

- Hussey, Edward. *The Presocratics*. Indianapolis: Hackett, 1995.
- Kirk, G. S., J. E. Raven, and M. Schofield. *The Presocratic Philosophers*. 2nd ed. Cambridge: Cambridge University Press, 1984.

➤ PARMENIDES—A FRAGMENT

“That which is there to be spoken and thought of must be . . . Nor was it ever nor will it be, since it is now, all together, one, continuous. For what birth will you seek for it? How and from where did it grow? I will not permit you to say or to think [that it grew] from what is not; for it is not to be said or thought that it is not. What necessity would have stirred it up to grow later rather than earlier, beginning from nothing?”

—Jacques Bailly

Source

Fragments of Parmenides’ poem, translated by Richard McKirahan, in Richard McKirahan, *Philosophy before Socrates* (Indianapolis, IN: Hackett, 1994), 153.

Socrates

Socrates (470–399 BCE) has long been considered one of the most influential philosophers in Western intellectual history. Socrates lived in Athens, and because of his father’s close relationship with the son of Aristides the Just, one of the founders of the Delian League, Socrates was familiar with the life of the privileged class. As a young man he served with noted courage in the Peloponnesian War, but his fame and notoriety came from his philosophical speculation, particularly as he engaged with the citizenry of Athens. Although he wrote no known works, his thought and manner of argumentation were captured in the writings of Plato and Xenophon.

Mediterranean philosophers prior to Socrates emphasized what came to be known as natural philosophy, that is, the study of fundamental and basic aspects of the natural world. These natural philosophers addressed issues of basic metaphysics and epistemology, such as what and how many kinds of elements constituted the natural world and how this could be known. Socrates was said to have “brought philosophy down from the skies” by focusing less on such issues and more on questions concerning social, political, and personal issues, such as the nature of the good life or of social justice or friendship.

What came to be referred to as the Socratic method involved both content and process. The

➤ SOCRATIC IRONY

Later commentators on the life and thought of Socrates often speak of Socratic irony. This is in reference to the style of Socrates' inquiries and dialogues. In the course of asking others about some topic, Socrates would frequently remark that he knew nothing and the person with whom he spoke was knowledgeable and wise, which is why Socrates sought him out. The result, however, was always the same: the wise citizen was shown by Socrates not to be wise and knowledgeable but opinionated and ignorant. Many commentators have claimed that one of his goals was not sincerely to seek truth from his fellow citizens and that his own professed lack of understanding was feigned.

—David Boersema

content of Socratic inquiry took the form of asking “What is X?” where X would be topics with content such as friendship, piety, love, knowledge, and justice. The method of such inquiry was to ask someone who was considered to be knowledgeable about a specific topic and then to seek clarification on it via a series of questions and objections to proposed answers. This process of question and objection usually took the form of seeking a definition of some concept, such as piety. In asking for a definition of some topic, Socrates claimed that he was seeking not simply a list of examples but the essence of the topic. For example, in asking “What is knowledge?” and demanding an answer that would enunciate explicit criteria for anything to be knowledge, Socrates set the tone and direction for much of philosophy in the West ever since. This insistence on conceptual clarity by means of providing necessary and sufficient conditions for understanding what a basic concept is became, and to a large extent remains, a hallmark of Western philosophy.

The result of Socrates' interrogations of his fellow Athenians rarely led to resolution or even consensus about the topic at hand. While many young people, including most famously Plato, were supporters of Socrates' goal of desiring genuine wisdom, many others found his activities as a gadfly less admirable, and the well-known dramatist Aristophanes even satirized Socrates in his play *The Clouds*. Because Socrates often irritated

and publicly embarrassed some of his fellow citizens, he was several times in his life accused of misconduct. Most famously, late in life he was brought to trial for impiety and corrupting youths. Although he denied such accusations, Socrates maintained that his activities were always in the service of truth and the public good. He was found guilty and sentenced to die, which he did by drinking hemlock while in jail and thus ensuring his legacy as a martyr to truth.

—David Boersema

Bibliography

- Cornford, F. M. *Before and After Socrates*. Cambridge: Cambridge University Press, 1932.
- Navia, Luis E. *Socrates: A Life Examined*. Amherst, NY: Prometheus Books, 2007.
- Stone, I. F. *The Trial of Socrates*. New York: Anchor Books, 1989.
- Taylor, C. C. W. *Socrates: A Very Short Introduction*. Oxford: Oxford University Press, 2001.
- West, Thomas G., and Grace Starry West, eds. *Four Texts on Socrates*. Ithaca, NY: Cornell University Press, 1998.

Plato

A Greek philosopher, Plato aimed to systematize all human inquiry and all knowledge derived from this inquiry. At the core of his system was Socrates, the protagonist in Plato's dialogues: a questioner in the early dialogues and an imparter of wisdom in the middle and late dialogues. Whereas Socrates seems to have concerned himself with learning how to live an ethical life, Plato wanted to understand how proper conduct related to politics, law, mathematics, and science. If all knowledge was part of a system, then every insight was related to every other insight no matter how disparate they might seem. Although he had predecessors, one might assert that Plato, through his writings, was the first to systematize the study of philosophy.

Plato was born in 427 BCE in Athens, a small Greek city with a flourishing civic life, much of it focused on the forum. There the men met to discuss matters of state, lawyers conducted trials, teachers taught their students, and merchants sold their wares. People talked among themselves about trivial and consequential matters. Sophists visited from other cities to seek

➤ BOOK II, *THE REPUBLIC*

In *The Republic* Plato wishes to argue that the philosopher should prefer justice to injustice, but he begins his discussion of justice, as he did in other contexts, by making injustice seem preferable to justice. His task, of course, will be to rebut his own arguments about the superiority of injustice. Accordingly, the reader should not conclude, despite this passage, that one should be unjust rather than just.

“No (unjust man) could endure to hold back from another’s goods and not to touch, when it was in his power to take what he would even out of the market without fear, and to go into any house and lie with anyone he wished, and to kill or set free from prison those he might wish, and to do anything else in the world like a god. . . .

The (unjust man) will hold public office because he is thought to be just; then he will marry into any family he chooses, and give his children to marry

anyone he chooses, and make partnerships and contracts with any he likes, and besides all this he will benefit by gaining profit because he does not mind being unjust. In legal actions public or private, he will overcome and get the better of his enemies; and by this he will grow rich and able to benefit a friend and hurt an enemy, and to sacrifice and dedicate offerings to the gods properly and magnificently, and to serve gods and men, if he will, much better than the just, so that he may reasonably expect that the gods will care for him more than for the just man.”

—Christopher Cumo

Source

The Republic, translated by W. H. D. Rouse, in *Great Dialogues of Plato* (New York: New American Library, 1956), 157, 159.

payment for instruction. Born into an aristocratic family whose members had directed affairs for generations, Plato intended to enter politics. As a young man he had come to esteem Socrates and was among his followers. Socrates’ trial and execution shocked Plato, convincing him to abandon a life in politics and prompting him to write his first dialogue, the *Apology*.

In the *Apology*, Plato defended Socrates from his accusers and expanded his method of inquiry. Plato depicted Socrates, in contrast to the sophists’ claim to knowledge, as a man who knew only what he did not know. Socrates’ execution led Plato to question whether government, oligarchy, tyranny, or democracy could be just or whether any form of government would have executed Socrates. The *Apology* was part of a trilogy to which Plato appended *Crito* and *Phaedo*. In *Crito*, Plato writes of Socrates’ commitment to virtue. Accepting his verdict of death despite its injustice, Socrates refused to escape jail and go into exile. Early dialogues, the *Apology* and *Crito* show Socrates to have been a questioner more than a possessor of wisdom. The wisdom Socrates had, Plato wrote, was in knowing the limits of his knowledge. *Phaedo*, however, was a dialogue of Plato’s maturity, one

of his middle dialogues. In it Plato presented a new Socrates, a man who had wisdom and wished to impart it to his followers. In *Phaedo*, Plato expressed certitude that people survive death. This certitude contrasted the agnosticism of the *Apology* in which Socrates, Plato tells the reader, was content whatever the prospects for survival. If death was final it would be an unbroken sleep untroubled by dreams. In *Phaedo*, by contrast, Plato rejected this view of death. Instead, he attempted to prove the soul’s immortality. For Plato, the soul was a person’s rational self or intellect. The rational self comprehended knowledge. This knowledge was independent of the senses. A triangle, for example, cannot be known by the senses, for every attempt to depict a triangle will be imperfect. The intellect alone can know what a triangle is. Because the rational self alone can know what a triangle is and because a triangle is immaterial, the soul that comprehends it must also be immaterial.

Plato’s interest in mathematics derived from his visit, around 387 BCE, to southern Italy and Sicily. These parts of the Mediterranean basin espoused mathematician and philosopher Pythagoras’s enthusiasm for mathematics as a system for comprehending reality. From his exposure to

Pythagoreanism, Plato concluded that the rigor and logic of mathematics could lead the philosopher to understand human behavior and the regulation of behavior in legal and political systems. In the *Republic*, one of his middle dialogues, Plato recommended the study of mathematics to young philosophers-to-be.

Beyond the study of mathematics, Plato wished to comprehend perfect justice, perfect truth, and perfect beauty. Perfect justice, for example, was not to be found in any judicial system. From culture to culture the definition of justice varied. This variance did not mean that justice was relative but that justice could not be known by comparing different judicial systems. Rather, the rational self alone could know perfect justice as an object of thought. Perfect justice was as real as a rosebush. In fact, perfect justice was more real than a rosebush because plants die. In contrast, perfect justice was, like the soul, immortal and unchanging. Perfect justice existed beyond time, whereas rosebushes and all other living things existed in time.

Plato believed that the soul, being immortal, had all knowledge but that much of it was latent. The philosopher, through careful questioning, helped the soul recollect this latent knowledge. In *Meno*, a middle dialogue, Plato, in the guise of Socrates, questioned a slave who had never been taught geometry, leading him to solve a geometric problem. Yet this knowledge could be obscured. In the *Republic*, Plato depicted a group of people chained in a cave. They face a wall and so cannot see the light from the sun that enters the cave. The only light they perceive indirectly comes from a fire behind them. The light from this fire casts shadows on the wall, and the chained people believe that these shadows are all that exists in the world. These fleeting images entertain them, and they give prizes to whoever can guess the proper sequence of images. Only with difficulty will a person free himself, climb out of the cave, and discover that reality is much greater than he had supposed. The philosopher, of course, will make the transition from shadowy realm to the sunlight of reality. Were he to return to the cave with his knowledge of reality, the others, hearing his incredible story, might kill him in disbelief and anger.

One authority credits Plato, in establishing the Academy in Athens, with creating the pre-

cursor to universities. At the Academy, scholars conducted research in all areas of knowledge. Students learned from these scholars, often assisting in their research. Among the pupils attracted to the Academy was Aristotle, who would become Plato's student.

Plato's dialogues have been universally popular and since their inception have been part of Western civilization. Even during the Middle Ages, scholars did not forget these dialogues. All subsequent philosophy owes a debt to Plato. American philosopher and mathematician Alfred North Whitehead commented that philosophy is a series of footnotes to Plato. Others have equated philosophy with Plato's dialogues. Today these dialogues are ensconced in the curriculum of many universities. Introductory courses traditionally require students to read selections from Plato's dialogues in order to acquaint themselves with the major issues in philosophy. In this context, the dialogues are the starting point for students wishing to study philosophy. Professional philosophers write commentaries on Plato's dialogues. Others, borrowing from Plato, write their own philosophical tracts. Still others write biographies of Plato, bringing his life and times to a wide public. Thanks to the work of publishers and professors, Plato is today probably better known than he was in antiquity. He is arguably the best-known philosopher of antiquity and, with the possible exception of Jesus, the best-known person from the ancient world. Reaching old age, Plato died in 347 BCE.

—Christopher Cumo

Bibliography

- Barrow, Robin. *Plato*. New York: Continuum, 2007.
 Fine, Gail, ed. *The Oxford Handbook to Plato*. New York: Oxford University Press, 2008.
 Grabowski, Francis A. *Plato: Metaphysics and the Forms*. New York: Continuum, 2008.

Aristotle

Aristotle (384–322 BCE) was the son of the court physician to Amyntas II, king of Macedon. His father died when Aristotle was young, and subsequently he was sent by his uncle to Athens. Here he studied at Plato's Academy for 20 years, until Plato's death in 347 BCE. Five years

➤ SYLLOGISTIC LOGIC

Among the many enduring legacies of Aristotle was his work in logic. He is credited with having systematized and formalized the study and enunciation of structures of reasoning and inquiry. Especially renowned and still taught today is his categorization of forms of inference into deduction and induction, labeled syllogisms. Aristotle identified numerous argumentative and inferential

structures as well as means of determining valid versus invalid forms of reasoning. Syllogistic logic was acknowledged for centuries as capturing and constituting all forms of inference and implication, being seriously supplemented only beginning in the nineteenth century.

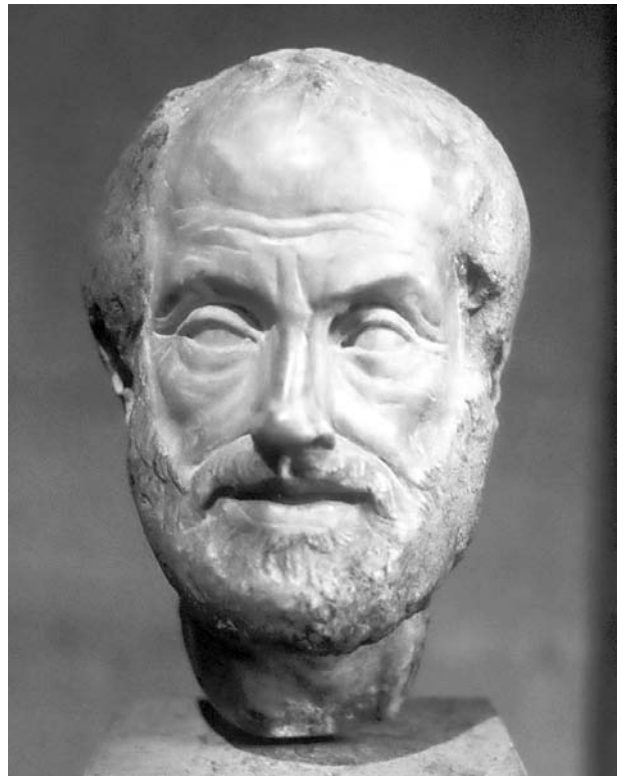
—David Boersema

later Aristotle was invited to supervise the education of the son of the then-king of Macedon, Philip II. The son later became famous as Alexander the Great. In 355 BCE Aristotle returned to Athens and founded the school called the Lyceum, where he remained until a year before his death.

Aristotle studied under Plato but rejected much of his teacher's views. In particular, he rejected Plato's Doctrine of Forms, the view that abstract universal things (such as whiteness) exist independently of particular physical things (such as white objects). The differences between Aristotle and Plato on these basic conceptual and metaphysical issues shaped nearly all subsequent Western philosophical thought.

Aristotle's influence on Western science and philosophy are unparalleled. His writings spanned science, theology, logic, ethics, politics, art, and other topics. His thought was systematic and had several basic and unifying themes, particularly the notion of teleology, or goal-directedness. He held the view that the natural world can be understood only in terms of change, in which change was always movement from some potential toward some actualization or fulfillment of a naturally determined goal, such as an acorn moving from its potential state of being an oak tree toward the actualization of that goal.

This teleological category also informed Aristotle's social, political, and ethical views. The nature of the good life and the good State were seen by him as being a function of the kinds of entities that were involved with moral behavior, whether at the individual or collective level. Being a good person or being a good citizen were matters of both intellectual virtues and practical virtues, both related to the goal-directed natures



Marble portrait bust of Aristotle. Roman copy of a Greek original in the style of Lysippos, fourth century BCE. (Jupiterimages)

of human action. In particular, his moral virtues incorporated what came to be known as the Doctrine of the Mean, which advocated a middle ground or moderation between the extremes of excess and deficit. With respect to his view of the nature of the State, he claimed that humans are by nature political (i.e., social) beings, so the State is a natural aspect of human life, contrary to the later conception of Social Contract Theory, which saw the State only as the result of consensus among an aggregation of individuals.

The best State, he argued, was a middle ground between rule by too few (such as tyranny) and rule by too many (such as democracy). Preferential to those extremes is a polity, or republic.

Although Aristotle's scientific influence was significant for almost two millennia, his social and philosophical influence waned quickly in the West after his death in large part because his writings were lost to Western scholars. With the rediscovery and translation of his works in the 1100s and 1200s, however, his influence eclipsed every other classical thinker during the late Middle Ages, so much so that he was known as "The Philosopher." He became the foil for much of the scholarly focus during the sixteenth and seventeenth centuries with the emergence of the Cartesian and Newtonian worldviews.

—David Boersema

Bibliography

- Aristotle. *The Complete Works of Aristotle*. 2 vols. Edited by Jonathan Barnes. Princeton, NJ: Princeton University Press, 1971.
- Barnes, Jonathan. *The Cambridge Companion to Aristotle*. Cambridge: Cambridge University Press, 1995.
- Lear, Jonathan. *Aristotle: The Desire to Understand*. Cambridge: Cambridge University Press, 1988.
- Shields, Christopher. *Aristotle*. New York: Routledge, 20.

Hellenistic and Roman Philosophy

Although the four basic schools of ancient Greek philosophy were established during the mushrooming development of many philosophic stances and sects in Athens before 300 BCE (Academic ca. 385, Peripatetic 335, Epicurean 306, and Stoic 301), the development and influence of the last two only came after 300 in the Hellenistic period and for a time (200 BCE–100 CE) far outshone the popularity of the first two. However, after 100 CE Stoicism and Epicureanism faded, while the former two, especially Platonism, had a strong resurgence even though there was no institutional continuity after the time of the late Roman republic.

The Academy went through violent metamorphoses from strong dogmatism at the start of the Hellenistic period to strong skepticism from 270 BCE for 150 years with Arcesilaus (scholarch: 268–241) and Carneades (scholarch: 155–137). The later Academy under Antiochus and his successors returned to a modified dogmatism. Aristotle's school, the Lyceum, was very active in the early Hellenistic period, setting up the Alexandrian Museum and Library through its member Demetrius of Phalerum (ca. 350–284) and also in fueling the development of

PHILOSOPHERS' THOUGHTS ON PHILOSOPHY

"The greatest authors, and the greatest number of authors, have maintained that there are three divisions of philosophy—moral, natural, and rational. The first keeps the soul in order; the second investigates the universe; the third works out the essential meanings of words, their combinations, and the proofs which keep falsehood from creeping in and displacing truth."

Source

Seneca, *Epistulae Morales* 89.9, translated by R. Gummere (1953; reprint, Cambridge: Harvard University Press, 1920).

"Contemplation ascends from nature to soul, and soul to intellect. . . . For Intellect needs the Good,

but the Good does not need Intellect. . . . [T]his beautiful universe of ours is a shadow and image of it [Intellect] . . . so wonder would possess him who saw this too, and, as he should, entered it and became one with it. As certainly, one who looks up to the sky and sees the light of the stars thinks of their maker and seeks him, so the man who has contemplated the intelligible world and observed it closely and wondered at it must seek its maker[.]"

—Allan Wooley

Source

Plotinus, *Ennead* 3.8.8 & 11, translated by A. H. Armstrong, (Cambridge: Harvard University Press, 1967).

scholarship and science, especially notable in the personage of Eratosthenes (ca. 276–195), who became the chief Librarian at Alexandria, was a friend of Archimedes, and was the most widely engaged scholar-poet of his time, even participating on both sides of the great Hellenistic philosophic struggle between dogmatists and skeptics (as a skeptic with Stoic psychology). The Stoics set up a competitive library complex at Pergamum and fostered the development of literary criticism and grammar. The Middle Stoa were also very active philosophically: Posidonius (ca. 135–50) revised some basic doctrines, and Panaetius (ca. 185–109) made Stoicism pro-Roman. Greek philosophies in general were popular among the late republican rulers, especially through the advocacy of Cicero (106–43). The Epicureans kept to themselves until they took root in Campania near Naples and came to have a great influence on Roman thought and literature in the first centuries BCE and CE (e.g., Lucretius ca. 94–50). Throughout this period and the next, Cynics wandered the Greek world with their poverty, street-corner sermons, and doctrine of the brotherhood of all men.

The first centuries BCE and CE was the heyday of the Stoicism, both as the bulwark of imperialism in Seneca (5 BCE–65 CE) and Marcus Aurelius (121–180) and as the opponent of imperialism in Cicero, Musonius Rufus (ca. 30–100), and Epictetus (ca. 50–138). It was in the second century BCE that two separate trends arose. First, the shadow sect of skepticism rose to prominence as a separate school (Sextus Empiricus ca. 200) and as a popular point of view (Lucian 115–180). Second, the philosophical compass began

to veer away from materialism and back to idealism as the Neo-Pythagoreanism of the late republic and early empire blossomed and combined with a renascent Platonism seen in Plutarch (46–120) and Albinus (ca. 100–155) to become Middle Platonism, which through a reignited interest in Aristotle (e.g., commentaries such as those of Alexander Aphrodisias flourished around 175), and developments in Alexandria became a springboard for Neoplatonism.

Alexandria had become a major seat of philosophy as the Roman empire grew and became particularly important from the second century CE as the seedbed for Neoplatonism and Christian theology in the person of Ammonius Saccas (ca. 165–242), who taught the Christian Origen and philosopher Plotinus (205–270), who immigrated to Rome to found his school. The latter was the most powerful thinker since 300 BCE. Although he claimed only to be interpreting Plato, he in fact was the founder of Neoplatonism, the most influential school of thought to come out of antiquity. With the dual rise of Neoplatonism and Christianity the dominance of materialism was broken, and philosophy returned to its stance of the fourth century BCE.

—Allan Wooley

Bibliography

- Dillon, J. M., and A. A. Long, ed. *The Question of "Eclecticism."* Berkeley: University of California Press, 1988.
- Reale, Giovanni. *A History of Ancient Philosophy*, Vol. 3, *The Systems of the Hellenistic Age*. Translated by John R. Catan. Albany: State University of New York Press, 1985.
- Smith, Andrew. *Philosophy in Late Antiquity*. New York: Routledge, 2004.

■ Introduction: Judaism and Zoroastrianism—Iron Age Traditions

At the beginning of the Iron Age (1200 BCE), monotheism (the belief in only one god) was rare and may not have existed at all. By 300 CE, monotheism was one of the dominant theological concepts in the Roman empire and the Sassanid empire of Iran. Mono-

theism developed in two distinct religious traditions, Judaism and Zoroastrianism, both traditions that developed under Persian authority.

The roots of Judaism lie well before the history of the Persians, in the traditions of the Hebrew Bible/Old Testament. It was in the kingdoms

of Judah and Israel that monotheistic belief systems seems to have emerged. The religions of Judah and Israel do not seem to have been monotheistic initially. Note that the commandment that “you shall have no other gods before me” does not argue that there are no other gods; it just commands the Israelites to worship only the one God. Much of the Bible preserves a theological argument for monotheism. The story of God’s wrath at the Israelites’ manufacture of a golden calf for worship when Moses was receiving the Ten Commandments on Mount Sinai reflects this argument. By the end of the Iron Age, when the people of Judah were exiled to Babylon (and the First Temple in Jerusalem was destroyed), monotheism seems to have become a fundamental part of the religious perspective, and in Babylon the religion of Judaism seems to have developed.

The religion of Judaism was profoundly influenced by the experiences of the exiles in Babylon (as described in some of the later books of the Hebrew Bible/Old Testament). The Persians conquered Babylon (in 532 BCE) and allowed the Judeans to return to Israel. Persian imperial attitudes toward foreign religion were tolerant, and under Persian authority Judaism was able to thrive.

The Persian court was heavily influenced by the priests of another tradition, Zoroastrianism. It is unclear to what extent the Persian kings themselves could be considered Zoroastrians, but certainly this religious tradition was an important one at court. The beliefs of Zoroastrians are complex and varied but at its heart lies a belief in one universal god, Ahura Mazda, who has both masculine and feminine elements. Because of this and the belief in lesser spirits, it is often argued that Zoroastrianism is better considered dualistic. It is a tradition that incorporates (and has influenced) elements from both Western and Eastern religious traditions. Unfortunately, little is known with certainty about its early formation, but it can be said that it continued and developed after the collapse of the Persian empire.

Judaism similarly continued and developed after the collapse of Persian authority, and eventually the lands where the tradition was practiced were incorporated into the Roman empire. Jewish religious life was centered on the Second Temple in Jerusalem until 70 CE, when the Temple was destroyed by the Romans in response to

a Jewish revolt. Lacking a central temple, Jewish practices came to be centered on the synagogue, and Rabbinical Judaism emerged.

—Kevin M. McGeough

Judaism and Ancient Israel

It is widely known that Judaism has its origins in the religion of ancient Israel, but these two belief systems are by no means identical. Both, of course, venerated the deity YHWH (probably pronounced “Yahweh” and often rendered as “LORD” in English translations), but later Judaism developed a number of doctrines, such as a belief in a resurrection of the dead, that would have been alien to the ancient Israelites. Conversely, the rabbis of the first century CE would have been horrified by the polytheism and idolatry practiced by the Israelites and Judeans of the monarchic period.

The central credo of Judaism emphasizes the belief in only one god. There is a great deal of evidence, however, that suggests that the religion actually practiced in the ancient kingdom did not approach true monotheism before perhaps the end of the eighth century BCE. The Bible itself continually mentions the fact that the people went “astray” and worshipped Canaanite deities such as Baal and Ashtaroath (cf. Judges 2:13 and 10:6; 1 Samuel 12:10); less clear, however, is whether this worship was viewed as sinful by the state and religious authorities of the time. During the period of the Judges, for example, the hero Gideon is said also to have the name “Jerubbaal”; the etymology given in Judges 6:32 is “Let Baal contend against him,” with the implication being that Gideon was a zealous opponent of Baal worship. As scholars have noted, however, this etymology is less likely than one that reads the name as honoring the deity mentioned (such as “founded of Baal”; cf. e.g., “Jeruel” in 2 Chronicles 20:16). Some scholars have suggested that the tale of his “hewing down” (which, conveniently, is what the name “Gideon” means) his father’s altar to Baal may have been designed to “sanitize” his story for the later Yahwist audience.

The names of some of Saul’s descendants provide more evidence that even among the ruling classes, the religion of ancient Israel was not monotheistic. According to 1 Chronicles 8:33,

for example, Saul named one of his sons Esh-Baal (“man of Baal”), indicating that Saul’s opinion of this Canaanite deity was not unfavorable; this name apparently bothered the authors of 1 Samuel enough that they provided a euphemism for it, “Ish-bosheth” (lit. “man of shame”; cf. 2 Samuel 2:8). And while the biblical record presents Saul’s successor David as a faithful Yahwist, he appears to have been less than successful in instilling such fidelity in his son; according to 1 Kings 11:1–8, Solomon was “led astray” by his foreign wives late in his life and began to worship other gods. Thus, even during the golden age of Israel’s united monarchy, there are a number of clues that even the official religion was not the monotheism that would be so central to later Judaism.

After Solomon’s reign, the monarchy split in two: Jeroboam became king of the northern kingdom (Israel), while Solomon’s son Rehoboam reigned in the south (Judah). From this point onward, the religion of Israel proper (i.e., the northern kingdom) was characterized by apostasy from, or even outright opposition to, YHWH. Ahab, perhaps Israel’s most infamous king, built a temple to Baal and set up female fertility totems (*Asherah*); his wife, the Phoenician princess Jezebel, went so far as to order the deaths of Yahwist prophets. The remaining history of the northern kingdom, down to the fall of its capital Samaria in 721 BCE, was marked by one religious misdeed after another (at least from the perspective of the biblical authors), with each king’s reign summarized by the formula “and he did evil in the sight of the LORD.”

Only at the end of the eighth century BCE, after the fall of Israel, do we see biblical religion moving toward the strict universal monotheism that it would ultimately develop into. Even the religion of the Judean monarchy, however, still showed significant differences from later Judaism. In the seventh century BCE, for example, King Manasseh is said to have “erected altars for Baal and made an Asherah, as Ahab king of Israel had done, and worshiped all the host of heaven and served them” (2 Kings 21:3, NASB). It is interesting to note that there is no mention of the people rebelling against Manasseh for this heresy; indeed, his 55-year reign was longer than that of any other king of Israel or Judah. Nevertheless, from the perspective of the biblical authors, Manasseh’s infractions were so severe that

➤ ZOROASTRIANISM’S INFLUENCE ON JUDAISM

Some of the doctrines of Judaism that are not found in ancient Israelite religion may reflect the influence of Persian and Hellenistic culture. For example, the texts of Zoroastrianism, a religion practiced in ancient Persia (which ruled over the Judeans during 539–332 BCE), contain passages about a resurrection of the dead and a “Last Judgment,” such as the following:

“In fifty-seven years the Soshyant (“Savior”) will raise up all the dead. And all mankind will arise, whether just or wicked. . . . Then the assembly of Isadvastar will take place. In that assembly, everyone will behold his own good or bad deeds, and the just will stand out among the wicked like white sheep among the black.”

—John Walton Burnight

Source

Mary Boyce, *Textual Sources for the Study of Zoroastrianism* (Chicago: University of Chicago Press, 1984), 52.

the LORD would ultimately destroy the nation for it by bringing the Babylonian Army to destroy the Temple and exile the populace in 586 BCE (cf. 2 Kings 24:3–4), thus ending the Davidic monarchy.

By the first century CE after centuries of Babylonian, Persian, Hellenistic, and finally Roman rule, Yahwism had changed significantly from what it had been during the period of the monarchy. Baal worship was a distant memory, and idolatry was anathema to both the common people and the elite. Despite or perhaps because of the fact that they had been subject to foreign rule for most of the preceding half millennium, their belief in the unique status and omnipotence of their God grew ever stronger, as did their categorical rejection of idols. This, of course, led to considerable friction with their pagan Roman rulers, who required their other subject peoples to worship Caesar. After a series of rebellions, the Romans destroyed the Jerusalem Temple in 70 CE. It is a testimony to the strength of Jewish faith that the various conquests, exiles, and persecutions did not put an end to Yahwism. In fact, while the religions of the various empires

that conquered them fell by the wayside, the religion of the ancient Israelites, while changing significantly, continued to grow, providing the seeds not just for modern Judaism but also for Christianity and Islam as well.

—John Walton Burnight

Bibliography

- Boyce, Mary. *Textual Sources for the Study of Zoroastrianism*. Chicago: University of Chicago Press, 1984.
- Neusner, Jacob. *Judaism and Zoroastrianism at the Dusk of Late Antiquity*. Atlanta: Scholars Press, 1993.
- Redford, Donald B., ed. *Aspects of Monotheism: How God Is One*. Washington, DC: Biblical Archaeology Society, 1997.

Rabbinical Judaism

Rabbinical Judaism is the form of Judean religion that became normative after the destruction of the Jerusalem Temple by the Romans in 70 CE. For centuries, this temple had been the focal point of Judaism, and its destruction—prompted by a Jewish revolt that lasted from 66 to 74 CE—presented a threat to the future of the religion. The power of the elite Sadducees (descendants of the Zadokite priests, from whom they took

their name) was largely tied to temple ritual, and so their role in Jewish life was greatly diminished. The influence of the rival sect of the Pharisees, on the other hand, was less centralized and focused more on synagogues and so was better able to meet the needs of a diaspora community that had lost its central shrine. In addition, the Pharisee leaders Hillel and Shammai had established rabbinic academies earlier in the first century; these became new focal points for the religion.

Also in 70 CE, a rabbinic council was formed at the coastal city of Yavneh under the leadership of the Hillelite rabbi Yohanan ben Zakkai. During the following decades this council would go a long way toward shaping the future of Judaism, with its (now necessary) emphasis on individual piety and the study of sacred writings rather than on temple ritual. Importantly, a decision was made to allow sacrifices—which could only be done at the temple—to be replaced with monetary offerings. In addition, the rules for holidays were modified to allow their observance away from Jerusalem. The shape of the Hebrew Bible also neared its final form (although some books, such as Ecclesiastes, were still debated for some time). It would ultimately consist of three major divisions: the Torah (“instruction, law”), the Neviim (“prophets”), and the Kethuvim (“writings”). Collectively, the works were called by the acronym Tanakh, made up of the first letter of each division; the contents are the equivalent of the Christian Old Testament, although the order and groupings are different.

Yohanan’s successor, Rabban Gamaliel II (a great-grandson of Hillel), was recognized by both the Jewish community and the Romans as a leader of the Jews in Palestine, thus ensuring the survival of the Pharisees’ vision of Judaism. The ability to worship apart from Jerusalem became particularly important following a second Jewish uprising in 132–135, led by a Jewish nationalist named Simeon Bar Kokhba. After suppressing the Bar Kokhba Revolt, the Roman emperor Hadrian banned Jews from their former capital; he proclaimed it a pagan city and renamed it Aelia Capitolina. The Yavneh academy subsequently moved to the northern region of Galilee, which would replace Jerusalem as the center of Jewish life in Palestine for the next 800 years. It was here that the rabbi Judah ha-Nasi (Judah the

➤ EXCERPT FROM “BENEDICTIONS,” THE FIRST TRACTATE OF THE *MISHNAH*

“1.2 From what time in the morning may the *Shema** be recited? So soon as one can distinguish between blue and white. Rabbi Eliezer says: Between blue and green. And it should be finished before sunrise. Rabbi Joshua says: Before the third hour: for so is it the way of kings, to rise up at the third hour. He that recites it from that time onward suffers no loss and is like to one that reads in the law.”

—John Walton Burnight

*Deut. 6:4, a central prayer that states the basic tenets of Judaism.

Source

Adapted from Herbert Danby (Trans.). *The Mishnah*. Oxford: Oxford University Press, 1933, 2.

Patriarch, ca. 175–220 CE) was instrumental in the compilation of the Mishnah. The Mishnah (lit. “repetition,” also called the Oral Torah) is a set of laws and debates that according to tradition originated with Moses and were passed down orally for centuries until they were finally written down in the second century CE by rabbis called *tannaim*. The Mishnah, however, seems to reflect the perspectives and concerns of Jews of the posttemple period, and its laws are often framed as legal discussions between the House of Hillel and the House of Shammai (which, as noted above, were founded in the first century CE). It consists of 63 tractates in six divisions: *Zera'im* (Seeds), *Mo'ed* (Festivals), *Nashim* (Women), *Nezikin* (Damages), *Kodashim* (Holy Things), and *Tohorot* (Purifications). As the names of the tractates imply, the Mishnah's principal concerns are ritual and purity; it contains little in the way of formal theology or history. Interestingly, despite its largely legal content, there are a number of instances in which multiple opinions on a question are presented, with no clear instruction as to which one is to be viewed as correct.

The Mishnah is considered to be the last revelation in Judaism, and all subsequent rabbinic work is viewed as commentary on either it or the Tanakh. That applied to the Tanakh is traditionally divided into four types, collectively called by the acronym *Pardes*: (1) *pesbat*, the plain or literal interpretation; (2) *remez*, hints or implied interpretation; (3) *derash*, inquiry, homiletic or comparative interpretation (also called *midrash*); and (4) *sod*, mystical interpretation. The third of these, *midrash*, is further divided into two subtypes: *halakha*, legal and ritual applications, and *aggadah*, tales and folklore designed to provide moral and practical advice. *Midrashim* (plural of *midrash*) often contain pious expansions of biblical stories.

Rabbinic commentary applied to the Mishnah is grouped under the broad heading *Gemara* (Finishing). The Jerusalem Talmud is the Mishnah combined with a *Gemara* crafted by the scholars of the rabbinic center in Jerusalem; it was completed by about 400 CE. Rabbis in the Babylonian Diaspora later applied their own *Gemara* to the Mishnah, and this became the Babylonian Talmud (finished by approximately 600 CE). These two Talmudim, along with the Hebrew Bible and the various rabbinic *midrashim*

applied to it, became the foundational documents for modern Judaism.

—John Walton Burnight

Bibliography

- Danby, Herbert, trans. *The Mishnah*. New York: Oxford University Press, 1933.
- Levine, Lee I. A. “Judaism from the Destruction of Jerusalem to the End of the Second Jewish Revolt, 70–135 C.E.” In *Christianity and Rabbinic Judaism*, edited by Hershel Shanks. Washington, DC: Biblical Archaeology Society, 1992.
- Neusner, Jacob. *Invitation to the Talmud: A Teaching Book*. Eugene, OR: Wipf and Stock, 2003.

Zoroastrianism (through the Parthian Period)

Zoroastrianism was the main religion of pre-Islamic Iran adopted by Iranian peoples across the ancient Near East and central Asia. The name “Zoroaster” is the Greek rendition of the name of the religion's prophet and founder, Spitama

➤ ZOROASTRIAN DUALISM AND APOCALYPSE

Zoroastrian cosmology was extremely dualistic, with an Evil Spirit (Av. Angra Mainyu) opposing the Wise Lord. Where exactly evil came from was the object of much speculation, with many different variations within the religion. We learn from later texts that Ahura Mazda created the physical world to trap and ultimately destroy Angra Mainyu. Creation was thus a battlefield between good and evil, and while all good in the world was a product of Ahura Mazda's original creation, everything evil resulted from Angra Mainyu's perversion and pollution of it. Destroying anything that was the Evil Spirit's handiwork, including insects and reptiles, was a duty of a good Zoroastrian and was thought to hasten the ultimate purification of the world. The world would be purified with Angra Mainyu and all his distortions annihilated at a final apocalyptic battle at the end of time. At this point there would be a resurrection of the dead, last judgment, and punishment in rivers of molten metal for evildoers. The political utility of this dualism was not lost on Iranian kings. In his inscriptions Darius I (ca. 550–486 BCE) casts any opposition as the creation of the Lie.

—Matthew Canepa

Zarathushtra. The religion was known to its adherents as Mazdayasnian (Mazda worshipping) or simply the Good Religion. The era of Zarathushtra's life remains a focus of scholarly debate and due to the fragmentary nature of all evidence involved is a story that will likely never be conclusively detailed. Dates proposed by scholars and various ancient sources range widely, from 6,000 years before Plato to 248 years before Alexander. The eras that have received the strongest advocacy are circa 1000 BCE and 541 BCE.

Zoroastrianism was a prophetic revision of ancient Iranian religion and contains many elements common to it and to ancient Indo-Iranian religion. The collection of the sacred texts of Zoroastrianism is known as the Avesta, and the language in which the texts are written is called Avestan. It is the closest surviving language to Vedic Sanskrit with which it shares a similar grammar, metric structure, and even some of the same vocabulary, including names of gods. The Avestan and Vedic language stems from a time when the two branches of the Indo-Iranian, or Aryan, group of Indo-Europeans were still one people. Calling themselves noble (Avestan, *Airīia*; Vedic, *Arya*), this culture practiced a religion based on veneration of fire and the preparation of an intoxicating substance (Avestan, *Haoma*; Vedic, *Soma*), and was the progenitor of the peoples who migrated into Iran and India, respectively. At some point after these groups split and their cultures diverged, the gods (Vedic, *deva*) of one

became the demons of the other (Avestan, *daeua*, related to the English “devil,” or “little god”).

Zarathushtra introduced a reform into the ancient Iranian religion based on the rejection of all old gods and the worship of a single Great God, whom he called Ahura Mazda (Wise Lord). Fundamental to Zoroastrianism then and now is the practice of good thoughts, good words, and good deeds; abhorrence of any falsehood; and respect for fire, earth, and water, all the Wise Lord's good creations. After Zarathushtra's death, many elements of the old Iranian tradition were reincorporated into the new religion. Some of the old gods, such as the warrior gods Mithra (god of pacts and their enforcement) and Verethragna (lit. “smashing of obstacles”), as well the preparation of Haoma and veneration of fire now served and protected the religion. The major surviving parts of the Avesta consist of Zarathushtra's Gathas (Hymns), which is the most ancient portion; liturgical prayers; a later group of hymns to various deities, most of whom had roots in the pre-Zoroastrian religion; and laws.

Many Iranian peoples continued to practice variations of the pre-Zoroastrian religion, with Zoroastrianism orthodoxy only emerging much later under the Sassanian dynasty of Iran (226–651 CE). Scholars do not agree if the Achaemenid Persians (558–330 BCE) were Zoroastrian. Yet while the Achaemenids never mention Zarathushtra, their monumental inscriptions praise Ahura Mazda and proclaim hatred for “the Lie,” while their personal inscriptions mention the preparation of Haoma, and monumental art indicates a veneration of fire. Iranian religion in general was thrown into great disarray after Alexander's invasions (334–330 BCE), which resulted in the loss of much of the Avesta. Yet while there is great evidence of ritual and artistic fusion with Hellenistic culture during this period, the Zoroastrian religion remained intact, likely with the active support of the Arsacid (Parthian) dynasty. Zoroastrian ideas, such as an apocalypse, resurrection of the body, and last judgment, influenced Christianity through Judaism. None of these ideas were present in Judaism until after the Persian king of kings Cyrus, a prophet and anointed of God according to the Bible, granted the Jews freedom from their Babylonian captivity.

—Matthew Canepa



Carved representation of Ahura Mazda from the Royal Audience Hall of Darius I (548–486 BCE) at Persepolis, Achaemenid dynasty. (Jupiterimages)

Bibliography

- Boyce, Mary. *A History of Zoroastrianism*. 3 vols. Leiden: Brill, 1975.
- Boyce, Mary. *Textual Sources for the Study of Zoroastrianism*. Chicago: University of Chicago Press, 1990.
- Gnoli, Gherardo. *Zoroaster*. Costa Mesa, CA: Mazda, 2005.
- Malandra, William W. "Zoroastrianism." In *Encyclopaedia Iranica*, edited by Ehsan Yarshater. www.iranica.com.

Dualistic Traditions in Persia: Manicheanism and Mandaeanism

Persia during the period between 1000 BCE to 300 CE was a mosaic of different cultural traditions, influenced by Hellenistic-Mediterranean culture, Near Eastern culture, and South Asian culture. Within this mosaic, there was a significant amount of religious freedom (although that varied depending on the leadership). Under the Parthian and Sassanid dynasties, dualistic traditions merged elements of Zoroastrianism with Christian and Gnostic teachings. Two of these, Manicheanism and Mandaeanism, spread beyond the boundaries of Persia and can be considered world religions.

The teachings of the prophet Mani (ca. 216–276 CE) form the basis of Manicheanism. Mani was a Mesopotamian religious prophet who wandered throughout Persia beginning shortly after the establishment of the Sassanid dynasty. He preached an extreme form of dualism in which the world is understood as divided into the Forces of Light (the Kingdom of God) and the Forces of Darkness (the Kingdom of Satan). Although his original writings have been lost, remnants are preserved in later Manichean documents. Mani claims to have been an apostle of Jesus Christ, who (according to later biographies) received a revelation about the true nature of the universe when he was in his twenties. Manicheanism became very popular among elites in the Sassanid court. His teachings spread outside of Persia through his missionary activities that took him to Egypt, Syria-Palestine, India, and central Asia. No doubt these early movements led to the spread of Manicheanism as far east as China in later periods. At the end

THE BOOK OF GIANTS

Also known as *Ohya the Giant*, the *Book of Giants* is an apocryphal biblical text that has been found at Qumran (among the Dead Sea Scrolls) and at Turpan in the Tarim basin in China. The Dead Sea Scrolls version of the text dates to earlier than the second century BCE, but its presence in China suggests that this book was important to the Manichaean community that lived there. The text presents stories of antediluvian giants, one of which is named Ohya (or Ogias). The only versions of this text that have been recovered have been fragmentary. Thus, scholars debate the order of the narrative events of the story, and interpretations of it are debatable.

—Kevin M. McGeough

of his days, Mani had fallen out of favor with the Sassanid court, and tradition holds that he died or was martyred in prison.

Manicheanism was a form of Christianity that blended elements of Judaism and Gnosticism with Zoroastrianism. As in Gnosticism, Manicheanism does not hold God to be omnipotent but rather on equal footing with Satan. Some have argued that there are Buddhist and Hindu elements in Manicheanism, which were incorporated during Mani's travels to India. In particular, Foltz has argued that the concept of the transmigration of the soul was derived from Buddhism and that the structure of the Buddhist *sangha* was the basis of the organization of the Manichean community. Manicheanism was well suited for this kind of hybridization of religious beliefs since one of its fundamental tenets was that it revealed more complete teachings that had not yet been revealed in other traditions. Thus, as it spread, it incorporated ideas from various local traditions.

Within Persia, Manicheanism was not as popular as another nearly contemporary tradition: Mandaeanism (which was especially favored under the Parthians). Like Manicheanism, Mandaeanism was informed by Gnosticism and Zoroastrianism. Mandaean dualism sees a cosmic father and mother who are also associated with light and dark and other binaries, although

there is no systematic theology or cosmology within the diverse community of believers. However, most Mandeans trace the origins of their beliefs to Adam (the first man in the Judeo-Christian tradition) and see John the Baptist as one of the most important prophets (as opposed to Jesus, who is not held in as high regard by the tradition). Little of the secular history of Mandaeanism is preserved in their own accounts, as the history of the physical world was of little interest to the community.

—Kevin M. McGeough

Bibliography

- Buckley, Jorunn Jacobsen. *The Mandeans: Ancient Texts and Modern People*. Oxford: Oxford University Press, 2002.
- Foltz, Richard C. *Religions of the Silk Road*. New York: St. Martin's Griffin, 2000.
- Gardner, Iain, and Samuel N. C. Lieu. *Manichaean Texts from the Roman Empire*. Cambridge: Cambridge University Press, 2004.
- Widengren, Geo. *Mani and Manichaeism*. London: Weidenfeld and Nicolson, 1965.
- Yamauchi, Edwin. *Gnostic Ethics and Mandaean Origins*. Piscataway, NJ: Gorgias, 2004.

■ Introduction: Christianity

Christianity owes its existence to the conviction of a small Palestinian Jewish community that their crucified leader, Jesus of Nazareth (ca. 4 BCE–30 CE), had been resurrected from the dead by the God of Israel. An itinerant rabbi, healer, and nonviolent social revolutionary, Jesus heralded the advent of the Kingdom of God, a new “Way” of being in which God is the king over all earthly affairs. But contrary to kingship through exertion of brute force—the method both practiced by Rome and widely anticipated by first-century Jews as indispensable to Messiah’s Roman conquest—Jesus proclaimed that God reigns by internally transforming the lives of individuals through unconditional love. Claiming to speak and act with divine authority, Jesus was perceived as a threat by Jewish and Roman authorities alike and thus suffered crucifixion under the sentence of Roman procurator Pontius Pilate (r. 26–36 CE).

Shortly thereafter, among the apostles (Jesus’s designated leaders) and disciples emerged belief in Jesus’s resurrection alongside the corollary that God had thereby vindicated Jesus’s messiahship and deity. Hence, a new faith was born in Jerusalem that under the apostles’ leadership extended northward to Antioch and southward to Alexandria. Notwithstanding this Near Eastern growth, the person chiefly responsible for the development of Christianity into a world religion was the Hellenistic Jewish thinker

Paul (ca. 10–64 CE), a protégé of leading Pharisaic rabbi Gamaliel and former persecutor of the followers of Jesus. Following a vision in which he encountered the risen Christ, Paul became Jesus’s greatest interpreter and evangelist. From Jesus’s ministry Paul extrapolated the doctrines of justification by grace through faith, the atonement, and the ultimate fulfillment of ceremonial Jewish law in the crucifixion. Accordingly, Gentiles could join the Jesus movement without observing Jewish customs, a point emphasized by Paul on three successful missionary journeys throughout the Mediterranean basin.

Presenting itself as an alternative way of understanding the Gospel, Gnosticism assimilated the figure of Jesus into its syncretistic blend of Greek, Jewish, and Asian philosophic tendencies. To compete with the prevalent Pauline Christianity, in the second and third centuries Gnostics authored pseudonymous gospels that differentiated the utterly transcendent supreme God from the Hebrew biblical Yahweh, portrayed as a wicked demiurge. Gnostics viewed Jesus as a God-inspired teacher of secret knowledge (*gnosis*) that humans must apprehend in order for their intrinsically good souls to escape from their imprisoning evil bodies.

Gnostic positions were sharply rejected by ante-Nicene Church Fathers, the theologians reputed for spiritual leadership and often martyrdom in an era when Christianity was illegal in

the Roman empire. In their exegetical treatises the Fathers distinguished between orthodoxy and heresy by employing the criterion of apostolicity, which defined true beliefs as those conforming to the life, teaching, and experience of the apostles. On this basis a collection of documents, including the four Gospels and the letters of Paul, gained recognition as canonical, and concepts regarded as logical derivations from these scriptures, such as the Trinity, assumed their earliest shape.

—Kirk R. MacGregor

Bibliography

- González, Justo L. *The Story of Christianity*, Vol. 1. San Francisco: HarperCollins, 1985.
- Pelikan, Jaroslav. *The Christian Tradition: A History of the Development of Doctrine*, Vol. 1, *The Emergence of the Catholic Tradition (100–600)*. Chicago: University of Chicago Press, 1971.
- Wenham, David. *Paul: Follower of Jesus or Founder of Christianity?* Grand Rapids, MI: Eerdmans, 1995.
- Wright, N. T. *Christian Origins and the Question of God*, Vol. 2, *Jesus and the Victory of God*. Minneapolis: Fortress, 1997.

Life of Christ

Jesus of Nazareth (ca. 4 BCE–ca. 30 CE) was an itinerant Jewish preacher in and around Galilee who gathered a following principally among his fellow Jews and who was executed near Jerusalem by the Roman government under a charge of political sedition. Since Jesus did not leave behind any writings, virtually everything we know about his life comes from those who believed that he was the long-awaited Jewish Messiah. This was a Hebrew term meaning the “anointed one” who would restore the glory of David’s kingdom and inaugurate a new era of God’s dealings with humanity. In Greek the term for “anointed one” is “Christ.” Whether Jesus claimed this title for Himself during His lifetime is debated by scholars. The principal sources for His life are a series of surviving gospels (“good news”) written by Christians from around 60 CE to around 120 CE. Four of these accounts are contained within the New Testament, while numerous others were included in the Christian canon. Modern scholars have

RESURRECTION

“Then one [of the disciples], whose name was Cleopas, answered [the stranger, who unbeknownst to them, was actually the risen Jesus], ‘Are you the only stranger in Jerusalem who does not know the things that have taken place there in these days? . . . The things about Jesus of Nazareth, who was a prophet mighty in deed and word before God and all the people, and how our chief priests and leaders handed him over to be condemned to death and crucified him. But we had hoped that he was the one to redeem Israel.’ . . . Then [Jesus] said to them, ‘Oh how foolish you are, and how slow of heart to believe all that the prophets have declared! Was it not necessary that the Messiah should suffer these things and then enter into his glory?’ Then beginning with Moses and all the prophets, he interpreted to them the things about himself in all the scriptures” (Luke 24:18–21, 25–27).

—Jeffrey Trumbower

thus had to piece together details of Jesus’s life, accounting for the discrepancies among the gospels and the agendas of their various authors.

Two gospels (Matthew and Luke) claim that Jesus was born in Bethlehem, although they differ on the details of why His family was there. This Bethlehem connection could have been the result of a later legend that tied Jesus to this so-called City of David, especially since He was known in His adult life as Jesus of Nazareth, not Jesus of Bethlehem. Nothing is known of Jesus’s activities until He was about age 30, at which time all the sources claim that He was associated with an ascetic Jewish apocalyptic preacher named John the Baptist. After His encounter with John, Jesus embarked on His own career of preaching, healing, and casting out demons throughout Galilee, attracting both admirers and opponents among the Jewish populace. His preaching seems to have focused on the dawning Kingdom of God, variously understood in the sources. It appears that Jesus preached an ethic of love for God and neighbor tied to a view that God was now including in His Kingdom

some, such as tax collectors and certain repentant sinners, whom others might exclude. In some year during the reign of the Roman governor Pontius Pilate, who ruled Judea during 26–36 CE, Jesus decided to go to Jerusalem during the politically charged spring Passover festival, where He may have engaged in provocative actions (Mark 11). It is possible that He and/or His followers were expecting dramatic, universally visible intervention by God to correct the injustices of foreign occupation, based on earlier prophecies in the Hebrew Bible and other pre-Christian Jewish sources (see Zechariah 9 and 14 and Luke 24:18–21). Instead, what they received was a crucified Messiah, as Jesus was arrested and put to death through a collaboration of Jewish and Roman authorities. At this point, Jesus's followers had to choose to either abandon the movement or to reinterpret Jesus in light of the new facts of His death and apparent outward failure. Many of these followers became convinced that God had raised Jesus from the dead and had then taken Him up into heaven, vindicating His life and message. This set the stage for the spread of the initially Jewish and eventually multiethnic religion that would become known as Christianity. Christians hold that the life of Christ, far from ending in 30 CE, continues on and that Jesus will return from heaven some day to judge the living and the dead.

—Jeffrey Trumbower

Bibliography

- Ehrman, Bart. *Jesus: Apocalyptic Prophet of the New Millennium*. New York: Oxford University Press, 1999.
- Fredriksen, Paula. *Jesus of Nazareth, King of the Jews*. New York: Vintage Books, 2000.
- Sanders, E. P. *The Historical Figure of Jesus*. London: Penguin, 1993.

Apostles and the Early Spread of Christianity

After the death of Jesus there were two distinct factions of His followers in Jerusalem—the Aramaic-speaking Christian Jews and the Hellenized, Greek-speaking Christian Jews. The Aramaic-speaking Christian Jews were confined largely to Jerusalem; they were conservative, le-

galistic, and exclusive, still practicing Jews in all ways except that they believed that Jesus was the Messiah. They did not seek wider missionary activity but worshipped in the Temple and in each other's houses. The Greek-speaking Hellenized Christian Jews considered themselves part of the intellectual and cultural environment of the larger Greco-Roman world. They met in the synagogues throughout Jerusalem and they read the Septuagint, the Greek version of the Hebrew scriptures.

Paul, the Greek-speaking Pharisee who later became a Christian missionary to the Dispersion Jews and to the Gentiles (from the Latin *gens*, “people,” which to the Jews meant anyone who was not a Jew), initially harassed those early Hellenized Christian Jews. He zealously persecuted uncircumcised converts, and he was present at the stoning in 35 CE of the proto-martyr Stephen, a Hellenized Christian Jew who claimed that Jesus was the prophet of Moses. After a dramatic conversion on the road to Damascus in 37 CE (Acts 9:1–19), however, Paul traveled through the cities of Syria, Asia Minor, and Greece to preach the message of Jesus to Jews and Gentiles. It was just after the early Christian churches had been established there in 40 CE that Paul and his followers at Antioch were first called *Christianoi*, “men of Christ.”

By 40 CE, the Christian movement had expanded and not only did these two distinct groups of Christian Jews disagree on several practical and theological issues but the Jews more generally were at odds with the Romans. The Hellenized Christian Jews following Paul did not think that conversion should require the traditional Jewish practices of circumcision, the observance of the Sabbath, and dietary laws. According to Acts 15, this argument about circumcision between Paul and the Aramaic-speaking Christian Jews was settled in 50 CE at the Apostolic Council in Jerusalem. Gentiles who converted to Christian Judaism no longer had to be circumcised. In a short time and largely through the missionary work of Paul and his followers, Christianity became a separate form of Judaism. Morality and ethical conduct, if not circumcision, still bound Jews and converts alike to the Torah. But the central shared Christian rite of the Eucharist (from the Greek *eucharistia*, “thanksgiving”), “communion,” which

represented Jesus's death, was now the only sacrifice necessary in their worship of God.

Despite the decision of the Apostolic Council to allow uncircumcised Gentiles to become Christians, Paul's proselytizing continued to offend some Jews in the synagogues where he preached. He had replaced the Torah with faith in Jesus whom his followers now called the Christ. Many Jews felt that if Paul was right then Moses and the Scriptures were wrong and so they were hostile to his teaching. Herod Agrippa I, who ruled in Jerusalem from 41–44 CE, persecuted Christians in an effort to appease the traditional Jews who were not followers of Jesus and who were suffering under the increasing hostility and religious intolerance of local Roman governors. Often when Paul preached, local Jews rioted and stoned him, to force him to leave their synagogues and their cities. Both at Philippi in Greece and in Judea, Roman officials had to step in when the rioting became too serious. In Judea, fellow Christians feared for Paul's life and he was spirited away and brought before the Roman governor in Caesarea. There he was kept under house arrest for over two years. At that time he appealed his case to the emperor, a privilege reserved for Roman citizens, rather than stand trial against his accusers in Jerusalem.

In 58 CE, just before leaving Caesarea to go to Rome, Paul had an audience with Agrippa II, king of the Jews, and his sister Berenice, at which Agrippa is reputed to have interrupted Paul's discourse to concede that he would soon make a Christian of him if he kept up his preaching. En route to Rome, where his case had been transferred, Paul was shipwrecked on Malta. Upon arriving in Rome, he was under house arrest but seems to have continued preaching until at least 64 CE. This was the period of the great fire in Rome under Nero for which Christians have sometimes been blamed; Paul is traditionally considered to have been martyred then along with other Christians charged with starting the fire.

—Cynthia White

Bibliography

Ferguson, Everett. *Backgrounds of Early Christianity*. 3rd ed. Grand Rapids, MI: Eerdmans, 2003.

CHRISTIANITY AND THE DESTRUCTION OF THE SECOND TEMPLE

The impact of Paul's organized ministries in synagogues throughout the Diaspora was strengthened by the destruction of the Jewish Temple in 70 CE, under the Flavian emperors Vespasian and his son Titus. This war is considered by many to be the clear break between Judaism and Christianity: while the destruction of the Temple profoundly altered the nature of Judaism, Paul's message that salvation was possible without the law simultaneously hastened Christianity's transformation from a reform movement within Judaism into an *adversus Judaeos*, "against the Jews," religion. Christianity was a challenge to Judaism. For example, Christians conceived of Jesus as God and they believed that the prophecies of scripture were fulfilled in him, but this was something no Jew could accept; and although Jews and Christians both awaited the Messiah, the Christians considered Jesus the Messiah and expected his return. By the early second century, Ignatius, Bishop of Antioch, had written a series of letters while traveling to his martyrdom in Rome in which he drew a clear line of separation between Christians and Jews, claiming that it was monstrous to talk of Jesus Christ and to practice Judaism.

—Cynthia White

Frend, W. H. C. *The Rise of Christianity*. Philadelphia: Fortress, 1984.

Meeks, Wayne. *The First Urban Christians: The Social World of the Apostle Paul*. New Haven, CT: Yale University Press, 1982.

Stark, Rodney. *The Rise of Christianity*. San Francisco: HarperCollins, 1997.

White, Cynthia. *The Emergence of Christianity*. Westport, CT: Greenwood, 2007.

Pauline Christianity

Paul of Tarsus (ca. 10 CE–ca. 64 CE) was a Greek-speaking Pharisaic Jew who opposed the Jesus movement in the early 30s CE (Philippians 3:5–6) but who later became an influential Christian theologian. Although Paul never met the historical Jesus, he had a dramatic religious experience



Saint Paul was a first-century Christian convert credited with spreading Christianity throughout the Roman empire, St. Paul's Church, Rabat, Malta. (Corel Corporation)

of the risen Jesus (Galatians 1–2; Acts 9) that caused him to join the movement he had opposed. Paul led important missionary activities in Asia Minor and Greece in the 40s, 50s, and 60s CE that fostered the spread of Christianity. Thirteen letters in the New Testament are attributed to him, of which scholarly consensus considers at least seven to be genuine (1 Thessalonians, Philippians, 1 and 2 Corinthians, Galatians, Philemon, and Romans). Later tradition holds that he died a martyr at Rome during Nero's persecution of Christians in 64 CE. The author of the Gospel of Luke also wrote a biography of Paul (Acts 9–27) that both corroborates and contradicts details from his life that may be gleaned from the letters.

Pauline Christianity was focused on Jesus as the cosmic Christ whose death and resurrection constituted the focal point of the Jewish God's dealings with all humanity. There is very little in Paul's letters about Jesus's teachings. Paul's is a religion *about* Jesus rather than the religion *of* Jesus. Because of Jesus's death on the cross, the specific requirements of Jewish Law (Torah) are no longer necessary for either Jews or Gentiles (Galatians 2). Furthermore, because of Jesus's resurrection, all will soon be raised and transformed like He was (1 Corinthians 15). Believers in Jesus's death and resurrection put on Christ in a mystical sense and become new creatures, and this has concrete ethical implications (Romans 6–8). Paul anticipated Jesus's return from heaven within his own lifetime (1 Thessalonians 4:17),

➤ SCRIPTURE ON JESUS'S SACRIFICE

The following passage, taken from the letter of Paul to the Romans, demonstrates the essence and focus of Pauline Christianity: the cosmic effect of Jesus's death and resurrection on the relationship between God and humanity.

"There is therefore now no condemnation for those who are in Christ Jesus. For the law of the Spirit of life in Christ Jesus has set you free from the law of sin and death. For God has done what the law, weakened by the flesh, could not do: by sending his own Son in the likeness of sinful flesh,

and to deal with sin, he condemned sin in the flesh, so that the just requirement of the law might be fulfilled in us, who walk not according to the flesh but according to the spirit. . . . I consider that the sufferings of this present time are not worth comparing with the glory about to be revealed to us. For the creation waits with eager longing for the revealing of the children of God." (Romans 8:1–4, 18–19).

—Jeffrey Trumbower

at which time all demonic forces and powers opposed to God would be defeated (1 Corinthians 15:20–28). Paul's preaching could be radically egalitarian with respect to relations among believers (Galatians 3:28), but he could also be a social conservative, not wishing to spark social or political upheaval in the short time before Jesus's return (1 Corinthians 7–9; Romans 13).

—Jeffrey Trumbower

Bibliography

- Roetzel, Calvin. *The Letters of Paul: Conversations in Context*. 4th ed. Louisville, KY: Westminster John Knox, 1998.
- Sanders, E. P. *Paul: A Very Short Introduction*. New York: Oxford University Press, 2001.
- Segal, Alan F. *Paul the Convert*. Reprint ed. New Haven, CT: Yale University Press, 1992.

The Gnostic Variations

A variety of Christian sects active during the first through fifth centuries CE are commonly designated as Gnostic. These groups interpreted the Hebrew Scriptures in light of the new confession of Christianity but with inspiration from Greco-Roman philosophy and Mystery religions. The result is a diverse array of theological systems adhering to no fixed dogma but departing drastically from the popular piety of the age.

In the Epistles of St. Paul, we find arguments being made against those who pretend to be recipients of secret knowledge (gnosis) unavailable to others. However, certain writings designated as Gnostic bear only a superficial relation to Christianity. A claim to secret knowledge and a consequent reversal of values are at the heart of the system of Simon Magus (described by his orthodox opponents, such as Irenaeus of Lyons, as the originator of all heresies), who elevated a prostitute to the status of universal Wisdom incarnate, and the sophisticated theology of Marcion, who taught that the God of the Hebrew Bible (Yahweh, Jehovah) was not really the Father of Jesus Christ but rather was an ignorant demigod extending his power by enslaving his human subjects by force of law, not love. This dichotomy (law versus love), drawn from the New Testament, led the seminal modern historian of dogma, Adolf von Harnack, to

➤ Gnostic Antiworldview

Scholars debate the term “Gnostic(ism),” but it is generally accepted that the various groups and texts so designated express a low opinion of life in this world and view certain humans (Gnostics) as citizens of a spiritual community that is temporarily held captive here yet destined for redemption through a cosmic process of salvation and restoration. Early Christian theologians and some pagan philosophers spent much time contesting the Gnostic worldview. The Gnostics themselves became prominent in many highly respected pagan philosophical circles of the early centuries CE as well as in Christian communities, where they sometimes held high office.

—Edward Moore

describe Marcion as the only early Christian, besides St. Paul, who truly understood the radical message of the Gospels. According to Marcion, Jesus was the emissary of a wholly alien God who, motivated by pure love, desired the release of humanity from its material imprisonment.

Around the same time, Basilides began to draw upon Stoic philosophy as he elaborated his system of a cosmic seed achieving fruition through the historical intervention of a divine savior-figure, Christ, and ending in the perfection of a cosmos reflecting divine glory. Basilides' near contemporary, Valentinus, elaborated a Christian philosophy of salvation in which souls were said to achieve redemption according to a hierarchical arrangement preordained by the highest God. The opponents of Valentinus quoted him as saying that certain souls are saved by nature, some through righteous acts, while others are destined for damnation. Valentinian Gnosticism is properly regarded as the first systematic expression of Christian theology, evident in the work of Ptolemy (Valentinus's pupil, not to be confused with the famous astronomer of that period) and the lengthy philosophical treatise *Tripartite Tractate* (in the Nag Hammadi Library of Coptic texts discovered in Egypt in 1945).

The joint founders of Neoplatonism, the Christian Origen of Alexandria and the pagan Plotinus, each opposed Gnosticism. Origen condemned the view that evil is a product of divinity;

Plotinus railed against the notion that the cosmos is inherently flawed. However, the highly sophisticated philosophical theology of the Gnostics, especially the so-called Sethian school (after Seth, the third and spiritually perfect son of Adam), remained a challenge to both pagan philosophy and emerging Christian dogma. Origen attacked Gnostic theology in several of his works, notably the *Commentary on the Gospel of John*. Plotinus wrote the treatise “Against the Gnostics,” included in the second book of his *Enneads*.

—Edward Moore

Bibliography

- Jonas, Hans. *The Gnostic Religion: The Message of the Alien God and the Beginnings of Christianity*. Boston: Beacon, 1958.
- King, Karen L. *What Is Gnosticism?* Cambridge: Harvard University Press, 2003.
- Rudolph, Kurt. *Gnosis: The Nature and History of Gnosticism*. Edited by R. McL. Wilson. Translated by P. W. Coxon, K. H. Kuhn, and R. McL. Wilson. Edinburgh, UK: T. & T. Clark, 1984.
- Williams, Michael Allen. *Rethinking “Gnosticism”: An Argument for Dismantling a Dubious Category*. Princeton, NJ: Princeton University Press, 1996.

The Early Church Commentators

Interpretation of sacred writings was central to the creation of Christianity out of its Jewish and Greco-Roman social and cultural contexts. Early Christians had to decide how they would understand Jesus Christ (the “anointed one”) in light

of the Hebrew Scriptures and His relationship to the larger population of Rome in the first century CE. Some Christian groups, such as the followers of the Marcion (d. ca. 154 CE), rejected Jewish texts altogether. Others maintained that one had to be a Jew to be a Christian, strictly following Jewish ritual laws as contained in the Torah. The teachings that would become orthodox held a middle position on Jewish Scriptures. The Gospels accepted into the New Testament portray a Jewish Jesus who is a commentator on the Hebrew Bible, proclaiming Himself the fulfillment of its prophetic teachings and the Savior of the Greco-Roman world, not just of the Jews.

Commentators of the second and early third centuries CE continued to argue about the importance of Jewish Scriptures in their communities. Justin Martyr (d. ca. 165 CE) opposed those Christian groups who abandoned the Hebrew Bible. In his *Dialogue with Trypho*, he maintained that Christ had superseded the old covenant with the Jews but had not negated it. Irenaeus of Lyon (ca. 190) built upon Justin’s arguments in his *Against Heresies*, maintaining that the Jewish texts should be read typologically; that is, Christ is hidden in the text of the Hebrew Bible and made known through types and parables. This way of seeing the Scriptures became influential for later orthodox positions. It was developed and refined by subsequent Church Fathers such as Clement of Alexandria (d. ca. 211), who read the texts symbolically, and Tertullian of Carthage (d. ca. 222), who further

➤ ORIGEN’S THREEFOLD SENSE OF SCRIPTURES

Origen of Alexandria was one of the most important and controversial theologians of early Christianity. A renowned teacher and prolific scholar, he produced commentaries on virtually all books of the Bible and works that synthesized Christian theology. Origen was particularly regarded for developing one of the most influential hermeneutical techniques prior to Augustine. In Origen’s opinion, the Bible should be viewed with three discernable senses: literal, moral, and mystical. The literal sense contained references to things that actually took place. In his commentaries,

Origen often begins with this sense, though he believed that some Scriptures lacked literal meaning altogether. The moral sense was the edifying message of the text: the lesson that the text held for the reader. The mystical sense, which was behind all Scripture and was the most important to Origen, was influenced by Platonic philosophy. The mystical sense was the sacred truth that transcended the physical world. When uncovered, the exegete would reveal the true nature of God, bringing the reader into union with the divine.

—Dennis Quinn

maintained that the Scriptures foretold the coming of Christ. This attitude was refined by Origen of Alexandria, Egypt, who was executed during the Decian persecutions in 251 CE.

—John Walton Burnright

Bibliography

- de Margerie, B. *An Introduction to the History of Exegesis*. 3 vols. Petersham, MA: Saint Bede's, 1993.
- Froehlich, K., ed. *Biblical Interpretation in the Early Church*. Philadelphia: Fortress, 1984.
- Grant, R. M., and D. Tracy. *A Short History of the Interpretation of the Bible*. 2nd ed. Philadelphia: Fortress, 1984.

The Concepts of Orthodoxy and Heresy

The concept of orthodoxy (correct opinion) was unknown to the earliest Christians as was its antithesis, heresy (division arising from a dissenting opinion). As the early Church struggled to define itself in relation to the dominant culture, a wide variety of opinions arose, all of them vying for the exalted status of correct, or normative. The New Testament provides examples of early debates over questions that would later form the basis for dogma (institutionalized opinion), notably the role of Jewish law in the emerging Christian religion and the status of faith versus good works as the key to salvation. Given the fact that the New Testament writers themselves held diverse opinions on these and many other topics, centuries of often heated debate and sometimes violent disturbance occurred before anything resembling consensus emerged.

In early Christianity, the Hebrew Scriptures (or Old Testament) were the touchstone for matters of interpretation of the young faith. Several New Testament books include citations from the Greek translation of the Hebrew Bible (the *Septuagint*) in support of theological points. Perhaps the earliest manifestation of heresy is the rejection of these Scriptures as authoritative, as in the radical proto-Gnostic system of Marcion, who identified the God of the Jews with an ignorant and inferior—indeed evil—creator. While Christian orthodoxy did not come to mean unqualified acceptance of the Hebrew Bible as authoritative Scripture, it did utilize allegory as a method of

DEFINITIONS OF ORTHODOXY AND HERESY

The establishment of orthodoxy involved a long process. Early Christians did not agree on the basic tenets of the faith. Mysterious and paradoxical theories regarding the personhood of Christ and the meaning of salvation abounded. Greek philosophy served as the common language used to explain these notions. Heresy is best understood as the outcome of failed attempts to explain religious revelation in philosophical terms. Orthodoxy is properly understood as the philosophical reconciliation of human reason and the poetical claims of divine revelation.

—Edward Moore

squaring the laws and precepts of the so-called Old Testament with the sometimes divergent and even radical message(s) of the New Testament. By the end of the second century, both mainstream Christians and esoteric Gnostics were using the Old Testament for exegetical purposes. At this point, heresy and orthodoxy came into opposition regarding a more central aspect of the Christian faith, the person and status of Christ.

As the Christian era progressed, numerous theories regarding the person, status, and mission of Christ spread around the Roman empire, shaping the theology of the Church. In the era of the Ecumenical Councils, many of these theories were condemned as heretical, yet their influence remained and served to provide the language and philosophical foundation for later orthodox dogmatic theology. Chief among these heresies was docetism, which taught that Christ's Incarnation was only apparent, not real, that is, that He was a nonphysical spiritual apparition and therefore did not actually suffer in the Passion. Another prevalent heresy was that Christ was not truly God or even equal to the Father but rather a normal man, adopted by God as His Son. These heresies became enshrined in highly sophisticated systems associated with the names of Arius (Arianism), Apollinaris (Apollinarianism), and Nestorius (Nestorianism), among others. The longest-lived Christian-derived heresy was that of Mani, known as Manichaeism, that thrived from the third through

fourteenth centuries, in various forms, from Europe to Asia.

The definition of Christ as a single person containing two natures (divine and human) eventually became the standard of Christian orthodoxy in both the East and West, as did the doctrine of the Trinity as a single substance existing as three unique persons, all equally divine.

—Edward Moore

Bibliography

Bauer, Walter. *Orthodoxy and Heresy in Earliest Christianity*. Edited and translated by R. A. Kraft and G. Krodel. Philadelphia: Fortress, 1971.

Kelly, J. N. D. *Early Christian Doctrines*. 5th ed. 1977; reprint, New York: Continuum Books, 2006.

McGrath, Alister E. *Christian Theology: An Introduction*. Malden, MA: Blackwell, 2001.

■ Introduction: Nonmonotheistic Religious Traditions

Polytheistic belief systems (the belief in more than one god) were widespread worldwide from 1000 BCE to 300 CE. The cultures of Greece, Rome, Africa, and the Americas were polytheistic, believing in a variety of deities. It is difficult to generalize about polytheistic beliefs and practices since polytheism lends itself to considerable diversity. The following entries provide examples of some of the polytheistic practices found throughout the world at this time with the exception of South and East Asia, which are treated in other sections of this encyclopedia.

—Kevin M. McGeough

Development of Greek and Olympian Religion

Olympian religion was polytheistic, with worship centering around the gods known as the Olympians, anthropomorphic beings consisting of Zeus, his siblings, several of his children, and Aphrodite, most of whom dwelled on Mt. Olympus. Within this polytheistic religion Zeus reigned supreme, although various spheres of influence were portioned out to various gods. Individual mortals and city-states could have particular favorites among the gods (e.g., sailors would seek to ensure the goodwill of Poseidon, while Athenians

➤ XENOPHON OF COLOPHON

The poet and philosopher Xenophon of Colophon (ca. 570–478 BCE) questioned the validity of the anthropomorphic nature of the Olympians, noting the tendency of Greeks (and people in general) to create their gods in their own image, investing their gods not only with human bodies but also human qualities and personalities. In particular, Xenophanes blamed the less than praiseworthy nature of the Greek gods on Homer and Hesiod, who “attributed to the gods all deeds that are a disgrace among men” including such crimes as adultery and theft:

“... but if cows and lions had hands and could draw with their hands and create art

like men do, they would draw the shapes of their gods and make their bodies just like their own, each god having a body like their own, horse gods having bodies just like horses, cow gods just like cows.” (Xenophanes, fragment B15 Diels-Kranz)

—Kelly MacFarlane

Source

H. Diels and W. Kranz, *Die Fragmente der Vorsokratiker*. 3 vols., 6th ed. (Dublin and Zurich: Weidmann), Vol. 1, chap. 21, pp. 113–139. Translated by author.

were fond of their patron god Athena), although sensible mortals would ensure that they treated all gods with the necessary respect and worship.

Our earliest literary evidence for the nature of Olympian religion is found in Hesiod and Homer. In their works, the Olympian gods are already fully formed, possessing their own characters, personalities, and areas of interest. For instance, Hesiod's *Theogony* narrates the creation of the universe, the gods, and the rise to power of Zeus, while the gods take a personal interest in the Trojan War in the *Iliad* and in Odysseus's fate in the *Odyssey*. Although the gods do appear already fully drawn in these early poems, with little variation to be found in later works regarding the essential nature of the gods, there is textual and etymological evidence to suggest that the Olympian gods were not portrayed as static. Accounts of Dionysus usually contain some element of initial hostility toward the god, who must fight to have his divinity recognized (e.g., Euripides' tragedy, the *Bacchae*) while iconographic representations contain a number of Eastern elements (e.g., loud, raucous music; exotic animals; foreign dress), suggesting that Dionysus was adopted or adapted from the East. The varying genealogy of Aphrodite (who is either the daughter of Zeus or his aunt) suggests a similar fluidity. Etymology provides further information, with a number of gods having names derived from the Indo-European language (e.g., Zeus, from the Indo-European root for "sky"). The evidence suggests that some gods may have entered the Greek world from outside and were adapted to Greek culture.

Later authors began to question the validity of the myths told about gods, in particular those myths that portrayed the gods in a morally reprehensible light. Plato wanted to banish poets and myths from his ideal city. While the average Greek likely did believe in the existence of the gods, belief in traditional mythology was undermined among the intellectuals and philosophies that rejected the traditional gods that began to appear (e.g., Epicureanism, Cynicism).

—Kelly MacFarlane

Bibliography

Burkert, Walter. *Greek Religion*. Translated by John Raffan. Cambridge: Harvard University Press, 1985.

Lefkowitz, Mary. *Greek Gods, Human Lives: What We Can Learn from Myths*. New Haven, CT: Yale University Press, 2003.

Sissa, Giulia. *The Daily Life of the Greek Gods*. Translated by Janet Lloyd. Stanford, CA: Stanford University Press, 2000.

Greek and Roman City and State Cults

State cults of the Greco-Roman world provided divine support and legitimacy for political and ruling institutions. Although Greece and Rome constructed different governmental systems, politics in both societies was characterized by a fusion of religious and political authority.

Greek city cults varied depending upon each city-state, or polis. In Athens, the *demos* (the people) maintained the religious and political institutions. Citizens were always concerned with maintaining divine support. In Athens also, assemblies handled religious matters and addressed such topics as sacrifices, priesthoods, and temple construction. A typical assembly considered sacred matters first, then the more mundane political matters second. There was no organized priesthood in Greece, only individual priests and priestesses from individual temple sanctuaries.



Emperor Trajan pours libation as pontifex maximus at a sacrifice before battle with Dacians, in this detail from Trajan's Column. (The Art Archive/National Museum Bucharest/Dagli Orti)

These figures were often consulted in religious matters. People often consulted and almost always obeyed Oracles in important times. For example, Plato recommended consulting the Oracle of Delphi for the “founding of temples, and sacrifices, and other forms of worship of gods, daemons, and heroes” (Repub. 427b-c.). Oracles legitimated political practice by demonstrating the gods’ favor for certain actions. Thus, the gods retained ultimate authority in Greece. The demos, however, ultimately decided whether to consult the gods in a given circumstance.

In Rome as in Greece, religious authority rested in the hands of politicians. The senatorial aristocracy was charged with maintaining the *pax deorum*, or peace of the gods. In later years, following the lead of the first emperor, Augustus, the emperors adopted this role. Magistrates took auspices (studying bird behavior or animal livers in order to understand messages from the gods) and dedicated temples, while priests, appointed by the Senate, were considered the experts of ritual practices. Before meetings of the Senate, auspices were taken to discern the will of the gods before decisions were made about elections, making laws, and conducting wars. Romans considered the Senate house, where the Roman Senate met, a *templum*, a sacred space separated by rituals. In this way political and religious authority was fused at the heart of the Roman empire. By the late first century BCE, the emperor had adopted a religious role. For example, Augustus took the title of *pontifex maximus*, thereby becoming the head of the priestly colleges. The emperor thus became an intermediary between the people and the gods. Cults for the emperor were usually local, and it was not until the ascension of Constantine and his conversion to Christianity (312 CE) that emperors became intimately involved with the establishment of religious organizations.

The Roman emperors’ conversions to Christianity paired with the rise of episcopal power led to the first real separation of religious and political power in the Mediterranean world.

—Kelly MacFarlane

Bibliography

Beard, M., J. North, and S. Price. *Religions of Rome*, Vol. 1, *A History*. Cambridge: Cambridge University Press, 1998.

Johnston, S. I., ed. *Religions of the Ancient World: A Guide*. Cambridge: Harvard University Press, 2004.

Parker, R. *Athenian Religion: A History*. Oxford, UK: Clarendon, 1996.

Greek and Roman Votive Art

“Ex-voto” is a Latin expression used as a generic name for a votive offering made to a divinity as thanks for the fulfillment of a wish. The term may be used in the context of any civilization, and while we might speak of Greek or Roman ex-votos, the term is also employed in discussing the art of more recent times. The quality of such offerings is naturally uneven, ranging between a classical style and something rather primitive, usually an indication of local production. Such offerings are not works of art but instead were simply intended to make the prayer last longer. The number of ex-votos found on a given site can enable an estimation of the importance of the sanctuary and the fame of its divinity.

Votive offerings are an important element of religion and help us to understand a certain form of devotion. Relations between a divinity and the faithful were based on a bargaining system. A devotee signed a kind of contract (the *votum*) with the divinity: “If you give me this, I will give you that.” It might concern a cure, success in trade, a safe journey, or even the health of the emperor. When the devotee considered that his wish had been granted, he had to respect his part of the bargain and give the promised offering. The expression *V.S.L.M.* (from the Latin *votum soluit libens merito*) on an offering showed that the devotee had thanked the divinity.

The offering was proportional to the realization of the wish and to the devotee’s means; it might consist of perishable items, objects of everyday life, wooden or marble statues, altars, and even entire temples. In healing sanctuaries such as those of Asclepius at Epidaurus or Corinth in Greece are found numerous anatomical votives in terra-cotta representing the affected part of the body: a leg, an eye, a breast, a womb.

Offerings in metal often have a hole in the top to fix them by means of a nail to a wooden

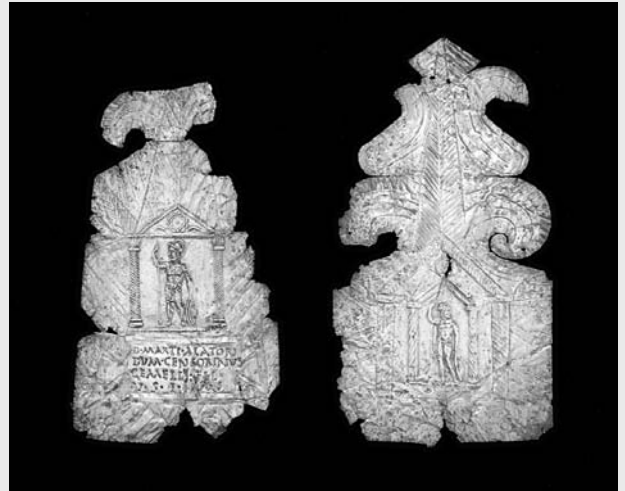
► BARKWAY TREASURE, BRITISH MUSEUM, LONDON

In 1743 a series of seven silver votive plaques and other metal objects were discovered in a quarry near Barkway (Herts). Five were dedicated to Mars, the god of war; the other two were dedicated to Vulcan, the god of fire.

These plaques are roughly shaped like palms or palm trees with volutes and are sometimes decorated with a fish-bone pattern. The largest votive plaque, exceptional by its size, is more than 19 inches (50 centimeters) long.

At the bottom an inscription or a human figure in a small temple refers to the divinity to be thanked: Mars shown as an armed and helmeted warrior, or Vulcan shown with his hammer and blacksmith's tongs.

—Marie-Luce Muracciole



(British Museum/Art Resource, NY)

gift (such as a statuette or casket) or on a pillar or a wall of the sanctuary set apart for public thank offerings. This practice is still in use in Catholic churches, where marble plaques thank the Virgin or the Saints for miracles performed.

—Marie-Luce Muracciole

Bibliography

- Henig, Martin, and Anthony King. *Pagan Gods and Shrines of the Roman Empire*. Oxford University Committee for Archaeology, Monograph 8. Oxford, UK: Oxbow, 1986.
- Rouse, William H. D. *Greek Votive Offerings*. 1902; reprint, New York: Arno, 1975.
- Woodward, Ann. *Shrines and Sacrifice*. London: Batsford, 1992.

The Role of Divination in the Classical World

Divination was the practice of gaining divine knowledge of things past, present, and future through signs, portents, oracles, and dreams. Gods of the Greco-Roman world were believed to possess a special understanding that came from their ability to see past, present, and future simultaneously. Mortals therefore hoped to gain access to such knowledge in order to ensure worldly success. The information provided through divi-

nation was not always obvious. Thus, their language needed to be interpreted by specialists trained to read it. The job of diviners was to bring out this information.

People from every level of society employed diviners. The Greek polis relied on divination in practically every major decision. At the political level, divination functioned as a means to determine whether the gods favored a particular action or to find out what the outcome of a particular official action might be. The prophetic utterances, however, needed to be read with caution. This was best illustrated by the case of the Lydian king Croesus (547 BCE). Before attacking the Persians, the Oracle at Delphi prophesied that a great empire would fall. Armed with the belief that his enemy would be defeated, Croesus went into battle but was captured by the Persian king Cyrus, only then realizing that the defeated empire would be his own. Thus, expert readings were always highly prized.

In Rome, the rhetorician Cicero wrote a treatise, *De Divinatione*, that provided the Stoic distinction between technical and natural divination, some of which came from Etruscan influences. As Cicero explained, technical divination was performed by specialists such as the *haruspices* (interpreters of the internal organs of animals, lightning, and other prodigies such as



Etruscan bronze mirror depicts a figure performing haruspices on the liver of a sacrificed animal. (David Lees/Corbis)

meteors), *augures* (diviners), astrologers, and other soothsayers. The Etruscans in Italy seem to have been particularly obsessed with the art of divination. Technical divination worked because, as Cicero noted, the gods love humans, “For they mean well and are friendly to humanity; they certainly know what they themselves have planned and established; it is definitely in our interest to know what will happen, for knowing it will make us more careful” (1.82). Natural divination, on the other hand, was obtained in a more passive manner by means of dreams and visions passed on to humans by divine instigation. “Since the universe is filled to the brim with a sense that lasts forever, and a mind that is divine, it follows logically that the spirits of men are directed by the contact with spirits divine” (1.110). This would usually occur in dream or trances believed to be instigated by the gods.

—Dennis Quinn

Bibliography

- Bowden, H. *Classical Athens and the Delphic Oracle: Divination and Democracy*. Cambridge: Cambridge University Press, 2005.
- Luck, George. *Arcana Mundi: Magic and the Occult in the Greek and Roman Worlds*. Baltimore: Johns Hopkins University Press, 1985.
- Manetti, G. *Theories of the Sign in Classical Antiquity*. Translated by C. Richardson. Indianapolis: Indiana University Press, 1993.

Shamanism in Central Eurasia

Derived from the Tungus word *saman* (“he who knows”), a shaman was a central figure in most central Eurasian societies of the ancient world. While the term has become synonymous with medicine man, witch doctor, and a wide variety of other religious figures, shamanism better describes the religious traditions of the nomadic and hunter-gatherer peoples of Siberia and the Eurasian steppes. In many ways, the shaman was more comparable to a psychiatrist than a priest. Unlike other religions, shamans did not have a standardized practice of rites and rituals. While many practices were similar, there was great variation in their roles and how they carried out their functions.

The shaman was not a priest but rather an intermediary between the mundane world and the spirit world. Entering an ecstatic state, the shaman used a variety of methods to cure and alleviate distress. As many illnesses were associated with the theft of one’s soul by an offended spirit, the shaman was essential to providing comfort and a cure. When the shaman entered a trance, his soul entered the spirit world to retrieve the lost soul. Also the shaman assisted with the ascension of one’s soul into the spirit world upon an individual’s death.

In addition to handling matters of life and death, shamans communicated with the spirit world. By using the acquired information, the shaman could then predict the future. This could take the form of scapulimancy (the reading of cracks in burned bones), augury (studying the behavior of birds), or allowing a spirit to possess the shaman’s body, thus allowing

THE SHAMAN

A person did not become a shaman by choice but instead was imbued with the ability at an early age. A shaman often possessed what would be termed psychological problems and may have suffered from a variety of seizures or hallucinations. In modern or even ancient agrarian societies, the shaman may have been a person who, due to these issues, would have been marginalized by society. However, in shamanic societies, the person

was viewed as having an affinity with the spirit world. Sometimes, a person acquired the abilities after a traumatic and unusual experience, such as being struck by lightning or recovering from a near-death experience. Furthermore, because a person had shamanic traits, this did not mean that the person wanted to be a shaman. Often the person needed to be coerced by the spirits.

—Timothy May

the spirit to communicate directly with the physical world.

The shaman not only protected his tribe from spirits but, in a sense, entered a relationship with the spirit world. Thus, the shaman was able to control spirits so that they assisted him. At the same time, the spirits could use the shaman to express their needs to the mundane world. As many of the local spirits were also ancestral spirits, this was a crucial role of the shaman. Without the shaman, society was exposed to psychic threats from the spiritual world and was thus vulnerable to a number of maladies. Only the shaman could deal with the spirit world and understand its needs.

Like any other religious profession, the shamans underwent rites of initiation and instruction by other shamans. Nonetheless, the position of shaman is often hereditary, which may not be surprising should the psychological or physical manifestation of shamanic ability be genetic. While most shamans tended to be male, female shamans were not uncommon, as the importance of ability was greater than gender considerations.

—Timothy May

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Foltz, Richard C. *Religions of the Silk Road*. New York: St. Martin's, 1999.
- Heissig, Walther. *The Religions of Mongolia*. Translated by Geoffrey Samuel. Berkeley: University of California Press, 1980.

Mystery Religions in Roman World

The wide variety of mystery religions in the Roman world makes their definition difficult. In contrast to the collective political character of traditional Roman religion, mystery religions offered personal salvation and enlightenment through ecstatic initiations. The rituals and teachings themselves were a closely guarded secret accessible only to the initiated few but centered upon chthonic deities who transcended life and death.

Mystery religions originated in the Greek East. The most famous mysteries were those of Demeter and Persephone at Eleusis in Attica. Although originating in the eighth century BCE, the Eleusinian mysteries remained popular during the Roman period. Much of the extant sanctuary, at Eleusis north of Athens, dates to the second or third centuries CE when the Roman emperors Hadrian and Marcus Aurelius were initiates. The surviving telesterion, or hall of initiation, dates to Marcus Aurelius's rebuilding of the sanctuary after its destruction by Sarmatians in 170 CE. The sanctuary remained in use until 392 CE.

The earliest Eastern cult to arrive in the city of Rome was that of Dionysus, whose association with wine and intoxication offered an escape from social constraints. Evidence of rituals performed in honor of Dionysus—the “Bacchanalia”—were first recorded in Rome in 186 BCE when Livy records their suppression by the Roman senate. Individuals could join Dionysus either through the adoption of an ascetic

► SPECIAL LIFESTYLES ASSOCIATED WITH THE MYSTERY CULTS

Members of ancient mystery cults often distinguished themselves from noninitiates in diverse ways. In general, mystery cults promised a change in status for the initiate in relation to his or her god, which meant a perceived change in status within the society. Since membership into these cults required certain secretive and symbolic activities known only by other initiates (*mystai*), the social bond between members was often closer than any other institution in the classical world, including family.

Although the rites were secret, initiates were often candid about their membership in mystery cults. This was especially the case for their priests and priestesses. For example, the eunuch priests (*galli*) of Cybele castrated themselves, imitating the suffering god Attis (the divine consort and lover of the goddess) who bled to death under a pine tree after self-emasculation. These demasculinized individuals were held in high esteem in the classical world. Additionally, but less radically, priests of the Isis cult shaved their heads in honor of the Egyptian goddess. Also, initiates into her cult wore linen every day instead of ordinary wool as a visible marker of cult membership. Thus, regular members of mystery cults, often called *therapeutai*, sometimes distinguished their lifestyles from those who were not. This was the case for members of the mystery cult of Mithras; a religious group that allowed only men, it was especially popular for Roman soldiers, sailors, and bureaucrats. Initiates of this religious fraternity were believed to be reborn (*renatum*) into the family of the god and thus transformed their status both personally and socially. Initiates' lifestyle and religious identities therefore became inextricably linked.

—Dennis Quinn



Relief panel depicting a priest offering incense to the goddess Cybele, Ostia Antica, Italy, third century CE. In Roman religion, Cybele was the principal goddess of the Phrygians and was often referred to as the Mother of the Gods. (Allan T. Kohl/Art Images for College Teaching)

Bibliography

- Burkert, W. *Ancient Mystery Cults*. Cambridge: Harvard University Press, 1987.
- Meyer, M. W., ed. *The Ancient Mysteries: A Sourcebook*. San Francisco: HarperCollins, 1987.

lifestyle or through the drunken ecstasy of the Bacchanalia.

More influential was the ancient Persian god Mithras. Mysteries in honor of Mithras are first recorded among the Cilician pirates in the first half of the first century BCE. The worship of Mithras

spread widely through the Roman empire from the second half of the first century CE and was particularly popular among the soldiers stationed along the northern frontiers of Britain and Germany and along the Danube. Worshippers gathered in artificial caves that re-created the mythical

cave in which Mithras sacrificed a primordial bull bringing life into the world, re-created through the depiction of the tauroctony (bull slaying) and the partaking of a ritual banquet.

The cult of the Phrygian mother goddess Cybele, or Magna Mater (Great Mother), was invited to Rome in 205 BCE during the war with Hannibal. Games in her honor, such as the Ludi Megalenses, were instituted the following year, and a temple was dedicated to her in 191 BCE. At the culmination of her rituals the priest would castrate himself, offering his fertility to the goddess. Horrified, the Senate forbade Roman citizens to participate, and it was only during the reign of Emperor Claudius (41–54 CE) that the cult of Cybele and her son-consort Attis was officially recognized. The archaeological record indicates that these cults spread and developed somewhat later, from the first through the third centuries CE.

—*Benedict Lowe*

Bibliography

- Beard, M., J. North, and S. Price. *Religions of Rome*. 2 vols. Cambridge: University of Cambridge Press, 1998.
- Burkert, W. *Ancient Mystery Cults*. Cambridge: Harvard University Press, 1987.
- Ferguson, J. *The Religions of the Roman Empire*. Ithaca, NY: Cornell University Press, 1970.
- Godwin, J. *Mystery Religions of the Ancient World*. London: Thames and Hudson, 1981.
- Turcan, R. *The Cults of the Roman Empire*. Cambridge and Oxford: Oxford University Press, 1996.

Celtic Religion

Apart from a number of rather famous quotes from ancient historians like Caesar, Diodorus of Sicily, Strabo, Pliny the Elder, and Lucan, the main sources for ancient Celtic religion are inscriptions and archaeological finds and features. Early medieval Irish and Welsh literature have also been frequently used to reconstruct “common Celtic” religion.

A closer look at the evidence reveals only a very few similarities, but a huge range of differences exists between the various Celtic religions practiced across Celtic Europe (and Asia Minor)

in the last few centuries BCE and the early centuries CE. The most obvious similarities—although they are limited to western Europe—exist in the terminology for some of the religious functions. The Greek geographer Strabo (*Geographika* 4.4.4) mentions bards, ovates, and druids, which are direct cognates to the Old Irish *baird*, *faithi*, and *druid*, respectively. Besides that, there are a limited number of names of deities—e.g., Lugh/Lugh and Ogmios/Ogma—that are relatively widely distributed in the Celtic west. Also, there is relatively widespread evidence of ritual deposition in watery contexts (rivers, lakes, springs, bogs), for human sacrifice (Gaulish “sanctuaries,” bog bodies), and for some elements of ancestral worship. The association of many different Celtic deities with only a handful of Classical counterparts indicates that local Celtic religious traditions seem to have followed the general Indo-European model relatively closely.

Other than that, however, much of ancient Celtic religion seems to have been very different, with local customs, traditions, beliefs, and practices by far outweighing widespread similarities. Thus, of the over 600 names of Celtic deities that have come down on us, only a very small number are attested more than once. Similarly, the archaeological record shows a wide range of differences in religious, sacrificial, and burial practices, which often also changed considerably over time, even on local scales. Where sacrificial depositions are concerned, while the selection of deposited goods often is relatively similar in much of Celtic Europe, the sites chosen as well as the layout of features sometimes found at those sites are very different. For instance, deposition, often associated with bridges and other riverside features in Switzerland, takes place in rectangular ditch enclosures in some areas of Gaul and in bogs and small lakes in much of Britain and Ireland.

It thus is impossible to reconstruct one Celtic religion. Rather, we have to assume that many different locally constituted Celtic religions existed in different areas of Europe in different periods of later prehistory that did share some common features, possibly some religious functions and a few gods but otherwise varied widely.

—*Raimund Karl*

Bibliography

- Green, M. J. *Dictionary of Celtic Myth and Legend*. London: Thames and Hudson, 1997.
- Green, M. J. *Dying for the Gods: Human Sacrifice in Iron Age and Roman Europe*. Stroud, UK: Tempus, 2001.
- Green, M. J. *Exploring the World of the Druids*. London: Thames and Hudson, 2005.
- Maier, B. *Dictionary of Celtic Religion and Culture*. Rochester, NY: Boydell, 1997.

Olmec Shamanism and Religion

Olmec civilization is the oldest of the pre-Columbian high cultures. From its formative period (starting around 1800 BCE) to the so-called epi-Olmec phase (ending ca. 300 CE), Olmec society experienced a transition from the cultural stage of hunter-gatherers to stratified society with ruling elites. This long-term transition is reflected in the socioeconomic patterns and in related belief systems.



Eagle transformation figure, Olmec, tenth–sixth century BCE. (The Metropolitan Museum of Art/Art Resource, NY)

The belief system of an early stage of a hunter-gatherer culture can be identified in the relationship between human beings and nature. Since Olmec times, the intertwining of humans and animals is typical for the mythological traditions of Mesoamerican peoples, and this mythical pattern of interrelated existence of all living beings manifests itself in the themes and motifs of the visual arts. In the worldview of the early hunters in the rubber country, humans and animals were bonded, and their spirits could interact without the boundaries of later belief systems in which the world of humans is separated from that of animals.

Associated with the spirited worldview of the hunters is the central role of the shaman in the Pre-Classical communities. Shamans could be men and women who were not leaders with political power but rather experts of communication between the living and the supernatural beings, and as such they enjoyed undisputed authority. Shamans were thought to be able to transform themselves into animals through trance techniques or the use of hallucinogenic drugs. Numerous Olmec sculptures depict this transformation process.

Despite social changes that occurred with the transition to food production, the central role of the shaman in community life did not change although there was a shift in priority for his or her ceremonial activities, which had to focus on the interaction with those forces in nature that were responsible for the success of plant cultivation and the prosperity of the community. In view of this shifting of priority, the primary concern of the Olmec farmers was to seek support and blessing for their crops and the fertility of their animals. Lineages were defined according to the memory of founding ancestors. Burials were more carefully prepared, mortuary offerings became more varied, and it can be conjectured that ritual practices relating to burials became ever more elaborate. These observations suggest that the shaman's role extended to performing ceremonies associated with an ancestor cult.

The early agrarian communities were characterized by social and economic equality. The later period of the Olmec cultural horizon shows signs of an emerging social hierarchy of the population. When the transition from egalitarian com-

► CONTINUITY OF CULTS OF PRE-COLUMBIAN DIVINITIES—THE RAIN GOD AND THE EARTH MOTHER OF OLMEC COINAGE

Olmec art incorporates aspects from all three evolutionary stages of Olmec society. The typical features of Olmec art, in form and style, are distinguishable by circa 1150 BCE. This holds true also for the basic motifs and symbols that repeat themselves in later periods in manifold combinations and transformations.

The abundance of composite (i.e., hybrid) representations may be seen as an echo of the imagined interconnection between all living things and of the duality of human beings and animals. The composite figures may well be associated with ideas of spiritual transformation. The human-animal hybrids form a distinct class of imagery, associating shamanic transformation.

The emergence of divinities with individual profiles of mythical personality and related attributes in early agrarian society finds its visual manifestation in sculptures of gods and goddesses. The oldest figures of the Olmec pantheon are the rain god (derived from the basic figure of the were-jaguar) and the earth goddess, whose figure becomes later identifiable with Tlazolteotl,

the goddess of filth and mother of the maize god. Their imagery persists and proliferates throughout the religious canon of pre-Columbian civilizations. The cults of some divine figures of Olmec coinage are still popular today. In local Maya communities of Mexico and Guatemala, offerings are regularly made to the rain god Tlaloc at secluded sanctuaries.

The monumental head sculptures—undoubtedly the most impressive genre of Olmec art—may represent deified ancestors of ruling elites, mystified in their composite representation with human features mingling with those of the mythical jaguar, which is identified by some scientists as the collective totem animal of the pre-Columbian Mesoamericans.

—Harald Haarmann

Bibliography

Miller, Mary, and Karl Taube. *The Gods and Symbols of Ancient Mexico and the Maya: An Illustrated Dictionary of Mesoamerican Religion*. London: Thames and Hudson, 1993.

munities to chiefdom and perhaps when local kingship occurred is not known. Some postulate the beginnings for this transition to hierarchically structured society as being the late second millennium BCE; others advocate a later date (that is, the first half of the first millennium BCE).

Social hierarchy in the Olmec civilization was somewhat diffuse and did not reflect distinctions of social classes as they are manifested in Maya, Zapotec, or Aztec society of later periods. In Olmec society, one lineage may have taken the lead over others, and its head (chief) assumed a prestigious status among the heads of other lineages. What can be observed from the archaeological record is a differentiation of two social groups, the great majority of villagers ruled by a small social elite whose authority symbolically accumulated in the hands of a prestigious head of lineage. It has been assumed that the shift of ceremonial centers that marks differences of cultural development may reflect a shift of power relations, that is, a change of social

elites. This stage of social development resembles the structuring of clan society in ancient China during the period of Shang rulers.

—Harald Haarmann

Bibliography

Benson, Elizabeth P., and Beatriz de la Fuente, eds. *Olmec Art of Ancient Mexico*. Washington, DC: National Gallery of Art; New York: Harry N. Abrams, 1996.

Joralemon, Peter David. "In Search of the Olmec Cosmos: Reconstructing the World View of Mexico's First Civilization." In *Olmec Art of Ancient Mexico*, edited by Elizabeth P. Benson and Beatriz de la Fuente. Washington, DC: National Gallery of Art; New York: Harry N. Abrams, 1996.

Chavín Shamanism

The religion of the cult at Chavín de Huántar (ca. 1600–400 BCE) probably focused heavily on concepts and practices drawn from shamanism.

➤ ONE CULT, MANY VISIONS

While we are certain that people participating in the Chavín cult took mind-altering substances, it is hard to know exactly what they took and when. One complicating condition of studying shamanic entheogen use in prehistoric South America is the wide range of available substances that might have been ingested alone or in combination.

Andean people made extensive use of common intoxicants such as alcohol and tobacco. In addition, early societies availed themselves of a large natural pharmacopeia. Available substances included mescaline from San Pedro cactus (*Echinopsis pachanoi*), a variety of other psychedelic tryptamines from plants and animals (*Viriola* spp, *Anadenanthera columbrina*, *Bufo marinus*), tropane alkaloids (*Brugmansia* spp and *Erythroxylum coca*), and psychoactive neurotoxins such as saxitoxin (found in *Spondylus princeps* and *calcifer*).

We might ask why people experimented with so many different substances given that most of them are toxic even in small amounts. One answer may be in the nature of the experiences themselves. Different tryptamines, tropanes, and neurological agents affect different pathways in the nervous system and create different mental effects. It may be that people took different substances as a way of achieving different mental states and accessing different parts of the supernatural world. Alternatively, the various entheogens may simply have provided adherents with different paths to the same altered reality.

—Jo Ellen Burkholder

As a historically documented form of religion found in many parts of the world, shamanism embodies a wide variety of beliefs and practices, not all of which are held in common. The art of Chavín de Huantar, however, suggests that several of the traits common to shamanism—the importance of animal spirits, the use of altered mental states, shamanic flight, and belief in transformation—were present on some level at Chavín. Architectural spaces at the Chavín temple also lend themselves to shamanic rituals.

Shaman (male) and shamanka (female) are usually people who communicate with the supernatural world by entering an altered mental state through an autoinduced trance, ascetic

practices such as fasting, and/or the use of hallucinogenic substances. Several indicators suggest that people involved with the Chavín cult took hallucinogenic drugs. One is the presence of drug paraphernalia—small trays, spatulas, spoons, tubes, and mortars and pestles—decorated with supernatural images executed in Chavín style. Among contemporary shaman of the Amazon, these instruments are used to prepare and ingest inhalatory powders high in psychoactive tryptamines. Supporting the use of inhalants, several of the tenoned heads that decorated the Chavín temple illustrate thick discharge from the nose and facial contortions, a common side effect of taking these substances. A second indicator is the common appearance in Chavín art of a cactus species known as San Pedro. San Pedro is high in mescaline and capable of producing hallucinations. Recent work suggests that people may also have made use of other substances derived from potato relatives and even spiny oyster (*spondylus*).

The particular animals illustrated in Chavín art also have shamanic associations and include snakes, felines, and birds. Shamans commonly speak of seeing snakes as part of their altered states, perhaps as interpretations of entoptic phenomena brought on by hallucinogenic substances. In Chavín art, snakes appear frequently either alone or as elements of larger figures such as the hair of important deities or other supernatural figures. The famous images on the Lanzón, Tello Obelisk, and the Raimondi Stone all serve as good examples of this. Amazonian shaman in particular also frequently refer to jaguars as spirit guides in the supernatural world as well as to their transformation into these animals so as to traverse the supernatural world. Spotted felines, perhaps jaguars, adorned the cornices of the consolidated temple and appeared in free-standing sculpture. Felines also loaned salient attributes such as prominent canines and claws to supernatural beings of all varieties. Alternatively, some shamans described flight associated with raptorial birds such as hawks or eagles as part of their altered-state experience. Birds adorning important portals and entranceways at the Chavín temple have been identified variously as hawks, harpy eagles, or perhaps macaws. Macaws may seem like an odd choice but may have

been viewed as special for several reasons including brilliant colors, unusual configuration of toes, bare skin patches on the face, a tendency to travel in pairs, long life span, not the least of which is its ability to mimic human speech.

Images expressing duality and transformation also figure prominently in the art of Chavín. Shamanic religions believe in the ability of shamans to mediate between the mundane world and that of the supernatural. This they achieve either through the help of an animal spirit or through personal transformation into an animal or spirit. Chavín's tenoned heads have been considered prime examples of depiction of various stages of transformation from human to animal and back. Shamanism also tends to focus on duality or complementarity and on the intersection or mediation of opposites. Chavín's location—equidistant from desert coast and tropical forest, at the conjunction of rivers—reflects these principals. Archaeologists have also pointed to the use of black and white stone, strombus and spondylus shells, highland and lowland animals, and images that make sense both right side up and upside down as further reflections of shamanistic dualism.

The temple complex at Chavín initially provided ideal spaces for the small-scale rituals typical of shamanism. People entered internal passageways or galleries through small patios, where rituals likely began. Galleries themselves

were narrow and allowed only a few people to enter an interior space at one time. Although the corridors were unlit, people navigated them by feel or by using entheogenic drugs, causing dilation of the pupils and improved vision in dark spaces. The complicated galleries mimicked long and winding journeys taken by shaman in the pursuit of esoteric knowledge with the goal of the journey being an audience with a supernatural spirit such as the Lanzon. In the later phases of the Chavín temple's operation rituals focused more on exterior spaces such as large plazas, where staged rituals in conjunction with visual and auditory effects could have provided shamanic-like experiences for large groups.

—Jo Ellen Burkholder

Bibliography

- Burger, Richard L. *Chavin and the Origins of Andean Civilization*. London: Thames and Hudson, 1995.
- De Feo, Vincenzo. "The ritual Use of Brugmansia Species in Traditional Andean Medicine in Northern Peru." *Economic Botany* 58(1) (2005): 221–229.
- Glowacki, Mary. "Food of the Gods or Mere Mortals? Hallucinogenic Spondylus and Its Interpretive Implications for Early Andean Society." *Antiquity* 79(304) (2005): 257–268.
- Rick, John W. "The Evolution of Authority and Power at Chavin de Huantar." *Archaeological Papers of the American Anthropological Association* 14(1) (2004): 71–89.

■ Introduction: Religious Developments in India

From 1000 BCE to 300 CE, the Indian subcontinent experienced a remarkable religious fluorescence. Over the course of less than 1,000 years, the traditions of Buddhism and Jainism—religious systems that are still practiced today—emerged. Hinduism, which had begun prior to 1000 BCE in the Vedic Age, continued to develop and expand and this period was particularly formative in the development of Hindu traditions.

The Vedic Age, which lasted from 1800 to 600 BCE, was the period in which many of the

central tenets of Hinduism were established and the Vedic texts, which are fundamental to Hinduism, were written. Hinduism refers to a diverse set of practices and beliefs and has remained widespread in India to the present day.

Buddhism and Jainism began around 500 BCE during a period of Indian history in which there was no centralized leadership. Rather, numerous city-states and small kingdoms ruled South Asia. In this context, wandering philosophers (*shramanas*) taught devoted followers, sometimes developing philosophical schools

based on their teachings. These philosophers sought answers to questions fundamental to human existence: What is the meaning of life? Is the current social order legitimate? Buddhism and Jainism are both legacies of wandering shramanas whose followers perpetuated and continued their teachings. After India was centralized under the authority of the Mauryan kings, King Aśoka converted to Buddhism, sending out missionaries to spread these teachings far and wide. Buddhist thought and practices began diverging, leading to the development of distinctly different traditions.

These three traditions (Hinduism, Jainism, and Buddhism) lasted until the present day in varying forms and in varying locations. All three of these traditions, however, are rooted in ancient India.

—Kevin M. McGeough

Early Brahmanical Hinduism

The years between 1000 BCE and 500 CE saw a large number of changes in the religious landscape of the Indian subcontinent. There were two major developments: first, philosophical speculations about concepts such as karma, rebirth, and the human soul, and second, the shift to temple-based worship of deities such as Vishnu, Shiva, and the Goddess.

Traces of the sacrificial concerns of the late Vedas can be found in the Upanishads, but reli-

gious thought and practices were undergoing a shift. For example, late Vedic religion identified the powerful speech that serves as the underlying substratum of the universe as Brahman. In the Upanishads, Brahman is the unchanging, eternal, indescribable ground of being. The Upanishads teach that the soul is likewise imperishable and unchanging. After death the soul is reborn based upon the person's karma. Karma (literally "action") referred to any morally consequential action that would bring about a result in the future, either the current life or a future one. Karma does not eliminate free will. Karma brings about a certain situation that living beings respond to, generating further karma. The accumulation of karma results in living beings' entrapment in *samsara*, the cycle of death and rebirth. From the Upanishads onward, the goal of Hinduism became to escape from this cycle. There were countless opinions about how to do this and the nature of the resulting state. Some Upanishads describe a series of heavenly realms accessed via sacrifice. Most, however, claim that meditative insight will enable the individual soul (atman) to merge with the Universal Reality, or Brahman. While scriptural study was deemed an important aid in this process, direct personal guidance by a teacher (guru) was said to be most helpful.

The other significant development in this period was the shifting pattern of worship. Vedic deities such as Indra, Agni, and Soma faded in importance. Vishnu, Shiva, and the Goddess, minor figures in the Vedas, came to hold a central place in most people's religious lives. Countless myths describe their aiding their worshippers, granting salvation, and battling forces of evil. As the Vedic pantheon faded in importance, so too did Vedic forms of ritual. The construction of temples to Hindu deities began at least as early as the third century CE and in time came to almost completely replace older ritual forms.

Many temples were constructed for the god Vishnu in one or more of his incarnations. Vishnu was represented as a cosmic ruler, the guardian and preserver of the cosmos who comes to earth in order to preserve righteousness generally by slaying the gods' demonic opponents. The *Ramayana* and the *Mahabharata*, Sanskrit epics composed between 400 BCE and

➤ EXCERPT FROM *THE BHAGAVAD-GITA*

[The soul] is not born,
it does not die;
having been,
it will never not be;
unborn, enduring,
constant, and primordial,
it is not killed
when the body is killed.

—Katherine Ulrich

Source

Barbara Stoler Miller, *The Bhagavad-Gita* (New York: Bantam, 1991), 32.

400 CE, tell the stories of Rama and Krishna, the two most important incarnations of Vishnu. Another god who rose to prominence in this period was Shiva. A model ascetic, he was often immersed in meditation in the Himalayas. He too had a cosmic role to play. At the end of each cosmic cycle, he would destroy the universe. He is often worshipped alongside the Goddess (Devi or Shakti). While the Upanishads had taught that spiritual wisdom would provide release from the round of rebirth, by the first century CE it was widely believed that devotion to a deity would accomplish this as well.

—Katherine Ulrich

Bibliography

- Heesterman, J. C. *The Broken World of Sacrifice*. Chicago: University of Chicago Press, 1993.
- Olivelle, Patrick. *Upanishads*. Oxford: Oxford University Press, 1996.
- Thapar, Romila. *Early India: From the Origins to AD 1300*. Berkeley: University of California Press, 2003.

The Bhakti Movement, Shaivism, and Devotion to Vishnu

The bhakti (devotional) movements had two main sources. The first is the *Bhagavad-Gita*. This important Sanskrit scripture, part of the *Mahabharata* epic, is dated to the first century CE. In the course of a dialog between the god Krishna and his friend and disciple Arjuna, devotion is emphasized as a means of spiritual discipline. With one's mind fixed on god, one may then act without fear of karmic consequences. While previous centuries focused on ritual acts or meditative insight as means of making spiritual progress, the Bhagavad-Gita advocated devotion to Krishna as the best way of attaining *moksha*, release from the cycle of birth and death (*samsara*).

Early Hindu temples were built in the centuries following the Bhagavad-Gita. It was from this context of temple worship that the bhakti movement derived its second inspiration. During the sixth through eighth centuries CE, the earliest of the poet-saints of southern India wandered from temple to temple singing the praises of the gods. Their poetry was in Tamil rather

than Sanskrit. Drawing on the conventions of a secular poetic tradition as well as stories from Sanskrit mythology, these early poet-saints focused their devotion on either Shiva or Vishnu. The poetry they left behind attests to a different variety of devotion than that of the Bhagavad-Gita. While the latter extolled devotion to Krishna, this did not preclude ordinary life in the world. The Tamil poet-saints, however, subordinated everything to devotion to their gods. Whether they served Shiva or Vishnu, their only profession was singing the praises of their gods with an emotional fervor far from the detachment recommended by the Bhagavad-Gita. This emotional devotion to a deity became a hallmark of the bhakti movement. In the centuries following these Tamil saints, the bhakti movement spread north and west. Bhakti poetry was composed in all the regional languages of India. In many cases, these are the earliest extant works of literature in the vernacular.

The bhakti movement had no single founder, no common scripture, and no central institution. It did not even have a common deity. While one can classify movements as Shaiva (focused on the god Shiva), Vaishnava (focused on the god Vishnu), or Shakta (focused on the goddess Shakti), each devotee favored a particular divinity, often one enshrined at a specific location or with a specific local name. Often the deity was portrayed as the parent, companion, or lover of the devotee. Other devotees avoided placing any limits on the being they worshipped, including the limits of name and form. These devotees were known as adherents of *nirguna bhakti* (devotion to the formless [god]).

Regardless of the deity worshipped or the language spoken, the devotional movements all shared certain premises. Love of god was of central importance. Devotion should be offered not only to god but also to those who serve god. One speaks to god in one's mother tongue rather than reciting Sanskrit prayers, and reciting the name of god with devotion is often enough to ensure salvation. The bhakti movement allowed participation by women and members of the lower castes. Its impact on art, literature, and the religious lives of millions remains strong.

—Katherine Ulrich

Bibliography

- Gonda, Jan. *Visnuism and Sivaism: A Comparison*. London: University of London, Athlone Press, 1970.
- Hardy, Friedhelm. *Viraha-bhakti: The Early History of Kṛṣṇa Devotion in South India*. Delhi: Oxford, 1983.
- Hawley, John Stratton, and Mark Juergensmeyer. *Songs of the Saints of India*. New York: Oxford University Press, 1988.

Jainism

Around the middle of the first millennium BCE, a movement emerged that challenged the spiritual supremacy of the Brahmin caste. According to this *śramana* (or “striver”) movement, the advanced goal of *moksha*, or liberation from the cycle of rebirth, could be attained by persons of any caste willing to exert the necessary effort.



A contemporary of the Buddha, Mahavira, the twenty-fourth Tirthankara, is believed to have lived from approximately 599 to 527 BCE. Statue of the Jain god, Mahavira, tenth century, Khajuraho in central India. (Anne Salaun/Roger-Viollet/The Image Works)

The shramana movement consisted of numerous sects, each with its distinctive understanding of the nature of the process of karma and rebirth and the means to reach liberation. The two shramana sects that have survived as distinct religions to the present day are Buddhism and Jainism.

Jainism is arguably the older of these two traditions. The contemporary Jain community traces itself to Vardhamana Jnatrputra, better known as Mahavira (the “Great Hero”) who according to one tradition lived from circa 599 to circa 527 BCE. If these dates are correct, then they would make Mahavira a senior contemporary of the Buddha, who, by Sri Lankan tradition, lived from circa 563 to circa 483 BCE. (The dates of both figures may need to be adjusted by as much as two centuries, depending upon the interpretation of particular pieces of archaeological and textual evidence.) But according to Jain tradition, Mahavira is not, strictly speaking, the founder of Jainism but instead the twenty-fourth in a series of great teachers who have discovered the Jain path and reestablished the Jain community. The twenty-third of these teachers, or *Tirthankaras*, named Parshvanath, was very likely an actual historical figure who lived about two centuries before Mahavira. According to the Jain scriptures, Mahavira’s parents were Jain practitioners in the tradition of Parshvanath.

The life story of Mahavira is parallel to that of Siddhartha Gautama, the Buddha. Both men are said to have been from the Kshatriya, or warrior caste, and to have been the sons of kings or tribal leaders in ancient northern India. Both are said to have left home at the age of 30 to become ascetics in pursuit of *moksha* and spiritual enlightenment. And both are said, by their respective traditions, to have achieved their goal.

There are also many similarities between Jainism and Buddhism. But whereas the Buddhist tradition was largely extinguished in India, albeit after having transplanted itself through missionary activity throughout Asia, the Jain community survives as a minority community in India to the present day. And whereas the emphasis of Buddhism is more psychological, focusing upon the motives that give rise to action

and addressing the many psychological factors involved in suffering, the emphasis of Jainism is sharply ethical and focuses upon correct action, chiefly in the form of the practice of *ahimsa*, or nonviolence in thought, word, and deed.

The Jain worldview posits a dualism of spirit, or *jiva*, and matter, or *ajiva*. The type of matter of greatest relevance to Jain practice is karma. Though the idea of karma as a principle of cause and effect is shared among Hindus, Buddhists, and Jains, the Jain view of karma is distinctive in seeing karma as a type of matter. It is the adhesion of karmic particles to the soul, or *jiva*, that keeps it tied to the cycle of rebirth. The Jain practices are designed to expel the karmic matter currently lodged in the soul as well as prevent further karmic influx. This twin goal is achieved through cultivating a state of inner equanimity and detachment, to which the practice of *ahimsa* is essential. When the soul is free from karmic matter, it experiences a state of omniscience called *kevala jnana*, followed by *moksha*, or liberation from the cycle of rebirth.

Jainism, like Buddhism, appealed to the merchant classes of the emerging cities of the Ganges Valley in the late first millennium BCE. The two dominant sects of Jainism are the Shvetambaras and Digambaras. These two sects differ with regard to monastic practice, yet they agree on the basic doctrine.

—Jeffery D. Long

Bibliography

- Dundas, Paul. *The Jains*. London and New York: Routledge, 1992.
- Jaini, P. S. *The Jaina Path of Purification*. Delhi: Motilal Banarsidass Publishers, 1979.
- Jaini, P. S. *Collected Papers on Jaina Studies*. Delhi: Motilal Banarsidass Publishers, 2000.

Life of the Buddha

The Buddha (literally “the Awakened One”) was the originator of Buddhist religious teachings (called the *dharmā*) and the founder of the Buddhist monastic order (called the *sangha*), which are among the most influential doctrines and in-

stitutions in human history. He was born Siddhartha Gautama, prince of the minor Sakya clan on what is today the border of India and Nepal. As a young adult he chose to renounce his position, his family, and his possessions in favor of the spiritual pursuits of asceticism, meditation, and homeless wandering. After 6 years, he achieved his goal of enlightenment or awakening (*bodhi*) and began a teaching career that was to last 40 years, until his death or supreme nirvana (*parinirvana*).

Scholars disagree about the precise dates of the Buddha's life, but it is generally accepted that he lived for 80 years and died sometime between 486 and 386 BCE. We know of him only through his followers, and his life story is a stylized and idealized product of centuries of sermonizing. It glorifies the Buddha's praiseworthy qualities and exemplifies the religious life that Buddhists are encouraged to emulate. In fact, Buddhists believe that Gautama Buddha was only the latest in an infinite line of Buddhas who have appeared in the world, and his life story is identical to that which all Buddhas, of all times, have lived although with different names. As such, the Buddha's life story is a central element of Buddhist doctrine in much the same way as the life story of Jesus is a central element of Christian doctrine.

The story begins in the blissful Tuita Heaven, where the future Buddha (called the bodhisattva) awaits the right moment to take on his last birth. He chooses to descend into the womb of Queen Maya, who dreams that a white elephant enters her through her side. After ten months she gives birth painlessly, miraculously, from her right side in the garden of Lumbini. Upon his birth, the future Buddha takes seven steps on his own and declares to all that this is his last rebirth.

The remarkable qualities of this new baby are confirmed by the court astrologer, who predicts that the boy will surely be an invincible conqueror, either a universal emperor or a conqueror of the spiritual realm, a Buddha. In line with this auspicious prophecy and the child's own confident declaration, the joyous parents bestow him with the name Siddhartha, which means “he whose goal is accomplished.”

➤ BUDDHA AND RENUNCIATION

The Buddha is among the world's most famous adherents of renunciation, leaving home in search of liberation from the cycle of rebirth. During his lifetime, however, he was only part of a growing trend among Indian religious practitioners. In the quote below, the Buddhist poet Asvaghosa imagines the Buddha's dialogue with his father, who thought, as many orthodox Hindus do, that a royal son should stay on as prince, become king, and only enter the forest as a renouncer once his sons are grown and his duties to family and royal lineage have been fulfilled.

"I will not enter the penance grove, O king, if you will be the surety for me in four things. My life shall not be subject to death. Sickness shall not rob me of my health. Old age shall not strike down my youth. And misfortune shall never plunder my wealth.

"If this course is not possible, then do not stop me, for it is not right to impede a man trying to escape from a burning house.

"Given that separation is certain in this world, is it not better to separate oneself voluntarily for the sake of religion? Or should I wait for death to separate me forcibly even before I have reached my goal and attained satisfaction?"

—Jonathan C. Gold

Source

Patrick Olivelle, trans. *Buddhacarita* 5.30–38, selections. From Donald S. Lopez Jr., ed., *Religions of India in Practice* (Princeton, NJ: Princeton University Press, 1995), 543.

King Siddhodhana, the father of the bodhisattva, wants his son to succeed him and become a universal emperor, not a mendicant sage. To this end, the king surrounds his son with beauty and joy and sequesters him from the world's troubles. Siddhartha succeeds masterfully in all of his studies and for 29 years enjoys the pleasures of the palace, including a wife, a son, and an extensive harem. But he eventually sets his mind upon seeking the outside world, and his father cannot prevent him. When he

does finally venture out, the future Buddha encounters what are termed the four sights—old age, sickness, death, and renunciation—that are human possibilities he had not known about before.

He understands immediately that the only proper response to the realities of old age, sickness, and death is the path of renunciation: leaving behind home, family, and worldly enjoyments in pursuit of liberation from death and rebirth. He sneaks out of the palace that very night and in a dramatic gesture symbolizing his severing of all attachment to the vanities and distractions of his old life cuts off his hair. This act is replicated in Buddhist monastic ordination ceremonies to this day.

As a wandering mendicant, the future Buddha quickly masters all of the forms of meditation and asceticism to which he puts his hand. But he is never satisfied that he has reached his goal until one night when he makes a vow not to leave his meditation spot until achieving liberation from the round of birth and death. After a night of meditation under the so-called Bodhi tree (a site of worship to this day), he faces down the threats and temptations of the demon Mara and eventually achieves his goal of awakening.

He soon gathers numerous disciples, many of whom realize nirvana themselves and are sent across the world to spread the Buddha's teachings (the dharma). At 80 years of age, with the final words "Decay is inherent in all component things! Work out your salvation with diligence!" the Buddha peacefully passes into nirvana for the last time. He refuses to name a successor to lead the sangha, saying instead that thenceforth the dharma must be the monks' teacher. His cremated body is said to have left behind 80,000 relics, which were immediately claimed by a variety of competing parties, and irresolvable divisions within the sangha began.

—Jonathan C. Gold

Bibliography

- Ñānamoli, Bhikkhu, ed. and trans. *The Life of the Buddha, According to the Pali Canon*. Onalaska, WA: Pariyatti, 2001.
- Schotsman, Irma. *Asvaghosa's Buddhacarita: The Life of the Buddha*. Sarnath, India: Central Institute of Higher Tibetan Studies, 1995.

Swearer, Donald K. *Becoming the Buddha: The Ritual of Image Consecration in Thailand*. Princeton, NJ: Princeton University Press, 2004.

Theravada Buddhism

Theravada Buddhism is the only surviving member of the early Buddhist schools that grew up in the centuries immediately following the death of the Buddha. Meaning “The Doctrine of the Elders,” Theravada is a self-consciously conservative school. It is the dominant religion today in Buddhist Southeast Asia, in particular Sri Lanka, Thailand, Cambodia, Burma/Myanmar, and Laos. The term “Theravada” is often used anachronistically (as here) to refer not just to the surviving Theravada school but also to early Buddhism more generally. The Theravada scriptures provide the bulk of existing evidence of early Buddhism, and the term “Theravada” is preferable to the derogatory term “Lesser Vehicle” (Hinayana) used by many later self-styled Great Vehicle (Mahayana) Buddhists. What follows, then, applies to all of non-Mahayana Buddhism and not just the Theravada school (but, italicized terms are in Sanskrit, not the Theravada scriptural language of Pali).

A Buddhist is anyone who goes for refuge to what are termed the Three Jewels: the Buddha (lit., “The Awakened One”), the *dharma* (the teachings and mode of practice outlined by the Buddha), and the *sangha* (the community of monks and nuns who pass on the Buddha’s teachings). At a minimum one must recite three times the refuge prayer: “I go for refuge to the Buddha, I go for refuge to the dharma, I go for refuge to the sangha.” All three of these elements are considered proper objects of reverence, and their worship brings not only an ultimate refuge but countless worldly benefits as well.

The Buddha’s own achievement of enlightenment or awakening (*bodhi*) and the blissful mental state of *nirvana* that it allowed were the culmination of his countless lifetimes of good works. In the dharma he provided not only a description of reality but also a path of practice that anyone could follow to nirvana, although the ultimate goal might take many lifetimes to reach. Most Buddhists, it must be admitted, choose to cultivate good works in the hopes of a better rebirth, deferring the difficult practices of monasticism and meditation to future lives.

The dharma is concisely summarized in the Four Noble Truths that the Buddha taught in his

➤ THERAVADA MONKS AND LAY SUPPORTERS

While the ultimate goal of Buddhists is to achieve final release from suffering, or *nirvana*, very few seek this very difficult goal directly. Instead, most seek to store up merit (*punya*) in the hopes that a lifetime of good actions (*karma*) will bring improved rebirths and perhaps make *nirvana* easier to attain in the future. The best way to gather merit, then, is to make donations in support of the *sangha*, as these donors do. The monks are representatives, upholders, and teachers of the *dharma*, so supporting them is especially meritorious because it extends the life of the Buddha’s teachings in the world. In addition to providing lay supporters with the benefit of a meritorious rebirth, monks give them teachings, perform protective rituals, and officiate at funerals, all of which help the monks to store up their own merit as well.

—Jonathan C. Gold



Theravada Buddhist monks receive alms, Laos. (Nguyen Thanh Long)

First Sermon. First is the truth of Suffering (*dukkha*), which is essentially a declaration that desire and deprivation, birth, old age, sickness and death are unpleasant and unsatisfying phenomena that permeate and dominate the experience of all beings throughout the universe. Second is the truth of the Cause of Suffering, which is essentially a declaration that out of ignorance, all beings act on their desires in ways that only cause their own suffering, through unending rebirths (this is the Buddha's explanation of karma, on which there is more below). Third is the truth of the Cessation (ending) of Suffering, which is a declaration that the causes can be eliminated and the cycle defeated, what the Buddha calls nirvana (quenching). Fourth, and finally, is the truth of the Path, the path that if followed brings about this cessation of suffering, which is a description of exactly how one may achieve release by cultivating one's wisdom, virtue, and meditation.

In opposition to most of his Indian contemporaries, the Buddha taught that there was no self (*ātman*), or eternal soul, and no eternal gods. Instead, all things are impermanent (*anitya*), constantly changing and therefore subject to decay, which is why the Buddha believed in long-lived gods but taught that even they are insufficient as final refuge. All beings, including gods, hell beings, humans, animals, and ghosts, are born as they are because of their past morally significant actions (karma). If you are a thief, you might become a jackal in your next life, and it may be many lifetimes before you are lucky enough to be reborn again as a human.

The Buddha taught several forms of meditation, but perhaps his most innovative and distinctive form is the analytical mindfulness meditation in which one categorizes all experiences into a limited set of types, noticing and classifying each. For example, when you experience a sound, know you are experiencing a sound; when you have a lustful thought, know you have a lustful thought. The Buddha credits this practice, combined with single-pointed concentration, with bringing about his own final realization.

Members of the Buddhist sangha take vows to abide by hundreds of rules—including celibacy and not eating after noon—but the tradi-

tion calls itself a middle way between worldly pursuits and the more stringent asceticism practiced by most mendicants in the Buddha's day. Monks—especially virtuous learned monks—are considered a field of merit into which lay supporters can plant seeds of their future positive rebirths by donating food and supplies. This fruitful exchange has allowed the Buddhist tradition to persist and expand through some 25 centuries.

—Jonathan C. Gold

Bibliography

- Buddhaghosa. *The Path of Purification: Visuddhimagga*. Translated by Bhikku Ñānamoli. Seattle, WA: BPE Pariyatti Editions, 1999.
- Collins, Steven. *Selfless Persons: Imagery and Thought in Theravāda Buddhism*. New York: Cambridge University Press, 1982.
- Gombrich, Richard. *Theravāda Buddhism: A Social History from Ancient Benares to Modern Colombo*. New York: Routledge, 1988.

Mahayana Buddhism—Religious Developments in India

The movement that would call itself Mahayana (Great Vehicle) Buddhism began to emerge around the first century BCE in a variety of traditions that emphasized the superlative powers of Buddhas and bodhisattvas (future Buddhas). Practitioners worshipped texts termed Mahayana Sutras, which embodied the Buddha in his form as the *dharmā* (teachings, truth); they described and visualized and prayed for rebirth in heavenly realms where they could meet with Buddhas who taught there; and they believed that the supreme knowledge (*anuttarajñāna*) of Buddhahood should be the central goal of all Buddhists. The Mahayana scriptures emphasize, above all else, the cultivation of a Buddha's two basic mental characteristics: (1) The discerning Wisdom (*prajñā*) that perceives the falsity of all conceptual constructs and (2) the Great Compassion (*mahakaruna*) that seeks to relieve all beings from suffering of every kind.

Many Mahayana practices and beliefs simply extend earlier Buddhist trends. Yet the belief that everyone should aspire to become a Buddha clearly sets Mahayana Buddhists apart from their

rivals, whom they derisively term Hinayana (Inferior Vehicle). The non-Mahayana traditions held that since Buddhahood was an extremely rare and special achievement, most people needed only to aspire to the lesser but still magnificent goal of becoming an arhat. An arhat was an awakened disciple (*sravaka-buddha*), someone who had achieved perfect enlightenment after hearing and practicing the teachings of a Buddha. The Buddha's chief disciples became arhats, and self-styled arhats were presumably the leaders of the monastic establishment in the centuries following the Buddha's death. An intermediate kind of achievement, called a Solitary Buddha (*pratyeka-buddha*), was someone who discovered the dharma on his own without needing to hear the Buddha's teachings. A full Buddha, however, has not only realized the dharma on his own but is also capable of establishing the teachings in our world on a firm footing. Early Buddhists believed that only a Buddha could make enlightenment available to lesser beings, but once one has done so (through his teachings), the sensible goal for the rest of us should be arhatship.

Mahayana Buddhists argued that on the contrary, anyone with a truly great aspiration would seek nothing less than the highest goal of Buddhahood. They criticized as selfish the desire for the individual enlightenment of arhatship. Whereas arhats sought to free themselves from suffering as soon as possible, bodhisattvas sought to become Buddhas in an effort to free all beings from suffering. Rather than dedicating their good works to achieving a better life or a better rebirth for themselves and their loved ones alone, Mahayana practitioners dedicated their merit to the achievement of supreme knowledge by all beings. This is seen in inscriptions beginning from the fourth century CE, although some of the scriptures that form the basis of the Mahayana date from as early as the first century BCE.

Mahayana scriptures praise those beings who choose the more compassionate but far longer and more difficult path of the bodhisattva, and they exalt and maximize the achievements of Buddhas and advanced bodhisattvas. The Mahayana pantheon grew to include numerous new celestial Buddhas and bodhisattvas whose

➤ BODHISATTVA IMAGE FROM GANDHARA



Bodhisattva statue from Gandhara, second-third century CE. (Burstin Collection/Corbis)

Some of the earliest Mahayana Sutras advocated the practice of “recollecting the Buddha” through meditative visualization, though the direct worship of images has always been a less arduous method of achieving a visual encounter with the Buddha. Images of bodhisattvas (future Buddhas) are easily distinguished from full Buddhas by their ornamental jewelry and decorated clothing, which are signs of royalty. The Buddha was born a prince, but he renounced his royal position (cutting off his long hair, and abandoning his elegant clothing and jewelry) to become a wandering ascetic for six years before achieving Buddhahood.

—Jonathan C. Gold

many lifetimes of compassionate acts had earned them the ability to grant blessings to their supplicants. Many of the most popular deities in Asian history are embodiments of this celestial compassion: Akshobhya, Amitabha/Amitayus/Amida, Avalokiteshvara/Chenrezi, and Tara/Guanyin/Kannon. On the wings of their praise, Mahayana Buddhism would rise to become the dominant religion across Asia in the middle of the first millennium CE.

The miraculous compassion of the Buddhas and bodhisattvas also became the basis for a new doctrine of the nature of the Buddha(s) and the dharma. The historical Buddha, Siddhartha Gautama, came to be understood as only an emanation, a transformation body of his celestial form, called Shakyamuni Buddha, who in fact reigned over a vast Buddha field of countless worlds. It was taught that the Buddha did not actually die or teach or do anything that Gautama was traditionally said to have done. Rather, he was only appearing to do so out of compassion for the sentient beings who benefited from the experience. These apparitions and the teachings that issued from them were merely an expression of the celestial Buddha's skillful means (*upaya*). Under this view, most of the Buddha's teachings need to be understood not as ultimate truth but as only conventional truth, pragmatically beneficial teachings directed toward the needs of disciples of particular levels of understanding. Such a doctrine accounts for the variety and apparent inconsistency within the Buddha's teachings including,

not insignificantly, the divergences of the Mahayana Sutras themselves.

The first great philosopher of the Mahayana, Nagarjuna (ca. 100 CE), justified the Mahayana Sutras with a philosophy called the Madhyamaka (Middle Way). Nagarjuna elucidated the two truths just mentioned as a distinction between ordinary perception, cognition, and language on the one hand (conventional truth) and the emptiness (*śūnyata*) of those perceptions and cognitions on the other (ultimate truth). He argued that nothing really has an unchanging, intrinsic, essential nature (*svalakṣaṇa*), and yet our words are always ascribing stable, discrete identities and characteristics to what is unstable, interconnected, and relative. As a consequence, Nagarjuna believed that all language and concepts should be understood as only conventional designations (*prajñapti*). Although Nagarjuna was careful to explain that the concept of emptiness was itself only a conventional, skillful designation, he and his followers were labeled by their opponents as Shunyavadins, or Nihilists: adherents of nothingness.

—Jonathan C. Gold

Bibliography

- Pye, Michael. *Skillful Means: A Concept in Mahāyāna Buddhism* London: Duckworth, 1978.
- Schopen, Gregory. *Figments and Fragments of Mahāyāna Buddhism in India: More Collected Papers*. Honolulu: University of Hawaii Press, 2005.
- Williams, Paul. *Mahāyāna Buddhism: The Doctrinal Foundations*. New York: Routledge, 1989.

■ Introduction: Philosophical and Religious Developments in East Asia

Beginning in the Eastern Zhou dynasty (771–256 BCE), East Asia saw the birth of some of the most important philosophers in world history, philosophers who established many of the worldviews that would come to dominate East Asian society well into the present.

There are two main periods that fall within the scope of the Eastern Zhou dynasty. The first

is the Spring and Autumn period (722–481 BCE) when the great philosopher Confucius lived (ca. 551–479 BCE) and his students wrote down his teachings. The second period (and the last period) of the Eastern Zhou dynasty was the Warring States period (403–221 BCE). This was, as the name suggests, a time of tremendous conflict in China as the decentralized authority of

the Zhou empire decayed. It makes sense, then, that philosophers were concerned with understanding the nature of governance and power. Daoist philosophy, a tradition that seeks to understand the proper balance of the universe and is at odds with Confucian beliefs, also emerged in this chaotic time. Buddhism arrived in China from India sometime in the first century CE, and while it took a long time for Buddhism to develop into the dominant tradition in China, it certainly added to the multiplicity of traditions present in China in this period.

—Kevin M. McGeough

Confucius

Confucius (551–479 BCE), known in Chinese as Kongzi (Master Kong), was born in the small feudal state of Lu in what is now Shandong province in northeastern China. He lived between the social instability of the Spring and Autumn period (770–481 BCE) and the descent into violence and chaos known as the Warring States period (403–221 BCE). Eminent Chinese historians as well as Western scholars have likened his role in Chinese and East Asian cultural history to that of Jesus or Socrates in the West. Although Confucius famously asserted that he simply transmitted the teachings of the sages of the past and did not create any sort of novel or personal teaching, his legacy led to new and lasting intellectual, literary, philosophical, political, religious, and social developments not only in China but also in Korea, Japan, and Vietnam. As a culturally symbolic figure, Confucius has been alternately idealized, deified, dismissed, vilified, and rehabilitated over the millennia by both Asian and non-Asian thinkers and regimes. Discourse about Confucius persists today as an arena of contestation over East Asian identity, modernity, and values.

During Confucius's lifetime, what now is northern China enjoyed no political unity and suffered from the internecine warfare of small states, remnants of the once-great Western Zhou dynasty that collapsed after barbarian invasions in 771 BCE. For more than 300 years after Confucius's birth, the Chinese would fight each other for mastery of the empire lost by the Zhou. In the process, life became difficult, especially for the

retainer or knight (*shi*) class from which Confucius himself arose. As feudal lords were defeated and disenfranchised in battle and as the kings of the various Warring States began to rely on appointed administrators rather than vassals to govern their territories, these *shi* became lordless anachronisms and fell into genteel poverty and itinerancy. Their knowledge of aristocratic traditions, however, helped them remain valuable to competing kings, who wished to learn how to regain the unity imposed by the Western Zhou and who sought to emulate the Western Zhou by patterning court rituals and other institutions after those of the fallen dynasty.

As *shi* became itinerant antiquarians, they found themselves in and out of office as the fortunes of various patron states ebbed and flowed. Confucius is said to have held office for only a short time before withdrawing into scholarly retirement. While out of office, veteran *shi* might gather small circles of disciples, young men from *shi* backgrounds who wished to succeed in public life. Some, such as Confucius, became known as scholars (*Ru*), the ritual masters and teachers of the courts of the various Warring States that, soon after Confucius's death, contended for the violent reunification of northern China into a new imperial order. It is precisely such master and disciple exchanges between Confucius and his students that the text known as the *Analects* (*Lunyu*), a collection of sayings and biographical anecdotes that was edited by generations of Confucians culminating in the Han dynasty (206 BCE–220 CE), claims to record.

Like nearly every thinker of his time, Confucius interpreted social disorder as evidence that human beings had lost a once-harmonious relationship with the Way (*dao*), the source of all life and order in the universe. In framing his vision of the Way, Confucius relied on a number of Western Zhou sources, including historical documents, governmental decrees, poetry, and ritual texts, that were later given the title "classics" or "scriptures" (*jing*). Confucius used Western Zhou culture to formulate a challenge to his own times. He encouraged his disciples to emulate the sages of the past and restore the moral integrity of the state. Most of his ideas, as described in the *Analects*, have to do with Heaven (*Tian*), morality, and politics. These ideas in turn

THE CULT OF CONFUCIUS

During the Han dynasty (206 BCE–220 CE), numerous hagiographical accounts of Confucius's origins and deeds were produced, many of which would startle readers familiar only with the *Analects*. According to various texts, Confucius was a superhuman figure destined to rule as the uncrowned king of preimperial China. At birth, his body was said to have displayed special markings indicating his exemplary status. After his death, he was alleged to have revealed himself in a glorified state to his living disciples, who then received further esoteric teachings from their apotheosized master. Eventually, and perhaps inevitably, he was recognized as a deity, and a cult organized itself around his worship.

Such mythmaking was very important to the emerging imperial Chinese state, however, as it struggled to impose cultural unity on a vast and fractious territory during the final few centuries BCE and beyond into the Common Era. Han emperors and their ministers seized upon Confucius as a vehicle for the legitimation of their rule and the social control of their subjects. The Five Classics—five ancient texts associated with Confucius—were established as the basis for the imperial civil service examinations in 136 BCE, making memorization of these texts and their orthodox Confucian interpretations mandatory for all who wished to obtain official positions in the Han government. This precedent was honored by all but a few succeeding regimes.

State endorsement of Confucianism persists into modernity. In Taiwan, the Nationalist government has promoted Confucianism in order to



Apricot Platform of the Temple of Confucius, Qufu, Shandong Province, China. This is the oldest temple of Confucius, located in his hometown, originally established in 478 BCE. (Rolf Mueller)

distinguish itself from the iconoclastic communists who won control of mainland China. Most recently, the mainland government has backed the restoration of old imperial temples to Confucius as refuges for the old and the construction of new Confucian academies for the young.

—Jeffrey Richey

form the basis of what became Confucian thought, which continued to develop long after Confucius's death.

Tian was the name of the supreme deity worshipped by the Western Zhou kings, whom they believed granted them power on earth to rule as long as they maintained high moral standards, the so-called Mandate of Heaven (*Tianming*). Confucius taught that Heaven was morally good and brought all things into being but depended on human beings to put its will (which could be known by sages) into practice. In this sense, Heaven seems to combine elements of what elsewhere might be called fate or

nature as well as god without being limited strictly to any one of these. Heaven's greatest gift to humanity was a capacity for morality (*de*) that, according to Confucius, it directly implanted within every human being.

Yet not every human being, in Confucius's view, fulfills his heavenly moral potential. *Analects* 4:16 describes the "profound person" or "gentleman" (*junzi*) as one who focuses on morality, while those who focus on personal profit are "small persons" (*xiaoren*). The profound person or gentleman puts his Heaven-sent morality into practice by cultivating and maintaining harmonious social order through good taste,

good manners, and good relationships. Good taste could be expressed by a well-performed ritual or an appropriate quotation from ancient history or poetry. Good manners could be expressed by demonstrating a sense of one's place in hierarchical society (filiality or *xiao*), as in parent-child or ruler-subject interactions. Good relationships flowed from the models established by good taste (such as the sage-rulers and ideal sons of Confucian lore) as well as from ritualistic adherence to good manners (through careful observation of propriety or *li*). Those who cultivate their moral natures are crucial to their neighbors' human flourishing, as *Analects* 12:19 asserts: "The moral force of the profound person is like the wind; the moral force of the small person is like the grass. Let the wind blow over the grass and it is sure to bend."

Thus, political concerns are inseparable from moral concerns in Confucius's thought. *Analects* 2:3 credits ritual propriety and moral rectitude with establishing lasting political order: "Govern the people with moral force and regulate them with ritual, and they will possess shame, and moreover, they will be righteous." Living in a world defined by chaos and conflict, Confucius was anxious to find a way to restore the golden age of unity that he attributed to the fallen Western Zhou dynasty. Like other early Chinese thinkers, Confucius pinned his hopes on the appearance of a sage-ruler who would combine political power with moral wisdom, unify the fractured empire, and usher in a new age of harmony and prosperity. According to *Analects* 2:1, "One who rules by morality may be compared to the North Star—it occupies its place and all the stars pay homage to it." Although his hopes never were fulfilled during his lifetime, from the second century BCE on, nearly every Chinese dynastic state endorsed Confucianism, and generations of scholar-officials worked earnestly to put Confucius's principles into practice.

—Jeffrey Richey

Bibliography

- Brooks, E. Bruce, and A. Taeko, trans. *The Original Analects: Sayings of Confucius and His Successors*. New York: Columbia University Press, 1998.
- Creel, Herrlee G. *Confucius and the Chinese Way*. New York: Harper and Row, 1949.

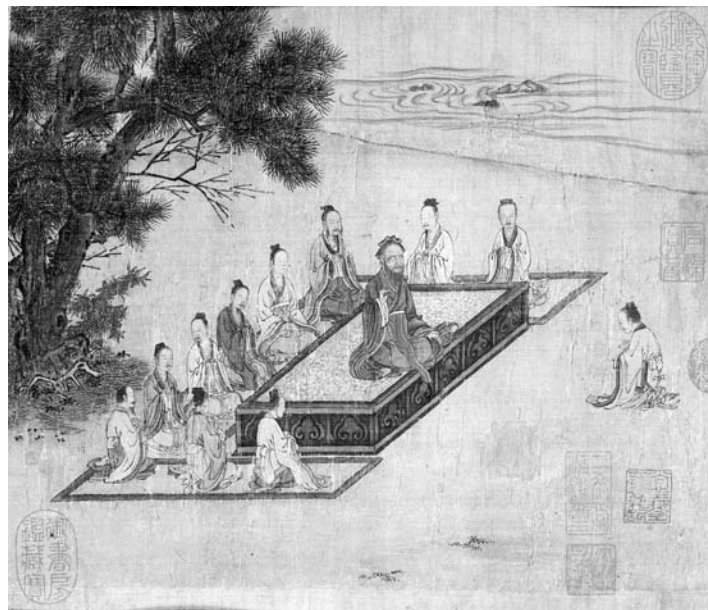
Csikszentmihalyi, Mark. "Confucius and the *Analects* in the Hân." In *Confucius and the Analects: New Essays*, edited by Bryan W. Van Norden. Oxford: Oxford University Press, 2002.

Eno, Robert. *The Confucian Creation of Heaven*. Albany: State University of New York Press, 1990.

Fingarette, Herbert. *Confucius: The Secular as Sacred*. New York: Harper Torchbooks, 1972.

Confucian Thought

Confucian thought bases itself on the teachings of Kongzi (ca. 551–479 BCE), a Chinese thinker better known in the West as Confucius. These teachings are recorded in the text known as the *Lunyu* (*Analects*). According to *Lunyu* 7:1, Kongzi "transmitted, but did not innovate." What Kongzi claimed to transmit was the *Dao* (Way) of the Western Zhou dynasty (1100–771 BCE), which he idealized as an alternative to his own Spring and Autumn period (770–481 BCE), a time of increasing social disorder. As the learned guardian of tradition, he challenged his disciples to emulate the sages of the past and restore the moral integrity of the state. Most of his



Silk painting depicts Kongzi discussing filiality (*xiao*) with his disciples. The painting was probably created during the Song dynasty (960–1279 CE), when Confucianism attained unprecedented influence on all aspects of Chinese life. (Howard Sochurek/Time & Life Pictures/Getty Images)

ideas, as described in the *Lunyu*, have to do with *Tian* (Heaven), morality, and politics. These ideas in turn form the basis of what became Confucian thought.

Tian was the name of the supreme deity worshipped by the ancient Zhou kings, whom they believed granted them power on earth to rule as long as they maintained high moral standards. Kongzi taught that Tian was morally good and brought all things into being but depended on human beings to put its will (which could be known by sages) into practice. In this sense, Tian seems to combine elements of what elsewhere might be called fate and nature as well as god without being limited strictly to any one of these. Later Confucian thinkers such as Xunzi (ca. 310–ca. 220 BCE) saw Tian as more or less identical with nature and rejected the tendency to think about Tian anthropomorphically (as a person). This naturalistic view of Tian became dominant among later Confucian thinkers.

Morality is the primary concern of most Confucian thought. For Kongzi, morality consisted of maintaining harmonious social order through good taste, good manners, and good relationships. Good taste could be expressed by a well-performed ritual or an appropriate quotation from ancient history or poetry. Good manners could be expressed by demonstrating a sense of one's place in hierarchical society, as in parent-child or ruler-subject interactions. Good relationships flowed from the models established by good taste (such as the sage-rulers and ideal sons of Confucian lore) as well as from ritualistic adherence to good manners (through careful observation of etiquette and ritual [*li*]).

After Kongzi's time, a Confucian thinker known as Mengzi (Master Meng) or Mencius (ca. 372–289 BCE) developed a moral psychology that eventually was accepted by most Confucians. According to the text that records Mengzi's teachings, "By fully developing one's mind, one knows one's nature, and by knowing one's nature, one knows *Tian*" (*Mengzi* 7A1). For Mengzi, the journey toward morality begins with birth as a being that naturally is oriented toward goodness (*ren*). One then proceeds toward maturity, guided by the examples of ancient sages and the ritual forms and texts they have left behind, habitually doing what is right until one uplifts oneself from

the merely human to that which Tian intends for one, which is to become a sage. Nature is crucial to moral development, but so is nurture. Mengzi's model of moral psychology involves both discovery (human nature is good) and development (human nature can be made even better).

Xunzi questioned many of Mengzi's teachings, especially his claim that human beings are born with a predisposition toward *ren*. For Xunzi, human beings were born with a natural tendency toward selfishness and disorderly conduct, which had to be overcome through the corrective power of culture. Nonetheless, both Mengzi and Xunzi taught that human beings are capable of moral perfection and that cultural formation through ritual and textual education is the key to achieving this perfection. The idea that human beings are incapable of moral self-transformation is completely alien to both Mengzi and Xunzi as well as the teacher whom both revered, Kongzi. In this sense, Confucian thought has no concept analogous to the Western notion of original sin.

Political concerns are inseparable from ethical concerns among Confucian thinkers. Living as they did in a world defined by chaos and conflict, Confucian thinkers were anxious to find a way to restore the golden age of unity that they attributed to the fallen Western Zhou dynasty. Like other early Chinese thinkers, Confucians pinned their hopes on the appearance of a sage-ruler who would combine political power with moral wisdom, unify the fractured empire, and usher in a new age of harmony and prosperity. According to Kongzi, "One who rules by morality may be compared to the North Star—it occupies its place and all the stars pay homage to it" (*Lunyu* 2:1). For Mengzi, only a ruler who enjoys the *ming* (moral mandate) of Tian can bring order to a state; should a ruler fail to do so, his subjects are entitled to rebel against him and replace him. Xunzi, like most Confucian thinkers, saw the ruler-subject relationship in familial terms, with the ruler as the all-powerful father entrusted with the care of his dependent subjects. Occasionally, Confucians expressed frustration about the gap between the ideal of a Tian-sent sage-ruler and the reality of their brutal and disorderly world. This frustration became especially acute during the Warring States period (403–221 BCE) in which the rulers of small states com-

peted for domination through constant intrigue and warfare.

Confucian thinkers were persecuted, along with members of many other early traditions, during the short-lived Qin dynasty (221–202 BCE). The succeeding Han dynasty (206 BCE–220 CE) adopted Confucian thought as a tool for legitimizing its power and controlling its subjects. In 136 BCE the Han government established Confucian texts as the basis of its civil service examinations, making Confucian thought a mandatory subject for all who wished to obtain official employment. During this period, Confucian thought took on many recognizably religious aspects, including the ritual worship of Kongzi in state-sponsored temples. After the fall of the Han in 220 CE, Confucian thought fell out of official favor as a series of warring factions struggled for control of China during the Period of Disunity (220–589 CE) and as foreign and indigenous religious traditions such as Buddhism and Daoism rivaled Confucianism for the attentions of the elite. Confucian thought never retreated entirely, however, and subsequent dynasties restored its position as the preeminent intellectual tradition of Chinese elites.

—Jeffrey Richey

Bibliography

- Graham, A. C. *Disputers of the Tao: Philosophical Argument in Ancient China*. La Salle, IL: Open Court, 1989.
- Ivanhoe, Philip J., and Bryan W. Van Norden, eds. *Readings in Classical Chinese Philosophy*. Indianapolis: Hackett, 2003.
- Taylor, Rodney L. "The Religious Character of the Confucian Tradition." *Philosophy East and West* 48(1) (January 1998): 80–107.
- Tu, Wei-ming. *Confucian Thought: Selfhood as Creative Transformation*. Albany: State University of New York Press, 1985.
- Yao, Xinzhong. *An Introduction to Confucianism*. Cambridge: Cambridge University Press, 2000.

Daoist Philosophy

"Daoist philosophy" is the term used to describe a distinctive set of ideas about human beings, the natural world, and society that emerged in China during the Warring States period (403–221 BCE). While these ideas and their sources

vary, they share rejection of Confucian thought. Confucian thought taught its disciples to become moral, politically engaged, and ritually accomplished. Daoist philosophers, as we call them, tended to be skeptical about moral judgments, suspicious of political idealism, and contemptuous of rituals.

The two primary sources for Daoist philosophy are the texts known as the *Zhuangzi* (*Master Zhuang*) and the *Laozi* (*Master Lao*) or *Daodejing* (*The Classic of the Way and Power*), both of which date to some point during the fourth century BCE. The commentaries of the *Xuanxue* (*Dark Learning*) thinkers Wang Bi (226–249 CE) and Guo Xiang (d. 312 CE) shaped both the later form and interpretations of these texts. Other important texts include the *Guanzi* (*Master Guan*) and the *Huang-Lao* (*Yellow Emperor-Laozi*), which can be dated to the fourth century BCE and the early Han dynasty (202 BCE–220 CE), respectively. All of these texts and thinkers focus on the term *Dao*. Dao means "Way" and in Daoist philosophy takes on additional meanings such as "cosmic pattern," "cosmic principle," "nature," and "ultimate" or "transcendent." Dao might best be understood as the unseen, impersonal order of the universe with which humans should strive to be in harmony. It is this sense of the term that unites these otherwise distinct sources of Daoist thought.

The *Zhuangzi* is associated with a "Master Zhuang" who was probably an actual figure of the fourth century BCE, although not all of the text that bears his name is likely to have been authored by him. This text prescribes meditative practices as part of a program leading to one's transformation into a *zhenren* (perfected person) who is one with Dao, spontaneously (*zi-ran*) responsive to changing circumstances, and at peace with the prospect of loss and death. The text also celebrates other examples of human perfection known as *xian* (immortals) and *shengren* (sages). All of these figures are characterized by an acceptance of their places within a dynamic, ever-changing, and all-encompassing natural order. This sense of one's place in the cosmos contributed to the formation of culturally relativistic values and the idea that suffering could be transcended through abandoning one's ego. When Buddhism first entered China around



Lao Tzu on a water buffalo. (Foto Marburg/Art Resource, NY)

the first century CE, many Chinese converts to the new religion found parallels between Buddhist teachings and the teachings of the *Zhuangzi*. This led to the adoption of many terms found in the *Zhuangzi* for expressing Buddhist concepts in Chinese.

The *Laozi* is a fourth-century BCE collection of sayings attributed to a figure by the same

name who may or may not have existed. Its first 37 chapters are concerned with Dao, while the remaining 44 chapters focus on *de* (power, especially in the sense of personal charisma). For this reason, the text became known in the Han period as the *Daodejing* (*Classic of the Way and Power*), which also indicates that it had attained status as a culturally important text (*jing*) by this time. It describes Dao as ineffable and yet as something with which humans may enter into a harmonious relationship. This and other seemingly paradoxical views are common throughout the text, which asserts that “He who speaks does not know; he who knows does not speak” (*Laozi* 56). The key to attaining union with Dao is the practice of *wuwei*, a term that means “no action” but might best be understood as “effortless action.” Wuwei is a method of responding to one’s environment, both mentally and physically, that paradoxically achieves advantage and control through relinquishing them. It is a concept that underlies artistic techniques as well as many martial arts disciplines throughout East Asia. As in the *Zhuangzi*, here the sage who attains union with Dao concentrates his vital energy (*qi*), sees beyond conventional values, and is free from attachment to artificial distinctions such as good and evil, male and female, and beauty and ugliness.

While it might seem that Daoist philosophy is primarily concerned with evading the burdens of social responsibility and cultivating inner states of heightened awareness, these are only part of the tradition. Like its adversary, Confucian thought, Daoist philosophy was also concerned with government and social order. Unlike Confucians, Daoist thinkers worried little about the moral legitimacy of rulers and instead focused on practical pathways to gaining and keeping power. In this they looked for inspiration to their particular understanding of *Dao* and *Tian* (Heaven) as amoral and all-powerful tools that were opaque to conventional wisdom. The *Laozi* advises rulers to keep their subjects ignorant, well fed, and few in number so as to better control them and to keep themselves out of the public eye. The non-Daoist thinker Han Feizi (d. 237 BCE) incorporated these ideas into his *Fajia* (Legalist) theories, which later helped to form the basis of the Qin dynasty (221 BCE–206 BCE) poli-

cies. The *Guanzi*, which takes its name from Guan Zhong, a minister in the ancient state of Qi during the seventh century BCE, also discusses strategies of rulership in some detail. Finally, the aforementioned *Huang-Lao* texts describe how rulers can exploit the contemplative techniques found in the *Zhuangzi*, the *Neiye*, and the *Laozi* in order to impose order on the world and remain secure from threats to their power.

Multiple authors often living in different centuries wrote almost all of the works associated with Daoist philosophy. The term “Daoist” (*Daojia*) did not exist prior to the Han dynasty, and its application to pre-Han texts and traditions is somewhat controversial among scholars today. The proliferation of religious movements calling themselves Daoist during the Han and later periods further complicates our understanding of Daoism.

—Jeffrey Richey

Bibliography

- Ames, Roger T., ed. *Wandering at Ease in the Zhuangzi*. Albany: State University of New York Press, 1998.
- Ivanhoe, Philip J., and Mark Csikszentmihalyi, eds. *Religious and Philosophical Aspects of the Laozi*. Albany: State University of New York Press, 1999.
- Kohn, Livia, ed. *The Taoist Experience: An Anthology*. Albany: State University of New York Press, 1993.
- Roth, Harold D. *Original Tao: Inward Training (Nei-yeh) and the Foundations of Taoist Mysticism*. New York: Columbia University Press, 1999.
- Yates, Robin D. S. *Five Lost Classics: Tao, Huang-Lao, and Yin-Yang in Han China*. New York: Ballantine Books, 1997.

Mo Zi

Mo Zi (470–390 BCE) was one of the most important philosophers in ancient China. He lived in a time of great turbulence: the old feudal order centered in the Zhou royal house was falling apart as it confronted the challenges of the many regional powers. Endemic warfare prompted many princes to search for the best way to enrich their domain and strengthen their military, and their continuous search led to the blossoming of the so-called One Hundred Schools of Thought. Mo Zi’s teaching was one of these One

Hundred Schools, and he offered it as a remedy for the social ills at that time.

Mo Zi’s teaching, often known as Mohism, addresses many aspects of life, but a few salient points distinguish it from the others of the Hundred Schools. Characteristically, Mohism stands opposite to Confucianism on almost all important issues. The first is the concept of *jian-ai*, or “all-embracing care.” Contrary to Confucianism, which differentiates the care for parents from the care for strangers, Mohism advocates the same care for all. Once care is no longer graded, in Mo Zi’s view, competition will stop. The concept of *jian-ai* is closely related to another salience in Mohism: *feigong*, or nonaggression. Mo Zi denounced warfare and strongly urged for a stop to it. The concepts of *jian-ai* and *feigong* were at odds with most other schools of thought, for it was difficult not to give special care for one’s own kin, and it was impossible to simply lay down the weapons in times of rising violence. But these concepts represented the hope of most people of the time, who were often the victims of the rampant social disorder and thus were anxious to restore peace.

Mo Zi also strongly believed in gods and ghosts. This belief, too, sets Mohism apart from

➤ MO ZI THE ARTISAN

Mo Zi is best remembered as a philosopher, but he was also a great artisan. In fact, his career as an artisan provided a foundation for his logical thinking. Unlike most of his contemporary thinkers, Mo Zi came from the lower classes, and in his early years he worked as a craftsman practicing carpentry and engineering, which according to legend he perfected. Once he and his friend (another scholar) were playing a game in which they would attack and defend miniature walled cities, using wooden models. He designed numerous model weapons for this game, the most ingenious of which were mechanical birds and a so-called cloud ladder, a tall tower with wheels that could be used as a weapon to sack a walled city. Contemporary scholars speculate that the fact that Mo Zi’s teaching did not get government’s patronage could have slowed down scientific and technological developments in China.

—Yi Li

many other contemporary teachings. Throughout much of the Western Zhou era since the eleventh century BCE, high culture was characterized by its emphasis on secular humanism, a tradition of Confucianism. Confucius himself once stated that one must serve people before thinking about serving ghosts. It would be an exaggeration to say that Mo Zi is a believer, however, for the purpose of sacrificing for ghosts, according to him, could be quite pragmatic: as villagers worship together, the bond among them will be nourished. Pragmatism as an element of Mohism contrasts with Confucianism, while Confucius advises people with the sense of *yi*, or righteousness. Mo Zi believed that the most righteous thing to do is to ensure maximal benefit for the majority of the people.

Mo Zi's greatest contribution to the Chinese philosophy is perhaps his ideas about logic. He introduces two different paths of epistemological research: imitation and extension. Imitation is to use one thing to explain the other, an idea in agreement with another idea that is proven correct will be correct. Extension is to attribute the same to what is unknown as to what is known. In other words, if we know that water boils at 212 degrees Fahrenheit (100 degrees Celsius) here in the United States and that it does the same in Russia, we can extend this knowledge to China, assuming that water in China will boil, too, at 212°F (100°C). The methods of imitation and of extension are quite close to deduction and induction in Western logic. Mo Zi's epistemology is unique in his time and in China, and for that reason many people call him the first true Chinese philosopher.

Mohism, while once very popular, lost its appeal for much of the past two millennia since the unification of Qin. It is at least in part due to the First Emperor (r. 240–210 BCE), who destroyed most of the books that he thought would endanger his dynastic rule, and the emperor Wudi of Han (r. 147–87 BCE), who banished all other teachings in favor solely of Confucianism.

—Yi Li

Bibliography

Fung Yu-lan. *A Short History of Chinese Philosophy*. Edited by Derk Bodde. New York: Free Press, 1997.

Graham, A. C. *Later Mohist Logic, Ethics, and Science*. Hong Kong: Chinese University Press, 1978.

Mo tzu. *Basic Writings*. Translated by Burton Watson. New York: Columbia University Press, 1963.

Legalist Thought

Legalism (sometimes also called Realism) was another school of thought in Eastern Zhou times, and in some important ways it was quite unique. In fact, it would probably be wrong to call Legalism a philosophy; it was more of a statecraft or *realpolitik*, a technique for keeping a ruler in power, his nation strong, and his population obedient and submissive. Legalism sought to accomplish these objectives through a simple recipe of rewards and punishments specified by laws. There was no abstract consideration of right and wrong; right was simply what the ruler wanted, and wrong was what he did not want.

Legalism was a straight-forward, anti-intellectual approach to governance. Legalists had very little patience for Confucian or Daoist ideas; for them, talk of *li* or *ren* or the *dao* was all mumbo jumbo and vain imagining. Legalists thought people were to be motivated not by any of these amorphous philosophical considerations, but by fear of punishment and longing for reward. Taking their cue from the Confucian philosopher Xunzi, Legalists insisted that humankind was stupid and predisposed toward evil. The followers of Xunzi soon parted company with Legalism when Legalists refused to believe in any possible perfectibility of human beings. (Xunzi taught that people could indeed overcome their innately evil natures.) Legalists insisted that people could not be reformed and had to be constantly controlled through laws specifying punishments and rewards for every conceivable behavior.

Legalists heartily disagreed with Confucianists and Daoists who harked back to a lost golden age. For many Legalists, there never was a golden age in the first place. They were out to create an ideal society and state here and now, for the first time in history. Some Legalists argued that, even if there had been a golden age in the past, it

would be impossible to restore or replicate it now because the times had changed drastically; yesterday's methods were incapable of solving today's problems.

Legalist thinkers formulated their ideas over two or three centuries. Various Legalist ideas and governmental techniques were eventually synthesized by a Legalist named Han Fei, who died in 233 BCE. His book, *Han Feizi (Master Han Fei)*, was a compendium of administrative technique, law, and criticisms of Confucianism, Daoism, and other minor schools of thought. The teachings of the book might well be characterized as ruthless and brutal. Han Fei spells out, among other things, his contention that the methods of the golden ages imagined by Confucians and Daoists were utterly inapplicable to the current situation. According to Han Fei, the Legalist ruler is not to be benevolent or loving in dealing with his subjects because this will only spoil and ruin them; people are motivated to act only by threat of force and by laws specifying rewards and punishments. Li Si, another Legalist who continued in this vein, urged the application of extremely harsh punishments for intellectuals who would not conform to the wishes and programs of the state.

Legalism was, then, completely amoral and highly unphilosophical. It eventually became the official ideology of the state of Qin, which defeated all other states and unified China under its rule in 221 BCE. It assumed that people could not be taught but only compelled or enticed. Legalist law was not natural law; that is, it did not claim to be modeled after the world of nature. Nor was it divine law, because it did not pretend to derive of divine sources or dispensations. Unabashedly manmade, it made no references to unchanging standards of right and wrong. People were recruited into government service not on the basis of their moral qualities or broad learning but their proven administrative expertise. Officials who accomplished what the government wanted were promoted and rewarded; those who did not were demoted and punished.

If Legalism can be called the rule of law, it certainly was not a democracy. Laws came from the whims of the ruler, not from the consent of the governed or the expressed popular will. Legalists

EXCERPT FROM *MASTER HAN FEI*

Han Fei, in his most famous passage, uses a parable to illustrate his point that the methods of the philosophers of the Golden Age were inapplicable to his times. He writes:

"If somebody in this present age should praise the ways of Yao and Shun . . . he would certainly be ridiculed by contemporary [Legalist] sages. Hence the sage does not seek to follow the ways of the ancients, nor does he regard precedents as the rule. He examines the circumstances of his own time and plans his course of action accordingly. There was once a man of Sung who tilled his field. In the midst of his field stood the stump of a tree, and one day a hare, running at full speed, bumped into the stump, broke its neck, and died. Thereupon the man left his plow and kept watch at the stump, hoping that he would get another hare. But he never caught another hare, and was only ridiculed by the people of Sung. Now those who try to rule the people of the present age with the conduct of government of the early kings are all doing exactly the same thing as that fellow who kept watch by the stump."

—David Curtis Wright

Source

Han Fei, *Han Feizi*, in *Sources of Chinese Tradition*, eds. William Theodore de Bary, et al. (New York: Columbia University Press, 1960), 1:130.

held a very dim view of their subjects; they could not trust a populace they regarded as stupid and self-serving to formulate their own laws. Daoists deplored this viewpoint because laws are in and of themselves indications that the government had lost its "way." Confucian scholars also found Legalism particularly revolting because the laws often seemed coldly arbitrary and did not accommodate any moral or ethical considerations. They concluded that the rule of law was not nearly as good as government by benevolent men who understood Confucian principles.

—David Curtis Wright

Bibliography

- de Bary, William Theodore, et al, eds. *Sources of Chinese Tradition*. 2 vols. New York: Columbia University Press, 1960.
- Fung, Yu-lan. *A History of Chinese Philosophy*. Translated by Derk Bodde. 2nd ed. Princeton, NJ: Princeton University Press, 1963.
- Mote, F. W. *Intellectual Foundations of China*. 2nd ed. New York: McGraw-Hill, 1989.
- Schwartz, Benjamin. *The World of Thought in Ancient China*. Cambridge, MA: Harvard University Press, 1985.
- Wright, David Curtis. *A History of China*. Westport, CT: Greenwood, 2001.

One Hundred Schools of Thought

“One Hundred Schools of Thought” (*baijia*) is a term used to describe the proliferation of multiple intellectual and spiritual movements in Warring States period (403–221 BCE) China. During this period the Chinese fought one another for mastery of the empire lost by the Western Zhou

dynasty (1100–771 BCE) to so-called barbarian invasions. Simultaneously, all of the major philosophical and religious traditions of China emerged, with the exception of Buddhism. While Hundred Schools thinkers disagreed intensely on nearly everything, they were in agreement on two points: (1) that the lost empire of the Zhou must be reunified under a single regime, and (2) that intellectual and spiritual pluralism was a sign of living in ill-fated times. Ironically, it was the profound cultural ferment of this era that later facilitated the emergence of a new imperial order and an accompanying intellectual synthesis.

The earliest of the Hundred Schools were the Confucians (*Rujia*), beginning with Kongzi, or Confucius (ca. 551–479 BCE), who came mostly from the ranks of the *shi* class and taught Zhou ceremony, literature, and lore to young men seeking success in public life. Kongzi and his followers, such as Mengzi, or Mencius (ca. 372–289 BCE), and Xunzi (ca. 310–220 BCE), taught that human beings are capable of moral perfection and that cultural formation through family life, ritual practice, and textual education is the key to achieving this perfection. They appropriated the term *Tian* (Heaven), which originally described the supreme deity worshipped by the Zhou kings, to describe a power that was morally good and brought all things into being but depended on human beings to put its will (which could be known by sages) into practice and thus did not always prevail on earth.

Followers of Mozi (ca. 480–390 BCE), now known as Mohists, rejected the Confucians’ aristocratic clannishness and antiquarianism. Instead, they argued for the intrinsic moral value of all human beings, whom one ought to “love universally” (*jian ai*), and saw *Tian* as an anthropomorphic deity whose will could be easily understood by humans and who never failed to reward goodness and punish wickedness. Later Mohists demonstrated an interest in logic that is unusual in Chinese intellectual history.

The term “Daoist” (*Daojia*) is frequently used to describe the thought expressed in texts such as the *Zhuangzi* (*Master Zhuang*) and the *Laozi* (*Master Lao*) or *Daodejing* (*The Classic of the Way and Power*). Although this term is anachronistic when applied to the Chinese thought before the Han dynasty (202 BCE–220 CE), it may

EXCERPT FROM MENGZI (MENCIUS) 1B8.

齊宣王問曰湯放桀武
王伐紂有諸孟子對曰於
傳有之曰臣弑其君可乎
曰賊仁者謂之賊賊義者
謂之殘殘賊之人謂之一
夫聞誅一夫紂矣未聞弑
君也
孟子見齊宣王曰爲巨
室則必使工師求大木工
師得大木則王喜以爲能

In this excerpt, Mengzi tells King Xuan of the state of Qi that a ruler’s subjects are entitled to overthrow him if he exercises his power in an immoral fashion and fails to provide for his people’s welfare.

—Jeffrey Richey

be used to describe those thinkers who rejected both Confucian and Mohist moralism and social planning because of their skepticism about moral judgments and suspicion of political idealism. These thinkers also demonstrated a much greater interest in contemplation and mysticism than is evident in Confucian or Mohist sources.

Daoist thinkers also were influenced by Hedonism and Legalism, two other Hundred Schools movements whose paths occasionally intersected with those of Daoism. Hedonism was personified by the legendary thinker Yang Zhu (ca. fourth century BCE), of whom it was said that he would not spare a hair from his own head even if it meant being able to save the entire world. Legalists, including Han Feizi (ca. 280–233 BCE), rejected the egoistic ethics of Yang Zhu, the meritocratic tendencies of the Mohists, the public-spirited moralism of the Confucians, and the mysticism of the Daoists in favor of a harshly mechanistic theory of law and punishment that was almost Machiavellian in its pragmatism and lust for power.

As the Warring States period drew to a close, a sixth school attained widespread influence, which would only increase in the new imperial eras just ahead. This was the Yin-Yang School (Yinyangjia) or Cosmologist movement, which claimed that all cosmic processes were deeply interconnected. This correlative cosmology implied that the smallest of human actions could affect cosmic processes and vice versa. Most Hundred Schools thinkers who accepted it used it to encourage rulers to behave in particular ways in order to exploit the cosmos for the benefit of the state.

—Jeffrey Richey

Bibliography

- Graham, A. C. *Disputers of the Tao: Philosophical Argument in Ancient China*. La Salle, IL: Open Court, 1989.
- Ivanhoe, Philip J., and Bryan W. Van Norden, eds. *Readings in Classical Chinese Philosophy*. Indianapolis: Hackett, 2003.
- Nivison, David Shepherd. "The Classical Philosophical Writings." In *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, edited by Michael Loewe and Edward L. Shaughnessy. Cambridge: Cambridge University Press, 1999.

Schwartz, Benjamin I. *The World of Thought in Ancient China*. Cambridge: Belknap Press of Harvard University Press, 1985.

Dark Learning

"Dark Learning" is an English translation of the Chinese phrase *xuanxue*, which also can be translated as "Abstruse Learning," "Mysterious Learning," or "Profound Learning" and is sometimes called "Neo-Daoism" by Western scholars. This term comes from chapter one of the *Laozi* (*Daodejing*, or the *Classic of the Way and Power*), which describes the *Dao* ("Way") as *xuan zhi you xuan* ("darker than dark"). It refers to a movement among Chinese thinkers during the third and fourth centuries CE that reinterpreted earlier Daoist texts in metaphysical terms. Xuanxue thinkers preserved and commented on these texts. These commentaries have influenced both Chinese and non-Chinese readers. Their works are best understood as a synthesis of Confucian (Rujia) and Daoist (Daojia) ideas.

Xuanxue thought emerged after the collapse of the Han dynasty (202 BCE–220 CE) when what we now call China split into three states: Wei in the north, Shu in the west, and Wu in the south and east. Each state competed with the others for supremacy, but all were plagued by continuous warfare and frequent floods and droughts. Chronic instability generated extraordinary intellectual and spiritual creativity. Educated elites looked beyond orthodox Confucianism, which had become the official Han ideology in 138 BCE, and explored alternative ways of thought. Some, such as the famous Seven Sages of the Bamboo Grove, abandoned Confucian values altogether. These sages met to drink wine, compose poetry, and talk but otherwise avoided social conventions and responsibilities. Others, however, retained their Confucian commitments to ritual propriety and social order. These included the most famous xuanxue thinkers, Wang Bi (226–249 CE) and Guo Xiang (d. 312 CE).

Wang Bi served as a minister in the state of Wei. Although he is most famous for his commentary on the fourth-century BCE text known as the *Laozi* (*Master Lao*) or *Daodejing*, he also wrote commentaries on the Confucian *Lunyu*

(*Analects*) and the ancient divination manual known as the *Yijing* (*Classic of Changes*). Wang was dismissive of the sectarian Daoist movements then emerging. These movements focused on attaining personal immortality and preached a millennialist message of impending doom and redemption through moral purification. Instead, he wished to identify the mysterious fundamental structure of the cosmos and apply it to the political and social renewal of his society. For Wang, this was the Dao, which he equated with a nonbeing that paradoxically brings all things into being and believed was beyond the capacity of human language to express. He argued that a true sage, like the Dao, rises above conventional understanding yet ensures that things happen as they should. Later, early Chinese Buddhists used his terminology to explain ideas imported from India to Chinese converts.

Guo Xiang served as a high-ranking official in the Western Jin dynasty (265–316 CE), which briefly reunified the territory formerly governed by the Han. He is best known for his commentary *Zhuangzi* (*Master Zhuang*), another fourth-century BCE Daoist text. Perhaps because of his focus on this text rather than the *Laozi* (*Daodejing*), his ideas differ significantly from those of Wang Bi. Guo Xiang rejected Wang Bi's notion of Dao as the nonbeing from which all things originate. Instead, Guo Xiang used the term *ziran* (spontaneity or naturalness), a central idea in the *Zhuangzi*, to argue that nonbeing is an illusion and that only being exists. This originates and transforms itself without any external force becoming involved. His metaphysical view of the cosmos as self-creating, self-changing, and self-sustaining led to his ethical view that one should be content in all circumstances, accepting change as the way (Dao) of the universe.

—Jeffery Richey

Bibliography

- Chan, Wing-tsit, trans. and comp. *A Sourcebook in Chinese Philosophy*. Princeton, NJ: Princeton University Press, 1963.
- Dien, Albert, ed. *State and Society in Early Medieval China*. Stanford, CA: Stanford University Press, 1990.
- Kirkland, Russell. *Taoism: The Enduring Tradition*. New York and London: Routledge, 2004.

Wagner, Rudolf G. *Language, Ontology, and Political Philosophy in China: Wang Bi's Scholarly Exploration of the Dark (Xuanxue)*. Albany: State University of New York Press, 2003.

Ziporyn, Brook. *The Penumbra Unbound: The Neo-Taoist Philosophy of Guo Xiang*. Albany: State University of New York Press, 2003.

Buddhism Comes to China

Buddhism first gained a foothold in China during the Three Kingdoms period (220–280 CE). It came in not directly from India but from central Asian Buddhist kingdoms that had converted to Buddhism a few centuries earlier. (Some of these kingdoms had originally been founded by the generals of Alexander the Great, and later their populations converted to Buddhism, thus combining Buddhist religion with Greek culture.)

Buddhism had been known in China since Han times, but it never flourished during that dynasty. This is probably because the basic message of Buddhism, that life is suffering, did not resonate with the Han Chinese. Life was fairly good in Han China, and the majority of Chinese seem to have had little if any desire to alleviate the pain of life with a palliative religion.

One variety of the religion called Mahayana Buddhism taught that because strictly abiding by Buddhist practices (such as the Eightfold Path) was an extremely difficult or even almost impossible thing to do, merciful beings called *bodhisattvas* who had achieved nirvana themselves had, at the time of their deaths and on the brink of stepping into eternal nirvana, stepped back and turned their compassion and attention to the mortal, suffering world. By having come this close to eternal nirvana and then temporarily backing away from it for the sake of the world, they had accrued to themselves an inexhaustible fund of merit which could be imputed to all people who turned to them in faith and supplication.

Mahayana Buddhism was, then, a type of savior religion, and it appealed deeply to the Chinese of the Period of Division. Life in China at this time was rough and entailed much suffering. Buddhism had great appeal in both northern and southern China, among the elite and commoners alike. The rulers of the barbarian

► UNDERSTANDING BUDDHISM IN CHINA

Some Chinese Buddhists were so interested in the religion that they became monks and traveled all the way to India, the land of Buddhism's origins. There some of them even mastered the extremely difficult Sanskrit language in which Buddhist *sutras* (religious writings) were written and translated them into Chinese. Eventually, Buddhism in China took its own peculiar doctrinal turns. The Chan ("Zen" in Japanese) school of the religion became the most well known of these. During the first wave of Buddhism's entry into China, the Buddhist missionaries and early Chinese converts used Daoist terminology to translate Buddhist terms.

This, however, led to conceptual confusion and created misunderstandings. Most Buddhists in China eventually decided to transliterate, rather than translate, Buddhist terms in their full foreignness. That is, they decided not to translate the terms at all, but more or less to spell them out exactly as they sounded in Sanskrit. Many Buddhist terms thus had a very foreign ring to Chinese ears, but this actually added to their mystery and reinforced the point that they were indeed different from Daoist ideas and concepts.

—David Curtis Wright

conquest dynasties in northern China found the religion attractive precisely because it was not Chinese and because it had come from another great and ancient civilization. But the elite of the native Chinese dynasties in southern China also found Buddhism acceptable because of its art, its more advanced teachings, and its message of possible surcease from suffering. Commoners in both northern and southern China accepted Buddhism because of its message and the beautiful and colorful art the Buddhist missionaries used to explain the fundamentals of the religion. By the 500s, China had been thoroughly converted to Buddhism.

Buddhism fit nicely into the Confucianist-Daoist duo and transformed it into a religious and philosophical trio. The Chinese during this time concluded that Confucianism was applicable to governmental affairs, while Buddhism and Daoism pertained more to an individual's private, inner religious life. But Confucianism during this time seemed somewhat irrelevant because there was no effective central government in China that could seek to apply it. Buddhism and Daoism gave people much more solace and comfort in their lives, and most Chinese, and even many Chinese emperors, more or less preferred it over Confucianism. The Period of Division and the Sui and Tang dynasties that followed it were the heyday of Buddhism in Chinese history.

—David Curtis Wright

Bibliography

- de Bary, William Theodore, et al, eds. *Sources of Chinese Tradition*. 2 vols. New York: Columbia University Press, 1960.
- Fung, Yu-lan. *A History of Chinese Philosophy*. Translated by Derk Bodde. 2nd ed. Princeton, NJ: Princeton University Press, 1963.
- Mote, F. W. *Intellectual Foundations of China*. 2nd ed. New York: McGraw-Hill, 1989.
- Schwartz, Benjamin. *The World of Thought in Ancient China*. Cambridge, MA: Harvard University Press, 1985.
- Wright, David Curtis. *A History of China*. Westport, CT: Greenwood, 2001.

The Debate between Buddhists and Greek Philosophers at Meandner's Court

Meandner, also known as Menander, is one of Alexander's Indo-Greek successors who ruled the Bactrian kingdom in northwestern India around 150 BCE and was a patron of Buddhism, according to both Pali and Chinese literary traditions. The very existence of King Meandner is attested by the large amount of coins bearing the inscription "Saviour King Menander" in Greek on the front, found from modern Kabul to Punjab. Some of the coins of Menander I and Menander II incorporate the Buddhist symbol of the eight-spoked wheel, associated with the Greek symbols of

victory. According to Buddhist literature, the great Indian Buddhist emperor Asoka sent Buddhist emissaries to the Greek lands in Asia to spread the dharma toward the end of third century BCE. Thus, the Buddhist presence in Greek Bactria during the second century BCE and the debates on certain important Buddhist doctrines between King Menander I and a Buddhist monk named Nagasena are presented in a number of different works, translations of texts that may have originally been written in Sanskrit as early as 100 BCE.

These debates are preserved in the *Nagasena Bhikṣu Sutra* in Chinese translation and the *Milindapaṇḥa* in the Pali language, which is only used by the Buddhists in South and Southeast Asia. The first work is only one-fourth of the second in length and corresponds to the first part from pages 1 to 89, at the end of which there is a concluding sentence saying, “Here ends the answering of the problems of the questions of Milinda.” Comparative studies show that both works may come down from one original version and that the Chinese translation is earlier than the Pali one. Some technical terms in the earliest Chinese translation of the *Nagasena Bhikṣu Sutra* highly suggest that it was translated during the second century CE. Thus, the original work must have been composed much earlier.

The debates between the king and the Buddhist monk mainly concentrate on some of the important Buddhist concepts such as no-soul, rebirth, karma, Buddha, nirvana, and spiritual life. It suggests that the king had little knowledge of Buddhism but had difficulty in understanding some major teachings, particularly the concepts of no-soul and rebirth. As a result, Nagasena used as many as six similes to illustrate the point. The following is a dialogue on no-soul theory to show the nature of their debate:

“Suppose a man, O king, were to light a lamp, would it burn the night through?”

“Yes, it might do so.”

“Now, is it the same flame that burns in the first watch of the night, Sir, and in the second?”

“No.”

“Or the same that burns in the second watch and in the third?”

“No.”

“Then is there one lamp in the first watch, and another in the second, and another in the third?”

“No. The light comes from the same lamp all the night through.”

“Just so, O king, is the continuity of a person or thing maintained. One comes into being, another passes away; and the rebirth is, as it were, simultaneous. Thus neither as the same nor as another does a man go on to the last phase of his self-consciousness.”

—Guang Xing

Bibliography

- Davids, T. W. Rhys. *The Questions of King Milinda*. Oxford: Clarendon, 1890.
- Hinüber, Oskar von. *A Handbook of Pā li Literature*. Berlin: Walter de Gruyter, 2000.

Religious Developments in Yayoi Japan

The Yayoi period (ca. 400 BCE–ca. 250 CE) is named after a district of Tokyo where the first pottery from this period was discovered. However, the original home of Yayoi culture in Japan was in northern Kyushu and is distinct from the earlier Jomon culture in more than just pottery. Yayoi technology was more advanced than that of Jomon and included the use of the potter's wheel as well as metalwork in bronze and later in iron. What makes Yayoi most distinctive, however, was that it is identified with the beginnings of settled agriculture and especially of wet rice cultivation. This allowed for the development of more complex societies and for the development of a different approach to religion.

Evidence indicates that Jomon religion involved fertility practices, but scholars do not know much more about it. Yayoi religion centered on agriculture and on the religious importance of social hierarchies. Yayoi religion is therefore seen as the origin of modern Japanese Shinto in both its folk forms and in the more el-

evated ceremonies connected to the Japanese imperial household. Though often seen as “nature religion,” Shinto has an intimate connection with the agricultural cycle and especially with the planting and harvesting of wet rice. In developing agriculture and wet rice cultivation, Yayoi culture made these central aspects of the religious arena as well. Their development of bronze work led to the creation of ceremonial articles such as bells, jewelry, mirrors, and swords, which had both religious and political significance. The “Three Sacred Treasures” (a sword, a mirror, and a necklace of jewels) are still presented to each successive Japanese emperor during his enthronement ceremony. Scholars do not know if these are originals since outsiders have never seen them; they represent continuity with the Yayoi culture and its religion.

In Yayoi culture, the centrality of wet rice cultivation was linked to the centrality of their rulers. These rulers were to develop in a later period into the Japanese emperors. Both the sacred treasures and rice are viewed as the gift of the gods. Rice cultivation requires cooperation and regulation, which indicates the existence of a complex society. The Yayoi rulers were responsible for organizing this society. Religious developments meant that these rulers were seen as both human and divine. Their existence guaranteed the goodwill of the gods, the continuance of society, and the guarantee of the harvest. Initially, Yayoi culture was decentralized with a number of different settlements and (presumably) a number of different rulers. This only developed into a unified imperial system after the end of the Yayoi period in the later Kofun or Yamato period. However, religious developments in the Yayoi period were the essential prerequisites for this happening. At a more popular level, religious developments in this period also laid the foundation for popular or folk Shinto. Based around the agricultural cycle, Shinto is particularly focused on rice and products made from it. This overwhelming emphasis on the importance and even “sacred” nature of rice remains a feature of Japanese society.

—Michael Thompson

➤ HANIWA

Haniwa are baked red clay figures of different sizes that were placed in the tombs of important people beginning in the late Yayoi period. Haniwa can look like people, especially soldiers, but there are many other designs as well. They can be horses, birds, or houses. It is not clear why they were made. This practice may have replaced earlier customs of putting real offerings in graves. The custom may reflect a belief in an afterlife in which these things would be of use. The figurines may also have been symbols of respect and/or displays of power.

—Michael Thompson

Bibliography

- Brown, Delmar. *Cambridge History of Japan*, Vol. 1, *Ancient Japan*. Cambridge: Cambridge University Press, 1993.
- Kasahara, Kazuo, ed. *A History of Japanese Religion*. Translated by Paul McCarthy and Gaynor Sekimori. Tokyo: Kosei, 2001.
- Kitagawa, Joseph Mitsuo. *On Understanding Japanese Religion*. Princeton, NJ: Princeton University Press, 1987.

Religious Development in Early Three Kingdom Korea

The Three Kingdoms period (from the first through sixth centuries CE) witnessed two major developments in the religious history of Korea. The first was the integration of the native belief system into the cult of the royalty. Rulers of the three rival states of Koguryo, Paekche, and Silla claimed to possess supranormal or shamanic powers in order to sacralize their genealogy and distinguish themselves from the other contenders for kingship. The second was the spread of Buddhism in the late fourth century, which had immediate political, social, and spiritual repercussions.

The Koguryo legend of the founding ruler, Chumong, in which he is described as the “Grandson of the Emperor of Heaven” or “the descendant of Heaven itself” apparently evolved into a model for state rituals. According to Chinese

historical annals, to the east of the capital of Koguryo there was a huge cave called the cave of the Underground passage where people welcomed the return of the spirit of the cave in the tenth month. Historians believe that the cave represented resurrection or fertility ceremony and was dedicated to the mother of the founding ruler, Chumong-Tongmyong. The cult of Tongmyong also became the state religion, which the people of Koguryo observed apparently as an expression of gratitude for their happiness and prayer for continued prosperity.

The rulers of Silla also developed a state ritual centered on Pak Hyokkose, the mythical ancestor, in a bid to define and justify their claim to a sacred and superior genealogy and the attendant reinforcement of political authority. All the Silla rulers carried out sacrificial rites at the shrine of Hyokkose either in the year of their ascension to power or in the following year in spring. Sacrificial ceremonies were usually accompanied with discussions on important state matters. Decisions that were arrived at were considered to be sacrosanct for both the ruling elite and commoners, apparently because it was felt that the political process of the states had now received supernatural imprimatur. However, from the late fourth to sixth centuries BCE when these three ancient states developed a fully agricultural society and underwent the related process of state formation, they drew on Chinese ideas and institutions. The model of the Northern (Chinese) dynasty that successfully harnessed Buddhism as an instrument of the state represented to Koguryo, the first Korean state to accept Buddhism, an ideal system of centralized monarchical state.

Buddhism was first introduced to Koguryo by the monk Sundo from Former Qin who was sent by Fujian and brought a Buddha image and Buddhist sutras. Since Fujian was in close contact with events on the Korean peninsula after his conquest of Liaodong in 370 CE, his role in spreading Buddhism to the Korean peninsula appears to be related with his broader political and diplomatic objectives. Koguryo rulers were clearly impressed by the Chinese cultural package, the coherent ensemble of Buddhist motifs and the mechanism of Confucian statecraft. This explains why Koguryo established a Confucian

Academy in the same year (372 CE) it patronized Buddhism as the spiritual mainstay of the state. Subsequently, Koguryo also imported Daoism. Prime Minister Yon Kaesomun told King Pojang in 643 CE, “None of the three teachings (Buddhism, Confucianism and Daoism) should be neglected, as each one of them constitutes the leg of a tripod.” He requested that the king send an envoy to the Tang to learn Daoism and to spread this religion in the state. Consequently, in the following year eight Daoist monks came from Tang China. They were accommodated in Buddhist monasteries.

Paekche was introduced to Buddhism in 384 CE when a monk called Marananda came to this state from Eastern Jin. Since Paekche was the most formidable enemy of Koguryo in the late fourth century and Koguryo and Former Qin were close allies, it is very likely that this state sought to build strong ties with Eastern Jin, the enemy of Former Qin. King Asin (392–405 CE) in his edict exhorted people to embrace Buddhism and seek blessings. The recently discovered tomb of King Muryong (501–523 CE) provides evidence of distinct Buddhist influence. King Song (523–554 CE) made singular contributions to the cause of Buddhism. It was during his reign that Buddhism was introduced to Japan, where the ambitious Soga clan used it in order to consolidate its power at court.

Buddhism was accepted as the guiding ideology of Silla in 527 CE during the reign of King Pophung. His successor, King Chinhung, sought to exploit the possibilities that the Buddhist concept of cakravartin, or a cosmic sovereign, held for reinforcing his aggressive monarchical career and legitimating his political imagination of peninsular conquest. He invoked the Buddhist concept of supreme kingship by naming his sons Tongnyun (Bronze Wheel) and Saryun (Iron Wheel) two of the four kinds of cakravartin (Universal Ruler). King Chinhung is generally believed to be the Korean Asoka, presumably because, like Asoka, he extended patronage to Buddhism and inaugurated an epoch of great vitality in Korean history. One of his major achievements was the reorganization of the Hwarang based upon the new Buddhist-Confucian ideas. The Hwarang order represented a quest for equivalence between indigenous values and im-

ported ideology. Buddhism as a spiritual foundation of the state emerged as a powerful force of unity in Silla and contributed to the erosion of the ideological anchorage of the traditionalists at court and provided unity and identity to the Silla society.

Another Silla ruler, King Chinp'yong (580–632 CE), named himself Chongban (Suddhodana) and called his wife Maya Puin (Maya Devi). The king's two brothers were also named after the two brothers of Suddhodana, Suklodana and Dronodana, signifying a special linkage between the royal lineage of Silla and the lineage of Sakyamuni. Employment of this Buddhist rhetoric served to reinforce the sacred character of Silla kingship.

During the reign of Queen Sondok, the twenty-seventh monarch of Silla, Buddhist myth was invoked once again. The Buddhist world of the times proclaimed her to be a queen of the

Ksatriya caste, the warrior caste of India to which the Buddha belonged. It thus accorded her a status crowned with virtue and valor. The monk Chajang also proclaimed Silla as a Buddhist realm and an abode of past Buddhas to give spiritual comfort to his countrymen and to instill in their minds confidence and a sense of pride.

—Pankaj Mohan

Bibliography

- Cohen, Warren I. *East Asia at the Center: Four Thousand Years of Engagement with the World*. New York: Columbia University Press, 2000.
- Lee, Ki-Baik. *A New History of Korea*. Translated by Edward W. Wagner and Edward J. Schultz. Cambridge: Harvard University Press, 1984.
- Lee, Sang Taek. *Religion and Social Formation in Korea: Minjung and Millenarianism*. New York: Mouton de Gruyter, 1996.
- Seth, Michael J. *A Concise History of Korea*. Lanham, MD: Rowman and Littlefield, 2006.

■ Introduction: New Religious Lifestyles

From 1000 BCE to 300 CE, a number of new lifestyles based on religious beliefs developed. Prior to this, most religious systems emphasized the role of religious specialists. Especially prominent in the Near East and the Greek world, these priests were in charge of organizing worship and offering sacrifices much in the way that state employees were in charge of running various types of infrastructure. This approach to religious life continued through 1000 BCE to 300 CE (especially in the Near East and the Greco-Roman world), but new lifestyles in which the individual could participate in religious life appeared as well.

These new lifestyles are most readily apparent in the religious traditions that appeared on the margins of society. The early Christian Church remained a marginalized religious institution for most of this period, and its followers developed an elaborate church hierarchy outside of the normative society of ancient Rome. With Christianity, the idea of martyrdom also developed; that people should sacrifice themselves in taking a stand for

their religious beliefs was utterly novel. Christianity itself emerged as a new tradition in the context of other Judaic traditions that developed as alternatives to mainstream Judaism, as organized by the Temple in Jerusalem. Other marginalized traditions in Roman society include the so-called Mysteries in which devotees sought direct and often ecstatic encounters directly with the divine forces, very different from the formal and indirect temple worship of the Roman state. The nature of these mystery religions varied dramatically, and some of the more ecstatic traditions were banned in different periods in Roman history.

While these marginal religious lifestyles were practiced by people still participating in Roman society, a new type of lifestyle that involved withdrawing from society also emerged in the Roman world and within Buddhism. This is the time of the first monasteries, where individuals would step out of the normative practices of everyday life in order to devote themselves to a more spiritual life.

—Kevin M. McGeough

Jewish Essenes and Messianic Movements

In the centuries around the birth of Jesus there were several messianic movements in Palestine. One of these movements was the Essenes, an ascetic and esoteric Jewish sect that lived a communal and celibate life in the Judean desert at Qumran. During the third century BCE the unceasing Hellenization of the Jews represented a grave threat to their very survival as a race and monotheistic religion. In response to this colonization by the Seleucid empire, three Hasidean Jewish sects emerged: the Pharisees (rabbis), the Sadducees (aristocracy), and the Essenes. Contemporary sources relate that the appellation “Essene” means “holy ones” and also “healers,” although the Essenes referred to themselves as the Community of the Poor and the Sons of Light.

The Essene community flourished at Qumran (located on an escarpment at the northwestern tip of the Dead Sea approximately 20 miles or 32 kilometers east of Jerusalem) in the second and first centuries BCE until the first century CE. The site was razed in 68 CE by the Romans during the First Jewish Revolt. But before the site’s destruction, the sect hid their sacred scriptures in nearby caves, where they remained hidden until found in 1947 by a Bedouin shepherd. These scriptures consist of both biblical and sectarian scrolls and have come to be called the Dead Sea Scrolls. Archaeologists at the Qumran

site have uncovered numerous ritual baths (*mikvehs*), a communal dining hall, and a scriptorium for the copying of the scrolls.

The most celebrated Essene leader was the Righteous Teacher, the founder of the sect. Their sectarian scrolls describe his battle with the Wicked Priest (Temple high priest) over Temple cult practices. Since the Essenes practiced both a stricter adherence to Jewish law and a stricter observance of the Sabbath, they sought to separate themselves from the two other main sects within Judaism. They established a desert community in order to prepare for a Holy War against the Sons of Darkness (all nonbelievers, including other Jews) that was to take place at the end of days. The sect was awaiting the coming of two Messiahs, the priestly Messiah (Messiah of Aaron) and the royal Messiah (Messiah of Israel); the Essenes believed that both would appear during the current generation. This has led many modern scholars to characterize the Essenes as having practiced a priestly apocalypticism.

In addition to their practice of a communal life of celibacy and rejection of family members, the Essenes preached personal poverty. This required all candidates, each of whom had to pass through a two-year novitiate before being granted full membership, to sell all personal property and give the proceeds to the order to be held in common and doled out according to need.

Perhaps the most important tenet of the Essenes was their observance of the daily communal meal, during which members partook of a ceremonial meal of bread and wine. In order to maintain ritual purity, before each meal members had to bathe in a ritual bath and then don sacral garments of white linen. Indeed, the maintenance of ritual purity was of paramount importance since the communal meal was always performed in anticipation of the messianic banquet, which would usher them into the kingdom of God. In the final analysis, Essene doctrine and practice influenced early Christianity.

—Keith D. Sisson

THE DEAD SEA SCROLLS

Ever since their initial discovery in 1947 by a Bedouin shepherd in a cave near Qumran, the Dead Sea Scrolls have shed light on Essene doctrine and practice. In the decade that followed, more scrolls were discovered in nearby caves. The biblical scrolls contain all 24 books of the Hebrew Bible except Esther; the sectarian scrolls include the Damascus Document, the War Scroll, the Manual of Discipline, and the enigmatic Copper Scroll. The Copper Scroll is perhaps the most intriguing since it both lists the contents and reveals cryptically the whereabouts of hidden treasures that have yet to be found.

—Keith D. Sisson

Bibliography

- Cross, Frank Moore. *The Ancient Library of Qumran*. Garden City, NY: Doubleday, 1961.
- Larson, Martin A. *The Essene-Christian Faith: A Study in the Sources of Western Religion*. New York: Philosophical Library, 1980.

Wise, Martin, Martin Abegg Jr., and Edward Cook.
The Dead Sea Scrolls: A New Translation. New
 York: HarperCollins, 1996.

Christian Life in a Pagan World

Many religious currents were active in the late Roman era: the imperial cult, the mystery religions, Judaism, Gnostic groups, and many others. The Christian Church formed its identity both in contrast to these other orientations as well as through internal splits. Even during the 300 years of sporadic persecution within the pagan world of the Roman empire, the Christian religion expanded. In the pagan world of Emperor Claudius (41–54 CE), Christians were still considered part of the Jewish community; however, by the end of the first century both sides (Jewish and Christian) were separately persecuted by Emperor Domitian. The year 312 CE marked a turning point, as Emperor Constantine magically ascribed his victory over Maxentius to the Christian God. From this point on, Constantine promoted Christianity and prohibited the pagan cults.

Immediately after the death of Jesus, early Christian communities were still indebted to the Jewish tradition. The first adherents were either Jews or individuals interested in Judaism. A dispute in Antioch initiated the first split between the Christian and Jewish religions. Conflict erupted when conservative Christians from the Jerusalem congregation insisted on Jewish circumcision as a precondition to being a Christian. The solution, reached at the council in the year 48 CE, was that being uncircumcised should not bar one from becoming a Christian. Religious initiation was not connected to privileges or preconditions. This made it very attractive to people of both sexes among the middle and lower classes.

Christianity spread in the first decades through the work of charismatic mobile individuals and wandering prophets, both male and female. Christians communicated their values and way of life to the public with direct person-to-person contact. This method engaged both working people and members of the upper class. Tradition holds that even prisoners spread the message of Christianity. Later Christians, such as

▶ PLINY THE YOUNGER AND REPORTS OF CHRISTIAN ATROCITIES

Roman administrative practices toward Christians are preserved to some extent in Pliny the Younger's *Epistulae* (letters). Pliny (61–ca. 122 CE) was sent to Asia Minor by Emperor Trajan. Pliny reported in the year 112 CE about the problem of the growing number of Christians in the province of Bithynia et Pontus. Pliny investigated accusations of atrocities that he subsequently deemed unfounded. On the contrary, in his letter to Rome he described the Christian cult as having exemplary ethical goals. Emperor Trajan responded to this by stating that those who converted to Christianity should be punished by death. Those who were accused of being Christians were obliged to perform a public worship act to prove that this was not the case. The accused Christians were expected to perform a sacrifice to the gods and to the emperor (in his role as a god). In this public act, they were also expected to denounce Christ.

—Barbara Wilhelmi

Ulfilas (Wulfila), bishop of the Goths (ca. 310–383 CE), claimed that Christian ancestors had once been prisoners. For the first three centuries of the Common Era, unpaid healings by the laying on of hands and prayer were significant means through which Christianity was spread. Justin (ca. 100–165 CE) and Tertullian (ca. 160–220 CE) brought these early Christian healing successes to the Roman empire, where community members demanded them as a form of social care when pagan magi and pharmacologists failed or were too expensive.

The Christian communities in Roman cities met in private houses. Houses were meeting places for a variety of reasons. First, Christians were initially not very numerous, and in times of persecution private houses were safer. Hence, we can imagine that women often hosted these private house-based meetings. The metaphor of the “house of god” implied a criticism of the emperor, who as head of his empire (house) was understood to be the *paterfamilias* (father of the family) and who demanded total loyalty. Exclusive meetings in houses countered this total loyalty.

The communion of the holy (*communio sanctorum*) was the central point of this community. This is where intensive prayer took place and the Eucharist was celebrated. The ritual of baptism was the foundation of the community and was a central component of belief. Contributions were gathered in the collection for social causes according to means. Many women are depicted taking part in evening communion in the frescos in the catacombs (e.g., in the Priscilla catacomb). This is evidence of the leading role of women in community life until the fourth century. The oldest person led. As Christianity became more established, women were only allowed to occupy the hierarchically less important offices. In some of the later letters of the Bible (such as Ephesians), guidelines for conventional Christian conduct are established.

Christians were persecuted in a variety of ways in the first 300 years. Nero persecuted them within the city of Rome in the year 64 CE, and the entire Roman empire was dangerous for them under Domitian (81–96 CE) and Trajan. There was also brutal torture by imperial order for several decades under the emperors Decius, Valerian, and Diocletian. Simply being a Christian was a punishable offense.

There was an abundance of accusations against Christianity, many based on the fact that this was a new movement that originated in the east. In part, Christians inherited the accusations that had previously been made against the Jewish community: they were an exclusive community with foreign customs and secret practices, and they did not take part either in public life or in Roman religious rites. Not participating in pagan religious practices was considered economically damaging because cultic practices permeated many industries. Butchers, construction workers, and fortune-tellers, for example, made their living by selling religious products or services. This livelihood was threatened when groups within the community refused to participate in those religious practices.

The Christian message encouraged individuals to guide their personal lives with moral principles, which could lead to unwavering refusal (*obstinato*) in trials against them. Christians also rejected pagan myths, in the form of either plays, educational content, or sculpture. Tertul-

lian warned about taking part in the athletic games due to their mythological content. In the *Traditio Apostolica* from the early third century we learn that painters, dancers, actors, and innkeepers could be refused baptism. From a Christian perspective, all of these professions were undesirable due to their association with the organization of pagan feasts.

The profession of faith, originally a part of baptism, acquired a new significance in the trials against Christians. Anyone who bore witness to the Christian faith, by definition a martyr (Greek: witness), had to also suffer martyrdom, which now meant sacrificing one's life. Tertullian wrote of martyrdom as a cure for a sick, sinful life. Men and women differed in this regard in one crucial way: most female martyrs bore witness to their Christian faith by opting for a life of virginity, which was promoted by Paul in particular. A woman's refusal to marry was understood by the patriarchal society as a refusal of submission and was punished. Christ's successors valued Christianity above family relationships, as the reports about the martyrs Felicitas and Perpetua make clear. The traumata suffered were developed as legends in countless literary retellings in later centuries. We cannot prove whether all of these martyrs sacrificed their lives as readily as is reported. The ideal of being a successor to Jesus and an ascetic outlook certainly contributed to this. Persecution was seen as a test of faith, with death as a victory. There are also connections between sacrifice of life and the mystery religions, which also presuppose a life after death. Hence, the myth of Proserpina (Persephone) tells of voluntary entry into death.

—Barbara Wilhelmi

Bibliography

- Brown, Peter. *Authority and the Sacred: Aspects of the Christianisation of the Roman World*. Cambridge: Cambridge University Press, 1997.
- Dodds, E. R. *Pagan and Christian in an Age of Anxiety*. Cambridge: Cambridge University Press, 1965.
- Jantzen, Grace. *Power, Gender and Christian Mysticism*. Cambridge: Cambridge University Press, 1995.
- Laistner, M. L. W. *Christianity and Pagan Culture in the Later Roman Empire*. New York: Cornell University Press, 1951.

- Lane Fox, Robin. *Pagans and Christians*. London: Viking, 1986.
- Lee, A. D. *Pagans & Christians in Late Antiquity*. London and New York: Routledge, 2000.
- Ranft, Patricia. *Women and Spiritual Equality in Christian Tradition*. New York: St. Martin's, 1998.
- Wilhelmi, Barbara. "Christianity and Shamanism." In *Shamanism: An Encyclopedia of World Beliefs, Practices, and Culture*, Vol. 1, edited by M. N. Walter and E. J. Neumann Fridmann. Santa Barbara, CA: ABC-CLIO, 2004.

Women in Early Christian Communities

The role of women in the early Church underwent significant change as Christianity spread throughout the Roman empire. Initially, women were afforded prominent positions, but by the solidification of the church hierarchy in the fourth century CE, their roles within the church had been restricted.

In first-century CE Christian writings, women are often mentioned as disciples. The Gospels portray several women positively, noting that they were admirable believers and provided hospitality to traveling Christians. The Pauline letters likewise mention numerous women who were actively involved in the early Church, many as missionaries. Women participated openly in Christian life, praying and prophesying as well as serving as church leaders. There is evidence that some early Christian communities applied Galatians 3:28 to their communal structures and thus emphasized gender equality in regard to religious practice. In communities that did not stress traditional gender roles, women were allowed a high degree of autonomy.

From the second century CE onward, the role of women in the church began to change as theologians applied passages such as 1 Corinthians 11:2 to roles within the church. Furthermore, when local power began to solidify in the figure of the bishop, who was always male, the role of women within the church became more rigidly structured. Women turned to other avenues to express their religious devotion. In particular, with the rise of asceticism and the



Mary Magdalene sees the apparition of the risen Jesus Christ, in this woodcut from about 1500 CE. (Jupiterimages)

monastic movement of the fourth century CE, many women were freed from assuming traditional obligations such as marriage and child-bearing. Wealthy women in this period also became patrons of the church, lavishing donations of land and money on it or offering support to individuals. Melania the Elder, for instance, provided ample aid to the Christian scholar Jerome (ca. 400 CE), even providing the funds to build and sustain his monastery in Bethlehem.

Within early Christianity there were clearly differing opinions about the role of women within the church. While some authors such as Tertullian railed against women serving as deacons, there was a large corpus of noncanonical literature that focused on positive aspects of religious women. The popular prison diary of Perpetua, a third-century CE martyr, details the devotion and courage of a young woman in prison awaiting her execution in the arena. Perpetua gave up her familial ties, including her newborn son, in order to devote herself to her faith. The *Acts of Paul and Thecla* describes the encounter between a young Roman woman, Thecla, and the apostle Paul. Thecla goes on to become a powerful leader in the church with the power to baptize and exorcise demons. The story stresses the opposition that Thecla encountered

➤ MARY MAGDALENE

Mary Magdalene is one of the most studied women in early Christian history. She makes her first appearance in New Testament writings as a follower of Jesus. She is described as a teacher, a recipient of visions, and one of the first witnesses of the resurrection. She appears in numerous other noncanonical texts as a prominent leader in the early Church, most notably in the gospel of Mary. This depicts Mary as the preeminent disciple of Jesus. In this work, she even gives instructions to other followers. Beginning in the fourth century, however, theologians began to associate Mary with the unnamed sinner women in Luke 7:36. She was thus subsequently connected to all sinful women who appear in the New Testament, especially the prostitute mentioned in John 8:1. Mary was gradually transformed from a powerful holy woman into a repentant prostitute.

—Lisa Holliday

as she rose to prominence and has often been interpreted as an argument for increased power for women within the church.

By the fourth century CE, women did not serve in church administration but were more commonly associated with the church's charitable endeavors and monastic movement. Therefore, although women's roles changed in this period, women remained influential members of the early Christian community.

—Lisa Holliday

Bibliography

- Burrus, Virginia. *Chastity as Autonomy*. Lewiston, NY: E. Mellen Press, 1987.
- Clark, Gillian. *Women in Late Antiquity*. Oxford, UK: Clarendon, 1993.
- Kraemer, Ross. *Her Share of the Blessings*. Oxford: Oxford University Press, 1992.

Development of a Christian Hierarchy

The teachings of Jesus put forth an ideal of servant leadership. One gospel, Matthew, singles out Peter for a special role (Matthew 16:18), but

it is clear from the New Testament that Peter did not actually exercise centralized authority over the early Christian movement. The canonical gospels and Paul's letters mention a core group of 12 disciples who played a role carrying on Jesus's authority and who will act to judge the 12 tribes of Israel during the end times (Matthew 19:28; Mark 3:13–19). These 12, however, were not the only ones to exercise leadership in the early Christian movement. Jesus's brother James and the apostle Paul were the two most prominent leaders who had not been among the 12. Neither is it clear exactly who all of the 12 were or what sorts of leadership, if any, each one exercised after Jesus's death.

Leadership in the early Christian movement could be based on numerous factors including a blood relationship with Jesus (James), close association with Jesus (Peter, John, and perhaps Mary Magdalene), charismatic authority (Paul, Prisca, and Aquila), or some combination of these. In Paul's letters, a number of people, including many women, appear to be founding and presiding over Christian communities (see Romans 16). There was no regularized ordination process acknowledged by all Christians in the early decades. Christian leaders such as Paul arose spontaneously in this spirit-filled environment. Gradually a new and more stable leadership structure began to develop in which deacons (servants) constituted the lowest rung followed by presbyters (elders) and bishops (overseers). Soon these came to be seen as offices with specific requirements (1 Timothy 3). A first-century text called the *Didache* is witness to a time when itinerant charismatic prophets coexisted with a more established hierarchy, each having their own type of authority. Gradually the hierarchical model became dominant, and further developments took place in the second century as women came to be excluded from church offices, mirroring the practice of many other social organizations in the Greco-Roman world. One bishop began to exercise authority over the churches of a particular area as the proto-orthodox catholic form of Christianity tried to consolidate its position and decide which ideas were acceptable and which were to be considered heretical. When a bishop died or was martyred, a new bishop was elected from within the community.

► DIDACHE 11:8–12 AND 15:1

The *Didache* (Teaching of the Twelve Apostles) is a text likely written in the first century CE. The *Didache* thus serves as an interesting historical record that documents the beliefs, practices, and organization of an early transitional Jewish-Christian community prior to the development and institutionalization of a church hierarchy. The following passage attests to the multiple forms of leadership and authority that characterized early Christianity.

“Not everybody making ecstatic utterances is a prophet, but only if he behaves like the Lord. It is by their conduct that the false prophet and the [true] prophet can be distinguished. . . . If someone says in the spirit, “Give me money, or something

else,” you must not heed him. However, if he tells you to give for others in need, no one must condemn him. . . . You must, then, elect for yourselves bishops and deacons, who are a credit to the Lord, men who are gentle, generous, faithful, and well tried. For their ministry to you is identical with that of the prophets and teachers.”

—Jeffrey Trumbower

Source

Didache 11:8–12 and 15:1 in *Early Christian Fathers*, edited by Cyril Richardson, Library of Christian Classics Series (Philadelphia: Westminster John Knox, 1970), 176 and 178.

In the early third century we find the first attestations of the terms “hiereus” (Greek) and “sacerdos” (Latin) applied to Christian presbyters and bishops. These terms mean “priest” and connote a connection to the temple priesthood in the Hebrew Bible. Earlier writers had described all Christians as priests (1 Peter 2:5–9), but in the third century this term came to denote only those who performed the Eucharistic ceremony, understood as a reenactment of Jesus’s sacrifice.

Many cities around the Roman empire had influential bishops in the third and fourth centuries including Jerusalem, Alexandria, Antioch, Ephesus, and Rome. Often these bishops were called “papa” (father), a term of endearment and recognition of authority. Although the bishop in Rome eventually became known as the pope and assumed the primary position of leadership in the Catholic world, at the close of this period (300 CE) the Christian hierarchy remained in its formative stage.

—Jeffrey Trumbower

Bibliography

Grant, Robert M. *Augustus to Constantine: The Rise and Triumph of Christianity in the Modern World*. Louisville, KY: Westminster John Knox, 2004.

Richardson, Cyril, ed. *Early Christian Fathers*. Library of Christian Classics Series. Louisville, KY: Westminster John Knox, 1970.

Torjesen, Karen Jo. *When Women Were Priests*. San Francisco: HarperCollins, 1993.

von Campenhausen, Hans. *Ecclesiastical Authority and Spiritual Power in the Church of the First Three Centuries*. Translated by J. A. Baker. Stanford, CA: Stanford University Press, 1969.

Development of Buddhist Monasteries

The Buddhist *sangha* (community) included monks (*bhikkhu*) and nuns (*bhikkhuni*), though sometimes the term “sangha” includes dedicated lay followers as well. The rules governing the behavior of monks and nuns evolved during the Buddha’s lifetime, and during the century after the Buddha’s death (ca. 400 BCE), they were collected and codified in what is called the *Vinaya-pitaka*, the “Basket of Monastic Rules.” The *Vinaya* is one of the three principal divisions of early Buddhist scripture, the other two being “baskets” that contain, respectively, the Buddha’s sermons (the *Sutta-pitaka*) and early Buddhist philosophy (the *Abhidhamma-pitaka*).

The heart of the *Vinaya* is the list of rules called the *Patimokkha* (227 rules in the

UPOSATHA CEREMONY

“Venerable ones, I have just recited this set of rules. I ask you, in the name of the Community, whether you have transgressed these rules. [He would repeat the question three times, and then continue.] Venerable ones, I infer from your silence, in the name of the Community, that you have not transgressed these rules.” [Uposatha ceremony described and cited by Mohan Wijayaratna]

—Jonathan C. Gold

Source

Mohan Wijayaratna, *Buddhist Monastic Life According to the Texts of the Theravāda Tradition*, translated by Claude Grangier and Steven Collins (New York: Cambridge University Press, 1990), 124.

Theravada *Vinaya*, with more for nuns), which monks gather to recite every lunar half-month in what is called the *uposatha* ceremony. After the recitation, the most senior monk asks for confessions of any offenses. It is considered a palpable benefit to one’s practice to confess and a great hindrance to refrain from doing so.

The additional stringent rules for nuns suggest that the Buddha may have wished to preclude the charge that women were joining his community simply to escape their family responsibilities. Even so, he is recorded as having prophesied that the order would only last half as long with nuns present. Perhaps he doubted that enough supporters could be found to contribute to the oddity of a mixed-gender sangha.

Monks and nuns renounced their homes and familial obligations and adopted a life of celibacy, few possessions, and a daily round of begging for food. Monks were required to accept without comment whatever food was offered to

them, for which reason the Buddha did not prohibit the eating of meat.

Much of the early community often accompanied the Buddha in his travels around northern India, and he tended not to stay in any location for more than a few weeks, often less. However, after the Buddha instituted the rule of the rains retreat, during which monks and nuns were required to stop their wandering for four months of each year, the first permanent monasteries—whether freestanding structures (*viharas*) or excavated caves (*gubas*)—became appropriate and beneficial. Prominent rulers and wealthy patrons donated land and funds and supervised their construction. The selection of sites took into consideration the monks’ need to be sufficiently far from town to be able to study and meditate in peace but also sufficiently close so that begging rounds could be fruitful without being too arduous and lay devotees could come by to request teachings. Over the centuries of Buddhism’s presence in India (ca. 400 BCE–1200 CE), Buddhist monasteries became great repositories of Indian culture and learning, the largest of them being the world’s first universities.

—Jonathan C. Gold

Bibliography

- Mookerji, Radha Kumud. *Ancient Indian Education (Brahmanical and Buddhist)*. New Delhi: Motilal Banarsidass, 1990.
- Pruitt, William, ed. *The Pāṭimokkha*. Translated by Kenneth Roy Norman. Oxford: Pali Text Society, 2001.
- Schopen, Gregory. *Buddhist Monks and Business Matters: Still More Papers on Monastic Buddhism in India*. Honolulu: University of Hawaii Press, 2004.
- Wijayaratna, Mohan. *Buddhist Monastic Life According to the Texts of the Theravāda Tradition*. Translated by Claude Grangier and Steven Collins. New York: Cambridge University Press, 1990.

Introduction: Religious Literature

Many of the formative texts of the world’s religions were compiled between 1000 BCE and 300 CE. This was a remarkable period of religious-literary production through-

out Europe, Africa, and Asia. What is truly remarkable about these writings is how many of them still provide meaning to worshippers today. That 3,000 to 2,000 years of distance does

not weaken their power to inspire people demonstrates the tremendous abilities of these authors to provide insight into the world.

The fundamental texts of Greek religion, the works of Homer and Hesiod, were probably written at this time. There is some debate about when exactly the Homeric books (the *Iliad* and the *Odyssey*) were written, but even if they had been written earlier, they certainly became widespread early in this period. These texts were fundamental in establishing connections between the varieties of Greek religious traditions that were spread throughout the decentralized Greek world. They provided a framework in which Greeks could think of themselves as having a common religious tradition. And even though there are no longer any living participants in these traditions, the works of both authors are still read as deeply meaningful texts today.

Although many of the sections of the Hebrew Bible/Old Testament describe events that occurred prior to this period, most of the accounts were written down after 1000 BCE. This was also the time in which these varied writings were compiled into the Hebrew Bible, in a process called canonization, whereby it was decided which texts were holy or sacred and which were not (and which versions of each text were correct). The Dead Sea Scrolls are evidence of an alternative canon of biblical thought, including slightly different copies of biblical books and religious manuscripts unique to that community. This was also the period in which the books of the New Testament were written and the Christian Bible was compiled. The canonization of Bibles in both Judaism and Christianity did not stop the writing traditions in either religion. New types of religious writing, in which Jewish and Christian scholars interact with sacred texts, became common means of expressing theological ideas.

In India, the process of writing down the Vedic texts began before this period (the Vedic Age is thought to run from 1800 BCE to 600 BCE). Between 400 BCE and 400 CE, the major epics of Hindu literature were written down, and thus by the end of this period the fundamental texts of Hinduism (which are still important today) came into being. The *Mahabharata*, the *Upanishads*, and the *Bhagavad Gita* are not

only profoundly moving sacred texts but are also masterpieces of world literature. Around 500 BCE the Buddha began teaching in India, and following his awakening Buddhist writers compiled stories of his life and accounts of his teachings that still help modern Buddhists attempt the attainment of their spiritual goals.

What follows are introductions to this diverse variety of important sacred writings. East Asian texts (such as *The Analects*) are not presented here; those introductions can be found in the section “Philosophical and Religious Developments in East Asia” beginning on page 598.

—Kevin M. McGeough

Hebrew Bible and the Concept of Sacred History

The Hebrew Bible (Christian Old Testament) was composed roughly from the twelfth to third centuries BCE. The earliest passages are poetic (e.g., Exodus 15, Deuteronomy 32, and Judges 5) from which the surrounding historical-narratives have sometimes borrowed (e.g., Exodus 14; Judges 4). Yet the textual formation of the Hebrew Bible at large was centered on events spanning from 722 BCE to 539 BCE when two political powerhouses of the ancient world, Assyria and Babylon, attacked the ancient kingdom of Israel, forcing massive sectors of the population into exile.

In Jewish tradition, the Hebrew Bible is divided into three sections: the Torah, the Prophets, and the Writings. The Torah (Genesis, Exodus, Leviticus, Numbers, Deuteronomy), also known as the Pentateuch, is believed to have been finalized either during the exile (587–539 BCE) or later. The Former Prophets (Joshua, Judges, 1 and 2 Samuel, and 1 and 2 Kings) may have been written during the exile as well. For the Latter Prophets, there are two subcategories. First are Isaiah, Jeremiah, and Ezekiel, known as the Major Prophets due to their volume and prominence. Nearly half of Isaiah involves events of the exilic period, whereas almost all of the material found in Jeremiah and Ezekiel dates to the exile. Second are the Minor Prophets (Hosea, Joel, Amos, Obadiah, Jonah, Micah, Nahum, Habakkuk, Zephaniah, Haggai, Zachariah, and Malachi), which are closely related to the events transpiring around 722 BCE and 587 BCE. After the Prophets appear,

the Writings (Ruth, 1 and 2 Chronicles, Ezra, Nehemiah, Esther, Job, Psalms, Proverbs, Ecclesiastes, Song of Songs, Lamentations, and Daniel), the majority of which was written in the postexilic period (539 BCE and afterward).

To better understand the development of the Hebrew Bible, one must understand the major theories offered to explain it. The German scholar Julius Wellhausen (1844–1918) is most celebrated for his popularization of the Documentary Hypothesis, which claimed that the final form of the Torah was compiled from four strands: the Priestly (P) author (postexilic), the Yawistic (J), the Elohist (E) (eighth century BCE), and the Deuteronomist (D) (seventh century BCE). J and E represent a free primitive Israel without the centralized cult at Jerusalem. D, presumably the law book discovered in King Josiah's reign, altered this by establishing the principal place of worship at Jerusalem. P was written during the time of the sacerdotal and sacrificial system attributed (mistakenly) to Moses.

Although it has visibly shaped the scholarship of the Hebrew Bible, the hypothesis has suffered many criticisms. One critique lambastes Wellhausen for his anti-Semitic sentiments; another attacks his methodology, for in his publication he refrained from consideration of essential extrabiblical artifacts coming to light via archaeology.

Afterward, a different theory for the growth of biblical tradition appeared under the auspices of a second German scholar, Martin Noth. This theory took shape under the label of the Deuteronomistic History. It pertained not to the Torah but to the Former Prophets, with the book of Deuteronomy as its preamble. It described them as the production of one author, who collated various traditional sources to construct his history of Israel. The work was written as a unified whole, both in its language and attitude. Noth argued that the work was authored in the exilic period. Later, the Harvard scholar Frank M. Cross advocated a view that the Deuteronomistic historian worked in the preexilic period at the time of the Judean king Josiah (639–609 BCE), to whom the Deuteronomistic historian attributed great importance. In sum, as the ideas of Wellhausen have been confronted and amended, so have those of Noth. Nevertheless, they have become foundational

for current speculation on the development of the Hebrew Bible.

—Benjamin D. Thomas

Bibliography

- Cross, F. M. *Canaanite Myth and Hebrew Epic: Essays in the History of the Religion of Israel*. Cambridge: Harvard University Press, 1973.
- Halpern, B. *The First Historians: The Hebrew Bible and History*. 2nd ed. University Park: Pennsylvania State University Press, 1996.
- Noth, M. *The Deuteronomistic History*. Vol. 15 of the *Journal for the Study of the Old Testament Supplement Series*. Eugene, OR: Wipf & Stock, 2005.
- Wellhausen, J. *Prolegomena to the History of Israel*. Reprint of the 1885 translation from the German original, with a reprint of the article "Israel" from the *Encyclopedia Britannica*. Atlanta: Scholars Press, 1994.

Dead Sea Scrolls

The Dead Sea Scrolls have been called the greatest manuscript discovery of modern times, not only because they include biblical manuscripts 1,000 years older than any we had before but also because they offer a firsthand view of the life of an ancient Palestinian community. The earliest known copy of the Hebrew Scriptures before 1947 came from the tenth century CE, about 1,100 to 1,600 years after most of them were composed. Extrabiblical sources for the history of first-century Palestine were also copies from centuries later, and they tended to convey the limited perspective of groups that became dominant much later.

Palestinian shepherds discovered the scrolls preserved in ceramic jars in caves about two miles inland from the northwest shore of the Dead Sea. Archaeologists subsequently determined that they originated from a monastic-like community of Jews who lived on a nearby plateau called Qumran until around 70 CE. Since the initial discovery, 11 caves containing manuscripts have been found, not all directly connected with the Qumran community. In addition to seven well-preserved scrolls, thousands of manuscript fragments were found, many of which scholars are still trying to piece together.

THE PIERCED MESSIAH TEXT

Translating and understanding fragmentary ancient texts is difficult and prone to errors, especially when the subject matter ignites strong religious feelings. One of the fragments found at Qumran became famous in 1991 when Robert Eisenman proclaimed it as evidence for first-century Jewish expectations of a slain messiah. It came to be called the Pierced Messiah text. Eisenman asserted that his interpretation was beyond doubt, but other scholars who examined the text disagreed. Today most consider it more likely that in this text the messiah is the victor who kills his enemy rather than the one being killed, as in the translation by Eisenman quoted here, followed by that of Geza Vermes.

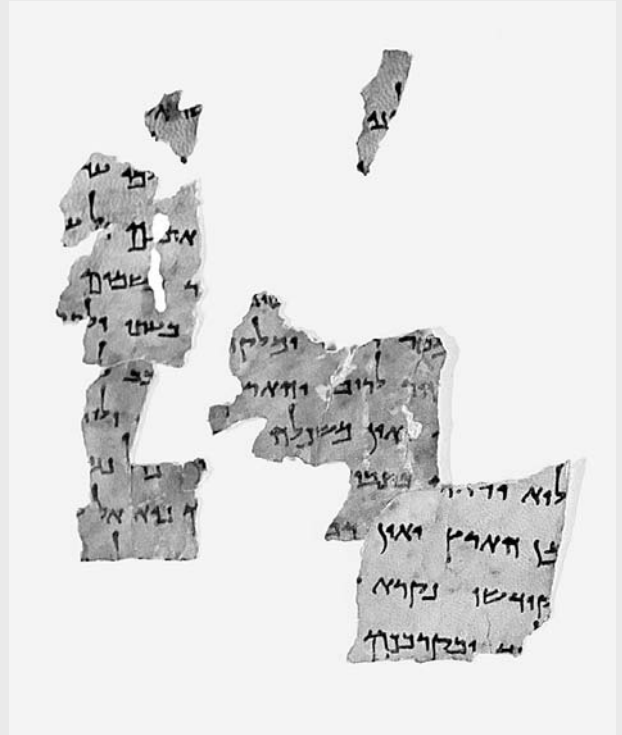
Eisenman: “. . . and they put to death (possibly too ‘shall put to death’) the leader of the community, the Bran[ch of David] with wounds (also ‘stripes’ or ‘piercings’).”

Vermes: “. . . and the Prince of the Congregation, the Bran[ch of David] will kill him [by stroke]s and by wounds.”

—Thomas Dykstra

Source

James Tabor, “The ‘Pierced Messiah’ Text—An Interpretation Evaporates,” *Biblical Archaeology Review* 18(4) (July/August 1992): 80–82.



Fragments of the “Pierced Messiah” text from the Dead Sea Scrolls. (Clara Amit/Israel Antiquities Authority)

The bulk of the Qumran manuscripts were written in the last two centuries BCE and the first century CE. The most important finds include scriptural texts; commentaries on scripture (*pesbarim*); rules and guidelines for the monastic community (the Damascus Document and the Manual of Discipline); a detailed description of a temple that was never built, with regulations for its worship practices (the Temple Scroll); a letter containing theological polemic between Qumran and other Jewish groups (“Some of the Works of the Torah”); and an eschatological text foretelling a great war (the War Scroll). Many smaller pieces of poetry and documentary texts (such as records of financial transactions) were also found.

The consensus among scholars is that these works were created by a Jewish sectarian community called Essenes by other first-century sources, though the Qumran documents themselves never use that name. A few historians have suggested that Qumran was just a military outpost for Jerusalem Jews or that it was a rich man’s villa, but they have gained few adherents.

The community organized its communal life around the study of scripture and saw itself as the community of the new covenant. It believed in resurrection and expected two messiahs, a Davidic one and a priestly one who would guide him. It was strongly deterministic, believing that God was in complete control of everything, and it saw the world starkly in terms of light and

dark, good and evil. Its members considered themselves to be sons of light.

The texts illuminate a forgotten segment of Judaism and its conflicts with other Jewish groups, and in so doing they portray a degree of diversity within Judaism that was not known before. They also changed our understanding of the development of the biblical text. Before their discovery we had copies of the Hebrew Scriptures in manuscripts from the tenth century CE and copies of a Greek translation called the Septuagint (LXX) from the fourth century. The text of the Hebrew version differs substantially from that of the Greek in places, and LXX variants were often thought to be corruptions or interpolations introduced in the translation process. We now know that the LXX often preserves ancient Hebrew traditions that we were not aware of before.

Before 1947 the consensus among historians was that all Jews shared one canon of scripture that crystallized by the end of the first century. The Qumran evidence helped undermine that view. This community of Jews revered other texts besides the ones in today's Hebrew Bible as authoritative, continued to write documents that claimed to speak with divine authority, and left no evidence of even having been interested in establishing what was in or out of the scriptural canon.

—Thomas Dykstra

Bibliography

- Herbert, Edward D., and Emanuel Tov, eds. *The Bible as Book: The Hebrew Bible and the Judean Desert Discoveries*. Newcastle, DE: Oak Knoll, 2002.
- Shanks, Hershel, ed. *Understanding the Dead Sea Scrolls: A Reader from the Biblical Archaeology Review*. New York: Random House, 1992.
- Tabor, James. "A Pierced or Piercing Messiah? The Verdict Is Still Out." *Biblical Archaeology Review* 18(6) (November/December 1992): 58–59.
- VanderKam, J., and P. Flint. *The Meaning of the Dead Sea Scrolls: Their Significance for Understanding the Bible, Judaism, Jesus, and Christianity*. San Francisco: HarperCollins, 2004.
- Vermes, Geza. *The Dead Sea Scrolls in English*. Sheffield, UK: Sheffield Academic Press, 1987.

The Canonization Process in Ancient Judaism

The Hebrew Scriptures formed the base upon which Judaism, Christianity, and Islam were built and have profoundly influenced Western civilization as a whole. Today a broad consensus exists among the world's Jews on which scriptures (authoritative texts) are included in the canon (the final unchangeable list of writings accepted as scripture). But relative unanimity about this has been the rule only since the Middle Ages. From the fifth century BCE through the first century CE, various communities of Jews accepted different books as scripture. And up to the very end of that period, some communities were still adding to their collections.

The present collection consists of 22 books grouped into three sections according to the Jewish reckoning: the Torah ("Teaching"), Genesis through Deuteronomy in the Christian Old Testament, also called the Pentateuch; the Nebiim ("Prophets"), Joshua through Kings plus most of the books named after prophets; and the Ketubim ("Writings"), Psalms, Proverbs, Job, Daniel, and others.

Until the 1970s the consensus among historians was that these sections represented stages in a single canonization process within a monolithic Judaism. First was the Torah. Introduced by King Josiah in the late seventh century BCE, it grew in influence and attained scriptural status in the fifth century BCE. The catalyst for its canonization was the effort of Ezra and Nehemiah to rebuild Jewish society in Palestine after the return from Babylonian exile. The Torah brought with it the very ideas of scripture and canon among the ancient forebears of the Jews, and a religion was built around it. The word "canon" itself comes from Christian history, but the concept it represents is already expressed in Deuteronomy, which explicitly insists on obedience to it and warns against adding anything to it or taking anything away from it.

The canonization of the Prophets came next, centuries later. Many of these books were written and edited while the Torah was gaining ascendancy, but as a collection they did not achieve scriptural status until the second cen-

tury BCE. Finally, in a third phase, the Writings gained authoritative status by the end of the first century CE, and the complete tripartite canon of scripture was given a final seal of approval at the Council of Jamnia (or Javneh) in 90 CE, at which time the canon as it is currently acknowledged was finalized.

This image of a single clearly defined historical progression has fallen apart in the last few decades, in part due to archaeological discoveries such as the Dead Sea Scrolls and in part due to cultural change among historians. The evidence was always insufficient to support such clarity, but scholars with religious allegiances tended to share their traditions' presuppositions. Religious traditions often attempt to trace an unbroken line of historical continuity back to its earliest origins.

In fact, no direct evidence has survived indicating who did the canonizing, what they canonized, or when or why they did it. We do know that by the time of Alexander the Great (fourth century BCE), every Jewish group that left a historical record acknowledged the Torah as scripture. Some communities, such as the Samaritans, literally obeyed Deuteronomy's strict warnings against "taking away or adding" and permanently limited the extent of their "Bible" to the Torah. Others began to supplement it with new writings and by attributing scriptural status to older writings. As time went on, different groups of Jews created different collections of supplementary scriptures. We can see a snapshot of this process in the way the Qumran community developed writings to which it ascribed divine authority, such as the Temple Scroll and the Manual of Discipline.

Around the middle of the second century BCE, references to the tripartite scheme (Torah, Prophets, and Writings) begin to appear in some Jewish sources. By the first century CE this becomes fairly common though not universal; a few sources even cite the number of 22 (or by another count, 24) books but do not name them all. The first actual lists of books defining the extent of the canon come from the third century CE. There is no historical record of debates by religious authorities or anyone else as to the makeup of this canon.

➤ THE SEPTUAGINT—THE GREEK VERSION OF THE HEBREW BIBLE

When Alexander the Great's successors were spreading Hellenistic civilization in the third century BCE, many Jews adopted the Greek language but sought to preserve their cultural identity by translating their scriptures. According to a legendary account, 72 independent translators all miraculously produced exactly the same translation of the Torah, so the new Greek version came to be called the Septuagint (or LXX), from the Latin word for "70." Later other books were added, some translated from Hebrew and some originally composed in Greek.

The text of the LXX differs significantly in places from the Hebrew version that is currently in use. The Dead Sea Scrolls have revealed that some of the differences reflect variant versions of the Hebrew text that existed in the first century CE and earlier. Psalm 151, which exists only in the LXX and in Hebrew manuscripts from Qumran, is an example.

The LXX played a role in the rise of Christianity, for the Jews who created Christianity primarily read the Greek version of their own scriptures. The belief in personal resurrection arose in Hellenistic Judaism in the second century BCE and was faithfully passed on by the LXX. The LXX was used almost exclusively by the early Church as its scripture, and the New Testament quotes extensively from it.

—Thomas Dykstra

In particular there is no evidence that such a debate took place at the Council of Jamnia. The direct evidence for what actually happened there is limited to a few discussions preserved in the Mishnah about the status of a few scriptural books. The Mishnah itself was compiled more than a century later, and these particular debates are part of a text whose purpose was to function as training materials for rabbis, not to promulgate authoritative decisions. There is no evidence that the discussions were part of a council, that those who took part in them either had or asserted religious authority over all Jews, that any debate about a complete biblical canon took place, or even that the rabbis involved were

acting as a decision-making body of any sort for the few books whose status they did discuss (Ecclesiastes and Song of Songs).

How then did the present unanimity come about? As a result of the Roman suppression of the Jewish revolt around 70 CE, all groups claiming leadership of Jews except one were eliminated. That group developed into what would later be termed Rabbinic Judaism to reflect some continuity with the past (Judaism) but a very real break in a new direction (Rabbinic). Few sources that could illuminate the inner workings of this new structure of authority survive from the second through seventh centuries, but at the end of that dark period we have the present firmly defined closed canon of 22 books.

The vast majority of Jews accepted this newly closed canon, and it helped effect a change in how that religion understands scripture. Before the ascendancy of Rabbinic Judaism and its canon, most Jews focused their attention on the essential message of the Torah which permitted “adding” to its words in order to elaborate on and supplement its message. Once the canon was closed, the understanding of divine inspiration in Judaism shifted focus to the words themselves as the locus of divine inspiration. Even the characters within the words became sacrosanct. Christianity and Islam eventually followed a similar path, creating fixed canons and viewing the scriptures included in those canons as fundamentally different in inspirational character from all other writings.

—Thomas Dykstra

Bibliography

- Davies, Philip R. *Scribes and Schools: The Canonization of the Hebrew Scriptures*. Louisville, KY: Westminster John Knox, 1998.
- Herbert, Edward D., and Emanuel Tov, eds. *The Bible as Book: The Hebrew Bible and the Judean Desert Discoveries*. Newcastle, DE: Oak Knoll, 2002.
- Knoppers, Gary N., and Bernard M. Levinson, eds. *The Pentateuch as Torah: New Models for Understanding Its Promulgation and Acceptance*. Winona Lake, IN: Eisenbrauns, 2007.
- McDonald, Lee Martin, and James A. Sanders, eds. *The Canon Debate*. Peabody, MA: Hendrickson Publishers, 2002.

The Christian Bible—Deciding What Is Canon

The process that produced the Christian Old and New Testaments extended from before 500 BCE to after 500 CE and determined the fundamental character of the religion. The formation of the New Testament began around 50 CE when Christian leaders started to write works intended to function as scripture (authoritative guides) for their communities. Various Christian groups continued to produce literature with that intention well into the third century, and in the fourth and fifth centuries one of these communities along with its choices for scripture became dominant for all of Christianity. The idea of canon then crystallized as a single forever-unchangeable collection of writings that are authoritative in a way fundamentally different from all other literature.

When Christianity began as a sect of Judaism in the first century CE, both were unique in the Greco-Roman world. The surrounding religions were polytheistic and took it for granted that a person could take part in multiple religious communities. For them, worshipping a god primarily entailed carrying out cultic actions such as sacrifices. But Judaism insisted that its adherents worship only Yahweh and obey His commandments, which were primarily ethical rather than cultic. Judaism perpetuated these values and an exclusive group identity by developing scriptures that adherents were expected to learn and obey. Christianity inherited these scriptures but shifted the emphasis from obedience to belief, for it asserted that the primary basis for a positive relationship with God was not ethical action but belief in Jesus as the Messiah promised in the Jewish scriptures. That made correct interpretation of those scriptures of critical importance and created a need for new scriptures to authoritatively interpret the old ones.

The first person who did this and whose writings survived was Paul the Apostle. To him the word “scripture” meant Jewish scripture, but he clearly presented his own writings as having divine authority, for he asserted his commission and authority from God in each epistle.

Others claimed authority for their writings by adopting the pseudonym of Paul (for example, 3 Corinthians and the epistles to Timothy and Titus) or another apostle. Some did it by writing works that related Jesus's own story and words (for example, the New Testament Gospels and the Gnostics' Gospel of Truth and Gospel of Thomas). And a few followed Paul's example of simply asserting a direct commission from God without other qualifications (for example, Revelation). There was not one united leadership of all Christian churches producing this literature but rather a proliferation of communities, each seeking to advance its own agenda in a process that continued for more than a century.

Christians writing about this new literature after the turn of the second century began to call it scripture alongside the books of Jewish scripture. This practice became more common throughout the second and third centuries but did not in itself imply the development of a canon, for there was no widespread belief that everyone had to agree on which works were or were not scripture. That openness to diversity began to change over the course of the second century in part due to some high-profile controversies among Christians over beliefs and scriptural interpretation. Marcionite Christians rejected Jewish scripture altogether and accepted only some of Paul's epistles and the Gospel of Luke. Montanist Christians believed that God was speaking directly through some of them as he did through Jesus, thus devaluing scripture as a source for learning God's will. Gnostic Christians saw Jesus as a purveyor of secret knowledge and revered their own gospel, which presented Him in that light. These three groups lost out in the long run and disappeared. But in order to argue that the so-called heretical communities were wrong, the winning side increasingly found itself arguing that certain books had to be accepted as scripture, certain others could not be accepted, and every genuine Christian had to agree on which was which.

We have very little evidence explicitly witnessing to debates among Christians as to why a given book should be accepted or rejected as scripture. Indirect evidence indicates that from

➤ WHICH ENDING OF MARK IS THE CANONICAL ONE?

No original manuscript by the author of a New Testament book has survived. To determine what the authors wrote, we rely on copies from hundreds of years later. But handwritten copies contain both accidental errors and intentional changes, and the problem is compounded when all we have are copies of copies of copies many times removed. Of more than 5,000 known manuscript copies of the New Testament in its original Greek, no two of significant size are exactly alike, and many of the differences are not trivial.

One example is the ending of the Gospel according to Mark. Modern English Bibles print verses 9–20 of chapter 16 but explain in a note that “some ancient authorities” omit them. This is because two of our three oldest and best complete manuscripts of the New Testament—Sinaiticus and Vaticanus from the fourth century—end Mark at verse 8. The major manuscripts that do have verses 9–20 are significantly later, dating to the fifth century. The additional verses contain the only postresurrection appearance of Jesus in Mark, so they significantly change the perspective of the book. Which perspective is canonical? The canon as a list of books by name cannot answer that question in this case or in many others like it for other New Testament books.

—Thomas Dykstra

the second century on Christians tended to accept works that were believed to be written by Christ's apostles, works that were thought to be ancient rather than newly written, works that supported orthodox beliefs and interpretations, and works that had seen wide use in the sense of being read publicly in many Christian churches over a long period of time. However, the decision-making process was less one of evaluating individual books than it was a case of one community becoming dominant and extending its preferred list to everyone.

Early in the fourth century Constantine made Christianity the official religion of the Roman empire. As he and his successors tried to make the religion a unifying force for the empire, they needed to promote uniformity within

Christianity itself. This led to the creation of the Nicene Creed in 325, and it is from later in the fourth century that we find the earliest evidence of attempts to establish a single list of books that all Christians everywhere must accept as scripture exclusively. The first such list that has survived until today and that contains the exact contents of the present 27 books of the New Testament was created in 367 by a bishop named Athanasius of Alexandria. More lists appeared after that, not all of them the same. But by the end of the fifth century most of the Christian world had reached a consensus.

The crystallization of the concept of canon helped to reshape Christianity. It directed so much attention to the New Testament as to de-emphasize the Old Testament, and Christians never even reached common agreement on the extent of the Old Testament canon. Moreover, by limiting the concept of scripture to one never-to-be-changed list of ancient works, the canon created in Christians' minds more of a dichotomy between divine revelation and ongoing human action than was true in the first centuries when they were still writing scripture. And by sealing the victory of one Christian group over many others, the canon ensured that only these books would be preserved, while other scriptures were often deliberately destroyed and were thus lost to subsequent generations. This helped to obscure until relatively recently the fact that from the beginning, as much as in our own time, there were many Christianities, not one, each with its own scripture, its own history, and its own view of Jesus Christ.

—Thomas Dykstra

Bibliography

- Dungan, David L. *Constantine's Bible: Politics and the Making of the New Testament*. Minneapolis: Fortress, 2007.
- McDonald, Lee Martin. *The Formation of the Christian Biblical Canon*. Peabody, MA: Hendrickson, 1995.
- McDonald, Lee Martin, and James A. Sanders, eds. *The Canon Debate*. Peabody, MA: Hendrickson, 2002.
- Metzger, Bruce M. *The Canon of the New Testament: Its Origin, Development, and Significance*. New York: Clarendon, 1987.

Syriac Language and Literature

The Syriac language (*leshana suryaya*) is part of the Afro-Asiatic language family and falls in the Semitic subgroup. It is a later development of the Aramaic language spoken in and around the confines of Edessa (Urhoy/Urhay in modern Şanlıurfa, Turkey) in northern Mesopotamia. Syriac is usually regarded as an Eastern Aramaic dialect that falls within the Northwest Semitic language family, which also comprises the various Canaanite languages including Hebrew and Phoenician.

Aramaic itself came into popular usage throughout the Near East under the expansion of the Neo-Assyrian empire (934–609 BCE) and gradually began to supplant Akkadian, whose cuneiform script became highly cumbersome. The Assyrians espoused the use of Aramaic due most probably to the simplicity of its alphabet (based on the original Phoenician), which would supplant the more archaic cuneiform script. It continued as the lingua franca of the Achaemenid empire, and by the time of Alexander of Macedon, Aramaic was used as the official language of all the nations from Asia Minor to Persia, from Armenia to the Arabian Peninsula. It was divided into a western dialect used in Palestine and Syria by the Jews, Palmyrans, and Nabateans and an eastern dialect, spoken in Mesopotamia predominantly by the inheritors of the Assyro-Babylonian heritage, which included religious groups such as Mandeans, Manichaeans, and the Mesopotamian Jewish community.

During the weakening of the Seleucid empire, small independent principalities were created by local peoples and dynasties. The most famous was the Kingdom of Osroene, whose capital Edessa was the seat of the Abgarid dynasty and among the first principalities to convert to Christianity in the second century CE following the spread of the religion. The city also became an intellectual and cultural center despite the constant changing of ruling powers from Parthian to Roman. Some of the earliest known Syriac inscriptions date to the second century CE and occur in Edessa and its environs.

There are about 80 existing Old Syriac inscriptions dated to the first three centuries CE.

The difficulty in distinguishing Old Syriac from Imperial Aramaic has made the usage of a distinct Syriac script the marker deemed most reliable. Early examples include an inscription dated to 73 CE and a deed of sale on parchment from Dura Europos that dates to 243 CE. All of these early examples of the language are non-Christian.

The Syriac language *leshana suryaya* is derived from the Akkadian word for Assyrian, *ashurayu*, with the removal of the original aleph and addition of an intrusive yod, which both appear under Greek influence. Interestingly, the earliest Syriac inscriptions in the vicinity of Edessa belong to the enigmatic Sabian community of Sumatar, 37 miles (60 kilometers) southeast of today's Urfa. This esoteric sect mixed their brand of Assyro-Babylonian astrology and Neoplatonic philosophy to create a syncretism that can be seen on the remains of the temple of the moon-god Sin, which certainly speaks to a continuity of Mesopotamian thought and culture.

Under the Edessan monarchs, Old Syriac became a well-defined language with greater rules and regulations than the numerous Aramaic dialects of Mesopotamia, especially with the advent of Christianity and the development of a true corpus of literature. Under the influence of Christianity the language and body of literature developed considerably and eventually became the liturgical and literary language of all the churches throughout the ancient Near East extending to India in the east and Armenia in the north. The simplicity of this language allowed for the Church Fathers to explain Christian values and dogma in a way both imaginative and poetic, an essential factor in captivating a Semitic-speaking audience. The use of natural symbolism is quite strongly present, although the language owes a great deal to Hellenic influence.

From the second century, Syriac was adopted by much of the church in upper Mesopotamia. Many renowned works found their way into Syriac Christian literature during this period. The earliest Christian literature was biblical translation, the Peshitta and the Diatessaron (the telling of the four gospels in one narrative) of one Tatian the Assyrian.

Another remarkable author and philosopher was Bardaisan of Edessa. Bardaisan ("son of the

➤ SYRIAC ALPHABET

The Syriac alphabet consists of 22 letters and no vowels but rather diacritical marks that denote vowel sounds. There are three major variants of the Syriac alphabet. The oldest and classical form of the alphabet is *Estrangela* ܐܠܦܒܝܬ ܐܪܡܝܐ; the name is derived from the Greek description *στρογγυλη*, which reflects the idea of being rounded. The Western script is usually written in the *Serto* ܐܠܦܒܝܬ ܣܪܬܐ (line) form of the alphabet, also known as the Jacobite script used by the Melkite, Maronite, and Syrian Orthodox and Catholic rites. Most of the letters are clearly derived from *Estrangela* but are simplified, allowing for ease of writing. The Western script is usually vowel-pointed with miniature Greek vowel letters above or below the letter, which they follow. The Eastern script referred to simply as *Madenhaya* ܡܕܢܗܝܐ is also sometimes referred to as Nestorian or Chaldean in reference to the churches that most actively use the script. The Eastern script resembles the *Estrangela* more closely than the Western script, being somewhat a midway point between the two. The Eastern script uses a diacritic system of dots above or below letters to indicate vowel sounds.

—Sargon George Donabed

leaping river") was born of pagan parents in Edessa around 154 CE. The Syriac works *The Book of the Laws of Countries* and *The Hymn of the Pearl* are generally thought to be Bardaisan's although it is possible that the first should be attributed to his son Harmonius. Bardaisan is considered a Gnostic, and his followers, the Bardaisanites, were deemed heretical by the more orthodox elements of the church. Despite this, he was still well respected by later authors of the Eastern Church.

The fourth century CE is considered to be the Golden Age of Syriac literature. The two giants of this period are Aphrahat the Persian Sage (270–345 CE), an Assyrian born in Adiabene who wrote 23 treatises or homilies on Christian life titled *Demonstrations* for the church in the Persian empire. Though he wrote numerous works, his *Demonstrations* is the only one that has survived and in fact has been translated into Ge'ez, Armenian, and Arabic, among other languages.

Ephrem Suryaya (306–373 CE), born in Nisibis, is perhaps the most well known of all Syriac-language authors. Known as the “harp of the spirit,” Ephrem wrote numerous hymns, poetry, and prose for the church within the borders of the Roman empire. Of the two famous styles of work ascribed to Ephrem were *mēm̄rê*, or homilies, in heptosyllabic verse and *madrāšê* based on the Bardaisanite model but utilized as educational hymns resplendent with imagery. Over 400 of his hymns still exist today, and Ephrem’s Syriac writings have been translated into numerous languages.

—Sargon George Donabed

Bibliography

- Beyer, Klaus. *The Aramaic Language: Its Distribution and Subdivisions*. Translated by John F. Healey. Göttingen: Vandenhoeck und Ruprecht, 1986.
- Drijvers, H. J., and John F. Healey. *The Old Syriac Inscriptions of Edessa and Osrhoene: Texts, Translations, and Commentary*. Leiden: Brill, 1999.
- Philip, T. V. *East of the Euphrates: Early Christianity in Asia*. New Delhi, India: CSS and ISPC, 1998.
- Wright, William. *A Short History of Syriac Literature*. 1894; reprint, London: Adam and Charles Black, 1974.
- Yildiz, Efrem. “The Aramaic Language and Its Classification.” *Journal of the Assyrian Academic Society* 14(1) 2000: 23–44.

Sanskrit Plays

Examples of early Sanskrit plays of India are noticed in the dialogic hymns intended for performance during rituals contained in the oldest religious text of India, the Vedas (1500–800 BCE). Even though the religious epics of India, *Ramayana* and *Mahabharata*, are considered as texts of poetical tradition (*kavya*), it is probable that many episodes of these texts were performed, forming one of the early Sanskrit plays of India. In fact, this might explain the reasons for many of the early Sanskrit plays of India being based on the stories of the *Mahabharata* and *Ramayana* (300 BCE–300 CE). Therefore, the two important aspects of Sanskrit plays in

India are religion and high literary culture. Such high literary tradition and religion is not confined to Hindu plays but is also noticed in early Buddhist plays. Asvaghosha’s play, *Sariputra Prakarana* (*Legend of Sariputra*), based on the life of Sariputra, one of the foremost disciples of the Buddha, is one of the most well-known Sanskrit plays of early India and may have exerted a tremendous influence on Silk Roads Buddhism.

As noted above, the Sanskrit plays have originated as part of the religion and high literary tradition rather than the folk tradition, unlike other world cultures. The genre of *nataka* (theater or play) is not clearly distinguishable from the genre of *kavya* (poetry) in the Indian literary tradition, since theater remained a part of the poetry as poetry fulfilled the roles of theater by lending itself to performance. In the early historic period, the *kavya* is read aloud (*patya*) as it is seen (*drisya*) and heard (*sravana*) by an audience. Even though the latter two qualities are commonly associated with performance traditions, in India they are noticed as part of the *kavya* tradition, portraying the intricate association of *kavya* and *nataka* in Indian culture. It is also notable that early authors have written in both genres, which conforms to the high literary status of theater as that of or similar to poetry in India.

Although the qualities of a play are clearly defined by Bharata’s *Natyasastra* (*Theory of Dramaturgy*) (200 BCE–200 CE), Sanskrit theater is not totally separated from the literary style of poetry in the first millennium. In fact, the *nataka* remained firmly rooted in the *kavya* tradition, and Abhinavagupta (900–1035 CE), the author of *Abhinavabharati*, an authoritative commentary of *Natyasastra*, claims that the play is the highest form of poetry.

In fact, it is in this Sanskrit theatrical tradition known as Kudiattam (Dance theater of Kerala) that one of the oldest and best examples of Sanskrit plays was discovered in the early twentieth century. In 1912 Ganapathi Sastri came across manuscripts of the Sanskrit plays used in Kudiattam performances. These included *Svapnavasavadatta*, a play attributed to Bhasa by Rajasekhara (880–920 CE) in his text on poetics, *Kavyamimamsa*. Based on stylistic and linguistic analysis, all the plays in the group were attributed to Bhasa.

Bhasa's plays, *Pratimanataka* (*The Images*) and *Abhishekanataka* (*The Coronation*), are based on the *Ramayana*, while a number of his plays—*Pancharatra* (*The Five Nights*), *Madhyamavyayoga* (*The Middle Vyayoga*), *Dutaghatotkacha* (*The Envoy Ghatotkacha*), *Dutavakya* (*The Envoy's Message*), *Urubbanga* (*The Broken Thigh*), *Karnabhara* (*Karna's Burden*), *Balacarita* (*Tale of the Child, Krishna*)—are based on *Mahabharata* stories. Bhasa's play *Avimaraka* is a fairy tale, while *Daridra Charudatta* (*Charudatta, the Poorman*) is a romantic fictional story. His most famous plays, *Swapna Vasavadatta* (*Vasavadatta in a Dream*) and *Pratigna-Yaugandharayana*, are based on historical accounts of King Udayana of Ujjain.

Therefore, it is not surprising that one of the well-known and most well-preserved Sanskrit plays of early India, *Mricchakatika* (*The Little Clay Cart*) of Sudraka is derived from Bhasa's play *Daridra Charudatta*. In 1984 it became a popular Hindi film. The story of this play depicts the trials and tribulations of Charudatta, with numerous twists and turns including a triangle love affair, mistaken identities, theft, and jealousy.

—Lavanya Vemsani

Bibliography

- Ryder, Arthur W., trans. *The little clay cart (Mricchakatika) a Hindu drama attributed to King Shudraka*. Cambridge, MA: Harvard University Press, 1905.
- Sastri, Ganapati T. *Bhasa's Plays*. Trivandrum, India: Trivandrum Sanskrit Series, 1914–1922.
- Sastri, Madhusudhana. *Natyasastra of Bharatamuni: With Commentary of Abhinavabharati by Abhinavaguptacharya*. Varanasi, India: Banaras Hindu University, 1971.
- Varadpande, M. L. *History of Indian Theatre*. New Delhi: Abhinav Publications, 1987.

The Mahabharata, the Ramayana and the Bhagavad Gita

The two great epics of Indian literature, the *Mahabharata* and the *Ramayana*, are multilayered texts that have their origins in historical events. Interwoven with these are other traditional sto-

KUDIATTAM

Kudiattam is a form of Sanskrit theater performed in the temples in the state of Kerala, India. It is recognized by UNESCO as one of the Masterpieces of the Oral and Intangible Heritage of Humanity (2001). Kudiattam was performed outside the temples of Kerala for the first time in 1955 for public audience in a theater by Padmasri Guru Mani Madhava Chakyar (1899–1990). As Guru Chakyar went on to perform in numerous other theaters throughout India, Kudiattam was brought to an audience located outside Kerala. The documentary film *Kudiattam* (1987; directed by Prakash Jha and produced by Prakash Jha Productions, Bombay) depicts the historical, cultural, and performance aspects of Kudiattam.

—Lavanya Vemsani

ries and myths. The epics probably began life as accounts of small local feuds between chiefdoms. These and other stories were retold by bards, who selected their material to suit their audience. Later the narrative was ordered into a more coherent form and written down, with additions that reflected the very different society of the later first millennium.

The *Ramayana* is said to have been composed by Valmiki, writing around the fourth or third century BCE. The *Mahabharata*, traditionally attributed to a brahman poet, Vyasa, was compiled by unknown writers around the same period, reaching its final form around the fourth century CE. Geographical and sociopolitical data indicate that the action of the *Mahabharata* belongs to a slightly earlier period than that of the *Ramayana* (although in the written version the *Mahabharata* includes a version of the *Ramayana* story). Various external and internal data have been used over the centuries to provide a date for the events of the *Mahabharata*, from 3102 to 836 BCE. The early first millennium BCE best matches the core sociopolitical conditions of the story, according to archaeological evidence, but the precise date cannot be determined any more than can the historicity of the core events.

Mahabharata and *Ramayana* are both written in Sanskrit *slokas*, a religious verse form using paired lines of 16 syllables each. *Mahabharata*

➤ BHAGAVAD GITA

A major late interpolation into the Mahabharata text is the poem known as the *Bhagavad Gita* (*Song of the Lord*); this has become one of Hinduism's most sacred texts. On the eve of the great battle, Arjuna, the middle Pandava brother, tells Krishna (his brother-in-law, acting as his charioteer) his doubts about fighting against his own kin. Krishna's reply is the *Bhagavad Gita* in which he expounds the sacred duties of a king: to set aside his own emotions and pursue righteous actions in accordance with the will of the gods, who have preordained the fall of the Kauravas.

Krishna elaborates the relationship between the individual and the divine, preaching the doctrine of transmigration. By combining *karma*, that is, action in accordance with *dharma* (righteousness and sacred duty), which in this case includes undertaking righteous war, with *bhakti*, love and personal devotion toward God, throughout many reincarnations, the individual will move ever closer to *moksha* (liberation from the cycle of rebirth), complete detachment from the material world and unity with God.

—Jane R. McIntosh

runs more than 74,000 verses, divided into 18 books (*parvas*), making it the world's longest poem. This draws on several earlier bardic versions, the *Jaya*, and the *Bharata* as well as later interpolations and adds didactic passages, including the *Bhagavad Gita*. Much of the poem is concerned with the Battle of Kurukshetra. The written version of the *Ramayana* likewise combines an earlier poetic cycle (Rama-katha, forming Books II to VI) with later didactic material (Books I and VII), giving in all 24,000 verses.

The *Mahabharata* story concerns the feud between cousins, the Pandavas and the Kauravas. Dhritarashtra is debarred by blindness from ruling the kingdom of Kuru. His younger brother Pandu becomes king but dies young, leaving five young sons (the Pandavas), the eldest of whom, Yudhishthira, becomes heir to the throne, with Dhritarashtra as his guardian and regent. Dhritarashtra's 100 sons (the Kauravas), led by the eldest, Duryodhana, are enraged by the situation. They unsuccessfully attempt to murder the Pan-

davas by arson. After escaping, the Pandavas woo Draupati, a princess of neighboring Panchala, who becomes the bride of all five. Thereafter the cousins agree to a compromise: the kingdom is divided, the Kauravas retain the settled area in the east, with its capital at Hastinapura, while the Pandavas gain the undeveloped western area, where they build a new capital, Indraprastha.

Yudhishthira performs the Rajasuya sacrifice, which demonstrates his power over neighboring communities: this fuels the Kauravas' jealousy. They invite Yudhishthira to a gambling contest, where he successively loses his wealth, his kingdom, his brothers, himself, and their wife. An attempt to strip Draupati is thwarted by divine intervention, her garment continuing infinitely as it is unwound. Horrified, Dhritarashtra negotiates the Pandavas' release from bondage; instead they will go into exile for 13 years before regaining their kingdom. When this time is up, however, Duryodhana is unwilling to relinquish his control of the Pandavas' kingdom, precipitating the 18-day Battle of Kurukshetra involving most of the kingdoms of India. Many perish, including Duryodhana and his principal supporters.

After a long reign, Yudhishthira establishes his great-nephew on the throne so that the Pandavas may journey toward Heaven. Due to their imperfections the others die on the way, but Yudhishthira reaches Heaven, where eventually he is reunited with all his deceased family.

Although the text of the *Mahabharata* speaks of kingdoms, the core of the epic reflects a time of smaller polities, clan chiefdoms of pastoralists and village farmers that were expanding into unoccupied forest and waste land. The setting and participants in this narrative were confined to the upper Ganges-Yamuna doab (Kuru). Stories like the *Mahabharata* were used to legitimate a ruler's authority through genealogical links to rulers and heroes of the past. Itinerant bards would perform versions of the story at major sacrificial rituals, emphasizing the role of players of local importance and adding tales of local relevance.

As *janapadas* (small kingdoms and republics) began to emerge in the Ganges Valley and elsewhere in northern India, the roll call of participants in the *Mahabharata* war expanded,

and the story was modified to reflect the increasing power of monarchies and their conquest of new territory, the development of urban life, and the growing importance of caste. Several major additions were made, mainly didactic, emphasizing the qualities and duties of a monarch as well as his territorial and dynastic rights and legitimizing the authority of monarchies.

The rise of Buddhism and Jainism in the later first millennium stimulated developments in Brahminical Hinduism, including the idea of transmigration (*samsara*), leading to ultimate liberation from existence in the impermanent world and unification with the divine (Brahman) and the Bhakti movement, which emphasized personal devotion to the deity, principally Vishnu. This is reflected in the literature of the period, including the *Bhagavad Gita* and later Upanishads such as Mundaka and Prashna Upanishads. Krishna, a hero on the Pandavas's side, was now transformed from a mortal prince into an avatar (incarnation) of Vishnu. Rama, the protagonist of the *Ramayana*, was also now identified as an avatar of Vishnu.

The narrative of the *Ramayana* takes place shortly after agricultural settlement had spread into the Ganges Valley. One of its central themes is the contrast between the excellence of monarchy and the barbarism of other forms of political organization; this is most apparent in the later additions to the text.

The king of Kosala is put in an awkward situation when his second wife calls in an open promise he once made her. She chooses to demand that her own son, Bharata, be made the king's heir in place of his older half-brother Rama and that the latter be exiled. Noble Rama volunteers to undergo 14 years of exile to honor his father's promise; the latter dies of a broken heart soon after Rama's departure. Bharata himself is unhappy with the situation. Having failed to dissuade Rama, he symbolically places his brother's sandals on the throne and governs only as his regent.

Rama, his wife Sita, and another brother, Lakshmana, take up residence as hermits in the wild Dandaka forest. A vengeful demon, Ravana, abducts Sita. Rama, wandering in search of her, arrives at Kishkindha, the kingdom of the monkeys, with whom he makes an alliance. One of

these, Hanuman, discovers Sita in Ravana's fortress on the island of Lanka. Rama musters an army and wages war on Lanka. Ravana is killed in single combat with Rama, and Sita is rescued. Rama returns to Kosala, where he rules in peace and prosperity. Sita undergoes an ordeal of fire, which proves that her virtue is unsullied. In the final book (VII), a later addition to the story, she is nevertheless banished due to the Kosalans' suspicions; she takes refuge in the *ashrama* (forest hermitage) of Valmiki, who raises the twin sons born to her there. Years later the twins, Lava and Kusha, attend an *ashvamedha* (horse sacrifice) performed by Rama and chant Valmiki's epic poem.

Ramayana was set in the middle Ganges region, Kosala lying southeast of the region that was central to the *Mahabharata*. To its east lay Videha, the kingdom of Sita's father, while the Dandaka forest, Kishkindha, and Lanka were probably located to the southwest in the Vindhya and the Mahanadi Valley. Later, however, the geographical focus extended farther south, with Kishkindha eventually becoming identified with the Tungabhadra Valley or the Nilgiri hills and Lanka with the island of Sri Lanka.

—Jane R. McIntosh

Bibliography

- The Mahabharata of Krsishna-Dwaipayana Vyasa*. Translated by Kisari Mohan Ganguli. 3rd ed. New Delhi: Munshiram Manoharlal, 1972–1976.
- Schwartzberg, Joseph E., ed. *A Historical Atlas of South Asia*. New York: Oxford University Press, 1992.
- Thapar, Romila. *Cultural Pasts: Essays in Early Indian History*. New York: Oxford University Press, 2000.
- The Upanisads*. Translated by F. Max Müller. New York: Dover, 1962.
- Valmiki. *The Ramayan of Valmiki*. Translated by Ralph T. H. Griffith. N.p., 1895. <http://www.sacred-texts.com/hin/rama/index.htm>.

Early Greek Religious Literature

Literature pervades Greek society, appearing in such diverse forms as drinking songs at private parties, public festivals in which Homer's epics

► HYMN TO DEMETER

The *Hymn to Demeter* provides a literary account of Demeter's loss of and subsequent reunion with her daughter Persephone as a backdrop to an account of the establishment of the Eleusinian Mysteries, a cult dedicated to Demeter and Persephone that ensured a blessed afterlife for its initiates.

"She went to the kings who administer law . . . and revealed the conduct of her rites and taught her Mysteries to all of them, holy rites that are not to be transgressed, nor pried into, nor divulged. For a great awe of the gods stops the voice. Blessed is the mortal on earth who has seen these rites but the uninitiate who has no share in them never has the same lot once dead in the dreary darkness" (*Hymn to Demeter*, 473–482).

—Kelly MacFarlane

Source

Helen P. Foley, *The Homeric Hymn to Demeter: Translation, Commentary, and Interpretive Essays* (Princeton, NJ: Princeton University Press, 1994), 26.

and plays were performed for the amusement and edification of the audience, and songs in honor of the gods sung at religious festivals. Much of this literature, regardless of the venue of its performance, featured accounts of the gods and their interactions with mortals, making it difficult to determine which works of literature qualify as purely religious and which as purely secular. One useful criterion is the occasion of the performance rather than the content of the poem: literature intended for performance in a religious context can be classified as religious. Regardless of its classification, Greek literature provides a great deal of information about Greek beliefs in and attitudes toward the gods, the relationship of mortals to gods, and religious practices.

Homer's *Iliad*, the story of Achilles' anger and its consequences toward the end of the Trojan War, involves much interaction between gods and mortals, ranging from the gods com-

menting on and interfering in the actions of humans to mortals attempting to appease the gods and enlist their support. The *Iliad* is not a glorification of the gods but instead uses the gods as a literary device to advance the plot and to illustrate one of the major themes of the poem. Unlike the ageless, deathless, and carefree gods, mortals are beset with many worries before their inevitable deaths, a fate from which only posthumous remembrance can save them.

Hesiod's *Theogony* is the story of the birth of the universe and the gods, the rise to power of Zeus and the other Olympian gods, and Zeus's governance of the world in accordance with justice. Hesiod's *Works and Days* is a didactic poem explaining the origin of strife in the world and the need for mortals to work hard and in accordance with justice. Both poems use the gods, and in particular Zeus, to demonstrate the nature of justice and the gods' concern for the proper governance of the universe.

The Homeric *Hymns* have a greater claim to being considered religious literature. They are a collection of individual songs celebrating particular gods that were composed by anonymous authors over centuries for performance in festivals. The longer poems narrate discrete episodes from the lives of various gods (e.g., *Hymn 3*, a poem explaining Apollo's birth and his establishment of his cult at Pythia), while the shorter ones are brief invocations of various gods intended as dedicatory introductions to longer compositions.

—Kelly MacFarlane

Bibliography

Clay, Jenny Strauss. *Hesiod's Cosmos*. Cambridge: Cambridge University Press, 2009.

Stories of the Buddha

Stories of the Buddha's previous lives are among the most popular stories of South Asia. Reborn here as a king, there as an elephant, the future Buddha (called the bodhisattva) exemplifies the ideals of Buddhist ethics. Termed Jatakas (Birth Stories), 547 such stories are recorded in the Pali canon of the Theravada Buddhists. Many Jatakas are depicted in prominent and detailed carvings around the ancient Buddhist monuments of Bar-

THE BUDDHA AND MARA

One of the stories of the Buddha that is often depicted in art is his confrontation with Mara. The Buddha is often shown touching the earth in the moment just before his enlightenment. In response to the challenge of the demon Mara, he is calling the earth as a witness of his great deeds of the past that permit him the right to sit on the throne of enlightenment. The earth trembles and terrifies Mara's armies into flight, for the earth has witnessed the Buddha's many great deeds from previous lifetimes, as told in the Jataka tales. In this third century CE slate statue, Mara is shown attacking the Buddha.

—Jonathan C. Gold



Slate image of Mara attacking Buddha, India, third century CE. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

hut and Sanchi, and their popularity was only extended after being retold by the Sanskrit poet Arya Sura.

The last of the Jataka tales, the story of Prince Vessantara, is reenacted and retold regularly in numerous Buddhist communities. It is last because it takes place just before the bodhisattva ascends to Tusita heaven, from which he will descend to be born into his last body, the body in which he will achieve enlightenment and so become Buddha. The *Vessantara Jataka* is thus the story of a bodhisattva's final preparations before he is ready to become a Buddha.

Prince Vessantara's distinguishing characteristic is his generosity, and his four inconceivable gifts drive the plot of the story. The prince has a magical elephant that ensures rain for the crops of his kingdom of Sivi. When he is asked by neighboring Brahmins to give them the elephant to save their failing crops, he does so (gift number 1). This enrages the populace, and they demand that he be banished. Vessantara agrees, but before entering the forest with his wife and two children he gives away all of his possessions in what is termed the Gift of Seven Hundreds (700 decorated horses, 700 chariots, etc.; gift number 2). Once in the forest, he is asked for

and gives away first his children (gift number 3) and then his wife (gift number 4). Remarkably enough, the story ends happily with the family reunited back home, but the pathos of separation is the story's main theme and the interest in each dramatic retelling.

These were only the last of the bodhisattva's many great, meritorious accomplishments, and numerous other Jatakas also tell of the future Buddha sacrificing himself for the sake of others: for example, he feeds his own body to a starving tigress to keep her from eating her cubs. Still, many of the stories are fables with a lighter morality, promoting virtues such as co-operation, learning, and respect.

Surely the most famous story in the Jatakas is that of Prince Rama, as told in the *Dasaratha Jataka*. Best known in versions that stem from the Hindu *Ramayana* by Valmiki, this story was crystallized in a Buddhist Jataka at around the same time as it became a tale of an incarnation of the great Hindu god Vishnu. The sameness of these stories suggests an earlier folkloric circulation, and scholars believe that the majority of the Jatakas should be similarly understood as Buddhist restatements or revisions of traditional tales.

—Jonathan C. Gold

Bibliography

- Arya Sū ra. *Once the Buddha Was a Monkey*. Translated by Peter Khoroché. Chicago and London: University of Chicago Press, 1989.
- Cone, Margaret, and Richard F. Gombrich, trans. *The Perfect Generosity of Prince Vessantara*. Oxford, UK: Clarendon, 1977.
- Rhys Davids, T. W., trans. *Buddhist Birth Stories: The Oldest Collection of Folk-lore Extant*. London: Routledge, 2000.

Sutra Literature and Early Indian Philosophy

The *sutra* is a genre of literature (or one verse unit of that genre) that appeared in the middle of the first millennium BCE in two quite different forms: an orthodox form (accepting the authority of the *Vedas*) and a Buddhist form. In the orthodox Indian schools of traditional Brahmanical ritual, the commentarial literature on the *Vedas* had been expanding over several centuries. With the *sutra* literature, the new goal was brevity. *Sutras* were terse summaries of all of the essential points in a field of inquiry, condensed into brief chunks that were easy to memorize. It had come to take many years just to learn how to recite the Vedic scriptures correctly, never mind comprehending their content. The *sutras* made it newly possible for a student to master a topic in a comparatively brief time.

The Sanskrit word “*sutra*” means “thread,” and there is a metaphor here of knowledge being woven out of these slight threads, indeed of the fabric of knowledge being, potentially, one single continuous thread woven back and forth against itself. Yet to understand a *sutra* always requires not just the thread itself but also a commentary. The language of a *sutra* is so concise that even when the phrasing is coherent and grammatically complete, the *sutra*’s layers of meaning are incomprehensible without a guide. Once explained, however, a memorized *sutra* becomes a densely packed treasury of meaning.

Two major categories of ritual (*kalpa*) were summarized in two different kinds of *sutras*: rituals performed by Brahmins (priests) in the *Shrauta Sutras* and rituals performed by house-

holders in the *Grhya Sutras*. In addition, *Sulva Sutras* laid out the measurements and calculations for setting up the sacred altars and enclosures described in *Shrauta Sutra* rituals. Finally, the *Dharma Sutras* provided the householder with additional rules to guide not only the performance of ritual but also all of life.

In addition to rituals themselves, the Vedic schools had taught a variety of methods for interpreting and applying the Vedic corpus. *Sutras*, their commentaries, and their related treatises (*shastra*) were developed on a wide range of so-called limbs of the Veda (*vedangas*) covering pronunciation (*shiksha*), metrics (*chanda*), grammar (*vyakarana*), etymology (*nirukta*), and astronomy (*jyotisha*). As each of these areas of knowledge developed its own specialized literature, the Vedic schools lost their centralized control over these memorized (*smṛti*) forms of text (as opposed to Vedic scriptures themselves, classified as “heard,” *śruti*). Before long, autonomous specialists called *Vaiyakaranas* taught grammar under their own auspices, *Nairuktas* taught etymology, and so on.

In a parallel development, philosophical *sutras* became the basis of the six orthodox systems of Hindu thought and practice: *Samkhya* of Kapila, *Yoga* of Patanjali, *Nyaya* of Gautama, *Vaisheshika* of Kanada, *Purva Mimamsa* of Jaimini, and *Vedanta* of Badarayana. Each of the authors here listed must have been only the final *sutra* redactor writing an authoritative commentary after some generations of his tradition’s development. Each school has a somewhat different worldview and endorses a different system of discipline and study.

During this same period, the largest of the nonorthodox schools, the Buddhists, were also naming a category of their own scriptures as *sutras* (Pali, *suttas*). For Buddhists, the texts that make up the “Basket of *Sutras*” (*sutta-pitaka*) are sermons given by the Buddha or approved by him. The Theravada Buddhist canon also includes two other baskets, one that contains monastic rules (the *vinaya-pitaka*) and the other an early form of Buddhist philosophy termed the “further dharma” (*abhidhamma-pitaka*). A Buddhist *sutra* is easily identified by its opening line: “Thus have I heard.” This statement is

placed up front to indicate its authenticity, for it was heard, as written, by the Buddha's chief disciple Ananda.

—Jonathan C. Gold

Bibliography

- Gonda, Jan. *The Ritual Sūtras: A History of Indian Literature*, Vol. 1, Fasc. 2. Wiesbaden: Harrassowitz, 1977.
- Mookerji, Radhakumud. *Ancient Indian Education (Brahmanical and Buddhist)*. Delhi: Motilal Banarsidass, 1969.
- Walshe, Maurice, trans. *The Long Discourses of the Buddha: A Translation of the Dīgha Nikāya*. Boston: Wisdom Publications, 1995.

The Christian Gospels and the Book of Acts

The New Testament Gospels (Matthew, Mark, Luke, and John) and the book of Acts represent types of Christian literature that proliferated after the death of Jesus, whom they called Christ (“anointed one”). Originally written in Greek, the Gospels are examples of ancient biographies that integrate Hellenistic and Jewish literary forms, drawing from such genres as lives of philosophers, hero tales, and Jewish prophetic texts. The term “Gospel” comes from the first few lines of the Gospel of Mark, “The beginning of the Gospel [*euangelion*, literally ‘good news’] of Jesus Christ the Son of God” (Mark 1:1). Since the Gospels are good news, they were not written as histories or biographies in the modern sense. The Gospel writers were not attempting to be objective or to write factual accounts. Rather, Gospels served as written proclamations of the good news of salvation promised by the teachings, life, suffering, and death of their hero-leader-teacher and thus are closer to modern advertisements than to histories.

The first three books of the New Testament are called Synoptic Gospels because they all follow a similar narrative sequence. The first of these is Mark, written around 70 CE. Mark seems to have had a number of texts at his disposal, such as collected miracle stories and sayings of Jesus, and wove his narrative together focusing on Jesus's teachings, suffering, and death. Around

▶ LUKE 1:1–4

In the following passage from the Gospel of Luke, Luke discloses that he was not an eyewitness of Jesus but is drawing from other sources (including the Gospel of Mark) in order to write his own account of the life of Jesus. No other writer of a gospel gives so much evidence about the process of his own writing.

“Since many have undertaken to set down an orderly account of the events that have been fulfilled among us, just as they were handed on to us by those who from the beginning were eyewitnesses and servants of the word, I too decided, after investigating everything carefully from the very first, to write an orderly account for you, most excellent Theophilus, so that you may know the truth concerning the things about which you have been instructed.” (Luke 1:1–4)

—Jeffrey Trumbower

90 CE the authors of Matthew and Luke used Mark but seem to have also used a sayings source called Q (for the German word *Quelle*, meaning “source”), which is now lost. Their Gospels end with Jesus's followers spreading the good news to the world. The author of Luke also wrote the Acts of the Apostles, designed to be the second part of a two-volume work. Luke-Acts begins with Jesus's life, teachings, suffering, and death, like the other Synoptics, but then recounts the adventures of the Apostles throughout Asia Minor, ending with the Apostle Paul's imprisonment in Rome. The Gospel of John is somewhat dissimilar from the other narrative presentations and focuses more on Christ's divine nature, minimizing his Jewish lineage. Thus, the common thread that connects all these Gospels is that Jesus was sent by God to save all people from their sins by means of His death and resurrection. The Gospels and Acts are considered sacred to Christians since they preserve this message.

The Gospels and Acts in the New Testament are only examples of the many Christian writings from the first three centuries CE. Many Christian texts were destroyed or lost during

the canonization process because the Church disapproved of their inclusion in the Bible. Fortunately, many were rediscovered in 1945 at Nag Hammadi, Egypt. These included the gospels of Thomas, Mary, and Philip. There were also many extant texts that recounted the deeds of various apostles. These included the Acts of Andrew, Paul, and John, which were preserved in collections known as Apocryphal Acts of the Apostles.

—Dennis Quinn

Bibliography

- Aune, David E. *The New Testament in Its Literary Environment*. Philadelphia: Westminster, 1987.
- Duling, Dennis C., and Norman Perrin. *The New Testament: Proclamation and Parenesis, Myth and History*. New York: Harcourt Brace, 1994.
- Keck, Leander E., and Gene M. Tucker. "Literary Forms of the Bible." *The Oxford Study Bible: Revised English Bible with Apocrypha*, M. Jack Stuggs, et al., eds. New York: Oxford University Press, 1992.

Early Christian Apologetics

"Apologia" is a Greek word meaning "defense." It derives its meaning from the law courts, where defendants attempted to prove their innocence. As the early Christian movement faced hostility from both non-Christian Jews and Greco-Roman polytheists, certain Christian writers sought to mount a defense of Christianity, attempting to prove its worthiness. The aim of early Christian apologetics was not so much to convert others, although that could be a by-product, but rather to secure respectability and tolerance for their new religion.

There are apologetic elements in many types of early Christian literature. For instance, the Acts of the Apostles tried to demonstrate through its narrative that Christianity was compatible with the Roman government and posed no threat to the established order. In the second century CE, a group of writers emerged who are known collectively as the early Christian apologists. They included Greek authors Justin Martyr (d. 165 CE), Theophilus of Antioch (fl. 169–177 CE), Athenagoras of Athens (fl. 176 CE), and the



Portrait of Tertullian from 1584 CE. (Thevet, André. *Les Vrais Pourtraits et Vies Hommes Illustres*, 1584)

Latin author Tertullian of Carthage (fl. 180–220 CE) among others. These writers protested the unjust treatment of Christians at the hands of hostile governments and mobs but steadfastly maintained their loyalty to the Roman empire. They did not seek to overthrow the empire but rather to reform it to provide a space for Christianity. To this end, they argued for the great antiquity of Christianity, connecting it to Abraham, Socrates, and the ancient philosophical impulse toward monotheism in the Greek tradition. They often claimed that Plato had read the books of Moses, and they did this to prove that whatever was worthy in the Greco-Roman tradition had actually been derived from Christianity, broadly conceived to include all pre-Christian Judaism. They portrayed Christianity as a philosophical school similar but superior to Platonism, Stoicism, and the rest. In the process they gave Christianity itself a more secure grounding in the philosophical tradition.

The third century CE saw the emergence of a new Christian apologetic literature aimed squarely at philosophical attacks mounted by non-Christians. Around 170 CE Celsus (possibly a former Christian) penned a devastating attack on Christianity that was not answered until Origen of Alexandria took up the challenge in his *Contra Celsum*, written around 248 CE. Later that century, the Neoplatonist Porphyry wrote against the Christians, again eliciting apologetic responses. The character of Christian apologetics changed dramatically after Constantine, since during his reign the government became an ally of a certain form of Christianity rather than its persecutor.

—Jeffrey Trumbower

➤ ST. JUSTIN MARTYR, *FIRST APOLOGY*

The group of writers known as the early Christian apologists sought to gain greater tolerance for Christianity within the Roman empire by arguing for the historical and philosophical continuity of Christianity with Greek and Jewish tradition. This strategy is exemplified below in a quotation from *St. Justin Martyr: The First and Second Apologies*:

“We have been taught that Christ is the First-born of God, and we have suggested above that He is the Logos of whom every race of men and women were partakers. And they who lived with the Logos are Christians, even though they have been

thought atheists; as among the Greeks, Socrates and Heraclitus, and people like them; and among the barbarians, Abraham . . . and many others whose actions and names we now decline to recount, because we know it would be tedious.”

—Jeffrey Trumbower

Source

Justin, “First Apology,” in *St. Justin Martyr: The First and Second Apologies*, edited by Leslie William Barnard (Mahway, NJ: Paulist Press, 1997), 55.

Bibliography

- Barnard, Leslie William, ed. *St. Justin Martyr: The First and Second Apologies*. Mahway, NJ: Paulist Press, 1997.
- Edwards, Mark, et al., eds. *Apologetics in the Roman Empire: Pagans, Jews, and Christians*. Oxford: Oxford University Press, 1999.
- Grant, Robert M. *Greek Apologists of the Second Century*. Philadelphia: Westminster, 1988.
- Wilken, Robert. *The Christians as the Romans Saw Them*. New Haven, CT: Yale University Press, 1984.

Near Eastern Prophecy, 1000 BCE–300 CE

The main evidence of Near Eastern prophecy from the period 1000 BCE to 300 CE comes from the seventh century BCE capital of the Assyrian empire, Nineveh. Its ruins lay near modern Mosul, Iraq, the prophetic corpus within Jewish and Christian Bibles and other early Jewish writings.

Besides numerous references to prophecy in a variety of documents, the Neo-Assyrian evidence includes 29 oracles on 11 cuneiform tablets from the reigns of Esarhaddon (681 to 669 BCE) and Assurbanipal (669 to 631/627(?) BCE). The prophets speak primarily, but not exclusively, in the name of the goddess Ishtar of Arbela and sometimes in her guise as Mullissu, wife of the god Assur. They concern the well-being of

the king, the security of his rule, treaties, and military fortunes. On rare occasions lapses in royal piety are alleged. These oracles were collected and preserved for posterity, presumably because of their numerous words of encouragement for the monarchs. These collections show signs of editing or “redacting” in the use of formulaic language and styles that mask the *ipsisma verba* (actual words) of the prophets.

Assyrian monarchs did not correspond directly with the *mabhu* (comparable to Mari’s “ecstatics”) and *raggimu* (“shouter” or “repeater”) but treated their pronouncements seriously. An indignant astrologer once wrote to Esarhaddon after being snubbed by the monarch in favor of male and female prophets. Oracles were not usually subject to verification through other divinatory techniques. One exception appears in a letter that advises the king to test an oracle from Nusku by a female slave supporting a rival claimant to the throne and to execute all concerned with the affair.

The Christian Old Testament or Jewish Tanakh contains many documents named after and attributed to prophetic spokesmen for the deity Yahweh. Biblical narratives also refer to other prophets including Moses. Prophets of rival deities and those who allegedly speak falsely in the name of Yahweh are frequently denounced.

The most frequent Hebrew term for prophet is *nabi* (cognates of this term appear elsewhere

in the ancient Near East) and some of these are also claimed to be priests. *Hozeh* “see-er” also appears as does “man of God.” Groups of apprentices or disciples are sometimes called “sons of the prophet.” The biblical prophets are sometimes described as having ecstatic experiences. Most often, however, divine words are said to “come” to a prophet or the prophet merely announced a revelation with a phrase like “Thus says Yahweh.” The biblical prophets typically decry lapses in morality and piety and predict divine judgment on Judah and Israel which are played out against the military and political fortunes of these kingdoms. These texts also look forward to a time of restoration in which opposing nations will either accept the lordship of Yahweh, or as is more often the case, be soundly defeated in battle.

Prophecy in ancient Israel probably followed patterns roughly comparable to that of surrounding nations, but there is little evidence of the biblical prophets outside of the Bible itself. A letter dating to the Babylonian assault on Judah found in Lachish (tell ed-Duweir, southwest of Jerusalem) mentions a prophet. Another important discovery was a broken plaster inscription found at Deir Alla in Jordan written between 840 and 760 BCE. This revealed the name of Balaam, a prophet within the biblical tradition. The inscription was written in a local dialect with Aramaic influence but included some key phrases from the biblical story. Rather than confirm the existence of the biblical figure, however, this site seems to indicate that Balaam was a legendary figure popular among people on both sides of the Jordan River.

The majority of scholars hold that most biblical prophetic books contain actual quotations from the eponymous prophet. Some are far more cautious, advising that the Bible projects idealized prophets onto Israel’s past. Many significant textual variants exist and no manuscripts date prior to the second century BCE. The biblical materials have been extensively edited and expanded. For example, Isaiah has considerable material that presupposes Judah’s defeat by Babylon (587 BCE), long after the time Isaiah was supposed to have lived (eighth century BCE). Many “prophecies” are *ex eventu*, written after the events they purport to predict (e.g., the book of Daniel).

The complex representation of prophecy preserved in the Bible is indicative of the unique status of holy books in later Judean and early Jewish society. Even the interpretation of written prophetic oracles became to be seen as an act of inspired prophecy itself, as evidenced in some of the Qumran interpretations (*pesherim*) of biblical books. The New Testament regards Psalms (devotional poetry) to be prophetic in nature, predicting the coming of Jesus as the Messiah (Christ). Jewish tradition groups together not only the oracular books but many historical narratives in a canonical division called “The Prophets.”

A related phenomenon was the rise of apocalyptic literature. Apocalypses put *ex eventu* prophecies into the mouths of legendary figures from biblical tradition. A strong element of eschatology (thought about the end of history) and judgment on humanity marks these writings. Daniel in the Jewish Bible and Revelation in the New Testament are the only apocalypses included in the Bible, although both Jews and Christians wrote apocalypses for a few centuries into the Common Era. The Ethiopian book of Enoch (sometimes called First Enoch) became part of the Ethiopian church’s expanded canon.

Other ancient religions were also rooted in prophetic traditions. The origins of the Persian religion of Zoroastrianism (persisting today among the small Parsi community in India and in a wider diaspora) is attributed to a prophet named Zarathustra or Zoroaster, although considerable uncertainty surrounds this figure. He may have lived in the seventh or sixth centuries BCE. The Gathas, part of the Avesta scriptures, are said to contain his words. Islamic tradition includes reference to pre-Islamic prophets in Arabia although the sources are usually too recent to say much of certainty regarding them.

—James Linville

Bibliography

- Ben Zvi, Ehud, and Michael H. Floyd, eds. *Writings and Speech in Israelite and Ancient Near Eastern Prophecy*. Atlanta: Society of Biblical Literature, 2000.
- Kaltner, John, and Louis Stulman, eds. *Inspired Speech: Prophecy in the Ancient Near East. Essays in Honour of Herbert B. Huffmon*. Journal

for the Study of the Old Testament Supplement Series, 378. New York: T & T Clark, 2004.

Nissinen Martti, ed. *Prophecy in its Ancient Near Eastern Context: Mesopotamian, Biblical, and Arabian Perspectives*. Atlanta: Society of Biblical Literature, 2000.

Nissinen Martti. *References to Prophecy in Neo-Assyrian Sources*. State Archives of Assyria, 7; Helsinki: Helsinki University Press, 1998.

Parpola, Simo. *Assyrian Prophecies*. State Archives of Assyria, 9; Helsinki: Helsinki University Press, 1997.

■ Introduction: Art Inspired by Religion

The profound truths and sacred messages of the religions of the world have long been deeply inspirational for artists. The period from 1000 BCE to 300 CE was a period of profound development in both the religious and the artistic spheres of life, so it should come as no surprise that a variety of artistic depictions of these religious developments were created. This section gives some examples of how classical art and classical religion mingled in this formative time.

—Kevin M. McGeough

Jewish Temple Images

The most significant image of a Jewish temple is that of the Temple in Jerusalem, which has been a focus of veneration in both Judaism and Christianity and has a long history in both religions.

The Temple of Jerusalem has three main periods. King Solomon built the first Temple in Jerusalem in the mid-tenth century BCE, and this Temple was destroyed by the Babylonians in 586 BCE. The second was the reconstruction of the Temple by Zerubbabel circa 500 BCE, and the third was built by Herod I, completed in circa 10 BCE and destroyed by the Romans in 70 CE. Although there were other attempts to rebuild the Temple, the image of the Temple through history evolves around these three periods.

The biblical descriptions of the Temple of Solomon are found in I Kings 6–8, written in the sixth century BCE; in Chronicles, written in the fourth century; and in other ancient texts such as the Talmud, the Septuagint, and the first two Books of Paralipomenon. The prophet of Ezekiel, chapters 40–42, also described the Temple,

although he described a vision of the Temple rather than a real Temple. Descriptions of Herod's Temple can be found in Josephus and Philo from the first century CE.

There are small inconsistencies in these descriptions, which led to variations in later reconstructions of the Temple. However, the basic form of the Temple was in three sections: the porch with the two freestanding columns Jachin and Boaz, then through into the holy place where the daily offerings of shewbread were placed, and finally the Holy of Holies where the Ark of the Covenant stood. The Ark of the Covenant disappeared after the destruction of the Temple of Solomon, and the Holy of Holies remained empty in the two subsequent Temples. The depiction of the Ark in these later Temples became emblematic of the faith.

The earliest extant image of the Temple is on coins that date from the period of the Bar Kochba revolt against Emperor Hadrian in 132–135 CE. The image is of the Temple facade with a flat roof and four columns; there the three openings between the columns and the middle one reveals, through the open doors, the Ark of the Covenant. The coin appears to represent the Temple of Herod that was destroyed 60 years earlier. The image is in the Roman artistic tradition, showing the facade and the emblem of the religion for easy identification. The open door also depicts the yearning and hope for the rebuilding of the Temple.

On the western wall of the synagogue in Dura-Europos, on the banks of the Euphrates River, Syria, are depicted symbolic images of the Ark of the Covenant, the Tabernacle in the desert, and the Temple of Jerusalem. These images are dated circa 244–245 CE, and they reveal a

➤ A COIN OF REVOLT

This coin was minted in 132–135 CE by Bar Kokhba (Simon, son of the star), the leader of the Second Revolt of the Jews against Rome. The coin depicts the facade of the Second Temple of Jerusalem, which was destroyed by the troops of Emperor Titus in the first revolt in 70 CE. Also portrayed are Simon's name in Old



(Erich Lessing/Art Resource, NY)

Hebrew letters and a star that is symbolic of his name that can clearly be seen above the temple. At the time the coin was minted, there was no temple or temple treasury. The coin was minted to establish Simon's sovereignty in Judea.

—Tessa Morrison

change in the mood of the depiction of the Temple. The representation of the Temple is similar to the one on the coin in that the facade has a flat roof and four columns, but now the doors are closed, representing the lost Arc and the loss of hope in the immediate rebuilding of the Temple.

Three gold-gilt glasses found in Rome, dated to the late third or early fourth century and retained in the collections of the Israel and Vatican museums, have the Temple portrayed as having a colonnaded court, which is flanked by the porch columns, Jachin and Boaz, and although the facade of columns is represented, the roof is now gabled. In front of the Temple a seven-branched candelabra is now depicted.

These symbolic elements of the Temple become entrenched into Jewish iconography. However, by the fourth century the image of the Temple was no longer only presented within the context of Judaism, and representations of the Temple began to appear in the Christian context. The image of the Temple became a powerful and enduring image in two mainstream religions and continued to evolve, revealing important changes in the philosophy of architectural design and meaning in the process.

—Tessa Morrison

Bibliography

- Kuhnel, Bianca. "Jewish Symbolism of the Temple and the Tabernacle and Christian Symbolism of the Holy Sepulchre and the Heavenly Tabernacle." In *Jewish Art*. Jerusalem: Center for Jewish Art of the Hebrew University, 1987.
- Mildenberg, Leo. *The Coinage of the Bar Kokhba War*. Aarau, Switzerland: Verlag Sauerlander, 1984.
- Rosenau, Helen. *Vision of the Temple*. London: Oresko Books, 1979.
- Tigerman, Stanley. *The Architecture of Exile*. New York: Rizzoli, 1988.
- Vale, Lawrence J., and Thomas J. Campanella. *The Resilient City: How Modern Cities Recover from Disaster*. New York: Oxford University Press, 2005.

The Development of Greek and Roman Religious Art and Architecture

In ancient Greece and Rome, religion did not exist as a separate category from the rest of human activity. Thus, while spaces, structures, and images that primarily served cults were important, religious significance could mark art and architecture dedicated to a surprisingly wide variety of purposes. Conversely, traditional Greco-Roman religious practice, based on sacrifice, never required a structure or image. In its most basic form, sacrifice required merely something to be sacrificed, most commonly an animal, but also wine or bread, a means to perform the ritual killing, and an altar (Greek *bomos*, Latin *ara*), that is, a place to burn or pour the portions of the offering dedicated to the god. This corresponds to our earliest evidence of cultic activity, with architecture and the visual arts embellishing these sites only later.

Our first evidence of Greek sacred architecture (ca. 1100–800 BCE) consists of low walls that formed a boundary (Greek *temenos*) around a sacred precinct, often associated with a natural feature such as a sacred spring, grove, or mountain. The concept of a temple (*naos*) with a cult statue emerged much later (ca. 700 BCE) through contact with the more advanced cultures of Egypt and Mesopotamia. Situated within the *temenos* opening east, the earliest temples adapted the

► REMAKING ROMAN RELIGION THROUGH ITS URBAN TOPOGRAPHY

As part of his program to remake Roman culture, Augustus (63 BCE–14 CE), Julius Caesar's heir and Rome's first emperor, exploited the fact that the Romans experienced their relationship to the past and to the divine through the architectural and visual environment of their city. Augustus was particularly adept at manipulating Rome's sacred architecture and urban topography to fuse his family and personal history into the Romans' experience of their ancient traditions. For example, in the area before the Senate in the Roman Forum, Augustus built a temple to the divine Julius, which he flanked with his rebuilt temple of Castor and Pollux and triple-bayed triumphal arch, in effect creating a space dedicated to his and his family's legacy out of what had been the premier public space of the Roman republic. Similarly, Augustus built a temple to Mars Ultor (Mars the Avenger) to

celebrate both fulfillment of a vow to avenge the murder of Julius Caesar and Rome's military victory over its external enemies. The space before the temple contained such images as Rome's founders Aeneas and Romulus intermixed with Augustus and his family. Augustus's Ara Pacis, an open-air marble altar dedicated to Peace, juxtaposed images of Augustus as chief priest (*pontifex maximus*) with images of mythological founders in similar attitudes of sacrifice. On a smaller scale, Augustus systematized Rome's many outdoor altars to the spirits (*lares*) of the crossroads (*compitum*), marking each of these local neighborhood cult sites with imperial sponsorship and images. In a span of less than a generation Augustus succeeded in placing himself at the center of Roman culture as well as political power.

—Matthew Canepa

same thatched-roof, mud, and wood architecture used for normal human habitation, in effect providing a house for the god. In this primitive era, a wide variety of objects could embody the god who lived inside: sometimes a *baitolos* (an uncarved, often meteoric, stone), a *xoanon* (rough wood idol) or, again under the influence of Egypt and Mesopotamia, an *agalma* (a wood, stone, or bronze statue fashioned into human form), all of which could receive cultic service, such as ritual bathing, clothing, feeding, and procession.

Adapting technology first from shipbuilding and later Near Eastern quarrying techniques, the archaic Greek city-states transformed these mud huts into monumental wood and then stone temples, much larger and more elaborate than any private citizen's abode. The size and richness of these sanctuaries soon reflected the importance or aspirations of their sponsor, be it a city-state (*polis*) or a Panhellenic sanctuary, such as Olympia or Delphi. Often encompassing a diverse assemblage of natural features, altars, and structures from many periods, larger sanctuaries could even include theaters and stadiums, as the competitions that took place in them were considered sacred activity too. The main public cult still took place on open-air altars, and normal worshippers would rarely if ever glimpse the actual cult statue.

Temples also functioned as a showcase for gifts, including art objects, dedicated by worshippers. They were displayed in the temple precincts and sometimes in the *opisthodomos*, a screened-off space opposite the entrance to the cella (inner chamber). At Panhellenic sanctuaries, city-states built their own treasuries, often smaller adaptations of temple architecture. The structure and the art objects in it functioned as elaborate showcases for the city and its citizens.

By the Classical era (479–333 BCE), the typical Greek temple opened east, was made of stone, and was embellished with brightly painted relief sculpture. Conforming to the strictures of the Greek orders, a colonnade surrounded the cella and was covered with a peaked roof. Colossal cult statues occupied the cellas of the most lavish temples, such as the Athenian Parthenon or the Temple of Zeus at Olympia, and could be made out of precious materials such as gold and ivory (called a *chryselephantine* statue). The relief sculpture that embellished the pediment and friezes interacted with the worshipper's experience in approaching the temple and often contained thinly veiled political commentary on the civic or foreign politics.

With Alexander's conquests (333–323) spreading Greek culture throughout the Near East and

South Asia, Greek sacred architecture became a tool of global empire. Many Hellenistic kings sponsored lavish religious structures to bolster their rule, such as the Attalids's Pergamon altar in Asia Minor (ca. 180 BCE) that was covered in elaborate reliefs. Conversely, local religions appropriated Hellenistic art. In northern India and Afghanistan, classical visual forms embellished Buddhist *stupas* and the narrative reliefs that decorated them.

Archaic Roman sanctuaries (Latin *fanum*) ranged from a simple *sacellum*, a demarcated space with an altar (*ara*), to complexes containing various sacred structures (*aedes*). Like Greek temples, the earliest Roman temples (*templum*) functioned as houses for cult objects and were an outgrowth of domestic architecture. Initially, Roman temples were indistinguishable from those of their Etruscan overlords, themselves adaptations of Greek ideas of sacred architecture. Constructed of wood with terra-cotta roof tiles and sculpture, these early temples rose on a high podium with a frontal porch and could house multiple cult statues in separate chambers in their cellas. After Rome's conquest of much of the Greek world, Roman temples adapted Greek architectural forms, ornament, and sculpture yet retained their high frontal character, with engaged columns flanking the cella. Unlike Greek temples, Roman sacred structures were not constructed purely of stone but instead were constructed with a brick and cement core covered with decorative stone revetment.

At the end of the Roman republic, wealthy and powerful senators sponsored sacred architecture both as gifts to the Roman people and for self-promotion. In order to circumvent sumptuary laws, Pompey constructed Rome's first permanent theater (55 BCE) ostensibly as part of a votive temple in thanks for his victories, although in reality the temple was a tiny appendage on the theater. In its courtyard, he displayed spoils from his conquests. Similarly, as the centerpiece of his Forum Iulium, Julius Caesar built a lavish temple to Venus, who also happened to be the divine ancestress of his *gens*.

Along with engineering projects, Roman sacred architecture was an important tool of imperial control. Mimicking Rome, significant provincial cities would have a *capitolium*, a temple

to dedicated to the Capitoline trinity (Jove, Juno, and Minerva). Cities vied to host a regional sanctuary dedicated to the cult of the deified emperors, modeled in form and ritual after temples to the gods. Cult statues of deified emperors could also cohabitate in temples originally built for local deities, and altars dedicated to the goddess Roma often usurped a structure's original altar, such as befell the Athenian Parthenon. As the empire expanded, the city of Rome integrated many foreign cults into its own sacred urban landscape, while in the provinces, communities provided local deities with temples that often merged classical forms with local traditions, such as the temple to Bel at Palmyra (ca. 32 CE).

In Rome and the provinces, entertainment venues such as theaters, amphitheaters, circuses, and baths carried religious connotations. For example, circuses not only contained a temple but were themselves considered sacred to the sun, with the chariot races symbolizing cosmic movement and the obelisks that graced the center representing the sun.

—Matthew Canepa

Bibliography

- Boardman, J., ed. *The Oxford History of Classical Art*. Oxford: Oxford University Press, 1993.
- Jaeger, Bertrand, ed. *Thesaurus Cultus et Rituum Antiquorum*, Vol. 4, *Cult Places, Representations of Cult Places*. Los Angeles: J. Paul Getty Museum, 2005.
- Price, S. R. F. *Rituals and Power*. Cambridge: Cambridge University Press, 1984.
- Vernant, J. P. *Mortals and Immortals: Collected Essays*. Princeton, NJ: Princeton University Press, 1991.
- Zanker, P. *The Power of Images in the Age of Augustus*. Translated by A. Shapiro. Ann Arbor: University of Michigan Press, 1988.

Early Christian Art

Early Christian art refers to the visual culture associated with Christian communities within and around the Roman empire from the first century CE through the decades following Constantine the Great's initial sponsorship of the religion (ca. 313 CE). Christian art and architecture changed radically over this period, paralleling

the fortunes of Christianity itself as it ascended from a persecuted and despised cult of slaves and foreigners to the religion of the Roman imperial court.

Although Christian communities multiplied in the first two centuries after Christ, Christians are virtually invisible in the archaeological record until the early third century. It is only from the Christian intelligentsia's elaborate literary attacks on traditional Roman polytheism that we have any evidence at all for the earliest Christian attitudes toward art. These authors waged an unrelenting war against art, with Tertullian even going so far as to credit Satan himself with creating painters and sculptors. Their animosity stemmed largely from art and architecture's service to pagan cult, yet despite these elite authors' polemics, most Christians used images in their daily life both as a necessity and a pleasure.

Only in the early third century does a distinctly Christian material culture begin to emerge as its adherents grew in size and social status. A limited number of private houses that converted to Christian cult activity are documented in Rome and the provinces; however, most evidence comes from the funerary arts, especially from underground networks of burial chambers called catacombs. In these chambers we find simple images similar to Clement's sealing rings that are joined by more complex figures, such as a shepherd or even such pagan gods as Dionysus or Orpheus who rose from the dead, all of which could symbolize Christ.

Later in the third century, narratives from the Old and New Testaments and images that specifically referred to Christian narratives and ritual begin to take shape. Christian artists adapted the same techniques, visual conventions, and often styles as the dominant visual culture of the region in which they lived. The Roman catacomb frescos portray Christ and the Prophets wearing senatorial togas to indicate their status; Moses and Christ perform miracles with a magic wand, and the twelve apostles recline next to Christ in the Last Supper as at a Roman *convivium*. Paralleling Christian tendencies to interpret the Bible typologically, with Old Testament events or figures presaging the New Testament, many catacomb frescos visually juxtapose stories from the two books.



Early Christian fresco depicts Moses striking water from the rock, Catacomb of Priscilla, Rome, Italy. (Scala/Art Resource, NY)

➤ CLEMENT OF ALEXANDRIA ON CHOOSING A FINGER RING

In instructing his congregation on buying a sealing ring, an object essential in antiquity for any legal or business transaction, the Church father, Clement of Alexandria (ca. 200), did not prohibit images altogether. In his work *Paedagogus*, Clement warns his flock that Christians must not choose a ring with images of the pagan gods, drinking cups, or a favorite prostitute, all popular options for non-Christians, but rather images with a potentially Christian significance: a dove, fish, or anchor. While early Christians did not produce a materially distinct visual culture in the first two centuries, this indicates that they cultivated a distinct usage and interpretation of mainstream Roman art.

—Matthew Canepa

Even at this early stage Christians thought that images could interact with the people or activities around them, a tendency that develops much greater complexity in the Byzantine period. From their placement near or even on the tombs of the deceased, frescos of miracles such as Moses crossing the Red Sea or Christ raising Lazarus enact a meaningful relation with their physical context and surrounding ritual activity, acting almost as guarantors of the tomb occupant's own

resurrection. Similarly, in the lively border city of Dura Europos in present-day Syria, frescos depicting the three Marys at Christ's empty tomb flank a baptismal font in a mid-third-century house-church. Here the image comments on the significance of the rite of baptism and the initiate's new hope for the afterlife.

Constantine the Great's patronage profoundly transformed Christian art and architecture. Christian iconography appropriated many elements of imperial iconography: clothing Christ in purple, encircling his head with a nimbus, and representing Him enthroned receiving gifts from foreign envoys (i.e., the Magi). In order to accommodate growing congregations and mark the empire with a distinctly Christian topography of power, Constantine funded massive building projects in the city of Rome and the Holy Land. With imperial funding, architects adapted many basic Roman architectural forms, such as the basilica and mausoleum, for new Christian uses as churches and shrines.

—Matthew Canepa

Bibliography

- Elsner, J. *Imperial Rome and Christian Triumph: The Art of the Roman Empire, AD 100–450*. Oxford: Oxford University Press, 1998.
- Finney, P. C. *The Invisible God: The Earliest Christians on Art*. New York: Oxford University Press, 1994.
- Kleinbauer, W. E. *Early Christian and Byzantine Architecture: An Annotated Bibliography*. Boston: G. K. Hall, 1992.
- Krautheimer, R. *Early Christian and Byzantine Architecture*. 4th ed. New York: Penguin, 1986.

Early Hindu Art and Architecture

The sacrificial rituals of the Vedic period were performed in temporary structures for deities thought to be present though invisible. Therefore, the archaeological record is silent when it comes to the art and architecture of this time. Most likely, images and structures to house them were initially built from wood, thatch, and other ephemeral materials. It was not until artisans began working with stone and brick that we have surviving evidence of early art and architecture.

The earliest extant images are of fertility figures dating to the third century BCE. Most of these images were found in sites associated with Buddhism but represent a popular or folk religion likely shared with Hindus. For example, voluptuous female demigoddesses (*yakshis*) adorned the railings and gateways surrounding the Buddhist reliquary mounds of Sanchi and Bharut (second through first centuries BCE). Bas-reliefs of the Vedic gods Indra and Surya guard the doorway to a monks' cell in the rock-cut complex of Bhaja (mid-second century BCE). A few Hindu images have been found dating to the following centuries, but most of the extant art and architecture up until the fifth century CE was Buddhist. One of the few exceptions is a sandstone figure dating to the first or second century CE depicting the sun god Surya dressed in Scythian clothing and holding a short sword. There were two major styles during this period: the Greco-Roman-influenced Gandhara style in Pakistan and Afghanistan and the Mathura style in northwestern India. Later sculpture would integrate elements of both of these styles.

During the period of the Gupta dynasty (fourth through seventh centuries CE), Hindu art and architecture truly began to flourish. An inscription dated to 278 CE from Nagarjunakonda in Andhra Pradesh refers to a wooden statue of Vishnu, although the brick temple that housed it is no longer extant. The earliest extant Hindu temples are centuries older, but this inscription suggests the existence of no-longer-extant temples from the third century at the latest. All traditional Hindu temples functioned as a home for the deity rather than a space for congregational worship. From the earliest period, strict conventions governed the construction of temples and the carving of images. Hinduism developed an elaborate tradition of iconography. Gods and goddesses were frequently depicted with many arms, each holding an item typical of the deity. These had symbolic meaning and also served to identify the deity. Vishnu holds a conch and discus, for example, while Shiva holds a trident. The central image in a Shiva temple was almost always a pillar-shaped *linga*, representing the god in his most abstract form.

Art historians generally distinguish two styles of temples. The northern style was known

as the *nagara* style. The typical roof of a northern temple is shaped like a pyramid, and the towers tend to curve. The tower over the inner sanctuary tends to be the tallest. Sculptures on the outside of the temple frequently depict amorous couples. The *dravida* style of southern temples, in contrast, favors flat roofs, and the tower over the inner sanctum is often swarfed by towers marking gateways into the wall around the temple complex. The large temple complexes in the south often contain multiple secondary shrines and a large tank of water for ritual baths. The typical dravida temple tower is not curved and has clear horizontal bands of niches containing statues of gods, goddesses, saints, and scenes from mythology.

Both northern and southern temples share certain features. A temple's main deity is enshrined in an inner sanctuary, the *garbhagriha*. Smaller secondary shrines to other figures are common. Since the main images are immovable, temples generally contain a set of secondary processional images, often cast in bronze. Priests performed worship rituals for the images in the inner sanctuary, while visitors crowded forward to gaze upon the lavishly decorated image. *Darsan*, seeing the divine image, became a central feature of Hindu ritual from a very early period.

—Katherine Ulrich

Bibliography

- Dehejia, Vidya. *Indian Art*. London: Phaidon, 1997.
- Eck, Diana. *Darsan: Seeing the Divine Image in India*. 3rd ed. New York: Columbia University Press, 1998.
- Michell, George. *The Hindu Temple: An Introduction to Its Meaning and Forms*. Chicago: University of Chicago Press, 1988.

Early Buddhist Art and Architecture

Buddhist art received its initial impetus during the reign of Aśoka, the first Buddhist ruler of the Mauryan empire (273–232 BCE). Before the time of Aśoka, Buddhism was only one of many religious sects with followings in India, including Brahmanism (which would eventually develop into Hinduism), Jainism, and other, now-extinct *śramana* (striver) groups, such as the Ajivikas.



Standing Buddha Shakyamuni, from the ancient region of Gandhara, Pakistan, third century CE. Buddhist art from Gandhara is striking for its synthesis of a Hellenistic Greek style with Indic themes. (The Metropolitan Museum of Art/ Art Resource, NY)

With Aśoka's embrace of Buddhism and serious commitment to its teachings, the Buddhist community received levels of material support that it had not previously enjoyed. Although Aśoka did not support Buddhism to the exclusion of other traditions (donating cave monasteries, for example, to the Ajivikas), he did devote the bulk of his support to the Buddhist *sangha*, or monastic community, and to the promotion of Buddhist ideals through the construction of monuments and rock edicts.

Buddhist artworks attributed to Aśoka's direct support include the various pillars and monuments erected at Buddhist pilgrimage sites and the great stupa at Sanchi, in central India. The Buddhist pilgrimage sites had existed prior to the time of Aśoka. But Aśoka ensured that they were adorned with commemorative monuments. Such sites were associated with events in

the life of the Buddha and included the places of his birth, his attainment of nirvana, his first sermon, and his death (or *parinirvana*).

Probably the most remarkable Aśokan monument, though, from an artistic point of view is the great stupa at Sanchi. A stupa is a burial mound containing the physical remains, or relics, of a Buddhist saint (although Jain stupas were constructed as well). The shape of the stupa is suggestive of ancient Indo-European burial mounds erected over the remains of kings and warriors, a suggestion reinforced by the presence at the stupa of royal symbolism. The Sanchi stupa is crowned by a throne and an umbrella carved in stone. The throne is empty, as a symbol of the Buddha's absence from this world, having entered the state of nirvana and being free from *samsara*, the cycle of rebirth. This royal symbolism conveys not so much his status as a Kshatriya as his spiritual supremacy in general.

After the period of Aśoka, stupas remained prominent in Buddhist art. Over the course of time, the mound structure that formed the stupa's foundation became less prominent, while the umbrella mounted on the throne at the crown of the stupa became more prominent. The style of stupa with the prominent umbrella and small foundational mound structure was exported to Southeast Asia and eventually developed into the Chinese pagoda.

Because of their size, stupas are generally outdoor monuments. But smaller stupas were also constructed and housed in galleries in cave monasteries. There were even miniature stupas, presumably for the purpose of devotional worship in the home.

The stupa is typical of the artwork of the Aśokan period inasmuch as it does not include a realistic depiction of the human form of the Buddha. In this earliest phase of Buddhist art, the Buddha is only represented using abstract forms that symbolize his state of absence from the world. In addition to the empty throne, and of course the stupa itself, which, as a reliquary, is suggestive of former presence and current absence, there is also a representation in the form of the Buddha's footprints. The message of such imagery is clear: the Buddha was here, but now he is gone.

The religious sentiment of devotion, however, involves a longing for the presence of the sacred. Some scholars have speculated that a contributing factor to the rise of the Mahayana movement in Buddhism, which involves the idea of Buddha not as an absent teacher but as an omnipresent cosmic consciousness, might have been the practice of devotional rituals involving stupas and relics of the Buddha and of Buddhist saints.

Coinciding with the rise of Mahayana Buddhism in the second and first centuries BCE was the realistic representation of the human form of the Buddha. Such depictions are first associated with the Gandhara style of art. Gandhara, a region that today includes Afghanistan, was heavily influenced by Greek culture in the wake of the invasions of Alexander the Great. Gandhara Buddhas show strong Greek influence in the realism with which they depict the physical forms of their subjects.

The Gandhara style in turn influenced a style of sculpture that was associated with the northern Indian city of Mathura. The Mathura Buddhas are highly realistic, like the Gandhara Buddhas, but are also distinctively Indian. The Gandhara and Mathura styles continue to influence the representation of the Buddha to the present day.

When, in the wake of Aśoka's reign, patronage of Buddhism became popular in ancient India, wealthy donors endowed the Buddhist sangha with numerous cave dwellings. The term "cave" should not convey the impression that these dwellings were primitive. They were elaborately carved and adorned establishments that contain some of the greatest art treasures of the Indian subcontinent. The most famous of these cave establishments are at Ajanta and Ellora, both just north of the modern city of Mumbai (Bombay). In addition to many fabulous carvings, the walls of these dwellings are adorned with brightly colored frescoes depicting stories from the life and the past lives of the Buddha. These caves were expanded many times during the course of their existence. They were used by Brahmanical and Jain as well as Buddhist religious orders and contain many works of Hindu and Jain as well as Buddhist art.

Finally, another distinctive Buddhist art form to develop in early India was the mandala. Although associated primarily with later Indian Buddhism, the precursors of the mandala can be found in a variety of Buddhist art forms of the early period, including the stupa, of which, some have argued, it is a two-dimensional representation. Mandalas are depictions of the Buddhist cosmos, illustrating through a series of concentric circles the various stages of enlightenment and states of meditation. They are prominent today in Tibetan Buddhism and function as an aid to meditative visualization.

—Jeffery D. Long

Bibliography

- Dehejia, Vidya. *Indian Art*. London: Phaidon, 1997.
 Tucci, Giuseppe. *Stupa: Art, Architectonics and Symbolism*. New Delhi: A. Prakashan, 1988.
 Tucci, Giuseppe. *The Theory and Practice of the Mandala*. Mineola, NY: Dover Publications, 2001.

Pyramids of Mesoamerica and Transformation Images

Mesoamerican pyramids, like those of Egypt, had political and religious significance. Pyramids represented significant investments of time, energy, and symbolic capital. They were ostentatious representations of wealth dedicated to gods, ancestors, or elites. Their very presence proclaimed that the polity maintained continuity with its past (through ancestral veneration), that its present was still glorious (current construction efforts or upkeep), and that its future was bright (contemporary ceremonies and worship). A pyramid is simply a large solid structure with a stairway up the side(s) whose summit houses a religious or politically orientated structure. In Mesoamerica, pyramids were frequently renovated by adding a new facade to each side. After a few hundred years, the final structure hid several earlier versions under its facade. Occasionally, an earlier version was exceptionally well preserved, such as the Rosalila complex in Copan, Honduras. Pyramids were religious symbols as well. Every Mesoamerican city or village had its sacred edifice, and each household maintained its own worship space. The earliest

known pyramids in Mesoamerica were small structures dedicated to religious and astronomical rituals. Over time, the renovated structures eventually rivaled the pyramids of Egypt in size and ritual complexity.

Mortuary pyramids were a special kind of sacred space. These structures were dedicated for the mortal remains of prominent kings and their families. Often erected posthumously by the new ruler, the dedication of a pyramid was considered the pious duty of the prince in memory of his father. Stelae, or monuments, were set in front of the structure and proclaimed the deeds of the dead. For the ancient Maya, this dedication ceremony transformed the rock and mortar into sacred mountains where one could commune with spirits. The decorations within or around the mortuary temple also invoked the underworld and the maize god with resurrection motifs.

For Mesoamerican peoples, buildings were alive with the essence of supernatural entities because all things were charged with vital force. Caves, hills, and volcanoes each had special attributes and were associated with particular supernatural forces. Likewise, plants and animals had their own vital forces that were appeased, borrowed, or used for good and evil. Priests and rulers called upon these forces as necessary. The ancient Maya had a word for people with dual

➤ OF JAGUARS AND OLMECS

Matthew Stirling hypothesized that the prominence of were-jaguar motifs among the Olmec resulted from a belief that they conceived of themselves as children of the union of a jaguar and human female, giving them jaguar attributes. A stronger theory came from Peter Furst. He viewed jaguar-human images as shamanistic transformation, a process whereby shamans adopt jaguar attributes in their trances. Jaguars, as large top-tier carnivores in Central and South America, are believed to possess power that can be given to others. When Olmec shamans seek out their animal counterpart, they shed their human skin (metaphorically) and change into were-jaguars.

—Zachary Nelson

natures, *way* (pronounced “why”). The way was a spirit companion for an individual. Like a totem animal, the bearer would not kill any of his way-species for fear of killing himself. Stories are still told of shamans who as transformed jaguars received in their human forms any wounds that their animal forms incurred.

Similarly, kings and elites in Mesoamerica ritually impersonated a god and received its essence. Sacred objects, such as a god-image, were believed to have contained part of the divine essence. When humans clothed themselves with such objects, they absorbed a spark of the divine. This allowed them to ritually transform themselves into the object of adoration. Divine investiture of this form was common throughout Mesoamerica and played important roles in Mesoamerican society. For example, to reenact the origin of the sun, where the gods sacrificed themselves to make it move, slaves were transformed into deities through lengthy rituals and were then sacrificed, whereupon a noble or priest would be transformed into the resurrected aspect of the god. Thus, each myth could be faithfully reenacted by the original participants.

—Zachary Nelson

Bibliography

- Fields, Virginia, and Dorie Reents-Budet. *Lords of Creation: The Origins of Sacred Maya Kingship*. London and Los Angeles: Scala and the Los Angeles County Museum of Art, 2005.
- Houston, Stephen, and David Stuart. “Of Gods, Glyphs and Kings: Divinity and Rulership among the Classic Maya.” *Antiquity* 70 (1996): 289–312.
- Taube, Karl A. “The Rainmakers: The Olmec and Their Contribution to Mesoamerican Belief and Ritual.” In *The Olmec World: Ritual and Kingship*, edited by Michael Coe. Princeton, NJ, and New York: The Art Museum, Princeton University, and Harry Abrams, 1996.

Transformation in Chavín Iconography

The broadly dispersed Chavín stylistic period during the latter half (900–200 BCE) of the Formative period of Peru may have resulted from the dissemination of a highly influential ideology or religious cult. The suspected shamanic

nature of this ideological system derives from the sculptural program at Chavín de Huántar, the presumed locus of such religious activity. The sculptural program, through illustrations of both psychotropic plants and their associated physiological reactions, suggests visual transformations from human to animal forms.

At the site of Chavín de Huántar in the north-central Andes, local sandstone and quartzite were carved in the round in the form of anthropomorphic, zoomorphic, and zoo-anthropomorphic heads. These sculpted heads were faceted as tenons set high into the walls of the monumental buildings at the site. Originally spaced in an even course about 32 feet (10 meters) above ground level, the heads would have appeared to float out from the building facades, far above the observer. The sculptures represent mostly feline, avian, and human faces; however, other forms appear among the surviving examples.

A few of the three-dimensional tenoned heads depict streams emanating from or plugs placed within flared nostrils. Based on ethnographic analogies, these nasal discharges possibly signified the flow of mucus resulting from the ingestion of hallucinogenic snuff. Sporting similar topknot hairdos, the tenoned heads may suggest the transformation of anthropomorphic figures to more zoomorphic forms through various stages from human to feline or avian counterparts. This sequence was arguably once structured around the building facade. Such visual transformations thus may have been a defining feature of the Chavín religious cult and ideology.

Other representations within Chavín iconography and material culture support the interpretation of transformation among the tenoned head sculptures. Ornately sculpted stone mortars, shaped as birds or felines with shallow central trays, suggest the processing of hallucinogenic snuffs from certain well-known tropical forest plants such as *Anadenanthera Colubrine* and *A. Colubrine*. Other hallucinogens, however, may have been consumed in beverage form. A high-relief sculpted piece from the Circular Plaza at Chavín de Huántar illustrates a zoo-anthropomorphic figure with feline-like fangs and claws carrying a San Pedro cactus. The San

Pedro cactus (*Trichocereus pachanoi*), common throughout the Peruvian Andes and still used by modern Peruvian shamans, produces a mild hallucinogenic reaction as a specially prepared drink. The figure holding the San Pedro cactus, with its prominent fangs and claws, stands in contrast to more anthropomorphic figures within the same sculptural program, which carry staves or seashells. The cactus-bearing individual may thus visually connect the cause and effect of alleged shamanic transformations in Chavín practice through the representation of a psychotropic ingredient in the hands of a zoo-anthropomorphic individual.

Snuff spoons and trays for the ingestion of hallucinogens nevertheless were present in the archaeological record prior to the establishment of Chavín de Huántar. The same may be said of images of feline, avian, and anthropomorphic figures and of San Pedro cacti in preceding Andean visual programs. The concept of transformation, its practice and representation, thus may not have been limited to the site of Chavín. Due to limitations in archaeological data, the accounts of transformation at Chavín de Huántar further draw heavily upon comparisons with modern Peruvian shamanic practices and ethnographic accounts. While stimulating in their application to the Chavín materials, such comparisons pose the problem of spatial and temporal disjunction. Analyses of Chavín iconography, with its representations of zoomorphic and zoo-anthropomor-

➤ A TENONED HEAD FROM CHAVÍN DE HUÁNTAR

This tenoned head is the only example that remains in situ. It protrudes from the west (back) wall of the main building at Chavín de Huántar. The stylized head displays a top knot, an upturned mouth with fangs, and a wrinkled nose with possible plugs in the nostrils.

—Kimberly Jones



(Kimberly Jones)

phic figures, thus require continued research to elucidate better its significance for the Formative period in pre-Hispanic Peru.

—Kimberly Jones

Bibliography

- Burger, Richard L. *Chavín and the Origins of Andean Civilization*. London: Thames and Hudson, 1992.
- Cordy-Collins, Alana. "An Artistic Record of the Chavín Hallucinatory Experience." *Masterkey* 54(3) (1980): 84–93.
- Cordy-Collins, Alana. "Chavín Art: Its Shamanic/Hallucinogenic Origins." In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern. Palo Alto, CA: Peek, 1977.

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Science and Technology

The exclamation “Eureka,” which can be translated from the Greek as “I have found it,” is most often credited to the Greek scientist Archimedes (ca. 287–ca. 212 BCE), a scientist often considered alongside of Galileo, Newton, and Einstein as one of the greatest thinkers in human history. The reason for Archimedes’ exclamation was his observation that water rose when he stepped into a bath. While this may not seem like a startling observation, for Archimedes that observation led to a fundamental mathematical discovery: how to identify the volume of irregularly shaped objects. Since the volume of water that was displaced was exactly equal to the volume of the object that was submerged, Archimedes reasoned that one could measure the volume of an irregularly shaped object by submerging it and measuring the displaced water. In his excitement at this observation, Archimedes supposedly jumped out of the bath and ran through the streets of ancient Syracuse naked, sharing his discovery (and much else) with the world.

While many scholars doubt the veracity of this tale, since it was first told nearly two centuries after Archimedes’ death in Vitruvius’s *On Architecture*, the amusing tale is illustrative of the types of fundamental scientific discoveries made in Greek times. Greek science is foundational to science as practiced today. While mathematics, physics, biology, chemistry, and astronomy all existed to some extent before Greek times, it is Greek civilization that establishes these areas of study as independent scientific disciplines.

What truly made this Greek science different is that these ancient scientists attempted to understand the world around them solely through recourse to the natural world. That is to say, what made Greek science unique in comparison to what had come before is that it was believed that the natural world could be explained without reference to gods, numinous forces, or other unobservable phenomena. This is not to say that the Greeks did not believe in the gods, numinous forces, or unobservable phenomena; they certainly did. Nor is it to say that Greek science was always independent of religion; the Pythagoreans, for example, were deeply mystical. However, Greek science was an intellectual endeavor founded on empiricism (observation and experience) with a heavy emphasis on reason (often scientific theories were exercises in reasoning devoid of systematic observation). The same could be said for Greek historical writing. Whereas earlier Greek writings such as the *Iliad* and *Odyssey* narrated a past in which the gods played a direct role, Greek historians such as Thucydides and Xenophon tried to explain the unfolding of history in purely human terms. Wars were

won and lost because of human actions, according to this viewpoint, not through the intervention of divine forces.

Greek science (other than medicine) can be thought of as developing in three stages. The first stage consists of the sixth-century Ionian Cosmologists, such as Thales of Miletus. Their approach was conceptual, theoretical, and logical and not based on empirical data, although they may have utilized Near Eastern records of astronomical/astrological observations. These scientists may be better thought of as philosophers or theoretical cosmologists. The second stage began with Aristotle, who could be safely called the father of empirical science in the Hellenic/Hellenistic world. His work was fundamental in much later science, especially in medieval Europe and Islam. Aristotle established a rigorous scientific method and bounded field of inquiry called natural philosophy. He classified living things, much as the Mesopotamians had but to a scale of detail that had not been achieved before. His observations on the movement of animate and inanimate objects, for example, gave rise to physics as an independent field of research. The third stage of Greek science builds heavily on Aristotle's work but occurs in the cosmopolitan setting of the Hellenistic age in which Mediterranean thinkers had access to the writings of Greek and Near Eastern scholars, the library of Alexandria being the most noteworthy institution that facilitated this. Astronomy in particular benefited from this fusion of Near Eastern and Greek science. The Near Eastern legacy of recording astronomical observations provided empirical data for the

Aristarchus of Samos (whom Nicolaus Copernicus cited in his 1543 CE work On the Revolutions of the Heavenly Spheres) had posited earlier in that century a heliocentric universe, but most Greeks (and others) who knew of his theory thought it was an impious idea.

type of Aristotelian reasoning that was well equipped to understand the nature of moving objects. Hipparchus of Nicaea (in Anatolia), for example, established in the second century BCE the astronomical system later popularized by Ptolemy. Aristarchus of Samos (whom Nicolaus Copernicus cited in his 1543 CE work *On the Revolutions of the Heavenly Spheres*) had posited earlier in that century a heliocentric universe, but most Greeks (and others) who knew of his theory thought it

was an impious idea. Alexandria, and Hellenistic science in general, was the location of a rich cross-fertilization of ideas and data (derived from diverse cultures and time periods) that were utilized by scholars from varied regions and backgrounds.

The Greeks were not the only people in the period from 1000 BCE to 300 CE who were interested in science and technology. The astronomy that was practiced in India during this period was based somewhat on earlier Mesopotamian practices and was as dependent on mathematical principles as Greek astronomy. The Chinese used mechanical celestial globes to assist in identifying heavenly bodies and charting their movements. The invention of the abacus, which occurred sometime in the first millennium BCE, certainly assisted in Chinese astronomical calculations. Mesoamerican astronomy was also rigorous, though it developed independently of the practices in Meso-

potamia, Greece, and India. While most evidence for Mesoamerican astronomy comes from later periods, town plans were oriented along precise astronomical coordinates, consistent with Mesoamerican views of the layout of the cosmos.

Mesoamerican construction and engineering was also elaborate, and much of it was based on highly developed skills in the exploitation of stone. The Olmecs were able to move large stones long distances and were experts in stone carving. The burgeoning Maya cites and the large center of Teotihuacan (near modern-day Mexico City) featured monumental and sophisticated architecture. The Maya used what is called a corbel arch (or false arch since no key stone is used) as a means of spanning vaults and entrances; this architectural feature had become nearly universal in Maya engineering by about 250 CE.

The Romans were also extraordinary engineers, as is attested by the numerous Roman buildings that still dot the European and Mediterranean countryside to this day. The Flavian Amphitheatre (better known as the Coliseum) and the Pantheon, both in Rome, remain marvels of architectural and engineering achievement to this day. Roman towns throughout the empire had similar, though usually less elaborate, architectural features. Two of the main components of Roman building were concrete and arches. Neither were invented by the Romans (both were used in ancient Mesopotamia), but the Romans did develop means of using them more effectively.

Chinese engineering between 1000 BCE and 300 CE is also noteworthy. Many of the principles of Chinese architecture that were established during the Han dynasty remained fundamental in Chinese design until the nineteenth century. The ability to construct long walls over difficult terrain reached its pinnacle in the construction of a great wall by the Qin dynasty that acted as a defensive wall. The later Ming dynasty resurrected this idea of a great wall, and today's visitors to the Great Wall in China mostly see the Ming structure. One of the first instruments used to understand earthquakes was developed in China, perhaps as early as the second century CE. The Houfeng Didong Yi, as it was called, was used to identify when an earthquake had happened and in which direction. Arguably one of the most influential Chinese contributions to the earth sciences was in cartography, particularly the development of rectangular grids and graduated scales that allow for accurate estimations of distance between locations. Pei Xiu (224–271) is usually credited with developing this, but he may have based his rectangular grid off of the maps of Zhang Heng (78–139).

New water-management technologies that appeared from 1000 BCE to 300 CE allowed previously marginal areas to be better exploited by humans. Long aqueducts, which were designed to bring water directly into a Roman city, allowed Roman cities to utilize water supplies from farther off and to provide enough water to run the public baths. A system of underground irrigation channels called *karez* in Persian or *qanat* in Arabic allowed much of the arid regions of central Asia to be cultivated and was employed by the Persians, the Chinese (starting in the Han dynasty), and others living in arid parts of Asia. Ma Jun, a mechanical engineer who lived in China (ca. 200–265 CE), is said

to have developed a chain pump that allowed palace gardens to be watered. Agricultural science became more theoretical in 1000 BCE–300 CE, especially in Roman times. The agricultural manuals of Cato and Varro, written in the first century CE, provided Roman aristocrats with practical advice on farming, especially concerning soil-related issues.

Science in the period from 1000 BCE to 300 CE was not just oriented toward the study of the world around humans. Ancient approaches to the study of humans in medicine and anatomy set the stage for how medicine has been practiced throughout Europe and Asia to the present. Indian Vedic texts from this period see illness as a consequence of sin or from the actions of demons or other spirits, much in the same way that the Mesopotamians understood sickness. Yet collections of medical texts from India that date to this period indicate a sophisticated knowledge of surgical procedures and a wide array of surgical tools. One particular surgical approach that was common in the Americas as well as in Asia and Europe at this time is trepanning (or trephination), which involved the drilling of holes into the skull. Archaeological evidence for this practice comes in the form of skulls with neat holes cut into them.

Theories of medicine were developed in both China and the Hellenistic world between 1000 BCE and 300 CE. Traditional Chinese medicine was heavily influenced by the Yellow Emperor's *Classic of Internal Medicine*, which was compiled and edited during the Han period and posits that ill health is caused by a variety of natural factors, such as environment, diet, and lifestyle, and not through magical influences. In this work the body is seen as mirroring the cosmos, and through understanding natural forces a person can achieve good health. These ideas are best contextualized within the larger framework of Daoist and Confucian ideas. The practical application of these philosophical principles manifested itself in acupuncture and herbal medicine. Indian Vedic medicine likewise saw the body as a microcosm of the cosmos, and some medical collections similarly emphasize the necessity for balance in bodily elements (although, as already mentioned, magic and sin were also seen as root causes).

Hellenic medical theory was also informed by philosophical principles and likewise rejected magical explanations as the causes of disease. Like Chinese medicine, Greek medicine emphasized the necessity of balance in the body (especially of fluids they called humors) and saw disease as caused by an imbalance of these fluids. Hippocrates, a semilegendary physician from the island of Cos, is the most well known of the ancient Hellenic healers. He and his colleagues practiced a form of medicine that emphasized careful observation, and the practices became widely known throughout the Greek world. After Hippocrates' death, his status became more legendary, and he came to be revered as the father of scientific medicine. Numerous treatises on medicine were ascribed to him, and these and perhaps some of his own works (although no one is sure which, if any, were actually written by him) were collected as the *Hippocratic Corpus*.

—Kevin M. McGeough

■ Introduction: Understanding the Physical World

The period from 1000 BCE to 300 CE was a Classical age of science. It was at this time that the cosmological conceptions of the world were established that would be fundamental until the spread of Western science after the Enlightenment.

Western science can draw direct connections to the science of the Greeks, who took the Mesopotamian scientific methods of careful observation and divorced it from theology. Thus, the Greeks were the first scientists to attempt to understand the natural world through recourse to explanations derived from the natural world (as opposed to looking for divine or religious explanations).

Scientists in India also used the insights of ancient Mesopotamian scientists but did not attempt to understand the natural world as divorced from the gods. This is most apparent in Indian astronomy/astrology, which was based on Mesopotamian methods and rigorous observation but fused with Vedic theology.

Chinese attempts to understand the world began long before this period. However, the philosophies of Confucianism and Daoism that emerged under the Eastern Zhou dynasty (771–256 BCE) carried with them particular understandings of the ways in which the natural world operated and established some of the basic tenets of Chinese science.

Mesoamerican attempts to understand the universe manifested in an incredibly complex (and accurate) calendar. The calendar seems to have developed before 600 BCE and provided the foundations for the Maya and Aztec calendars that are still in use (by some communities) today. This calendar was a means not just of keeping track of time but also of predicting future events. Because time was seen as cyclical, the function of a calendar was to keep track of recurring events and thus help people prepare for them.

—Kevin M. McGeough

Ionian Physicists

The Ionian physicists (also known as the Milesian School) are Thales (sixth century BCE), Anaxi-

mander (610–546 BCE), and Anaximenes (ca. 545 BCE), all from Miletus in Ionia (Asia Minor). The tradition is that Thales taught Anaximander who in turn taught Anaximenes. The cosmos and physical phenomena in it, not other areas of philosophy, were their primary interest. Strangely (to us), they did not clearly distinguish material things (such as air) from qualities (such as hot) or from forces (such as heat). All were monists, positing one basic physical stuff of the world.

For Thales, the first philosopher, we have no surviving writings or even contemporary accounts of his thought. Through secondhand accounts we know that he claimed that water was the basic stuff of the world, the first nonmythological and nondivine natural explanation of the world, and included details such as that the earth is a flat disk floating in water.

Known as the father of geometry, Thales probably learned mathematics and astronomy from the Babylonian tradition but distinguished himself by offering explanations in addition to observations (e.g., of an eclipse), practical applications (e.g., determining distances ship to shore), theoretical formulations, and perhaps mathematical advances.



Roman mosaic depicts Anaximander of Miletus holding a sundial. (AAAC/Topham/The Image Works)

► THE SOLE SURVIVING FRAGMENT OF ANAXIMANDER

“The Non-limited is the original material of existing things; further, the source from which existing things derive their existence is also that to which they return at their destruction, according to necessity; for they give justice and make reparation to one another for their injustice, according to the arrangement of Time.”

—Jacques Bailly

Source

The sole surviving fragment of Anaximander, found in Simplicius's *Commentary on Aristotle's Physics* 24.18–21, translated by Kathleen Freeman, *Ancilla to the Pre-Socratic Philosophers* (Cambridge: Harvard University Press, 1948), 19.

Variety and disparity in the myths of more advanced neighbors probably led him to start anew at explaining the world, rejecting myth as an explanation. His chief importance is the value of simplicity and reduction in explanations and his rejection of divinity as explanatory.

One sentence survives of Anaximander's own words, quoted by Simplicius; again, all is second-hand. He held that the basic stuff was “*to apeiron*” (the unlimited), a primitive unified stuff infinite and qualityless and probably divine (immortal and powerful). Somehow, within the *apeiron* hot and cold/wet arose and conflicted. In their conflict, which created the cosmos, the cold/wet partially dried (earth), partially evaporated (mist and air), and partially remained (water). The heavens are the hot split up by the evaporation of wet/cold into rings surrounded by mist with holes through which the hot is visible as the sun, moon, stars, etc. He suggested that there was no natural up or down, so the earth had no need to be supported by anything, and he created a geometric model of the universe, including a map of the earth and the heavens. He claimed that life emerged from the sea and that eventually everything will return to the *apeiron* to justly pay for the original conflict of hot and cold/wet.

Several quotations of Anaximenes' own words survive. A material monist, he said that the basic

stuff was air (including vapor), which was perpetually moving. His mechanical explanation of the apparent diversity of the world as density variations (hot and dry = rarefied; wet and cold = dense) includes two important scientific innovations: quantitative differences explaining qualitative differences and conservation through change.

—Jacques Bailly

Bibliography

Barnes, Jonathan. *The Presocratic Philosophers*. 2nd ed. New York: Routledge, 1982.

Lloyd, G. E. R. *Early Greek Science: Thales to Aristotle*. New York: Norton, 1974.

Aristotle

Perhaps the world's first scientist, Aristotle favored observation over theory. Much of his corpus, particularly the bioscientific works, consists of careful observation of phenomena, from insects to humans. His scientific works are now of historical interest. His philosophical system, however, and his careful observations about other things, such as constitutions and literature, retain more than historical interest.

Aristotle's philosophy is hylomorphic: physical things consist of matter (*hyl-*), which is potentially something, and form (*morph-*), which combined with matter are the things in the world. Rover, for example, is tissue (matter) combined with dogginess (form). Individual physical things, especially living beings (which are Aristotle's usual examples), are substances. Individuals such as Rover are primary substances. Primary substances are the bedrock of reality for Aristotle: they exist independently, while nonsubstances exist dependently on substances. Rover, considered as a hylomorphic entity, belongs to an *infima* species (lowest species), dog, which is his form. Forms are secondary substances. Secondary substances depend on primary substances for existence (contrary to Plato's forms, which are the bedrock of his reality, are separate from things and make things what they are). The species dog belongs to a genus (call it mammal), which is also a secondary substance. The genus mammal is a species, however, relative to its genus, animal. Species are defined by differentia, which differentiate one species from another in

the same genus. A differentia is part of a thing's essence, which is a thing's account or definition that includes all the differentia of the infima species and higher to which a thing belongs.

All other things are nonsubstances and can be allotted to the following categories: qualities, quantities, whens, wheres, relationships, positions, activities, passivities, and wearings (e.g., of clothes). A few things, such as being, unity, and goodness, cannot be simply allotted to one of those categories. They apply in different ways to every category, including substances, and are the subject of Aristotle's metaphysics.

Aristotle finds four appropriate ways to answer the question "Why is that an X?": the material constituents, the form, the thing that mechanically brought X about, and what X is for. Those answers correspond to the four Aristotelian causes (or explanations): material, formal, efficient, and final. The form of Rover is dog; the matter is flesh, bones, sinew, etc.; the efficient cause is his father and mother; the final cause is what dogs are for.

Aristotle analyzed change as a different actualization of a potential: the substance remains the same through change of its nonsubstance accidents. In substantial change, however, the matter remains, while the form changes. Thus, Rover's matter remains when Rover dies, but it is no longer Rover: his form is gone, and that matter has different form(s).

A substance's form (and matter) has practical and theoretical consequences. Humans, for instance, are both rational and political in the account of their form, their nature/essence. Not all are fully rational, but the human who has reached humanity's goal of becoming fully human is fully rational. Humans who fall far short of that goal cannot deliberate about ends; they can only deliberate about means to ends. Aristotle famously said that such humans are natural slaves (to the fully rational humans). Fortunately, Aristotelians can pluck that and other repulsive ideas (e.g., that women are inferior) out and leave Aristotle's system virtually intact. As for their political nature, it leads humans to form groupings, the natural end of which Aristotle identified as the Greek city-state, or polis, a natural goal because the polis allows humans to fully develop their nature, to

➤ ARISTOTLE ON THE SCIENCE OF NATURE

The opening sentences of Aristotle's *Physics* are:

"In every line of inquiry into something that has principles or causes or elements, we achieve knowledge—that is, scientific knowledge—by knowing them; for we think we know a thing when we know its primary causes and primary principles, all the way to its elements. Clearly, then, it is also true in the science of nature that our first task is to determine the principles."

—Jacques Bailly

Source

Physics 1.1 in *Aristotle: Selections*, translated by Terence Irwin and Gail Fine (Indianapolis: Hackett, 1995), 83.

achieve the excellences of their nature as humans, and it grows from other groupings. Outside of a polis, certain human excellences are unattainable. For Aristotle, individual human excellences, or virtues, are lasting states that are means between extremes.

Aristotle was Macedonian by origin and spent 20 years at Plato's Academy in Athens and left after Plato died in 347 BCE. Aristotle returned to Athens to found the Lyceum school, but after his fellow Macedonian and former pupil Alexander the Great died in 323, he left Athens and died within a year.

Aristotle's surviving writings are his collected papers (unpublished in his lifetime and consisting of 2,500 densely packed pages) and represent perhaps 20 percent of his lifetime output. They are honest and careful efforts to explicate his own ideas. They are never easy to read and often contain inconsistencies, puzzles, and apparent contradictions, many of which he was aware of. Nonetheless, they add up to an admirable effort of a philosophical system. Although often our best source for his predecessors' thought, he was not a historian of philosophy, and care is necessary in using him as a historical source.

Aristotelianism in various areas has been a dominant stream in philosophical thought continuously from Aristotle's time on.

—Jacques Bailly

Bibliography

Barnes, Jonathan. *The Cambridge Companion to Aristotle*. New York: Cambridge, 1995.

Barnes, Jonathan. *The Complete Works of Aristotle*. Princeton, NJ: Princeton University Press, 1984.

Early Indian Astronomical Texts

Jyotis is the science of astronomy, and texts on astronomy are called *jyotishshastra* in Sanskrit. As one of the limbs of the Veda, *jyotis* was the science of determining the movement of the heavens for the sake of Vedic ritual. The cosmos itself was thought to reflect the ritual, which had to be performed at certain times and oriented correctly with respect to direction. Divination of appropriate times to begin undertakings and interpreting celestial omens were other uses of *jyotis*. Despite the necessity of astronomy and mathematics for Vedic rituals, the Indian traditions benefited from the infusion of methods from the neighboring Babylonian civilization.

The *Jyotissavedanga* of Lagadha is the oldest text on *jyotis*, and it most likely dates to 400 BCE. It declares that astronomy is the science of determining time and, in particular, the proper times for the Vedic sacrifices. The text describes the annual motions of the sun and moon as well as the *naksatras*, the 27 divisions of the sky through which these bodies pass.

Mathematics (*ganita*) was an indispensable discipline for astronomy as well as for the performance of the Vedic rituals. *Sulva Sutras* were texts describing the proper geometric layout for Vedic ritual altars. Mathematics of right-handed triangles as well as methods of calculating area ensured the correct layering of altar bricks. Similarly, these texts described how to measure the cardinal directions for orienting the altar. This class of literature developed from about 500 BCE until the advent of the Common Era.

The most significant discovery in Indian mathematical astronomy was the invention of the number zero. From India, it spread into Greek and Arabic mathematical systems. The numeral used was originally a dot (.), which acted as a placeholder. In Sanskrit, the word used for this was *shunya*, a term referring to a hole or a cavity, an etymology important for the development of the now-familiar shape of the numeral zero (0).

In the early centuries of the Common Era, astrology and the interpretation of omens grew in importance. The *Gargasambhita*, dating to within a century of the advent of the Common Era, was a text on omens that describes various celestial phenomena and interprets their meanings. The *Yavanajataka* of Sphujidhvaja is an important third-century CE text dealing with both astronomy and astrology. It contains an updated planetary theory for more accurately predicting planetary motions as well as descriptions of the signs of the zodiac (*rashi*) and the astrological influence of the planets. It also contains instructions for divining the best times to initiate undertakings.

Babylonian and Greek systems of astronomy influenced many of these texts. Lagadha's *Jyotissavedanga*, for example, relied on methods from Babylonian sources that allowed the construction of more accurate calendars. Methods of divination and horoscopy reflect Babylonian omens, and much of the *Yavanajataka* is based on a second-century CE Greco-Babylonian text from Alexandria.

—Matthew Bingley

Bibliography

Pingree, David. *Jyotishśāstra: Astral and Mathematical literature*. Wiesbaden, Germany: Harrassowitz, 1981.

Sphujidhvaja. *The Yavanajataka of Sphujidhvaja*. Translated by David Pingree. Cambridge: Harvard University Press, 1978.

Mesoamerican Calendar System

The Mesoamerican calendar system was one of the most intricate of the ancient world. Developed before 600 BCE, it is still in use today by day keepers in isolated villages and increasing because of the New Age movement. In particular, the Maya and Aztec calendars are well known and share many common features. The Gregorian calendar is based on a solar year, or one revolution around the sun. This 365-day cycle does not quite approximate a full solar year, so every four years a leap day is included as February 29. In addition, we use a lunar calendar for certain holidays, to measure tides, and for references to fertility patterns. All of these concepts were familiar to the ancient Maya.

Calendars mark repeating cycles. Each revolution of the earth is a day, and each revolution of the earth around the sun is a year. For ancient cultures, these patterns were harbingers. Time was not a linear function but rather a cyclical function. Events repeated themselves and were identified by their attributes on that day. Thus, a bad harvest year was expected to come around again and again, according to its period. It was very important for the ancient Mesoamericans to know when to expect calamities, hurricanes, earthquakes, good fortune, and even romance. Thus, the ancient Mesoamericans developed calendars whose interconnections foretold events and predicted the future based upon the past.

The numeric notation of the ancient Maya was vigesimal (base 20), not decimal (base 10). Rather than count with just fingers, they included toes. In fact, the word for “man” and “20” are the same, “uinic.” The Maya used a single dot for 1, a bar for 5, and glyphs for 20 and larger units. Thus, 34 would be written as uinic, 2 bars

and 4 dots. They also recognized zero as a concept, representing it hieroglyphically as a shell in their notation. However, the ancient Maya loved to use variants in their writings. They interchanged numbers for god-face equivalents whenever possible.

Divination was very important to ancient peoples, and Mesoamericans were no exception. Their 260-day calendar, often called *tzolkin* in the literature, was used to predict outcomes and to understand repeating cycles. Perhaps originally based on the duration of human gestation, this calendar was used to name children, understand their attributes (based on their birthday), as an oracle for activities (including waging war and peace), and as a means of knowing which god was responsible for which day’s events. The almanac was composed of 20 day names with 13 day numbers in an endless repeating cycle.

Mesoamericans also used a solar year. This 365-day calendar was divided into 18 “months” of 20 days each, with 5 unlucky days at the end

➤ MAYA DAY ORDER AND NAME

1	Imix
2	Ik
3	Akbal
4	Kan
5	Chicchan
6	Cimi
7	Manik
8	Lamat
9	Muluc
10	Oc
11	Chuen
12	Eb
13	Ben
14	Ix
15	Men
16	Cib
17	Caban
18	Etnab
19	Cauac
20	Ahau

➤ MAYA MONTH NAMES AND ORDER

0	Pop
1	Uo
2	Zip
3	Zotz
4	Zec
5	Xul
6	Yaxkin
7	Mol
8	Chen
9	Yax
10	Zac
11	Ceh
12	Mac
13	Kankin
14	Muan
15	Pax
16	Kayab
17	Cumku
18	Uayeb

➤ END OF THE WORLD AS WE KNOW IT?

December 21, 2012, marks the completion of current baktun. In Maya calendrics, this is equivalent to a millennial event. For most of the world, it will be a nonevent. However, for the growing body of New Age adherents, this day could be highly significant. It will not be the end of the Maya long count, which just accumulates days for infinity. But this date reset the commonly used coefficients to effectively 0.0.0.0.0.

While the ancient Maya were more concerned with past events than future events in their monuments, New Age Maya enthusiasts look forward to this date as a culmination of the calendar and expect significant changes to occur. For instance, Web sites dedicated to 2012 abound with great expectations. Earth may join an extraterrestrial league of planets. It might be destroyed. A shift in the galactic beam could occur. Modern Maya will take over the earth. Atlantis will surface, ushering in an era of supernal consciousness. Most of the claimants have only token knowledge of ancient Maya practices. Few of them read any of the several hundred Mayan languages. A couple of shamans claim to channel the vital force of past Maya kings. Others pick up vibes from their Maya DNA.

Whatever the claim, it is unlikely that archaeologists will uncover something more significant about that date than is known already: The lower coefficients of the long count turn over, and this occurs on a winter solstice in the Northern Hemisphere. On the other hand, Tikal, Guatemala, is well worth exploring, especially when it is cold up north.

—Zachary Nelson

(Uayeb). They did not use a leap year to realign the calendar, which means that New Year's Day gradually moved. For the Maya, the first day of the year was "1 Pop." The solar year was also referred to as the "Vague Year" or "haab" since it only approximates an actual revolution of the sun.

The intersection of the 260-day almanac and the solar year was called a calendar round. For a given date, it required 52 years of 365 days to repeat. Beginning this great cycle was a cause of celebration among the Aztec when the New Fire was ceremonially kindled.

Longer durations of time required a different calendric approach. Rather than relative time (i.e., based upon a king's reign), sometime early

in Maya history (before 600 BCE) they devised the long count. Similar to the concept "Before Common Era" and "Common Era," this calendar counts up from a mythological origin of August 11, 3114 BCE. This count was based on a vigesimal system of 20 days (rather than our decimal system). Each day was called "kin." Twenty kin was a uinal. Every 360 days equaled a tun. Twenty tun equaled a katun, or approximately 20 years. Twenty katun equaled a baktun, or roughly 400 years. Even larger units are known. The notation for a long count is written biggest unit to smallest, (i.e., baktun, katuns, tuns, uinals, kin). Where place holders were required, the Maya used their term for zero. The ancient Maya celebrated katun and half-katun endings. Often, this celebration involved feasts, dancing, and erecting monuments dedicated to the king.

The ancient Maya also kept track of the moon and its eclipses. In the inscriptions, the lunar information was known as the Supplementary Series. Moon age was counted from the new moon's first occurrence and rounded to whole numbers (i.e., 29 or 30). Over long periods, the Maya achieved a high degree of accuracy with their lunation cycles, accurate to three decimal places. The movement of the moon was important in predicting eclipses, which the Maya dreaded. Terrible things occurred when the sun hid itself unexpectedly, and they were able to predict such occurrences.

Astronomy was also important to the ancient Maya. In particular, they paid attention to the brightest of the wanderers, Venus. Venus appeared as a morning star for 236 days and then disappeared from their view for 90 days. It reappeared as an evening star for 250 days and then disappeared again for 8 days before beginning the cycle over. These movements were carefully tallied by the ancient Maya and were related to unfortunate events, such as warfare. About every two calendar rounds, the Venus cycle, the 260-day almanac, and the 365-day calendar would align.

—Zachary Nelson

Bibliography

- Coe, Michael D. *The Maya*. 6th ed. New York: Thames and Hudson, 1999.
- Coe, Michael D., and Mark Van Stone. *Reading the Maya Glyphs*. 2nd ed. New York: Thames and Hudson, 2005.

Harris, John F., and Stephen K. Stearns. *Understanding Maya Inscriptions: A Hieroglyphic Handbook*. 2nd rev. ed. Philadelphia: University Museum Publications, 1997.

Early Astronomy in Mesoamerica

Early astronomy in Mesoamerica was closely related to the vision of cosmic order, and the stars were associated with the sacred domain of existence. Deities were associated with stars, satellites, and planets, and their movements were registered in calendars that determined the ritual and daily aspects of life. According to the sixteenth-century Codex Vaticaniano-Rios, the people of Mesoamerica envisioned various celestial strata or layers in the sky, each with its own deities, dwellers, and attributes. For instance, the Maya from the Yucatan Peninsula considered seven superimposed celestial layers held by an evergreen Ceiba tree emerging from the center of the earth plus another four of these trees for each corner of a square cosmological model. Another variation was the representation of the sky as a gigantic celestial dragon formed by bands of stars and astral symbols.

Early astronomers in Mesoamerica perceived the apparent movement of the celestial vault and registered directions and patterns. The cosmic directions were identified with crosslike designs, and specific colors, deities, trees, and birds were associated with each of these directions. Therefore, the sky introduced a sacred order related to landmarks and symbols. The astronomical orientation of buildings could also create Hierofanies (an illumination of the sacred), whereby on specific dates and at a specific time the sun would create patterns of light and shadows or illuminate an underground chamber.

By far the most relevant star in Mesoamerican astronomy was the sun, which was central in tracking the rain cycles and dry seasons. It also served as a strategic guidepost for the economic subsistence of the largely agricultural society in Mesoamerica, and hence an accurate record of the solstices, equinoxes, and zenithal passes was put in place. Another important astronomical event in Mesoamerica cultures was when the sun would appear directly above the

observer in an exact vertical line, therefore projecting no shadows. This phenomenon is known as the zenithal pass and can be observed twice a year in places located around 23.5° N and S. For this end, special zenithal chambers were built in Montealban, Teotihuacan, and Xochicalco. The chambers were built as underground compartments where the sunrays pass through a cylindrical chimneylike duct, illuminating the chamber on the predicted day. The observation of the sun's cycle was key to Mesoamerican ceremonies and laid the origin of the ritual calendar. This calendar was known as *tonalpohualli* among the Nahuas and *tzolkin* among the Maya and held ritual and divinatory significance for marking festivities and ceremonies.

The moon was regarded as the feminine principle and the element of change in Mesoamerican cosmology. The lunar cycles and their relationships with eclipses were recorded in a particularly accurate fashion since the prediction of these events signified a powerful demonstration of the ruling classes' powerful scientific wisdom.

The observation of other stars and planets such as Venus was important enough to erect imposing architectural structures. According to archaeoastronomer John B. Carlson, the cult of the planet Venus that determined wars and human sacrifices elsewhere in Mesoamerica was prominent at Teotihuacan. Ceremonial rituals were timed with the appearance of Venus as the morning and evening star, and the symbol of Venus appears whether as a star or half star with a full or half circle. In Teotihuacan, priests embodied religious as well as scientific knowledge since they were in charge of predicting eclipses, meteorological forecasts, and epiphanies as well as performing rituals and ceremonies. The core of the urban complex was the Pyramid of the Sun, which stands atop a sacred cave representing the fundamental creation. The pyramid was aligned with the rising of the sun and the appearance of the Pleiades at the spring equinox. It was designed for astronomical observations, worship, and sacrifice. Astronomical devices known as pecked crosses were common in Teotihuacan. These markers were designs pecked on rocks or impressed in plaster floors and include rectangles, Maltese crosses, and other forms, but many consist of a cross and two

concentric circles. Among the first found at Teotihuacan were a pair, several kilometers apart, that formed a perpendicular to the Avenue of the Dead, suggesting that they were important in astronomical alignments and for the city planning layout.

Data for other heavenly bodies was also recorded, such as Mars's synodic cycle (depicted in the Dresden codex), the conjunctions and alignments of stars, and constellations. Among the latest, the Pleiades were known among the Nahuas as Tianquitzly (open market) or Miec (crowd) and also the constellations of Colotl (Scorpio), Citlaltachtli (Gemini), Xonecuilli (Orse Major), Citlalin Popoca (comets), and Citlalin Tlamina (falling stars).

The identification of astronomical cycles, patterns, and events not only indicate the scientific

relevance of their observations but also reveal a solid link between astronomy and astrological symbolism. The celestial phenomena were always related to the rise and fall of rulers, a battle's fate, and major natural disasters. The importance of the observatories was not only astronomical but also had ritual and divinatory purposes.

—Alfonso Valenzuela-Aguilera

Bibliography

- Aveni, Anthony F. *Skywatchers of Ancient Mexico*. Austin: University of Texas Press, 1980.
- Broda, Johanna, et al., eds. *Arqueoastronomia y Etnoastronomia en Mesoamerica*. Mexico: Universidad Nacional Autónoma de México, 1991.
- Williamson, Ray A., ed. *Archaeoastronomy in the Americas*. Los Altos, CA: Ballena Press and Center for Archaeoastronomy Cooperative Publication, 1981.

■ Introduction: Treating the Abstract—Mathematics

Western students of mathematics quickly become aware of the Greek foundations of modern mathematical inquiry when they first learn the letters of the Greek alphabet that are still used in mathematical expressions. For Western mathematicians, Greek mathematicians are the classical masters, and although these works have been superseded in current times, these ancients are still treated with reverence. Although the Greeks built their own discoveries on those of the Egyptians and Mesopotamians, Greek mathematics took the science in new directions, especially in its ability to function as a means of thinking abstractly.

The Greeks were not the only mathematicians living from 1000 BCE to 300 CE. The people of Mesoamerica, with their elaborate calendar, were clearly skilled at using numbers to problem solve. Indian astronomers were also adept at mathematical calculations. In fact, many fundamental mathematical discoveries were made in India.

—Kevin M. McGeough

Indian Discoveries in Mathematics

Indian scholars, working largely within Hindu religious traditions, made a number of significant contributions to mathematics. The cultural and social structures of the Hindu religion provided both a unified structure and a means of dissemination for this mathematical work. India was located at the crossroads of a number of major trading routes, which allowed Indian scholars in the later period to influence (and be influenced by) mathematicians in China, Rome, and Persia.

The roots of mathematics in Indian culture can be found in the Vedas, the sacred texts of the Hindu religion. In terms of the history of mathematics, the most important content in the Vedas is a set of ritual instructions for priests. Many of the ceremonies described in the Vedic texts involve ritual sacrifices, which require not only precise knowledge of the right day and time for the sacrifice to occur but also precise construction of a sacrificial altar. For this reason, mathematical computation and astronomical ob-

servation were both given high positions of honor in the priestly traditions.

The Sulva Sutras, written mostly between 800 and 500 BCE, are the portion of the Vedic literature that deals with ritual measurements. The sutra was a common form of proverb or instruction in the Vedic texts, and the word “sulva” refers to a rope or cord; the Sulva Sutras are a series of instructions for using a simple rope to construct a geometrically precise ritual altar. Ritual altars were not simple objects, and the priests who used the Sulva Sutras needed not only to be able to construct altars of different shapes and dimensions but also in some cases to locate them along specific geographical orientations or astronomical sight lines.

The Sulva Sutras, which were intended to be religious manuals, contained an impressive amount of practical geometric and algebraic knowledge. Some of the later Sulva Sutras incorporate technological advances such as gnomons or measuring tapes, but even the older ones, which rely on nothing more complicated than simple sticks and cords, describe a fairly advanced functional mathematics. In the process of describing procedures for constructing these altars, the Sulva Sutras include general solutions for problems such as rectilinear transformations, squaring the circle, and solving first- and second-order indeterminate equations, along with a general formulation of the relationship between the lengths of the sides of a right triangle (commonly known today as the Pythagorean theorem). Indian geometry, as contained within the Vedic texts, is considered a primarily empirical base of knowledge because it relies on general rules rather than the formalized proofs that were prioritized by Greek and Greco-Roman mathematicians. Even considered as an empirical or functional body of knowledge, though, the understanding of geometry in the Vedic texts is comparable to mathematical knowledge in other cultures during this time period. In addition to this functional geometric content, the Vedic texts include extended discussions of very large numbers, discussions that cannot reasonably be said to have any functional or practical utility and are often taken as an indicator of the playfulness and inventiveness of Indian mathematicians.

Toward the end of the Vedic period, Indian mathematicians came into contact with Greek and Mesopotamian ideas about mathematics. The next phase in the development of Indian mathematics is described in another set of religious writings, the Siddhantas. Inspired partly by increased demand for navigational accuracy and partly by contact with other civilizations, the Siddhantas focus primarily on astronomical concepts such as the motions of heavenly bodies. The mathematical content of the Siddhantic writings consists mainly of trigonometry and includes some significant advances on the Ptolemaic trigonometry believed to have inspired them. In particular, the first expression of general rules for calculating sine relationships appears in one of these later Siddhantas.

—Susan Marie Groppi

Bibliography

- Joseph, George Gheverghese. *The Crest of the Peacock: Non-European Roots of Mathematics*. Princeton, NJ: Princeton University Press, 2000.
- Newman, James R., ed. *The World of Mathematics*. Mineola, NY: Dover, 2000.
- Prakashan, Sundeep. “On the Sulvasutras,” edited by G. Thibaut. In *Studies in the History of Science in India*, Vol. 2, edited by Debiprasad Chattopadhyaya. New Delhi: Editorial Enterprises, 1982.
- Rahman, A., ed. *Science and Technology in Indian Culture: A Historical Perspective*. New Delhi: National Institute of Science, Technology and Development Studies, 1984.
- Restivo, Sal. *Mathematics in Society and History*. New York: Springer, 2002.
- Srinivasiengar, C. N. *The History of Ancient Indian Mathematics*. Calcutta: World Press, 1967.
- Struik, Dirk Jan. *A Concise History of Mathematics*. New York: Dover, 1987.

Greek and Roman Mathematics

From 600 BCE to 600 CE, several varieties of mathematics developed in the area bordering the Mediterranean Sea, some of which have a great deal in common with the mathematics developed in other times and places and one—the Euclidean tradition in geometry—that was unprecedented and exercised a powerful hold over the imagination of the Christian and Muslim

▶ A MAP BASED ON PTOLEMY'S GEOGRAPHY

A fifteenth-century map of the world constructed according to the information given in Ptolemy's *Geography* 1,100 years earlier.

Ptolemy was dependent on reports of travelers and their accounts of travel times for the locations he assigned to important cities. It is not surprising that the map of Asia and southern Africa is highly inaccurate. On the contrary, what is surprising is the ease with which one recognizes nearly all of Europe, the Mediterranean Sea, and northern Africa.



(Erich Lessing/Art Resource, NY)

—Roger Cooke

civilizations that inherited it after the breakup of the Roman empire. This history can be divided into three very unequal periods: the Hellenic period (from 600 BCE to 300 BCE), the Hellenistic century (from 300 BCE to 200 BCE), and the Roman period (from 200 BCE to 600 CE). Even in the Roman period, nearly all mathematical work was written in Greek.

During the sixth century the Ionian philosophers Thales and Pythagoras systematized some geometry and number theory. According to a work ascribed to Aristotle's pupil Eudemus and quoted by the Neoplatonist Proclus 750 years after Aristotle, Thales knew certain abstract geometric relations about triangles and circles that go beyond mere measurement of lengths and areas, which were the primary concern of earlier mathematical work. Pythagoras, despite his association with the geometric theorem that bears his name, certainly did not discover this theorem and probably did not prove it. He and his followers were more interested in the mystical properties of numbers than in geometry. The basic structure and content of what became Euclidean geometry was worked out, largely in Athens, in the fifth and fourth centuries BCE.

After the death of Alexander in 322, leadership in mathematical research passed from Athens to Alexandria in Egypt. There around the year 300 Euclid wrote his *Elements*, which con-

tains a deductive development of plane and solid geometry and parts of elementary number theory. Euclid's work was soon followed by more advanced geometry, the high-water mark of which was the work of Archimedes embracing both pure geometry and mechanics and Apollonius's treatise on conic sections. Both of these mathematicians had studied in Alexandria, although Archimedes lived in Sicily and Apollonius in Pergamum (now Bergama, Turkey).

The Golden Age of Euclidean geometry came to an end with the death of Archimedes, killed by a Roman soldier when the Romans took Syracuse in 211 BCE during the Second Punic War. Although it is tempting to blame the Romans for allegedly putting an end to this flowering, one must remember that the school in Alexandria lasted into the fourth century CE yet never again produced work comparable to that of Archimedes and Apollonius. The ponderous Euclidean methods themselves, with their limited stock of curves, limit what can be achieved. Further advances had to wait some 1,800 years for cross-fertilization with the more graceful methods of algebra in the work of Descartes on analytic geometry in the seventeenth century CE.

Nevertheless, the last 800 years of Greco-Roman mathematics contain much that is interesting, both in the Euclidean tradition and in work better adapted for practical application. This second style of mathematics is easily distinguished from the Euclidean style by the assignment of specific numbers to represent the length of a line. Examples of this style occur in two treatises of the second-century Alexandrian Claudius Ptolemy, one on astronomy (his *Syntaxis*, now known as the *Almagest*), the other on geography.

Except for some algebraic work by Diophantus of Alexandria (dates uncertain, but probably third century CE), later Roman mathematics consists of commentaries on the earlier work. Especially notable is the *Synagoge (Collection)* of Pappus of Alexandria (fourth century), which preserves a great deal of earlier work and contains a few important original propositions.

—Roger Cooke

Bibliography

Fowler, D. E. *The Mathematics of Plato's Academy*. 2nd ed. Oxford, UK: Clarendon, 1992.

Heath, T. L. *A History of Greek Mathematics*. Oxford, UK: Clarendon, 1921.

Klein, J. *Greek Mathematical Thought and the Origin of Algebra*. Translated by Eva Brann. Cambridge, MA: MIT Press, 1968.

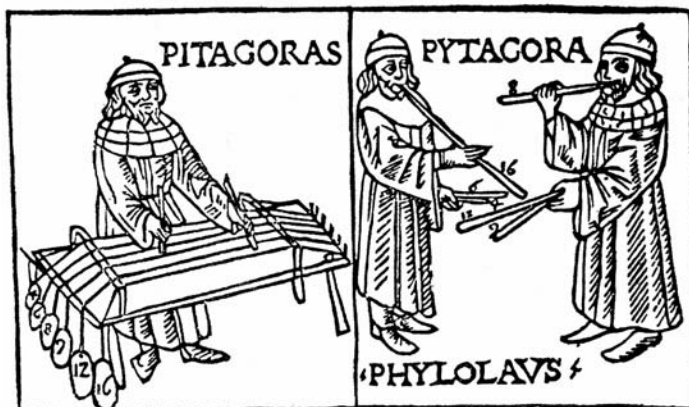
Pythagoras

“... those called Pythagoreans took hold of mathematics and were the first to advance that study . . . since they saw the attributes and ratios of musical scales in numbers and other things seemed to be made in the likeness of numbers in their entire nature, and numbers seemed to be primary in all nature, they supposed the elements of numbers to be the elements of all things that are.”

Source

Aristotle, *Metaphysics* 1.5 985b23–986a2, translated by Richard McKirahan, in *Readings in Ancient Greek Philosophy from Thales to Aristotle*, edited by S. Marc Cohen, Patricia Curd, and C. D. C. Reeve (Indianapolis: Hackett, 1995), 18.

Pythagoras (ca. 580–ca. 500 BCE) was born on Samos in Ionia but around 532 BCE moved to southern Italy, where he founded a religious brotherhood of Pythagoreans. The sources for Pythagoras and his followers are plagued by extraordinary difficulties, including forgeries, anachronisms, and the often fragmentary secondhand nature of the evidence. He himself was chiefly a charismatic teacher of a philosophical religion of transmigration of souls whose teachings were formed in sayings called *acousmata*. Followers performed rituals and lived a life of discipline that included dietary restrictions. Later Pythagorean thought was often anachronistically attributed to him. What is clear is that he did not see mathematics as separable from metaphysics or ethics. Pythagoras’s fundamental discovery was that of numerical proportions. For Pythagoreans, reality is basically mathematical: numbers and other mathematical things provide limits for the unlimited stuff(s) of the world. (The unchanging permanent nature of Pythagorean mathematics perhaps led Plato to his Forms.) The limits are bonded to the unlimited stuffs via harmonies. In music, for example,



Pythagoras recognized the mathematical relationship between the length of a vibrating string, a column of air, or the size of a percussion instrument, and notes of the musical scale. From *Theoricum opus musicae disciplinae*, 1480. (Jupiterimages)

➤ PYTHAGORAS IN LEGEND

There are two versions of Pythagoras: the historical figure and the legend.

About the historical figure we have few reliable facts, but we know that he was a charismatic religious figure and reportedly had a golden thigh, could be in two places at once, and once conversed with a river. Later, his Pythagorean followers attributed to him many discoveries and theories, including several mathematical discoveries as well as the most important elements of Platonic and Aristotelian philosophy. Sorting the facts from the fiction is nearly impossible. And thus at the very beginnings of Western science, we find mysticism, ritual, and puzzling enigmas.

—Jacques Bailly

Pythagoras or his followers discovered the diatonic, harmonic, and enharmonic scales, which are mathematical structures (limits) harmonized with notes (unlimited).

Pythagoras’s most important followers were Philolaus of Croton (ca. 470–ca. 385 BCE), who wrote the first Pythagorean work, and Archytus of Tarentum (fl. 350–400 BCE). Among Pythagorean discoveries are the Pythagorean theorem, the incommensurability of a square’s side and diagonal, and Archytas’s method of doubling the volume of a given cube. Archytas also first identified the four branches of inquiry that became

the quadrivium of later education: arithmetic, music, geometry, and astronomy. He argued that the universe is infinite, as follows: if it is finite, then imagine standing at the edge and hold out a staff; the staff must extend beyond the supposed edge and thus identify a new supposed edge; go there and hold out a staff; repeat *ad infinitum*. Philolaus, whom Copernicus acknowledged, posited that the center of the world is neither the sun nor the earth but instead is a central cosmic fire. In general, Pythagoreans combined empirical observation with a priori thought, as is evident from the fact that their theories were not just religious beliefs but were also intended to account for observable phenomena. Because it caused turbulence in their religious beliefs about numbers, the Pythagoreans were quite disturbed by the discovery of irrational numbers: for instance, that the ratio of the side of a square to its diagonal are irrational (not representable by a fraction with whole numbers as denominator and numerator). They tried mightily to represent irrational numbers using whole numbers.

The members of the religious brotherhood of Pythagoreans were bound by a code of secrecy (which contributed to the conflicting incompleteness of what survives). Believing in the transmigration of souls, the religion incorporated intellectual activity into its rituals, which aimed at purifying the soul to attain union with the divine in part via a numerology that has been characterized as mystical. Many of their ideas are puzzling, such as a statement that jus-

tice is or resembles four and square or that one must not eat beans.

—Jacques Bailly

Bibliography

- Kahn, Charles. *Pythagoras and the Pythagoreans*. Indianapolis: Hackett, 2001.
- Riedweg, Christoph. *Pythagoras: His Life, Teaching and Influence*. Ithaca, NY: Cornell University Press, 2005.

Archimedes

Mathematicians and historians of mathematics have traditionally regarded Archimedes as the greatest of the ancient mathematicians. The justification for this high esteem can be found in ten of his works, which have been preserved to the present time. They show that he was a master of the Euclidean style in geometry, proving very profound propositions with strict rigor. At the same time, both the subjects he studied and the methods he employed went far beyond what was done by his predecessors. His *Quadrature of the Parabola* is an example of the Euclidean style, while his *Method* provides an entirely different, more intuitive approach to geometry. In both of these works he came right up to the threshold of the integral calculus, which was not fully developed for another 1,800 years. (Nor could it have been, since it depends on the combination of algebra and geometry known as analytic geometry.)

➤ PRAYER BOOK OR MATHEMATICAL STUDY?

This palimpsest containing works of Archimedes was discovered in Constantinople a century ago, when it was photographed and published. Its whereabouts from 1908 to 1998, when it was auctioned by Christie's, is something of a mystery. It is actually a thirteenth-century prayer book written over a tenth-century manuscript of several of Archimedes' works. Among those works was the *Method*, which revealed that Archimedes had used some intuitive principles later known as the method of indivisibles, or Cavalieri's principle.

—Roger Cooke



(Rick Maiman/Sygma/Corbis)

Archimedes was born circa 287 BCE and spent most of his life on the island of Sicily. Plutarch says that Archimedes belonged to the ruling family in Syracuse, and some of his works were addressed to King Hieron II and his son Gelon. Archimedes probably studied in Alexandria, since he was in correspondence with other scholars there. Some of the letters he wrote to accompany his papers have been preserved. They enable us to know him better than we know most other ancient mathematicians, whose lives and works have been preserved only in secondary sources. Several ancient authors mention him and report stories about him that have become legends. Some of the feats he was said to have performed when Syracuse was under siege by the Romans during the Second Punic War border on the miraculous, such as setting ships afire with burning mirrors or building a crane to lift Roman ships out of the water. Such tales must be regarded with extreme skepticism. It is well established, however, that he was killed by a Roman soldier when the Romans finally took Syracuse in 211 BCE. (Plutarch gives three different versions of the details.) The Roman orator Cicero reported finding Archimedes' tomb 150 years later when he was quaestor in Sicily.

The ten surviving works of Archimedes are beautifully polished specimens of mathematical exposition. His proof that the area of a sphere is four times the area of a disk of the same radius meets the highest standards of Euclidean rigor, but

Archimedes went on to reveal the intuitive considerations that led him to make this discovery. In addition to the solution of such difficult problems as finding the area of a sphere and the area of a segment of a parabola, Archimedes worked on physical problems. He formulated the basic principle of hydrostatics, that the buoyant force exerted by a fluid on an immersed or floating body equals the weight of the fluid displaced by the body. He stated the law of the lever, that bodies balance at distances from a fulcrum inversely proportional to their weights. And he did not shrink from purely practical computational problems. For example, he demonstrated rigorously that the ratio of the circumference of a circle to its diameter (the number we now denote π) lies between $3 + 10/71$ and $3 + 1/7$. In his famous *Sand-Reckoner*, he found a way to cope with numbers larger than the traditional Greek system of numeration could handle and illustrated his notation by expressing the number of grains of sand required to fill up the celestial sphere (in our terms, a sphere whose radius is that of the earth's orbit).

—Roger Cooke

Bibliography

- Claggett, M. *Archimedes in the Middle Ages*. Madison: University of Wisconsin Press, 1964.
- Dijksterhuis, E. J. *Archimedes*. Translated by C. Dikshoorn. Princeton, NJ: Princeton University Press, 1987.
- Heath, T. L. *The Works of Archimedes*. New York: Dover Reprint, 1953.

■ Introduction: Understanding the Body

The foundations of current medical practice lie in the period from 1000 BCE to 300 CE. Prior to this, medical knowledge was relatively limited. The Egyptians and Mesopotamians had a fairly good understanding of anatomy and did practice various types of surgery. For the most part, however, ancient Near Eastern medicine relied on incantations and various types of magical remedies to heal the individual because disease was usually understood to be caused by troublesome spirits (such as demons) or by the will of the deities.

Greek medical practices departed from this by taking a more empirical approach to the understanding of disease and illness. Arguably the most influential of these empirical-based understandings of the body was Hippocrates's conception of the body as consisting of four humors (black bile, yellow bile, phlegm, and blood). Every body was made up of these humors, and most illnesses were understood to reflect an imbalance in proportion of these humors. Divinities could still be called in for assistance for the ill. Asclepius, the god associated with medicine,

was one of the most important divine beings for intervention in human health. The ill could make pilgrimages to one of his sanctuaries, where his priests would perform healing rituals.

Indian and Chinese medical practices both integrated a particular cosmological sense of the world with medical practice. Both cultures believed that various elements that became out of balance could seriously harm the individual. Through combinations of spiritual practices and medical procedures (such as surgery), Chinese and Indian medical practitioners attempted to heal the unwell. The principles uncovered in ancient India and China are, in many cases, still foundational for traditional medicine in both of these regions today.

—Kevin M. McGeough

Greek and Roman Medicine

At first associated with magic, the art of healing over time became a religious art under the protection of the god Asclepius (the son of Apollo and father of Panacea, the goddess who cures all diseases, and of Hygea, the goddess of health). Medical sanctuaries were situated near springs, the most famous in Greece at Epidaurus. The development of the spice trade as a consequence of Alexander the Great's Asian expeditions en-

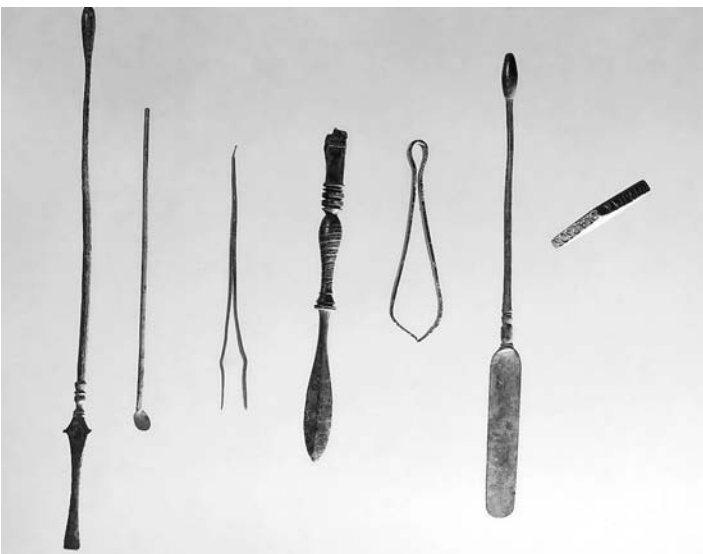
riched the pharmacopoeia thanks to the introduction of saffron, cinnamon, or coriander.

The most famous schools of medicine were those of Asia, but anyone who wanted to study medicine could also become apprenticed to a qualified doctor, although such studies were not subject to official control. Some doctors had private practices in city surgeries, while others traveled the country. Medicine and religion were intimately linked in healing sanctuaries, where priest and doctor might be one and the same person. Healing took place under the protection of a divinity. Once cured, the patient would show his thanks by dedicating a votive offering (an *ex-voto*) of wood, stone, or metal that represented the part of the body that had been unwell. These very realistic *ex-votos* enable us to recognize different complaints.

An Etruscan medicine based on magic and divination was already practiced at Rome, but the Romans imported the Greek cult of Asclepius and domesticated it as that of Aesculapius. Judging by the evidence of grave stones, a number of practitioners in Rome were slaves or emancipated slaves of Greek origin. Roman doctors were respected for their skills: there were surgeons who practiced minor operations and dedicated specialists who could cure eye diseases and even operate on cataracts. The eye specialist's medical chest was full and included such features as plant-based liquid eye drops and salts diluted with milk, oil, or egg white. To identify the eye drops, the doctor would put the name of the product and the infection to be cured on the preparation by means of a stone seal. On the sarcophagus of Sosias (in the Museo Nazionale, Ravenna) we can see a woman's eyes being treated by an ophthalmologist.

The tradition of thermal baths had a long history in the ancient world. Romans already knew of the therapeutic properties of certain springs. Many would go to Cumae or Baiae to take various kinds of cures: bathing in water or mud, taking shower baths, or taking the waters in a glass. Patients thought nothing of traveling to thermal springs in Britain, such as Bath, or to Gaul, where there were such important hydrotherapy centers as Vichy and Nérès-les-Bains.

Private doctors were also attached to gladiator schools, to circus factions, and to gymnasia. Galen, the greatest Roman doctor (born in Per-



Medical instruments and eye doctor's stamp, bronze, second century BCE–second century CE, Gallo-Roman, from Vertillum, France. (The Art Archive/Archaeological Museum Châtillon-sur-Seine/Gianni Dagli Orti)

gamum in 131 CE), learned his profession on gladiators, studying anatomy before becoming doctor to Marcus Aurelius. Galen's theories were to last for 13 centuries.

—Marie-Luce Murracchiole

Bibliography

- Cruse, Audrey. *Roman Medicine*. Stroud, UK: Tempus Publishing, 2004.
- Jackson, R. *Doctors and Disease in the Roman Empire*. Norman and London: University of Oklahoma Press, 1988.
- King, Helen. *Greek and Roman Medicine*. London: Bristol Classical Press, 2001.

Vedic Medicine of Ancient India

Ayurvedic or Ayurvedic medicine originated in the Vedic culture. The term “Ayurvedic” comes from the Sanskrit *ayur* (life) and *veda* (knowledge as truth). Thus, a literal translation would be “the truth of life.”

Our main source of knowledge of Vedic medicine comes from the *Vedas*, which are ancient texts that are difficult to date. They include sacred texts (*Sambhitas*) from the Vedic period, theological commentaries (*Brahmanas*), and philosophic supplements (*Upanishads*). One of these sacred texts (*Atharvaveda*) comprises magico-religious formulas (*atharvan*), which show archaic medical practices. In these texts disease is considered a consequence of sin, which is caused by devils. Healing involves prayer and penance (associated with magic rituals) and the use of other remedies, such as medicinal plants. Knowledge of the human body is very limited, but some knowledge concerning the functions and significance of bile, phlegm, and breath is suggested.

The historical origins of Ayurvedic medicine are very difficult to establish since the sources provide mythical accounts involving gods and legendary figures. The most concrete evidence for the early history of these medical practices comes from collections of medical texts. The oldest ones are the large collections *Susrutasambhita*, *Carakasambhita*, and *Bhelasambhita* attributed to Susruta, Caraka, and Bhela, respectively. These were historical personages who became semilegendary figures in the Vedic tradition. These collec-

YUNANI MEDICINE

Less well known than the Ayurvedic system, Yunani medicine is another classic Indian medical system that continues to thrive. The name refers to the Arabic word for Greece, “Al Yunaan.” The doctrine is composed of Arabized ancient Greek medicine, received mainly from the book *Al-Qanun fil-Tibb* (*Canon medicinae* in Latin) of the Persian physician Avicenna (980–1037). The Yunani medical doctrine is based on the four humors: *safr*a (yellow bile), *dam* (blood), *sauda* (black bile), and *balgham* (phlegm). The alteration of these humors causes disease. To treat such imbalances, doctors administer diets, herbal remedies, and in some cases bloodletting.

—Justo Hernandez

tions were written in the first century BCE but were enriched and elaborated during the following eight centuries. They have been commented upon and systematized many times since their original composition.

Ayurvedic medical theory posits that the universe is composed of five elements (*dhātu*): ether, air, water, earth, and fire. Three of them play a fundamental role in the health and diseases of the microcosmos (which are conceptualized as an organism). So, air embodies the breath (*prana*), fire the bile (*pitta*), and water the phlegm (*kapha*). Each one of these elements has specific qualities (for instance, *prana* is dry, cold, light, clear, and raw) and is divided into five varieties residing in different somatic zones. So, variations of *prana* are the source of the following organic functions: the articulated word, breathing, digestion, bodily excretions, and the movement of blood. Diseases depend on the imbalance or relative predominance of the elements, which are transformed in *dosha* (disturbed elements).

The *Carakasambhita* collection of medical texts deals with 80 diseases related to *prana*, 40 related to *pitta*, and 20 related to *kapha*. The main causes of disease (as understood in this collection) are environmental factors, dietary factors, and divine punishment. The texts do offer clinical and epidemiological observations and reflect knowledge of the precise difference between tumor and abscess, the furunculosis, the sweet urine in diabetes, and the mosquitoes of

the genus *Anopheles* as vectors of malaria. Surgery seems to have been highly advanced. The *Susrutasambita* collection mentions medical instruments, which include several types of scalpels, forceps, probes, cauteries, vaginal and rectal specula, and otoscopes. For anesthetics, substances such as opium and *Cannabis sativa* were used, as was hypnotism. Surgical operations are described in the collection of texts attributed to Susrata, such as laparotomy (surgery on the abdominal cavity), rhinoplasty (surgery of the nose), and cheiloplasty (surgery on the lips).

—Justo Hernandez

Bibliography

- Azmi, Ahmad Altaf. *History of Unani Medicine in India*. New Delhi: Centre for History of Medicine and Science, Hamia Hamdard, 2004.
- Dash, Vaidya Bagwan, and Suhasini Ramaswamy. *Ayurveda: The Science of Traditional Indian Medicine*. New Delhi: Lustre, 1998.
- Kulkarni, P. H. *The Encyclopaedia of Āyurveda*. Delhi, India: Sri Satguru Publications, 2005.
- Narayana, Ala. *History and Fundamentals of Ayurveda (Indian System of Medicine)*. S. I.: s. n., 2000.
- Rao, M. S. "The History of Medicine in India and Burma." *Medical History* 12(1) (January 1968): 52–61.
- The Roots of Āyurveda: Selections from Sanskrit Medical Writings*. Translated with an introduction and notes by Dominik Wujastyk. London: Penguin Books, 2003.

Early Trepanation

Trepanation (trephination) is the process of making an opening in the living human skull and has been performed in many cultures throughout recorded history. The procedure derives its name from the Greek *trypanon*, or rounded bore hole. The reasons for performing this procedure vary widely among cultures and were often bound to specific cultural, spiritual, and healing beliefs. Perhaps the best way to approach the topic of why this procedure was performed would be to accept that there was a rational justification that balanced spiritual and mystical beliefs with pragmatic treatment for traumatic injuries. In order to truly understand the meaning of this we must have an understanding of the role of the healer, the patient, the process, and its outcomes and

how they were intricately interwoven with a unique society and its beliefs. This is not a simple task, since the procedure spans a wide geographic area and virtually all of recorded history. For example, skulls showing signs of trepanation have been identified in Europe, Africa, New Guinea, Tahiti, New Zealand, Asia, and North and South America and have been dated (skulls found along the Dnieper River) to the Mesolithic period, 12,000 years ago.

Trepanning the skull most likely incorporated both mystical and practical reasons for seeking access to either the healer or the spiritual leader. For example, the belief that a person had been possessed by a malevolent spirit or perhaps had been cursed by someone wishing them harm may have led either the patient or the patient's family group to seek a solution. Although we must avoid the temptation to apply present-day societal norms while interpreting beliefs and motivations of other cultures in other times, it may be reasonable to assume that the decision to undergo a dramatic and painful procedure was not taken lightly. This would probably have included not only the patient but possibly the family and members of an extended social group. Disorders such as extreme mental illness, epilepsy, migraine headache, and various types of infections that affect the brain and central nervous system would be interpreted within the context of the group's beliefs. Traumatic injury would also have been a justification for seeking treatment.

Most often, the procedure would have been used to treat a traumatic injury. In fact, most of the trepanned skulls in some regions showed an apparent traumatic injury (with adjacent trepanation) on the left side of the skull, suggesting that most of these injuries would have come at close quarters by predominantly right-handed individuals. Reasons that did not include obvious injury include severe head pain caused by infections, tumors, or perhaps severe migraine headache. Another reason would have been seizures or bizarre behaviors associated with severe mental illness. To the patient's family or the group, this suggested the need for mystical or possibly surgical intervention. Sometimes these behaviors were attributed to a special ability to communicate with the spirit world or to mystical forces that threatened the individual or community.

There were four basic techniques of opening the skull. These were (1) scraping; (2) creating an elongated groove; (3) boring a hole with a drill or a circle of smaller close or partially overlapping holes, possibly using a chisel to open between these bore holes; and (4) four intersecting incisions that release the intervening bone fragment. The instruments would have included a stone or metal knife with a cutting and scraping edge as well as specialized trepans (identified in Mesopotamia and dating to 4000 BCE).

Among groups using sharpened stone, bone, or even metal knives, the most common tools appear to have features in common with what we consider to be modern surgical instruments. A portion of the tool served as a cutting edge that had either a pointed cutting tip, an elongated flat cutting edge, or a crescent-shaped cutting surface. There are only scattered firsthand descriptions and even rarer video excerpts of the procedure being performed. The performance of the procedure was often restricted to the healer, the patient, and one or more assistants. There is, however, evidence that the entire community may have participated in the healing ritual, which included a trepanation. Revealing these procedures to outsiders in settings where the procedure had been outlawed by a regional governmental agency made it exceedingly difficult to observe the procedure within a cultural milieu. From existing descriptions we know that the procedure frequently included the use of a sedative hypnotic substance to calm the patient, onlookers, and possibly even the healers themselves. Without considering the ritual that accompanied the procedure, the first step in performing the trepanation would require the separation of the skin of the scalp. The scalp is richly vascular, and the separation of skin layers with the division of a tough underlying connective tissue layer would have meant that bleeding would need to be slowed or stopped. The skin of the scalp may have been rolled back using leaves or substances that had a coagulant property to stop the bleeding. Once the skin had been separated and the bleeding was controlled, the outer bone of the skull was now visible. There is evidence that pigments or inks were used that seeped into and revealed small cracks caused by a traumatic injury. This also highlighted the sutures or irregular lines

where bones of the skull normally join. These were often avoided perhaps in the belief that these represented a form of supernatural writing on the bones themselves.

The skull consists of three layers: an outer hard bony layer, a middle spongy softer layer, and an inner bony firm layer. By combining a cutting and scraping movement with a Tumi knife (middle Chimu) or copper blades (Mochica period), each of these layers was sequentially exposed. The wound and skull surface were washed frequently during the procedure to remove bone fragments and scrapings. Upon reaching the middle layer (diploe) the procedure may have been interrupted for a period of time. Depending on the sufferer's condition, it may have been a good time to shift position, ingest additional sedative or analgesic substances, or simply rest. The procedure may have been ended at this point; however, there is evidence that many procedures continued beyond this point. After the inner table of the skull bone was exposed, the process of cutting and scraping continued until the inner table of bone had been removed and the rubbery covering of the brain, the dura, lay exposed. This type of approach usually resulted in a smaller inner hole with gently sloping edges forming a shallow depression. The Dolem (primarily women) in central France used a unique T-shaped Sincipital groove following the midline of the skull and may have used a hot stick or rod to burn (cauterize) bleeding vessels in the scalp. At this point the procedure would have been essentially completed, and the process of closing the wound would be undertaken. The edges of the skin were approximated, possibly sutured or loosely fastened, and the wound was covered using combinations of leaves and vines and sometimes woven textiles, stone, metal, or fragments of gourd. This entire process may have taken hours to complete. Only time would then determine whether the release of a malevolent spirit or any other desired goal of the treatment had been achieved or if the patient would have needed to undergo additional procedures or treatments.

Contrary to our expectation that the trepanation procedure would, under those conditions, have been uniformly fatal, there is evidence that patients not only recovered from the procedure but had undergone additional and occasionally many more trepanation procedures. Skulls have

been identified that show clear signs of bone formation (healing) around the edges of trepanned openings. Skulls from the Yantyo tribe in Peru show healing in more than half of the trepanned skulls examined. One Incan skull showed evidence of up to seven bore holes. Several skulls show more than one procedure and show signs of healing at different ages, suggesting that the procedure was performed several times over an extended period of time. Given the rate of bone formation and the number of openings, the procedures may have spanned years. What ultimately caused the deaths of these individuals may have had very little to do with the trepanation procedure itself. Several skulls that showed evidence of multiple procedures show healing in some but not all openings, which suggests that the patients had undergone treatments up until their deaths. The Greek literature refers to an ominous darkening or reddening of the bone, which suggests inflammation and death of the bone called osteomyelitis. This is characterized by an irregular surface around the trepanation site in some of the examined skulls. Relatively re-

cent observations of how patients have undergone the procedure demonstrate dramatic hypertrophic scars where the procedure had taken place. These scars, sometimes referred to as keloids, appear as large bulging masses of skin bordering the trepanation site and actually served to provide substantial protection for the brain underlying the section of skull bone that had been removed. Occasionally, fragments of bone that were removed following trauma or rounded portion of bone removed by cutting between smaller holes (rondelles) may have been worn by the patient or healer as an amulet.

—Richard Siderits

Bibliography

- Arnott, Robert, Stanley Finger, and C. U. M. Smith, eds. *Trepanation: Discovery, History, Theory*. Exton, PA: Swets and Zeitlinger, 2002.
- Finger, Stanley. *Origins of Neuroscience: A History of Explorations into Brain Function*. New York: Oxford University Press, 2001.
- Majno, Guido. *The Healing Hand: Man and Wound in the Ancient World*. Cambridge: Harvard University Press, 1975.

■ Introduction: Understanding Human Action

Many historians see the Greeks as the first history writers. Although the Greeks were not the first to record events that took place or to keep track of people who ruled (the Mesopotamians and Egyptians both started doing this much earlier), the Greeks are often considered to be the first historians who attempted to understand human actions without divine explanations. It is true that there is a fundamental difference between the type of history that Homer produced and the type of history that Thucydides produced. While both discussed wars that were important to Greek culture (the Trojan and Persian wars, respectively), Homer's explanation of the causes of the war are almost entirely based on divine intervention, whereas Thucydides' explanations are almost solely based on the activities of men. This was an important intellectual breakthrough,

and one that is apparent in this encyclopedia, whereby there are no divine explanations given to understand world history.

Although the histories written by the Greeks has been incredibly important, the Greeks were not the only people from 1000 BCE to 300 CE who attempted to understand human behavior, culture, and history through writing. The authors of the Bible attempted to understand the course of history. This is especially true of the Old Testament/Hebrew Bible in which the authors of some of the biblical books attempted to understand why various bad things happened to the people of Israel despite the fact that they were the chosen people of God. The New Testament provides a historical account in a more Greek fashion, providing in many instances (such as the book of Acts and arguably the Gospels) a relatively straightforward account of the

major events in the life of Jesus and the early Church. Of course, what is not typical of Greek historians in these accounts is the discussion of miracles and direct interventions of God.

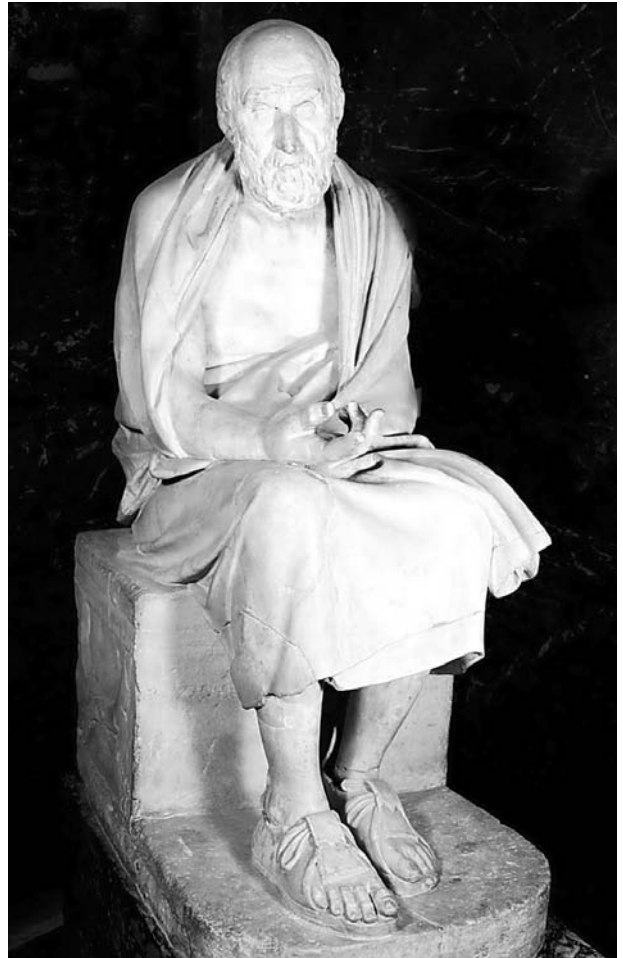
Chinese historical writing also attempted to unearth certain patterns of behavior. Prior to 1000 BCE, the idea of the mandate of heaven came to play an important role in understanding the course of Chinese history. This mandate was a mandate that the gods gave kings to rule that could be withdrawn if the human king did not live up to the deities' expectations. This understanding was incorporated into further historical reflections and contributed to the creation of a pattern or framework for understanding Chinese political history. This pattern could be described as an undulating wave, with power oscillating between a strong central authority and a number of diffused decentralized powers.

—Kevin M. McGeough

Development of Greek and Latin History Writing

Prose history developed late among the Greeks, who viewed epics as a record of their past supplemented by local traditions and stories and by their own genealogies. Herodotus of Halicarnassus, called the father of history, gave the genre its name, for *historia* means “investigation” or “researches.” In the mid-fifth century BCE Herodotus traveled throughout the eastern Mediterranean. Moved by the same spirit of inquiry that prompted the first natural philosophers, he may have intended to write of the customs and monuments of the Egyptians, Scythians, or other peoples as earlier logographers (story writers) such as Hecataeus had done.

Herodotus unified his material by relating the struggle between the Greeks and the Persians. The Persian Wars (490–479 BCE) are the culmination of a narrative that gradually introduces all the players in their native places. Herodotus found both focus and method of presentation in another famous narrative of a great war, Homer's *Iliad*; it was natural for him and his successors to incorporate dialogue, public discourse, geography, and ethnography



Statue of seated man said to be Herodotus, third century BCE, Musée de Louvre, Paris. (Library of Congress)

into their histories, which all centered around foreign wars and domestic politics of the states involved.

Many ancient historians wrote of events contemporary with their lives and those of older living people and investigated as a modern journalist does by examining locations and questioning witnesses. Thucydides of Athens lived through and recounted the history of the Peloponnesian War (431–404 BCE). He established a more critical and rigorous methodology, including the quotation of official documents, and created a sensible chronological framework for the narrative; his narrow focus on the war embraced all that war involves, including its effect on the human spirit.

Most of Thucydides' successors fell short of his standards; two centuries later Polybius

➤ EARLY HISTORIANS ON THE IMPORTANCE OF THEIR CRAFT

In his brief preface to his *Histories* (of the Persian wars), written in the fifth century BCE, Herodotus notes:

“Herodotus of Halicarnassus here sets forth his researches, so that human accomplishments not fade with time, and that great and astonishing achievements of both Greeks and barbarians be remembered, especially the reason why they went to war with each other.”

The second-century BCE historian Polybius, in the introduction to his own *Histories*, wrote the following to explain his purpose in writing a history of Rome’s involvement in the Mediterranean world:

“Who is so thoughtless or so lazy that he has no desire to know how and under what kind of government the Romans in just about fifty-three years brought into their power almost the whole inhabited world, an unparalleled accomplishment, and who is so mad to see or learn other things that he would consider them more profitable than the study of history?” (*Histories* 1.1.5–6.)

—Barbara Saylor-Rodgers

Source

Both passages translated by author from the original Greek.

revived the scientific approach to history. Polybius, a Greek, documented the rise of Rome and the decline of important Greek states. The first Roman historians, such as Fabius Pictor, followed Greek models and wrote Greek prose, while others told the same stories in dramatized Latin epics. The Roman statesman Cato, Polybius’s contemporary, wrote the first prose history in Latin.

Standard Roman methodology was annalistic due the nature of Roman civic and religious records, but in the 40s BCE Sallust wrote monographs on important episodes in Roman history. Livy composed a monumental history from the founding of Rome until his own lifetime (he died in 17 CE) that included the wars, politics, and personalities of the creation of the Roman empire. Later Romans such as Tacitus (first century CE) and Ammianus Marcellinus (fourth century CE) took up the narrative, arranging events reign by reign so that the history of imperial Rome was very much like an extended biography of each emperor.

—Barbara Saylor-Rodgers

Bibliography

Fornara, Charles W. *The Nature of History in Ancient Greece and Rome*. Berkeley: University of California Press, 1983.

Kraus, C. S., and A. J. Woodman. *Latin Historians*. Oxford: Oxford University Press, 1997.

Marincola, John. *Greek Historians*. Oxford: Oxford University Press, 2001.

Writing about Foreign Lands

In writing about foreign lands, most historians and commentators of antiquity presented “the other” as barbarian in relation to their own societies, which they presumed were civilized. This is most notable in the cases of classical Greece, the Hellenistic kingdoms, Rome, and Han China. Most of the rhetoric describing so-called barbarians was typically made in contextual comparison with how these civilizations viewed themselves as relatively more sophisticated and developed. Barbarians were viewed as lacking in the ways of government, culture, and even demeanor. Initially, much of the contact that these ancient civilizations had with barbarians was through trade and military skirmishes in the frontiers. Historians, military commanders, and political leaders, who wrote the bulk of this literature, wrote of these people in an effort to document their contact and exposure to “the other” on the fringes of civilization.

As the Greeks expanded their dominions in various settlements beginning in the eighth century BCE, they developed a notion of a common identity as Greeks based on language, religion, and political structures (i.e., the *poleis*). Greek writers, such as Herodotus, writing in the context of the Persian Wars, exalted Greek virtues in comparison with Persian flaws, thereby illustrating this conceptualization of Greek superiority. In this sense, foreign lands were compared with Greece and were lacking in culture, arts, and political organization and were thus barbarian. Therefore, a barbarian was conceptualized as an uncultured and uncivilized non-Greek who had no conception of Greek freedom and no appreciation for culture or the arts and lived under despotism. Greek writings on foreigners, such as those by the historian Herodotus and the dramatists Aeschylus and Euripides as well as the depictions of foreign peoples in arts, illustrate the dichotomy between the cultivated Greeks and the uncouth barbarians. Greek mythologization of their identity made room for some peoples to exist as nonbarbarians, such as the Egyptians, given their contributions to Greek learning and civilization. During Alexander's conquests of the fourth century BCE, these worldviews were carried by Greek soldiers, viewing their enemies (and their allies the Macedonians) as barbarians being brought under the mantle of Greek rule. Alexander's successor Hellenistic rulers would see themselves as the beacon of civilization ruling over barbarian peoples, who sought to be civilized.

Roman conceptualizations of barbarians were similar to that of the Greeks in that people on the fringes of the Roman realms were considered barbarians. However, not all foreigners were barbarians, as Greeks and others who were perceived to have some level of civilization were not characterized in the same manner. Contact with barbarians was primarily through trade and military skirmishes on the Roman western and northern frontiers from the first century BCE well until the demise of the empire in the fifth century CE. Through the writings of Tacitus and Julius Caesar, the Germans of Germania were presented as lacking in traits attributed to the Romans and were thus uncivilized, while some of their military capabilities might have been somewhat ad-

➤ THE BARBARIAN IN LANGUAGE—SUBJECTIVITY THROUGH DISCOURSE

The dichotomy of civilization and barbarism existed in antiquity in the discourse of the Greeks, the Romans, and the Chinese. The Greek conceptualization of barbarian was manifested in the word *barbar*, which meant “strange” or “foreign” but also “to speak nonsense” (otherwise not speak Greek). The Roman word for “barbarian,” *barbarus*, which meant “uncivilized” or “savage,” also meant “the bearded one,” something deemed as unseemly in Roman society. The Chinese concept of *hu*, used to denote barbarians, also delineated similar characteristics on non-Chinese as the Greek and Roman meanings. In this manner, elements perceived as negative traits within these ancient civilizations (speaking nonvernacular languages, being slovenly, and having facial hair) were associated with barbarians in their respective discourses.

—Abraham O. Mendoza

mirable. The lack of political order, economic structures, and religion were deemed examples of German inferiority vis-à-vis the Romans.

Ancient China, particularly under the Han dynasty of the third century CE, regarded nomadic invaders from the north, such as the Xiongnu, Tatars, and Turkic peoples, as barbarians. These nomadic peoples who plagued the northern and western frontiers of China through military excursions and raids were deemed a major threat to the stability of the Han realm (hence the importance of the building of the Great Wall). Similar to the Greeks and the Romans, the Chinese conceptualization of the barbarian was that of a stranger or foreigner lacking in characteristics that the Chinese deemed as a mark of civility within their own society. However, the Chinese also deemed Europeans, Japanese, and other Asians as barbarians, even if they exhibited a semblance of civilization (as the Chinese qualified it), as they were not Chinese and therefore were foreign. Chinese writing on foreigners presented them as exotic and lacking in sophistication akin to that associated with Han Chinese culture and society.

—Abraham O. Mendoza

Bibliography

- Harrison, Thomas. *Greeks and Barbarians*. New York: Routledge, 2001.
- Waldron, Arthur. *The Great Wall of China: From History to Myth*. New York: Cambridge University Press, 2008.
- Williams, Derek. *Romans and Barbarians: Four Views from the Empire's Edge, 1st Century AD*. New York: St. Martins, 1999.

The Development of Chinese Historical Writing

The Chinese have the longest continuous tradition of historical writing in the world. From the Han dynasty that began in 202 BCE until the twentieth century, each dynasty wrote an official history of its predecessor. These 26 “Standard Histories” total some 40 million words. The first, *Records of the Grand Historian* by Sima Qian (ca. 90 BCE), was a groundbreaking achievement, but Sima had several previous examples to draw upon.

The earliest records in China, dating back to about 1200 BCE, were oracle bones, shoulder blades or turtle shells inscribed with questions to the ancestors about droughts, illnesses, warfare, childbirth, and so on. The bones were heated, and the resulting cracks were interpreted as yes or no answers. After the predicted events had transpired, a notation was often made on the bones. This type of dated record

gave way to the annals of individual Chinese states in the Spring and Autumn period (770–476 BCE). Indeed, the name of the period is derived from the most famous of these chronicles, the *Spring and Autumn Annals*, which was a record of major occurrences such as battles, deaths, and diplomatic dealings in the state of Lu. The *Annals* themselves are very sparse, with just a few words devoted to each event, and are arranged by year and season. The *Zuo Zhuan*, a lengthy commentary on the *Annals* composed in the third to second century BCE, offers much more detailed accounts. The *Annals* eventually became one of the five Confucian Classics, which also included an anthology of ancient poetry and another of political documents.

Sima Qian (ca. 145–86 BCE), a court astrologer and historian in the early Han dynasty, had access to these and other records (including several collections of historical anecdotes). He created a new type of universal history, one that tried to encompass the entire world, which he considered to be China and its nomadic neighbors, from legendary times to his own era. To accommodate such a vast scope, he organized his material into five sections: 12 basic annals that recounted the reigns of earlier dynasties and individual emperors, 10 chronological tables, 8 monographs on topics such as rituals or the economy, and 70 memoirs of either individuals or groups. In all, there were 130 chapters, each of which was written on a bundle of thin bamboo strips. The *Records of the Grand Historian* was the first history of China written by an identifiable author. Later dynastic histories followed the pattern established by Sima Qian with some modifications, the most important of which was that they narrowed their focus to single dynasties.

—Grant Hardy

DOCUMENTING THE RIGHTEOUS

“[Those who are righteous are praised in their own times,] but their deeds should also be written on bamboo and silk, inscribed on bronze and stone, and incised onto vessels in order to pass them down to later generations.”

—Mozi (468–376 BCE), a Chinese philosopher

—Grant Hardy

Source

Endymion Porter Wilkinson, *Chinese History: A Manual*. Rev. and enlarged ed. (Cambridge: Harvard University Asia Center, 2000), 444.

Bibliography

- Hardy, Grant. *Worlds of Bronze and Bamboo: Sima Qian's Conquest of History*. New York: Columbia University Press, 1999.
- Lewis, Mark Edward. *Writing and Authority in Early China*. Albany: State University of New York Press, 1999.
- Wilkinson, Endymion. *Chinese History: A Manual*. Rev. and enlarged ed. Cambridge: Harvard University Press, 2000.

■ Introduction: Technological Developments

Around 1200 BCE, the Iron Age is said to have begun in the Near East, although iron had actually first been used before this. What is markedly different about the Iron Age is the widespread use of iron in place of bronze. The manufacture of iron was one technological invention that led to a number of other technological discoveries. By 1000 BCE (although the start of the Iron Age is dated earlier), smiths were able to manipulate iron to make very strong tools. These tools had military ramifications in that stronger weapons and armor could be produced, a technological breakthrough that would not be surpassed militarily until the invention of gunpowder. Iron also allowed for better stonework, as the harder iron could be better used for quarrying and working hard rocks. Farming implements made of iron lasted longer and could be used in harder soil.

There were a variety of developments in agriculture beyond the manufacture of iron. The invention of the *karez* system in central Asia allowed arid regions to be cultivated. The same was true of the Andes, where new water systems transformed Peruvian ways of life. The Romans studied farming and adapted new farming techniques throughout their widespread empire. Associated with farming were the technologies for the production of textiles. New drawlooms in China allowed sophisticated fabrics to be made, and a felt-manufacturing industry developed in central Asia.

New construction technologies also appeared. The cities of Mesoamerica benefited from the ability to work stone and move heavy objects vast distances. The fact that stonework was so prevalent in Mesoamerican construction has meant that many of these ancient cities have survived in an environment where wooden structures would decay significantly. During the Qin and Han dynasties in China some of the most impressive monuments in the ancient world were built, most notably the Great Wall of China. The most impressive builders, however, had to have been the Romans, who left their mark wherever they went. The combination of the arch and concrete (neither of which they invented but

both of which they mastered the use of) allowed them to build on a massive scale with materials that still stand today.

—Kevin M. McGeough

Development of Iron Technology in Nok Nigeria

Nok culture is the name given to the earliest known iron-making polity in Africa south of the Sahara Desert. Its name derives from the village where its artifacts were first accidentally discovered during a tin-mining excavation in 1928. The settlements and artifacts discovered at Nok, Zaria, Abuja, Kafanchan, Jema'a, Ankiring, and other areas in the central part of Nigeria are collectively referred to as the Nok culture. The archaeological evidence reveals that actual metalworking in the forms of smelting furnaces, iron slag, and manufactures in iron and tin were practiced in these areas long ago. The period was radiocarbon dated to be between 1000 BCE and 200 CE, with most of the artifacts clustered within the period 500–200 BCE.

Some of the artifacts found in Nok include naturalistic and nonnaturalistic figures and heads, some with elongated ears; ground stone axes; iron axes and other iron tools; the baked clay draft pipe used in iron smelting; quartz lip plugs and other ornaments; and, most importantly, the striking terra-cotta.

In terms of the historical evolution of the Nok culture, the origin of the ancient Nok iron technology is still subject to debate among scholars. For instance, it has been suggested that the knowledge of iron metallurgy came to West Africa either from the metal traders of Meroe around the Middle Nile or from the North African Berber states. The Meroe refugees were said to have drifted to the West African region soon after the people of Aksum destroyed their kingdom. Thus, these Meroe refugees were credited with the diffusion of the knowledge of iron metallurgy. The second probable area of diffusion of iron technology into Nigeria was Carthage via Gao in North Africa and across the Sahara

Desert. Furthermore, there is even the widespread claim by the local inhabitants of Nok that the knowledge of iron working was indigenous to them. Nevertheless, it is apparent that the final word is yet to be said on the origin of iron technology in Nok.

It is interesting to note that artifacts from Nok were produced from alluvial tin works that included artifacts of both stone and iron. The inference is that the period of the Nok culture represented a time change and an overlap between the use of stone and iron. While it cannot be said categorically that iron technology spread only from Nok to other parts of the country, scholars can say that it was the most important single source of iron technology diffusion within Nigeria. The Nok culture had a great influence on Ife bronze culture and other culture areas in Nigeria. Indeed, it has been established through archaeological evidence that the Nok culture is the earliest known iron technology not only in West Africa but also in the whole of sub-Saharan Africa.

—*Olukoya Ogen*

Bibliography

- Ikime, Obaro, ed. *Groundwork of Nigerian History*. Ibadan: Heinemann, 1980.
- Olaniyan, Richard, ed. *African History and Culture*. Lagos: Longman, 1982.
- Rupp, N., J. Ameje, and P. Breunig. "New Studies on the Nok Culture of Central Nigeria." *Journal of African Archaeology* 3(2) (2005): 283–290.

Celtic Metalwork

Two historic periods in Celtic Europe were the Hallstatt and La Tène. Hallstatt is the name given to a late Bronze and early Iron Age culture that was predominant in central Europe for 200 years from about the eighth century BCE. The name is derived from the location near Salzburg, Austria, at which large quantities of objects typical of the period were discovered. Some of the earliest evidence of the Celtic people comes from this time.

During this stage, bronze work became more sophisticated, incorporating items worked from flat sheet as well as those that were cast

into their final form. The use of silver and iron increased. Some articles had embossed gold decorations. The geometric decorative motifs found from this period may have been the result of contact with the classical world. It was a time of great technical improvements in metalworking, which the Celts would take with them as they conquered new lands.

Hallstatt was followed by the La Tène period, named for an excavated site on the shores of Lake Neuchâtel, Switzerland. It encompassed the late Iron Age Celts and was roughly contemporaneous with ancient Greece. The La Tène period is considered by some to be the high point of Celtic culture, lasting from around 500 BCE to the Roman invasions in the first century CE. It is at this time that the Celtic people begin to use a silver coinage system based on those of the Greeks and Romans.

This is the first period with significant evidence of lost wax casting in western Europe. Previously, they had used mostly bivalve ceramic molds, possibly due to lack of domesticated honeybees. Lavish display pieces included colorful elements such as semiprecious stones and coral. A kind of red enamel that was held in place with cold connections rather than by fusing to the metal was also used. Thin gold foil and filigree were affixed to the surface of prestigious objects. In addition to personal decorative objects, metalworkers of the period produced mirrors, hanging bowls, and vessels for domestic use. In the middle of the first millennium BCE the Celtic regions of Ireland, Scotland, northern Britain, and Wales experienced the Iron Age. Iron was produced in significant quantities to make it available to most levels of society. In addition to swords and weapons, iron implements for the planting and reaping of grains, as well as axes and saws, can be found from this period.

The decorative style of La Tène was dominated by symmetrical spiral and circular geometric designs that were interlaced. Abstracted plants and animals were also arranged into stylized designs on heavily decorated surfaces. The La Tène period influenced medieval art in the few remaining Celtic areas of northwestern Europe.

In general, Celtic metalwork is best known for its geometric design motifs that frequently included stylized beasts, people, and floral ele-

ments within them. The layout for designs was planned on grids drawn on bone or slate prior to working in metal. The circular motifs were planned with compasses. These elements were initially shallow but became deeper over time.

The technical abilities of the ancient Celts included engraving, casting, etching, and overlays of thin metal cladding in bronze and gold. Coral, glass paste, shell, niello, and amber were used for color. They also plated with tin, gold, bronze, and a silver and copper alloy. Plating and inlaid materials seem to have been particularly used to create contrasting surfaces. The glass used was probably not true enamel but rather a glass paste that was pushed into recesses after being softened by heat. The glass was mixed with cuprous oxide to give it an opaque red color. Patterns in chasing and repoussé in bronze and brass were found on shield bosses and scabbards. Small pieces in relief were created in large quantities through an embossing system.

As a primarily warring society, the early Celts reserved most of their technology for armor and arms. Bronze was used for most weapons and tools prior to the rise of iron. It was used to make hardware for leather or wooden shields, swords, scabbards, knives, daggers, and horse fittings. A few domestic objects found from this period include cauldrons, mirrors, and wooden vessels decorated or held together by bronze.

Unlike its European predecessors, Celtic culture used iron in significant quantities. By approximately 600 BCE iron was becoming a more popular metal than bronze for tools and weapons. Early iron mimicked bronze forms at first.

Celtic graves show swords and wagon fittings in iron created for wealthy patrons. Having control of proficient blacksmiths was a mark of affluence and power and the nobility gave gifts of metalwork to show their status. Weapon makers frequently signed their best work. It is probable that smiths outside the system of royal patronage existed to make simpler utilitarian objects and tools. Blacksmiths also made firedogs and chains for cauldrons. Advancements in iron-working technologies underpinned many advances in the Celtic civilizations.

Periodically, bronze and iron were combined. One way of connecting iron and bronze

➤ CELTIC HANGING BOWLS

Some of the great mysteries of the Celtic people are the hanging bowls that they have left behind. It is not known what these were used for. Dating from the fifth to the eleventh centuries, they were made of beaten copper-based alloys. These bowls appear to have been suspended from three or four hooks. Mounts for the hooks, called escutcheons, were located outside and below the rim. They were decorated with openwork, enamel, or cast into the forms of creatures, and soldered or riveted on. Some bowls may have been polished on a lathe.

The objects that survive from the ancient Celtic people are primarily functional. Their geometric motifs continue to be popular to this day and were notably incorporated into the silver and pewter of Archibald Knox in the nineteenth century.

—Ana M. Lopez

was to physically cast the metal with the lower melting temperature, bronze, around the metal with the higher melting temperature, iron. This technique, called casting on, was especially found in horse and vehicle hardware. Items have also been found in which the iron object was heated and dipped in molten bronze in order to plate the iron. Bronze and iron were used together in some La Tène cauldrons for improved durability. Bronze was also inlaid into some iron weapons as an embellishment.

—Ana M. Lopez

Bibliography

- Chadwick, Nora K., and Barry W. Cunliffe. *The Celts*. London: Penguin Books, 1997.
- Green, Miranda J. *The Celtic World*. London: Routledge, 1996.
- MacGregor, Morna. *Early Celtic Art in North Britain: A Study of Decorative Metalwork from the Third Century B.C. to the Third Century A.D.* Leicester, UK: Leicester University Press, 1976.
- Stead, I. M. *Celtic Art: In Britain before the Roman Conquest*. Cambridge, MA: Harvard University Press, 1996.
- Youngs, Susan, and P. T. Craddock. *The Work of Angels: Masterpieces of Celtic Metalwork, 6th–9th Centuries AD*. Austin: University of Texas Press, 1990.

Development of Iron and Bronze Technology in Yayoi Japan

The Jomon era (ca. 14,000–300 BCE) inhabitants of Japan made their tools and weapons out of stone, bone, and wood; they did not have the knowledge of how to produce metal. Metallurgy came to the Japanese Archipelago during the Yayoi period (ca. 900 BCE–300 CE) with immigrants from the Asian continent.

For functional tools and weapons such as swords, halberds, axes, and sickles, the Yayoi used iron. The earliest iron tools are from sites in northern Kyushu. While recent radiocarbon determinations date these artifacts to circa 800 BCE, some archaeologists disagree with the date. The main disagreement arises from the fact that there is a paucity of contemporary iron artifacts from the Korean peninsula and China. Another

early iron tool has come from the Initial Yayoi site of Magarita on Kyushu, though the context of the find is also debated by archaeologists.

Scholars debate how widespread iron use was during the Yayoi period. One school of thought argues that iron was readily available throughout the Yayoi period but due to its value was heavily recycled. The other school of thought argues that since iron had to be imported from either China or Korea, it was a rare item and was used only by elites. Evidence backing their view is a 1980 study on the number of excavated iron artifacts from Yayoi contexts. Northern Kyushu yielded 663 iron artifacts, with 524 of them being from a Late Yayoi (ca. 100–300 CE) context. The Kinai region of Honshu yielded only 79 iron artifacts dating to the Yayoi period.

Bronze artifacts, particularly ceremonial items, are much more plentiful. The earliest bronze artifacts appeared in the Early Yayoi period and are Korean-style mirrors, bells (*dotaku*), halberds, spearheads, and swords. Later Western Han, Eastern Han, and post-Han mirrors from China were brought to the Japanese Archipelago. The Yayoi people also imitated these styles of mirrors. As time progressed, the traditional Korean forms gave way to new styles that were less functional and more symbolic. In the case of the bronze halberds, swords, and spearheads, they became larger in size, and their blades became thinner and wider. These oversized weapons would have broken quite easily if used in combat. The *dotaku* became several times larger, with linear relief decorations and knobs along the edges.

The majority of the Yayoi bronzes have not been excavated from settlement sites. Hoards and tombs are the most common places where bronzes are found. Hoards in Japan are deposits of bronzes buried on dry land. They can consist of as few as 1 bronze item or over 300, as in the case of the Kojindani hoard in Shimane prefecture. While not exclusive, there is a general patterning in the Yayoi hoards. *Dotaku* are found primarily in Kinai, the eastern Inland Sea region, and eastern Shikoku. Weapons are found primarily in Kyushu, western Shikoku, and the western Inland Sea. The interpretation of this patterning is complicated by mixed hoards containing both



Bronze bell, or *dotaku*, from the Japanese Yayoi period, about 200 BCE–200 CE. (Sakamoto Photo Research Laboratory/Corbis)

weapons and bells in both regions and the discovery of dotaku molds in Kyushu.

Like the hoards found in Europe, the purposes and functions of the Japanese hoards are also debated by archaeologists. Makoto Sahara has argued that bronzes were cultic objects and were normally stored in the ground. When the cult was abandoned, the bronze remained in the ground. Hideji Harunari has argued that the bronze artifacts were viewed as magical and were used as territorial boundary markers. A more general explanation is that they were hidden away in times of warfare and forgotten about.

While it is clear that the Yayoi people were able to manufacture items from bronze and iron, there is no evidence that they were able to smelt iron and copper and produce bronze from locally available materials. The process of extracting copper and iron from its ores produces massive amounts of waste material known as slag. So far, the oldest slag heaps found in the Japanese Archipelago date to the later half of the Kofun period. At Enjo, north of Kyoto, archaeologists have found evidence of iron smelting that dates to the fifth century CE. In the case of bronze, lead isotope analyses indicate that the bronze used in the dotaku and other Yayoi bronze artifacts originated either in China or the Korean peninsula. It implies that the Yayoi either recycled bronze objects from these two areas or directly imported bronze ingots from these two areas. Lead isotope analyses point to the earliest exploitation of copper ores in the Japanese Archipelago in the eighth century CE.

—Mark E. Hall

Bibliography

- Farris, William Wayne. *Sacred Texts and Buried Treasures*. Honolulu: University of Hawaii Press, 1998.
- Hudson, Mark J. "From Toro to Yoshinogari: Changing Perspectives on Yayoi Period Archaeology." In *Hoabinbian, Jomon, Yayoi, Early Korean States*, edited by Gina Barnes. Oxford, UK: Oxbow Books, 1991.
- Imamura, Keiji. *Prehistoric Japan: New Perspectives on Insular East Asia*. Honolulu: University of Hawaii Press, 1996.
- Mabuchi, H., Y. Hirao, and M. Nishida. "Lead Isotope Approach to the Understanding of Early Japanese Bronze Culture." *Archaeometry* 27(2) (1985): 131–159.

➤ BRONZE SMELTING IN ANCIENT ASIA

Bronze is an alloy consisting primarily of copper and tin and, in the case of East Asia, some lead. Copper can be smelted from a variety of copper-bearing minerals, and tin comes from the mineral cassiterite. In copper and tin smelting, the furnace operates at a temperature high enough to melt the resulting product. Lead is added to bronze to lower its melting point so that it stays a liquid longer when making elaborate castings.

Iron is smelted from a variety of iron ores. Iron smelting can be done one of two ways. In a bloomery furnace, a carbon monoxide atmosphere is created, and the heat and carbon monoxide reduce the iron oxides to iron. What is important to remember in the bloomery process is that the iron never melts; the gangue forms a liquid above 1,200°C and is squeezed out of the bloom by repeated hammering. An alternative way of producing iron is by using a blast furnace. The blast furnace operates at temperatures over 1,500°C, and the iron is melted as it is produced. The resulting product is called cast iron.

Nomadic groups are believed to have brought the bloomery process to China circa 700 BCE. The Chinese developed the blast furnace circa 500 BCE. The few metallographic studies of Yayoi iron indicate that both cast iron and bloomery iron were in use during the Yayoi period.

—Mark E. Hall

Chinese Innovations in Farming and the Geographic Sciences

Pre-Imperial China, and the Eastern Zhou era in particular, will probably always be best known for the rise and fall of its feudal political structure and its cultural and intellectual efflorescence. There were, however, several quite astounding technological and scientific innovations during this period. Interestingly and ironically enough, many of them date to the fourth century BCE, a time during the Eastern Zhou called the "Warring States," when warfare between states had reached its most intense level.

One supremely important innovation in pre-Imperial China was the trace harness. This invention, which dates to the fourth century BCE,

➤ JOSEPH NEEDHAM'S *SCIENCE AND CIVILISATION IN CHINA*

Only during the past few decades have Western scholars begun to realize just how advanced pre-modern Chinese technology and science really were. (“Pre-modern China” refers to China before 1840 or so.) The late great British China specialist Joseph Needham and his team of researchers at Cambridge University worked on the history of Chinese technology and science since the 1950s. Together they produced a monumental, multivolume work entitled *Science and Civilisation in China*, a project that is still ongoing despite Needham’s death. In this continuing work, Needham and others have presented a bewildering array of overwhelming evidence showing that pre-modern China was quite advanced in engineering, agriculture, industry, medicine, warfare, transportation, mathematics, and the physical sciences. The results of their research prove conclusively that many inventions, discoveries, and innovations long thought to have been accomplished by Europeans actually originated in China several hundred years before they were known in the West.

—David Curtis Wright

revolutionized agriculture. Prior to the advent of the trace harness, farm animals that pulled plows were harnessed around their necks and stomachs with something called a throat-and-girth harness. This was, of course, inefficient and cruel because it choked the poor beast when it pulled any significant burden. There is evidence that in the fourth century BCE, the Chinese began placing a yoke across the animal’s chest, from which traces or shafts connected it to a carriage. This simple and ingenious innovation placed the burden not on the neck of the animal but on the chest, which was much more able to withstand the strain of pulling loads. Astonishingly, this simple innovation was unknown in the ancient Middle East or the Roman empire, and it did not emerge in medieval Europe until the eighth century CE, about nine hundred years after it was first used in China.

By the sixth century BCE, at the very latest, the Chinese were using iron plows. Chinese de-

signs of the plow included a remarkably efficient one that used a plowshare to cut the soil and a moldboard to turn the soil over as the plow was pulled forward. This type of plow, which was finally introduced into Europe during the seventeenth century, contributed greatly to the European agricultural revolution. By the third century BCE, the Chinese also understood the importance of planting crops in long, straight lines. Plants placed in straight lines usually do not interfere with each other’s growth and allow winds to pass through without causing extensive crop damage. Straight-line cropping was not widely practiced in Europe until well into the eighteenth century CE.

Other innovations in ancient Chinese geology involved the utilization of energy sources. By the fourth century BCE the Chinese were drilling for natural gas and using it as a heat source, thus preceding Western natural gas drilling efforts by about 2,300 years. Natural gas seems to have been discovered accidentally by workers who were drilling in the earth for brine, or water saturated with salt from salt deposits in the earth’s crust. When they found both brine and natural gas together, the ingenious and practical Chinese used the natural gas to boil vats of the brine, thus removing the water and leaving the salt behind. Some drilled wells yielded only natural gas, and the Chinese called these “fire wells.” Later innovations facilitated the transport of natural gas through bamboo pipelines and even the use of portable tanks to carry it.

Another technology that is fundamental to the practice of geography today that has its roots in ancient China is the compass. Both the Europeans and the Chinese seem to have made the first use of the compass in navigation during the twelfth century CE, but the Europeans obtained the compass itself from China, where it had been known since the fourth century BCE. The compasses used in twelfth-century navigation involved the use of magnetized needles, but the earliest Chinese versions of the compass seem to have been spoons or other objects fashioned from naturally magnetic lodestone. The earliest mention of a simple lodestone compass occurs in a fourth-century BCE Chinese source, but a more detailed description dates to the *Han Feizi* (*Master Han Fei*), the third-century BCE work

on Legalism. The Chinese term for compass is “south-pointer” or “south-pointing needle” because the ancient Chinese thought of south, not north, as the cardinal direction.

—David Curtis Wright

Bibliography

- Ronan, Colin A., ed. *The Shorter Science and Civilization in China: An Abridgement of Joseph Needham's Original Text*. 5 vols. New York: Cambridge University Press, 1978–1995.
- Temple, Robert. *The Genius of China: 3,000 Years of Science, Discovery, and Invention*. New York: Simon and Schuster, 1986.
- Wright, David Curtis. *A History of China*. Westport, CT: Greenwood, 2001.

The Camel Saddle

The domestication of the camel was crucial to the opening of the desert for trade and travel. Nonetheless, taming the animal did not complete the camel's transformation into a useful animal. Due to the camel's unique physiology, it is not the easiest animal to ride or carry heavy loads over a long distance. Whereas the horse offers a stable platform for rider and load, the camel's hump or humps was a considerable obstacle. In order to use the camel to its maximum potential, a saddle was necessary. There are three places where one can place a saddle on a camel: on top of the hump, behind the hump, and in front of the hump. Not surprisingly, geographic diversity led to a wide range of saddle styles and placement.

Although the camel's domestication dates to roughly 3000–2500 BCE in Arabia, the camel saddle does not appear until sometime between 500 and 100 BCE in North Arabia. The earliest depiction of it is found on Roman coins in the first century BCE. However, there is little reason to doubt that it was in use by the Nabateans and Bedouin tribes prior to this. Indeed, Bedouin probably first invented the saddle out of necessity to survive the desert, as it allowed them to carry more possessions and, most importantly, more water. The North Arabian saddle became the most common form of saddle used in the Middle East, although other varieties came into being as well.

THE CAMEL SADDLE AND WAR

One of the most important advantages of the North Arabian saddle was that it provided a stable platform for its rider. This was crucial not only for long-distance transportation but also in transforming the camel into an effective animal in war.

With the dispersal of the North Arabian saddle with its inherent stability, new forms of weapons were introduced to other regions of Arabia. The adoption of the northern variant of the saddle allowed for the use of long lances in mounted combat in Yemen. Previously this was not used or was used infrequently, as a rider on the South Arabian saddle could topple from the saddle by the impact of his lance against an enemy due to the saddle's instability. The North Arabian saddle also benefited the rider by providing a height advantage, which compensated for the camel's inferiority to a horse in combat.

By mastering mounted combat on camelback, Bedouin tribes then became a crucial factor in the trade routes. Rather than simply being camel breeders and customers, the Bedouin could now give caravans a simple choice. The caravans could either use them as guards or risk being attacked by the Bedouin. Their riding skills were also superior to those of sedentary guards. Thus, they could attack and ride off into the desert and make a clean getaway. The requisitioning of Bedouin guards became essential simply because one could not take a sizable body of cavalry on horseback into the desert due to water requirements.

—Timothy May

The saddle itself both accommodates rider and secures baggage, as it is a frame that works around the dromedary camel's hump. Both saddle bows are comprised of straight sticks that form a V-shape or lopsided X, with the intersection of the V serving as the bow. These sit on pads so as not to chafe or irritate the camel. The bows are connected by sticks or framework on the side of the camel, with the hump protruding above it all. The riders sit upon a pad atop the hump more or less in the middle of the camel; however, the rider's weight is distributed to the framework and to the camel's ribcage. If the camel was used to carry baggage, the load must be divided into two equal portions and tied to

the side of the saddle. If the load is not properly distributed, it will cause undue stress to both the camel and the saddle.

Although the North Arabian saddle became the most common form, the South Arabian saddle is older in design, dating to the ninth century BCE. The major difference is that the saddle bows were closer to the hump, and the whole apparatus sat on top of a cushion on the camel's hump, with the rider more toward the back of the camel. Although the South Arabian saddle is still in use today, the North Arabian style also became ubiquitous in Yemen. The primary reason seems to have been that the North Arabian style simply provided a more stable platform than the South Arabian saddle.

Other saddles also existed in North Africa. The Tuareg in the region of the South Sahara desert placed the saddle in front of the hump. The advantage here is that it provided more control over the camel, as the rider was closer to the camel's head and neck. Furthermore, the rider could also control the camel with his feet and toes, thus leaving his hands free for other activities. These saddles are more chairlike in appearance than most, with a high back and a small bow in the front, and they sit squarely on the shoulders of the camel. In between the Tuaregs and Arabia are a wide variety of saddles with their positioning on the camel slightly different. Nonetheless, scholars believe that the North African or Saharan forms of the saddle ultimately are derived from the North Arabian saddle, as saddles closer to Arabia bear a close resemblance to the North Arabian saddle and gradually transform into one similar to the Tuareg version. This is supported by petroglyphs found in the Sahara. Other forms, specifically for baggage, are baskets hung on either side of the hump without any sort of wooden frame.

The Bactrian camel represented a new challenge due to its multiple humps. It is not certain when saddles came into use for the Bactrian camel, but it was definitely in use by the time of the Northern Wei dynasty (386–534 CE). This saddle was made with felt padding surrounding the camel's humps and then two boards or bundles of sticks on the side. Additional felt helped strap the boards or bundles to the camel's body, connecting the sides by running between the

humps. Typically the Bactrian camel was a beast of burden, and thus the main concern was attaching bundles to the saddle. A rider could of course ride on top of the saddle, sitting between the humps.

—Timothy May

Bibliography

- Bulliet, Richard W. *The Camel and the Wheel*. New York: Columbia University Press, 1990.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Knauer, Elfriede Regina. *The Camel's Load in Life and Death*. Zurich: Schöck Söhne, 1998.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

Roman Concrete

The Romans originally learned the art of building from the Etruscans, who in turn had been taught partially by the Greeks of south Italy; it is not surprising, then, that their early buildings in Italy resembled those of both cultures. The first revolutionary phase of Roman architecture occurred with the conquest of the eastern Mediterranean in the last two centuries BCE, when Romans adopted the classical and Hellenistic Greek forms, replacing the broad, squarish, and top-heavy Italian proportions with the oblong, tall, and airy Greek style. But their real contribution to civil engineering was structural concrete.

Concrete, though not an invention of the Romans, was perfected by them about 200 BCE, and by the first century it had become the principal material for foundations and walls. In order to obtain better footings for their buildings, the Romans were willing to alter the natural contours of the terrain and to sink deep and substantial footings of unfaced concrete. For the exposed walls above, the concrete, made of lime and volcanic sand with fragments of stone scattered through it, was poured semifluid into a wooden mold; when the planking was removed the wall was faced with stone or brick wherever it was to

be seen. From about 200 to 50 BCE the facing was made of small, irregular bits of stone, each with a smooth outer surface and a pyramidal tail set into the concrete (*opus incertum* meaning “irregular work”). For the next hundred years or so the facing stones were cut as squares and arranged corner-to-corner in rows to give a symmetrical appearance like the meshes of a net (hence the name, *opus reticulatum*, or “net work”). As early as the time of Augustus the concrete was being faced with kiln-dried bricks, a method (called *opus testaceum* or “brick work”) that reached its peak in the second century CE under the Emperors Trajan and Hadrian, hence the familiar brick facades of many of the surviving buildings throughout the Mediterranean constructed during the prosperity of the Roman empire. Finally, as the empire declined so, too, did methods of construction, with ever greater quantities of mortar being used between the layers of brick.

While the stone or brick facing of visible walls was not structurally necessary, the pointed ends served to bind the concrete, in fact, an early form of modern reinforced concrete. Concrete was so inexpensive and easy to use that the Romans even made columns of it: cylindrical concrete cores faced with slightly curved bricks and smoothed with liquid cement into which were set thin, prefabricated strips of fluted marble.

With their development of concrete the Romans were able to produce a whole new style of architecture based on interior spaces rather than on the Greek ideal of external beauty. As a result, Roman architecture differs from Greek design in a number of very significant ways: the true arch, for example, was substituted for the classical Greek post and lintel, and the concrete vault was used as a means of enclosing a space with a continuous curve. In town planning, too, there were innovations: rather than using buildings as central focal points in surrounding open areas, as was the usual Greek manner, the Romans used their facades to limit open central spaces; the Greek temple, for example, was now placed on a high Roman podium and positioned to form one side of a colonnade that surrounded an open central court. The curve, which had been used infrequently in Greece, became a dominant element of Roman design: the rectan-

gular temple often became a rotunda and the square niche became a semicircular exedra. Finally, where the Greeks had used the natural landscape for the dominant setting of a temple or for the sloping seats of a theater, the Romans—whose architects were always engineers as well—created their own landscapes, by building (for one example) a free-standing theatrical structure, or by altering the natural topography to create a man-made balance and symmetry.

The use of the vault and dome in enormous structures is certainly the most memorable feature of imperial Roman engineering. This method of covering large halls was possible only after the perfection of concrete and the development of brick relieving-arches that formed the skeleton of the vault. Both the arch and barrel vault had been used long before in Mesopotamia and Egypt, and at Rome they became popular as early as the second century BCE. But it was principally in the imperial baths, palaces, and temples that the Romans perfected the technology of roofing great interior spaces. Stunning examples can be found in Italy (the palaces of the emperors on Rome's Palatine Hill and, most impressively, the dome of the Pantheon) and throughout the Romanized empire. Regrettably, we have almost no documentary evidence for the construction of these magnificent vaults, so the survival of the Pantheon is doubly important, first for the breathtaking elegance of its interior space, and because it gives us an unparalleled insight into the revolutionary methods of Roman imperial architects—a perfect combination of engineering and beauty.

—John W. Humphrey

Bibliography

- Drachmann, A. G. *The Mechanical Technology of Greek and Roman Antiquity. A Study of the Literary Sources*. Copenhagen: Munksgaard, 1963.
- Healy, J. F. *Pliny the Elder on Science and Technology*. Oxford: Oxford University Press, 1999.
- Humphrey, J. W. *Ancient Technology*. Westport, CT: Greenwood, 2006.
- Humphrey, J. W., J. P. Oleson, and A. N. Sherwood. *Greek and Roman Technology: A Sourcebook*. New York: Routledge, 1998.
- Ward-Perkins, J. B. *Roman Imperial Architecture*. 2nd ed. Harmondsworth, UK: Penguin Books, 1981.

Roman Developments in Mining Technology

During the Roman republic most important mineral resources were found in the Iberian Peninsula, which was rich in gold, silver, lead, copper, and iron. Other important sources of minerals were found in Britain, the Balkans, and Dacia.

The Romans practiced three main types of mining. Alluvial deposits of gold and tin were extracted by panning. Surface ores could be extracted through simple open-cast excavations. The Elder Pliny describes the process of hushing whereby water was diverted to wash away soil and rock from surface deposits. The water could also be directed through subterranean galleries to blast away parts of the mountain, a process that Pliny calls *ruina montium*. Aqueducts supplied water over a distance of 6 miles (10 kilometers) from the river Cothi to the gold mines at Dolaucothi in southern Wales. The flow of water was regulated by tanks placed on the slopes above the mines to enable a sudden release of water. Once the surface deposits were depleted, tunnels or shafts were dug to extract deeper veins of ore, requiring greater costs of labor, ventilation, and drainage. Remains of a wooden water wheel from Dolaucothi show that mechanical drainage was used, although Pliny says that manual draining was also employed (*Natural History* 33.97).

The Romans rarely developed new mining areas, instead expanding the scale of earlier operations. The scale of Roman operations is best

seen in the mining district of Las Médulas in northwestern Spain, where between 3.5 billion and 8.1 billion cubic feet (100 million and 230 million cubic meters) of soil were removed. The mines were supplied by eight aqueducts extending for nearly 248 miles (400 kilometers) and supplying 16.9 billion cubic quarts (16 million cubic meters) of water a year. Pliny records that the regions of Asturica, Gallaecia, and Lusitania supplied 20,000 pounds of gold per annum.

Under the empire the most important gold and silver mines were controlled by the Roman state. A set of mining regulations dating to the second century CE came from the district of Vipasca, near Aljustrel, in Portugal. The copper and silver mines were controlled by an imperial procurator, and mining concessions were leased out to companies, or *societates publicani*.

—Benedict Lowe

Bibliography

- Davies, O. *Roman Mines in Europe*. Oxford: Oxford University Press, 1935.
- Edmondson, J. C. *Two Industries in Roman Lusitania: Mining and Garum Production*. Oxford: Oxford University Press, 1987.
- Healy, J. F. *Mining and Metallurgy in the Greek and Roman World*. Ithaca, NY: Cornell University Press, 1978.

Roman Theories on Farming

Marcus Porcius Cato and Marcus Terentius Varro were Roman aristocrats who wrote manuals on agriculture for other members of the nobility in the first century CE. Varro dedicated his manual to his wife, who had just bought a farm. The treatises of Cato and Varro gave readers practical advice: how large an estate to buy, how many olive trees to plant, how many slaves to buy, and the like. Cato and Varro treated soil science at length and were aware that soils must be fertilized to retain their fertility. They may have assumed that they need not belabor every point because their audience was comprised of experienced farmers. Perhaps for this reason the authors did not discuss the use of agricultural technology in detail. One might characterize their treatment of agriculture as prescientific.



View of the mines at Las Médulas, Spain. (Benedict Lowe)

Cato and Varro understood that farmers could not practice monoculture year after year without reducing soil fertility. Varro recommended that some land be left fallow every other year to restore its fertility, though he also recommended that other land be cropped continuously. Both Cato and Varro advised farmers to manure their soil to restore its fertility. Varro ranked dung from thrushes and crows the best, though he did not propose how a farmer might get bird dung in quantity. Varro ranked human excrement second; dung from goats, sheep, and donkeys third; and horse manure fourth. Curiously, he omitted pig manure though he opined that every farm should have pigs. Cato rated pig dung and urine excellent for spreading around pomegranate trees. He recommended that farmers allot half their manure for forage crops, one-fourth around olive trees, and one-fourth for rangeland. This allotment left nothing for the vineyard, though Cato nonetheless urged that farmers spread manure around grape vines. Both Cato and Varro recommended the planting of legumes to restore soil fertility. The advice was prescient, for scientists now know that legumes fix nitrogen in the soil. Interestingly, Cato was unaware that chickpeas are legumes and cautioned against planting them.

Cato and Varro took pains to ensure that farmers planted the right crop in the right soil. Their advice was a foundation for the science of agronomy. Without detailing his thoughts, Cato recommended that farmers plant the crop variety best for a region. He upheld heavy soils as best for grain and heavy warm soils as best for olives. Tantalizingly he recommended the planting of hybrids, though he gave no indication of what he understood the term to mean. In any case the Romans never seem to have appreciated the value of hybrid vigor in the breeding of many crops. Cato and Varro may not have known that plants have male and female parts, a fundamental insight for the breeding of crops. Varro recommended the planting of grain on flat land, spelt on wet soils, barley on dry soils, wheat on intermediate soils, and grape vines on hillsides. Varro advised farmers to save seed from the largest, most vigorous plants for planting next season. Farmers practiced this method of seed selection into the twentieth century.

➤ ROMAN PLOW

Among the oldest agricultural implements, the plow was the principal technology for breaking the soil in preparation for the planting of seeds. The Roman plow differed little from its Near Eastern predecessor. The Roman plow had a long horizontal beam that rode on top of or slightly below the soil surface. At the front of the beam was the plowshare, which broke the soil. The Romans understood that a wooden plowshare wore quickly, so they fastened sheets of iron onto the front of the beam. Attached to the beam was a curved length of wood to which a farmer yoked draft animals. Varro recommended oxen as draft animals on heavy soils and donkeys on light soils. He counseled farmers to plow a field twice in spring, with the second plowing at a right angle to the first. Farmers then broadcast seed and plowed a third time to cover seeds with soil. Cato likewise urged farmers to plow the soil in spring, working the driest ground first and the heaviest, wettest land last.

—Christopher Cumo

Cato and Varro lived at a time when slavery was common. Neither questioned that farm owners should use slaves to do the work. Varro cautioned against using slaves on swampland or on other lands where diseases were prevalent. Apparently the investment in slaves was too great to expose them to premature death. Cato and Varro described the routine of work in detail, and both advised farmers against allowing their slaves to be idle. The abundance of slaves and of hired hands may have led farmers to de-emphasize labor-saving machinery. For example, few farmers adopted the vallus, a mechanical harvester. Instead, as farmers had for centuries, Romans harvested grain with a sickle.

Cato and Varro were prolific writers, yet few of their works are extant. The fact that their manuals of agriculture have survived evinces their quality and the desire of humans for practical knowledge.

—Christopher Cumo

Bibliography

Cato, Marcus Porcius. *On Agriculture*. Cambridge: Harvard University Press, 1979.

Kehoe, Dennis P. *Law and Rural Economy in the Roman Empire*. Ann Arbor: University of Michigan Press, 2007.

Varro, Marcus Terentius. *On Agriculture*. Cambridge: Harvard University Press, 1979.

White, K. D. *Roman Farming*. Ithaca, NY: Cornell University Press, 1970.

Drawloom Technology in China

The first documented drawlooms date from about 400 BCE in China, which is the Chu period. Before the invention of the drawloom, the simpler treadle loom was used for weaving textiles. It required a single person and was capable of only basic designs. The drawloom was a more complex affair, requiring two people to operate, but it was capable of weaving complex patterns. Repeating patterns, known as repeats, could be set in the arrangement of the frame, thereby enabling the operators to efficiently and accurately manufacture cloth with intricate designs.

ANCIENT CHINESE DRAWLOOMS AND THE ORIGINS OF COMPUTERS

It is possible to trace the origins of modern computers to ancient Chinese drawloom technology. French inventor Joseph Marie Jacquard (1752–1834) saw the potential in improving the capabilities of the drawloom by doing away with treadles and controlling the yarns with a system of punch cards and pins. These punch cards and pins controlled the positions of the warp yarns with such finesse that pictorial patterns were made possible. In turn, the British inventor Charles Babbage took Jacquard's idea and used punch cards to program one of his mechanical computers, known as an analytical engine. The concept of preset programs for controlling computers and other machines is the basis of modern technology. The embryonic idea of computation can therefore be traced back to the Chinese drawloom, invented more than 2.5 millennia ago. In essence it is all about asking a machine to think for itself but in a controlled manner.

—Gerard Cheshire

Mechanically the drawloom is so-named because it has a frame attached above, known as the drawboy, that functions as a mechanical boy, drawing or lifting the appropriate heddles to achieve the desired arrangement in the weave.

Each heddle, or heald, has a loop through which a warp yarn passes. The raising or lowering of a heddle therefore causes its yarn to warp upward or downward in a corresponding way. Accordingly, the weft yarn rides above or below the warp yarn so that the pattern is built up with each pass of the shuttle. The actions of the heddles are controlled by foot pedals called treadles, which are attached to the drawboy via cords.

The invention of the drawloom seems to have coincided with the burgeoning silk industry in China, and its addition resulted in highly sophisticated and ornate fabrics fit for kings, as it was usually only the Chinese rulers and aristocracy who could afford such fine cloth. This was during a period in Chinese history when the Chu kingdom was prevalent: 722–221 BCE.

Some scholars question the Chinese origin of the drawloom, suggesting that it was invented in Asia Minor. They point to the technique shown in ancient samples of cloth, as opposed to any archaeological evidence. As with many distant historical events, it is likely that no one will ever know for sure.

Whatever the true origin of the drawloom, its introduction is now regarded as a seminal event in textiles. It has been compared with the invention of movable type in printing because of its impact on the weaving industry.

Apart from increasing the intricacy of designs, the drawloom also made the process more efficient and improved the rate of production. Once the drawloom was set up, the operators could run through a sequence of settings and churn cloth out at an industrial pace. In turn, this meant that surplus cloth and carpets became available for trade with other regions.

In effect, the drawloom was the first programmable machine. That is to say, the presets in the drawboy were a form of primitive programming, as the treadle operator knew that depressing a particular treadle would result in a reliable outcome. In fact, one might even say that the drawloom was the first mechanical com-

puter. The French inventor Joseph Marie Jacquard refined the concept of the drawloom in the early nineteenth century by introducing punch cards and pins that controlled the positions of the warp yarns with such finesse that pictorial patterns were made possible.

—Gerard Cheshire

Bibliography

- Broudy, Eric. *The Book of Looms: A History of the Handloom from Ancient Times to the Present*. Hanover: University Press of New Hampshire, 1979.
- Geijer, Agnes. *A History of Textile Art*. London: Wilson, 1979.
- Needham, Joseph, and Dieter Kuhn. *Textile Technology: Spinning and Reeling*. In *Science and Civilisation in China*. Vol. 5, Part 9. Cambridge: Cambridge University Press, 1988.

Development of the Karez System

In the arid climate of much of central Asia and Iran, agriculture can often be difficult. Although water from streams and melting snow allows large settlements to be possible in the highlands, in lower areas without irrigation this can be nearly impossible. However, early agriculturalists developed an effective albeit labor-intensive system to allow agriculture to flourish. This is known as *karez* in Persian and *qanat* in Arabic and is one of the most impressive engineering feats of the ancient world.

The system appears during the first millennium BCE and evolved from simple irrigation channels that one would find anywhere. However, in the arid climate of central Asia and Iran, these channels could lose significant amounts of water through evaporation, thus necessitating a more efficient system.

The karez works in a simple but ingenious manner. To avoid water loss via evaporation, the water travels from its source via man-made underground channels. These channels are roughly 6 feet (2 meters) high, although the water is rarely more than 3 feet (1 meter) deep. Vertical shafts are sunk in order to access the water via a well. These shafts are wide in diameter, as they

➤ BUILDING THE KAREZ

Who built the *karez* networks or irrigation channels? Soviet scholars studying those found in central Asia concluded that it was slave labor. Scholars have now dismissed that conclusion because it fit too neatly into a Marxist framework. It seems more likely that villagers built it to fit their needs. Indeed, in pre-Islamic central Asia there is evidence that a school of irrigation engineering existed. Indeed, considering the feat of extending these channels up to a couple of miles, the skill of professional engineers and mathematicians was necessary. Thus, the village that would benefit from the irrigation and had the most at stake would do the labor but hire an engineer to help in the planning and construction.

—Timothy May

also serve to ventilate the water channels and as access points for maintenance. By descending the shaft, workers can repair shafts, clear debris, and generally ensure that the karez functions as it should. At times, the water must travel in aboveground canals. Again, water loss via evaporation remained a concern, so palm or other trees provided shade for the canal. Reservoirs were also built periodically to store water.

As towns grew around natural oases, the karez system functioned to bring additional water. This often required the karez to bring water more than a mile from its source. In some areas more than 300 wells have been found that tap into the subsoil channels. From an aerial view, you can follow the path of the channel by well holes.

The use of the karez turned marginal agricultural areas into fertile lands. It also allowed for a larger population. During the Han dynasty of China (206 BCE–220 CE), the karez allowed them to establish garrisons in the Turfan basin, located in present-day Xinjiang, in order to gain access to horses and trade with the nomads and oasis towns of central Asia. Indeed, it is thought that the Chinese introduced karez irrigation to the Turfan basin, although it developed in Iran and west-central Asia independently.

—Timothy May

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Pre-history to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Frye, Richard N. *The Heritage of Central Asia: From Antiquity to the Turkish Expansion*. Princeton, NJ: Markus Wiener, 2001.
- Liu, Xinru, and Lynda Norene Shaffer. *Connections across Eurasia: Transportation, Communication, and Cultural Exchange on the Silk Roads*. Boston: McGraw-Hill, 2007.

Development of Felt Manufacturing in Central Asia

Although most sedentary cultures developed textiles from thread made from vegetable fibers (cotton or flax) or animal products (wool, silk), in central Asia wool was the primary textile. The nomadic cultures further separated themselves from the sedentary cultures by using woolen products but not in the form of a thread. This strong and durable nonwoven fabric became an integral part of central Asian clothing and manufacturing. As sheep were a central element for all pastoral nomads across central Asia, felt production was common among all nomads. While the first recorded mention of felt products dates to around 500 BCE, it was certainly used before then, as Greek, Chinese, and Persian observers noted that the nomads used it to construct their homes.



Scythian horseman with cloak and mustache, detail of a Scythian felt cloth from a frozen tomb in the Paryryk Valley, Altai Mountains, fifth-fourth century BCE. (Erich Lessing/Art Resource, NY)

The earliest examples of felt were found in Scythian tombs in the Altai Mountains. Used for saddle blankets and coverings, wool was also used as appliqués on clothing and in housing. Indeed, felt was a fundamental element of housing and also covered the yurts of all nomads. Known for its insulating properties, it was critical for surviving the cold winters of the steppe. Thus, during extreme cold another layer could be added quite easily.

Of course, felt was used for other purposes as well. Archaeological finds in Mongolia and Siberia have also yielded felt rugs and linings for boots. Indeed, even Chinese observers, though often contemptuous of the nomads and their rough ways, remarked that felt clothing was better than silk in the steppe due to its warmth and also its ability to protect against cuts from brambles and thorns in the wilderness. Indeed, while the nomads enjoyed silk garments, they often lined their robes with felt for insulation while keeping the silk on the outside for ornamentation. Indeed, Chinese sources note that the Xion-

➤ FELT MANUFACTURING

Felt is made from taking wool and crushing it together. As wool has microscopic scales, when it is pounded the individual strands rub together, and the resulting abrasion cause the scales to interlock and form a compact layer. Typically the wool is carded or separated. Then layers are placed on top of each other with the strands running in alternating directions. After enough layers are in place, and this varies depending on the purpose, the wool is rolled up and pounded. This pounding process is conducted with wooden

staves, other utensils, or with the body. With the body, the person picks up the wool and places it on a surface such as the ground, a board, or a wagon and then forcefully crushes it with the chest. Then the wool is moved and the process repeated. The techniques for felt manufacturing were based on convenience and local folkways; felt manufacture required little technology and any tools needed could be created with materials at hand.

—Timothy May

gnu tribes and other groups in Mongolia used it as light armor, often reinforced with strips of leather or of metal sewn onto it. It is unclear if the Scythians or other tribes in the Pontic and Caspian steppes used it as armor, although writers such as Herodotus may not have understood that felt as clothing might have also had a defensive purpose. Otherwise, the material's function as clothing, shelter, and other utilitarian purposes appears to have been similar across the steppe lands of Eurasia.

—*Timothy May*

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Herodotus. *The Histories*. Translated by Robin Waterfield. New York: Oxford University Press, 1998.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Soucek, Svat. *A History of Inner Asia*. New York: Cambridge University Press, 2000.

Olmec Stone Moving Technology

Colossal stone monuments are the most characteristic feature of the Olmec culture from the Gulf Coast of Mexico. Sculptures include giant portrait heads, which could measure up to 9 feet (2.7 meters); platform thrones, or altars; and stele (upright stone slabs), typically decorated with low-relief carving. These large sculptures were an integral part of the architectural design of ceremonial centers, such as San Lorenzo and La Venta.

The basalt, a type of volcanic rock employed to create these sculptures, however, originated quite far from the sites of their final and current location. Microscopic analysis revealed that the main source can be traced to Cerro Cintepec, an extinct volcano on the Tuxtla Mountains roughly 37 miles (60 kilometers) away from San Lorenzo and La Venta. Boulders can be found on the surface on the volcano's slopes and do not need any major cutting prior to transportation.

Large semiworked boulders, some weighing up to 40 tons (roughly 89,000 pounds), were

transported from Cerro Cintepec to the final destination using both land and fluvial routes. The main quarry is almost 30 miles (48 kilometers) away from the nearest navigable river, while both San Lorenzo and La Venta lie at the banks of major waterways. Speculations on the possible routes utilized by the ancient Olmecs (there are no written accounts from this early period) are based on aerial photographs and topographic maps as well as comparative analysis with stone-moving technologies among other early civilizations (e.g., ancient Egypt and Assyria and prehistoric Easter Island).

First, land transportation was carried out with sledges pulled by sheer manpower, given the lack of beasts of burden and wheel technology in ancient Mesoamerica. Ramps were used to load the boulders on the sledge. The stone boulder needed to be flattened on one side in order to rest firmly on the wooden crossing beams of the sledge. The employment of natural substances to reduce friction on the ground would have been essential for reducing the number of men necessary to carry out the job, although there is no direct evidence to indicate what agent may have been used. It has been calculated that roughly 1,000 men would have been needed to pull overland an average boulder from the main quarry to the riverbanks. If sleepers were employed, additional workers would have been needed to move the sleepers from beneath the sledge to the front. Coordinating operations such as replacing fatigued laborers and providing food would have also required additional workers.

At a calculated speed of roughly 236 inches (600 centimeters) per hour, it would have taken 135 days to carry the boulders from the quarry at Cerro Cintepec to the main river at Coatzacoalcos.

Water transportation was much easier. The large boulders were hauled on log rafts, measuring approximately 35 feet (10.7 meters) long, 20 feet (6.1 meters) wide, and 4.2 feet (1.3 meters) deep. Canoes may also have been employed. Most likely, multiple canoes were joined together by crossing beams, which served as the resting surface for dragged boulders. From the loading point at the Coatzacoalcos River, it would have taken four days to reach the site of San Lorenzo and about six days to reach La Venta.

Olmec stone-moving technology was an important aspect of socioeconomic relations in early Mesoamerica. A large portion of the local population was involved in the quarrying, dragging, and loading of the boulders from Cerro Cintepec to the major ceremonial sites, where they served their final functions as historical monuments and ritual altars. Although knowledge on the specific technological tools remains speculative, archaeologists agree that organizing this operation would have required a high degree of social complexity.

—Alessia Frassani

Bibliography

- Coe, Michael. "San Lorenzo and the Olmec Civilization." In *Dumbarton Oaks Conference on the Olmec, October 28th and 29th, 1967*, edited by Elizabeth P. Benson. Washington, DC: Dumbarton Oaks Research Library and Collection, 1968.
- Coe, Michael, and Richard A. Diehl, eds. *In the Land of the Olmec*. 2 vols. Austin: University of Texas Press, 1980.
- Grove, David C. "Olmec Archaeology: A Half Century of Research and Its Accomplishments." *Journal of World Prehistory* 11(1) (1997): 51–101.
- Velson, Joseph S., and Thomas C. Clark. "Transport of Stone Monuments to La Venta and San Lorenzo Sites." *Contributions of the University of California Archaeological Research Facilities* 24 (1975): 1–39.

Andean Water Systems

The South American Andes region is home to great biogeographic diversity, including rain forest, high arid plains (also called *puna*, or Andean Altiplano), and coastal desert valleys along the Pacific. This region has been under continuous agricultural cultivation by humans in its variety of ecosystems for several thousand years. After the Iberian conquest in the sixteenth century, highland agricultural techniques of indigenous peoples of the Incan empire were chronicled to some extent by Spanish observers. For this reason, the Incan empire, which existed for only a short time in its unified form before Pizarro's conquest of 1532, is most frequently associated in both public and scholarly perceptions with notions of pre-Columbian Andean settlement. Perhaps most famous among complex highland

Andean settlements are the terraced agricultural and water systems of Machu Picchu, an Incan city that was never discovered by the Spanish conquerors but instead was first described for academic audiences by an American team of archaeologists in the early twentieth century.

In the later twentieth century, thanks to increased archaeological interest and new methods of data collection, for example, through archaeobotany and palynology (analysis of pollen from agricultural and other plant products trapped in soil sediments), a new debate has emerged among anthropologists and geographers about the earliest origins of agricultural settlement in the Andes. At present, there is no scholarly consensus on the earliest date of intensive agriculture in the Andes. Archaeologists of this region and period refer to broad cultural eras of settlement known as the Initial Ceramic period (1800–900 BCE), the Early Horizon (900–200 BCE), and the Early Intermediate period (EIP; approximately 300 BCE–600 CE, depending on the source of estimation). The earliest possible dates for irrigated agriculture in the Andes region are variously estimated from 4000 BCE to 1800 BCE, toward the end of the Pre-Ceramic period.

Under arid conditions irrigation becomes necessary for agricultural production, and the resulting landscape patterns and structures of irrigation are sought by archaeologists searching for ancient and abandoned sites of settlement. In the Andes region, with the various types of arid ecosystems found there, intensive agriculture requires some level of human intervention by diverting water from natural pathways (rivers, streams, rainfall, lakes, or springs) to the desired site of agricultural settlement via constructed canals, dikes, ditches, dams, or terraces. Irrigated agriculture is important either seasonally or year-round, depending on levels of rainfall and moisture.

There are several distinct types of arid zones for irrigated agriculture in the Andes, following changes in altitude, temperature, topography, soil, and moisture. Archaeological investigations have identified the earliest small-scale irrigation works in coastal valleys (approximately 3000–4000 BCE) and other early sites of irrigation (possibly 2400–3000 BCE) in the mountain valley of La Galgada. The Moche Valley along the northern Pacific coast, home to the Mochica set-

tlement during the EIP, is considered to be a site of impressive architecture, canal building, and water distribution, though most extensive evidence for these networks of canals comes from subsequent periods on the same site.

Recently, anthropologists of environment and agriculture have tried to integrate the ancient past and present of Andean ecosystems into a more continuous framework, relying on dynamic environmental factors and enduring crop systems to define a range of indigenous technologies and livelihoods from the first origins of regional agriculture up until the present. By attributing indigenous heritage to the sophisticated engineering projects of the pre-Columbian past, advocates see an opportunity to reinvest disempowered indigenous peoples with the respect and heritage of expertise that was denied to them in the conquest of the Americas and subsequently denied again by Eurocentric models of expertise, large-scale technical improvement projects, and modernization programs.

In the 1980s a research collaboration between structural engineers and field archaeologists of this region concluded that the role of dynamic river systems, geological tectonic movements, and cycles of decadal or centennial flooding (tied to the El Niño climatic phenomenon) had contributed to structural instability,

abandonment, and then reconstruction of extensive Moche Valley canal works of the Chimú state, founded after the EIP. Since the researchers concluded that these forces of environmental change are continuous in the Andean context, there are further reasons for water systems engineers of the present to pay attention to an archaeological record of adaptation to dynamic environments.

—Abigail Schade

Bibliography

- Denevan, William M. *Cultivated Landscapes of Native Amazonia and the Andes*. Oxford Geographical and Environmental Studies. New York: Oxford University Press, 2001.
- Keatinge, Richard W., ed. *Peruvian Prehistory: An Overview of Pre-Inca and Inca Society*. New York: Cambridge University Press, 1988.
- Kosok, Paul. *Life, Land, and Water in Ancient Peru: An Account of the Discovery, Exploration, and Mapping of Ancient Pyramids, Canals, Roads, Towns, Walls, and Fortresses of Coastal Peru with Observations of Various Aspects of Peruvian Life, Both Ancient and Modern*. New York: Long Island University Press, 1965.
- Ortloff, Charles R., Robert A. Feldman, and Michael E. Moseley. "Hydraulic Engineering and Historical Aspects of the Pre-Columbian Intravalley Canal Systems of the Moche Valley, Peru." *Journal of Field Archaeology* 12(1) (Spring 1985): 77–98.

■ Introduction: Monumental Wonders of the Ancient World, 1000 BCE–300 CE

Six of the seven wonders of the ancient world were constructed between 1000 BCE and 300 CE. Only the Great Pyramid of Giza was built earlier (and it is the only one still intact), having been constructed during the Fourth Dynasty of Egypt (2613–2494 BCE). That the rest have long since vanished but are still remembered nearly 2,000 years later is a testament to the impact that these wonders had on the ancients. These were not the only wonders that this period had to offer though, as tourists to Italy, China, and Mesoamerica can attest to. The following entries present some of these ancient

architectural marvels, some still standing and some long destroyed, that still captivate our imagination today.

—Kevin M. McGeough

The Seven Wonders of the Ancient World

The concept of the seven wonders of the ancient world was developed from the writings of various Greek philosophers, historians, and geographers who discussed these places amid their

➤ ANTIPATER OF SIDON ON THE SEVEN WONDERS OF THE ANCIENT WORLD

“I have set eyes on the wall of lofty Babylon on which is a road for chariots, and the statue of Zeus by the Alpheus, and the hanging gardens, and the Colossus of the Sun, and the huge labor of the high pyramids, and the vast tomb of Mausolus; but when I saw the house of Artemis that mounted to the clouds, those other marvels lost their brilliancy, and I said, ‘Lo, apart from Olympus, the Sun never looked on aught so grand.’”

—Abraham O. Mendoza

Source

Antipater, *Greek Anthology* (IX.58), in William Roger Paton, ed. and trans., *The Greek Anthology* (Cambridge: Harvard University Press, 1917), 31.

travels during the Classical and Hellenistic periods of Greek history. It is primarily through the writings of Antipater of Sidon, Philo of Byzantium, Herodotus, Strabo, and Diodoros Siculus that the concept of the seven wonders of the ancient world developed. Moreover, travel guides written during the early Hellenistic period discussed these wonders, or things to see, as major attractions for Greek travelers wishing to explore the new domains of the successors of Alexander the Great. In an expanded Greek world, the seven wonders of the ancient world provided a set of attractions for Hellenistic civilization to be proud of, as five of these were Greek; the other two were Egyptian and Babylonian.

The Great Pyramid at Giza was constructed between approximately 2584 and 2561 BCE by the ancient Egyptians during the Old Kingdom. It was built for the pharaoh Khufu (Cheops in Greek) and is believed to have stood at approximately 481 feet (147 meters) at the time of its completion. Out of the seven wonders, the Great Pyramid is the only wonder that remains. Greek merchants and travelers would have been well acquainted with this major attraction of the Near East.

The Hanging Gardens of Babylon, built by Chaldean king Nebuchadnezzar II around 600 BCE for his wife Amytis of Media, who supposedly missed the landscape of her native land, is documented by Greek writers Diodorus Siculus and Strabo. Built alongside a palace with elaborate balconies and irrigations systems, the lush gardens were noted for being grandiose and expansive. Given that these were supposedly destroyed by earthquakes in the second century BCE, it is uncertain that the documentation left by these writers can be entirely accurate, given that they were not alive during its actual existence.

The statue of Zeus at Olympia, sculpted by Phidias in approximately 432 BCE inside a temple dedicated to Zeus, stood at an estimated 40 feet (12 meters), occupying the entire width of the temple. Constructed of ivory, gold, and bronze, as it was described by various Greek commentators and travelers, its existence can be verified through these corroborated testimonies. The Temple of Artemis at Ephesus, built for the Greek goddess Artemis, is documented to have taken 120 years to construct, beginning around circa 550 BCE. Roman philosopher Pliny the Elder estimated the size of this temple (converted to modern units of measurement) as 377 feet (115 meters) in length and 180 feet (55 meters) in width. Both of these monuments were later destroyed through plundering and vandalism throughout various wars of antiquity but lasted long enough to be documented by Greek writers.

The Mausoleum at Halicarnassus, built for Persian satrap Mausolus around approximately 351 BCE, stood at an estimated 135 feet (41 meters) and was adorned with finely crafted sculptural reliefs on the exterior. For its size and elaborate decorations, Antipater of Sidon documented it as one of the seven wonders. The Colossus of Rhodes, a giant statue of the Greek god Helios, was built on the Greek island of Rhodes between 292 and 280 and stood at approximately 107 feet (33 meters). It was destroyed by an earthquake circa 226 BCE. The Lighthouse of Alexandria, built between approximately 285 and 247 BCE as a major landmark for the port of the city of Alexandria, was estimated to be between 383 and 440 feet (116 and 135 meters) tall. It was documented to have been seen far out to sea and was later destroyed by earth-

quakes in the tenth and fourteenth centuries. These monuments were well documented by writers and travelers.

—*Abraham O. Mendoza*

Bibliography

Clayton, Peter A. *The Seven Wonders of the Ancient World*. New York: Routledge, 1990.

Jordan, Paul. *Seven Wonders of the Ancient World*. Boston: Longman, 2002.

Palace at Nineveh

Under the reign of Assyrian king Sennacherib (704–681 BCE), the capital of Assyria was moved to Nineveh from Dur Sharrukin. Upon relocating the new Assyrian political and military center to Nineveh, Sennacherib commissioned the construction of a grand new palace. Known as the “palace without rival,” it was lined with elaborate reliefs and inscriptions to commemorate the king’s accomplishments in battle as well as the power and glory of Assyria. The palace was built on the mound of Kouyunjik, on the southwestern corner, adjacent to the walls of the city of ancient Nineveh. The palace’s rooms were characterized by limestone slabs with inscriptions of scenes of Sennacherib’s heroic deeds. However, when Nineveh was sacked in 612 BCE by an allied force of Babylonians and Medes, Sennacherib’s palace was utterly destroyed, burned, and pillaged by the invaders. It was rediscovered in 1847 by British archaeologist Austin Henry Layard, who was the first to excavate the site.

Layard’s excavation of the “Southwest Palace” (which is how he referred to the “palace without rival”) from 1847 to 1851 led to the discovery of an inner chamber within the structure. In this chamber, the wall reliefs described in cuneiform script Sennacherib’s siege of the Judean city of Lachish. This event was corroborated in the second book of Kings in the Bible, thereby confirming the historical accuracy of the event in question. Further finds from the palace also confirmed other events that had previously been documented only in the Old Testament, such as the Assyrian siege of Jerusalem. George Smith, an Assyriologist who worked at the British Museum (where the treasures of Nineveh were brought after excavation), discovered among the

➤ SIR AUSTEN HENRY LAYARD (1817–1894)

British archaeologist Sir Austen Henry Layard, the excavator of Nineveh (particularly the site of Kuyunjik) and Nimrud (near Mosul) in what was the ancient civilization of Assyria in Mesopotamia, is notable for his multiple discoveries and the popularization of Assyrian archaeology in Victorian Britain. He was born in Paris and educated in Italy, England, and Switzerland, and his travels abroad took him to the Ottoman empire, where under the auspices of the British Foreign Ministry and the British Museum he undertook various excavations in Ottoman Mesopotamia. Among his important findings were the palaces of Assyrian kings Ashurbanipal II, Shalmaneser II, and Tiglath-Pilester. Layard is best known for his discovery of the ancient Assyrian capital of Nineveh (1847), on the other side of the Tigris River from Mosul, where he discovered the ancient palace of Sennacherib (1849). Layard also found extensive collections of cuneiform tablets that allowed scholars to decipher aspects of Assyrian and Babylonian history and culture. His discoveries in Nineveh and his subsequent publications, most notably his *Discoveries in the Ruins of Nineveh and Babylon* (1853), popularized his findings among the educated British public. Moreover, his collections of Assyrian archaeological findings in the British Museum promoted Mesopotamian archaeology and history within British society, sparking further interest in the study of Near Eastern civilizations.

—*Abraham O. Mendoza*

palace’s tablet archive an account of a flood that was remarkably similar to the story of the biblical deluge. He was then sent to the actual site to find more cuneiform tablets.

Many of the features that characterize Sennacherib’s palace are based on other Assyrian palaces built by his forbearers, albeit to a grander and more elaborate extent. Among these shared traditions of palace architecture in Assyria are their distinctive architectural style, the layout of the decorations, and the subject matter of the various elements that make up central royal chambers and the myriad rooms. The palace had a long, wide room for royal receptions, with multiple doors to connect this chamber with a considerably large outer court area and adjacent terraces.

The royal throne was positioned in the southeast end of this chamber flanked by a wall that faced a staircase on the opposite end. The layout of decorations and monumental art in the palace was characterized by the prevalence of stone orthostats (upright stone slabs) carved with inscriptions and artwork, which narrated important events in Assyrian history. Doorways were adorned by adjacent stone statues of deities or Assyrian kings. The subjects of these various decorative elements in the palace commemorated significant events related to the reign of the current king, typically battles and other accomplishments related to warfare. The assumed purpose of these royal chambers was to captivate those received by the king through the sheer magnitude of the artwork, attesting to the wealth and power of the sovereign but also to draw reverence to the Assyrian state.

—Abraham O. Mendoza

Bibliography

- Layard, Austen Henry. *Discoveries in the Ruins of Nineveh and Babylon*. London: J. Murray, 1853.
- Russell, John Malcolm. *The Final Sack of Nineveh: The Discovery, Documentation, and Destruction of King Sennacherib's Throne Room at Nineveh, Iraq*. New Haven, CT: Yale University Press, 1998.
- Russell, John Malcolm. *Sennacherib's Palace without Rival at Nineveh*. Chicago: University of Chicago Press, 1991.

Parthenon in Athens

The Parthenon served not only as a religious temple but also as a civic symbol representing the greatness and glory of ancient Athens. The construction of temples in ancient Greece, which were built beginning in the eighth century BCE, coincided with the establishment of the Greek city-state. After the end of the Persian Wars and the establishment of Athens as a major center of power in Greece, the Parthenon was built on the site of an older temple for Athena, the Greek goddess for whom the city was named. The goal of the building project was to exemplify the greatness of the city and its patron goddess 30 years after Athens' pivotal role in the defeat of the Persians. Set atop the Acropolis, a high flat promontory in Athens, the Parthenon, one of a series of

structures, was originally built in 447 BCE and completed in 432/431 BCE. It still stands today, despite centuries of decay and weathering, as a symbol of the greatness and grandeur of ancient Athens.

The first attempt to build a major temple dedicated to Athena occurred after the Battle of Marathon in 490 BCE, which suggests that it was built to give Athena thanks for this great victory. However, in a subsequent Persian invasion of Athens, this temple on the Acropolis was razed to the ground as Persian forces set about destroying Athens in 480 BCE. That year a major Athenian naval victory at the Bay of Salamis destroyed the Persian fleet. A subsequent land victory by a Spartan-led army the following year ousted the Persians from Greece and ended the threat of foreign domination. During this time, Athens had formed the Delian League, a powerful alliance of coastal city-states and islands in which each member contributed to a common treasury kept at the island of Delos. Athens held the dominating role, which allowed it to seize the assets of the treasury to use for major construction projects, among these a new temple to Athena.

In the mid-fifth century BCE the Athenian Acropolis became the de facto seat of the Delian League, which was now well established as an Athenian empire. Thirty years after the defeat of the Persians, Athenian statesman Pericles initiated an ambitious building project lasting throughout most of the century, with the support of the Athenians. Four major buildings were constructed on the Acropolis in Athens, among them the Parthenon, the Propylaea, the Erechtheion, and the temple of Athena Nike. These structures were meant to promote civic pride, create employment, and give thanks to Athena for their victories. The Parthenon itself was built under supervision of the sculptor Phidias. The main architect Ictinus began construction in 447 BCE. While most of the construction of the Parthenon was completed by 432, the work on the decorations lasted for another year. Most of the expenses incurred were from extracting and shipping marble from a local quarry 9 miles (15 kilometers) away.

The Parthenon was built on the same site and on the actual foundations of the building destroyed by the Persians. Most of what could be

THE MANY LIVES OF THE PARTHENON

The Parthenon served as a Greek temple to Athena throughout most of its trajectory under the ancient Greeks. However, it was looted by the Romans in the fifth century CE, with the great statue of Athena transported to Constantinople. Afterward, the temple served as a Christian Church and became a center for pilgrimage for centuries, known throughout the Orthodox world as the Temple of Theotokos (Mother of God) Atheniotissa. It briefly served as a Catholic church after Athens was taken in the Fourth Crusade in 1204. After Athens was conquered by the Ottoman Turks in

1456, it served as a mosque, with the Turks adding a minaret to the structure. In 1687, in a minor war between the Ottomans and Venice, the Ottomans used the building as a gunpowder magazine, and it was blown up during battle, causing significant damage to the structure. The Venetians, and later the British, looted most of the remaining internal structures. Centuries of vandalism, decay, and weathering have taken its toll on the structure, which still stands today nonetheless as a testament to the grandeur of ancient Athens.

—Abraham O. Mendoza

salvaged was reused in the construction of the newer structure. Ictinus designed the new building on a different scale than the prior structure, attaching extra sets of marble Doric columns. Instead of the typical six-column width characteristic of Doric temples, the new Parthenon was eight columns wide. The interior of the Parthenon consisted of two main chambers. The larger of the two, known as the Hekatompedon, housed a giant ivory and gold statue of Athena. The other room, known as the Parthenon (from which the building takes its name), served as a vault for the Athenian treasury. The Parthenon served multiple functions for the ancient Athenians: a temple to Athena, a victory monument to the defeat of the Persians, a treasury, and a war memorial to commemorate the Athenian dead.

—Abraham O. Mendoza

Bibliography

- Burford, Alison. "The Builders of the Partheon." *Greece and Rome* 10 (1963): 23–35.
- Neils, Jenifer, ed. *The Parthenon: From Antiquity to the Present*. New York: Cambridge University Press, 2005.
- Ratte, Christopher. "Athens: Recreating the Parthenon." *Classical World* 97(1) (2003): 41–55.

Second Temple in Jerusalem

Initial construction of the Second Temple in Jerusalem was begun in 535 BCE and completed by 516 BCE. The First Temple (also known as Sol-

omon's Temple) had been destroyed at the hands of the Chaldeans as the Kingdom of Judea fell to the Babylonian empire of Nebuchadnezzar in 586 BCE. Subsequently, Jewish elites were taken into exile as captives of the Babylonians (Chaldeans) in an episode known as the Babylonian Captivity (ca. 586–537 BCE).

The Second Temple was built after the Babylonian Captivity and authorized by Cyrus the Great of Persia, who defeated Babylon in 537 BCE. Upon the release of Judeans from Babylon following Cyrus the Great's defeat of the Chaldeans, Cyrus authorized the reconstruction of the Temple of Jerusalem. Among the many concerns of the newly freed Hebrews was the reconstruction of the Temple to give homage to their deity and reassert their traditional religious practices in their homeland. The Temple was completed in 515, almost 20 years after the end of the Babylonian Captivity, and consecrated in 516 BCE. According to Scripture, the Second Temple lacked many elements of the First Temple that had been seized in prior invasions at the hands of the Assyrians and the Babylonians, such as the Ark of the Covenant, Aaron's rod, and the Ten Commandments. However, many of the vessels of gold that had been taken by the Babylonians were restored by the Persians in their attempts to conciliate the Hebrews with foreign rule.

The Second Temple entered a new phase nearly half a millennia later under the rule of the notorious Hebrew leader King Herod the Great, a client-king of the Roman empire. Some historians suggest that this renovation project was

MODEL OF THE SECOND TEMPLE



(Hanan/Sachar/Corbis)

A model of the Second Temple, built in 1966, is currently in the Israel Museum in Jerusalem (formerly housed in the Holy Land Hotel). It is a replica of Herod's expansion of the Temple Mount complex, which was destroyed by the Romans in 70 CE. It is part of a larger model of the city of Jerusalem from the era of the Second Temple. From this model's depiction, visitors can see the Main Hall of the Temple (the Hechal), containing the Holy of Holies, and the outer Altar and Inner Sanctuary.

—Abraham O. Mendoza

priesthood, and much of the Hebrew population were skeptical of Herod's scheme.

This led to Herod's need to quarry all the stones required for the project before the destruction of the earlier Second Temple structure could be initiated. Herod and the Jewish religious authorities also had to make an agreement that the sacrificial rituals, known collectively as the *korbanot*, were to be continued during the entire process of construction. Furthermore, the Cohanim would be responsible for supervising the construction of the project. Estimates about how long the construction process lasted range from three years to half a century. Ultimately, the Romans destroyed Jerusalem and razed the Second Temple on August 4, 70 CE, in order to quash the Jewish Revolt, which had erupted in 66 CE. The temple's destruction at the hands of the Romans as they razed Jerusalem to the ground took place 90 years after the initial announcement of its construction was made.

—Abraham O. Mendoza

Bibliography

Josephus, Flavius. *The Works of Josephus: Complete and Unabridged*. Translated by William Whiston. Peabody, MA: Hendrickson Publishers, 1980.
Shanks, Hershel. *Ancient Israel: From Abraham to the Roman Destruction of the Temple*. Upper Saddle River, NJ: Prentice Hall, 1999.

The Roman Colosseum

The Colosseum, or Flavian Amphitheatre, was originally planned by the emperor Vespasian to help win over the Roman populace to the rule of the new Flavian dynasty. Under the previous emperor, Nero, the site of the Colosseum had been occupied by an artificial lake, part of the extensive parklands surrounding Nero's palace in the heart of Rome, the Domus Aurea (Golden House). The Colosseum took its nickname from the colossal statue of Nero that once stood beside the lake. Many Romans were upset that Nero had occupied so much land in the heart of the city for his own amusement, and so it was a political masterstroke when Vespasian, upon becoming emperor in 69 CE, decided to convert part of the former imperial estate to a public entertainment venue. The lake was drained, and

undertaken to bring wealth into Jerusalem from Jewish Diaspora religious pilgrimages and also to reinforce Herod's reputation in the region following a period of persecutions of Jews under Herod's command. Herod's Temple in Jerusalem was a grandiose expansion of the Temple Mount complex. It included the construction of a completely new and much larger Jewish Temple than the one completed in 515 BCE. The older Temple, which had been built by Jewish leader Zerubbabel nearly half a millennium before, was a small structure. Despite frequent renovations in prior periods, most significantly under the rebellious Maccabees, it was in a deplorable and decayed state prior to Herod's improvements. According to historical records and Scripture, around 20 BCE King Herod announced that the old Temple would be demolished and replaced with a new and much larger structure. The Cohanim, which was the existing high Jewish

construction began on the Colosseum early in his reign. Many of the necessary construction funds came from booty that was captured during the Roman sack of Jerusalem in 70 CE. Amid much fanfare, the inaugural games in the recently completed Colosseum were staged by Vespasian's son Titus in 80 CE.

Like other Roman amphitheaters, the Colosseum was elliptical in shape: the building's exterior measurements were 616 by 511 feet (188 by 156 meters). A ring of seating (*cavea*) surrounding the arena floor, 167 feet (51 meters) wide and 159 feet (48.5 meters) high, is estimated to have held some 50,000 spectators. Four tiers of concentric passages underneath the *cavea* as well as radial stairways that divided the seating into wedge-shaped sections (*cunei*) allowed spectators to quickly circulate throughout the various levels of the building to find their seats. In addition, spectators were directed to one of over 70 numbered entrance arches by their tickets, which ensured that they entered the Colosseum as close to their seats as possible. The seating was also divided horizontally into six tiers: the lowest tiers were reserved for the Roman elite, while the highest were open to women and commoners.

A variety of materials were used in the Colosseum's construction. A massive ring of concrete, some 164 feet (50 meters) wide by 39 feet (12 meters) deep, was sunk into the former bed of Nero's lake to support the structure above. Travertine piers on top of the concrete foundation further supported the building's enormous weight. In addition, the highest tier of seating was made out of wood rather than marble so as to minimize the weight load on the structure.

A number of other architectural features ensured both the comfort of spectators and the orderly staging of spectacles in the Colosseum. Still visible today on the arched travertine facade of the Colosseum are the stone corbels that once helped support the *velarium*, the awning that could be extended to provide shade for spectators on particularly hot days. A substructure later added to the Colosseum contained animals cages and various spectacle props that could be raised to the arena floor whenever necessary.

—Christopher Epplett

➤ MARTIAL ON THE COLOSSEUM

The contemporary poet Martial gives us a good impression of the wonder caused in Rome by the opening of the Colosseum:

“Let barbarous Memphis speak no more of the wonder of the pyramids, nor Assyrian toil boast of Babylon; nor let the soft Ionians be extolled for Trivia's temple [temple of Diana at Ephesus]; let the altar of many horns say naught of Delos; nor let the Carians exalt to the skies with extravagant praises the Mausoleum poised in empty air. All labor yields to Caesar's Amphitheater. Fame shall tell of one work in lieu of all.”

—Christopher Epplett

Source

De Spectaculis 1, in *Martial: Epigrams*, Vol. 1, edited and translated by D. R. Shackleton-Bailey (Cambridge: Harvard University Press, 1993), 13.

Bibliography

- Bomgardner, David Lee. *The Story of the Roman Amphitheatre*. New York: Routledge, 2000.
- Gabucci, Ada, ed. *The Colosseum*. Los Angeles: Getty Museum, 2000.
- Shackleton-Bailey, D. R., ed. and trans. *Martial: Epigrams*, Vol. 1. Cambridge: Harvard University Press, 1993.
- Ward-Perkins, John Bryan. *Roman Imperial Architecture*. New York: Penguin, 1981.

Roman Pantheon

The Pantheon (“Temple of all the gods”) was originally built in Rome during the reign of Augustus (31 BCE–14 CE). The construction was entrusted to the emperor's right-hand man, Agrippa, who dedicated the Pantheon in 27 BCE as part of his monumental building program in the Campus Martius. Despite the name of the Pantheon, its primary purpose was to honor the emperor's family, the Julian clan.

Unfortunately, in part due to later rebuilding, the original design of the Pantheon is not absolutely clear. The original Pantheon appears



The Pantheon in Rome, Italy. (Rob Meehan)

➤ GIVING CREDIT WHERE CREDIT IS DUE

Hadrian, who was a very active builder throughout the Roman empire during his reign, was careful to give credit to the original builders of structures he restored. A clear example of this is seen in the Pantheon. As a mark of respect to his predecessor, Hadrian was careful to include the building's original dedicatory inscription in the rebuilt Pantheon, an inscription that is still clearly visible on its facade: "M AGRIPPA L F COS TERTIVM FECIT" (Marcus Agrippa, son of Lucius, consul for the third time, constructed [this building]).

—Christopher Epplett

to have been a rectangular temple some 65 by 144 feet (20 by 44 meters) in size, with its main entrance on the south side. Somewhat unusually, the *cella* (main chamber) of the temple was not aligned with the porch but instead was situated perpendicular to it. Like many other Augustan monuments, the original Pantheon was built at least partly in marble. In addition, as Pliny the Elder informs us, the Pantheon was decorated with Caryatid columns (carved in the form of women) sculpted by Diogenes of Athens, a classicizing element that it shared with the Forum of Augustus.

The original Pantheon was one of many buildings in Rome destroyed by fire in 80 CE. The emperor Domitian subsequently rebuilt the

Pantheon, but the rebuilt structure was itself destroyed by another fire in 110 CE. It was therefore left to Hadrian to once more rebuild the Pantheon after becoming emperor in 117 CE. Brick stamps on the Pantheon not only indicate that construction began the following year but also that the Hadrianic reconstruction obliterated virtually all remaining traces of earlier building on the site.

Hadrian's Pantheon, largely preserved because of its conversion to a church in 608 CE, is a distinct departure, in terms of design, from its previous manifestations. The front of the structure consists of a rather typical eight-columned porch and pediment; the design of the rest of the structure, however, is anything but conventional. The interior of the Pantheon, in its most basic terms, consists of a cylinder topped by a dome. The interior diameter of the cylinder (141.7 feet, or 43.2 meters) is equal to the interior height of the building at the top of the dome. A massive concrete foundation ring, some 14.7 feet (4.5 meters) deep and 33.7 feet (10.3 meters) thick, along with the walls 19.6 feet (6 meters) thick of the cylinder above, supports the weight of the dome. Further stability is also ensured by the fact that the concrete mixture used for the dome is substantially lighter than that employed for the cylinder and foundation.

Despite the bulk of the Pantheon's structure, it is anything but oppressive to anyone entering the interior. A number of optical effects ensure that the visitor is given the impression of space and openness. A large *oculus* (round opening) some 30 feet (9 meters) wide, situated at the top of the dome, provides light to the Pantheon's interior. In addition, architectural effects such as the coffered panels built into the interior of the dome as well as a series of recesses built into the base of the cylinder break up the potential monotony of the building's interior.

—Christopher Epplett

Bibliography

- Boatwright, Mary Taliaferro. *Hadrian and the City of Rome*. Princeton, NJ: Princeton University Press, 1987.
- De Fine Licht, Kjeld. *The Rotunda in Rome: A Study of Hadrian's Pantheon*. Copenhagen: Gyldendal, 1968.

MacDonald, William L. *The Pantheon: Design, Meaning, and Progeny*. Cambridge: Harvard University Press, 2002.

Ward-Perkins, John Bryan. *Roman Imperial Architecture*. New York: Penguin, 1981.

The Earlier “Great Wall” of China

The Great Wall of China that still stands today was not the first “great wall” to be built in China. During the Warring States period (481–221 BCE) when warfare was endemic, defense walls were built to keep out invaders, both predatory neighbors and alien nomads. Most regional states, particularly those located in proximity to the steppe lands such as the Zhao, Yan, and Qin, all built their own walls separately. After the Shihuangdi of Qin unified the country in 221 BCE, the internal defense walls fell into disuse, but the northern nomads continued to present a tangible threat to the agricultural community in the south. Thus, the Shihuangdi strengthened the defense walls that the regional states built previously and connected them together as one structure. As the threats from

the north persisted, the Han (206 BCE–220 CE) rulers followed the Shihuangdi’s strategy, building on the wall and using it as a defense line against the nomads through much of the Han era. The wall thus becomes known as the Great Wall.

The Great Wall was a massive engineering feat. It started in Liantao from the northwest in present-day Gansu, cut its way across various landscapes including plains and mountains, and stretched to Liaoting in the northeast. The total length of the wall during the Han period was over 10,000 *li* (1 *li* is about 0.3 miles or 0.5 kilometers). It thus acquires the name of Wanli Changcheng, or the “Ten-thousand-li-long Wall.” Wood, rocks, and bricks were all used as building materials, but the bulk of the wall was made out of earth, which was tamped and hardened. It stood about 65 feet (20 meters) high, making it harder for the horseback-riding nomads to cross; in some parts the top of the wall is 26 feet (8 meters) wide, allowing the defending troops to move back and forth. On top of the tall beacons, sentries would start up fires for smoke signals, signaling the approach of the invading nomads from afar.



➤ SCHOLARLY CONTROVERSIES—WAS THE ANCIENT GREAT WALL REALLY GREAT?

Almost every discussion of Qin Shi Huang's reign includes the one accomplishment that seems to typify both the positive and negative aspects of his reign: the Great Wall of China. According to the typical account, Qin Shi Huang completed earlier Zhou wall construction projects by connecting them all up to form the Great Wall, which he built to protect China from the savage and warlike Xiongnu or "Huns" on China's northern border. He may even have punished laborers who did not work hard enough on the project by executing them and having their bodies buried within the Great Wall. When finished, this Great Wall supposedly extended all the way across China, effectively dividing the Chinese civilization on the south from the world of the barbarians, or pastoral nomadic peoples, of the northern steppe lands. There it remained until the present in one state of repair or another, periodically undergoing renovation projects. Today it stands as monumental and artifactual testament to the industry of the Chinese people and the despotic, boundless ambition of Qin Shi Huang. It is such a magnificent structure that it is the only man-made object on the earth that can be seen from orbit or, by some accounts, the moon.

All of this makes tantalizing copy for travel brochures and grist for the publishing mills that endlessly crank out glossy, coffee-table picture books about China. There is, however, one major problem with this standard and sensationalized description of the Great Wall: according to the historian Arthur Waldron it is wrong in its entirety.

Waldron has exploded hoary legends and proven conclusively that much of what we once thought we knew about the Great Wall is pure myth. First of all, the Great Wall of China is not ancient but was built during the Ming dynasty (1368–1644 CE). Many traditionally minded historians of China have long maintained that although the Great Wall as it stands today was last renovated during the Ming, the site of the wall itself goes all the way back to Qin Shi Huang's day. Waldron, however, has shown that there is only the flimsiest of evidence to support this notion. Earlier Chinese dynasties, including the Zhou and the Qin, did in fact build walls, but the locations of these walls were scattered throughout many areas of northern China and never constituted the one continuous and fixed wall that Chinese and foreigners recognized as the Great Wall. He points out that Marco Polo, whose travels during the thirteenth century CE often took him through areas where the Great Wall supposedly existed, never even mentioned it. Waldron maintains that the Great Wall was built for the first time during the Ming and did not exist in any form before that dynasty. Of course, this is not to say that the Great Wall is not magnificent. All Waldron maintains is that the wall is not ancient.

—David Curtis Wright

Bibliography

Waldron, Arthur. *The Great Wall of China: From History to Myth*. Cambridge: Cambridge University Press, 1990.

➤ THE STORY OF MENGJIANG

There are many folktales about the Great Wall, and one story has become the most popular throughout China, the story of Mengjiang. Mengjiang was married to a man who, soon after their marriage, was drafted to work on the wall. Mengjiang was a devoted wife, waiting patiently for her husband to return. When winter approached she made her husband warm clothes and traveled to Shanhaiguan to deliver them. When she arrived she

learned that he had already died of exhaustion and cold. Deeply in grievance, she cried incessantly under the wall until her tears broke open the part of it, revealing her husband's skeleton and the skeletons of many others. Mengjiang took the remains and buried them properly, and having no other family to comfort her, she threw herself into the sea.

—Yi Li and Constance Childs

The building of the Great Wall consumed tremendous resources and incurred high human costs. The Shihuangdi alone is said to have deployed 70,000 people to work on the project, while the entire Chinese population at that time was no more than 30,000. At the peak of construction, perhaps up to 1 million men worked on the wall, not to mention the high labor cost for the continuous maintenance of it. Many of these workers were either criminals or peasants drafted from the village who were obliged to fulfill their duty to the government. The working conditions were harsh and inhumane, with little security and with many laborers dying on the job. Legends that say that the wall was built on the piles of human skeletons are not entirely without grounds.

Despite the great efforts in the building of the Great Wall, over the long history it did not always protect China from the northern nomads. After the Han fell in 220 CE, the Central Plains were overrun and devastated repeatedly by the invading nomads. The Xiongnu, the Xianbei, and Turks, one after another, had crossed the wall and established their presence in China. However, the wall remains symbolic in separating the agricultural and “civilized” Chinese society from the nomadic and “barbarian” society in the north. As the Chinese increasingly believed that they were the center of the world as the Middle Kingdom, the wall worked better in keeping the Chinese people in rather than keeping the “barbarians” out.

—Yi Li and Constance Childs

Bibliography

- Fairbank, John, and Merle Goldman. *China: A New History*. 2nd ed. Cambridge: Belknap Press of Harvard University Press, 2006.
- Lovell, Julia. *The Great Wall: China against the World, 1000 BC–AD 2000*. Great Britain: Atlantic Books, 2006.
- Waldron, Arthur. *The Great Wall of China: From History to Myth*. New York: Press Syndicate of the University of Cambridge, 1990.

The Maya Temple Pyramids of Nakbe

Located in the *bajos* (lowlands) of the northern Petén region of Guatemala, Nakbe was the earliest of the preclassic cities in the southern Maya

lowlands to erect platforms, temples, stelae, and other forms of monumental architecture. The discovery of these early structures by Richard Hansen and his colleagues on the Regional Archaeological Investigation of the Northern Petén, Guatemala (RAINPEG) Project, now known as the Mirador Basin Project, indicates that by 750 BCE the social, political, and economic complexities associated with the emerging concept of kingship was probably Maya in origin and not Olmec, as previously assumed.

Archaeologists from the University of Pennsylvania discovered Nakbe in 1930 using aerial reconnaissance, but the site was not systematically mapped until 1962, when anthropologist Ian Graham began limited excavations. He named the city Nakbe, which in Yucatec Maya means “on the way.” Intensive investigation of the site commenced in the late 1980s under the auspices of the RAINPEG Project and continues at present. Between 600 and 300 BCE, residents of Nakbe leveled their villages and used the rubble as fill for two substantial platforms that would eventually become the foundation of Nakbe’s civic-ceremonial center. Because of the site’s marshy location, the builders of Nakbe connected these two Middle Preclassic platforms, which extended an impressive approximately 60 to 92 feet (18 to 28 meters) into the air, with the Kan sacbe, an elevated causeway of crushed white stone as high as 13 feet (4 meters) aboveground in certain areas. Another sacbe connected Nakbe to El Mirador, a city located approximately 8 miles (13 kilometers) to the north, whose rise to prominence came on the heels of Nakbe’s demise.

By the Late Preclassic, the eastern and western platforms had reached monumental elevations of approximately 105 and 148 feet (32 and 45 meters), respectively. The city’s principal structures sat atop these two basal platforms. One part of the two-part eastern platform held a terrace surrounded by a number of low platform structures forming a court with a freestanding pyramid abutting it at the western corner; on the other part rested an even larger pyramid that was visible, but not accessible, from the court. The western platform supported three terraced courtyards and associated building complexes, the highest terrace of which was crowned by

Nakbe's largest and most magnificent pyramid. Structure 1, as this pyramid is known, was decorated with four large masks positioned symmetrically on either side of the main staircase leading from the central plaza to the triadic complex of three temples at the top. Maya artisans carved the masks in stone, covered them with stucco, and then painted them in multiple colors. Archaeologists reburied three of the four masks for preservation purposes, but the largest mask remains visible and depicts Vucub Caquix, or Seven Macaw, the principal bird deity associated with royal accession.

Members of Richard Hansen's team also uncovered 45 fragments of a stone stele that when intact measured 11 feet (3.4 meters) in height. The reconstructed stele portrays two men standing face to face and wearing garments similar to those appearing on the granite Miraflores stele from Kaminalijuyu, an indicator of highland-lowland interaction as early as the Late Preclassic. One of the two men points his index finger upward to a severed head, a scene evoking the

mythological genealogy described in the Popol Vuh of the ball-playing hero twins Hunahpu and Xbalanque, whose father's skull grew on a tree after his sacrifice by the cruel lords of Xibalba. Stone quarrying techniques and cutting technology were initial areas of investigation in the RAINPEG Project, as archaeologists wanted a better understanding of how the Maya built such grandiose structures in such a relatively quick period of time. A series of replication studies demonstrated that a variety of chert tools including hammerstones, picks, and axes were efficient, accurate, and durable for shaping limestone.

—Whitney Leeson

Bibliography

- Demarest, Arthur. *Ancient Maya: The Rise and Fall of a Rainforest Civilization*. Cambridge: Cambridge University Press, 2004.
- McKillop, Heather. *The Ancient Maya: New Perspectives*. New York: Norton, 2006.
- Sharer, Robert J., and Loa Traxler. *The Ancient Maya*. 6th ed. Stanford, CA: Stanford University Press, 2005.

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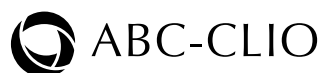
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 4 Expanding Regional Civilizations, 300–1000

During these 700 years, 30 to 35 generations lived, succeeding each other at 20–25 year intervals. Over these seven centuries, the earth's estimated population grew slowly (by modern standards) from perhaps 200 million to 300 million. But that number is deceptive, because although the number of earth's human inhabitants did not even double in nearly three quarters of a millennium, within that period there were significant population blooms and crashes. The rise of great empires brought a modicum of internal peace and security, allowing prosperity to spread and great cities to thrive; the convulsions that accompanied the decline and destruction of great empires brought war, desolation, and depopulation. New crops and agricultural techniques brought significant population increases; environmental degradation and weather fluctuations resulted in famines and precipitous population declines. These centuries constitute an era of rises and falls, of great achievements and appalling catastrophes.

These centuries witnessed periods that for many powerful and wealthy people were halcyon years, serene times in which life seemed to be a great fulfillment.

The Fujiwara regent of Japan in the eleventh century expressed his satisfaction with his time:

“No waning in the glory of the full moon
The world is indeed my world”

During some phases of this era, there were seemingly invincible conquerors and mighty builders who may have shared the sentiments expressed in “Four Preludes to Playthings of the Wind” by the American poet Carl Sandburg:

“We are the greatest,
We are the Best
Nothing like us ever was”

But for many, perhaps most, life was difficult, often desperate. For large numbers of slaves (and nearly all societies had slaves, especially in the Mediterranean region and Asia), life was an unrelieved round of exploitation and degradation. The vast majority of people lived as agricultural peasants, not slaves, but they were subject to landlords and tax

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For all of their exploitation, and often because of it, these peasants were the strength of their societies, and the vitality of empires was directly proportional to the well-being of the peasants.

Life for many was, to quote the English philosopher Thomas Hobbes, “poor, nasty, brutish and short.” Life expectancy in the agricultural regions dominated by cities, where the vast majority of the people lived, has been estimated to have ranged from 30 to 35 years. Early in the era, pandemics swept through China and the Roman empire and other regions of Eurasia, carrying off untold millions, especially in the cities.

For women in this era, life could be difficult. As was true for nearly all agrarian civilizations since the development of sedentary agriculture, most societies in this era were patriarchal, with many of the benefits of the social order reserved for the men, while women shouldered much of the burden of work and service. During the middle centuries of this era, in the Mediterranean region and West Asia, women were increasingly secluded; in India and China, daughters-in-law came to occupy the lowest rung in the familial order. In the savanna regions of Africa, women’s roles became much more narrow as patrilocal residence became common and the reckoning of descent through the male line spread.

This era witnessed the spreading of great regional civilizations. This was most apparent in the Afro-Eurasian ecumene (the zone of interacting civilizations that at this time included the Mediterranean region, much of western Europe, West Asia, South Asia, Southeast Asia, East Asia, and central Asia), but it was also true, although to a lesser extent, in Africa south of the Sahara as well as parts of the Americas and, coincidentally, the vast area of the Pacific Ocean that historians call East Polynesia.

For the sake of convenience and because it roughly conforms with some major political changes, particularly the rise and fall of some empires, this period can be divided into two sub-eras: the Age of Southernization (300–600 CE) and the golden age of Islam and the Tang dynasty (600–1000). This division works fairly well for the Afro-Eurasian ecumene and, surprisingly, for East Polynesia (the time periods but not the titles of the sub-eras). For Africa south of the Sahara it has less coherence, and for the Americas other periodization schemes may be more appropriate.

The Age of Southernization, 300–600

The term “Age of Southernization” is appropriate for the period 300–600 because during these centuries the great center from which many of the cultural innovations in the Eastern Hemisphere radiated was South Asia, better known as the Indian subcontinent. This Age of Southernization is thus analogous to the nineteenth- and twentieth-century Age of Westernization, when many cultural innovations emanated from Europe and North America (i.e., the West).

Northern Indian prosperity during the Gupta dynasty (ca. 240–555) generated the cultural process for which the Age of Southernization is

named. The Gupta empire, roughly contemporaneous with the Sassanian empire (226–651) in Persia and the early phase of the Byzantine (East Roman) empire, was a cultural dynamo, during which great strides in metallurgy, mathematics, medicine, and philosophical and religious speculation were made.

The Age of Southernization also witnessed the radiation of Indian civilization to Southeast Asia, East Asia, and central Asia and, to a lesser extent, the Mediterranean. Indian crops, such as cotton, rice, bananas, and citrus fruits, spread west; Indian technology, such as the art of distillation, followed the trade routes. Indian music and musical instruments, such as the cithar (a forerunner of the guitar), and Indian mathematics, with its decimal system and the concept of zero, were carried in the baggage of merchants, missionaries, and conquerors. Indian religions and religious forms also traveled: Hinduism and Buddhism into Southeast Asia, Buddhism into central and East Asia, and some Buddhist ideas, as well as the practice of monasticism, to the Mediterranean region.

In Southeast Asia, merchants and other travelers transplanted Indian civilization to such an extent that Southeast Asia during this period has been called “Greater India.” States, modeled after the Hindu kingdoms in India, were established on the Southeast Asian mainland among the Khmers, the Mons, and the Chams and also among the Malays and others of the Malay Peninsula as well as the large islands of Sumatra and Java. In the Southeast Asian mainland and island kingdoms, varieties of Hinduism, Buddhism, or both were established as court religions.

Merchants and missionaries carried much of Indian civilization, including Buddhism, over the Hindu Kush and into Afghanistan, Iran (Persia), and other regions of central Asia. From central Asia, Buddhism spread along the Silk Roads to China. Buddhism became an important religion in China during the Period of Division (220–589) from the fall of the Han to the rise of the Sui dynasty. Other aspects of Indian civilization, especially art motifs, music and musical instruments, science, and mathematics, went with Buddhism from India to China. By 600 this complex of ideas and traits was naturalized in China. In the next two centuries, this new Buddhist Chinese civilization spread to Korea and Japan.

Indian civilization influenced the Mediterranean region during the early centuries of this period less than it did central and East Asia, and its influences were, for the most part, less direct and less obvious. Although especially in the fourth and fifth centuries there was direct commerce between the Mediterranean peoples and the Malabar Coast of southwestern India, most Indian influences reached the Roman empire through the mediation of Sassanian Persia, or Arab traders, or through the Ethiopian port of Adulis. Although Indian mathematics did not reach Europe until after the year 1000, some historians believe that certain religious notions, as well as religious practices, diffused from India to the pre-Christian and Christian West before and during the

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early centuries of this period. The idea of Sunday as the holy day of the week, the practice of putting solar disks (nimbus and halos) around the heads of gods and saints in religious art and important personages in secular art, and the establishment of monasteries, where a special religious elite, often celibate, sanctified the society—all were features of the flow of cultural forms from India, often by way of Persia.

Although cultural currents were diffusing from India and China to the Roman empire, the most significant development in the Mediterranean region during the three centuries (300–600) was the rise of Christian civilization in the Roman empire and the Germanic kingdoms that were the successors of the empire in the west. Roman emperor Constantine (r. 306–337) favored Christianity in the first quarter of the fourth century, and it became the official religion of the empire in 380. Latin, or western Roman, Christianity became the vector by which the modified and impoverished Graeco-Roman civilization spread to the Germans, who invaded the western empire in the late fourth to mid-sixth centuries, and to the Celts in Ireland and Scotland. Meanwhile, trade and missionaries were spreading Christianized Graeco-Roman civilization east into Mesopotamia and the Caucasus and south into Ethiopia and the area on the great bend of the Nile River known as Nubia (the area of the modern republic of Sudan).

The great surge of cultural influence from India was contemporaneous with a swelling tide of migration and military influence from the grassland pastoralists and forest dwellers of Inner Eurasia. In that vast region stretching from the Rhine River border of the Roman empire in the west to the borders of China in the Ordos steppe, unexplained phenomena occurred during these centuries, causing immense migrations and population displacements.

All the neighboring sedentary peoples, including the Chinese, the Sogdians (an eastern Iranian people inhabiting the area of present-day Uzbekistan), the Indians, the Persians, and the Romans, were impacted. Invaders from the steppe and forests north and west of China, known to the Chinese as “the five barbarians,” seized northern China from the Jin dynasty. In the west, Goths from north of the Black Sea drove the Romans south of the Danube River after 376. Later, the Huns, another group of invaders from the steppe, set in motion a great movement of peoples into Europe that resulted in the fall of the western Roman empire and the rise of Germanic kingdoms. Farther east, the central Asian Hephthalites invaded and terrorized Persia and India, while the Toba erected their empire on the northern Chinese plain.

Throughout this period, groups of Turkish pastoralists expanded in the Eurasian steppe. They coalesced into great empires, such as the Tork empires (sixth century to eighth century), the Khazar empire (early seventh century to the late tenth century), and the Uighur empire (744–840). These steppe empires taxed and protected transhemispheric trade on the Silk Roads. Sometimes they conquered sedentary agricultural peoples. Occasionally, the conquered people, as in Bulgaria, assimilated them but, as frequently, Turkish peoples imposed their languages and ethnicity on the conquered people, as in Turkey (Anatolia) and central Asia well after the year 1000.

While crops and cultural forms were diffusing from India to the West, out of the Arabian Desert came another cultural feature that would, by the middle of this period, revolutionize human adaptation to the Sahara and provide a cultural and trade connection between the great Afro-Eurasian ecumene and Africa south of the Sahara. This cultural feature was the domesticated single-humped camel, or dromedary, with the new camel saddle, the use of which had begun to spread from Arabia into the Sahara region in the last centuries BCE. By the fourth or fifth centuries CE, camel nomadism was becoming ubiquitous throughout the Sahara, and camel caravans were extending trade across the Great Desert, especially into the savanna regions of West Africa. From then on, the Sahara was less of a barrier. While it remained a great obstacle to cultural exchange, this vast wasteland was becoming increasingly porous. While most of Africa south of the Sahara did not become an integral part of the great Afro-Eurasian ecumene until well after 1000, all parts of Africa were to be impacted by developments from the ecumene in this period.

While cultural influences emanating from the Mediterranean region across the Sahara were important and would, by 1000 CE, work a religious and cultural transformation of the Sudan, that great belt of grassland, or savanna, between the desert and the tropical forest, an equally important influence moved in from the east, across the Indian Ocean and the Arabian Sea. In trading posts and cities established along Africa's east coast, Austronesian, Indian, Arab, Ethiopian, and Bantu merchants and settlers began growing Asian crops, including rice, cotton, citrus fruit, sugarcane, taro, and especially bananas. These crops would, in the course of this period, spread from Africa's east coast to all parts of Africa south of the Sahara. Eventually, the addition of bananas to the agricultural portfolio would lead to a remarkable population increase and the emergence of states and empires in the African forest and savannas.

One of the last phases of the great Austronesian dispersal provided an important impetus in the growth of cultural influences in Africa from the Indian Ocean. Sailors and settlers from Indonesia to East Africa and particularly Madagascar comprised the western wing of the Austronesian dispersal, while thousands of miles away in the central and eastern Pacific Ocean, the Polynesian exploration and settlement of the Society Islands, the Marquesas, Hawaii, Easter Island, and, perhaps after 1000 CE, New Zealand (Aotearoa) represented the Austronesian Far East. Because of these epic migrations, the Austronesian language group was more widespread than any other until after 1500.

The Austronesians who settled Madagascar probably began migrating from Indonesia to that great island before 300 CE and continued to come after 1000 CE. In Madagascar, Indonesian immigrants assimilated Bantu groups and, from there, modified the cultures of continental Africa south of the Sahara. One modification was in music and musical instruments. The Africans widely adopted the Indonesian xylophone, or marimba.

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The period that comprises the Age of Southernization coincidentally marks a natural period in the growth of East Polynesia. Despite that, for all practical purposes, cultural communication between the ancestors of the Polynesians and Eurasia had ended several thousand years prior to this period. Anthropologists believe that Polynesian culture developed from Lapita culture in the Solomon Islands, perhaps 2000 BCE. The early Polynesians settled West Polynesia (Samoa, Tonga) sometime in the second millennium BCE. After settling West Polynesia, migration stopped; there was a long pause for 1,500–2,000 years. Then, for reasons that anthropologists have yet to discover, about 300 CE (the beginning of this period) a few Polynesians began to voyage thousands of miles east, rapidly exploring most remaining Pacific Islands and making initial settlements on most by 650 CE except Aotearoa (New Zealand).

The Golden Age of Islam and the Tang Dynasty, 600–1000

Just as the Age of Southernization is so-named because cultural innovations emanating from India impacted much of Afro-Eurasia, in the golden age of Islam and the Tang dynasty, roughly 600–1000, the great founts of cultural innovation were Tang China and the newly minted Islamic civilization. For these centuries (and perhaps an additional six centuries after 1000, a millennium in all) China and the Islamic world were the two cultural and economic dynamos of the expanding Afro-Eurasian ecumene. These two centers were magnets of cultural attraction, and their interaction resulted in a fruitful cultural synergy. China was preeminent for most of the era's innovations in material culture and developed papermaking, gunpowder, printing, and many agricultural and industrial processes. The Muslim world (known as Dar al-Islam, or House of Islam) served as a transmission belt that carried Chinese innovations to the far corners of the Afro-Eurasian ecumene during this period and for centuries after.

Throughout this period, China was the most populous, the most prosperous, the most urban, and the most technologically innovative civilization in the world. For much of this time, China also wielded the strongest military force. With the imposition of imperial peace after the

reunification of China by the Sui in 589 and then the Tang in 618, the stage was set for a glorious flowering of creativity. New canals, bridges, and roads led to new heights of prosperity. New lands were settled, cities flourished, and the imperial government enjoyed mounting revenue surpluses. With the growing opulence of

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Chinese society came a heightened development of Chinese art and literature. At the high noon of the Tang dynasty, in the long reign of Xuanzong (r. 712–756), Chinese civilization experienced a surge of creativity that recalls the glories of fifth-century BCE Greece. But by the middle of the eighth century, the security and serenity of Tang had ended, and

China experienced An Lushan's Rebellion, a disaster that the Tang endured but from which it never really recovered.

Chinese civilization under the early Tang dynasty was powerfully seductive to the neighbors of China. Its wealth and art, as well as the strength of its government, exerted a forceful attraction over the ruling groups in surrounding lands, particularly Korea and Japan, who sought to emulate Tang China's greatness by wholesale adoption of Chinese civilization. Students were sent to China to study Buddhism as well as Confucianism and Chinese manners and morals.

The Yamato chieftains of Japan sent eight great embassies to China between 607 and 838 with hundreds of students whose mission was to learn the secrets of Chinese state power and to use this knowledge to construct an equally powerful Japanese state. The Japanese built a capital city, huge for its time, in imitation of the Tang capital, Chang'an. The city was replete with great Buddhist monasteries and a highly cultured, but idle and inbred, class of aristocrats.

In this city, then called Heian but now known as Kyoto, aristocratic courtiers and ladies enjoyed a luxurious and mannered existence, characterized by ritual and intrigue, that lasted until the second half of the twelfth century. Out of this hothouse civilization emerged humanity's first great novel, *The Tale of Genji*, by the court lady Murasaki Shikibu.

The rulers of the Korean kingdom of Silla also built a huge capital city in imitation of Tang. Silla, in alliance with Tang China, united the Korean Peninsula in 668 after centuries of division into three Korean kingdoms. The Silla dynasty, assimilating Tang civilization, including Buddhism, even more thoroughly than Japan, lasted until 935, when it was replaced with the Koryo dynasty.

At least two more states arose in imitation of Tang: Parhae, which persisted for two centuries (713–926) in the northern part of Korea and much of Manchuria, and Nanzhou, which prospered in China's southwest from 751 until it was conquered by the Mongols in the thirteenth century.

While Tang China's civilization was adopted as a whole package by its neighbors in East Asia, only selected, mostly technological features from China influenced other peoples, including those of the Muslim world. The meeting of Tang China and the Islamic world was intense when their armies fought each other in the Battle of Talas in 751, in the Ferghana Valley of central Asia. By that time there had been contact between China and the Muslims for over a century, almost from the foundation of the Islamic religion.

The roots of Islamic civilization can be traced to the early seventh century, when the Prophet Muhammad (ca. 570–632) began preaching the new religion and nurturing the Muslim *umma*, or community of believers. Because Islam, the youngest of the great world religions, was the only one originating within the period from 300 CE to 1000 CE, and because a dynamic new empire and civilization, which has been called the first world civilization, developed around this new religion, Muhammad was the outstanding individual of this period, the superhero of the time.

The sudden emergence of Muslim power from out of the Arabian Peninsula in the early seventh century was surprising but not

unprecedented. The Byzantine empire and the Sassanian empire had exhausted each other in their series of terrible wars that lasted a century and a quarter. The populations of both empires were alienated from their governments. Far from assisting the imperial forces in repelling the Muslims, many of the subject peoples in Iraq, Syria, Palestine, and Egypt welcomed the invaders and often assisted in the conquest. What was more amazing than the easy Muslim conquests was the durability of the Muslim state and the development of Islamic civilization. In little more than three or perhaps four generations (86 years) Muslim armies carved out the largest empire the world had known, extending from the Bay of Biscay in Europe to the mouth of the Indus River and including what had been the wealthiest and most prosperous lands of the Roman and Sassanian empires. Throughout this vast area, Arab armies settled in garrison cities: Kufra, Basra, and Qum in the former Sassanian empire; Merv in central Asia; Fustat in Egypt; Qayrawan in Tunisia; and others. These garrison towns acted as centers for spreading the Arab language and Islamic religion, and within less than a century, in many areas, the surrounding countryside was Arabic in language with a majority of Muslims. Arabic replaced the ancient languages of Egypt, Syria, and Mesopotamia as well as the Latin creole tongues of the Maghreb (western North Africa). However, Arabic failed to replace Persian, which emerged as one of the chief literary languages of the Muslims.

Muslim civilization is basically a Western civilization, but it has been called the first world civilization because it eventually spanned the Eastern Hemisphere from the Atlantic to the Pacific and interacted with most of the other civilizations of the Eastern Hemisphere (except those of Oceania). The Muslims inherited much of their basic science, mathematics, philosophy, and cosmology from their predecessors in the Mediterranean and Iranian lands, but they were equally quick to appropriate elements from India and China. The central bond of the Islamic world, the Muslim religion, is, like Judaism and Christianity, originally Semitic, and like its sister Abrahamic faiths, it owes a great debt to Persian Zoroastrianism. From Persia, Islamic civilization acquired its concept of kingship and a philosophy of government as well as a great trove of literary and historical lore. From India came mathematical concepts, such as the decimal system and Arabic numbers.

The Muslim world assimilated a large body of agricultural and industrial technology and crops from India as well. From China, the Muslims acquired many material innovations without which modern civilization would have been much different: paper, new methods of harnessing horse traction, improved water and wind mills, improved mining technology, a vastly expanded pharmacopoeia, and much else.

Tang China and the Muslim world interacted in ways that stimulated both. Chang'an and Baghdad, the capitals of the Tang dynasty and Abbasid caliphate, had large populations of wealthy courtiers enjoying the surplus collected from the renewed prosperity of rich agricultural lands. These courtiers exerted a demand for exotic luxury goods that could only be satisfied through long-distance trade. The most important routes of this long-distance trade were the overland caravan silk routes

across the Eurasian steppe from China to Baghdad and Constantinople and the seaborne trade through the Indian Ocean and the China Sea.

The overland Silk Roads and the Indian Ocean–China Sea route were the main trunk routes for what became, by the middle of this period, a great trading system that spanned the Eastern Hemisphere, reaching from Japan and the islands of the Indonesian archipelago in the east to the forests of West Africa and northern Europe in the west. It was the circulation system of the great cultural ecumene, and the center of this hemispheric circulation system, the heart of the ecumene, was the Muslim world.

Though the Muslim world was the heart of the ecumene, the vast Chinese economy provided much of the stimulus for this trade. The Chinese were nearly self-sufficient in most products, but they were deficient in some essentials and many luxuries. Warhorses from central Asia were especially in constant demand, and the search for a supply of these horses was a force that drove much of the trade on the Silk Roads. But the Muslims wanted Chinese luxuries, principally silk, that they paid for with silver from central Asia. Silver coins from the Abbasid caliphate were the currency of the time, a common coin from China to the western Mediterranean.

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Trade through the Mediterranean Sea had diminished considerably with the fall of the western Roman empire and the Islamic conquest of the Maghreb (western North Africa), but by the late eighth and early ninth centuries it was recovering. The emergence of the Carolingian empire by 800 stimulated this. Feeding into the Mediterranean routes were trails to northern Europe, bringing luxury goods north and forest products and slaves to the more urbanized south. Even the far north of Europe entered into the mainstream of hemispheric trade.

The Vikings erupted from Scandinavia in the late eighth century, marauding and pillaging and sometimes conquering the coast lands of western Europe and the forest peoples of eastern Europe, seizing tribute in amber and furs but especially slaves to trade for Abbasid silver and, through Muslim intermediaries, Chinese luxuries. The Vikings established a trading and tribute-gathering kingdom on the Dneiper River that emerged, by the end of the tenth century, as Kievan Rus (the ancestral state of both Russia and Ukraine).

The Indian Ocean–China Sea route competed with the overland Silk Roads as the principal artery of the Eastern Hemisphere trading system. The great sea route ran from Japan and Korea to Chinese ports on the Shandong Peninsula and from there south along the China coast to the great port of Guangzhou. Arab, Persian, Indian, and Malay merchants frequented Guangzhou, and thousands of Arabs and Persians lived there, buying Chinese silks, ceramics, and other luxuries and selling ivory, rare woods, and metals from around the Indian Ocean littoral. From Guangzhou, the sea route ran south, through waters infested with Cham pirates, to the port of Srivijaya in western Sumatra. As the capital

of a trading empire, Srivijaya maintained a navy to suppress the pirates who frequented those shores. Srivijaya was home to a large Buddhist monastery/institution of higher learning and was a stopover for East Asian Buddhist pilgrims on the road to Nalanda, the great Buddhist monastery in Bihar, India. Srivijaya was a major resting place for travelers and a meeting place for Chinese and Indian merchants.

In Srivijaya, a tributary stream of trade, carrying spices from the Moluccas and rice from Java, joined the main Indian Ocean trading system. The sea route ran west from Srivijaya across the Bay of Bengal to Mahabalipuram and other ports in southern India. A small fraction of the trade went north instead of west, to the Khmer kingdom of Cambuja (Cambodia) and the Mon kingdoms on the Irrawadi River. These Southeast Asian states had adopted Indian civilization and imported Chinese silk and other luxuries for ivory and exotic products used in Chinese medicine.

The majority of the trade continued on from Mahabalipuram to sail around the southern tip of India to the Malabar Coast. There, the ships waited until the monsoon season, when they would sail west across the Arabian Sea. India also contributed much to the westward traffic, in pepper, gems, and other products.

This oceanic trade route bifurcated in the Indian Ocean. The main stem ran up the Persian Gulf to ports in Persia and Basra in southern Iraq, the port of the sea route's main western market, Baghdad. A second oceanic route ran to southern Arabia and into the Red Sea, to reach the Ethiopian port of Adulis. From the fourth to the eighth centuries, the Axumite empire of Ethiopia was one of the chief trading powers on the Indian Ocean route, as hoards of Ethiopian (Axumite) coins in southern India and Indian coins in Axum attest.

During the period of Axumite trading prominence, much of the Indian Ocean trade was going up the Red Sea, eventually to end up in Alexandria in Byzantine Egypt, but camel caravans also carried much overland along the western side of the Arabian Peninsula to Byzantine Syria. According to some scholars, the prosperity created by that carrying trade through Mecca widened economic disparities, causing social instability that made the Arabian society fertile ground for the religious turmoil that led to the emergence of Islam.

The Indian-Ocean trade system reached far south along the East African coast. There, commercial city-states grew up whose people spoke Swahili, a language of the Bantu family with Arabic influences. The Swahili traded African products, particularly elephant ivory, smelted iron, and perhaps gold from the interior (after 900) for Chinese and Indian goods. The Swahili also adopted, perhaps from Indonesian migrants who may have briefly tarried on the East African coast en route to Madagascar, Asian crops: Asian rice, Asian yams, taro, sugarcane, and especially bananas. These crops took root in East Africa early in this period, but by 1000 they had diffused throughout most of Africa south of the Sahara, reaching across the continent to the Atlantic coast of West Africa by the tenth century. These crops did not replace the traditional African crops but rather supplemented them, resulting in a greatly increased food production. This resulted in greater populations

in most areas. Eventually, the greater population density led to the emergence of many new states by or shortly after the eleventh century.

While East Africa's participation in the Indian Ocean trading system was strengthening Africa's connections with the Afro-Eurasian ecumene, the growing involvement of West Africa in the trans-Saharan trade connected Africa south of the Sahara with the Mediterranean end of the great ecumene. Trade across the Sahara existed from at least the first century CE, but it expanded greatly during this period with the increasing use of Arabian camels in the Sahara.

In the early centuries CE, camel pastoralism had spread throughout the great desert, and by the seventh century, Berber merchants developed an institutionalized system of camel caravans traveling three main routes across the Sahara. Gold, slaves, kola nuts, and alum traveled north, while handicraft goods, salt, religious specialists, horses, and weapons went south. Cities on the edge of the desert served as ports from which the caravans set forth. Sijilmasa on the northern edge of the great desert and Khumbi Saleh in the western Sudan were the chief ports on the western route. On the central route, the kingdom of Zawilla, in the Fezzan oases, dominated the trade that flowed from the Sudanese empire of Kanem, located on Lake Chad. Other great empires grew up south of the desert, such as Ghana. These empires grew wealthy and powerful, partly through the trans-Saharan trade. Their rulers employed Muslim Berbers to staff their administrations, but during this period, the mass of their people remained pagan.

Ghana, Kanem, and the other Sudanese kingdoms traded salt obtained from the Sahara trade for gold and kola nuts from the forest peoples to the south and west, using the Niger River as a highway. These peoples of the West African rain forest were becoming more numerous, and their large villages were evolving into city-states. Many of these city-states started as colonies of the Yoruba mother city of Ife, which served as the spiritual center for Yoruba land. The Nri kingdom was another important West African forest state that dominated the Igbo people by religious sanctions rather than military prowess.

Before 1000, political entities larger than city-states had evolved among only a few of the numerous agricultural peoples inhabiting most of the West African forest, the equatorial forest of central Africa, or the Great Lakes region of East Africa. In those areas, the autonomous agricultural village was the rule.

The Bantu-speaking peoples, who completed their expansion from the Nigerian-Cameroon border to dominate central, East, and southern Africa by the beginning of this period, were originally a yam-growing matrilineal forest people, but in assimilating numerous groups of cattle-raising and grain-growing peoples were becoming patrilineal cattle pastoralists in the eastern and southern Africa savannas. They were skilled artisans, smelting iron and copper and weaving superior cloth.

In eastern Polynesia, almost all of the inhabited islands were settled in the 350-year surge after the beginning of this period. During this early phase, a light population spread out among the great archipelagos from the Marquesas to Tahiti to Hawaii and Easter Island, living in

relatively egalitarian societies and subsisting on the species endemic to the islands. After about 650, the early phase of eastern Polynesian history was over. Many of the indigenous easy-to-catch species had been hunted to extinction, and much more intensive agricultural practices, necessary to feed much larger populations, developed. Fishponds, terraces, and irrigation works began to be constructed by populations living in large villages in which increased social stratification was developing.

It was during this time that Polynesian voyagers reached the western coast of South America and returned to islands as widely separated as Hawaii and Easter Island with the knowledge of sweet potato cultivation.

Between 650 and 1000 CE, long-distance voyaging continued in the Polynesian Islands, and contact, perhaps sporadic, between archipelagos as distant as Tahiti and Hawaii continued. It was during this time that Polynesian voyagers reached the western coast of South America and re-

turned to islands as widely separated as Hawaii and Easter Island with the knowledge of sweet potato cultivation.

Two centuries after the settlement of Easter Island in the Pacific, the Scandinavians were settling Iceland (874) in the Atlantic, thus completing the occupation of most inhabited lands (with the possible but not certain exception of New Zealand).

The Americas

During this period (in fact during most of history before Columbus's famous voyage in 1492) events in the Americas were isolated from those in Afro-Eurasia: each hemisphere existed in almost hermetic isolation from the other. While it is true that some contact between the two nearly isolated regions probably did take place before or during this period (the Viking explorations of coastal North America occurred mostly after 1000 CE), they were sporadic and, with two exceptions, insignificant.

These exceptions were

- a) The diffusion of bow and arrow technology by proto-Inuit hunters migrating from Asia across the Bering Sea to North America in the early centuries CE. The bow and arrow then diffused southward from group to group in North America and probably produced a spasm of instability as it progressed southward through the continent.
- b) The acquisition of sweet potatoes (kumara) by Polynesian mariners visiting South America sometime between 650 and 900 CE. While sweet potatoes became an important crop in many parts of Polynesia, the Polynesians left little discernable trace of their visit.

Although the Americas were isolated in their own solitude and were little influenced by events external to the Americas (except for global meteorological and environmental phenomena), the years between 300 and 1000 CE form a coherent period for some important areas, especially the classic Maya, in the Americas. But for many other

areas, the periodization is, at best, uncertain and attempts to describe their pasts in terms of periods derived from the Eastern Hemisphere may seem contrived and artificial. However, if we allow broad flexibility of perhaps several centuries, it is possible to discern some parallels between the histories of the hemispheres.

There was no great zone of cultural interaction and diffusion in the Americas comparable to the great hemisphere-wide Afro-Eurasian ecumene. There were no world religions, such as Buddhism, Christianity, and Islam, sweeping through large reaches of the Americas. There was no great trading system on the scale of the interconnected Silk Roads, Indian Ocean routes, and trans-Saharan system. Instead, in the first millennium CE, there were six or more regions that served almost as regional ecumenes. Each of these offered cultural interaction within itself but interacted much less with outside groups.

The two principal regional ecumenes in the first millennium Americas were Mesoamerica and the Andes. These two cultural collectives were the only areas in the Americas where significant urbanization occurred. There, the first states emerged.

Mesoamerica consisted of a group of cultures and peoples in central and southern Mexico as well as northern Central America. This was the only area in the Americas in which true writing systems developed. In Mesoamerica, intensive agriculture supported relatively dense populations. Kingdoms, such as the Zapotec kingdom of Monte Alban, emerged during this period.

Teotihuacan, in central Mexico, was the largest city in the Americas. Until it experienced disaster in the beginning of the seventh century, Teotihuacan was the great power of Mesoamerica and exerted some control over the Mayan cities to its south.

The Maya classic period (250–900 CE), when the lowland Mayan were constructing stone monuments dated by the Long Count, is almost entirely encompassed in this period. Because their writing system has been deciphered, more is known about the Maya than any other people in the Americas before 1000 CE. Their glyphs, incised in stone, tell us that the Maya city-states were very warlike, much like the Greek city-states a millennium earlier. Also like the Greek city-states, they were culturally very creative, making advances in astronomy and mathematics especially. Early in this period, in India and among the Maya, mathematicians discovered the concept of zero independently of each other. The classic Maya flourished until the tenth century, but then a series of catastrophes resulted in the abandonment of its cities and the collapse of classic Maya civilization.

Andean civilization was the other regional ecumene in the Americas, which had both cities and states. The Andean region was the home of one of the most unusual of the world's urbanized civilizations, unique in several aspects. With practically no contact with non-American peoples

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and almost no direct relationship with Mesoamerican civilizations, the peoples of the mountains and coastal valleys of Peru had, by 300 CE, developed cities and states.

Unlike Mesoamerica, Andean civilization had nothing that modern historians can recognize as writing, so what we know about it before 1000 is the fruit of archaeology. The peoples of Andean civilization, like the Mesoamericans, were excellent farmers, cultivating cotton, potatoes, maize, and about a dozen other crops on raised gardens, mountain terraces, and irrigated river valleys.

Their cities, such as Nazca, Moche, Tiwanaku, and Wari, were often built on or around great pyramidal mounds. They were excellent craftsmen, producing what some consider the finest ceramics in the Americas. Metallurgy, which was unknown at this time to the Mesoamericans, was a highly developed craft in Andean civilizations. (During the first millennium CE, the art of smelting metals was slowly diffusing northward to reach Mesoamerica roughly by 1000 CE.)

Nazca, a city and state, prospered as a ceremonial center on the coastal plain of southern Peru until the ninth century and produced the mysterious Nazca lines in the desert.

The city and state of Moche is known to us through its beautiful and magnificently wrought pottery and often comic and even pornographic ceramic effigies, highly developed metallurgy, and huge mounds built of earth and adobe bricks, known by moderns as the Huaca del Sol and Huaca de La Luna (Pyramid of the Sun and Pyramid of the Moon, respectively). In their time, these were the largest man-made structures in the Americas and are evidence of a powerful government, regulating the religious as well as economic lives of its people.

Moche flourished on the northern Peruvian coast from about 100 to 750 CE, when a cataclysmic flood, perhaps caused by a super El Niño event, destroyed it. Moche culture carried on in new urban centers such as Galindo and Pampa Grande.

Tiwanaku and Wari repeated the pattern of rise and fall that Moche had experienced. For both Tiwanaku and Wari, the last half of the first millennium CE were years of prosperity and power. For both, the years of plenty abruptly ended with the onset of the terrible three centuries of drought that began about 950.

Tiwanaku, located in modern Bolivia near the shore of Lake Titicaca, may not have been an empire in the modern sense. Tiwanaku owed its prosperity to the amazing productivity of its raised gardens in the Titicaca wetlands and became an imperial power by circa 500 CE. This imperial city established an archipelago of colonies in a variety of ecological zones to provide it with products, which could not be obtained locally. For more than half a millennium the population increased, and the elite of Tiwanaku's class-ridden society prospered, building luxurious dwellings. In the middle of the tenth century the prolonged drought destroyed Tiwanaku's agriculture, and the city was deserted.

Wari, in the central mountains of Peru, was the capital of an empire that controlled much of Peru during 700–950 CE. Wari was a militaristic city whose power bordered that of Tiwanaku in the south and

Moche's successors in the north. Wari tied its far-flung empire together with a web of roads along which messengers traveled carrying quipu messages. Wari's power was also rooted in agriculture (the carefully terraced irrigated gardens in the Ayacucho basin), and its prosperity and empire ended by the same drought that humbled Tiwanaku.

Between the Andes civilization and Mesoamerica were the cultures of Colombia and Central America. Although not urbanized and without organized states, these cultures practiced a rather highly developed agricultural technology. Some of their people were highly skilled artisans, especially in gold and copper metallurgy. They lived in large villages and were governed by hereditary chieftains.

To the north of Mesoamerica were the Pueblo cultures of the North American Southwest, and the Mound Builder culture of central and eastern North America. There is evidence that regular trade between Mesoamerica and some of the Pueblo cultures took place and that there was some diffusion of culture between Mesoamerica and the Pueblo cultures. At the beginning of this period, the Pueblo peoples practiced some agriculture, raising squash as well as some indigenous crops. About 400 CE they acquired maize, and a few centuries later they acquired beans, both of which had diffused to them from Mesoamerica. The Pueblo cultures are called Basket-maker cultures for the period 100–700 CE, but after that various groups, of the so-called Anasazi (the Navajo term for “Ancient Ones”), succeeded them. (Most Pueblo peoples reject Anasazi, preferring “Pueblo Peoples.”)

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Between Mesoamerica and the Mound Builders, there probably was contact, but the state of our knowledge of this is so embryonic that it is difficult to gauge the extent of that contact. At the beginning of this period, the Mound Builders grew locally domesticated crops, such as goosefoot and sunflowers, but in the ensuing centuries, they acquired first squash and then, a few centuries later, maize. It was not until about 800, at the beginning of the Mississippian period, that they acquired beans, the last of the three sisters of Mesoamerican agriculture.

The Mound Builders are so-called because they built huge earthen mounds, both for burial mounds and as platforms on which to erect their temples and other structures. In general, there were three phases of the Mound Builder cultures: Adena, 750 BCE to about 100 CE; Hopewell, 100–500 CE; and Mississippian, 800–1500 CE.

The Mound Builders, both the earlier Hopewell and the later Mississippian, traded extensively: their trade networks extended from the Rocky Mountains to the east coast and from the Great Lakes region to the Gulf coast.

Most knowledge of the Mound Builders is based on archaeology. Before 1000 CE, all of our inferences about the Mound Builders are based on archaeology. Cahokia (in modern East St. Louis, Illinois), which most archaeologists estimate was a Mound Builder city of tens of thousands of inhabitants, was probably built after 1000 CE.

In the Amazon basin of South America, archaeologists have, in recent decades, discovered another hidden and forgotten but apparently extensive agricultural civilization. Little is known about this civilization, but it was probably thriving during this period. It thrived in large agricultural villages along the banks of the many rivers of the Amazon basin that presumably were used as trading routes for a vast trading network, rivaling that of the Mound Builders of the Mississippi Valley.

Conclusion

In the nearly three quarters of the first millennium CE that this period encompasses, many historical processes were in operation, but five factors stand out:

- 1) The leading roles of India and then China and the Islamic world as cultural innovators and leaders in the Afro-Eurasian ecumene.
- 2) The development of a network of hemispheric trade routes that facilitated cultural contacts and interaction and transfers of culture, technology, crops, and diseases as well as people.
- 3) The growth and spread of three great world religions, first Buddhism, then Christianity, and then Islam. These religions expressed the culture and definition of civilizations as well as served as vectors or carriers of cultural traits from civilization to civilization.
- 4) Isolated as they were from the Eastern Hemisphere, two regions in the Americas, Mesoamerica and the Andes, developed densely populated agricultural societies with cities that grew into states.
- 5) In most of the rest of the earth's agricultural regions—for example, in North America in the Southwest and the Southeast; in Central America and northern South America; in the Caribbean and the vast stretches of the Amazon Basin; in the regions of Oceania known as Polynesia, Micronesia, and Melanesia; and in much of the West African forest, central Africa, East Africa, and southern Africa as well as northern Europe and much of eastern Europe—a less dense population dwelt in nearly autonomous villages, sometimes egalitarian but often governed by hereditary chieftains. They usually had no writing; we know of them mostly through archaeology, the reports of neighboring peoples, or by their own legends and (often unreliable) oral history.

These five factors helped shape the cultural milieu in which the great majority of humanity lived during this period. However, small but significant groups of people lived by other means than agriculture. There were the pastoralists and animal herders who inhabited the Eurasian steppe and the African pastoralists who, during this time, were spreading in the great savannas east and south of the great African equatorial forest. There were also the camel nomads, who had been known in the Arabian desert for centuries but whose way of life spread throughout the great Sahara Desert in the early centuries of the Common Era.

And finally, there were the hunter-gatherers, those who foraged for a living and whose way of life was often nomadic. These groups usually roamed the less bountiful regions of the earth (but there were important exceptions, such as the acorn- and mesquite-eating villagers of California or the salmon catchers and marine mammal hunters of the Pacific Northwest). Although they are often thought of as people without history, especially the Australian Indigenes, who are said to have lived in “dream time,” there were at least some changes in their cultures during the first millennium CE. Some of these changes were the spread of reindeer domestication among the Arctic peoples of Eurasia, the development of new hunting technology among the Dorset and Thule Inuit people, and the introduction and diffusion of the bow and arrow in North America. As the tools of archaeology and historical linguistics are further developed, it is hoped that the cloud of our ignorance that envelops these groups will be dispelled.

—*Wilfred J. Bisson*

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Environment and Population

In 536 CE a massive tropical volcanic eruption, one of the most colossal in 50,000 years, shot several cubic miles of dust and sulfurous gas into the atmosphere. The dust and gas were borne aloft to the stratosphere, where much of it remained for the next several years, blocking out much of the sunlight and cooling the atmosphere several degrees. For several years, in many parts of the world, there was frost and snow every month of the summer, accompanied by weak or nonexistent summer monsoons and widespread drought. Crops failed, and famines followed in many countries. The members of the generation that experienced these calamities could well believe that they lived in the end of times, but the suffering caused by these global disasters ended after a decade or two. Civilizations continued as they had before the eruption, but they never escaped the implacable fate determined by the environmental challenges and human response.

This essay discusses the role of environmental evolution and changing population numbers in the expansion of regional civilizations during 300–1000 CE. It describes the environmental cards that fate dealt human societies and the way these societies played them; it talks about rises and falls of civilizations. The focus of this essay is on climate change and agricultural adjustment; expansion of croplands and population growth; years of plenty and abundant harvests; cold and dry times when famine struck and populations fell; the cutting of forests and the construction of great cities; deforestation and environmental degradation; hunger and epidemic disease; the flowering of civilizations in salubrious times and their decline and sometimes collapse in times of drought and cold; land subsidence, the flooding of coastlands, and the building of dikes; volcanic eruptions; and El Niño events.

The seven centuries of this era (300–1000 CE) straddle two climate periods: the Dark Age Cold Period (200–650) and the Medieval Warm Period (800–1300). There is much disagreement about the beginning and ending dates of these periods; some would date the Dark Age Cold Period at 150–700 CE, while others would delay the start of the Medieval Warm Period until 900 CE. In both of the chronological schemes, there is a one- to two-century transitional phase between the cold and warm periods.

The Dark Age Cold Period roughly coincides with what is called late antiquity (ca. 200–650 CE) in the Mediterranean and China and with the Late Pre-Classic and Early Classic (ca. 1–500 CE) period in Mesoamerica and the Andes. The Dark Age Cold Period witnessed contrasts in the experiences of civilizations: in the Mediterranean and China, the collapse of the Han dynasty and the fall of the western Roman empire,

while India saw the florescence of the Gupta civilization. During the Dark Age period of cold and moist climate, cities in both Mesoamerica and the Andes prospered, and civilization flowered.

During the Dark Age Cold Period, most of North America and Eurasia were colder and wetter than in the present or during the Medieval Warm Period. Water levels around Lake Titicaca were higher, allowing Tiwanaku crops and culture to flourish. This climate regime also prevailed in Mesoamerica, where Teotihuacan became the metropolis, and the Maya cities began their Classic Period.

But in the Roman empire and China, the cold had serious negative effects. In both northern China and the European provinces of the Roman empire, many rural villages were abandoned, the area under cultivation was diminished, and the rural populations declined seriously. So-called barbarian tribes crossed the Rhine River on the ice in the very cold winter of 406. The barbarians pillaged and eventually destroyed the western Roman empire. This was a marked consequence of the Dark Age Cold Period, but the destructive nature of this adverse climate regime continued.

The Event of 536 caused an abrupt additional cooling of the earth's atmosphere in 536 and the years immediately following, compounding the misery already visited on humanity by the cold cycle. Crop failures, famines, and epidemic disease followed the excessive cold. The Justinian Plague, a pandemic that swept the Eastern Hemisphere in the middle decades of the sixth century, acted with the contemporary famines to reduce populations by 30–50 percent.

In the mid-seventh century, the Dark Age cold began to moderate somewhat. By the ninth century, the warming of the earth's atmosphere accelerated, and the Medieval Warm Period began. The Medieval Warm Period lasted nearly half a millennium (800–1300 CE) and was the longest period of warm climate in the Late Holocene, the last 5,000 years. During this period, glaciers retreated in all of the world's mountains; summers were long, and weather was predictably mild throughout the temperate zones. During this period, much of Eurasia witnessed abundant crops and little hunger year after year. Villages were established on newly cleared fields, and growing populations basked in what they believed was special divine grace.

In contrast, in western North America, in Mesoamerica as well as in the Andes, the centuries from 900 to 1200 were centuries of savage droughts and aridity. The glaciers in the Andes that fed Lake Titicaca and the streams, which irrigated the fields of the Andean civilizations, withered. Crop failures, famines, and the decline of Andean populations were the result. Droughts in Mesoamerica had similar

but perhaps more disastrous results among the Maya lands, where many cities were abandoned and the Classic Period ended.

During the 700 years of this era, the world's population, which had reached a relatively high plateau in the first two centuries CE, declined

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slightly by 400 CE and then more precipitously until the seventh century. From a low point in the early seventh century, the world's population climbed rapidly to new heights in the ninth century, when it again leveled off, declining sharply in the Americas but rising in the Mediterranean region and India. Below is a tentative chronology of world population rises and falls during this period:

200 CE	World population 240 million
400 CE	World population 200 million
600 CE	World population 180 million
850 CE	World population 320 million
1000 CE	World population 320 million

This estimate masks some very serious population rises and crashes in Europe, China, and the Americas. Since the population was sometimes rising rapidly in one region, a population crash in another region would not be apparent in the total estimate. Throughout these 700 years, a quarter of the world's people lived in China, another quarter in Europe and the Mediterranean region, and perhaps a fifth in India, while the remaining 30 percent dwelt in the rest of the habitable world.

China and the Roman empire both reached a high point of prosperity in the second century CE, when their populations were approximately 60 million each. In the third century the Han dynasty fell, and warfare between the successor kingdoms swept through the land. At the same time, civil wars convulsed the Roman empire. In both places, populations declined, perhaps more precipitously in China than in the Roman empire. While populations were sinking in China and the Mediterranean world, they were rising in India and the Americas. The golden age of Gupta India, the Age of Southernization, when northern India led the world in prosperity and economic development, occurred in the first half of the first millennium. The population rises of India during that period, although not equaling the population crashes of both China and the Mediterranean area during 400–600, were substantial and did mask the China/Mediterranean declines. Meanwhile, populations in Japan, Mesoamerica, and the Andes began to grow relatively rapidly, further masking the declines in China and the Mediterranean region.

With the stability ensured by establishment of the Tang dynasty (618) the population of China again began to rise, to be joined in its upward trend by the population of Europe and the Mediterranean Basin after 700 CE as well as southern India and the Americas. The upward trend peaked at about 320 million in 850. While populations in Europe, Southeast Asia, and Africa south of the Sahara continued to rise after 850, China's population responded to political instability and natural disasters by a sharp decline from its high point of 80 million.

Almost as numerically significant as China's population loss was the demographic disaster that struck Mesoamerica and the Andean civilizations as a consequence of drought and environmental degradation in the ninth and tenth centuries. The population of Mesoamerica and the Andes, by some estimates 28 million in 850, crashed by 80 percent, to less than 7 million in the tenth century. The Maya population alone declined

from a high point of 12 million to little more than 1 million in a few generations. Thus, in the seven centuries of this era, world population increased perhaps 80 million, but this was not a smooth and steady increase. Instead, the trajectory of population increase was something like a roller coaster.

During these seven centuries, the world's people were very unevenly distributed over the normally habitable regions. People were densely clustered in small tracts of fertile or easy-to-work soil so that inhabited areas resembled islands of population, separated by large sparsely inhabited areas. The floodplains of major rivers, such as the Yellow River, the Yangtze, the Ganges, the Indus, the Tigris-Euphrates, and the Nile, were still the homes of a large part, perhaps half or more, of the earth's people, but other smaller areas of high fertility were also important.

Outside the densely populated river valley floodplains, the areas of dense population became smaller. People still congregated in relatively congested villages, but large tracts of forest or other scantily inhabited wasteland, where bandits often lurked and pastoral peoples dwelt, separated the villages.

In northern China, the Loess plateau with its very fertile soil had been thickly settled since about 500 BCE because the Chinese had developed a special type of iron plow to turn the soil. Indeed, one of the reasons that China, as early as the beginning of the Common Era, had the most dense and sometimes the best-fed population in the world—the reason that China was home to a quarter of the world's population—was that the Chinese had developed a superior system of agricultural technology. This involved highly developed hydrological management for both flood control and irrigation, the extensive use of iron tools, a high investment of labor in intensive cultivation, and a broad but carefully developed variety of crops including rice, wheat, millet, soybeans, and the like.

The Ganges Valley was another very fertile and densely populated area. Here, the soil was easily worked, and the land was extremely fertile, so fertile that it was possible to plant the same crop year after year without the necessity of leaving the land fallow. It was customary for farmers in this area to harvest two and often three crops a year: rice in

In Southeast Asia, the majority of the people inhabited the floodplains of the river valleys where wet-rice farming supported large villages. Here, as in India, large tanks were constructed to irrigate the winter crops.

the summer monsoon season and wheat in the drier winter season. Often varieties of beans were also harvested. In some locales along the Ganges, sugarcane and cotton were also raised. During the first half of the first millennium CE, the villagers were also beginning to clear the forests in the Punjab and to the south of the Ganges Valley, making heavy use of iron

tools. To permit cropping of the fields during the winter dry season, the people of India built reservoirs, or tanks, to store water from the summer monsoons.

In Southeast Asia, the majority of the people inhabited the floodplains of the river valleys where wet-rice farming supported large vil-

lages. Here, as in India, large tanks were constructed to irrigate the winter crops.

From the eighth century on, an ever-denser population harvested multiple annual rice crops on the rich volcanic soil of Java's Kedu Plain. In a broad zone stretching from the Tarim Basin in central Asia to the Atlantic shore of North Africa, including Iran, Mesopotamia, Syria and Palestine, Arabia, Egypt, and Mediterranean Africa, where the principal crops were wheat, barley, and similar grains, agriculture and civilization were possible only because people made copious investments in irrigation: in digging and cleaning wells and in building and maintaining dams, canals, or, in Iran, underground water tunnels (*qanats*).

In southern Arabia, the Himyarite civilization flourished on the agriculture made possible by the 1,000-year-old Marib dam. It was a catastrophe of epic proportions when the Marib dam collapsed in the late sixth century. The dam was never rebuilt. Famine and a vast out-migration of destitute South Arabian refugees ensued.

In the Mediterranean Basin, the winters are cool and moist, while the summers are hot and dry. Here, grain crops, chiefly wheat, were grown in the winter, with wine grapes, olives, pistachios, and other tree crops harvested in the summer. Livestock, principally sheep and goats, fed on increasingly overgrazed hillsides. This region did not support the dense populations that the wet-rice areas of Asia did, but because the land north of the Mediterranean consists of four peninsulas (Anatolia, the Balkans, Italy, and Spain), the population often could supplement their diets with fish and other seafood.

Northern Europe had a denser forest cover than the Mediterranean region. At the beginning of this era, during the Dark Age Cold Period (200–700), population declined, gradually at first but precipitously during the demographic turmoil resulting from the Great Migrations of Germans and Slavs (400–800). Villages were deserted, the area under cultivation was diminished, and forests expanded.

With the lengthening growing seasons during the Medieval Warm Period (800–1300), North European peasants founded new villages, cleared more forests, and put new fields under the plow. Vineyards, which had been absent from the British Isles since the second century, flourished in southern England, and wheat could be grown in southern Scandinavia where only rye could be grown during the Dark Age Cold Period. New technology was necessary to cultivate the heavy forest soils of northern Europe, and it was early in the Medieval Warm Period that European farm folk adopted iron-wheeled plows and load-pulling horse collars, developed in China centuries earlier.

The climate in Africa south of the Sahara probably did not change as much as that in Europe or Asia, but the African population changed significantly during this period. Asian crops, which had been introduced to East African ports early in the Common Era, diffused across the continent in the first millennium CE. These Asian crops, including Asian rice, taro, sugarcane, and, most important, bananas, stimulated a remarkable population increase throughout Africa south of the Sahara.

The Bantu, whose 1,000-year expansion from West Africa reached its limit in East and southern Africa in the early centuries CE, adopted

the grain-raising and cattle-herding practices of the Cushite and Nilo-Saharan peoples with whom they intermixed and, in doing so, changed some of the East and southern African forests to open savanna.

In the Americas, the moister and cooler climate regime of the first half of the first millennium CE allowed the high civilizations of Mesoamerica and the Andes to flourish. This was the Classic Period of the Tiwanaku, Wari, Nazca, and Moche civilizations in South America as well as of the Maya, Zapotec, Teotihuacan, and other civilizations in Mesoamerica. But a 30-year drought struck both areas in the mid-sixth century, and a phenomenal El Niño seriously damaged Moche and other coastal Andean civilizations in the eighth century. Finally, in the ninth and tenth centuries these regions suffered a 300-year-long series of droughts that caused these Classic Period Andean and Mesoamerican civilizations to collapse.

However, until their collapse, these civilizations each developed sophisticated systems of water management to maximize food production. In Tiwanaku, this involved the construction of extensive raised beds in the wetlands surrounding Lake Titicaca to both provide dry soil and warm the microclimate of the raised beds in order to produce bountiful crops of potatoes. The Wari and Moche constructed elaborate irrigation canals and mountain terraces. The Maya and other Mesoamericans used an elaborate system of irrigation canals, terraces, and raised beds.

All of these systems proved very efficacious in the relatively moist times, but when the centuries of drought set in, not even the most elaborate water management systems served to ward off disaster. Human-caused environmental degradation compounded the calamity of the great drought. In their centuries of glory, the Mesoamericans as well as the Andean civilizations were prodigal users of wood for fuel and for construction timbers and to make fired bricks as well as lime for plaster from limestone. After nine centuries of forest cutting, the land was denuded. When the dry years came and the wind swept through the Mayan cities, the unprotected land became a dustbowl. Famine and the population, which had reached an estimated 12 million, plummeted to perhaps a tenth of that.

Deforestation was an omnipresent problem wherever agriculture expanded and populations grew. Everywhere, humans used wood for fuel; for constructing temples, palaces, and common dwellings; for shipbuilding; to fire pottery kilns; and in furnaces to smelt the iron tools and weapons that complex civilizations required in ever increasing quantities. In northern China by the tenth century, deforestation was so severe that iron makers were forced to use coal instead of charcoal. This was a very expensive process and produced inferior iron until Chinese metallurgists discovered the method of purifying the coal by using destructive distillation to drive off the sulfurous gasses and make coke.

By the fifth century, deforestation had reached serious proportions in the lands around the Mediterranean Sea. The Roman empire, with its vast construction projects, used wood and timber on a lavish scale. The

Romans used prodigious quantities of cement, which they made by baking limestone in kilns. Much of the forests in Greece, Italy, Spain, North Africa, Anatolia, and Syria were gone by the fifth century. Where the forests on the mountainsides were cleared, sheep and goats grazed, eating the shoots of new tree seedlings. Lands that had been covered by lush forests had now become permanent scrub.

In northern Europe, deforestation proceeded at a much slower pace. The army, in building defensive fortifications, particularly Hadrian's Wall in northern Britain, its roads, the bridges across the Rhine and the Danube, and the military camps, cleared a wide swath of forest along the frontier, but this became naturally reforested after the fall of the Roman empire.

More ecological change during the first millennium involved the extinction of several species of mammals, birds, and reptiles. In North Africa, the last of the wild elephants as well as lions and other species, prized for their use in Roman arenas such as the Coliseum, were hunted into extinction. In West Asia and Iran lions disappeared, as did elephants, rhinoceroses, and tigers in southern China.

The Malagasy settlers of Madagascar exterminated several species of lemurs, pygmy hippopotami, a crocodile unique to the island, and the giant roc, a huge flightless bird.

The Polynesians, in settling the Hawaiian Islands, destroyed habitat and inadvertently drove several unique species to extinction. The early Hawaiians, before they harvested their first crops, supported themselves by hunting to extermination the Hawaiian flightless goose. Early settlers in other parts of eastern Polynesia caused similar exterminations. Other human-generated exterminations, particularly of plants, are likely to have occurred during this period.

In the early medieval age, most sedentary populations lived in relatively large peasant villages, though a small but important minority lived in cities. Throughout most of the globe, the urban population comprised less than 5 percent of the total population, and most cities, by modern standards, were very small, with less than 10,000 inhabitants.

These small cities had a modest impact on the local environments, although there was usually deforestation in their immediate vicinities. It was the few giant capitals that had the largest environmental impacts. Rome, Chang'an, Baghdad, Constantinople, and Teotihuacan all imposed major demands on their environments. Rome's demands for potable water required the construction of an elaborate system of aqueducts to bring in water from distant sources. In China, feeding the huge population of Chang'an, capital of the Tang dynasty, required the building of the 1,500-mile-long Grand Canal, the world's longest artificial water channel. On this canal, myriad canal boats, laden with rice and other foods, daily transported their cargos from the distant fields in the Yangzi Valley to feed the mighty capital.

In North Africa, the last of the wild elephants as well as lions and other species, prized for their use in Roman arenas such as the Coliseum, were hunted into extinction. In West Asia and Iran lions disappeared, as did elephants, rhinoceroses, and tigers in southern China.

Teotihuacan, the Mesoamerican metropolis, posed difficult problems. The city's population is estimated at 150,000 to 300,000. The city was landlocked, and because the Mesoamericans had neither wheeled vehicles nor draft animals, all food, fuel, timbers, obsidian, and other necessities were brought in by human porters. Within a few centuries, the area around the great city had been stripped of forest. Fuel and timber became very expensive, but that was not an impossible problem. When a long period of drought in the second half of the sixth century ruined crops in the Teotihuacan area, it proved impossible to feed the citizens from distant sources using human porters. Famine set in, and the destruction of the city by the desperate residents followed.

Even though the later part of the first millennium witnessed the destruction of cities and the collapse of civilizations in the Americas, in Africa and Eurasia the favorable climatic conditions allowed populations to grow, cities to develop, and new states to emerge. This resulted in an even greater human footprint on the planet.

—Wilfred J. Bisson

■ Introduction: Environmental Events

Although detailed information of environmental events during this period is not as abundant as for more recent ages, nevertheless a picture (admittedly very tentative) emerges. Many paleoclimatologists (scholars who study ancient climates) sketch a climate chronology for the first millennium CE that begins with a warm period that lasted to about 300 to 400 CE, followed by the Dark Age Cold Period, which may have continued until 700 CE, and then the Medieval Warm Period, which lasted for five centuries (800–1300 CE). This chronology is based mostly on the study of ice cores from the Greenland and Antarctic ice caps as well as dendrochronology (the study of ancient growth rings in trees) in many locations.

Patterns of climatic events were sometimes similar in the Americas and the Eastern Hemisphere, but often they were at wide variance. The Dark Age Cold Period brought massive social disruption and suffering to parts of Eurasia at a time when the civilizations of Mesoamerica and the Andes were approaching the glory of their Classic Period, and whereas the Medieval Warm Period brought five centuries of agricultural expansion and prosperity to most of the

temperate regions of Eurasia, it had a different effect in western North America, much of Mesoamerica, and the Andes. During the last centuries of this period (300–1000 CE), these areas suffered serious and long-lasting droughts, which caused the collapse of civilizations in the western parts of North and South America as well as much of Mesoamerica.

Adding to this picture is the record of the El Niño–Southern Oscillation, the changes in surface temperature in the western and eastern tropical Pacific Ocean. These changes, which are believed to occur at intervals of three to eight years, can cause damaging torrential rains in some regions, especially the west coast of South America, and debilitating droughts in other regions, such as the normally drenched rain forests of Indonesia. According to some archaeologists, a super El Niño caused a gigantic flood that destroyed Moche, a city on the coast of Peru, in about 700 CE.

Other less-recurrent events also had a major environmental impact. Scholars argue about the nature and causes of the Event of 536, the consequences of which included widespread crop failures, famines, and extreme cold weather.

—Wilfred J. Bisson

El Niño Events

The global events of El Niño and the Southern Oscillation (ENSO) are two related climate patterns that recur very frequently. ENSOs primarily affect the Pacific Ocean and the Indian Ocean. Every two to ten years, atmospheric and oceanic temperature patterns change. This drastically alters the climate and weather of India, North and South America, and Asia. Although there is no clear evidence of the dates of ENSO events between 300 and 1000, they did occur, often with catastrophic results.

El Niño was named for the Christ-child by Peruvian fishermen because of the event's irregular appearance around Christmastime. The effects of the ENSO have long been noted, but the cause of this enormously influential weather pattern was not widely understood until the 1970s. El Niño is triggered by a decrease of the Northeast trade winds and a reversal of the air pattern called the Southern Oscillation. This pattern disrupts the monsoonal rains in Southeast Asia. Monsoons occur annually between June and September, and most agriculture depends on the rains. ENSOs can cause crippling droughts throughout the area. Such droughts are very hard to trace in historic records from 300–1000, but science can reconstruct the patterns of ENSO events.

Although not every ENSO causes catastrophe in human societies, some extreme events have been linked to famines across the world. The global effect of ENSO can be seen in the fact that scientists have used data about the annual flooding of the Nile to find out when ENSOs happened in the past. Scientists have identified ENSOs from 622 to 1522 CE.

ENSO also affects the other side of the globe; by December, as the warmer waters move to the coast of South America, there is a rise in rainfall. Yet by dumping rain sooner, ENSO could even cause droughts in other areas. In coastal South America, ENSO causes flooding and the destruction of crops and irrigation networks. The warm waters also hurt fish populations, and societies dependent on fishing have been badly hurt by the disappearance of fish.

ENSOs happen very frequently, and societies in affected areas developed ways to cope with the patterns. Yet particularly bad series of his-

THE COLLAPSE OF THE MOCHE

The Moche society in ancient Peru began around 1 CE. Suddenly, after 700 CE, the Moche society collapsed. The Moche lands were drought-prone, so their agriculture was based on irrigation networks and fishing. Recently, scholars have suggested that the collapse was linked to extreme environmental catastrophes, including desertification and earthquakes. There were also extreme ENSOs in 600, 612, 650, and 681 CE. These would have caused severe floods, destroyed the irrigation systems, flooded out crops, and devastated Moche fishing. Although ENSOs cannot be said to have directly caused the collapse of the Moche, they definitely contributed to it.

—Ellen Arnold

toric ENSOs may be partially to blame for large crises in different societies. During the seventh century CE, a series of ENSOs may have been linked to the end of Moche society in Peru. Another series of ENSO-related droughts may have contributed to major problems for the Maya in the Yucatan Peninsula. Around 900 CE many Mayan temples, cities, and settlements were suddenly abandoned in the middle of political chaos. Although all of the reasons for this Classic Maya Collapse will never be known, a decades-long drought in the ninth century, likely triggered by ENSO, contributed. The population decline in the Yucatan became, in a way, its own environmental event. As the agricultural system collapsed, the landscape that had been altered by the human presence gradually returned to jungle.

—Ellen Arnold

Bibliography

- Dillehay, Tom, et al. "Pre-Industrial Human and Environment Interactions in Northern Peru during the Late Holocene." *Holocene* 14(2) (2004): 272–281.
- Fagan, Brian. *Floods, Famines, and Emperors: El Niño and the Fate of Civilizations*. New York: Basic Books, 1999.
- Kornbacher, Kimberly D. "Horsemen of the Apocalypse: The Relationship between Severe Environmental Perturbations and Culture Change on the North Coast of Peru." In *Natural Disasters and Cultural Change*, edited by Robin Torrence

and John Grattan, 204–234. London: Routledge, 2002.

Park, Chris. “Water Resources and Irrigation Agriculture in pre-Hispanic Peru.” *Geographical Journal* 149(2) (July 1983): 153–166.

Problems in Early Medieval Environmental History

There are two basic questions that historians face when dealing with the history of world climate. The first is, what happened to the climate? The second question, at points even more difficult to answer, is, what effect might climate have had on human societies? For the period 300–1000 CE we are just beginning to have answers to these questions.

In order to understand the history of climate and environmental events, climatologists, environmental scientists, archaeologists, and historians have to combine their sources. From the historical perspective, for the period ca. 300–1000 CE there is much less written data to work with than at other times in world history. We have to rely heavily on archaeological evidence and scientific data. Scientists gather and compile what is known as proxy data, which includes evidence from tree rings, ice-core samples, pollen counts, and surveys of ocean floors and changing coastlines. Advances in technology and better abilities to compile and compare results are making this evidence better by the year. Ironically, these improvements are making it harder to make bold statements about the history of climate change.

The best example of this is the era known as the Medieval Warm Period. Beginning in the 1960s, many scholars argued that there was evidence of a substantial warming of the Northern Hemisphere between circa 900 and circa 1400 CE. However, there are many recent challenges to this idea, in part because there is little solid evidence for corresponding changes in the Southern Hemisphere’s climate. Also, widely different regional changes are being noticed, and scientists point out that broad generalizations about warming or cooling are not possible. For example, some evidence suggests that Scandinavia became warmer as early as 600 CE. In parts of North America a warmer period began in 700

CE, but Alaska was warmer during 500–800 than in the following centuries, contrary to the generalized Medieval Warm Period.

This variability in the data at both regional and temporal levels makes the era of 300–1000 difficult to assess. After circa 1000 CE, proxy and historical data become more precise and easier to use. Better sources, an interest in the Medieval Warm Period, and a concern to identify the results of industrialization all contribute to the fact that there are many more attempts to understand the 1,000 years after 1000 CE than those before.

Finally, there is a gap between events that we know about and our ability to understand their effects. Often we know that a society suddenly thrived or failed, but we do not have a clear sense of a specific political, social, or environmental cause. At other times, there is clear proxy evidence for a significant natural event or a climate fluctuation, but because of a lack of written evidence or archaeological investigation, it is almost impossible to understand the impact of this event.

Yet in spite of these challenges posed by evidence, methods, and even the goals and interests of scholars, there are some things that can be better understood about the impact of climate between 300 and 1000 CE. There are several types of events or change that have been traced and identified, including single unusual events with wide ramifications. A clear example of this is the 536 event. This event was associated with short- and long-term climate change and astronomical phenomena throughout the Northern Hemisphere. Because of its severity, people took notice, and it is an example of a natural phenomenon that can be traced in proxy data and in historic sources.

Another category of climate or environmental events is the ones that are, on an individual basis, unpredictable yet are routine enough that scientists know better how to look for them in the proxy data. Such events include earthquakes, volcanoes, and tsunamis, events often thought of as natural disasters. Unfortunately, because they are more routine, often they were not noted or elaborated on in historical records. These are increasingly recoverable via scientific investigation, the results of which can be compared to

archival and historical records. Yet scientific objectives in researching past climate do not always overlap either historians' questions or methods. In addition to the biases of scientific inquiry, there are also problems in the historic record that need to be addressed.

As historians working on natural disasters and epidemic disease have shown, culture and society are also a part of the process through which a disaster is created. Nature's processes can be exaggerated or altered by human intervention, and human settlement patterns and agricultural and political organization can shift a natural event into the realm of disaster. It is at that point, of course, that we are more likely to find traces in the human record. For example, though it is now known that Mount Vesuvius may have erupted 13 times between 300 and 1000, most of these eruptions were unrecorded or unreported in the historical record. Because of its disastrous impact, the famous 79 CE eruption was far better documented and thus becomes a bigger event in our modern imaginations as well.

Finally, there are recurring events, such as El Niño, monsoons, typhoons, and other shorter-term climate patterns. Because their causes and effects are well known, such events are sometimes easier to trace than single events. For example, because we understand the global effects of El Niño, regular notations that were made of the Nile flood can now be combined with proxy data from the Americas to trace the El Niño cycle between 300 and 1000 CE. But it is difficult to establish the exact results of any single El Niño event. Because shorter-term changes in rainfall were often routine, many societies adapted their agricultural patterns to them, and it is harder to determine their effects on societies.

In the entries on climate events that follow, there is discussion of the possible effect of environmental events. But it should be remembered that such results are perhaps even more difficult to determine than global climate patterns. In the evolution of human societies, economy, religion, politics, and culture change things at the same time that natural events are occurring. Untangling the web of causes and effects is the great challenge for those seeking to understand the role of climate in human events.

—Ellen Arnold

Bibliography

- Bergman, J. "Disaster: A Useful Category of Historical Analysis." *History Compass* 6(3) (2008): 934–946.
- Ingram, M. J., et al. "Past Climates and Their Impact on Man: A Review." In *Climate and History: Studies in Past Climates and Their Impact on Man*, edited by T. M. L. Wigley, M. J. Ingram, and G. Farmer. Cambridge: Cambridge University Press, 1981.
- McCormick, M., et al. "Volcanoes and the Climate Forcing of Carolingian Europe, A.D. 750–950." *Speculum* 82 (2007): 865–895.

The Beginning of the Medieval Warm Period

From 800 to 1300 CE, a time known as the Medieval Warm Period (MWP), the earth's average climate warmed several degrees, and ecological zones moved several hundreds of miles northward in the Northern Hemisphere. The highest temperatures during this period were the century and a half from 950 to 1100 CE. Various theories of causation for the MWP have been suggested, but it is often partly attributed to a spike in solar energy known as the Medieval Solar Activity Maximum. Paleoclimatologists cite evidence from samples taken from the Greenland and Antarctic ice cores as well as the testimony of growth rings in ancient trees that support the claim of higher temperatures during the MWP. Isotope analysis of the gases trapped in Greenland and Antarctic ice cores supports the concept of the Medieval Solar Activity Maximum.

During the half millennium of the MWP, glaciers in the Alps, the Andes, the mountains of East Africa, and the Himalayas retreated. Hardwood forests, especially beech and oak, migrated to more northerly latitudes, and agriculture followed.

Crops such as wheat, rye, maize, beans, and grapes, which had been domesticated in regions with warm climates, were successfully grown in more temperate regions. For example, grapes, which during the centuries before 700 CE had been unknown in northern Europe, were by 800 CE harvested in England, southern Germany, and Hungary. During the MWP it was not necessary for the Catholic Church to import expensive sacramental wine from southern Europe. Wheat

THE CONTINUING CONTROVERSY

The concepts of the Little Ice Age and the Medieval Warm Period emerged in the 1970s when meteorological scientists, particularly Hubert Lamb of the British meteorological office, discerned these patterns from studying medieval literature and modern records.

While the idea of the Little Ice Age was readily accepted, the concept of the Medieval Warm Period was, for a time, subject to widespread skepticism. In the face of mounting evidence, much of the skepticism dissipated. Those who deny that human activity promotes global warming seized on the concept of the Medieval Warm Period to support their contention that the present global warming is a natural cyclical phenomenon rather than an anthropogenic (human-caused) event. Supporters of the idea of anthropogenic global warming maintain that the present rate of global warming is much faster than the natural warming cycle would cause.

While controversy over the existence of the Medieval Warm Period persists, a consensus of climate scientists now accept it, although some still question whether it was a global or regional phenomenon, but investigators are finding evidence of it in almost every part of the world. Disagreement continues, however, as to the height of the average temperature during the Medieval Warm Period maximum. Did the average temperature during Medieval Warm Period maximum, which lasted for a century and a half, reach or surpass those of today? Or are today's averages warmer?

—Wilfred J. Bisson

replaced rye as the staff of life in much of northern Europe, while rye fed even more northerly populations. Wet-rice farming moved into more northern areas in China, Korea, and Japan, while maize, beans, and squash, the so-called three sisters of Mesoamerican agriculture, were adapted for cultivation by the Pueblo peoples of the North American Southwest and the Mound Builders of the Mississippi Valley and the North American southern woodlands.

The disappearance of ice floes in the North Sea and the Baltic Sea resulted in an upsurge in pelagic fishing. A consequence of the northward

march of farming and ocean fishing was a significant increase in food production. This along with more consistency in the climate resulted in larger and better-fed populations. The decimation of populations by periodic famines was, for these centuries, held in abeyance. People probably enjoyed longer lives and saw more of their progeny live to adulthood.

As agriculture and population spread north, new cities emerged, and new villages were planted in the now dense forest. In Europe, this meant a move into previously sparsely settled lands and the creation of Newtowns, Newburgs, and Novgorods. West Europeans moved into the wilds of Slavic eastern Europe, a movement that Germans call *Drang Nach Osten*, and Japanese occupied the northern reaches of the island of Honshu. Not only did new agricultural settlements and cities appear, but also new states and chieftainships emerged in what had been northern wilderness. In Europe these included the Scandinavian kingdoms, Poland, Bohemia, and Kievan Rus, while in northeastern China (Manchuria), Parhae appeared. In North America, the Pueblo peoples formed chieftainships in the Southwest and the Mound Builders did so in the Southeast. The retreat of glaciers in the Himalayas and the spread of barley farming were probably factors in the flourishing of the empire of Tibet.

Viking voyages to and establishment of settlements in Iceland, Greenland, and North America were possible because of the retreat of sea ice in the North Atlantic, while the presumably calmer seas during the MWP facilitated the great burst of Polynesian navigation in the Pacific Ocean during this time.

The MWP started in the early medieval age and continued well into the high medieval age, but global climates cooled in the early fourteenth century CE. At that time, the much colder Little Ice Age began and persisted until the mid-nineteenth century. Because of the increase in sea ice, the Norse settlements in Greenland died. Alpine glaciers once more expanded, and some mountain villages were abandoned. But for the most part, the northerly march of agriculture and settlements that had taken place during the MWP was not reversed. These northern villages and cities suffered, but although there may have been some decline in population, the remaining

people adapted to the harsher climate. Most of the expansions in area of settlement were permanent, persisting through the Little Ice Age to the present era of global warming.

—Wilfred J. Bisson

Bibliography

Fagan, Brian. *The Long Summer: How Climate Changed Civilization*. New York: Basic Books, 2004.

Lamb, Hubert. *Climate, History and the Modern World*. London: Routledge, 1995.

First-Millennium Droughts

There were many droughts between 300 and 1000 CE. Each of these could be catastrophic to individual communities and to the human, plant, and animal inhabitants of entire regions. Most droughts from this era will never be known, but some are known because they were great enough that they left a record in human and natural archives. Droughts were caused by long-term events such as climate change or the El Niño and the Southern Oscillation (ENSO) cycles. Droughts were also caused by sudden events such as volcanic eruptions.

For example, the strange event of 536 CE led to cold weather, drought, and famine throughout the world. In southern China, extraordinarily cold temperatures led to crop failure and unimaginable losses. One administrative record suggests that in a particularly hard-hit region, 70 to 80 percent of the people died of starvation. Such numbers may be exaggerations, but when combined with other stories and sources, the impact of the cold and drought is clear. This drought was also hard on the nomadic steppe groups of northern China. The loss of good pasture may have triggered some of the nomadic groups to move west. The broad impact of such events is that as the nomads moved west, they fought for limited resources with Roman populations in eastern Europe.

An example of droughts caused by climate trends is a series of droughts in North America that lasted from 450 to 1300 CE, when the Americas became colder and drier. In the California area, the most severe droughts took place during 500–800 CE, and another bad period began

around 950 CE. Ice caps records from the Andes show that South America had dry periods during 540–610 and 650–760 CE, and lakes in the Yucatan Peninsula record droughts in 860 and 922 CE. Studies of a marsh in New York suggest that a 500-year-long drought began around 800 CE.

The Chumash people on the coast of California suffered from droughts beginning around 450 CE. Although the cold weather and droughts were very destructive to agriculture and plant life, fish populations off the coast were helped by colder waters. Coastal communities were harmed less because they relied on fishing. But areas that relied on grazing, hunting, and gathering were badly affected. Over time, these droughts became worse and may have contributed to war and conflict within Chumash society. Single environmental events could have very different effects within the same region.

In India, many sources record droughts between 300–1000. (One author described a drought around 700 CE that lasted for 12 years.) Agriculture in India relied almost entirely on monsoon rains; if they did not come or were too small, famine could occur in the whole subcontinent. The history of drought in India can be traced by historical ENSO patterns and in Nile River levels because low levels in the Nile are linked to drought in India. During 600–1000 the river was lower than usual more than 100 times and was especially low in 683–696 and 770–782.

➤ THE COLLAPSE OF THE MAYA

Maya civilization flourished in the Yucatan during 200–800 CE. One of the signs of their success was their ability to adapt their agriculture and technology to their environment. Yet by 900 CE, Mayan lowland civilization unexpectedly collapsed. This collapse may have been linked to droughts. Between 750 and 1025 CE, droughts plagued Central America. Venezuela suffered from droughts in 760, 810, 860, and 910. The drought from 910 may have lasted for six years. Although also connected to economic, military, and social patterns and changes, the Maya collapse happened during a period of drought that harmed the region's agriculture.

—Ellen Arnold

Droughts in India, like droughts in the Americas, could be part of global climate patterns.

—Ellen Arnold

Bibliography

Dhavalikar, Madhukar K. "The Nile Floods and Indian Monsoon." In *Monsoon and Civilization*, edited by Yoshinori Yasuda and Vasant Shinde. New Delhi: Lustre, 2004.

Fagan, Brian. *The Long Summer: How Climate Changed Civilization*. New York: Basic Books, 2004.

Gill, Richardson Benedict. *The Great Maya Droughts: Water, Life, and Death*. Albuquerque: University of New Mexico Press, 2000.

The Event of 536—Problems in Understanding Environmental Events during 300–1000 CE

Environmental changes can have a profound impact on human life. Around 536 CE a severe and as of yet unexplained atmospheric event, generally known as a dry fog or a dust-veil event, triggered intermediate and long-term climate changes throughout the Northern Hemisphere. Writers from Byzantium, Rome, Ireland, and China described strange sights in the skies, cold winters, and famines. Some scientists have suggested that the conditions were caused by a massive volcanic eruption that spewed gas and particles into the atmosphere. There have also been suggestions that a meteorite or a comet caused the event.

Written reports of the event are substantiated by comparing many series of sixth-century climate data from around the world. It first showed up in ice core analysis from glaciers. Some of the ice core samples from around 540 CE (plus or minus ten years) show a layer of high acidity and dust similar to that found when large volcanoes erupt. The study of tree rings (dendrochronology) shows a major event in the years 536–545 CE. Something caused shockingly low growth rates in trees in North America, Ireland, continental Europe, and Scandinavia.

Thus, the dust veil appears to have blocked much of the solar radiation, cooling the climate and hurting plant growth. Indeed, after 536 there were crop failures and famines as far apart as China and Ireland. In addition to short-term effects, this dust veil may have triggered dozens if

not hundreds of years of cooler weather. To understand whether or not this was an event of global importance, scholars have begun to compare mid-sixth-century economic, social, and political events from across the world. Historians and archaeologists have explored how the event might have been linked with the fall of Rome, the Maya hiatus, dynastic troubles in China, and problems in two African civilizations.

Written sources that describe the 536 event are not numerous or detailed, but they are tantalizing evidence that the event was big and was associated with the atmosphere. A Roman politician, Cassiodorus, reported that for an entire year, something unusual and mysterious happened in the sky, muffling the sun and moon. He, like many people during the age, equated such unusual events with a sign from God but still feared that crops would continue to fail and that normal weather would not return. Zacharias of Mythlene reported that for seven years the stars behaved strangely, and Chinese sources note famine, comets, and that the star Canopus could not be seen in the sky.

The 536 CE event shows the importance of paleoclimatology (the scientific study of past climates) in world history. Scientists have shown that this event was global in its scope. But this event is also a reminder that the causes and results of past major climate events are often veiled in uncertainty. There is no consensus on what caused the 536 event or what its impact was. The sixth century CE is a period for which there are often few written sources, which makes it even harder to understand its effects and to separate problems caused by the event from problems that had already begun.

—Ellen Arnold

Bibliography

Baillie, M. G. L. "Marking in Marker Dates: Towards an Archaeology with Historical Precision." *World Archaeology* 23(2) (1991): 233–243.

Baillie, Mike. *Exodus to Arthur: Catastrophic Encounters with Comets*. London: Batsford, 1993.

Gunn, Joel D., ed. *The Years without Summer: Tracing A.D. 536 and Its Aftermath*. Series 87. Oxford, UK: BAR International, 2000.

Hammer, C. U., et al. "Greenland Ice Sheet Evidence of Post-Glacial Volcanism and Its Climatic Impact." *Nature* 288 (1980): 230–235.

The Early Medieval European Environment

Before the Industrial Revolution was well under way in the nineteenth century, at a time when most people in the world were directly or indirectly engaged in agriculture, changes in climate had a profound impact on human lives. In the European world, several periods of significant change are now well recognized: the Medieval Warm Period (approximately 800–1300), which corresponded to a long wave of population growth; the first wave of the Little Ice Age (whose onset was announced by the great European famine of 1315–1322); and the second wave of lower temperatures during the long seventeenth century. The extent to which these climatic phases in Europe corresponded to equivalent (or opposite) phases in other parts of the world—for example, the extended drought in the southwestern regions of North America during the European warm period of the eleventh and twelfth centuries—remains a hotly debated question. The colder and wetter climatic phase of the mid-first millennium CE (the early Middle Ages) must be added to this list, as it is essential to understanding many of the important changes in agriculture, settlement patterns, and the shape of the landscape itself between the fifth century and the beginning of the great medieval demographic and economic expansion in the tenth century.

As used here, the term “climate” is not the same as “weather.” Weather is what we experience from day to day: today is warmer or colder than yesterday. Climate is described by the average temperature and precipitation over the long term. That long term may be calculated over periods of time from tens of decades or centuries to tens of millennia or millions of years. For historians, multidecadal to century-long changes are the most interesting. As recent studies of the consequences of global warming have shown, plants and animals respond to such changes (for example, their geographic range may shift, or their time of flowering or breeding may change). As a consequence, agricultural crops may fail more frequently, or diseases may spread among domestic animals. And these events will present serious challenges to which society must respond.

➤ AGRICULTURE AND FORESTS

It is often imagined that the Romans were responsible for opening up the landscape in the lands they conquered and using it for agricultural production and that the lands beyond the Roman frontier were largely impenetrable forest. Neither of these is true. Pollen studies show that the great wave of land clearance for agriculture began in the late Bronze Age (starting around 2300 BCE). Roman-era farmers moved into lands long since cleared. The development of cities during the Graeco-Roman period gradually connected agriculture to the commercial circuits that fed those cities. With the decline of cities in the west, beginning in the third century CE, those circuits gradually vanished. Population fell in the countryside as well as in the cities. In what had been the Roman world, agriculture switched from a primary emphasis on grain production and stock raising for urban consumers to a primary emphasis on pastoralism, supplemented by grain for household consumption. Agricultural land was abandoned and slowly reverted to forests. These would only be cleared again in the eleventh and twelfth centuries.

—Fredric L. Cheyette

Climates differ from region to region. Europe has three large climatic regions: Atlantic, Continental, and Mediterranean. The boundaries between these regions shift from season to season, but the general seasonal geographic pattern appears to have remained relatively stable over the last two millennia. Within these regions, studies based on instrument records since the mid-nineteenth century have shown that temperatures at sites quite distant from each other move up and down at approximately the same time; on the other hand, sites near each other may show quite different patterns of precipitation. This complicates any attempt to generalize climate data from particular sites to large regions or all of Europe.

Instrumental records of temperature and precipitation begin, for the most part, in the mid-nineteenth century, though a few go back to the mid-eighteenth century. For information before that time, historical climatologists are dependent on proxy records, that is, noninstrumental

records that can be linked to changes in climate. These may be written—records, for example, of the dates of grape harvests—or, most often, physical or biological: changing species of plants in peat bogs reflecting changes in rainfall, records of floods provided by layers of alluvial soil, evidence of glacial growth and shrinkage provided by relict moraines. The evidence for first-millennium climate is necessarily of this sort.

In Europe, a shift toward wetter and colder weather began during the late fifth century and extended into the seventh century. There was a less severe repeat of this phenomenon around the mid-ninth century.

Evidence for greater precipitation in the north comes primarily from studies of bogs and lakes, whose flora and microfauna respond to changes in water levels. Research during the 1980s and 1990s revealed a wet shift between 450 and 600 at 10 of the 21 bogs surveyed in the British Isles. Nine of the 21 showed a repeated wet shift between 800 and 950. The same wet shifts have been found at bogs in Scandinavia and northern Germany. In southern Europe, studies of alluvial soils along the Arno and Po rivers indicate periods of intense flooding between 500 and 700 and again in the ninth century. A lake in the French Alps that was repeatedly flooded by the Rhone River until the late nineteenth century has given the most refined dating in the layers of alluvion laid down on the lake bottom. An analysis of silicates washed down from the mountains showed a steady increase in the size and frequency of floods beginning around 400, reaching a height between 550 and 600 and then tapering off around 800 to return to the levels and frequency of the beginning of the first millennium.

Evidence for temperature changes comes principally from dating the growth and retreat of Alpine glaciers, determined primarily by winter precipitation and summer temperatures. A study of three glaciers (Aletsch, Gorner, and Lower Grindelwald) shows nearly synchronous expansion between 500 and 600 and again between 800 and 900. In the eastern Alps the cooling period and growth of glaciers began a century earlier. In all these areas the glaciers reached or surpassed their length in the mid-nineteenth century at the end of the Little Ice Age.

These changes in climate had profound consequences both in the short term and in the long term. The upsurge in precipitation that caused the most devastating floods in the years around 600 (one in Rome in 589 is mentioned by Bishop Gregory of Tours in his *History of the Franks*) was doubtless responsible for the severe famine in Gaul in 585 (also mentioned by Gregory). The lack of narrative sources from this period prevents us from tabulating these events in any detail.

More significant were the consequences for agriculture and settlement patterns. Over much of western Europe, the heavy clay soils and the river valleys that provided the richest soil for grain were abandoned. In many areas, such as the lower Po Valley, they turned into marshes that would not be drained and put back to agricultural use until the nineteenth or twentieth century. In the Paris basin and elsewhere in the north, the heavy soils would not be worked again in some areas before the eleventh or twelfth century. It was during the sixth and seventh centuries that alluvial soils covered many ancient ports around the northern Mediterranean and moved the shoreline farther out than it had been in antiquity.

The most long-lasting consequence was in the location of rural habitation. River valleys had been favored in the ancient world because of both the richness of their soils and the ease of transportation for their produce that waterways provided. Between the fifth and seventh centuries as these older sites were abandoned, new settlements began to appear at higher elevations, on hillsides or hilltops. Many of these became the nuclei for villages that developed centuries later, many of which remain to the present day.

—Fredric L. Cheyette

Bibliography

- Arnaud, F., et al. "7200 Years of Rhône River Flooding Activity in Lake Le Bourget, France: A High-resolution Sediment Record of NW Alps Hydrology." *Holocene* 15(3) (2005): 420–428.
- Cheyette, Fredric L. "The Disappearance of the Ancient Landscape and the Climatic Anomaly of the Early Middle Ages: A Question to be Pursued." *Early Medieval Europe* 16(2) (2008): 127–165.

Durand, A., and Philippe Leveau. "Farming in Mediterranean France and Rural Settlement in the Late Roman and Early Medieval Periods." In *The Making of Feudal Agricultures?* edited by M. Barceló and François Sigaut. Leiden: Brill, 2008.

Francovich, R., and R. Hodges. *Villa to Village: The Transformation of the Roman Countryside in Italy, c. 400-1000*. London: Duckworth, 2003.

Jones, P. D., R. S. Bradley, et al., eds. *Climatic Variations and Forcing Mechanisms of the Last 2000 Years*. Heidelberg and New York: Springer, 1996.

■ Introduction: Environmental Constraints and Human Adaptation

In very few places on earth are environmental conditions so salubrious that they require no special adaptation for human existence. In the arctic, snow, ice, and cold require special clothing and ways of getting food; in the desert, lack of water and food and the presence of sometimes excessive heat are problems; and on the South American Pacific coast, El Niños can bring excessive rains. In Australia, irregularly recurring killer droughts impose severe constraints to human settlement. The environment almost always imposes limitations or compulsions to which humans must adapt.

In the era of expanding regional civilizations (300-1000), some of the most remarkable adaptations were those of the Dorset and Thule Inuit. The Dorset people preceded the Thule in the North American arctic and were very well adapted to the extreme cold. In the centuries before the Medieval Warm Period (800-1300 CE) the Bering Sea and Arctic Ocean coasts were locked for most of the year in ice. The Dorset people lacked bows and arrows and projectile weapons in general, but they were able to successfully hunt seals by walking on the ice to the seal blowholes. With the onset of the Medieval Warm Period (about 800 CE) the Arctic ice retreated from the coasts except in northern Greenland and a few other high-latitude islands. The Thule people, who were the ancestors of the Inuit, developed seagoing watercraft (umiaks and kayaks) built of driftwood and seal or walrus skin with which to pursue whales on the open ocean. The Thule hunters, with their newly developed toggle harpoons, were adept whale hunters, while the possession of bow and

arrow technology afforded them equal success in hunting land animals, such as the caribou and musk ox.

Inland, in Arctic Eurasia, northern hunters adapted to the Medieval Warm Period by reducing the extent of their nomadism and taming, if not domesticating, reindeer. It has been estimated that reindeer were tamed as draft and riding animals as early as the first century CE, but the practice of using tame reindeer both as draft animals and for milk apparently did not occur among northern peoples until the latter part of the first millennium CE. By that time, reindeer husbandry had spread to the Nenets, Khants, Eveniks, and other Tungus-speaking peoples of northern Eurasia. However, the Sami (Laps) of northern Scandinavia evidently did not adopt the practice until recent centuries.

The invasion of the Roman, Chinese, and Persian empires by the pastoral peoples from the Inner Eurasian steppe in the fourth to the seventh centuries CE may have been an adaptation by the pastoral tribes to the increasingly dryer conditions on the steppe associated with the Dark Age Cold Period (200-650 CE). While frequent droughts led to social and political instability in the sedentary empires, they impelled the pastoral tribes to break through the imperial defenses. The spread of camel pastoralists from Somalia westward along the southern edge of the Sahara Desert may have resulted from increasing drought in the early part of the first millennium CE. The camel was better adapted to the harsh environment than were cattle. Later, the spread of camel pastoralism in the interior of the desert, together with the beginning

of regular trans-Saharan trade, by 700 CE may have been an adaptation to a moister climate.

It was in agriculture that the most diverse and widespread human adaptations to environmental constraints occurred. Population growth required more land under cultivation, and this in turn necessitated more extensive use of irrigation. In the richest agricultural areas of the world irrigation systems were extended and, where they had fallen into disrepair, refurbished. In the more arid regions, such as the Arabian and Sahara deserts, wells were dug, while in areas of seasonal rains, such as the Indian subcontinent, reservoirs and tanks were constructed. In mountainous areas such as in the Ifugao region of the Philippines and the Peruvian Andes, farmers built elaborate terraces for irrigation and to minimize soil erosion. In some territories, farmers protected their crops from cold and drought by ingenious systems. Farmers in parts of Polynesia and China created microclimates by planting taro and other crops in pits dug in the ground, and in North China peasants also protected crops against frost by planting them between earthen furrows.

One of the most sophisticated and effective farming systems employing man-made microclimates was that developed by the people of Tiwanaku in the first millennium CE. In this system, the farmers built raised fields in the wetlands near Lake Titicaca. The relatively small fields, separated by canals, were thickly planted with potatoes and other crops. Although the temperature of the air in the surrounding area at night often dipped below freezing, the warm water in the canals warmed the raised fields so that the crops escaped frost damage.

In these ways and others, societies in the early medieval age adapted to changing environmental constraints with some success.

—Wilfred J. Bisson

Bibliography

- Diamond, Jared. *Guns, Germs and Steel: The Fates of Human Societies*. New York: Norton, 1998.
- Fagan, Brian. *The Great Warming: Climate Change and the Rise and Fall of Civilizations*. New York: Bloomsbury, 2008.
- Von Hagen, Adriana, and Craig Morris. *The Cities of the Andes*. New York: Thames and Hudson, 1998.

Environment, Population, and Trade in Early Java

Early Java's economy and settlement patterns were consequent to geographical distinctions between coasts and hinterlands and uplands and lowlands. These divisions would result in regions of *sawah* (wet-rice) and *swidden* (garden, slash-and-burn, or shifting) cultivation. The trading exchanges involved both dichotomies. The earliest trade networked highland hunters and gatherers who exchanged their services and forest products (woods, bamboo, lacquer) with lowland rice cultivators. Salt from the coast was a key commodity in this upland-lowland exchange, although in this case the highland products stayed with the lowland cultivators rather than flowing on to the coast. Another type of exchange network was that between hinterland populations and coastal peoples and then outward to the international trade. In this second indigenous trading network, the hinterland supplied local agricultural and forest products to lowlanders who dispensed them externally to international traders. Coastal-based traders returned goods of foreign origin or specialized services (for example, transport) to the hinterland producers. In exceptional cases merchants worked from a coastal base to organize the necessary trade mechanisms that allowed them to extract local products from their hinterlands. However, this was rare. Agricultural and imported commodities normally entered Java trading networks either laterally, through direct barter between producers and consumers, or vertically, through political or religious institutions or through the developing hierarchical commercial networks. Barter was the primary means of exchange in earliest times, and only rarely was trade conducted by means of monetized commercial transactions until minted Chinese copper coinage became an alternative standard in marketplace exchanges during the fourteenth century.

Even in its early stages, sawah cultivation made a tremendous difference in social arrangements. Not only did it support a denser population, but the increased productivity of this relatively stable food source was an ideal means of feeding the non-food-producing individuals

associated with the state, including such people as political functionaries, religious specialists, and traders. Sawah cultivation and political development in early Java were thus coincident. The available inscriptions suggest that in the earliest period of Java's political development prior to the eleventh century, direct payment of tax revenues to a court was the exception rather than the norm, as it was more common for a political authority to reassign its income rights to the sustenance of local temples. Nevertheless, regardless of their initial use, the advent of surpluses controllable by a state was an important step in the development of Java's civilization.

In the earliest years of wet-rice agriculture, any attempts to tax the small and scattered productive units must have been a time-consuming task, if it was attempted at all. Nevertheless, as Javanese states developed, there would be an ongoing tension between the interests and abilities of producers and the politics that sought to draw on their surplus. On the one hand, despite the ready availability of productive land in adjacent lowland and highland forests, sawah cultivators could not easily and randomly escape revenue assessments. Leaving their fields uncontrolled was not an option for sawah cultivators except in the period immediately after the harvest, and efforts to develop new lands for cultivation (building terraced and irrigated fields) might require sustained work over several seasons. On the other hand, the armies and bureaucratic corps of the early states were not large enough to induce sawah producers to remit contributions of food or labor purely through the threat of force. Instead, would-be elites had to offer inducements such as protection or material or ideological rewards. In central Java even protection might not always be needed, as the population centers were geographically isolated from their neighbors and thereby minimized human threats to property, crops, and lives. While there was clearly competition among eighth- and ninth-century hinterland regional polities based in central Java's volcanic river plains, there was no hegemonic state. In that time, most commonly, political elites secured food and labor from subordinate sawah cultivators by means of material rewards such as foreign luxury goods or through ideological rewards such as titles,

temples, and sacred ritual rather than by threat of military intervention.

The late-tenth-century recentering of Javanese society and culture in east Java's Brantas River basin benefited from a direct connection to the ocean on Java's north coast. East Java-based monarchs sometimes intervened directly to build regional hydraulic irrigation networks in order to gain better control over agricultural production and increase its yields, not simply to control floods or regulate the water supply. One incentive for developing this control was the more significant financial position that long-distance trade had assumed in the East Java economy, particularly the rice-based trade to the eastern Indonesian archipelago via the Solo and Brantas rivers. However, the increased rice production encouraged by this trade was more the work of local producers than of the state, being produced voluntarily rather than extracted forcibly. A polity's authority certainly benefited from royal access to and partial control over the trade-derived luxuries. Furthermore, East Javanese courts took a more direct role in economic and administrative affairs than had their central Javanese predecessors. However, there is no evidence that even East Java's courts severely regulated local access to the imported commodities, nor is there evidence that they dominated the countryside and monopolized the rice trade by means of tax assessments, and even in East Java irrigation networks continued to be built and maintained mostly by the locals rather than the state. Thus, there was local incentive to invest in agrarian development to produce the surpluses that could bring trade luxuries to the local producers, and it was the locals who continued to control the irrigation networks.

A ruler would have had ample reasons to support the success of wet-rice cultivation. Above all, wet-rice cultivation could support relatively large population concentrations, and the population would in turn produce sufficient agricultural surplus to sustain the needs of a court. The concern of royal courts for their agrarian hinterlands would be an enduring theme of Javanese culture. A state's economic initiatives tended to focus on the development and preservation of sawah, both the creation of newly incorporated sawah communities and

the prevention of cultivated land's return to wilderness. Therefore, though sawah cultivation required more from the farmer, it also attracted support to the farmer from larger collectivities ranging from the village clusters all the way up to the monarch.

In addition to directly facilitating the construction and regulation of agricultural infrastructures, states would eventually concern themselves with providing security. To prevent reversion to the wild, a grassland periphery was commonly maintained. This area served as a border against the forest and a buffer against enemies. Here domesticated animals grazed, and here and in the adjacent forest both the court elite and the commoners hunted wild animals. By this time, the cultivators would have developed a very different attitude toward forests than they had as shifting agriculturalists. For swidden farmers, the forest is home. But for these sawah farmers, the forest was dangerous. So here too is evidence that the shift to wet-rice agriculture was part of a wide-ranging cultural shift whether or not it was actively encouraged by states, in further support of the notion that in at least some senses, this shift was a bottom-up development rather than one actively imposed by the states. Ultimately, sawah cultivators had a different attitude toward forests than that of swidden farmers. The controlled use of fire helped to maintain the border between the sawah and swidden zones of habitation while also replacing old taller grasses with shorter and younger varieties that provided better nutrition to livestock.

Hunts in adjacent forests provided sawah cultivators with necessary protein, culled animals that might damage crops, and helped to hone skills of balance, agility, and accuracy with weapons necessary for warfare. In Javanese court literature, royal hunts assumed importance as a ritualized display. Due to his control of the forest, symbolic of that which is wild and uncivilized, a monarch and his allied elite held the right to hunt royal game, which symbolized the victory of court civilization over prevailing localisms. In addition, the elite's rights to the products of forest hunts included such exotic export items as rhinoceros horn and tiger penis

(both considered to be aphrodisiacs), which figure prominently among Java's exports to China.

—Kenneth R. Hall

Bibliography

- Boomgaard, Peter. *Southeast Asia, An Environmental History*. Oxford, UK: ABC-CLIO, 2007.
- Boomgaard, Peter, Freek Colombijn, and David Henley, eds. *Paper Landscapes: Explorations in the Environmental History of Indonesia*. Leiden: KITLV Press, 1997.
- Hefner, Robert. *The Political Economy of Mountain Java*. Berkeley: University of California Press, 1990.
- Tomascik, Thomas, and Anmarie J. Mah. *The Ecology of the Indonesian Seas*, Vol. 7. Dahhousie, Canada: Timber Press, 1997.

Environmental Constraints in Mesoamerica and the Andes

Civilizations in the pre-Columbian Americas faced two primary environmental constraints. First was the north-south direction of the Western Hemisphere that cut across latitudes and broke up weather systems with high western mountain ranges. The second was a lack of animals that could be domesticated for food, transport, and power. Together these two constraints took new world stone-age civilizations down a different historical path compared to old world counterparts, impacting populations, food supply, urban density, technology, and more.

Pre-Columbian populations for the entire hemisphere reached 50 million people by 1500 CE, or about the size of the Roman empire 2,000 years ago. The largest urban area of the Americas was Teotihuacan in central Mexico, with a population of perhaps 150,000 at its height. This was only a small fraction of the population found in classical empire capitals such as Rome, Patilaputra, or Chang'an in the old world. This light density resulted from adaptations to the environmental constraints of climate and lack of domesticated animals. The animals that played such a large role in old world civilizations were not present in the pre-Columbian world for use as major food, transport, or power sources. Animals such as horses, camels, cattle, oxen, water buffalo, goats, sheep, pigs, and chickens were

not present in the Americas, and instead indigenous peoples relied upon dogs, turkeys, llamas (camelids), and guinea pigs. Most transport and labor had to be completed by humans. For food, crops that could grow in a variety of environments such as maize, potatoes, beans, manioc, tomatoes, and gourds were supplemented with wild animals such as fish, crustaceans, deer, reptiles, rodents, and insects across the landscape using rudimentary technology. Not surprisingly, the pre-Columbian worldview including religious beliefs was devoted to managing this complex and precarious ecological relationship.

In Mesoamerica, irrigation crop technology produced yields beyond the carrying capacity of the land through *chiñampas* or intensive raised field agriculture. Swamp mud, water, and civilization debris were combined with vine plants such as tomatoes, beans, chilies, and gourds that grew around maize stalks watered by irrigation rows filled with fish, crustaceans, and other aquatic animals. The result was an incredibly productive plot that produced up to five crops in a year and was self-sustaining.

In the Andes as in Mesoamerica, extreme conditions of moisture and elevation combined to produce extensive agriculture variations. Terracing and irrigation allowed for various isolated environmental zones to be exploited. Quinoa grain was grown at elevations above 10,000 feet. Potatoes were produced in cold intermountain basins using irrigated water to moderate nightly temperatures, and cotton was produced on coasts with no measurable rainfall by gathering moisture from morning fog nets. As elsewhere in the Americas, crops were planted at several elevations and climates to ensure production.

Even this creativity, however, was not enough to overcome catastrophic environmental constraints in the Americas often associated with the north-south direction of the hemisphere, which meant exposure to global and regional weather patterns for latitudes between 0 and 60 degrees. Storm systems such as El Niños in the Pacific and hurricanes in the Atlantic as well as volcanic mountain chains on the Pacific Ring of Fire were coupled with earthquakes and rain-drought shadows that made for a turbulent history. Civilizations such as the Moche in South

ENVIRONMENTAL CONSTRAINTS AND TECHNOLOGY IN MESOAMERICA

In Mesoamerica the environment directed technological developments away from the use of the wheel and metallurgy. Both are found in the archaeological record but primarily as decorative. So why not as tools?

The environment was probably a major factor. With volcanic mountain ranges that ran north to south and reached 17,000 feet in height, the region was split in half. Additionally, two rugged coastlines on the Pacific and the Caribbean made coastal watercraft travel more efficient than land travel. Most important, the lack of draft animals (only turkeys and dogs were available) to pull wheeled vehicles and metal-edged plows favored stone-age transport and tools. Mesoamericans found it easier to travel by water, till fields with stone and wood hoes, and move goods by backpacks versus using soft, expensive metallurgical tools or to haul wheeled carts in the mountains, jungles, and deserts of Mesoamerica.

—Christopher Howell

America fell victim to El Niño flood events in the sixth century CE, while the Maya of Mesoamerica suffered repeated cycles of drought and ecological imbalance over 2,000 years of history. Even lightly populated southwestern Pueblos on the edge of Mesoamerica suffered from cyclical droughts that altered historical trajectories. Starvation and drought were always just an environmental change away. These events placed great stress on humans, plant resources, and wild game by disrupting an already stretched food and water supply. Archaeologists have noted associations between catastrophic events and human sacrifices in the pre-Columbian world, even to the point of cannibalism.

Even areas of civilization such as metallurgy and seafaring were impacted, though researchers are still unclear on the nature of such relationships. Some copper metallurgy was known, spreading late from South America to the north, but iron was apparently not utilized. Sails were known, and some unique watercraft were utilized in open ocean voyages, but as with metallurgy

little technological advancement was made, perhaps associated with environmental constraints. Both the Amazon region and eastern North America also demonstrate similar developmental patterns.

—Christopher Howell

Bibliography

- Crosby, Alfred. *The Columbian Exchange, 30th Anniversary edition*. New York: Praeger, 2003.
- Diamond, Jerod. *Collapse: How Societies Choose to Fail or Succeed*. New York: Penguin, 2005.
- Diamond, Jerod. *Guns, Germs, and Steel*. New York: Norton, 1999.
- Fernandez-Armesto, Felipe. *Civilizations: Culture, Ambition, and the Transformation of Nature*. New York: Free Press, 2002.
- Isbell, William, and Elaine Silverman. *Andean Archaeology II: Art, Landscape and Society*. New York: Springer, 2002.
- McNeill, William, and Robert McNeill. *The Human Web: A Bird's Eye View of World History*. New York: Norton, 2003.

Pacific Ocean Islands and Australia—Environment and Population

Australia and the islands of Oceania were peopled in two great waves of migration flowing out of Southeast Asia. Australia and Melanesia were first occupied by modern humans tens of thousands of years ago, while Micronesia and Polynesia, among the last places on earth to be peopled, were first occupied only thousands of years ago. By 300 CE more than 1 million people, adapting to a wide variety of environments in different ways, lived throughout Australia and Oceania.

Australia and Oceania are made up of several types of geologic formations. Australia, New Guinea, and New Zealand are continental landmasses with a diversity of plants and animals. Of the smaller landmasses, many, such as Hawaii and Fiji, are high islands formed by either explosive or flow volcanic eruptions and by coral buildup and are less biologically diverse than the continental landmasses. The low islands of the Pacific, including most of Micronesia, are coral atolls only a few feet above sea level. Low islands are less biologically diverse than either continental landmasses or high islands.

Almost every type of climate zone known on the planet can be found in the Australia-Oceania region. In Hawaii alone, 11 of the 13 climate zones can be found. Environments throughout the region include seacoasts with saltwater-tolerant plants such as coconut palms, mangrove forests with plants adapted to brackish water, swamps with plants such as sago palms, lowland rainforests with a wide variety of palms, montane rainforests with oaks and pines, cloud forests with rhododendrons and myrtles, alpine forests and meadows, semideserts, grasslands, savanna woodlands, semitropical coniferous forests, and semitropical deciduous forests.

In Australia small bands of foragers achieved a sustainable adaptation that lasted tens of thousands of years. With a population of about 750,000, well below the carrying capacity of the land, Aboriginal peoples could withstand any shifts in the climate. Through periodic controlled burning of the land, native Australians both maximized those ecological niches that provided desired food resources and prevented large fires by minimizing underbrush as a fuel source for fires. While outsiders could point to the simplicity of an Aboriginal technology that lacked even the bow and arrow, the material culture of native Australians enabled them to live in harmony with their environment. No cultivation of domesticated plants ever developed in Australia, and the only semidomesticated animal was the dingo (dog). According to environmental scientist Timothy Flannery, the frequent extreme climate pattern of the El Niño–Southern Oscillation (ENSO) resulted in long periods of drought that made gardening unsustainable in Australia. Staple foods ranged from grass seeds and other bush tucker in the semideserts of the interior to palm nuts in the rainforests of the north.

Around 700 CE sweet potatoes were introduced into Oceania and spread west into Polynesia, Micronesia, and Melanesia. A plant first domesticated in South America, sweet potatoes were probably brought into the Pacific by seafaring Polynesians who made contact with the Native Americans of western South America. Sweet potatoes quickly became a staple food throughout Oceania and resulted in a major population increase in the highlands of New Guinea. Such contact with South America may have occurred

► FIRE-STICK FARMING AND ENVIRONMENTAL MANAGEMENT IN AUSTRALIA

Fire-stick farming, a phrase invented by archaeologist Rhys Jones, refers to the pattern of periodic controlled burnings of the land done over thousands of years by native Australians in order to manage the environment and maximize food resources. Australian Aborigines are usually thought of as foragers who never developed farming. Around the world and throughout history, foragers are thought of as having almost no impact on the environment. Humans were first thought to have had an impact with the Neolithic and the invention of farming. Fire-stick farming is a dramatic example of the impact that foragers can have on their environment. With the burnings of the land, underbrush, which could fuel a large dangerous fire, was kept to a minimum, and ecological niches that favored certain foods could be expanded. Controlled burnings are called farming because of the degree to which the environment is modified and because of the level of knowledge required to do burnings safely.

—Charlotte Neely



Grass fire in Kakadu National Park, Northern Territory Australia. Grass fires are a critical part of the normal ecology of the Kakadu flood plain; many plants in this region have seeds that will not germinate until they have been through a fire. For many millennia, Australian Aborigines have set fires to encourage the growth of edible tubers and other fire resistant foods, as well as to create pastures for grass-eating kangaroos. (Craig Ruaux)

during a major ENSO event that meant an extended period of winter westerly winds. A similar shift in the winds probably facilitated the earlier settlement of eastern Polynesia.

In Melanesia, including New Guinea, foraging for wild plants, animals, and fish became less important over the years. People made use of a wide variety of domesticated plants and animals, and the population eventually increased to the maximum number the environment could support. The nature of horticulture required vast amounts of land to lie fallow at any point in time. The most important food crops grown through gardening were sweet potatoes, yams, taro, and bananas. Domesticated animals included pigs, chickens, and dogs. Soon after the introduction of the sweet potato by 1600 CE (if not centuries before; there is disagreement on this) the carrying capacity of the land was reached and exceeded in New Guinea. A pattern

of revenge warfare developed in the highlands among tribes as a kind of population-control mechanism, while malaria served the same function in the lowlands. Between 1000 and 1600 CE the population of Melanesia is estimated to have grown from about 564,000 to 753,000, with the greatest population density in the highlands of New Guinea.

In Micronesia most land was near the shore, and often salt water percolated up through the ground even in areas farthest from shore. Therefore Micronesians were more dependent than others in the Australia-Oceania region both on saltwater-tolerant plants such as coconut palms and on fishing as sources of food. The period of global warming that began about 800 CE probably increased such dependence with rises in sea levels. Due to the importance of fishing, boat building was probably most sophisticated in Micronesia. The only source of fresh water was

from rain. In Micronesia as in Polynesia and much of Melanesia, a societal form called chiefdoms developed. With more rank and status, chiefs could get others to cooperate with food redistribution systems to ensure that no one went hungry. By 1000 CE the population of Micronesia was probably about 86,000.

In Polynesia especially on the high islands a variety of domesticated crops were cultivated, all brought by the first settlers. Those plants included taro, yams, sweet potatoes, bananas, breadfruit, and many others. Animals included pigs, chickens, dogs, and, unintentionally, the Polynesian rat. To maximize food production in Hawaii, irrigation systems and shoreline fishponds were developed. Throughout Polynesia chiefs assigned land to commoners, ran redistribution systems, and controlled complex societies that also included priests, navigators, and artisans. By 1000 CE the population of Polynesia was about 78,000.

During the period from 300 CE to 1000 CE there was much migration within Oceania. It was probably after 800CE that the first humans arrived in New Zealand, making it the last place on earth to be settled.

—*Sharlott Neely*

Bibliography

- Oliver, Douglas L. *Oceania: The Native Cultures of Australia and the Pacific Islands I and II*. Honolulu: University of Hawaii Press, 1989.
- Strathern, Andrew, et al. *Oceania: An Introduction to the Cultures and Identities of Pacific Islanders*. Durham, NC: Carolina Academic Press, 2002.
- Tonkinson, Robert. *The Mardu Aborigines: Living the Dream in Australia's Desert*. Belmont, CA: Wadsworth, 2002.
- Van Tilburg, Jo Anne. *Easter Island: Archaeology, Ecology, and Culture*. London: British Museum Press, 1994.

Environment and Cities in the Americas

During the classical era in Mesoamerica, a number of cities were created as ritual and governmental centers. Some of the cities achieved considerable size and power. By the end of the classical era, however, nearly all of these cities

had declined in population and vitality. Although archaeologists disagree about causes, most believe that a major cause was the degradation of the environment and ecological setting around the cities.

Teotihuacan, whose population at its height was probably 100,000 to 300,000, was the largest city in the Americas. Other cities were considerably smaller, but many important ones had populations of around 8,000. The smaller cities were mainly administrative and religious centers. The ruling elites and their retainers lived in them along with religious leaders, priests, and some traders and artisans. They were all dependent upon labor and food supplied by common peasants, who made up the majority of the population. These peasants lived in small villages and settlements outside the city proper but within close walking distances. They supplied the labor that created monumental structures, such as pyramids and palaces. More importantly, they also supplied the food and other necessities of life for the elites.

Mesoamericans lacked pack animals and wheeled vehicles. For the transportation of food and other goods they depended on porters, who carried loads on their backs. Rarely, some goods could be transported by canoe but only when rivers were available. Although a thriving trade existed between the different cities in Mesoamerica, it consisted mostly of exotic and easily transported goods such as cacao beans, colorful feathers, and obsidian. Food products, such as maize, beans, and squash, were too bulky to make their transportation worthwhile. Porters could carry a useful load only a small distance.

This lack of easy bulk transportation meant that food required by the cities had to be produced nearby. Most of Mesoamerica was a tropical rain forest with relatively poor soil. The normal method of farming this land was slash and burn, or swidden, agriculture. The vegetation on a plot of land was cut during the dry season and allowed to dry out so that it could be burned. The ashes that were produced enriched the soil. The plot was planted at the beginning of the rainy season, and a good yield could be expected. Within a few years, the productivity of a plot of land would decline thanks to weeds, insects, and exhaustion of the minerals in the

soil. Before a plot declined to the point where the yields were unacceptable, farmers would select another area and begin the process again.

Swidden agriculture required a large amount of land to support each person. Most of the land was not in production at any one time. Unfortunately, as a city's population grew, more food was required, and thus more land was needed. At some point, the land was unable to produce enough food to support the population.

Efforts were made by the Mesoamericans to increase the productivity of the land. The remains of massive irrigation and terracing projects have been discovered by archaeologists. The labor for these projects was supplied by the peasants under the direction of the elites. Although successful to a degree, the projects apparently helped create divisions between the peasants and the elites. As tensions over shortages of food increased, the peasants became more likely to either revolt against their rulers or to move to locations where they had smaller burdens.

Evidence also indicates that the very success of growing cities helped to undermine their future. Monumental structures required more resources, such as lime. To create the lime, cities such as Teotihuacan burned nearby trees. One result of the deforestation was the massive erosion of farmlands, resulting in smaller harvests.

—*Timothy J. Watts*

Bibliography

- Andrews, Anthony P. *First Cities*. Washington, DC: Smithsonian Books, 1995.
- Fields, Virginia M., Dorie Reents-Budet, and Ricardo Agurcia Fasquelle. *Lords of Creation: The Origins of Sacred Maya Kingship*. Los Angeles: Los Angeles County Museum of Art, 2005.
- Peppas, Lynn. *Life in Ancient Mesoamerica*. New York: Crabtree, 2005.
- Sabloff, Jeremy A. *The Cities of Ancient Mexico: Reconstructing a Lost World*. New York: Thames and Hudson, 1989.

Anthropogenic Environmental Change

"Anthropogenic" is a term used to refer to anything that has its origin in human activities. One of the most dramatic examples is anthropogenic environmental change, which has a long history.

Human actions have effected changes in the environment at least since people discovered how to make fire hundreds of thousands of years ago. Fires set by humans are said to have caused massive deforestation and desertification in Australia. According to many scholars, excessive predation by humans resulted in the extinction of the megafauna (large animals) in Australia, the Americas, and Siberia prior to 10,000 years ago. Some climate historians speculate that the global warming caused by the development of agriculture in the last 10,000 years prevented the onset of another ice age.

In 300 CE, the earth's environment differed from what it became 700 years later. Dense hardwood forests covered much of northern Europe, southern China, and much of central and southern Mexico. Elephants and rhinoceroses roamed southern China, lions still existed in western Asia, and in Madagascar there were pygmy hippopotamuses, large crocodiles, huge flightless birds, and many species of giant lemurs as well as giant tortoises. In Hawaii and other islands of eastern Polynesia, there were many endemic species of birds, including large flightless geese. Rapa Nui (Easter Island) was covered by a species of palm unique to the island that formed verdant forests.

In the Mediterranean region, northern China, and northern India, where cities had made heavy environmental demands for many centuries, environmental change was already evident. Excessive timber cutting had denuded much of the terrain in northern China and the Mediterranean region. In particular, the pasturing of goats and sheep in the Mediterranean region on the deforested hillsides prevented natural reforestation and turned these hill slopes into scrubland. In both northern China and the Mediterranean region, the massive deforestation had resulted in increased devastation by flooding. Through this process great malarial swamps were created along the coasts in Italy.

The imperial authorities in both northern China and the Mediterranean region were voracious consumers of forests. Timbers were lavishly used for the construction of the great monumental structures, such as the Coliseum, the aqueducts, roads, fortifications, and waterways. prodigious quantities of wood were burned to

make charcoal needed in the production of cement and plaster as well as for the large amounts of iron produced in China and India. In the Roman empire, much timber was used in fortifying the northern frontier.

In previous centuries elephants, lions, and giraffes had inhabited North Africa, but by 300 CE hunters had exterminated these animals north of the Sahara.

After the decline of the Roman empire in the fifth century CE, deforestation in the northern part of the empire nearly ceased. As the population declined, the pressure on the environment was no longer as severe. Many rural areas where land had been cleared for tillage reverted to wasteland and then to scrub forest. In the ninth century CE, the climate began to moderate as the Medieval Warm Period set in. The population in northern and eastern Europe began to increase, and new lands, which were by then heavily forested, were cleared for farming. Deforestation resumed as new towns were built and cities sprang up in what had been previously the northern forest. The forests on the north coast of the Mediterranean began to be cut to furnish timbers for the ships needed in the revived commerce of the Mediterranean and for the navies of Muslim and Christian states. Many mountain slopes in what is now Slovenia were denuded of trees to furnish timbers needed as piles to drive into the Venetian lagoon on which to build the structures of the rising port city and naval power.

In northern China also, many Han Chinese fled south to the Yangtze Valley and beyond, abandoning their land to the conquering nomads moving in from the steppe. Rather than revert to forest, some settled lands were used to pasture the horses of the conquering nomads. In the south, the relocating Han Chinese commenced to displace the southern indigenes on the most productive and easily farmed land. The new Han settlers resumed the process of deforestation that had denuded northern China, and they began to hunt out the elephants, rhinoceroses, and tigers. These would be extinct in much of southern China by 1000 CE.

By 300 CE, Madagascar had been settled by humans for perhaps two centuries, but it still had most of its unique flora and fauna as well as

most of its widespread rain forests. There were giant grazing lemurs as well as giant flightless birds related to the ostrich and extinct New Zealand moa, dwarf hippopotamuses, great river crocodiles, and many other species, which the Austronesian settlers would drive into extinction by overhunting or habitat destruction in the coming centuries. The settlers, who were, with Bantu arrivals from Africa, the ancestors of the Malagasy, cleared much of the rain forest to grow the rice that they had brought from their Indonesian homeland.

In Hawaii and many of the other islands of eastern Polynesia, the settlers established their Polynesian crops and livestock (pigs, chickens, and dogs) but exterminated many of the endemic species of birds and some of the native plants. The pigs and the Polynesian rat, that unwelcome passenger on Polynesian voyages, did especial environmental damage by eating the eggs and young of ground-nesting birds. The early Hawaiian settlers hunted to extinction the large flightless Hawaiian goose. On Rapa Nui (Easter Island) the Polynesian settlers began their prodigal clearing of the Easter Island palm forest. In future centuries this would result in the extinction of the Easter Island palm tree and the relegation of the inhabitants to starvation and desperation.

In the Americas, the most devastating examples of anthropogenic environmental change were in Mesoamerica: the collapse of Teotihuacan and the fall and desertion of the classic Mayan cities. Teotihuacan was the largest city in the Americas and among the largest in the world from the third century to the seventh century CE, with a population that some estimate approached 300,000. It was a gigantic task to supply this metropolis with food, raw materials, and timber, since Teotihuacan was inland and not on a navigable river. The Mesoamericans had no draft or pack animals to pull or carry supplies to the city and, in the absence of river or sea transportation, the principal carriers of supplies to the city were humans. It was possible to supply the city's large population when the crops in the vicinity of the metropolis were abundant and the supply of timber was nearby. Over the years the nearby forests were cut, requiring carriers to make much longer journeys for timber supplies;

in the sixth century, droughts and crop failures compounded the difficulty of supply. Food shortages and starvation resulted in social and political unrest, which may have been exacerbated by foreign invasions. By sometime in the seventh century, the city collapsed and was soon deserted.

The collapse of the classic Maya cities is similar. At its zenith in the ninth century, the combined population of the classic Maya cities has been estimated at about 12 million. The forests had been cut not only to make room for farmland but also to provide timbers for the massive construction projects of the Mayan kings. When the great droughts of the tenth century set in, the land became a veritable dust bowl, and recurrent widespread famines reduced the population to a fraction of what it had been in its heyday.

These are the most noticeable examples of environmental change caused by human actions. Anthropogenic environmental change was and continues to be constant and incremental. This change accelerates as populations grow and becomes more serious as the technological capacity of humans to effect change becomes greater.

—Wilfred J. Bisson

Bibliography

- Diamond, Jared. *Collapse: How Societies Choose To Fail or Succeed*. New York: Penguin, 2005.
- Fagan, Brian. *Floods, Famines and Emperors: El Niño and the Fate of Civilizations*. New York: Basic Books, 1999.
- Montgomery, David. *Dirt: The Erosion of Civilizations*. Berkeley: University of California Press, 2007.

■ Introduction: Demographic Change

All population estimates for this era are, at best, guesses, based on a paucity of evidence. Our estimates start with an actual census taken in China during the mid-Han dynasty, at about the beginning of the Common Era. This census was an enumeration of the number of households. Historical demographers using this data have calculated China's population during the most prosperous years of the Han dynasty at about 60 million people. On the assumption that China's population remained stable or grew very slowly until the "barbarian" invasions in the fourth century, it is estimated that China's population in 300 CE was still about 60 million.

China's agriculture for at least the last 2,000 years has been the most intensive and productive in the world. In the nineteenth and early twentieth centuries, Chinese agriculture supported a fifth to a quarter of the world's people, and scholars have assumed that this has been the case for the last two millennia. If in 300 CE China's population of 60 million was one-fourth (or perhaps a

little less) of the world's population, then the total number of the earth's inhabitants was in the range of 200 million to 240 million.

Other historians, examining data from the Roman empire, estimate that its population in 300 CE was also about 60 million. The other region with high agricultural production capable of supporting a comparable population was the Indian subcontinent. Estimates for the subcontinent are not as high as those for China and the Roman empire, averaging about 45 million. But if to this figure is added the possible 15 million from Iran, Mesopotamia, and central Asia, we get 180 million.

This leaves Southeast Asia (2 million?), Japan and Korea (2 million?), Siberia and northern Europe (3 million?), and the Arabian Peninsula (3 million?) as well as sub-Saharan Africa, the Americas, Oceania, and Australia to be accounted for in terms of population.

To estimate the population of the Americas, scholars begin with archaeological evidence that points to a population of the Maya cities at 10

million to 12 million in the eighth century. In 300 CE, the Maya population may have been a third of that, 3 to 4 million. The population of the rest of Mesoamerica may have exceeded that, bringing the total population of Mesoamerica up to 6 million or 7 million. The other major population region of the Americas was that of the Andes, with possibly 3 million people. The rest of the population of the Americas in 300 CE might have been 3 million to 5 million, putting the total for the Americas in 300 CE in the range of 9 million to 15 million people.

Sub-Saharan Africa's population before the diffusion of bananas and other Asian crops was very small, probably not greater than that of the Americas, perhaps 15 million. Oceania and Australia together may have had 1 million or perhaps 2 million (depending on what the population of New Guinea might have been).

This gives us a grand total of earth's population in 300 CE of 220 million (200 million–240 million). Seven hundred years later, in 1000 CE, the Chinese population is estimated to have been 80 million. Using our assumption that the Chinese population was one-fourth to one-fifth of the world's total, the total world population would have been 360 million to 400 million people. That is not an impressive increase for three-quarters of a millennium, but it masks some serious population crashes as well as a few population blooms. These demographic changes roughly parallel climate change, the changes in temperature and rainfall over long periods, as well as perhaps changes in the disease environment. We know of one serious pandemic (Justinian's Plague) that swept Eurasia in the sixth century, but there are hints of other serious epidemics that affected wide regions.

In general, populations in mid-latitude Eurasia seriously declined during the Dark Age Cold Period (200–650 CE), but during these centuries populations grew swiftly in Mesoamerica, the Andes, and probably the Amazon and Mississippi basins. Conversely, during the centuries after 800 CE, populations in Mesoamerica and the Andes crashed, while those in temperate Eurasia responded to the more salubrious climate of the Medieval Warm Period by growing steadily and comparatively rapidly.

—Wilfred J. Bisson

Population Fluctuation and Ethnic Changes in Early Medieval China

The end of the classical era of Qin-Han (221 BCE–220 CE) in China was followed by a long period in which the population fluctuated greatly due to political instability, a contracting economy, and an increasing level of violence in society. At its zenith around the first century BCE, the population of China stood at 59 million, according to the government's statistics. Small landholding peasants constituted the bulk of the tax-paying and labor-supply segment of the population, through which the Han dynasty built its power and influence throughout the realm. Toward the second century CE, however, magnates at the regional level, based on large landowning families, gradually expanded their influence at the expense of the local peasants and thus eroded the foundation of the dynastic rule.

As central Han control weakened and the peasants increasingly suffered under growing regional power, social violence was on the rise. By the early fourth century CE, imperial authority was no longer able to restrain the power of the large estates, and the empire fell apart, giving way to the intensive competition among the regional power centers and indirectly putting tens of thousands of refugees on the roads. Productive agricultural land was left untilled, towns and villages were abandoned, and corpses littered the roadsides. Population declined rapidly; only a fraction of it remained on the government's tax roster.

The radical fluctuation of population was accompanied by drastic movements of ethnic groups within and from outside China. Increasing social instability prompted foreign invasions from the other side of the Great Wall. The fall of the Western Jin in 317 was followed by a period known as *wubu luanbua*, or “Five Barbarians, bringing turmoil to China.” These nomadic invaders spoke languages other than Chinese, and their invasions devastated the Chinese Central Plain, the heartland of Han society. The ruling Jin dynasty fled south to the Yangtze River valley. This huge influx of government officials, bureaucrats, and soldiers who accompanied it infringed on the local population, most of them

speakers of Austronesian languages. As a result, the ethnic makeup in the Yangtze River valley and farther south changed drastically.

In the Yellow River valley to the north, there were also changes in the ethnic makeup of the region. Upon their arrival at the fertile agricultural lands there, many of the invading nomads settled, and they founded, separately, 16 kingdoms in the Central Plain, many of them of short duration. In the early fifth century, one group of invaders, the Tuoba tribe of the nomadic Xianbei people, established a fairly stable state. Their dynasty, the Wei, carried out a policy of encouraging their people to *hanhua*, encouraging their people to adopt the Chinese language as well as the farming and government system of the Central Plain. Inter-marriage between the Tuoba and the native peoples of the Central Plain was common.

Ethnic mixing in this period continued for several centuries as locals intermarried with settling invaders. The Yang family, the founding dynasty of the Sui in 587, and the Li family that founded the Tang to replace the Sui in 618 both had a long tradition of marriage with non-Chinese-speaking peoples. By the mid-eighth century, the Chinese population grew to its highest level given the stability under Tang rule. By then, the ethnic makeup of China had changed considerably.

—Yi Li

Bibliography

- Barfield, Thomas. *The Perilous Frontier: Nomadic Empires and China*. Oxford, UK: Basil Blackwell, 1989.
- Di Cosmo, Nicola. *Ancient China and Its Enemies: The Rise of Nomadic Power in East Asian History*. Cambridge: Cambridge University Press, 2004.
- Eberhard, Wolfram. *China's Minorities: Yesterday and Today*. Belmont, CA: Wadsworth, 1982.
- Lattimore, Owen. *Studies in Frontier History*. Paris: Mouton, 1962.

Fluctuating Populations in Inner Eurasia and Europe

The population of Europe and of Inner Eurasia (most of Russia, Belarus, Ukraine, and central Asia as well as Inner and Outer Mongolia and the

THE MYTH AND REALITY OF *HANHUA*

Different non-Chinese-speaking peoples who lived in the periphery of China often moved to rural areas of the country in their quest for economic expansion or territorial gain. After living in China, many of these recent arrivals adopted the Chinese lifestyle, language, customs, social and cultural norms, and political institutions. The Chinese had long noted this phenomenon and referred to it as *hanhua*, or *Han-ization*, with *Han* meaning “authentic Chinese culture.” However, these non-Chinese-speaking peoples also brought to China their own traditions and were instrumental to the syncretic nature of the development of subsequent Chinese culture.

—Yi Li

Chinese provinces of Sinkiang and Gansu) fluctuated dramatically during the first millennium CE as empires rose and fell. Droughts, famines, diseases, wars, natural disasters, and other calamities all took their toll. Following these events, the establishment of stable governments combined with the decline in mortality, a rise in birth rates, and the beginning of the Medieval Warm Period generated an increase in the population of these regions.

The stability created throughout Europe by the formation of the Roman empire under Augustus Caesar in 27 BCE and Rome's general policy through the Antonine emperors during 97–180 CE of fostering the union between the west and the Greek-speaking east allowed for substantial population growth. Population in Europe west of Russia reached a high point around 200 CE when approximately 36 million to 44 million people were settled in the region, this in spite of the Antonine Plague (165–180) during which an estimated 5 million people died. During the same period, the population of Inner Eurasia is estimated to have been anywhere from 6 million to 17 million. (Figures for Inner Eurasia do not include the population of Gansu.)

Population fluctuations in the distant past are difficult to track, but we can estimate them from evidence provided by anthropologists, archaeologists, and paleontologists. Some of the data is physical, such as the presence or growth

THE MEDIEVAL DEPOPULATION OF ROME

The population of second-century Rome may have been 1.2 million. After Visigothic and Vandal invaders sacked the city and destroyed the water supply system in 410 and 454, the population declined precipitously; only a few hundred thousand remained in the mid-fifth century. Famine caused by the volcanic eruption of 535 as well as by the seemingly endless wars caused further massive reductions in the population. As the Roman infrastructure crumbled, trade became more difficult, and an increasing lack of hygiene led to more illnesses. By the end of the sixth century the Roman population had been reduced to as few as 30,000. What was once the center of the Roman entertainment and the scene of bloody gladiatorial fights became a sheep pasture.

—Linda Malcor

Rome's defenses are breached by the Vandals, nineteenth-century engraving. By the mid-fifth century, the Roman empire was in steep decline and had already ceded most of its African colonies to the combined forces of the Vandals. Wars and invasions accelerated the population decline in the Late Roman empire already begun by adverse climate change and pandemics. (Ridpath, John Clark. Ridpath's History of the World, 1901)



of settlements and signs of agricultural activity. Other data is provided by calculations based on what we know about population density and probable birth and mortality rates in cultures with certain levels of technology and certain types of social organization. Population figures provided in ancient written sources are often large figures that simply mean “a lot of people,” so all such references must be checked against the other data that is available. Even so, population estimates found in different sources can vary widely. The numbers presented here represent estimates, and even these estimates cover a significant range.

As the stability of the Roman empire began to crumble under the Severans (196–217 CE) and

the subsequent emperors in the third century, the peoples of Europe were exposed to many threats that took a disastrous toll on their numbers. The warfare caused by the Eurasian peoples flooding into Europe reduced the population in that region to about 30 million. By 600 CE the European population fell to roughly half of its 200 CE level, somewhere around 20 million to 26 million, with about 25 million people dying during the Justinian Plague (541–542) alone. As stable states re-formed during the medieval period, Europe's population rose again, reaching around 30 million to 36 million by 1000 CE.

The population of Inner Eurasia may have remained a bit steadier largely because of its sparser population, which hindered the spread

of the pandemics that wreaked such havoc on Europe's population. The fall of China's Han dynasty in 220 destabilized much of the region, resulting in a decline in population that was reversed only by the establishment of the Sui dynasty in 581. Sources disagree about whether the population of Inner Eurasia fell by half a million or rose by a million between 200 and 400, but given the number of people leaving Eurasia and those killed in natural disasters and warfare, the figures indicating a decline make more sense. By 600 Inner Eurasia's population had either dropped by a little over half a million or risen by almost the same amount, with estimates varying from 7.4 million to 15.9 million people. The variations arise partially from the mass movements into Europe by nomadic cultures, such as the Alano-Sarmatians and the Huns, and partially because of natural disasters, such as the 535 volcanic eruption, probably of Krakatau, which caused an extreme climate change that resulted in famine and disease throughout Eurasia. By 1000, however, the population of Inner Eurasia, encouraged by the stability imposed by the Sui and Tang dynasties, definitely exceeded its 200 level, reaching between 9.6 million and 19.5 million people.

The natural disasters of the first millennium were followed by the Medieval Warm Period (ninth through thirteenth centuries), a time of elevated temperatures that occurred from roughly the tenth to the fourteenth centuries. Agricultural production increased during the Medieval Warm Period, and the population of Europe more than doubled again, to between 74 million and 79 million people, prior to the onset of the Black Plague. Although not impacted by the warmer temperatures, the population of Inner Eurasia increased to roughly 12.25 million to 19.3 million people during this time as nomadic cultures began to give way to increasingly agricultural societies and governments stabilized, encouraging population growth.

—Linda Malcor

Bibliography

Carcopino, J. *Daily Life in Ancient Rome: The People and the City at the Height of the Empire*. Translated by E. O. Lorimer. New Haven, CT, and London: Yale University Press, c.1940, 2003.

Livi-Bacci, M. *A Concise History of World Population*. Cambridge, MA: Blackwell, 1992.

McEvedy, C., and R. Jones. *Atlas of World Population History*. Harmondsworth, UK: Penguin, 1985.

Justinian Plague

The Plague of Justinian was a series of outbreaks of what was probably bubonic plague—a bacterial infection spread by rat-borne fleas—in the Mediterranean basin and probably western Europe. These outbreaks lasted from 541 (during the reign of Byzantine emperor Justinian) to around 760. The first outbreak was the deadliest, killing millions of people and further weakening the eastern Roman and Sassanid empires, which were locked in perennial warfare in the Middle East. The outbreaks continued at various



Detail of a Byzantine mosaic of Emperor Justinian I from the Hagia Sophia, Istanbul, Turkey. During Justinian's reign (527–565 CE), the Byzantine empire won notable victories in recovering Italy and North Africa, but these victories proved hollow, largely because of the losses in population occasioned by the Justinian Plague. (Christel Gerstenberg/Corbis)

➤ PROCOPIUS ON THE PLAGUE

Procopius, a sixth-century Byzantine historian, made these observations about the plague's symptoms:

"I am unable to say whether the cause of this diversity of symptoms was to be found in the difference in bodies, or in the fact that it followed the wish of Him who brought the disease into the world. For there ensued with some a deep coma, with others a violent delirium, and in either case they suffered the characteristic symptoms of the disease. For those who were under the spell of the coma forgot all those who were familiar to them and seemed to lie sleeping constantly. And if anyone cared for them, they would eat without waking, but some also were neglected, and these would die directly through lack of sustenance. But those who were seized with delirium suffered from insomnia and were victims of a distorted imagination; for they suspected that men were coming upon them to destroy them, and they would become excited and rush off in flight, crying out at the top of their voices. And those who were attending them were in a state of constant exhaustion and had a most difficult time of it throughout. For this reason everybody pitied them no less than the sufferers."

—Joseph P. Byrne

Source

Procopius, *History of the Wars*, trans. H. B. Dewing, Loeb Library of the Greek and Roman Classics (Cambridge, MA: Harvard University Press, 1914), vol. 1, 453, 455.

intervals, preventing the Mediterranean populations from recovering fully and leaving them vulnerable to invasion. In the end, the disease simply disappeared from the West for no known reason.

Contemporary sources claim that the first epidemic began in Egypt or farther south in Africa and spread by ship across North Africa and the Levant to Constantinople, Italy, and southern France. It may have also appeared in England and northern Europe west of the great German forests during the seventh century. No one in the early medieval world was prepared or equipped to deal with disease on any level, especially one

that spread as widely and killed as readily as this plague.

Most secular or medical writers followed the teachings of the classical physicians Hippocrates and Galen, blaming the epidemic on corrupted air, perhaps caused by comets, fires, or earthquakes. Most religious writers credited the plague to God, usually seeing it as a punishment for human sin, not unlike the great flood in Noah's day. Many writers listed the typical symptoms. Late in the sixth century Evagrius, a lawyer in Antioch, lists buboes, fever, diarrhea, carbuncles, and swollen and bloody eyes. Gregory, bishop of Tours in France in the century's last decades, described what he saw: "Death was very sudden. A snake-like wound appeared in the groin or armpit and the poison affected the patients in such a way that they gave up the ghost on the second or third day. Furthermore, the power of the poison robbed people of their senses."

Swellings in the lymph nodes of the groin, armpit, or neck are common signs of bubonic plague. In northwestern Italy historian Paul the Deacon wrote in the late 700s that "there began to appear in the groins of men and in other delicate places, a swelling of the glands, after the manner of a nut or date, presently followed by an unbearable fever, so that upon the third day, the man died. But if anyone should pass over the third day, he had a hope of living."

The fear of death caused Byzantines to wear name tags when they went out so they might be identifiable if they should die in the streets or while traveling. They used scents and aromatic smoke to cleanse the corrupted air they thought caused the disease.

Administrators and bishops ordered mass graves dug to accommodate the huge numbers of the dead, and contemporary estimates of fatalities run wild. Yet even modern estimates for deaths in Constantinople in 541–542 range around 40 percent, or 200,000, out of a base of 500,000. All told, as many as 25 million, perhaps a quarter of all Mediterranean people, died over a three-year period.

By the end of the pandemic the ancient world had been transformed. The role of the plague in this transformation is debatable but undeniable. Bulgarians and Slavic peoples had migrated into and secured the plague-wracked

Balkan region, Justinian's reconquests from the Goths in Italy quickly fell to the Germanic Lombards, and the Muslim Arabs burst out of the Arabian Peninsula to create an Islamic empire that stretched from Spain to Baghdad, much of it on the ruins of the Sassanid and Byzantine empires. Large death tolls among their enemies may have also facilitated the rise of the Frankish kingdom in Gaul. Cities such as Constantinople, Alexandria, and Damascus suffered terribly, losing perhaps half of their populations. The numerous deaths of craftspeople, artists, teachers, and other specialists precipitated the decline of many cultural characteristics, from rising illiteracy to less classical forms of artistic expression.

—Joseph P. Byrne

Bibliography

- Allen, Pauline. "The 'Justinian' Plague." *Byzantion: Revue Internationale des Études Byzantines* 49 (1979): 5–20.
- Biraben, J. N., and Jacques LeGoff. "The Plague in the Early Middle Ages." In *Biology of Man in History*, edited by Elborg Forster and Patricia M. Rannum. Baltimore: Johns Hopkins University Press, 1975.
- Byrne, Joseph P. *The Black Death*. Westport, CT: Greenwood, 2004.
- Dols, Michael W. "Plague in Early Islamic History." *Journal of the American Oriental Society* 94 (1974): 371–383.
- McNeill, William H. *Plagues and Peoples*. New York: Anchor, 1998.

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Society and Culture

During this age, the great majority, perhaps as many as 90 percent, of the earth's people were members of sedentary agricultural societies. Most of these sedentary agricultural societies were organized into states and empires, but some were stateless, organized as chieftainships or autonomous villages. The next largest group of the earth's inhabitants (after sedentary agriculturalists) were nomadic or seminomadic pastoralists who herded cattle, yaks, horses, sheep, goats, camels, lamas, or reindeer. These groups formed widely diverse social structures that varied according to environmental factors, the nature of neighboring sedentary agriculturalists, and other historical factors. A very small fraction of the world's population during this period was nomadic or seminomadic hunters and gatherers, some of whom were also gardeners.

A few groups of hunters and gatherers whom lived in particularly rich environments, such as Florida, California, or the North American Northwest, lived in sedentary but nonagricultural villages and comprised a separate group of cultures.

Our knowledge of the society and cultures of hunting and gathering people in the Age of Expanding Regional Civilizations is anecdotal at best and suffers from extreme paucity of sources. We know more about societies and cultures of the pastoralists than of hunters and gatherers of this age, but what we know is still largely anecdotal and is biased toward the views of their sedentary neighbors. Consequently, this essay mostly concerns itself with the societies and cultures of the sedentary agricultural peoples who lived in states or empires. But that included the great majority of the world's inhabitants.

During this age, as in all periods of human history, the basic social institution was the family. Although human societies included a wide variety of family structures, the vast majority of families in sedentary agricultural populations during this period were patriarchal, patrilineal, and patrilocal. They were patriarchal in that the father was the head of the family, patrilineal because descent and inheritance followed the male line, and patrilocal because married couples usually lived with or near the husband's kin.

In China and in Christian lands, men were allowed to have one legal wife, while four were allowed in Islamic countries. But this does not mean that a form of polygamy was not allowed in Christian Europe or in China. In both areas during this period, concubinage and other forms of female slavery were allowed, recognized, and widespread among the elites of all major agricultural societies. For example, the Christian kings of the Franks, including Charlemagne, all had several concubines

in addition to their legal wives. The restriction of elite men to one wife was to control inheritance, not sex. Non-elite men were restricted to one wife, and poverty usually precluded them from keeping concubines.

Marriages were regarded as social and economic contracts between the families of the bride and groom and were always, with rare exceptions, arranged by the families concerned. Rigid rules of procedure were followed. Usually, the bride's family provided a dowry, which in

India could be a substantial part of the family's wealth. In China and India, the most elaborate procedures were followed, with matchmakers often licensed by the state.

Girls were married young, often before puberty. In Tang China the minimum age for marriage for a boy was 14, while girls were often married by the age of 12. In Muslim lands, girls as young as 9 were sometimes wed.

Girls were married young, often before puberty. In Tang China the minimum age for marriage for a boy was 14, while girls were often married by the age of 12. In Muslim lands, girls as young as 9 were sometimes wed.

Families varied with social classes. Upper-class households might be vast extended family agglomerations and include multiple nuclear families, dominated by a patriarch, whereas peasant families were often single nuclear families and usually included only three generations in the same household.

Women, who usually moved from their natal families to the families into which they married, became subservient to their mothers-in-law. In China as in India, new brides occupied the lowest status in the family hierarchy. It is sometimes said that in China, daughters-in-law paid the highest price for the social structure.

In the most complex and technologically advanced agricultural societies, such as China and India, the subjugation of women in the social order was most complete, whereas in the less complex and less technologically advanced areas, such as western Europe, male dominance was less pronounced. Among the nomads of the Eurasian steppe, gender roles were less rigidly defined, and strong women sometimes emerged.

Agricultural societies were, with rare exceptions, hierarchically stratified. They were divided into numerous social gradations, with a small elite ruling class and massive classes of farmworkers. In between these were intermediate groups, such as military men, merchants, artisans, monks and nuns, and urban people in general.

The farmworkers ranged from free peasants (who rented and sometimes owned the land they worked) to serfs and then to agricultural slaves. These farmworkers comprised 90 percent or more of the early medieval population. They lived in tens of thousands of often-isolated villages, each with its own cultural and linguistic dialect. Many of these villages had little contact with other villages. Each village was a world unto itself. Most of these isolated villages had their own traditions, historical narratives, and folk culture. The free and unfree peasants in these villages produced most of the societies' wealth and taxable revenue. They were the strength and support of all agrarian societies, yet they were disdained and discriminated against in all lands.

In most agrarian societies, a wide chasm separated the peasants and the ruling elite. The rulers lived in fortified capital cities and enjoyed the luxury and wealth drawn from all the villages in their domain. The size and opulence of the city reflected the number and prosperity of the villages under its rule. The high culture of the cities and elites affected the villagers in a limited way, as it was mediated through the agency of the culture brokers such as merchants, tax collectors, clergy, soldiers, and landlords.

In China and in some of the Islamic lands where money circulated freely, governments supported their military establishments through taxation, and the soldiers lived in cities of special camps, with only occasional interaction with the villagers. In less economically developed regions, such as western Europe or northern India after 600, rulers assigned military men a village or villages, with its land for their support. By this method, the military men acquired “ownership” of the villages and a claim on the produce and labor of the villagers. In western Europe this system led to feudalism, and in India as well as some Muslim countries it led to something similar to feudalism. In these systems, peasants were required to render payments in money and/or kind to their lords as well as to labor a number of days weekly or monthly for the lord. Where such systems prevailed, the military aristocracy built manor houses in the countryside and developed more intimate relations with the villagers.

Groups of religious specialists also constituted an elite that drew its support from the peasants. Most of these religious specialists were monks or nuns who lived in monasteries to which the rulers had granted peasant villages for their support. The monasteries were then the landlords of these villages and had a claim on their produce and labor. Monks and nuns, Christian, Buddhist, or Hindu, were relatively numerous in most agricultural societies in this era. In mid-ninth-century China, the Tang emperor Wuzong launched a great suppression of Buddhism and other religions regarded as foreign to China, in which reportedly 4,600 Buddhist monasteries were dissolved and their 260,500 monks and nuns defrocked and returned to lay life. The dissolution of these institutions returned 150,000 serfs to the tax rolls. In addition, 3,000 Manichaean, Assyrian Christian, and Zoroastrian clerics were expelled from China. But these monks and nuns did not comprise the total in China; in addition, there were over 1,000 Daoist monasteries and more than 100,000 Daoist monks and nuns who were not included in the persecution. After Wuzong died in 846 the persecution ceased, and many of the dissolved monasteries were revived.

In western Europe during this period, the number of monks and nuns in relation to the lay population probably equaled that of China except in Ireland, where the ratio may have been higher. In India, in addition to Buddhist monasteries, there were Jain monasteries as well as a variety of Hindu institutions.

Besides the religious specialists, the social status of the many groups between that of the ruling elite and the peasants varied. There were traders, who ranged from great merchants involved in oceanic shipping or long-distance caravan trade to the village peddlers. There were craftsmen

and artisans who produced a wide variety of goods from glassware and cloth to pottery and from iron tools and armor to steel blades. They ranged from those who worked in large establishments, such as the great ceramics establishments in China, to the small smithies in the forest clearings and castles of western Europe. There were medical practitioners, scribes and clerks, moneylenders and changers, and others. Special groups who passed the mysteries of their trades from father to son or mother to daughter practiced most of the arts and crafts.

In many lands, such as West Africa, Mesoamerica, Muslim cities throughout the vast and growing Dar al-Islam (Home of Islam), and India, practitioners of specialized trades banded together in guilds for protection and social expression. Increasingly, these guilds practiced endogamy (marriage only within the guild) and evolved into castes. In

Increasingly, these guilds practiced endogamy (marriage only within the guild) and evolved into castes. In India and perhaps also in West Africa, the evolution of guilds into castes had an ancient pedigree and was well advanced before this era.

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In India, the caste system was most highly developed. Most people, except the lowest social status, belonged to castes (*jati*). Castes were (and are) social groups that have similarities to a very large extended family or a nation. They are endogamic (marrying only within the group)

hereditary social identification groups, sometimes with formal organizational structures, that often are associated with given occupations and economic functions. Although Indian society had been divided by castes for centuries and perhaps millennia, in this era the boundaries between castes grew more rigid as craft and mercantile guilds claimed exclusive occupational niches and evolved into new castes. The lot of the low caste (or outcaste) untouchables became more debased, and caste rules governing ritual purity became more rigid.

All agrarian societies, most societies of pastoral nomads, and some sedentary foraging societies kept slaves in late antiquity and the early medieval age. Indeed, slaves were considered indispensable for the proper functioning of a society. Slaves were used in many occupations and occupied a variety of social statuses. Most did menial labor and ranked very low in the social hierarchy, but a few, who were associated with the elites or served as soldiers, had higher social ranks. Many slaves worked in agriculture. As many as 20 percent of West European farm laborers may have been slaves in Carolingian times (eighth through ninth centuries). In the sugar-planting region of southern Iraq, the population consisted overwhelmingly of slaves from East Africa, many of whom revolted in a series of uprisings, the most serious being in 869–883. Some slaves were entertainers, and many were trafficked as prostitutes.

Some people fell into slavery when they could not pay their debts. In hard times, such as during the famines that recurrently swept through almost every region, people sold themselves and their children into slavery. But many slaves were prisoners of war or captives of slave-raiding expeditions. Vikings launched slave raids into Ireland, western Europe,

and Russia. Expeditions from the Muslim caliphates captured many Turkish slaves, while the Carolingian and other West European states kidnapped many East Europeans, making the ethnic designation “Slav” (*Sclavus*) synonymous with “slave.” In Tang China, there were legal and cultural obstacles toward enslaving ethnic Han Chinese, but it was legally very easy to enslave Koreans, the indigenes of southern China, or the so-called barbarians from the northern steppe. And in India, it was easier to enslave the tribal people than members of established castes.

Agrarian societies that were organized as states or empires, as well as some pastoral empires, had at minimum a capital city and often other cities. The chief economic role of the cities was the care and feeding of the soldiers and elites who supported the state or empire and benefited from its bounty. The ruling elite, the religious elite of clerics and monks/nuns, the imperial bureaucrats, soldiers, craftsmen and artisans, merchants, laborers, servants, entertainers, prostitutes, slaves, and others inhabited the cities. Some, especially the servants and many slaves, lived with the elite in their great houses, but most of the artisans and merchants as well as the humble laborers and others lived in their separate quarters of the cities. As the cities grew, artisans and merchants banded together in guilds, especially in Islamic and Indian cities and later in western Europe. As we have seen, Indian guilds often evolved into castes.

The high culture of these cities often differed widely from the popular cultures of the rural villages in which the majority of this era’s people lived. The culture of the town dwellers was often shaped by one of the world religions—Buddhism, Islam, Christianity, Saivite, Vaishnavite Hinduism, and, to a lesser extent, Judaism—that were vehicles for the expanding regional civilizations of this era. In the cities of this era, the piety of the dominant world religions was triumphant, while the rural villagers clung to the paganism of their folk religions. Throughout this era, the cities served as the bridgeheads for new ideologies: Buddhism in East Asia, Christianity in the Roman empire, and (after 632) Islam in West Asia and North Africa. The religion of the cities, as well as their high culture, flowed, usually slowly, from the cities to the rural villages.

In the dominant civilizations of the Afro-Eurasian ecumene, the Age of Expanding Regional Civilizations was an age of faith, and all societies subscribed to an official religious tradition. Religious institutions dominated the cities and were spreading into the countryside. Religious doctrine shaped the legal structures, social mores, and public monuments as well as literature and art. Christian churches had their own courts to police morals and matters such as marriage and divorce thought to be in their purview. In Muslim societies, legal issues were the provinces of specialists in Islamic jurisprudence, or *fiqh*. China was probably the most secular of these early medieval societies, but even there, the Confucian secularism of the Han dynasty was overshadowed by the Buddhist and Daoist religiosity of the Tang.

In all agrarian societies dominated by cities (that is, the great majority of societies), the educational system, centered in the cities, disseminated the high culture of that civilization. These educational systems were usually meant to train a very small percentage of the population as religious specialists and candidates for the bureaucracy. In China the

emphasis was on the latter, and the Chinese educational establishment included the most formal examination system devised by any early medieval people. In China, India, and Srivijaya, Buddhist monasteries functioned as teaching institutions as well as places of religious devotion. The Buddhist monastery of Nalanda, in India, had international renown and drew students from China, Japan, and Korea as well as Southeast Asia. Among Hindus in India, higher education usually involved being tutored by a guru, but late in this era, the great Hindu reformer Shankara established *mathas*, or monastic colleges, in imitation of the Buddhist monastic academies. In Muslim and Christian lands, education was less attended, and institutions for higher learning were slow in developing. In Constantinople, the government maintained a school, the Pandidakterion (“The Place Where All Things Are Taught”), sometimes called a university by modern historians, to train high functionaries in church and state, but that was the closest approach to higher education in Christian lands since the suppression of such institutions in the fifth century. In Muslim lands, the tradition of classical Greco-Roman learning was kept alive by Assyrian Christian teachers at the Persian school of Gondeshapur in Edessa (Syria), but the first Muslim madrassah of higher learning was al-Azhar in Cairo, founded by the Shia Fatimid dynasty in 974. In a number of cultures in Africa south of the Sahara, education was one of the functions of age-group cohorts.

In all early medieval societies, material culture complemented verbal and other nonmaterial aspects to produce the cultural imprint of the age. The production, preparation, and consumption of food as well as the clothing worn, the types and locations of the dwellings, the kinds of tools and utensils, the kinds of sculpture, paintings, and other plastic arts employed, and the religious and other public monuments all contributed to the cultural signatures of the age.

Each civilization had its own foodways, its distinct pattern of culinary experience. The Chinese and most other sedentary East Asians disdained dairy products, but milk and cheese were the principal dietary elements for the pastoral peoples. For the South Asians, the people of the Muslim world, and the Europeans, dairy products were very important. Some peoples prohibited the consumption of horses, dogs, or pigs, but for others, these were accepted items of consumption. A combination of grains provided the basic foods of the great majority of the earth’s people: rice, wheat, and millet in East and South Asia; wheat, rye, and barley in the Muslim world and Europe; various types of millet and teff in much of Africa south of the Sahara; maize for the peoples of Mesoamerica; and maize and quinoa (along with potatoes) in the Andes. The foodways of the world were not, however, static during this era; change occurred in almost all regions as incremental innovations in agricultural crops and technology occurred. The most spectacular changes occurred in the North American Southwest and Southeast, eastern Polynesia, the Muslim world, and Africa south of the Sahara. Mesoamerican crops—maize, beans, and squash—diffused northward to revolutionize the cuisines of the North American Southwest and the Eastern Woodlands; sweet potatoes from South America changed the cuisine of eastern Polynesia; the diffusion of Southeast Asian crops, par-

ticularly bananas, enriched the foodways of Africa south of the Sahara; and the Muslim world underwent an agricultural revolution as South Asian crops were added to the menu.

Popular cultures and high cultures expressed themselves in numerous genres of art, and we can know some of this through artifacts. Great public monuments are the most noticeable artifacts of the age: they were meant to be statements of the grandeur and power of institutions and ideas. The Classical Period of Mesoamerica and the Andean civilizations (ca. 100–900 CE) announced itself in numerous great pyramids and platform mounds. The same time period, which approximates the golden age of Mahayana Buddhism, witnessed the construction of numerous great Buddhist monuments: gigantic sculptures, cave temples, and pagodas throughout East, South, and Southeast Asia, such as the cave temples of Ajanta and Elora in India; the massive grottoes and hand-hewn caves at Longmen, Dunhuang, and Yungang in China; the now destroyed Buddha statues at Bamiyan in Afghanistan; and the great Javan Buddhist temple mound of Borobudur. The most impressive example of Christian monumental architecture during this era was the church of Hagia Sophia in Constantinople. Muslims constructed great shrines and mosques in many regional capitals of the caliphate. The Great Mosque of Damascus is a prime example.

Great public monuments are the most noticeable artifacts of the age: they were meant to be statements of the grandeur and power of institutions and ideas.

Most peoples exercised their artistic bent in pottery, and some non-literate cultures would remain enigmas without their clay artifacts. This is especially true of the Mochica, the North Peruvian culture of the era. In their exquisitely comic and often pornographic ceramic figurines, we can view their daily lives and sometimes their inner thoughts. The Chinese invention of porcelain, toward the end of the era, produced a ceramic that surpassed that of any other civilization and was traded throughout Afro-Eurasia. This became an expression of high-class culture everywhere. China was also the fount of many other things, the consumption of which was reserved to the elite of Afro-Eurasia. Tea and silk were two such items.

Painting and visual art during this era were not, except sometimes in Tang China, designed to be realistic but rather to convey a message. In the Christian West, the humanistic naturalism of the Greco-Roman classical age was abandoned in favor of art intended to be didactic, to convey a religious message. In the Muslim world, visual representation of people or animals was discouraged, but Muslim monuments and mosques were adorned with beautiful Quranic calligraphy. Chinese painting was more realistic, but artists during the Tang dynasty were less interested in faithfully representing objective reality than in representing the inner meaning of a scene.

In music, very little can be said for most cultures of the era. The music of Christian cultures that has survived the ages is mostly church music, which in this era was mostly noninstrumental vocal music such as the Gregorian chant. The more puritanical Islam disapproved of music of any kind, but the Islamic elite kept songstresses, sometimes free

but usually slaves, to entertain their guests. In the Tang dynasty, music and musical instruments were ubiquitous elements of both popular and elite culture, but little of Tang music has been preserved except by traditional musicians of the imperial Japanese court. Tang dynasty musical instruments and musical compositions were discovered in the 1990s. Now, using reproductions of these instruments, Chinese musicians play Tang compositions in concerts at the Hubei Museum. In Africa south of the Sahara, music was characterized by drumming and elaborate call-and-answer vocalizations, but increasingly during this era, Indonesian music that utilized marimbas or xylophones was diffusing across the African continent from the Malagasy in Madagascar.

A truly comprehensive coverage of society and culture in the Era of Expanding Regional Civilizations would be impossible even in an encyclopedia of this scope, but the facets of the subject discussed here are some of the highlights.

—Wilfred J. Bisson

■ Introduction: Early Medieval Families and Gender— A Global View

In the early medieval age (300–1000 CE), the vast majority of the earth's population lived in patriarchal families, based in sedentary agricultural villages. These families were units of biological continuity, but they were also the basic units of economic production as well as the basic social and emotional institutions. The agriculturally based patriarchal family structure has shown remarkable endurance from at least the fourth millennium BCE until well into the twentieth century in the West. It is just now being challenged in much of the rest of the world. Most early medieval societies were patrilineal, tracing descent in the male line, but some, especially in West Africa and among the western Bantu, were matrilineal, tracing descent in the female line. With only a few minor exceptions, all were patriarchal, with males dominating economically, socially, and politically.

Male dominance of society and politics was not as firm among the pastoral peoples or among the stateless agricultural villagers, such as the ancestors of the Cherokees and Iroquois. Women in those societies often exerted decisive political power. For gender relations among the northern hunters, the hunters and gatherers of the world's

forestlands, or the foragers of Australia, anthropologists have given cloudy and often conflicting testimony. Perhaps more light will be shed on that subject in the future.

In all societies, the lot of women was to marry at an early age and to bear children at intervals of two to three years. In addition, women did much of the basic work in most early medieval societies, producing, processing, and cooking the food; weaving textiles and fabricating clothing; and caring for the children, the elderly, and the men. Romantic love was not a consideration in marriage; rather, it was looked on as a sinful luxury of the wealthy elite. The highest virtue for any woman was to perform her familial duty as a wife and mother and to do as her father and husband told her.

Some women, especially in Buddhist and Christian societies, avoided this matrimonial fate by becoming nuns. Convents, where nuns dwelt, were women's worlds, where women could and did exercise power.

In most early medieval societies, prostitution existed. It was probably more prevalent in East and South Asia than in Christian Europe or the Muslim world because East Asia, particularly

China, was more urbanized, and in the West prostitution incurred a greater social stigma. In China and other parts of East Asia, female entertainers were often also prostitutes, and some of them had relatively high social prestige, as had the hetaerae of fifth-century BCE Greece. In India, temple dancers were often also prostitutes, and prostitution was a recognized legitimate profession. In the Muslim world as well, certain classes of entertainers, known as songstresses, were sometimes prostitutes.

Childhood was a dangerous time of life in early medieval societies. Child mortality, by any modern standard, was appallingly frequent. Although most women were pregnant for much of their lives between puberty and menopause, many of these pregnancies were terminated in stillbirths. Induced abortions were not disallowed by the religious or political authorities and were resorted to especially when it was feared that the baby would be abnormal or handicapped. Infanticide was also practiced in many societies, sometimes for economic or social reasons. Death in childbirth may have been one of the most frequent causes of female mortality in many early medieval societies. Early medieval children shared their lives intimately with domestic farm animals, and farm animals have notoriously been one of the most prolific sources of childhood diseases. Children born into early medieval families had less than an even chance of living to adulthood.

Children were not pampered in the majority of early medieval agricultural societies. Corporal punishment was normal in rearing children. Children were allowed free play for only a few brief years in early childhood; as young as five, they were inducted into the labor force. If they were children of peasants, they were given agricultural or domestic work. In elite families, children were given different tasks, sometimes being educated by stern tutors or being trained in the martial skills. Sometimes children were employed as singers or servants of the warrior classes.

The lives of adult men were, on the whole, easier than that of early medieval women. In agricultural societies, men usually did the most physically demanding work, such as plowing, sowing, and most of the work in reaping, but they also often had the best food available for

the farm family. In wealthy elite families, some men could be wastrels, but most elite men were engaged in occupations such as governmental administration, military command, religious and monastic pursuits, or mercantile affairs. The great advantage that men had was that they controlled the major institutions of societies: the armies, the governments, the churches, and religious institutions.

—Wilfred J. Bisson

Bibliography

- Cantor, Norman. *Civilization of the Middle Age*. New York: Harper, 1994.
- Gernet, Jacques. *Daily Life in China on the Eve of the Mongol Invasion*. Stanford, CA: Stanford University Press, 1962.
- Thapar, Romilla. *A History of India*, Vol. 1, *From the Discovery of India to 1526*. New Delhi: Pelican Books, 1990.

Gender and Matrilineal/Patrilineal Social Relations in East, Central, and Southern Africa

In postclassical East, central, and southern Africa, men and women were viewed as equals. Both gender and age were factors in the division of labor, but key elements of social hierarchy were based on seniority, not gender. Men's jobs were not considered more important than women's jobs. In Bantu-speaking societies during this period, women controlled the technology of agriculture, pottery, house building, and food preparation, while men herded the animals, carved wood, and smelted iron and were responsible for protection. At the beginning of this era almost all East, central, and southern Africans lived in subsistence-based economies. Within these economies women controlled the bulk of the food production and preparation. Thus, it is not surprising that women enjoyed economic power and often held positions of leadership.

Since there was an abundance of land and no concept of private property, labor was key to survival. Low population density and a constant shortage of laborers contributed to making motherhood the most powerful social institution in this area. Infant mortality was extremely high; therefore, the need both to reproduce and

➤ NO PATRIARCHS IN BANTU-SPEAKING SOCIETIES

Women were not oppressed as women in Bantu societies for at least the last 2,000 years prior to colonialism. Seniority, not gender, determined status, and older women had political and economic control over younger women and younger men. The gender equity of Bantu-speaking peoples challenges the widely accepted historical hypotheses that the oppression of women is universal and has always been a part of human existence. African women were leaders and had important status, especially as mothers.

—Christine Ahmed-Saidi

to protect babies became essential to the survival of these people. Under these conditions, it is not surprising that by 300 all Bantu-speaking societies were matrilineal.

Clan membership was calculated through the mother's bloodline, but matrilineality was not just a method of inheritance and social affiliation; it was also an ideology. Matrilineal societies tended to be decentralized, and surpluses were widely distributed to distant relatives. The private accumulation of goods was discouraged. The basic social unit of matrilineal societies in the later part of this period consisted of a grandmother, her married and divorced daughters, and their husbands and children. Female initiation rites were the most important ceremonies in these societies, although many communities still celebrated male initiation.

For a man to marry in a matrilineal society, he had to work for his future mother-in-law for several years and show that he could father children before he was accepted fully as a husband. Marriage was a process that started at the marriage ceremony and ended when mother-in-law avoidance rules were lessened, usually after years of labor and several children. In matrilineal societies during this period, the mother-in-law was highly respected and was often able to control the labor of young males in her own family.

While marriage was considered very important for the raising of children, the social category of wife was relatively unimportant. This was probably also true 5,000 years ago since we

can reconstruct a proto Bantu word, *yadi*, to signify a life stage for a young woman from puberty to her first pregnancy. In other words, a young woman would enter puberty and be married yet was still considered a *yadi* until the birth of her first child, when she became an adult. In this society, motherhood rather than marriage was the event that signified a girl's entry into adulthood. Men also were considered adults only after they had fathered a child.

During this period some societies began shifting from matrilineal to patrilineal descent. In patrilineal social organization inheritance and clan membership were determined through the father's bloodline. Patrilineal societies differed from matrilineal societies in that they tended to create corporate kinship organizations that controlled female labor to a great degree. Polygamy was much more common in patrilineal societies, and since women produced most of the agriculture, husbands with several wives could control agricultural surplus. Private accumulation of goods was also possible within a patrilineal society. Wifedom in patrilineal societies became a more important institution because a young man could not marry unless his family had presented the future wife's family with goods, cattle, or other valuable items. Women lost some of their independence as young wives but retained their role as sisters in their own clans. In both matrilineal and patrilineal societies young men and women wielded little power, gaining status through parenthood and seniority.

After 500, many cattle-keeping peoples in East, central, and southern Africa changed to patrilineality. In societies that depended on cattle raising, chiefs were able to command younger male support by inflating the amount of cattle needed for marriage. The young men were forced to work or fight for the chief since he controlled distribution of cattle. Bantu-speaking peoples in the Nyanza (Lake Victoria) area of the Great Lakes by 1000 had become patrilineal and were socially organized to the extent of having a king. Yet in most of the centralized Bantu-speaking societies the queen mother and other royal women, especially when united, could command more political power than the actual ruler.

Not all cattle-keeping peoples abandoned matrilineality. The Botatwe of east-central Africa

retained matrilineality even though they adopted cattle by 800. The Herero of southwestern Africa raised cattle, but they relied on a dual lineage system with matrilineal descent for political leadership and patrilineal descent for cattle ownership. Their dual lineage may in part reflect the heavy Khoisan influence, since Khoisan speakers tended to organize along a dual lineage system. The Lovedu of southern Africa were patrilineal cattle keepers, but political leadership lay in the hands of the rain queen.

In east-central Africa, Bantu-speaking peoples had consolidated their matrilineal belief systems into a matrifocal, or mother-centered, system. God was no longer a distant figure but instead was a nurturing force like a mother. The most important ceremony was the two-part female initiation ceremony celebrating a young woman's *yadi* life stage. The first ceremony was when a young woman reached puberty, and the second was when she felt the movement of her first child. In this underpopulated land with limited soil fertility, motherhood and female sexuality were highly celebrated.

By 1000 the majority of Bantu societies were still matrilineal and decentralized. Women retained their equal status in these communities well into the nineteenth century. Even within patrilineal societies women remained independent players. Within the kingdoms and states of the next historical era, common women began to have their positions challenged. Yet even within these kinds of politics the women of royal and chiefly status still acted as power brokers.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey, 1998.
- Murdock, G. P., and Caterina Provost. "Factors in the Division of Labor by Sex: A Cross Cultural Analysis." *Ethnology* 12 (1973).
- Oyewumi, Oyeronke. *The Invention of Women: Making an African Sense of Western Gender Discourses*. Minneapolis: University of Minnesota Press, 1997.

Poewe, Karla. *Matrilineal Ideology: Male and Female Dynamics in Luapula, Zambia*. London: International African Institute, 1981.

Sacks, Karen. *Sisters and Wives: The Past and Future of Sexual Equality*. Cambridge: Cambridge University Press, 1981.

Families and Kinship in Tang China

The family in China was viewed as a microcosm, a state in miniature, with the father as the ruler and other family members as his subjects. The family was thus the standard social unit, while the individual was of little importance. The family was responsible for its members as well as for activity in political life. The state and family were further linked in that it was the responsibility of the family to raise filial sons who would be obedient and loyal to the ruler. The study of the family in general is difficult in early China because the vast majority of the evidence is for the elite classes. Little direct evidence for nonelite classes exists prior to the nineteenth century. Therefore, the following must be viewed as a discussion of the elites of China and not China as a whole.

The statement is often made that the Chinese family was always patriarchal, patrilineal, and patrilocal. Despite their common use, these concepts are only generalities. As was common in patriarchal agrarian societies, the family was headed by the eldest male. He was an autocrat, having the power of life and death over family members. However, as the head of the family, he himself was ruled by a reciprocal code that made him responsible for the family members. After the father, the next levels of authority were the sons, in terms of power ranked from eldest to youngest. Within generational cohorts the elder members took precedence over the younger members. This can be seen in the complex network of nouns in the Chinese language that describe one's relationship with others in terms of what one calls them.

In theory families were patrilineal, with all inheritance passing to the sons through the father. However, patrilineal ideology was more fluid and was frequently compromised. By the time of the Song dynasty the patrilineal nature of the family relaxed somewhat as improving economics inflated the dowry prices for women.

THE AFTERLIFE MARRIAGE

The family was considered so elemental in Chinese society that arrangements were often made for the nuptials of those who died before marriage.

Since the otherworld was believed to be essentially the same as this one, the marriage of those in the afterlife was seen as an act of compassion. In this way the needs and wishes of the deceased could be met. Like marriages in this world, the afterlife marriages were arranged by families, and proper etiquette for such arrangements had to be followed. There were even models for prayers to congratulate the bride and groom. The following is from documents found at Dunhuang.

Sample prayer to be recited by the groom's father during wedding ceremonies for afterlife couples:

"So and so, I hereby inform you: You died at a young age and thus did not fulfill the meaning of the husband and wife relationship. You sleep alone in the dark world and lack the intimacy of man with woman. Just as living people long for companionship, the dead fear loneliness as well. Unexpectedly, so and so's family had a daughter who also just passed away like an autumn leaf. We sent a betrothal for you so your souls might meet. We selected this auspicious day for the rite of your union. We also set out an offering next to your shrine tablet, furnished with all kinds of delicacies. Please send your spirit down to the banquet and eat the meal."

—Rebecca Wendelken

Source

Robin R. Wang, *Images of Women in Chinese Thought and Culture: Writings from the Pre-Qin Period through the Song Dynasty* (Indianapolis: Hackett, 2003), 296.

In many cases families wanted to protect their investments, and women began to inherit in some cases.

Chinese families were also patrilocal and were grouped into clans consisting of all families with the same surname living in a particular district. This descent from a common ancestor became the focus of group rituals.

Extended families developed in Neolithic times as a way to survive and as a way to gather

and preserve wealth within the family. However, the philosophical basis for the family structure came from the writings of Confucius. Confucian reverence for filial piety meant that family members were at the beck and call of all older or more hierarchically superior members of the family. Parents and grandparents held the key positions. This was made easier because all members of the family lived in the same compound. The ideal situation was to have four generations under one roof, although this rarely happened. Reverence for older family members extended to the dead through the practice of ancestor worship. Since only males could make the sacrifices and perform the rituals for the ancestors, it was critical for the family to produce male heirs. These rituals for honoring the ancestors helped to bind the family together.

Large families are thought of as the norm in China; however, they were more often the exception. Large families were expensive. They meant dowries for the daughters and marriages for the sons. Peasants generally limited their families to six members at the most. Since this could include grandparents and daughters-in-law, the number of children must have been far fewer than the fabled "100 sons." Another factor that limited family size was the practice of dividing the land among all surviving sons when the father died. This practice began to be phased out during the period between the fall of the Han dynasty and the rise of the Sui dynasty.

Families were tied together by ritual. The survival of the family as a unit depended on having sons to continue the ritual sacrifices for ancestor worship. Survival also depended on preserving or increasing family landholdings so that all the sons could marry and have and support families of their own.

After ancestor worship, the most important family ritual was marriage. The selection of marriage partners for the family's children was controlled by the fathers, which could help explain the traditional animosity between daughters-in-law and mothers-in-law. Marriage was considered so important that parents of children who died single often arranged posthumous marriages for them.

The father contracted with a matchmaker, who was almost always female. She interviewed

the prospective brides and their mothers and then reported back to the groom's father. Female matchmakers were specially prized, as they could actually examine the bride for health, beauty, and so on, and matchmaking was one profession that women could enter without stigma. Choosing the proper mate for their child was especially important since marriages were between families, not individuals. Males were allowed to marry at age 14 but were usually much older. Females were of marriageable age at 12. The state was not involved in the marriage process unless there was a question of fraud, such as lying about the health, age, or morality of the bride or groom.

Once the prospective new family member was chosen, a contract was drawn up by the groom's father or the eldest family male and sent to the bride's family. Her father or the senior male of her family signed and returned it. The bride and groom were rarely consulted about the choice, and they rarely disagreed with the family's decision. Next, symbolic gifts were exchanged between the families. A gift of glue and lacquer might represent cementing the relationship. A gift of silk floss to the bride encouraged her to be meek and remember her place. After the arrangement of the marriage settlement, the marriage was sealed in a ceremony in which the couple bowed to ancestors and to the groom's parents.

Brides left their family homes to live with the groom's family, except in the case of grooms who were marrying up socially. In that case the groom moved into the bride's house. In later times brides severed connections with their natal families, but new research shows that before the Song dynasty married women played important roles in their natal families. Men who through political connections did well were supposed to share the advantages of these new connections with their affinal relations, especially those of married daughters. High-ranking maternal grandfathers often helped find positions for grandsons, and persons connected with the imperial family might even receive help from the maternal grandmother.

The law allowed for severe punishments for disrupting the harmony of the family. Fathers had the power of life and death over their wives and children. A father had the right to beat an

errant son to death if he so chose. If a son struck his father, the son could be beheaded. A wife who struck her husband would be beaten. A man who hit his wife would not be punished unless she was severely injured. Female adultery was far more serious than male adultery.

—Rebecca Wendelken

Bibliography

- Benn, Charles. *China's Golden Age*. Oxford, UK: Oxford University Press, 2002.
- Fairbank, John King. *China: A New History*. Cambridge, MA: Belknap Press of Harvard University Press, 1992.
- Wang, Robin R., ed. *Images of Women in Chinese Thought and Culture: Writings from the Pre-Qin Period through the Song Dynasty*. Indianapolis: Hackett, 2003.
- Watson, Rubie S., and Patricia Buckley Ebrey, eds. *Marriage and Inequality in Chinese Society*. Berkeley: University of California Press, 1991.

Early Medieval European Family

As in all societies throughout history, the family was the basic building block of late antiquity and early medieval society. The structure, definition, and size of families, however, evolved over time as the nature of society itself changed. That notwithstanding, the family remained an important institution throughout the period, even when the ascetic and monastic movement emerged and challenged conventional family life. Indeed, during the fourth to eighth centuries the family became an even more stable and important institution, and the evolution of marriage customs in the same period further reinforced the structure of the family and its importance in society.

According to Tacitus (ca. 56–ca. 120), the Roman moralist and historian, the premigration Germanic family was a tight-knit unit. He notes that mothers nursed their own children who often ran about naked and dirty, which allowed them to develop their bodies fully. Children were raised with minimal pampering and were only married once they had reached maturity. Adultery was rare, according to the Roman writer, and women caught in adultery were severely punished. The importance of the marriage vow and of family was taken very seriously, and women were expected to share in their husbands' labors

in the field and even in war. Not only was the nuclear family bound closely together, but the extended family was as well. Members of the family were expected to participate in family feuds, and nieces “are as highly honored by their uncles as by their own fathers” (118). This idyllic picture, which may have more to do with Tacitus’s desire to criticize contemporary Roman mores than any desire to reveal the reality of the Germanic situation, bears a grain of truth; the close bonds of the family in later barbarian Europe supports the portrayal in Tacitus of the premigration German family.

The family of the early Middle Ages was shaped not only by premigration Germanic tradition but also by Roman and Christian traditions. Indeed, as the various Germanic peoples settled in the former western empire, they came into contact with Roman legal traditions and Christian views of the family. According to Roman law, the father was the *paterfamilias* and had complete control over all his children as long as he lived. Although the life-and-death authority once exercised by the Roman father—according to legend, the founder of the Republic, Brutus, executed his own son for the son’s betrayal of the city—no longer was in force by the fourth century of the Common Era, the father retained significant power in the family, which reinforced Germanic tendencies in that regard. Christian teachings emphasized friendship and charity within the family, and Christian theologians strove to define the importance of marriage, creating the monogamous traditions that shaped marriage and the family by the eighth century.

In the early Middle Ages, however, the family was in a somewhat fluid state owing to the various marriage customs of the Germanic peoples. Indeed, loose marital practices allowed for a much broader definition of family than that of a mother, father, and children. Polygyny was practiced, at least by kings and nobles, into the eighth century, and all children were welcomed by their father; illegitimate children even shared in the inheritance. Indeed, Charles Martel was born to an illicit union and rose to command the Frankish kingdom in the early eighth century. And the history of Gregory of Tours is filled with the multiple marriages of the Merovingian kings

and their numerous concubines and children. This situation changed, however, under the Carolingian dynasty, which sought to promote monogamous marriages and thus stabilized family structure.

The family was also an economic unit. Marriages involved exchanges of often significant amounts of movable wealth and property and were arranged to promote the economic interests of both sides. The family household was the center of much economic activity. It was there that the basic economic activities of the period took place. Cooking, brewing beer, baking, and spinning were done in the home. Women also prepared candles, soap, and other necessities for the family, and animal husbandry and farming were performed at this level. And all members of the family participated in the economic activity of the household. At the head of the household was the father, and all members of the family were subject to his authority.

It has been customary to maintain that children were raised with little sentimentality or affection. Indeed, it has been suggested that the chances for the survival of children were so slim that it is likely that little attention was paid to them before they were seven years old or so and that even then they were treated roughly. Corporal punishment, as contemporary legal codes reveal, was practiced; fathers could sell their children into slavery; and there is even some indication that infanticide was practiced, as it had been in ancient times. This view, however, has been challenged, and anecdotes from the histories of Einhard, Gregory of Tours, and others suggest that there was a great deal of family affection in the early Middle Ages. Charlemagne, for example, loved his daughters so dearly that he would not let them marry and always kept them by his side. He would go riding and hunting with them and loved them and the illegitimate children they had with members of the royal court. Moreover, even the most ferocious Merovingian queens, Brunhilde and Fredegund, revealed their maternal sides quite clearly in the protection of their children. They struggled mightily against each other to promote the interests of their sons, and Brunhilde wrote to the emperor tearfully seeking his aid in protecting her daughter, who had

been lost in North Africa. The situation of children was also improved by the reforms of the Carolingian dynasty, which strengthened marital practices and family structure.

—*Michael Frassetto*

Bibliography

- Einhard, and Notker the Stammerer. *Two Lives of Charlemagne*. Translated by Lewis Thorpe. Harmondsworth, UK: Penguin, 1981.
- Gies, Frances, and Joseph Gies. *Marriage and Family in the Middle Ages*. New York: Harper and Row, 1987.
- Goody, Jack. *The Development of Family and Marriage in Europe*. Cambridge: Cambridge University Press, 1983.
- Gregory of Tours. *The History of the Franks*. Translated by Lewis Thorpe. Harmondsworth, UK: Penguin, 1974.
- Herlihy, David. *Medieval Households*. Cambridge, MA: Harvard University Press, 1985.
- Riché, Pierre. *Daily Life in the World of Charlemagne*. Translated by Jo Ann McNamara. Philadelphia: University of Pennsylvania Press, 1983.
- Tacitus. *The Agricola and the Germania*. Translated by Harold Mattingly. Revised translation by S. A. Hanford. Harmondsworth, UK: Penguin, 1982.
- Wemple, Suzanne. *Women in Frankish Society: Marriage and the Cloister, 500 to 900*. Philadelphia: University of Pennsylvania Press, 1981.

Gender in Dar al-Islam

One of the major debates of the early Islamic period concerns the impact of Islam on women's status and gender roles. Some scholars maintain that women were better off before Islam, citing pre-Islamic practices that allowed women to have greater independence than they did after the arrival of Islam. Others claim that Islam advanced women's status, emphasizing innovations in the Quran (Muslims' sacred book) that improved conditions for women. Both arguments raise important points. Unfortunately, there are so few extant sources for the period in question that neither perspective can be verified absolutely. However one sides with the debate, it is unambiguous that the early Muslim community had far more liberal attitudes toward women compared to their descendants,

the Umayyads (661–750) and the Abbasids (750–1258). But Islamic legal discourses were developed during the later periods; therefore, misogynist perspectives were enshrined in many aspects of Islamic law.

Women in some cultures of the Middle East probably had more autonomy before than after the spread of Islam. Women in pre-Islamic Arabia actively participated in many community affairs, including war and religious activities, and women could initiate marriage and divorce on their own terms. It is not clear which types of marriages were most prevalent, but polyandry (in which a woman may have several husbands), matrilineality (in which descent is determined by the female line), and matrilocality (in which married couples reside with or near the bride's mother) did exist in addition to male-centered marriages.

Islam certainly did not introduce patriarchy or misogyny to the Middle East, and it actually brought a number of new protections to women. The Quran gave women inheritance, dowry, and maintenance rights; it also sanctioned women's right to own property, banned female infanticide, forbade levirate (forcing a widow to marry her husband's brother), and limited Muslim men to four wives. The Quran states frequently that all believers are equal before God; Muslim feminists today point to these verses to argue that equality of the sexes is consistent with the Quran's message of spiritual egalitarianism.

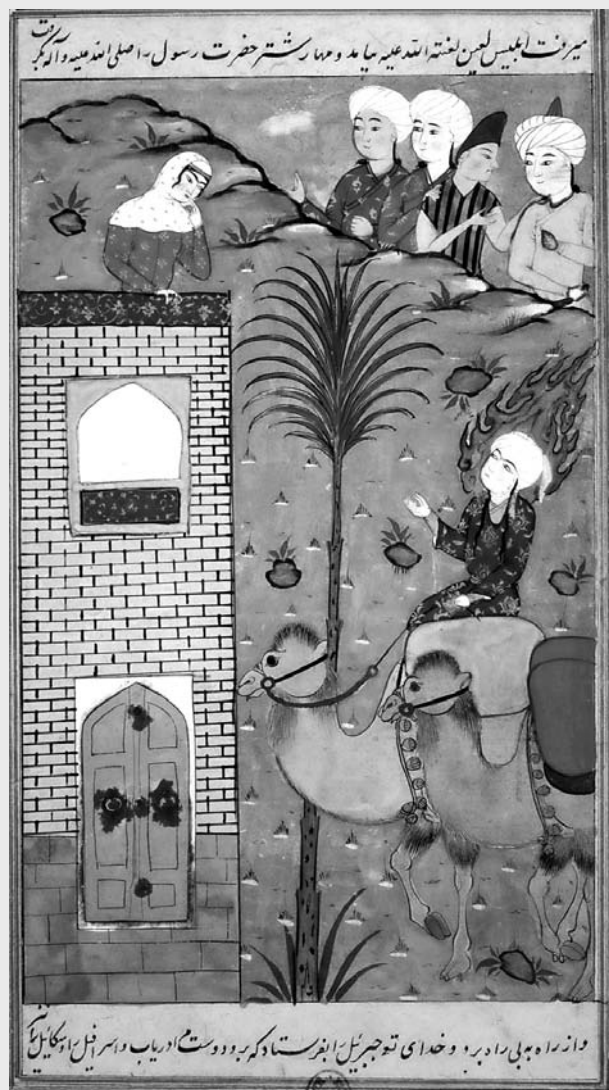
Despite these advances, many of the practices that Islam endorsed did restrict women's autonomy. Whereas the pre-Islamic period saw a variety of practices, Islam limited options and tended to sanction those favoring men. Women were limited to one patriarchal form of marriage, divorce greatly privileged men over women, and the husband's family was given custody rights over the wife. Women no longer could initiate marriages or divorces, and their legal testimony was half that of a man's. Initially, the practices of veiling and seclusion were practiced only by the Prophet's wives. Such customs long predated Islam in parts of the Mediterranean and Persia and only became common among the elite in Muslim communities after Islam spread to these areas.

➤ KHADIJA AND AISHA

One can examine the question of Islam and gender by comparing two of Muhammad's wives. Khadija illustrates women's pre-Islamic status, and Aisha demonstrates changes that Islam instituted. Khadija, 15 years Muhammad's senior and his first convert, was a divorced business-woman for whom Muhammad worked when she proposed marriage. Khadija neither secluded nor veiled herself, and their marriage was monogamous. Aisha was nine years old when her father married her to Muhammad. During Aisha's marriage, she and Muhammad's other wives began new customs of seclusion and veiling. After Muhammad's death, Aisha was engaged in politics until she led an unsuccessful battle. Later she became an important authority on the Prophet's sunna (practice), which is a basis for Islamic law.

—Elizabeth Brownson

Muhammad the Prophet visiting his first bride, Khadija. This painting illustrates a level of gender equality in the early Islamic world, which declined as the centuries passed. (Snark/Art Resource, NY)



Women's status, like other social dynamics, varied by place and time within Arabia and the greater Middle East. It is also useful to note that many values attributed to Islam are actually rooted in preexisting cultural traditions. For example, the idea that female chastity is necessary to preserve the family's honor is a cultural custom, not an Islamic law.

—Elizabeth Brownson

Bibliography

Ahmed, Leila. *Women and Gender in Islam*. New Haven, CT: Yale University Press, 1992.

Esposito, John. *Women in the Muslim Family Law*. 2nd ed. New York: Syracuse University Press, 2001.

Spellburg, Denise. *Politics, Gender and the Islamic Past: The Legacy of A'isha bint Abi Bakr*. New York: Columbia University Press, 1994.

Gender in China

"Men plow and women weave" (*nangeng nü-zhi*). Daughters are born "facing out [away from the family]." These sayings are often used to describe the status of women in early China. This

status had much to do with Confucian ideals of piety, which included loyalty, filial piety, integrity, and righteousness. It was also connected to the hierarchical nature of Chinese family structure, code, and cosmology. For Chinese the female essence was yin, which comprised all things dark, weak, and passive. The male essence was yang, or everything that was light, strong, and active. Since yin and yang must balance, it would stand to reason that both genders should have equal complementary status. However, generations of male writers supported the idea that women were inferior and should stay that way. Such ideas developed into the patterns of passivity that were expected of women. Girls were subordinate to their brothers and fathers, wives to their husbands, and mothers to their sons, and models for women from literary sources were familial and passive.

Despite this common view, Chinese women should not be examined as a monolithic whole. Many factors affected women's actual roles as opposed to their models, including age, marital status, ethnicity (Han Chinese vs. non-Han), family power and status, and location. Older women had more power and freedom than younger ones. The role of the daughter-in-law was far inferior to that of the mother-in-law. The position of unmarried women was extremely vulnerable. Han Chinese women might attempt to model themselves more closely on Confucian ideals, but Confucian notions of the husband's superiority were not incorporated into laws in the north of China until the end of the Six Dynasties period. Elite women often fit more closely to the models, although even here there are notable exceptions. Women of the peasant class were required to work, and their ability to do so was considered in their selection as marriage partners. Wives, daughters, servants, and mothers all had different roles and were treated in different ways. Models for female behavior, such as those written about by Ban Zhou and others, placed women in inferior positions where they were universally subordinate to men. Some historians have taken these models as the literal truth, but they were meant as guidelines and not as reports on actual conditions.

Early writers on women in China, especially Western writers up to the 1980s, have considered traditional Chinese women as among the



Figurines of women performing various domestic duties, Tang dynasty, 618–907 CE. (Art & Archaeology, Inc./Corbis)

most oppressed in the world. Many of these studies failed to take into consideration the variables discussed above or had mapped the situation in nineteenth-century China onto earlier periods. In addition, much of the surviving material from earlier times dealing with women's roles was more about how men wanted women to behave rather than how women really acted. Current research shows that real-life women had more freedom in earlier Chinese history, but it also shows that the movement toward total subjugation began early.

Confucianist thought stated that the sexes should be kept separate and emphasized man's superiority over women. Ban Zhou repeated the admonition twice in her work that women should be quiet and self-restrained and not fond of playing or laughing. Although these norms were meant to apply to all women regardless of social status, the ability to work was a necessary trait for wives of the lower classes.

Punishments for women were based on ideas of filial piety and the double standard. Chinese family law shows that a wife who struck her husband could be beaten; however, a man who hit his wife would not be punished unless she was severely injured. Female adultery was considered far more serious than male adultery.

Chinese life was divided into spheres of influence, as is shown in the saying above on women's roles as weavers. All internal household affairs were managed by women. Anything

THE ANALECTS FOR WOMEN

The Analects for Women is especially interesting because it was written by the Tang scholar Song Ruoxin and her sister Song Ruozhao and was about Confucian values written by and for women. It applies these values to everyday activities, making it especially practical. This selection is from *Book Two: Learning to Work*.

“A woman should learn women’s work. . . . Choose silk threads for the warp and the woof to turn into bolts of silk cloth. Keep yarn on spools and thread on bobbins. With fine silk, ramie, hemp and coarse fiber you will have a lot to weave. These you can either sell or keep for your own use—making shoes or socks, using the thread for embroidering, mending, and basting; you should be able to do everything. If you can follow these teachings you will have no worry about coldness; when the cold comes you will be leisurely and dignified, worrying neither about clothes being torn, nor about your family being poor.

Don’t learn from those lazy women, who are petty and foolish and not eager to do women’s work, who don’t plan for spring or autumn and who sew brusquely and are attacked by others. When they marry, they bring shame on the new family. When clothes become torn, they rob Peter to pay Paul [‘tear down the east wall to cover the west’], are pointed at, and scornfully laughed at in the village. I venture to exhort all women to heed the words above.”

—Rebecca Wendelken

Source

Robin R. Wang, *Images of Women in Chinese Thought and Culture: Writings from the Pre-Qin Period through the Song Dynasty* (Indianapolis: Hackett, 2003), 330.

outside the domestic sphere was the realm of men unless the women were peasants, and then they were expected to work in the family’s fields. Women had charge of household servants, childbirth, and raising children including their early moral training, daily household chores, control of the daughters-in-law and her husband’s concubines, and making sure that the correct rituals were preformed to propitiate domestic deities dealing with the household. Ancestor worship

rituals were the prerogative of the males, but the wife was in charge of preparing the rice for the rituals and therefore had to be free of blemishes. One of her main duties was to produce sons, and if she did not, she could be divorced or her husband could take one or more concubines.

Despite the admonition that women should be obedient to parents before their marriage and to parents-in-law after marriage, women’s filiality toward their own parents was not transferred to the husband’s parents until the Ming dynasty, and then only slowly. The role of mother-in-law gave women a position of power.

Beyond the realm of Confucian writing, women appear as different creatures. Women in poems are sometimes described as working as weavers or tea pickers. Tea picking was more physically demanding and was done outdoors.

In poems, tea pickers are shown as working as hired labor and as overworked by their bosses. However, they also are romanticized. Upper-class women picked tea as a pastime, rather like Marie Antoinette and her ladies played at being milk maids.

Women in northern China were responsible for the manufacture of one of China’s most famous and lucrative products: silk. Women and children in the countryside raised silkworms and reeled the yarn, processes that were both time- and labor-intensive. The yarn was sent to the cities, where it was woven by male artisans. Peasant women also grew and prepared ramie for weaving.

In Ban Zhao’s work, *Lessons for Women*, she states that women should be educated because it helped to cultivate their qualities of intelligence, moderation, and gentleness. Despite this, most women probably received little if any education. A few women, mostly from scholarly families, were educated and gained fame as poets and writers, such as the poetess Li Qingzhao. But since the object of Chinese education was to take the imperial examinations and women were not allowed to do so, there was really little point in educating them. However, by the Song dynasty, perhaps in reaction to the greater availability of books but also due to rising economic conditions, many women were learning to read and write.

Religions sometimes offered women an alternative life. When the daughter of a princess took

vows as a Daoist priestess in the eighth century, the court remodeled her mansion into an abbey. This was, of course, the upper class, and such possibilities were closed to commoners and peasants. Buddhism, with its ideas of universal salvation, appealed to women. The first Buddhist convent in China was established in 312 CE. Buddhism placed women and mothers in a relatively high position. However, Chinese translations of Buddhist texts over time replaced the “equal” words with “subordinate” ones, mirroring Confucianist thought. For example, “Husband supports wife” became “Husband controls his wife.” Courtesans and official entertainers registered with the government.

In the Tang dynasty women could be quite active, playing physical games such as polo. Even women of the court such as Empress Wu and Yang Guifei played this game. Women were also the principal performers of music during the same period.

By the Song dynasty there is more information available on women from a wide variety of classes due to the development of printing. These women were not entirely confined to the home, and many had occupations such as midwives connected with women. Buddhist nuns taught girls and women in upper-class homes, widows ran inns, and serving girls ran away from abusive masters.

The improving economy in the Song dynasty led to higher dowries. Women began to have control over their dowries, and their legal claims to property improved, if only for a short time. Neo-Confucianist writers such as Zhu Xi emphasized the importance of female subordination and segregation and their duty to conform to rigid gender roles. They favored permanent divisions in the home between men’s and women’s quarters. Women were encouraged to be free from jealousy, even if their husband took concubines, and to be faithful to their husband’s family even after his death. Confucianism became an excuse to subjugate women. This helped to change the ideal of beauty away from more athletic women to the more delicate. Women again veiled their faces in public and rode in sedan chairs through the streets rather than ride on horseback as they had during the Tang. Foot binding, which began during the

Tang dynasty, became more widespread, limiting women’s mobility.

—Rebecca Wendelken

Bibliography

- Fairbank, John King. *China: A New History*. Cambridge, MA: Belnap Press of Harvard University Press, 1992.
- Holmgren, Jennifer. “Imperial Marriage in the Chinese and Non-Han State, Han to Ming.” In *Marriage and Inequality in Chinese Society*, edited by Rubie S. Watson and Patricia Buckley Ebrey. Berkeley: University of California Press, 1991.
- Wang, Robin R., ed. *Images of Women in Chinese Thought and Culture: Writings from the Pre-Qin Period through the Song Dynasty*. Indianapolis: Hackett, 2003.

Western Concepts of Masculinity

Europe in the early Middle Ages was a male-dominant culture in which masculine traits were universalized as ideal human traits. The same patriarchal system that repressed women, however, also forced men to conform to explicit



Saint Guthlac parts from his troops, from the Guthlac Roll, East Anglia, about 1210. Guthlac was the epitome of medieval Europe’s two ideals of masculinity: first, the warrior for Christ, and then, the ascetic holy man. (The British Library)

► THE CLASH OF MASCULINITIES— SECULAR AND SACRED

Early medieval Christian authors had ambivalent feelings about the warrior culture they depicted in their writings. Many had genuine admiration for men of courage and honor, but they rarely passed up an opportunity to moralize on warriors' worldly ways. For instance, in *Beowulf* (the poem dates from around the year 1000, but the extent to which it represents an earlier oral tradition is still fiercely debated), the old king Hrothgar tempers the celebration of Beowulf's victory by warning the hero not to succumb to pride, worst of the Seven Deadly Sins:

"Guard against evil, dear Beowulf, best of men, and choose the better, eternal gains. Do not be intent on pride, renowned warrior! The glory of your power is now, at one time; soon it will be that sickness or sword will deprive you of life, or fire's grasp or the sea's surging, or a sword's attack, or the spear's flight, or terrible old age, or the brightness of your eyes will fall and grow dim; it will be suddenly, warrior, that death will overpower you" (translation by author).

Although all the characters in this poem are pagans, here the poet speaks through Hrothgar to deliver this very Christian warning on the danger of pride and the transitory nature of the earthly glories sought by the warrior class.

—John William Sutton

Source

Beowulf and The Fight at Finnsburg, ed. Frederick (Friedrich) Klaeber, 3rd ed. (Lexington, MA: D. C. Heath and Company, 1950), lines 1758–1768.

cultural expectations. For ordinary men, being a man meant being a provider and head of the household, but for the aristocratic elite there were two additional models of manhood: the spiritual masculinity of the Catholic Church and the secular masculinity of the warrior class. A man who failed to perform his allotted cultural duties was deemed unmanly, a source of shame and sometimes a fate worse than death.

Attitudes toward masculinity (and femininity, since it is difficult to speak of one without the other) in the early Middle Ages were largely a product of classical views. Galen (130–200), the most celebrated physician of late antiquity, dominated the field of medicine for a millennium. Although he was a brilliant scholar (he proved, for instance, that arteries pump blood and not air), his understanding of human sexuality was deeply flawed. He maintained that there was a single sex for all human beings. This one-sex theory held that men were warmer than women, so their genitals could grow outside of the body, while women, naturally cooler, had those same sexual organs inside of the body. Women thus were inverted men. With the male body as the default human body, being a man or woman was not a distinction of biology but rather a distinction of social rank.

Early Christian theologians readily accepted the one-sex theory and augmented it with patriarchal values from classical philosophers (Aristotle) and Jewish thinkers (Philo of Alexandria). The church fathers of the fourth and fifth centuries, such as St. Ambrose (340?–397) and St. Jerome (347?–420?), taught that men were more rational and spiritual, while women were more lustful and beholden to materialism. They urged men to lead ascetic lives and to avoid women, whose licentious ways engendered sin. Even St. Augustine (354–430), who had more tolerance for sexuality (as long as it was confined to marriage), agreed with the other fathers that women were a dangerous temptation for men.

A holy man could escape the lure of female flesh by living as a solitary hermit or in a community of monks. Such spiritual masculinity involved resisting not only feminine wiles but also conventional markers of secular masculinity such as prowess and wealth. The Anglo-Saxon legends of Saint Guthlac (674?–714), for example, depict Guthlac as a renowned warrior and military leader who gives up his worldly life in order to live as a hermit in the wilderness. There, Guthlac battles temptation with the courage and heroic zeal that characterized his earlier martial persona. The saint's willingness to endure suffering highlights the key attribute of spiritual masculinity: the man's conscious emulation of Christ.

Expectations for secular men, meanwhile, involve three basic manhood scripts that can be found across time and throughout the world: impregnating women, providing for kin, and protecting dependants. As for the first, male sexual prowess was by no means in short supply; research indicates that male sexuality in this era could be characterized as aggressive and unrestrained. The role of provider can be seen in the prominence of generosity as a crucial manly virtue. While seeking riches was seen by the church as sinful greed, in secular society greed was found in hoarding, or keeping wealth out of circulation.

The third major male role is protection, a duty that fell chiefly to the warriors who made up the aristocracy. In most of Europe this class was descended from the Germanic tribes (Visigoths in Spain, Ostrogoths in Italy, Franks in Gaul, Angles and Saxons in Britain, etc.) that had been encroaching upon the borders of the Roman empire for hundreds of years and then filled the power vacuum left by the disintegration of the empire in the fifth century. At its most basic level, the ruling class of Germanic Europe was organized around male relationships. A lord would recruit other aristocratic men who provided him with loyalty and military service; in turn, he rewarded his men with treasure and status. This system, often referred to today as a *comitatus* (Latin for “fellowship”), a term used by the Roman historian Tacitus to describe such Germanic groups, was a precursor to the later feudal system, which added the exchange of land to these reciprocal responsibilities. The *comitatus* fostered male homosocial bonding (ties of platonic love) by means of rituals such as sharing the sacred mead-cup, giving and receiving treasure, and fighting side by side in battle. Men were expected to avenge the deaths of their beloved fellows, so feuding was widespread in the culture of warrior masculinity and was a source of great concern for church commentators.

—John William Sutton

Bibliography

Bullough, Vern L. “On Being a Male in the Middle Ages.” In *Medieval Masculinities: Regarding Men in the Middle Ages*, edited by Clare A. Lees. Minneapolis: University of Minnesota Press, 1994.

Gilmore, David D. *Manhood in the Making: Cultural Concepts of Masculinity*. New Haven, CT: Yale University Press, 1990.

Klaeber, Frederick, ed. *Beowulf and the Fight at Finnsburg*. 3rd ed. Lexington, MA: D. C. Heath, 1950.

Laqueur, Thomas. *Making Sex: Body and Gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press, 1990.

Murray, Jacqueline. “Hiding behind the Universal Man: Male Sexuality in the Middle Ages.” In *Handbook of Medieval Sexuality*, edited by Vern L. Bullough and James A. Brundage. 1996; reprint, New York: Garland, 2000.

Gender Distinction in Early Christian Centuries

During the first five centuries of Christianity, the leaders of what was to become the Roman Catholic Church developed a gender distinction based on the doctrine of original sin, which, according to Genesis, originated when Eve ate forbidden fruit from the Tree of Knowledge of Good and Evil in the Garden of Eden and in turn gave Adam the fruit to eat. This doctrine evolved as the Christian faith competed and interacted with the Jewish faith and pagan religions and as Christian leaders struggled against Roman imperial authorities. Ultimately, as Christianity evolved as an institution and became tied to the imperial government as the state religion, the doctrine of original sin established the notion of women as inherently morally flawed and served to marginalize women from political participation in the public sphere.

In the first century of the Christian era, the stories of what Jesus did and said were circulated among the populace in the Roman empire and interacted with diverse pagan religious traditions. Those traditions were, in general, socially and culturally patriarchal; they viewed women as a weaker gender than men, practiced taboos against women’s participation in official religious rituals during menstruation, and circumscribed women’s functions more or less to domestic spaces. These ideas and practices were based on the pagan understanding of women’s physiology and served various social purposes of agrarian societies. However suppressive the ideas and

➤ TERTULLIAN ON ORIGINAL SIN

Tertullian was a prolific Christian writer born in the late second century. As the first Christian author to write in Latin and the first to develop a number of theological concepts, his writings were highly influential on the development of Christian theology. The passage below illustrates Tertullian's interpretation of original sin, a view later affirmed by Saint Augustine, that served to limit the role of women in the Church:

"And do you not know that you are (each) an Eve? The sentence of God on this sex of yours lives in this age: the guilt must of necessity live too. *You* are the devil's gateway: *you* are the unsealer of that (forbidden) tree: *you* are the first deserter of the divine law: *you* are she who persuaded him whom the devil was not valiant enough to attack. *You* destroyed so easily God's image, man. On account of your desert — that is, death — even the Son of God had to die" (italics in original).

—Wenxi Liu

Source

Tertullian, "On the Apparel of Women," in *The Ante-Nicene Fathers*, Vol. 4, edited by Rev. Alexander Roberts, Sir James Donaldson, and Arthur Cleveland Coxe (Buffalo, NY: Christian Literature Publishing Company, 1885), 14.

In this context, the new Christian faith offered women a liberating inspiration because the recorded acts of Jesus did not discriminate against anyone on the basis of ethnicity, social status, or gender. The early Christian movement eventually attracted women converts and encouraged them to spread the faith to their children and husbands, as well as to other women. The early Gospels, including many that were not later accepted as part of the New Testament, bore witness to Mary (the mother of Jesus), Mary Magdalene, and a few other women as the most humble and faithful followers of Jesus and the most patient and effective prophets of his messages. In his *Letter to the Romans*, Paul mentioned about a dozen female converts and activists. Among them, he showed his intention to give a certain female deacon Phoebe a "welcome worthy of God's holy people" and thanked her for "the help of many people, including myself." Most recent historical researchers have acknowledged that quite a few female prophets, patrons, teachers, and missionaries are recorded in the New Testament and suggest that some of them were ordained to fulfill a variety of religious duties in the same manner as their male counterparts during the time period when church structure was not formally institutionalized.

In the second and third centuries, charismatic leaders, activists, and scholars of Christian movements were able to gradually organize themselves and reach consensus on the components of the New Testament. In denouncing the Roman earthly kingdom and popularizing a new universal covenant with God, Church leaders began to provide their faithful followers with coherent norms to be observed on a range of theological and moral issues against what they perceived to be the pollutions of external pagan teachings and philosophy. Meanwhile, they also fought internal dissenters, or heretics, in their attempt to establish a Christian orthodoxy. Moral purity and ethical disciplines were therefore pushed to the forefront of their agenda.

At the turn of the third century, Tertullian (ca. 155–222), a convert to Orthodox Christianity in northern Africa (before his own conversion to Montanism), publicized a series of treatises in his battle against heresies, including the movement

practices were, the militaristic Romans never stopped venerating the duties of the Vestal Virgins by tending either the flames of their households' hearths or of the hearth in the House of Vesta to ensure the prosperity of their families and the empire. Women all over the empire continued to demonstrate their devotion to female deities, such as Isis in Egypt and northern Africa, where unique religious rites and celebrations were closely linked to crucial life experiences, such as securing a happy marriage, fertility, safe childbirth, health of family members, and deaths. Although norms reflecting different religious ethics and social expectations were in place to marginalize women's roles in public spaces, their voices and participation in the public sphere were never completely suppressed.

of Montanist apocalypse led by two women, that provides us with some insights into the moral concerns of the Christian thinkers of the time. On the one hand, he relentlessly advocated monogamy and blamed both men and women for their promiscuous affairs out of wedlock. In this respect, the upcoming Christian canons of marriage between consenting couples would become very distinguishable from marriage codes of other religions. At the same time, while affirming the virtues of virginity, chastity, modesty, and other ascetic values of his faith, he aggressively accused each and every woman of being Eve and the devil's "gateway." His condemnation went so far as to argue that on account of women's desertion of divine law, they ought to be held responsible for the death of Jesus and the fall of men, who were created according to God's image. Tertullian's rhetoric echoed the Greek myth of Pandora, the first woman as the bringer of evil, and therefore planted the roots of the doctrine of original sin. However, his derogatory remarks were made in the context of his concern about Christian women being persecuted for their appearances, since the people around him often mistook the public exposure of a woman for promiscuity. In general, Tertullian demonstrated in his various writings an absurd and ironic attitude toward women. Nevertheless, the discursive absurdity did indicate that the liberating spirit of the early Christian movement began to suffer from the arbitrary and abusive language of an ever more organized church.

Emperor Constantine changed the destiny of Christianity through his personal conversion in the early fourth century, which was followed by the establishment of Christianity as the imperial religion at the end of the century. The Christian leaders and thinkers were therefore no longer passive defenders of their faith for its survival but instead became determined and enthusiastic engineers for reconstructing the social and moral orders of the Roman empire, which they thought was suffering from internal decay. Throughout the empire, women were barred from priestly activities in the fourth century. In the western part of the empire, the ideas of integrity and universality motivated bishops in Rome to take more assertive actions to change

the religious attitudes and ethic norms of the people. St. Ambrose (ca. 338–397) labored to defeat heresy and to preserve the Church's doctrines. He promoted the belief in the virginity and purity of Mary as the mother of Jesus. Ambrose's goal was to protect the integrity of the Church, since the worship of mother goddesses and female prophets continued to be popular. St. Augustine (354–430) traced the fallibility of all humans to the original cause of Eve's seductive persuasion of Adam to eat the forbidden fruit. Eve poisoned Adam, and Adam passed in turn the inherited guilt to all of his descendants through sexual acts. Therefore, marital sexual acts with the purpose of reproducing children were necessary, but he condemned "irrational" desires for sexual pleasure, which he termed "concupiscence," because they prevented humans from loving God and holding, contemplating, and enjoying happiness in God. Although the reasoning apparently reiterated Tertullian's rhetoric, Augustine aimed less to repudiate any specific heresies of his time than to invent and elaborate a general and intrinsic moral flaw of the female gender and therefore founded the "universal" doctrine of original sin.

In the next two centuries, the Catholic Church and the Christian Fathers made a diligent effort to build a patriarchal government according to the Roman imperial model. On the one hand, they recorded with admiration a series of conversion stories in which both the Roman and the "barbarian" queens inspired their husbands to convert themselves and their peoples. They also applauded women who chose to live in the desert or in monastic celibacy and to devote their energy, wealth, and even lives to the mission of Jesus. On the other hand, they promoted the Augustinian doctrine of original sin. Successive campaigns to denigrate sexuality in general and exaggerate women's moral defects culminated in prohibiting women from holding any ordained mission in the Church. Women's role in the public sphere was diminished, and their rights to property and other benefits were reduced.

By the end of the fourth century, the slight gender liberation impulse of Christianity in the first two centuries was a thing of the past. From

the fourth century almost to modern times, Christianity taught that women were the source of original sin. Thus, the role of women in the Church as well as in European culture became more narrow and rigidly defined.

—Wenxi Liu

Bibliography

- Fiorenza, Elisabeth Schussler. *In Her Memory: The Feminist Theological Reconstruction of Christian Origins*. New York: Crossroad, 1983.
- Kraemer, Ross S., ed. *Her Share of the Blessings: Women's Religions among Pagans, Jews, and the Christians in the Greco-Roman World*. New York: Oxford University Press, 1992.
- Liebeschuetz, J. H. W. G. *Continuity and Change in Roman Religion*. Oxford, UK: Oxford University Press, 1979.
- MacDonald, Margaret Y. *Early Christian Women and the Pagan Opinion: The Power of Hysterical Women*. Cambridge: Cambridge University Press, 1996.
- Pelikan, Peroslav. *Mary through the Centuries: Her Place in the History of Culture*. New Haven, CT: Yale University Press, 1996.

Gender and Politics in Byzantium

The modern understanding of gender and women in Byzantium, like many cultures from various eras, is fundamentally affected by the politics at that time. The political writings and elite primary sources shaped the notions of female power, imperial ideology, and gendered expectations of women, men, and eunuchs. The first and most revered imperial Christian woman of Byzantium was Helena (b. 248 or 250, d. 330 or 336), the mother of Constantine the Great. Helena was renowned for her piety, patronage, and visits to the Holy Land, and as Byzantium became Christianized, the fame and scope of Helena's building programs in Jerusalem also became exaggerated. For example, the late-fourth-century Church historian Eusebius boasts that Helena may have built over 30 churches in the city of Jerusalem itself, even though many of the churches and monuments attributed to her have been proven spurious. Moreover, Helena became the center of the creation of the imperial cult and was regarded as the ideal Byzantine Christian matriarch. She came to idealize the proper

and good empress, and sources for centuries afterward referred to many empresses as the "New Helena." Helena was depicted with her son and daughter-in-law, Fausta, on coins and in imperial art, but political intrigue caused the murder and damnation of Fausta (of which Helena was possibly implicated) and left Helena to reign gloriously as the dowager empress.

While Helena was glorified in Byzantium as the ideal empress, politics also shaped the understanding of a bad empress. Prokopios of Caesarea, the official historian to the emperor Justinian (r. 527–565), wrote an unofficial secret history of Justinian and his wife Theodora. The secret history of Prokopios, or the *Anekdota*, is especially critical and explicit about Theodora's vices, perversions, sexual proclivities, and general malfeasance. In spite of Prokopios's opinion, Justinian was deeply in love with Theodora and sought her counsel on important matters of state, law, and religion. As empress, Theodora was very involved in religious and charitable works and had many buildings and monuments commissioned throughout the empire. Yet Theodora's image is severely impacted by Prokopios's portrait of her in the *Anekdota*, a portrait that is in actuality an example of a stock literary form in the classical genre of invective.

In the eighth century, the empress Irene (r. 797–802) took politics into her own hands. Irene was married to the emperor Leo IV during the period of Byzantine iconoclasm (that is, two periods of Byzantine ecclesiastical and political history from 726–787 and 815–843 in which the use of icons depicting holy figures and the veneration of such icons were forbidden). At the death of her husband in 780, Irene ruled as regent for her ten-year-old son Constantine VI. During her regency, Irene swiftly promoted members of her family and powerful eunuchs to positions of political and military importance. Unlike the members of her husband's family, Irene believed in the use and veneration of icons, and she called the Seventh Ecumenical Council of 787, which was attended by 365 bishops from all over the empire, to reject the doctrine of iconoclasm. Although Irene is canonized in the Orthodox Church for returning orthodoxy and icon veneration, later iconoclastic sources of the ninth

THE THIRD GENDER—EUNUCHS IN BYZANTIUM

Eunuchs were an integral part of late Roman and Byzantine as well as Chinese, Muslim, and other medieval societies. In Byzantium, as in the Tang dynasty and the Muslim caliphates, eunuchs were sometimes employed in the highest level of imperial service. Although they themselves could never assume imperial title because of their corporeal incompleteness or bodily mutilation, they were often instrumental in promoting members of their families to the throne, the most notable being John the Orphanotrophos, who engineered the ascension of both his brother Michael IV (r. 1034–1041) and nephew Michael V (r. 1041–1042) as Byzantine emperors.

There is much interest in modern scholarship on the medical creation of eunuchs. The seventh-century physician Paul of Aegina stated that eunuchs were created either through crushing of a young boy's testicles or through removal of the testicles through incision. Prepubescent boys who were castrated exhibited all of the traditional traits associated with sexlessness, including high-pitched voices and smooth skin. Although castration could also occur after puberty, this case was much rarer than prepubescent castration. There is also interest in the debate on the origins of eu-

nuchs. There is much evidence that eunuchs were bought and sold in Byzantium in a servile state and were given as gifts from foreign courts to the Byzantine emperors. Yet there are also instances in which provincial Byzantine families castrated their young sons and then sent them to Constantinople, where they would attain the highest level of education and embark on lucrative careers. Symeon the New Theologian (949–1022), for example, rose to high imperial rank and was initiated into the court by his uncle, himself a eunuch and an imperial chamberlain. Nonetheless, Byzantine authors were revolted by and disparaging to eunuchs. The fourth-century historian Ammianus Marcellinus believed that they were “pale and unsightly because of their deformity,” and in the twelfth century Theophylact of Ochrid, as a favor to his brother, wrote a defense of eunuchs against charges that they were monsters and were known for their homosexuality and vice. Yet the significance and importance of this so-called third gender to Byzantium cannot be understated, especially during the reigns of Constantine the Great (r. 324–337) and Irene (r. 797–802), when eunuchs played crucial roles in imperial politics.

—Ruma Niyogi-Salhi

century malign her intentions as being purely political. Once her son came of age and reached majority, Irene, with strong support from powerful eunuchs and generals, still continued to direct the affairs of the empire, often at cross-purposes with her son. In 797 upon her orders, Constantine VI was seized, brought back to the imperial palace in Constantinople, and blinded, leaving Irene as the sole ruler of Byzantium. Irene chose not to remarry and instead ruled as *basileus*, or emperor, in her own name. She immediately struck gold coins depicting herself on both sides to emphasize this fact. In 801 or 802 an embassy was sent to Constantinople to contract the marriage of Irene with Charlemagne, who had just been crowned emperor in the West. These nego-

tiations, however, crumbled because of intrigue and political tensions among Irene's courtiers. Her reign ended in 802 because of a military revolt in Anatolia that eventually swept into the capital. Although Irene was noted for her peaceful restoration of icons, Byzantine chroniclers decried her cruelty and political manipulation of Byzantine politics.

—Ruma Niyogi-Salhi

Bibliography

- Herrin, Judith. *Women in Purple: Rulers of Medieval Byzantium*. Princeton, NJ: Princeton University Press, 2001.
- McClannan, Anne. *Representations of Early Byzantine Empresses*. New York: Palgrave Macmillan, 2002.

■ Introduction: Social Order of the Early Medieval World: Class, Caste, Slavery

Inequality was a characteristic of nearly all societies in the early medieval age, 300 to 1000 CE. Elites and aristocrats dominated all agricultural and urban societies. The surplus produce of the peasants supported early medieval elites and aristocrats, while the peasants were the mudsills of society and performed most of the productive labor. Almost universally in agricultural societies (and most early medieval societies were basically agricultural), the dichotomy between the peasant wealth producers and aristocratic tribute takers prevailed. This was the case in the Andean civilization, in Mesoamerica, and among the North American Mound Builders; the Polynesians; many of the Africans south of the Sahara; and all of the high civilizations of East Asia, India, the Islamic world, and Christian Europe. Aristocrats and other elites were always a small minority, numbering in most societies less than 10 percent of the population. It probably required the surplus produced by 10 peasant families to provide even meager support for 1 aristocratic family. Luxurious support would require the surplus produced by 50 or even 100 or more peasant families.

Scholars in many early medieval societies (Christian Europe, Islamic lands, India, China, and others) likened a well-functioning society to a human organism, with the elite acting as the head, or thinking part, and the peasantry as the feet. It is significant that many early medieval people were commonly barefoot, and feet were often covered with mud, dust, and grime, while the head was elevated above the filth. The point of this was to emphasize the normally unbridgeable social gulf between the two classes.

While peasants, either enslaved or in a less extreme form of dependency, did most of the physical work, produced most of the wealth, and occupied the bottom rungs in early medieval society, the rulers, whether kings or emperors or called by some other title, were at the top. The social wisdom of the age treated them as a different and superior type of human, somewhere between heaven and earth. People sought the touch of a king as a cure for leprosy and

other normally incurable diseases. All of the major religions taught that rulers were appointed by God and had divine favor. Indeed, one of the earliest actions taken by a military man after a successful seizure of power was to seek divine approbation. Rulers endowed monasteries and other religious institutions and agreed to share the spoils of their dominance with the religious elite. Sometimes, rulers ordered their subjects to convert to a new religion. Examples are the conversion of the Rus to Christianity under Vladimir, the conversion of the Japanese to Buddhism under the Soga, and the conversion of the Uighurs to Manichaeism by I-ti-chien.

In many societies the aristocrats were largely a military caste, although in India, the land of formal castes, the highest caste was theoretically not the Kshatriyas (the warriors) but rather the Brahmins (the priests). But most of the Indian monarchs were warriors, with the Brahmins as their justifiers who sometimes manned the Indian bureaucracies. In China, the scholar bureaucrats were theoretically the elite class, but in times of troubles, such as the period of division between the fall of the Han and the rise of the Sui dynasties (220–589 CE), military men, often of “barbarian” origin and the Tang dynasty after An Lushan’s Rebellion (756), became the leading elite group. In western Europe (where the concept of aristocracy was defined) aristocrats were commonly horse-riding warriors, or knights.

In early medieval societies, the military and other secular aristocracies usually shared social prestige and wealth with a religious aristocracy. In India and Sri Lanka, the religious elite included members of the Brahmin caste but also high-ranking Buddhist and Jain abbots and other monks. In Southeast Asia, although there were a few Brahmins at the royal courts, most of the religious elite were Buddhist monks.

In China, from about 400 to 840 CE, Buddhist and sometimes Daoist monks were at the apex of the religious aristocracy, but after the great persecutions of the 840s, Confucian scholars began to acquire renewed prestige.

In Christian Europe, the Christian clergy not only monopolized positions of religious prestige but also composed almost the entire intellectual class as well as manning much of the bureaucracy of European states.

For Muslim lands, it was less easy to identify a religious aristocracy, since in orthodox Islam there was no consecrated clergy. Nevertheless, by the eighth century a class of religious scholars, collectively known as the *ulema*, filled the role of religious aristocrats.

Some scholars think that the scribes who carved or at least composed the glyphs on the Mayan monumental architecture were religious aristocrats. These scribes, in this view, were responsible for the Mayan Long Count calendar devised Mayan mathematics as well as for astronomy.

In some early medieval societies, social mobility from a lower class to a higher class was sometimes possible, but it was seldom easy. Most societies imposed hurdles to minimize social mobility. By the end of the early medieval period, class differences were becoming impossibly great in many areas of Europe as the feudal system was being elaborated. In China, the increasing insistence on scholarship had the effect of shutting out the lower classes, since they had neither the wealth nor the time required for the long years of study. In many cases, not even the acquisition of wealth was sufficient to open the doors to social mobility, but over generations wealth was often effective in minimizing social differences.

Almost all of our information about the social structures of nonliterate non-Eurasian societies is based on archaeological inference and, to a lesser extent, on oral history and mythology. Information from both of these sources gives little reason to think that social equality was widely practiced in any complex agricultural society. In Mesoamerica, monumental architecture and burial practices point to deep social chasms. Among the agricultural chiefdoms of North and South America, the evidence indicates societies dominated by "Big Men," served by commoners. And in Polynesia the chiefs lived like gods, and the mass of people lived much more meagerly.

—Wilfred J. Bisson

Peasants in Sui and Tang China

Nothing was simple about the lives of Chinese farmers during the Sui and Tang dynasties. Due to a scarcity of rain, especially in the north, farming itself was exceedingly difficult. What is more, farmers obtained land through a complex system that was dependent upon scrupulously kept household registers. To make ends meet, they had to market their produce, borrow money, rent land, and sometimes even flee.

Sui and Tang peasants were sophisticated farmers. Even though northern China is often subject to drought (with an averages of only 20–25 inches of rain per year), medieval peasants were adept at obtaining the land's highest possible yield. China's oldest complete agricultural manual, Jia Sixie's *Essential Techniques for Commoners* (*Qimin yaoshu*), which was written around 534–544 CE, furnishes an in-depth look at the variety of techniques and wealth of experience on which medieval farmers could draw. For example, whenever it snowed, farmers placed objects on top of the fields so that the snow with its moisture would not blow away. Jia also recommended that farmers plant a variety of crops so that no matter what the weather, some would survive. Medieval farmers also had access to a dizzying variety of grains and vegetables: Jia lists 86 different varieties of spiked millet and 45 types of jujubes. These knowledgeable farmers derived as much profit from the land as their technology would allow; in fact, northern Europe did not reach medieval China's level of agricultural productivity until the seventeenth century.

These efficient farmers were subject to a complex program of land allocation called the Equalization of Fields (*juntian*). In this system, which was in effect from 486 CE until the An Lushan Rebellion (755–763), all land belonged to the emperor, which his government lent in equal amounts to the people. Men between the ages of 15 and 60 received 80 *mu* (one *mu* equals 1/6 of an acre) of personal-share land (*koufen tian*) and 20 *mu* of inheritable land (*shiyetian*). Upon their retirement, the personal-share land was to be returned to the government for redistribution. The inheritable land, which

was to be used for planting mulberry trees, forever remained with the family. Based on the receipt of this land, farmers had to furnish a land tax (*zu*) payable in kind, a cloth tax (*diao*) payable in either silk or hemp, and a corvée labor tax (*yong*), which could be paid either in 20 days of unpaid labor service or in cash for securing a substitute. This system attempted to both encourage the cultivation of land and prevent its concentration in the hands of the few. Land could neither be bought nor sold. This system required close government supervision. Every year, the village headman was supposed to check each family's household register for accuracy; every three years, the census bureau was required to do the same.

This system was so complex that many scholars doubted that it was ever implemented. However, documents recovered in northwestern China indicate that it was, even in the empire's remotest parts. Nevertheless, the system did not entirely function as planned: the government usually gave far less land than prescribed, allotments were scattered, cultivators often rented out faraway parcels and tenant-farmed nearby ones, and household registers were falsified. The system collapsed because the government had progressively less land to redistribute, powerful families and monasteries concentrated land in the form of manors, and the An Lushan Rebellion made it impossible to maintain household registers. By 780 the Two-Tax system (*Liangshuifa*) replaced the Equalization of Fields. Under this new policy, peasants only paid taxes twice a year: in the summer they handed over a levy based on household wealth, and in the fall they paid a levy based on the family's landholdings. The central government no longer tried to keep track of household members; instead, each local government was given a quota based on the area's past productivity. Simultaneously, the government tacitly recognized the farmer's right to buy and sell land.

Although in theory taxes under the Equalization of Fields systems were relatively light, there were a number of other levies, such as miscellaneous local labor services. Under the Two-Tax system, the farmer's burden became even more onerous. Farmers tried to cope with the tax burden in a number of ways. One common solution

was to abscond. A squatting household (*kebu*) was not subject to the Equalization of Fields taxes. Under the Two-Tax system, even though a squatting household had to pay a household levy, it was free from corvée duties. Southern China was a particularly attractive destination because it was peaceful, land was plentiful, and the Equalization of Fields system was never implemented there. Another expedient was to become tenant farmers. By farming someone else's land, a family could avoid paying taxes, which the landlord would shoulder. In exchange, the tenant farmer would give his landlord 50 percent of his crop, certain commodities, and his or her labor services. The landlord would also provide him or her with seeds, farming tools, and draft animals, all at steep interest.

Farmers had many other strategies for coping, but these methods underscore how tenuous their existences were. To buy seeds or pay taxes, medieval peasants often borrowed money or grain from moneylenders. Lent money had to be paid back with 15 percent interest; one's possessions and land were collateral. Farmers who borrowed grain from monasteries were expected to pay 50 percent in interest. In other cases, borrowers would rent their land to their creditors; if the former defaulted, then the latter would take over ownership of the land. Although the law expressly forbade it, one might sell his or her children to a creditor.

Medieval peasants were knowledgeable about markets. Since some tax obligations had to be paid with cash, all farmers had to engage in market activities. As a result, many farmers raised cash crops that they would sell at local markets. The *Essential Techniques for Commoners* devotes an entire chapter to advice about commerce. Since farmers sometimes worked as wage laborers, they were also well aware of their labor's monetary worth. Even though most farmers were illiterate, they were all familiar with written documents. Contracts had to be drawn for almost any financial transaction no matter whether a person was purchasing a slave, hiring a laborer, borrowing grain, or even buying a shirt. After the contract had been read aloud, the participants would indicate their acceptance by signing their name or, if they were illiterate, making an outline of their finger joints.

In short, Sui and Tang peasants were sophisticated and market-savvy farmers. Despite their ingenuity, the crushing weight of their tax burden often led them to seek refuge by either fleeing or becoming tenant farmers.

—Keith N. Knapp

Bibliography

- Hansen, Valerie. *Neogotiating Daily Life in Traditional China: How Ordinary People Used Contracts, 600–1400*. New Haven, CT: Yale University Press, 1995.
- Shih Sheng-han. *A Preliminary Survey of the Book Ch'i Min Yao Shu: An Agricultural Encyclopaedia of the 6th Century*. Beijing: Science Press, 1974.
- Twitchett, D. C. *Financial Administration under the Tang Dynasty*. Cambridge: Cambridge University Press, 1963.
- Xiong, Victor Cunrui. "The Land-tenure System of Tang China: A Study of the Equal-field System and the Turfan Documents." *T'oung Pao* 85 (1999): 328–390.

Peasants in Early Medieval Islamic Lands

What must be noted about peasants in early medieval Islamic territories is that their situation was not significantly different from late antiquity when those territories were ruled by the Byzantine and Sassanian empires. The peasants, most of whom kept their own religion after the Islamic conquests, continued to pay taxes as they had before. The caliph Umar (r. 634–644) had forbade agricultural activity by his warriors, so the local peasants continued to cultivate the same land they had before. The fiscal administration of the Umayyad caliphate levied a head tax on non-Muslims (*jizya*). Muslim landholders were required to pay the land tax (*ushr*), so conversion to Islam did not guarantee one an exemption from tax. The peasants tended to be more conservative and less likely to convert than their urban counterparts.

The condition of the peasantry in early medieval Islamic lands depended on their location. In general, there is a dearth of information on the peasantry. Much of the peasantry of Syria and Egypt were non-Chalcedonian Christians; they had become alienated from the government of

➤ PEASANTS AND URBAN CENTERS

Peasants in the early Islamic period were connected to the major urban centers where they sold much of their agricultural surplus. They remained connected to these urban centers by the traditional water routes of the Euphrates, Orontes, and Nile and by the road network inherited from the Romans and maintained and expanded by the Umayyads. Thus, the distinction between rural peasantry and urban dwellers was not as extreme as it may have been in a much less densely populated area. However, in the later Umayyad period (684–750) the peasantry was transformed, as many of the peasants moved into the cities and converted to Islam and the lands were taken over by urban landlords.

—Benjamin de Lee

Constantinople and seemed to be more accepting of Islamic rule than their Orthodox counterparts in Palestine and North Africa. The Coptic peasants of Egypt were relatively prosperous, as they continued to cultivate the fertile banks of the Nile as they had for millennia before the Muslim conquests. They were largely Coptic-speaking people and were alienated from the Greek-speaking urban elites of Alexandria. They looked to the Coptic monks of the desert for spiritual leadership. Less is known about the peasants of the former Sassanian empire, but they also continued to cultivate the fertile areas of Mesopotamia as before.

In late antiquity, Syrian peasants had been relatively prosperous, and they used seasonal agricultural methods to maximize their yields from the land. However, this system began to collapse as landholders began to consolidate holdings. For whatever reason, the agricultural areas of Syria were not cultivated as much as they had been. The Persian invasions of the early seventh century further weakened the peasantry. Thus, for the Syrian peasants, Muslim rule in the early period meant an end to warfare, religious persecution, and rapacious landlords. The Syrian peasantry was able to recover somewhat, and lands that had been left fallow for some time were cultivated once again.

The Egyptian peasants also found a respite from warfare and a rapacious and sometimes

oppressive Byzantine religious and tax policy. As mentioned above, however, there was more continuity for the Egyptian peasantry. Developments, however, did occur in Egypt and elsewhere.

Irrigation systems were improved, and by the ninth century the water mill and the windmill were becoming more common throughout the Islamic world. By the eleventh century an Islamic agricultural revolution had taken place. New technologies had become widespread. New crops such as rice, sorghum, hard wheat, sugarcane, cotton, watermelon, eggplant, spinach, and many others ensured that the average peasant in the Islamic world had a much healthier diet than in most places. More land came under cultivation, and the growing season was extended. These developments lead to an overall improvement in the quality of life for the peasant in Islamic lands in the early medieval period.

—Benjamin de Lee

Bibliography

- Al-Hassan, Ahmed Y., and Donald R. Hill. *Islamic Technology: An Illustrated History*. Cambridge: Cambridge University Press, 1986.
- Ashtor, E. *Social and Economic History of the Near East*. London: Collins, 1976.
- Bullier, R. *The Camel and the Wheel*. New York: Columbia University Press, 1990.
- Gil, M. *A History of Palestine*. Translated by E. Broido. Cambridge: Cambridge University Press, 1992.
- Lambton, A. K. S. *Landlord and Peasant in Persia*. Oxford, UK: Oxford University Press, 1953.

European Peasant Society

Throughout the Middle Ages, the vast majority of the population lived in the countryside and worked in agricultural pursuits. In the early Middle Ages, approximately 90 percent of the population lived in the country, and even the largest cities were essentially farming communities. Normal life was rural life, and agrarian thought patterns dominated the culture.

Bondage to the manor defined a peasant's life. To understand medieval peasant society, one must first understand the manorial system, the economic and social milieu in which peasants lived and worked. Although free peasants resided in some areas, the structures and rela-

tionships of the manorial system offer a typical view of the lives of medieval peasants. In addition, manorial lords generally kept better records and left more evidence of their activities for historians to study than did proprietors who held land in other systems.

Manorialism originated in the agrarian conditions of the late Roman empire. During this period, elements of the Roman colonate system melded with Germanic ideas about lordship to form a unique political and economic structure. In early medieval, or classical, manorialism, the landholder's portion of the manor, the *demesne*, formed the center of the manor. The lord held and managed the manor and was assisted by slaves and tenants of dependent lands. Peasants held the dependent holdings, called *manes*, and performed services or paid dues as a form of rent. The peasants and domestic slaves of the manor formed the lord's *familia*. The proportion of *demesne* land on each manor varied from one estate to the next, as did the obligations and standing of the peasants. As a result, the manorial system became the basis of life for most medieval peasants and the economic foundation for the landholding elite.

Despite comprising the majority of the population, very few records concerning peasants survive. By the eleventh or twelfth century the concept of the feudal order had emerged that recognized contemporary society as one divided into "those who fight, those who pray, and those who work." This does not mark the birth of a peasant class, but before this our understanding of the peasant class is nebulous in part because records from the early Middle Ages identify people by their legal status rather than by occupation. They use terms that translate into English as "free," "half-free," and "servile" rather than "farmer" or "laborer." In the early Middle Ages no word existed in either Latin or German that translates as "peasant." "Peasants" appear in the records after the tenth century, when people engaged in agriculture became legally distinguishable from those whose primary occupation was "warrior."

In economic terms, peasants existed as farmers and herders much earlier than they existed as a legal class. Many free peasants populated Europe in the days after the decline of Rome. They inhabited single farms, groups of farms,

and hamlets, but war and natural disaster forced them to move periodically. Moves were not difficult, since they built their dwellings and other buildings from wood, straw, and clay. As agricultural methods intensified and more permanent building materials came into use, the peasants became a settled class. In these uncertain political and economic times, peasants often surrendered their holdings to a local strongman in exchange for protection. The strongman became the manorial lord, and the peasant became part of his *familia*. The lord then granted the land he had acquired back to the peasants. This became the peasant's manse.

Historians believe that originally most peasants were free and that in early Frankish times they served in the king's army in Germanic tradition. As the manorial system spread, powerful landholders emerged, and a military system based on mounted warriors who held fiefs developed. This made military service too far-ranging and too expensive for free peasants to take part. They did not have the wealth to maintain a horse and arms, and they could not be away from their farms on the extended campaigns of the late eighth-century Carolingian kings.

These military developments drove more peasants into manorial servitude. Eventually, two broad groups emerged. The first was manse peasants, who held a house and a piece of land that they worked independently and who owed rents or services to their manorial lord. These peasants most likely descended from freemen. The second group was serfs, who resided on the manor and rendered immeasurable services on demand and for whom the lord was personally responsible. Some historians argue that serfs were not really peasants in the true sense because they were considered chattel, property of the manor to be used as required, be it in the fields, in the workshops, or doing domestic duties. However, from an economic standpoint little differentiates the two groups.

From the outside this system appears homogeneous. From within, however, the system was extremely complex. A peasant's economic and social standing depended on the deal he made with the manorial lord when he submitted. Some peasants submitted only their land and remained free subjects of the king or count, while others



A peasant's work is never done. This illustration from *De Universo* by Rabanus Maurus (1028), shows the back-breaking toil which pervaded the lives of early medieval peasants. Note the figure on the right, bent over an enormous iron hoe. (Bildarchiv Preussischer Kulturbesitz/ Art Resource, NY)

submitted their persons as well as their land and became servile peasants, subjects of the lord. Some agreed to perform services in addition to working on the demesne, some agreed to pay dues in money or in kind, and some agreed to extra labor at certain times of the year. These varying arrangements determined the customs that ruled the relationship between each peasant and his lord, which would also govern the relationship between their descendants. The term "serf" has been used by some historians to distinguish between free and servile peasants and by others to describe all the dependants living on a manor. In reality, peasants classified as serfs had economic arrangements that were as varied and complex as those of free peasants. Peasants of varying social standing with a range of economic agreements often lived side by side with one another on the same manor.

Arrangements that determined social standing of peasants within a village were equally complex. Class identity within lower levels of society appears to have been of little importance. Free peasants were free before the law and could appeal to the king or a nobleman for justice, but economically they depended on their manorial lord, so distinctions between free peasants and serfs quickly became irrelevant. Despite legislation prohibiting marriage between free and

THE PEASANTS' DAY

Ceaseless labor in the home and field marked the daily life of the medieval peasant. Early medieval peasants used primitive wooden implements and tools to till and plant their fields. The peasants' goal was to produce food for subsistence, and agricultural jobs dominated their workload. They were not specialists and performed any job that needed doing. Women also did daily chores around the house and farmyard, made cloth from flax and wool, and assisted in the fields during the planting and harvesting seasons.

In addition to working his own holding, the peasant's duties might include performing services on manorial demesne, performing nonscheduled duties such as mending fences whenever his lord demanded, and performing seasonal duties that might take him away from home for several days as part of a work crew. The duties to the manor took priority over work that the peasant needed to perform on his own holding. If the peasant's wife needed to make flour or bake bread, the lord often required that she use the manor's mill or bakery and pay a usage fee.

There were nevertheless bright spots in the peasant's life. The natural gathering area for peasants was the village church. Often the local market set up in front of the church, and festivals and village celebrations took place there. Medieval peasants celebrated weddings, baptisms, saints' days, and the local church's anniversary. People sang, danced, and drank and held celebrations such as harvest festivals and solstice bonfires that had roots in pagan custom but continued throughout the Middle Ages. On all these occasions, feasts made up for the normally monotonous and frugal meals that peasants ate the rest of the year.

—Kevin Hill

servile people, there appears to have been no hesitation to intermarry. Finally, between the free and nonfree existed a vast number of semi-free people whose situations bore elements of both the freeman and serf.

—Kevin Hill

Bibliography

Duby, Georges. *Rural Economy and Country Life in the Medieval West*. Translated by Cynthia Postan. London: Arnold, 1968.

Goetz, Hans-Werner. *Life in the Middle Ages from the Seventh to the Thirteenth Centuries*. Translated by Albert Wimmer and edited by Steven Rowan. Notre Dame, IN: University of Notre Dame Press, 1993.

Riché, Pierre. *Daily Life in the World of Charlemagne*. Translated by Jo Anne McNamara. Philadelphia: University of Pennsylvania Press, 1978.

Rösener, Werner. *Peasants in the Middle Ages*. Translated by Alexander Stützer. Cambridge, UK: Polity, 1992.

Aristocrats and Elites in Early Medieval Europe

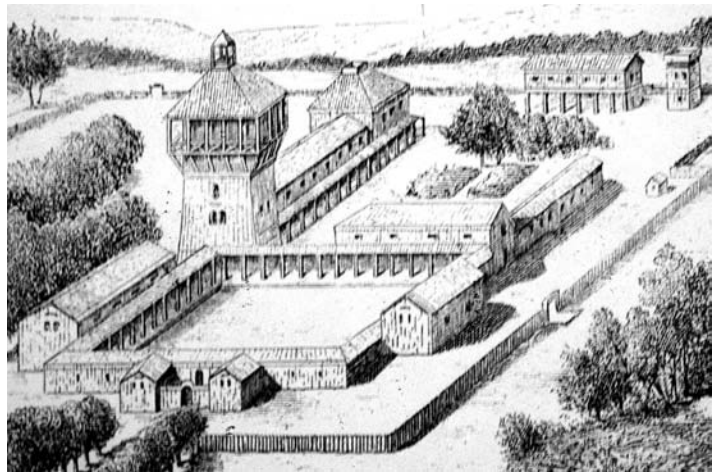
Aristocratic elites were able to maintain their political and economic authority over much of early medieval European society (300–1000) through their control of landed wealth; however, their position was confronted by the growing importance of towns. Following the decline of the western Roman empire, the Germanic successor kingdoms were unable to create centralized authority due to political and social instability. This situation allowed Germanic warriors to derive certain political and economic rights in exchange for military service. Gallo-Roman patricians were also able to preserve many of the privileges they had enjoyed under the late Roman empire by adapting and marrying into the social structure of their new Germanic overlords. Through their positions as the warrior caste of Europe (“those who fight”) and feudal landowners, medieval elites achieved their level of power by manipulating these positions and playing the Church off against the interests of centralizing European monarchs. From late antiquity to the High Middle Ages, elites consolidated their power through their control of the institutions of the Church, the military, and the emergence of feudalism, thereby ensuring their political, social, and economic domination of Europe.

After the barbarian migrations of the fourth and fifth centuries, Germanic chieftains established political entities reliant on the loyalty of their armed forces on the territories of the western Roman empire. Through the distribution of conquered lands, they secured the loyalty of their subordinates. However, this relationship was reciprocal in that such loyalty was in exchange for these landholdings, allowing the landholder a

level of autonomy within his domains. The Gallo-Roman patricians were able to hold onto their landholdings by utilizing Roman law, which many of the German chieftains abided by to a certain extent, and also by gradually assimilating and intermarrying into the cultural norms of their Germanic overlords. Centuries of cultural contact between Germans and Gallo-Romans, particularly in Italy and Gaul (France), ensured that this was a long evolving process. Intermarriage and common cultural attributes, such as Christianity, created a cohesive social network of both elite Germans and Gallo-Romans in western and southern Europe.

The emergence of feudalism in different parts of Europe took on different characteristics and had differing results for the autonomy of the aristocracy. The social hierarchy of early medieval Europe evolved from that of Germanic warriors given land for loyalty into a form of political autonomy based on service or fealty to the king. The social division of “those who fight, those who pray, and those who work” relegated the elites to positions of the first two but also ensured the subordinate status of the peasants, laborers, and peasants in the latter. Elites inherited their landed wealth and thereby also their responsibility to the king. Aristocratic elites served in military capacities or in high positions in the Church, in essence attaining more land as clerics. From a very young age boys were typically trained to be warriors and were thus imbued with martial values. Elite women were confined to the household, married off to create ties to other noble families, or were sent to serve the Church as nuns at convents, maintaining varying levels of personal agency within such roles. Wealth from their landed possessions allowed them to amass fortunes to spend on castles and luxury goods from the Near East.

The social, political, and economic functions of the elites maintained their importance throughout medieval society. As the warrior caste of Europe, aristocrats fought for the protection of their property and theoretically served their overlord. The fratricidal in-fighting of the early Middle Ages ravaged on in the Frankish and German holdings as those monarchs fought to hold on to their power but also to engage outside incursions by Vikings, Magyars, and Arabs. Throughout this en-



A Merovingian manor house. Built during the Merovingian dynasty (457–751) in Gaul (modern France), the house includes a great court at lower center, surrounded by dwelling rooms and a portico. A palisade encloses the whole, a wooden tower for defense stands in the center, and farm buildings are in the background at right. (Instructional Resources Corporation)

tire period, the aristocracy also found a place in the institutions of the Church to project their influence and power. As archbishops, bishops, abbots, and other higher clergy, elites were able to control massive expanses of Church lands and political control over the daily lives of the serfs on those lands. As clerics, they skirmished with monarchs and other nobility for political influence. The aristocracy also proved quite influential in the affairs of the Roman Catholic Church, serving as high clergy (bishops, archbishops, abbots). This served to supplement their income as landholders beholden to the Church when they already held lands as fiefs from their secular lord. Noble women were also able to serve in the ranks of the Church as nuns and with rare exception as abbesses. The political fragmentation of Europe into multiple principalities, kingdoms, duchies, etc., increased with the growing power of the aristocracy and its discontent with the English, French, and German kings. Having become major landowners, nobles were exceptionally important to the economy of Europe given that agriculture constituted a significant percentage of the medieval commerce. As the main purchasers of finished goods and metalwork (particularly armor), the nobility ensured the livelihood of townsfolk and city dwellers responsible for manufacturing.

Social relationships between the aristocracy and the bulk of society (“those who work”) were shaped by the reciprocal relationship that existed between them within the structure of feudal society. The economic system of manorialism characterized a local jurisdiction or geographical area owned by a noble. The manor was located near a town or village inhabited by peasants. The lord of the manor was the local ruler of all peasants in his village. He held legal authority over them and was in charge of administering the law through his court. The bulk of the serfs who lived in the manorial properties of the aristocratic lord were expected to work on the lord’s land, fix the roads, pay to use the lord’s mill, and perform other duties expected of them in exchange for protection. In addition, the lord might control a number of serfs, workers who were legally tied to the land. The Peace of God was an agreement made between the nobility and the Catholic Church at the end of the tenth century to protect noncombatants (peasants, townsfolk, lower clergy, etc.) from attacks by soldiers. Town dwellers, merchants, and craftsmen, while having specific rights as freemen when their towns and villages were in possession of royal charters, still deferred to the aristocracy in acknowledgment of their lower social position relative to them. The lower clergy, such as priests, monks, and nuns, also held a subordinate relationship to the nobility, especially to their high-ranking clergy officials of noble background.

—Abraham O. Mendoza

Bibliography

- Bates, David. *Normandy before 1066*. New York: Longman, 1982.
- McKitterick, Rosamund, ed. *The New Cambridge Medieval History*. New York: Cambridge University Press, 1995.
- Reuter, Timothy. *Germany in the Early Middle Ages, 800–1056*. New York: Longman, 1991.

Scholar Bureaucrats in Tang China

Scholar bureaucrats formed one of the most powerful social groups within Tang China (618–907). As the group charged with both administering official China and maintaining the cultural tradi-

tions of China, this group held a level of prestige on par with that of the imperial family. Scholar bureaucrats, or *shi*, held their status based on three characteristics: the relative ranking of their clan, their success in the civil examination system, and their role as protectors of Chinese culture (*wenbua*). During the infancy of the Tang dynasty, the aristocratic clans were already positioned as the only group that could lay claim to all three of these characteristics. The status that these clans possessed led to their domination of the upper echelons of the civil bureaucracy.

Young men became officials in several different ways, the two most common of which were the civil examination and the yin privilege. The yin privilege allowed high-ranking officials to place their sons at lower levels of the bureaucracy without having to go through the civil examination. This method of entering the bureaucracy served to perpetuate the power of those families already considered *shi*. The sons of other families, those of lower rank, had to participate in the civil examination system. This highly competitive



Tomb figure of a government official, Tang dynasty. Custom and government regulations decreed that officials be dressed in brightly colored silks and other costly materials. (Museum of East Asian Art)

system tested young men in a variety of subjects and, theoretically, chose the most competent to enter the bureaucracy.

The *shi* were an important part of the Tang government. The duty of the official was to provide advice to the emperor during the decision-making process. The official was expected to challenge the emperor if the official believed that the emperor's decision was not in the best interest of the dynasty. The official could write memos to the court or even withdraw from government as a means of protest. This level of candor between the official and the emperor was part of the prescribed role of the official and ruler within the Confucian governing model. The role of the scholar to stand in opposition to the emperor often caused tension within the court. For this reason, the emperor often acted to undermine the power of the officials.

There were several methods at the emperor's disposal to increase his own power at the expense of the *shi*. Taizong, the second emperor of the dynasty, instituted the nine ranks system. This system was similar to what the Northern Wei (386–534) utilized as a means of sponsoring applicants for government service. The Tang version of this system ranked the clans in order of prestige. Early in the Tang, the northern clans filled the upper ranks of this system. Over time, however, the government successfully included many of the families that rose to prominence through government service to the Tang in the upper ranks. The government also used the civil examination system as a way of controlling domination of the *shi* by the aristocratic families. The civil examination system promoted a meritorious entry into civil service through a test administered by the government rather than through family connection. The role of the government in the exam process fostered loyalty between the scholar and the emperor, as it was the emperor who was ultimately responsible for choosing the final candidates for admission into the bureaucracy. The emperor also utilized less gradual means of limiting the power of the leading clans. Taizong initiated a ban on intermarriage among the great clans in order to dilute the families through marriage with other clans.

The scholar bureaucrat's role as protector of Chinese culture was important as a distinguish-

➤ WEI ZHENG AND TANG TAIZONG

The role of the top officials within the dynasty was often precarious. The top official had a Confucian duty to challenge the emperor when he believed that the emperor was incorrect, but that challenge often resulted in dismissal or execution. Under Tang Taizong, a strong emperor, Wei Zheng often found himself at odds with various plans of the emperor. Wei considered it his duty to mold Taizong into the Confucian ideal of an emperor and encouraged the emperor to remain frugal and to always put the people first in any decision. While Wei advanced within the bureaucracy because of his willingness to challenge the emperor, Wei's position also depended on the emperor's belief that he needed to follow Wei's advice. By 737 Taizong grew tired of Wei's constant criticism and moved him out of the inner circle around the emperor. Thus, the power of the bureaucracy often depended on the willingness of both parties—the official and the emperor—to adhere to their prescribed roles. Failure of one or the other to do so rendered the official inconsequential.

—Robert Williams

ing characteristic of the group. The prestige of the great clans was based in part on their ability to cultivate literary virtues, such as poetry and study of the Five Classics. Other elites extolled families that conducted themselves according to ancient ritual (*li*) and engaged in the study of cultural traditions (*wenxue*). While the great clans claimed a monopoly on these virtues during the early Tang, as the diversity of the official class increased during the course of the dynasty, more families claimed *shi* status.

The scholar bureaucrat claimed elite status in China based on familial or cultural grounds. During the almost 300 years of Tang rule, the control of this class within Chinese society of a relatively few clans from the north of China decreased markedly. During the infancy of the dynasty, the Tang had two goals: to bring the northern clans into the dynasty in order to prevent any move on their part toward independence and to integrate these powerful clans into a government-sponsored system that ultimately favored greater diversity among the officials and

increased loyalty to the emperor. The Tang was largely successful in both of these regards.

—Robert Williams

Bibliography

- Bol, Peter. *This Culture of Ours: Intellectual Transitions in Tang and Sung China*. Stanford, CA: Stanford University Press, 1992.
- Ebrey, Patricia Buckley. *The Aristocratic Families of Early Imperial China: A Case Study of the Po-Ling Ts'ui Family*. Cambridge: Cambridge University Press, 1978.
- Johnson, David G. *The Medieval Chinese Oligarchy*. Boulder, CO: Westview, 1977.
- Wechsler, Howard J. *Mirror to the Son of Heaven: Wei Cheng at the Court of T'ang Tai-tsung*. New Haven, CT: Yale University Press, 1974.

Court Society in Heian Japan

The Heian period in Japan (794–1185 CE) began with the capital moving to Kyoto (Heian-kyō) and was the last Classical Period. During this time the Fujiwara became powerful, first intermarrying with and later controlling the imperial family. As centralized and imperial government

declined during this period, the family structure was affected as well.

During the Heian period, aristocratic marriages were usually conducted as visiting marriages. An elite woman typically remained in her parents' house, where her husband would come to visit periodically. These women were expected to stay behind closed doors at all times, even going so far as to stay behind a screen while at home, needing to hide themselves from all males who were not their husbands. This is one of the reasons for the prominence of women in Japanese literature of the time. While some resorted to staring off into space or spending copious amounts of time selecting colors and patterns for kimonos, still others spent their time writing in diaries. This was strengthened by the fact that written Japanese was known as a feminine script, while the court (and therefore male) language was Chinese.

These marital arrangements had both advantages and disadvantages. Outwardly, the women had unstable positions in the marriage because the husband could stop visiting whenever he chose. At the same time, they also had strong po-

► PROTOCOL AND SUPERSTITION—THE LAST TESTAMENT OF FUJIWARA NO MOROSUKE

Fujiwara no Morosuke (908–960) was an important member of the Fujiwara clan who was named *udajin* (“minister of the right hand”) to Emperor Suzaku (923–952 CE) in 947 and married his daughters to Emperor Murakami (946–967 CE), making him grandfather to two emperors. In his will, Fujiwara left instructions to his heirs on how they should live their daily lives. This is a good insight into how structured and ceremonial the aristocrats lived their lives in medieval Japan. It is also an indication of how intensely superstitious they were. Below is an excerpt from his will:

“When you arise in the morning, chant seven times the name of the star for the year. Next look at yourself in a mirror. Next consult the calendar to know the fortune for the day. Next use your toothpick and face west to wash your hands. Next chant the name of the Buddha. . . . Next cut your finger and toenails (cut your fingernails on the day of the ox and toenails on the day of the tiger).

Then select a day to bathe (once every five days). You must consult the fortune before bathing. (It is said in the Biography of the Yellow Emperor that bathing on the first day of the month results in a shortened life. Bathing on the eighth day brings about longevity. Bathing on the eleventh day helps your eyesight, and bathing on the eighteenth day causes suffering from bandits. Bathing on the day of the horse results in the loss of love and respect and bathing on the day of the boar results in shame. Do not bathe on bad days. The bad days are, the days of the tiger, dragon, horse and dog, and the day the star of the long-nosed goblin comes to earth to the food of the human beings.”

—Monique Vallance

Source

Kujodōno Ikai (Last Testament of Lord Kujō), as quoted in David John Lu, *Japan: A Documentary History* (New York: Sharpe, 1997), 73–74.

sitions because any maltreatment or neglect by the husband could result in the wife barring her husband from the household. And because they were living with their parents and not their husbands, they were not dependent on their husbands for money or protection, which meant that husbands who wanted to keep their wives had to maintain a certain level of behavior.

In addition, the marriage politics at the time made having girls more desirable than boys, as it was easier to use them to improve one's social status. The Fujiwaras had married their daughters with the sons of the imperial family. As they grew in importance, their daughters eventually began giving birth to future emperors. While women did not have overt voices in politics, instances such as these gave them indirect control. These visiting marriages meant that young boys lived primarily with their mothers and maternal grandparents and only saw their fathers occasionally. This resulted in mothers having considerable influence over their sons and is the reason that the Fujiwaras were able to gain nominal control over the imperial government.

Despite the control that the Fujiwaras had over the emperors, the respect for the emperor was so great that they never actively sought to overthrow the emperor but instead were content to rule from behind the scenes. Because of this, court culture remained very important. Decorum, appearance, and status were the most important things for a courtier to possess. Status was strictly adhered to, and the showy display of luxury and riches were the norm. In fact, the elites looked upon the commoners as brutish and grotesque. Composure was expected at all times. Any outburst of strong emotion, such as laughing with one's mouth wide open, was looked upon as something to be shameful of. Appearance was something that all were highly conscious of. They were constantly aware of what others thought of them, and this awareness affected their behavior. They were also highly conscious of fashion and clothes; even the slightest mismatch of colors in one's kimono was frowned upon.

Elites during the Heian period spent most of their lives concerned with display and their outward behavior, something they were forced to control even in the privacy of their own homes

and marriages. Due to the women writers who both wrote in their diaries and wrote novels such as *The Tale of Genji*, scholars have an intimate look into everyday life in twelfth-century Japan.

—Monique Vallance

Bibliography

Hane, Mikiso. *Premodern Japan: A Historical Survey*. New York: Westview, 1991.

Shikubu, Masaki. *The Tale of Genji*. Translated by Kencho Suematsu. North Clarendon, VT: Tuttle, 2006.

Structure of Korean Society

Korean society up to modern times has been notable for its strongly aristocratic character, a phenomenon that finds its origins in ancient times. The Korean Three Kingdoms of Koguryo, Paekche, and Silla emerged from age-old clan societies, where the ruling chief had wielded power only as *primus inter pares* ("first among equals"). Although powerful kings did eventually emerge from among such chiefs, Korean society throughout the Three Kingdoms and Unified Silla periods and, to a lesser extent, the Koryo period continued to be characterized by a strict social hierarchy that included an aristocracy of birth or mixed birth followed by commoners (to include farmers and artisans) and slaves with little social mobility between the classes.

By the year 300 the Three Kingdoms of Koguryo, Paekche, and Silla had emerged as adversaries for control of the Korean peninsula. Yet despite their mutual rivalry the Three Kingdoms had much in common in terms of social structure. They all possessed clear aristocracies whose members owed their position and privileges to birth. Although few details are known of Koguryo social structure, it is clear from Chinese histories that the higher echelons of Koguryo society consisted of clans whose power was directly related to their proximity to the monarch and their supply of royal consorts. Likewise, we know that eight prominent families comprised the noble class in Paekche, which monopolized its administrative bureaucracy and court.

However, Silla provides the clearest evidence of a centralized monarchy ruling within



Wall painting shows a noblewoman with her serving maids, from the tomb of Dong Shou, Anak, Korea, fourth century, Three Kingdoms period, Koguryo. (Werner Forman/Corbis)

the larger context of a rigid aristocratic society. A strong centralized monarch emerged relatively late in Silla compared to its neighbors. But by about 500 the Silla king had solidified his authority, thanks in good part to the national struggle against Koguryo and Paekche, which demanded strong centralized leadership. The emergence of centralized monarchies in all the Three Kingdoms undoubtedly required concessions between the monarch and the aristocracy, but this was most evident in Silla. In the sixth century the king increased his authority to rule but in the process was compelled to institutionalize the privileges of the aristocratic class. The strict Bone Rank System of Silla was formally institutionalized in the sixth century, reserving the highest offices in the land for the *chingol* (“true bone”) aristocracy and limiting the rise of those of mixed noble-commoner birth to a middle rank of Head Rank Six.

Nevertheless, social mobility was not entirely stagnant in the Three Kingdoms. During the tumultuous period of warfare leading up to Silla unification in 668, merit in battle could elevate one’s social status. Such seems to be the case with the Koguryo figure Ondal. According to legend, Ondal rose from commoner status to high rank due to his valor in campaigns against Paekche. The life of a Buddhist monk also offered more prominent social status or could at

least provide an escape from the rigid confines of Silla society. Many of the Head Rank Six class, no doubt frustrated or disillusioned by the limitations placed upon them, chose to follow a Buddhist path.

As in most traditional settled societies, that of Korea was based on agriculture and animal husbandry. In Silla this included the raising of horses and cattle, the growing of crops such as rice and millet, and the cultivation of silkworms. Particularly with the influence of Confucianism in the Silla period, lip service was paid to the farmers for their vital role in sustaining the life of the nation. In reality, as with most traditional societies, the life of the farmer was one of hardship, which alongside farm labor could include corvée duties. However, the monarch was often perceived as responsible for lessening the sufferings of the peasantry, which included providing relief in times of flood or famine. There were even some cases where kings in Unified Silla distributed land to able-bodied peasants, but the exact nature of such distribution and its motives are not known.

Something analogous to slavery was also a salient characteristic of Korean society from the Three Kingdoms through the Koryo periods (and indeed up to the nineteenth century). The application of the English word “slavery” to traditional Korean society is problematic. Nevertheless, we know from the historical record that Koguryo, Paekche, Silla, and Koryo societies had slaves (in Koryo referred to as *ch’ŏnmin*, or “lowborn”), although their exact status is not fully understood. Fragments of an eighth-century Silla census reveal that in a group of four villages numbering 442 inhabitants, about 5 percent were slaves. From this evidence as well as the historical record, we can infer that slavery never played a major economic role in traditional Korea. Slaves were probably used primarily as domestic servants or to fill jobs traditionally shunned, such as butcher. Nevertheless, their status was hereditary, and manumission seems to have been quite rare and even punishable.

Silla’s defeat of its rivals ushered in the Unified Silla period (668–927) but did little to alter the social order. In the interests of a smooth assimilation, the noble classes of Paekche and Koguryo were largely absorbed into Silla’s own aristocratic caste or at minimum were allowed

to retain their landed estates. For instance, the Silla king granted Ansuŏng (?–683), the self-proclaimed last king of Koguryo, an aristocratic title and clan name and brought him to reside in the Silla capital.

For a brief century or so following unification the Silla monarchy made a determined effort to solidify its authority and break the power of the Silla aristocracy. The Silla kings reformed the administrative apparatus along Chinese lines and attempted to wrest decision-making ability from the Hwabaek Council dominated by the nobility. They even made bold attempts to break the landed source of aristocratic power by divesting aristocratic officialdom of their so-called stipend villages, or large land grants whose production the nobility could exploit in lieu of any official salary. In their place the king instituted a system of regular salaries dispersed by the central treasury. Meanwhile, the lesser Head Rank Six officials supported the monarchy's attempt to stymie the entrenched interests of the noble class.

In the struggle between king and aristocracy that became a salient characteristic of late Unified Silla, the Head Rank Six class was a key component of royal power. They often received royal support to study in Tang China, returning to Silla to staff the increasingly Chinese-style bureaucracy as a counterbalance to the aristocratic officials. Such key Head Rank Six figures as Ch'oe Ch'i-wŏn (857–?) espoused the adoption of a merit-based system for office seekers.

Ultimately, royal attempts to curb the power of the major noble clans failed. The assassination of King Heygong in 780 marked the emergence of a period of extended internecine struggle among the Silla aristocracy during which the power of the throne was largely eclipsed and the centralized government itself broke down. This breakdown of the traditional social order can be seen in an edict issued by Silla's King Hungdok in 834 reminding his subjects that "there are superior and inferior people, and humble persons, in regard to social status." Lamenting a degeneration in social ranks, Hungdok reinstated the old punishments for transgressing the dress and living codes of one's class.

Naturally, the breakdown of effective government resulted in the disintegration of conditions for the peasantry. Thus, the history of late

➤ BONE RANK SYSTEM

The rigid aristocratic hierarchy of Silla society was most evident in its Bone Rank System (*kolp'um chedo*), which stratified Silla society according to bloodline. Originally an informal system, it was codified during the reign of King Chinhung (540–576). Silla society was formally divided into those of hallowed bone (*songgol*) origins, true bone (*chingol*) origins, mixed noble-common origins, and commoners. At first only those of hallowed bone status could assume the Silla throne, while the *chingol* class could attain the highest ranks and government posts. After 654 the *sŏ nggol* class disappeared with the crowning of the *chingol* King Muryŏ I. The Bone Rank System also dictated the color of one's clothes, the size of one's home, and even the types of utensils one could use. Eventually such aristocratic privileges undermined royal authority. Moreover, the system frustrated the ambitions of talented Head Rank Six men of mixed noble-common status. Many Head Rank Six officials transferred their loyalties to the state of Koryŏ, where they were to play influential roles.

—Daniel C. Kane

Unified Silla was marked by increasing social unrest in the countryside. By the ninth century alternate power centers were arising in the provinces, led by men having little or no connection to the traditional elites of Silla. Such figures as Chang Pogo (787–846) and Wang Kon (877–943) emerged from humble backgrounds to positions of great power in the Korean hinterland. It was Wang Kon, a figure linked to maritime trade in northwest Korea, who emerged in the chaos of the final years of Silla to establish the Koryo dynasty in 918, which he would rule as its first king under the name T'aejo.

The last Silla king submitted to Koryo in 927. In one sense the triumph of T'aejo was the final blow to the old aristocratic order of Silla. In early Koryo positions of authority were dominated by a new elite: powerful gentry who had supported T'aejo's rise to power as well as former Head Rank Six officials of Silla. Learning the lessons of Silla's fall, early Koryo monarchs were keen to keep power centralized and society orderly. One's family origins largely determined

one's life pursuit, with military, civil, agricultural, and artisan roles largely hereditary. Although Koryŏ soon set out to establish a more Confucian bureaucratic system based on merit, in reality those of the lower classes had little chance of sitting for the national examinations. The elites had changed, but Koryŏ society proved in many ways more rigid than the Bone Rank System it had supplanted.

—Daniel C. Kane

Bibliography

- Joe, Wanne J. *Traditional Korea, a Cultural History*. Seoul: Hollym, 1997.
- Kang, Hugh H. W., ed. *The Traditional Culture and Society of Korea: Thought and Institutions*. Honolulu: Center for Korean Studies, University of Hawaii, 1975.
- Kim, Chong-sun. "Sources of Cohesion and Fragmentation in the Silla Kingdom." *Journal of Korean Studies* 1(1) (1969): 41–72.
- Kim, Chong-sun. "The Kolp'um System: Basis for Sil-lan Social Stratification." *Journal of Korean Studies* 1(2) (January–June 1971): 43–69.
- Lee, Ki-baik. *A New History of Korea*. Translated by Edward W. Wagner with Edward J. Shultz. Cambridge, MA: Harvard University Press, 1984.
- Lee, Ki-dong. "Bureaucracy and Kolp'um System in the Middle Age of Silla." *Journal of Social Sciences and Humanities* 52 (December 1980): 31–58.
- Lee, Peter H., ed. *Sourcebook of Korean Civilization*, Vol. 1, *From Early Times to the Sixteenth Century*. New York: Columbia University Press, 1993.
- Unruh, Ellen S. "Reflections on the Fall of Silla." *Korea Journal* 15(5) (May 1975): 54–62.

The Development of Caste in India

The social system of classes and castes, *varna* and *jati*, constitutes the most prominent and comprehensive social structure in ancient India. Taken together, these two categories are often referred to as caste, a broad term referring to social class that obscures the complexity of the Indian social system. The term *jati* refers to the specific socioeconomic roles of members of a community such as scribes, washers, tailors, weavers, etc. A single community, such as a village, would have had several interdependent *jati*

working together to fulfill all the economic needs of the community. Moreover, *jati* are endogamous, which means that members of a *jati* tend to intermarry within their own group and pass their socioeconomic roles down to their descendants. On the whole, different *jati* may conform or correlate to one *varna* or another.

The term *varna*, then, refers to the religiously sanctioned stratification of society into four broad classes. These four are the *brāhmins*, specialists in the Vedic texts and rituals; the *kṣatriya*, the warriors and nobility who constitute a political class; the *vaiśyas*, the merchants and artisans; and the *śūdras*, the class that serves and performs menial tasks. These *varna* are ranked in terms of ritual purity, with the *brāhmins* being the most pure in religious terms and the *śūdras* the least pure. As this social system expanded from northern India throughout the rest of the peninsula in the latter half of the first millennium CE, the categories of *varna* and *jati* functioned as a means of classifying and assimilating new roles and occupations into a Sanskrit social structure.

Closely related to *jati* were commercial guilds (*śrenī*). Often found in urban settings, guilds were mercantile associations related by similar economic professions and interests. For example, the early centuries of the first millennium CE saw the rise of guilds of silk weavers in western India. What distinguishes a guild from a *jati* is that while the former refers merely to groups with the same or similar economic occupations, the latter term encompasses not only economic but also social and religious roles within a community. The role of guilds as professional organizations also provides some insight as to the possibility of social mobility upward (or downward, as the case may be). For example, by the fifth century CE many of the aforementioned silk-weaving guilds had migrated farther inland into central India and abandoned their profession in favor of more profitable and higher-class occupations as soldiers, archers, and bards.

There is evidence that in earlier periods of Indian history there was more acceptance of movement between classes, but law texts (*dharmaśāstra*) from this period indicate the prevalent perception that caste was fixed at birth, and a person was to remain in that class until death.

➤ GENDER ROLES AND CASTE

Generally speaking, patriarchal social mores prevailed in the caste system of southern Asia. Although the ideal marriage was within a caste group, some dharma texts allowed for hypergamous marriages, in which the husband was of slightly higher caste than the wife. Furthermore, expectations on high-caste women were more stringent. High-caste women were expected to be married before adulthood; sometimes girls were married before puberty. Society frowned on the remarriage of widows. Among *kshatriya* women, the practice of *sati*, in which a widow immolates herself on her husband's funeral pyre, emerged in this period, as attested by an inscription from Eran in

western India dating to 510 CE. A woman's property rights were limited, although customs and laws governing women's inheritance varied by region. In some places, customs of matrilineal descent and cross-cousin marriage were practiced to keep property within a family. For example, Uchchakalpa, in central India, maintained these patterns in this period as a social custom that existed before the caste system emerged in this region.

Ways for women to opt out of a householding life were generally limited. Some became courtesans or joined performing troupes. Others renounced society altogether to join religious orders.
—Matthew Bingley

Nevertheless, as this last example shows, class and caste are not as rigidly defined as they are often portrayed. The process by which a group elevates its social class has been dubbed *sanskritization* and involves inculcating and exhibiting the norms and cultural mores of higher classes, as represented in the Sanskrit literary and religious traditions. For example, by the end of the first millennium, many wealthy landowners, the recipients of land grants for agricultural production and revenue, sought recognition as members of the *kshatriya* class, resulting in an expansion of this class in northern India. Adding to the expansion of the *kshatriya* class late in this period were other groups claiming this status. Administrative scribes (*kayasthas*) claimed status as *kshatriya* as well as a trading class, called *khatri*, who justified their elevated status by claiming a story of their origins as *kshatriyas* who had fallen in status.

Groups beyond or below hierarchies of caste, such as untouchables, outsiders, and slaves (*dasa*), grew more numerous in this period. Untouchability generally referred to those individuals below even the *shudras* in status and whose touch was innately polluting. Untouchables in urban settings were often those who scavenged for a living or who worked in cremation grounds, while those in rural settings were often equated with menial labor. For example, the term *chandala* referred to a caste spe-



Detail of a palace scene showing various castes and ethnic groups, Gupta dynasty (320–600 CE). In theory, broad caste divisions (*varna*) were associated with color, with the lower-ranking *varna* being darker. (SEF/Art Resource, NY)

cializing in the transport and cremation of corpses, the *nishada* referred to rural hunters, and *karavara* was a leather worker. An outsider (*mlechchha*, often translated as “barbarian”) was one whose language and customs differed

and who likewise could not be part of caste society. Outsider groups included tribal peoples, whose customs were alien to South Asian caste society. While some tribal groups were considered untouchable, as they became integrated into caste society tribal chiefs were identified as *kshatriyas*. Finally, increased mention of slavery in the literature of this period indicates an expansion in the institution. Forced labor was prevalent in agricultural and domestic settings, although slaves from untouchable castes did not serve in domestic roles.

In contrast to the caste structure that placed *brahmans* at the top of the hierarchy, religious institutions such as Buddhism and Jainism advocated the abandonment of caste. Moreover, the category of the religious renunciate remained the primary means of leaving caste society behind. Generally, the initiatory rites of renunciation and joining religious orders were viewed as a way of becoming dead to society.

—Matthew Bingley

Bibliography

- Dumont, Louis. *Homo Hierarchicus: The Caste System and Its Implications*. Translated by Mark Sainsbury, Louis Dumont, and Basia Gulati. Chicago: University of Chicago Press, 1970.
- Thapar, Romila. *Early India: From the Origins to AD 1300*. Berkeley: University of California Press, 2002.

Free People of Early Medieval Islamic Cities

In many ways, the Islamic conquest led to a revival of urban life in the Near East during late antiquity. Cities had been on decline and had become centers for the agricultural communities that surrounded them. City life was dominated by free people who were local landowners. With Islam, cities came to be dominated by merchants, and urban life revived. Free people of early medieval Islamic cities were not all that different from the free people of pre-Islamic late antiquity cities. The Muslim conquests accelerated the change of the urban landscape that had begun long before in late antiquity. The Muslim conquerors took over established cities, and life was not dramatically changed for most people. Even such features as bazaars predated the Mus-

lim conquests. They had been and remained meeting and business places for free people. For some time in the Levantine region, urban civic and public life had been in decline, while private and domestic life became more important. Cities remained centers of commerce, and many free people were artisans, craftsmen, or traders. Gradually, the late antiquity cities and their inhabitants were transformed, but many cities and their populations retained elements from their Hellenistic and Persian foundations.

Most of the cities of this period were ancient urban centers whose histories long preceded the Muslim conquest. Jerusalem, Aleppo, Damascus, Alexandria, and Antioch are just a few. Still, the Muslims founded new cities such as Kufa and Basra in Iraq, Fustat in Egypt, and Qayrawan in North Africa. In addition, there were the Muslim cities of the Hijaz, where Mecca and Medina remained preeminent. Still, life in these cities would not have been dramatically different for the average free person just because of the advent of Islamic rule. However, some of these cities, such as Kufa and Basra among others, were founded as garrison cities for Islamic soldiers. In the later Umayyad period (684–750) these cities underwent a transformation as many peasants moved in from the countryside and converted to Islam. Also, many slaves converted to Islam, a move that often brought freedom so that they were able to join the ranks of free people in the cities. By the end of the early medieval period, the distinction between ruler and ruled among the populations of Islamic cities was not so great, as more and more free people converted to Islam, Arabicized, and demanded a greater role in religious and political life.

Muslim leaders continued to found cities. Al-Qahira, Cairo, was founded by the Fatimids in 969, and Fez was founded in 788–789 by Idris Ibn Abd Alla. Baghdad was founded as the new Abbasid capital in 762. These cities, like the others, became cosmopolitan cities with free people from diverse backgrounds.

Many of the free people in Islamic cities were relatively prosperous. Some were landlords connected to the countryside, while others traded in agricultural products. Some were artisans, including metalworkers, goldsmiths and silver-smiths, carpenters, papermakers, bookbinders,

scribes, calligraphers, butchers, bakers, and leatherworkers. Eventually, many of these artisans would become organized in guilds, although the nature of Muslim medieval labor organization is the subject of some debate. Tradesmen were headed by an *amin*, who regulated the trade organization and wielded considerable power, but the guilds were still not as powerful as their European counterparts.

Some Islamic cities, such as Damascus and later Baghdad, became great manufacturing centers for luxury goods. Some of the wealthiest free people of societies were merchants. Although the early Arab Muslims romanticized their nomadic past, in reality Islam was an urban religion, having arisen in the cities of Mecca and Medina. While these centers were actually just towns, they were still some of the largest settlements in a region of nomads, but some scholars regard them as only protourban settlements. Muhammad himself was a resident of Medina and was a merchant, not a nomad. Thus, the strongest centers of Islam were the urban centers to which free people were drawn by economic and cultural opportunities. These people were not forced to convert, however, and Muslim cities in this period were among the most ethnically and religiously diverse in the world. The free people might be Greek and Arab Christians, Bedouin tribesmen, Chinese, Indian, Jews, and Persians of varying faiths.

Free city dwellers often lived in sun-dried brick houses. Decoration was concentrated on the interior as domestic life rose in importance. Muslim homes looked inward; at the center was a courtyard and fountain, much like an ancient Roman villa. However, in many cities, wealthy merchants built palatial houses and villas. Government officials might vie with merchants for wealth and prestige, but many were not wealthier than other middle-class inhabitants, especially those in smaller towns.

The role of free women in early medieval Muslim cities is less certain. The prophet's wives were models for Muslim women, and they owned property, actively traded, and had a voice in the affairs of the Muslim community. However, the role of women became more secluded in the course of the medieval period, although women in the Muslim world still enjoyed a greater degree of freedom than their Byzantine or West Eu-

ropean counterparts. Muslim women could own property, initiate divorce, and engage in business, and there is ample evidence to suggest that a wealthy and active class of urban women did arise in early medieval Muslim cities.

By the year 1000, the Islamic empire had begun to break up into regional centers. Urban populations remained similar and included merchants, artisans, scholars, and others. However, the different regions developed on divergent paths. Cities in the former Sassanian empire once again were Persian, while cities in North Africa took on local characteristics. Islam was still a unifying factor, and scholars and merchants traveled as free people throughout Muslim cities, but the political and cultural unity that characterized the early medieval Muslim period was no longer in existence.

—Benjamin de Lee

Bibliography

- Hourani, A. H., and S. M. Stern. *The Islamic City*. Philadelphia: University of Pennsylvania Press, 1970.
- Kennedy, Hugh. "From Polis to Medina: Urban Change in Late Antique and Early Islamic Syria." *Past and Present* 106 (1985): 2–27.
- Kennedy, Hugh. *The Prophet and the Age of the Caliphates*. 2nd ed. London: Pearson-Longman, 2004.
- Lapidus, I. *Muslim Cities in the Later Middle Ages*. Berkeley: University of California Press, 1987.
- Robinson, F. *The Cambridge Illustrated History of the Islamic World*. Cambridge: Cambridge University Press, 1996.
- Wheatley, P. *The Places Where Men Pray Together: Cities in Islamic Lands*. Chicago: University of Chicago Press, 2001.

People of European Towns and Cities

The towns and cities of western Rome late antiquity declined in population and importance between 300 and 550 CE. Although northern towns were the first to lose their administrative and patrician classes, their slaves and long-distance merchants, and their military garrisons and intellectuals, by the early sixth century town life had ceased throughout much of the former western Roman empire. The collapse of the Roman villa system meant that the countryside could no

► TRADE AND DISEASE—EXCERPT FROM HISTORY OF THE FRANKS

Bishop Gregory of Tours, historian and theologian as well as the leading prelate in sixth-century Gaul, noted that trade and concentrations of people often meant the outbreak of epidemic disease, as in sixth-century Marseilles.

“In the meantime a ship from Spain put into port with the usual kind of cargo, unfortunately also bringing with it the source of this infection. Quite a few of the townsfolk purchased objects from the cargo and in less than no time a house in which eight people lived was left completely deserted, all the inhabitants having caught the disease. The infection did not spread through the residential quarter immediately. Some time passed and then, like a cornfield set alight, the entire town was suddenly ablaze with the pestilence. Bishop Theodore came back and took up residence in St. Victor’s church, together with the seven poor folk who remained at his side. . . . At the end of two months the plague burned itself out. The population returned to Marseilles, thinking themselves safe. Then the disease started again and all who had come back died.”

—Joseph P. Byrne

Source

Gregory of Tours, “History of the Franks,” in *Readings in Medieval History*, ed. Patrick Geary (Lewiston, NY: Broadview, 1989), 178.

longer support urban populations. Germanic invaders also aided urban decline since they had little use for the niceties of town life beyond the provision of necessary goods and services. As in most cases administrative duties passed to Germanic warlords and Christian bishops, and the urban fabric and social life disintegrated more or less slowly as local conditions dictated.

By the sixth century the numbers and variety of inhabitants of ill-defined towns had plummeted. Artisans in metal, ceramics, wood, textiles, leather, and perhaps glass found relative safety within surviving or shakily reconstituted Roman walls. They rubbed elbows with the servants of the Church, local lords, and the war-

riors or soldiers who served both. Merchants generally dealt in narrow ranges of local produce and merchandise and were more likely to be itinerant than sedentary. In very general terms towns had an upper class of locally important nobles, clergy, and perhaps old Roman landlords; a middling class of free craftspeople, trades people, and civic functionaries; and a lower class of slaves, serfs, servants, widows, and those needful of charity. The south, however, still contained an array of urban specialists, and port towns that still conducted trade with the Byzantine or Islamic worlds retained the most cosmopolitan populations. Under the Franks town life tended toward stability and growth, but these towns suffered during the invasions of the ninth and tenth centuries.

—Joseph P. Byrne

Bibliography

- Hodges, Richard. *Dark Age Economics: The Origins of Towns and Trade, A.D. 600–1000*. London: Duckworth, 1989.
- Nicholas, David. *The Growth of the Medieval City: From Late Antiquity to the Early Fourteenth Century*. New York: Addison-Wesley, 1997.
- Pounds, Norman. *The Medieval Town and Social Change*. Westport, CT: Greenwood, 2005.

Dhimmi and Dhimmitude— Non-Muslims in Muslim States, 632–1000 CE

After the great conquests of the Muslim armies in the seventh century, the caliphate faced the critical issue of ruling over substantial populations of Jews and Christians now under its authority. Classifying their status as *dhimmah* (meaning “protected,” in the sense of their religious rights) and them as *dhimmis*, Muslims recognized a commonality in the nature of the revelations followed by these monotheists. The prototype for this concept stems from the earliest moments of the Islamic movement when the Prophet Muhammad (ca. 570–632) had been asked to arbitrate in a long-standing feud between tribes native to Yathrib, later known as Medina (located roughly 240 miles to the northeast of Mecca).

As part of his agreement to do so, he required all the people of the city to enter into a

series of agreements—known as the Constitution of Medina—that set out the rights and responsibilities for each group within the collective. Included in these agreements were the Jewish groups that formed an integral part of the military and economic strength of Medina. Constituting nearly half of the city's population by some estimates, the Jews of Medina are mentioned explicitly in Articles 25–30 and 46 of the constitution, where they are referred to as an *ummah* (community) among the believers. However, this relationship did not remain cordial. After the Jews failed to accept him as a prophet, Muhammad acted against them. Declaring that the Jews had failed to uphold their duties as mandated by the Constitution, Muhammad was able to liquidate a potentially dangerous internal element.

With the reign of the caliph Umar I (634–644), expansion outside the Arabian Peninsula began in earnest. However, it is important to note that the nature of this expansion—and by extension the growth of the Islamic polity—was crucial in how the native populations were treated. If the conquest of a territory occurred under the force of arms, it was designated as *ard al-unwab* (land of force or violence). Lands conquered in this way were under the direct administration of the state after they were forcibly pacified. Agricultural lands were appropriated, and tax levels were set by the regional governor. However, if a territory capitulated without contest, it qualified for the legal status of *ard al-sulh* (land of treaty). In both cases monotheists were allowed to practice their religion, but religious communities could negotiate for favorable terms in territories that were *ard al-sulh*.

Generally, there were two taxes that were levied on territories conquered or acceding to Muslim rule. The *kharaj* (land tax) was assessed on land seized by force. Most important for our discussion, though, is the *jizya* (capitation tax, or head tax). This capitation tax was applied to all inhabitants who did not convert to Islam (i.e., *dhimmis*). Thus, in exchange for the payment of this tax, which signified the *dhimmi's* formal acceptance of Muslim hegemony, individuals and religious communities were allowed a measure of freedom in conducting their business, personal, and spiritual affairs. In this way, many

➤ THE PACT OF UMAR I

The *Pact of Umar I*, while now largely considered to be formulated much later than the reign of the second Rashidun caliph, is nevertheless a critical text in understanding the nature of confessional relationships in the Islamic world. While we have different forms of this document preserved (each worded slightly different), there are some points common to all extant versions.

Included in the covenant were injunctions prohibiting the building of new monasteries, convents, and churches. Likewise, the repairing of dilapidated religious buildings or ones located in Muslim sections became forbidden. Security matters were of grave concern, and therefore the harboring of foreign spies invalidated the freedoms and rights of the *dhimmi*. It also became important to visually distinguish between Muslim and non-Muslim, so sumptuary clauses were included. These included the calling for distinctively colored headwear, footwear, and devices that were worn on the outside of clothing to denote one's religious affiliation. As part of their agreement the *dhimmi* were exempt from military service, but that meant that they could not arm themselves under Muslim law. The paramount role of Islam in society was to be respected at all times. Thus, religious activities had to be conducted in an unobtrusive manner, quietly and away from the Muslim public. Also honored were Muslim dietary laws, as it was expressly forbidden to tempt Muslims with pork or alcohol (although private consumption by the *dhimmi* was allowed). Finally, while it was illegal to preach to the Muslim population, any *dhimmi* who decided to convert to Islam was allowed to leave. Thus, while Islamization was a slow process after the conquest period, it was a provision in the covenant.

—Rasheed Hosein

dhimmis rose to prestigious and exalted posts in both the government and the economy. Often, especially in Islam's early days, *dhimmis* formed the backbone of the bureaucracy, reprising their former jobs for their new rulers. Opportunities for advancement were also available, and there are records of *dhimmis* serving in almost every political post, including that of vizier (the highest civil office).

Injunctions for this accommodation can be traced directly back to the Quran and its assertion: “Let there be no compulsion in religion” (II:256). However, the Quran goes on to note: “Fight those who believe not in Allah, nor the Last Day, nor hold that forbidden which hath been forbidden by Allah and His Messenger, nor acknowledge the religion of Truth, (even if they are) of the People of the Book, until they pay the *jizya* with willing submission, and feel themselves subdued” (IX:29). In this way, the Quran provided a reliable means of dealing with these monotheist groups, given the failure of the Prophet’s attempt to provide them with direct inclusion in the community at Medina. Thus, the status of the *dhimmi* populations of the caliphate was a legal distinction of Quranic origin.

However, while the Quran laid out a basic framework, the injunctions contained within were not comprehensive enough for any practical application. Therefore, Islamic legal scholars drew on another textual source—known as the *Pact of Umar I*—as the exemplar for the rights and responsibilities of the *dhimmi* vis-à-vis their Muslim rulers. Although it is attributed to the caliph Umar I, the pact is now largely believed to be a back projection from jurists of later historical periods seeking to attribute what emerged as customary practice back to the era of the pious Rashidun caliphs (632–661). The overarching theme of the covenant, in its multiple extant iterations, is the safeguarding of the *dhimmis* and their religious sites, provided they pay the capitation tax to the Muslim authority. However, this pact also restricted the public and even private lives of *dhimmis* in ways that underscored their inferiority to the Muslim True Believers.

Social constraints aside, the status of *ahl al-dhimma* (people of protected status) had very far-reaching effects for non-Muslim populations throughout the Islamic world. In many key regions of the caliphate such as Egypt, Syria, and Iraq the dominant Christian creed was not the one recognized by either the Latin Church in Rome or the Orthodox Church in Constantinople. Stemming largely from the aftermath of the Fourth Patriarchal Council at Chalcedon (451), these so-called Oriental churches found themselves on the wrong side of a debate on the nature of the Christ, leading to excommunication,

marginalization, and persecution by the Holy See in Rome and the armies of the Byzantine emperor. When Muslim armies appeared with their offer of security, many communities accepted Islamic hegemony because, for the price of the *jizya*, it offered a measure of religious freedom that was not forthcoming from the previous elite. In this way some churches, such as the Coptic Orthodox Church, the Syriac (or Syrian) Orthodox Church, and the Armenian Apostolic Church, which were threatened with (often brutal) persecution by the Byzantines, were spared and indeed thrived under Muslim rule.

That is not to say that Muslim rule was universally benevolent. There were episodes of repression and even forced conversion in the historical record. However, a careful study of the dating of these events may reveal an alternate rationale. During the reign of the Fatimid caliph al-Hakim bi-Amr Allah (r. 996–1021), the *dhimmi* populations of Egypt and Syria faced brutal repression. Christians were forced to wear large wooden crosses, and both Jews and Christians had to wear black hats to distinguish themselves from the Muslims. In 1007 the caliph also destroyed the Church of the Holy Sepulcher in Jerusalem, one of the holiest sites in Christendom. However, this caliph may have been influenced by millenarianism. A look at the *hijri* calendar—which is the major Islamic calendar that is based on lunar cycles—revealed that the Fatimid caliph ruled from 386 to 411 AH (circa 996 to 1020 CE), with the destruction of the Holy Sepulcher occurring right at the year 400 AH (circa 1009 CE). This is not an isolated phenomenon. Careful study reveals that episodes of *dhimmi* persecution tended to line up with *hijri* centenaries, but this is not a definitive answer to the sporadic persecution of non-Muslims in the caliphate.

In the end, while the caliphate afforded Christian, Jewish, Zoroastrian, and later Hindu *dhimmis* a measure of security and religious freedom that was not generally available elsewhere in the premodern world, the social construct was not utopian. Rather, it was a privilege extended to non-Muslims that evolved from the piecemeal nature of conquest in the early Islamic period and served to normalize tricky relationships between the rulers and the conquered. The true legacy of this institution is its longevity,

serving as a hallmark of Islamic dynasties until the eighteenth-century concept of the state and its importation to the Middle East by colonial powers rendered it anachronistic.

—*Rasheed Hosein*

Bibliography

- Ali, Yusuf, trans. *The Meaning of the Illustrious Qur'an*. Lahore: Sh. Muhammad Ashraf, 1957.
- Cohen, Mark. *Under Crescent and Cross: The Jews in the Middle Ages*. Princeton, NJ: Princeton University Press, 1995.
- Courbage, Youssef, and Philippe Fargues. *Christians and Jews under Islam*. Translated by Judy Mabro. New York: I. B. Tauris, 1997.
- Hoyland, Robert, ed. *Muslims and Others in Early Islamic Society*. London: Ashgate Variorum, 2004.
- Rahmatallah, Maleeha. *The Treatment of Dhimmis in Umayyad and Abbasid Periods*. Baghdad: Times Press, 1963.
- Tritton, A. S. *Caliphs and Their Non-Muslim Subjects: A Critical Study of the Covenant of 'Umar*. 1930; reprint, London: Frank Cass, 1970.
- Ye'or, Bat. *Islam and Dhimmitude: Where Civilizations Collide*. Translated by Miriam Kochan. Madison, NJ: Fairleigh Dickinson University Press, 2001.

Serfdom in Late Antiquity and the Early Medieval Age

Serfdom was a system by which the elite in agrarian societies appropriated the wealth produced by unfree peasants. Serfdom was a system practiced in many if not most agrarian societies throughout much of history and has an ancient origin. Although the most commonly understood concept of serfdom is of West European origin, institutions very like or identical to West European serfdom prevailed in ancient Mesopotamia, Egypt, China, Greece, and the Roman empire. In classical Greece, the helots were virtual serfs. It is commonly held that one of the antecedents of serfdom in western Europe was the practice in the late Roman empire of settling quasi-free men, or *coloni*, on lands that had, in the early empire, been worked by slaves. Alternatively, slaves were settled on vacant land as *coloni*. Others see the effective origin of West European serfdom in the collapse of the security

provided by the Carolingian empire. This explanation holds that free peasants exchanged their freedom for protection from bandits and other marauders. The feudal bargain, according to this rendition, is that the peasants willingly submitted to a loss of freedom for the security promised by a force of knights and other warriors. A more cynical view is that horse-riding warriors imposed serfdom on defenseless farmers.

Serfdom, like slavery, was a condition of inequality, but societies recognized more rights for the serfs than for the slaves. Usually, serfs were settled on plots of agricultural land that they worked for their own sake as well as for the sake of their masters. In most cases the serfs had recognized rights to the land, including passing the land to their descendants in inheritance, but in all societies they were obliged to pay the master, or lord, for these rights by laboring in the master's fields and/or his household and by paying money or produce, often a large share of his crop. Serfs were required to exhibit marks of inferiority by kneeling or bowing in the lord's presence. Serfs were universally bound to their land and were subject to severe reprisals for abandoning their land and their lord.

Serfdom was most classically defined in Europe and the Mediterranean in the later Roman empire and after its fall, but it was also practiced in various forms in China, India, Persia, Korea, and Japan, indeed in most agrarian societies. Usually, centralized states preferred, for purposes of taxation and military recruitment, a free peasantry without serfdom. China, under the Northern Wei, Sui, and early Tang dynasties, attempted to preserve or create independent landowning peasantries with their Equal Field System. Korea and Yamato, Japan, also tried to institute equal field systems. The Byzantine empire likewise tried to assure itself of an independent peasantry with its Farmers Laws of the seventh and eighth centuries.

However, in China, Korea, and Japan, regardless of the Equal Field System, growing numbers of peasants were forced into serfdom when the governments gave allotted peasants with the land they tilled for the support of Buddhist and Daoist monasteries. In Europe, rulers likewise gave peasants with land to Christian monasteries. In East Asia, as the population grew and as

central governments became unable to enforce the Equal Field System, local elites acquired more and more land, with peasants losing their independence through debts, declining into a condition very like West European serfdom.

Land tenancy and landlordism, in which landlords owned large tracts of land and rented it to peasants to farm, was widespread. This was the most common system in the Islamic lands, most of India, and much of China. Sharecropping, by which the tenant rendered a share, often half or more, of the land's produce to the landlord, was a common arrangement. Tenancy was not the same as serfdom because the tenant was free to leave one landlord for another, but it could and often did evolve into a system of debt peonage, little different than serfdom. In debt peonage, the peasant accumulated a burden of debt to the landlord that was impossible to pay off and that effectually bound him to the landlord.

Serfdom developed early in western Europe but by the sixteenth century had disappeared from large areas. Ironically, the peasants were free tenants in early medieval Kievan Rus. It was not until the mid-sixteenth century that Russian peasants were forced into serfdom by a series of governmental decrees that deprived them of the right to move from the land of one lord to another.

All early medieval societies believed in and practiced social inequality. Serfs occupied the bottom rung of the social order; only a few slaves were considered inferior to them. Indeed, the word “serf” derives from an Old French word meaning “slave.” Another word for “serf” was *villein*, which had the same connotation as the modern word “villain” and meant “ugly, rude, and uncouth.”

Most religions gave positive sanctions to social systems practicing serfdom. In Christian countries, the clergy taught that it was the serf's duty to serve his lord, to give his lord loyalty and love. Other religions taught that the serf's duty was to fulfill his allotted role in this life with the promise of a better life in the next world.

—Wilfred J. Bisson

Bibliography

Cantor, Norman. *Civilization of the Middle Ages*. New York: Harper, 1993.

Duby, Georges. *The Early Growth of the European Economy: Warriors and Peasants from the Seventh to the Twelfth Century*. Ithaca, NY: Cornell University Press, 1974.

Slave Soldiers in Early Medieval Dar al-Islam, 632–1000 CE

Early medieval Muslim states were unique not only in the extent to which they employed slave soldiers but also in the power and prestige these soldiers attained while still military slaves.

A military slave is definable as a man of slave origin who, after a long training in military service, would have spent most of his life as a professional soldier. Many words have been used to describe slave soldiers. They were at first called *ghulam* (a young servant), and afterward the term *mamluk* (a property) was used for a slave soldier with lighter skin.

Military slavery was almost nonexistent at the beginning of Islam. During the initial campaigns of conquest, in the seventh century, military slaves were members of the Bedouin tribes of the Peninsula. It was not until the beginning of the eighth century that the first slave soldiers emerged.

The Abbasid caliphate was the first to employ large numbers of slave soldiers. During the al-Mansur (754–775 CE) and Harun al-Rashid (786–809 CE) caliphates, a process of military slave requisitioning, from the most peripheral regions of Dar al-Islam, became a normal practice. These slave soldiers demonstrated loyalty to the caliph, who granted them privileges and financial rewards. This step was related to the caliph's regional support; the Abbasid conquest of the caliphate was connected to the Iranian region of Khorasan, where the revolution, which toppled the Umayyad reign in 750 CE, began.

The Iranian phase, which was followed by a Turkish phase, resulted in a rapid increase of military slaves. These became the praetorian guard of the caliph. During the reigns of al-Mamun (813–833 CE) and al-Mutasim (833–842 CE), there were systematic and large-scale increases in slave recruitment for military purposes. The majority of the slaves came from central Asia; the town of Samarqand (in present-day Uzbekistan) was an important slave-trading center where the

nonconverted Turkish soldiers were considered the best option in creating a new army.

Slaves served full-time, receiving regular wages; wore distinctive clothes; and lived in separate headquarters of the towns. In Baghdad, the Abbasid capital, the caliphate palace was surrounded by a military quarter where, in the ninth century, the slave soldiers were in the majority. Al-Mutasim decided in 835 CE to move the capital to Samarra, an Iraqi town 70 miles north of Baghdad, because relations between the military slaves and the civil population had become hostile and violent.

The Mutasim caliphate increased the army of Turkish slaves to 70,000 professional soldiers. These troops were dressed in gold and silk brocade with silver ornaments and other jewels, which provoked jealousy from other army regiments. The Turkish slave soldiers became so powerful that they were able to depose caliphs and raise others to the throne. Turkish slaves murdered Caliph al-Mutawakkil and installed his son, al-Muntasir, as caliph.

By the middle of the ninth century, the armies of most Muslim states consisted largely of slave soldiers. In Muslim Spain and Morocco, Slavic slaves, purchased from Venetian and other West European slave traders, served in the armies. In Egypt, slaves from Nubia and other areas south of the Sahara joined Turks in the ranks. But in most Islamic states, Turkish and Kurdish slaves comprised the bulk of the forces.

As the caliphs came to be weaker and more ineffectual in the late eighth century, the caliph's chief official, the vizier, emerged as the actual commander of the slave troops. The office of vizier came to be hereditary in a few Persian families, eventually being held by the Buyids of southern Persia. The Buyids recruited a new slave force of infantry stiffened by slave cavalry from the Ghaznavid region of Afghanistan. In 1055 CE, the Seljuks, a new Turkish group, defeated the Buyids. After 1000 CE, Muslim Turkish-ruled states continued to recruit slave soldiers until the early nineteenth century.

—Marco Demichelis

Bibliography

Clarence-Smith, W. G. *Islam and Abolition of Slavery*, London: C. Hurst, 2005.

FAMILIES OF TURKISH SLAVE SOLDIERS

Ibrahim ibn al-Abbas al-Suli is the progenitor of the first Turkish family under the command of the Abbasid dynasty with military and administrative responsibilities. They began to be engaged in the organization of slave armies during the al-Mansur caliphate, and they reached the most important position in command during the al-Mamun reign for the level of devotion shown by his Visir, al-Fadl ibn Sahl, the preeminent caliph adviser.

The Tulunid family, of Turkish background, obtained the *wali* (government) role in Egypt after being a member of the central Asian Turkish guard, initially formed in Baghdad, and later settled in Samarra after its establishment as the seat of the caliphate by al-Mutasim. They became a vassal family of the Abbasid caliphate, establishing an independent Turkish-Egyptian army able to maintain control of Egypt, Palestine, and Syria between 868 and 909 CE. Ibn Tulun organized an army composed of Sudanese and Greek slave-soldiers. His military prowess was strengthened by his multiethnic regiments of black Sudanese soldiers, Greek mercenaries, and fresh Turkish troops from Turkestan. This specific army, in which all the soldiers converted to Islam and were compelled to learn Arabic quickly in order to understand military orders, was the model for the Ottoman slave soldier army of Janissary (new army in Turkish), the elite of the Turkish empire, which emerged during the fourteenth century when religious indoctrination and multiethnics were the main characteristic of the superiority of this army.

—Marco Demichelis

Gordon, Matthews S. *The Breaking of a Thousand Swords: A History of the Turkish Military of Samarra*. Albany, NY: SUNY Press, 2000.

Pipes, Daniel. *Slave Soldiers and Islam: The Genesis of Military System*. New Haven, CT: Yale University Press, 1981.

Early Medieval Slavery— A Global View

Slavery has existed in human societies at least since people became sedentary 10,000 years before the present. In slavery, the masters are dominant and own the slaves, who are subordinate and have no rights over their persons, property,

or fruits of their labor except as the master allows: slaves are the property of the master. In most societies, slavery was hereditary; a child of a slave was born in slavery and transmitted its slave status to its offspring.

Virtually all agriculturally based societies practiced slavery and serfdom during the early medieval age (300–1000 CE). From Christian Europe to Buddhist Japan, in China and India, in Islamic lands and in Africa south of the Sahara, among the Mesoamericans and the Andean indigenes, among the Icelandic Norsemen and the Polynesian islanders, slavery was a common and universally accepted social status.

Some slaves, almost certainly a minority, were born to slavery, but in most countries, slaves did not produce enough children to replace themselves. It was constantly necessary to recruit new slaves by purchase or capture to keep the institution functioning. One of the most common methods of obtaining slaves was through war. Prisoners of war were commonly sold as slaves, and the purpose of some military campaigns was to obtain slaves. Charlemagne's armies are reputed to have conducted wars against the Slavic tribes to capture slaves. It is no coincidence that the English word "slave" resembles the ethnonym "Slav"; the two words have a common origin. Muslim armies in central Asia are said to have paid their troops in enslaved captives, and thousands of Sogdian and other central Asian oasis dwellers were sent to Chang'an and Luoyang as slaves by the triumphant soldiers of the Tang dynasty. The Viking raids against the West European coastlands were conducted largely to capture slaves; the Norsemen who settled Iceland brought so many Irish slaves to the new settlement that the DNA of modern Icelanders reveals a substantial Celtic biological inheritance. Musa ibn Nusair, the Arab conqueror of Spain, is said to have brought to Damascus in his triumphal train 25,000 enslaved Visigothic maidens.

Slaves were one of the principal commodities traded on the Silk Roads, the trans-Saharan trade routes, and perhaps the Indian Ocean route. They were among the most common items of commerce between civilizations and cultures. China during the Tang dynasty and the Umayyad and Abbasid caliphates, the wealthiest centers of economic activity, were the principal destina-

tions of the slave trade. Scandinavian freebooters regularly brought Slavic captives to the markets of Baghdad and other Muslim cities, while West Europeans sold slaves in Cologne and other Rhenish markets. Many of these slaves were transported down the Rhone to Marseilles, where they were then shipped to Egypt and ports on the eastern Mediterranean. Another well-trodden route for the slave trade was by camel across the Sahara Desert. African slaves were brought north from the West African city of Aoudghost to the Moroccan city Sijilmasa, where the slaves were distributed to cities on the Mediterranean littoral. Egypt obtained African slaves from its southern neighbor, Nubia, and Iraq obtained them via the Indian Ocean trade from the Swahili cities on the East African coast. Slaves were also shipped to India from the East African coast.

The early Tang dynasty imported slaves from Korea, Parhae, the Turkish tribes on the northern frontier, and the oasis cities in central Asia but primarily from the non-Chinese indigenes in the still lightly settled and somewhat wild regions of southern China as well as from Southeast Asia. After An Lushan's rebellion, the Tang dynasty was usually too weak to obtain slaves from the north and west; in fact, during the late Tang dynasty, many Chinese were enslaved by the northern barbarians. However, slaves continued to flow from the southern regions.

Slaves were often used in agriculture and also in most other lines of economic activity. They tilled much of the land in Charlemagne's royal domain and were widely used in Islamic lands, where they were probably partly responsible for the dramatic increase in agricultural production of the Islamic agricultural revolution. Slaves were also used to construct the vastly expanded irrigation systems that were the basis of the Islamic agricultural revolution, and their work likely included digging new wells and deepening old ones and digging underground water channels and surface irrigation canals. In southern Iraq and elsewhere, slave gangs operated vast sugar plantations.

Among the most difficult jobs were those in the mines. Some free labor was used in the silver and salt mines, but often the mine owners preferred to own their labor source. Silver and copper mines in central Asia, China, and Egypt

depended on slave labor, as did gold mines in West Africa and Southeast Asia. Salt mines in the Sahara Desert used enslaved Saharan indigenes. Iron mines throughout the Eastern Hemisphere depended on slave labor, as did many of the smelters and charcoal makers.

Sea transportation, particularly in the Mediterranean, needed numerous galley slaves to man the heavy oars, as did naval vessels. Whenever there were tasks that were extremely difficult, demanding more than ordinary effort, injurious to health and sometimes resulting in early death, tasks that free people would avoid if possible, slaves were used.

Other slaves were entertainers, such as actors and geishas. Some female slaves in wealthy Muslim households were carefully trained as songstresses. Many female slaves were used in the sex trade as prostitutes. Many wealthy households had slave servants who enjoyed an enviable existence when compared with that of agricultural and other slaves and even when compared with many nominally free people cursed by poverty.

Toward the end of this era, slaves were used to man many Muslim armies. These slaves would sometimes rise to very high military ranks. Military slaves, often from Turkish tribes, would become a pampered caste and a danger to civil society.

A question arises: Was slavery necessary for agricultural societies? Could many of the difficult tasks, in which the laborer was called upon to sacrifice his well-being and even life, have been accomplished? The jury is still out on that question.

—Wilfred J. Bisson

Bibliography

- Cantor, Norman. *Civilization of the Middle Ages*. New York: HarperCollins, 1993.
- Dien, Albert. *State and Society in Early Medieval China*. Stanford, CA: Stanford University Press, 1991.
- Gordon, Murray. *Slavery in the Arab World*. New York: New Amsterdam, 1989.

Zanj Slave Rebellion in Southern Iraq

In the early medieval age, slaves were used in nearly every Eurasian society, and occasionally slaves rose up in massive rebellions. This nor-

mally happened only when large numbers of slaves were employed in brutalized working conditions. These conditions prevailed in southern Iraq in the ninth century.

Late ninth-century southern Iraq experienced an agricultural boom. A growing demand for cotton and sugar, stimulated by the expanding textile handicraft industry and consequent larger urban population of Baghdad and its environs, resulted in an acute demand for land that could be irrigated and made productive.

Wealthy Basra landowners reclaimed land by draining the salt swamps southeast of the city. To be made productive, this land required a heavy investment in labor. The burgeoning trade between Baghdad and the East African coast supplied African slaves to meet the demand for labor. Some sources report that up to half a million black slaves were imported in the ninth century. These slaves not only drained the swamps and removed the salt-impregnated top layer of soil but also worked the cotton and sugar plantations that were established on the newly opened ground.

These Africans, known as Zanj, worked in large gangs. Some labor gangs numbered 500 or more men. Working in deplorable conditions and fed very poorly, the Zanj were receptive to the call to rebel made by Ali ibn Mohammed in September 869. Ali ibn Mohammed claimed to be a descendant of the Prophet Mohammed, but he became a Kharijite, claiming that any pious Muslim, even a black slave, was qualified to be elected to the caliphate.

The Zanj Rebellion spread until it liberated most of southern Iraq and some of neighboring Iran. The Zanj built a capital named al-Mukharah on the salt flats and fielded armies that defeated the forces that Caliph al-Mutamid sent against them. Zanj forces were supplemented by numerous black troops who deserted from the caliph's army.

Some of the disaffected Shia peasants of southern Iraq also joined Zanj forces. In 871 the Zanj Army sacked Basra and later even threatened Baghdad itself. The rebels cut commerce between Baghdad and the Persian Gulf, threatening the prosperity of the caliphate.

Through the 870s, the Zanj state was independent and undefeated. The caliph's most trusted general was his brother, al-Muwaffaq,

whose forces suffered defeat after defeat at the hands of the Zanj. But in 879 its armies stiffened with new levies of Turkish slave troops, and assisted by forces sent from Egypt, the caliphate made a concerted effort to crush the Zanj Rebellion. Al-Muwaffaq, still in command, made slow progress; the Zanj stoutly defended their independence and required four years before their revolt was defeated. Step by step, al-Muwaffaq's forces pushed the Zanj back. In 881 he laid siege to the Zanj capital, building a permanent camp from which to attack al-Mukharrah. Finally, in August 883, the Zanj defenses were breached, and al-Muwaffaq's troops snuffed out the rebellion. The victorious army presented the caliph in Baghdad with Ali ibn Mohammed's head on a pike.

—Wilfred J. Bisson

Bibliography

- Nicolle, David, and Graham Turner. *Armies of the Caliphates 862–1098*. Oxford, UK: Osprey, 1998.
- Waines, David, trans. *The History of Al-Tabari: The Revolt of the Zanj*. Albany, NY: SUNY Press, 1992.

Serfdom in European, Islamic, and Chinese Societies

Serfdom was practiced concurrently in medieval societies as diverse as western Europe, the Islamic Middle East, and China. Serfs in these societies were forced laborers who were bound to the land and belonged to the lowest social classes. Serfdom was not simply an economic relationship but also provided a stable political relationship in systems of social inequality. Serfs were usually considered the property of the landlord, but not in the same way that slaves were property. Serfs differed from slaves in that they were allowed to own property and could not be sold apart from the land on which they worked. Although serfs owed their labor to the landowners, they were also usually given legal and physical protection as well as the right to use lands and common facilities provided by their lords. Although there were some differences in how serfdom worked in European, Islamic, and Chinese societies, the general framework of the serf system was very similar in each society and was central to their economic and social structures.

Scholars long believed that European serfdom emerged in the framework of what historians have traditionally termed feudalism, a hierarchical system of legal and military obligations that members of the nobility had with one another and that served as the basis for organizing medieval society. Serfs fit into this organization because they were usually tied to the lands they lived on and worked on behalf of a noble, who in turn had been granted the right to administer that land by a higher-ranking noble. It is believed that such relationships originated from older practices in the western Roman empire. The custom of patronage among the Romans, for example, was based on a system in which a stronger patron provided various types of protection to a weaker client in exchange for political and other types of support. Additionally, the reforms of later emperors made some jobs hereditary, most notably farming. With the decline of the Roman government's authority in the West, peasant farmers were forced to increasingly rely upon the local landowner for both physical protection and limited support in tough economic times. Correspondingly, landowners depended on the peasant farmers for the majority of their labor. Landowners at the time also depended on slaves, who should not be confused with serfs because the institution of slavery had much older origins and existed independently of the institution of serfdom.

Although modern scholars have rejected the notion that the broad application of the term “feudalism” to the diverse societies and economic systems of medieval Europe has any real value, the notion of serfdom as a major socioeconomic system in the Middle Ages remains unscathed. Medieval serfs typically lived in crude and simple houses on the lord's manor. They were either granted or leased a small plot of land and assigned a small share of the fields to work. Sometimes they were given farm animals and were usually granted access to the wells, ovens, and other utilities made available for collective use on the manor. In addition to the required labor performed for the lord, the serf was also required to give part of his own crop from those lands he worked for himself as payment for his rent. Other financial obligations (various fees and taxes) were usually paid in the form of sea-

sonal labor that consisted primarily, although not exclusively, of harvesting crops. In serf systems where lords and labors lived up to their responsibilities, there was no moral condemnation of the practice. The Christian Church, for example, condoned serfdom, and Christian monasteries had the most extensive holdings of serfs in medieval Europe.

In the Byzantine empire, the Farmers Laws (seventh–twelfth centuries) attempted to protect the free peasantry, but within time powerful land magnates were able to reduce many peasants to serfdom.

Islamic societies, whether based around the Mediterranean or in the Middle East, adopted and maintained varying forms of serfdom that were equally important to the social structures and the functioning of some of their economies, as they were in western Europe. Although Islam arose out of a nomadic environment where trade dominated the local economy, it spread rapidly as a result of the Arab conquests that took place from the early seventh century to the middle of the eighth century. This expansion led to the creation of Islamic societies extending from the Hindu Kush to the Atlantic coast of modern Portugal. Consequently, a variety of governmental and economic systems were necessary to meet the needs of diverse Islamic societies.

Usually a civil or military officer ruled or administered a village or town on behalf of a conquering Muslim sovereign. This centralization made it tough for serfdom to develop in places where it had not existed before but was ideal for collecting taxes in conquered villages or towns that were based around serf-type systems already in place before their conquest. Lands on which multiple serfs paid various fees and taxes directly to the lord made tax collection much easier, as the administrator could collect directly from the lord rather than from each individual peasant. As a result, it was not uncommon for Muslim rulers to leave serf-type systems in place for administrative reasons after a conquest. The Mamluks, for example, allowed the feudal-type economic system of the Druze and other remote groups of Syrians to continue unabated but with a local administrator keeping a watchful eye. Hence, the rise and expansion of Islam in the seventh and eighth centuries led to the introduc-

LIBERATION FROM SERFDOM

During the thirteenth century as European economies began to become more dependent on money rather than trade in kind or labor, serfdom began to decline in favor of various other arrangements. The text that follows is a document of manumission of a serf granted in 1278 by the Abbot of Peterborough.

“To all the faithful of Christ to whom the present writing shall come, Richard by the divine permission abbot of Peterborough and the Convent of the same place, eternal greeting in the Lord. Let all know that we have manumitted and liberated from all yoke of servitude William, the son of Richard of Wythington whom previously we have held as our born bondman, with his whole progeny and all his chattels, so that neither we nor our successors shall be able to require or exact any right or claim in the said William, his progeny, or his chattel. But the same William with his whole progeny and all his chattels will remain free and quit and without disturbance, exaction, or any claim on the part of us or our successors by reason of any servitude, forever. . . . Given at Borough for the love of lord Robert of good memory, once abbot, our predecessor and maternal uncle of the said William, and at the instance of the good man brother Hugh of Mutton, relative of the said abbot Robert; A.D. 1278, on the eve of Pentecost.”

—Andrew Holt

Source

J. H. Robinson, *Translations and Reprints from the Original Sources of European History*, Vol. 3 (Philadelphia: University of Pennsylvania Press, 1897), 31–32.

tion and preservation of serfdom in many Islamic societies throughout the Middle Ages.

In the Far East there is clear evidence that medieval societies in China also practiced a form of serfdom similar to that practiced in West European and Islamic societies. Chinese society was essentially divided between landed elites and an enormous agricultural class consisting of serfs, slaves, and free peasants. Legally Chinese serfs were free, but in reality they could be bonded to a landlord. Like serfs in the European or Islamic societies, Chinese serfs relied on a landlord for



This early medieval woodcut shows serfs plowing, illustrating the serfs' function in the medieval world: to do the manual labor essential for the sustenance of the whole society. (Ancient Art & Architecture Collection/Topham/The Image Works)

their homes, oxen to plow, various farm implements, and even fertilizer. Unlike European and Islamic societies, there were no contractual relations between Chinese landlords and serfs.

The institution of serfdom was carefully monitored by Chinese authorities, who sometimes attempted to limit its expansion because of the state's interest in taxing and exacting military service from the free peasantry. During the Northern Wei dynasty (ca. 439–534), for example, officials sought to limit the power of lords who controlled lots of land and serfs through the implementation of an equal field system of land tenure, which they believed would increase tax revenues. The Tang dynasty (ca. 618–907) also periodically used the equal field system to redistribute land to free peasants, who were then subject to taxation and military conscription.

The equal field system broke down, with the Buddhist monasteries owning large tracts of land with the peasants who cultivated it. Powerful landlords also increasingly limited the freedom of peasants, reducing them to serfdom. Later dynasties embraced the social and economic structure of serfdom, as was the case with the Song Dynasty (ca. 960–1279), and allowed it to flourish. Chinese religious authorities also held no moral reservations on the institution of serfdom, and like in Christian Europe, Buddhist monasteries had the most extensive holdings of serfs in medieval Chinese society.

That serfdom, in various forms, was practiced in societies as diverse as those of Europe, the Middle East, China, and elsewhere serves as something of a testament to its utility in the Middle Ages. Certainly seafaring peoples and nomadic traders of all cultures found less value in the tenets of serf systems, but agricultural societies with rigid social hierarchies appear to have found serfdom to be among the most suitable systems for addressing their economic and social needs.

—Andrew Holt

Bibliography

- Ashtor, E. *A Social and Economic History of the Near East in the Middle Ages*. London: Collins, 1976.
- Devroey, Jean-Pierre. "Men and Women in Early Medieval Serfdom: The Ninth-Century North Frankish Evidence." *Past and Present* 166 (February 2000): 3–30.
- Elvin, Mark. "The Last Thousand Years of Chinese History: Changing Patterns in Land Tenure." *Modern Asian Studies* 4(2) (1970): 97–114.
- Michio, Tanigawa. *Medieval Chinese Society and the Local "Community"*. Berkeley: University of California Press, 1985.
- Reynolds, Susan. *Fiefs and Vassals: The Medieval Evidence Reinterpreted*. Oxford, UK: Oxford University Press, 1994.

■ Introduction: High Culture and Popular Culture

High Culture in the early medieval age is the description of the way people in ruler's courts in the cities and in the prominent social institutions behaved. It was the

culture spread by the great universal religions. While each region had its own flavor of High Culture, in general there were only a few High Cultures in the Mediterranean-Eurasian ec-

umene. Outside of that ecumene, where the writ of the great universal religions did not run and where urbanization was not so prominent, High Cultures were less important. Mesoamerica probably had a High Culture, as possibly did the Andean civilization. Within the ecumene there were at least two Christian High Cultures, while the Muslim world was more unified with a single Islamic High Culture. Likewise, in South Asia there was a (not well-unified) single High Culture. In China and the rest of East Asia, the High Culture centered on Chinese literary culture and Mahayana Buddhism. High Culture involved more than a universal religion; it also involved manners, morals, and elite patterns of behavior.

Popular culture in the early medieval age was not mass culture because at that time, there were no mass media to disseminate it. Rather, popular culture was folk culture and developed from the folk traditions of the country people. Popular culture was preeminently village culture, although in every city there were also varieties of popular culture. There were many folk cultures, with a different one for at least each linguistic and ethnic group. Folk culture was essentially very conservative, based on the engrained traditions of the folk, which changed very slowly. Folk cultures were very resistant to the blandishments of the new universal religions adopted by the urban elites in the early medieval age. Folk culture often did influence High Culture, but almost always in the long run it was the folk culture of the villages that was most changed in the interaction between city and village.

—Wilfred J. Bisson

Bibliography

Bisson, Wilfred. *Global Connections: The World of the Early Medieval Age, 600–900 CE*. Philadelphia: Exlibris Publishing, 2003.

Johnson, Donald, and Jean Johnson. *Universal Religions in World History: Buddhism, Christianity and Islam*. New York: McGraw-Hill College, 2007.

An Age of Faith—Religion and Popular Culture in Christian Societies, 300–630 CE

With the legalization of Christianity within the Roman empire in 312, the Church entered a new age of growth. To this it brought powerful ele-

ments of both High Culture—clerical, liturgical, theological, and dogmatic—and popular belief and practice, especially those of illiterate believers. In the years before legalization Church leaders had developed educational tools for raising children in the faith and teaching converts. Yet alongside orthodox doctrine arose popular religious understandings and rituals, usually founded on formal teachings related to healing, salvation, or damnation. Many of these were developed locally, often arising from the blending of pagan and Christian practices, such as St. Augustine's mother's practice of making food offerings for her dead husband. With the great fourth-century expansion of Christianity came a wide variety of converts in all parts of the empire. Waves of converts followed the preaching of the Arian Ulfilas among the Goths and other Germanic peoples, another with the conversion of the Irish, and again with that of Frankish King Clovis in the late fifth century, later still among the Anglo-Saxons. In each case Christian preaching and liturgies had to establish themselves within ancient and deep-rooted pagan cultural systems that often altered the face of mainstream Christianity in the process. Around 600 Pope Gregory I wisely recommended that missionaries disturb



Baptism of Clovis, a manuscript illumination from the Grandes Chroniques de France. Conversion to the Catholic religion was a supreme political event, emphasizing the paramount role of religion in early medieval society. (Gianni Dagli Orti/Corbis)

➤ GREGORY OF TOURS ON THE SHRINE OF ST. MARTIN IN TOURS, SIXTH CENTURY

“Who could ever investigate or know how many miracles either constantly happen or have happened by means of the dust or the wax from that place or by means of something else that someone could take from the tomb? . . . A man was so filled with faith that he attempted secretly to remove some relic from the saint’s church; but although he often tried, he was never able, as long as he did not act for the common good. He wished to return, and during the night he came to the rope that rang the bell. He cut a small piece from the rope with his knife and took it with him. Once he returned to his home, it bestowed health on many ill people, thus there was no doubt that whoever was worthy faithfully to kiss that relic escaped illness. Saint, behold what you offer to believers who seek your protection in particular.”

—Joseph P. Byrne

Source

Gregory’s *Miracles of the Bishop Saint Martin*, quoted in Raymond Van Dam, *Saints and Their Miracles* (Princeton, NJ: Princeton University Press, 1993), 220–221.

only those parts of a society or culture that directly offended Christian sensibilities.

The process of conversion was often formalized first by mass baptisms at the order of a king or other leader, while the teaching of Christian doctrine followed only slowly. It is clear that much in the way of traditional ritualistic magic, healing, and spirit conjuring remained quite active. Popular belief systems demanded tangible instruments of power as well as access to powerful spiritual forces, and the Church slowly and not altogether successfully replaced the shamans and druids with the clergy and saints. For Germanic converts the very strangeness of the Latin language and chant may have provided the appropriate aura of holy presence. Clerics declared that the old gods were demons and drove them off by exorcism, perhaps the most powerful magic that the Christian priest had in the eyes of new converts.

Personal and communal ties to traditionally revered dates and places remained largely untouched. As had their pagan ancestors, Christian communities continued to celebrate certain days of the year, such as the kalends or first days of each year and month, with feasting, processions, gift giving, singing, and even dancing. Christian leaders, however, realigned the meanings of these popular festivals to Christian ends, rededicating them to events in the life of Jesus or the saints and adding sermons to solemnize the day. To augment the chanted scriptural psalms used in liturgies and at festivals, people wrote pagan-style hymns with Christian themes and even sang old pagan hymns, perhaps mentally applying the words to their new religion. The Church also absorbed the old pagan geography of sacred hilltops, groves, pools, wells, shrines, and even temples, which were now associated with Christian holy men and women and miracles instead of with the demonized gods or pastoral spirits. Christian churches and shrines, often occupying old pagan sacred sites, replaced the old pagan temples and shrines as venues for rituals and feasts. These structures were decorated with old motifs and symbols given new meanings: the shepherd, the bird, vines, cherubs, and fish. Reclining erotic Endymion became biblical Jonah, and glorious Apollo morphed into Christ.

The popular cult of the saints grew among the faithful, and the Church quickly capitalized on its value and strength. The saints were people in heaven blessed by God and granted powers over such annoyances as disease, political enemies, heretics, and devils. Popular during their lifetimes, after death—especially if they died martyrs to the faith—saints took their place in God’s presence and could serve as advocates for those left below on earth. As such they continued in their miraculous ways, especially when a believer specifically prayed to them and even more so when prayers were offered at their burial places or shrines. Popular shrines quickly evolved into formal churches and were staffed by the clergy, but their appeal only intensified and spread. Physical remains, or relics, embodied the holy power of the saint and were of great value to those who possessed them. While the cult of saints included prayers and hymns, it lit-

erally centered on the shrines and relics, and there began a small but steady stream of pilgrims to the holy sites. Here vendors hawked simple souvenir images, medals, ampules of oil from lamps that burned before the holy tomb, and even bags of dust that had supposedly settled on it, continuing practices previously conducted at pagan shrines.

—Joseph P. Byrne

Bibliography

- Brown, Peter. *Late Antiquity*. Cambridge, MA: Harvard University Press, 1998.
- Gurevich, Aron. *Medieval Popular Culture: Problems of Belief and Perception*. New York: Cambridge University Press, 1990.
- MacMullen, Ramsay. *Christianity and Paganism in the Fourth to Eighth Centuries*. New Haven, CT: Yale University Press, 1997.
- Moreira, Isabel. *Dreams, Visions, and Spiritual Authority in Merovingian Gaul*. Ithaca, NY: Cornell University Press, 2000.
- Van Dam, Raymond. *Saints and Their Miracles in Late Antique Gaul*. Princeton, NJ: Princeton University Press, 1993.
- Williams, Mark F. *The Making of Christian Communities in Late Antiquity and the Middle Ages*. New York: Anthem, 2005.

Christianity and Western European Cultures

Christianity was founded and developed its early forms in the eastern Hellenistic half of the Roman empire. In these urbanized, Greek-speaking, and philosophically minded regions the religion of Jesus acquired formal Scriptures and theological literature, a hierarchical clergy, structured liturgies, and an impulse to monastic asceticism. Before 312 it was a relatively minor cultural phenomenon, better known for its persecution by the Roman authorities than its influence on Roman culture. With Emperor Constantine's acceptance of Christianity after 312, the Eastern cult became a state religion (and later in the century the state religion), and both state and religion were profoundly affected. As the Roman state in the West gave way to Germanic kingdoms beginning in the fifth century, Christianity, in both its Orthodox and Arian forms, replaced Germanic

paganism as it had Roman paganism. This transformation was even more profound and long-lasting than that of the late antique empire.

In the empire Christianity's most obvious effects were seen in its impact on classical religion and philosophy. By its nature Christianity was exclusionist, denying validity to any spiritual or intellectual system other than its own. In turn, state paganism, Eastern mystery religions, and Greco-Roman philosophical schools were eliminated, although not before Christianity had absorbed elements of each: the iconography of divine rulership, liturgical details of Eastern religions, and Platonic understanding of reascent to God. Christian art owes much to its Greco-Roman matrix and proved to be the means through which late classicism was preserved. Likewise,



Baptism of Christ. Detail from the mosaic of the Dome of the Baptistry of the Arians, Ravenna, Italy, sixth century CE. Built by the (heretic) Arian Christian Ostrogoth King Theodoric, this religious structure was appropriated by the Orthodox Byzantine Exarch of Ravenna when Byzantine troops took the city in 565. (Scala/Ministero per i Beni e le Attività culturali/Art Resource, NY)

➤ A MIRACLE OF SAINT JULIAN

Gregory of Tours on the Power of St. Julian to Convert Pagans, sixth century:

“On the following night the priest also had a dream in which he saw that the images which the pagans worshipped were being destroyed by [invocation of] the divine name and were lying on the ground after being reduced to dust. Four days later when the pagans wished again to offer sacrifices to their gods, the priest sadly knelt before Saint Julian’s tomb, wept and prayed that the brightness of divine power would finally visit these pagans who were trapped in darkness, and that the blessed martyr would no longer allow his own foster children to be bound by their blindness, since he possessed the happiness of eternal enlightenment [salvation]. While the priest was praying immediately thunder rumbled, lightning bolts flashed, a storm that combined lightning and hail poured down, and everything was in chaos. The entire crowd of pagans rushed together to the shrine and knelt before the priest.”

—Joseph P. Byrne

Source

Gregory’s *Sufferings and Miracles of Saint Julian*, quoted in Raymond Van Dam, *Saints and Their Miracles* (Princeton, NJ: Princeton University Press, 1993), 168.

the Church borrowed the secular state’s administrative structure: its notion of law, its hierarchy, and its geographical expression. Thus, as the Roman state disintegrated in Europe, it was replaced by parallel, if often rudimentary, organizations: the Germanic kingdom and the Christian Church, whether Arian or Catholic.

By the era of invasion (the fifth and sixth centuries), the Church’s sacred texts, theological writings, and liturgies had been translated into Latin, a language that now had to be mastered by at least the religious elite. Since civic schools had disappeared everywhere but Italy, monasteries and clerical schools, both formal and informal, were generally the sole providers of literacy. At first this education included classical Roman authors haphazardly, but by the ninth century Benedictine education included

major authors in most genres. Monastic scribes fed the demand for copies of both sacred and secular literature by monastic and episcopal librarians alike. Thus did Latin Christianity preserve some of ancient Rome’s literary culture. The acceptance of religious imagery, specifically in sacred and liturgical books, provided Late Roman, Germanic, and Celtic artists a range of opportunities to translate their artistic traditions onto vellum and parchment. Exposure of barbarians to Italian and Greek models proved transformative, and early medieval painting emerged from the synthesis. The Church’s insistence on formal, architectural worship space dictated the design and construction of more or less permanent churches in which large numbers could congregate. Throughout the area once ruled by Rome stood the remains or ruins of buildings that proved sufficient. When the Christian leaders had the will and the resources of the local people, new structures arose, sporting arched doorways and windows and simple trestle roofs. Where Roman remains proved more inspiring, and especially during the Carolingian age, locals raised much grander buildings. Cathedral and monastic churches revived the basilica style, while Emperor Charlemagne borrowed directly from the Byzantine style on display in Ravenna, Italy.

When considering the changes undergone by the various Germanic peoples during the early Middle Ages, it is hard to overestimate the effects of Christianity. The Church suppressed pagan beliefs and practices but picked up holly wreaths, mistletoe, and Yule logs. Although the Germanic divinities Tiu, Wodin, Thor, and Freya were eradicated, they remain hidden in plain view in the English Tuesday, Wednesday, Thursday, and Friday. The Church’s reliance on literacy prompted more worldly scribes to preserve their histories and pre-Christian tales in writing, as evidenced by Charlemagne’s order to preserve Frankish traditions and the work of the Anglo-Saxon *Beowulf* poet. When contemporary poets composed, they sometimes blended Christian elements into their tales of warlords and monsters, as in *Beowulf*, or viewed the Christian story through a warrior’s eyes, as in the Anglo-Saxon “Dream of the Rood.” The legal traditions of the Burgundians, Franks, and Lom-

bards also found their way into written form, as did Charlemagne's many new laws.

Christianity's moral law is founded on Jesus's assurance that God is love and that love should be the basis for all of a person's interactions, even with those one despises. Christians were called upon to meet offenses with forgiveness rather than retribution and to meet threats with self-sacrifice rather than the sword. The Christian heaven was entered through submission and obedience to God's law, not martial glory as with Valhalla. The Germanic societies of the early Middle Ages were not prepared to recast their cultures so radically, and religious leaders struggled to reconcile the endemic violence with Christ's call. Providing material support for the (generally) peace-loving clergy and pacifist monks was one way for the violent to atone for their acts. On the other hand, the Church could, and did, condone certain acts of violence, although these were universally defined as defensive and unavoidable.

Charlemagne's cultural program, often called the Carolingian Renaissance, celebrated the inextricable tie between the Catholic Church and the Frankish monarchy. The king was served by abbots, bishops, and even the pope himself, and in turn he patronized all of them on the basis of the tremendous role they played in drawing the Frankish nation up from barbarity. Like Gregory of Tours and the Venerable Bede, Charlemagne saw that true national unity and societal unity depended on the success of the Church.

—Joseph P. Byrne

Bibliography

- Brown, Peter. *The Rise of Western Christendom*. New York: Blackwell, 1996.
- Cochrane, Charles Norris. *Christianity and Classical Culture*. New York: Oxford University Press, 1972.
- Ehrman, Bart. *Christianity in Late Antiquity, 300–450: A Reader*. New York: Oxford University Press, 2003.
- Kingshirn, William E., and Mark Vessey, eds. *The Limits of Ancient Christianity: Essays on Late Antique Thought and Culture*. Ann Arbor: University of Michigan Press, 1999.
- MacMullen, Ramsay. *Christianity and Paganism in the Fourth to Eighth Centuries*. New Haven, CT: Yale University Press, 1997.

Religion and Popular Culture in South Asia

With its first few centuries being marked by the reign of the Gupta dynasty over much of South Asia, the period from 300 to 1000 CE is marked by high levels of achievement in the areas of religion and popular culture. Many of the classics of Sanskrit literature were composed at this time, and the philosophies and practices that characterize Hinduism to the present day were consolidated and popularized. The intricate temple art, architecture, and classical Indian dance forms widely associated with Hinduism emerged at this time, as did classical Indian drama. Scholars typically regard this period as the Golden Age of India and also as the Hindu Renaissance. But it was also a golden age for Jains and Indian Buddhists, with both communities being highly productive in the development of philosophical concepts, literature, and temple artwork.

With regard to Hinduism, the beginning of this period marked the completion of the two great works of Hindu epic literature, the *Ramayana* and the *Mahabharata*. In the centuries to follow, these two epics would become the basis for numerous poems, plays, dance dramas, and works of art. Popular versions of both epics, in the vernacular tongues of the common people rather than the high Sanskrit of their original composition, were written in this period, making the stories and the lessons contained within them available to all. This was also the period of the composition of the *Puranas* (Ancient Tales) in which the deeds of the deities of popular Hinduism are recounted. Although Hinduism is typically defined in terms of adherence to the *Vedas*, it is not the primary Vedic deities, such as Indra and Agni, who are most prominent in Hindu devotional practice but rather the deities of the *Puranas*: Vishnu, Shiva, and the Mother Goddess, known by a variety of names such as Devi, Durga, Kali, Parvati, and Shakti. It was in the Classical Period that these deities assumed the prominence that they have had in Hinduism ever since.

Prior to this period, Hinduism is generally identified with Brahmanism, the early Vedic belief system centered on the ritual of sacrifice and the philosophical teachings of the *Upanishads*,

which would remain foundational for subsequent Hindu traditions. But in the Classical Period, Hinduism comes to be marked by devotional traditions centered on the worship of the popular Puranic deities: Vaishnava traditions centered on devotion to Vishnu and his various incarnations (most prominently Rama and Krishna), the Shaiva traditions centered on devotion to Shiva, and the Shakta traditions centered on devotion to the Divine Mother. The practice of devotion, or *bhakti*, becomes absolutely central to Hindu spirituality at this time, in contrast with the earlier Brahmanical traditions, which emphasize the correct performance of ritual action (karma) or the attainment of a higher knowledge (*jñāna*). Though the philosophy of *bhakti* is articulated in the *Bhagavad Gita*, a dialogue contained in the *Mahabharata*, and the *Shvetashvatara Upanishad*, composed before this period, it is at this time that *bhakti* emerges as a widespread popular practice that has a major impact upon Indian culture. Cultural expressions of *bhakti* that become prominent at this time are poetry, song, dance, drama, sculpture, and temple architecture.

Bhakti is closely connected to the aesthetic philosophy of *rasa* (taste), which seeks to evoke an intense emotional experience of beauty. The composers of *bhakti* poetry and literature and the artisans and architects of this period fuse the aesthetic and the spiritual, utilizing the experience of beauty evoked by their art to direct the emotions of their audience toward the divine.

In a related development, a movement known as Tantra emerges during this time, rising to prominence in the eighth century CE. Tantra takes the fusion of *bhakti* and *rasa* to a new level, systematically employing sensory experience to enable the practitioner to transcend the realm of the senses. Tantric practices and artworks that emerge at this time include the mantra, the yantra, and the mandala. Mantras are sacred verses that can be chanted aloud or meditated upon silently. The sound of the mantra is believed to purify, and chanting or meditating upon it can induce an altered state of consciousness.

A yantra is a geometric design that is an abstract representation of a Hindu deity, usually the goddess Lakshmi. A mandala, similarly, is a geometric design that depicts the sacred cosmos,

made up of various layers or levels of spiritual realization, with the highest stage of enlightenment being depicted at the very center of a series of concentric circles. The mandala is chiefly associated with Buddhism, and Buddhists were prominent in the development and popularization of Tantric practice, exporting it to regions such as Tibet and Nepal.

In addition to the Buddhist participation in and contribution to Tantra, the major developments in Buddhist thought of this period include the Yogachara, or Practice of Yoga, system, according to which the true nature of reality is pure consciousness, and the Buddha Embryo or Buddha Nature doctrine, according to which all beings, being of the nature of pure consciousness, have the potential for enlightenment, which is simply the realization of one's true nature through the purification of the mind. Both of these ideas would have a profound influence on the Zen tradition, when Buddhism was finally transmitted to Japan. They would also influence Hinduism near the end of this period, as they were adapted to Brahmanical thought in the early ninth century by the great Hindu thinker Shankara in his development of Advaita, or non-dualist Vedanta, though this is a controversial claim given the charge of Shankara's Hindu critics that his philosophy is merely Buddhism in a Hindu guise.

Finally, the Jains were as culturally active as Hindus and Buddhists during this era. Some of the most striking Jain temple art in India was fashioned during this period. It was also during this time that some of the greatest Jain philosophers, such as Akalanka, Samantabhadra, and Haribhadrasuri, composed their works, developing the distinctive Jain philosophy of relativity, which sees all philosophical systems as having some insight into truth.

—Jeffery D. Long

Bibliography

- Basham, A. L. *The Wonder That Was India*. New York: Picador, 2004.
- Doniger, Wendy. *The Hindus: An Alternative History*. New York: Penguin, 2009.
- Keay, John. *India: A History*. New York: Grove, 2000.
- Long, Jeffery D. *Jainism: An Introduction*. London: I. B. Tauris, 2009.

- Robinson, Richard H., Willard L. Johnson, and Thanissaro Bhikkhu. *Buddhist Religions: An Historical Introduction*. 5th ed. Belmont, CA: Wadsworth Publishing, 2005.
- SarDesai, D. R. *India: The Definitive History*. Boulder, CO: Westview, 2008.
- Thapar, Romila. *The Penguin History of Early India: From the Origins to AD 1300*. New Delhi: Penguin Books India, 2002.

Religion and Popular Culture in Japan

In many ways, the developments in religion and popular culture in Japan from 300 CE to 1000 CE reflect the transformations that accompanied Japan's transition from a society of localized rule based on kinship relations to a state centered on a heavenly sovereign and administered by an organized bureaucracy. In other important ways, however, religion as realized in the popular culture of lay believers outside of officially sanctioned temples and shrines often reveal movements independent of this shift toward centralization. Religion in popular culture draws from Japan's rich tradition of indigenous beliefs that developed over time and within numerous geographic settings. The introduction of Buddhism to Japan by Korean monks in the middle of the sixth century injected an already vibrant religious landscape with new ideas and practices. Religious life in Japan would develop into a unique culture combining diverse traditions.

The appearance of large burial mounds, or *kofun*, in the late third century corresponds to the rise of unified rule in the Yamato area. These mounds were built as graves for powerful leaders. *Kofun* construction spread throughout Japan in the fourth century, peaked in scale and importance in the fifth century, and continued into the seventh century. Issues of succession most likely dictated many of the rituals surrounding *kofun*. Furthermore, archaeological evidence suggests that ritual acts to keep evil spirits away played a prominent role in burial practices.

Belief in local deities, known as *kami*, formed the center of religious belief in ancient Japan. The term *kami* covers a broad range of meanings

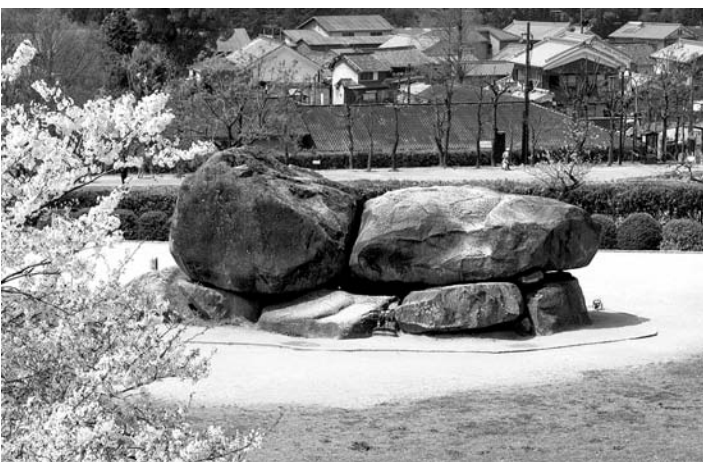
➤ REEVALUATING KUKAI

The Buddhist priest Kukai (774–835) is without question one of the most popular religious figures in Japanese history. Traditionally, Kukai has been credited as the founder of the Shingon sect. In this standard narrative, the Shingon sect represents a rupture with Nara institutions and the beginning of a new age. However, recent scholarship by Ryuichi Abe reinterprets Kukai's significance. Abe claims that Kukai contributed to religion in Japan not as the founder of a sect but rather by establishing a new form of esoteric discourse. Although traditional scholarship portrays Kukai as rejecting Nara Buddhism, Abe argues that Kukai was able to succeed precisely because he cooperated with existing institutions. In particular, Kukai brought back esoteric Buddhist concepts such as mantra from China and used these concepts to create a theory of language that allowed the existing clergy in Japan to understand their own texts in a new way. In other words, Kukai gave the existing institutions the tools to unlock the secrets to teachings that previously had been beyond the scope of their understanding. Furthermore, this Buddhist discourse came to replace the Confucian discourse of the existing political system. The clergy, who formerly existed under the control of the state bureaucracy, was able to take responsibility for maintaining the cosmic order and for legitimizing the rule of the emperor. In these ways Kukai shaped the political and religious landscape of Japan for centuries to come.

—Bryan Lowe

including deities tied to natural phenomenon such as the sun and the wind, demons, and animistic spirits; deities from creation myths; and tutelary deities. In some ways, *kami* and *jindo* (the reading of the characters Shinto prior to the fourteenth century) have been defined as any non-Buddhist deity. Even this broad definition is problematic because the relation between *kami* and Buddhist deities has been renegotiated time and time again throughout Japan's history. It is best to understand the concept of *kami* as fluid and existing only in relation to a particular historical context.

Early beliefs viewed *kami* as unpredictable and malevolent. For this reason, people



Ishibutai kofun in Asuka, Japan, seventh century CE. This is the largest burial cave in Japan, with stones weighing up to 75 tons. The mouth of the crypt was uncharacteristically left uncovered as a rebuke to the sometimes hated Emperor Soga-no-Umake, who had imposed taxes thought to be extortionate. (Yoshitsugu Nishigaki/amanaimages/Corbis)

worshipped *kami* in order to prevent natural disasters and disease thought to be caused by the violent manifestations of *kami*. Both mountains and the sea became associated with *kami*, and some of the earliest altars have been found at mountain passes and on islands between Japan and Korea. Many scholars speculate that these island altars arose to protect against disease entering Japan from the Korean peninsula. Although it is difficult to assess the validity of this claim, it is easy to imagine the desire to appease wrathful *kami* residing in rugged mountain passes and perilous seas. By the sixth and seventh centuries, however, *kami* had become closely associated with local clans, with many clans adopting tutelary deities.

The popular spread of Buddhism in Japan brought about an abundance of unique religious expressions. One popular movement was mountain ascetic practices. These practices were diverse, but many incorporated both Buddhist and non-Buddhist elements. There is some debate over the extent to which thaumaturgic ambitions drove practitioners to asceticism, but there can be little doubt that many privately ordained monks set out for arduous practices in remote locations with the hope of gaining magical powers. In addition, practices such as divination, healing, and shamanism colored Japanese religious beliefs.

One illuminating source with which to view Buddhism as a living religion containing these diverse elements is the ninth-century collection of tales titled the *Nihon Ryoiki*, written by the monk Kyokai (or Keikai). Many of these tales focus on strange and wondrous stories, such as ones that recount faithful and diligent believers flying up to heaven and greedy and deceitful Buddhist antagonists suffering twisted mouths and painful rebirths. However, there is a method to the madness of these narratives. These tales communicate the laws of karmic causality and the Buddhist doctrine of the six paths of rebirth. In other words, Kyokai aims to elucidate the rules that govern even the most inexplicable events. In this way, the *Nihon Ryoiki* represents a logical description of the world. In addition to discussing the basic laws of karma, Kyokai also describes devotion to individual bodhisattvas such as Kannon, faith in the Lotus Sutra, and tales of ascetic monks.

The Buddhist landscape of the Nara (710–784) and early Heian (794–1185) periods is often associated with rites aimed at protecting the state, but beginning in the Asuka (ca. 500–710) period, local clans also became strong patrons of Buddhism, building clan temples and inviting monks to stay in their homes. Additionally, local groups of believers known as *chishiki* engaged in Buddhist activities such as sutra copying independent of the state. Finally, in the tenth century there was a rise of popular Pure Land preachers such as Kyoshin and Kuya who emphasized relying on Amida for rebirth in the Pure Land. In these ways, Buddhism was not only a religion that provided spiritual protection for the state but also played an important role in the private sphere. These Buddhist and non-Buddhist elements that appeared between the years 300 CE and 1000 CE would continue to shape the religious landscape of Japan for centuries to come.

—Bryan Lowe

Bibliography

- Bowring, Richard. *The Religious Traditions of Japan, 500–1600*. Cambridge: Cambridge University Press, 2005.
- Brown, Delmer M. *The Cambridge History of Japan*, Vol. 1, *Ancient Japan*. Cambridge: Cambridge University Press, 1993.

- LaFleur, William R. *The Karma of Words: Buddhism and the Literary Arts in Medieval Japan*. Berkeley: University of California Press, 1983.
- Nakamura, Kyoko Motomochi, trans. *Miraculous Stories from the Japanese Buddhist Tradition: The Nihon Ryoiki of the Monk Kyokai*. Cambridge, MA: Harvard University Press, 1973.
- Shively, Donald H., and William McCullough, eds. *The Cambridge History of Japan, Vol. 2, Heian Japan*. Cambridge: Cambridge University Press, 1999.
- Swanson, Paul, and Clark Chilson, eds. *Nanzan Guide to Japanese Religions*. Honolulu: University of Hawai'i Press, 2006.

Syria under Roman Occupation, circa 300–600 CE

After Egypt, Syria was the wealthiest province of the Roman empire. In the period between 300 and 600, unlike the rest of the empire, Syria experienced an economic upswing in spite of the relative decline of its older Hellenistic cities. Because of its prosperity owing to its successful social, cultural, and economic transition through late antiquity, Syria became the heart of the Islamic caliphate immediately after the Roman rule ended in 636.

Consisting of coastal plains, the hill country, the desert, and the Euphrates Valley, Syria's geography largely determined the lifestyle of its ethnically diverse inhabitants. The coastal plains were dotted with Hellenized cities. The Jordan and Orontes rivers cut through the mountain ranges, providing water sufficient for bountiful agriculture. Farther to the east was the Syrian Desert, not a typical sand desert of Arabia but a rock and gravel steppe that receives only up to five inches of rain annually. Even farther east was the Euphrates River, surrounded by the rich black soil of the floodplains, called Roman Mesopotamia, with no natural barriers against Sassanid Persia. Syria produced wine, olives, olive oil, grain, vegetables, fruits (especially apricots and lemons), and all sorts of nuts, including pistachios. The biggest problem for Syrian farmers was water. Syria's water supply was provided by the Jordan and Orontes rivers and by numerous springs in the hills that could easily be exhausted by overuse. River valleys, especially the hills surround-



Ruins of Palmyra in present-day Syria. Palmyra was a wealthy city in Syria, one of the most prosperous provinces of the Roman empire during 300–600 CE. (Franco Pecchio)

ing the Orontes River, contained hundreds of prosperous villages with solidly built stone houses and churches, so sumptuous that the early researches mistook them for aristocratic villas. Syria, however, escaped the fate of the Western provinces, where much of the urban aristocracy escaped the declining cities by moving to their rural villas. There was continuous building activity in the cities and in the countryside, especially under Justinian. Numerous cities of the coastal plains and the hill country, namely Beirut, Tyre, Sydon, Caesarea, Latakia, Antioch, and Beroea, manufactured world-famous purple dye, glass, and linen and wool cloth as well as a variety of metalwork.

The boundary between the arable and the arid lands was also a cultural divide between the settled farmers and the nomadic tribes of the desert. The two groups looked at one another with suspicion. Inhabitants of the coastal plains, the hills, and the Euphrates Valley used the donkey as the main beast of burden. Inhabitants of the desert used the camel.

There were three main caravan routes: one going south from Damascus following the Jordan River to Arabia; one going through Palmyra, in the Syrian desert, over the Euphrates into Mesopotamia; and another, also known as the Silk Roads that began at Antioch and passed through Beroea, Edessa, and Adiabene. The road continued across the border into Sassanid Persia and beyond. The border area had an extensive system of defenses known as *limes*. Recent archaeological and aerial surveys confirmed the

extent of the border system, which was as elaborate as the Rhine-Danube frontier in the West.

Politically, Syria was a part of the diocese of Oriens (after Egypt became a separate diocese during the fourth century). The governor of the diocese resided in Antioch and had the title “Comes Orientis.” The reforms of Diocletian divided the area into Syria Prima, Syria Secunda, Syria Maritima, and Syria Lebanesis. The diocese also included the provinces of Palestina, Prima, Secunda, Tertia. The bend of Euphrates area was known by the name Transeuphratensis. The Roman governor resided in Edessa.

Syria was highly urbanized and therefore Hellenized, especially the coast and the hills surrounding the Orontes River. The largest city in the area was Antioch, also the third-largest city of the empire, with approximately 250,000 inhabitants. Antioch suffered a devastating blow from which it never fully recovered in 545 when Khosrau I (531–579), the ruler of Sassanid Persia, invaded the area. As one moved toward the plains of Mesopotamia, the Hellenistic influence would fade, cities became less prominent, and the tribal way of life dominated the nomadic and seminomadic populations. The Christian Church, especially the numerous monastic communities, took over some of the political roles of the traditional urban elites as the Hellenistic cities grew smaller in late antiquity. Syria was home to personalities as diverse as the worldly pagan Libanius, an educated rhetorician from Antioch, and the austere and eccentric monks living on pillars, whose excesses and achievements in asceticism drew crowds from all over the empire.

Religious and ethnic boundaries often intersected in Syria. The largest ethnic and religious groups were Arabs, Arameans (often called Eastern Syrians), Armenians, Assyrians (often called Western Syrians), Greeks, Jews, Manicheans, and Persians. The practice of traditional religions (paganism) persisted, especially in the countryside, well into the sixth century even though Christianity had already become the majority religion by the fourth century. The spread of Christianity outside of Hellenistic cities was helped by the development of the Syriac alphabet in the third and fourth centuries, and indigenous literature began to flourish. The first works of literature were lives of saints. A specifically Syrian institution

was the holy man, the most famous being St. Simeon the Stylite. Living on a pillar in the hill country, Simeon not only organized a substantial monastic community but also served as an arbiter of local and tribal disputes. Holy men were also occasional intermediaries between the local population and the provincial and imperial governments. A similar institution arose within the Jewish community, where miracle-working rabbis among the so-called Amoraim (rabbis of the period 200 and 600) performed both religious and social functions.

Religious practices of the general population were syncretic, with borrowings across the ethnic and religious lines. Religious leaders repeatedly criticized and admonished the faithful to maintain communal boundaries, apparently without success. The Council of Chalcedon in 451 divided the Syrian Christians. The supporters of the council came mostly from the Hellenized urban areas and were called the melkites or the imperial church. The opponents, coming largely from the Syriac-speaking rural and tribal areas, were called the monophysites. Economically prosperous but culturally divided, Syria faced the Muslim invaders, who came in 636.

—Alexander Mirkovic

Bibliography

- Brown, Peter. *Society and the Holy in Late Antiquity*. Berkeley and Los Angeles: University of California Press, 1982.
- Cameron, Averil, ed. *The Cambridge Ancient History*, Vol. 14, *Late Antiquity: Empire and Successors, AD 425–600*. Cambridge: Cambridge University Press, 2001.
- Kennedy Hugh. “From Polis to Madina: Urban Change in Late Antique and Early Islamic Syria.” *Past and Present* 106 (1985): 3–27.
- Liebeschuetz, J. H. W. G. *Antioch: City and Imperial Administration in the Later Roman Empire*. Oxford, UK: Oxford University Press, 1972.

Age Groups, Education, and Initiation in East, Central, and Southern Africa

The agricultural and pastoral peoples of East, central, and southern Africa held puberty initiation ceremonies that involved long periods of seclusion. These were a form of intense education de-

signed for the purpose of making young people productive members of their respective societies. The entire community participated in public ceremonies; mature men (fathers and grandfathers) initiated boys, while mature women (mothers and grandmothers) initiated girls.

Bantu male initiation also included male circumcision, which was practiced in Africa for more than 9,000 years prior to this era. Only in the matrilineal regions of central and East Africa had male circumcision disappeared along with male initiation by 300. Female circumcision was not usually a part of female initiation except for northeast Africa, in areas heavily influenced by Southern or Eastern Cushitic culture.

In early Bantu history groups of adolescent boys were initiated together to form what was called an age set. These age sets served to organize men in ways that transcended blood and family ties. Women who were initiated together also formed less formal age sets. At the beginning of this historical era, age sets were universal among most of the Bantu-speaking peoples except those in southern Africa and in the matrilineal belt of central and East Africa.

Age sets had almost disappeared among most Bantu-speaking people by 1000. An explanation for this disappearance may be that as some societies began to centralize, new leaders were attempting to gather support based on their blood ties with members of their own lineages. The democratizing role of age sets could have eroded their potential power base.

In the Great Lakes region Bantu-speaking peoples eliminated age sets, as did their Southern Cushitic and Central Sudanic neighbors as they moved toward political centralization. The tradition survived, however, in regions such as Kenya and northern Tanzania, where a significant presence of Southern Cushites and Southern Nilotes retained their own form of age sets.

Northeast Africa developed differently since the Southern Nilotic peoples created unique forms of cycling age sets. In this region, men advanced through two life stages. The first was called *muren*, a young man's age grade, and the second, the *payyan*, was an elder man's grade. Because it took approximately 15 years until the next age set was initiated into the *payyan* stage of life, the young men remained together during

➤ EDUCATION—AFRICAN STYLE

Education is often seen as one of the few good things initiated by colonialism in Africa. Yet Africans had education for their children over 1,500 years ago. While it may not have included European history, children were taught practical skills for survival and were also taught about their history as soon as they were weaned. Children in agricultural systems learned about weather and botany, which included understanding plant cycles. Children in pastoralist societies became experts on cattle, their care, and their diseases. Gathering and hunting peoples started training their girls from an early age to recognize at least 2,000 types of plants, fish, insects, and small animals in addition to knowing where these things were located, what time of year they were plentiful, and under what conditions they were edible. Boys learned how to stalk and kill an animal as well as fish out of canoes. Initiation ceremonies at puberty were an African form of high school graduation whereby teenage girls and boys learned about sex education, parenting, psychology, traditional medicine, and cultural traditions. Younger children sat around a campfire listening to the elders tell the histories of their ancestors, stories about social mores, and religious stories such as origin myths.

—Christine Ahmed-Saidi

this period. Their primary responsibilities were to defend their community and raid other communities for cattle. This longer period of membership in the warrior age grade increased the ability of the Kalenjin to exert military pressure on their neighbors. They were able to expand into various areas along the Rift Valley in Kenya without changing their form of democracy based on seniority.

During this era, female initiation was central to all the matrilineal societies and to most of the patrilineal societies as well. By 300 in east-central Africa the most important ceremonies for the matrifocal Bantu-speaking peoples were the two-part female initiation rituals. A young girl at puberty was secluded and taught about her history and her clan's history and how to be a productive member of the society as a wife

and a mother. This education process involved a multidisciplinary approach. Schematic drawings were painted on large rocks or cave walls, ceramic figurines possibly numbering 400 or more were used as teaching devices, and unfired clay items were used to test the young girls' strength and agility. After marriage, when the young woman felt the movement of her first child, they celebrated a final ritual because she was no longer a *yadi* but instead was an adult and soon to be a mother. By 1000 these matrifocal peoples settled large parts of Zambia and brought with them the centrality of female initiation. Their matrilineal neighbors in Malawi, Tanzania, and Congo also celebrated long and involved female initiation rituals.

While agricultural and pastoral peoples used puberty rites as the basis for intense education, the gathering and hunting societies of the region continued their own education system, which probably dated back several thousand years prior to this historical period. Women started training their daughters from an early age to recognize at least 2,000 life cycles of plants, fish, insects, rodents, and other small animals. Prior to marriage and motherhood, young girls needed to know where to find food at all times of the year in all types of weather and regardless of various climatic changes. Their scientific knowledge of plant and animal life had to be extensive, since as adults they would produce 60–80 percent of the food. The young boys, meanwhile, were taught how to stalk and kill animals and to fish out of canoes. The Khoisan painted representational rock art, and the Batwa crafted schematic rock art as aids to spiritual and social education.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Richards, Audrey. *Chisungu: A Girl's Initiation Ceremony among the Bemba of Northern Rhodesia*. London: Faber and Faber, 1982.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.

Education in the Era of Expanding Regional Civilizations

Education in literate societies in this era took several forms. The most elaborate and institutionalized school system of the age was that of China. In China there was a highly developed system of religious education, mainly Buddhist, but also a parallel system of state schools. Buddhist monasteries sometimes operated free primary schools, but they specialized more in higher learning, functioning somewhat as universities. Daoists also maintained similar institutions. Also in China, there were schools in many villages for children and adolescent boys. These schools were often partially financed by village associations or lineage groups, but almost always the parents were assessed a fee, which only a small minority could afford. In these schools the basic skills of literacy and numeracy were taught. Higher education to prepare candidates for civil service positions took place in provincial schools and also at a national university in the capital, Chang'an, or sometimes Luoyang.

In the late Roman empire, education was only somewhat less institutionalized than in China. In the Roman and Byzantine empires, as in China, elementary education was carried on in local schools, but these were by no means public and were usually supported by fees paid by the parents. In the Roman empire as in China, the wealthy often hired tutors to educate their children privately. Higher education in philosophy, law, and rhetoric during the late Roman empire was provided by special institutions, often at least partially supported by the government. These institutions were located in the chief cities. Preeminent among these were the Library at Alexandria, the Platonic Academy at Athens, and similar institutions in other cities. Classical higher education fell on hard times, however, with the triumph of Christianity in the Roman empire, especially in the fourth and fifth centuries. During these centuries and after, pagan institutions throughout the empire were closed or destroyed, including the Library at Alexandria. In 529, the Platonic Academy in Athens, the last classical institution of higher learning in the Roman empire, was forced to close by Emperor Jus-

tinian (r. 527–565), with its savants fleeing to exile in Sassanian Persia and India.

In 425, Emperor Theodosius II founded a Christian school of higher education, which evolved into the University of Constantinople. Designed to educate government bureaucrats and the higher clergy, the university did preserve somewhat the learning of classical Greece and Rome, but its emphasis was on promoting Christian orthodoxy.

The tradition of Greco-Roman science and philosophy continued at institutions in exile. In 353, a group of Nestorian scholars established an academy at Nisibus and later Edessa, Syria. There, these scholars continued the classical Hellenistic science and philosophy tradition for over a century until the intolerance of the Roman emperor Zeno drove them to seek refuge in the Sassanian empire in 489. The Sassanian emperor Khosrau I (r. 531–579) assisted them to found Gondeshapur, which became an influential institution of higher education with an attached hospital. This institution specialized in medicine and science and preserved most Greek and some Indian philosophy and science until the Muslims could absorb it in the eighth and ninth centuries.

The educational system in Muslim countries, though not nearly as institutionalized as those of China and India, helped produce a culture as uniform as that of China and more uniform than that of India. This culture extended through the whole vast territory of Dar al-Islam. Very soon after Muhammad's death, Muslim authorities recommended that Muslim boys memorize the Quran, starting as early as the age of seven (some sources say four). Boys met in the mosques to memorize, guided by a teacher. These mosque schools soon evolved into elementary schools (*maktab*), where literacy and numeracy were also taught. Secondary and higher education in religion, literature, and jurisprudence developed by a somewhat informal, noninstitutionalized system.

Students would seek instruction from shaykhs noted for their knowledge of religion and jurisprudence. These students would sit in a circle around the teacher, learning by rote the learned man's lectures. When the student had absorbed the shaykh's lectures sufficiently, he

would receive a certificate or diploma that would give him the credential to teach what he had learned. This diploma was the forerunner of the bachelor's degree in modern Western higher education. Gradually, these learning circles coalesced into regular educational establishments, which eventually grew to be madrassahs, similar to colleges in the West. One of the oldest and perhaps the first such madrassah was established in Fez, Morocco, in 859 by Fatima al-Fihri, the pious daughter of a wealthy businessman. Al-Fihri, like other founders of madrassahs and maktabas, left an endowment, or *waqf*, for the support of deserving scholars at the institution. Similarly, in 974, the Shia Fatimid rulers of Egypt founded in Cairo what is often reputed to be the oldest university in the Western world, Al-Azhar. Originally, Al-Azhar was a Shia institution, but when the Ayyubids took power in Egypt in the twelfth century, the university changed to a Sunni orientation.

Buddhist monasteries in India, China, and Southeast Asia maintained other primary schools. Some Buddhist monasteries, such as that at Nalanda in Bihar, India, evolved into renowned universities, where secular sciences as well as religious subjects were pursued. These were mainly in northern India, but the greatest was Nalanda. Nalanda was perhaps the largest and most important institution of higher learning of the era. With over 10,000 resident students, its fame reached throughout India, Southeast Asia, China, Korea, and Japan. It was a focus of Buddhist pilgrimages from all of South and East Asia. Nalanda's preeminence endured from the fifth century until its destruction in 1193 by Muslim invaders.

Throughout India, Brahman teachers conducted schools in their homes, and Hindu mathas conducted schools of higher education for more advanced study of Indian philosophies and religious studies. In nonliterate civilizations, little can be said about the forms of education that were specific to this era.

—Wilfred J. Bisson

Bibliography

Altekar, Anant Sadashiv. *Education in Ancient India*. Varanasi, India: Nand Kishore and Brothers, 1965.

Benn, Charles. *China's Golden Age: Everyday Life in the Tang Dynasty*. Oxford, UK: Oxford University Press, 2002.

Buckler, Georgina. "Byzantine Education." In *Byzantium: An Introduction to East Roman Civilization*, edited by Norman G. Baynes and H. S. L. B. Moss. Oxford, UK: Clarendon, 1962.

Muslim Education before 1000 CE

Before 1000 CE throughout the Islamic world, Islamic education presented an easily recognizable face. In spite of there being no centralized governmental or religious authority charged with maintaining education, there was a ubiquitous system with a high degree of uniformity. While boys were the usual students, there is evidence that some girls were educated, at least in the primary literary subjects. What we know of this system is derived primarily from the lives of scholars, so it may be biased toward displaying their preparation as the norm.

This system was composed of a normal course of study, common schools, and teachers. The types of schools and patterns of education were as follows. From age 5 or 6 to 14 a boy went to a school, known as a *maktab* or *kuttab*, that was not located in a mosque and was more than an elementary school for reading and writ-

ing, although that is what the name implies. After learning the fundamentals of reading, writing, and reciting, a student of ages 15 to 18 could move on to the mosque-based school, the *masjid*, that had been in existence as early as the eighth century and that taught *Adab*, the literary curriculum, and the Islamic sciences. In these schools, instruction in the literary sciences (grammar and poetry) necessarily preceded the study of the religious sciences (Quran, Hadith, and *fiqh* or jurisprudence), including some training in elementary logic and mathematics. There were circles of scholars and pupils (Arabic: *balqa*), and learning progressed to the advanced subjects. Finally, a student could study to become a scholar at one of the places for higher education where scholars could be found: libraries, bookshops, and literary salons, known variously as *bayt al-bikma*, *dar al-bikma*, *dar al-ilm*, etc., or simply called *majlis*. Alternatively, a young student could attach himself to a scholar for independent instruction. A good deal of this higher study consisted of reading the classical Greek mathematicians and philosophers in their Arabic recensions.

An enlightening, personalized description of this phenomenon is seen in Ibn Sina's *Autobiography*. This precocious student interested in philosophy learned reading and writing at home, where at age 6 his education continued under a tutor who taught him the Quran and Arabic literature; he was also sent to a greengrocer to learn arithmetic. Next he studied Islamic jurisprudence (*fiqh*) and began to study philosophy somewhere between the ages of 10 and 16. The only significant variation from the ordinary pattern is that Ibn Sina's father brought tutors to his house rather than sending his son to a school; this is simply a result of his social class. His story accords well with Islamic education as it was practiced everywhere in the Islamic world.

One peculiarity of the Islamic system was its international character. This was possible because of the relative uniformity of the educational system. A student from Islamic Spain who had received his primary education and learned some rudiments of logic was ready for the study of Hadith and *fiqh* in Cairo, Damascus, or Mecca. Those who desired higher education in the Islamic religious sciences often completed a grand



Al-Azhar Mosque and university in Cairo, founded in 972 CE. Al-Azhar was one of the first Muslim universities. Begun as a Shia institution by the Fatimids, it became a center of Sunni orthodoxy under the Ayubids. (Paul Cowan)

tour of the educational centers of the eastern Islamic world (Cairo, Mecca, Medina, Baghdad, and Damascus), gaining certificates (*ijazat*) in reading the classics of one or more of the Islamic sciences with noted teachers. While there were particular differences in legal opinion between the so-called schools of law, regardless of the school a student needed the same preparation to succeed in the study of it.

When one reads the lives of scholars, it is clear that unlike in our world the people with whom they studied are discussed, and there is almost no mention of the places in which they worked. Here we find that the norm was relational rather than institutional. In other words, the main way that a student acquired knowledge of philosophy, science, mathematics, and astronomy was by attaching himself to a teacher and reading the standard books under his guidance rather than going to a school.

While there were not degrees per se, scholars (*‘ulama*) were highly regarded and respected members of the community. Local rulers would compete to have the finest scholar they could get teaching in their capital.

—Michael C. Webber

Bibliography

- Berkey, Jonathan. *The Transmission of Knowledge in Medieval Cairo: The Social History of Islamic Education*. Princeton, NJ: Princeton University Press, 1992.
- Chamberlain, Michael. *Knowledge and Social Practice in Medieval Damascus, 1190–1350*. Cambridge: Cambridge University Press, 1994.
- Gutas, Dimitri. *Greek Thought, Arabic Culture*. London: Routledge, 1998.
- Halm, Heinz. *The Fatimids and the Traditions of Learning*. London: I. B. Tauris, 1997.
- Nakosteen, Mehdi. *History of Islamic Origins of Western Education*. Boulder: University of Colorado Press, 1964.

Education in Early Medieval South Asia

Education in early medieval South Asia was closely tied to the institution of caste as well as to the monastic institutions of religious traditions, such as Buddhism. Although caste, as an institution, has fallen into disrepute in the mod-

WERE THERE UNIVERSITIES IN THE MEDIEVAL ISLAMIC WORLD?

Recent scholarship has focused attention on the character of higher education in the Islamic world and has opened a debate on the question of the nature and function of the *bayt al-hikma* of Baghdad. In older books there is generally a celebration of it as the precursor of the modern university. However, what we think of as a modern university existed nowhere before 1000. This shadowy institution carried out nothing like a university mission. Instead, it seems to have been a library complex where book acquisition, preservation, and study occurred. Such places seem to have existed in all the major cities of the Islamic world as early as the Umayyad caliphate.

This does not mean that there were no institutions for higher learning; however, the main goal of institutional instruction was in the religious sciences. While some secular educational institutions for higher education did exist, most were created after the end of the first millennium CE. Among them, in medieval Cairo there was a *dar al-‘ilm* created in 1005 CE under royal patronage dedicated to providing a place and means to higher study of secular subjects.

—Michael C. Weber

ern period due to the restrictions that it imposes on individual mobility and the social prejudices that have come to accompany it, the castes in early medieval South Asia were akin to trading guilds: highly specialized communities centered on particular occupations with highly valued knowledge and skills unique to themselves. Knowledge of specific occupation-related skills was passed from one generation to the next through the caste system: mining, metallurgy, weaving, dyeing, carpentry, and so forth. This system of highly specialized education led to a very high degree of development across a wide range of technologies, especially in engineering, minting, stonecutting, polishing, and carving.

More generalized forms of knowledge, such as writing, grammar, mathematics, medicine, and astronomy, were passed on, typically by Brahmins, in special schools, or *pathashalas*, typically reserved for young upper-caste males,

THE GREAT BUDDHIST UNIVERSITY AT NALANDA

Buddhist educational institutions were the ancient Indian equivalent of contemporary Ivy League universities. All fields of knowledge were taught, along with Buddhist systems of philosophy and meditation. Some of the major works of Buddhist philosophy were composed at Nalanda, which was also visited by the Chinese Buddhist pilgrim Xuanzang, who traveled to India in the seventh century CE to retrieve primary Buddhist texts. At one time, these ruins were swarming with students from all over South Asia who came to receive the knowledge for which this institution was famous.

—Jeffery D. Long

though this knowledge was also made available by ascetics from non-Brahmanical traditions, such as Buddhist and Jain monks. It is also evident that not all Brahmins uniformly held restrictive attitudes about the sharing of knowledge, as some orthodox Brahmanical texts would suggest.

Though the practice of medicine was generally seen as a low-caste profession due to the inevitable contact with polluting substances, such as blood and internal organs, that it involves, authors of works on medicine were often accorded Brahmin status. Among the important Sanskrit works on medicine that were composed and used during the early medieval period in India are Charaka's work on the medicinal value of certain plants and Sushruta's work on surgery, the latter of which is surprisingly sophisticated for an ancient work, including detailed accounts of successful brain surgeries (carried out in order to relieve pressure). Evidence suggests that Indian medicinal knowledge of herbs reached Europe, particularly the *History of Plants* by Greek botanist Theophrastus, which describes their usage.

Similar knowledge, contained in Sanskrit works, is evident in the fields of mathematics and astronomy (which was not distinguished from astrology, as was also the case in Europe during this period). The work of the Brahmin Aryabhatta is particularly distinguished in this regard. It was in India that the decimal system was first developed. With the invention of the zero, the calculation of very high numbers was

made possible, and it has also been speculated that the vast age and scale of the universe found in Indian religious texts—comparable to that revealed in modern astronomy—was a direct outcome of this invention. The so-called Arabic numerals and algebra, both of which were made known to Europeans through their interactions with Islam, are actually Indian inventions.

Linguistic knowledge, focused specifically on the intricacies of Sanskrit grammar and pronunciation, was also a highly developed field from an early date. The grammars of Panini and Patanjali, both of which were composed before the Common Era, displayed a highly sophisticated grasp of linguistic principles and became the standard guides to classical Sanskrit usage.

The strength of the Brahmins in linguistics, mathematics, and astronomy is due to the importance of these fields in the ritual performance of Vedic ceremonies. The correct use of Sanskrit was essential to the chanting and recitation of the Vedas in ritual contexts. Mathematics, particularly geometry, was important for the construction of the altars used in Vedic ceremonies. And astrology is used even today to calculate auspicious times for events such as weddings, the starting of a new business venture, the building of a house, and so on.

In early medieval South Asia, Buddhist universities had the advantage over most Brahmanical learning of being available to anyone interested in learning, with caste being no bar to education. Major Buddhist centers of learning, such as Takshashila (Taxila) in the far northwest and Nalanda and Vikramashila in the eastern half of the Ganges Valley, were the Harvard and Princeton, the Oxford and Cambridge, of ancient India. Even non-Buddhists sent their sons to these universities to receive training in general knowledge, such as literature, grammar, mathematics, and so forth. Brahmanical learning was made available at these institutions as were such topics as Buddhist philosophy and Buddhist meditation, for many Brahmins had become converts to Buddhism from an early stage of the history of the tradition. Buddhist philosophical and dramatic works were composed in Sanskrit, the elite language of classical learning in India up to the modern period, and students were trained in the whole range of ancient Indian knowledge.

Most education in early medieval India was centered upon men. This is true of the knowledge of trades, passed on through the castes, the Brahmanical knowledge taught at the *pathashalas*, and the curricula of the Buddhist universities. Though there is some evidence that, at an early period, Brahmanical education was available to women and there were also Buddhist educational institutions for women (Buddhist nuns), women were primarily educated at home by their mothers and other female elders in the local community, and this education was mainly focused on traditional family responsibilities.

—Jeffery D. Long

Bibliography

- Basham, A. L. *The Wonder That Was India*. London: Picador, 2004.
- Embree, Ainslie T. *Sources of Indian Tradition*. New York: Columbia University Press, 1988.
- Thapar, Romila. *The Penguin History of Early India: From the Origins to AD 1300*. New Delhi: Penguin Books India, 2002.

Education in Europe

In the fourth and fifth centuries formal education in the Roman empire retained the forms and content developed during previous centuries. Local authorities supported grammar schools in Latin in the west and Greek in the east, private tutors served the children of the elite, and teachers of philosophy and rhetoric provided advanced training for young men interested in scholarly and public careers. Christian leaders in both the east and the west accepted the importance of classical education as a foundation for clear thinking and eloquent expression, ensuring that the tradition would survive.

Survival was most evident in the Byzantine empire, where elementary and secondary students first mastered Greek and then the Greek poets, especially Homer. Elements of mathematics and some natural philosophy rounded out the basic curriculum. Higher education continued to focus on rhetoric and philosophy and was institutionalized in the School of Constantinople, founded by Theodosius II in 425. Schools established by the patriarch of Constantinople in the

HRABANUS MAURUS ECHOES ST. AUGUSTINE ON RHETORIC AND EDUCATING THE CLERGY, CIRCA 850 CE

“Rhetoric is, as the ancients have told us, skill in speaking well concerning secular matters in civil cases. However, though this definition does apply to earthly knowledge, the topic is not for that reason foreign to ecclesiastical discipline. After all, any orator or speaker who wishes to treat the divine law adequately and skillfully in his teaching, or one who wishes to compose a literate and polished statement needs this skill; nor should one be considered a sinner who studies the art at the proper time. . . . The fact is that he is doing something very worthwhile if he studies it diligently so that he may be fitted to preach the Word of God.”

—Joseph P. Byrne

Source

Joseph Miller et al., eds., *Readings in Medieval Rhetoric* (Bloomington: Indiana University Press, 1973), 125–126.

seventh century provided basic classical learning blended with theological training designed to prepare men for ecclesiastical careers. Although the founders of Orthodox monasticism tended to be accepting of humanistic studies, Greek monasteries early on abandoned a broad secular curriculum for language mastery directed toward scriptural and theological scholarship.

In the western empire education withered during the German invasions and collapse of classical society of the fifth and sixth centuries. While Ostrogothic Italy retained some of this Latin heritage, in most areas it was relegated to monastic settlements where command of Latin was necessary for Bible study and the Divine Office. Western monastic founders such as Benedict assumed literacy among the brothers, but soon it became clear that training had to be provided within the monasteries, and monastic schools—along with some other clerical schools—remained the only repositories of formal Latin literary education. By the eighth century the liberal arts provided a basis for religious studies in Benedictine schoolrooms, and Anglo-Saxon scholar-monks such as Bede and Alcuin

of York were the best-educated men of their generations. Alcuin went on to work as a scholar-in-residence at the court of Charlemagne, ruler of a Frankish kingdom whose leaders at least dimly understood the value of the classical tradition and did much to preserve it. With the disruptions by Vikings and others in the ninth century, literary education in western Europe was again nearly extinguished.

Western and southern Slavs and the Irish had remained outside the direct control of the Roman empire, but both cultures were transformed by Christian missionaries who transmitted, respectively, the Greek and Latin religious traditions. Both required literate clergy and monks, so education in at least basic literacy developed. From the fifth century Irish monasteries taught Latin, but Irish scholars tended to apply it directly to Scripture and theology rather than the broader classical arts. By the sixth century Irish monastic missionaries were traveling about northern Europe replanting the seeds of Christianity and literacy that their ancestors had received from the continent. In Slavic lands ninth-century Byzantine missionaries developed spoken Slavic vernacular into written languages and translated Scripture for the people. Here, as in early medieval western Europe, education remained largely in the hands of the Christian Church. In tenth-century Rus, however, literacy followed the conversion of the rulers and quickly penetrated downward, as testified to by large numbers of birch-bark letters by literate laity in Novgorod.

—Joseph P. Byrne

Bibliography

- Begley, Ronald B., and Joseph Koterski, eds. *Medieval Education*. New York: Fordham University Press, 2005.
- Ferzoco, George, and Carolyn Muessig, eds. *Medieval Monastic Education*. Leicester, UK: Leicester University Press, 2000.
- Riché, Pierre. *Education and Culture in the Barbarian West: From the Sixth through the Eighth Century*. Columbia: University of South Carolina Press, 1978.
- Sullivan, Richard E. *The Gentle Voices of Teachers: Aspects of Learning in the Carolingian Age*. Columbus: Ohio State University Press, 1995.

Education in China

Education is one of the most fundamental parts in Confucianism. In *The Analects*, a collection of homilies attributed to Confucius, it is said, “In teaching, there should be no distinction of classes.” In China, from the emperor to a common peasant, everyone recognized the importance of education. Basic education was most often completed in private schools, such as *si shu* (the private primary schools), *yi xue* (charity schools), and *shu yuan* (private academies of learning). Imperial school offered higher education. Guo zi jian, in the capital, was the central university for Chinese and foreign students. The civil service examination was used as one of the methods to select officials.

The private academies have existed in China through the centuries ever since the days of the Spring and Autumn periods (770 to 475 BCE) and flourished in the Han dynasty (206 BCE to 220 CE). Generally, when a boy was three years old his parents would invite tutors to teach him at home. Later he would be sent to *si shu* in the village. Otherwise, there were also *yi xue* in many temples and monasteries. They offered free courses to the public so that the children from poor families also had chances to study. Education differed for women and men. Women were educated in their families and rarely attended public schools. They were principally taught feminine virtue. Some women in rich families had opportunities to learn literature, history, calligraphy, music, and stitch work, among other subjects.

Shu yuan was a unique education form in traditional China that started during the Tang dynasty. Unlike public school, *shu yuan* was a kind of private school organized by outstanding scholars. It underwent rapid development in Tang and flourished in Song, the following dynasty, and persisted until the beginning of the twentieth century. It is estimated that there were about 30 such academies in the Tang period, and the number rose to more than 1,900 by the Qing period (1644–1911). In 717 CE Emperor Xuanzong called for scholars to collect and edit books all over the country. The next year, the imperial library was named *shu yuan*. Later on,

THE CHINESE CLASSICS, EDUCATION, AND GOVERNMENT SERVICE

The major texts for the civil service examination were the *Four Books* and the *Five Classics*. The *Four Books* includes *The Analects*, *Mencius*, *Great Learning*, and *The Doctrine of the Mean*. The *Five Classics* are the *Classic of Poetry*, the *Classic of History*, the *Classic of Rites*, and the *Classic of Changes*, *Classic of Spring and Autumn Annals*. There were many other texts used to adjust different requirements in different periods. After 690, the Tang dynasty empress Wu formally introduced the palace examination, and it became the last hurdle for examination candidates. They might face and have an interview with the emperor directly. The emperor would give the candidates political questions with bamboo slips, and the candidates would answer them with bamboo slips called *ce wen*.

Although many Tang officials were not selected from examinations, in subsequent dynasties the civil service examination developed as the most important avenue for attaining an office. Biennial licensing tests and triennial qualifying tests were regularly held in counties to choose eligible candidates for the triennial provincial examinations that were held once every three years. Then there would be the metropolitan examination held in the capital. Finally, a small percentage of graduates

could take palace examinations hosted by the emperor. Hanlin Academy is the government institution in charge of supervision of provincial, metropolitan, and palace civil examinations.

The civil service examination was a degree system. Candidates who passed a certain level of the exam would be given corresponding title and rank. Those who passed the provincial-level examinations were awarded licentiate degrees, which made them eligible for appointment at the lowest rank. Those who passed the upper level of examinations at the capital were awarded doctoral degrees. The top one finisher in palace examination was called *zhuang yuan*. In today's China, when a Chinese student receives the top score in an examination, he or she will be praised as *zhuang yuan*. And before some important examinations, the parents will buy *zhuang yuan* cake for their children for good luck.

However, the civil service examination was weakened in the late eighteenth century. Some scholars saw it as an obstacle that was holding China back from modernizing. The civil service examination lasted 1,300 years and was abolished in 1905.

—Yiran Zheng

more royal *shu yuan* were established in the capital city (Chang'an or, later, Luoyang). In one of them, *ji xian dian shu yuan*, the collection reached 53,915 volumes. *Shu yuan* was not just a library but was also an institution that elected scholars and gave political suggestions to the government. Afterward, scholars outside the palace adopted this name. At first, intellectuals called their own houses of book collection *shu yuan*. *Shu yuan* were usually located in beautiful scenic places near mountains, rivers, and bamboo fields and intentionally pursued a natural environment different from the mundane world. Later on, some scholars also taught students or gave lectures. As a consequence, *shu yuan* turned out to be a private academic place for learning. In wartime when the public schools were damaged, the private academies of learning were necessary amendments of the education system.

At the very beginning of Tang (618 CE), the government maintained central educational institutions. At the regional level there were county and prefectural schools, which were all financed by the state. In the capital city there was a central university for higher education called *guo zi jian*. In previous dynasties official schools were open only to the gentry. Beginning with the Tang dynasty, official schools became available to common people. However, people needed to pass certain exams and attain the lowest academic degree first. In schools, students studied history, literature, calligraphy, mathematics, medicine, and so on. In the central university students might be recruited to certain majors and could earn a doctoral degree in seven years. Every ten days, every month, and every year, the students in *guo zi jian* needed to pass a test so that they could continue to study. In the early Tang the number of students in *guo zi jian*

reached 3,000. During the Tang dynasty there was a great number of students who came from Japan, Korea, and other countries.

The civil service examination was the earliest completed examination system in the world. It tested both learning and intellectual acuity by a series of exams. Its original and basic purpose was to select the proper bureaucrats for the imperial government. This exam system was constructed in 606 CE in the Sui dynasty. In 622 the Tang emperor Gaozu announced that the exam was open to the public and that all educated people were free to take it. The candidates included both students who studied in local schools and students who were educated at home. When the first emperor Li Shimin saw students coming into the exam court, he said excitedly, “All the heroes under the sky are in my pocket!” To enter officialdom, the candidates would undergo both literary examinations and character evaluations. A person’s level of appointment would be determined by his performance during this process, including deportment, eloquence, calligraphy, and legal knowledge. In 702 CE Empress Wu Zetian, the only female ruler in Chinese history, constituted the other exam system for selecting military commanders. They were required to meet the physical qualification. At the same time, they were tested in horsemanship, the skills of archery, and using other weapons as well as in the art of war.

This examination system was not only an effective method to select bureaucrats for intellectuals but was also the ladder to success. Many

scholars pointed out that in traditional Chinese society entry into the ruling bureaucracy was the final goal for every man. Aside from civil service examination, it was hard for individuals to gain prominence and demonstrate their creative energies. Since the exams were open to the public and, to a large extent, were fair, they encouraged individuals to put forth effort in their academic studies and improved social mobility in Chinese society. Because of this, many commoners had the opportunity to move upward to higher class.

Through this system of education, orthodox values were diffused in China, and the Chinese empire developed a common culture. Many members of the general population studied the classics in schools and memorized the notions for the examinations and then were tested by the ruling class. The system of education, especially the civil service examination, effectively transmitted dominant values to large sections of society. Over time these values were also disseminated through public lectures, encyclopedias, almanacs, and the legal code. The existence of this educational and examination system ensured that the ruling class was grounded with a broad social foundation.

—Yiran Zheng

Bibliography

- Elman, Benjamin A. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.
- Ping-ti, Ho. *The Ladder of Success in Imperial China: Aspects of Social Mobility, 1368–1911*. New York: Columbia University Press, 1962.

■ Introduction: Varieties of Material Culture

As in all other eras, peoples throughout the world were identified by and expressed themselves through material culture. Their great monumental architecture, such as the platform pyramids in Mesoamerica and among the Andean peoples, the great Buddhist monuments and Hindu temples, the Muslim mosques (particularly the Umayyad Mosque in

Damascus), and the Christian churches such as Hagia Sophia were statements of the power and glory of these cultures and religions. The palaces in which the rulers and other elites dwelt were designed to elicit the awe of the common people at the majesty of the elite.

Houses of commoners were usually small and built of abundant but cheap materials such

as sun-dried mud of clay between wood laths. Stoves and chimneys were rare, and the smoke from the hearth escaped through a hole in the roof. Sometimes cooking was done outside of the dwelling so the air in the house would be less smoky, but most houses were cold. The houses of early medieval commoners were nonetheless often charming and sometimes had a rustic beauty. Commoners often took pains to decorate their dwellings, sometimes painting symbols on the exterior, often on the lintel of the door. In many cultures, dwellings included a shrine to the ancestors, an icon corner, or a religious altar. Care would be taken to keep the objects there clean and polished.

Clothing was also designed to emphasize class differences. While the vast majority of the earth's population was scantily clothed in less-fine fabrics such as hemp, linen, ramie, palm fiber, or wool, some in India, the Muslim world, and the civilizations of the Americas enjoyed cotton. In the Andes, textile weaving of cotton and fine wool of the vicuna was a highly developed art, and some textiles made of these materials were treasured luxury items. However, during this period, silk was the most treasured fabric, and the production and commerce in this textile stimulated the economy of the Eastern Hemisphere.

One of the most ubiquitous types of material culture was pottery. All but a small percentage of human groups had pottery (although some, such as the Inuit and the Eastern Polynesians, whose ancestors had pottery, abandoned its manufacture and use), and all classes used pottery. Although pottery was probably the most common variety of material culture, in a few groups, such as the Moche of the Andes civilization, pottery making was a highly developed art form. For the Moche, clay pottery sculpture was what sculpture in stone or bronze was for peoples of Eurasia. Throughout Eurasia, porcelain was the most sought-after ceramic pottery and, like silk, was traded through most of Eurasia as well as much of coastal Africa.

The peoples of western Eurasia led the world in the production of glass and glass objects. After the fall of the western Roman empire, the center of glass making moved to Egypt and western Asia. Glass, which was used to produce most

of the same objects that were made of ceramic pottery, was difficult to make and was expensive. The possession of glass objects was a mark of status.

Metallurgy was a highly developed craft in many civilizations, and utilitarian tools and weapons as well as ornamental jewelry were made of it. The peoples of central and northern South America were especially skilled at producing beautiful ornamental objects of tumbago, an alloy of copper and gold with some silver. In Mesoamerica, where the art of metallurgy was adopted only late in this period, craftsmen carved fine ornaments of flint and obsidian.

Food was an aspect of material culture that involved people of all cultures in all ages. In all cultures, at least 90 percent of the population was involved in food production, and more were occupied in preparing it for consumption. Varieties of food reflected status. The more expensive harder-to-produce foods were consumed by the elites, while the lower classes ate coarser and cheaper foods. In this period, the cuisine of the Americas, Africa south of the Sahara, Mediterranean Eurasia, and South Asia were very different because of the different crops and domestic animals. During this period, the crops of India and Southeast Asia spread to China, the Mediterranean region, and Africa south of the Sahara, but the crops of the Americas would not be known in Eurasia and Africa until the late fifteenth century.

These were only the principal varieties of material culture in the early medieval age. There were many more.

—Wilfred J. Bisson

Bibliography

- Kirch, Patrick Vinton. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley: University of California Press, 2000.
- Mason, R. H. P., and J. G. Caiger. *A History of Japan*. Tokyo: Tuttle, 1997.
- Von Hagen, Adriana, and Craig Morris. *The Cities of the Ancient Andes*. London: Thames and Hudson, 1998.
- Wickham, Chris. *The Inheritance of Rome: Illuminating the Dark Ages, 400–1000*. New York: Viking, 2009.

Mound Builders and Other Agriculturalists in Eastern North America

What archaeologists delineate as Mississippian Culture actually had its origins with two civilizations that did not originate in the Southeast. The Adena Culture that existed between 1000 and 100 BCE originated within present-day Ohio, Indiana, West Virginia, Kentucky, and portions of Pennsylvania and New York. The Adena was a mound-building society that reached its zenith in eastern North America prior to the coming of the Europeans. The Adena Culture is considered by many archaeologists to be a precursor to Hopewell Culture and hence the more advanced Mississippian culture. Yet all of these cultures had in common the construction of earthen mounds.

Adena mounds were constructed on flat-topped hills to form circles, squares, and other shapes. They usually encompassed an area of about 350 feet in diameter. Moreover, these earthen mounds were usually built as part of the burial process whereby layers of bodies were deposited one after another upon the top of a

burned mortuary building. Prior to the construction of the mounds, offerings were made to the deceased and were composed of foods and cherished items that were burned along with the honored dead. Subsequent additions were made atop the previous layer so that over time the earthwork grew in size and prominence.

Archaeologists postulate that the construction of these Adena mounds required a small workforce. The Adena (primarily centered in Ohio) lived a semisedentary life (they altered their residence according to the seasons) and subsisted on hunting and food gathering as well as the cultivation of squash and other local starchy plants. These small seasonal communities nevertheless reflect the increasing sophistication and perhaps an increased social stratification among the Adena. Over time the Adena built more expansive earthen burial mounds, where archaeologists unearthed more and more impressive artistic objects such as jewelry, pottery, and clothing. These items clearly indicate an increasing population necessitating a more sedentary lifestyle as well as social differentiation among classes of people.

► EFFIGY MOUNDS

Effigy mounds appeared during the Late Woodland period (700–1050 CE) in Wisconsin, Ohio, Illinois, Minnesota, and Iowa. These mounds are thought to represent boundary control within both local and regional areas. Most effigy mounds are shaped like birds or terrestrial animals, and all mound groups have both celestial and terrestrial animal shapes present, signifying dual religious division.

Terrestrial animal mound frequency varies by location. Between 80 percent and 90 percent of bear and panther effigies are segregated from each other. This regionalization of terrestrial effigy types signifies political and territorial boundaries.

The ritual use of fire has been observed in many effigy mounds. Within certain mounds, unusual gold and yellow sandy loams as well as oxidized brick sand and red clay have been layered with local deposits. Altars and burials are marked by continuous layers of charcoal and decomposed organics. The effigy mound culture was brief but left behind striking landscapes.

—Melissa Halverson



The Great Serpent Mound in Ohio was possibly a product of the Adena civilization (1000 BCE–400 CE), but was refurbished by the Fort Ancient people in about 1050 CE. The mound is nearly a quarter of a mile long and varies in height from one to three feet. The heaped earth of which it was constructed was laboriously scraped up by hand, using moose antlers for shovels. (Richard A. Cooke/Corbis)

Hopewell Culture, commonly believed to be an outgrowth of Adena Culture, first emerged about 200 BCE and flourished until approximately 400 CE. Archaeologists debate its origins. One school of thought argues that this culture first appeared in Illinois and then spread to western New York and from Wisconsin to Mississippi and contained both the Canadian and American sides of Lake Ontario. But Hopewell Culture may also have started (according to some archaeologists) in western New York, where it grew and expanded southward to the Ohio Valley. There, these native peoples pursued the mortuary (mound-building) practices found among the more ancient Adena peoples. Other archaeologists, however, believe that Hopewellian dispersion originated from western Illinois and spread to southern Ohio.

Hopewellian people, like the Adena and late Mississippian groups, built elaborate burial mounds. The Hopewellians placed many objects in their burial mounds, suggesting the high rank of their buried dead. Both the size of the mounds as well as the buried objects indicate that Hopewell Culture possessed a highly social structure that delineated the status of each group (and person) and the division of labor.

This society consisted of, along with the hunters and food gatherers, metalworkers, artists, and traders. For the most part the Hopewell people resided in rather small communities and pursued both hunting and food gathering to sustain their villages. Fishing became an important activity to augment their diet derived from native plants and wild game.

The expanse of the artifacts unearthed to date by archaeologists suggest that the Hopewell people developed a vast trading network. Many artifacts indicate the extent of the trade for status goods relied on for their burial ceremonies, with these objects reflecting the status of the individuals buried both in their lifetime and at the time of their demise. Among the possessions found in Hopewellian burial mounds include cherished weapons and soapstone pipe bowls in the shape of beavers, frogs, birds, and human forms. From excavations archaeologists conclude that the Hopewellians were very adept at metallurgy, fashioning copper into axes, arrowheads, and trinkets.

Hopewell burial mounds that have been excavated suggest a degree of sophistication far exceeding their predecessors, the Adena. For instance, Cook's Mound (in Louisiana) is one of the largest mounds built by the Hopewellians. They buried 168 bodies within the platform and added another 214 bodies on the platform before covering the entire area with a huge mound. Their decline after 400 still remains a subject of contention, yet many archaeologists believe that the primary culprit was overpopulation, which put a strain on available resources.

The Mississippian Culture of the Southeast is considered to be an extension/offshoot of both the Adena and Hopewell cultures. Between 1 CE and 450 the peoples in the Southeast and the South built more and more massive burial mounds. Each varied in size yet signified an increasing population in the regions where the mounds were built. The movement to maize and bean cultivation between 800 and 1000 transformed the inhabitants of the South and Southeast. Settlements along the Mississippi River grew in size and number. The construction of substantial houses and platform mounds and the production of pottery all indicate an increase in their society's complexity. The Mississippians, while moving toward maize and bean cultivation, continued to hunt and fish as they had done in the past. By 900, larger Mississippian centers could possess populations in the thousands and were generally surrounded by defensive palisades. These larger settlements possessed a largely hierarchical society with a principal chieftain at the top. Cohakia (near present-day St. Louis) was the largest Mississippian center, with a population numbering between 30,000 and 35,000.

—John S. Leiby

Bibliography

- Galloway, Patricia, ed. *The Southeastern Ceremonial Complex*. Lincoln: University of Nebraska Press, 1989.
- Jennings, Jesse D., ed. *Ancient Native America*. 2nd ed. San Francisco: Freeman, 1983.
- Perigrine, Peter N. *Mississippian Evolution: A World-System Perspective*. Madison, WI: Prehistory Press, 1992.
- Shaffer, Linda N. *Native Americans before 1492: The Moundbuilding Centers of the Eastern Woodlands*. Armonk, NY: Sharpe, 1992.

Farming Cultures in the North American Southwest

What archaeologists call the Mogollon Culture emerged sometime between 200 BCE and 200 CE along the Mogollon Rim's desert and forested highlands of southern Arizona and northern Mexico, and then it disappeared. According to Emil W. Haury, the Mogollon resurfaced as part of the Anasazi around 850. From archaeological evidence, the Mogollon people relied on rainfall and not on irrigation to obtain their sustenance from their fields.

It is nevertheless their settlements found in the colder, wetter, and more mountainous reaches of east-central Arizona as well as west-central New Mexico that have received the most scrutiny by archaeologists. The Mogollon people lived, at first, in small villages consisting of pit dwellings. These early pueblos normally had fewer than a dozen rooms where perhaps one or two extended families resided. The Mogollon evolution is characterized by five stages, the last ending about 500 years ago, and six regional variants. Mogollon communities as time progressed became ever larger so that by the time of Columbus they possessed pueblos that perhaps numbered several hundred rooms. This latter process would mean a more stratified society (hierarchy) and also a much more developed division of labor.

The Anasazi—"enemy ancestors" in the Navajo language, although denoted by scholars as the "ancient ones"—inhabited the plateau region of the present-day American Southwest. Many tourists each year visit the elaborate cliff dwellings found in Mesa Verde National Park, Navajo National Park, and Canyon de Chelly National Monument and the Great Houses of Chaco Culture National Historical Park.

Before 500 CE the Anasazi Basketmakers, so-named because of their intricately woven and decorated baskets, settled in caves and rock overhangs, cliff dwellings near streams or rivers. They located themselves along these canyon walls facing south to take advantage of the warmth of the sun during the winter months. However, like the Mogollon and Hohokam peoples, the early Basketmakers built small semisedentary villages in open areas.

For clothing the Anasazi Basketmakers wore fur or turkey-feather robes, string aprons, loin-cloths, and plant-fiber sandals. They subsisted on primarily corn, beans, and squash, which they grew in small garden plots as compared to the large-scale fields found in the later Anasazi pueblos, an example being Pueblo Bonito in Chaco Canyon. They augmented their diet through hunting (such as mountain sheep, elk, mule deer, and black bear) and food gathering. Women harvested wild crops such as amaranth, pinyon nuts, Indian rice grass, and sunflower seeds. The Anasazi Basketmakers were unaware of how to make pottery but were very adept at producing very ornate and sturdy baskets. Women cooked using these baskets by lining them with pitch where the food mixture was deposited, and then fire-hot stones were added to this mixture.

These baskets were fashioned into a wide assortment of sizes and shapes. They were utilized not only to transport possessions, to prepare meals, and for burial offerings but also to convey seeds and flour as well as to store grain and ceremonial items. To date, most early Basketmaker artifacts, mainly baskets, have been found by archaeologists within dry caves and rock shelters. The Anasazi Basketmakers' pace of evolution intensified by the middle of the first millennium. This is evidenced by the construction of larger villages, which possessed large storage and ceremonial structures. Some of the villages excavated by archaeologists in central New Mexico contain pit houses, comprising more than 50 in number. Although the later Basketmakers continued to hunt and gather food, they increasingly devoted more time to the cultivation of domesticated crops and their ceremonial structures. Like the later pueblo peoples, the Basketmakers began to build kivas, which contained a *sipapui* or small entrance where they believed the first people emerged from the underworld onto the surface of the earth.

While the Basketmakers' evolution lagged behind their southern counterparts, the pace of development hastened by the midpoint of the first millennium. They began to construct larger villages (with far greater storage capacity), signifying increased crop yields. For instance, in west-central Mexico archaeologists have unearthed a number of villages whose extent indi-

► THE CHACO CANYON—THE DEBATE GOES ON

Pueblo Bonito, which many archaeologists see as the capital of the Chaco Experience, was clearly a very important ceremonial center. Wolcott Toll has emphasized (and many other scholars have accepted his train of thought) that in order to understand Chacoan society, one must pay attention to the commonalities of modern-day Pueblo ceremonies. Pueblan society, like that of its historic past, is conditioned by the changing seasons. Corn consequently was a central aspect of Chaco society, as it is with the present-day Pueblos. We may surmise also that the rituals practiced by modern Pueblo Indians are similar or perhaps identical to those at the height of the Chaco Canyon era. In terms of the structure of the Chaco State (if this latter delineation is accepted), it is hard to unravel the pattern of office holding. Were positions hereditary? We really do not know for certain. However, the recent work of Brian Fagan (2005) offers a thorough study of the

archaeologists who have studied and continue to argue about the Chacoan political structure. He has noted that the only indication about the possible power of Chaco Canyon's political leaders emanates from Pueblo Bonito (particularly in light of research of excavated burial sites there). David Wilcox "believes Chaco was a small state administered from Pueblo Bonito, with territorial chiefs living in outlying communities." Fagan, on the other hand, embraces Frank Cushing's much maligned notion of a council of priests representing the six cardinal points. Whether Fagan and Cushing's view of the "Masters of the Great House" being the real model of the system of governance for Chaco Canyon's Pueblo Bonito is accurate remains a subject for speculation and argument. The accuracy of this view depends on whether the structure for Zuñi was actually a continuation of that followed by the Chacoans.

—John S. Leiby

cate a much higher population in the regions inhabited by the Basketmakers. Accordingly, these larger villages led to greater social stratification and more power in the hands of the elites who directed the evolution of these communities. Whereas the early Basketmakers had formulated an egalitarian society, increasingly the inhabitants of the ancient Four Corners region of the American Southwest evolved into a much more hierarchical society, although not on the scale that arose in Chaco Canyon.

As time progressed the inhabitants of what today is called the Four Corners area established more elaborate and lasting lodges that might be circular or rectangular in composition/structure. Over time both the residences and kivas of the later Basketmakers became larger, with inhabitants of each numbering several hundred people and each village encompassing 100 rooms and more than a dozen pit houses. Eventually in the late first millennium the Anasazi peoples of the Four Corners regions redefined themselves, as evidenced by the construction of the elaborate Chaco Canyon villages. There the Pueblo Anasazi constructed 11 villages encompassing between 500 and 100 rooms each. This so-called

Chaco Phenomenon represented a transition to even more elaborate villages and structures. Pueblo Bonito, in Chaco Canyon, grew larger and larger so that by 500 CE it was one of the most populated villages found in the canyon. Moreover, after 500 CE the Anasazi there began to substitute their pit houses for aboveground houses, which evidences their further development and refinement. These peoples continued to evolve, but by the mid-eleventh century they had reached their zenith.

In terms of the political/social system that developed among the peoples of Chaco Canyon and beyond, much debate among archaeologists has occurred and continues today and probably will persist indefinitely. Some scholars such as James Judge have postulated that the initial loosely configured farming communities of the Anasazi gradually grew larger, with Pueblo Bonito, for example, becoming the primary community in Chaco Canyon. The result was an increase in hierarchy. Field research over generations has unearthed differences in burial sites, which indicate in particular in Chaco Canyon that social stratification occurred. Many graves contain elaborate turquoise jewelry. Though still

debated, this circumstance would suggest that some people held greater social distinction and with it perhaps political power. If true with regard to the latter, this would support the notion of those who contend that what emerged with Chacoan people was a state. One of the more prominent of those supporting the idea of a Chacoan state, David Wilcox, has articulated the view that outlying communities became tributaries to Pueblo Bonito's more prominent families/clans. Yet another archaeologist, Steve Leskon, who researched the Chaco State Theory via the outlying communities with Chaco Canyon and its periphery, found similarities in their architecture, thus suggesting that Pueblo Bonito was not just a ceremonial center but in reality was the capital of the Chaco state. Whether there actually was a Chacoan state will undoubtedly cause present and future archaeological communities to continue to ponder.

—John S. Leiby

Bibliography

- Fagan, Brian. *Chaco Canyon: Archaeologists Explore the Lives of an Ancient Society*. Oxford, UK: Oxford University Press, 2005.
- Frazier, Kendrick. *The People of Chaco: A Canyon and Its Culture*. New York: Norton, 1999.
- Plog, Stephen. *Ancient Peoples of the American Southwest*. New York and London: Thames and Hudson, 1997.
- Reid, J. Jefferson, and David E. Doyel, eds. *Emil Haury's Prehistory of the American Southwest*. Tucson: University of Arizona Press, 1986.
- Stuart, David E. *Anasazi America*. Albuquerque: University of New Mexico Press, 2000.

Foods in the Era of Expanding Regional Civilizations

Food has been the most important aspect of material culture in any era. It is so vital that Christians, in their most important daily prayer, implored God to “give us this day our daily bread.” Food was also endowed with mystic qualities. Many religions demanded sacrifices of food as offerings to the divinity, and in some, including Christianity, one achieved communion with God by symbolically consuming his flesh and blood.

In most societies, consumption of rare or difficult-to-produce foods was a status symbol. Thus, in many parts of East and South Asia where rice was widely grown, the elites ate polished rice, while commoners typically ate less labor-intensive grains, such as millet or barley. In Europe, highly refined wheat bread was the fare of aristocrats, and the peasants ate coarser rye and barley bread. In northern Europe, sugar was very expensive and was used as a medicine, and even in the Mediterranean region, where it was sometimes produced, it was a luxury for the wealthy.

In most societies, celebrations and memorializations were the occasion for prodigious food consumption. Weddings and, less often, funerals were replete with feasting, as were religious holidays. Christians feasted at Easter and Muslims at Eid ul-Fitr, at the end of Ramadan. East Asians feasted during the Lunar New Year (Tet) and other celebrations. Indeed, the term “festival” derives from “feast,” when food is lavishly consumed. Just as people celebrated by feasting, they also gained religious merit by fasting. For this reason, Christians fasted during the season of Lent, and Muslims fasted during Ramadan. In many cultures, denying oneself food was a way to reach or communicate with the divinity.

Societies erected taboos against eating certain foods, and sometimes these taboos were reinforced with religious sanctions. In Muslim and Jewish cultures, preparation of foods was controlled by religious regulations. The Catholic Church forbade German and Scandinavian converts eating horsemeat because it was thought to be a sign of paganism. Pigs were eaten in many societies, but in Muslim and Jewish cultures, consuming these animals was forbidden. Dogs were considered food in China, most of the rest of East Asia, and by many groups in the Americas, but many other parts of the world viewed eating these animals with abhorrence. Insects, including silkworm larvae, ants, and grubs, were food in some cultures; in others the thought of consuming them evoked disgust. Most cultures that had domesticated cattle enjoyed milk and dairy products with the significant exception of China and other East Asian peoples. The great majority of peoples abominated cannibalism, though it occurred in most cultures in times of severe fam-

ine. Severe famines visited many lands several times in each century.

Though most societies forbade the eating of certain foods, almost everything edible was considered legitimate fare in some lands. Humans are, on the whole, omnivorous, particularly when starvation looms. As one Chinese general in this period remarked, everything, even leather, can be eaten if the cook prepares it correctly.

Almost all groups foraged, or hunted and gathered, either as their sole way of obtaining food or in addition to pastoralism or farming. Even in Buddhist groups, where hunting was frowned on, hunting was common. People have foraged for a wide variety of wild foods, anything edible that can be easily gathered including wild grains (wild rice), nuts (acorns, hazelnuts), insects (grubs, grasshoppers, ants, butterflies), fish (salmon, herring, anchovies), shellfish, crustaceans, marine mammals (whales, dolphins, seals), and terrestrial mammals, especially rabbits, large rodents (such as capybara), beaver, pigs, ruminants, deer, elk, moose, wild cattle, buffalo, bison, antelopes of many species, donkeys, horses, turtles, frogs, snakes, and birds (especially ducks, geese, turkeys, and the like).

For most sedentary societies, grain was the basic food. In China and India, various kinds of millets, wheat, barley, and rice were the staff of life. In West Asia, the Mediterranean region, and Europe, wheat, rye, or barley served the same function. In Africa south of the Sahara, the favored grains were various kinds of millet, except in the Inland Delta of the Niger, where African rice was favored, and in Ethiopia, where teff, a very nutritious seed, competed with wheat and barley. In the Americas, maize (corn) was by far the leading grain, but in the Andes, quinoa predominated in the highlands. In the North American Southeast, sunflowers and amaranth were the favored food until about 500 CE, when maize agriculture was spreading into that region.

Grain was eaten sometimes raw (green maize, parched wheat) or boiled, as porridge. The most widely consumed grain was rice, which was the higher-status food in East Asia, Southeast Asia, and much of South Asia. Brown rice (unpolished rice), though more nutritious than polished rice, was viewed as poverty food and was eaten only by the poor or the sick. The

elites, whose diets consisted largely of polished rice, sometimes suffered from beriberi, a disease of the muscles and nervous system caused by a vitamin deficiency. Rice was usually consumed boiled whole, not ground. Sometimes it was served as sticky rice balls, which could be eaten like an apple, but more commonly it was served plain and eaten with chopsticks (in East Asia) or with the fingers (in India).

Some grains were eaten crushed and cooked or boiled in soups or porridges. Often these were combined with vegetables and spices and, occasionally, meat. Quinoa, amaranth, and crushed maize in a form of porridge (*atole*) was often the chief food of the Mesoamericans, including the Maya, and the highland Peruvians. In Iran and West Asia a common food was soup or gruel made of crushed wheat or barley (*cous cous*), and in Tibet and central Asia pounded barley porridge (*tsampa*) was the daily fare. In China, India, and Africa south of the Sahara, the various types of millets were usually consumed as soups or porridges.

Many grains were commonly ground into meal or flour. Grinding grain was one of the most demanding and arduous tasks, usually performed by women. Sometimes, grinding or pounding grain was done in a large pestle mortar (especially in Africa south of the Sahara) in which several women collaborated. More often, grain was ground in quern (hand-operated mills) in Eurasia or metate (a type of horizontal mortar). In the Americas, maize was often boiled in limewater to soften it prior to grinding.

Flour, especially that of hard semolina wheat, was often made into noodles beginning early in the first millennium CE in China. In fact, the Chinese usually ate wheat and barley as noodles, seldom as bread. The Japanese often ate buckwheat noodles, which were served with green tea. The making of noodles spread from China westward across Eurasia in the middle of the first millennium CE. Muslim societies began to make and eat noodles before the turn of the first millennium, and the Italians adopted the practice from the Muslims shortly after 1000 CE.

Flour was baked into a variety of breads and cakes, both leavened (with yeast) and unleavened (flat bread, chapattis, tortillas). Bread in northern India and in Western societies achieved

➤ TWO MAJOR FOOD REVOLUTIONS

Agriculture and cuisine in most of the world's civilizations were radically modified with the Columbian exchange resulting from the European invasion of the Americas after 1492. In this biological exchange, Spanish and Portuguese explorers and merchants took maize, tomatoes, potatoes, peanuts, hot chilies, cocoa, tobacco, and many other plant foods from the Americas and spread them to all the shores they visited. Within a century, these new crops were being grown in Europe, Africa, India, China, and most of the other lands of the Eastern Hemisphere, where they transformed what had been the rather bland diet of the peoples of these regions.

Likewise, about eight centuries before that, another biological exchange enriched the cuisines of Africa, the Mediterranean region, the Muslim world, and Europe. This process began as early as the beginning of the Common Era but rapidly accelerated with the Arab conquests and creation of the Islamic empire. In this process, Arab soldiers conquered a vast territory, and Muslim merchants traveled to many more territories, reaching a large variety of ecological areas. Muslim conquerors and merchants brought watermelons from sub-Saharan Africa, apples from central Asia, and a large variety of tropical crops from India to enrich the diet of the Muslim world and subsequently Europe. Among these commodities were oranges and lemons, sugar, cotton, bananas, rice, eggplants, spinach, and other items, which enlivened the hitherto

impoverished menu of Mediterranean and West Asian foods.

These two biological exchanges may rank among the most important historical events ever.

This was nearly coterminous with the Medieval Warm Period, which also witnessed agricultural expansion in Europe and China. Although the more salubrious climate of the Medieval Warm Period may have some value in explaining the agricultural good fortune of early Dar al-Islam, there are other equally or more persuasive explanations.

The early medieval Islamic empire stretched about 6,000 miles around the globe and included a wide variety of climatic and ecological regions, from wet tropical to temperate forest and from Mediterranean climates with cool rainy winters and hot dry summers to areas with dry winters and monsoon summers. Arab armies and Muslim merchants became familiar with many foods and crops in this vast territory. High-ranking Arab commanders brought these crops to the areas to which they retired to assure themselves of a steady supply of these new foods, which in the beginning were regarded as rare delicacies. Within a relatively brief time, these erstwhile delicacies became staples of the Muslim agricultural portfolio. After 1000, these new Islamic crops began to diffuse into the Christian lands of Mediterranean Europe and later became commonplace in European cuisine.

—Wilfred J. Bisson

a status as the principal food. No meal was considered complete without bread; indeed, providing bread was the main preoccupation of the economic and cultural life of the people. The highest-status bread was finely milled and bleached white wheat bread, but most people ate other breads. In northern Europe, dark brown or even black rye bread was common, and in some areas barley, spelt, and other grains were used.

Unleavened flat bread was easily prepared by cooking dough directly on a hot surface, but more commonly leavened bread with yeast was demanded, requiring more elaborate ovens. In many villages, bread was made in communal ovens. In some areas bread baking was a seasonal occupation, with the bread made into hard, al-

most inedible loaves that were softened in ale or beer before being eaten. These loaves could be stored for months. In India, wheat and barley were eaten as various kinds of bread—chapattis, naan, roti, and others—depending on the region and method of baking.

In some parts of Southeast Asia as well as most of Melanesia, Micronesia, and Polynesia, taro, yams, breadfruit, coconut, and other starchy foods played the role that grains did in grain-producing cultures. The western Polynesians also began raising sweet potatoes, a crop they obtained from South America, but it is not certain that they got sweet potatoes before 1000 CE. In the Andean highlands, potatoes took the place of grains, while in Amazonia and the Ca-

ribbean, cassava, or manioc, both the bitter and nonbitter varieties, were a staple. In addition, most Native American agricultural peoples ate squash and pumpkins.

Grains do not provide a balanced diet. Their nutritional deficit was sometimes supplemented by animal proteins, but in most sedentary societies meat was not a common item in the diets of the mass of the people. Rather than meat, beans and other leguminous foods were consumed. In Europe and the Muslim lands, these legumes were peas and lentils. In Mediterranean lands, fava beans were also common. In India, a variety of legumes were consumed, but it was in China that soybeans almost completely replaced animal flesh as the source of protein in the diet. Manchurian tribes probably domesticated soybeans in the early first millennium BCE, and soybean cultivation then spread to northern China. In the late centuries BCE, soybeans were grown on most Chinese farms, and soybeans were consumed in a wide variety of ways: as a vegetable, as a drink, and, most ubiquitously, as soybean curd (tofu). Soybeans became a favorite and necessary food in China and all lands to which Chinese culture spread. Soybeans grew on less-fertile soils, the crop required less care than other crops, and they supplied all the nutrients that animal protein did. Indeed, soybeans were the wonder food in the Chinese diet.

The Mesoamericans and the people of the Andes enjoyed the most varied and, many say, the tastiest cuisine during this era. Tomatoes, potatoes, avocados, cocoa, and many other foods, during this time unknown in Africa and Eurasia, were staples in much of the Americas. Chile peppers, which characterize the cuisine of India and Southeast Asia and some regional Chinese cuisines and others in modern times, were unknown outside of the Americas before 1500 CE.

Meat of domestic animals was consumed in most areas. In most of Eurasia and Africa, these were various species of cattle, sheep, goats, pigs, chickens, ducks, and geese. In China, silkworm larvae were eaten after the silk was unwound from the cocoons. Native Americans had few domestic animals, though Mesoamericans as well as some other groups ate dogs. Mesoamericans also had turkeys, while in the Andes llamas and guinea

pigs were eaten. South Americans also had Muscovy ducks, and they adopted Araucanian chickens from Polynesian visitors, though perhaps not until after 1000 CE. Pigs were the meat most often consumed in China, Europe, and some Pacific Islands, but, as already noted, this meat was forbidden in Islamic lands where sheep, goats, and sometimes camels were preferred.

Milk and other dairy products were consumed in almost every Eurasian culture except China, Japan, and Korea. For the pastoral peoples on the steppe who milked cows, yaks, horses, and camels as well as sheep and goats, milk, cheese, butter, and cultured milk products such as yogurt, kefir, buttermilk, and kumis (fermented, slightly alcoholic milk, often from mares) were a most important and often chief part of their diet. The Bedouin of the Arabian and Sahara deserts consumed camel's milk. In most of the Muslim world, dairy products, especially yogurt, were a common staple. Most Europeans also used dairy products from cows, goats, and sheep, especially cheese and, except in Mediterranean Europe where olive oil was preferred, butter. In India, milk and milk products, especially from cows and buffalos, was highly valued and eagerly consumed. In India, sweetened yogurt (*lassi*) was a favorite drink, while clarified butter (*ghee*) was a common cooking oil. Eggs, which sometimes are classified with dairy, were an article in the diets of most peoples. In the Americas they were usually obtained by foraging wild foods, but in Eurasia (and Africa by the late first millennium CE) nearly every people had domesticated chickens.

All classes and ages in most societies commonly drank beer, ale, and other slightly alcoholic beverages. Indeed, much of the daily caloric ration was ingested with these beverages, and most peasants brewed beer or made wine. Beer brewing was women's work in many societies. Honey, grapes, other plants, and spices as well as hallucinogenic narcotics were sometimes used to flavor beer, but by the eighth century CE Europeans began flavoring beer with hops. Chicha, a drink made of maize, cassava, fruits, and coca leaves, was the equivalent of beer in the Americas. First the maize or cassava root was chewed by women and then was spat in a container and fermented, producing a drink with an

alcohol content of up to 6 percent. Fermented honey, or mead, had an alcoholic content of up to 20 percent and was prominent in northern Europe as well as Ethiopia. Attila the Hun is said to have died after a mead-drinking bout. In the Mediterranean regions of Europe, wine made from grapes served the same role that beer did in other parts of Eurasia. In China wine was also made from grapes, although wine made from rice was more common. In India and Southeast Asia, fermented sugarcane juice was common, though the Brahmin priests prohibited it. In Muslim lands too, alcoholic beverages, particularly wine, were widely consumed, though Islam forbade it. Before 1000 CE alcoholic beverages were made almost exclusively by fermentation. Distillation may have been discovered in India, but it had not yet disseminated to other lands.

Tea, which had been known to the Chinese since the late centuries BCE, became a preferred drink of the elite during the early centuries CE. Buddhist monks especially encouraged tea drinking and spread the practice to Korea, Japan, and other nearby lands. By the ninth century, tea was one of the chief items sold to the Arab and Persian traders at the port of Canton. The tea ceremony became a refined art, especially in Japanese elite circles.

A factor that affected diets worldwide was the necessity of preserving and storing food from the harvest, when foods were plentiful, to the dry season or, in the more northerly regions, in the winter, when scarcity might be more prevalent. Meat was preserved by drying, smoking, pickling in salt brine or vinegar, or, in the proper climates, freezing and keeping in cold storage.

Grain was stored in big baskets, huge ceramic pots, subterranean pits lined with stones, or granaries constructed to be as rat and insect proof as possible. Drying was often the method of preserving vegetables, as was pickling and fermenting. Fruit was sometimes dried, whereas vegetables such as cabbage were pickled all over northern Eurasia as sauerkraut or kimchee. Sometimes, special cellars were constructed to store foods at a constant cool temperature.

In all societies, obtaining, preserving, preparing, serving, and eating food was the most important part of any material culture.

—Wilfred J. Bisson

Bibliography

- Pilcher, Jeffrey. *Food in World History*. New York: Routledge, 2006.
- Tannahill, Reay. *Food in History*. New York: Three Rivers, 1988.

Indonesian Contributions to East, Central, and Southern Africa

Between 300 and 1000 CE, small numbers of Indonesian immigrants arrived along the East African coast. These immigrants introduced new crops, new livestock, and even a new musical instrument to East Africa. From East Africa, these diffused to central and later southern African societies. By 300 CE or possibly a few hundred years earlier, a small group of Indonesian immigrants arrived in East Africa via the Indian Ocean and traveled along the coast, finally settling in Madagascar. One key source of evidence for this migration is that modern-day Madagascar is home to Malagasy, a language in the Austronesian family to which most Indonesian and all Polynesian languages also belong.

The Indonesian seafarers traveled first to India and then followed the monsoon winds to East Africa. The Indonesians may have settled for a brief period of time along either the Kenyan or Tanzanian coast and intermarried with local African peoples. By the end of the fourth century CE if not before they sailed south, crossed the Mozambique Channel, and arrived at the uninhabited island of Madagascar.

The Indonesian immigrants brought Asian yams, taro, bananas, and sugarcane, all of which could be reproduced by planting a cutting instead of seeds. Bantu-speaking peoples along the coast of East Africa were still practicing African yam cultivation; therefore, they easily added the new Asian root crops to their agricultural practices. Additionally, Indonesians had domesticated these crops in a region with a tropical climate much like the environment along parts of the East African coast, the Great Lakes, and the Congo Basin.

By the fifth century CE banana cultivation had spread rapidly into the inland parts of East and central Africa all the way to the Great Lakes region. Bananas became the most important crop for accumulation and surplus, and this

➤ BANANAS AND XYLOPHONES

Bananas, sugarcane, and the marimba (xylophone) are basic to the economies and cultures of Latin America and the Caribbean and were brought to the Americas by African slaves. These items were not African in origin but were introduced to the African continent by Indonesians who sailed along the East African coast over 1,500 years ago,

intermarried with Africans, and settled Madagascar. Once bananas and the xylophone were introduced to East Africa, they spread within a few hundred years to West and central Africa. Bananas even became the economic basis for several important African empires.

—Christine Ahmed-Saidi

Asian crop dramatically changed the economic history of these regions by greatly improving the productive capacities of Bantu-speaking societies.

The Indonesians also introduced chickens to Africa. By circa 1000 BCE, Bantu-speaking Africans had partially domesticated guinea fowls, which were allowed to forage for themselves. Chickens would have been raised in the same manner. Linguistic evidence indicates that by 1000 CE the chicken had spread throughout East Africa, southern Africa, and all the way to southeastern Nigeria at the mouth of the Congo River.

Southeast Asian immigrants also brought the xylophone to Africa. It is often referred to as the *mbira*, which is also the word for the thumb piano, an instrument invented by Bantu-speaking peoples over 2,000 years ago. But with the introduction of the xylophone, the term “mbira” began to refer to both instruments. The mbira is also used today in Afro-Latin music. The xylophone, which was brought to East Africa almost 2,000 years ago, became an important element in Bantu-speaking people’s music. This instrument later accompanied African slaves to Central and South America, where it remains a staple of local music.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey, 1998.
- Jones, A. M. *Africa and Indonesia: The Evidence of the Xylophone and Other Musical and Cultural Factors*. Leiden, Netherlands: Brill, 1971.

Schoenbrun, D. L. “Cattle Herds and Banana Gardens: The Historical Geography of the Western Great Lakes Region, ca. AD 800–1500.” *African Archaeological Review* 11 (1993): 39–72.

Porcelain in East Asia before 1000 CE

Porcelain was one of China’s technological triumphs before 1000. Porcelain (or chinaware as it was sometimes called by the West) is a ceramic that is usually once-fired, which means that the body and the glaze are fired simultaneously. After the body is formed and finished it is dried, coated with a glaze, dried again, and fired. In the high temperatures (2,336–2,552 degrees F) of the kiln, both are fused together. Suitably modified with a flux, the material used to form the body of a piece of Chinese porcelain was often used as a glaze. The similarity in composition of the body and the glaze helped to produce a good fit between the two that reduced cracking. Thus, porcelain became a highly desired object because of its durability and unique thinness.

In the context of Chinese ceramics the term “porcelain” lacks a specific definition. This in turn has led to a debate as to when Chinese porcelain was first produced. Claims have been made for the late Eastern Han period (25–222 CE), the Three Kingdoms period (220–280 CE), the Six Dynasties period (222–589 CE), and the Tang dynasty (618–906 CE). Decorative arts scholars argue that the first true porcelain was made in the Chinese province of Zhejiang during the Eastern Han period. They also emphasize the presence of a significant proportion of porcelain-building minerals (china clay, porcelain stone, or a combination of both) as an important factor in defining porcelain and shards



Tang dynasty hanging scroll titled A Palace Concert shows the use of porcelain at a royal banquet. (National Palace Museum, Taipei/Werner Forman/Corbis)

recovered from Eastern Han kiln sites in Zhejiang. However, so-called porcelaneous wares or protoporcelain wares made using at least some kaolin and fired at high temperatures are known that date to well before the year 1000 BCE. Unfortunately, there is much that can divide porcelaneous wares and protoporcelain wares from true porcelain.

One of the first mentions of porcelain by a foreigner was made by a South Asian traveler around the ninth century (during the Tang dynasty) who recorded that “they have in China a fine clay with which they make vases which are as transparent as glass; water is seen through them. The vases are made of clay.” During the Sui and Tang periods (581–906) a wide range of ceramics, both low-fired and high-fired wares, were produced. These included the well-known Tang lead-glazed sancai (three-color) wares, the high-firing lime-glazed Yue celadon wares, and low-fired wares from Changsha. In northern China, high-fired translucent porcelains were made at kilns in the provinces of Henan and Hebei.

The city of Jingdezhen in Jiangxi was an important center for the production of ceramics in southern China since at least the early Han dynasty. The early wares were low-fired, but by the time of the Southern and Northern dynasties (304–589 CE) locally available raw materials were being used to produce a form of porcelain. In the year 1004, under the Song emperor Jingde, the newly renamed city of Jingdezhen

was established as a center for the production of imperial porcelain.

Within China during the Tang and Song eras abundant supplies of food enabled many parts of China to pursue technological and industrial interests. Porcelain wares were lighter and thinner and were highly prized for their translucence by the upper classes. Sets were usually produced for the wealthy, and of course a special unique set of pieces was gifted to the emperor. Porcelain was usually decorated with fine multicolored brushstrokes, and painted scenes appeared before 1000 CE. In the Tang period, with the rise of major cities such as Chang'an and with Buddhism becoming fully integrated into Chinese daily life, porcelain continued to become a reflection of an individual's wealth. Buddhist monasteries became repositories for merchant wealth and served as banks and warehouses for wealthy individuals. Some of the largest porcelain firms housed shipments in monasteries before sending them on to other destinations.

With the rise in wealth and status due to the reinstitution of the Confucian exam systems (*jinsshi* examinations), court life into the Song period saw major rises in kinds of wares that were produced for high-end tables. A variety of forms included plates and other kinds of dishes, but with commodities such as tea on the rise, porcelain production soared. Tea was such a major commercial crop starting in the Tang period that the government taxed it heavily. In order to set a proper table for scholar bureaucrats and other court officials, the government ordered vast amounts of tea-related forms that included cups, saucers, pots, caddies for tea leaves, and even waste bowls that were all made of fine porcelain. Images from the Tang and Song periods depict a variety of forms for such use, and since tea was seen as a pharmacological product, this would have a lasting impact on the porcelain production related to tea for centuries to come.

In the global context, the rise of new and powerful dynasties directly led to an increase in the demand for porcelain objects in both the Indian Ocean basin and along the Silk Roads that led to the Abbasid empire. Craft workers in West Asia challenged East Asian porcelain wares, but demand continued for these smooth, white chinawares. Routes traversed by Chinese junks and a

host of other traders from the Malay Peninsula to the South Asian coast and as far as East Africa carried porcelain to all of the destinations and those in between. Along with Arab dhows, junks were the best sailing vessels in the world. Equipped with watertight bulkheads, sternpost rudders, compasses, bamboo fenders, and rocket-propelled defenses, these ships enabled Chinese sailors and merchants to become the dominant force in the East Asian realm. Expanding into the Indian Ocean, Chinese junks also shipped porcelain because of their navigators' understanding and mastering of the seasonal monsoon systems. Although they did not intend to dominate the Indian Ocean, major connections did exist to create a symbiotic relationship with other traders who were not pirates. Archaeologists have excavated several sites along the coast of East Africa that yielded deposits of Song dynasty porcelain, so there is substantial evidence that porcelain became sought after by the communities of foreign merchants who congregated in cities throughout the Silk Roads. The development of porcelain and consumer demand continued into the Yuan period and set the stage for the production of Chinese export porcelain for the European market during the Ming (1368–1644) and Qing eras (1644–1911).

—J. Nathan Campbell

Bibliography

- Clark, Hugh R. *Community, Trade, and Networks: Southern Fujian Province from the Third to the Thirteenth Century*. Cambridge: Cambridge University Press, 1991.
- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. New York: Cambridge University Press, 1996.
- Elvin, Mark. *The Pattern of the Chinese Past*. Stanford, CA: Stanford University Press, 1973.
- Medley, Margaret. *The Chinese Potter*. London: Phaidon, 1999.
- Watt, James C.Y. *China: Dawn of a Golden Age, 200–750 AD*. New York: Metropolitan Museum of Art, 2004.

Glass in Early Medieval Civilizations

Glass in the early medieval world was primarily used for utilitarian purposes, religious observation, and decorative ornament. Advances in

glassmaking technology during the early Roman imperial era meant that glass went from being a precious, difficult-to-produce substance to a great commercial commodity within the vast network of trade routes spanning Europe, the Mediterranean, Africa, and Asia. The center of glass production was the eastern Mediterranean region of greater Syria (present-day Lebanon, Syria, Jordan, Palestine, and Israel), and this region continued to dominate the glass trade worldwide through the fifteenth century CE.

The area of greater Syria was strategically situated on the east-west trade routes, which allowed for exchange of goods as well as artistic influences. The sand in this area was superb for glassmaking. Glass was made of three key elements: silica (sand), lime, and soda (ashes of burnt plants). These ingredients were formulaically melted in large batches at temperatures of at least 1,150°C (about 2,100°F). The molten glass was then worked immediately or allowed to cool in large chunks. The latter, known as cullet, was shipped throughout the entire Mediterranean and Europe, where it was remelted in local workshops. This explains one reason why glasses made in the same period across geographic styles have the same chemical composition. It was much easier for a craftsman to reheat glass than to create his own.

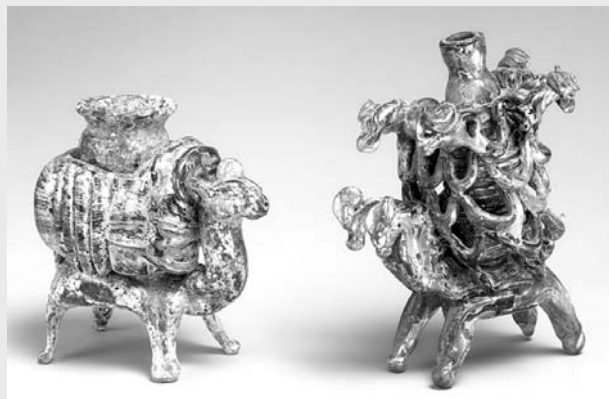
For everyday usage, people continued to use glass much the same as they had during Roman rule. Kohl tubes were decorative glass vessels that held eye cosmetics in either paste or powder form and were one of the most widely produced vessels in the Palestinian glasshouses. They served both fashionable and practical demands, for the paste helped abate eye diseases. The form dated sometime from the ninth century to the fourth century BCE. During the fifth and sixth centuries CE kohl tubes began to get bigger and more decorative. The tubes doubled and then doubled again to four compartments with elaborately tooled ornamentation.

Not all forms of glass had such specific usage. Cone-shaped vessels were made in the late fourth to early sixth centuries across the eastern and western provinces of the Roman empire. Archaeologists have found evidence of their use as both lamps and drinking vessels, although not within the same household. The use of cone-shaped

► CAGE FLASKS

Cage flasks, sometimes called dromedary flasks, were a stylized form of the kohl tube that developed during the early Islamic period. Dating around the seventh to eighth centuries CE, these flasks were shaped as horses or camels carrying a caged jar or tube on their backs. Made entirely of glass, the vessels referenced early Roman cage cups, which exhibited a lattice network protecting the interior cup. These charming anthropomorphic flasks were widely available and may have represented the journey of oils and perfumes in glass vessels on the Eastern trade routes.

—Kelly Conway



Seventh-century Islamic cage flask. Glass-making was one of the most highly developed arts in the early Islamic world. (The Metropolitan Museum of Art/Art Resource, NY)

lamps probably originated in the Palestinian region in the mid-fourth century. They were filled with a combination of olive oil and water, which helped cool the glass and increased the optical effects. Glass lamps burned longer than clay lamps, an advantage in Jewish households where lamps could not be relit during the Sabbath. Along with household use, cone-shaped lamps were used in polycandelon to illuminate large spaces such as churches, tombs, and synagogues. In the western Roman empire the cone-shaped glass was used primarily for drinking rather than lighting. Elongated conical beakers without a flat bottom evolved from Frankish drinking customs in which a glass was never set down on the table.

Roman cultural influences declined as the western empire collapsed in the fourth and fifth centuries. Glassblowers used some older Roman methods, but slowly Germanic traditions influenced the style of glassware. One distinctive form that arose during the fifth to eighth centuries was the claw beaker. Often greenish-yellow or blue, these beakers had wide rims, small and disproportionate feet, and clawlike protrusions in two or three concentric rings. The claws were hollow so as to allow liquid to flow through them, which must have been a sight. Unlike metal or wood, glass did not affect the taste of wine. From the fourth century onward, drinking

vessels were the primary output for glassmakers in medieval Europe.

By contrast, in China ceramics, lacquerware, and bronze vessels were favored over glass for everyday usage. Domestic glass production was limited to beads, hairpins, bracelets, and cast-molded bowls. Chinese glassmakers used a formula containing lead and barium, making it distinct from any other glass. This also made it very thin and brittle with no ability to hold heat. By the Tang period (618–906 CE) this formula was abandoned in favor of a soda-lime composition brought with western craftsmen settling along the caravan roads. Certain forms, however, were specific to China and related to stone and lacquer vessels, such as flat-sided flasks. Although China was engaged in some glassmaking, items of Roman, Sassanian, and Islamic origin were more desirable and appeared in greater numbers over domestic glass.

The Silk Roads, a group of overland routes spanning 5,000 miles from the Mediterranean to China, became very important in disseminating commercial goods and cultural traditions. The Silk Roads, however, were not the only commercial routes to encourage such exchanges. The seafaring Vikings collected a wide variety of glass beads along their travels. Highly prized in Scandinavia, a wide assortment of shapes, col-

ors, and motifs demonstrated the broad territory covered by Viking ships. In Africa, coastal cities imported glass beads from India beginning in the fourth century CE, with beads flowing into the interior via African traders overland. Although little is known of domestic bead making in Africa during the first millennium CE, some evidence suggests that beads were manufactured as early as 600 CE in South Africa.

New ideas flowed into Japan, particularly during the Nara period (645–794 CE), from Byzantium, Persia, India, and China via trade routes. A number of glass objects from these cultures survive in the Shoso-in Treasure House, built in the eighth century CE as a temple to the Great Buddha. Some of the most common objects were beads (around 60,000–70,000) used on sashes, Buddhist utensils, furniture, sword handles, and imperial crowns. Glass was also used for cinerary urns and the revered *shari-ki*, a receptacle for relics that served to protect the temple.

While some regions adopted glass technology and objects into their culture, glass in India experienced a sharp decline from about the fifth to ninth centuries CE. Glass mentioned in Indian literature of the period revealed that it was very desirable as a substitution for precious jewels. Beyond this function, glass use and production were limited to bead making as an export good.

One of the most important influences on glass production during the early medieval period was religion. By the fourth century, symbols of Christianity were found on glass objects, sometimes mingled with older pagan iconography. Glass beads were common in the Roman empire although more typically favored by the lower classes. Around the fifth century CE, however, the church began to discourage the use of jewelry, including glass-beaded necklaces, for their pagan associations. Glass mosaics were used to decorate the walls and ceilings of churches and tombs, illuminated by hanging glass lamps. Glass-makers were even exempted from taxes and mandatory services, an order issued by the first Christian emperor, Constantine (272–337 CE).

From the fifth through the mid-seventh centuries, glass bottles and jars with Christian or Jewish symbolism were made in Syrian and Palestinian workshops. Important religious sites

were located in the Syro-Palestinian region, especially centered in Jerusalem. Increasing numbers of pilgrims to the area gave glassblowers incentive to create a souvenir trade. Workers blew the glass into full-sized molds bearing images of saints, crosses, birds, menorah, etc. Pilgrims could buy jars and fill them with oil, water, or dirt from the holy shrines and tombs visited along their route. Production of these souvenirs ceased soon after the advent of the Islamic period in 636 CE.

Buddhism was introduced to Korea by Chinese settlers and then to Japan by Korean immigrants during the fifth to sixth centuries CE. The popularity of glass beads, both imported and made domestically, peaked during this rise in religious practice from about 400–900 CE. In both Korea and Japan, the *kogok* and the *magatama*, respectively, were among the first type of glass made in both countries. This comma-shaped bead arose as a sacred symbol, in the yin-yang emblem of Korea, and as part of the three royal emblems in Japan (sword, mirror, and *magatama*).

Glass-making traditions in the greater Syrian area continued to evolve during the Islamic period. While the Islamic caliphates did not patronize the glass industry, the assimilation of Islamic ornament from other media such as textiles and calligraphy worked its way gradually into decorative glass. The widespread influence of Islamic art would later influence the Europeans, particularly the Venetian glass industry during the Renaissance.

—Kelly Conway

Bibliography

- An, Chia-yao. *Early Chinese Glassware*. Translated by Matthew Henderson. Oriental Ceramic Society Translations; no. 12. Hong Kong: Millenia, 1987.
- Carboni, Stefano, and David Whitehouse. *Glass of the Sultans*. New York: Metropolitan Museum of Art, 2001.
- Charleston, Robert J. *Masterpieces of Glass*. New York: Harry N. Abrams, 1990.
- Dubin, Lois Sherr. *The History of Beads*. London: Thames and Hudson, 1987.
- Engle, Anita, ed. *Readings in Glass History: Glass & the Silk Route*, Nos. 6/7. Jerusalem: Phoenix, 1976.

Fleming, Stuart J. *Roman Glass: Reflections on Cultural Change*. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 1999.

Stern, E. Marianne. *Roman, Byzantine, and Early Medieval Glass: 10 BCE–700 CE*. Ostfildern-Ruit, Germany: Hatje Cantz, 2001.

Development of Moche Mold-Made Ceramics

From approximately 400 to 800 CE, Moche potters living in the valleys along Peru's northern coast produced an amazing variety of molded ceramic vessels ranging from portrait jars and stirrup spout bottles to whistles and dippers. Many of these were elaborately painted with complex scenes featuring anthropomorphic deities, humans, plants, and animals.

Potters hand modeled their ceramics during phases I and II (100–400 CE) of the Moche ceramic typology developed by Rafael Larco Hoyle, but beginning in Phase III they developed press molding and stamping techniques that made it quicker and easier to produce multiple copies of objects with three-dimensional or low-relief decorative elements. Most molds were two-piece, but potters frequently used one-piece molds for figurines and whistles; some complex sculptured forms made use of multiple molds. Potters made molds by packing clay around a mold matrix (a ceramic form made exclusively to produce molds), an already existing vessel, or other objects such as a warty squash. They sectioned

the mold into front and back halves while the clay was still wet and then waited for the two halves to dry completely before removing them for firing. Unlike ceramic vessels, mold matrices were unpainted, had thicker walls, frequently opened at the top and bottom, and possessed a vertical groove along the side that served as a cutting guide for the potter sectioning the mold under construction.

Molds facilitated the production of elaborate portrait vessels of individual Moche elite. In a survey of portrait vessels, Christopher B. Donnan determined that the faces of over 75 of 750 individuals appeared on 2 or more portrait jars, while many individuals appeared on 15 or more such vessels. Even though numerous portraits were produced from the same mold or molds made over the same matrix, potters nevertheless achieved variety by altering headdresses, adding nose and ear ornaments, incising facial features, or smoothing out unwanted elements. Moche potters also depended upon molds to increase production levels of mundane utilitarian wares needed for domestic and storage purposes.

—Whitney Leeson

Bibliography

Bawden, Garth. *The Moche*. Malden, MA: Blackwell, 1999.

Donnan, Christopher B. *Ceramics of Ancient Peru*. Los Angeles: UCLA Fowler Museum of Cultural History, 1992.

Donnan, Christopher B. *Moche Portraits from Ancient Peru*. Austin: University of Texas Press, 2004.

■ Introduction: Literature in the Age of Expanding Regional Civilizations

Early medieval literature reflected the age's preoccupation with religion. Seminal religious works were produced in every society, and here we can mention only a few. India was the fount of a vast outpouring of religious literature, much of which influenced the religion of other cultures. In the fourth century CE, during the Gupta cultural florescence, Indian

scholars cast what has been called history's longest religious work, the epic *Mahabharata*, in its finished form. Gupta writers also rendered the Puranas, religious histories in the form that they have come down to us.

From the fourth to the tenth centuries, India was the arena for religious rivalry among Jains, Hindus, and Buddhists, all of whom wrote apolo-

getics for their traditions. Among the Buddhists, two are preeminent: the third-century Ashvag-hosa, whose *Life of Buddha (Buddhacarita)* and *Awakening of Faith in the Mahayana* became important works in the Mahayana wing of Buddhism. The Theraveda tradition found its defender in the fifth-century Buddhagosa, whose *Path of Purification* is still read by many. Bhakti devotional Hinduism found its expression in the Tamil south of India in the poems and songs of the 75 bhakti saints (seventh to tenth centuries), and Hinduism was given its modern formulation in the *Bhāṣyas* (commentaries) of Shankara.

In China, as in India, religious rivalry occurred, but by the fourth century, Buddhism had triumphed over both Confucianism and Daoism. The chief religious works in Tang China were Buddhist. Chinese Buddhist works included many canonical scriptures, such as the *Pure Land Sutra* and the *Perfection of Wisdom Sutras*.

In the western part of the Afro-Eurasian ecumene, Christian religious literature included the works declared canonical works of the Christian New Testament as well as numerous noncanonical works that were suppressed. In addition, Christian religious literature during this era included the writings and sermons of Ambrose as well as the works of Jerome (the *Vulgate*, the most important Latin translation of the Christian Bible), Augustine (*City of God, Confessions*), and the *Apophthegmata (Sayings of the Desert Fathers)* by Anthony.

Muslim works including the Quran, the hadith compilations of al Hajjaj and al Bukhari, and the tenth-century Shia work *The Peak of Eloquence*.

Nonreligious literature of the age was largely of two genres: popular folktales and court literature. Little of the folk literature has survived, as almost all was transmitted orally. Of the court literature, the work of the Sanskrit authors of the Gupta age (fourth to early seventh centuries) stands out. Kalidasa was the literary giant of the Gupta age, and he is often said to have been India's greatest author. His dramas are classified with the works of a very few authors in human history, such as the seventeenth-century English playwright Shakespeare. Kalidasa's *Recognition of Shakuntala (Abhijnanasak)* is regarded as India's greatest play and is the inspiration for

many modern Indian films. Sanskrit plays and poetry were highly regarded in early medieval royal courts; even Emperor Harsha (r. 606–647) delighted in writing and producing Sanskrit plays. In southern India, secular Tamil literature was produced from 300 to about 600, when the religiosity of the bhakti movement replaced it. This literature included *Cilapatikaram*, the great epic of the Tamil people.

In China during this age, lyric poetry dominated nonreligious literature. The two great Chinese masters of lyric poetry, Li Po and Du Fu, flourished during the very creative high noon of the Tang dynasty (the first half of the eighth century), and their fame endures to the present. In present-day China, schoolchildren still recite Li Bai's and Du Fu's poems.

In the middle of the first millennium CE, the Indian collection of folktales and animal fables known as the *Panchatantra* reached its final literary form. Tales from the *Panchatantra* subsequently spread west and appear in that great collection of Persian and Arabic stories known as the *One Thousand and One Nights*, or *Arabian Nights*. They also influenced Ferdowsi's (tenth-century) great Persian literary epic *Shahnama*.

The relationship between the tales in the *Panchatantra* and the comparable *Darofify* and *Darofipy* cycles of tales in the oral literature of the Malagasy people of Madagascar is unclear.

The literature, both religious and nonreligious, of Muslim lands in this era was usually written in Arabic until the ninth century, when a new form of the Persian language, Pahlavi, written with the Arabic alphabet, began to be widely used. From then on, most Muslim religious literature continued to be in Arabic, but scientific, philosophic, and historical literature in Muslim lands was increasingly written in Persian. Early Arabic literature, both religious and secular, more often than not took the form of poetry, and this genre was also prominent in Muslim Persian literature.

Christian literature of this era was overwhelmingly religious, as discussed earlier. Partial exceptions were some Byzantine and West European historical writing, such as the *Anecdota* of the sixth-century Procopius, the *History of the Franks* by Gregory of Tours, and the *Ecclesiastical History of England* by the Venerable

Bede. In Byzantine courtly circles, epigrammatic poetry was a favored genre.

In Japan and Korea, after their adoption of much of Chinese civilization, courtiers and other members of the upper class normally wrote Chinese, using Chinese literary forms. But at least in Japan a new type of literature arose, written by aristocratic women using Japanese syllabary script as well as Chinese characters. The most memorable work of these aristocratic women is *The Tale of Genji*, acclaimed by many scholars as the first and the greatest novel in human history.

During this era, literature in sub-Saharan Africa and the Americas was almost completely oral except in Mesoamerica. The written literature of the Mesoamericans, particularly the Classic Maya, is only now, after having long been occluded, being read.

—Wilfred J. Bisson

Chinese Literature

The Northern and Southern dynasties (317–589 CE) and the Tang dynasty (618–907 CE) were two brilliant periods for Chinese literature. In the Northern and Southern dynasties, the chaos of frequent wars engendered decadent and over-subtle characteristics in composition and also stimulated the popularity of anchoretic poetry.



Li Po, renowned romantic poet during the Tang dynasty in China. (The British Library)

At the same time, as a conclusion of previous literary achievement, literary criticism and literary anthologies were flourishing. The Tang dynasty was the golden age of Chinese poetry. Tang poetry was preeminent because of an unrivaled position in both its quantity and the quality. The eighth-century writers Li Po and Du Fu are the two greatest poets in China's history.

During the Northern and Southern dynasties, the empire was divided into several short-lived kingdoms. It was common for one person to live through several dynasties. Wars took place everywhere and frequently. With experiences in wars, intellectuals felt the fragility of life, the impermanence of fortune, and unexpected fate. The feeling of the individual's powerlessness engendered a tragic mood in their writings. "Medicine" and "wine" became two major key words in poetry. Poets used medicine to cure their injured bodies and used wine to heal their wounded spirits.

In addition, anchoretic poetry (poetry of anchorites or hermits), a new trend, became popular. Because of the impact of war and the influence of metaphysics, intellectuals treated life and death imperturbably. They preferred escaping from society and living a solitary existence. Tao Yuanming (365–427) is a highly admired idyllic poet who spent almost half of his life as a hermit poet. Tao's beautiful long poem *Record of Peach Blossom Fount* (*Tao Hua Yuan Ji*) is a tale of a fisherman who lost his way and accidentally found a village in the mountains with masses of peach blossoms. In this isolated village, people keep primitive purity and rustic virtue. The fisherman was treated warmly and saw a peaceful and affluent society. "Old and the young are all happy," he exclaimed. After returning home, the fisherman could no longer go back to the peach blossom village; he had forgotten the way. In this poem Tao described an ideal world, so in Chinese culture "peach blossom fount" is the equivalent of Utopia. This idiom is even used today.

From the fifth to the sixth centuries, literary criticism was thriving. The most important works of literary criticism were *Fu on Literature* (*wen fu*) by Lu Ji, *Evaluations of Poetry* (*Shi Pin*) by Zhong Rong, and *The Hermit of the River Canglang* (*cang lang shi hua*) by Yanyu.

► LI PO AND DU FU—DAOIST HEDONIST AND CONFUCIAN MORALIST

Li Po (701–762) is the greatest Chinese poet. About 1,100 of his poems are extant. In his unparalleled poems we can find extraordinary imagination and expansive eloquence. He is called “Immortal Poet” and “Immortal of the Wine-cup” as well. Du Fu wrote a poem to describe his friend: “A hundred poems per gallon of wine,—that’s Li Po. Who sleeps in the taverns of the market of Chang’an, The son of Heaven summoned him, and he could not stagger on the boat, said ‘your servant is indeed an immortal in his wine.’” Being a Daoist Hedonist, Li Po’s writing and his life both showed the spirit of freedom. In one of Li Po’s poems, “Bringing in the Wine,” he wrote: “Oh, let a man of spirit venture where he pleases. / And never tip his golden cup empty towards the moon! / Since heaven gave the talent, let it be employed! / Spin a thousand of pieces of silver, all of them come back!” Having grown up in Sichuan Province, he later traveled and wandered around the country and wrote a great number of landscape poems. Being a romantic poet, he likes to use hyperbole in his poems. In his “Watching the Lu Mountain Falls,” Li describes the fall as “the torrent dropping three thousand feet, / straight down to the valley floor, / I think it must be the milky way / spilling to the earth from the heavens.”

Du Fu (712–770) is called “the Sage of Poets.” He was born in Henan Province. If Li Po’s poetry offered romanticism and Daoism, then Du Fu, in contrast, represented realism and Confucianism. Du incisively criticized social problems and spoke out against injustice. His words “Behind the gates of the wealthy, / food lies rotting from waste / Outside it’s the poor / who lie frozen to death” reflected the decline of the Tang dynasty that he witnessed. Around the rebellion of An Lushan, Du composed his best-known series of poems: the Three Officials and Three Leaves. In “The Official of Shihao,” Du told a miserable story: When Du came to Shihao village and stayed, he witnessed an official trying to catch someone after dark. The old man in the house climbed over the wall and fled. The old woman sobbed bitterly. Their three sons were all in the battlefield, and one had just written home and told them that the other two sons had died recently. In order to protect her husband and grandson, the old woman begged the official to take her. Du Fu’s touching poems reveal his intense love and sympathy of the people and the country. Fourteen hundred of his poems exist today and are regarded as “the mirror of his time.” Therefore, his poetry is called “historical poetry,” and he is also called a “poetic historian.”

—Yiran Zheng

These critical works have come down as historical masterpieces. Liu Xie (465–520) composed the most important work of literary criticism, *The Heart of Literature Carves Dragons* (*wen xin diao long*). Liu’s great work consists of 50 chapters. He wrote that literature is integral to the nature of things.

In the Tang dynasty, Chinese poetry reached its maturity. Tang poetry combines alternating tones and rhymes in accordance with strict rules.

In Tang poetry, there were many different genres. Wang Wei and Meng Haoran were good friends and prominent poets in the genre of landscape poetry. Their poems usually portray a beautiful and quiet scene and convey peaceful emotion. Frontier fortress poetry was made known because of Gao Shi and Cen Cen. They traveled along the far edge of the country and recorded their observations and moods. The

Han Meng genre takes its name from Han Yu and Meng Jiao. They were noted for the extreme care with which they selected the precise words to convey strange and exotic images.

Wang Bo, Yang Jiong, Lu Zhaolin, and Luo Binwang are remembered as the “four outstanding poets in early Tang.” Their writings marked the new epoch of poetry. In the late Tang, Li Shangyin and Du Mu brought Tang poetry to another pinnacle. They were good at using symbols and metaphors to describe subtle feelings. In order to distinguish from Li Po and Du Fu, they are called “Junior Li Du.”

Bai Juyi (772–846) was a famous realistic poet in the Tang dynasty. Bai always wrote a very profound verse with some simple words. It is said that whenever he finished a poem, he would read it to an old woman. Only if an illiterate villager could understand would he consider his

poems acceptable. Bai Juyi wrote almost 3,000 poems in his life. Most of his poems focused on the important social and political problems.

His long narrative poems *Pipa Song* and *Everlasting Regret* are his two best-known poems. *Pipa Song* describes a suffering song girl's life, which moved the author, an official in exile. He said, "Both of us are strangers here, both of us stranded, / Does it matter that we've just met, if our hearts understand?" This is one of the most famous sentences in Chinese literature. *Everlasting Regret* rewrote the love story of a Tang emperor, Xuanzong, and his favorite consort Yang Guifei. She was surprisingly beautiful. Emperor Xuanzong loved her so much that he neglected the affairs of state. She was blamed by people, and finally, in the rebellion of An Lushan, she was executed by officials in front of the army and the emperor.

The age was replete with literary anthologies, such as the *Collection of Literature* by Xiao Tong and *New Songs from the Jade Terrace* by Xu Ling. But *The Complete Collection of Tang Dynasty Poetry* was not published until 1707 in the Qing emperor Kangxi's regime. It is a 900-volume collection that contains 48,900 poems by more than 2,200 different authors. This is only a partial selection of Tang poetry; many poems could not be found after almost 1,000 years.

There are many poets in the Tang dynasty. Among the many poets of the Tang dynasty, Li Po and Du Fu are the most revered. They are considered the two leading poets in the history of Chinese literature. Though they were good friends, their writing styles were different. Li is seen as a Daoist hedonist, and Du is seen as a Confucian moralist. Li and Du separately represent the two main streams in Chinese literature: romanticism and realism. Both Li Po and Du Fu contributed to Chinese poetry by their talent and responsibility. A compliment by Han Yu, another famous Tang poet, has been always mentioned: "The works of Li and Du are there; their brilliant light will shine for ever."

—Yiran Zheng

Bibliography

Chang, Kang-I Sun, and Stephen Owen, eds. *The Cambridge History of Chinese Literature*. London: Cambridge University Press, 2010.

Du Fu. *The Selected Poems of Du Fu*. Translated by Burton Watson. New York: Columbia University Press, 2002.

Giles, Herbert. *A History of Chinese Literature*. 1901; reprint, Ithaca, NY: Cornell University Library, 2009.

Li Po. *The Selected Poems of Li Po*. Translated by David Hinton. New York: New Directions, 1996.

Liu, Wu-chi. *An Introduction to Chinese Literature*. Bloomington: Indiana University Press, 1966.

Mair, Victor H. *The Columbia History of Chinese Literature*. New York: Columbia University Press, 2002.

Twitchett, Denis. *The Writing of Official History under the Tang*. Cambridge: Cambridge University Press, 2002.

Early Japanese Women Writers

Prior to Chinese contact Japan had no written language, but by the fifth century written Chinese was already becoming well established in Japan, its function being, in some ways, analogous to that of Latin in Europe. It was the language of official written discourse in the realms of politics and religion. Following the Chinese Confucian model, women were excluded from official participation in politics, and though a few did learn some Chinese, they were discouraged from demonstrating such knowledge.

By the ninth century an indigenous Japanese writing system called *kana* was developed. It used a relatively small number of simplified Chinese characters to represent sound alone, detached from meaning. Kana made it possible for the first time to write in pure Japanese vernacular rather than in Chinese. Kana writing was used by both sexes to record poetry, and the written exchange of poems was an important part of social discourse and courtship among the aristocracy. As the classical poetic tradition developed, many of the characteristics of the earliest poetry of women—the expression of personal, private emotions and a predominantly melancholy tone—came to dominate the formal Japanese poetry of both men and women.

Japanese women writers played a major role in creating their culture's classical, elite literary tradition. Although their significance lessened greatly in later centuries, around the turn of the second millennium CE women writers enjoyed

preeminence unparalleled in any other premodern literary tradition worldwide.

The first compendium of poetry in Japanese, the *Manyōshū* (*The Collection of Ten Thousand Leaves*), compiled in the mid-eighth century CE, includes significant verses by women from the earliest periods. *Genji Monogatari* (*The Tale of Genji*), often called the world's first novel, was the work of a woman. Women were viewed as the natural and appropriate creators of literature in the native Japanese vernacular. This position is clearly evidenced by an ironic contrast to Western literary tradition: the oldest extant example of Japanese narrative prose by an identifiable author is the *Tosa nikki* (*Tosa Diary*), a literary diary created by a man who wrote in the guise of a woman.

Several sociological factors help account for the prominence of women among the earliest Japanese authors. Mythological and historical evidence indicates the significant position of women in early periods of the culture. In *Kojiki* (*The Record of Ancient Matters*), a mythopoetic account of origins published in 712, the central deity is Amaterasu, the sun goddess, who is presented as the ancestor of the Japanese ruling house. The oldest foreign record of an encounter with people in the Japanese islands is a Chinese account describing a tribe led by a woman called Pimiko.

The overwhelming influence of political and religious systems and cultural values imported from the Asian mainland gradually brought a decline in the position of women, but one such cultural system, the Chinese system of writing and its subsequent adaptation in Japan, was crucial to the formation of literature in Japan and directly affected the role of women as writers.

Literary diaries were the most common form of classical women's writing. The earliest of these is *Kagerō nikki* (*The Gossamer Years*, translated by Edward Seidensticker). Written by a woman known to us only as "the mother of Michitsuna," it covers the years 954 to 974 and is a virtual autobiography recounting the author's unhappiness over her husband's diminished affection after his attentions shifted to a later secondary wife.

Another sort of diary is *Makura no sōshi* (*The Pillow Book*) by Sei Shōnagon, a woman in court service. Completed shortly after the year

WOMEN WRITERS IN LATE HEIAN JAPAN

Heian Japan (794–1192 CE) saw a proliferation of female authors who penned novels that are to this very day considered classics in Japanese literature. The reason for the number of women who wrote novels, diaries, and poetry, among other works, is mainly societal. During the Heian period, elite marriages consisted of visiting marriages in which the bride would remain with her natal family and the husband would visit periodically. This afforded these women much leisure time, and many used this time to write. In addition, women were forbidden to write in Chinese, the language used for all court and government transactions, making written Japanese known as a feminine language. This use of Japanese rather than Chinese made it more accessible to the lower classes and therefore more widespread. The most important pieces were written between 950 and 1050, and this movement of female writers is partially credited with the breaking with Chinese culture and the creation of what would become a uniquely Japanese culture.

—Monique Vallance

1000, it takes the form of a collection of notes, lists, and comments rather than a chronological diary or journal. The personal voice of Sei Shōnagon, witty and acerbic, contrasts strikingly with the self-pitying attitude of Michitsuna's mother. *Makura no sōshi* is still judged one of the greatest masterpieces of literary style in the Japanese language, and its random essay form became a mainstay of later literary writing by men.

Among all the writing by premodern Japanese, male or female, undisputed pride of place goes to *Genji Monogatari*. Like Sei Shōnagon but about a decade later, its author, Murasaki Shikibu, was also in service as a tutor to an imperial consort, apparently having achieved this position because of her established literary reputation. *Genji Monogatari* is a vast work of narrative fiction rather than a diary, more than 1,000 pages in English translation. Completed early in the eleventh century, it depicts an imaginary court of about a century earlier and centers around the amours of the idealized male hero, the prince Hikaru Genji, "Shining Genji." Its later darker

chapters shift, after the prince's death, to the amorous lives of two younger men, each a pale, partial reflection of Genji.

Though the work was read by both men and women, its primary audience was the women at court. It was written serially and circulated chapter by chapter, apparently read aloud and discussed among the women. For this audience *Genji Monogatari* must have been both diverting and soberingly instructive in its depiction of many aristocratic female characters of varied personality. As in women's literary diaries, more outward social and political concerns scarcely appear. The psychological intensity of women's passion, the negative power of jealousy, and the importance of personal taste and grace are its major concerns. Despite vast cultural differences, the book has an extraordinary feeling of modernity and accessibility.

The canon of classical Japanese literature includes about a half dozen other significant diaries and works of fiction by women. The last important flowering of the women's courtly literary tradition came some 300 years after *Genji* in the diary titled *Towazugatari* (*The Confessions of Lady Nijō*). Written by an imperial concubine, it describes both her years at court and her later life when she became an itinerant nun after falling out of favor. Not only is she writing in the tradition of earlier courtly women diarists, but she also shows instances in which court activities were modeled on scenes in *Genji Monogatari*.

The decline of the court, the rise of other genres of literature and drama, and the gradually declining social position of women in subsequent centuries shifted literary preeminence away from the brushes of women writers. Only in modern times has writing by Japanese women begun to regain significance.

—Susan Matisoff

Bibliography

- The Confessions of Lady Nijō* Translated by Karen Brazell. Stanford, CA: Stanford University Press, 1973.
- The Kagerō Diary: A Woman's Autobiographical Text from Tenth-Century Japan*. Translated with annotations by Sonia Arntzen. Ann Arbor: Center for Japanese Studies, University of Michigan, 1997.
- Kawashima, Terry. *Writing Margins: The Textual Construction of Gender in Heian and Kamak-*

ura Japan. Cambridge, MA: Harvard University Press, 2001.

The Pillow Book of Sei Shonagon. Translated by Ivan Morris. New York: Columbia University Press, 1967.

Sarra, Edith. *Fictions of Femininity: Literary Inventions of Gender in Japanese Court Women's Memoirs*. Stanford, CA: Stanford University Press, 1999.

Shikibu, Murasaki. *The Tale of Genji*. Translated by Royall Tyler. New York: Viking Penguin, 2001.

Literature of India

India experienced a literary golden age during the first millennium CE. During that period, particularly in the Gupta Age, Indian writers produced works of enduring merit, works that influenced the literature of China, Southeast Asia, Persia, the Muslim world, and Europe and may have helped shape the oral literature of Madagascar and through that great island sub-Saharan Africa.

The compilation of the *Puranas* in written form was one of the great literary achievements of the Gupta Age (late third to early sixth centuries CE). The *Puranas* (*Tales of Ancient Times*), based largely on oral literature originally recited as early as several centuries BCE, were embellished and modified in written form during the early medieval age and perhaps after, but their written versions were substantially composed in the early part of this period. The *Puranas* are significant religious works not only for the Hindus but also for the Jains and Buddhists. The focus of the *Puranas* is on the mythical history mainly of northern India, but they are also of some value (when very judiciously used) as historical sources, especially in their genealogies of kings. The *Puranas* were written in Sanskrit but eventually became available in the vernacular languages.

Another important literary enterprise of early medieval India was the *Panchatantra*. Although the original version had been written earlier (some say as early as the third century BCE), the original texts had long been lost, and modifications and revisions of the project continued through the Gupta Age and after. The *Panchatantra*, consisting of fabulous tales of

animals that contained a moral lesson, sometimes thought to be useful for the ethical instruction for children, is also considered to have had significance as a political science text, giving Machiavellian instruction to aspiring rulers.

The tales in the *Panchatantra* involve such animals as the treacherous Dimna the Jackal and the pure of heart but rather simple Lion, king of the beasts. A clever monkey and cunning crows as well as donkeys and other animals also populate these stories. In the early medieval age, versions of the *Panchatantra* spread to neighboring peoples, especially to the Persians and from them to the Arabs and then the Europeans. In the *Shahnameh*, the great tenth-century Persian epic, Ferdowsi states that Shah Khosrau I in the late sixth century ordered the *Panchatantra* translated from Sanskrit to Persian. It has been said that the *Panchatantra* influenced much of the world's subsequent fabulist literature, including the ninth-century *Arabian Nights* and the nineteenth-century *Uncle Remus* tales.

The literary glory of northern India in its classical Gupta Age can be found in the works called *kavyas*, erudite works in prose and poetry written largely for the courts of the Guptas and other royal families. Kalidasa, who wrote perhaps during the reign of Chandragupta II (r. ca. 350-ca. 415), was one of the great writers of *kavyas* and was a playwright ranking with the fifth-century BCE Athenian playwrights Sophocles and Aristophanes and the sixteenth-century CE Englishman, Shakespeare.

The three plays of Kalidasa that have come down to us focus on the love of kings for beautiful girls or, in one case, a wood nymph. The most famous play that has been translated into English is *Abhijnanashakuntalam*, often called *Shakuntala*. In the play, a king falls in love with Shakuntala, the beautiful daughter of a forest sage, and looks forward to a happy marriage with her. Their idyll in the forest is cut short when the king is called back to court, leaving his pregnant bride to the wiles of a malignant magician, who puts her under the curse that the king will forget her unless she has the ring that he has given her. Unfortunately, Shakuntala loses the ring, and the king sends her away from his court. But the play has a happy ending when a fisherman finds the ring and brings it to the

king, who regains his memory of his forest love and goes back into the wilderness, where he finds her.

Kalidasa's poems include two epics, *Kumarasambhava* (*Birth of Kumar*), and *Raghuvamsha* (*Dynasty of Raghu*), but is also famous for his lyric poetry, including *Rtusamhara* (*Progress of the Seasons*) and *Meghaduta* (*Cloud Messenger*). *Meghaduta*, a poem of 111 stanzas, concerns a Himalayan mountain spirit whom the gods have exiled to the hot Deccan, in central India. The banished mountain spirit implores a passing cloud to carry a message back to his wife in the mountains. The message that the cloud takes to the mountains is a description of the wonders of the Indian countryside that the cloud passes over on its way to the mountain.

Although Kalidasa stands out as a composer of *kavyas*, he was but one of a galaxy of prose and poetry writers in the Gupta Age. One of the popular genres was the writing of plays, and many dilettante officers, including Emperor Harsha (r. 590-647), at the royal courts wrote plays as a social accomplishment.

A remarkable flowering of literary production in southern Indian languages, particularly in Tamil, occurred in the first millennium CE. The early centuries of the first millennium especially are regarded as a golden age for the development of Tamil literature. During this period, known as the Sangam Age, Tamil literature witnessed a great outpouring of works, including grammatical texts, epics, and a great deal of poetry.

Of the "Five Great Epics of Tamil Literature" (*Jivaka-chintamani*, *Siliappatikaram*, *Manimekalai*, *Kundalakesi*, and *Valayapathi*), *Siliappatikaram* (also spelled *Ciliappatikaram*) stands out as a Tamil classic. The authorship and dates of this epic are variously attributed. The subject of *Siliappatikaram* as well as of the other classic Tamil epics is the history of the Three Kingdoms in Tamil land, the kingdoms of the Pandyas, the Cheras, and the Cholas. *Siliappatikaram* waxes lyrical in its celebration of the geography and countryside of southern India. Jain and Buddhist authors composed these epics from the second to the tenth centuries CE.

Jains and Buddhists produced much of the Tamil literature during the period 300-600 CE,

but with the emergence of the bhakti movement, Hindu saints (63 Saivite Nayanmars and 12 Vaishnavite Alvars) composed a vast outpouring of devotional poetry, chants, and hymns. Appar was a famous Nayanmar who composed thousands of devotional hymns, 3,066 of which have survived. Other Nayanmars composed thousands more hymns, making the body of this work very great. The Vaishnavite Alvars were also prolific authors of devotional literature, especially the only female Alvar, Andal, and her stepfather Preiyalvar. Andal declared that she would marry no mortal man and pledged herself to the great god Vishnu. Vishnu was her symbolic lover, and her most beloved devotional song, *Vaaranam Aayiram* (*One Thousand Elephants*), describes in lyrical terms her wedding to Vishnu. It is still sung at weddings in Tamil Nadu.

None of the other major southern Indian languages has a literary tradition as old as that of Tamil. The literary tradition of the Kannada language is said to date from the middle of the first millennium CE, but the first surviving major work in Kannada is the *Kavirajamarga*, composed by Jains about 850 CE. The Telegu literary tradition started much more recently, perhaps not until the sixteenth century. Literature in Malayalam probably began to be composed after the twelfth century.

➤ “WHAT HAS INGELD TO DO WITH CHRIST?”— THE SURVIVAL OF SECULAR LITERATURE IN A CHRISTIAN TEXTUAL CULTURE

Alcuin (ca. 735–804), a scholar in Charlemagne’s court, demanded to know why monks in northern England were preserving the tales of the pagan past. His question “Quid Hinieldus cum Christo?” (What has Ingeld to do with Christ?) highlights the precarious position of secular literature in a monastic setting. Ingeld, a hero of the Scandinavian saga *Ynglingasaga*, represented heroic characters grounded in secular Germanic values of strength, loyalty, and generosity. Monastics were most likely preserving works featuring such secular characters not to undermine their faith but because these heroic tales were as much a part of their cultural identity as their religion.

—Todd Preston

The above includes some of the major literary traditions of early medieval India but is by no means exhaustive.

—Wilfred J. Bisson

Bibliography

- Hart, George L. *The Poems of Ancient Tamil: Their Milieu and Their Sanskrit Counterparts*. Berkeley: University of California Press, 1975.
- Macdonell, Arthur Anthony. *A History of Sanskrit Literature*. Whitefish, MT: Kessinger Publishing, 2004.
- Winternitz, M. A. *A History of Indian Literature*. New Delhi: Oriental Books, 1927.

European Secular Literature

Clarifying the term “secular literature” is essential prior to any discussion of the writings of the early Middle Ages. For our discussion, the term “secular” refers to works that are largely non-Christian in content or focus. Thus, the Old English poem *Beowulf* may be considered secular, even though the hero repeatedly praises and relies upon the Christian God. Similarly, although an argument may be made for considering everything from recipes to royal edicts as “literature,” we shall use this term to refer to larger works of philosophical, scientific, political, and historical prose as well as poetry.

While secular prose of the early Middle Ages assumed many forms, sometimes the remove from religious writing was very slight. Philosophical texts were most prone to this effect. The *Consolatio Philosophiae* (*Consolation of Philosophy*) of Boethius (ca. 480–525), for example, could be seen as a thinly veiled Christian text. Although the narrator of the *Consolatio* investigates humanity’s place in the larger workings of the cosmos, wrestling with questions of fate and free will, Christianity is not overtly invoked. However, this is more a function of the author’s reverence for his classical models than it is any refutation of Christian belief. In fact, the very nondogmatic nature of the text is what may account for its popularity through the centuries.

Scientific texts, like the philosophical ones, also owed a debt to the classical past. Martianus Capella’s (fifth-century CE Roman pagan writer) hugely influential *Satyricon* or *De Septim Dis-*

ciplinis (*On the Seven Disciplines*) laid the groundwork for scholarship throughout the Middle Ages. Separating the seven liberal arts into the *trivium* (logic, rhetoric, and grammar) and the *quadrivium* (astronomy, arithmetic, geometry, and music), Capella created a system for understanding the arts and sciences that found its way into courts and monasteries across Europe.

Political and historical texts of court and church during the period could intermingle fluidly. A text like the *Anglo-Saxon Chronicle*, for example, not only records the important events of a community but also provides political commentary. When the *Chronicle* reports Cynewulf's usurpation of Sigebert's throne in 755, the chronicler justifies Cynewulf's actions by pointing out Sigebert's "unryhtum dædum" (unrighteous deeds). Historical prose was likely to be very subjective in the medieval period.

Like secular prose, secular poetry of the early Middle Ages also took a wide variety of forms. In Old English, poems could range in form from the elegiac (i.e., lamentation poetry), like "The Wanderer," to the heroic, like *Beowulf*, to the gnomic (i.e., wisdom poetry), like the riddles of the *Exeter Book*. Verse forms could range from emulation of classical forms to native vernacular techniques. In content, the secular poems of the early Middle Ages largely focused on the myths and the real or imagined heroic deeds of the pagan past. *Beowulf* is the prime example of early medieval secular poetry. Although the Christian God does appear in the text, Germanic heroic values drive the characters in the poem. As much as *Beowulf* may call upon God for strength in battle, the narrator ultimately praises the hero as one not most devoted to God but as a man "most eager for fame."

—Todd Preston

Bibliography

- Besserman, Lawrence. "Secular and Sacred in Medieval and Early Modern Cultures: Issues and Approaches." In *Secular and Sacred in Medieval and Early Modern Cultures: New Essays*, edited by Lawrence Besserman. New York: Palgrave, 2005.
- Contreni, John. "The Carolingian Renaissance: Education and Literary Culture." In *The New Cambridge Medieval History*, Vol. 2, c. 700–c. 900,

edited by Rosamond McKitterick. Cambridge: Cambridge University Press, 1995.

Fontaine, Jacques. "Education and Learning." In *The New Cambridge Medieval History*, Vol. 1, c. 500–c. 700, edited by Paul Fouracre. Cambridge: Cambridge University Press, 2005.

O'Brien O'Keeffe, Katherine. "Heroic Ideals and Christian Ethics." In *The Cambridge Companion to Old English Literature*, edited by Malcolm Godden. Cambridge: Cambridge University Press, 1991.

European Christian Literature

For a largely illiterate region, a remarkable variety and amount of Christian literature was produced during the early medieval period. As the influence of the Christian church spread across Europe during the early Middle Ages, writings both in Latin and in the European vernaculars emerged from Greece to the British Isles.

A fitting origin for Christian literature in medieval Europe would be the Latin Vulgate Bible of St. Jerome (ca. 340–420). Editing the Old Latin Bible (the *Vetus Latina*) and translating anew from Hebrew and Greek exemplars, St. Jerome's more accessible Latin text was the basis for most theological and imaginative Christian literature for the medieval period.

Linguistically accessible Scripture may be of little use if it is ill applied. Therefore, early

➤ ADAPTING THE BIBLE TO SUIT ANGLO-SAXON CULTURE—MOSES, THE ANGLO-SAXON WARRIOR

One of the most interesting aspects of early medieval Christian writings is the way in which writers adapted Scripture to best suit their own culture. The Old English *Exodus* of the eighth century transforms the Old Testament text into heroic verse and casts Moses as "herges wisa" (the leader of the army) whose military victory over the Egyptians will ultimately ensure the Israelites' heavenly reward in "beorselas beorna" (the beer-hall of heaven). For the Anglo-Saxons, recasting Moses as a Germanic warrior-hero was a way of making the biblical story their own and ensuring the adoption of Christian texts and their values.

—Todd Preston

Christian writers wrote instructional handbooks to help the clergy spread the good word. Such an effort was the *Pastoral Care* of Pope St. Gregory I (“the Great”) (ca. 540–604). St. Gregory was a prolific author who contributed to shaping church doctrine and practice. *Pastoral Care* was well received and was reproduced throughout medieval Europe. Within the text, St. Gregory gives practical advice for the clergy’s care of its spiritual charges. Gregory outlines what kind of men should work for the Church, how to conduct oneself as a pastor, how to preach to various kinds of parishioners, and how to do all of this with humility. This influential work served as a handbook for clergy and as a meditation on all kinds of rule, both secular and sacred.

Once the right person was found for the job of pastor, he had to be able to deliver mass. This duty spawned a large body of liturgical writing. While the Scripture was the bedrock of Christian mass, interpretative sermons provided the means of bringing the Scripture’s message to the people. Abbot Aelfric of Eynsham (ca. 955–1010) was an acknowledged master of the form. Aelfric’s passion for reaching his audience was made plain in the preface to his *Catholic Homilies* (ca. 989). He wrote that his reason for writing in English rather than Latin was to “more readily reach the hearts of those who read or hear.” Liturgical texts, then, were not merely to announce the teachings of the Church but also to genuinely connect with the congregation.

Some of those early medieval Christians eagerly sought that connection to help explain the mechanics of their lives, giving rise to many philosophical treatises on religion. One of the early medieval era’s most influential meldings of philosophy and religion was the work of Boethius (ca. 480–524). A Roman citizen during the rule of King Theodoric the Ostrogoth (r. 493–526), Boethius wrote his *Consolation of Philosophy* (ca. 523–524) while imprisoned on spurious treason charges. Within his text, Boethius posits a discussion between his alter ego and Lady Philosophy. Following a model of Platonic discourse, Lady Philosophy brings Boethius to understand that everything happens for a divine greater good; all suffering is part of the divine plan. If liturgical texts like *Pastoral Care* helped to bridge the spiritual gap between clergy and

parishioner, philosophical texts such as *Consolation* helped to provide a rational understanding of the mechanics of providence.

Spiritual and intellectual understanding of Christian teachings inspired a large number of imaginative works in the early Middle Ages. Anglo-Saxon poets could turn the biblical Exodus into a heroic poem in the eighth century or have a gospel book speak the riddle of its identity in the tenth century. Christian teachings had passed from the precincts of the churches and cloisters into the popular imagination. The impact of Christianity on the literature of the early Middle Ages is profound and, ultimately, inestimable. What the religion fostered was a diverse, profuse, and meaningful literary heritage.

—Todd Preston

Bibliography

- De Jong, Mayke. “Religion.” In *The Early Middle Ages: Europe 400–1000*, edited by Rosamond McKitterick. Short Oxford History of Europe. Oxford, UK: Oxford University Press, 2001.
- Gamble, Harry. *Books and Readers in the Early Church: A History of Early Christian Texts*. New Haven, CT: Yale University Press, 1995.
- Gameson, Richard, ed. *The Early Medieval Bible: Its Production, Decoration and Use*. Cambridge Studies in Palaeography and Codicology. Cambridge: Cambridge University Press, 1994.
- Pope, John C., ed. *Homilies of Aelfric: A Supplementary Collection, Being Twenty-One Full Homilies of His Middle and Later Career*. London: Oxford University Press, 1968.
- Wood, Ian. “Christianisation and the Dissemination of Christian Teaching.” In *The New Cambridge Medieval History*, Vol. 1, c. 500–c. 700, edited by Paul Fouracre. Cambridge: Cambridge University Press, 2005.

Arabic Literature

Arabic literature has a rich and wide-ranging history. In its Classical Period (sixth to twelfth centuries CE), it developed in diverse artistic directions. In the cultural melting pot of the early Islamic world, indigenous Arabian literary ideas and forms blended with middle Persian, Greek, and Indian traditions to produce a colorful literature in the Arabic language. Poetic genres such as tribal odes, brigand poetry, ele-

giac laments, love lyrics, court panegyrics, scathing satires, and mystical verses emerged side by side with prose genres such as scripture, orations, epistles, fables, mirrors for princes, and popular tales, all with their own intriguing features. Centuries later, these texts still provide us with a firsthand view of the culture and thought of the classical Arabic-speaking world.

Arabic was a distinct language by the third century CE. In the pre-Islamic period of the sixth century CE, poetry and oratory had already emerged in the Arabian Peninsula as fully developed art forms. From this period some short poems, primarily elegies by women, and a larger collection of odes by men have survived. The latter form typically included the following tripartite structure: first a love prelude, with the poet weeping over the deserted encampment of the departed beloved, followed by a journey through the wilderness with descriptions of the poet's mount, camel or horse, and of desert landscapes and animals, and finally a section of tribal praise or self-praise, focusing on the twin heroic motifs of generosity and courage. These odes, on average between 60 and 130 verses in length, were set in monorhyme and monometer verse. Their composers used a standard nondialect form of Arabic that was used for intertribal communication and for all "high" literature. Among these odes, the most famous are the seven called *mu'allaqat*, and of them, Imru' al-Qays's *mu'allaqat* is perhaps the best-known poem in all of Arabic literature.

Poetry was considered the register of the Arabs, a record of their great deeds and culture, even their conception of the meaning of life and death. It had a ritual and mythic function, and poets, in the pre-Islamic period, were believed to possess semidivine, shamanistic powers.

Although oratory was the major Arabic prose genre during pre-Islamic times, relatively few examples of this form have survived. Extant pieces consist of rhymed pronouncements by soothsayers, pious sermons about the inevitability of death by pagans and Christians, and political speeches by tribal leaders during periods of intertribal hostility.

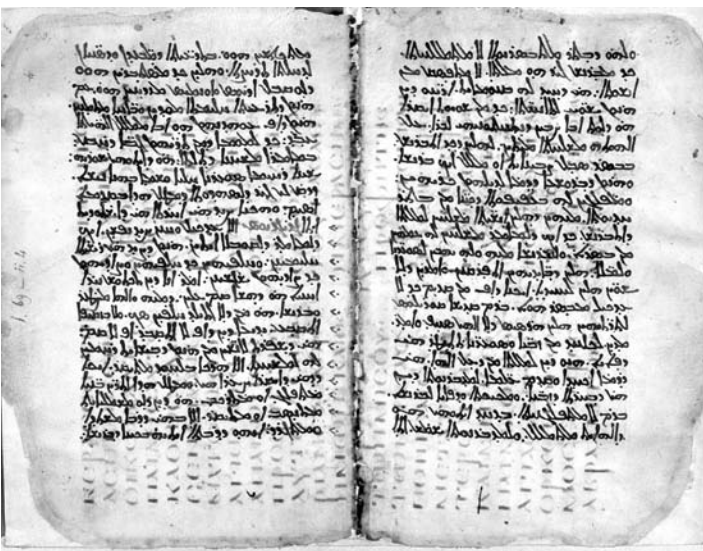
With the advent of Islam in the early seventh century CE came its Holy Book, the Quran. Muslims believe that the Quran was the word of God, containing knowledge of all things revealed to

his prophet Muhammad through the archangel Gabriel. The Quran had no literary precedent, being neither poetry nor prose. Its miraculous nature was attributed in part to its use of language. The Quran had an enormous influence on subsequent Arabic literature. The desire for Muslims to understand the linguistic and idiomatic context of the Quran, in addition to their wish for tribal valorization, motivated many Muslims to preserve earlier poetic materials.

In this period oratory continued to exist as a major prose genre. 'Ali b. Abi Talib, an important religious and political personage of early Islam, composed orations that delineated the Arabic path of eloquence. Most of the literature produced up until the mid-eighth century was oral. Scholars memorized and orally transmitted these works to subsequent generations. In the late eighth and early ninth centuries scholars such as Sukkari, Mufaddal, and Asma'i began physically copying these works.

The Arabic language spread to Persia, Syria, Iraq, and Egypt in the mid-seventh century with the Muslim conquests of these lands and, to a large degree, replaced the local languages. The emerging Islamic empire adopted the bureaucratic forms of the Sassanian and Byzantine empires it had conquered. Although written Arabic prose had existed since early Islamic times in the form of treaties and brief epistles, as the empire expanded Islamic leaders found it increasingly necessary to disseminate policy edicts more widely. This gave rise to a chancery that produced polished policy documents.

In 697, when the Umayyad caliph 'Abd al-Malik required the use of Arabic in the imperial chancery, it became the seat of Arabic literary prose. Most chancery officials were Persian or Greek; therefore, the first written Arabic literary prose developed under the impetus of these groups' respective writings on statecraft while being simultaneously influenced in style and theme by the indigenous Arabic oratorical tradition. In comparison to oratory, this epistolary style emphasized longer syntactically parallel constructions. 'Abd al-Hamid al-Katib was this form's most celebrated proponent. The vast majority of writers emulated his style, although a century later the emphasis shifted again to rhyming prose.



Part of a text by Severus, Christian Patriarch of Antioch, about 800 CE. By this time, the majority of the literature in the West, whether by Muslim or Christian writers, was in Arabic. (The British Library)

Umayyad poetry brought in new dimensions with the introduction of vituperative poetic duels. Farazdaq, Jarir, and Akhtal are famous for their bawdy satires. Furthermore, two new schools of love poetry emerged. ‘Umar b. Abi Rabi’a represents the Hijazi style, with flippant dialogue and a coquettish beloved, and two poets from the tribe of ‘Udhra, Jamil and Majnun, represent the ‘Udhri style, with expressions of grieving laments and unfulfilled, undying love. Poets of the Umayyad period, such as Farazdaq and Kumayt, also composed religio-political poetry in praise of the family of the prophet.

The subsequent Abbasid period was one of great literary efflorescence. In the early ninth century, the caliph Ma’mun founded an institute in Baghdad, called the House of Wisdom (Bayt al-Hikma). Under the leadership of a Nestorian Christian, Hunayn b. Ishaq, its scholars translated works of Greek philosophy, via Syriac, into Arabic. This translation movement produced a rationalist trend in Arabic literature that influenced many contemporary writers. Abbasid society’s appreciation of literature, its opulent multiethnic courts that encouraged literary production, and its openness to new ideas and cultures gave rise to creative innovations in both

prose and poetry. The geographical compass of Arabic literature also expanded. In addition to the Arabian Peninsula, Syria, and Iraq, Arabic literary production was now coming out of Egypt, Persia, and central Asia.

Fiction, in the Arabic mind, had initially been considered “untruthful” and thus morally reprehensible. This negative perception changed gradually but never really disappeared until modern times. Early Arabic authors of fiction adopted the form of historical writing. This form consisted of real or made-up anecdotes, each framed by an oral chain of transmission (*isnad*). These early works also exemplify a genre of prose called *adab*, literally meaning “good manners” but also “literary culture.”

Ibn al-Muqaffa, a Persian scribe, produced the first Arabic work of fiction. His “mirror for princes” fable *Kalila and Dimna* was an Arabic reworking of a Persian book that itself was a translation of the ancient Sanskrit text *Panchatantra*. A prose writer from Hamadan nicknamed Badi’ al-Zaman, or “Marvel of the Age,” produced an original picaresque protonovel titled *Standings*, with an eloquent rogue as its hero. Jahiz, an essayist from Basra of East African lineage, wrote approximately 200 *adab* treatises on a vast range of topics, including animals, misers, politics, geography, and literary theory. These authors’ works were immensely influential in shaping the course of Arabic prose.

Poetry also expanded in new directions. A multiplicity of new and reworked genres emerged in Abbasid lands, such as homoerotic, wine, Arab-bashing, and ascetic poetry. In Fatimid Egypt, a new genre of religious mission poetry developed. This was also the age of the professional panegyrist (a poet who wrote praise for an individual) who was often a salaried employee of the state. And it was the age of stylistic innovation, with the introduction of far-fetched metaphors and excessive wordplay. Abu Tammam was a state panegyrist who famously praised the Abbasids’ military victories over the Byzantines. He is considered the principal proponent of the “artificial” *badi’* school. Mutanabbi was another celebrated panegyrist who lived in the tenth century. His descriptions of battles and horses as well as his gnomic pronouncements

on death are memorized and quoted by Arabic-speaking peoples to this day.

By the mid-ninth century, literary culture was widely accessible to the masses. Many famous litterateurs rose from humble socioeconomic beginnings to enjoy some of the best education of the day. Public lectures were commonly held in mosques on religious and secular topics, as were public debates. Baghdad boasted an entire market devoted to booksellers, which consisted of approximately 100 shops. The public libraries of Baghdad and Cairo contained tens of thousands of books (some reports go up to 200,000). Library budgets routinely included expenses for paper and ink in order to allow individuals to make their own copies. Arabic literature, in this period, transitioned from a primarily oral to a primarily written mode as paper-making techniques from China reached the Islamic world.

Alongside “high” literature composed in pure, classical Arabic, a tradition of popular tales had existed since at least the ninth century. These tales were in “middle” Arabic, a mixture of colloquial dialects and standard classical. Professional storytellers narrated fantasy tales sprinkled with myth, folktales, history, poetry, and Scripture, Arabic tales that had echoes from Persian, Turkish, Greek, and Indian cultures. The famed collection *Thousand and One Nights* (also known as *Arabian Nights*) took its Shahrazad frame story from an old Persian tale and used it to encompass all aspects of fascinating stories. It evolved over many centuries and was eventually written down in several versions. The storytellers also narrated epic story cycles (*sira*) of valiant heroes, such as the pre-Islamic ‘Antar, the warriors of the migratory tribe of the Banu Hilal, the warrior-princess Dhat al-Himma, and later of the Mamluk prince Baybars.

In the Far West, Arabs had entered Europe through North Africa as conquerors in the early eighth century. The Umayyad caliphate of Andalusia produced a good deal of literary material. Most of the important literary figures of Arab Spain are, however, from the eleventh, twelfth, and thirteenth centuries and thus outside the scope of this article. Non-Arabic speaking Muslims in South, Far East, and central Asia also

➤ “PRECIOUS GEMS”

“Halt, O companions both! Let us weep at the remembrance of a beloved and a campsite by the winding of the dunes, between Dakhul and Hawmal

and Tudih and Miqrat, whose traces have not been effaced from the weaving through of the North and South winds.

You see the droppings of white antelope in its open spaces and lowlands, like balls of peppercorn.

As though I—on the day they loaded their camels near the tribe’s acacia trees—were peeling bitter colocynth-onions.”

(Translated from Arabic by Tahera Qutbuddin)

Thus opens Imru al-Qays al-Kindi’s famous muallaqa ode, some of the best-known lines of Arabic literature. Sixth-century CE Dakhul, Hawmal, Tudih, and Miqrat are the names of ancient tribal camping sites in Arabia.

Poetry was the main art form of the Arabs in pre-Islamic times, and the best odes were reportedly selected by an intertribal council at the annual cultural fair of Ukaz to be written in letters of gold and hung on the holy shrine of the Kaaba in Mecca.

The poet gave the ode no real title. It is known as “the muallaqa of Imru al-Qays.” The etymology of the word “muallaqa” is disputed. The meaning might be “precious gems.” Or it could mean “the hung one” (on the walls of the Kaaba).

—Tahera Qutbuddin

produced a large amount of religious Arabic literature from the eighth century onward, but modern scholarship currently lacks a detailed study on this topic.

In conclusion, classical Arabic literature developed from an oral tribal-inspired set of odes and orations into a largely urban writing culture that included religious tracts, historical works, geographical studies, and grammatical texts and, in belles-lettres, incorporated new genres of poetry as well as literary epistles and fictional prose.

—Tahera Qutbuddin

Bibliography

- Cooperson, Michael, and Shawkat Toorawa, eds. *Arabic Literary Culture, 500–925*. Detroit: Thomson-Gale, 2005.
- Irwin, Robert, ed. *Night & Horses & the Desert: An Anthology of Classical Arabic Literature*. New York: Anchor Books, 2001.
- Meisami, Julie Scott, and Paul Starkey, eds. *Encyclopedia of Arabic Literature*. 2 vols. London: Routledge, 1998.
- Sells, Michael. *Approaching the Qur'an: The Early Revelations*. 2nd ed. Ashland, OR: White Cloud Press, 2007.

Persian Literature

Persian is the ancient language from the region of Fars in modern-day Iran. As the language spread northeast into central Asia during the first millennium, Persian solidified its position as the cultural language in Greater Iran. This region underwent massive change in the mid-seventh century when the population rapidly converted from Zoroastrian to Islam, and the Persian language adapted to the introduction of Arabic vocabulary and script, resulting in the transformation of Pahlavi, or Middle Persian, into New Persian. These two major changes sig-

nificantly influenced Persian literature by incorporating new vocabulary, introducing innovative literary styles, and shifting themes within poetry and prose. Despite a lull immediately proceeding the Islamic Conquest, Persian literature experienced a revival during the reign of the Samanids (ca. 850–999 CE), culminating in the composition of the great Persian epic the *Shahnama*, written by Firdawsi (935–1020 CE). Firdawsi's work is the quintessential Persian chronicle, and Persian children continue to study it for its patriotic and nationalistic value.

Early Persian literature emerged from the versed *Gathas*, or psalms, of the Zoroastrian sacred book the *Avesta* (written ca. 1000 BCE); lyrical hymns better enabled priests to remember the words of recitation. Since only a small portion of the reported 20-volume text remains, the *Avesta* is not generally regarded for its literary significance. Zoroastrian influence decreased following Alexander the Great's conquest of Greater Iran in 331 BCE, and there was a subsequent decline of religious, secular, and literary efforts.

It was not until the Sassanian dynasty (224–651 CE) and the ensuing surge of Persian identity that there developed significant secular literature as well as literary professionals such as court poets and historians. The role of poets was often combined with that of court singers. Despite very few remaining Sassanian writings, information from later sources identified a few poets including Barbad and Nakisa as well as several kings. Popular subjects of poetry included love, wisdom, and wine, and poetry was even used to deliver bad news, such as when a beloved horse died and the poet-singer Barbad was selected to inform the king, which he did in a versed tale. During this time, the writing of dynastic histories became popular, as they could further solidify the power of monarchs. Such panegyrics, or highly praising verses, were the most common examples of prose, along with scholarly topics such as philosophy and sciences. There are very few remaining examples of fiction and drama; such works of prose resemble poetry, as they contain elements of rhymes and rhythms.

The seminal division in Persian literature is the 651 Muslim Arab conquest of central Asia, which introduced new literary topics. Persian

► THE SHAHNAMA

The *Shahnama* (*Book of Kings*) is the only Persian epic of Iran's glories and people. It begins at creation and continues through the Sassanian defeat by the expanding Muslim Arab empire. The *Shahnama* is divided into three sections: the mythic, the legendary, and the historic. The mythic section focuses on the creation of the world and the development of society. A prince named Rustam is the central figure of the legendary section. In order to save his king, Rustam faces seven trials, including slaying a dragon, killing a witch, and defeating a demon. This hero also faces tragedy when, during battle, he inadvertently kills his son, Sohrab. The legendary section also features several well-known romances, such as that of Zal and Rudaba. The final section is factual and covers the centuries between Alexander the Great in 331 BCE and the Islamic conquest in 651 CE.

—J. Tia Wheeler

literature was ebbing, and it was not until the Abbasid power in Baghdad solidified and the concurrent rising Eastern influence that Persian literary efforts increased. During that time, the hub of Persian literature was the city of Merv, an ancient Zoroastrian center. Abbas of Merv is nominally identified as the first bard of the New Persian language. When the Abbasid caliph Mamun came to Merv in 809, Abbas was selected to author a panegyric that he chose to compose in Persian instead of the customary Arabic. Despite this effort by Abbas to advance his native language, many Persian authors wrote in Arabic, as that was the official court language of the Abbasid rulers.

When Abbasid authority declined and the Samanids of Persia came to power in the mid-ninth century, Persian literature witnessed a revival that reflected the contemporary political changes. Prominent were historical writings focusing on the pre-Islamic era by recalling Persia's heritage, and once again panegyric epics served as propaganda for monarchs who encouraged such writing through royal patronage. The writing style became progressively more refined to make the words pleasing to hear when recited to the king and royal court. Despite Islamic bans on alcohol, bacchanalian poetry continued to thrive. A new popular topic was self-elegies in which the writer would often comically lament his lost youth. One poet, who composed a humorous quatrain on vanity, in particular the need to dye graying hair, was Rudaki (ca. 880-ca. 954 CE). The blind author was a prolific writer with more than 1 million verses attributed to him, yet less than 100 remain today. Of those lost, the best known was his poetic Persian translation of the animal fables, *Khalila and Dimna*.

Another famed Persian writer, Daqiqi (ca. 940-ca. 976 CE), began composing a great Persian epic before his murder by an esteemed slave. Like his other writings, it revealed a strong Zoroastrian identity and focused on wine and women. His approximately 1,000 verses of the epic were not lost, as they were soon incorporated by Firdawsi into his work that was to become the *Shahnama*. Firdawsi, who like Daqiqi was from the city of Tus, claimed to have seen the dead poet in a dream in which Firdawsi was charged by Daqiqi to continue writing the epic.

Firdawsi spent more than 30 years composing the *Shahnama*, and in its unabridged form it has 60,000 couplets and is approximately ten volumes in length. It continues to be regarded as the greatest literary example of the Persian language, largely because of Firdawsi's deliberate selection of Persian-origin words in avoidance of the Arabic-diluted New Persian. Thanks to its prominence as a national epic, manuscripts of the *Shahnama* have been commissioned by most Persian-speaking monarchs during the past millennium, and many of these manuscripts include magnificent illustrations that exemplify Persian painting.

—J. Tia Wheeler

Bibliography

- Abdullaeva, Firuza, and C. P. Melville. *The Persian Book of Kings: Ibrahim Sultan's Shahnama*. Treasures from the Bodleian Library. Oxford, UK: Bodleian Library, 2008.
- Arberry, A. J. *Classical Persian Literature*. London: Allen and Unwin, 1958.
- Browne, Edward G. *A Literary History of Persia from the Earliest Times Until Firdawsi*. Cambridge: Cambridge University Press, 1928.
- Ferdawsi, Abolqasem. *Shahnameh: The Persian Book of Kings*. Translated by Dick Davis. New York: Viking, 2006.
- Jackson, A. V. Williams. *Early Persian Poetry, from the Beginnings Down to the Time of Firdawsi*. New York: Macmillan, 1920.

Byzantine Literature

Byzantine literature developed from pagan classical genres that were adapted to Christian needs along with new and explicitly Christian literary forms. In late antiquity (ca. 300–500) literature in Latin, Syriac, and other languages flourished in the eastern Roman empire, but after the mid-seventh century it was written in Greek. Formal literature was modeled after the language of classical Athens, imitating styles and themes of the Hellenistic and Second Sophistic period (second century CE). It was written by and for the educated literary elite who also read and preserved ancient works. Late ancient literature became increasingly divergent from spoken language and has been criticized as artificial and divorced from reality, but current scholars argue

that Byzantine writers could be innovative and creative in their use of classical models. Most literary works were declaimed, sung, or performed, and the messages in letters were presented orally, so current translated texts cannot convey their full impact on their audience.

Byzantine literary genres were defined in a complex accommodation between Christianity and pagan literature and between Greek, Latin, Syriac, and other Eastern languages. Classical pagan traditions in history, rhetoric, letter writing, and poetry (especially epigrams) in both Latin and Greek thrived during this period. Histories focused on rulers and military and diplomatic events, presenting causation, morals, and character through the insertion of speeches on the models of the ancient historians Thucydides, Herodotus, and Tacitus. Notable works were the *Res Gestae* of Ammianus Marcellinus, a Greek soldier who wrote in Latin, and the sixth-century *History of the Wars of Justinian* by Procopius of Caesarea. Classicizing histories, many surviving only in fragments, continued throughout late antiquity and were revived in later centuries. As the empire became Christian, alternative historical models were developed. Eusebius, bishop of Caesarea, created genres of salvation history that were followed throughout the medieval world, building on translations into Latin, Armenian, Syriac, and Coptic. His *Ecclesiastical History* traced the church from its origins to Constantine using documentary evidence, and his *Chronicle* systematized chronologies from the creation of the world to the time of writing, tracking events that foretold God's plan for salvation through annual entries in simple language and style.

In the fourth century, Christian leaders educated in the classical rhetorical tradition appropriated it for orations, sermons, panegyrics, and theology, combining classical genres with biblical references and Christian argument. The Greek Orthodox Church fathers Basil of Caesarea, Gregory Nazianzus, Gregory of Nyssa, and John Chrysostom, like their counterparts Ambrose and Jerome in the Latin Catholic west, created models that were copied, translated, and imitated throughout later Church history. In late antiquity, bishops delivered sermons in large-scale public events that attracted masses and were copied by stenographers. Gregory Nazian-

zus's sermons included funeral orations for family members and friends and homilies for Christian festivals. The sermons of John Chrysostom ("Golden mouth") interpreted biblical texts and stressed morality and social justice and are among the most widely copied Byzantine manuscripts. Christian emperors were celebrated in panegyrics as their pagan predecessors had been, following Eusebius's *Life of Constantine*. Intellectuals circulated letters that were formal compositions of argument, persuasion, or consolation in Christian as well as pagan circles, and letter collections survive from many periods of Byzantine history. As rhetorical showpieces, they were meant for dissemination, and private messages were generally conveyed orally.

Hagiography—works describing the lives and miracles of holy men and women—was among the most popular and distinctive literature of late antiquity. Developed from classical biography, the lives of philosophers, and romantic novels, saints' lives and ascetic tales traced the spiritual heroism of desert-dwelling hermits, monks, and bishops, of so-called holy fools, and even stylites who lived on high pillars. Late ancient hagiography also included lives of women saints, from Gregory of Nyssa's praise of the domestic holiness of his sister Macrina to tales of women who disguised themselves as men to live as ascetics. Late ancient hagiography was identified by its subject matter rather than its literary form, and holy men and women were memorialized in forms that ranged from extensive letters to collections of monastic tales and of the miracles performed at healing cult centers and from philosophical biographies in rhetorical Greek to lives of rural saints written in rustic language. All reflected a new emphasis in Christianity on the need for human figures who could provide intercession, cures, and direct communication with God. A new hymn form, the *kontakion*, developed from Syriac tradition as a dramatic sermon in verse and was incorporated into the liturgy. The most famous of these, the *Akathistos* hymn, is still sung today.

During the Byzantine Dark Age of the late seventh and eighth centuries, reading and literature declined among the elites, and much of what was written was destroyed in the Iconoclast Controversies. Chronicles and theological

and polemical writings can be reconstructed from their incorporation into later works such as the early-ninth-century *Chronographia* of Theophanes. Saints' lives of monks and bishops who opposed iconoclasm still exist in large numbers, almost all written in the ninth century or later, at the end of the controversy.

The ninth-century revival of education and scholarship and development of minuscule script, which made manuscripts more available, led to a revival of literature in the tenth century characterized by encyclopedism and the use of classical forms and language. Although scholarly circles existed in the capital from the early ninth century, the patronage of Constantine VII Porphyrogenitus (945–959) of literature was especially important. He commissioned histories of his dynasty that were continued and imitated later, centering on the reigns of the emperors, and compiled a historical encyclopedia of materials essential for governing, drawing on classical and early Byzantine texts in the imperial library. Hagiographical texts were rewritten in a uniform, more rhetorical style and organized to correspond to the liturgical year in the *Menologion* of Symeon the Metaphrast (ca. 1000), but the number of new saints lives declined. To this era also belongs the most important collection of classical and Byzantine epigrams, the *Palatine Anthology*. Literary epistolography (the study of writing letters) flourished in the tenth century, and collections of the letters of leading secular and religious figures survive. Like their

classical models, Byzantine letters were rhetorical gifts, demonstrating the author's ability for elegant, often obscure expression on topics such as friendship, consolation, and blame. Modern scholars have dismissed them as obscurantist rhetoric, but current study of the nature of letters and letter collections underlines their importance for understanding Byzantine emotions and literary culture.

If Byzantine literature was created from the interaction of classical and Christian needs in late antiquity, its revival in the ninth and tenth centuries made it the hallmark of the growing literary culture shared by Byzantium's growing secular and religious intellectual elite. The classical literature revived, and new works created in this period formed the basis for an expanding literary culture in later centuries. Translated into Slavonic, it also created the culture of the newly converted orthodox world of the Byzantine Commonwealth.

—Dorothy de F. Abrahamse

Bibliography

- Cameron, Averill. *Christianity and the Rhetoric of Empire*. Berkeley: University of California Press, 1991.
- Jeffreys, Elizabeth, ed. *The Oxford Handbook of Byzantine Studies*. Oxford, UK: Oxford University Press, 2008.
- Lemerle, P. *Byzantine Humanism: The First Phase*. Translated by A. Moffat and H. Lindsay. Canberra: Australian Association for Byzantine Studies, 1986.

■ Introduction: Art and Architecture

In this topic, we discuss visual art and architecture: architecture, sculpture, some material culture, and painting. Aesthetic reasons motivated creation of this art, but most of it also served political and/or religious purposes.

Religious art in the early medieval age was intended to be didactic, that is, to make a statement about the truth, the glory, and the power of the religion that was the subject of the art. Its purpose was to educate, to advertise, to impress the viewer with the beauty and force of the reli-

gion. Religious art includes monumental architecture and sculpture, such as the great Buddhist temple Borobudur, the Mesoamerican and Andean pyramid temples, the Ajanta and Elora cave temples in India, and churches, mosques, and other places of worship and the like as well as smaller objects, such as holy statues, paintings, and other works intended to convey a visual message.

Religious art, especially monumental art, often also carried a political message. Usually a

ruler who was interested in legitimizing his rule or demonstrating the power of his regime undertook the vast scale of constructing a large temple, church, or mosque. For example, when Byzantine emperor Justinian built Hagia Sophia on the site of a previous church, he emphasized his power by building larger and more magnificently than his predecessors. Umayyad caliph al-Walid, to demonstrate the superiority of Islam, ordered the construction of the Grand Mosque of Damascus, which was to be built on the site of a demolished Christian church and on a more lavish scale than Constantinople's Hagia Sophia.

The Mahayana Buddhists showed their devotion and gained religious merit by commissioning the construction of huge Buddha sculptures, such as those at Bamiyan, Afghanistan, or at Longmen, China. The representation of Buddha in visual art was an innovation by the Mahayana in Buddhist practice. Originally, Buddhists had frowned on any pictorial or sculpted representation of the Buddha. But in the early centuries CE, Mahayana Buddhists began to construct monumental art depicting the Buddha and other religious subjects on a prodigious scale in India, central Asia, China, Korea, Japan, and Southeast Asia.

In India, the monumental art of the Jains and the Hindus rivaled that of the Buddhists. In the sixth and seventh centuries, these three religions competed in constructing elaborate cave temples, their interiors covered with religious paintings in central India at Elora and Ajanta. By the seventh century and after, devotees of the Hindu deities Vishnu and Shiva built elaborate temples, covered with exquisite religious sculptures, for the glory of their gods. In southern India, kings constructed temple cities as pilgrim centers in which religious art became important not only for political purposes but also to stimulate the pilgrim economy.

Christians originally appropriated pagan temples as their sites of worship. Often they would demolish the pagan temple, building something specifically Christian, but sometimes also, as at the Roman Pantheon, Christians would use the original structure with little except cosmetic modification. That the early Christians were very conscious of the power of religious art is shown by the Egyptian Christians defacing the inscriptions and pictorial work on ancient pagan

Egyptian temples. Christians themselves soon developed a religious artistic tradition in sculpture as well as in painting. In a largely illiterate era, religious paintings (icons) were used to propagate the teachings of the church. In the eighth and ninth centuries, many Christians, perhaps influenced by Muslims, objected to the visual representation of certain religious subjects, causing a very intense political and religious struggle, the Iconoclast Controversy that convulsed the Byzantine empire in the eighth and ninth centuries.

Muslims were forbidden to employ visual representation (graven images) of living creatures in their religious art. Instead, Islamic religious art featured elaborate calligraphic representation of Quranic verses, floral designs, or abstract symbols.

—Wilfred J. Bisson

Persian Architecture and Hunting Gardens during the Sassanian Dynasty

The Sassanian dynasty began with Ardeshir I's conquest of the Parthian capital, Ctesiphon, in 226 CE. The Sassanian kings, in an attempt to revive the glories of the ancient Achaemenid empire, announced Zoroastrianism as the state religion and erected several Zoroastrian temples as well as palaces in different parts of their territory. Some famous Sassanian palaces are *Tagh-i Kasra*, Bishapur, Firuzabad, Imarat-i Khusro, and Haus Kuri.

In their attempt to revive Achaemenid architecture, the Sassanians actually developed new architectural styles and construction methods. In Sassanian architecture new vaulting techniques were used in erecting huge arches and domes in buildings such as *Tagh-i-Kasra* and *Firuzabad* palaces. A significant Sassanian contribution to construction methods was solving the problem of the propagation of a circular dome on a square building by using squinches. This system was later widely used in Islamic and European architecture. Mud and brick were used as the main material in constructing buildings, and in terms of decoration molded or carved stucco decorations in massive walls were applied. Roman and Greek influence can be seen in the grid plan and mosaic decorations of the

➤ SASSANIAN GRANDEUR—CTESIPHON

The grandeur of the Sassanian dynasty is well illustrated in the surviving palaces such as Tagh-i-Kasra in the capital city of Ctesiphon, which is located south of Baghdad in Iraq. This city, which was founded by Parthians, was later developed by Sassanians. Ardashir I (r. 224–241 CE) selected it as his capital. This Sassanian city with its circular site plan was later developed by Khosru I Anushirvan, who added and built a new suburb to accommodate refugees from Antioch in 540 CE. Taq-i-Kisra, Khosru's palace, is probably the most famous monument at Ctesiphon. Using the barrel-vaulted *iwan* inherited from the Parthian period, Taq-i-Kasra is famous for the huge size of the arch in the great vaulted hall, which is credited to the reign of Shapur I (r. 241–272). The principal feature of this entirely brick structure is its open arched *iwan*, which has a facade decorated with blind architectural features, arranged in six registers of engaged columns and niches. Its huge size (more than 80



Photograph from about 1930 shows the remains of the facade and open audience hall of the Sassanid Palace of Tagh-i-Kasra in Ctesiphon, Iraq. (Library of Congress)

feet in width and 118 feet in height) has made it one of the masterpieces of Persian architecture.

—Mohammad Gharipour

Anahita temple in Bishapur and in wall paintings in Kuh-i Khwaja in Sistan.

Respect for Anahita, the great goddess worshipped during the Achaemenid dynasty, motivated Sassanian kings such as Ardashir I and Shapur II to build their palaces near natural hot springs (which are rich in plants and water) like Firuzabad in Fars and Takht-I Soleiman in Azerbaijan. Sassanian kings engraved reliefs in several parts of their territory such as Naghsh-I Rostam, Tagh-I Bostan, and Bishapur to show important events such as their victories over Romans and the enthroning of kings. During this time several Christian churches were erected in Persian cities such as Hira, Ctesiphon, and Rahalica.

Since the Sassanian kings were so interested in hunting, they revived the Achaemenid concept of hunting gardens, such as those in Firuzabad, Sarwistan, Ghasr-I Shirin, Takht-I Soleiman, and Hawsh Kuri, rather than concentrating on ornamental palace courtyards. In the plans of most Sassanian palaces, pavilions were located at the intersection of four avenues in the center of an enclosed garden, which contained rare animals. Archaeologists have found traces of the earliest Sassanian gardens in Ray (in modern

Tehran), Firuzkuh, and Ghal-I Dokhtar. In Ray, remains of a great walled enclosure known as Ghal-i Ghabr are believed to be the remains of a Sassanian garden for the royal hunt. The remains of another large garden in Firuzkuh reveal the existence of a Sassanian *paradeisos* (hunting garden). In the fire temple in Ghal-I Dokhtar, built by Ardeshir I, archaeologists could find the evidence of a pool and garden in the courtyard. Ardeshir II (379–383 CE) ordered the design of another hunting garden in Taq-i-Bustan probably for hunting wild boar and deer. Shapur II's sanctuary in Takht-I Soleyman, dedicated to the water goddess Anahita, was probably a hunting garden encircling Anahita's fountain. Another famous Sassanian hunting garden was located in Khusrau II Parviz's (591–628 CE) palace, Imarat-i Khusru, at Ghasr-i Shirin. This palace stood on a high terrace in the center of a great garden encompassed by a wall. A great pool is located between the palace and the monumental entrance portal on the east side of the complex. At the same level as the garden, a vaulted passageway ran around three sides of the eastern half of the terrace. Khusrau II Parviz had a smaller palace at Hawsh Kuri that was set in a rural location on a

lifted terrace with a vaulted hall to view the garden. The palace of Hawsh Kuri included an avenue that ran from the eastern side of the palace to a pavilion and from the northeast corner of the palace to the monumental entrance portal of another enclosed garden.

—*Mohammad Gharipour*

Bibliography

- Matheson, S. A. *Persia: An Archeological Guide*. London: Faber and Faber, 1976.
- Moynihan, E. B. *Paradise as a Garden in Persia and Mughul India*. New York: George Braziller, 1979.
- Pinder-Wilson, R. *The Persian Garden: Bagh and Chaharbagh, the Islamic Garden*. Washington, DC: Dumbarton Oaks and Trustees for Harvard University, 1976.
- Pope, Arthur U. *Persian Architecture: The Triumph of Form and Color*. New York: George Braziller, 1965.

Funerary Architecture in Iran, 651–1157 CE

The development of funerary architecture has always been dependent on the concept of death in different cultures and ages. Zoroastrianism, Iran's official religion before Islam, prohibited burying corpses. Consequently, Persians did not build luxury tombs in the Sassanian era. After the Muslim invasion of Iran, many people, voluntarily or forcibly, converted to Islam. According to this new religion, humans should leave this world as they were born. So in the early Islamic years, people avoided a whole range of mourning practices, including wailing and the sprinkling of ashes or dust on the body. In terms of architecture, the grave was supposed to be level with the ground, and no structure of any kind could be there to mark it. During the Abbasid dynasty (r. 750–1285 CE), an elaborate burial

➤ GONBAD-I QABUS TOMB TOWER

Gonbad-i Qabus, erected in 1006–1007, was the first Persian tomb tower. It was built in the city of Gonbad in the southern coast of the Caspian Sea, a region of Zoroastrian Persians who resisted the Abbasid caliphs for several centuries. This tomb tower was built to honor Qabus, a famous scholar king and outstanding author in Persian literature. Since Zoroastrianism prohibited underground burials, they built a brick tomb tower 180 feet (55 meters) high in which the mummified corpse was suspended from the roof in a glass coffin. Constructing tomb towers became fashionable after the eleventh century in northern Iran, where tomb towers also functioned as city landmarks.

—*Mohammad Gharipour*



Tower tomb of Prince Gonbad-i Qabus, erected in 1006–1007, Mazandaran, Iran. (Alinari/Art Resource, NY)

practice gradually emerged. The corpses of some of the Abbasid caliphs were covered in richly worked expensive silk clothes (instead of plain white cotton ones) and were put in elaborately carved coffins made of expensive wood. Under the influence of Christian Roman culture, which persisted in some areas of the Abbasid empire such as Syria, mausoleums became fashionable. Probably the earliest Islamic mausoleum was erected in Samarra in the ninth century. The octagonal shape of this monumental mausoleum, called Qubbat al-Sulaibia, reminds us of the architecture of Roman mausoleums.

Under the influence of funerary culture of Turkish tribes, Samanid (r. 819–999) and Ghaznavid (r. 821–1055) kings who ruled Iran showed an interest in erecting royal mausoleums. The most famous mausoleums and tomb towers in this era are the mausoleums of Amir Samanid, Sultan Qabus, and Alp Arslan. At that time, the construction of mausoleums was limited to the boundaries of the Samanid and Ghaznavid empires. They were not built in southern Iran. The outstanding mausoleum of Amir Samanid was erected in 907 in Bukhara, which was the capital of the Samanids. In this mausoleum, four small domes are placed on drums around a central dome, while the facade of this domed square mausoleum is richly decorated with brick.

In the eleventh century several mausoleums and tomb towers such as Samiran, Sangbast, Chehel Dokhtar, Khargan, Pir-e Alamdar, and Gonbad-e Ali were erected in different parts of Iran. The Samiran tomb tower in the mountainous regions of northern Iran, one of the earliest tomb towers, has a polygonal plan similar to the plan of Qubbat al-Sulaibia Mausoleum in Samarra. Pir-e Alamdar Mausoleum (ca. 1026–1027) in Damghan was erected near a mosque to honor a Sufi mystic in Iran. After the construction of this mausoleum, the erection of religious mausoleums as royal tombs became the style in Persian architecture. One of the last royal mausoleums, Sangbast, is a domed square building, dedicated to Alp Arslan, a famous Ghaznavid king who died in 1028. A dome through a deep zone of transition surmounts the square chamber of this building. The last Samanid mausoleum is Gunbad-e Ali (ca. 1056), which was built

at Abarquh (in the center of Iran) in order to celebrate a mystic master.

In the eleventh century, constructing mausoleums officially became an important part of Persian architecture and culture. Most of these mausoleums were erected to honor famous Sufis and religious masters. The most important mausoleums and tomb towers, which were erected in the Seljuk era (1038–1194 CE), are Bayzid Bastami, Gunbad-i Sorkh, Ala-Aldin, Sultan Sanjar, Seh Gunbad, Jalal Aldin Husein, Davazdah Imam, Kharagan, and Pir. The tomb of Bayzid Bastami (ca. 1120), a famous Persian mystic in the ninth century, like other mausoleums was a place for pilgrimage. This building was later restored and developed in the fourteenth century. The tomb tower of Ala-Aldin (ca. 1149) followed the typical northern scheme, with 32 right-angled flanges and a conical blue-tiled roof, ornamented with an inscription frieze and a strap-work cornice band of the characteristic blue faience and terra-cotta. Davazdah Imam Mausoleum (1037) in Yazd has been regarded as an important structure in the history of construction because of the trilobed squinches, which were used in constructing its dome. This kind of squinch, a device that tackles the problem of placing a dome on a square chamber, creates the octagon to support the dome. The last and one of the finest examples of Seljuk architecture is Sultan Sanjar Mausoleum (ca. 1157–1160) in Merv; the mausoleum is a ponderous and solemn cubical chamber surmounted by a blue-tiled dome. The crucial transition from sanctuary block to dome above was achieved by means of corner galleries, which concealed the squinch. The circular drum of the dome is arched, and galleries mitigate the severity of mass without compromising the simplicity of the structure as a whole.

—*Mohammad Gharipour*

Bibliography

- Hillenbrand, Robert. *Islamic Architecture (Form, Function and Meaning)*. New York: Columbia University Press, 1994.
- Hutt, Antony, and Leonard Harrow. *Islamic Architecture (Iran 2)*. London: Scorpion, 1978.
- Pope, Arthur Upham. *Persian Architecture*. New York: George Braziller, 1965.

Cathedrals and Mosques

In Christianity and Islam, different requirements for each faith developed into different architectural types: the cathedral for Christians and the mosque for Muslims. A cathedral typically consisted of a long narrow nave with side aisles. This emphasized the procession and a focus on the clergy and the altar, which usually resided in an apse at the end of the nave. A cathedral may have also included a transept or cross aisle, a narthex, a baptistery, and a courtyard. Like the cathedral, a mosque was also a place for worshippers to gather but has no specific architectural requirements. A mosque can be anywhere Muslims pray. However, by the end of the first millennium, a basic typology had been developed for mosques. Mosques typically consisted of a roofed prayer hall, a qibla wall that indicated the direction of Mecca, a mihrab or semicircular niche within the qibla wall, a courtyard, and a minaret or tower for the call to prayer.

Cathedrals represented the main church or Christian worship space within a geographical area, called a see, and was headed by a bishop. The cathedral was the seat of the bishop and served as a center for worship. Other churches within each see accommodated additional worshippers and were subordinate to the main cathedral. Similar to Christian churches, there might have been many mosques within a city, but one was dominant in relation to the others and was called the Friday Mosque or Congregational Mosque. It was here that people gathered for Friday prayer, but it also served as the center of social and political life for the community. In theory, the Friday Mosque was to accommodate all of the men of a city for prayer.

Early Christians met in minimal structures, often houses. However, after Constantine's endorsement of Christianity, churches transformed from simple spaces to majestic edifices celebrating the new imperial religion of the Roman empire. The first church type developed from the Roman basilica, which consisted of a long central aisle with clerestory lighting that terminated in a semicircular apse and was flanked by narrower side aisles. In Roman basilicas the apse area was used to glorify the emperor or housed pagan cult

objects. In Christian architecture the apse came to be the location of Christ's representatives on earth, the clergy. An altar was located at the edge of the apse before the congregation, and a raised pulpit located to the side of the altar allowed the gospel to be read to the worshippers. The earliest churches were decorated with mosaics and paintings similar to that of pagan buildings with floral and faunal designs. Beginning in the fifth century CE, distinctly Christian ornament appears in such elements as crosses, depictions of martyrs, and Bible stories. The adoption of the basilica-type building allowed the church to accommodate a large number of worshippers within the structure and establish an architectural typology.

Constantine's first imperial church, which has been completely rebuilt, was San Giovanni in Laterano, Rome (320 CE). The original church consisted of a central nave, which was raised on columns to allow access to the double side aisles flanking the nave. A high clerestory window was located above each pair of columns and allowed light to penetrate the central space. The nave terminated in an apse where the altar was located, the inner aisles terminated in a wall, and the outer aisles led into a rectangular room on each side of the church. Its exterior was merely a simple expression of the interior spaces and reserved the splendor for the interior. The structure of the building was also simple, as it was constructed of concrete covered in brick, marble columns on the interior, and a simple wood truss roof covering each part of the church. This became the standard early Christian church.

Later cathedrals added a transept or cross aisle in front of the apse. This space could house a number of different functions, and in plan it caused the church to be shaped like a cross, which reinforced the symbolism of the church. An entrance or narthex was often added to the west end of the church. In the eighth through eleventh centuries this developed into a monumental entrance known as the westwork.

Like churches, the earliest mosques were also simple. Tradition indicates that the first mosque was located in the Prophet Muhammad's own house in Medina. It was a simple structure made from mud brick and palm tree trunks, as

was typical of that time. It consisted of a walled courtyard with small rooms for the Prophet's wives on the exterior of the courtyard. On the south side, there was a portico that sheltered the believers from the sun as they prayed. A second portico on the north side housed poor followers of Muhammad. Originally, the position of these was reversed because the believers prayed toward Jerusalem until 624, when Mohammed received a revelation to turn toward the Kabba in Mecca for prayer. This established Mecca as the direction of prayer for Muslims worldwide.

Other primitive mosques were constructed in Basra, Iraq (635 CE); Kufa, Iraq (638 CE); and the Mosque of Amr ibn al-'As, Egypt (641 CE). These consisted of little more than a demarcated space and protection from the sun. These mosques survive only in written descriptions, but the earliest surviving mosque is the Great Mosque of Damascus (709–715 CE). It was built within the walls of an ancient pagan temple. The Roman emperor Theodosius I (379–395 CE) appropriated the space for Christian worship, and after Damascus was captured by Muslims, it became a mosque. There are stories of the structure being shared by both Christian and Muslim congregations, but the configuration of space suggests that it was constructed as a mosque rather than adapted from a church. The prayer hall consists of a wide narrow space adjoining the entire south wall. Three nearly equal aisles run parallel to the long wall, and a raised transept bisects the prayer hall and creates a strong axis from the courtyard to the central mihrab. The remaining space within the pagan walls was reserved for a courtyard surrounded by a covered colonnade. At the corners of the original pagan walls, there were towers from which believers were called to prayer.

By the ninth or tenth century, the architectural type for a mosque was well established. Each mosque contained a covered prayer hall that was shallow and wide. Worshippers faced the qibla wall, which was aligned with Mecca, and a mihrab or semicircular niche drew attention to the qibla wall. A courtyard was located adjacent to the prayer hall to allow space for additional worshippers. Originally a man climbed on the roof of the mosque to call the believers to prayer, but later this function developed into a

tower called a minaret. Since Islam forbids iconography, there are almost no representations of humans or animals on mosques. Instead, Muslims developed intricate patterns using curving plantlike designs, abstract forms, and calligraphy to decorate their buildings.

The principal ways in which mosques and cathedrals differed was in their orientation and ornament. Mosques were wide shallow spaces, while cathedrals needed long narrow spaces to facilitate procession. Cathedrals lavished in depictions of saints, Christ, and scenes of Bible stories, while mosques deliberately abstained from the use of figural imagery and developed a rich tradition of abstract and geometric ornament.

—Marika Dalley Snider

Bibliography

- Creswell, K. A. C. *A Short Account of Early Muslim Architecture*. Baltimore: Penguin, 1958.
- Frishman, Martin, and Hasan-Uddin Khan. *The Mosque: History, Architectural Development & Regional Diversity*. New York: Thames and Hudson, 1994.
- Kostoff, Spiro. *A History of Architecture: Settings and Rituals*. New York: Oxford University Press, 1995.
- Snyder, James. *Medieval Art: Painting, Sculpture, Architecture, 4th–14th Century*. Upper Saddle River, NJ: Prentice Hall, 1989.
- Trachtenbert, Marvin, and Isabelle Hyman. *Architecture from Prehistory to Postmodernity*. Upper Saddle River, NJ: Prentice Hall, 1986.

Buddhist Monumental Sculpture and Architecture

As Buddhism spread from India to most of Asia, devotees refigured their environment into a sacred landscape of colossal statues, sprawling cave complexes, and elaborately arranged temples. Though Buddhism began to attract significant royal patronage within a few hundred years of its foundation in the fourth century BCE, during the period of the fourth to tenth centuries CE pious monks and kings who aimed to earn religious merit constructed awe-inspiring Buddhist monuments throughout Asia. The impetus to build these monuments derived from trade along caravan routes between India, China, and the Middle East, which helped the dissemination

THE LEGENDS OF SAMYE

Samye Gumpa was a famous religious site, reputed to have been the first Buddhist monastery built in Tibet. Architecturally, Samye symbolizes the confluence of three conflicting currents in Imperial Era (seventh to ninth centuries CE) Tibetan Buddhism: Tantric Buddhism, Indian Buddhism, and Chinese Buddhism. Two legendary events in the early history of Samye, the invitation of Padmasambhava and the Hwashang Mahayana debate, are interconnected with the symbolic architecture.

According to Tibetan ecclesiastical history, Tibetan emperors were originally adverse to tantric Buddhism being introduced to the country out of fear for its individualistic, nonhierarchal aspects. However, after native Tibetan demons repeatedly thwarted the efforts of the Indian Buddhist monk and philosopher Shantarakshita and the Tibetan emperor Trisong Detsen to found Samye, they invited the semilegendary Indian tantric Buddhist adept Padmasambhava to Tibet. Due to his magical tantric practices, Padmasambhava successfully suppressed the anti-Buddhist demons.

Samye's buildings are laid out to resemble a *mandala*, a symbolic microcosm of the universe. Among other purposes, tantric Buddhist meditators use mandalas as visualization aids. Therefore, the layout of the buildings at Samye represents the moment that the Buddhist religio-political authority began to embrace some tantric Buddhist practices. At the center of a tantric Buddhist mandala is often a deity in a multitiered palace. Samye's main temple is built to resemble such a palace, each level a different architectural style: Indian, Chinese, and Tibetan.



Samye Gumpa was a famous religious site, reputed to have been the first Buddhist monastery built in Tibet. As with much of Buddhist architecture, Samye Gumpa is constructed in numerous levels, symbolizing the passages through numerous lives as one ascends to enlightenment. (Lea Halevi)

At one point in the beginning of the Tibetan assimilation of Buddhism, Indian, Chinese, and central Asian Buddhist missionaries were welcome on the Tibetan plateau. However, in the late eighth century (ca. 792), followers of the Indian Buddhist monk Kamalashila arranged to have Hwashang Mahayana, a Chinese master of Chan (Zen) Buddhism, and his followers evicted from Tibet, an event mythologized as a debate won by Kamalashila. Whereas the layout of the buildings of Samye represent the moment that tantric Buddhism gained a foothold in Tibetan religion, the multiple styles of the main temple signal the official end of Chan Buddhist influence in Tibet.

—Cameron David Warner

of wealth and the spread of Buddhism. The monuments therefore served as not only educational and religious centers for local inhabitants but also destinations for pilgrims and the population basis for thriving markets.

Whether these monuments took the form of cave complexes, freestanding monasteries, or outdoor worship spaces, artisans adorned them with statues and murals of the Buddha Shakyamuni and other divinities. Though it appears

that the earliest forms of Buddhism prohibited the depiction of its founder, Shakyamuni, by the fourth century CE, the veneration of Buddhist statues had grown into one of the most important means to gain spiritual merit for a better rebirth. For the laity and monks, sculptures of the Buddha were not decoration but rather embodied his living presence.

These monuments also included many Buddhist reliquary shrines, called stupas. Stupas were

originally architecturally similar to burial mounds built for the purpose of venerating relics of the Buddha Shakyamuni's body. Over time, Buddhist devotional practices developed a complex theology based on the worship of the Buddha's body, speech, and mind. Devotees attempted to transform their own body into that of the Buddha through worshipping statues of the Buddha. They studied his speech through reading texts of his teachings and venerating the books containing them. Finally, Buddhists contemplated his mind through building and circumambulating stupas, which over time came to symbolize his mind. Statues of the Buddha and Buddhist stupas can vary in size from small enough to fit on a home altar to over 328 feet (100 meters) in height.

Though Buddhism continues to thrive throughout the world, the advent of Islam and its rapid spread to Asia were the death knell for the great period of Buddhist expansion and monument building. For many reasons, but especially due to iconoclastic and militaristic forms of Islam, Buddhism died in India, Afghanistan, and Indonesia, leaving some of its greatest monuments to be forgotten to world history until the era of European colonialism. Though some monuments from this period are still under serious threat, the vast majority are protected as UNESCO World Heritage sites and promoted by local peoples as tourist destinations.

Beginning in the second century BCE, in the present Indian state of Maharashtra 66 miles (106 kilometers) from Aurangabad, artisans carved the Ajanta Buddhist cave complex containing Buddhist monasteries (Skt. *vihara*) and reliquary shrine monument halls (Skt. *chaityagrha*) into the escarpment above the Waghora River. In the early period, there were only 5 or 6 caves, but Harisena of the Vakataka dynasty in the fifth century CE sponsored an additional 23 caves. These newer caves contain many statues of Buddhas and bodhisattvas. All of the pillars, decorations, and Buddha statues in the Ajanta caves were carved out of the living rock to form the cave.

When the second period of carving at Ajanta ended, artisans began carving the Elora cave complex 18.6 miles (30 kilometers) from Aurangabad. Though the complex grew to become a multireligious site of 35 caves, from the fifth to the sev-

enth centuries CE Elora consisted of 12 Buddhist monasteries, sleeping quarters, and kitchens.

About the same time that the Ajanta caves were expanded, the Longmen cave complex was established under royal patronage 7.5 miles (12 kilometers) south of present-day Luoyang in Henan province, in the People's Republic of China. Longmen is an immense sprawling site densely dotted along two mountain ranges, the Xiangshan to the east and the Longmenshan to the West with the Yi River between them. According to the Longmen Caves Research Institute, there are 2,345 caves and niches, 2,800 inscriptions, 43 pagodas, and over 100,000 Buddhist images. Most of the construction occurred during the Tang dynasty (618–907), but fully one-third were built during the Northern Wei dynasty (386–534). In these two dynasties monuments to Buddhism flourished across China, including the Yungang caves on the north cliff of Wuzhou Mountain in Datong during the Northern Wei dynasty and Mogao caves 15.5 miles (25 kilometers) from Dunhuang during the Tang dynasty.

Along the trade and pilgrimage route between Indian and China, present-day Afghanistan grew into an important Buddhist culture from the second to ninth centuries CE. Combining artistic influence from Greece and India, the two standing Buddhas of Bamiyan were carved out of the Bamiyan cliffs in 507 CE and 554 CE, measuring 120 and 180 feet (37 and 55 meters), respectively. The two largest carved standing Buddha images in the world, they were once decorated with gold and fine gems and surrounded by Buddhist monasteries and a thriving cave complex. Numerous Islamic iconoclasts attacked the statues, most notably the Mughal emperor Aurangzeb, but they survived complete destruction until 2001, when the Taliban succeeded in obliterating them with dynamite and heavy artillery.

Greater regional prosperity and Buddhist fervor finally penetrated the Tibetan plateau in the middle of the seventh century CE, where it soon gained royal patronage. By the end of the eighth century CE, the Tibetan emperor Trisong Detsen supported the construction of Samye, Tibet's first Buddhist monastery. Designed to include Indian, Chinese, and Tibetan architecture, the buildings of the monastery are arranged to form a mandala. The main temple is in the center of an area

demarcated by a circle that includes other buildings and four axial stupas. Severely damaged during the Chinese Cultural Revolution (1966–1976), Samye was rebuilt in the 1980s. In addition to being one of Tibet's greatest pilgrimage centers, it is a popular tourist attraction.

Another Buddhist monument built to resemble a mandala is the Indonesian Borobudur. Likely built around the beginning of the ninth century CE in central Java, Borobudur is a giant multilayered stupa that resembles a mandala from above. The monument was designed as a series of concentric circles with staircases and corridors ascending to the top that guide the pilgrim through an idealized image of Buddhist cosmology. Each level contains bas-reliefs carved in situ, 1,460 of which are narrative panels and 1,212 of which are decorative panels. Together these panels, derived from Buddhist canonical texts, instruct the pilgrim on the Buddhist law of cause and effect, the Buddha's life-story including stories of his previous births, and the perfection of wisdom. Though Buddhism died out in Java due to the spread of Islam, unlike Afghanistan, the Indonesian government has protected and preserved Borobudur for Buddhist pilgrims and tourists.

—Cameron David Warner

Bibliography

- Kapstein, M. *The Tibetan Assimilation of Buddhism: Conversion, Contestation, and Memory*. Oxford, UK: Oxford University Press, 2000.
- McNair, A. *Donors of Longmen: Faith, Politics, and Patronage in Medieval Chinese Buddhist Sculpture*. Honolulu: University of Hawai'i Press, 2007.

Soekmono, R., et al. *Borobudur: A Prayer in Stone*. Singapore: Archipelago, 1990.

Spink, W. M. *Ajanta: History and Development*. Leiden: Brill, 2005.

Arts and Material Culture in East, Central, and Southern Africa

The music, material art, and rock art of East, central, and southern Africa testifies to the creative abilities of Bantu-speaking peoples during this period. They created wood carvings, ceramics, metal jewelry, and beadwork. An important element of material culture among all the peoples in this part of Africa was that the line between beauty and practicality as spiritual meaning and everyday use were blended or non-existent. No art was made for art's sake, and no technological development was devoid of ritual and aesthetics.

The music of the Bantu-speaking peoples 1,700 years ago is what most people identify as African music, with polyrhythmic dancing, involving all parts of the body, accompanied by elaborate drum rhythms. Most Bantu-speaking peoples continued these music traditions right into the modern era, but in southern Africa the Khoisan-speaking peoples introduced the use of stringed instruments to accompany the drums. In northeastern Africa it was a different story. Around 800 CE Bantu-speaking peoples abandoned the drum and replaced it with the stringed instruments of their Southern Nilotic- and Southern Cushitic-speaking neighbors.

➤ ROCK ART AND LIVING SYMBOLS

Modern Western art is about individual artistic creation and often is described as art for art's sake, while the art produced by the peoples of East, central, and southern Africa during this era was created to represent a collective artistic aesthetic and always had a practical, social, and spiritual component. Woodcarvings, pottery, ceramic items, raffia weavings, bark cloth, jewelry, and rock art were decorated with symbols that corresponded to the religious and cultural norms of the societies. For example, throughout central and east-central

Africa there are many examples of schematic rock art and rock etchings, some of which date to thousands of years ago. The very symbols found in the schematic rock art, are found today on the walls of houses along the Luapula River and were painted by older women during the female initiation ceremony. Each schematic design represents an important element of a young woman's education, thus linking the artistic symbols of a much earlier period to those used today.

—Christine Ahmed-Saidi

All Bantu-speaking men excelled at wood carving. The distribution of carved wooden headrests is an excellent example of interactions of various peoples during this era. The Sudanic peoples of the Middle Nile Basin first carved the simple wooden headrests. Bantu-speaking peoples in the Great Lakes region learned from them how to carve headrests and then added their own elaborations. As Bantu-speaking peoples moved south they brought the headrests with them. By 500 CE these wooden headrests were carved by Bantu-speaking peoples from the Great Lakes to the southern savannas and west to the equatorial rainforests.

Pottery decorations have often been equated with the various cultures or ethnolinguistic groups that innovated and produced them; thus, each group had its own distinct pottery decorations. In the Transvaal region of southern Africa, from 400 to 700 CE the Shona- and Sal-speaking peoples created ceramic heads named by archaeologists as Lydenburg. These ceramic heads, reminiscent of the West African Nok heads of 1,000 years earlier, were probably used for initiation ceremonies. Other southern African Bantu-speaking peoples, especially those with cattle, stopped creating this ceramic art, possibly because of moving into areas where clay was less available or having a less sedentary lifestyle.

In graves dating to 500 CE archaeologists began finding metal jewelry, ceremonial axes, knives and hoes, and intricate iron staffs. Along the copper belt of Zambia and the Congo, copper jewelry was manufactured together with copper crosses that soon became the currency in central Africa.

The Khoisan-speaking peoples of southern Africa made beadwork from ostrich eggshells, but by 1000 CE the Indian Ocean trade networks had reached the Khoisan-speaking peoples, as evidenced by the appearance of glass beads in their jewelry.

Rock art is probably the best-known visual art of this part of Africa. In southern Africa, Khoisan religious leaders painted animals and humans in trancelike states on the caves and rock overhangs for thousands of years. In east-central Africa the Batwa peoples had long produced schematic rock paintings and etchings. By about 600 CE Bantu-speaking peoples had in-



Earthenware sculptures, possibly used as ritual masks in the Transvaal region of southern Africa, about 500 CE. Known as Lydenburg Heads, these objects display the Bantu potters' exquisite mastery of the craft. (Werner Dieterich)

tegrated the Batwa schematic rock art into their female initiation ceremonies. While the Batwa and the Khoisan used various natural color pigments, some of the later Bantu drawings were strictly in white clay, historically the ritual color among Bantu-speaking peoples. Women created the Bantu-made rock art in east-central Africa since it was a critical aspect of female initiation.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey, 1998.
- Smith, B. W. *Zambia's Ancient Rock Art: The Paintings of Kasama*. Livingstone, Zambia: National Heritage Conservation Commission, 1997.

Early Medieval Chinese Painting

After the fall of the Han dynasty (206 BCE–220 CE), Buddhism entered China, flourishing during the Period of Disunity (220–589 CE). The arrival of the new religion influenced many aspects of Chinese culture, including that of art. Used primarily for the decoration of temples and caves, Buddhist painting styles during the Three Kingdoms period (221–280) introduced a new

➤ SIX LAWS OF PAINTING

Xie He (fifth century) was a highly influential art theorist of the Six Dynasties period. In his famous work the *Guhua lu* (*Evaluating Ancient Paintings*), Xie described a method of painting that ultimately had a huge impact on how later artists in China approached painting. Xie's Six Laws of painting were:

1. Breath Resonance: life and vitality embedded in the forms and lines of painting.
2. Bone Method: the way that the brush is used to structure form.
3. Responding to the Object: accuracy of representation to subject in the real world.
4. According with kind: accuracy of color and tone in rendering the subject's intrinsic qualities.
5. Organizing and planning: composition of the painting.
6. Transmitting and transplanting: manner in which forms are copied from one source to another.

Xie's Six Laws acted as the foundation for much of the painting theory that developed in China after the early medieval period.

—Anna Hennessey



Detail of an ink and color painting on silk hand-scroll entitled *Admonitions of the Court Instructress*, by Gu Kaizhi (about 344–406 CE). This is an example of the political uses of painting in China. The artist is making a satirical comment on the extravagance of an empress. (British Museum, London, UK/Archives Charmet/The Bridgeman Art Library)

detailed and delicate style of painting images in China, differing greatly from the antique styles present in Han painting. As the Chinese domesticated Buddhism over the course of a few centuries, integrating the foreign religion with indigenous traditions such as Confucianism and Daoism, the thought, writings, and practices of Buddhism transformed on Chinese soil. Similarly, traditional Buddhist art forms that had originally developed in India also integrated with indigenous and secular forms of painting in China.

One painter in particular, Gu Kaizhi (ca. 344–ca. 406), from whom both paintings and works of writing remain extant, depicted subjects that were of both religious and secular origins. Gu, who lived during the Six Dynasties of China's Period of Disunity, is today often considered to have been one of the founders of Chinese painting. His textual work, *A Record of Painting Cloud-Terrace Mountain* (*Hua Yun-taishan Ji*), is a fundamental writing on Chinese painting theory, detailing a method of art that

advocates the transformation of emotion into form through the medium of painting. In the famous painting attributed to Gu, *Admonitions of the Court Instructress* (*Nushi Zhen*), light colors are brushed onto silk in the creation of Chinese figures whose flowing robes hang smoothly across the hand scroll. Whereas the compact lines of figures found in Buddhist art of the time may have influenced the composition of the painting, Gu's subject matter instead relates to the secular topic of lessons of virtue for ladies of the court.

Other masters of Six Dynasties figure painting include Lu Tanwei (active ca. 465–472) and Zhang Sengyou (active ca. 500–550), both of whose paintings of figures and animals exhibit some influences of Buddhism and Buddhist art, including that of three-dimensionality. In the meantime, Wang Wei (415–453) and Zong Bing (375–443) both painted landscapes and wrote important essays describing landscapes as extensions of the painter's own persona. The connection between artist and landscape, which

would have major significance in the works of later Chinese landscape painters, acted to ground landscape firmly within the field of Chinese painting.

Xie He (fifth century), an important art theorist of the Six Dynasties period, developed a theory of art that encouraged the use of six fundamental principles in painting known as the Six Laws. Xie's construction of his Six Laws was highly influential in the development of Chinese art over time, impacting subsequent theories and practices of painting in China. Along with the other major figures of his time, Xie contributed to the growing aesthetic discourse that was to become a central focus of later literati culture.

China was reunified after several hundred years of strife during the periods of China's Sui and Tang dynasties. Although the Sui dynasty (589–618) was short-lived, several important projects, including the Grand Canal connecting China's north to its south, were completed under the leadership of Emperor Yang (569–618). Zhan Qizhan (ca. 550–604), a painter from the north, and Dong Boren (active during the late sixth century to the early seventh century), originally from the south, met in the capital of Chang'an (present-day Xian), where they synthesized the northern and southern styles of Sui painting.

During the Tang dynasty (618–907), China greatly expanded its territories, economy, arts, and culture, ultimately becoming the largest and perhaps greatest empire of the Middle Ages. Literature, art, music, and calligraphy all flourished in the golden age of the Tang, centering around life in the cosmopolitan capital city of Chang'an. Throughout the Tang, painters made rich developments especially in the area of figure painting. Landscape painting, which would eventually replace figure painting as the dominant subject matter in later Chinese art, evolved more toward the end of the Tang. Yan Liben (ca. 600–673), a well-known figure painter of the early Tang, worked as an artist in the court of Emperor Taizong (599–649). Using a fine-brush style of painting, Yan's typical subjects included important political figures and events of the Tang. Fine ink and color brushstrokes of red and black dominate the silk hand scrolls on which Yan painted his subjects. Buddhism, which had be-

gun to flourish during the earlier medieval periods of China's history, continued to thrive during the Tang, and the religion makes a strong presence in the painting of Mid-Tang artists such as Weichi Yiseng (active in the late seventh century). This painter, who hailed from China's northwest area of Khotan and was most likely influenced by the Buddhist art of India and central Asia that had traversed the Silk Roads, utilized three-dimensionality in his depictions of Buddhist subjects.

During the Tang golden age (690–750 CE), one of the most important artists in the history of Chinese painting, Wu Daozi (ca. 680–760), began painting figures in sweeping brushstrokes that sought more to represent transcendent qualities of the subjects than to render the verisimilitude of their form through techniques such as three-dimensionality. Developing a simplified rapid brush style of an often monochrome ink, Wu Daozi, who like many of his contemporaries painted Buddhist subject matter, is also considered a founder of the liturgical painting within the Daoist tradition. The flowing style of Wu's brush would have a huge impact on the development of ink painting as it existed within both court and literati traditions of later Chinese art.

A final painter of the High Tang to have enormous influence on later art in China was Wang Wei (701–761), a poet-painter who developed a style of monochrome ink painting known as *pomo* ("splashed ink" or "broken ink"), which he used to paint landscapes. Completed in ink-wash instead of color, Wang Wei's works are described in the writings of later art critics as having utilized the myriad tones of ink to depict landscapes in a poetic fashion.

—Anna Hennessey

Bibliography

- Barnhart, Richard M., et al. *Three Thousand Years of Chinese Painting*. New Haven, CT: Yale University Press, 2002.
- Lee, Sherman, ed. *China, 5,000 Years: Innovation and Transformation in the Arts*. New York: Guggenheim Museum Publications, 1998.
- Little, Stephen. *Taoism and the Arts of China*. Chicago: Art Institute of Chicago; Berkeley: University of California Press, 2000.
- Sullivan, Michael. *The Arts of China*. Berkeley: University of California Press, 1999.

Wang Yao-T'ing. *Looking at Chinese Painting: A Comprehensive Guide to the Philosophy, Technique, and History of Chinese Painting*. Tokyo: Nigensha Publishing, 1995.

Watson, William. *The Arts of China to A.D. 900*. New Haven, CT: Yale University Press, 2000.

Zongqi Cai, ed. *Chinese Aesthetics: The Ordering of Literature, the Arts, and the Universe in the Six Dynasties*. Honolulu: University of Hawaii Press, 2004.

Early Medieval South Asian Art— The Pala School

The Pala School of Sculptural Art flourished from the eighth to twelfth centuries in north-eastern South Asia, roughly coinciding with the present-day states of Bihar and West Bengal and the nation of Bangladesh, interlinked by the Ganges River. Pala art is named after the dynasty under which it evolved and came to prominence. More than 6,000 sculptures in bronze and black stone survived to date, characterized by a high technical standard. The depicted fig-

ures are somewhat more sensual than in the preceding Gupta art. Females invariably have heavy round breasts and bulging hips, whereas males have broad shoulders and narrow waists. Facial features include more accentuated curves and somewhat harder edges. The themes were predominantly Buddhist (Mahayana, or the Great Vehicle), than Hindu and, to a much lesser extent, Jain. Pala art had a lasting impact on the Buddhist arts of Southeast Asia.

Pala stone sculptures are carved out of fine-grained black schist from the Rajmahal Hills and are often polished. Most stone sculptures are in high relief. The bronzes were usually gilded and often inlaid with silver. A typical Pala portrait of a divinity is as a central figure with two smaller attendants to the side, all three captured in an oval outline. Seated Buddhas are often surrounded by four or eight smaller Buddha images, representing different episodes in the life of the historical Buddha (Shakyamuni). Characteristic for the later period are huge steles portraying the Hindu god Vishnu with his two spouses, crowded with a multitude of minor figures and traditional background decoration around the central image.

Sculptures from the sixth through the early eighth centuries show the diagnostic features of the preceding late Gupta period (ca. 320–ca. 500) of north and north-central India. These are, among others, smoothness of the body, minimal jewelry, drapery that clings to the body, and a serene expression of the face with downcast eyes. New stylistic developments, indicating the early beginnings of Pala art, are more tubular arms, heavier and fuller bodies with broader shoulders, and straighter outlines of eyes and lips. During the ninth century and coinciding with the reign of the third Pala ruler (Devapala, ca. 810–850), Pala art can be considered mature.

Gradually, Pala art evolved toward greater iconographic complexity and focus on details. The bodies became longer with well-defined waists, the posture more static, and the faces more thin and pointed; dresses, jewelry, and background figures more finely carved and often highly complicated. A new invention was the crowned Buddha, adorned with jewelry, that first appeared in the eleventh century, perhaps

THE EXPORT OF PALA ART

During the Pala reign, Bihar was an international Buddhist center. For centuries, a vast number of travelers went to and from Bihar and its universities, monasteries, and sacred places. The region had been important for Buddhists since the fifth century BCE, as it included the ancient kingdom of Magadha, homeland of the Buddha. Important Buddhist centers of learning under the Palas were the universities and monasteries of Nalanda, Vikramashila, Somapura, Odantapura, and Jagga-dala. The often gigantic structures of their monasteries and universities were masterpieces of their time and inspired the builders of such complexes as the Borobudur in Java. They were built of burnt bricks and adorned with bands of terra-cotta and stucco panels along the many terraces. Sculptures were placed in shrines and in niches in the walls. Many visitors and traders returned home with smaller sculptures and manuscripts. As a result, Pala art exerted a profound impact on the Buddhist art of Tibet, Myanmar, China, and especially Yunnan, Sumatra, and Java.

—Alexandra van der Geer

related to the rise of esoteric Buddhism (Vajrayana, or the Diamond Vehicle). In time, Buddhism was gradually supplanted by Hinduism, especially Vaishnavism, which is reflected in the imagery of later Pala art.

From the end of the eleventh century onward, the Hindu Sena dynasty replaced the Buddhist Pala dynasty in larger areas. The style of their artworks is indistinguishable from that of the Palas, and sometimes the early medieval art of northeastern India is thus named Pala-Sena art. By the thirteenth century, Pala art ceased to exist in northeastern South Asia, in part due to Muslim domination in the area. Its influence, however, is visible in later Buddhist artworks of Tibet and Southeast Asia, including Sumatra and Java.

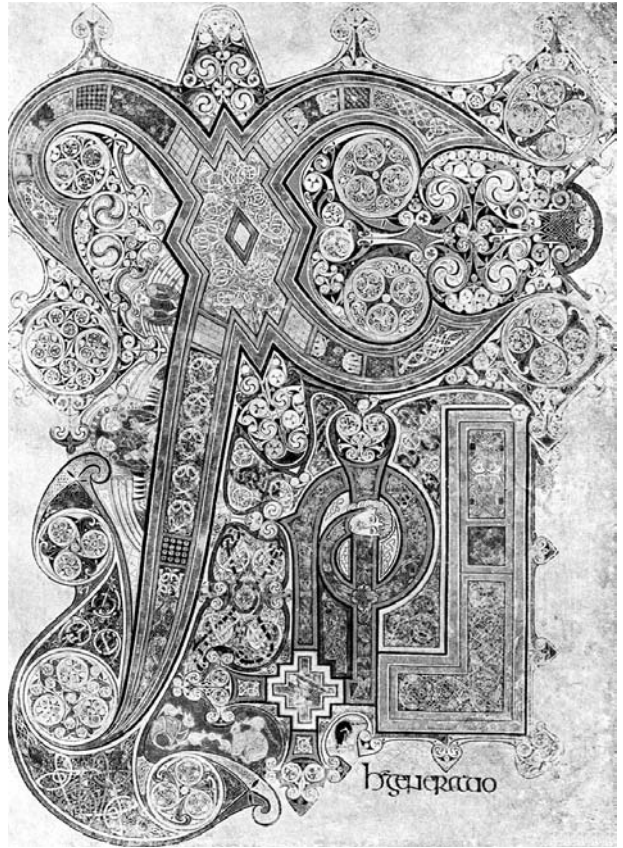
—Alexandra van der Geer

Bibliography

- Asher, F. M. *The Art of Eastern India, 300–800*. Minneapolis: University of Minnesota Press, 1980.
- Brown, R. L. *The Dvāravātī Wheels of the Law and the Indianization of South East Asia*. Leiden: E. J. Brill, 1995.
- Fisher, R. E. *Buddhist Art and Architecture*. New York: Thames and Hudson, 2002.
- Huntington, S. L., and J. C. Huntington. *Leaves from the Bodhi Tree: The Art of Pala India (8th–12th Centuries) and Its International Legacy*. Dayton and Seattle: Dayton Art Institute and University of Washington Press, 1990.
- Shamsul Alam, A. K. M. *Sculptural Art of Bangladesh: Pre-Muslim Period*. Dhaka, Bangladesh: Department of Archaeology and Museums, 1985.

Painting and Sculpture in Christian Europe

Both painting and sculpture rapidly fell under the spell of the Christian Church in the early Middle Ages. Funerary art such as catacomb frescoes and sarcophagus sculpting typified public expressions throughout Europe, while illustrated books of the Bible blended Christian teaching with late Roman pictorial styles. After the legalization of Christianity under Constantine, the erection of churches provided extensive wall space for frescoes and mosaics that illustrated biblical narratives and depicted Christ in the role of ruler and judge of the world. Mon-



Chi-Rho page from the Gospel of Saint Matthew, from the Book of Kells. The Book of Kells is an illuminated manuscript of the Gospels, considered a masterpiece of Hiberno-Saxon style. (Jupiterimages)

umental sculpture declined with the Germanic invasions and Christian qualms about idol worship, but the conversion process necessitated the continued use of icons and illuminated manuscripts. Emerging monastic houses created many of these, blending late classical models with colorful, spirited, and often abstract forms adopted from Germanic and Celtic traditions. Irish monasteries sculpted high crosses, and Anglo-Saxons adopted the form as their own, in one case adding Christian poetic text in both Latin and Old English runes. Celtic monastic gospel books such as the Book of Kells and the Lindisfarne gospels featured clear Latin script encased in colorful decoration that ranged from tightly controlled geometric patterns to organically sinuous vegetable and animal forms. Many of the patterns echoed pre-Christian Celtic work in stone and metals. Painted figures reflected

traditions that included early Celtic stone carving and late classical and even Eastern Mediterranean illustration styles.

On the European continent some artists preserved late classical idioms, while Germanic artists continued in their native styles. Both worked with ivory and small-scale precious metals, while Christian book decoration held to its classical roots. From the mid-eighth century, however, Irish and Anglo-Saxon influence blended with these Mediterranean forms during the Carolingian Renaissance. Frankish king and emperor Charlemagne patronized artists whose work reflected the style of Christian imperial Rome as a way of linking his own empire with that of Constantine. This movement produced small-scale painted works and manuscripts with naturalistic human forms in clear settings but decorated with knot and zoomorphic patterning characteristic of insular art. While architectural sculpture remained primitive, generally limited to reliefs adorning doorways and column capitals, sculptors produced many intimate sculpted works in ivory, soft stone, and metals. The covers of presentation copies of illuminated Bibles and prayer books often featured finely carved abstract and figural motifs, sometimes incorporating antique carved gems or cameos. Limited evidence also remains of fresco mural painting, especially in churches. Figures tend to be large and fully formed, but realistic settings and interactions are lacking, evidence of the influence of early Christian models.

During the great disruptions of the tenth century German King Otto I sponsored a classically inspired imperial artistic revival (Ottonian Renaissance) similar to that of Charlemagne. Again artists harnessed classical forms and style to enhance imperial prestige, but the impact on broader trends was limited.

—Joseph P. Byrne

Bibliography

- Dodwell, C. R. *The Pictorial Arts of the West, 800–1200*. New Haven, CT: Yale University Press, 1993.
- Duby, Georges. *Art and Society in the Middle Ages*. Malden, MA: Blackwell, 2000.
- Nees, Lawrence. *Early Medieval Art*. New York: Oxford University Press, 2002.

Early Medieval Hindu Religious Art

During the early medieval period (300–1000 CE), religious art played a key role in the expression of Hinduism throughout Southeast Asia and, particularly, India. Sculpted figures of gods and goddesses in bronze, copper, sandstone, and marble and ornately carved temples built to honor specific deities provided Hindus with earthly expressions of their beliefs. These artistic forms not only venerated the gods but also symbolized Hinduism's four goals of life: righteousness (*dharmā*), acquisition of wealth (*artha*), sensual love and pleasure (*kama*), and spiritual liberation (*moksha*). Nearly all of Hindu art is religious and reflects these life goals whether through fantastic personification of the many deities or a plethora of human forms.

The beliefs and practices of Hinduism defy definition as a single coherent religion. The pluralistic origins of Hinduism are complex, with no single sacred text, no particular founder, and no unified leader. Followers of Hinduism believe in reincarnation and karma (the law of return) and worship multiple deities. Hinduism is also a syncretic religion, which means that its practitioners integrate deities, symbols, principles, and practices from other religions, particularly Buddhism, Jainism, and indigenous and tribal communities.

Religious expression of Hinduism through art is equally complex. Hindu sculptures and temples built to honor and house deities during this period were pervasive throughout India and other parts of Southeast Asia. These pieces reflected everything from polytheism, political and social power, humanity's sensual nature, and peoples' relationships with each other and the gods. The symbolic meanings in Hindu religious art are multifaceted. They might represent humans' love for life and earthly pleasures, or they might symbolize humans' desire for union with the divine.

Hindu sculpture during the early medieval period immortalized and celebrated the human body and personified gods honored in the religion. As part of the Hindu four goals of life, sensual pleasure and spirituality are intertwined. *The Kama Sutra*, written in Sanskrit by the In-

ELLORA CAVES AT MAHARASHTRA

The Ellora Caves exemplify the fantastic Hindu temples built during the early medieval period. The 34 shrines, monasteries, and temples at Ellora, 17 of which were Hindu (Caves 13–29), were carved from the Charanandri basalt cliffs between 600 and 1000 CE. The site is located in Maharashtra, a state located on the western coast of India and home to Mumbai, the capital of Maharashtra and the largest city in India.

The Hindu, Buddhist, and Jain monuments, built side by side, demonstrate the religious tolerance of this period of Indian history. One of the Hindu temples at the site is the Kailash Temple or Kailashnath (Cave 16), built to represent the home of Lord Shiva. This freestanding monolith, originally covered in white plaster and resembling a snowy mountain, was carved from a single rock over a 150-year period. This magnificent temple required the removal of over 250,000 tons of rock to build and has been called the most outstanding piece of



Kailash Temple (Cave 16), at the Ellora Caves in the state of Maharashtra, India. (Jeremy Richards)

Indian art in history. The Ellora Caves are designated as UNESCO World Heritage Sites.

—Kim Kennedy White

dian scholar Mallanāga Vātsyāyana sometime between 300 CE and 600 CE, is a compendium on human sexuality. Hindu sculptures of the period drew inspiration from the *Kama Sutra* and reflected a preoccupation with sacred sexual union. Sculpted human forms typically presented voluptuous bodies in sensual movement and displayed overt eroticism and sexuality.

Images of gods and goddesses also dominate sculpture during this period. Major deities included the trinity of gods, Brahma, Vishnu, and Shiva. Brahma, the creator god, might be shown with four faces, each looking in one of the four directions. Vishnu, the preserver god, appeared as himself (as well as his other incarnations, particularly Krishna and Rama) engaged in combat or holding various ornaments. At times, he appeared with a boar's and lion's head on either side of his face; in other sculptures, he might have multiple heads with smaller human and animal attendants and weapons that represented the metaphorical battle between creation, preservation, and destruction.

The best-known iconographic Hindu sculpture is Shiva as "Lord of the Dance" (*Nataraja*).

Shiva, the supreme god, is depicted as a multi-armed figure engaged in the cosmic dance within a ring fire. The sculpture comes to life with rhythm and energy. His left leg is raised midair in flowing movement, while his right leg is balanced atop a demon, perhaps representing ignorance. In one of his right hands he holds a tambourine, and in a left hand he holds fire, energy that both creates and destroys. The sculpture illustrates Shiva's dual nature, both gentle and dangerous.

Some sculptures tell the story of mythical heroes and the victory of the gods over demons and other dangers. Demons are often seen multi-headed, showing their superhuman nature. The gods might be involved in cosmic battles. In one early medieval example from ninth-century India, the goddess Durga, shown as the multi-armed warrior, demonstrates her power and multitasking abilities, as each hand holds various weapons and tools.

Hindu architecture has brought the world some of the most awe-inspiring and ornate temples. The age of the Hindu temple cities began in 600 CE. Temples venerating the gods, most commonly Vishnu and Shiva, physically sat at the

city's center and were the heart of religion, politics, and society. Temples were believed to be inhabited by the god for whom it was built and was itself worshipped.

Construction of the temple was based on the cosmos. The architecture was designed on a grid of squares and triangles that formed a mandala, a circular patterned design that represents the universe. The temple, then, served as a three-dimensional structure that symbolized the cosmos, housed the god, embodied the god, and was the center of community religious and social life.

The temple was built on carefully selected sacred sites that best suited celebration of a particular deity. Typical Hindu temples of the early medieval period consisted of an entrance to the east, one or more halls, and an inner sanctum (*garbagriha*), with a tower built directly above.

The architecture and sculptures of Hindu temples are inextricable. The exteriors were covered in ornately sculpted figures. Within the sanctum (temple's center room) rested the linga, or phallic-shaped sculpture that symbolized the life force, typically dedicated to Shiva. The relief figures carved onto the exterior of the temple depicted various aspects of the temple's god or goddess, mythological creatures, and images considered auspicious such as loving couples (*mithunas*), musicians, and beautiful and sensual figures engaged in sexual practices.

The Hindu temples during the early medieval period were inspired by the *Puranas*, a collection of sacred Hindu myths and legends (and other religious topics such as rituals, festivals, and ceremonies), the earliest of which were compiled and written between 350 CE and 750 CE. The earliest medieval shrines were carved from rock like those at Ellora that contain Hindu shrines constructed between 500 CE and 1000 CE as well as the grand Kanchipuram temples (seventh to ninth centuries CE) and the Durga Temple at Aihole (seventh century CE).

—Kim Kennedy White

Bibliography

Atherton, Cynthia Packert. *The Sculpture of Early Medieval Rajasthan*. New York: Brill, 1997.
 Blurton, Richard T. *Hindu Art*. Cambridge, MA: Harvard University Press, 1992.

Elgood, Heather. *Hinduism and the Religious Arts*. London: Cassell, 1999.

Kalidos, Raju. *Encyclopaedia of Hindu Iconography: Early Medieval*. Delhi: Sharada, 2006.

Lee, Sherman E. *A History of Far Eastern Art*. New York: Harry N. Abrams, 1994.

Maity, Sachindra Kumar. *Cultural Heritage of Ancient India*. New Delhi: Abhinav, 1983.

Michell, George. *Hindu Art and Architecture*. London: Thames and Hudson, 2000.

Early Buddhist Art

Buddhist religious art was the world's most widespread class of religious artifacts in the first millennium CE. Produced in South Asia, central Asia, East Asia, and Southeast Asia—a region that extended from the Javan jungles to the peaks of the Himalayas and the deserts of Turkestan—Buddhist art found expression in cave temples, stupas, and other monumental art as well as in portable objects and the written word.

The earliest forms of Buddhist art were aniconic, or lacking in anthropomorphic images of the historical Buddha Shakyamuni. Common examples of these early representations of the Buddha included objects as diverse as a pair of footprints, a throne, or an umbrella, signifying royalty, and a tree, signifying the place where Shakyamuni achieved enlightenment. Scholars disagree as to what prompted the change to an iconic, or figural, representation of the historical Buddha, but there are two popular theories as to the source of the change. One argues for transmission of non-Indian Western sources via the Gandhara region of northwest India, while the other argues for indigenous development in northern India. Both concur that the Kushans, a nomadic group who ruled this part of India from the first through the fourth centuries CE, helped to disseminate early Buddhist imagery as well as early texts. Prior to the arrival of the Kushans, Buddhism existed as a largely oral tradition.

Early Buddhist architectural works centered on the stupa mound form, a burial tradition that predated Buddhism in India but found resonance within the Buddhist realm as a site for the cremated remains, or relics, of the historical Buddha. The stupa would continue to be the most commonly used shape for housing Buddhist relics throughout most of South and Southeast Asia

up to the present day. In East Asia the stupa would be transformed into a pagoda. Some scholars argue that the rationale for this was the inauspicious connotation of the funerary mound in China, where Buddhism first entered East Asia. Others argue that the new Buddhist religion sought a visible presence within China and adopted a very vertical and thereby noticeable form previously used only for watchtowers.

Buddhist art moved out of India and into central and East Asia via the Silk Roads, in actuality a series of routes traveled by merchants and monks through the Hindu Kush. Portable shrines as well as scriptures came into China via this route; similarly seagoing trade via the coastal routes of Southeast Asia further helped disperse Buddhist texts and images throughout present-day Indonesia, Thailand, Cambodia, and Vietnam.

Carved or cast, painted and printed, Buddhist imagery and sacred texts reached a wide audience through a variety of media. While the two main schools of Buddhist thought would diverge, with Theravada gaining prominence in South and Southeast Asia and Mahayana in East Asia, certain types of imagery can be found in both. Both schools would utilize large-scale Buddhist imagery, and both would feature illustrations of the life of the historical Buddha. The Mahayana tradition would later expand the pantheon of Buddhist images to include bodhisattvas, which are beings that have attained enlightenment but choose to forego nirvana in order to remain in this world to help others, and alternate Buddha incarnations, such as the seven Buddhas of the Past and the Buddha of the Future.

As Buddhism moved into East Asia, it entered into China and subsequently Korea and Japan often through royal patronage. The earliest known Chinese Buddhist images are found in second-century tombs, pointing to the incorporation of this new foreign religion and its imagery into the preexisting tradition of ancestor worship. Soon independent bronze portable shrines appeared, and temples were built to house works coming from abroad. The oldest Buddhist temple in China is the White Horse Temple (Baimasi) in Loyang, purported to contain the remains of two Indian monk envoys

➤ THE GUPTA INFLUENCE—EARLY BUDDHIST ART, 300–1000 CE

Within the study of Buddhist art, Buddha imagery created in the Gupta style is seen as the source for some of the most influential works found throughout Asia. Patronized by the great kings of the Gupta empire, Buddhist art created between the fourth and sixth centuries in India also reflected the regional diversity of the artists within the Gupta sphere of influence. The three main centers of Buddhist art of the Gupta era were at Mathura, Sarnath, and Nalanda, and through contact with Buddhist pilgrims and merchant travelers, the style of these regions spread throughout Asia.

The most noticeable feature of the Gupta style is the introverted, downward gaze of the Buddha figures along with a general softening and sensuality of form not seen in earlier Buddha imagery. After being brought into China, the Gupta style was transformed into what came to be referred to as the Tang International style, a combination of the sensual qualities of the Indian face with the heavily draped figure preferred in China. The Tang International style spread through the Korean peninsula to Japan, and extant examples of works bearing the Gupta influence are numerous. The Gupta style also was transmitted to Southeast Asia, where Buddhist statues seen at the site of Borobudur in Indonesia remain as testament to the power of the Indian influence upon it. Built around 800 CE, the complex of Borobudur includes 92 meditating Buddha figures carved from the local lava rock, yet their faint smiles, sensuous bodies, and downcast meditating gaze clearly show a knowledge of the Gupta style.

—Karil J. Kucera

who had brought the sutras and an image of the Buddha back to China in the first century CE.

Also imported into China for the first time was the idea of colossal imagery. The earliest such images are found at Yungang, west of present-day Beijing. The five colossal statues at Yungang were carved in the late fifth century from the living rock. Scholars contend that they were designed both to promote royal power and demonstrate filial piety. These works were followed by equally impressive royal creations at other sites in China, and as Buddhism spread to

Korea and Japan the idea of large-scale Buddhist imagery also emigrated. Remains of early royal projects in Japan include the colossal Vairocana Buddha statue found at Todaiji in Nara, Japan. Dedicated in 752 CE with an eye-opening ceremony, the Great Buddha at Todaiji suffered severe damage during the Gempei Wars of the late twelfth century but was rebuilt under the watch of Shunjobo Chogen (1121–1206). Since then the temple and its large cast bronze Buddha statue have suffered several setbacks, each time being rebuilt and recast. The only remaining original portion of the statue is the lotus base, with the statue now seated on it dating to 1692.

As Buddhism and Buddhist art settled into East Asia, the rationale for popular support shifted. In the early years, Buddhism generally entered these countries with state support; according to some scholars, these early acceptances of this new foreign religion were prompted by desires on the part of the various rulers to gain this-world benefit. The emperors of China and Japan and the kings of Korea all saw potential for strengthening their countries by allowing and supporting Buddhist practice. To this end, foreign monks accompanied the texts and images that came on what were largely diplomatic missions. These monks were seen as vital to proper usage of the images and texts, which ensured that these sacred objects would be effective. The monks were also instrumental in ensuring that the images were created in the appropriate standardized fashion and that the texts were accurately translated. In this way, new Buddhist teachings entered each of these countries sequentially as new schools of thought superseded old ones in India and China. Along with these changes, newly trained monks brought in the new images and texts necessitated by the new teachings. This transference of religious ideology and imagery in a succession of waves helps to explain stylistic and formal changes that occur in both the art and architecture found at Buddhist sites throughout Asia.

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Bibliography

- Karetzky, Patricia E. *Early Buddhist Narrative Art*. New York: University Press of America, 2000.
- Rhie, Marilyn Martin. *Early Buddhist Art of China and Central Asia*. Leiden: Brill, 1999.

Washizuka Hiromitsu, Park Youngbok, and Kang Woo-Bang. *Transmitting the Forms of Divinity: Early Buddhist Art from Korea and Japan*. New York: Japan Society, 2003.

Buddhist Art on the Silk Roads

One of the most influential cultural items ever to have traversed the Silk Roads was the religious art of Buddhism, which migrated north from India, traveling across the Central Plains and arriving in China at the beginning of the first century CE. As Buddhism underwent significant theoretical transformations during the early years of the Common Era and the Mahayana school of thought developed from Theravada, India's earlier form of Buddhism, the religion's artworks, likewise spread in a variety of forms as they crossed the thousands of miles of land comprising the Silk Roads.

Ancient sites of Buddhism and Buddhist art began spreading across the Silk Roads before the beginning of the Common Era, flourishing between India and China by the mid-third century. Remnants of the art and material culture attached to Buddhist religion still dot the land today. Khotan, an ancient oasis town located along the southern edge of the Tarim Basin (of which the Taklamakan Desert is a part) and in what is now marked as China's southwestern portion of the Gobi, acted as one of the primary junctions along the Silk Roads through which Buddhist culture diffused. Several hundreds of miles north of India and Nepal, Khotan provided migrant Buddhist monks with a place where they could missionize, write, create art, and build monasteries. Xuanzang (602–664), the Chinese Buddhist monk famous for his travels and adventures to India, claimed that during the period of his visit in the mid-seventh century, Khotan was the most significant site of Buddhist practice along the southern route of the Silk Roads. He cited the existence of more than 100 temples and monasteries and more than 5,000 practicing monks and nuns in the city at that time. Archaeological excavations have revealed numerous Buddhist artifacts in and around Khotan and nearby Yotkan, an unearthen city that the noted Hungarian-British geographer and archaeologist Sir Aurel Stein (1862–1943) claimed to have been

Khotan's ancient capital. Artifacts found in these areas include fragments of Buddhist sculptures, tombs, and tomb art that included painted coffins, small figures and statues made of pottery and metal, ancient coins, wood carvings, and pieces of Buddhist architecture.

Other important oases skirting the Silk Roads southern passages eastward from Khotan and Yotkan include Niya, Lolan, and Lop Nor, all of which have offered archaeologists and historians rich sources of ancient Buddhist documents, textiles, and other artifacts similar to some of those found in Khotan.

Looking to the desert paths that move eastward toward China along the northern edge of the Tarim Basin, key features of Indian Buddhist art surface in the forms of carved grottoes, all of which mark caves found within the various hills and mountainsides of the region. Bamiyan, an oasis located west of the Tarim Basin in the heart of the Hindu Kush of modern-day Afghanistan, exhibits this same art form and was home to two of the most impressive Buddhist images of their kind to exist into modern times. One stood at 175 feet (53 meters), while the other raised to 120 feet (36 meters). Unfortunately, in March 2001 members of the Taliban who were acting on orders to eliminate artwork of Afghanistan's pre-Islamic past destroyed both statues, which had been carved into Bamiyan's sandstone cliffs around the third century.

The oases of Kucha and Turfan, also found along the northern edge of the Tarim Basin, share cave grotto temples similar to those of Bamiyan. Lying farther east, however, in China's Gansu Province, is the largest concentration of this kind of temple to exist in any area of the Silk Roads. Of these temples, the most famous is the Thousand Buddha Caves complex, also known as the Mogao Caves, located in the small town of Dunhuang, a critical junction along the Silk Roads and also a part of Gansu's gateway to China's imperial cities of Chang'an (present-day Xian) and Luoyang. Dunhuang contains China's most magnificent repository of Buddhist art. Along a cliff at Dunhuang that measures 5,577 feet (1,700 meters) 492 caves have survived, the vast majority of which are located along 3,280 feet (1,000 meters) of the complex's southern end. The earliest building at Dunhuang occurred

➤ DUNHUANG

Situated as an oasis within the Gobi desert and acting as an important trading post along the Silk Roads, the Chinese town of Dunhuang is famous for its Mogao Grottoes, which are known popularly as the Thousand Buddha Caves. The caves, which still exist today, house one of the richest stores of Buddhist art in the world. Painted murals of Buddhas, bodhisattvas, and other flying figures grace the cave walls. The different artistic styles found within the many murals reflect historical and cultural changes of artistic and religious importance. Double chins, for example, become prominent in the faces of some of the painted figures, representative of the aesthetic appeal that was popular during China's Tang dynasty (618–907 CE).

—Anna Hennessey

during China's Northern Liang dynasty (397–439 CE), when caves numbered by archaeologists as 267–275 were constructed. Inside the caves, many polychrome murals, thousands of clay statues and sculptures, and numerous other art objects have been found. Additionally, excavations have also revealed Buddhist scriptures in many languages as well as relics and objects of daily life representative of how the many people who practiced at, resided in, or passed through the sacred site, including nuns, monks, patrons, pilgrims, and artisans, lived their lives. The Buddhist sculptures and paintings at Dunhuang, many of which the dry desert climate of the Gobi helped to preserve, have provided scholars and visitors with one of the richest and most unique opportunities to view Buddhist art and life along the Silk Roads.

Buddhist art is found in many other important locations along the Silk Roads, and diverse artistic styles, from Greek to East Asian, influenced each other over time. Greco-Buddhist art, for example, flourished in Gandhara, a region of the Kushan empire (circa second century BCE–third century CE) and a key location along the western portion of the Silk Roads. Artists from Gandhara famously incorporated Greek realism into their styles of representing the draperies that clothed their Buddhist sculptures. The same styles were then transformed by the Chinese,

who created less realistic bronze statues of the Buddha at least as early as the fourth century CE. The syncretism of many of these styles become physically manifest in the wide variety of objects related to Buddhist practice and religious life. In addition to the artifacts mentioned here, Buddhist art also emerged on the Silk Roads in many other forms. Some of these include painting on silk, painting on clay, painted wood, painted earthenware, bronze figures, wooden scriptures, ink text on paper, sculptures, statues, relics, stupas, monuments, masks, jewelry, textiles, containers, vessels, pottery, caskets, and coffins.

—Anna Hennessey

Bibliography

- Foltz, Richard C. *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*. New York: Palgrave Macmillan, 2000.
- Juliano, Annette L., and Judith A. Lerner, eds. *Monks and Merchants: Silk Road Treasures from Northwest China*. New York: Harry N. Abrams and the Asia Society, 2001.
- Li Jian, ed. *The Glory of the Silk Road: Art from Ancient China*. Dayton, OH: Dayton Art Institute, 2003.
- Tucker, Jonathan. *The Silk Road: Art and History*. London: Philip Wilson, 2003.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2004.

Early Christian Art and Architecture

Sources both spiritual and cultural led to the flowering of religious art in the European and Byzantine late antiquity and medieval periods. Although the Hebrew Bible's injunction against graven images would seem to have been an obstacle to such development, Christianity believed itself to be sent into the world to go out in the world, and it quickly absorbed the architectural concepts and the artistic influences of Greece and Rome. Further, earlier Christian theologians had developed a theology of the incarnation that valued God's creation and, by extension, human creative expression. By the fourth century, when Christian emperors brought the rich resources of empire to monumental building, including

churches, the faithful eagerly took up their tools. For the next several centuries, they would produce churches, sculptures, paintings, and illustrated manuscripts, all of which told the story of salvation as they knew it from their sacred scriptures.

The great churches were built on the model of the Roman basilica. This building was rectangular in shape, had many columns, and was part of the business and market center of an ancient Roman city. Christian worship originated in Christian homes, but imperial support beginning in the fourth century both made it public and increased the need for larger spaces. Christians made a few changes in the Roman design to accommodate their liturgy. The side entrances of the classical Roman basilica, for example, yielded to a front entrance and a longitudinally oriented interior space leading to the altar in the front of the church. A few of the greatest examples are Santa Maria Maggiore in Rome; Sant'Apollinare in Classe, Ravenna; and Hagia Sophia in Constantinople.

These churches showed additional innovation. Rather plain on the outside, their interiors were covered with such artistic works as mosaics made from glass tesserae (small pieces or tiles) that were both brightly colored and resplendent in natural light. Although their debt to Greco-Roman art was obvious, they taught the faithful their theology by illustrating biblical episodes considered signal events in the Christian history of salvation. The most important artistic subjects were Jesus Christ and the Virgin Mary. The great mosaics of these two, such as those of Christos Pantocrator (Christ Almighty) or of Mary as Theotokos (God-bearer), showed the clear influence of earlier renderings of the Greek Zeus or earlier goddesses. In fact, a fifth-century report tells of an artist whose hand withered when he dared to portray Christ in the manner of the pagan king of the gods. The severe kingly rendering of the savior won the day nonetheless. Often this image is accompanied by words from the Gospel most readily associated with Christ's full divinity, John. In Byzantine churches, Christos Pantocrator often decorates the dome of the cathedral. Many images of Mary as the mother of Jesus survive. The Theotokos holds the Christ child. The tenderness of the mother-child relationship is evident in every image and befits the

devotion to Mary that was so strong during these centuries.

A later important architectural development was the monastery. In the civil and political breakdown that marked the end of antiquity, the monasteries provided refuge not only for monks and nuns but also for the intellectual heritage of classical civilization. Charlemagne showed particular interest in the monastery, and an ideal plan for one survives and is known as the Saint Gall Monastery Plan. Its central building was a church, next to which were the monks' sleeping quarters. A refectory for meals was nearby. The ideal plan also included a food cellar, a brewery, a school, quarters for guests, and several other buildings. The monastery at Cluny, built in the tenth century, became the model for monasteries built throughout Europe.

The preservation of the sacred text also provided occasion for artistic innovation. Irish monks, notably at the monastery of Clonmacnoise, illuminated hand-copied manuscripts, such as the *Book of Darrow* (seventh or eighth century) or the *Book of Kells*, an eighth- or ninth-century copy of the four Gospels of the Christian New Testament. These works are among the most celebrated pieces of monastic art and are counted as Irish national treasures today. In copying these manuscripts, the monks illuminated the first letters of sentences by painting them in gold, red, or another color with complex borders and designs of fabulous beasts, such as the unicorn.

Very few books from classical Roman and Greek civilization survived the destruction of the western Roman empire, but Charlemagne's coronation as emperor at the outset of the ninth century marked the beginning of renewed learning and attention to the production of illustrated manuscripts. The king wanted a learned civilization, and his cultural revival reproduced not only biblical manuscripts but also ancient Roman texts. These books showed a genuine intermingling of classical Roman motifs with Celtic and Teutonic dynamism. The new North European influence met with the classical world's balance and harmony and changed European art. One of the most famous of these manuscripts is the Utrecht Psalter (the Psalms). The liveliness of its representation distinguishes this example of Carolingian art from its earlier classi-

➤ EARLY CHRISTIAN ART AND ARCHITECTURE

From ancient times, kings and emperors have sought to impress and intimidate their subjects with monumental building. Its purpose was not only to show their earthly might but also to astound the populace with the power of the god whom they adored. The structures that survive often are considered among history's great works of art. Once powerful rulers embraced Christianity, the church benefited from this politico-religious drive. A few select examples follow.

The first Christian emperor, Constantine, built several churches, and among the most important were the Church of the Holy Sepulcher in Jerusalem, allegedly on the site of the tomb where Jesus was laid, and the basilica of St. Peter in Rome on the traditional site of the apostle's martyrdom. Constantine also constructed the church of Hagia Sophia in the new capital he named for himself, Constantinople. The sixth-century Byzantine emperor Justinian also built ambitiously. He renovated Hagia Sophia after bloodily crushing a revolt over his legal reforms and high taxation in Constantinople. The church had been damaged in the revolt, and so its rebuilding signified his victory. In the west, Charlemagne sought to hold together his empire through a network of monasteries. Consequently, he built a church at Aachen (Aix-la-Chapelle), where he was crowned by Pope Leo III, and also established a school there as part of his program of preserving and in many ways restoring the intellectual achievement of the Roman empire.

—Gerald S. Vigna

cal predecessors. As one example, the illustration of King David's confrontation with the prophet Nathan (2 Sam. 12:1-15) shows the cuckolded and betrayed general Uriah lying dead before them along with an illustration of the parable that the prophet recites to trouble the conscience of this ancient king. There is evidence that Byzantine artists were in the European court, and in the East talented artists also were commissioned by the emperors to illustrate books. They produced not only the Scriptures but also works of such important theologians as the fourth-century saint Gregory Nazianzus. The book of his homilies referred to as the Paris Gregory since it now resides in the *Bibliothèque*

Nationale in Paris contains many finely done images. The twin desires for creative expression and religious edification produced pictures not always readily connected to the text they illustrate. The Byzantines also produced books containing the four canonical Gospels. These Gospel books survive more than any other type; thousands still exist. They follow a standard format and begin with a sort of ancient concordance of the four Gospels. Each Gospel begins with an illustration of the evangelist, and they are richly adorned throughout with scenes from the life of Christ. A variant on this genre was the Gospel lectionary, which reproduced the text according to the readings in the liturgical year. The Christian art and architecture of late antiquity and the Middle Ages continued the heritage of Greco-Roman civilization. It also absorbed the influences of new tribal cultures sweeping across Europe and added its own genius in its need to be distinctly Christian.

—Gerald S. Vigna

Bibliography

- Krautheimer, Richard. *Early Christian and Byzantine Architecture*. Baltimore: Penguin Books, 1965.
- Lowden, John. *Early Christian and Byzantine Art*. London: Phaidon, 1997.
- Matthews, Thomas F. *Byzantium: From Antiquity to the Renaissance*. Upper Saddle River, NJ: Prentice Hall, 1998.
- Ware, Timothy. *The Orthodox Church*. Baltimore: Penguin Books, 1964.

The Iconoclast Controversy

Like many other world societies, Byzantine rulers and citizens believed that catastrophes were intended by God as punishment for their actions. They sought explanations for the disasters of the seventh and eighth centuries in religious beliefs or rituals that might be offensive to God. When Arab conquests of major Byzantine cities were accompanied by outbreaks of plague, the eighth-century emperor Leo III and his advisers decided that the cause for God's anger was the practice of venerating painted images of holy figures, known as icons, and banned their use. The Iconoclastic controversy (literally, "breaking icons") divided the Byzantine empire for a cen-

tury. Because Iconoclasm was eventually condemned as heresy, Iconoclast writings were destroyed. Since the sources for the controversy were written by iconophile monastic partisans after the restoration of icons, it is difficult to understand the beliefs of the Iconoclasts or the extent of their support.

Early Christianity inherited from Judaism the biblical prohibition against worshipping religious idols, and Christ was portrayed symbolically. But in late antiquity, people believed that divinity was directly manifest in the world, and Christians began to look to ascetics who could invoke God to protect them against illness, demons, or natural disasters. In the late sixth century, painted likenesses of Christ, the Virgin Mary, and saints began to fill this role. The subject of the image—Christ or a saint—was believed to become present in portraits painted on small wooden boards and to respond to the worshippers who could see and touch them. Famous images were carried in battles to protect the troops, and an image of the Virgin Mary was paraded around the walls of Thessalonica to save the city from a Slavic attack. Images of Christ and the Virgin Mary hung in public places, and people prostrated themselves, prayed, and burned candles and incense before them. A portrait of Christ was placed on Byzantine gold coins, and in 692 the Council in Trullo declared that Christ should be portrayed rather than represented symbolically. Was this the idolatry outlawed in the Bible?

Leo III banned the veneration of images about 730, and holy figures were replaced with crosses on church walls and coins. This must have seemed the cause for God's punishment of Byzantium. After years of civil war, Leo (717–741) and his son Constantine V (741–775), an ardent Iconoclast, had long and successful reigns. They began to win battles against the Arabs and, with the breakup of the Umayyad caliphate, even began an offensive against them. Constantine V developed theological arguments against icons, arguing that Christ's divinity could not be circumscribed in a painting, and in 754 a Church council condemned icons as heresy. When Constantine's son Leo IV (775–780) died in 780, his wife Irene, as regent for the young emperor, called a Church council to restore icons. Her

► IRENE—BYZANTINE EMPRESS

It has been said that life dealt Byzantine emperor Leo IV two cruel turns of fate: tuberculosis, a disease that killed him in his thirties, and his wife, Irene. Irene was a pious beauty from Athens who was consumed by a hatred for Iconoclasm. In 780, Empress Irene became regent for her young son Constantine VI and ruled Byzantium as co-empress for 10 years. She presided over a Church council that restored the use of icons. Later, she feuded with her son and eventually had him blinded, the standard punishment for political rivals. During 797–802, Irene ruled alone as the first female emperor. She negotiated alliances in the west and even considered a political marriage with Charlemagne before she was unseated by a rebellion of Iconoclastic soldiers. Irene's rule was controversial, but her power was unquestioned.

—Dorothy de F. Abrahamsee

Empress, imperial regent, and even emperor herself, Irene was an important and powerful figure in the Byzantine empire in the late eighth and early ninth centuries. In the Iconoclast controversy, she was an iconodule (supporter of icons) and incurred the enmity of the iconoclast army.
(Brian Snelson)



reign ended in failure, as she had her son blinded and was eventually exiled. Her successors presided over disastrous defeats at the hands of the Bulgars, and in 817 the emperor Leo V returned the empire to Iconoclasm. But the second period of Iconoclasm was less intense, and it was not accompanied by military victories. In 843 another empress, Theodora, presided over the restoration of icons to Byzantine churches, and the festival of Orthodoxy that commemorates it was inaugurated. Since that time, icons have always been an important part of Orthodox Christianity. Images of Christ and the Virgin Mary adorn church domes and apses, and painted icons portraying saints and the Virgin Mary in symbolic poses are a focus for private devotion in the home.

Historians continue to debate the origins and meaning of Iconoclasm. Some modern historians have interpreted Byzantine Iconoclasm as an attempt to restore the centrality of imperial reli-

gious authority or to attack the power of monks and holy men. Byzantine sources called Leo III “Saracen-minded,” implying that Iconoclasm was an idea taken from Islam. In the late seventh century figural art in religious settings was banned in Islam, and coins and mosques were decorated with Quranic inscriptions. Both societies were reacting to biblical injunctions against idolatry that they had inherited from Judaism. One indisputable outcome of the controversy is the artistic traditions that can be traced in icons and churches not only in Byzantium but also throughout the medieval Slavic world and Europe.

—Dorothy de F. Abrahamsee

Bibliography

- Brown, Peter. *Society and the Holy in Late Antiquity*. London: Faber, 1982.
- Brubaker, Leslie, and John F. Haldon. *Byzantium in the Iconoclast Era (ca.680–850): The Sources*;

An Annotated Survey. Aldershot, UK: Ashgate, 2001.

Cormack, Robin. *Byzantine Art*. Oxford, UK, MA: Oxford University Press, 2000.

Herrin, Judith. *The Formation of Christendom*. Princeton, NJ: Princeton University Press, 1987.

Herrin, Judith. *Women in Purple*. Princeton, NJ: Princeton University Press, 2001.

Buddhist Monumental Art in Java—Borobudur

Mahayana Buddhism has inspired some of the world's most impressive religious monumental art, such as the caves at Longmen in China and the now-destroyed statues of the Buddha in Bamiyan, Afghanistan, that stood 120 and 180 feet (37 and 55 meters) high, but the most impressive Buddhist monument is Borobudur.

Borobudur, the great Mahayana Buddhist stupa located in central Java near the confluence of the Elo and Progo rivers 25.5 miles (41 kilometers) northeast of Yogyakarta, was constructed in five stages over a period of years from about 780 CE to about 833 CE, and thanks to the numerous reliefs carved on the walls of its galleries and balustrades, it is a storehouse of valuable information about life in the general area during the rule of the Shailendra kings when it was built. In form a rather squat pyramid 103 feet (31.5 meters) high consisting of nine tiers surmounted by a great central stupa, Borobudur is situated on a hill rising from the surrounding

plain, but from the base of the stupa and from many points on the plain the three upper tiers, less steep in pitch than the lower portion of the stupa, are hardly visible; it is impressive not so much for its height but for its mass and wealth of architectural detail.

The ground plan of Borobudur is in itself a mandala (symbol of the universe), and the entire structure must be classified as a stupa rather than a temple since there are no open spaces inside where the worshipper can enter to pray or make offerings and since there are no relics enclosed in the stupa at the summit if the structure is a stupa of the *uddesika* (“commemorative”) type. There is no Buddha image inside this central stupa either, but on the three upper tiers or terraces, which are rather low and open to the surrounding mountains and sky, there are 72 subsidiary stupas arranged in concentric circles around the central stupa; in each of these stupas there is an image of a seated Buddha, his hands in the *dharmacakramudra* (“sign of turning the wheel of the Law”) position. The upper part of these stupas is in form like a bell completely covering the Buddha image on its base, but the walls of the bells are perforated with vents, lozenge-shaped on the two lower terraces and square on the highest one, a kind of stone latticework.

What may have underlain the unique concept of this structure, in essence really a vast open-air temple, is the custom of circumambulating a central image in the inner shrine of an enclosed temple or moving along a circular corridor in a temple with a solid core, for at Borobudur the worshipper enters the first tier at the east entrance, proceeds in a clockwise direction around that level, and upon reaching again the east entrance ascends the stairs to the next level and repeats this same circuit for each of the successive tiers. That it was intended that devotees were to be led by monks who would explicate the reliefs on the walls illustrating selected episodes in various Buddhist texts is attested by the fact that there are key words inscribed on various reliefs that would provide a cue to the guide for the appropriate commentary for each successive panel. Thus, the visitor to Borobudur would come there not only to worship but also to receive instruction.

There was another reason to carve reliefs on the walls of Borobudur in addition to leading



Buddhist temple of Borobudur on the island of Java, built in the ninth century by the Sailendra. (iStockPhoto)

the pilgrim to circumambulate the structure while receiving a lesson from the illustrations in stone of texts that he may have heard in sermons, and this is that by circling through this three-dimensional mandala, he was passing on the way through the three strata or spheres—*kâmad-bâtu*, or “the sphere of desire” (the base with hidden foot); *rûpa-dhâtu*, or “the sphere of form” (the four galleries); and *arûpadhâtu*, or “the sphere of formlessness” (the sixth tier and the three terraces)—and thus was participating in the mystical force of the mandala.

Though the Borobudur reliefs illustrate texts that were written in India about events that took place in India, the Javanese artists set these events against a background that was familiar to them. Of course, there might be reference in the texts to things that were typically Indian and possibly unknown to the artist, but considering the continued close relationship between the Shailendras and India, the Javanese artists must have been schooled in Indian artistic traditions and would have had access to pictures on paper as examples of these things. The pilgrim passing through the galleries of Borobudur would have recognized much that was familiar to him, especially since the artists, who had only very general directions for what was to appear on each panel to illustrate a specific portion of the text, perhaps delighted in filling in the empty spaces with details drawn from daily life, including people they knew and places they had visited, so that the observer would have felt perfectly at home passing through the course of the story as he passed through physical space.

All of this constitutes a rich source for the study of Old Javanese civilization and culture, as instructive in its way as the literature of the period and particularly instructive taken in conjunction with the literature, for these reliefs often show an item that is known only by name from the texts, and used in this way, the reliefs of Borobudur and other monuments of the period provide the pictures for the Old Javanese

vocabulary. Early studies of the Borobudur reliefs were concerned mainly with establishing the identity of the texts they illustrate and assigning the scene represented in each panel to a certain episode in those texts, but now that this tremendous task has largely been accomplished, scholars have more recently begun to try to interpret the reliefs not for their religious message but in synchronic (social) and diachronic (historical) terms. Certain inferences may be drawn from these pictures concerning institutions, though this is not always possible if we cannot identify the status or role of a figure from his attributes, but even though it is not always possible to identify certain objects, these reliefs are a mine of information about the architecture and realia of the Old Javanese period. There are about ten categories of items that are frequently represented in these reliefs and are of particular interest for further study: royal emblems and insignias, costumes and ornaments, dance movements and postures, musical instruments, vehicles, containers, furniture, buildings and architectural details, weapons, and ceremonies and customs. A detailed comparison of items within any one of these categories with corresponding items in India contemporary with and prior to the period of construction of Borobudur, as well as with those in present-day Java, should give some clue as to how much influence the culture of India had on Javanese culture of that time and to what extent those influences have survived.

—Roger Finch

Bibliography

- Dumarcay, Jacques. *Borobudur*. Translated by Michael Smithies. Singapore: University of Oxford Press, 1991.
- Gomez, Luis, and Hiram Woodward Jr. *Borobudur: History and Significance of a Buddhist Monument*, Vol. 2. Berkeley Buddhist Studies Series. Berkeley: Asian Humanities Press, 1981.
- Miksic, John. *Borobudur: Golden Tales of the Buddha*. Boston: Shambala, 1990.

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Migration and Travel

Theme 3 discusses travel and migration during the seven centuries prior to 1000 CE. It deals with migrations as folk movements, migrations caused by wars, migrations over a few decades, and migrations over centuries and even millennia. This theme also discusses some ethnogenesis (the coming into being of new ethnicities) as well as ethnic and linguistic changes as they relate to migration.

After migration, Theme 3 discusses trade routes, trade diaspora communities, and religious pilgrimages.

Around 300–400 CE, the Bantu migration and dispersal, which began perhaps 3,000 years previously in the forests of West Africa, reached its limits on the shores of the Indian Ocean and among the Khoi-San-speaking pastoral peoples of South Africa. During these three millennia, the Bantu tide moved at a glacial pace, occupying the great equatorial forest, the mountains surrounding the Great Lakes and the Rift Valley, and the broad savannas east and south of the great forest. By 300 CE, they could claim nearly all the southern third of the African continent as their homeland.

In the Pacific another millennia-long human migration reached its limits about 800 years after the Bantu dispersal was complete. About 300 CE, eastern Polynesians sailing from the Marquesa Islands fanned out to settle Tahiti, Hawaii, and most of the other tropical islands in eastern Polynesia. Then there was another pause of 300–500 years before a settlement was made on subtropical Easter Island (Rapa Nui). After another pause of several centuries, settlement was planted, perhaps by 1200 CE, on mostly temperate Aotearoa (New Zealand).

At some undetermined time but probably between 700 and 900 CE, the Polynesian wave of exploration even reached South America, probably the coast of Peru and Chile. Two-way commerce between the Polynesian Islands and the South American coast probably continued for at least a few decades and perhaps a few centuries. Eventually, after about 1400, Polynesian long-distance navigation ended, and the Polynesian settlements on the South American coast were absorbed into the Native American population.

Although the Polynesian accomplishment in the eastern Pacific was most spectacular, that of another group of Austronesian speakers who crossed the Indian Ocean from Borneo to settle Madagascar also deserves our admiration. The settlers to Madagascar probably arrived there in the early centuries CE, but already Austronesian seafarers, from Champa on the Vietnamese coast as well as others from the Indonesian islands, had been sailing across the Indian Ocean to the East African

coast since the last centuries BCE. These Austronesian navigators sailed first across the Bay of Bengal to Sri Lanka. Then, rounding the southernmost promontory in that large island, they skirted the coast of India and South Arabia until they reached the East African shore. The Cham and other Austronesian seafarers discovered the pattern of the summer and winter monsoons and introduced the lateen square-rigged sail to Arab and Greek traders. The Austronesians traded along the coasts, and they were frequent visitors to the South Arabian port of Aden, the Ethiopian port of Adulis, and the East African port of Rhapta.

The ancestors of the Malagasy, who were the first settlers in Madagascar, sailed from Borneo and perhaps other Indonesian islands to East Africa sometime between 200 and 500 CE.

While the Malagasy were colonizing Madagascar, a process called the Great Movement of Peoples, or the Age of Migration (300–800), was unfolding in Eurasia from Mongolia to China and from the Eurasian

steppe to central Asia and Europe. Generally, these migrations were in the form of relatively impoverished and stateless forest and pastoral peoples migrating to wealthier agricultural lands ruled by large empires: China, the Roman empire, the Sassanian Persian empire, and the Gupta empire. What triggered these great migrations is the subject of continuing debate. Some attribute it to environmental factors, principally cold weather and drought, impelling pastoralists to seek new pastures

Generally, these migrations were in the form of relatively impoverished and stateless forest and pastoral peoples migrating to wealthier agricultural lands ruled by large empires: China, the Roman empire, the Sassanian Persian empire, and the Gupta empire.

and raid sedentary empires. Others find the cause of the migrations in the simultaneous weakness of all the great empires inviting the so-called barbarians in. Many of these barbarians were assimilated to the culture of the Romans and the Chinese. This includes most of the Germanic tribes who migrated to Spain, Italy, and Gaul (France, Switzerland, and the Low Countries), where they adopted the local Latin dialects. These dialects evolved, through the next 1,000 years, into the modern Romance languages. But in much of the Rhine Valley as well as Britain, there was little assimilation. The invaders imposed their Germanic dialects, which evolved into English, Dutch, Flemish, and modern German.

Likewise, the Slavic tribes who, in the sixth century, occupied much of the Balkan Peninsula, imposed their Slavic dialects everywhere except in the Albanian mountains, much of Romania, and Greece.

In China, the Five Barbarians (Xiongnu, Qieh, Xianbei, and the proto-Tibetan Qiang and Ti) occupied most of the north in the period 304–440. These barbarians ruled northern China under their Sixteen Kingdoms and immigrated heavily during this time but left almost no traces of their languages or culture. With them, assimilation was complete.

During the fourth and fifth centuries, while northern China experienced heavy barbarian immigration, large numbers of northern Chinese fled south to the Yangzi Valley and beyond. There the refugees established a southern Chinese empire, which endured, despite numerous regime changes, until 589. When the refugees from the north set-

tled in southern China, they dislodged indigenous peoples. Many of these displaced indigenous groups moved into less desirable mountainous land, but some, including Miaou (Hmong) and Thai groups, began a migration lasting centuries into Southeast Asia.

The weakening and collapse of these great empires were the invitation to the stateless and pastoral peoples to invade the great empires, but there was also a push from the Eurasian steppe. The period 300–1000 witnessed continued migrations/invasions of mounted pastoral peoples into the comparatively wealthy agricultural civilizations that lay to the east, south, and west of the Eurasian steppe. Until the early centuries of the Common Era, peoples of Iranian Indo-European speech dominated the steppe. But in the last two centuries, the Xiongnu, a non-Indo-European people from Mongolia, created a confederation that dominated the eastern steppe for four centuries. The Xiongnu empire posed the chief military threat to the Han dynasty, starting the process of driving the Indo-European groups, such as the Yuezhi, west and south.

From the eruption of the Huns to at least the fourteenth century, Inner Eurasia witnessed a steady migration of Turkish pastoral peoples from east to west across the Eurasian steppe to West Asia and Eastern Europe. These peoples included the Bulgars, the Avars, the Khazars, and the Turks. Some of these, such as the Khazars, established relatively long-lived empires. Some of these Turkish-speaking groups, such as the Bulgars and the Khazars, were assimilated by the conquered populations, but many, especially those in central Asia, assimilated the conquered populations to their Turkish language and ethnicity. Some Turkish groups, such as the Uighurs, stayed in Mongolia until the late ninth century and there created an empire in alliance with the Tang dynasty.

The great migrations that the Eurasian continent witnessed during the later centuries of the first millennium CE were replete with explorations of the Atlantic Ocean. The Scandinavian Vikings crossed the Atlantic to reach North America, while the Polynesians were voyaging across the Pacific. One branch of Vikings emerged from the shores of Scandinavia at the end of the eighth century to raid and pillage the coasts of western Europe, while another crossed the Baltic, where they penetrated the rivers of Russia to gather tribute and slaves. By about 1000 CE, Vikings had established at least one outpost in North America.

In the last centuries BCE, the one-humped Arabian camel (the dromedary) began to spread among the Berber tribesmen of North Africa. The Berbers then inhabited the grasslands north of the Sahara Desert. Using camels, the Berbers were able to voyage across the Sahara, that great inland sea of sand, even as the Polynesians were crossing the Pacific, the Malagasy were crossing the Indian Ocean, and the Vikings were crossing the Atlantic.

Some of the Berbers moved permanently onto the desert, where they became Tuaregs, the blue men of the desert. The ethnogenesis of the Tuaregs probably occurred in the first half of the first millennium CE.

One of the most significant events that produced migration as well as ethnic and linguistic change in Afro-Eurasia during this period was

the emergence of Islam. The rise and rapid spread of the Muslim faith in the seventh and subsequent centuries resulted in the migration of Arabs from Arabia to the far corners of the Muslim conquests: to Mesopotamia, Syria, and Palestine; to Egypt, North Africa, and Spain; and to central Asia. The Arab language, which prior to the rise of Islam had been a minor Semitic language, now rose to become one of the world's leading languages, on a par with Latin and Sanskrit. The Arabs were a small minority in all the lands to which they went, but because of the prestige of their language (and because the Arabs were in charge), the peoples in West Asia, Egypt, and North Africa eventually adopted the Arab language and culture and considered themselves Arabs. In Persia and central Asia, where Pahlevi and Sogdian had been widespread, Arabic initially made great strides, yet by about 900 CE, a new form of Persian emerged that was to become a leading Muslim language.

There were also many migrations in the Americas during this period, but the record and memory of most of these have been lost. In the early centuries CE, there might have been a movement of Arctic people from Asia, who introduced the bow and arrow to the Americas. It was probably during the first half of the first millennium that the Athapascans started their trek from the Arctic wastes eventually to the Four Corners region of the southwest. And the Arawaks during this period migrated from the headwaters to the mouth of the Amazon and from the Amazon Basin by way of the Orinoco to the islands in the Caribbean Sea.

All of these migrations stimulated and were stimulated by trade. One of the oldest and most used trade routes was the sea route around the southern and eastern shore of the Eurasian continent, from Spain to Korea and Japan. This can be divided into four or five interconnected segments: the Mediterranean, the Indian Ocean from Egypt to the west

coast of India, the Bay of Bengal and Southeast Asia from Sri Lanka to Indonesia, and the East China Sea from Indonesia to China, Korea, and Japan. Theoretically, a ship could, and perhaps some did, sail from East Africa or Egypt all the way to China, but almost all traders traveled in only one of these segments.

Theoretically, a ship could, and perhaps some did, sail from East Africa or Egypt all the way to China, but almost all traders traveled in only one of these segments.

Before 300 CE, "Greek" merchants from the Roman empire dominated the Indian Ocean trade, and they established trading settlements on the Malabar Coast of southwestern India. From 300 to 650 CE, Ethiopian merchants, based in the port of Adulis, played a large role in Indian Ocean trade. After about 650, Muslim Arab merchants dominated the trade, driving out the Ethiopians. The nearly simultaneous rise of the Tang dynasty and the Muslim caliphates created a powerful demand for luxury goods at the two ends of this trade route.

During this period, trade between the east coast of India and southeastern India burgeoned. Indian merchants settled in Southeast Asian ports, and Southeast Asian societies became Indianized. The Silk Roads was the second most important trade route. The Silk Roads is actually a metaphor, coined in 1877, to give a name to a complex of routes, all

running from China to the oases cities of the Tarim Basin and central Asia and on to West Asia and the Mediterranean world.

As in the ports along the maritime trade route, merchant diasporas from many lands settled in the cities all along the Silk Roads. Although there were other important trade routes in the Early Medieval Age, none equaled the Silk Roads as a cultural transmission belt. Other important trade routes included the three trans-Saharan routes, the Viking Baltic to Black Sea route, and, in western Europe, the slave route from the Slavic lands to the Mediterranean.

There were several trade systems in the Americas, but perhaps the most widespread was the Mississippian route by which the Mound Builders obtained obsidian, seashells, and copper. We know almost nothing about the travelers on this route.

Religious pilgrimage was another variety of travel that became more widespread during 600–1000 CE. The practice of pilgrimage had venerable roots. For example, pilgrimages to the Oracle of Pachacamac (the earth god) on the central Peruvian coast were a feature of Andean civilization from the early centuries CE. Long before the rise of Islam, the Kaaba in Mecca, as a shrine of Arabian polytheism, drew pilgrims from all Arabia. In India there were many foci of pilgrim devotion, and in the Roman empire pious Christians made pilgrimage to Jerusalem.

In the Early Medieval Age, pilgrimage became a long-distance affair, which crossed political and cultural boundaries. Fervent Chinese and later Korean and Japanese Buddhists made the pilgrimage to Buddhist shrines in India. These pilgrims, as well as Buddhists from Southeast Asia, often spent years studying at the monastery-academy of Nalanda in Bihar. Among the many Chinese Buddhist pilgrims, three left famous accounts of their Indian sojourns, which are invaluable resources for scholars studying medieval Indian history.

As well as pilgrimages to India, Buddhists, particularly from Korea and Japan, often journeyed to Chinese Buddhist monasteries and shrines to study. Pilgrimage also was prominent among Christians in Europe and Hindus, Jains, and Buddhists in India. Pilgrimage to Jerusalem continued to be a goal for the pious, but because of the chaotic international situation, fewer made this trip after 600. The foci of Christian pilgrimage came to be shrines where relics of Jesus or revered Christian saints were reputed to be stored. This pilgrimage was very effective in development of the Spanish Christian identity. In India, the pious traveled to revered shrines or temples. Varanasi, on the Ganges, was (and is) a chief focus for Hindu pilgrimage.

The Hajj, or Muslim pilgrimage to Mecca, has been the most important annual international cultural event since the second half of the seventh century. This journey of pilgrimage, which every year tens of thousands undertook from all parts of Dar al-Islam (House of Islam), served to promote a common Muslim culture and identity. The organization and protection of this great pilgrimage was one of the chief functions of Muslim governments.

The series of Japanese embassies to China from 607 to 838 were travel events that included political as well as religious, cultural, and

economic dimensions. These embassies were great well-planned and well-organized expeditions involving many ships and thousands of diplomats, students, and merchants. Their purpose was to study Chinese civilization in order to replicate it in Japan.

Migration and travel were becoming much more significant during 300–1000. Great migrations of peoples were very significant during the turmoil of the so-called Dark Age (300–650 CE), but during the Early Medieval Age (600–1000) travel for trade, pilgrimage, and cultural purposes became more prominent.

—*Wilfred J. Bisson*

■ Introduction: Ethnic Migrations and Diasporas

Large-scale movement of populations, sometimes over extended periods, characterized the period 300 to 1000 CE. Perhaps the Bantu dispersal from West Africa to East, central, and southern Africa was the longest migration in duration, having commenced several millennia before this period. By the early centuries of this period this transcontinental movement was completed, and it changed the civilization of the eastern and southern Bantu.

Some of these Bantu crossed the Mozambique Channel to become part of the ancestral stock, with Austronesian immigrants from Indonesia, of the Malagasy people of Madagascar. Other Austronesian migrants during this period were the Polynesians who sailed from Tahiti and the Marquesas Islands to settle Hawaii, Rapa Nui (Easter Island), and the other Polynesian islands of the eastern Pacific, with the notable exception of New Zealand.

In the Americas, the Thule Inuit migration eastward from the Bering Sea coast along the Arctic Ocean littoral to Greenland and their replacement and/or assimilation of indigenous Dorset culture people was notable. Other important migrations in the Western Hemisphere were that of the Arawaks from the Amazon headwaters to the Caribbean Islands, the migration of Athapascans from Arctic regions to the northwest Pacific coast and southwest North America, and the movement of Teotihuacanos from their deserted city in the seventh century

to Maya areas and the subsequent Teotihuacization of Maya civilization.

In Eurasia, one of the earliest great population movements is known as the Great Movement of Peoples in Europe, which started with the Goths before 300 and animated German peoples, Huns, Slavs, Avars, Magyars, and others. It was a phenomenon that extended into the ninth century. At the eastern end of Eurasia, after 300, Turkish, Xienpei, and Tungus pastoralists surged through the crumbling defenses to settle in northern China. There, they maintained their ethnic identity only a few generations before the more numerous Han Chinese assimilated them into the Han ethnicity. When the “northern barbarians” poured into northern China, many Han Chinese fled to the south of the Yangtze Valley, where they displaced and/or assimilated the non-Han indigenes who lived there.

The other two major ethnic migrations/dispersals in Eurasia during this time concerned the migration of Turkish peoples from the Altai Mountains to central Asia, the Balkans, and Anatolia and the Arab diaspora throughout the Muslim world consequent to the emergence of Islam. The Turks changed the ethnic nature of central Asia, Anatolia, and other regions not so much by displacing the peoples among whom they settled but by the assimilation of Sogdian and other central Asian and Greek-speaking Anatolians into Turkish ethnicity and linguistic groups.

The Arab diaspora similarly assimilated large numbers of Syrians, Egyptians, Roman North Africans, some Berbers, and some Roman/Visigothic Hispanics into Arab ethnicity and language. One major exception to the Arab assimilation of peoples was the failure to assimilate Persian into Arabic ethnicity and language.

—Wilfred J. Bisson

Bibliography

- Findley, Carter. *The Turks in World History*. Oxford, UK: Oxford University Press, 2005.
- Halsall, Guy. *Barbarian Invasions and the Roman West, 376–568*. Cambridge, UK: Cambridge University Press, 2007.
- Hourani, Albert. *A History of the Arab Peoples*. Cambridge, MA: Belknap, 1991.

Turkish Dispersal from the Steppes

The history of Eurasia is characterized by migrations on an often vast scale and by the impact of those migrants upon the sedentary agrarian civilizations already established in the region. During the first millennium of the Common Era the most influential migratory episodes involved the dispersal of various Turkic-speaking confederations from the steppes of Inner Eurasia. The Turkish migrants at no stage constituted a homogeneous ethnic group, although they did all share a common language and a broad nomadic heritage. Despite their obscure origins, the Turkish dispersal profoundly influenced the subsequent history of Eurasia and laid the groundwork for the even more extraordinary impact that the Mongols would have in the twelfth and thirteenth centuries.

The name “Turk” appears for the first time in Chinese annals dated to 542 CE, where it is used to refer to a nomadic people who were in control of a substantial steppe empire stretching from Mongolia to the Black Sea, the first Turk empire (ca. 552–81). This Oghuz Turkic entity was forced to accept Chinese hegemony in the seventh century (leading to a degree of Sinotization), although in 683 Turkic forces under the leadership of Kutlugh recaptured much of the original realm, establishing a second Turkic empire (963–734). The oldest known Turkic inscriptions (dated to the 720s) were produced

➤ TURKIC MIGRATION'S IMPACT ON WORLD HISTORY

The migration of the Turks into western Eurasia had a profound impact on subsequent world history, which although outside of the chronology of the period between 300 to 1000 CE needs to be noted. Islam spread rapidly as a result of privileges and advantages made available to converts by the Seljuks, and by 1453 when the Seljuks' successors the Ottomans conquered Constantinople, Anatolia was a Turkish and Islamic realm, which it has remained ever since. The Ottomans' disciplined military organization allowed them to not only become masters of the former Seljuk and Byzantine realms but also to go on and found a world state (the Ottoman empire) that eventually controlled a vast region stretching from Vienna to the Indian Ocean and from North Africa to the Caucasus. A separate wave of Turkish migrations also played a significant role in the history of India. During the eleventh century the Ghaznavid Turks of Afghanistan were led by Mahmud of Ghazni on a series of raids into India. Over the ensuing centuries they consolidated their hold until eventually the Turkish sultanate of Delhi controlled much of northern India. Mahmud and his successors actively (and violently) promoted Islam at the expense of Buddhism and Hinduism, and the long-term impact of this Turkish invasion was the establishment of a significant Muslim presence in northwestern India.

—Craig Benjamin

during this period. The ruling elites recorded the creation myths of the Turks and accounts of their early history in a series of inscriptions on funerary stele near the River Orkhon in northwestern Mongolia. This inscription of the powerful qaghan Bilga Qaghan and Prince Kül Tegin illustrates both the imperial vision and military and organizational prowess of the Turks: “When the blue sky above and the dark earth below were created, human beings were created between the two. My ancestors Bumin Qaghan and Istami Qaghan rose above the sons of men. Having become their masters, they governed and established the empire and the institutions of the Turkic people. They had many enemies in the four corners of the world, but waging military campaigns, they subjugated and pacified

them, making them bow their heads and bend their knees.”

In the mid-eighth century the Oghuz Turks entered a period of decline, eventually losing control of their empire to the Uighur and (later) Kyrgyz peoples. The Oghuz migrated to the southwest, settling in Sogdiana. The Turkic-speaking Uighurs were probably not related to the Oghuz ethnically, although they were the most dominant of the Tokuz Oghuz (or “Nine Tribes”). The Kyrgyz were the last Turkic-speaking peoples to dwell in Mongolia, and after their expulsion in 924 by the Manchurian Kitai, some of their tribes followed the Oghuz by migrating to the south and west.

In western Inner Eurasia meanwhile, two other influential Turkic empires emerged during the second half of the first millennium, those of the Avars and Khazars. Fifth-century Byzantine sources refer to mixed Turkic-speaking groups dwelling and raiding along the borders of the Balkans, which the sources name as “Bulghars” or “mixed ones.” From the 520s on, Christian missionaries were active among these Turkic/Hunnish groups, and Byzantine negotiators used Turkic Pecheng escorts and hostages to maintain trans-Pontic trade routes. In 557, a Turkic-speaking people of East Asian Hunnic ancestry who called themselves Avars migrated into the western steppes. Eventually the Avars occupied the old Hunnish heartland of Pannonia, where their oppressive policies encouraged massive Slavic migrations into the Balkans. As the Avars began to adopt a sedentary lifeway in the seventh century their power declined, and they suffered a crushing defeat in 626 with the failure of an ill-conceived attack on Constantinople itself.

A new Turkic-led Khazar confederation then appeared in the region of the northern Caucasus. Initially allies of Byzantium, the Khazars began raiding to the south in a series of attacks described in Armenian histories. In the 670s Khazar forces defeated “Great Bulgaria” and emerged as the major power of the Caucasus, although their military strength was tempered somewhat by the periodic attacks of Arab Islamic armies. By the mid-eighth century the Khazar empire had become a major Eurasian power in control of a substantial region that included the Kazakh steppes, the Caucasus, and the steppes and for-

ests of the Volga, Don, and Dnieper river systems. In the late ninth century the Khazar elites converted to Judaism, although the bulk of the population remained Christian, Islamic, or pagan. The Khazars were able to withstand various challenges to their power (from the Magyars, Pechengs, and Volga Bulghars) until the late tenth century, when a Rus army under Prince Svyatoslav destroyed Khazar power for good.

Farther to the southeast, migrants from the second Turk empire of the eastern steppes who had settled on the fringes of the Abbasid empire began to adopt the religion of Islam. The Arab conquest of Sogdia in the seventh century had brought the Oghuz Turkic clans of the region (including the Seljuks and Osmanli, ancestors of the Ottomans) into direct contact with the Islamic caliphate of the Abbasids, and by the tenth century they had largely embraced the Sunni Muslim faith. This conversion was of great historical significance, because as the Turks continued their migration they carried their new faith with them, helping to expand the influence of Islam throughout western Eurasia.

By the second half of the tenth century, large numbers of Seljuks were being employed as mercenaries by the Abbasids and had settled within the borders of the Abbasid realm. But the Turks became increasingly powerful until by the mid-eleventh century they overshadowed the authority of the caliphs. The Seljuk leader Tughril Beg (990–1063) was proclaimed sultan by the Abbasid caliph, and by 1055 he had gained control of Baghdad. This was the beginning of two centuries of Seljuk dominance in the region, and as Turkish control widened and strengthened, the Abbasid caliphate was reduced to a figurehead role. Tughril Beg’s successor Alp Arslan (r. 1063–1072) led the Seljuks on invasions of Georgia, Armenia, Syria, Palestine, and Anatolia. As substantial numbers of Turkish peoples migrated into Anatolia (the heartland of the Byzantine empire), conflict between Alp Arslan and the Byzantine emperor Romanus IV became inevitable. In 1071 the Seljuks inflicted a devastating defeat on the Byzantines at the Battle of Manzikert, which opened up much of the Byzantine empire to Turkish occupation. Alp Arslan’s son, Malik Shah (r. 1072–1092), proved himself an able administrator, but early in the twelfth century the

substantial Seljuk empire began to fragment, and eventually many of the Seljuk states were overrun by Chinggis Khan and the Mongols.

—Craig Benjamin

Bibliography

- Barfield, T. *The Perilous Frontier: Nomadic Empires and China*. Oxford, UK: Blackwell, 1989.
- Beckwith, C. I. *The Tibetan Empire in Central Asia: A History of the Struggle for Great Power among Tibetans, Turks, Arabs and Chinese during the Early Middle Ages*. Princeton, NJ: Princeton University Press, 1987.
- Christian, D. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Golden, P. B. *An Introduction to the History of the Turkic Peoples*. Wiesbaden: Harrassowitz, 1992.
- Rice, T. T. *The Seljuks in Asia Minor*. London: Thames and Hudson, 1961.

The Great Movement of Peoples in Europe

The great migration of peoples in Europe, a process that historians have often called the barbarian invasions, was a critical factor in the transformation of the ancient world into medieval Europe. Beginning in the fourth century CE, groups of peoples moved from eastern Europe and the Asian steppes to settle within the territories of the Roman empire. Current research suggests that these peoples did not overwhelm the Roman population by numeric superiority but instead introduced their cultural identities into an already divided imperial society. By providing opportunities for the rejection of Roman control, the immigrant tribes were the catalyst for the fragmentation of the Mediterranean worldview of the Romans. The arrival of northern and eastern peoples eventually led to the permanent division of much of the Roman empire into separate kingdoms, each with its own languages and customs.

The migrations arose in response to the Roman empire's involvement with tribes beyond its frontiers. As a source of luxury goods and lucrative employment in its armies, Rome had a magnetic effect on many non-Roman peoples. Between the first and third centuries CE exposure



Burning of a city under Attila the Hun. Initial from a French manuscript, fifteenth century. (Alinari/Art Resource, NY)

to Roman training, tactics, and wealth also made the tribes into more formidable military opponents. Unlike the divided Gallic chieftains defeated by Julius Caesar in the first century BCE, tribal leaders of the third and fourth centuries CE assembled large groups of followers, gathering the traditional kinship-based clans and tribes into large confederations such as the Alamanni and the Goths. In 376 groups of Goths crossed the Danube without Roman approval, beginning the great migration of tribes into the Roman empire.

Invasions by steppe peoples from central Asia, especially the Huns, convinced the Goths and other Germanic peoples to seek permanent protection within Roman territory in the later fourth century. Third-century tribal confederations had raided Roman provinces along the Rhine and Danube and then returned to their homes beyond the rivers. However, the Huns and other nomadic steppe peoples moved into eastern Europe in the fourth century and disrupted more settled tribes such as the Goths in the Ukraine. Pressure from the east meant that the Goths wanted new homes safe from Hunnic

➤ ATTLA THE HUN

Attila, the king of the Huns from 445 until 453, became the most infamous tribal leader and enemy of the Roman empire during the migration period. He not only united the Huns, nomadic Mongolian tribes who had invaded eastern Europe, but he also incorporated Iranian and Germanic peoples whom the Huns had dislocated. With this large multitribal army, he carved out a vast empire in central Europe, laying claim to territory from the Ukraine to the Rhine River. Attila overcame several Roman armies and sacked many important cities, but his greater goal was to intimidate the Roman government into giving him money and recognition of his rule. Attila suffered a setback in 451, when the Romans defeated his army with their own coalition of allied tribes at the Battle of the Catalaunian Plains (Châlons), but only his death following a wedding banquet in 453 spared the Roman empire from further threat. Without his ferocious leadership, Attila's great tribal confederation disintegrated within a few years of his demise, but his exploits elevated him to legendary status as the "Scourge of God."

—Craig H. Caldwell III

raids, not just the plunder that earlier raids had provided.

In response to tribal pressures on its frontiers, the Roman empire attempted to incorporate the incoming peoples into its provinces as Romans and to resist the immigrants with force. The Goths had first entered Roman territory with permission to enroll in the army, but the numbers of immigrants overwhelmed the local food supply and imperial supervisors, and groups of Goths then plundered the Balkan provinces to support themselves. In 378 a Roman army attacked the Goths at the Battle of Adrianople, but the bands of Gothic warriors inflicted a severe defeat upon the Roman forces and killed the Roman emperor Valens. After several more years of war the Roman government granted the Goths the right to settle in certain regions of the Balkans. The Goths won permission to live within Roman territory on terms of their own making. But tribal leaders demanded

further concessions from Rome, and feuds between western and eastern Roman emperors left their armies unable to compel Gothic obedience. When the Roman emperor Honorius failed to satisfy the Goths' demands for better land and imperial employment, the Gothic king Alaric invaded Italy and sacked the city of Rome in 410.

As Roman strategies to co-opt or contain the tribes failed, Roman control in Europe went into retreat, bringing about the dissolution of the western Roman empire. But despite contemporary accounts of barbarian invasions, the migrating peoples did not actually conquer the Roman empire by force. Internal Roman conflicts offered the tribes a great opportunity. Civil wars induced Roman emperors to pay large subsidies to the tribal kings to frustrate their opponents, and distracted Roman rulers also failed to manage their western provinces effectively. In this political vacuum of the late fourth and early fifth centuries, the kings led their tribes across the Rhine and Danube frontiers and settled among the Roman population as the new power brokers. The Visigoths (western Goths) and Sueves established themselves in Spain, the Ostrogoths (eastern Goths) in the Balkans and Italy, the Vandals in northern Africa, the Anglo-Saxons in Britain, and the Burgundians and the Franks in Gaul (France). Some Roman provincial leaders even encouraged tribal immigration to protect the residents, and emperors became dependent upon tribal leaders to provide much of their military strength.

During the Hunnic invasion of the Roman empire in the mid-fifth century, the defense of the provinces reflected the importance of the newly settled tribes. To oppose Attila the Hun's army of subject peoples, the Roman general Aetius assembled his own coalition of tribes in northern France. The addition of the Visigoths and their king Theoderic to the allied forces proved decisive, and the Romano-Gothic army triumphed over the Huns in 451 at the Battle of the Catalaunian Plains (Châlons). The Roman contribution to victory was management, not weapons or tactics. Despite Aetius's genius for forging alliances, he became another casualty of intraimperial competition when the emperor Valentinian III had him murdered in 454. The

fall of Aetius foreshadowed the final irrelevance of the western Roman emperor, for when the ruler could not organize the tribes and arbitrate among them he became a puppet without his last claim to independent leadership. After the tribal king Odoacer invaded Italy and forced the boy emperor Romulus Augustulus to abdicate in 476, he dispensed with the need for any Roman emperor at all. The western Roman provinces had all become kingdoms of the migrating peoples, and the Roman empire in the west ceased to exist. Many Romans came to identify themselves as members of the migrating tribes since the new ethnic identities conferred tax exemptions and legal privileges. The tribes did not obtain their kingdoms by conquest so much as they had taken over control of local affairs from the Roman government and absorbed the resident populations.

The Slavs were a different type of migrating people from the Germanic tribes that preceded them. They did not have significant economic ties to the Roman empire, and hence they did not incorporate Roman political and economic structures as readily as other groups. Rather than being drawn into Europe by the Huns, the Slavs initially expanded in the East European voids left by Hunnic disruption and Germanic emigration in the fourth and fifth centuries. From the Ukraine the Slavs migrated both to the northwest, settling in Poland, and to the southwest, entering the Balkans. Early Slavic culture did not support complex political organizations like the Germanic kingdoms but instead favored smaller tribes centered on hilltop strongholds.

After the Hunnic empire of Attila collapsed in the mid-fifth century, the Slavs gradually emerged as a dominant presence in southern Europe. By settling along the Danube, they came into contact with the eastern Roman (or Byzantine) empire as well as the Avars, a nomadic steppe people from central Asia who had moved into central Europe after the Huns. As a subject people of the Avars after 576, the Slavs fought in their armies and established tribal centers wherever Avar expeditions drove out the Romans. Since they expanded in the shadow of Avar devastation, Slavic culture was slow to mix with that of other peoples, and the political organiza-

tion of the Slavs remained relatively unsophisticated into the seventh century. This very local nature of Slavic society attracted people displaced by the frequent wars in the Balkans, and archaeological investigations suggest that the Slavic identity was the most commonly held in the region.

When Avar authority began to weaken in the mid-seventh century, the Slavs rebelled and established fledgling kingdoms. Service alongside the Avars had transformed the Slavs into formidable warriors, and the Slavic revolt against the Avars produced their first independent, complex political units. In the eighth and ninth centuries Slavic influence expanded into Greece and to the alpine frontier of Italy. Slavic languages became the common tongue in southern and eastern Europe, even influencing the language of neighboring non-Slavic peoples such as the Bulgars. The Bulgars, a nomadic steppe people who spoke a Turkic language, had crossed the lower Danube in the late seventh century. Within their kingdom of fortified encampments centered around modern Bulgaria, the Bulgars subjected some Slavs to their control but also adopted a Slavic language in their literature. The Slavs' demographic and cultural success led to their eventual dominance in much of Europe even though they had not inherited effective political control.

—Craig H. Caldwell III

Bibliography

- Curta, Florin. *The Making of the Slavs: History and Archaeology of the Lower Danube Region, c. 500-700*. Cambridge: Cambridge University Press, 2001.
- Goffart, Walter. *Romans and Barbarians, A.D. 418-584: The Techniques of Accommodation*. Princeton, NJ: Princeton University Press, 1980.
- Heather, Peter J. *Goths and Romans, 332-489*. Oxford, UK: Oxford University Press, 1991.
- Vána, Zdenek. *The World of the Ancient Slavs*. Detroit: Wayne State University Press, 1983.

Slavs Move West and South

Slavic tribes spread roughly from the fifth to the eighth centuries from eastern Europe toward the west and south and created individual states. They entered central Europe and the Balkans,

THE HIGH-WATER MARK OF SLAVIC EXPANSION

The high-water mark of Slavic expansion is in the Peloponnese peninsula of Greece and perhaps in the present-day Netherlands, places that today have few traces of Slavs. Slavic dialects were spoken in several villages in southern Greece until recent centuries. In the Peloponnese, a number of villages even retained Slavic names until the 1930s, when they were changed to Greek. In the west, the Slavic tide may even have reached the Netherlands, where a place named Wiltenburg near Utrecht was regarded by medieval writers as a castle of the Veleti and then, from the fourteenth century, connected in history literature to the Slavic people. Some groups of Slavic people could have reached this area. This remains a hypothesis (by Libuše Hrabová), which is difficult to test because the archaeological sites have been destroyed.

—Antonin Kalous

areas once inhabited by Germanic tribes, or parts of the Roman empire. They mainly cultivated the land but were also warriors who made terrible attacks on the lands south of the Danube. After settling down, however, they formed early states, which gradually became integrated in the European culture and became part of the Christian tradition both in the west and in the south.

Slavs are Indo-Europeans who originated in eastern Europe, probably between the Vistula, Dnieper, and Dniester rivers. They developed close relations to the Baltic tribes, ancestors of the modern Latvians and Lithuanians. The Slavs became distinct tribes during the period of mass migration of Germanic tribes at the fall of the western Roman empire. They are often identified with Veneti, a tribe so-named by Roman authors in the first and second centuries. The Slavs started to move from their homeland about 500 due to economic developments, growth of the population, and mass migration. There were a few tribes who went farther east (or stayed in the original place) and later formed the Eastern Slavs (the ancestors of the Russians, Ukrainians, and Belorussians). However, the movement westward and southward had more immediate consequences for European history.

Slavic tribes began to be registered in Byzantine sources in the sixth century (Prokopios, Jordanes); they were taking part in Byzantine campaigns, and Slavic tribes lived north of the lower Danube and the Black Sea. From the beginning of the sixth century they also made frequent assaults on the lands south of the Danube. The Slavs moved from their original land to most parts of central, eastern, and southeastern Europe. In the beginning of the sixth century they crossed the Danube and settled in the original area of the Roman empire. In the lower Danube area they were integrated in the Avar forces from the 580s up to the siege of Constantinople in 626. The cooperation with these nomads led to the Slavic assimilation of the Avars. In the Balkans the Slavs assimilated the Turkish Bulgars to form the Slavic Bulgarian kingdom. Slavic tribes, not yet differentiated, had occupied the western Balkans (later Croats, Serbs, Macedonians, and farther northwestern Slovenes) as well as central Europe (later Czechs, Poles, Slovaks) with the Elbe basin (Sorbs and other tribes).

The move westward is confirmed by archaeological finds (i.e., ceramics of the Prague type) from present-day Slovakia, Moravia, Bohemia, Poland, and parts of Germany from the mid-sixth century onward. The Slavs, however, spread farther to the west: archaeological finds prove their presence in northeastern Bavaria. These Slavs were closely related to the Sorbs, one of the tribes that inhabited the areas between the rivers Oder and Elbe (Polabian Slavs). The first statelike formation in this area was under the rule of Samo (d. 658/659), which, however, is not very well attested. A contemporary chronicle describes him as a Frankish merchant who settled in the Slavic territory and led a tribal federation in defense against the Avars, whose power rose in the 630s. The same chronicle speaks of a conflict with the Frankish king Dagobert.

The Slavic expansion brought a new population to areas vacated by Germanic tribes and destroyed areas of the Roman empire. Slavic migration posed serious dangers for the original inhabitants, subjecting them to murder, enslavement, and other atrocities. In the long run the Slavic nations created strong individual states,

which changed the political, social, cultural, and linguistic milieu of central and eastern Europe.

—Antonin Kalous

Bibliography

- Curta, Florin. *The Making of the Slavs: History and Archaeology of the Lower Danube Region, c. 500–700*. Cambridge: Cambridge University Press, 2001.
- Dvornik, Francis. *The Slavs in European History and Civilization*. New Brunswick, NJ: Rutgers University Press, 1962.

Traffic in Slavic Slaves

The west and east European slave trade in the early Middle Ages was largely connected to the Slavic peoples. They were quite often taken prisoners in the incessant wars and sold as slaves in Crimea, wherefore the name “Slav” became a common name for slaves. The Slavic slave trade spread in other parts of Europe as well and diminished only after the tenth century, when almost all the Slavic nations became Christian.

The importance of the early Slavic slave trade, which was organized mainly by the nomadic Khazars during the sixth to ninth centuries, is attested by the common name for slaves. The Khazars, who converted to Judaism, became the main exporters and merchants in terms of the Slavic slave trade, the main area of the trade being the Black Sea. Later on this stream of slaves was taken over by Mongols from the thirteenth century. There were also the Swedish Vikings who participated in the slave trade in eastern Europe, buying slaves among the Slavs and bringing them to Constantinople. The trade in the Mediterranean in general was also concentrating on slaves (Slavs were mentioned), as Abu al-Qasim ‘Ubayd Allah ibn Khurradadhbah, a Persian scholar, in *The Book of the Routes and the Kingdoms* (between 846 and 886) describes.

The conflicts between Slavic tribes and early Christian states in central and east-central Europe also meant a new influx of slaves (usually as war prisoners) in the west, especially from the ninth century and the wars of Charlemagne and his successors. The main trade routes, which were also used for the slave trade, were along the Danube and the Elbe at that time. From the mid-tenth century the most significant

➤ WAS THE SLAVE TRADE THE BASIS FOR THE CREATION OF THE BOHEMIAN KINGDOM?

Some modern Czech historians claim that the slave trade helped to lay the foundations of the Czech state. The Prague slave market was renowned all around Europe, and the Bohemian dukes, by bringing the Slavic slaves from the East (as captives), earned a considerable amount of revenue, but there were other merchants who earned much more (the possible price of a slave in Catalonia was about 13 times higher than in Prague). It is, however, characteristic for all the new states of central Europe, including Poland, Hungary, or even the emerging German empire in the tenth century, that they profited in their early stage from the Slavic slave trade and based part of their economy on it. These profits helped finance the armies that were indispensable for any emerging state.

—Antonin Kalous

trading place in slaves in the western Slavic countries was Prague, capital of the newly emerging Bohemia. Ibrahim Ibn Jákub, a Jewish merchant from Cordoba, refers to slaves among the export articles from Prague to the South (Muslim and Jewish traders).

The Slavic slave trade started to diminish in the tenth and eleventh centuries when almost all the Slavic peoples had accepted Christianity and when several of the rulers promulgated laws to limit the slave trade. The slave trade in these areas (especially present-day Ukraine and Crimea), however, continued to exist into the seventeenth century, when the most significant slave markets were the Muslim countries. By the thirteenth century slaves became uncommon in western Europe north of the Pyrenees.

—Antonin Kalous

Bibliography

- Duby, Georges. *The Early Growth of the European Economy*. Ithaca, NY: Cornell University Press, 1979.
- Lopez, Robert S., and Irving R. Raymond, eds. *Medieval Trade in the Mediterranean World: Illustrative Documents Translated with Introduction and Notes*. New York: Columbia University Press, 1955.

Migrations of the Anglo-Saxons and Scots

By the early medieval period the inhabitants of the British Isles were not a homogeneous group but rather an aggregation of distinct cultures sharing a common lineage with those continental Europeans who expanded into the British Isles following the Ice Age. The coming of Julius Caesar and the Romans in 56 BCE and the subsequent partitioning of early Britain established the conditions that would classify the perceived differences among the islands' peoples. The people of southern Britain largely came to be known as the Angli (the English), while those north of the Roman frontier of the Antonine Wall (stretching from the Firth of Forth to the Firth of Clyde) were generally known as the Picti (the Picts), or painted people.

The people of Ireland, known to the Romans as the Scoti (the Scots), extended their reach into western Scotland in the fifth century. By 500 CE these Scots had consolidated their holdings into the kingdom of Dal Riata, comprising most of western Scotland. The eastern portion

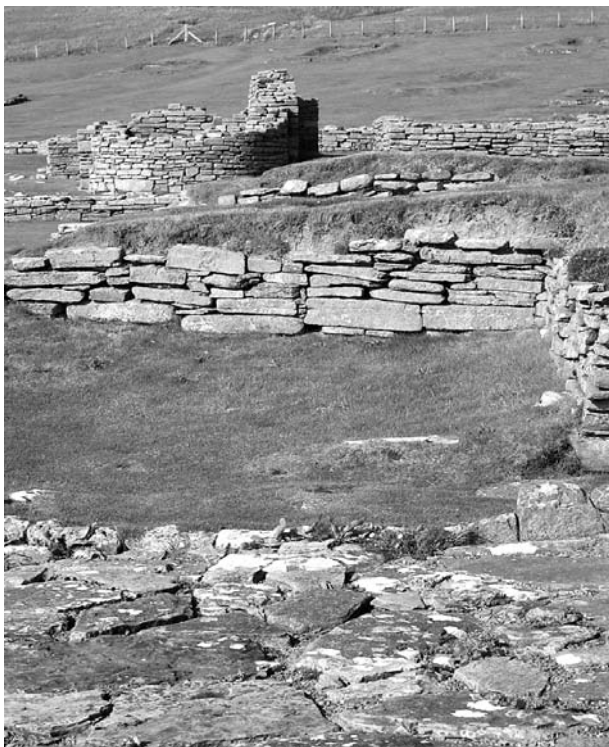
of the country was largely the domain of the Picts, although Britons from the south and Angles from the southeast also contended for land and power in the border regions.

In the meantime, the Visigoths had sacked Rome in 410 CE, and the Roman emperor Honorius recalled his forces from their outposts in the British Isles. The native Britons in the south, now lacking the protection and discipline of their Roman occupiers, faced hostile incursions from almost every side. The Celtic Scots and Picts attacked from the north, the Welsh held the west, and Germanic raiding parties from the continent threatened the eastern shores. The Britons' solution was to employ the services of Germanic mercenaries to drive off the hostile Celtic forces. Generally, these hired warriors came from three continental groups: the Jutes and the Angles from Denmark, and the Saxons from northern Germany.

Although these mercenary forces were successful in protecting the Britons from their enemies, they soon recognized the extent of their employers' weaknesses and began to settle in England. The Jutes dominated Kent and surrounding areas of the southeast, while the Angles and Saxons made their homes in East Anglia and the northern Midlands. The Scots and Picts largely retreated to Northumbria and above, and the Welsh remained ensconced in the west.

The Britons, however, were not destroyed by these Germanic newcomers. Rather, a process of cultural assimilation and accommodation began that lasted throughout the Anglo-Saxon period. British and Germanic people and cultures blended and coalesced into relatively distinct cultural groups that became known as the Anglo-Saxon Heptarchy. These seven kingdoms were the precincts of Kent, Sussex, Wessex, Essex, East Anglia, Mercia, and Northumbria. Yet even these seemingly stable entities changed size and character as they struggled against one another and suffered continued raids by Scandinavian war parties. Eventually, even these Viking raiders would settle in the Danelaw of the Midlands and East Anglia. It was not until the reign of King Aethelstan (924–927) that all of these groups would be ruled as a cohesive Anglo-Saxon (English) people.

—Todd Preston



Ruins of a Pict settlement on the tidal island at Birsay, Orkney, Scotland. (Dreamstime)

➤ LIVING WITH VIKINGS

Although the Anglo-Saxons themselves could claim Germanic invaders as their ancestors, this does not mean that they were happy to see the process begin again in the ninth century. However, despite the turmoil of the period and the bad press the Vikings endured in the *Anglo-Saxon Chronicle*, these Scandinavian invaders did more than just pillage and run. Much to the dismay of the residents of Anglo-Saxon England, the Vikings stayed.

What may have begun as scattered raiding at the end of the eighth century eventually became an influx of settlers who, for good or ill, had an important impact on the character of the emerging English nation. When King Alfred (r. 871–899) accepted the surrender of the Danish king Guthrum (ca. 886), Alfred allowed Scandinavian law to operate in a limited fashion within an area known

as the Danelaw. The Danelaw extended north from the Thames on the eastern side of the country as far up as Northumbria, effectively splitting Anglo-Saxon England in half.

However, the Danes in England came to be more than an encamped military force. They settled and tilled the land, and their influence on English culture can be seen from the names of northern towns to the Scandinavian focus of the epic poem *Beowulf*.

—Todd Preston

Source

Simon Keynes, “The Vikings in England,” in *The Oxford Illustrated History of the Vikings*, ed. Peter Sawyer (Oxford, UK: Oxford University Press, 1997), 48–82.

Bibliography

- Anderson, Marjorie. “Dalriada and the Creation of the Kingdom of the Scots.” In *Ireland in Early Medieval Europe: Studies in Honor of Katherine Hughes*, edited by Dorothy Whitelock, Rosamond McKitterick, and David Dumville. Cambridge: Cambridge University Press, 1982.
- Barrell, A. D. M. *Medieval Scotland*. Cambridge: Cambridge University Press, 2000.
- Howe, Nicholas. *Migration and Mythmaking in Anglo-Saxon England*. New Haven, CT: Yale University Press, 1989.
- Stenton, F. M. *Anglo-Saxon England*. 3rd ed. Oxford, UK: Clarendon, 1971.
- Wood, Ian. “Before and After the Migration to Britain.” In *The Anglo-Saxons from the Migration Period to the Eighth Century: An Ethnographic Perspective*, edited by John Hines. Woodbridge, UK: Boydell, 1997.

Magyar Migrations

Hungarian history before the tenth century may be described as a series of migrations ending in the Carpathian basin, the westernmost stretch of the Eurasian steppe. Hungarians (or Magyars) are of Finno-Ugric origin (their closest relatives are Voguls and Ostyaks, small tribes now living in the northern Urals), and the nation itself presumably developed somewhere in the southern

parts of the Ural Mountains. From there they moved west, for some time lived north of the Black Sea, and finally came to Pannonia (the plain on the Danube where present-day Hungary is located) in the end of the ninth century.

The Magyars started their journey in the southern Urals, the traditional site of their ancient home (Magna Hungaria). There they had lived for centuries in close contact with Sarmatians and Scythians, and the Hungarian language contains some loan words from these Iranian peoples. Around 600 CE they began moving west and gradually settled north of the Black Sea, where they were initially tributaries of the Khazar empire. By the late 830s they revolted against their Khazar overlords and ruled the steppe north of the Black Sea for more than half a century. In the 870s they are described by Muslim merchants, whose information then passed to accounts of Muslim scholars (e.g., Ibn Rust, Gardizi). The Magyar settlement around the lower Dnieper was called Etelköz, a name probably brought from their former settlement closed to the Volga (Atil). In these areas they met with Turkic tribes, who contributed about 300 words to Hungarian.

From their base north on the Dnieper they sent raiding parties west. They served as allies of Bulgaria against the Byzantine empire and of

➤ BROTHER JULIAN FINDS THE MAGYAR'S ANCIENT HOMELAND

The Magyars never forgot that they originally came from the East. The stories of the prequest period and the migration were always present in the Magyar legends, including the fights in Etelköz when the Magyars were defeated by the Pechenegs. After the failure of the Crusades in the Holy Land they began looking for their ancestral homeland so that they could Christianize their relatives on the Eurasian steppe. When the establishment of the Mongolian empire made a journey to the steppe less dangerous, four Dominican friars traveled east in 1234–1235. Only one of the monks, Julian, came back and gave an account of the journey. He said that he found the territory called Magna Hungaria and spoke Hungarian with the natives.

—Antonin Kalous

Great Moravia against the Franks. Their first attack on the eastern Franks is attested in 862. From that time they acted as a member of the political game in east-central Europe, as allies of the Great Moravia against the Franks, and alternatively as allies of Byzantium and the Franks against Moravians and Bulgarians. In the late ninth century the Pechenegs, a coalition of Turkic pastoralists, invaded the Black Sea steppe and drove the Magyars westward. In 894 they left Etelköz, crossed the Carpathians, and settled in Pannonia (895–896).

Magyar warriors, however, continued their attacks on Europe. They helped in the destruction of Great Moravia but also attacked more distant lands. They entered Italy, Germany, the Iberian Peninsula, and France, often as allies of some local lords. In all the places they wreaked havoc on the local population. Their raids on the west finally ended in 955, when they were decisively defeated by the German king Otto I close to Augsburg.

During the tenth century the majority of the population settled in Pannonia. For about two or three generations they continued living as nomads, but by 1000 most of them became sedentary except for their seminomadic way of

herding the cattle. In Pannonia the Magyars would erect the Hungarian kingdom in the eleventh century.

—Antonin Kalous

Bibliography

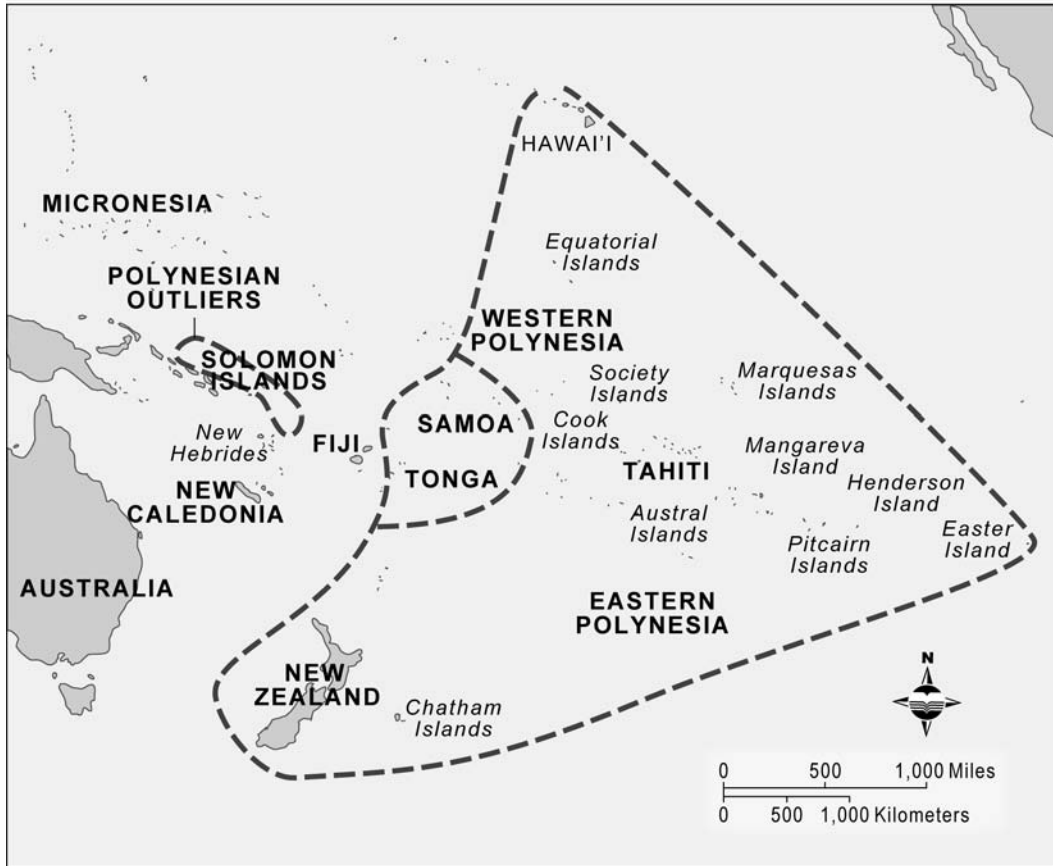
- Engel, Pál. *The Realm of St Stephen: A History of Medieval Hungary, 895–1526*. London and New York: I. B. Tauris, 2001.
- Kristó, Gyula. *Hungarian History in the Ninth Century*. Szeged: Szegedi Középkorász Műhely, 1996.
- Rot, Sándor. *Hungarian: Its Origins and Originality*. Budapest: Korona, 1994.

The Settlement of Eastern Polynesia to 1000 CE

The exploration and colonization of the remote islands of eastern Polynesia was a remarkable episode in human prehistory. Movement into the margins of eastern Polynesia represents exploration and migration of the last habitable lands ever to be settled by humans. Originally colonized from a homeland in western Polynesia, the ancient seafarers moving into eastern Polynesia relied upon sophisticated oceangoing vessels (double-hulled canoes) and reliable navigational systems based on observations of the sea and the sky. These Polynesian navigators crossed a vast ocean using traditional navigation techniques long before European explorers ever attempted to do so with the aid of modern navigational equipment. The initial settlement voyages into eastern Polynesia were of remarkably long distances and required the transport of humans, plants, and animals in order to establish viable colonizing populations. Once settled, the isolated islands of eastern Polynesia offered diverse natural environments, which the first settlers adapted to and eventually modified over the long term.

Settlement of eastern Polynesia involved colonization of a vast region known as the Polynesian Triangle, which stretched to the Hawaiian Islands, New Zealand, and Easter Island (Rapa Nui). Eastern Polynesia includes all of the islands and archipelagos to the north, south, and east of western Polynesia (Tonga, Samoa, Futuna, and 'Uvea). The central core of eastern Polynesia is comprised of the Society Islands, the Cook Islands,

POLYNESIAN DISPERSALS, 300–1000



the Tuamotu Islands, the Austral Islands, and the Marquesas Islands. The margins of eastern Polynesia, settled from the central core, are more remote and include Pitcairn-Henderson, Mangareva, Easter Island, Hawaii, and New Zealand.

Western Polynesia was the first part of Polynesia to be settled and is now considered the immediate homeland from which eastern Polynesia was colonized. This contradicts earlier theories that saw the origins of eastern Polynesian cultures as outside of the region, usually Asia or the Americas. The timing and direction of human dispersals out of western Polynesia into central and marginal eastern Polynesia have been the subject of continued debate. Most researchers use material evidence for human settlement, including direct evidence for human occupation (radiocarbon-dated cooking features) and indirect or proxy data for human settlement (human-induced environmental change inferred from pollen cores). Linguistic data and historic

data such as oral traditions, myths, and genealogies are also important for reconstructing the regions' settlement history.

When voyagers first set off from the western Polynesian homeland into eastern Polynesia is a highly contentious issue, and consensus has yet to be achieved. Most archaeologists accept that there was a long pause of at least 1,000 years between the settlement of western Polynesia (ca. 1000 BC) and eastern Polynesia (sometime in the first millennium CE). This was perhaps because colonization of eastern Polynesia required greater navigatory skill that needed to be built up over time or because of climatic factors such as availability of suitable winds for sailing east.

Settlement models utilizing data on experimental voyaging and prevailing winds, current archaeological data, and linguistic evidence support a similar order for the settlement of eastern Polynesia. The Society Islands were settled first, and then one migratory branch moved through

➤ SWEET POTATOES AND POLYNESIAN CHRONOLOGY

Sweet potato ultimately originated in South America, but it has long been an important staple food item in Polynesia, indicating that it was a transpacific introduction. How exactly was sweet potato first brought to Polynesia, when did this occur (i.e., was it brought by the first Polynesian colonists, or was it a secondary introduction, either by Polynesians or by European explorers), and why was it introduced? Our present data indicates that this tuber was introduced during the prehistoric era into Polynesia through the dispersal of human agents.

There is no doubt now that sweet potato was first domesticated in the Americas, most probably central or northern South America. Ethnohistoric and linguistic evidence suggests that the Polynesian word for sweet potato, *kumara*, comes from Ecuadorian people who were intensive sweet potato cultivators.

When it was first realized that sweet potato originated in South America and was introduced into Polynesia, one argument was that sweet potato was an early prehistoric introduction into Polynesia, arriving as early as 700 CE. Other evidence suggested that sweet potato may have been a later introduction, perhaps brought by European explorers. In the last 20 years, fragments of carbonized sweet potato have been found in several eastern Polynesian archaeological sites. These include well-dated prehistoric contexts in Mangaia (Cook Islands), Easter Island, and the Hawaiian archipelago. Archaeologists now accept that sweet potato was imported into central eastern Polynesia by 1000–1100 CE and most likely spread into the margins of eastern Polynesia during 1100–1200 CE. Sweet potato is then a secondary introduction, brought to eastern Polynesia several centuries after the region had first been colonized but many centuries before European contact.

The question remains as to whether natives from South America brought sweet potato to Polynesia or whether Polynesians made contact with South America and returned with the sweet

potato. Most agree that it was Polynesians, rather than South American voyagers, who made a two-way voyage and were responsible for the initial transfer of sweet potato, given the extensive evidence for long-distance voyaging capabilities for Polynesians. After this initial transfer to eastern Polynesia, this food item spread westward into central Polynesia both by Polynesian and later European traders. The prehistoric circulation of sweet potato within eastern Polynesia and to the west broadly supports that eastern Polynesians were carrying out long-distance voyaging up until 1400 CE and that some of these voyages included contacts with eastern Polynesia.

But why was sweet potato adopted when Polynesians already had a series of good crops? It is quite similar in appearance to yam, which already was a Polynesian cultivar when sweet potato was introduced. However, unlike yam, sweet potato can be planted year-round, and thus it was easily adopted by Polynesians who already had experience with a similar food crop. Some have argued that perhaps a canoe load of east Polynesians were taken off course by a large storm and landed in South America. Once there, they would have sought out foodstuffs such as sweet potato that were similar to plants they had already cultivated. They then brought sweet potato back to eastern Polynesia with them on their successful return voyage (likely as a foodstuff to eat on the voyage). Once they returned, they had leftover sweet potato that they continued to cultivate and trade because the plant had a high yield and was well adapted to Polynesian styles of cultivation.

—Jennifer Kahn

Source

Ballard, Chris, Paula Brown, R. Michael Bourke, and Tracy Harwood, eds. *The Sweet Potato in Oceania: A Reappraisal*. Oceania Monograph 56, Ethnology Monographs 19. Sydney: Oceania Publications, 2005.

the Tuamotu Islands to the Marquesas and then up to Hawaii. A second southern migratory branch passed through the Tuamotus to Pitcairn-Henderson and out to Easter Island.

Many archipelagos in central eastern Polynesia lack well-excavated archaeological sites with

accepted chronologies, and researchers often rely on archaeological and linguistic evidence. Some have argued that the central eastern Polynesia corridor was settled between 0 CE and 600 CE, while proponents of a shorter chronology believe that the area was not settled until after

600 CE. Early sites in the centrally located Society Island archipelago include evidence for domesticated coconuts at 600 CE. Because this island group is subsiding, the earliest human occupations that would have been situated on the coast are now under water, making the discovery of early settlement period sites in the Society Islands nearly impossible. Indirect evidence for human occupation (forest fires, increased erosion) in Mangaia, Cook Islands, may date to 500 BC–0 CE, but this evidence is not accepted by all researchers. Additional archaeological excavation in several archipelagos will be needed before the sequence of dispersal into central eastern Polynesia can be determined with any accuracy.

It is well accepted that the remote eastern Polynesia area was settled out of an eastern Polynesian homeland in the central corridor. Historically, all eastern Polynesian cultures share certain traits, including a pantheon of four gods (Tangaroa, Tane, Rongo, and Tu) and a ritual architecture complex including ceremonial spaces delineated by stone enclosures (*marae*) and stone platforms. They also share oral traditions, namely creation myths recounting a marriage between a Skyfather and an Earthmother from whom the rest of the gods are born, and from them came human life. These traits are not all shared by western Polynesian cultures. Tangaroa, the creator god, is found in western Polynesia, but the remaining gods in the pantheon are cultural innovations found across eastern Polynesia, as is the elaborated ceremonial architecture. These shared innovations found throughout eastern Polynesia suggest some period of isolation from western Polynesia while they were being innovated. It is currently accepted that these traits were early innovations developed in the settlement of central eastern Polynesia. They later spread to marginal eastern Polynesia once voyagers moved out of this secondary eastern Polynesian homeland situated in the central eastern Polynesian corridor.

Currently available archaeological data supports this sequence, indicating that sites in the margins of eastern Polynesia were settled after those in the core. The chain of islands stretching from the Australs to Mangareva, Pitcairn-Henderson, and finally to Easter Island appears to have been settled no earlier than 800–1000 CE based on archaeological evidence, although some

would argue that it was one to two centuries later. Current archaeological data suggests settlement of the Hawaiian archipelago no earlier than 800 CE. New Zealand was the last part of Polynesia to be settled by humans, at 1200 CE. Chronologies privileging archaeological and linguistic data support a somewhat earlier movement out of the Society Island-Tuamotuan region at 600–800 CE, with expansion up to Hawaii and down to Mangareva, Pitcairn, and Easter Island.

While the chronology is still hotly debated, researchers now agree that the settlement of eastern Polynesia was the result of purposeful long-distance voyaging rather than by accidental drift voyaging. Computer simulations and experimental voyaging with double-hulled canoes have established that eastern Polynesia was settled intentionally by voyagers with an amazing range of navigational abilities for way finding and landfall. DNA evidence from New Zealand Maori skeletal populations indicates that at least 70–190 women must have landed in the first voyage to this island, indicative of a well-planned voyage of several large double-hulled canoes rather than a small fishing canoe being blown off course during a storm.

Early settlements in eastern Polynesia were nucleated villages situated on the coast, and often these hamlets are found on sand dunes. Houses were of both round-ended and rectangular shapes, and cooking areas were separated from the dwelling. The first human colonists brought domesticated animals (pig, dog, and chicken) and horticultural crops (taro, yam, banana, breadfruit) and relied heavily on indigenous land and sea birds. The Pacific rat was another introduction, possibly as an unintended stowaway during the initial voyages of discovery, and it was later used as a foodstuff by some eastern Polynesian peoples. The early colonists also experimented with different fishing gear and angling techniques to catch both inshore reef fish and open-sea fish with fishhooks fashioned from bone and pearl shell.

Estimating population size can be difficult, but most accept that founding populations were small (in the range of 100–200 persons) and that most eastern Polynesian populations went through a logistical growth cycle up to and beyond 1000 CE. Typically one to two centuries

after initial colonization, the native food resources, especially land birds, had been depleted or made extinct through human predation. Thereafter bones of pig and dog appear with greater frequency at archaeological sites, indicating efforts to establish and intensify new subsistence resources that also included shifting cultivation. No archaeological evidence for *marae* (complex ceremonial sites) has been thus far recovered during the early settlement period, but linguistic reconstructions are suggestive that they developed at this time. Linguistic reconstructions also suggest that eastern Polynesian societies dating to this period were organized as chiefdoms, with hereditary rulers (chiefs) who inherited their positions based on their genealogy.

In many regions voyaging did not cease with initial colonization, although the remotest islands (Hawaii, New Zealand, and Easter Island) likely became isolated from exterior contacts soon after their settlement. Analysis of pottery and particularly adzes (axelike stone tools) has documented contact between central eastern Polynesian cultures and Fiji and Tonga. There is also widespread evidence that a complex regional interaction sphere in central eastern Polynesia linked the Societies, Tuamotus, and Marquesas, along with the Southern Cooks, Austral, and Mangareva-Pitcairn-Henderson, from perhaps as early as 900 CE.

A topic of long-standing interest in Polynesia has been the possibility of contacts with the Americas. Sweet potato, domesticated in South America, is now accepted as being imported into eastern Polynesia by 1000–1100 CE. This is based on the discovery and dating of carbonized sweet potato remains from sites in Mangaia (Cook Islands), Easter Island, and Hawaii.

—*Jennifer Kahn*

Bibliography

- Green, Roger C., and Marshall I. Weisler. "The Mangarevan Sequence and Dating of the Geographic Expansion into Southeast Polynesia." *Asian Perspectives* 41(2) (2002): 213–241.
- Howe, K. R. *Vaka Moana: Voyages of the Ancestors*. Auckland: David Bateman, 2006.
- Irwin, Geoffrey. "The Colonisation of the Pacific Plate: Chronological, Navigational and Social Issues." *Journal of the Polynesian Society* 107 (1998): 111–143.

Kirch, Patrick V. *On the Road of the Winds*. Berkeley: University of California Press, 2000.

Kirch, Patrick V., and Roger C. Green. *Hawaiki, Ancestral Polynesia*. Cambridge: Cambridge University Press, 2001.

The Settlement of Madagascar

Madagascar is an island that lies roughly 300 miles off the coast of East Africa. Like many large and reasonably remote islands, it is home to a remarkable flora and fauna, much of which is quite distinct from that of continental Africa. Thus instead of monkeys or apes, Madagascar has many species of lemurs. At the same time, it is still close enough to Africa that it also has species that have arrived from the African mainland, such as the Nile crocodile. Likewise, Madagascar's human population is partly derived from the African continent but also contains elements that are unlike anything else found in Africa.

Early visitors to Madagascar were struck by the appearance of the Malagasy (as both the people of Madagascar and the language they speak are called). The Malagasy did not look like or share the languages of the people who lived on the East African coast. They looked more like Indonesians. Modern linguistic and genetic studies confirm these earlier observations. Linguists have demonstrated that the closest living language to Malagasy is spoken on the island of Borneo. Recently, geneticists have shown that the population of Madagascar gets about half its genetic material from Africa and half from Southeast Asia. The Malagasy, it would seem, are the westernmost branch of the Austronesian expansion, the epic human migration that brought speakers of Austronesian languages to Southeast Asia as well as to many of the islands of the Pacific in the East and to Madagascar in the West.

The gradual Austronesian expansion into the Pacific is relatively easy to trace, but not so the route or even the timing of the migration that brought Austronesian speakers to Madagascar. Linguistic evidence suggests that the Malagasy arrived in Madagascar as far back as 2,000 years ago. Genetic evidence indicates that they arrived between 2,000 and 1,500 years ago. Genetic studies of the banana, a plant that is believed to have been introduced to Africa by the Malagasy, sug-

gest that it arrived at the beginning of the first millennium. Archaeologists, however, cannot find any evidence of human habitation there before the seventh century CE, so these early dates are not supported by any physical evidence.

What we can say is that at some time in the early centuries of the first millennium settlers from Southeast Asia came to Madagascar. Almost certainly they came by sea, although the route they took remains mysterious. Linguistic evidence suggests that there was more than one wave of settlers that came to Madagascar, indicating that the colonization process happened accidentally more than once or that word got back of the success of the first settlers. There are two ways that settlers might have reached Madagascar from Southeast Asia. They could have followed the northern arc of the ocean by way of India to the East African coast and then south to Madagascar. On some levels this seems most plausible. People who followed this route would have been able to get food and water on the way, a crucial consideration for people in open boats. However, there is neither archaeological nor linguistic evidence of their passage along this route, so if they did follow this route they did not tarry along the way. The other possibility is that settlers came to Madagascar accidentally, swept across the southern reaches of the Indian Ocean on the current that moves southwest toward Madagascar. But this would have meant months on the open sea and settlers who would probably have arrived half-dead. And surely this would have killed any living plants, such as banana seedlings, on board.

So no one is certain how the Malagasy got to Madagascar. We know only that they did. It speaks highly of the seafaring skills of the people who made these voyages, no matter which route they followed.

—Erik Gilbert

Bibliography

- Chittick, Neville, and Robert Rotberg, eds. *East Africa and the Orient*. London: Holmes and Meier, 1975.
- Hurles, Matthew, et al. "Untangling Oceanic Settlement: The Edge of the Knowable." *Trends in Ecology and Evolution* 18(10) (2003): 531–540.
- Reade, Julian, ed. *The Indian Ocean in Antiquity*. London: Kegan Paul, 1996.

➤ WHAT DID THE MALAGASY BRING WITH THEM?

The epic migration of the Malagasy would be little more than a testament to human endurance were it not for the role they played in introducing a number of crops and, perhaps, technologies into Africa. Because the arrival in East Africa of bananas and varieties of yams and rice that were native to Southeast Asia coincides with the arrival of the Malagasy, they are usually given credit for bringing these crops to Africa. Southeast Asian yams and rice offered new varieties to African farmers who already had other varieties of both these crops, but bananas were something new and significant. Bananas were extremely productive, tolerated high rainfall, and once established required little labor. As such, they were an ideal crop for rain forest farmers who had struggled for a millennium to farm the high rainfall zones of central Africa. Bananas played a crucial role in increasing the population of the forest zones. It is also possible that the Malagasy introduced outrigger canoes and xylophone-like musical instruments to East Africa. Both of these are also found in Southeast Asia, but here the chain of transmission is unclear, and many scholars contend that these technologies were developed independently in Africa.

—Erik Gilbert

The Climax of the Bantu Expansion

The period 300–1000 CE was one of great transition in East, central, and southern Africa. In circa 300 CE Bantu-speaking peoples migrated into already settled regions. By 1000 CE Bantu-speaking peoples had moved from the Great Lakes in Uganda to the Cape Coast in South Africa. Not only had they thrived in these regions, but also they had Bantuized the vast majority of the original inhabitants. Today the vast majority of peoples of these regions speak 1 of over 800 Bantu languages.

It is still unclear how these matrilineal decentralized agriculturalists were able to have such a long-term impact on vast parts of Africa. One possible answer is that the Bantu-speaking immigrants had a very flexible approach to the peoples they encountered. They moved out of the rain forests with knowledge of yam cultivation

THE PEACEFUL PEOPLE DOMINATE

Politically centralized peoples with better technology will always dominate the decentralized, less technologically advanced, or so the historians claim. By 1000 CE Bantu-speaking peoples had moved from the Great Lakes in Uganda to the Cape Coast in South Africa. Not only had they thrived in these regions, but they had also Bantuized most of the earlier inhabitants, who in turn taught them iron smelting, grain cultivation, and animal husbandry (the important technological innovations of the era). Today in East, central, and southern Africa the majority of the peoples speak Bantu languages. How did these nonwarrior, matrilineal, decentralized peoples, who arrived in the region with only pottery technology and root agriculture, absorb all these technologically advanced people? This is the major question confronted by scholars who are currently studying the Bantu expansion.

—Christine Ahmed-Saidi

and goat herding, yet by 1000 CE they had become successful pastoralists and grain and banana farmers. As they moved into new ecological regions, they learned food-producing technologies from the peoples they encountered. These skills enabled them to survive in such diverse climates. By the fourth century CE diverse populations had settled East, central, and southern Africa.

Africa has four major language families, each dating back over 10,000 years. East Africa was the region where members of each of these language families met and often merged. Bantu languages are the daughters of the Niger Congo language family that was originally centered in West Africa. The Southern and Eastern Kushitic-speaking peoples lived in the northeast sections of East Africa and were part of the Afro-Asian language family, whose other languages include Berber, Hausa, Arabic, and Hebrew. The Southern Nilotes and the Central Sudanic peoples of the Nilo-Saharan language family resided in northwestern East Africa. The Kosians, a hunting and gathering people, lived in southern East Africa.

The language evidence indicates that Bantu-speaking peoples learned iron smelting, grain cultivation, and cattle raising from Central Sudanic-speaking peoples. They also acquired

knowledge about cattle raising and grain cultivation from the Kushitic-speaking peoples they encountered. The Indonesian immigrants, who most probably intermarried with some Bantu-speaking peoples, introduced bananas and other Asian crops. The Khoisan-speakers taught the Bantu-speaking peoples how to forage for extra food sources. Finally, the Batwa passed on fishing techniques to the Bantu-speaking peoples.

While these interactions were often reciprocal, the key element in understanding the success of Bantu speakers is found in their flexible approach. Since Bantu societies were matrilineal and thus limited by the number of children a clanswoman produced, they often recruited from outside peoples. Oral histories from later periods show that many intratribal quarrels within Bantu society led to one group moving on to a new territory and accommodating themselves to their new neighbors and new environs. These successful settlements laid the basis for the following historical period in which some Bantu-speaking peoples, but certainly not the majority, created centralized polities and began to dominate other peoples.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey, 1998.
- Klieman, Kairn. *The Pygmies Were Our Compass*. Portsmouth, NH: Heinemann, 2003.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.
- Vansina, Jan. *Paths in the Rainforest: Toward a History of Political Tradition in Equatorial Africa*. Madison: University of Wisconsin Press, 1991.

Arab Muslim Garrison Towns—Agents of Arabization and Islamization

With the foundation of the Islamic state in 622 in Medina, the first Arab/Muslim army struck out on some 80 raids against the city of Mecca,

eventually conquering it and most of the Arabian Peninsula. Muhammad's death in 632 inaugurated the era of the Rashidun (Rightly Guided) caliphs (632–661), and the second of these caliphs, Umar I (r. 634–644), oversaw the caliphate during its period of most rapid expansion. Launching campaigns against the Byzantine empire to the west and the Sassanian empire to the east, both of which were weakened after almost a century of conflict, the Arab armies directed the momentum gained from their new unity outward against the day's two greatest empires in western Eurasia. While the Arabs had often raided the border regions in the past, the idea of empire building was definitely new.

As Arab armies pushed out of the peninsula on these campaigns, they began to establish military centers in the newly opened territories. These garrison towns were known as *amsar* (sing., *misr*) and were located on the fringes between the desert and the settled land, near to preexisting urban areas. Cities such as Basrah and Kufah (both founded in Iraq in 638) and Fustat (known as Old Cairo and established in Egypt in 642), were the most successful of these garrison centers. Regions conquered by armies from a garrison center would be administered from and remit taxes to that *misr*. As the *amsar* became centers for the collection of taxes, they also became the seats for the regional governors.

According to Arab administrative practices during the Rashidun period, the caliphate was roughly divided into four administrative regions. Syria was administered from Damascus; the eastern caliphate was run from the *misr* of Basrah, Egypt; the West was administered from Fustat; and Arabia was governed from Medina. This corresponded to the major thrusts of the Islamic conquests and illustrated the growing importance of these frontier towns to the burgeoning Islamic empire. Indeed, Kufah was briefly the capital of the caliphate during the time of the fourth Rashidun caliph Ali b. Abu Talib (r. 656–661). Thus, these garrison cities were not only critical military centers but were also important administrative centers.

Under the Umayyad dynasty (661–750) expansion continued, but fiscal issues began to undermine the system. From the time of Umar I, soldiers were paid stipends (*ata*) from monies



Al-Kufa Mosque in Kufa, Iraq, seventh century CE. Kufa, the first of the Muslim garrison cities, served as the capital of the caliphate during the reign of Ali, and again in the early years of the Abbasid caliphate. (Art Directors.co.uk)

levied on conquered lands in their home *misr*. The amount that each soldier received was listed on a state registry (*diwan*) and was based on when the soldier joined the Islamic movement. Those who joined earliest received the most money. This system, based in part on existing practices among both the Byzantines and the Sassanians, worked well when the wealth produced from taxable land was high and the amount of soldiers drawing from the revenue was low. However, by the time of the caliph Abd al-Malik (685–705), many of those claiming *ata* were no longer a part of the military.

As military spending became increasingly tight the pace of demilitarization quickened, with soldiers choosing instead to raise families and ceasing their military service. However, the *ata* was considered to be heritable, passed from a father to his sons with each generation. Thus, it became painfully obvious that the demographic nature of the caliphate was changing. With the breakdown of the *amsar* system, the Arab military levies were increasingly dispersing into the native population, becoming almost indistinguishable from the conquered peoples.

The accumulation of wealth and power that these *amsar* created had another effect. These centers became desirable to the indigenous populations for the economic and political opportunities they afforded. Where capital accumulated, there was always the opportunity for trade, and

➤ KUFAN AND POLITICAL DISSENT IN THE EARLY ISLAMIC PERIOD

Located about 102 miles (170 kilometers) south of Baghdad and about 6 miles (10 kilometers) north-east of Najaf, the city of Kufah has played an important role in the early history of the Islamic world. It was founded as a military encampment, *misr*, on the Euphrates River near the city of Hira in 638 by Said b. Abu Waqqas (584–664), an early convert to Islam and companion of the Prophet Muhammad (570–632). The city stood at the edge of the desert and the rich alluvial lands between the Tigris and Euphrates rivers known as the *sawad* (black lands). However, the tribal levies housed in Kufah were not allowed to possess the *sawad* lands, leading to discontent among the soldiers stationed there. Military setbacks and a truculent attitude toward the governor appointed by Caliph Uthman I (r. 644–656) led to a diminished status for the city.

Upon the death of Uthman, the city fell fully into the camp of the last Rashidun caliph, Ali b. Abu Talib (r. 656–661), who supported the economic and social grievances of the population. It briefly served as Ali's capital and continued their support of his family after Ali's assassination. It was to Kufa that Husayn (626–680) was fleeing during the reign of Yazid I (680–683). Husayn hoped to use the support of the population to launch his revolution against the Umayyads. However, Husayn was killed at Karbala in 680, effectively ending the claim of Ali's lineage to the title of caliph but also creating the crystallizing moment of Shia opposition to the Umayyads. Thereafter, Kufa remained a city with deep Shia loyalties, becoming a center for rebellion, such as the revolt under Mukhtar (622–687), and the articulation of Shia theological doctrine during the late Umayyad (661–750) and Abbasid (750–1258) periods.

—*Rasheed Hosein*

trade flourished from these centers. Also, because these *amsar* were burgeoning administrative centers, there was a great demand for administrative and clerical officials to aid in the governance of the regions. This encouraged the Arabization of the native population, as trade and governance were both conducted in Arabic by this time. Indeed, classical Arabic grammar was classified into two schools, the Kufan school

and the Basran school, after the grammarians who taught Arabic in each of these *amsar*. Thus, these centers caused the conquered populations to gravitate toward them, established Arabic outside the Arabian Peninsula, and helped the conquered to forge commercial and personal ties with the Arab elite therein.

This demographic movement and general demilitarization created unique fiscal problems for Abd al-Malik. With the pace of conquest slowing, the caliphate increasingly relied on taxation to fund the state. At the moment of conquest, two taxes were generally levied on the newly conquered lands. The *kharaj* (land tax) was assessed on land seized by force, and the *jizya* (head tax) was applied to all inhabitants who did not convert to Islam. While rates for both the *kharaj* and the *jizya* fluctuated from region to region, the sources note that the amount a non-Muslim paid to the caliphate in taxes was greater than the taxation amount paid by Muslims (known generally as *ushr*). Thus, despite the fiscal benefits available with Islam, it was often in the best interests of provincial administrators to discourage active conversion because of the possible fiscal strain to the state.

These two trends thus converged at the start of the eighth century to fundamentally alter the nature of the caliphate. As soldiers dispersed, they traded with and married into the indigenous populations moving into the *amsar*, speeding up the Arabization and causing the Islamization of the conquered territories. This created unique questions surrounding the issue of classifying one's status for Abd al-Malik and the later Umayyad caliphs.

For Arabs descended from the original conquest levies, did they still qualify to receive *ata*? Did converted peoples, even those married into Arab families, qualify for the *ushr*, or were they to pay the *jizya*? Abd al-Malik and his successors sought to maximize the revenues for the state while maintaining the status quo where they could. The issue of military pay was addressed, with the *diwans* updated to remove people not in service. However, the *mawali* (sing., *mawla*, in this context meaning non-Arab converts to Islam) maintained a higher level of taxation. This created two tiers of believers in the Muslim community, the Arab Mus-

lim and the non-Arab *mawla*, that led to great disaffection in these *amsar*. In 750 the Abbassids, tying into this current of unrest, launched their revolution from the Eastern caliphate, overthrowing the Umayyads and establishing the Abbasid dynasty (750–1258).

—*Rasheed Hosein*

Bibliography

- Crone, Patricia. *God's Rule: Six Centuries of Medieval Islamic Thought*. New York: Columbia University Press, 2004.
- Crone, Patricia. *Slaves on Horses*. Cambridge: Cambridge University Press, 1980.
- Hawting, Gerald. *The First Dynasty of Islam: The Umayyad Caliphate, AD 661–750*. London: Taylor and Francis, 2000.
- Kennedy, Hugh. *The Armies of the Caliphs: Military and Society in the Early Islamic State*. New York: Routledge, 2001.
- Kennedy, Hugh. *The Prophet and the Age of the Caliphates: The Islamic Near East from the Sixth to the Eleventh Century*. New York: Longman, 1994.

Arab Diaspora—The Special Case of Spain

Although a vibrant and rich Arabo-Islamic culture emerged in Al-Andalus (Muslim Spain, or Iberia), Arab emigration was minimal at the time of conquest and negligible in future years. Amazigh (Berber) peoples came in larger numbers, but the overwhelming majority of the population in Al-Andalus was indigenous.

In 711 CE the commander Tariq ibn Ziyad crossed to Al-Andalus with an invasion force of approximately 12,000 soldiers along with their families. These included a core of Arab officers, whereas the bulk of the army was made up of Amazigh tribesmen and included some central African slaves. In the initial battle with the Visigoths there were some 3,000 Muslim casualties. The following year Tariq's superior Musa b. Nusayr arrived with 18,000 soldiers, among them many Arabs of the Yamani tribes and distinguished members of the Quraysh. These early settlers (known as *baladiyyun*) dispersed throughout the crumbling Visigothic kingdom, including Spain and Languedoc. The Amazigh settled mountainous areas that recalled their native lands. Soon after the conquest they were

➤ BALJ B. BISHR—THE LIFE AND DEEDS OF AN ARAB IMMIGRANT

The Arab Balj b. Bishr came to the Muslim West along with his uncle, Kultum, leading Syrian troops who had been sent to quell a large-scale Berber revolt in the Maghreb in 740 CE. When Kultum was killed Balj took command of the force, which numbered perhaps 8,000 Arabs and 2,000 converted clients along with their families. Balj soon found himself hemmed in at Ceuta while the revolt spread to al-Andalus in 741. Unable to contain the rebels there, the governor Ibn Qatan invited Balj to aid him, providing transport from Africa on the condition that Balj return to Morocco after quelling the rebellion. But after routing the Berber forces near Algeciras, Balj marched on Cordoba and had Ibn Qatan imprisoned and executed. Balj's troops were then given choice lands in southern Spain to settle and were exempted from taxes, which exacerbated tensions with settlers of the previous generation and touched off further fighting in which Berbers joined with Arab factions loyal to the executed governor against Balj and other Arab settlers who supported him. The tribal aspect that historians have traditionally attributed to this struggle has probably been exaggerated. Balj's arrival represents the last significant settlement of Arabs in Iberia.

—*Brian A. Catlos*

marginalized by the Arabs, provoking a region-wide revolt that began in 739.

As a consequence, the commander Balj b. Bishr and his predominantly Syrian Arab (*shamiyyun*) force of 10,000 were invited to come to Spain to crush the revolt. After defeating the rebels, Balj staged a coup. Seizing choice lands and claiming tax exemptions, the *shamiyyun* provoked the *baladiyyun* and early Amazigh settlers into a civil war. Often portrayed as a struggle between Yamani and Qaysi Arab tribal federations, in fact it was one between settlers and newcomers. This war dragged on until the arrival in 757 of the Umayyad refugee 'Abd al-Rahman, who imposed his authority by bringing in his own Amazigh troops to sap the power of the Arab settlers.

In the 800s the indigenous population converted overwhelmingly to Islam and along with the Amazigh integrated into Arabo-Islamic culture. Early converts became clients (*muwalladun*) of Arab families and appropriated their genealogies and privileges. But the *muwallad* elite soon chafed against Arab domination, and this provoked a series of revolts through the ninth century and manifestations of anti-Arabism as a cultural phenomenon. By the reign of 'Abd al-Rahman III (912–961) these questions had largely been settled; a core Arab elite remained a powerful faction, but for all intents and purposes integration had led a new Andalusí ethnicity to emerge. However, under 'Abd al-Rahman III and his successors, new Amazigh settlers were brought in to serve in the army and undermine the native military elite. As these culturally distinct foreigners gained power and prestige, tensions with the Arab elite and the Andalusí populace grew, culminating in a popular uprising and massacre at Córdoba in 1031 as the caliphate itself disintegrated. Subsequently Muslim Spain would be conquered by two North African factions, the Almoravids (late eleventh century) and the Almohads (twelfth century), and Christian Spain would be subject to inconclusive invasions by the Marinids (late fourteenth and early fifteenth centuries), but settlement and colonization were not significant during these episodes.

The net result of the light Arab and Berber immigration to Spain was that although local Romano-Visigothic culture was nearly eradicated, an extremely fecund Islamic culture developed in its place, which in turn provoked monumental transformations in Jewish culture and that of the Latin West.

—Brian A. Catlos

Bibliography

- Collins, Roger. *The Arab Conquest of Spain, 710–797*. Oxford, UK: Basil Blackwell, 1989.
- Glick, Thomas F. *Islamic and Christian Spain in the Early Middle Ages*. Princeton, NJ: Princeton University Press, 1979.
- Marín, Manuela, ed. *The Formation of Al-Andalus, Part 1: History and Society*. Aldershot, UK: Ashgate, 1998.
- Taha, 'Abdulwahid Dhanun. *The Muslim Conquest and Settlement of North Africa and Spain*. London: Routledge, 1989.

Arabization and Islamic Conversion of the Middle East and North Africa

The Arab Muslim conquest of an empire stretching from Spain to the Ferghana Valley in central Asia was extremely rapid, requiring little more than a century, but the spread of the Arabic language and the conversion to Islam of a majority of the population in this vast area were much slower, requiring many centuries.

The spread of culture and all that entails in terms of religion and language is a process not neatly marked by dates of battles and time boundaries of ruling dynasties. It took longer for Christianity to become the dominant religion in the Roman empire than the span of time from the American Revolution to the present. Christianity was still struggling for converts on the fringes of Europe in the tenth century CE at the time that Islam was finally becoming the majority religion in territories controlled by Arab dynasties. Conversion to religion and adoption of language are complex processes that do not automatically follow military and political domination.

The first peoples brought under Muslim Arab control outside the Arabian Peninsula were in the Fertile Crescent and Nile Valley, ruled by the Byzantine and Sassanid empires. The Arabic language gradually became the major language of the region. In the first generations, the Arab conquerors governed through Byzantine and Persian administrators, and Greek and Persian were the languages of government. It was not until late in the seventh century that Arabic became the language of government. Islam gained many adherents and is the majority religion today, but that took longer than the spread of the language. Both the Byzantine and Sassanid empires sponsored Arab tribes at the edge of the peninsula, the Lakhmids and Ghassanids, as a buffer between their empires and the Arab tribes of the Arabian Peninsula. They spoke Arabic, had trading ties with the Hijaz, and had long been exposed to the monotheistic religions of Judaism and Christianity and the nonpolytheistic religion of Zoroastrianism. As the Muslim Arab empire expanded, encountered peoples spoke Aramaic as their common language and were Christian or Jews of both empires. The

Jews were minorities in both empires, and many of the Christians were considered heretical sects by the Byzantine Christians. Acceptance of Arab rule was not a problem, nor was adoption of Arabic. Conversion was, however, a slow process.

A feature of early Arab conquests may help explain why these did not lead to massive conversions even as Arab rule expanded so rapidly. The first Arab armies followed a policy of separating themselves from conquered peoples by establishing military bases to house armies for further conquest. These included Kufa and Basra in lower Mesopotamia and Fustat on the Nile. All three were on the edge of the desert with major rivers behind them, easing communication over desert routes to the Hijaz and providing easy routes for conquest via river routes. Kufa was west of the Euphrates and Basra west and south of the Shatt-al-Arab below the junction of the Euphrates and Tigris rivers. Fustat was east of the Nile, near present-day Cairo. All three had caravan routes to Mecca and Medina with no major barriers intervening. All three aided advance via the rivers to the rest of the Fertile Crescent and Nile Valley. For the first years the Arab armies contented themselves in these military camps by capitulation settlements with conquered territories and the collection of the Jizyah.

This separation broke down as these military camps became more permanent, attracting peninsula Arabs for prospects of trade and for migration of the families of the conquering armies. Conversion of native peoples for reasons of economic and social advance began, although slowly. Some of the conquered people became clients (*mawali*) of Arab tribes. This provided a route to Arabization and Islamization. The practice of polygamy by Arab tribes was also a factor. Islam limited the number of wives to four, with all having equal rights under Sharia (Islamic law). Moreover, wives did not have to convert, able to retain their previous beliefs, while Muslim females had to marry only Muslim males. Intuitively, it is likely that non-Muslim wives may have encouraged sons to become Muslim for social and political advancement.

Cultural and religious expansion depends on many factors, and these help explain how and how long it took for the Fertile Crescent to become Arab and Muslim. Foremost was the fact

that the populations of the region spoke Semitic languages, and many resented domination by the two dominant empires. Rule by Arabs and adoption of that Semitic language were not problems. Rule by monotheistic Muslims was easily accepted by monotheist Jews, Christians, and dualistic Zoroastrians, as Islam recognized their religions as "Peoples of the Book," although their books were deemed flawed. For Jews and many Christians second-class citizenship in the Arab empire, being subject to the Jizyah, or poll tax, and other restrictions were less a burden than persecution by the Byzantine or Sassanid rulers of the time. They had the legal status of *dhimmi*, protected people who were subject to their own religious leaders for legal matters regarding marriage, inheritance, contracts, and other matters now considered part of modern civil law.

The early expansion of Muslim rule did lead to some conversions to Islam, as this exempted converts from the Jizyah and was perceived as a way to advance in social and political status under the new regime. The Arab tribes expanding into the Fertile Crescent and Nile Valley developed the concept of Mawla (pl. Mawali), which allowed converts to become adopted members of the tribes. This and the tax exemptions led to the first wave of converts. It seems to have been especially attractive to non-Semitic speakers of the Sassanid empire, who could become Mawali without changing their language from the Indo-European Persian or Kurdish. This may help explain why the Persian-speaking part of the Arab conquest actually preceded the Semitic portions in the proportion of conversions. Iran retains its ancient language but is overwhelmingly Muslim. This may reflect the failure of Arabic to become the common language of Muslim countries outside the Fertile Crescent and Nile Valley, which now far outnumber Arabic-speaking Muslims.

Richard Bulliet has studied this in detail, based on examination of the prevalence of Muslim names in biography compilations and a lifetime studying the Middle East. It appears that there were two peaks in adoption of Islamic names. The time line depended on place, the first peaks occurring in areas first subjugated by Arab-Muslim forces and somewhat later as Muslim conquests expanded. That occurred two centuries later. The first peaks did not indicate a

massive conversion to Islam; as an example, less than 10 percent of the names in Iraq and Syria were Muslim by the end of the Umayyad dynasty in 750 CE. A simple majority of Muslim names did not occur until a century later. Overwhelming majorities waited until the tenth century, roughly the same time that Christianity expanded into Russia. This is consistent with the long process involved in cultural expansions of the past. That contrasts with the phenomenon of the dispersion of American popular culture: blue jeans, T-shirts, and sports caps over the past 50 years. The essence of American—or more widely understood West European—culture is not reflected in such visual images. It should not be surprising that the essence of Arab culture and Islam took time to develop.

—Daniel E. Spector

Bibliography

- Bishai, Wilson B. *Islamic History of the Middle East*. Boston: Allyn and Bacon, 1968.
- Bulliet, Richard W. *The Case for Islamo-Christian Civilization*. New York: Columbia University Press, 2004.
- Bulliet, Richard W. *Conversion to Islam in the Medieval World: An Essay in Quantitative History*. Cambridge: Harvard University Press, 1979.
- Glasse, Cyril. *The Concise Encyclopedia of Islam*. New York: HarperCollins, 1989.
- Hottinger, Arnold. *The Arabs: Their History, Culture and Place in the Modern World*. Berkeley: University of California Press, 1963.
- Hourani, Albert H. *A History of the Arab Peoples*. Cambridge, MA: Harvard University Press, 1991.

Migrations in the Americas

Migrations are defined as the permanent resettlement of a large number of people from one territory to another. This process includes their cultural and technological heritage. Migrations in the Americas are considered one of the key methods by which ideas, art styles, weapons, and domesticated plants have spread from their points of origin to other regions.

Scholars generally accept that the appearance of humans in the Americas is the result of migration from Asia. It appears likely that groups

of hunter-gatherers from Asia appeared in Alaska and the Pacific Northwest thousands of years ago and gradually migrated throughout both continents. They probably followed the animals they hunted and searched for more hospitable environments. For most of humans' early presence in the Americas, the population density was quite low. If a group of people found that a location was undesirable either because of environment or unpleasant neighbors, it was simpler to move to another location.

The development of agriculture and dependence on domesticated plants as the major sources of food ended wandering. Fertile regions for growing plants like squash and maize were desirable and not present everywhere. Migrating groups might displace those who were already in place as different groups competed for the same resources, or they might conquer the territory and establish themselves as elites who ruled the population.

The causes of migrations usually fell into a few categories. One of the most common was environmental disaster or decline. In the classic era of Mesoamerica (250–900 CE), a severe drought forced many farming peoples who lived along the northern borders to search for new lands to the south. These migratory groups pressured the existing states and contributed to the decline of Teotihuacan during the seventh century CE. A common ecological cause was the declining fertility of land. Some archaeologists have proposed that the Mound Builders of the Mississippi were dispersed because their maize-growing farmland could no longer produce sufficient crops. Another common cause of migrations was to escape the exploitation by other groups.

Migrations can be traced over the centuries by linguistic characteristics of Native American languages. Related languages and their degree of similarities indicate the origins of the speakers and how long ago the groups may have separated. One example would be the close relationship between the Athapaskan peoples of Alaska and the Apaches and Navajos of the American Southwest.

Other indications of significant migration are architectural styles and other nonmovable artifacts that suddenly appear in a location after

a certain date. Some significant indicators of migrations include cultural practices such as similar deities that are worshipped in different locations, such as Quetzalcoatl. Other examples of cultural diffusion through migrations in Mesoamerica are I-shaped ball courts and skull racks. Human sacrifices and the religious significance of green obsidian are others.

Migration in the Americas was a constant process between 300 and 1000 CE. Groups of Athapascan people migrated from Alaska to the American Southwest, where they became the Navajo and Apache tribes. The Arawak may have originated in the Andes and spread along the river valleys of Amazonia, where they became the most important group of inhabitants. Those peoples who did not migrate during this time were the exceptions to the rule.

—Timothy J. Watts

Bibliography

- Fagan, Brian M. *The Great Journey: The Peopling of Ancient America*. Gainesville: University Press of Florida, 2004.
- Fiedel, Stuart J. *Prehistory of the Americas*. New York: Cambridge University Press, 1992.
- Powell, Joseph F. *The First Americans: Race, Evolution, and the Origin of Native Americans*. Cambridge: Cambridge University Press, 2005.

Controversy—Migration or Autochthonous Development?

The presence of ideas, art styles, religious practices, and plants in different regions of the Americas has caused difficulties for archaeologists and historians. They have debated whether similar styles and practices spread from one central point of origin or whether styles and practices developed at different times and places among multiple groups in response to similar environmental conditions.

For many years anthropologists and archaeologists believed that the most likely explanation for why these elements appeared in different cultures throughout the Americas was because of migration or diffusion. Migration indicated that a sizable proportion of a population moved from one place to another. In such a migration they brought along their cultural characteristics, such as ideas about art and religion. They also brought plants that they grew and goods such as pottery. The reasons for migrations might include a search for better land and resources, the desire to be free from rule by another group, or greater religious freedom. The most famous example may be the Aztecs, who migrated to the Basin of Mexico from an unknown location to the northwest. After being

➤ DID THE EXAMPLE OF MESOAMERICAN PYRAMIDS STIMULATE MOUND CONSTRUCTION TO NATIVE AMERICAN CULTURES?

The Mound Builders' mounds and the Mayan pyramids had similar shapes and were both used for religious functions, leading many to originally believe that they were the result of migration from Mesoamerica to the Mississippi River valley. Today, however, most archaeologists believe that the groups had no contact and that the similar structures arose because of similar needs.

—Timothy J. Watts



Despite the similarities between the pyramid at the Cahokia Mounds settlement in present-day Illinois (depicted at its height, left) and the Pyramid of Kukulcan at Chichén Itzá in present-day Mexico, archaeologists believe the two groups arrived at their shapes without any direct contact. Similar requirements probably led to similar architectural styles. (Cahokia Mounds State Historic Site, painting by Michael Hampshire)

dominated and forced to move by other groups, the Aztecs founded their own state and eventually controlled all the peoples in the Basin of Mexico. These reasons have been shared by humans who migrated in all parts of the world. In many parts of the Americas migration was a peaceful process if population density was low. Most peoples found it easier to relocate than to fight. Migration sometimes included violent conquest, such as the movement of the Olmeca-Xicalanca from the Gulf of Mexico coast into the Mayan highlands around 900 CE. The Olmeca-Xicalanca established their authority over the autochthonous, or indigenous, population and ruled as an elite.

Even if violent, the migration of one people into another area resulted in a blending of cultures that gave rise to a more sophisticated one. Archaeologists recognize this change when architecture, art, and other aspects change radically in a culture with little advance signs. One example is from the Toltec state, centered at Tula. Around 900 CE the Nonoalcas migrated to Tula and joined with the Chichimecs from northern Mesoamerica. The two cultures created a dynamic hybrid that made the Toltec the dominant state in Mesoamerica for two centuries.

Diffusion is a mechanism related to migration for the spread of culture. In diffusion, small groups from one culture carry information and examples of goods to another group, sometimes over long distances. In the Americas, traders and merchants were the prime examples of this factor. Diffusion is ordinarily a peaceful process. Through diffusion, new types of artwork, pottery, and religious rituals might make their appearances in other cultures. Most often, diffusion is responsible for only a few new characteristics in a culture. Diffusion is sometime cited as the agent in the spread of domesticated species such as maize, beans, and squash from Mesoamerica to North America.

Autochthonous development has gained more prominence among archaeologists in the past three decades. They have been more interested in considering how environmental factors can affect a peoples' development. Under this theory, similar characteristics may appear in widely separated locations in response to similar stimuli. These characteristics may not be as sim-

ilar as observers at first assume, however. Similarities between pyramids in Egypt and those in Mesoamerica are limited, since both were used for different purposes. Likewise, the mounds built by the Mississippi Mound Builders beginning around 900 CE were believed to have been inspired by pyramids in Mesoamerica for many years. Archaeological evidence, however, indicates that the first mounds in the Mississippi Valley predated contact between the two civilizations and had less of a similarity than was believed. Authorities now believe that cultures faced with similar conditions are likely to come up with similar answers.

—Timothy J. Watts

Bibliography

- Braswell, Geoffrey E. *The Maya and Teotihuacan: Reinterpreting Early Classic Interaction*. Austin: University of Texas Press, 2003.
- Riley, Carroll L. *Becoming Aztlan: Mesoamerican Influence in the Greater Southwest, AD 1200–1500*. Salt Lake City: University of Utah Press, 2005.
- Sanders, William T., and Joseph W. Michels. *Teotihuacan and Kaminaljuyu: A Study in Prehistoric Culture Contact*. University Park: Pennsylvania State University Press, 1977.

Transpolar Movement of Inuit—The Thule Tradition

The Inuit managed to survive and even thrive in one of the harshest climates on earth. Their migration across the Arctic from Alaska to Greenland resulted from a search for better hunting, especially of marine mammals such as seals and beluga whales. Their superior technology allowed the Inuit to displace or assimilate the people of the Dorset culture who had settled in those regions before them.

The Inuit share cultural and ethnic ties with native peoples of Siberia. They probably crossed into North America during the Late Ice Age. Their original home was in northwestern Alaska, where they developed technology to hunt whales, seals, walrus, and other marine mammals as their main source of food. Arctic archaeologists believe that the Thule Inuit began to migrate eastward in the later half of the first millennium CE, although some recent excavations

indicate that their migration may have commenced centuries later than first thought. It is believed that the climatic warming associated with the Medieval Warm Period (ca. 800–1300 CE) brought bowhead whales into the Arctic Ocean, and the Inuit traveled along the coast in pursuit. They moved in small groups, probably consisting of members of an extended family. When they reached Baffin and Somerset islands, the Inuit constructed whaling villages, thought to have housed 50 to 100 people. They used driftwood and whale bones as the framework for houses. Thick pieces of sod provided insulating walls for their multifamily dwellings. These houses were extremely small by modern standards, scarcely more than eight by ten feet (two by three meters), and were rounded or oval in shape and sunk into the surrounding ground. The entry would be excavated even lower than the living floor to provide an air lock for the warmer interior of the dwelling. The inhabitants slept on shelves covered with slabs of rock, rushes, and other vegetation and, finally, skins and furs. Permanent settlements were used mostly in winter.

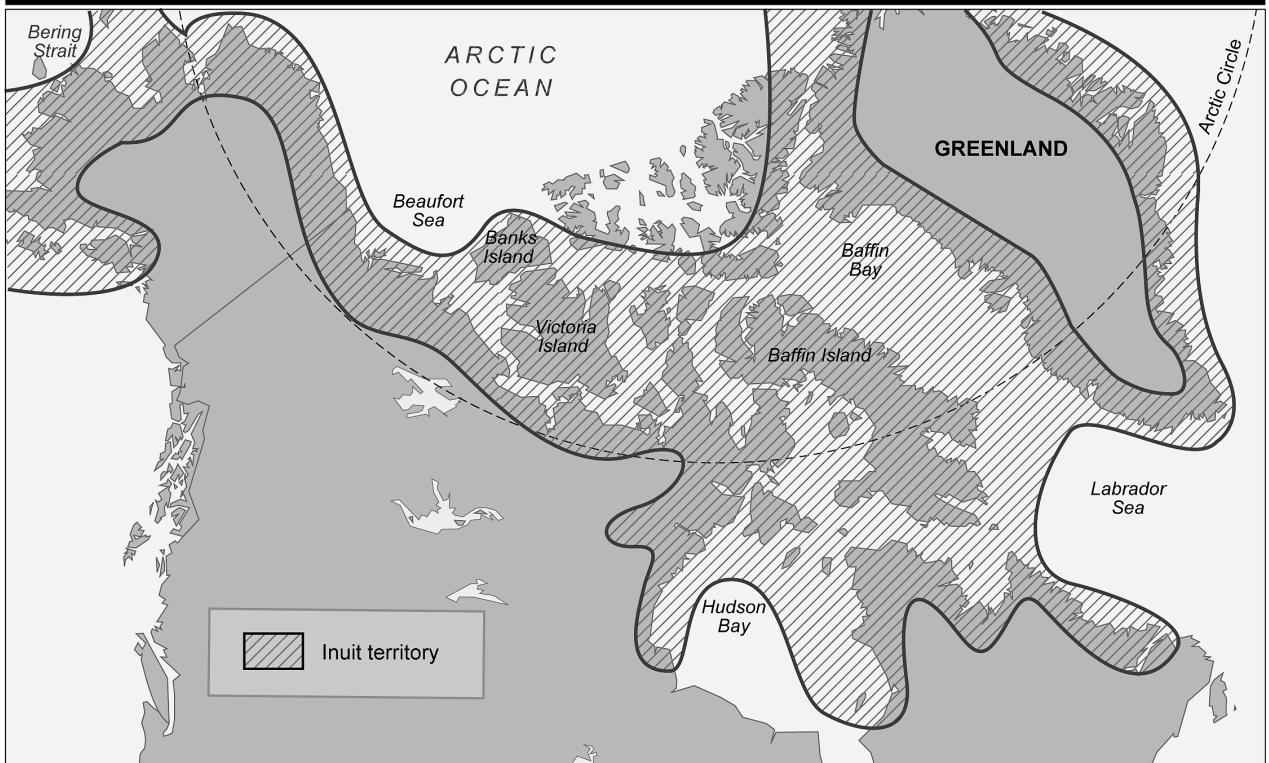
During the summer months, the Inuit broke into smaller groups to follow herds of caribou and musk ox.

Inuit technology was better suited to life in the Arctic than the Dorset people, whom they displaced. The Inuit were masters of using bones and other animal products to create advanced harpoons, bows and arrows, clothing, and other necessities. They traveled with dogs and dogsleds, kayaks, and seagoing umiaks, constructed on a design that was superior to that of their Dorset predecessors. Their ability to pursue and kill large mammals like whales provided them with a better standard of living than other peoples, since only one whale could support a village for some time.

The Thule eventually, perhaps after 1000 CE, reached Greenland, where they met the Norsemen who had settled southwestern coast in the tenth century. By about 1200 CE, Thule Inuit made contact, usually hostile, with the Norse colonists and may have been a factor in the collapse of the Norse settlements.

—*Timothy J. Watts and Wilfred J. Bisson*

TRANSPOLAR MOVEMENT OF INUIT, CIRCA 500



Bibliography

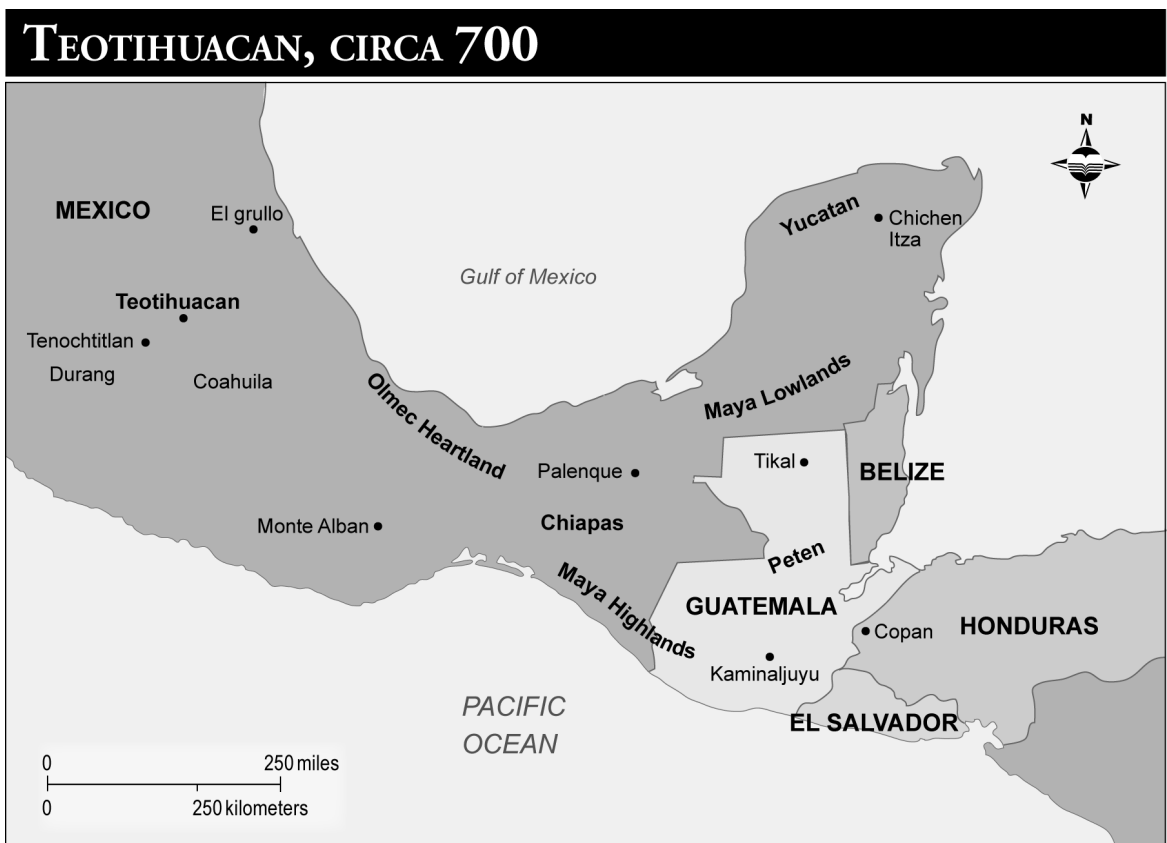
- Burch, Ernest S., and Werner Forman. *The Eskimos*. Norman: University of Oklahoma Press, 1988.
- Fitzhugh, William W., and Aron Crowell. *Crossroads of Continents: Cultures of Siberia and Alaska*. Washington, DC: Smithsonian Institution Press, 1988.
- Nelson, Richard K. *Hunters of the Northern Ice*. Chicago: University of Chicago Press, 1969.

Movement of Teotihuacan into the Maya Highlands

One of the more expansive civilizations of Mesoamerica was that of Teotihuacan, whose influence at its apex extended to the far north of Mexico and as far south as Guatemala. The site of the great city of Teotihuacan (referred to as “the place where gods reside” by the Aztecs) is about 30 miles northeast of modern-day Mexico City. People began to inhabit this location by about 200 BCE, and at its height it was the center of a vast trading empire that exchanged goods with nearly all the Classic Period peoples

of Mesoamerica. As of 300 CE Teotihuacan was a fully developed civilization, whereas that of the Maya was just beginning to evolve as a great Mesoamerican culture in its own right.

Many archaeologists suggest that the decline of the Maya highlands communities (such as Abaj Takalik, El Baúl, and Kaminaljuyú as well as others) emanated from intrusions by Teotihuacanos. By about 400 CE a massive influx of people from Teotihuacan led to a gradual decline of the culture and civilization existing in the Maya highlands. Many who have studied this process assert that it occurred either as a consequence of invasion or massive migration of the Teotihuacanos to the highlands. An illustration of this development is the Maya highland community of Kaminaljuyú, which over the course of the two centuries after 400 CE witnessed its nearly complete reconstruction according to the architectural style of Teotihuacan. This evolutionary pattern essentially ended the political and economic autonomy of Kaminaljuyú. Other evidence of the growing influence of Teotihuacan over this city is the pottery found by archaeolo-



gists within its tombs that show a distinct Teotihuacan origin or influence. If it is the latter, it would appear that the local artisans adopted the style reflecting the dominance of the central Mexican city-state perhaps because of the direct intrusion and immigration of the Teotihuacanos. In particular, the pottery unearthed by scholars to a large extent contains images of the gods worshipped by Teotihuacanos and their elites, bedecked in their full regalia. It is certain, given the evidence and artifacts, that most of the Maya highland communities came under the domination of these invaders. The pattern of social, political, religious, and economic life was completely transformed within the highlands. Yet the Maya were able to hold on to many of their spiritual values and beliefs. To the present-day the indigenous people of Guatemala, Honduras, southern Mexico, and El Salvador cling to their divination through their shamans, sometimes referred to as “the keepers of time.”

The influence of Teotihuacan was not confined entirely to the Maya highlands. Within the lowlands these influences had spread as of the fifth century CE. Archaeologists have determined through their thorough excavations that this influence was especially prevalent in Tikal. Funerary objects show a definite connection to the styles of Teotihuacan. (Of note are murals depicting warriors of Teotihuacan as attendants to the deceased rulers of Tikal.) Another rationale besides the intrusions from Teotihuacan explaining the Maya highlands demise revolves around the the devastating volcano eruptions of Ilopango between 200 and 250 CE. All of the communities of the Maya highlands saw a protracted decline in their economies, which were so dependent upon their extensive trading networks.

—John S. Leiby

Bibliography

- Evans, Susan Toby. *Ancient Mexico and Central America: Archaeology and Cultural History*. London: Thames and Hudson, 2004.
- Gallenkamp, Charles. *Maya: The Riddle and Rediscovery of a Lost Civilization*. 3rd ed. New York: Viking, 1985.
- Meyer, Michael C., William L. Sherman, and Susan M. Deeds. *The Course of Mexican History*. 8th ed. Oxford, UK: Oxford University Press, 2007.

Southward Migration of Athapascans

The Athapascans (sometimes spelled Athabascans) were probably the last group of people to migrate from Asia into North America. They originally settled in eastern Alaska and northwestern Canada. Tribes such as the Tlingit are subfamilies of the Athapaskan. Archaeological and linguistic evidence indicates that around 100 CE, some groups of Athapaskan began a migration to the south. While some groups ended up in the Pacific Northwest, others continued their migration into the American Southwest. The migration probably took the form of autonomous small groups drifting southward, looking for better hunting and greater safety. Most Athapaskan groups traveled through the eastern foothills of the Rocky Mountains, although some used the route through the Great Basin. The migration continued for over 1,000 years, but the Athapaskan retained their unique language and cultural ways. Linguists discovered that speakers from Alaska and the Southwest could understand each other. Unlike other Native American languages, Athapaskan is tonal. Words with the same phonemes have different meanings according to their tones.

The Athapaskan followed a hunting and gathering lifestyle for most of their existence. Their camps during their migration consisted of conical structures with wooden pole frameworks that were covered with brush or hides. These early tepees could easily be taken down when needed, and most materials could be located at the next campsite. The Athapaskan also borrowed technology from the people they encountered on their migration, including the construction of stone walls without the use of any mortar. After arriving in the Southwest, groups of Athapaskan adopted much of the technology of the Pueblos.

One group of Athapaskan adopted the Pueblo way of life and became farmers around 1350 CE. Although they called themselves Na Dene (“The People”), they became known to the Spanish as the Navajo. Later arriving groups in Texas became the Apaches and retained more of a nomadic life. They were among the first Native Americans to adopt a horse culture.

—Timothy J. Watts

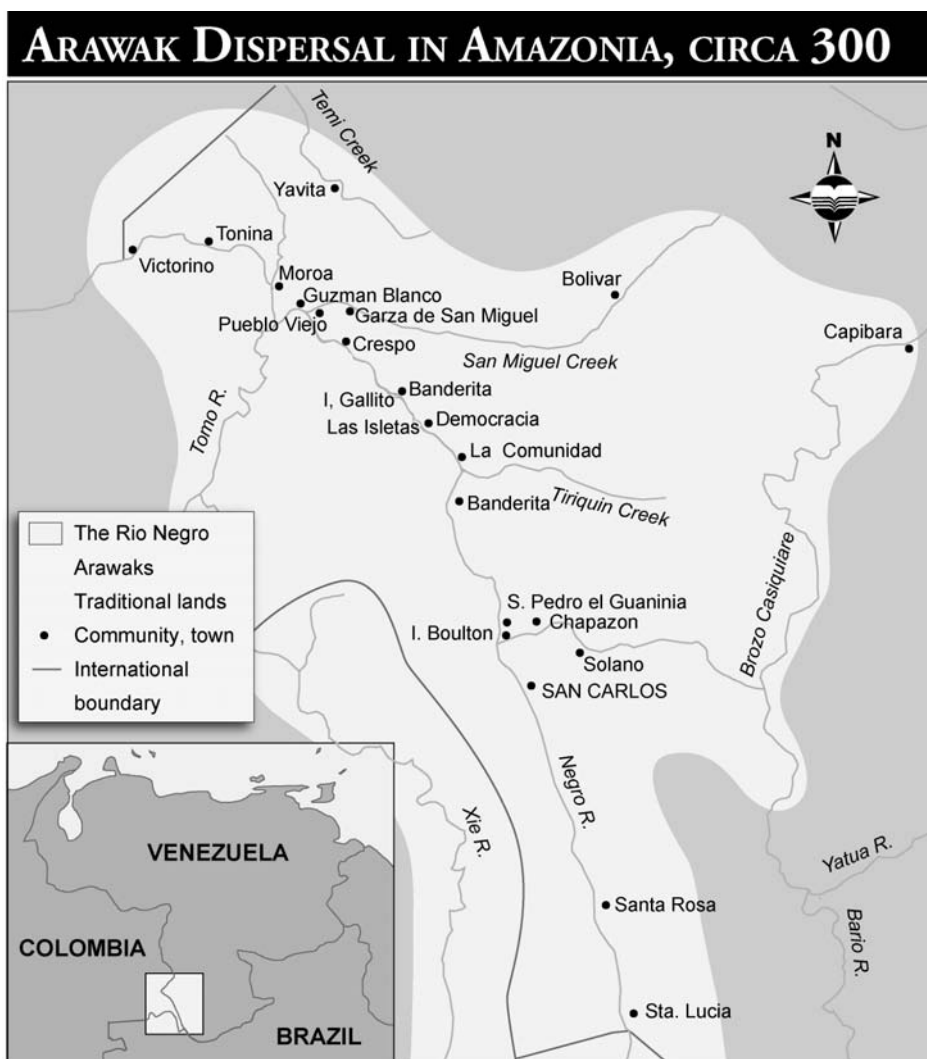
Bibliography

- Basso, Keith H., and Morris Edward Opler. *Apachean Culture, History and Ethnology*. Tucson: University of Arizona Press, 1971.
- Dutton, Bertha Pauline. *Navahos and Apaches: The Athabascan Peoples*. Englewood Cliffs, NJ: Prentice Hall, 1976.
- Iverson, Peter, and Monty Roessel. *Dine: A History of the Navajos*. Albuquerque: University of New Mexico Press, 2002.

Arawak Dispersal in Amazonia

Of all the many languages and ethnic groups in Amazonia, those based upon the Arawak family are the most numerous and widespread. It is believed by anthropologists that the Arawaks origi-

nated on the banks of the upper Rio Negro River and migrated throughout Amazonia by following the Orinoco and Amazon rivers and their tributaries. These migrations may have begun around 2000 BCE and certainly by 500 BCE. Arawak influences, known as the Arawak phenomenon, have been identified throughout the region, along its rivers, by anthropologists. While most of the region is covered by rain forests known for their poor soil, many of the floodplains along the rivers are quite fertile and suitable to intensive agriculture. Archaeological evidence indicates that the Arawak built habitation mounds for autonomous villages that rose above the seasonal flooding. Arawak migration may be traced by their characteristic pottery style and the cultivation of manioc as a staple food. The Arawak may



have been the first people to discover how to prepare manioc safely and to remove its natural poison.

One of the factors that made the spread of the Arawak so successful was their cultural emphasis on trade and cooperation. Although their villages were autonomous, the Arawak recognized their ethnic connections and sought to include groups into their culture. As a result, the Arawak were probably the most powerful and expansive people in Amazonia during 300–1000 CE.

While the Arawak successfully settled throughout Amazonia, they also migrated to the islands of the Caribbean during 500–1000 CE.

Their knowledge of watercraft because of experience on the rivers enabled them to voyage across open seas to places such as Cuba, Hispaniola, and Puerto Rico. The Arawak who colonized the islands eventually forgot their Amazonian origins and adopted a myth of originating in a cave on Hispaniola. They continued to trade with their relatives on the American mainland.

—*Timothy J. Watts*

Bibliography

Lathrop, Donald W. *The Upper Amazon*. New York: Praeger, 1970.

Williams, Denis. *Prehistoric Guiana*. Miami: Ian Randle, 2003.

■ Introduction: Trade Diasporas

Throughout the early medieval age (300–1000 CE), long-distance trade took place in both the Eastern and Western Hemispheres (but not significantly between hemispheres). Merchants who engaged in this long-distance trade often settled for a season or permanently in trading cities far from their home country, leaving diasporas of their fellow countrymen in these ports and trading posts along the trade routes and transplanting familiar institutions and ways of behavior in these strange locales.

In the Americas, much-frequented long-distance trade routes were those provided by the great river systems, particularly the Mississippi-Missouri. Although artifactual evidence of this trade is not rare, it is difficult to make inferences about trade diasporas that it can be assumed to have existed.

In Afro-Eurasia, we have literary as well as artifactual evidence. Merchants and others who traveled the Silk Roads, for example, settled in diasporic communities from the Mediterranean to China. Sogdians, Parthians, Radhanite Jews, Buddhists, Manicheans, and Nestorian Christians all lived in diasporic enclaves, stopping in monasteries and caravanserais, introducing the culture of their native lands, and, in turn, assimilating and transmitting to their home countries some of the culture of their host communities.

Ports on the Indian Ocean littoral were also liberally seeded with trade diasporas. From East Africa to the Malabar Coast of western India, Romans, Greeks, Ethiopians, Arabs, Jews, “Syrian” Christians, Persians, and Indian Muslims jostled each other and established enclaves. And from India’s Cape Comorin to the Bay of Bengal and around the Malay Peninsula to teeming ports on coastal southern China, Malays, Chams, Indians, Persians, and Arabs traded and settled.

A similar situation obtained in the desert ports of the trans-Saharan trading system. Berber merchants settled in towns on the southern edge of the great desert, bringing Mediterranean goods and the Islamic religion.

These trade diasporas played a crucial role in increasing knowledge of the wide world in all places they tarried, but not without costs. In a savage antiforeign paroxysm, Chinese rebels sacked the foreigners’ quarters and slaughtered many thousands of Persians and Arabs.

—*Wilfred J. Bisson*

Bibliography

Bentley, Jerry. *Old World Encounters: Cross-Cultural Contacts and Exchanges in Pre-Modern Times*. New York: Oxford University Press, 1993.

Curtin, Philip D. *Cross Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.

Trade Diasporas on the Overland Silk Roads

The Silk Roads encompassed a network of overland routes that criss-crossed the Eurasian continent connecting China with the West. The routes were often dangerous and difficult. Traveling from one end of the Silk Roads to the other could take more than a year. For that reason, individual merchants seldom traveled the entire length but tended to trade between particular cities and/or outposts. Goods moved in stages, changing hands many times before reaching their destinations. Communities of Chinese, central Asian, and Western merchants developed in principal cities and towns along the way, serving

as trade facilitators, bankers, government officials, and provisioners and essentially providing infrastructures for fellow merchants, helping to ensure a continued flow of goods.

The Sogdians, an Indo-Iranian group, controlled the central Asian section of the Silk Roads and thus the trade itself from the second century BCE to the tenth century CE. By the eighth century members of the Sogdian diaspora were active in civic life in major central Asian and Chinese cities. Some were even awarded Chinese titles for their service. Gradually, many Sogdians abandoned long-distance trade, becoming agriculturalists or trading more locally. Sogdian research is still in its infancy, but current studies are beginning to reveal

➤ A FASHION FOR THE FOREIGN

During the Tang dynasty, China was unusually open to foreign ideas. Silk Roads trade and the presence of large numbers of foreigners helped create a fashion for the exotic. Foreign items of clothing, including the Western *hufu* (barbarian robe), a cross-fronted garment that fastened at the neck, were popular for both men and women. Central Asian hairstyles, hats, and shoes were adopted by the Chinese elite for informal wear. Musical performers and instruments from central Asia, such as the transverse flute and the *pi'pa*, helped transform Chinese music. Foreign dances, including the Sogdian swirl where the dancer twirled wildly on a small round mat were adopted by Chinese performers. Even members of the Tang elite, including Yang Gui-fei and General An Lushan, were said to have learned the dance. Foreign games were also imported, including polo. Developed in Persia, polo became a popular game for both men and women. Even household furnishings were affected. The Chinese gave up sitting on floor mats or pillows and switched to chairs, an import from central Asia that the Chinese called barbarian beds. Fruits and vegetables from the West, including pomegranates, and melons were added to the Chinese diet. Their names often begin with the word “barbarian.”

—Rebecca Wendelken



Tang dynasty ceramic of a camel carrying musicians. Musicians as well as dancers and other entertainers were sometimes sent along the Silk Roads, especially from central Asia to China. (Asian Art & Archaeology, Inc./Corbis)

more about these merchants and the processes of Silk Roads trade.

More is known about Chinese merchants and trade diasporas in China because of the variety and large number of Chinese sources. Despite the fact that merchanting and trade were considered lower-class activities in China, many Chinese were involved in them. They also formed diaspora communities along the western Silk Roads. Some were centered around frontier military outposts established to prevent robbers from harassing merchants and stealing cargo, while others were created in cities of central Asia. A fresco of a Chinese merchant and his wife dating from the eighth century has been found in Samarkand, once the capital of the Sogdian empire.

Some of the most important diaspora communities were located in China's major cities, where they secured goods to be shipped westward. The Tang dynasty's primary capital, Chang'an, had a large foreign community that included Turks, Uighurs, Sogdians, Tocharians, Arabs, and Indians in its western quarter. They brought their faiths with them and built religious structures and monuments representing Nestorian Christianity, Islam, and Zoroastrianism, among others. Louyang, the Tang's second capital, also had a large foreign population, as did the city of Yangzhou, where several thousand Persian and Arab merchants did business at the intersection of Grand Canal and the Yangzi River.

The Chinese were ambivalent about foreign merchants, often subjecting them to restrictive laws and local animosity. In Chang'an the Office of the Caravan Leader monitored the affairs of foreign merchants and promoted trade. However, foreigners who died in China forfeited all their belongings and holdings in the country to the government, and those who married Chinese women were forbidden to leave. At times the foreign communities became targets of violence. In the eighth century thousands of Persian and Arab merchants were massacred in Yangzhou. Despite the dangers and restrictions, the chance to profit from the silk trade ensured that foreign merchants would continue to live and work in China as long as the Chinese government allowed them to do so.

—Rebecca Wendelken

Bibliography

Juliano, Annette L., and Judith A. Lerner. *Monks and Merchants: Silk Road Treasures from Northwest China, Gansu and Ningxia, 4th–7th Century*. New York: Harry N. Abrams, 2001.

Vaissère, Étienne de la, and Éric Trombert, eds. *Les Sogdiens en Chine*. Paris: École française d'Extrême-Orient, 2005.

Trade Diasporas on the Indian Ocean Littoral

The great distances to be covered by navigators on the Indian Ocean combined with the seasonal nature of the monsoon winds obliged traveling merchants to remain in foreign ports for months between voyages. Eventually, some merchants began remaining in foreign places to act as intermediaries between their countrymen and the people whose lands they now inhabited. Those who did not assimilate into the general population formed expatriate communities, either by bringing their own families to join them or by intermarrying locally. The descendants of these mixed unions developed distinct cultural identities and served as a bridge between the nations of their maternal and paternal ancestors.

There is considerable archaeological and written evidence for the existence of overseas communities around the Indian Ocean in the early first millennium CE. Tamil, Prakrit, and Old Sinhala inscriptions show that merchants from Sri Lanka, India, and Bengal sojourned in various places around the Bay of Bengal, and there were well-established communities of southern Arabian and Zoroastrian Persian merchants in southern India and Sri Lanka by the fourth century. Omani merchants were settled on the coast of Persia and were active in East Africa north of the Horn of Africa before the seventh century.

The coming of Islam represents a watershed in the commercial history of the Indian Ocean. Zoroastrian merchant exiles fled the Persian Gulf to settle in India, Sri Lanka, and East Africa, but converts to Islam followed in their wake. By the eighth century, Persian, Arabian, and Omani Muslims had established themselves on coastal islands including the Lamu archipelago, Zanzibar, Kilwa, and Shanga. In the same period they

➤ MUSLIM VIEWS OF HINDUS IN THE TENTH CENTURY CE

After the eighth century, the rise of conservative Brahmanism made India increasingly dependent on non-Hindu traders. A tenth-century Muslim noted the complex and expensive rituals associated with eating: “There are certain Indians, who never eat two out of the same dish, or upon the same table, and would deem it a very great sin if they should. When they come to Siraf [in Persia], and are invited by the considerable merchants, [whether they are] a hundred in number, or more or less, they must each have a separate dish, with the least communication with the rest.”

—Lincoln P. Paine

Source

Abu Zayd Hasan ibn Yazid Sirafi, “Concerning the Voyage to the Indies and China,” in *Ancient Accounts of India and China by Two Mohammedan Travellers, Who Went to Those Parts in the 9th Century*, translated by Eusebius Renaudot (1733; amended reprint, New Delhi: Asian Education Services, 1995), 98–99.

also settled the Comoros Islands, which lay astride the monsoon sailing route from southern Mozambique to the Persian Gulf.

Some of the Muslim trading colonies along the Konkan coast between Khambhat (Cambay) and Saymur (Chaul, south of Mumbai) were quite large and had considerable autonomy. In the tenth century, al-Masudi wrote that Saymur had a population of about 10,000 *bayasira* (people in India born of Muslim parents) as well as merchants and settlers from Oman, Siraf, Basra, and Baghdad. Their communal leader served at the pleasure of the Rashtrakuta king and was presumably responsible for the appointment of port authorities and other officials who looked after Muslim affairs.

Farther south, Islam was transplanted to the Malabar Coast and Sri Lanka as the lands around the Arabian Peninsula and the Persian Gulf from which Sassanian merchant-settlers originally came converted to Islam. Caste restrictions prevented intermarriage between Muslim merchants and anyone except low-caste Hindu wives,

with whom they often contracted temporary marriages. The offspring of these unions were known as Mapillas, from the Malayalam meaning “big children,” and in time this was the name applied to the community of mestizo Muslims as a whole, which survived until well after the arrival of the Portuguese in the sixteenth century.

—Lincoln P. Paine

Bibliography

- Ahmad, S. Maqbul. “Travels of Abu ’l Hasan ‘Ali b. al Husayn al Mas’udi.” *Islamic Culture* 28 (1954): 509–524.
- Pearson, M. N. *The Indian Ocean*. New York: Routledge, 2003.
- Ray, Haraprasad. “Archaeology of Bengal: Trading Networks, Cultural Identities.” *Journal of Economic and Social History of the Orient* 49(1) (2006): 68–95.
- Wink, Andre. *Al-Hind: The Making of the Indo-Islamic World*, Vol. 1, *Early Medieval India and the Expansion of Islam, 7th–11th Centuries*. Boston: Brill, 2002.

Silk Roads Travelers

Travelers along the Silk Roads in the period from 300 to 1000 did not leave behind a rich legacy of written records of their journeys. Because few accounts of their voyages have survived, knowledge about them and their travels is limited. The so-called library of literary, religious, and commercial texts at the Buddhist caves in Dunhuang in today’s western China, an important site along the Silk Roads, attests to the numerous groups represented by the travelers. Works in Chinese, Iranian, Hebrew, and many other languages abound in this remarkable collection, an indication of the diversity of voyagers who passed through this vital stopping place. However, few of these texts yield much information or insight about the travelers themselves. Additional evidence about Silk Roads travelers derives from Tang dynasty (618–907) ceramic figurines, many of which depict images of foreigners. Potters portrayed Arab, Iranian, Turkic, Armenian, and Jewish merchants, horse grooms, musicians, and dancers as well as the horses and camels that transported them along the Silk Roads to China. Although these depictions offer valuable information about their clothing and

➤ FAXIAN—A BUDDHIST TRAVELER ALONG THE SILK ROADS

The travels to India of the Buddhist monk Xuanzang from 629 to 645 have overshadowed the journeys of the monk Faxian (399–414). The Tang dynasty constructed the Great Wild Goose Pagoda in Changan (today Xian) to house the texts and artifacts that Xuanzang obtained during his travels. The emperor treated Xuanzang with great deference, and his fame and popularity led to depictions of him in literature, most prominently in the Ming-era novel *Journey to the West*. Chinese sources did not accord Faxian the same status or renown, and unlike Xuanzang, little is known of Faxian's life and career.

Faxian actually traveled along the Silk Roads two centuries before Xuanzang and charted the course that the more illustrious voyager journeyed. Faxian entered a monastery before the age of ten, but other than that fact, myth and a few unreliable anecdotes shroud his early life. His *A Record of Buddhistic Kingdoms*, an account of his travels, is his principal

legacy. It recounted stories relating to the historical Buddha's life, Ananda's spectacular fiery suicide, and Asoka's virtuous rule. Faxian related these tales in sequence as he visited the sites where these events reputedly took place. Coupled with these Buddhist anecdotes were his impressions of the various kingdoms and regions on his route. He described the environments, customs, and products, enriching China's knowledge of foreign lands.

Unlike Xuanzang, Faxian returned by sea to his native land. He stopped in Sri Lanka for some time and then headed back after a 15-year journey. According to a brief Chinese account, he spent the rest of his life in a monastery, devoting himself to translations of the writings he brought back from his travels. Unlike Xuanzang, Faxian was not accorded a hero's reception and, despite his accomplishments, lived out his remaining years in relative obscurity.

—Morris Rossabi

hairstyles in addition to the musical instruments, weapons, and tools they used and introduced into China, the lack of written sources impedes attempts to provide details about their personalities and adventures.

Travelers encountered numerous hazards along the Silk Roads. Because the roads (or more accurately, trails) were not clearly marked, voyagers could easily lose their way and find themselves in unfamiliar terrain, with the dangers attendant to such uncertainty about the paths to follow. Sandstorms, heat strokes, and hallucinations and mirages caused by overexposure to high temperatures and spillage of water were only a few of the dangers travelers faced in crossing some of the world's most unforgiving deserts. For example, the Buddhist pilgrim Xuanzang journeyed for four days without water after an accidental spillage of the precious liquid. On the other hand, frostbite, icy conditions, avalanches, and altitude sickness posed serious threats to traveling across some of the world's loftiest mountains. As late as the twentieth century, the explorer Aurel Stein had several of his toes amputated due to frostbite. In earlier periods, travelers, who may have taken fewer precautions and

had less access to medical care, most likely suffered more serious and debilitating injuries. Bandits, marauders, and hostile rulers en route were just a few of the human threats.

Merchants were the principal travelers along the Silk Roads and endured the hardships and hazards. They overcame their concerns about such long-distance travels because of anticipated profits from commerce. Elites in Iran, the Arab world, and India were willing to pay exorbitant sums for Chinese silk, while the Tang upper classes traded for horses, exotic animals, aromatics, precious metals, and medicines from West and central Asia. Arab, Iranian, Turkic, and Indian merchants arrived in China, but few Chinese traveled to other lands. Small Islamic and Hindu communities settled in both northwestern and southeastern China, and these foreign merchants often served as middlemen in commerce between China and their respective homelands.

Entertainers and artisans were other groups who traveled along the Silk Roads, mostly to China. Chinese ceramic figurines portray foreign acrobats, musicians, and dancers, many of whom performed at the Tang court. These performers influenced not only Chinese musicians

and dancers but also Chinese clothing and hair-styles. Foreign dress became, for a time, fashionable at the Chinese court, which also valued the works produced by foreign craftsmen. Persian artisans, the era's great silversmiths, created decorative artifacts as well as ritual and ceremonial objects. Central Asian weavers, in particular Uyghur Turks, produced fine textiles, which influenced the motifs and techniques of Chinese textiles. Yet here too no written sources by these craftsmen have surfaced, perhaps because many artisans were not literate.

Buddhist pilgrims did write accounts of their travels. Because literacy was generally required for initiation, Buddhist monks were often literate in one or more languages. Thus, they could and did produce records of their journeys. Most sought to study with the great Indian and central Asian Buddhist masters and to collect Buddhist writings and artifacts. The fifth-century monk Faxian and the seventh-century monk Xuanzang were the most renowned of these Buddhists, perhaps due to their own accounts of their travels. Xuanzang, in particular, returned to China with numerous texts and relics and was greeted as a national hero.

This golden era of the Silk Roads began to end in the middle of the ninth century. The declining Tang dynasty sanctioned a persecution of Buddhism around 845 that spilled over into xenophobia. Even rebels against the dynasty turned against foreigners and blamed them for the Tang's difficulties. Such antiforeignism, coupled

with the dynasty's loss of control of oases and towns in northwestern China and the surrounding regions, undermined the Silk Roads trade. Merchants, envoys, and pilgrims refrained from traveling via the Silk Roads. The Song dynasty (960–1279) did not attempt to recover the oases and towns in northwestern China and central Asia because its officials believed that overexpansion into non-Chinese territories had contributed to the Tang's collapse. Without Chinese control over these lands, trade and travel along the Silk Roads decreased, and the seaborne commerce among India, Iran, the Arab world, and China superseded the land-based caravan trade until the thirteenth-century Mongol invasions.

—*Morris Rossabi*

Bibliography

- Boulnois, Luce. *Silk Road: Monks, Warriors & Merchants on the Silk Road*. Translated by Helen Loveday. Hong Kong: Odyssey Books and Guides, 2004.
- Faxian (Fa-Hsien). *A Record of the Buddhistic Kingdoms*. Translated by James Legge. Oxford, UK: Clarendon, 1886.
- Tucker, Jonathan. *The Silk Road: Art and History*. London: Art Media Resources, 2003.
- Whitfield, Susan. *Life along the Silk Road*. Berkeley: University of California Press, 1999.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2002.
- Wriggins, Sally Hovey. *The Silk Road Journey with Xuanzang*. Boulder, CO: Westview, 2004.

■ Introduction: Pilgrimages

Going on pilgrimages was a principal motivation for travel in the early medieval age. Pilgrimages were almost always made for religious reasons, and in most religious traditions, one gained particular religious merit by making particular pilgrimages. Many went on pilgrimages to atone for imagined or real transgressions. Some made pilgrimages to shrines hoping to be cured of illness or disease. Women sometimes went on pilgrimages as a curative for failure to bear children.

The business of pilgrimages became a recognized commercial enterprise on pilgrim routes. Guiding pilgrims was an accepted profession, and hostels along the pilgrim routes catered to the pilgrim trade. The temples and shrines, which were the destination of pilgrimages, grew wealthy from the donations made by the pilgrims. Pilgrimages had a cultural impact not only on the pilgrims but also on routes through which the pilgrims passed and, equally important, on the home-

land of the pilgrims. Pilgrimages were culturally broadening.

In Andean civilization, pilgrimages were a prominent feature in most cultures. Especially significant was the venerable pilgrimage site of Pachacamac, which had, since before the beginning of the Common Era, a Pan-Andean reputation comparable to that of the oracle of Delphi in ancient Greece.

In India, too, pilgrimages were a prominent religious and cultural feature. The chief destination for pilgrimages in the early medieval age, as today, was the holy city of Varanasi (Benares), but pious Hindus made pilgrimages to many other sites. In southern India, especially, devout monarchs built temple cities as the foci for pilgrimages.

For Buddhists also, pilgrimage was an important way of gaining religious merit. The Buddhists had developed pilgrimage into an international enterprise. Mahayana Buddhists from central Asia, China, Tibet, and Southeast Asia traveled to Buddhist monastery/university centers in India, of which Nalanda was the most famous. Some of these pilgrims traveled through the mountains and deserts of central Asia to reach India, but many took the sea route, with a stopover at Srivijaya in Sumatra. Indeed, Srivijaya became so important that a major monastery/university at which pilgrims on their way to Nalanda could spend a few months or a few years developed there.

While Jerusalem was still under Roman rule, Christians often traveled as pilgrims there, but after the Muslims seized it, Christian pilgrimages there became less frequent. After that, with the growing centralization of the Western Christian Church, Rome became the favored destination for West European pilgrimage. However, the Golden Era of West European Christian pilgrimage did not commence until nearly 1000 CE, when this period was nearly over.

The most important, from a cultural standpoint and for the sheer number of individuals involved, was the Muslim pilgrimage to Mecca, the hajj. The hajj was and is incumbent on all Muslims who can make the trip. Today, several million people annually make the pilgrimage; in the early medieval age the participants may have numbered several tens of thousands. Its influ-

ence in creating a sense of shared brotherhood among the disparate Muslim communities is difficult to overestimate.

—Wilfred J. Bisson

Bibliography

Coleman, Simon, and John Elsner. *Pilgrimage: Past and Present in the World Religions*. Cambridge, MA: Harvard University Press, 1995.

Sumption, Jonathan. *Pilgrimage: An Image of Medieval Religion*. London: Faber and Faber, 2002.

The World of Buddhist Pilgrimages

Buddhism, a missionary religion well adapted to the necessities of commerce and long-distance travel, played an important role in the expansion of Asian trade networks during the first millennium CE. From its location of origin in northern India, Buddhism spread along both land and maritime trading routes to regions of central, East, and Southeast Asia. According to the Buddhist tradition, the Buddha himself enjoined his disciples to make pilgrimages to sacred sites. The *Mahāparinirvāṇa Sūtra* records him telling Ānanda that any devotee who dies while on pilgrimage will be reborn in a realm of great happiness.

For centuries, until Buddhism became firmly established in other countries, India was the essential destination for Buddhist pilgrims from all over Asia. The four most important Indian pilgrimage sites relate to events of the Buddha's life: Lumbini, the place of his birth; Bodhgaya, where he attained enlightenment; Sarnath, the park in which he preached his first sermon; and Kushinagara, where he entered parinirvāṇa (a state of complete enlightenment). This list of four was quickly expanded to eight with the addition of Sravasti, Vaisali, Rajagriha, and Samkasya.

The earliest pilgrimage accounts are those left by Chinese monks, who traveled to India in search of Buddhist teachings and scriptures. The earliest of these is Faxian's *Fo guo ji (Record of Buddhist Countries)*. Faxian began his journey around the year 400 and after walking for five years arrived in the "land of the Dharma," where he stayed for six years collecting Buddhist texts and worshipping at sacred sites. From India, Faxian sailed to Sri Lanka,

➤ XUANZANG

Xuanzang (602–664) is one of the most well-known early Buddhist pilgrims. Departing China in violation of an imperial decree prohibiting foreign travel, he spent 16 years on pilgrimage in India.

Like many seventh-century travelers moving across Asia, Xuanzang followed the Silk Roads, from Liangzhou (present-day Wuwei) to Anxi around the Taklamakan Desert to Samarkand (Uzbekistan) and then down through Taxila (Pakistan) into India. During his journey he visited both Nikāya and Mahāyāna temples and monasteries. In India, Xuanzang studied at the renowned Nalanda Monastery and visited the important locations of the Buddha's life.

While on his journey, Xuanzang made it a point to meet state officials in the regions through which he passed. Upon his return to China he was welcomed at the imperial court. Such was Xuanzang's prestige as a result of having made such an extensive and arduous trip and having returned with Buddhist relics, more than 650 scriptures, and knowledge of the Sanskrit language that Emperor Taizong requested that he write an account of his travels and even urged Xuanzang to participate in the emperor's military offensive against Korea. Due to the political connections that Xuanzang made while on pilgrimage, he played a strategic part in initiating diplomatic relations between northern India and Tang China.

Xuanzang established the Faxiang school of Buddhism and spent the rest of his life translating. His account of his journey is recorded in the *Record of the Western Regions of the Great Tang Dynasty* (*Da tang xi yu ji*), and a fictional account of his life has been popularized in the Ming dynasty narrative *Journey to the West* (*Xi you ji*).

—Alyson Prude

which had become a Buddhist country in the third century and boasted pilgrimage sites of its own, largely in the region of Anuradhapura. Other well-known Chinese pilgrims include the monk Xuanzang, who departed China around 627, and Yiqing, who took a sea route to India via Sumatra. Yiqing traveled with merchant caravans and spent 25 years visiting Buddhist locales, including the famous Indian monastery of

Nalanda, the world's leading center of Buddhist scholarship.

The routes that early Buddhist pilgrims took were the same routes used by merchants, traders, and the first Buddhist missionaries. One of these paths was the Silk Roads. As early as China's Northern Wei dynasty (386–534), there were reportedly 3,000 Buddhist monks living at the Yungning monastery in Luoyang, many of whom were foreigners having arrived with trading caravans via the Silk Roads. Another well-traveled course was the maritime route connecting India and eastern China via the islands of Indonesia. It was via these maritime courses that Buddhism was introduced to Southeast Asia: Myanmar, Thailand, Cambodia, and Laos. Also through the activities of seafaring merchants and Indian immigrants, Mahayana Buddhist practices were introduced to the islands of Java, Sumatra, and Borneo sometime in the fifth century CE. In Java, the temple complex at Borobudur became a popular pilgrimage center, and the kingdom of Srivijaya, established based on its strategic location and control of the Strait of Melaka, enjoyed a brief period of prominence as a hub of Buddhist scholarship and translation activities.

Due to Buddhism's involvement with long-distance commerce, Buddhist pilgrimage sites developed into commercial centers. Similarly, with the establishment of Buddhist temples, commercial centers became pilgrimage destinations. Mahayana Buddhists espoused worshipping Buddha images and relics with material offerings, such as precious stones, fabrics, and incense. The former, in the form of pearls, lapis lazuli, and coral, were important components of luxury trade from India northward to China, and the latter, as silk, was a major commercial item carried from China south toward India. Buddhist pilgrimage thus encouraged and was encouraged by trade and the exchange of luxury goods.

The years up until the seventh century mark a period of Buddhism's importation to and domestication within Asian countries outside India. Emperors and local rulers, attempting to use Buddhism to legitimize their rule, encouraged the adoption of Buddhist practices, financed the construction of temples and monasteries, and sponsored monastic pilgrimages to acquire

scriptures and relics. Empress Wu of China (r. 690–705), for example, employed Indian monks in her court both to translate Buddhist scriptures and to validate her claim to sovereignty over the Buddhist continent. The role of Buddhist rulers in importing relics and establishing local sacred sites played a key role in Buddhism's establishment in lands beyond India.

While written texts remained the provenance of monks and the educated elite, relic veneration and pilgrimage were practices in which the common people, largely illiterate and from the middle and lower classes, could participate. Devotees flocked to worship relics brought by pilgrims and itinerant monks, and local pilgrimage destinations developed at places of reported miracles and at former dwellings of native Buddhist saints. In East Asia, the first of these was China's Wutai Mountain, recognized in the seventh century as the abode of the bodhisattva Mañjur. Its designation as the home of Mañjur is ascribed to the many visions of the bodhisattva seen by early visitors to the site. The Korean monk Jajang reported encountering Mañjur there in 636, at which time the bodhisattva allegedly instructed him to establish a similar pilgrimage tradition in Korea.

With the grounding of Buddhist study and practice in China and the recognition of sacred sites on Chinese soil, China became a pilgrimage destination of its own. Most pilgrims to China came from Korea and Japan, but even Buddhist devotees from South Asia and India made the journey to worship in China. Japanese Buddhist monks who requested government sanction to accompany official emissaries to China include Koba Daishi (Kokai in Chinese), popularly believed to be the founder of the 88-site Shikoku Pilgrimage in southern Japan. Another important pilgrimage circuit in Japan included the 33-site Kwannon Pilgrimage, revealed in a vision to the eighth-century abbot Tokudo Shinin.

—Alyson Prude

Bibliography

- Barnes, Gina. "An Introduction to Buddhist Archaeology." *World Archaeology* 27(2) (1995): 165–182.
- Holcombe, Charles. "Trade-Buddhism: Maritime Trade, Immigration, and the Buddhist Landfall in

Early Japan." *Journal of the American Oriental Society* 119.2 (1999): 280–292.

Liu, Xinru. *Ancient India and Ancient China*. Delhi: Oxford University Press, 1988.

Sen, Tansen. *Buddhism, Diplomacy, and Trade*. Honolulu: Association for Asian Studies and University of Hawai'i Press, 2003.

Hajj, or Pilgrimage, to Mecca

The annual pilgrimage to Mecca was one of the most important elements of Islam in fostering a far-flung community of believers and in promoting a unified Islamic culture. Yearly, Muslims from places as diverse as Spain, central Asia, northwestern India, Iran, the Sahara, and the Indian Ocean littoral made the journey to participate in the most hallowed rituals of the Muslim faith. People of several cultures, ethnic groups, and social classes made the hajj, during which these differences were ignored and believers interacted on a basis of equality.

The Muslim religion has five pillars, that is, central requirements that all believers must observe. One of these is the obligation to undertake a hajj, or pilgrimage, to the Holy City of Mecca at least once in a lifetime. However, those who are ill or cannot afford it are excused. On the other hand, to make it possible for someone else to do a pilgrimage is meritorious, and those who die while on pilgrimage are blessed. The actual pilgrimage lasts for five days during the month of Dhul al-Hijja, though many pilgrims take longer than this. Everyone must do a fixed set of rituals and practices with all the other participants in Mecca and surrounding areas. These include moving around the Kaaba, or sacred stone set in the middle of the Great Mosque in Mecca; moving to the plain of Arafat, stoning rocks representing devils at Mina; and then returning to Mecca to circumambulate the Kaaba again. Pilgrims have to wear very simple clothes, called the ihram, and sexual relations and bad conduct are banned during the hajj period.

The rites and ceremonies of the hajj follow the practice of the Prophet Muhammad when he made his Pilgrimage of Farewell in 632 CE shortly before his death. On this occasion 200,000 followers assembled to hear his vision

► THE EARLIEST ACCOUNT OF A PILGRIMAGE— NASER-E KHOSRAW OF PERSIA, 1050 CE

This is an account of the umrah (minor pilgrimage), which however is the same as the start of the longer rituals of the complete hajj:

“For people who have come from faraway places to perform the Minor Pilgrimage, there are mile-stones and mosques set up half a parasang [about 3.5 miles] away from Mecca, where they bind their ihram. To bind the ihram means to take off all sewn garments and to wrap a seamless garment about the waist and another about the body. Then, in a loud voice, you say ‘Labayk Allahumma, labayk’ [I have answered thy call, O God], and approach Mecca. . . . Having come into the city, you enter the Haram [Great] Mosque, approach the Ka’ba, and circumambulate . . . always keeping the Ka’ba to your left shoulder [in other words, counterclockwise]. Then you go to the corner containing the Black Stone, kiss it, and pass on. . . . Afterwards you go to the Well of Zamzam, drink some water or rub some on the face, and leave the Haram Mosque. [After running seven times between Safa and Marwa] you find a bazaar with about twenty barber-shops facing each other. You have your head shaved and, with the Minor Pilgrimage completed, come out of the Sanctuary.”

—Michael Pearson

Source

Michael Wolfe, *One Thousand Roads to Mecca: Ten Centuries of Travelers Writing about the Muslim Pilgrimage* (New York: Grove, 1997), 22–23.

of an all-encompassing political, social, economic, and spiritual Islam. Delivering his sermon on Mount Arafat, Muhammad espoused a belief in one God, the equality of all Muslim believers, the sanctity of life, property and honor, women’s rights, and the notion of the Ummah, or Muslim, community.

The Holy Book, the Quran, recommends the hajj: “And proclaim that the people shall observe Hajj pilgrimage. They will come to you walking or riding on various exhausted [means of transportation]. They will come from the farthest locations.” Elsewhere it lays down that the “Hajj shall be observed in the specified months. Who-

ever sets out to observe Hajj shall refrain from sexual intercourse, misconduct, and arguments throughout Hajj. Whatever good you do, God is fully aware thereof. As you prepare your provisions for the journey, the best provision is righteousness. You shall observe Me, O you who possess intelligence.”

As the Muslim religion spread rapidly in the first century of its existence—that is, to around 730 CE—we can assume that increasing numbers made the journey to Mecca. However, we have no estimates of how many made the hajj in this period. The first travelog recording a hajj dates only from 1050. Figures from slightly later give us some indications. In 1279, 40,000 came from Egypt, and the same number from Iraq and Syria. In 1324 it was estimated that 15,000 believers from Africa south of the Sahara Desert came on hajj. It must be remembered, however, that the Muslim world at this time was much more constricted than was the case later. Even as late as 1000 CE, Islam had not spread far beyond the Arab world, Persia, North Africa, Iberia, and the area of Pakistan. Conversions in sub-Saharan Africa, India, and Southeast Asia were yet to come.

The pilgrimage to Mecca was obviously primarily a religious event. Those who had undertaken the long and dangerous journey to the Holy City were much esteemed on their return home and were entitled to give themselves the title of hajji, one who has done the hajj. Such people were treated with great respect. Those people who stayed in Mecca for some time, doing several hajjs and studying in the religious schools in the town, were even more influential. When they went home they taught others how Islam was practiced in Mecca itself. This served to standardize the faith. People all over the Muslim world tried to follow the rituals and practices of the authorities in Mecca.

—Michael Pearson

Bibliography

- Peters, F. E. *The Hajj: The Muslim Pilgrimage to Mecca and the Holy Places*. Princeton, NJ: Princeton University Press, 1994.
- Wolfe, Michael. *One Thousand Roads to Mecca: Ten Centuries of Travelers Writing about the Muslim Pilgrimage*. New York: Grove, 1997.

Santiago de Compostela and Other Christian Pilgrimages

By legalizing Christianity, Emperor Constantine opened the roads of the Roman empire to Christian pilgrims. His mother's identification of the places associated with Jesus's life in and around Jerusalem and his construction of large religious shrines in Jerusalem, Rome, and Constantinople facilitated the visitation of devout believers. Out of devotion to Christ and the saints or as a penance for sin, Christians journeyed from near and far to place themselves in the presence of the holy, to pray, witness miracles, and perhaps obtain a holy relic to take back home. Before leaving home, pilgrims received blessings from their family, friends, and clergy and made their last wills.

Jerusalem had long drawn pilgrims and remained the ideal destination. As the cult of saints developed, however, the pious were drawn to local and regional shrines where martyrs were buried or relics were displayed. Rome could brag Saints Peter and Paul, Alexandria (and later Venice) hosted Saint Mark, Compostela in Spain claimed Saint James, and Constantinople became a veritable warehouse of holy relics, especially those of the Apostles. Later saints developed their own cults that drew the faithful: Saint Symeon Stylites at Qal'at Seman in Syria, Saint Demetrios in Thessalonike, Saint Martin at Tours, Saint Martial at Limoges, Saint Brigid in Kildare, and Saint Alban in England. People often traveled hundreds of miles, usually on foot, to make their pilgrimage, and journeys could be long and hazardous. They shared the roads—often old Roman highways to major sites—with merchants, traveling clerics, and vagabonds. Pilgrims could fall prey to inclement weather, illness, accidents, and thieves. The wealthy could be arrogant and violent, and the poor could be demanding of their hosts along the way. Women travelers often met resistance from male-controlled shrines and houses of hospitality, and commentators warned of the dangers to women's virtue and very lives. Along major routes religious orders and their charitable patrons provided hospices, baths, chapels, and other accommodations. Pilgrims gained certain privileges such as free hospitality and ex-

▶ FEMALE PILGRIM FROM SPAIN IN JERUSALEM, CIRCA 400 CE

"On arriving at Gethsemani a suitable prayer is first said, followed by a hymn, and then a passage from the Gospel describing the arrest of the Lord is read. During the reading of this passage there is such moaning and groaning with weeping from all the people that their moaning can be heard practically as far as the city [Jerusalem]. And from that hour everyone goes back on foot to the city singing hymns, and they arrive at the gate at the hour when men can begin to recognize one another. From there, throughout the center of the city, all without exception are ready at hand, the old and the young, the rich and the poor, everyone; and on this day [Friday] especially no one withdraws from the vigil before early morning. It is in this fashion that the bishop is led from Gethsemani to the gate, and from there through the whole city to the Cross.

When they finally arrive before the Cross, it is already beginning to be broad daylight. There then is read the passage from the Gospel where the Lord is led before Pilate, and whatsoever words are written that Pilate spoke to the Lord or to the Jews, all this is read. Afterwards, the bishop addresses the people, comforting them, since they have labored the whole night."

—Joseph P. Byrne

Source

Egeria: Diary of a Pilgrimage, translated by George E. Gingras, 109–110 (New York: Newman, 1970).

emption from tolls, which led unscrupulous travelers to pretend to be pilgrims themselves. Towns along popular routes developed service industries to meet the pilgrims' needs for food, shelter, and health care, and churches developed their own collections of relics to draw the traveling faithful and their offerings.

Political and social changes could affect trends in pilgrimage. Islamic conquest of much of Byzantium ended Christian control of many sites; the conversion and rise of the Franks and conversion of the Anglo-Saxons and continental Saxons by Roman missionaries stimulated pilgrimages to Rome; Saracen threats in the Alpine

passes may have shifted tenth-century north-west European pilgrim traffic away from Rome to French shrines and Compostela; and the destruction of the Holy Sepulcher shrine in Jerusalem by Caliph Al-Hakim in 1009 reinvigorated the Latin West's interest in Jerusalem.

—Joseph P. Byrne

Bibliography

- Dunn, Maryjane, and L. K. Davidson. *The Pilgrimage to Compostela in the Middle Ages*. New York: Garland, 1996.
- Hunt, E. D. *Holy Land Pilgrimage in the Later Roman Empire, AD 312–460*. New York: Oxford University Press, 1982.
- Webb, Diana. *Medieval European Pilgrimage, 700–1500*. New York: Palgrave Macmillan, 2004.

Christian Pilgrimage to 1000 CE

Christian pilgrims made long and often dangerous journeys to place themselves in the physical presence of the holy. Their destinations included places where Jesus lived and taught, especially Jerusalem, where he suffered and died, and

places that contained the remains, or relics, of both holy men and women. The collection of bodily remains and objects used by these saints began early in the Christian era, amounting to a “cult of the saints” by late antiquity. Church fathers and clergy preached that divine favor was associated with the saints and that veneration of their relics pleased the saints who had God's ear. Just as Christians were drawn to the presence of living holy men and women, such as great preachers or wise hermits, so too were they drawn to the places sanctified by Jesus or to the relics of his saints.

Shrines of local martyrs drew the earliest pilgrims, but as Christianity was legalized and crystallized throughout the Roman empire, the devout sought other places of note. In the city of Rome, Emperor Constantine erected churches over the graves of the apostles Peter and Paul, and Pope Damasus turned the Colosseum and Christian underground cemeteries, or catacombs, into martyrs' shrines. Constantine's mother, Helena, traveled as a pilgrim to the Holy Land and had church-shrines built on sites associated with Jesus's life and passion, returning with precious relics for display and veneration. Reports of miracles, especially healings, associated with shrines circulated widely. Pilgrims were convinced that any object they brought into contact with saints' tombs, relics, or reliquaries that housed them became sacred and might have miraculous powers. Oil that was used in shrine lamps, water that was poured over a shrine, and even dust or dirt was collected, handed out, or sold at sites. Pilgrimage evolved into a penitential act, with pilgrims humbling themselves as they sought forgiveness from the divine Judge. Rituals and special liturgies developed at major shrines for the sake of pilgrims. Eventually monastic and cathedral churches began to collect relics, themselves becoming destinations for the pious, both local and foreign.

The most famous destination developed in the ninth century at Compostela in northwestern Spain around the purported grave of the Apostle James, or Santiago. Mid-tenth-century documents record visits by nobles, high clergymen, a Viking, and even an Armenian hermit, all

► GREGORY OF TOURS ON VISITING ST. PETER'S SHRINE

Gregory of Tours wrote of his visit to St. Peter's Shrine in Rome during the sixth century:

“He who wishes to pray before the tomb opens the barrier that surrounds it and puts his head through a small opening in the shrine. There he prays for all his needs and, so long as his requests are just, his prayers will be granted. Should he wish to bring back a relic from the tomb, he carefully weighs a piece of cloth which he then hangs inside the tomb. Then he prays ardently and, if his faith is sufficient, the cloth, once removed from the tomb, will be found to be so full of grace that it will be much heavier than before. Thus will he know that his prayers have been granted.”

—Joseph P. Byrne

Source

Gregory of Tours, quoted in Jonathan Sumption, *Pilgrimage* (Totowa, NJ: Rowman and Littlefield, 1976), 24.

of whom sought the saint's favor. After 1000 the land routes across southern France and northern Spain to Compostela developed into the most famous pilgrimage road of the Christian Middle Ages, dotted with monasteries, chapels, and hospices for the thousands who made the arduous journey each year.

—*Joseph P. Byrne*

Bibliography

- Dunn, Maryjane, and L. K. Davidson. *The Pilgrimage to Compostela in the Middle Ages*. New York: Garland, 1996.
- Sumption, Jonathan. *Pilgrimage: An Image of Medieval Religion*. Totowa, NJ: Rowman and Littlefield, 1976.
- Webb, Diana. *Medieval European Pilgrimage, 700-1500*. New York: Palgrave Macmillan, 2004.

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Politics and Statecraft

Theme 4: Politics and Statecraft: Introduction discusses governments, states, and empires in the Era of Expanding Regional Civilizations.

By the fourth century CE, the great majority of the earth's people were sedentary village agriculturalists, while a very small minority were nomadic hunters and gatherers. Although they occupied huge stretches of territory, such as Australia, most of Siberia, the deserts of southern Africa, and much of North and South America, few if any of the hunting and gathering bands had any sign of formal governing apparatus.

In large sparsely populated areas where there were no cities, most of the sedentary agriculturalists had only rudimentary governing institutions. They lived in nearly autonomous villages without the governing apparatus of states. Sometimes these villages were egalitarian, but often a chief dominated them politically. These chieftaincies were frequently hereditary, as was the case with the Celts, Germans, and Slavs beyond the frontiers of the Roman empire; most of the inhabitants of the African forests and the East African savanna; the Polynesians and other inhabitants of Oceania; and many of the indigenous agricultural peoples of the Americas.

These chieftainships became states when populations increased and their governance became so complex that professional administrators (bureaucrats) were required. States are defined as political entities that have formalized administrative systems for taxation or tribute gathering, the redistribution of state revenue, etc.: in other words, political systems with bureaucracies. Empires are large states that are themselves agglomerations of smaller states. They are often multicultural and multilingual political entities, created by military force.

States and empires needed armies for their defense or conquest, but soldiers could seldom organize and govern states without bureaucrats to collect taxes, administer the laws and decrees of the governing power, and organize and execute public works such as irrigation systems, defensive walls, and roads as well as palaces and monuments (to advertise the greatness of the governing power). In addition to an army and a bureaucracy, all successful states, to legitimate themselves and to envelop their ruler with an aura of the sacred, subscribed to an ideology, an organized religion. During this period all states were identified with a religion; there

In addition to an army and a bureaucracy, all successful states, to legitimate themselves and to envelop their ruler with an aura of the sacred, subscribed to an ideology, an organized religion.

were no secular states, not even China, as has been claimed by some historians.

Nomadic pastoralists, who inhabited the vast grasslands of the Eurasian steppe as well as the savannas south of the Sahara and the Arabian and Sahara deserts, usually traveled in small groups, governed by kinship bonds. Although they sometimes did coalesce into powerful tribal confederations, these usually proved to be ephemeral. Occasionally, however, they conquered the farming folk and became sedentary themselves.

The years from 300 to 1000 mark a fecund period for the formation of new states and empires. New states and empires grew by appropriating and refashioning the governing systems, the rules, customs, ideologies, and especially the bureaucracies of the fallen states that they replaced, or by absorbing, by diffusion, these elements from a successful neighboring state. It was not necessary to reinvent the basic elements needed for state creation. These elements emerged anew only a few times in human history: in the ancient Middle East, India, China, Mesoamerica, the Andes, and the West African Sudan.

In the year 300, the Roman and Sassanian empires dominated and contended for the western part of the Afro-Eurasian ecumene, the Guptas were creating an empire in India mimicking the model of the Mauryas and Kushans, and in China several ephemeral dynasties and kingdoms contended to fill the vacuum left by the downfall of the once mighty Han dynasty. In both Mesoamerica and the Andes, the elements of state building had been developed, and the first empires, Wari and Tiwanaku, were emerging. In Africa south of the Sahara, Axum and the Nubian kingdoms, inspired by examples from the Mediterranean region, were growing. In West Africa, city-states and kingdoms were also rising; whether as a result of outside example or because of internal dynamic is a question not yet resolved.

During the seven centuries of this period, many new states would rise, but all owed their creation to the examples of preceding or existing states. Successor states emerged when groups conquered parts or all of existing states, appropriating their governing systems and some of their bureaucratic personnel in the process, as was the case with the Germanic kingdoms, the Gupta empire, or the empire of Ghana. Other states, such as Japan, Kievan Rus, and Funan (Cambodia), emerged in areas where previously there had not been states, but they were able to build the elements of state governance by learning from the example of neighboring states. Usually these elements of governance were part of a transfer of culture that included a religion, such as Buddhism, Christianity, Islam, or an amalgam of Hinduism/Buddhism.

The Tang dynasty, one of the two early medieval superpowers, rose in a civilization where the elements of governance were well developed and deep rooted. Tang succeeded by overthrowing the Sui, which had united China after a three-and-a-half-century period of division, but the elements of governance that had developed during the Han and preceding dynasties survived in each of the fragments into which China had been divided. It was only necessary for the Sui and Tang to reassemble these elements, including the scholar bureaucracy and the Confucian

system. In addition, the Tang used their patronage of Buddhism to increase the legitimacy of their state.

The Muslim caliphate, the other early medieval superpower, was created by conquerors from the Arabian Desert, but it succeeded only by appropriating the governing systems of the vanquished Sassanian empire and the richest provinces of the Roman empire. In its first century, the caliphate used Persian and Byzantine administrators as well as the Persian and Greek languages for its government.

Most early medieval states and empires had similar anatomies. The heart and brain of these political organizations were the capital. There were located the ruler's family and household, the high bureaucracy, and the capital army together with the armaments makers, the poets who sang of the ruler's glory, the high clerics and monasteries that gave the state its spiritual legitimacy, and the thousands of servants and other people necessary for the care and feeding of all these important functionaries. Some early medieval capitals were very large. It is estimated that the Tang capital, Chang'an, housed up to 1 million people in the walls and perhaps as many outside, while Baghdad may have had in excess of 800,000 and Teotihuacan, the Mesoamerican metropolis, perhaps 300,000. East Asian capitals were planned on a gargantuan scale. The capital of Silla was said to have housed several hundreds of thousands, but Heian in Japan, modeled after Chang'an, never reached the enormous size originally planned for it.

The well-being of the capital came to be the chief concern of most states. The Tang dynasty constructed an elaborate canal system to transport food to Chang'an. The Persian Sassanian empire built its capital, Ctesiphon, not in the Persian heartland but rather in bountiful Mesopotamia, where it could be more readily supplied.

Besides the revenue-consuming capital, medieval states had a revenue-producing hinterland. Successful states were careful to maintain the health of the hinterland provinces by, minimally, maintaining irrigation systems and administering laws in a way that promoted stability. In addition, governments usually sought to secure the loyalty of the hinterland by supporting religious establishments and building monuments designed to reflect the ruler's magnificence.

Medieval states were also very concerned with their frontiers. The defense of frontier competed with the maintenance of the capital as a consumer of revenue, and because large armies were normally stationed on the frontier, it was always a source of danger for the central government. Ambitious frontier generals launched many great rebellions. Some of these rebellions, such as that of An Lushan in mid-eighth-century China, came close to toppling the regime. The rebellion of Arab armies in central Asia did overthrow the Umayyad caliphate and established the Abbasid caliphate in the mid-eighth century.

Empires varied in geographical configuration. Tiwanaku in the Andes, for example, resembled more an archipelago than a compact empire. The heartland of Tiwanaku was in the fertile area near the shore of Lake Titicaca, but the Tiwanakan metropolis sent out colonists to develop resources in a variety of ecological zones. These colonies were like islands in territory over which Tiwanaku did not exercise control.

All early medieval states and empires had a variety of groups who performed various functions. Most important were the revenue-producing classes, particularly the peasantry. The status of the peasantry ranged from free landowners to various degrees of unfreedom, including serfdom and even slavery. Some states, such as the Byzantine empire (ca. 750–1000) and the Tang dynasty in its early phase, drew copious revenue and numerous army recruits from their free peasantry and passed laws to protect their freedom. At other times and in other

States developed bureaucracies to collect taxes as well as to control and regulate the revenue-producing classes. These bureaucrats were professionals, such as those trained as Confucian scholar bureaucrats, as in China, or as members of the Christian clergy, as in western Europe or Ethiopia.

states, the peasantry was cruelly exploited, living on the edge of starvation in good years and visited by famine in years of scarcity. The Byzantine empire and the Tang dynasty both tried to maintain an independent landowning peasantry.

States developed bureaucracies to collect taxes as well as to control and regulate the revenue-producing classes. These bureaucrats were professionals, such as those trained as Confucian scholar bureaucrats, as in China, or as members of

the Christian clergy, as in western Europe or Ethiopia. As already stated, the Caliphate used Byzantine or Sassanian bureaucrats in its first century but after that relied increasingly on administrators educated in religious schools and trained on the job. In western Europe, where the elements of statehood developed in Roman times had atrophied to some degree, the bureaucracy was likewise weakened. Local landholders, churchmen, and warriors undertook many of the functions previously performed by government administrators.

The armies were another important group. In the larger empires, there were two kinds of armies: the capital army and the frontier armies. The frontier armies defended the empire against foreign invasion; the capital army defended the capital against rebellious frontier armies. In the times of their greatest military power, both the Byzantine empire and the Tang dynasty manned their armies with levies from the peasantry, but after the decay of peasant freedom, both empires increasingly recruited mercenary professional soldiers for their forces. In the Muslim caliphate during its Umayyad period, the soldiers were usually Arabs or converted Muslims who often served for religious reasons. Under the Abbasids, however, Arabs were increasingly banished from the armed forces, their places being supplied by mamluks, or slave soldiers, usually Turkish but often Slavic or African. From time to time the bureaucrats called in the army to suppress peasant uprisings. Nearly as often the armies intervened in politics, deposing rulers and elevating others.

The great landholders and the nobility were powerful interests in most early medieval states and empires, holding varying degrees of political power. Usually, they controlled political power at the local level, and often their lands and peasants were immune from taxation. Very seldom could a state impose its dictate on local areas without first negotiating with the local magnates, who often fielded their own armed groups and local militias. In medieval western Europe and in the Sassa-

nian and Gupta empires, the local landholders and soldiers were formally invested with political power over their areas, and the army of the ruler consisted largely of feudal levies led by the local aristocrats who, in western Europe, were often also powerful clerics.

The chief functions of early medieval states were always stated in religious terms, but the sociologic and economic functions were to maintain the status of the ruling group and to transfer wealth from the peasants, craftsmen, and merchants to the ruling group. Indeed, many states, such as the Germanic kingdoms, Kievan Rus, and the Muslim caliphate, started frankly as kleptocracies (thievery states) but soon, realizing that the revenue potential of their conquests depended on the prosperity of the conquest, assumed other functions. Defending against foreign invasion, keeping law and order, maintaining irrigation systems, protecting trade routes and markets, and supporting and promoting the official religion were all functions of the early medieval state.

All early medieval states embraced and supported an official religion; some, such as the Tang dynasty, supported a number of religions. These religions, whether Buddhism in East Asian lands, Hinduism in South and Southeast Asia, Islam in the caliphate, or Christianity in Europe, Ethiopia, and Byzantium, legitimated the state and enveloped the ruler in a sacred aura. In the early medieval age, there was no separation of church and state; each symbiotically supported the other.

All early medieval states had roughly similar life cycles. All states were strong and flourishing in times of prosperity. When the agricultural classes were healthy, when the bureaucracy functioned well, and when citizen soldiers under a vigorous government manned the armies, early medieval states thrived. But when rulers were weak, when civil war or wars of succession wracked the state, when mercenary armies became exorbitant in their demands, or when floods, droughts, and other disasters combined with official corruption to further injure the suffering peasantry, then rebellions, often led by religious sectarians, such as “heretical” Christians, Shias, or Daoists, erupted, leading to regime change.

The life spans of some empires in the Era of Expanding Regional Civilizations were short. Many lasted only a few generations. Others lived to an old age of almost 300 years, but few exceeded that. The Byzantine empire was a miracle of longevity, enduring until 1204 and then after its reestablishment in 1261 until 1453.

—Wilfred J. Bisson

■ Introduction: Sources of Political Power in the Early Medieval Age

In the period 300–1000 CE, many new states were established. Most of these new states grew out of chieftaincies, especially those that emerged in Inner Eurasia, West Africa, and

Mesoamerica. These chieftaincies became states by developing an institutionalized structure, with a professional bureaucracy and an institutionalized military force. These new states usually

imported their bureaucratic expertise from existing states. Missionaries from universal religions such as Christianity and Buddhism supplied this political capital by serving in the administration of the new states. Some new states that emerged on the ruins of collapsed empires, but some emerged from the fragments of established states and usually harvested the available political capital left by the defeated empire by employing the bureaucrats of the old empire. This was especially evident in the early Islamic caliphate, where the bureaucrats and the political apparatus of the defeated Sassanians and Byzantines were the foundation of the new Islamic empire's administration. In Tang China, which was the wealthiest and most populous and politically sophisticated state of the age, great efforts were expended in recruiting and training government officials. In the Tang system, officials were recruited through an elaborate examination system in which candidates were tested not only for their competence but also for their adherence to official cultural norms.

All successful early medieval states developed a governing rationale, or philosophy of governance. Usually this governing rationale was couched in religious terms and was part of the official religion of the state. The thrust of the governing rationale was that the state was divinely instituted, that the ruler of the state was enveloped in a sacred aura, and that loyalty and obedience to the state were religious duties for all inhabitants of the state.

This was true in China (where the emperor was believed to have been given a mandate from heaven) as well as in Muslim, Christian, Buddhist and other lands. Often, the founders of states consciously searched for a universal religion to provide this kind of legitimacy. Such was the case with the ruler of the Uighur empire, who decreed Manichaeism to be the state religion; the khagan of the Khazar, who urged his subjects to adopt Judaism; or the Slavic states of central and eastern Europe, which were proselytized by both Orthodox and Catholic missionaries. A similar process occurred in East and Southeast Asia, where the new states in Korea, Japan, and Southeast Asia sought to legitimize them by adopting Buddhism or, less frequently, Hinduism as their court religion.

In Mesoamerica a similar process was evident. The rulers of the Maya city-states also claimed a unique relationship with the gods. In the early medieval age, almost all states were kingdoms, ruled by hereditary monarchs.

Kingdoms, started by armies, institutionalized by bureaucracies, and legitimated by religions, could be fragmented by religious schisms or succession crises. Religious fissures were usually avoided by the enforcement of official orthodoxy and the punishment of heresy. Rules of succession, usually by the first son, were important for the unity of the kingdom, but often there was no accepted system of succession to the throne. This resulted in frequent wars of succession, as in Merovingian and Carolingian Francia.

To sum up, the principal supports for political power in early medieval states were

- 1) An army to seize or impose power. An army, it has been said, could conquer a kingdom but could not govern a kingdom.
- 2) A trained and professional bureaucracy to collect taxes, administer law, construct public works, etc. The bureaucracy was the key to governing.
- 3) An official religion to get support or acquiescence from the people and win legitimacy for the kingdom.
- 4) A system of orderly succession to power to ensure unity and prevent wars of succession.

—Wilfred J. Bisson

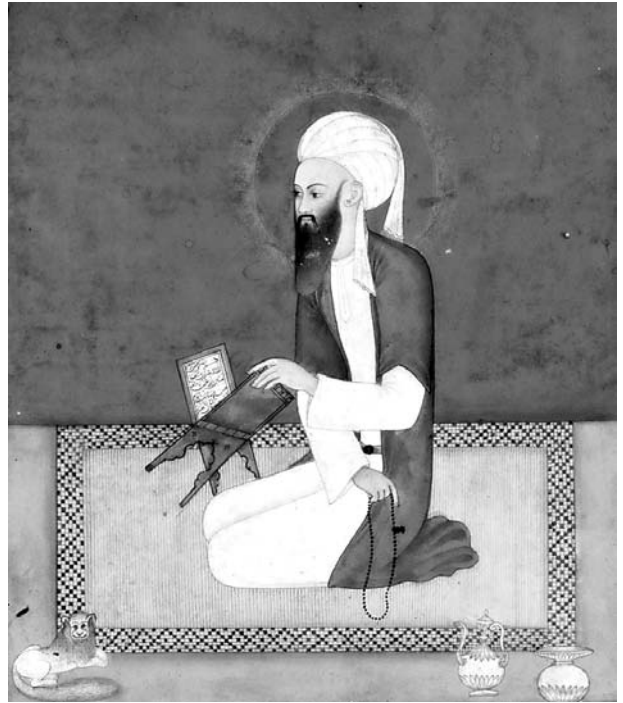
Muslim Political Thought, 632–1000 CE

At its height in the eighth century, the caliphate (from *khalafa*, “to succeed,” and *khalifa*, “deputy”) ruled over territories extending from North Africa to the Indus River, but its impact on the early medieval world was even larger. One only needs to consider the flow of goods and ideas between the East and the West and the resulting exchange among cultures to understand the impact of the caliphate on the early medieval world. Studying the political thought and practice in this large, prosperous, and dynamic entity requires a truly world-historical

context, as the caliphate integrated to its evolution the existing heritages and traditions of the late antique world.

The caliphate emerged after the death of Prophet Muhammad (570–632). The first four caliphs, all elected to the office, organized very successful conquests in Iran, Byzantine Syria, and Egypt and built the initial administrative and fiscal institutions of government. Success brought controversy and conflict. The first major rupture in the history of the caliphate was the first civil war (656–661), which led to the collapse of the Rashidun (the rightly guided caliphs) and the ascendancy of the Umayyads (661–750). The ostensible cause of the conflict was the assassination of the third caliph, Uthman, and the hesitation of the fourth caliph, Ali, to pursue the killers. However, a much more complex dynamic lay behind this simple *casus belli*. The early Muslim conquests, which in merely three decades slashed the Byzantine empire in half and exterminated the Sassanian empire, and its corollary socioeconomic transformation caused tension within the society on many levels. The civil war involved a manifold confrontation among the cultural, sociopolitical, and economic centers and the discontent periphery in a polity too rapidly expanding and changing.

The governor of Damascus, Uthman's clansman Mu'awiya, rose against Ali, demanding that the murderers of Uthman be brought to justice. The disagreement turned into military conflict, at the indecisive end of which Ali and Mu'awiya agreed to negotiate. However, the negotiation came to a stalemate, leading to the disillusionment of some of Ali's supporters. They questioned his sincerity and legitimacy. They maintained that he should not have negotiated with Mu'awiya had he thought he was right. They split from his ranks and thus were named the Kharijites, and they became a mortal enemy of both Ali and Mu'awiya. Ali was shortly assassinated by one of the Kharijites (the assassin targeting Mu'awiya was captured and killed), leaving Mu'awiya the *de facto* ruler; he was immediately announced caliph. The supporters of Ali rallied around his sons shortly after his death and formed the seed of the Shia political action during the Umayyad caliphate. Umayyads continued the conquests and reorganized the adminis-



Uthman was the third successor to Muhammad as head of the early Islamic community. The chief problem with which Muslim political thinkers wrestled concerned the legitimacy of the caliph, or ruler. Uthman's caliphate is viewed as illegitimate by Shia and other Muslim minorities. (Victoria & Albert Museum, London/Art Resource, NY)

tration to assert central authority and pacify the provinces.

Under the Umayyads the election gave way to succession. But as the second civil war in 684 shows, the succession dispute was problematic even within the Umayyad family. The Umayyad caliphs organized their administration, and the power of the caliphs increased. And so did the force of the opposition to them. It appears that the rhetoric of the political debate during the Umayyad dynasty focused on the key concepts of election versus succession (*shura* vs. *wiratha*). The Umayyads defended their right to appoint their successors from among their family members. The nonsectarian conglomerate of proto-Sunnis—for example, the broad community of faithful, the Kharijites, and the Qadarites, the supporters of freewill—demanded the return to election. Various Shia trends advocated the appointment of the one agreed upon from the family of the Prophet.

The third civil war brought the Abbasids to power (750–1258). The Abbasids, in reference to

THE NECESSITY OF IMAMS

“They have disagreed on the necessity of imamate and on searching for an imam and appointing him. The majority of our colleagues [Sunnis] from among the theologians, the jurists, together with the Shia and the Kharijis and the majority of the Mu’tazilis, has acknowledged the necessity of imamate and [agreed] that it was a religious obligation requiring obedience to whoever was appointed for it. [They also agreed] that the Muslims need an imam to execute their laws, implement verdicts, lead their armies, conduct the marriage transactions of slave girls, and distribute revenues among [the members of the community]. A small faction from the Qadariyya, such as Abu Bakr al-Asamm and Hisham al-Fuwati, disagreed with our colleagues. Al-Asamm claimed that if people refrained from harming each other, they could do without an imam. [On the other hand], Hisham claimed that if the community brought its word on the truth together, then it would need [to elect] an imam. However, if it rebelled, sinned, and killed the imam, it would not be necessary for the

people of the truth to institute an imam. [Baghdadi goes on:] The companions of the Prophet Muhammad have agreed in consensus on the necessity of the imamate. There is no value to Al-Asamm’s and al-Fuwati’s objections in this matter because of a preceding consensus to the contrary of their views. Religious law (*shari’a*) has brought injunctions that can be handled only by an imam or his appointee, such as the execution of verdicts on the free [members of the community]—notwithstanding the disagreement on the authority of slave owners to apply lawful punishments on their slaves—, and marrying girls who have no custodians according to the view of the majority of the community, and holding the Friday prayers and Muslim Festivals, according to the people of Iraq” (translation by author).

—Hayrettin Yücesoy

Source

Abd al-Qahir al-Baghdadi, *Usul al-Din*, Helmut Ritter, ed. (Istanbul: Devlet Matbaasi, 1928), 271.

the uncle of the Prophet Muhammad, Abbas, led a revolt against the Umayyads advocating the right of the family of the Prophet to rule. Once caliphs, however, they did not practice election. They excluded even the Alids from the caliphate and implemented a stricter line of succession. They alienated not only the Kharijites, who would almost disappear from the political scene after the middle of the ninth century, but also the Shia, who were their supporters during the third civil war. Even the more sympathetic proto-Sunnis and Mutazilites preferred to maintain mostly cordial but not overly supporting relations with Abbasid caliphs. The Mutazilite was a theological sect favoring rational reasoning and argumentation in religious thought. It emerged in the early eighth century and waned by the twelfth century but has nevertheless continued to exercise great influence on Islamic theology.

In retrospective, all caliphs until the demise of the caliphate in the middle of the thirteenth century were from the tribe Quraysh. The ascension to office was either by some sort of election, appointment by the ruling caliph, or

simply through military force. The caliph was appointed for life, and there was no particular constitutional law outlining his responsibilities and privileges clearly. This does not mean, of course, that he was a tyrant free to exercise whatever he wanted. He had to negotiate his authority with prevailing social classes, religious scholars, sectarian formations, military and administrative classes, and the political culture of his milieu. Certain qualifications (intelligence, good moral conduct, military prowess, physical ability to attend his duties, male, Qurashite in descent) were sought in the candidate, but there was no institutional oversight. Most of the time political necessities dictated the appointment of a particular individual to the office. It seems that political thought was greatly influenced by this historical practice whether in the form of adoption or counterargumentation.

As a result, the initial ideas on politics involved mainly subjects closely relevant to political legitimacy and the qualification of the ideal candidate. Among such matters were the problem of freewill and predestination (*qadar* and

jabr), the definition of faith (*iman*), the identification of the most meritorious of the earliest caliphs (*afdaliyya*), and the debate over election versus succession. Ironically, as the political power of the caliphate was diminishing in the middle of the ninth century, theoretical expositions of the caliphate began to emerge. Major intellectual traditions seem to have delineated the broad outlines of their political views by the eleventh century, among which one may isolate several distinct paradigms: Sunni legal paradigm, Shia discourse of imamate, Mutazilite rationalism, *siyasa* (or practical governance) expounded by Abbasid secretaries and belles lettres, and political philosophy.

The rise of the ulema (literally, the learned; technically, religious scholars responsible for elucidating religious law and theology) since the early eighth century was one of the most significant developments in medieval Islamic history. The ulema came to mediate between the caliphs and their subjects and represent the rights of the community against the power of the caliphs. In this role the ulema carried a great social and political weight. However, the ulema could not oppose the caliphate as illegitimate, for the legitimacy of all transactions, secular and religious, was tied to the caliphate. The ulema therefore stood in support of the historical caliphate even though they were careful to emphasize their independence from it and stress the distinction between the real caliphate (the period of the first four caliphs and/or the ideal theoretical caliphate) and kingship. They came to agree that the caliphate was based on religious law (Sharia) and by and large took for granted that political society was a religious necessity. They maintained that the caliph was in charge of enforcing mundane laws and the observance of religious ordinances. This was a principle intended to subordinate the caliphate to religious law.

According to the Sunnis, the caliph should be elected to office rather than being secretly appointed or divinely ordained. In this the Sunnis agreed with the Kharijites and the Mutazilites but fell apart from the Shia, who maintained that the incoming imam was appointed by the current, divinely sanctioned, and infallible one. The majority of the Mutazilites and the Kharijites saw the imamate as a rational necessity. But

many Mutazilites and Kharijites thought that the imamate was neither necessary nor religiously obligatory. For the Shia, it was a grace of God since he would not leave his creatures without guidance. Sunni political views were expounded in jurisprudential work, *hadith* (traditions attributed to the prophet Muhammad) collections, and the works of theology beginning with al-Ashari (945) in the tenth century. The most elaborate and far-reaching discussion of the caliphate from the Sunni-Juristic perspective was made by the jurist al-Mawardi (1058).

The *siyasa* genre (literature on practical ethics, mirror for princes, practical and moral advice to rulers) was initially associated with government secretaries since the middle of the eighth century but encompassed later diverse literature from various walks of life. The advice literature, deriving largely from the Sassanian imperial tradition and culture but also inspired by Greek tradition, aimed at advising rulers to improve their government and promote a courtly etiquette for appropriate royal conduct. The impact of this genre and its advocates on the practice of the caliphate cannot be overestimated. It was thanks to this genre that the caliphs were increasingly modeled on the Sassanian emperors, projecting a grandiose image aloof from their subjects, an almost divine or semidivine ruler. The egalitarian notion of *umma* (Muslim community) among the Sunni, Kharijite, and Mutazilite theorists was incompatible with the hierarchical social order and therefore drew the antagonism of the ulema to secretaries and their political views. This was a clash between religious egalitarianism and imperial social hierarchism.

Political philosophy seems to have fared differently compared with legal views and *siyasa*. It entered the Muslim purview along the Sassanian advice genre in the late eighth century onward and received courtly patronage most of the time but did not enjoy the popularity of either legal theories or *siyasa* genre. The pioneering translations from Greek into Arabic resembled more the advice literature and were circulated among court secretaries, although later it did not concern itself seriously with addressing ruling audience. This does not mean of course that the discussion of politics was solely theoretical. Politics emerged as a subsection of

the larger philosophical exposition on ontology, epistemology, and ethics, under the last of which it was studied as practical philosophy. Unlike Sunni theories, political philosophy envisioned political society as a natural and rational necessity emerging from the needs of human beings. They maintained that political society came into being step by step from the need of humans to live in a society, having laws and rulers to ensure steady and peaceful collaboration. Then philosophers theorized on ideal politics. A good illustration of this is the work of Farabi (951) who envisioned a perfect society (one of his political tracts is called *the Virtuous City*) under a philosopher-king.

—Hayrettin Yücesoy

Bibliography

- Black, Anthony. *The History of Islamic Political Thought: From the Prophet to the Present*. New York: Routledge, 2001.
- Crone, Patricia. *Gods Rule: Government and Islam*. New York: Columbia University Press, 2004.
- Lambton, Ann K. S. *State and Government in Medieval Islam: An Introduction to the Study of Islamic Political Theory; The Jurists*. New York: Oxford University Press, 1981.
- Mahdi, Muhsin. *Alfarabi and the Foundation of Islamic Political Philosophy*. Chicago: University of Chicago Press, 2001.
- Watt, W. M. *Islamic Political Thought*. Edinburgh, UK: Edinburgh University Press 1998.

Chinese Examination System in the Tang Dynasty

The civil examination system in China was more than just a test to determine qualified members of society for the civil bureaucracy. The government intended that the test serve several important social and political functions, including determining elite status within the empire, ensuring that the classic Confucian texts remain a vital part of Chinese governance, and using it as a method of creating an institutional elite who supported the idea of absolute power and as an attack on the hereditary aristocracy through the creation of a more fluid class of elites. The test thus represented the government's attempt to reorder the intellectual elite within China and to promote allegiance to the emperor at the expense of the powerful aristocratic families. The

success or failure of the various dynasties in achieving these goals depended on their ability to control the alternative means of entering the government outside the civil examination. While the Tang dynasty (618–906) was never able to fully prevent the hereditary elites from entering government service based on family origins, beginning with the Song dynasty (960–1279) the emperor was more successful in controlling the composition of the bureaucratic class.

Most scholars agree that the civil examination system originated in the Sui dynasty (589–617). The Tang, following their successful rebellion against the Sui, continued the system. The Tang viewed the system as a way of decreasing the power of the traditional aristocratic families in northern China. The Tang, however, failed to limit the yin privilege. The yin privilege allowed sons from high-ranking officials to enter the bureaucracy outside the civil examination system. It was only in the Song dynasty that the civil examination system functioned as the government originally intended. The Song closed alternative means of entering government as a means of moving more closely toward a merit-based system of choosing government officials.

Although all males in China were eligible to take the exam, in reality only those from wealthy families had the opportunity to pass the test. The nature of the exam, with its emphasis on memorization and orthodox readings of Confucian texts, required many years of study with tutors in order to confidently attempt the exam. This effectively prevented families that were not wealthy from preparing their sons for the exam. The exam consisted of five major categories, the most important of which were military strategy and the Confucian classics. The candidate had to compose strictly formatted essays that demonstrated a sophisticated understanding of the Five Classics and the other categories and their orthodox interpretations. The test varied considerably over time. At certain times poetry was an integral part of the exam, as the literati considered this skill an important part of Chinese culture. At other times the test focused more on skills that would aid the administration of the empire.

The test was theoretically intended to select qualified individuals for the bureaucracy, but its political nature cannot be understated. Emper-

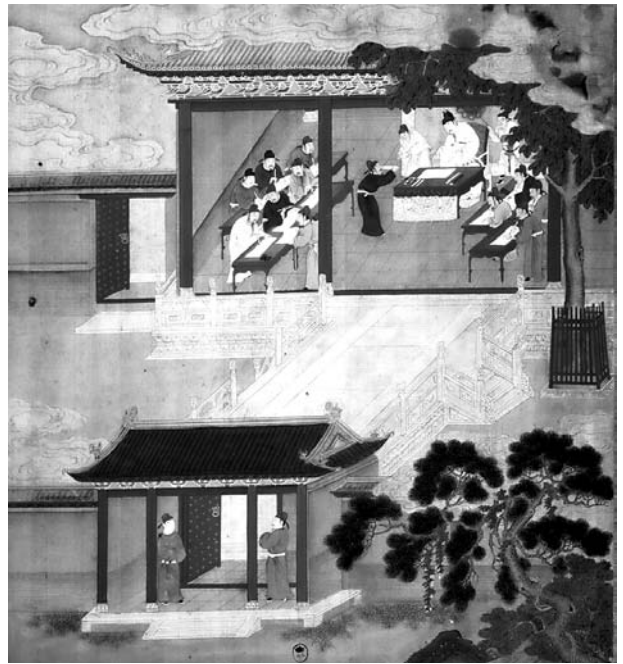
ors viewed the test as a method of fostering loyalty among the officials for the emperor. Since the emperor often made the ultimate decision on who did or did not pass the test, the official naturally felt some loyalty for the emperor. Empress Wu (624–705) best exemplifies this. Empress Wu, who was viewed as a usurper by many officials when she came to power, increased the number of candidates placed into official positions in an effort to stock the bureaucracy with officials who viewed her reign more favorably. Although Empress Wu is an extreme example, every emperor was aware of the loyalty that the exam system created.

The examination system lasted from its advent during the Sui dynasty until 1905. The exam functioned, for the most part, as an effective method of choosing the most qualified candidates for government service, but there are some criticisms of the system. As mentioned earlier, the number of people who could dedicate the time and money to preparing for the exam was extremely small. While it is true that over time the exam decreased the power of the traditional northern aristocratic families, for the most part it merely transferred that power to other elite families. In addition, the test encouraged the study of specific texts and rewarded specific interpretations of those texts, which some scholars have criticized as contributing to limiting unorthodox thought and as a method that encourages homogenization. Despite these criticisms, there is no doubt that the civil examination system contributed to the stability of the Chinese bureaucratic system and allowed for some measure of social mobility.

—Robert Williams

Bibliography

- Chaffee, John. *The Thorny Gates of Learning in Sung China: A Social History of Examinations*. Albany: State University of New York Press, 1995.
- Johnson, David G. *The Medieval Chinese Oligarchy*. Boulder, CO: Westview, 1977.
- Miyazaki, Ichisada. *China's Examination Hell: The Civil Service Examinations of Imperial China*. Translated by Conrad Schirokauer. New York: Weatherhill, 1963.
- Moore, Oliver J. *Rituals of Recruitment in Tang China: Reading an Annual Programme in the Collected Statements by Wang Dingbao (870–940)*. Leiden: Brill, 2004.



Chinese civil exam under Emperor Jen-Tsung (Song dynasty), from *The Lives of the Emperors of China*, Qing dynasty, seventeenth–eighteenth century CE. (Bridgeman-Giraudon/Art Resource, NY)

SELECTION PROCESS FOR CANDIDATES FOR EXAMINATIONS

The government intended the exam to select the best-qualified candidates to fill positions. In order to do this they have to ensure that the testing process was as free from bias as possible. The Chinese took extreme measures to ensure the anonymity of candidates throughout the process. The testers provided each person taking the exam with a number, which they were to use in lieu of their name on their exams. In addition, because calligraphy was an art form in China, each test was rewritten by a third person. The rewriting of exams ensured that testers could not recognize the handwriting of the candidates. Despite these extreme measures, the testers were often charged with corruption. Many believed that the use of certain phrasing by candidates placed them within particular examination schools and therefore violated the anonymity the process promoted. Whether this was true or not, it remains clear that the Chinese went to extraordinary lengths to ensure that the best candidates were selected.

—Robert Williams

Ideological Legitimation of Imperial Power in Byzantium to 1000 CE

The early eastern Roman, or Byzantine, emperors inherited existing Roman ideas of power and its legitimation. Some of these derived from Roman law, especially the belief that the people had transferred its power to the ruler and the twin ideas that the prince was not bound by the letter of the law but was supposed to set an example by respecting its tenets. Another Roman inheritance was the military foundation of imperial authority, the heritage of Julius Caesar and other warriors who rose to power through military victories. Early emperors were called Augustus (for the first emperor) or *imperator* (literally “commander-in-chief”), the title accorded a victorious general in the early Roman Republic. To these Roman concepts were added Eastern elements as the empire became increasingly Greek. These included elaborate ceremo-

nial, bright robes, impressive throne rooms, and the Greek title *basileus* (king) that largely displaced the Latin titles originally in use. The Greek title *autocrator* (literally “one’s own master” or the one who rules by his own authority) was also used to claim unique power for the ruler. Christian elements, especially those derived from Constantine and his fourth-century successors, gave the emperor an air of sanctity and authorization by God. Theodosius I, who rose to power by appointment, was seen as vice-regent of God on earth; Leo III described himself as “the Vicar of Christ.” The title *isapostolos* (peer of the apostles) acknowledged the emperor’s special relationship to the Church in which he had a strong but not unlimited power. The ruler called Church councils and appointed bishops, including the patriarchs. This position of power did not exempt the ruler from accepting orthodoxy, and he was supposed to respect the patriarchs, especially the patriarch of Constantinople, the most important of the Eastern patriarchs and the chief rival to the bishop of Rome for first place in the Church.

The ruler nominally was elected but not in the modern sense of a political election. This election, or calling out, might be done by a reigning emperor (one’s father or other relative), who, following precedents from ancient Roman times, crowned his heir in his own lifetime; the army; the populace; or the Senate. (The populace could be fickle in this acclaim, as Justinian I learned during the Nike Riots of 532.) Whatever the source of an emperor’s election, all of the latter three were supposed to come together in the ceremonial entry of a new ruler into Constantinople through the Golden Gate. This ceremony was based on a Roman triumph, and the ruler was hailed as a victor over Rome’s enemies. The populace acclaimed the ruler, and the Senate (an assembly of notables with little other power) was expected to add its ratification. A coronation rite was introduced early, and the patriarch usually officiated. Only very late in the empire’s history was a rite of anointing, probably modeled on Western ceremonial traditions, added to this ritual.

The elective rites might be rendered unimportant if the emperor crowned his heir as co-ruler. Some rulers, especially those who rose to



Byzantine fresco depicting Emperor Constantine the Great (306–337 CE), from Karanlık Kilis, Turkey, twelfth century. The halo surrounding the emperor signifies the divine favor that the Christian ruler brings to the empire. (DeA Picture Library/Art Resource, NY)

► LEGITIMIZATION OF BYZANTINE IMPERIAL POWER

The Byzantine empire, like the Roman empire before it, had no strong sense of predetermined succession to the position of emperor. Emperors might be succeeded by their children or other chosen heirs, but usurpers could arise, usually from the armies. Those who were successful could be legitimized through acclamation by military commanders or approval by the Senate. Acclamation was a constituent part of the elevation of any emperor, reflecting the military origins of the imperial office. Eventually acclamation was supplemented with coronation by the patriarch of Constantinople, head of the Orthodox Church, the ceremony shifting from public places such as the Hippodrome to Hagia Sophia, the principal church of the capital. The legitimization of a usurper differed little in this respect from the accession of a legitimate ruler. The successful military usurper

held a triumphal procession into Constantinople, entering through the Golden Gate. (Victory was treated as a sign of divine favor for the usurper.) Public games and private celebrations accompanied the coronation, while a genealogy might be forged, as in the case of Basil I in 867, to buttress the new regime. Marriage into an existing imperial line was also useful. John Tzimisces married a daughter of Constantine VII after his coronation in December of 969 in a bid for legitimacy. Tzimisces also humbled himself before the patriarch of Constantinople. Tzimisces had murdered his uncle, Nicephorus II, himself a usurper, who had both married the widow of Romanus II and become guardian of his children. These children eventually succeeded as Basil II and Constantine VIII.

—Thomas M. Izbicki

power as military leaders, deposing and killing off a former emperor, often gained legitimacy by marrying into an existing imperial line, wedding an heiress or a widowed empress. Co-rulers were sometimes recognized when an heir was a minor, and an adult might be crowned to rule until the heir reached maturity. All of these factors are illustrated by the minority of Basil II. Nicephorus II Phocas married the widowed Empress Theophano, Basil's mother. John I Tzimisces, who murdered Nicephorus, was forbidden to wed his widow, so he exiled her but kept Basil and Constantine, his brother, until his own death. Only then did Basil and Constantine take power together. In some other minorities, the mothers of young rulers served as regents. The Empress Irene decided to retain power by deposing and blinding her son, Constantine VI. However, the new emperor came to power, and he accepted the robes and pomp of office, dazzling visitors with the majesty of the New Rome. His reign was expected to last until death, but death could come early through war or murder. Other rulers were deposed and mutilated, usually—as Constantine VI was—by blinding to prevent their regaining power. Titles and ceremony did not protect the emperor from the hazards of holding power.

—Thomas M. Izbicki

Bibliography

- Barker, Ernest. *Political Thought in Byzantium from Justinian to the Last Palaeologus*. Oxford, UK: Clarendon, 1957.
- McCormack, Michael. *Eternal Victory: Triumphal Rulership in Late Antiquity, Byzantium and the Early Medieval West*. Cambridge: Cambridge University Press, 1986.
- Runciman, Steven. *Byzantine Civilization*. New York: Meridian Books, 1956.

Church, Army, and State in Byzantium

The interaction among the emperor, the army, and the Orthodox Church created a swirling political dynamic in Byzantium from the inception of the eastern empire in the fourth century through the beginning of the thirteenth century. Emperors and empresses needed an army made loyal through good pay or choice land and played church factions against each other, always with an eye to the army's reaction to the religious controversy. More than once, an emperor or a theologian put forward the idea that the political realm (*imperium*) and the religious realm (*sacerdotium*) represented parallel commissions from God, one to care for bodies and



Emperor Justinian I and his retinue of officials, soldiers, and clergy. Church and state in the Byzantine empire were intimately entwined. The Byzantine emperor was supreme and regularly appointed and deposed bishops and other church officials. (Archivo Iconografico, S.A./Corbis)

the other to care for souls. In the case of Byzantium, however, parallel lines often met.

In the fourth century, Constantine saw the advantage of a united Christian Church and used the political means at his disposal against dissension. Less noticed but perhaps as important as his willingness to banish an uncooperative bishop was his sending of imperial troops against a group of North African schismatics, the Donatists. From the beginning, then, emperors would use the army to end church controversy if necessary. Constantine was also the first to support the Church through a building program, a primary way of exercising influence in the ancient and medieval worlds. The emperors after Constantine further tightened the relationship between Crown and miter by turning the power of law against non-Christians, whether Romans, Greeks, or Jews. Constantine's sons initiated the practice, and in the fifth century Theodosius further encoded it into law. The greatest example of legislating on behalf of the church is Justinian's work in the sixth century, whose reign marks the closest relationship between church and throne. Justinian was determined to root out paganism and, for example, banished the philosophers from Athens in 529. In an attempt to reconcile the still smoldering Monophysite controversy, he also called the fifth

ecumenical council, that of Constantinople, in 553. As the preceding examples show, the emperor acted in church affairs by calling councils and exiling bishops. Often motivated by political agendas, imperial assertiveness in theological controversy at times caused the convocation of an ecumenical council that reversed imperial positions. The quasi-clerical privileges enjoyed by the emperor complicated matters. So, for example, the emperor could enter the church sanctuary, but the laity could not. He also received the Eucharist in the same manner as the priests, could bless the congregation, and could even preach, which Leo VI frequently did.

Imperial endeavors in doctrinal matters sometimes led to more serious upheavals. Heraclius's (d. 641) attempt to resolve the monothelite issue (a failed compromise between Monophysites and diophysites) with his *Ecthesis*, supportive of monothelitism, in 638 was met by the opposition of Maximus the Confessor, who in 646 in North Africa preached so effectively that Gregory of Carthage proclaimed himself emperor. His attempted usurpation was crushed as soon as it began, however, by the advancing Arab empire. The intrigue continued as Constans II sent Olympius to arrest Pope Martin of Rome, who not only opposed monothelitism but also took the papacy without imperial approval. Olympius, however, chose to revolt and separate Italy from Constantinople. He also failed, and the pope was brought to Constantinople for trial. The iconoclastic controversy also showed the intimate connection between church and throne. Emperor Leo III, attempting to control the church and centralize the state, forbade the worship of images in 725. Empress Irene, however, pressed for the Second Council of Nicaea, the last of the Seven Ecumenical Councils, that met in 787 and fervently defended the use of images. A century later, the *filioque* controversy left Ignatius and Photius, competing patriarchs of Constantinople, with alternating periods of royal support.

From the time of the first great doctrinal controversy, Arianism, and the first ecumenical council at Nicaea in the fourth century, the power of the monks to influence the people had to be taken very seriously. Later, from the eighth through the tenth centuries, monasticism was a

force to be reckoned with economically and politically as well as doctrinally. Monks stood to lose the most in the eighth century when Leo III sought to outlaw images, and they resisted him fiercely. In addition, the monasteries had acquired large tracts of tax-exempt land, and their lifestyle often seemed anything but impoverished. When the plague reduced Asia Minor's population by a third in the mid-eighth century, Constantine V Copronymus's anger raged against them not only for their worship of icons but also because monasticism represented the loss of so many able-bodied men from the army and the economy. As the iconoclastic controversy continued over the next century, leading monks insisted that the emperor did not transcend divine law, and their disdain did not stop there. The moechian (from the Greek word for "adultery") controversy at the end of the eighth century pitted Constantine VI against them. The conflict, along with tensions over images, continued into the next century, led by the formidable opposition of the famous monk Theodore the Studite.

An objective of imperial ecclesiastical policy was the loyalty of the military. Heraclius and Constans II saw revolts arise around their monothelite agendas. Constantine V had a similar hatred for all things associated with icons that also was born from military conflict. He had been defeated by his brother-in-law, the iconodule Artavasdos. Upon repairing to iconoclastic Anatolia, Constantine found men at the ready to join him in renewed attack on his nemesis. When Constantine defeated Artavasdos and took the throne in Constantinople, he had learned two things. The first was an even more visceral antipathy toward icons that led him to persecute monks viciously, and the second was a lesson in the strength of those who venerated icons. Yet this was also a man who wrote at least 13 theological treatises and perhaps held his iconoclasm with some sincerity. Later, the empress Irene, who restored the use of icons upon assuming the throne, put down a revolt of the overwhelming iconoclast Anatolian Army. She then attempted to purge the army of iconoclast foes but succeeded only in generating more rebellion.

The success or failure of imperial military expeditions was often seen as a sign of divine

favor or disapproval. Heraclius supported his monothelite initiative by appealing to his victory over the Persians, and Leo V interpreted military defeats as God's punishment and advanced iconoclasm as the cure. Leo was not alone in this opinion. The army and the Constantinopolitan aristocracy also looked at the military success of iconoclast emperors and the defeat of iconodule rulers as God's judgment on the issue. Leo made no secret of his desire to placate his warriors, and the decree of the episcopal synod that he convoked in 815 stated plainly that the empire did well until a woman (Irene) took the throne and restored the veneration of images.

Maintaining the army's loyalty was critical to the emperor's power, and pay was often at the heart of the issue. Military pay was problematic from the time of Diocletian due to inflation and shrinking revenues. As imperial lands shrank from the sixth through the eighth centuries, Persian and then Arab conflict did not permit a proportional reduction in the size of the army. In 602, Emperor Maurice was deposed and executed by Phokas, a military leader at the Danube whose troops already had ceased their loyalty in the face of military economizing. Heraclius, his successor by yet another rebellion, cut pay again, although he was able to maintain loyalty and defeat the powerful Persians. The army was reorganized in the seventh century into units called themes and later into tagmata. By this time the practice of paying the soldiers with parcels of land had rendered the army sufficiently self-supporting to enable ambitious commanders to mount frequent revolts. On the other hand, now that soldiers had their own land, probably former imperial estates, they had incentive to defend the borders valiantly. Constantine V's creation of the tagmata helped slow the revolts. His rival Artavasdos was leader of the Opsician Theme. Constantine divided this formidable and often mutinous force into three units called tagmata. Their increased mobility provided tactical advantage, and resulting victories increased their loyalty to the emperor. Continued victories and reconquered territory provided both wealth and men to expand the military, which it did somewhat robustly from the eighth through the tenth centuries, especially toward the end of the

tenth century. By the start of the eleventh century, the state treasury enjoyed a large surplus. Through the ninth century, the emperors and the army became more closely allied, and the emperors often named Anatolian aristocrats to military posts. Not only were such men the most capable leaders, but they also shared the imperial interest in military might.

The tenth century saw the ascent of John Tzimisces to the throne. It was he who remarked that God had entrusted souls to church and bodies to empire, another way of saying what Constantine and Eusebius had said at the outset of the eastern empire. Orthodoxy, and consequently Byzantium, saw the human experience organically. Church and state *were not* separate because both were reflections of God's divine governance of all that exists through God's having created it. Church and state *were* separate because both had

distinctive realms over which they ruled. In either case, the army mattered greatly.

—Gerald S. Vigna

Bibliography

- Geanakoplos, Deno John. *Byzantine East and Latin West: Two Worlds of Christendom in Middle Ages and Renaissance*. New York: Harper and Row, 1966.
- Mango, Cyril, ed. *The Oxford History of Byzantium*. Oxford, UK: Oxford University Press, 2002.
- Norwich, John Julius. *Byzantium: The Early Centuries*. New York: Knopf, 1989.
- Ostrogorsky, George. *History of the Byzantine State*. Rev. ed. Translated by Joan Hussey. New Brunswick, NJ: Rutgers University Press, 1969.
- Treadgold, Warren T. *A Concise History of Byzantium*. New York: Palgrave, 2001.
- Treadgold, Warren T. *A History of the Byzantine State and Society*. Stanford, CA: Stanford University Press, 1997.

■ Introduction: Sub-Saharan States

The Nubian kingdoms were the most venerable states in Africa south of the Sahara. They developed out of the ancient civilization of Kush. The two Christian Nubian kingdoms and Allodia, situated on a 600-mile stretch of the Nile River south of Aswan, were, like their Kushite predecessors, culturally connected with the Mediterranean world and maintained their independence for nearly 1,000 years.

Ethiopia was another African state with roots in the classic era. In the first part of our era, Axum, as Ethiopia was then known, flourished as an important anchor for the African trade with India and the Mediterranean, but after 650 CE, defeats by the Muslim Arabs drove the Axumites from the coast to the Ethiopian highlands, where they developed their unique medieval Ethiopian civilization.

In the grasslands of the western Sudan, the development of camel-borne trans-Saharan trade with the Mediterranean region stimulated the emergence of the empires of Wagadu (Ghana) and Kanem. Wagadu, located north of the upper Niger River, is thought to have emerged about

the fourth century CE, while Kanem, situated near Lake Chad, was much younger than Wagadu, arising probably not before the eighth century.

In the forested areas of West Africa, small city-states were emerging in this period. Ife, the mother city of Yoruba land, was one of the most important of these, but there were others such as Igbo-Ukwu, which was the capital of the shadowy Nri kingdom that dominated the Igbo (Ibo) people. This was the springtime of city-state building in the Guinea forest. For a stretch of the West African forest extending through the Niger Delta and westward for more than 1,000 miles independent city-states were emerging by the middle of this period (700 CE).

On the Swahili coast of East Africa another group of city-states emerged in the latter part of this period. In response to the stimulus created by increasing Indian Ocean trade, coastal Bantu villages grew into wealthy cities, of which the Lamu archipelago island cities, Shanga and Manda, were most important. These cities were independent states ruled by native kings.

Throughout Africa south of the Sahara, the period 300 to 1000 CE witnessed a steady increase in population as a result of the introduction of Asian crops. By the end of this period, Africa south of the Sahara had reached a population density sufficient for the creation of small kingdoms throughout the region. That would take place in the subsequent era.

—Wilfred J. Bisson

Bibliography

Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600-900 CE*. Philadelphia: Xlibris, 2003.

Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.

Africa's Role in Early Medieval World History

While Westerners are tempted to view African culture and history in monolithic terms, experts in African studies point to the enormous diversity that Africa presents. It has been said that there is as much diversity among, for example, the Tuareg of the Sahara Desert, the Ibo of the Nigerian cities, the merchants of the Swahili coast, and the Ba-Twa hunter gatherers of the equatorial forest as there is in the whole of the Afro-Eurasian ecumene, which includes Europe and North Africa, as well as West, East, South, and Southeast Asia.

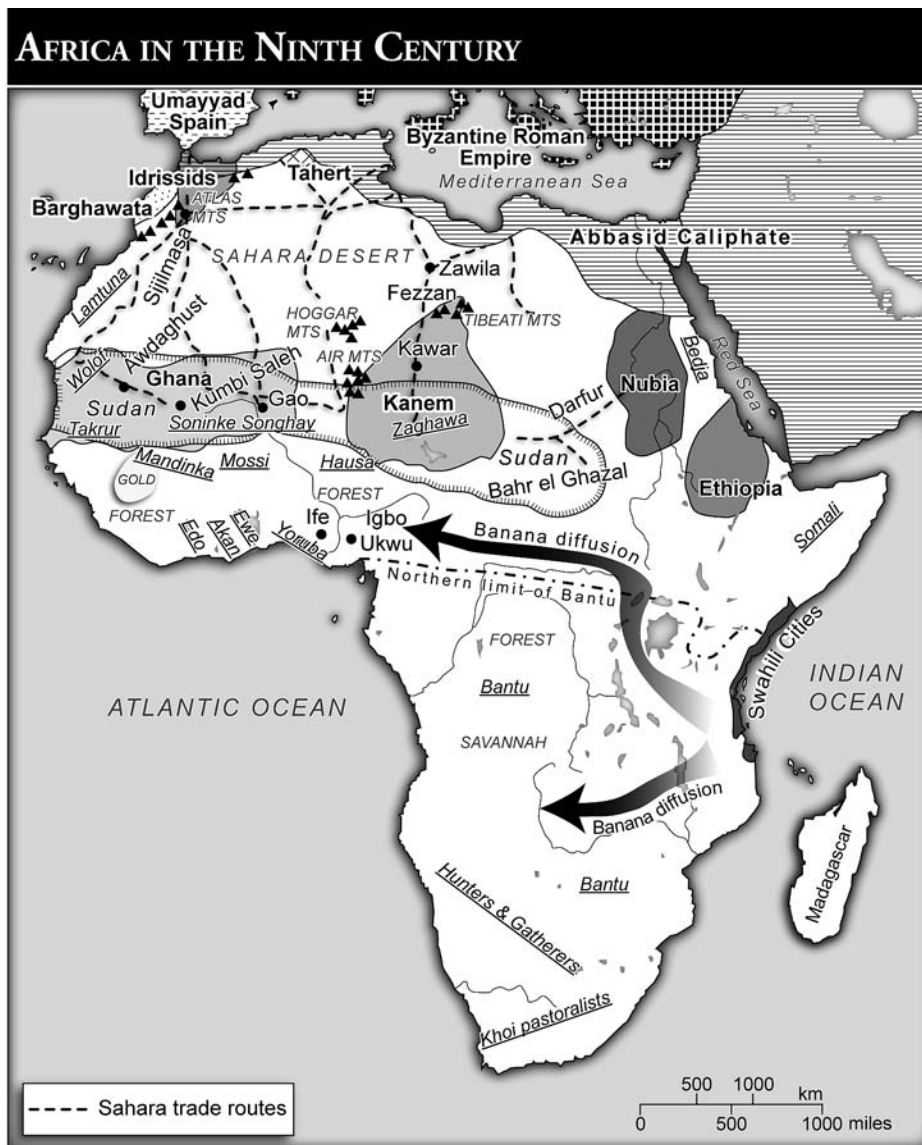
The greatest divider in African historical geography is the vast Sahara Desert that, as effectively as a great ocean, isolated Mediterranean Africa from the lands to the south of the great desert. Culturally and historically, Mediterranean Africa was part of the Afro-Eurasian ecumene, the collective of interacting peoples that spanned the Eastern Hemisphere, diffusing technologies, religions, mythologies, and folkways. African peoples south of the Sahara were, for the most part, cut off from the ecumene and had the freedom to develop in their own solitudes.

However, in the early medieval age, contacts with the Afro-Eurasian ecumene began to grow and produce changes in both western and eastern sub-Saharan Africa. When, in the early centuries CE, the Berbers of North Africa acquired

camels, camel nomadism spread throughout the Sahara Desert; by 300 CE, trans-Saharan trade developed apace, stimulating the formation of kingdoms and then empires in the grasslands south of the desert. By the mid-seventh century, Berber merchants, newly converted to Islam, brought their religion to the new trading cities south of the desert. In time, but mostly after the first millennium CE, the population of the western Sudan became Islamized and influences from north of the Sahara began to infiltrate the region. But these influences disseminated much more slowly to the forest peoples south of the western Sudan who continued to develop according to their internal dynamics.

In the eastern horn of Africa, a different narrative unfolded. The Nubians on the Nile as well as in the Ethiopian highlands had for centuries been influenced by Mediterranean culture. They converted to Christianity early in the medieval age, but the proof of their resistance to external influences is that the Muslim wave was unable to convert them until after this period. Even today, many of the Ethiopian peoples remain Christian. From 300 to about 650 CE, the Ethiopians were intimately involved in oceanic trade, sailing to India and to Egyptian ports on the Red Sea coast. But when the Muslim Arabs seized control of Indian Ocean trade, the Ethiopians withdrew to their highlands and hermetically sealed themselves from foreign experiences.

The external currents that most radically changed much of sub-Saharan Africa during the first millennium CE emanated from Indonesia and Southeast Asia and were carried on the crafts of the Austronesian settlers of Madagascar. These Austronesians brought with them Southeast Asian crops and culture: sugar, rice, Asian yams, and taro as well as many other crops, though the most important crop was bananas. The Austronesians who brought these crops to Madagascar also apparently brought them to the East African coast, where the coastal peoples eagerly cultivated them. Over the centuries, these Asian food crops spread from people to people, until by about 1000 CE, most of the peoples in the forested parts of the great lakes region, the equatorial forest, and forested West Africa relied on them for the bulk of their food. These new sources of abundant nutrition, especially



bananas, produced a population increase that led to larger settlements and the formation of states and kingdoms.

The histories of sub-Saharan African peoples are only now being pieced together, whereas the histories of Mediterranean African peoples during the early medieval age are well documented. Most of the sub-Saharan peoples preserved their histories orally, often by a group of specialists who served as official rememberers. But in the nineteenth and early twentieth centuries the catastrophe of European conquest destroyed many sub-Saharan African states, devastated their culture, and disrupted their traditions. Such a situation causes great difficulty in

reconstructing the pasts of those who were once thought of as people without history.

—Wilfred J. Bisson

West Sudanese Empires

In the broad area south of the Sahara Desert and west of the Nile Basin, two areas became the focus of large-scale state building after 300 CE. In the far western part of the area two rivers, the Senegal and the Niger, provided the economic and transportation base for the political developments. Farther east, the development was more focused because the Chari-Logone river system

empties into Lake Chad, which became the sole major focus of state building.

North of the Senegal River, the Soninke empire of Wagadu arose about the third or fourth century CE. The ruler of the empire was called the Ghana, and historians have often used that name for the empire as a whole. The empire was created when a number of smaller localized states were absorbed by the growing power of the Soninke.

The driving economic force behind the empire was the renewed trade across the Sahara. Two things sparked this renewal for trade: the products and the means of transport. The camel had been introduced by the Berbers of North Africa in the third or fourth century. Wagadu was able to control the trade in gold and salt. The source of the gold was located in Bambuk and Bure to the south of Wagadu. The source of the salt was Taghaza. Neither source was located in the empire, but control of these goods was essential for controlling the trade and providing the taxes necessary for the empire.

Wagadu reached its zenith of power in the ninth to eleventh centuries, at which time its main trading partners were Muslims from North Africa. The capital of Wagadu, Koumbi-Saleh, consisted of two cities separated by a road six miles long according to the Arab historian al-Bakri. Koumbi was the location of the palace of the king and where the Soninke lived. Saleh was where the Muslim traders lived. It contained 12 mosques. The separation was an indication of the ambivalence of the Ghana toward his Muslim guests.

The Soninke were matrilineal, and on the death of the Ghana his sister's son became the new Ghana. The royal palace was located within a grove of trees in the middle of Koumbi. The ancestral rulers were buried in the forest, indicating that the Ghana was at the center of a still powerful Soninke religion. It was perhaps because of the strength of the indigenous religion and culture that the Ghana never fully accepted Islam and attempted to keep the Muslims at a distance.

The decline of Wagadu began with a conflict between the Soninke and a Muslim reform movement, the Almoravids or Al-Murabitun. The Al-Murabitun was a warlike movement focused on purging Islam of recent heresies. They came

➤ A USABLE GENEALOGY AND A NOTE ON DATING

By the time of the contact between the empire of Kanem and the Muslim world in the 800s CE, the Abbasid revolution had already taken place. It became important for the rulers of Muslim states to establish their proper credentials to rule the country. These credentials were defined as Shari-fian descent. That is, to be the ruler of a Muslim state one should be able to trace one's descent from Muhammad.

During the initial period of contact with the Muslims the Mai or ruler of Kanem was not required to be Muslim, nor did it matter to the Mai. After some centuries of contact this requirement became important, but a problem arose. If the line of the Mais only stretched back to the 700s CE, then there were multiple appropriate male founders available. The line could be connected to the line of the Prophet via a mythical concubine who had a son with Muhammad, Ali, Hasan, Houssein, or others, so we must ask why that connection was not claimed. The answer must be that it was not believable. It was not believable because the people of Kanem knew that the kingdom was already established before the Prophet was born.

To resolve that issue the Muslim scholars in Chad found an ancestor who lived in the proper period and filled most of the conditions, Sef or Saif ibn Dhi Yazan. Later, as time passed, the oral historians of Kanem gradually forgot the names of lesser rulers, much like people today do not remember the names of obscure presidents yet still know that the United States was founded in 1776. In this way the remembered rulers when finally recorded in writing only stretched back to the 700s.

—Douglas E. Saxon

into conflict with the Soninke in 1062. According to sources from the period, the Ghana could field an army of 100,000 knights. The war lasted several years, and according to tradition the Al-Murabitun eventually defeated the Soninke. Wagadu declined in power, and its constituent states began to fight for control of the trade.

In the middle to latter half of the sixth century CE the kingdom of Kanem was founded northeast of Lake Chad. The people of Kanem, speakers of a Saharan language, had been spreading to the south and west for centuries

after the northern section of Lake Chad dried out. As the lake dried out the people gradually shifted to a more nomadic lifestyle based on cattle herding. They encountered a settled people who had been living in cities since the last millennium BCE. These interactions come to us as the myths of the So or Sao, whom the people of Kanem described as giants possessed of superhuman strength and powers. Over centuries of trade, warfare, and intermarriage the people of Kanem settled and established an agricultural state.

The first Mai or ruler of Kanem was called Sef and was reputed to be Saif ibn Dhi Yazan from Arabia. His capital was established at Njimi. The state followed the typical Sudanic model. The ruler was regarded as divine and the leader of a state sect that was focused around a relic called the mune. In the thirteenth century conflicts between the local religion and Islam would have major consequences for Kanem, but during this period there were no problems like those faced by Wagadu farther west. For the early rulers, frequently all that is known is the clan of their wives, indicating the importance of that connection and a relatively important position of women in the society.

By the late 800s Kanem was in contact and trading with the Muslim Khariji emirates in North Africa. This is the date of the first contact between Kanem and Islam. The Khariji, or Kharijites, were heterodox Muslims. Mosques built in Kanem dating to this period use a peculiar type of minaret called a staircase minaret, unique to the Kharijis. There are also reports that merchants living among the Khariji were able to speak the language of Kanem because of their trade activities. By the end of the first millennium CE, the Mais of Kanem had converted to Islam.

In this area the major trade item was slaves, who were traded for salt and other goods. By 909 CE the Kharijis were replaced by the newly established Shia Fatimid state, which continued the trade. Throughout the remainder of the period to 1000 CE Kanem continued to grow and prosper, developing a large slave-trading network to the south and continued connections to the north. The height of power would be reached in the thirteenth century under Du-

nama II Dibalami, who extended the state into the desert as far as the oasis of Bilma.

—Douglas E. Saxon

Bibliography

- Bovill, E. W. *The Golden Trade of the Moors*. London: Oxford University Press, 1958.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.
- Lange, Dierk. "The Chad Region as a Crossroads." In *General History of Africa*, Vol. 3, edited by M. El-fasi. London: UNESCO, 1988.

Ethiopian Political History

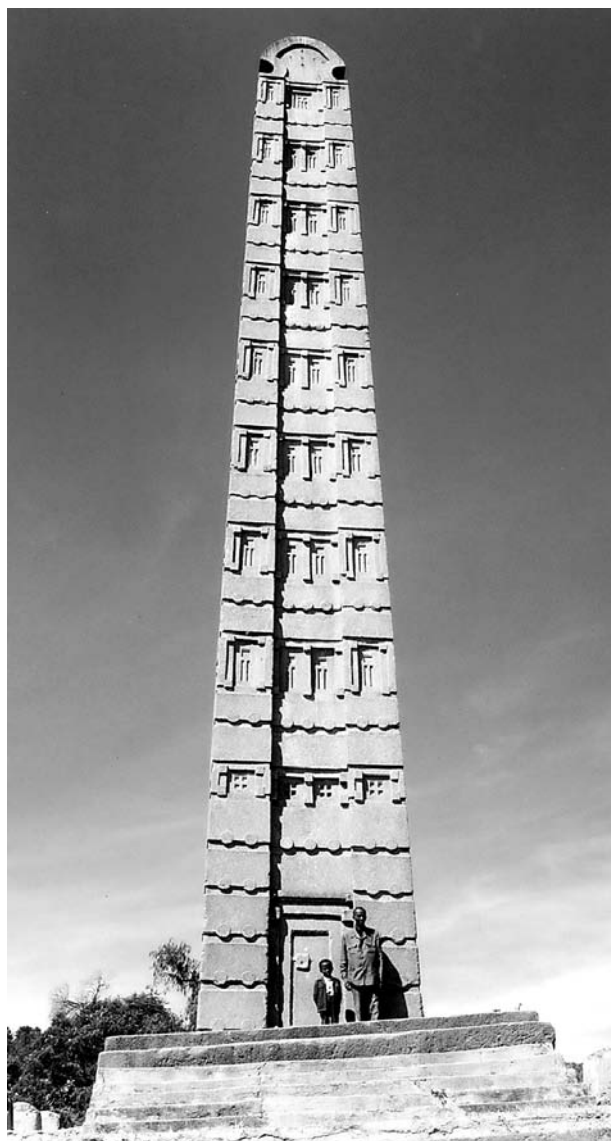
In the fourth century a vigorous African state, known to us as Ethiopia, prospered through controlling the trade of the Red Sea, the southern end of which it dominated. The center of this state was the town of Aksum by which the state itself was commonly known to its contemporaries. Aksum exported gold, ivory, tortoiseshell, rhinoceros horn, and slaves and imported brass and copper objects, iron bars, and weapons. Aksum was firmly rooted in a highland plateau, the edge of which is close to the coast. The rulers of Aksum spoke Geez, a Semitic language closely related to the languages of South Arabia, which, in turn, are related to the Arabic of the Quran. One of Aksum's achievements was a distinctive script, which is still in common use. Most of the subjects of Aksum were farmers, who used plows drawn by oxen to grow a wide variety of crops and probably also spoke Semitic languages. Aksum's dominion and the people under it were diverse in culture and language. Some of its subjects spoke Kushitic or Nilo-Saharan languages (ancestors of languages such as today's Somali or Nubian), and some were pastoral herders of cattle, sheep, and goats.

"Ethiopia" is a term that Greek-speaking people used to refer to the black people of Africa. The wider trading world in which Aksum participated was dominated by Greek-speakers. The first record that a ruler of Aksum used the term "Ethiopia" to refer to his own country is an inscription, written in Greek, that probably dates to the third century CE. The term "Ethiopia" appears to have been the Greek translation of the

Geez “Habasha.” By this time Aksum was mentioned as one of the four kingdoms of the world, the others being Rome, Persia, and Sileos. Its rulers commonly referred to themselves, on the coins they issued and the monuments they erected, as “King of Aksum,” the monuments also claiming authority over the territories and peoples on both the African and South Arabian sides of the Red Sea. The rulers of Aksum erected numerous carved monoliths and monumental thrones and built palaces of stone.

We know the names of some 20 rulers of Aksum who, from about 270 CE to about 740 CE, issued coins in gold, silver, and copper. However, much of the information concerning Aksum clusters around the reigns of two kings, Ezana, of the second quarter of the fourth century, and Kaleb, of the early sixth century. This information comes, in addition to the coins, from archaeology, their inscriptions on stone monuments in three different languages (Sabeen, Geez, and Greek), the traditions of later generations, and a handful of accounts by contemporary travelers, historians, and geographers. Ezana’s inscriptions describe in some detail campaigns in Ethiopia and into the Sudan. Ezana referred to himself both as “king” and as “king of kings,” titles used by rulers of Ethiopia into the twentieth century. He is most famous as having adopted Christianity sometime around 340, the religion followed by his successors and, eventually, the faith of many of the subjects of the Ethiopian kings.

Kaleb, Ezana’s eventual successor, is noted for having championed Christianity, founding churches in Ethiopia and protecting the Christians of South Arabia on whose behalf he waged war. Toward the end of the years separating the reigns of Ezana and Kaleb, Ethiopian tradition records the arrival of two groups—the Tsadqan (“the Holy Ones”) and the Nine Saints—who contributed greatly to the spread of Christianity in Aksum by founding monasteries and churches. Kaleb’s period may also have seen the founding of the Ethiopian church’s musical tradition and the translation of the Bible into Geez. Religion was but one dimension to the struggles over South Arabia. Kaleb was allied with the ruler of Byzantium in a struggle against Persia to control the trade from Asia to the eastern Mediterra-



Hewn from a single granite stone in the fourth century, the most famous obelisk in the ancient city of Aksum commemorates the reign of King Ezana. (UNESCO Photobank/Maureen Dunne)

nean. In the short term the Persians were victorious, expelling the Aksumites from South Arabia. In the long term the struggles of these three powers were transformed by the rise of Islam, founded in the years 622–632 at the holy sites of Mecca and Medina, just across the Red Sea from Ethiopia, and the creation, by 700 CE, of a great Arab empire based at Damascus. Most important for the Aksumites was Arab naval control of the Red Sea, which appears to have been complete by about 750, a date that marks the

➤ EZANA'S CONVERSION TO CHRISTIANITY

Ezana's conversion to Christianity is one of Aksum's best-documented events. It is attested to by monumental inscriptions, coins, contemporary foreigners, and Ethiopian traditions. The inscriptions invoke three distinct religious languages. First, they referred to Ezana as "the son of Mahram" (in Geez; "Ares" in Greek), the South Arabian god of war. A transitional inscription uses monotheistic language referring to "the might of the Lord of Heaven" and "the Lord of all." Finally, an inscription discovered in 1969 starts, "In the faith of God and the power of the Father, and the Son and the Holy Ghost who have saved my kingdom. I believe in Your Son Jesus Christ." This same progression, from South Arabian religion through monotheism to Christianity, is also evident from Ezana's coins. Some are inscribed with the South Arabian crescent and disc, while others are inscribed with a cross. The crescent and disc appear on the coins of all his predecessors, and the cross appears on the coins of all his successors.

Two literary sources date the conversion. Rufinus, a Church historian (345–410/411), told of Frumentius (remembered in Ethiopian traditions), who converted an unnamed king and was then consecrated bishop by Athanasius, patriarch of Alexandria (325–373), to serve that same king. Emperor Constantius of Constantinople (337–361), an enemy of Athanasius, wrote a letter to Ezana asking him to send Frumentius back to Alexandria for instruction in the true faith. These sources indicate that Ezana's conversion, which profoundly shaped the future of Ethiopia, took place around 340.

—Donald Crummey

definitive decline of the empire, whose rulers then stopped issuing coins. Islam slowly established itself among the peoples of the Ethiopian coast and eastern lowlands.

Losing control of the Red Sea trade was a devastating blow to Aksum, which now proved unable to protect its northwestern borders from incursions by the Beja people. Sometime after 750 crude inscriptions in Aksum record revolts of people on the southern borders suppressed by a ruler called Hatsani Daniel. Environmental factors also undermined the empire, which had

emerged in the first century of the Christian era on a wave of agricultural prosperity associated with an increase in rainfall. However, by 650 there is evidence of increasing soil erosion, which, after 700, became catastrophic, and in the earlier eighth century rainfall began to decline drastically.

The Aksumite empire slipped into international obscurity at the same time as its culture, political traditions, and church found new leases on life in territories to the south. Already in the reign of Kaleb, the governor of the Agaw, a Kushitic-speaking people living some 124 miles (200 kilometers) south of the heart of the empire, was important in controlling the gold trade. Aksum, as capital, was replaced by Kubar still farther to the south. Aksumite outposts spread agricultural techniques, Semitic language, and Christianity, giving rise, out of an earlier population of Agaw-related peoples, to the Amhara, who from the thirteenth century onward were to dominate Ethiopia. Success in the spread of Semitic culture and political domination is indicated by the rebellion in reaction to these processes, around 950–960, of a queen of Damot, a territory as far south as modern Addis Ababa. The revolt destroyed many churches and is vividly remembered in local traditions across northern Ethiopia. Aksum's legacy survived this reversal and bequeathed to later generations of Ethiopians an indigenous church, a script, Semitic language, and political traditions.

—Donald Crummey

Bibliography

- "Aksum." *Encyclopaedia Aethiopica* 1 (2003): 173–179.
- Munro-Hay, S. C. *The Coinage of Aksum*. New Delhi: Manohar and R. C. Senior, 1984.
- Phillipson, David. *Ancient Ethiopia: Aksum, Its Antecedents and Successors*. London: British Museum Press, 1998.
- Tamrat, Tadesse. *Church and State in Ethiopia, 1270–1527*. Oxford, UK: Clarendon, 1972.

The Political and Social Formation of Swahili Civilization

Like all African civilizations, the beginnings of the Swahili-speaking people of East Africa's

coast are rooted in myth. Traditional Swahili explanations of their origins usually begin with stories of migrations of the so-called Shirazi or the Wadebuli or other Arabs to the coast sometime around the tenth century CE. Scholars long have pondered the historical accuracy of these accounts, asking when the actual origins of Swahili urban civilization were and just who these mysterious founders might have been. A few tantalizing literate accounts by Islamic scholars throw additional light on these questions; some of our best evidence comes from archaeological and linguistics research. While no single type of source by itself provides an adequate picture, taken together they provide a reasonably detailed representation of the early formation and character of Swahili communities.

Scholars agree that the places of origin usually claimed by the Swahili for their founding ancestors can be identified with Persia (Shiraz) or northwestern India (Debul). For many years, Western scholars accepted such legends at face value, believing that sometime during the period of the Abbasid caliphs groups of Muslims migrated to East Africa and founded Swahili cities such as Lamu, Mombasa, and Kilwa as foreign Arab communities that had little in common with their neighbors of the African interior. Archaeological and linguistic research over the past three decades, however, has challenged that viewpoint. Although the Swahili have been majority Muslims for the past seven centuries, their ancestors clearly were not Islamic migrants who had arrived from elsewhere in the western Indian Ocean. Rather, they primarily are descendants of African Bantu-speaking peoples who originated in West Africa and spread rapidly through the rain forests and savannas of central Africa, arriving on the coast of what is now Tanzania in the early centuries CE. These were primarily animist, village-based farmers who lived off a diet of cereals, yams, and livestock. Like their Bantu-speaking neighbors, their primary unit of social organization would have been the clan. In the centuries that followed, these peoples expanded northward along the coast and its hinterlands until around the eighth century when they began to split into discrete ethnic and (related) language groups, one of which included the ancestors of today's Swahili speakers.



*Excavation of a mosque at Shanga, from 780 CE.
(Mark Horton)*

One can assume that during these centuries political organization probably never exceeded anything larger than small chieftaincies. Political power was diffuse, with clan elders exercising considerable influence and being capable of overriding any chief in both executive and judicial decision making.

This process of expansion was accompanied by significant cultural change as these ancestral Swahili speakers adapted to new opportunities presented them by the coastal environmental niche in which they now found themselves. Again, both archaeological and linguistic data indicate that the old economy based on mixed cereal and yam farming expanded to include new crops that thrived in the coastal soils and heavier monsoon rains, such as coconut, mango, bananas, and rice. Villages at various locations such as Mogadishu on the Somali coast and Shanga and Manda on the coast of Kenya grew into larger and, probably, more socially stratified towns in which there was a larger variety of economic activities, some of which, such as crafts production and commerce for example, came to attach greater status to their practitioners. Most significant perhaps is that such communities became increasingly influenced by the world of the western Indian Ocean and new vistas provided by marine activities that supplemented long-established agrarian ways of life in terms of both avocation and diet. Well before the end of the first millennium we find evidence of an economy based as much on fishing the abundant marine life found

THE TRADITION OF THE COMING OF THE SHIRAZI FROM THE KILWA CHRONICLE

“When [the Shirazi] arrived in a ship, they went to Kilwa, they found it was an island, but that at low water it was joined to the mainland so that one could cross on foot. They disembarked on the island and met a man who was a Muslim. . . .

“They asked the Muslim about the country and he replied: The island is ruled by an infidel from Muli, who is king of it; he has gone to Muli to hunt, but will soon return. After a few days the infidel returned from Muli and crossed to the island at low tide. The newcomer and he met together and [the Muslim] acted as interpreter. The [Shirazi] newcomer to Kilwa said: I would like to settle on the island: pray sell it to me so that I may do so. The infidel answered: I will sell it on condition that you encircle the island with coloured clothing. The newcomer agreed with the infidel and bought on the condition stipulated. He encircled the island with clothing. . . . So the infidel agreed and carried away all the clothing, handing over the island and departing to Muli.”

—Randall Pouwels

Source

Freeman-Grenville, G.S.P., ed., *The East African Coast: Select Documents from the First to the Earlier Nineteenth Century*, 2nd edition (London: Collings, 1975), 36–37.

in offshore reefs and mining their corals for building materials as on cereals and domestic stock. Moreover, Bantu skills in iron making and African animal by-products soon attracted the interest of ship captains, who availed themselves of monsoon winds to pay yearly visits to the coast to trade. Since winds as well as coastal currents favored ports of call north of Zanzibar, not surprisingly it was towns on the southern Somali and Kenyan coasts that were the first to experience the transformational effects that such trade would have had on the coastal Bantu civilization. Well before 1000 communities such as Mogadishu, Shanga, and Manda were becoming specialized in crafts and commodities production for export as well as serving as conduits for luxury imports.

Iron and ivory along with animal hides, rhino horn, and ambergris were the principal exports, while ceramic wares, dates, and Indian cloth and beads were the items most in demand by African producers and merchants.

The late first millennium also saw the introduction of Islam among the ancestral Swahili. Archaeologists have excavated mosques and Islamic burials at Manda and Shanga as well as in Zanzibar and Pemba, dating from the eighth century, and a tenth-century source mentions the presence of Muslims at Qanbalu, most likely Pemba. It is virtually certain that these first Muslims were immigrants. Nevertheless, the prestigious association of Islam with international trade both attracted converts and contributed to the partial Islamization of urban political institutions and social values almost from the start. Gold, silver, and copper coins minted in the name of a ruling dynasty at Manda and Zanzibar provide evidence of a Muslim sultanate by the tenth century. Ultimately, the most transformational effect that Islam had on coastal society resulted from the introduction of literacy, particularly from written law (the Sharia). Whereas African ideas about social rights and legitimacy typically originated in claims of kinship, ethnicity, and oral traditions that supported them, the Sharia applied universal laws. African customary law usually granted greater rights to women in matters of property, inheritance, and marriage than the Sharia allowed. A proper interpretation of the Shirazi origin myths was therefore as a story that established the primacy of the Islamic cult and of Islamic written traditions concerning marriage, the (reduced) rights of women, inheritance, and property over African customs.

—Randall Pouwels

Bibliography

- Freeman-Grenville, G. S. P., ed. *The East African Coast, Select Documents*. London: Oxford University Press, 1962.
- Horton, Mark, and John Middleton. *The Swahili: The Social Landscape of a Mercantile Society*. Oxford, UK: Blackwell, 2000.
- Pouwells, Randall L. “East Africa and the Indian Ocean to 1800: Reviewing Relations in Perspective.” *International Journal of African Historical Studies* 35(2–3) (2002): 385–425.

Nubian Kingdoms, 350–1000 CE

The Christian Nubian kingdoms of Makuria and Alwa (Alodia) existed as prosperous states on a 600-mile stretch of the Nile River (in present-day Sudan) from the early sixth to the late fourteenth centuries.

Before its conquest by the Mamluks of Egypt about 1350 CE, the area on the banks of the Nile River in the northern half of what is today the Republic of Sudan is referred to as Nubia. This area on the Upper Nile had long been influenced by Egyptian civilization and had developed its own remarkable civilization along parallel lines. From about 1000 BCE until its overthrow, in circa 350 CE, the Kingdom of Kush (Cush), with its capital of Meroe, ruled this region.

Egypt was a province of the Roman empire until 641, and the boundary between it and the Kingdom of Kush was, until around 300 CE, about 160 miles south of modern Aswan. At around 300 CE Roman forces retreated to the fortress of Philae, just south of Aswan. The Romans moved the Nobatai, a people who had dwelt in the Great (or Kharga) Oasis, into the territory they vacated. Known as *foederati*, the Nobatai were bound by treaty to guard the Roman frontier. These Nobatai were the ancestors of the Nubians.

Ezana, the ruler of the powerful Ethiopian kingdom of Axum, destroyed Meroe circa 300 CE. To commemorate this victory, the Axumites erected a stone stele on the banks of the Nile River, where it still stands. After the destruction of Meroe and with it the Kushite state, the Nobatai and a nomadic group, the Blemmyes, contested for the territory of the defunct state. The wars between these two peoples continued for much of the fifth century, until the final defeat of the Blemmyes by King Silko, perhaps about 575 CE. Silko was ruler of Nobadia, an early Nubian state that was absorbed into Makuria in the sixth century.

The language of Kush disappeared with its political power, to be replaced by that of the incoming Nobatai. Their language, Old Nubian, became the language of the people as well as the administration and often the Church, although the liturgical languages were Coptic and at times Greek.

CHRONOLOGY OF CHRISTIAN NUBIA

Late fourth century: Collapse of Kush invasion of Nubia by Nobadia; emergence of state of Nobadia.

Fifth century: Wars between Blemmyes and Nobadia.

Early sixth century: Emergence of kingdoms of Makuria and Alwa.

Mid-sixth century: All Nubian kingdoms adopt Christianity.

Early seventh century: Absorption of Nobadia by Makuria.

Mid-seventh century: War between Makuria and Muslim invaders from Egypt; negotiation of *Baqt* or Truce that was to last 600 years.

Late fourteenth century: Conquest of Makuria by Muslims.

Mid-sixteenth century: Final conquest of last Nubian kingdom by Muslims.

—Wilfred J. Bisson

Nobadia, the first Nubian kingdom, rose in the late fourth century and existed as the sole Nubian kingdom for the next century, but its authority extended only over the northern third of the territory ruled by Nubian groups. Makuria and Alwa, the other two kingdoms, emerged in the early sixth century.

The early medieval history of Nubia begins with the conversions of the three kingdoms to Christianity in the mid-sixth century. The first Christian missionaries were from the Egyptian Coptic Church, but rival Greek Orthodox missionaries from Constantinople shortly joined them. In the early years, considerable friction developed between the two faiths, and this produced contention among the three kingdoms. However, their populations readily embraced the new faith, as far as we can know from the record.

Within a generation, most Nubians were members of the Coptic Church, whose spiritual head was the patriarch of Alexandria, Egypt. Impressive brick churches were built in all the Nubian cities, and the Christian clergy assumed a position of leadership in Church and state. In

Nubian popular Christianity, the archangel Michael was very prominent, playing a role similar to that of St. George the dragon slayer in medieval European Christianity.

Both Makuria and Alwa were ruled by a series of royal dynasties. Usually, the royal families of the two kingdoms intermarried. Succession to the throne was by uterine descent; the son of the reigning king's sister inherited the throne. Since the kings of Makuria and Alwa were often married to each other's sister, their sons were often heirs to their brother-in-law's kingdom. We can only speculate about the fate of the royal family on Nobadia after its absorption, either by conquest or dynastic marriage, into the kingdom of Makuria. Nobadia became the Makurian province of Maris and guarded the northern frontier. After the Muslim conquest of Egypt, the Makurian official governing Maris occupied an extremely sensitive post. This official, whose title was eparch, was usually a member of the royal family.

Except in the northern province of Maris, Makuria was ruled by 13 kinglets, all of whom were priests under the hegemony of the king. The king, at least theoretically, owned all land and had the power of reducing anyone to slavery for any reason.

Dongola, nearly 100 miles north of the great bend of the Nile, was the capital and chief city of Makuria, and Faras, in the northern province of Maris, was a close second to Dongola in population and splendor. Soba, in the vicinity of modern Khartoum, was Alwa's metropolis. Dongola was located in the productive and relatively densely populated Letti Basin of the Nile Valley. The countryside of this fertile basin was dotted with numerous agricultural villages surrounded with well-tended fields, gardens, and pastures. The hinterland of Faras was not as productive as that of Dongola, but because it was an important military post, much of Makuria's revenue was lavished on this city. Little is known about Soba, but it has been suggested that it was at the end of a trade route whose other terminus was Lake Chad.

These cities were industrial as well as administrative centers. Pottery was intensively produced at both of these centers as well as at many other sites along the Nile. Especially abun-

dantly produced were the pots used in the wheels used to lift water for irrigation from the river. Other industries were iron smelting and textile weaving.

Part of the explanation for Nubia's medieval prosperity may be in the trade from Africa south of the Sahara to Egypt and the Muslim caliphate. Although little is known of this trade, treaty documents between Muslim Egypt and Makuria mention slaves to Egypt as well as wild animals (giraffes), ivory, and gold.

Alwa and Makuria's generally peaceable relations were not only a result of the familial relations of their royal groups; the two were somewhat isolated from each other because they were separated by more than 100 miles of a non-navigable reach of the Nile's great bend. Between Makuria and Muslim Egypt, a 600-year truce, though violated occasionally, usually prevailed after the peace treaty or Baqt, signed in 652.

—Wilfred J. Bisson

Bibliography

- Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia: Xlibris, 2003.
- Jakobielski, S. "Christian Nubia at the Height of Its Civilization." In *General History of Africa*, Vol. 3, *Africa from the Seventh to the Eleventh Century*, edited by I. Hrbek. London: James Currey, 1992.
- Welsby, Derek. *The Medieval Kingdoms of Nubia: Pagans, Christians and Muslims along the Middle Nile*. London: British Museum Press, 2002.

West African Forest Polities

State formation in the southern forest regions of West Africa began by the end of the first millennium CE. Sources of political authority were largely based on religious and ritual power. The economic basis of small states and larger polities was almost always linked to food production, resource control, and specialist activities. Archaeology and oral traditions provide historians with a wealth of information about the rich artistic expression and world connections that characterized early polities.

When the archaeological site of Igbo Ukwu in the forests of southeastern Nigeria was dated to the end of the first millennium CE, many Eu-

ropean scholars were reluctant to accept the implications of its early beginnings. Since then the excavation of other forest sites has added to the picture of social and economic complexity that Igbo Ukwu provides. The intricately cast copper-alloy objects (850–880 CE) reveal a sophisticated technology and participation in a larger economic network. One object depicts a horse and rider, suggesting early trade connections between the forests east of the Niger River and North Africa. Moreover, the patterning of the figure's facial scarification was identical to ethnic markings of contemporary peoples, thus eliminating the possibility of their having been imported manufactures. One reconstruction of the ritual and high-status cache of artifacts interprets them in association with local traditions of titled elders, who ruled forest communities with advisory councils and ritual authority. Small forest polities such as this one likely persisted because of their appropriate scale and useful democratic underpinnings.

According to Yoruba oral traditions, Ife was the oldest state situated in the region of modern Nigeria, between the savanna, the northern woodlands of the Niger, and the forest of the coastland. The city of Ile-Ife marks the spot where the gods descended from the heavens to create the world and humankind. Olorun, the supreme sky deity, sent the founding ancestor Oduduwa to establish the state. Some traditions claim that his sons in turn founded the other 16 Yoruba kingdoms. Since this time, the ruler of Ife, the Oni, has claimed his right to govern based on the direct descent from Oduduwa, both ancestor and deity. It is also on this basis that the Oni in turn assesses the right of other Yoruba kings to wear the legitimizing beaded crowns of their royal privilege.

There is no doubt that Ife constitutes a likely site for early state development. Occupied since at least 350 BCE, Ife straddled the rich agricultural region of savanna and forest, marking a key gateway into the rich resources of the forest, including kola nuts, yams, and ivory, which would have been traded for metals, horses, and other goods. The early settlement was characterized by agriculture and iron- and bead-making technologies. Its access to predictable sources of high protein in the form of large forest snails and

SEATS OF POWER, SACRED SOURCES OF LEGITIMACY

In the early period (ca. 600–1100 CE) of Yoruba city-states, symbols of royal authority included large and elaborately carved stone stools. These objects are sacred artifacts and also historical statements about the sources of political authority. The origins of cities and states were located in the forest but at the same time were linked to key connections outside the forest.

An undated quartz stool (ca. 1000 CE) has a cylindrical seat and base connected by a curved elephant's trunk. The forest's largest animals, elephants, also provided valuable ivory for long-distance trade. The elephant image served as an eloquent and ancient symbol of leadership. A Yoruba proverb alludes to power as being like an elephant, the presence that cannot be ignored. A terra-cotta pot lid in the shape of an elephant head was excavated at Lafogido (ca. 1300 CE). It wears the beaded headdress and bead necklace associated with kingship. An earlier terra-cotta fragment shows a figure seated on a stool. Taken together, these works of art suggest the elevation and separation of the powerful elite. Divine kingship relied on both the forest and the spiritual and economic connections that extended beyond the forest realm.

Metaphorically, stools were the seats of power and in recent times reflect the elevated status of chiefs and kings. The elephant allusion in the quartz stool suggests the transference of power between the lord of the forest and the city-state. Such stools also played a role in rituals in which they served as "god's seat" and are found in sacred groves, where divine rulers and ordinary folks alike sought the sanction of ancestors and spirits.

—Candice Goucher

other game would have furthered the growth of population.

The rulers of Ife (and the city-states of Ijero, Owo, Ijebu, Ondo, Oyo, and others) were both male and female and situated their royal power with divine abilities and ritual roles undertaken on behalf of their communities. They too ruled with a council of male and female elders. Between about 500 and 800 CE, regional cities appear in the form of walled communities known as Enuwa,

a term for the original settlement meaning “we see eye to eye” and suggesting that early states came about through the mediation of conflict. The presence of monumental stone structures and complexes of buildings, streets, courtyards, and shrines define a style of urban architecture and planning at Ile-Ife and other forest sites in West Africa. An accomplished style of terra-cotta sculpture was also practiced. By the end of the first millennium CE, elaborately patterned potsherd and stone pavements (ceramic and stone tiles laid on edge in herringbone and basketweave shapes) with ritual pots set within or below and sophisticated copper-alloy casting also mark the flourishing of the distinctive city-state system that would spread over the next 500 years.

Similar constellations of large cities and emerging states on the forest edge are also situated in present-day Ghana and dated to between 1000 and 1500 CE, when local production and long-distance trade eventually characterized their growth. Among the 20 or more other potsherd pavement sites ranging from modern-day western Togo to Nigeria is the early city-state of Oyo (800–1200 CE). Stone beads were also an important item of royal trade from Oyo south along the Niger River to Benin, where they became the primary statement of political power in royal regalia, including crowns. The transformation of Oyo into kingdom and empire occurred much later, when trade and tributary systems extended all the way to the coast of Dahomey. Consistently present was an association of Oyo and subordinate kingdom political authority with Ife spirituality. Several historians have speculated that the basis for this continued religious influence was the practice of mediation by ritual specialists carried out at the center of Ife, long after its political power waned.

—Candice Goucher

Bibliography

- Akyeampong, Emmanuel Kwaku, ed. *Themes in West Africa's History*. Athens: Ohio University Press, 2006.
- Connah, Graham. *African Civilizations: An Archaeological Perspective*. 2nd ed. Cambridge: Cambridge University Press, 2001.
- Drewal, Henry John, and John Pemberton III, with Rowland Abiodun. *Yoruba: Nine Centuries of African Art and Thought*. New York: Center for African Art and Harry N. Abrams, 1989.

Political Change in East, Central, and Southern Africa

From 300 to 1000 CE Bantu-speaking peoples populated East, central, and southern Africa. They also successfully integrated, absorbed, or lived in union with the peoples who had already settled in these lands. In the fourth century CE most were organized into small matrilineal clans with a chief who could either be male or female or matrilineal clans led by a social and spiritual leader with little material authority. During this historical period some Bantu-speaking peoples were able to accumulate surplus by increased food production and, in some areas, better trading opportunities. As populations grew, some groups moved toward political centralization. Other Bantu-speaking peoples, especially those in less fertile regions, remained small populations with a political and social ideology of decentralization.

From 300 to 600 CE, southern Africa Bantu-speaking peoples mainly grew seed grains and raised cattle. They also formed small decentralized polities in which the matrilineal clan chiefs were primarily responsible for rituals such as the harvest celebrations and the redistribution of surplus food among the people. As cattle became the primary source of food, however, patrilineal ideology began to dominate. Some patrilineal clan chiefs were able to use their roles as distributors of cattle to create their own personal herds and thus attracted more followers.

The clans of chiefs with large numbers of cattle gained prestige. This in time led to the political concept of chiefly clans. North of the Limpopo in southern Zimbabwe the cattle-raising Shona began the centralization process, which would later result in the creation of centers of political power known as great and lesser Zimbabwe.

By 1000 CE Southwestern Africa began to experience different political consequences regarding the adoption of cattle. While the people began to integrate cattle into their food-production technologies, grain cultivation and gathering and hunting remained important sources of sustenance. Dual descent, rare in Africa, became the social order, and each person owed allegiance to both her or his father's and mother's clans. The

competing loyalties of dual descent tended to slow the centralization process.

Around 600 CE Bantu-speaking agriculturalists moved into East-Central Africa, organized into small matriclans, and continued to maintain a matrifocal philosophy of social organization. A possible reason for the continued decentralization could be that the soils in this region could not sustain a population through agricultural production only. Fishing was therefore often needed to supplement food production. The reliance on fishing and hunting encouraged the people of the region to work closely with the BaTwa, who were organized into nonhierarchical family bands.

North in the Upemba Depression of the Congo, the Luba-speaking peoples began to settle the region around the seventh century CE and came to control the rich resources of salt, iron, and copper found in the area. This helped to create a surplus, which led to social stratification. These peoples constructed irrigation systems and participated in long-distance trade. Although social stratification was developing, local village autonomy seemed to be the rule.

This period witnessed population growth in the Western Equatorial Forest based on banana production and the trade of iron goods. The BaTwa traded skins, honey, and ivory for Bantu-manufactured goods and agricultural foodstuffs. Even though the BaTwa traded with and lived in close proximity to the Bantu-speaking agricultural communities, they retained their loose decentralized forms of political organization. The surplus production and population pressures among the Bantu-speaking peoples, however, began to transform political organization, and lineage-based matriclans expanded. By 1000 CE these communities underwent a process of centralization, which led to the formation of larger kingdoms. These newer polities demanded and often received tribute from surrounding peoples. Bantu-speaking people of the Western Equatorial Forests transformed the concept of leadership by adding an additional meaning to their new word for leader, “to pronounce judgment,” which indicates that the new group of rulers enjoyed widespread judicial powers.

In the Mount Kilimanjaro region, the Chaga cultivators created elaborate trading networks

➤ AFRICAN DEMOCRATIC PROVERBS

A form of democracy was found in most of the Bantu-speaking societies in this region from 300 to 1000 CE. People were organized into matrilineal clans, and the person in charge was usually more a spiritual and social leader than a political one. A group of elders, both male and female, together with the leader made all the important decisions. To become an elder, one just had to have the luck to live long enough. During this era a chief was the one most able to provide peace and the ability to negotiate equitable settlement of grievances among peoples. Since leadership did not require warrior prowess, both men and women could become leaders. The following proverbs from the Bemba of Zambia symbolize this long-term attitude toward leadership:

“Ubukulu bwa chambeshi: Ukuicefya—The real leader, the big person is the one who makes herself/himself small.

Abantu lisabi: likonka maeshi aba no luse cikuuku, kabili ishiwi lisuma—Somebody must know how to speak kindness if she/he wants to build a village.”

—Christine Ahmed-Saidi

Source

Benedict Mwemba, “The Reality Impact and Pastoral Implications of the Mupai (Witch finder-Doctor) after 100 years of Christianity—A Research: Kayambi Parish, Mbala Diocese” (Unpublished, undated), 10.

by harvesting crops in different kinds of environments. At the beginning of this period, the Bantu-speaking people in this area used the old Bantu word *mfumua* for “chief,” which was based on the older meaning of “the honored one.” By about 800 CE, however, they had created a new word for chief, *mangi*, that originally meant “the arranger, planner.” The difficult terrain of the Mount Kilimanjaro region led to the development of small independent chiefdoms. With the transition from *mfumua* to *mangi*, political power shifted away from individual clans to small territorial kingdoms. The *mangi* played the roles of mediators between the growing populations from these diverse clans. The *mangi*

also could use the age sets as communal labor in building and maintaining irrigation works, so in a sense they controlled public works. Under the mangi was the *njili*, which is a borrowed word from a Southern Cushitic language and was a type of clan headperson.

The Bantu-speaking Thagiicu, the Southern Cushitic Gumba, and the Nilotic Kalenjin lived in the Mount Kenya region. The Thagiicu adopted Southern Cushitic types of clan headmen who lacked a political role but wielded significant ritual responsibilities. Individual leaders were known as *mulamati*, which literally meant “the guardian.” A combination of the Kalenjin and the Bantu type age sets created a new form of cycling age grades in which every 40 years a new generation set would take over conduct of public affairs from the previous generation. This became a democratic nonchief-based society. Everyone could become an elder if they lived long enough.

As we have seen, this was a period of political change and consolidation in East, central,

and southern Africa. Although they would eventually change, the vast majority of East, central, and southern Africans would continue to reside in decentralized political polities for at least another 700 years.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History: 1000 BC to AD 400*. Oxford, UK: Currey Publishing, 1998.
- Klieman, Kairn. *The Pygmies Were Our Compass*. Portsmouth, NH: Heinemann, 2003.
- Roberts, M., and A. Roberts. *Memory: Luba Art and the Making of History*. Munich: Prestel for the Museum for African Art, 1996.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.

■ Introduction: Eurasian States in Late Antiquity

In 300 CE, a band of large empires spanned Eurasia from the Atlantic to the Pacific oceans. Surrounding the African, European, and Asian shores of the Mediterranean was the Roman Empire. Occupying the Iranian plateau and reaching into central Asia, the Persian empire of the Sassanians interacted with the Roman empire to the west, the kingdoms of India to the southeast, and the China dynasties to the northeast.

China had once been united under the mighty Han dynasty, but that powerful and long-lived state had broken apart in savage civil wars, and the third century CE was disastrous for China. The Jin dynasty would briefly unite China, but in the first decade of the fourth century invading “barbarian” pastoral tribes from the northern steppe smashed through the Great Wall and occupied most of northern China. For the next three centuries, China would be divided. In southern China, refugees from the north established a

“pure Chinese” southern empire, which endured, ruled by five successive dynasties, for the next three centuries. In northern China, “barbarian” tribes from five different linguistic groups warred among themselves to establish supremacy. In the latter part of the fourth century, one “barbarian” group, the Toba, defeated the others and, as the Northern Wei dynasty, established a strong state that lasted for more than a century. By 534, the Northern Wei split into the Eastern and Western Wei, but by 581, the Sui dynasty crushed both of these states and in 589 conquered the Southern empire. The conquest of the south ended the long period of division. From that time to the present, China has normally been a united empire.

Like China, the Romans had experienced a disastrous third century. Civil wars and foreign invasions battered the empire, but by the end of the century Diocletian had reestablished order and stability. The Roman empire was to be, for

another three-quarters of a century, the strong and united arbiter of the Mediterranean world. During the fourth century CE, Constantine “the Great” moved the capital to Constantinople and set in motion the process that resulted in Christianity becoming the official religion of the Roman world, at nearly the same time that Mahayana Buddhism was becoming a major force in China.

This period of supremacy ended when Gothic invaders crushed the Roman Army in 379, signaling the beginning of the destruction of the empire. From then on, “barbarian” attacks on the northern frontier were relentless. By the early years of the fifth century, the western half of the Roman empire was occupied by Germanic kingdoms. The eastern half, centered on Constantinople, became the refuge for Roman civilization, similarly as the southern Chinese empire became the asylum for Chinese civilization.

Despite a brief revival of power in the sixth century when Justinian I sent Byzantine forces to recapture North Africa and Italy. The Byzantine empire, as modern historians know the eastern rump of the Roman empire, never regained more than a small fraction of the territory and might of its predecessor in its prime.

The great nemesis of the Byzantine empire was the Sassanian empire. The Sassanians had overthrown the Parthians in Persia in 224 CE and ruled Persia as a powerful Iranian and central Asian empire for four centuries, until the Muslims in 651 CE destroyed them. The Sassanian empire served as a commercial and cultural bridge between China/India and the Roman west and interposed an absolute blockade to any expansion of the Roman empire in Mesopotamia. The Sassanians located their capital not in Persia proper but rather in the rich agricultural Semitic-speaking Tigris-Euphrates Valley.

War between the Sassanians and the Romans, though intermittent, continued through this period until the fall of the Sassanians. The Roman-Persian conflict culminated in a war that lasted through the first quarter of the seventh century. The Sassanians were initially very successful, overrunning all of the Asian provinces of the Byzantine empire as well as Egypt and laying siege to the Byzantine capital, Constantinople. However, the Byzantine emperor Heraclius

turned the tide when his army of 50,000 defeated the Persians at the gates of the Sassanian capital, Ctesiphon. Heraclius’s victory in 627 CE brought peace and prostration to the two imperial antagonists, and it left both empires easy prey for the rising Muslim power that emerged from Arabia in 634. The Byzantine empire lost its wealthiest provinces to the Muslims, who simultaneously destroyed the Sassanian empire.

The Kushan empire, which had been a very prosperous state stretching from the Oxus River (Amu Darya) to the Tarim Basin (in modern Xingjian Province, China) and south to central India, lasted from the first century CE until it fragmented in the late third century. Its territories in India soon came to be ruled by the Gupta empire, which presided over Indian civilization during a golden age. The Gupta empire endured for three centuries (ca. 280–550 CE) and during that period led the world in scientific, mathematical, and much other cultural achievement. The empire of the Guptas weakened under the assaults of the “barbarian” Hephthalites (White Huns), who in the fifth and early sixth centuries emerged from central Asia to harass both the Sassanians and the Guptas.

These are only the most prominent of the Eurasian states in late antiquity. Others included the three kingdoms of Korea (Koguryo, Paekche, and Silla); the protostate of Yamato in Japan; Funan in Southeast Asia; the Pandyas, Cheras, and Chola of southern India; the Sri Lankan kingdom; and many more. During the three centuries of late antiquity, almost all of the smaller states adopted much of the high culture and civilization of their more powerful neighbors. Thus, the Korean kingdoms became Sinified, the nascent states in Southeast Asia were Indianized, and the new states in Europe and the Mediterranean world were Christianized. Regional civilizations were expanding by diffusing among the weaker civilizations surrounding them.

—Wilfred J. Bisson

Bibliography

- Burton Stein. *A History of India*. Oxford, UK: Blackwell, 1998.
- Reischauer, Edwin O., and John K. Fairbank. *East Asia: The Great Tradition*, Vol. 1. Boston: Houghton Mifflin, 1960.

The Roman Empire in the Fourth Century

The fourth century was a period of fundamental transformation in the Roman empire. At the death of Diocletian in 305, it still retained its far-flung territories, stretching from Britain to the borders of Sassanian Persia. The emperors Diocletian and Constantine inaugurated new imperial systems, finances, and capitals. The adoption of Christianity as the state religion brought momentous change to the late ancient world. During the century, however, external invasions and internal rebellions challenged the empire as never before. In 395 the two sons of Theodosius I inherited what was to become a permanent division of the eastern and western empire, leading to two very different fates.

Controlling the unwieldy empire was a major problem. Imperial succession was rarely peaceful; sons of emperors, often still boys, needed the

support of the army to survive. Coemperors were often appointed for different territories. While this practice could expand control, it also multiplied the opportunities for rebellion. When Constantine divided the empire among his three sons, civil war broke out immediately, ending only when Constantine's nephew Julian had defeated all rivals. Military and attempted usurpations continued throughout the century, and the pressure to recruit troops exacerbated the entry of barbarian warriors into the empire.

Defense of the empire's long borders was the primary concern of fourth-century emperors, who often led campaigns directly. Intermittent war with Sassanian Persia continued until the seventh century and required a major commitment of Roman forces. Emperor Julian died on an expedition in Persian territory in 363, losing an important fortress. In the north, the Roman borders along the Danube and Rhine rivers were under constant threat by barbarian groups.

► CONSTANTINOPLE

In 330 Emperor Constantine inaugurated his new capital, Constantinople, on the site of the ancient Greek city of Byzantium. He chose a superb location at the intersection of Europe and Asia Minor, on the passage between the Mediterranean and the Black Sea, and at the intersection of two major military highways. At the heart of Constantine's city lay the Great Palace, the Hippodrome, site of imperial games and public ceremony, and the senate buildings. In the sixth century Emperor Justinian built the great church of Hagia Sophia nearby. A colonnaded avenue lined with columns and monuments led to one of the city gates and served as a route for imperial processions. In Constantine's time the city was one of several imperial capitals, but under his successors it became the permanent residence of the emperor and the central administration.

By the sixth century Constantinople was a huge urban center. The size of its population is debated, but it may have been as large as 500,000 before the Justinian Plague. Water was brought to the city in aqueducts and stored in huge cisterns, while grain to feed the population was brought from Egypt. The city was defended by a massive



The square in front of the Blue Mosque was once the site of the ancient Hippodrome in Byzantine Constantinople. Built between 203 and 330 CE, chariot races took place in the original Hippodrome, along with much of the civic life of early Constantinople. (Library of Congress)

system of land and sea walls and harbor defenses that protected it for centuries.

—Dorothy de F. Abrahamse

By 350 Alemanni and Frankish warriors were attacking important cities in Gaul. In 378 Emperor Valens and much of his army were killed at Adrianople in a disastrous battle against Visigothic immigrants, who were then allowed to settle in the Balkans as federated warriors.

Fourth-century emperors also made important innovations in government. They created a new senatorial class dependent on the emperor and restructured the organization of the army and provincial government. An expanded bureaucracy was responsible for collecting the revenues needed to support the empire, and controls were placed on the mobility of city dwellers and farmers. The emperors themselves were seen as Christ's earthly representatives, appearing in person or through their statues in glittering ceremonies.

—*Dorothy de F. Abrahamse*

Bibliography

- Brown, Peter R. L. *The World of Late Antiquity, AD 150–700*. London: Thames and Hudson, 1989.
- Cameron, Averil. *The Later Roman Empire*. Cambridge, MA: Harvard University Press, 1993.
- Cameron, Averil, and Peter Garnsey. *The Cambridge Ancient History*, Vol. 13, *The Late Empire, AD 337–425*. Cambridge, MA: Cambridge University Press, 1997.

The Fall of the West Roman Empire and the Emergence of Successor States

The parallels between the two great Eurasian empires in the Classical Age, the Han dynasty and the Roman empire, are striking, although parallel events were not always simultaneous. Both empires had, for long periods, established peace and prosperity over large parts of the Eurasian world. But both empires, after their centuries of glory, collapsed or were destroyed. Similar causes operated in both cases: impoverishment of once-free peasantries, increasing militarization of society, crushing taxation, and alienation of the people from the state.

The precipitating cause of the collapse of the West Roman empire was the invasion by Germanic tribes in the early fifth century. With the frontier defenses weakened, large groups of German tribesmen moved across the frozen

Rhine in the winter of 405. They weakened and slowly took over the Roman political structure and had a similar impact on towns and rural areas. The cities, particularly north of the Pyrenees and the Alps, retreated behind walls on an average of half their original size, while in the countryside Germans took over the land and three-quarters of its revenues. The Roman army withdrew from Britain, which was then overrun by Angles and Saxons. North Africa fell to the Vandals, while the Franks became supreme in Gaul. In all parts of the west Roman empire, the invaders and those they invaded were transformed by this experience.

Among the first states to emerge from this transformation process were those of the Visigoths in southern Gaul and the Ostrogoths in Italy. Pressure from the westward-moving Huns drove the Visigoths into Roman territory around 376. Having defeated the eastern Roman army (Adrianople, 378), the Visigoths wandered within the empire for 40 years, eventually sacking Rome under Alaric (410) before settling in Aquitaine (417/418).

The Roman emperor of the West, Constantius III, assigned the Visigoths in Gaul to the defense of Roman territory against local unrest and other Germanic groups. Benefiting from relative peace, the Visigoths expanded in southern France and northern Spain and slowly established the kingdom of Toulouse. But expansion came to a halt under Alaric II (484–507), who emphasized fusion of Romans and Goths, published an important code of law (*Breviary of Alaric*), and convoked the first national council of the church under Germanic leadership at Agde (September 506). The kingdom of Toulouse disappeared when defeated by Clovis and the Franks (507), after which the Visigoths retreated to Spain, where they flourished until the Arab conquest of the eighth century.

In 488 the Ostrogoths were sent by the Eastern emperor to Italy against Odoacer (476–493). This invasion contributed to unifying the Ostrogoths and led to the establishment of the second Gothic successor state in the West. The Ostrogoths built a network of alliances with friendly tribal groups around Italy, acted as the official legitimate imperial army in the West, and used Roman senators in their administration

THE FALL OF ROME—DESTRUCTION OR TRANSFORMATION?

Ever since Edward Gibbon published *The Decline and Fall of the Roman Empire* (1776), the question of the fall of Rome has been hotly debated. Gibbon mainly blamed Christianity and the Barbarians for the decline of the empire in the West, whereas recent scholarship has presented multi-causal explanations to emphasize transformation instead of immediate collapse.

Recent scholarship based on theories of ethnogenesis has emphasized that the formation of distinct identities among Germanic peoples occurred only after their incursion within Roman territory. Continuity with older Germanic groups was minimal and was mostly used for propaganda purposes by leaders of both groups. Germanic kings of newly risen states in erstwhile Roman territory claimed to be ruling under Roman auspices and attempted to act as Roman officials. The outstanding example of this was Theodoric, ruler of Ostrogothic Italy. Theodoric was generally acclaimed as a wise and tolerant ruler, which earned him the title of “Great.” His reign is especially known for his renewal of social and cultural aspects of traditional Roman life, as the monuments of Ravenna still show prominently. Despite Boethius’s execution, there is no evidence for general hostility from the Roman aristocracy. Even ecclesiastical writers praise his neutral involvement to settle matters of the Church. The destruction in Italy wrought by the Byzantine reconquest in the sixth century was, by all accounts, much worse than the Gothic occupation of the fifth century.

—Eric Fournier



Mausoleum of Theodoric the Great in Ravenna, Italy. Theodoric the Great was king of the Ostrogoths and ruler of Italy from 493 to 526 CE. (Daderot)

(Cassiodorus). But their Arianism and the opposition of prominent members of the Roman Senate (Boethius) led to increasing Byzantine alienation and to military intervention in 535 under Justinian (527–565). Defeating the Ostrogoths took the better of three decades and left Italy devastated.

—Eric Fournier

Bibliography

- Heather, Peter. *The Goths*. Oxford, UK: Blackwell, 1996.
- Heather, Peter, ed. *The Visigoths from the Migration Period to the Seventh Century: An Ethnographic Perspective*. Rochester, NY: Boydell, 1999.

Moorhead, John. *Theoderic in Italy*. Oxford, UK: Clarendon, 1992.

Wolfram, Herwig. *History of the Goths*. Translated by Thomas J. Dunlap. Berkeley: University of California Press, 1988.

From East Rome to Byzantium, 395–641 CE

Between the fifth and seventh centuries, Byzantine civilization emerged from the Roman empire. Its centralized imperial system survived barbarian threats and internal unrest and was able to mobilize resources of manpower and wealth. As Christian theological controversies

THEODORA, JUSTINIAN'S PARTNER IN EMPIRE

Although women, such as Empress Irene, did sometimes rule the Byzantine empire on their own, this was unusual. But as wives, mothers, and sisters of emperors they were often powerful political figures. The Empress Theodora (ca. 500–548) was one of the most colorful and influential women in the early Byzantine empire. Historians must interpret her life from a slanderous diatribe (the *Secret History* by Procopius) that is the main source for Theodora. We do know that Theodora came from a disreputable background. She was an actress, a hereditary profession that was considered similar to prostitution. In order to marry her, Justinian had to issue a law allowing penitent actresses to marry with imperial permission.

Theodora was a strong partner for Justinian. As empress, she closed brothels, founded a convent for repentant prostitutes, and helped the destitute. She also intervened on behalf of women who were political victims. Theodora was a Monophysite, and with Justinian's permission she sheltered monks and clergy of this belief. Her influence was important in a popular rebellion known as the Nika Revolt. In 532 the popular factions in the Hippodrome joined in riots against Justinian's officials and burned much of the city. According to our sources, Justinian lost his nerve and considered flight, but Theodora persuaded him to stay and put down the rebellion. Until her death in 548, Theodora played an important role in Justinian's decisions. Her regal presence is vividly evident in a mosaic in San Vitale, Ravenna, where she stands opposite her husband Justinian in the nave of the church.

—Dorothy de F. Abrahams



Empress Theodora, mosaic from the basilica of San Vitale, Ravenna, Italy. Theodora I was the strong-willed consort of Justinian I during the sixth century CE. (Scala/Art Resource, NY)

bitterly divided the east, Byzantine emperors took on the role of protectors of right belief (Orthodoxy). Greek became the language of law and administration, and rulers began to use the Hellenistic term *basileus* (king). They ruled a civilization still interconnected around the eastern Mediterranean. The eastern empire remained a world of thriving cities, large and small, that produced trade, wealth, and frequently popular discontent in the fifth and sixth centuries. The emperor Justinian was able to marshal the resources of the empire to recover territory and mount a massive building cam-

paign in the sixth century, but new invasions from Persia and Arabs almost destroyed his successors. Historians now characterize the period between the fourth and seventh centuries not as a period of decline but as a distinctive and vibrant society known as late antiquity.

Fifth-century rulers of the east faced many of the same barbarian threats as their western counterparts. Pressured by the Huns, the Visigoths and later the Ostrogoths crossed the Danube frontier into the Balkans, and their generals threatened the empire. Eastern rulers, however, were able to offer subsidies to the

invaders and recruit armies from within the empire to oppose them. They were also helped by geography, as the Visigoths and Ostrogoths moved west into Spain and Italy, while the Persian border remained peaceful. Religious controversy was at its height in the fifth century, as great Church councils debated the definition of the human and divine natures of Christ. These arguments were not just abstract; they reflected deep divisions in belief between areas such as Egypt and Syria with Constantinople and the west.

The emperor Justinian (527–565) was one of the most important Byzantine rulers. His acts addressed every aspect of his society, beginning with a codification of imperial law that became the basis of Roman law for Europe in later centuries. He issued theological edicts, held a Church council, and attempted to restore religious unity. Justinian carried out a massive building program that created churches and fortresses throughout the empire. Most important was the huge domed church of Hagia Sophia (Holy Wisdom) that became the center of imperial religious ceremony. To restore the western empire, Justinian sent out campaigns that began with the reconquest of Africa from the Vandals in 533 and moved on to Italy. The reconquest of Italy from its Gothic rulers was long and difficult and was interrupted by renewed wars with Persia and the outbreak of the plague. Even in his own age Justinian's program was controversial, and many modern historians argue that its expense fatally weakened the empire.

Justinian's successors faced crises almost immediately. New migrations increased pressure on the expanded borders, as a central Asian group known as the Avars moved west. Italy remained Byzantine for only a few years before Lombard invaders, fleeing the Avars, took most of Justinian's conquests. The Danube frontiers came under new threat from the Avars and the Slavs. The Slavs, who lived in small groups, began to settle in the Balkan Mountains and raid as far south as Greece during this period. The crisis came to a head in 602 when a rebellion against the emperor Maurice led to civil war and gave the Persian armies a reason to invade. By 613 they had entered Jerusalem, where they took the Byzantine relics of the True Cross and moved on to conquer Egypt and invade Asia Minor. The

Persian rulers seemed ready to annihilate their old rival Byzantium.

But the new Byzantine emperor Heraclius led a remarkable comeback. He organized a new army and trained it in Asia Minor, remaining on the frontier even when Constantinople endured its first great siege by the Avars and Persians. The siege demonstrated the great strength of Constantinople, as the invaders were unable to breach its walls, and the use of Greek fire decimated their boats. Eventually Heraclius was able to regain the lost Byzantine territory along with the True Cross and to restore it to Jerusalem in a ceremonial triumph in 630. But the two empires had drained their resources in the wars. The cities and countryside of both empires were gravely damaged, and archaeology shows that many cities and villages were abandoned in the seventh century.

Neither was prepared to resist an unexpected new enemy from the desert, as the Arab followers of Muhammad began to attack the cities of Palestine in 633–634. They fell quickly and decisively, and by the time Heraclius died in 641, Palestine, Syria, and Egypt were lost to the Byzantine empire.

—Dorothy de F. Abrahamse

Bibliography

- Cameron, Averil. *The Mediterranean World in Late Antiquity, AD 395–600*. London: Routledge, 1993.
- Cameron, Averil, Brian Ward-Perkins, and Michael Whitby. *The Cambridge Ancient History*, Vol. XIV, *Late Antiquity: Empire and Successors, A.D. 425–600*. Cambridge: Cambridge University Press, 2000.
- Evans, J. A. S. *The Age of Justinian*. London: Routledge, 1996.
- Mango, Cyril. *The Oxford History of Byzantium*. Oxford, UK: Oxford University Press, 2002.

The Sassanian Empire

The Sassanian empire was the third of the great Persian empires in Classical and late antiquity. The first was the Archaemenid empire that was founded by Cyrus the Great about 540 BCE and lasted until its conquest by the Macedonian Alexander the Great in 333 BCE. Alexander's Greek successors ruled much of Persia until the rise of the Parthian kingdom in 250 BCE. The

Parthian kingdom, also known as the Arsacid empire, by the first century BCE, expanded to include Mesopotamia as well as most of Iran.

The Arsacid empire thrived nearly half a millennium until supplanted by the Sassanians in 224 CE. Tradition traces the dynasty to Sassan, a third-century CE Persian who was a shepherd and Persian Holy Man. His grandson, Ardashir I, at first was a vassal of the Parthians. As king of Fars in southern Iran, he is said to have claimed descent from the great rulers of the Archaemenid empire. Rebelling against Arsacid overlordship, Ardashir killed Artabanus V, the last Parthian king, and established the Sassanian (Sasanid) empire. By 226, he seized the luxurious Arsacid capital of Ctesiphon and assumed the title of shahinshah (king of kings), which had been the ruling title of the Archaemenid emperors. Ardashir also established Zoroastrianism as the state-sponsored religion.

The Sassanian empire endured for more than four centuries and, like its Persian predecessors, took its place as one of the great powers of the Eastern Hemisphere. At its greatest extent under Shahinshah Khosrau II (r. 591–628) the Sassanian empire stretched from west of the Egyptian Nile to the Indus River and ruled an area from the Mediterranean Sea and the Caucasus to central Asia and the outer limits of the Chinese empire and had client states in Oman and Yemen. Even in its more modest usual boundaries, it spanned the territory from Syria and the Caucasus to modern Uzbekistan and central Afghanistan. The mighty Roman empire fought numerous wars with the Sassanians and sometimes paid tributes to the Sassanians amounting to thousands of pounds of gold for peace.

On their western frontier, the Sassanians fought and traded with the Romans. The eastern cities of the Sassanian empire did the same with the oasis cities on the Silk Roads, and in the southeast the empire conducted intimate commercial and cultural relations with the kingdoms of India, including the Gupta empire. But the Sassanian empire was not only a commercial and cultural bridge between the East and West; it also was the location of a vigorous economic and cultural achievement on its own merits, to which the Sassanian university and the medical institute of Gondeshapur testify.

➤ IMPACT OF TOLERANCE IN EMPIRES

How states deal with diversity is important. Some tolerate just about anything that does not threaten their existence. Others insist on homogeneity and conformation. This varies over time. Most societies alternate between tolerance and conformation. Neither is a guarantee for success. The Persian empires survived for more than 1,000 years, from the sixth century BCE to the seventh century CE, with some interruptions. Their experience is interesting. The Achaemenids tolerated a wide variety of peoples and religions. They are remembered for allowing the Jewish Babylonian exiles to return and build a new temple in Jerusalem. Other peoples in the empire were treated with tolerance. This included many Greeks, who often performed well in imperial armies. Alexander continued this tradition, as did most of his Hellenic successors. There were exceptions such as that presented by the Seleucids (305–ca. 90 BCE) under Antiochus, leading to revolts such as that of the Maccabees in the second century BCE. The Parthians modeled their rule on that of the Achaemenids and sponsored widespread tolerance of diversity, often capitalizing on this in their conflict with Rome. The Sassanians did not follow this tradition. Their sponsorship of orthodox Zoroastrianism often led to persecution of dissenters in their empire. That did not, however, prevent their exploiting the discontent of dissidents, both Christian and Jewish, in the Byzantine Empire. It also did not result in such severe persecution of Persian Jews that it prevented completion of the Talmud by scholars in Mesopotamia, still the primary source of Orthodox Jewish law. Their departure from the greater tolerance of the Parthians did lead to many subject peoples welcoming the Arab Muslim conquerors. This paralleled the response of Byzantine subjects to the Arab Conquest. It seems that while tolerance does not ensure survival, intolerance provides fertile ground for subversion.

—Daniel E. Spector

Sassanian government combined a patrimonial, almost feudal, system of local government with some degree of centralization. Hereditary magnates (*shabrdars*) governed many of the provinces. With the higher Zoroastrian clergy, these magnates constituted a powerful governing class without whom only a few rulers found

➤ KEY DATES IN PERSIAN EMPIRES

Empire of the Medes	625–550 BCE
Empire of the Achaemenids	550–330 BCE
Cyrus the Great	550–530 BCE
Cambyes (530–531 BCE)	
conquers Egypt	525 BCE
Darius I (531–486 BCE)	
Battle of Marathon	490 BCE
Xerxes I (486–465 BCE)	
Battle of Salamis	480 BCE
Darius III (336–330 BCE)	
Battles of Issus	
and Gaugamela	333–331 BCE
Greek empires in Persia	332–248 BCE
Alexander the Great	356–323 BCE
Seleucid Greeks	305–248 BCE
Parthian empire	248 BCE–226 CE
Arsaces I (founded	
Parthian kingdom)	248–212 BCE
Mithradates (expanded Parthia	
to extensive empire)	171–138 BCE
Treaty with Rome	92 BCE
Sassanian empire	226–651 CE
Ardashir I (226–240 CE)	(founded Sassanian empire)
Multiple wars with	
Rome/Byzantium	241–627 CE
Sassanid siege on Constantinople	626 CE
Muslim wars against	
the Sassanids	633–651 CE
Battle of Qadisiyah	637 CE
Sassanid defeat at Nehawand	642 CE
Death of last Sassanid emperor	651 CE

—Daniel E. Spector

it possible to govern. These magnates controlled vast territories and enjoyed princely incomes. Next in prestige were the lower clergy and bureaucrats and then the class of warriors known as *artestdar*. These warriors served as heavily armored cavalry, or *cataphracts* or *clibanarii*. They were the knights of Sassanian Iran and the antecedents of medieval European knights. The *artestdar* were a very haughty lot, proud of their genealogy and disdainful of the impoverished commoners. These warriors were given hereditary estates so that they would be able to afford

the armor, the weapons, and the special horses that their military service required.

The commoners were artisans or peasants, often living as hereditary serfs. They were exploited and occasionally engaged in widespread peasant uprisings, which the *artestdar* and the government suppressed with a measure of brutality. The most serious of these peasant uprisings was that of the Mazdakists, which occurred at the end of the fifth and beginning of the sixth centuries. The Mazdakists were the followers of Mazdak, a charismatic holy man who preached, if the reports of his enemies are to be believed, the sharing of the landlords' and the Zoroastrian churches' wealth and women. Initially, the reigning shahinshah, Kavadh I, favored the Mazdakists, but the Zoroastrian clergy and the majority of the nobles overthrew him. When Kavadh regained power in the early sixth century, he allowed a pitiless proscription of the Mazdakists, massacring thousands.

Although there was much religious diversity in the Sassanian empire, with many Jews, Christians, and Buddhists, the majority and official religion was Zoroastrianism. Jews and Buddhists usually received broad toleration, but toleration of Christians alternated with persecution, often shifting with the imperial succession. Although both Manichaeism and Mazdakism received initial favor by the reigning shahinshah, both were regarded by the Zoroastrian clergy as Zoroastrian heresies and were suppressed.

The Zoroastrian clergy, like the medieval European Christian clergy, were extremely potent. They controlled much of the wealth in the empire and wielded great political power. Religious orthodoxy became a state goal. This was similar to what happened in the Roman empire after Christianity became the state religion in the fourth century, intolerant of non-Christians and Christian beliefs that deviated from orthodoxy. Both empires tried to subvert religious minorities in each other's domain, and this became a theme in the imperial conflict. When Persian armies took Jerusalem in 614, the Jews there welcomed the change; dissident Christians elsewhere in the Byzantine empire often welcomed their Persian conquerors as more tolerant than their Christian leaders. This foreshadowed what would soon happen when the Arab Muslims conquered territories

in both empires. They were often welcomed as relief from persecution by orthodox religious elites.

The third and fourth centuries and the sixth century were periods of grandeur for the Sassanian empire, but during the fifth century the imperial fortunes sank to a low point. In the second half of the fifth century, a prolonged famine swept the land (464–471), peasant distress was rife, civil conflicts abounded, the Mazdak insurgency occurred, and the Hephthalites, a pastoral people from central Asia, forced the Sassanians to pay tribute. Immediately after the famine, the Hephthalites attacked Herat in the eastern part of the empire. The shahinshah, Perooz I (r. 457–484), after some initial victories was captured by the Hephthalites and held for ransom. Perooz agreed to pay tribute to the Hephthalites and even surrendered his heir, Kavadh, to them as a hostage. Then, the Hephthalites intervened on behalf of Perooz in a civil war. On Perooz's death in 488, Kavadh ascended the throne and fell afoul of the Zoroastrian clergy for supporting the Mazdakite insurrection. Although the clergy allied with the nobility deposed Kavadh, he sought refuge among the Hephthalites and married the daughter of their king. The Hephthalites again intervened in Persian civil strife, assisting Kavadh in recapturing his throne. Kavadh and his Hephthalite allies then attacked the Romans in the west and won several victories. But the Hephthalites proved to be fickle allies and continued to raid Sassanian territory until finally defeated by Shahinshah Khosrau I in 557.

Historians have called several Sassanian rulers “the Great.” Shapur I the Great (r. 240–272) is remembered as a great warrior who defeated the Romans and as a builder of cities including Gondeshapur, later the location of the famous university. He built roads and dams that stimulated agriculture and the economy.

Shapur II (r. 309–379) is also called “the Great.” The nobility crowned him while still in the womb; the crown was placed on his mother's belly. He fought many wars against the Romans although without great results. His conquests included Armenia, the area now known as Afghanistan, and part of Pakistan, where he subdued and annexed the Kushan empire.

Perhaps the most renowned Sassanian ruler in Persian legend is Braham V (r. 421–438). A

great warrior, he repeatedly defeated the Romans and dealt the Hephthalites a severe defeat near Bukhara, in modern Uzbekistan. A model Persian gentleman, he was immortalized by the Muslim Persian historian Firdausi in his epic *Shahnameh (Book of Kings)* (ca. 1000 CE).

The end of the Sassanian empire came in 642, when the last shahinshah, Yazdgerd III, was defeated (some say killed) by the Muslim Arabs. Although the Tang dynasty maintained his successor, Perooz II, and a court in exile for several decades, the Sassanian empire was only a memory.

—Wilfred J. Bisson
and Daniel E. Spector

Bibliography

- Armajani, Yahya. *Iran*. Englewood Cliffs, NJ: Prentice Hall, 1972.
- Curtis, John, Vladimir Grigor evich Lukonin, and British Museum. *Mesopotamia and Iran in the Parthian and Sasanian Periods: Rejection and Revival C. 238 BC-AD 642; Proceedings of a Seminar in Memory of Vladimir G. Lukonin; Funded by a Gift from Raymond and Beverly Sackler*. London: Published for the Trustees of the British Museum by British Museum Press, 2000.
- Daryaei, Touraj. *Sasanian Iran, 224- 651 CE: Portrait of a Late Antique Empire*. Costa Mesa, CA: Mazda Publishers, 2008.
- Dignas, Beate, and Engelbert Winter. *Rome and Persia in Late Antiquity: Neighbours and Rivals*. Cambridge: Cambridge University Press, 2007.

The Guptas in India

The Gupta rulers gave northern India its so called classical age, that era when a society accepts its political and social structures and develops refined standards for its artistic and literary culture. The reign of these “imperial” Guptas, 319–467 CE, also saw the integration of ancient beliefs, local customs, and bardic legends into the conglomerate yet classical pattern of Indian culture and the equally conglomerate religion that foreigners would later call Hinduism. The Gupta empire was neither the largest nor the mightiest in India's long history, but it was the one that supported and sponsored this classical culture.

➤ FAXIEN: A RELIABLE WITNESS?

Historians seeking accurate accounts of past events usually look for primary sources (i.e., documents or eyewitness accounts, perhaps in memoirs or letters) describing such events. These are usually, but not always, considered more reliable than secondary or more remote transmissions.

For India's Gupta empire, the primary evidence is fragmentary: coins, inscriptions on pillars, rocks, and copper plates. However, there is one eyewitness account, that of a Chinese monk named Faxian. Faxian resided in Gupta India from 401 to 411 CE, after which he took a ship to Singhala (Sri Lanka), where he spent two years before moving on to Java. He had plenty of opportunity to observe the Gupta state and the life of the people within it.

However, Faxian's interest was focused on Buddhism. He seems to have spent most of his time studying Buddhist manuscripts, visiting holy places, and hearing tales of events in the lives of the Buddha and his principal apostles. Only two passages mention rather casually the lives of the people, and these give such sugarcoated views

that they must be questioned. One says that there were no capital punishments, merely fines for crimes, and no butcher shops or dealers in intoxicating drinks and that the only meat eaters were the low-caste Chandellas. In the other passage, he says that the townspeople "vie with one another in the practice of benevolence and righteousness" and that wealthy families set up dispensaries to provide medical care for all the poor.

There is enough evidence in the law codes and the literature of the day to assert that Faxian was not aware of what was happening around him. Or perhaps he was aware but felt that as a guest he should not tell unpleasant facts about his hosts.

—Edwin Hirschmann

Source

A Record of Buddhistic Kingdoms, Being an Account by the Chinese Monk Fa-Hien of His Travels in India and Ceylon (A.D. 399–414) in Search of the Buddhist Books of Discipline, translated and annotated by James Legge (1865; reprint, New York: Paragon, 1965).

This empire, which came to rule much of northern, eastern, and central India, had as its core area Magadha (southern Bihar) and as its capital Pataliputra, as had the mighty Maurya empire roughly 500 years earlier. It reached for empire when its heir, Chandra Gupta I, married a princess of the powerful Lichchavi tribe of northern Bihar, absorbed their lands, and began adopting imperial titles and trappings. (This Chandra Gupta must not be confused with Chandragupta Maurya, founder of that dynastic empire. Perhaps the former tried to emulate the latter, but there was no family connection.)

Samudra Gupta, 335–375 CE, followed his father's lead by sending the armies to conquer the upper Gangetic plains and, if inscriptions are reliable, then south, along the Bay of Bengal coast, to the area of present-day Chennai (Madras). Samudra Gupta is said to have subdued many "kings," although he restored some to their administrative roles as his tributaries. Annexing conquered lands and ruling through imperial officials was not the usual practice of those times.

Samudra Gupta, in addition to his political and military skills, was portrayed as an accomplished poet and musician.

The Gupta empire peaked with the reign of Chandra Gupta II, 375–415 CE, sometimes called "Vikramaditya." His army carried the reach of empire westward beyond the Indus Valley, wiping out what remained of Kushan and Shaka "satraps" or feudatory chiefs. Like his father, he claimed to be a "universal" emperor, and his conquests are listed on a commemorative iron pillar, now in Delhi.

Such inscriptions, on pillars, copper plates, caves, and walls, must be used by historians, along with dated coins, to understand the history of classical India. It is a jigsaw puzzle with many pieces missing. There are few narratives or chronicles. Literature of the time gives us some materials, but they are not historical records; even learned treatises on state and society are prescriptive (telling how life should be) rather than descriptive (telling how it actually was). Thus, we have *shastras* on the law and state as-

cribed to Manu, the legendary lawgiver, and later sages but no records of actual trials or administrative proceedings. Some historical insights can be gleaned from the *Arthashastra* of Kautilya, which is too subtle and sophisticated to have been imagined. For instance, Kautilya urged frequent checks against fraud by state officials, since such theft is as hard to detect “as it is to discover when the fish drinks water.” The historical Kautilya was the minister to Chandragupta Maurya, but the language of the *Arthashastra* indicates that it was written during Gupta times.

In classical India the monarch was divinely anointed through ceremonies by leading Brahmins (much as in medieval Europe). Kingless states, called “republics” or “oligarchies,” were gradually eliminated from most of India. The reigning monarch chose his successor, and the successor was not always the oldest son. This led to some gory episodes: Chandra Gupta II reputedly became king by killing his brother. Despite their divine sanction, kings did not rule absolutely. They were a part of the socio-religious system called *dharma*, divine law or duty, and the king who violated *dharma* by turning tyrant forfeited his subjects’ loyalty. The wise king valued public opinion and, of course, Brahmanical opinion.

Rulers and warriors supposedly came from the *varna* (caste) of the Kshatriyas, but most of the ministers seem to have been Brahmins, and members of other *varnas* could occasionally rise to high position through their merits and the fortunes of politics. Generally, though, the low-castes and no-castes were supposed to do the dirty work and serve their “betters.”

The king ruled through his administrative machinery, for, as Kautilya wrote, “a single wheel cannot move by itself.” He chose senior advisers, called *mantrins*, who met in council. Members included the *purohita* (court priest), the *senapati* (army commander), the foreign minister, the chief judge, and other functionaries. There were also the *amatyas*, administrative assistants to the king. One pillar from Gupta times refers to a *sabha*, apparently a popular assembly, but tells nothing of its selection or its role in the state. The Guptas also had an established system of provincial and local administration, with royal governors running the directly

ruled provinces. Those provinces were divided into districts, administered by district officers assisted by appointed councils. Towns and villages also had councils of prominent local citizens to attend to civic business.

Areas that retained their autonomy had kings who acknowledged the sovereignty of the Gupta ruler and sent him gifts and tax revenues, in return for which they were confirmed and protected on their thrones. Should the central power weaken, these regional feudatories might assume larger measures of independence and authority. This was most likely in frontier areas where access was difficult and in minor states that had been swallowed whole by the empire. When Chandra Gupta II married the princess of the Vakatakas, rulers of a substantial central Indian kingdom, he brought that state into the empire.

Despite India’s philosophies of nonviolence, warfare and aggressive diplomacy seem to have been normal interstate behavior. Kautilya wrote that a ruler should consider all bordering neighbors as his natural enemies and seek to weaken or upset them. But if one’s neighbor is a natural enemy, the state on his far side would be a natural ally with whom one could work to destroy their mutual foe. Kautilya built up a system of situational chesslike gambits known as the *mandala* theory, advising a ruler how to weaken his enemies and strengthen his own position. A proper army, according to classical doctrine, included infantry, cavalry, chariots, and an elephant corps, although by Gupta times the chariot was fading into military insignificance. Though wars were frequent, we have no historical accounts of invasions and battles or destruction and casualties, making them seem abstract and bloodless.

Law in classical India was not considered a product of legislation or royal decree but instead was a fulfillment of *dharma*, divinely dictated and merely elaborated by earthly authorities. Law codes of Gupta times show a greater preoccupation with property rights than had earlier renditions, indicating a society settling down with increasing contentions over land occupancy. Trial judges could consider existing customs and changing conditions as well as the codified laws, but again we have legal prescriptions attributed to brilliant scholars rather than descriptions of actual ordinances and trials.

The Gupta monarchs do not seem to have participated directly in economic activities, perhaps because of the vigorous and well-organized mercantile and banking establishments. As seen, the rulers provided an effective court system that respected property rights, and they made a fine art of minting silver and gold coins. To help commerce they maintained and policed highways. To help agriculture they built dams and irrigation systems, since the prudent use of river and rain waters was already becoming a subject of general concern. There was talk of state regulation of market prices and banking rates, but whether anything effective was done is not known.

The principal source of state finance was the land revenue, in Gupta times and after, until the modern Indian Republic. It was usually set at one-sixth of the farmer's harvest, though it might rise as high as one-third. It is called simply "land revenue" to avoid the knotty problem of whether it was taxes or rent, whether the monarch "owned" all the land in the kingdom. "All land belongs to the king" was a truism often heard but not meant in the Western sense. He could not simply seize it and oust the peasant without justification. If he did so he could be accused of violating dharma, and if he did it too often he might find himself without a kingdom. Except for those on explicitly temporary lease, the peasants had a recognized right of occupancy if not ownership.

The most distinguishing role of the Gupta court was as the generous patron of learning and literature in classical Sanskrit. Ancient Sanskrit had been retained for sacramental use in Vedic prayers, though it had dropped out of everyday speech. Now it was revived with elegant complexities as the language of India's learned and cultured elites. The court of Chandra Gupta II hosted "The Nine Jewels," accomplished Sanskrit poets and writers. Among them, it is generally believed, was Kalidasa, brilliant poet and dramatist whose romantic drama "Shakuntala" introduced an idyllic legendary India to the West. Science also flourished in Gupta times, with Aryabhatta the most renowned astronomer and mathematician whom some feel first invented the decimal system.

The Gupta empire peaked with Chandra Gupta II in 415 CE, but empire and dynasty con-

tinued. His son and successor, Kumara Gupta, maintained the empire for 40 years. When insurgents threatened, Kumara Gupta's son Skanda Gupta crushed them and then succeeded his father in 454 CE. However, the empire was soon threatened by a serious invasion from central Asia by the Huns (called Hunas in India), cousins of those invading Europe at about the same time. As in Europe, they were depicted (by their victims) as brutes and monsters of depravity. Skanda Gupta repelled the Hunas in a fierce battle, but some imperial feudatories used the distraction to gain power or even break away from the empire.

With the death of Skanda Gupta in approximately 467 CE, the line of succession becomes murky. A brother, Puru Gupta, apparently succeeded, followed shortly by two of Puru Gupta's sons. Then Budha Gupta, a son of Skanda Gupta, ruled from 477 to about 500 CE. But the Hunas then returned in force, and the emaciated empire succumbed to their attacks. Under the terrifying Toramana and his son, Mihirakula, the Hunas raided and ravaged northern India. This ended around 530 CE when a Gupta feudatory, Yashodharman, seized control, rallied the home forces, and drove the Hunas into Kashmir. After a decade of personal power, Yashodharman disappeared. Gupta heirs resumed their throne in their Magadhan heartland, but the empire had been shattered.

—Edwin Hirschmann

Bibliography

- Basham, A. L. *The Wonder That Was India*. 3rd rev. ed. New York: Taplinger, 1968.
- Gupta, P[armeshwari] L[al]. *The Imperial Guptas*. 2 vols. Varanasi: Vishwavidyalaya Prakashan, 1979.
- Saletore, Bhasker Anand. *Ancient Indian Political Thought and Institutions*. Bombay: Asia Publishing House, 1963.
- Thapar, Romila. *Early India: From the Origins to AD 1300*. Berkeley: University of California Press, 2002.

Christian Africa in Late Antiquity

From the early fourth century to the late seventh century, North Africa was a Christian land. Christianity in North Africa enjoyed its golden era in the fourth century. The Catechetical School of

Alexandria produced great scholars such as Tertullian and Cyprian.

The Egyptian or Coptic Churches spread the Christian faith in the local (Coptic) language, and many churches emerged in the interior of Egypt. The Roman government's fitful campaign to suppress Christianity reached its peak when Emperor Diocletian launched a major attack against Christians during 303–305, but this suppression came to an end in the year 312 when a pro-Christian emperor, Constantine, issued a decree of religious freedom.

In the fourth century, the era of monasticism commenced. This movement started when devout Christians left families and cities in order to live ascetic lives as hermits in the desert. Antony (251–356), a hermit from Egypt, is often referred to as “the African Father of Egyptian Monasticism,” while Pachomius (ca. 287–347) founded Coptic monasteries that were ruled by poverty and obedience. Augustine (354–430), the bishop of Hippo, also founded monasteries in North Africa, and his monastic rule had great influence in the universal Church. In spite of its triumph in becoming the orthodox religion of the Roman state, Christianity in North Africa experienced doctrinal conflicts that led to internal divisions. In these conflicts, African bishops such as Athanasius and Augustine were in the vanguard of defining the accepted orthodox position.

Donatism, a doctrine propounded by Bishop Donatus of Carthage, denied Church members who had collaborated with Christian persecutors admission back into the Church. Augustine argued that the Christian message did not depend on the moral character of the messenger but instead depended upon God, the giver of salvation. Later on, Augustine accepted the collaboration of the imperial authorities in fighting the Donatists. The imperial authorities resorted to armed violence to suppress the Donatists. However, the Donatist schism continued to prevail in North Africa until the invasion of the region by Islam in the seventh century.

The Christian church in Egypt, led by the archbishops of Alexandria, refused to subscribe to Christian orthodoxy as defined by the archbishops of Constantinople, who were supported by the Byzantine emperors. In their conflict with the Byzantine archbishops and emperors,

the Egyptians embraced Monophysitism, a complex and unique understanding of the nature of Christ. This doctrinal dispute with the Byzantine authorities strengthened the Egyptians in their nationalistic defiance of imperial authority. The indigenous Christian church of Egypt came to be known as the Coptic Church (after Copt, a Greek word for the native Egyptians).

The split within the Orthodox Church became wide and bitter. After the fifth century, imperial authorities maintained a Greek archbishop in Alexandria in rivalry with the indigenous Coptic archbishop. During the wars between the Byzantines and the Persians, the Copts sided with the Zoroastrian Persians rather than the Christian Byzantines. When the Muslims drove the Byzantines from Egypt in the 640s, the native Egyptians stood on the sidelines and cheered. Invasions by Vandals in North Africa marked the beginning of the decline of the Church in North Africa. The Vandals had been converted to Arian Christianity in the fifth century and were hostile both to Donatists and Catholic Christians. In 533, Byzantine invasions led by Justinian defeated the Vandals. Justinian tried to revive Catholicism by expelling Donatists and Arians from the churches, but the prosperity of the third and fourth centuries was never fully restored. However, it was during the reign of Justinian that Christianity spread to Nubia, the Sudan, and Ethiopia. Some evidence indicates that Christianity had already been in Ethiopia as early as 350 in Aksum. Regardless of the great attention he gave to the struggle between the orthodox and the Monophysites, Justinian failed to bring about religious unity in his empire. His conquest of Vandals did very little to stop the decline of Christianity in North Africa.

The coming of Islam to North Africa in 639 further weakened the divided Christian communities of this region and displaced Christianity on a large scale. In 667, Arab armies invaded the province of North Africa and built the city of Kairowan as its religious and military center in North Africa. By 709, the whole of North Africa was in the hands of Arabs. Unconverted Christians were allowed to practice their religion if they paid a tax and renounced proselytizing for Christianity. There was a significant increase in Islamic converts. Within a century, the Christian

Church in North Africa, except for the Nubian kingdoms, had died out without any direct persecution. The Nubian kingdoms of Nobadia and Makuria that united under the name of Makuria's capital, Dongola, managed to fight back Arab forces and flourished as a kingdom until 1317, when the Dongola Cathedral became a mosque.

—Conrad Chibango

Bibliography

- Baus, K., H. Bek, E. Ewig, and H. J. Vogt. *The Imperial Church from Constantine to the Early Middle Ages*. Translated by Biggs Anselm. London: Burns and Oates, 1980.
- Comby, J. *How to Read Church History, Vol. 1, From the Beginnings to the Fifteenth Century*. London: SCM, 1985.
- Daniel, Robin. *The Holy Seed: Faith, Hope and Love in the Early Churches of North Africa*. Harpenden, UK: Tamarisk Publications, 1993.
- Lindberg, Carter. *A Brief History of Christianity*. Malden, MA: Blackwell, 2006.

Chinese States during the Period of Disunity, 184–589 CE

The Period of Disunity in China lasted more than three and a half centuries, from the fall of the Han dynasty until the rise of the Sui dynasty. It is often dated as starting with the deposition of the last emperor of the Han dynasty in 220, but many Chinese historians (as well as the authors of *The Romance of the Three Kingdoms*) prefer to date it from the Yellow Turban Rebellion, which began in 184 and spelled the de facto end of Han dynasty power.

The Yellow Turbans were a Daoist sect in Shandong that led a peasant rebellion against extortionate taxation and bureaucratic oppression. Although the leader of the Yellow Turbans was killed, his rebellion spread, eventually engulfing most of northern China as well as Sichuan and requiring the mobilization of vast armies for its defeat. These armies managed to suppress the uprisings but only at the cost of massive death and destruction and the effective loss of imperial unity. The commanders of the regional armies rose to become warlords of their devastated areas, and the nominal emperor became a puppet of one of the leading generals, Cao Cao (from whom the dish General Tsao Tsao's

chicken, common in American Chinese restaurants, takes its name).

After years of warfare among the warlords, three kingdoms emerged.

In the north, centered on the Han capital of Loyang, General Cao Cao ruled through a puppet Han emperor, but in 220 Cao Cao's son deposed the puppet and established the Wei dynasty. Shortly after, another warlord proclaimed the Shu Han dynasty in Sichuan, while the Yangzi Valley and the south became the home of the Wu dynasty. These three kingdoms were at nearly incessant war from 222 to 265, warfare that is the major theme of *The Romance of the Three Kingdoms*, one of China's Four Great Novels. *The Romance of the Three Kingdoms* was written in the thirteenth century.

All the three kingdoms confronted similar problems, the most pressing of which was to stabilize their agricultural base. Wei had the largest population, but throughout the period many of its people continued to flee south to Lu, where the less densely populated regions offered opportunity. But the rich lands in the Yangzi Valley were claimed by strong landlords, and peasants fleeing from the north could usually settle them only if they accepted a status similar to serfdom. Wu also broadened its economic base by a significant enlargement of its overseas mercantile fleet.

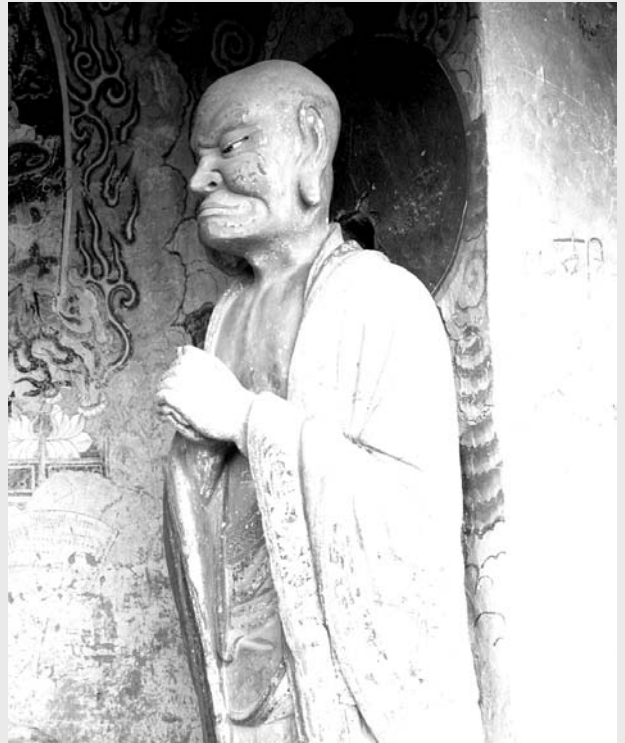
The continuing war between the Three Kingdoms came to an end when the northern kingdom of Wei, now ruled by a general who usurped the throne and established the Jin dynasty, conquered the other two kingdoms and united China. The Jin dynasty lasted for a chaotic period of 52 years (265–317), almost constantly at war with one or more of the five groups of Altaic and Tibetan “barbarians” who invaded and eventually erected ephemeral kingdoms on the northern China plain. The Jin government took a census of the united realm; only a few more than 16 million inhabitants were counted. This compares with about 59 million during the heyday of the Han dynasty, indicating the horrendous mortality in the third and fourth centuries.

In the beginning of the fourth century, “barbarian” groups began seizing sections of the northern China plain and settling there as crowds of Chinese refugees fled to the safety of the Yangzi Valley. Xiongnu, Xienbei, Tibetan, and

➤ KASYAPA—A SIXTH-CENTURY BUDDHIST SCULPTURE AT THE MAIJISHAN GROTTOES

In the wake of the collapse of the Han dynasty in 220 CE, a number of smaller kingdoms and self-proclaimed empires appeared in a fragmented China, many of them carved out by non-Chinese invaders. The most important of these invaders were the Tuoba clan of the Xianbei tribe, probably a Turkic people, who established several short-lived but important polities in northwestern China. Of these the Northern Wei (386–535) and Western Wei (535–557) empires were the most significant. The Northern Wei and their Tuoba successors strongly promoted Buddhism as the theological underpinning for their authority, and their patronage of this faith and its arts profoundly affected the cultural course of Chinese civilization forever after. Beginning with the Northern Wei, these foreign empire builders actively supported the earliest construction and decoration of China's four great Buddhist cave complexes at Dunhuang (in the Gobi Desert), Maijishan (near Tianshui), Longmen (near Luoyang), and Yungang (near Datong).

This particular statue, probably dating from the sixth century during either the Northern Wei or Western Wei periods, is found in Cave 87 at Maijishan and portrays Kasyapa, the Buddha's oldest disciple. Together, he and Ananda, the Buddha's youngest disciple, iconographically represented the earliest Buddhist Sangha, or monastic community, and often flanked statues of the Buddha. Note the beaked nose and overall facial features, which clearly mark Kasyapa's foreign ethnicity. The artists who worked in these caves and their Northern Wei and Western Wei



This statue, probably dating from the sixth century during either the Northern or Western Wei periods, is found in Cave 87 at Maijishan and portrays Kasyapa, the Buddha's oldest disciple. (Alfred J. Andrea)

patrons knew that Kasyapa had been an Indian, but he looks central Asian and might well show us a typical elderly Tuoba man.

—Alfred J. Andrea

other bands established short-lived kingdoms in northern China from 304 to 439. Chinese historians call this the Sixteen Kingdoms Period.

By 316, the Jin dynasty was destroyed in the northern capital of Louyang, but in 320 a group of Jin loyalists reestablished the dynasty, now known as the Eastern Jin, near Nanjing. This became the capital of the Southern empire, which extended from the Huai River in the north to the Red River in what is now Vietnam and lasted, in spite of dynastic changes (Liu Song, 420–479; Qi, 479–502; Liang, 502–557; Chen, 557–589) until the reunification of China by the Sui in 589.

Waterways and canals made the cavalry of the northern barbarians ineffective, while the strong navy of the Southern empire offered stout defense and the Southern empire flourished. Over the decades, migration from northern China filled the lands of the Yangzi Valley and pushed south into Hunan and Guangdong. The Southern empire, dominated by wealthy landlord families whose pride was in their northern origins, ensured the continuation of the ancient Chinese traditions and scholarship. The civil service continued to be recruited partly by merit, and the government supported the arts.

Although the rural areas in the Southern empire continued to grow in population and wealth, this did not translate into a strong central government. Powerful families dominated the regions, treating them almost as independent fiefdoms. The decrees of the emperor often did not prevail in the provinces, and the central government's taxing authority was limited. Many powerful families escaped taxation, as did the lands of the growing number of Buddhist monasteries.

In northern China, the "barbarian" kingdoms continued their unending warfare with each other (and with the Southern empire) but began to lose some of their "barbarian" culture and became assimilated into Chinese civilization. In 386 one partly sinified "barbarian" group, the Toba (which may have been Turkish or proto-Mongolian [Xienbei] in origin), seized much of the Yellow River plain and proclaimed the Northern Wei dynasty. In 439, the Northern Wei conquered the rest of North China, establishing what is often referred to as the Northern Empire.

For more than a century, the Northern Wei was a powerful and energetic dynasty. The Northern Wei defended China against the incursions of a new, powerful "barbarian" group, the Juan Juan, so successfully that the Juan Juan abandoned China and turned west. Their descendants, the Avars, would terrorize Europe in the seventh century. The Northern Wei also rebuilt some of the Great Wall and even began to reclaim some of the military colonies established by the Han dynasty on the Silk Roads.

The Northern Wei was able to support these enterprises because of its new policy regarding land and peasants. This policy instituted the Equal Field and the Three Chiefs systems. According to the Equal Field System, peasants were given land in exchange for taxes and labor service. Peasants were supposed to have equal amounts of productive land. In the northern China plain, this amounted to 140 mou, or 19 acres. But the Northern Wei was forced to exclude many estates from the Equal Field system, and as in the south, lands of the great Buddhist monasteries were tax-free. Under the Three Chiefs system, villages were made collectively responsible for taxes. This system divided the

peasants into groups by which the peasants policed each other.

Buddhism made great strides in northern China during the Northern Wei. Northern Wei emperors patronized the Buddhism lavishly, and the great Buddhist cave temples, such as those at Yunkang and Longmen near the two Northern Wei capitals, dug during the Northern Wei, are enduring examples of early Chinese Buddhist art.

Buddhism did not make as rapid progress in the Southern empire, perhaps because of the stronger role that Confucianism played there. Nevertheless, by the mid-sixth century in both the Southern and Northern empires, Buddhism had permeated deeply into the population and enjoyed governmental favor in both empires. In fact, in the Southern empire, Emperor Liang Wudi renounced his throne and entered a Buddhist monastery twice. Government ministers both times were required to pay a high "ransom" each time for his release.

As the sixth century progressed, the Toba rulers of the Northern Wei adopted more Chinese culture. Chinese became the language of court, and Toba officials were required to adopt Chinese clothes, customs, and surnames. Inter-marriage with Chinese families was encouraged.

This court-imposed sinification eventually caused a rebellion among the frontier troops, but the Northern Wei endured until it fragmented into the Eastern and Western Wei in 534. The Northern Qi and the Northern Zhou replaced these two states. In 581, General Yang Qien deposed the last emperor of the Northern Zhou and proclaimed the Sui dynasty, which then conquered the Southern empire, uniting China again.

The Period of Disunity thus came to an end. Although China was to experience more periods of division, none came close to equaling the post-Han Period of Disunity that lasted three and a half centuries. Unlike Europe after the fall of the Roman empire, China after the end of the Period of Disunity was usually conceived of as a single empire.

—Wilfred J. Bisson

Bibliography

Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. London: Cambridge University Press, 1996.

Reischauer, Edwin O., and John K. Fairbank. *East Asia: The Great Tradition*. Boston: Houghton and Mifflin, 1958.

The Sui Dynasty, 581–617 CE

After the collapse of the Han dynasty in 220 CE, China split into a number of kingdoms. By the mid-sixth century northern and southern China had grown apart culturally and economically. These differences were reversed when the short-lived Sui dynasty reunified China in 581. The unification itself coupled with massive construction projects and the stimulation of economic growth formed the framework for the glorious Tang dynasty that followed.

General Yang Jian, a dynamic man of mixed Chinese and Xianbei descent, took power in a coup d'état in 581. He assumed the title of emperor and ruled as Sui Wendi (581–604). He was followed by his son, Sui Yangdi (605–617). Sui Wendi was lauded as the great unifier, while Sui Yangdi was vilified in the official histories. A close examination of the two reigns shows little difference. Both engaged in enormous engineering projects, and there is little difference in policy between the two reigns. Indeed, many policies of the Sui were continued into the Tang dynasty, where they were praised by official histories.

Reunification helped to solidify Chinese culture and tradition and strengthened the centralized bureaucratic monarchy. The Sui replaced weak governmental institutions with new stronger ones. Laws, rituals, and protocols (*li*) were codified. The Sui revamped local administration to help prevent favoritism. New officials were prohibited from serving in their homelands, and their terms of service were limited to three to four years.

Although the Sui dynasty was sharply criticized for its foreign policy, the same policies were used under the Tang and led to three centuries of peace. The Turks, both eastern and western, and Korea were the primary interests in foreign policy. The western Turks were kept in line because their khan's mother was Chinese and lived in Chang'an, part hostage, part inter-

➤ AN ELEGANT TRIP ALONG THE GRAND CANAL

In 605 the Sui dynasty emperor Sui Yangdi traveled from Loyang to Chiang-tu to celebrate the completion of a section of the Grand Canal linking the two cities. He traveled, along with his court and officials, in specially built boats. All along the 65-mile journey entertainment and provisions were provided by local officials at their own expense. The *Sui History* describes the journey:

“Moreover the emperor caused to be built dragon boats, phoenix vessels, war boats of the ‘Yellow Dragon’ style, red battle cruisers, multi-decked transports, lesser vessels of bamboo slats. Boatmen hired from all the waterways . . . pulled the vessels by ropes of green silk on the imperial progress to Chiang-tu [Yangchow]. The Emperor rode in the dragon boat and civil and military officials of the fifth grade and above rode in the multi-decked transports; those of the ninth grade and above were given the vessels of yellow bamboo. The boats followed one another poop to prow for more than 200 leagues [65 miles]. The prefectures and counties through which they passed were ordered to prepare to offer provisions. Those who made bountiful arrangements were given an additional office or title; those who fell short were given punishments up to the death penalty.”

For a region already staggering from the heavy tax burden and forced labor required to build the canal, this display must have increased local hostility toward Sui Yangdi. Within five years major rebellions broke out throughout China that ultimately led to the fall of the Sui dynasty.

—Rebecca Wendelken

Source

Arthur F. Wright, *The Sui Dynasty: The Unification of China, A.D. 581–617* (New York: Knopf, 1978), 180.

mediary. The Western khan came to Chang'an under Yangdi and remained there until 612.

The eastern Turks were more of a challenge. To control them the Sui began to repair and extend the Great Wall. Wendi kept Turkic children for so-called education, although they were actually held as hostages. Tribes were also resettled

to Chinese territory, and they were kept docile by tribute and payments to prevent them from allying with Chinese enemies. The Chinese used the eastern Turks as mercenaries, although they were not always reliable.

The biggest military struggle of the Sui was against the kingdom of Koguryo. Once a possession of the Han dynasty, Koguryo was rich and already civilized. In 612 China attacked with a two-prong strategy that included land and naval forces. Despite quickly building a bridge over the Liao River, the Chinese were rebuffed by Koguryo's walled cities and by summer rains. The following year the Chinese attacked again but this time were distracted by rebellion at home. In 614 on their third campaign, Chinese troops came within close distance of Koguryo's capital near present-day Pyong-yang, but attempts to convince the king of Koguryo to surrender failed. A fourth campaign was planned but never executed because of a civil war in China. Another campaign against Manchuria, once part of the Han dynasty as was Koguryo, ended in failure. One major success was reconquering Vietnam.

The Sui dynasty is especially known for its construction projects. A new capital, a canal system, granaries, rebuilding the Great Wall, and creating a navy were only a few. Early in the dynasty the Sui began to build a new capital southeast of the old Han capital of Chang'an. Building materials from the old city were recycled to construct new walls, fortifications, palaces, and temples. The capital was erected quickly, and quality was often sacrificed. Many of the walls had to be rebuilt during the Tang dynasty.

The Great Wall was crumbling by the time of the Sui dynasty. The wall was repaired, and more segments were added. The royal libraries were expanded, and unique books in private collections were copied to make the collections of the libraries more complete.

To help unify the northern and southern parts of the country, Wendi began the construction of a canal system to improve China's transportation and increase trade. This Grand Canal was completed by his son. The system was constructed in segments. Existing canals were repaired and widened, and new canals were built. The first canal connected the Wei River near

the capital with the Yellow River, bypassing a section that frequently silted up. Other canals and canalized rivers united the Wei and Yellow River valleys with the Yangtze River. The Grand Canal itself, nearly 1,300 miles long and varying in width between 300 feet (90 meters) in the countryside and 100 feet (30 meters) in the cities, stretched from Hangzhou to Chang'an on to near the present-day city of Beijing. Each canal had post roads running along either side. Huge granaries were constructed near the canals, and some held as much as 33 million bushels of grain. Despite this, very little grain was transported at that time. Most of the river and canal traffic consisted of silk during the Sui dynasty. The canal system was enormously expensive and required heavy taxation and huge amounts of compulsory labor. When males were in short supply, women were conscripted.

In an effort to reunify and harmonize Chinese culture, the government listed proscribed books that were thought to be morally corrupting or subversive. These books were burned. Confucianism was deemphasized under Sui Yangdi, and schools were reorganized. Part of this included changes in writing styles. Governmental writing was ordered to be straightforward without flowery phrases.

High taxes, compulsory labor levies, and flooding in Hopei and Shantung increased peasant revolts in those areas. Sui relations with their Turkic neighbors also suffered, as the Turks were virtual allies of the Koreans. In 613 the Yang Hsüan-kan Rebellion broke out. In 617 rebels led by General Li Yüan, who had been put in charge of destroying them, seized the Sui capital and demanded that Sui Yangdi step down. The new government called itself the Tang dynasty. They renamed Daxing, the Sui capital, reverting to Chang'an, the name used by the Former Han dynasty. The general's son, Li Shih-min, became the first emperor of the Tang.

It is clear that the Sui dynasty laid the groundwork for the Tang in government, foreign policy, and reorganization. Even governmental personnel were transferred from the old government to the new Tang dynasty, which helped provide stability to the new regime. But the Tang realized that the major changes of the Sui had caused dis-

juncture and that China needed a period of healing. Centralization was retained, but Sui tactics that placed intense pressure on the common people were lessened, allowing the new government time to win the people's support.

—Rebecca Wendelken

Bibliography

Gernet, Jacques. *A History of Chinese Civilization*. 2nd ed. New York: Cambridge University Press, 1996.

Wright, Arthur F. *The Sui Dynasty: The Unification of China, A.D. 581–617*. New York: Knopf, 1978.

■ Introduction: Islamic Political History

In the seventh century, the Arab Muslim empire emerged with explosive force and, within a century, became the largest and most populous political entity in world history up to that time. At its height the Arab Muslim empire, or caliphate, stretched from the Atlantic coast of the Iberian Peninsula to the Indian Punjab, and its writ reached into central Asia and the Saharan wastes. The caliphate was the principal political force in the Western Eurasian world for nearly three centuries, from at least 640 to the rise of the Buyid sultans in the 930s. But even though the caliphate lost much of its political power early in the tenth century, it remained an important religious symbol that conferred political legitimacy on aspiring regimes throughout most of the Muslim world until the Mongols destroyed the caliphate itself in 1258.

Islamic political history begins with Muhammad in the city of Medina. From there, the Prophet constructed the first Islamic state, which, by Muhammad's death in 632, included much of the Arabian Peninsula. On Muhammad's death, the Companions of the Prophet chose a caliph (Commander of the Faithful) to rule the expanding state. The first four caliphs, the Rashidun caliphs (the "rightly guided," or legitimate caliphs), were chosen because of their piety and closeness to the Prophet.

During the reigns of the Rashidun caliphs, the Muslim state experienced explosive growth, destroying the Sassanian Persian empire and conquering the wealthiest and most populous provinces of the Roman (Byzantine) empire, but was racked by succession disputes and recurring civil wars (*fitna*) between those who came to be known as Shia and those who were Sunni. The Shia believed that the caliphate should be

conferred on Ali, Muhammad's cousin and son-in-law, and his descendants, whereas the Sunni insisted that the caliph be chosen from the Quraysh tribe by a consensus of the Islamic community. A third, more radical group, the Kharijites, insisted that any sufficiently pious Muslim male could assume the caliphate.

In 661, the Muslim governor of Syria, Muawiyah, proclaimed himself caliph on the assassination of Ali, the fourth Rashidun caliph. Muawiyah founded the Umayyad dynasty, which ruled from Damascus. With the rise of the Umayyads, the office of caliph became hereditary though not in the family of the Prophet. During the Umayyad dynasty, the Arab empire continued to expand. Indeed, it reached its apogee during this period, growing with the conquest of most of Mediterranean Africa (except Egypt, which had been conquered during the Rashidun period), Spain, much of central Asia and the Indian lands of Sind, and the western Punjab. Umayyad armies probed into southern France, and annual campaigns were launched into the Anatolian heartland of the Byzantine empire. Twice the Umayyad forces came close to capturing Constantinople (674–678, 717–718), and in 738 their forces penetrated as far as Poitiers, in the heart of France.

The Umayyad caliphate was powerful and expansive, yet it lasted a mere 89 years (661–750). In its power and arrogance, it scandalized the more pious among the Muslims, and it alienated non-Arab Muslim converts, particularly in Iran and central Asia. Ibrahim, a fourth-generation descendant of Abbas, the Prophet's youngest uncle, was especially alienated. He organized a rebellion against the Umayyads, allying himself with Shias as well as disgruntled Persians.

► CHRONOLOGY OF ISLAMIC POLITICAL HISTORY TO 1000

All dates are in the Common Era (CE).

622–632 — Early Islamic state under Muhammad's rule

632–661 — Rashidun caliphates

661–750 — Umayyad caliphate

750–1258 — Abbasid caliphate

934–1062 — Buyids

Al Andalus to 1000

711 — Islamic conquest of Spain

755–929 — Umayyad emirate of al Andalus

929–1031 — Umayyad caliphate (al Andalus)

Morocco to 1000

744–1058 — Bhargawata

744–974 — Idrisid emirate

800–909 — Aghlabids

909–1171 — Fatimid caliphate

—Wilfred J. Bisson

Although the Umayyads assassinated Ibrahim, his forces destroyed the Umayyads at the Battle of the Greater Zab River and proclaimed Ibrahim's brother Caliph Abbas al-Saffah, the first of the Abbasid dynasty, in 750.

The Abbasid caliphate made their newly created capital at Baghdad (762), which soon became one of the wealthiest and most populous cities in the world. The Abbasid caliphate was not as expansive as its Umayyad predecessor had been. Morocco soon came under the rule of Kharijite and other schismatics: the Bhargawata and the Idrisids. The populous and wealthy province of al Andalus fell under the sway of Abd al Rahman, an Umayyad who had escaped the manhunt following the defeat of the Umayyads at the Greater Zab. Al Rahman set up an Umayyad emirate of al Andalus and defended it against Abbasid attacks. The Umayyads ruled Hispania first as an independent emirate but in 929 declared their rule a caliphate, which endured until 1031.

In the West Asian heartland of the Abbasid caliphate, Abbasid rule remained strong for

nearly two centuries until the Buyid military men took control and reduced the role of the caliphs to that of figureheads. Even before that, Abbasid rule of the further provinces atrophied. In Ifriqiya (Tunisia) the Aghlabids became hereditary independent governors in 800, while the Saffarids and Samanids won the same power in Persia somewhat later. In Egypt, Turkish mercenaries—the Tulunids and Ikshidids—ruled in the tenth century, while in Syria the Hamdanids became hereditary emirs.

Meanwhile, an Ishmaili Shia caliphate, that of the Fatimids, challenged the Abbasids for religious and political leadership of the Muslim world. The Fatimids had originated in Ifriqiya in 909, overthrowing the Aghlabids, who were Abbasid loyalists. Soon the Fatimids conquered all of Mediterranean Africa, including Egypt, where they founded their new capital, Cairo, in 969. Before the end of the tenth century, the Fatimids had seized Palestine and western Arabia, with the holy cities Mecca and Medina, and threatened the Iraqi heartland of the Abbasids. Cairo rapidly became the commercial center of the western world, surpassing Baghdad in wealth and sophistication. In Cairo, the Fatimids founded what many historians refer to as the first university in the western world, Al Azhar, as an institution to teach Shia theology and jurisprudence. The Fatimids reached the height of their power early in the eleventh century. In the middle of the eleventh century, Ifriqiya had become independent and converted back to Sunni Islam. First, Turkish troops and then crusaders drove the Fatimids from Syria and Palestine late in the eleventh century, and in 1169 the Sunni champion Saladin seized power in Egypt, ending the Fatimid caliphate.

The Abbasid caliphate endured as a symbol for Muslim unity but had no political power after the Buyids took power in Baghdad in 945.

—Wilfred J. Bisson

Bibliography

- Hodgson, Marshall G. S. *The Venture of Islam: Conscience and History in a World Civilization*, Vol. 1, *The Classical Age of Islam*. Chicago: University of Chicago Press, 1977.
- Hourani, Albert. *A History of the Arab Peoples*. Cambridge, MA: Belknap, 1991.

Islamic State from Its Inception through the Orthodox Caliphs

The Islamic state took its earliest form in western Arabia around 622 and by the end of some 40 years had spread from Egypt to Iran, had weakened or destroyed two other empires in the Middle East, and had laid the groundwork for a world civilization. Yet Arabia at first glance was hardly an auspicious location from which to conquer, build, and administer a vast empire, inhabited as it was by nomadic, decentralized Bedouin tribes. The rest of the Middle East was ruled by two empires weakened by decades of war with one another, the Byzantine empire in modern-day Turkey, Syria, and Egypt and the Sassanian empire in modern-day Iran and Iraq.

It was in this context in which Muhammad, a merchant in the cosmopolitan city of Mecca, is said to have begun receiving revelations from the angel Gabriel, as the mouthpiece of God, starting in 610. These revelations tasked Muhammad with bringing “true religion” to the Arabs. He was not well received in Mecca, and in 622 Muhammad and a group of followers migrated to Medina, a city about 200 miles to the north. Muhammad had received an invitation to arbitrate a dispute between two prominent Medinan tribes, which he accepted in exchange for a pledge to obey and defend him. The migration from Mecca to Medina marks the first year of the Muslim calendar, and it is in Medina, where Muhammad began organizing a polity, that we find the genesis of the Islamic state.

In Medina, Muhammad strengthened his control by exiling two Jewish tribes and executing the male members of a third who had refused to accept his claim as prophet. Through diplomacy, marriage alliances, and conversion, Muhammad succeeded in winning over the Bedouin tribes into accepting his leadership. Through these efforts, he was able to build over time a faith-based community centered around his role as both political leader and prophet.

It was apparent that Muhammad's efforts to form a new polity were meeting with success when, in 624, the Muslims defeated a superior force of Meccans at the Battle of Badr. By 630, Muhammad had amassed a strong enough force of Medinans and tribesmen to convince the



Illustration from a sixteenth-century manuscript depicting the Battle of Badr, fought in 624 CE between Muhammad and his followers and the Meccans. (Erich Lessing/Art Resource, NY)

Meccans to surrender to him. Muhammad died in 632, having established a Muslim community and cobbled together an alliance from scattered Arabian tribes, yet significantly, he had not provided for a successor, or caliph. When after his death it appeared that the fragile coalition of Bedouin tribes was in danger of disintegrating without Muhammad to unite them, the Muslims chose Abu Bakr, Muhammad's uncle, to succeed him. The function of Abu Bakr and the caliphs who came after him was primarily to run the state, and although their religious prestige heavily influenced whether or not they were chosen, they were not prophets but rather statesmen with religious credentials. Abu Bakr himself was tasked with reestablishing unity over the Arabian Peninsula, which he succeeded in doing through a series of campaigns known as the

Ridda (apostasy) Wars by the time of his death in 634.

Under Umar, Abu Bakr's successor, the Muslims set their sights northward, toward the Byzantine empire, and eastward, toward the Sassanian empire. The purpose of the conquests was not, as is often thought, conversion but rather to collect booty and establish an Arab-Muslim elite over the conquered territories, accomplished by setting up a number of garrison towns (two well-known ones are Basra and Kufah in modern-day Iraq) from which the new elite could oversee the empire and carry out further conquests. The function of the newly conquered lands was, accordingly, to collect taxes and distribute them to the Arab Muslims, the new ruling class. In this capacity, the Muslims benefited enormously from the administrative apparatuses left behind by the Sassanian empire, which had fallen by 651, and by the Byzantine empire, which held on to Turkey but lost Syria and Egypt. By adapting these long-established systems of governance, the Arab Muslims were able to manage their expanding empire with the state apparatuses already in place.

Although Umar had established how the empire was to be administered, the issue of who had the right to administer it became a topic of bitter dispute. Umar had favored the first converts and early allies of Muhammad and alienated the older Meccan and tribal aristocrats. Umar was murdered by a Persian slave in 644. His successor, Uthman, was from an aristocratic Meccan family and was also a companion of the Prophet. Under Uthman's rule the conquests continued, as did the disagreement over power sharing in the empire; while Umar had favored the early converts, Uthman followed an opposite policy, this time favoring the pre-Islamic aristocrats. Moreover, many of the provincial governors resented him for diverting revenue from their districts to Medina, and he was often accused of nepotism. He was murdered in 656 by some Egyptian mutineers.

Ali, the next caliph, Muhammad's son-in-law and an early convert, found himself in the unenviable position of trying to simultaneously propitiate both the pre-Islamic aristocracy and the early converts to Islam as well as a new party led by Uthman's cousin, Muawiyah, governor of

Syria, who demanded retribution for the slaying of Uthman. In the ensuing civil war, Ali's forces met Muawiyah's in a stalemate at the Battle of Siffin in 657. Ali consented to arbitration to address the issue of whether or not Uthman's death was justified. This prompted some of his followers to turn against him for "compromising," and by 659 Ali found himself with few supporters. Rebellions threatened to engulf the empire, unrest threatened tax revenue, and turmoil threatened to undermine security. When Ali was assassinated by one of his disenchanted followers in 661, the Muslims chose Muawiyah as caliph. Whereas the selection of the first four caliphs was influenced by their status in Islam, Muawiyah was chosen because he was the most capable of restoring order. The caliphate became a hereditary office, and the civil war engendered a permanent division of Muslims into two main denominations: the Shia, who look to Ali as the sole legitimate caliph, and the Sunnis, who in addition to Ali recognize Muawiyah and his successors. Muawiyah moved the capital from Medina to Damascus and established a dynasty that would last until 750.

—Joshua Hoffman

Bibliography

- Donner, Fred. *The Early Islamic Conquests*. Princeton, NJ: Princeton University Press, 1981.
- Hodgson, Marshall. *The Venture of Islam: Conscience and History in a World Civilization*, Vol. 1, *The Classical Age of Islam*. Chicago: University of Chicago Press, 1974.
- Kennedy, Hugh. *The Armies of the Caliphs: Military and Society in the Early Islamic State*. London: Routledge, 2001.

Umayyad Caliphate

The Umayyad dynasty was in power from 661 to 750, a relatively short but formative period, as the Umayyads consolidated Islamic control of conquered lands and adapted the Classical Roman, Greek, and Persian heritages to Islamic civilization. The Umayyad dynasty chose Damascus as its capital and established its presence there with the construction of the great Mosque out of the Christian Cathedral, which had previously been a temple to Jupiter. The Umayyads laid the foundations for Classical Islamic civilization, yet

they, along with the Greek Byzantines and Frankish Carolingians, were also inheritors of the Roman empire that had preceded them. The Umayyads maintained much of the late antiquity Byzantine administrative system that they had inherited. They transformed the caliphate from an elected leader based on consensus to a hereditary monarch relying on a trained bureaucracy.

The first Umayyad caliph, Muawiya (r. 661–680) came to power by defeating Ali, the son-in-law of the Prophet Muhammad, in the first Muslim civil war. Muawiya established his capital in Damascus in Syria, since the earlier capital, Medina, had seemed to contribute to instability, as it was in the midst of the factionalized tribes of the Hijaz while the wealth and power center had shifted to Syria. Muawiya divided his empire into a few large provinces ruled by his closest associates and family members. For local government, he relied on provincial scribes and elites. Through marriage and cooperation, he managed to keep factions and warring tribes at peace. He designated his son, Yazid (r. 680–683), as his successor.

After Yazid's death, civil war erupted again. Marwan I (r. 684–685) was elected by the leading tribe, the Qudaa, and he succeeded in maintaining the Umayyad power base of Syria and Egypt. Ibn-Zubayr, linked to the family of the Prophet, led the revolt and was recognized as caliph by the rebels. However, the opponents to Umayyad rule, although initially successful, were not united. Ibn Zubayr was killed in the siege of Mecca by al-Hadjdadj, who had been sent by Abd al-Malik (r. 685–705), son and successor to Marwan. Abd al-Malik managed to finish the civil war and reconquer Iraq (and to build the Dome of the Rock around 692). He then presided over a period of peace and prosperity. He reformed and formalized the Umayyad administration and taxation, and he also made Arabic the official language of the government. In 744 the caliph al-Walid II was assassinated after being on the throne for only one year. His assassination unleashed a civil war that was not ended until 750 when the Abbasids came to power and moved the capital to Baghdad. However, Abd al-Rahman ibn Muawiya, an Umayyad prince, escaped to Spain and set up the Umayyad caliphate of Cordoba, which presided over a

➤ JOHN OF DAMASCUS

John of Damascus (676–749), a saint in the Eastern Orthodox Church, is a symbol of the early syncretistic character of the Umayyad caliphate. His Arabic name was Yahya Ibn Mansur, and he was bilingual. He was a *wazir* (high official) in the government in Damascus, although he remained a Christian. He was dismissed on account of bureaucratic intrigue, and he retired to a monastery in Palestine where he became known as a great defender of icons. His career is an example of how many Christians actively participated in the life and government of the Islamic empire under the Umayyads while maintaining contact with Christians in the Byzantine empire.

—Benjamin de Lee

great cultural flowering in Islamic Spain. The last Umayyad caliph in Spain ruled until 976.

The territory that the Umayyads were able to conquer was vast. Immediately after the end of the civil war, Muawiya continued his assault through North Africa. By 711 the Muslims had conquered Spain, and by 751 they had reached central Asia and India. Although these conquering armies were initially the great nomadic warriors of the Arabian Peninsula, by the later Umayyad period the caliphs employed professional armies of mixed ethnicities.

The Umayyads were great patrons of art. Their transformation of the cathedral of Damascus into a mosque (709–715) symbolized their synthesis of the classical pre-Islamic Roman and Byzantine heritage with the new religion of Islam. Like the Dome of the Rock in Jerusalem (692), the construction of the mosque relied on Byzantine artisans and utilized Byzantine mosaics and architectural techniques. Early Umayyad caliphs also built numerous desert retreats near Damascus. Many of these pleasure palaces and complexes were masterpieces of early Islamic art, but by the reign of Yazid III (744) such expenditures had depleted the treasury, and he was forced to reside in Damascus.

Although the Abbasids maligned the Umayyads as impious, the foundations of Islamic civilization were laid in the Umayyad period, as Islam came into its own as an organized religion.



Umayyad Mosque in Damascus, Syria. The caliphate of the Umayyad dynasty moved the capital from Medina to Damascus during the seventh-century CE rule of Muawiyah. (Hendrik Dacquin)

Ulama, Islamic scholars, debated and discussed every aspect of Islamic law and life. The *hadith*, sayings of the Prophet, were collected and authenticated. It was also in the later Umayyad period that the major sects of Islam arose, most notably the division between the Shia and the Sunni.

By the end of the Umayyad period, Islamic civilization had developed and advanced far beyond its tribal, militaristic roots. Soldiers, tribesmen, and free people were all subjects of a central government. The Muslims were not an occupying army but were now part of a new culture that had arisen from the collapse and transformation of late antiquity culture.

—Benjamin de Lee

Bibliography

Dixon, Abd al-Ameer Abd. *The Umayyad Caliphate, 65–86/684–705*. London: Luzac, 1971.

Hawting, Gerald R. *The First Dynasty of Islam: The Umayyad Caliphate, AD 661–750*. London: Croom Helm, 1986.

Kennedy, Hugh. *The Prophet and the Age of the Caliphates*. 2nd ed. London: Pearson-Longman, 2004.

Abbasid Caliphate to 1000 CE

Ruling large swaths of the central Middle East and Iran during Islam's golden age, the Abbasid caliphate was the major political and cultural center of the Islamic world. Along with China under the Tang dynasty, the Abbasids, during the early centuries of their existence, created one of the most intellectually vibrant, economically prosperous empires that the world has ever seen. The Abbasid caliphate originated when the Abbasid family, claiming descent from al-Abbas, an uncle of the prophet Muhammad, overthrew the Umayyad caliphate (661–750) in a revolution and established what would become the largest Islamic territorial empire in history. Based primarily in the unruly Umayyad frontier province of Khurasan in eastern Iran and the Iraqi city of Kufa, the Abbasids and their supporters built a support base among discontented Umayyad subjects, primarily new non-Arab converts and Yemeni tribes. Publicly sympathetic to claims to political authority by descendants of the fourth al-Rashidun (“Rightly Guided”) caliph, Ali ibn Abi Talib (Alids), the Abbasids stated that they wanted to return the seat of leadership to a member of the Prophet's household. The lack of a specific, widely accepted definition of exactly who was a legitimate successor may explain why the Abbasids were able to elevate themselves to take over the caliphal title and marginalize the Shia.

The success of the Abbasid revolution rested on the military support of soldiers and notables from Khurasan under the leadership of Abu Muslim, who was key to the ascension of Abul Abbas as the first caliph in October 749 and the failure of negotiations by Abu Salama to name an Alid to the position. Khurasani troops defeated Umayyad armies and killed off the majority of the Umayyad men to prevent their return to power. One notable exception was Abd al-Rahman, who fled west to the Iberian Peninsula where he established an

Umayyad state that successfully repelled several Abbasid invasions and ruled al-Andalus until the rise of the collapse of the Spanish Umayyad caliphate in the early part of the eleventh century.

In 762 the second Abbasid caliph al-Mansur ordered the construction of Baghdad, a new capital city, that would serve as their administrative and military base. The new capital was closer to the Abbasid stronghold of Khurasan and signaled a formal end of the Umayyads, whose power was based in Damascus, Syria. Although it had existed as a small town shortly after the Umayyad expansions eastward into Iran, under the Abbasids Baghdad was greatly expanded. Large military bases and residential areas for construction workers were built, as were palaces, government buildings, centers of scholarship, and libraries. At its height, the city was home to between 200,000 and 500,000 residents, making it one of the largest urban centers in the world at that time.

The founding of Baghdad allowed for flourishing of the arts and letters under the auspices of Bayt al-Hikma (House of Wisdom), the imperial library and center of learning that reached its height in the late eighth century into the first half of the ninth century under the caliphs al-Mamun (813–833) and Harun al-Rashid (786–809). Among the most notable Abbasid-era accomplishments were the translations of hundreds if not thousands of Classical Greek, Roman, Persian, and Indian texts into Arabic. When the library was destroyed in 1258 by the Mongols, it was said to contain over 40,000 manuscripts, many of which existed only in Baghdad.

The increasing availability of Greek philosophical texts played a significant role in the emergence of the Mutazilites, a Muslim intellectual movement that argued for a rationalist approach in interpreting religion. Although they believed in the absolute unity of God (*tawhid*), the Mutazilites believed the Quran to have been created, which ran counter to traditional views that it was eternal and held that people possessed free will. Although favored by several Abbasid caliphs during the early ninth century, the Mutazilites became the focus of mounting criticism from more traditional scholars, and by the late twelfth century the movement had died out, though some of its practices were adopted by Shia theologians.



Illustration by al Hariri shows life in Abbasid times, with a camel caravan at an oasis. The Arabic text reads "Oh God, protect my belongings and my destiny. God be my leading power. God be my savior, grant me security and safety, make me choose your path, provide me with health and wealth," Abbasid empire, 750–1258 CE. (Ivy Close Images)

During the early Abbasid period the caliphal government was increasingly centralized as the taxation systems and appointment of judges (*qadis*), which had been left to provincial governors under the Umayyads, became the purview of the caliph and his chief minister (*wazir*). Although there is some debate as to the ethnic composition of the Abbasid movement, recent scholarship suggests that although it certainly received significant support from non-Arabs, predominantly Persian converts, the family itself was Arab in origin. The Abbasids diversified the court elite, bringing in Yemeni Arabs, Khurasani Arabs, and Iranian converts and breaking the monopoly enjoyed by Syrian Arab tribes during the Umayyad period.

Centralized Abbasid power reached its height during the late eighth century under Harun al-Rashid, who also reigned during the most prosperous economic times as tax revenue and foreign trade flowed into Baghdad. Trade routes

were maintained from Egypt in the west to China and India in the east. Gold, silver, textiles, ceramics, and agricultural products were the main items that fueled the Abbasid trade-based economy. Despite revolts against caliphal authority, the government was able to impose its rule over the large settled centers of the empire, though far-flung regions remained difficult to control.

Despite the caliphate's successes, the Abbasids began to suffer succession crises by the early ninth century following the death of Harun al-Rashid, who divided the empire between his sons al-Amin and al-Mamun. Soon after their father's death in 809 the first Abbasid civil war erupted, and even following al-Amin's defeat and death when Baghdad fell to his brother's forces in 813, the strife resulted in the loss of Egypt, Syria, Palestine, and North Africa. Although most of these territories would be returned to Abbasid control, Morocco permanently slipped away. Succession crises came to mark the most significant set of challenges to centralized Abbasid rule, and by the end of al-Mamun's reign the golden age of the caliphate had come to a close.

The end of the civil war also marked the beginning of the domination of the Abbasid military by Turkic officers and slave soldiers (*mamluks*) from central Asia. These soldiers were brought into the Abbasid heartlands because their loyalty at least theoretically rested solely with the caliph since they had no tribal, clan, or family ties to the local Arab and Persian populations. However, the Turkic military came into conflict with the Abbasids' Arab troops and the local population, so in 836 the capital and Turkic garrisons were moved to the town of Samarra north of Baghdad. The political power of these new troops and their commanders steadily increased during the ninth century, and mamluk support became crucial in influencing caliphal succession.

By the mid-tenth century Abbasid decentralization forced the caliphs to cede power to different regional dynasties who ruled in the name of the caliph in Baghdad, including the Ghaznavids in eastern Persia and Afghanistan, the Buyids in western Iran and Iraq, and later the powerful Turkic Seljuks. By the early tenth century the Abbasids were no longer able to monopolize the caliphal title with the foundation of a counter-caliphate by the Ismaili Shia Fatimids in Egypt,

North Africa, Palestine, and Syria. Despite the nominal allegiance to the Abbasid caliphs, many of the regional dynasties took over the reigns of political and military power to become essentially independent states. The once successful Abbasids entered into a steady period of decline brought about by the decentralization of state power and the resulting inability to raise funds to maintain a large loyal army or run a complex bureaucracy as had existed during the empire's golden age. Although the Abbasid caliphs no longer exerted effective political authority, they continued to be left as ceremonial heads of state by successive dynastic states including the Ghaznavids in eastern Iran and the Seljuk in western Iran, Iraq, Syria, and Anatolia.

—Christopher Anzalone

Bibliography

- Kennedy, Hugh. *The Armies of the Caliphs: Military and Society in the Early Islamic State*. New York: Routledge, 2005.
- Kennedy, Hugh. *The Prophet and the Age of the Caliphates*. 2nd ed. New York: Longman, 2004.
- Lassner, Jacob. *The Shaping of 'Abbasid Rule*. Princeton, NJ: Princeton University Press, 1980.
- Sharon, Moshe. *Black Banners from the East: The Establishment of the 'Abbasid State*. London: Brill, 1983.
- Zaman, Muhammad Qasim. *Religion and Politics under the Early 'Abbasids: The Emergence of the Proto-Sunni Elite*. London: Brill, 1997.

Al-Andalus—Muslim Spain to 1000 CE

For half a millennium Al-Andalus (Muslim Spain) was the most prosperous, urbanized, and literate region of Europe. The Muslims ruled parts of the Iberian Peninsula for more than 750 years and left behind influences in art, architecture, language, and cuisine that have helped to make Spain the unique country it is today. From the Muslim conquest (711) until 1492, Al-Andalus was the westernmost extension of the Islamic world, and the religious, social, and cultural orientation of the region was toward the east, toward Muslim North Africa and Damascus and Baghdad, and not toward Christian western Europe.

After the Muslim conquest, the conquerors settled down but not amicably. Arab immigrants

➤ MADINA AL-ZAHRA

In 936 Abd al-Rahman III began construction on Madina al-Zahra, a palace-city approximately 3.4 miles outside the capital of Córdoba. Built into the side of a hill, the walled city contained three terraces that separated the royal halls and palaces from the gardens, military barracks, and baths on the second level and the residential area of the service personnel on the lowest level. A palace-city functioned as a permanent royal residence with multiple palaces, baths, and gardens but also urban elements, such as markets, workshops, a prison, a mint, and several mosques. Measuring more than 10.76 million square feet, Madina al-Zahra was the largest palace-city in Al-Andalus. Looted and burned in 1012 during a civil war, the site was pillaged for centuries and today is undergoing excavation.

—April Najjaj

Source

Ruggles, D. Fairchild. *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*. University Park: Pennsylvania State University Press, 2000.



Ruins of the palace-city of Madina al-Zahra, 3.4 miles outside Córdoba, Spain, built by Abd al-Rahman III beginning in 936 CE. (Alex Chang)

contested with North African Berbers for favorable lands and government posts. Arabs received the choicest sites, but even among Arabs there was conflict between the North Arabs (Qaysites) and the South Arabs (Yemenites).

In the Middle East a new Islamic dynasty, the Abbasids, defeated the Umayyads of Damascus in 750 and attempted to assassinate the entire Umayyad extended family. Abd al-Rahman I (756–788), a nephew of the last Umayyad caliph, escaped and fled from Syria, eventually traveling across North Africa and into Spain. He established the first independent emirate in the Muslim world (756) with the capital at Córdoba. He and his descendants spent the next 50 years consolidating their hold on Al-Andalus. This struggle was at times fierce. For example, in 777 a coalition of Arab leaders called in the forces of Charlemagne, whose Frankish troops swept into Spain to unsuccessfully besiege Zaragoza. On his retreat through the Pyrenees, Basque mountaineers decimated Charlemagne's rear guard, giving rise to the legend, which is remembered in the French epic poem *Chanson de Roland*.

Despite Viking raids, discontent among Berbers, and religious conflict with Mozarabs (Arabized Christians), Abd al-Rahman II (822–852) enjoyed a relatively stable reign that allowed for development of court ceremonies, increased trade, and a further expansion of the Great Mosque in Córdoba to better accommodate the growing numbers of converts to Islam.

The height of Muslim rule in Al-Andalus came with the accession of Abd al-Rahman III (912–961). Competition for territory and prestige in the Muslim world had increased with the expansion of two other dynasties, the Abbasids in Baghdad, who had displaced the Umayyads 200 years before, and the Fatimids, a Shia dynasty that had arisen in the late ninth century in North Africa. As a result, in 929 Abd al-Rahman III declared himself *khalifa* (caliph) and *amir al-mu'minin* (commander of the faithful), a title that had previously belonged to his Umayyad ancestors in Syria. In addition, continuing a tradition of expressing power and authority through architecture, Abd al-Rahman founded and constructed a palace-city, Madina al-Zahra,

a few miles outside Córdoba, and he divided his time and his administration between these two capitals.

Andalusi civilization reached its greatest expressions to date in this period of the tenth century. The caliph received delegations from the Christian kingdoms in the north of Spain and as far away as the Byzantine empire. The markets of Al-Andalus were renowned throughout the medieval world for their variety and quality of goods. Literature, art, and architecture during this period reached a very high level. Two hundred years later, poets would still sing praises to the accomplishments of the Andalusi Umayyads and lament the passing of a golden age of Muslim rule in Spain.

With Abd al-Rahman's death in 961, the fortunes of the Umayyads began to decline. Although the splendor of the Andalusi court continued for another 30 years, internal problems and political intrigue developed, only becoming more serious with the accession to the throne of an 11-year-old boy, Hisham II (976–1009). Al-Mansur (981–1002) was appointed regent, and grew so powerful that the caliph was merely a figurehead. Berber mercenaries became restless, and a *fitnah* (a civil war or rebellion with religious implications) broke out in 1009. Madina al-Zahra was sacked and destroyed, centralized political authority broke down, and the caliphate officially ended in 1031. Al-Andalus broke apart into a series of tiny kingdoms called *taifas* (party kingdoms).

The Christian kingdoms in the north, taking advantage of the discord among the Muslims, expanded greatly. Although North African Berber empires (the Almoravides and the Almohades) would come to the aid of the Spanish Muslims, and although Al-Andalus would hold on to a portion of southern Spain until 1492, its greatest era was over.

—April Najjaj

Bibliography

- Fletcher, Richard. *Moorish Spain*. New York: Henry Holt, 1992.
- Jayyusi, Salma Khadra, ed. *The Legacy of Muslim Spain*. 2 vols. Leiden, Netherlands: E. J. Brill, 1994.
- Reilly, Bernard F. *The Medieval Spains*. Cambridge: Cambridge University Press, 1993.

Safran, Janina M. *The Second Umayyad Caliphate: The Articulation of Caliphal Legitimacy in Al-Andalus*. Cambridge, MA: Harvard University Press, 2000.

The Aghlabid Emirate

In the ninth century, Ifriqiya (modern Tunisia), the Aghlabid emirate (800–909), became one of the most important states in the Islamic empire because it remained loyal to the Abbasid caliphate. Ibrahim ibn Aghlab, commander of the Abbasid garrison of Tubna, pressured Caliph Harun al Rashid to name him hereditary governor of the Maghreb. Theoretically that included the entire Maghreb, but in reality it was not clearly delimited. In practical terms, it amounted to what had been the Roman province of Ifriqiya. The Aghlabids continued to recite Friday prayers in the name of the Abbasid caliph; they flew the Abbasid colors of black and red; and, most importantly, they continued to send tribute in coins stamped *li-khalifa* (“for the caliph”). That the tribute was intermittent speaks to a high degree of autonomy. Each successive Aghlabid governor petitioned the Abbasid caliph to approve his succession. The Aghlabid state was autonomous “by consent of the caliph,” but one has to wonder if the caliph could have done otherwise. Aghlabid administration was modeled after that of Baghdad. And like the Abbasid caliphate, the state was buttressed by religious law of the Hanifi juridical school, although the Maliki school was rapidly gaining in popularity among the population of Qayrawan and the surrounding areas.

A persistent problem for the Aghlabid rulers was the numerous revolts by the *jund*, the Abbasid military. Ibrahim ibn Aghlab's own power was based on the loyalty of the Tubna garrison; later rulers increasingly depended on their own private slave armies. Some of these slaves were purchased from Africa south of the Sahara, but many were East European Slavs obtained from Italian merchants.

During the ninth century, the Aghlabids developed naval power. By midcentury, Aghlabid fleets dominated the central Mediterranean. Ziadat Allah (r. 817–838), third Aghlabid emir, began the conquest of Sicily with his corsair navy in 827. The Aghlabid conquest of western Sicily,

with the taking of Palermo in 831, occurred relatively rapidly, but subduing the remainder of the island was protracted. The defenders offered stubborn resistance. Syracuse held out for half a century (until 878), and the last Byzantine stronghold was not taken until 902. Even before the Aghlabid conquest of Sicily was complete, their navy seized footholds in southern Italy, with strongholds in Bari and Taranto. Under the Aghlabids and successor Muslim dynasties, Sicily reached a high point of prosperity and culture. They revived the ancient irrigation systems of the island and introduced new crops and industries. Lemons, oranges, cotton, rice, sugarcane, and mulberry trees were introduced. Cotton and silk textile industries flourished, and Sicily became a rich trading center from which “oriental” goods were distributed through Italian merchants from Amalfi, Pisa, and Genoa.

Ifriqiya under the Aghlabids enjoyed a wave of prosperity that persisted well into the eleventh century. Indeed, the Maghreb in general shared in this prosperity. The area of cultivated land seems to have expanded and with it the population. The decayed Roman irrigation systems were rebuilt and improved, and the new crops that the Muslims introduced into Sicily had already been introduced into the Maghreb. The growing trans-Saharan trade brought gold as well as slaves to the Maghreb. The growth of trade with the oases of the Fezzan, particularly Zawilla, yielded a supply of alum, important in the growing textile industry of the Mediterranean basin.

The age of the Idrisids and Aghlabids was a crucial period for the Maghreb because it was from that time that the foundations were laid for the three modern states of the Maghreb: Morocco, Algeria, and Tunisia. Except for the edge of the desert, their boundaries have changed very little since the tenth century.

The decline of the Aghlabids was a classic example of the virtue to corruption story described by Ibn Khaldun; that is, over a number of generations, a tough, disciplined ruling elite became soft and corrupt under the influence of the luxuries of city life. The decline began with the reign of Muhammad II (864–875), who delighted in hunting and the palace life. Ibrahim II (875–902) was a tough ruler but had a wide-



City walls of Sousse on the Mediterranean coast of Tunisia, built by the Aghlabids in the ninth century CE. (Lou Lou Photos)

spread reputation for being cruel and for raising excessive taxes. Within the next seven years, three more rulers contributed to the state of decline and to the collapse of the dynasty with the arrival of the Fatimids.

—Ron Messier

Bibliography

- Abun-Nasr, Jamil M. *A History of the Maghreb in the Islamic Period*. Cambridge: Cambridge University Press, 1987.
- Bullier, Richard W. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.
- Julien, Charles André. *History of North Africa: Tunisia, Algeria, Morocco, from the Arab Conquest to 1830*, edited and revised by R. Le Tourneau. Translated by John Petrie. New York: Praeger, 1970.
- Laroui, Abdallah. *The History of the Maghreb: An Interpretive Essay*. Translated by Ralph Manheim. Princeton, NJ: Princeton University Press, 1977.
- Levtzion, Nehemia, and J. F. P. Hopkins. *Corpus of Early Arabic Sources for West African History*. Cambridge: Cambridge University Press, 1981.

The Emergence of the Fatimids in the Maghreb

“Wanted dead or alive!” In 905 the Abbasid caliph in Baghdad had put out the word that a dangerous political renegade, Ubayd Allah, the

► THE FATIMIDS COMPETE FOR SIJILMASA AND CONTROL OF THE GOLD TRADE

After Fatimid partisans rescued Ubayd Allah in Sijilmasa, the Fatimids held Sijilmasa for only 50 days. In what had now become a seesaw battle to control the city-state, the people of Sijilmasa revolted and killed all of the soldiers in the Fatimid garrison. The Bani Midrar were back in power. But the Fatimids sent a second army to retake Sijilmasa in 922. This time they chose to rule the city through local clients, a strategy that succeeded for 20 years. In 942 the Bani Midrar, led by a local hero named Ibn al-Fath, regained their independence and maintained it for the next 16 years. Ibn al-Fath challenged the authority of both caliphs, the one in Baghdad as well as the Fatimid caliph in Ifriqiya. He took the title *amir al-mu'minin* (commander of the faithful), a title reserved for the caliph himself. And he took yet another caliphal title, *al-shakir lillah* (the grateful toward God), that he engraved on his coins. But then the Fatimids sent yet another army under the command of Jawhar al-Katib. When Ibn al-Fath heard that the Fatimid army was coming, he fled with his “household, family, children, principle officers; he took refuge with them and all of their treasures in Tasagdalt, a stone fortress some twelve miles from Sijilmasa.” Archaeologists think that Tasagdalt is what people in the Tafilalt oasis today call Jabal Mdaoura (Round Mountain), a rock fortress, today in ruins, atop a lofty mesa located due west of the ruins of Sijilmasa, exactly as the medieval texts describe. Ibn al-Fath was captured by Jawhar’s troops and was taken in chains back to Tunisia. The Fatimids controlled Sijilmasa for another 20 years until yet another superpower, the Umayyads of Cordoba, entered the competition to control the gold route to West Africa.

—Ron Messier

future Fatimid caliph, was on the loose and was heading for Sijilmasa. By the beginning of the tenth century the Abbasids increasingly felt threatened by anti-Abbasid propaganda spread by Shia missionaries called dai. The dai who came to the Maghreb was a man named Abu Abd Allah al-Shii (“the Shia”). Following the pattern of earlier Arab refugees such as Ibn Rustam and Idris I, Abu Abd Allah quickly assembled a

following among locals, raised an army, and overthrew the last Aghlabid ruler. He preached the coming of the Mahdi, the Shia imam Ubayd Allah. The prediction was correct. After Ubayd Allah and his son managed to pass through Egypt in disguise, they arrived in Sijilmasa and managed to remain undetected for four years. When Ubayd Allah’s son performed what seemed like a miracle, causing a spring to gush forth, their cover was blown. The two were arrested and imprisoned. Word got back to Abu Abd Allah’s partisans in Ifriqiya. They rescued Ubayd Allah in 909. The following year Ubayd Allah took the title of caliph in total defiance of the caliph in Baghdad. Medieval sources tell us little about the relationship between Ubayd Allah and Abu Abd Allah, but it must have been tense and competitive. It ended with Abu Abd Allah being executed in 911.

From the start, the Fatimid regime was imperialist. From their base in Ifriqiya, they sent agents out to gather intelligence, and they began to weigh their options. Ibn Hawqal, best known as a geographer, was probably such an intelligence agent. He tells us that “taxes on caravans setting out for the land of the Sudan, as well as tithes, land tax, and old-established dues from what was bought and sold there amounted to a total of about 400,000 dinars and this from Sijilmasa and its district alone,” fully half of what the Fatimids collected from the whole of the Maghreb. The Maghreb was agriculturally rich. It was the breadbasket of the former Roman empire, and the tenth-century Arab geographer Ibn Hawqal confirms that it remained rich. A common theme of historians of the early twentieth century was that agriculture competed with and indeed was constantly threatened by nomadic pastoralism. More recently, however, historians have concluded that except for relatively brief periods of nomadic invasion (e.g., the Bani Hilal), the relationship was more complementary than competitive. Agriculture and pastoralism combined to support industries and long-distance trade, a horizontal east-west trade between the Middle East and Spain and a vertical north-south trade connecting the Mediterranean to West Africa, all supporting a tax structure that made the Maghreb a prize worth fighting for.

Taxes provided much of the revenue needed to finance their conquest of Egypt. The rest came from their control of the routes of the gold trade with West Africa. They conducted no less than five expeditions to control Sijilmasa, which they did either directly or through local clients for most of the first half of the tenth century. The gold coming into Morocco had become such a prize that it was bitterly contested by a second imperial rival, the Umayyads of Andalusia who had also taken the title of caliph. The competition between these two superpowers is dramatically reflected by the production of gold coinage. A peak in production in one regime corresponds to a lapse in production in the other. It seems clear that when one regime controlled the gold routes, it was at the expense of the other.

On their fourth attempt the Fatimids finally succeeded in conquering Egypt in 969. They established a new capital immediately north of Fustat and called it al-Qahira ("the city of victory"). The English version of that is Cairo. The Fatimids continued to control much of the Maghreb through a client Berber tribe, the Zirids, under the leadership of Buluggin ibn Ziri. Buluggin's successor, though, began to conduct himself more and more like an independent prince. The final break between the Fatimids and the Zirids came in 1049 when the Zirid al-Muiz ibn Badis took advantage of a split within Fatimid Shia and declared his independence. The Fatimids retaliated by unleashing a hoard of Arab nomads, the Bani Hilal, that Ibn Khaldun described as a swarm of locusts. The destructive impact of the Bani Hilal is a debated issue. Some see the invasion of the Bani Hilal as the cause of a major upheaval in the socioeconomic structure of the Maghreb. Others argue that increasing instability in the Maghreb following the Fatimid immigration to Egypt opened the door to the Bani Hilal. Either way, what followed was the establishment of a number of independent Berber regimes, leaving the whole of the Maghreb under Berber rule for the first time since the Roman conquest. During the first half of the eleventh century the Berber tribes were once again left to rule themselves until they all fell under the imperial power of the Almoravids of the great Sahara.

—Ron Messier

Bibliography

- Abun-Nasr, Jamil M. *A History of the Maghreb in the Islamic Period*. Cambridge: Cambridge University Press, 1987.
- Bullier, Richard W. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.
- Julien, Charles André. *History of North Africa: Tunisia, Algeria, Morocco from the Arab Conquest to 1830*. Edited and revised by R. Le Tourneau. Translated by John Petrie. New York: Praeger, 1970.
- Laroui, Abdallah. *The History of the Maghreb: An Interpretive Essay*. Translated by Ralph Manheim. Princeton, NJ: Princeton University Press, 1977.
- Levtzion, Nehemia, and J. F. P. Hopkins. *Corpus of Early Arabic Sources for West African History*. Cambridge: Cambridge University Press, 1981.

Baghdad, 762–1000 CE

From the time of its foundation in 762 to its destruction by the Mongols in 1258, Baghdad was the capital city of the Abbasid dynasty and the symbolic center of Islam. The origin of the name "Baghdad" is unclear. According to most Arabic sources, it is derived from Persian and means "gift of god," but Aramaic and other ancient Middle Eastern inscriptions dating from as early as the eighteenth century BCE provide evidence of a much earlier origin of the name.

After the Revolution of 750, the Abbasids turned away from Damascus toward Iraq in search of a capital to symbolize the new era that they had inaugurated. After careful study, the second Abbasid caliph, al-Mansur (r. 754–775), decided on Baghdad, which was then a small and insignificant Christian village on the west bank of the Tigris River.

Al-Mansur named his new city Madinat al-Salam, or City of Peace, with a reference to verses VI:127 and X:26 in the Quran. It was the official name that was used on documents, coins, etc. The new capital was designed to be the imperial army's base as well as the Abbasids' administrative center. The city's circular form, with the caliphal palace and the Friday, or main, mosque at its center, seems to have represented a new Islamic cosmic order, namely the universal rule and absolute legitimacy of the Abbasid caliph.

However, the form of the Round City might also have followed earlier examples of Persian military camps. New institutions such as the bureau of complaints, the body of advisers, and the office of the chief justice were created to implement the new roles and responsibilities that the Abbasid caliphs claimed as their own. Furthermore, a market supervisor, a police chief, various guilds, and leaders of residential quarters helped regulate life in the new city. Very quickly, though, the confines of the Round City were abandoned, the city walls shifted, and the original Round City became part of a larger and rapidly growing Baghdad. No traces of the Round City have yet been found; thus, most of what we know about the foundation of Baghdad is based on medieval chronicles rather than archaeological evidence.

Baghdad's cultural golden age spanned the ninth to the eleventh centuries. During this period the city attracted representatives of different schools of Islamic thought who discussed divergent ideas regarding theology and rational philosophy. Indeed, Baghdad's sophisticated, indulgent, and sometimes extravagant society developed a lifestyle that did not always accord with Islamic moral principles. The "Big Three" at the beginning of this golden age were Caliph Harun al-Rashid (r. 786–809), immortalized in the *Thousand and One Nights*; his *wazir* Jafar al-Barmaki; and the poet Abu Nuwas (ca. 750–810) whose poetry celebrated wine, extravagance, and breaking away from taboos.

In addition to its deserved reputation as a cosmopolitan metropolis where ideas could be freely exchanged, Baghdad during these years also became a hub for the exchange of goods from across the Islamic world and beyond. Commerce connected Baghdad not only to other major Islamic cities but also to sub-Saharan Africa, China, and regions north of the Caspian Sea that were then becoming more accessible to Muslim merchants. Baghdad, in contrast to the earlier Umayyad capital city of Damascus, reflected a more universal, more "Muslim" concept of the caliphate and not one based on Arab hegemony, thereby mirroring the diversity of the many peoples who had converted to Islam and their various ethnic qualities and cultural achievements.

Ironically, Baghdad's cultural height was accompanied by the early stages of the Abbasids'

erosion of political and religious power. The first centuries of Abbasid rule witnessed a civil war between Harun al-Rashid's sons, al-Amin and al-Mamun (809–813); social tensions between different religious and ethnic groups; and the beginning of territorial decentralization. Caliph al-Mutasim (r. 833–842), in an effort to secure his position, preferred to move, together with his Turkish guard, away from Baghdad to a newly founded military camp in Samarra, which remained the military and administrative center from 836 until 870.

—Hend Gilli-Elewy

Bibliography

- El-Ali, Saleh Ahmad. "The Foundation of Baghdad." In *The Islamic City*, edited by A. Hourani and S. M. Stern. Oxford, UK: Bruno Cassirer, 1970.
- Kennedy, Hugh. *When Baghdad Ruled the Muslim World*. Cambridge, MA: De Capo, 2005.
- Lassner, Jacob. *The Topography of Baghdad in the Early Middle Ages*. Detroit: Wayne State University Press, 1970.
- LeStrange, Guy. *Baghdad during the Abbasid Caliphate*. Oxford, UK: Clarendon, 1900.

Islamic Rule in Iran and Central Asia, 650–1000 CE

The Islamic conquests define the sharpest periodization in Iranian history particularly and West Asia more generally. Although an underlying tenacious continuity is discernible in the Persian-Islamic ethos to the present, the acceptance of a new religion marked the start of a new order, and it became the basis of a new civilization whose identity, development, and efflorescence, subsequent to enslavement, slaughter, and destruction, were completely remolded. It merits reiteration that its articulation, despite pre-Islamic inspiration, was unassailably Islamic. The Sassanian-Zoroastrian legacy of art, attitude, statecraft, thought, and sophistication—neither fully assimilated nor rejected but always ambivalent—was bequeathed to the Islamic tradition. This became evident in Islam's treatment of Zoroastrians who were expediently, and never unanimously, recognized as *ahl al-kitab* (People of the Book).

Zoroastrianism or Mazdeism, the state religion of its Sassanian upholders (224–651 CE),

eclectically also flourished in Afghan and Transoxianian principalities, which completely collapsed with the Arab conquest of Iran and central Asia. It lacked any recuperative power and, of all religions that encountered Islam, suffered the most. Byzantine Christians could at least count on allies or adherents elsewhere, and Jews, unlike Zoroastrians, had honed bitter survival skills over generations. Islam was to leave Zoroastrianism a remarkable remnant surviving as an officially tolerated minority in both Islamic republics, Iran and Pakistan, where known as Parsis there and in secular India, they have dwindled but remain the most progressive and successful South Asians.

Expansion was enjoined by the injunction of the Quran (9:29). The fanatical fervor of a then-nascent proselytizing cult notwithstanding, the Arab attacks mirrored the Alexandrine invasion where poor but hardy Bedouins, like Macedonians seeking loot and land a millennium earlier, overwhelmed the Persians after two or three decisive battles to set the stage and scope of subsequent events.

Conquest was piecemeal and conversion gradual. During the Umayyad era (661–750 CE), an Iranian convert had to become a *mawla* (“client”) of a tribe and assume a socially subordinate position to his Arab ruler. Thus, the inducement to accept Islam attracted the lower orders such as peasants or prisoners and urban traders, retainers, servants, and tenants who prudently ingratiated themselves with their new masters garrisoned in centers across lower Iraq, southern Fars, and Khurasan, especially the Merv oasis (modern southeastern Turkmenistan). Mass conversion was not actively encouraged, but it became plain to Persians that social mobility and prosperity lay in accepting the colonizer’s creed and standards associated with its way of life. Backsliding was ruled out, for apostasy, then as now, invited death.

Ignorant of running an imperial system, the Arabs delegated the administration to former Sassanian secretaries (*dabiran*), thus establishing Islamic *divans* (chancelleries) whereby Pahlavi records were replaced by Arabic only after 700 CE, and tax collection was delegated to subdued magnates (*marzuban*) and landlords (*dabaqin*). Besides the land tax (*kharaj*), non-Muslims or

➤ ISLAM BESIEGED—AL-MUQANNA, THE “VEILED ONE”

No challenge to early Islam was graver than that of Hashim bin Hakim or al-Muqanna during the third Abbasid caliph, al-Mahdi’s reign (775–785 CE). Hailing from descendants connected to Abu Muslim, al-Muqanna came to regard himself as the rightful imam. Imprisoned in Baghdad, he escaped first to Merv and then Transoxiana, preaching that he embodied the incarnate spirit of Abu Muslim who had succeeded Jesus, Muhammad, and Abraham. His expressly anti-Islamic teachings attracted peasants and superficially Islamized inhabitants among rural fastnesses. Neo-Mazdakite and Manichean notions are discernable, though Muslim accounts are silent about his teachings except that he encouraged promiscuity, abolished property, and invited Qarluq Turks to appropriate Muslim lands and wealth. His revolt (774–779 CE) spread across Shahr-i Sabz, Samarkand, and as far as Termez. He retired to a fortress in the upper reaches of the Kashka Darya (southern Uzbekistan) and, when encircled by Khurasanian forces, committed suicide after instructing that his body be burned to vindicate his divine ascent.

He was eulogized as the Veiled Prophet of Khorasan in Thomas Moore’s poem, *Lalla Rookh* (1813), and fictionalized by Jorge Luis Borges in the short story *El tintorero enmascarado Hákim de Merv* (*Hakim, the Masked Dyer of Merv*), published in 1935.

—Burzine Waghamar

dhimmis (people of the covenant) paid a graded capitation tax deemed degrading and annulled upon conversion. Accounts of collection and treatment were meted out vary temporally, demographically, and provincially. But it affords interesting insights into Arab and early non-Arab Muslim interactions: Umayyads, when saddled with increasing official expenses, refused exemption even upon conversion. Other levies were then extracted from converts to shore up revenue losses, which provoked rebellion.

Resistance and revolts were frequent especially in central Asia, which Arabs pillaged after crossing the Oxus in 653–654 CE. Balkh (ancient Bactria’s capital) was reconquered in 663 CE. Bukhara was overtaken in 674 CE, and Samarkand

was overtaken in 676 CE. A total Arab hold was only established under Qutayba bin Muslim's governorship of Khurasan and the East (705–715 CE). By then, 50,000 Arab colonists were settled in Khurasan, albeit after reannexation. Qutayba had to reassert control over Bukhara in 706–709 CE. Its inhabitants were reported to have recanted thrice after being converted under his order. He next decreed the manumission of slaves upon becoming Muslims, demolition of fire-temples and religious sanctuaries, and the compulsory domiciling of Arabs within Bukharan homes to check them from lapsing. Alienation and civil wars were not restricted to infidels. Disgruntled, marginalized Muslim malcontents, both converts and Arabs, began unraveling the Umayyad caliphate by the mid-740s.

Anti-Umayyad strands including Kharijis, Alids, *mawali* (clients), *dahaqin*, and slaves, collectively flagged under the Abbasid revolt, ousted the Umayyads and orientated the caliphate from Syria to Iraq. Led by Abu Muslim, the Abbasids (749–1258 CE), temporarily amalgamated heterogeneous factions by propagating the prophetic ideal of an egalitarian, universal community. Changes in the social and military structure of the caliphate occurred when Persian consciousness manifested itself through revived Sassanian precepts of kingship and governance: the caliph presided over a hierarchical social order as the Shadow of God.

Social antagonisms resurfaced when disappointed elements, particularly the Shia and Khariji, rapidly realized that promised prosperity and justice were mere Abbasid sloganeering. Reprisals did not even spare allies. Abu Muslim, suspected as a powerful gubernatorial threat, was executed by the second caliph, al Mansur, in 755 CE. Abu Muslim's death instigated a rash of revolts among peasants and extremist sectarians saturated with messianic syncretism. Five uprisings flared between 755 and 780 CE linked to Abu Muslim's memory and seriously tested the Abbasids and Islamic orthodoxy. Such social unrest was not restricted to eastern Khurasan and Transoxiana but also extended to metropolitan Iraq, where the *zandaka* (dualist heretics) and *shuubiya* ("people") were alleged to call for Islam's downfall or belittle its Arab component, respec-

tively. By the time of Harun al-Rashid's accession (786 CE), all Persian provinces were in turmoil.

Several statelets challenged the caliphate in and around the borderlands. Within the hinterlands of Gilan, Tabaristan, Azerbaijan, and Daylam were isolated, independent, princely enclaves practicing heterodox beliefs such as the Bawandids (665–1349) and Musafarids (ca. 916–ca. 1090). Only with the arrival of Zaydi Shia preaching was Islam established around the Caspian littoral in the ninth and tenth centuries CE. The Buyids (932–1062) were Twelver Shia and one of the most powerful dynasties of the Iranian intermezzo (821–1055). They conspicuously imitated Sassanian court etiquette including addressing themselves as *shahanshab* (king of kings). Three minor Iranian dynasts—the Tahirids of Khurasan (821–873), the Samanids of Transoxiana (819–1005), and the Saffarids of Sistan (867–ca. 1003)—mark the Iranian resurgence and drift from caliphal authority. While the Saffarids were the first indigenous Persian rulers, it was the Samanids who ushered the New Persian renaissance in Bukhara to rival Baghdad as Islam's cultural capital. But Arabic poets and scholars were at home in its court, as was Ferdowsi whose lyrical verses crystallized the national legend, *Shahnameh* (*Book of Kings*), in 1009–1010. As Greek civilization was to Christianity, Persian became the cultural vehicle that internationalized Islam from Bosnia to Bengal during the next 18 centuries.

—Burzine Waghmar

Bibliography

- Bulliet, Richard. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.
- Choksy, Jamsheed. *Conflict and Cooperation: Zoroastrian Subalterns and Muslim Elites in Medieval Iranian Society*. New York: Columbia University Press, 1997.
- Curtis, Vesta, and Sarah Stewart, eds. *The Rise of Islam*, Vol. 4, *The Idea of Iran*. London: I. B. Tauris, 2009.
- Ferdowsi. *Shahnameh: The Persian Book of Kings*. Translated by Dick Davis. New York: Penguin, 2007.
- Frye, Richard. *The Golden Age of Persia: The Arabs in the East*. Totowa, NJ: Barnes and Noble, 1996.

Kennedy, Hugh. *The Great Arab Conquests: How the Spread of Islam Changed the World We Live In*. Philadelphia: Da Capo, 2008.

Pourshariati, Parvaneh. *Decline and Fall of the Sassanian Empire: The Sassanian-Parthian Confederacy and the Arab Conquest of Iran*. London and New York: I. B. Tauris, 2008.

Kharijite and Other Heretical States in the Maghreb to 1000 CE

The Arab conquest of North Africa in the mid-seventh century CE was the most significant turning point in North African history. It set in motion the processes of Islamization and Arabization, defining the two most important characteristics that would overlap the indigenous Berber identity to form a truly unique culture. The process of Islamization was slow, requiring centuries. A hundred years after the founding of Qayrawan, the Arab capital of the Maghreb, only half the families in Ifriqiya had adopted Muslim names. The process of Arabization was slower still.

The conquest imposed Arab Muslim sovereignty over an essentially Berber population. The government consisted of an Islamic judiciary and a pair of ministries to collect taxes and recruit an army. A persistent theme in North African history is continued resistance to central authority by the indigenous Berber population. One aspect of that resistance is the Berber acceptance of Kharijite Islam.

Arab Kharijites had fled to North Africa following the general direction of Islamic conquest, and by the late 730s they dominated the religious and political life of Qayrawan. These Arabs, like the local Berber population, viewed the Umayyad caliphs as usurpers. Kharijite rebellions that started in Iraq quickly spread to North Africa. In 739–740 a water carrier in Qayrawan named Maysara who was a Sufriya Kharijite (the strictest and least tolerant of the Kharijite sects) fled to the northwest, where he led the rebellion in the region of Tangier. After suffering a setback at the hands of the Arab army, Maysara was replaced as Kharijite leader by Khalid ibn Hamid. Khalid defeated the Arab army at the Battle of the Nobles in 741. The rebels then advanced on to Qayrawan, where they

were defeated in 742. The rebels were crushed, but they did not go away. Rebellion in the east (Mashriq) made it impossible for the last three Umayyad caliphs to focus on routing out the rebels of the Maghreb. When the Umayyad dynasty was finally overthrown in Damascus and replaced by the Abbasids in Baghdad, the Islamic hegemony over North Africa (i.e., the sense of belonging to a united Islamic empire) began to deteriorate. A number of independent principalities emerged in the Maghreb.

After the defeat of the Kharijite rebels in Qayrawan, the Barghwata, a group of people from different tribes and even from different tribal confederations, fled to Tamesna, the Atlantic plains between Sale and Azemur. There they formed a sect containing elements of both Sufriya and Ibadi Kharijism as well as the mahdist tradition of Shia. They established a state under a king named Tarif. They were Muslim, but they were viewed by most as heretics. They clung to many customs that did not conform to the true faith. For example, they fasted during the month of Rajab rather than Ramadan. They prayed ten times a day rather than five. When they prayed they moved their heads without prostrating. They were permitted to marry as many wives as they wanted but were prohibited from marrying their cousins. They could repudiate and take back their wives 1,000 times a day if they wished, as women were not protected under their law. Rather than cut off the hands of thieves, they killed them. They could neither kill nor eat cocks because these announced the morning prayer; if they did, the penalty was to free a slave. They recognized Salih ibn Tariq as their prophet, and they had their own Quran, in their Berber language, that had 80 chapters named after Adam, Job, Noah, Moses, Aaron, Asbath, the 12 tribes, the cock, the grasshopper, the camel, and the wonders of the world. What this all represents is a genuine Berberization of Islam.

What is most remarkable about Barghwata is its longevity; the kingdom lasted from the middle of the eighth century to the middle of the twelfth. They survived attacks by the Idrisids, Fatimids, Zirids, and Almoravids. And even though these were all setbacks, it took the aggressive Almohads to finally eliminate them.

➤ WHO ARE THE BERBERS?

Although not definitive, perhaps the safest indicator of who the Berbers are is the language that they speak. People who speak a Berber language as native speakers are Berbers.

That is how Ibn Khaldun, the famous fourteenth-century thinker and writer from Tunisia, defined them. He divided the numerous Berber tribes into three major tribal confederations: the Zanata, Masmuda, and Sanhaja. But he ultimately distinguished Berbers by the language they spoke, referring to an ancient king, a contemporary of Moses, who gave them the name “Berbers” when he heard their jargon and asked what that *barbara* was. (Some modern Berbers prefer to be called Amazigh and maintain that the term “Berber” is fundamentally pejorative.)

This seems straightforward enough, but there is a certain amount of cultural baggage that comes with Ibn Khaldun’s definition. Berbers, says Ibn Khaldun, lack “taste,” which he defines as “the tongue’s possession of the *habit* of eloquence” or “the conformity of speech to the meaning in-

tended,” in other words, language. Since the language of culture and authority in the Maghreb under Islamic rule was Arabic and since Berbers did not speak Arabic as a native language, they lacked taste. And Arabs looked at them disparagingly for that. Not only did Berbers lack taste, but there was something inherently rebellious about them. The conquest of North Africa by the Arabs was one of the longest and bloodiest episodes in the extraordinary expansion of Islam. Another early Arab historian, Ibn Abi Zayd, says that the Berbers of North Africa revolted 12 times before they accepted Islam. Ibn Khaldun says that even after the Muslim religion had been established among them, “they went on revolting and seceding, and they adopted dissident (Kharijite) religious opinions.” He adds that this is what is meant by the statement that Ifriqiya (the medieval name for what is now Tunisia and eastern Algeria) divides the hearts of its inhabitants. The statement is a play on words connecting Ifriqiya with the Arabic root *f-r-q* (“to divide”).

—Ron Messier

There were two successful attempts to form independent Kharijite states in the Maghreb. In 757 CE Abul-Qasim Ibn Samgu fled religious persecution in Qayrawan, escaping to the Tafilalt oasis in southern Morocco, the very edge of the Islamic frontier, where he gathered a following among the Bani Midrar tribe. Together they founded the city of Sijilmasa, steeped in the ideology that every believer who was religiously and morally irreproachable was eligible to be ruler “even if he were a black slave.” Indeed, the first ruler chosen in Sijilmasa was Isa Ibn Yazis al-Aswad (al-Aswad meaning “black”). The Midrarid state would last the next 200 years until it was taken by the Fatimids. Its position at the head of the trade routes across the Sahara from West Africa placed it in an ideal position to control, or at least profit from, the flow of West African gold into the Muslim world. The discovery in 1992 of 32 gold coins in Aqaba, Jordan, of which 29 were minted in Sijilmasa in the name of the Umayyads, is testimony to the role

of Sijilmasa as the link between the Islamic and Mediterranean worlds to the sources of gold in West Africa.

The second Kharijite state was in Tahart (six miles west of Tiaret in present-day Algeria). Abd al-Rahman Ibn Rustam, a Persian who had grown up in Qayrawan, had become the Kharijite subgovernor. But when the Abbasids retook the city in 761 CE he was forced to flee. He fled to Tahart and allied with local Berber tribes who, within 15 years, recognized him as Kharijite caliph of an independent city-state that would last until 908, when it too fell to the Fatimids. The Rustamids were Ibadi Kharijites, the more moderate Kharijite sect. In practical terms, that translated into a much more moderate approach to non-Kharijites. The population of Tahart included many non-Kharijites, even some Christians; and many more came to the bustling commercial bazaars of Tahart. The Rustamid state placed enormous emphasis on economic contacts with West Africa. Rustamid merchants

established partnerships with trading firms in the sub-Saharan city of Gao, some Rustamids taking up permanent residence there. Ibn Rustam even married off his daughter to the ruler of the commercial city of Sijilmasa.

—Ron Messier

Bibliography

- Abun-Nasr, Jamil M. *A History of the Maghreb in the Islamic Period*. Cambridge: Cambridge University Press, 1987.
- Bullier, Richard W. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.
- Julien, Charles André. *History of North Africa: Tunisia, Algeria, Morocco from the Arab Conquest to 1830*. Edited and revised by R. Le Tourneau. Translated by John Petrie. New York: Praeger, 1970.
- Laroui, Abdallah. *The History of the Maghreb: An Interpretive Essay*. Translated by Ralph Manheim. Princeton, NJ: Princeton University Press, 1977.
- Levtzion, Nehemia, and J. F. P. Hopkins. *Corpus of Early Arabic Sources for West African History*. Cambridge: Cambridge University Press, 1981.

The Idrisids of Morocco— An Early Shia Kingdom

The Idrisids, who ruled much of Morocco for nearly two centuries (788–974), established the first independent Arab state in the Muslim Far West and are often hailed as the founders of the Kingdom of Morocco.

By the 780s Shia propaganda had begun to spread concurrently with Kharijism in northern Morocco. The Berbers, faithful to Islam, were impressed that Idris was a direct descendant of the Prophet. Being fiercely independent, they endorsed Idris's opposition to the Abbasid caliphate. In 788 Idris settled in Volubilis, where we see continuous archaeological evidence of urban occupation after the Roman occupation, right up to the founding of the new Idrisid capital city. Idris consolidated his authority over the northern part of Morocco (essentially what had been Mauritania Tingitana under the Romans, along with the Atlantic coastline south of Salé).

Idris died in 791. His infant son was recognized as his successor but was obviously not

able to claim real authority right away. When he was still quite young, in 808, because of perceived dangers of remaining in Volubilis, Idris II established a brand new capital city in Fez. It was in an ideal location at a crossroads going from east (Salé) to west (through the Taza Gap to Qayrawan) and from north (Tangier and Ceuta) to south (Sijilmasa, a new Kharijite city, already a commercial entrepôt on the edge of the Sahara). Fez was to become the nucleus of a sense of political cohesiveness that, after going through several variant phases, would gradually emerge as Morocco. Fez became an important center of Arabization for Morocco. The university there claims to be the oldest in the world. In subsequent eras, refugees from Spain and Qayrawan settled in Fez, making it the cosmopolitan crossroads of the Islamic Far West.

The early Idrisids were active warriors. Through a protracted series of military actions, they conquered much of the region of the High Atlas as well as other Muslim areas. Morocco became an important regional power as well as a cultural center.

The Idrisid state was rudimentary at best. It amounted to little more than a locally recruited army that produced revenues for the regime from spoils of war and by collecting taxes from non-Muslims. The Idrisids were almost totally dependent on the Berber tribes who had adopted them. The Idrisids were Shia, though a large percentage of their Berber subjects were Kharijites, while the populations of Fez and other cities were largely Sunni. The prevailing system of Islamic jurisprudence, at least in the capital, was Malikite, a very strict interpretation of Sharia.

Idrisid Morocco shared in the wave of prosperity that swept over the Maghreb in the ninth and tenth centuries. This prosperity was agriculturally based, stimulated by the revival of irrigation systems and expansion of cultivated land. Sugar plantations were established, and Asian crops, such as citrus fruits, cotton, and rice, were introduced to feed and clothe the growing urban populations. The burgeoning trans-Saharan trade stimulated handicraft industries.

When Idris II died in 826, Idrisid domains were divided among nine claimants within the

family. Succession continued to pass from one to the next, exercising at least nominal control over the dynasty until the Fatimids took Fez in 920. The Idrisids survived in the Riff Mountains, sometimes as clients of the Fatimids, sometimes as clients of the Umayyads of Cordoba, chief rivals of the Fatimids.

—Ron Messier

Bibliography

Abun-Nasr, Jamil M. *A History of the Maghreb in the Islamic Period*. Cambridge: Cambridge University Press, 1987.

Bullier, Richard W. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.

Julien, Charles André. *History of North Africa: Tunisia, Algeria, Morocco from the Arab Conquest to 1830*. Edited and revised by R. Le Tourneau. Translated by John Petrie. New York: Praeger, 1970.

Laroui, Abdallah. *The History of the Maghreb: An Interpretive Essay*. Translated by Ralph Manheim. Princeton, NJ: Princeton University Press, 1977.

Levtzion, Nehemia, and J. F. P. Hopkins. *Corpus of Early Arabic Sources for West African History*. Cambridge: Cambridge University Press, 1981.

■ Introduction: Political History of India

The political history of north India during 300–1000 is highlighted by two major historical narratives, that of the Gupta and the Harsha Vardhana empires and the tripartite struggle for dominance of the Ganges Valley, centering around the city of Kannauj between the Pratihara empire, the Pala empire, and the Rashtrakuta empire, while the political history of the Deccan after the decline of the Gupta empire is taken up with the fortunes of the Chalukyas of Badami, their overthrow by the Rashtrakutas, and then the rise of the Chalukyas of Kalyani or Western Chalukyas (who may or may not have descended from the Badami Chalukyas). The political history of the Tamil southern tip of India is even more complex, involving shadowy warfare and political conflict among the Pallava, Pandya, Chola, and Chera empires.

The Gupta empire (280–550 CE), which dominated northern India, particularly the Ganges Valley, is remembered as existing during a cultural florescence that rivals Greek civilization in the fifth century BCE, or the European Renaissance. It was not a centralized empire, as was the Mauryan empire, because local governments and local rulers were probably more autonomous, causing some historians to refer to it as quasi-feudal.

The Gupta empire's decline started in the middle of the fifth century, when Hephthalite (Huna, or White Hun) incursions sapped the Gupta's strength. By 550, even though the Hephthalites had been defeated, the weakened Gupta empire collapsed into its quasi-feudal components. Nearly half a century after the Gupta collapse, Harsha Vardhana united the Ganges Valley and, in 606, was acclaimed emperor at a great council. He was only 16 years of age. Harsha rule, filled with many wars, lasted until 647, during which time he conquered territory from Gujarat to northern Bengal. On Harsha's death, his empire separated into several small kingdoms.

In the period of the eighth through the tenth centuries, northern India witnessed the sway of two large empires as well as many smaller kingdoms. In Bengal there was the Pala empire, which began when its first ruler, Gopala, was elected by democratic process to the office of Pala, or Protector. The Palas ruled Bengal for 400 years, during which time literature, culture, and prosperity flourished. During the first half of the ninth century, the Pala empire held sway over much of India, including most of northern India. After 850, Pala power retreated to Bengal and Bihar.

The Pratihara empire was the other major power in northern India in the eighth through

tenth centuries. The Pratiharas were Rajputs, but their home ground was Gujarat. In the late eighth century, the Pratihara empire expanded to include most of the Ganges Valley but came into conflict with the Pala empire and retreated. Toward the middle of the ninth century, the Pratihara pushed the Palas out of most of the Ganges Valley, and their empire again ruled most of the Ganges Valley until 910.

In the Deccan (central India), the Chalukya dynasty created an empire that endured for more than 200 years (543–753). They were powerful enough to stop the southern expansion of Harsha's empire in the early seventh century but were defeated by another central Indian dynasty, the Rashtrakutas, in 753.

The Rashtrakuta empire included, at times, most of west-central India to Maduri. During the ninth century, the Rashtrakutas contested the rule of the Ganges Valley with the Palas and the Pratiharas. The Rashtrakuta empire lasted until 982.

In southern India, the Pallava empire dominated from the late sixth century until the early eighth century. During their rule, the great rock sculptures of Mahabalipuram were carved. Their rule saw the beginning of the florescence of southern India culture. They were very warlike and fought the Chalukyas to the north and the Pandyas and Cholas on their southern boundary. For much of the period of their ascendancy, they shared the southern part of the peninsula with the Pandyas and Cholas, but by the middle of the ninth century the Cholas decisively defeated them and established a great empire that dominated southern India, Sri Lanka, and the Bay of Bengal and had great influence throughout Southeast Asia until the end of the thirteenth century.

—Wilfred J. Bisson

Bibliography

- Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia: Exlibris, 2003.
- Stein, Burton. *A History of India*. Oxford, UK: Blackwell, 1998.
- Thapar, Romilla. *A History of India*, Vol. 1, *From the Discovery of India to 1526*. New Delhi: Penguin, 1966.

> POLITICAL CHRONOLOGY OF INDIA, 300–1000 CE

All dates are Common Era.

North India

Third–fourth centuries	Indo-Sassanian kingdom in Punjab
208–550	Gupta empire
590–647	Harsha's empire
711–738	Arab conquest of Sind and Multan

ca. Eighth–tenth centuries	Three-way struggle for supremacy in Ganges Valley
ca. 580–ca. 1000	Pratihara empire
750–1174	Pala empire Bengal's golden age

The Deccan (Central India)

543–753	Chalukya empire
ca. 550–973	Rashtrakuta empire
973–ca. 1180	Chalukyas of Kalyani

South India

571–750(?)	Pallava kingdom
ca. 525–ca. 890	Pandyan kingdom
ca. 850–1275	Chola empire

—Wilfred J. Bisson

Harsha's Empire and Feudalism in North India, 600–1000 CE

Harsha, also known as Harsha Vardhana, is regarded, along with Ashoka and Akbar, as one of the great emperors of Indian history. After the decline of the Gupta dynasty, the second great empire after the Maurya to unite much of the Indian subcontinent, Harsha succeeded in developing a large and prosperous kingdom in which education and culture were able to thrive. The period of Harsha's reign is also one of the best documented in ancient Indian history, being covered in great detail in two texts composed during his time: the *Harsha Charita*, or biography of Harsha, written by the Sanskrit poet Bana, and the travelogue of Xuanzang, a Chinese Buddhist monk who traveled extensively in India during Harsha's reign, writing in vivid detail about India's natural features, society, and forms of political administration.

One reason for Harsha's success was his own longevity. A talented administrator, he was able to oversee his kingdom for 41 years, ruling from 606 to 647 CE. He died without an heir, however, and did not leave a very strong administrative structure to succeed him either, relying largely on his own talents and the force of his personality to rule his kingdom. It therefore suffered the same fate as many other Indian empires and disintegrated into a number of small kingdoms after his death.

Harsha hailed from what is now the state of Haryana, in northwestern India, from the city of Thanesar. The story of his ascent to the kingship reads like a great novel. He was the younger brother of Rajya Vardhana, ruler of the Vardhana dynasty, one of many small feudal kingdoms in northern India after the collapse of the Gupta dynasty. Rajya's and Harsha's sister, Rajyasri, was married to a king named Grahavarman, who was killed by a king named Devagupta, of Malwa, in central India. After he killed Grahavarman, Devagupta had Rajyasri imprisoned.

Shashanka, the king of Gauda, in the eastern part of India, agreed to meet with Rajya Vardhana in order to make an alliance with him against Devagupta and help to free Rajya's sister. But Shashanka had already secretly allied himself to Devagupta and killed Rajya Vardhana. Vowing to avenge his brother and free his sister, Harsha raised an army and marched against Devagupta, whom he defeated and killed in battle. Devagupta's people then made Harsha their king. All of this happened in 606 CE, when Harsha was only 16 years old.

Despite his youth, Harsha was a great warrior and administrator. Still determined to punish Shashanka's treachery, he continued his campaign against Shashanka's realm, conquering much of the Ganges Valley in the process. Though he never succeeded in either killing or overthrowing Shashanka, he did outlive him. Bhaskaravarman, Harsha's ally, managed to conquer what remained of Shashanka's kingdom after Shashanka died in 625 CE.

Like Ashoka and Akbar, Harsha practiced a policy of tolerance toward all of the religions practiced in his realm, giving patronage to Buddhism, Jainism, and the various Hindu sects. Religiously speaking, Harsha himself came from a

Shaiva Hindu family. But he was also a generous patron of Buddhism, particularly of Mahayana Buddhism. In Xuanzang's account, Harsha's conflict with Shashanka is cast as a religious war between Buddhism and Shaiva Hinduism, with Shashanka presented as a persecutor of Buddhists and Harsha depicted as their champion. Scholars suspect, however, that this is a biased account, given the prevalence of mixed religious allegiances in ancient India. Harsha continued to support Shaivism while also supporting Buddhism, and some of the most prominent Buddhist educational institutions in India were in Shashanka's kingdom. A play written by Harsha, *Nagananda*, reflects Harsha's mixed religious allegiance. The play is essentially a Buddhist one, being a retelling of a *Jataka* tale, or story of one of the Buddha's past lives. But Harsha makes the goddess Gauri, the wife of the Hindu deity Shiva, a prominent figure in his play, an incorporation that is his own innovation.

As can be seen from the fact that he wrote plays, Harsha was a great patron of the arts in addition to being a great warrior and a capable administrator. After expanding his kingdom through conquest, he moved his capital from the relatively remote Thanesar to the more centrally located city of Kanauj, in the Ganges River valley.

According to most historians, the chief flaw of Harsha's reign was the fact that he relied so much upon himself to administer his kingdom. Without a strong administrative structure or an heir to succeed him, his kingdom quickly collapsed after his death.

The aftermath of the collapse of Harsha's kingdom follows a pattern that can be seen repeatedly in Indian history and that is evident in the aftermath of the collapse of other empires, such as those of the Mauryas, the Guptas, and later the Mughals. Due to the strength of the Indian social structure, in the form of the caste system, the integrity of Indian society is not dramatically affected by such political collapse. Brahmins continue to perform rituals. The mercantile communities continue to trade, and the manufacturing communities continue to weave, make pottery, and so forth. And lower castes continue to perform menial tasks. So, although there is some disruption, the collapse of an empire such as Harsha's does not produce the kind

of social chaos left in the wake of, for example, the fall of the Roman empire. But a situation emerges in which India is divided into a great variety of small kingdoms and subkingdoms in a state of perpetual instability as competing kings vie to become the next Harsha or Chandragupta.

—Jeffery D. Long

Bibliography

- Keay, John. *India: A History*. New York: Grove, 2000.
- SarDesai, D. R. *India: The Definitive History*. Boulder, CO: Westview, 2008.
- Schwartzberg, Joseph E. *A Historical Atlas of South Asia*. New York: Oxford University Press, 1992.
- Thapar, Romila. *The Penguin History of Early India: From the Origins to AD 1300*. New Delhi: Penguin Books India, 2002.

Kingdoms of South India

South India, from 300 to 1000 CE, was never ruled by a single state or empire. Its topography made centralized control difficult. Much of it is characterized by rugged hills and (until modern times) thick jungles. The semiarid Deccan Plateau of central India and the rich but narrow valleys of the Far South seemed unable to sustain large empires or large cities such as those of North India. These were the core areas of the kingdoms of South India, which rose and fell over the centuries in kaleidoscopic patterns.

In the Far South, the traditional dynasties and their core areas were the Cholas in the Cauvery River valley and adjacent coast, the Pandyas from the Madura area to the southern tip of India, and the Cheras or Keralas from the mountain range of the Western Ghats to the Arabian Sea coast. Their age is uncertain, but they existed in the third century BCE, when they are cited in Ashokan inscriptions. On the Deccan, the oldest verifiable dynasty was that of the Satavahannas or Andhras, who apparently dominated politics from the third century BCE to the third century CE. This hilly plateau area was invaded from time to time by rulers to the north and south, and at other times its monarchs invaded and defeated those neighbors. Frequent warfare was the anticipated pattern.

The first historically known monarch was Karikala, who began a period of Chola dominance starting in about 190 CE. Heroic tales are

told about Karikala, whose forces trounced his allied enemies in at least two major battles. He is also supposed to have reclaimed forest lands, created a riverine irrigation system, and patronized elegant poetry. However, the third century CE saw the rise of the rival Pandyas, whose most renowned king was Nedunjelidan.

➤ KERALA—A DIFFERENT INDIA

Kerala is different from the rest of India. Occupying the Arabian Sea coastal strip and resembling palm-clad tropical islands, it is divided from the rest of India by the rugged mountains of the Western Ghats. They could be penetrated by determined settlers, merchants, or even armies, but their semi-isolation allowed the peoples of Kerala to develop their own language (Malayalam), culture, caste structure, and politics. Even its elaborately stylized dance form, Kathikali, is unique.

The Chera or Kerala monarchs supposedly ruled this land from antiquity. They were mentioned in Ashokan inscriptions (third century BCE) and celebrated in many songs and stories. But Cheras may have been a generic rather than a family name, as different lines of rulers took the title. The first such recognized line was the Kulasekharas (800 to 1100 CE). Even then, most real authority resided in the rival city-states that dotted the coastline. This was briefly interrupted by the Chola invasion from Tamilnad in the eleventh century.

Because of its location, Kerala received frequent visitors, including travelers such as Marco Polo, missionaries, and traders. The export of black pepper, ginger, cinnamon, and other spices as well as pearls and cotton cloth propelled the economy. The presence of ancient Greek and Roman merchants has been documented with written references and caches of coins. Persians and Arabs came next and, in a later age, Chinese. According to Christian tradition, the apostle Thomas was sent to India to evangelize, and he arrived at Kerala's port of Cranganore. A Christian community has lived in Kerala since 345 CE, if not earlier. A Jewish community received a land grant in the tenth century. Muslim Arab traders settled in the eighth and ninth centuries, and their descendants (called Mappilas) remain a vigorous part of the diverse society of modern Kerala.

—Edwin Hirschmann

Although the names of such kings are known, the monarchs of South India were unusually restricted in their powers and political roles. A South Indian kingdom has been called a segmented state in which functions were prerogatives of the crown elsewhere here devolved upon others. Thus, according to inscriptions, there were troops of soldiers raised and maintained by assemblies of merchants and areas in which civil governance was assumed by villages of Brahmans (the *brahmadeyas*). Moreover, royal strength often depended on the loyal support of feudatories, powerful local chiefs who might play their own games of power politics. The king had a valued ceremonial role; he was the upholder of *dharma* (the divinely decreed law and social order) and the dispenser of justice. He was expected to defend the society against invaders and outlaws and to attack weaker neighbors, which meant that he needed a fighting force. But his was a hollow crown.

The king was usually assisted by members of his royal family, although family feuds and succession disputes sometimes interfered. He had advisers in such specialized areas as revenue, military, judicial, and theological matters who sometimes became powerful hereditary officials. However, there is no evidence of a regularly constituted council of ministers. There were the equivalent of sheriffs to enforce royal decrees and bailiffs to enforce judicial ones. These depended on the cooperation of village

leaders since the integrated nuclear village was South India's basic socioeconomic unit.

Within this framework, states and dynasties rose and fell. In fragmented central India the most prominent after the fall of the Satavahanas in the third century CE was the Vakatakas, with headquarters near modern Nagpur. A royal marriage to Chandragupta II, ruler of North India, brought them briefly into the orbit of the Gupta empire, but they reigned into the mid-sixth century.

Next to dominate the Deccan was the Chalukyas of Badami (or Vatapi), beginning in the sixth century. Their most accomplished ruler was Pulakeshin II, who won the throne by defeating his uncle, Mangladesha, in a hard-fought civil war. Pulakeshin subdued imperial tributaries who had broken free during the fighting, then defeated the mighty emperor of the north, Harsha, in a crucial battle at the Narmada River in about 612 CE. Pulakeshin had a navy to battle coastal enemies, sent an ambassador to the court of Persia, and received a visit from the Chinese monk Huen Tsang who vividly described this powerful and bellicose kingdom. He later moved south and conquered the Pallavas of Kanchi (near modern Madras/Chennai). However, Narasimhavarman I, son and successor of the vanquished Pallava ruler, retaliated in about 630 CE, defeating the Chalukya armies and apparently killing Pulakeshin.

Those Pallavas rose in the sixth century CE and dominated regional politics in the seventh and early eighth centuries. Inscriptions indicate that this was a period of growing Sanskrit and North Indian cultural influence. The empire peaked with its wars against its longtime Chalukya enemy, resulting in Pallava ascendancy in South India, construction of the port at Mahabalipuram with its rock-cut shore temples, and the spread of South Indian trade and culture across the Bay of Bengal. But the Pallava empire was smashed in about 730 CE by the revived Chalukyas, allied with some unhappy feudatories. The Pandyas then dominated the Far South until the rise of the greatest of all South Indian dynasties, the imperial Cholas, in the tenth century.

In the Deccan the Chalukyas were ousted in the mid-eighth century by the dynasty called Rashtrakutas. This was apparently a clique of provincial officials rather than a kinship family,



Shore temple at Mahabalipuram, Pallava dynasty, seventh century CE. (Infocus/Dreamstime)

and internal factions, rifts, and rebellions were more frequent than usual. Nevertheless, the Rashtrakutas were a restless and ambitious dynasty. Govinda III became the first southern ruler to invade North India, and in 802 he briefly held Kanauj, Harsha's old capital. Several monarchs took the Rashtrakutas south, invading the lands of Pandyas and Pallavas. The dynasty peaked with Amogavarsha (814–880), who suppressed rebellions, spread his domain, built an elegant palace, and became known for his literary and religious pursuits. But offstage the Chalukyas were regrouping, and in the mid-tenth century they regained royal power.

—Edwin Hirschmann

Bibliography

- Basham, A. L. *The Wonder That Was India*. 3rd rev ed. New York: Taplinger, 1967.
- Menon, A. Sreedhara. *Social and Cultural History of Kerala*. New Delhi: Sterling, 1979.
- Sastri, K. A. Nilakanta. *A History of South India*. 3rd ed. London: Oxford University Press, 1966.
- Thapar, Romila. *Early India, from the Origins to AD 1300*. Berkeley: University of California Press, 2002.
- Trautmann, T. R., R. D. Saran, P. A. Granda, and A. Ruckert. "The Study of South Indian Inscriptions." In *Studies of South India: An Anthology of Recent Research and Scholarship*, edited by Robert E. Frykenberg and Pauline Kolenda. Madras: New Era Publications, 1985.

The Pala Dynasty of North India

The Pala dynasty ruled the northern and eastern Indian subcontinent, coinciding with present-day Bihar, West Bengal, and Bangladesh, between circa 750 and circa 1174. The Palas rose to power during a period of anarchy following the decline of the Guptas and repeated foreign invasions. During their reign, Bengal achieved its highest level of power and cultural achievements. The Palas were prominent promoters of Mahayana Buddhism and patronized the arts and architecture. They are held responsible for the reformation of Buddhism in Tibet. Their art, known as the Pala School, had a long-lasting impact on the arts of Tibet and Southeast Asia. The dynasty was eventually replaced by the Hindu Senas toward the end of the twelfth century.

The founder of the dynasty, Gopala (ca. 750–775), brought an end to the so-called Dark Age of Bengal, referred to by the Tibetan historian Taranatha Lama as *matsyanyan*, or "eating of small fish by big fish." According to some historians, Gopala was democratically elected by the desperate people of the city of Gaur in Bengal to end this anarchy and restore peace and wealth to the country. From ancient sources it appears that Gopala was not of noble origin but instead was the son of a warrior, a *shudra* (member of the working class), or a *kayastha* (scribe) and perhaps the grandson of a learned man. Not much is known about his life and career, but it is generally agreed that he ruled all of Bengal.

The second in line, Dharmapala (ca. 775–810), is better known and is considered one of the greatest kings of Bengal. His name means "Protector of the Law," perhaps as a reference to the eight fierce Buddhist deities whose task it is to protect the Buddhist law. He expanded the Pala reign into the Deccan and the Gangetic plain up to Kanauj, notwithstanding a continuous struggle for supremacy with the Gurjara-Pratiharas of Rajasthan and the Rashtrakutas of the Deccan. Mutual conflicts between the Pratiharas and the Gurjaras indirectly helped Dharmapala in gaining full control over Bengal, Bihar, and Kanauj. Several Rajput rulers had to pay him tribute. Dharmapala founded the university and monastery at Vikramashila.

Dharmapala's son, Devapala (ca. 810–850), is believed to have extended the boundaries of his kingdom even farther to Pragjyotisha (Assam) and the Vindhya range in the south, although not much is known about the details of his military campaigns under his cousin General Jayapala. Some historians assume that Devapala even conquered Kamboja, a region in ancient Gandhara (Pakistan-Afghanistan). Unfortunately, no details of this extension are available from ancient sources other than vague evidence provided by the fact that Devapala appointed Viradeva from Kamboja as abbot of Nalanda. According to Taranatha Lama, Devapala founded the Great Monastery at Somapura, known as Sompur Bihara. The reign of Devapala saw the maximum expansion of the Pala realm. After him, larger and smaller areas were gradually lost, and the kingdom survived in a reduced form.

THE PALA SCHOOL OF ART

The name of the Pala dynasty survived in their art, generally referred to as the Pala School of Sculptural Art. Pala art had a lasting influence on the Buddhist art of Sri Lanka, Nepal, and Southeast Asia. Their main products were in bronze and black stone and reveal a high technical standard. Pala bronzes were usually gilded and often inlaid with silver. A new invention was the crowned Buddha. Although these gilded bronzes are predominantly Buddhist, the earliest dated Hindu bronzes were produced by the Palas as well. Pala stone sculptures are carved out of fine-grained black schist from the Rajmahal Hills (Jharkhand) and are often polished. The portrayed figures are somewhat more sensual than in the preceding Gupta art. Females invariably have heavy round breasts and bulging hips, whereas males have broad shoulders and narrow waists.

A change through time is observed within Pala sculptural art. Gradually, the bodies became longer and more static, the faces more pointed, and dresses, jewelry, and background figures more finely carved and complicated. Typical for the later period are huge steles portraying the Hindu god Vishnu with his two spouses, crowded with a multitude of minor figures and traditional background decoration around the central image.

—Alexandra van der Geer

Mahipala I (ca. 995–1043) reestablished Pala supremacy in large parts of Bengal and Bihar. He is considered the second founder of the Pala dynasty. The kingdom was confined to southern Bihar under his two immediate predecessors due to repeated invasions by Chandellas and the Kalachuris, two Rajput groups that arose after the demise of the Pratiharas. Toward the end of his reign, Mahipala had regained northern Bihar. The main temple at Paharpur was renovated, and architecture was added under his patronage. He is also credited with having constructed and rebuilt religious architecture at the Buddhist pilgrimage center Sarnath. Songs about the deeds of Mahipala survived to the present time.

Copperplates and other ancient sources indicate that Mahipala I reconquered his paternal

kingdom, which had been taken away from him by people who had no claim to it. Two opinions prevail about the exact nature of this statement. The earlier theory holds that foreign tribes or war bands had come and set foot in Bihar, usurping the Pala kingdom. The later theory holds that there was a conflict within the Pala lineage itself and that it had split in two. The occurrence of exactly the same names of kings and their epithets but in different genealogies is evidence for this. In addition, the referred kings belong to the same era and time frame.

During the Pala reign both Mahayana Buddhism and Hinduism flourished. Religious and artistic ideas were exported to Nepal, Tibet, and Southeast Asia. The vast production of artworks is explained as thanks to the relative peace and religious tolerance. The Palas founded many monasteries and enlarged existing ones. During their reign the universities of Vikramashila and Nalanda, the largest Buddhist universities ever, rose to prominence and international renown. From here Buddhism spread to Tibet, Nepal, Bhutan, Myanmar, and Indonesia. Dipamkara Srijñana (ca. 980–1052), abbot of the Vikramashila monastery, reformed Buddhism in Tibet and laid the foundations for the Kadampa tradition. Tilopa (988–1069) founded the Tibetan Kagyu tradition. The University of Nalanda was destroyed by fire in 1193 by the Turkish-Afghan general Bhaktiyar Khalji. A few years later it was totally abandoned.

The Pala Army consisted of the same four divisions (infantry, cavalry, elephants, and chariots) as earlier Indian armies. Likewise, a *senapati*, or general, stood at its head. Cavalry was recruited mainly from tribes from the north and the Himalayas and from Rajput groups. Horses could not be bred locally because of the high humidity and temperature of the climate of Bengal, Bihar, and Bangladesh. The cavalry forces often had their own commander.

The names of Pala kings all end in *-pala*, literally “protector.” Gopala, for instance, means “Protector of Cattle,” Dharmapala means “Protector of the Law,” and Devapala means “Protector of God(s).” The ending *-pala* is not restricted to Bengal or to royal dynasties but is a rather common ending to names in northern India.

—Alexandra van der Geer

Bibliography

- Alam, S. *Sculptural Art of Bangladesh*. Dhaka: Department of Archaeology and Museums, 1985.
- Bagchi, J. *The History and Culture of the Palas of Bengal and Bihar, cir. 750 A.D.-cir. 1200 A.D.* New Delhi: Abhinav Publications, 1993.
- Broadley, A. M. *The Buddhistic Remains of Bihar*. Varanasi: Bharati Prakashan, 1979.
- Chauley, G. C. *Art and Architecture of Nalanda*. New Delhi: Sundeep Prakashan, 2002.
- French, J. C. *The Art of the Pal Empire of Bengal*. London: Oxford University Press, 1928.
- Mahajan, V. D. *Ancient India*. 1960; reprint, New Delhi: S. Chand, 2008.
- Majumdar, R. C. *History of Ancient Bengal*. 1971; reprint, Kolkata: Tulsi Prakashani, 2005.
- Paul, P. L. *The Early History of Bengal: From the Earliest Times to the Muslim Conquest*. 2 vols. Indian Research Institute Publications, Indian History Series 2 and 3. Calcutta: Indian Research Institute, 1939–1940.

■ Introduction: Indian Influences in Southeast Asia

Indianization” is the term used to describe Indian influence on the development of Southeast Asian societies. This influence involved a number of areas including the concept of royalty (court customs, installation, pageantry), administration and law, writing systems, linguistic borrowing, the epics *Ramayana* and *Mahabharata*, and literary works on subjects such as philosophy, astrology, medicine, and the arts. That there was such Indian influence cannot be denied; from the temple ruins at Angkor in Cambodia and Borobudur on the island of Java to the linguistic remnants in the Philippines, the evidence is plentiful. However, certain issues are not as clear. For example, the explanations for how and why Indian influence came to Southeast Asia depend on the question of initiative.

The connection between South Asia and Southeast Asia was quite strong. Paul Mus argued that India and Southeast Asia had a “common primordial substratum of belief.” However, with the exception of northern Vietnam, Chinese cultural influence was negligible. The Chinese viewed Southeast Asians as barbarians or non-Chinese and therefore not worthy of assimilating Chinese culture. China did keep ongoing economic and political bonds with various political entities in Southeast Asia. This was to maintain a buffer on its periphery and to keep the region weak and divided. As long as Southeast Asian kingdoms (as the Chinese designated them) paid tribute, China was content.

Most of what is known as Indian influence was found among those in positions of leadership and their courts. The political systems—the Chinese called them kingdoms, modern scholars refer to them as states, and O. W. Wolters used the Sanskrit term *mandala*, meaning circle of a king—were centers of spiritual authority and political power, which were constantly shifting.

Southeast Asians believed that certain individuals were superior to others due to the soul stuff they possessed. One’s accomplishments were proof of his spiritual superiority. Rather than establishing or developing political institutions, these leaders would initiate religious cultic systems that both reinforced their spiritual power and superiority as well as allowed their followers to share in or draw from that power. Hinduism provided both the deities and the ceremonies to affirm the royalty of a given leader. Buddhism provided legitimacy by means of promised blessings and curses.

As a result, the initiative regarding Indian influence rested with Southeast Asian leaders who saw Indian culture and religion as tools to be appropriated to enhance and solidify their political status. That Southeast Asian leaders took the initiative is confirmed by the unevenness of Indian influence and the changes made to conform to local situations.

With this in mind, the following scenario is likely what happened. Indian traders, passing through the region on their way to China, came

THE MARRIAGE OF KUANDINYA AND SOMA

The story of Kaundinya is the founding myth of Funan, the earliest known kingdom in Southeast Asia, located in southern Cambodia. The story is associated with other kingdoms in the region as well. At least two versions of the story of Kaundinya have been recorded, one that emphasizes Indian agency and another that emphasizes Southeast Asian initiative.

According to the version that attributes the initiative to Indians, an Indian Brahmin, Kaundinya, is said to have received instructions in a dream and followed them, getting a magic bow from a temple and then leaving on a merchant ship. Upon reaching Funan he defeated Soma, the daughter of the king of the nagas. He then married her and began the royal line of Funan. This version of the legend indicates a double legitimacy of the royal family, one in its Indian roots (Kaundinya) and indigenous mythology (daughter of the nagas).

The version recorded by the Chinese in the third century CE tells of a local princess, called Lin-yeh by the Chinese, who led an attack on a passing ship; some say that it was a Southeast Asian vessel, while others say that its origin was unknown. The ship's crew and passengers successfully repelled the attack. When they landed, one of the passengers, an Indian named Kaundinya, drank of the water of the land and subsequently married Soma. This version points to Southeast Asian initiative, which originally was more aggressive and violent and was unsuccessful. The marriage of Kaundinya and Soma represents an intermingling of Indian and Southeast Asian cultures.

—Damon Woods

into contact with the local population and probably sought to deal with the local leader or authority. In the course of their dealings with Indian traders, local leaders learned from the traders of religious and political systems in India. Taking the initiative, these Southeast Asian leaders sought the assistance of educated and priest caste Indians (Brahmins), who brought various aspects of Indian culture back to Southeast Asia to reinforce the positions of local leaders. (Of the castes, the Brahmins alone possessed the knowledge brought to Southeast Asia. Thus, while the merchants—belonging to the Vaisya

caste—were the initial contacts, they could not have brought the knowledge that Southeast Asian leaders wanted. As a result, some speak of Hinduization rather than Indianization. This is too narrow a description, as Buddhism and other aspects of Indian culture were brought to Southeast Asia.) These might have included different aspects of the pageantry and ceremonies involved with the installing of a new leader, political administrative systems, the borrowing of Sanskrit terms to describe new realities in Southeast Asian politics, writings systems for the purpose of keeping records, the epics that would be rewritten with the leader as the heroic figure, any kind of scholarship, and the visual arts for the building of monuments and temples.

Indian influence came to the region in a process that covered more than a millennium as political leaders and their systems came and went. Each leader would select those aspects of Indian culture, including Hinduism or Buddhism, that best suited his situation and rule. For example, in Funan, the earliest kingdom in Southeast Asia, Indian vocabulary was used in conducting affairs of state, but Indian cosmology and statecraft did not have real significance. Indian-styled names and titles were popular in the kingdoms of Angkor and Champa. One finds *varman* added as a suffix to royal names such as Indravarman, Rajendravarman and Jayavarman. Those following Hinduism had a choice of various deities, but Siva came to dominate. Yet even when a particular god, cult, or religion was chosen, there would be a blending of various beliefs. For example, Sanjaya, one of the early leaders of Sailendra, a political system on Java in the eighth century, followed the Siva cult, or Saivism as it is known. His successors were Indra, Visnu, and Indra II. But in spite of the fact that they had names of Hindu gods, they were all Buddhists and built Borobudur, the great Buddhist monument in central Java. The temple complex at Angkor in Cambodia has temples to Siva and Visnu as well as Buddhist temples. The title and concept of bodhisattva (Buddha in the becoming) was appropriated by some kings who used Buddhism as their state religion.

This indicates that Indian culture was not adopted wholesale and uncritically. What one finds is a process described by scholars as do-

mestication, localization, indigenization, and local genius. That is, Southeast Asians picked and chose those parts of Indian culture that best suited them. This selective borrowing is seen in many areas, but the place of women in Southeast Asian society is perhaps the best example. It is important to remember that Southeast Asians borrowed cultural forms while retaining indigenous thinking. Thus, Justin van Leur wrote of the “thin, flaking glaze” to describe the place of Indian cultural influence in the region. One can make the distinction between core values, which were Southeast Asian, and surface values, which were borrowed from other cultures.

—Damon Woods

Bibliography

- Coedes, George. *The Indianized States of Southeast Asia*. Edited by Walter F. Vella and translated by Susan Brown Cowing. Honolulu: East-West Center Press, 1968.
- Hall, D. G. E. *A History of South-East Asia*. 4th ed. London: Macmillan Education, 1981.
- Hall, Kenneth R. *Maritime Trade and State Development in Early Southeast Asia*. Honolulu: University of Hawai'i Press, 1985.

Southeast Asian Mainland States

From the early Christian era, several mainland Southeast Asian states developed in the silt-rich deltas of present-day Cambodia, Vietnam, and Myanmar, where the fertile soil contributed to agricultural prosperity and the proximity to the sea strengthened the growth of commerce. The origins of these early states, their exact locations, the names of the rulers, and the dates they ruled are still debated by scholars. However, there is a general consensus that these early states were influenced by Indian culture and sent embassies to Chinese courts during this period.

Funan, the pre-Khmer kingdom established in present-day Cambodia, was the first great power, flourishing from the first century CE to the sixth century CE. Its ruler claimed divine status with the title “Kings of the Mountain.” According to the Chinese record, an Indian Brahman named Kaundinya, guided by a dream, came to Funan, where he married the queen, Soma, daughter of the king of the Nagas (Snake),

and founded the dynasty. This legend and the title were adopted by the Khmers and other Southeast Asian states. Its capital city Vyadhapura, near present-day Phnom Penh, was 120 miles from the sea; its port Oc Eo was the center of foreign trade.

In the third century the crown was transferred to a new dynasty of indigenous lineage, beginning with Fan Shih-man. He promoted foreign trade and with a strong fleet controlled the area from Annam in the east to the Bay of Bengal in the west and south to Malay Peninsula. A second Kaundinya dynasty ruled in the fifth century, during which the laws were modified to strengthen Indian influence. Sanskrit was the court language, and Hinduism was established in Funan. But Buddhism also flourished after the fifth century. The Funan kingdom retained power until the death of King Jayavarman in 513. It disintegrated in the middle of the sixth century and was finally overthrown by Chenla, one of its vassal states established by the Khmers.

The Khmer conquerors inherited Funan culture and its dynastic traditions. Isanvarman I (611–635) built the first Khmer capital, Isanapura (present-day Sambor Prei Kuk) in central Cambodia. His authority stretched over Cambodia, South Vietnam, central Thailand, and the upper Malay Peninsula. Before the end of the seventh century, Chenla split into Upper (Land) Chenla, and Lower (Water) Chenla, weakening its rule. In 790 the Sailendra rulers of Java invaded Chenla and killed its king, bringing the pre-Angkor Khmer period to an end.

King Jayavarman II (877–889), who expelled the Sailendras and declared himself *chakravartin* (ruler of the universe), laid the foundation of the great Khmer kingdom of Angkor. The greatness of the Khmer civilization was established through his successors' territorial conquests over the next five centuries, along with the architectural splendor of Angkor and its environs. Indravarman I (877–889) was known for his irrigation works and his temple Preah Ko. Meanwhile, his son Yasovarman I (889–915) built the first city of Angkor, Yasodharapura, along with the massive East Baray water reservoir. Jayavarman V (968–1001), under whom the country experienced remarkable peace and cultural prosperity, founded a new capital, Jayenanagari,



A Champa temple at Mison, present-day Vietnam. Throughout the medieval period, the Cham kingdom contested central and southern Vietnam with the Vietnamese. The Vietnamese finally conquered the last Cham state in the sixteenth century. (Ina Van Hateren)

and many temples including Banteay Srei, the most beautiful and artistic of Angkor. Suryavarman I (1002–1005) expanded Angkor civilization to present-day Lopburi in Thailand and Kra Isthmus. His significant accomplishments included the great West Baray reservoir. Jayavarman VII (1181–1219) founded Angkor Thom and the Bayon. The Khmer civilization reached its apex during his reign, but ambitious expansion and wars also led to its destruction.

During the second century CE near the present-day Hue in Vietnam, a local leader named Kiu-lien established a kingdom named Champa

(Lin-Yi) after overthrowing the Chinese authority. Champa, covering the present-day central Vietnam provinces, left archaeological residues of Indian influence. Around 400, King Bhavavarman founded the first temple of the Hindu god Siva in the Mison area. China invaded Champa in 605 during the reign of Sambhuvarman. In 653 Champa extended its rule to the south of the modern Cap Verella under King Vikrantavarman, the grandson of King Isanavarman of Chenla. King Indravarman II (854–893) established a new capital, Indrapura, in Quang Nam Province and built a great Mahayana Buddhist monastery at Dong-duong. For more than 1,000 years Champa was capable of defending itself from the attacks of the Chinese, Vietnamese, and Khmer but was finally conquered by the Vietnamese.

The Mons, ethnically related to the Khmers, also developed a state with its capital at Thaton in Myanmar from the early Christian era. In the Menam Valley, another Mon state called Dvaravati, which was first established at Lopburi with a second capital at Haripunjaya, rose to power, controlling part of Tenasserim in the seventh century. The Mon capital of Hamsavati, now Pago, was founded in 825. During the tenth and eleventh centuries, Thaton, Dvaravati, and Haripunjaya were joined as a Mon confederacy called Ramanyadesa. Adopting Indian traditions of kingship, Vishnu worship, Buddhism, and Sanskrit and Pali writing systems, the Mons developed a high civilization that was later transmitted to the Myanmar and the Thai peoples.

The Pyus, a Tibeto-Burman people, developed a state that flourished from the sixth to the ninth centuries. Their capital city, Srikshetra, was established around 638 in present-day Hmawza near Pyay, at the head of the Irrawaddy Delta. The old palace site, consisting of a massive wall with impressive internal and external moats and gigantic Buddhist images and temples, exhibited the greatness of the Pyu kingdom. The stone sculptures of Vishnu and the bronze statuettes of Avalokitesvara found in Srikshetra evince Indian Hindu influence. However, images of Mahayanist bodhisattva reveal the existence of Mahayana Buddhism, while Pali inscriptions witness the adoption of Theravada Buddhism. Chinese records note that Srikshetra was a center of Theravada Buddhism in the seventh century. From

673 to 718 a Vikrama dynasty, Suryavikrama, Harivikrama, and Sihavikrama, ruled the country. The Pyu challenged the Mon's control of lower Myanmar; this struggle lasted throughout most of the eighth century. Pyu claimed suzerainty over 18 states, including the Mon state with an important trading port, Mo-ti-po. Invaded by the Tai state of Nanchao in present-day China, the Pyu kingdom collapsed in the ninth century.

—*Angelene Naw*

Bibliography

- Cady, J. F. *Thailand, Burma, Laos, & Cambodia*. Englewood Cliffs, NJ: Prentice Hall, 1966.
- Chandler, David, *A History of Cambodia*. Boulder, CO: Westview, 2000.
- Hall, D. G. E. *A History of South-East Asia*. London: Macmillan, 1981.
- SarDesai, D. R. *Southeast Asia: Past and Present*. Boulder, CO: Westview, 1997.

Island Southeast Asia— Srivijaya and Sailendra

Funan, the earliest known kingdom in Southeast Asia, dominated trade during the first half of the first millennium CE. This was due to its location in southern Cambodia. Traders from the Middle East and India sailed to the Isthmus of Kra, crossed it, and then sailed across the Gulf of Siam to Funan. From there they either would sail around southern Vietnam or across Cambodia to the South China Sea by means of a series of canals built for that purpose and the Mekong River. When the Malacca Straits replaced the Isthmus of Kra route between India and China, this led not only to the decline of Funan as an economic center but also to the emergence of a series of small ports as political entities in the region. These political systems emerged as a result, in part, of the growth of trade in the region. Initially, Southeast Asian ports provided facilities—housing, supplies, and places for repairs—for those passing through. In time, these ports became places where goods that could serve as substitute products for foreign products could be traded (e.g., pine resin for frankincense and benzoin or gum benjamin for myrrh). Later, products unique to Southeast Asia were traded in these ports. These products included camphor, sandalwood, nutmeg, and cloves.

In the seventh century one of these Sumatran ports, Srivijaya, emerged as a dominant political and economic center. The capital of Srivijaya was on the site of modern Palembang, which is located about 80 miles inland on the Musi River on the northern side and the eastern end of Sumatra. Its location at the southern mouth of the Malacca Straits made it an ideal place to trade, resupply, repair ships, and wait for the winds to shift. While other ports also had locations that enabled them to provide those services needed by traveling traders, the ruler of Palembang became the dominant figure in the region. Srivijaya involved three parts: the core area around the capital, Palembang; the land along the Musi River; and other ports and their surrounding areas. The areas outside Palembang were controlled indirectly by means of alliances with local leaders. Srivijaya was able to dominate commerce passing through Southeast Asia by getting rid of competition, gaining control of the seas by putting down piracy, and having a trading center.

However, its location is not sufficient to explain the ascendance of Srivijaya. Other ports had locations with similar advantages to Palembang. In addition, products such as camphor and sandalwood were not grown in the area around Palembang. The spices that brought traders to the region only grew in the Moluccas, far to the east. The area around the Musi River did provide a better agricultural base than any of the other ports. Factors responsible for Srivijaya's ascendancy, beyond Palembang's strategic location, included the superior use of military force used to subjugate surrounding systems, the connection of Palembang's leader to the water spirits (*nagas*), and Buddhism, which found in Palembang a ceremonial center. Above all, the leadership in Palembang was willing to share the wealth generated by the interaction with traders. The political structure of Srivijaya, at least in terms of titles, imported or borrowed from Indian systems. The royal administration, located in Palembang, had Sanskrit titles: for example, *baji* (king), *dandanayaka* (judges), *nayaka* (revenue collectors), and *pratyaya* (managers of royal property).

A hundred years before Srivijaya emerged as a dominant commercial political system, there

> CURSES!

As Srivijaya and all other Southeast Asian political systems in the first millennium CE were supported by religious structures and systems, the promise of curses as well as blessings were used by leaders to keep their subjects in line. In Srivijaya, the king (*haji*) was seen as a patron of both Buddhism and the local belief in the *nagas*, spirits who lived in water and were the keepers of life and energy in water, the primary means of transportation in trade. According to the *Telaga Batu* inscription, dated circa 686, the subjects of the king were to take an oath. Magical imprecations or curses from both the Buddhist system and the indigenous beliefs in the *nagas* were threatened. From the Buddhist system, a curse was pronounced against those who were guilty of love of self, anger, and greed, violations of Buddhist prohibitions. Threats from local beliefs included one's being swallowed by a big river. On the other hand, those who followed the king were promised a prosperous future. Among the promises were growth and prosperity, arriving at a perfect state, the secret formula for final liberation, and the eternal tranquility of Nirvana.

—Damon Woods

were kingdoms based on rice production developing across the Sunda Straits on the island of Java. Location was critical. The soil of central Java was fertile due to volcanic activity and provided the basis of significant rice production. One kingdom, known as Sailendra, located on the Kedu Plain on central Java emerged as a dominant power in the ninth century. While Sailendra had ports on Java, that was not the focus of their energies. Produce, principally rice, beans, salt, and dyes, was the basis of its wealth. However, there were at least four levels or layers of merchants between them and the international market.

The political development of Sailendra and other rice-producing states followed a similar pattern. The use of indigenous terminology demonstrates that the development was organic and not artificial or adapted from Indian models. The term *wanua* referred to a cluster of villages populated by *anak wanua*, children of the *wanua*. These were governed by *tuba* (elders)

and *rama* (fathers on the council). The most important official was known as the *bulair*, the head of the local water board. These *wanua* shared a common market, *pken*, and a collection of *wanua* made up a *watek*. The official in charge of irrigation for the *watek* was the *rakrayan*. A powerful *rakrayan* in charge of a prospering *watek* could bring other *rakrayan* and their *wateks* into an alliance under his authority. At this point, Indian influence made itself felt. The next title that one could take was *raja*, with the possibility of becoming a *maharaja*. Indian priests would be brought in to legitimize his rule with elaborate ceremonies.

In the last two centuries of the first millennium, temples were built on the mountainsides and plains of Java. A Hindu temple complex on the Dieng Plateau marked the beginning of this output of religious structures, and another Hindu complex at Prambanan marked the end of this boom of temple building. In between, Sailendra built the Buddhist monument Borobudur, which became a pilgrimage center.

Sailendra lasted a little more than a century, being pushed aside by another kingdom. The Sailendra prince fled to Srivijaya, where he ascended the throne. Srivijaya and Sailendra were able to coexist peacefully for several reasons. First, Buddhism was the dominant religion in both, providing the symbolic source of authority. Both kingdoms were pilgrimage centers and known for Buddhist scholarship. Sailendra's leaders built the great Buddhist monument, while Palembang was the location of an international community of Buddhist monks, at one point numbering around 1,000 monks. Second, each kingdom had different basis for existing—Srivijaya for trade and Sailendra for rice production—and thus there was a minimal amount of direct competition.

However, each kingdom was pushed aside and replaced in importance by others. As the second millennium began, Majapahit, a Hindu kingdom, emerged on Java, embracing both commercial and agrarian aspects.

—Damon Woods

Bibliography

Hall, D. G. E. *A History of South-East Asia*. 4th ed. London: Macmillan Education, 1981.

- Hall, Kenneth R. "Economic History of Early Southeast Asia." In *The Cambridge History of Southeast Asia*. Cambridge: Cambridge University Press, 1992.
- Hall, Kenneth R. *Maritime Trade and State Development in Early Southeast Asia*. Honolulu: University of Hawaii Press, 1985.
- Wolters, O. W. *Early Indonesian Commerce: A Study of the Origins of Srivijaya*. Ithaca, NY: Cornell University Press, 1967.

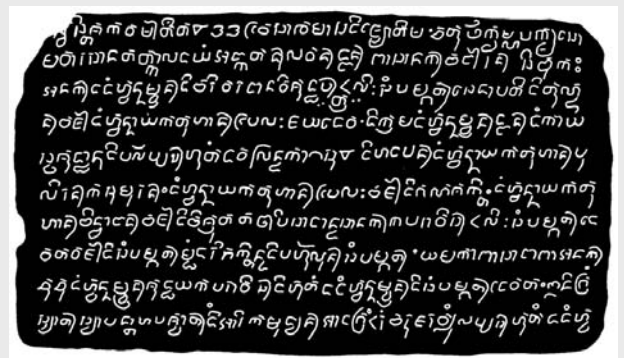
The Philippines to 1000 CE

Chinese records, archaeological finds, and reconstructions based on the available evidence have been essential to learning about Philippine societies in the first millennium CE. In the mid-1970s an archaeological team discovered the remains of two seagoing vessels near Butuan City

in Mindanao. Using carbon 14 dating, one was found to come from the early fourth century CE and the other from the mid-thirteenth century CE. These finds would indicate that the people of the archipelago did travel to other parts of Asia, no doubt to trade. Descriptions of vessels from Chinese texts of the third century CE match the one found in Butuan. One historian stated that "by the third century A.D. the islanders of the Philippines were sailing 800 miles and more across the open sea to Funan" (one of the earliest kingdoms of Southeast Asia, located in southern Cambodia). He based his statement on both the artifacts excavated at Oc-Eo (a Funanese port) and the Kang Tai report that the peoples of Southeast Asia brought their goods to Funan. Among the products brought were those found in the Philippines: pearls and gold.

➤ LAGUNA COPPERPLATE INSCRIPTION

Until recently, the sources of information for reconstructing Philippine societies prior to the Spanish intrusion were limited. A discovery in the 1980s has provided significant information about the state of some societies in the Philippines in the ninth century. Known as the Laguna Copperplate Inscription, this document was accidentally discovered as the result of dredging for sand and gravel in the provinces of Laguna. The document is not only the earliest document discovered in the Philippines, it is also the only pre-Spanish document that has been discovered thus far. Written on a thin copper plate, it was dated using the Sanskrit calendar and translates to April 21, 900. A *sud-dhapattra*, a legal document of the cancellation of a debt, it states that a debt of gold (865 grams) owed by a certain Namwaran has been cancelled. Given to his daughter, Angkatan, the document was written in a language that contained elements of Old Javanese, Old Tagalog, and Sanskrit. Sanskrit was used for technical terms, including the dating of the document and the political titles of the individuals involved. Among the fascinating aspects of this document is the chain of command that is described. The authority to cancel the debt was exercised by a local ruler and witnessed by local rulers, who were under the authority of the ruler of Dewata (in Mindanao), who was under the authority of the ruler of Medang (in Java). Thus,



The Laguna Copperplate Inscription, the oldest known document found in the Philippines, dates from the ninth century. Little is known of the Philippine kingdoms that existed before the Spanish conquest in the sixteenth century. The Spanish effectively destroyed the collective memory of these kingdoms. (Santos, Hector. "The Laguna Copperplate Inscription" in A Philippine Leaf at <http://www.bibingka.com/dahon/lci/lci.htm>. US, October 26, 1996)

there was a political connection that ran from Java all the way to the region around Manila Bay. This radically challenges the notion that the Philippines were isolated from the rest of Southeast Asia. The Laguna Copperplate Inscription shows that at least communities in the Manila Bay area were active and interactive parts of the region.

—Damon Woods

The work done by archaeologists has pointed to organized and widespread trade, first between the Chinese and coastal inhabitants and then between the people of the coast and the people of the interior. The presence of trade porcelain throughout the archipelago, in the lowlands and mountains, can be seen as evidence that such porcelain was first brought by Chinese traders and traded with coastal communities. The products traded for the porcelain included those from the sea (pearls, coral, tortoise shell) and those from the interior (beeswax, sandalwood, rattan). Thus, the coastal communities must have had working agreements with people of the interior, and in this way Chinese trade porcelain made its way into even the most remote areas of the islands. However, there appears to have been contact with Indian traders that predate contact with the Chinese. Both metal and glass artifacts, believed to have originated in India, have been found.

Unfortunately, all of this does not tell us much about the local inhabitants or their customs. Beyond political fragmentation, evidenced in the scattered communities unearthed by archaeologists, the rest is guesswork based on existing evidence. New discoveries may shed more light. One such discovery in the 1980s has transformed existing views of the level of political, economic, and cultural development of pre-Spanish Philippines.

—Damon Woods

Bibliography

- Jocano, F. Landa. *Filipino Prehistory: Rediscovering Precolonial Heritage*. Quezon City, Philippines: PUNLAD Research House, 1998.
- Patanċe, E. P. *The Philippines in the 6th to 16th Centuries*. Metro-Manila: LSA Press, 1996.
- Scott, William Henry. *Prehispanic Source Materials*. Rev. ed. Quezon City, Philippines: New Day, 1984.

■ Introduction: The Radiance of the Tang Dynasty in Southeast Asia

The Tang dynasty (618–907) was known throughout Asia for its brilliant culture and its grandeur. It has rightly been referred to as China's golden age. The Tang reached their height in the eighth century, and their power attracted the interest of neighboring states that imitated Chinese customs. During the Tang dynasty, China also served as a cultural conduit, absorbing and passing on ideas from one region to another.

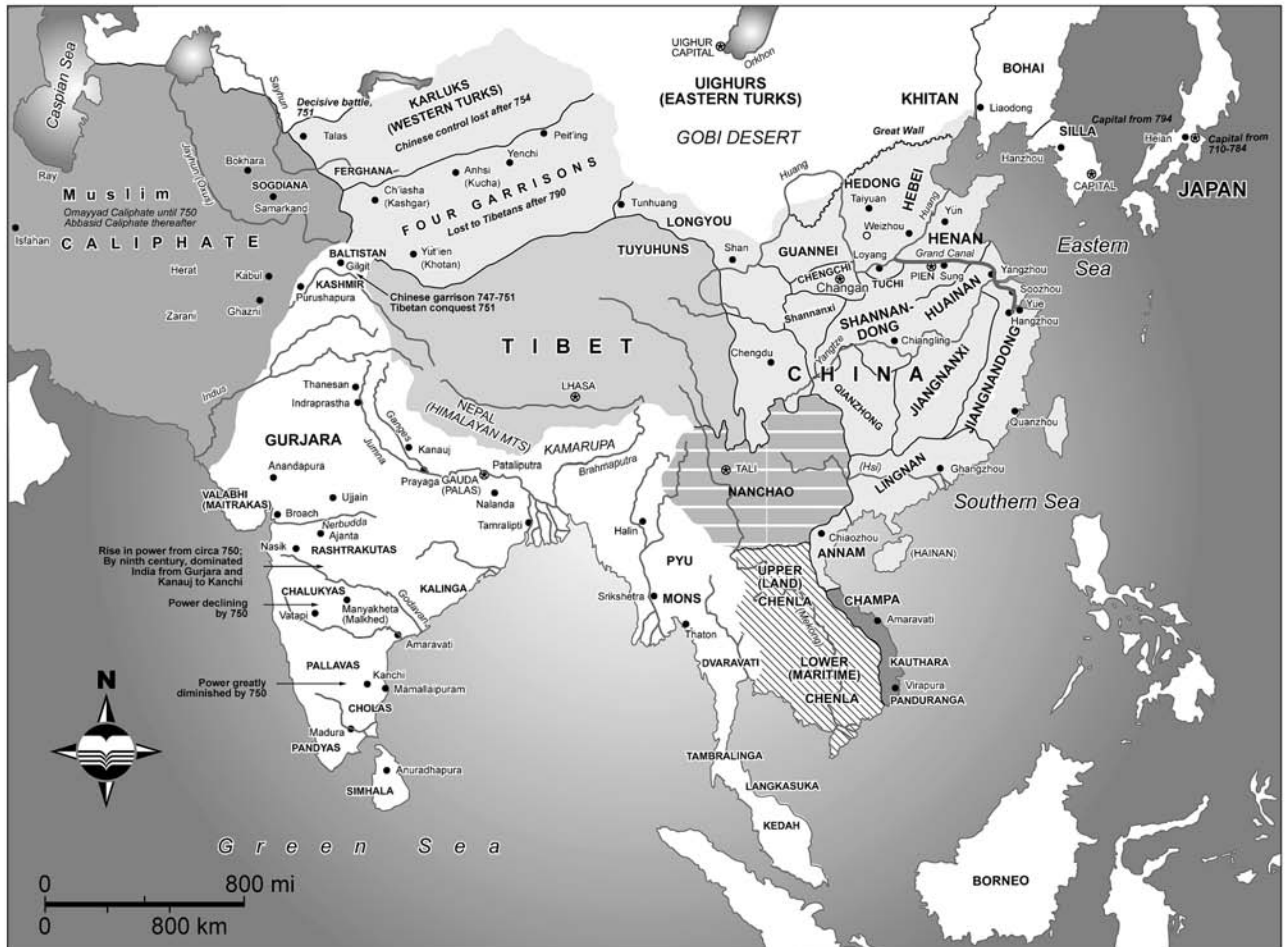
China's lucrative trade and rich port cities attracted many visitors. Foreign merchants traded for Chinese goods such as silk but often took away much more, including Chinese customs and culture. Students from neighboring countries came to China to learn from Buddhist and Confucian masters. In 640 over 8,000 Koreans, mostly students, lived in China's capital of Chang'an. Embassies from surrounding states came to China's capitals and were exposed to Chinese culture, technology, philosophy, litera-

ture, administrative systems, land systems, Buddhism, art, architecture, and medicine. China's government and administration became models for several emerging nation-states in the region.

Chinese citizens also traveled abroad, carrying their culture and customs with them. Tang princesses traveled to distant lands as part of the time-honored practice of diplomatic marriage. These women, real princesses or created by imperial command, were married to the royalty of other kingdoms, creating diplomatic connections with peoples such as the Uighurs, Turkic khans, and Tibetans. The women traveled to their new homes with pomp and splendor befitting representatives of Asia's superpower status, and their presence opened the way for increased interaction with the Chinese.

King Songtsān Gampo of Tibet was so attracted by the wealth and culture of the Tang that he sent envoys to the capital of Chang'an on several occasions requesting a marriage alliance.

TANG CHINA AND EAST ASIA, 618-907



In 640 his wish was granted. His wife, the Tang princess Wen Cheng (Tibetan: Mung-chang Kung-co) helped promote friendship between Tibet and China and helped spread Tang culture. She is credited, at least in folklore, with teaching the Tibetans spinning and weaving. Chinese engineers and doctors in her entourage passed on their knowledge, including how to construct water-powered mills for grain, and the king used the Chinese system as a model when he set up his military and administration. Perhaps most importantly for the history of Tibet, Wen Cheng brought her statue of Sakymuni. Under her influence the king converted to Buddhism.

Like Tibet, surrounding countries looked to China for religious inspiration. As Buddhism lost importance in India, China became the primary source of Buddhist teachings. The Chinese sect

of Chan Buddhism, begun in the eighth century, spread to Japan, where it was known as Zen, and to Korea. Devotees from around Asia traveled to China to visit its many shrines and temples and to study with Chinese masters.

Although Chinese influence in Japan began well before the Tang period, it reached its height during the Tang. Every aspect of Japanese life was affected, and gradually Japan embraced Chinese political and administrative methods, language, writing, literature, technology, and religion. Japan based its Taiho Code, published in 701, on Tang code. The cities of Heijo (Nara) and Heian (Kyoto) were modeled after Chang'an, with straight wide streets laid out in a grid pattern. Court education consisted primarily of reading Chinese texts and reading and writing Chinese poetry and prose. Chinese became the

THE JAPANESE MONK ENNIN VISITS CHINA

China's brilliant culture attracted many foreign visitors during the Tang dynasty. Many traveled for religious purposes, visiting China's many shrines and monasteries. In 838 a Japanese monk named Ennin, known in Japan as Jikaku Daishi, sailed to China. For the next nine and a half years he traveled throughout China, writing in his diary what he saw and experienced. It is the first account of Chinese life by a foreign visitor, for Ennin arrived in China more than four centuries before Marco Polo.

Ennin's diary is particularly detailed and provides a lively view of daily life at the end of the Tang dynasty. One of his interesting discussions covers the imperial prohibition on the sale of iron:

"On the seventh day of the eleventh moon, Chen-shun, a monk of the Kai-yuan-si, privately sold broken pots to a merchant to the amount of ten pounds weight. When the merchant went out with his iron, he ran into some police inspectors at the monastery gate and was arrested and brought back. The five inspectors came and said, 'Recently the Minister of State has prohibited [the use of] iron, and one is not allowed to sell or buy it. How then is it that you have sold some?' Chen-shun replied that he did not know that its sale was prohibited. Then the officer in charge and Chen-shun prepared documents asking for a decision, and the officials pardoned him. Thus we learned that within the jurisdiction of Yang-chou [Hangzhou] the sale or purchase of iron is not permitted."

—Rebecca Wendelken

Source

Edwin O. Reischauer, *Ennin's Travels in T'ang China* (New York: Roland, 1995), 7–8.

language of law, philosophy, history, and religion up until the nineteenth century. All Buddhist sects in today's Japan are rooted in Chinese Buddhism from the Tang dynasty.

Despite all this, Japan did not adopt Chinese ideas completely. During its Nara (710–784) and Heian (794–1068) periods, Japan began to selectively choose elements of Chinese culture for adoption. Those selections were then adapted to Japanese society to create a distinct culture of their own. Japan embraced Chan Buddhism but continued to practice Shinto. Court ranks and

rewards were based on Chinese models, but the interior workings of the court were based on birth and not on the Chinese examination system. Likewise, the Japanese did not adopt the practice of using eunuchs at court.

Korea's connections with China are even older than Japan's, and many Chinese lived in the kingdoms of Paekche and Koguryo. China conquered a good deal of Korea before the eighth century, when the native kingdom of Silla rose to power. There were close contacts between Silla and the Tang in the last half of the seventh century. They exchanged diplomatic embassies, and Korean students and monks traveled to China to study and worship. Koreans were found in the areas along the Chinese coast. The impact of Tang fashion on Korea can be seen in Korean traditional ceremonial wear. At first the Silla tried to drive out the Chinese but soon realized that they did not have enough military force. Instead, they used diplomacy. China removed itself from the Korean Peninsula, and the Silla king recognized the emperor of China as his overlord. The kingdom of Silla became a vassal of China, and its envoys traveled with gifts to the Chinese court. There they showed their submission by kowtowing to the emperor. But the relationship was very beneficial for the Koreans. They received far more in gifts from the Chinese than they paid in tribute. The Silla built a new capital modeled on Chang'an, and the elite began to read and practice the teachings of Confucius. Like Japan, Chan Buddhism also spread to Korea.

Vietnam had a far more contentious relationship with China. Tang armies moving into Vietnam met strong resistance, but China soon had control of the Viet's cities and towns. Despite Viet resentment and resistance, China embarked on a plan to absorb the Viet people into China. The Viet people adopted many aspects of Chinese culture including methods of agriculture, administrative structures and educational models, and even Confucianism and Buddhism. As the Tang dynasty was collapsing, Vietnam won its freedom and succeeded in resisting incursions from China during subsequent dynasties.

The impact of the Tang dynasty on its neighbors is undeniable. Its vibrant art and culture and its governmental policies and structure provided a model for the developing countries along

its periphery as well as those as far away as Persia and Byzantium.

—Rebecca Wendelken

Bibliography

Gernet, Jacques. *A History of Chinese Civilization*. 2nd ed. New York: Cambridge University Press, 1996.

Political History of the Tang Dynasty before the An Lushan Rebellion

The Tang dynasty (618–906) was a golden age in China's history and stands out as one of the most prosperous empires in the history of the world. On the collapse of the Sui dynasty in 617, Li Yuan swiftly seized the two Sui capitals. In 618, he proclaimed the founding of the Tang dynasty with the capital at Chang'an ("perpetual peace").

Its political structure was based on that of Han as well as the Northern and Southern dynasties of the Period of Division (304–589 CE). With the innovations of the first half of Tang, it became a fully matured system of checks and balances that was looked upon as a model in later centuries. Tang was also the most cosmopolitan period of Chinese history, open to influences coming from far and wide.

Known by his posthumous title of Gaozu, Li Yuan (r. 618–626) devoted himself to the restoration of peace and order. He reappointed Sui administrators and rewarded anti-Sui rebels with positions of power. A comprehensive legal code laid a foundation for later ages. The equal-field system, established in the fifth century, granted land to adult males, who in turn were to pay taxes and labor service. He continued the Sui militia system of conscripting soldiers for defense, and like his Sui predecessors, Gaozu promoted Confucianism, Daoism, and Buddhism to consolidate cultural unity.

In Gaozu's reign, the civil service examinations, a system of recruiting candidates for the bureaucracy that had its origins in the Han dynasty, were reestablished. The examination system was a unique feature of the Chinese imperial administration, which gave it strength and durability. The Tang further developed the examination system, replacing an aristocratic government with meritocracy, and it lasted until 1905.

The second emperor, Taizong (r. 626–649), was a man of broad vision and boundless ambition. He came to the throne by assassinating the crown prince and forcing his father to abdicate. Most remarkable in his reign was the improvement of the bureaucratic system of three departments that Gaozu inherited from the Sui. Under this system, the Department of the Secretariat drafted edicts, the Chancellery reviewed them, and the Department of State Affairs implemented them, bringing about an effective bureaucratic system of checks and balances to support the monarchy.

The Li royalty belonged to a long lineage of mixed Chinese and non-Chinese blood tracing back to the Period of Division. The nomadic horse-riding tradition contributed not only to the military vigor of Taizong and his siblings but also to Taizong's vision of a universal empire in which the ruler would be both the Chinese Son of Heaven and the khan over the nomadic peoples. While forming a marriage alliance to appease the newly rising Tibetan kingdom, Taizong initially concentrated his forces against the Turks, seeking to establish control over the Western Regions as well as to extend Chinese rule over North Korea. After the conquest of the Eastern Turks in 630, he assumed the title "Heavenly Khan." His vision made the Tang capital a cosmopolitan city, attracting people from all over Asia including Nestorian missionaries.

Although Taizong failed in his Korean campaign, the next emperor, Gaozong (r. 649–683), succeeded. By 660, Tang had established its administration far beyond its previous limits. Gaozong, however, is mostly known for his empress, Wu Zetian. In 660 when he suffered a stroke, Empress Wu became a joint ruler with him behind the scenes and continued to hold the power after his death. In 690, she proclaimed herself the emperor of the Zhou dynasty and was only forced to abdicate shortly before her death in 705. The reign of Gaozong and Empress Wu continued efforts at improving government and perfecting the legal code. Since Empress Wu's rule as a woman was challenged by both internal revolts and by a revived Turk empire, she had to make great efforts to secure her power, but she never neglected government duties. Externally, when the Tang expansion became overextended,

► EMPRESS WU

Empress Wu ruled Tang China for nearly half a century (660–705) in its time of glory and power. A skilled administrator and military planner, she promoted peace and prosperity within China and presided over a significant expansion of Chinese power into central Asia. Despite her vilification by male Chinese historians, she is considered by some as a great ruler in history.

Wu Zetian came from a prominent family. Her career began as a low-ranking concubine of Taizong. After his death, she duly entered a Buddhist convent, but through successful intrigues she returned to the palace, became Gaozong's favorite concubine, and in 655 made Gaozong dismiss the empress and elevate herself into that position.

Wu's rise was due to her clear understanding of the intricacies of politics and her superb ability at manipulating factional struggles to her advantage.

While she exercised terror, she elevated the widely practiced Buddhism as a state religion. Though self-serving, her assuming a public role in performing court rituals, extending the mourning period for a mother to that of a father, and having literary works of exemplary women compiled could be regarded as protofeminist.

—Yihong Pan



Eighth-century Chinese empress Wu Zetian, from an eighteenth-century album of Chinese emperors. Empress Wu was one of the most effective rulers of the Tang dynasty. (The British Library)

Empress Wu from 670 turned to a policy with more emphasis on defense.

Fierce power struggles went on for seven years after the death of Empress Wu until 712, when Xuanzong (r. 712–756) emerged victorious. An immensely capable ruler, he brought Tang to its peak. (French historians sometimes compare Xuanzong to Louis XIV.) Xuanzong's reign saw a restoration in the coordination of the Three Departments. A major taxation reform increased revenue, enabling Xuanzong to switch from frontier defense to expansion westward until the Chinese Army was defeated by the expanding Abbasid Caliphate in central Asia at the Battle of Talas in 751. Xuanzong was a great patron of the arts, and his reign is remembered as a golden age of poetry. While diffusing Chinese culture eastward to Korea and Japan and westward to central Asia, under the Tang dynasty China was open to outside influences, receiving Zoroastrianism, Manichaeism, and Islam and embracing various foreign cultural elements.

Yet crisis was looming. Tensions were deepening among the central, regional, and frontier governments and between the outer court of the regular bureaucracy and the inner court of the powerful relatives of the royal family.

Xuanzong needed to be able to maintain a delicate balance between these rival forces, but in his later years he withdrew from these complicated politics into the world of his beautiful, artistic Yang Yuhuan, known by her title *guifei* ("honored consort"). In 755, An Lushan, a military governor on the northeastern frontier of mixed Turkish and Sogdian origin, rebelled in the name of opposing the dictatorial chief minister, Yang Guozhong, cousin of Yang Yuhuan. Although Tang survived this disastrous rebellion that lasted until 763, it never regained its earlier verve.

—Yihong Pan

Bibliography

- Benn, Charles D. *China's Golden Age: Everyday Life in the Tang Dynasty*. New York: Oxford University Press, 2004.
- Dien, Dora Shu-fang. *Empress Wu Zetian in Fiction and in History*. Hauppauge, NY: Nova Science Publishers, 2003.
- Guisso, Richard W. L. "The Reigns of the Empress Wu, Chung-tsung and Jui-tsung (684–712)." In *The Cambridge History of China*, Vol. 3, *Sui and Tang China, 589–906, Part I*, edited by Denis Twitchett and John K. Fairbank. New York: Cambridge University Press, 1979.

Twitchett, Denis. "Hsüan-tsung (Reign 712–56)." In *The Cambridge History of China*, Vol. 3, *Sui and T'ang China, 589–906, Part I*, edited by Denis Twitchett and John K. Fairbank. New York: Cambridge University Press, 1979.

Wechsler, Howard J. "The Founding of the T'ang Dynasty: Kao-tsu (Reign 618–26)," and "T'ai-tsun (Reign 626–49) the Consolidator." In *The Cambridge History of China*, Vol. 3, *Sui and T'ang China, 589–906, Part I*, edited by Denis Twitchett and John K. Fairbank. New York: Cambridge University Press, 1979.

Wechsler, Howard J., and Denis Twitchett. "K'ao-tsung (Reign 649–83) and Empress We: The Inheritor and the Usurper." In *The Cambridge History of China*, Vol. 3, *Sui and T'ang China, 589–906, Part I*, edited by Denis Twitchett and John K. Fairbank. New York: Cambridge University Press, 1979.

Late Tang and the Period of Five Dynasties and Ten Kingdoms, 756–960 CE

The Tang dynasty (618–907), one of China's most glorious, flourished for about a century and a half until An Lushan's Rebellion (755–763) fatally weakened it. To restore order, the court was obliged to call in the aid of the Turkic Uighurs, who exacted a high price in tribute.

The An Lushan Rebellion changed Tang drastically. The power of the court decreased vis-à-vis the strong provincial governors. In settling the rebellion, the court had compromised with the rebel forces and appointed their leaders as military commissioners in the territories they occupied in present-day Hebei and parts of Shandong and Henan. Although accepting titles from the court as symbols of legitimacy, these generals governed their territories as independent fiefdoms. In the rest of the country, regional commands formed a new tier of provinces between the central government and the prefectures under military or civil commissioners appointed by the central government but often acting with a good deal of autonomy.

When he came to the throne, Dezong (r. 780–805) was determined to revitalize the central government and carried out reforms assisted by his ministers. He adopted a firm policy toward the semiautonomous provinces, which

only resulted in touching off a series of civil wars. In response, Dezong returned to the laissez-faire policy of his predecessors. His reform of taxation, on the other hand, proved a success. With the collapse of the Equal Field System, the government acknowledged private land ownership and implemented the two-tax system levied on households and on land and payable in cash. This along with the monopoly on salt, tea, and liquor production and distribution increased government revenues. It also enabled the state to derive revenue from all the productive classes, not from the peasantry alone. When Xianzong (r. 805–819) ascended the throne, the young and forceful emperor engaged in a series of confrontations with the semiautonomous provinces. For a while his reign seemed a period of central government resurgence. Yet it was marked by entrenchment of the power of the eunuchs. The emperor was either murdered by eunuchs or died of a drug overdose.

The problem of eunuch influence in court policies was not new. While not a serious issue in the prerebellion period, the power of eunuchs grew steadily in the postrebellion period. The most important contributing factor was the eunuch command of the Palace Armies, which began during the rebellion. Under Dezong, eunuch control of the Palace Armies became permanent. The eunuchs interfered in almost all imperial successions from 819 until the end of the Tang. From the mid-ninth century in their factional struggles within the regular bureaucracy, each side was trying to obtain the support of powerful eunuchs, which further increased the eunuch's power and eroded the government.

Postrebellion Tang had shrunk from its earlier overstretched territory. In its foreign policy, Tang was on the defensive and became more flexible and pragmatic. Taking advantage of the rebellion, the Tibetan kingdom expanded into Chinese territory into present-day Gansu, cutting off the line of communication between Tang and the Western regions (present-day Xinjiang), thus effectively ending Tang influence there. From their occupied territory to the west of Tang China, the Tibetans engaged in frequent incursions. In 763 they even briefly occupied the Tang capital and attempted to establish a new puppet emperor.

► THE CONCUBINE AND THE REBEL—YANG GUIFEI AND AN LUSHAN

In the summer of 756 in the chaos of the An Lushan Rebellion, Xuanzong had to flee the capital accompanied by a small number of troops, his favorite consort Yang Guifei, and her family members. Soon, however, his troops demanded the death of Yang Guifei, accusing her of distracting the emperor to the neglect of state affairs. Xuanzong complied. In Chinese popular tradition, the tragic end of Xuanzong's reign was featured by An Lushan, the barbarian rebel, and Yang Guifei, who epitomized seductive femininity. All sorts of scandalous stories circulated about them in later fictions and dramas, implying illicit relations between them such as that An had free access to the harem and that he shared meals with her and sometimes spent the entire night in the harem. It is impossible to know the truth. The *Old Tang History* itself indicates a close relationship. An asked to be the adopted son of Yang, apparently a move to secure the trust and favor of Yang and the emperor. When paying respect to his adoptive parents, An Lushan bowed to Yang Guifei first. When the emperor was surprised, An offered this explanation: "The barbarians show respect to the mother first and the father second." On the celebration of An's 48th birthday in 751, the mother gave An a ceremony of washing her baby when An was dressed in a diaper. Such a bazaar behavior as an evidence of the court's moral declining further puts the blame on the barbarian An Lushan and the woman Yang for the disasters of the nation.

—Yihong Pan

Source

Liu Xu, ed., *Old Tang History* (Beijing: Zhonghua shuju edition, 1975), chapter 200A, p. 5368.
Translation by Yihong Pan.

In coping with this most formidable enemy, the Tang usually opted for a peaceful policy. They concluded five peace treaties with Tibet while also maintaining an alliance with the Uighur empire against Tibet. The alliance was maintained through seven marriage contracts of Tang princesses with the Uighur rulers as well as through the regular horse-silk trade, with

China purchasing Uighur horses in exchange for silk. Although uneasy and costly, the alliance was successful in maintaining some balance of power in the complicated regional geopolitics. The Tang also managed to win over the Nanzhao kingdom in the southwest from a previous pro-Tibetan stance, preventing Tibet from moving farther into Tang's southwest.

As the court readjusted China's status in regional geopolitics, among the intellectual elite there was a reassessment of what constituted Chinese culture. A famous example is Han Yu's memorial to the court against Buddhist rituals. This was not so much based on a rejection of Buddhist ideas as on a deep concern that Confucianism and China's national spirit were losing ground. In 842–845 Wuzong (r. 840–846) carried out a great proscription of Buddhism and other foreign religions. While the proscription was primarily concerned with the economic drain of religious institutions, such hostility also resulted from Tang's sense of insecurity in international affairs.

Although the brilliance of Tang as a centralized and expansive power dimmed, postrebellion China witnessed steady and impressive economic development. With people migrating to the south to avoid chaos during the rebellion, economic importance moved from the north to the more fertile and productive south, where the environment was more conducive to agriculture. The introduction of Champa rice from central Vietnam made double cropping possible; tea became a major commodity in trade. As the government abandoned its supervision over the operations of markets, trade increased and markets flourished. Credit institutions grew, and the first paper money in the world, issued by joint merchant houses, appeared in Sichuan around the end of the ninth century. The economic development would continue into an urban and commercial revolution from the tenth century onward.

By the end of the 840s both the Tibetan and Uighur power had collapsed, while Tang was also on a road of fast decline. Waves of rebellion occurred, reaching their height in the rebellion of Huang Chao in 874–884. In 907 General Zhu Wen forced the last Tang emperor to abdicate, thus ending the dynasty and ushering in another

period of division in Chinese history. Known as the Five Dynasties and Ten Kingdoms period, it consisted of a series of short-lived dynasties in the north and regional warlord powers in the south, another period of political disunity in Chinese history but much shorter than before. Half a century later, China was reunited under the Song dynasty in 960.

—Yihong Pan

Bibliography

- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1999.
- Levy, Howard S. "The Career of Yang Kuei-fei." *T'oung Pao* 45(4-5) (1957): 45-489.
- Pan, Yihong. *Son of Heaven and Heavenly Qaghan: Sui-Tang China and Its Neighbors*. Bellingham: Center for East Asian Studies, Western Washington University, 1997.
- Pulleyblank, Edwin G. *The Background of the Rebellion of An Lu-shan*. Oxford, UK: Oxford University Press, 1955.

Tibet, 600–1000 CE

The Tibetan people originated among the nomadic non-Chinese Chiang tribes on China's periphery. The *Old Tibetan Chronicle* states that the empire began with a coup, but the *Chronicle* borders on mythology. The first externally confirmed event of Tibet's history occurred in 608 when a Tibetan ambassador visited China. This diplomatic visit occurred one year before the founding of the first Tibetan dynasty, the Tufan dynasty. Its first ruler, Songtsän Gampo (Srong-brtsan sgam-po) (609–650) moved the capital to Lhasa to remove himself from the areas of deeply entrenched tribalism and to make expansion to the north easier. He promoted agriculture and animal husbandry by reclaiming land and promoting water conservation.

Tibet's military and administrative structure was modeled after China. Educational and diplomatic exchanges between Tibet and China were very important for Tibet's early development. From 634 to 846 the two countries exchanged emissaries about every 13 months on average. To improve communication within his country, Songtsän Gampo promoted the creation of a

script for Tibetan. Although there are several stories about the development of the Tibetan alphabetic script, the actual origin is unknown.

To maintain closer ties with the Tang, Songtsän Gampo sent several envoys to the Chinese capital requesting a marriage alliance. In 640 his wish was finally granted. His wife, the Tang princess Wen Cheng (Mung-chang Kung-co) helped promote friendship between the two countries and also spread Tang culture. Folklore credits her with teaching the Tibetans spinning and weaving. While this may be questionable, she did bring engineers and doctors who taught their skills to the Tibetans. Although her husband is credited with introducing Buddhism to Tibet, it may have been accomplished by Wen Cheng herself. She brought a statue of Sakymuni to Tibet, and according to some sources the king converted under her influence.

Under Songtsän Gampo, Tibet began to expand, conquering and absorbing tribes along China's western border area. The king sent his sister to marry the king of Zhang Zhung, a bordering state. When the marriage was not consummated, the king's sister helped her brother conquer Zhang Zhung, and it too became part of Tibet.

Songtsän Gampo died in 650 and was succeeded by his infant grandson Trimang Löntsän (Khri-mang-slon) (650–677). His reign is chiefly known for the annexation of Azha and later for conquering the important Chinese Silk Roads towns of Kucha, Yanqi, Kashi, and Khotan. This move cut Tang China's communication with their northwest territories and with central Asia. It also interrupted Silk Roads trade and the flow of pilgrims to Buddhist sites in the region. The Khri'bring brothers, who engineered the capture, belonged to the Mgar (Gar) clan. The Mgar often served as regents for infant kings, which gave them a great deal of power. They were eager to expand Tibet's power in order to increase their own.

Tridu Songtsän ('Dus-srong mang-po-rje) (677–704) was born the year of his father's death. His initial reign was orchestrated by his mother Thirmalö Khri-ma-lod, a powerful woman in her own right, and by the Mgar clan. In 692 China regained control of the Tarim basin and the Silk Roads cities, and conflict between the

THE CHINESE VIEW OF THE TIBETANS

Despite the advances in Tibetan civilization, the Chinese held an extremely negative view of them, a view they held about anyone who was not Chinese:

“We are told that the country has a very cold climate, that oats, barley, wheat and buckwheat grow there, and that there are yaks, excellent horses, and dogs, sheep and pigs. The capital is known as Lhasa, where there are city-walls and houses with flat roofs. The king and his nobles live in felt tents which are joined together as one large one. They sleep in unclean places and they never wash or comb their hair. . . . They dress in felt and leather. They like to paint themselves with red ochre. The women plait their hair. They worship the heavens and believe in sorcerers and soothsayers. They do not know the seasons, and their year begins when the barley is ripe. Their games are chess and dice, and for music they have conch-shells and drums. They have no writing for official purposes, and they fix arrangements by means of knotted cords and notched tally-sticks. They make vessels by bending round a piece of wood and fitting in a leather bottom, or they make basins of felt. They knead roasted grain [*tsampa*] into little cups and they fill these with broth or curds and eat it all together. They drink their beer with their cupped hands.

There are hundreds of thousands of men ready to bear arms, and in order to levy troops they used a golden arrow (as insignia of authority). In order to give warning of enemy attacks they use fire and smoke signals. . . . Their armor and helmets are excellent. When they put them on their whole body is covered, with holes just for the eyes. Their bow and their sword never leave them.”

—Rebecca Wendelken

Source

David Snellgrove and Hugh Richardson, *A Cultural History of Tibet* (New York: Praeger, 1968), 29.

From the footnote to the text: “See P. Pelliot, *Histoire ancienne du Tibet*, Paris 1961, pp. 1–3 and 79–82. We have rearranged the information here, so as to provide a single account.”

two countries continued. By the end of the seventh century Tridu Songtsän had tired of the control of the Mgar clan. He invited members of the clan to a hunting party, where they were executed. The king then defeated the remaining Khri-bring brother, who committed suicide. This ended the power of the Mgar clan. While the king was bringing down the Mgar clan, his mother served as regent. In 702 China and Tibet agreed to peace, and Tridu Songtsän returned to reorganize his administration. The king died during a military expedition against the Erhai region in 703 during which the Tibetan military suffered heavy losses.

After the king's death, his mother ruled as regent for the child Gyälsugru (704–754). After thwarting an attempt by the king's older brother to usurp the throne, the dowager empress arranged for the marriage of Gyälsugru to a Chinese princess who came to Tibet in 710. When his grandmother died in 712 Gyälsugru took the throne as King Tride Tsuktsän (Khri-Ide-gtsug-brtsan).

Growing Arab and Turkic presence in central Asia threatened the Tibetan power there. The Arab Umayyad caliphate used Tibet and other central Asian groups as pawns to further its own political agenda. In 751 the Tibetans allied with the Arabs and Uighurs against a Chinese and Karluk Turk force at the Battle of Talas River. The Karluks defected, and the Chinese were defeated. Tibet became a regional power as a result of the battle.

Tride Tsuktsän was assassinated by two of his ministers in 755. The following year, Trisong Detsän (Khri srong Ide brtsan) (r. 756–797) was crowned king. At the same time, the An Lushan Rebellion broke out in China. The Chinese redeployed troops stationed on the border with Tibet to quell the rebellion. While China was occupied with the rebellion, the Tibetan army cut the link between Anxi and Chang'an. They used a similar ploy in 763 when Tibet attacked Chang'an and sacked the city, holding it for 15 days. With its victories against the Chinese, Tibet reasserted its power in central Asia. Hostilities between China and Tibet continued despite diplomatic efforts. China sent its nominal allies, the Uighurs, to threaten Tibet's northern border.

Meanwhile in Tibet, Trisong Detsän sought to replace the traditional animist religion with Buddhism to keep the aristocrats in check. In 770 he suppressed the nobles and invited monks from China and India to spread Buddhism. His son Mune Tsänpo (Mu-ne btsan-po) (r. 797–799) continued to support Buddhism. He forced the nobles to contribute to Buddhist monasteries, causing great resentment. He was poisoned by his mother, Queen Tshe-sbang-bza, who supported the nobles' cause. Despite this, the next two kings also supported Buddhism, punishing those who did not comply.

Tride Songsän (Khri Ide srong brtsan) (r. 799–815) struggled with the Arabs in the west and the Uighurs in the north. His successor Ralpacan (Khri gtsug Ide brtsan Ralpacan) (r. 815–838) continued to fight the Uighurs. After Tibet once again raided Chinese territory, China offered both the Uighurs and the Tibetans diplomatic marriages with Chinese princesses. This plus the Sino-Tibetan treaty signed in 823 brought 20 years of peace to the region.

Ironically, the last king of the Tibetan empire, Glang Darma (Khri 'U'I dum brtsan) (838–842), saw the collapse of Tibet's longtime enemy, the Uighur empire. In reaction to the support of Buddhism by previous reigns, Glang Darma banned the Buddhist religion and closed all the temples and monasteries. He was assassinated by a monk. After his death a struggle over succession led to civil war. In 846 the Tufan dynasty collapsed, and Tibet divided into several kingdoms, none of which rose to the power they enjoyed under the Tufan.

—Rebecca Wendelken

Bibliography

- Nag-Dban-Blo-Bzan-Rgya-Mtsho. *A History of Tibet*. Uralic and Altaic Series v. VII. Bloomington: Indiana University Research, 1995.
- Richardson, Hugh. *Tibet and Its History*. Boston: Shambhala, 1984.
- Stein, R. *Tibetan Civilization*. Stanford, CA: Stanford University Press, 1972.
- Zahiruddin, Ahmad, trans. *The History of Tibet by Fifth Dalai Lama of Tibet*. Bloomington: Indiana University, Research Institute for Inner Asian Studies, 1995.

Korea from the Three Kingdoms through the Silla to the Koryo Dynasties

Korea's Three Kingdoms period was one of rapid and revolutionary change, unparalleled cross-cultural exchange, sophisticated artistic and intellectual endeavor, high stakes international diplomacy, and finally regional war. Its culmination with the triumph of Silla over its rivals in 676 allowed the history of the peninsula to proceed along a single and independent trajectory toward the emergence of a Korean cultural identity. But with the peninsula's unification came an end to perhaps the most dynamic period of Korean history. Not until modern times would the peninsula again be the center of such volatile and creative energies.

Scholars have a difficult time saying when exactly the three kingdoms of Koguryo, Paekche, and Silla emerged from out of the tribal confederacies that preceded them. The dates of their emergence first assigned by the twelfth-century Korean scholar Kim Pusik—57, 37, and 18 BCE for Silla, Koguryo, and Paekche, respectively—had as the primary objective the establishment of Silla precedence with little basis in historical fact. Suffice it to say that by about 300 CE the Three Kingdoms—Koguryo in the northwest, Paekche in the southwest, and Silla in the southeast—had emerged as the three dominant political units on the peninsula.

The Three Kingdoms were centers of great networks of cross-cultural exchange in northeastern Asia and beyond. Indeed, one notable characteristic of the period is the porosity of regional borders. From the fourth century Buddhism began to arrive on the Korean peninsula via the petty dynasties of northern China, which had arisen in the wake of the fall of the Han, although Paekche eventually nurtured its own relationships with the more southerly Chinese dynasties. By 550 all three kingdoms had adopted the faith with far-reaching cultural consequences.

Buddhism proved a great vehicle for another revolutionary product of cultural exchange: Chinese writing. Koguryo was adept enough in the intricacies of classical Chinese to carve the massive funeral stele for its most notable king



The eighth-century Pulguksa Temple, in South Korea, is considered a masterpiece of the golden age of Silla Buddhist art. (Tae Hoon Kang)

Kwanggaeto in 414. Soon all of the Three Kingdoms were composing their own national histories in the imported script, although these have long been lost.

Contact between the peninsula and Japan was also common in the Three Kingdoms period. From the fifth century Paekche nurtured a close relationship with the emerging Japanese Yamato court that opened up important conduits of cultural exchange. Paekche monks transferred Buddhism to Japan, and most historians agree that it was a traveling scholar from Paekche named Wangin who first brought Chinese writing to Japan in the early fifth century. Japanese-Silla relations were not so cordial. Pirates issuing from the Japanese islands routinely harassed the Silla coast, finally compelling Silla to construct massive coastal defensive fortifications.

Within a century of Buddhism's adoption by Paekche and Koguryo, adepts of those kingdoms hungry for Buddhist scriptures and knowledge were traveling far afield and bringing the fruits of their efforts back home. Silla monks would join in such endeavors following their state's official adoption of Buddhism in 527. Koguryo monks could travel overland to China but for their Silla and Paekche counterparts it often meant a sea voyage, and both of these kingdoms became adept at Yellow Sea navigation. By the eighth century large Silla communi-

ties were thriving along Tang's eastern coast, where they often served as traders between Tang and their homeland. Japanese missions to China were often heavily reliant upon such Korean maritime middlemen. Records indicate that even Arab and Persian traders began tapping into such regional networks, reaching Silla ports by the ninth century.

The level of sophistication attained in the arts and in public works stands as a testament to the degree of development and organization in the Three Kingdoms from the early centuries CE. In Koguryo, remnant stone pyramid and mounded tombs found at a series of that state's capitals reveal both that kingdom's sophisticated engineering skills and the power that its monarch had attained by 400. Perhaps its most impressive engineering achievement was the extended network of stone walls and mountain fortresses that protected its northern frontier and several times fended off massive Chinese assaults. Paekche tombs found around its several capitals in central-western Korea reveal its close relationship with Koguryo as well as the influence of the Chinese southern dynasties. But it is in and around Kyongju, the Silla capital, where the most stunning examples of rich heritage of Three Kingdoms' art and architecture are found. Revealing Silla's intimate national relationship with Buddhism, the vast majority of artistic undertakings were Buddhist in nature, while the layout of the capital itself, like Nara in Japan, reveals its debt to Chinese urban planning.

The wars of the seventh century that finally unified Korea were not strictly Korean wars at all but instead were regional conflicts for hegemony. The Sui and its successor Tang had been attempting since the late sixth century to subdue a troublesome Koguryo on their northeastern frontier but without success. Silla seized the diplomatic initiative offered by Tang's failed 645 attack on Koguryo to broker an alliance with the Chinese dynasty against both Paekche and Koguryo. The Tang-Silla attack against Paekche that came in 660 was a shock to the Japanese court, which had by now enjoyed a long and close relationship with that kingdom. It was a strong enough relationship that the Japanese court responded positively to Paekche appeals for assistance and in 663 dispatched a large force

to restore the fallen Paekche, but it proved no match for the Tang-Silla armies.

The Tang-Silla alliance moved on Koguryo with equal success, seizing that kingdom's capital and capturing its last king in 668. Partners in war, Tang and Silla parted ways with the initial peace. Tang soon revealed itself intent upon establishing a Chinese colony of the defeated kingdoms' territories reminiscent of the Han dynasty commanders who had controlled the region seven centuries earlier. Only after a series of battles between the former allies did Silla emerge in 676 as the undisputed master on the peninsula.

The unification of the peninsula by Silla in 676 was not total. Koguryo remnants re-formed in the peninsula's northeast, joining with Malgal elements to form the Parhae state. Parhae and Unified Silla shared nearly parallel life spans, with Parhae falling in 926 to the Khitan and Silla formally submitting the following year to Koryo. Although Silla and Parhae never nurtured any relationship and regarded one another warily throughout their mutual existence, upon their fall they were both assimilated into Koryo, with the exception of the Malgal element.

The wars that unified the peninsula and established Silla as the primary hegemon greatly lessened the instability of the region and in so doing eliminated a major source of its dynamism. Tang largely withdrew from Korean affairs, satisfied with the loyalty of its Silla subject. Checked in Korea, Japan also soon withdrew from continental intercourse, abandoning in great part as well its halfhearted adoption of the Chinese legal and bureaucratic systems.

Unified Silla (676-927) was more inward looking and existed during a time of political and cultural consolidation. Buttressed by its successful unification, the Silla monarchy in the eighth century reached the height of its power and prestige. Emerging from the unification wars with greater authority than ever, Silla kings set off on an energetic campaign to finally squelch the power of the entrenched aristocracy. One aspect of this was the increasing adoption of a Chinese-style bureaucracy. Silla re-organized the national territory, now including the former Paekche and Koguryo domains, into Chinese-style districts and counties and established new regional capitals, in great part

➤ CHANG POGO

Chang Pogo was a man of mysterious origins who became, for a brief period, a maritime warlord, kingmaker, and key political figure of the late Unified Silla kingdom. Although apparently Korean, as a young man Chang Pogo voyaged to Tang China, where he won distinction as a military commander. Troubled by Tang's growing social and political disorder and the suffering of its many Silla residents, many of whom were falling victim to bandits and slave traders, around 825 Chang returned to Silla. His appeals to the Silla king to establish an armed presence in the Yellow Sea resulted in King Hungdok appointing Chang the military commissioner of Chonghae Garrison, a naval command post at what is today Wando Island off Korea's southwest coast, and granting him 10,000 troops. Chang Pogo was soon a controlling force on the sea lanes between Japan, Korea, and China, as testified to by the surviving journal of the ninth-century Japanese monk Ennin (794-864). In 839 Chang demonstrated his growing power when his troops proved instrumental in seating King Sinmu (r. 839) on the Silla throne. But the powerful commander went too far when he attempted to marry his daughter into the Silla royal house. His common lineage and pretensions to power made him enemies among the capital aristocracy. It was likely such animosities that resulted in his assassination around 845. Chang Pogo stands as one of the most influential figures of late Silla, evidence of both Korean maritime skill as well as the turmoil that characterized Silla politics of the ninth century.

—Daniel C. Kane

populated by former subjects of the conquered kingdoms. The Silla king also set up Chinese-style ministries staffed increasingly by lesser aristocracy trained in Confucian learning.

While the Three Kingdoms period of Korean Buddhism had been one of continental connections and the quest for sutras, the Unified Silla period was more concerned with assimilating and harmonizing the wealth of material that had been imported. As Tang society descended into increasing turmoil, Buddhist missions to that country tapered off. Emphasis on Buddhism's state-protection aspects and the aspect of Silla as Buddha Land was deemphasized in Unified Silla

as the heightened dangers and tensions of the Three Kingdoms period passed. Instead, Confucian learning came increasingly to dominate government affairs, while Silla Buddhism sought doctrinal harmony. In late Unified Silla the textual schools of Buddhism gave way altogether before the rising popularity of Son (Zen) Buddhism among the powerful gentry of the interior.

The Silla monarchy's attempt to assert its own authority at the expense of the aristocracy was a long-term failure. From approximately 800 began a long decline of central power, replaced by regional power centers in the interior often centered around a powerful landed gentry figure with no relationship to the former ruling order of the capital region. Amid widespread turmoil in the countryside the shadows of the former Three Kingdoms fell again over the peninsula when two rebel leaders declared the foundation of Later Paekche and Later Koguryo in the early tenth century. But the peninsula was not fated to again witness an extended period of division. Later Koguryo, later renamed Koryo, was able to defeat Later Paekche and eventually receive the submission of the last Silla king in 927, again setting Korea on a unified path.

—Daniel C. Kane

Bibliography

- Hamada, Kōsaku. "Sovereignty and Maritime Power: Chang Pogo's Ch'onghae Garrison and Pirates." *Interaction and Transformations* 1 (2003): 131–145.
- Hurst, G. Cameron, III. "'The Good, the Bad and the Ugly': Personalities in the Founding of the Koryō Dynasty." *Korean Studies Forum* 7 (Summer–Fall 1981): 1–27.
- Jeon, Deog Jae. "Characteristics and Changes in the Political System during the Three Kingdoms Era." *International Journal of Korean History* 8 (August 2005): 129–139.
- Lee, Ki-baik. "Confucian Political Ideology in the Silla Unification and Early Koryō Periods." *Journal of Social Sciences and Humanities* 42 (December 1975): 1–23.
- Lee, Ki-baik. *A New History of Korea*. Translated by Edward W. Wagner, with Edward J. Shultz. Cambridge, MA: Harvard University Press, 1984.
- Yi, Wan-jae. "The Thoughts and Values of the Three Kingdoms Period." In *Introduction to Korean Studies*. Seoul: National Academy of Sciences, Republic of Korea, 1986.

Japan from the Yamato through Fujiwara Periods

Scholars usually divide the era from 300 to 1000 CE into three phases: the epoch of a Wa/Yamato confederation (250–645 CE), the heyday of a polity modeled on principles drawn from Chinese history (645–900), and the classical or aristocratic state (900–1050) dominated by a tiny elite living in Kyoto (Heian). On the surface, Japanese politics and statecraft underwent great change in these 700 years; certainly membership in the elite, the names and sizes of offices, and the amount and means of recompense altered almost continuously. In another sense, however, the Japanese state changed relatively little: a monarch reigned with the aid of a designated marital line; a nobility aided the ruler by providing him or her with advice, commodities, and services; and local notables dictated the reach of the central government into a given region's population and resources.

During the first phase, a people known as the Wa ruled over a confederation in western Japan. The first mention of this polity comes in a Chinese dynastic history, which describes the shaman-queen named Himiko (r. c. 250 CE). She seems to have been the leader of a bloc of tiny principalities centered on large moated settlements, each controlling about 100 square kilometers, centered in western Japan. Following her demise, reliable written and material evidence of statecraft in the islands does not reappear until about 390 CE. At that time, Chinese histories write, five kings ruled western and central Japan and possibly parts of southern Korea. These kings were military leaders whose reigns always ended in warfare and who built huge keyhole-shaped tombs filled with vast quantities of iron weapons and tools. Japan is an iron-poor archipelago, and the iron as well as horse trappings, stoneware, stone-fitting technology, noble accoutrements such as gold and silver jewelry, and methods of statecraft came to the islands with Korean immigrants. By 500 the five kings had developed some court institutions, including a marital line from which the king took consorts and the use of surnames (*uji*) and titles (*kabane*) to distinguish the functions of a service nobility.

After a period of civil war during the 500s, a new house came to occupy the throne. Establishing their base in Yamato (Nara), the new kings are known as the Yamato line. They took for their consorts the Soga, a family of Korean origin, who quickly took over control of the court. The Soga remained in power until 645. The Yamato court maintained close ties with Korea, adopted Buddhism to protect the state, made alliances with about 120 local leaders known as *kuni no miyatsuko*, and initiated the development of a ranked bureaucracy. Also during the sixth and seventh centuries scribes wrote down the mythological history of the Yamato line, claiming descent from the Sun Goddess in a line unbroken for ages eternal (*bansei ikkei*).

Phase two began in 645 when the Soga were destroyed in a palace coup, and the new leaders desperately attempted to centralize and militarize the nascent state. The coup came as a reunified and vigorous China—under the Sui dynasty (589–617) and Tang dynasty (617–906)—launched massive expeditions into Korea, putting pressure on rulers in Korea and Japan. Following the coup, the Japanese court tried to intervene in international politics with disastrous consequences: the loss of 27,000 troops at the Battle of the Paekchon River in 663. Fearing an imminent invasion, the court and local notables rejected the losing leadership, and Prince Oama seized the throne from his brother in the civil war of 672. Renamed Divine Sovereign Tenmu (r. 672–686), he and his consort Jitō (r. 686–697) borrowed and adapted Chinese-style institutions to strengthen their territory against a possible assault from China or Korea, unified under the hostile Silla dynasty (668–918).

The Taihō Code, completed in 701, laid out the principles of political control. The new government, now located in a Chinese-style rectangular capital laid out along the lines of the compass (first in Fujiwara and then in Nara), established a large hereditary bureaucracy that was appointed, ranked, paid, and dismissed according to Chinese principles. To support the sovereign, his court, and the bureaucracy, the government adopted and modified the Chinese idea of registering the populace in a census and required the people to farm a certain amount of

THE LIFE OF THE JAPANESE HIGH ARISTOCRACY

In the late 1980s two massive archaeological finds near the imperial palace at Nara revealed in the most concrete form yet available what life was like for the high aristocracy. Japanese archaeologists believe that they uncovered the estate of Prince Nagaya (684–729), grandson to Divine Sovereign Tenmu (r. 672–686). Nagaya held the lofty status of the junior third court rank, occupied by only a few people at that time. His compound housed 4 wives, 18 children and siblings, and their 4 wet nurses. The estate ranged over 15 acres and contained 30 buildings. Among the buildings was a main office for Nagaya's state-appointed staff. They oversaw the feeding and clothing of his family, employing cooks, rice wine brewers, yogurt makers, firewood collectors, seamstresses, dyers, potters, metal pot makers, and movers, among others. Estate workers included plasterers, tanners, bronze casters, weapon makers, and sculptors of Buddhist statues. Nagaya's household also contained attendants to care for his dogs, horses, and falcons; diagnose and treat his family's illnesses; and manage the system of interest-bearing rice loans that financed his businesses. In addition to his household, Nagaya possessed fields scattered throughout the region, an ice storehouse, lumberyards, a salt bin, and a charcoal-firing center. He received commodities such as rice, dried fish, and salt from about half of Japan's 66 provinces. Ironically, the artifacts reveal that Nagaya's consort Princess Kibi (?–729), granddaughter of Tenmu, daughter of one sovereign and sister to two more, was even richer than her mate, who was murdered in a political intrigue in 729.

—William Wayne Farris

rice paddy and pay a variety of poll taxes. This system functioned fairly well for about 120 years, although evidence suggests that recurrent epidemics of smallpox and other diseases as well as frequent famines resulting from drought and environmental degradation had begun to shrink the tax base by 800.

During the 800s myriad problems surfaced to end the Chinese-style system. Not only did the registered population shrink, resulting in fewer taxes, but the elite spent lavishly on new temples and capitals and on wars in northeastern

Japan. The overburdened populace began to resist taxation violently, and tax collectors replied in kind. Incidents of domestic violence spiraled. Finally, the old class of local notables, numbering about 550 at their height, either fell into poverty or refused to cooperate with the distant court ensconced in the half-finished capital at Heian.

During phase three beginning about 900, the ruling elite of royal and aristocratic families decided to retreat from direct control over the land and people of Japan and shift to a system of tax farming. About 66 provincial governors served four-year terms during which they collected as many tax items as they could from a decimated and beleaguered commoner class. To supplement their income, the central elite established some estates (lands known as *shôen*). At court, the sovereign fell under the sway of a new marital line—the northern branch of the Fujiwara—who dominated politics. Decision making at court was essentially unchanged; a council of aristocrats met before the sovereign and discussed policy issues. This new attenuated system held sway until about 1050; civil aristocrats and religious institutions produced a brilliant classical culture symbolized by the *Tale of Genji*, while tax farmers collected all they could from the hapless populace. Although the scope of statecraft had changed greatly between 300 and 1000, there was also continuity: the royal family usually ruled with the aid of a marital alliance to a strong family and a class of aristocrats, and the elites' wealth and power were always constrained by their ability to cooperate with locally prominent families who controlled the common people.

—William Wayne Farris

Bibliography

- Farris, William Wayne. *Heavenly Warriors: The Evolution of Japan's Military, 500–1300*. Cambridge, MA: Harvard University Press, 1992.
- Farris, William Wayne. *Sacred Texts and Buried Treasures: Issues in the Historical Archaeology of Ancient Japan*. Honolulu: University of Hawai'i Press, 1998.
- Hall, John W. *Government and Local Power in Japan, 500 to 1700*. Princeton, NJ: Princeton University Press, 1966.
- Piggott, Joan. *The Emergence of Japanese Kingship*. Stanford, CA: Stanford University Press, 1997.

Japanese Embassies to China

From the late sixth century to 838, the Japanese government sent a series of great cultural missions, or embassies, to Sui and Tang China to study and absorb China's civilization, which the Japanese government considered the epitome of refinement. These embassies were simultaneously cultural missions and trading expeditions. They were transported by flotillas of ships carrying merchandise as well as diplomats, students, and monks. Each embassy stayed in China for several years, some as much as a decade or more. Japan's culture has many roots in China. Buddhism, first introduced to Japan in the mid-sixth century from China and Korea, was used primarily as a tool of state power. Imperial prince Shotoku (b. 574) was a great promoter of State Buddhism and sent embassies to China to study Chinese civilization in depth.

These early missions from Japan started in China's Sui period and ended 260 years later. They are officially known as the Embassies to Sui China (*Kenzuishi*) and the Embassies to Tang China (*kentoshi*).

There were 5 missions to Sui China, starting in 607, and then 18 or 19 to Tang China, with the last ship in 838 carrying the priest Ennin. A mission planned with Sugawara no Michizane in 894 was cancelled owing to internal problems in China, and for a time that was the end of these voyages. The main goals of these missions were cultural exchange and trade. Most included Japanese court officials, diplomats, merchants, engineers, and many Buddhist scholars and student-monks. They brought many innovations back to Japan, including the Chinese vocabulary and the new ideas it encapsulated. In these early centuries, many things found their way to Japan via the Silk Roads, Persia, Korea, and China.

A special museum, the Shoso-In, was built in Nara in the compound of the temple Todai-ji to hold these imperial treasures. It became a vast repository of more than 9,000 items, and even today its remaining treasures depict a period of vibrant cross-cultural activity and a sophisticated cosmopolitan culture in Tang China. Recently, in 2004, the stone epitaph of Jing Zhencheng (the posthumous Chinese name of a Japanese envoy who visited China in the early

ENNIN'S OBSERVATIONS ON HIS JOURNEY TO CHINA

Ennin was one of the most important Buddhist clerics in Japanese history, but his fame derives, to a large degree, from the diary he kept during his sojourn in China with the last great Japanese embassy. Ennin was born in Shimotsuke (present-day Tochigi) and began his religious training at age nine. Later he went to Mount Hiei and became a disciple of Saicho, founder of the Tendai sect. In 838 after two failed attempts due to bad weather, he reached China as a student-monk. He departed from the official mission and traveled alone with his servants in various areas of China and Korea, keeping his keen eyes on the local culture.

He described everyday life in the temple and the market place and, like a modern-day ethnographer, wrote details about customs and institutions, administration and politics. Dr. Edwin O. Reischauer translated Ennin's famous diary *The Record of a Pilgrimage to China in Search of the Law* (*Nitto Guho Junrei Koki*). Ennin returned to Japan after nine years.

On his return he established many rituals special to Tendai, the so-called Secret Tendai Teachings (*taimitsu*). He also brought back special rituals for chanting prayers to Amida Buddha and a five-tone recitation (*jogyodo nembutsu*) that is still practiced widely in Tendai communities. At age 61 he became the third head of the Tendai sect at Mt. Hiei after Saicho. He was given the posthumous title Jikaku Daishi.

—Gabi Greve



Rubbing taken from a Tang dynasty stele of the Japanese monk Ennin. Ennin is probably the most famous Japanese Buddhist pilgrim to China. (Werner Forman/Corbis)

eighth century) was discovered in Xian, China. The discovery, announced by Northwest University in Xian, is probably the oldest proof of these early missions. The first mention of the name "JAPAN" on this epitaph is also remarkable. Xian was known as Chang'an in the Tang dynasty.

Among the embassies, the second Sui mission, led by Ono no Imoko, was very successful. On his way back an envoy accompanied him from China. The third Sui mission, with Takamuko no Kuromaro and the monk Somin, had a profound impact on Japan's Taika Reform of 645 and the subsequent development of Buddhism

in Japan. Abe no Nakamaro (698–770) left for China in 718, together with Kibi no Makibi. Nakamaro never made it back to his homeland and left behind many tanka poems about being homesick. He won the confidence of the Chinese emperor Xuanzong and was sent to Annam as a governor.

In 803, the priests Saicho (founder of Tendai Buddhism) and Kukai (Kobo Daishi, founder of Shingon Buddhism) boarded ships for China. Both later became very important figures in promoting esoteric Buddhism in Japan. Kukai's ship, on the journey back, got caught in a severe

storm. He threw a Buddhist pestle (*sankosho*)—given to him by his Chinese teacher Keika—into the sky toward the east in the hope that it would land in an ideal place for him to begin preaching Shingon Buddhism. He later found the pestle on a pine tree on Mount Koya (Koyasan) in 816, where he then founded his famous monastery. Kukai also studied civil engineering in detail and is famous for introducing water-regulating systems in Shikoku and other parts of Japan.

Traveling to China was a risky venture owing to weather conditions, wars, and piracy. The vessels were called *kentoshi sen* (“ships of the missions”). They were rather small, and many never returned. Some were shipwrecked, and the envoys ended up in Southeast Asian countries.

The Japanese embassies to China were a cultural umbilical cord that facilitated the transmission of Chinese culture to Japan. But as with the physical umbilical cord, Japanese culture outgrew the need for the embassies, and they were discontinued.

—Gabi Greve

Bibliography

- Anesaki, Masaharu. *History of Japanese Religion*. Tokyo: Tuttle, 1963.
- Groner, Paul. *Saicho: The Establishment of the Japanese Tendai School*. Honolulu: University of Hawai'i Press, 2000.
- Reischauer, Edwin O. *Ennin's Travels in Tang China*. New York: Roland, 1955.
- Sansom, George B. *A History of Japan to 1334*. Stanford, CA: Stanford University Press, 1958.
- Tamaru, Noriyoshi, and David Reid. *Religion in Japanese Culture*. Tokyo and New York: Kodansha, 1996.

Culture and History of Indigenous People of Northern Japan

The annexation of northern Honshu to the southern-based imperial state was a union from the point of view of the south but a division for the north: gradual breaking of the link between Hokkaido and the main island, Honshu, where a common language and culture as well as a loose federation of peoples existed. The political strength and cultural autonomy of the Ainu-speaking populations began to erode as the Japa-

nese Yamato state expanded; their southern border was constantly pushed north, eventually leaving only the tip of Honshu as Ainu territory by the thirteenth century.

William Farris provides the following translation from the *Nibonsboki* (*The Chronicles of Japan*, compiled 720), the earliest Japanese written record, and its report on an indigenous nation known as Hitakami: “Among the eastern barbarians are the Hitakami. In that country men and women are both tattooed, and are brave. They are the Emishi. Their land is huge and rich. We must conquer and take it.” The initial conquest of the north by Emperor Keiko occurred in the third or fourth century, but it was not until the mid-seventh century that the northern way of life transformed in response to the invasion.

In the seventh century, influenced by the sedentary agricultural Yayoi culture of the south, Satsumon (a culture characterized by incised-motif pottery) emerged connecting Hokkaido and northern Tohoku (the northern half of northern Honshu) following millennia of an advanced nomadic foraging way of life known as Jomon (a culture characterized by potteries decorated with elaborate rope pattern), the first and oldest in Japan. The Satsumon lingered in the north for six centuries, while the prototype of modern Ainu culture, partially influenced by seal-hunting Okhotsk culture, emerged toward its end.

Though the Emishi population consisted of diverse ethnic components, it included speakers of the Ainu language, who left their footsteps throughout northern Japan. Ainu linguists identified indigenous place-names that persist and ensure a basic continuity in Hokkaido, Sakhalin, the Kuriles, and northern Honshu, such as those displayed by the words *nay* and *pet* designating rivers. Moreover, a considerable number of personal Emishi names found in Japanese records from the seventh century onward are Ainu or Ainu-like. The best example might be Aterui, a tragic hero of the Battle of Subuse: “the bandit chief” who led the Emishi and defeated a large imperial army along the Koromo River (a branch of the Kitakami River in Iwate Prefecture) in 789. Native speakers of Ainu assert that his name in Ainu is rendered *at-oro-i*, meaning “the place to soak elm bark in water” to make the *atushi*,

the traditional Ainu jacket. Aterui was taken to Kyoto and executed by the court in 802.

However, as the Yamato progressed northward, native tongues gradually faded away, and their mutual intelligibility in Ainu was confined to farther north. As the conquest of the north by the Yamato relied on the tactic of using barbarians to pacify barbarians, powerful chieftaincies based on the combination of heredity and merit emerged, ruling the Ainu and other indigenous populations connected by a large trade network extending to the Amur River region in Siberia. These powerful northern lords are known as *Fushu*, having compromised their native status to receive an official rank or recognition in the Yamato bureaucracy called the Ritsuryo system, which imposed tribute and labor taxes as well as a military draft on the locals.

One of the most controversial issues in the history of Japan concerns the nature of the socio-political relationship between the Emishi/Fushu with the Yamato. However, contemporary scholars posit that an indigenous quasi-state existed in northern Honshu, which was not entirely within the jurisdiction of the Japanese state. Existence of a surplus economy, servitude, a great military capability, and hieroglyphic writing, counting, and recording systems support the high degree of political structure among the Emishi. Although their indigenous state was not unified and centralized, it was capable of great solidarity among the loosely federated polities at times of war against the Yamato.

Moreover, the dual identity of the Fushu was also a weakness, as the political tension in the north constantly increased. Their identity dilemma was the cause of several major rebellions in the eleventh century, including the Former Nine Year War (1050–1062) that involved a hereditary district magistrate appointed by the imperial state, Abe Yoritoki, whose independence had reached the point that he was neither paying taxes nor providing men for labor services.

The conflicts among the Fushu clans contributed to further division in the north, which helped the imperial state gain more control. By the early thirteenth century, Japan's northern frontier shifted to the northernmost region of

➤ ATERUI—INDIGENOUS HERO

Aterui is the first Ainu indigenous leader whose name is known to history. His name first appears in the *Shoku Nihongi* (*The Continuation of the Chronicle of Japan*) in the paragraphs referring to the imperial army's defeat at the Battle of Subuse in the eighth year of the Enryaku era (789 CE) as "bandit chief i-no-aterui" in which *i-no* designates "belonging to other, savage race in the East." He is also noted as "i-no-ohtsuka-no-kimi-aterii" (large-tomb chief Aterui of Eastern savage race) in the *Nihongi Ryaku* (*The Summary of Japanese Chronologies*) in the paragraphs describing his execution.

In 802 CE, Aterui appears to have voluntarily accompanied the imperial grand official Sakanoue Tamuramaro to Kyoto. Tamuramaro began to build Isawa Castle in 802, which was located at the center of Emishi territory in Isawa region, as part of the imperial government's plan to settle 4,000 vagrants there. *The Shoku Nihongi* records that Aterui and his chief lieutenant, More (Ainu: morai, meaning "quiet river"), "surrendered" with their 500 companions. Tamuramaro proposed to the court that these Emishi leaders be pardoned and returned to their homeland to assist him in peacemaking with the "rebels." But the court nobles replied that they could not be trusted at all and that to send them back was to feed the tiger and leave potential harm. Aterui and More were arrested and beheaded at Moriyama in Kawachi country near Kyoto in the eighth month of the same year.

—Sakurako Sherry Tanaka

Honshu, Tsugaru (Aomori Prefecture), and the indigenous population there and in Hokkaido came to be called Ezo. The lineages of the Fushu clan and the official deputy status continued in Tsugaru, as the chief of the Ando clan was appointed as Ezo Kanrei, "the lord for the Ezo." Others fled farther north to Hokkaido, as testified by some Ainu in Hokkaido who have family oral histories tracing their ancestors to northern Honshu.

Yet the maternal line contributed to the continuity of Ainu heritage in northern Honshu,

evidenced by the matrilineal system of the Fushu clans who often lost their men in war. This is understandable, however, considering the parallel descent system practiced by the Ainu whereby the male line of descent was passed down from father to son and the female line from mother to daughter. The members of the maternal descent group had a distinct collective consciousness as relatives descended from one old woman, which defined permitted degrees of relationship for marriage: a man could not marry a woman who belonged to the same descent group as his mother. A similar dual-descent system was also found throughout the Japanese archipelago before the enforcement of Confucianism in the Edo period.

—Sakurako Sherry Tanaka

Bibliography

- Farris, William Wayne. *Heavenly Warriors: The Evolution of Japan's Military, 500–1300*. Cambridge, MA: Harvard University Press, 1992.
- Tanaka, Sherry. "Sannai Maruyama, the Origin of the Ainu and the Problem of the Historical Interpretation of 'Japan.'" In *Japan in the Global Age: Cultural, Historical, and Political Issues on Asia, Environment, Households and International Communication*, edited by M. Nakamura. Vancouver: Centre for Japanese Research, University of British Columbia, 2001.
- Yamada Hidezo. *Toboku Ainu-go chimei no kenkyu* [A Study on Ainu Place-Names in Northern Honshu]. Tokyo: Sofukan, 1993.
- Yiengpruksawan, Mimi Hall. *Buddhist Art and Regional Politics in Twelfth-century Japan: Hirai-zumi*. Cambridge, MA: Harvard University Asia Center, 1998.

■ Introduction: Early Medieval Inner Eurasian Empires

In late antiquity (300–600 CE) and the early medieval age (600–1000 CE), the peoples of Inner Eurasia were the principal scourges of the sedentary Eurasian states. Inner Eurasia consisted of the great area of grasslands and forests north of the Roman, Persian, and Chinese empires. On this great expanse lived pastoral tribes on the grassy steppe, with farming villagers inhabiting the forested edges of the grassland.

The relationship between the pastoral peoples of Inner Eurasia and the agricultural empires to the south fluctuated with the comparative strength of the pastoral and agricultural peoples and the climatic cycle. During the relatively warm and moist period, which included the last three centuries BCE and the first two centuries CE, both the pastoral peoples and the agricultural empires prospered. The agricultural empires maintained strong and stable governments and maintained their frontier defenses at a high degree of efficacy.

During this period, the steppe and the agricultural lands engaged in an often mutually beneficial trade and cultural exchange. But by the third century CE, the climate turned drier and colder, causing hardship to both the steppe and

the agricultural empires. During this Dark Age Cold Period, the farming lands suffered. Crop failures and natural disasters in the agricultural empires led to hunger and rebellion, and because the lessening of revenue supporting the large military establishments that the defense of the northern frontier required, political instability and civil war occurred.

But the pastoral peoples also suffered. The grass on which their herds subsisted dried up, and the carcasses of their starving animals sometimes littered the steppe. Hungry pastoral hordes forced their way through the weakened imperial defenses and pillaged the equally desperate farming folk.

The Huns were among the first of these hordes. The Huns are thought to have descended from Xiongnu nomads who had been defeated by the forces of the Han dynasty. The Huns then moved west and, by the beginning of the fourth century CE, pastured their herds north of the Caspian Sea. When the climate turned cold and dry, the Huns then attacked their neighbors to the west, the Goths. The Goths clamored for admission to the Roman empire and destroyed a Roman army in 378. This Roman defeat set in

motion more than a century of turmoil during which Goths and other German tribes as well as Alans and Huns ravaged the Roman empire and erected new kingdoms on the ruins of the western half of the empire.

Many of the pastoral peoples settled down in the new environment to form a new aristocracy governing the sedentary farming population. The Toba, a people of mixed Mongolian and Turkish origin who conquered most of northern China, were such a people. The Toba ruled northern China as a strong and prosperous state for about a century and a half (386–534). Over the six or seven generations of their rule, the Toba became assimilated into Chinese civilization and disappeared as a distinct ethnic group.

The Toba, who assumed the responsibility for defending the farming Chinese against more pastoralist invasions, fought and defeated (429) the Juan Juan (Ruan), driving them from their homeland in Mongolia. The Juan Juan then moved west, setting in motion a domino-like process that eventually reached Europe and the Roman empire. When the descendants of the Juan Juan reached Europe (557), they, now known as the Avars, pastured their herds on the debris of Roman Panonia (where Hungary is today) and proceeded to harass the Byzantine empire. In 626 the Avars joined the Persians in besieging Constantinople but were defeated by the Byzantine fleet. Returning to Panonia, they gradually settled down as farmers.

On their migration westward across the steppe the Juan Juan encountered the Hephthalites, who are also thought to have migrated from the steppe north of China to central Asia. The Hephthalites, also known as the White Huns, conquered much of central Asia before 425 CE and there began a conflict with Sassanian Persia, with whom they fought intermittently for nearly a century until their final defeat by the Persian king, Khosrau. From their capital, Bamiyan (in present-day Afghanistan), they invaded India. Their attacks played a large role in the dissolution of the Gupta empire.

When the Toba expelled the Juan Juan from Mongolia, they created a power vacuum that was eventually filled by the Gok-turks, or Turks, who created a great steppe empire stretching from Mongolia to the north shore of the Black Sea.

This empire was primarily pastoral but grew wealthy by levying tribute on the forest and farming peoples whom they dominated and collecting a toll from the reviving silk route trade. The Gok-turks established the first Turk empire, which lasted 80 years (552–630). From 581 to 630, the empire was split into an eastern and a western Turk empire. Incessant civil war between the two empires coupled with attacks by the revived Chinese empire under the Tang dynasty led to the demise of the first Turk empire.

Anarchy and insecurity again characterized the steppe until in 683 Kutlugh, a chieftain from the area north of China, united the Turkish tribes in Mongolia to form the second Turk empire, which endured for half a century (683–734). This empire conquered most of the area that the first Turk empire had ruled. Like its predecessor, the second Turk empire supported itself through tributes from subject peoples and through tolls on trade. Also, like its predecessor, the second Turk empire split into eastern and western wings. This empire is said to have lost its erstwhile nomadic vigor and succumbed to Chinese intrigues, by which the leader of the empire was poisoned and the empire fell into disarray.

Another Turkish empire on the eastern steppe was that of the Uighurs. The Uighur empire emerged in Mongolia when the second Gok-turk empire fell (634). During the years of the An Lushan Rebellion, the imperiled Tang dynasty requested assistance from the Uighurs. In rendering that assistance, the Uighurs looted the accumulated wealth of the Tang by sacking the Tang capitals, but they did save the Tang, who then were required to deliver annual tributes to the Uighurs. The Uighur empire became a commercial empire and protected the Sogdian merchants who dominated the transhemispheric trade of the Silk Route. The Uighurs, or at least their ruling class, converted to Manichaeism, and the Uighur empire became, for nearly a century, the international protector of the Manichees.

When its erstwhile subjects, the Kyrghiz, destroyed the Uighur empire in 744, the Chinese launched a savage persecution of the Manichees, leading to their virtual extirpation in China.

Perhaps the most significant and certainly the most long-lived of the Inner Eurasian empires in the early medieval age was that of the

Khazars. The Khazars, another Turkish people, were a major power for about three centuries, from the 620s to their destruction by the Kievan Rus about 965. Their empire, which was centered in the grasslands north of the Caspian and Black seas, effectively stopped Muslim expansion northward and played a major role, in alliance with the Byzantine empire, in curbing Muslim advance into Anatolia and the Caucasus. The Khazar empire is unique in that it adopted Judaism as its official religion.

The Uighur empire and the Khazar empire are both subjects for separate essays in this encyclopedia.

—Wilfred J. Bisson

Bibliography

- Barfield, Thomas. *The Perilous Frontier: Nomadic Empires and China*. Oxford, UK: Blackwell, 1989.
- Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia: Exlibris, 2003.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.

The Uighur Empire

The Uighur empire dominated much of east-central Asia for nearly a century, from the mid-740s to 840 CE. The Uighurs were a group of tribes who spoke a Turkic language and inhab-

ited the steppe region of what is now western Mongolia and eastern Turkistan. They rose to prominence in the 740s CE during the decline of the Tork empire. Forming a coalition known as the Tokuz Oghuz (“the nine tribes”), the Uighurs overthrew the Torks. They then turned on the Basmils and Karluks, two tribes formerly allied with them, and forced them to migrate to the west. (The Karluks would settle in what is now eastern Kazakhstan and Kyrgyzstan; some of their descendants founded the Karakhanid empire of the eleventh century.) The Uighur leader Kutlugh Bilgä of the Yaghlagar clan assumed the title of khagan in 744.

Within a short time the Uighurs controlled much of Mongolia, eastern Turkistan, southern Siberia, the Tarim basin, and Ferghana. Through their domination of large segments of the Silk Roads, the Uighurs gained access to a wide array of precious metals, gems, textiles, agricultural products, and other important goods. The Uighurs were more open to influence from their sedentary neighbors than their predecessors, and a number of important cities sprang up in their territory, including their capital of Ordu Balik (Karabalgasun).

The early Uighur khagans developed close relations with the Tang dynasty of China with whom they traded Siberian furs and horses for valued Chinese luxury goods, but the relationship was often strained due to Uighur ambitions. Uighur khagans demanded, and occasionally received, recognition as equals of the Chinese em-

MANICHAISM IN CENTRAL ASIA

The conversion of the Uighurs to Manichaeism was not without controversy. When the Khagan Itichien attempted to impose the faith in the 770s, he and many of his family were assassinated, and his successor Tun Alp Kutlugh led an anti-Manichaean reaction. Ultimately, however, Manichaeism triumphed, and its adoption as a state religion transformed the Uighur khaganate. Its priesthood led to the establishment of schools, temples, and libraries. Some scholars believe that as much as a third of the population of the empire's cities was literate.

Before archaeologists began a serious study of central Asia in the last century, knowledge of Manichaeism, a dualistic religion shaped by Gnostic, Judeo-Christian, Zoroastrian, and Buddhist influences, was limited largely to hostile writings by such authors as St. Augustine of Hippo. A number of important excavations at such locations as the oasis town of Turfan have unearthed dozens of Manichaean scriptures that describe the faith's doctrines, rituals, and organization, giving contemporary scholars a much more complete view of Manichaeism and its history.

—Brian Gottesman

perors; the Chinese, for their part, did their best to buy Uighur goodwill with gifts (including royal brides). On several occasions, usually allied with one Chinese faction or another, the Uighurs invaded China proper and sacked Chinese cities.

The Uighur khaganate was home to a dizzying array of religious sects and ethnic groups. Turks, Arabs, Persians, Sogdians, Tibetans, Chinese, and Jews all made their home in the cities along the Silk Roads. The so-called Nestorian Christianity of the Assyrian church established a foothold in Uighur territory, as did Zoroastrianism and several varieties of Buddhism. Jewish merchants such as the Radhanites crossed Uighur territory on their land routes to China and may have established Jewish colonies all along the Silk Roads. Likewise, Islam came to the region initially through traveling merchants.

Of particular importance were the adherents of Manichaeism, a dualistic religion founded in third-century Mesopotamia whose adherents, fleeing Muslim persecution, found refuge in Sogdiana and Ferghana. Sogdian merchants, who formed much of the administrative, diplomatic, and mercantile class in the Uighur khaganate, spread the religion among the Uighur elite, leading to Manichaeism becoming established as the state religion in the early ninth century. Manichean culture and philosophy flourished under Uighur rule, and the Uighur khagans eventually saw themselves as protectors of Manichean communities beyond their borders.

The ninth century saw a steady decline in Uighur military might. The urbanization of the ruling class alienated them from the nomadic tribes from which they had once derived their support; the empire became increasingly divided between the urban and pastoral segments of the population. From 820 on parts of the empire were in constant revolt, and in 840 after a series of famines and plagues a Kirghiz army sacked Ordu Balik and destroyed the Uighur empire. Uighur tribes scattered throughout Siberia, northern China, and central Asia. In China and the Muslim Middle East where Manicheans were seen as Uighur agents, savage persecutions of their religion led to its virtual disappearance. The Silk Roads were now threatened by bandits and hostile tribes, and the Kirghiz were unable or unwilling to establish control over the region

to the same degree as their predecessors. Ultimately, the fall of the Uighur khaganate led to a power vacuum in central Asia that contributed to the collapse of transcontinental trade in the tenth century.

—Brian Gottesman

Bibliography

- Christian, David. *A History of Russia, Central Asia, and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Golden, Peter. *An Introduction to the History of the Turkic Peoples*. Wiesbaden, Germany: Harrassowitz, 1992.
- Mackerras, Colin. *The Uighur Empire According to the Tang Dynastic Histories*. Canberra: Australian National University, 1972.

The Empire of the Khazars

From the early seventh to after the mid-tenth century, the Khazar empire ruled most of the area in present-day Ukraine, the Caucasus, and the steppe near the mouth of the Volga. For these three and a half centuries, which roughly coincided with the span of China's Tang dynasty, the Khazars were one of the great powers of western Eurasia, on a par with the contemporary Carolingian empire.

The Khazars were a seminomadic tribal federation that founded a powerful empire in what is now southern Russia, the Caucasus, Ukraine, and western Turkistan. Their origins are somewhat unclear. Although they appear to have spoken a Turkic language, they were probably a conglomerate of disparate ethnic groups, including migratory Hunnic people and various autochthonic populations.

The Khazars were subjects of the western Tork empire, which dominated the Eurasian steppes from the mid-500s until the mid-600s CE. A Khazar army rode with the Byzantine Emperor Heraclius against Persia in 628, but it is unclear whether they were independent at this time or still subject to the Torks. By 650, however, the Tork empire had collapsed, and an independent Khazar khaganate began its expansion, defeating the Bulgars and Sabirs and coming into conflict with the expanding Umayyad caliphate in the Caucasus Mountains.

► THE KHAZARS CONVERT TO JUDAISM

Sometime during the eighth or ninth century, the Khazar ruling class and much of the population (who had previously been predominantly Turkic shamanists) converted to Judaism. Jewish colonies had existed around the Black Sea since ancient times, and Jewish merchants were quite influential along the Khazar-dominated branch of the trans-Eurasian trade network. Various accounts of the conversion survive, including the correspondence between Hisdai ibn Shaprut (a tenth-century Spanish rabbi) and the Khazar king Joseph, the Schechter Text, a letter composed by a Khazar and discovered in Egypt in 1896, and the writings of various Muslim scholars such as al-Masudi and ibn Fadlan. The extent and timing of the conversion is hotly debated among scholars; however, the recent discovery of coins minted in imitation of Arab dirham and dated 838 that bear the legend “Moses is the Prophet of God” suggest that the conversion occurred by that date. Moreover, the writings of ninth- and tenth-century rabbis suggest that Khazar Jews had extensive contacts with Middle Eastern Jewry.

Scholars debate the impact of the Khazars on the genetic makeup of East European Jews. For some time it was fashionable to assert, as Arthur Koestler did, that the Khazars were the primary ancestors of Ashkenazi Jewry. Recent studies, however, have shown that while some Ashkenazi Jews may have Khazar ancestry, they are primarily a Middle Eastern people closely related to other Jewish populations.

—Brian Gottesman

The Khazars allied with the Byzantine empire again to combat the growing Muslim threat. Two eighth-century emperors, Justinian II and Constantine V, took royal Khazar brides. In the 720s and 730s the Khazars became embroiled in a bloody conflict with the Umayyad caliphate that resulted in a nominal victory for the Muslim army. So heavy were the losses inflicted on the caliph's forces that they had to withdraw without leaving a garrison; shortly thereafter the Umayyads would fall to the Abbasid revolution.

Sometime in the late 700s or early 800s, under pressure by both Muslims from the caliphate and Christians in Byzantium, the Khazar rulers

and much of the population adopted Judaism. At their height around 800, the Khazars controlled a vast swath of Eurasian territory from their capital at Atil (near present-day Astrakhan). Dozens of tribes, including the Alans, Oghuz, Pechenegs, Magyars, and Volga Bulgars and various Georgian principalities were vassals. The Khazar cities, including Atil, Balanjar, Samandar, Sambata (Kiev), Tamatarkha (Tmutarakan), and Kerch, became major trading hubs and centers of production for pottery, wool, honey, and other export goods. The Khazar government levied a 10 percent tariff on all foreign merchants, including those engaged in the lucrative northern European slave trade.

The Khazars had a dual kingship; authority was divided between the spiritual king (*Khagan*) and the military king, theoretically inferior in rank but exercising most day-to-day authority over the government (the *Bek*). Various officers, including the *Jawysbyghr* and *Kundur* (whose specific duties are unknown), assisted in the management of the khaganate, as did military officials called *tarkhans*, local governors called *tuduns*, and an ecumenical supreme court consisting of members of all major religions within Khazar territory.

During the early 900s Khazar power began to decline. Several rebellions by client peoples were put down by the Khazar rulers Benjamin and Aaron II, and the khaganate enjoyed a brief period of renewed authority under Joseph. The alliance with the Byzantines, however, had long since collapsed, and Constantinople switched its support to the nascent Rus, the Pechenegs, and other tribes, beginning to press on Khazaria's borders. The Volga Bulgars asserted their independence around 920. The Pontic steppes were by that time dominated by the Pechenegs, who had ousted the Khazars' Magyar allies (who migrated westward to found Hungary). Kiev, a Khazar town since the 700s, fell to the Rus sometime in the early 900s, and its prince Svyatoslav dealt the death blow to the Khazar empire around 969, when he sacked its capital Atil. Khazar politics existed in the Crimea until at least 1016, when they were conquered by the Byzantines, and tantalizing (if ambiguous) references to Khazars in the Caucasus and Black Sea region appear as late as the 1200s.

—Brian Gottesman

Bibliography

- Barthold, Vasilii Vladimirovich, and Peter B. Golden. "Khazar." In *The Encyclopedia of Islam*, Vol. 4. Leiden and London: Brill, 1978.
- Brook, Kevin Alan. *The Jews of Khazaria*. Northvale, NJ: Jason Aronson, 1999.
- Christian, David Gilbert. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Dunlop, Douglas M. *The History of the Jewish Khazars*. Princeton, NJ: Princeton University Press, 1954.
- Golb, Norman, and Omeljan Pritsak. *Khazarian Hebrew Documents of the Tenth Century*. Ithaca, NY: Cornell University Press, 1982.
- Golden, Peter. *Khazar Studies: An Historiophilological Inquiry into the Origins of the Khazars*. Budapest: Akademiai Kiado, 1980.
- Kovalev, Roman K. "Creating Khazar Identity through Coins: The Special Issue Dirhams of 837/8." In *East Central and Eastern Europe in the Early Middle Ages*, edited by Florin Curta. Ann Arbor: University of Michigan Press, 2005.
- Kovalev, Roman K. "What Does Historical Numismatics Suggest about the Monetary History of Khazaria in the Ninth Century? Question Revisited." *Archivum Eurasiae Medii Aevi* 13 (2004): 97–129.
- Mason, Richard A. E. "The Religious Beliefs of the Khazars." *The Ukrainian Quarterly* 51(4) (Winter 1995): 383–415.

■ Introduction: European States and Empire, 650–1000

Early medieval Europe was ruled by various empires and minor kingdoms. This world was marked by instability as well as ever-changing and disappearing borders. There were various reasons for the instability that the population of early medieval Europe endured. Although the first wave of barbarian invasions were well past by the seventh century, there still tended to be a great deal of infighting among the petty kings and emperors of Europe. The Church had fought off the major heretical challenges of previous centuries such as Arianism, but it still struggled with its own organization and with its relationship with the political authority. There were also economic stresses; the prosperity of Rome's glory days had not carried over into the early Middle Ages.

The heir to the Roman empire, Byzantium, did not fare as well. The powerful Byzantine state that Justinian I (r. 527–565) left—which included nearly all of the Mediterranean basin including Italy, Greece, Anatolia, and much of North Africa—would steadily lose ground after the reign of Heraclius (r. 610–641). By the eleventh century, Byzantine territory had been reduced to the Greek peninsula and a small area around the city of Constantinople.

The kingdoms to the east of Byzantium are fairly difficult to map since there were few pre-

cise borders or frontiers. The territories north and south of the Danube River were controlled by various peoples at different times. Some of the most prevalent were the Slavs, Avars, Bulgars, Magyars, Armenians, and Georgians. Farther to the north and the east, the rulers of Poland, the Khazars, and Keivan Rus wielded significant power and influence in the early Middle Ages. Although rarely discussed in traditional European history, the states and kingdoms to the east had a significant impact on the politics and culture of the Middle Ages.

By the middle of the seventh century, Britain, the farthest outpost of the old Roman empire, was divided into a number of kingdoms. The most notable were Wessex, East Anglia, Kent, Mercia, and Northumbria. By the beginning of the eighth century, all were Christian. Much of Anglo-Saxon England, however, was invaded and occupied by Viking raiders. The southern and western regions (particularly Wessex) under the leadership of King Alfred (r. 871–899) were able to successfully resist the Viking incursions. By the middle of the tenth century, all of England was under the power of a single king.

Before the tenth century, Scotland, Wales, and Ireland also became divided and politically unstable. Ireland was ruled by the *tuatha* (petty

THE VIKINGS—EMPERORS OF THE SEA

The Vikings are one of the least understood and most maligned peoples of the early Middle Ages. The Viking peoples of Scandinavia left too few sources prior to the eleventh century to reconstruct a trustworthy account of their political culture. However, based on outside sources and recent archaeological evidence, it is possible to generate a broad history for the early Middle Ages. Although there was virtually no unity from the seventh to ninth centuries, Northmen from their bases in Norway and Denmark conquered and settled in numerous areas, from Iceland and Greenland to England and Francia. Because of their ability to navigate both the open sea and narrow rivers, the Vikings could travel virtually anywhere in Europe and beyond. Rather than the barbaric reputation they carry today, they were, in fact, traders and explorers as much as they were raiders. Their impact was felt as far south as the Muslim world of the Middle East and as far west as the New World.

—Jace Stuckey

kingdoms). In Wales, the rulers were successful at fighting off most of the Viking invaders, but tremendous infighting led to significant weaknesses that the English would eventually exploit. The Picts, a Gaelic-speaking group from northern Ireland, along with the Britons of Strathclyde inhabited the area that became Scotland. Although the Scots were able to resist a push north by the English of Northumbria in the eighth century, the Vikings occupied many of the northern islands and territories during the ninth century. Only after the eleventh century was Scotland able to achieve a greater degree of stability and autonomy.

On the continent, in the eighth century, two fairly weak kingdoms would give way to much stronger ones. In Spain, the Visigothic kingdom would be completely overrun by Muslim forces that had already conquered the whole of North Africa. In Gaul, the Merovingian dynasty of do-nothing kings gave way much more peacefully to the Carolingians when Pippin deposed the last Merovingian king Childeric III in 751.

This transition ushered in what historians have labeled the Carolingian Renaissance. The re-

naissance was made possible by the political support of, arguably, the most powerful empire in Europe after the fall of Rome and prior to the turn of the new millennium. Under its greatest king and one of early medieval Europe's most influential men, Charlemagne, the empire reached its greatest extent. He defeated the Lombards in the south, the Saxons of the north, and the Avars of the east. Charlemagne's empire included most of modern-day France and Germany as well as parts of Italy and eastern Europe. Charlemagne opened a number of Cathedral schools and helped expand learning in the West. However, infighting and civil war would lead to the collapse of the empire after Charlemagne's death. In 843, the empire was split between Charlemagne's three feuding grandsons. The West would be inherited by the Capetian dynasty in the late tenth century but in reality would be ruled by the powerful regional nobles until the twelfth century. The East would retain the title Holy Roman Empire and pass to the Ottonians in the tenth century.

In Italy, before the year 1000, political control shifted from one group to another. Shortly after the death of Justinian I in the sixth century, much of the Byzantine territory in Italy was lost to the Lombards. However, several major cities in the north such as Venice and islands and lands in the south (i.e., Sicily and Sardinia) remained in Byzantine control through the eighth century. The Lombards set up a sophisticated political system that centered around major cities. They did not, however, control Rome, as this was part of the Papal States. This territory in central Italy was directly ruled by the pope. Charlemagne's conquest of the Lombards in the eighth century was in part to aid the pope, who was continually threatened by Lombard aggression from the north and the south against the Papal States. Charlemagne quickly placed Franks in many duchies and bishoprics. After the disintegration of the Carolingian empire in the ninth century, the German and Ottonian presences in the tenth century would provide a semblance of political stability.

The world of early medieval Europe scarcely resembles its modern counterpart. That does not, however, discount the critical impact that the culture had on the later Middle Ages as well as the modern political landscape that exists today.

—Jace Stuckey

Bibliography

McKay, Angus, and David Kitchburn, eds. *Atlas of Medieval Europe*. London and New York: Routledge, 1997.

McKitterick, Rosamond, ed. *Atlas of the Medieval World*. London: Times Books Harpercollins Publishers, 2003.

The Byzantine Empire, 641–1025 CE

The seventh and eighth centuries were a period of unparalleled crisis for the Byzantine empire, marked by invasions on all borders, civil war, and the religious controversy of Iconoclasm. Eighth-century emperors developed a successful defense strategy that laid the foundations for a remarkable recovery. Under the Macedonian Dy-

nasty between 843 and 1025, Byzantium regained territories lost to the Arabs and incorporated much of the Balkans into the empire through a strong centralized imperial system. In an age of cultural revival, imperially sponsored missionaries converted emerging nations to Orthodox Christianity, spreading Byzantine cultural and political influence.

The seventh-century successors of Heraclius faced continuing losses to the Arabs. Arab forces completed the conquest of Egypt and North Africa, inflicted devastating annual raids throughout Asia Minor, and by the end of the seventh century began to attack the most important Byzantine cities by sea. At the same time, Slavic tribes migrated into the Balkans and Greece, and the Bulgars settled north of the Danube, making imperial control impossible. Emperor Constans II (r. 641–668)

► CONSTANTINE VII PORPHYROGENITUS, 905–959 CE

Much of what we know about the Byzantine imperial court and government is due to the unusual career of the emperor Constantine VII Porphyrogenitus. Constantine was only six years old when he inherited the throne, so the empire was ruled by regents and coemperors. Until he was 39 Constantine remained in the background, while Romanus Lecapenus (921–945) ruled as a strong senior emperor for more than 20 years. He unexpectedly became the actual emperor in 945 and ruled for 14 more years.

Constantine spent his years in retirement in the imperial library reading and commissioning encyclopedic collections of knowledge preserved in ancient manuscripts. His goal was to preserve all the useful information from the ancient world for future emperors, from agriculture to veterinary medicine. His collection included an account of all the imperial ceremonies and a handbook of information about each of the foreign peoples the empire dealt with. Travelers who viewed the ceremonies left accounts of the awe they could inspire. Constantine also patronized an artistic revival of classical style, evident in manuscript illuminations and ivory carvings. As a scholar-emperor, Constantine represents the importance of ritual and learning that was unique to Byzantium in the medieval Christian world.

—Dorothy de F. Abrahamse



Byzantine gold solidus of Constantine VII, 945. Byzantine gold coins and Abbasid silver coins were the standard currency in the Mediterranean world and Europe in the early medieval age. (Barbara Heller)

even moved his government to Sicily for safety. Continuing religious strife, rebellions, and civil war deepened the crisis at the turn of the eighth century, and the end of Byzantium seemed inevitable. In two great sieges of Constantinople (674–678 and 717), the Arab caliphs attempted to complete their conquest of the empire. Constantinople's strong defenses, the use of Greek fire, and the imperial forces held the city and enabled the empire to survive, but Arab forces continued to attack Asia Minor. Emperor Leo III (r. 717–741) and his son Constantine V (r. 741–775) established a stable imperial dynasty and saved the empire. They were able to put in place military reforms, strengthen provincial administration, and mount a successful defense against Arab and Bulgar invaders, but their controversial policy of outlawing the use of icons left such hostile accounts in the sources for the period that it is difficult to appreciate their achievements.

Political crisis returned in the early ninth century when Empress Irene (r. 797–802) attempted to rule in her own right and restore icons and her successor was killed in a disastrous loss to the Bulgarian khan Krum. But the principle of dynastic rule became firmly established during the reign of the Amorian family (820–867) and the Macedonian dynasty, whose emperors ruled for two centuries (867–1056). Basil I (r. 867–888) became emperor by assassination, but five generations of his descendants held the throne. During the reigns of Constantine VII Porphyrogenitus (r. 913–959) and Basil II (r. 958–1025), the coemperors Romanos Lecapenus (r. 920–944), Nicephorus Phocas (r. 963–969), and John Tzimiskes (r. 969–976) were responsible for much of the empire's military success but could not displace the legitimate emperors.

The Macedonian period realized the creation of Byzantium as a powerful medieval state. Beginning in the reign of Michael III (r. 842–867), recovery was achieved through a long series of military campaigns against powerful neighboring states, the Bulgar kingdom in the Balkans, and Arab emirates in the east and south and through success in diplomacy and conversion. Byzantine missionaries converted the Bulgar king to Orthodox Christianity about 865, bringing Bulgaria into the cultural orbit of Byzantium.

Warfare, however, continued until Basil II finally conquered and incorporated Bulgaria into the empire in 1018. From the campaigns of Basil I (867–886) through the tenth century, Byzantium was able to take advantage of the disintegration of the Arab empire to consolidate the eastern frontier in Anatolia and reconquer former Byzantine territories. Nicephoros Phocas and John Tzimiskes led expeditions that restored Crete, Cyprus, and Antioch to the empire and extended its borders deep into Armenia. After the Kievan Rus made frightening raids on Constantinople, Byzantium bound them to the empire as allies in the tenth century and cemented their conversion to orthodoxy with the unprecedented marriage of Basil II's sister to the Russian prince Vladimir in 988. In 1025 the Byzantine empire was the dominant Mediterranean power.

Byzantine success in the ninth and tenth centuries was built on a strong imperial autocracy. The imperial government directly controlled the army and the provincial government, maintained a system of taxation, and paid salaries in gold to its administrators. The court sponsored the recovery of classical manuscripts and revival of late ancient learning. Emperors ruled in a restored capital unequalled in historic and ritual symbolism and surrounded themselves with ancient ceremonial that awed foreigners and citizens. It is not surprising that scholars often consider this period the apogee of Byzantium.

—Dorothy de F. Abrahamse

Bibliography

- Haldon, John. *Byzantium in the Seventh Century*. Cambridge: Cambridge University Press, 1997.
- Mango, Cyril, ed. *The Oxford History of Byzantium*. Oxford, UK: Oxford University Press, 2002.
- Toynbee, Arnold. *Constantine Porphyrogenitus and His World*. Oxford, UK: Oxford University Press, 1973.
- Whittow, Mark. *The Making of Byzantium, 600–1025*. Berkeley and Los Angeles: University of California Press, 1996.

Rhomaioi—Who Were the Byzantines?

The empire and people we know as Byzantine never used that term to describe themselves.

Throughout its history the inhabitants of the empire called themselves *Rhomaioi*, the Greek term for Romans, and their ruler “emperor of the Romans.” The term “Byzantine” was a designation developed by the German humanist Hieronymus Wolf in the sixteenth century to differentiate medieval from ancient Greek texts. During the history of the empire the term “Rhomaioi” came to have different meanings and was the source of both contention and confusion with western rulers, but in Byzantium it encapsulated the Roman continuity and Christian identity of the eastern empire.

When Constantine I moved his capital to Constantinople, the “New Rome,” in 330 CE, he and his successors ruled a single multilingual and largely polytheistic empire, east and west, whose citizens were naturally “Romans.” During the fifth century as the empire became increasingly Christian and the west disintegrated, the term “Rhomaioi” described a subject of the Christian empire, as Greek became the lingua franca of the east for religion and government, and the use of Latin diminished. Pagan classical learning was suspect, and the word for Greeks, “Hellenes,” became a term of opprobrium that meant “pagan.” The sixth-century emperor Justinian (527–565) still used the traditional Latin title *imperator romanorum* as sole ruler of a temporarily restored empire, but in the early seventh century the Emperor Heraclius (617–641) adopted the Greek title “*Basileus ton rhomaion*.” The term “Rhomaioi” had no ethnic or national identity and included the inhabitants of all lands ruled formally or in reality by the emperors. In Justinian’s time it designated a largely eastern Mediterranean polyglot population of Greeks, Arabs, Copts, Syrians, and other ethnicities.

In the seventh and eighth centuries as Byzantium struggled to survive the onslaught of Arabs and Slavs, the term “Rhomaioi” came to signify the embattled defenders of Constantinople against Islam; by the ninth century it also reflected its orthodox identity. The empire that emerged in the ninth century emphasized its Roman-ness symbolically and substantively. Emperors elaborated ceremonial inherited from late antiquity, revived late Roman law, sponsored an effort to copy classical texts, and drew on them

for practices ranging from military tactics to medicine. The Middle Byzantine empire remained multiethnic, and the many individuals and groups it absorbed, notably Slavs, Caucasus tribes, Bulgars, and Armenians, were asked only to accept Christianity and imperial rule to become Rhomaioi. Administrators and educated citizens spoke and wrote Greek, but everyday life remained multilingual.

The identity of Byzantium as the Roman empire was accepted by most outside powers, from the Islamic rulers, who called it *Rūm*, to Kievan Russia and even early Frankish rulers in the west. The challenge to the Roman identity of the east came from the eighth-century Roman popes. Byzantine inability to protect Rome and Ravenna from invasion, compounded by Iconoclast beliefs considered heretical in Rome, led the popes to develop an elaborate defense of their own claim to be heirs of Rome and to seek new protectors in the Frankish rulers, whom they eventually sought to legitimate as rival emperors. Latin writers called Byzantines “*Graeci*,” a terminology that spread in the west, frequently with a list of derogatory modifiers carrying offensive connotations of paganism to Byzantines. By the eleventh century the Latin stereotype of devious, effeminate, and arrogant Greeks had displaced earlier, more positive interest in a related Roman world.

Although late Byzantine writers sometimes used the terms “*Graikoi*” and “Hellenes” in cultural contexts, they continued to identify themselves politically as Rhomaioi until the end of the empire, even when it had little hope of survival. The term remained powerful enough for the Russian tsars to claim their inheritance as the Third Rome after the fall of Constantinople in 1453.

—Dorothy de F. Abrahamse

Bibliography

- Ahrweiler, Hélène, and Angeliki Laiou, eds. *Studies on the Internal Diaspora of the Byzantine Empire*. Washington, DC: Dumbarton Oaks Research Library and Collection, 1998.
- Cameron, Averil. *The Byzantines*. Oxford and Malden, MA: Wiley-Blackwell, 2006.
- Herrin, Judith. *The Formation of Christendom*. Princeton, NJ: Princeton University Press, 1987.

The Merovingians and Carolingians

The ruling families of the Merovingian and Carolingian empires both descended from Frankish tribes. During late antiquity these tribes occupied territory in the lower Rhine River region and were divided into two groups: the Salian, or “saltwater,” and Ripuarian, or “riverine,” Franks. Sixth-century historian and bishop Gregory of Tours provides us with little detail on the origins of the Merovingian dynasty beyond its founding by the eponymous Merovech, purportedly of divine ancestry, perhaps in the early fifth century CE. Early Merovingian rulers were probably warrior chieftains raised to a higher status by acclamation and possibly tribal election. In the mid-fifth century Childeric seized lands in Roman Gaul, establishing Frankish influence as far as Brittany and the Loire.

The key figure in establishing Frankish dominance in much of western Europe, however, was Childeric’s son Chlodovacar or Clovis (later Louis, Ludwig) (r. 481–511). Clovis made expansion his

policy. He united the two main Frankish tribal halves and neutralized the potential rivals to the south and east. Without abandoning Austrasia Clovis led the Franks deep into Gaul, establishing a headquarters at Soisson. He married a Burgundian princess (Clothilda) who happened to be Catholic and was baptized Catholic in Rheims. While many Germanic groups remained polytheistic and others such as the Goths, Lombards, and Vandals subscribed to Arian Christianity, Clovis tied the Franks to the Catholic Church, its powerful bishops (such as Gregory), and Rome. Thus his Germanic political rivals became religious enemies as well, to be conquered and converted.

Clovis’s successors maintained strong ties of patronage and support for the Catholic Church, building and protecting churches and monasteries and encouraging conversion. In Frankish fashion at the ruler’s death the kingdom was divided among surviving sons, a tradition that naturally weakened both the Frankish territorial polity and the kingship. But the Merovingians were not beyond mutilation and even murder to eliminate rivals and reunite the kingdom under a single ruler, a feat accomplished by Dagobert I (r. alone 629–638). While Dagobert’s successors often ruled as very pious men, they were detached from active administration—especially in military matters—and earned the nickname “The Longhaired Kings.” Powerful nobles, especially those who served the kings as mayor of the palace in each major province, managed most royal affairs. In 732 the most famous of these mayors, Charles (Carolus), later named Martel (Hammer), defeated an army of Iberian Muslims near Tours in central France. The victory marked the end of Muslim encroachment in Francia and the ascent of the Carolingian family.

Charles’s son Pepin (also Pippin) the Short (r. 751–768) consolidated the mayoral positions in his own hands and later unseated the last Merovingian king, young Childeric III. Pepin acted with the support of a nobility that had tired of weak central rule and a pope who was in need of an ally against the Arian Lombards in central Italy. Anointed king in 751 by Boniface, the famed English missionary to the Saxons, Pepin and his two sons marched to the aid of Pope Stephen. After defeating the Lombards, Pepin granted their southern territories to the pope. This provided

▶ THE ANNALS OF LORSCH RECORD PEPIN’S CORONATION AS KING OF THE FRANKS

“750 [751]—In this year Pepin was named king of the Franks with the sanction of the pope, and in the city of Soissons he was anointed with the holy oil by the hands of Boniface, archbishop and martyr of blessed memory, and was raised to the throne after the custom of the Franks. But Childeric, who had the name of king, was shorn of his locks and sent into a monastery.

753—In this year pope Stephen came to Pepin at Kiersy, to urge him to defend the Roman church from the attacks of the Lombards.

754—And after Pope Stephen had received a promise from king Pepin that he would defend the Roman church, he anointed the king and his two sons, Charles and Carloman, with the holy oil.”

—Joseph P. Byrne

Source

Oliver J. Thatcher and Edgar Holmes McNeal, eds., *A Source Book for Medieval History* (New York: Scribner, 1905), 37–38.

► POPE GREGORY THE GREAT, 590–604 CE

Pope Gregory the Great's 14-year pontificate, 590–604, witnessed the solidification and extension of papal authority throughout western Europe. In this difficult period in the city of Rome, Gregory assumed the responsibility of restoring public buildings and took charge of the defense of the city in addition to making administrative and pastoral reforms. These reforms laid the foundations for the traditions of the medieval papacy. Gregory asserted the role of the papacy as a major power broker in Italy and in that role negotiated with Byzantines, Franks, and Lombards. Although he remained a loyal subject of the emperor in Constantinople, Gregory recognized the importance of the western Germanic rulers. These important contacts led to increasingly close ties between Rome and the west over the next century and a half, culminating in the formal alliance of the Franks and popes in the eighth century.

Pope Gregory the Great (d. 604) was very important in aligning the Catholic Church and the rising Merovingian power in early medieval western Europe. (Alinari/Art Resource, NY)



the pontiff with resources for the defense and marked the establishment of the Papal States. At Pepin's death both Charles and Carloman inherited the greatly strengthened kingdom, which was reunited at Carloman's death three years later.

Charles, or Charlemagne (Charles the Great; r. 768–814), tirelessly campaigned against the polytheistic Saxons, the Lombards, the Muslims in Spain, and the Turkic Avars who had replaced the Huns in Hungary. He seized the treasure horde of the Avars, the Lombard crown, forcibly converted or slaughtered the Saxons, and suffered defeat in Spain. Charles sought to control and communicate with his nobles and Frankish clerics through traveling *missi dominici* (messengers of the lord). He strengthened and tried to make the Church uniform by patronizing bishops and monastic houses. Charles replaced various monastic practices with the Benedictine Rule, implemented Gregorian chant, and pro-

vided books for education and liturgy. Pope Leo rewarded his efforts and accomplishments by crowning him emperor in St. Peter's Basilica at Christmas in the year 800, the first to hold that office in the west in 324 years. Charles's Carolingian Renaissance, directed from his palace at Aix-la-Chapelle, was an attempt to revive important elements of classical Roman culture as a way of both celebrating the renewal (*renovatio*) of empire and creating a common culture.

Charles's grandson Louis the Pious (r. 814–840) ruled alone as Vikings, Magyars, and Muslims hammered the empire, prompting the decentralization of authority and power. At his death his three sons—Charles, Louis, and Lothair—fought over their inheritance, further weakening the Frankish world. This civil war permanently divided the empire and led to the evolution of distinctly French and German cultures.

—Joseph P. Byrne

Bibliography

- Frassetto, Michael. *Encyclopedia of Barbarian Europe: Society in Transformation*. Santa Barbara, CA: ABC-CLIO, 2003, Entry 126, <http://historyreferencelibrary.abc-clio.com/?1851095861&126>.
- Geary, Patrick J. *Before France and Germany*. New York: Oxford University Press, 1988.
- Gregory of Tours. *A History of the Franks*. Translated by Lewis Thorpe. New York: Penguin, 1976.
- James, Edward. *The Franks*. New York: Basil Blackwell, 1988.
- Riché, Pierre. *The Carolingians: A Family Who Forged Europe*. Philadelphia: University of Pennsylvania Press, 1993.

Anglo-Saxon and Celtic Kingdoms

During the Anglo-Saxon period, which stretched from the Roman retreat from Britain in 410 CE until the Norman Conquest of 1066, the British Isles were governed by a complex and shifting set of small kingdoms. Present-day Ireland, Scotland, Wales, and England were all colonized by mainland Europeans expanding their horizons after the Ice Age, but these newly minted Britons diversified into recognizably different peoples by the early medieval period. However, these varied populations did not remain genetically or culturally isolated. They participated in cross-border alliances and marriages and were also subject to

incursions by continental peoples. Despite these potentially ambiguous lines of distinction among the early peoples of the British Isles, there are some quantifiable facts regarding the early political organization of the region.

Although Ireland was supposed to have had more than 100 small kingdoms as late as the fifth century, its larger political organization divided the island into five large provinces. The center of government was at Tara, the traditional seat of the high king of all Ireland, located in the central province of Meath. Surrounding Meath were the provinces of Ulster to the north, Connacht to the west, Leinster to the east, and Munster to the south, all home to the set of provincial sub-kings and petty kings under the high king's rule.

Like Ireland, early Scotland was also seen as composed of five provinces. Scotland was the home of a people known to the Romans generically as the Picts, and Pictland was their ancestral stronghold in the north and east of the country. Irish invaders from Ulster established the province of Dal Riata in the west, while Strathclyde to the southwest bordered the kingdom of the Anglo-Saxon Northumbrians, as did Lothian in the southeast. The western islands of present-day Scotland formed the province of the Hebrides, largely under the control of the seafaring Norwegians.

The early medieval political organization of the Anglo-Saxons was also divided between vari-

THE SHORT CAREER OF QUEEN JUDITH

The life of an Anglo-Saxon queen was not usually a celebrated one. Most of these women receive scant notice in the historical record if any at all. A notable exception is Judith, queen first to the West Saxon king Aethelwulf (r. 839–858) and then his son Aethelbald (r. 855–860). Daughter to the Frankish king Charles the Bald (r. 840–877), Judith was married to Aethelwulf in 856 at the tender age of 12. Aethelwulf married Judith in the hopes of cementing a relationship with her powerful father. One condition of this marriage was the anointing of Judith as queen, giving her role as queen a primacy that flew in the face of Anglo-Saxon tradition. However, it was an importance that was

ultimately accepted by the Anglo-Saxons. Judith even held enough power to witness royal charters as queen. When Aethelwulf died in 858, the 14-year-old widow retained her queenly status. This power and her family connections made her an attractive marriage prospect for her stepson Aethelbald, who had inherited half his father's kingdom. They married, amid no little controversy, and Judith remained queen of the West Saxons until Aethelbald died two years later. Twice the widow by the age of 16, the inimitable Judith returned to her father's kingdom of West Francia only to elope against her father's wishes.

—Todd Preston

ous subkingdoms. In the case of the Anglo-Saxons, these kingdoms were known as the Heptarchy. Although a relatively simplistic concept forwarded by Venerable Bede (673?–735), the term “heptarchy” is useful insofar as it outlines the general political divisions among the Anglo-Saxons. Bede, in his *Ecclesiastical History of the English People* (731), describes seven subkingdoms of the Anglo-Saxons: Northumbria in the north, Mercia in the midlands, East Anglia and Essex in the east, Wessex in the southwest, Sussex in the south, and Kent in the southeast.

These subkingdoms battled for dominance among one another but also contended with Celtic and Scandinavian invaders. Eventually the kingdom of Wessex emerged as dominant under the rule of Egberht (r. 802–839). His descendants would eventually rule all of Anglo-Saxon England. King Alfred (r. 871–899) would accept the submission of the various Welsh kingdoms by the mid-880s, and King Aethelstan (r. 924–939) would solidify his hold on Northumbria to make him the first king of the English in 927. Thus the pattern of political consolidation in the early Middle Ages began the process of shaping the British Isles into the configuration we know today.

—Todd Preston

Bibliography

- Anderson, Marjorie. *Kings and Kingship in Early Scotland*. 2nd ed. Edinburgh, UK: Scottish Academic Press, 1980.
- Kirby, D. P. *The Earliest English Kings*. Rev. ed. London: Routledge, 2000.
- O’Croinin, Daibhi. *Early Medieval Ireland, 400–1200*. London: Longman, 1995.
- Stafford, Pauline. “Charles the Bald, Judith and England.” In *Charles the Bald, Court and Kingdom*, edited by Margaret Gibson and Janet Nelson. 2nd rev. ed. Aldershot, UK: Variorum, 1990.
- Yorke, Barbara. *Wessex in the Early Middle Ages: Studies in the Early History of Britain*. London: Leicester University Press, 1995.

State Formation in Northern and Eastern Europe

The ninth and tenth centuries were a time of gradual creation of the medieval states in northern and central Europe and in the Balkans, which was quite substantially related to the external

pressure of powerful neighbors and to the spreading of Christianity. These two factors helped the creation of the new Europe in areas toward the north and northeast of the original area of the Roman empire and the incorporation of this region to the West European cultural sphere. These areas, a periphery of the Carolingian empire, had similar development through the Middle Ages, be it cultural or political (better preservation of old tribal legends or the development of political institutions).

The period until 1000 in the north is traditionally labeled as the Viking Age. It was the time of the first formation of power centers in the north as well as the development of the Baltic and the North Sea trade. The Vikings, being experienced navigators, not only administered this trade but also expanded through the sea: it was the time of devastating raids especially in western Europe and active searching for new lands of the north-erners. Central and southeastern Europe were populated by western and southern Slavic tribes; during the time of the Slavic expansion they settled as far west as the Elbe, coming into contact with the Frankish empire, and as far as modern Greece in the south, coming into contact with Byzantium. In the end of the ninth century a new element was brought by the Magyars and their settlement in Pannonia during the tenth century.

The first area of where states started to develop was the old territory of the Roman empire. There were the Avars, who created a statelike formation in the Danube basin. Their state significantly influenced the development of central Europe. Toward the south, however, the Turkish Bulgarians (who gradually became a Slavic nation due to the assimilation with the local Slavic



Messengers of the Moravian prince Rastislav ask Emperor Michael III to send missionaries speaking a Slav language; he sends to Saloniki for Cyril and Methodius. From the Radziwiłł Chronicle, late fifteenth century. During the early medieval period, the pagan rulers of northern and eastern European peoples converted to either Catholicism or Orthodox Christianity as part of the state formation process. By doing this, it was thought the new states would acquire divine protection. (Erich Lessing/Art Resource, NY)

SAINTS AND STATES

Christianity meant, for the early states, not only bringing of culture but usually also a legitimization of the ruling dynasty. The members of the ruling dynasty could become bishops of the local church, but in a few cases it happened that a member of the ruling dynasty became a saint whose cult and veneration then helped the propagation of the family. In the tenth century it was St. Wenceslas (d. 935), who after being murdered by his own brother became a national saint of Bohemia. Prince Vladimir of Kiev, who commanded the conversion of Russia to Orthodox Christianity in 989, has also been elevated to sainthood. In the early eleventh century there are examples of Norway with St. Olaf Haraldsson (d. 1030) and Hungary with St. Stephen (d. 1038). These men were crucial in spreading Christianity and consolidating the power of their states. Later on, but relatively soon, they became symbols of their states themselves: national saints.

—Antonin Kalous

population) created a state independent of Byzantium as well as the Avars. Traditionally the year of the creation of the state is 680, but it was only at the beginning of the ninth century when the state was more consolidated under Khan Krum. The constant conflicts with Byzantium made the administration necessary. And this model repeated in other areas.

In the north it was Denmark, which was the first to come into contact with the Carolingian empire. Charlemagne's war against the Saxons meant that the Frankish expansion reached the borders of the Danish lands. Charlemagne endangered the Danes also by promoting a coalition with the Obodrites (Polabian or Elbe River Slavs), which was the first of these Slavic peoples to have some more significant power centers. They were allies of the Franks but later also cooperated with the Danes. The Frankish king also helped the consolidation of the Slavic tribes in central Europe. First, he defeated the Avars (but did not integrate the territory into his empire) and thus enabled the local tribes to proceed in their own state formation. Second, by his own intrusion to the territory of Bohemia, he

compelled them to pay a tribute (similarly as other bordering Slavic tribes). In the peripheral areas of the old Avar territory Slavic states started to develop in the eighth century, the most important of them being the states of the Carinthians and Moravians. After the fall of the Avars (795–804), thanks to Charlemagne and Krum, the new states were able to acquire larger territories and powers.

Not only the military pressure of the powerful neighbors but also Christianization of this region stimulated the creation of the new states. In the ninth century the Moravians and Czechs in central Europe learned about Christianity, and the Moravian ruler Mojmir was baptized in 834. Bulgaria had already become Christian in the 860s. The Carinthians and Croats were exposed to missions earlier since they were living in the originally Christian areas. The north was, like central Europe, a new ground for Christianity. The most activity can be attributed to St. Ansgar (who made several missions among the Danes and Swedes in the 820s–860s) and his followers on the Archbishopric See in Hamburg-Bremen. In the tenth century the Poles and the Hungarians accepted Christianity.

For these new states Christianity and the Church administration was of crucial importance, for it not only gave the state (and the dynasty) a new ideology and legitimacy but also created a powerful tool of the state administration. Through the individual archbishoprics (i.e., by creating the local church), which were always desired by the local rulers, the states were also able to become more independent of their powerful neighbors. The case of Great Moravia is quite illustrative: Rastislav (r. 846–870) wanted to have an independent church, and even though the land was frequented by missionaries from Bavaria (then a part of the Frankish empire), he asked the pope for missionaries directly from Rome. When Rastislav did not get them he asked for the same from Constantinople, whence brothers Constantine-Cyril and Methodios came to Moravia. They brought a new script for the Slavic language and created a church based on Old Church Slavonic as the liturgical language with its independent archbishopric. Later on, however, their disciples were expelled, and the Latin liturgy took the ground.

In the period until 1000 many new states developed in northern, central, and eastern Europe. By accepting Christianity (mostly from the West except for Bulgaria and Russia) they became a part of European culture and tradition. Even the Magyars, who are first described as total strangers both to Christianity and to European culture, were gradually incorporated in the community of the Christian states. Thus most of the nations of Europe became Christians (at least nominally) by the eleventh century. Only the areas of Polabian Slavs and the Baltic peoples remained heathen for a few more centuries. We can also say that most of the states that were created in the tenth century survived for a long time (unlike their predecessors) and form the image of Europe even today.

—Antonin Kalous

Bibliography

- Adams, Jonathan, and Katherine Holman, eds. *Scandinavia and Europe 800–1350: Contact, Conflict, and Coexistence*. Turnhout, Belgium: Brepols, 2004.
- Barracrough, Geoffrey, ed. *Eastern and Western Europe in the Middle Ages*. London: Thames and Hudson, 1970.
- Dvornik, Francis. *The Making of Central and Eastern Europe*. 2nd ed. Gulf Breeze, FL: Academic International Press, 1974.
- Fine, John V. A. *The Early Medieval Balkans: A Critical Survey from the Sixth to the Late Twelfth Century*. 2nd ed. Ann Arbor: University of Michigan Press, 1991.
- Sawyer, Birgit, and Peter Sawyer. *Medieval Scandinavia: From Conversion to Reformation, Circa 800–1500*. Minneapolis and London: University of Minnesota Press, 1993.

Early Kievan Rus, 860–1000

Kievan Rus was a state that emerged on the banks of the Middle Dnieper River toward the end of the ninth century. Kievan Rus is usually considered the forerunner of the modern states of Russia, Belarus, and Ukraine. The appearance of Kievan Rus marked a major milestone in the history of Inner Eurasia: the beginning of a transition from migratory pastoralism to sedentary agriculture, a process that would sweep Inner Eurasia from the European plain to the Pacific Ocean.

The spread of sedentary agriculture out of east-central Europe started in the sixth century CE with the expansion of the Slavic peoples from their homelands north and east of the Carpathians, an expansion that may have been a response to increasing populations resulting from improved agricultural technology and crops. Some moved west to the Vistula and the Elbe, others migrated to the Balkans, while still others moved east to the Volkhov River and especially the fertile lands of the Middle Dnieper.

After the establishment of the Khazar empire in the seventh century and the security against pastoral raiders that this provided, agricultural villages began to be established by Alans and Sabirs as well as Slavs on the northern edge of the steppe.

With the growth of settlements came an increase in population and wealth, tempting marks for marauders seeking booty and slaves. In the early centuries of this Slavic expansion, the Khazar empire collected tribute from many of these villages, but it also offered some protection against the pillaging of pastoral nomads. To collect tribute, the Khazars built stone fortresses, such as Sarkel on the Don, and garrisoned strong points including, importantly, Kiev.

The Khazars collected tribute in forest products, furs, honey, beeswax, and slaves, which they sold to the Muslim caliphates for silver. Scandinavian Vikings, who had already developed a trade with the Finns and Baltic peoples east of the Baltic Sea, began to penetrate the rivers of western Russia to get to the source of the silver. They built strong points at Staraia Ladoga and Gorodische on the Volkhov River and at Timerevo and Sarski Fort on the headwaters of the Volga. From these strong points, they launched marauding expeditions to gather plunder and slaves to trade with the Abbasid caliphate as well as with the Volga Bulgars and the Khazars. Success attracted more Viking adventurers from Scandinavia, and they fanned out over the forests, demanding more tribute and slaves.

Although these Viking freebooters were a turbulent lot, in 850 they were loosely confederated in the Khaganate of Rus, whose dates probably were 850 to 940. The Khaganate, with its armies of Slavic, Finnic, and Balt tribesmen as well as large contingents of Viking berserkers,



Olga, widow of Igor, prince of Kiev, has the envoys of the Drevlyans buried alive after their arrival by boat. Igor was killed in battle against the Drevlyan prince in 945 CE. From the Radziwill Chronicle, late fifteenth century. (Erich Lessing/Art Resource, NY)

was very powerful. In the beginning, its capital was at Gorodische, but perhaps at the onset of the tenth century a new capital, Novgorod (“New Town”) was constructed next to the old Viking strong point. The Khaganate, a brutal slaving mafia, sent great fleets down the Volga to the shores of the Caspian Sea to trade in amber, European swords, and slaves or to pillage the Muslim villages on the shore of the Caspian. The Rus, either under the auspices of the Khaganate or in independent bands, also sent fleets into the Black Sea that ravaged the coasts of that sea and twice mounted unsuccessful attacks against Constantinople.

By 900, Viking interest was gravitating toward the Kiev region. Kiev was an old settlement, predating the Slavic expansion. By 900, it was the heart of a very rich and heavily settled agricul-

tural area, perhaps one of the most productive in eastern Europe. It was on the periphery of Khazar power, but the Khazars probably kept a garrison there until late in the ninth century. The Russian *Primary Chronicle*, notoriously unreliable in its early chronology, states that Oleg, a mercenary in the service of the Rurikid dynasty of Novgorod, conquered Kiev from Dir and Askold, who may have been previous Viking conquerors. However, the first Kievan prince of the Rurikid dynasty with solid historical certification was Igor, who reigned in the 940s.

In Kiev, princes of the Rurikid dynasty established a kingdom that was an uneasy union of city-states all ruled by members of the dynasty of Rurik. Supported by powerful armies composed of Slavic and Finnic troops but whose elite forces were composed of the Viking mercenaries, the new state supported itself with tributes collected from the quasi-independent Slavic groups inhabiting this rich agricultural region.

Kiev under the Rurikids soon embroiled the region in war. Kievan armies battled the Byzantine empire, the Bulgars of the Danube, the Volga Bulgars, the Pechenegs, and the Khazars as well as the Slavic tribes who dwelt as far away as the Oka River area, near present-day Moscow. Igor led an army in an unsuccessful campaign on the Byzantine empire. In 945, he attacked the Drevlyans, a Slavic tribe who were becoming increasingly reluctant to satisfy Igor’s demands for tribute. The Drevlyan leader, Mal, defeated Igor and killed him. This action did not go unpunished, because Igor’s wife, Princess Olga, who ruled as regent for her underage son, Svyatoslav, led armies that exacted brutal revenge.

Olga’s policy toward Byzantium was more pacific. She negotiated with the Byzantine emperor and even journeyed to Constantinople and converted to Christianity.

Her son, Svyatoslav, remained a staunch polytheist. When he reached maturity, he led armies against most of his neighbors. He destroyed the Khazar empire and sacked its capital, Itil, as well as the Khazar stronghold of Sarkel on the Don. In 968, he joined with the Byzantines to attack the Bulgarian kingdom. The wealth of the Danubian region impressed Svyatoslav, and he decided to establish a new capital

there. The Byzantine emperor, John Tzimisces, alarmed at the prospect of a new neighbor more powerful than the Bulgarians, negotiated with the Pechenegs to attack Svyatoslav's army. The Pechenegs destroyed the Kievan Army as it was crossing the Dnieper and killed Svyatoslav. The Pecheneg leader and his family used Svyatoslav's gilded skull as a cup from which to drink toasts on ceremonial occasions.

On Svyatoslav's death, his sons launched a nine-year war of succession. The youngest son, Vladimir, prince of Novgorod, won the struggle when he recruited fresh levies of Scandinavian mercenaries and seized Kiev in 980. Vladimir's reign lasted 25 years and was a turning point in the history of Kievan Rus because it was during his reign that the prince and the people converted to Orthodox Christianity.

Vladimir, who appreciated the utility of a state religion in conferring legitimacy on the government, at first turned to the Rus blend of Slavic, Scandinavian, and Iranian paganism in order to cloak his regime in legitimacy. He erected monuments to pagan gods and seemed intent on strengthening the role of traditional priests in Kiev. But in a sudden about-face in 899, Vladimir ordered the conversion of his state to Christianity.

The twelfth-century monks who composed the *Primary Chronicle* relate, in a charming but probably apocryphal tale, that Vladimir's search for a religion was the result of a studied comparison of the practices of Jews, Muslims, Catholics, and Orthodox Christians, but it probably was influenced as much or more by strategic and economic considerations. Byzantine emperor Basil II engaged in his epic conflict with the Bulgarian kingdom as well as revolts in Asia Minor and sought a military alliance with Vladimir. Vladimir's price was high: Basil's sister, Anna, must be given in marriage to Vladimir. Basil apparently agreed but was slow in sending Anna to Kiev. Only after Vladimir's forces attacked the Byzantine Crimean city of Cherson did Basil send his sister to Vladimir.

Along with Anna came Orthodox priests and all the panoply of the Orthodox Church. The great statue of the pagan god Perun that Vladimir had erected on the banks of the Dnieper was thrown down, and the people of Kiev were

baptized en masse in the river. The conversion to Orthodoxy meant that Kievan Rus would become part of the zone of Orthodox civilization at a time when the divergence between Latin Western Christianity and Greek Eastern Christianity was becoming wider.

Vladimir was named a saint in the Russian Orthodox Church, and Kievan Rus began its career as the expanding eastern wing of Christendom. Kievan Rus would endure until 1240, when the Mongols sacked and burned Kiev.

—Wilfred J. Bisson

Bibliography

- Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia, Xlibris, 2003.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Franklin, Simon, and Jonathan Shepard. *The Emergence of Rus, 750–1200*. London: Longman, 1996.

Georgian Kingdoms

Politically, Georgia in the year 300 did not exist. The land that would 700 years later become Sakartvelo (“the land of the Kartvels”), or what we in the West call “Georgia,” was made up of several kingdoms divided into two cultural and political zones. Eastern Georgia, composed principally of the region of Kartli, or Iberia, was exposed to Persian influences but had managed to retain its formal independence. Western Georgia, straddling the Black Sea, comprised Colchis (also known as Egrisi, or Lazica) and had fallen under the sway of Rome.

This was the setting, in about 337, for the conversion of King Mirian of Kartli to Christianity by St. Nino, a humble woman from Cappadocia (present-day Turkey). Though archaeological evidence shows that early followers of Christianity had been present in western Georgia by the year 200, formal adoption of the new religion did not take place until about the same time as Kartli. For Georgia, conversion to Christianity was a pivotal moment. For the first time in its history, the country looked toward the West.

Though Georgia now oriented itself to the West, it faced a stern challenge from the East. In 363 Persia, reenergized by a new dynasty, the Sassanians, defeated Rome and asserted its political hegemony over Kartli. Toward the end of the 400s, Vaktang Gorgasali, king of Kartli, waged a vigorous struggle against Persia but ultimately was defeated. However, one significant achievement of Gorgasali's reign would have lasting repercussions: the establishment of an autocephalous (that is, independent) Georgian church. Despite the political setbacks of this time, the institutional basis for a cohesive Georgian identity had been set.

Kartli's political decline continued after Gorgasali's death. By 520 the authority of the monarchy had been substantially diminished, and by the 580s it was abolished outright by the Sassanians. A similar process of political subjugation was ongoing in western Georgia, with Byzantium increasingly asserting military and political control over Colchis/Lazica.

It is important to note that until the seventh century Georgia, along with its neighbor Armenia, was monophysite, that is, it held the doctrine of the one and single nature of Christ. This conflicted with the teachings promulgated by the imperial church council of Chalcedon in 451. But in 607, at a time when Georgia increasingly looked to the Byzantine empire for protection from Sassanid Persia, Georgia broke with the Armenians and embraced diophysitism (the doctrine that holds that Christ's nature is both wholly human and wholly divine). Once again, Georgia looked to the West.

Georgia's growing links with Constantinople were temporarily disrupted in 645 when Arab armies, fervent with the zeal of a new religion, Islam, invaded. By 655 all of Kartli had become an Arab emirate. Though the emirs interfered little with Georgian culture, Muslim suzerainty caused many Kartlian nobles and religious elites to relocate to the southwest, to the regions of Tao-Klarjeti and Shavsheti, far from the Arab metropole based in Tbilisi (founded by Vaktang Gorgasali in the fifth century). Unimpeded access to Byzantine ideas and practices led to a great cultural efflorescence in this "neo Kartli." Important new churches were founded, the size and scale of which exceeded anything being built in Byzantium at that time, while a great

output of religious literature—gospels, exegetical works, philosophical tracts—testify to Georgia's increasing cosmopolitan outlook.

Western Georgia was untouched by the Arab invasions, and in 795—at the same time as "neo Kartli" was being created by a diaspora community in Tao-Klarjeti and Shavsheti—Leo III, king of Abkhazeti (far northwestern Georgia), brought all of Colchis/Lazica under his dominion, with Kutaisi as the capital. It was during this period that the church in western Georgia broke off from the patriarchate in Constantinople, to which it had formerly owed allegiance, and subordinated itself to the church in Kartli. The Western and Eastern churches in Georgia were now united. The stage was set for political unification.

As a sense of national identity emerged, two of the first histories were composed sometime in the ninth or tenth century, both dealing with the spread of Georgian Christianity: *The Conversion of Kartli* and its more elaborate counterpart, *The Life of St. Nino* (earlier redactions can be traced to the seventh century). Though these histories are concerned with events from the fourth century, their outlook reflects a growing sense of nationhood and the desire to construct a Georgian past.

A pivotal moment came in 813 when Ashot I, from the Bagratid family, seized political control of neo Kartli. Unification now became an overt political goal, impelled in part by a common struggle against outside forces and the increasing idea that Georgians, both east and west, shared a common culture and inhabited a single land, Sakartvelo. After much difficulty, in 1008 the kingdoms of Kartli/Iberia and Abkhazeti were unified by Bagratid III. The next two centuries would be a golden age for Georgia.

—Charles Cavaliere

Bibliography

- Allen, W. E. D. *A History of the Georgian People from the Beginning to the Russian Conquest in the Nineteenth Century*. London: K. Paul, Trench, Trubner, 1932.
- Braund, David. *Georgia in Antiquity, 500 BC—550 AD*. Oxford, UK: Oxford University Press, 1994.
- Rapp, Stephen. *Studies in Medieval Georgian Hagiography: Early Texts and Eurasian Contexts*. London: Variorum, 2005.
- Toumanoff, C. *Studies in Christian Caucasian History*. Washington, DC: Georgetown University Press, 1963.

■ Introduction: Political Change in the Americas

In the Americas during this era, political structures ranged from the informal politics of the small hunting and gathering band as existed among the dwellers of the Arctic or the extreme southern tip of South America to the institutionalized states of Mesoamerica and the Andean region. Because we understand little about the communication systems of these peoples (except for the writing of the Classic Period Maya), most of what historians can say about political structures of the Americas and changes in them in this age is derived from inferences based on artifactual evidence.

It is conjectured that in the more sparsely populated regions where some type of agriculture was possible, independent villages were the rule. In more densely settled areas, where resources were more abundant, chieftaincies, groups of villages ruled by one chief or headman, were common. This was the case of the Mound Builder villages of the Mississippi Valley, the North American southeastern region, the Pueblo farmers of the North American southwestern region, the salmon and marine mammal hunting villagers of the North American Pacific coast, the acorn-eating villages of California, the farming villages of the Amazon Basin, and the circum Caribbean peoples of the West Indies, northern South America, and Central America.

It was only in the more densely populated and intensively farmed regions of Mesoamerica and the Andes that what we would recognize as states appeared. These states were usually small by modern standards, often little more than city-states, including only a city and its hinterland. However, in a few cases, larger entities emerged.

Such is the case of Teotihuacan, which was the largest city in the Americas and among the larger cities in the world in the middle of the first millennium CE. From about 100 to 500 CE, Teotihuacan was the hegemon of Mesoamerica, dominating the region commercially, culturally, and to some extent politically. Evidently, Teotihuacan not only exerted cultural influence over the Maya cities to the southeast but also held some of the Maya cities in a sort of imperial con-

trol. Teotihuacan's influence ended in the fifth century when the great city was mysteriously destroyed and the population scattered.

Historians know more about the Maya city-states. They flourished during the Mayan Classic Period, from about 200 to 900 CE. There were many Mayan city-states, each independent or striving to be, and each ruled by its own king or, occasionally, queen. Maya royalty was believed to intercede with the gods for divine favor for their city. Warfare among the cities was frequent and very bloody. For much of the period, the Maya cities coalesced into two alliances, one centering on Tikal and the other led by Calakmul. The struggle between these two cities, reminiscent of the struggle between the ancient Greek cities of Athens and Sparta, lasted much longer than the Peloponnesian Wars but, like the Greek conflict, was inconclusive, with losers but no winners. Although the Maya made great achievements in mathematics and astronomy, in politics and statecraft they ended about where they began. The Maya Classic Period ended with massive droughts and savage famines in the ninth century.

We know much less about the states of the Andean region than we do about those of Mesoamerica. The Andean peoples may have had a method of recording their thoughts in the system of quipos, knotted chords in which the knots are read according to their size and technique, or the quipu may have been simply mnemonic devices to keep numerical records. Unfortunately, we will not know until and unless someone discovers how to read the quipu.

Archaeological evidence indicates that three or four Andean peoples had states in this period: the Moche, the Nazca, the Tiwanaku, and the Wari. The Moche lived in northwestern Peru, farming the short valleys of rivers that rushed down the west slope of the mountains to the Pacific Ocean. They probably had several states, each in its own valley. We can conjecture, from the rich grave goods excavated from the tomb of the Lord of Sipan, that their rulers were very powerful and revered by their subjects.

We can know more about Tiwanaku. Tiwanaku was a city built in the wetlands on the shore of Lake Titicaca. The people of Tiwanaku had developed an extremely productive agricultural system and an elaborate civilization. To gather resources from different ecological zones, the Tiwanaku sent out colonies to remote places to grow maize, tropical fruits, cotton, and other exotic products. Their state resembled an archipelago of settlements and control. Little is said about their form of government except that it seems to have been based on a very powerful and privileged ruling class.

Wari was a territorial empire, a precursor of the Inca empire that would, centuries after the demise of the Wari, occupy the same territory. The people of Wari used quipu and, like the Inca, built roads to connect their strong points. Both the Wari and Tiwanaku declined precipitously in the great droughts that afflicted the region in the tenth century CE.

—*Wilfred J. Bisson*

Stateless Villages in Most of the Americas

In most of the Americas between 300 and 1000 CE, the most common type of human polities were stateless villages. These settlements represented a milestone on the path to more complex societies for some groups, while other villages were the culmination of social development for others. These villages also were a stepping stone from egalitarian societies to highly organized and hierarchical societies in which individuals and groups held status because of their birth.

Unlike rulers of states, chiefs of villages have limits to their power. They lack a bureaucracy and institutions that reinforce their power. While both types of rulers may combine religious and political power to maintain their positions, chiefs operated with limits. Their people submitted to their power in both religious and secular matters, but the organization remained based on a voluntary exchange of services. While villages developed a hierarchical and stratified society, the chiefs remained answerable to those they led.

Villages developed as bands of humans became more sedentary and less nomadic. The

beginning of agriculture encouraged this development, as humans were able to depend upon a steady supply of staple crops. The adoption of maize as the mainstay of a group's diet is the most common example. However, many groups that did not grow maize adopted a sedentary lifestyle during this time. They continued to depend upon hunting and gathering of wild plants for their sustenance. Certain areas, such as the eastern woodlands in the future United States, provided sufficient game and plants to support this type of life. Other villages, such as those in Florida or the Pacific Northwest, depended upon marine life for most of their food. The availability of dependable sources of food resulted in increased population.

As villages grew, a change in the society followed. While most nomadic peoples followed leaders because of their personal qualities and knowledge, village life encouraged the change from an egalitarian to a hierarchical society. Nomadic groups tended to follow leaders who had displayed leadership qualities and knowledge about their environment and the group's traditions, and villages slowly evolved to put leadership in the hands of particular families or groups, based upon their birth. Decisions were made less often by consensus and more often by individuals. The power of these chiefs increased as they oversaw more and more aspects of village life, ranging from trade with other groups to warfare to protect the resources controlled by the village.

Because stateless villages did not have formal social structures, such as a bureaucracy or legal codes, hierarchical leaders reinforced their special position through religious means. Chiefs played a central role in mediating between the people and the gods. The gods' favor was necessary for the group's success. Different groups throughout the Americas had different theological beliefs, but each group was influenced to some extent by contact with others. The Southern Cult, for example, included motifs of death and deities. Artifacts with Southern Cult symbols, such as hands with eyes gazing out, have been found from Florida to Texas and into the Great Lakes region. Chiefs assumed a leading role in religious rituals. Ceremonial centers developed that sometimes served a network of vil-

lages. One example would be the Mississippian culture, based upon the floodplains of the Mississippi and Missouri as well as other tributary rivers. Ceremonial centers, such as Cahokia, were surrounded by villages and homesteads. Flat-topped mounds, topped with ceremonial buildings, were central to the Mississippian culture's religious practices. Chiefs performed rituals on these mounds that were sometimes observed by the ordinary people. Eventually, chiefs in many cultures were worshipped as deities because of their intermediary role.

As chiefs' political and religious power grew, they were more able to mobilize the village's workforce on community projects. Ceremonial mounds, protective stockades, irrigation projects, and similar works were supervised by the chiefs or their assistants. These ceremonial centers usually marked the center of a territory associated with a particular political entity. While individual villages had their own chiefs, each was subordinate to a hierarchical superior. The pattern is associated with peoples as diverse as the Arawak villages in the Caribbean and the Pueblo settlements in the American Southwest. Individual villages remained largely autonomous, but the inhabitants of the associated settlements considered themselves related to the larger group through either family connections, language, or heritage.

The villages maintained trading contacts with distant people. Specialists within the village made goods that were wanted by other groups. Trade goods included desirable materials for tools, weapons, or prestige goods. Examples of materials that villages in the Mississippi area traded included obsidian from the Southwest, copper from the Great Lakes or Appalachians, mica from the Southeast, and shells and sharks' teeth from the Gulf of Mexico. Control over the distribution of these prestige goods was in the hands of the chiefs. In the stratified society, the upper ranks possessed most of the goods. The use and display of the goods marked an individual's place in village society. Large amounts of prestige goods have been found in graves all across the Americas. The amount of goods indicates the social standing of the person buried. Chiefs and members of the ruling families have large amounts, while ordi-

➤ ANASAZI CLIFF DWELLINGS



View of the Cliff Palace, one of the cliff dwellings built by the Anasazi people. The elaborate ruins are part of Mesa Verde National Park in present-day Colorado. (Corel)

Like other stateless villages, the inhabitants of this pueblo were dependent upon their own resources for constructing, maintaining, and defending their dwellings. Cooperation and consensus among the people was vital to the village's survival. The pueblos, located on cliffs and with few exterior openings, were well designed to keep out intruders.

nary individuals have far fewer possessions buried with them.

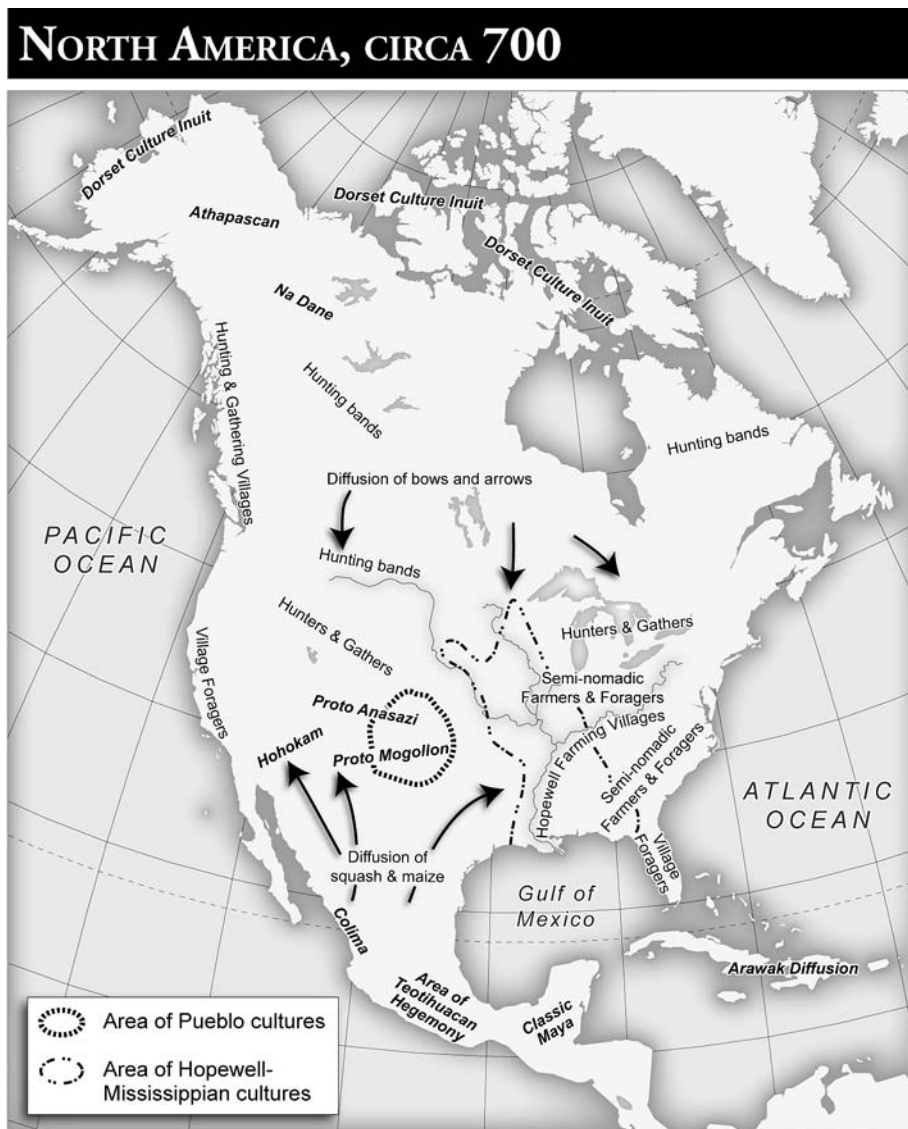
—Timothy J. Watts

Bibliography

- Plog, F. T. *The Study of Prehistoric Change*. New York: Academic Press, 1974.
- Trigger, Bruce G., and Wilcomb E. Washburn, eds. *The Cambridge History of the Native Peoples of the Americas*. New York: Cambridge University Press, 1996.
- Waldman, Carl. *Atlas of the North American Indian*. Rev. ed. New York: Checkmark Books, 2000.

Chieftainships—Mound Builders and Pueblos, Amazonia and the Circum-Caribbean

Chieftainship is an intermediate stage in political development between a tribe and a state. The chieftainship is normally inherited, but the



position of the chief may be unstable and insecure. Chieftainships do not have the institutionalized methods of control that a state has. Many chiefs rely on asserting their authority through demonstrations of spiritual power and backing, through conspicuous consumption, or through large-scale building projects.

In pre-Columbian America, chieftainships developed between 300 and 1000 CE in a number of areas outside Mesoamerica. These areas included the Mississippi Valley where Mound Builders created monuments, the American Southwest where groups of Native Americans worked together to create defensible pueblos, and the Amazon region and the shores around

the Caribbean where fewer enduring examples of chiefly authority have survived.

Societies at a less complex level of development rely on leadership by individuals who have proven their abilities, whether through military prowess, speaking ability, or outstanding achievements in other areas. Their authority is limited and may be restricted to an area in which they have demonstrated their abilities. Population densities in these societies are normally low. Although the various groups in a tribe feel a kinship, they only cooperate in unusual circumstances and retain a great deal of autonomy.

The development of chiefs in a society is often indicated by the presence of exotic goods



Mississippian shell gorget, about 1000 CE. The gorget depicts crested woodpeckers, symbols of war to the Mississippians, guarding the four directions that encircle the sun. (Barbara Heller)

buried with infants or children too young to have distinguished themselves. The presence of such goods indicates that these children were born into a family of elite status. Chieftainships probably developed when the leader of one settlement convinced his people to gain control over neighboring settlements. Many times, conquered people were integrated into the home settlement of the chief, allowing for greater control.

In the chieftaincies, the position of the chief depended on him convincing his people that he was favored by the gods and shared in divine power. Several methods were apparently used. One was to require labor on complex building projects for ceremonial purposes. The mounds in the Mississippi Valley were created by Mound Builders for religious rituals and displays sponsored by the group's chiefs. These constructions were demonstrations of his authority. The roads constructed in the Chaco Canyon area were apparently built for similar religious reasons.

Another method of emphasizing the favored status of the chief and his family was their exclusive right to wear and use exotic goods. Examples of these goods were buried with the rulers, allowing archaeologists to identify the elites. These goods were usually rare or imported articles obtained from great distances or through

difficulty. Among the Mound Builders, examples of such goods included shells from the Gulf of Mexico, jade from Mesoamerica, and copper items from the Great Lakes region. Extensive trade routes brought these products to the elite consumers but not to the ordinary people.

The failure of a chief to protect and provide for his people could lead to his downfall. If he claimed authority because of divine favor, his failures could indicate that he had lost that blessing. In all four of the regions, the chieftainships failed to develop into more complex states, thanks to environmental and other causes.

—Timothy J. Watts

Bibliography

- Cohen, R., and E. Service, eds. *Origins of the State: The Anthropology of Political Evolution*. Philadelphia: Institute for the Study of Human Issues, 1978.
- Earle, T., ed. *Chieftdoms: Power, Economy, and Ideology*. Cambridge, UK: Cambridge University Press, 1991.
- Fried, M. *The Evolution of Political Society*. New York: Random House, 1967.

Farming Cultures in North American Southwest

What archaeologists call the Mogollon Culture emerged sometime between 200 BCE and 200 CE along the Mogollon Rim's desert and forested highlands of southern Arizona and northern Mexico, and then it disappeared. According to Emil W. Haury, the Mogollon resurfaced as part of the Anasazi around 850. From archaeological evidence, the Mogollon people relied on rainfall and not on irrigation to obtain sustenance from their fields.

It is nevertheless the settlements of the Mogollon Culture found in the colder, wetter, and more mountainous reaches of east-central Arizona as well as west-central New Mexico that have received the most scrutiny by archaeologists. The Mogollon peoples lived at first in small villages consisting of pit dwellings. These early pueblos normally had fewer than a dozen rooms where perhaps one or two extended families resided. The Mogollon evolution is characterized by five stages, the last ending about 500

► CHACO CANYON—THE DEBATE GOES ON

Pueblo Bonito, which many archaeologists see as the capital of the Chaco Experience, was clearly a very important ceremonial center. Wolcott Toll has emphasized (and many other scholars have accepted his notion) that in order to understand Chacoan society, one must pay attention to the commonalities of modern-day Pueblo ceremonies. Pueblan society, like that of its historic past, is conditioned by the changing seasons. Corn consequently was a central aspect of Chaco society, as it is with the present-day Pueblos. We may surmise also that the rituals practiced by modern Pueblo Indians were similar or perhaps identical to those at the height of the Chaco Canyon era. In terms of the structuring of the so-called Chaco State (if this latter delineation is accepted), it is hard to unravel the pattern of office holding. Were positions hereditary? We really do not know for certain. However, the recent work of Brian Fagan (2005) offers a thorough review of the

archaeologists who have studied and continue to argue about the Chacoan political structure. He has noted that the only indication about the possible power of Chaco Canyon's political leaders emanates from Pueblo Bonito (particularly in light of research of excavated burial sites there). David Wilcox "believes Chaco was a small state administered from Pueblo Bonito, with territorial chiefs living in outlying communities." Fagan, on the other hand, embraces Frank Cushing's much-maligned notion of a council of priests representing the six cardinal points. Fagan's and Cushing's championing of the so-called Masters of the Great House as the real model of the system of governance for Chaco Canyon's Pueblo Bonito remains a subject for speculation and argument. The accuracy of this view depends on whether the structure for the later Zuñi was actually a continuation of that followed by the Chacoans.

—John S. Leiby

years ago, and six regional variants. As time progressed Mogollon communities became ever larger so that by the time of Columbus they possessed pueblos that perhaps numbered several hundred rooms. This latter process would mean a more stratified hierarchical society and also a much more developed division of labor.

The Anasazi—"enemy ancestors" in the Navajo language (although denoted by scholars as the "ancient ones")—inhabited the plateau region of the present-day American Southwest. Many tourists each year visit the elaborate cliff dwellings found in Mesa Verde National Park, Navajo National Park, and Canyon de Chelly National Monument and the Great Houses of Chaco Culture National Historical Park.

Before 500 CE the Anasazi Basketmakers, so named because of their intricately woven and decorated baskets, settled in caves and rock overhangs—cliff dwellings—near streams or rivers. They located themselves along these canyon walls facing south to take advantage of the warmth of the sun during the winter months. However, like the Mogollon and Hohokam peoples, the early Basketmakers built small semisedentary villages in open areas.

For clothing the Anasazi Basketmakers wore fur or turkey-feather robes, string aprons, loin-cloths, and plant-fiber sandals. They subsisted primarily on corn, beans, and squash, which they grew in small garden plots as compared to the large-scale fields found in the later Anasazi pueblos. They augmented their diet through hunting (mountain sheep, elk, mule deer, and black bear) and food gathering. Women, for instance, harvested wild crops such as amaranth, pinyon nuts, Indian rice grass, and sunflower seeds. The Anasazi Basketmakers were unaware of how to make pottery but were very adept at producing very ornate and sturdy baskets. Women cooked using these baskets by lining them with pitch. The food mixture and then fire-hot stones were added.

These baskets were fashioned into a wide assortment of sizes and shapes. They were utilized not only to transport possessions, for meal preparation, and for burial offerings but also to convey seeds and flour as well as to store grain and ceremonial items. To date, most early Basketmaker artifacts (mainly baskets) have been found by archaeologists within dry caves and rock shelters. The Anasazi Basketmakers' pace of evolution intensified by the middle of the first

millennium. This is evidenced by the construction of larger villages that possessed large storage and ceremonial structures. Some of the villages excavated by archaeologists in central New Mexico contain pit houses comprising more than 50 in number. Although the later Basketmakers continued to hunt and gather food, they increasingly devoted more time to the cultivation of domesticated crops and their ceremonial structures. Like the later pueblo peoples, the Basketmakers began to build *kivas* that contained a *sipapui*, or small entrance, where they believed the first people emerged from the underworld onto the surface of the earth.

While the Basketmakers' evolution lagged behind their southern counterparts, the pace of development hastened by the midpoint of the first millennium. They began to construct larger villages (with far greater storage capacity), signifying increased crop yields. For instance, in west-central New Mexico archaeologists have unearthed a number of villages whose extent indicates a much higher population in the regions inhabited by the Basketmakers. Accordingly, these larger villages led to greater social stratification and more power in the hands of the elites. Whereas the early Basketmakers had formulated an egalitarian society, increasingly the inhabitants of the ancient Four Corners region of the American Southwest evolved into a much more hierarchical society although not on the scale that arose in Chaco Canyon.

As time progressed the inhabitants of what today is called the Four Corners area established more elaborate and lasting lodges that might be circular or rectangular in composition and structure. Over time both the residences and kivas of the later Basketmakers became larger, with inhabitants of each numbering several hundred people and with each village encompassing 100 to 500 rooms and more than a dozen pit houses. Eventually in the late first millennium the Anasazi peoples of the Four Corners regions redefined themselves, as evidenced by the construction of the elaborate Chaco Canyon villages. There the Pueblo Anasazi constructed 11 villages encompassing 100 to 500 rooms each. This so-called Chaco Phenomenon represented a transition to even more elaborate villages and structures. Pueblo Bonito, in Chaco Canyon, grew larger

and larger so that by 500 CE it was one of the most populated villages found in the canyon. Moreover, after 500 CE the Anasazi there began to substitute their pit houses for aboveground houses, which evidences their further development and refinement. These peoples continued to evolve, but by the mid-eleventh century they had reached their zenith.

In terms of the political-social system that developed among the peoples of Chaco Canyon and beyond, much debate among archaeologists has occurred and continues today. Some scholars such as James Judge have postulated that the initial loosely configured farming communities of the Anasazi gradually grew larger (Pueblo Bonito became the primary community in Chaco Canyon), which resulted in a more elevated hierarchy. Field research over generations has unearthed differences in burial sites, which indicate that social stratification was present in Chaco Canyon. Though still debated, this circumstance would suggest that some people held greater social distinction and with it perhaps political power. If true with regard to the latter, this would support the notion of those who contend that what emerged with Chacoan people was a state. One of the more prominent of those supporting the idea of a Chacoan state, David Wilcox, has articulated the view that outlying communities became tributaries to Pueblo Bonito's more prominent families/clans. Yet another archaeologist, Steve Leskon, who researched the Chaco State Theory via the outlying communities with Chaco Canyon and its periphery, found similarities in their architecture, thus suggesting that Pueblo Bonito was not just a ceremonial center but in reality was the capital of the Chaco state. Whether there actually was a Chacoan state will undoubtedly cause the present and future archaeological community to continue to ponder.

—John S. Leiby

Bibliography

- Fagan, Brian. *Chaco Canyon: Archaeologists Explore the Lives of an Ancient Society*. Oxford, UK: Oxford University Press, 2005.
- Frazier, Kendrick. *The People of Chaco: A Canyon and Its Culture*. New York: Norton, 1999.
- Plog, Stephen. *Ancient Peoples of the American Southwest*. New York and London: Thames and Hudson, 1997.

Reid, J. Jefferson, and David E. Doyel, eds. *Emil Haury's Prehistory of the American Southwest*. Tucson: University of Arizona Press, 1986.

Stuart, David E. *Anasazi America*. Albuquerque: University of New Mexico Press, 2000.

Early Mesoamerican States

During the Classic Period, a number of Mesoamerican polities arose that rank as states and empires. These states and empires differed in many significant ways from those established in the rest of the world. However, they exhibited a high degree of sophistication, and their rulers were able to exert a large amount of control over their people.

Mesoamerican states were unique because they existed at a stone-age level of technology. Virtually all tools, weapons, and mechanical devices were created from stones of different kinds and wood. Manufactured goods consisted of workings of these basic materials. Mesoamerican states were also unusual in the world because most of them lacked the type of cities found in Asia and Europe. Relatively compact areas of dense population were rarely found in Mesoamerica during the Classic Period. Only a few examples, such as Monte Alban and Teotihuacan, can be cited. Instead, most states were centered upon small religious and administrative centers. The centers contained temple buildings such as pyramids and the homes of the rulers and their retainers. Some specialized craftspeople also lived in the centers and created products for use by the elites or for trade. Most of the population lived in multigeneration farm homesteads, close to the fields they worked. As a result, it is possible that hundreds of small independent states existed in Mesoamerica.

Politically, Mesoamerican states were more complex than the political entities that had come before. They had a ruling class that had few or no direct family links to common people. Status was inherited, not earned. Kings were able to demand forced labor from their people, to create temples and palaces, and to fight in wars if necessary. Kings were regarded in Mesoamerican states as being descended from the gods. A society's well-being depended upon keeping the gods and their king pleased. To as-

sert their special status, kings, members of the ruling family, and the nobility openly demonstrated their special status through displays of wealth, conspicuous consumption of luxury goods from other regions, or the creation of monumental works. These displays often helped shore up the authority of a ruler who lacked institutionalized power over his people.

The first Mesoamerican states arose when ambitious chiefs conquered nearby polities and asserted their authority over them. Ordinarily, this assertion took the form of demands for labor. This conquest created a new hierarchy of officials who ruled over conquered areas.

One of the first Mesoamerican states was Teotihuacan, in the Basin of Mexico. Teotihuacan grew rapidly, and its rulers resettled most of the population of the basin within its boundaries. This resettlement helped Teotihuacan's rulers to control the different groups who were assimilated into its population. By 150 CE, Teotihuacan had a population estimated at 80,000. The city's size helped to discourage rivals. The earliest projects by Teotihuacan's rulers included two massive pyramids, dedicated to the sun and the moon. Later projects included massive apartment complexes for its people and public works like irrigation canals to support intensive agriculture. Teotihuacan expanded the areas under its control to include corridors of territory into regions that provided trade goods. Teotihuacan became Mesoamerica's first empire, incorporating numbers of peoples who had been previously independent and did not share an ethnic heritage with its founders. Trade was probably one of the driving forces behind the expansion, especially trade in products such as gold, silver, cacao beans, feathers, and other luxury goods for the noble classes. The centralized government at Teotihuacan and its ability to demand forced labor from its people gave it an advantage over its neighbors. Although Teotihuacan left no written materials, archaeologists believe that the surviving artwork indicates that the people of Teotihuacan were regarded as interchangeable units, expected to work for the good of the rulers.

A similar process occurred in the city of Monte Alban, which was founded by people living in the Oaxaca Valley. The city was built on a

defensible mountaintop, with two miles of walls around it. Satellite settlements were established to provide forward defense and to make agriculture easier. Extensive canals were constructed by centrally directed forced labor to increase the production of food. The Zapotec state continued to expand and incorporate surrounding peoples until it covered around 7,722 square miles. The city of Monte Alban began to shrink after 300 CE, with people resettling in the surrounding villages. It remained a religious center, however, and was the destination of pilgrims.

Smaller states were founded among the Maya in the Mexican highlands and lowlands. These city-states were greatly influenced by Teotihuacan and the Zapotec states. These influences came through trade exchanges as well as military conflict. Tikal, for instance, was one of the earliest Mayan states. It used military conquest and shrewd diplomacy to dominate and incorporate its neighbors. The complete elimination of a rival ruling family and its replacement by a member of Tikal's dynasty was one method. Another method was the desecration of religious sites in conquered cities and their replacement by sites dedicated to Tikal's gods. In this way, Tikal managed to combine physical conquest with spiritual conquest. Actual military conquest by Mesoamerican states was relatively rare because the logistics required were beyond their capabilities. Many warriors were only available during part of the year because of agricultural requirements. Also, lack of pack animals and wheeled vehicles ensured that only the supplies carried on human backs were available.

Palenque was another important Mayan city-state. Located on the northwestern edge of the Maya Lowlands, Palenque was located close to a cacao-growing area and blessed with six rivers for easy water transportation. The city was discovered in the seventeenth century and remains one of the best-preserved examples of Mayan architecture and art. The site was occupied until the late eighth century. Most surviving structures and historical records date from 600 to 800 CE. Beginning with the king Pakal during the seventh century, Palenque became an important ceremonial center. The many temples and religious structures help make Palenque's history the best documented in Mesoamerica.



Photograph from the Pyramid of the Sun at Teotihuacan illustrates the elaborate and extensive building characteristic of early Mesoamerican states. (Corel)

Calakmul was a major urban center in the southern Maya Lowlands between 300 and 900 CE. The size of the structures shows that the rulers of Calakmul could organize both people and materials to create large projects. Calakmul's rulers were also able to exert their influence over their neighbors. Palenque's well-documented history indicates that it was conquered by Calakmul shortly before Pakal ascended to the throne. Other Mayan cities were tributaries to Calakmul until the region experienced political fragmentation in the ninth century. The city may have had a population of up to 75,000 people.

Copan was the southernmost Mayan state during the Classic Period. Located in modern Honduras, Copan had a population of around 25,000 and exerted influence over a large area. Its rise to greatness was apparently begun by a ruler from Teotihuacan around 426 CE. A program of constructing temples and ceremonial courtyards helped cement Copan's importance to the region. Surrounding settlements were reduced to tributary status. By the early eighth century, the king of Copan could claim equality with Palenque, Tikal, and Calakmul on his monuments. The city collapsed during the early ninth century as a result of overpopulation and ecological degradation.

Yaxchilan was an important Mayan city overlooking the Usumacinta River. Its many monuments are notable for their depictions of women. They also allowed scholars to decipher many of the ritual images used throughout the Mayan

world during this time. Yaxchilan established many alliances during the Classic Period, including close relations with Calakmul. These shifting alliances may have led to Yaxchilan's collapse around 808 CE. Excavations at the central ceremonial complex revealed many projectile points, indicating that a final battle took place there around that time.

After 800 CE, the existing Mesoamerican states began to decline. Most were apparently the victims of internal divisions. The demands of the ruling families and nobility for labor and luxury goods put ever-increasing pressure on the common people. The gulf between the classes also increased. Villages became more autonomous, and the power of centralized state governments declined. Some cities show signs of having been looted or destroyed by fire between 800 CE and 1000 CE. By 900 CE, the Classic Period had come to an end, with only a collection of petty city-states throughout Mesoamerica.

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Bibliography

- Evans, Susan Toby. *Ancient Mexico & Central America: Archaeology and Cultural History*. New York: Thames and Hudson, 2004.
- Feinman, Gary M., and Joyce Marcus, ed. *Archaic States*. Santa Fe, NM: School of American Research Press, 1998.
- Jones, Grant D., and Robert Kautz. *The Transition to Statehood in the New World*. New York: Cambridge University Press, 1981.
- Marcus, Joyce, and Kent V. Flannery. *Zapotec Civilization: How Urban Society Evolved in Mexico's Oaxaca Valley*. New York: Thames and Hudson, 1996.

The Teotihuacan Empire, 300–650 CE

Teotihuacan was the first empire in Mesoamerica during the Classic Age that stretched from 300 to 900 CE. It was one of the largest cities in the world during this time, with a population estimated at up to 200,000 people. Until at least 650, Teotihuacan dominated the Basin of Mexico and the surrounding areas. Archaeological evidence indicates it had a strong central government that exerted strict control over many aspects of the population's lives.

The earlier Olmecs had established a number of ceremonial centers that were independent polities. These centers had relatively small populations. Soon after Teotihuacan was founded during the first century before the Common Era, it began to grow rapidly. The ruins of Teotihuacan show signs of city planning, with a two-mile-long central street known as the Avenue of the Dead. The avenue was more than 150 feet wide and ran from the Pyramid of the Moon to a large compound that probably served as an administrative center and central market. By 300 CE at least half of the people in the Basin of Mexico lived in Teotihuacan. The city covered an area of more than seven square miles, but its population density was less than contemporary European cities. One reason the population grew so rapidly was that Teotihuacan was a religious center for the region. The massive Pyramid of the Sun, for instance, was built over an underground lake considered to be the place where humans emerged into this world.

Although the plain where Teotihuacan was located was relatively well watered and fertile, its population depended more on crafts and specialization than on agriculture. Neighborhoods, or barrios, were organized so that people engaged in the same kind of work lived close to each other. One important industry was the production of obsidian and flint tools and weapons. Other industries included the production of ceramic pottery and small figurines. The degree of centralized planning and control by the government of Teotihuacan is obvious. It was greater than that of any prior Mesoamerican rulers. Each barrio had its own ritual center with three small temples. Apartment complexes were built around the ritual centers, making the barrios virtually self-contained.

The archaeological evidence also indicates that Teotihuacan was intended from the beginning by its founders to serve as a trade center as well as a religious center. It was located on the natural routes between the lowlands along the Gulf of Mexico and the central plateau. It also straddled routes from the American Southwest and the Pacific coast. Because Teotihuacan had few natural resources that were unique to its location, it became an important redistribution center. Teotihuacan rulers encouraged trade and

THE LONG LIFE OF THE ZAPOTEC KINGDOM

The Zapotec kingdom of the Oaxaca Valley had a history dating at least to the establishment of a religious and population center at San Jose Mogote by 900 BCE. Four hundred years later, an urban center was founded at Monte Alban as part of the confederation of different Zapotec peoples. Monte Alban experienced a golden age during the Classic Period, starting around 200 CE. The city's rulers gained control over at least 50 surrounding population centers, forcing them to pay tributes of goods and labor. A defensive wall around the base of the mountain protected the city from attacking warriors. The top of the mountain on which Monte Alban was built had been leveled and made into a plaza that included palaces, temples, and a large ball court. Eventually this central plaza became the exclusive precinct of a class of royal rulers, nobility, and priests who maintained the city's religious life. Commoners seem to have eventually been excluded from the central plaza, leading to a growing tension among the classes. Traders from Monte Alban established a separate barrio at neighboring Teotihuacan, and evidence exists of a thriving trade between the two cities. The relationship seems to have been proper but uneasy, since the cities were rivals. After Teotihuacan collapsed



Monte Alban was the center of Zapotec culture until its fall in 900 CE. (Corel)

during the seventh century, Monte Alban underwent a period of decline. The population decreased as more people moved to smaller settlements in the Oaxaca Valley. The population of the central settlement at Monte Alban dwindled from a high of 25,000 to only several thousand by 900. The temples, however, remained a religious center and were visited regularly by pilgrims.

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established special neighborhoods for merchants from other regions. While exporting obsidian and flint weapons and tools and decorated ceramic pottery, Teotihuacan imported cotton, cacao beans, and luxury items such as brightly colored feathers from tropical birds. The thriving trade brought great wealth to the city and its noble rulers.

To support its trade, Teotihuacan developed a strong military force. Unlike other cultures in Mesoamerica, Teotihuacan developed a militia that used standardized formations and tactics. Weapons were supplied by the state and consisted of short stabbing spears and atlatls that threw darts with great force and accuracy. Teotihuacan differed from conquering empires in the Middle East and Europe, however, because it did not try to conquer and occupy the neighboring states. Instead, trade colonies were apparently established in selected areas, supported by warriors. Corri-

dors under Teotihuacan control were created to make the movement of trade goods safe and easy. Neighboring states were influenced by diplomacy and alliances with Teotihuacan.

One example of a kingdom that was influenced by Teotihuacan was Tikal. Tikal was a Mayan city-state allied to Teotihuacan. Tikal conquered neighboring Waxaktun in 378 CE, probably with military assistance from Teotihuacan warriors. Architecture, art, and culture in Tikal showed influence from Teotihuacan. The Teotihuacan war god 18-Rabbit Snake, for example, was adopted by the rulers of Tikal. Such an adoption showed they believed that Teotihuacan's gods were stronger than their own native gods and could bring them success. A neighborhood of people from Teotihuacan has been found amid Tikal's ruins.

Teotihuacan began to decline during the seventh century probably because of internal

conflicts. An uprising around 650 CE burned much of the city's ritual core. The population declined, although large numbers of people remained in Teotihuacan until the ninth century. Other factors believed to have contributed to Teotihuacan's decline included ecological collapse from deforestation and a prolonged drought as well as the influx of migratory peoples from the north.

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Bibliography

- Braswell, Geoffrey E. *The Maya and Teotihuacan: Reinterpreting Early Classic Interaction*. Austin: University of Texas Press, 2003.
- Carrasco, David, and Lindsay Jones. *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*. Boulder: University Press of Colorado, 1999.
- Evans, Susan Toby. *Ancient Mexico & Central America: Archaeology and Culture History*. London: Thames and Hudson, 2004.
- Meyer, Karl Ernest. *Teotihuacan*. New York: Newsweek, 1973.

Blood and Sacrifice—Mayan City-States

During the Classical Period of Maya civilization, between 300 and 900 CE, many Mayan city-states of different sizes flourished in present-day Guatemala and southern Mexico. The Mayan kingdoms were united in the pervasive presence of religion in all aspects of private and public life. The people viewed their gods as actively participating in the successes and difficulties of daily life. The state was expected to sustain and honor the gods to ensure their assistance and favor. Animal and human sacrifices were a significant function of the state in appeasing and seeking the continued assistance of the gods.

Blood was considered the highest gift that could be offered to the gods. The Mayan term for blood meant “precious water,” indicating the high value they placed on it. Some animals were suitable sacrifices to the gods. Jaguars, with their power, speed, and ferocity, were believed to be especially sacred. However, human blood was the type of sacrifice that best pleased and strengthened the divine beings. Most Mayans practiced bloodletting on themselves. Maguey thorns were often used to pierce earlobes, ears,

tongues, and genitals. In extreme cases, strings were drawn through holes pierced in various body parts. Sometimes the blood was collected on paper. The paper was then burned to produce smoke that rose to heaven.

All blood sacrifices followed strict rituals and rules. The rituals enforced the gods' authority over individuals' lives. A key part of this system was the idea that kings and other rulers of the city-states were representatives of the gods, if not divine beings themselves. Mayan kings claimed the right to rule through authority given by the gods to their ancestors. They inherited their positions through divine intervention and were expected to participate in many activities to keep the favor of the gods for themselves and their people. Sacrifices were required to ensure that the world remained an orderly place.

Human sacrifice had its roots in Mayan myths about the founding of the world. According to one story, the gods gathered to create the sun and the moon to light the world. To create them, two gods had to sacrifice themselves. In other stories all the gods sacrifice themselves to make the heavens and the earth. To pay this debt to the gods required blood from humans.

Human sacrifices had to be sanctioned by the state and could only be performed by a member of the priesthood according to certain ritual rules. Victims were selected according to specific requirements. For example, to bring regular rainfall from the god Tlaloc, children who had two whorls in their hair were selected. The more tears they shed before being sacrificed, the more rain would fall in the coming year. Midwives chose a mature woman who had to weave and dance in the market before being sacrificed. In all cases, the victim was ritually washed and purified before the sacrifice. They were dressed in beautiful costumes or as a particular god.

Many of the victims chosen for more common sacrifices were slaves. The most pleasing sacrifices to the gods, however, were captives gathered in warfare. The more courageous a captive was, the greater the honor and benefit in sacrificing him to the gods. The sacrifice of a valiant enemy was also a victory over that enemy's gods. Warfare was often viewed primarily as a method of gathering victims for sacrifices to the gods as much as for any political or commercial gain. The

warriors who captured high-ranking opponents were rewarded and decorated. They often received ceremonial meals after the sacrifice of their victims, the warriors and their families were served small roasted portions of the victims.

Methods of sacrifice varied. Most took place in public displays before the assembled people. Usually, victims and the priests who sacrificed them marched in procession to the temples where the sacrifice was performed. They often sang and danced along the way. Many victims went willingly to their doom, believing that their death was a high honor. Decapitation was often used against women. Strangulation, burning, and hurling from great heights were also used. The most common method involved the removal of the victim's heart. He would be placed on a sacrificial stone at the top of a temple pyramid, and a priest would cut through his chest wall with a flint knife. The priest grasped the still-beating heart and ripped it out of the victim's chest. He held the heart up for the people and the gods to see before placing it in a ceremonial vessel. The body was unceremoniously tossed down the pyramid. The skull was usually removed and placed on a rack with others for public display.

For the Maya and other Mesoamerican societies, blood, particularly human blood, was the nourishment for the gods that kept the world in order. Sacrifice pervaded all of their culture and society.

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Bibliography

- Boone, E. H., ed. *Ritual Human Sacrifice in Mesoamerica*. Washington, DC: Dumbarton Oaks Research Library and Collection, 1984.
- Bradburne, James M. *Blood: Art, Politics, and Pathology*. New York: Prestel, 2001.

➤ LADY SIX SKY

Lady Six Sky was the daughter of Flint-Sky-God K, king of the Maya city Dos Pilas. When the ruling family of neighboring Naranjo was destroyed, Lady Six Sky was sent by her father to establish a new dynasty in that city. Stela recorded her arrival on August 27, 682 CE, and her performance of rituals as ruler three days later. These rituals played an important part in establishing the legitimacy of Lady Six Sky as a ruler. She apparently spilled her own blood as well as that of sacrificial victims to obtain favor of the gods. Female rulers were very rare in Mayan culture, and Lady Six Sky apparently married a Naranjo noble soon after her arrival to further ensure her place. In 687 her son Smoking Squirrel was born and was acknowledged as rightful heir to the throne. She served as official regent for her son. Under Lady Six Sky, Naranjo began a military campaign against its enemies when Smoking Squirrel was five years old. A series of military victories established Naranjo as an important power. Smoking Squirrel's victory monuments always referred to his mother; his father remains unknown. After Smoking Squirrel's death around 726, Lady Six Sky ruled as queen until her death in 741.

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Graulich, Michel. *Myths of Ancient Mexico*. Norman: University of Oklahoma Press, 1997.

Read, Kay Almere, and Jason J. Gonzalez. *Mesoamerican Mythology*. New York: Oxford University Press, 2002.

Tozzer, Alfred M. *Chichen Itza and Its Cenote of Sacrifice: A Comparative Study of Contemporaneous Maya and Toltec*. Cambridge, MA: Peabody Museum, 1957.

■ Introduction: Andean Political History

Political life rose to new heights and importance during this era that roughly corresponds to what is called the Middle Horizon in Andean archaeology. Among the diverse sociopolitical configurations that charac-

terize this period and region, we see the rise of the first true centralized states in South America and the first true urban centers. States included those centered in the Moche Valley on the northern coast as well as those centered on the later

sites of Wari and Tiwanaku in the southern Andes. Urban centers of this period include not only the political capitals of the emergent state polities but also sites such as Ventilla in the Nazca Valley; Gallindo, Pañamarca, and Pampa Grande on the north coast; and Conchapata, Lukurmata, and Khonko Wankane in the southern highlands. Religious pilgrimage, warfare, and political feasting appear as repeated themes explaining what held these emerging polities together.

At least two strong state-level polities characterized this period in the Andes. In fact, the great urban polities of Wari and Tiwanaku have served to define the archaeological Middle Horizon in Peru. Tiwanaku was probably politically less cohesive than Wari, but both states shared important characteristics. Signs of greater centralization include not only the emergence of truly urban centers but also the establishment of multitiered hierarchies of sites in which the great urban centers of Wari and Tiwanaku attained primacy. From the urban centers, polities extended their social, political, and economic influences, creating the first Andean empires. States used a variety of techniques to incorporate new territory including military conquest and domination as well as appeals to sociopolitical ideals. The result was a patchwork of free territories, economic and political colonialism, and clientage.

Decentralized is a more fitting description for the polities that emerged along the northern and southern coasts of Peru during this era. Decentralized polities were characterized by complementary and/or competing urban centers. While these centers maintained shared cultural traits such as the shared iconographic traditions of the Moche and Nazca homelands, no one center maintained any significant control over other centers for any long period of time. Leadership in these polities may not have been strictly hereditary, but the leaders themselves most likely came from chiefly clans or belonged to a class of ritual specialists rather than representing monarchs in a true sense. For this reason archaeologists often refer to Moche centers, for example, as *señorios*, suggesting leadership by a lord rather than a king.

Religious pilgrimage may have played an important role in the creation of urban centers as

well as in the perpetuation and extension of state control. Some pilgrimage centers may have been quite empty except during periods of pilgrimage and ceremony. A similar scenario was once hypothesized for the great Mayan centers but seems to be a more accurate interpretation in many South American centers. Others may have sustained ongoing traffic of religious adherents or continual cycles of rites and rituals. In either case archaeologists have hypothesized a priestly elite that would have directed pilgrims, reified the social order through public ritual, redistributed elite goods, and collected tribute sent to honor the shrines housed within the center. Control of the pilgrimage experience was one way in which elites maintained social influence and control of urban centers, or at least sectors of them. Funerary remains and iconographic evidence suggest that both males and females took prominent roles in the administration of religious ritual.

Warfare, including practices of headhunting and human sacrifice, was another means for political integration and control for states. Polities throughout the Andes during this time period exhibit a variety of evidence for these practices including visual, physical, and architectural data. Much of the evidence comes from visual representations of warfare, armed combatants, prisoners, and disembodied heads. Judging from the prevalence of some of these images, it seems that interethnic violence was commonplace and played a major role in male sociopolitics. In most cases, however, the physical evidence for violence (e.g., decapitated bodies), though indisputable, is much less abundant than suggested by the visual data and includes a combination of both male and female victims. Similarly large architectural compounds, such as those constructed by Wari people, were certainly defensible and intimidating, but evidence that they functioned predominantly as male military barracks rather than as redistribution centers or administrative centers occupied by both men and women is lacking. The male warrior ethos exhibited in pottery and other media lends more credence to this conclusion than does any corroborating physical data.

Noble largesse and feasting also played an important part of Andean statecraft during this time period. Feasting certainly took place in

both centralized and decentralized polities and may have constituted a part of both sacred and secular practices associated with statecraft. One telling category of evidence for this practice is vessels in the shape of elite males or at least elite male heads. Such portrait vessels constitute parts of highly decorative assemblages of storage and serving vessels. Archaeologists have encountered such assemblages in contexts associated with elite burials, ritual offerings and caches, households, and temple complexes. The diversity of contexts for these assemblages suggests that sharing of food and drink served in both sacred and secular functions as ways for the elites to create and maintain social influence. Emergence of such means of political control may also have signaled a dramatic shift in gender relations as elite males sought to control the means of producing feasts. Monopolizing the capacities of female household and kin-group members would have given males greater access to the food and drink required to sponsor feasts.

—Jo Ellen Burkholder

Bibliography

- Bawden, Garth. *The Moche*. Malden, MA: Blackwell, 1997.
- Janusek, John W. *Identity and Power in the Ancient Andes: Tiwanaku Cities through Time*. New York: Routledge, 2004.
- Schreiber, Katherina. *Wari Imperialism in Middle Horizon Peru*. Anthropological Papers of the Museum of Anthropology, University of Michigan #87. Ann Arbor: University of Michigan, 1992.
- Silverman, Helaine, and Donald A. Proulx. *The Nasca*. Malden, MA: Blackwell, 2002.

Moche

The Moche (or “Mochica”) culture produced one of the first true states in the Andean region. Moche culture incorporated 14 valleys along the northern Peruvian coast from Piura south to Huarmey. Renowned for their work as ceramic craftspeople, the Moche produced a distinctive artistic canon that included portraits of elite men and fine-line drawings of various scenes. The content and distribution of Moche art along with impressive monuments and recently excavated burials of fabulous grandeur and wealth suggest a theocratic basis for Moche statecraft.

The Early Moche (100–300 CE) grew out of the Chavin tradition of northern Peru (called Cupisnique on the coast). These early people resided alongside Gallinazo and Vicus groups in the same region. Each valley housed politically autonomous but culturally related polities, sharing cultural ideas but not governance. After about 300 CE, however, Moche warrior-priests gained greater control over populations. These new rulers, for example, could command enough labor to organize impressive irrigation projects and to sponsor the production of fine art in specialized workshops.

During the Middle Moche period (300–600 CE) the state in the Moche Valley expanded beyond the confines of its homeland. The motivation for the expansion is unclear. Unifying several valleys, this emergent state constructed the most impressive monuments ever built in South America at Cerro Blanco, the capital. The adobe bricks contained in these monuments still bear the marks of the work crews who contributed them as part of state taxation. As the state grew, people increasingly adopted Moche ideals and norms, effectively eliminating earlier cultural expressions. More northern Moche polities may have maintained their relative autonomy, producing their own powerful leaders immortalized in exquisite ceramic portraits. All leaders seemingly participated in similar state rituals to reify their power and control, with the same ritual drama acted out by different leaders in different valleys.

In the period from about 500 to 750 CE known as Late Moche, the coast encountered a series of stresses. These included environmental stresses from drought, earthquake, and El Niño disruptions of the coastal fishery. At the same time the Moche experienced contact from the Wari empire as it expanded northward from the central Andes. It also appears that people felt increasingly isolated from their ritual-bound elites. This combination led to political and social reformulations, signaling the collapse of centralized state power. In turn, the reorganization gave rise to the later Chimú polity.

Archaeologists have long acknowledged the narrative nature of Moche art. It was only in the last few decades, however, that they surmised that scenes portrayed in the fine-line style had

THE LORD OF SIPAN

How do archaeologists know that the people shown in Moche art really existed? They long thought that drawings on pottery represented myths, not real events. Discovery of several intact elite tombs beginning with the Lord of Sipan tomb in 1987 allowed archaeologists to draw parallels between the buried regalia of the elites and the costumes consistently portrayed in artwork. The main person in the Lord of Sipan tomb, for example, had many of the same garments, jewelry, and insignia buried with him as did the neighboring Old Lord of Sipan tomb. These match those shown on the main figure receiving offerings of blood depicted repeatedly in Moche art.

The long-standing hypothesis was that depictions such as the presentation theme (a high-ranking personage receiving a chalice of human blood), reiterated numerous times in part or in whole in Moche fine-line paintings, represented scenes from Moche mythology; none of it ever really happened.

Discovery of the Lord of Sipan tomb and other elite tombs radically changed that basic hypothesis. Included with the central individuals in these tombs were elements of the regalia illustrated on the mythic individuals in the fine-line paintings. This suggested that on some level the Moche art in question represented something far more real than originally thought, perhaps elements of a Moche history.

When more than one individual was found buried with the same regalia, interpretations



Reconstruction of the “Lord of Sipan” tomb. (AP Photo/Hermann J. Knippertz)

changed again. Repeated examples of the same costumes now suggest that Moche elite occupied specific roles and reenacted rituals or scenes from myth, generation after generation.

—Jo Ellen Burkholder

direct correlations to the real-life world of Moche politics. The most potent scenes portray individuals in battle and the stripping of prisoners, their sacrifice, and the collection and offering of their blood by a group of priests and priestesses. Evidence from several sumptuous tombs at the site of Sipan allowed archaeologists to equate scenes from Moche pottery with roles held by actual individuals buried with complete sets of ritual regalia. Rituals most likely took place on the top of large platform mounds in full view of the general populace. State ritual was the basis of leaders’ theocratic powers.

—Jo Ellen Burkholder

Bibliography

- Alva, Walter, and Christopher B. Donnan. *The Royal Tombs of Sipan*. Los Angeles: Fowler Museum, 1993.
- Bawden, Garth. “The Art of Moche Politics.” In *Andean Archaeology*, edited by H. Silverman. Malden, MA: Blackwell, 2004.
- Bawden, Garth. *The Moche*. Malden, MA: Blackwell, 1997.
- Pilsbury, Joanne. *Moche Art and Archaeology in Ancient Peru*. New Haven, CT: Yale University Press, 2006.

Wari

Wari (Huari) might be considered the largest and greatest of the Andean region’s Middle Hori-

zon (400–1000 CE) polities. In its size and scope it may be second only to the Inca empire itself for which it laid some of the physical and social infrastructure. It is somewhat ironic that this large and powerful state, centered in the Huamanga region of Peru, was for many years lost to the annals of archaeology and its impressive material culture confused with that of its more southerly coeval polity centered at Tiwanaku. Current data suggest, however, that Wari was the first of the two great Andean polities to attain a state level of political organization.

Wari origins are mysterious. Wari material culture is clearly derived from that of the Huarpa culture, whose greatest center was probably Nawimpukio, outside of present-day Ayacucho, Peru. Additional cultural influences probably also included coastal Nazca people. Major Wari sites in the Huamanga region may all have been occupied prior to the Middle Horizon, but most saw major reconstruction and reorganization after 400–500 CE.

The centralization of Wari power after 500 CE was founded on combinations of ritual feasting, mortuary ritual, and militarism. Ceremonialism is denoted by the presence of D-shaped temples within high-walled elite compounds. The rituals that took place in these limited-access spaces most likely included drinking of *chicha* (corn beer) from the enormous highly decorated urns that were later smashed in situ. Drinking rituals involving oversized urns, 19–32 inches (50–80 centimeters) tall and 23–36 inches (60–90 centimeters) wide at the open mouth, also took place in other restricted rooms and not just D-shaped temples. Some place the beginnings of the central Andean tradition of ancestor worship and mortuary cults within the Wari tradition, arguing that elites reified their status through visual reference to the physical presence of a noble ancestry.

Assertions of Wari militarism are closely tied to the establishment of regional administrative centers in provinces distant from Wari's natal territory in Huamanga. Such centers date between 750 and 900 CE and include the sites of Pikillacta, Jargampata, Azangaro, and Honco Pampa. Here Wari presence is noted in the presence of orthogonal cellular architecture. These installations were divided into regular room clusters and sur-

➤ THE ROLE OF D-SHAPED STRUCTURES

D-shaped buildings occur at a number of Wari sites, but what functions did these structures serve? As the name implies, these structures are round except for one flattened side. They vary in size to 8 to 59 feet (6 to 18 meters) in diameter, and many contain stone-capped burial chambers beneath the floors and trapezoidal niches in the walls. Recent work suggests that these were places leaders may have gone to offer ritual sacrifices in order to ensure the fertility of the land. By emphasizing the connection between humans who sacrifice and myths of divine sacrifice, leaders may have promoted themselves as divine rulers.

—Jo Ellen Burkholder

rounded by high walls up to 3.4 feet (1 meter) thick at the base. Roads that predate those of the Inca connected many of these sites with the capital city. Where imperial complexes exist, local settlement patterns were often reconfigured at about the time of the Wari intrusion. The cause for this expansion is unclear.

More recent research in the areas of the Colca and Cotahuasi Valleys of southern Peru as well as ongoing research at the anomalous site of Cerro Baul suggest that Wari elites may also have used political and social coercion as a way to gain control over new territory. Clientage and gift exchange may have swayed local elites to provide the goods and services desired by the empire without the threat of physical force.

—Jo Ellen Burkholder

Bibliography

- Cook, Anita G. "Huari D-Shaped Structures, Sacrificial Offerings, and Divine Rulership." In *Ritual Sacrifice in Ancient Peru*, edited by E. P. Benson and A. G. Cook, 137–164. Austin: University of Texas Press, 2001.
- Isbell, William H. *Mummies and Mortuary Monuments: A Postprocessual Prehistory of Central Andean Social Organization*. Austin: University of Texas Press, 1997.
- McEwan, Gordan F., ed. *Pikillacta: The Wari Empire in Cuzco*. Iowa City: University of Iowa Press, 2005.

Schreiber, Katherina. *Wari Imperialism in Middle Horizon Peru*. Anthropological Papers of the Museum of Anthropology, University of Michigan, No. 87. Ann Arbor: University of Michigan, 1992.

Tiwanaku

Tiwanaku is the name given to the state-level polity that arose in the southern Lake Titicaca Basin in present-day Bolivia. Though once dated as early as the second millennium BCE, the state-level polity now appears to have coalesced from several regional polities sometime during the period between 500 and 750 CE. Overlap between the artistic canons of Tiwanaku and Wari, its northern neighbor, led many scholars to conflate the two polities, giving preeminence to Tiwanaku for most of the nineteenth and twentieth centuries. Today the emerging picture of the Tiwanaku state is one of a highly influential polity with deep cultural roots but lacking the duration, expansive abilities, and military might of the Wari state.

The cultural origins for Tiwanaku predate its political coalescence. Iconography and temple

architecture associated with Tiwanaku resemble that of earlier cultures of the altiplano region, particularly the Yayamama Religious Tradition. This includes especially strong ties to the iconography of the Pukara and Chiripa cultures of the Titicaca Basin. The emphasis on images of severed human heads on elite serving vessels also suggests connections to the Nazca culture of the Peruvian coast.

Over the last several decades archaeologists have continued to move the date for the emergence of the Tiwanaku state forward in time. Carlos Ponce, one of the first Bolivians to devote his career to the study of Tiwanaku, placed the start of the Tiwanaku state with the earliest habitation of the type site, around 1500 BCE, and placed the apogee of the Tiwanaku state between 400 and 1000 CE. Improvement of dating techniques, a wealth of new carbon 14 assays, and a better understanding of how to archaeologically define Tiwanaku civilization now leads most researchers to place the coalescence of state society closer to 600 CE and the state's maximum influence before 850.

A number of signs mark Tiwanaku's centralization of power. Most obvious may be population growth in the urban capital at the expense of its main satellites, Lukurmata and Khonko Wankane, and the establishment of a multitiered site hierarchy within the Tiwanaku Valley. Other signs of the rising power of the state include abundant large-scale construction projects in the Tiwanaku site's ceremonial core and massive efforts to construct raised agricultural fields. Pervasiveness of a specific ceramic assemblage—a tall drinking cup (*kero*) and a stout bowl (*tazon*)—appears to signal people's incorporation into Tiwanaku's political system.

Three factors appear to contribute to the centralization of the Tiwanaku polity. The most obvious is a pervasive religious iconography. This iconography is similar in content to that of the Wari state, though it is distinct in execution and preferred media. The most important figures were a supernatural being with rayed projections from its head, winged attendants figures shown in profile, and severed human heads. The meaning of this iconography is unclear, though rituals may have involved at least occasional human sacrifice as indicated by human remains



The city of Tiwanaku, located just south of Lake Titicaca in present-day Bolivia, was the capital of the civilization also called Tiwanaku. (Shutterstock)

scattered on the terraces of a Tiwanaku temple known as the Akapana. Unlike the Nazca, however, people of Tiwanaku do not appear to have collected and preserved severed human heads.

A second factor appears to be a kind of factional competition between emerging elites. Researchers have identified areas of elite residential compounds as places where large feasts likely took place. Postulating something like the kin groups found in the area today, many archaeologists now accept the idea that commensal politics would have been one form of articulation between social or ethnic groups. In the course of these interactions elites would strive to produce increasingly larger feasts that would win followers, secure labor, and impress other elites. The basis of these feasts is thought to have been *chicha*, a fermented grain beverage (usually corn) served in *kero* cups. The host also probably served stews based on llama meat and potatoes.

A final factor in Tiwanaku's coalescence may be its economic position within a greater network of southern Andean trade. The original attraction to a place such as Tiwanaku, isolated on a cold and vast plain, was likely its function as a central place for trans-Andean traders. The flat plain was and is ideal for walking long distances up and down the spine of the Andes and is also a convenient place to cross from the desert coast to the tropical forests and back. Tiwanaku sites in the Titicaca Basin show evidence that this contact continued and even intensified as the state developed. Evidence for long-distance trade includes obsidian, precious metals, and animal products from the tropical forest as well as the likely importation of corn from more temperate areas to fuel the production of chicha. In many cases it appears that altiplano people directly colonized places such as the Moquegua and Cochabamba valleys to further economic strategies.

—Jo Ellen Burkholder

Bibliography

Browman, David L. "Tiwanaku: Development of Interzonal Trade and Economic Expansion in the Altiplano." In *Social and Economic Organization in the Prehispanic Andes*, edited by D. L. Browman, R. L. Burger, and M. A. Rivera. Oxford: British Archaeological Reports International Series #194, 1984.

VIEWING THE TIWANAKU PAST THROUGH DIFFERENT LENSES

Interpretations of Tiwanaku politics have been influenced by modern-day politics as well as by the available evidence. Nationalism helped to push dates for the beginnings of the Tiwanaku state back to the second millennium BCE and beyond. As late as the 1990s Bolivian grade-school textbooks cited dates as distant as 40,000 years ago as the date for the Tiwanaku state, making it by far the oldest civilization in the world. Racist thought placed the downfall of Tiwanaku at the feet of the Aymara, the dominant ethnic group in the region, who were said to have invaded the Lake Titicaca area perhaps 1,200 years ago. Today a new kind of nationalism favors a view of a Tiwanaku state made up of indigenous Aymara people with far-flung colonies. Aymara nationalism is the major modern expression of the resurgence of indigenous consciousness in Bolivia.

—Jo Ellen Burkholder

Goldstein, Paul. *Andean Diaspora: Tiwanaku Colonies and the Origins of South American Empire*. Gainesville: University of Florida Press, 2005.

Janusek, John W. *Identity and Power in the Ancient Andes: Tiwanaku Cities through Time*. New York: Routledge, 2005.

Nazca

The Nazca culture of the Peruvian south coast, which thrived from 200 BCE to 700 CE, is noted for its elegant pottery, fine textiles, and mysterious Nazca Lines etched into the desert pavement. The political organization of the Nazca, however, is an object of debate among scholars. Some have viewed Nazca as developing into a secular state-level polity capable of expansion to other areas, while most have argued for Nazca as a confederation of related chiefdoms coordinated from a central location. In either case, ritual was a way in which leaders extended their control over the populace.

Early Nazca culture is derived in part from the Paracas and Ocucaje cultures of the Peruvian south-central coast. Early materials date between 200 BCE and about 400 CE. During this



Spider geoglyph, Nazca culture, Peru. (Shutterstock)

► CRAFTS AND NAZCA POLITICAL ECONOMY

Archaeologists identify several characteristics that mark a state. One is craft specialization. In the case of Nazca this has led to speculation. Nazca pottery and textiles are very distinctive, and the images on the best pieces are very complex. This suggests that specialists produced these items. Other indicators of specialization appear to be lacking. For example, archaeologists have not yet identified specialized workshops or production zones, nor do fancy pottery and textiles appear to function as prestige goods available only to elites. Households appear to produce their own fancy goods or to freely barter what they produce for the productions of others.

—Jo Ellen Burkholder

period the site of Cahuachi, in the Nazca River drainage, rose to prominence as a civic ceremonial center. Cahuachi was probably an empty pilgrimage center, with the urban population at sites such as Ventilla/Site 165 in a neighboring valley. Some amount of authority must have existed to coordinate religious and other activities, such as the construction of the geoglyphs or Nazca Lines and reproduction of complicated religious iconography on pottery and textiles. Burials from this period, however, show little status differentiation, suggesting that authority was shifting or transitory. Iconography from this time period does not portray people we can recognize as elites.

Cahuachi and its associated cult(s) appear to fall apart after about 400 CE. The cause for this collapse has been tied to environmental triggers and a loss of faith in cult efficacy. Desertification and severe flooding may both have played a role in undermining people's faith in a religious system focused on maintaining balance between humans and the natural world. It also remains unclear how far the effects of this collapse reached and whether the collapse of organization in the Nazca drainage coordinated from Cahuachi had a ripple effect on societies up and down the Peruvian coast.

Beginning in the Late Nazca period (500–1000 CE), society was drastically reorganized. Researchers argue that the vacuum created by the collapse of the Cahuachi-coordinated system led to intense competition and the rise of self-aggrandizing chiefs or nobles. In particular, droughts during the sixth and seventh centuries made water a highly contested commodity. Organizing labor to create, maintain, and repair irrigation systems allowed some people the opportunity of self-advancement.

Males more so than females could achieve and pass on elevated status. Males did this through armed combat and the taking of trophy heads (mummified human heads) in addition to perhaps managing their group's water resources. In the Late Nazca period men who achieved status appeared in Nazca art, often carrying a trophy head in one hand and a knife in the other.

A parallel emphasis on female fertility may have offered women access to other forms of status. Artists produced many female figurines beginning in the Late Nazca period. These figures have robust proportions and usually clearly depicted genitalia and tattoos of aquatic animals. Many interpret this as evidence of a female-focused fertility cult that developed in the face of environmental degradation.

—Jo Ellen Burkholder

Bibliography

- Aveni, Anthony F., ed. *The Nazca Lines*. Philadelphia: American Philosophical Society, 1990.
- Silverman, Helaine. *Cahuachi in the Ancient Nasca World*. Iowa City: University of Iowa Press, 1993.
- Silverman, Helaine, and Donald A. Proulx. *The Nasca*. Malden, MA: Blackwell, 2002.

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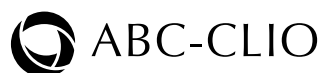
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Economics and Trade

This essay discusses the fundamental material underpinnings of societies in the two phases of the Era of Expanding Regional Civilizations: late antiquity (300–600) and the early medieval age (600–1000).

In this era, a small number of the earth's population continued to gain their livelihood with hunting and gathering economies. These nomadic foragers dwelt mainly in Australia, the depths of Africa's rain forest, the vast northern forests and arctic wastes of North America, the cold reaches of South America's extreme south, and the inhospitable hearts of all the world's deserts. A larger number, but still a very small percentage of the earth's people, made their livings by supplementing a basically hunting and gathering economy with swidden, or slash-and-burn gardening. These seminomadic villagers dwelt in many of the earth's forested regions that circled the globe in the tropics and temperate zones. A larger fraction, but still a small minority of the earth's population, consisted of nomadic pastoralists, herding animals (cattle, sheep, horses, camels) to pastures in the Eurasian grasslands, the steppe surrounding the Sahara and Arabian deserts, or the Arctic tundra (reindeer). But for the vast majority of the world's population during the Era of Expanding Regional Civilizations, sedentary agriculture was the economic mainstay. In the agricultural zones, the majority of the earth's people lived in villages, even though political power centered in the few cities.

Although the seven centuries of the Era of Expanding Regional Civilizations did, on the whole, witness an expansion, the early three centuries, known as late antiquity, experienced a sharp contraction in population, area of land cropped, and economic health. This was due to the Dark Age Cold Period, a 600-year epoch of global cooling (ca. 100–600 CE). During much of this time, while the economies of most of the Afro-Eurasian ecumene were contracting, that of India, which may have benefited by increased rainfall, was expanding. In this phase, India was the most prosperous region and the commercial center of the ecumene.

After 600, another gradual shift in global climates began, which by 800 produced a much warmer climate, and a new epoch began: the Medieval Warm Period, which lasted until circa 1300. During this salubrious phase, China became the economic powerhouse of the ecumene, and most of Afro-Eurasia experienced a level of prosperity that had hitherto been unknown. It was also during this phase that farmers colonized the northern forests of western Europe and Russia, using new and heavier plows that may have been first developed in China.

In Africa south of the Sahara, most of the Era of Expanding Regional Civilizations experienced a gradual but cumulatively impressive economic growth. The cooling of the Dark Age Cold Period does not seem

to have affected this region significantly. The introduction of Asian crops, such as rice, taro, sugarcane, and especially bananas, together with chickens, led to a major population increase by 1000 CE. The development or intensification of trans-Saharan and Indian Ocean trade stimulated increased urbanization in the western Sudan and the Swahili coast during this era.

The Americas, like Africa south of the Sahara, also witnessed growing populations and economies. The Hopewell Mound Builder people in the North American Midwest had declined after 400 CE in the Dark Age Cold Period but revived as the Mississippian Culture with the Medieval Warm Period after 800. The Mississippian culture adopted quick-maturing varieties of Mesoamerican crops, especially maize and squash, and constructed large settlements such as Cahokia, which has been called the largest Native American city north of Teotihuacan. The Pueblo people of the North American Southwest responded in a similar fashion to the moist early centuries of the Medieval Warm Period.

This was the classic era in both Mesoamerica and the Andean region. The Maya cities, Teotihuacan as well as the empires of Wari and Tiwanaku, and the Moche civilization flourished during this era.

Until the modern Industrial Age, agriculture was the economic foundation of all sedentary states. The prosperity and military strength of all great empires was rooted in the fertility and productivity of their soils.

During the early medieval age, all empires depended on the agricultural surpluses of a few “islands” of extraordinary fertility. Thus, the Gupta empire derived its power from the rich black soils of the Ganges Valley; the Tang dynasty’s economic health was based on the fertile, friable, and easily eroded yellow loess of the northern China plain; the economy of the Sassanian empire and, later, the Abbasid caliphate centered on the opulence of the irrigated area

of Mesopotamia called the Sawad; and the Nile Valley with its annual nutrient-laden floods contributed to the prosperity of the eastern Roman empire and later to the Umayyad and Abbasid caliphates. Likewise, the Tiwanaku empire derived its sustenance from the abundant potato yields of its unique system of raised fields in the Lake Titicaca Basin.

Soils in these “islands of fertility” were rich enough that they could be cropped year after year without the necessity of leaving great portions of the arable fields fallow or of rotating crops. In some favored “islands,” such as the Ganges Valley or the volcanic soils of Java or highland Guatemala, it was possible to harvest two or three crops annually without the use of fertilizer.

Usually, agricultural prosperity and, consequently, imperial power depended not only on regions of extraordinary fertility but also on the ease with which this fertility could be exploited, given the prevailing simple agricultural technology. For example, the peoples of the Hopewell and Mississippian cultures could, without plows or draft animals, grow and harvest bountiful crops of pumpkins, sunflowers, and

The prosperity and military strength of all great empires was rooted in the fertility and productivity of their soils. During the early medieval age, all empires depended on the agricultural surpluses of a few “islands” of extraordinary fertility.

maize on the easily worked floodplain soil of the rivers of midwestern North America.

But many peoples practiced irrigation and hydraulic management to optimize production. The Sassanian empire and later the Muslim caliphates paid keen attention to improving the irrigation of the Sawad. (The Sawad has been compared to the Central Valley of California for agricultural productivity.) The Tang dynasty, like most other Chinese dynasties, saw flood control of the Yellow and Yangzi rivers as among its chief duties. In India and much of Southeast Asia, where monsoon seasons were followed by rainless months, local officials as well as kings built large tanks and lakes to catch and store water. The countries in East, Southeast, and South Asia that practiced wet-rice farming were extensive practitioners of water management. Irrigation and hydraulic engineering were not confined to the Afro-Eurasian ecumene. The Pueblo cultures of the North American Southwest, many groups in Mesoamerica (including the Maya), as well as most of the Andean cultures were avid irrigators and hydraulic engineers.

The establishment of the caliphate created a zone of interaction in which the Muslims adopted and diffused crops and agricultural technologies from every civilization in the Afro-Eurasian ecumene. The Muslims adopted crops from India, such as sugarcane, cotton, and rice; from China, such as oranges, lemons, and other citrus fruit; and from central Asia, such as spinach, alfalfa, and eggplant. They grew these throughout Dar al Islam, from Spain and Morocco to the Ferghana Valley and the Swahili coast. Muslim farmers established advanced irrigation systems and began the practice of maintaining soil fertility by rotating crops. By growing many diversified crops, they were often able to have several annual harvests. New agricultural technology, such as wind and water mills for pumping irrigation water and grinding grain and collars for horses and camels for pulling plows and other loads, made the application of energy to agricultural tasks more efficient. Many of these innovations in agricultural technology originated in China but diffused through the Islamic world after the eighth century. Although the European Christians subsequently adopted these innovations, this did not take place until after 1000 CE.

From the eighth to the thirteenth centuries, agricultural production increased globally. Small cities became more numerous, and a few large capital cities appeared. To supply these urban centers with food and cotton, large commercial farms and even some plantations emerged, especially in the Muslim world and China. Of special note were the sugar plantations in southern Iraq and Spain as well as the area of Morocco ruled by the Bhargawata, a schismatic Muslim sect. In southern Iraq, gangs of slaves imported from East Africa worked large sugar plantations, and slaves were common on most plantations and commercial farms as well as on many smaller farms throughout the world.

However, the vast majority of farm dwellers were not slaves, though for most freedom was restricted. Most of the farm population in Afro-Eurasia, the Americas, and Polynesia were peasants who paid tribute in the form of rent or taxes to higher-status landholders. The status of these peasants ranged from slavelike serfs, as in western Europe, to relatively

free tenants in much of the Muslim world or China. In Mesoamerica as in the Andes, the common people also paid the bulk of their crops to privileged elites. Nearly everywhere, sedentary village agriculture produced societies sharply divided between powerful elites who used their control of the means of violence to extract tribute from the wealth-producing peasantry. Often, the privileged elite was a warrior caste. In western Europe and some other regions, the dominance of a servile peasantry by a military elite produced feudalism. In China, Europe, and other areas, rulers “gave” villages and peasants as property to monasteries and other religious organizations. In many lands, the rapacity of the elites, religious as well as lay, reduced the peasantry to a bare subsistence. Only in good years, when there was enough but not too much rain, when crops were not devoured by insects, and when villages were not devastated by marauding bandits or pillaging armies, would the peasants experience a modicum of prosperity. In less fortunate years, famine or pestilence scourged the peasant villages but spared the privileged elites.

Since most peasant villages had little surplus to trade, they attempted to be as self-sufficient as possible, producing most of what they consumed and consuming almost all of their production. Villages and manorial estates functioned as nearly self-sufficient economic units. In slack agricultural seasons, villagers engaged in handicraft, producing agricultural tools, pottery, and cloth of home-produced materials. For most of Eurasia, wool and hemp were important textile materials. People of the Andes, Mesoamerica, India, Africa, the Muslim world, and (after the middle of the era) China used cotton as well. In China many villagers produced silk cloth, while in Africa raffia was frequently used. In Africa and Eurasia, village smiths turned out knives, sickles, and metal tips for plows, but most farm tools were made of wood.

The increasing number of cities, most of which were small by modern standards, that grew up after the seventh century in China and the

eight century in the Muslim world promoted a different economic regime. They were often started as military strong points or administrative and/or ecclesiastical centers, and the economic impact on their hinterlands was important. Because the elites spent in these towns much of the tribute skimmed off the peasant villagers, specialized manufacturing groups to satisfy their

wants developed. Armorers and weapons makers, metallurgists, weavers of common and luxury cloth, makers of fine ceramics and glass, jewelers, and health professionals all swelled the economic demands of the cities.

These cities as well as the rural villages exerted a demand for resources not usually locally available. The most universally needed items—salt and iron—were available in most regions, but because their extraction and processing required special care or concentration of resources, they were easy to tax. Salt was mined from rock deposits, as in Austria, or mines in the Sahara Desert or was extracted from brine wells in Sichuan or collected from evaporation ponds along many coasts, but because everyone needed it, it was usually taxed. Likewise,

The increasing number of cities, most of which were small by modern standards, that grew up after the seventh century in China and the eighth century in the Muslim world promoted a different economic regime.

iron was used throughout Eurasia and Africa, but the logistic of iron smelting required large investments in capital and labor. Like salt, iron was frequently subject to a tax. This was true especially in China, the largest iron-consuming and iron-producing region.

The capital cities of the great empires and major kingdoms were in a special economic category. The principal function of these imperial capitals was the care and feeding of the imperial family; the officials who administered the empire; the clergy, including, in Christian and Buddhist states, the great monasteries that were the spiritual guides; and the large capital armies. This care and feeding required hundreds of thousands of servants and slaves, artisans and tradesmen, construction workers and transportation workers, and carters and water carriers and numerous specialists to care for the medical needs of the large populations of these cities. These capitals rivaled in population the huge populations of Rome when it commanded its classical empire. Often the population of a great Early Medieval capital exceeded the combined populations of all other cities, towns, and other urban centers within its empire. Often, great capitals such as Constantinople, Baghdad, and Chang'an were multiethnic and polyglot (though this was less true of the Korean capital, Kyongju, or the Japanese capital, Heien). Another reason for the special nature of great capitals is that their populations were divorced from the land and the peasant villages to an extent that could not be even imagined by the denizens of any other city in the empire. Everything the capitals' residents consumed, whether food, clothing, or often even water, had to be purchased daily and brought in from distant regions. Unlike the case with most of the smaller cities, the huge populations of the capital cities exerted demands for food as well as other necessities and wants that could not be satisfied by the produce of their immediate hinterlands. Often, necessities such as grain, salt, wool, cotton, and animals for slaughter were transported or driven in from provinces not immediately adjacent to the great capital. Smelted iron for tools and weapons, horses for cavalry mounts, timber and sometimes stone for the construction of dwellings and monuments, materials for construction of naval and merchant vessels, and replacements also had to be imported from distant provinces or from across the frontiers.

During the centuries of late antiquity, 300–600 (also known as the Age of Southernization), India's economy was thriving, and India was the focus for trade with central Asia, China, Southeast Asia, and the Mediterranean world. During this period, India exported cotton textiles, precious stones, iron weapons, and religious items and imported wool, horses, and rare woods as well as gold and silver. In these centuries, the Sassanian kings of Persia attempted to monopolize trade between India and the West, but the Romans partially outflanked the Persians by buying from the Arabs and Ethiopians, who became middlemen in trans-Indian Ocean trade. This was the heyday of Ethiopia as an important factor in Indian Ocean trade.

These centuries also saw the beginning of the use of camels in the trade route across the Sahara. In the Americas, these centuries were the golden age of Teotihuacan as a great Mesoamerican metropolis and trading center.

After 400 CE, the economic vitality of both the Mediterranean world and China became much impaired, and by 500, that of India began to wither. Trade across the Eastern Hemisphere declined significantly, though it did not stop.

Then, beginning in the seventh century, Eastern Hemispheric trade across the Indian Ocean, the Eurasian steppe, and the Sahara Desert experienced a spectacular advance. The nearly simultaneous emergence of China's Tang dynasty and the Muslim caliphate had two important results that promoted trade. First, both of these great empires established law and order over large areas by suppressing brigandage and protecting property. Increased security resulted in heightened economic activity.

Second and equally important was the demand created by the establishment of the large and opulent capital cities, Baghdad and Chang'an. Wealth poured into these capitals, and the wealthy classes of each demanded the luxuries produced by the other. The Silk Roads across the desert and steppe from Chang'an to Baghdad and beyond revived, as did the oceanic route from Baghdad to the southern coast of India, then across the Bay of Bengal to the Sumatran port of Srivijaya. In Srivijaya, Arab, Persian, and Indian merchants met traders from China. Srivijaya became an important oceanic trading city. Likewise, Dunhuang, Samarkhand, and other central Asian caravanserais became important in the overland Silk Roads. Along these maritime and overland transhemispheric routes, silk, fine ceramics, lacquer, paper, and, toward the end of this era, tea flowed west, while to China went horses, furs, hides, amber, wool, silver, and gold.

Much of this gold originated in West Africa, where it was obtained by Berber traders who sent it, along with kola nuts and slaves, by camel caravans across the Sahara Desert to the Mediterranean coast, to enter the stream of trade ending in China. For West African gold, the Berber traders exchanged salt from the Sahara Desert as well as horses and metal weapons from the Mediterranean countries.

The Swahili cities on the African East Coast were also actively involved in the transhemispheric trading system. Swahili merchants

Swahili merchants traded with Arab, Persian, Indian, and occasionally even Indonesian or perhaps Chinese traders and exchanged elephant ivory, rhinoceros horn, rare woods, and pig iron for Chinese ceramics, Indian manufactures, and other products.

traded with Arab, Persian, Indian, and occasionally even Indonesian or perhaps Chinese traders and exchanged elephant ivory, rhinoceros horn, rare woods, and pig iron for Chinese ceramics, Indian manufactures, and other products.

Europe was at this time peripheral to the main stream of world commerce, but even there the upsurge in transhemispheric trade found an echo. Increased demand by the Muslim world for European raw materials and slaves resulted in the

growth of a timber trade on the north coast of the Mediterranean and a steady market for Slavic and Irish slaves captured in Viking raids and in the wars between the Christian West Europeans and the pagan Slavs.

In the Americas, the increased economic activity resulting from the wet centuries, which preceded the Medieval Warm Period, stimu-

lated broader trading systems. Important networks developed in the Mississippi-Missouri-Ohio Basin, in Mesoamerica, in the Andes, and probably also in the Amazon Basin as well as in the Caribbean. Dugout canoes along the rivers and seacoast transported trade items, but overland trade depended on human bearers, supplemented in the Andes by llamas.

The Hopewell people of the Mississippi-Missouri-Ohio Basin traded extensively along this river system, importing obsidian from the Yellowstone area, copper from upper Michigan, and seashells from the Gulf of Mexico. The great Mexican metropolis of Teotihuacan, as mentioned previously, traded extensively, sending obsidian tools and artwork to the Mayan cities of Central America and to the Hohokam of the Salt and Gila rivers in present-day southern Arizona. In South America, trans-Andean trade also focused on obsidian but also dealt in *Spondylus* shells from the Ecuadorian coast and, after 600 CE, in bronze from the Tiwanaku area.

Trading systems used a variety of materials as currency during the Era of Expanding Regional Civilizations. In Africa south of the Sahara, cowry shells from the Indian Ocean as well as gold dust and small curved copper ingots served as media of exchange. In the Andes, *spondylus* shells from the Ecuadorian coast were used. In China, in the first centuries of this era, bolts of silk were used as currency, especially in China's foreign trade, but for domestic trade, copper cash (*banliang*), which could be strung together due to the square holes in the center of each, were more commonly used. In the ninth and tenth centuries, after the development of woodblock printing, leather and paper notes, often printed by private money changers, were sometimes used, but it was not until the Song dynasty that the government began issuing paper money. The Muslim caliphates issued the most widely used money outside of China. The earliest Muslim coin, the gold dinar, began its life as a Muslim copy of the Byzantine gold solidus, or *hyperpyron*, and this continued to be used, especially for trade with India. But the most currency from the Atlantic to China was the Abbasid silver dirham. Compared to gold, silver was relatively abundant. The Abbasids developed very productive silver mines in central Asia. Silver from these mines was minted into dirhams, hoards of which have been discovered from England to Russia and from the Carolingian empire to China. The silver dirham was the common currency for much of the Afro-Eurasian ecumene.

—Wilfred J. Bisson

■ Introduction: Agriculture in Early Medieval Economies

In the period from 300 to 1000 CE, more than 90 percent of people the world over engaged directly in agriculture and animal herding, and these pursuits produced most of the wealth, known as the gross domestic product (GDP), in nearly all societies. Agriculture produced food,

silk, cotton, wool, and other textiles. The farm and pastoral population supplied horses and men for the world's armies and produced food for the warriors and fodder for the horses. Nearly all early medieval states obtained the greater part of their revenue by taxing agriculture. Many

states, especially in China, India, and the Muslim world, invested heavily in public works, such as the construction of flood-control and water-impoundment dams, irrigation canals, and the like, with the aim of increasing the economic yield of agriculture.

The country people (peasants) who worked the land were sometimes free but more often existed in some degree of unfreedom or dependence. Sometimes they were chattel slaves, as were those who labored on the sugar plantations in the south of Iraq or on occasional great farms operated by rulers or monasteries. More often, the peasants were serfs who had their own plots of land but paid dues in labor and produce to a lord. Perhaps equally often, especially in Muslim countries, peasants were tenants who paid for the right to a plot of land by paying the landlord a share of the produce as rent. And much less frequently, peasants were free farmers who owned their land and paid taxes on it directly to the state. But free peasants often slipped into debt peonage and eventually types of serfdom by falling into debt because of crop failures or other disasters.

Some governments, reasoning that the health of the kingdom rested on the welfare of the peasants, took measures, such as the Byzantine Farmers Law or the equal field system attempted by several Chinese dynasties, to prevent peasants from losing their land and freedom. These measures never long survived the economic and social pressures of the times. It was more common for states to take measures to prevent peasants from fleeing their lands to free themselves of the onerous burdens imposed on them by landlords and governments.

Monasteries were importantly engaged in agricultural economics in this age. In Buddhist countries, rulers often gave gifts of land and peasants to monastic institutions. The peasants became serfs, but the monasteries grew wealthy. In Europe this practice involved Christian monasteries, which sometimes used the wealth to expand the area under cultivation.

From the eighth through the eleventh centuries CE, the introduction of new crops, which culminated in an Islamic agricultural revolution, stimulated the emergence of a group of agricultural entrepreneurs who made, for a few cen-

turies, agriculture in the Muslim world very productive, nearly approaching the productivity of Chinese agriculture. Investing in irrigation systems, slave-manned sugar plantations in southern Iraq, and market gardens in the vicinity of the cities, Muslim agricultural entrepreneurs made the Islamic world the most productive civilization in western Eurasia.

—Wilfred J. Bisson

Bibliography

- Cameron, Rondo, and Larry Neal. *A Concise Economic History of the World: From Paleolithic Times to the Present*. Oxford, UK: Oxford University Press, 2003.
- Postan, M. M. *Essays on Medieval Agriculture & General Problems of the Medieval Economy*. Cambridge: Cambridge University Press, 1973.
- Watson, Andrew M. *Agricultural Innovation in the Early Islamic World: The Diffusion of Crops and Farming Techniques, 700–1100*. Cambridge: Cambridge University Press, 1983.

Agricultural Innovations in East, Central, and Southern Africa

Between 300 and 1000 CE, Bantu-speaking peoples moved into the diverse ecological areas of East, central, and southern Africa. They adapted agricultural technologies from the people already living in the region and invented new ones. They were able to settle and create food-producing niches by raising cattle in the drier regions where there were no tsetse flies and agriculture in the areas of better rainfall where tsetse flies could breed. The gatherers and hunters continued their form of food production and offered alternative sources of food in areas where agriculture or livestock raising was more precarious.

By 500 CE the gathering and hunting peoples in southern Africa had added livestock raising to their food-producing strategies. Bantu-speaking cattle herders supplemented their food production by learning the techniques for the gathering of plants, small animals, and insects of the area and how best to hunt the larger animals that roamed southern Africa. The integration of these various technologies for food production was probably the result of trade between the gathering and hunting peoples who could trade

animal hides and ostrich eggshells for Bantu-manufactured goods such as iron pots and tools, baskets, and woodcarvings. By relying on more than one food-producing technology, these peoples ensured survival in times of crises.

The click sounds, a trademark of Khoisan languages, are found in all the Bantu languages of southern Africa today. Bantu adoption of the click is linguistic evidence of the continued close contact over a long historical period among the gathering and hunting peoples and the Bantu-speaking peoples of southern Africa.

The successful cattle keeping/gathering and hunting strategies also transformed the agricultural peoples of southern Africa. As soon as they began raising cattle, farmers moved into the drier savanna areas, expanding the Bantu-speaking populations and settling new lands.

In east-central Africa by 300 CE, food-producing communities had settled for the first time. The earliest of such communities were Bantu-speaking peoples coming from East Africa, bringing cattle into the drier open savanna areas of east-central, central, and southern Zambia. Their expansion caused the eventual assimilation of the former Khoisan-speaking people of those areas into their societies. In land with good rainfall they grew grain crops. The Batwa fishing, gathering, and hunting peoples persisted as culturally distinct in the swamps and wetlands around Lake Bangweulu.

Beginning around 600 CE, another group of Bantu-speaking peoples, the Sabi, moved from the Congo south into east-central Africa, where they adopted the agricultural techniques of the earlier peoples. They also added a technological innovation of their own in the form of slash and burn agriculture known as *citemene*. The land was not very fertile, so people began burning the trees on the savannas to prepare the soil for agricultural production. The ash from these burned trees provided the soil with essential nutrients. Increasing fertility allowed the Sabi to populate a region of marginal fertility. In the drier sections of southern Zambia the Botatwe absorbed the former cattle-herding peoples and began raising livestock themselves. They also continued with their own type of *citemene* agriculture in the wetter, possibly tsetse fly-infested areas.

In the rain forests of the Congo Basin of central Africa, Bantu-speaking peoples had cultivated yams since 3000 BCE, but around 600 CE bananas, an Indonesian crop, were introduced. Banana crops produced ten times more food than yams and were even better suited for the evergreen rain forests of central Africa. Also, banana cultivation was less labor-intensive, which led to higher population densities among the Bantu-speaking farmers. In central Africa there are more than 120 different varieties of bananas compared to only 12 types in Asia. Banana production allowed the agriculturalists to move into areas that had not been suitable for yam cultivation.

During the seventh century CE around Mount Kenya in East Africa the Thagiicu were still growing African yams in the damper higher regions but were also growing bananas, Southeast Asian yams, arrowroot, and later taro and sugarcane. In the drier lower lands the Chagga grew sorghum and pearl millet. These differing crops in a relatively small area allowed the development of intricate trading networks, which would eventually result in small states.

By 700 CE in the Western Rift to Lake Nyanza, the population of Lake Bantu peoples had grown considerably. The need to place more land into agricultural production of bananas led to deforestation. Areas that were once thick forests by 1000 CE were becoming open grassland savannas. While deforestation seems like a disaster, the net effect of deforestation for the Lake Bantus was that it made the land excellent for livestock raising by removing the habitat of the tsetse fly. Soon communities, like the Batutsi, began to depend primarily on cattle raising and were able to expand and later play a major role in the development of the region. These cattle herders in turn helped the farmers. Fallow land could be used for grazing cattle, while the droppings of the cattle would help to fertilize the land and decrease the fallow time. The success of blending of the agricultural and livestock technologies resulted in larger population growth.

Bantu-speaking peoples had migrated in various ecological zones in East, central, and southern Africa. They adapted food-producing techniques from the peoples they encountered and innovated new methods. Their agricultural success laid the basis for several centralized

states in the future but also allowed people in less fertile areas to continue to live in and maintain their own decentralized communities. Gathering and hunting peoples, in some cases, were integrated into the agricultural societies, but many maintained their independence in part due to their ability to produce ivory and other items for the developing Indian Ocean trade.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey Publishing, 1998.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.
- Vansina, Jan. *Paths in the Rainforests: Toward a History of Political Tradition in Equatorial Africa*. Madison: University of Wisconsin Press, 1991.

Early Java Rice Culture

In early Java, as elsewhere in early Southeast Asia, there was an important dichotomy between swidden (“garden,” “slash-and-burn,” or “shifting”) “dry” cultivation and *sawah*, or “wet-rice” agriculture. In the earliest periods swidden cultivation was practiced in both upland and lowland locations. Annual cereal grass grains that could be grown in relatively dry or wet conditions were supplemented with tubers and yams (*ubi*) gathered from nearby forests or grown in local rain-fed garden fields. The people of Java also cultivated a variety of vegetables and sago palms, another source of starch, as well as fruit, sugarcane, and coconut palms (some for eating and others for their oil), all of which was available at regular three-month intervals because of the short growing seasons these products required. In addition, they raised pigs and fowl. Though this method of production produced a stable food supply, it was not a useful basis for the establishment of urbanization and states, as the fields, rivers, and lake productive centers of the lowland swidden farmers tended not to produce large food surpluses. In addition,

lowland swidden cultivators had scattered low-density settlement patterns similar to those of the highlanders of later periods, and because their settlements tended to be some distance apart rather than contiguous, their aggregate revenue potential was limited, and it was relatively difficult to extract surpluses for export or state development.

In addition to the gardens of the lowlands, dry grains were associated with the shifting cultivation of the highland areas. Modern studies of upland swidden cultivation have shown that it requires less labor per unit of production than does lowland wet agriculture. In the highlands a new patch of forest is cleared and burned each year in preparation for a new crop. The planting process normally uses pointed sticks to make holes in prepared mounds into which two or three grains are placed and then covered over with more soil. The newly cleared fields are initially highly productive due to the nutrients added to the soil in the initial burn-off. However, these nutrients are washed away by rain within two seasons, thus necessitating constant movement to new fields. These migration cycles, together with the relatively low yield per acre/hectare, limit swidden population density to 20 to 30 persons per square kilometer. The low productivity compared to sawah makes it difficult to collect surplus for urban development or for export. In addition, the producing populations are less tied to place than are their wet-rice-producing neighbors. Lowland dry grain farmers would presumably have shown similar distribution patterns, thus impeding the early formation of states. All of this would change with the spread of wet-rice (*sawah*) cultivation.

As sawah agriculture spread in the first millennium CE, swidden production was displaced from much of the lowlands, for the two types of cultivation are incompatible. In the pre-1500 period, garden cultivation never entirely disappeared from the less densely settled parts of the lowlands, as Java’s rich volcanic soil sustained ongoing cultivation although with consequent local population limitations. It is generally believed that sawah cultivation was already becoming common in Java during the early Christian era, though surviving records definitively substantiate only that wet-rice agriculture

was being practiced in eastern Java by the eighth century, coincident to the rise of the first continuous states.

The transition from shifting dry cultivation to settled wet-rice agriculture may have been induced by population pressure as some have suggested, but it was more likely due to a supportive physical environment, a combination of readily available fertile soil in riverine plains that were conducive to early irrigation agriculture and the consistency of seasonal monsoon rainfall. The physical environment was thus a facilitating factor rather than a causative one, which paired with (or contributed to) supportive sociocultural-psychological factors. Wet-rice agriculture could have been considered more convenient, as farmers did not have to move all the time or range as far to gather the means of subsistence. Wet-rice cultivation put farmers in a different kind of trade network, which in turn suggests lifestyle/culture changes of additional kinds. Security, status, and emotional well-being were additional motivations for preferring sawah, and the transition to sawah was accompanied by a fundamental reversal of people's relationships to the forest, which was now perceived increasingly as a zone of wildness and danger rather than a source of livelihood. All of this indicates that whether encouraged from above or adopted from below, the adoption of wet-rice agriculture was intertwined with larger cultural shifts.

Java's sawah cultivators practiced the labor-intensive cultivation method of transplanting rice seedlings, a wet-rice production method that depended on irrigation and was more labor-intensive than the broadcast or banded and plowed floodplain techniques used by wet-rice farmers in Cambodia, Thailand, and Myanmar (Burma). In the transplanting method used in Java, seed was annually sown in small seedling beds at the approach of the rainy season. While seedlings took root, farmers and families prepared nearby fields; they weeded and broke up soil with wooden, stone, or metal-tipped hoes until the monsoon rains soaked the earth. Then seedlings were transplanted by hand, with enough space between for each plant to grow. As the crops matured, farmers repaired the local irrigation system and regulated the flow of water

➤ WET-RICE CULTIVATION PRODUCTIVITY

Transition to wet-rice cultivation is widely believed to increase the productivity per unit of land. But does it produce a similar benefit for the individual farmer? It used to be a common belief that the move from swidden, or dry cultivation, to wet-rice cultivation gave the individual cultivator a greater yield per unit of labor and that it was this increased welfare and prosperity that made possible the formation of early Indic states in Southeast Asia. However, this was not necessarily the case, as we now know that wet-rice cultivation did not necessarily produce more per unit of labor. Recent studies have collectively shown that today's upland swidden cultivators have no less than an 88 percent higher return on their labor than those lowlanders who practice irrigated agriculture. Earlier, when swidden cultivators would have sown in primary growth forest, their yield could have been as much as 124 percent higher than wet-rice farmers, more than twice as much product for the effort invested. Why, then, would a rational peasant farmer commit to wet-rice agriculture? Clues are offered by interviews with today's peasant farmers, who commonly stress the desire for security and personal and familial well-being—physical and psychological—as the two most important motivations in their lives. Wet-rice farming addresses those concerns.

—Kenneth R. Hall

as rains reached their peak. As water receded, fields were drained, and the sun ripened the grain. At harvest, the entire community worked side by side. Javanese women harvested using a finger-knife that cut only one stalk at a time rather than using a sickle, which might offend the local rice spirit and thus jeopardize future production. During the subsequent dry season, fields were cleared, tools were repaired, and feasts, festivals, and marriages were celebrated.

Wet-rice production might be affected by periodic disease and plagues, including the mice plagues that are depicted in ninth-century temple bas-relief. Nevertheless, the food source was relatively stable. Furthermore, there was no need to move to new fields because soil nutrients were replenished via the combination of water flow, plowing under of harvested crops,

algae growth on stagnant water, and also duck droppings. In early times one rice crop normally proved adequate to supply local needs, although a second crop could be harvested if weather and irrigation facilities permitted and if there was incentive to produce a surplus for external sale and consumption. Double-cropping was not necessary for Javanese farmers' subsistence. Nevertheless, by the early fifteenth century double-cropping of rice would be common, as by this time Java's rice had become a valuable exchange commodity on the international trade routes.

Even without double-cropping, sawah agriculture could support an elevated population density due to its ability to generate high yields from small areas. In contrast to swidden cultivation, which supported only 20 or 30 people per square kilometer, with sawah cultivation a field of 2.5 acres (1 hectare) could well support a household of up to 10 adults and children. Also in contrast with swidden, which favored constant population movement, under sawah farmers tended to be tied to particular places, as the rights to occupy and use land were characterized by long-term commitment to a soil plot. Sawah cultivators could occupy the same lands for generations, and because they had little need to move, they were ideal producers of surplus. Nevertheless, in the early sawah regions, large population centers were the exception. It was more common for people to congregate in small housing clusters (one house and one field or several houses and nearby fields), as these were more practical for flooding and draining the fields. Too much water flow would damage the dikes, while too little would result in unwanted algae growth.

Initially at least, irrigation systems were rarely built and controlled by a political authority, though inscriptional evidence suggests that the early states began playing a more direct, albeit still limited, role after the royal center had moved to eastern Java in the late tenth century. Control of water would have been important in dry areas, notably in two "dry zones," one in the coastal mountainous region of western Java and the other in the similarly mountainous region at the eastern end of Java, where annual monsoon rainfall was unpredictable. But rainfall was plentiful elsewhere, and where there were many rivers useful for irrigation, elites would have had to

employ excessive numbers of functionaries to build, maintain, and control a water system, and in the early polities of central and western Java this was apparently a disincentive to direct royal involvement.

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Bibliography

- Boomgaard, Peter. *Southeast Asia: An Environmental History*. Oxford, UK: ABC-CLIO, 2007.
- Boomgaard, Peter, Freek Colombijn, and David Henley, eds. *Paper Landscapes: Explorations in the Environmental History of Indonesia*. Leiden: KITLV, 1997.
- Hefner, Robert. *The Political Economy of Mountain Java*. Berkeley: University of California Press, 1990.
- Tomascik, Tomas, and Anmarie J. Mah. *The Ecology of the Indonesian Seas*, Vol. 7. Dahhousie: Timber Press, 1997.

Agriculture and Rural Life in Japan

Agriculture and rural life in Japan between 300 and 1000 CE encompassed two separate phases. Between 300 until about 730 the archipelago's population expanded from approximately 1–3 million to more than 6 million. Between 730 and 1000 the population stopped growing, as did the amount of cultivated land. This stasis was caused by high mortality due to epidemics imported from the Asian continent, famines induced by an unusually dry and hot climate, and erosion and other ecological damage created by the untrammeled harvesting of lumber in the Kyoto-Osaka-Nara region.

The evidence for this first phase comes almost exclusively from archaeology, as reliable written records did not exist until about 700. Still, it is likely that the population grew and helped fuel an expansion of cultivated land, especially paddy rice. Evidence for land-clearance activity comes from scattered written comments, archaeological data on the disturbance of forests, and ancient rice paddies uncovered all over Japan.

Early farmers conducted rice cultivation according to the lay of the land and the height of the water table. In many areas, such as that represented by the famous Toro site in Shizuoka pre-

fecture, peasants merely scattered grain upon the low-lying swampy land and then harvested in the fall with stone reaping knives, clipping off each sheaf individually. Similar techniques were applied at higher elevations where enough rain fell to permit natural irrigation. Tools such as hoes and spades were mostly wooden. Draft animals were not employed.

By at least the eighth century a second and more sophisticated mode of paddy cultivation had developed. Farmers prepared seedbeds, sprinkling them with rice seeds, and then transplanted the seedlings to flooded paddies. In this system, men and women harvested the rice at the stalk with an iron sickle, and iron-tipped hoes and spades were more common. This newer system yielded greater harvests but also required a greater input of labor, which became scarcer as the population curve flattened and then dipped after 730.

Scholars are relatively well informed about rice cultivation compared to other crops because polished white rice was the preferred grain of the ruling elite and also served as a unit of account. One record indicates that by around 950 there were about 2.586 million acres of paddy land in Japan, cultivated by a population of about 4.5–5.5 million. By 950 the agricultural cycle was highly ritualized, including ceremonies intended to please the gods of the soil; chase off birds, insects, and disease; and pay homage to the ancestors. One crucial aspect of this agrarian cycle was the breaking up of soils uncultivated in the previous year. This rite, which always took place in the spring, was a necessity, as generally 25–35 percent of the fields lay fallow every year. The other aspect was the assembly of as many farmers as possible, a difficult task since the rural population was highly mobile, labor was becoming scarcer, and peasant settlements were highly dispersed over the landscape.

It would be a mistake, however, to assume that rice paddies were the only or perhaps even the predominant means of livelihood. For thousands of years, residents of the archipelago had survived as affluent foragers, hunting, fishing, and gathering nuts and tubers. Moreover, slash-and-burn farming was a common alternative to rice farming because it took place in the mountains and could not be effectively taxed. Peas-

➤ THE SPRING HUNGERS

Most of the populace of Japan suffered from chronic malnutrition throughout the ancient period despite the introduction of wet-rice cultivation to Japan around 900 BCE. To be sure, yields from paddy land were relatively high, but farmers struggled to maintain the land in continuous production because of drought, blight, insects, and floods. Other peasants, unwilling to subject themselves to the taxation on wet-rice paddies, simply abandoned their lands and fled to the hills to live off game, fish, nuts, and tubers. Moreover, frequent epidemics afflicted a populace with no immunities, killing high percentages of the cultivator class and leaving fields barren. Even when cultivators tilled the same land continuously, crops failed about once every three or four years.

Fortunately, historians have records for the prices of various grains during the famine year of 762. As one might expect, these data show that the supply of rice, barley, and wheat was highest immediately after the autumn harvest. As the seasons progressed, storehouses became empty. By the spring (February–March), prices for all grains skyrocketed. The supply seems to have been so low in the summer of 762 that no data survived to indicate prices. This condition, which continued until at least the sixteenth century, has come to be known among historians of Japan as the spring hungers. Even in the best of times, diet was just barely adequate to sustain the population.

—William Wayne Farris

ants also planted dry crops such as wheat, barley, millet, soy beans, and buckwheat. A dry field yielded only about 25–35 percent of a good rice paddy, but the government did not systematically tax unirrigated land. Dry cropping also required much less labor than rice farming did. In essence, despite the importation of rice agriculture as early as 900 BCE, Japan was ill-suited to becoming a rice-based agrarian society because of the small amount of flat land, poor irrigation technology, and the generally acidic nutrient-poor soil. The long, slow transition to a fully agricultural society would take at least another half a millennium.

Thanks to the work of archaeologists, scholars have uncovered considerable details about

material life in the countryside. Peasant huts were pit dwellings made entirely of lumber and thatching grasses and straw, with the dirt floors beneath ground level; they were cold, dank, and prone to fire. Clothing was sewn from hemp or ramie plants and would have been cold and scratchy to the skin. Toilets were either nonexistent or consisted of a hole with two boards upon which the person squatted. Diet consisted of the aforementioned grains and probably included brown rice, meat, nuts and tubers, and fish. Even in the best of times, caloric intake was just barely enough to sustain the populace. Farmers harvested only one crop in the fall, and food often ran out in the spring or summer, a phenomenon known as the spring hungers.

—William Wayne Farris

Bibliography

- Farris, William Wayne. "Famine, Climate, and Farming in Early Japan." In *Heian Japan: Centers and Peripheries*, edited by Mikael Adolphson and Milt Kamens. Honolulu: University of Hawaii Press, 2006.
- Farris, William Wayne. *Population, Disease and Land in Early Japan, 645–900*. Cambridge, MA: Harvard University Press, 1985.
- Kelly, William. *Water Control in Tokugawa Japan: Irrigation Organization in a Japanese River Basin, 1600–1870*. Ithaca, NY: Cornell University Press, 1982.
- Torao, Toshiya. "Nara Social and Economic Institutions." In *The Cambridge History of Japan: Ancient Japan*, edited by Delmer Brown. Cambridge: Cambridge University Press, 1993.

Diffusion of Asian Crops and Livestock to the Mediterranean Region and Africa

In the global history of human agriculture, at least five great series of events are prominent:

- 1) The Neolithic Revolution, during which most domestic animals and many crops were domesticated, beginning about 10,000 years ago. This was the effective beginning of agriculture.
- 2) The Muslim Agricultural Revolution, involving the diffusion of crops and livestock from India and Southeast Asia to the Mediterra-

nean region and Africa south of the Sahara during the Early Medieval Age.

- 3) The Columbian Exchange beginning in the late fifteenth century CE in which the crops that had been developed by the Native Americans spread to all the civilizations of Europe, Asia, and Africa.
- 4) The Agricultural Revolution of the eighteenth and nineteenth centuries CE.
- 5) The post-World War II Green Revolution.

The following centers on the second of these series of events, focusing on the diffusion of crops and livestock, which occurred before and during the Muslim Agricultural Revolution.

The spread of livestock to the Mediterranean region and Africa during the first millennium CE, while mainly consisting of Southeast Asian animals, also included the camel from the Arabian Peninsula and the silkworm from China. Of the Southeast Asian animals, at least one, the chicken, began its spread to the Mediterranean world at the beginning of the first millennium BCE, but its appearance in Africa south of the Sahara did not occur until the early centuries CE. Another animal from Southeast or South Asia, the Asian buffalo, also known as the water buffalo, may have spread to Egypt early in the first millennium CE, but it was not known in the Maghreb or Mediterranean Europe until the seventh century.

The new crops brought to the Mediterranean region and/or Africa south of the Sahara during this time included cotton, sorghum, sugarcane, rice, taro, lemons, limes, other citrus fruits, spinach, bananas, plantains, eggplants, and certain types of melons.

The spread of camels from Arabia to North Africa and the Sahara Desert began in the last centuries BCE but had its greatest impact in the middle centuries of the first millennium CE. Camels were brought across the Red Sea to Somalia in the last centuries BCE where the Somalis as well as the Beja tribesmen quickly adapted themselves to camel culture and camel nomadism. At the same time, camel herding spread to Egypt and to the Berber tribesmen of Libya and the Roman territories of North Africa. Some Berber tribesmen, the Tuareg, also developed camel nomadism. They ad-

vanced with their camel herds to every area of the Sahara Desert, subjugating the farmers of the Sahara oases and reaching the Sahel south of the great desert. By the beginning of the early medieval period (300 CE), the camel-date complex, in which camel nomads and date palm-cultivating oasis dwellers had established a symbiotic trade relationship, was ubiquitous throughout the Sahara. Within another century, Berber herders inaugurated a thriving camel-borne trans-Saharan trading system.

The buffalo, sometimes called the river or water buffalo, spread from North India through Sassanian Persia to West Asia by 300 CE. Although the Egyptians probably knew of the buffalo by 300, there is no evidence that it became common in the eastern Mediterranean region until 600 CE. When the Muslims conquered North Africa, they brought the buffalo with them and then introduced it to Andalusia in the early eighth century. The Aghlabids introduced it to Sicily in the ninth century, but it was not until the mid-eleventh century that the mainland Italians became acquainted with the animal. The Muslims and the Italians both used the buffalo as a draft animal, but they prized it for its rich milk as the raw material for some distinctive cheeses.

The diffusion of Southeast Asian crops to Africa south of the Sahara and the Mediterranean region involved two different processes that were not exactly simultaneous: the Austronesian migration from Indonesia to Madagascar and the diffusion of crops west from India consequent to the creation of the Islamic caliphate.

The people who settled Madagascar began sailing across the Indian Ocean to East Africa at about the beginning of the Common Era. They traveled along the southern coast of Asia, first to Sri Lanka and southern India, and then along the coast of South Arabia to what is now known as Somalia and south to modern Tanzania. Subsequent voyages continued from Tanzania to Madagascar, which had previously been devoid of humans. The Austronesians brought their crops in their outrigger canoes. They established these crops on Africa's east coast as well as in Madagascar. Rice was the major crop that they brought, but coconuts, taro, sugarcane, cotton, new vari-



Sugarcane fields in the Nile River valley, Egypt. Sugarcane was introduced to Egypt during the Muslim agricultural revolution. Since it is a summer crop that demands much water, and since the Nile River was normally low in the summer, growing sugarcane in Egypt required heavy investments in irrigation systems. (Espixx)

eties of sorghum, Asiatic yams, and, importantly, bananas and plantains were also brought on the Austronesian craft. In addition, the chicken crossed the Indian Ocean with the Austronesians. The commerce between Indonesia and Madagascar was two ways and may have continued until the fourteenth century CE.

The Southeast Asian crops introduced by the Austronesians became a very important addition to the agricultural portfolio of East Africa and by the eleventh century had spread across the continent to the Atlantic coast and into West Africa. For interior and West Africa, bananas and plantains were the most important of these crops. Where the rainfall is sufficient, bananas and plantains are easy to propagate, requiring only the insertion of a stem cutting into the soil. Bananas and plantains are high in calories and are nutritious. In much of sub-Saharan Africa they became the staff of life, the principal crop. Indeed, in some African languages, the word for bananas and plantains and food in general are the same.

A consequence for sub-Saharan Africa of the diffusion of Asian crops, particularly bananas and plantains, was that it made possible the increased production of high-caloric food per unit of land. This allowed populations to grow and population densities to rise. More cities grew, and new states were created.

The Muslim Agricultural Revolution, of which the diffusion of cultivars from India to the Mediterranean was a central part, was a consequence of the emergence of the Islamic empire with its unification of areas producing diverse crops. The Islamic empire established the largest zone of peace and security that the world had known until then. In this zone a Pax Islamica prevailed in which commerce and people moved from Spain to Sind (northwestern India) and from the Malabar Coast to the Mediterranean Sea. Muslim merchants (in this period, mostly Arab), military men, administrators, and scholars collected plants in their far-flung travels, returned to West Asia to retire, and established gardens to raise these exotic crops. Thus, rice, sugarcane, spinach, eggplants, mangos, taro, sorghum, bananas, lemons, and other citrus fruit were planted in gardens from Spain to Persia and from Morocco to Oman in the early Islamic centuries. They could be grown in gardens on a small scale with a high investment in labor, but raising these new crops on a larger scale required a drastic change in Mediterranean agriculture.

Most of these new crops, except spinach and citrus fruits, were hot-weather crops that required copious amounts of water. They were adapted to India and Southeast Asia, where the summer monsoons provided just the right milieu for them. But in the Mediterranean region, wheat and olives, adapted to dry summers and wet winters, were the rule. To successfully propagate the hot-weather Southeast Asian crops in the Mediterranean region required a high investment in irrigation systems. By the ninth century old irrigation systems were revived, and new ones were constructed in Spain, North Africa, Sicily, Syria, Iraq, and the rest of the Islamic world. This allowed Islamic agriculture to be much more productive, to harvest crops in two seasons rather than relying only on the cool-weather winter crops. Also, the diffusion of Southeast Asian crops throughout the Islamic world resulted in a much more diverse and exciting culinary palette.

—Wilfred J. Bisson

Bibliography

Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.

Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.

Watson, Andrew M. *Agricultural Innovation in the Early Islamic World*. Cambridge: Cambridge University Press, 1983.

European Rural Economy

Economic conditions in Europe began to deteriorate during the late third century when the Roman empire faced political upheaval, barbarian incursions, and population decline. The Romans responded with increasingly rigid state control of the economy, leading to a decline in the role of towns in the economy. As a result, the economy of early medieval Europe came to be primarily agricultural. Commercial activity fluctuated throughout the period but never disappeared.

The agrarian economic structure most closely associated with the Middle Ages was the manor, an agricultural structure that emerged between 400 and 800. By the ninth century manorial estates dominated the eastern half of Gaul, Italy, the Rhineland, and southern and central Germany. By the end of the tenth century the manorial model dominated England and Denmark. However, it is important to note that the medieval agrarian economy was not monolithic. Many types of estates existed, and these varied with geography, population density, climate, and soil conditions. For example, in southwestern Gaul and on the Saxon plain, manorial estates never completely dominated the economy. Small and large estates existed side by side along with free holdings called *allods*. Friesland as well as parts of Holland, Norway, and Sweden never had a manorial system. Because many more records survive from manorial estates, any discussion of medieval agriculture must focus on the system about which historians have the most information.

Manorial estates generally consisted of three parts: the lord's holding or demesne, the tenants' holdings, and often a common holding such as a pasture or forest. The lord was a local strongman whose ancestors had been powerful Germanic or Roman nobles or governmental officials. The peasants descended from slaves or freemen who had given over their land and free-

dom in varying measures to the lord's ancestors in exchange for protection and security during the politically and economically uncertain times after the decline of Roman power in the West.

Custom and the traditions of the estate determined the lord-tenant relationship. In general, the lord or his agents directed the work and provided the management needed to run the estate. The peasants, often referred to as villeins or serfs, worked their own parcels and provided day-to-day labor needed to farm the demesne as well as rents in the form of payments in kind. Beyond this, the specific obligations between lord and peasant varied from one manor to the next and depended on the original deal made between their ancestors.

The medieval agricultural economy produced a myriad of goods. Each manor existed primarily as a self-sufficient unit and produced everything it needed. In addition to such staple cereal crops as wheat, barley, and rye, peasants grew spelt (a grain resembling wheat), oats, buckwheat, and millet. In gardens they grew turnips, peas, lentils, beans, and onions, and to support the expanding textile trade they grew dyer's weed, woad, madder, saffron, and teasels. Flax and hemp were important crops as well. Southern Europe grew olives and grapes, and temperate zones grew fruit trees, including apple, pear, plum, cherry, and fig, as well as walnut, hazelnut, and chestnut trees. Pigs roamed forests, feeding on acorns and other nuts, and provided most of the meat. Medieval estates also kept cattle for traction, meat, and dairy and sheep for wool, meat, and dairy products.

By the tenth century the population of Europe began to grow. The rapid clearing of forests and expansion of arable land that occurred in this period suggest that there were more people to feed. The Romans passed down sound agricultural techniques, including knowledge of intensive weeding, crop rotations, and the need for fertilizing land with manure, ash, and green manure crops. Some of this knowledge went into disuse, but such new innovations as the heavy plow and open field systems made it possible to open up heavier soils of northern Europe to feed more people. The increase in arable land also increased the availability of pasture and fodder crops, which led to a better balance

between cereal crops and animal husbandry.

Historians have only a few references in chronicles and a sparse archaeological record upon which to base conclusions about the economy of post-Roman Europe, but it is generally accepted that trade and commerce declined during the early Middle Ages, and the West suffered more in this decline than did the eastern half of the Roman empire, driving Europe to an increasingly rural and agricultural economy. Historians believe that the empire had long suffered from a trade imbalance, and after 300 the problem became more pronounced. Eastern provinces produced commodities, silk, spices, jewelry, and grain, all things that the western provinces wanted, while the west, with its agricultural economy, had little more than slaves to offer in return. The western provinces had to pay for everything with currency, so gold flowed west to east and never came back into the western economy. This apparent trade deficit, combined with fifth-century barbarian invasions, the fall of the western Roman empire in 476, and the advance of Muslim power in the seventh century, led historians to one of the most hotly debated historical arguments of the twentieth century. What was the cause of the economic decline of Europe in early medieval times, when did it occur, and how severe was it?

In general, historians agree that trade and commercial activity decreased during the late Roman period and then fluctuated throughout the early Middle Ages. Trade declined during the fourth and fifth centuries, revived in the sixth and early seventh centuries, diminished again at the end of the seventh century, and remained at low levels throughout the ninth century. During this period, economic activity shifted to the local level and became increasingly rural. Small towns and manors produced goods to meet local needs. Most craftsmen and farmers did not produce for the market but instead worked to meet



Chronicle of the Months, an early Carolingian manuscript showing agricultural labors, ninth century CE. (Erich Lessing/Art Resource, NY)

► INTERREGIONAL TRADE

Local trade and trade within the regions of Europe played an important role in the economy of early medieval Europe. Historians often treat the economies of northern and southern Europe as separate, but they were far from unconnected.

Nearly every locality had a market that served the area's needs. Markets occurred frequently, perhaps weekly, and specialized in cheap or perishable commodities. They offered people a place to buy or trade for goods that they could not produce themselves or that they produced in surplus. Local markets had to be within walking distance so that a peasant had time to walk to the market, conduct business, and walk home. Regional markets met less frequently and served as a meeting point for merchants to sell off or trade items they had accumulated in abundance and to restock the items in which they specialized. By the twelfth century some large regional markets eventually evolved into fairs, which met two or three times a year and served as an outlet for large business transactions.

By way of this system of markets, goods moved all over Europe. Southern areas sent wine, olives, spices, silk, and other luxury items to the northern parts of the continent. The northern provinces sent back indispensable items such as grain, butter, cheese, fish, timber, metals, salt, and their one luxury item, furs. Advances in agricultural technology allowed the Frankish kingdoms to produce a surplus of foodstuffs they could trade to areas that could not feed themselves such as Scandinavia, Frisia, and eventually Flanders.

—Kevin Hill

the needs of their self-sufficient village or manorial economy.

However, it would be a mistake to believe that all trade ceased or that only an agrarian economy persisted. Sixth-century documents refer to Syrian and Jewish merchants in Francia, and at the end of the sixth century Marseilles remained a trading center and entry point to the West for goods from the East. Many scholars have pointed to these and other facts, including evidence indicating the continued use of coins in the West, to conclude that trade in various

commodities continued between East and West throughout the early Middle Ages.

—Kevin Hill

Bibliography

- Duby, Georges. *The Early Growth of the European Economy: Warriors and Peasants from the Seventh to the Twelfth Century*. Translated by Howard B. Clarke. Ithaca, NY: Cornell University Press, 1974.
- Hodgett, Gerald A. J. *A Social and Economic History of Medieval Europe*. London: Methuen, 1972.
- Pounds, N. J. G. *An Economic History of Medieval Europe*. London and New York: Longman, 1974.
- Verhulst, Adriaan. *The Carolingian Economy*. Cambridge: Cambridge University Press, 2002.

The Three Sisters and the Spread of Agriculture in North America

Archaeologists have dated the cultivation of maize (corn), beans, and squash to at least 7000 BCE. They believe that maize originated from a wild grass or corn in the Tehuacan Valley of Mexico by that date. Early maize had small cobs with only a few kernels on each one. Early indigenous Americans, however, recognized that they could plant seeds and receive a harvest after the plants matured. They quickly recognized that selecting the best seeds from the plants that had the most favorable characteristics would result in better harvests. Thanks to this seed selection, maize along with beans and squash became the most important part of most indigenous Americans' diets.

The agricultural lifestyle that resulted from growing maize and the other crops changed indigenous American society. They moved from a hunter-gatherer culture to one that was more sedentary. A more dependable food supply also resulted in an increase in population. Food surpluses allowed some individuals to take on new functions not connected with simply obtaining food to survive. Religious and civil leaders emerged. Cities developed with denser populations than ever before.

Seed selection resulted in the development of various types of maize, beans, and squash. Each variety had characteristics that were useful in certain circumstances. Corn varieties in-

cluded flint corn, which had larger yields and grew better in cooler climates. Flour corn had a soft starch center that could be easily ground into flour for making dough. All parts of the corn plant were used by the indigenous Americans. They found that the leaves were high in sugar, and these were chewed by the Maya. Immature cobs were cooked and eaten whole as vegetables. Even the silk on the cobs was dried and used as a seasoning.

Varieties of beans that were developed included black, lima, and runner beans. Beans were cooked or dried and ground into flour. When domesticated beans spread to the Southwest, farmers there used seed selection to develop varieties that could withstand dry heat better. Beans provided the amino acids lysine and tryptophan lacking in corn. Squash varieties included pumpkin, acorn, zucchini, and crookneck. Squash was not as important to the diets of indigenous Americans but did provide nutrients.

By 1500 BCE farmers in the Southwest were growing maize with seeds obtained through trade. Production was limited until around 300 BCE, when they developed varieties that grew better in dry conditions. The Hohokam people dug miles of canals to carry water to their maize, while the Anasazi developed a flood irrigation system to take advantage of seasonal rainfall. Other indigenous Americans planted their crops in crevices or at the foot of cliffs, where water collected.

Maize reached the Mississippi River valley around 200 CE but was not widely grown until around 800 CE. It allowed the development of the Mound Builders civilization in that region. The surplus food produced by maize and the other crops permitted the development of a class of elites who ensured a distribution of food in lean years and helped keep the social order. Other indigenous American peoples in the Southeast and Northeast adopted a more settled lifestyle when they began growing maize, beans, and squash around 1000 CE. They cleared fields and planted all three crops together. They found that all three did better when grown together.

Maize, beans, and squash became known as the Three Sisters because indigenous Americans regarded them as so important and essential to

THE INTERLINKED THREE SISTERS

Cherished as the Three Sisters by indigenous North Americans, corn (maize), beans, and squash support each other as well as their human cultivators. Grown together in the same plots, these plants provide mutual aid. Maize, with its heavy demand for nitrogen, depends on beans, which provide nitrogen from the air and in turn use the corn stalks to climb toward the sun, while squash plants, with their big leaves, smother weeds that otherwise would rob the three crops of nutrients.

—Tim J. Watts

their culture. They assigned religious meanings to each one, especially maize. For many tribes, their creation stories included an important role for maize. Some, such as the Iroquois, believed that the three crops should be grown together and dried together to preserve them. They represented a balance that was an ideal in life.

—Timothy J. Watts

Bibliography

- Coe, Sophie. *America's First Cuisines*. Austin: University of Texas Press, 1994.
- Heiser, Charles B. *Seed to Civilization: The Story of Food*. Cambridge, MA: Harvard University Press, 1990.
- Hurt, R. Douglas. *American Indian Agriculture: Prehistory to Present*. Lawrence: University Press of Kansas, 1987.

Mesoamerican Agriculture

Agriculture in Mesoamerica was central to the development of civilizations in the region. The development of edible plant species that could produce significant harvests allowed the people of Mesoamerica, especially the Maya, to create complex societies with specialization among professions and enough time for higher learning. Improved food production also led to an increase in the total population in the region and the building of infrastructure to improve the quality of life. The success of Maya agriculture between 300 and 1000 CE resulted in a Classic Period, and the end of that period may have been the result of agricultural failures.

Mesoamerican agriculture produced more edible plants than that of any other region, with the exception of China. By the time Europeans arrived, 88 species had been domesticated and were used as food products. The cultivation of basic food crops, especially maize, beans, and squash, spread throughout the region as well as beyond during this time. Mesoamerican farmers displayed a great deal of talent for nurturing favorable genetic mutations. Wild squash, for example, were first gathered over 9,000 years ago. The seeds, which are rich in edible oil, were the only part consumed originally. The flesh of the squash was thin and bitter. Prehistoric Mesoamerican farmers recognized that by saving seeds from plants with the most favorable characteristics, they could gradually develop a more useful species. By 4000 BCE, they had a number of domesticated squash species that could provide nutrition. Maize was also domesticated at an early date. By 2000 BCE, it was being grown throughout Mesoamerica and was a basic staple. Genetic manipulation by early farmers increased the yield many times but produced a plant that could not survive without human intervention. Other important plants that were domesticated by the Mesoamerican farmers included trees such as the cacao.

Agriculture in Mesoamerica was a complex process that required large numbers of people working together. As a result, anthropologists argue that it helped in the development of ever more complex societies. The type of agricultural system and the techniques used depended upon the climate and other conditions.

One of the earliest systems of agriculture that remained in use in tropical forest areas of Mesoamerica is the slash-and-burn system, which became known as milpa agriculture. During the dry season, the vegetation on a plot of land was cut and left to dry. When the rainy season started, the vegetation would be burned. The ashes provided nutrients for the crops planted in the field. A clearing or field would be used for 2 to 3 years and then abandoned for the forest to reassert itself. This fallow period often lasted up to 20 years. Advantages of the milpa system included no need for fertilizers and a decline in the number of insect pests in a field. The drawbacks in-

cluded a need for large amounts of virgin forest that could be brought into cultivation. As populations grew, the amount of land available declined, and fallow ground was not allowed enough time to restore its fertility.

Typical crops in Mesoamerican milpa agriculture included maize, beans, and squash. The beans used the corn stalks for its vines while adding nitrogen to the soil. Maize required large amounts of nitrogen and provided stalks for climbing bean vines. The squash helped shade the ground and prevent the evaporation of moisture. Many other types of crops were planted in the same fields at the same time. Cotton, for example, was cultivated by the Maya and became an important trade good. The cotton cloth was woven in complicated weaves and was richly embroidered and colored. Fixed lengths of cotton cloth were traded like currency among the people of Mesoamerica. To achieve some return from the fields being left fallow, trees, such as avocado, were planted. Most families farmed several plots at the same time, with each at a different stage in its useful career. The clearing required periods of intensive manpower use, promoting greater social organization and control. Mayan rulers were able to marshal their subjects successfully to clear the land as needed during most of the Classic Period.

Other agricultural techniques that were used by Mesoamerican farmers depended on the organization and use of large numbers of people, especially to provide an adequate supply of water to crops. Examples of these techniques include the irrigation and terracing of fields. Many Mayan fields cultivated between 300 and 1000 CE show signs of these systems. In terracing, sloping fields were built up into a series of steps. Terracing prevented soil from washing away and crops from being damaged. It also helped to retain moisture in the field. Terracing required the creation of retention walls, which was done through brush or stone walls. Many walls were the product of generations of farmers. Mayan farmers also depended on raised fields to grow crops. Where the ground was suitable, canals were dug throughout a field, and the removed soil was placed between the canals. Water flowed through the canals to irrigate the fields.

A year-round supply of water was provided by reservoirs or by diverting streams. Archaeologists have found evidence that the fields could be completely flooded during different times of the year to help control pests.

Irrigation depended on the artificial supply of water to fields in regions where rainfall was seasonal. In most of Mesoamerica, rainfall was most common between May and December. The porous limestone bedrock of the region tends to drain away water that falls, requiring human intervention to provide water year-round. Reservoirs and canals were used to accumulate the water and to bring it to the fields. Most Mayan farming may have been concentrated in the bajos, forested wetlands where the most water could be found. These bajos would have been the centers of agriculture and supported the Mayan cities nearby. Like terracing, irrigation required large amounts of human labor. The result, however, was greater food production, encouraging a growth in population.

The most varied and intensive food production was in home gardens. These were small plots near the residences of the inhabitants. Plants in the home gardens were those that required the most intensive attention through weeding, watering, or transplanting. They were also home for the plants whose products were needed in small quantities on a regular basis. Security for gardens against human and animal predators was important, and they were often enclosed by stone walls. Yields were higher on home gardens than on other agricultural areas. Farmers were aware that fertilizer such as bat guano or lime could increase yields. They also used waste water from the homes to water the gardens as needed. Products from the home gardens included medicinal plants, ornamental plants, and spices. Fruit and nut trees, including avocados and cacao, were prominent in home gardens. In some Mesoamerican societies, fields were owned and worked communally, but home gardens were always under the control of the resident. They were often the source of individual wealth or status. While products from larger fields provided the food needed to sustain life, the gardens provided luxury goods for sale or trade.

—Timothy J. Watts

Bibliography

- Coe, S. D. *America's First Cuisines*. Austin: University of Texas Press, 1994.
- Fedick, S. L., ed. *The Managed Mosaic: Ancient Maya Agriculture and Resource Use*. Salt Lake City: University of Utah Press, 1996.
- Killion, T. W., ed. *Gardens of Prehistory: The Archaeology of Settlement Agriculture in Greater Mesoamerica*. Tuscaloosa: University of Alabama Press, 1992.

The Agricultural Economy of the Andes

The economy of the Andes between 300 and 1000 CE was based upon agricultural products. Most communities strived to be as self-sufficient as possible. Very few essential products were not produced locally. As a result, most Andean societies lacked hard currency and a merchant class. Instead, they bartered for goods and commodities.

The key factor of life in the Andes was the influence of geography. Different elevations had radically different environmental conditions, which determined which crops and products could be produced. At the higher elevations, herding was the most suitable form of agricultural production. At lower levels, where moisture was more common, different kinds of crops were grown. Farmers in the Andes recognized the need to diversify the crops they grew. By doing so, they could avoid disasters from pests or bad weather that would destroy one type of crop. To raise different foods, control over ecological niches was necessary. By establishing growing areas at different elevations, which were relatively close to each other, Andean farmers could grow a variety of crops. Not only were they protected against the failure of one type of crop, but their diet was more varied and nutritious.

Crops grown by the Andeans were the result of centuries of domestication by their predecessors. Early farmers recognized that they could improve the production of crops by planting seeds from the plants with the most desirable characteristics. Careful nurturing created species that still remain important to modern agriculture. Potatoes were the most important food



Common Andean dried staples, including dried corn, freeze-dried potatoes, and lima beans. (iStockphoto)

crop grown in the Andes. Other crops included peanuts, lima beans, squash, and chili peppers. At lower levels, important amounts of maize, cacao, and different kinds of fruits were grown. Andean farmers also raised cotton and gourds for manufacturing useful items.

Protein was provided by meat from llamas and alpacas. These camelids had been domesticated centuries before, and large herds thrived at higher elevations. Llamas were also used as pack animals since they could carry up to 90 pounds. Both llamas and alpacas were valued for their wool. Llama wool was used for ropes and sacking, while the finer wool of the alpaca was woven into clothes. Further protein was provided by guinea pigs, raised by Andean farmers. Around lakes, such as Titicaca, fisheries provided additional sources of protein.

Because each community valued self-sufficiency and they lived on the edge of subsistence, the Andeans developed methods of preserving food from years of surplus. The most famous is the freeze-drying of potatoes. They also dried llama meat, which they called *charqui*, possibly the source of the English term “jerky” for dried meat. Surplus food was stored in state warehouses and issued to citizens when needed.

Most Andean states during this time resembled a socialist society whereby private ownership was rare. Fields were allocated to each household according to their anticipated needs and ability to work the land. Seed and farming tools were owned by the state and distributed ac-

cording to need. When poor harvests occurred, surplus food was redistributed from state warehouses. Because a monetary system did not exist, a system of labor tax was used, with each person owing service to the rulers. On sloping mountain fields, this labor might include building terraces to prevent erosion. In the dry coastal lowlands, a system of canals was constructed to bring water from the few rivers and springs to the fields. Labor was carefully monitored. Those who were away from home, either in the army or working in mines, had their fields tended by others who lived in the same political unit.

The success of the Andean agricultural economy and the surpluses it produced allowed a degree of specialization and the emergence of elite classes who did not work the land. These included priests and leaders for a religious system that was common through most of the Andes. This system included many shrines of varying importance. Most shrines had their own lands assigned to them, along with the people required to work the land. Other members of the elite class included hereditary nobility and the rulers of the Andean states, all of whom had lands and workers assigned to them.

Some agricultural products were in great demand but could not be grown in Andean highlands. Groups of colonists were sent by their rulers to locations where these products could be grown to create new settlements. Such products included cacao, fruit, and marine products. They were the center of a system of long-distance trade, carried mostly by caravans of llamas. Because this trade was not conducted for profit, it did not lead to the development of a merchant class. A network of roads and bridges, along with rest stations at regular distances, was created to facilitate this redistribution of agricultural products.

—Timothy J. Watts

Bibliography

- Bawden, G. *The Moche*. Malden, MA: Blackwell, 1996.
- Kolata, A. L. *The Tiwanaku: Portrait of an Andean Civilization*. Malden, MA: Blackwell, 1993.
- Schreiber, K. J. *Wari Imperialism in Middle Horizon Peru*. Ann Arbor: University of Michigan Press, 1992.

■ Introduction: Early Medieval Industry

The most widespread form of industry in all early medieval societies was handicraft manufacturing. The largest share of early medieval handicraft manufacturing was done by families in the home for home consumption or by village craftsmen for use within the village or its vicinity. Milling of grain, the making of beer and bread, and the processing of meats, cheeses, and other dairy products were all home or village industries, as was much preparation and weaving of linen, hemp, wool, and similar textiles (or cotton in parts of the Americas). Many villages had their potters, house builders, and metalsmiths, and many homes made candles and wooden tools that fabricated almost all of the industrial products used by the average villager.

In the larger towns and most of the cities, much of these handicraft industries were carried out in specialized shops with a master and a few subordinate craftsmen. In India, where craft specialization was very highly developed, castes, which in these centuries were very close in function to guilds, controlled and conducted most crafts, a consequence of which was that India produced some of the finest manufactures of the age. For many centuries, Indian weavers were renowned for the fine cotton textiles they produced. In West Africa too, many crafts, particularly metalsmithing, was controlled by caste guilds.

One of the most active industries in most early medieval societies was the manufacture of weapons and armaments. Swords, spears, bows and arrows, and shields were the most common weapons. Indian steel swords, made by the secret Wootz process, were widely sought throughout Eurasia. Only toward the end of this era were the metallurgists in Damascus and Toledo able to manufacture blades with such keen edges. The Indian steel longbow made Indian armies formidable until the end of this era. The Chinese excelled in manufacturing crossbows, which they were able to mass-produce.

Navies and shipbuilding also called for industrial production. Most effective naval powers—the Byzantine empire, the Arab caliphates, the Tang dynasty, and, late in this era, Venice and

perhaps other Italian cities—had closely supervised government shipyards.

Metallurgy, particularly iron manufactures, was a very important industry. In certain periods, the making of iron tools and weapons was a state monopoly in China. The Chinese developed a method of mass-producing relatively inexpensive but brittle cast iron. The abundance of Chinese iron tools is sometimes credited with the exuberance of the Chinese economy in the early medieval age. In India, the metalworking guilds also produced abundant metal for tools and weapons. In Teotihuacan, much of the prosperity of the city rested on the skill of the craftsmen who carved obsidian tools and weapons for much of Mesoamerica.

Although the making of cotton cloth probably originated in India, which maintained its preeminence in that industry, demand for cotton textiles was enormous in the Muslim world, and cotton-weaving establishments sprang up in many Muslim cities. Cotton weaving was also important in the Andes as well as in Mesoamerica and was beginning to spread in Africa.

Porcelain was a leading industry in China during the Tang dynasty and developed an important export trade, particularly to Muslim lands as far west as the Swahili coast, and porcelain-manufacturing establishments were becoming large enterprises. Papermaking, another industry of Chinese origin, had by 800 spread to the Muslim world, and within less than a century many Muslim cities had a papermaking establishment. It would require another three centuries before the process leapt the cultural barrier to Christian Europe.

Before 1000 CE, industrial production in Europe was still in its infancy. It would be several centuries before Europe would catch up with the more highly developed industrial regions of the Muslim world, India, and China.

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Bibliography

Hourani, Albert. *A History of the Arab Peoples*. Cambridge, MA: Belknap, 1991.

Reischauer, Edwin O., and John K. Fairbank. *East Asia, the Great Tradition*. Boston: Houghton Mifflin, 1960.

Stein, Burton. *A History of India*. Oxford, UK: Blackwell, 1998.

China, the Economic Powerhouse of the Early Medieval World

The great wealth and power that China accrued during the Han dynasty (206 BCE–220 CE) came as a result of significant technological advances such as the widespread use of iron, the acceleration of communications with an improved network of roads, and the extension of military power. The Chinese economy declined with the fall of the Han dynasty and had grown little during the period of division (220–589 CE). It rebounded under the Northern Wei (386–534), Sui (589–618), and Tang (618–907) dynasties.

The period of relative peace extending from the late fourth century to the fall of the Tang allowed for an impressive growth in population, production, trade, and culture. There were significant advances in technology and agriculture, the building of major canals, and a vast expansion of foreign trade. Furthermore, the implementation of the equal field system, which allotted several acres of cultivable land to each adult male, provided a high degree of financial stability. Commerce grew rapidly, and a highly developed money economy emerged. There was a concurrent rise of overseas trade from the start of the eighth century between China and South and West Asia. There also emerged a large land-owning gentry class that remained in power from the Tang through the end of the Qing dynasty in the early twentieth century.

The rise in prosperity came with the unification of China under the Sui. The last ruler of the Sixteen Kingdoms had already unified northern China in the late sixth century. The Sui rulers brought order to China with the introduction of a comprehensive new legal code, the establishment of reforms in local administration, and the continuation of the equal field system begun by earlier kingdoms. A reorganized and highly efficient bureaucracy brought in increasing tax revenues, while price-regulating granaries brought

in grain in times of glut and sold it cheaply in times of poor harvests.

The second Sui emperor, Yang Di (r. 605–618), used the greater resources available for several major projects, the most grandiose of which was the construction and extension of the Grand Canal from Hangzhou north across the Yangzi to Yangzhou and then to Loyang in northwestern China. By 609 the canal was extended to the regions of Beijing and Tianjin. These canals, when combined with local streams and lakes, made possible the barge transport of food and other commodities of the lower Yangzi to fortify the northern frontier as well as to feed the major cities of Chang'an and Loyang. The canal between Hangzhou and Chang'an can be called the first Grand Canal of China, in contrast to the more modern canal built during the period of Mongol rule between Hangzhou and Beijing. These two grand canals had the same primary purpose to supply food from the south to the capital city and to the border armies that defended them.

The Sui dynasty, however, came to a very premature end after the failed reigns of Sui Yangdi and Qin Shihuang. Yang Di made an unfortunate attempt to invade Korea. His overwhelming defeat exhausted his resources and brought widespread rebellion across China, which led to the collapse of the dynasty in 618.

The new Tang government was more prudent in its administration of the country, but it also benefited from the advances implemented under the Sui. They inherited the huge capital city of Chang'an (with a population of 2 million by the 700s) and the secondary capital at Loyang. Later in the seventh century when armies swept northward to occupy Korea, southward into Vietnam, and westward into central Asia, China opened the way to the oasis trading cities of the Silk Roads and West Asia. Chang'an, located at the terminus of the Silk Roads, became a great international metropolis, perhaps one of the largest, wealthiest, and most cosmopolitan cities in the world.

The government of the Tang dynasty was far wealthier than the earlier Han dynasty. Important advances in agriculture and government administration were responsible for part of this gain, but of greater importance was the signifi-

cant population growth in the Yangtze River valley since the third century CE. The chief agriculture area for China was no longer the dry wheat and millet land of the Wei Valley and the North China Plain but rather the rich rice paddy fields of the Lower Yangtze region.

There was a vast expansion of international trade during the Tang period. The reopening of the Silk Roads stimulated a huge demand for Chinese goods such as silk, lacquer, and porcelain in the Middle East and Persia. In addition, tea became a major export item, although tea consumption had become popular in China during the Northern and Southern dynasties (420–589). Chinese maritime trade from such ports as Guangzhou (Canton) extended to Japan, India, the Persian Gulf, and the Red Sea. Guangzhou emerged as a thriving international port with a large expatriot population.

Salt and iron monopolies became important sources of revenue for the Tang state. During its early years, Tang rulers allowed the private manufacture of salt and iron, but in 758 Emperor Tang Suzong established a salt monopoly. The government introduced a monopoly of iron and mines in 780 as well as an intermittent monopoly on the production of liquor in 782.

In addition to the expansion of trade and production, developments in science and technology flourished during the Tang dynasty. New products included matches, the double-action piston pump, cast iron, the iron plow, the horse collar, the multitube seed drill, the wheelbarrow, the suspension bridge, natural gas as fuel, the propeller, the sluice gate, and the pound lock. Many of these innovations paved the way for the great wave of prosperity during the Song dynasty (960–1279).

The Tang began a long period of decline starting in the middle of the eighth century. A series of weak rulers combined with expensive military overexpansion and defeats in central Asia significantly weakened the state. The bitter rebellion led by An Lushan swept China between 755 and 763, bringing devastation to both cities and valuable farm land before the Tang government could restore order. The administration, however, never recovered the power it had possessed before the rebellion. Increased military weakness and successions of invasions from



The Grand Canal in China was constructed by the second Sui emperor, Yang Di, during the seventh century CE. China's early medieval prosperity was based to a large extent on its advanced system of inland transportation. (Yory Frenklakh)

outside China proper led to the final collapse of the empire in 907.

—Daniel A. Métraux

Bibliography

- Benn, Charles. *Daily Life in Traditional China: The Tang Dynasty*. Westport, CT: Greenwood, 2002.
- Deng, Kang. *Premodern Chinese Economy: Structural Equilibrium and Capitalist Sterility*. New York: Routledge, 2007.
- Needham, Joseph, ed. *Science and Civilisation in China*. Cambridge: Cambridge University Press, 1954–2000.
- Perry, John C., and Bardwell L. Smith, eds. *Essays on Tang Society: The Interplay of Social, Political and Economic Forces*. Leiden: Brill, 1976.

Economic Development in India

Indians created sophisticated institutions and mechanisms in trade, mercantile organizations, shipping, banking and currency, and taxation during the era 300 to 1000 CE. The merchants and craftsmen of classical India were generally organized into *śrenis*, or guilds. These must have existed from the beginnings of settled Indian society, since they are mentioned in the later Vedas and the Jatakas (stories of the lives of the Buddha and his aides). Each such guild was headed by a chief executive (*mukhya*) assisted by advisers. They had the power to control

THE BAZAARS OF CLASSICAL INDIA

Indian commerce showed its flamboyant best at the bazaars, which were a highlight of most towns and cities. City markets could be massive cornucopias of the wealth of metropolis, countryside, and even foreign parts. A large bazaar would contain separate rows, even separate sections, for the varied spices, bolts of gleaming cotton cloth, heaps of fruits and vegetables, and handicrafts of wood, ivory, metals, and so on. Other shops lined major streets. The stereotypical shopkeeper (often called a *bania* or *banyan*), squatting or sitting cross-legged in his stall, has probably changed little over the centuries.

The bazaar of Sagala (Sialkot) in the northern Punjab, a city with “thousands of magnificent mansions,” streets filled with elephants and horses and carriages, and “frequented by groups of handsome men and beautiful women,” is described in a Buddhist classic, *The Questions of King Milinda*: “Shops are there for the sale of Benares muslin, of Kotumbara stuffs, and of other cloths. . . . [S]weet odours are exhaled from the bazaars, where all sorts of flowers and perfumes are tastefully set out. Jewels are there in plenty, such as men’s hearts desire. . . . So full is the city of money, and of gold and silver ware, that it is a very mine of dazzling treasures. And there is . . . food and drinks of every sort, syrups and sweetmeats of every kind.”

Even this is surpassed by the account of the great Tamil epic, the *Shilappadikaram* (*The Ankle Bracelet*), of the markets of Madurai of the fifth century CE. Ships laden with incense, silks, sandals, and camphor were driven up the river Vaigai and into the harbor. Kovalan, hero of the epic, was a small-town youth dazzled by his first sight of the great city of Madurai. He entered the jewelers’ special street, where “shining diamonds were sold, without flaw or stain or crow’s-foot,” and “cloudless green emeralds, perfect in form and luster,” and “heaps of white and pink pearls.”

“In the street of the cloth merchants Kovalan made his way through piles of bales, each containing a hundred lengths, woven of cotton, hair, or silk. There was a street for grain merchants, busy with their balances, measures, and bushels. Bags of grain and pepper were to be found there in all seasons.”

—Edwin Hirschmann

Sources

The Questions of King Milinda, translated by T. W. Rhys David, Vol. 35 of *Sacred Books of the East*, edited by F. Max Muller (Oxford, UK: Clarendon, 1890), 3.
Prince Ilango Adigal, *Shilappadikaram*, translated by Alain Danielou (New York: New Directions, 1965), 97–98.

prices, productivity, standards of work, and conditions of labor. Apparently they also had the power to punish violators of their edicts by reprimands, censure, seizure of goods, or even banishment. Such internal judgments were usually respected by kings and their courts. The guilds superintended the artisans through their training, with four ranks generally recognized: apprentice, advanced student, expert, and teacher. Finely made goods were a source of pride, and craftsmanship was considered a gift from the gods that superseded one’s caste restrictions.

In the classic *varna* (caste) structure, the merchants and shopkeepers occupy a middle rank, distinctly lower than the Brahman priests and the warriors/nobles, but they played a respected part in the affairs of the state and society. Inscriptions found on clay tablets, metal

plates, and stone walls attest to their charities and other deeds. This is especially true in southern India, where some guilds ran villages and maintained military troops.

Banking/moneylending has been an accepted part of Indian life since later Vedic times. The shastra literature directs terms and arrangements for lending. Lenders might be individuals, families, guilds, institutions, or even the state. In India, as elsewhere, substantial business required the use of credit. Annual interest rates swung between 15 and 25 or even 30 percent, depending on the risks and security offered. (The Laws of Manu stated that the higher a man’s caste, the lower should be his borrowing rate.) Regulations were issued for the settlement of disputes or forfeitures arising from loans. Temple and cave inscriptions tell of interest-only en-

dowments as well as outright gifts to religious institutions.

Currency was another firm pillar of the Indian economy, from the punch-holed coins of the Mauryas. The issuance of coinage was an assertion of sovereignty, and chronologies stamped on the coins have been invaluable in fixing regional dates. Gold, silver, and copper were used for coinage (and sometimes cowrie shells for small change), and professional *shroffs* had the delicate job of determining the weight and worth of the coined metals.

The commercial networks led to the bazaars that were often the features and nerve centers of cities and towns. Goods from near and far were presented in this structured yet freewheeling setting. Varied foodstuffs, textiles, utensils, spices, pharmaceuticals, handicrafts, and other wares were on display.

However, India has always been a largely agricultural land, with most people living in villages either through farming or serving the needs of farmers. The agricultural pattern was well established by classical times, and the *rayat* (peasant) with his simple wooden plow, drawn by an ox or two, was a constant of the countryside. In settled times the state would try to assist by construction of roads, dams, and irrigation channels and perhaps with relief supplies in times of natural disaster. The peasant might own cattle, oxen, goats, or chickens.

Most farmland was held and worked by families, though some was worked by sharecropping tenants and some by laborers. Sometimes a monarchy operated large plantations, and sometimes religious institutions (i.e., temples, monasteries, or universities) might hold substantial estates. Grazing, fishing, or forest foraging rights might be held quite apart from cultivation rights.

Theoretically, all land belonged to the king as "lord of the world." However, the occupancy rights of the peasant were generally recognized by his neighbors, and any land dispute would be adjudicated. The ruler who unjustly seized lands and expelled their occupants might find his rule facing mounting resistance as reports spread. It was usually wiser to keep the peasant producing and instead take the recognized raja's share of the harvest, perhaps one-sixth of the yield (though it might rise as high as one-third). This

land revenue, a mix of rent and taxes, was collected by royal officials, sometimes after hard bargaining between the collector and village leaders. It was the principal source of state income in India until Indian independence in 1947.

Internal trade usually depended on established relationships for the shipping, financing, and marketing of goods at a distance. Businessmen seemed indifferent to the outcome of warfare and political upsets, but they needed security of property and a state that could ensure it. Thievery was a frequent menace in unsettled areas, and wild animals, bandits, or strange diseases might lurk. Merchants often banded together to outfit a caravan, usually of ox carts but in some regions camels or elephants. Professionals would organize such a caravan, with the requisite armed guards. Where conditions were too rugged for wheeled carts, they would resort to backpacks.

Intercity roadways were maintained only when a settled political order permitted. Shipping by sea was easier if one avoided the summer monsoons and occasional winter storms. Principal ports in classical times were Tamralipti in Bengal, Mammalipuram (or Mahabalipuram) in the Southeast, Bharukuccha in the Northwest (Gujarat), and Cranganore in the Southwest (Kerala). But to reach the interior of India, the only reliable rivers were the Ganges and its tributaries, gentle and deep, and the Indus and its tributaries, at times swift and dangerous.

Indian products have been highly valued and much sought in the West since the days of the ancient Greeks and Romans. Most sought have been cottons and pepper. Cotton cloth, made coarsely and massively or in fine and ornate specialized weaves such as calico and muslin, with a variety of attractive patterns and regional specialties, was India's principal export to the Mediterranean, East Africa, and other parts of Asia during the centuries.

Black pepper was even more famous, with the best quality coming from the Malabar Coast (Kerala), spicing up the diets of more and more of the world with the passing centuries. Other more specialized spices were gradually becoming known and appreciated: cardamom, ginger, cinnamon, turmeric, cloves, and, costliest of all, saffron. India was also an abundant source of gems, pearls, and semiprecious stones, often gorgeously

set. Forest products and timber (notably sandalwood, teak, and ebony), aromatics, and handicrafts in ivory, metals, and wood were also exported.

What did foreign merchants exchange for these goods? India's biggest import by far was gold from the Middle East and the Mediterranean world. More surprising was the constant flow of horses from central Asia and Arabian lands; horses always languished in India, perhaps because of the climate or some unknown endemic disease. Slaves were a significant import from East Africa. So were medicinal and aromatic herbs and other forest products, such as frankincense from Arabia, Chinese silks, and woolen and linen fabrics.

In ancient times Indian merchants sailed the Arabian Sea and the Indian Ocean, as classical writings testify. By the fourth century CE Indian merchants dominated the trade to the east, bearing Buddhist monks and doctrines to Southeast Asia along with their merchandise. But in the seventh century Chinese reunification under the Sui and Tang dynasties encouraged the outreach of Chinese merchants into Southeast Asia and eventually India. To the west, Arab and Persian merchants were expanding their scope. The Islamic conquests and conversions seemed to give them extra encouragement and esprit, especially when the caliphate was moved to eastward-

looking Baghdad in 750 CE. By the ninth century the Indian Ocean had become a Muslim lake.

Why had Indian merchants yielded this lucrative carrying trade? Evidently, foreign invasions and political disorder from about 500 CE led to the dissolution of the Buddhist establishment, with its elaborate but costly pagodas, monasteries, and universities, and the revival of exclusivist nativist Hinduism. Buddhism is a missionary religion whose adherents wish to roll the wheel of law through the entire world; Hinduism sees in the foreigner a danger of pollution and corruption. It was reputed that for a high-caste Hindu to cross the *kala pani* (black waters) was to risk pollution and ostracism, even with purification rituals. An exception was the South Indian trade with Southeast Asia. As a result, Hindu merchants gradually lost their stake in oceanic commerce.

—Edwin Hirschmann

Bibliography

- Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.
- Saletore, R. N. *Early Indian Economic History*. London: Curzon, 1975.
- Thapar, Romila. *Early India, from the Origins to AD 1300*. Berkeley: University of California Press, 2002.
- Wink, Andre. *Al-Hind, the Making of the Indo-Islamic World*, Vol. 1. Leiden: Brill, 1990.

■ Introduction: Early Medieval Commerce

While agriculture was by far the largest economic sector during the early medieval age, commerce was a distant second. Two varieties of commerce—local and long-distance—were pivotal during this period. The early medieval world consisted of a vast number of economic regions, local territories that were, as near as possible, self-sufficient in producing most of what they consumed. The demands of city populations for food and other necessities stimulated trade in those commodities with farm folk in the surrounding areas within

their economic region. Most of these economic regions produced all necessities except salt, metals, and sometimes timber.

Regions with sources of these sought-after commodities were pivotal to long-distance trade. Such regions included the seacoast, as well as salt deposits at places such as Salzburg (Austria), Taudenni (central Sahara Desert), or the brine wells of Sichuan (China). Copper mines in Sweden and Michigan, silver mines in sites from Germany's Harz Mountains, central Asia, Japan, or the Andes, and obsidian deposits in central

Mexico and the Yellowstone country also were commercial foci for large areas.

But there was also local and regional trade in other commodities. Pastoral peoples on the grasslands traded horses, wool, hides, and dried meat with agricultural peoples for grain, other foods, and the luxuries produced by sedentary populations. The dwellers of the North Eurasian forests traded honey, beeswax, furs, and forest products for foods and luxuries.

The early medieval trading systems that have been the object for most study involved the long-distance and intercontinental trade routes. These were mainly in the Eastern Hemisphere, but the Americas also had some lesser-known trade systems. The overland Silk Roads or silk routes from China to the Mediterranean and their maritime counterpart, the sea route from Egypt to India and then from India around the Malay Peninsula to China, were the longest and most famous of these routes.

The Chinese exported raw silk, silk cloth, porcelain, tea, lacquerware, paper, and Chinese manufactures on these routes. They received in return horses, furs, wool, cotton, pepper, ivory, rhinoceros horn, tortoise shell, hides, precious woods, cobalt ore, and other raw materials as well as jewels, silver, and gold. India also traded finished manufactured goods, such as steel swords, cotton cloth, gems, silk, religious texts, pepper, and spices, for horses, gold, ivory, and coral along these routes.

Although these two transhemispheric trading routes were the central feature of the early medieval Afro-Eurasian trading system, they were complemented by other trading systems:

- a) The Mediterranean system, in which the Islamic world traded Arab silver and manufactures along with luxuries such as silk, pepper, and spices that the Arabs obtained from India and China for European timber and slaves;
- b) The trans-Saharan system, in which Berber merchants, driving camels across the great desert exchanged manufactured goods from the Mediterranean region and salt from the central Sahara for gold, slaves, kola nuts, and other tropical products from the peoples of the West African savannas and forests;

- c) The East African extension of Indian Ocean trade in which Arab, Persian, Indian, and African sea merchants traded goods from India and the Muslim world for ivory, slaves, pig iron, and (toward the end of this period) gold with the Swahili merchants at the city-states on Africa's east coast.
- d) The Baltic Sea to Black Sea route pioneered by the Vikings in which they traded furs, honey, beeswax, forest products, and slaves with the Byzantine empire and the Muslim caliphates to the south.

The principal trading systems in the Americas were:

- a) The Mississippian trading system, in which the Mound Builders of the Hopewell and Mississippian cultures imported obsidian from the Yellowstone region, pipestone from Minnesota, copper from Michigan, and seashells from the Gulf of Mexico to manufacture artifacts, which presumably were themselves traded. It is thought that the Mound Builders paid for these items with food, particularly maize.
- b) The Mesoamerican trading pattern, in which turquoise from New Mexico was traded as far south as the Mayan cities, and obsidian tools and weapons made in Teotihuacan were widely traded throughout the region.
- c) The Andean trading pattern, whereby Spondylus shells from the Ecuadorian coast were widely traded throughout the Andean region, and fish and other foodstuffs were brought from the lowlands to the highlands.

It is probable that there also existed trading systems and patterns along the Amazon and other great rivers.

—Wilfred J. Bisson

Bibliography

- Bentley, Jerry. *Old World Encounters: Cross Cultural Contacts and Exchanges in Pre Modern Times*. New York: Oxford University Press, 1993.
- Curtin, Philip D. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press, 1984.

India, China, and Buddhism in International Trade

Buddhism was the major influence in the expansion of trade and other contacts between India and China in the first millennium CE. Prior to the fall of the Han dynasty, the religion had entered China with traders from India and central Asia accompanied by some missionary activity of central Asian monks but remained largely limited to those foreigners. During the post-Han dynasty warfare and political chaos, Buddhism gained followers and influence and started to become an important religion in China.

In the fourth century the famous translator of Buddhist texts, Kumarajiva, came to China from Kucha at the invitation of the Chinese monk Daoan, and their disciples subsequently dispersed widely. The spread of Buddhism and the creation of Buddhist temples, stupas, and statues greatly increased under the Northern dynasties. Those formerly nomadic foreign rulers found more affinity with Buddhism than with the Confucianism and Daoism of the previous ethnic Chinese dynasties. They became the religion's adherents and patrons, giving Buddhist teachers from India significant influence in China. This led to greater commercial and diplomatic exchanges between the kingdoms.

Commerce and travel most often took place via the central Asian route that went from India to the Gandharan region, following the Silk Roads through Bactria and Sogdiana, across the Pamirs, around the Taklamakan Desert, and into China. Alternatively, there were more direct but much more rugged trails crossing the Karakorum Mountains, and a sea route also connected China and India. In the fifth century the Chinese monk Fa-Xian traveled to India over the Karakorum Range and then returned to China by sea, his written account being a primary source of information on the Buddhist lands of that time. The sea passage was via the Spice Route down the Arabian Sea coast of India to Sri Lanka and then across the Bay of Bengal. It then went on to Srivijaya, a rich trading center on the island of Sumatra, that commanded the Molucca and Sunda straits. Srivijaya was a center of Vajrayana Buddhism, with religious and diplomatic ties to both India and China, and thus was often a stop-

ping place for monks from both countries. From there ships sailed to Indo-China and then Guangzhou (Canton), with some continuing farther north along the Chinese coast.

The Mahayana school of Buddhism, the most important in China, viewed precious metals, gemstones, and silk as symbols of Buddhist purity and sacred devotion. The Mahayana text known as the Lotus Sutra stated that the Buddha instructed his followers to build 84,000 stupas and lavishly decorate them with the seven treasures. These precious commodities flowed into China: gold and silver from India, central and Southeast Asia, and the Middle East; lapis lazuli (also used to produce ultramarine pigment for Buddhist paintings) from the Kokcha Valley of the Hindu Kush; rock crystal (quartz) from Samarkand; coral from the Mediterranean and Red Seas and the Persian Gulf; red pearls from the Kashgar region; and diamonds and other gems (such as rubies, carnelian agates, emeralds, and common pearls, sometimes alternatively listed as among the seven treasures) from India. Glass, valued for its own decorative qualities, was also often substituted by the Chinese Buddhists for lapis lazuli or crystal. It was commonly obtained from India and Bactria, but higher-quality glasswork was imported from the Middle East and Europe. These items, purchased by Chinese devotees for donation to monasteries and temples, likely made Buddhist institutions even larger consumers of such luxury goods than the secular elites in China during this period. Meanwhile, India and central Asia imported Chinese silk for Buddhist institutions' use.

Buddhism had entered its iconic period in the first centuries CE, and a large trade in Buddhist images developed during the subsequent centuries. Buddhas and bodhisattvas were carved in stone, sculpted in clay, and cast in bronze, in all sizes, as well as painted on a variety of media. Additionally, Buddhist symbols such as lotuses, endless knots, swastikas, and lions were incorporated into utilitarian items such as carpets and furniture. This artwork was in demand among devotees in all the areas of Buddhist influence. Commerce in such art from central Asia, ritual objects from India, and luxury goods from India, the Middle East, and China along with the more mundane commodities combined to make

THE SILK ROADS—BUDDHISM'S GATEWAY TO CHINA

Buddhism's early entry into China was via the Silk Roads, through the oasis town of Dunhuang. Originally established as a military outpost on the western edge of the Chinese cultural sphere, it became an important Buddhist center starting in the fourth century. One of the early Chinese Buddhist monks, Le Zun (Lo-tsun), had a vision of golden light like 1,000 shining Buddhas when stopped outside Dunhuang while on his way to study in India and began carving caves for Buddhist shrines in the hillsides. This effort was joined by other monks and supported by donations from passing Buddhist traders and pilgrims. Buddhist missionaries from central Asia and India stopped there to learn Chinese before proceeding into China and met with pilgrims and students heading west. It thus became a center of Buddhist learning and a repository for Buddhist manuscripts and books. The latter include the copy of the *Diamond Sutra* found there in the early 1900s, which is the oldest known printed book bearing a date, May 11, 868, CE.

—Leonard Leshuk



Caves carved into the hillside near Dunhuang, China. These caves show abundant evidence of the role Buddhism played in India-China trade. (Valery Shanin)

the section of the Silk Roads linking India and China via central Asia the most heavily trafficked in the fifth and sixth centuries.

Despite the rise of Islam, Buddhist idols were still being transported westward to be sold in cities such as Baghdad and Bukhara in the late ninth century, with one account mentioning that Buddha figurines worth 50,000 silver dirhams were sold at a fair held in the latter. The extreme geographic penetration of this Buddha trade is shown by a small eighth- or ninth-century bronze Buddha from northern India found in a Viking Age site in Sweden, assumed to have gotten there via the Silk Roads and trade routes through Russia.

After the reunification of China under the Sui and Tang dynasties in the seventh century, the shared religion continued to foster commercial and diplomatic ties to India. Meanwhile, Buddhist monks, artists, and craftsmen also transmitted scientific and technical knowledge between the countries, an example being their transfer of sugar-processing technology from India to China. However, the relationship soon be-

gan to change as the Chinese developed their own Buddhist schools. At a time when Buddhism in post-Gupta India was without support of a powerful state, the Chinese empress Wu Hou promoted it, not only making China more independent of the religious institutions in India but also ultimately making it into a rival as the main center of the religion.

Starting in the eighth century, political instability and military conflicts in the eastern portions of central Asia began to disrupt the overland India-China trade and diplomatic relations. China lost control of its central Asian territories to Arab forces in 751, followed by a period in which Tibetans, Arabs, Uighurs, and Chinese fought over various portions of the region. In the mid-ninth century the Tang emperor Wu Tsung suppressed religions of foreign origin, including Buddhism. The situation started to improve in the tenth century after the Tang dynasty ended, as central Asian trade began to revive. By then, however, the Buddhist connections had become less important, and merchant guilds in both India and China began to assume

the most influential role in commerce between the kingdoms. The increasing shift of trade to the sea routes, where merchants of other faiths were becoming more numerous, further reduced the importance of Buddhism in the commercial relations of the two countries during the Song dynasty period.

—Leonard Lesbuk

Bibliography

- Foltz, Richard. *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*, New York: St. Martins, 1999.
- Liu, Hsin-ju. *Ancient India and Ancient China: Trade and Religious Exchanges, AD 1-600*. Delhi: Oxford University Press, 1988.
- Sen, Tansen. *Buddhism, Diplomacy and Trade: The Realignment of Sino-Indian Relations*. Honolulu: University of Hawai'i Press, 2003.
- Zurcher, Erik. *The Buddhist Conquest of China: The Spread and Adaptation of Buddhism in Early Medieval China*. Leiden: Brill, 1959.

Indian Ocean Trade and the Swahili Coast

The Swahili coast of East Africa stretches some 2,000 miles from Mogadishu to Maputo. In this early period our knowledge of the city-states on this littoral is scanty at best. Apart from a few brief and obscure Greek gazetteers, we are reliant on linguistic work and, much more important, archaeological excavations. Important work has been done by scholars digging up the past,

but there are still very many sites along the Swahili coast that have yet to be excavated and analyzed. Studies of these early city-states have also been bedeviled by biased work. Earlier studies often saw the Swahili coast as passively accepting influences, even civilization, from external forces, notably from Shiraz in Persia (Iran) and from the Arab world to the north. More recent work has tended to stress the autonomy of the local inhabitants on the coast. They are seen as playing an active role in accepting and modifying external influences while remaining part of the Bantu-speaking world from which they derived.

There is no doubt that the arrival of Islam on the coast, which happened primarily in the eighth century CE, marked a decisive change. However, long before this the coast had been tied in to the wider Indian Ocean world trading network. By 300 CE Indian and Arab traders had for some centuries been active on the coast, especially in the north in Ethiopia and Somalia. The Greek guidebook *Periplus of the Erythraean Sea*, from the middle of the first century CE, shows us that there was trade as far south as Zanzibar and the mainland coast to the west. A little after this, finds of pottery show contacts with Sassanian Persia and China. At this time, around 500 CE, only the small coastal towns and their immediate interiors were exploited; penetration farther inland came much later.

Arabs had traded to the coast for perhaps eight centuries before the arrival of Islam in the early seventh century. Now Muslims, the Arabs continued their trade. The first mosques on the

► TRADE FROM SWAHILI COAST—IVORY

Ivory, along with gold, was the most valuable export item from East Africa. It is derived from the tusks of male elephants. African elephants produced ivory that was much easier to carve and was more attractively patterned than was ivory from Indian or Sri Lankan elephants. Ivory was much in demand in India, where it was used to make bangles. The demand was constant, for Hindu women break their bangles when their husbands die, and thus new ones are needed.

In the producing areas, inland from the Swahili coast, ivory was not valued. Local herdsmen used

tusks as fence posts and valued the protein from an elephant's carcass much more than the tusks. The huge tusks, weighing at least 44 pounds (20 kilograms) and some even 88 pounds (40 kilograms), were carried to the coast and there exchanged for cloth from India. The Swahili merchants in their port cities facilitated and profited from this exchange. In India the raw tusks were carved by expert craftspeople into fine bangles and other decorative items.

—Michael Pearson

coast date from the eighth century. These were small structures and were used by visiting Muslim merchants and possibly by some Muslim migrants who had settled on the coast. Over the next centuries many Swahili, especially in the north, converted, but it was only from the tenth century that nearly all of the Swahili became Muslims.

The connection of the coast with the Indian Ocean Muslim trading world led to an expansion of trade. Three main items were collected in the interior of East Africa, sent to the Swahili city-states, and exchanged there for manufactured goods from the Muslim world and India. Ivory, which came from far inland, was in demand especially in India for use in making jewelry and ornaments. Gold came from the far south, from the interior area now known as Zimbabwe. Exports began in the tenth century or perhaps a little earlier and were at their height between the eleventh and fifteenth centuries. Slaves were the third main export. They were much in demand in the wealthy Abbasid empire, which flourished from the eighth century in what is now Iraq. These slaves came from the northern part of the coast and were used in backbreaking work draining the marshes of the Tigris-Euphrates delta.

The history of the city-states that funneled this trade into the Indian Ocean world during much of this period is obscure. Archaeologists have excavated a series of small settlements on either side of the Zanzibar channel and also in the Lamu archipelago that date from the sixth to the tenth centuries. The most important change was the transformation of these small settlement clusters into much more sophisticated urban and mercantile societies. This happened between 750 and 950, and it is clear that the arrival of Islam and its opening up of wider horizons were crucial in this momentous transition.

The most important of these new city-states were probably, going from north to south, Mogadishu, Shanga and Manda in the Lamu area, Mombasa, Pemba, Zanzibar, and Kilwa. We cannot provide a list of rulers for any of them, but what we do know is that many of these petty sultans claimed to be originally from Shiraz, in Persia. These claims, which appear to have very little historical veracity, were made in order to give these local dynasties more prestige and to tie them in more closely to the wider Muslim

➤ SINBAD THE SAILOR

Sinbad the Sailor is the subject of a series of travel stories centering around the Indian Ocean trade routes. Sinbad may have lived around 1000 CE in the great city of Baghdad (at that time the capital of the mighty Abbasid empire and a place of great trade), but the tales of the seven voyages of Sinbad do not describe the actual adventures of a real person. Rather, they make up an amalgam of the experiences of many seafarers, with many exciting mythological occurrences added to provide interest. Each story begins with Sinbad living peacefully in Baghdad. He is then seized with a desire to go to sea again. On his travels he has many dramatic adventures. In one he lands on an island that turns out to be a huge fish. In another he escapes by tying himself to a huge bird and flying away. There are also demons and the evil figure of the Old Man of the Sea who traps unwary mariners. The stories are an important part of Muslim literature and have also been popular in Western travel accounts.

—Michael Pearson

world. However, it is possible that some of these dynasties were founded by migrants from Arabia or even Persia, but as they intermarried with local women they became more and more African rather than foreign.

—Michael Pearson

Bibliography

Horton, Mark, and John Middleton. *The Swahili: The Social Landscape of a Mercantile Society*. Oxford, UK: Blackwell, 2000.

Pearson, Michael N. *Port Cities and Intruders: The Swahili Coast, India, and Portugal in the Early Modern Era*. Baltimore: Johns Hopkins University Press, 1998.

Mediterranean and European Trade

In the centuries after the fall of the western Roman empire, traders in Europe and the Mediterranean no longer had one large geographic area with consistent regulations and taxation in which they could operate relatively securely. The decline of populations and urban centers



Slavic-influenced silver-mounted-crystal pendant found in Gotland, Sweden, tenth–eleventh century CE. Gotland was an important starting point in the river route from the Baltic Sea to the Black Sea. (Werner Forman/Art Resource, NY)

dispersed customers, and the absence of a unified monetary or coinage system, along with a shortage of those coins that were being minted and circulated, complicated trade. Yet extensive commerce continued. The desire for and reliance on continued supplies of imported goods caused most local rulers to grant safe passage to traders and keep duties and tariffs within reason. Greater dangers from piracy and robbers increased the risks, but there were always traders willing to take them in return for the profits that could be made. New towns grew around the medieval markets and fairs. In the absence of sufficient coinage, merchants resorted to barter or used compact commodities as money.

The Mediterranean and Black seas, the Atlantic Ocean, and the North and Baltic seas were the primary arteries of trade in the medieval era. From the seas, rivers then served as the major routes into the center of Europe. The Mediterranean also connected the ports of Europe with the northern ports of Africa, the westernmost ports of Asia, and those of the Black Sea. From the ports

along the coasts and rivers of Europe, carts and wagons were used for commercial transport farther inland where possible, but with few roads being adequately maintained after the fall of Rome, much of the overland transport was by pack animals. Though inefficient for moving large quantities of goods, pack traders carried merchandise anywhere there was a trail passable by horse or mule, thus connecting even remote villages to the international network of commerce.

The items most commonly associated with medieval commerce are the luxury goods transported long distances and purchased by the wealthy: gemstones, silk, furs, dyes, perfumes, spices, hunting dogs and hawks, ivory, ceramics, glass, and objects made of precious metals. The vast majority of medieval international commerce, however, was in commodities and more utilitarian goods traded between areas of abundance and scarcity, purchased by even those of modest means with proceeds from the sale of some of their own produce. Salt was purchased by almost everyone, and even the poorest people required metal tools and utensils for farming and cooking. Grain and other easily transportable bulk foodstuffs, olive oil, honey, wine, wax, wool, flax, and hides were widely traded. Among the most important commodities were the base metals. Iron, being widely mined and smelted, was generally traded relatively short distances. Due to there being far fewer sources of copper, tin, and lead, those metals were transported longer distances, often via the same routes as in classical times. Although horses and other livestock were generally raised and traded locally, there was international commerce in especially desirable breeds and exceptional individual animals. With slave labor being important to most medieval economies, there were numerous local markets for slaves as well as major international trade in slaves.

The extent of commerce is illustrated by some of the communities on the Atlantic islands. In the ninth and tenth centuries they exported to the European continent raw wool, wool cloth, sheep and cattle hides, sour (preserved) butter, lava quern stones, dried fish, furs, down from seabirds, whale bone, walrus ivory, marine mammal hides and rope made from them, and marine mammal fats rendered into oil for lamps

and tar for shipbuilding. They would then import raw commodities such as lumber, iron, and bronze; foodstuffs including grain, dried fruit, ale, and wine; and manufactured goods such as linen cloth, tools, weapons, hone stones, household utensils, pottery, and personal items such as jewelry and mirrors.

Manufactured items of exceptional quality, such as swords and glassware from the Rhine Valley, became world renown and were traded all across Europe, around the Mediterranean, and far beyond. There was also commerce in some surprisingly sophisticated items. For example, rock crystal lenses dating from the tenth century have been found on the Swedish island of Gotland. The lenses, which are believed to have been made in eastern Europe, were intentionally shaped to correct for spherical aberration, thus providing distortion-free magnification, a technique that was subsequently lost for more than 500 years.

Celtic ships and traders had long conducted extensive commerce between the continent and the Celtic-populated islands. Their commercial activities were significantly curtailed when the Visigoths invaded Iberia and the Angles and Saxons, and later the Danes, took control of much of Britain and were further hindered as the Scandinavians gained power in the northern seas. The Byzantine (East Roman) empire continued to dominate commerce in the Mediterranean from Constantinople. However, after Roman control of virtually all the coastal areas from North Africa to Italy had been briefly reasserted, the eastern and southern shores of the Mediterranean were lost to the Muslim caliphate in the seventh century. This included Alexandria and Carthage, which were the trading centers for Africa, and the Levant's ports such as Antioch and Tyre connecting to the Silk Roads and Asia. Although not totally ending trade with these areas, it caused Byzantium to direct more of its maritime commercial activities to the west and north. In particular, new sources of grain were sought around the Black Sea to replace supplies formerly obtained from North Africa. When the Muslims took control of Gibraltar in the eighth century, the sailing route from the North and Baltic seas and the Atlantic islands and coast to the Mediterranean was disrupted. Consequently, separate northern and

➤ INNOVATIONS IN VESSELS OF MEDIEVAL COMMERCE

Two nautical developments led to greater efficiency in sea transport and facilitated the expansion of medieval trade. In the Mediterranean a small version of the lateen sail had been used on coastal vessels since the early Roman period. In the medieval era, however, the Arabs were the first to adapt it to larger ships. By the ninth century it was in wide use on the naval and merchant ships of the Byzantine empire, with the shape refined. Its advantage was that it allowed ships to sail more directly into the wind, making for shorter, faster voyages. A disadvantage, though, was that the very long yard and large sail of a lateen rig required a larger crew and made it dangerous to use in regions where the waters were frequently rough and stormy. Thus, it was not suitable as the primary sail configuration for the northern seas, where the simple single square sail prevailed. Meanwhile, the Scandinavians made advances in the design and construction of clinker-built (lapstrake) ships. They were thus able to construct light and relatively fast yet strong and stable cargo vessels known as *knarrs*. Of the same basic design and having some of the same handling characteristics as the famous longships, they were broader and deeper, enabling them to carry heavy cargoes and cross the open seas. Their easy maneuverability and simplicity of operation also allowed them to be sailed with small crews. These very different innovations in the separate spheres of trade each contributed to greater volume of commerce and lower relative transport costs while creating two distinct styles of ships and seafaring.

—Leonard Leshuk

Mediterranean European trading spheres developed. The Umayyad caliphate in al-Andalus, the Fatimid caliphate in Tunis, and the Abbasid caliphate in the Middle East, although political rivals, comprised a Muslim trading area with a level of commerce comparable to that of Europe. It connected, even if usually indirectly, to the European Mediterranean markets and linked them to the trade routes going into Africa and Asia.

The conflict between Islam and Christianity led to Radhanite Jews serving as the early intermediaries in trade between the two societies.

Long active in international commerce, their role as the main link to the Muslim markets of Spain and North Africa, and also to those of the Middle East, enabled them to gain control of much of western Europe's trade. Beginning in the late eighth century, the Vikings became the pre-eminent traders in the North Sea and the Baltic. In the ninth century they expanded the existing trade routes down the eastern rivers of Europe connecting to Byzantium, with Kiev and Novgorod soon becoming major trade centers. In the south, Italian merchants from Venice, Genoa, and Naples initially operated under Byzantine control. They began to develop into economic and military powers in their own right and assumed a major role in sea trade in the Mediterranean between Byzantium, western Europe, and the Muslim caliphates.

—Leonard Lesbuk

Bibliography

- Hodges, Richard. *Dark Age Economics: The Origins of Towns and Trade, A.D. 500–1000*. London: Duckworth, 1989.
- Latouche, Robert. *The Birth of Western Economy; Economic Aspects of the Dark Ages*. London: Methuen, 1961.
- Lewis, Archibald Ross. *The Northern Seas: Shipping and Commerce in Northern Europe, A.D. 300–1100*. Princeton, NJ: Princeton University Press, 1958.
- Lopez, Robert Sabatino, and Irving Woodworth Raymond, eds. and trans. *Medieval Trade in the Mediterranean World*. New York: Columbia University Press, 1990.

The Radhanite Merchants

The Radhanites (in Arabic, *ar-Radhaniyya*) were Jewish merchant-adventurers who were active during 500–1000 CE. The meaning of their name is uncertain. Some historians believe that it derives from the Persian phrase *Rab Daan*, or “he who knows the way”; others maintain that the name refers to the Rhone River valley in France (called Rhodanus in Latin) that was the origin point for most of their routes. Moshe Gil identified the Radhanites with the district of Radhan in southern Mesopotamia, which he asserted was their base of operations.

Jewish merchants were instrumental in maintaining the Mediterranean and Levantine trade routes following the collapse of the Roman empire and the rise of the Islamic caliphate. During much of this period, Christian vessels were often barred from Muslim ports (and vice versa). Jewish-owned ships, on the other hand, were seen as neutral parties and thus permitted to trade where they pleased.

The name “Radhanite” is known from only a few Arabic sources, the earliest of which is *al-Qitab al Masalik wal- Mamalik* (*The Book of Roads and Kingdoms*) by Abu'l Qasim Ubaid'Allah ibn Khordadbeh. As Abbasid Caliph al-Mutammid's (r. 869–885 CE) director of posts and police for the province of Djibal, ibn Khordadbeh was a postmaster, a sheriff, and a spy; he was therefore perfectly placed to learn about the people who passed through his jurisdiction.

The picture we get of the Radhanites from ibn Khordadbeh is of extremely talented and sophisticated travelers. “These merchants speak Persian, Roman (Greek), Arabic, the language of the Franks, Spanish, and Slav,” he wrote. “They journey from west to east, from east to west, partly on land, partly by sea.” Ibn Khordadbeh described four primary trade routes traveled by the Radhanites; all four began in southern France. Several centuries before Marco Polo, all four routes ended in China (a journey of many months or even years). Ibn Khordadbeh lists the commodities carried by the Radhanites as including spices, perfumes, jewels, silk, and other luxury items as well as steel weapons. The Radhanites also participated in the lucrative slave trade.

The Radhanites and other Jewish traders were highly successful and influential. Jewish merchants received various privileges in the Carolingian empire and were probably a factor in the Khazars' conversion to Judaism. They were probably pioneers in the field of banking; medieval Jewish travelers used letters of credit to transport large quantities of money without fear of theft. Some scholars have credited Jewish traders with the introduction of papermaking and Arabic numerals from South and East Asia into Europe. The Radhanites may also have founded Jewish colonies along their trade routes.

► THE ROUTES OF THE RADHANITES

The Radhanites used four primary routes in their network. The first went from the Rhone Valley, then went south to the Mediterranean, and then went by ship from Narbonne or Arles to Farama (Pelusium) in Egypt. From there the cargo was transported overland to Kolzum (present-day Suez) and loaded on ships for shipment via the Red Sea and the Indian Ocean, stopping in Sindh (now Pakistan) and possibly the Malabar coast before proceeding around the southern tip of Malaya to China (possibly the Yellow River port of Kai-feng, one of the capitals of the Tang dynasty). The second went overland across Syria to Basra in southern Iraq. From there the Radhanites sailed

east through the Persian Gulf before linking up with the first route in India. The third route went through southern France and Spain and across the Strait of Gibraltar into Africa. From Tangiers the merchants proceeded east to Cairo, Baghdad, and the Silk Roads. The fourth route went overland across central and eastern Europe to the Khazar Khaganate and eastward across the steppes to China. It is unlikely that any one merchant routinely traveled as far as China; most likely the cargo was handed from one Radhanite to another as they went back and forth along fixed legs of the journey.

—Brian Gottesman

In the tenth century a number of factors led to the downfall of the Radhanite trade network. The Tang dynasty of China collapsed in 908. In the succeeding decades the Abbasid caliphate disintegrated into a myriad of feuding Muslim principalities, the Khazar khaganate was destroyed by the rising Kievan Rus, and numerous wars broke out on the steppe between competing Kipchak, Kyrgyz, Kimak, and Pecheneg tribes. In Europe the empire forged by the Franks fragmented into smaller states, and the Italian city-states began to take an active part in Mediterranean trade, preying on unwanted competitors such as the Radhanites. The end of the Radhanite age saw a rise in the prices of many Eastern goods in Europe (and vice versa); indeed, many spices that had been readily available in the West disappeared from European tables for half a millennium. For the Jews of both Europe and the Middle East a golden age had ended, and a time of persecution and fear was ushered in.

—Brian Gottesman

Bibliography

- Bendiner, Elmer. *The Rise and Fall of Paradise*. New York: Putnam, 1983.
- Gil, Moshe. "The Radhanite Merchants and the Land of Radhan." *Journal of the Economic and Social History of the Orient* 17(3) (1976): 299–328.
- Rabinowitz, Louis. *Jewish Merchant Adventurers: A Study of the Radhanites*. London: Edward Goldston, 1948.

Trans-Saharan Trade

The Sahara Desert, a vast sea of sand and desolation over 1,000 miles wide in most places, separates the cultures and peoples of Mediterranean lands to the north and the peoples of the grasslands and forests to the south. For much of history, Africa south of the Sahara and the area of North Africa and Eurasia developed as two separate culture areas, each little influenced by the other. But in the third century when the North African Berbers began to use the dromedary camel, the walls of separation were breached to some extent. Trans-Saharan commerce commenced, and people, goods, cultures, and religions made the journey in both directions. To cross the Sahara is a daunting task even today. The slightest miscalculation can result in death by exposure and thirst. In earlier eras it is almost miraculous that people could make the journey. The name "Sahara" is reputed to be the plural of the local word for "desert." One of the major prerequisites of the trade was the existence of powerful and stable states at either end, North Africa and the Sudan. The types of goods that can be carried on the journey have specific requirements as well. They must be relatively easy to transport and very valuable. Both gold and salt fit this category. The other type of commodity that can be traded across the great distances is a commodity that transports itself,

THE MEANING OF THE SILENT TRADE

The earliest descriptions of the gold and salt trade conducted by Wagadu indicated that it was a silent trade. In this scenario the traders from Wagadu would approach the site of the trade and leave salt and other trade goods. They would then withdraw. The miners would then come out of hiding and leave an amount of gold and withdraw. If the traders from Wagadu were satisfied with the amount of gold, they would take the gold and leave their goods. If they were not satisfied, they would simply withdraw. The miners would return and put more gold next to the trade goods. This process would continue until both sides were in agreement, at which point they would take the traded goods and leave.

It is difficult to suggest how communication worked in this context. Some have said that silent trade would have been useful if people did not have a common language to communicate with each other; however, it is more likely that it indicates something else.

The story showed that the traders from Wagadu did not control the source of the gold; in fact, they did not even know where the source was. It was a warning to their Muslim counterparts back at the capital. If outsiders were to attempt to replace the agents of the Ghana and deal directly, they would fail because they would not know where to look. The story foreshadowed what happened when the sultan of Morocco attempted to seize the source of the gold from the Songhay in 1591 and lost all access to the gold for his trouble.

—Douglas E. Saxon

that is, slaves. Finally, a means of transport is required. During earlier eras there was evidence in rock drawings that horses and chariots had made the trip during the last millennium BCE. Linguistic data indicate that this trade was how the horse was introduced to the western Sudan. However, the real birth of the trade needed the arrival of the camel from Arabia in the third century CE.

In the western Sudan south of the desert the state of Wagadu formed in about the third or fourth century CE. This provided the necessary southern anchor for the trade; however, real trade did not begin until the expansion of Islam

in North Africa provided the balancing northern anchor. The main product shipped north was gold from Bambuk and Bure, two areas near the headwaters of the Senegal and Niger rivers. Wagadu, more commonly known as the empire of the Ghana, did not control these areas, but the Soninke rulers of Wagadu did control the trade with those areas. The gold was carried north to Wagadu by donkey and reloaded on camels for the trip across the desert. The northern product of the trade was salt mined in the desert and shipped south from Taghaza. The Sanhaja Berbers were the most important merchants on the northern end of the gold and salt trade.

Wagadu faced a dilemma in dealing with the Muslim merchants. On the one hand the merchants provided wealth through the taxes they paid and commerce through the goods they brought. However, their religion challenged the traditional religious beliefs of the people. Evidence indicates that the Soninke were matrilineal before exposure to Islam; however, Islam is strongly patrilineal. In addition, frequently in African societies women were responsible for engaging in trade in local markets. This view conflicted with Muslim views that women should remain confined to the home. One expression of this conflict was the fact that the capital city of Wagadu, Koumbi-Saleh, was actually two cities connected by a road six miles long. One city was the Soninke city where the Ghana and his court resided. The other city was where the Muslim merchants lived. From Wagadu there were two routes across the desert. The western road terminated in Sijilmasa in modern Morocco. Another route passed to the northeast via the Hoggar to Tunisia.

In the eastern area of the western Sudan near Lake Chad the Kanem empire was established in the sixth century CE. Again the development of the trade had to await the establishment of a stable state on the northern end of the route. This anchor was provided by the Khariji state set up in Algeria in the late ninth century CE. These merchants soon learned the language of Kanem and introduced Islam into Kanem. The rulers of Kanem and the people were perhaps more accepting of Islam than the Soninke because very quickly mosques built in the unique style of the

Khariji were found in the kingdom, and no effort was made to separate the Muslim merchants from the bulk of the people. There were cultural strains put on the society; however, in later years one of the advisers to the Mai or king of Kanem was a woman representing divorced women in the empire. The conflict between the traditional role of the women of Kanem in producing and selling items they manufactured during the dry season conflicted with the proper Muslim view of female seclusion. The result was a large number of divorces and the need for the king to have an adviser.

Since there was no gold to trade north from the Chad basin, slaves instead were the major product. As in the west the product that headed south from the Bilma mines was salt and a more particular mineral product called natron. This was a mineral-laden salt transported in slabs that was reputed to have medicinal powers. The slave trade north hit its peak when the Fatimids replaced the Kharijis after 909 CE. They had need for loyal soldiers who could provide a regiment of royal bodyguards. This corps acted as the Praetorian Guard for the Fatimid imams until their defeat and the destruction of the guards by Saladin in the twelfth century. The rest of the slaves were destined to become domestic servants or, for women, slave concubines. While the numbers and mortality rate were nothing like the Atlantic slave trade, thousands made the journey every year, with the numbers approaching 9 million total. Also almost all of the males were castrated so they could be trusted around the harems of their Muslim masters. Also to provide the slaves Kanem had to raid its neighbors to the south each year, disrupting normal trade relations and causing many groups to seek refuge in the mountains of Guera and the swamps of the Salamat.

Shortly after the end of the first millennium CE the trade was disrupted in the west by the jihad of the Almoravids against Wagadu. Whether or not they actually destroyed the kingdom, they prevented the trade from continuing for years and impacted the economy of the state. Wagadu went into a decline, and the trade was not restored until Mali, its successor state, arose in the thirteenth century.

—Douglas E. Saxon

Bibliography

- Bovill, E. W. *The Golden Trade of the Moors*. London: Oxford University Press, 1958.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.
- Saunders, J. J. *A History of Medieval Islam*. London: Routledge and Kegan Paul, 1965.

The Overland Silk Routes

The overland trade routes that connected Europe to China have become known as the Silk Roads. This was not a single unchanging roadway but a dynamic network of roads and caravan trails linking trade centers across Asia on which goods had moved since ancient times. The rise of Byzantium, the expanding Chinese empire in the east, and the later development of Islamic empires in the areas between led to increased demand for imported luxury goods and caused the Silk Roads to assume an especially important role in international trade during the first millennium CE.

From the Chinese capital, Chang'an (Xian), the Silk Roads ran south of the Great Wall to Dunhuang. A route north of the Taklamakan Desert went through the Jade Gate Pass to the towns of Hami, Turpan, and Kucha, with a route farther north branching off at Hami to Urumqi, Almaty, and Tashkent and finally rejoining the main routes at Samarkand. A route south of the Taklamakan went through the Yangguan Pass to Loulan, Khotan, and Yarkand. The two routes converged at Kashgar, where a difficult shortcut to India could be taken south over the Karakorum Range. The main route, however, went west from Kashgar across the Pamir Mountains to Samarkand, Pendzhikent, and Bukhara. An alternative route went from Kashgar down the Wakhan Corridor and through Bactria to Balkh and then to Bukhara. Alternate northern routes went from Tashkent and Bukhara across the steppes north of the Caspian Sea, crossing the Volga into eastern Europe. The main route went southwest to Merv, Hamadan, and Baghdad. The central route then went to the Mediterranean port of Antioch from where goods were transported by sea to and from Europe, while northern branches went overland to Constantinople and the Caucasus,



The Silk Roads traversed desolate deserts as well as towering mountain ranges. This section of the route cuts through the Karakorum Range in western China. (Satish Arikkath)

and a southern branch went to Damascus, Tyre, and Alexandria.

This trade network carried an incredible range of goods. Items with high value in relation to their weight and volume, such as gemstones, precious metal objects, silk, ivory, medicines, furs, decorative glass and ceramics, fine weapons, and spices, were most likely to be traded across the entire length of the routes. More utilitarian goods, foodstuffs, animals, and slaves were also transported on these routes but generally only shorter distances. Although the Silk Roads are often thought of in terms of bringing Oriental goods to Europe, the flow of European goods eastward was at least as important. The Chinese impetus to trade silk, the entire production of which could have easily been consumed by the local elites, was a desire to obtain foreign goods. The balance of trade often favored those on the European end of the trade routes, as indicated by surpluses of coins and bullion of Eastern origin appearing in Byzantium and Scandinavia in this period.

Silk and the Silk Roads provide an early example of globalization of trade and manufacturing. By prohibiting the export of silkworms and sericulture technology, the Chinese initially maintained a monopoly on silk production. But starting in classical times, fabric brought via the Silk Roads from China was often unraveled in Persia or Europe, where better weaving tech-

niques turned it into more desirable cloth. Thus China eventually began selling silk yarn for use by Western weavers. Silkworms were smuggled to central Asia around the fourth century CE, and in the sixth century CE Nestorian Christian monks transported silkworm eggs to Byzantium, breaking the Chinese monopoly on silk yarn production. In the mid-700s central Asian Muslims acquired Chinese silk technology and workers and became major silk producers along with China and the Byzantine empire. With international competition in production, supplies increased and prices fell so that after the ninth century silk was widely available across Europe, and Western-made silk cloth was even traded eastward to China.

In some cases merchants would journey major portions, or even the entire length, of the route with specific goods. More often, though, goods passed through several hands. For example, Chinese silk was traded to the Turkic tribes of Ferghana for horses, the silk was then exchanged for manufactured goods from the Middle East via Sogdiana, and the silk was then traded by the Sassanians to Byzantium for products from farther north. Predating the inception of Islam, the early European and Asian traders were Zoroastrians, Manichaeans, Jews, Orthodox and Nestorian Christians, Buddhists, fertility cultists, and polytheists. Where merchants went they were usually followed by teachers of their respective faiths, making the Silk Roads a route by which religions, languages, cultural influences, knowledge, and technology spread in both directions.

The merchants, who formed the most important link on the Silk Roads especially during the fifth through seventh centuries, were the Sogdians, whose major centers were Pendzhikent (abandoned in the early eighth century), Bukhara, and Samarkand. They had direct trade and diplomatic contact with both China and Byzantium, and their language, an eastern branch of the Iranian group, became the lingua franca along the Silk Roads. Originally Zoroastrians and Manichaeans, they later adopted Buddhism. Economically powerful but politically weak, Sogdiana was considered a vassal state by both the Turks and Chinese and in the eighth century was quickly subjugated by the Arabs.

► ENTERTAINERS AND THE SILK ROADS

In addition to more tangible goods, the Silk Roads carried entertainment across vast distances. Exotic animals for amusement and sport, talented performers (both slave and free), and musical instruments were transported along the trade routes. An indication of the range of such entertainment trade is found in a partial list of the imports of Iraq, giving their countries of origin or transshipment, in a mid-ninth-century work, *The Investigation of Commerce*, attributed to the Arab writer known as Al-Jahiz (real name Abu Uthman Amr Ibn Bahr al-Kinani al-Fuqaimi al-Basri). Listed among the imports were tigers, panthers, and elephants from India; peacocks and racing horses from China; ostriches from Arabia; panthers and black hawks from Barbary and the borders of Maghreb; giraffes from Yemen; trotting donkeys from Egypt; dancing girls from Ahwaz; and valuable zithers and zither

players from Merv. Al-Jahiz's mention of zithers is part of a considerable body of historical and archaeological evidence that allows the movement of musical instruments along the Silk Roads to be traced both east and west. For example, it is known that the Arab *oud* reached China no later than the early years of the Tang dynasty, influencing development of the *pipa* and other lutelike instruments. Transported west, it became the medieval European lute. The Persian *rebab* was carried east to India, while the version played with a bow developed into the tenth-century European forerunner of the violin, the *rebec*. The *sheng*, a Chinese reed pipe mouth organ, spread to central Asia and became a common instrument in Buddhist temples, while the central Asian two-stringed lute entered China, where it evolved into the *erhu*.

—Leonard Leshuk

Travel was almost always undertaken as part of a caravan utilizing pack animals: horses, donkeys, mules, camels, and, when crossing the high mountains, sometimes even yaks. Where marauding nomad tribes were a threat, traders would seek safety in large numbers by forming caravans of 1,000 or more travelers with their pack animals. Oases along the routes grew into rich trading towns and cities that owed their prosperity largely to the commerce that passed through them. Their rulers thus generally sought to make travel safe and would often provide military escorts to caravans. Fortified caravansaries were also built at intervals of a day's travel.

Over the centuries, control of central Asia changed hands among numerous tribes and empires, sometimes resulting in temporary disruption of commerce or causing shifts in the preferred routes through the region. Political and social changes in China periodically affected how eagerly the foreign merchants were received there. By the Song dynasty period, merchants from the West usually obtained Chinese goods from central Asian tribes rather than penetrating China itself. Meanwhile, advances in shipbuilding and safer ocean passage to China allowed more economical transport of goods be-

tween Europe and the Far East by sea. Thus the importance of the Silk Roads in linking East and West had already begun to decline by the eleventh century. Portions of the overland routes remained the primary channels for commerce within central Asia. Transport via deserts and cool mountains also continued to be preferred by some traders for the land route's most famous commodity, silk, that was easily ruined by mold in the damp holds of ships traveling for months through hot, humid climates and tropical storms.

—Leonard Leshuk

Bibliography

- Foltz, Richard. *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*. New York: St. Martin's, 1999.
- Liu Hsin-ju. *The Silk Road: Overland Trade and Cultural Interaction in Eurasia*. Washington, DC: American Historical Association, 1998.
- Stein, Aurel. *Innermost Asia: Detailed Report of Explorations in Central Asia, Kan-su, and Eastern Iran, Carried Out and Described under Orders of H.M. Indian Government*. New Delhi: Cosmo, 1981.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2002.

Trade Diasporas on the Malabar Coast in the Age of Sinbad the Sailor, circa 800–1000 CE

The tales of Sinbad the Sailor incorporate the reality of increased Middle East contact with the Indian Ocean during the ninth century, consequent to the expansion of the Maritime Silk Roads to China after the establishment of the Abbasid caliphate capital at Baghdad in 762. The fictional Sinbad tales were based on popular word-of-mouth and written portrayals of the Indian Ocean realm in a series of Arabic-language geographical texts that provided “firsthand” accounts of their author’s Indian Ocean travels but were often collections of “fact” supplied by others who had made Indian Ocean voyages.

Collectively, these Middle East sources focus on India’s southwestern Malabar coastline, which was the destination of voyages based out of the Persian Gulf or the Red Sea. There, most Middle Eastern merchants were content to trade for the products that arrived on ships from the East, while some Middle Eastern merchants made the onward passage to China. Middle East ships brought with them copper, African ivory, incense, turtle shells, glassware, and horses, which were exchanged for gold, pearls, silk, cotton, ceramics, a variety of jungle products (e.g., sandalwood and rhinoceros horns, which were believed to have medicinal value), and spices (including Malabar pepper). Muslim, Christian, Zoroastrian (Parsi), and Jewish traders of Middle Eastern origin began to make Malabar ports of trade their home. Contemporary Indian-inscribed stone and copper plate documents provide local accounts of their activities and interactions.

The Stahnu Ravi plates (ca. 850) are the single most important document of the ninth century CE for the study of West Asian trade diasporas in South Asia and consequently for the understanding of southern India’s place in the early international trade of the Indian Ocean. The plates are multilingual: the main text is in Tamil, and the testimonials are in Arabic, Pahlavi, Judaeo-Persian, and an as yet unidentified northern Indian language, representative of the major resident trade diasporas active in the Malabar Coast marketplaces at that time, who

were variously networked with the Persian Gulf, the Arabian Peninsula, and northern India.

The grant texts concern intimately linked issues: the establishment of and terms of management appropriate to a new port of trade and its marketplace; the endowment of a Nestorian Christian church at the port of Kurrakeni-Kollam, near modern-day Quilon (Kollam) in southern Kerala; and the allocation of trade privileges to two trade associations. Among those participants and witnesses of the grant certification rituals were three different Middle Eastern ethnic groups who were using the local marketplace and presumably held community residential stature, whether part-time or permanent. Their validations were written in scripts representative of their places of origin. These networked regional homelands in the Persian Gulf and Arabian Peninsula regions were vital to the Kollam port’s success. Contemporary Middle Eastern anonymous sojourner accounts collected in the *Akhbar al-sin wa al-hind* (ca. 851) assert that Kollam was by then the chief port of call and taxation before entering the wider Indian Ocean. The Malabar coastline was the point of intersection of Arab, Persian, and Chinese shipping, and Kollam was the guard post attached to the country of Koullam-Malaya, which took taxes on China trade ships to the amount of 1,000 dirhams and 10 to 20 dinars on other ships.

The inscriptions distinguished the trading rights of the Anjuvannam (foreign diasporas) and Manigramam (Indian) trade associations and their responsibility for the administration of trade in Kollam. They were exempted from customs duties on incoming and outgoing articles and a tax on bondsmen who served their marketing needs. They had to pay fees on their vehicles for the transport of goods—eight *kasu* (gold coinage) on land vehicles and four on boats—both on their entrance and exit from the marketplace.

Kollam was not an open free trade marketplace but instead was an administered marketplace. This is significant in that administered marketplaces ensured fair exchanges of goods and services in a marketplace where the self-interests of foreign visitors and multiethnic residential communities needed to be checked. To this end, the Anjuvannam and Manigramam

were to be present at the collection of duties to ensure equitability, the assessment of the value of commodities coming into the market, and handle all other market business. They were thus the district governor's agents in the marketplace, assisting in or delegated to make assessments and collections. They were also entitled to administer and collect lease fees from local market stalls. A palace agent collected the local king's due. The *Anjuvannam* and *Manigramam* collected the local king's due. They were delegated as the chiefs within the market area or as the agents of the two local chiefs named as attending the grant certification ritual. They held ultimate income rights over the property that was included within the jurisdiction of the new port-of-trade community.

The grant enumerates the 72 rights of the *Anjuvannam* and *Manigramam*. Among these was the privilege to carry earth and water on the back of an elephant and to ride on elephants during marriage ceremonies or on other auspicious occasions, rights granted to them "for all time"; the right to withhold ceases on merchandise exported beyond the king's realm if any disputes rose between them and other groups until a resolution was reached; and jurisdiction over their own affairs.

The grant's linked focus on a Nestorian church shows the importance of religion to these diasporic merchant groups in their new homelands, as the endowment of the Nestorian Christian church served as a center for specific religious practices. The church, as a building and as a community, provided a source of ascribed or constructed social meaning to those seeking an identity and personal security in a foreign land.

While the *Stahnu Ravi* inscriptions are the most detailed local accounting, other contemporary Malabar coastline inscriptions confirm these characterizations of the Kollam trading diasporas. An early eleventh-century inscription from the port of Cochin similarly details the establishment of the Kodungallur (Cranganore) marketplace under the administration of a residential Jewish community led by the merchant Joseph Rabban. The initial eleventh-century accounts of Jewish diaspora activities in the region

contained in the Cairo Geniza collections report early partnerships among Jewish, Christian, and Muslim communities, which were distinct from the Hindu agrarian settlements that lay adjacent to their commercial centers. The archaeological remains of early mosques and a 788 CE tomb near the port of Calicut document the first Muslim settlements. Subsequent Muslim accounts substantiate the founding of the regional Mappilas ("Big Child") Muslim community in this era, notable for their practice of *muf'a* (temporary marriage), which established a network of port wives to provide local representation in their husbands' periodic absence.

These inscriptions demonstrate that the early western Indian Ocean maritime diasporas were not exclusively commercial in nature but instead overlapped into meaningful societal, religious, and political affiliations. These and the other ninth- through early-eleventh-century evidence of regional networking in the western Indian Ocean region suggest that maritime diaspora were acculturating into local societies or negotiating relationships with their neighboring communities, as these early commercial interactions and the resulting stable pluralistic communities contributed to the Indian Ocean trade boom that followed.

—Kenneth R. Hall

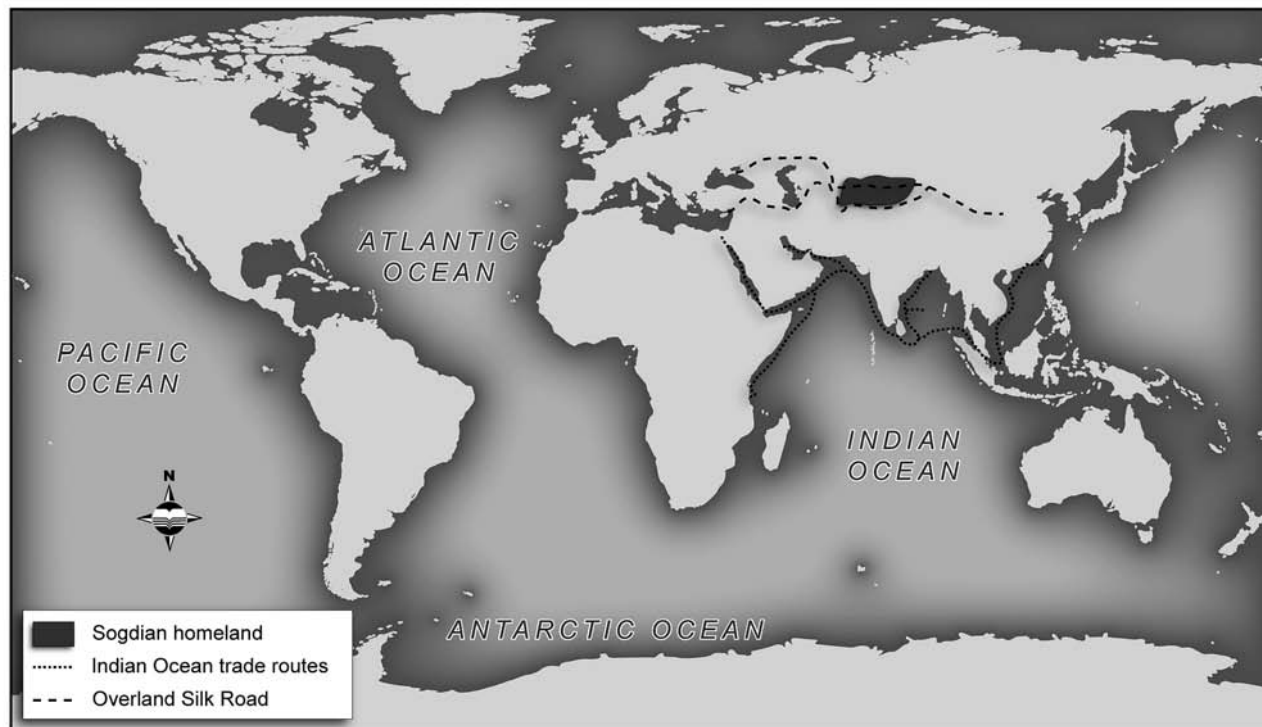
Bibliography

- Abraham, Meera. *Two Medieval Merchant Guilds of South India*. Delhi: Monahar, 1988.
- Goitein, S. D. *India Traders of the Middle Ages*. Leiden: E. J. Brill, 2007.
- Winke, Andre. *Al Hind: The Making of the Indo-Islamic World; Early Medieval India and the Expansion of Islam, 7th-11th Centuries*. Leiden: E. J. Brill, 1996.

Sogdians on the Silk Roads

The fall of the Kushan empire in the third to fourth centuries CE coincided with the emergence of the Sogdians as the most prominent traders on the Silk Roads, suggesting that they possibly were replacing Indian and Bactrian merchants who had operated under the aegis of the Kushans. That Indian influence may be seen

SOGDIAN HOMELAND AND SILK ROAD ROUTE, 300–1000



in the Indian terms connected with the trade that were used by the Sogdians. The account of Samarkand in a history of the Tang dynasty adds the information that “When a child is born, they give it a piece of rock honey to suck on and place sticky glue on the palms of its hands, desiring that it would have sweet words when grown and would latch on to valuable things as if glued to its hands. . . . They are good at commerce, love profit, and when twenty years old, they go out to other countries, they go wherever there is any profit to be made.” The Byzantine sources tell how the Sogdian merchants, in close cooperation with the Turkish empire on the steppes in the sixth century, took control of the silk trade with Persia and through Persia with the Byzantines. When that plan failed, however, the Turks and the Byzantines formed a close alliance against Persia.

The Sogdians were more successful in their trade to the east although there were setbacks, especially during periods of disorder in China. A number of letters found at a watchtower of the

Great Wall, written in Sogdian and probably dating from the early fourth century, provide vivid evidence of the difficulties faced by those early merchants. But there was a continuing migration of Sogdians into China, and the settlements flourished, especially at capitals such as Luoyang. A contemporary description of Luoyang, the *Luoyang qielanji*, speaks of the large numbers of foreign merchants who have carried the rare goods of the world to that capital. In return for silk and other Chinese products, the Sogdians as traders or as envoys brought saffron, stone honey, medicinal herbs, perfumes, carpets, silver, gold and glass artifacts, rare jewels, ostrich-egg cups, animals such as lions and leopards, and even dwarfs, musicians, and dancers. The Sogdians so dominated the trade from the fourth to the eighth centuries that their language became the lingua franca of the caravan routes.

Although there is much literary evidence that testifies to a large Sogdian population in and around China, there is little archaeological evidence of their presence. Recent discoveries of a

number of burials of the sixth and early seventh centuries now provide a firsthand look at the burial practices of some Sogdian residents in China and a glimpse into their lives, or how they preferred to be seen.

The forms of these burials are unlike anything seen in Sogdia itself but instead represent an adaptation of Chinese practices to Zoroastrian beliefs. Stone coffin beds prevented the human remains from polluting the earth, and there were few if any grave goods, as the Zoroastrian funereal rites prescribed, but the style of the tomb was Chinese, and there does not seem to have been any attempt at de-fleshing the body before it was interred. The decor of the tombs, carved into the walls of the stone vault or on the stone screen placed around three sides of the coffin bed, provide unique depictions of Zoroastrian beliefs, illustrating in some cases what had only been known from literary sources.

A network of Sogdian communities followed the trade routes across central Asia, through the Gansu corridor, and into northern China. The responsibility for administering the Sogdian communities within the Chinese realm was given to the leaders who were given a low rank in the official hierarchy. The Sogdians entered into Chinese society in many ways, as merchants but also as farmers, craftsmen, grooms, and translators and in the military. During periods of unrest and warfare Sogdians took part on all sides. The most famous of these was the mid-eighth-century rebel An Lushan (Sogdian *rwššn*, or “luminous, light”), whose father was Sogdian and mother was Turkish. Having become the commanding general on the northeastern frontier, he led a rebellion (755–763) that almost brought down the Tang dynasty. His eventual defeat and the reaction that followed may have contributed to the quickening pace of assimilation of the Sogdians into Chinese society, for by the ninth century only their surnames reveal their ancestry.

—Albert Dien

Bibliography

- de la Vaissière, Étienne. *Sogdian Traders: A History*. Translated by James Ward. Leiden: Brill, 2005.
- Schafer, Edward. *The Golden Peaches of Samarkand: A Study of Tang Exotics*. Berkeley: University of California Press, 1963.

➤ AN ENCOUNTER WITH MEDIEVAL SLAVE TRADERS

One of the most detailed contemporary descriptions of medieval slave traders is that of the Rus observed by the Arab chronicler Ahmad Ibn Fadlan in the land of the White Bulgars along the Volga River. Scholars have raised questions in relation to Fadlan’s “Rus,” who differ in a number of aspects from what archaeological evidence and other historical accounts, such as that by his Persian contemporary Ahmad Ibn Rustah, tell us about the Scandinavian traders of the period. However, the relevant passages in Ibn Fadlan’s *Risala* present some colorful and fascinating images.

Fadlan tells of the Rus bringing slave girls and furs down the Volga, offering sacrifices to wooden idols in anticipation of, and later in thanks for, successful sales. He was appalled by their licentious behavior in public with the female slaves and by their personal hygiene but was favorably impressed by their physical stature and wealth. He depicts them as showing a very callous attitude toward anyone who fell ill, giving minimal provisions and care and even less in the case of slaves. Most sensational is the detailed description of the funeral of a wealthy chieftain in which a female slave volunteers to be cremated with him on a pyre constructed from his ship hauled up on the shore. Artistic license taken with this impressive ritual in works of fiction in recent centuries has led to a widely held image of Viking funerals in which ships were set adrift and then set on fire, even though no historical or archaeological evidence for such floating funeral pyres exists. More recently, Fadlan’s encounter with the Rus has itself served as the inspiration for macabre historical fiction, having been merged with the story of Beowulf in Michael Crichton’s novel *Eaters of the Dead* (1976) and its cinematic adaptation, *The Thirteenth Warrior* (1999).

—Leonard Leshuk

Slave Trade from Northern/ Eastern Europe and Central Asia

Slave labor played a significant role in most medieval economies, making trade in slaves an important part of international commerce. The European slave trade declined near the end of the western Roman empire because fewer slaves were taken in war, estate owners were reluctant

THE REMNANTS OF SLAVERY IN OUR LANGUAGE

Several words relating to slaves and slavery from the medieval period remain in our language. Whereas the term “slave” itself is generally accepted to have derived from the name of the central European Slavs who were among those being taken as slaves, it appears that the opposite happened in the case of the Welsh. Initially applied to all Celtic inhabitants of Britain by the Anglo-Saxon invaders, the origin of “Welsh” is their word *waelh/wealas*, used interchangeably for foreigner or slave and reflecting the attitude that all those of other ethnic groups were considered potential slaves. Evidence that the slave-taking in the struggle for control of Britain in that period was not one-sided is found in a play on words that works as well in English as in the original Latin and was reportedly made by Pope Gregory. Seeing a group of blond blue-eyed youths being sold in the slave market in Rome, he inquired as to their origin. When told that they were Angles from Britain, he replied, in reference to their angelic appearance, “They are not Angles, but angels.” Although not denoting a particular group of people, an Old Norse word for slave or bondservant, *thrall*, survives in English. The verb “enthral,” literally meaning “to enslave,” is now used as a word meaning to fascinate or spellbind. Mamluk (alt. spellings *mameluk/mamluke*), an Arabic word meaning “owned,” was initially applied to soldier slaves such as those used by the Turks. The mamluk armies grew so efficient and powerful that they became a political force in their own right, ceasing to be slaves and evolving into a military caste. Egypt and various areas in the Middle East were at times seized and ruled by these soldiers so that now, in English, the term “Mamluk” is more often associated with ruling dynasties or sultanates rather than with slavery.

—Leonard Leshuk

to invest in slaves when the labor of freemen could be hired cheaply, and it became more difficult to prevent slaves from escaping. However, slavery persisted and evolved in the countries that succeeded the empire. In some countries there were hereditary slave classes. People were also enslaved as punishment for crimes or as the result of debt, with impoverished parents some-

times reduced to selling their children into slavery. Most commonly, though, in Europe as in central Asia slaves were taken from among defeated enemies or in raids.

The possibility of being taken captive as the result of war or in a slave raid was an unpleasant fact of life in medieval Europe and Asia, particularly for those living near seacoasts and borders. Shipborne slave raiders could appear suddenly at a village on a coastline or isolated estuary, attack, and sail away with captives before any resistance or pursuit could be organized. Inland in Europe and across central Asia, well-armed slave raiders on horseback relied on being so formidable and intimidating that the sedentary agrarian populations would be unable or unwilling to put up effective resistance. Their captives, usually bound or at least tied to one another, would then be marched to the distant slave markets. Women and children were more likely to be taken as slaves than men, who were more difficult to catch and subdue and would more often later escape or attack their owners. In central Asia it was common to kill all adult male captives or else cripple them in a way that allowed them to work but made escape difficult.

Slaves were widely used for agricultural and unskilled labor, but such workers were of low value and generally did not get traded long distances. The international slave trade consisted primarily of those who brought higher prices. These included young women to be concubines, sometimes as members of large harems, or to be household servants; boys who could be trained for specialized work, sometimes emasculated into eunuchs to make them more docile and deter escape by making them social outcasts; boys who could be raised as soldiers; and individuals with special artistic, technical, or administrative skills. Slavery, however, was not necessarily a hopeless or permanent fate. Throughout the era, many notable figures were taken as slaves and then later regained their freedom. The boy who grew up to be Ireland’s Saint Patrick was seized on the coast of Britain at the end of the fourth century by Irish raiders, and Olaf Tryggvason, one of the most famous kings of Norway, was taken as a boy by Danish or Baltic raiders in the tenth century and enslaved in Estonia. The former escaped with relative ease when he was a

young adult, and the latter was spotted on the streets of Tallin by a merchant uncle who purchased his freedom.

Christian and Islamic societies officially or tacitly allowed their members to keep slaves of their own religion but generally prohibited, or at least discouraged, trading in them. They also prohibited members of other religions living within their societies from owning or trading in those professing the predominant religion. The peoples of northern and eastern Europe and central Asia who did not yet adhere to the monotheistic religions of Middle Eastern origin fell totally outside these rules and protections. They therefore took slaves from and were subject to being captured and sold as slaves by both Christians and Muslims.

The major slave markets in Europe were in Prague, Kiev, Constantinople, Khorsun, Cologne, Marseilles, and, later, Genoa. The Vikings were active in long-distance international slave trade, with Bristol and Dublin being known as slave markets by the tenth century. They appear to have traded some slaves from these markets to Muslim Spain. However, the extent of Viking slave trade is unclear despite speculation that the sale of slaves may have, at times, produced a major portion of their income. They are known to have often requested only modest ransom payments to release prisoners, indicating that there was no great desire to keep or sell them as slaves. As the Rus gained control in eastern Europe, they took slaves from among the nomadic Slavic and Turkic tribes for sale in Kiev, Constantinople, and Baghdad.

Christian countries in western Europe took slaves in battles against unconverted Saxons, Scandinavians, Magyars, and Slavs. The large number of Slavic prisoners taken in central Europe resulted in the Latin word for Slav, *Sclavus*, being applied to any captives sold into bondage; this is the origin of the English word "slave." Many of these captives were sold to the Muslims occupying Spain. Since Christian and Muslim nations generally would not trade directly, starting in the Carolingian period charters were given to Jewish Radhanite merchants, allowing them to transport non-Christian slaves across Christian territories to Spain. These traders operating from Arles, Marseilles, and Verdun became dom-

inant in the European slave trade. They also took such slaves beyond Byzantium to sell to the Khazars, who then sold them in Baghdad and other Middle Eastern slave markets. Later in this era when trade between Europe and the Muslim caliphates expanded, slaves from northern and eastern Europe were also purchased by Genoese and Venetian merchants, who traded them to Islamic countries around the Mediterranean.

In central Asia, warring nomadic tribes raided and enslaved both their nomadic enemies and sedentary neighbors and sold them to the Islamic societies to the south. Muslims took other Muslims as slaves in their civil wars, often declaring their rivals heretics and infidels and thus not due the protections of religious law. In the early eighth century Qutayba, the governor of Merv, took so many captives in suppressing rebellions and in his other military actions that sales of them temporarily depressed the prices of slaves in the markets of Kufa, Basra, and Merv. Slave trade increased in the eighth century when the Abassid caliphs, like their Umayyad counterparts in Spain, began purchasing many male slaves to use as soldiers. Mainly Turkic youths from north of the Syr Darya, such slaves were first purchased in the markets of Baghdad and later bought from Samanid governors of the Transoxiana area. The Samanids themselves in the tenth century became the first central Asian dynasty to utilize a mainly slave, or *ghulam*, army. With the individual soldiers able to earn progressively greater privileges and responsibility as they proved their loyalty and valor, some rose to positions of political power. Such slave armies would soon determine the course of history in much of the Islamic world.

—Leonard Leshuk

Bibliography

- Bloch, Marc. *Slavery and Serfdom in the Middle Ages: Selected Essays*. Berkeley: University of California Press, 1975.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1. Malden, MA: Blackwell, 1998.
- Gordon, Murray. *Slavery in the Arab World*. New York: New Amsterdam Books, 1989.
- Mazo, Ruth. *Slavery and Society in Medieval Scandinavia*. New Haven, CT: Yale University Press, 1988.

The Trading System of the Mississippi Mound Builders

The Mississippi Mound Builders culture was very dependent on long-distance trade in prestige goods. The leadership of this cultural group, also known as Mississippian culture, used imported goods to establish their positions among the ordinary people. These goods were also used in religious rituals, especially in burial rites.

Unlike the contemporary Mesoamerican trading system, the Mississippi Mound Builders culture did not use extensive long-distance trading routes to obtain goods. Instead, they relied on a hand-to-hand system in which neighboring people obtained goods from more distant peoples and passed them along. Archaeological evidence proves that the Mound Builders valued goods obtained from long distances. Individuals who apparently had great social importance were buried in mounds along with large quantities of goods. These goods included seashells from the Gulf Coast, copper ornaments and tools from the Great Lakes region, and precious stones from the Southwest. Graves of ordinary people have yielded smaller numbers of goods that originated in the region.

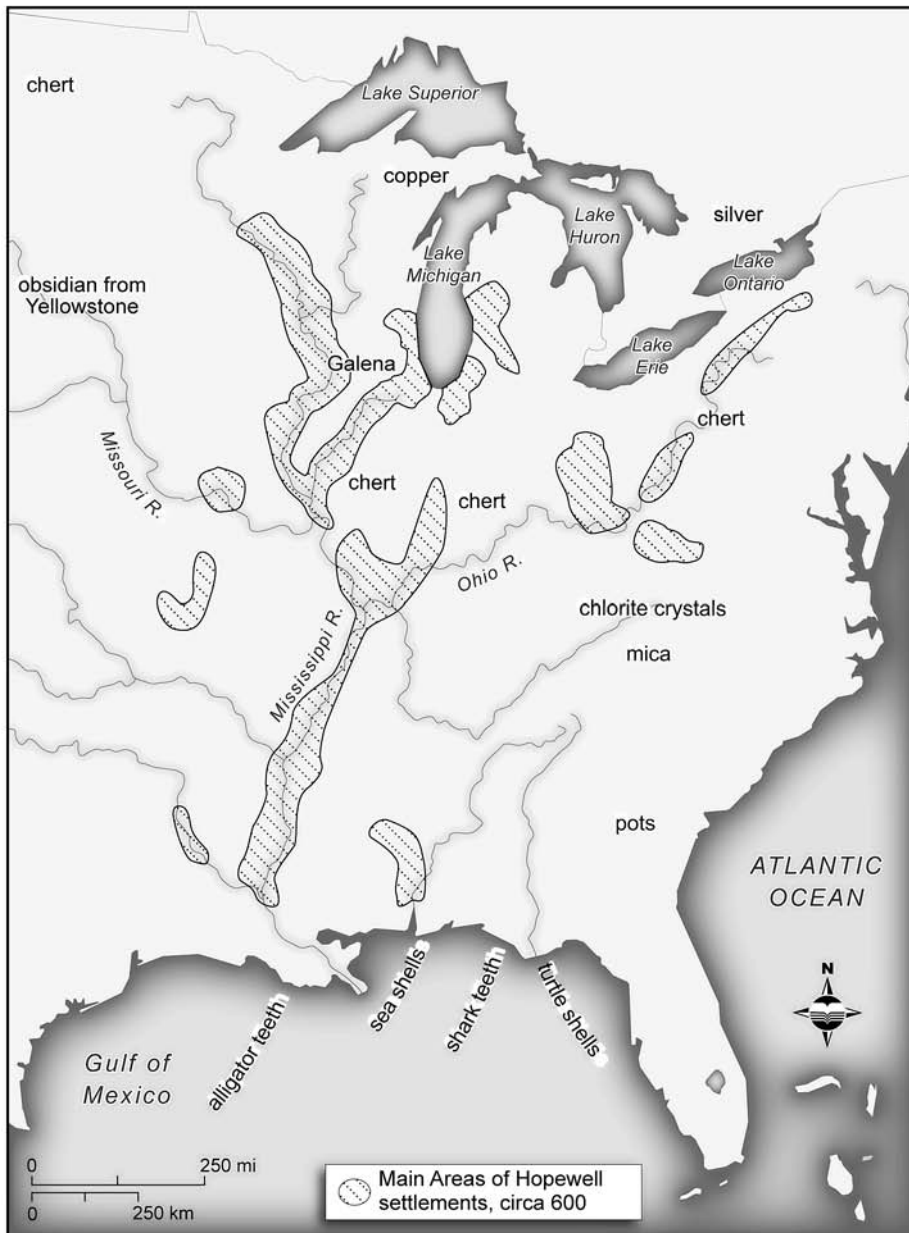
The dominant culture in the region by 300 CE is known as the Hopewell. It originated in southern and central Ohio and influenced peoples living in current-day Indiana, Illinois, and Kentucky. One of the most important aspects of Hopewell culture was the skill with which various kinds of stone were worked. Blades made from local supplies of chalcedony and flint were highly prized by neighboring peoples, as were obsidian blades made from stone imported from the Rocky Mountains. The Hopewell people exchanged their products for items from as far away as upper Michigan and the Gulf Coast. Imports included copper, which was made into ear spools, breastplates, and decorative items, and galena, which could be made into white paint and sparkling powder. Mica from southern Appalachia was separated into sheets and cut into various shapes, such as hands. Shells, alligator teeth, and turtle shells came from the Gulf region.

Goods were not the only things exchanged among the different peoples. Religious concepts

and rituals were also shared and helped to form the region into an exchange network that valued the same sorts of items. The mounds that marked this culture were the centers of religious and political authority. A limited amount of maize was grown among the Hopewell people, and some archaeologists believe that it had a religious significance greater than its role as food. The Hopewell culture began to decline by 400 CE, evidenced by a decline in trade. Fewer imported items can be found in burial sites from this period. One explanation is that the Hopewells' trading partners found new supplies of the goods they wanted, such as copper. Another is that the replacement of the atlatl by the bow and arrow caused an increased amount of warfare among the people of the region, leading to the breakdown of trading relations.

People in the Ohio and Mississippi river valleys had developed sedentary societies before the Common Era based on the domestication of native plants supplemented by hunting. These plants include sunflowers, goosefoot, and erect knot weed. Although they were familiar with maize, the people apparently preferred foods that originated in the region. Maize did not become an important food crop in the Mississippi and Ohio river valleys until around 800 CE, with the rise of another mound-building culture, the Mississippian. The Mississippian people also raised squash and beans developed in Mesoamerica, replacing many of the native foods previously grown. The greatest center of Mississippian culture was Cahokia, near present-day St. Louis. By 900 CE, it was the largest urban center north of Mesoamerica. Unlike the earlier Hopewell culture, the Mississippian culture was dependent upon maize as its chief food crop. Cahokia was the hub of an extensive trade network. Many of the goods, however, came from different regions than those of the Hopewell culture. Flint was imported from Oklahoma, while galena came from Missouri. Southern Appalachia provided copper. Stone hoe heads, buffalo hides, and decorated pottery also were important trade goods. Water routes following the Mississippi north and south as well as the Missouri and Ohio rivers to the east and west all helped make Cahokia an important trading center. The Mississippian culture did not use large canoes to haul large amounts of trade

HOPEWELL TRADING SYSTEM, CIRCA 600



goods, like in Mesoamerica, but relatively small amounts of products could be moved by water. The alternative overland method was limited to how much a man could carry, since wheeled vehicles or pack animals were not available.

The ability of agriculture to supply steady amounts of food caused the population to increase. As a result, the Mississippians developed a more complex social order. A government of hereditary chiefs was established. These chiefs

and other members of their elite class were expected to perform certain duties, such as defending the settlement against outsiders. In return, the ordinary people provided them with food, necessities, and labor. Possession of imported prestige goods helped to confirm the status of elite classes among the Mississippians, helping to promote the trade among people of the region.

—Timothy J. Watts

Bibliography

- Baugh, T. G., & J. E. Ericson, eds. *Prehistoric Exchange Systems in North America*. New York: Plenum, 1994.
- Milner, George R. *The Moundbuilders: Ancient Peoples of Eastern North America*. London: Thames and Hudson, 2004.
- Muller, J. *Mississippian Political Economy*. New York: Plenum, 1997.

Mesoamerican Commerce

During Mesoamerica's classical era, from about 300 to 800 CE, highly developed trade routes and patterns were created. This commerce consisted primarily of long-distance trade in luxury and prestige goods between different states. Many of the trade items also served as tribute from vassal states to their rulers. As a result of the interaction, the Mesoamerican cultures came to share many ideas as well as religious concepts and art.

Mesoamerica did not develop an elaborate road system, such as that of the Andean states. Long-distance trade was also hampered by the lack of beasts of burden and wheeled vehicles. Most goods were carried by professional porters using pack frames and tumplines over various landscapes. Because of their limited carrying capacity (about 50 pounds), most long-distance trade was limited to low-weight high-value luxury or prestige goods. These products were con-

sumed by the local elites in religious or social displays. Bulky food products such as maize were not normally traded except on a local basis.

An alternative to human porters was water transportation. Only a few rivers in Mesoamerica were suitable for this method, limiting the use of water. Large inland lakes and coastal waters, however, were often used to transport bulky and relatively inexpensive goods. Dugout canoes were most often used to carry goods. A single man could move a ton of goods at the same speed as a walking man, making water transport much more efficient. Canoes could reach up to 100 feet long, with a corresponding cargo capacity. Both canoes and rafts were used in the Gulf of Mexico, where they used currents and paddles as their primary means of motion. Sails were unknown in Mesoamerica.

The dominant city-state in the Classical Period Mesoamerica was Teotihuacan. Although much of its power was thanks to military success, Teotihuacan also depended on an extensive commercial network. Settlements of merchants from Teotihuacan were located in many other urban centers of the time, and corridors of Teotihuacan settlements from the city to its trading partners ensured the safe passage of goods.

The most common products involved in Mesoamerican commerce included ceramics, obsidian, textiles, high-quality stone tools, metals, precious stones, and specialized tropical goods. Ceramics were relatively heavy objects, and many were traded from culture to culture in Mesoamerica as packaging for other goods. Elaborately decorated ceramics, however, were considered prestige goods by the elite classes of Mesoamerica. Most of these originated during this time from the Gulf Coast and coastal Guatemala. Their use was reserved for royalty and nobility, who used them in public displays. The artwork on the ceramic dishes and pots influenced the artwork and religious concepts in the communities that imported them, helping to create a more unified culture throughout Mesoamerica.

Another important trade good was obsidian. This volcanic glass was found in only a few places in Mesoamerica, but people throughout the region recognized its importance for making cutting tools. Modern archaeologists can use



Dried cacao beans and pod, used as a medium of exchange in Mesoamerican commerce. (Howard Sandler)

chemical analysis of obsidian tools to work out trade patterns that existed. The obsidian from the Pachuca area of central Mexico was the most widely traded not only because of its technical qualities but also because of its greenish color. Other green and blue stones were used by the elites in displays intended to solidify their status. Turquoise from the regions north of Mesoamerica was traded throughout the area. Rock crystal, mica, and onyx were among the other desirable items. Decorative and religious items made of gold were widely traded from their origins in Oaxaca and Central America. Similar items made of bronze were imported from Mexico during the period as well. All of these goods were prime trading goods thanks to their relative light weight and small mass, making them easier to transport.

Cotton and maguery textiles were widely traded among the Mesoamericans. A standardize-sized cloak became a basic currency among the peoples, since it could be fashioned into useful clothing. Cloth was also relatively light and compact, making it suitable for carriage by human porters over long distances.

High-quality stone tools, made from chert from Belize, were commonly traded in Mesoamerica. These tools, such as metates for grinding maize, were relatively heavy but appeared throughout the region. They were superior to locally produced stone products and were highly desired.

A few food items that were not widely available were traded. Salt was produced in coastal areas and was in wide demand. Cacao beans were also widely traded and eventually were used as a form of currency in most of Mesoamerica.

Miscellaneous trade goods included rubber balls used in the ball game played throughout Mesoamerica. Thousands of masonry ball courts have been identified in Mesoamerica, and the rubber balls that were used had to be imported from tropical lowlands where rubber trees grew. It is estimated that the Aztecs alone imported approximately 16,000 rubber balls to their capital each year, giving an indication of how significant the trade in rubber was.

Metal objects were imported from western Mexico during this period. Craftsmen learned the techniques and secrets of metalworking from

➤ CACAO CURRENCY

The cacao bean assumed the role of money in most Mesoamerican commerce. The beans were small and easily transported. Cacao beans also were valued by all inhabitants of the region, making them a universal currency. Individual and small numbers of cacao beans could be used to make change, giving the cacao bean a flexibility that other products often lacked.

—Timothy J. Watts

merchants from South America and developed a range of goods intended to meet the social needs of elites in Mesoamerica. Bells, tweezers, and rings were made at first from copper, highlighting the status of the user. After 1200 CE, craftsmen developed a range of goods made from bronze alloys. By varying the amount of tin or arsenic in the alloy, they could make the objects look more like silver or gold. Even though silver and gold were readily available, their durability was less than that of bronze.

—Timothy J. Watts

Bibliography

- Andrews, A. P. *Maya Salt Production and Trade*. Tucson: University of Arizona Press, 1983.
- Hirth, K. G., ed. *Trade and Exchange in Early Mesoamerica*. Albuquerque: University of New Mexico Press, 1984.
- Lee, Thomas A., Jr., and Carlos Navarrete, eds. *Mesoamerican Communication Routes and Cultural Contacts: Papers of the New World Archaeological Foundation*. Provo, UT: New World Archaeological Foundation, 1978.

Andean Trading Patterns

Trade and commerce in the Andean region between 300 and 1000 CE was mostly limited to luxury goods and those items that could not be produced locally. The emphasis among the Andean communities was on self-sufficiency. The geography of the region greatly influenced the pattern of trade.

To support themselves without having to depend on outside resources, the Andean peoples



Quechua Indian uses llamas to transport goods for trade, Peru. Most Andean trade goods were carried on the backs of humans or llamas. Wari and later Andean civilizations constructed an extensive network of roads which facilitated this commerce. (Zbigniew Bzdak/The Image Works)

developed what have been called vertical archipelagoes. Different ecological systems existed within close proximity to one another, depending on the elevation. Different agricultural products were produced at different elevations. Higher elevations were good for supporting llama herds. Lower ones were used for growing vegetable products, such as potatoes. By controlling different ecological areas, a people could grow different crops. In this way they were also more protected against disasters such as poor harvests or pests. Their diet was also more varied as a result.

The earliest state in the Andes during this period was Moche, on Peru's northern coast. The capital of Moche was marked by large public buildings devoted to religious and political purposes. A high degree of craft specialization was also evident at Moche. Archaeological evidence indicates that the elites had access to clothing, jewelry, and other luxury items imported from different regions. Moche was succeeded after 500 CE by two newer states, Tiwanaku and Wari. Both states exerted considerable influence over their neighbors through conquest and religious conversion. They also used a practice of sending colonists to an area that produced desirable goods. The colonists would retain their membership in the larger po-

litical organization but would produce goods that could be traded back to the home state. In turn, they would receive products from the Andean highlands.

All three of these early Andean states practiced self-sufficiency as much as possible. Even so, a thriving long-distance trading network existed. Caravans of llamas were used to carry local products for trade with other peoples. Local products from the Andean states included dried llama meat, potatoes and other tuber products, hides, fats, and textiles. As the caravans passed along their routes, they would have bartered for products not produced in the mountainous regions. Most of these products would have been luxury or status goods, desired for religious or political reasons. These products were desirable because of their unavailability from local sources. Maize, for example, was grown by farmers in the coastal settlements along the few rivers flowing into the Pacific. Andean leaders needed maize to brew a local beer that was used in religious rituals and was also provided to workers as part of their pay. The same settlements also provided red shells from the spiny oyster, used in the production of jewelry. Some food products were bartered from the same settlements. Dried fish were obtained there as well. Salt, a vital product, came from coastal villages. Other trade goods included objects made of gold, silver, and bronze. Obsidian for tools was obtained from a few locations in the Andes.

The total amount of goods traded in the Andean region was relatively low. Because they were primarily luxury and prestige goods, their overall effect on the region's economy remained low. The trade did help to unify states, however, as well as reinforce the status of their elites.

—Timothy J. Watts

Bibliography

- Bawden, G. *The Moche*. Malden, MA: Blackwell, 1996.
- Kolata, A. L. *The Tiwanaku: Portrait of an Andean Civilization*. Malden, MA: Blackwell, 1993.
- Schreiber, K. J. *Wari Imperialism in Middle Horizon Peru*. Ann Arbor: University of Michigan Press, 1992.

■ Introduction: Cities in Early Medieval Economies

While most economic production in the early medieval world was connected with agriculture and occurred in rural areas, cities played crucial economic roles. Early medieval cities were primarily administrative, religious, and pilgrimage centers; secondarily commercial hubs; and only occasionally manufacturing (handicraft) centers. Most of the cities were small, even miniscule, by modern standards, but a few early medieval giant cities, the capitals of great empires, had populations ranging from 500,000 to almost 1 million. China's capital, Chang'an, is said to have approached 2 million.

The large capital cities had the greatest economic impact. To these capital cities the taxes of great empires, much in the form of grain, flowed, and there it was spent. There great numbers of people were employed in the feeding and care, the entertaining and the pleasure, the disciplining and the punishment, the training and education, and, most importantly, the defense and protection of the ruling families and the swarms of functionaries. This imposed an economic burden on the state that was paid for by the wealth exacted from the rural countryside of the empire.

A great expenditure supported by the taxes from the countryside was the support of the armies that every capital city required. The troops and their dependants required maintenance in a style more luxurious than that enjoyed by the majority of taxpaying peasants. Their horses required stables and fodder. All of these requirements created demands that more people were employed to satisfy and created more businesses. Entertainers, prostitutes, and transport workers as well as craftsmen of many varieties thronged these capitals. Market gardens and orchards sprang up in the near vicinities of these capitals.

The concentrated wealth of these capitals created demands for luxury goods that could only be satisfied by long-distance trade. The near simultaneous rise of the Tang dynasty and the emergence of the Arab caliphates and their consequent centralizing of much of the wealth of

China and the Muslim world created an unprecedented demand for luxury goods and stimulated a significant revival and expansion of the trans-hemispheric trade over both the inland silk routes and the marine route along the Indian Ocean littoral. This in turn led to the growth of many commercial cities along these routes. Bukhara and Samarkand are but two of these trade centers.

Likewise, the growth of the camel-borne trans-Saharan trade led to the growth of such trading cities as Kumbi Saleh and Kanem on the southern edge of the Sahara Desert.

Aside from the capital cities, there were many smaller cities. Again, these were mainly administrative and religious. Some were centers for religious pilgrimage. Mecca stands out in this respect, but so also do Nalanda, India, and Srivijaya.

Artifactual evidence from the abandoned Mesoamerican metropolis of Teotihuacan indicates that it did, exceptionally, have a large manufacturing role. Based on its abundant supply of excellent obsidian, the people of this city manufactured tools, weapons, and very fine decorations, which were evidently traded over a wide area. It was one of the few great cities with a major manufacturing function.

—Wilfred J. Bisson

Bibliography

- Coe, Michael, and Rex Koontz. *Mexico: From the Olmecs to the Aztecs*. New York: Thames and Hudson, 1994.
- Cotterell, Arthur. *The Imperial Capitals of China: An Inside View of the Celestial Empire*. London: Pimlico, 2007.
- Pounds, Norman. *The Medieval City*. Westport, CT: Greenwood, 2005.

Cities in Early Medieval India

Cities in first-millennium India represent a new phase of urbanization in India, which can be called the third urbanization period because of the special features, differences, and notable discontinuities from the first urbanization period (cities of the Indus Valley civilization) and second

urbanization period (cities in the Ganges-Yamuna river basin in the early historic period, c. 600 BCE). Cities from 100 CE onward lack uniformity, nucleus, or a center point and also lack large city walls. Lack of these features was wrongly assumed to have indicated the decline of urban centers in India, but recent archaeological and inscriptional research has established that in the first millennium, there was a shift in the process of urbanization from the Ganges-Yamuna basin to the rest of India, which until now had been thought to play an indirect role. The cities of the first millennium are not concentrated in a single core area as noted in first and second urbanization but are distributed throughout India and acquire a regional character. The major proliferation of cities in the third urbanization of India is notable in the coastal regions of India along the Indian Ocean.

The geographical shift in urbanization can be understood in the context of increasing trade with the Arabian Peninsula and Southeast Asia with the development of the Indian Ocean network of trade routes from 300 CE onward, the decline of the Roman empire, and the development of Silk Roads trade on the northern borders of India. Major cities of second urbanization such as Taxila, Pataliputra, and Vidisa declined due to this shift. A few of the former cities, however, survived this shift in urbanization by adopting a special product of trade and cooperating with the emerging cities nearby. An example is Varanasi, an earlier religious center, now known for specialized textiles, that continued to flourish as a major city. Cities that failed this transformation declined in the Ganges basin, and hence urbanization in the first millennium indicates not only a geographical shift in the urban centers but also a shift that is economic in nature.

The Indian Ocean network heralded a new phase of urbanization in India. During the first millennium India benefited from the Indian Ocean network of trade that passed through India connecting Southeast Asia on the east with Africa and the Arabian Peninsula on the west. Hence, the evolution of cities during this period mirrors the development of this major network of ocean trade routes. In early India, rivers were the veins of communication and trade, and it is only natural that the ancient ports are located

on the rivers close to but not on the sea. These ports may have acted as a two-way communication between inland areas and the sea. In the east, the opulent Ganges Delta opened into the sea at many outlets in Bengal. Examples include Tamralipta, Chandraketugarh, and Sudkawan near Chittagong, followed by Orissa with its large fertile plain arching toward the Indian Ocean with the major port at Vishakhapatnam. The fertile deltas of the Krishna and Godavari rivers in Andhra are connected by a number of ports (Machilipatnam on the Krishna River and Srikakulam on the Vamsadhara River with the Indian Ocean), and the fertile lands of Tanjavur on the Coromandel Coast are connected to the seaports at Nagapatnam, Arikamedu, Pondicherry, etc. On the west coast, in the backwaters of Kerala, a number of seaports near the river mouths of Kerala emerged: Kulam-mali or Quilon, Fandarina or Patalyani. On the Konkan coast, ports opened toward the Arabian Sea (Goa, Mangalapura [Mangalore]), while Gujarat with its peninsula of Kathiawad (Surparaka, Cemuliya, Chaul) and Kutch open to the sea developed numerous port cities.

As opposed to the earlier period when cities were political centers founded and developed by kings, the cities of the first millennium differ in their layout and are distributed far and wide wherever trade and exchange flourished. Hence, one of the major characteristics of the cities of India is regionalism, which can be summed up as follows:

1. Regional ruling dynasties: The shift to commercial activity also goes in tandem with the shift of political diffusion. No large dynasties had their origin in the Ganges-Yamuna basin after the first half of the first millennium, and regional dynasties that evolved into powerful states in the second half of the first millennium had coastal access, with their capital cities located close to the ocean. (e.g., Gurjara-Pratiharas, Rashtrakutas, Palas, Cholas, and so on).
2. Diffuse economy: The economy was not centered in one area or product but instead was spread throughout India. Each area contributed a specialized product or trade that had its own guild organization, which in

turn connected with the all-India network of traders. The guilds functioned as individual trading and professional units on a micro-level and in their connection and network spread on an all-India basis and functioned at a macrolevel economy of India. This prevented large-scale migrations of artisans and traders who could be part of their local guild, which in turn functioned as part of the national network.

3. Regional media: Regional kingdoms, regional guilds, and regional networks sponsored and participated in regional cultural activities, which gave rise to regional languages (for example, Kannada, Telugu, Gujarati, and Bengali), regional festivals (Kumbhmela, jataras, and Tirunals in different temples), and regional gods and goddesses (Kashi Vishweshwara in Varanasi, Meenakshi in Madurai, Vittala in Maharashtra, and so on). Each leading city has its own god or goddess, language, and festival.
4. Proliferation of religion: With the development of Bhakti religion, Hinduism evolved as a popular religion, with pilgrimage as one of its central features. Religious centers proliferated in each microregion with regional characteristics while at the same time an all-India character is maintained through pilgrimage, which included major religious sites throughout India. Religious centers also evolved gradually as commercial centers, since the assemblage of a large number of travelers developed consumers markets.
5. Regional artistic and architectural styles: In tandem with the evolution of regional dynasties and merchant classes, the development of regional artistic and architectural styles is evident in the cities from 600 CE onward. The northern Indian and southern Indian musical styles (Karnataka and Hindustani music) are also accompanied by various dance styles: Kathak, Manipuri, Odissi in northern India and Bharatanatyam and Kuchipudi in southern India.
6. Rise of merchant classes: The rise of the merchant class to prominence is noticeable in inscriptions and literature. Almost all cities founded during this time have a specially designated marketplace, unlike the earlier

cities that have administrative centers as the nucleus of the city.

7. Heterogeneity: Many of these cities were cosmopolitan in nature, with inscriptional and literary texts recording that foreigners lived in major cities, such as Kanchi, Kochin, Goa on the Coromandel Coast, and the Malabar Coast.

A sharp dichotomy between the city and the village is not noticeable in this period due to the presence of social links and cultural norms extending between the city and countryside, maintained via merchant guilds and religious organizations that functioned both at the microlevel and macrolevel. In fact, the religious centers or temples were located on rivers and were close to ports, which developed a network of routes for pilgrimages that were later utilized for trade and exchange and cities proliferated on these routes. This explains the cultural role of these cities. Although the states are small and regional in character, this did not prevent an expansion of trade and religious networks operating on an all-India level, since merchants, pilgrims, and people of religion were allowed to travel freely between different states and kingdoms without restrictions. This is also the period when Indian culture spread to Southeast Asia owing to close trade links and contacts on the Indian Ocean. Dynasties such as the Palas and the Cholas sent trade embassies to China, indicating the prosperous trade and mercantile character of Indian cities.

—Lavanya Vemsani

Bibliography

- Champakalakshmi, R. *The Medieval South Indian Guilds: Their Role in Trade and Urbanization*. Delhi and New York: Oxford University Press, 2001.
- Chattopadhyaya, B. D. *The Making of Early Medieval India*. Delhi: Oxford University Press, 1994.

Economic Role of Cities in Western Europe

Although the Roman empire contained many urban centers, its West European provinces remained largely rural. The cities in these areas existed primarily to house administrative centers and marketplaces. Along frontier regions, towns

➤ ABRAHAM BEN JACOB DESCRIBES THE TOWN OF PRAGUE, 973 CE

Abraham ben Jacob (Ibrahim ibn Yaqub), a merchant and alleged spy from Al Andalus (Muslim Spain), visited Prague in 961 and wrote the following in his memoirs:

“The city of Prague is built of stone and limestone, and is the greatest trading emporium of that country. To it come the Rus from Cracow and the Slavs with goods, and from the lands of the Turks come Muslims, Jews and Turks, likewise with goods and current money. And they take away slaves, tin and various pelts. . . . In Prague saddles, bridles and thick shields are manufactured which are used in their lands. Loosely woven cloths, like nets, which one cannot use for anything, are also manufactured in the land of Bohemia. They have a fixed price among them: ten cloths for a penny. They possess trunks of them. These are their wealth.”

—Joseph P. Byrne

Source

Howard L. Adelson, ed., *Medieval Commerce* (New York: Van Nostrand, 1961), 155–156.

Romans continued to carry on trade at all levels and to staff the new royal administrations. Many of these men were from the eastern empire, and commercial ties with the Eastern Mediterranean remained intact, as both church leaders and Germanic nobility demanded the luxury items it provided. The Ostrogoths in Italy had experienced Roman civilization and did much to maintain urban life and unfettered trade through ports and along the intensive road system. In Gaul, the port cities of the Mediterranean coast and the Rhone River continued to host exchanges of European slaves and agricultural products for Eastern goods, although the volume of traffic was clearly waning as Vandal pirates raided ships and ports. Farther north, towns and town life continued to contract as buildings slowly disintegrated and roads and bridges fell into disrepair. An early medieval pattern began to emerge as artisans and agents of local landowners joined church officials and garrisons in the dilapidated but defensible town remains. The sixth century saw Justinian's Gothic Wars bring disruption and then revived trade in the Mediterranean. At the same time the Merovingian kingdom of the Franks established effective rule over much of Gaul. The relative stability of Frankish and Byzantine rule promoted minor urban development but was quickly stifled by plague and the swift successes of Islamic armies. While Muslims brought many of Iberia's towns into Islam's urban economic and cultural orbit, the Lombards drove the Byzantines from northern Italy and added little to the region's economic development. In Gaul, increasingly incompetent Merovingian rulers decentralized government administration, and what little we know of regional or local trade indicates an onset of urban decline.

Yet towns never lost their role as centers of church ritual and administration. Urban bishops and, increasingly, monasteries provided both steady demand for distant goods (incense, textiles, metalware) and a supply of local specialties that found their way to small urban markets. Pilgrims, too, stimulated some economic activity, although the great age of pilgrimage was far off. The rise of the Carolingians created a political unity of sorts and relative stability, including coinage, that encouraged internal trade from Denmark to Rome, with cities providing the essential

also served as military garrisons as well as civil administration. The tumultuous third century CE, a time marked by epidemics, civil wars, Germanic invasions, inflation, and impoverishment of the free peasantry, initiated a period of urban decline. Towns and cities shrank in area and populations and constructed walls to protect themselves from invaders. The fourth century witnessed a revival of strong central leadership and, later, the rise of local Christian leaders enjoying the emperors' patronage. In the fifth century port cities and provincial centers continued to benefit from local, regional, and international trade, but other cities, including Rome, eventually fell to invaders. Although local Roman administration often remained intact, the leaders of the Christian church and newly implanted Germanic warlords emerged as new elites. While the Germanic peoples had little use for cities other than plunder, the Christian bishops reflexively defended the Roman urban order in areas now ruled by Goths, Vandals, and Burgundians.

nodes. Trade with Byzantium picked up as Muslim territories fought among themselves, and Charlemagne's support for the church included economic concessions to the towns dominated by clerics. The Rhine, actively trafficked by Frisian cloth merchants and traders, took over the Rhone's position as the chief Gallic river network, and towns sprang up to host artisans and merchants. Yet even during this revival no large centers emerged. Italy, the most urban part of western Europe, had Rome as its largest city, which was home to only 25,000 residents. Yet the revival was enough to attract Vikings, Muslims, and Magyar raiders and invaders who sought the resources of Europe's towns. The Northmen pillaged and besieged Carolingian towns accessible by water, but they also established trading posts and towns from Ireland to the Volga. Europe's battered population built new walls around recently shrunk towns, while warrior nobility established a feudal regime in the countryside. Lasting revival only began as the threats decreased after the mid-tenth century.

—Joseph P. Byrne

Bibliography

- Christie, N., and S. T. Loseby, eds. *Towns in Transition: Urban Evolution in Late Antiquity and the Early Middle Ages*. Aldershot, UK: Ashgate, 1996.
- Hodges, Richard. *Dark Age Economics: The Origins of Towns and Trade, A.D. 600–1000*. London: Gerald Duckworth, 1989.
- Slater, Terry R., ed. *Towns in Decline, A.D. 100–1600*. Aldershot, UK: Ashgate, 2000.
- Verhulst, Adriaan. *The Carolingian Economy*. New York: Cambridge University Press, 2002.

City Dwellers in Dar al-Islam to 1000 CE

When the Arab conquerors expanded out of Arabia after the death of the Prophet in 632, they settled in garrison cities, which allowed them to accommodate the army and live as an elite military minority aloof from the majority of subdued peoples while leaving their administrative, social, and religious structures intact. The Jews, Christians, and Zoroastrians as adherents of earlier written revelations were recognized as a protected people (*ahl al-dhimma*), permitting them

to keep their religions as long as they paid a poll tax (*jizya*) and acknowledged Arab-Muslim sovereignty. However, within the first century, these initial attempts to sustain a dichotomy between Arabs and non-Arabs had proven to be untenable. The Arab rulers became increasingly involved in local affairs, and Arab migrations and settlements favored cosmopolitan urban centers supported by a productive agricultural hinterland.

Besides mosques and markets, Islamic cities offered their inhabitants several facilities, including libraries, hospitals, and bathhouses. Most city houses were built from bricks since wood was rare and expensive. In cities like Baghdad and Cairo people might have rented apartments in buildings of up to six floors, whereas the well-to-do could usually afford houses built around an interior courtyard with a well and enjoy the cool night breeze on a spacious rooftop terrace. Carpets covered the floors where people worked, ate, slept, and prayed, and the wealthy would also bedeck the walls with decorative rugs.

Islamic cities did not have a regular street system making all points in the city accessible; instead, the main axis routes were surrounded by cul-de-sacs and isolated districts. The population was divided according to ethnic, religious, and professional criteria and lived in juxtaposed and enclosed quarters, accessible often only through gates and some narrow streets. This reflected the social fragmentation of the population, held together not by an identity of citizens belonging to the city but instead by that of belonging to the Muslim community as a whole. The Muslim quarters were divided along occupational, tribal, and ethnic lines. The existing Jewish and Christian populations had already lived in separated communities.

The social classes represented in the cities could vary in size and proportion. The two arms of the government, the military aristocracy and the administration, stood at the top next to representatives of the Sharia, religious scholars (*ulama*), theologians, and judges. They were followed by the large class of merchants and craftsmen who were subdivided into several categories and levels. At the bottom remained the masses of have-nots who often depended on patronage or benevolence for survival. The majority of non-Muslims engaged in craftsmanship.

Some ran businesses that were prohibited to the Muslims, such as dealing with wine or money lending with interest. Jewish and Christian scholars of ancient sciences also played an important role in transmitting their knowledge to the Arabs, and their physicians enjoyed a prestigious position.

Non-Arab Muslims were first absorbed as *mawali* (clients) into the old Arab clan structure and were held to be social inferiors. As they grew in number and infused different branches of society, social tensions and class conflicts arose. By the first half of the eighth century, this led to a slow process of social change, mutual assimilation, and the creation of a Muslim, not merely Arab, empire. For example, as Basra developed from a garrison city to an administrative center with an important textile industry and trading connection to the Persian Gulf, it attracted both Arabs and non-Arabs to serve as administrators, clerks, merchants, bath attendants, weavers, and other workers and even as guards and policemen.

—Hend Gilli-Elewy

Bibliography

- Hourani, A., and S. M. Stern, eds. *The Islamic City: A Colloquium*. New York: Oxford University Press, 1970.
- Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.
- Udovitch, A. L., ed. *The Islamic Middle East, 700–1900: Studies in Economic and Social History*. Princeton, NJ: Princeton University Press, 1981.

Markets in Byzantine Cities

Commerce was a central feature of ancient cities and remained so in Byzantium, but the location of urban markets, the nature of trade, and the role of the state underwent significant change between the seventh and eleventh centuries. The fate of cities and trade at the end of antiquity has been much debated, but archaeology is dramatically expanding an understanding of its complexity.

Late ancient cities from Egypt and Syria to North Africa incorporated commercial establishments into their monumental layout of wide thoroughfares and open public spaces, frequently

locating them in two-story colonnades along major avenues or surrounding a forum. Coins and pottery demonstrate continued involvement in a three-tier market: long-distance trade, regional commerce, and local production. Widespread remains of large amphoras used as containers for wine, olive oil, and grain and red slipware pottery are evidence of long-range trade throughout the Mediterranean, which by late antiquity was divided into separate eastern and western regions. In the eastern Mediterranean, recent excavations and surveys show continued trade and prosperity through the mid- or late sixth century in much of the relatively dense urban landscape. Regional as well as long-distance trade networks are evident, and new commercial building has also been found. Cities produced and sold a wide range of common and luxury objects, but the basic food supply, bread and sometimes oil, was controlled by the government, which supplied a free bread dole.

The seventh- and eighth-century invasions of Byzantium resulted in devastation, dislocation, and even abandonment of the urban landscape. In Egypt and the Levant, however, urban prosperity, trade, and commerce continued to thrive under Islamic rule, although urban design gradually changed. The wide colonnaded streets and open public squares began to be built over, eventually becoming narrow winding streets and *suqs*. The Byzantine heartland, in contrast, survived only by adopting a radical defensive policy whereby unwallled classical cities were abandoned as inhabitants clustered in fortresses to survive the continued invasions of Arabs and Slavs. Archaeology shows that many cities were abandoned and resettled only after the ninth century, moved to defensible hilltops, or ruralized with land within city walls used for agriculture, and there are few coin finds to suggest continued trade. Only on more protected islands, or in the ninth century, did urban centers and trade begin to recover. There is little evidence of permanent urban market sites outside the capital before the eleventh century, but periodic fairs developed. Local exchange probably used barter as much as cash.

Byzantine survival was in large part due to Constantinople's strong defenses. The state that emerged in the ninth and tenth centuries was

much more centralized in the capital. Even though it too used much of the land within its walls to raise food in the seventh and eighth centuries, Constantinople retained the monumental urban layout of late antiquity, and its palaces, monumental public squares, and large colonnaded streets survived. By the end of the tenth century, it had become a major emporium for the eastern Mediterranean, with traders from as far as Russia, Syria, and Venice gathering there.

The markets of Constantinople are described in the *Book of the Eparch*, published in the late tenth century and covering regulations for merchant guilds in the capital. The book covers 19 distinct trades and is clearly not comprehensive. Each trade had its regulated space in the city, allowing the *eparch* (governor) to exert imperial control over trading activities (bankers, notaries, silk dealers) and to ensure that perfume dealers perfumed the central processional route of the capital while also regulating businesses that generated obnoxious smells (such as fishmongers and pig and cattle dealers outside the city center). Some merchants were allowed to sell only on certain days, and foreign trade was strictly regulated, both in the housing of foreign traders and the export of imperial monopolies like silk. Sales, even of household goods, as well as fines were considered to be in coin rather than barter. The *Book of the Eparch* demonstrates the breadth of the Constantinopolitan market, from luxury goods such as jewelry and fine silks and long-distance imports such as spices to basic necessities of life, such as bread (no longer an imperial dole), wine, meat, fish, and groceries in a controlled economy.

During the eleventh and twelfth centuries, trade and markets expanded greatly in Byzantium. The commercial revolution of western Europe was reflected in Byzantium, both in the rising demand for goods within the empire and in involvement in a growing Mediterranean trading economy. Byzantine merchants were active throughout the Mediterranean in the new trade, and merchant colonies from Venice, Genoa, and other Italian cities grew up in Constantinople and elsewhere in the empire. Provincial cities became producers of products such as silk, purple dye, glass, ceramics, and soap as well as grain and food and served as centers for regional trade. Local and regional fairs expanded, possibly becoming the ancestors of the modern Greek saints day festival (*panegyris*). Byzantine commerce and Constantinople's value as an emporium for imported luxury goods were a prime reason for the involvement of westerners in the empire and the events that led to the capture of Constantinople in the Fourth Crusade.

—Dorothy de F. Abrahamse

Bibliography

- Freshfield, E. H. *Roman Law in the Later Roman Empire: Byzantine Guilds, Professional and Commercial; Ordinances of Leo VI, c. 895, from the Book of the Eparch, Rendered into English by Edwin Hanson Freshfield*. Cambridge: Cambridge University Press, 1938.
- Laiou, Angeliki. *The Economic History of Byzantium*. Washington, DC: Dumbarton Oaks Research Library and Collection, 2002.
- Wickham, Chris. *Framing the Early Middle Ages: Europe and the Mediterranean, 400–800*. Oxford, UK: Oxford University Press, 2004.

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War and Diplomacy

This essay discusses peace and war between states and empires during the Era of Expanding Regional Civilizations. War, or open armed conflict between groups, has been a human pre-occupation since the emergence of the first states. Indeed, war and taxation were among the chief reasons states were organized. States existed by monopolizing violence. Most chieftainships and every state and empire were organized to support war. The hierarchal and patriarchal structure of most societies reflected their war-making function. War was viewed as one of the most important functions, if not the most important function, of a society. The elite classes of most societies were warriors, and heroes of many societies were warriors. China was a partial exception. Kingdoms and empires during this era were normally at war or preparing for war. Periods of peace were seen as interludes between wars.

Every state and empire during this era was created and preserved by military force, and most of them fell by military defeat. States, empires, and often dynasties owed their beginnings to groups of professional fighters who gave their loyalty to an often charismatic leader with a vision of the state. Successful state builders co-opted bureaucrats and functionaries to manage the state but, in the last analysis, depended on war-making professionals to police the state and defend it against interlopers.

Professional warriors were usually highly trained and disciplined. The skills and craft needed for successful combat had to be carefully developed. Warriors were trained, much as a modern athlete, from early adolescence and for most of their lives. Indeed, the term “infantry,” the English word for foot soldiers, has the same Latin root as “infant” and derives from the early medieval use of adolescents in war. Turkish, Slav, or African children were often kidnapped to serve as slave soldiers for life.

Discipline was invested with a sacral aura in which loyalty to one’s leader or feudal lord was paramount and given religious sanction. Warriors, whether they were Roman soldiers, members of Korean *hwarang* bands, Muslim *ghazis* (frontier warriors), slave troops, or European knights, spent their whole lives and invested their whole beings in war; indeed, they had no lives outside of the warrior band to which they belonged.

Warriors, whether they were Roman soldiers, members of Korean hwarang bands, Muslim ghazis (frontier warriors), slave troops, or European knights, spent their whole lives and invested their whole beings in war; indeed, they had no lives outside of the warrior band to which they belonged.

To pay these warriors, states employed a variety of methods. The simplest way was to give each warrior a share of the plunder obtained in successful battles. This was the method used to hold together and reward so-called barbarian hordes and states in the early stages of formation. The Huns, the Germanic tribes, and the early Muslim Arabs cemented the unity of their groups by this method. Sometimes invading peoples, such as the Angles and Saxons in Britain or the Slavs in the Balkans, seized the land, killing, enslaving, or driving the native peoples off their farms. But when conquest was over in an area, it became apparent that continued plundering and enslaving the native populations would be less profitable than the exaction of tribute, and the conquerors usually set up systems of regular tribute taking. These systems or institutions of tribute taking were the basis of many states, such as the Northern Wei in northern China, the Khazar and Uighur empires, and later Kievan Rus in Inner Eurasia and a host of others.

The more successful states and empires, such as the Roman, the Northern Wei, China's Sui and Tang dynasties, the Muslim caliphates, and even the Carolingian empire (partly), paid their warriors stipends from the central treasury. In its early centuries, the Arab caliphate required its warriors to reside in specially established garrison towns, such as Kufra, Basra, Fustat, Merv, Kayrawan, and others, where they were paid stipends.

In many cases, due to the lack of economic activity or the deterioration of the central bureaucracy, it was more convenient for the central government to assign warriors territories from which they could exact tribute rather than paying stipends. The feudal system in western Europe developed from such a system. Although the West European style of feudal system was perhaps *sui generis*, similar systems developed in many regions, such as Sassanian Persia, Gupta India, and others. In Kievan Rus, Muslim lands under the Seljuks, and Japan, similar systems of remunerating warriors were used.

In most empires, there were at least two classes of armed troops. The capital army consisted of elite forces guarding the ruler, his family, and the administration. Perhaps their most important duty was to defend the ruling group against rebellions by frontier armies. The warriors in the capital armies enjoyed a relatively high social status and looked down on the frontier troops as uncouth rustics.

The frontier army's duty was to defend against barbarian invasion and often took the field, sometimes crossing into enemy territory in preemptive strikes.

A third category of troops that empires sometimes maintained were provincials, neither capital troops nor frontier guards but armies of occupation stationed in restive or rebellious provinces.

In addition to these three classes of armies, empires often maintained field armies to use as expeditionary forces in large-scale campaigns against traditional enemies. Thus, the Umayyad and Abbasid caliphates maintained at Damascus or Baghdad a large strike force that annually deployed in Anatolia against the Byzantine empire.

Armies and agriculture were inextricably linked. The feeding of the army was a basic concern of all states, and a productive farm popula-

tion was of great importance. Standing armies and their warhorses were an expensive burden for any population. These horses needed to be big and powerful to carry the warrior, clad in metallic armor. Often the horse was also protected with chain armor. These horses required special feed: grain, often oats, and nutritious hay. Fields of alfalfa were often necessary to produce feed for these war chargers.

Because of their need for a steady flow of supplies, early medieval armies were tethered to productive agricultural areas; they could not extensively campaign in lightly inhabited, devastated, or unproductive regions unless they could use river or sea transportation. The early Muslim armies, using camel transportation, had a greater range and mobility than their Byzantine enemies, who used ox and horse carts for overland transportation, but even camels needed special maintenance. Elephants, widely used as heavy cavalry by Indian and Southeast Asian armies, were the most expensive war animals to maintain.

Throughout both late antiquity and the early medieval age, land operations overwhelmingly dominated warfare, with naval operations playing a secondary role.

The Chinese were the leaders of the age in naval warfare, and they launched the largest fleets, largely on the Yangtze River but also in the East China Sea. The Battle of Paekgang (August 27, 663) off the southeast coast of Korea, in which a Tang Chinese fleet destroyed a Japanese fleet of upward of 400 ships and reportedly killed 10,000 Japanese sailors and soldiers, was one of the significant naval conflicts of the era.

The Mediterranean Sea was the arena for a continuing series of naval hostilities between the Muslim and Christian states from the 650s to the end of this period. For most of this era, Arab fleets dominated the Mediterranean, with the Christian European states in a defensive role. It was early in this time that the Arab siege of Constantinople (674–678) was broken when the Byzantines employed a new weapon, Greek fire, to burn the Arab fleet.

While Muslim fleets dominated the Mediterranean, Viking seaborne raiders ravaged European coasts. The most important naval power in Southeast Asia was the Malay thalassocracy (sea-ruling kingdom) of Srivijaya, whose ships protected Indian Ocean trade routes by patrolling the Malay straits and suppressing piracy.

The Xiungnu, the Huns, the Avars, the Turks, and other horse-riding nomads had vastly more mobility than the armies of sedentary empires due to special circumstances. First, the nomads had lighter horses that largely subsisted on grass. The nomads fought with powerful recurved compound bows rather than the lances used by the horsemen of the empires. And, importantly, the nomads were able to supply themselves with grain and fodder by raiding and devastating the agricultural lands of the empires.

In addition, for much of this period, the nomads had a technological advantage over the Muslims and the Europeans. In the early centuries

The early Muslim armies, using camel transportation, had a greater range and mobility than their Byzantine enemies, who used ox and horse carts for overland transportation, but even camels needed special maintenance.

CE, the nomads had adopted stirrups from the Chinese. Stirrups, by allowing the horseman to stand in the saddle, gave spear and lance thrusts much more force and archers greater accuracy. When the West Europeans started to use stirrups in the eighth century, a military revolution ensued. Some scholars maintain that the use of the stirrup, by making the mounted warrior supreme in medieval battle, was responsible for the culture of feudalism in Europe.

The Roman empire, the Persian empires, the Chinese empires, the Gupta empire, the Muslim caliphates, and other states of late antiquity and the early medieval age had been or would be established by military conquest. These empires expanded to a limit determined by the existing technology of communication and transportation. In most cases, it proved unfeasible to extend imperial authority more than a 90-day march from the capital. Beyond that limit, large armies could not be supplied, even though they lived off the countryside and often left famine in their wakes wherever they marched. When an empire reached its limits of communication and transportation, it established a defensive frontier. Empires often had client states, which were expected to help control peoples beyond the frontier. Thus, the Romans and the Persians were allied with Armenian kings, and each of these mighty empires had its own Arab client states.

Usually, empires erected elaborate defenses along their borders with the so-called wild forest and steppe people. These defense lines included fortified walls, such as Hadrian's Wall in Scotland; defensive walls stretching nearly 1,500 miles across northern China's grasslands; or the shorter but still impressive walls that the Persians built both to the west and east of the Caspian Sea to protect their northern frontier. The Romans used the broad Rhine and Danube rivers as their frontier, but they, like the Chinese and the Persians, were forced to keep frontier armies to garrison these passive defenses.

Sometimes the imperial forces established a no-man's-land, an uninhabited strip of territory on the frontier in which intruders would be killed or enslaved. Occasionally, imperial forces would launch forays beyond the no-man's-land as punitive expeditions or as slave-catching raids. The Spanish Muslims did this in northern Spain, central Asian Muslim armies raided Turkish tribes for slaves, and Christian Carolingian armies sent slave raiders against the pagan Slavs. If enemy raiders did manage to break through the frontier defenses, militias of local civilians were often deployed to harass the raiders with guerrilla-style tactics. In cases of invasion by large powerful enemy forces, guerrilla operations were supplemented with a scorched earth policy. This was the defensive strategy commonly used by the Byzantine empire against the Muslim forces along the Anatolian frontier.

In the third, fourth, and the fifth centuries, the frontier defenses failed in both China and the Roman empire, and barbarians poured across the frontiers to seize parts of the great empires and establish their own kingdoms, which often created demographic disasters.

The causes of these barbarian invasions were linked to environmental change. The colder temperatures and dryer conditions during the Dark Age Cold Period (ca. 250–600 CE) are said to have driven the state-

less and pastoral peoples of Inner Eurasia to attack and overrun the great sedentary states that lie on the southern rim of Eurasia.

Adverse conditions on the steppe and in the forests of Inner Eurasia were the precipitating causes, but several deep-seated factors also contributed.

First, the Germanic tribes, Huns, Hephthalites, Turks, the Xiongnu, Xianbei, Tangut (proto-Tibetan) nomads, and other barbarians had long been neighbors of the great empires, and they learned something about statecraft and war from their association. Throughout the vast areas of grassland and forest that stretched from Manchuria to Germany, these hitherto stateless peoples were (and had been for at least a century previous to this) coalescing into tribal confederations. Initially, the purpose of these confederations was probably defensive, a part of the resistance against the expansion of their great imperial neighbors and against the slave hunters common on imperial frontiers.

In their intercourse with their imperial neighbors, the barbarians traded and raided across the borders and served as border guards and mercenaries in the imperial armies. Barbarians such as Stilicho the Vandal, Alaric the Goth, or An Lushan, a person of Sogdian and Turkic ethnicity, often became high officers in imperial armies. In this way, the empires trained the stateless peoples in the skills needed for war and state formation.

Second, as the Dark Age Cold Period set in, both the Roman and Han empires were suffering from a series of economic and political crises. Cold and increasing drought produced declining harvests that resulted in famines, pestilence, and banditry. This in turn led to decreased imperial revenues and to civil wars as rival military commanders fought over the decreasing supply of public largesse. As civil wars, plagues, famines, and other natural disasters weakened the frontier defenses of the Roman empire and the Chinese states, tribal groups invaded and settled in rich provinces of these weakened empires.

In the fourth century, Xiongnu, Tibetan, and Turkish proto-Mongol and Tungusic tribes invaded, pillaged, and occupied northern China, establishing short-lived states. While northern China was experiencing invasion and desolation, refugees from northern China reestablished Chinese governments in the Yangzi Valley and farther south. Finally, after 386 one of the competing groups of barbarians, the Xianbei Touba, established itself as the Northern Wei dynasty that, by 439, conquered all its rivals and established rule over all of northern China.

The Touba, who were instrumental in establishing a Sinicized form of Buddhism in northern China, were assimilated into Chinese culture, and with their rule, stability returned to northern China. China continued to be divided, into a northern and a southern empire, until the Sui dynasty reunited it in 589.

The Roman empire succumbed to barbarian onslaughts later than the Chinese states, but in the fifth century, Huns and Germanic

Finally, after 386 one of the competing groups of barbarians, the Xianbei Touba, established itself as the Northern Wei dynasty that, by 439, conquered all its rivals and established rule over all of northern China.

tribesmen devastated the empire's western half. Germanic tribes erected kingdoms in the western provinces, similar to the way barbarians had established kingdoms in devastated northern China. In the Roman world, as in the Chinese, the old culture continued in the unconquered half of the empire. While the southern Chinese empire preserved traditional Chinese culture, likewise the Byzantine, or eastern Roman, empire was the sanctuary for classical Greek and Roman culture.

Sassanian Persia and Gupta India were also subjected to barbarian invasions during the early centuries of this period. The Persians built a series of defensive walls, extending several hundred kilometers east and west on both sides of the Caspian Sea to guard against invasions of pastoral nomads, but when barbarians did invade, they came from the east, beyond where the fortifications ended. These barbarians, called Hephthalites, or White Huns, conquered much of central Asia by 350. In the next half century, they conquered Afghanistan and invaded India, seizing the northwest including the fertile Punjab. Although they hastened the demise of the Gupta empire, they were soundly defeated by a coalition of Hindu rulers about 550 CE. The Hephthalites raided Persian cities and in 484 defeated the Sassanian Army, killing the emperor. For decades, the Hephthalites forced the Sassanians to pay tribute, but in the early sixth century the Persians destroyed the Hephthalite army and killed the Hephthalite king.

Religion is said to have a role in causing many conflicts, and it cannot be denied that hostilities between Christians and Zoroastrians played a role in the Byzantine-Sassanian conflict or that the wars by which the Arabs conquered their empire had a strong religious current, as did the Carolingian wars against the pagan Saxons and Slavs. But one of the most important factors promoting warfare involved the elites' understanding of history and their role in it. Many civilizations, particularly Western and Indian civilizations, understand their history as being shaped by conflict, and their national epics and religions reflect this. Some elites and rulers practiced historical mimesis (recreation of an imagined and idealized historical reality) by attempting to replicate the roles of their cultural heroes.

The view of history as being a tale of conflict has a venerable age. The Greek epics, the *Iliad* and the *Odyssey*, and also the two Indian epics the *Mahabharata* and the *Ramayana* glorify war. Religions, particularly Zoroastrianism, Christianity, and Islam, view cosmic history as struggle between opposing forces. Christianity teaches about Armageddon and the apocalypse. In such a cultural milieu, to be a warrior is glorious.

Wars can develop their own momentum so that a conflict can become a series and can continue for centuries after the original cause is forgotten or becomes irrelevant. A war starts over a real or imagined cause, and one side defeats the other. The defeated party, humiliated, bides its time and marshals its strength until it can retaliate. In this way, one war begets another, and the cycle continues.

The series of wars between the Roman empire and the Parthian/Sassanian dynasties of Persia that lasted six centuries is such a cycle. In this long struggle, both sides thought that they were filling roles in a historical drama, reaching back to the conflict between the Trojans and the Greeks and continuing through the Persian Wars of which Herodo-

tus wrote. Alexander the Great's conquest was but one act in the ongoing drama, but it exerted a powerful fascination over the Romans, who saw themselves as the successors of the Classical Greeks. During the 600 years of conflict between Rome and Persia, there were long periods of peace during which the two sides traded with each other and enjoyed amicable relations, but once or twice in each century, sometimes more often, a Roman or Persian ruler would revive hostilities. Both the Persian empire and the Roman empire maintained highly trained professional armies whose leaders sought prestige and renown in war. They were nurtured on a history and mythology that served to ennoble and continue the multigenerational conflict.

The final war between the two lasted a quarter of a century. Its principal result was to fatally weaken both empires, making them easy prey for the rising Muslim forces. The Persian empire was destroyed, while the Roman (Byzantine) empire lost all its richest provinces.

After the Muslim conquest of the Sassanian empire the drama of conflict continued, with the Muslims filling the place of the Persians and the Romans morphing into generic Christians. The Arabs went from success to success, and with astonishing speed their armies conquered a vast empire. By 711, their conquests extended from Spain in the west to northwest India in the east and from the Oxus (Amu Darya) in central Asia to the Second Cataract of the Nile in the south. The expansive momentum of the Arabs reached its zenith in 751 when an Arab army destroyed a Chinese force at the Battle of the Talas River in central Asia. In Europe, the Arab tide had already begun to ebb with an Arab defeat at the Battle of Tours-Poitiers (732). And in spite of two prolonged and hard-fought Muslim sieges of Constantinople (674–678 and 717–718), the Arab surge failed to destroy the Byzantine (Roman) empire.

By the mid-eighth century the Arab assault subsided, but indecisive guerrilla struggles continued on Muslim frontiers in Spain, Sicily, southern Italy, Anatolia, the Caucasus, and northwestern India.

Only on the frontier between Muslim Egypt and Christian Nubia was there a more or less durable peace.

The explosion of Arab imperialism occurred with a suddenness and speed that were remarkable. To explain its explosive nature, one must point to the internal weakness of both the Byzantine and Sassanian empires and the simultaneous unification of the Arabs with the meteoric emergence of Islam. The passion and zeal of the Muslim Arabs were rewarded by early spectacular victories that not only electrified the Arabs but also enriched many of them. New recruits flooded into the ranks of the Arab armies, and more plunder rewarded the warriors. But as new recruits joined the forces they also expected rewards, and this created pressure for more conquests. But after a century, most of the areas that could be easily conquered were conquered, and the storm of Arab conquest was over. Turks and Berbers, but not Arabs, would resume Muslim expansion, especially in India and West Africa after 1000 CE.

Compared with the wealth of information we have about wars during late antiquity and the early medieval age in the Afro-Eurasian ecumene, our knowledge about conflicts in the Americas during that time is slight except for the Mayan cities. Archaeologists tell us that at the outset of this period, the bow and arrow started diffusing south from the

The Moche of northern Peru tell us about their way of war on their ceramics: they fought with clubs instead of bows and arrows, they fought neighbors for territory and for commodities such as coca, and they dismembered their prisoners, perhaps for ritual cannibalism.

Arctic peoples, to whom it had been introduced from Siberia about the turn on the Common Era. By 500 CE, this weapon was common in North America. Though the peoples of Mesoamerica may have had knowledge

of the bow, it was not important in their warfare. Mesoamericans as well as the peoples of the Andes fought with clubs, spear-throwing atlatls, and obsidian knives. The Moche of northern Peru tell us about their way of war on their ceramics: they fought with clubs instead of bows and arrows, they fought neighbors for territory and for commodities such as coca [cocaine is extracted from coca leaves], and they dismembered their prisoners, perhaps for ritual cannibalism.

The Maya of Mesoamerica inhabited numerous city-states whose rulers boasted of the wars in which they humiliated rulers of neighboring cities. From 400 to the crash of Maya civilization in the ninth century, two cities, Calakmul and Tikal, fought wars with each other for supremacy in Maya-land, similar to the long conflict between Persia and Rome.

Conflicts were not always between states; often civil wars disturbed the internal tranquility of states. These civil wars often concerned disputes about the succession to the rulership of a state. All dynasties, whether Chinese, Arab, Byzantine, or other, began and ended in civil wars.

Despite the frequency of wars and the endemic hostility between states, there were also long periods of peace between most peoples during this period. Trade, travel, and other kinds of peaceful intercourse between states prevailed during the periods between hostilities. Although the era of full-time professional diplomacy in which ambassadors were permanently posted in neighboring state capitals was still many centuries in the future, most states did conduct sporadic diplomacy with each other.

Embassies were often large expeditions, as interested in trade as in diplomatic relations. The Japanese sent eight large embassies to the Tang court to establish diplomatic relations, to trade, and to bring students to study Chinese technology and culture. The Sui and Tang governments sent military expeditions to the oasis kingdoms on the Silk Roads whose mission was to conduct diplomacy and to cement alliances, sometimes at the point of the sword. Often, states exchanged high-status hostages as pledges of friendship and amity. Dynastic marriages between neighboring states were also frequently arranged. The Tang and other Chinese dynasties sometimes resorted to the practice of awarding Chinese princesses to barbarian rulers to promote peace or to cement an alliance.

Although it is difficult to determine whether the Age of Expanding Regional Civilizations had more or fewer destructive conflicts than later eras, a plentitude of war darkened human existence and destroyed human hope during this era.

—Wilfred J. Bisson

■ Introduction: War and Diplomacy in Eurasia, 300–632

For nearly seven centuries (the first century BCE to the seventh century CE) two great empires, the Roman and the Persian, coexisted side by side in the Mediterranean region and West and Southwest Asia. Their relations were often peaceful, but in almost every century the peace would be disturbed by protracted wars between the two giant states. While these empires were relating to each other with often more than guarded hostility, “barbarian” peoples on their northern frontiers threatened both. Both empires maintained heavily armed forces to defend their northern frontiers as well as their frontier with each other. For each of these great powers, the burden of maintaining these powerful frontier armies was a serious drain on their prosperity. Not only were these armies crushingly expensive, they were, at times, serious threats to the internal stability of the empires they were meant to protect.

From the fourth to the mid-seventh centuries, the pastoral and other peoples north of the Roman, Persian, and Chinese frontiers were in motion. In the fourth century, pastoral groups poured through Chinese defenses and occupied northern China, establishing their own “barbarian” regimes. By the mid-fifth century, one of these pastoral groups, the Toba Turks, imposed its rule over all of northern China as the Northern Wei dynasty that was, within less than a century, Sinicized and assimilated into Chinese culture.

On the western edge of Inner Eurasia other “barbarian” groups invaded the Roman empire in the late fourth century and throughout the fifth century, toppling Roman authority and erecting their Germanic kingdoms in the western half of the empire. The eastern half of the Roman empire, which we know as the Byzantine empire, survived and continued to pursue the ancient quarrel with the Persians.

During the late fifth century and much of the sixth century, the Persians were having their own problems with northern “barbarians,” the Hephthalites (White Huns). The Hephthalites moved out of central Asia in the fifth century and erected a large state centering in modern Afghanistan but also including territories in the

Oxus River and Ferghana valleys. The attention of Sassanian Persians was focused on the Hephthalite threat through most of the fifth century and much of the sixth century, but after the Sassanian king Khosrau decisively defeated the Hephthalites in 557, the Persians were free to renew their quarrel with the Romans.

The Roman-Persian conflict ended with a climactic war lasting a quarter of a century that left both empires exhausted and easy prey for the newly emergent Muslim Arabs.

—Wilfred J. Bisson

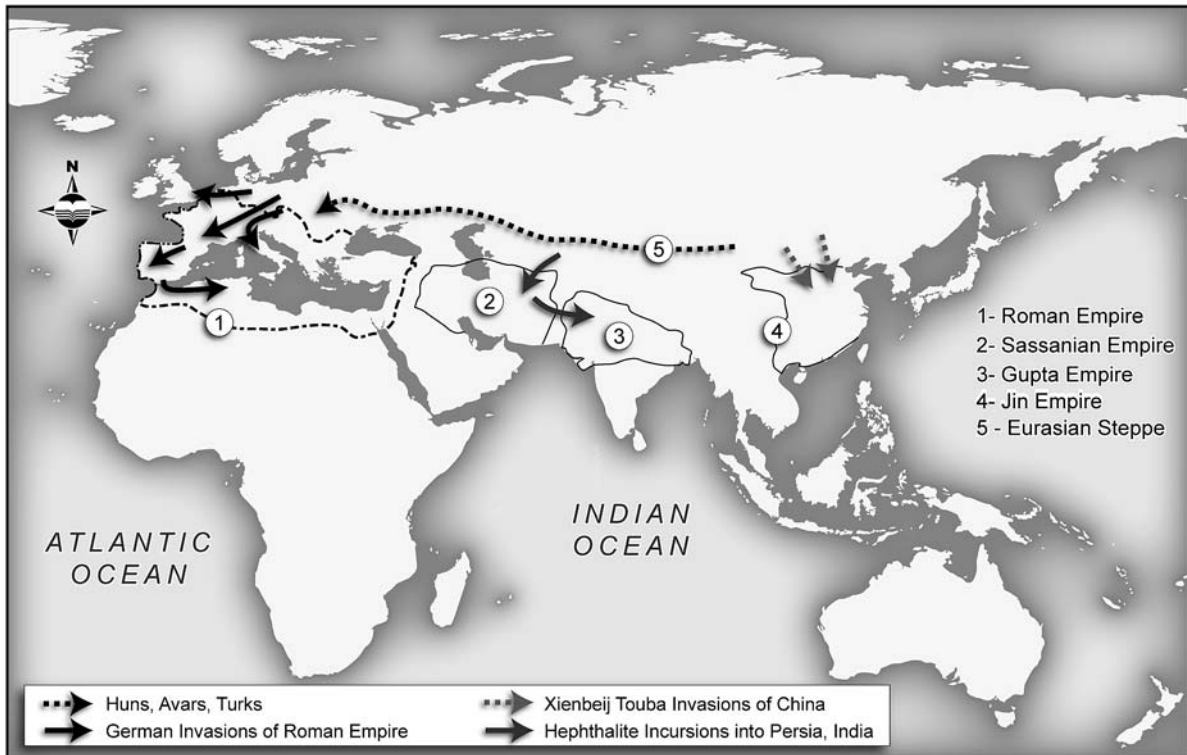
Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Wickham, Chris. *The Inheritance of Rome: Illuminating the Dark Ages, 400–1000*. New York: Viking, 2009.

Barbarian Invasions of China, India, and the Roman Empire, 300–650 CE

Developments in the central Asian steppes in the early fourth century CE triggered the onslaught of invasions by so-called barbarians through much of Eurasia for the next three centuries. Climate change in the central Asian steppes, which led to decreased rainfall and grass stocks, forced pastoralist peoples, most notably the Huns, to seek more hospitable climes for their livelihoods. Most of these barbarian migrations were triggered by the pressure exerted by the Huns, who were a confederation of Eurasian tribes from the steppes of central Asia. Through their use of advanced weaponry, rapid mobility, and battlefield tactics, they achieved military superiority over many of their enemies, subjugating the peoples they conquered. In the process, these groups of people who had been kept at bay by the older and more sophisticated and established civilizations were brought into open conflict. While some of these groups had been successfully co-opted by either the Romans or the Chinese in prior centuries,

BARBARIAN INVASIONS, CIRCA 450



other groups felt compelled to engage in open warfare in order to secure land and partake in the benefits of their more sophisticated imperial neighbors.

More than 600 years before the eruption of the Huns, the Xiongnu, whom some historians see as ancestors of the Huns, had threatened the China as early as the second century BCE. Han westward expansion pushed the Xiongnu into the central Asian steppe. However, the outlying barbarian peoples around Han China also began entering China in the east for its wealth and arable lands. Climate change in the steppe compelled these ethnic groups to seek their fortunes as the Han fell into decline in the third century CE. The Han state had collapsed in 220 CE, and China was only briefly reunited by the Jin dynasty in 280 CE. However, civil war wracked the Jin dynasty, and similar to the Roman empire, it was barbarians who had been settled in previous years who took advantage of the situation. In 311 CE descendants of the southern Xiongnu seized Emperor Huai and the capital of Luoyang. His successor, Emperor Min, was taken

in Chang'an in 316 CE, and although Jin rule continued in the south, Chinese rule over the north ceased (until 589 CE).

The various states founded by Xiongnu factions were not the chief power in the appropriately named Sixteen Kingdoms Period. Barbarian groups from the Di, Qiang, Jie, and Ba-Di also founded kingdoms. Most important were members of the Xianbei confederacy that had grown in power in the third century. In 258 CE the Chinese Jin dynasty had even used them as allies against the Xiongnu. They established 5 of the 16 states of this period, and this culminated when the Tuoba Xianbei's Northern Wei dynasty (386–534 CE) brought the north under stable rule. The Northern Wei was increasingly sinicized (assimilating Chinese customs and culture), moving their capital to Luoyang, adopting Chinese clothing and names, converting to Buddhism, and using Chinese administrative practices and personnel. The nomads-turned-Chinese-rulers were themselves forced to fight numerous battles on their northern frontier against peoples from their former Mongolian homeland. In 524 CE a rebel-

THE SACK OF ROME

By the fifth century CE the city of Rome had ceased to be the center of political authority. Emperor Honorius (r. 395–423 CE), for example, ruled from defensible Ravenna, but Rome's sack by the Visigoths in 410 CE was nevertheless a powerful symbol of the decline in Roman authority. However, it was not simply a case of Roman against barbarian. Numerous barbarian *foederati* fought for the Romans, and even Honorius's chief general Stilicho was a Vandal.

Alaric (r. 395–410 CE) and the Visigoths had helped Emperor Theodosius I (r. 379–395 CE) put down a rebellion in 394, but the Goths felt that they had been inadequately rewarded and rose against the empire, declaring Alaric their king. They first marched against the eastern Romans, plundering Greece, until Stilicho crossed from the West to confront them in 397. The Goths then traveled to Italy, but Stilicho was again responsible for driving them out in 402. In the fluid political situation, Alaric became the western Romans' ally

against the eastern empire in 407, but court politics led to the murder of Stilicho and of the families of many *foederati*. As a result, many went over to Alaric, and the Visigoths attacked the city of Rome three times in the following years. The first time (408) the Senate was able to ransom the city; the second time (409) Alaric set up a puppet emperor, Attalus. The third time the Visigoths attacked in earnest, storming the city on August 24, 410. The city was looted, but the Christian Goths spared the churches, and only a few areas of the city were damaged by fire. According to Procopius's *History of the Wars*, in Ravenna a eunuch rushed to inform Emperor Honorius that “*Roma* has died!” Honorius was horrified until he discovered that the eunuch was talking about the city and not his pet rooster of the same name. Alaric himself died soon after, and the sackers of Rome renegotiated an alliance with Rome, settling in southern Gaul (France) in 418 CE.

—Jonathan Bruce Markley

lion by the less sinicized military brought serious difficulties, and the state split in 534 CE. Except for a brief period under the northern Zhou, the region would remain divided until the Sui dynasty reunited north and south under Chinese rule in 589 CE. Similar developments would ensue in the West with nomadic invaders.

Roman relations with its Germanic neighbors to the north had been somewhat stable in the first and second centuries CE, with sustained legion foray into Germanic lands to quell potential aggression. In the second and third centuries, Roman military strength in its North European provinces had significantly deteriorated, and this necessitated the greater use of Germanic mercenaries along the borders who served Rome in exchange for being allowed to settle within the empire. However, by 376 CE, the Visigoths (western Goths) crossed the Danube and entered the Roman empire. This was not, however, an invasion. The Gothic tribes were fleeing the Huns (who had swept out of the East) and sought refuge in the empire. However, relations broke down, and in the resulting Battle of Adrianople (378 CE) the eastern Roman

(Byzantine) Army was obliterated. Negotiations initially led to a treaty in 382 CE making them *foederati* (federates) of the empire. The Goths had converted to Arian Christianity and, like many other barbarians, sought to emulate Roman administration in their states. The most successful of the post-Roman kingdoms were those of the Ostrogothic (East Gothic) king Theodoric in Italy (489–526 CE), the Visigoths in Spain, and the Franks in Gaul.

Although they often provided troops to Roman armies, the Huns themselves remained a threat, particularly under Attila (r. 434–453 CE). The eastern Roman empire succeeded in purchasing peace with the Huns with gold, while in the West, Roman forces, allied with Goths and other tribes, combined to oppose the Huns. Ultimately, the Huns were defeated at the Battle of Chalons (also known as the Battle of the Catalaunian Plains) in 451 CE by a Roman-Visigothic coalition, which crushed their power and led to their decline. They disappeared as a major force by the mid-fifth century.

Many other tribes crossed into the empire including the Burgundians, who seized eastern

Gaul; the Lombards, who settled in Italy in the sixth century CE; and the Angles and Saxons, who were invited to Britain to aid in its defense and dominated the south and east of England by the sixth century. The Vandals crossed the Rhine in 406 CE, establishing a kingdom in North Africa for a century (430–533). Others such as the Alamanni and the Alans played lesser roles in these invasions. Slavic Avars were the major threat in the sixth and seventh centuries, even besieging Constantinople in 626 CE.

The history of the Goths is in many ways typical of what earlier historians termed the “barbarian invasions.” Various tribes driven by extraordinary circumstances entered the empire and engaged with Roman authority in a complex web of cooperation and conflict. The Romans signed treaties, recruited troops, and often granted permission for settlement. It was a dangerous path. The last western Roman emperor was overthrown in 476 CE by his barbarian general Odoacer, but even he sought legitimacy by asking Constantinople to recognize his authority. However, the Romans lacked the military and economic means to expel the various peoples, and they had little choice but to make necessary compromises. For example, rather than directly intervene against Odoacer, the Ostrogoths invaded Italy with Constantinople’s blessing in 490 CE. Byzantine (East Roman) emperor Justinian’s (r. 527–565 CE) general Belisarius (500–565 CE) fought long wars in the West, and although he defeated the Ostrogoths in Italy and the Vandals in Africa, it is doubtful that his campaigns brought any adequate return. Justinian’s policy of bribery and diplomacy on the Balkan frontier was less popular but also more economical. The Visigoths established their kingdom, which ruled Spain until the Muslim Arabs conquered it in 711 CE. The most enduring of the Barbarian kingdoms was that of the Franks in Gaul, which eventually became the Kingdom of France. The Angles and Saxons in Britain established a multitude of little states that, by the ninth century, coalesced into one kingdom.

While the Indian subcontinent had a similar relation with external nomadic invaders, it would be far more successful in resisting the

threat by these pastoralist peoples seeking lands at their expense.

In the Indian subcontinent, the Gupta state came under increasing pressure in the fifth century CE from invasions out of the northwest by a group usually known as the Hunas (sometimes also known as the White Huns). Their connection to the Huns of Europe, the central Asian Hephthalites, or Greater Yuezhi, with whom they have been identified remains unclear. The scale and consequences of their attacks seem to have been more limited than those in the West and Far East. Skandagupta was able to repel an attack in 458 CE, but the Gupta disunity contributed to their loss of control of the northwest by 510. The Hunas were particularly hostile to Buddhism, and the work of Buddhist scribes probably contributed to the hostility of the tradition concerning them. Toraman and his son Mihirakula maintained Huna power in northwestern India for a time, but they were driven into the Kashmir region by local coalitions prior to 550. Other Huna rulers followed, probably ruling territories farther to the north in modern Afghanistan. A Sassanian-Turk coalition destroyed them sometime after 557, after which they disappear from historical records. Tradition maintains that Hunas who remained in India were assimilated into the local culture, but attempts to link the Hunas with modern Indian groups such as the Rajputs and Gujars are disputed. The collapse of Gupta rule seems to have been due to internal difficulties (perhaps exacerbated by war costs), and unlike in China or western Europe, the power vacuum was not filled by barbarians but instead by groups from within what had been the Gupta state, such as the diminished kingdom ruled by Harsha (606–647 CE), a grandson of the Gupta royal house.

—Jonathan Bruce Markley

Bibliography

- Frassetto, Michael. *Encyclopedia of Barbarian Europe*. Santa Barbara, CA: ABC-CLIO, 2003.
- Goyal, S. R. *The Imperial Guptas: A Multidisciplinary Political Study*. Jodhpur: Kusumanjali Book World, 2005.
- Graff, David. *Medieval Chinese Warfare, 300–900*. New York: Routledge, 2002.

Kulikowski, Michael. *Rome's Gothic Wars from the Third Century to Alaric*. Cambridge: Cambridge University Press, 2006.

Sinor, Denis, ed. *The Cambridge History of Early Inner Asia*. Cambridge: Cambridge University Press, 1990.

Whittaker, C. R. *Rome and Its Frontiers*. New York: Routledge, 2004.

Wars between Rome and Persia

The beginning of the fourth century heralded enormous changes in the Roman world that had important ramifications for Persia. First, during the reign of Constantine the Great, the Roman empire began its transformation from a polytheistic into a Christian empire. As Christian bishops (seeking the elevation of Christianity) grew in power throughout the empire, so did an inherent distrust of non-Christian faiths including the Zoroastrianism of the Persians. Although the Roman and Persian empires had been in periodic conflict since the first century BCE, the rise of Christianity contributed to their enmity as their competing faiths later became an important element of the transformation of their hostilities into holy wars. The early fourth century also witnessed the relocation of the center of Roman authority to the east as the city of Constantinople (founded by Constantine in 330 CE) grew to even greater imperial importance than Rome. Although the western half of the Roman empire maintained an emperor until 476 CE, the emperors of the eastern Roman empire (Byzantine empire) held greater prominence and, usually, economic and military power. This new focus and shift of Roman power to the east, bolstered by an increasingly militant faith, led to intensified hostilities between Romans and Persians until the demise of the Sassanian (Persian) empire in the seventh century.

Roman eastward expansion during the later part of Constantine's reign ensured greater hostilities with Persia and a legacy of campaigning in Mesopotamia for Constantius II, his son and successor. Constantius II carried on his father's efforts in the east without delay, as less than a year after his father's death he had made his headquarters at Antioch for annual campaigns



Roman emperor Julian II, “the Apostate,” became one of the most notorious and well-documented emperors of the later Roman empire. Julian, like many emperors before him, invaded the Persian empire—with disastrous results. (Vanni Archive/Corbis)

against the Persians, lasting until 346 CE. Following in the precedent of Constantine and his son, other Christian Roman emperors continued hostilities periodically against the Persians throughout the fourth century. Even the last pagan Roman emperor, Julian II (Julian the Apostate), made war against the Persians an early priority of his short reign. He later died during the war from a spear wound in the Battle of Samarra in 363 CE.

The fifth century was generally a more peaceful period in Roman and Persian relations (in comparison to the fourth and sixth centuries), as the neighboring empires resorted to military conflict on only two occasions. The first war broke

➤ ANTIOCHUS STRATEGOS—THE PERSIAN CONQUEST OF JERUSALEM, 614 CE

Long-running hostilities between Byzantine Christians and Zoroastrian Persians led to the Persian conquest of Jerusalem in 614. The following account by the Byzantine monk Antiochus Strategos, a resident of Jerusalem and eyewitness of the event, is reflective of the deep animosity resulting from centuries of hostility that existed between the two sides as well as the despair that Byzantine Christians must have felt at losing control of the Holy City.

“Meanwhile the evil Persians, who had no pity in their hearts, raced to every place in the city and with one accord extirpated all the people. Anyone who ran away in terror they caught hold of; and if any cried out from fear, they roared at them with gashing teeth, and by breaking their teeth on the ground forced them to close their mouths. They slaughtered tender infants on the ground, and then with loud yelps called their parents. The parents bewailed the children with vociferation and sobbing, but were promptly dispatched along with them. Any that were caught armed were massacred with their own weapons. Those who ran swiftly were pierced with arrows, the unresisting and quiet they slew without mercy. They listened not to the appeals of supplicants, nor pitied youthful beauty nor had compassion on old men’s age, nor blushed before the humility of the clergy. On the contrary they destroyed persons of every age, massacred them like animals, cut them into pieces, mowed sundry of them down like cabbages, so that all alike had severally to drain the cup full of bitterness. Lamentation and terror might be seen in Jerusalem. Holy churches were burned with fire, others were demolished, majestic altars fell prone, sacred crosses were trampled underfoot, life-giving icons were spat upon by the unclean. Then their wrath fell upon priests and deacons; they slew them in their churches like dumb animals.”

—Andrew Holt

Source

F. Conybeare, “Antiochus Strategos’ Account of the Sack of Jerusalem (614),” *English Historical Review* 25 (1910): 502–517.

out in 420 CE due to disagreements over Byzantine unwillingness to return Persian Christians who had sought refuge in the Byzantine empire from persecution. The Persians, in turn, took Roman gold miners working in Persian territories as hostages, prompting a Roman invasion. The Romans experienced considerable early success, which soon won them a favorable peace agreement. The second war broke out as the result of a Persian invasion of Roman territory in Armenia in 440 CE. The Persians attacked during a period when the Roman empire was experiencing numerous military difficulties, as the city of Carthage had been lost to the Vandals less than a year earlier in 439 CE. Consequently, the Romans were anxious to come to terms, and the Persians soon withdrew when they were paid off.

The sixth century was a period of intensified hostilities between the Persian and Roman empires that began when the Persians under King Kavadh I again invaded Armenia in 502 CE. Although Kavadh wished to expand the boundaries of his empire, he ended up winning very little, as the Romans under the leadership of Emperor Anastasius I effectively fought him to a draw. The war did not formally end until 506 CE when both sides agreed to a truce that resulted in 20 years of peace. The next period of conflict began in the latter part of Kavadh’s reign when he tried to force Christian Iberians (located primarily in the Transcaucasus region and upper Mesopotamia) to become Zoroastrians. Although the Iberians were under Persian rule, Roman forces interfered with Persian efforts, provoking a war that lasted from 527 until 532 CE. With the death of the Persian king in 531 came serious negotiations for peace and the formal signing of a truce in 532 CE. The peace was largely agreed to because Kavadh’s successor, Khosrau I, wanted the opportunity to stabilize his newly acquired empire.

In 540 CE hostilities broke out again when Persia invaded Syria and attacked cities in Mesopotamia and Byzantine Armenia. The Byzantine response was delayed by the fact that this was a period in which Justinian I’s most important general (Flavius Belisarius) was fighting in the west and had to be quickly recalled to the east to deal with the Persians. After five years of indecisive conflict, the Byzantines and Persians nego-

tiated a truce in which the Persians agreed not to attack Byzantine territory for the next five years. Yet mistrust and hostilities between the two empires continued during this period because of events happening elsewhere. The Romans wanted control of the kingdom of Lazica (in present-day western Georgia) as a barrier against Persian advance from Iberia to the Black Sea. The kingdom was under the control of the Persian empire, but its inhabitants were Christians. The Lazic king, Gubazes II, sought the assistance of Byzantium when he revolted against the Persians in 548 over fear that Emperor Khosrau I intended to convert his people to Zoroastrianism or replace them with more loyal inhabitants. These actions resulted in another lengthy and indecisive war that lasted until a truce was signed in 557 CE followed by a more substantial peace agreement in 562 CE in which the Persian ruler Chosroes I recognized Lazica as the Byzantine vassal state in exchange for annual payments of gold.

The final outbreak of war, and perhaps the most significant for the future of both empires, began in 602 CE. This war with Persia was in one way similar to the later crusades in that it was promoted by Byzantine leaders as a holy war between Christianity and Zoroastrianism. The war began when Khosrau II (r. 590–628 CE) attacked the Byzantine empire during a succession crisis in which the Roman emperor Maurice (r. 582–602 CE), an ally to Khosrau, was murdered by the usurper Phocas (r. 602–610 CE). The Persians had considerable early success during Phocas's reign, as they plundered Syria and Asia Minor. Persian successes initially continued with the ascension of Heraclius to the Byzantine imperial throne in 610 CE, as Damascus was captured in 613 CE and Jerusalem was taken in 614 CE with the True Cross taken away in triumph. Persians then occupied Egypt in 619 CE and conquered the city of Alexandria in the same year.

Much of the reason for Persia's early success was the result of internal dissension in the Byzantine empire as well as the distraction of dealing with other threats posed by the Avars and Slavs. Yet Byzantine fortunes began to change in 622 CE when under Heraclius's inspired leadership they won a decisive battle over Persian

forces at Issus and were able to fend off a combined Persian-Slav-Avar attack on Constantinople in 626 CE. It was during this successful defense of Constantinople that Heraclius demonstrated his skill as a military commander. Confident in the city's ability to hold out under siege, Heraclius took the fight to his enemies as he sailed through the Black Sea to attack Persia from behind. Heraclius and his army won several important battles as they made their way through Persia, culminating in a crushing victory over the Sassanian army in northern Mesopotamia in December 627. Heraclius then began to make his way toward the Persian capital of Ctesiphon. On news of Heraclius's approach, Persian leaders assassinated Khosrau II, and his successor Kavadh II (r. 628) made peace with Heraclius by restoring Byzantine territories won in the early half of the war.

This conflict ultimately exhausted both the Byzantines and the Persians economically, militarily, and psychologically, and, as a result, neither was well prepared to deal with the rise of Islam in the decades that followed. Early Islamic armies had an especially devastating impact on the Persians, as they quickly conquered and consolidated the Persian empire under the Islamic caliphate by the middle of the seventh century. The Byzantine empire survived the early Islamic onslaught (barely fending off attacks on the capital city of Constantinople in 674 and 717 CE) but lost control of enormous territories in North Africa and Syria. The survival of the Byzantine empire boded well for Christian Europe, as the Byzantine state served as a buffer to Arab (and later Turkish) invasions until its fall to the Turks in the fifteenth century.

—Andrew Holt

Bibliography

- Cameron, Averil. *The Later Roman Empire: A.D. 284–430*. Cambridge, MA: Harvard University Press, 1993.
- Greatrex, Geoffrey, and Samuel N. C. Lieu, eds. *The Roman Eastern Frontier and the Persian Wars: A Narrative Sourcebook*. London: Routledge, 2002.
- Jones, A. M. H. *The Later Roman Empire, 284–602: A Social, Economic, and Administrative Survey*. London: Blackwell, 1964.

Overview of Maritime History

From the perspective of maritime commercial and technological and naval history, the outstanding changes of the centuries from 300 to 1000 were the gradual decline of the maritime primacy of the eastern Mediterranean and the growing volume of trade across maritime Asia. Egypt, the Levant, and the Aegean had dominated the Mediterranean as a whole for the previous 2,000 years. In their place arose the central and western Mediterranean commercial and naval powers—with the Muslim faith giving way to Christianity—of Italy and Spain, which emerged around the tenth century. These set the stage for the economic integration of western and northern Europe, without which the transoceanic expansion, colonization, and economic globalization of recent centuries would have been impossible. Simultaneously, the trade of Asia, with its enviable diversity of rare and exotic flora and fauna, became ever more attractive for those both within its sphere and beyond it.

Northern Europe underwent a period of violent transformation as Christianity and trade penetrated northward beyond the limit of what had been the Roman empire and secular rulers fought for precedence, often in the guise of religion. The east-west divide of northern Europe was lessened thanks in large part to the Vikings of Scandinavia, who had no sails until the seventh century and no Christianity until the tenth century. Although infamous for their violent raids, the Vikings laid the foundation for vibrant east-west commerce, and they stimulated north-south trade via the Russian rivers between the Baltic Sea in the north and the Caspian, Black and Mediterranean seas in the south. Their westward ventures bore them to the British Isles, southward along the coasts of France and Spain and into the Mediterranean, and across the North Atlantic to Iceland, Greenland, and eastern Canada. In their achievements we can see the dynamism of northern maritime Europe from which would spring, when crossed with the maritime traditions of the Mediterranean, the world-girdling enterprise of the 1400s and later.

The littoral of Asia and East Africa—bounded by the Indian Ocean, the Indonesian archipelago, and the South and East China seas—underwent

comparable changes, characterized broadly by the spread of Buddhism in the east and of Islam in the west. The written history of the western Indian Ocean prior to the rise of Islam is sparse. The two principal imperial powers with an interest there were the Byzantines, who controlled Egypt and much of Arabia and therefore the Red Sea, and the Sassanian Persians, whose territory embraced the Persian Gulf and whose seafarers traded to East Africa, India, and China. Muslim armies overthrew the Byzantines and the Sassanians in the Middle East by 650, and Muslim merchants—including both Arabs and converted Persians—began sailing along their old trade routes. Muslim mariners also began to establish enclaves on the coast of India, where through intermarriage with low-caste Hindus there evolved creole communities of Mappilla Muslims that flourished until the sixteenth century.

The existence of foreign trading communities of both newly arrived or converted Muslims and of more established Jews, Zoroastrian Persians, and Nestorian Christians became especially important for southern India's overseas trade as Hinduism superseded Buddhism and Jainism. After the eighth century, more conservative observance of purity rites led to a diminished involvement in overseas trade by Hindu traders.

In the first millennium CE, commerce across the Bay of Bengal between the Dravidian kingdoms of south India and the Southeast Asian states flourished. Through this trade, Indian civilization, including its Hindu religion, cultural norms, architectural styles, music and dance patterns, and material culture spread to Southeast Asia. The view that such cultural norms were imposed from India in the course of a medieval colonial project has been largely debunked. It is clear that while certain imports were entirely new to Southeast Asia—writing, for example, in a variety of scripts from different parts of India—developments in Southeast Asia were not simply a function of alien influence. That the states of Southeast Asia were on a more or less equal footing with their Indian contemporaries can be seen in their lavish endowment of monasteries and temples at home and in India, the latter probably intended as much for commercial and political as for spiritual benefits.

Perhaps the most ambitious sea-based military campaign of the age was launched by the Chola kingdom of southern India, which in the 1020s ventured north to Bengal and subsequently east against the kingdom of Srivijaya. Sailing more than 1,500 miles across the Bay of Bengal, the Cholas captured 13 cities on either side of the Malacca Strait on the Malay Peninsula and Sumatra, including Srivijaya, Palembang, and Kedah and perhaps in Burma.

From the fourth to sixth centuries, pressure from hostile neighbors in central Asia caused political fragmentation in China. Southern states on the South China Sea began to pursue trade with Southeast Asia. This proved to be the foundation of an overseas trade that reached its apogee during the Tang dynasty (618–907), when the flow of goods and ideas, notably Buddhism, from India and farther west was at its peak. From China, Buddhism and other material, cultural, and religious aspects of Chinese civilization passed to Korea and via the Korean kingdoms to Japan.

South of the sphere of Persian influence, mariners probably originating from Java crossed the Indian Ocean to Madagascar, most likely between the second and fourth centuries. There they introduced a variety of goods and plants that were subsequently brought to Africa proper. Most notable of these are the water-yam, taro, plantains, and bananas, which have long since become staples in other parts of the world, notably the Americas.

Far removed from Eurasia, Pacific islanders finished their settlement of Oceania. Voyagers from Tahiti and the Marquesas Islands sailed southeast to Easter Island—the most remote island on earth—in the fourth century, and a century later they crossed the equator to settle Hawaii. At some point in the next few centuries Polynesians reached South America, returning to Oceania with the sweet potato. Their last major discovery was of New Zealand, first settled in the tenth century. Around the same time, bearers of the Thule culture spread eastward across Arctic North America from Alaska to Greenland.

—Lincoln P. Paine

Bibliography

Hourani, George F. *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*. Revised and expanded by John Carswell. Princeton, NJ: Princeton University Press, 1995.

THE BOOK OF THE WONDERS OF INDIA

Commerce and religion often go hand in hand, as shown in a story from Buzurg Ibn Shahriyar's tenth-century *The Book of the Wonders of India*, a celebrated Arabic compendium of sea stories. In 922 an Omani merchant named Ismail landed on the coast of East Africa near Sofala, where his crew began bartering with the locals. When the king boarded the ship to see off the merchants, Ismail kidnapped him and put him with the other 200 slaves already aboard. Several years later Ismail returned and was brought before the ruler, his former captive. According to the unnamed king, after living as a slave in Basra and Baghdad and converting to Islam, he escaped his owner and made his way to Mecca and Cairo. From there he headed down the Nile and eventually reached the Indian Ocean and boarded a vessel that brought him home. His people had agreed not to choose a new king until they had definite news of his fate, so he resumed his throne. "Like myself," he told Ismail, "they embraced the religion of Islam. . . . And, if I have forgiven you, it is because you were the first cause of the purity of my religion." The king asked the Omani to "let Muslims know that they may come here to us as to brothers, Muslims like themselves." His people's adoption of Islam had a practical side, and the king could promote their faith in the same way a business might post a sign saying "Arabic spoken here."

—Lincoln P. Paine

Source

Buzurg ibn Shahriyar of Ramhormuz, *The Book of the Wonders of India: Mainland, Sea and Islands*, translated by G. S. P. Freeman-Grenville (London: East-West Publications, 1981).

Kirch, Patrick Vinton. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley: University of California Press, 2000.

Magnusson, Magnus. *The Vikings*. Stroud, Gloucestershire, UK: Tempus, 2000.

Wang Gungwu. *The Nanhai Trade: The Early History of Chinese Trade in the South China Sea*. 2nd ed. Singapore: Times Academic Press, 1998.

Wink, André. *Al-Hind: The Making of the Indo-Islamic World*, Vol. 1, *Early Medieval India and the Expansion of Islam, 7th–11th Centuries*. Leiden: E. J. Brill, 2002.

■ Introduction: Conflicts Relating to the Emergence of Islam

The emergence of Islam and the creation of the Arab Islamic empire destroyed the Persian empire and left the Byzantine (East Roman) empire a weakened rump of that erstwhile mighty great power. The two great empires of Persia and Byzantium climaxed their seven centuries long series of intermittent conflicts exhausted, their populations alienated and their treasuries emptied. The Persian empire was no more, and the case of the Byzantine empire was dire. For the next two centuries, the Byzantine empire fought for its life, its survival doubtful.

The causes of the Arab Muslim success were only partly due to the weakness of its opponents. The Arab forces were infused with the élan and spirit of converts. God, they believed, was on their side, and as a result of their nearly immediate victories, their élan was rewarded with great wealth. After the first victories, a wave of enthusiasm swept the Arabian Peninsula, and recruits, lured on by the promise of Paradise in the next world and riches in this world, flocked to conquering armies. The tide of Islamic conquest seemed unstoppable, and in about eight decades the Arab armies, with their Muslim converts, conquered the most extensive empire known until then, spanning much of western Eurasia from the Atlantic coast of Hispania to beyond the Indus River in South Asia.

By the middle of the eighth century, the Arab Muslim tide had run its course. In 718 the Byzantine Navy, using Greek fire, defeated the second Arab siege of Constantinople. The Byzantine empire rallied and, in time, drove the Arab forces out of Anatolia, back to Antioch. In Europe, the Frankish Army stopped the Arab onslaught at the Battle of Tours (732), and in the Punjab, Hindu troops, using their bamboo and steel longbows, stopped the Arab advance. As early as the middle of the seventh century, the Arab movement south from Egypt had stopped, and a durable treaty, the Baqt, had established a durable peace on that frontier.

By the middle of the eighth century, the expansive force of the Arab Muslim empire had been spent, and frontiers that lasted nearly three centuries emerged in northern Spain, eastern

Anatolia, and along the frontier of Sind. The Muslim frontier with Nubia remained stable for nearly six centuries.

—Wilfred J. Bisson

Bibliography

Donner, Fred. *The Early Islamic Conquests*. Princeton, NJ: Princeton University Press, 1981.

Kennedy, Hugh N. *The Byzantine and Early Islamic Near East*. London: Ashgate, 2006.

Nubia versus Muslim Egypt— A 600-Year Truce

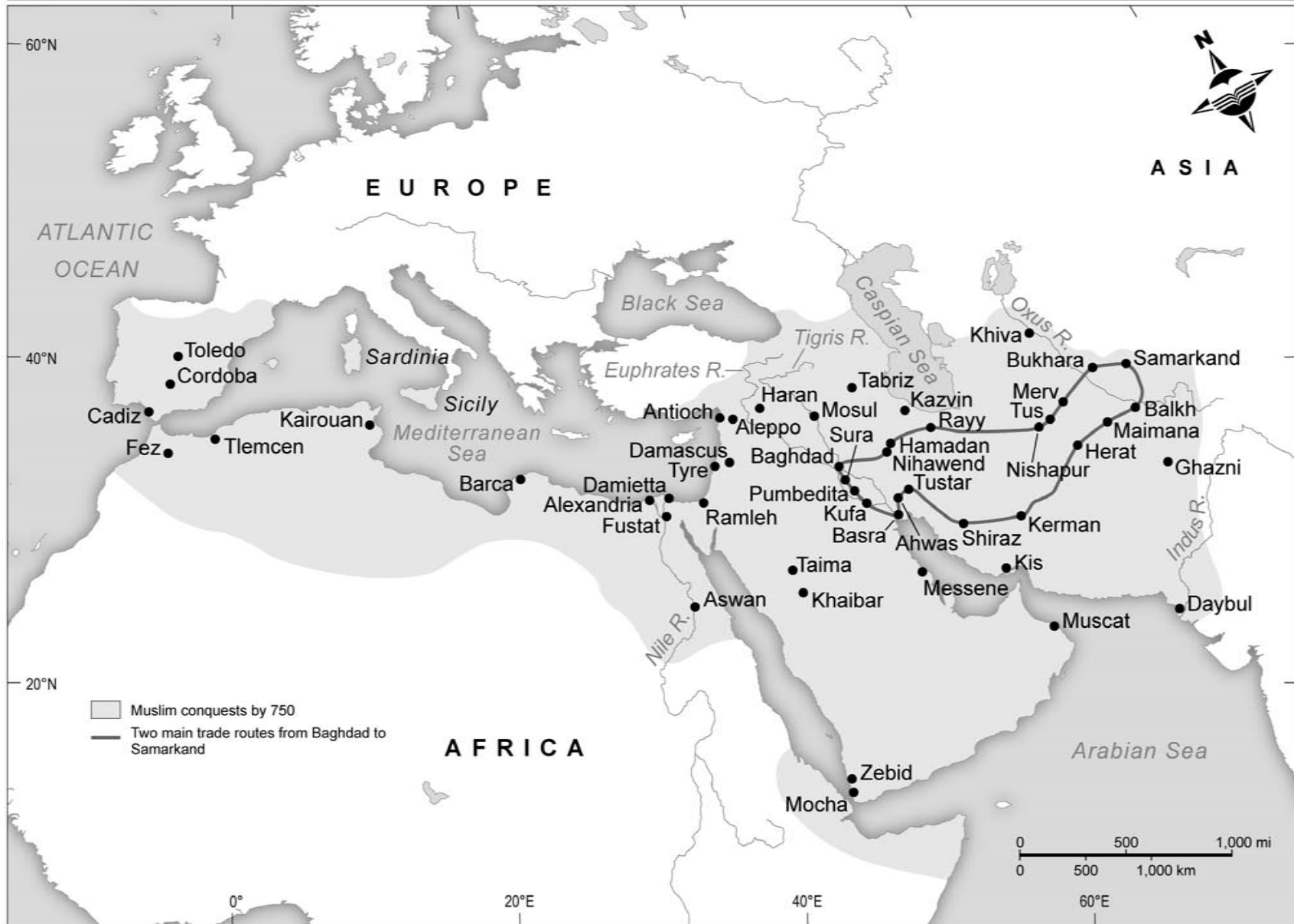
Relations between the medieval Christian Nubian kingdoms and Muslim Egypt were unique. Unlike the situation between Dar al-Islam (the Muslim world) and its non-Muslim neighbors in other parts of the medieval world, where jihad and crusade were often the rule, interaction between these Muslim and Christian neighbors was comparatively peaceful for about six centuries.

The Nubian kingdoms emerged in the late fourth to early sixth centuries CE. They were located just south of Egypt in the valley of the Middle Nile, in the modern republic of Sudan.

Muslim Arab armies, fresh from their great victory over Emperor Heraclius's Byzantine army at the Battle of Yarmuk, invaded Egypt in 639. By 641 they had driven the Byzantines from Egypt, ending six centuries of Roman occupation. From that time to the present, Muslims would dominate Egypt. The northern Nubian kingdom, Makuria, had been a Byzantine ally, but because of the swiftness of the Muslim campaign the Nubians failed to come to the aid of their ally. Nevertheless, the Arab emir (governor) of Egypt, El As, sent an army, reputed to have numbered 20,000, to invade Makuria. The Muslim army rampaged through the land pillaging and killing, but a Nubian defense force, which the Muslims claimed was 100,000 strong, drove the invaders back into Egypt.

El As sent a second army into Makuria in 652. According to Muslim sources, this was in retaliation for a Nubian raid on Aswan, which the Egyptians had taken from Makuria in the previous combat. The Egyptian army, with 5,000

MUSLIM CONQUESTS, CIRCA 750



➤ A GIRAFFE FOR THE CALIPH—THE *BAQT*, A GIFT EXCHANGE AGREEMENT

The treaty, or *Baqt*, between the Muslim caliphate and the Nubian Makuria kept the peace, with a few exceptions, between the two powers for six centuries. Fundamentally it was a nonaggression pact, but it also provided for annual (later, triennial) gift giving between the parties. The Nubians were to give slaves to Egypt and its officials, while the Egyptians were to give the Nubians grain, wine, cloth, and two swift horses.

A tenth-century Egyptian account stipulated the schedule of gifts as follows:

From Makuria to Egypt and its officials:

Slaves—356 slaves to the Caliph, 40 to the governor (emir) of Egypt, 25 slaves to the officials supervising the gift exchange, and one slave each to the 12 witnesses for the gift exchange
Giraffes—an occasional giraffe for the Caliph

From the Caliphate to the Makurians:

Grain—1,000 measures of wheat and 1,000 measures of barley for the King and his treasury, 300 measures of wheat for the Makurian ambassadors
Wine—1,000 amphorae for the king, 300 for the Makurian ambassadors
Horses—2 swift horses from the emir's stables
Cloth—40 quantities of 6 kinds of cloth, 1 quantity of silk

In addition, the Egyptians were obligated to provide sustenance for certain Makurian embassies.

—Wilfred J. Bisson

horsemen, drove the Nubian defenders more than 300 miles south and laid siege to Dongola, the capital of Makuria. Although the Muslims used catapults, which they had brought up the Nile River on ships, the Makurian archers created such havoc among the besieging Muslims that they withdrew.

The strength of the Makurian army was its bowmen. These well-trained troops had the ability to shoot armor-penetrating iron and copper alloy-tipped arrows very rapidly from very powerful compound bows. The Muslim attackers

were astounded at the accuracy with which the Nubian archers could shoot their arrows. They complained that they could never get close enough to the Makurian soldiers to be able to use their swords.

As a result of this defeat, the Muslim commander agreed to a treaty, or *baqt*, with the Makurian king Qalidurut. This was an agreement that was to govern the relations between Egypt and Makuria for the next six centuries. It was a rare agreement for the Muslim caliphate at this time because it was an agreement among equals. It was more usual in early Muslim treaties for the non-Muslim party to be put in an inferior position. There was nothing in the terms of the *baqt* to imply a status of inferiority on the part of Makuria.

The *baqt* was a nonaggression treaty that acknowledged Makuria's independence and fixed the border just south of Aswan. It regulated commerce between the two powers, allowing traders from each country to operate in the territory of the other, but prohibited settlement. In addition, the *baqt* instituted a regular exchange of gifts between the two parties: Nubian slaves for the Muslims, and Egyptian grain, wine, horses, and cloth for the Makurians.

Until the thirteenth century, the *baqt* guaranteed peace of a sort between Egypt and Makuria. There were times when the Egyptians attacked Makuria, claiming that the Nubians were not fulfilling their agreement. At other times the Makurians raided into Egypt, pillaging Egyptian oases. In 748 the Makurian king Cyriacus went so far as to send an army deep into Egypt, even camping on the outskirts of Fustat, then the Muslim capital of Egypt. The provocation for Cyriacus's action was religious: the Muslim governor of Egypt had imprisoned the Coptic patriarch, who was revered by Nubian Christians. The Muslim governor then released the patriarch, and the Makurians went back to their homeland.

In the ninth century Muslim raiders, not controlled by the Egyptian government, began raiding the Beja, camel nomads who dwelt between the Nile and the Red Sea. One of these raiders, el-Omari, after capturing some of the Beja as slaves and converting the rest to Islam and developing a gold mine, attacked and occupied Makurian settlements. Eventually el-Omari

was driven out of Makurian territory, but not until after he triggered a civil war between the Makurian king's sons.

This Muslim incursion was the most serious until 1173, when the Makurian king took advantage of what he thought was a time of weakness and attacked the Muslim fortress of Aswan. The Muslim ruler, Salah ed-Din (Saladin), sent a punitive force south but had to withdraw it to face attacks by European crusaders in the north.

The *baqt* ceased to have much importance after the Muslim invasion of Makuria in 1265. The Muslims occupied Dongola, the Makurian capital, and forced Makuria to pay tribute. From then on Makuria existed as a tributary vassal of Muslim Egypt. Muslims began to buy land and settle on Makuria, and the Egyptian authorities frequently interfered with succession to the Makurian throne. By 1315 the kings of Makuria were Muslim, and the Islamification and Arabization of Nubia proceeded without hindrance. Within a few centuries the population had converted to Islam and adopted the Arabic language.

The life span of the Christian Nubian kingdoms was roughly contemporaneous with that of the Muslim Spanish states. Both the Muslim Spanish states and the Christian Nubian kingdoms existed for roughly 800 years. Both experienced periods of intensive warfare with neighbors of a different religion. The Muslims in Spain were finally defeated at the end of the fifteenth century, while Alwa, the southernmost Christian Nubian kingdom (about which little is known), might have persisted until the early sixteenth century. But for about six centuries there was relative peace between the Christian kingdoms and Muslim Egypt.

—Wilfred J. Bisson

Bibliography

- Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia: Xlibris, 2003.
- Jakobielski, S. "Christian Nubia at the Height of Its Civilization." In *General History of Africa*, Vol. 3, *Africa from the Seventh to the Eleventh Century*, edited by I. Hrbek. London: James Currey, 1992.
- Welsby, Derek. *The Medieval Kingdoms of Nubia: Pagans, Christians and Muslims along the Middle Nile*. London: British Museum Press, 2002.

How the Muslims Simultaneously Defeated the Byzantines and the Persians

One of history's persistent questions is posed by the swift and nearly simultaneous defeat of two of Eurasia's strongest and most professionally trained armies by a horde of desert raiders who were inexperienced in sustained warfare. In retrospect, the Muslim's defeat of this pair of the world's mightiest empires is astonishing. But there are explanations.

The appearance of the unifying ideology of Islam coupled with the skillful use of both traditional and novel means of political consolidation resulted in the emergence under Muhammad and Abu Bakr of a new state that was able to organize and dominate more effectively than ever before the different tribal groups of the Arabian Peninsula. In place of the extreme political fragmentation that had formerly existed in Arabia, with various tribal groups vying with one another for local dominance, there emerged a relatively centralized, unified, and unifying polity that integrated most of these tribes into itself and made them functioning parts of the larger whole. Thus the Prophet Muhammad had made Medina, his adopted city, and Mecca, his birthplace, centers of an Arabian movement that Muslim Arabs developed into a world movement through the conquest of Persian and Byzantine territories.

It was this integration of the Arabian tribes into a single new Islamic state that set the stage for the conquests, which in fact represented the fruit of that integration. The process of state consolidation that began with Muhammad continued unabated throughout the whole period of the early Islamic conquests. This continuing process of state integration can be seen in the fact that tribal groups subject to the state were liable to the recruitment of their members into the Islamic armies sent to fight on various fronts during the conquests. These recruited tribesmen were not simply a horde wandering aimlessly toward the Fertile Crescent but instead were organized into contingents of a well-coordinated army whose objectives and general movements were established by the ruling elite.

Neither Sassanian Persia nor the Byzantine empire had been unfamiliar to those Arabs who

➤ KHALID—MUSLIM MILITARY GENIUS

Inspired military leadership can often make up for deficiencies in military traditions and troop numbers in military contests. Napoleon demonstrated that in early nineteenth-century Europe, and Vo Nguyen Giap did so in twentieth-century Vietnam. Khalid ibn Al-Waleed was the inspired military leader who led Islam's armies to defeat both the Romans and the Persians.

Khalid's accomplishment parallels those of Alexander the Great and Julius Caesar in significance and consequence because without Khalid's victories, Islam very likely would not have spread beyond Arabia, and Islam might have withered away.

It has been said of Khalid that he never was defeated in battle. His career as a successful military leader began when he led a Quraish force to defeat Mohammed's Muslim troops in the Battle of Uhud. Soon after the battle, Khalid submitted to Mohammed and became a devout Muslim. Khalid was elected general by Muslim troops after

Mohammed's three first appointees were slain in battle. The small Muslim army defeated a much larger force of Byzantines and their Arab allies. Next, Khalid led a Muslim expeditionary force that terrorized into submission rebellious Arab groups in the Wars of the Riddah. Five years after the Prophet's death, we find Khalid leading armies against the Sassanian empire, where they decisively defeated the Persians in the Battle of Qadisiya. But Khalid's greatest triumph was against the Byzantines when he destroyed a Byzantine army several times the size of his Arab forces at the Battle of Yarmuk in Palestine. By these two victories, he drove the Persians from Iraq and the Byzantines from Palestine and Syria.

After his victory at Yarmuk, Caliph Umar relieved Khalid of his command purportedly because of jealousy over Khalid's rising popularity, but Khalid refused to retire to Medina and served the rest of his life as a common soldier.

—Wilfred J. Bisson

were the former's Lakhmid and the latter's Ghasanid vassals, the frontier guardians of the two empires against fellow Arabs who roamed deeper in the Arabian Desert. Also, Meccan and Medinese Arabs had established commercial connections with the Byzantines and the Sassanians. The immunity of Mecca's ancient sanctuary, the Kabah, against outlawry and outrage had promoted this city's commercial importance. The Kabah was cleansed of idols by Muhammad, who had himself once been engaged in commerce. He made it the sanctuary of a monotheistic faith whose sacred writings were filled with the injunctions and prohibitions needed by a business community for secure and stable trading.

Arab tribalism beyond urban fringes was less easily broken than idols. It was embedded in the desert sparsity that led to warfare and carefully counting a tribe's male offspring. After Mecca and Medina had become Muslim, it was essential that the Muslims win the desert Arab's allegiance in order to secure the routes they depended on for trade and communication. In the process of doing this, wars over water holes, scanty pastures, men-at-arms, and camels were enlarged into international campaigns of expansion.

The vulnerability of Sassanian Persia assisted the expansionist process. In 623 the Byzantine emperor Heraclius reversed Persian successes over Roman arms, namely by capturing Jerusalem in 614 and winning at Chalcedon in 617. His opponent, Khosrow Parviz, died in 628 and left Persia prey to a succession of puppet rulers who were frequently deposed by a combination of nobles and Zoroastrian clergy. Thus when Yazdegerd III, Persia's last Sassanid emperor, came to the throne in 632, the year of Muhammad's death, he inherited an empire weakened by Byzantine wars and internal dissension.

The war between Persia and the Byzantine empire had created the perfect opportunity for the Muslims to invade and surprise both of them. Neither the Persian empire nor the Byzantine empire had enough strength to repulse the Muslim attacks. It did not take long for the Muslims to conquer the eastern province of the Byzantine empire. Not only was the empire weakened by the war with Persia, but it was also weakened by internal division due to a desire to maintain orthodox Christianity within the empire. Many Christians wanted to keep the empire pure and looked upon certain religious sects as heretics.

Monophysites, who believed that Christ had a single nature, not two as orthodoxy taught, were especially persecuted. To these people, life under Islam was more appealing than life under Byzantium because Muslims tolerated other religions, and those incorporated into the Muslim empire were free to practice what religion they chose. Many Byzantine dissenters, therefore, welcomed the Muslim conquerors.

To these factors must be added one more that was perhaps the single most important one contributing to the success of the conquests: the remarkable degree to which a new Islamic state with an expansionist policy could harness for its purposes the warriors and tribesmen of Arabia. The rise of the state made it possible to weld into an incredibly effective fighting force those tribesmen, whom the Byzantines and the Sassanid knew, whose energies had hitherto been consumed by petty quarrels among themselves and whose political horizons had hitherto usually been limited to their own tribe and its affairs.

—*Moshe Terdiman*

Bibliography

- Bosworth, Clifford Edmund. *The Arabs, Byzantium, and Iran: Studies in Early Islamic History and Culture*. Brookfield, VT: Variorum, 1996.
- Diehl, Charles. *Byzantium: Greatness and Decline*. New Brunswick, NJ: Rutgers University Press, 1957.
- Donner, Fred. *The Early Islamic Conquests*. Princeton, NJ: Princeton University Press, 1981.
- Lombard, Maurice. *The Golden Age of Islam*. Princeton, NJ: Princeton University Press, 2004.

Muslim Conquest of the Maghreb

After completing the conquest of Egypt in 642, the Arabs started to raid the territory to its west inhabited by the Berbers, which they called Bilad al-Maghreb (Lands of Sunset), or simply the Maghreb. In 705 this region became a province of the Muslim empire, then ruled from Damascus by the Umayyad caliphs.

The Byzantine (East Roman) empire ruled the Maghreb as an exarchate (vicerealty, or sub-kingdom) in much of the seventh century. Because of a disagreement over religious policy with Byzantine emperor Constans II (r. 641–668), Gregory, exarch (viceroys or governor-general) of

➤ KAHINA—BERBER PROPHETESS AND AFRICAN QUEEN

The Muslim conquest of the Maghreb was stoutly resisted by the Berbers and required two decades and repeated invasions by Muslim forces. Dhabba, sometimes known as the Berber Deborah, the chieftainess of a Berber tribe in the Aures Mountains, was one of the Muslim's fiercest opponents. Leading a Berber army, she defeated the Muslims in 698 and captured Carthage, the leading city of the Maghreb. The Muslims retreated to Egypt, and Dhabba, called Kahina (Prophetess), became the queen of a large swath of the Maghreb. According to some reports, she told her followers that what lured the Muslims to the Maghreb was the wealth of the land and urged them to destroy the cities and farms so that the Muslims would not be tempted to return. This was a disastrous mistake because it turned the sedentary population against her and her nomadic followers. When in 702 the Muslims did return, the inhabitants of the destroyed towns and villages made common cause with them. The Muslims easily defeated Kahina's forces, and Kahina died, reputedly by her own hand. But before the final battle, Kahina sent her two sons to the Muslims with instructions to convert to Islam so that her family would not be destroyed.

—*Wilfred J. Bisson*

Source

Hannoun, Abdelmajid. *Colonial Histories, Post-Colonial Memories: The Legend of the Kahina, a North African Heroine*. Portsmouth, NH: Heinemann, 2001.

the Byzantine exarchate of Carthage, rebelled (647) and ruled as an independent sovereign. The dominions of Gregory extended from the borders of Egypt to Morocco.

Arab raids to the west of Egypt concentrated at first on the area of Cyrenaica in present-day Libya, which they conquered in 642. They raided Ifryqia (Tunisia) several times. Gregory attempted to halt the Muslim advance but met defeat and death at the Battle of Sufetula in 647. After Gregory's death, the Byzantines reasserted their rule, appointing a new exarch, Gennadius. Gennadius sought to avoid a Muslim takeover by offering tribute to the Muslim authorities at Damascus

while simultaneously paying taxes to Constantinople. The burden was too great, and the population, particularly the Berbers, rebelled.

However, no attempt was made to establish Arab rule in the exarchate before 670. Conflicts among the Muslim leaders, especially after the assassination of the third caliph Uthman in 656, hindered Muslim territorial expansion. Only after the Umayyads had consolidated their authority in the 660s and had come to view the conquest of the Maghreb in the context of their confrontation with the Byzantine empire was the systematic conquest of the Maghreb undertaken. Uqbah ibn Nafi commanded the Arab army that occupied Ifryqia (the Arab term for the exarchate) in 670. Before his recall in 674, Uqbah founded the town of al-Qayrawan (Kairouan), which became the base for further military operations and also the first center of Arab administration in the Maghreb.

When Uqbah's successor Abu al-Muhajir Dinar al-Ansari began the conquest of the Maghreb west of Ifryqia, he had to fight seminomadic Berber communities that had developed some tradition of centralized political authority. In the course of his campaign, Abu al-Muhajir Dinar prevailed upon the Berber king Kusaylah to become Muslim. From his base in Tlemecen, Kusaylah dominated a confederation of the Awraba tribes living between the western Aures Mountains and the area of present-day Fez. Since Kusaylah's profession of Islam implied his recognition of caliphal authority, it served as a basis for coexistence between him and the Arabs. However, when Uqbah was reinstated as commander of the Arab army in the Maghreb in 681, he insisted on imposing direct Arab rule over the whole region. In 682 he led his troops across Algeria and northern Morocco, reaching the Atlantic Ocean and penetrating south to the area of Sous in southern Morocco. On his way back to al-Qayrawan, Uqbah was attacked near Biskara in present-day Algeria on orders from Qusaylah by Berbers supported by Byzantine contingents. Through his death in this battle and his extended campaign, Uqbah became the legendary hero of the Muslim conquest of the Maghreb.

By the 680s the Arabs had gone too far in the conquest of the Maghreb to be willing to accept defeat at the hands of a Berber leader, albeit

one professing Islam. Two large armies had to be sent from Egypt, however, before organized Berber resistance could be suppressed. The first, commanded by Zuhayr ibn Qays al-Balawi, reoccupied al-Qayrawan and then pursued Qusaylah westward to Mams, where Qusaylah was defeated and killed. The dates of these operations are uncertain, but they must have occurred before 688 when Zuhayr ibn Qays himself was killed in an attack on Byzantine positions in Cyrenaica.

The second Arab army, commanded by Hasan ibn an-Numan, was dispatched from Egypt in 693. It faced stiff resistance in the eastern Aures Mountains from the Jawara Berbers, who were commanded by a woman whom the Arabs referred to as Kahinah (al-Kahinah, or the Priestess). After Kahinah was defeated in 698, Ibn an-Numan occupied Carthage, the center of Byzantine administration in Tunisia, and began the construction of the town of Tunis nearby.

These successes and Arab naval supremacy in the Mediterranean forced the Byzantines to evacuate their remaining positions on the Maghrebi coast. Consequently, under Ibn an-Numan's successor Musa ibn Nusayr, the Maghreb was made into a province of the Umayyad caliphate in 705, known as Ifriqiya, thus separating it from Egypt to which it had been administratively attached until that time.

—Moshe Terdiman

Bibliography

- Julien, Charle-Andre, and Roger Le Tourneau. *The History of North Africa: Tunisia, Algeria, Morocco, from the Arab Conquest to 1830*. Edited by Roger Le Tourneau. London: Routledge and Kegan Paul, 1970.
- Laroui, Abdallah. *The History of the Maghrib: An Interpretive Essay*. Translated by Ralph Manheim. Ann Arbor: University of Michigan Press, 2006.
- Mango, Cyril, ed. *The Oxford History of Byzantium*. Oxford, UK: Oxford University Press, 2002.

Muslim Conquest of Spain

The year 711 was one of triumph for the Umayyad caliphate when Muslim armies conquered both the Indian kingdom of Sind and Visigothic Spain, more than 5,000 miles to the

west. In that year, a Berber army under Arab leadership crossed the Strait of Gibraltar from Africa in a continuation of a series of raids that had been going on for some time. After a single campaign, almost the entire peninsula lay at their feet. The early-eighth-century conquest signaled the beginnings of an Islamic presence in the Iberian Peninsula that would endure for nearly 800 years and serve as a leading center of Islamic culture.

In the early years of the eighth century, a succession struggle, which Roderic won in 711, convulsed the Visigothic court of Spain. Taking advantage of that crisis, Musa Ibn Nusair, governor of the Maghreb, sent Tariq ibn Zayid with an army of 7,000 to invade Spain. Tariq's army crossed the Strait of Gibraltar ("Tariq's Rock") on ships provided by Julian, a Christian who was on the losing side of the Visigothic succession struggle. In the Battle of Guadalete, Tariq, assisted by Julian's troops, decisively defeated and killed Roderic, leaving all Spain open for conquest.

Musa followed shortly afterward with an army of 18,000. Proceeding to Toledo, he executed a number of prominent people and devastated the country. The archbishop of Toledo, primate at the Spanish church, abandoned his flock and fled. Musa then moved north to the valley of the Ebro River, where he took the principal city of the region, Zaragoza.

Before the end of 712 Musa left Spain, recalled by the Umayyad caliph to Damascus. Musa took with him a number of lordly Visigothic captives (including a claimed 16,000 Visigothic virgins) and huge quantities of booty in the form of bullion and jewelry. Musa's death is variously reported. He may have been executed by the enraged brother of the caliph, he may have died on a pilgrimage to Mecca, or perhaps, as another account maintains, he died as an impoverished beggar in Damascus.

Before he left, Musa entrusted the administration of the conquered provinces to his son, Abd al-Aziz, who spent the three years of his governorship (712–715) extending and consolidating his father's conquests until they embraced the whole of the Iberian Peninsula except for a small region north of the mountains in Asturias. In 715 or perhaps a few years later Abd al Aziz was assassinated in a mosque, reput-

➤ BATTLE OF TOURS

The Battle of Tours (often called the Battle of Poitiers) was fought on October 25, 732, between forces under the Frankish leader Charles Martel and an Islamic army led by Emir Abd er Rahman. During the battle, the Franks defeated the Islamic army, and Abd er Rahman was killed. The result of this battle stopped the northward advance of Islam from Spain. This battle is considered by most historians to be of macrohistorical importance in that it may have halted the invasion of Europe by Muslims and preserved Christianity as the controlling faith during a period in which Islam was overrunning the remains of the old Roman and Persian empires.

—Moshe Terdiman

edly on the order of the caliph. The report is that the caliph had Abd al Aziz's head sent back to Damascus, where it was displayed in a mosque.

In the northern mountains of Astoria, Pelayo, a claimant of the Visigothic throne, continued a guerrilla resistance that the Muslims never suppressed and that, in the centuries to come, became the foundation of the Spanish Christian kingdoms.

Muslim forces did not stop with the conquest of most of the Iberian Peninsula, sending probing and raiding expeditions north of the Pyrenees. In 723, a major Muslim force was defeated by Odo, Duke of Aquitaine, at the Battle of Toulouse in southern France. Muslim advances in western Europe were effectively stopped (732) when the Arab emir of Al Andalus, Abd er Rahman, was decisively defeated at the Battle of Tours (Poitiers) by a Frankish army led by Charles Martel (the Hammer).

—Moshe Terdiman

Bibliography

- Collins, Roger. *The Arab Conquest of Spain, 710–797*. Oxford, UK: Basil Blackwell, 1989.
- Fletcher, Richard. *Moorish Spain*. London: Weidenfeld and Nicolson, 1992.
- Glick, Thomas F. *Islamic and Christian Spain in the Early Middle Ages*. Princeton, NJ: Princeton University Press, 1979.

Muslim Conquest of Iran and Central Asia

In 600 Mesopotamia was a province of the Persian Sassanian empire to which it had belonged for three centuries. It was probably the most populous and wealthy area in the Middle East, and the intensive agriculture of the lower Tigris and Euphrates rivers and of tributary streams, such as the Diyala and Karun, formed the main resource base of the Sassanian monarchy.

The first conflict between Muslim troops and Sassanian forces seems to have been in 634, when the Arabs were defeated at the Battle of the Bridge

► PIROOZ AND THE ROYAL SASSANIAN COURT IN EXILE

After the Muslims crushed Persian resistance in 650 CE, Yazdgerd III, the last Sassanian king, fled with the royal family and many nobles to what is today Turkmenistan. The pursuing Arabs captured Yazdgerd and beheaded him (by another account, a miller robbed and murdered the fugitive Yazdgerd), but many of the fugitives escaped. Fleeing through central Asia and across the Pamir Mountains, these aristocratic refugees, who included Persians, Sogdians, and Bactrians, sought asylum with the Tang dynasty in China.

Pirooz, though still a child, was Yazdgerd's son and heir, while Yazdgerd's daughter was one of the wives of the Tang emperor. The Tang emperor aided the exiles, reputedly giving them 38 villages and allowing them to set up a royal court in exile. The Chinese trained Pirooz in military arts and, when he had reached maturity, gave him a general's rank in the Chinese army. However, the Chinese for many years would not allow Pirooz to serve with their forces guarding the western frontier for fear that he would attack Muslim-controlled territory. Eventually, Pirooz did win an appointment to a command on the western frontier. The consequence of that was an outbreak of hostilities with the Arab Umayyad caliphate. These hostilities continued intermittently until the decisive defeat of Tang armies at the Battle of Talas in 751.

Pirooz died in 700 CE and was buried with an elaborate ceremony attended by all the Sassanian court-in exile.

—Wilfred J. Bisson

on the banks of the Euphrates River. There, a force of some 5,000 Muslims under Abu Ubayd al-Thaqafi was routed by the Persians. In 637, a much larger Muslim force under Saad ibn Abi Waqqas defeated the main Persian Army at the Battle of al-Qadisiyyah in southern Mesopotamia and moved on to sack Ctesiphon, the capital of the Sassanian empire. By the end of 638, the Muslims had conquered almost all of Iraq, and the last Sassanian king, Yazdgerd III, had fled to Iran.

In 642, the Battle of Nahavand (in western Iran) between Arab and Sassanian forces was a major turning point in Iranian history. The battle ended in disastrous defeat for the Sassanian armies and paved the way for the Arab conquest, which resulted in the Islamization of Iran. At Nahavand some 30,000 Arab troops, under the command of Numan, attacked a Sassanian army alleged to number 150,000 men, many of whom may have been untrained recruits. The Sassanian troops, commanded by Firuzan, were entrenched in a strong fortified position. After an indecisive skirmish, Numan pretended to be defeated and withdrew from the battlefield. Firuzan then abandoned his position and pursued his foe. This pursuit proved to be a major tactical error because the Sassanians were forced to fight on unfavorable ground: the Sassanian Army, caught between two mountain defiles, was massacred by the Arabs. Both Numan and Firuzan died in the battle, and Sassanian casualties were said to number 100,000.

The Battle of Nahavand completed the Sassanids' defeat. Yazdgerd fled to the empire's northwestern outpost, Merv, whose governor, Mahuyeh, was soured by Yazdgerd's imperious and expensive demands. Mahuyeh turned against his emperor and defeated him with the help of Hephthalites from Badghis (today in northwestern Afghanistan). The Hephthalites, originally a nomadic people from central Asia, had troubled the Sassanians since at least 590. A miller near Merv is reputed to have murdered Yazdgerd for his purse. Another account has the Arab commander capturing and ordering the execution of the erstwhile Sassanian ruler. With the death of Yazdgerd III in 651, the Arab conquest of Iran was completed.

In 651, Merv surrendered before the Arabs, and it became their base for raids to Mover-

rankhr, the territory of modern Uzbekistan. Around 670 or earlier, the Arab commander Al-Khakim Amr Al-Gifari was the first to cross the Amu Darya River.

More actively, the Arabs began their invasion into central Asia during the reign of the governor-general of Khorasan, Ubaidallah bin Ziyad, in 674. He besieged Pykend and conquered Bukhara, seizing its princess, arms, clothing, gold, silver, and numerous captives. The rulers of Soghd, Kesh, and Nesev came to the aid of Bukhara, but the Arab army had them so panicked that they left the battlefield.

In 704 Qutayba bin Muslim was appointed governor-general of Khorasan, and he set as his objective the conquering of Mawaranahr, or Transoxiana, the right side of the Amu Darya River. In 705–706, he subjugated Balkh, Pykend. However, he faced a fierce resistance of Sogdians and Turks led by the head of Bagdis, Nizal Tarkhan, who forced him to retreat. In 709, Qutayba took over. Tarkhan was destroyed and murdered, and Bukhara surrendered without much effort. Soon Qutayba conquered Shoumen, Nesev, and Kesh. Everything was ready for the Arabs to advance to the heart of Sogd, Samarqand; however, some affairs in Khorezm distracted Qutayba for almost two years.

In 712, Qutayba launched a raid to Samarqand and faced fierce resistance by Gurek, governor of Samarqand. The Arab army was using spears and wall-piercing weapons. After a long fight, Qutayba took over the city. Qutayba collected a huge tribute from Samarqand.

Qutayba proceeded to march east and conquered Khudjant and Fergana, but in Shash he encountered the resistance of its ruler, Turk Bahadur-Tudun. In 715 Qutayba, having heard about the death of the reigning caliph, initiated a revolt but was killed in Fergana by his troops.

In the middle of the eighth century, the entire territory of Mawaranahr (Transoxania) surrendered to the Arabs and became part of the Abbasid caliphate. A key event was the Battle of Talas River in 751 in the High Pamirs. The battle was a conflict between the Abbasid caliphate and the Chinese Tang dynasty over the control of central Asia. The Arab cavalry routed the Chinese infantry near the bank of the Talas River after the Qarluq Turk mercenaries, who had

marched with the Chinese, defected to the Arabs and cut off the infantry from the rest of the Chinese troops. The Tang Chinese army of 30,000, led by General Gao Xianzhi (a Korean), was defeated, but their commander escaped.

Due to this defeat and the domestic rebellion of An Lushan and subsequent warlordism, the Tang ceased to be influential in central Asia. The local Tang tributaries then switched to the authority of the Abbasids, and the introduction of Islam was thus facilitated among the Turkic peoples. In the long run, the battle is significant because it marked the western limit of Chinese cultural and political influence, thereby determining that central Asia would be more influenced by Islamic culture than by Chinese culture. The technology of papermaking also spread to central Asia and the Middle East, as the skilled Chinese prisoners of war were ordered to produce paper in Samarqand. The Arabs halted their push after a defeat at the hands of the Khazars in Azerbaijan.

—Moshe Terdiman

Bibliography

- Bausani, Alessandro. *The Persians, from the Earliest Days to the Twentieth Century*. Translated from the Italian by J. B. Donne. London: Elek Books, 1971.
- The Cambridge History of Iran*. Cambridge: Cambridge University Press, 1968–1993.
- Malcolm, John. *The History of Persia: From the Most Early Period to the Present Time*. London: J. Murray, 1829.
- Sykes, Percy Molesworth. *A History of Persia*. London: Macmillan, 1951.

Wars between Muslims and the Byzantine Empire to 1000 CE

The early years of the seventh century saw the replacement of the ancient struggle for supremacy in the Near East between Byzantium and Persia by a new contender. The endemic warfare between the Byzantines and the Muslims that followed was to last for over eight centuries.

During the course of the first Islamic century (622–722 CE), Arabs overran the Fertile Crescent, detaching Syria and Egypt from the Byzantine empire. They also conquered North Africa as far

west as Morocco, finally putting an end to Byzantine dreams of restoring their hegemony in the western Mediterranean beyond Sicily.

The momentum of Muslim conquest was at its strongest during the period of the Orthodox caliphs (632–661) and that of the Umayyad caliphs (661–750). Although the Arabs were strangers to Mediterranean seafaring, they had now acquired the naval resources of Syria and above all Egypt with the services of their maritime populations. Using these, the Arabs raided Cyprus as early as 649, Rhodes in 654 and 672, and Crete in 674, and they defeated Emperor Constans II in person with his fleet at Phoenix off the Lycian coast in the Battle of the Masts in 655. The Muslim fleet under the command of Busr ibnabi Artah, in cooperation with the Egyptian fleet under Abdullah ibn-abi Sarh, defeated the Byzantine fleet by transforming the sea fight into a hand-to-hand encounter by tying each Arab ship to a Byzantine vessel. This defeat was a catastrophe for the Byzantines, but the Muslims failed to follow up this naval victory, probably because of the murder of the caliph Uthmar, which occurred about this time, and other concomitant civil disturbances.

The Muslims first besieged Byzantium itself in 669 under the leadership of Caliph Muawiya's son Yazid, the future Caliph Yazid I. The second attack on Constantinople was made during the Seven Years' War of 674–680, which was waged mainly between the two fleets before Constantinople. The Muslims had secured a naval base in the Sea of Marmara on the peninsula of Cyzicus. This served as winter headquarters for the invading army, and hostilities were resumed every spring. The use of Greek fire is supposed to have saved the city. On the death of Muawiya in 680 the Muslim fleet withdrew from the Bosphorus and Aegean waters. However, the supreme Muslim effort was made in August 716–September 717 by the caliph Sulayman, who designated his half-brother Maslama b. Abd al-Malik to be supreme commander of the attacking forces. These comprised the Syrian army by land and the Egyptian fleet by sea. Maslama's investing forces suffered terribly from the unusually cold winter of 717 and the lack of provisions in Thrace, normally a fertile province but one now devastated by war. When the new caliph Umar II came to

the throne in 717, he abandoned the expansionist policy of his predecessors, turning his attention to the urgent internal tasks of social and financial reform within the Islamic empire. Hence, he immediately gave orders for Maslama to abandon the siege of Constantinople.

This was the last direct Muslim effort against Constantinople for over seven centuries, although an army under the nominal leadership of the young prince Harun, later the caliph Harun al-Rashid, was to appear at Scutari in 781–782 before Empress Irene bought the Muslims off by a timely offer of tribute.

After the debacle of 717, Muslim-Byzantine warfare declined for a century and a half (until the Macedonian resurgence) to episodic warfare and raiding. The Muslims dispatched raiding parties or armies into Anatolia each spring and summer, and their highly mobile cavalrymen often penetrated right across the Anatolian plateau nearly to the Aegean Sea.

In the second half of the ninth century, the Muslims occupied the strategically important island of Malta, and in the year 878, Muslims from the Aghlabid emirate of Ifryqia occupied Syracuse after a siege of nine months. After the loss of Syracuse, the Byzantine empire retained only the city of Tauromemium, or Taormina, on the eastern coast of the island. Later, the Muslims occupied the city of Rhegium (Reggio) on the Italian shore of the Strait of Messina, and thus the strait was completely in the hands of the Muslims. In 902 they completed the conquest of Sicily with the seizure of Taormina.

The beginning of the tenth century was marked by active operations of the Muslim fleet. Even at the end of the ninth century Cretan pirates had repeatedly raided the coasts of the Peloponnesus and the islands of the Aegean Sea. These sea raids of the Muslims became more dangerous when their Syrian and Cretan fleets began to act together. The attack of Thessalonica by the Muslim fleet under the leadership of the Greek renegade Leo of Tripolis in 904 is the most famous deed of the Muslims in this period. The city was taken only after a long and difficult siege, but a few days after its fall the conquerors departed with a large number of prisoners and rich spoils, setting sail eastward to Syria. In 906 the Byzantine admiral Himerius gained a bril-

liant victory over the Muslims in the Aegean. But in 911 the great sea expedition of Emperor Leo VI against the eastern and Cretan fleet, also headed by Himerius, ended in complete failure for the empire. However, in 917 Leo of Tripolis was defeated at Lemnos.

By the mid-tenth century, the Byzantines switched from the defensive to the offensive. During the brief reign of Romanus II (959–963), his general, Nicephorus Phocas, the future emperor, reoccupied the island of Crete.

In 962 the future emperor Nicephorus Phocas (963–969) invaded northern Syria, and in 966 he laid waste to the Syrian Jezira. Again in 968 he entered Syria, capturing and sacking Shaizar, Hama, and Homs. From Homs the emperor descended to the coast of Lebanon, which he laid waste to on his return march to Tarsus. Meanwhile, Cyprus had been reconquered from the Muslims, and the Byzantine fleet had gained command of the sea. On October 29, 969, the Byzantines seized Antioch. In 975 John Tzimiskes (969–976) conquered Syria and from there continued to Tiberias, which surrendered without resistance. He made forays into Palestine, but since the Byzantines had not enough men to garrison them, most of his conquests were immediately reoccupied by the Muslims. The area that remained under Byzantine control was a strip of coastline extending from Tortosa to Alexandretta with a slight extension inland east of Antioch.

Basil II (976–1025) marched in 995 with 40,000 men from the Balkans to Antioch. He pressed on into Syria, occupied Shaizar and Homs, and visited Tortosa but failed to take Tripoli. Then, in 999, he repeated the same campaign, reaching a point a little north of Baalbek and arriving back in Antioch in January 1000. Neither campaign made any permanent change in the frontier, for the emperor had not enough men to garrison the places he captured.

—*Moshe Terdiman*

Bibliography

- Bosworth, C. E. *The Arabs, Byzantium and Iran: Studies in Early Islamic History and Culture*. Aldershot, UK: Variorum, 1996.
- Glubb, Sir John. *The Course of Empire: The Arabs and Their Successors*. London: Hodder and Stoughton, 1965.

Vasiliev, A. A. *History of the Byzantine Empire, 324–1453*. Madison: University of Wisconsin Press, 1952.

The Caliph's Armies, 632–1000 CE

The military organization of the Islamic armies went through a transformation in the period between the death of Muhammad in 632 and the turn of the first millennium of the Common Era. The armies inherited by Muhammad's uncle and successor, Abu Bakr, the first of the four "Rightly Guided Caliphs" (632–661 CE), consisted of Bedouin Muslims recruited from the faithful in the Arabian Peninsula. These first troops were well armed with long iron swords, javelins, and bows and were protected by felt armor and small round leather shields. Abu Bakr's forces fought in close formation, mirroring the infantry tactics of the seventh-century Byzantine army, and used archers as skirmishers and to protect their flanks from enemy cavalry attacks. Although initially poorly equipped with horses, Islamic cavalry improved when Yemeni Najran and Yamamah came under Muslim control, providing the caliph's army with highly prized Arabian and heavier Persian horses. In battle, Islamic cavalry utilized light lances and would harass the flanks of enemy infantry formations and exploit any tears or breaks in the ranks. Early Muslim armies also made good strategic use of the camel for mounted infantry, bypassing enemy armies by traveling through deserts and then dismounting and fighting defensive battles at the time and place of their own choosing.

As Islamic conquests expanded into North Africa and the Levant at the expense of the Byzantines and Sassanids, manpower requirements necessitated organizing the newly conquered and converted peoples into *junds*, or regional armies, under the direction of Arab commanders. These troops fought more for booty than ideology, swelling the ranks of the Muslim armies in time of victory and evaporating in times of trouble. Junds were often used to garrison cities but also formed the backbone of Muslim armies that spread Islam from Persia to the Straits of Gibraltar. In fact, the Arab commander who crossed from North Africa to Iberia in 711,

► ISLAMIC FORTIFICATION AND SIEGECRAFT

Siege warfare was not an important part of early Islamic military activity. When enemy fortifications were faced, negotiations or blockade rather than assaults usually determined the outcome. When a city wall was attacked, Muslim commanders used a type of counterweight artillery piece called a *manjaniq*, similar to the European trebuchet, replacing the classical torsion machines favored in the Classical Period. Islamic siegecraft did develop over the course of the Umayyad and Abbasid caliphates, as Muslim commanders were faced with more determined non-Muslim foes behind stronger walls. Perhaps the most famous of these unsuccessful sieges took place against the Byzantine capital of Constantinople in 674–678 and again in 717–718.

It was during this first siege that the Muslim attackers were introduced to Greek fire (a burning-liquid weapon), when the Byzantine navy set the Umayyad flotilla ablaze at the Battle of Syllaeum in 677. Purportedly invented by the Syrian engineer Callinicus in the chemistry laboratories of Constantinople, this liquid fire was hurled onto enemy ships through siphons, burst into flames on contact, and could not be extinguished using water. Although its exact composition remains a mystery, its recipe was handed down from Byzantine emperor to emperor for centuries and probably included some combination of chemicals including liquid petroleum, naphtha, burning pitch, sulfur, resin, quicklime, and bitumen. Eventually, Islamic commanders would obtain the recipe for Greek fire and other incendiary devices and create specialized troops called *naффatin* (after *naффt*, which was most likely crude oil ubiquitous in this region) to employ these fiery weapons. Muslim siegecraft would be tested again during the crusades when the Catholic invaders introduced an ambitious castle-building program to the Levant.

—Brian Todd Carey

Tariq ibn-Ziyad, led a force of 12,000 Berber infantry, supported by only 300 Arab cavalry. Not all the junds came from conquered peoples. Some of the best soldiers from this period defected from the Sassanid army to the caliphs in exchange for high salaries and lands for settlement.

Under the Umayyad caliphate (661–750), Islamic armies began to mirror their enemies in tactics, equipment, and organization. The last Umayyad caliph, Marwan II (r. 744–750), is credited with standardizing his army, subdividing his forces into smaller units (*kardus*), each including heavy infantry, light infantry archers, and heavy cavalry lancers. Muslim infantry fought in the Byzantine fashion, placing the better-armored foot soldiers in the front. But unlike Byzantine horsemen, Islamic cavalry would dismount and fight as infantry, using their lances as pikes. Muslim heavy cavalry mounts were protected with felt barding, while their riders wore coifs and hauberks and were armed with mace, straight-hilted swords, and the large *khanjar*, or dagger. In order to better stabilize these heavier warriors on their mounts, the leather loop stirrup was replaced by metal ones.

These martial trends continued into the Abbasid caliphate (750–1258), though persisting contacts with central Asians began to impact the Islamic way of mounted war. Abbasid generals increasingly utilized Khurasani (eastern Persian) and Turkish horse archers, armored in lamellar cuirasses and round leather shields and armed with lance and bow. The composite Turkish bow was a recurved bow constructed of wood and horn and tendons from oxen, carefully laminated together to create a bow of superior strength, range, and impact power. It is also during this time that the Turkish warriors introduced the distinctive curved cavalry sword or saber, which was worn off the shoulder hanging from a baldric in the Roman fashion. Turkish influences continued to grow in the ninth century CE as junds were augmented by *ghulams*, or Turkish regular troops. Later, some of these ghulams, purchased as slave children and then trained and converted to Islam, would serve the Abbasid caliphs as their personal bodyguards. And like the Roman Praetorian Guard before them, these slave-soldiers were seldom employed against Islam's external enemies, becoming instead caliph-makers and architects of palace intrigue. Ghulam heavy cavalry was the finest in the Islamic world, marrying elements of steppe warfare (use of bow and lasso from horseback) with those of traditional mounted Islamic warfare (use of Arab lance and sword), fusing heavy and light cavalry into one.

Islamic infantry under the Umayyad and early Abbasid caliphates often fought using indigenous weapons and armor and according to regional tactics. The first North African infantry were poorly equipped with large leather shields and javelins, and if swords were carried, they were of poor quality. These men fought as free warriors, but later Islamic North African dynasties (most notably the Tulunids and Fatimids of Egypt) would utilize slave-warriors taken from Saharan tribes. In the Islamic east, Umayyad and Abbasid caliphs relied heavily on the Daylamis, a fierce people from the Elburz Mountains south of the Caspian Sea. Daylami warriors fought as heavy infantry behind shield walls, advancing slowly and using javelins to break up enemy formations before engaging with battle-axes and maces. The Khurasan region also provided Muslim commanders with excellent professional soldiers well versed in combined-arms tactics and, equally important, siegecraft.

Although the Abbasid caliphs would continue to be the symbolic leaders of Islam until the Mongol destruction of Baghdad in 1258 CE, by the ninth century the centralized empire enjoyed by earlier caliphs was replaced by political fragmentation. At the turn of the millennium, Turkish influence on Islamic warfare would increase dramatically with the appearance of the Seljuk Turks, who converted to Sunni Islam and overran Afghanistan and eastern Persia in the 1040s and entered Baghdad in 1055, becoming the de facto rulers of Abbasid holdings. The Seljuk empire reached its zenith in the 1070s with the defeat of the Byzantine emperor Romanus IV at Manzikert in 1071, robbing the eastern Roman empire of its prime Anatolian lands and precipitating the First Crusade. By the year 1000 CE, Islamic warfare was no longer controlled by the Arabic successors of Muhammad but instead was now the enterprise of the various converted peoples led by their commanders and political leaders.

—Brian Todd Carey

Bibliography

- Elgood, Robert. *Islamic Arms and Armour*. London: Scholar Press, 1979.
- Kennedy, Hugh. *The Armies of the Caliphs: Military and Society in the Early Islamic State*. New York: Routledge, 2001.

- Roland, Alex. "Secrecy, Technology, and War: Greek Fire and the Defense of Byzantium, 678–1204." *Technology and Culture* 33(4) (1992): 665–679.
- Taha, A. D. *The Muslim Conquest and Settlement of North Africa and Spain*. London: Routledge, 1989.

The Early Muslim Civil Wars

During the early years of Islam, its followers were united religiously and politically to an extent that no other empire could claim. Muhammad's failure to establish a system by which successors could be named, however, led eventually to divisions and civil wars among the Muslims. Perhaps the most significant division revolved around whether the Prophet's son-in-law Ali was Muhammad's rightful heir. The dispute from 657 to 661 divided Islam religiously between Shias and Sunnis, a schism that has lasted to the present. A second civil war followed a generation later. Although its long-term effects were more limited, it marked the end of Medina and Mecca as administrative centers of Islam. Another civil war between 747 and 750 permanently divided Muslim territories politically, with separate states ruled by the Umayyad and Abbasid families.

Muhammad's death in 632 caused prominent Muslim leaders to elect his father-in-law, Abu Bakr, as the first caliph. Abu Bakr was succeeded by two other caliphs over the next 24 years. In 656, Caliph Othman was murdered after some Muslims rose up against his rule. They accused him of behaving secularly and not according to the spirit of Islam. He was also a member of the Umayyad family, which had opposed Muhammad in Mecca. Ali, cousin, son-in-law, and adopted son of Muhammad, was named by some leading Muslims as caliph, but many Muslims believed that he had some responsibility for Othman's death or at least that he refused to bring Othman's murderers to justice. Rebels led by Ayesah, widow of Muhammad, seized Basra soon afterward. Ali defeated them in what became known as the Battle of the Camel but could not put down the revolt. The resulting civil war became known as the First Fitna.

Muawiya, cousin of Othman and governor of Syria, refused to accept Ali as caliph. In response, Ali invaded Syria in 657. The two armies

➤ THEY KILLED FOR RIGHTEOUSNESS— THE ORIGIN OF THE KHARIJITES

The original Muslim fundamentalists, the Kharijites, demanded that the leaders of the ummah (Islamic community) be righteous in their behavior and adhere to a rigid form of conduct. They believed that political rule and behavior should follow demanding religious standards and that rulers who violated Muhammad's teachings should be removed. The Muslims who assassinated Othman could be considered the first Kharijites, but the group had its real beginnings in Ali's army. A number of men felt that Ali had compromised his piety and religious zeal by attempting to negotiate with Muawiya and withdrew from the army. They claimed that no political and administrative decisions should be made unless they followed the principles laid out in the Quran. Another guiding principle of the Kharijites was that grave sinners should be excluded from the larger community. Such exclusion meant a loss of rights, and extremists saw it as a moral justification for the assassination of leaders who did not follow Islam's teachings.

Ali attempted to reconcile the Kharijites to his cause, especially after Muawiya was named caliph. While many rejoined him, others refused. Ali's army massacred around 4,000 Kharijites at Nahrawan. In revenge, a Kharijite assassinated Ali in 660, using a poisoned sword.

—*Timothy J. Watts*

confronted each other, but peace negotiations dragged on for 110 days. Both sides were hesitant to kill fellow Muslims. Finally, a bloody and indecisive three-day battle took place. To halt the bloodshed, Muawiya proposed that an arbitration take place to decide who should be caliph. Ali reluctantly agreed. Part of his army accused Ali of betraying Islam's principles and withdrew. They later became known as Kharijites (dissenters).

Arbitration favored Muawiya, who was proclaimed caliph in Jerusalem in 660. Ali was murdered soon afterward by a Kharijite. His son renounced his claim as caliph the following year. While Muawiya governed politically, followers of Ali accepted his successors as the true spiritual leaders of Islam. These successors took the title of imam, or spiritual leader. The second imam

ceded the caliphate to the Umayyad family, thus formalizing the split between Sunnis and Shias.

A second civil war, or *fitna*, followed within 20 years. Ali's son, Hussain, revolted in 680 and was murdered after being defeated at the Battle of Karbala. Additional uprisings were put down by Umayyad caliphs in Iraq and Arabia before peace was restored in 692.

The civil war that ended the political unity of Islam took place from 747 to 750. Although Islam expanded to its greatest extent under the Umayyad caliphs, many Muslims believed that their rulers had become corrupted by secular success. Cultural achievements in literature, art, and architecture helped fuel the sense that they were too devoted to the secular. A series of weak caliphs after 743 helped bring a time of regional revolts and religious disputes. In 747, supporters of the Al-Abbas family rose in revolt. Al-Abbas had been a cousin of Muhammad and a close companion during Islam's founding. A series of victories in Khorasan caused uprisings in Persia and Mesopotamia. In 749, Al-Abbas's grandson Abul Abbas proclaimed himself caliph. The Umayyad caliph, Marwan II, was defeated at the Battle of the Greater Zab in January 750 and killed. Most of the Umayyad family was then systematically murdered. Even so, revolts in support of the Umayyad family took place in Syria and Mesopotamia between 750 and 754.

When Abul Abbas died in 754, his brother Al-Mansur proclaimed himself caliph. Other members of the Abbasid family objected and rose up against him. Al-Mansur spent the early years of his reign putting down revolts, including an uprising by Shias in Iraq. Despite his successes in Islam's traditional heartland, Al-Mansur was unable to reestablish control over Muslims in Spain and Morocco. Instead, a separate state ruled by a member of the Umayyad family was established, forever breaking the political unity of Islam. To mark his victory and the establishment of a new dynasty, Al-Mansur established his capital at the new city of Baghdad in 766.

—*Timothy J. Watts*

Bibliography

Hawting, G. R. *The First Dynasty of Islam: The Umayyad Caliphate, AD 661-750*. London: Croom Helm, 1986.

Von Grunebaum, G. E. *Classical Islam: A History, 600-1258*. Chicago: Aldine, 1970.

Watt, W. Montgomery. *The Majesty That Was Islam: The Islamic World, 661-1100*. London: Sidgwick and Jackson, 1974.

Frontiers of the Islamic World to 1000 CE

From the earliest decades of Islam, there was a stark but shifting boundary between the Land of Islam (Dar al-Islam) on the one hand and the Land of Unbelief or War (Dar al-Harb) on the other. Between these two worlds no permanent peace was possible; there were only truces for limited periods. Yet this rigorous distinction inevitably blurred once the period of initial enthusiasm was over and the momentum of conquest had slowed down. The letter of the law remained, but practice became relaxed, and the overrunning of all the Lands of Unbelief was postponed from historic to messianic times. Hence, it was possible for a certain amount of stability to emerge along some frontiers or, at least, for a fairly determinate no-man's-land to become recognized. This was the case in Spain between the Muslims of al-Andalus and the Christians of the petty kingdoms of the north of the peninsula and equally so with regard to the Taurus region of Anatolia.

Moreover, Islamic law came to recognize an intermediate status, that of the Land of Treaty Relationship (Dar al-Ahd) applied to non-Muslim states in a contractual relationship with the Muslims, paying tribute to the Muslims but retaining their own autonomy and internal freedom. This was, for instance, the position of the Christian Kingdoms of Nubia (modern Sudan) vis-à-vis the Muslim power in Egypt down to Mamluk times.

Both the Muslims and the non-Muslims left the frontier zones depopulated, with only fortresses and strong points guarded by local irregular troops. The Islamic strong points were called *ribats*, probably meaning "a place for tethering horses" and echoing a verse in the Quran, viii, 62, in which the believers are enjoined to launch against their enemies at the frontier their full strength, including mounted pickets (*ribat al-khayl*).

The ribat is an institution found in the early centuries of Islam wherever there was a frontier,

whether by land or sea, facing powerful enemies in the Land of War. The ribats were frontier forts that also partook of the nature of religious retreats. Fighters for the faith (*ghazis*, *mujahids*) anxious to discharge their obligation of jihad would meet in the ribats for defending the frontiers and for raiding into enemy territory and also for religious and ascetic exercises. Hence, the ribat owes its existence to the unique fusion within Islam of the life of rigorous asceticism and the life of combat against the infidel, and the Islamic jurists were aware of the convergence of the two strands when they analyzed the jihad into a greater jihad (the spiritual fight against the errant ways of the soul) and a lesser jihad (military action against the infidels).

Ribats were to be found in al-Andalus, their legacy includes many places named Rabida or Rapita that still exist in Spain and Portugal. And an origin of the peculiarly Spanish Christian military orders of Calatrava, Santiago, and Alcántara, which had developed in the ninth and tenth centuries from the Islamic *murabits* (people of the ribat) was suggested in 1820 by the Spanish historian of Muslim Spain, José Conde. They were especially thick on the Atlantic and Mediterranean coasts of the Maghreb, from the mouth of the Senegal River to Tripoli. In the Islamic east they were very numerous in Anatolia, central Asia, and Afghanistan, facing the Byzantines, the pagan Turks, and the Rajputs in India.

The ribats on the eastern frontiers of the Islamic world, such as against the Byzantines in Tarsus and against the pagan Turks of the steppes beyond the Oxus and Jaxartes, were manned on a shifting basis by volunteers from the various towns of Syria, Iraq, and Transoxiana, which also provided money and horses for these strong points. The eastern Islamic provinces, because of their proximity to an open and often fluid frontier with the pagan lands of Inner Asia, were the focus of a particularly strong and bellicose Muslim piety. This spirit of jihad there was even stirred by events on the distant Byzantine frontier during the third quarter of the tenth century.

After the Islamic empire was dissolved in the eighth century, the Arab or Muslim control over the faraway parts of the empire such as al-Andalus, Sind, and Inner Asia weakened, and the non-Muslims took advantage of this throughout

the ninth and tenth centuries to try to reconquer portions of these faraway parts.

—*Moshe Terdiman*

Bibliography

- Bosworth, C. E. *The Arabs, Byzantium and Iran: Studies in Early Islamic History and Culture*. Aldershot, UK: Variorum, 1996.
- Collins, Roger. *The Arab Conquest of Spain, 710–797*. Oxford, UK: Basil Blackwell, 1989.
- Dunbar, Sir George. *A History of India from the Earliest Times to the Present Day*. Delhi: Low Price Publications, 1995.
- Fletcher, Richard. *Moorish Spain*. London: Weidenfeld and Nicolson, 1992.
- Glick, Thomas F. *Islamic and Christian Spain in the Early Middle Ages*. Princeton, NJ: Princeton University Press, 1979.
- Ikram, S. M. *Muslim Civilization in India*. New York: Columbia University Press, 1969.

Muslim Frontier in Spain to 1000 CE

From the Muslim conquest of Spain in 711 until the mid-eleventh century, the frontier between al-Andalus (Muslim Spain) and the Christian kingdoms ran across the northern part of the Iberian Peninsula.

Muslim troops had gained the eastern Pyrenees within the first decade of Islamic rule in the peninsula, when Barcelona, Gerona, and Narbonne had been captured. The Muslims raided into the heart of Gaul (France) until 732 when, in October, Charles Martel defeated an Islamic host under Abd al-Rahman al-Ghafiqli near Poitiers. The Muslims held on in southern France until Pepin the Short recaptured Narbonne in 751.

In 750 a disastrous drought, causing famine, ravaged extensive areas of the peninsula, particularly the central and northwestern regions. This induced many of the Berbers of Galicia to return to their North African homeland. At this point the Christian kingdom of Asturias seized Galicia. The Muslims did not make any further attempts to occupy the lands north of the Duero River but consolidated their power to the south of that river. From then to the tenth century, a century and a half of raids and counterraids laid waste to the no-man's-land that separated al-Andalus and the Christian kingdoms.

The tenth century witnessed the height of Andalusí fame, power, and wealth under three

strong rulers, the first of whom was Abd al-Rahman III ("The Victorious," 912–961). By the 920s he launched an offensive against the Christian kingdoms, sacking Pamplona and inflicting heavy losses on the Basque troops of Sancho Garcés of Navarre in 924.

Abd al-Rahman died at the height of his power and was succeeded by another strong caliph, the scholarly al-Hakim II (961–976). Al-Hakam continued to press the Christian kingdoms with constant raids, keeping his militia strong and dynamic through the continued importation of Berber soldiers. In the early 970s, Al-Hakim received continuous embassies from the king of Navarre, the regent of León, and the counts of Castile, Galicia, and Barcelona, who came to render homage and tribute before the dazzling strength of the greatest power in Europe.

Al-Hakam's death induced a dynastic crisis, leaving the country under the rule of a boy, Hisham II, but in the actual power of the *hajib* (chamberlain), Muhammad ibn Abi Amir, known as al-Mansur. As *hajib* he continued to scourge Christian territory, his raids culminating in the sack of Santiago de Compostela in 997 when he razed the cathedral and carried off its bells to Córdoba. When he died while returning from his last campaign in 1002, he seemingly left the state in a strong position. But his military strength was gained at the expense of disrupting the ethnic balance of power upon which the state's political foundations rested. He professionalized the army by detribalizing it (forcing Arabs into mixed units without regard to tribe or place of origin) and by injecting into it large numbers of newly recruited Berber regulars.

During the same period the pace of change in the Christian zones was much slower, obeying different socioeconomic imperatives. In the eighth century it is possible to distinguish broadly between three zones, differing from one another in social organization and culture. In the west was Galicia, where continuity of settlement had been unbroken from late Roman times and where elements of Roman social organization survived. In the center, a continuous mountain belt, from the Cantabrian system in the west to the Pyrenees, was populated by Cantabrian and Basque mountaineers, who also represented an ancient tradition, one of hostility to the power centers of the peninsula. In the extreme

east was the future Catalonia, an area only lightly garrisoned by the Muslims that in the early ninth century came into the orbit of Carolingian political power and social organization.

Before the famine of 750, with Berbers occupying the mountains of southern Galicia, the Muslims' northern line of defense in the central zone followed a line extending eastward from Saldaña in the present province of Palencia to Amaya, Miranda de Ebro (Burgos Province), and Cenicero.

The medieval legend of the origins of the "Reconquest," interwoven with neo-Gothic strains, places the birth of the movement of resistance at Covadonga, where in 722 a small group of Christians under Pelayo, a Gothic noble, defeated a Muslim column.

Indeed, Pelayo's grandson Alfonso I (739–757) had carved out a small principality in the mountains of Asturias, with its capital in Oviedo, and he began the first tentative steps toward expansion into areas abandoned during the drought of 748–753 by Berbers, or those areas that had not been completely abandoned but were only thinly garrisoned.

In the middle part of the century the Duero Valley became more or less totally depopulated and came to constitute a no-man's-land between the Asturian kingdom and al-Andalus. Around 756, the last year of Alfonso I's reign and the first of that of Abd al-Rahman I, the Christian line (including the buffer zone) followed the course of the Duero from its mouth to Osma and then turned northward, extending into the Basque country. The Islamic frontier, representing the line up to which permanent settlement was encouraged, ran from somewhat north of Coimbra in the west through Coria, Talavera, and Toledo and then swung north to encompass Guadalajara, Tudela, and Pamplona.

A more organized effort at expansion southward was begun in the reign of Alfonso II (791–842), during which time the mountain people began to move down onto the plain to begin small agrarian settlements in what were to become León and Castile, the first stage of which (ca. 800–835) involved the settlement of the headwaters of the Ebro River (Miranda de Ebro, Mena Valley). Under Ordoño I (850–866) the focus shifts westward; the king was said to have directed the settlement of the deserted towns of



Bell tower of la Mezquita in Córdoba, Spain. Muhammad ibn Abi Amir, known as al-Mansur, sacked the Christian city of Santiago de Compostela in 997, razing the cathedral and appropriating its bells for the Córdoba Mosque. (Catherine Jones)

León, Astorga, Tuy, and Amaya with people fleeing al-Andalus. Farther to the east, settlers moved across the Ebro and fortified a line extending from Amaya to Oca.

Farther east, Sancho Garcés I of Navarre (905–925) was able to capture Pamplona and fortify a long line of forts in the foothills of the Pyrenees after the decline of the powerful Banu Qasi clan made such an advance possible. But no further advances were registered during the tenth century, as Abd al-Rahman III was able to turn the Navarrese back in a series of campaigns in the 920s.

In the eastern Pyrenees a number of mountain counties had taken shape under Frankish patronage (Sobrarbe, Ribagorza, Pallars). The Franks had pushed the Muslims out of Barcelona in 801 and stabilized the frontier somewhat to

the south. The future Catalonia remained within the Frankish orbit until the Carolingian collapse of the mid-ninth century made it possible for the southern counts to establish independent hereditary dynasties. In the 870s Guifred the Hairy, a descendant of the Gothic count Borrell of Ausona, had established his family's control over the counties of Barcelona, Gerona, and the mountain territories of Urgell, Cerdàña, and Conflent. In a movement analogous to the settlement of the Duero Valley the plain of Vich was settled, beginning under Guifred's direction in the closing years of the ninth century and continuing into the middle of the tenth century. By 1000 CE the pale of settlement had extended south of Barcelona into the Panadés and west to Segarra.

The eleventh century, the most critical and significant of the Spanish Middle Ages, witnessed a change of sign in the peninsular balance of power. After the death of al-Mansur, the caliphate of Córdoba, still the strongest power in Europe, collapsed in ruins in a matter of years. After a period of struggle and shifting power relations (the *fitna* or anarchy of 1008–1031) the unitary Islamic state was replaced by a shifting constellation of two dozen or so small states, ruled by the so-called Party Kings (*mulúk al-tawâ'if*). The Christian countries were then able to take quick advantage of the fragmentation of Islamic power by first establishing their suzerainty over the Party Kings by exacting tribute and then by renewing the conquest of Islamic territory.

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Bibliography

- Collins, Roger. *The Arab Conquest of Spain, 710–797*. Oxford, UK: Basil Blackwell, 1989.
- Fletcher, Richard. *Moorish Spain*. London: Weidenfeld and Nicolson, 1992.
- Glick, Thomas F. *Islamic and Christian Spain in the Early Middle Ages*. Princeton, NJ: Princeton University Press, 1979.

Islamic Frontiers in Anatolia to 1000 CE

After the Battle of Yarmuk in which the Byzantine emperor Heraclius lost many of his best troops, he endeavored to strengthen the Byzantine position in northern Syria, but there were no natural defensive barriers there to hold up

the Arabs. Hence, after 639 Emperor Heraclius adopted a defensive role in order to protect the heartland of Asia Minor and Armenia. Thus, it was the natural barrier of the Taurus Mountains that was to form the normal boundary between Islam and Byzantium for four centuries.

The Muslims dispatched raiding parties or armies (*sawa'if*) into Anatolia from Syria each spring and summer, and their highly mobile cavalrymen often penetrated right across the plateau to Nicea, Armorium, or Samsun. Nevertheless, a rough frontier zone came into existence along the southern edge of the Taurus and its southern outliers like the Amanus Mountains, the Jabal al-Lukkam or "Black Mountain," in northwestern Syria. This latter region was in the first century or so of Islam the stronghold of Christian people whom the Byzantine historians call Maradaites.

Soon after the second Arab occupation of Antioch in Umar I's caliphate (634–644), the Maradaites made an agreement with the Arabs to act as spies and scouts for them and to guard the Amanus Gates against the Byzantines; in return, they were exempted from the poll tax, or *jizya*, normally levied on Christians and were given the right to a share in the Arabs' plunder. Around the year 666, Emperor Constans IV detached them from the Arab side. Justinian II was again able to raise the Maradaites and to get them to raid southward into Lebanon (688 or 689). From the early eighth century, some Maradaites were dispersed through northern Syria and even Iraq as soldiers of fortune in the caliphal armies, while a considerable number of them immigrated to Byzantine territory. In their place, the caliph brought in the Zutt from Iraq (originally Jhats from India).

The main frontier region between the Arabs and the Byzantines comprised the two zones known to the Arabs as, first, the *thughur*, or gaps, a forward zone of strongholds in an area that the Arabs called the *dawabi*, or "outer regions," and second, an inner line of defenses, the *awasim*, or "protective fortresses." In the early period of the Arab conquests, the awasim stretched from Antioch, north of Aleppo to Manbij. Under the Umayyad caliphs, the Arabs concentrated for their annual summer incursions on the plain of Dabiq in the Azaz district of the upper course of the Quwaiq River. A semipermanent

nent forward military base was established there. Administratively, the region of the awasim depended on the military center of Qinnasrin, to the southwest of Aleppo. The whole area was the scene of strenuous fighting during the Byzantine reconquests of the tenth century, and despite the containing actions of the Hamdanid emirs of Mosul and Aleppo and their intermittent successes against the Byzantines, by the third quarter of the tenth century the last Hamdanids lived virtually under a Byzantine protectorate.

Beyond these awasim stretched the marches of the *thughur*, a vaguely delimited region stretching as far west as Tarsus and Massisa and northward and eastward to Marash, Samosata, Nisibin and Malatya. The western parts were known as the Syrian *thughur*, and the eastern ones, those on the upper Euphrates, were known as the Jazira *thughur*. In the Umayyad period, the defense of the Syrian marches was the task of the Syrian government troops based on Damascus, Homs, and Qinnasrin, while the more easterly marches were defended by the northern Arab tribesmen who had settled on the vacant lands of northern Mesopotamia.

When Heraclius retreated northward, he deliberately left the region up to the Taurus depopulated, with only fortresses and strong points guarded by local irregular troops such as the Maradaites. The equivalent Islamic institution to these Greek frontier strongholds was the *ribat*. Along the Syrian and Jaziran *thughur*, the *ribats* existed in fact as centers where fighters for the faith congregated. The region of the *thughur* must have acquired a mixed Christian and Muslim population from Umayyad times onward, with Arab colonists coming in the wake of the Arab armies and settling in the Muslim strong points among the indigenous Christians, Syrians, and Armenians.

Moreover, at times there were quite large-scale movements of whole population groups across the frontiers. In the period immediately after the Arabs overran Palestine and Syria, certain Arab tribal groups, who had been established on the Syrian Desert fringes in pre-Islamic times, preferred to migrate to Byzantine territory rather than become Muslims. In the tenth century a powerful Arab tribe, the Banu Habib, which remained Christian for one or two centuries after

the Islamic conquests, emigrated from the region of Nisibin. After suffering from the exactions and harassments of their kinsmen, the Hamdanids, some 10,000 or 12,000 cavalymen of the Banu Habib, together with their families and clients, migrated northward to Byzantine territory, where they became Christian and were received with open arms by the Byzantines. The Hamdanids were then used as frontier auxiliaries by Byzantium, constituting a useful element of additional military pressure on the Muslims of al-Jazira.

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Bibliography

- Bosworth, C. E. *The Arabs, Byzantium and Iran: Studies in Early Islamic History and Culture*. Aldershot, UK: Variorum, 1996.
- Glubb, John Sir. *The Course of Empire: The Arabs and Their Successors*. London: Hodder and Stoughton, 1965.
- Vasiliev, A. A. *History of the Byzantine Empire, 324–1453*. Madison: University of Wisconsin Press, 1952.

Islamic Frontiers in Northwestern India to 1000 CE

The Arab conquest of the northwestern Indian (now southern Pakistan) kingdom of Sind and southwestern Punjab was completed by 714, and during the following three centuries there was no further extension of Muslim dominion. The second phase of Muslim expansion, beginning with the establishment of a Turkish Muslim dynasty in Ghazni, followed the traditional northwestern routes for the invasion of India.

It was the Arab occupation of Transoxiana (central Asia) in the eighth century that paved the way for the Muslim conquest of India, for it established a link between the Turkish homeland and Islam. From this time the Turks were to play an important role in the Muslim world and were the main force behind the conquest of the subcontinent.

The first inroad into the heart of the area that is now Afghanistan was made by Yaqub ibn Lais, the Saffarid who captured Kabul in 870 and founded Ghazni at about the same time. Kabul was, however, lost by his successor to Hindu rulers known as the Hindu Shahis, whose capital was at Waihind (Ohind), near modern Peshawar,

and whose rule extended to Kabul in the west and the Bias River in the east.

In the meantime the Samanids (874–999) had established themselves at Bukhara and gradually brought the greater part of the territory to the east of Baghdad under their rule. Persian in origin, they favored the Persian language, and thus Persian replaced Arabic as the official language.

Under the Samanids, Turkish slaves gained political and military importance. One of these, Alptigin, rebelled against his Samanid masters and established himself at Ghazni in 962. In 977 Subuktigin, a Turkish slave upon whom Alptigin had bestowed the hand of his daughter, ascended the throne of Ghazni and proceeded to expand his kingdom by annexing adjacent areas in Khurasan, Seistan, and Lamghan. Alarmed at the rising power of the new Turkish principality, Jaipal, Hindu raja of Waihind, took the offensive and advanced toward Subuktigin's capital. The two armies met between Lamghan (modern Jalalabad) and Ghazni in 986. Jaipal was defeated and was forced to agree to pay a large indemnity to the Turkish ruler. Jaipal defaulted and tried to avenge his loss, but he was again decisively defeated, and Subuktigin followed up his success by forcing Jaipal to cede the territory between Lamghan and Peshawar.

Later Muslim historians often represent Subuktigin as a champion of the faith whose chief occupation was the propagation of Islam with fire and sword among the idolators of India. But, in fact, he never crossed the Indus, and the only two expeditions in which he took the initiative were undertaken as measures of reprisal and for the purpose of securing his dominion rather than with any intention of propagating his faith. Subuktigin, however, paved the way for the more

active efforts of his son Mahmud by occupying the key city of Peshawar and building roads leading to the Indian frontiers along which his son marched during his numerous expeditions.

Even more important was the development of Ghazni as a base of operations against India. It reached its zenith in the succeeding reign when it became a center of political power, organized administration, and literary culture, second in importance only to Baghdad in Muslim Asia. Even under Subuktigin it surpassed Bukhara in importance and began to attract a large number of Turks who were to form the spearhead of the attack against the Indian subcontinent.

Subuktigin died in 997, and after a brief struggle his son, known as Mahmud of Ghazni, succeeded him. Mahmud at once turned his attention to India. He had taken part in all of his father's campaigns against Jaipal and knew the weakness of the Indian armies as well as the riches of the kings and temples. The series of invasions he launched against the subcontinent were to carry his armies farther than any previous Muslim ruler had penetrated.

—*Moshe Terdiman*

Bibliography

- Dunbar, Sir George. *A History of India from the Earliest Times to the Present Day*. Delhi: Low Price Publications, 1995.
- Ikram, S. M. *Muslim Civilization in India*. New York: Columbia University Press, 1969.
- Malik, Hafeez. *Moslem Nationalism in India and Pakistan*. Washington DC: Public Affairs Press, 1963.
- Qureshi, Ishtiaq Husain. *The Muslim Community of the Indo-Pakistan Subcontinent (610–1947): A Brief Historical Analysis*. Delhi: Renaissance Publishing House, 1998.

■ Introduction: Conflicts in China and East Asia

In the second decade of the fourth century, Turkish, Xienpei, Tungusic, and Tibetan pastoralists invaded northern China. The ruling Jen dynasty fled to the Yangtze Valley, while the

pastoralist invaders set up 16 ephemeral warring kingdoms on the northern China plain.

The Jen dynasty, now the Eastern Jen, became the first of five successive dynasties to rule

China's Southern empire from 317 until China's reunification in 589 by the Sui.

While southern China during that period was usually united, northern China experienced frequent conflict as the 16 "barbarian" kingdoms contested for supremacy. By 439 the Toba, one of the rival groups, had eliminated all of its rivals and founded the Northern Wei dynasty, which for a century ruled northern China. Northern Wei was very warlike, engaging in several wars in attempts to conquer the Southern empire. Also, the Northern Wei protected China from further invasions by northern "barbarians," engaging in a protracted contest in which Northern Wei destroyed the formidable Juan Juan confederation on the northern steppe.

In 532, a succession crisis caused the Northern Wei to split into two fragments, and these fragments experienced further permutations until the Sui dynasty imposed unity on the north (581). The warlike and aggressive Sui then conquered the Southern empire (589), reestablishing a unified Chinese empire for the first time in almost three centuries.

The Sui sent armed forces to the north, where they defeated some of the eastern Turks; to the west, to establish control over the silk route cities in Gansu; and to the south, reestablishing Chinese rule over Vietnam and engaging in combat with the Cham state on the central Vietnamese coast. The Sui sent probing expeditions to Taiwan and as far south as Srivijaya in Sumatra.

But the Sui badly miscalculated when they attacked the Kingdom of Koguryo, which straddled the Yalu River in Manchuria and northern Korea. The second Sui emperor, Yangdi, sent three successive massive armies (claimed to have included up to half a million men each) against Koguryo in 612, 613, and 614. The Koguryo inflicted crushing defeats on the Chinese armies. Then, in 615, the eastern Turks delivered a stunning defeat to Yangdi's forces. This defeat led to Yangdi's assassination and the fall of the Sui dynasty.

After a civil war the Tang dynasty succeeded the Sui. Like the Sui, the Tang was expansive and aggressive but had learned from the Sui's experiences and were luckier. After three more failed invasion attempts, the Tang allied itself with Silla, then the smallest of the three Korean kingdoms. In a series of protracted campaigns (630–668),

CHRONOLOGY FOR CHINA CENTERED CONFLICTS, 300–1000 CE

Chronology: All dates are CE (Common Era).

- 304–317—"Barbarian" invasion of northern China
- 304–439—Warfare among 16 "barbarian" kingdoms in northern China
- 317–589—Five successive dynasties rule the Southern Chinese empire
- 439–535—Toba Northern Wei dynasty in northern China
- 581—Sui unite northern China
- 589—Sui conquer the Southern empire and create the reunified Chinese empire
- 589–618—Sui dynasties
- 612, 613, 614—Koguryo defeats Sui invasions
- 615—Eastern Turks defeat Sui
- 618–907—Tang dynasty
- 630–668—Tang-Silla alliances unify Korea
- 630–690—Tang destroys eastern Turk and western Turk empires, forces Tibet to become tributary, annexes the Tarim Basin, and extends Chinese power into central Asia
- 669–674—Silla frees Korea from Tang rule
- 683–705—Rule of Empress Wu
- 751—Nanjao Kingdom defeats Chinese army at Battle of Dali Lake; Arabs defeat Chinese army at the Battle of Talas
- 755–763—An Lushan's Rebellion
- 883–906—Huang Chao's rebellion begins a period of turmoil and civil war that leads to the collapse of the Tang dynasty
- 907–960—Period of division, Ten Kingdoms and Five Dynasties
- 960–1126—Northern Song dynasty; Khitan Liao dynasty in far north

—Wilfred J. Bisson

the alliance of Tang and Silla defeated a counter-alliance of Koguryo, Paekche, and Yamato (Japan) that created the first unified Korean kingdom under Silla's rule in 668. Silla then turned against the Tang, fighting a successful five-year war to throw off Chinese suzerainty.

The early Tang dynasty, like the Sui dynasty, extended its power in every direction. In the 630s, the Tang destroyed the eastern Turk empire, and in 657 they also destroyed, with the alliance of the Uighurs, the western Turk empire.

The Tang annexed the Tarim Basin and extended Chinese power beyond the Pamir Mountains, almost to the Ferghana Valley. Tang power forced the Kingdom of Tibet, which had been unified in 600, to accept a tributary status. In one amazing exploit, a Tang force crossed the Himalayas into India, captured an Indian king who had offended a Chinese envoy, and brought the king back to China for punishment.

Empress Wu (r. 683–705) was one of the more successful of the warlike early Tang rulers. Under her rule, Chinese power was felt from the southeastern peninsula deep into central Asia.

The power of the Tang dynasty began to slip after 700. Tibet became more restive, and a strong kingdom, Nanjao, challenged China in the southwest. Most ominously, the Arabs who in the previous century had conquered an empire as great as that of the Chinese were consolidating their power in central Asia. A power struggle developed among the Tibetans, the Turks, the Arabs, and the Chinese for dominance in central Asia. Tang power was humbled by the nearly simultaneous defeats of Chinese armies at the Battle of Lake Dali by the Kingdom of Nanjao in Yunnan and at the Battle of Talas by the Arabs in the Ferghana Valley.

From 755 to 763, China was convulsed by the An Lushan Rebellion in which both Chinese and “barbarian” armies fought devastating battles throughout northern China. With the aid of its one loyal Turkish ally, the Uighurs, the Tang dynasty survived, but it never regained the power of the early Tang. Chinese power contracted to the Han provinces, and the dynasty was required to pay tribute to its Uighur allies, who took over the Chinese outposts in the Tarim Basin.

The weakened Tang dynasty survived nearly another century and a half. In 883, another protracted series of rebellions began. These rebellions led to civil wars that ravaged the empire until it was finally overthrown in 906.

The Tang dynasty was followed by more than half a century of division, the Period of Ten Kingdoms and Five Dynasties. During this period, rival warlords contended for dominance, and another northern “barbarian” people, the Khitan, seized some of the northern territory. This period of turmoil ended when another strong dynasty, the Song, reunified China in 960.

But the China of the Song was much smaller than that of the Tang at its most expansive.

—Wilfred J. Bisson

Bibliography

Reischauer, Edwin, and John Fairbank. *East Asia: The Great Tradition*. Boston: Houghton Mifflin, 1960.

Conflict between States and Dynasties, Northern and Southern China, 220–589 CE

The long period from 220 to 589 CE in China was a time of disunity. In the north, there existed at least 16 separate kingdoms, and in the south, four independent dynasties rose and fell. This north-south division continued until 589, when the south was conquered by the north.

The disunity had begun to manifest itself at the end of the Han dynasty, during the Three Kingdoms period. During this period, the kingdoms of Wei (220–265), Shu (221–263), and Wu (222–280) vied against one another for the upper hand. Wei annexed Shu in 263; however, its ruler was in turn forced to abdicate by the Sima family, who founded instead the Western Jin dynasty (265–317). Fifteen years later, in circa 280, the Jin forcibly annexed Wu, thereby unifying China. Thereafter, for approximately half a century, peace and stability prevailed until the reign of Jin Huidi.

First, Empress Jiahou and her clan monopolized the political scene; then, the eight princes, themselves powerful warlords stationed outside the capital, rebelled. In their struggle for the throne, they either formed alliances among themselves or fought against one another. To strengthen their hold, they invited the troops of the Xiongnu and Xianbei (nomadic non-Chinese tribes living on the northern periphery of the Jin territory) to join forces with them. During the 16 years of this so-called Rebellion of the Eight Princes (291–306), war raged around Luoyang and Chang'an, destroying the large area north of the Yangtze River. Eventually, the Xiongnu and Xianbei, along with other nomadic non-Chinese tribes (the Qiang, Di, and Jie), migrated southward and settled among the Chinese within the Jin boundary. Some of these “barbarians” were

assimilated by the Han culture, even going so far as to serve or fight for the Jin government. Others, however, were often suppressed, exploited economically, or forced into servitude by the Chinese, and this was a constant source of resentment. In 311, the Xiongnu attacked Luoyang and captured the emperor Jin Huaidi, while the escaping royal entourage and Jin bureaucrats were killed by another rebelling tribe, the Jie. The surviving Jin government moved to Chang'an, but in 316 the Xiongnu attacked again and captured the last emperor, Jin Mindi, thus bringing to an end the rule of the Western Jin. Henceforth, the north was ruled by a succession of kingdoms, many of whose rulers were non-Chinese. Meanwhile, in the south, the dispossessed Jin nobility and great clans sought refuge across the Yangtze River. Here, rallying around the prince of Langya Sima Rui at Jiankang, they established the Eastern Jin (317–420).

In the absence of the Jin government in the north, chieftains of the Xiongnu, Xianbei, Qiang, Di, and Jie, together with Chinese clan leaders and settlers and refugees, seized territory. Proclaiming themselves true successors to the throne, they established their own kingdoms that survived for varying lengths of times. These northern states (established between 304 and 439) were collectively known by Chinese historians as the Sixteen Kingdoms of the Five Barbarians. They were the kingdoms of the Former Zhao, also called the Han (304–318), Later Zhao (319–352), Former Yan (337–370), Later Yan (384–409), Southern Yan (398–410), Northern Yan (409–436), Former Qin (351–394), Later Qin (384–417), Western Qin (385–431), Xia (407–431), Former Liang (354–376), Later Liang (386–403), Southern Liang (397–414), Northern Liang (397–439), and Western Liang (400–421). Not included in the group were another three states: Chenghan (303–347), Western Yan (384–394), and Ran Wei (350–352). In the midst of the continuing wars and turmoil, the Former Qin rose to power and came close to unifying the north. However, in 383, at the Battle of Feishui, the Eastern Jin countered their attack so powerfully that the Former Qin suffered enormous losses and soon after retreated and began to collapse. Their formerly subjugated peoples now broke away, and the north again disintegrated into

many states. In the midst of this chaos, the Xianbei tribe led by Tuoba Gui, Tuoba Si, and Tuoba Tao expanded its territories and founded the Northern Wei (386–534). Tuoba Tao proceeded to unify northern China between 425 and 439.

In the south, the Eastern Jin attempted to recover the areas north of the Yangtze River that had been occupied by northern invaders in 354, 356, and 359 but without much success, reclaiming some territory only after the defeat of Former Qin in the Battle of Feishui. In 409, Jin general Liu Yu launched a campaign in the north and conquered the Southern Yan. He seized the throne of the last Jin ruler and founded the first of the Southern dynasties, the Song dynasty (420–479). In 450, the Northern Wei waged the Battle of Guabu against the south. The Song dynasty was seriously at risk but was able to withstand the attack. However, both sides suffered heavy losses. As a result, for about 20 years the north and the south were in a stage of equilibrium, as neither was able to defeat the other. The Song dynasty was further weakened by internal political struggles. After a series of ruthless killings among the rival Song princes, Song general Xiao Daocheng took control and established the Qi dynasty (479–502), the second of the Southern dynasties. In time, however, this dynasty suffered a similar fate. A clansman of the Qi royal family, General Xiao Yan, seized power and founded the third and longest dynasty, the Liang dynasty (502–557).

While dynastic changes were taking place in the south, the north was also fragmenting. In the capital, the Xianbei ruling class wanted to embrace the Han culture, while the Xianbei warriors stationed on the northern border of the Northern Wei objected to this, and seeing themselves as becoming increasingly marginalized, they rebelled. Subsequently, the Northern Wei broke up into the Eastern and Western Wei between 534 and 535. Wars between the two states lasted for about ten years. Both states were torn apart by internal power struggles and were succeeded, respectively, by the Northern Qi in 550 and the Northern Zhou in 557.

In the south, the Liang dynasty was also badly shaken by a rebellion. A defecting Eastern Wei warlord, Houjing, who had sought the protection of the Liang dynasty, killed the Liang emperor and controlled the Liang for four years (549–552). Xiao

Yi, a brother of the killed emperor, secured military aid from the Western Wei by ceding territory and successfully suppressed the rebellion, but his rule was ended by his nephew, who joined forces with the Western Wei to establish the Later Liang dynasty. However, Xiao Yi's son was supported by a Liang general, Chen Baxian, who eventually removed the heir and founded the Chen dynasty (557–589), which was also the last of the four Southern dynasties. Meanwhile, Emperor Wudi of the Northern Zhou set about annexing other states. He defeated the Northern Qi in 577, dying shortly afterward. The father of his daughter-in-law, Yang Jian, ousted his grandson and heir to found the Sui dynasty (581–618). Yang Jian continued the momentum of unification set in motion by Wudi. Yang Jian conquered the Chen dynasty and, in doing so, in 589 succeeded in bringing to an end the north/south division.

—Soon Cheng Tan

Bibliography

- Boodberg, Peter Alexis. *Selected Works of Peter A. Boodberg*. Berkeley: University of California Press, 1979.
- De Crespigny, Rafe. *Northern Frontier*. Canberra: Australian National University, 1984.
- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. London: Cambridge University Press, 1996.
- Graff, David A. *Medieval Chinese Warfare, 300–900*. London: Routledge, 2002.

Silla and the Wars for Korean Unification

By the fifth century a long process of political consolidation on the Korean peninsula had resulted in the emergence of the three kingdoms of Koguryo, Paekche, and Silla (as well as a grouping of minor city-states in the southwest called the Kaya, or Karak, Confederacy). These three kingdoms, all ruled over by central monarchies, emerged as rivals for control of the peninsula's limited resources, a process that culminated in the wars of unification of the seventh century and finally the unification of most of the Korean peoples under Silla rule.

In rough geographic terms, Koguryo occupied the northern half of the peninsula, extending into what is today Northeast China. Paekche controlled the peninsula's southwest, and Silla controlled its southeast. The early period of this rivalry seemed to portend a Koguryo victory. During the late fourth and fifth centuries a succession of powerful and effective Koguryo monarchs, most prominently King Kwanggaeto (r. 391–413), strengthened central authority and greatly extended the kingdom's territory. In 427 Koguryo transferred its capital from its ancestral homeland along the Yalu River in Northeast China south to what is today Pyongyang along the P'ae (or Taedong) River, and in 475 Koguryo even captured the Paekche capital of

► ELITE WARRIORS OF SILLA—THE HWARANG

The Hwarang (often translated as “Flower Youth”) were bands of young Silla noblemen, some of whom played central roles in the military campaigns against Kaya, Paekche, Koguryo, and Tang China that culminated in Silla's unification of the Korean peninsula in 676. The heroic exploits of the Hwarang, recounted in such works as the thirteenth-century *Samguk Yusa* (*Memorabilia of the Three Kingdoms*), have ensured them a prominent place in Korean history and imagination. The exact meaning of the term is unknown but likely refers to the legendary beauty of the Hwarang initiates (*hwa*, meaning “flower” in Sino-Korean). Originally the primary activity of these noble bands seems to have been song, dance, poetry, and a commitment to ethical living.

Although the earliest Hwarang bands were composed of young women, they became exclusively male in the sixth century. The Hwarang also became associated with worship of the Maitreya Buddha, the Buddha of the future. As rivalries among the three kingdoms of Korea intensified in the late seventh and early eighth centuries, the Silla monarchy took tighter control over the Hwarang, training them in the military arts and inculcating them with a patriotic fervor, making the elite Hwarang a sort of training ground of Silla leadership. Undoubtedly the most prominent Hwarang was Kim Yusin (595–673), whose brilliant generalship made him a central architect of Silla unification.

—Daniel C. Kane

Hansong (near present-day Seoul), killing its king Kaero.

Both Silla and Paekche felt the pressure of Koguryo expansion. In 475 Paekche was forced to shift its capital farther south to the fortress town of Ungjin (present-day Kongju). More importantly, around 490 Silla and Paekche forged a political and military alliance, one that successfully fended off Koguryo's southerly ambitions for more than half a century. In 551 this alliance fell apart in acrimony when Silla seized territory won from a united Silla-Paekche campaign against Koguryo in the Han River basin. This sudden act of boldness by Silla can only be seen in the context of the growing strength of the Silla state.

In 500 Silla seemed the unlikely vehicle of Korean unification. Unlike his counterparts in Koguryo or even Paekche, the Silla monarch was still largely beholden to powerful aristocratic clans. Furthermore, Silla's location in the southeast meant that it often fell victim to attacks by the Wa, a marauding peoples who emerged from their bases in Tsushima or nearby Japan to raid the Silla coast. Its geographical setting also meant that it was historically more isolated from regular contact with Chinese dynasties, potential sources of material and cultural support.

But in the sixth century came the two reform-minded and effective Silla monarchs Pophung and Chinhung. In 527 King Pophung formally adopted Buddhism (although Silla had been exposed to Buddhism more than a century earlier via Koguryo). In Silla the new faith was soon utilized to bolster royal authority. The Silla kings began to portray themselves as living Buddhas and Korea as a Buddha land, and they also promoted the state protection aspects of the faith. In an attempt to strengthen the state Pophung also instituted Chinese-style bureaucratic reforms and strengthened cooperation between the king and aristocracy by formalizing aristocratic privileges. Drawing on this new strength, his successor King Chinhung expanded Silla territory. Betraying its alliance with Paekche, Silla seized the Han River basin in 551, and in 562 he defeated the last of the Kaya states.

It is also King Chinhung who is credited with instituting the Hwarang corps that proved an important component of Silla's growing

KOREA'S THREE KINGDOMS, CIRCA 650



strength. Beginning as bands of young initiates dedicated to song and poetry, by the late sixth century the Hwarang had evolved into a training ground for elite warriors and political leaders drawn from the aristocratic classes.

The seventh century opened as a period of violent stalemate, with none of the three kingdoms able to dominate its rivals. For its part, Koguryo from 598 to 612 was preoccupied by massive offensives by the Chinese Sui dynasty. Koguryo ultimately prevailed, and Sui's tremendous losses helped topple that young dynasty and usher in the Tang in 618. But the first Tang emperor, Taizong, soon revealed himself equally

determined to defeat a recalcitrant Koguryo. A moral justification for invasion was provided in 642 when the Koguryo military strongman Yon Kaesomun (by all accounts a brutal and ruthless figure but one of surpassing military skill) murdered the Koguryo king, installed a puppet on the throne, and seized control of the state. But as with his Sui precursor, Tang Taizong failed in his costly attempt to subdue Koguryo in 645. Ultimately such Koguryo successes played into the hands of Silla.

Following the bitter end to its alliance with Silla in 551, Paekche turned its diplomatic attentions to Japan, forging an alliance with that kingdom that continued until the fall of the Paekche state. In the early seventh century Paekche also allied with Koguryo and began to harass Silla strongholds in the Han River basin. Silla's attempts to ally itself with Japan and then Koguryo fell on deaf ears. Diplomatically isolated, Silla then turned to the Tang dynasty, which was still smarting from its 645 defeat by Koguryo. In 660 Silla brokered an alliance with Tang to launch joint invasions, first of Paekche and then Koguryo. A combined land and sea invasion of Paekche in 660 quickly resulted in that state's fall despite the last-minute aid of Japanese troops. The fall of Koguryo was hastened by its material exhaustion following its protracted engagements with Sui and Tang and then by the death of Yŏn Kaesomun around 666. Upon Yŏn's death civil war erupted among his several sons, with one appealing for aid from Tang and guiding in Chinese forces. A Tang-Silla invasion of Koguryo ended with Koguryo's final defeat in 668.

Silla's relations with Tang soured soon after the fall of Paekche and Koguryo when Tang attempted to create a colony out of the Korean peninsula reminiscent of the Chinese commanderies in the region during the earlier Han dynasty. Unwilling to accept this state of affairs, Silla launched a campaign to expel the Tang forces. A series of Silla victories resulted in the withdrawal of Tang forces from Korea in 676 and the unification of the peninsula for the first time. Meanwhile in what is today far northeastern Korea and the Russian Maritime Provinces, remnants of the defunct Koguryo state combined with elements of Malgal peoples to formally

establish the state of Parhae in 713. Until its fall in 926 this state would enjoy an independent and nearly contemporaneous existence alongside Unified Silla, and thus some Korean historians refer to the period of Parhae and Unified Silla as the Era of Northern and Southern Dynasties.

—Daniel C. Kane

Bibliography

- Iryŏn. *Samguk Yusa, Legends and History of the Three Kingdoms of Ancient Korea*. Translated by Ha Tae-Hung and Grafton K. Mintz. Seoul: Yonsei University Press, 1972.
- Jamieson, John C. *The Samguk Sagi and the Unification Wars*. Unpublished PhD dissertation. University of California, Berkeley, 1969.
- Lee, Ki-baik. *A New History of Korea*. Translated by Edward W. Wagner with Edward J. Shultz. Cambridge, MA: Harvard University Press, 1984.
- Lee, Ki-dong. "Silla Society and the Hwarang Corps." *Journal of Social Sciences and Humanities* 65 (June 1987): 1–16.
- Rutt, Richard. "The Flower Boys of Silla (Hwarang): Notes on the Sources." *Transactions of the Korea Branch of the Royal Asiatic Society* 38 (October 1961): 1–66.
- Tikhonov, Vladimir. "Hwarang Organization: Its Function and Ethics." *Korea Journal* (Summer 1998): 318–338.
- Wong, Joseph. "Unfought Korean Wars: Prelude to the Korean Wars of the Seventh Century." *Papers on Far Eastern History* 22 (September 1980): 123–158.

An Lushan Rebellion

The An Lushan Rebellion took place between 755 and 763 during the Tang dynasty (618–907). In Chinese history this event is known as the An-Shi Rebellion to include another major rebel leader, Shi Siming. Although the revolt did not topple the dynasty, it inflicted the Tang a heavy blow by shaking its imperial foundations, a factor that led to its decline.

By the mid-eighth century, Tang China was unrivaled in the world for its wealth, power, and stability. However, serious problems slowly emerged. The concentration of land in the hands of large landowners resulted in small landholders becoming tenants, indentured laborers, or migrating beggars. Scholars estimate that more than 5 million such migrants roamed the empire

THE AN LUSHAN REBELLION, DECEMBER 16, 755–FEBRUARY 17, 763



by the mid-eighth century. This phenomenon alone impacted the Tang military system, which required peasants to serve in the army. With no land, few peasants were willing to perform this obligation, which compelled the Tang to adopt a new system of hiring professional soldiers. This special tie enabled commanders, such as An Lushan, to enjoy loyalty from those soldiers who expected booty and benefits from commanders.

Political corruption was also prevalent during the Tang dynasty. Xuanzong's long rule eroded his enthusiasm for handling tedious political issues. He became infatuated with Lady Yang and left state routines to corrupt officials and eunuchs. The ruffian Yang Guozhong, Lady Yang's cousin, even became the prime minister.

At the provincial level, it was not unusual for a rich man to purchase an official title. On the one hand, these weakened Tang's administrative effectiveness; on the other hand, they were used as a pretext for An Lushan to stage a rebellion.

The immediate cause for the rebellion was frontier military arrangements. In the 740s the Tang court appointed non-Chinese generals to command frontier garrisons on the grounds that they were brave and maintained no political affiliation. This allowed a number of non-Chinese, including An Lushan, to gain military commands. Within a decade, An was conferred commanderships in the northern Chinese frontier. It was from this base that he eventually launched his rebellion.



This Song period reproduction of an eighth-century landscape depicts Tang dynasty emperor Xuanzong (the mounted figure in foreground, crossing bridge) fleeing with his party to Sichuan. An Lushan's attack on Chang'an in 756 forced Xuanzong to evacuate the capital. (Werner Forman/Art Resource, NY)

An Lushan rose in revolt against the Tang in 755 by commanding 150,000 troops to march southward with the excuse of removing corrupt officials from the royal court. Seized with panic, the Tang rushed to a fight with newly recruited soldiers who were mercilessly routed. In a few months An occupied most of the Yellow River basin, including the strategic city of Luoyang, where he proclaimed himself emperor of a new dynasty, Dayan.

However, An Lushan was blocked by the Tang troops at the impregnable defensive mountainous pass called Tongguan. At this crucial moment, the Tang court made a disastrous decision by ordering those troops to attack An on flat land. The troops were mercilessly beaten. As a result, the road to the capital of Chang'an lay open. An pressed forward and occupied the capital in 756. Emperor Xuanzong fled to Sichuan, but on his way his mutinous troops killed both Yang Guozhong and his cousin Lady Yang. This incident led to a transfer of power to the crown prince, who escaped to Lingwu (in present-day Ningxia). In 756 he assumed the emperorship as Emperor Suzong, and during the next six years he organized an army to fight An and his rebels.

From 756 to 762 much of northern China was plunged in bloody wars, and millions died. As it turned out, An Lushan was murdered by his subordinates who supported his son An Qingxu.

➤ AN LUSHAN, 703–757 CE

An Lushan epitomizes the Tang empire's multiculturalism. His non-Chinese background has long been known. However, recent studies further trace his paternal origin to Sogdian and his maternal side to Turkish ancestry. After his father died, his mother brought him to Manchuria where he adopted his stepfather's surname of An. His contact with various cultures enabled him to acquire fluency in six different languages.

An Lushan joined the Tang army and rose from the ranks until becoming the commander of Pinglu (present-day Liaoning), Fanyang (present-day Hebei), and Hedong (present-day Shanxi). He became a favorite of both Emperor Xuanzong and his concubine Lady Yang. One story is often cited to show An's shrewdness for imperial favor. When the emperor asked about his fat body (more than

300 pounds according to one source), An replied that "inside is nothing but a big loyal heart to my emperor." As a result, Xuanzong trusted him. The emperor never imagined that An would someday betray him.

An's rebellion did not gain him popular support. On the contrary, he became notorious when he ordered the sack of cities and slaughter of civilians. Ironically, he became paranoiac after he entered Luoyang and frequently ordered the flogging and execution of his subordinates. His volatile temper is diagnosed by modern doctors as a symptom of diabetes due to obesity. He had ulcerous warts all over, a factor that eventually left him blind. His explosive rage that terrorized his entourage finally killed him.

—Patrick Fuliang Shan

The division of the rebellious camp gave the Tang an opportunity to mobilize soldiers to recover both Chang'an and Luoyang in 757. Meanwhile, loyalist officials coordinated in their defense and resistance. For example, Zhang Xun guarded Suiyang (present-day Shangqiu) for almost a year with a small contingency, smashing the enemy's plan to invade southern China. Zhang Xun fought to the last man, for which he was canonized by the Tang as a national hero. In 759 An Qingxu was killed by Shi Siming, who crowned himself the next rebel emperor. Shi recaptured Luoyang and planned to retake Chang'an. Nevertheless, Shi Siming was murdered in 761 by his own son Shi Chaoyi, who became the last rebel emperor. In the next two years Shi Chaoyi was pursued by Tang troops and suffered defections by his own soldiers. In despair, Shi Chaoyi committed suicide in 763, formally ending the rebellion.

The An Lushan Rebellion was a turning point in Tang history. Many regions were depopulated as many millions of civilians lost their lives, and those who survived suffered severe economic and social dislocation. Consequently, the Tang financial machinery malfunctioned. The war forced many northerners to take flight to the south, shifting Tang's economic center to the Yangtze River basin.

The most devastating impact of the rebellion was the formation of the warlord system. When the rebellion was suppressed in 763, about 75 percent of the governors in the provinces were military men. Soon after, the Tang created 43 military commanderships throughout the empire (only 10 on the frontiers before the rebellion). Many of those commanderships became hereditary, and the holders of these offices enjoyed semi-independence. This chronic militarism deeply divided the Tang empire into autonomous domains free from the control of the central government. The Tang had to depend on foreign or barbarian troops for its own defense, echoing the similar situation of late imperial Rome.

The revolt forced the overstretched Tang empire into contraction and made it a defensive rather than an expanding empire. The rebellion encouraged a number of ethnic states to invade Tang China, and the Tibetans briefly occupied

Chang'an in 763. Along the southern frontier, while Tang soldiers were moved to the north to fight the rebels, Nanzhao started to take over the vacated territories. As central Asia fell into Turkish or Tibetan hands, commerce on the formerly thriving Silk Roads suddenly slackened. Consequently, the Tang empire decayed. Although it existed in name for another century, its influence and prestige no longer existed. It was able to survive the next 100 years because southern China was not impacted by the rebellion.

—Patrick Fuliang Shan

Bibliography

- Benn, Charles. *China's Golden Age: Everyday Life in the Tang Dynasty*. Oxford, UK: Oxford University Press, 2002.
- "Biography of An Lushan and Shi Siming." In Ouyang Xiu, *Xin Tang Shu [The New History of the Tang]*, 8:6411–6435. Reprint. Taipei: Dingwen Shuju, 1998.
- Pulleyblank, E. G. *The Background of the Rebellion of An Lushan*. Taipei: Rainbow-Bridge Books, 1966.
- Pulleyblank, E. G. *Essays on Tang and Pre-Tang China*. Burlington, VT: Ashgate, 2001.
- Zhigong, Niu. *An Lushan Shi Siming Pingzhuan [A Critical Biography of An Lushan and Shi Siming]*. Xi'an: Sanqin Chubanshe, 2000.

Japan's Military and the *Emishi* Pacification Wars

Until well into the ninth century the northeastern third of Honshu remained outside the Japanese imperium as a hazy frontier zone inhabited by a people known to the court as the *emishi*. While cultural, political, and economic interaction between this region and the rest of Japan was ongoing from prehistoric times, efforts to absorb the *emishi* and their homelands began in earnest during the second half of the seventh century, after the establishment of the imperial state.

The first such efforts centered on the creation of outposts (usually called forts or stockades in English) and the transplanting of households from eastern and northeastern provinces into the territory. These outposts were fortified, defended by government troops, and served as places into which settlers could

► WHO WERE THE *EMISHI*?

The *emishi* inhabitants of the northeastern frontier region were politically, culturally, and linguistically distinct from the peoples of central and western Japan, but their ethnic identity remains a matter of debate. The issue is, in fact, largely moot, for the term *emishi* was primarily a political appellation, not an anthropological one. It referred to peoples as yet outside the Yamato polity without regard for race.

Although there appears to have been considerable continuity of material and linguistic culture across northern Honshu and Hokkaido, the indigenous societies of the region were organized into tribal villages, which functioned independently of the others. When necessary, related tribes could combine into short-lived federations, but the tribal structure remained intact within the larger organization. At other times even related tribes were regularly at odds—even at war—with one another.

Emishi ethnic identity emerged as a product of interaction and conflict with the expanding Japanese imperial polity. Similar processes also defined two later ethnocultural groups in the same region: the *ezo* of the medieval era and the *Ainu* of early modern and modern times. While there is clearly significant cultural and genealogical overlap between these three groups, there was also substantial diversity between them, within each, and between each and the rest of the Japanese. It is therefore anachronistic and meaningless to attempt to project modern ethnic labels such as “Japanese” or “Ainu” back onto the *emishi* peoples of the pacification era.

—Karl Friday

retreat in times of danger, but initially they supported a mostly nonbelligerent diffusion of imperial subjects and authority into the frontier.

This more or less passive approach ended in 709, when the court began sending armies into the region to build roads and intimidate uncooperative residents. From this time forward, violent confrontations with the *emishi* became more frequent, as the court’s objective shifted from simple absorption to military conquest and subjugation. In 774 the court committed itself—albeit with some internal opposition—to a policy of pacification that would take more than three decades to complete. On at least ten occasions

between 774 and 811, expeditionary forces marched northward to pacify the *emishi*, meeting a mixed record of victories and defeats. The last campaigns, under Sakanoue Tamuramaro in 801 and Funya Watamaro in 811, were, however, pronounced successful. The court thereafter officially declared the *emishi* to have been pacified, and the frontier to have ended.

In fact, the notion of a pacification era was largely a creation of court oratory and propaganda, bounded on both ends not by meaningful changes in circumstances in the northeast but by government declarations. Rhetoric notwithstanding, court expansion into the region continued along much the same lines as before and after the campaigns, as did *emishi* resistance.

Ironically, the subjugation efforts proved to be between both the first and the last activities of the imperial polity in its original form. By the time they ended, the state was undergoing profound changes to its military institutions, its tax collection mechanisms, and its apparatus for central and local government decision making. In fact, the court’s ninth-century efforts to complete the assimilation of the northeast ultimately gave virtually the whole of its machinery for local rule over to *emishi* leadership, a process that foreshadowed what happened elsewhere in the country during the tenth to thirteenth centuries. During the eleventh and twelfth centuries, successive houses of *emishi* descent—the Abe, the Kiyowara, and the Fujiwara—were able to establish nearly autonomous satrapies in Mutsu province, which endured until Minamoto Yoritomo’s northern campaign in 1189. Thus *emishi* autonomy ended only as the court’s exclusive grip on authority in the provinces ended, which occurred in the medieval era.

—Karl Friday

Bibliography

- Batten, Bruce L. *To the Ends of Japan: Premodern Frontiers, Boundaries and Interactions*. Honolulu: University of Hawai'i Press, 2003.
- Farris, William Wayne. *Heavenly Warriors: The Evolution of Japan's Military, 500-1300*. Cambridge, MA: Harvard University Press, 1992.
- Friday, Karl. *Hired Swords: The Rise of Private Warrior Power in Early Japan*. Stanford, CA: Stanford University Press, 1992.

► THE *RITSURYO* MILITARY SYSTEM

The imperial state legal codes (*ritsuryo*), promulgated in 702, defined an elaborate military apparatus centered on a militia composed principally of peasants conscripted as part of their normal tax and corvée obligations and registered in provincial regiments, or *gundan*. The majority of the troops attached to these militias spent most of their year tilling their fields and were called up in rotation for training and service for 35 days each year.

In time of war, an expeditionary force was knit together from temporarily mobilized provincial regiments under staff officers holding temporary commissions. At the close of a campaign the officers' commissions expired, the army was dissolved, and the troops were returned to their homes. This militia-based system enabled the imperial court both to maintain a near-monopoly on military manpower and the use of force and to

muster very large-scale fighting forces when needed without straining its agricultural base the way a standing army would have.

Tactically, the imperial armies were predominantly light infantry that fought with bow and arrow from behind portable standing wooden shields. These bowmen were augmented by other foot soldiers bearing spears, by bow-wielding cavalry, and by a somewhat mysterious artillery piece called an *ōyumi* or *do*, which appears to have been some sort of platform-mounted crossbow on the order of the Roman ballista. An army of this sort is formidable in pitched battles, particularly on the defensive. But it is logistically ill suited to long offensive campaigns because of its size and because it draws as its manpower the same farmers who produce its food and other supplies.

—Karl Friday

Friday, Karl. "Pushing Beyond the Pale: The Yamato Conquest of the *Emishi* and Northern Japan." *Journal of Japanese Studies* 23(1) (1997): 1–24.
McCullough, William H. "The Heian Court, 794–1070." In *Cambridge History of Japan*, Vol. 2, *Heian Japan*, edited by Donald H. Shively and William H. McCullough. New York and Cambridge: Cambridge University Press, 1999.

Chinese Foreign Relations

Chinese foreign relations between 300 BCE and 1000 CE demonstrated multiple characteristics: they went through many transitions, and policies varied toward differing foreign peoples. However, there was also consistency to foreign relations. The cornerstone of Chinese foreign relations was the so-called tributary system, and in the long run the tributary system led to military conquest, new trade, and the spread of ideas, which in turn brought together more closely the different communities in and around the Chinese world.

The tributary system originated long before 300 BCE, at least in the period of Western Zhou (eleventh through eighth centuries BCE), where the lesser lords presented local products from their native places to the Zhou ruling house as

tributes. It was a way to honor the Zhou's superior power and its suzerain claim to legitimacy. The Han (206 BCE–220 CE) inherited the idea and on it based their foreign policy. When the policy developed into a system, it became the tributary system. Under the system, the Han offered military protection and political recognition to lesser polities surrounding its empire in exchange for their pledge of loyalty and acceptance of the status as vassals. Loyalty was manifested in many ways, including the vassal's frequent trips to the Han capital for imperial hearings, offers of local products as tributes, the sending of a vassal prince to Han as hostage, and the adoption of the Han calendar. The vassal was usually left alone subsequently, allowed to administer his own domain and pass it along the family line. During the Han period, the tributary system bonded together many regimes around the empire. After taking shape, the tributary system remained the basic framework of Chinese foreign relations for the many dynasties that followed, albeit with some minor modifications.

In the tributary system, the bond between the suzerain ruler and the vassal varied from individual to individual and from time to time. Geographical distance, political importance,

➤ HAN CHINESE MARRIAGE ALLIANCES

Marriages for political purposes played a very important role in foreign relations in almost all ancient societies, but in ancient China the practice of marrying imperial princesses to rulers beyond the border was especially common. The practice, known as *Heqin*, not only became a cornerstone in Chinese foreign relations but also became the stuff of legends. Dramatic stories of princesses who made the ultimate sacrifice for the wellness of the country captured the Chinese imagination. One such princess was Wang Zhaojun of the early Han dynasty. Wang was among the emperor's large harem and was chosen, according to the legend, because the emperor did not realize how beautiful she was. Her marriage with the Xiongnu Khan secured a peace for several decades. The other well-known princess in the *Heqin* diplomacy was Princess Wencheng of the Tang dynasty, who was married to the ruler of the then-powerful Tibetan kingdom, Songtsan Ganbu. Wencheng not only sealed a vital alliance between the Tang and Tibet but also was instrumental in the cultural exchanges between the two countries. The stories of Wang Zhaojun and Princess Wencheng became favorite subjects in the Chinese literature and arts and continue to be popular today.

—Yi Li

balance of power, and economic vitality often had a bearing on such bonds. The weaker and smaller regimes in Korea, located right next door to the Central Plain, were usually placed under the more direct watchful eye of the Chinese rulers. The southern Xiongnu, who started paying tributes to the Han in the first century BCE, eventually became absorbed in the Han agricultural society. The tribal peoples in the Red River basin in today's Vietnam, on the other hand, had long been under the direct rule of China but became a tributary vassal after winning independence in 939. Meanwhile, many regimes across the vast regions west of China once had pledged loyalty to the Tang emperor (618–907) but switched their loyalty to the Arabic caliph after the 751 Battle of the Talas River.

In addition, the emperor in China did not always play the master in the working of the tributary system. The identities of lord and vassal

depended on the balance of power between the interacting parties. After political unity fell completely apart in 317, rampant disorder left the regimes in China vulnerable to attacks by the nomads. After 415 the Tuoba tribe of the nomadic Xianbei restored order as the Northern Wei dynasty and extracted tributes from lesser powers around its empire, both Chinese and non-Chinese. The Tang dynasty (618–907), which not only continued but also expanded and perfected the tributary system, was partly non-Chinese in its origin. While both the Tuoba and the Tang might have adopted the Chinese ways, the Chinese emperor did not always have the upper hand in the tributary system. After the destructive An Lushan Rebellion in the mid-eighth century, the Tang court survived only at the mercy of the regional powers and non-Chinese forces, noticeably the Tibetans and the Uighurs. The large payments that the Tang had to make in exchange for peace often raised questions on whether the “barbarians” were paying tributes to the Chinese emperor or the other way around.

While the tributary system was the overtone in China's foreign relations, the Chinese were also related to their neighbors in many other ways. First of all, the power of the Chinese imperial state waxed and waned at a different pace from its neighbors; as a result, a tipping of the balance of power often led to military conquests. Under the Qin and Han (221 BCE–220 CE) and then under the Sui and Tang (587–917), China was on the offensive but was on the defensive in the period in between. The continuous seesaw battles resulted in frequent cross-cultural interactions between them. Movements of peoples from one place to another became accelerated, and trade prospered. The differences between the agricultural Chinese on the one hand and the pastoral nomads in the north and tribal peoples in the south on the other hand generated great incentives for trade. Small-scale spontaneous trade must have long existed, but it was the participation of the government that propelled the foreign trade to a much higher level. The trade developed best along two roads: the land road that cut through Inner Asia and connected China to the lands of India, Persia, and as far as to Rome and the sea route that

reached out to Southeast Asia and from there to the India Ocean. Because the main product that traveled along these trade roads was Chinese silk, these became known as the Silk Roads. Many communities along the Silk Roads thrived, and foreign imports shaped Chinese society in many ways. Dunhuang, an oasis town in the Gobi desert along the land Silk Roads, was once the second-largest city in the Tang, with a population of 700,000. Toward the tenth century, however, the sea route gradually prospered, and the Song dynasty had a special office in the southern port city of Guangzhou overseeing the maritime trade.

Moving along the Silk Roads were not only people and commodities but also ideas. Many other peoples were attracted to the better-developed Chinese culture, adopting the Chinese political and economic systems, writing, and philosophy. The Tuoba people probably went through the most thorough process of sinicization, as they, having settled down in China proper since the fifth century, took up the Chinese language, institutions, and customs. Another example was the spread of Chinese culture to Vietnam, Korea, and Japan, a process beginning in the first century BCE. The Japanese adoption of Chinese culture climaxed in the seventh century, when the Taika Reform introduced into Japan the centralized government system, a public landowning system, Chinese writing, and Confucianism. Even the capitals of Japan, first Nara and subsequently Heian-kyo (Kyoto), were miniatures of the Tang capital of Chang'an in China. But the spread of cultures was not at all one-way traffic; many foreign ideas were introduced into China, the most significant of all was Buddhism. First introduced to China by the merchants traveling on the Silk Roads in the first century, Buddhism took root in China beginning in the third century, catering to the rising spiritual need of the Chinese as chaos set in during the period of disunion. Over time it gradually mingled with the indigenous teachings, mainly Daoism, to develop distinct Chinese characteristics. Chinese Buddhism was subsequently spread to Korea, Vietnam, and Japan and remained an important defining factor in the continuous transformation of the cultures in all these societies.

—Yi Li

Bibliography

- Bentley, Jerry H. *Old World Encounters: Cross-cultural Contacts and Exchanges in Pre-Modern Times*. New York: Oxford University Press, 1993.
- Cui, Mingde. *Zhongguo Gudai Heqin Tongshi* [Complete History of Marriage Diplomacy in Ancient China]. Beijing: Renmin Chubanshe, 2007.
- Gernet, Jacques. *A History of Chinese Civilization*. Translated by J. R. Foster. Cambridge: Cambridge University Press, 1999.
- Hansen, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2002.

Japan's Position in the China-Centered World System to 1000 CE

Although Japan is an island country, it developed historically as part of a larger China-centered world system. Beginning in Han times (206 BCE–220 CE), chiefdoms and states in the Japanese islands, the Korean Peninsula, and elsewhere were bound to the central kingdom (China) and to each other by political and military interactions as well as flows of information and material goods. These external connections had a decisive impact on the development of Japanese society in the period through 1000 CE.

China was historically more populous, more powerful, and more socially and culturally advanced than other regions in East Asia. China's immediate neighbors tended to view it as both a threat and a role model and to view each other as rivals to be outdone. The process of state formation along the Chinese periphery can be described as one of competitive emulation among peer polities in the shadow of Chinese civilization.

The language of this competition was largely determined by the Chinese concept of world order. Partly out of ethnocentrism but also partly because of China's objectively preeminent status, Chinese leaders believed that their country was inherently superior to other states. In their view, diplomatic relations with other states were an expression of the hierarchical world order, with foreign leaders sending official missions to China in order to present tribute.

➤ HAKATA, GATEWAY TO JAPAN

Kyushu Island, and particularly the area around Hakata Bay, historically served as Japan's front door. Situated just 160 miles southeast of Pusan, South Korea, Hakata lies on the shortest and most convenient route between Japan's early capitals and the Asian continent. As such, Hakata was a natural locus for international and intercultural exchange. It was also a natural focus of attention for Japanese political authorities, who sought to control transborder interactions both for reasons of security and in order to monopolize the wealth and prestige accruing from diplomatic and commercial ties with other lands.

Hakata first came under the control of Japan's rulers in the sixth century CE following a brief war of secession by a Kyushu strongman, Iwai. During the seventh-century Korean unification wars, Hakata became a command post for Japanese military operations. After Japan's 663 defeat, an office named Dazaifu was established near Hakata. Dazaifu was responsible for coastal defense and for monitoring the arrival of foreign visitors. The number of such visitors increased substantially from the ninth century, when Chinese and Korean merchants began visiting Japan to sell exotic foreign goods. After the twelfth century government officials lost control of the trade, and Hakata became a thriving commercial entrepôt.

—Bruce L. Batten

Foreign leaders, far from rejecting the premise of Chinese superiority, were frequently enthusiastic participants in the China-centered world order. This was certainly true in the Japanese islands, from which the first recorded tribute mission to China was sent in 57 CE. Numerous other missions were sent in the early centuries CE, most famously by Queen Himiko in the third century and by the so-called Five Kings of Wa in the fifth. ("Wa," or "Wo" in Chinese, referred to the western part of what is now Japan.) These missions were motivated by the desire for Chinese titles (e.g., king of Wa) and prestige goods (e.g., gold seals, mirrors, etc.), both of which were essential to the political legitimacy of Japanese rulers. No stable, unitary state yet existed in the Japanese islands,

and leaders needed all the help they could get in their struggle for domestic supremacy.

The overseas concerns of Wa leaders also extended to Korean kingdoms such as Koguryo, Paekche, and Silla. The Five Kings of Wa, for example, sought Chinese titles granting them authority over various parts of Korea, again out of the desire for prestige and legitimacy. For the same reason and also to obtain needed cultural goods and raw materials (e.g., iron), Wa leaders pursued direct contacts with Korea, most closely with the southwestern kingdom of Paekche.

The international situation in East Asia heated up considerably with the emergence of a unified, expansive empire in China under the Sui dynasty (581–618) and the Tang dynasty (618–907). Chinese expansion had a ratcheting effect on competition among the various Korean kingdoms and Wa. The result was the Korean unification wars in which Silla, aided by Tang, vanquished the other Korean kingdoms and gained control of the peninsula in 668. Wa, which sided with Paekche, suffered a major defeat at the hands of Silla and Tang in 663. The pervasive atmosphere of competition and foreign crisis gave Wa leaders the motivation and means to pursue domestic political reforms culminating in the emergence of a stable, centralized state (newly christened Nihon, or Japan) in the late seventh and early eighth centuries.

During the eighth and ninth centuries Japan remained politically linked to the rest of East Asia but from a position of greater strength than before. Japanese leaders continued to send ambassadors to China but no longer sought tributary status, which was now perceived as demeaning. Meanwhile, they strove to create an alternate Japan-centered world order in which Silla, and later Parhae (also known as Bohai), a Manchurian kingdom that sent its first embassy to Japan in 727, were expected to play the role of tributaries. Not surprisingly, Japan's diplomatic partners did not always share its perception of these relationships. Silla in particular strongly objected to treatment as a Japanese tributary, and relations between the two countries were notoriously rocky.

Tang, Silla, and Parhae all fell in the early tenth century, after which Japan entered a long period of self-imposed diplomatic isolation. Japa-

nese rulers were secure in their rule and no longer in need of support from abroad. Furthermore, exotic foreign goods were now available through commercial as well as diplomatic channels. Chinese and Korean traders first began visiting Kyushu in the early ninth century, and by the early tenth century they had completely supplanted diplomats as the primary medium of international contact between Japan and the Asian mainland. Japan remained tightly linked to China and Korea but only in cultural and economic terms, not political or diplomatic ones.

—Bruce L. Batten

Bibliography

- Batten, Bruce L. *To the Ends of Japan: Premodern Frontiers, Boundaries and Interactions*. Honolulu: University of Hawai'i Press, 2003.
- Batten, Bruce L. *Gateway to Japan: Hakata in War and Peace, 500–1300*. Honolulu: University of Hawai'i Press, 2006.
- Holcombe, Charles. *The Genesis of East Asia: 221 B.C.–A.D. 907*. Honolulu: Association for Asian Studies and University of Hawai'i Press, 2001.
- Wang Zhenping. *Ambassadors from the Islands of Immortals: China-Japan Relations in the Han-Tang Period*. Honolulu: University of Hawai'i Press.

■ Introduction: South and Southeast Asian Wars

During this era, wars in India and Southeast Asia were commonly fought between forces, which by modern standards may have been numerically small but as a percentage of the existing populations were large at least in Southeast Asia. Horse cavalry were less numerous than in China or the west, but elephants were widely used. The most effective weapon used in India was bamboo or sometimes steel longbow that could shoot arrows with enough force to penetrate armor and stop cavalry charges by invaders from central Asia.

In this introduction, we will discuss conflicts in five areas:

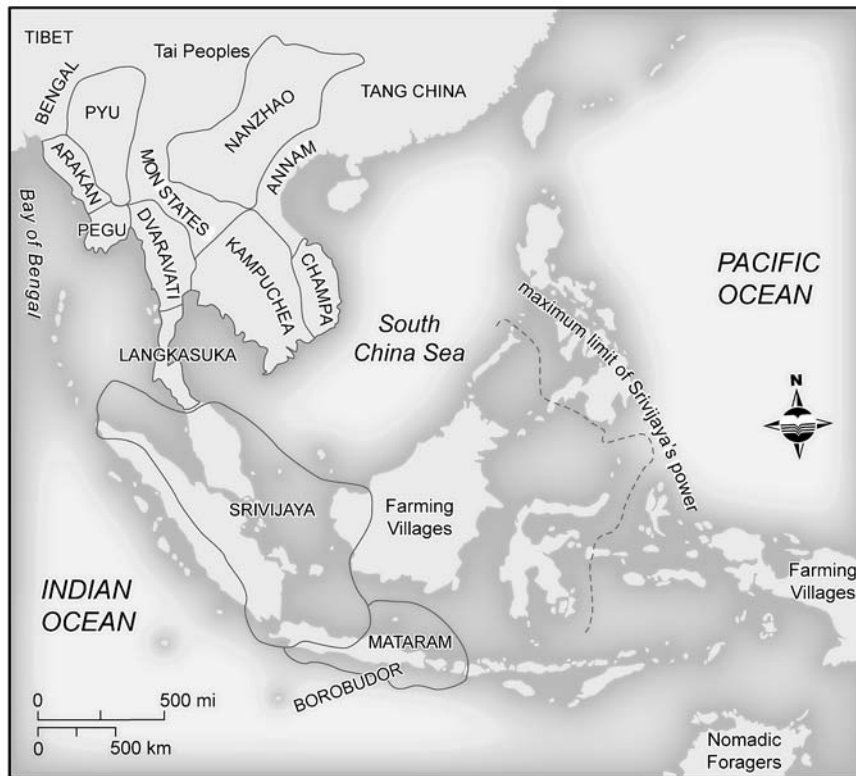
- 1) Northern India, including the Indus and Ganges valleys
- 2) The Deccan, or central India
- 3) Southern India, including the southern third of the peninsula plus the island of Sri Lanka
- 4) Mainland Southeast Asia
- 5) Island Southeast Asia

In northern India, the most significant conflicts, after the establishment of the Gupta empire, were those caused by the invading Hephthalites, or Huna (White Huns). The Hephthalites were “barbarian” invaders from central Asia who had fought long wars with the Sassanian

Persians and occupied Bactria (Afghanistan). From 450 to 528 they regularly swept through the passes to raid the northwest and the Ganges Valley. Although some sources claim that the Hephthalites temporarily toppled the Gupta empire, an Indian force decisively defeated the invaders, ending their menace. After the defeat of the Hephthalites, a series of confused “feudal” wars descended on northern India until Harsha Verdhanta united northern India in 606. Harsha’s 41 years of rule were filled with frequent warfare while he extended his realm to include territory from Gujarat to northern Bengal. Harsha failed in his attempt to extend his empire south, when he was soundly defeated on the banks of the Narmada River by Pulakesi II, ruler of the Chalukya empire of the Deccan. When Harsha died in 647, northern India again devolved in localized feudal wars.

In 711–712, forces of the Umayyad caliphate from Syria invaded and conquered Sindh, a province at the mouth of the Indus River. In 738, Muslim advance in India was stopped at the Battle of Rajasthan, when a force of Rajputs, led by the Pratihara king Nagabhata, destroyed an Arab army, driving the Muslims back across the Indus River. This Muslim defeat stopped the Muslim advance into India for nearly three centuries. This was six years after

SOUTHEAST ASIA, CIRCA 700



the Muslim advance in western Europe at the Battle of Tours.

From the middle of the eighth century to the middle of the tenth century, two north Indian empires (that of the Pratiharas, centered in Gujarat, and that of the Palas in Bengal) and one central Indian empire (that of the Rashtrakutas) struggled for supremacy in the Ganges Valley. The focus of their conflict was the city of Kannauj, which had been Harsha's capital. The forces of these three were nearly evenly matched, so the city changed hands several times in these two centuries.

The Chalukyas ruled most of the western Deccan from the middle of the fifth century to 753, when they lost out to the Rashtrakutas. As we have seen, the Chalukyas intervened in northern affairs to stop Harsha's empire from expanding south. The Chalukyas also waged frequent wars against the Pallavas in southern India and the Rashtrakutas in the Deccan until the Rashtrakutas crushed the Pallavas in 753. The Rashtrakutas then ruled the western Deccan and, as we

have seen, contested for supremacy in the Ganges Valley until their downfall toward the end of the tenth century.

At the southern end of the Indian peninsula, the Pallavas contested with the Pandyas, the Cholas, and sometimes the Cheras for dominance. The Cheras, whose strength was situated in the Malabar (western) coast, were somewhat peripheral in this contest. The Pallavas were the dominant power in southern India for several centuries after the sixth century (chronology in early medieval southern Indian political history is somewhat indeterminate) until the Cholas defeated them in the mid-ninth century. The Pandyas were concentrated on the southern tip of the peninsula, and the Cholas too subdued them in the ninth century.

On the island of Sri Lanka, the enduring conflict was between the native Sinhalese kingdoms and the Pandyas and Cholas, who invaded and occupied the northern part of the island numerous times. The Cholas sent naval expeditions to points on the coast of the Bay of Bengal and into

the islands of the Indonesian archipelago repeatedly for three centuries, until 1250.

Toward the end of the eighth century, Javan pirates attacked the capital of Cambodia and seized the king. A successor drove the Javan out and moved the capital to Angkor in 802. The Khmer kingdom of Cambodia was the leading state in mainland Southeast Asia. The Khmers waged wars against the Mon kingdoms of Dvaravati and Lophuri (in present-day Thailand), which they sometimes reduced to tributary status. But perhaps the most persistent conflict was with the kingdom of Champa (on the central and southern coast of present-day Vietnam). Several times Khmer forces occupied the Cham capital, but sometimes Cham forces defeated Khmer armies. The Khmer-Cham conflict persisted for nearly a millennium, from the sixth century to nearly the sixteenth century.

Champa also had another persistent antagonist, Vietnam. During this era, Annam, as Vietnam was then known, was a province of China. The Chinese in Annam conducted frequent campaigns against Champa. China's Sui dynasty, around 600 CE, sent a force that temporarily occupied Champa's capital. After Vietnam won its independence from China in the tenth century, successive Vietnamese dynasties continued the conflict until they destroyed the last Champa kingdom in the sixteenth century.

In the Irawaddi Valley, where modern Myanmar is today, the Pyu kingdom of Shrikshetra experienced frequent invasions from the aggressive Nanzhao kingdom, located in the modern Chinese province of Yunnan. Nanzhao reduced Shrikshetra to a vassalage and, when the people revolted (832), destroyed the Pyu capital, Hmawza, and transported the people as slaves to the Nanzhao capital on Lake Dali. Nanzhao also waged frequent wars with Burmese Pagan after 800.

In the Indonesian archipelago, Buddhist Srivijaya and the Hindu kingdoms in central Java clashed until the Hindu kingdoms drove Srivijaya's allies from central Java.

—Wilfred J. Bisson

Bibliography

Bisson, Wilfred. *Global Connections: The World in the Early Medieval Age, 600–900 CE*. Philadelphia: Exlibris, 2003.

Stein, Burton. *A History of India*. Cambridge, UK: Blackwell, 1998.

Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*, Vol. 1, Part 1, *From Early Times to c. 1500*. Cambridge: Cambridge University Press, 1992.

Tharpar, Romila. *A History of India*, Vol. 1, *From the Discovery of India to 1526*. New York: Penguin, 1966.

Mainland Southeast Asian Wars

For the period under consideration, three major political centers can be identified: central Burma inhabited by the Pyu, the lower Menam (Chao Phraya) basin of the Mon people, and the region comprising the Mekong Valley and Vietnam. The latter two areas have to be taken together, as they formed a single arena fiercely contested among the Khmer, Cham, and Viet peoples. Wars and interaction with the Southeast Asian mainland have to be seen in connection to their relations with the outside world, mainly India and China. For a long time, early Southeast Asia has been regarded as being Indianized or Hinduized, two terms denoting Indian influence in Southeast Asian culture, discernible in the fields of religion (Hinduism, Buddhism), language, or astronomy. However, on the one hand the size of Indian influence has to be set against the influence exerted by the Chinese, as China was a close neighbor and therefore a much more significant political and economic power. On the other hand, the external influence of both India and China have to be set against the autonomous agency of the Southeast Asian people themselves, who could decide between the offers of two cultures rather than simply submitting to them.

Accordingly, Southeast Asian rulers have repeatedly sent diplomatic missions to the Chinese emperors, which not only brought them recognition but usually trade concessions too. Military conflicts between the Chinese emperors and Southeast Asian rulers rarely occurred; apart from the continuous Chinese suzerainty over the Red River plains of northern Vietnam, which lasted for the whole period, the major disturbances were created by the Yunnan-based Nanzhao, who in the eighth and ninth centuries CE frequently raided Southeast Asian territories.

➤ SOUTHEAST ASIAN WAY OF WAR

Classical Indian texts such as the *Mahabharata*/*Ramayana*, the *Arthashastra*, and some late Vedic texts mention the “four parts of the army” (infantry, cavalry, elephantry, and chariots). However, only the former three are to be found in Southeast Asian armies of the same period. Instead of chariots, war boats were better suited for Southeast Asia’s many rivers. Success in a war depended as much on a ruler’s ability to muster a large number of foot soldiers as it did on his ability to raise and maintain sufficiently trained war elephants. Manned with bowmen and a mahout and often surrounded by infantrymen to protect their vulnerable legs, elephants were the “tanks” of the military equipment in pre-modern Asia.

—Tilman Frasch

In addition to these intra-Asian connections, the Southeast Asian mainland was linked to the outside world by way of trade. Much evidence for long-distance trade comes from Oc-eo, an emporium in the western part of the Mekong Delta flourishing since around the second century CE. Excavations have yielded a broad spectrum of goods and artifacts originating from the Mediterranean, Persia, India, and China.

The period witnessed many conflicts and feuds among the rulers and headmen of Southeast Asia, most of which seem to have gone unrecorded. The major exception appears to be the Cambodian-Vietnamese struggle that intensified with the rise of Angkor after 800 CE. The one area affected by this struggle was the long coastal strip of what is now Vietnam. Its northern part had earlier come under Chinese domination, and it was not before the eleventh century that the Vietnamese rulers of the Ly dynasty could contain the Chinese temporarily. The Vietnamese were in turn challenged by the Cham people, who ethnically and linguistically belong to the Malayo-Austronesian peoples. The Chams repeatedly defeated the Vietnamese, but with the rise of Angkor in the west, they became themselves sandwiched between the Vietnamese and the Khmers. The Khmers invaded Cham territory for the first time in the mid-tenth century, although the major wars between the two powers were

fought only in the twelfth century, when the Chams first conquered Angkor and were then defeated by the Khmer. A panel from Angkor Vat, which shows that the Chams invaded the country on ships, actually comes from the twelfth century but may reflect an earlier form of warfare as well. In fact, once the hills separating the Vietnamese coast from the catchment area of the Mekong are crossed, the Mekong and Thonle Sap rivers form natural waterways that allow easy access into Angkor. Numerous examples, ranging from Javanese raids on Vietnam and Cambodia to the campaign of a South Indian armada against Sri Vijaya around 1025 CE, illustrate that ships were capable of transporting armies, including horses and elephants.

The Javanese raids of the Southeast Asian mainland, which took place in the eighth and ninth centuries CE, seriously affected its political developments. It seems that the Javanese temporarily succeeded to establish a lasting overlordship in the conquered coastal areas. The relocation of the Khmer capital from the coastal area around Oc-eo to Angkor in the interior could have resulted from the expectation that it would in the future deny Javanese warships easy access to the capital.

Angkor’s rise to dominance over the mainland after 800 CE was based on territorial expansion, mainly into the western mainland. This affected first the settlements of the Mon people in the Menam basin, known under the name of Dvaravati. With Angkor expanding, the Mons began to migrate to northern Thailand (Lan-na) and very likely to Lower Burma (Pegu) as well. The migration of the Mons into Burma seems to have been a predominantly peaceful affair, although it added to the pressure put on the Pyu people living in large city-states in central Burma. Although it is uncertain whether we can assume the existence of a single Pyu state, it seems clear that the century between circa 730 and 830 CE was a period of crisis for the Pyu. In addition to the immigrating Mons, the Nanchao of Yunnan repeatedly invaded Upper Burma and on one occasion conquered a major Pyu city, abducting most of its inhabitants. The third party to put pressure on the Pyus was the ethnic Burmans who, having migrated from Inner Asia, finally made their way into central Burma. Becoming sedentary, they

mixed with the Pyus (to whom they appear to be linguistically related), taking over the latter's culture of wet-rice cultivation, city building, and very likely Theravada Buddhism as well. After a dark age of approximately two centuries, the former Pyu settlement of Pagan was to become the capital of the first kingdom of Burma.

Finally, one instance of religious intercourse deserves mention even though it may not qualify as conflict in the narrow sense. Buddhism had been known on the mainland for a long time, but since around 800 CE a new process began to direct the region toward its present shape. While Buddhism disappeared completely from its Indian homeland, the religion became firmly rooted in the societies of mainland Southeast Asia, where Theravada prevailed, and insular Southeast Asia (mainly Java), where Mahayanist and Tantric traditions dominated. Ultimately, Theravada became the mass religion of the people on the mainland, but where Theravada failed to succeed, Buddhism also declined and eventually disappeared altogether.

—*Tilman Frasch*

Bibliography

- Bellwood, Peter, and Ian Glover, eds. *Southeast Asia from Prehistory to History*. London: Routledge, 2004.
- Coedes, Georges. *The Indianized States of Southeast Asia*. Honolulu: University of Hawaii Press, 1968.
- Higam, Charles. *The Civilisation of Angkor*. London: Weidenfeld and Nicholson, 2003.
- Saraya, Dhida. *(Sri) Dvaravati: The Initial Phase of Siam's History*. Bangkok: Muang Boran, 1999.

Island Southeast Asian Wars

Seen from the sea, insular Southeast Asia can be described as the area circumferencing a major maritime highway, sometimes called “the silk roads of the sea.” In effect, this was a set of sailing routes that connected China to the Indian Ocean and the Red Sea. Crossing the Bay of Bengal in the west, this route ran through the Malacca Straits to the southern tip of the Malay Peninsula, where it bifurcated. The northern branch headed straight north toward the southern fringes of the Mekong Delta and then ran

along the mainland coast to China. The southern branch went farther east at first along the north coast of Java. There it split again, taking ships either farther to the Spice Islands or heading north along the coast of Sulawesi Island.

The landscapes along these routes were highly disparate in terms of language and ethnicity, although Malayan dialects seem to have served as a kind of lingua franca (common language). Obviously, the region was open to all kinds of outside influences in which two areas stand out. For a long time, Southeast Asia has been seen as Indianized or Hinduized for the highly visible elements of Indian culture in the religion (both Hinduism and Buddhism), language, or astronomy. This alleged superiority of Indian culture, however, has to be set against Chinese influence, which became manifest in the many tribute missions that Southeast Asian rulers would habitually send to the Chinese emperors. By way of these missions, Southeast Asian rulers gained political recognition combined with trade privileges. The tradition of sending diplomatic missions to the Chinese court also indicates that the question of Indianization versus Sinicization ultimately depends on the autonomous agency of the Southeast Asian sovereigns and people, who could choose from either side what suited their interests best.

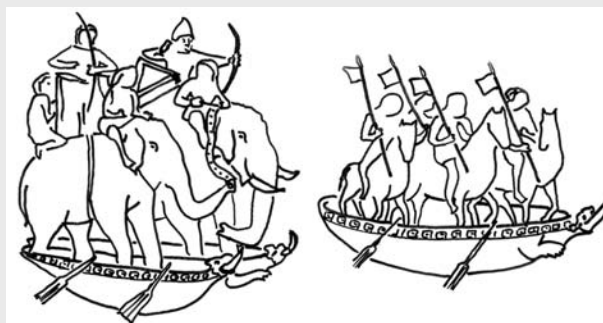
Most of the intercourse taking place in the archipelago would have been of a peaceful nature, consisting especially of trade and all forms of economic exchange. Accordingly, evidence for trade with virtually all the rest of the world has been found at many port sites of Southeast Asia. Along with this, trading communities including Arabs, Jews, Persians, Armenians, Indians, and Chinese came to the area and occasionally settled there as well. A case in point is the South Indian trading associations such as the Nanadeshis (“those trading to foreign countries”) whose inscriptions, artifacts, and religious monuments were found all over the archipelago.

The Southeast Asian seascape favored waterborne intercourse and traffic involving a broad variety of boat types. The most common Southeast Asian type usually possessed outriggers and had two masts in addition to oars. The biggest ships, which had a burden of several hundred tons, may have been the Chinese *jongs* and the

➤ A SOUTHEAST ASIAN WAR BOAT

The sea provided an easy link between the regions of insular Southeast Asia and extended their rulers' potential to extend their military power considerably. The ships employed were capable of transferring large armies, including horses and elephants. These two illustrations, which were painted around the fifth century CE on the walls of a Buddhist cave at Ajanta in western India, show oared war boats carrying a fully equipped army across the sea. Although of Indian origin, the boats and armies depicted may not show much difference to the ones used in Southeast Asian naval warfare in the second half of the first millennium CE.

—Tilman Frasch



(Drawn by Tilman Frasch, after Dieter Schlingloff, *Guide to the Ajanta Paintings*, 1999)

Arab *dhaus*, the latter making their appearance in Southeast Asian waters around the ninth century CE. Their size enabled them to transport not only people and goods but also armies, including horses and elephants. The sea thus provided the basis for both trade and warfare in the archipelago.

The Malacca Straits formed a natural bottleneck for the shipping routes between the Bay of Bengal and China that could easily be controlled. This situation favored the emergence of Srivijaya as a major maritime kingdom of Southeast Asia. Epigraphic evidence suggests that the kingdom was centered at Palembang, thus controlling the southern portal of the straits. Dependencies were situated on Kalimantan Island, the eastern parts of Java Island, and on the Malay Peninsula. An inscription from the late seventh century, found in the vicinity of Palembang, gives an impression of Sri Vijaya's politics: "In April 682, the ruler (of Sri Vijaya) left the city with vessels and led an overland and maritime campaign, bringing home wealth, glory and power one month later." The target was Malayu, a region in central Sumatra famous for its gold deposits. Control of the mineral products—gold from Sumatra, tin from Malaya—added to the economic strength of Sri Vijaya, which was a mixture of policing the seas, enforced preferential trade, and occasionally outright piracy as well. However, given the extent of the area, it is debatable whether Sri Vijaya was a centralized empire of a federation of more or less

independent regional kingdoms cooperating in questions such as trade policies.

The only power capable of challenging Sri Vijaya's dominance in the western archipelago seems to have been the Sailendra rulers of central Java. Attempting to control local production centers and to tax trade just like their Sri Vijayan competitors eventually made them attack both the Khmer settlements in the Mekong Delta and the Cham kingdom in what is now Vietnam. For a brief period the Sailendras seem to have held sway over the Khmer lands before the capital was relocated to Angkor. Ultimately the Sailendras came into conflict with Sri Vijaya as well. In 990 CE King Dharmavamsa launched a successful naval campaign against Sri Vijaya that resulted in the conquest and occupation of its capital. However, Sri Vijaya's network of alliances was strong enough to compensate for the loss of its center. About two decades later the combined forces of Sri Vijaya retaliated with a naval expedition of their own that ended with the conquest of the Sailendran capital on Java. However, Sri Vijaya's triumph did not last long. In 1025 CE a South Indian king led an armada across the Bay of Bengal and apparently conquered Sri Vijaya again. This weakened the former empire to a point from which it did not recover, and ultimately other rulers of the regions seized the opportunity to establish trading centers of their own to participate in the trade flowing through the straits. Malacca and Temasek (Singapore) are the two best-known ex-

amples of this development. Apart from trade and war, religion was another area of intercourse. Indian Brahmins were regularly invited by Southeast Asian rulers to perform court rituals, compute time, or compose inscriptions. In turn, Buddhists from Southeast Asia were in contact with Indian centers of Buddhism, while monks from China occasionally studied at Buddhist centers in the archipelago. People in the archipelago were mainly followers of Mahayanist and Tantric schools of Buddhism, and the great stupa of Borobudur is an architectural witness to these traditions. But when Buddhism came under pressure in the centuries after circa 800 CE, the religion began to disappear from the archipelago, only to survive as a syncretist Hindu-Buddhism on the island of Bali. In a way, the Borobudur thus marked the apex and the turning point of Buddhism in insular Southeast Asia.

—Tilman Frasch

Bibliography

- Bellwood, Peter, and Ian Glover, eds. *Southeast Asia from Prehistory to History*. New York: Routledge, 2004.
- Hall, K. R. *Maritime Trade and State Development in Early Southeast Asia*. Honolulu: Allen and Unwin, 1985.
- Jacq-Hergoualc'h, Michel. *The Malay Peninsula: Crossroads of the Maritime Silk Road*. Leiden: Brill, 2004.
- Manguin, Pierre-Yves. "The Southeast Asian Ship: An Historical Approach." *Journal of Southeast Asian Studies* 11(2) (1980): 266–276.
- Wisseman Christie, Jan. "Tamil Language Inscriptions in Southeast Asia and China." *Journal of Southeast Asian Studies* 29(2) (1998): 238–268.

Relations between Kingdoms in India

Relations between kingdoms in ancient and medieval India were typically characterized by competition and conflict, accompanied by a good deal of intrigue and a dizzying array of constantly shifting alliances. The philosophy of governance that most rulers followed, as outlined in Kautilya's *Artha Shastra*, created what could be characterized as a situation of managed conflict in which fierce competition carried out by a variety of means, fair and foul, was presumed to be the

natural state of things. Western scholars have at times expressed horror at what some have seen as the amoral approach to governance found in the *Artha Shastra*, often comparing it, not unreasonably, to Machiavelli's *The Prince*. On behalf of the *Artha Shastra*, though—and, for that matter, Machiavelli—it could be argued that it is a practical, not a utopian, text and that a good ruler, with a realistic sense of the challenges facing him or her, may need to be prepared, in some situations, to behave ruthlessly. Kautilya, the purported author of the *Artha Shastra*, is said to have been the adviser to Chandragupta Maurya who, following Kautilya's advice, became the first king of the Maurya dynasty, quite a strong recommendation for this particular text.

The *Artha Shastra* depicts each king as being at the center of his own *mandala*, or circle of kings. If one could visualize one's kingdom as being at the center of a giant gaming board, the other kingdoms would represent the positions of one's fellow players. The kingdoms adjacent to one's own are regarded by Kautilya as one's enemies. The kingdoms just beyond these, in the next circle, are one's allies, and so on. The king is therefore visualized as being in the center of a series of concentric circles, with enemies and allies alternating in each successive circle. The gaming board has been set up, and its goals are quite simple: to survive and to expand one's

WARFARE OR ATHLETIC CONTEST?

The rules of warfare in ancient India were quite strict. Noncombatants were not to be targeted. But even when engaging with other warriors, one would be dishonored were one to violate certain limits. In the *Mahabharata*, for example, before the final battle is waged, both sides agree on rules of conduct. One cannot attack an opponent from behind or attack an opponent who is not armed. Fighting is to take place only during the day, and opponents cannot be attacked at night or while they are sleeping. It is even said that during the night, warriors from both sides ate, drank, and sang songs together, enjoying one another's company before retiring to bed to rest in preparation for the next day's conflict.

—Jeffery D. Long

kingdom at the expense of one's enemies and with the help of one's allies.

Clearly, Kautilya does not envision a utopian future in which there will be world peace. According to his rules in which one's neighbors are always, by default, one's enemies, then, if one were to be successful in eliminating one's enemies, expanding one's kingdom by the extent of a concentric circle, as it were, one's allies would then become one's enemies, and one's former enemies, two concentric circles away, would thereby become one's new allies, and the entire process would begin again. No king could ever fully trust another. Every enemy was a potential ally and every ally a potential enemy.

The closest thing to a situation of peace, on Kautilya's understanding, is one in which a single monarch manages to subdue all of his enemies and become the ruler of the entire territory: in practical terms, all of India. To become such a universal emperor, or *chakravartin*, was the goal of every king in ancient India. And only a few, such as Chandragupta Maurya, achieved it. But even the *chakravartin* must be able to maintain his empire and must beware of his feudatories—the lesser kings who owe him allegiance—forming alliances against him. This was often the fate that befell large polities in ancient India: a large empire, like that of the Mauryas or the Guptas, would arise but would later disintegrate into smaller kingdoms, each vying to become the next dominant power.

The vision outlined in the *Artha Shastra* is not a simplistic one in which kings are constantly at war with one another, in the overt sense. War can be waged in a variety of ways, and kings in ancient India competed with one another in many ways: through trade, the performance of elaborate Brahmanical rituals, or massive building projects. The competition among kings in ancient and medieval India played a role in the construction of some of the architectural and artistic wonders of that country. The building of temples was one way that a king could show that he was favored by the gods and thus deserved the title of *chakravartin*. Winning the royal competition was a matter not only of brute force but also of showing who could achieve the most. The competition among kings in the areas of art and architecture could perhaps be compared to

the twentieth-century space race between the United States and the Soviet Union: a competition for prestige as well as power.

One way for a king to assert his status as a contender for the title of *chakravartin* was the *ashvamedha*, or horse sacrifice. In this ancient Vedic ceremony, a horse would be released into the countryside (though carefully guided by its handlers). Wherever the horse would wander unchallenged, the king holding the ceremony could claim that land as his territory. Having the horse “wander” into the territory of a king that was one's ally and tributary was a way of reinforcing one's relationship of dominance over that king. And having the horse “wander” into the territory of an enemy amounted to a declaration of war. Typically, Indian kings did not hold this provocative (and also quite elaborate and costly) ceremony unless they were confident of their ability to back their (or rather, their horse's) claims with force.

This account of the situation of constant conflict among kings in ancient and medieval India, though, would be deceiving if one were to conclude from it that India was constantly wracked by warfare, with villagers being killed and the infrastructure of society facing repeated destruction. The caste system provided the check on the conflicts that were waged by kings upon one another, for outside the warrior, or *kshatriya*, caste, most Indians were not expected to engage in warfare. The honor code among *kshatriyas*, as it is depicted in the *Dharma Shastras*, or Legal Texts, and epic literature, such as the *Ramayana* and the *Mahabharata*, was quite strict. Noncombatants were not targeted in battle. The population of a kingdom and its infrastructure were the prize to be won, not the enemy to be destroyed. That distinction belonged only to the rival king and his warriors.

—Jeffery D. Long

Bibliography

- Keay, John. *India: A History*. New York: Grove, 2000.
- SarDesai, D. R. *India: The Definitive History*. Boulder, CO: Westview, 2008.
- Schwartzberg, Joseph E. *A Historical Atlas of South Asia*. New York: Oxford University Press, 1992.
- Thapar, Romila. *The Penguin History of Early India: From the Origins to AD 1300*. New Delhi: Penguin Books India, 2002.

■ Introduction: Inner Eurasian Wars

To discuss the conflicts in Inner Eurasia, it is useful to divide the region into three parts:

- 1) The eastern steppe, including the grasslands of Inner Mongolia, Mongolia, and the Altai Mountains as well as an indeterminate region to the west of the Altai.
- 2) Central Asia, from the western reaches of China's Gansu Province, the Tarim Basin; the oasis cities and deserts of the region of the Oxus (Amu Darya) west to the Caspian Sea; and the grassland north of this area.
- 3) The western steppe, including the grasslands north of the Caspian Sea, the North Caucasus, the Pontic (Black Sea) steppe to the Danube River, and the Pannonian (Hungarian) plain.

This is a vast area, but communication and travel for well-armed groups could take place, and peoples could migrate from the eastern to the western steppes in several decades. This migration of peoples allows a somewhat unified historical narrative: there were connections between the regions.

In the East, before our period, the Xiongnu created a great steppe empire, which fought for centuries against the Han dynasty. The Xiongnu split into northern and southern empires in 48 CE, with the Southern Xiongnu allied with the Chinese. The Northern Xiongnu were defeated by the Chinese in 89 CE and migrated west. According to some historians, their descendants reappeared on the Black Sea steppe as the Huns, where they drove the Goths into the Roman empire and started the Great Movement of Peoples that brought down the western Roman empire in the fifth century.

The Hephthalites (White Huns, probably not related to the Xiongnu Huns) may have been driven south by the Huns from their pastures on the steppe north of central Asia to attack the Sassanian Persians in the fifth and sixth centuries. Defeated by the Persians, the Hephthalites moved south into India, where they have been credited with helping to bring down the Gupta empire.

Meanwhile, the Southern Xiongnu remained allied with the Han dynasty until the fall of the Jin dynasty (304) when they invaded northern China and set up a dynasty known as the Northern Han. Very soon, other steppe peoples moved on the northern Chinese plain, drawn by the vacuum created by the fall of the Jin. Sixteen different groups of steppe "barbarians" fought savage wars for supremacy in northern China until the Toba, who may have been of Xienpei stock, defeated all the rest. In 386, they established the Northern Wei dynasty and, during the next century and a half, assimilated Chinese culture and fought other steppe peoples who attempted to raid northern China.

In a protracted contest, the Toba defeated the Juan Juan, who had gained supremacy in the eastern steppe. After their defeat, the Juan Juan migrated west. Some historians think that they are the same as the Avars, who arrived on the Pannonian Plain in the 560s, where they raided and harassed the West Europeans and the Byzantine empire until they were conquered in the 790s by the armies of Charlemagne.

Meanwhile, in the eastern steppe, the Gokturks, from their base in Mongolia, created the first Turk empire (552) in the vacuum left by the collapse of the Juan Juan. The first Turk empire soon conquered all the peoples on the eastern steppe and collected tribute from the trading oasis cities in the Tarim Basin and into the Oxus region. The first Turk empire split (581) into an eastern and a western Turk empire, but both of them were destroyed by the rising power of the Tang dynasty by 630.

After the collapse of the western Turk empire, some of the western Turks moved farther west, where they participated in the events leading to the founding of another Turkish empire, that of the Khazars in the first third of the seventh century. The Khazar empire, whose capital Itil was located in the delta of the Volga River, was probably the longest lasting of these steppe empires, enduring nearly three and a half centuries (ca. 625–965). The Khazars dominated the western steppe from the mouth of the Danube River to the grasslands north of the Aral Sea. The

Khazars were very warlike and fought the expanding Muslim Arab empire to a standstill in the Caucasus in the mid-seventh century. The Khazars were usually allied with the Byzantine empire, and the ruling families of the two empires intermarried. The prosperity of the Khazars was based on the tributes they extracted from their subjects on the steppe as well as from the East European forest people they dominated and taxes from the international trade that they controlled. The Khazars were unique in that they were the only great power to convert to Judaism.

The Khazar began to decline in the ninth century, when Pecheneg Turks from the steppe north of central Asia began to invade the steppe north of the Black Sea. Finally, in 965, Viking Rus who had conquered Kiev, an erstwhile Khazar stronghold, destroyed the Khazar capital and with it the Khazar empire.

Back on the eastern steppe, Gokturks founded a second Turk empire (683) that dominated Mongolia and collected tribute from peoples on the northern periphery of the Chinese empire. This empire lasted 51 years, until the Uighur, a subject people, overthrew the second Turk empire (733).

The Uighur, who became a loyal ally of the Tang dynasty, established their empire over the same territory that the second Turk empire had occupied and collected tribute from their new subject peoples. During An Lushan's Rebellion, 755–763, the Uighurs intervened to support the Tang dynasty, during which they occupied and thoroughly sacked the Tang eastern capital, Luoyang. After the rebellion, China was required to pay tribute to the Uighurs, who occupied the oasis cities of the Tarim Basin. The Uighurs were unique in that they were the only great power to adopt Manichaeism as a state religion. Erstwhile Uighur subjects destroyed the Uighur empire in 840.

At the beginning of the tenth century the Tang dynasty collapsed, giving way to half a century during which China was divided and convulsed by warfare among a multitude of local warlords (the Period of Ten Kingdoms and Five Dynasties [907–960]). During this period of chaos another steppe people, the Khitan, emerged to seize part of northern China, and although in 960 another strong Chinese dynasty, the Song, reuni-

fied China (960), it was unable to wrest back the slice of northern China occupied by the Khitan, who established themselves as the Liao dynasty.

—Wilfred J. Bisson

Bibliography

Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Pre-history to the Mongol Empire*. Oxford, UK: Blackwell, 1998.

Grousset, Rene. *The Empire of the Steppes: A History of Central Asia*. New Brunswick, NJ: Rutgers University Press, 1970.

Kiev, the Pechenegs, and the Khazars

During the early and mid-tenth century CE, a large-scale three-way conflict developed in the Pontic steppes (grasslands north of the Black Sea) between the Khazar Khaganate, encroaching Pecheneg hordes, and the nascent principalities of the Rus. The Pecheneg invasion of the region in the late ninth century triggered a series of migrations that caused the Khazars to lose their main northern allies, the Magyars. By the early tenth century the Khazar-dominated Saltovo-Mayaki had collapsed, and at some point between 880 and 920 the Khazars lost control over the Dnieper Valley, including the vital stronghold of Sambata (Kiev), which fell to the Rus warlord Oleg. Khazar power was reduced to the region of the lower Don Valley, the Volga Delta, the Taman Peninsula, and parts of the Crimea and Caucasus regions. Within a short time the Pecheneg territories abutted the growing Kievan Rus, and the two groups came into increasing conflict.

The Khazars adopted a somewhat ambivalent policy toward the Rus. Conflict often broke out, particularly after the fall of Kiev. In 910 a massive Viking expedition, either originating in or allied with the Rus princes, was attacked and destroyed by a Khazar army after having pillaged Muslim states around the Caspian Sea. Around 940, a Rus warlord identified in Khazar sources as HLGW (possibly the same Oleg who conquered Kiev) was defeated by the Khazar general Pesakh after the former attempted to wrest the eastern Crimea and the Taman Peninsula from Khazar control. Yet there is evidence that the Khazars saw seagoing Rus and Viking

pirates as useful allies of convenience to be used against Byzantine interests around the Black Sea, and the Khazars may have played a political balancing act between permitting Vikings passage into the Caspian Sea to raid their Muslim neighbors and preventing such access when it was expedient to do so.

The Byzantine empire, keen to protect its economic and strategic interests in the region, played the three powers against each other. Having borne the brunt of a number of Rus incursions, Constantinople had initially sought to support and ally with the Khazars as a bulwark against Rus and Pecheneg attacks. By the tenth century, Byzantine policy had shifted, and the empire began sponsoring uprisings among the Khazar Khaganate's vassals (uprisings that may have been supplemented by Byzantine-hired Pecheneg aid). Emperor Constantine VII Porphyrogenitus identified the Pechenegs as the dominant steppe power and potentially valuable allies in his book *De Administrando Imperio*, written around 950. Increasingly, the Byzantine empire sought alliances with the Pechenegs against both the Rus and the Khazars.

The destruction of Khazar imperial power around 969 by the Rus prince Svyatoslav of Kiev, who sacked the Khazar city of Sarkel and the capital of Atil, created a power vacuum in the Pontic region and changed the dynamic of political alliances. The Byzantines soon changed their policy and allied with Svyatoslav against the Danube Bulgars, but when Svyatoslav's demands for territorial and economic concessions proved too burdensome, Emperor John I Tzimiskes had no qualms about realigning his empire with the Pechenegs, who ambushed and killed Svyatoslav in 972.

One consequence of the disappearance of the Khazars was that the steppe trade routes, which had been stable for centuries under what some scholars call the Pax Khazarica, became unsafe and virtually collapsed. The virtually simultaneous fragmentation of the Frankish, Abbasid, and Tang Chinese empires meant that trans-Eurasian trade declined, causing many local economies to disintegrate and further feeding the chaotic conditions.

After Svyatoslav's death, Rus power in the steppe region generally declined as Rus politics

➤ SVYATOSLAV'S VAULTING AMBITION

The Rus prince Svyatoslav I of Kiev provides a perfect illustration for the shifting politics of the period. He defeated the Volga Bulgars in 965, reducing them to vassaldom and bringing the upper Volga under Rus control. Rallying the Khazars' Slavic vassals against their overlords, he invaded the Khazar Khaganate and destroyed its capital around 969. Immediately thereafter he allied with the Byzantine empire, formerly the enemy of Kiev, in a joint expedition against the Bulgarian khanate on the Danube, most of which he conquered. Possibly to break with the past and signal the genesis of a new empire, he moved his capital to Pereyaslavets, in modern-day Bulgaria, around 970, leaving his mother Olga as regent in Kiev. After a dispute over the spoils of battle he turned on his Byzantine allies, marching as far as Adrianople before he was defeated by the Byzantine emperor John and agreed to return to his Kievan territories. John then allied with the Pechenegs, whose khan, Kurya, ambushed and killed Svyatoslav in 972 on the latter's return journey home. According to Russian chroniclers, the Pecheneg khan so respected Svyatoslav's fighting prowess that he had the Kievan prince's skull gilded and made into a drinking goblet.

—Brian Gottesman

fell to infighting and lost most of Svyatoslav's conquests. Over the succeeding decades, Pecheneg tribes sometimes formed alliances with one another or with Rus states, sometimes united briefly to make war on the Rus, and sometimes turned on one another. It was not uncommon to find both Rus and Pecheneg forces fighting on both sides of the same battle.

With the conversion of the Rus to Christianity under Vladimir in 988, Byzantine policy swung again toward alliance with Kiev and its sister and successor states against the Pechenegs (some, but by no means all, of whom also adopted Christianity). A joint Byzantine-Rus invasion destroyed a Khazar successor state in the Crimea in 1016, and while Khazar politics may have survived in the Caucasus for some time thereafter, they would play no further role in international affairs.

The Rus, however, remained unable to break the Pecheneg hold over the Pontic steppes. Notwithstanding their inability or unwillingness to form a single unified kingdom, the Pechenegs remained the dominant military force in the region for almost a century, until in the mid-eleventh century they were defeated and forced west by the Kipchaks (Cumans). Again sensing the shifting balance of power and continuing their tradition of allying with far-off barbarians against those closer at hand, the Byzantines allied with the Kipchaks to crush the last remnant of Pecheneg might at the Battle of Levounion in 1091 and the Battle of Beroia in 1122. The Kipchaks would dominate the steppes and fill the vacuum of power until the Mongol invasions of the thirteenth century.

—Brian Gottesman

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Pre-history to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Franklin, Simon, and Jonathan Shepard. *The Emergence of Rus, 750–1200*. London: Longman, 1996.
- Golb, Norman, and Omeljan Pritsak. *Khazarian Hebrew Documents of the Tenth Century*. Ithaca, NY: Cornell University Press, 1982.
- Golden, Peter. *An Introduction to the History of the Turkic Peoples*. Wiesbaden: Harrassowitz, 1992.

The Turks, Uighurs, and Tibetans and the Tang/Abassid Contest for Central Asia

In 600 CE central Asia continued its strategic and economic importance. The trade routes running through central Asia were sources of great wealth, and China and the Arabs as well as the nomadic groups on the periphery fought to control it. In the late sixth century CE China emerged from more than 300 years of fragmentation when it was united by the Sui dynasty (581–618). However, Sui policy caused widespread revolts, and the Sui fell to the Tang dynasty (618–907). Tang interest in the world outside China, especially to the west, made central Asia a focal point. In the Middle East the Arab Umayyad caliphate also turned toward central Asia. Both empires saw the steppe nomads, including the eastern and western Turks, Uighurs, and Tibetans, as pawns to further their own political agendas.

In the mid-seventh century China found itself threatened by newly emerging nomadic groups. When an attempt to divide the eastern Turks' forces failed, the Chinese turned to tribute to control the nomads. The eastern Turks grew rich from Chinese payments but soon fell under Chinese control. China resettled them in the Ordos, but the Turks rebelled and reestablished their khanate, which dominated the Mongolian steppes for the next 50 years.

➤ KAO XIENQI—THE TANG'S KOREAN PROCONSUL IN CENTRAL ASIA

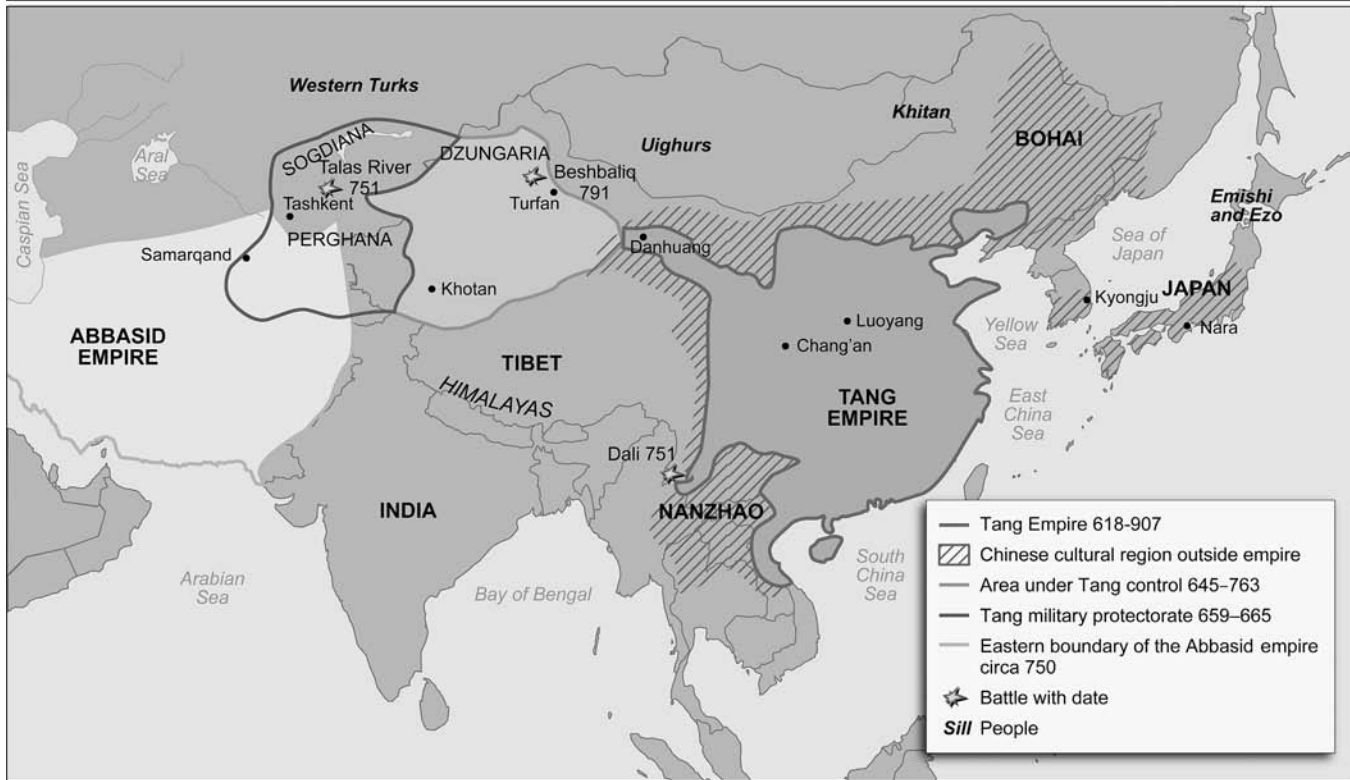
Little is known about the early life of Kao Xienqi, a Chinese general of Korean origin, but by 747 he had distinguished himself enough to be awarded the titles of “Assistant Protector-General of the Pacified West” and “General Commissar for the Troops and Horses of the Four Garrisons.” With an army of 10,000 he traveled across central Asia, finally defeating the Tibetans in the Pamirs. This gave China control over the important Pamir and Wakhan regions and the Tarim Basin. Kao was made the governor of four military garrisons for his victory. However, his overbearing attitude and his policies against Tashkent angered regional leaders. Together with the prince of

Tashkent, they allied with the Arabs against the Chinese.

In 751 Kao received intelligence that a large Arab army including Tibetan and Turkish troops was headed toward the Chinese frontier. The Arab army, led by Ziyad ibn-Salih, met Kao's forces near the present-day city of Jambul, Kazakhstan, on the Talas River. The battle continued for five days, during which time the Turkic forces fighting with the Chinese changed sides. The Chinese were forced to retreat through mountain passes choked with refugees fleeing the battle. Kao escaped, but thousands of his men were captured and taken as prisoners to Samarqand.

—Rebecca Wendelken

CENTRAL ASIA, 618–907



Between 647 and 679 another Turkic group on the northwestern frontier, the Uighurs, came under the Chinese *jimi fuzhou* system. They retained their traditional leaders but in reality were subjects of the Tang. The Uighurs quickly settled and became dependent on trading horses for Chinese silk. They occasionally rebelled, but for the most part the Uighurs allied with China and formed China's primarily frontier support forces. When internal fighting destroyed the eastern Turkic khanate in the 740s, the Ordos fell to the Uighurs (744–840).

The western Turks in Transoxiana also formed a state, but it crumbled shortly after 630. Rather than ally with the eastern Turks in Mongolia, some groups, including the Türgesh and Karluk, remained independent. Together they fought to drive out the Arabs but were unsuccessful. In the mid-seventh century a new group, the Tibetans, began expanding into central Asia. They allied with the advancing Umayyads, and soon the Tibetans controlled the southern Silk Roads and most of the Hexi corridor. They re-

mained in control from the seventh century to the ninth century. Despite the marriage of a Chinese princess to the Tibetan king in 710, relations between China and Tibet were contentious. They signed a peace treaty and established a border but continued fighting over the kingdom of Bru-sha in northwestern Tibet that controlled the overland trade between central Asia and India.

In 750 the Abbasids overthrew the Umayyads, and the capital of the Islamic world moved to Baghdad. This shift increased the importance of central Asia, no longer the periphery of the Arab world but now the center. In the spring of 751 the Chinese and Abbasids clashed for the first and last time. A Chinese force marched into Ferghana (in central Asia) and proclaimed Chinese suzerainty. In July a combined Chinese and Karluk Türk force led by Kao Xienqi met an Arab army supported by Tibetans and Uighurs at the Talas River. The Karluks defected to the Arab side, and the Chinese were defeated. The battle marked the beginning of major changes in the central Asian steppes. It ended Chinese involvement west of

THE BATTLE OF TALAS AND THE TRANSMISSION OF PAPER MANUFACTURING

According to Thaalibi, the eleventh-century Arab author of *The Book of Curious and Entertaining Information*, the central Asian city of Samarqand was famous for papermaking in the medieval world. He traced the origins of paper manufacturing in Samarqand back to the Battle of Talas in 751. Fought between Muslim forces led by the Arab commander Ziyad ibn Salih and Tang Chinese forces under the command of General Gao Xianzhi, the Battle of Talas resulted in a reconfiguration of power in central Asia. The Chinese defeat, even though it merited little attention among Chinese and Arab historians at the time, came to be regarded in later centuries as the beginning of the Chinese withdrawal from central Asia and the beginning of Muslim domination. Following Thaalibi, later historians also associated the battle with the transmission of papermaking.

Relying on a book written at least one century after the events, Thaalibi wrote that Muslim soldiers took captured Chinese papermakers to headquarters in Samarqand, where the Chinese prisoners of war transmitted the skill of papermaking to their captors. Nowadays historians regard Thaalibi's account as factually inaccurate. Chinese accounts of the Battle of Talas describe the capture of various Chinese artisans such as goldsmiths and silversmiths during the battle but

make no mention of papermakers. Moreover, archaeological evidence demonstrates that paper was already circulating in the region of Samarqand before 751. The papers discovered at a cave near Mount Mugh (now Tajikistan), where Destavich, lord of Samarqand, had sought refuge in the early 720s, date back to the early eighth century and were probably manufactured locally.

Despite its factual inaccuracy, Thaalibi's story captures an important moment in the history of the transmission of paper technology. After the Battle of Talas and with the establishment of the Abbasid dynasty around the same time, the rulers of the Muslim empire began to focus on the eastern part of their domains. The incorporation of central Asian domains sped up the transmission of papermaking across central and West Asia. The Battle of Talas thus demarcated the assimilation and rapid expansion of papermaking in the Muslim empire even though it did not coincide with the first transmission of the skill to central Asia.

—Hilde De Weerd

Source

Bloom, Jonathan. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven, CT: Yale University Press, 2001.

the Pamirs. It also stopped the eastern expansion of the Abbasids and made Tibet a regional power. The Turkic world became permanently divided as the western Turks settled and were absorbed into the Islamic cultural sphere. The eastern Turks continued their nomadic traditions, eventually converting to Buddhism.

The battle did not stop the fighting, however. China continued to have diplomatic relations and military conflicts with the Tibetans, Uighurs, and Turks. During the An Lushan Rebellion (755–763), which nearly brought down China's Tang dynasty, the Uighurs honored their borders, but the Tibetans took advantage of the situation to invade Chinese territory. In 783 after a series of treaties, China recognized Tibetan occupation of former Chinese holdings in central Asia.

Three years later the Tibetans occupied the Silk Roads town of Dunhuang, controlling it until 848. In 814 Tibet was defeated by the Abbasids near Karakoram, after which their power in central Asia declined. By 866 political and religious infighting brought an end to the Tibetan empire.

China's alliances with the Uighurs continued to help stabilize the frontier. With the fall of Tibet many important cities along the Silk Roads, including Dunhuang, became dependencies of the Uighurs. However, the Uighur empire was nearing its end. In 840 a Uighur general led a force of 100,000 western Turks against the Uighur ruler. The empire collapsed, and the Uighur population disbursed, many migrating to the west.

Despite the resulting power vacuum in the steppes, China made the decision not to reclaim its former possessions in central Asia. The Tang dynasty was experiencing rebellions and mutinies of its own. The dynasty fell in the early tenth century, ending at least momentarily the struggle over central Asia.

—Rebecca Wendelken

Bibliography

- Barfield, Thomas J. *The Perilous Frontier: Nomadic Empires and China*. Oxford, UK: Blackwell, 1989.
- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Central Asia from Prehistory to the Mongol Empire*. Oxford, UK: Blackwell, 1998.
- Graff, David A. *Medieval Chinese Warfare, 300–900*. New York: Routledge, 2002.

■ Introduction: Early Medieval West European Wars, 650–1000

Western Europe in 650 was divided into numerous kingdoms and other polities, and war between them was frequent. Since the collapse of Roman authority in the fifth century, the society and culture of western Europe had become increasingly militarized, and armed bands were frequent. The Visigoths had almost completely united Spain, while Italy was the arena for protracted conflict between Lombard forces, which had invaded the country in the late sixth century, and the Byzantine authority, which had been imposed on an unreceptive land in the mid-sixth century.

Gaul (France) and Germany were ruled by Merovingian descendants of Clovis, the fifth-century unifier of the Franks. These descendants, each a king in his area, were almost constantly at war with each other except when a single Merovingian kingdom could briefly impose its rule on the rest. In Britain, Celtic chieftains warred with advancing Anglo-Saxons, who were themselves divided into numerous little “kingdoms.”

In the late seventh century, the Arab Muslim juggernaut swept across North Africa and in the second decade of the eighth century destroyed the Visigothic kingdom and added Spain to the Muslim world.

In the early decades of the eighth century, Charles Martel united the Frankish kingdoms under his rule and stopped Muslim Arab expansion into western Europe at the Battle of Tours

(732). Charles’s son, Pepin, defeated the Lombards in Italy (751) and was anointed King of the Franks by the Pope. Pepin’s son Charles, called the Great (Charlemagne), was proclaimed (West) Roman emperor in 800 CE and ruled an empire that extended from northern Spain to beyond the Elbe River in central Europe. Charles fought many wars, chief of which were the conflict against the Spanish Muslims in northern Spain, a 30-year series of wars to subdue the pagan Saxons in northern Germany, and the contest in which he destroyed the kingdom of the Avars in Pannonia (Hungary). On his death in 814, a 3-year civil war among his sons split Charlemagne’s empire into three successor states, which resumed the endemic warfare that had characterized the Frankish kingdoms before their unification by Charles Martel. The western Frankish kingdom became France, while the eastern one became Germany.

Most of the ninth century and much of the tenth century in western Europe were characterized by endemic violence in which a multitude of nobles with armed followings fought each other for land and power. These were localized wars because, in these centuries, the central authorities of large kingdoms had atrophied. In these centuries, three invasive groups threatened western Europe:

- 1) The Muslim states in North Africa and Spain. In the ninth century, the Aghlabid emirate of

Ifriqiya (Tunisia) conquered Sicily and raided southern Italy, while the Spanish Umayyad caliphate seized the Mediterranean coast of France and sent raiders deep into southern France and the Alpine country.

- 2) The Scandinavian Vikings. These raiders terrorized the Atlantic littoral and islands, looting cities and enslaving populations. In the forestlands of eastern Europe, they established strong points, such as Strya Ladoga and Gorodishe, from which they preyed on surrounding populations and exacted slaves and tributes. Eventually, they established kingdoms in Ireland, England, and Russia and seized the province of Normandy in France.
- 3) The Magyars, who migrated from the steppe north of the Black Sea to Pannonia (Hungary) at the end of the ninth century and terrorized Germany, France, Italy, and the Balkans with raids in the first half of the tenth century, until the German king Otto the Great stopped them at the Battle of Lechfeld.

—Wilfred J. Bisson

Bibliography

- Riche, Pierre. *The Carolingians: A Family Who Forged Europe*. Philadelphia: University of Pennsylvania Press, 1993.
- Wood, Ian. *The Merovingian Kingdoms, 450–751*. London: Longman, 1995.

Wars of Charlemagne

During his 46-year reign between 768 and 814, Charlemagne undertook an unprecedented 54

military campaigns, greatly expanding the territory of the Frankish kingdom. And even though the Frankish army was relatively small compared to armies of the Classical Period (modern estimates vary from 5,000 to 35,000 men, excluding attendants), it was sufficient to carve out the largest state that western Europe had seen since the fall of the western Roman empire some 300 years earlier. His impressive military and political achievements even won him the title of “emperor of the Holy Romans” from the papacy on Christmas Day 800 CE.

Charlemagne’s campaigns took him to many areas in Europe. In 773 he led his army into Italy, crushing the Lombards and crowning his son king of Italy. Four years later Charlemagne crossed the Pyrenees into northern Spain. This campaign proved disappointing. Despite the annihilation of his rear guard at Roncesvalles by the Basques in 778, Charlemagne and his successors were successful in eventually establishing the Spanish March, a string of fortifications in Catalonia that served as a defensive bulwark against Muslim raiding and a future base of operations for the Christian reconquest of Spain in the eleventh century.

Charlemagne was more successful in his eastern campaigns into Germany. In 787 he invaded Bavaria and brought that region under his rule. In 790 his Frankish armies marched east along the Danube and met and utterly eradicated the Avar empire in the Balkans, seizing wealth accumulated in two centuries of raiding and adding it to his own treasury. Perhaps Charlemagne’s greatest success came in Frisia and Saxony, a region in northern Germany between the Rhine

► EQUIPPING CHARLEMAGNE’S ARMY

The composition and equipment of Charlemagne’s army was continuously evolving. Initially, the Carolingian Army was composed mostly of infantry, but as campaigning took him farther and farther from his base in Austrasia, Charlemagne soon relied increasingly on mounted troops rather than infantry. His numerous capitularies point to the raised status of cavalry. During 792–793 he issued regulations requiring vassals to have a horse, shield, lance, sword, dagger, bow, quiver, and arrows. In other

royal decrees wealthier nobles were ordered to come to war wearing mail and were asked to bring rations for three months of service and clothing for six. Furthermore, these greater magnates were to make certain that their own vassals came on campaign with a standardized panoply consisting of shield, spear, bow, and 12 arrows. Even attendants were required to be armed with bows.

—Brian Todd Carey

CAROLINGIAN EMPIRE AND CHARLEMAGNE'S WARS, CIRCA 800



and Elbe rivers. Beginning in 772 Charlemagne set his sights on the conquest and conversion of these regions, but resistance was fierce (Charlemagne campaigned in Saxony in 772, 785, 792–793, and 798–803). It was not until 804, after 18 annual campaigns, that Saxony was finally pacified and added to the Carolingian domain.

Charlemagne never developed a regular standing army; instead, he relied on feudal levies to raise his forces. It did not take the emperor

long to assimilate new regions into his military machine. Just two years after bringing Saxony into the kingdom, Charlemagne created a sliding scale of military contributions, ordering five Saxon vassals to equip a sixth to campaign in Spain and two to equip a third for Bohemia, while all were required to campaign against regional threats. In 807 he issued a capitulary decreeing that all nobles in the realm holding a benefice (a lease of land) were obligated to



Charlemagne leads his troops during the Spanish March, fourteenth century manuscript. Charlemagne's troops were principally horsemen—the Frankish army relied heavily on cavalry especially after the Battle of Poitiers (Tours) in 732. (The Art Archive/Corbis)

military service. If a noble failed to muster for war, he risked the confiscation of his estate. Charlemagne perfected this system to the point where he could raise several annual levies and conduct operations on multiple fronts, including Germany, Bohemia, Brittany, and Spain.

Charlemagne's military success was not founded on the decisive engagement; indeed, history records him present at only three battles during his lengthy reign. The Carolingian emperor's success was instead based on a well-trained and experienced feudal fighting force wearing down the enemy through a strategy of attrition and the ability to raise several armies for annual campaigns in different regions. He also recognized the impending threat to his empire, building and garrisoning forts along his borders with the Muslims, Danes, and Slavs. He even went so far as to try to maintain his superiority in military equipment by threatening the forfeiture of all property to anyone selling mail

hauberks to foreigners and death to any who exported Carolingian swords out of the country.

Finally, perhaps Charlemagne's greatest military legacy was his emphasis on cavalry as an instrument of strategic mobility. And although the stirrup-stabilized lancer, probably present in limited numbers during Charlemagne's reign, did not revolutionize battle tactics in the late eighth and early ninth centuries, heavy cavalry's importance as the centerpiece of the Carolingian tactical system was a harbinger of how war would be made in the later medieval period.

—Brian Todd Carey

Bibliography

- Bachrach, Bernard S. *Armies and Politics in Early Medieval West*. London: Aldershot, 1993.
- Beeler, John. *Warfare in Feudal Europe, 730–1200*. Ithaca, NY: Cornell University Press, 1971.
- Bowlus, C. W. *Franks, Moravians and Magyars: The Struggle for the Middle Danube, 788–907*. Philadelphia: University of Pennsylvania Press, 1995.
- Ganshof, F. L. *Frankish Institutions under Charlemagne*. Providence, RI: Brown University Press, 1968.

Viking Raids

By far the most devastating and widespread attacks in Europe during the ninth and tenth centuries came from the Vikings of Scandinavia. The Vikings were a Germanic people based in Norway, Sweden, and Denmark, and their movements constitute the final wave of Indo-European migration. Warriors, traders, superb shipbuilders, and sailors, the Vikings pushed south from their homeland in their trademark longships and attacked the whole of Europe. Norwegian Vikings moved into Ireland and western England, while the Danes attacked eastern England, Frisia, and the Rhineland and navigated rivers to enter western Carolingian territories. Swedish Vikings controlled the Baltic Sea and pushed into Slavic areas in eastern Europe. Moving into northwestern Russia, the Swedes sailed up and down that region's rivers to Novgorod and Kiev and established fortified ports in these areas, ultimately influencing the development of early Russian civilization. Sailing down the Dnieper and Don rivers to the Black Sea, they made contact with

the Byzantine empire as both traders and raiders, and the Byzantine emperor even hired Russo-Swedish Vikings, the Varangians, as his personal bodyguards. The Vikings also sailed west and settled in the Faroes, Iceland, Greenland, and, for a short time, North America.

The Viking age of expansion and conquest had its beginnings in a culture permissive of ship-based raiding. The shore raid, or *strandbogg*, was an age-old Viking tradition, one where warriors would beach their longship, round up cattle and sheep, and then sail off. This form of medieval livestock rustling was even done in Scandinavia itself until it was outlawed by the rise of centralized monarchies in the ninth and tenth centuries, forcing the *strandbogg* into foreign waters. Raids against continental Europe and the British Isles brought more opportunities, with Vikings returning from their seasonal raids with young women and healthy youths for the thriving slave trade.

Early Viking raids were usually carried out in the summer, with Scandinavian warriors sacking coastal villages and towns, destroying churches and monasteries, and easily defeating local, mostly infantry-based militias. In the first decades of the ninth century Viking raiding involved small numbers of ships and was mostly directed against Europe's coastline. But the death of Charlemagne in 814 and the chaos that followed under the weak rule of his son and successor Louis the Pious offered an attractive target for Viking marauders. As news spread of the wealth and vulnerability of the Frankish interior, Vikings appeared in greater numbers. By the 830s larger Danish fleets were threatening England as well with seasonal raids. During the winter of 840–841 the Norwegian Vikings switched from seasonal raids to wintering in enemy territory, staying for the first time on a small island off the coast of Ireland. When the Carolingian empire erupted into civil war at the death of Louis the Pious in 843, Vikings set up permanent bases at the mouth of the Loire and Seine rivers and then launched raids inland, sometimes on ships, sometimes on captured horses.

The size of Viking armies also varied depending on the period. Early-ninth-century raids consisted of a few longships and maybe 100 warriors.



Carved stone grave marker outside the ruins of Lindisfarne Priory depicts a row of Viking raiders. Viking warriors devastated the Anglo-Saxon monastery in 793 CE. (Ted Spiegel/Corbis)

But by 865 Viking activity in western Europe was concentrated in the Great Army made up of fleets of hundreds of ships carrying thousands of Viking warriors and led by several Scandinavian kings. Between 865 and 879 and again between 892 and 896 the Great Army plundered England, with the Danes occupying an area known as Danelaw in northeastern England. Accepting Christianity, the Danes were eventually assimilated into the larger Anglo-Saxon kingdom, giving their greatest warriors, the *huscarles*, to the English king as bodyguards. On the continent, the Great Army devastated Flanders, raided deep into the Rhine Valley, and even besieged Paris in the winter of 885–886 with perhaps as many as 40,000 men and 700 ships, although probably the numbers involved were much smaller.

But as widespread as the Viking raids and invasions were, the Vikings were, in fact, not particularly good at winning battles. Many of their victories came from attacking soft, undefended targets such as churches and monasteries well stocked with ecclesiastical treasures and sacramental wine. When regional armies finally organized and offered determined resistance in the late ninth century, the fortunes of the Vikings changed. In England the Anglo-Saxon king Alfred the Great (r. 871–899) built walls around his towns, creating *burhs*, and founded the first English navy in 875 to intercept Danish fleets at sea.

THE VIKING LONGSHIP

The primary instrument of Scandinavian overseas aggression was the longship. Long, narrow-keeled and flat-bottomed vessels with beautifully carved arched prows, the first longships carried around 35 warriors. They were made of oak using clinker construction (overlapping planks held together with clinch bolts) with a mast amidships and one bank of oars on each side. Controlled with two steering oars, these vessels had shallow drafts, making it possible for them to navigate up rivers and along coastlines, giving the Vikings unprecedented strategic mobility. The *Gokstad* ship, built in the second half of the ninth century, was more than 76 feet long and 12 feet wide and drew less than 34 inches of water, giving it the ability to sail up rivers and estuaries into shallow waters only 3 feet deep. Longships were also easy to beach and portage over short distances using rollers and manpower.

—Brian Todd Carey

In France, cities were walled (or if dilapidated by neglect were rewalled), and fortified bridges were constructed across major rivers to close access to the interior. Unaccustomed to fortifications, the Vikings usually moved on. Moreover, when battle was offered by the defenders of a realm, the Vikings often preferred negotiations or withdrawal to a set-piece engagement.

The last great Viking invasion took place in 1066 when a massive Norwegian invasion fleet set sail for England to challenge the new Anglo-Saxon king, Harold Godwinson, for the English Crown. Although Norwegian king Harald Hardrada would be ultimately defeated by Godwinson at the Battle of Stamford Bridge, another Viking offspring, Duke William of Normandy, would successfully invade England using Viking-designed warships and transports, defeating Godwinson at the Battle of Hastings and ending the Viking age.

—Brian Todd Carey

Bibliography

- Devries, Kelly. *The Norwegian Invasion of England in 1066*. Woodbridge, UK: Boydell and Brewer, 2003.
- Griffith, Paddy. *The Viking Art of War*. London: Greenhill, 1995.

Haywood, John. *The Penguin Historical Atlas of the Vikings*. New York: Penguin, 1995.

Jones, Gwyn. *A History of the Vikings*. 2nd ed. Oxford, UK: Oxford University Press, 1983.

Sawyer, Peter. *The Oxford Illustrated History of the Vikings*. Oxford, UK: Oxford University Press, 2001.

Anglo-Saxon Wars, 700–1000 CE

The period 700–1000 CE witnessed the consolidation of secular rule in Anglo-Saxon England and an eventually successful defense of the realm against the deprivations of Viking raids and invasions. The many smaller kingdoms of earlier years were gradually absorbed into larger ones until by the late seventh century two kingdoms, Mercia and Wessex, had come to dominate, with Mercia the leading power in the eighth century and Wessex the leading power in the ninth and tenth centuries.

Mercian supremacy resulted from the adroit exploitation of its strategic position in the midlands by two powerful and long-lived kings, Ethelbald (r. 716–757) and Offa (r. 757–796). Under these kings Mercia exacted allegiance and tribute from the smaller kingdoms to the south and east. Offa advanced his power westward against the Welsh, effectively sealing off Wales with an immense earthen embankment known as Offa's Dyke. Offa's able heir Cenwulf (r. 796–821) continued to dominate Kent and East Anglia, although his influence over Wessex and Northumbria waned. King Egbert (r. 802–839) of Wessex's decisive victory over the Mercian Army at Ellendon in 825 was quickly followed by the establishment of Wessex control over Kent, Sussex, and Essex. Within a decade he received the submission of East Anglia, Northumbria, and for a short time Mercia itself. But the hegemony of Wessex in England was concurrent with the decline of Carolingian power on the continent and the coming of the Viking Age.

The Vikings began raiding England in the late eighth century, plundering the monastery of Lindisfarne in 793. Over the next century Vikings raided and eventually invaded England, carving out territory virtually everywhere outside of Wessex and establishing areas of Danish control known as Danelaw. But in 871 the Vikings' ex-

➤ OFFA'S DYKE

An example of the strength and determination of the Anglo-Saxon administrative machinery is Offa's Dyke. Built during the reign of King Offa of Mercia (r. 757–796), it is actually a combination of two dykes. Offa's Dyke is roughly 149 miles long, longer than the famous Roman Hadrian and Antonine Walls combined. The dyke system ran from sea to sea, cutting off the Welsh Peninsula from Mercia. The dyke itself was flanked by a 6-foot-deep ditch that ran along the Welsh side of the fortification. Archaeologists maintain that the rampart was 24 feet above the ditch bottom, providing the Anglo-Saxons with an impressive frontier system against the Welsh.

—Brian Todd Carey



Offa's Dyke passes through the Shropshire countryside. The earthwork formed a boundary, albeit discontinuous, between England and Wales. Built by the Mercian King Offa, it was meant to keep the "savage" Welsh out of England. (Andrew Fogg)

pansion was blunted by an English monarch of considerable talent, Wessex king Alfred the Great (r. 871–899). His decisive defeat of the Danes at Eddington in 878 gave him all of England south of the Thames-Lea line. Alfred reorganized the army, built fortified settlements called *burhs* to protect his subjects, and built a 60-ship navy to challenge the Vikings at sea. During the tenth century Alfred's talented successors would further extend his work of reconquest and political consolidation. Under Edgar the Peaceable (r. 959–975) Alfred's navy was expanded to a force capable of maintaining constant patrols against the Vikings.

After Edgar's reign, England was besieged by a second round of Danish invasions and the accession to the English throne of the Danish king Canute (r. 1016–1035). But after Canute, the last

Anglo-Saxon king, Edward the Confessor (r. 1042–1066) reestablished the Wessex dynasty and consolidated England under his rule just in time for the Norman conquest in 1066.

—Brian Todd Carey

Bibliography

- Brooks, N. P. "England in the Ninth Century: The Crucible of Defeat." *Transactions of the Royal Historical Society*, 5th Series, No. 29, pp. 1–20.
- Hill, David, and Margaret Worthington. *Offa's Dyke: History and Guide*. Stroud, Gloucestershire, UK: Tempus, 2004.
- Hollister, C. Warren. *Anglo-Saxon Military Institutions on the Eve of the Norman Conquest*. Oxford, UK: Clarendon, 1962.
- Loyn, H. R. *The Vikings in Britain*. London: Bratsford, 1977.

■ Introduction: Warfare in the Americas and Oceania

Warfare in the Americas and Oceania between 300 and 1000 BCE had many similarities. In most cases, the reason for conflict was control over scarce resources. These resources included food, labor of peas-

ants, and the need to obtain sacrificial victims to offer to the gods. Armies were hampered by the lack of draft animals and wheeled vehicles, ensuring that campaigns were localized and relatively short. Only a few instances exist in which

the warfare included long campaigns and was conducted for territorial gain.

Geographically, Mesoamerica and Oceania had similarities. Although Mesoamerica consisted of a large continuous landmass, the population density was relatively low. Only a few large urban centers existed, and archaeological evidence indicates that they were mostly the residences of rulers and their retainers. Most people lived in agricultural settlements. Likewise, in Oceania the population density was relatively low. Most people lived in small settlements, and the total area covered thousands of miles of ocean with only a relatively few small islands. On larger islands, the population might belong to several different and hostile groups.

The Polynesian societies and the Mesoamerican societies of the period were both stone age civilizations. Warfare was conducted primarily as a socially prestigious affair, with members of the elite engaging in battle to assert their social standing. For the Polynesians, warfare formed an important part of their culture. Hereditary chiefs were expected to participate as a way of confirming that they possessed *mana*, a sort of grace from the gods that followed to them from legendary ancestors. Success in war was a confirmation that one had *mana*. A man who did not succeed in battle was viewed as being out of favor with the gods and might well lose his position. Warfare ranged from raids on neighboring villages to large confrontations. Conflict might well last for generations, until honor was satisfied or one group was exterminated. Mesoamerican cultures, such as the Maya, similarly viewed their rulers as having a supernatural origin. They were the mediators between the people and the gods, and the ruler's success in battle determined that culture's prestige and success. Strong commercial and political standing for a city-state in Mesoamerica could quickly be lost if a ruler was defeated or captured in battle. In both societies, internal enemies might rise up to challenge an elite who was unsuccessful in warfare.

In both societies, military campaigns were short and controlled by the seasons. Both societies lacked animals and wheeled vehicles that could carry supplies for a long campaign. Polynesian warriors were able to use canoes to transport supplies, but this method of supply could work in

only some cases. Supplies were limited to what could be carried on the backs of warriors and porters. Efforts to live off the land were usually not very successful, since local peasants were usually hostile or had little food to share. Campaigns were also not common during the rainy season, since muddy terrain made travel difficult. Warfare also was scheduled around agricultural requirements, since the absence of numbers of men would prevent planting, tending of crops, and harvesting. As a result, campaigns were short and took place relatively close to home.

Warfare was most often waged by members of the elite. Very few city-states in Mesoamerica during this time allowed commoners to participate. The cities of Teotihuacan and Tollan seem to have enlisted most of the men into their armies, but they were the exceptions. The relatively low productivity of agriculture required that most men work in the fields. Also, the responsibility for conducting warfare confirmed the special status of warriors in both societies. Even when Polynesian warriors included all males of a certain age, their leaders and champions were members of the local nobility.

Armaments among both groups were similar. Most weapons were made of wood and stone. Clubs were the earliest type of weapons, supplemented by short thrusting spears and knives. In Mesoamerica, obsidian was often used as a cutting edge for weapons. Pieces were inset in wooden handles to make swords. In Oceania, cutting edges were sometimes organic materials, such as shark teeth. Missile weapons in both cultures included stones thrown with slings. The Mesoamericans added the atlatl, a throwing stick used with spears to add considerable force. Bows and arrows were known to the Mesoamericans but were not often used in combat. In both regions, no group had a technical advantage over their neighbors. The soldiers of some Mesoamerican cities, such as Teotihuacan, were protected with cotton armor and helmets. Shields were also often used in Mesoamerica. Very few Mesoamerican cities, including Teotihuacan and Tollan, used organized formations and tactics. Most Polynesian and Mesoamerican warriors fought individually.

Fortifications were used by both cultures in warfare. Polynesian villages were often protected

by a stockade known as a *pa*. These fortifications could be erected in a very short time and usually served as a haven for people when attacked. Many Mesoamerican cities were similarly fortified, but their walls were more elaborate and included massive stone walls. In both instances, fortifications usually prevented attackers from seizing a settlement. Attackers lacked the logistical support, such as supplies, to mount a lengthy siege. The existence of fortifications was one reason most warfare assumed the character of raids.

Warfare also assumed a ritualistic and religious aspect in Mesoamerica and Oceania. Rulers in both regions appear to have consulted oracles and divination to determine the best days for combat. Certain dates were seen as auspicious, and battles usually avoided religious festivals. Important rulers and warriors in both cultures were distinguished by conspicuous dress, which was often more ceremonial than functional. Precombat rituals and sacrifices were offered. After the battle, prisoners, especially notable captives, were sacrificed to the gods. Trophies, including the skulls of important opponents, were kept by the victors.

—Timothy J. Watts

Bibliography

- Brown, M. Kathryn, and Travis W. Stanton, eds. *Ancient Mesoamerican Warfare*. Walnut Creek, CA: AltaMira, 2003.
- Feinman, Gary M., and Joyce Marcus, eds. *Archaic States*. Santa Fe, NM: School of American Research Press, 1998.
- Raaflaub, Kurt A., and Nathan Stewart Rosenstein. *War and Society in the Ancient and Medieval Worlds: Asia, the Mediterranean, Europe, and Mesoamerica*. Cambridge, MA: Harvard University, Center for Hellenic Studies, 1999.
- Vayda, Andrew Peter. *Maori Warfare*. Wellington, New Zealand: Polynesian Society, 1960.

Weapons in the Americas

Societies in the Americas between 300 and 1000 CE were stone age societies that normally did not use metals to form their weapons and had only relatively simple technology. Even so, the weapons they used were effective and capable of inflicting great slaughter on opposing warriors. Since no group had a technological advantage over another, victory usually depended on morale

and individual fighting skills. Some city-states, however, were able to establish empires that controlled relatively large regions, thanks to their development of standard formations and tactics.

Archaeological evidence indicates that the oldest weapons used in the Americas were clubs or maces. Simple wooden clubs were replaced by maces with stone heads, which were useful for crushing the bones and muscles of opposing warriors. Further development brought stone axes with sharpened heads. They were able to cleave through rudimentary coverings but suffered from a degree of fragility. Such weapons were effective only in hand-to-hand fighting.

By 300, most fighting men in the Americas used spears of varying lengths. While some spears were used for throwing like javelins, most were retained and used for thrusting at close quarters. Points were made of stone chipped to a sharp edge. Toward the end of the period, obsidian, which could hold an extremely sharp edge, replaced many other types of stones. Obsidian also played a role in the creation of other shock weapons used for slashing attacks. These included wooden swords with obsidian placed around the edges. Knives were also used as a final weapon.

Early defensive weapons included large rectangular shields made of hide. Personal armor, including helmets, began to appear by 300. Shields underwent a corresponding change, becoming smaller and round. Strips of leather or cotton cloth were wrapped tightly around the legs and arms of warriors to help deflect blows. Cotton armor for the rest of the body appeared around 500 in Mesoamerica. This armor consisted of short cotton jackets. They were quilted and filled with material such as rock salt to defeat slashing attacks. Such armor remained in use until the Spanish Conquest. Many Spaniards adopted cotton armor instead of their own, since it was lighter and cooler and provided effective protection from most weapons. Helmets were also worn by important persons. They were usually colorfully decorated with feathers and other ornaments to make their wearer easier to identify. Helmets seem to have been more decorative than practical.

Missile weapons of the era consisted at first of thrown spears. Rocks hurled by slings were also effective against unarmored warriors. These missile weapons were replaced to some degree

by the atlatl, a spear thrower. A warrior would place a wooden stick along his forearm. A groove in the stick held a short spear or dart. When the warrior brought his arm forward, the atlatl would act as an extension and give the extra force. Darts thrown with an atlatl traveled much farther and could penetrate most armor.

Use of the bow and arrow followed that of other missile weapons. Evidence indicates that their use may have spread from Northeast Asia to Alaska. Gradually, bows and arrows diffused to the east and south. Early bows were selfbows, made of single staves of flexible wood. They were not very powerful but were useful especially for hunting. The power of the bows was increased by attaching sinew, horn, or bone to the wooden staves followed by compound recurved bows. The more powerful bows were most common in northern North America, and little evidence of their use in Mesoamerica exists.

Bows and arrows were widely used in the American Southwest and were familiar to the Mesoamericans but were rarely used in warfare. Most noble warriors preferred the atlatl, which required extensive practice to be accurate. Because arrows were most effective when used in massed volleys, the bow and arrow was most likely used by lesser-trained commoners. The ability of commoners to pose a serious threat to noble warriors' monopoly on warfare may have been a factor in undermining the existing social structure in Mesoamerica. Parallels may be drawn to the advent of gunpowder weapons equalizing peasants and knights in early modern Europe.

Teotihuacan, which dominated the first part of the era, apparently had trained warriors using uniform weapons and standardized tactics. These included specialists armed with atlatls who delivered missile fire on their opponents. This was followed up by warriors armed with thrusting spears. Later city-states, such as Tollan, armed their warriors with atlatls and swords, allowing them to use missile fire followed by shock attacks.

—Timothy J. Watts

Bibliography

Brown, M. Kathryn, and Travis W. Stanton. *Ancient Mesoamerican Warfare*. Walnut Creek, CA: Alta-Mira, 2003.

Feinman, Gary M., and Joyce Marcus. *Archaic States*. Santa Fe, NM: School of American Research Press, 1998.

Follett, Prescott H. F. *War and Weapons of the Maya*. New Orleans: Department of Middle American Research, Tulane University, 1932.

Hassig, Ross. *War and Society in Ancient Mesoamerica*. Berkeley: University of California Press, 1992.

Warfare among Mayan Cities

During the Classic Period (200–900 CE), Southeastern Mexico, Guatemala, Belize, and part of Honduras were the home of Mayan cities. They were organized in a number of independent city-states that controlled varying amounts of territory. Warfare was a nearly constant part of their existence, especially between 400 and 900. It included commercial and political elements but also had important religious aspects.

Before 300, most Mayan conflicts were indecisive. Rulers raided each other's territory and engaged in bloody pitched battles, but imperial expansion was rare. All sides fought with basic stone age technology, such as thrusting spears with stone points. Each city had an organized militia that consisted of virtually all adult men. Their leaders were members of the nobility, with the ruler and his family serving as ultimate leaders. The size of Mayan armies is unclear. For important campaigns, thousands might have been mobilized. For the more common raids and smaller expeditions, only a few hundred men might have been included. One of the most important reasons for limited numbers was the logistical problems supporting many soldiers. Without draft animals or wheeled vehicles, all supplies had to be carried on men's backs or confiscated from local peasants. When supplies ran out, the armies returned home. Another reason for limited numbers was the need for agricultural laborers. Campaigns were timed for periods when workers were not needed for planting or harvesting.

One reason for war between the Maya cities was to gain control of populations and arable land. Wealth was primarily based upon agricultural products, such as cacao beans or cotton.

More territory also meant that more food could be produced to support increasing populations. Victory in war often resulted in the control of frontier territories and their workers. Another reason for conflict was commercial. An important trade between the Maya cities and other groups was important. Control of trade routes and the establishment of trading colonies allowed cities to import products like obsidian, decorated pottery, and metal objects more easily while exporting agricultural products.

Archaeologists have recently become more convinced that religion played an important role in decisions to go to war. Mayan artworks indicated that the capture of important persons for sacrifice to the gods was paramount. Seizure of an opposing ruler usually ended a battle immediately. A multitude of gods were worshipped by all Mayans. The most important for warfare was one known as 18-Rabbit Serpent. Mayans believed that the gods accompanied them and fought with them. The Maya regarded their kings as descendants of gods and displayed them as such in their art. Brightly colored banners and other devices on long poles were used in battle to represent gods and to help give directions to warriors. Kings and other nobles wore colorful costumes in battle, representative of various gods. Sacred litters with representations of the gods usually accompanied armies on campaigns and were special prizes to be captured. Because the gods and their favors were always present for the Maya in everything in life, success in war defined a king's power as a representative of the gods. Failure, especially capture and sacrifice by another ruler, indicated that a ruler had lost the gods' favor.

Although most wars between Maya cities consisted of short, often bloody actions, major battles were not unknown. These battles may have included thousands of warriors on each side. Although the archaeological evidence is unclear, rulers may have made arrangements in advance. Priests would have let the kings know what dates were acceptable to the gods and consulted auguries to check for auspicious signs. Formal tactics in the battles were rare, and most fighting seems to have been done by individual nobility. Although the capture of live enemies

for sacrifice to the gods was one goal, Mayan battles could be extremely bloody.

Although warfare was endemic among the Maya, conquest of another state was only possible when that population could be incorporated into the victor's population. One of the earliest examples is Tikal's conquest of the neighboring city of Waxaktun in 378. The two cities had fought before, but Tikal's victory in this year was decisive. Tikal's king installed his brother on the throne after eliminating the old ruling family of Waxaktun. One reason the people of Waxaktun seemed to accept absorption into Tikal was that credit for the victory was given to 18-Rabbit Snake, a foreign war god imported from Teotihuacan. The Tikal victory proved that 18-Rabbit Snake was a more powerful god, giving the new king from Tikal credibility.

Victories were celebrated with sacrifices of captured enemies but also by destroying the defeated city's religious power and symbolism. Stone stela were raised by the victors with information about their victory. In the capitals and ceremonial centers of the losers, religious buildings were ritually desecrated to destroy their powers. Masks of the gods were disfigured, and bonfires were built in sacred chambers. Pottery used in rituals was smashed, and white marl was spread over the floors and doorways. The destruction symbolized the victory over the loser's gods.

Warfare was common for most of the classical era of the Maya. No city-state was able to establish a lasting dominance over the others. By 900, Mayan society in the Yucatan collapsed, apparently from internal pressures caused by warfare and ecological disaster.

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Bibliography

- Brown, M. Kathryn, and Travis W. Stanton. *Ancient Mesoamerican Warfare*. Walnut Creek, CA: AltaMira, 2003.
- Feinman, Gary M., and Joyce Marcus. *Archaic States*. Santa Fe, NM: School of American Research Press, 1998.
- Follett, Prescott H. F. *War and Weapons of the Maya*. New Orleans: Department of Middle American Research, Tulane University, 1932.
- Hassig, Ross. *War and Society in Ancient Mesoamerica*. Berkeley: University of California Press, 1992.

The Polynesian Way of War

Warfare was an important part of Polynesian society. Most social disputes were solved with violence, whether they were between different groups of people or within the same political group. Because of the limited resources available on most Polynesian islands, warfare could be caused by increasing populations and the competition for those resources. It could also be caused by social ambitions and the need among elite groups to prove that they deserved their positions.

Around the beginning of the Common Era, Polynesian groups began a long-distance colonization of the islands of the central Pacific. This amazing process was apparently spurred by increasing populations and the need to escape violent conditions in their homelands. The process was repeated throughout the era as populations became settled, grew, and then came into conflict over control of the new islands. Although ancient Polynesians left no written records, their oral traditions and archaeological evidence indicate that the first settlements were made on islands in areas with abundant water resources. As the populations expanded, groups formed new communities in more marginal areas of the island. Eventually these communities expanded until their borders came into conflict with each other. If populations continued to increase, the groups would engage in war with each other until they were conquered or forced to flee the island. Warfare was brutal and usually without mercy. Conflict between groups sometimes lasted for generations. Captives were used as human sacrifices in religious rituals. On some islands, cannibalism may have taken place as a part of these sacrifices.

Conflict was also the result of social stratification and stress. Polynesian populations were

divided into an elite class of chiefs and the mass of commoners. Status was determined by birth. Chiefs were believed to possess *mana*, a force given by the gods through the ancestors of the elite class. Mana was made manifest through the prowess and power of the chiefs. A man who was not successful in war was believed to be without mana and lost his position in the society. On the other hand, successful warriors from the common class could rise in social status. Some apparently demanded and received the benefits of chieftdom because of their success in combat.

Because of endemic warfare in Polynesian society, fortifications were common. Most villages or settlements had wooden walls and were sited on easily defended terrain, such as hill or ridge tops. Known as *pa*, they also included large storage pits for food to allow the population to withstand a siege if necessary.

Spears were common weapons in Polynesian warfare. They ranged from 6 to 15 feet in length. Natives amazed later European explorers with their ability to grab thrown spears in mid-flight and use them to fend off other spears. Slings, strangling cords, and tripping devices were also common. War clubs from ironwood or other dense wood were used in close combat and were often elaborately decorated.

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Bibliography

- Feinman, Gary M., and Joyce Marcus. *Archaic States*. Santa Fe, NM: School of American Research Press, 1998.
- Kirch, Patrick Vinton. *The Evolution of the Polynesian Chieftdoms*. New York: Cambridge University Press, 1984.
- Vayda, Andrew Peter. *Maori Warfare*. Wellington, New Zealand: Polynesian Society, 1960.

■ Introduction: Fighting Forces—A Global Overview

Globally, the period 300–1000 CE witnessed both change and continuity in warfare largely due to increased reliance

on cavalry, advances in technology, and often—except in sub-Saharan Africa and the Americas—increased reliance on navies.

In Eurasia, migrations and invasions of steppe peoples into civilization zones precipitated the decline and fall of great civilizations in China, India, and Europe, changing the way these civilizations made war and raising the value of cavalry during this period. In China, the infantry-based armies of the late Han dynasty began to include more cavalry in their tactical mix to meet the persisting threat of horse nomads on their northern frontier. Han commanders even went so far as to hire nomadic horsemen as mercenaries because of their skill as mounted archers using powerful composite bows. After the fall of the Han dynasty in 220, Chinese armies were heavily influenced militarily by the influx of central Asian peoples who brought with them saddle and stirrup-stabilized cavalry, both of these inventions coming from horse nomads. But policing the vast territories of China required large multiethnic infantry contingents, so footmen remained an integral part of the Chinese military system throughout the later Sui (581–618) and Tang (618–907) dynasties.

Indian military structures were also impacted by the influx of steppe peoples into the subcontinent in the period 300–1000. During the Kushan Kingdom (ca. 150 BCE–ca. 200 CE) Indian warfare was influenced by central Asian martial practices, dispensing with the war chariot so popular in earlier periods and emphasizing cavalry tactics over large infantry engagements. The rise of the indigenous Gupta dynasty (320–ca. 550) returned India to more traditional ways of warfare, stressing combined-arm cooperation using heavier cavalry, infantry, and war elephants. The Gupta infantry could stand against the cavalry from the central Asian steppe because they used the bamboo and steel longbow that could shoot armor-penetrating missiles. The Gupta dynasty was nearly destroyed by another steppe people, the Huns, whose cavalry armies swept into India from the northwest in the late fifth and sixth centuries, but an alliance of Hindu armies drove the Huns out of India in 528. The conquest and occupation of the Sind by Arab Islamic armies in the early eighth century introduced Islamic martial practices to Indian war making, while the northwestern frontier of India was threatened again in the tenth century with the coming of Turkic Ghaznavids (963–1187),

who utilized steppe warfare showcasing lighter horses and mounted archery. Turkic martial organization and tactics would continue to influence Indian warfare through the numerous dynasties that made up the later sultanates of Delhi (1206–1527).

Persian warfare under the Sassanids (224–651) mirrored that of their chief adversary, the Byzantines, with sophisticated armies using well-armored heavy cavalry cataphracts with infantry support being the norm, although the Persians were also famous for their elephant corps. The rapid rise and expansion of Islam destroyed the Sassanids and quickly put the Byzantines on the defensive. Early Arab Muslim armies were not adept at siege warfare like their Chinese, Indian, and Byzantine counterparts, preferring to use their camel corps to cross deserts, bypass fortifications, and raid the countryside. But later Islamic armies adopted the technologies and tactics of their conquered peoples, transforming Muslim armies with heavier Persian-styled heavier cavalry and better siege trains, while in North Africa, Berber martial practices mixed with Arab practices as Islamic armies crossed into Europe and conquered the Iberian Peninsula after 711. The conversion to Islam of the Ghazni and Seljuk Turks brought light cavalry archers into Muslim warfare often with spectacular effect, as the Seljuk defeat of Byzantine forces at Manzikert in 1071 illustrated.

In Europe, the Roman Army was in decline beginning in the fourth century and was unable to defeat Germanic tribes penetrating the Roman frontiers in raiding expeditions, a process that accelerated in the fifth century. Drill and discipline suffered as Germanic troops were allowed to join the Roman military, often with their own commanders, and by the fall of the western Roman empire in 476, the Roman Army was indistinguishable from its barbarian enemies. Cavalry, rather than infantry, was the featured military arm of emerging Germanic kingdoms, especially after the diffusion and widespread use of built-up saddles and stirrups created more efficient lancers in the ninth century. This West European heavy cavalry provided Catholic Europe with the strategic mobility to meet the threat of the Magyar and Viking menace, and by the beginning of the

eleventh century heavy cavalry was the dominant military arm in western Europe.

Martial practices in North Africa in the period 300–1000 were heavily influenced by Roman, Vandal, Byzantine, and later Islamic warfare, while in sub-Saharan Africa tribal warfare was the norm. Between 700 and 1000 the kingdom of Ghana emerged as the dominant political and military force in sub-Saharan Africa and was the first of the western Sudanese empires to establish a large professional army. During this period, cavalry was not a featured military arm as it would be in the later kingdoms of Mali and Songhai. Instead, infantry armed with short-handled wood, stone, and iron-tipped thrusting spears, javelins, and iron swords and protected by bamboo shields was the main fighting force. These light troops were ideally suited for fighting in the varied topography of the Sahel, savannas, and jungles that surrounded this West African kingdom. War revolved around protecting the gold, ivory, and salt trade; iron mining; and the seizure of captives for the growing slave trade with the Mediterranean world. The expansion of Islam into West Africa after 1000 changed military structures, highlighting the role of professional soldiers and creating large standing armies as well as highly disciplined cavalry forces.

In the New World, patterns of warfare in the period 300–1000 continued to be centered around tribal conflicts using small armies with stone age martial technologies like atlatls, bows, spears, and clubs for control over people, trade routes, and limited natural resources like fresh water, arable land, and access to obsidian and chert, strategically important materials for constructing tools and weapons for societies that did not use copper, bronze, or iron. Where states did exist, warfare was highly ritualized, and there is still debate among scholars on the role of human sacrifice as a motivation for raiding and conquest. One of these states, the Teotihuacan civilization in the Valley of Mexico, was capable of fielding an army of nearly 20,000 men when augmented by allied communities. This army utilized battle standards (a first for pre-Columbian armies), and there is indication that soldiers were equally adept in shock combat using thrusting spears and clubs as they were using standoff missile weapons like javelins and atlatls (bows were not used).

For protection, quilted helmets and shields were utilized. Farther east the classical Maya (ca. 250–ca. 900) organized their society in city-states like ancient Greece and continuously fought civil wars for control over the region's resources. Archaeology reveals that the Maya built fortifications around their urban centers, but modern scholars are still deciphering sources to understand Maya tactics and military organization. Most martial activity seemed to be done by a military caste that most probably fought in open formations and used missile weapons like bows, atlatls, and spears and then closed for hand-to-hand combat with thrusting spears and clubs. Textual and archaeological evidence supports increased Maya warfare at the end of the millennium, perhaps due to increased competition for dwindling resources. Less is known about the military capabilities of the central Andean civilization of the Moche (ca. 100–ca. 800). The Moche were organized like the Maya in loosely connected communities, and limited archaeological evidence suggests that Moche warriors fought without armor and with atlatls and clubs, while defensive works at the end of the civilization point toward internal social unrest, possibly because of climate change.

At sea, Old World navies from East Asia to Europe continued to use wooden ships powered by oar and sail. In China, the Han dynasty's so-called Tower Ship Navy was improved upon by later Tang and Song rulers, and the Chinese proved masters of seaborne and riverine operations. Farther west the Gupta empire maintained a navy and was able to control regional waters around the subcontinent, while the Sassanids in Persia used their navy to attack across the Persian Gulf to Arabia before the advent of Islam. In the Mediterranean, Byzantine and Arab Muslim warships were usually smaller derivatives of earlier Roman galleys and carried contingents of marines for ship-to-ship fighting and amphibious operations. The incendiary known as Greek fire was used to good effect by the Byzantines to destroy a large Muslim fleet in 678 and was soon in the arsenal of most civilizations in the region. Farther north, Scandinavian shipwrights constructed large clinker-built longships capable of extraordinary transoceanic journeys and deep river penetrations, becoming the Vikings' favor-

ite tool for raiding and invading Europe from Ireland to the Ukraine and colonizing Iceland, Greenland, and, for a short period by 1000, parts of the northeastern coast of North America. There is no evidence to support the existence of large organized navies in sub-Saharan Africa and the Americas in this period.

—Brian Todd Carey

The Byzantine Army

During the period 300–1000 CE the Byzantine empire faced numerous challenges from Persian encroachment, Germanic invasions, and Islamic expansion, yet Byzantium was almost always ready to fight. The long Byzantine survival was due in part to the remarkable performance of a balanced combined-arms army. The composition of the Byzantine Army differed from that of its Roman predecessor in that cavalry, rather than infantry, took a dominant position. This switch in emphasis probably arose due to prolonged martial contacts with the Near East. The most formidable threat to the eastern part of the Byzantine empire came from the successors of the Parthians, the Sassanid Persians, who fought like their forerunners almost exclusively with light and heavy cavalry. Due to close martial contacts, some Byzantine heavy cavalry, called *clibanarii* or *cataphractii*, carried bows. The cataphract functioned as a heavily armored lancer or as a mounted archer. With the adoption of the stirrup sometime from the late sixth to the late seventh century CE, the cataphract became for the first time a true lancer because he could now use the synergy of the horse and rider and aim through his target instead of jabbing down or loosening his spear with every pass, as classical heavy cavalry had done for centuries.

Second to cavalry in importance in Byzantine warfare was light infantry. Byzantine light infantry wore very little body armor and carried a composite bow with a quiver of 40 arrows, a small shield, and an axe for close combat. Infantry not skilled with the bow carried javelins. Warfare against mounted archers in the east illustrated the effectiveness of these foot bowmen over enemy horse archers because light infantry fired bows with a greater range from a more sta-

THE BYZANTINE NAVY, 300–1000 CE

Naval power was inextricably tied to the fortunes of the Byzantine empire in the period 300–1000. Under emperors Constantine (r. 324–337) and Justinian (r. 527–565), the Byzantine fleet was modern and large and could project power to the far corners of the Mediterranean Sea, maintaining the flow of goods and the prosperity of the empire. The standard Byzantine warship was the *dromon*, a galley with two banks of oars and an average crew of 200 oarsmen and 70 marines. Swifter and lighter warships called the *pamphylos* and the *ousiakos* were also used, and special transport ships were used for carrying horses (*onerarai*) and for projecting Greek fire (*siphonophores*). Byzantium faced a new naval threat with the emergence of Islam in the seventh and eighth centuries. Muslims seized important naval bases along the Mediterranean littoral and islands and placed the Byzantine capital under siege twice (674–678 and 717–718). In the ninth century, Byzantine emperors Michael III (r. 842–867) and Basil I (r. 867–886) revived the eastern Roman Navy. But this revival was short-lived, as future emperors increasingly employed mercenary Venetian fleets to police their waters. When a Russo-Swedish navy attacked Constantinople in 1042, the Byzantines pressed into service aging hulks and refitted transports to defend the city, and in 1204 there was no Byzantine navy present to meet the Catholic crusaders during the Fourth Crusade (1202–1204).

—Brian Todd Carey

ble platform, the ground. Byzantine light infantry were supported in the field by heavy infantry modeled after classical Roman infantry. Byzantine heavy infantry wore mail or lamellar armor and helmets and carried a large round shield. Equipped with a long spear and sword, Byzantine heavy infantry normally massed in phalanxes (compact bodies of troops) 4, 8, or 16 ranks deep on the battlefield. This infantry generally formed up as a second line behind the cavalry, relying on the cataphracts to break up the enemy formation before following up, or in the center with cavalry on the wings.

Using this military organization, Emperor Justinian (r. 527–565) was able to reconquer most of the Mediterranean basin. After his death



Miniature from the Scyltizes Chronicles (eleventh century CE) depicts a battle waged in 842 CE between Byzantine and Arab cavalries. (Werner Forman/Art Resource, NY)

in 565, the Byzantine (eastern Roman) empire faced crisis after crisis. Constantly besieged by the Slavs and Bulgars in southern Europe, by Persians in Mesopotamia, and, from the mid-seventh century onward, Islam from Africa and the Levant, the Byzantine empire found its military and fiscal resources relentlessly stretched. Still, despite being deprived of all its African and Asian possessions except Asia Minor, the Byzantine empire maintained itself for centuries as a formidable eastern Mediterranean power.

Unable to sustain a professional standing army, Emperor Constans II (r. 641–668) settled his mobile armies in specific districts called *themes*. The new organization of themes introduced regionalized army groups under the command of a senior general, or *strategoi*. The themes acted as both regional frontier troops and as mobile field armies. Outside of military organization, the themes were also an important part of imperial social structure. The soldiers of a particular theme were the legal holders of the land itself, a development that came in the form of imperial land grants within the particular region and were similar to the land grants during the early Roman empire.

Beginning in the mid-seventh century, soldiers of the themes supported themselves from land grants within their districts because the state's only remaining means of supporting its soldiers seems to have been giving them land, most probably from imperial estates. For the most part, the themes acted as a defensive force,

but later emperors would take an interest in regaining lost territory. Emperor Constantine V (r. 741–775) created several elite cavalry units called *tagmata*, first as a reaction to a rebellious theme in northwestern Anatolia and then for offensive campaigns against the Arabs and Bulgars.

The basic administrative and tactical unit of the Byzantine Army from the seventh century was the *banda*, consisting of about 400 soldiers commanded by a tribune and, later, by a count. The *banda* were about equally divided into infantry and cavalry, with the dominant weapon system being heavy cavalry (historians believe that cavalry made up 20 percent to 40 percent of a Byzantine army, depending on where it was created and where it was operating). Infantry archers and javelineers usually accompanied the heavy infantry, acting as skirmishers. Five to eight *bandum* (2,000–3,200 cavalry and infantry) formed a *turma*, two or three *turmae* (4,000–9,600 soldiers) constituted a *thema*, and three or four *themae* together became a Byzantine field army, usually numbering 25,000 to 30,000 men. The entire Byzantine Army was not very large, probably never exceeding 150,000 men total. For all practical purposes, the *thema* replaced the legion as the premier strategic unit of maneuver in Byzantine warfare.

The Byzantine Army differed from its Roman predecessor in one significant way: the level of professionalism in its military. Although the soldiers of the *thema* became increasingly a defensive militia force, the core of the Byzantine Army consisted of professional soldiers organized in homogenized cavalry or infantry units called *tagmata*, equal to the size of the *thema*. These soldiers were the best-trained troops in the empire, serving as Constantinople's garrison and as the chief expeditionary force for the emperor. When the emperor went on campaign, the *tagmata* and local *themae* combined to create a field army.

For the next 300 years, Byzantine field armies enforced a conservative, careful strategy of limited military aims, seizing land in the Balkans from the Bulgars and territories in Anatolia, Syria, and Armenia from the Muslims. But by the coming of the millennium, the overall professionalism of the Byzantine Army dropped precipitously, forcing emperors to rely increasingly on foreign mercenaries, especially Russo-Swedish soldiers

called the Varangian Guard, instituted by Emperor Basil II (r. 976–1025) in 988 CE. By the beginning of the eleventh century, emperors added Normans, Germans, and Turks to their payrolls, serving under their own officers in units with their own organization. As the themes declined in combat efficiency, these mercenaries began to replace the Byzantine Army rather than merely complement it. But despite these changes, the Byzantine empire would not be able to meet the growing threat of the Seljuk Turks, who defeated the eastern Romans decisively at Manzikert in 1071 and overran most of Anatolia, forcing Byzantium to ask for assistance from the papacy and precipitating the crusades.

—Brian Todd Carey

Bibliography

- Carey, Brian Todd, Joshua B. Allfree, and John Cairns. *Warfare in the Medieval World*. Barnsley, South Yorkshire, UK: Pen and Sword Books, 2006.
- Haldon, John. *Byzantium at War*. Oxford, UK: Osprey, 2002.
- Treadgold, Warren. *Byzantium and Its Army, 284–1081*. Stanford, CA: Stanford University Press, 1998.

Merovingian and Carolingian Armies

Early medieval western Europe was dominated by the Franks, a fierce Germanic people who settled into what is today the Netherlands, Belgium, and northern France. Split into two major dynasties, the Merovingian (ca. 450–751) and the Carolingian (751–987), the Franks possessed a solid military and very able commanders. The first important king of the Merovingian dynasty, Clovis (r. 480–511), converted to Catholicism in 496 CE, and his subsequent alliance with the papacy brought the Catholic Church's organizational capabilities to the Germanic kingdom. Sanctioned by the pope and allied with Catholic missionaries, Frankish kings and nobles spread Catholicism and civilization east of the Rhine and ushered in three centuries of Frankish cultural, political, and military supremacy in West European affairs.

The core of Clovis's army consisted of a personal bodyguard of professional warriors (*socii* or *exercitus*) bound to service by oaths of loyalty

➤ CAROLINGIAN FORTIFIED BRIDGES

In order to block or discourage seaborne penetrations of the Viking Great Army into the heart of western Europe, the Frankish king Charles the Bald (r. 843–877) built fortified bridges across strategic waterways. Viking marauders preferred soft targets such as churches, monasteries, and unwall towns and cities and raided these sites from the safety of their longships. To obstruct these upriver raids, Charles placed these fortified spans at strategic locations such as Charenton-le-Pont on the Marne River, Auvers on the Oise River, and Paris, Pistres, Pontoise, and Trilbardou on the Seine River and built and garrisoned the bridges with men too poor to go on campaign. The bridges consisted of a wooden superstructure and bridge-head forts of wood and stone. The effectiveness of these fortified bridges is mixed. With the exception of Paris, most of these bridges had limited success because of the difficulty of maintaining garrisons. Most were attacked and destroyed while under construction. Charles also ordered the restoration of walls at Orleans, Le Mans, and Tours and construction of a wall around the important monastery of St. Denis near Paris. After Charles's death in 877, control of the fortified bridge near Paris fell to local commanders, who despite their best efforts were unable to hold back a second Viking Great Army in 885 that sailed up the Seine and attacked Paris.

—Brian Todd Carey

and commanded by officers of the court (mayor of the palace, counts of the palace, and marshal). If a larger army was required, Clovis and his successors would pull together an *exercitus generalis*, or general army, made up of magnates and their followers. In the second half of the sixth century a general levy (*heerbann*) of able-bodied men appeared, led by the local count (*comes*). Duties included maintenance and garrisoning of fortifications, roads, and bridges and serving on campaign. The period of service was probably a maximum of six months and was limited by planting and harvesting. The *heerbann* usually served as infantry in battle wearing little or no defensive protection, usually just a helmet; carrying a shield; and employing a light lance, a long sword, or a long single-edged dagger known as a

scramasax. Infantry also carried the *angon*, or barbed-headed javelin, as a missile weapon. Archers were never present in large numbers in Frankish armies except during the reign of Charlemagne. The wealthier noble horsemen wore mail hauberks and helmets, carried round convex shields, and used their long swords as frequently as their lances for attack. These less-armored heavy cavalry often employed javelins or throwing axes known as *franciscas*, creating a fusion of heavy and light cavalry.

Eventually, a succession of weak Frankish kings under the Merovingian dynasty led to the practice of actual power being wielded by the mayor of the palace. Through this office the next Frankish dynasty, the Carolingian, rose to power. The most significant of these Carolingian mayors, Charles Martel (ca. 688–741), earned his military reputation as an ardent campaigner, consolidating the power of his office and expanding centralized control over Austrasia and Neustria in what is now roughly northern France and northwestern Germany. But Charles Martel faced new challenges to his rule with the expansion of Islam into the Iberian Peninsula. Muslim armies crossed into Europe in 711 and conquered the Visigothic kingdom in Spain by 718, using northern Spain and eventually southwestern France as bases of operations for raiding expeditions into Christian Europe. Charles Martel blunted the most famous of these raids at the Battle of Tours in 732. Charles Martel's army was primarily a force of mounted infantry who dismounted to fight. Once dismounted, these troops fought in the same dense shield walls as their Frankish ancestors had centuries earlier, with men from the same estate or towns standing together and with feudal vassals gathered around their lords. There is some evidence that stirrup-stabilized cavalry entered the Frankish art of war after the Battle of Tours.

Charles Martel's grandson, Charlemagne (r. 768–814), would build upon his inheritance and create the most powerful kingdom in western Europe since the Roman empire. To defend against foreign invasions, Charlemagne established border provinces known as marches (*marcae*) consisting of a network of fortresses joined by roads to protect the hinterland and to be used as bases for offensive campaigns. An ap-

pointed military governor, or *markgraf*, commanded each of these marches, granting newly conquered territory to nobles and veterans in exchange for military service.

Under Charlemagne the majority of the Frankish Army was still serving as infantry, although there was a steady increase in the use of cavalry in the Carolingian period. This emphasis on mobility was due to constant campaigning on the borders against fast-moving raiders (Avars, Muslims, Vikings, and Magyars). Because of the expense of the knight's panoply and the time and practice required to become a skilled equestrian and lancer, the medieval heavy cavalryman needed to be economically supported. Consequently, lords who wanted the services of this new and expensive weapon were required to grant each vassal a benefice, a piece of land from their hereditary possessions that provided the vassal's economic support. In return for this grant of land the vassal provided the lord with military service. By the ninth century, the benefice became a fief as it acquired new characteristics involving the exercise of political power. The fief differed from the benefice in that the vassal enjoyed the rights of jurisdiction or political and legal authority within his fief.

Stirrup-stabilized heavy cavalry also made its appearance in this period. The stirrup, which was believed to have originated in central Asia in the second century BCE, was probably introduced to the West sometime before the eighth century either by the Byzantines, the Muslims, or the Avars. When combined with a saddle built up at the pommel and cantle for longitudinal support, the stirrup welded rider and horse together. Rather than thrusting out himself, the lancer now held his weapon at rest in the crook of his arm, using the combined weight of his body and his charging mount to deliver a blow of unprecedented violence. Utilizing the energy of the horse and the newfound stability provided by the stirrup, this new heavy cavalry used its spears as lances to defeat its enemies and secure a position at the top of the social hierarchy. The Franks became famous for the irresistible charge of their heavy cavalry, and their tactics spread from France to all of western Europe by 1000 CE.

Carolingian dominance in western Europe waned after the death of Charlemagne in 814. A

second age of invasions swept across the continent as Muslim, Magyar, and Viking marauders severely eroded Frankish defenses. What remained of Charlemagne's empire was split into three parts with the Treaty of Verdun in 843, although the invaders pummeled these smaller kingdoms as well. Later Carolingian kings used fortified bridges to impede upriver Viking assaults, while another strategy was to give land grants to Viking chieftains under the condition that these rulers would protect the realm from their brethren. The most famous and historically consequential of these land grants took place in 911 when King Charles the Simple (r. 893–923) granted the lands at the mouth of the Seine River to a band of Vikings under Rolf the Walker (later known as Rollo), creating the duchy of Normandy. Although the Carolingian dynasty ended in 987, the martial lineage of Clovis, Charles Martel, and Charlemagne shifted to the Normans, inheritors of both Viking and Frankish martial institutions.

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Bibliography

- Bachrach, Bernard S. *Armies and Politics in Early Medieval West*. London: Aldershot, 1993.
- Beeler, John. *Warfare in Feudal Europe, 730–1200*. Ithaca, NY: Cornell University Press, 1971.
- France, John. "The Military History of the Carolingian Period." *Revue Belg d'Histoire militaire* 26 (1985): 81–99.
- Griffith, Paddy. *The Viking Art of War*. London: Greenhill Books, 1995.

Chinese Armies, 300–907 CE

In the period between 300 and 907 CE the Chinese Army witnessed great change as the Middle Kingdom succumbed to foreign invasion, reshaping its military institutions. After the Han dynasty fell in 220 CE, China was divided into three Chinese states, the Wei, Wu, and Shu Han, though these states did not last long. In 266, the Jin dynasty attempted to unify China again, though it ultimately fell in 316 when northern barbarian tribes divided northern China among themselves, setting up kingdoms that were Chinese in name only. Ethnic Chinese rule continued in the south, but the influence of these northern nomads on Chinese warfare was both

revolutionary and long-lasting, impacting the Chinese art of war under the later Sui (589–618) and Tang (618–907) dynasties.

The armies that founded the Han dynasty in 202 BCE consisted mainly of infantry, supported by contingents of cavalry and chariots. Foot soldiers wore caps or iron helmets and were protected by leather or iron lamellar armor and fought with swords, spears, or halberds. Although archers were present, crossbowmen figured prominently in the Chinese art of war. But persistent contacts with central Asia from the mid-second century BCE onward forced the Chinese to adopt exclusively cavalry forces to meet the barbarian threat. Han cavalry utilized swords, spears, halberds, and both bows and small crossbows and would dismount in battle if necessary. Han commanders hired nomadic horsemen as mercenaries, valuing their archery skills from horseback.



Statuette of a knight, Tang dynasty. Before 500 CE, Chinese armies adopted cavalry technology, including the stirrup, of their horse-riding pastoral enemies, the Xianbei warriors. (Scala/Art Resource, NY)

➤ TURNING POINT IN CENTRAL ASIA— THE BATTLE OF TALAS RIVER

The Battle of Talas River in 751 was a major clash between two powerful empires for control over central Asia. Under the Tang dynasty (618–907) Chinese armies pushed farther west, recovering lands lost since the fall of the Han dynasty, but encountered resistance from both Tibetans and the growing influence of Muslim Arabs in the Tarim Basin. In 747, a Tang army of 10,000 mounted Chinese soldiers and non-Chinese allies pressed as far west as the Pamir Mountains, commanded by the Korean general Kao Hsien-chih. Chinese troops defeated a Tibetan army and stabilized the Tibetan frontier but four years later faced a new Arab dynasty, the Abbasid (750–1258), at the Battle of Talas River (near modern Taraz in Kyrgyzstan).

General Kao commanded an impressive host of 30,000 soldiers (20,000 Chinese and 10,000 Qarluq mercenaries). There are no records as to how many Muslim soldiers were present. The fierce battle lasted five days and only came to a decisive conclusion when the Qarluq mercenaries defected to the Arab side. The Tang army was routed in the only major military confrontation between Muslims and the Chinese armies in this period. Tang westward progress was halted, and Islamic influence permeated central Asia. Captured Chinese artisans gave the West paper manufacturing, which was taken back to Samarkand and Baghdad and then spread to Damascus, Cairo, and Morocco before reaching Europe by way of Spain and Italy. Islam's control of the Silk Roads initiated a golden age for the Abbasid caliphate, while the loss at Talas River severely weakened the Tang emperor and precipitated the An Lushan Rebellion (755–763), leading to the decline of the Tang dynasty.

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Chinese military history changed dramatically in the fourth century CE with the introduction of stirrup-stabilized heavy cavalry cataphracts, well-armored lancers riding larger horses. Stirrupless heavy cavalry was a common feature in West Asian warfare going back to the sixth-century BCE Achaemenid Persians, with this form of warfare slowly making its way east across central Asia over the centuries. The Xiongnu in northwestern China first obtained cata-

phract panoplies in 312 from captured Xianbei warriors who migrated south from Manchuria, introducing the cataphract into China proper by midcentury. With the addition of the stirrup and a saddle with built-up pommel and cantle, the Chinese cataphract became a true lancer, using the synergy of the horse and rider and aiming through his target instead of jabbing down or loosening his spear with every pass. Due to the expense of fielding heavy cavalry cataphracts, poorer tribesmen continued to be employed in large numbers as light cavalry archers.

Barbarian commanders controlling Chinese territory soon recognized the importance of conscripting native Chinese infantry to garrison cities and control the countryside. Under the Northern Wei dynasty (386–534) early forms of the *juntian* (“equal field”) and *fubing* (“soldier-farmer”) military systems were created. The *juntian* system assigned 140 *mou* (about 19 acres) of agricultural lands to a peasant family to work, both slowing the accumulation of land by wealthy families and providing the economic support for the soldier-farmer. Under the *fubing* system, each regional military headquarters (*fu*) commanded about 1,000 soldier-farmers who could rapidly mobilize for war. During peacetime, these men worked their allotted land and served one-month annual tours garrisoning the capital. Most *fubing* militia units were located in the northwest and were best suited for the annual campaigning cycle of an expanding empire.

China was unified again in 589 under the Sui emperors Wendi (r. 581–604) and his son Yangdi (r. 604–618), who came from a northwestern aristocratic family of mixed Chinese and barbarian ancestry. Sui military institutions continued to reflect nomadic influences. Forty percent of the Sui dynasty's 60 highest-ranking officers were non-Chinese, while 87 percent had served under the previous Xianbei dynasty. The Sui's vigorous foreign policy required the organization and deployment of considerable military force. Military expeditions were sent west, driving out the nomadic peoples of Gansu and eastern Turkestan. Wendi's policy exploited the internal divisions among these Steppe peoples, supporting rival Turkish factions against one another. Colonies were established along the western Silk Roads, while to the south Sui

armies marched into Champa in central Vietnam and crossed the Strait of Formosa to Taiwan. Three unsuccessful campaigns against the northern Korean state of Koguryo strained the dynasty's manpower and material resources, precipitating rebellion and the assassination of Yangdi in 618. Yangdi was replaced by the Sui dynasty's top general, known posthumously as Gaozu (r. 618–626), who founded the Tang dynasty. Gaozu's second son enjoyed considerable success as a military commander before killing his brothers and forcing his father to abdicate, becoming Emperor Taizong (r. 626–649). He pushed Chinese hegemony west across the Tarim Basin to the Pamir Mountains in modern Tajikistan but, like the Sui before him, failed against Koguryo in Korea.

Both the Sui and early Tang utilized the fubing military system, though with different command structures. The Sui allowed local administrators to control these units, while the Tang placed all of the soldier-farmers under the Ministry of the Army (*ping-pu*), giving the emperor centralized control. The Tang maintained some 600 fubing units, each containing between 800 and 1,200 men. These soldier-farmers were liable for military service between the ages of 21 and 60. Units contained both infantry and cavalry and were subdivided into *tuan* of 200 men, *tui* of 50 men, and *buo* of 10 men. Officers were permanently employed, while the soldier-farmers reported to the capital at Chang'an (modern Xian) on a rotating basis depending on how far away they lived. Soldiers who lived up to 500 *li* (about 160 miles) from the capital served 1 month in every 5, while those who lived 2,000 *li* (about 640 miles) away served 2 months out of every 18. Early Tang officials also used a similar system to man the far reaches of the empire, rotating men every 3 years in frontier garrisons.

The fubing system worked well at first because most of the soldier-farmers were already located in the northwest and close to the capital. Militia performed well as peacetime garrisons or in short-duration campaigns but proved inadequate for staffing static fortifications in frontier regions or in prolonged campaigns like those fought in Korea. If soldiers were kept on campaign too long, their agricultural fields suffered at home, weakening both the family and the

state. By the reign of the Tang emperor Xuanzong (r. 712–756) the fubing system had declined as well-off families began to pay substitutes or evade military service altogether. Xuanzong replaced the militia system with a standing army that, by the 740s, reached a strength of half a million men and 80,000 horses. The ethnic makeup of this new standing army reflected the success of Tang imperium and included Han Chinese, Koreans, Kitan, Turks, and Sogdians, preserving the Chinese-Inner Asian mixture characteristic of Sui and early Tang armies. Central Asian tactics and equipment continued to shape Chinese armies, with many ethnic Chinese horsemen favoring the traditional Turkish combination of light lance and bow over the more cumbersome cataphract panoply. Tang generals favored cavalry for its strategic mobility, with some Tang expeditionary forces in central Asia consisting entirely of ethnic Chinese or allied horsemen. When infantry was included, it was often mounted in order to keep up with the cavalry.

In 747, Emperor Xuanzong sent his mobile army west across the Pamirs to prevent the Muslim Arabs and Tibetans from joining forces. This strategy initially worked, but four years later the Tang Army suffered a devastating defeat against the new Abbasid caliph at the Battle of Talas River near Samarkand, ending Tang ambitions in this area and opening central Asia to Islamic influence. An alliance between Tibet and Nan Zhou in southwestern China further exacerbated the Tang's strategic position. To meet these growing threats on the frontier, Xuanzong gave his frontier commanders military governorships (*jiedushi*), weakening centralized imperial control over the Tang Army. One northwest frontier general of Turkish extraction, An Lushan, took advantage of his new position and rebelled, ordering his 160,000 veteran troops against the home army. The resulting An Lushan Rebellion (755–763) witnessed the seizure of the capital of Chang'an and the flight of the imperial court south to Sichuan. Order was reestablished in 763 only with the assistance of non-Chinese allies.

In the post-An Lushan climate, later Tang emperors created the "Divine Strategy Armies" to counterbalance the power of the frontier governors, placing palace eunuchs in command, but

even this contingency failed as the eunuch generals grew increasingly powerful until the end of the Tang dynasty in 907. Eunuch control over native Chinese armies ended in the Five Dynasties period (907–960), a politically unstable but militarily successful era characterized again by the centralization of the military under imperial control and the expansion of Chinese territory.

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Bibliography

- Dreyer, Edward L. "Continuity and Change." In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.
- Kierman, Frank A., Jr., and John K. Fairbanks. *Chinese Ways in Warfare*. Cambridge, MA: Harvard University Press, 1974.
- Van de Ven, Hans. *Warfare in Chinese History*. Leiden: E. J. Brill, 2000.

Thought and Religion

Theme 7 discusses the principal religions and philosophies during the Age of Expanding Regional Civilizations, 300–1000 CE.

Throughout much of history, especially since the rise of agricultural societies dominated by cities and the appearance of extreme class divisions and slavery, humans have sought comfort in the solace of religion. Religion, or a sense of the sacred, permeated every society and culture in the first millennium CE, as in other periods of history. However, the period from 300 to 1000 was not simply a time of religious stasis; rather, it was a protean period during which there was much religious ferment and new religions emerged. In this time period religious traditions developed that simultaneously divided and united humanity from then until modern times. During this period, today's great world religions (Christianity, Islam, modern theistic Hinduism, and Mahayana Buddhism) were largely shaped.

At the beginning of the Age of Expanding Regional Civilizations, Hinduism, Buddhism, and Confucianism were the chief religious categories in the eastern part of the Afro-Eurasian ecumene, while Zoroastrianism and Christianity would soon dominate the western part. In the fourth century, Christianity became the leading religion of the Roman empire, while the Sassanian empire, the other great power of western Eurasia, embraced Zoroastrianism. Islam emerged in the seventh century and grew at the expense of both Christianity and Zoroastrianism. After the rise of Islam in the seventh century, Zoroastrianism withered to insignificance, and Islam far surpassed Christianity in geographical extent and numbers of adherents and by 1000 CE was poised to overtake Buddhism as the world's leading religion in number of adherents.

Mahayana Buddhism was the world's leading religion in terms of geographical extent and number of adherents during the seven centuries before 1000 CE. It dominated or was a principal religion in most of East, South, and Southeast Asia, an area that had the preponderance of the earth's population and wealth. However, the category "Buddhism" includes as much religious diversity, especially in theology, as the three Western, or Abrahamic religions—Judaism, Christianity, and Islam—combined.

At the beginning of this period Buddhism was also a strong presence in central Asia but by the mid-ninth century Islam began to replace Buddhism as the dominant religion in central Asia.

In India, the land of its origin, Buddhism was still strong in 1000 CE, especially in Bengal, Kashmir, Punjab, and Bihar, but in a few centuries, Islam would replace Buddhism in these areas too.

The kingdoms of Southeast Asia utilized both Buddhist and Hindu rituals for their court ceremonies, but these religions did not significantly modify the popular religions for many centuries.

The expansion of Mahayana Buddhism out of its Indian origins began in the early centuries of the Common Era. This time period witnessed a great flowering of Indian civilization, especially in the Gupta period. During this Age of Southernization, India was the great fount of innovation for much of the Afro-Eurasian ecumene. It was a city on a hill, the beacon from which new technology, science, mathematics, philosophy, and especially the Buddhist religion radiated. The prosperity of northern India stimulated trade with its neighbors, especially seaborne trade with Southeast Asia and across the Indian Ocean and up the Persian Gulf and Red Sea to Persia and the Roman empire and overland trade to central Asia and through central Asia to China. Buddhist missionaries accompanied the merchants and established monasteries in central Asia and China as well as most of the lands of Southeast Asia. India was also the religious pilgrimage locus par excellence, as witnessed by Chinese and other pilgrims to India such as Faxian and Xuanzong.

Central Asian merchants brought Buddhism to China as early as the first century CE, but it was not until the third century that the Indian faith took root among the Chinese masses, spreading rapidly among the

Its appeal was similar to that of Christianity in the Roman empire at the same time: Mahayana Buddhism, like Christianity, offered salvation to the downtrodden and exploited.

common people during the Period of Disunity (220–589 CE). Its appeal was similar to that of Christianity in the Roman empire at the same time: Mahayana Buddhism, like Christianity, offered salvation to the downtrodden and exploited. In China, Buddhism was often conflated with Daoism, much as Christianity shared the appeal of Mithraism and other salva-

tion religions that abounded in the Roman empire in the early centuries of the Common Era. Although Buddhism entered China as a foreign religion, within a few centuries distinctly Chinese Buddhist traditions, especially Amitabha (Pure Land) and Chan (Zen), emerged.

Imperial and royal governments co-opted religions for political purposes, especially Christianity and Buddhism. These religions became arms of state power. Governments and religions supported each other in several ways. State power not only provided protection and status for the leaders of favored religions but also provided the favored religion with wealth, especially land and bonded peasants. Governments often supported the favored religion against its rivals, prosecuting and often killing or at least marginalizing religious dissenters and nonconformists.

Though favored religious organizations profited by their symbiotic relationship with government power, governments profited as much. Religions legitimated governments by teaching that the state was divinely sanctioned and that the rulers were surrounded by a divine aura. Thus, Catholic Christianity legitimated the Kingdom of the Franks/Carolingian empire, just as Mahayana Buddhism lent legitimacy to the Sui and Tang dynasties of China, and Hindu Shaivism and Vaisnavism did the same for kingdoms in southern India and Southeast Asia.

Indeed, one of the principal attractions that dominant religions had for emerging states is the legitimacy gained by these new kingdoms. For example, the rulers of Korea and Japan adopted Buddhism, in part, to strengthen their mantles of legitimacy. For like reasons, Georgia, Ethiopia, the new Germanic kingdoms of Europe, and Kievan Rus converted to Christianity. Many other new states followed similar courses. When these emerging states adopted a new religion, they imbibed the culture, the literature, and the view of history—in fact, the complete aspects of civilization—that any world religion carried. Buddhism carried Chinese civilization to Korea and Japan. Buddhism as well as varieties of Hinduism transmitted Indian civilization to Southeast Asia, while Christianity served as a vector for Mediterranean civilization in northern and eastern Europe. Until modern times (ca. 1500 CE), the religion that was the most widespread vector of a civilization, however, was Islam.

New states also benefited from the bureaucratic expertise of the clergy and monks of the newly adopted religion. North European kingdoms relied on Catholic monks, and Rus and other East European kingdoms made use of Orthodox clerics. In the Japanese and Korean realms, Buddhist monks played similar roles.

The Roman empire and all subsequent empires and states throughout the western half of the Afro-Eurasian ecumene identified themselves with intolerant state religions that demanded and enforced orthodoxy and orthopraxy (correct doctrine and correct ritual). In the Roman empire and its successors the state religion was Christianity as defined by the Seven Ecumenical Councils (325–787 CE), and Sassanian Persia enforced an intolerant form of Zoroastrianism although, for political reasons, it tolerated Assyrian Christians. A large, but only partial, exception to the claim of universal religious intolerance during this period is the Muslim states. While Christians, Jews, and Zoroastrians were tolerated, they were forced to accept an inferior position as *dhimmi* (people of the contract) and were subject to heavy taxation and humiliating restrictions.

While all early medieval states were legitimated and supported by an organized religion, religious heterodoxy (“other,” or deviant, doctrine) could be a serious danger to any regime. Dissenting sects, such as the Monophysites in the eastern Roman empire, Daoist sects in China, or Shias and Karijites in Islamic lands, gave religious coloration to widespread rebellions that shook and sometimes toppled powerful dynasties. For this reason, most states sought to enforce religious orthodoxy and were vigilant in rooting out heresy.

In most early medieval religions, there was a sharp division between the clergy and the laity. (Islam was the great exception to this.) The clergy were the class of religious specialists, the priests, monks, and nuns, while the laity were the common believers who supported the religious specialists. Monasteries were special communities of religious specialists. Their function was to perfect the spiritual lives of their inhabitants but also to pray and to intercede with the deity in favor of the society. The earliest monasteries were established in India, and the Buddhists had many. Buddhist missionaries persuaded rulers to establish monasteries in the lands surrounding India, and soon other

religions, such as the Manicheans and the Daoists, established their own monasteries. In the late third century, a Manichean monastery is reported to have existed in Rome. In the third century, Christian monasteries were founded in the Roman empire. Monasteries, both Christian and Buddhist, rapidly accumulated wealth and political power. They were influential in almost all areas of their societies but especially in education. The Buddhist monastery-academy of Nalanda (in Bihar, India) is said to have had 10,000 students. Monastic expansion in China received an abrupt and lasting check when the emperor, in 841–845,

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In Islam, the clergy was much less distinct than in most other religions. The Quran does not mention clergy except to say that it wanted no monks. But over the centuries, classes of religious specialists did emerge. Toward the end of this period, the ulema (the learned), religious scholars and juris-consultants, constituted one such class.

Sufi mystics were another class of religious specialists that arose in Islamic societies by the end of this period. Mysticism, here defined as ecstatic religious experience, manifested itself in most religions. Buddhist and Hindu mysticism in this era emerged in new transformative movements and sects: Bhakti devotionism in Hinduism, Tantricism in Hinduism and Buddhism, Amida Pure Land Buddhism, and Chan Buddhism.

The histories of religions in North Africa and Eurasia show a rough parallelism, particularly during the first millennium of the Common Era. In the first century of the Common Era, religions promising a universal savior, such as the Mahayana Buddhist bodhisattva, Avalokitesvara (Sanskrit for “Hearer of the World’s Cries”), emerged and grew in the early centuries of the Common Era. As China’s Han dynasty was collapsing in the third century, Mahayana Buddhism, with its promise of savior bodhisattvas, spread rapidly among all classes of Chinese, and Avalokitesvara became the Chinese Guanyin. In the fourth century, as the northern Chinese heartland suffered pillage and destruction by barbarian horsemen, faith in another Buddhist savior became prominent: Maitreya, the Buddha of the future. Repeatedly, desperate peasants rebelled under leaders who proclaimed themselves the incarnation of Maitreya.

In the Roman empire, several new religions competed for popular favor in the first centuries CE. Most centered their teachings on a universal savior who saves sinful humanity by suffering a painful death and is then resurrected. In the fourth century, Christianity emerged as the winner of this competition and suppressed all of its rivals.

Christianity’s triumph in the Roman empire parallels the contemporaneous triumph of Buddhism in China. There, by the seventh century, Buddhism evolved into distinctly Chinese forms, including Chan (Zen) and Amitabha (Amida) Buddhism. Amitabha or Pure Land Buddhism, like Christianity, offers surcease from the sufferings of this world as well as a Pure Land, or heaven, in the afterlife.

Muhammad in Arabia and Adi Shankara in India were the two most influential religious leaders in this era. Muhammad was the superhero of this period who not only founded a new world religion but also established a great empire, which was one of the age's superpowers, as well as a new civilization that spread throughout the Eastern Hemisphere.

While Pure Land Buddhism was developing in China and the Islamic civilization was growing in West Asia, bhakti, a movement of ecstatic devotional love for chosen deities, primarily Shiva and Vishnu, emerged from Tamil, or southern India. During the first millennium CE, a triangular struggle among Buddhists, Jains, and Hindus for India's allegiance raged. By 1000 CE, varieties of Hinduism triumphed, partly because of the destruction of Buddhist monasteries by Muslim invaders but mostly because of the bhakti movement and the reformulation of Hinduism by religious figures such as the ninth-century holy man Adi Shankara, who was also one of India's most influential in a crowded field of theologians and philosophers.

India was the world's leading hotbed of spiritual speculation during this era. The leading schools of Indian philosophy are known as Vedanta ("the culmination of the Vedas"). There were many varieties of Vedanta, of which six are recognized as orthodox, but the leading school was and is Advaita (nondualism), which Shankara championed and which is still identified as *the* philosophy of India.

During the same time, philosophic speculation in China was absorbed with the process of adapting the rather alien thought structures of Buddhism to Chinese realities. After the collapse of the Han dynasty, the Han Confucian-Legalist synthesis, basically a political philosophy, was widely abandoned for the more consoling Buddhist formulation. It was not until after the fall of state-sponsored Buddhism in the middle of the ninth century that Han Yu and Li Ao began the synthesis of Daoist and, especially, Buddhist concepts with Confucian political philosophy that would emerge as neo-Confucianism in the early Song dynasty.

As far as Christian speculative theology during this era was concerned, the only philosophic/theological work that still resonates is Augustine's *City of God*. During the fourth century, the Monophysite controversy concerning the nature(s) of Christ convulsed the Christian world, but from then until the eleventh century, philosophic speculation in Christian Europe was a neglected enterprise.

Like the Christians after the fifth century, the early Muslims discouraged philosophic speculation. However, after coming in contact with the philosophies of the Mediterranean world and beyond, they attempted to synthesize Hellenic, Hellenistic, Persian, and Indian thought and to make this synthesis compatible with the teachings of the Quran. The eighth century saw the development of the Mutazilite school, a theological movement that centered much of its thought on the problem of predestination versus free will. During the ninth and tenth centuries, a veritable explosion of philosophic speculation emerged with the increased translation of Greek and Hellenistic philosophic texts. These were the centuries in which the Kalam and Falsafa thrived and when the great Arab and central Asian polymaths, al-Kindi and al-Farabi, worked.

For nonliterate cultures and civilizations outside of the Afro-Eurasian ecumene, our knowledge of their thought and religious systems during this era is much less complete than it is for the Afro-Eurasian ecumene.

We can glimpse ideas concerning the sacred in Africa south of the Sahara by inferences made by scholars using the tools of linguistic analysis. By this method, scholars have reconstructed some of the religious history of early medieval Africa south of the Sahara. The religious focus of West and central Africa south of the Sahara involved worship for and propitiation of the ancestors. Peoples in this region had a vague notion of a creator god, but this deity was a distant and indistinct figure, scarcely a subject of worship. As the Bantu spread from West and central Africa, they took with them their ancestor-centered religion with its indistinct creator god, but as they moved into the Great Lakes area of East Africa at the beginning of the early medieval age, they assimilated grain-cultivating and cattle-herding Nilotic and Cushitic groups who worshiped a sky god as the supreme deity. The resulting religious change flowed back westward along the migration routes. Powerful and sometimes malevolent deities appeared in West, central, and East Africa, and witchcraft became more prevalent.

With the rise of population densities, the concept of sacred kingship, in which rulers and their families were invested with mystical power, began to manifest itself. This was especially true of the Nri kingdom in the area of modern Nigeria. But one of the most significant reli-

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gious changes in Africa south of the Sahara began to manifest itself toward the end of our period, when Muslim Berber and Arab merchants began to spread the Islamic faith in the West African savannas and the East African (Swahili) littoral.

For the Americas and Polynesia, our knowledge of religion during the early medieval age should be most complete for Mesoamerica because the cultures of this region were literate. Unfortunately, most

of their writing is lost, largely due to Spanish Catholic suppression in the sixteenth century, and the little that survives dates from the immediate Pre-Contact period, 500 years after the collapse of the Classic civilizations. The best-known Mayan religious writing, the *Popul Vuh* creation myth, is from the Post Classic Period, several centuries after this period.

The inscriptions on the monumental architecture of the Mayan Classic Period, which in recent years have been deciphered, indicate that the rulers of the Mayan cities were enveloped in a sacred aura and that a principal function of religion in Mesoamerica as in Eurasian societies was to glorify and legitimate the ruling order. The Mayan rulers were the intercessors between their cities and the supernatural powers that were thought to control their world.

We do not know if the Maya or the other peoples in Mesoamerica during this period had an organized religion with a professional priesthood. We cannot be sure that they insisted on a theology that they regarded as orthodox. But it is likely that the Mesoamericans of the Classic

Period, like their successors in the Post Classic Period, believed that the history of the world was cyclic, with the universe flourishing and then being destroyed in each cycle.

For the religions of the urban-agrarian civilizations of the Andes, we can only draw inferences from archaeological artifacts. Archaeologists speculate that in the period 300–1000, there were two religious traditions in the Andes, the Northern and the Southern traditions. The Northern, or Moche, tradition was male-centered and emphasized warfare and human sacrifice, whereas the Southern tradition, the tradition of Wari and Tiwanaku, was more centered on ancestor worship and preservation. In the Southern tradition, an androgynous god, sometimes called the Two Faced Deity, was prominent.

During the early medieval age agricultural peoples, dominated by cities all over the world, were divided by more or less extreme class inequalities. In all such civilizations, the dominant class imposed or used a religion to legitimate its position and power. Most organized states were kingdoms during this period, and a major function of the dominant religion in these kingdoms was to envelop the ruler with a supernatural aura. This was also true of most chiefdoms, such as those of the Hopewell and Pueblo civilizations of North America, as well as of Polynesia.

—*Wilfred J. Bisson*

■ Introduction: Non-Eurasian Religions

Since most non-Eurasian peoples had no written literature in this period, it is difficult to understand much about their religions in the first millennium CE. Archaeologists have made some inferences from the artifacts of this period, and ethnohistorians have done some fascinating work in linguistic analysis of African languages, but the pictures that emerge are vague, the conclusions arrived at are extremely tentative, and most statements on the subject are based largely on conjecture. Where there is literary evidence, as in the case of the Maya, our understanding is on firmer ground, but it is still evolving.

—*Wilfred J. Bisson*

Andean Religion

Pre-Columbian religions in the Andes stem from one of two regional traditions clearly visible during this era. A Northern Tradition developed along the northern coast of Peru and may have reached inland as far as the Marañon Valley. A Southern Tradition developed along Peru's

southern coast, reaching up into the High Sierras and down into what is today Chile and Argentina. Overlap in the iconography of these two traditions probably stems from the far-reaching and early influence of the Chavin culture (800–200 BCE).

The Northern Tradition, as exemplified by the Moche culture (100–750 CE), incorporated at least two separate cults, sects, or distinct aspects, one of which was closely tied to elite power and control. That practitioners of this tradition separated these aspects is evidenced by the different use of media in which people conveyed important religious messages.

Most perplexing to modern observers is the male-centered cult aspect of the Northern Tradition. It is this tradition that produced the famous pornographic pottery. These are sculptural ceramic pieces that exhibit males with oversized phalluses or couples, including two males, engaged in a variety of sexual activities. Because the sexual acts depicted are rarely procreative, this may represent a cult of male virility rather

➤ ARCHAEOLOGICAL PROBLEM—IDENTIFYING SUPERNATURAL BEINGS

How can we tell if a religious image represents males or females, mortals or supernatural beings? In the Andean region artists used certain conventions fairly consistently to indicate to viewers what type of character they were seeing. By deciphering this system of representation, we can get a better idea of what ancient religions were all about.

Ancient artists defined supernatural beings in two ways. First, they showed some supernatural beings with bodies compounded from more than one type of animal or combinations of human and animal parts. These characters might have canine or feline heads and human bodies or combinations of feline, bird, or fish attributes. Figures that looked exactly like ordinary human beings also occurred. To distinguish them from mere mortals, artists showed them with bared teeth and prominent fangs in their upper and lower jaws.

Telling males and females apart is more difficult for us today than it may have been to the original viewers. Today, when viewing these artifacts, we rely mostly on indicators of physical or sexual characteristics and the ways in which they are associated with other attributes. Wari and Tiwanaku pottery, for example, often illustrated men sporting various configurations of facial hair in combination with particular garments such as tunics and four-cornered hats. Women, when they appear in Wari and Tiwanaku art, dress differently, often displaying a shawl draped over their shoulders or a dress supported by large pins conveniently placed over where the breasts would be.

—Jo Ellen Burkholder

than one of fertility, strictly speaking. Spanish chroniclers later reported similar behavior from the later Chimú culture, suggesting long-term continuity in these ideas in the north.

The Northern Tradition also embraced an elite cult of ritual warfare and sacrifice. As early as the second millennium BCE, religious art of the north depicts battle and its consequence. Winners sacrificed losers by disemboweling or dismembering them. By Moche times, artists depicted battles between human pairs of different ethnicity or between pairs of humans and supernatural beings. The narrative style of Moche art

makes it clear that losers were stripped, bound, and sacrificed with a semicircular knife called a *tumi*. An entourage of priests then offered the blood of sacrificial victims to a high-ranking elite seated on a covered throne. Knives of various metals and cups such as those shown holding sacrificial blood commonly appear in elite tombs.

The Southern Tradition incorporates the cultures of Paracas, Nazca, Pukara, Wari, and Tiwanaku. As in the case of the Northern Tradition, data supports the existence of several distinct cults, sects, or aspects of this tradition. It is out of this tradition that the preservation and worship of ancestors, as seen in the Inca culture, probably emerges. Also mirroring the Northern Tradition, some aspects of the Southern Tradition were more connected to elite power and control than others. Consumption of hallucinogenic and intoxicating substances in the form of snuff and/or drink may have played a part in many aspects of religion or may have existed as separate cults.

Most notably, the Southern Tradition incorporated a figure known as the front-faced deity. People portrayed this deity in different ways, as a floating head with rayed projections, as a standing anthropomorphic being (both seen in Pukara, Wari, and Tiwanaku), and perhaps as a splayed or flying supernatural being (seen in both Nazca and Paracas). Association of these representations with fancy pottery vessels, especially in the case of Wari and Tiwanaku, suggests a connection between the front-faced deity and elite drinking rituals. Researchers have identified both male and female forms of this deity, although representation of gender is not consistent across time and space. The dual or androgynous nature of this deity constitutes a strong reason to link it to the later Inca deity known as Viracocha.

As with the Northern Tradition, a fertility cult seems to have coexisted alongside of the front-faced deity cult. Unlike their northern cousins, however, people of the Southern Tradition focused on female fertility rather than male virility. Paracas (800–200 BCE) expressions of this include depiction of oculate beings—anthropomorphic or zoomorphic forms with large concentric eyes—that contain smaller versions of the same figure inside the abdomen. Nazca peo-

ple (200 BCE–1000 CE) first made small figurines of both males and females and placed later emphasis on robust female forms with their genitalia emphasized. In the highland cultures of Pukara and Tiwanaku, people expressed concerns with fertility through a connection between human females and domesticated camelids, especially llamas. Female images become rare in Tiwanaku times (600–1000 CE), but small votive llama figurines become common.

Trophy heads form another focus of the Southern Tradition. Researchers commonly apply the term “trophy head” to any human head with no attached body. Strictly speaking, however, true trophies are human heads that have been intentionally removed from the body and preserved, usually by removing the brain, securing the eyelids and lips with thread or cactus spines, and attaching a cord with which to suspend it. Nazca people clearly produced and kept true trophy heads. Other cultures associated with the Southern Tradition may only depict human heads. Often, heads appear to be held by the hair rather than a cord, and postmortem treatment of the mouth, eyes, and brain is unclear. Frequently it was a supernatural being who clasped the head in one hand and a sacrificial knife in the other. Some suggest that decapitation rituals may have had stronger connections to ideas of agricultural fertility than to a cult of male warfare, as seems the case for the Northern Tradition.

The complex practice of ancestor worship also seems to emerge from the Southern Tradition. Three things distinguish this practice. First, people placed at least some of their dead in tombs that could be reopened and revisited many times without fear of damaging the preserved remains. Second, people positioned ancestor burials in locations where the ancestors could be feted and propitiated. Third, people made repeated offerings to ancestors, not just at their death or burial but on repeated occasions thereafter. Wari and Tiwanaku cultures probably had the beginnings of recognizable ancestor worship, but the practice matured and spread throughout the Andes. By the time of the Spanish Conquest, ancestor veneration was common in the Andes.

—Jo Ellen Burkholder

Bibliography

- Benson, Elizabeth P., and Anita G. Cook, eds. *Ritual and Sacrifice in Ancient Peru*. Austin: University of Texas Press, 2001.
- Bourget, Steve. *Sex, Death, and Sacrifice in Moche Religion and Visual Culture*. Austin: University of Texas Press, 2006.
- Isbell, William H. *Mummies and Mortuary Monuments: A Postprocessual Prehistory of Central Andean Social Organization*. Austin: University of Texas Press, 1997.
- Lyon, Patricia. “Female Supernaturals in Ancient Peru.” *Nawpa Pacha* 16 (1978): 95–140.

Religious Change in East, Central, and Southern Africa

The arrival of Bantu-speaking peoples to East, central, and southern Africa, circa 300–1000 CE, transformed the religious philosophies of these regions. A religious transformation during this period reflected cultural syncretism and also changes within various Bantu-speaking societies.

By 300 CE most Bantu-speaking peoples worshipped one creator God who was often believed to be distant from people. The proto-Bantu word for God was “Nyambe,” and it is still used in the western Bantu-speaking regions of Africa. The word came from an old Niger-Congo verb root that meant “to begin.” This meaning fit perfectly with the Bantu belief in God as “the Creator Who made the world begin.” Around 400 CE Bantu-speaking peoples in East Africa developed a new term for God, “Mu-lungu.” This new term was derived from the old Bantu verb “-lungu,” which meant “to become fitting, become straight,” and added a new attribute to God as the “Supreme Example of Righteousness.”

Day-to-day worship involved paying homage to one’s ancestors and later to various territorial spirits. While God was respected for creating the world, neglecting ancestors could have disastrous effects for a person, his or her family, or the community at large. People would placate their ancestors, and in return they expected help in dealing with life’s problems.

A major source of evil in the Bantu religious philosophy was human beings who were

➤ ONE GOD—SHE/HE

European missionaries called Bantu-speaking Africans “pagans,” but in reality they were monotheistic since they and their ancestors believed in one Creator God for almost 10,000 years. While the role of God varied among the peoples of East, central, and southern Africa, the one constant was that God was never gendered. God could have female and male attributes but was considered to be either both genders or beyond gender. Even the words used to describe God are without gender markers. It took the arrival of missionaries and colonial scholars in the nineteenth century to make God male. As they translated African religious traditions and myths, they missed both linguistic and oral tradition evidence to the contrary and made the God of Bantu-speaking peoples masculine.

—Christine Ahmed-Saidi

consumed by feelings of malice and jealousy. “Bu-logi” was the term for this source of evil, inadequately translated as “witchcraft.” Bantu-speaking peoples called on the Baganga, or a group of skilled practitioners of these medicinal practices, to diagnose, treat, and even prevent individuals from falling under the spell of a “witch.” Ironically, the fear of witchcraft among these societies encouraged social equality. Since most cases of witchcraft involved envious or jealous individuals, people tended to distribute any wealth they had rather than hoarding it. They would also ensure good relationships with their neighbors and distant relatives through the sharing rather than the stockpiling of food.

In East Africa, Bantu immigrants came into contact with the Southern Nilotes, who believed that the sky and rain were a single spiritual force or presence. By 300 CE in the Great Lakes regions of East Africa, the Bantu-speaking peoples of southern Nyanza had invented a new word for God, “li-uba,” that was an old Bantu term for “sun.” As they moved south, the Bantu-speaking peoples continued to add sky and rain attributes to the Creator God.

The BaTwa and the Khoisan-speaking peoples also had an effect on the religious beliefs of the arriving Bantu immigrants. The Khoisan be-

lieved that only people in trances could communicate with the spirit world. Many Bantu-speaking peoples adopted this belief, and spirit possession became an important aspect of their religious practices. In any region where there was a significant BaTwa population, religious worship required that these gathering and hunting peoples participated.

In east-central Africa, circa 500 CE, the decentralized and matrifocal Bantu-speaking peoples developed a new term for the Creator God, “Leza.” The word was derived from an older Bantu root, “-lel-,” meaning “to bear, take care of (child).” Its literal sense appears to have been “to nurture (especially a child).” Calling God by such a term likened the activity of the Creator to one of the major activities of a woman. Equally significant, the derivation of Leza conveyed a new and innovative conceptualization of the Creator as an active presence, like a mother, rather than as a distant First Cause. In the Botatwe group, God was called by such alternative names as Lubumba, “the molder, one who shapes or molds,” as a woman molds her pot. The neighboring Bantu-speaking peoples also adopted the word “Leza” and the female attributes of the Creator but added the sky imagery. Thus, the term “Leza” could now mean God, rain, and lightning.

Political and social changes in these regions also affected the transformation of religious beliefs. As the population grew in the Great Lakes region, so did the pressure on the land and struggle over control of resources. The chief held a new religious role as intercessor in order to prevent departed ancestors from harming the living. Many of these ancestors became territorial spirits, and the chiefs who appeared to control or appease these spirits became the political leaders of the emerging centralized polities.

In the early ministates along the Congo River, circa 1000 CE, the rulers had become the mediators among the people, their ancestors, and the local territorial spirits. This pattern was repeated throughout the region in the centralizing societies. Common people were no longer able to directly pray to the ancestors or even to God. Instead, they needed intercessors who in turn grew more powerful.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History, 1000 BC to AD 400*. Oxford, UK: Currey Publishing, 1998.
- Hinefellar, H. *Bemba-Speaking Women of Zambia in a Century of Religious Change (1892-1992)*. Leiden: E. J. Brill, 1994.
- Klieman, Kairn. *The Pygmies Were Our Compass*. Portsmouth, NH: Heinemann, 2003.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.

Classic Maya Ideas of the Sacred

Religion is a difficult concept to unravel in prehistoric societies. The imagery and writings of Classic Period Maya were never intended for modern audiences. Their messages were intended for people who already knew the conventions, stories, and background essential for fully understanding their world. Nevertheless, major advancements in the decipherment of Maya hieroglyphs along with an increased data set have worked together to bridge many of the deficiencies in our understanding of Classic Maya religion.

The term “religion” is probably a misnomer. Ancient peoples such as the Maya did not classify their world into rigid distinctions between religious activities and nonreligious life. For them, life was religious. Ritual permeated their being and gave flavor to the world around them. From planting corn to harvesting vegetables, every action was a ritualized activity.

There is no evidence that the Classic Maya had a system of orthodoxy. Each kingdom had a corpus of beliefs that paralleled those of other nearby kingdoms but without an ecclesiastic body that canonized them. The incredible coherency of their beliefs is evident in the archaeological record. Principal legends and individuals can be identified by costume and activity from materials dating from 300 BCE through 1600 CE. While many of the smaller legends and stories disappeared or changed over time, the core had not.

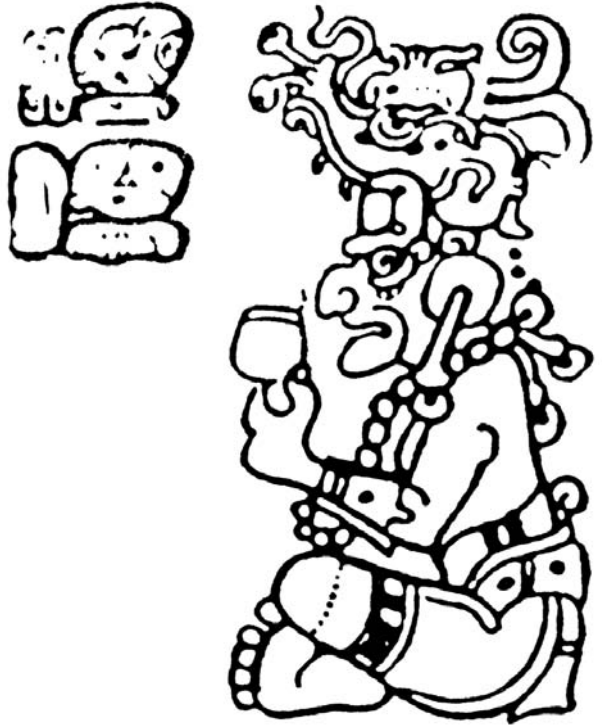


Illustration after a figure in a Maya manuscript depicting Itzamná, the principal deity of the Maya. (EclectiCollections/Fotosearch)

A primary concept to understanding the Classic Maya world is that everything is imbued with vitality. Rocks, mountains, carvings, idols, fish, plants, animals, and people are all vital beings. The earth itself was portrayed as either a crocodilian monster or turtle. Both are animals capable of movement, and earthquakes occurred when they moved. Likewise, an image of a king partook of his vitality and became the king to an extent. An image of the corn god was the corn god. It shared his vitality, his essence, and hence was a god. Even hieroglyphs had their own vitality. The unread word was actually alive and awaited an opportunity to be read. For these reasons, archaeologists frequently find defaced monuments dedicated to kings. The eyes, nose, and mouth of the figure were vandalized in the past. This illustrated that someone wanted to destroy the king's essence and presence.

In addition to general vitality, some beings had extra vitality that set them apart from the rest. These were gods and royalty. Major gods

THE POPOL VUH

The Popol Vuh is a Quiche Maya account of the creation of the world and some of the activities of the supernaturals at that time. Although the book is a sixteenth-century document, many of the stories within it were known to the Classic Maya. The first section describes the multiple creations of the earth. The second section concerns the exploits of a series of twins. The twins, Hunahpu and Xbalanque, defeat the Lords of the Underworld in a series of contests. They are common symbols of kingship in Classic Maya lore. All together, the *Popol Vuh* chronicles Classic Maya legends faithfully. Below, the *Popol Vuh* tells of the origin of humans:

“There was only immobility and silence in the darkness, in the night. Only the Creator, the Maker, Tepeu, Gucumatz, the Forefathers, were in the water surrounded with Light. They were hidden under green and blue feathers, and were therefore called Gugumatz. . . . Then while they meditated, it became clear to them that when the dawn would break, man must appear.”

—Zachary Nelson

Source

Adrian Recinos, ed., *Popul Vuh: The Sacred Book of the Ancient Quiche Maya*, translated by Delia Goetz and Sylvanus Moaly (Norman: University of Oklahoma Press, 1950), 81–82.

were manifestations of nature’s primal forces. Beings such as Chaak and K’awil represent the chaotic forces of nature. For example, Chaak (god B) was a storm god who rained lightning and thunder down upon the earth. Yet there were also small gods who were worshipped locally. The identity and role of small gods are difficult for archaeologists to reconstruct because of insufficient information. Perhaps they were aspects of a greater god, ancestors who became intermediaries to the gods, or even gods themselves.

The pantheon of major gods was not large. Itzamna was the name of the old creator god. His equally aged wife or consort was Ix Chel, goddess of midwives and healing. Kinich Ahau (god G), or the sun god, warmed the earth during the day and changed into a jaguar at night as he returned to his morning place. The maize god, pos-

sibly called Hun Nal, was a major element in Classic Maya representation. He embodied resurrection and growth. Yum Cimih (god A) was the patron of death and the underworld. In addition to these well-known entities, other supernatural entities were also depicted but are not as well understood by archaeologists. Contact period documents provide information about minor gods but probably do not give the full picture of their importance to Classic Period civilization. For example, god C, possibly Ah Chicumek, was associated with the north star, merchants (during the post-Classic Period), and with the rain god. God K was associated with rulership and scepters. Finally, dwarves and twins were held in esteem by the Classic Maya. Dwarves were associated with underworld activity, and twins were well represented in their legends.

Royalty was also holy (written as “k’uh” in the hieroglyphs). While stopping just short of being gods themselves, Maya rulers certainly partook of godly essences. Their very names indicate godlike aspects that were added to their essence. They protected the god-images of the city, supervised activities generally, and were essential to the well-being of the kingdom. They were the kingdom in some instances. They entered into the gods’ homes and communed with the supernatural on behalf of their subjects. There was also a belief in a duality of soul for some individuals. A king might have had attributes of a jaguar, for instance. Beliefs about dual natures are still common in Mesoamerica and South America and may have originated with the Olmec civilization.

An underlying theme of Mesoamerican religious belief was the idea that humans and gods entered into covenant relationships. The gods, after several miscues, created humans to worship them from corn dough. The privilege of creation, wherein mankind possessed physical bodies and life, carried with it an obligation to return vitality to the gods in the form of sacrifice. Thus, food for the gods was offered up. These sacrifices included incense smoke, blood, and the occasional captive. The Maya did not sacrifice humans to the same degree as the Aztec, but it did occur. Royalty, being close to the gods, were especially required to feed the gods with their own blood. Luckily, these offerings could be given while living through bloodletting

from ears, tongue, and especially genitalia. These offerings were then burned and the essence ascended to the gods. There is also evidence that substitutions occurred. Red pigment would sometimes be offered instead of blood.

However, when sacrifice failed and the gods were not listening, some communities would chasten their gods by holding their images responsible for the chaos they endured. They would put the gods in direct sunlight or hold them upside down to compel them to uphold their side of the covenant. If this did not work, perhaps the Maya would look for another god to sustain them in their need.

—Zachary Nelson

Bibliography

- Christenson, Allen J. *Popol Vuh: The Sacred Book of the Maya*. Norman: University of Oklahoma Press, 2007.
- Houston, Stephen D. "Classic Maya Religion: Beliefs and Practices of an Ancient American People." *BYU Studies* 38(4) (1999): 43–72.
- Houston, Stephen D., and David Stuart. "Of Gods, Glyphs and Kings: Divinity and Rulership among the Classic Maya." *Antiquity* 70 (1996): 289–312.
- Stuart, David, Stephen D. Houston, and John Robertson. "Recovering the Past: Classic Mayan Language and Classic Maya Gods." In *Notebook to the XXIIIrd Linda Schele Forum on Maya Hieroglyphic Writing*, March 13–14, 1999. University of Texas at Austin.

■ Introduction: Eastern Eurasian Religions

The eastern Eurasian religions included in this discussion are those of China and India: Confucianism and Daoism for China and Hinduism, Buddhism, and Jainism for India. This does not by any means exhaust the list of religions practiced in this period in eastern Eurasia; one thinks also of Japanese Shinto, Korean Shamanism, and Tibetan Bon in this connection.

This period preeminently witnessed the rise and spread of Mahayana Buddhism in India and then from India to central Asia and China and from China to neighboring countries such as Korea, Japan, and Vietnam.

In China, Confucianism had become, in the third and fourth centuries, somewhat discredited by its association with the defunct Han dynasty. Mahayana Buddhism became the favored religion of several succeeding Chinese dynasties, including the Sui and the Tang, until the 840s, when a powerful antiforeign movement began its serious decline. In the late ninth century, Confucianism, in the guise of neo-Confucianism, began to regain favor. While at its peak of acceptance Buddhism had become so closely identified with Chinese culture that when Buddhist missionaries went to Japan and Korea, they brought Chinese civilization with them. In these lands, too, Buddhism became the favored religion of the rulers.

In India, Buddhism did not become as powerful as in China during this period. Instead, there was a three-way struggle for India's religious allegiance among Vaishnavite/Saivite Hinduism and Buddhism and Jainism. In spite of the Buddhist's command of the intellectual heights at the great monastery/universities of Takshashila and Nalanda, Hinduism, by the ninth century, won the contest with the development of *bhakti*, religious devotionism that generated an intense love for the deity. By the tenth century, Buddhism was confined to the northwest and northeast of India, and in the eleventh century the destruction of the Buddhist monasteries led to the virtual extirpation of Buddhism in India.

In the early and middle centuries of the first millennium CE, India exported both Buddhism and Hinduism to the southeastern mainland and the Indonesian archipelago. By the end of this era (1000 CE), the royal courts in mainland Southeast Asia accepted both Hindu, usually Saivite, and Mahayana Buddhist rituals and personnel, but in the twelfth to fourteenth centuries, Theravada Buddhism, brought by missionaries from Sri Lanka, became the official religion of most mainland Southeast Asian lands, with the notable exception of Vietnam.

In the Indonesian archipelago, Srivijaya and the central Javan kingdom of the Sailendras

adopted Mahayana Buddhism, but their rivals in East Java and Bali were Saivite Hindus.

—Wilfred J. Bisson

Hinduism and the Heterodoxies, 300–600 CE

Hinduism cemented its role as the orthodox religion in India around 300–600 CE, while its competitors, Jainism and Buddhism, were relegated to the position of heterodoxies. Interaction among the three religions was marked by three main developments: the flourishing of classical culture in northern India during the Gupta and post-Gupta political dynasties (300–700 CE); a more diffuse distribution of power among the various social classes (castes), conflict between which was indelibly linked to Buddhism's and Jainism's rise; and the growth of more popular, theistically oriented expressions of religiosity in all three traditions.

During the Gupta and post-Gupta eras of northern India's Classical Period, the rise of devotionally oriented theism is the major religious development in Hinduism. Textually this development is expressed in the two great literary epics of Indian tradition, the *Ramayana* and *Mahabharata*, with the *Puranas* (fifth through tenth centuries CE) further extending the theism first expressed in the epics. Theologically, the Forest-Books (Aranyakas) and Upanishads of the Vedic corpus offer a monistic metaphysics, which continues as the basis of modern philosophical formulations associated with the Vedanta ("end of the Vedas"). The epics, however, offer a distinctly theistic vision centered on the two main incarnations (*avatara*) of the male god Vishnu, Ram and Krishna. According to this vision, Vishnu takes incarnation in these forms to restore the earthly and cosmic order (*dharma*), which is threatened by the forces of disorder personified in the evil protagonists of each tale. Moreover, in the Bhagavad Gita (9.12–30), which was inserted into the *Mahabharata* epic, Krishna serves as the spokesperson for a broader social vision and multiple paths to salvation that seek to appeal to women and the laboring castes (Shudra), whom orthodox Hinduism discriminated against. According to Indian tradition, there are 18 major *Puranas*. The *Puranas* were

instrumental in helping to spread the worship of the deities that comprise the contemporary Pan-Indian pantheon of the male gods Vishnu and Shiva and the goddess in her various guises. Artisans had perfected the sculpting of freestanding images by the second century CE, and it is speculated that growth in religious architecture in all three religions was connected with the need to house such images.

Jainism advocates strict asceticism for its monastic practitioners as a means of self-purification leading to spiritual liberation. As in early Buddhism, this led to a significant divide between the religion's laity and those who chose the route of monastic discipline. The core system of ethics in both Jainism and Buddhism advocates abstention from violence, dishonesty, misuse of sex, theft, and the use of intoxicants, although Jains stress instead nonaccumulation of material wealth as their fifth great vow. According to Jain tradition, the religion underwent a major schism into the two main sects of the white clad (Shvetambara) and sky clad (Digambara) during the reign of the Mauryan emperor Chadrugupta I (321–297 BCE) regarding the issue of whether or not its monks were permitted to wear clothes, with the latter opposed to this as a sign of shame and hence ego awareness. At the Second Jain Council of Vallabhi in the early sixth century CE the division between the sects was formalized, and the sacred canon of the Shvetambara sect was codified.

Buddhism experienced its period of most rapid growth between the second to seventh centuries and was likely the world's largest religion at that time. By the time of the Fourth Buddhist Council in the second century, missionary activity to central Asia and China had increased greatly, and the schism between the religion's two major schools, the Theravada and Mahayana, was recognized. The early centuries CE saw a great flourishing of Buddhist art and architecture in monuments such as burial mounds (stupas) and cave monasteries, including Ellora and Ajanta in central Maharashtra. Buddhist sculpture such as that of the early Mathuran school was created to adorn the exteriors of the stupas and cave monasteries and serve as focal points of worship in the latter case. Ellora and Ajanta are rightly famous as premier examples of cave

architecture during this period that combined monasteries for Buddhist monks and worship halls (*chaitya*). More than 20 cave temples dot the site, which is famous beyond its architectural importance for its beautifully painted murals in vivid colors. Many of the murals depict scenes from the narratives of the Buddha's previous lives (Jataka) and serve as visual scriptures.

Buddhist monastic centers cum universities continued to be constructed from these early models well until Buddhism's demise in its Indian homeland. The monasteries served as sites of higher training for members of the monastic communities (Sangha) as well as oases of culture for the laity. One such site was Nalanda in north-eastern India, which dates back to the second century CE. The Buddhist logician and founder of the Madhyamika school of philosophy Nagarjuna was said to have taught there. Two other great Buddhist teachers and scholars, Shantarakshita (ca. 705–788) and Atisha (982–1054), were also associated with Nalanda and played instrumental roles in bringing Buddhism to Tibet. Buddhism's concentration in these monastic centers, however, also contributed to the religion's disappearance from India. Nalanda was destroyed in 1198 as part of the Muslim Turks' overthrow of the Pala empire in 1162 and their eventual conquest of India's eastern region.

In the contemporary world, Theravada Buddhism is found principally in South Asia (Myanmar, Sri Lanka) and most countries of Southeast Asia; the Mahayana branch is the dominant form in East Asia and heavily influenced the third major form of Buddhism known as the Vajrayana (Thunderbolt Vehicle). The other major influence upon Vajrayana Buddhism was Tantric religion, which enjoyed a resurgence in India during the sixth century CE and eventually developed both Hindu and Buddhist forms. In the modern world, Tibetan Buddhism is the most widely known variety of Vajrayana Buddhism, although it can be found throughout northern Asia.

—Joseph C. Shaller

Bibliography

Brooks, Douglas Renfrew. *The Secret of the Three Cities: An Introduction to Hindu Shakta Tantrism*. Chicago: University of Chicago Press, 1990.

Davis, Richard H. "Introduction." In *Religions of India in Practice*, edited by Donald S. Lopez Jr. Princeton, NJ: Princeton University Press, 1995.

Lipner, Julius. *Hindus: Their Religious Beliefs and Practices*. London and New York: Routledge, 1994.

Oxtoby, Willard G., ed. *World Religions: Eastern Traditions*. 2nd ed. New York: Oxford University Press, 2002.

Thapar, Romila. *A History of India*, Vol. 1. 1966; reprint, New York: Penguin, 1990.

Forms of Early Buddhism— The Emergence of Mahayana

Broadly speaking, one can trace the emergence of three movements within Buddhism. The first occurred in the middle of the first millennium when numerous sects arose that interpreted the Buddha's teachings in diverse ways. Most of these sects also had their own monastic ordination lineages. The second broad movement was the rise of Mahayana Buddhism, a division that questioned and challenged the aims of early Buddhism. The third group under consideration here is Vajrayana, a form of Buddhism involving rituals and meditations rich in symbolism.

Mahayana ("Great Vehicle") Buddhism is not in itself a sect of Buddhism but rather a loose coalition of texts, ideas, and individuals who collectively comprise a reform of Buddhism that evolved over the first millennium CE. While the first explicit mention of Mahayana in inscriptions comes from the sixth century CE, the ideas that make up Mahayana thought were circulating as early as the first century CE. Given that in India there were no Mahayana ordination lineages, it is likely that those who explicitly considered themselves Mahayana Buddhists were an influential minority within the Indian Buddhism itself, despite the prominence of Mahayana thought and practice in East Asia.

The central concern dealing with salvation of Mahayana Buddhism was the bodhisattva, a figure motivated by compassion to vow to lead all other beings out of suffering to nirvana. Texts such as Chandrakirti's *Madhyamakavatara* (seventh century) and Shantideva's *Bodhicaryavatara* (eighth century) integrated Mahayana

THE COUNCIL OF LHASA

The Council of Lhasa, a series of debates held in Tibet at or around 792, provides insight into variations in the development of Mahayana. At issue was the nature of nirvana and the bodhisattva path. The Chinese Chan representative Mo-ho-yen argued that awakening occurred suddenly because all things are innately of the nature of the dharma. Heading the Indian delegation, Kamalashila argued for a gradual path to nirvana after spending lifetimes perfecting moral and spiritual qualities. The Indian side proved victorious in the debates, and as a result Indian Mahayana was to have the greatest influence on the development of Tibetan Buddhism.

—Matthew Bingley

philosophy with an elaborate framework of practice in which a bodhisattva progresses along ten stages to Buddhahood. Each stage marks the achievement of the perfection of different characteristics, most notably giving, morality, patience, effort, meditative absorption, and wisdom. Kamalashila's eighth-century *Bhavanakrama* (*Stages of Meditation*) expands on the dual virtues of wisdom and skillful means, the latter of which includes the abilities that the bodhisattva wields to aid all beings. In this ideal the bodhisattva criticized earlier sects of Buddhism as rewarding the selfish practitioner who strives to attain nirvana within patriarchal and socially stratified contexts that held monastic institutions in higher esteem than lay institutions. Mahayana authors referred to these earlier visions of Buddhism as Hinayana (Inferior Vehicle).

The central doctrinal concern of Mahayana thought was the perfection of wisdom (*prajna-paramita*). Rejecting the view that any dharma has any inherent existence, the Madhyamaka School taught that ultimately all phenomena are of the nature of emptiness (*sbunyata*). The philosopher Nagarjuna (ca. third century CE) taught that everything is empty; everything is merely an appearance or an illusion or like a dream. Similarly, perfection of wisdom texts such as the *Heart Sutra* and the *Diamond Sutra* taught that this perfection would lead to awakening through an insight into the nature of reality. The Madhya-

maka School believed that the world as ordinarily experienced was provisionally true until one discovered that all things were ultimately empty. This conventional distinction proved to be a point of contention between Nagarjuna's successors, such as Bhavaviveka (ca. 500–570 CE) of the Svatantrikas and Chandrakirti (ca. 600–650 CE) of the Prasangika. Despite philosophical differences over the extent to which reality can be considered empty, the notion that reality was ultimately an illusion proved to be the dominant idea within Mahayana Buddhism.

Some thought that Madhyamaka took the idea of emptiness too far. The Yogacara (Way of Yoga) school, also called Cittamatra (Mind Only), held that not everything was empty. The philosophers Asanga and Vasubandhu (ca. fourth century CE) held that since one experiences reality through perception, consciousness itself must have some form of inherent existence. Emptiness applies only to the objects of perception, not to the consciousness underlying perception. The resulting philosophy was a form of idealism that aimed at viewing the world as a projection of one's own consciousness.

During this period, Buddhist monastic institutions were repositories of knowledge and education. Buddhism in India declined in influence politically, losing ground to Hindu rivals, especially those of Shaiva sects. However, Buddhism expanded abroad into East and Southeast Asia. Kumarajiva (344–413), for example, brought Madhyamaka teachings of emptiness into China. In the fifth or sixth century, the legendary Bodhidharma introduced Ch'an (Zen) to China. Other missionaries introduced popular forms of Buddhist devotion in China as well as a pantheon of Buddhist divinities and the notion that all things are manifestations of a Cosmic Buddha. These developments spread popular forms of Buddhism as a devotional religion, amenable to prayer and worship of enlightened Buddhas and bodhisattvas. Conversely, Chinese pilgrims made their way into India. Most notable among these was Xuanzang (599–664), a pilgrim who visited Nalanda, the foremost Buddhist educational institution in India. He brought back to China numerous Buddhist texts and founded a school of Mind Only doctrine as well. As a result, when Buddhism virtually disappeared

from India in the twelfth century, East Asia became the foremost center of Mahayana Buddhist thought and activity.

The final division of Buddhism, originating in this period, is Vajrayana, the “Diamond Vehicle” or the “Thunderbolt Vehicle.” This is synonymous with Tantric Buddhism, a form that retains an adherence to the ideals and doctrines of Mahayana Buddhism despite holding practices and beliefs in common with Hindu forms of Tantra. Similarities between Buddhist and Shaiva Tantras include the reliance on secret initiations, the chanting of sacred mantra and meditation on *mandala*, and the identification with a divine being in meditation. Esoteric forms of Buddhism, like their Hindu analogues, first appear in the seventh century CE. By the tenth century CE, forms of Esoteric Buddhism made their way into Tibet, whose sects preserved these Esoteric traditions down to the present day.

—Matthew Bingley

Bibliography

- Conze, Edward. *Buddhist Thought in India*. Ann Arbor: University of Michigan Press, 1967.
- Gethin, Rupert. *The Foundations of Buddhism*. New York: Oxford University Press, 1998.
- Williams, Paul. *Mahayana Buddhism: The Doctrinal Foundations*. New York: Routledge, 1989.
- Williams, Paul, and Anthony Tribe. *Buddhist Thought*. New York: Routledge, 2000.

Forms of Early Buddhism— Theravada and Others

Of the early sects of Buddhism, the sole surviving non-Mahayana tradition is that of the Theravada. The name “Theravada” is a Pali translation of the Sanskrit “Sthaviravada,” meaning the “School of the Elders,” and Theravada alone has maintained the use of the Pali language in its canon. Distinct ordination lineages as well as differences in philosophical interpretations (*abhidharma*) of the Buddha’s teachings distinguished this and other early sects.

Theravada represents a conservative tradition of Buddhism that historically maintained that the goal of Buddhism is one’s own *nibbana* (the Pali word for “nirvana”), the extinction of suffering, in contrast with the Mahayana ideal of

the bodhisattva. Moreover, unlike other traditions of Buddhism that view the Buddha as a cosmic or divine being who manifested in physical form to teach salvation, the Theravada sect maintained that the Buddha was merely a human being who found the way to nibbana and showed the way to others. Likewise, it has preserved a socially stratified and interdependent hierarchy between the monastic community (*sangha*) and the laity. In this relationship, monasteries are centers of education and spiritual direction but in turn rely on lay institutions for support. Theravada has also preserved the tradition that holds that junior monks are subordinate to senior monks, that all nuns are subordinate to all monks, and that the laity are subordinate to all monks.

As the sole surviving sect of early Buddhism, Theravada has preserved one of two extant collections of *Abhidharma*, the philosophical commentary on the Buddha’s teachings. This is due in part to the work of the fifth-century CE monk Buddhaghosa whose *Visuddhimagga* (*Path of Purification*) was a compendium of Theravada teachings. It incorporated much of the Theravadin *Abhidharma*, thus preserving it, and also included instructions on meditation, morality, and discipline, thus underscoring the importance attached to the reformation of the mind to achieve Buddhist awakening.

➤ BUDDHIST GENDER RELATIONS— NUNS IN THERAVADA

According to tradition, the Buddha ordained the first orders of nuns, although nuns were never equal in status to monks. Lists of rules for nuns were slightly more extensive than the 250 or so rules for monastic discipline and included the condition that even the most senior of nuns must remain subordinate to even the most junior monk. Orders of Buddhist nuns flourished in South Asia throughout the first millennium CE until the ordination lineage of Theravada nuns in Sri Lanka died out in the eleventh century. There have been recent attempts to revive orders of Theravadin nuns, however, through ordination lineages of nuns from East Asian Mahayana sects.

—Matthew Bingley

Theravada has historically held a strong following in Sri Lanka, where a monk named Mahinda introduced the sect in circa 250 BCE. Theravada enjoyed the patronage of the state throughout much of its history in this period and even down to the present. In this environment, Theravada thrived; indeed, the monk Buddhaghosa was originally from mainland India and settled in Sri Lanka. By the eighth and ninth centuries CE, Mahayana and Esoteric teachings supplemented Theravada orthodoxy in Sri Lanka until in the tenth century invasion from expanding Tamil kingdoms briefly disrupted the Buddhist Sangha in Sri Lanka. Theravada Buddhism reestablished itself as the state religion in the twelfth century, however, under the reign of Parakkama Bahu I (1153–1186). Theravada traditions also became established in Burma and other parts of Southeast Asia from the early centuries of the Common Era onward.

In northern and northwestern India, the Sarvastivada (“the view that all exists”) flourished in the early centuries of the first millennium. The Sarvastivadin *Abhidharma*, compiled in the third century CE, is the other of the two extant compilations of Buddhist philosophical commentary. What distinguished the Sarvastivadins was the view that all elements (*dharmas*) inherently exist in past, present, and future. One experiences change only because the mode of elements changes with time. This view proved to be controversial, and it helped give rise to other schools of thought. Nagarjuna, for example, in the third century CE criticized the idea of inherent existence with his philosophy of the radical emptiness of all things. The Sautrantika School was another sect that formed over doctrinal disagreements with the Sarvastivada.

The doctrines of the Sautrantika (“those who follow the sutras”) reflected a close adherence to the original teachings (sutra) of the Buddha. Figures such as the Buddhist logician Dinnaga (ca. fifth century CE) held that given the Buddhist belief in impermanence, it was fundamentally a mistake to view elements as existing forever. Instead, an element exists for only a moment and creates an effect as it ceases again. All of reality is continually blinking in and out of existence faster than one can perceive, but what

is experienced is the cumulative effect of momentary elements.

Another noteworthy early sect was the Pudgalavada (“the school of the person”), which held the controversial view that there was such a fundamental entity as a person (*pudgala*) who acted, followed the Buddhist path, and experienced nirvana. This person functioned much like a permanent soul, and the controversial nature of this doctrine can be readily seen given that a cardinal belief among all Buddhists is that there is no permanent or essential self. Despite the controversy that the Pudgala school generated, the Indian emperor Harsha (606–647 CE) patronized the Pudgala sect in the seventh century CE, at which time perhaps a quarter of all Buddhist monks followed this school.

With the sole exception of the Theravada in Sri Lanka and Burma and Esoteric Buddhism in Tibet, Buddhism virtually disappeared from South Asia by the twelfth century CE. There are a variety of reasons for this. One is that unlike in Sri Lanka, Buddhism lost royal patronage in favor of Hinduism throughout this period, with the exception of the Pala dynasty’s support for Buddhist institutions in northeastern India from 750 CE onward. Likewise, in the first millennium CE Hindu sects began to incorporate Buddhist ideas: Sankara’s Advaita Vedanta incorporated the non-duality of Madhyamaka, while Puranic literature described the Buddha as an incarnation of Vishnu, one sent to lead heretics astray. Finally, one cannot overlook the fact that Indian Buddhism lacked a martial tradition, unlike Hinduism, and Buddhism declined as Islam spread from central Asia into northern India beginning in the tenth century CE.

—Matthew Bingley

Bibliography

- Conze, Edward. *Buddhist Thought in India*. Ann Arbor: University of Michigan Press, 1967.
- Gethin, Rupert. *The Foundations of Buddhism*. New York: Oxford University Press, 1998.
- Gombrich, Richard Francis. *Theravāda Buddhism*. New York: Routledge and Kegan Paul, 1988.
- Harvey, Peter. *An Introduction to Buddhism*. Cambridge: Cambridge University Press, 1990.
- Williams, Paul, and Anthony Tribe. *Buddhist Thought*. New York: Routledge, 2000.

Tibet's Conversion to and Development of Buddhism

According to Tibetan religious tradition, Buddhist teachings first appeared in Tibet in the form of a box that fell from the sky onto the Yumbu Lhakang palace. Inside the box were a golden stupa and the bodhisattva Avalokitesvara's mantra written in gold. Although no one could read the small manuscript, the king enshrined and worshipped it, recognizing its sacred quality.

Tibet did not develop a writing system until the seventh century CE, and due to the scarcity of written texts it is difficult to write with certainty about early Tibetan religion. What is known is that by the early sixth century CE the kings of the Yarlung Valley had begun to build a military power capable of uniting the disparate and warring Tibetan regions. Tibet's neighbors—Nepal, China, India, and the nations of central Asia—were all Buddhist countries, and in the seventh century CE the Tibetan king Songtsen Gampo (ca. 609–650 CE) became the first Tibetan ruler to be converted to Buddhism.

Tibetan histories credit Songtsen Gampo's conversion to two of his wives, the Nepali princess Bhrikuti and the Chinese princess Wen-cheng. Both of these women were devout Buddhists, and Tibet's first Buddhist temples, the Jokhang and Ramoche, were built to house the Buddha images that these wives brought with them to Tibet. Songtsen Gampo sent Thonmi Sambhota to India to develop a script for writing the Tibetan language so that Buddhist texts could be translated into Tibetan. Western scholars speculate that part of Songtsen Gampo's interest in Buddhism may have stemmed from his political aspirations. While Tibet was still a relatively isolated collection of warring principalities, its local rulers had no need for external recognition of their sovereignty. Songtsen Gampo's emerging dynasty, however, had international ambitions, and affiliation with Buddhism, the religious lingua franca of the time, granted the Tibetan king widespread cultural legitimacy.

The second of Tibet's great Dharma kings was Trisong Detsen (ca. 740–798 CE). Trisong Detsen is remembered for inviting the Indian monk San-



Jokhang, the Buddhist temple built by Songtsen Gampo in the seventh century CE. (Jack Versloot)

taraksita to Tibet, where he ordained the first Tibetan monks. With the help of the tantric master Padmasambhava they established Samye, Tibet's first monastery. A fervent Buddhist, Trisong Detsen decreed all of Tibet a Buddhist nation and appointed aristocratic landholding families the task of providing for the material needs (mainly food and robes) of the new Buddhist monks. Through the middle of the eighth century Tibet looked to both India and China for instruction in Buddhism. Tension slowly developed, however, between the Chinese monks and their supporters and the Indian teachers and their followers. Traditional accounts state that in 755 CE a great debate was held at Samye Monastery to decide the future of Buddhism in Tibet. The Indian faction won the debate, and from then on Tibetans followed only the Buddhist traditions from India.

During these first centuries of Buddhism's establishment in Tibet, the new religion remained largely the purview of the royal court and certain aristocratic families. Much of the common Tibetan populace remained ignorant of the new religion, and even some aristocrats, inimical to anything foreign and determined to maintain the status quo, continued leading their religious lives much as they had before Buddhism's arrival. The pre-Buddhist practices are often referred to as Bon, and they included rituals for calling the soul of the recently deceased to guide it on its way, offerings to mountain gods, ransom rituals that depended upon animal

THE SAMYE DEBATE

The Samye debate ranks as one of the most important events in the history of Buddhism in Tibet. Buddhist histories depict it as a formal competition initiated by King Trisong Detsen in order to determine whether Tibet would adopt the Chinese Chan Buddhist tradition of sudden enlightenment or the Indian Buddhist tradition of a gradual path to liberation. Traditional accounts describe the Indian monk and scholar Kamalasila winning a decisive victory for his supporters against the Chinese meditation master Hashang Mahayana. Hashang, his disciples, and all Chinese Buddhists were then banished from the country, and all further translations of Buddhist scriptures were rendered solely from Indian texts.

Contemporary scholars, however, suspect that the Samye debate was not a one-time contest of reasoning but a protracted period of rivalry. Unconvinced that the outcome was decided solely on the basis of which tradition represented the most authentic and effective religious path, scholars suggest that due to mounting political tension with Tang China the Tibetan court decided in favor of the Indian faction in order to limit the growing Chinese influence in the country. In fact, eighth-century Tibetan contacts with China were more developed than those with India. One of the earliest extant Tibetan historical narratives, the *dBa' bzhed*, emphasizes the important role that Chinese monks and Chinese teachings played in Tibet's conversion to Buddhism, and scholars believe that Chinese Buddhist influence was not summarily ended as a result of the royal dynasty's decision to sponsor the adoption of the Indian Buddhist system.

—Alyson Prude

sacrifice for curing illness, the creation of demon-catching traps, and various forms of divination. Storytellers and bards roamed the country reciting the origin legends of the first kings, a practice believed to uphold and protect the kingdom. The voices of local guardian deities spoke through the bodies of spirit mediums, giving instructions for their worship and diagnosing the causes of accidents and misfortune.

Buddhism continued as the official state religion through the reign of King Relpachen (ca.

806–840 CE). Many Buddhist texts were translated from Sanskrit, Tibetans traveled to India to bring back Buddhist texts and teachings, and Indian masters were invited to the royal court.

Relpachen's assassination and his younger brother Lang Darma's seizure of the throne marked a shift in the royal court's propagation of Buddhism. The reign of Lang Darma is described in Buddhist histories as a time of persecution, and Lang Darma is portrayed as an evil king intent on eradicating Buddhism and restoring the practices of Bon. Contemporary scholars offer a slightly different account. Evidence points to the successive occurrence of numerous natural disasters, including frosts, hailstorms, crop disease, famine, and epidemics as influencing Lang Darma to return to some of the indigenous rituals that had protected the land and its inhabitants for so many years before the adoption of Buddhism. Lang Darma was supported in these efforts by those elite families who had remained averse to foreign influence and the new religion. The previous kings' ardent support of Buddhist monasticism had strained the financial resources of the state. According to contemporary scholars, Lang Darma merely withdrew state financial support from Buddhist monks and monasteries. He did not actively suppress Buddhism in the way that Buddhist kings, such as Trisong Detsen, had persecuted Bon by throwing Bon texts into rivers or sealing them inside Samye's black stupa.

Lang Darma's assassination by a Buddhist monk in 842 initiated a time of political and social chaos in Tibet and marked the end of the unified Tibetan empire. Monks fled to the northeastern borders of the country, and monasticism disappeared from central Tibet. During the next 150 years Buddhism went underground and was practiced, often in secret, by village tantrics and married householders. Buddhist practices during this time were employed mainly for conducting funerary rituals, blessing crops, and soliciting protection from evil spirits.

The second dissemination of Buddhism in Tibet is dated to 978 CE when Yeshe O, the king of the western Tibetan regions of Guge and Purang, again began sending Tibetans to India to bring back teachings and inviting Indian Buddhist scholars to Tibet. Yeshe O was concerned

about the legitimacy of the tantric rituals that Tibetans had been practicing during the preceding period of turmoil and sought to ensure that all new translations were authentic and correct. The earlier texts and practices were heavily criticized by the proponents of the new Buddhist schools, but their practitioners, who came to be identified as the Old Translation School (known in Tibetan as the Nyingma), held their ground.

—Alyson Prude

Bibliography

- Kapstein, Matthew. *The Tibetan Assimilation of Buddhism*. Oxford, UK: Oxford University Press, 2000.
- Karmay, Samten. *The Arrow and the Spindle: Studies in History, Myths, Rituals and Beliefs in Tibet*. Kathmandu: Mandala Book Point, 1998.
- Pasang Wangdu, and Hildegard Diemberger, eds. *dBa' bzbed: The Royal Narrative Concerning the Bringing of the Buddha's Doctrine to Tibet*. Vienna: Austrian Academy of Sciences Press, 2000.
- Stein, R. A. *Tibetan Civilization*. Stanford, CA: Stanford University Press, 1972.

Bhakti in South India

It is around the seventh century CE, roughly at about the same time that Muhammad was proclaiming Islam as the true faith in the desert oases of Arabia, that *bhakti*, as a codified movement, emerged within Hinduism. Bhakti began in the lands where the Tamil language was spoken and in a few centuries spread over all the regions of India. The term “bhakti” comes from the Sanskrit root *bhaj* (“to evoke,” “to sing praise of”). It is a name given to a form of faith in which the devotee is intensely and individually involved with the personified deity he or she worships. There is urgency in the appeal, a passionate relationship with the divine form that is experienced and then sung through ecstatic lyrics by the saint poets. These songs were sung in melodies called *pans*, and modern musicians are trying to revive these precursors of modern-day ragas of classical Carnatic (southern Indian) music. The Tamil bhakti was a romantic movement, not intellectual or abstract as the devotion expressed in the famous Sanskrit holy book the Bhagavad Gita (ca. second century CE).

➤ BHAKTI AS A WOMAN

In one of the ancient Sanskrit texts called the Bhagavatamahatmyam, *bhakti* is personified as a woman, and she says, “I was born in Dravida grew up in Karnataka and became old in Maharashtra and Gujarat.” She must have been even older when she reached Bengal. Thus, *bhakti* is a Pan-Indian movement but had its birth in Dravida, which is South India.

In this hymn to the dancing Siva of the temple of Tiruvalankatu, Karaikkal Ammaiyar begins by a self-description, calling herself the “female ghoul,” and concludes the stanza with the Lord Siva dancing in the deathly arena.

“With emaciated breasts and protruding veins,
With hollow eyes and toothless gums
With a belly sunk concave and mousy hair on the crown
With molars like fangs
With bony knees clattering
Does live this lamenting female ghoul
This burning ground, wherein she dwells
It is here my Father chooses to dance
His whirling tresses fanning the eight directions
My Father, who lives in Tiruvalankatu
Cools my body with his Grace.”

—Rajeshwari Ghose

Source

Hymns on Tiruvalankatu, Hymn 1, Verse 2. Translated by Rajeshwari Ghose.

The Tamil bhakti poets sing praises of specific manifestation of the god in a particular temple and or in a particular sacred spot. Thus, pilgrimage to the holy shrines and visual descriptions of the icon are intrinsic parts of this movement. In going on pilgrimage, they also created a notion of sacred geography within the Tamil lands, thereby adding local spots watered by the holy river Kaveri to the Pan-Indian sacred landscape. The bhakti saints also place an enormous value on being loyal and respectful to the community of believers, called *bhaktas*. Thus, there is the feeling of belonging to a collective, and this collective was energetically evangelizing its faith.

The bhakti hymns were chiefly addressed to two forms of the Divine, Vishnu and Siva. Those

who composed hymns in praise of Vishnu were called the Alvars, and there were 12 important Alvars who are respected as saints by the worshippers of Vishnu. There were 63 saints who are venerated as the founding fathers of the bhakti movement dedicated to the god Siva. These 63 were collectively called Nayanmar (plural of Nayanar). Images of the Alvars and Nayanmar are worshipped in the temples of southern India. Though all the hymns are characterized by a very personal note and by an intimate approach to a personified form of the divine, there are vast differences between the composition of one saint and another, and generally there is a marked difference between the approaches adopted by the Vaishnavas (worshippers of Vishnu) and the Saivas (worshippers of Siva).

Among the compositions of the Nayanmar or the Saiva poet saints we can clearly discern three paths leading to the divine. The first is to approach god as father, the second is to hail him as master, and the third is to treat god as an intimate friend. The three most famous Nayanmar are Appar, Sambandhar, and Sundarar, and later interpreters of bhakti attribute the three paths, respectively, to this sacred trio. There is only one female Nayanmar. She is reverentially referred to as the Mother of Karaikkal, Karaikkal being the name of the city she came from. Among the Alvars too there is only one woman saint poet. Her name is Kothai, and she is popularly called Andal or the Ruler, referring to her power over her lord, the god Vishnu. The way these two women approach the divine and the way they led their lives show the wide divergence that exists within the bhakti literature and also provides us interesting information on the notion of gender in the Hindu devotional universe.

Gender has been understood and interpreted in many different ways in the vastly disparate traditions of Hinduism. With no central ecclesiastic authority and with literature and material artifacts of over 3,000 years, we are actually looking at a massive labyrinth of myths, rituals, poetry, and visual representations that can inform us on how gender was constituted within the conceptual framework of the Divine.

Kodai or Andal falls in love with Vishnu. In one of her poems she addresses her divine lover and says, “My beautiful lover, you have put clay

around me and poured molten metal into my heart.” Here the metaphor centers on the making of images of the gods and goddesses by the lost wax method. Her heart, says Andal, has melted with love, and all that remains is the clay of her mortal body. While Andal speaks of her passionate love for her divine lover, there are men saints of the Vaishnava tradition who speak, adopting the voice and persona of the female, longing for union with the male god. Adoption of the female voice to invoke God as the lover is also known in Christian tradition, but it is less frequently used than in the Hindu bhakti tradition. Sometimes the deity to whom the hymns are addressed crosses the boundaries of gender. One of the Alvars called Nammalvar sings to the male god Vishnu:

“Being my father
My friend and the mother
Who gave birth to me.”

Thus, the bhakti tradition seems to operate in two levels, namely, that of the abstract god and that of the devotee so consumed by love of god that he is no longer aware of his gender and becomes the lovelorn maiden.

Our other example of a female bhakti poet devoted to Siva is that of Karaikkal Ammaiyar. While Andal, the Alvar referred to above, is believed to have lived in the ninth century, Karaikkal Ammaiyar is placed much earlier in the late sixth century or thereabouts. While Andal was a beautiful woman who got sensuously dressed to please her lord and who adorned herself with the garland meant to decorate the image of the lord, Karaikkal Ammaiyar prays to the god Siva to divest her of her youth and beauty, which she sees as a distraction both to herself and those who gaze at her physical beauty. She wants to look withered, old, and ugly, and her image of her god is of one who dances the dance of death in the cemeteries and presides over the cruel realities of death, war, and suffering. It is an image in stark contrast to that of the world of the bride Andal passionately dreaming of the lover’s embrace and of all things lyrical and beautiful.

Karaikkal Ammaiyar chooses to sing of the god in the temple town of Tiruvalankatu. Her images of herself and her god are couched in terms

that make the macabre and the terrible beautiful. The message is that one, pointed devotion to the god Siva will conquer all fear of death. The cemetery (cremation ground, for the corpse was cremated in the Hindu practice) is simply a metaphor for death and all the destructive forces that are within us. She finally reaches Mount Kailasha, the abode of the god Siva, who hails her as “Mother.” Thus, while Andal, meaning the ruler, wins over the heart of her lord by her passionate sensuous longings, Karaikkal Ammaiyar by her strange images and lifestyle placed outside the normal codes of behavior, earns the respectful epithet of “Mother” from Siva, her god.

The Tamil bhakti poets accepted all the myths and belief systems of the Sanskrit religious works but gave them expression through the local Tamil language, thereby giving access to many more people. Sanskrit was like Latin in the medieval ages in Europe, an ecclesiastic language for the learned clergy. By using Tamil and by talking to God in endearing Tamil and by referring to god as a Tamilian, they localized the Pan-Indian faith and gave it a new stimulus.

—Rajeshwari Ghose

Bibliography

- Dean, David. *Harsh Devotee*. Philadelphia: Department of South Asia Regional Studies, University of Pennsylvania Press, 1990.
- Ghose, Rajeshwari. *Tyagaraja Cult in Tamilnadu: A Study in Conflict and Accommodation*. Delhi: Motilal Banarsidass, 1996.
- Narayanan, Vasudha. *Hinduism: Origins, Beliefs, Practices, Holy Texts, Sacred Places*. New York: Oxford University Press, 2004.
- Peterson, Indira Viswanathan. *Poems to Siva: The Hymns of the Tamil Saints*. Princeton, NJ: Princeton University Press, 1989.

Confucianism, Buddhism, and Daoism—Transformation of Chinese Religion

By 300 CE, China was no longer under unified rule. The fortunes of the most prominent indigenous religious tradition, Confucianism, had fallen with the Han dynasty (202 BCE–220 CE), while those of its lesser-known native and foreign counterparts, Daoism and Buddhism, were rising steadily. These three transformations in-

fluenced the subsequent development of Chinese religious history throughout the first millennium CE and beyond. From the period of disunity (220–589 CE) onward, Chinese religion would be defined by the interactions among Confucianism, Buddhism, and Daoism.

During the Han, the term “Daoism” (*daojia*) denoted a mélange of legal, medical, philosophical, and occult lore. Later it signified a constellation of sectarian movements, each claiming a host of divinely revealed writings as authoritative scripture alongside well-established texts such as the *Laozi* (*Daodejing*) and the *Zhuangzi*. These movements’ healing and longevity practices and commitment to moral rectitude no doubt made them doubly attractive to those searching for meaning in the fragmented post-Han world. Led by Zhang Ling (later known as Zhang Daoling), the Celestial Masters (Tianshi) venerated Laozi as a god and required rituals of confession for its members in anticipation of the imminent end of the world. Celestial Masters, whose title signified initiation into an unseen cosmic bureaucracy, devoutly expected to assume positions of power in a purified society ruled by the elect. Daoist theocracies ruled by groups such as the Celestial Masters and the Yellow Turbans (*huangjin*) briefly flourished here and there. At the personal level, techniques for attaining physical immortality were in vogue, especially among the gentry of the south to which Chinese regimes had retreated in the wake of northern barbarian invasions.

By the fourth century CE, Buddhism had developed from a hitherto little-known South Asian faith introduced by merchants and missionaries traveling the Silk Roads trade routes into a growing tradition patronized by Chinese elites. Initially it did not appear likely that Buddhism would take root in China. Although trade routes had linked China to other regions of Eurasia for centuries, travel was always difficult and dangerous, especially across the Himalayas to the south and the great deserts to the west. The scriptural languages of Buddhism, such as Pali and Sanskrit, are completely unrelated to Chinese, and thus the translation of foreign texts and concepts into the vernacular presented an enormous challenge. Perhaps the most formidable obstacle to Buddhism in China was the uniformly nativist



Two statues of the bodhisattva Guanyin. In Buddhism, a bodhisattva is an enlightened being who defers release from rebirth in order to assist other suffering beings. The statue on the left was produced during the first half of the seventh century CE and reflects the androgynous qualities of Central Asian Buddhist iconography, while the figurine on the right dates to the Yuan dynasty (1271–1368 CE) and illustrates the feminization of this figure in Chinese Buddhist art. (Réunion des Musées Nationaux/Art Resource, NY/Asian Art & Archaeology/Corbis)

and negative Confucian reaction that it provoked. But in the absence of state support, Confucianism was at a profound disadvantage and was unable to mount any effective resistance to Buddhist proselytization efforts.

Daoist movements were in nascent stages of development and could not compete with the better-organized Buddhist missions. Many Daoists as well as some disillusioned Confucians were attracted to the apparent similarity of Buddhist teachings with those familiar to them from texts such as the *Laozi* (*Daodejing*) and the *Zhuangzi* and movements such as the Dark Learning (*xu-anxue*) school. This attraction was encouraged by early translators of Buddhist texts into Chinese, many of whom adopted Daoist terminology in order to express Buddhist concepts. Later sectarian Daoist movements, such as the Highest Clarity (Shangqing) and Spiritual Treasure (Lingbao) sects, borrowed other Buddhist ideas (such as the doctrine of karmic retribution), resulting in further Buddhist-Daoist syncretism.

By the end of the long interregnum between unifying dynasties, Buddhism's prestige

had reached its zenith. Yang Jian, the general who reunified the empire and reigned as Emperor Wendi of the short-lived Sui dynasty (581–618 CE), assumed the mantle of a Buddhist *chakravartin-rajā* (“wheel-turning king,” i.e., universal monarch) in order to legitimize his rule. Under the succeeding Tang dynasty (618–906 CE), Chinese Buddhists and their elite patrons sponsored missions to the regions now known as Vietnam, Korea, and Japan, and Buddhist diplomacy helped to cement cultural and political links between East Asian courts. Chinese sensibilities also transformed Buddhist iconography, as the bodhisattva *Avalokitesvara* (masculine in South and central Asian representations) became Guanyin, a highly feminine figure in Tang art. Tang trade links to central, South, and West Asia enabled the transmission of still more foreign religions to China, including Islam, Judaism, Manichaeism, and Nestorian Christianity. Although none of these ever attained the popularity enjoyed by Buddhism, sizable communities affiliated with each tradition thrived throughout the Medieval Period, and large Muslim communities still exist in China today. While elites in each religious tradition maintained the ideals of exclusivity and orthodoxy, there is no evidence that average Chinese showed much concern for exclusive religious participation or pure doctrinal teachings. Instead syncretism prevailed, and each of the Three Teachings, or *sanjiao* (Buddhism, Confucianism, and Daoism), was enveloped in the trappings of Chinese popular religion, with its myriad local cults, deities, and mythologies.

Both the Sui and the Tang patronized Confucianism (in addition to Buddhism), reestablishing its canon as the basis for civil service examinations. Confucian ethics, with its three bonds of obedience (ministers to rulers, sons to fathers, and wives to husbands), continued to define social relationships among the educated. Confucian ritual dominated all ceremonies of public life and influenced religious practices among families and extended communities such as villages. Near the end of the Tang, Confucian and Daoist cliques at court persuaded Emperor Wuzong (r. 841–846 CE) to launch a fierce persecution, directed at “foreign” religions, destroying Buddhist institutions, confiscating Buddhist property, and secularizing monks and nuns

throughout his realm. This disaster prompted Chinese Buddhists to view their era as the last days of the dharma (*mofa*), a degenerate period in which customary methods of transmitting the Buddha's teachings would not suffice. Subsequently, new Chinese Buddhist sects developed around reliance upon a single practice, such as meditation (in Chinese, *chan*, in Japanese, *Zen*) or the recitation of a particular *sutra*, thought to be uniquely useful for gaining salvation in such troubled times. These developments in China strongly influenced Buddhist movements throughout East Asia.

After the fall of the Tang, various warlords competed for supremacy until a former Tang commander, Zhao Kuangyin, restored imperial unity as Emperor Taizu (r. 960–976 CE) of the Song dynasty. Having relied upon Confucian scholars to help stabilize and legitimize their regime, early Song emperors gratefully embraced Confucianism and continued the anti-Buddhist policies of the late Tang. Some endorsed Daoism, leading to the imperial compilation of the Daoist scriptural canon in 1019 CE. Nonetheless, while the influence of Confucianism only grew stronger under Song rule, Buddhism and Daoism retained their permanent places as fixtures in the Chinese religious landscape. The patterns of interaction between these three traditions set in motion during the Period of Disunity and the political precedents established by the succeeding dynasties ensured that Chinese religion would continue to be defined by syncretism, state control, and struggles for supremacy.

—Jeffrey Richey

Bibliography

- Bokenkamp, Stephen R. *Early Daoist Scriptures*. Berkeley and Los Angeles: University of California Press, 1997.
- Dien, Albert, ed. *State and Society in Early Medieval China*. Stanford, CA: Stanford University Press, 1990.
- Ebrey, Patricia, and Peter Gregory, eds. *Religion and Society in T'ang and Sung China*. Honolulu: University of Hawai'i Press, 1993.
- Knapp, Keith Nathaniel. *Selfless Offspring: Filial Children and Social Order in Medieval China*. Honolulu: University of Hawai'i Press, 2005.
- Wright, Arthur F. *Buddhism in Chinese History*. Stanford, CA: Stanford University Press, 1959.

Early Japanese Buddhism

The impact of Buddhism on Japan's political, religious, and artistic development is impossible to exaggerate. Today, some 14 centuries after Buddhism reached its shores, Japan remains one of the world's great centers of Buddhist practice and art and a major wellspring for the ongoing migration of Buddhist traditions to the West.

Originating in India around 500 BCE, Buddhism swept across Asia in just 1,000 years. It came last to Japan, crossing the sea in the mid-sixth century. It spread fast under the patronage of regent Shotoku Taishi (547–622), the nephew of Empress Suiko. Shotoku embraced the new faith (he was one of its first converts). He fostered its acceptance as both a superior religious philosophy and a powerful political tool for creating strong centralized governance under the emperor's guidance. Shotoku is credited with constructing numerous temples, centralizing state administration, importing Chinese bureaucracy, and enacting a 17-article constitution that established Buddhist ethics and Confucian ideals as the moral foundations of the young Japanese nation. During his regency, many missions were dispatched to China. Prince Shotoku never became a monk, but in modern popular belief he is revered as a Buddhist saint.

The Korean and Chinese missionaries who introduced Buddhism to Japan brought rituals and texts from both the Theravada and Mahayana schools, but the Mahayana form in particular struck a chord with its promise of salvation to both monastic followers and laity alike. The early missionaries also brought their art and techniques for reproducing Buddhist icons and sutras. Three texts were of great influence in Japan: the Lotus Sutra, the Sutra of Golden Light, and the Benevolent Kings Sutra. These were called the Three Scriptures Protecting the State. Indeed, the Japanese court's early support for Buddhism was based largely on the court's desire to use Buddhism as an instrument of state power and consolidation rather than an instrument of salvation for the masses. Buddhist ceremonies at the time were organized predominantly for the court to ensure the welfare of the country, to expel demons of disease, and to ensure rain and thus abundant harvests.

➤ KOBO DAISHI—ONE OF JAPAN'S MOST BELOVED BUDDHIST SAINTS

Kukai (Kobo Daishi) was the patriarch of the Shingon sect of Esoteric Buddhism. Shingon is Japan's version of Vajrayana (Tantric) Buddhism. Together with Hinayana and Mahayana, Vajrayana represents one of the three basic forms of Buddhism in Asia today. It is especially strong in Japan and Tibet and is intricately connected with the mandala art form. Shingon's most prominent deity is Dainichi Buddha, whose symbol is the vajra (thus Vajrayana, the Sanskrit term for "Diamond Vehicle").

Posthumously named Kobo Daishi (the Great Teacher), Kukai remains one of Japan's most beloved Buddhist saviors. Folklore says that he attained Buddhahood before death. Portraits of him abound. The Japanese today tend to ignore doctrinal differences when honoring him. Kukai traveled to China in 804 and was initiated in esoteric teachings by the Chinese priest Huiguo. Kukai returned in 806, and by 816 he obtained imperial sanction to construct his monastery on Mount Koya, a serene location on the Kii Peninsula still considered a holy land and one of modern Japan's most popular pilgrimage sites.

Kukai played an active role in many fields, performing rituals for the emperor, constructing a large reservoir in Shikoku for the common people, and establishing the first school for common citizens. His legend is riddled with folklore. He is



Tocho-ji Temple in Fukuoka, Japan, was founded by the scholar-priest Kobo Daishi in 806 CE. (Vanni/Art Resource, NY)

credited with everything from inventing Japan's kana script to introducing homosexuality. He is one of Japan's most celebrated calligraphers and supposedly published Japan's first dictionary. He became a major patron of the arts and reportedly founded hundreds of temples across Japan. The Shikoku Pilgrimage to 88 Sites is a popular pilgrimage attributed to Kukai. Most devotees carry a staff bearing the words "we two walk together."

—Mark Schumacher

Buddhism quickly became the state creed. By the eighth century, Emperor Shomu (d. 756) ordered the establishment of a nationwide system of provincial temples. This fast transition, however, was not always peaceful. In Prince Shotoku's time, it had sparked a war between the pro-Shinto faction (Mononobe clan) and pro-Buddhist forces (Soga clan). Buddhism won the day, but its subsequent success owed much to its tolerance and absorption of the older deities of the indigenous Shinto mountain cults. Before Buddhism, Shinto shamanism and mountain worship were the predominant forms of native faith. Japan's pre-Buddhist beliefs in nature spirits and holy men with magical powers were incorporated into Buddhism during the Nara (645–794) and Heian (794–1185) periods, resulting in a complex blend of Shinto-Buddhist practice.

One of the most celebrated mountain sages was En no Gyoja. This legendary holy man was a mountain ascetic (*yamabushi*) of the late seventh century. Like much about Shinto-Buddhist syncretism, his legend is riddled with folklore. He was a diviner at Mount Katsuragi on the border between Nara and Osaka. Said to possess magical powers, he was expelled in 699 to Izu Prefecture for allegedly misleading the people and ignoring state restrictions on preaching among commoners. He is considered the father of Shugendo, a major syncretic movement that combined pre-Buddhist mountain worship with Buddhist teachings. Popular lore says that he climbed and consecrated numerous sacred mountains.

By the ninth century, Buddhist temples were constructed alongside Shinto shrines on many sacred mountains, epitomized by the

powerful Tendai temple-shrine multiplex on Mount Hiei (Shiga Prefecture) and by the holy places throughout the Kumano mountain range. The native Shinto *kami* (deities) residing on these peaks were considered manifestations of Buddhist divinities, and pilgrimages to these sites were believed to bring double favor from both their Shinto and Buddhist counterparts. Another major center of syncretism was the Kasuga shrine complex in Nara. The number of deities proliferated. Despite earlier resistance, syncretism was relatively smooth and marked by religious tolerance.

Shinto-Buddhist syncretism was actually formalized and pursued based on a theory called Honji Suijaku, with Shinto gods recognized as manifestations (*suijaku*) of the original Buddhist divinities (*honji*). In the later Kamakura period some Shinto sects proposed the opposite, proclaiming the Shinto gods as honji and Buddhist deities as *suijaku*.

Scholars typically divide the Nara and Heian periods into two categories. The so-called Six Schools of Nara (the Sanron, Hosso, Kegon, Ritsu, Jojitsu, and Kusha sects) were mostly academic schools under state control that were centered in Nara and were devoted to mastering Buddhist philosophy from China and to maintaining court patronage. This period is called Nara Buddhism. It was marked by strong court-clergy relations and by lavish state spending on Buddhist temples, images, and texts. It did not show much doctrinal innovation and was largely devoted to state functions. In contrast, the Heian era is considered a groundbreaking period. Called Heian Buddhism, it centered around the establishment of two new schools, Tendai and Shingon, that both played key roles in the Shinto-Buddhist merger. The two founded their monasteries in mountain retreats away from the capital, thus gaining greater autonomy from the court. Both emphasized meditative practices and taught that everyone, not just the elite, had the potential to realize Buddhahood.

Priest Saicho (767–822) founded Japan's Tendai sect, and Priest Kukai (774–835) founded the esoteric Shingon sect. Both schools originated in China, where Saicho and Kukai had traveled to study the teachings. Once transplanted to Japanese soil, both schools flowered with innovation. Saicho's sect attempted a synthesis of

various Buddhist doctrines, including faith in the Lotus Sutra, esoteric rituals, Amida (Pure Land) worship, and Zen concepts. Tendai gained great court favor, rising to eminence in the late Heian era. Shingon, in contrast, was predominantly esoteric. Its doctrines were mystical and occult and required a high level of austerity. Elaborate and secret rituals (utilizing mantras, mudras, and mandalas) were developed to help practitioners achieve enlightenment. Despite its complex practices, Shingon exerted a profound impact on religious art and the faith of the court and monastic orders.

Religious pilgrimages were instituted during the mid-Heian era as well, often by priests who had made the arduous sea journey to China, including Saicho, Kukai, Ennin (794–864), and Enchin (814–891). Pilgrimages became a lasting practice thereafter. At the same time, Lotus Sutra Meetings (*bokke-e*) became popular among the nobility. By the late tenth century, meetings were designed for the salvation of the lower classes. Shinto shrines joined in, adding to the syncretic Shinto-Buddhism of the day. Gatherings for the working class were particularly common in the Kumano region.

Heian Buddhism and Shinto-Buddhist syncretism helped lay the foundation for the widespread propagation of Buddhism among the masses in the Kamakura Era.

—Mark Schumacher

Bibliography

- Groner, Paul. "A Medieval Japanese Reading of the Mo-ho Chih-Kuan: Placing the Kanko Ruijii in Historical Context." *Japanese Journal of Religious Studies* 22, nos. 1–2 (1995): 49–81.
- Groner, Paul. *Saicho: The Establishment of the Japanese Tendai School*. Honolulu: University of Hawai'i Press, 2000. First published in 1984 by the University of California Press.
- Kim, Yung-Hee. *Songs to Make the Dust Dance: The Ryōjin Hisho of Twelfth-Century Japan*. Berkeley: University of California Press, 1994.

Korean Buddhism, 400–1000 CE

For nearly a millennium, from its arrival around 400 CE until well into the Koryo era (918–1392), Buddhism played a dominant role in the political, social, and cultural life of the Korean peninsula. During this period Buddhism overshadowed

WONHYO

Wonhyo (617–686) was a man of Silla and one of the most prominent figures in the history of Korean Buddhism. Legend states that on the night he was conceived his mother dreamt that a shooting star had entered her womb and that his birth was heralded by multicolored clouds hovering over the earth. Silla had officially adopted Buddhism a century before Wonhyo's birth, and in his boyhood Wonhyo opted to enter the Buddhist priesthood. Unlike many of his contemporary monks, Wonhyo never made the journey to China to study Buddhism, although he attempted to on more than one occasion. One well-known story concerning Wonhyo relates how en route to China he took shelter in a cave in western Korea. Waking thirstily in the night, he groped in the dark until he found what he thought was a gourd. He was immediately refreshed by the pure water he found within it. In the morning Wonhyo discovered he had been sleeping in a tomb, and the gourd was in fact a human skull containing putrid water. From this experience Wonhyo received the revelation that all reality was a creation of consciousness. During Wonhyo's adult years the Unified Silla kingdom suffered from an excess of Buddhist teachings, resulting in doctrinal strife and disunity. Wonhyo set out to harmonize the various Buddhist doctrines that had been imported into Korea over the past century and in so doing became perhaps the greatest contributor to a distinctly Korean style of Buddhism. His massive efforts to unify the plethora of Buddhist scriptures into a unified doctrine proved highly influential in China and Japan as well. Upon his passing Wonhyo was granted the posthumous title "National Preceptor Who Harmonizes Disputes."

—Daniel C. Kane

Sources

- Buswell, Robert E., Jr. "Hagiographies of the Korean Monk Wŏnhyo." In *Buddhism in Practice*, edited by Donald S. Lopez Jr. Princeton, NJ: Princeton University Press, 1995.
- Iryō n. *Samguk Yusa: Legends and History of the Three Kingdoms of Ancient Korea*. Translated by Ha Tae-Hung and Grafton K. Mintz. Seoul: Yonsei University Press, 1972.
- Koh, Ik-chin. "Wonhyo and the Foundation of Korean Buddhism." *Korea Journal* 21(8) (August 1981): 4–13.

Confucianism as the guiding state ethos and was a primary focus of intellectual and artistic energies.

By most accounts, Buddhism first arrived on the Korean peninsula through a proselytizing Buddhist monk of the Chinese Eastern Qin kingdom, who brought the new religion to Koguryo in the late fourth century. Shortly thereafter, the more southerly Korean kingdom of Paekche adopted the faith. The kingdom of Silla farthest south was certainly exposed to Buddhism from around 400 CE. But in a situation closely analogous with Japan, Buddhism seems to have been first greeted by Silla with animosity and distrust. The Silla aristocracy in particular perceived in the foreign religion a threat to their privileges, founded in part upon their close association with the worship of native shamanistic deities. But one secret of Buddhism's success worldwide has been its ability to accommodate native beliefs. Silla officially adopted Buddhism in 527 after, legend states, the Buddhist official Ich'adon was martyred and his blood flowed the color of milk. The Silla aristocracy soon found grounds of accommodation with the new faith, while the Silla monarchy would also use it to bolster royal authority.

Although the Hinayana school of Buddhism, with its stress on individual meditation and salvation, was tolerated, it was the Mahayana school, with its vast hierarchy of bodhisattvas, emphasis on prayer over meditation, and appeal to the masses, that prevailed in Three Kingdoms Korea. For one thing, the hierarchical nature of Mahayana Buddhism conformed well to social realities on the Korean peninsula. Similarly, the Mahayana concept of bodhisattvas—lesser Buddhas who had forsaken final enlightenment to aid humans in their everyday struggles—readily accommodated many native deities.

When Buddhism arrived on the peninsula the Three Kingdoms were in the process of centralization and mutual rivalry. It was perhaps natural then that the monarchies of those kingdoms took the lead in the acceptance and promotion of the faith. Silla in particular linked Buddhism with royal power and the protection of the homeland. For a century or so after the faith's adoption in Silla, monarchs of that kingdom took on Buddhist names and styled themselves as Buddhist kings and Silla in particular as

a Buddhist Land, specially chosen to take the lead in the promotion of the doctrine. In the Silla capital of Kyōngju the massive Hwangnyong Temple symbolized Silla's own vision of itself as Buddhist Land. The youthful bands of male Hwarang, who gained their greatest glory during the battles for unification, became linked to the worship of the Maitreya Buddha. In short, Silla's promotion of Buddhism was intimately tied to the growth of royal power and the drive for peninsula hegemony.

With the aim of promoting Buddhism on the peninsula, many monks from the Three Kingdoms and later Unified Silla made the pilgrimage to China and even India in search of Buddhist sutras and personal enlightenment. The Silla monk Hye'cho (704-787), for instance, recorded his long journey to the birthplace of Buddha in India in a five-volume travelogue (which was presumed lost until its rediscovery in a Buddhist grotto in Dunhuang, China, in 1908). Likewise renowned was the Paekche monk Kyōmik, who voyaged to India and returned safely to Paekche in 526, carrying vast amounts of Buddhist sutras that were eventually translated into Chinese (then being used by the Korean kingdoms). It is a testament to the efforts of such pilgrimages that the Silla monk Wonhyo in the seventh century was able to assimilate and harmonize the bewildering array of Buddhist doctrine without ever having left Korea.

In 668 Silla, with help from Tang China, finally succeeded in defeating its rivals and unifying the peninsula. Although relations with Tang were initially troublesome, with Tang wishing to carve its own colonies out of the defeated kingdoms, Silla eventually prevailed. Following Silla's absorption of the Buddhist legacies of Paekche and Koguryo and then the normalization of Silla-Tang relations around 700, Korean Buddhism was prepared to enter a more intellectually mature period.

For Buddhism in Korea, Unified Silla was a period of unparalleled intellectual vigor and development. Foremost among the Buddhist figures of the period were the contemporaries Ŭisang (625-702) and Wonhyo (617-698). Ŭisang studied in Tang China and returned to Silla to found the Korean Hwaōm (Huayen, Kegon) school, one of the major sects of Silla Buddhism.

By the time of Silla unification, so many various Buddhist sutras and doctrines had entered Korea that what emerged was a crisis mirroring the confusion of Buddhist doctrine then prevalent in China. The overall result was a Buddhism whose ultimate meaning was lost in the cacophony of various teachings. While Wonhyo never benefited from study abroad, his intellectual efforts are credited with bringing the various Buddhist doctrines under a unifying system of thought.

Ironies aside, the material splendor of Korean Buddhism is one of its most striking aspects, especially in the case of Silla. The Silla capital of Kyōngju (its present-day name) remains a vast storehouse of Silla period Buddhist temples, pagodas, murals, statues, and stupas. Most impressive is perhaps the stone Buddhist grotto of Sōkkuram, just outside the Silla capital. Echoing similar Buddhist grottos in northwestern and western China, Silla's Sōkkuram ("stone cave hermitage") is a masterpiece of Silla craftsmanship and a testament to the deep inroads that the faith had made by the eighth century.

The socially turbulent period of Late Silla saw a new development in Korean Buddhism with the growth in popularity of Sōn (Chan or Zen) thought. Although this meditative sect of Buddhism had arrived from China as early as the seventh century, it failed to make an impact until the early ninth century. Its rise in popularity has been linked to the social realities of late Unified Silla, namely the rise in power of local gentry at the expense of capital aristocracy. The powerful local gentry of late Unified Silla, including Wang Kōn, the future first king of Koryō, became the primary supporters of Sōn Buddhism. But its appeal may also be attributed to its dismissal of textual learning for personal meditation and sudden enlightenment. Over the century bridging late Unified Silla and early Koryō a total of nine independent Sōn monasteries were established on nine different Korean mountains, each headed by a patriarch. Unlike the earlier urban-centered Buddhist temples, Sōn temples chose as their locale isolated mountain retreats. In time Sōn overtook the textual schools of Korean Buddhism to become the main current of Buddhism in the Koryō period.

Following the fall of Silla in 927, Buddhism, notably Sōn, continued to play key social and

cultural roles during the succeeding Koryŏ dynasty, although it would slowly be eclipsed by Chinese-inspired Confucian statecraft in the realm of politics.

—Daniel C. Kane

Bibliography

- Iryŏn. *Samguk Yusa, Legends and History of the Three Kingdoms of Ancient Korea*. Translated by Ha Tae-Hung and Grafton K. Mintz. Seoul: Yonsei University Press, 1972.
- Korean Buddhist Research Institute. *The History and Culture of Buddhism in Korea*. Seoul: Dongguk University Press, 1993.
- Korean Buddhist Research Institute, ed. *Son Thought in Korean Buddhism*. Seoul: Dongguk University Press, 1998.
- Lancaster, Lewis R., and C. S. Yu, eds. *Assimilation of Buddhism in Korea: Religious Maturity and Innovation in the Silla Dynasty*. Berkeley: Asian Humanities Press, 1991.
- Nam Dong-shin. "Buddhism in Medieval Korea." *Korea Journal* 43(4) (Winter 2003): 30–58.

Shankara and the Reformation of Hinduism

Shankara (788–820 CE), also known as Shankaracharya and Adi Shankaracharya, may be the best known of classical Hindu philosophers. He developed the philosophy of Advaita Vedanta and established the Dashanami order of Hindu monks. His reforms helped give Hinduism the basic structure that it has, right to the present day. When, in the nineteenth century, modern Hindu thinkers sought to reform their tradition, the work of Shankara provided their chief model and inspiration.

Hinduism, in Shankara's time, was divided into numerous sectarian groups and was greatly weakened by the philosophical critiques and widespread popularity of anti-Vedic traditions, particularly Buddhism but also Jainism. Shankara recognized the validity of many of the Buddhist critiques of Brahmanical thought but also affirmed the truth of the Vedic revelation as a *pramana*, or basis for discerning the true nature of reality. He saw a deeper unity underlying the various Hindu traditions and taught that the deities at the basis of these traditions were all, ultimately, manifestations of one supreme divine reality. Finally, he organized a set of monastic in-

stitutions to perpetuate his vision, ensuring that it did not die with him.

A child prodigy, it is said that Shankara was defeating prominent philosophers in public debate at a very young age, mastering the four Vedas by the age of eight. He was drawn early to the life of a *sannyasin*, or wandering monk. Born in the southern state of Kerala, he traveled north where he met his guru, Govinda Bhagavata, who was, in turn, a disciple of Gaudapada, who was the author of a renowned commentary on the *Mandukya Upanishad*. Gaudapada's work utilizes a great deal of Buddhist terminology as well as Buddhist forms of argumentation. But it does so in the elucidation of Vedanta, the Hindu philosophy based on the interpretation of the *Upanishads*, the *Brahma Sutras*, and the *Bhagavad Gita*.

Shankara continued in the footsteps of Govinda and Gaudapada, writing many commentaries of Vedic texts that he interpreted in terms of his philosophy of *advaita*, or nondualism. According to Advaita Vedanta, Brahman, the ultimate reality affirmed in the *Upanishads*, is the sole reality. The world made up of the phenomena of ordinary experience is a mere appearance that we superimpose upon the reality of Brahman. To use one of Shankara's favorite metaphors, the world is like a snake that one sees in poor light. On closer inspection, it is revealed that the snake is really a rope that one has not perceived correctly. The world, like the snake, is *maya*. It is neither real nor unreal. It is not completely unreal, for it is based on a truly existing reality: Brahman/the rope. But it is unreal in the sense that it does not have the character that it appears to us to have: the world/the snake. Liberation from the cycle of death and rebirth, according to Shankara, occurs when one perceives reality as it truly is and realizes that all of existence—and in particular the self, or *atman*—is nothing but Brahman. This realization can occur during one's lifetime, and Shankara's followers believe him to have been liberated while still in his physical body (*jivan-mukti*).

God, for Shankara, is the supreme personal form of Brahman, as perceived from the point of view of *maya*. But the distinction between God and the world, and God and the self, is ultimately an illusion to be overcome through right knowl-

edge. The deities of Hinduism—Shiva, Shakti, Vishnu, and so on—are different forms or aspects of the Supreme Being.

Shankara spent a good deal of his career debating Buddhists. But he had Hindu opponents as well, who believed that his doctrine of *maya*—affirming the unreality of the world and the ultimate unity of the individual and the supreme reality—was too similar to Buddhism, undermining popular piety and the practice of devotion (*bhakti*). Shankara saw devotion as a preliminary to knowledge, the true source of liberation. At the same time, while his philosophy did subordinate devotion to knowledge, some very beautiful and intensely devotional poetry is attributed to him. His preferred deity was Shiva.

Shankara saw the greatest weakness of Hinduism, in contrast with Buddhism, to be the lack of a highly organized monastic structure, such as the Buddhists had. He sought to replicate this structure by establishing the Dashanami order of Hindu monks and four monasteries, or *mathas*, at the four corners of India, which are still prominent monastic centers today: Sringeri in Karnataka (in the south), Dwaraka in Gujarat (in the west), Puri in Orissa (in the east), and Jyotimath in Uttarkhand (in the north).

—Jeffery D. Long

Bibliography

- Dasgupta, Surendranath. *A History of Indian Philosophy*, Vol. 2. Delhi: Motilal Banarsidass, 1975.
- Deutsch, Eliot. *Advaita Vedanta: A Philosophical Reconstruction*. Honolulu: University of Hawai'i Press, 1969.
- Doniger, Wendy. *The Hindus: An Alternative History*. New York: Penguin, 2009.
- King, Richard. *Early Advaita Vedanta and Buddhism*. Albany: State University of New York Press, 1995.
- Klostermaier, Klaus K. *A Survey of Hinduism*. 3rd ed. Albany: State University of New York Press, 2007.
- Rambachan, Anantanand. *The Advaita Worldview: God, World, and Humanity*. Albany: State University of New York Press, 2006.

Emergence of Tantric Movements

Tantra is a loosely defined category that incorporates many different beliefs and practices. It is

often opposed to the Vedic and Brahmanical orthodoxy that upholds rigid caste structures. It is likewise transgressive in nature in the sense that Tantric symbolism and ritual defy orthodox social norms. The symbolism of Tantra categorizes the world in terms of numerous categories represented by deities, sounds, and other symbols known only to the initiated. The most important symbols are the ultimate cosmic pair Shiva and Shakti, whose union gives rise to the entire world and all beings within it.

Tantric literature frequently presents legendary stories of its origins. These texts, called *Agamas*, typically present the god Shiva transmitting teachings as revelations. They are often framed as a dialogue between Shiva and the goddess called Shakti or Devi. The legendary quality of these frames reflects the obscurity of finding a starting point for the emergence of Tantra, although the earliest Tantric texts date to circa 600 CE. The word *tantra* comes from the root *tan*, meaning “to extend,” referring to the idea of a web, or spreading fabric on a loom. Tantric traditions point to an etymology that combines the roots *tan* with *tra*, which means “to save,” giving one the sense that salvation lies in the expanse of the world. As a term, it appears before literature that explicitly identifies itself as Tantric, referring to a collection of literature on a subject.

The body itself is the vehicle of salvation in Tantra. Meditation (*sadhana*) aims at uncovering the divine nature within oneself. In particular, Tantric meditation involves visualization of the body as the home of the gods accompanied by the recitation of *mantra* (sacred formulae for chanting). The body is a microcosm whose structure reflects the nature of the cosmos as a whole. The fusion between human consciousness and the physical body is thought to reflect the divine couple, Shiva and Shakti. While different traditions emphasize one or the other of this divine pair, most agree that liberation occurs when one realizes in meditation this cosmic union in one's own body.

Belief in the supremacy of the goddess identified as Shakti (“power”) overlaps with devotional goddess worship. First seen in texts of the seventh and eighth centuries CE, cults of the goddess Kali point to the immanence of the divine in the world. The ferocious aspect of Kali, her

➤ A TANTRIC MEDITATION

Tantric manuals of meditation employ methods cloaked in symbolism and often use methods that locate the divine couple Shiva and Shakti in the body. For example, a ninth-century CE meditation manual called the *Vijnanabhairava* teaches one to identify with Shiva (here called Bhairava) by meditating on the breath. Whereas Shiva is the essence of consciousness, the breath is the goddess, Shakti, alternately drawn in and exhaled out. In meditation one puts awareness on the cycle of respiration and gradually learns to hold the breath in meditation. Then, with this motion stilled, one is supposed to have a vision of Shiva.

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affiliation with jackals, corpses, and cremation, all point to the transgressive element of Tantric rites as a means to liberation. In the Shri Vidya traditions, meditation utilizes geometric diagrams (*yantra*) that represent the goddess in the world as well as various mantra, to come to the realization of the creative force underlying the world. The goddess is also the force underlying the efficacy of Kundalini yoga. In these practices the goddess is a coiled serpent slumbering at the base of the spine; in *sadbhāna* she is roused and made to ascend through the energy centers (*chakras*) to unite with Shiva above the crown of the head. The body, as well as the elements of the Tantric physiology involved, are all seen as aspects of the power of the goddess.

The emphasis on the goddess as divine energy inherent in the physical world forms the basis for so-called Left Handed practices. These are the infamous and secretive rituals involving what are referred to as the Five M's, named for the first letter of each ritual element: wine (*madya*), fish (*matsya*), meat (*mamsa*), parched grain (*mudra*), and sexual union (*maithuna*). While Tantra is often connotatively identified with sexual elements, the extent to which these practices were actually performed, or are symbols representing the divine couple Shiva and Shakti, remains a matter of contention.

The loose collection of traditions that have sometimes been called Kashmir Shaivism repre-

sent a high point in Tantric philosophy in the first millennium. It should be noted, however, that not all of these sects were both Kashmiri and Shaiva. These traditions fused the worship of Shakti with Shaiva Siddhanta and other sects into a form of monistic belief in which everyone and everything is part of Shiva. It was an idealist philosophy in that everything was of the nature of light (*prakasha*) as perceived through the self-reflexive awareness (*vimarsha*) of the Lord. The aim of all *sadbhāna* is to realize one's true identity as Shiva through meditations aimed at clarifying one's own consciousness.

The most comprehensive theologian of this system of thought was Abhinavagupta (ca. 975–1025). His work incorporated the philosophy, practices, and symbols of other Tantric traditions into a synthesis he called Trika (“Three-fold”). This term may refer to the successive levels of attainment one experiences through the purification of consciousness in *sadbhāna*. With Abhinavagupta, Tantric thought and practice reached a zenith in Indian religion. The beliefs of Trika were later to influence Shaiva and Tantric systems in southern India. Some of the practices and iconography are also seen in Vajrayana Buddhism, although the relationship between Buddhist and non-Buddhist Tantra remains unclear.

Esoteric or Vajrayana (“Diamond Way”) Buddhism is similar to other forms of Tantra in that it utilizes a rich symbolism, numerous mantras, and yogic methods in which the practitioner identifies with a particular Buddhist deity. Much as with other forms of Tantra, one cannot definitively point to a specific moment for the evolution of Esoteric Buddhism, although Tantric elements first appear in Buddhist texts in the seventh century CE. A major distinction of this form of Tantra is its assimilation into a Buddhist philosophical and soteriological framework. For example, the virtues of compassion and wisdom replace the duality of Shiva and Shakti. Likewise, any identification with a Buddhist divinity is done with the doctrine of emptiness (*śūnyatā*) in mind: at the end of the ritual, the practitioner deconstructs this notion of selfhood.

With the destruction of Nalanda University, Tantric Buddhism virtually disappeared from India. A sect of Tantric Buddhism appeared in China

in the late seventh century CE. Although it died out in China, it survives as the Shingon sect in Japan. However, Tantric Buddhism successfully established itself as the dominant form of Buddhism in Tibet from the eighth century onward. In this era the Buddhist missionary Padmasambhava, reputed to have pacified the demons of Tibet, established the Nyingma sect. Likewise, the Indian sage Naropa (956–1040) taught Esoteric Buddhist teachings to his Tibetan disciple Marpa, who in turn founded the Kagyu sect in Tibet.

—Matthew Bingley

Bibliography

- Bhattacharya, Narendra Nath. *History of the Tantric Religion*. New Delhi: Manohar, 1982.
- Flood, Gavin. *Tantric Body*. New York: I. B. Tauris, 2006.
- Gupta, Sanjukta, Dirk Jan Hoes, and Teun Goudriaan. *Hindu Tantrism*. Leiden: E. J. Brill, 1979.
- Muller-Ortega, Paul E. *The Triadic Heart of Śiva*. Albany: State University of New York Press, 1989.
- Shastri, Mukunda Rama, ed. *The Vijnana-Bhairava*, Vol. 8. Kashmir Series of Texts and Studies. Srinagar, India: Research Department, Jammu and Kashmir State, 1918.
- Williams, Paul, and Anthony Tribe. *Buddhist Thought*. New York: Routledge, 2000.

Indian Philosophies, 300–600 CE

The period 300–600 CE was probably the most productive era in Indian cultural history. It was a period during which the arts, literature, and science flourished, and the lively exchange with other cultures, especially China, stimulated the intellectual vitality of the country. For example, the famous Sanskrit play *Shankuntala* by Kalidasa originated during this time. However, the once-common label “India’s Golden Age” is now avoided among historians, who over the last decades have aimed at drawing a more differentiated and evenhanded picture, especially with regard to the social conditions of the time. Similarly, the term “Gupta Age,” after the dynasty that ruled the north for nearly 250 years, has been criticized for neglecting the political diversity of the Indian subcontinent, much of which lay beyond the boundaries of the Gupta empire.

In modern secondary writings it is common practice to group Indian philosophies into six

orthodox (i.e., Hindu) schools (in three pairs of two: Nyaya-Vaisheshika, Samkhya-Yoga, and Mimamsa-Vedanta) and a few unorthodox systems such as the Buddhists and Jains. Yet even the adequacy of the term “Hinduism” is disputed among scholars, and the interactions and codependencies of the numerous Indian philosophies are much more complex than such categorizations suggest. The following examples aim to highlight some central themes and achievements to offer a flavor of the vibrant intellectual climate of the time, but as with most periods in Indian history, the biographical data of the individual philosophers who probably lived during this period are far from universally agreed upon.

While the period between 300 and 600 CE was one of toleration for many philosophies and religions, one remarkable feature was the growing influence of Brahmanism in Indian culture, particularly of the bhakti (devotional) cult. Philosophical discourse experienced an increased use of the high-class language of Sanskrit as opposed to vernaculars such as Pali that had been used by the Buddhists. Sanskrit became the lingua franca for intellectuals across India, thus furthering philosophical exchange between the different regional schools of philosophy.

The Yoga sutras, attributed to the quasi-mythical Patanjali, probably originated during the fourth century CE. These treatises on spiritual and mental discipline, which famously define yoga as the “cessation of the fluctuations of the mind,” mark the beginning of a tradition of textual transmission that has continued into the present time and has expanded well beyond the Indian subcontinent. While the Indian traditions do not ascribe separate realms to philosophy and religion, not all topics of Indian philosophy were essentially spiritual in nature. More worldly topics included the principles and policies of government, the scope of authority that should be granted to a ruler, and the theories of law and social order. Besides explicit literature on law, such issues were often discussed in narrative form such as in the Puranas, sacred legends that in their written form can be dated from the fourth century onward, although the oral tradition stretches much further back.

The study of language had always been a central concern of Indian philosophy, partly

➤ INDIAN LOGIC

The science of proper reasoning developed in India from the study of rhetoric and grammar. In formalized debating competitions there were three types of debate. In tricky debate (*jalpa*) each participant tried to make their position seem stronger, often through clever use of rhetoric. Destructive debate (*vitanda*) tried to defeat the opponent at any cost, without offering constructive argument for an alternative position. In honest discussion (*vada*) both parties sought to arrive at the truth by using only logically acceptable arguments.

For the Nyaya School, a properly formed argument for public debate consisted of five steps, including two concrete examples from experience, one similar and one dissimilar. The standard example of the Nyaya syllogism was: There is fire on the hill (proposition). Because there is smoke (reason). Like in the kitchen, and not like in the lake (examples). On this mountain, since there is smoke, there must be fire (application). Therefore, there is fire on the mountain (conclusion).

This model was accepted by most schools of Indian philosophy, although Buddhist philosophers such as Dignaga thought it too long-winded and took the first three steps as sufficient for a well-formed argument. The Nyaya School accepted this shorter model for drawing conclusions for oneself but insisted on all five steps when trying to convince another person.

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because the effective performance of the sacred rituals was thought to depend on the correct recitation of the ancient Vedic texts. Yet far from being a mere handmaid to religion, linguistics was developed into a true philosophical science by philosophers such as the fifth-century grammarian Bhartrhari, whose *sphota* theory was designed to tackle the problem of understanding meaning. According to Bhartrhari, sentences rather than individual words convey meaning, and a message is understood not through a combinatory process of the mind but instantaneously and as a whole.

Based on the rules established by the Nyaya (logic) school, the art of well-formed arguments developed into an important part of Indian culture, where many different schools had to com-

pete for followers and patronage, sometimes in formalized competitions of debate. The origins of the Nyaya sutras, the most fundamental text of this school, are difficult to trace, but the first existent commentary that tries to make these aphorisms accessible was composed by Vatsyayana probably during the fifth century. Such commentaries on texts of authority became a typical feature of the Indian philosophical tradition, with philosophers trying to present new ideas not as their own innovation but as already implied in the established works they were commenting on. Respect for tradition, and especially for the sages and teachers of ancient times, is a defining feature of Indian intellectual culture.

Of the schools that did not accept the authority of the Vedic scripture, the Jains are to be mentioned for their important contribution. Around 400 CE or somewhat earlier, the most fundamental philosophical text of Jainism, the *Tattvarthasutras*, was composed, which deals with, among other topics, ontology (the question of existence), karma theory, and the mechanisms of the soul's bondage in the cycle of rebirths. The Jain philosopher Kundakunda wrote on the two viewpoints from which reality can be perceived: the absolute viewpoint of truth that is available to the omniscient person and the conventional viewpoint that is taken by most people yet, though not necessarily false, is limited and limiting in comparison to the ultimate and all-encompassing truth.

In Buddhism a central development was the increased importance of the populist notion of the bodhisattva, an advanced spiritual seeker who defers final Buddhahood out of compassion for all living beings, opposed to the austere focus on personal liberation that had characterized the earliest *sangha* (Buddhist community). On a more intellectual level, the philosopher Dignaga provided Buddhism with a systematic epistemology and logical theory. His *betuchakra* (wheel of reasons) can be seen as a first step toward a system of formalized logic. The philosophers Buddhaghosa and Buddhadatta produced comprehensive surveys of the central Abhidharmika notions, that is, the Buddhist system of how to advance toward liberation through several stages of meditation. Another important contribution was made by the sixth-century

Buddhist philosopher Dharmakirti, who built on the logical work of Dignaga. For example, on the much debated issue of cause and effect, Dharmakirti concluded that such relations are merely human conceptual constructions and do not possess independent reality.

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Bibliography

- Ghoshal, U. N. *A History of Indian Political Ideas: The Ancient Period and the Period of Transition to the Middle Ages*. Oxford, UK: Oxford University Press, 1959.
- Leaman, Oliver, ed. *Encyclopedia of Asian Philosophy*. London: Routledge, 2001.
- Murty, K. Satchidananda, ed. *History of Science, Philosophy and Culture in Indian Civilization*, Vol. 2, Part 1, *Life, Thought and Culture in India (c. AD 300–1000)*. Project of History of Indian Science, Philosophy and Culture, Centre for Studies in Civilizations. Delhi: Motilal Banarsidass, 2002.
- Potter, Karl, et al., eds. *Encyclopedia of Indian Philosophies*, Vols. 1–16. Delhi: Motilal Banarsidass, 1977–2007.
- Stewart, Mary L. *Nalanda Mahavihara: A Study of an Indian Pala Period Buddhist Site and British Historical Archaeology, 1861–1938*. Oxford, UK: BAR International Series 529, 1989.

Indian Philosophies, 600–1000 CE

The time between 600 and 1000 CE can be seen as the transition from late ancient to early medieval India. After the Hun invasions and when King Harsha, whose power had held the kingdom together, died without an heir, countless smaller and often unstable kingdoms came into existence, most famously those of the Rajput clans in the north and west. In the south, however, which was often neglected in older historiographies, no such unitary power had existed even in the preceding centuries, and the simplistic image of an Indian Dark Age, which followed the golden age of the Gupta period, has been shown to be inadequate by more recent scholars.

Despite the often restless political situation, at the royal courts the arts, philosophy, and religion found generous patronage according to the tastes of the local ruler. In the field of philosophy, classical values were still highly regarded, and if this era could not compete with the pre-

ceding in terms of innovation, it was characterized by an increasingly sophisticated and technical application of the fundamental ideas in the form of commentary literature and encyclopedic treatises.

During the seventh or eighth century, the philosopher Shankara was born probably in what is today the southern Indian state of Kerala. The central aspect of his Advaita (nondualist) philosophy is the existence of one Absolute (Brahman) behind the apparent diversity of things. For the Advaita Vedantins the path to liberation consists in realizing that all distinctions, especially between knower and object of knowledge, stem from an ignorant mind-set and are ultimately illusory. The aim of the Vedantins lies in attaining pure, immediate consciousness, which, because it is nondifferent from Brahman, is also thought of as the state of ultimate bliss.

The monistic Advaita Vedanta philosophy is still equated by many people with Indian philosophy per se. This is mainly due to the accounts of Indian philosophical history presented by neo-Vedantins such as Svami Vivekananda, which the West accepted during the nineteenth century without much questioning. Yet besides Shankara's unmatched fame, the Advaita Vedanta school has produced many other original thinkers such as Shankara's slightly older contemporary Mandana Mishra or the tenth-century philosopher Vacaspati Mishra, an extremely learned scholar who wrote for several different schools. It also has to be emphasized that the Advaita Vedanta is not the only form of Vedanta, that is, a philosophical system that grounds itself in the interpretation of the last part (*anta*) of the sacred Vedic texts.

The school that focused primarily on the interpretation of the ritualistic aspects of the Vedas and the concept of dharma (duty, law, religion) was the Mimamsa (exegesis) school. During the seventh century, two branches of Mimamsa developed. The founder of the first was Kumarila Bhatta, of the second Prabhakara Mishra. Both agreed that the Vedas were eternal and authorless and that they manifested their own validity because of the eternality of the Sanskrit language and the correspondence of grammatical structures to the underlying order of the cosmos. Nevertheless, the Mimamsa system also

➤ INDIAN THEORIES OF PERCEPTUAL ERROR

The problem of perceptual error, how a person could mistake a rope for a snake or mother of pearl for silver, was an issue of heated debate among Indian philosophers. For the Buddhists, perception was limited to the intake of a stream of momentary sense data, and any error had to originate during the conceptual construction of the mind. For the Naiyayikas such as Jayanta Bhatta, who objected to such a gulf between mind and world, error consisted in mistaking one real thing for another. The Naiyayikas claimed that at first the mother of pearl was perceived simply as “something bright.” In case of error, this perception triggered the memory not of mother of pearl but of silver, and according to the Naiyayikas, that silver was in reality located elsewhere. Prabhakara found the idea that real silver could be perceived in an erroneous perception absurd and claimed that what was presented was merely remembered silver. For Shankara, the erroneously perceived silver was of a different status altogether. He thought of it as neither real nor unreal but rather that it originated with the illusion and was destroyed at the moment the object was recognized as a shell.

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conceded an important role for perception and rational thinking, as a state of inner wisdom was an important preparatory stage for the correct performance of Vedic ritual.

By the year 600 CE the Nyaya (logic) school had effectively amalgamated with the Vaiseshika (atomism) school. The Nyaya-Vaisheshika system aimed at providing a realist philosophy, based on a rigorously applied theory of substances and properties. One of the greatest works of this school is the *Nyayamanjari* by the ninth-century philosopher Jayanta Bhatta, which was written to provide intellectual distraction to the author who had been imprisoned by the local ruler. The *Nyayamanjari* deals with one of the issues that were most disputed among Indian philosophies, namely the question as to what were the means of acquiring valid knowledge of the world. For the Nyaya-Vaisheshika, these *pramana* were perception, inference, comparison,

and verbal testimony, while other schools disagreed on number or interpretation. During the tenth century a further contribution to Indian epistemology was made by the Nyaya philosopher Bhasarvajna, who reflected on the possible theories of error.

Buddhism, which was to largely disappear from India around 1200, was starting to lose ground both as a religion and a philosophy. A comprehensive defense of Buddhism was attempted by Shantarakshita, an eighth-century professor at the university at Nalanda. In his *Tattvasamgraha* he attacked, among others, the views of the chief exponents of the Nyaya, Mimamsa, and Samkhya schools. The ninth century produced three famous dialecticians: Kalyanarakshita, Dharmottara, and Pandit Ashoka. During the tenth century, Ratnakirti elaborated on the theory of momentariness, the Buddhist doctrine that reality is a chain of fleeting moments, especially with regard to consciousness, ideas, emotions, and the perceived self.

In the era under discussion, Jain philosophy was becoming increasingly systematized, as concepts that had been elaborated for internal use were now employed in interschool competition. The Jain logician Akalanka wrote an important commentary on the *Tattvarthasutra* as well as several original works, which were mainly aimed at refuting the Buddhist Dharmakirti. Slightly later, Haribhadra Suri composed a treatise that discusses the Buddhist, Jain, Nyaya, Samkhya, Mimamsa, and Vaisheshika schools. As an innovative and influential contribution of Jainism to Indian philosophy, the theory of *anekantavada* has to be mentioned. This theory teaches that any object possesses an infinite number of attributes about which, in theory, an infinite number of statements can be made from different perspectives.

As these examples show, Indian philosophies not only concerned themselves with spiritual matters but also tried to understand all realms of human experience. Among the most sophisticated issues debated in the early medieval era were the existence of universals such as cow-hood or pot-ness, the question as to whether an effect had to already be preexistent in its cause, and the problem as to whether a relation binding two substances would require a further

relation to bind the substance to itself, thus leading to an infinite regress.

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Bibliography

- Bose, Mainak Kumar. *Late Classical India*. Calcutta: A. Mukherjee, 1988.
- King, Richard. *Indian Philosophy: An Introduction to Hindu and Buddhist Thought*. Edinburgh, UK: Edinburgh University Press, 1999.
- Murty, K. Satchidananda, ed. *History of Science, Philosophy and Culture in Indian Civilization*, Vol. 2, Part 1, *Life, Thought and Culture in India (c. AD 300-1000)*. Project of History of Indian Science, Philosophy and Culture, Centre for Studies in Civilizations. Delhi: Motilal Banarsidass, 2002.
- Potter, Karl, et al., eds. *Encyclopedia of Indian Philosophies*, Vols. 1-16. Delhi: Motilal Banarsidass, 1977-2007.
- Rao, Srinivasa. *Perceptual Error: The Indian Theories*. Honolulu: University of Hawai'i Press, 1998.

Buddhism in Java— The Early Years

The first extant record of a vibrant Buddhism in Indonesia is the account of the Chinese Buddhist pilgrim Yijing who, on his first voyage to India in 671 to obtain copies of Buddhist texts, stopped in the kingdom of Srivijaya in southeastern Sumatra for six months to study Sanskrit. He reported that Palembang, the capital city of Srivijaya, contained more than 1,000 Buddhist monks who were preaching and doing good works there. Two and a half centuries earlier, another Chinese pilgrim, Faxian, who in 414 had stopped on the north coast of Java, reported that although he saw Hindu ascetics there, he found few traces of Buddhism.

And yet, Buddhist missionary activity, much of it probably emanating from Sumatra, had already begun in Java in the early fifth century and would increase in the centuries that followed. Shortly before or after Faxian's visit, and certainly sometime before 424, the monk Gunavarman, an early prince of Kashmir, stopped in Java on his way to China and reportedly introduced the doctrine of Buddhism there. The spread of Buddhism to the islands around the Java Sea during this same general period is attested to by the Buddha images discovered

there, including the Buddha on the hill of Seguntang at Palembang and another from the Celebes (Sulawesi), both in the Amaravati style and probably dating from the fourth century, and another in East Java that shows fourth- or fifth-century Singhalese influence.

As for Sumatra, just across the narrow Sunda Strait from Java, a group of inscriptions in Old Malay, found in southern Sumatra, attest to the existence there of a Buddhist state whose king had just conquered the "hinterland" of Jambi, an area to the north of Palembang on the east coast of Sumatra, as well as Bangka, a small island lying just off the same coast, and was preparing to launch a military expedition against Java. The land mentioned there, with its center at Jambi, may possibly be identified with a kingdom referred to in Chinese sources that predated Srivijaya and whose king, Sri Varanarendra, sent a Hindu ambassador to the Chinese court between 454 and 464. The same source states that in 502 a Buddhist king, Gautama Subhadra, ruled there and that his son, Vijayavarman, sent an embassy to China in 519, while the anonymous king whose victorious campaign in eastern Java in 682 is recounted in one of these inscriptions is almost certainly Jayanasa, and the kingdom that he conquered, Taruma, may have become the center for expansion of Sumatran influence in Java.

The next stage begins in central Java in the eighth century with a Sanskrit inscription dated 732 on a stele discovered in the ruins of the Shivaite sanctuary (a temple dedicated to lord Shiva) of Chandi Changgal to the southeast of Borobudur, the largest and best-known Buddhist monument on the island. This inscription commemorated the erection of a *linga* (a phallic symbol of Shiva), not in the shrine where it was found but in the "country of Kunjarakunja," the name at that time for all or part of the Kedu Plain to the west of Borobudur. The author of this inscription was Sanjaya, the first of a line of kings or chiefs who ruled in central Java from the early eighth century to the end of the ninth. A later inscription, dated 907, represents Sanjaya as a prince of Mataram, the southern part of central Java. According to another inscription, the second ruler of this line, Panangkaran, was reigning in 778 under the suzerainty or control

of the Shailendras, who had established a parallel dynasty in central Java sometime in the middle of the eighth century.

The origin of the Shailendras of Java and Sumatra is uncertain, since dynastic traditions trace them back variously to different regions in southern and east-coast India, but their sudden appearance was an event of major importance, not only because it brought the greater part of the Malay archipelago under their rule but also because their empire extended as far as Kambuja (Cambodia) and Champa (Vietnam). The Shailendra period is one of the most important eras in the history of Southeast Asia, for they introduced into the areas where they settled some of the greatest cultural achievements of India at that time.

Whereas the rulers of the Sanjaya dynasty in central Java were Hindu, the Shailendras were Buddhist, and under them Mahayana Buddhist art, inspired at least in part by Tantrism, reached a new peak. Their greatest monument, Borobudur, a massive stupa with over 2,500 carved relief sculptures, represents the culmination of this art, and Sumatran-Javanese civilization became a model for other Southeast Asian countries around this time.

About 835 or possibly 840, the presumed date of completion of Borobudur, to almost a century later, around 930, Buddhism might seem to have been dormant because of the lack of examples of Buddhist sculpture or architecture dating from that time. However, an inscription found on the Southeast Asian mainland written on the occasion of the foundation of two sanctuaries in 908 and 911 mentions two pilgrimages to Java to learn Tantric magic, thus attesting to the fact that Java was still at that time a center of Buddhist activity.

—Roger Finch

Bibliography

- Coedes, G. *The Indianized States of Southeast Asia*. Honolulu: University of Hawaii Press, 1964.
- Dumarçay, Jacques. *Borobudur*. Singapore: Oxford University Press, 1978.
- Hall, Daniel George. *A History of South-East Asia*. Houndmills and London: Macmillan Education, 1955.
- Kempers, A. J. Bernet. *Ageless Borobudur*. Was-senaar: Servire, 1976.
- Krom, N. J. *Barabudur: Archaeological Description*. 2 vols. The Hague: Martinus Nijhoff, 1927.

Kulke, Hermann, and Dietmar Rothermund. *A History of India*. 4th ed. New York: Routledge, 2004.

Marzuki, Yazir, and Toeti Heraty. *Borobudur*. N.p.: Penerbit Djambatan, 1982.

Singhal, D. P. *India and World Civilization*. 2 vols. East Lansing: Michigan State University Press, 1969.

Wickert, Jürgen D. *Borobudur*. Jakarta: PT Inter-masa, 1985.

Chinese Intellectual History

Politically, the period 300–1000 CE in China is bounded on one side by the collapse of the (Western) Jin dynasty in the traditional Chinese heartland and the establishment of a dynasty in exile (Eastern Jin) at Jiankang (near modern Nanjing) in 317. This was followed by a period of some three centuries of disunity, traditionally called Southern and Northern dynasties, until the founding of the Sui dynasty (581) and its longer-lasting successor, the Tang (618). Officially the Tang lasted until 907, though it had already been much weakened by rebellion since the middle of the eighth century. Following another period of disunity called the Five Dynasties and Ten Kingdoms, the Song was established in 960.

The intellectual climate prevalent among the cultured elite in the fourth century had its source in events more than a century earlier. With the collapse of the Eastern Han dynasty (206 BCE–220 CE) and the subsequent disorder that preceded the short-lived Western Jin dynasty (265–316), the classical and broadly Confucian commentarial tradition that had been preeminent in the Han suffered an eclipse from which it was not to recover until the Song in the eleventh century. As the cultured elite began to doubt the efficacy of the Confucian tradition, there was a renewed interest in other streams of thought that can be traced back to the Warring States period, for instance, Legalism, Nominalism, and Mohism.

More important, during the Period of Disunity, was the rise of a new interest in the ancient Daoism exemplified by such texts as the *Laozi* and *Zhuangzi* and also the Zhou divination manual known as the *Book of Changes* (*Yijing*), a trend that became associated with a movement

called the School of Mysteries (*xuanxue*). Representatives of this movement include He Yan (d. 249), who wrote *On the Nameless* (*wu-ming lun*) and *On Non-action* (*wu-wei lun*); Wang Bi (226–249), who wrote commentaries on the *Laozi* and the *Yijing*; and Xiang Xiu (d. 300) and Guo Xiang (d. 312), who wrote commentaries on the *Zhuangzi*. While it would be fair to characterize the movement's interest as metaphysical or ontological, the tradition of naming it Neo-Daoism might be misleading since the thinkers involved tend to regard themselves as true followers of Confucius, albeit a Confucius who is both a teacher of morals fit for ordering the world and also a sage who understood the inexpressible mysteries of ultimate reality.

Connected with the School of Mysteries is a type of discourse current among the cultured elite called Pure Conversations (*qingtan*). Originally connected with the study of character that formed the basis of recommendations for political office, the practice eventually took the form of salons in which refined participants competed to display their sophistication by discussing philosophical, moral, or artistic topics with witty and eloquent epigrams. The movement came to be associated with contempt for political life and social conventions and, conversely, a preference for nature and spontaneity and art for art's sake. After the fall of the Western Jin and the migration of much of the Jin elite to the south, the Pure Conversation movement continued to be popular in the Southern dynasties, where it exerted a strong influence on elite intellectual life well into the sixth century. The early exponents of Buddhism were conversant with the format and made use of it for their own polemical purposes.

Buddhism, which originally arose in India toward the end of the sixth century BCE, first began to infiltrate the Chinese world in the first and second centuries CE overland from central Asia. In time, it also came by sea via the maritime trade routes that connected the Indian Ocean, Southeast Asia, and southern China. Initially, the new religion had a limited following among the cultured classes in China. But this was to change from around 300 when, thanks in part to the translation efforts of the monk Dharmaraksha (born ca. 230 at Dunhuang), the circles associated with Pure Conversations began

to take an active intellectual interest in certain doctrines of Mahayana Buddhism. The resulting philosophical Buddhism, which brought together elements from the School of Mysteries and Mahayana Buddhism, was to thrive until the end of the Eastern Jin dynasty in the south but was largely unknown in the north.

In contrast to the more speculative traditions of the south, Buddhism in the north first established itself as a predominantly practical and even political orientation. Emblematic of this development is Fo Tugend (fl. fourth century), a magician-monk of Kuchean origins who won the trust of two tyrants of the (non-Han) Later Zhao kingdom: Shi Le (274–333) and his nephew Shi Hu (295–349). With this patronage, Fo Tugend and his disciples were able to build up an organized Buddhist church that was not only the focal point of a popular religion but also supplied monks who influenced the affairs of the court.

One of Fo Tugend's disciples, the Chinese monk Dao An (314–384), compiled the first catalogue of Buddhist writings in Chinese. The work of Dao An exerted a strong influence both in the north, where he founded a center of Buddhist studies at Chang'an, and in the south, where his most brilliant student, Hui Yuan (334–417), worked. In 402 Hui Yuan, together with his disciples and some laypeople, in front of an image of the Buddha Amitabha vowed that they would be reborn in the Western Paradise (*qingtū*, or "Pure Land"), inaugurating Buddhism as a path of universal salvation in China. While familiar with the philosophical fashions prevalent among the cultured elite of the south, Hui Yuan sought to distinguish Buddhism from native Chinese traditions.

Back in the north, the Kuchean monk Kumarajiva (350–413) presided over a great translation effort in Chang'an, building on the foundations laid earlier by Dao An. This project was to make available in Chinese a great collection of Buddhist texts. Kumarajiva was also credited with introducing the dialectic between Conventional Truth and Ultimate Truth, originally a contribution of the Madhyamaka school of Nagarjuna (ca. 150–250), to Chinese Buddhism. The translation effort of Kumarajiva's team, together with that of the Indian monk Paramartha (500–569) working in the sixth century, made possible the

bulk of what was later known as the Old Translations of the Buddhism texts, superseding the Ancient Translations that preceded them. A third wave, the New Translations, refer to those made in the Tang period.

As Buddhism—in an increasing number of different forms—gained ground through the fourth century, there was a felt need to establish true doctrine by going back to the sources in India. The most famous among the earlier part of the period was Fa Xian, who traveled in central Asia, India, and Southeast Asia from 399 to 412; brought back a large number of manuscripts, and made some translations. But it was during the Tang that the activities of the most famous pilgrim and translator of all Chinese Buddhist history, Xuan Zang (602–664), occurred. Leaving China for central Asia in 629, Xuan traveled and studied in much of India before returning to Chang'an in 645. He assembled a team that translated a large number of Indian texts over some 18 years. Second to Xuan was Yi Jing, who traveled to India by sea via Southeast Asia (from 671 to 685) and stayed for many years at the Buddhist center of Sri Vijaya in Sumatra (685 to 695) translating Sanskrit texts before returning to Luoyang.

The four main sects of Buddhism in China are Tian'tai (Heavenly Terrace), founded by Zhi Yi (538–597); Huayan (Garland), founded by Fa Zang (643–712); Qingtu (Pure Land), whose first patriarch was Shan Dao (613–681) but traces itself to Hui Yuan; and Chan (Meditation), whose founding is traditionally ascribed to Bodhidharma (ca. fifth to sixth centuries). Despite its diversity, this is a Buddhism that had been thoroughly sinicized while at the same time impressing itself upon the trajectory of subsequent Chinese intellectual history.

From the fifth century onward, Buddhism at various times enjoyed state patronage but also suffered periodic attempts to reduce the number of monks or otherwise restrict the influence of the Buddhist church. Buddhist tradition speaks of the “four persecutions” under the Northern Wei in 446, under the Northern Zhou in 574, most severely under the Tang in 842–845, and under the Later Zhou in 955. Nevertheless, Buddhism established itself firmly within the Chinese world and reached the peak of its influence under the Sui and Tang dynasties, where it

was an important aspect of China's power and influence throughout East Asia well into the tenth century. Its influence within China only began to decline in the ninth century. Apart from periodic repressions from successive governments increasingly uncomfortable with the power and size of the Buddhist priesthood, the expansion of Islam also resulted in Chinese Buddhism losing contact with its sources elsewhere in Asia by the end of the eighth century.

In addition, a reaction against Buddhism and all perceived undesirable “foreign” influences began to take shape among certain segments of the intellectual elite around 800. Among the earliest manifestation of this new development was a conscious return to the simplicity and clarity in literary style associated with the ancients that was spearheaded by Han Yu (768–824) and Liu Zongyuan (773–819). In the eyes of these champions of the ancient style (*guwen*), since form and content constitute an inseparable whole, the concern for stylistic sophistication that became prevalent after the fall of the Han (exemplified, for instance, in Pure Conversations) was symptomatic of moral decay. Conversely, proponents of the ancient style did not have a purely literary concern: Han Yu, for instance, was an active opponent of Daoist and Buddhist influence at the Tang court and was exiled to faraway Chaozhou (in modern Guangzhou) for his efforts. Through his disdain for Buddhism and Daoism and his insistence upon a return to ancient Confucianism, Han Yu inaugurated a movement that would eventually culminate in the Neo-Confucian revival of the Song period.

—Hui-chieh Loy

Bibliography

- De Bary, William Theodore, Irene Bloom, Wing-tsit Chan, Joseph Adler, and Richard John Lufrano. *Sources of Chinese Tradition*, Vol. 2. 2nd ed. New York: Columbia University Press, 1999.
- Fairbank, John K. *Chinese Thought and Institutions*. Chicago: University of Chicago Press, 1957.
- Mote, Frederick W. *Intellectual Foundations of China*. New York: Knopf, 1989.
- Schwartz, Benjamin I. *The World of Thought in Ancient China*. Cambridge, MA: Belknap Press of Harvard University Press, 1985.
- Zhang, Dainian. *Key Concepts in Chinese Philosophy*. Translated and edited by Edmund Ryden. New Haven, CT: Yale University Press, 2002.

■ Introduction: Western Eurasian Non-Christian Religions of Late Antiquity

Christianity and Zoroastrianism were the principal western Eurasian religions in late antiquity (300–622 CE), but there were also several other major and many minor religions. Judaism had a venerable and well-developed tradition, and it, like Manichaeism, another widespread faith of the time, would have a vigorous career through late antiquity and the early medieval age. Mazdakism, an offshoot and heresy of Zoroastrianism, would be the vanguard of a social protest movement in Persia that was brutally suppressed.

During this period, important developments occurred within Judaism. With the destruction of the Second Temple and the dispersal of the Jews in 70 CE, Rabbinical Judaism developed to fill the void left by the lack of central authority in Judaism. Rabbinical Judaism was primarily interested in the transmission and interpretation of the Oral Law in parallel with the Written Law contained in the books of the Bible (the Tanakh). The Oral Law was compiled in the Mishnah by 200 CE. (The function of the Mishnah in Rabbinical legal interpretation can be roughly compared to that of the hadith in Islamic Sharia.) The Talmud, in addition to the Mishnah, also includes the Gemara, or rabbinic discussion and interpretations of the Mishnah. The development of the Talmud was completed about 500 CE, and further revision was declared impermissible. The Talmud is a discussion of Halakha, which is believed to not only encompass law but also to provide a pathway for virtuous life.

Not all Jews agreed with the course of Rabbinical Judaism. The Karaites, an important group active especially in ninth- and tenth-century Baghdad, rejected the Mishnah and the whole concept of Oral Law and insisted that the Written Law derived from the Tanakh was sufficient to provide a guide to living. The conversion of the Khazars to Judaism in the sixth century is sometimes attributed to Karaite missionaries.

Almost all western Eurasian religions, including Christianity and Islam, share a common eschatology, a belief in the place of man in a cosmic history. Western religions are dualistic, see-

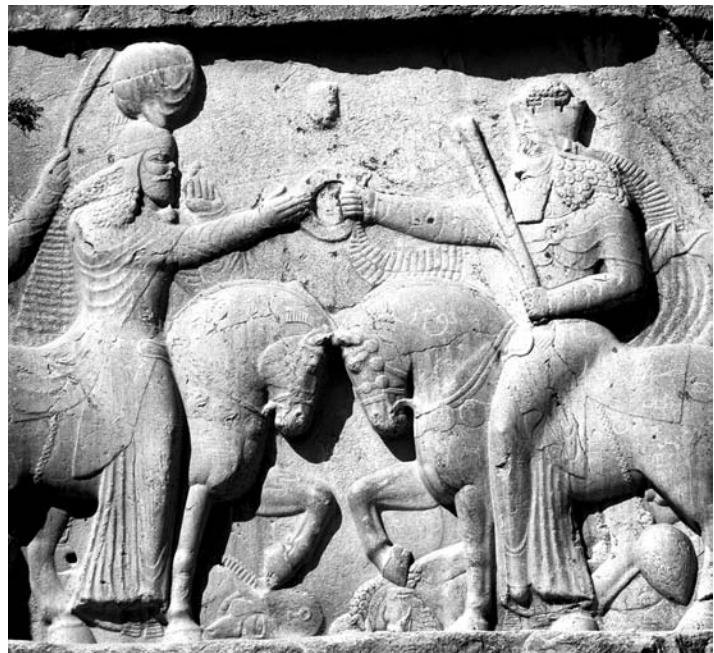
ing cosmic history as a struggle between the forces of good and the forces of evil. Most Western religions posit a linear cosmic history, with a belief in an end of times and a day of reckoning whereby the just will gain paradise and the sinners will suffer for their iniquities.

During late antiquity, most Western religious traditions were convinced that they alone possessed the truth, and they persecuted heretics in their midst.

—Wilfred J. Bisson

Zoroastrianism in the Sassanid Period

The story of religion is integrated to the political events in the Sassanid age. The reason is the role of Sassanid kings who claimed to be the owners of both politics and religion. The first Sassanid king, Ardashir I (r. 226–241), announced Zoroastrianism as the official religion in the empire. Generally speaking, Sassanid kings considered



Ardashir I receives his crown from the god Ahura Mazda in this relief. Ardashir I founded the Sassanid dynasty of Persia and aggressively promoted Zoroastrianism. (Paul Almasry/Corbis)

➤ KERDIR—THE ZOROASTRIAN MAGI

Kerdir also made some basic changes and began fighting with other religious groups such as Jews and Christians. This fanatic religious leader stimulated his contemporary kings, Bahram I (r. 273–276) and Bahram II (r. 276–293), to kill Mani and his followers simply because, according to him, they were apostates who abandoned their faith. Kerdir used the same excuse by accusing all of his critics of treason. These cruel policies dissatisfied the Zoroastrian court and, consequently, the Sassanid kings. Such internal conflicts made the Sassanid empire weaker, and this weakness brought failures for Persians in their wars against Romans in their western boundaries (in which Armenia was separated from the Sassanid empire).

—*Mohammad Gharipour*

themselves as representatives of Ahura Mazda on earth. The coinage and rock reliefs that remain from this area show that the kings received the crown from Anahita or Ahura Mazda (as symbols of gods).

In order to understand the development of Zoroastrianism in the Sassanid period, we need to analyze the social context at that time. The Sassanid society was divided into four classes. The first class was royal family, the second class was clerics Magi (Zoroastrian), the third class consisted of military officers, while the common people made up the fourth class. The Magi became more powerful within the state and became either a great source of support for kings or their biggest enemy. In other words, it was the influential Zoroastrian clergy who was ruling the country from behind the scenes. With the support of army leaders and courtiers, these clerics had power to easily enthrone and dethrone kings, especially the kings who were more tolerant of other religions such as Mazdakits and Manicheans. The fact that the kings received their crowns from religious parties clearly shows to what extent the credibility of kings depended on the confirmation and approval of Magi.

Zoroastrianism in the Sassanid period was never similar to the pure and united faith that was common in the Achaemenid period. Various

cults derived from Zoroastrianism but combined with superstition practiced by people in this period. Moreover, the increasing number of Christians after the Parthian period had made Zoroastrian clerics worry about losing their power in the empire. They were also concerned about new religions offered by Mani and Mazdak, which had come to replace the corrupted Zoroastrianism in that age.

In a rivalry with Christians and Manicheans, who had established sets of detailed rules and regulations, Zoroastrian clerics with the support of the king Ardashir decided to collect all of their references in order to come up with an integrated set of rules and material for their religion. Under the command of Ardashir I (r. 226–241), Tansar, who was the chief of Magi, began to collect the lost pieces of Avesta and organized them in a book. But this book was not comprehensive enough to answer all religious questions of people. It also let clerics interpret Zoroaster's teaching in different ways and take advantage of Zoroastrian teachings for their benefit. Because of the lack of unity in religious documents, some even disagree with interpretations and rules used by other clerics. During the reign of Ardashir's son and successor Shapur I (r. 241–272), Kerdir, who was the most powerful Magi (Mobad-e Mobadan), decided to decrease the power of local clerics from local governments in the Parthian age. In order to spread Zoroastrianism in the Sassanid empire, Kerdir ordered the erection of fire temples and fire altars. In fire temples, a sacred flame, believed to have been lighted from heaven, was kept continuously alight by the priests and was spoken of as inextinguishable.

After Kerdir, the most powerful Magi was Mehrespand, who was a wise and moderate clergy. He was also chief of an assembly who announced the unborn son of Hormoz II as the king. Mehrespand's success in finding a king for the empire at that time was a solution for the political conflicts among courtiers. His major role was organizing Zoroastrian documents, disciplines, and thoughts in this period to create unity and to increase concentration of the religious power. With other clerics' agreement, Mehrespand established an assembly that included members of important Magi in the em-

pire who were representatives of different sects. This assembly was formed in order to come up with an overall agreement on interpretations of Avesta. The members of this assembly elected seven of them to finalize these decisions on Zoroastrian religion. These seven Magi elected one who was the most virtuous, Ardaviraf, as the final juror. Ardaviraf claimed that with the help of God and Zoroaster he would choose the best decisions and answers. Because of his important role, people later considered Ardaviraf as a saint and made stories about his ascendance to skies to see the splendor of God. The result of all these discussions among clergies was editing a new version of Avesta in the Pahlavid language that was more like an encyclopedia of various topics from medicine, geometry, astronomy, and other aspects of life. It could resolve many conflicts among clergies and consequently led to a unity in the Sassanid empire that lasted for approximately three centuries. At the same time, it was used as a tool to control people's lives, beliefs, and behavior.

—*Mohammad Gharipour*

Bibliography

Christensen, A. "Sassanid Persia." In *The Cambridge Ancient History*, Vol. 12, *The Imperial Crisis and Recovery (A.D. 193–324)*, edited by S. A. Cook et al. Cambridge: Cambridge University Press, 1939.

Mazdakit Movement

The Mazdakit movement was a heretical offshoot of Zoroastrianism in the last century of the Sassanian empire. The Sassanian government and the orthodox Zoroastrian priesthood regarded it as a very pernicious heresy, rivaling Manichaeism as a target of their wrath. Mazdakism emerged in the late fifth century and, though suppressed, persisted in some localities until the eighth century. Many view it as a precursor to Iranian Shia, which persists to the present.

Mazdak, son of Bamdad, was a Zoroastrian priest (Mobed) in the sixth century in Fasa (or Nishabur) in Iran. He was probably the follower of Zardusht Khurraگان, a Zoroastrian priest in Fasa who began a reform movement in Zoroas-

trian religion. Beginning to preach his new religious concepts around 484 CE, Mazdak, like his mentor, was deeply committed to the concept of social justice and the welfare of the poor. They offered a revised interpretation of the Avesta (Zoroastrian scripture) that supported their views. Mazdak became the leader of a social revolutionary movement, which resembled the peasant's rebellions that recurrently swept through medieval agrarian societies. The Mazdakits attacked the Zoroastrian clergy—whom they regarded as parasites and oppressors—and the landed nobles, pillaging and burning their property and allegedly seizing their women.

In the ensuing conflict, the Sassanian ruler Kavaad I initially allied himself with Mazdak and the movement but was defeated. The nobles and clergy imprisoned Kavaad and enthroned his brother. The orthodox Zoroastrian forces executed Kavaad's eldest son. Eventually a younger son, Khosrow, who became known as Khosrow the Great, seized power. Khosrow immediately set out to crush the Mazdakit movement. In 524 or 528 CE Khosrow arranged for a religious debate in which Mazdak and his adherents were foredoomed and killed. After that he ordered a massacre of Mazdakits.

Although Khosrow I (531–579), remembered as Anushirvan ("immortal soul"), harshly suppressed the Mazdakits, he enacted reforms that ameliorated the condition of the peasantry and curbed their exploitation by the nobles. Following the general massacre, the surviving Mazdakits settled in remote areas. After the conquest of the Sassanian empire by Muslims, the Mazdakits restarted their activities and gradually developed a system of beliefs that was later incorporated into Iranian Shia.

According to Sassanian governmental regulations, the society was divided into four classes. The first class was the royal family (who had control over all affairs of the society), the second class was the Zoroastrian clergy (Mobeds who played an influential role in making political decisions), and the third and fourth classes were workers and peasants. Mazdak, who was going to establish equality for people within the society, questioned the numerous privileges of the noble class and the clergy. According to his

➤ MAZDAK—ZOROASTRIAN POPULIST

From time to time in the history of organized religions, some feel that the religious establishment has lost touch with and is even exploitative of the common people. In such times, reformers attempt to return the religion to what they maintain was its early purity. Martin Luther and the other leaders of the sixteenth-century Protestant Reformation were in that mold. Like the Protestant reformers, Mazdak tried to purify an established religion of superstitions and fallacies, which were thought to be in contrast to what was explained in early texts. A reformist minority of Zoroastrian clergy, who were also eager to purify Zoroastrianism, supported Mazdak. He explained Zoroaster's ideas with a different interpretation from the traditional reading. Criticizing the Zoroastrian clergy, Mazdak attempted to decrease the importance of religious formalities by claiming that all human beings should be able to comprehend the principles of the universe.

—Mohammad Gharipour

teachings, which were a call for social revolution, all people should have equal opportunities to gain money and education and to marry. In his ideal society, nobody had privileges over others, and everybody should obey the king's commands, which represents God's justice on earth. Mazdak's revolution was mainly a reaction against the increasing power of aristocrats and Zoroastrian clergy, whose exactions depressed the productive sectors of society and the taxpayers. Since the peasants, the artisans, and the ordinary people welcomed his ideas and flocked to Mazdak, his movement was called that of popular justice. Mazdak preached the equality of men and women and prohibited polygamy, which the Zoroastrian priests allowed.

Mazdak accepted the Zoroastrian concept of a dualistic universe, which holds that the two great forces in the universe are good and evil, light and darkness, and between them there is incessant conflict. But Mazdak's theology agreed with that of the Manicheans in holding that good and evil, light and darkness, are inextricably mixed in each individual. The whole world was overshadowed in dark, and a resurrection or re-

birth experience was required to help the light overcome the darkness.

According to Mazdak, the inner soul is always looking for the divine and hates evil. To reach perfection and avoid corruption, one should fight inner greed through creating a simple but comfortable life that fulfills basic needs. Mazdak emphasized good conduct, which involved a moral and ascetic life, not exploiting others unfairly, not making others suffer, not killing and not eating flesh, and being kind and helpful and living in peace with other people while enjoying life. His followers were famous because of their hospitality and mutual support.

Mazdak preached a profound equality among people. Human beings are equal at birth and should share wealth, natural conveniences, and the like. Mazdak taught that the world belongs to God and human beings. All people, regardless of their wealth, gender, and social class, should have the equal right to take advantage of God's blessings. He considered wealth and power as tools to reach prosperity but condemned excess wealth and power as causes of sedition, corruption, and misery. He believed that human beings could reach prosperity in their second life (after death) only if they have a comfortable life in this world.

Mazdak is accused by his enemies of urging people to take advantage of any means to divest the nobles and the clergy of their iniquitous wealth. It has been claimed that Mazdak's movement attempted to establish the world's first egalitarian and socialistic system in a vast empire. For a short period of time it was widely and systematically instituted in the Sassanian empire. Competition between the monarchy and Zoroastrian clergy served to spread Mazdak's movement in the Persian empire.

—Mohammad Gharipour

Bibliography

- Simachko, Maurice. *Mazdak*. Paris: Gallimard, 1973.
- Taraporewala, I. J. S. "Three Forgotten Religions: Mithraism, Manichaeism, Mazdakism." Part 3 in *The Religion of Zarathustra*. Bombay: B.I. Taraporewala, 1979.
- Yarshater, Ehsan. "Mazdakism." In *The Cambridge History of Iran*, Vol. 3, *The Seleucid, Parthian and Sasanian Period*, edited by Ehsan Yarshater. Cambridge: Cambridge University Press, 1983.

Changes in Early Medieval Judaism—The Emergence of Rabbinic Judaism

Rabbinic Judaism is the religion practiced by all but a very few observant Jews in modern times. Rabbinic Judaism developed in the first half of the first millennium CE as a result of the Roman empire's destruction of the Second Temple and the dispersal of the Jews from Palestine. When the Romans destroyed the Temple, they also abolished the Sanhedrin, the Jewish court that had been the ultimate human authority on Jewish law. The judges of the Sanhedrin were guided by the Oral Law that was said to have been given to Moses orally on Mount Sinai with the written Torah. The Oral Law was memorized by generation after generation of Jewish students, who learned it by listening to their teachers.

Rabbi Judah the Prince spearheaded the movement to save the Oral Law by having it written down in a compilation called the *Mishnah*. He did this because many of the traditional teachers who had memorized the Oral Law had died in the Great Revolt (66–70 CE) and the Bar-Kokhba Rebellion (132–134 CE). It is estimated that in those two upheavals, about one million Jews died. Previous to these two traumatic events, Jewish legal scholars opposed writing down the Oral Law because of their reverence for the Oral Law and also because they believed that the oral transmission of the sacred Oral Law created a strong bond between teacher and student. The *Mishnah* is a systematic codification of the Oral Law. It is a huge body of work that explicates Jewish law and its application in varying circumstances.

Rabbi Judah the Prince utilized the opinions and rulings of Jewish lawgivers who lived and taught from the destruction of the Second Temple (70 CE) to the beginning of the compilation of the Oral Law in 200 CE. These sages are known collectively as the Tannaim.

Jewish scholars subjected the *Mishnah* to intense scrutiny and interpretation for the next three centuries. Jewish lawgivers searched the *Mishnah* for guidance in forming opinions concerning cases and questions of the law that came before them. These deliberations were then subject to discussion among groups of teachers, or

rabbis. In about 400 CE, a committee of rabbis in Palestine produced the *Jerusalem Gemara*, based on the rabbinical discussions of interpretations on the *Mishnah*. To the *Mishnah* and the *Jerusalem Gemara*, the rabbis added more material on history, mythology, and ethical guidance. These are collectively known as the *Jerusalem Talmud*. A century later, a committee of rabbis in Babylon came out with a more extensive *Mishnah* exegesis, which formed the core of the *Babylonian Talmud*. The *Babylonian Talmud* is what is usually meant when people speak of the Talmud. Rabina (d. 499) is credited with being the chief editor of the *Babylonian Talmud*.

After the dispersal of the Jews from Palestine in the first and second centuries CE, the leadership of the world Jewish community was split: those in the Roman empire initially adhered to the spiritual leadership of a Jewish patriarch in Palestine, while those in the Persian empire were subject to the rule, both religious and secular, of a Jewish prince known as the exilarch who resided in Babylon. The office of exilarch was hereditary in a family claiming descent from King David. The exilarch was legally recognized as the ruler of the Jewish community in the Persian empire. The exilarch instituted religious courts to administer Jewish law and collected taxes from the Jews for the imperial treasury.

In the fifth century CE, Roman emperors abolished the position of Jewish patriarch, leaving the Babylonian exilarch the leading authority in the world Jewish community. It was under the aegis of the exilarch that the rabbis in Babylon compiled the *Babylonian Talmud*.

After the Muslim conquest of the Persian empire, the new rulers recognized the exilarch as the head of the Jewish community (*dhimmi*) in the Islamic world. As head of the Jewish *dhimmi*, the exilarch was responsible for the internal affairs and government of the Jewish community, including collecting the required poll tax (*jizya*). Normally, the Jewish exilarch received his appointment from the Muslim caliph. Exilarchs continued to be appointed throughout this period, but in the twelfth century the caliphal government discontinued the practice.

While the majority of the world's Jews subscribed to the rulings derived from the Talmud,

an important minority refused. These were the Karaites, a religious faction that disputed the central premise of Rabbinic Judaism. The Karaites claimed that the Oral Law, which the proponents of Rabbinic Judaism maintained God had given Moses with the written Torah, was a fiction and that it does not exist. Moses, the Karaites maintain, received only a written law, and it was every Jew's obligation to study the Torah to discover correct modes of behavior for himself. A difference between modern Karaites and the Jewish mainstream is that Karaites insist that one inherits his Jewish identity patrilineally, while the mainstream holds to a matrilineal transfer of Jewish identity. It is not certain if this difference prevailed in the early medieval age. Although there are only a few small communities of Karaites still existing, some historians estimate that in the last centuries of the first millennium CE, a large percentage of all Jews were Karaites. According to some reports, it was Karaite Jews who converted the rulers of the Khazars and convinced them to make Judaism the official religion of an early medieval great power.

The high noon of the Karaites came in the late first millennium. The political competition between Rabbinic Judaism and Karaites became intense. In the eighth century, a line of Karaite exilarchs split off from the main line of exilarchs. The Karaite exilarchs received recognition from some of the caliphs as heads of a separate Karaite *dhimmi*. The Karaites developed their own institutions, and many of their leaders obtained important posts in the caliphal government. By the end of the first millennium CE, the fissure between Rabbinic Judaism and Karaism was deep and permanent.

The Karaites suffered a precipitous decline after the twelfth century. The Seljuk Turks abolished the office of the Karaite exilarch and ceased recognizing a Karaite *dhimmi* independent of the rabbinic mainstream. Without this official support, Karaite Judaism diminished. Rabbinic Judaism became the religion of the great majority of the world's Jews.

—Wilfred J. Bisson

Bibliography

Johnson, Paul. *A History of the Jews*. New York: Harper and Row, 1987.

Strack, Herman. *Introduction to the Talmud and Midrash*. New York: Jewish Publication Society, 1945.

Yaron, Y., ed. *An Introduction to Karaite Judaism*. Troy, NY: al-Qirqisani Center, 2003.

Manichaeism

Manichaeism was a minority religion in the Sassanian and Roman empires in late antiquity (ca. 250–650 CE) that spread through central Asia and into China during the second half of the first millennium CE. Although it flourished during late antiquity and persisted for about 800 years more until about 1400 CE, it died out soon after. An offshoot of Zoroastrianism, Manichaeism also included elements of Gnosticism, Christianity, and Buddhism. Manichaeism had a well-organized hierarchical clergy, and it maintained monasteries and female convents and lay congregations.

Manichaeism spread to Rome by 280 CE and Egypt in the 240s. Manichaean monasteries existed in Rome in 312 during the time of the Christian pope Miltiades. In the fourth century, Manichaeism had many followers in North Africa, including St. Augustine, who later converted to Christianity.

In the Sassanian empire the popularity of Manichaeism was seen as a threat to the established Zoroastrianism, while in the Roman empire the rapid growth of Manichaeism was viewed as a threat to not only official Roman paganism but also Christianity. In the Roman empire Manichaeans, like Christians, endured savage persecutions under Emperor Diocletian (r. 285–305). In 296 Diocletian condemned the Manichaeans to death by fire.

After Christianity became the state religion of the Roman empire under Theodosius, Manichaeism was forbidden, and Manichaeans were murdered by Christian authorities. This order resulted in massacres in Egypt and North Africa. Similarly, in 382 Emperor Theodosius I (r. 347–395) decreed the slaughter of Manichaean monks.

Although Manichaeans were suppressed in the Mediterranean, they inspired offshoot sects in Anatolia and Armenia. One sect, the Paulicians, which emerged in the seventh century, had a varied career involving savage persecution by the Byzantine authorities and military conflict

with and eventual defeat by the Byzantine government. In 970 the Byzantine government resettled some of the Paulicians in Thrace, where they served as auxiliaries in the Byzantine army. In Thrace the Paulician settlers inspired the formation of another offshoot sect, the Slavic Bogomils, who in turn influenced the growth of the Cathars, a similar sect in the eleventh century in southern France. The Cathars were viciously suppressed by the Albigensian Crusade in the thirteenth century.

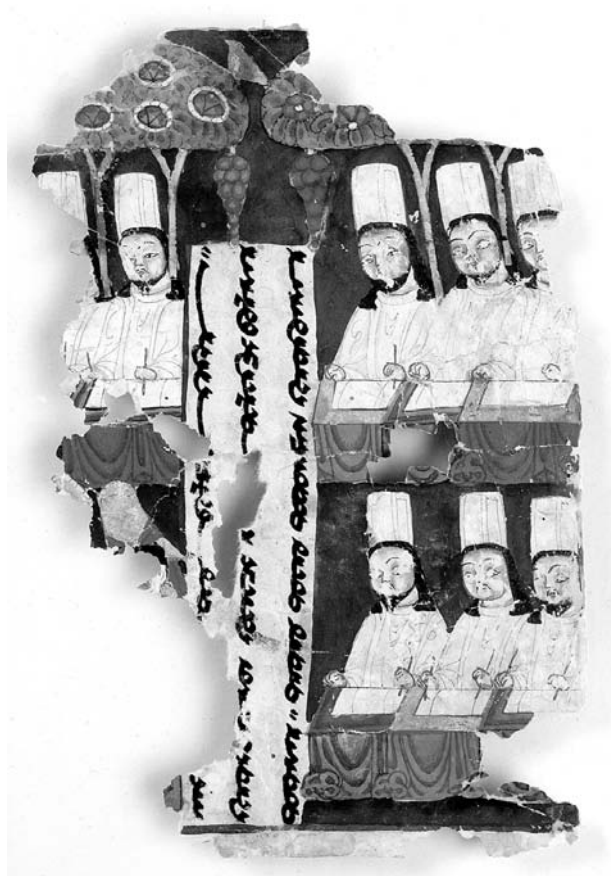
In the east, Manichaeism spread along trade routes as far as Chang'an (the capital of the Tang dynasty in China). In 240 CE Turan Shah, an Indian Buddhist king, converted to Manichaeism. This exposure to Buddhism caused some Buddhist teachings and ideas to permeate Manichaeism.

Similar to their experience in the Roman empire, Manichaeans were savagely persecuted and suppressed in the Sassanian empire and, after the Muslim conquest, by the Muslim caliphate. Manichaeans were under pressure in the Islamic period (except in the ninth century when Caliph Ma'mun tolerated a community of Manichaeans after they were accused of being apostates and were under the threat of being killed).

But Manichaean missionaries had by the fourth century established the faith in central Asia along the Silk Roads and China, where Sogdian merchants had settled. The faith flourished in the Sogdian colonies along the Silk Roads and in the Chinese cities of Chang'an and Luoyang.

During the An Lushan Rebellion (755–763) the Uighur Turks, whose army occupied Luoyang in support of the Tang dynasty forces suppressing the rebellion, became acquainted with Manichaeism. The Uighur khan Bugug (r. 759–780) became a convert and ordered his followers to do likewise. Although this caused turmoil in Uighur society, the Uighurs eventually became Manichaeans, and Manichaeism remained the state religion for about a century before the collapse of the Uighur empire.

Manichaeism was founded by Mani (215–276), born in Babylon, which was ruled by the Persian Sassanian empire. Mani's parents belonged to a Jewish ascetic group, the Elkasites. Later he claimed that he received revelation from a spirit (called Syzygos) and began preach-



Fragment of a manichaean miniature painting with representation of kneeling Hindu gods. From Khocho, Xinjiang province, China, eighth–ninth century CE. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

ing in central Asia, India, and Iran. He taught that salvation is possible through education, abstinence, celibacy, vegetarianism, and fasting.

Mani's activities occurred at a time when competition for political and social power between Christian and Zoroastrian clerics was at its peak in the Sassanian empire. Zoroastrian clerics considered Mani a rival and attempted to use their influence to end his movement. However, Persian monarchs Shapur (r. 241–271) and Hormiz I (r. 272–273) supported Mani. The Zoroastrian magi succeeded in deposing Hormuz because of his support for Mani. Mani died in 276 or 277. While some believe that he died in prison when he was awaiting execution by the Sassanid emperor Bahram I (r. 273–276), others state that he was killed or beheaded. After his death Mani's followers were widely persecuted and slaughtered during the reign of Bahram II (r. 276–293).

MANICHEAN SOCIETY

Mani divided the society into two classes: the class of elected and the ordinary people (laymen). The elect (all males) were the ones who were deemed to have separated their seed of light from their bodies. They were scheduled to live ascetically, not being allowed to marry, eat meat, drink wine, or work. All they did was preach and pray. The laity supported the elect. Although they were not prohibited from getting married, they were cautioned not to have many children because an increasing number of humans would mean that the light was spread in more bodies. The elect were chosen because of their education and family background.

—Mohammad Gharipour

Mani claimed to be a universal savior, the apostle of Jesus of whom Christian texts foretold and the final prophet on earth. He believed that the earlier revelations of the true religion were limited in effectiveness because they were local, not universal. Moreover, he stated that the adherents of these religions had lost sight of the original truth. Viewing himself as the carrier of a universal message destined to replace all other religions, Mani organized an extensive mission program. Despite the pressures from the Zoroastrian Magi and Roman Christians, Mani and his followers spread the new religion in a wide geographical area from west (Mesopotamia, Africa, Spain, France, North Italy, the Balkans) to east (northern India, western China, and Tibet). Because of its wide geographical spread, Manichaeism adopted many ideas from different religions and cultures, especially Zoroastrianism, Buddhism, and Christianity.

Mani was one of the few religious leaders who tried to record his teachings in writing, translate them to other languages, and give those writings canonical status during his lifetime (to avoid any corruption). His seven holy books included *The Living Gospel*, *The Treasure of Life*, *Pragmateia*, *The Book of Mysteries*, and *The Book of Giants*. Except *The Living Gospel*, which was written in Middle Persian, his other books were written in Syriac. His teachings to his students were also collected in other books

such as *Kefalaya*. These manuscripts were later translated to Coptic, Greek, and Chinese. Except a few manuscripts in Coptic and Chinese, not many Manichaean texts survive.

The Manichaean faith was based on dualism. Like his predecessor, Zoroaster, Mani talked about two opposite forces in the world: light and darkness. In his belief the universe is the temporary result of a permanent conflict between the realm of darkness and the realm of light. In opposition to Zoroastrianism, Manichaeism rejects the presence of an omnipotent good power. Human beings, according to Mani, are battlegrounds for two powers: the light (soul) and the dark (body). While the soul is incorruptible, humans' bodies are considered as the sources of evil. Salvation lies in the release of spirit and soul (light) from body (matter) and its return to its original state of separation.

Mani stressed the importance of individual salvation because the light that makes up the human soul cannot be physically redeemed. Its salvation depends on a conscious struggle for virtue by each individual. For Mani, the soul could have two fates before it attains release before final justice. The virtuous souls would leave the body in order to join gods to ascend to the New Paradise, but sinners would go to death (hell). He also believed in an Armageddon as the ending point of the world. He believed that after this great war the light would be drawn out of the world. It would also be followed by the coming of Jesus, who would establish his judgment seat and separate the virtuous people from the sinners. After that the New Paradise would be joined to the Paradise of Light, and its inhabitants, gods and the redeemed, would behold once more the face of what he called the Father of Greatness, hidden from them since the struggle began.

In his theories on creation Mani discussed three separate stages of the creation of gods. He believed that the creation of the world is the result of the victory of the Living Spirit over the powers of darkness. He also believed that the creation of man is the consequence of matter (personified as Greed or Desire) that prompted two great demon-animals to devour the offspring of the other animals and thus to absorb into their own two bodies all the light that they

possessed. The mate of this pair led to the production of Adam and Eve.

—*Mohammad Gharipour*

Bibliography

- Boyle, J. A., ed. *The Cambridge History of Iran: The Seleucia, Parthian and Sassanian Periods*, Vol. 3/2. New York: Cambridge University Press, 1968.
- David BeDuhn, Jason. *The Manichaean Body: In Discipline and Ritual*. Baltimore: Johns Hopkins University Press, 2000.
- Van Oort, Johannes. "Manichaeanism: Its Sources and Influences on Western Christianity." Chap. 3 in *Gnosis and Hermeticism: From Antiquity to Modern Times*. Edited by Roelof van den Broek and Wouter J. Hanegraaff. New York: SUNY Press, 1998.

Manichaeism among the Uighurs

What distinguishes the Uighurs from other early Turkic tribes is acculturation; this is characterized by the shift from a nomadic way of life, based on pastoralism, to a sedentary way of life, based on agriculture and commerce. In the case of the Uighurs, what prompted their interest in commerce was their proximity to the Chinese empire to the immediate south of them, not only the promise of lucrative trade with them but also the possibility of gaining a certain amount of control over the trade routes passing along the Silk Roads between China and the West. The most salient feature of this acculturation process is not, perhaps, permanent settlements and the eventual building of cities but rather the conversion of the populace to religious beliefs of other older sedentary populations, not in this case to those of China, such as Confucianism or Daoism, but to religions originating in Western countries.

First mention of the Uighurs places them in the very north-central area of present-day Mongolia along the Selenga River, not far south from the lower reaches of Lake Baikal, around the end of the seventh or early eighth centuries. This reference is on a stone monument erected in 735 in honor of the ruler of the eastern Turk or Gok Turk empire (680–740), Bilga Kagan, who had died the year before. According to this inscription, Bilga Kagan, when he was about 33 years of age (in 718), led a campaign against the Uighurs

at some place along the Selenga River where they were living and destroyed their residences, and the people scattered up into the mountains.

According to Chinese sources, the Uighurs were distant descendants of the Hsiung-nu (Huns), and their immediate ancestors were members of a confederation of 15 tribes known as the Tolis, of which they were the chief tribe; up until the eighth century, in China at least, the Uighurs were referred to by this name. In the early seventh century, the Uighurs established an independent kingdom, although the Tolis confederation may have been maintained by some of the tribes. In the Bilga Kagan inscription, the Tolis are referred to as living toward the east and are distinguished from the Uighurs. Around 641 the Uighurs were in control of a new coalition called the Tokuz Oguz.

Following the defeat of the Uighurs by the Gok Turk forces in the Uighur homelands, there must have been a treaty and the establishment of cooperation between them, for Eltarish Kagan, the founder of the second Turk empire, incorporated the Tokuz Oguz into his expanding realm, and subsequently the Gok Turk rulers effectively employed the Uighurs to patrol and govern the northern regions of their dominion (682–692). At the same time, the Uighurs managed to maintain friendly relations with the Chinese.

Considering the location of this first-known homeland of the Uighur on the upper reaches of the Selenga River, even closer than the Gok Turk to the Otukan mountain and forest area, the ancient sacred refuge of the Turkic peoples, we might assume that at this point in their history they still clung to the beliefs of their ancestors. In fact, because of their proximity to this refuge, the Uighurs may have been regarded to some degree as the custodians of Turkic religious traditions.

Since there is no direct evidence in the form of texts or contemporary accounts, it can only be inferred from the scattered references in the inscriptions what these religious beliefs were. It appears to have been a form of animism with two divinities predominating: Tengri, meaning "sky" or "heaven" as a deity or in general, with a specific reference such as *kun tengri* ("sun" as a deity) or *ay tengri* ("moon" as a deity), and Yer, meaning "earth," often personified as the deity of Otukan Mountain or as Umay, goddess of the

earth. And just as in heaven there are great spirits such as sun and moon, on earth there are spirits of land and water.

It is sometimes assumed that these beliefs pertain to shamanism, but this has been based on the observations made by travelers to the area of the Altai region and central southern Siberia of shamanistic practices there among such Turkic tribes as the Altay, Teleut, and Shor, and these practices have been attributed to Turks in general as vestiges of their original religious practices. The Turkic word *kam* (“shaman”) is found in general, though only with that meaning in the languages of Turkic tribes where shamanism is practiced; in Uighur, for instance, *kam* means “sorcerer.”

Taking advantage of a state of unrest in the Gok Turk empire, the Uighurs, at the head of the Tokuz Oguz confederation, enlisted as allies the Karluk and the Basmil, and together in 741 they managed to destroy what remained of the weakened realm and set up a new one of their own in Mongolia, afterward known as the Uighur empire. In the following year it was the Karluk together with the Tokuz Oguz confederation who chose the Uighur *yabgu* (administrator) Kullig Boyla as the first ruler of the empire and conferred upon him the title of Kutlug Bilga Kagan; thereafter members of his clan, the Yag-lakar, became the Uighur royal family.

There are a variety of cultural achievements of the Uighurs that are distinctive and set them apart from other nomadic or originally nomadic societies, but perhaps the most significant of these is the conversion of at least a portion of the populace to Manichaeism. This religion, founded by Mani, who according to tradition was born in 216 CE in Parthia, an ancient kingdom located in what is now northeastern Iran, was outlawed as a heresy within the entire Persian empire, where the official religion was Zoroastrianism. However, in spite of intense persecution, this new religion survived and by the time of the Sassanian dynasty in Persia had crossed the Oxus River into Sogdiana and had taken root there among a receptive population. Thereafter Sogdian territory provided a base for the further spread of Manichaeism both eastward and westward. It was not by contact with Sogdians residing in Chinese Turkestan, how-

ever, that the Uighurs were first exposed to the teachings of Mani but rather within China itself. This took place during the An Lushan Rebellion, a popular uprising against Emperor Xuan Zong who called upon the assistance of the Uighurs to help suppress the rebellion.

In 759 Bogu, the second son of the second Uighur kagan, acceded to the throne under the title of Tengri Kagan, and in 762 the kagan himself occupied the city of Luoyang in Henan Province to protect the Chinese capital Xi-an to the rear of the advancing forces of An Lushan from the area around Beijing and Hebei Province toward the northwest. It was there that the kagan met some Sogdian Manichaean *electi* (“chosen ones”), who not only converted Bogu Kagan but convinced him to proclaim Manichaeism as the state religion of his realm. With the help of Bogu Kagan’s forces, the An Lushan Rebellion was quelled, but of greater significance for the Uighur state was the adoption of Manichaeism, for though the religion itself may not have had much impact on the lives of the common people, the introduction of this new religion into the country brought with it an influx of Sogdians, who began to gain some power as advisers in administrative affairs.

Not all the Uighur people, however, were receptive to the new religion. Bogu Kagan encountered some strong opposition from conservative elements in his own court. As a result, the kagan felt it necessary to issue a law whereby groups of ten people were each to have at their head one man who was responsible for the spiritual welfare of the other nine. This was based on the precepts of Mani himself, in which the community was divided into two classes, the *electi* and the “hearers.” It is not clear whether this edict was meant to ensure complete acceptance of Manichaeism by dividing the entire Uighur population into groups of ten or whether it was a means of control, possibly at the insistence of the opponents to the religion, over those who were already converts.

It was Bogu Kagan’s dependence on the Sogdians that eventually led to his downfall, for in 779, upon the death of the Chinese emperor Dai Zong, there was an attempted mutiny against the emperor’s successor, and the Sogdians at Bogu’s court advised him to take advantage of

the situation and undertake an invasion of China. Bogu Kagan's chief minister, Tun Baga, was strongly opposed to such a move, and when Bogu persisted in proceeding with his plan, Tun Baga apparently felt that he had no recourse except to have the kagan assassinated, together with many of his Sogdian advisers and supporters, and had himself installed upon the throne. This initiated not only a period of anti-Sogdian and pro-Chinese political orientation but also a rejection of Manichaeism and a return to the ancient beliefs of the Turkic people.

The shifting prospects of this religion, however, changed with the accession of different Uighur rulers. In 789, upon the death of Tun, the chief minister El Ogasi, who acted as regent for the heir, still in his teens, reinstated Manichaeism and restored the existing Sogdian contingent in the realm to their former positions of authority. El Ogasi continued to rule after 795 as kagan when the young kagan unexpectedly died, and during his reign the Uighur empire gained strength and flourished until his own death in 808.

—Roger Finch

Bibliography

- Foltz, Richard. *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*. New York: Palgrave Macmillan, 2000.
- Lieu, Samuel N. C. *Manichaeism in Central Asia and China*. Leiden: Brill, 1998.
- Whitfield, Susan, and Ursula Sims-Williams, eds. *The Silk Road: Trade, Travel, War, and Faith*. Chicago: Serindia Publications, 2004.

Religious Syncretism in China and Christian Europe

Syncretism is a process in which ideas, beliefs, or practices are combined or exchanged between cultures, particularly in the realm of religion. Through syncretism, cultures constantly change through historical and social processes. Those processes result in the mixture of ideas in different manners dependent upon the cultures involved. In nearly every instance in which a religious feature is transferred from one culture to another, it is modified by syncretic adaptation.

This was true of Buddhism in China as well as Christianity in Ireland. Christianity, modified by syncretic processes in Ireland, was then exported to northern Europe.

In the early centuries of the Common Era, the male-dominated Buddhist faith entered China. In this instance, a male god became female, fulfilling a need in Chinese Buddhism for a feminine aspect of the divine. When the Lotus Sutra was translated into Chinese, the compassionate Bodhisattva Avalokitesvara ("The Lord who Regards the Cries of the World") became Kuanyin. Meanwhile, a competing belief system, Daoism, had many female deities, while Buddhism had little room for them. The oldest and most influential Daoist representations of female divinity were found in western China under the Queen Mother of the West. By the late eighth century, female representations of Kuanyin appeared in this same area. The male representation of compassion took on a female face to better incorporate existent needs of Chinese society. For China, competing belief systems resulted in the modification of a set of beliefs to accommodate different cultural needs.

In these same centuries, Christianity expanded throughout late Roman society, exposing an ever-widening group of cultures to the precepts of the faith. The expansion moved beyond the borders of the old empire, encountering cultures that had never been part of Roman influence. Encounters between pagans and Christians did not always result in persecution on either side. In the Ireland of the third and fourth centuries, Christianity was appropriated by an ancient society built around kinship, obligation, and honor. Not only did Christianity change the political and social makeup of the island, but by the seventh century, when Irish monks journeyed to the European continent, they brought with them a changed Christianity. The Irish extended the concepts of lordship and clientage to the relationship between believer and God in the form of the penitential, a simple book designed to allow a priest to guide sinners back into the good graces of God. Christianity was transformed in Ireland and brought to Europe the concepts of confession and penance still in use in the Catholic Church of today. For Ireland, the existing relationship

between lord and client was maintained and extended to accommodate even the introduction of a new God.

Examples like these can be found throughout history and around the world, illustrating the kinds of accommodation and assimilation that occur as cultures incorporate new ideas. Cultures are dynamic and are constantly undergoing syncretic processes that have led to the existing cultures of the modern world. Syncretism does not imply the existence of a pure culture that can be located if layers of mixture and accumulation are removed but instead implies that all cultures are composites and that they will go on changing into the future in complex and often unexpected ways. As the example of the Chinese transformation of a god into a goddess shows, noting the kind of transformations that take place when cultures interact can help

historians to distinguish key components of beliefs and their role in society.

—Charles Flowers

Bibliography

- Fowden, Garth. *The Egyptian Hermes: A Historical Approach to the Late Pagan Mind*. Princeton, NJ: Princeton University Press, 1993.
- Martin, Luther H. "Why Cecropian Minerva? Hellenistic Religious Syncretism as System." *Numen* 30(2) (December 1983): 131–145.
- McCone, Kim. *Pagan Past and Christian Present in Early Irish Literature*. Maynooth Monographs 3, Department of Old Irish, National University of Ireland. Naas, Ireland: Leinster Leader, 2000.
- Stewart, Charles. "Syncretism and Its Synonyms: Reflections on Cultural Mixture." *Diacritics* 29(3) (Autumn 1999): 40–62.
- Yü, Chün-Fang. *Kuan-Yin: The Chinese Transformation of Avalokitesvara*. New York: Columbia University Press, 2001.

■ Introduction: Christianity

In the early centuries CE, Christianity had become, in a competition with other faiths, a major religious force in the Roman empire. Though by 300 CE Christians constituted a small minority of the empire's total population, they were strategically located in the cities, especially in the eastern half of the empire. In the Roman empire as a whole, Christians probably were a majority in the cities. They had a very effective organization and communications network with a hierarchy of bishops and patriarchs, paralleling and rivaling the apparatus of the Roman state.

Originally a proscribed movement, by the second quarter of the fourth century Christianity was the favored faith of the Roman government. By the end of the century, Christianity had become the official state religion. No others were tolerated.

In the course of the fourth century, an official Christian orthodoxy emerged, and heretical variants were, after that, proscribed and suppressed.

Christianity became the identifying religion of the Roman empire and its successor regimes in the West. Before the emergence of Islam, the

Christian Roman empire opposed the equally intolerant Zoroastrian Persians. The Christian religion spread beyond the limits of the Roman empire to northern and eastern Europe; to Armenia, Georgia, and Mesopotamia; and to the Nubian kingdoms and Ethiopia. Nestorianism, a form of Christianity deemed heretical, spread along the trade routes of the Silk Roads, all the way to China.

Christianity became the vector for the transmission of Mediterranean civilization to the Germans and Slavs. After the collapse of Roman authority in the western half of the empire, Christianity developed two centers of religious governance, Rome and Constantinople. The bishop of Rome, the pope, would head the Western Church, which became known as the Roman Catholic Church, while the Eastern Church, governed by the Byzantine emperor and the patriarch of Constantinople, came to be known as the Orthodox Church. The structure of the Roman Catholic Church is often credited with preserving Greco-Roman civilization in western Europe during the Dark Age of late antiquity and the early medieval period.

From the emergence of Islam to beyond the end of the medieval age, western Eurasia would be divided between mutually hostile Christian and Islamic regimes. The advancing Muslims in the first half of the seventh century conquered many of the most populous and devout Christian provinces of the Roman empire, such as Egypt and Syria. For most of the rest of the first millennium CE, Christian regimes were on the defensive against powerful Islamic states. Christian civilization had declined everywhere.

—Wilfred J. Bisson

Constantine and the Christian Revolution of the Fourth Century

The Christian revolution of the fourth century involved the abandonment, by the Roman government, of Roman-Hellenistic paganism and the embracing of Christianity as the legitimizing religion for the empire. At the beginning of the fourth century, Christianity was considered by many Romans to be but one of several mystery religions in the empire. A minority despised by the ruling establishment, Christians suffered sporadic persecutions as Roman emperors attempted to impose religious conformity. Roman-Hellenistic paganism traditionally lent support to the imperial government by its teaching that the reigning emperor was divine. Toward the end of the third century and the beginning of the fourth century, this pagan support was less efficacious because of the medley of mystery religions pervading Roman society. With the Christian revolution, Christianity changed its status to become the religion that enjoyed imperial favor. It replaced paganism in providing sacred sanction for the imperial government.

The spread of Christianity and its eventual establishment as the official religion of the Roman empire can be traced to the developments surrounding the ascension of Emperor Constantine (who claimed the imperial seat in the West in 306, became coemperor in 313, and became sole emperor in 324) and the Council of Nicea (325). A legend, reported as fact by an early Christian historian, Eusebius, has it that Constantine's victories in the civil wars by which he gained power were divinely assisted. In particular, before the Battle of Milvian Bridge, Constan-

➤ CHURCH POLITICS IN THE TIME OF CONSTANTINE—HOSIUS OF CORDOVA, CIRCA 256–358 CE

As one of few Latin bishops who attended the Council of Nicea, Hosius of Cordova was an influential figure in the Arian controversy. Although Cordova rested in the western part of the Roman empire, Hosius corresponded regularly with Emperor Constantine. Prior to the Arian Controversy, Hosius served as an adviser to the emperor during the Donatist schism, which involved questions concerning members of the Church who had recanted their Christianity during the Great Persecution (303 CE) and who now sought readmission to the Church. When the conflict between Alexander of Alexandria and Arius erupted, Constantine enlisted the aid of Hosius to act as an intermediary and carry a letter from the emperor to the disgruntled parties. Following this failed attempt, Hosius traveled to Nicea to preside over the council, although whether he functioned as a representative of the pope or emperor is unclear.

A staunch and unbending supporter of the Nicean Creed, Hosius continued to play a role in theological controversies after the death of Constantine. Presiding over the later Council of Sardica in 343, Hosius met other bishops in a failed attempt to settle the continuing storm surrounding Arius's teachings. Hosius was present at the later Council of Rimini (357 CE), called at the behest of Emperor Constantius II. Often contributed to his advanced age, Hosius signed the Second Sirmian Formula (357 CE), which argued against the use of the word "substance" in the Nicean Creed. The events of the last years of Hosius's life are unknown.

—Dorothy de F. Abrahamse

tine saw a cross in the heavens bearing the inscription *In Hoc Signo Vincas* ("In This Sign Conquer").

The Edict of Toleration (313) allowed Christians freedom to practice their religion. It gave Christianity the status of a recognized religion. It did not outlaw paganism, and there is some doubt as to whether Constantine understood the exclusivity of monotheism. However, with this move, Constantine became the patron of

➤ JULIAN THE APOSTATE (332–363 CE)

Julian was emperor of Rome during 361–363. Referred to as Julian the Apostate because he turned from his Christian upbringing to embrace paganism, he unsuccessfully attempted to halt the spread of Christianity in the empire.

During his childhood, Julian enjoyed a classical education that instilled in him a love for Greek literature and learning. Although he later received instruction in Christian theology, he always remained interested in the classics. Once he became emperor, he acted to limit the influence of Christianity, perceiving it as subversive and dangerous to the stability of the empire. He prohibited Christians from teaching rhetoric, arguing that they could not teach secular subjects objectively. He wrote several letters and treatises that emphasized Christianity's Jewish heritage, noting that the Jews did not recognize Christ as a fulfillment of Jewish prophecies. Julian even mused about rebuilding the Jewish Temple in Jerusalem to disprove the commonly held opinion that the fall of the Temple was a sign of Christian victory. As an alternative to Christianity, Julian tried to revive an interest in paganism. He encouraged pagan priests to emulate Christian attitudes toward charity and adopt a holy lifestyle like that of Christian preachers.

Julian's efforts failed. By the mid-fourth century, Christianity was an established religion and too widespread for Julian's reforms to be effective. Julian's successors to the throne promptly rescinded his legislation against the Christians. In 380 Christianity became the official religion of the Roman empire.

—Lisa Holliday

Christians, and much governmental financial support was withdrawn from pagan temples and rituals and was transferred to Christian churches and ceremonies. His patronage of the faith and his convoking in the Council of Nicea further legitimated Christianity to Romans, particularly the upper classes, thus beginning the intertwining of Christianity with Roman government and its promulgation among the Roman elite.

Constantine's new capital, named Constantinople, was to be the first Christian city. Christian clergy, not pagan priests, conducted the dedication ceremonies. Dedicated in 330, Con-

stantinople boasted numerous churches and was viewed as a safe haven for Christians. Constantine favored the church with a variety of gifts and offered Christians incentives to move to Constantinople. Through legislation, he enforced Sunday as a day of rest and lavished generous funding on churches. Christian leaders turned to him to arbitrate disputes, and he employed an adviser for ecclesiastical affairs. It was in this dual role as patron of the church and Roman emperor that Constantine was drawn into the Arian Controversy.

The Arian Controversy was one of the most vicious and divisive storms to challenge unity in eastern Christianity in late antiquity. It concerned the question of the relationship of the Son to the Father: was the Son a creation of the Father or eternal with the Father? To Arius, a priest in Alexandria, Egypt, the answer to this question rested with the substance of the Son being different from that of Father. Therefore, Arius asserted that the Son was a created being and of a lesser dignity than the Father.

The bishop of Alexandria, Alexander, was unable to stop the spread of Arius's teachings, which soon included powerful figures such as bishops Eusebius of Nicomedia and Eusebius of Caesarea, the noted father of church history. The dissention escalated to effectively divide the Eastern Church. Constantine tried to stop the dispute between Arius and Alexander through a series of letters but to no avail. After a failed council held at Antioch under the supervision of Constantine's adviser Hosius, Constantine called the first ecumenical council to be held at Nicea in 325.

Over 200 bishops attended the council, almost entirely from Eastern churches. Though the degree to which he presided over the council is debatable, Constantine urged the bishops to come to a compromise. While the actual minutes of the council are not recorded, eventually Arius was anathematized, as were two bishops who continued to adhere to his interpretation. These two bishops were exiled by imperial decree. Later Eusebius of Nicomedia joined them in exile.

The Nicene Creed established that the Son is homoousian, or of the same substance as the Father. Containing 20 canons, or laws, the council

also discussed behavioral standards for the clergy and details of canon, or church, law. Nicea was a watershed in Christian history. Regarded as the first ecumenical, or universal, council of the church, the council established written standards of belief and behavior for the entire imperial church and marked the beginning of the Christianization of the Roman empire. Constantine's patronage of Christianity and his participation in the council set a precedent for later relations between emperor and church. Emperors intervened freely in church affairs to settle questions regarding heresy and in some cases to advocate for the primacy of one church over another.

Though the conversion of Constantine and his later relationship with the Christian Church did not result in large-scale conversions during his lifetime, it did begin the process of the conversion of the aristocracy, the powerful senators and wealthy landowners who sought to curry favor with the emperor by converting. Following the model of Constantine, they began to patronize the Church. It became acceptable for sons to embark on ecclesiastical careers rather than secular ones.

Christianity did not become the official religion of the Roman empire until the reign of Theodosius I (346–395, r. 379–395). In 380, with the Edict of Theodosius, he decreed that all citizens of the empire were to be Christian, thus outlawing paganism. He shut down pagan temples and proscribed and outlawed heresy but tolerated Jews.

—Lisa Holliday

Bibliography

- Barnes, T. D. "Constantine, Athanasius, and the Christian Church." In *Constantine: History, Historiography and Legend*, edited by S. N. Lieu and D. Montserrat., London and New York: Routledge, 1998.
- Barnes, T. D. *Constantine and Eusebius*. Cambridge, MA: Harvard University Press, 1981.
- Brown, Peter. *The Making of Late Antiquity*. Cambridge, MA: Harvard University Press, 1993.
- Drake, H. A. *Constantine and the Bishops: The Politics of Intolerance*. Baltimore: Johns Hopkins University Press, 2000.
- Jones, A. H. M. *Constantine and the Conversion of Europe*. Toronto: University of Toronto Press, 1979.

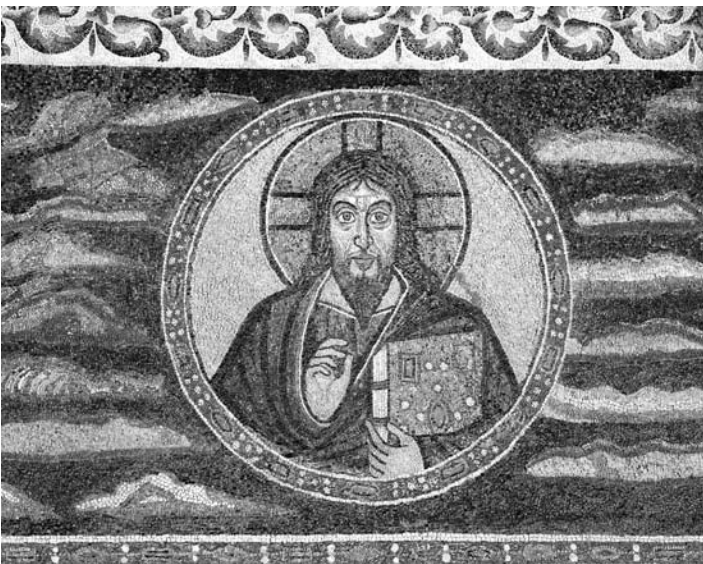
Kousoulas, D. G. *The Life and Times of Constantine the Great: The First Christian Emperor*. Danbury, CT: Rutledge Books, 1997.

Christian Orthodoxy and Heresy in Late Antiquity, circa 300–451 CE

When Roman emperor Constantine legalized Christianity in 313 CE, making a previously marginalized, fractured, and quibbling religious group into a powerful institution, the question soon arose of what exactly constituted the right form of Christianity. What was to be orthodoxy (from the Greek *orthodoxos*, meaning "straight thinking")? Although by the beginning of the fourth century proto-orthodox Christianity (the form that would become dominant after Constantine) had succeeded in Rome to become a dominant group, the Christianization of the Roman empire consisted of a process of self-definition that attempted to eradicate all other expressions of the faith. This development was the construction of a monolithic form of Christianity out of the original state of Christianity, which was initially characterized by diversity.

From Christianity's very inception, different groups within it defined correct faith in different ways. Some Christians focused on Jesus's teachings as if he were a philosopher, such as those who accepted the gospel of Thomas. Others saw salvation in Christ's death and resurrection, as did the proto-orthodox. Still others thought Christ too divine to actually suffer and die, such as the Docetists of the second and third centuries. Throughout the first three centuries of Christianity's expansion, Christians argued over who was right. While many supposed *they* were right, they accused other Christians of heresy (from the Greek *hairesis*, meaning "choice"). Of course, no Christian group ever claimed to be heretical; they were rather only accused as such by their opponents. Thus before Constantine, orthodoxy and heresy were simply a matter of perspective.

When Constantine embraced a particular form of Christianity, the *ecclesia* or Church, this family squabble took center stage. It was only a matter of time until the Church would once and for all settle this dispute in its favor. The making



Mosaic shows Christ “of one being with the Father,” from San Apollinare in Classe, Ravenna, mid-sixth century. (Scala/Art Resource, NY)

of orthodoxy took more than three centuries, from around the middle of the second century to the middle of the fifth, with the Council of Chalcedon in 451, and even then the issue of correct belief was not completely settled throughout the Christian world.

It is unclear just how many forms of Christianity there were in the first few centuries. The expert on heresies, Epiphanius of Salamis (315–403), claimed that there were more than 60 variants while he was bishop, while others maintained that there were nearly 130 in other places in the Roman empire. Writings against opposing Christianities demonstrate that the “orthodox” felt threatened by the sheer number of “heretics,” who oftentimes outnumbered them. For example, in the middle of the fourth century Arianism was a majority belief, even accepted by successors of Constantine. By the beginning of the fifth century, the Apollinarian “heresy” was the majority in the Greek-speaking eastern empire. By the 450s the Monophysite Church, influenced by Apollinarius’s Christology rejecting the dual nature of Christ, held sway in a great swath of the eastern empire extending to the Black Sea.

One way to demonstrate the construction of orthodoxy is to examine the case of Christology (the understanding of the nature of Christ). At the forefront of the Christological controversy in

the fourth century was the Alexandrian presbyter Arius, who attempted to define the relationship between God the Father and Christ the Son in terms of hierarchy. Arius’s position had precedent in Origen of Alexandria’s (ca. 185–251) theology, seeing Christ in a subordinate position to God the Father. This conformed well to popular neoplatonic teachings that stressed a cosmological hierarchy from the One (or God) down through lesser divine beings such as angels and demons. Arius’s position, therefore, was in line with popular pagan and Christian philosophical notions of the relationship between the One God and God’s emanations, or divine beings who proceeded from the One. For Arius, Christ was divine but subordinate to the Father. The orthodox position, such as that supported by Alexander of Alexandria (d. 328), objected to the notion that Christ was made at some point in time and stressed the coeternality of the Son with the Father. This was not simply an academic argument but instead had ramifications for the saving act of Christ since, the orthodox argued, this depended upon the savior being God himself.

In the 320s Arius proposed a counter to Alexander’s objection, maintaining that Christ was *homoiousios* (“of like substance”) with the Father, thus being similar but not identical to God the Father. In 325 this formulation prompted the Council of Nicea, a gathering of bishops from around the empire called by Emperor Constantine. It was here that the Nicene Creed, emphasizing the equality and distinctiveness of the three persons of the Trinity and asserting that Christ is *homoousios* (“of the same substance”) as the Father, eventually won the day. This creed was created to combat the Arian position, where the Christological formula that Christ is “eternally begotten of the Father” and “begotten, not made, of one being with the Father” and “through him all things were made for us and for our salvation” emphasized the Christological and soteriological solution. This solution made heretics out of Arius and his supporters. Nevertheless, the council did not settle the debate but instead only created opposing sides. In the mid- and later fourth century, emperors (except Julian) vacillated between pro- and anti-Nicene positions, while each side attacked their “hereti-

➤ LIFE AND DEATH OF THE GREAT HERETIC ARIUS (CA. 260–336), AS REPORTED BY HIS ENEMIES

The life of Arius is difficult to reconstruct with certainty since most of what we know of him comes from his opponents. His own works were systematically destroyed, though a few fragments survive. In general, Arius was a presbyter, theologian, and ascetic. Prior to his condemnation at the Council of Nicea, he was well respected in the Church for his devotion and flair for biblical exegesis. While in Alexandria in 320, Arius raised objection to Bishop Alexander's sermon that stressed the coeternality of both God the Father and the Son. Arius maintained that the Son had a beginning and was created. Alexander condemned Arius, who then petitioned the bishop of Nicomedia for support. Arius was then excommunicated by Alexander from Alexandria for his Christology. Arius then fled to Nicomedia to unite with supporters there. Shortly thereafter Arius's position was proclaimed orthodox by a synod held in Caesarea in Palestine. Arius's position was then publicly supported by Eusebius of Nicomedia. At the Council of Nicea, Eusebius was himself excommunicated for his support of Arius, and the synod of Caesarea was discredited. Moreover, the council of over 200 bishops officially repudiated Arius's teachings and formulated the Nicene Creed and formally declared the *homoeousian* theology. Ironically, the pro-Nicene position was not universally supported. Furthermore, Arius was supported by Emperor Constantine, who

believed that Arius's position was not well represented at the council. Arius was brought out of exile in 328, apparently feeling vindicated somewhat even though he was never rehabilitated into the Church. The fifth-century Orthodox Church historian Socrates describes Arius's death in a very ignominious manner:

"As he approached the place called Constantine's Forum . . . a terror arising from deep regret seized Arius, and a violent diarrhea began to take hold. He then asked whether there was a convenient place nearby to use the restroom, and being directed to the back of Constantine's Forum, he rushed toward it. But soon he became faint, and while he relieved himself, his bowels protruded, followed by a tremendous hemorrhage and the small intestines fell from him. Furthermore, portions of his spleen and liver were expelled in the effusion of blood, so that he died almost immediately."

Of course, this account says much more about how orthodox Christians attempted to humiliate their heretical opponents than how Arius probably actually died.

—Dennis P. Quinn

Source

Socrates Scholasticus, *HE* I.38.

cal" enemies. The Goths were converted to Arian Christianity, which spread the theological argument into Europe in the early Middle Ages.

The Council of Chalcedon in 451, among other things, attempted to eradicate final diversity in how Christ should be understood. The orthodox solution proposed that Christ had both human and divine natures that together form one unified divine person, the Godhead, who also included the Holy Spirit. The question arose, was Christ actually human? If so, how could he also be God? The orthodox position from Nicea proclaimed that Christ had two natures, both human and divine. This was a difficult theology for some otherwise orthodox thinkers to accept. For example, Bishop Apollinaris of Laodicea (d. 392) taught that Christ was too divine to be

fully human. For Apollinaris, Christ entered into the human realm cloaked by a man's flesh, and thus he did not share human frailties. Apollinaris stressed the essential unity of the Father and Christ, maintaining that there was no human subject in Christ but that he was rather entirely divine. Although this form of Christology was proclaimed heretical at the Council of Constantinople in 381, this Christology was reflected in the Eastern Monophysite churches (from the Greek *mono physeis*, meaning "one nature").

Another side of the Christological debate was held by Bishop Nestorius of Constantinople (381–451), who was also proclaimed a heretic by the orthodox supporters. He was, ironically, an ardent heresy hunter and critic of what he considered impious teaching. Cyril of Alexandria

(375–444) was his chief rival and attempted to gain control over the see of Constantinople. Nestorius's first dealings with controversy were over naming the Virgin Mary Theotokos "Mother of God." He maintained that the title "Mother of Christ" was a better title since it could prevent unacceptable confusion about the role of Mary in salvation. Mary Theotokos was extremely popular among eastern Christians in general, and this brought Nestorius into conflict with Emperess Pulchra (399–453), who modeled the Theotokos on her own personal piety and public displays as a pious virgin. This was the perfect opportunity for Cyril to attack Nestorius's own Christological concerns. Nestorius's refutation of the Theotokos title was rooted in his Christology. He warned against the dangers of confusing the human and divine natures in Christ. He was deposed at the Council of Ephesus in 431, his works were ordered burned by Emperor Theodosius II in 435, and he was exiled the same year to a remote Egyptian desert. Nestorianism is actually a distorted version of Nestorius's teachings, falsely crediting him with beliefs that he explicitly condemned. This Dyophysite Church, which arose during these Christological debates of the fifth century, argued that the second person of the Trinity was two persons: the man Jesus who suffered, died, and rose from the dead and the divine Logos who was divine and unbegotten. Christ thus had two natures (*dyo physis*), both divine and human. This Christology emphasizes the distinction between Christ's human and divine natures as opposed to the orthodox emphasis on the unity of both natures.

From the perspective of the Roman emperor, the construction of Christian orthodoxy was also important for political unity. Much like the pagan Roman empire, when religious loyalty meant the insurance of Pax Deorum (Latin for "Peace of the Gods") and therefore Pax Romana ("Peace of Rome"), doctrinal unity might also grant the Christian empire divine peace and prosperity under the direction of its new God. Thus, those forms of Christianity that fell out of favor with the emperor and the Church councils were not only heretics but also traitors. This was the case for the so-called Donatists, whose doctrine was nearly identical with the orthodox except they were critical of Church

leaders who turned over Christian texts to the authorities during the Great Persecutions under Emperor Diocletian, arguing for their excommunication. Their hard-line position was condemned by Augustine in the early fifth century, who preached acceptance of bishops who sold out and maintained that the state was justified in persecuting the Donatists and confiscating their property. The emperor's condemnation made the Donatists a group of political outlaws, not just religious schematics. Orthodox emperors, with their ecclesiastical advisers, persecuted heretics as well as the pagans. This was true with the Monophysites, who in Upper Egypt from the fourth century were the dominant form of Christianity. They opposed the decisions at the Council of Chalcedon and were thereby in direct opposition to the emperor in Constantinople, continually bristling with Byzantine plans to unify Egypt. Byzantine emperors tried to undermine their power in the region, but they were largely unsuccessful. When Egypt fell to the Arabs in 640, the Monophysites treated the Muslims as liberators from their orthodox persecutors. Their Muslim overlord protected the Monophysites from orthodox persecutors so well that even today most Egyptian Christians (Copts) are Monophysite.

—Dennis P. Quinn

Bibliography

- Bauer, Walter. *Orthodoxy and Heresy in Earliest Christianity*. Translated by R. A. Kraft and G. Krodel. Mifflintown, PA: Sigler, 1996.
- Ehrman, Bart D., and Andrew S. Jacobs. *Christianity in Late Antiquity, 300–450 C. E.: A Reader*. New York: Oxford University Press, 2004.
- Esler, Phillip F., ed. *The Early Christian World*. 2 vols. London: Routledge, 2000.
- Henderson, John B. *The Construction of Orthodoxy and Heresy: Neo-Confucian, Islamic, Jewish, and Early Christian Patterns*. Albany: State University of New York Press, 1998.
- Maier, Harry O. "Heresy, Households, and the Disciplining of Diversity." In *A People's History of Christianity*, Vol. 2, *Late Ancient Christianity*, edited by Virginia Burrus, 213–233. Minneapolis: Fortress Press, 2005.
- Williams, Rowan. *Arius: Heresy and Tradition*. Rev. ed. Grand Rapids, MI: William B. Eerdmans, 2002.

Copts in Egypt

In many ways, the experience between 300 and 1000 CE of the Copts, the indigenous Christian community of Egypt, included their highest and lowest fortunes. The fourth century marked the age of Constantine and the end of the great persecutions of late antiquity, and it was also the era of the influential Bishop Athanasius and the emergence of Christian monasticism, with Egypt at its center. By the end of the millennium, however, the Copts had suffered through antagonism from eastern Rome and had succumbed to the political hegemony of Islamic rule and (to a degree) its religious dominance. Coptic society demonstrated remarkable resilience during these centuries.

The prominent position of the Copts in the fourth century was best embodied by Athanasius of Alexandria, the “Father of Orthodoxy” throughout the theological controversies of that time. He was an influential bishop and theologian, but he also played a crucial part in the formation of another institution of Christian Mediterranean life: monasticism. In 357, Athanasius published a biography of Anthony the Great, the most celebrated Egyptian ascetic to withdraw to the wilderness for a life of meditation and prayer, shortly after his death. The text became a classic in the Mediterranean world and beyond, inspiring the spiritual discipline of no less than Augustine and Jerome and leading thousands of others to embrace this form of asceticism. It is no wonder, then, that Athanasius claimed that Satan himself appeared to Anthony, blaming him for the catastrophic growth of desert piety and driving him and his minions out of their territory! Monasticism, in fact, remained central to Coptic identity, even as it became a curious meeting ground of traditions for centuries to come; for example, the Egyptian and Syrian patriarchates maintained neighboring and friendly communities among the monasteries of Wadi al-Natrun through the Middle Ages. More astoundingly, after the arrival of Islam a number of the monasteries that bordered urban areas in Lower Egypt served as fine hunting lodges (with the best wine, scenic views, and iconographic artwork) and retreats for a surprising number of Muslim rulers.

Political tensions between Constantinople and the prominent patriarchates of Alexandria

(Coptic) and Antioch (non-Coptic), chief among them, eventually found their way into the most potent area of controversy of the day: theology. The Council of Chalcedon (451) declared these communions anathema, a decree fundamentally that was based on a doctrinal dispute over the divine/human nature of Christ but also led to the convenient end result of excommunicating Constantinople’s main rivals for ecclesiastical prominence. For an empire that increasingly identified itself as much with its adopted Christian faith as with its Roman legacy, this doctrinal dispute also created a bitter political division between Constantinople and the Copts in its Egyptian province that lasted for another two centuries. Constantinople favored a loyal group of followers (Melkites) who largely consisted of the Greek-speaking elite classes of Alexandria, going as far as to appoint its own rival patriarch to that city. The Coptic dissidents, with their support base largely found in rural Egypt (that is, most of the population of the day), rallied around their local identity by adhering to their traditional patriarchate, their unique Coptic language (a combination of colloquial Egyptian, Demotic, and Greek), and increasingly, to the doctrinal position of their split from Chalcedon.

The dispute with Constantinople did not determine the entirety of the Coptic experience during these years, of course. Daily life remained normal around the Mediterranean, in large part: Syrian hermits remained likely to hold their Egyptian desert fathers as life models, and traders from Constantinople and Antioch continued to regularly bring their goods into the harbor of Alexandria, making sure to leave plenty of time to share bread and wine with their Egyptian counterparts. Even the Coptic patriarchate retained a certain measure of regional influence, particularly in the south where it had extended its ecclesiastical authority over the Christian kingdoms of Nubia and Ethiopia since the mid-fourth century. Until 1000 CE and long after, for example, the Coptic patriarch continued to appoint the *abuna*, the head of the Ethiopian church, from among the ranks of the Egyptian clergy. The tensions beneath this uneasy status quo between Alexandria and Constantinople were not to remain in check indefinitely, however.

➤ DID FAITH MOVE MOUNTAINS?

The Fatimid caliph al-Mu'izz enjoyed a curious relationship with his Coptic subjects. The *History of the Patriarchs of the Egyptian Church*, the Coptic Orthodox Church's official early and medieval history, tells the story that he once invited the patriarch Abraham (r. 975–978) to represent Christianity in a religious debate with the *wazir* (prime minister), a Jewish statesman by the name of Yaqub Ibn Killis. After Abraham managed to dominate the debate, the Ibn Killis responded by pointing out to the caliph that the Christian Gospels promise that even the simplest faith is able to move mountains. Al-Mu'izz, intrigued, ordered Abraham to prove this or lose the entire Coptic community if he failed. Although the patriarch was terrified, the author of *Patriarchs* maintains that a miraculous vision led him to a one-eyed tanner and miracle worker named Simon, who saved the day by standing before the ruler and leading a congregation of Copts in prayer, with the result that the Muqattam Mountains, the hills that loom over the city of Cairo, repeatedly raised high enough that all could see the sun and horizon beneath them. Coptic popular tradition in fact maintains that the caliph himself immediately converted to Christianity, although this particular plot twist remains unsubstantiated by outside historical evidence as of yet.

—Kurt J. Werthmuller

Source

Sawirus ibn al-Mukaffa', Bishop of al-Asmunin.
History of the Patriarchs of the Egyptian Church, Known as the History of the Holy Church, Vol. 2, pt. 2, Khaël III-Senouti II (A.D. 880–1066).
 Translated and annotated by Aziz Suryal Atiya, Yassa 'Abd al-Masih, and O. H. E. Burmester.
 Cairo: Société d'archéologie copte, 1948.

The experience of the Copts changed dramatically in the aftermath of their brief occupation by Persian armies from 619 to 628. Following his reconquest of Egypt and the eastern Mediterranean by 628, the Roman emperor Heraclius (r. 610–641) asserted his authority by solidifying the Christian identity of his empire: this included enforcing Constantinople's orthodoxy and cracking down on those dissident communi-

ties, such as the Copts, that rejected it. For the next decade, this meant that the Church of Alexandria and its Egyptian population—by then a distinct sect from its Melkite rival—faced intense military and economic pressure from the emperor.

It is perhaps of little wonder, then, that the Copts breathed a collective sigh of relief when 'Amr Ibn al-'As led his Muslim army into Egypt in 640–641, successfully claiming the land for this new religio-political community and at first asking only a minor tax for non-Muslims in return. The Copts did not assist the Islamic army en masse in its conquest of Egypt; instead, their role was largely one of passive compliance, as they had little notion that the conquest represented the reign of a new, distinct, and permanent order. In fact, they quickly settled into a *détente* with the Muslim presence and its administrative center Fustat, near the former Roman garrison and local trading center of Babylon. Large-scale conversion to Islam was a process of centuries, not decades, and for these early centuries there is evidence that the growing number of Copts who converted to Islam did so for economic and political benefits. The succeeding Umayyad and Abbasid regimes were, in fact, surprisingly reticent to encourage mass conversion at the risk of losing their substantial tax base of the *jizya* (a poll tax on non-Muslims).

The deeper ramifications of the conquests only became clear as conversion neared a majority of the population (likely by the ninth or tenth century) and as Muslim rulers continued to flesh out their own policies. In 705, for example, the caliph Abd al-Malik made Arabic the language of all official business throughout his lands. This was a blow to the Copts for whom the Coptic language had served to reinforce their distinct communal and ecclesiastical identity under both the Greeks and Muslims. This shift did allow Copts for generations to dominate the scribal classes (given their long-held multilingualism), but it also highlighted the sea change in Egypt's social, political, and religious milieu. There were, in fact, communities that resisted Muslim rule: outright rebellions erupted on several occasions among Coptic villages in the Nile Delta during the eighth and ninth centuries, and the last one in 832 apparently marked that commu-

nity's final resignation to their permanent status as Muslim subjects.

The last decades of the following century, however, brought some of the most prosperous and colorful experiences of the Coptic tradition as Egypt became the center of the independent Fatimid dynasty in 969. The first two Fatimid rulers in Egypt, al-Mu'izz (r. 953–975) and his son al-'Aziz (r. 975–996), immediately recognized the practicality of courting their Coptic subjects: as a dynasty of Shia and therefore distrusted by the dominant Sunni community, they actively sought the favor of local minorities. The Copts represented the primary such group, one that also happened to have generations of useful experience in government administration. Copts thus played key roles in the upper echelons of the Fatimid state and enjoyed remarkable liberties during these three decades; the historical record reflects mostly cordial interaction in those years among the country's Christian and Muslim populations, especially at times of festival and celebration.

—Kurt J. Werthmuller

Bibliography

- Al-Maqrizi, Taqi al-Din Ahmad. *Al-Mawa'iz Wa-l-Itibar Fi Dbikr Al-Khitat Wa-l-Athar*, Vol. 4, pt. 2. Edited by Dr. Ayman Fuad Sayyid. London: Al-Furqan Islamic Heritage Foundation, 2004.
- Athanasius, Bishop of Alexandria. *Vitae Patrum: The Life of Abba Antony*. Translated by Benjamin Baker. Lincoln, NE: iUniverse, 2003.
- Berkey, Jonathan. *The Formation of Islam: Religion and Society in the Near East, 600–1800*. Cambridge and New York: Cambridge University Press, 2003.
- Bagnall, Roger S. *Egypt in Late Antiquity*. Princeton, NJ: Princeton University Press, 1993.
- Sanders, Paula. *Ritual, Politics, and the City in Fatimid Cairo*. Albany: State University of New York Press, 1994.

The Catholic-Orthodox Divergence to 1000 CE

During the era circa 300–1000 CE, the Christian church was characterized by a growing sense of distinction between the Latin members of the Western Roman church and the Greek members of the Eastern Byzantine Church. This diver-

gence involved a series of disputes over ecclesiastical hierarchy, doctrine, and rites. These religious differences between Latins and Greeks (or, in modern terms, Catholics and Orthodox) reflected and were reinforced by a broader sense of political, cultural, and economic competition between the developing civilizations of medieval Europe and Byzantium.

As early as the time of Latin theologian Augustine of Hippo (d. 430 CE), Christians recognized that there was a Greek-speaking Eastern Church (*ecclesia orientalis*) and a Latin-speaking Western Church (*ecclesia occidentalis*). This division mirrored the third-century administrative division of the Roman empire into eastern and western halves. These differences in language and religious observances did not form a source of general controversy. Starting during the fourth century, however, sources of tension developed between the ecclesiastical leadership of the Roman Church and the new imperial capital of Constantinople. During the ecumenical councils of Nicaea (325) and Constantinople (381), the Church of Constantinople was recognized as being second in status only to Rome in the pentarchy (the five major sees of the ancient world, also including Antioch, Alexandria, and Jerusalem). The bishops of Rome rejected this change, which they saw as an illicit innovation in the ecclesiastical hierarchy that threatened Rome's theoretical claim to jurisdiction over the faithful.

Relations between the followers of Rome and Constantinople were further complicated by sporadic disputes over religious teachings, including debates about the nature of Christ (Arianism), the question of whether or not to ban religious icons (Iconoclasm), and a disagreement over the origins of the Holy Spirit (the Filioque Controversy). Although these sources of contention did not cause any deep or lasting divide between Latin and Greek Christians, they led members of both Churches to express their disappointment in one another. From the perspective of Rome, Constantinople was a source of heresy and prone to disobedience. From the perspective of Constantinople, Rome was attempting to impose its will upon the entire Church without regard for other sources of authority.

During the eighth and ninth centuries, political developments led to a reconfiguration in the

► ROME, CONSTANTINOPLE, AND THE MISSIONS TO BULGARIA IN THE NINTH CENTURY

Conflict between Latin and Greek Christians was evident in the late ninth century when competing missions in Bulgaria directed by Rome and Constantinople caused a confrontation over ecclesiastical jurisdiction and religious practices. In a letter to the Bulgarian king, Pope Nicholas I (d. 868) informed him that several of the religious observances mandated by the Greek clergy were unnecessary and ill-advised. The Greek emperor and the current Greek patriarch, Photius (d. 891), responded with their own accusations against Rome and its Latin followers. At the same time, Nicholas and Photius were already involved in a dispute over Photius's recent election as patriarch, which Nicholas had judged illegal. In response to this developing crisis, Nicholas appealed to his supporters among the nearby Franks for a defense of the church, "especially the part known to use the Latin language."

Around 868 a Frankish monk named Ratramnus of Corbie composed a tract titled *Against the Objections of the Greeks* in which he defended the teachings, observances, and authority of Rome. Ratramnus did not insist, however, that the Greeks

conform to the religious practices of the Latin churches. The leaders of the Greek Church and empire, according to Ratramnus, had themselves failed to recognize that the universal body of the faithful contained within it a great diversity of languages, habits, and rites. Quoting Augustine of Hippo, the Frankish monk declared that the church was like the "queen in her many-colored robes" (Ps. 45:14), adorned with variety and variation before Christ her king. This immediate dispute was settled by two councils held at Constantinople in 869–870 and in 879–880. Over the long term, the Bulgarian Church developed within the Greek Christian tradition.

—Brett Edward Whalen

Sources

Nicolas I. *Nicolai I: Papae epistolae ad res orientalis pertinentes*, Vol. 6, *MGH Epp*, ed. E. Perels. (Berlin, 1912), 604. Translation by author.

Ratramnus of Corbie. *Contra Graecorum opposita Romanam ecclesiam infantium*, Vol. 121, ed. J. P. Migne, PL: 223–346. Translation by author.

relationship between Rome and Constantinople. The gradual disintegration of the western Roman empire and the growing Islamic dominance of the Mediterranean resulted in an increasingly tenuous sense of connection between the bishops of Rome and the imperial government of Constantinople. Searching for patrons, the Roman papacy forged a closer connection with the nascent polity of the Franks to their north, a mutual collusion that culminated in the reconstitution of the Western imperial authority under the Carolingian ruler Charles the Great (d. 814). This alliance between the Church in Rome and the Franks resulted in the persistent idea that there were two Christian empires, one in the East and one in the West. Over the long term, this political division intensified a mutual awareness among Latin and Greek churchmen of their religious differences.

Despite these historical episodes of contention, contemporaries on both sides continued to recognize the bonds of Christian fraternity that formed, in theory, the universal Church. Subse-

quent generations of Latin and Greek Christians received a dual inheritance from their predecessors, including examples of crisis and prejudice between the supporters of Rome and Constantinople but also an insistence that the two Christian peoples could and should resolve their periodic confrontations.

—Brett Edward Whalen

Bibliography

Brown, P. L. "Eastern and Western Christendom in Late Antiquity: A Parting of the Ways." In *The Orthodox Churches and the West*, edited by D. Baker. Oxford, UK: Blackwell, 1976.

Chadwick, Henry. *East and West: The Making of a Rift in the Church from Apostolic Times until the Council of Florence*. Oxford: Oxford University Press, 2003.

Kolbaba, Tia. "Byzantine Perceptions of Latin Religious 'Errors': Themes and Changes from 850 to 1300." In *The Crusades from the Perspective of Byzantium and the Muslim World*, edited by A. E. Laiou and R. P. Mottahedeh. Washington, DC: Dumbarton Oaks, 2001.

The Transition from Paganism to Christianity

Christianity did not succeed paganism easily or all at once. Decisive events and social forces shaped history over centuries of time. One famous event occurred on October 28, 312, CE, when the Roman emperor Constantine I fought the Battle of the Milvian Bridge. According to legend, he received a vision of the cross and a divine promise that he would triumph over his rival, Maxentius. Constantine, later dubbed “the Great,” did indeed find victory. The subsequent Edict of Milan in 313 officially ended all religious persecution and made the empire religiously neutral, but the emperor’s patronage of Christianity accelerated the shift from paganism to Christianity.

Before 313 Christianity grew only modestly. The pagan social order in the Mediterranean was already at least 2,000 years old and held great wealth and power. Wars, plagues, famines, population disruptions, and the resulting social upheaval of 300–475 CE destabilized this order, and Christianity offered a semblance of meaning and support in an increasingly chaotic Roman empire. Christianity thus grew more rapidly. Otherwise, Christianity likely would have remained a minor faith in a vast pluralistic religious ocean because pagan polytheism was central to the ruling hierarchy and tradition; religion and the established order reinforced each other.

To overcome hierarchy and tradition, Christianity required a powerful patron such as Constantine, and thus conversion offered opportunities in land and appointments. Christianity also introduced notions of spiritual equality, an afterlife in heaven, charity, self-sacrifice, and moral control for the common good, all of which likely appealed to oppressed groups, including slaves, women, and the poor.

Unfortunately, we do not really know what the common and oppressed people believed; there were no opinion polls, and they left no writings. Among intellectuals, debate raged. Against Christianity, Lucian of Samosata complained that the Christians accepted into their groups any person who desired to join them. Thus, any unscrupulous person could take advantage of them and acquire quick wealth by stealing from them and using them.

Lucian and other pagans saw Christians as fools who ignored reality and thus cared little for practical daily matters and willfully disregarded their own lives. More strongly, Galen (Claudius Galenus of Pergamum, 131–201 CE) complained that the Christians rejected the truth of the observable world, and their devotion to a capricious God made them unfit to live in civilized society. Porphyry of Tyros (232–304 CE) argues that Christians rejected logic in favor of blind faith, which in turn stands on belief that consists of spectacular but mythical stories. For Porphyry, Christianity lacked the two foundations that all truth requires: logic and history. Thus, its faith had no valid foundation; Christianity stood on nothing.

Other intellectuals supported Christianity. Tertullian (Quintus Septimius Florens Tertullianus, 155–230 CE) in his defense of the faith also defined many aspects of Christianity, including the concept of the Trinity. Many also countered Porphyry, including Eusebius of Caesarea, Apollinarius of Laodicea, Methodius of Olympus, and Macarius of Magnesia, but these texts are lost. The ruling class also increasingly embraced Christianity after Constantine, such that its character changed from grassroots collectivism to an institutional hierarchy resembling the hierarchy of the empire.

Yet a pagan champion arose in the form of Julian (Flavius Claudius Julianus, 331–363 CE). As emperor, Julian attempted to reverse Christian ascension to power and ever-increasing widespread popularity through a series of legal renderings and active political and economic promotion of paganism. However, Christianity had spread too fast and too far; a Christian majority arose in the eastern half of the empire sometime in the latter half of the 300s. Julian died in a field tent, mortally wounded at the Battle of Ctesiphon, the Persian capital. His friend and historian Ammianus Marcellinus recorded his final words as “Vicisti, Galilae,” or “You have conquered, Galilean,” in reference to Jesus. Never again would paganism have a champion against Christianity.

However, paganism did not simply die at that moment. Despite laws against sacrifices, seizures of idols by the state, and many other violent efforts to suppress and terrorize paganism, it survived unapologetically. Many communities

► CHRISTIAN COMPETITORS—THE EXAMPLE OF MITHRAISM

Many religions besides Christianity that increased in popularity during the tumultuous years 300–476 CE in the Roman empire promised salvation through a savior sent by God to redeem humanity. Among these was Mithraism, based on the figure of Mithra the bull slayer. The epithet suggests that Mithraism began as a local tribal belief, likely based on the life of an outstanding individual.

The earliest references to the Mithra cult date from 1380 BCE in a treaty between Subbiluliuma, king of the Hittites, and Mativaza, king of the Mitanni. With origins thus in Persia, Mithraism spread across Asia Minor and arrived in Rome sometime in the mid-first century CE.

As human civilization advanced and perception of the cosmos grew in size and complexity, the gods likewise changed from local tribal divinities to grander and more powerful deities. As Mithraism spread westward, Mithra evolved from a bull-slayer hero into a divine redeemer whose life now showed the path to salvation. Sacred sites remained in caves called grottos, the setting of Mithra's original bull sacrifice. Toward the end of the western Roman empire in 476 CE Mithraism closely resembled Christianity, with devotional rituals of redemption and seeking converts to serve the one God and fulfill his divine purpose.



Mithra sacrificing a bull as part of a Roman baptism ceremony, second century CE. (Jupiterimages)

—George Nels Lundskow

beyond the major cities in the late empire, Rome, Antioch, and Constantinople, refused to convert to Christianity. When the Byzantine emperor Justinian (527–565 CE) reconquered the southern half of the Italian peninsula, he discovered that the people had retained many pagan practices, including polytheism, and still celebrated many pagan holidays. Numerous pagan towns and communities survived well into the 800s CE, especially in Spain, rural Italy, and nearly all of North Africa. Boniface reports in 742 that the populace continued to observe numerous pagan feasts and festivals in St. Peter's Square in Rome, with singing, dancing, and ritualistic observances all on the traditional dates and following pagan customs.

Furthermore, recent evidence now shows that paganism actually survived, if diminished, throughout the Middle Ages in nearly all parts of

Europe, and Christianity blended with many traditional pagan and folk beliefs and practices, including animal husbandry and farming, herbology and medieval medicine, and trade guilds. People celebrated the solstices, equinoxes, and other festivals, perhaps into modern times. Pagan culture shaped Christianity from its beginnings as an ascetic cult and into the ostentatious pageantry and embrace of life by the time of the Renaissance, a rebirth of the ancient pagan arts and sciences, architecture, sculpture, and philosophy.

Even today influences remain, such as the Christmas tree and the yuletide, which refer to the pagan celebration of the Winter Solstice (December 22). The Easter Bunny and Easter eggs are pagan fertility symbols, and the word “Easter” derives from Ostara, the pagan celebration to the end of winter when the gods return from the underworld. Halloween is the pagan celebra-

tion of Samhain from which the Day of the Dead in Mexico is derived.

—George Nels Lundskow

Bibliography

- Barstow, Anne Llewellyn. *Witchcraze: A New History of the European Witch Hunts*. San Francisco: Pandora/HarperCollins, 1994.
- Chadwick, Henry. *The Early Church*. Rev. ed. London: Penguin Classics, 1993.
- Hoffman, Joseph R. *Porphyry's Against the Christians: The Literary Remains*. Amherst, NY: Prometheus, 1994.
- Hutton, Ronald. *The Pagan Religions of the Ancient British Isles*. New York: Ballantine, 1991.
- Hutton, Ronald. *The Triumph of the Moon: A History of Modern Pagan Witchcraft*. New York: Oxford, 1999.
- Lucian of Samosata. "The Passing of Peregrinus." In *Loeb Classical Library: Lucian*, Vol. V, edited by Jeffrey Henderson. Cambridge, MA: Harvard University Press, [c. 170 AD] 2001.
- MacMullen, Ramsay. *Christianity and Paganism in the Fourth to Eighth Centuries*. New Haven, CT, and London: Yale University Press, 1997.
- Murdoch, Adrian. *The Last Pagan: Julian the Apostate and the Death of the Ancient World*. Thrupp Stroud, Gloucestershire: Sutton, 2004.
- Norwich, John Julius. *Byzantium*, Vol. 1, *The Early Centuries*. New York: Knopf, 2003.
- Stark, Rodney. *The Rise of Christianity*. San Francisco: HarperCollins, 1997.
- Turcan, Robert. *The Cults of the Roman Empire*. Malden, MA: Blackwell, 2000.
- Wilken, Robert Louis. *The Christians as the Romans Saw Them*. New Haven, CT: Yale University Press, 2003.

Early Medieval Orthodox Christianity

Three factors early in Orthodox Christianity provide its distinguishing marks. These are the doctrinal controversies of the fourth and fifth centuries, the relationship of the emperor to the Church, and an ecclesiology (theological doctrine) that emphasized collegiality among the bishops. The first factor generated an elaborate Christian theology of the Trinity. The second created a political theology whose effects would be felt for centuries, and the third resulted in the system of patriarchates in Orthodox Christianity.

In 312 CE Constantine attributed victory over his last enemy, Maxentius, to the Christian God. The Edict of Milan (313) from Licinius, coruler in the East, and Constantine legalized Christianity, and Constantine's support of the new faith led to his being regarded as the first Christian emperor. Critical to understanding Orthodox Christianity is Constantine's concern for a unified Church.

The great doctrinal controversy of Constantine's reign was Arianism, named for Arius, a presbyter of Alexandria. Central to Alexandrian theology was the Logos, the Word of God that became flesh (Incarnation) and rational principle governing the universe. Arius argued that the Logos was subordinate and less fully divine than the Father, a common but not universal position then. The resulting controversy bitterly divided the Church. Meanwhile, Constantine defeated Licinius in 324 and saw a unified Christian Church as central to securing sole rule over the empire. In 325 he brought the sparring bishops to Nicaea, close to his newly built capital, Constantinople. The Nicene Creed declared both Father and Son fully and equally divine, or *homoousios* ("of the same substance"). The emperor had taken a direct hand in Church affairs. His involvement continued when the harmony suggested by the successful council never materialized, and Constantine exiled uncooperative bishops. Through the fourth and fifth centuries, doctrinal disagreement coupled with political action became commonplace, the latter based on a theory of kingship that placed emperor and Logos in parallel functions. The Logos piloted the universe, and the emperor guided the affairs of the world. The theory depicted a devout Christian ruler who fulfilled his duty at Nicaea and throughout his reign.

Post-Nicene theology wrestled with the problem of attributing a full humanity to Jesus Christ rather than one compromised by divine attributes. The Cappadocian fathers Basil the Great, Gregory of Nazianzus, and Gregory of Nyssa were foremost among the fourth-century theologians who addressed these questions. They insisted on a Redeemer both divine and human against such theologians as Apollinarius of Laodicea, who made little room for the savior's humanity. The Council of Chalcedon in 451 dogmatically

THEOTOKOS—GOD’S MOTHER

Little in Orthodoxy is more easily recognized than the iconic representation of the Virgin Mary, Christ child in arms. She is Mother of God, or God-bearer, Theotokos. Early orthodoxy was divided over the title, however. Theologians from Antioch objected that Theotokos, used for years by Alexandrians, compromised the full humanity of the redeemer. Nestorius, patriarch of Constantinople, opposed Cyril, bishop of Alexandria. The Council of Ephesus in 431 allowed the use of the honorific to the Virgin primarily to guard against a diminished understanding of the full divinity of Christ.

—Gerald S. Vigna

defined Jesus Christ as possessing two complete unmingled natures, divine and human.

The fifth century also saw increased mysticism in Orthodoxy. Influenced by platonic dualism, theologians postulated the inadequacy of human comprehension in understanding the divine and thus described God in negative, or apophatic, terms (e.g., unknowable, or immortal). Yet these mystics also sought spiritual union with God through prayer and contemplation. Fifth-century writings erroneously attributed to Dionysius the Areopagite (Pseudo-Dionysius) influenced East and West in their description of a God intellectually unknowable but experientially accessible. Seventh-century Maximus the Confessor wrote an influential commentary on these that ensured their place in Orthodox thought.

Orthodox theology emphasizes the importance of the Incarnation and thus the value of the material world as a medium through which God is revealed. Consequently, the veneration of images (icons) holds an important place in Orthodoxy. In the eighth century, however, theological discomfort with the material world and distrust of graven images raised the issue of icons’ legitimacy. The Iconoclastic Controversy also showed the intimate connection between Church and throne. Emperor Leo III, attempting to control the Church and centralize the state, forbade the worship of images in 725. His decree caused a religious revolt and had no backing from the papacy. The Second Council of Nicaea, the last of the Seven Ecumenical Coun-

cils, met in 787 and fervently defended the use of images.

Earlier speculation on the Trinity had left one question unanswered: the manner of the Holy Spirit’s generation within the Godhead. The Western churches had begun in the sixth century to assert that the Holy Spirit proceeded from the Father “and the Son” (*filioque*); they did this perhaps to preserve the full divinity of the Son against late Arian ideas. In the Filioque Controversy, the East complained that the Western idea raised questions about the unity of the Godhead. The question of the primacy of the bishop of Rome over the Eastern churches, at issue as early as the second century, again surfaced. Pope Nicholas I’s intervention in 863 into the conflict between Ignatius and Photius, competing patriarchs of Constantinople enjoying alternating periods of royal support, was ignored in the East. Ignatius had been exiled by the emperor Michael III, and the pope declared Ignatius the rightful patriarch. With Nicholas’s claim to universal ecclesiastical jurisdiction unheeded, Photius launched an attack against the filioque and branded Nicholas a heretic in 867. The controversy flared again early in the eleventh century when the papacy inserted filioque into the creed. The East’s insistence that the creed could be changed only by a Church council highlighted the critical ecclesiological difference between East and West.

The Filioque Controversy came to a head because of the ninth-century missionary journeys of Eastern and Western Christians to the Slavs. The East’s apostles to the Slavs were two brothers, Cyril and Methodius. To reach these pagan tribes, they created an alphabet, the Cyrillic alphabet, that enabled them to bring the Scriptures to their churches. From the West, German missionaries brought both Gospel and filioque. They clashed in Moravia, and the brothers appealed to Pope Hadrian successfully but ultimately to no avail, as German missionaries expelled their followers from Moravia after the brothers’ deaths. Nonetheless, the acculturating methods of Cyril and Methodius were successful in Bulgaria, Serbia, and other Slavic regions through the conversion of Russia in the tenth century. East and West differed doctrinally over the filioque and ecclesologically over the primacy of the bishop of Rome. By 1054, with mutual excommunications, the rift had become nearly irreparable. With the

thirteenth-century sack of Constantinople by the crusaders, it was irreparable.

—Gerald S. Vigna

Bibliography

- Grillmeier, Aloys. *Christ in Christian Tradition*, Vol. 1, *From the Apostolic Age to Chalcedon (451)*. 2nd rev. ed. Translated by John Bowden. Atlanta: John Knox, 1975.
- Pelikan, Jaroslav. *The Christian Tradition: A History of the Development of Doctrine*, Vol. 2, *The Spirit of Eastern Christendom (600–1700)*. Chicago: University of Chicago Press, 1974.
- Senecal, Christine. *Byzantine Empresses: Women and Power in Byzantium, AD 527–1204*. London: Routledge, 1999.
- Treadgold, Warren T. *A History of the Byzantine State and Society*. Stanford, CA: Stanford University Press, 1997.
- Ware, Timothy. *The Orthodox Church*. Baltimore: Penguin, 1964.

The Orthodox Church—Clergy, Feasts, and Practices

Orthodox Christian worship is a study in the contrast between the timeless and the historical. The rites that have become Orthodox worship and liturgy would have been impossible without the legalization of the religion in the later Roman empire and the ensuing church-state relationship that both built churches and saw imperial intervention into doctrinal controversies for centuries after. Elements of mysticism unite Orthodox theology and worship. For believers its prayer, sacramental rituals, and icons reflect heavenly eternity and humanity's participation in it. In contrast to the Latin West, Eastern Orthodoxy spent less time wrestling theologically with the mysteries of Christian faith and instead prayed them in word and action. A later theologian would summarize this harmony as *lex orandi lex credendi*, or "That which is prayed is that which is believed." These religious underpinnings led to a strong emphasis on tradition and have resulted in a genuine constancy in worship within the broader envelope of historical change.

Prior to the fourth century, Christianity held its worship in private homes or hidden places. Much of what became the liturgy began to develop during this time. With state sponsorship

of the church, grand spaces for public worship were built. In addition, the doctrinal controversies that raged through the fourth and fifth centuries had implications for worship. Consequently, two great theologians of the time, Basil the Great and John Chrysostom, turned their attention to it, and the two prominent liturgies in the Orthodox Church today have traditionally been attributed to them. The Liturgy of St. Basil is used in the contemporary Orthodox Church on great feast days such as Easter and Christmas and also Sundays during Lent as well as other times. Reliable tradition ascribes it to Basil. That of St. John Chrysostom is attributed with much less certainty to him. It is the liturgy used for most of the year and, like that of Basil, saw translation into the many languages of Orthodoxy. The Barberini Codex from the eighth century describes the Divine Liturgy. It consisted of two parts, the Liturgy of the Catechumens and the Liturgy of the Faithful. The first opened with a procession by the bishop and the worshippers, followed by several Scripture readings. Only the baptized could remain for the Liturgy of the Faithful. This began simply enough before the fourth century but with the construction of great churches such as Hagia Sophia grew into the Great Entrance. There followed the Kiss of Peace and the creed, the Eucharistic prayers, and then the distribution of communion.

Orthodoxy organizes its worship according to an annual calendar that begins again every September 1. The preeminent event in the calendar is Easter. The Twelve Great Feasts follow in importance. Orthodox Easter celebrates the resurrection of Jesus Christ. This was and remains the day for initiation of new Christians through the sacraments of Baptism, Chrismation, and Eucharist. The mystical element in Orthodox spirituality is apparent in its Twelve Great Feasts. Eight of these celebrate events in the life of Christ; four are dedicated to Mary in recognition of her role as Theotokos, or bearer of the Christ. Prominent among them is the feast of the Transfiguration of Christ (August 6), which commemorates the episode in the Gospels where Jesus Christ manifested his divine glory to Peter, James, and John on Mount Tabor. This divine glory will someday be humanity's since Orthodoxy's idea of salvation includes *theosis*, or divinization. In addition to the Twelve Great

► THE CHANGING TRADITION OF LITURGY

The Eastern Orthodox Divine Liturgy saw development from the sixth through tenth centuries. The liturgy consisted of two parts, the Liturgy of the Catechumens and the Liturgy of the Faithful. The first opened with a procession by the bishop and the worshippers. They chanted the Trisagion (Greek for “three” and “holy”). Although the origins of this chant may go back earlier, following the principle of *lex orandi lex credendi*, it was intended to refute the heretical Monophysite Christology. Central to the Liturgy of the Catechumens were four biblical readings, one from the Old Testament, a psalm, a New Testament reading (an epistle), and one from a Gospel. The Liturgy of the Faithful began with the presentation of the gifts (bread and wine) followed by the Kiss of Peace and the creed, this last introduced by the Monophysites to demonstrate their orthodoxy. Then came the Eucharistic prayers or anaphoras over the bread and wine and the distribution of communion. By the ninth century some changes had occurred. For example, the Trisagion yielded its place to a psalm that varied according to the feast celebrated and moved to a later spot. Because of this shift the Great Entrance no longer occurred, and the Little Entrance, which included only clergy, arose. The Liturgy of the Faithful increasingly allowed for private prayers by the priest rather than the entire congregation, much like in the West.

—Gerald S. Vigna

Feasts, there also are several lesser feasts and four important periods of fasting, the most significant of which is Lent.

Orthodoxy's sacramental rituals also reflect a religious imagination that leads to a mystical view of heaven and earth. The Barberini manuscripts provide our oldest complete texts of the Easter baptismal rite. This rite included exorcisms, renunciations of Satan, and the recitation of the Nicene Creed before the blessing of the baptismal water and the catechumen's immersion into it. Orthodoxy has always confirmed the newly baptized as part of this rite. Eucharist unites the church with Christ as the Body of Christ and believers with one another. Orthodoxy maintains that Christ is present in the bread and wine and, unlike the medieval West,

did not struggle first with Platonic and then Aristotelian explanations but instead believed what was prayed in its liturgy. Of the remaining sacraments, Holy Orders deserves brief attention. There are three major orders of clergy: deacon, priest, and bishop. A significant distinction in Orthodoxy that seems to date from the sixth century exists between married and celibate clergy, or white clergy and black (monastic) clergy. The decision to marry must be made before a man is ordained deacon; only black clergy may be ordained bishops. Because Orthodoxy emphasizes collegiality, bishops make decisions in Ecumenical Councils. In fact, one reason for the schism between Christian East and West was the disagreement over the jurisdictional role of the bishop of Rome over the entire church, a role that grew increasingly important in the West during this period.

The mystical understanding also explains Orthodoxy's devotion to icons, which Orthodoxy sees as reflections of heavenly reality. Through icons, the saints are available to Orthodox as fellow members of the worshipping church. In the eighth century when theological discomfort with the material world and distrust of graven images raised the issue of icons' legitimacy, the Iconoclastic Controversy again showed the intimate connection between church and throne through the actions of Emperor Leo III. Whether in public prayer or private devotion, from liturgy to iconic veneration, Orthodoxy emphasized the central principle of *lex orandi, lex credendi*; had a mystical element; and was affected by decisions of the state.

—Gerald S. Vigna

Bibliography

- Jones, Cheslyn, et al., eds. *The Study of Liturgy*. Rev. ed. London: SPCK, 1992.
- Pelikan, Jaroslav. *The Christian Tradition: A History of the Development of Doctrine*, Vol. 2, *The Spirit of Eastern Christendom (600–1700)*. Chicago: University of Chicago Press, 1974.
- Taft, Robert F. *The Byzantine Rite: A Short History*. Collegeville, MN: Liturgical, 1992.
- Ware, Timothy. *The Orthodox Church*. Baltimore: Penguin, 1964.
- Wybrew, Hugh. *The Orthodox Liturgy: The Development of the Eucharistic Liturgy in the Byzantine Rite*. London: SPCK, 1989.

The Role of the Catholic Church in Early Medieval West European Civilization

The Catholic Church played a crucial role in the early medieval period by offering a unifying culture and ideology to western Europe as the Roman empire collapsed. In the early medieval period, the Church suffered like many of the other Roman institutions but proved resilient in its ability to survive. As new kingdoms and political institutions arose in western Europe, the Church provided a unifying ideal and vision that would become Christendom in the high Middle Ages. The pope in Rome was nothing like later, more powerful popes. He was still just the local bishop of Rome with little power even within Rome itself. However, his respect and prestige were tremendous. As the Roman empire disintegrated in the West, Pope Gregory the Great (540–604) set the tone for future medieval popes. He took on secular duties as necessary, not because he wanted the power or felt that it was his job but because he was the first citizen of Rome, and there was no one else to fulfill the role in the absence of imperial authorities. He negotiated and corresponded with rulers and leaders throughout the West to protect Church interests, and he sent missions to pagan peoples. Just as the empire lost territory, so too did the Church. When Britain was overrun by the pagan Saxons and Jutes (mid-fifth century), Christianity nearly died out on the island. However, the Church was able to send missionaries who did not depend on military invasions or politics. Celtic missionaries arrived from Ireland, Cornwall, Wales, and Scotland. Pope Gregory sent Augustine to become the first archbishop of Canterbury in 597. In the next two centuries a thriving Anglo-Saxon Christianity would flourish, and the English Church would send missionaries to the continent.

However, early medieval popes such as Gregory had very little real power over the Church outside the city of Rome. The pope's prestige made him the paramount bishop in the West, and all other bishops deferred to the pope in matters of doctrine or even liturgy, but such questions rarely arose. In the administration of their dioceses, most bishops reported to the local Germanic ruler, the ruler who had appointed him.

➤ CAROLINGIAN RENAISSANCE

The Carolingian Renaissance worked closely with the Church to revive learning in the West. Cathedral schools in cities imitated the palace school of Aachen, and the groundwork for later medieval learning and universities was laid. Monastic schools also played a role in educating nobility and future clergy. Although the Carolingian world collapsed into civil war, the monasteries kept the memory and ideals of Christian learning alive. Cluny proved to be the monastery wealthy enough and sufficiently independent enough to lead a new revival. It founded daughter houses throughout western Europe to educate future Church leaders and to demand ecclesial independence.

—Benjamin de Lee

Throughout the West, monasteries, often just individual hermits or small monastic foundations, were models of piety to local people. They were also repositories of learning. The most important monastery of the early medieval period was the monastery founded by Benedict of Nursia (ca. 480–545) at Monte Cassino in 529; Benedict's *Rule* was used throughout the West as a guide to govern monasteries. Monasteries were often founded or endowed by local rulers and nobility. The local ruler would even appoint the abbot. The monasteries provided education for nobles' sons and contributed to local economic life. In spite of decline and fragmentation, the Church, through its episcopacy and monasteries, was still able to keep the embers of classical learning burning and to hold up an ideal of European Christianity.

Many of the Germanic tribes such as the Goths, Visigoths, and Ostrogoths that had brought about the collapse of the Roman empire were already Christian, albeit Arian Christians. Gradually these all came into the fold of Catholic Christianity. The Franks were perhaps the strongest holdout of Germanic paganism, but Clovis I (481–511) embraced Catholic Christianity and encouraged its spread. Thus, even as the Roman empire collapsed, more and more Germanic tribes embraced a Christian ideology that was centered on Rome and rooted in Latin language and learning. Even the fierce Vikings of Scandinavia would

be converted to Christianity in the eleventh century, and they, too, would become a part of a European-wide Roman Catholic culture.

Charlemagne (742–814) typifies the incorporation of the Franks into Roman Catholic Christian ideology. He conquered and unified most of western Europe. In 800 he was famously crowned emperor of the Romans in Rome by Pope Leo III on Christmas day. Charlemagne encouraged Latin learning and most importantly Roman Catholicism, which he saw as a unifying agent in his empire. Indeed, he saw it as his duty to protect and promote the Church. Charlemagne protected the pope and sent missionaries into northern and eastern Europe.

The Catholic Church thrived under Charlemagne's patronage. It became very much a part of Carolingian state and culture, and later German and Frankish rulers saw it as their duty to protect and govern the Church. The Investiture controversy has its roots in the Carolingian period, when Frankish nobles and rulers saw it as their duty and right to appoint Church clergy, from the local parish priest to archbishops.

The interference of local nobles in Church affairs would provoke the Cluniac Reforms, named for the Cluniac monastery, founded in 910 by William of Aquitaine. The Cluniac reformers stressed the complete independence of the Church, especially monastic institutions, and they emphasized clerical education and celibacy. The reforms would become popular among clergy throughout the West. While conflict with rulers was inevitable, the Church ultimately won. By the year 1000 the Church had survived numerous invasions by peoples whom it ultimately converted, and it had achieved enough independence and centralization to pursue the reforms of the high Middle Ages.

—Benjamin de Lee

Bibliography

- Brown, Peter. *The Rise of Western Christendom: Triumph and Diversity, AD 200–1000*. Cambridge, UK: Blackwell, 1996.
- Fletcher, Richard. *The Barbarian Conversion: From Paganism to Christianity*. New York: Henry Holt, 1998.
- Herrin, Judith. *The Formation of Christendom*. Princeton, NJ: Princeton University Press, 1987.

Lynch, J. H. *The Medieval Church*. London: Longman, 1992.

Russell, James C. *The Germanization of Early Medieval Christianity: A Sociobistorical Approach to Religious Transformation*. New York: Oxford University Press, 1994.

Religion in Georgia

Georgia, in the Caucasus, is one of the oldest Christian nations in the world.

Georgia in the year 300 CE enjoyed a level of religious diversity common throughout much of the Near East and eastern Mediterranean at that time. Due to its proximity to Persia, a local form of Zoroastrianism flourished in eastern Georgia (Kartli, or Iberia), while in western Georgia (variously known as Colchis, Egrisi, or Lazica), long exposed to Greco-Roman influences, various pagan deities were worshipped. Jewish communities had long thrived in Georgia, particularly in Mtskheta, the capital of Kartli. Archaeological evidence also shows that early followers of Christianity were present in western Georgia by the year 200 CE, and most likely the Jewish community in Mtskheta included followers of the Jesus movement.

This was the setting, in about 337, for the conversion of King Mirian of Kartli to Christianity by St. Nino, a humble woman from Cappadocia (present-day Turkey). Together with such states as Armenia and Ethiopia, which also adopted the new religion in the fourth century, the Christianization of Georgia thus followed a Constantinian model whereby rulers were targeted for conversion. For Georgia, the adoption of Christianity was a pivotal moment. For the first time in its history the country looked toward the West.

Though Georgian Christianity was very much part of a wider Pan-Caucasian missionary effort, the beginnings of a national church can be discerned in the period up to the Arab invasions of the seventh century. By the middle of the fifth century a network of episcopal sees, with Mtskheta at its apex, had been established across eastern and western Georgia. To propagate the new faith, an alphabet was devised for the Georgian tongue (in much the same way as a local script was invented to spread Christianity

➤ JVARI CHURCH

The first Georgian Christians were confronted with the challenge of creating sacred spaces that accommodated both the spiritual and liturgical requirements of their new faith. The earliest churches in Georgia employ the Greco-Roman basilica model, a long, rectangular-shaped structure divided lengthwise into three aisles, each separated by colonnades or, in some cases, walls. Although the basilica model provided the basic template for the first two centuries of Georgian church building, its linear composition differed sharply in ethos and shape from the circular plans that characterized domestic dwellings. The rigidity of the basilica design may also have provided a less than harmonious setting for liturgical chant, which to this day plays an important role in Georgian services.

These factors were likely the impetus for the development of a new architectural style: domed structures in which a central cupola is surrounded by four apses of approximately equal size (making a cruciform). In the earliest examples of tetraconch (four-apsed) churches, the conches protrude somewhat awkwardly from the base of the cupola, but in the next decades the technique would be refined. The magnificent early-seventh-century Church of Jvari (Church of the Holy Cross), built on a hill overlooking Mtskheta where King Mirian had erected a large cross after his conversion in the fourth century, represents the culmination of these



Jvari Church above the city of Mtskheta in present-day Georgia. The church was built between 586 and 605 on the site where, according to legend, Saint Nino converted the Pagan population to Christianity. (Shutterstock)

efforts. The interplay of design elements—cupola, conches, outer walls—is brought into a single integrated ensemble. The overall effect is to create an atmosphere that is organic and unitary. Although basilica designs did not entirely disappear from Georgia, Jvari marks a new era, foreshadowing the monumental cathedrals of the tenth through thirteenth centuries that would characterize Georgia's golden age.

—Charles Cavaliere

in neighboring Armenia), and biblical, patristic, and liturgical texts were translated, primarily from the Greek but also from Assyrian, Aramaic, and Armenian. Sometime late in the fifth century the earliest known example of Georgian literature appeared: *The Passion of St. Shushaniki*, the story of an Armenian princess put to death by her husband for refusing to convert to Zoroastrianism. Other hagiographies would follow in the next centuries.

During this formative period, a Georgian style of ecclesiastical architecture developed. The first churches in Georgia were constructed using the Roman/Byzantine basilica plan, but by 600 a uniquely Georgian idiom had emerged: the domed tetraconch church. Another important development is the appearance of a native

hymnography—liturgical chant—that fused biblical, Byzantine, and pre-Christian poetry into harmonious, polyphonic compositions. Still an integral part of church services today, these hymns (known as *galoba*) form an unbroken chain of cultural and artistic transmission from antiquity to the present.

Up until the eleventh century Georgian Christianity looked south, toward Syria, the Levant, and Palestine, for spiritual inspiration and ecclesiastical guidance. The liturgy in Georgia followed the Jerusalem rite until about the year 1000. Monasticism was the fulcrum for Georgia's relations with the Near East. Georgian monks were active in monasteries in Antioch, Jerusalem (where the oldest inscription written in Georgian, dated to 430, is located), and later at St.

Katherine's in Sinai. Numerous Georgian manuscripts survive from these centers. Georgia itself (or more specifically, Kartli) was colonized by a group of ascetics known as the Thirteen Syrian Fathers in the first half of the sixth century. Important monastic communities were established by Shio Mghvimeli near Mtskheta and by David Garesjeli in the eastern desert.

It is important to note that up until the seventh century Georgia, along with neighboring Armenia, was monophysite, that is, it held the doctrine of the one and single nature of Christ. This conflicted with the teachings promulgated by the imperial church council of Chalcedon in 451. But in 607, at a time when Georgia looked increasingly to the Byzantine empire for protection from Sassanid Persia, Georgia broke with the Armenians and embraced diophysitism (the doctrine that holds that Christ's nature is both wholly human and wholly divine).

Georgia's growing links with Constantinople were temporarily disrupted in 645 when Arab armies invaded. By 655 all of Kartli had become an Arab emirate. Though the emirs interfered little with Georgian culture, Muslim suzerainty caused many Kartvelian nobles and religious elites to relocate to the southwest, to the regions of Tao-Klarjeti and Shavsheti, where far from the Arab metropole based in Tbilisi (which replaced Mtskheta in the fifth century as the capital of Georgia), Georgian Christianity took on renewed vigor. Unimpeded access to Byzantine ideas and practices led, most notably, to the replacement of the Jerusalem rite with the Constantinopolitan early in the new millennium. From the ninth century, important new churches were founded in both eastern and western Georgia: Shatberdi, Tbeti, and Oshki (all in present-day Turkey); Bagrat (Kutaisi); Samtavisi (Kartli); Nikortsminda (Racha); Svetitskhoveli (Mtskheta); and Alaverdi (Kakheti). The size and scale of these churches were unprecedented and surpassed anything being built in Byzantium at that time. They spurred a dramatic increase in the production of religious literature: gospels, exegetical works, church music, philosophical tracts, and more. Georgian culture was by no means parochial. At the turn of the millennium Georgians were increasingly present at Constantinople and other foci of eastern Christianity. The monastery of Iveron ("of

the Georgians") was founded at Mount Athos in northern Greece in the tenth century and became an important literary center.

As a sense of national identity emerged, two of the first histories were composed sometime in the ninth or tenth century, both dealing with the spread of Georgian Christianity: *The Conversion of Kartli* and its more elaborate counterpart, *The Life of St. Nino* (earlier redactions can be traced to the seventh century). Though these histories are concerned with events from the fourth century, their outlook reflects the vigor and confidence of a national, indisputably Georgian, church. Further evidence of the church's power is supported by the change in title of the chief prelate from "catholicos" (a position somewhat equivalent to archbishop) to "patriarch" at some point in the eleventh century. The nationalistic tone of this new designation is unmistakable.

At the beginning of the new millennium the Georgian church had never been more wealthy or powerful. Aided by the growing might of the Bagratid kings, who first seized power in Tao-Klarjeti in 813 and who strenuously sought to unify all of Georgia under a single monarch (a goal realized in 1008), a true national church took shape, one that encompassed both east and west Georgia as well as lands inhabited by many non-Georgians. The next two centuries would be a golden age for Georgian Christianity.

—Charles Cavaliere

Bibliography

- Allen, W. E. D. *A History of the Georgian People from the Beginning to the Russian Conquest in the Nineteenth Century*. London: K. Paul, Trench, Trubner, 1932.
- Bowersock, G. W., Peter Brown, and Oleg Grabar. *Late Antiquity: A Guide to the Postclassical World*. Cambridge, MA: Belknap, 1999.
- Lang, Allen. *Lives and Legends of the Georgian Saints*. Crestwood, NY: St. Vladimir's Seminary Press, 1976.
- Mikaberidze, Alexander. *Historical Dictionary of Georgia*. Lanham, MD: Scarecrow, 2007.
- Rapp, Stephen. "Georgian Christianity." In *The Blackwell Companion to Eastern Christianity*, edited by Ken Parry. Oxford, UK: Blackwell, 2007.
- Toumanoff, C. *Studies in Christian Caucasian History*. Washington, DC: Georgetown University Press, 1963.

■ Introduction: Early Islam

Islam was the youngest of the major monotheistic religions to emerge in the first millennium CE. The Islamic religion claims a pedigree stemming from Christianity and Judaism. When Islam was first proclaimed in Arabia in the early seventh century, it entered a religious milieu dominated by Christianity and Zoroastrianism, both intolerant faiths. Islam from the beginning subscribed to the basic eschatology of dualistic Western religions: that the most important narrative is that of the struggle between the forces of good and evil, that the powers of good will win, and that there will be a day of judgment when the good will be rewarded with Paradise and the evil punished.

Islam establishes no priesthood as intermediaries between the laity and the deity. Islam insists that all believers are equal before the deity, without income, national, or racial distinctions.

Islam started as a conquering politico-religious movement and rapidly built an empire that straddled western Eurasia from Iberia's Atlantic coast to the western confines of Hindu and Buddhist India. In that vast empire, the Muslims created a civilization synthesized from the civilizations they conquered and those with which they came in contact. Despite frequent civil wars (*fitna*) and the very serious Sunni-Shia schism, the Muslim world (Dar al-Islam) became the world's leading community of faith by the end of the first millennium CE.

After the initial conquests, Islam rapidly gained converts, partly, it is said, because Islam taught a less complex and easier to understand theology with its uncompromising insistence on monotheism than either its Christian opponents, with their constant debates concerning the divinity of Jesus and the nature of the Trinity, or its Zoroastrian antagonists, with their more complicated cosmology. In the lands they conquered, the Muslims rarely tried to convert the Christian or Zoroastrian population en masse, though they did insist that their non-Muslim subjects (*dhimmi*) accept a secondary role in the new state and pay a special tax. In most Muslim lands, large Christian or Zoroastrian populations persisted for centuries.

After a century of an almost unbroken series of victories, the Muslim Arab career of conquest came to an end. Arab Muslim armies failed to take Constantinople in the siege of 717–718, and Arab Muslim forces were defeated at climactic battles in France and in India in the 730s. Significant expansion of Muslim states would not be resumed until after 1000 CE.

Nevertheless, by the year 1000, Islam probably had the most followers of any religion in the world. It was the principal religious expression of what may have been then the most dynamic and creative civilization on the globe.

—Wilfred J. Bisson

The Founding of the Islamic Religion, circa 610–680 CE

Although Islam is some 1,400 years old, the myths, personalities, events, and controversies of the period from around 610 to 680 are fundamental to understanding the religion's subsequent development into what it is today. With the appearance of its Prophet Muhammad came also the mainstay of Islamic religious doctrine, the Quran. Furthermore, the events after Muhammad's death engendered the two main denominations of Islam, Sunni and Shia. The Islamic religion has humble origins in Mecca, a city on the western Arabian Peninsula.

Prior to Islam, Arabia was shared by different Christian, Jewish, and, predominantly, polytheist religious communities. Although little can be known for certain about pre-Islam Arab polytheists, it is known that there were several hundred deities, and they believed that the world was populated by demons (*jinn*) that had to be appeased or defeated by magic. Mecca itself was a major center of worship, housing the Kaaba, the holiest site for the polytheist Arabs. A great black cubic structure around which were placed effigies of various gods to whom the Arabs would pray and make sacrifices, the Kaaba was also a major place of pilgrimage. However, although Mecca was a center of worship for pre-Islamic polytheism, it was also a natural place for the genesis of monotheist Islam. It was a cosmopolitan city populated by Jews and Christians



The Kaaba is a shrine that houses the Black Stone of Mecca, the focal point for Muslim prayer and final destination for pilgrims to Mecca. (Ayazad/Shutterstock)

in addition to polytheists and was brought into frequent contact with diverse religious ideas via trade and missionaries. As a center of commerce, Mecca itself was undergoing major social change in the sixth and seventh centuries that helped facilitate the rise of Islam. While the merchant class prospered, disparities in wealth as a whole increased, resulting in growing dissatisfaction with the prevailing social order and helping to create receptiveness for Islam. Although Islam is an outgrowth of this particular historical context, it is referred to by Muslims as the *jabilliyah* (“time of ignorance”) before Islam.

Islam is said to have its origins in 610 when Muhammad, a Meccan merchant, began receiving revelations from the angel Gabriel, who was delivering to him the direct word of God (Allah). These revelations, which Muhammad received until his death in 632, formed the Quran, Islam’s holy text. In the first years in Mecca, the revelations dealt primarily with the fundamentals of the religion, focusing on the monotheistic nature of the single all powerful, just God and the apocalypse to come, when everyone would pass before God, who would judge them based on their piety. It also focused on prophetic narratives. Muhammad was told that God’s message, Islam, had been received by various communities in the past through prophets of their own, many of whom are familiar in Christianity and

Judaism, such as Moses, David, Abraham, Noah, Jesus, and others. Included also were prophets unique to pre-Islamic Arabia. Muhammad was told that he was the final prophet in this long line and was sent to deliver the Arabs from sin and to rescue them from polytheism. At this time, Christians, Jews, and polytheists were all intended for Muhammad’s message; it was not yet clear that Islam was to become its own separate religion. Parts of these original messages display certain parallels with Judaism and Christianity. The concept of a prophet sent to save a chosen people, for example, is consonant with Judaism, and Muhammad’s articulations of the last judgment are similar to Christian tradition.

This new message represented a profound challenge to the predominating western Arabian worldview. Furthermore, as the new cult gained converts and status, the Meccan elites who had traditionally wielded control over religious affairs felt threatened. Thus, in 622 Muhammad and his Meccan followers were forced to migrate about 200 miles north to Medina. This event, known as the *hijra* (migration), is one of the defining moments in Islam. Its significance is such that the Muslim calendar begins here, in 622, at year 1.

While in Medina, revelations of the Quran continued to come to Muhammad, but they generally underwent a change of emphasis, reflecting the new reality in which Muhammad had found himself. Now, he was tasked with building an Islamic community (*umma*) and bolstering the legitimacy of his prophethood and leadership. Broadly speaking, the Quran now came to focus on legislative topics dealing with rites, rituals, laws, ethics, and other aspects necessary for building a faith-based polity and identity. Thus, the Quran now asserted that Muhammad was to found an entirely new religion, specifically distinct from Christianity and Judaism, and by doing so restore true monotheism. Also at this time were revealed the Five Pillars of Islam, five obligations for Muslims that in particular distinguish Islam from the other monotheistic faiths: *salat* (ritual prayer five times daily, facing Mecca), *zakat* (almsgiving to the poor), *hajj* (pilgrimage to Mecca for those who are able), *sawm* (fasting during the holy month of Ramadan), and *shahada* (testifying that there is only one God and that Muhammad

is his Prophet). At the same time, the rules governing the relationship between Muslims and Christians and Jews were revealed. People of the Book, those who believed in one God, in revelation, and in scripture, were to be allowed to practice their faiths as long as they accepted the Islamic political system and paid their taxes.

By 630, after a long process of conversion and winning over allies, Muhammad and his followers were able to enter Mecca without resistance. The Kaaba was purged of its polytheistic idols and relics and is now Islam's holiest site and still the destination for annual pilgrimage. Muhammad died soon afterward in 632. By the time of his death, the Quran, the foundation of Islamic religious life, had been revealed, and indeed the text has changed little if at all over the last 1,400 years. However, the Quran did not set forth any sort of criteria for selecting a successor (caliph) to Muhammad. Although it had been made very clear that Muhammad was the final prophet, the young Muslim community was still in need of a leader, and the next 50 years were predominantly concerned with working this out. If the years 610–632 are important because during this time the tenants of the Islamic faith were established, the years 632–680 are important because the events that occurred during this time gave birth to the two major denominations of the Islamic faith, Shia and Sunnism.

After Muhammad's death, there was disagreement as to who should succeed him as leader of the *umma*. Certain Muslims thought that the Quran had mandated that a member of the family of the Prophet should guide the new community and placed their support behind Ali, who was Muhammad's cousin, son-in-law, and an early convert. However, from 632 to 656 Ali was passed by three times in favor of other pious Muslims: Abu Bakr (d. 634), Umar (d. 644), and Uthman (d. 656). Ali then reigned as caliph until his assassination in 661. Following his assassination, his rival Muawiyah claimed the title of caliph and established the Umayyad dynasty, ruling from Damascus. In the East, particularly in present-day Iraq, supporters of the family of Ali refused to recognize Umayyad authority. In 680 Husayn, one of Ali's sons, rose up against the Umayyad dynasty and was slain at Karbala in Iraq.

These events engendered permanent divisions in the Islamic community. The Sunnis accept Muawiyah and those who came before and after him, idealizing the first four caliphs as the *rashidun* ("rightly guided") caliphs for their piety as Muslims. The Shia, representing now about 10 percent of Muslims worldwide, maintain that only blood heirs of Ali could lead the *umma*, with the largest subgroup claiming that one day a messianic descendant of the line of Ali called the Mahdi will appear toward the end of time to spread peace throughout the world.

—Joshua Hoffman

Bibliography

- Berkey, Jonathan P. *The Formation of Islam: Religion and Society in the Near East, 600–1800*. Cambridge: Cambridge University Press, 2006.
- Bloom, Jonathan, and Sheila Blair. *Islam: A Thousand Years of Faith and Power*. 2nd ed. New Haven, CT, and London: Yale University Press, 2002.
- Hodgson, Marshall. *The Venture of Islam: Conscience and History in a World Civilization*, Vol. 1, *The Classical Age of Islam*. Chicago: University of Chicago Press, 1974.
- Murata, Sachiko, and William C. Chittick. *The Vision of Islam*. New York: Paragon House, 1994.
- Watt, W. Montgomery. *Muhammad at Mecca*. Oxford, UK: Clarendon, 1953.

Teaching and Practice of Early Islam

The teachings and practices of early Islam represent both change and continuity with pre-Islamic religious belief in Arabia. The Quran, the holy book of Islam that Muslims believe to be the direct word of God as revealed to the Prophet Muhammad during 610–632 CE, put forward the essential tenants of Islam that represent the core of Muhammad's message. At the same time, it was a blueprint for creating a new society based around a shared faith. It at once draws from and Islamicizes a great deal from the cosmopolitan array of Jewish, Christian, and polytheistic religious faiths found in pre-Islamic Arabia and also introduces new ideas that would have seemed radical at the time.

One recurring message is the oneness of God, or God as the sole omniscient and omnipresent

creator, in contradistinction to the polytheism that characterized much religious practice in pre-Islamic Arabia. Another major theme is a concern with Judgment Day and the hereafter. Mankind, the pinnacle of God's creation, is given the choice of whether or not to heed the call to God's religion and follow his teachings, and whether or not one passes this test determines if one goes to heaven or hell. The Quran also contains a great deal of prophetic narratives, or stories of how God had revealed the message of Islam to outstanding men in other societies such as Jesus, Moses, Joseph, etc., who are descended from the Judeo-Christian tradition, as well as other prophets who were natives of Arabia. Muhammad was to be the final prophet before Judgment Day. The thread unifying all of these themes is a strong emphasis on the need to be pious, to obey and fear God. The pervasiveness and vigor of this aspect of the Quran suggests that Islam began as a movement of militant piety.

Besides the message of God's oneness, the warnings of Judgment Day to come, the narratives of past prophets, and the exhortations to piety, the Quran was also an instruction guide for the practice of the religion. Much of these teachings of early Islam were instrumental in creating a communal identity for Muslims as a distinct, cohesive community (*umma*) bound together by common belief over the tribal ties that underpinned pre-Islamic communal identity. The Five Pillars of Islam serve as a case in point. Revealed to Muhammad as a set of obligations incumbent upon Muslims, the Five Pillars form the cornerstone of Islamic practice. Professing Islam (*shahada*), or uttering "I bear witness that there is no god but God, and that Muhammad is His Prophet," grants one entrance into the *umma* and also demonstrates that one accepts the belief in a single God rather than multiple gods (thus distinguishing it from polytheism) and the belief in Muhammad as Prophet (thus distinguishing it from Judaism and Christianity). Almsgiving (*zakat*) was a cornerstone of social justice and requires Muslims who are financially able to donate 2.5 percent of their net worth to charity. Fasting (*sawm*), which had also been a practice in Judaism and Christianity, requires that Muslims who are able fast during

the holy month of Ramadan. Ritual prayer (*salat*) is arguably the most important outward act of devotion. Interpreted in most instances as five prayers daily at fixed times, it could be performed alone or in a group of people of any size. Finally, Muslims who are physically and financially able are required to make the annual pilgrimage (*hajj*) to Mecca, Islam's holiest city. Consisting of a number of rituals performed in and around the city of Mecca and adapted from the pre-Islamic practice of pilgrimage, performing the *hajj* is perhaps the greatest act of devotion that one could perform and, like congregational prayer, is a highly public communal act of faith that drew Muslims together and helped cement their identity as a unique community.

Also within the Quran are numerous passages regulating social relations among Muslims. Along with the rites and rituals, these regulations played a key role in cementing the young community and represent both continuity and change with pre-Islamic practices. Concerning marriage, for example, the Quran has much to say. Marriage in Islam is a civil contract between two adults, with husband and wife as equal partners before God. A dowry is paid to the bride by the groom and becomes her personal property, and in financial matters she retains control of her own property and assets. Divorce was highly discouraged, but in the event of a divorce women were free to initiate the proceedings. The pre-Islamic practice of polygamy remained permissible, but the Quran sought to mitigate it by stipulating that a husband must be able to treat all of his wives equally and by limiting him to four wives. The early teachings of Islam thus represented a significant step forward in terms of women's rights, and women in the early Muslim state based in Medina enjoyed legal rights on par with men. The egalitarian ethos of Muhammad's message extended beyond marriage into numerous other realms of social life. All Muslims, regardless of wealth, social standing, or tribe, were to stand equal before God, who would judge them only on their piety. Significantly, although Muhammad's message clearly established Islam as a highly communal religion, the Quran does not mandate an Islamic priesthood. Muslims are instead enjoined to read the

Quran, meditate upon its teachings, and use it as their personal spiritual guide.

Finally, the message of Muhammad sought to address Muslims' relations with non-Muslims. Christians and Jews, because they came from monotheistic traditions and believed in God and the Scripture, were to be allowed to continue to practice their faiths if they paid a tax and consented to live under Muslim rule. The Quran was much less benign concerning polytheists, who were to be fought or converted.

By the time of Muhammad's death in 632 CE, he had succeeded in forming a new community built around the teachings of Islam. The message of the Quran, the communal rites and rituals, and the different rules governing social behavior all combined to help Muhammad establish a cohesive and distinctive group based on shared identity as Muslims. Muhammad's legacy proved to be an enduring one, as after his death the *umma* would at its peak extend from western Arabia to Spain and India, and Islam would grow from a relatively small cult into one of the world's great religions.

—Joshua Hoffman

Bibliography

- Bloom, Jonathan, and Sheila Blair. *Islam: A Thousand Years of Faith and Power*. 2nd ed. New Haven, CT, and London: Yale University Press, 2002.
- Gordon, Matthew S. *The Rise of Islam*. Westport, CT, and London: Greenwood, 2005.
- Murata, Sachiko, and William C. Chittick. *The Vision of Islam*. New York: Paragon House, 1994.
- Turner, Colin. *Islam: The Basics*. London and New York: Routledge, 2006.

Muhammad and the Emergence of Islam in Arabia

The life of Muhammad (ca. 570–632) is of central importance to well over a billion Muslims throughout the world today. It not only helps explain the early history of Islam but also provides a pattern of behavior replicated daily by Muslims.

Tradition holds that Muhammad b. Abd Allah was born sometime in the last decades of the sixth century in the Hijaz, a region of the Arabian Peninsula bordering the Red Sea. Prior to this period, the region possessed little strategic

QUESTIONING THE HISTORICAL MUHAMMAD

In the nineteenth century, the French historian Ernst Renan (1823–1892) proclaimed that unlike Jesus, Muhammad's rise occurred "in the full light of history." Renan implied that whereas precious little is known of the "historical" Jesus, the "historical" Muhammad is known with greater certainty. Preserved in Muslim scripture (Quran), the massive body of Prophetic tradition (hadith), and the historical chronicles (*akhbar*), an amazingly full picture of Muhammad seems to emerge. In the 1970s, however, London University scholars, such as John Wansbrough, Patricia Crone, and Michael Cook, began to question the historical validity of these sources, casting a considerable shadow across Renan's premise. Although the views of the London School were largely dismissed as too radical, a more source-critical approach to the existing historical narrative of Muhammad's life and prophetic career emerged as a consequence of this challenge.

—Rasheed Hosein

importance to either the East Roman (Byzantine) empire (330–1453) or the Sassanid (Persian) empire (226–651), the two great powers of western Afro-Eurasia at the time. The ancient trade in frankincense, which passed through southwestern Arabia, was no longer a major economic activity. However, roughly a century and a half of semicontinuous warfare between the two empires heralded great change. Due to the conflict, trade from India and China diverted from the ancient overland trade routes of the Silk Roads to one that moved across the Indian Ocean and the Red Sea. This reenergized the Arabian economy and elevated the importance of western Arabia immensely, adding great wealth to the major cities of the Hijaz.

However, the economic changes that made the Hijaz prosper created great social upheaval. Increasingly, issues of wealth and disparity and the growth of the region's cities began to tear at the traditional patterns of tribal society, as evidenced by Muhammad's early years. Tradition holds that Muhammad's father, Abd Allah (ca. 545–570), died a few months before his son's birth. Muhammad's mother Amina (d. 577) died

► THE *SIRAT RASUL ALLAH*—THE EARLIEST SOURCE ON THE LIFE OF MUHAMMAD

In terms of sources, the earliest biographical material on Muhammad comes from the historian Ibn Ishaq (ca. 704–767). Appearing roughly a century after Muhammad's death, the *Sirat Rasul Allah* (*The Biography of God's Messenger*) is one of our most valuable sources on the life of the Prophet and forms the foundation for historical inquiry. However, the original text of Ibn Ishaq is lost.

All that remains of the work are the extensive portions quarried primarily by Ibn Hisham (d. 834) in his late-eighth-century/early-ninth-century recension and quotations of the text in the work of historians such as al-Tabari (d. 923). Using the work of Ibn Hisham, al-Tabari, and 11 other historical chronicles dating from the 820s to 1449, the European historian Alfred Guillaume attempted to rebuild the original history as it was written by Ibn Ishaq. Aside from extensive portions missing from the beginning of the original *sirah* (biography), Guillaume has reconstructed the majority of the work, restoring to scholarship our earliest extant version of the life of Muhammad.

—*Rasheed Hosein*

before his seventh birthday, leaving the young boy orphaned at an early age. Although the tribal system protected his interests, it was far from comprehensive in coverage, and these traumatic events in his early life affected Muhammad's view of society and social justice. The hadith literature records that Muhammad could neither read nor write, attesting to his lack of status in the clan as an orphan. Both the Quran and the hadith later commented extensively on one's obligations to society's downtrodden, lauding the virtues of protecting widows and orphans and establishing extensive rules on inheritance.

From a fairly young age, Muhammad took part in the trading ventures of his clan, which was known as the Banu Hashim and formed an important subset of Mecca's dominant tribe of Quraysh. His acumen in business affairs brought him to the attention of Khadijah (ca. 555–619), a wealthy businesswoman in Mecca. Their partnership became prosperous and led to marriage (ca. 595). However, this new wealth only served

to deepen Muhammad's concern over Mecca's social inequalities, leading him to retreat into the nearby hills to think and meditate. According to traditional accounts, a 40-year old Muhammad (ca. 610) was in a cave on Mount Hira, located some three miles northeast of Mecca, when revelation occurred. Muslim tradition records that Gabriel, the herald archangel, commanded Muhammad to "recite in God's name" (Quran, 96:1–4), thereby inaugurating the revelations of Muslim scripture. This revelatory experience would continue, in fits, over the next 20 years of the Prophet Muhammad's life.

Generally, Quranic scholars divide the sum of Muhammad's revelations into two distinct phases: the Meccan phase (ca. 610–622) and the Medinian phase (ca. 622–630). The *surahs* (chapters) of the Meccan phase mark the earliest revelations and tend to be short and pithy. The messages contained therein are dominated by verses decrying the practices of the pagan Arabs of Mecca and describe what awaits the unbeliever in the next life. These verses were even more unnerving to the Meccan elite because their very message undercut the elites' status and power. The city of Mecca prospered in large part because it was considered a sacred enclosure (*baram*). While the system of reciprocal violence that marked pre-Islamic justice was often bloody and could last generations, this hostility between tribes could not take place inside the confines of a sacred enclosure. In this way, groups that were otherwise engaged in intractable feuds could interact and trade in relative peace. In order to reinforce the sacrosanct nature of the Meccan *baram*, the elites of the city promoted an annual fair in the nearby site of Ukaz, followed by a pilgrimage to honor the pantheon of pre-Islamic Arabian gods in the holy sanctuary of Mecca.

However, Muhammad's call for an austere and uncompromising monotheism threatened these practices, which were the economic lifeblood of the city. Despite the protection afforded him through his wealth and his clan, the Meccan elite put increasing pressure, ranging from isolation to full-scale boycotts, on Muhammad to recant his revelations. However, in the Year of Sorrows (ca. 619), both Abu Talib (head of the Banu Hashim) and Muhammad's wife Khadijah

died. In an instant, the Prophet's main sources of protection and comfort were removed from him. The subsequent leader of the Banu Hashim, Abu Lahab (d. 624), removed the clan's protection, eliminating the threat of retribution to Muhammad's enemies. In 622 Muhammad and his followers fled from Mecca and migrated northward to the oasis city of Yathrib (later renamed Medina), some 200 miles (320 kilometers) distant. This event, known as the *hijrah* (emigration), inaugurated the first Islamic polity and marks the beginning of the Islamic (lunar) calendar.

In Medina, the tenor of Muhammad's revelations changed with his adoption of political authority. The Median verses tend to be longer than the Meccan verses and focus more on regulatory and governmental issues. Due to the tenuous relationship between Mecca and Medina at this juncture, fighting between the two cities became inevitable. Thus, revelations also began to enunciate the concept of jihad (literally "striving" but carrying the meaning of "just warfare" in this context). Arguably, the most intriguing by-product of the Medina polity was the creation of the *ummah* (here meaning "community"). The various individuals adopting Islam were no longer under the protection of the tribal system, and the *ummah* provided not only a religious connection but also a social identity.

During the final decade of Muhammad's life (622–632), the nascent Muslim community in Medina struck out on some 80 raids against Mecca. The Battle of Badr (624) was the first major victory for the Muslim army. However, the stalemate of the Battle of Uhud a year later (625) almost toppled the new state. According to the established historical narrative, these raids were largely meant to challenge the trading supremacy of Mecca, although the exact nature or scope of Mecca's merchant trade in this period is unknown. By destabilizing trade, the Muslims sought to strike directly at the economic status of Mecca and, more importantly, to damage the Meccan prestige among the seminomadic tribes of the Arabian Peninsula. As the fortunes of the conflict started to favor the Muslims, tribes began to align with Muhammad against Mecca, and by 630 the Prophet was in a position to capture Mecca, which fell with only minimal resistance and bloodshed. With the fall of Mecca, the bound-

aries of Islamic power, centered in Medina, encompassed almost the entire Arabian Peninsula. However, Muhammad, now in his sixties, was frail from his exertions. In 632 the Prophet fell ill with head pain and weakness and died a few days later. In terms of his historical record, the revelations comprising the Quran form the basis for the legal, political, and social systems for much of the Islamic world, and his sayings and actions (hadith) still form a pattern of behavior for Muslims to this day. Indeed, few individuals in history can lay claim to a similar legacy.

—Rasheed Hosein

Bibliography

- Bennett, Clinton. *In Search of Muhammad*. London: Cassell, 1998.
- Guillaume, A., trans. *The Life of Muhammad: A Translation of Ibn Ishaq's Sirat Rasul Allah*. Oxford, UK: Oxford University Press, 2004.
- Haykal, Muhammad Husayn. *Hiyat Muhammad [The Life of Muhammad]*. Isma'il Ragi A. al-Faruqi, trans. 1935; reprint, Westmont, IL: North American Trust Publications, 1976.
- Lings, Martin. *Muhammad: His Life Based on the Earliest Sources*. Rochester, VT: Inner Traditions, 2006.
- Watt, W. Montgomery. *Muhammad: Prophet and Statesman*. Oxford, UK: Oxford University Press, 1974.

Falsafah—Islamic Philosophy to 1000 CE

The expansion of Islam beginning in the 630s, the establishment of the Umayyad caliphate at Damascus (661–750), and the subsequent establishment of the Abbasid caliphate (ca. 750) brought the Muslims into contact with both Byzantine and Persian cultures, which included other religious, philosophical, and scientific traditions. The Islamic world was faced with assimilating a vast amount of knowledge and reconciling it, if possible, to Islam. The development of *falsafah* (a transliteration of the Greek *philosophia*) was thus significant for the history of Islam as well as the West. If not for the Muslim recovery of Aristotle and Plato, the West might not have seen the great work by St. Thomas Aquinas and others in the High and Late Middle Ages.

➤ **SELECTION FROM *ALFARABI'S PHILOSOPHY OF PLATO AND ARISTOTLE*, "ON THE ATTAINMENT OF HAPPINESS"**

"The human things through which nations and citizens of cities attain earthly happiness in this life and supreme happiness in the life beyond are of four kinds: theoretical virtues, deliberative virtues, moral virtues and practical arts. . . .

Therefore, the prince occupies his place by nature and not merely by will. Similarly, a subordinate occupies his place primarily by nature and only secondarily by virtue of the will, which perfects his natural equipments. This being the case, the theoretical virtue, the highest deliberative virtue, the highest moral virtue, and the highest practical art are realized in those equipped for them by nature: that is, in those who possess superior natures with very great potentialities. . . . It follows, then, that the idea of *Imam*, Philosopher, and Legislator is a single idea. However, the name *philosopher* signifies primarily theoretical virtue. . . . *Legislator* signifies excellence of knowledge concerning the conditions of practical intelligibles, the faculty for finding them, and the faculty for bringing them about in nations and cities. . . . The name *prince* signifies sovereignty and ability. . . . This is not possible except by great power of knowledge, great power of deliberation, and great power of [moral] virtue and art. Otherwise he is not truly able nor sovereign. . . . As to the *Imam* in the Arabic language, it signifies merely the one whose example is followed and who is well received: that is, either his perfection is well received or his purpose is well received."

—*Kimberly Georgedes*

Source

Alfarabi, *Alfarabi's Philosophy of Plato and Aristotle*, rev. ed., translated and with an Introduction by Muhsin Mahdi (Ithaca, NY: Cornell University Press, 1969), 13, 34, 46.

The assimilation of Greek philosophy begins with the great school of translators, without whom the Greek and other works would not have been accessible to the Muslims. The assimilation of Greek knowledge began in earnest during the Abbasid caliphate, particularly under the caliphs Harun al-Rashid (786–809) and his son

Al-Mamun (813–833), the latter of whom established the Bait al-Hikmah (House of Wisdom), which housed a school of translators, a library, and an observatory. Nestorian Christians such as Hunayn ibn Ishaq (808–878), his son Ishaq ibn Hunayn, and nephew Hubaysh, among others, translated works not only from Greek and Syriac but also Pahlavi and Sanskrit into Arabic. By about 1000 CE scholars in Islamic lands (whether Muslim, pagan, Christian, or Jewish) had nearly the entire corpus of Greek philosophic and scientific works available for their studies.

Islamic philosophy, although usually characterized as Aristotelian, is rather a mixture of Neoplatonism and Aristotelianism and conflicts with Islam on issues such as the creation of the world and man, the immortality of the soul, and the resurrection of the body. Many Islamic philosophers considered it part of their task to attempt to reconcile philosophy and dogma. The first Islamic philosopher and the only Arab was Abu-Yusuf Yaqub ibn-Ishaq al-Kindi (d. ca. 870). He was called the "Philosopher of the Arabs." Al-Kindi studied and wrote on nearly all the Greek branches of science and philosophy. Although he gave due regard to philosophy, he believed in the harmony of revelation and reason and recognized the former as a higher source of knowledge. He maintained nevertheless that most of one's knowledge comes through science and mathematics. He syncretized Aristotelian concepts such as matter and form, act and potency, and active and passive intelligence with certain Neoplatonic ideas such as creation by emanation from the transcendent True One and, in doing so, inserted creation *ex nihilo* (out of nothing) into the equation. He also divided Aristotle's original two species of active and passive intellect into four, which was adopted by al-Farabi and ibn-Sina. Al-Kindi's biographer al-Nadim cataloged about 250 works of al-Kindi, only about 10 percent of which actually survive.

Al-Razi (d. 925; Latin, Razes) was the next great philosopher, skeptic, and possibly agnostic. He was known primarily as a physician and diagnostician. His philosophical system was Platonic and postulated five eternal principles: God, the soul, matter, space, and time, which clearly conflicts with the Quran. His concept of

creation postulated that the soul developed an irrational passion for matter but was unable to achieve union on its own. Thus, God created the material universe as a place in which the soul's passion could be acted out.

Al-Farabi (875–950), known as the Second Teacher (after Aristotle), was perhaps the most widely read and prominent philosopher of this early period. He was particularly well known for works on logic and was the first major theoretician of music. His classification of the sciences had an impact on Muslim thought as well. His philosophy is based on Aristotelianism but, like al-Kindi's, is mixed with Neoplatonism. At the center of his philosophy is the First Being or Absolute One, which he equated with Allah. From this absolute and prime mover, all intelligences emanated in a hierarchical order, producing the Aristotelian-Ptolemaic planetary spheres. The last emanation was the Agent Intellect, which governs the sublunar sphere and is the source of all things in that sphere, including on earth. Al-Farabi adopted al-Kindi's concept of the four types of intelligence as well and also developed a political theory heavily influenced by Plato (Aristotle's *Politics* had not been translated) in which all authority emanates from a head of state (*rais*). The *rais* controls the state, assigns men to appropriate grades in the hierarchy, and is the embodiment of the philosopher, prophet (imam, or religious leader), and king. Unlike al-Kindi, however, al-Farabi maintained the superiority of philosophy over religion. Al-Farabi is sometimes erroneously credited with developing the distinction between essence and existence. Concerning the immortality of the soul, al-Farabi held that only the souls of those who had actualized their intellect (i.e., philosophers) would survive, which was at odds with Islamic doctrine.

The development of Islamic philosophy was significant not only for the Muslims themselves but also for the development of Jewish and Christian philosophy, particularly after 1000 CE. The Muslims came into contact with Greek philosophy and science through Christian translators; just as the early Christian Church had to deal with assimilating Greek thought, so did the Muslims.

—Kimberly Georgedes

Bibliography

- Adamson, Peter, and Richard C. Taylor, eds. *The Cambridge Companion to Arabic Philosophy*. New York: Cambridge University Press, 2005.
- Alfarabi. *Alfarabi's Philosophy of Plato and Aristotle*. Revised ed. Translated and with an introduction by Muhsin Mahdi. Ithaca, NY: Cornell University Press, 1969.
- Fakhry, Majid. *A History of Islamic Philosophy*. 2nd ed. New York: Columbia University Press, 1983.
- Nasr, Seyyed H., and Oliver Leaman, eds. *History of Islamic Philosophy*. London and New York: Routledge, 1996.

Kalam—Islamic Speculative Theology to circa 1000 CE

The expansion of Islam beginning in the 630s, the establishment of the Umayyad caliphate at Damascus (661–750 CE), and the subsequent establishment of the Abbasid caliphate in Persia (ca. 750) meant that the Muslims had to deal with various religious questions that arose from

➤ AL-ASHARI, ON THE CREATION OF ONE'S ACTS

"The rational proof of the creation of men's acts is our experience that unbelief is bad, false, vain, inconsistent, and of a certain contrariness, whereas faith is good, toilsome, and painful.

Such being the case, unbelief must have a producer who intentionally produces it as unbelief, vain and bad. And its producer can never be the unbeliever, who desires that unbelief be good, right, and true, whereas it is the contrary of that. Likewise faith must have a producer who produces it as it really is, toilsome, painful, and vexatious, and who is not the believer, who, though he strive that faith be contrary to its actual painfulness, . . . has no way to effect that. . . . [T]hen the intentional producer of both must be God Most High, Lord of the Worlds. For nobody and produce them, since bodies can effect nothing in things distinct from themselves."

—Kimberly Georgedes

Source

Kitab al-Luma, translated by R. J. McCarthy (Beirut, 1953), 55–56, quoted in John Alden Williams, ed., *Islam* (New York: George Braziller, 1962), 191–192.

political developments, the development of religious law (Sharia), as well as coming into contact with other religious traditions, such as Christianity and Zoroastrianism. The development of *kalam* (speculative theology) is very significant for the history of Islam.

In the Umayyad period (661–750) there were discussions concerning whether the Quran was the created or eternal Word of God, and debates concerning works and faith as well as free will versus predestination. The debate concerning whether a Muslim who sins remains a Muslim and whether faith alone or works were necessary to be a Muslim was significant because of the political situation of the time, particularly the assassination of Uthman, the civil wars, and the establishment of the Umayyad caliphate in 661. The Kharijites (the Seceders, those who initially followed Ali) militantly opposed the Umayyads and believed that works not only reflected but also affected one's faith and that one did not remain a Muslim after a grave sin. The Murjites (those who postpone), who acquiesced to Umayyad rule and represented the majority of religious opinion, argued that faith alone is sufficient, that a grave sinner remains a Muslim, and that works can neither quantitatively increase nor decrease faith. The judgment of a sinner should be reserved for God alone. On the issue of degrees of faith, orthodox Sunni theology took a middle road but inclined toward the Murjite position. Arguably, the central topic of discussion, around which many of the theological schools developed, was the problem of predestination and free will. On the one extreme were the Jabirites (*jabr*: coercion, force), who maintained strict determinism; on the other extreme were the Qadarites (*qadar*: decree, power), who argued for free will and personal responsibility. Broadly speaking, those who believe in a created Quran also believed in man's free will, while those who argued for an eternal Quran also believed that God determines everything.

Kalam began to develop systematically after 750 CE during the Abbasid period, and it too was affected by politics. The first significant theological school in Islam was the Mutazilite school (those who refrain), which initiated the discussion of Islamic doctrine in terms of Greek philosophical conceptions. They attempted to

find rational proofs for Islamic beliefs. The Mutazilites held five main points: God's unity (*taubid*), which entailed allegorical interpretation of divine attributes and held that the Quran was created; emphasis on God's justice (God must reward the good and punish evil); the Promise and the Threat (i.e., reward and punishment, paradise and hell); the intermediate position (regarding a grave sinner; i.e., that he was neither a Muslim nor a non-Muslim); and "commanding the good and forbidding the evil" (i.e., interfering publicly to maintain observance of the Sharia). Regarding the issue of free will, God is bound by justice to do what is best for man (i.e., send prophets, reveal the law, etc.), but it is man's responsibility to obey, and works can affect faith.

Although the Mutazilites were politically in favor for a short time, there was both popular and intellectual opposition to their views, and when they lost political support, they were considered heretics. Indeed, the majority of Muslims, including the *ulama* (religious scholars) rejected the *mutakallimun* (speculative theologians) and their theology. Kalam was thus studied by only a very small minority in Islam. The Asharite school of theology (after al-Ashari, d. ca. 935) arose in response to Mutazilite positions. Al-Ashari (a former Mutazilite) held that God's attributes did exist and were in some way distinct from his essence. The Quran is uncreated and eternal. Therefore, Quranic phrases about God's attributes must be accepted without question. Al-Ashari rejected the Mutazilite doctrine of free will and developed his doctrine of acquisition. An omnipotent God creates both good and evil acts of man, and the acts are acquired by man. Man acts because God has given him the ability to acquire or perform the acts that God has already created. Moreover, since God is the creator of everything, he is continually creating, without which creativity all life would immediately cease. Thus, there is no cause and effect, only atomism, or occasionalism. Al-Maturidi (d. 945) developed a system almost contemporaneously with al-Ashari's. The two systems were similar, but although al-Maturidi holds that all acts are willed by God, God does not take pleasure when evil acts are performed. Although emphasizing the omnipo-

tence of God, al-Maturidi allowed for the ability of the human being to produce acts. Determinism prevailed in medieval Islamic theology, for logically only an omnipotent being can act.

The most widely discussed problem in systematic theology was the problem of being, that is, whether essence and existence are one. The theologians tended to reject any difference between existence and essence and held that essences are created at the time of their existence, while philosophers generally tended to make a distinction between existence and essence. Discussions of being among the theologians would affect discussions among the philosophers as well.

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Bibliography

- Abdel Haleem, M. "Early *Kalam*." In *History of Islamic Philosophy*, edited by S. H. Nasr and O. Leaman. London and New York: Routledge, 1996.
- Hourani, George. *Reason and Tradition in Islamic Ethics*. New York: Cambridge University Press, 1985.
- Makdisi, George. *Religion, Law and Learning in Classical Islam*. Brookfield, VT: Variorum, 1991.
- Morewedge, P., ed. *Islamic Philosophical Theology*. Albany: State University of New York Press, 1979.
- Pavlin, James. "Sunni *Kalam* and Theological Controversies." In *History of Islamic Philosophy*, edited by S. H. Nasr and O. Leaman. London and New York: Routledge, 1996.

The Shia—Islam's Principal Minority, 632–1000 CE

The two major branches of Islam, Sunni and Shia, emerged on the death of the Prophet Muhammad in 632 as a result of the dispute over the leadership of the Muslim *umma* (community). The majority, who came to be known as the Sunni, proposed that the caliph (successor, or deputy, of Muhammad) be chosen by a consensus of the Companions of the Prophet (Muhammad's followers who knew him personally, in effect, almost any Muslim who lived in the time of the Prophet), while others, who became known as *Shia* (from *Shiat-ali*, party of Ali), asserted that the leadership of the Muslim *umma* should stay in Muhammad's family and should

be passed down through the generations to Muhammad's heirs. The Sunni majority supported Abu Bakr as the first caliph while the Shia insisted on Ali, Muhammad's cousin and the husband of Muhammad's daughter, Fatima. The Shia maintain that the Prophet Muhammad chose his cousin Ali as his successor but that Ali was cheated out of the Muslim leadership by a coterie of powerful Companions of the Prophet led by Abu Bakr, Umar, and Uthman, who then became successive caliphs (Commanders of the Faithful) after Muhammad died.

Abu Bakr, Umar, and Uthman each served as caliph, in succession, from 632 to 656. Abu Bakr died in 634. Disgruntled Muslims assassinated Umar in 644 and Uthman in 656. Then it was Ali's turn to be caliph. But not all the Muslims were willing to accept Ali and his reign. Aisha, who had been the Prophet Muhammad's child bride, especially objected to Ali's rule. She led an army against Ali but in the Battle of the Camel, near the Iraqi city of Basra, was defeated and sent back to Medina.

Ali had a stormy reign and after four years faced a rebellion by Muawiyah, the governor of Syria. The battle between them was inconclusive, and Ali and Muawiyah agreed that Muawiyah would succeed Ali as caliph. At this juncture, Ali was assassinated by one of his own fanatical supporters, who was outraged at what some regarded as a betrayal.

On Ali's death, Muawiyah became caliph and bought off the claims of Ali's son, Hasan, who was given a luxurious estate, wealth, and privilege for renouncing his claim to the caliphate.

Before Muawiyah died in 680, he appointed his son Yazid to be his successor. When Yazid took the throne, the garrison at Kufa, Iraq, invited Ali's second son, Husayn, to lead them in rebellion. Husayn lived in Medina, hundreds of miles across the desert. Husayn, with his family and about 72 armed followers, set out for Kufa, but before they reached the city they learned that the rebels there had come to an agreement with Yazid and had called off their rebellion.

Husayn continued his march, even though he knew he was facing certain defeat. The Shia claim that Yazid sent an army of 30,000 soldiers to intercept Husayn, but the Sunni say that it was only a small police detachment. Whatever

THE LOSS OF MUSLIM UNITY—THE SHIA VIEW

The Shia claim that when the 63-year-old Prophet Muhammad died after a short illness in 632, the body was given to Fatima and Ali to wash and prepare for the funeral. Meanwhile, Abu Bakr, Umar, and Uthman called a meeting of the Prophet's Companions to choose a successor. The Shia further maintain that the three leaders intimidated the members and forced them to swear allegiance to Abu Bakr. Then, Umar and Uthman, with a band of ruffians, surrounded Ali's house and demanded that he come out and also swear allegiance to Abu Bakr as caliph. Uthman forced his way into the house, rudely flinging the door open behind which the 18-year-old Fatima, eight months pregnant, was standing. The door hit Fatima with such force that she miscarried a son, whom the Shia especially revere. Fatima died shortly thereafter; some claim a month, others say six months later. A reign of terror ensued in which Ali's partisans were harassed and forced to give their allegiance to Abu Bakr.

Sunni deny that whole story. They claim that Abu Bakr was selected by the free choice of the Muslims and that even Ali pledged allegiance to him. Nevertheless, Ali's partisans were not reconciled and constituted a group whose festering sense of injury and loss continues to this day.

—Wilfred J. Bisson

their numbers, Yazid's forces surrounded Husayn's much smaller group and cut them off from access to the Euphrates River on the seventh day of the lunar month of Muharram. By the ninth of Muharram, Husayn's group was desperate for water. On the tenth of Muharram, Husayn's six-month-old second son, Ali Ashgar, was dying of thirst. Husayn carried the child out to the lines of the Sunni enemies and asked their commander for water for the boy. Instead of a drink, the enemy gave him death. The enemy commander shot an arrow through the infant's neck. After Husayn buried the dead child, the battle began. Husayn and his male followers were all slaughtered in the Battle of Karbala, while the women and children, including Husayn's oldest son, whom the Shia revere as Imam Ali ibn Husayn, huddled in the tents.

The Shia maintain that the Sunni victors brutalized Husayn's corpse and trampled it with

their horses. The women and children were savagely treated and loaded on camels for the trip to Yazid's dungeons in Damascus, where some, including Husayn's daughter, died of mistreatment. They were imprisoned for a year, but a groundswell of popular support persuaded Yazid to release and return his victims to their home in Medina.

Husayn's martyrdom at the hands of the Sunni majority has become the focal point in the Shia religious outlook. The Shia built a shrine to memorialize the site of the battle, and the holy city of Karbala grew up around the shrine. The commemoration of Ashura, the day of Husayn's death, is the holiest of days on the Shia holy calendar. For the Shia, the agony of Husayn's martyrdom is the emotional equivalent of the passion of Christ for Christians, and very much like some Christian penitents during Holy Week, many Shia scourge themselves and perform other acts of self-inflicted pain to share the suffering of their Imam.

After the death of Husayn, the Shia recognized his son, Ali ibn Husayn as Imam, or holy leader. (For the Sunni, an imam is simply a prayer leader, but when the Shia speak of the Imam [capitalized], they mean Ali or one of his descendants.) The Shia believe that their Imams were appointed by God and could communicate with God. Like the pope, Shia Imams were (and are) believed to be infallible in matters of faith and morals. Shia count Ali as the first Imam, Hasan as the second, Husayn as the third, and Ali ibn Husayn as the fourth. The great majority of Shia, the Twelvers, believe that the position of Imam passed down through 12 generations of Muhammad's descendants, but Ismailis, or Seveners, hold that the line of Imams ended with Ismail, the Seventh Imam. All of these Imams except the last, according to Twelver Shia doctrine, died either of poison or were beheaded by Sunni authorities. The Eleventh Imam died in 874, when the son, Mohammed al Mahdi, who became Twelfth Imam, was only five years old. To protect him from Sunni persecution, the boy was hidden from the public.

Although Sunnis deny that there ever was a Twelfth Imam, the Twelver Shia claim that he remained hidden and miraculously disappeared in 939. The Shia faithful say that the Twelfth Imam

is hidden or, as they say, is in occultation, where he will stay until God calls him out to lead the world as the Mahdi, or messiah. Thus, Twelver Shia believe that there will be a second coming of the Twelfth Imam, even as most Christians believe in the second coming of Christ.

Shia doctrine held that the Prophet Muhammad had imparted to his son-in-law, Ali, a special message or knowledge, hidden from the mass of the faithful; that this esoteric knowledge, which guaranteed the Imams' infallibility in faith and morals, passed down the line of successive Imams to the twelfth (or the seventh, for the Seveners); and that after the occultation of the Twelfth Imam, a succession of four *wakils* (representatives or interpreters) spoke for the occulted Twelfth Imam until the last wakil died in 940 CE after refusing to name a successor. Since then, Twelvers have chosen a group of learned and pious clerics, known as *ayatollah* ("signs of God"), who can be privy to some sacred esoteric knowledge and exercise some of the Imams' infallibility.

Throughout this era, Shia Islam was a movement of dissent and revolution. In the Umayyad and Abbasid caliphates (except for a brief period at the beginning of Abbasid rule and during the dominance of the Shia Buyids in Iraq and Iran after 945 CE), the Shia were suppressed, sometimes savagely, by Muslim governments. The Shia were an underground protest movement. For the Shia, particularly the Twelvers, their victimization was one of the main themes of cosmic history.

The Sevenser Shia, or Ismailis, were, in the tenth century and later, politically more successful than the Twelvers. An Ismaili group, which claimed their leader to be a descendant of the Prophet, seized power in western North Africa in 909. They conquered Egypt and part of Syria in the late tenth century and established the Ismaili Fatimid caliphate that endured until 1171. The Ismailis developed an elaborate theology that, like the philosophy of the sixth-century BCE Pythagoreans, focused on the mystical power of numbers, particularly the number seven, and the role of esoteric knowledge. The Ismailis taught that there are levels of knowledge, which only the elite theological adepts can know; that (for example) within the ordinarily understood "outer" mean-

ing of the Quran there was an inner meaning that Muhammad had imparted to Ali and that could be accessed by a few pious Ismaili adepts.

—Wilfred J. Bisson

Bibliography

- Halm, Heinz. *Shi'ism*. Translated by Marian Hill and Janet Watson. New York: Columbia University Press, 2004.
- Hodgeson, Marshall G. S. *The Venture of Islam*, Vol. 1. Chicago: University of Chicago Press, 1974.
- Keddie, Nikki, and Juan Cole, eds. *Shi'ism and Social Protest*. New Haven, CT: Yale University Press, 1986.
- Momen, Moojan. *An Introduction to Shi'i Islam*. New Haven, CT: Yale University Press, 1985.

The Development of Sunni Orthodoxy, 632–1000 CE

The idea of a Sunni orthodoxy in the early centuries of Islam is a complicated and somewhat problematic issue for historians. While one may use the term "Shia" (short for *shiat Ali* or "party/faction of Ali") for the political supporters of Ali b. Abu Talib (r. 656–661) after his death, the same sort of crystallizing moment is missing in Sunni Islam. Most Western scholars view the full development and articulation of Sunni theology and law as a long process that culminates in the ninth century or later. However, there are definite events and historical figures from this period that scholars point to as forming the core of Sunni Islam, which not only binds more than three-quarters of the world's Muslims into an identifiable group but also links them with Islam's more than 14 centuries of history. In this way, many scholars choose to use the term "majority Islam" to describe the Sunni Islam of this age, wherein acceptance of the legitimacy of the first three caliphs (successors) after Muhammad and adherence to one of the developing legal schools were some of the primary methods of distinction between Muslim groups.

The term "Sunni" refers to the Arabic word *sunnah* (customary practice) and is derived from the Arabic formula *abl al-Sunnah wa al-Jamah* (the People of the [Prophet's] Customary Practice and Community). In the first Islamic century, the concept of *sunnah* was used to address the legal and ritual issues that faced the

► CHARITY AND PIOUS ENDOWMENTS IN EARLY SUNNI PRACTICE

With the death of Muhammad in 632, Muslim intellectuals began to develop and refine their understanding of the ritually binding aspects of the religion (known in Arabic as *ibadat*). One of these pillars of the faith is the concept of charity. According to the Quran (9:103–104), it was possible to donate portions of an individual's wealth (in either coin or kind) as an act of repentance. However, while the hadith (prophetic sayings and actions of Muhammad) records the first instances of official charity in the Prophet's lifetime, it was not until much later that the legal rules surrounding charity were fully articulated.

Almsgiving, known in Arabic as *zakat* (from the Arabic verb for “to increase” or “to be pure”), is the most visible form of charity in Islam. According to the hadith and the interpretation of legal scholars, the rate of *zakat* that a Muslim must pay was roughly 2.5 percent of one's valuables and savings held for an entire lunar year if their wealth exceeded the value of (roughly) three ounces of gold.

There was a separate formula for livestock, agricultural goods, and coins. Likewise, there were rigid rules to limit those who could receive *zakat*.

However, the giving of alms was not the only charitable venture open to believers. The practice of endowing something for religious purposes, known in Arabic as a *waqf* (pl. *awqaf*) became quite popular in the Islamic world. An individual would declare a piece of property (or build something, such as a school) to be used for religious purposes. This served two purposes. It created institutions that promoted Islam (such as religious schools, mosques, and soup kitchens), and the property became ineligible for taxation by the state. Additionally, the creator of a *waqf* could name the terms of the endowment, often naming heirs in perpetuity as the paid administrators. In this way the *waqf* came to be a way to keep land from the state fisc and prevent a government from confiscating rich or lucrative properties.

—Rasheed Hosein

community. It was used to cite precedent, arguing that the customary practices of the Prophet Muhammad (ca. 570–632), his earliest companions, and in some cases those of the pre-Islamic Arabs and prophetic figures were legally and ritually valid patterns of action and conduct in the new Islamic milieu. In this way the Sunnis saw (and continue to see) themselves as a single coherent and unbroken community based upon the continuation of the practices ascribed to the Prophet Muhammad, his earliest followers, and those pre-Islamic customs that did not contradict the Quran.

However, while this was the majority view, it was not the only model. Existing within the early community were two basic political-religious positions. In the case of the Shia, they were initially motivated by the charisma of Ali and his descendants. The Sunnis, though, accepted the caliphal institutions that evolved after the death of the Prophet. These basic views in the early Islamic period were further defined by W. Montgomery Watt as intrinsicalist and contractualist and approached the issue of *sunnah* legitimacy in different ways. The intrinsicalist view held that legitimacy (both political

and religious) was a function of personal charisma, which was intrinsic or inherent to certain individuals—such as the aforementioned Caliph Ali—and very reminiscent of the ancient Near Eastern notions of sacral kingship. The intrinsicalist also viewed those imbued with the political-religious charisma as living exemplars and interpreters of the *sunnah*. In comparison, the contractualist view held that this charisma, which was intrinsic to Muhammad, was routinized or incorporated within the institutions of power and spirituality that were developing in the early caliphate. In this way, authority became something that was conferred and was transferred through the giving of an oath of allegiance (*biyah*). The *sunnah* became the practice of not only the Prophet but also those of his whole community, tying individuals concretely into the aforementioned Arabic formula: *abl al-Sunnah wa al-Jamah*. Thus, the wider view of political and spiritual legitimation inherent to the contractualist position resonated with the majority of the community and formed the dominant outlook in early Islamic society.

However, within the contractualist conception of Islam, the appurtenances of Sunni Islam

came into being only after the contentious theological debates of the second and third Islamic centuries (roughly the eighth and ninth centuries CE). The *ummah* (community of believers) of this period began to seek answers to weighty questions of a spiritual and theological nature, and since the *sahabah* (Companions of the Prophet) were now gone, the community began to experiment for solutions. Due to the new economic and intellectual wealth and power that was gained after the conquest period, Muslim theologians came into contact with Greek and Persian philosophy, leading to an expansion of Islamic philosophy. The outgrowth of this was a movement popularly referred to as the Mutazilah (those who separate themselves) but rightly by the more formal title, *ahl al-Adl wa al-Tawhid* (the people espousing [divine] justice and unity). Under the caliph al-Mamun (r. 813–833) these debates became violent, as the Mutazilites received official support for their philosophic views. However, the speculative theology of the Mutazilites would soon fall out of favor, as its abstractions were ill-suited to meet the majority's growing needs for broader clarifications of religious and legal practice.

A major part of this broader clarification revolved around the sources that would become the core of Sunni orthodoxy. There are considered to be four sources of legitimacy in majority Islam: the Quran, which is the primary source of religious, social, and political thought; the hadith (literally speech, but in this context meaning prophetic tradition and including the Prophet's speech and actions); *ijma* (consensus), wherein the community reaches agreement on the legal issues using both the Quran and the hadith; and finally *qiyas* (analogous reasoning), where one patterned solutions on other judgments when there was not a direct answer in either the Quran and hadith. These last two sources of authority harkened back to the original idea of community in the majority Sunni formula, a notion that developed around the prophetic hadith that stated: "My people will not agree together on an error."

While the Quran was the unquestioned central and primary source for Islam, it sometimes lacked specific details for everyday life. Unlike the Shia and their belief in the charismatic authority of an imam (a divinely chosen leader in this context) who served as a living model for

these issues, the Sunnis had to ground their orthodoxy in the established *sunnah*, leading to the question of what constituted authentic traditions and customary practices at this early juncture. After the death of the Prophet, people began to relate his deeds and sayings orally, unintentionally preserving them. However, it was not until the third Islamic century that this oral tradition, known as hadith, was systematically recorded by the great Sunni collectors.

Of the major collections of hadith, two are particularly important to Sunni jurists and theologians. The first is the collection of Muhammad b. Ismail al-Bukhari (810–870), or Bukhari for short. His work, known under the title *al-Jami al-Sahih* (*The Authentic Collection*), is considered to be the most trustworthy of the hadith compilations. The other major work in this genre belongs to Bukhari's student Abu al-Husayn Muslim b. al-Hajjaj (821–875) and is known simply as *Sahih Muslim* (*Muslim's Authentic [Traditions]*). Together these two works set the standard for relating the traditional sayings and deeds of the Prophet.

One important feature of the hadith genre was the *isnad* (chain of authority). In each extant entry the compiler recorded the chain of authority of the prophetic tradition back to the original witness or in some cases to Muhammad himself, thereby presenting a proof of its authenticity. However, even at the time that these hadiths were being compiled, there were serious questions arising about the veracity of some of them, leading some Western scholars to question the validity of the entire genre. Thus, while treated with skepticism from some Western scholars, from a Sunni point of view these works are beyond reproach and are considered a critical bridge to answering issues that are not addressed directly in the Quran.

In order to use the Quran and assess the hadith, the Muslim community began to work out a law code to help with the questions of orthopraxy (correct behavior). The answer came in the form of the Sharia (literally meaning the "way to the water hole" or "straight path" but now carrying the meaning of "Holy Law"). This divine law, culled from the Quran and hadith, contained everything that the majority community needed. In the pre-Islamic period a rough system of law was in place wherein justice was

dominated by the notion of sanctioned vengeance and collective culpability. For example, if one party wronged another, then the wronged side could legitimately demand or inflict a corresponding punishment on one or more relatives of the perpetrator to even accounts. Under Muhammad, the rules of such conduct were spelled out so that the principle of *thar* (blood revenge) changed to *qisas* (just retaliation). It is important to note that this change only abrogated the pre-Islamic notion of collective culpability, limiting liability to the perpetrator of the crime; it did not alter the right of the wronged to demand a reciprocal punishment.

However, while both the Quran and the hadith were largely static by the end of the ninth century, communal consensus (*ijma*) and analogous reasoning (*qiyas*) were not, and as legal issues became more complicated the notion of *fiqh* (jurisprudence) developed. The term *fiqh* came to apply to any legal decision that required the independent (i.e., not directly addressed in the Quran and hadith) exercise of human intelligence and was the opposite of *ilm* (here understood as divine knowledge). This led to differing views on legal questions, which spawned the articulation of differing Sunni legal positions. Emerging from the serious political and religious debates of the period were the four Sunni legal schools (s. *madhbab*, pl. *madhdbabib*) that survive to this day: the Hanafi *madhbab* (ca. 767), the Maliki *madhbab* (ca. 795), the Shafi *madhbab* (ca. 819), and the Hanbali *madhbab* (ca. 855). In this way, the majority community formed a collective enterprise, supervised by the theologians and the jurists. It is important to note that each of the four schools considers the others to be fully orthodox, and while their origins and histories were varied, they mark the final articulation of Sunni development in the Cassical Period.

—Rasheed Hosein

Bibliography

- Burton, John. *An Introduction to the Hadith: Islamic Surveys*. 1994; reprint, Edinburgh, UK: Edinburgh University Press, 2005.
- Coulson, Noel J. *A History of Islamic Law: Islamic Surveys II*. 1964; reprint, Trowbridge Wilts, UK: Cromwell, 1999.

Denny, Frederick Mathewson. *An Introduction to Islam*. 2nd ed. Toronto: Maxwell Macmillan Canada, 1985.

Ess, Josef Van. *Prémices de la théologie musulmane* [*The First Steps of Muslim Theology*]. Paris: Éditions Albin Michel S.A., 2002. Translated by Jane Marie Todd under the title *The Flowering of Muslim Theology*. Cambridge, MA: Harvard University Press, 2006.

Watt, W. Montgomery. *Islamic Political Thought: Islamic Surveys VI*. 1968; reprint, Trowbridge Wilts, UK: Cromwell, 1998.

Religious Pluralism and Toleration in Muslim Spain, 711–1100 CE

In 711, the Christian Visigothic kingdom in the Iberian Peninsula was invaded by the Muslim Berbers of Northwest Africa. This invasion was conducted under the auspices of the Umayyad caliph, Al-Walid I of Damascus, and within two years his army was well under way toward conquering the area. By 719, the only areas that were not under the authority of the Umayyads were the Kingdom of Asturias, which is modern-day Galicia, and the Basque regions of the Pyrenees. The rest, known to the Romans as Hispania and Lusitania, were now named Al-Andalus by the Umayyads.

Although the new Muslim regime was a devout one, religious intolerance was not universally applied, for those polytheists and idol worshippers still existing among the Visigoths were given the choice of “Islam or the sword.” However, those who were considered “people of the book,” namely Jews and Christians, were allowed to become protected people, or *dhimmis*. They were given the rights to practice their religions freely and maintain their places of worship, provided that they pay the *jizya*, or nonbeliever tax or tribute, that was levied upon adult males who were of a certain economic level. These communities were also given a certain amount of autonomy and were allowed to keep their previous government, the head of which was responsible for sending over the tax or tribute. As a result, most non-Muslims were not encouraged to convert to Islam, and some were even encouraged to remain with their

faith, as the *jizya* provided a substantial amount of revenue for the caliphate.

In addition to being allowed to practice their own religion, the Christians were allowed to send their children to either the Muslim schools or, if they objected to this, to schools attached to their own churches. Christian schools thrived as early as the ninth century, although these schools mainly produced theologians. There is historical debate over the extent of Muslim religious tolerance; however, many churches and monasteries remained in existence after the fall of the Visigoths, and there are no recorded incidences of iconoclasm. The main interference posed by the Muslims was in the appointment of church officials. They reserved the right to appoint or remove all church clerics, a power that was used from time to time. Sometimes the kings used this power as a method of earning revenue by selling offices to the highest bidder. At times, the positions of absentee bishops were even awarded to Muslims and Jews. As for the Jews, they enjoyed the same rights to religion as the Christians. The synagogue at Toledo remained active, and several translating centers were opened using Jewish translators. Under the Umayyads, the Jews enjoyed more toleration and religious freedom than they had under the Visigoths. They opened Talmudic schools, and poetry written in Hebrew flourished during this period.

Many of the Christians living in Al-Andalus began emulating the characteristics of Arab society and many converted to Islam. These people, known as Mozarabs, adopted the customs, dress, names, and even Arabic language. Those who converted to Islam were saved from paying the *jizya*. However, even though these *musalims* (the name for the converts) were now technically Muslim, this still did not afford them or their children (*muwalladun*) political or social equality with the Arab Muslims. This caused some to convert back to Christianity later on, and this same population sparked rebellions in the eighth century due to social inequalities.

By the end of the eleventh century, the Muslim princes were gradually losing their power in the Iberian Peninsula. Christians had been pushing their way south from Asturias through modern-day Portugal. The Almoravids were called from North Africa to assist, and this re-

sulted in the takeover by the Almoravids in 1096 and the reunification of Muslim hegemony, albeit in a smaller area of the Iberian Peninsula because the Christians had made some headway. The Almoravids were stricter about their religion than the Umayyads had been, resulting in harsher conditions for non-Muslims. Although Christians and Jews were still allowed to practice their religions, they received social restrictions that they had never experienced before. Both groups were forced to live either in special sections of the cities or were forced to move outside of the cities altogether. Jews were also given special garments to wear so they could be easily identifiable. These tactics angered the non-Muslims and drove them to assist in the more vigorous attempts of the Christians to drive out the Muslims.

—Monique Vallance

Bibliography

- Kennedy, Hugh. *Muslim Spain and Portugal: A Political History of al-Andalus*. London: Longman, 1996.
- O'Callaghan, Joseph. *A History of Medieval Spain*. Ithaca, NY: Cornell University Press, 1975.
- Watt, William Montgomery, and Pierre Cachia. *A History of Islamic Spain*. Piscataway, NJ: Transaction Publishers, 2007.

Islamic Law—Sharia

Islam teaches that the basic human problem is ignorance; consequently, humans need guidance to achieve salvation. Following Islamic law or Sharia leads one to be rightly guided on the path to salvation. Sharia developed from the need for specific guidance on personal questions. Specific guidance to questions was given as a fatwa by religious scholars and judges.

Islamic law was developed from the Quran and from the hadiths. The Quran (scripture) is believed by Muslims to have been given as revelation to Muhammad by an angel from Allah. The hadiths (traditions of sayings and deeds) were recorded after Muhammad's death. They contain reports of his behaviors and sayings (*sunnab*). Muslims believe that Muhammad lived and spoke things that can be used for guidance. In effect, the hadiths are coequal with the Quran. The combination of the hadiths of Muhammad and the Quran are the basis for Sharia.

► SHARIA AND ENGLISH COMMON LAW

Sharia law and English common law were both produced during the Middle Ages and were the products of reasoning by individual judges in individual cases in a process that is called casuistry. Both developed to serve the needs of a developing community: religious in the case of Sharia, civil in the case of common law. Neither system emerged from statute or a law code but instead both evolved more or less on a case-by-case basis. In that sense, both are organic bodies of law, closely reflecting their political and social contexts. In neither society was there a separation of religion and state. Both spread to new lands far beyond their origins.

Sharia came first, developing after the death of Muhammad (632 CE) and the great successes of his followers. New situations arose in which legal decisions were necessary, making the decisions unprecedented. Ancient customs of the desert did not provide adequate legal principles for making a decision. Sharia supplied the need.

Sharia developed from Islamic judges making decisions in the areas of life that were encouraged, permitted, neutral, discouraged, and prohibited. The decisions were intended to provide Muslims with guidance in matters of conscience. The judges were not part of an organized legal system but instead were part of an informal system. Their opinions were binding upon their consciences. The key legal principles for reasoning about the facts of a case were found in the Quran, the hadiths, elements of Roman law adopted from the Byzantines, and other ancient traditions.

Theoretically, Sharia covered all types of cases that could arise in an Islamic society, but in common practice the caliphs, sultans, sheiks, and others kept some legal matters, especially those involving political offenses or money, under their control.

Over a roughly 300-year period (700–1000 CE) the schools of Islamic law that arose developed a body of binding opinions. By around 1000 Sharia was fairly fixed.

In contrast, English Common Law began after the Norman Conquest (1066 CE). Over a 200-year period the kings of England sent itinerant judges on judicial circuits around the realm. Using reason, the older Anglo-Saxon unwritten customary law, and some other sources, they developed the law common to all of England and the establishment of precedents.

The English judges became legal specialists in three types of royal courts, turning written opinions in individual cases into a growing body of law between 1100 and 1300. These courts were the Court of Common Pleas, the Court of King's Bench, and the Exchequer of Pleas. By 1300 the legal principles of the Common Law were increasingly fixed as they were in Sharia. However, to prevent injustices arising from the rigidity of the Common Law, decisions mandated a fourth type of court (Chancery) to provide justice (equity).

An important commonality between Sharia and Common Law was in the influence of religion. Sharia was believed to be the interpretation of divine will. Common Law judges were also appealing to the divine by finding the universal moral principles of all peoples.

—Jack Waskey

Sources

Hallaq, Wale B. *The Origins and Evolution of Islamic Law*. Cambridge, UK: Cambridge University Press, 2005.

Hudson, John. *The Formation of the English Common Law: Law and Society in England from the Norman Conquest to Magna Carta*. New York: Longman, 1999.

The content of Sharia includes the divine decrees of Allah. The decrees are binding upon everyone. These rules include duties owed to Allah (*ibadat*). The word *ibadat* comes from the word for slave (*abd*), and thus the Muslim believer is the slave (*abd*) of Allah in that his word is the believer's command. In contrast, duties that are owed to people are called *muamalat*.

No human actions are to be found outside of Sharia. It places all of human behavior inside of five categories. These are things that are obligatory (*fard*), things that are recommended (*mandub*), things that are permitted (*mubah*), things that are discouraged but not prohibited (*makruh*), and things that are absolutely forbidden (*haram*).

Muslims believe that the Quran is the revealed will of Allah; however, to apply the revelation to human actions requires the practice of *fiqh*, which is the science of jurisprudence. The rules for governing life are derived from the issues of life and the data of the Sharia. Another tool used to develop Islamic law is analogical reasoning (*qiyas*). It was to be used when the other rules could not provide an answer to a question.

The rapid pace of the Arab Muslim conquests pressed its rulers to create a system of order that was comprehensive enough to control all of society. At first the Muslim Arabs had only their traditional ethical codes. However, as people in the conquered parts of the Byzantine empire converted to Islam, they brought some of the elements and practices of Roman law to the development of Islamic law. One figure that was adopted was the Roman magistrate, who became a *qadi*, or judge, who applied the law.

The goal was to create a society so ordered that morality, social relations, economics, and politics were all governed by the religious law of Sharia so that every aspect of the lives of individuals, of business life, and of sociopolitical life were regulated by it. Also regulated are the religious and ritual rules that govern fasting during Ramadan, foods that can be eaten, contracts, worship, payment of alms, sumptuary rules, and even the attitudes that are permissible when choosing a spouse.

Many schools of Sharia emerged during the early history of Islam. Eventually four schools (*madhabib*) acquired large followings among Sunni Muslims. Each Sunni school took its name from its leading legal scholar. The schools that became the main schools that set the standards were the Maliki, Hanafi, Al Shafii, and the Hanbali.

The Maliki school was founded by Malik ibn Anas (ca. 715–796). A conservative-minded individual, he worked in Medina. His jurisprudence was widely received in North and West Africa.

The Hanafi school was named after the legal scholar Abu-Hanifa an-Numan (699–767). It became the school with the greatest number of adherents in India, Pakistan, Bangladesh, Turkey, and Afghanistan.

The Al-Shafii school was founded by Abdullah Mohamed Ibn Idris Al Shafii (767–820). It arose in Egypt and expanded into Syria, Indone-

sia, and East Africa. Al Shafii created a widely accepted jurisprudence. He argued that there were four sources of law (*usul al-fiqh*) that stand in a definite order of rank. The first is the Quran with its commandments of Allah. The second is the *sunnah* of the prophet if transmitted by a valid hadith. The third is the legal scholar (*faqih*) who may look for consensus (*ijma*) of the community in the past. The use of consensus (*ijma*) is derived from a saying of Muhammad's that declared that the Islamic community shall never agree on an error. This means that the consensus of the learned and pious of previous generations and the contemporary community can be trusted as a sure guide.

The strictest of the four schools was the Hanbali school, founded by Ahmad ibn Hanbal (780–855). It rejected innovation and adopted traditionalism.

Shia Islam developed its own schools of Islamic law. The two major Shia schools were the Ja'fari and the Zaydi. The Ja'fari school takes its name from Ja'far al-Sadiq (702–765), the sixth imam of the Twelver Shia. The Shia Zaydi (Zaydiyyah) school developed among the Zaydis of Yemen. They are followers of Zayd ibn Ali, the grandson of al-Husayn ibn Ali.

Other schools of ancient Islamic law were the al-Ibadiyyah (Ibadi), Thahiri, Sufian Al'thawree, Sufian bin O'yayna, and Layth bin Sa'ad schools. The al-Ibadiyyan school was founded in Oman about 50 years after Muhammad's death. Neither Sunni nor Shia, it took its name from 'Abdullah ibn-Ibad at-Tamimi (fl.685), a Kharijite.

The Thahiri school of jurisprudence was developed in Andalusia by Ali ibn Hazm (fl.1015). He advocated relying exclusively on the literal meanings of the Quran and the Sunna.

The great bulk of Sharia was formulated in the Middle Ages. It was closed to changes by the 1200s.

—Jack Waskey

Bibliography

- Burton, John. *An Introduction to the Hadith*. Edinburgh, UK: University of Edinburgh Press, 1994.
- Coulson, N. J. *A History of Islamic Law*. Edinburgh, UK: University of Edinburgh Press, 1999.
- Schacht, Joseph. *An Introduction to Islamic Law*. Oxford, UK: Clarendon, 1982.

Swarup, Ram. *Understanding the Hadith: The Sacred Traditions of Islam*. Amherst, NY: Prometheus, 2002.

The Mutazilites and the Evolution of Sunni Orthodoxy

The Mutazili were an influential Muslim theological tendency and quasi-political faction that flourished principally in Baghdad from the eighth to the eleventh centuries CE. Mutazilism seemed to be on the verge of becoming the orthodox position of the Abbasid caliphs but ultimately fell out of favor and was suppressed as a heresy.

The Mutazila represent the early philosophers and theologians in the development of Islamic thought. Whereas schools (*madhhabs*) within Islam are most often associated with jurisprudence (*fiqh*), the Mutazili focused almost exclusively on the more speculative topics of philosophy and theology. They adopted a rationalist approach to their philosophical method that incorporated logical reasoning, materialism, and elements of Hellenistic philosophy. This represents a turn in the development of Islamic theology. Whereas earlier focus had concentrated on the different positions within Islam, the Mutazila engaged Muslim and non-Muslim approaches and subsequently developed an early apologetic tradition within Islam. Though the school itself did not continue much beyond the ninth century, its influence carried on in other traditions, such as the Ibadis and Twelver Shia. Mutazili influence was not confined to Islam. One can also find Mutazili elements within the Jewish philosophy of that period. It was a short-lived school that has had a lasting influence.

The theological school of the Mutazila arose in the early eighth century in Basra. Mutazili theology was strictly rationalist. All fundamentals of religion, such as the existence of God, his attributes, and the nature of good and evil, were to be known by reason rather than revelation, and revealed texts must be judged and interpreted by reason.

Mutazili doctrine was developed on the basis of five principles:

1. *Tawhid*, uniqueness of God. This involved rejection of anthropomorphism and corpo-

reality of God and denial that his attributes are additional to his essence.

2. *Adl*, justice. God is just; he does not create or will evil, although he is all-powerful. He gives humans freedom to act and does not impose on them what is beyond their capability.
3. *Al-Waad wa l-waid*, promise and threat. God will reward the obedient in the hereafter and punish the disobedient unless they repent before death.
4. *Al-Manzila bayn al-manzilatayn*, the intermediate position of the unrepentant grave offender.
5. *Al-Amr bi l-maruf wa l-nahy an al-munkar*, the obligation to order what is good and prohibit what is reprehensible.

Concerning the imamate (caliphate), the Mutazila held that caliphs lost their legitimacy by acts of injustice and oppression. The Mutazila upheld the legitimacy of the first four caliphs but repudiated the legitimacy of Muawiya and most later caliphs.

Under the early Abbasid caliphate, the school could propagate its teaching relatively freely and spread to most regions of the Muslim world. Its systematic theological thought was developed in debates with Sunni, Shia, and Kharijite schools and in refuting non-Muslim, especially dualist and trinitarian Christian, religious thought. In the late eighth century two prominent theologians, Abu l-Hudhayl al-Allaf (d. 840) and Ibrahim al-Nazzam (d. 845), were competing for the leadership of the school, and their distinctive views significantly influenced its further development. The inquisition (*mihna*), which the caliph al-Mamun (813–833) instituted against the opponents of the doctrine of the created nature of the Quran, is often erroneously described as the Mutazili inquisition. Al-Mamun in fact upheld divine determinism against the key Mutazili doctrine of justice and human free will and was advised by non-Mutazili theologians. The Mutazila, however, asserted the created nature of the Quran as did other theologians. When the caliph al-Mutawakkil (847–862) reacted against the inquisition and backed traditionalist Islam, the Mutazila became subject to government persecution.

In the later ninth century, the teaching traditions of the Mutazila were further elaborated and expanded beyond the confines of theology, especially by the development of an intricate conceptual framework, theories of natural science, and legal methodology (*usul al-fiqh*). Two major branch schools, the Basran and the Baghdad, now became established. The Basran school doctrine was basically defined by Abu Ali al-Jubbai (d. 915) and by his son Abu Hashim al-Jubbai (d. 933), who critically modified some of his father's teaching. The Baghdad school was headed by Abu l-Qasim al-Balkhi al-Kaabi. In Sunni Islam, Mutazili theology became mostly associated with the Hanafi legal school. Among the Shia, it was now broadly adopted by the Zaydiyya and to some extent by the Imamiyya (Twelvers). At the same time, two major antagonistic theological schools, the Ashariyya and the Maturidiyya, arose and upheld Sunni traditionalist dogma against Mutazili rationalist theology. The Ashari school was founded by Abu l-Hasan al-Ashari (d. 936), a pupil of Abu Ali al-Jubbai, who adopted a Hanbali creed. The Maturidi school was founded by Abu Mansur al-Maturidi (d. 945) in Transoxiana, who criticized Mutazili teaching on the basis of the Hanafi fiqh, a school of Islamic jurisprudence.

Mutazili theology spread at this time also outside Islam, especially among Jews, both Rabbanites and Karaites. Fragments of works by Mutazili authors of this age have been preserved in the storerooms of synagogues in Cairo. In 1027, a few years after the death of Abd al-Jabbar, Rayy was sacked, however, by Mahmud of Ghazna, who burned the libraries of the Mutazila and prohibited their teaching in the name of Sunni orthodoxy. The school never quite recovered from this blow, as successive governments sought to suppress it. Only in Khuwarizm in central Asia was Mutazili theology still openly taught, and it prevailed among Hanafi scholars for some centuries.

The school of Abu l-Husayn al-Basri was invigorated a century later in Khuwarizm by Rukn al-Din Mahmud ibn al-Malahimi. Ibn al-Malahimi (d. 1141) originally belonged to the Bahshamiyya but adopted the teaching of Abu l-Husayn and elaborated it systematically in his books. He undertook in particular to counter the philosophi-

➤ ABU L-HUDHAYL AL-ALLAF— MUTAZILITE STALWART

Abu l-Hudhayl al-Allaf (ca. 751–840) was a primary force in the shaping of Mutazila thinking in particular and Islamic theology in general. His legacy is remarkable, especially since none of his writings survived. His ideas are known only through the way he influenced the thought of others. Abu l-Hudhayl was an apologist for Islam, and he forged his thinking in the refutation of other philosophical and religious approaches. However, in the process of doing so, he maintained openness in adopting some of the methods of his opponents. In particular, he drew upon Aristotelian philosophy and placed an emphasis on atomistic metaphysics. His stress on these topics would define theological and cosmological debate within Islam for generations to come. His openness to these ideas was predicated on his emphasis on reason as a way to apprehend truth. He taught that the source of truth was not confined revelation alone, which may lead one to disassociate Islamic theology with the ideology of others. Instead, by championing the use of reason, he expanded the points of contact among Islam, Greek philosophy, and other religions. In the end, he is remembered as a staunch advocate of Islam while introducing Islam to the philosophical approaches of others. This earned him the distinction of being one of the first speculative theologians whose approach would expand the scope of Islamic thought.

—Abdulrahman Al Salimi

cal theology and metaphysics of the philosopher Avicenna (980–1037) and his school and wrote a major refutation of their theories. Al-Basri's work became influential among the Zaydi and Imamiyya (Twelvers) Shia but remained largely unknown in Sunni Islam.

—Abdulrahman Al Salimi

Bibliography

- Astren, Fred. *Karaite Judaism and Historical Understanding*. Columbia: University of South Carolina Press, 2004.
- Ben-Shammai, Haggai. "Kalam in Jewish Philosophy." In *The History of Jewish Philosophy*, edited by Daniel H. Frank and Oliver Leaman. London and New York: Routledge, 1997.

Frank, Richard M. *Beings & Their Attributes: The Teaching of the Basrian School of the Mu'tazila in the Classical Period*. Albany: State University of New York Press, 1978.

Griffith, Sidney H. *The Beginnings of Christian Theology in Arabic: Christian-Muslim Encounters in the Early Islamic Period*. Aldershot, Hants, UK, and Burlington, VT: Ashgate, 2002.

Wolfson, Harry Austryn. *The Philosophy of the Kalam*. Cambridge, MA: Harvard University Press, 1976.

A Historical Controversy— To What Extent Did Religious Pluralism and Toleration Prevail in Muslim Spain before 1000 CE?

At the time of the Islamic invasion in the early eighth century, the majority of the population of the Iberian Peninsula had been Roman Catholic; there were also significant Jewish communities in the region, perhaps dating back as early as the Roman empire. Muslim attitudes toward Christians and Jews in the conquered western Mediterranean territories under Andalusī Umayyad rule (756–1031 CE) had largely been one of tolerance, defined as consideration for the beliefs of what were called the People of the Book (*ahl al-kitāb* in Arabic), referring to the other Abrahamic faiths with a sacred or revealed text. Christians and Jews were held accountable to their own religious courts and often lived in their own areas of the city; however, they were required to pay higher taxes and oftentimes had social or other financial restrictions placed on them with varying levels of compliance and/or enforcement. Nevertheless, geographical proximity and prolonged economic and cultural contacts among the three faiths in Al-Andalus (the Arabic name for Islamic Spain) in this period has often been described by the Spanish term *convivencia*, a word first used by the renowned Spanish historian Ramón Menéndez Pidal and later expanded upon by his student, Américo Castro. *Convivencia* can be loosely translated as “coexistence,” but some historians have questioned the rather rosy picture of cross-confessional relations that Castro depicted in his writings.

One recent effort considering this controversy can be found in the writings of a specialist in Islamic Spain, María Rosa Menocal, in her work titled *The Ornament of the World: How Muslims, Jews, and Christians Created a Culture of Tolerance in Medieval Spain* (2002). Menocal's thesis stresses the positive interaction of the different religious groups in the region, and her goal is to reclaim the history and literature of Al-Andalus rather than to dismiss its importance, as medieval European historians typically do, or to view the period nostalgically, as Arab and Muslim historians have often done. Her work is in part a series of vignettes that cover the entire period of Islamic rule in the region (711–1492 CE) as well as a concluding chapter considering the Moriscos, Muslims living under Christian rule who were ultimately expelled from Spain in the early seventeenth century. These literary and historical accounts, when applied to the broader context of the history and culture of Al-Andalus, not only demonstrate the largely peaceful coexistence and exchange under most periods of Muslim rule that typified relations among the different confessional groups in Islamic Spain but also is a reflection of the powerful long-term influences of this region on the history and culture of what will become the Renaissance in western Europe and thus an important foundation of the modern Western world.

In contrast to Menocal, Bernard Lewis, who has published numerous books on Islam and relations with Christians and Jews and the West, subscribes to a more conflictive and confrontational approach in his writings. Rather than considering coexistence or *convivencia*, Lewis emphasizes a theory based on the clash of cultures whereby these religious traditions were more often in conflict and competition than cooperation. His writings are not specific to Islamic Spain but instead cover the whole gamut of what has traditionally been considered the Islamic and/or Western worlds. He writes in broad general terms and often takes his studies up to the present day. In his book *Islam and the West* (1993) Lewis presents his own definitions of terms and suggests in the last chapter that coexistence (he does not use the term “*convivencia*”)

denotes equality and that tolerance indicates that the ruling group allows the minority to benefit from and appreciate the same privileges and rights as the dominant group, a kind of separate but equal philosophy rather than one of emphasis on cultural cooperation and exchange, as Menocal stresses.

By the time of the last Islamic dynasty of Al-Andalus, the Nasrid Kingdom of Granada (1237–1492), 300 years of Christian expansion southward, and the frequent warfare along the borders had rendered *convivencia* a thing of the past. However, in the earlier centuries of Islamic Spain under the Andalusi Umayyad caliphate, tolerance, defined as consideration of and allowance for (but not necessarily acceptance of) different religious traditions, was the norm under the Andalusi caliphate. There were occasional exceptions, of course, but the overall concept of

coexistence is one of the enduring legacies of Islamic Spain.

—April Najjaj

Bibliography

- Lewis, Bernard. *Islam and the West*. New York and Oxford, UK: Oxford University Press, 1993.
- Mann, Vivian B., Thomas F. Glick, and Jerrilyn D. Dodds, eds. *Convivencia: Jews, Muslims, and Christians in Medieval Spain*. New York: George Braziller, 1992.
- Menocal, María Rosa. *The Ornament of the World: How Muslims, Jews, and Christians Created a Culture of Tolerance in Medieval Spain*. Boston: Little, Brown, 2002.
- Meyerson, Mark D., and Edward D. English, eds. *Christians, Muslims, and Jews in Medieval and Early Modern Spain: Interaction and Cultural Change*. Notre Dame, IN: University of Notre Dame Press, 2000.

■ Introduction: Early Medieval Monasticism

Monasteries are religious institutions in which religious devotees live an ascetic life, renouncing wealth and married life and promising obedience to the rules of the monastery. Many early medieval religions had (separate) monasteries for both men and women. The most numerous and historically important monasteries were among Buddhists and Christians, but Daoists, Manicheans, Hindus, and others supported varieties of monastic institutions.

The earliest Buddhist monasteries arose in the late centuries BCE as retreats for wandering Buddhist monks to take refuge during the rainy season. By the early medieval age, Buddhist monasteries had developed into year-round all-season institutions devoted to education and religious practices. A few monasteries became virtual cities, with thousands of monks. Buddhist monasteries were often supported by donations from the pious laity, often wealthy merchants who sought, by their donations, to win religious merit. Kings, emperors, and other

rulers often founded monasteries and endowed them with land and enserfed peasants to supply an income to support the monks.

Wealthy merchants and local rulers along the Silk Roads established many monasteries. These monasteries functioned not only as institutions to dispense religious solace but also at times hostels for pilgrims, sources of travel information, and, occasionally, depots for trade goods. A number of monasteries on the Silk Roads, especially those at Dunhuang, were institutions at which linguists translated Buddhist scriptures from Sanskrit to Chinese and other languages.

Some monasteries became great educational institutions, the leading universities of their times. The great monastery and university of Nalanda in Bihar, India, has been called the Harvard and Princeton of early medieval South and East Asia. Thousands of students from Japan, Korea, China, Southeast Asia, central Asia, Sri Lanka, and India traveled to Nalanda. It is reported that

in the eighth century, Nalanda housed about 10,000 student monks.

In its early centuries in China, Buddhism was a monastic religion. When Buddhism arrived in China, one of the first things established was the White Horse monastery. After the fall of the Han dynasty, Buddhism began to make serious inroads into Chinese culture, and many royal Chinese converts favored the religion by founding monasteries and endowing them with land and peasants to cultivate it. Over the centuries, Chinese Buddhist monasteries became wealthy, and many Chinese men and women flocked to the monasteries, escaping the taxation and labor burdens imposed by the state. In 842, in a paroxysm of antiforeign sentiment, the Tang dynasty proscribed Buddhism and other “foreign” religions. It is reported that in the persecution thousands of monasteries were suppressed and hundreds of thousands of monks defrocked (returned to civil life).

The earliest Christian monasteries grew up in the Egyptian desert toward the end of the third century. Christian monasteries had many similarities to Buddhist monasteries, but Christian monasteries were more often self-supporting instead of depending on alms from the laity. Christian monasteries were retreats from the profane world for the devout.

Christian monasteries had somewhat the same function in Christian societies as they had in Buddhist societies. Their basic role was to pray for the welfare of their society, but they also took on other roles. After the collapse of Roman authority in western Europe, the monasteries became the refuge of learning and the source of much education. Monasteries trained the officials who staffed the bureaucracies of the new European states. In the monasteries, monks laboriously copying ancient texts preserved some of the learning of classical civilizations. Monasteries were established in pagan areas to convert the people.

Some Christian monasteries, like their Buddhist counterparts, became wealthy from gifts of land and peasants. In the early medieval age, monasteries were a central element in the religious, political, and economic lives of their host societies.

—Wilfred J. Bisson

Early Medieval Buddhist Monasteries

Although monasteries may have existed prior to the emergence of Buddhism and Jainism, those two faiths have the oldest continuing monastic tradition of any religion. Both Buddhism and Jainism, which originated about the middle of the first millennium BCE, were primarily monastic creeds from their beginnings. They taught that in order to achieve enlightenment or salvation it was necessary for the believer to renounce ties to the mundane world, including especially family, and devote himself to acquiring merit. Buddha’s early followers were wandering ascetics, begging for their sustenance from pious laypeople during most of the year, but when the rainy season came they gathered in communal establishments to wait out the weather. In time, this custom of living in communal establishments extended from just the rainy season to encompass the rest of the year, and communal life in fixed abodes became the norm. This was the origin of the Buddhist monastery.

During the eight or nine centuries, from the emergence of Buddhism to the period under discussion, Buddhist monasteries had become numerous and powerful in India. (Note: The chronology of early Buddhism is a subject of controversy.) By the beginning of the early medieval age, Buddhist monasteries had established themselves in central Asia, China, and Southeast Asia, and in the next centuries they would be planted in Korea, Japan, and Tibet.

Both men and women were members of (usually, but not always separate) Buddhist monasteries. Monks (*bhikkus*) were more numerous than nuns (*bhikkunis*), and the *Vinaya* (compilation of monastic rules) specified that bhikkunis should be deferential to bhikkus. Bhikkunis were subject to many more rules than were bhikkus. Both male and female were enjoined to live chaste lives, to have only a few personal possessions, to be modest, and to be moderate in all appetites. The principal duty of monastics was to accumulate merit by living lives of purity, prayer and meditation, and, especially among the Mahayana, the extension of compassion to all sentient beings.

The Vinaya limited monks and nuns to one meal a day, usually eaten before noon. In India and Southeast Asia monks and nuns were expected to get their food by begging, and it was the obligation of laypeople to give them food. A monastic was required to eat whatever was given him, with the exception of meat if the monastic thought that the animal was killed specifically to feed him. In China, Korea, Tibet, and most of Japan, begging incurred negative social sanctions, so in those lands food was given to the monasteries in bulk and prepared (usually by laymen) in the monastic kitchens.

Many Buddhist monasteries operated schools for the laity, and some, such as Nalanda and Takashila, were famed throughout the Buddhist world of India, Southeast Asia, East Asia, and central Asia as leading institutions of higher education, universities that were the early medieval equivalent of Harvard or Oxford. Buddhist monasteries, especially in central Asia and elsewhere on the Silk Roads, often served as hostels for traveling merchants and pilgrims. Monasteries on the Silk Roads also are said to have been more directly involved in trade, sometimes serving as depositories for trade goods and perhaps assisting in the transfer of funds and payments. Buddhist monasteries, located as they were throughout the eastern half of the Eastern Hemisphere, formed a network of communication and intelligence sharing, more dependable than any system of diplomatic couriers of the time.

For several centuries in the middle of the first millennium CE, Buddhist monasteries were the locus of great political power in several Asian countries. Buddhist doctrine served to legitimate rulers, and rulers reciprocated by granting monasteries land and privileges. In China and throughout the rest of East Asia, monasteries were supported by grants of land and the enserfed peasants who worked it. These monastic estates, both land and serfs, were exempt from taxation, as were the monastics who were supported in this way. Monks who went as missionaries to new states, such as Korea's three kingdoms, Japan, or the kingdoms of Southeast Asia, frequently served as advisers to the ruler and staffed the nascent bureaucracy of many lands.

The eighth century witnessed the climax of the political power of the Buddhist monasteries in some East Asian states. In the eighth century, Buddhist monasteries that surrounded Nara, Japan's early capital, grew so powerful that Emperor Kammu moved the capital to Heien (Kyoto) in 794 to escape their tutelage. In the succeeding centuries, some Buddhist monasteries in Japan and elsewhere maintained private armies, sometimes consisting of armed monks. Toward the end of the first millennium CE, armed monks repeatedly intervened in the political affairs of Heian, Japan's capital.

In China in the ninth century, the last of the Tang dynasty, a severe backlash against the power of Buddhist monasteries nearly destroyed Buddhism in China and permanently diminished its influence there. By the 840s, Buddhist monasteries had, collectively, become the largest landlord and the most potent economic force in China. The monasteries' control of great estates and numerous serf-peasants effectively removed these estates from the tax rolls and the peasants from those available for conscription for *corvée* labor or military service. Likewise, the monks were exempt from state labor and military service. Buddhism was charged with being a foreign religion, incompatible with Chinese culture. It was declared an antisocial religion, and the monks' celibacy was deemed antithetical to the filial piety demanded by Chinese mores. From 841 to 845, a thorough and savage persecution of Buddhism (and other "foreign" religions) resulted in the confiscation of many monastic estates, the defrocking and returning to lay life of more than a quarter of a million monks, the freeing of hundreds of thousands of monastic slaves, and the consequent swelling of the tax rolls. Although the persecution ended in 845, Buddhist monasteries never regained their previous position of power and influence in China.

In India, Buddhist monasteries were most influential in the northwest and the northeast. These were the areas that would, in the second millennium CE, become strongly supportive of Islam. In these areas, Buddhist monasteries received great patronage of the rulers, especially the Pala dynasty of Bengal (750–1174). The Pala dynasty, although centered in Bengal, in the first

half of the ninth century controlled a vast swath of territory reaching across northern India to what is now Afghanistan. Wherever its rule prevailed, Buddhist monasteries prospered. The most important of these monasteries was Nalanda, on which the Pala kings lavished land and favors. In the tenth century, local Hindu regimes ousted the Palas from most of their territory except that in the northeast: Bengal and Bihar. With the Palas went the royal patronage for the Buddhist monasteries. In 1174 a Hindu dynasty, the Senas, overthrew Pala power in Bengal, and royal patronage of Buddhist monasteries in India ended.

But already, in the beginning of the eleventh century, Muslim rulers from Afghanistan, starting with Mahmud of Ghazni (973–1030), had been leading marauding raids into western India, sacking Hindu temples and Buddhist monasteries. As Muslims, they had a special abhorrence for monasteries and not only destroyed the buildings but also killed many monks. By the end of the twelfth century the Muslim raiders had conquered most of northern India. In 1193 a Muslim force destroyed Nalanda and massacred thousands of monks, burning some alive. Buddhist monasteries, and with them the Buddhist religion, disappeared from India.

Buddhist monasteries continued to thrive, however, in other lands. Tibet was a closed Buddhist theocracy governed by Buddhist monks until the communist invasion in 1950. Buddhist monasteries and nunneries still flourish in most of Southeast Asia and Sri Lanka, and they still exist in China, Korea, Japan and Vietnam.

—Wilfred J. Bisson

Bibliography

- Ahir, D. C. *Buddhism Declined in India: How and Why*. Delhi: B. R. Publishing, 2005.
- Henry, Patrick, and Donald Swearer. *For the Sake of the World: The Spirit of Buddhist and Christian Monasticism*. Minneapolis, MN: Fortress Publishing, 1989.
- Prebesh, Charles. *Buddhist Monastic Discipline*. New York: Routledge, 2006.
- Reischauer, Edwin O. *Ennin's Travels in Tang China*. New York: Ronald, 1955.
- Thaper, Shankar. *Buddhist Monasticism in Theory and Practice*. Kathmandu: Walden Book House, 1995.

Christian Monasticism to 1000 CE

During the late antique and early medieval periods, Christian monasticism grew from a marginal movement into an integral and important element in both West European and Byzantine society. While the term “monasticism” is commonly used to refer to the pursuit of communal religious life in a monastery or nunnery, a variety of the devotional practices that developed between the third and tenth centuries can be called monastic. Not all of these practices involved individuals living in common, but they did share certain traits: a highly structured life centered around prayer and religious meditation, abdication of personal ownership of property, restriction of bodily desires through voluntary celibacy, fasting, physical discipline, and a desire to retreat from the secular world.

Monasticism was not a Christian invention. It was an important element of Buddhist religious practice for at least three centuries before the time of Christ, although Buddhist monks and nuns tended to be more closely tied to surrounding lay communities than had the earliest Christian monks. While there is not direct evidence that Buddhist monasticism directly influenced the development of Christian monasticism, it may have done so indirectly through the incorporation of Buddhist ideas into Manichaeism. The Manichaean elect lived an ascetic, monastic life, and Manichaeism still had a firm presence in Egypt at the time that Christian monasticism began there. The main influences on the early development of Christian monasticism, however, appear to have been New Testament accounts of the lives led by the first Christians and a tradition of Jewish asceticism as exemplified by the Nazirites, the Essenes, and the “Therapeutae” described by Philo of Alexandria (20 BCE–50 CE).

Christian monasticism began in the deserts of Egypt in the late third century CE. The earliest practitioners of monasticism did not generally congregate in communities: although some monks did live near each other, with younger monks frequently gathering around an older, more experienced monk who served as an adviser and teacher, devotional pursuits were car-

ried out privately and individually. Although not the first of the desert ascetics, Antony of Egypt (d. 356) was the most famous and influential and attracted a large number of disciples. One of these disciples, Pachomius (ca. 290–346), organized the first formal monastic communities and may have also written the first set of monastic regulations, or rules. In a typical Pachomian monastery, monks or nuns would each have their own cells, but they would gather for meals, prayer, and communal labor, generally cloth or basket weaving. Property was held in common, and food and clothing were distributed from a central storehouse. Another of Antony's disciples, Hilarion (ca. 291–371), introduced monasticism to Palestine. By the mid-350s, Basil of Caesarea (ca. 330–379) was able to make a tour of established monastic communities in Egypt, the Levant, and parts of what are now Syria, northern Iraq, and eastern Turkey.

Basil himself became a monastic leader, and his *Rule of St. Basil* eventually became the basis of monastic life in the majority of monasteries in the Greek East. Eastern monasticism placed a heavy emphasis on prayer and the frequent repetition of the liturgy. Some monasteries, such as the Studeon in Constantinople, were even organized to provide perpetual prayer, with the monks divided into shifts so that a group was always praying at any given hour of the day or night. Basil's *Rule* allowed for a variety of institutional structures for the monastic life, and throughout the Byzantine period tight-knit enclosed monasteries coexisted with communities of isolated cells spread around a common meetinghouse and individual ascetics, some of whom attracted large followings. Monastic communities for women were also popular, although they tended to be much more closely regulated and regimented than male communities. While withdrawing from the secular world was one of the main goals of Eastern (and Western) monasticism, monks in the Byzantine empire frequently became involved in the theological disputes of the Greek Church. It was not unheard of for mobs of monks to demonstrate and even riot during the various early medieval debates over Christology, and the Iconoclast Controversy of the eighth century saw widespread imperial persecution of iconophile monks.



Saint Benedict of Nursia (480–547) prays with monks. Fresco from the Abbey of Monteoliveto Maggiore Siena, about 1500. (The Art Archive/Corbis)

Monasticism first began to spread to the Latin West in the middle of the fourth century. Martin of Tours (ca. 316–397) founded a monastic community near Poitiers around 360 and another near Tours after he became the bishop of that city in 371. Martin's monasteries followed the Egyptian model, with Martin and his disciples living and praying in separate cells. Egyptian monasticism was also the inspiration for John Cassian (ca. 365–ca. 435), who wrote two manuals (the *Institutes* and the *Conferences*) that would heavily influence later Western monastic writing. Cassian's contemporary, Augustine of Hippo (354–430), established communities of both men and women in his diocese and lived a monastic life with his cathedral clergy. Augustine's writings on the monastic life would prove influential in forming what would later be called the Augustinian Rule, but the first formal monastic rules in the Latin West were actually written by Caesarius of Arles (ca. 468–542). While Caesarius's rule for monks was eventually superseded by that of Benedict of Nursia (ca. 480–ca. 550), his rule for nuns remained popular for several centuries.

Benedict originally wrote his rule for the monastic foundation at Monte Cassino in Italy (established ca. 520). The *Rule of St. Benedict* envisioned monasteries in which monks lived,

➤ RULE OF ST. BENEDICT

When St. Benedict wrote his *Rule* in the mid-sixth century CE, there were many varieties of monastic life. In the first chapter of the *Rule*, Benedict describes four types of monks:

“The first is that of the cenobites, that is the monastic, serving under a rule and an abbot. The second kind is that of the anchorites, that is the hermits, those who have learned to fight against the devil not by the new fervor of a conversion but by a long probation in a monastery. . . . [T]hey are able, God helping them, to fight with their own hand or arm against the vices of the flesh or their own thoughts. But a third and very bad kind of monk is that of the sarabites. . . . Being shut up by twos and threes alone and without a shepherd, in their own and not in the Lord’s sheepfold, they have their own desires for a law. For whatever they think good and choose, that they deem holy. . . . But the fourth kind of monk is the kind called the ‘wanderers around’ (gyrovagi). . . . [T]hey are always wandering and never stationary, serving their own pleasures and the allurements of the palate, and in every way worse than the sarabites.”

—Stephen Allen

Source

Francis E. Peters, *Judaism, Christianity, and Islam: The Classical Texts and Their Interpretation* (Princeton, NJ: Princeton University Press, 1990), 152.

worked, and prayed in common under the leadership of an abbot, to whom complete obedience was due. Monks were expected to be chaste, to remain in the monastery at all times (except for special circumstances), and not to own any private property. Specific hours were scheduled for work and prayer, and the rule also went into great detail about diet, the distribution of monastic goods, sleeping arrangements, provisions for the ill and elderly, and other aspects of daily communal life. The *Rule of St. Benedict* grew in popularity slowly in the first few centuries after it was created, gaining some impetus from the favor of Pope Gregory I (ca. 540–604). Emperor Charlemagne (ca. 742–814)

and his successors attempted, with some success, to impose the Benedictine rule on all of the monasteries in his realm, and by the end of the tenth century Benedictine monasticism had become the dominant form of monastic life in western Europe.

A distinct form of monasticism, perhaps also influenced by Eastern practices, developed in Ireland in the fifth century and was spread by Irish missionaries to northern Europe and eventually into Gaul and Italy, where for a time it competed for popularity with the Benedictine system. Irish monasticism was often closely tied to secular politics, with monastic and lay leaders generally being closely related. Irish monks often practiced extreme asceticism and harsh physical discipline, and the concept of being an exile for Christ (a missionary who vowed never to return home) was a popular one. By the end of the tenth century, however, the Irish form of monasticism was mainly limited to Ireland proper and some parts of the British Isles.

—Stephen Allen

Bibliography

- Bitel, Lisa M. *Isle of the Saints: Monastic Settlement and Christian Community in Early Ireland*. Ithaca, NY: Cornell University Press, 1990.
- Chitty, Derwas J. *The Desert a City: An Introduction to the Study of Egyptian and Palestinian Monasticism under the Christian Empire*. Oxford, UK: Blackwell, 1966.
- Daly, Lowrie J. *Benedictine Monasticism: Its Formation and Development through the 12th Century*. New York: Sheed and Ward, 1965.
- Dunn, Marylin. *The Emergence of Monasticism: From the Desert Fathers to the Early Middle Ages*. Oxford, UK: Blackwell, 2000.
- Knowles, David. *Christian Monasticism*. New York: McGraw-Hill, 1969.
- Morris, Rosemary. *Monks and Laymen in Byzantium, 843–1118*. Cambridge: Cambridge University Press, 1995.

Nalanda—An International Buddhist Center of Learning, 500–1200 CE

The Buddhist monastic site of Nalanda is located about 55 miles southeast of present-day Patna, India, in Bihar Province. The name “Nalanda,”

sometimes translated as “lotus,” is thought to reference the many ponds that were recorded as surrounding the site. Other possible derivations of the site’s name include a reference to the historical Buddha’s previous life, in which as King Nalanda he established his domain in this region. Nalanda was an active site of Buddhist scholarship from the fifth century to the twelfth century, although evidence of Buddhist activity in the area dates from the time of the historical Buddha Sakyamuni. Historically Nalanda was linked to the nearby royal city of Rajagrha. Rajagrha was the site of the famous “taming the wild elephant” story, one of the Eight Great Wonders of the Buddha’s life, in which a jealous monk incited an elephant to charge the historical Buddha. Rather than killing the Buddha, as the inciter had hoped, the elephant knelt before the Buddha in homage.

Nalanda as a teaching center or university is recorded in a wide variety of records including travelogues by famous pilgrims to the site, notably the Chinese pilgrims Xuanzang and I Ching, as well as within the sutras themselves. The Mahaparinirvana Sutra details the historical Buddha’s visits to Nalanda, often stopping at a nearby mango grove to give teachings and debate with the nonbelieving Brahmins. Xuanzang notes that the mango grove site was eventually bought and donated to the Buddha by 500 nearby merchants, upon which the Buddha stayed at the site for three months teaching. Ananda, one of the Buddha’s greatest disciples, argued for Nalanda as the site of the Buddha’s eventual *parinirvana*, preferring it to the site of Kusinagara, which had already been chosen by the Buddha. Several hundred years later the historical Buddha’s activities at Nalanda were commemorated with a temple built in honor of his follower Sariputra by King Asoka.

Nalanda became a great center of Buddhist learning only centuries after the Buddha’s passing. Legend has it that the site was chosen by two brothers seeking to make Nalanda once again a center of learning. Originally composed of eight temples, Nalanda quickly gained in size and prominence. The legend continues that 500 masters who came to Nalanda after the initial construction phase brought with them the entire Mahayana canon as well as additional sutras



Ruins of Nalanda in present-day Bihar, India. Nalanda was a university and Buddhist center that dates back to at least the fifth century BCE. During the Gupta dynasty, support of the kings allowed the university to expand, and it was a prime destination for scholars and Buddhist pilgrims. (Lindsay Hebbard/Corbis)

that had by then been committed to writing. Nalanda henceforth became the central repository for Mahayana texts in Asia, a fact that prompted the long and arduous pilgrimages to the site of devout clergy and laypeople alike.

Enjoying extensive and ongoing royal patronage from the Gupta dynasty (240–550 CE) and the Pala dynasty (750–1179 CE), Nalanda’s reputation for study of not only Buddhist texts and theories but also Sanskrit, logic, and competing schools of thought created a center of international renown. Nalanda produced a long list of illustrious Buddhist masters, examples of which form a veritable who’s who of famous Buddhist masters including Nagarjuna, whose lineage was carried on by Aryadeva and Asvaghosa as well as Asanga and his brother and follower Vasubandhu, author of the *Abhidharmakosa*. From the lineages of Nagarjuna and Asanga stem the two major Mahayana philosophical schools of Buddhism, Madhyamika and Yogacara. The teachings from these two main schools of thought were then widely distributed across Asia by the student pilgrims upon returning to their respective homelands.

Descriptions of the Nalanda site come largely from records left by the Chinese pilgrim Xuanzang (599–644 CE), who arrived at Nalanda in 637 and stayed for two years. By the time of Xuanzang’s arrival, Nalanda had grown into an international center of learning, with students

➤ XUANZANG, CHINESE BUDDHIST PILGRIM TO NALANDA

Much of what is known about Nalanda during its heyday is due to the extensive writings of the Tang dynasty monk Xuanzang (599–644 CE). Defying an imperial decree, he left the Chinese capital of Chang'an in 629. Heading west along what has come to be known as the Silk Roads, he traversed some of the most dangerous routes of his time, braving desert and bandit alike to cross central Asia on his way to India. Throughout his journey, he recorded the great sites of the region, many of which are still extant today. After his arrival at Nalanda, he became the disciple of Silabhadra, abbot of Nalanda, and was initiated into the Yogacara lineage. Xuanzang's 16-year journey through central Asia and India in search of the Buddhist teachings was immortalized in the Ming dynasty epic saga *Journey to the West* (*Xiyouji*). Upon his return to China in 645, Xuanzang set about translating into Chinese the numerous scriptures he had brought back from India. He also brought back Buddhist relics and statues, which together with the scriptures were housed in the Great Wild Goose pagoda. Today a bronze statue of Xuanzang presides over the pagoda complex in Chang'an, present-day Xian.

—Karil J. Kucera

arriving from all over Asia. Xuanzang remarked not only on the physical attributes of Nalanda but also on the ritual activities occurring at the site. Marveling at the extensive size of Nalanda, at one point housing 8,500 students, Xuanzang also noted the beauty of the site, describing in detail the extensive sculptural program undertaken at Nalanda. Thanks to the support of the Gupta

kings, Nalanda benefited from the finest artisans money could buy to decorate the hundreds of buildings and shrines found there. The extensive library housing the Abhidharma and Mahayana texts was described by the Chinese pilgrim Yijing as a “four-square, like a city. There are four large gateways of three stories each. Each story is some ten feet in height. The whole is covered in tiles.” In addition to the library, other monuments found at the Nalanda site included numerous stupa housing the relics of the historical Buddha as well as those of two of his famous disciples, Sariputra and Maudgalyayana, both of whom were born not far from Nalanda and were said to have entered nirvana at Nalanda.

The Nalanda complex thrived from the fifth through the twelfth centuries, falling into ruin after the arrival of the Muslim invaders of India. The last of the Pala kings who succeeded the Gupta line in patronizing Nalanda's scholarship was King Govindapaladeva, who died in 1197. Soon after the site was ransacked and destroyed by the Muslim leader Muhammad Bhakhtyar Kalji (1197–1206), who purportedly would have spared Nalanda if the library had contained a copy of the Quran. Although visited periodically by pilgrims over the next half century, Nalanda would slip into oblivion until rediscovered in the nineteenth century by British archaeologists. Positive identification of the site came in the form of excavated seals bearing the name of Nalanda.

—Karil J. Kucera

Bibliography

- Debjani, Paul. *The Art of Nalanda*. Delhi: Munshiram Manoharlal, 1995.
- Dhammika, S. *Middle Land, Middle Way*. Sri Lanka: Buddhist Publishing Society, 1992.
- Sankalia, Hasmukhlal. *The University of Nalanda*. Delhi: Oriental Publishers, 1972.

■ Introduction: Mysticism

Most early medieval religions had a component of mysticism. Mysticism has been defined as a teaching, an experience of seeking an intuitive knowledge or even

union with the deity, or an experience of reality not rooted in logic, reason, or sensual experience. Epistemologically, mysticism is a way of knowing by experiencing an inner or transcendent reality.

By another definition, any deeply emotional religious experience is a mystical experience.

Mysticism pervaded early Christianity. The deep involvement of the Christian mass, the reenactment of Christ's passion with the culminating consumption of Christ in the Eucharist, is, to the devotee, the union or oneness with God. The union with God is the essential mystical experience of both Eastern and Abrahamic (Judaism, Christianity, and Islam) religious traditions. Early Christians sought mystical experiences also by asceticism, suffering cold and pain, renouncing sex, and sometimes starving themselves to find God. In the third century, many Christian mystics became hermits in the Egyptian desert to endure suffering as Christ suffered. This was their way of finding oneness with God.

Adherents of Eastern religions also sought salvation by embracing asceticism. For them, renouncing the pleasures of this world was aimed at release from the entanglements of the mundane world. Buddhists sought to attain release from the mundane world by deep meditation (*jhana*) that leads to a state of bliss.

In about the sixth century CE in southern India, *bhakti* devotionism led to particularly emotional mystical experiences. In *bhakti*, the devotee seeks to express his (or often her) love for the deity through chants, songs, and other ways. Another Indian mystical movement was *tantra*, which had both Hindu and Buddhist followers. Tantricism pervaded the Mahayana Buddhism of Bengal as well as that of Tibet.

Sufi is the most recognized form of mysticism among Muslims. Though the greatest development of Sufi took place after this era (300–1000), the origins date to the ninth century or even earlier.

In the seventh century, many Orthodox Christian monks fled the Muslim conquest of Egypt to find sanctuary on Mount Athos, or the Holy Mountain, a peninsula in northern Greece. Many monasteries were established on the Holy Mountain, and the monks developed the tradition of *hesychasm* in which the monk establishes a direct union with God through prayer and other devotional practices.

Mystics have often been a problem for organized religions. Since mystics seek and claim to

experience a direct knowledge and even union with God, they have little use for priestly hierarchies and institutions that seek to serve as mediators between God and the believer. Mystics are often disdainful of elaborate theology or religious law, claiming that their direct experience with God makes the law irrelevant. They are sometimes accused of thinking themselves above the law. They have often been persecuted and sometimes martyred by religious authorities.

—Wilfred J. Bisson

Early Hindu Devotional Mysticism

Devotional worship in South Asia is called *bhakti*, a word meaning “enjoyment,” implying that the devoted follower enjoys a share of his or her deity's blessings. For the devotee, this world is itself a gift from god. It is a manifestation of grace; sometimes the world is even the body of god. Devotion is a form of religion often expressed through heightened emotions of love or of longing. As a result, God in these traditions is often portrayed in image and story in personal terms rather than in abstract philosophical terms or as a formless Brahman. Emotionalism is a means of experiencing God, in seeing God in all things or in oneself. It is through the realization of the role of God in all things that one achieves the soteriological goal of liberation through devotion.

The predominant *bhakti* traditions center on the god Vishnu and his various incarnations, especially Rama and Krishna. Krishna in particular is presented in a rich array of literary narratives that support his worship through stories of his life and exploits in the *Harivamsas*, the *Vishnu Purana*, and the *Bhagavata Purana*. These stories portray Krishna as a mischievous youth, destroying demons and engaging in amorous exploits. These narratives become a source for the devotee's experience of the Lord, as the devotee can imagine himself or herself in the role of characters in the story or can experience the deeds of the Lord in a familiar geography now made sacred by devotion.

From the sixth through the ninth centuries CE the Alvars of southern India developed a prominent form of Vaishnava devotion (followers of Vishnu, his spouse Shri or Lakshmi, and

other figures related to Vishnu). They expressed a deeply personal and emotional form of devotion through their poetry. Writing in Tamil, their verses use a rich system of natural images and scenes as metaphors to express their devotion. Sometimes this poetry expresses a heightened sense of God in all things. An important characteristic of this poetry, however, is pained longing as a result of feeling separated from God, a form of devotion known as *viraba bhakti*. In particular, Nammalvar (ca. 880–930), the most famous of these poets, wrote of the dual nature of Vishnu as both a transcendent being, lacking form or quality, and yet also present in temples and icons dedicated to him, locating the Lord within the context of Tamil geography. By the tenth century CE, the theologian Nathamuni had collected the works of the Alvars in a volume titled *Nalayira Divya Prabandham (Four Thousand Divine Compositions)*. This text, regarded in southern India as a Tamil equivalent to the Sanskrit Vedas, was foundational for the Shri Vaishnava sect.

Much of the theology of bhakti is the result of the work of Ramanuja (ca. 1017–1137), an early proponent of the emerging Shri Vaishnava movement. His philosophy was that of *Vishishtadvaita* (modified nondualism), which contrasted with the monistic Advaita Vedanta of Shankara in which the world is merely appearance, a manifestation of impersonal Brahman. Ramanuja's vision was theistic: God is a personal being, and the world and everyone in it are entirely dependent upon Vishnu. Since the world is the body of the Lord, it is not simply appearance but rather an expression of God's glory. Liberation is the experience of union with the Lord and is a result of the total surrender (*prapatti*) of the devotee. This surrender led to liberation from rebirth and union with Vishnu in his heaven, Vaikuntha.

While the most prominent devotional sects focused on worship of Vishnu and his incarnations, bhakti was a component of all sectarian traditions. The Shaiva Siddhanta sect propounded a particularly theistic view of the god Shiva. In this sect, the individual soul is distinct from God and has become entangled in the physical world by karma. One could purify oneself through daily devotional rituals, entering a

state of union with Shiva at death. Despite an adherence to the belief in a fundamental distinction between the individual and Shiva, the Shaiva Siddhanta was to influence later forms of nondual Tantric Shaivism.

This period saw the rise of prominent goddess (*devi*) traditions as well. Goddess worship cuts across the spectrum of mystical practices, popular devotion, and Tantric sects. In many, the goddess is equated with the physical or natural world or is the dynamic power (*shakti*) underlying phenomena. While this creative power is sometimes identified as the Supreme Being, at other times shakti is identified as the manifestation of the abilities of masculine gods. For example, the *Devi Mahatmya* (found in the *Markandeya Purana*, dating from between the fifth and seventh centuries CE), portrays the goddess Durga as a powerful warrior, created from the combination of the powers of Shiva, Vishnu, and other gods. Paralleling this story, the goddess Kali appeared among emerging Tantric sects in Bengal in the seventh and eighth centuries CE as a ferocious, bloodthirsty goddess, associated with cremation grounds and portrayed as trampling the inert corpse of Shiva. The Shri Vidya tradition likewise identifies the goddess as the Supreme Being, closely identifying her with the sound that underlies the cosmos and invoked through mantra recitation. In this tradition, one performs meditation with mantras evoking the goddess as well as through the use of geometric diagrams (*yantra*) whose symbolism aids in visualizing the nature of the goddess.

Devotion is a powerful tool for spiritual development. Even Patañjali's *Yoga-Sutras* express the necessity of devotion to the Lord as a means of focusing one's attention in meditation. Most forms of Hindu mysticism rely on meditating on a deity. The emotional and even ecstatic states that the devotee found himself or herself in served to keep their attention solely on the Supreme, even when the god or goddess of one's devotion was to be found shining through the everyday world.

—Matthew Bingley

Bibliography

Coburn, Thomas B. *Encountering the Goddess*. Albany: State University of New York Press, 1991.

- Haberman, David L. *Journey through the Twelve Forests: An Encounter with Krishna*. New York: Oxford University Press, 1994.
- Hardy, Friedhelm. *Viraha Bhakti: The History of Early Krishna Worship in South India*. Delhi: Oxford, 1983.

Buddhist Mysticism

Buddhist mysticism ostensibly aims to achieve nirvana, the extinction or cessation of suffering, as the Buddha taught in his sermon on the Four Noble Truths. In this context, the fourth Noble Truth lays out calming (*samatha*) and insight (*vipasyana*) forms of meditation to achieve this goal. Put more positively, however, Buddhist meditation seeks to achieve an insight into the true nature of reality, to achieve that state of awakening (*bodhi*) that dispels ignorance. Mahayana Buddhism expresses this as a state in which one has insight into the true nature of reality or to achieve a complete union with the transcendent.

The most thorough early treatment of Buddhist mystical practice was Buddhaghosa's comprehensive fifth-century CE manual, the *Visuddhimagga* (*Path of Purification*). He describes calming meditation as the achievement of states of trance, traditionally listed as eight in number, in order to quiet the mind and achieve tranquility. These states have much in common with other forms of traditional yoga. Meditation is based on focusing attention on an object of concentration, such as a colored disk. The practitioner might instead focus on one of the four immeasurable qualities: kindness, compassion, sympathetic joy, or equanimity. Buddhist texts prescribe other objects suitable for meditation as well. The breath is an important object in both calming and insight forms of meditation as well as in traditional yoga. One might visualize the Buddha, recollecting his virtuous qualities. Or one might meditate on a corpse, since awareness of one's own mortality is a profound method of achieving insight into the transience of life.

Insight meditation, on the other hand, aims to increase one's awareness by being mindful of oneself or the surrounding environment. All dissatisfaction and suffering is the result of desire: either the desire for pleasant experiences or the

➤ METTA MEDITATION

An important preliminary form of meditation in Buddhism and one described in Buddhaghosa's *Visuddhimagga* is *metta* ("kindness") meditation, by which a person develops an attitude of kindness toward all others. A person starts by imagining someone he or she already loves or feels affection for (but not passionate or romantic love). By meditating on that person, he or she establishes the feeling of *metta*. With this feeling in mind, a person begins to meditate on people he or she is not as kindly disposed toward and even people he or she dislikes. Through practice, a person learns to radiate an attitude of kindness toward everyone without distinction.

—Matthew Bingley

desire to avoid unpleasant experiences. Mindfulness was thus the practice of increasing awareness while decreasing the desire to respond, and Buddhist meditation manuals such as Buddhaghosa's noted that this was, strictly speaking, the only essential method for achieving nirvana.

The monastery (*vihara*) was the traditional center of the Buddhist community (*sangha*). Like other forms of Indian mysticism, ordination entailed renunciation of possessions, property, wealth, and relationships. The novice monk or nun was expected to shave his or her head as a symbol of renunciation and to possess only what was given freely as a donation. Monks were expected to complete daily begging rounds for food, and a common term for a Buddhist monk was "beggar" (*bhikshu*). Each month, recitation of the rules of monastic discipline (*vinaya*) reminded monks of the rules they must follow.

The complex relationship between monastic and lay institutions was premised on a reciprocal relationship. The laity supported monasteries with offerings of food, gifts, and donations for construction, and the monasteries in turn provided spiritual guidance and education for communities. Royal patronage often ensured the maintenance of monastic institutions, although by the mid-first millennium CE royal patronage of Buddhist institutions in India declined, while support for Hindu institutions increased. An exception is in northeastern India, where the Pala

dynasty supported monasteries from circa 750 CE onward. Of singular note was the Buddhist center at Nalanda in present-day Bihar, the foremost educational and monastic institution of its time, where a number of influential Buddhist doctrines developed. Founded in the fifth century CE, at its height it held perhaps 10,000 students, and its destruction in 1193 marked the demise of Buddhism in the land of its birth.

Later Mahayana commentators criticized the monastic ideal as too conservative and patriarchal and argued that laypersons could follow the Buddhist path as well. A proliferation of meditative practices and devotional worship of Buddhist divinities accompanied this tendency among Mahayana followers to universal Buddhist soteriology. The monastic ideal persisted, however, in many Mahayana Buddhist settings outside of India, such as Zen in East Asia, as well as in Tibet, where monasteries also held immense political power until the twentieth century.

The bodhisattva ideal of Indian Mahayana meant a shift in the understanding of Buddhist meditation. Mahayana developed a system of stages (*bhumi*) to attain through lifetimes of practice as the bodhisattva pursued full Buddhahood. In the eighth century Kamalashila's *Bhavanakrama* (*Stages of Meditation*) described meditation as a means to better achieve wisdom and aid other beings in the path to nirvana. These perfections are qualities that one cultivates in oneself, and typically listed as six: generosity, good conduct, patience, vigor, meditation absorption, and wisdom. The sixth quality, the perfection of wisdom, was of central importance because at this stage, the bodhisattva realizes the ultimately empty, illusory, and unified nature of reality, an experience of awakening.

Esoteric Buddhism, or Vajrayana, is a form of Tantra that, like its Hindu counterpart, emphasizes secret initiation and teachings and ritual identification with a divine being. One major difference from Hinduism, however, is that Vajrayana occurs within a Buddhist soteriological framework that emphasizes distinct doctrines such as nirvana, no-self, and emptiness. In Vajrayana meditation, the practitioner identifies with a particular Buddhist deity through chanting man-

tra (sacred formulae) while meditating on a mandala (a symbolic representation of the Buddhist cosmos) or visualizing the deity and accompanied by ritual hand gestures (*mudra*). One thus achieves awakening by assuming the qualities of an awakened being through achieving a state of union with a Buddha or bodhisattva. Vajrayana practices are attested by the seventh century CE in India. From the efforts of Buddhist missionaries such as Padmasambhava (ca. eighth century CE), Vajrayana became established as the dominant form of Buddhist practice among the sects of Tibetan Buddhism.

—Matthew Bingley

Bibliography

- Buddhaghosa. *The Path of Purification: Visuddhimagga*. Seattle, WA: Pariyatti, 2003.
- Gethin, Rupert. *The Foundations of Buddhism*. New York: Oxford University Press, 1998.
- Harvey, Peter. *An Introduction to Buddhism*. Cambridge: Cambridge University Press, 1990.
- King, Winston L. *Theravada Meditation: The Buddhist Transformation of Yoga*. New Delhi: Motilal Banarsidass, 1992.
- Williams, Paul, and Anthony Tribe. *Buddhist Thought*. New York: Routledge, 2000.

Mysticism in South Asia

Mysticism in South Asia generally aims at attaining liberation or release (*moksha*) from the suffering of repeated rebirth as a result of accruing karma. In the period 300–1000 CE several of the major schools of mysticism developed. The first was yoga (“union” or “discipline”), classically presented as distilling the pure spirit from entanglement with the body. A second line of thought was Vedanta (“end of the Vedas”), which is based on metaphysical speculation in the *Upanishads* equating the essence of the cosmos (*brahman*) with one’s eternal and true self (*atman*). In this period we also see the rise of Tantric sects apart from the orthodox schools that purport to rely on the Veda.

Dating from the third century CE the Yogasutras of Patañjali present the most cogent source for the classical practice of yoga. Yoga as a method aims at the “cessation of fluctuating

thoughts” (YS 1.2), a state in which the spirit (*purusha*) reveals itself in its innate nature as pure witness, isolated from matter (*prakriti*), a metaphysical view found in the Samkhya school. When one experiences pure spirit freed from attachment to matter, one is liberated.

Patañjali’s program is called Eight-Limbed (*ashtanga*) yoga. This form of yoga involves a progressive withdrawal from outward activity to focus on finding the pure self hiding deep within. The first two of these limbs are moral restraints and observances. The moral restraints include practicing nonviolence, honesty, and celibacy; refraining from stealing; and avoiding greed. The observances include cultivating purity, contentment, austerity, self-study, and devotion to the Lord. The third limb is the most visible form of yoga today: control of physical posture (*asana*). This is commonly known as *batba* yoga and involves conditioning the body’s flexibility to rest comfortably in a variety of positions. The fourth limb is breath control, using the breath as a method of developing concentration and increased control facilitates quieting the mind. The fifth limb is withdrawal of the senses, disengaging the mind from the outside world for better introspection. The sixth limb is concentration. The yogin fixes attention on a single object for sustained periods of time. The seventh limb is the meditation (*dhyana*) during which the yogin’s attention is absorbed into a single point or object. The eighth limb is the trancelike state of intense concentration called *samadhi* at which point the mind is completely stilled. At this point consciousness is experienced in its true nature as spirit (*purusha*).

During this era, Shankaracarya (ca. 780–832 CE) developed Advaita Vedanta as an interpretation of the metaphysical idealism of the Upanishads. In contrast to the polarity of matter and spirit found in Samkhya and Yoga, Shankara taught a form of monism or nonduality (*advaita*). This reality is Brahman, the essence of the world and the self (*atman*). The world in all its diverse forms, every object one perceives, and even the variety of people in the world are all merely appearance. They are reflections, or manifestations, of Brahman, which alone is truly real. Later philosophers of Vedanta often reacted

➤ MAGIC POWERS

Patañjali’s *Yoga-sutras* present various magical powers (*siddhi*) that occur in connection with various meditations. These powers derive from deep contemplation on an object. For example, the *Yoga-sutras* claim that through meditation on the relation between the body and space, a person can levitate. Other powers include the ability to read minds, to become invisible, to have visions, and to hear things far away. But while Patañjali enumerates these and other powers, he also warns the yogin not to do yoga for the sake of gaining magical abilities because they are a distraction from the ultimate goal of achieving liberation.

—Matthew Bingley

to Shankara’s radical monism, offering more moderate approaches to nonduality that incorporated theistic elements and did not relegate the status of the world to mere appearance.

Tantric meditation (*sadhana*) is typically predicated on the divinity of the self and the correspondence between the physical body and the cosmos. Rituals and *sadhana* involve the recitation of various mantras, visualization of deities, and identification of various deities with parts of the body. These *sadhana* can be used for either identifying oneself with a chosen deity or for the sake of developing magical powers for more worldly reasons.

Even when their metaphysical beliefs are widely divergent, many of these schools of thought share similar practices. An exhaustive list is impossible due to the variety of meditative methods, bodily mortification, asceticism, etc., seen in South Asian mysticism. But a few prevalent methods stand out as unique to this milieu. Many techniques of meditation are forms of concentrating one’s attention on an object, such as the breath. Reciting a mantra, a sacred formula or chant, is another significant method. The most famous example of a mantra is the simple syllable *Om*. Closely akin to mantra is repeating praises of a deity, such as “*Om namah Shivaya*” (“*Om Praise to Shiva!*”). Other meditative practices involve visualizing one’s deity. Another

common form of meditation is visualizing the subtle channels of energy in the body. Through a combination of visualization, breath control, and mantra recitation, the meditator induces a flow of energy from the base of the spine through the energy centers (*cakra*) in the body upward to a point at a distance of 12 fingers in length above the crown of the head. This practice is called Kundalini yoga, and the union of the energy in the body with the point above the head is described as the uniting of the goddess Shakti with Shiva.

Apart from the metaphysical speculation and norms of meditative practice, mysticism in South Asia has been a reaction against the norms of social and worldly life. An important feature of South Asian mysticism is the act of renunciation (*sannyasa*). To pursue the path of spiritual liberation, one must abandon family, home, wealth, and possessions. Renunciation as a rejection of traditional caste roles is the fourth stage in traditional accounts of *dharmā*. Renunciates lead lives of homelessness, begging for food, and some gather in hermitages called *ashrama* to practice together. Also, one should not underestimate the importance placed on finding the right guru (spiritual teacher). For the novice, the guru's spiritual instruction must be obeyed scrupulously. The guru represents the body of traditional knowledge and is a living example of spiritual seeking.

The social dimensions of South Asian mysticism as well as the practices involved apply to both Buddhism and Jainism. These traditions also developed analogous modes of ascetic practice, renunciation, the need for a spiritual teacher, and the express goal of liberation from karma and rebirth.

—Matthew Bingley

Bibliography

- Bharati, Aghananda. *The Ochre Robe: An Autobiography*. Santa Barbara, CA: Ross-Erikson, 1980.
- Deutsch, Eliot. *Advaita Vedānta: A Philosophical Reconstruction*. Honolulu: East-West Center Press, 1969.
- Eliade, Mircea. *Yoga: Immortality and Freedom*. Translated by Willard R. Trask. Princeton, NJ: Princeton University Press, 1969.
- Patañjali. *Yoga: Discipline of Freedom [Yoga Sutra]*. Translated by Barbara Stoler-Miller. Berkeley: University of California Press, 1996.

Christian Mysticism

Mysticism in the Christian context generally refers to a believer's direct experience of God in a manner that is unusual both for the believer and for Christians. The root of the term mystical means "secret" or "hidden" and the mystical experience is usually taken to be a foretaste of the heavenly bliss that is promised to those who will be with God after death. Further descriptions tend to be idiosyncratic, as the mystic is forced to use human language to describe a unique spiritual encounter with the divine. The goal or experience of the mystic is often referred to as being in the presence of God, having a vision of God, or achieving a union—sometimes explicitly sexual—with God.

Scripture provides models for the Christian mystic. The Hebrew writings, or Old Testament, present several examples of patriarchs and prophets directly encountering God. The New Testament provides the Transfiguration of Jesus, Paul's being lifted to the Third Heaven, and John's Revelation. In the third century Neoplatonic writers such as Plotinus provided pagans and Christians alike with a philosophical model of the stages in the soul's ascent to the divine (The One) that quickly became a theological model. Both Neoplatonism and Christianity posited a separation of humanity from God, a descent or fall, that could be remedied by a conscious and concentrated effort to shed attachment to the natural world, enhance one's spirituality above all else, and direct one's spirit toward the divine source existence.

In the Greek-speaking Christian East, Alexandria served as a center for merging Neoplatonism and Christianity. Third- and fourth-century theologians such as Origen and Evagrius Pontus were important pioneers whose writings on spiritual ascent influenced later generations of both Greek and Latin speakers. At the same time, Christian men and women began abandoning the world for lives of prayerful isolation in the Egyptian desert. Their strict discipline and self-denial as hermits, or later in communities of monks, amounted to the *askesis*, or asceticism, that both Christians and Neoplatonists taught was necessary for the soul's ascent. Indeed, many of these earliest monks—

the Desert Fathers and Mothers—experienced God, especially the Holy Spirit, in ways that could only be described as mystical. Thus, by the mid-fourth century Christianity had a firm foundation in both mystical theology and the practice of mysticism in the monastic setting.

In the Latin West, Ambrose of Milan and his pupil Augustine of Hippo translated and further developed the Christian mystical tradition. Ambrose, bishop and teacher of Augustine, embodied much of his mystical understanding in his commentary on the biblical Song of Songs. Its allusions to sexual ecstasy and alcoholic intoxication had to be taken allegorically, and Ambrose turns these toward an ideal of asceticism, virginity, and the experience of Christ in the sacraments. Augustine, bishop of Hippo in later life, absorbed Ambrose's ideals and first sought the monastic life within which to practice them. He believed that the true mystic could only live as a monk, although every Christian has the goal of divine union. In his *Confessions* he recounts his own mystical experiences, and in other works he develops the theology behind their possibility: humans are made in the divine image and only with God's invitation and grace can ascend. As a pastor, though, he also followed Ambrose in linking true divine experience with the Church and its sacraments. The contemplative life begun on earth will be fulfilled and perfected in heaven.

At about the same moment, John Cassian, a monk from Romania, was translating his experience in the Egyptian desert to southern Gaul. At his new monastery near Marseilles he stressed the linkage of renunciation (of the world's appeal, former vices and desires, and worldly things) with the unceasing fire of prayer. Together these would lead his monks to a vision of God and conjunction with the divine, although the path was difficult. He wrote of his mystical understanding in his *Conferences* and his *Institutes*, which became instant classics of monastic spirituality. The later founder of mainstream Western monasticism, Benedict of Nursia, praised the two works, although he expected little in the way of such fire from his monks. Even so, monasticism would continue to host such mysticism as there was in the early medieval West. Pope Gregory I, a huge fan and biographer of Benedict, spread the message of monastic contemplation of God, although he



Saint Augustine of Hippo is considered by many to be the greatest of the Latin church fathers. Augustine's influence extended from late antiquity into the early Middle Ages and beyond. In common with many mystics, Augustine believed that a direct relation with God was utmost, and earthly power and pomp was unimportant. Augustine spoke of an internal and subjective "City of God," a holy community of believers. (Library of Congress)

emphasized its connection to the study of Scripture. Like Ambrose, Gregory found the truest meaning embedded allegorically in the biblical texts, and through grace the student reaches that level of understanding of truth and through that truth finds God. When the mind is raised to God, the spirit follows. Truly pastoral, Gregory notes that any Christian can achieve this, to be a "contemplative in action," although it is easier for the monk.

Known as Pseudo-Dionysius, the Greek-speaking sixth-century author of *Divine Names* and *Celestial Hierarchy* provided a Neoplatonically inspired great chain of virtues—paralleled by the nine orders of angels—by which the

➤ PSEUDO-DIONYSIUS ON ASCENT THROUGH PRAYER TO DIVINE KNOWLEDGE, SIXTH CENTURY

“So let us stretch ourselves prayerfully upward to the more lofty elevation of the kindly Rays of God. Imagine a great shining chain hanging downward from the heights of heaven to the world below. We grab hold of it with one hand and then another, and we seem to be pulling it down toward us. Actually, it is already there on the heights and down below and instead of pulling it to us we are being lifted upward to that brilliance above, to the dazzling light of those beams. . . .

That is why we must begin with a prayer before everything we do, but especially when we are about to talk of God. We will not pull down to ourselves that power which is both everywhere and yet nowhere, but by divine reminders and invocations we may commend ourselves to and be joined to it.”

Source

Pseudo-Dionysius, “The Divine Names,” in *Pseudo-Dionysius: The Complete Works*, translated by Colm Luibheid (New York: Paulist Press, 1987), 68.

Christian is led back to God. Becoming God by adoption proceeds from purgation to ignorance, to illumination by wisdom, and finally to perfection by deification. This author does not speak of his own experience but instead provides a guide for the contemplative. In the ninth century, the Irish monk John Eriugena translated the Greek work at the French king’s request. His commentaries on St. John and the *Celestial Hierarchies* gave him a forum for expressing his understanding of deifying contemplation. Influenced also by Ambrose and Augustine, he developed the theme of the spiritual life founded on meditative prayer, the prayerful reading of Scripture, and participation in the Church’s liturgy.

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Bibliography

- Fanning, Steven. *Mystics of the Christian Tradition*. New York: Routledge, 2001.
- Leclercq, Jean. *The Love of Learning and the Desire for God*. New York: Fordham University Press, 1982.

McGinn, Bernard. *The Foundations of Mysticism: Origins to the Fifth Century*. New York: Crossroad, 1994.

McGinn, Bernard. *The Growth of Mysticism: Gregory the Great through the Twelfth Century*. New York: Crossroad, 1994.

McGinn, Bernard, John Meyendorff, and Jean Leclercq, eds. *Christian Spirituality: Origins to the Twelfth Century*. New York: Crossroad, 1988.

Islamic Mysticism

Islamic mysticism, or Sufism as the Arabic word *tasawwuf* is often translated, is a spiritual trend developed in the heart of Islam from the very first centuries and widely spread in Islamic societies at every level. It is an articulate initiatory institution neither merely religious nor merely philosophical that includes ritual, doctrinal, and social aspects. Mystics themselves distinguish the religious exoteric sciences (*ilm al-zahir*, i.e., scholastic theology, religious jurisprudence) from the science of interior (*ilm al-batin*, i.e., mysticism itself). What discriminates Sufism from discursive knowledge and philosophy are both a set of ritual practices, such as voluntary fasts, litanies, retreats, and seclusions, and the conviction, so frequently maintained, that speculative and rational learning is not sufficient: to quote a mystic’s utterance, reason allows man to explore the created world, but if it turns to the Creator, it will be liquefied.

From the very beginning, the mystics’ experience is shaped as a spiritual path (*suluk*). The mystic (*Sufi*) is depicted as a wayfarer crossing stages and permanent spiritual stations (*makamat*) that he can achieve through his personal effort. However, these spiritual states (*ahwal*) are transitory divine gifts. The engagement in the Sufi life is ruled also from the social point of view. It is believed that the possibility of such a wayfarer reaching the spiritual goal without help is rare. Any aspirant to God (*murid*) must be the disciple of a master (*shaykh*) who receives his oath of allegiance by the hand clasp (*abd*), teaches him a secret litany (*wird*), casts on him the spiritual blessing (*baraka*) he inherited from a chain of masters linked to Prophet Muhammad, and leads him to get rid of his lower passions in order to ascend through the spiritual way. The final aim is to purify the self: once they

removed the veils of ignorance that separate man from God, the Sufi will annihilate his individualistic identity, will be filled by the divine attributes, and will permanently remain in God so that God himself becomes the ear he hears by, the eye he sees by, the tongue he speaks by.

These defined features are common to the whole movement. Nevertheless, one can find a progressive development in Sufism. Masters belonging to lands and centuries far from each other will contribute progressively to clarify concepts that were present from the beginning, even if in a less evident way. The concept of Sufism itself appeared as such only at a later time, and the word from which it derives, *Sufi*, was used for the first time about a century after the rise of Islam. Furthermore, the collective name that means the whole class of the Sufis (*sufiyya*) is not found before 815–816.

What happened in the meantime? Spiritual trends flowed free. To understand the origins of Islamic mysticism, one has to pay attention to a famous statement of the Khorasanian Sufi named Fushanji (d. 959) complaining about the bad spiritual situation of his age: “Today Sufism is a name without a reality, but it used to be a reality without a name.” Indeed, among the party of the primitive Sufis, one can find the names of Ali (d. 661), the fourth caliph and the transmitter of the esoteric knowledge, and the People of the Bench (*ahl al-suffa*), a group of poor Muslims who lived next to the first mosque in Medina, devoted to day fasting and nightly devotions. Subsequently, those who pursued the spiritual path were generically known as ascetics (*zuhhad*) without being distinguished from the ordinary believers by any exterior sign. Only as early as the middle of the ninth century, Sufis were known to be a peculiar group marked by more or less standardized spiritual practices and mystical doctrines.

When Baghdad was founded (762–763) and became the capital of the Islamic empire, it drew, besides commerce, also learned men of many kind. Sufi masters collected small circles of followers, although without creating real initiatory orders for the moment. Nevertheless, their teachings were of such significance that they molded the later development, thus making the school of Baghdad renowned as classical Sufism. The enlargement of the audience favored

> WERE THERE SUFIS BEFORE MUHAMMAD? THE MANY POSSIBLE ORIGINS OF THE WORD “SUFİ”

The etymological origin for the Arabic word “Sufi” has been debated throughout the centuries. Different interpretations have been set by both Islamic mystics and Western scholars, each of them enlightening one or more features of the spiritual movement itself. The hypothesis most accepted by both sides is that the word comes from the Arabic *suf*, meaning “wool,” a raw, rough, and poor material that ascetics used to wear to demonstrate their choice of forgoing worldly pleasures and devoting themselves to poverty and renunciation, looking for the delight in the thereafter. A further historical hypothesis—although philologically impossible—deals with the *ahl al-suffa* (people of the bench), the group among the first Muslim devotees living in the space between the first mosque in Medina and Prophet Muhammad’s place. In others’ opinion, the word would result either from *safa* (purity), as mystics purify their heart for the sake of God, or from *saff* (row), because out of their devotion they would hold the first place in front of God. Hypotheses of derivations from other words are seldom suggested and sometimes definitively rejected, among them the Greek *sophos* (wise), which would give Sufism an extra Islamic origin by linking it up with the Hellenistic philosophy, and the Arabic *sufana*, a plant on which ascetics would have fed at the beginning. Noteworthy in the end is the connection with the name of Gawth, son of Murra, called Sufa, who lived in total devotion five generations before the birth of Muhammad. This hypothesis would date the origin of the word before the revelation of Islam itself, thus linking it to a priestly tradition that initiated into the pilgrimage to the Kaaba.

—Marco Aurelio Golfetto

the increase of speculative doctrines, and world denial, although pursued, was now openly perceived as an introductory stage for acquiring the science of divine things. Besides classifying the spiritual experiences they enjoyed, the masters of this age went deep into the description of the higher steps of self-realization. Junayd (d. 910) is one of the most noteworthy personalities of this school. As a champion of inner sobriety, seriousness, and equilibrium, he probed the doctrine of

the Unity of God (*tauhid*) from the spiritual point of view, accordingly describing the initiatory path as a being's permanent striving to return to his original and pure state in God, as before the creation itself.

A completely different attitude from Junayd is found in further masters, whose engagement into the path is marked by divine attraction and love. Among them was Bistami (d. 874), well known for his ecstatic utterances, who is considered to represent the trend of intoxicated mystics. Despite his fame, he was possibly one of the inspirers of the important current of those who draw blame upon themselves (*malamatiyya*), which developed in Khorasan during the ninth century. Brotherly opposed to the Iraqi school, *malamatiyya* loved to hide their spiritual highness. Outwardly behaving in an apparently ordinary or even reprehensive way, they could devote themselves to the exclusive worship of God by giving permanent thanks for his grace he bestowed and jealously guarding the secrets and mysteries he revealed to their souls. On the contrary, the tendency to divulge the inner secrets was carried to an utmost extent by Hallaj (d. 922), the "martyr of divine love," who paid with his life for his utterances about the extreme mystical union of the Sufi with God, famous is his phrase "I am the absolute Truth" (i.e., God). His doctrines and beautiful poems produced two opposite effects: they enlivened the experience of later generations of Sufis and broke the balance between mysticism and secular religion.

The crisis that exploded because of Hallaj's scandal lasted for almost two centuries. During

this time, even more than in earlier and later ages, mystics were charged with extravagancy, boasting, and even heresy. Consequently, it was necessary to arrange an apologetic action that on the one hand defended the honor of the institution and on the other hand condemned heterodox doctrines and attitudes. As early as the middle of the tenth century, numerous handbooks were written to explain the real nature of Sufism. Authors such as Sarraj (d. 988), Kalabadhi (d. 995), Qushayri (d. 1072), and others not less important did their best to prove the accordance of Sufism with the Quran, the prophetic tradition (*sunna*), and the orthodox theology; to clarify the masters' deeds, teachings, and their use of technical lexicon; to justify their ecstatic utterances and the possibility of performing miracles (*karamat*); and to blame practical and philosophical mistakes of the individuals. However, it was only the unique personality of Ghazali (d. 1111) that could definitively accomplish the work of reconciling the spiritual path with the exoteric law and establishment.

—Marco Aurelio Golfetto

Bibliography

- Al-Qushayri. *Principles of Sufism*. Translated by B. R. von Schlegell. Berkeley: Mizan, 1990.
- Chittick, William C. *Sufism: A Short Introduction*. Oxford, UK: Oneworld, 2000.
- Ernst, Carl W. *Teachings of Sufism*. Boston: Shambhala, 1999.
- Lewisohn, Leonard, ed. *Classical Persian Sufism, from its Origins to Rumi*. New York: KNP, 1993.
- Schimmel, Annemarie. *Mystical Dimensions of Islam*. Chapel Hill: University of North Carolina Press, 1975.

Science and Technology

In this era, technology and science were two separate domains that only occasionally affected one another. Technology was developed by practical artisans and craftsmen who were less interested in scientific theory and mostly concerned with practical and, occasionally, aesthetic issues.

Technology

The period 300–1000 CE is often thought of as being technologically stagnant in which very little change occurred. This is a misconception; in many ways this period was technologically innovative.

The most important technology of the era was that involved with agriculture, since all sedentary economies, in which the great majority of the world's peoples lived, were overwhelmingly agricultural. During this era, substantial and important cumulative change, though at a gradual and incremental pace, occurred in agricultural technology, particularly in the development and diffusion of crops. These new crops, chiefly diffusing from Mesoamerica and South and Southeast Asia, produced agricultural revolutions in southeastern and southwestern North America, the Muslim world, and Africa south of the Sahara. In previous centuries, maize, beans, and squash had been developed by selective breeding to mature in progressively shorter growing seasons. In this period the farming peoples of the North American Southeast and Southwest adopted these originally tropical plants to supplement their plantings of sunflowers and amaranth. In the Muslim world, the adoption of water-loving hot weather summer crops—rice, bananas, sugarcane, taro, citrus fruits, cotton, etc.—from India and Southeast Asia to supplement the wheat, olives, and other Mediterranean winter crops resulted in a doubling of agricultural production in areas where intensive irrigation was possible. In China, the diffusion of cotton, sugarcane, and taro enriched the economy of southern China and the Yangzi Valley.

In Africa south of the Sahara, the introduction of bananas, sugarcane, taro, and rice resulted in significant population increases as well as social and political changes by 1000 CE.

China led the world in other changes in agricultural technology, particularly in intensive farming. Animals were increasingly confined to enclosures, manuring and fertilization were carefully practiced, new methods of water-conserving cultivation were developed, and elaborate systems of crop rotation and diversification were increasingly used. These Chinese farming techniques, which were also adopted in Korea, Japan, and Vietnam, required intensive use of human labor. The invention of seed drills and horizontal windmills and waterwheels during

this era may have reduced the labor burden somewhat. In the middle of this era, the Chinese developed improved harnessing systems, including the horse collar that made it possible to use horses to pull heavy loads. When the horse collar spread east across the Eurasian landmass, the Slavic peoples and then the West Europeans began to use horses to pull moldboard plows in the heavy North European forest soils.

The most important agricultural innovation in the Muslim Agricultural Revolution, after the adoption of South and Southeast Asian crops, was the improved irrigation systems, which these new crops demanded. In addition, Muslims in Afghanistan developed vertical waterwheels and windmills.

Any survey of medieval agricultural technology across the globe must include the ingenious system of raised beds by which the natives of Tiwanaku moderated the microclimates of their fields and the terrace irrigation of the Andean and northern Philippine cultivators.

Changes in transportation technology accompanied agricultural change. One of the most impressive of these transportation developments was the heavy investment by the Sui and Tang dynasties in canals, canal locks, and bridges. It was in this era during the Sui dynasty that the first Grand Canal was begun. Other innovations in overland transportation technology involved the increased use of the camel rather than the oxcart. The extensive use of camels began as early as the first century CE and by 300 had expanded to become a hemisphere-wide phenomenon. Camels, which could carry loads of several hundred pounds over roadless terrain, not only made redundant elaborate road systems such as the Romans had constructed but also made possible much more robust overland transcontinental trading systems such as the trans-Saharan routes or the Silk Roads. These overland routes were always supplemented by river transportation where this was possible or coastal sea transportation.

In sea transportation, the monsoonal pattern of Indian Ocean trade, discovered about the beginning of the first millennium CE, became extensively used as Indian Ocean trade burgeoned after 650 CE. Ships began to sail far out to sea, using the lateen sail to tack into the wind. This technique, perhaps first developed by the Polynesians and adopted from them by the Indonesians, began to be used by the Indian Ocean Arab

seafarers in this era. It spread to the Italian merchants by or after the end of this period (1000 CE).

Chinese innovations in sea transportation included the sternpost rudder and, toward the end of this period, the magnetic compass. The Polynesians developed highly sophisticated navigational techniques, including the double-hulled and outrigger canoes as well as sailing in the wind techniques that enabled them to colonize most Pacific islands as well as visit

The Polynesians developed highly sophisticated navigational techniques, including the double-hulled and outrigger canoes as well as sailing in the wind techniques that enabled them to colonize most Pacific islands as well as visit South America by 1000 CE.

South America by 1000 CE. While the Polynesians were crossing the Pacific, the Vikings were crossing the Atlantic in their much less technologically developed open boats.

In the Americas, transportation was by seagoing boats or rafts or overland by human runners or carriers. In the Andes, llamas as pack animals supplemented these, and where there were rivers such as the Mississippi or Amazon, they were supplemented by dugout canoes.

The technology of war and war making was also very important in this era, as in others. This involved fortifications, weapons, projectile weapons, flamethrowers and firearms, bows and arrows, body armor and horses, and camels and elephants. There were few innovations regarding fortifications during this era; the basic technology of defensive walls before the advent of cannons had been worked out thousands of years earlier. Nevertheless, defensive walls, such as the Danewirke in Jutland and Offa's Dyke that protected Mercia from Welsh raids, were still being constructed. Walls usually protected cities, and various types of rock or projectile-throwing devices—trebuchets, onagers, and catapults—were employed to knock them down. One of the more effective weapons used to break a siege was "Greek fire," a kind of flamethrower used by the Byzantines to break the Arab sieges of Constantinople (674–678 and 717–718).

Handheld or thrown weapons changed little. Most of these were close combat weapons: a variety of spears, javelins, swords, battle-axes, and the like, with cutting edges of iron, steel, bronze, flint, or obsidian. Gone were the days when highly disciplined armed groups, such as those of the late-first-century BCE Greeks, charged the enemy with long pikes in phalanxes. Most of the innovations in handheld weapons were in projectile weapons: the use of compound bows and the elaboration of crossbows, which had been in use in China since the third century BCE. Although the Chinese had invented gunpowder, it was seldom used in combat until after this era.

Perhaps the most far-reaching military innovations involved horses and cavalry. In this aspect of military technology, the Chinese are credited with many of the innovations, such as the horseshoe and stirrups (which allowed the rider to exert more force in making spear thrusts). These innovations made their way west, to be adopted by the Muslim armies and then the Europeans. The stirrup together with the European invention of the saddle with pommel and cantle is often credited with causing a military and political revolution in western Europe. But these would have been unlikely without the simultaneous emergence of a war-horse large and powerful enough to charge with a heavily armored knight carrying a long metal-tipped lance. These horses were specially bred and fed a rich diet of alfalfa (or clover) and grain. The care and feeding of these horses became one of the chief concerns of feudal society.

The technology of making tools, weapons, ornaments, and utensils—materials technology—was important. Many agricultural and household tools were made of wood, but some were made of metal, glass, or ceramics. Most peoples made ceramics, but the best were the porcelain, made by the Chinese. All sedentary societies in the Eastern Hemisphere made, or at least used, iron. The Europeans and Muslims made chiefly wrought iron, the Chinese made chiefly cast iron, but the people of India were the most accomplished iron metallurgists and made superior wrought iron as well as steel. Metallurgists in Africa

south of the Sahara smelted iron but also worked in copper and copper alloys, such as brass. The best metallurgists in the Americas were in the Andes civilizations, where copper and copper alloys such as bronze and tumbago were produced. Metallurgy diffused slowly north from the Andes, through Central America to Mesoamerica. In Mesoamerica, metallurgy never occupied a very utilitarian niche because of the abundance of easily worked obsidian and flint.

Many of the early medieval innovations in industrial technology originated in China. Porcelain, paper, printing, gunpowder, the magnetic compass, the seed drill, the butterfly-winged horse hoe, the horizontal waterwheel and windmill, deep drilled wells, iron bridges, horseshoes, horse collars, and stirrups are some of the innovations in industrial technology attributed to the Chinese. The question emerges: Why was China a fount of innovation in the medieval period? Several explanations suggest themselves. China had the largest and most dense population of any society on earth, and moreover, that population at several times in the early medieval period probably had the highest material standard of living. During these periods, many people had living standards above the bare level of existence and were less resistant to the idea of innovation. Moreover, China was the most urbanized society and was less conservative than more rural societies.

Science

The advance in scientific knowledge and theory was much less dynamic during this era than technology. Indeed, in some respects, much of the scientific thought that had been developed during the classical eras of the Roman empire and the Han dynasty was lost with the collapse of these empires. Chinese science did recover during the Tang dynasty, but science in Europe did not revive until the fourteenth century. While science in Europe suffered, India and, coincidentally, the Maya in Mesoamerica led the world in mathematics and, to a lesser extent, astronomy. In the eighth century, the Chinese had recovered much of their leading role, especially in materials science (alchemy), but in the ninth century, the efforts of a group of brilliant Muslim alchemists laid the groundwork for modern chemistry.

The ninth through the twelfth centuries witnessed a great surge in scientific and general intellectual achievement in the Persian-speaking lands of Iran and central Asia. This upsurge, sometimes referred to as the Samanid Renaissance, found an echo in a parallel spike in scientific work in late Tang and early Song China. This renaissance was studded with a group of polymaths, renaissance men who made contributions in such diverse fields as theology, philosophy, medicine, mathematics, astronomy, optics, cartography, geography, history, prose literature, and poetry.

Four factors contributed to the surge in Chinese and Muslim scientific achievement in the later centuries of the first millennium CE: increased wealth, urbanization, intercontinental trade, and greater ease in communication due to the diffusion of papermaking and, in China, printing. To this list, one is tempted to add the establishment of institutions, such as Baghdad's House of Wisdom or China's Imperial Acad-

emy, which facilitated the transmission of knowledge. China's economic leadership during this period stimulated the scientific enterprise, but toward the end of this era, the Muslim world surpassed China in some scientific areas.

The Muslim world's principal advantage was its location. Situated in the midst of the major civilizations of the Eastern Hemisphere—China, India, the Greco-Roman civilization of the Mediterranean—and interacting with all of them, the Muslim world was, more than China, the Middle Kingdom, the Central Civilization. The Muslims were heir to the great scientific advances of the classical Hellenistic savants, they were privy to the mathematical and astronomical knowledge of India during the Gupta period, and they absorbed much of the technological innovations of the Chinese. Muslim thinkers made a synthesis of scientific ideas from all these sources and, in doing so, made new scientific breakthroughs.

The great mathematical and astronomical advances of the Maya derived from sources similar to those that fueled China's technological and scientific prowess. In its age of glory, Maya-land was a rich, densely populated area that supported many wealthy cities. The Maya apparently had a well-educated creative class of scribes whose endeavors were facilitated by a writing system using bark paper. It is unknown how much the Maya benefited from contacts with the non-Mayan parts of the Mesoamerican ecumene, or from contacts with areas beyond Mesoamerica.

Science in this age was heavily influenced by and mixed with magic, sorcery, occult ideas, and superstition. Astrology (the idea that human affairs were controlled by stars, planets, and other celestial bodies) was a dominant belief in every civilization, and astrologers were revered. Magicians and sorcerers did not usually enjoy the high status of astrologers, but they were feared, and their services were avidly sought. Most people gave credence to occult or esoteric sciences such as the Jewish cabalists, the Shia esoterics, the Hindu and Buddhist Tantrics, or the Chinese Daoists. And even those thinkers who did not traffic in these pseudosciences often tried to keep their discoveries hermetic (hidden), available to only a select group. Thus, the great eighth-century Baghdadi alchemist Abu Musa al-Jabir (known in Europe as Geber) reported his discoveries in code that was intelligible to the elect but to most people seemed to be gibberish.

Medicine, alchemy, mathematics, astronomy, optics, geography, and history were the disciplines in which the most important advances were made during this era.

In medicine, the major civilizations of the Eastern Hemisphere relied principally on three traditions at the outset of this era: the Hellenistic-Roman, the major spokesmen of which were Hippocrates and Galen; the Chinese, which was heavily invested in acupuncture and Daoist lore; and Ayurveda, whose worldview was shaped by Indian

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tradition as well as by Buddhism. Ayurveda relied greatly on herbal medicines as well as teaching moderation in diet, food, sex, and the like, but it also employed plastic surgery as well as surgery to remove cataracts and for amputations, closing wounds, and caesarian births. Ayurveda became part of the intellectual portfolio carried by Buddhist missionaries to China, where it heavily modified traditional Chinese medicine.

Meanwhile, in the Roman empire, medical doctrine, which had been elaborated by Hippocrates (traditional dates 460–270 BCE) and Galen (129–200 CE), was being supplanted by Christian teaching. In the fifth and sixth centuries, heretical Christian doctors first at Edessa and later at the Persian institution at Gondeshapur were teaching this traditional Hellenistic medical lore. When the Muslims conquered Persia and most of the Asian provinces of the Roman empire, the Muslim authorities favored the doctors at Gondeshapur and had them translate the works of Hippocrates and Galen into Arabic.

The Muslims also studied the chief Indian works on Ayurveda, and from their understanding of Hellenistic medicine and Ayurveda they developed Arabic medicine. Arabic medicine, learned through the *Comprehensive Book of Medicine* of Mohammad Rhazi (865–925), known in the West as Rhazes, and the *Canon of Medicine* by Ibn Sina (980–1037), known in the West as Avicenna, was fundamental to medical science in Christian Latin Europe until the seventeenth century.

The modern science of chemistry grew out of the ancient alchemy. Alchemy was practiced in China, India, and the Muslim world, from

which it spread to Europe toward the end of this era. In ancient China, alchemy was an outgrowth of the search, by Daoist adepts, for an elixir of immortality. In their experiments, the Daoist alchemists developed a vast pharmacopoeia, a great list of drugs reputed to be efficacious in treating many diseases. The Daoist alchemists were also intent on transforming base metals into gold. Daoist alchemists are credited with discovering the secret of making gunpowder, one of the most consequential inventions of early medieval China. Daoist

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adepts cloaked their craft in mystery, teaching that it had a spiritual dimension that demanded physical and mental discipline. Yoga became an integral part of their discipline.

In India, alchemy with its magico-spiritual dimension was largely influenced by Chinese Daoism beginning in perhaps 300 CE. Indian methods of smelting and isolating metals, such as zinc and mercury, became an integral part of alchemical lore. The Indians developed methods of distillation and the production of acids that the Muslims would later further develop.

Early medieval alchemists of the Muslim world were indebted both to Persian scholars, particularly at the Sassanian medical school at Gondeshapur, who had preserved classical Hellenistic as well as Persian alchemical lore, and to translations of Indian works, which in turn had been

influenced by Daoist practice. In the ninth century, alchemy as practiced at Baghdad and the Persian city of Rayy became the most advanced in the early medieval world. Al-Jabir was, in many respects, the star of medieval alchemy. For al-Jabir, experimentation was more important than any spiritual or magical dimension of the craft. For this reason, he is sometimes called the Father of Chemistry. Al-Jabir isolated and identified a number of metals, including arsenic, antimony, and bismuth, and produced several acids, including sulfuric, hydrochloric, and others. One of his discoveries, the distillation of alcohol, was to have serious social consequences when the Europeans learned of it in the twelfth century.

In the early medieval age, mathematics and astronomy developed in tandem. The most advanced mathematics and astronomy for most of this period were that of India and, in some respects, that of the Maya. The Maya and the mathematicians of India both discovered the concept of zero at about the same time. The Maya predicted solar and lunar eclipses and calculated the length of the solar year at nearly the same value that modern astronomers assign it. Unfortunately, we do not know the names of any Mayan mathematicians or astronomers.

The period 400–1200 has been called the golden age of Indian mathematics. During this period, there were many great Indian mathematicians, a number of whom were followers of the Jain religion. The most influential, because their works were later translated into Arabic and so influenced Muslim and through them European mathematicians, were Aryabhata (476–550 CE) and Bhramagupta (seventh century). The Indian mathematicians not only developed the concept of zero as a number and a place holder and were the first to use so-called “Arabic” numbers but also devised the rules for trigonometry and much of algebra and made a beginning of calculus.

Indian mathematics spread north to China and west to the Muslim caliphate. During the Northern and Southern dynasties and the Sui and Tang dynasties, Indian mathematicians were often employed by the imperial calendar bureaus, but the Chinese preferred their own mathematical system and rejected much of the Indian mathematicians’ advice. Chinese mathematics and astronomy was dominated by the outstanding achievement of Zu Chongzhi (429–500) who, in devising the Daming calendar, calculated the length of the solar year to within 54 seconds of modern astronomers. Two and a half centuries later (727), Yi Xing, in an improvement on Zu Chongzhi’s work, introduced the Dayan calendar by which one could calculate phases of the moon, equinoxes, and many other celestial events.

Unlike the Chinese, Muslim savants eagerly embraced Indian mathematics. Muslim mathematicians built on the Indian teachings, and mathematics became one of the jewels in the medieval Muslim intellectual crown. An influential Muslim mathematician (as well as astronomer and geographer) was al-Khwarizmi (780–850), whose work introduced Muslim mathematics to Christian Europe and from whom the algorithm gets its name.

Chinese and Muslim cartographers developed mapmaking to its medieval apogee. Both devised systems of latitude and longitude. Muslim cartographers and astronomers also developed spherical trigonometry

to aid them in plotting distances. The Persian polymath Al-Biruni was a leading Muslim scholar in this field.

As this essay attempts to show, the early medieval age was by no means the sterile technological and scientific wasteland that some scholars, impressed with the European Dark Ages and not

aware of scientific and technological developments in non-Western civilizations, sometimes consider it. Technological and scientific change was uneven and sporadic, sometimes halting, but the technological and scientific landscape in 1000 was much different than it had been in 300 CE.

—Wilfred J. Bisson

■ Introduction: Agricultural Technology

Agriculture was the economic basis of almost all sedentary societies in the period 300–1000 CE. Because the great majority of the earth's people lived in sedentary agricultural societies, agriculture involved the most fundamental, most important, and widely understood technology of the age. This technology shaped most of the world's cultures and was woven into the folkways of the globe's rural majority.

Agricultural technology dictated the people's response and adaptation to the environment. The climate, length of the growing season, amount of rainfall or availability of water, and type and nature of soils as well as the nature of the crops and domesticated animals were among the factors in this adaptation.

The most widespread type of technology affecting agriculture was that of hydrological management: the techniques of controlling the water supply by irrigation to prevent desiccation in times of drought and drainage channels to remove excess water in times of floods. This technology was nearly as old as sedentary agriculture and was practiced in one form or another by most agricultural societies. The least labor-intensive irrigation occurred on seasonally flooded river valleys, such as in Egypt, but many irrigation systems required elaborate engineering and great amounts of labor in their construction and maintenance. These systems included dams and reservoirs (tanks) to impound water from the rainy season, as in India, Southeast Asia, South Arabia, and the North American Southwest; elaborate systems of laboriously dug irrigation canals in Peru, China, Mesopotamia, and many other regions; under-

ground channels dug through rocks to conduct water from aquifers to irrigable fields in Persia, central Asia, North Africa, and elsewhere; and hand-dug wells in most arid regions. All of these systems depended on a gravity flow of water, but in many regions, such as in Nubia and Egypt, mechanical devices were used to lift the water. The Chinese used chain pumps, powered by humans, as well as other devices. In many regions, animal-powered water wheels, which lifted water in a series of clay pots, were used. In mountainous areas such as the Philippines, the Andes, and elsewhere, terraces were built to conserve moisture or to create level areas to grow rice and other crops. In arid regions such as northwestern China, farmers conserved moisture by planting their crops in furrows between ridges or in pits dug into the soil.

An ingenious system of water management, designed not so much to irrigate crops as to control the microclimate, was that of Tiwanaku (in current-day western Bolivia). In the wetlands adjacent to Lake Titicaca, the Tiwanaku constructed raised beds surrounded by deep-water channels. The Tiwanaku raised abundant crops, mainly potatoes, on these raised beds despite the killing frosts that often visited this area, which has an altitude of 14,000 feet. The water in the water channels was heated by solar radiation during the day; at night it released heat, protecting the crops on the raised beds from frost.

In most segments of the Afro-Eurasian ecumene farmers raised crops and tended animals. Horses, until the invention of the horse collar (probably in China or central Asia about 500 CE)

were used mainly for war and as pack animals. Increasingly after improved methods of harnessing them for load pulling had diffused through the ecumene, they were used to pull plows and heavy loads. But the majority of animals used to pull plows were cattle or the related water buffalo. Europe, the Muslim world, India, and Southeast Asia employed a mixed livestock- and crop-raising strategy that required the allocation of arable land for pasture and grazing. In China, Japan, and Korea most of the few farm animals were kept in pens or stalls, and fodder was brought to these animals so that almost all arable land could be continuously cropped.

Wheat, barley, millet, and rice in the Eastern Hemisphere and maize in the Western Hemisphere were the principal grains forming the basis of agricultural life. Iron hoes, sickles, and animal-drawn plows were the common tools. In most of the world, planting the seed was a laborious task done by hand and sometimes with digging sticks, but by 500 CE the Chinese had developed a mechanical seed drill to expedite the task.

Wet-rice farming was the most widespread as well as the most productive crop in this time period. Rice was the major crop in the southern two-thirds of China and was becoming a prestige crop in Korea and Japan. In most of Southeast Asia as well as much of India, rice was intensively cultivated. During this era, rice cultivation diffused through the Muslim world and to Spain and Italy. Indian Ocean traders established rice farming on the east coast of Africa, while Malagasy colonists brought it to Madagascar. Rice was a prestige grain consumed by elites, but its production was one of the most labor-intensive types of farming. In East Asia as well as in India, rice seedlings were carefully started in special beds and about 40 days later, when the seedlings were a few inches tall, laboriously hand transplanted in the flooded mud of rice paddies. Rice production, which required arduous and constant manual labor, involved constructing level rice paddies with dikes to hold the water, repeatedly plowing the soil to create a mud slurry, flooding and draining the paddies several times a year, transplanting the young seedlings, carefully weeding the growing rice crop, harvesting the stalks with hand sickles, and threshing, milling, and polishing the grain.

China led the world in agricultural technology during this era. Chinese farmers invested a great amount of labor on small units of land, but their agricultural productivity per laborer as well as per unit of land was the highest of any large society. The Chinese accomplished this by growing a wide variety of crops carefully selected to match the soil, climate, and growing season. They alternated nitrogen-demanding crops, such as wheat and rice, with nitrogen-fixing plants, such as beans, particularly soybeans. Their methods of crop rotation made it possible to harvest multiple crops annually, year in and year out. Chinese farmers had no need to leave land fallow so that it could recover its fertility, nor were they obliged to set aside areas to pasture animals. Since China's cultivated plants, particularly soybeans, provided all essential nutritional requirements, animal protein was a luxury.

During this period, the Muslim world experienced what has been called an agricultural revolution. The basically Mediterranean-style agriculture that had prevailed in the areas conquered by the Muslims were made much more productive by the introduction of crops from India that were grown in heavily irrigated fields in the dry Mediterranean summer. This addition of a summer crop to the cool, wet winter crops, particularly wheat, traditional in regions with Mediterranean climates, made it possible to nearly double agricultural production.

The emergence of the Islamic empire and the great increase of Indian Ocean trade resulted in accelerated diffusion of many South and Southeast Asian crops to West Asia, the Mediterranean region, Europe, and Africa south of the Sahara during this era. Crops such as sugarcane, cotton, rice, bananas, lemons and other citrus fruits, taro, and coconuts, as well as Asian chickens, were thus spread. As these crops, particularly bananas, spread across the continent from the east coast of Africa, they wrought great changes in demography as well as agricultural technology. In the African Great Lakes region and the equatorial rain forest as well as in forested West Africa, the addition of these crops to the traditional yam- and groundnut-based African forest agriculture produced food surpluses that led to increased population growth, which in turn fostered the formation of kingdoms and

states. The basic tool used by most African farmers was the heavy short-handled iron hoe, though in the Ethiopian highlands wooden plows pulled by oxen were common.

In the Americas, where it has been estimated that 60 percent of the food crops known to modern humanity were domesticated yet agricultural tools were simple, the technology of irrigation, plant selection, and seedbed preparation was very sophisticated. The hand tools used (Native Americans had no plows because they had no domestic animals capable of pulling a plow) were usually made of wood but sometimes of antlers, bone, or conch shells. In the North American Eastern Woodlands, elk and moose antlers served as shovels, but elsewhere the wooden digging stick was the principal implement. In the Andes the foot plow, a wooden implement with which the farmer could use his foot to add the force of his weight for digging, was ubiquitous.

Irrigation systems in the Americas included catchment dams, contour-built irrigation canals, and raised beds as well as ridge and furrow fields to preserve moisture. Native Americans planted many crops, but the so-called three sisters—maize, beans, and squash—provided a balanced nutritional regime. This was very important for economies in which animal protein was scarce. The three sisters were domesticated in tropical Mexico where the growing season is more than 100 days, but by careful plant selection over many generations, North American farmers were able by 1000 CE to produce varieties of maize, beans, and squash that would reach maturity in 60 days or less. In 300 CE growing any of these crops north of Mexico was very difficult, but by 1000 they were being grown as far north as the Great Lakes and in the St. Lawrence Valley.

In Polynesia, farmers were using sophisticated strategies for producing crops, particularly taro and sweet potatoes. Complex irrigation systems watered taro, and pit cultivation fostered microclimates in which plants could be cultivated beyond the range otherwise possible.

Although rural people are of necessity very conservative, and changes take root among them slowly, a view of the long duration of this era's seven centuries shows significant innovations in agricultural technology.

—Wilfred J. Bisson

Bibliography

- Bray, Francesca. "Agriculture." In *Science and Civilization in China*, Vol. 6, part 2, edited by Joseph Needham. Cambridge: Cambridge University Press, 1994.
- Mazover, Marcel, and Lawrence Roudart. *A History of World Agriculture: From the Neolithic Age to the Current Crisis*. New York: Monthly Review Press, 2006.
- Watson, Andrew. *Agricultural Innovation in the Early Islamic World*. Cambridge: Cambridge University Press, 1983.

Agricultural Innovations in East, Central, and Southern Africa

Between 300 and 1000 CE Bantu-speaking peoples moved into the diverse ecological areas of East, central, and southern Africa. They adapted agricultural technologies from the people already living in the region and invented new ones. They were able to settle and create food-producing niches by raising cattle in the drier regions where there were no tsetse flies and engaging in agriculture in the areas of better rainfall where tsetse flies could breed. The gatherers and hunters continued their form of food production and offered alternative sources of food in areas where agriculture or livestock raising was more precarious.

By 500 CE the gathering and hunting peoples in southern Africa had added livestock raising to their food-producing strategies. Bantu-speaking cattle herders supplemented their food production by learning the techniques for gathering of plants, small animals, and insects of the area and how best to hunt the larger animals that roamed southern Africa. The integration of these various technologies for food production was probably the result of trade between the gathering and hunting peoples who could trade animal hides and ostrich eggshells for Bantu-manufactured goods such as iron pots and tools, baskets, and woodcarvings. By relying on more than one food-producing technology these peoples ensured survival in times of crises.

The click sounds, a trademark of Khoisan languages, are found in all the Bantu languages of southern Africa today. Bantu adoption of the click sound is linguistic evidence of the contin-

ued close contact over a long historical period among the gathering and hunting and the Bantu-speaking peoples of southern Africa.

The successful cattle keeping/gathering and hunting strategies also transformed the agricultural peoples of southern Africa. As soon as they began raising cattle, farmers moved into the drier savanna areas, expanding the Bantu-speaking populations and settling new lands.

In east-central Africa by 300 CE, food-producing communities had settled for the first time. The earliest of such communities were Bantu-speaking peoples coming from East Africa, bringing cattle into the drier, open savanna areas of east-central, central, and southern Zambia. Their expansion caused the eventual assimilation of the former Khoisan-speaking people of those areas into their societies. In land with good rainfall they grew grain crops. The Batwa fishing and gathering and hunting peoples persisted as culturally distinct in the swamps and wetlands around Lake Bangweulu.

Beginning around 600 CE, another group of Bantu-speaking peoples, the Sabi, moved from the Congo south into east-central Africa, where they adopted the agricultural techniques of the earlier peoples. They also added a technological innovation of their own in the form of slash and burn agriculture known as *citemene*. The land was not very fertile, so people began burning the trees on the savannas to prepare the soil for agricultural production. The ash from these burned trees provided the soil with essential nutrients. Increasing fertility allowed the Sabi to populate a region of marginal fertility. In the drier sections of southern Zambia the Botatwe absorbed the former cattle-herding peoples and began raising livestock themselves. They also continued their own type of slash-burn agriculture (*citemene*) in the wetter areas that were possibly infested with the tsetse fly.

In the rain forests of the Congo Basin of central Africa, Bantu-speaking peoples had cultivated yams since 3000 BCE, but around 600 CE bananas, an Indonesian crop, were introduced. Banana crops produced ten times more food than yams and were even better suited for the evergreen rain forests of central Africa. Also, banana cultivation was less labor intensive, which led to higher population densities among the Bantu-

➤ HUNTING AND GATHERING'S ALLURE

Do gathering and hunting peoples joyously embrace agriculture or pastoralism once established in an area? Most historians assume so. Yet the history of East, central, and southern Africa demonstrates that most gatherers and hunters in this region continued their way of food production well into the twentieth century. From 300 to 1000 CE agriculture was established and the newly settled communities were growing, yet the gathering and hunting peoples continued their own forms of food production and offered alternative sources of nourishment in areas where agriculture or livestock raising was more precarious. Hunters also played a role in the international trade since they hunted elephants for the ivory trade, which even 1,000 years ago was thriving.

—Christine Ahmed-Saidi

speaking farmers. In central Africa there are more than 120 different varieties of bananas, compared to only 12 types in Asia. Banana production allowed the agriculturalists to move into areas that had not been suitable for yam cultivation.

During the seventh century CE around Mount Kenya in East Africa the Thagiicu were still growing African yams in the damper higher regions but were also growing bananas, Southeast Asian yams, arrowroot, and later taro and sugarcane. In the drier lower lands the Chagga grew sorghum and pearl millet. These differing crops in a relatively small area allowed the development of intricate trading networks, which would eventually result in small states.

By 700 CE in the Western Rift to Lake Nyanza, the population of Bantu peoples had grown considerably. The need to place more land into agricultural production of bananas led to deforestation. Areas that were once thick forests by 1000 CE were becoming open grassland savannas. While deforestation seems like a disaster, the net effect of deforestation for the Lake Bantus was that it made the land excellent for livestock raising by removing the habitat of the tsetse fly. Soon communities such as the Batutsi began to depend primarily on cattle raising and were able to expand and later play a major role in the

development of the region. These cattle herders in turn helped the farmers. Fallow land could be used for grazing cattle, while the droppings of the cattle would help to fertilize the land and decrease the fallow time. The success of the blending of agricultural and livestock technologies resulted in larger population growth.

The Bantu adapted food-producing techniques from the peoples they encountered and innovated new methods. Their agricultural success laid the basis for several centralized states in the future but also allowed people in less fertile areas to continue to live and maintain their own decentralized communities. Gathering and hunting peoples, in some cases, were integrated into the agricultural societies, but many maintained their independence in part due to their ability to produce ivory and other items for the developing Indian Ocean trade.

—Christine Ahmed-Saidi

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. *The Classical Age: Eastern and Southern Africa in World History: 1000 BC to AD 400*. Oxford, UK: Currey, 1998.
- Shoenbrun, David. *A Green Place, a Good Place: Agrarian Change, Gender, and Social Identity in the Great Lakes Region to the 15th Century*. Portsmouth, NH: Heinemann, 1998.
- Vansina, Jan. *Paths in the Rainforest: Toward a History of Political Tradition in Equatorial Africa*. Madison: University of Wisconsin Press, 1991.

Early Medieval Muslim Agricultural Innovations

Historians speak of an Islamic Agricultural Revolution, an Islamic agricultural golden age that lasted about four centuries (700–1100 CE). During this time many new crops were added to the Islamic agricultural portfolio, massive investments were made in irrigation, and innovations in agricultural practices and technology developed. Agricultural output expanded, supporting an increasing population. Old cities grew, and new cities emerged as commerce burgeoned.

The new crops, such as oranges and other citrus fruits, cotton, sugarcane, rice, bananas,

coconuts, taro, and mangos were mainly from Asia. Most of them, except for the citrus fruits, were from India, grown there in the hot summer when the monsoon rains lashed the land. The Muslims in the Mediterranean region and West Asia successfully adopted these Indian crops, but to do so they were forced to make large investments, especially in irrigation and hydrological management.

The Mediterranean climatic regime of the early medieval Islamic heartland favored the growth of wheat and other crops in the cool winter season, when most of the rain fell. But rice, sugarcane, cotton, and the other Indian crops grew best in the hot summer and demanded more water than the scant rains of the Mediterranean summer afforded. That the Muslims successfully cultivated the water-loving hot-weather crops is a testament to their technological development. By successfully growing these new crops, farmers in Muslim lands were able to add a summer growing season to their traditional winter growing season and, in the process, nearly double their production.

The Muslims inherited irrigation systems in most of the lands they conquered, but irrigation systems require constant attention and repair. Canals must be kept unclogged, wells cleaned out, and leaks in dams plugged. In many areas, because of war and social upheaval, these systems had often fallen into disrepair. But with the imposition of strong government, the Muslim conquerors mobilized the necessary labor not only to repair the existing irrigation systems but also to extend them and to construct new irrigation systems in new areas.

The most productive irrigated areas in the lands conquered by the Muslims were Egypt and Mesopotamia. It was Mesopotamia, or Iraq as it became known, in which the Muslims had their first great success. The Persians, from whom the Muslims conquered Iraq, had constructed irrigation systems around their capital, Ctesiphon. In this area, known as the Sawad, the Persians had maintained an intensive system of canals, which distributed water to a rich agricultural region, but to do this it was necessary to maintain close centralized control over the allocation of the water. The Muslim conquerors took over this Persian system, and the Iraqi Sawad became, for a

few centuries, the economic gem in the caliphate's crown. The Iraqi Sawad was, until the late tenth century CE, for the Abbasid caliphate what the Central Valley is to modern California: a veritable cornucopia. In the tenth century, geological changes, perhaps a slight rise in the height of the land in the Sawad, together with a deepening of the channel of the Diwalla River reduced the efficacy of the Iraqi irrigation canals.

Egypt was another economic prize for the caliphate. The annual Nile flood continued to fertilize and irrigate the Nile Valley, and the Muslims restored canals to the Fayum and some other regions. Egyptian agriculture was very productive because of the annual flood, but the agricultural year was confined to one growing season. In the dry season, with the river low, it was very difficult to irrigate the hot weather crops, such as sugarcane, that came from India. Only when the value of summer crops was sufficient to repay the heavy investment in labor required could hot-weather crops be grown. Water would be raised from the river by means of shadoofs, norias, Archimedes screws, and other devices, which required much human or animal labor.

In Iran and central Asia, the Muslims were heir to irrigation systems utilizing *qanats*, long underground tunnels dug by hand, sometimes through hard rock, to conduct water from an aquifer to the areas to be irrigated. Prior to the Muslim conquests, *qanats* had been largely confined to the Iranian plateau, but in the seventh and eighth centuries, the Muslims constructed *qanats* in Arabia, Syria, and Palestine as well as throughout North Africa, from Egypt to the Atlantic coast and from the Mediterranean to the Sahara Desert.

In addition to constructing *qanats*, Muslim agriculturalists tapped underground water by the extensive digging of wells. This was especially the case in Arabia and North Africa. On the route of the hajj, or annual pilgrimage to Mecca, pious wealthy Muslims made endowments for the digging and maintenance of wells, which were then also used for some irrigation. In the early Muslim centuries, many new wells were sunk throughout the Muslim world, and agriculture reached a relatively flourishing state.

Muslim farmers developed agriculture to a high degree in the early Muslim centuries with

the use of new crops, which allowed cropping in all seasons; the extensive use of irrigation; and heavy investments in labor, often slave labor. The ninth century was the golden age of agriculture in North Africa; in the tenth century, agriculture in Muslim Spain reached its apogee. Muslim agriculture basked in its high achievement for four centuries. Muslim scientists wrote treatises on agricultural techniques, the quality of soils, the choice and nurture of crops, and the like.

After the thirteenth century, a slow decline began to set in. A variety of factors may have been responsible for this: climatic and geological change, as in the Iraqi Sawad; destruction of cultivated lands by pastoral nomads, as in the North African Maghreb; and the breakdown of law and order and endemic warfare in much of the Muslim world.

—Wilfred J. Bisson

Bibliography

- Marshall, G. S. Hodgson. *The Venture of Islam*, Vol. 1, *The Classical Age of Islam*. Chicago: University of Chicago Press, 1974.
- Watson, Andrew M. *Agricultural Innovation in the Early Islamic World*. Cambridge: Cambridge University Press, 1983.

Early Medieval Agricultural Technology in India and Southeast Asia

Developments in South and Southeast Asian agricultural technology made India and Southeast Asia leaders in agricultural productivity in the first millennium CE. Innovations included improved plant varieties and new types of irrigation works. These new technologies made agriculture more productive and supported growing populations throughout the region.

Early crops included millet, rice, sugarcane, yams, sago palm, bananas, and coconuts. Millet was primarily grown using slash and burn techniques especially in areas where irrigation was difficult or scarce. As wet-rice cultivation became more common, millet fell out of favor. Millet became associated with poverty and backwardness, while rice became highly valued as the chief staple throughout the region.

▶ EARLY MEDIEVAL AGRICULTURAL TECHNOLOGY IN INDIA AND SOUTHEAST ASIA— INTERNATIONAL TRADE ROUTES

Long-distance trade routes made it possible for new agricultural technologies to be adopted widely throughout the region. Trade also made it possible for new technologies and commodities to be introduced into the region from as far away as China, Arabia, and East Africa. Much of the trade was by sea except for the export and import of animals, which tended to be by land. The Chola kingdom of South India sent trade missions to China and imported high-quality horses from Arabia. Common commodities included rice, sugar, cardamom, cloves, indigo, opium, horses, monkeys, sandalwood, and teak.

—Eric Strahorn

Thousands of new strains of rice were developed by farmers who saved the seeds from especially productive plants. For example, the quick-ripening Champa varieties originated in what is now Vietnam around 100 CE. Intensive wet-rice production techniques, including multi-cropping and terracing, were developed in the highland areas of Southeast Asia to take advantage of these new varieties. Another important technique, the transplantation of rice plants, was first developed in southern China and was adopted throughout the area including northern and southern India, Vietnam, and the Malay Peninsula. The transplantation of rice plants involves the sprouting of seedlings in a seed bed separate from the main field. The seedlings are then transplanted into the flooded field by hand. The advantage of transplanting seedlings is that the main field can be used continuously. It also makes it possible to use the constantly flooded field as a fish pond. The presence of the fish improves the fertility of the soil, and the fish are an important source of protein for farmers. These new varieties and techniques spread throughout the region via the trade routes of Indian, Chinese, and Arab merchants and eventually transformed agriculture in India, Southeast Asia, and neighboring countries.

Rice cultivation began in river valleys and deltas, but in this period new irrigation technologies were developed that covered larger areas, al-

lowing for greater production. In the ninth century, the cooperative digging of irrigation channels made wet-rice agriculture possible in Java and Bali, while in Sumatra, deep-water and tidal irrigation technologies were developed in river basins. In the Chola kingdom in southern India, irrigation canals were built over several centuries on thousands of miles of the Cauvery River and its tributaries. These canals use an extensive system of anicut stone dams that could be nearly 1,000 feet (300 meters) long and 65 feet (20 meters) wide. An anicut dam is built in such a way that water flows over the dam and is diverted into irrigation canals. At its greatest extent, this series of dams provided irrigation water for more than 77 square miles (200 square kilometers). Throughout the region, smaller irrigation works were also constructed to store water for use in the dry season. Irrigation tanks could vary from small ponds 9 feet in diameter to substantial reservoirs covering several hectares.

There were also significant developments in other crops as well. Wheat is an important crop in the drier areas of North India but is a minor crop in South India and Southeast Asia. In North India, new varieties of wheat were developed that were better suited for local conditions by farmers who carefully selected seeds for the following year's crop. Irrigation works were built in places such as the Punjab in Pakistan, which has abundant rivers.

Sugarcane, cotton, and several spices are important cash crops in several areas throughout South and Southeast Asia. Technological advances with these crops were more in the area of harvesting and processing for market than in cultivation. Cotton from India was exported to the Middle East, while sugarcane tended to be consumed locally. Cloves, nutmeg, and mace were produced from trees that require very particular water and soil conditions. Farmers in Southeast Asia developed highly specialized methods to produce enough of these spices for export to India, Africa, Arabia, and Europe. For example, nutmeg trees require moist well-drained soil as well as partial shade. Clove trees also require partial shade, which is best provided by banana plants or albizias. Well-designed irrigation is necessary since waterlogging will kill both trees.

In the Gupta empire of northern India, new techniques in iron manufacture allowed for the

large-scale production of agricultural tools. An example of the quality of Gupta iron can be seen with the iron pillar located near the Qutab Minar in Delhi. This pillar is over 22 feet (7 meters) tall with a diameter varying from 14 to 17 inches (36–42 centimeters) and weighs more than 6 tons. The most distinguishing feature, however, is that the iron of the pillar has never corroded.

Knowledge of agricultural technology was transmitted in many different ways. In southern India, the poets of the Sangam period described different farming operations such as plowing, weeding, threshing, and the drawing of irrigation water from wells and lakes. Bullocks or steers were used to pull plows, thresh grain, and draw water from wells. In the Gupta empire, scholars produced numerous textbooks called *shastras* on a myriad of subjects including agriculture, horticulture, and animal husbandry. The *Brihatsambita* of Varahamihira discusses the proper ways to prepare seeds for planting as well as ways to treat diseases in plants, while the *Vai-syavarga* classifies different types of soils and advises as to which crops are best suited for each soil type. One of the most famous textbooks, the *Arthashastra* by Kautilya, is a treatise on political economy that advises the king on the management of irrigation; preparation of seeds for planting; proper care of cows, horses, and elephants; and the production of iron for tools and weapons. These texts were later brought to what is now Indonesia, especially Java, as Hinduism and Buddhism were increasingly adopted. In the Angkor region, temples served as storehouses of technical information on dam construction and various farming methods.

—Eric Straborn

Bibliography

- Grove, Richard H., Vinita Damodaran, and Satpal Sangwan, eds. *Nature & the Orient: The Environmental History of South and Southeast Asia*. Delhi: Longman, 1998.
- Latham, A. J. H. *Rice: The Primary Commodity*. Routledge Studies in the Modern World Economy. London and New York: Routledge, 1998.
- Randhawa, M. S. *A History of Agriculture in India*. 4 vols. New Delhi: Indian Council of Agricultural Research, 1980–1986.
- Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*, Vol. 1, *From Early Times to c. 1500*. Cambridge and New York: Cambridge University Press, 1992.

Agricultural Innovations in Europe

Developments in agricultural techniques and tools aided Europe's recovery from its fifth- and sixth-century population decline and climate cooling and enabled a northward expansion for crops that previously only thrived in the mild Mediterranean climate. Land, rarely vulnerable to raids and warfare, comprised wealth for almost everyone in the early Middle Ages. The majority of the population was involved in some aspect of agriculture, from the labor of tending the fields to tool production to the processing of food.

The estate (manor) system gradually replaced the Roman latifundium system in which large tracts of land were farmed by slaves. Changing climates and trade networks led to a decrease in population. It was no longer possible to run an economy on slave power, for such an economy depends on labor being extremely cheap. Early medieval rulers gave land (estates) to their followers in exchange for promises to serve them in war. An estate's tenants were given land to farm for themselves in exchange for farming the lord's land. Although most tenants (serfs) were not free people, they were able to inherit and will land. Estate complexes might also include fishponds, kitchen gardens for vegetables and herbs, beehives, and woodlands for material for building and fuel.

By the sixth century, a new and more effective kind of plow became popular, beginning in the north. The heavy plow offered a number of advantages over the previously common light plow. The heavy plow dug more deeply into the soil, turning it over more effectively, and fields only needed to be plowed once and not cross-plowed again afterward. Cross-plowing lends itself to square fields, while plowing only once led to the long, narrow fields. The heavy plow was more effective in turning over the rich alluvial lowland soils, which were increasingly farmed in the north. The plows were drawn by teams of oxen, and their efficiency improved as new types of harnesses developed that let the oxen stand one after another instead of side by side. With more land under cultivation and more oxen to feed, the scythe became a common instrument for cutting hay to feed them.

Beginning in the eighth century, three-crop rotation substantially increased agricultural

➤ WATER AND IRRIGATION

Too little water was as much a problem as too much: springs, aqueducts, and other purpose-built systems were tapped for seasonal irrigation in hot weather, especially for large vegetable gardens with water-hungry plants such as lettuce. Building an irrigation system required neighborhood collaboration, as the necessary ditches bringing water to a garden often crossed multiple property boundaries. Landowners whose property was crossed by these ditches made use of the irrigation system themselves in exchange for the use of their land. Smaller vegetable gardens were usually built near a convenient source of water such as a well.

—Shana Worthen

productivity. Two-crop rotation allows half of a manor's land to be cultivated at once; the other half lies fallow (unused) in order to recover from nutrient depletion. The following year, the fields will be reversed, with the fallow field plowed and planted. Fallow land could be productively used to graze cattle and sheep. In three-crop rotation, two different crops are grown each year, each in a third of the available land, with only a third left to rest.

A planting of winter crops, such as wheat or rye, would be followed by a planting of summer crops, such as peas, lentils, broad beans, oats, or barley. Crop diversity improved diets, reduced the chances of famine due to any one crop failing, and distributed the labor of plowing, planting, and harvesting throughout the year. The success of the system lay in choosing two different crops that require different nutrients and thus using the soil in complementary ways. Wheat and rye deplete the nitrogen content of soil, while beans convert nitrogen from the air into ammonia, which can be used as a source of nitrogen by other plants. Oats and barley had lower cultural status than wheat or rye and were often grown as animal fodder.

These agricultural developments enabled Europe's population to grow. The heavy plow, the three-crop rotation system, and the increased use of horses in farming were particularly advantageous in the heavier soil and colder climate of northern Europe, from the British Isles to what is

now Russia. The cooler temperatures that began with fifth-century glacial growth began to warm by the eighth century, creating a climate more conducive to farming. Thus, more and more land was cleared for cultivation in the north by draining swamps and cutting down woods. Dikes were built around low-lying Dutch bogs, holding back the ocean water in order to drain new land for agriculture.

Drainage also became more important. The cooler weather of the middle of the millennium led to much heavier rainfall and saturated soil, while land clearance led to erosion of topsoil. This caused rivers to silt up and increased the amount of marshy land, which required drainage to be reclaimed as farmland. Not all marshes were drained; some were maintained by landowners as sources of wildlife for food. Since new monasteries were often built in remote locations, monks contributed not only to clearing land but also to developing more robust strains of fruit, especially grapes, that could survive the cooler northern temperatures.

Processing of the Roman-era staples of wheat, millet, and barley, the cheapest grain, became faster thanks to the spread of watermills. Water-powered mills freed up time previously spent grinding grains by hand or by animal-powered mills.

—Shana Worthen

Bibliography

- Bober, Phyllis Pray. *Art, Culture, and Cuisine: Ancient and Medieval Gastronomy*. Chicago: University of Chicago Press, 1999.
- Squatriti, Paolo. *Water and Society in Early Medieval Italy, AD 400–1000*. New York: Cambridge University Press, 1998.
- Verhulst, Adriaan. *The Carolingian Economy*. Cambridge: Cambridge University Press, 2002.
- White, Lynn, Jr. *Medieval Technology and Social Change*. London: Oxford University Press, 1962.

Early Medieval Chinese Agricultural Technology

Throughout this era (300–1000 CE) and indeed for most of the last 3,000 years, Chinese agriculture led the world in productivity. The Chinese cultivated a wider variety of crops than most other peoples. The Chinese speak of the five

grains that for centuries have been their staples: rice, wheat, barley, millet, and kaoliang (or sorghum), but actually they had many more. There were several species of millet, for example, each adapted to a specific type of soil and weather pattern. The Chinese had crops that were suitable for a wide variety of soil conditions—arid soil, swampy soil, clay, sand, slightly saline soil, etc.—and so their agriculture was able to thrive in a wide variety of ecological regimes.

In addition to the wide variety of grains, which in every age provided the bulk of the food for the Chinese people, the Chinese also grew a great diversity of fruits, vegetables, and legumes. Pears, peaches, plums, apricots, and jujubes were grown in the north, while oranges, lemons, bananas, lichee nuts, and other tropical fruits were produced in the south. Mulberries were widely cultivated for their leaves to feed silkworms rather than for their fruit. Many vegetables were grown for both their roots and leaves. Legumes were widely cultivated both for their nutritional value and their soil-amending properties. Adzuki (red) beans were a favorite, and broad (fava) beans were introduced from West Asia around the fifth century CE. But the most widely cultivated and eaten legume was the soybean.

Soybeans can be eaten raw or processed into a variety of forms, including the Chinese staple bean curd (tofu), and preserved easily. It is a hardy plant that can tolerate extremes of climate, drought, mildly saline soils and other adverse conditions. Soybeans, introduced into the valley of the Yellow River around the seventh century BCE, were probably domesticated by Manchurian tribesmen from a plant that grows wild in northeastern China. Originally soybeans were used by the Chinese as animal fodder and as famine food, but by several centuries BCE soybeans had been naturalized in China and were a ubiquitous element in Chinese cuisine. Soybeans proved to be a wonder crop. Due to its high content of usable protein, soybean could replace most animal protein, making the reservation of land for the production of animal fodder and pasture less important.

These crops provided a more balanced diet on a smaller unit of land per capita than did other agricultural regimes, allowing for a more dense agricultural population. This in turn war-

ranted a much more intense investment of labor, which resulted in more enhanced production for each unit of land.

Most crops were for food, but some were also for fiber. Hemp was grown for both fiber and the oil from the seeds. Flax was cultivated for the oil in the seeds; the early medieval Chinese did not make linen. Other oil crops were rape, mustard, and sesame. Crops for fiber were silk, which was produced by the silkworms fed on mulberry leaves, hemp, and ramie in the south. Cotton was introduced from India around the fifth century CE and in time became the basis of China's leading textile industry. During the Tang dynasty, tea became an important crop in China's southeast and long remained a leading Chinese export.

In early medieval China, farmers employed a very wide range of cultivation systems that varied according to the terrain and climate. In the dryer north, their fields, although miniscule by Western standards, were usually rectangular. Since rainfall could be erratic in northern China, farmers developed a ridge and furrow tillage system that could save the crops by draining off water in times of excess rain and preserving moisture in times of drought. To construct the ridges and furrows, farmers, probably before the Tang dynasty, developed an implement pulled by oxen, called the butterfly winged hoe. (During the agricultural revolution of the eighteenth century, British farmers replicated this Chinese invention, possibly from Chinese models. It is known in the West as the horse hoe.) On these fields, early medieval Chinese peasants planted wheat, barley, millet, or another grain, using a mechanical seed drill to distribute the seed evenly in the rows. (Seed drills were not used in Europe and America until the eighteenth century CE.)

In more arid areas or in cases in which early or late frosts were a danger, Tang farmers employed pit cultivation. In this system, farmers dug pits, whose size and spacing depended on the crop and whether the purpose was to conserve moisture or to provide a warmer microclimate for the plants. Into the pit the farmer would usually deposit composted straw and manure as well as the started plant.

On hillsides, terraces to prevent soil erosion and to conserve moisture were laboriously constructed. In many cases, these terraces could be

flooded to grow rice. In the Yangtze Valley and to the south, much of the land was devoted to rice paddies. Rice paddies are among the highest-producing types of agriculture, but their construction and maintenance are extremely labor intensive. First, the land in each paddy (according to Chinese agronomists, the optimum size of a rice paddy is one-sixth of an acre) must be leveled to within an inch so that the rice plants can be evenly covered with water. Berms, or earthen dikes, must be built to contain the water; the paddy must be flooded and drained several times a year for planting, cultivation, and harvesting. Before the transplanting of the rice, the paddy must be plowed several times. In the Tang dynasty, Chinese peasants were using iron plows with curved moldboards pulled by an ox or water buffalo. This was a type of plow not available in Europe or America until the nineteenth century. After plowing, the paddy was flooded, and the rice seedlings, which had been started in a special and smaller starting bed, were transplanted by hand in rows in the paddy's mud. Usually the laborer did this by stooping, but sometimes the peasant built a raftlike tool that carried the unplanted seedlings and on which the worker could sit while transplanting. After planting the grain crops, whether rice, wheat, or other, the farmer hand weeded the plants. This was also labor intensive, though between the rows a hoe, usually of cast iron, could often be used.

In early medieval China, in contrast to Europe and the Mediterranean region, land was rarely left fallow. Multiple annual cropping was the rule. Two crops were the rule in the north, but sometimes as many as four could be har-

vested in the south. Care was taken to alternate crops such as rice or wheat with crops such as soy or adzuki beans so that the fertility could be maintained. Often, bean and rice stubble was plowed in as a kind of plant manure. Early medieval Chinese peasants were careful to manure their fields with chicken or pig manure and even human night soil. Silkworm droppings were a very highly valued fertilizer.

Animals were not allowed to roam freely in pastures but instead were kept in pens or special enclosures to prevent them from injuring the fields and to preserve their valuable manure. Oxen were fed the straw of rice, wheat, or other grains as well as the stalks of soy and other beans. Periodically, often daily, these animal pens were cleaned, and the manure was kept in special manure containers, where it was mixed with plant compost and mud.

Early medieval Chinese farmers used tools made of iron more often than any of their contemporaries in both the Eastern and Western Hemispheres. In some dynasties, the making of iron tools was a government monopoly. These tools were a further element in enhancing the output of the peasants' labor and thus early medieval Chinese agriculture.

—Wilfred J. Bisson

Bibliography

- Benn, Charles. *China's Golden Age: Everyday Life in the Tang Dynasty*. Oxford, UK: Oxford University Press, 2002.
- Bray, Francesca. "Agriculture." In *Science and Civilization in China*, Vol. 6, part 2, edited by Joseph Needham. Cambridge: Cambridge University Press, 1994.

■ Introduction: Early Medieval Industrial Technology

During the Era of Expanding Regional Civilizations (300–1000 CE), levels of industrial technology varied from civilization to civilization but nevertheless exhibited some similarities throughout the globe. The making of pottery and ceramics was nearly universal among sedentary peoples and very widespread

among nomadic hunters except in Australia. Some peoples, such as the Eastern Polynesians and the Inuit, abandoned the making and use of pottery because of the lack of suitable clay or fuel. Other groups, such as most of the North American peoples, adopted the bow and arrow from the Arctic peoples during this era.

By the beginning of this era most peoples in Africa were smelting iron and making iron tools, weapons, and ornaments. During this era, iron production became a central economic activity for many groups, and among some West African peoples iron smelting and ironworking were the jealously guarded preserve of a prestigious blacksmith's caste. These smiths made not only tools and weapons but also ceremonial items, such as the widely traded clapperless double bells, made of iron sheets bent into the proper shape and the forge welded together.

Another widespread technology in Africa south of the Sahara was copper smelting and working. Copper was used for ornamental jewelry as well as for money, with pieces of copper cast in the shape of crosses or the "X." Much copper was also used in West Africa for producing brass to make sculptures and other artwork.

In Mesoamerica for most of this era, one of the most highly developed technologies was the creation of stone tools and ornamental work. This was done both in chert, or flint, and obsidian. Although bronze metallurgy had diffused north through Central America perhaps before the end of this era, obsidian remained the favored material for weapons and tools in Mesoamerica.

In the Andean region, metallurgy in arsenic copper as well as tin copper was highly developed. Andean smiths were adept in both casting and forging. Other important Andean technologies in this period were the production of cotton textiles with very intricate weaving patterns and the molding of highly fired ceramic sculpture.

Throughout Eurasia, almost every people practiced metallurgy, made pottery, and used the bow and arrow and/or crossbows. Three civilizations in Eurasia were technological innovators: those of China, India, and Dar al-Islam (the Islamic world).

For several centuries Chinese technology had been the most innovative in the world. Inventions and new techniques during this era commonly originated in China and diffused from there to India, central Asia, and the Mediterranean region.

India had a highly developed industrial technology probably as long as China's. Indian industries were organized into guilds, and these guilds proved very effective in training skilled crafts-

men in many arts, such as making steel surgical implements. India excelled in metallurgy, particularly the making of wrought iron and steel. Its steel longbows are said to be powerful enough to shoot a missile that could penetrate armor. Throughout this era, Indian smiths produced the world's finest steel. Swords made of India's Wootz steel took very sharp edges and were eagerly sought after by India's trading partners throughout the first millennium and after, from the Romans to the Arabs and then the Turks.

Indians developed and passed on to the Arabs many of their industrial processes, including the art of distilling alcohol from sugar. The Muslims took many of the industrial processes they adopted from India and China and adapted it to their needs, often improving on it.

The Europeans, whose industrial practice, like many other aspects of their civilization, had seriously declined since the fourth century, were on the western end of the technology transfer that started with China or India, went through Dar al-Islam, and finally reached Europe, usually after several centuries of delay. After the fifteenth and sixteenth centuries, Europe would catch up with and surpass the Muslims and the Chinese in technological innovation, but during this era Europe was a technological backwater.

—Wilfred J. Bisson

Technological Innovations in East, Central, and Southern Africa

In East, central, and southern Africa in this period, specific technological information depended on a person's gender. Women were the potters across most of the continent, whereas ironworking was almost exclusively a male technology. Following the adoption of an agricultural lifestyle, women controlled the technology of potting, agriculture production, and the preparation of food. The technology of potting had not changed significantly from its discovery circa 3000 BCE through this period.

The new technological factor in this period of the region's history was ironworking. Interestingly, the rituals, traditions, and cultural mores associated with iron production were based on the potting traditions that date back to a much earlier

➤ IRON SMELTING AND MOTHERHOOD

The manufacturing of iron items was the new technological innovation established during this historical period. While men were the main producers of iron, the spiritual beliefs, rituals, and even the ore used were dependent on female imagery and women themselves. Technology, like every other aspect of their societies, was closely connected to spirituality. In many parts of this region the iron smelters were gynecomorphic, which means that birthing imagery and words were used to equate the production of iron with childbirth. While some societies just used birthing terminology, others actually put breasts on their iron furnaces. Women were also the extractors of the iron ore. Osteological assessments of bodies found in ancient mines of east-central and southern Africa indicate that women were miners as long ago as 1,500 years. Women as miners fits into Bantu-speaking peoples' belief that women were responsible for all things from the earth such as clay, agricultural items, and even ore.

—Christine Ahmed-Saidi

period. In the potting rituals, only adult women gathered clay. Menstruating women were excluded from rituals, as were men and children. Potters were forbidden to have sexual intercourse with their husbands prior to clay rituals.

Iron smelting had similar prohibitions except in reverse. As in potting rituals, menstruating women were not allowed at the smelting site, and men were not allowed to have sexual intercourse with their wives prior to smelting iron.

Ironworking technology became a shared feature of societies in the western Great Lakes region of East Africa. From there it spread west into the equatorial rain forest and east and south in East Africa. Ironworking technologies were well established in east-central African regions by 300 CE. Linguistic data indicates that at this time there were terms for smelting furnaces and new words for a range of iron tools, from knives and spears to hoes and razors. Thus, ironworking technology was well known across the region. An axe, barbed arrowheads, a curved knife, a spearhead, and possibly an iron hoe were found in eighth-century CE graves in the Congo. In

other graves dating to approximately 900 CE, smelted copper items have been found in addition to the iron objects.

An interesting element of iron-smelting rituals during this and later eras in central Africa and parts of East Africa was the distribution of overtly gynecomorphic iron-smelting furnaces. The individual furnaces were referred to as wives, initiated young women, or mothers. Some furnaces even had breasts or were set up to mimic the position of a woman giving birth. The process of iron smelting contained all the metaphors for birth, and iron processing may well have been seen metaphorically as a male version of reproduction.

In northeast Africa around 800 CE, it was not the Bantu-speaking peoples who were the iron producers but instead the Gumba, a group of Southern Cushites living around Mount Kenya. Among other Cushitic-speaking people, both potters and iron smelters formed separate castes. Members of these castes were eventually considered inferior to other workers, which was in direct contrast to the high status of blacksmiths and iron smelters in later Bantu-speaking states.

During this historical period Bantu-speaking peoples began producing iron jewelry, iron ritual items, and iron fishhooks. Male control of ironworking meant that smiths produced the iron tools needed by both men and women. A highly important new tool of cultivation, the iron hoe, was invented in the first millennium BCE. The hoe spread widely in the later last millennium BCE in East Africa and probably from east to west across east-central Africa by 300 CE. This new tool, specifically designed for women's farming work, enhanced women's capacities for digging savannah soils and preparing fields for grain cultivation. But in adopting the hoe, women's productivity in agriculture came to depend for at least one essential tool on a male-produced item.

—Christine Ahmed-Saidi

Bibliography

- de Maret, Pierre. "Luba Roots: The First Complete Iron Age Sequence in Zaire." *Current Anthropology* 20 (1979): 233.
- de Maret, Pierre. "Sanga: New Excavations, More Data and Some Related Problems." *Journal of African History* 18 (1977): 321–337.

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Ehret, Christopher. "The Establishment of Iron Working in Eastern, Central and Southern Africa: Linguistic Inference on Technological History." *Sprache und Geschichte in Afrika* 16/17 (2001): 125–175.
- Herbert, Eugenia. *Iron, Gender and Power: Rituals of Transformation in African Societies*. Bloomington and Indianapolis: Indiana University Press, 1993.

Chinese Technology

It has often been said that until the fourteenth century CE China was the most technically advanced civilization in the world. Certainly, China has been credited with a number of technological firsts, especially the so-called big four: the compass, paper, gunpowder, and printing. But it is the sheer volume of its technical advancements and innovations that places China at the top of the list. China's standard written language and its social stability allowed it to undergo dynastic changes without great technological loss. This allowed the Chinese to continually build on previous innovations without having to repeatedly reinvent the wheel. Chinese technology also developed mostly within the official networks of government-controlled industries, factories, and workshops, and beneficial technologies were cultivated and dispersed through these same networks.

The big four—the compass, paper, gunpowder, and printing—had tremendous impact on China but were also extremely important for the development of Western cultures, including Europe and the Islamic world. Arab and then Muslim mariners were visiting China for trade from the beginning of the first millennium. There they may have picked up the technology for the compass. Although critical for navigation, the compass also played an important role in the Islamic religion, allowing followers to pinpoint the direction of Mecca for prayers. Paper allowed Muslims to develop huge libraries, as it cut the cost of producing books dramatically. This also helped to increase literacy in the Islamic world and to spread new technologies and ideas there as well. Printing with movable type did not appear in Europe

until the fifteenth century, but it arrived at a particularly important point in history. The new presses and Europe's discovery of paper technology increased literacy and helped fuel the Reformation and the Enlightenment. At about the same time the Islamic world was exposed to the new printing press technology, but rather than embrace it, as had Europe, they banned it. Islamic authorities feared that the press could defile the name of God and make it easier to distribute undesirable writings. Gunpowder was developed in China in the ninth century and was used for military purposes from the mid-1200s. At almost the same time Muslim armies, which had received gunpowder technology from China, used gunpowder against the European crusaders. Gunpowder then moved into Europe, where it revolutionized warfare. The first cannons were developed there around 1310 and spread to the Muslim world by the 1330s, and by the 1350s the Chinese had received the technology from the Muslim world. The circle was completed.

Other than the big four, the vast majority of China's inventions have been less well known. Many are in the area of agricultural production, but their technological processes were often modified for use by other industries, and as in Western industrialization, a speed-up in one area of production led to innovations in others. For example, water-powered trip hammers for husking rice were invented during the Han dynasty. By the first century CE this same technology with heavier hammers helped improve the production of iron and steel. To keep up with rice husking by machine, the Chinese soon developed a manually operated winnowing machine that separated the chaff from the grain. As production increased, the need to move more grain more efficiently led to the wheelbarrow. Unlike the European wheelbarrow, the Chinese version had the wheel placed directly under the load, which allowed the operator to move heavy loads of up to 300 pounds with little effort.

Rice farming required irrigation, as did farming in more arid regions. Machines to move water from one level to another for irrigation would later find applications in mining and hydro-engineering. Chain pumps consisted of an inclined trough with the lower end placed in the water and the higher end placed where the

➤ WHY WERE THE CHINESE SO ADVANCED?

What made the Chinese so technologically advanced for their time, and what allowed them to hold on to that position for almost 1,000 years? One key component of the answer is population. China had nearly one-quarter of the world's population under the same government and same written language. China's intense urbanization helped concentrate the population into smaller and smaller areas. The middle class that arose in these cities helped to commercialize agriculture, increase trade, and expand manufacturing. This meant more support for innovation and technological improvements, although during the Song dynasty the Chinese bureaucracy began to limit the development of technology outside of government channels.

Another component of China's technical position was the government, which monopolized many areas of production and promoted and supported technologies that increased production. Many early innovations were tied to agricultural production, essential for feeding the growing population. The government encouraged agricultural innovations as well as others such as calendrical astronomy and mathematics that were beneficial to the government.

There are many other factors that could have promoted technological development. The single writing system in place since the fourth century BCE and the early development of printing from carved blocks allowed information to be spread throughout the educated classes quickly and inexpensively. This also helped promote the spread of technology, as did the relatively stable social and political climate of China. China's canal system, which was over 31,000 miles long by 1200, also helped spread inventions and ideas. Maintaining the canals helped advance hydraulic engineering. Also critical was China's early mastery of metallurgy and especially the production of iron, which were needed to produce many advanced machines. Other possibilities include China's diverse diet, which had few restrictions, and the use of vegetable proteins. Or could it have been, after the Tang dynasty, the drinking of tea? Boiling water to prepare the tea killed many hostile organisms in the water and has been credited with the longevity of China's people, or perhaps it was because China's culture was more open to cleverness and invention. The entire answer may never be known, but it cannot be denied that by the year 1000, China was still the master of the technological world.

—Rebecca Wendelken

water was needed. A mechanism moved a chain or series of closely fitting wooden paddles up the trough, pulling the water along with them. At the upper end the paddles passed over a wheel, dumping the water into a ditch or container, and then the paddles continued down the underside of the trough to repeat the process. This primitive pump could raise water to a height of about 15 feet. Vertical water-powered bucket wheels, similar to those developed in the Middle East and brought back to Europe by the crusaders, also moved water from one level to another. Bamboo or wooden buckets filled with water from a flowing stream at the bottom of the wheel and moved upward to be dumped onto a flume at the top of the circuit. This mechanism was later used to harness the power of flowing water for driving other machinery. Specialized tools for particular jobs were also invented in-

cluding, in the Tang dynasty, a harrow and special plow for use in the wet-rice fields.

Sharper and more efficient cast iron agricultural tools developed as early as the fifth century BCE but were not widespread until the Han dynasty. By China's medieval period the earlier simple iron plows had developed into pointed iron plows with sideboards and adjustments that optimized their efficiency in different soil conditions. These new plows were especially important for expanding agriculture into China's northern border regions. Better plows needed more power, and new techniques were developed for harnessing oxen and horses to optimize their ability to work. With more land under cultivation, the old method of broadcasting seed was no longer efficient. By the beginning of the first millennium, multitube seed drills that could dig multiple furrows, distribute the seed, and

cover it over with soil—all in one operation—were in use. Crops planted in rows were easier to hoe and to irrigate. Irrigation technology was used on a larger scale to build a system of canals that crisscrossed China and made shipping raw materials and finished goods more efficient and less costly.

China mastered bronze smelting and casting early in its history, and this paved the way for the development of the iron industry, which came under state control as early as 117 BCE. Innovations increased production so that by 806 CE China produced some 13,500 tons of iron a year. This figure continued to increase due to innovations such as the open hearth furnace, an ancestor of modern smelting processes. By the eleventh century production had been raised to 125,000 tons a year. When massive production put a strain on local resources for charcoal for the smelting process, China turned to pit coal and finally discovered that by preheating the coal to drive off impurities they could achieve even higher temperatures. This was the first use of coked coal. The improved smelting processes also used water wheels from agriculture to drive double-action piston bellows, also raising smelting temperatures. The same technology was later used to pump water and as a flamethrower. These new piston bellows were made possible by the invention of reduction gears that were soon applied to other inventions, including the odometer cart for measuring distances. These set the stage for mechanical escapement processes in the eighth century that allowed the development of mechanical clocks and machines that replicated celestial movement. Armillary spheres used to determine the position of celestial bodies reached their height of development in the tenth and eleventh centuries and could be set in motion by water power.

Mining techniques also improved to feed the growing iron and steel industries. Pumps used in agriculture could also be used to dewater deeper shaft mines, while iron tools and the wheelbarrow made removing and transporting the ore more efficient. The components of gunpowder were adjusted to make a more explosive product. This was used in mining for blasting. The Chinese not only used pit and shaft mining but also developed deep-well salt mining. Stone

and later steel drills were used to tap underground salt brine. The brine was brought to the surface with pumps and then dried to make salt.

In textiles, advances in silk production and manufacture helped create what for centuries was one of China's most valuable exports. Even after Western regions such as Byzantium developed their own sericulture, they were still reliant on China for much of their raw materials. Water-powered reeling machines were used to unwind the silk filament from the cocoon. The oblique loom, which used wooden shafts and treadles to facilitate forming patterns in fabrics, developed during the first century CE. Similar looms were not used in the West until the thirteenth century. Upright treadle looms developed before the tenth century and allowed even more complex fabric patterns to be woven in less time.

Even China's geography provided impetus for invention. Because the country was located near fault lines, early China was interested in lessening the destruction of earthquakes. In the second century CE China developed an early seismograph. This ingenious device consisted of a heavy pendulum inside a closed bronze urn. When a tremor occurred the pendulum swung, releasing one or more brass balls in the direction of the quake. Sometime before the fifth century China also developed the *dougong*, or bracketing system, of building in which an interlocking system of members supporting the roof dampened the energy of the earthquake as it traveled up the pillars supporting them. As bridges were especially vulnerable to quakes as well as floods, more stable bridges using segmental arches instead of semicircular ones were developed in the seventh century. The first of these is still standing intact today.

As can be seen by just these few examples, inventions such as these put China technologically ahead of Europe by as much as 1,000 years. The early beginning of technological progress and the large number of practical inventions make China the world's first technological civilization.

—Rebecca Wendelken

Bibliography

Chang, Chun-shu. *The Rise of the Chinese Empire: Nation, State and Imperialism in Early China*,

ca. 1600 B.C.–A.D. 8. Ann Arbor: University of Michigan Press, 2007.

Gernet, Jacques. *A History of Chinese Civilization*. 2nd ed. Cambridge: Cambridge University Press, 1996.

McClellan, James E., III, and Harold Dorn. *Science and Technology in World History*. Baltimore: Johns Hopkins University Press, 1999.

Wang Yusheng, ed. *China: Ancient Traditional Technology Exhibition*. Beijing: China Science and Technology Museum, 2001.

Early Medieval Islamic Industrial Technology

Dar al Islam was, after China, a leading center of innovation in industrial technology in the early medieval age. The Islamic world developed its industrial techniques, building on the industrial heritage of the Persians, the wealthy West Asian provinces such as Syria that it conquered from the Roman empire, and the Egyptians. These areas already possessed a rich and highly skilled industrial base, and the Muslims added to this base by adapting new technological advances from India and China, which Muslim scientists and technicians further developed into innovative industrial methods. The Muslims developed industrial centers in Syria, Baghdad, Egypt, and Spain at which they produced cotton cloth, glass, paper, and fine steel using processes they adapted from the Chinese and Indians.

The Muslims learned papermaking from the Chinese, reputedly from Chinese soldiers taken prisoner at the Battle of Talas in 751, but the paper they learned to make, though very usable for Chinese brush strokes, was too soft for the Muslims to write on with their quill pens. The Muslims discovered that if they added starch in the papermaking process, the paper would withstand their more energetic writing method. The Muslims learned to refine sugar from the Indians and developed water-powered sugar mills for that purpose.

It is sometimes said that the Muslims learned of water mills and windmills from the Chinese, and it is possible that they got the idea of these mills from the Chinese, but the windmills and water mills developed by the Muslims (and subsequently passed on to the Europeans) were

new inventions. Whereas the Chinese used horizontal water wheels and windmills, those that the Muslims developed were vertical like the irrigation wheel already used by the Egyptians for centuries. The Muslims invented crankshafts and gear trains to transmit power from these mills, and they also developed new machines, such as the water turbine, along with dams to store waterpower.

Egypt was the home of an ancient glass-making industry. After the Muslim conquest, Egyptian glasswares found markets not only throughout the Arab Muslim empire but also in all the lands with which Muslim merchants traded. Large factory-scale glass-producing establishments grew up in Lower Egypt to satisfy the growing demand. In the early Middle Ages the Muslim world had the world's largest glass industry. Pottery was another highly developed industry. Although the Muslims never learned the secret of making porcelain, they did make lusterware and stoneware that was nearly vitreous and looked like porcelain. Muslim potters also were the first to produce tin glazed pottery, which the Byzantines learned in the ninth century.

Muslim technologists improved on the distillation process they learned from India. They not only made alcohol from sugar, as the Indians did, but also pioneered in dry distillation and steam distillation and invented new tools, such as the alembic and retort for the distillation process. Using distillation techniques, they learned to make kerosene for lamps and naphtha and asphalt from the crude oil they extracted from the oil fields near Baku on the Caspian Sea. Some of the streets in Baghdad, it is reported, were paved with asphalt produced by distillation.

Muslim scientists led the world in refining new chemical and mineral products. The eighth-century Baghdadi polymath Jabir ibn Hayyan (known in Europe as Geber), whom some liken with the American Thomas Edison, discovered the elements arsenic and antimony and produced many industrial chemicals such as alkalis, acids, borax, ammonia, and ethanol.

In metallurgy, the Muslims were behind China and India. The Chinese made cheaper and more abundant cast iron, and the metallurgists of southern India made the world's finest steel, Wootz steel. In the tenth century, Damascus

smiths began to make fine Damascus blades, using materials derived from India. Later other centers, such as Toledo, also used that process.

—Wilfred J. Bisson

Bibliography

Hill, Donald Routledge. *Islamic Science and Engineering*. Edinburgh, UK: Edinburgh University Press, 1993.

Rashed, Roshdi, and Regis Morelon. *Encyclopedia of the History of Arab Science*. London: Routledge, 1996.

Early Medieval European Industrial Technology

Economic decentralization led to industry on a smaller scale than had been practiced at the height of the Roman empire. Weaker trade networks, resulting from political instability, made local manufacture and self-sufficiency much more important. Carthage, for example, previously imported ceramic lamps from stylish Rome; by the 360s, Carthage made its own.

In the fourth century, towns and cities across the Roman empire were increasingly building walls, earthen and stone, to protect themselves from political unrest and invasion. These large local building projects were increasingly typical of construction in the early Middle Ages. Stone quarrying provided some of the building material, with timber farming comprising most of the rest. The products of brick kilns were also used in building projects. Iron smithing provided nails, hammers, reinforcement for shovels, brackets, and other tools critical to building projects.

Mining, smelting, smithing, and all the other trades involved in metal production declined over the early Middle Ages due to scarcity of new mines. Mining provided the raw materials from the earth: iron, copper, tin, gold, and silver. Smelting was the process of extracting each metal from the stone or earth in which it was mined. Smithing processed the metal into a usable form. Iron was a staple metal, used for arms, armor, knives, pots, pans, horseshoes, and reinforcing farm tools such as the plow, scythe, and hoe in addition to building tools. Rotary grindstones, for sharpening blades, were known in Europe by 834, when one was drawn in the



Building the Ark. Detail from scenes of the Old and New Testaments, Byzantine ivory plaque, ninth century CE. Depicted are typical early medieval tools: saw, axe, adze, drill and the like. (Erich Lessing/Art Resource, NY)

Utrecht Psalter. Both gold and silver were more often reused than mined. Gold was preferred for coins and jewelry, while silver was more difficult to smelt but was more widely available.

Water mills, developed in the first century BCE, were large machines with a local market. Although they were the largest and most sophisticated machines produced by the period, they supplied water power to a task that provided sufficient ground meal only to its own greater vicinity. Grain, once ground, does not keep as long. Most millstones in northern Europe and the British Isles were imported from around the Rhine. Their numbers grew over the course of the early Middle Ages, supplemented throughout by other forms of milling: hand mills and animal-powered mills. Fabric production, from flax or wool, was also usually local, with the occasional expensive import of silk or cotton from the East. Many bone tools were made for the textile industry. Manufacturing operated on larger scales only when coordination and funding existed for it. Justinian could afford to hire 10,000 men to build Hagia Sophia, beginning in 532, because the Byzantine empire was more centralized and cohesive than the other successors to the Roman empire were.

In the fifth century, monasteries began to be alternate centers of industrial production. Intended to be largely self-sufficient communities, overproduction of goods, such as tanned hides or fulled fabric, enabled a monastery to trade for the goods it needed. By the eighth century, ship trade across the North Sea was expanding along with the production of wool, timber, iron, beer, and wine. Salt furnaces extracted salt from sea water for trade. Pottery, glassmaking, tanning, and beer and wine production were also important industries. More pottery has survived from the early Middle Ages than any other kind of

good. The earliest known application of mill power to something other than grinding was in 990, when the first animal-powered hemp mill is recorded. From local, defensive, decentralized pragmatism in the fourth century, European industry had begun to redevelop its trading networks and with it larger-scale, more mechanically based industries.

—Shana Worthen

Bibliography

- Blair, John, and Nigel Ramsey, eds. *English Medieval Industries: Craftsmen, Techniques, Products*. London and New York: Hambledon, 2001.
- Butt, John J. *Daily Life in the Age of Charlemagne*. Daily Life through History Series. Westwood, CT: Greenwood, 2002.
- Gies, Frances, and Joseph Gies. *Cathedral, Forge, and Waterwheel: Technology and Invention in the Middle Ages*. New York: HarperCollins, 1994.

Early Medieval Metallurgy

One of the basic technologies in any human society concerns the materials for tool and weapons making. During the first millennium CE, most civilizations in the Eastern Hemisphere fashioned tools and weapons using metals, although some in the Far North and Africa south of the Sahara still relied on stone, bone, and sinews. In the Americas, the Andean peoples used metals, primarily copper alloys, for tools and weapons. Although the Mesoamericans knew of metallurgy, metals were used mostly for ceremonial and decorative purposes; the Mesoamericans preferred obsidian for utilitarian devices.

In the Era of Expanding Regional Civilizations, seven metals were known: copper, mercury, gold, silver, tin, lead, and iron. Other metals were often used, but they were used in compounds and were not usually identified.

Antimony compounds were used to make cosmetics, particularly kohl, and (very rarely) to plate copper vessels. Arsenic was used in West Asia and Egypt to make bronze alloys in the early Bronze Age, but after tin became available arsenic was used only rarely. Andean metallurgists made bronze with arsenic along with tin. Arab alchemists isolated arsenic in the eighth century, although the Persians before that knew native arsenic. The Muslim alchemist Jabir ibn

Hayyan separated bismuth from lead in only the eighth century, but the peoples of the Andes knew of bismuth and produced a copper-tin-bismuth bronze for making sharp-edged tools. The Chinese as early as the Qin dynasty (third century BCE) sometimes used chrome to plate their bronze crossbow bolts and swords. The process they used is not known, nor is it known how long that practice continued.

Zinc was not recognized as a separate metal, although alloys of zinc-lead and zinc-iron-copper were sometimes used. It was not until the end of this era, circa 1000 CE, that zinc was smelted in China and India.

The early medieval Eurasian alchemists classified the known metals into noble and base metals. Mercury, gold, and silver were noble, while copper, tin, lead, and especially iron were base. Mercury was used sometimes for cosmetic and medicinal purposes. Gold, silver, and copper and sometimes iron were used in coinage. The Chinese produced cast, not stamped, coins of copper, bronze, or silver. In the Muslim world and Europe, pieces of gold or silver were stamped, not cast, as coins. In India, gold, silver, and copper were all used in stamped coinage. In central Africa, cast crosses of nearly pure copper served as currency in the second half of the first millennium CE.

In the Afro-Eurasian ecumene, gold was highly valued. Much of the gold that entered the currencies of this ecumene originated in the West African forested region and was then transported by camel caravan across the Sahara Desert. The Southeast Asian peninsula was another important source of the precious metal during this era. In the Americas, especially in the Andes, gold sometimes served as a quasi-utilitarian metal, used in certain elite vessels as well as for jewelry. Metallurgists in the area spanning the Andes and Central America sometimes produced an alloy including gold, copper, and sometimes silver. This alloy, tumbaga, varied in hardness with the ratio of copper to gold it contained and was used for jewelry, some ceremonial cups, and other utensils as well as some tools.

Unalloyed copper was used widely not only for coinage but also for jewelry and utensils. But the chief use of copper was in alloys as bronze or brass. In the Afro-Eurasian ecumene, bronze was seldom used to make weapons or tools dur-

THE MYSTERY OF THE IRON PILLAR OF DELHI

Chandragupta II (375–414 CE), one of the most powerful emperors of the Gupta dynasty that ruled northern India (280–550 CE), erected a 23-foot-high cylinder of remarkably pure wrought iron on a hill situated on the Tropic of Cancer in the center of India. The pillar was made in sections that were joined by forge welding, a process that required a degree of heat obtainable by burning coal. It weighs more than 6 tons (12,000 pounds).

Thought to be a center from which emanated great spiritual power, the site on which it was erected was called the Hill of God's Footprint. The pillar was erected as a gnomon, or sundial. The shadows that it cast were said to exert mystic power.

About 800 years later, Muslim conquerors, impressed with the huge iron shaft, transported it to Delhi, where they had made their capital. There, they gave it a place of honor in the park of great monuments, the Qutb Complex. The pillar never rusted, astounding the world with its purity. The pillar attracted pilgrims who believed that if they stood with their back against it and were able to touch their fingers of the opposite side, they would have luck.

In the 1990s, experts have discovered the secret of the pillar's freedom from corrosion. The Indian master iron makers who smelted the ore to make it used wood with high phosphorus content.



The Iron Pillar made by Indian iron mongers in the fourth century CE in central India and moved to Delhi by Muslim rulers in the thirteenth century. (Alicia Nijdam)

The phosphorus in the metal creates a microscopic film that prevents oxidation.

—Wilfred J. Bisson

ing this era, but it was more widely used to cast statues and ceremonial objects. In the Andes, metallurgists alloyed copper with arsenic, tin, silver, bismuth, and other elements to produce a wide variety of bronzes. The Moche Valley was one of the most dynamic sites for metallurgical innovation, and its craftsmen were working with many bronze alloys for both forging and casting knives, chisels, hoes, and needles. Their cast bronzes often included up to 2 percent arsenic. In Tiwanaku in the southern Andes, tin alloyed bronze was the all-purpose material for many tools and weapons. Their cast bronze generally had a high tin content (10–15 percent), while their forged tools and weapons were commonly made of low tin-bronze.

Mochica metallurgists concentrated on forging (i.e., hammering heated metal into shapes),

while the Chibcha of Colombia were more apt to cast the metal in a foundry.

Chibcha metallurgists cast decorative items of tumbaga using the lost wax process. This gave copper more hardness and luster.

Metallurgy, other than the cold forging of native copper and gold, did not become an aspect of Mesoamerican culture until late in this era. It is commonly thought to have diffused north from the Andean region through Central America and, perhaps, by coastal trade on the Pacific littoral from Ecuador to western Mexico (Colima), where casting of copper alloys (tin and arsenic bronzes, tumbago, or gold, silver, and copper alloys) was apparently adopted by 800 CE. But after metallurgy was adopted in Mesoamerica, it was used largely for production of ceremonial and decorative objects and very little for tools and weapons.

The reason for this was the abundance of and ease of working obsidian, a type of volcanic glass. Tools and weapons with very sharp cutting edges, superior to anything the metallurgists could produce, could easily be fashioned in Teotihuacan and the numerous Maya cities.

In Africa south of the Sahara, brass, a copper-zinc alloy, was used to make artistic and ceremonial objects.

Tin was one of the essential elements in bronze alloys; the other was arsenic. Tin was relatively scarce in Europe, the Mediterranean basin, West Asia, and India, but it is much more abundant in China and Southeast Asia. Although the chief metal in tools and weapons in this era was iron, tin was still used to make some bronze tools but mostly for bronze in statues. Tin was also used to make pewter for elite tableware and utensils. The chief source of tin in Europe was cassiterite from Cornwall, England.

Lead was widely used for water pipes and containers. By the eighth century, silver with lead was being mined in the Rhine Valley, the Harz Mountains, and central Asia as well as numerous sites in China. Most silver was a by-product of copper, gold, lead, and zinc refining.

During the early medieval age, southern India led the world in the production of steel, the most developed form of iron technology, while China had the most productive cast-iron industry. Europe and Africa south of the Sahara as well as the Muslim world produced relatively soft and inferior wrought iron until the ninth century, when the Muslims learned more effective steel production from southern India.

The softest and most technologically simple iron was the wrought iron produced in the west: Europe, Africa south of the Sahara, and the Muslim world. In producing wrought iron, the ore is heated by charcoal to a point slightly below the melting of iron. To reach this heat, air must be forced in the mixture, which originally was done by a hand-operated bellows. Much of the impurities in the ore would melt, leaving a mass, or bloom, of metal mixed with some impurities. The bloom was then forged, or hammered, to remove more of the impurities. This produced relatively pure but also relatively soft and malleable iron suitable for tools, but for weapons that required a sharp cutting edge it was inferior to steel.

The Chinese preferred to produce massive quantities of cast iron by using blast furnaces, which they invented in the last centuries BCE. In their blast furnaces, they injected powerful jets of air by using waterpower, transmitted by horizontal waterwheels. The heat produced was sufficient to melt both the impurities and the iron. When the iron was melted, it absorbed larger quantities of carbon, which produced a rigid but brittle product. Although cast iron was, like wrought iron, inferior to steel for cutting weapons, cast iron tools and implements could be made more cheaply than wrought iron tools because the arduous process of forging, or hammering, could be avoided. Toward the end of this era, the Chinese began to use trip hammers, powered by horizontal waterwheels, to make the production of wrought iron less labor intensive. The Muslims and Europeans developed their own water-powered bellows and trip hammers, using vertical waterwheels, early in the second millennium CE.

Both Chinese and Western iron making used large amounts of wood charcoal, resulting in deforestation of large areas. In the tenth century, Chinese iron smelters discovered the coking process that enabled them to use coal in smelting. In the coking process, coal is roasted, driving off sulfurous and other gasses, leaving coke, composed of almost pure carbon.

India, in this era, had what may have been the technologically most-developed metallurgical industry. Indian metalworkers produced a type of wrought iron that was superior to that produced by the surrounding civilizations. Some historians maintain that the flowering of southern Indian as well as classical Gupta civilization was facilitated by the superior quality and abundance of their iron tools. The Indians also made the best steel in this era.

Indian steel, also known as Wootz steel, is still rather mysterious. Developed in southern India in the last centuries BCE, Wootz steel was forged into very sharp and supple swords that the Romans, the Chinese, the Muslims, and others eagerly sought. Wootz steel was crafted of iron smelted of ores containing trace amounts of tungsten, vanadium, and perhaps other elements. Two kinds of iron products were produced: a soft wrought iron and a harder iron that contained more carbon. Strips of both of

these products were laminated together, and in a process of alternate heating and cooling combined with hot and cold forging, blades were produced that had the suppleness of spring steel with the capacity of holding an exceedingly sharp edge. That the Muslim armies possessed swords made of Wootz steel may have been a factor in their successes in this era. By the tenth century the Muslims, using raw materials imported from southern India, were able to nearly replicate the Wootz process and produce the famous Damascus steel. They continued to produce superior blades of Damascus steel until the seventeenth century when, inexplicably, they abandoned the process. It has been suggested that the industry withered because southern Indian ores were no longer available.

—Wilfred J. Bisson

Bibliography

- Hill, Donald R. *Islamic Science and Engineering*. Edinburgh, UK: Edinburgh University Press, 1993.
- Needham, Joseph. *Science and Civilization in China*, Vol. 4, Parts 2 and 3. Taipei: Cave Books, 1986.
- Srinivasan, S., and S. Ranganathan. *Wootz Steel: An Advanced Material of the Ancient World*. Bangalore: Indian Institute of Science, 1994.

Industrial Technology in Early Medieval Africa South of the Sahara

By 300 CE, societies in sub-Saharan Africa had developed an indigenous industrial technology that included a metallurgical tradition in iron and copper smelting and the casting of brass. Before 300, this region was already actively producing clothing, farm implements, and cooking utensils. There is archaeological evidence of the production of clothing through findings related to narrow loom weaving, ironworking, and wax castings. Innovations in transport technology during this period were a huge asset to craftsmen in that it allowed for greater trade with other world regions. Trans-Saharan and trans-Savanna trade routes allowed for the exchange of these commodities with the Mediterranean and Indian Ocean littoral. The incorporation of camels from Arabia allowed for their usage as pack animals within Africa. Camels carried goods

DEVELOPMENTS IN AFRICAN TECHNOLOGY AND CULTURAL RELATIVISM

Ethnocentric assumptions in the West have typically created a false view of Africa as uninventive and backward. Common misperceptions have been shaped by the absence of the plow for cultivation, little technology in maritime crafts, and the simplicity of African iron tools, among other issues. However, anthropologists and archaeologists of sub-Saharan Africa have illustrated through their research that such views are short-sighted given that social and economic conditions shaped African technological developments. Sub-Saharan Africans already had their own set of innovations that matched their needs and should be understood through their own culture rather than compared with innovations elsewhere. Technological development occurred as was necessary for the implementation of agriculture and industry. Such needs and growing contact with other world regions had a significant impact on such technological developments. Moreover, while contact with Arabs and the greater Muslim world already existed in much of the medieval period, much of their technology was invariably the same. African technology was shaped by local necessity, given regional foods, shelter, clothing, and religious observances. Some of their technologies were developed independently of other world regions, while some were as a result of increased contact through trade networks. Therefore, while awareness of external developments of technology did exist, the maintenance of regional technology rested on local needs.

—Tolope Lawrence Akinbogun

from Somalia to Sudan and well into regions along the Niger River. The incorporation of the camel allowed for the development of a network of caravan routes across the Sahara Desert.

Sub-Saharan Africans probably discovered iron smelting technology independently of influences from the Mediterranean region according to the evidence of linguistic analysis. Linguistic evidence also suggests that textile weaving on narrow looms was an indigenous development, although some scholars think that this technology might have been adopted from looms from South Asia. During this time, African weavers were mostly itinerants and needed more portable

equipment. The adoption of the narrow loom allowed them to have such equipment to carry out their craft. Nonetheless, as a result of this technological development, cotton cultivation and production as well as cotton-weaving technology grew in importance throughout sub-Saharan Africa.

In the region of eastern Nigeria, the Igbo-Ukwu culture is considered by scholars to be the most significant for technological development in this period. Artifacts of woven baste that were excavated by archaeologists in eastern Nigeria illustrate that weaving was an important industry by the ninth century CE in Igbo society. However, scholars are uncertain whether the looming process was in fact used for the manufacture of clothing. Cultural anthropologists, through comparisons with contemporary manufacturing of Nigerian mats, are convinced that this might be the case. Findings in Igbo-Ukwu culture also offer evidence of the production of beads in the southern Sahara. Beads of different colors were among other artifacts buried in this region that have been found in excavations. Approximately 165,000 stone and glass beads were found by archaeologists in the two excavation sites of the Igbo-Ukwu.

Ironworking was widely practiced in West Africa by 500 CE. The ore was either removed directly from hillside surfaces or dug from shallow pits. The ore was crushed between stones to remove the coarse impurities and overburden. The residue was then washed and placed in the furnace for smelting. The technology of the smith is a simple one consisting of elementary tools, usually the furnace, forge, and hammer. The *cire perdue* (lost wax) method of bronze casting was practiced by the Igbo-Ukwu in the ninth century CE.

The craft of pottery making was widespread in Africa south of the Sahara as it was in much of the world at this time. However, in this context it was a technology in which pottery was made by hand rather than with the use of the potter's wheel. While pottery was one of the oldest material cultures in Africa south of the Sahara, its practice from the Neolithic to the early medieval period continued without new innovations or technological changes. From 500 BCE to 200 CE, the earliest sculptures of terra-cotta yet dis-

covered in Africa were made. These were associated with Nok culture in northern Nigeria. The main techniques of building pots were pinching and coiling.

The potter's wheel was not used in Africa south of the Sahara until European colonization. Although there were different devices that could suggest the origin of the potter's wheel, these were not developed. While most pottery traditions in the world used one sort of rudimentary revolving device or another in the past, it was not known to have been developed in Africa south of the Sahara. Sub-Saharan African cultures began the production of large globular pots on the rounded bottom of previously fired pots; in some cultures it was started at the inside of a previously fired hemispherical pot. The devices were used as molds. The firing of pottery wares was done in the open in bonfires even though some rudiments of enclosed kilns were already in use in Asia.

—*Tolulope Lawrence Akinbogun*

Bibliography

- Adler, P., and N. Bernard. *African Majesty: The Textiles Art of the Ashanti and Ewe*. London: Thames and Hudson, 1992.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- July, R. W. *Pre-colonial Africa: An Economic and Social History*. New York: Scribner, 1975.
- Onuzulike O. "The Potter's Wheel Yesterday and Today: A Historical Survey of the Origin and Development of Man's Earliest Machine." In *Nigerian Crafts and Techniques*, edited by T. L. Akinbogun, S. R. Ogunduyile, and E. B. Ojo. Akure, Nigeria: Nigerian Crafts Forum, 2003.
- Shaw T. *Nigeria: Its Archaeology and Early History*. London: Thames and Hudson, 1978.
- Thurstan Shaw. *Igbo-Ukwu Culture: An Account of Archaeological Discoveries in Eastern Nigeria*. London: Faber and Faber, 1970.

The Invention and Production of Paper, 100–1000 CE — From China to West Asia

The invention and subsequent spread of paper profoundly altered the course of ancient world history, especially in the field of communica-

► CHRONOLOGY—THE DIFFUSION OF PAPER AND PAPERMAKING

- 140–87 BCE—First attested use of paper in Han dynasty China
- 105 CE—Cai Lun presented paper to Emperor He
- 0–200 CE—First attested use of paper for writing in Han dynasty China
- 200–300 CE—Paper reaches oasis cities of central Asia bordering on the Han empire
- 200–300 CE—Paper imported in states located on Korean Peninsula and in Vietnam
- 200–300 CE—Papermaking begins in Vietnamese territories
- 200–500 CE—Papermaking begins in central Asia
- ca. 280 CE—Paper replaces bamboo and silk in the production of Chinese books
- 300–500 CE—First attested uses of starches and dyes in papermaking in Chinese and central Asian territories
- 610 CE—Papermaking was introduced in Korea no later than this date; a Korean monk allegedly transmitted papermaking to the Japanese
- ca. 650 CE—Paper imported in Samarkand
- 751 CE—Muslim army captures Chinese paper makers at Battle of Talas
- 794–795 CE—Establishment of the first paper mill in Baghdad, capital of the Abbasid empire;
- widespread use of paper in the Abbasid bureaucracy
- 800–900 CE—Paper mills established in Damascus and other Syrian cities
- 800–900 CE—Paper imported in Egypt
- 900–1000 CE—Papermaking begins in Egypt
- 950–1000 CE—Paper imported on the Iberian Peninsula and used for the transmission of Muslim as well as Christian texts
- 1000–1050 CE—Papermaking begins on the Iberian Peninsula
- ca. 1050 CE—Paper imported in the Byzantine empire
- 1150–1200 CE—Paper appears in common use for commercial and legal transactions in northern and central Italy
- 1200–1250 CE—Papermaking begins on the Italian Peninsula
- 1300–1400 CE—Italian paper replaces Spanish paper in the Mediterranean and European trade
- 1400–1500 CE—Paper mills established throughout western Europe

—Hilde De Weerd

tions. As a cheap and light material that could be manufactured in most places, paper gradually replaced most forms of media that societies across the world had been using for record keeping and the transmission of ideas since the fourth millennium BCE. Paper initially facilitated and expanded the use of written records in the Chinese territories beginning in the first and second centuries CE and, over the course of the first millennium, was adopted in East Asia, central Asia, West Asia, North Africa, and southern Europe.

Chinese historians and some Western historians following their lead have attributed the invention of paper to Cai Lun, a eunuch who served at the court of the Han dynasty and presented the new material to Emperor He in 105 CE. Twentieth-century archaeologists as well as authors contemporary to Cai Lun testify that paper was already in use by the second and first centuries BCE. Archaeologists date the earliest extant pieces of paper back to this period on the

grounds that the tomb in Baqiao (now Shaanxi Province) in which they were discovered in 1957 was sealed around the reign of Emperor Wu (140–87 BCE).

The materials and the procedures used in the manufacture of these early papers changed little over the course of the first millennium. The small pieces of paper discovered in Baqiao were made from hemp rags. Impressions on the surface of the paper suggest that the sheets had been dried on a woven mat. Paper was then, as later, made by beating rags or vegetable fibers, mixing them with water, and gathering the resultant pulp on screens from which excess water and pulp could be drained. The sheets of pulp were either left on the screens or suspended from walls or lines for drying and were thus transformed into paper.

Chinese artisans first used hemp and paper mulberry bark as their raw materials, but by the eleventh century their repertoire of raw

> CAI LUN

Cai Lun was a eunuch, or castrated attendant, serving at the Han court between the late first and early second century CE. He was one of the dozens of eunuchs in the service of the emperors Zhang (75–88) and He (88–105) and benefited from the rising political power of his kind, at the cost of the regular bureaucracy. For his alleged invention of paper, Cai was granted the title of marquis, and paper was known in Han times as “the paper of Marquis Cai.” This appellation was, if not a rightful attribution, a sign of the growing interest in paper at court and in elite society in the first centuries CE and of the technical improvements that court workshops may have realized under Cai Lun’s direction.

According to his biography *The Dynastic History of the Later Han Dynasty*, written by Fan Ye and completed around 445, Cai Lun conceived of a process to make paper from tree bark, rags, hemp, and fishing nets. He submitted his invention to the emperor in 105 CE and promptly received imperial recognition for it. This date should not be seen as the beginning of papermaking. Archaeological evidence and accounts dating back to the Han dynasty provide evidence for papermaking at least two centuries prior to the submission of Cai Lun’s invention. Nevertheless, the addition of organic materials may have been an innovation of Cai’s, as earlier papers appear to have been made from used products such as rags and nets only.

—Hilde De Weerd

Sources

Tsien, Tsuen-hsuei. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology. Part 1: Paper and Printing*. Cambridge: Cambridge University Press, 1985.

Twitchett, Denis, and Michael Loewe, eds. *The Cambridge History of China*, Vol. 1, *The Ch’in and Han Empires, 221 B.C.–A.D. 220*. Cambridge: Cambridge University Press, 1986.

materials had expanded to include rattan, flax, ramie, jute, bamboo, seaweed, wheat stalks, rice straw, sandalwood, and hibiscus bark. Their extensive use of fresh plant fibers contrasted with later European manufacturing practices, which relied on supplies of linen and cotton rags obtained as a result of the growing popularity of

these textiles from late medieval times onward. Papermakers used two types of screens. The earliest papers were most likely made with floating screens. The papermakers poured pulp onto screens sitting on top of the pulp vat and peeled the sheets from the screens of woven ramie after all water had evaporated. Most extant Chinese papers were made with a second type of screen, the dipping screen, that allowed for faster processing. Artisans dipped the screen, typically made of bamboo, into the vat of pulp and transferred the wet sheets to boards or walls for drying.

In order to improve the quality of paper, Chinese and central Asian artisans began to add glues and starches either to the pulp or to sheets of paper between the third and fifth centuries CE. These glues and starches improved the cohesion of the plant fibers and rendered finished sheets suitable for writing or painting with ink. Around the same time, paper manufacturers began to experiment with dyes and colors. Some dyes were applied as insecticides, while others served purely aesthetic interests. The Han court began to use red and yellow papers by the third century CE. By Tang times (618–907) stationers supplied papers in ten different colors, ranging from apricot pink to light clouds.

The application of dyes and colors from the third century CE onward coincided with changes in the uses of paper. The earliest specimens of paper were blank. They were most likely used for wrapping. By the first century CE literate Chinese elites began to use paper as a substitute for less convenient writing surfaces such as wood tablets, bamboo strips, and silk rolls. Dyes and colors were an expression of their interest in the preservation of written materials and their desire for a luxurious and distinctive media of social exchange.

Once paper had been adopted as a medium for writing, it transformed the scholarly world. Sometime in the late second century or early third century CE, paper became more widely used than silk and bamboo in the production of books, as suggested by the Jin court’s decision in 280 CE to have its collections recorded on bamboo materials transcribed onto paper. Catalogs of the imperial collections of subsequent dynasties as well as extant records about private holdings indicate that from the third century CE onward

books in paper dominated court and elite culture. Paper became the ideal medium for the mechanical reproduction of texts after the adoption of woodblock printing in the eighth century. Even though its use for writing may have been most influential in the course of world history, paper changed the daily lives of millions of Chinese in other ways. During the first millennium it was used for such different purposes as fans, umbrellas, paper cuts, playing cards, napkins, lanterns, toilet paper, clothes, and harnesses.

The use and production of paper spread from the Chinese territories to all surrounding societies. To the west, paper reached the oasis cities of central Asia bordering on the Chinese empire by the third century CE and was manufactured there no later than the fifth century. It was imported in the rich city-state of Samarkand by the seventh century, and from there knowledge of the manufacturing process was further transmitted to Baghdad, Damascus, and other parts of West Asia. By the ninth or tenth century paper became known in North Africa, from where it was exported to the Iberian Peninsula in the tenth century. Long before its first introduction in Europe, paper had been in use in the societies of East Asia. Paper may have been introduced from the Han empire to states located on the Korean Peninsula and in present-day Vietnam as early as the third century CE. Vietnamese artisans learned the process of papermaking immediately, while Koreans engaged in papermaking no later than 610 since in this year a Korean monk allegedly transmitted knowledge of the process to Japan. This act of cultural borrowing was soon followed by the adoption of a related technology, woodblock printing, in both Korea and Japan. Thus, by 1000 CE paper had spread from China throughout much of the Eurasian landmass and in the process had revolutionized ancient communications practices.

—Hilde De Weerd

Bibliography

- Bloom, Jonathan. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven, CT: Yale University Press, 2001.
- Tsien, Tsuen-hsuei. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology; Part 1: Paper and Printing*. Cambridge: Cambridge University Press, 1985.

Chinese Printing to 1000 CE—Technological Innovations and Their Cultural Implications

Printing, or the reproduction of images and texts by pressing paper against an inked surface, first emerged in East Asia when this region was culturally dominated by the Chinese Tang empire (618–907). Historians disagree on the questions of whether the invention of printing dates back to the seventh or the eighth century and whether Chinese or Koreans first mastered the technology. There is no doubt, however, that printing, predominantly with woodblocks, was used for a variety of purposes in East Asia centuries before printing spread to West Asia and the European continent.

The earliest surviving printed text that can be reliably dated is the *Vimala Nirbhaya Sutra*. This text, a Buddhist charm or dharani, was discovered in a pagoda in the Pulguksa Temple in Kyongju (South Korea) in 1965. It was printed from a woodblock onto a paper scroll sometime between 705, when it was first translated into Chinese by the Chinese monk Fazang (643–712), and 751, when the construction of the Sakyamuni Pagoda was completed. Only about two-thirds of the original copy, which may have been as long as



The world's earliest surviving book is a wood-block printed version of the Buddhist scripture known as the *Diamond Sutra*. The Tang dynasty-era sutra consists of individual sheets of printed text and a frontispiece illustrating the Buddha surrounded by acolytes and disciples. (Werner Forman/Corbis)

► THE PRINTING OF THE *DIAMOND SUTRA*

In 1907 Sir Aurel Stein (1862–1943), a Hungarian-born British explorer, bought around 7,000 scrolls of text that had just been discovered in a hidden chamber in the cave-temples in Dunhuang (now Gansu Province). Among the scrolls was the oldest surviving printed book, titled *Jin'gang banruo boluomi jing*, or *Diamond Sutra* (Sanskrit: *Vajracchedika Prajna Paramita*). This Buddhist sutra became known in the Chinese territories in the fourth century when the monk Kumarajiva (b. 344), a famous translator of Buddhist texts, translated it from Sanskrit into Chinese. It is a short sermon attributed to the Buddha in which he explains the illusionary nature of reality and urges listeners to see through the deception of names and concepts. According to the Buddha, the power of this teaching resembled that of a diamond cutting through even the hardest materials. The copy that Stein bought and then transferred to the British Museum (now the British Library, London) can be dated to circa 868 based on internal evidence. The scroll concludes with a

colophon in which the sponsor dedicated the printing of the sutra to his parents and dated the project to 868 CE.

The book consists of seven long printed sheets, each drawn from a different woodblock. The sheets were pasted together right to left, forming a scroll 17.5 feet in length. It opens with an illustration of the Buddha surrounded by devotees. The quality of the illustration as well as the printed text demonstrates the advanced skill that Chinese printers had already attained by the ninth century. The sponsor's hope, expressed in the colophon, that the printing of this sutra would result in positive karma for his parents illustrates the role of Buddhist beliefs and the Buddhist investment in the duplication of texts in the development of printing in the Chinese empire.

—Hilde De Weerd

Source

The British Library, "Diamond Sutra," in "Landmarks in Printing."

20 feet, survive. Around 770 the Japanese Empress Shotoku (r. 764–770) ordered 1 million copies printed of the same Buddhist charm. She had the copies stored in tiny wooden pagodas and distributed among ten Buddhist temples. Several printed copies are extant. Chinese archaeologists discovered similar printed Buddhist charms in tombs excavated near the Tang dynasty capital of Chang'an (present-day Xian) in 1967 and 1974–1975. These may predate the charms discovered in Korean and Japanese temples. By the ninth century, Chinese printers produced Buddhist texts, calendars, dictionaries, pedagogical texts, and titles on medicine and prognostication.

The invention of printing was not sudden or unexpected. Regardless of whether one sees printing as a Korean or a Chinese invention, there is no doubt that the development of printing was an extension of preexisting technologies first developed in the Chinese territories. The Chinese character for printing (yin) is the same as that used for a seal and the stamping of a seal. Seal carving is very similar to the carving of woodblocks. A mirror image of the image or

text to be reproduced was carved in relief on a flat and hard surface. Seals had been in use since around the twelfth century BCE. They were carved in stone, jade, ivory, horn, and wood or cast in bronze, gold, silver, and iron. Before the invention of paper, users of seals stamped them on clay or silk. From the fifth century CE onward, government officials and literate elites commonly applied red ink to their seals and stamped them on paper. Seals sometimes carried a short text. Daoist priests, for example, used seals in the centuries preceding the invention of woodblock printing to duplicate charms.

By the sixth century, artisans developed a method for applying paper to an inscribed surface to produce a copy of the inscription. This method, called rubbing, was used mostly to reproduce stone inscriptions. An artisan pressed paper onto a stone stele-carved intaglio and applied black ink to it, thus producing a black sheet with white characters (showing the carved-out areas).

The techniques of seal carving and producing rubbings, along with the Chinese invention of pa-

per around the second century BCE and the use of black ink from the first millennium BCE at the latest, were the preconditions for the development of printing. The dharani discovered in Korea was printed by the woodblock method. Woodblock printing became the dominant method in Chinese printing, even though movable type was used throughout the second millennium CE and other media such as copper plates were occasionally substituted for the woodblocks. Typically, the blocks were cut from the wood of deciduous trees such as pear, jujube, catalpa, boxwood, ginkgo, or the Chinese honey locust. They were rectangular in shape, with their size depending on the desired size of the book. The first step in the carving process was the transcription of the manuscript to be printed with brush and ink onto thin sheets of paper. Next, an artisan placed the calligrapher's wet transcript, face down, on the block so that a reverse image of the text was transferred onto the block. Then the carvers were put to work outlining the reversed characters with a cutting knife and removing all the wood not covered by ink with a chisel. The process was repeated for the opposite side of the block; blocks were frequently carved on both sides. Because the carvers were low-paid laborers and oftentimes illiterate, literate men proofread a trial print. The carvers made the necessary corrections to the block by excising mistaken characters and plugging in substitute pieces of wood with the corrected text.

After the final editing, the blocks were ready for printing. Printers placed the prepared blocks on tables and applied ink to the characters with an inking brush. While the ink was wet, the printers laid white or yellow sheets of paper on top of the block, covering its entire surface. They gently pressed the paper against the block with a rubbing pad and thus obtained a clean and positive copy of the carved text in black characters. The printing process could be repeated immediately to obtain any number of copies; the owners of the blocks could also keep them in storage to produce further copies at a later date.

At first, printers preserved the appearance of manuscript texts. Calligraphers designed the characters, and the printed sheets were pasted together to form scrolls just like manuscript

texts. The earliest extant complete book in print, the Diamond Sutra, was produced in this fashion. Gradually, the new technology of printing brought about changes in book formats. In the ninth and tenth centuries bookbinders used a binding style in codex format. They folded the printed leaves down the middle, piled the folded sheets on top of each other, and then pasted stiff paper alongside the center folds to hold the sheets together. Because in the minds of some readers the leaves resembled the wings of butterflies when opened, this binding style was called butterfly binding.

The fact that the earliest extant printed texts in Korea, China, and Japan and the earliest extant printed book are associated with Buddhism illustrates its significance in the early development of the medium of print in Chinese history. According to T. H. Barrett, printed texts were part of a wider set of objects whose multiplication generated merit or karma for the individual producing and distributing them. Religious texts were equivalent to relics whose presence embodied holiness and were thus not necessarily produced to be read or used for instructional purposes. Printing was a useful technology for Buddhists because it made the duplication of thousands and even hundreds of thousands of printed relics faster and more reliable than copying by hand.

During the ninth century private printers and booksellers also used print technology to distribute a small repertoire of practical texts. Most popular among those were privately printed calendars. Calendars indicated propitious and unlucky times for agricultural and other activities of daily life and thus regulated the lives of households and communities. Their circulation challenged the state's prerogative in ordering time and thus prompted Emperor Wenzong (r. 826–840) to issue an edict in 835 prohibiting the private printing of calendars. Other ninth-century printed texts (such as printed manuals on prognostication and medicine, dictionaries, and a guide for the moral education of girls) similarly appealed to a broad and not necessarily scholarly readership.

A major shift in the application of print technology occurred in the tenth century. From the early tenth century onward, government and

private printers began to produce and distribute scholarly literature in print. The most conspicuous project was the printing of the classics associated with the Confucian tradition, comprising 13 titles in all, between 932 and 953. Until this time the government had published standard editions of the classics by inscribing them on stone steles. The printing of the classics, led by Feng Tao (881–954), who served in high court positions in five dynasties, symbolized the state's awareness of the power of print and promoted its acceptance among the political elite. Later in the tenth century similar large-scale printing projects resulted in the printing of the Daoist and Buddhist canons. These developments prepared the stage for the expansion of both government and commercial publishing during the Song dynasty (960–1279).

—Hilde De Weerd

Bibliography

- Barrett, Timothy H. *The Rise and Spread of Printing: A New Account of Religious Factors; Soas Working Papers in the Study of Religions*. London: School of Oriental and African Studies, 2001.
- Seo, Tatsuhiko. "The Printing Industry in Chang'an's Eastern Market in the Tang Dynasty." *Memoirs of the Research Department of the Toyo Bunko* 61 (2003): 1–42.
- Tsien, Tsuen-hsuei. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology; Part 1: Paper and Printing*. Cambridge: Cambridge University Press, 1985.
- Twitchett, Denis. *Printing and Publishing in Medieval China*. New York: Frederic C. Beil, 1983.

Gunpowder

Gunpowder may be the most important discovery in world history. It changed the way in which wars were fought and substituted chemical energy for muscle energy in many activities. Ironically, gunpowder apparently owed its origin to the search by Daoist alchemists for an elixir for eternal life.

Early Daoist alchemists in China conducted many scientific experiments before the beginning of the Common Era. The centralized government of Emperor Wu Di (156–98 BCE) financed a systematic search for mixtures that could bring

everlasting life. Researchers identified a number of compounds and cataloged their uses. Sulfur and saltpeter were among these, and recipes dating from 2,000 years ago include both. By 950 CE, mixtures including charcoal had been developed. Alchemists often used fire or heat to treat their mixtures, sometimes with disastrous results. Many of the early written recipes, such as those by Wei Boyang in the *Book of the Kinship of the Three*, were intended as warnings to alchemists that some mixtures should not be made.

Protogunpowder developed by alchemists was recognized as being toxic and not a source of life. They quickly found other uses for *huoyao* ("fire drug"). It was used to treat skin sores and ringworm. Physicians also used it as a fumigant to kill insects and to dispel chills and fevers.

Huoyao burned rapidly with a great deal of smoke, but applying its explosive powers to military uses was not appreciated until the tenth century. By the second century CE, Chinese craftsmen had stuffed sections of bamboo with *huoyao* and plugged both ends. The bamboo was then thrown into a fire, where it exploded with noise and a flash. Later they added a fuse to the side, creating firecrackers. Fireworks makers soon recognized that plugging one end of the bamboo would allow flames and sparks to shoot out of the open end, resulting in what became known as Roman candles.

Many Chinese military leaders were followers of the Dao philosophy, and they apparently learned of the secrets of *huoyao*. By 950 CE a printed formula for gunpowder had appeared. At first, the ratios of sulfur, saltpeter, and charcoal were roughly equal, resulting in a very low-power explosive. Military leaders learned that increasing the amount of saltpeter would result in a more powerful explosive. The first military use was recorded in 904 CE when Chinese armies used incendiary projectiles called flying fires. They attached bamboo tubes filled with gunpowder to arrows, lit fuses, and fired them against opposing armies.

By the eleventh century, the Chinese military had developed different types of gunpowder weapons. The first was a gunpowder bomb thrown by a trebuchet that would hopefully explode among opposing soldiers. The second was a similar bomb with hooks. The intention was

that the bomb would stick to a building or other wooden structure and that the explosion would set it on fire. The third was a poison-smoke ball, which would emit clouds of poisonous smoke. For this purpose, arsenic or other poisons were mixed with the gunpowder. Some Chinese soldiers also used versions of Roman candles as crude flamethrowers.

Observers realized that gunpowder had propulsive power, and the first rockets were developed by the thirteenth century. They were inaccurate and had limited physical impact. The rockets' psychological impact was apparently greater. Other Chinese soldiers used tubes filled with gunpowder and bits of glass, metal, or rocks. When the gunpowder ignited, the pieces were blown out. These weapons may be considered forerunners of cannons. Ironically, the development of gunpowder weapons slowed in China, falling behind the Europeans, who imported the secret of gunpowder from the Chinese.

—*Timothy J. Watts*

Bibliography

- Buchanan, Brenda J. *Gunpowder: The History of an International Technology*. Claverton Down, Bath, UK: Bath University Press, 1996.
- Kelly, Jack. *Gunpowder: Alchemy, Bombards, and Pyrotechnics: The History of the Explosive That Changed the World*. New York: Basic Books, 2004.
- Needham, Joseph. *Science and Civilization in China*, Vol. 5, *Chemistry and Chemical Technology; Part 7: Military Technology: The Gunpowder Epic*. New York: Cambridge University Press, 1986.
- Partington, J. R. *A History of Greek Fire and Gunpowder*. Cambridge, UK: W. Heffer, 1960.

Porcelain and Ceramics

Ceramic technology reaches back to the New Stone Age. In its simplest form clay was molded or shaped, dried, and then fired in a wood fire to temperatures of 800–1,150 degrees centigrade, creating earthenware, a product that was still somewhat porous. Glazes were later developed to make it waterproof. In 600 CE ceramics were mostly of this type with the exception of China, where ceramic technology reached a high level of sophistication as early as the first millennium

BCE. In China, ceramics were divided into two groups: low-fired earthenware and high-fired wares, including both stoneware and porcelain. Stoneware was fired to 1,200–1,300 degrees centigrade, which created a hard waterproof product that emitted a ringing sound when struck. Between the sixth and the eighth centuries CE Chinese potters discovered how to manufacture porcelain. Composed of kaolin and other ingredients and fired to an even higher temperature (1,280–1,400 degrees centigrade), porcelain is waterproof, vitrified, and semitransparent. Its beauty made it a desired trade item throughout Eurasia and later the entire world.

China was able to create the world's most technically superior ceramic wares because of, in part, their development of efficient high-fire reduction kilns. They produced a wide variety of products from coarse utilitarian wares to sophisticated porcelains, but it was the high-end products that were traded to the West and that influenced the development of the ceramic industry there. White stoneware or porcelains glazed with a thin transparent greenish or bluish glaze called celadon were originally in high demand but declined in popularity with the development of the bright Tang three-colored lead-glazed wares called *sancai*. These glazes, applied over stoneware, dripped and flowed, creating fuzzy borders reminiscent of the Tang tie-dyed and resist-dyed fabrics. *Sancai* was used

➤ A CHINESE SECRET—PORCELAIN

In the ninth century an Arabic merchant named Suleyman describing trade in Canton, China, reported on an amazing new discovery. He wrote of “a clay of superior quality with which bowls are made which are as thick as glass bottles; liquid inside them can be seen through them.” He was describing porcelain, a Chinese invention that would eventually rival silk as the most coveted import from China. Suleyman also describes an exciting new beverage he sampled that would eventually help fuel Europe's desire for porcelain: tea. These two items would soon rival silk as the premier Chinese export.

—*Rebecca Wendelken*

on dishes and pottery but also on sculptural pieces that often depicted horses, camels, and foreign merchants from the Silk Roads as well as young women and dancers. Many of the sancai pieces were created for funerary ware to be used in China, but some was exported to Persia and Byzantium, where a lively trade in copies developed. In the ninth century celadon again became popular, perhaps coinciding with the adoption of tea drinking, but the majority of Tang production consisted of Yueh ware, a stoneware covered with a greenish or putty-colored glaze. The designs were often influenced by Persian and Byzantine metalwork and motifs including palm trees, cherubs, swags, and dancers. Pieces of this fine-grained stoneware have been found from Japan to the Near East and on the eastern coast of Africa, showing the widespread trade in Chinese ceramics. The fall of the Tang dynasty fragmented China politically, but the turmoil did not stop the production of pottery. It continued to be produced in large quantities for both domestic use and for export.

Production in Korea and Japan was based on Chinese technology. Korean ceramics, especially after Korea's unification in 688, developed rapidly under Tang influence. Koreans perfected the production of celadon wares in the eleventh century, and their work rivaled that of the Chinese. Japanese potters were slower to develop more advanced techniques. The fashion for anything Chinese, especially among the elite, meant that domestic production was mostly limited to utilitarian wares. Local potters attempting to copy Chinese sancai ware could not meet the high standards of the Chinese products until high-fire kilns were imported from Korea. This finally allowed the Japanese to make a hard, dark gray stoneware. These pots were distinctly Japanese and of a much higher quality but continued to be used mostly by commoners. Porcelain wares were not produced in Japan until the early seventeenth century.

European ceramics suffered after the fall of the western Roman empire, as more advanced techniques used by the Romans were eventually forgotten. Only in Byzantium did technical innovations such as the potter's wheel and lead glazing continue to be used. Byzantium devel-

oped a lively decorating technique that included scratched and incised patterns and was greatly influenced by the technical advances in the Arab world and the products of China.

As Islam spread throughout Asia and North Africa, ceramics in those regions flourished due in part to a prohibition found in the hadith against eating or drinking from vessels of precious metal. This led to a brilliant tradition of ceramics decorated with geometric and calligraphic designs. In Persian areas the decoration took the form of human and animal representations despite the Quranic prohibition. The Abbasids in Baghdad and the Fatimid dynasty in Egypt had especially outstanding works. Nishnapur in eastern Persia was known for its underglazed wares, while in other areas Islamic ceramics sported vivid green, blue, and turquoise glazes over incised patterns. Technically, Islamic regions developed an opaque tin glaze that gave a white surface for decoration. New techniques including applying enamels to the surfaces of glazed pieces and the use of metallic lusters to simulate metalwork were developed. Islamic pottery borrowed motifs and forms from China, which illustrates the cultural exchanges along the Eurasian trade routes.

Earthenware technology was known in Africa since early times, but to date few pieces have been recovered outside of Egypt and North Africa. One notable exception has been the discovery of a number of large helmet-shaped earthenware heads from the sixth or seventh century. Their original use has not been determined.

In the Americas ceramic production was limited to unglazed earthenware pieces, although shiny and more waterproof surfaces were achieved by burnishing the clay surface before the pieces were fired. Minerals such as ochre or iron oxide were sometimes used to decorate the surfaces either before or after firing. The Maya were especially adept at this technique, creating finely painted ceramics for religious and domestic use. Small-scale sculptural figures of people from all walks of life were rendered in realistic detail. By 1000 earthenware technology was known to most of the settled peoples of the Americas.

—Rebecca Wendelken

Bibliography

- Camusson, Lorenzo, and Sandro Bortone. *Ceramics of the World: From 4000 B.C. to the Present*. New York: Abrams, 1991.
- Medley, Margaret. *The Chinese Potter: A Practical History of Chinese Ceramics*. London: Phaidon, 1989.
- Munsterberg, Hugo, and Marjorie Munsterberg. *World Ceramics: From Prehistoric to Modern Times*. New York: Penguin, 1998.
- “Voyage du marchand arabe Sylayman en Inde et in Chine rédigé en 851.” Translated from the Arabic by Gabriel Ferrand (Paris, 1922). In Luce Bulouis, *Silk Road: Monks, Warriors and Merchants on the Silk Road*, translated by Helen Loveday. New York: Norton, 2004.

Silk

The technology of silk cultivation and production developed in China more than 6,000 years ago. Silk cloth and thread were major Chinese trade items even before the Han dynasty (206 BCE–220 CE). Bolts of silk cloth were used as a medium of exchange and formed a large part of tribute payments to hostile groups along China’s periphery. Because silk brought high profits, peoples outside China were eager to learn the secret. Some, such as the Japanese, were given gifts of silkworm eggs by the emperor of China. While China’s production was sufficient to allow even commoners to have some silk clothing, in Japan smaller production meant that the use of silk was restricted to the court.

If they could not receive the technology by gifts, others resorted to early industrial espionage. The West had a silk-weaving industry, but it was entirely dependent on imported Chinese thread. Sassanid Persian textiles were especially prized for their excellent techniques and unique patterns. However, the supply of silk thread along the Silk Roads was not always dependable. At times, silk cloth was taken apart and the threads rewoven in more marketable local patterns. The solution was to gain access to the technology of silkworm cultivation. According to legend, in 552 Nestorian monks hid Chinese silkworm eggs in their walking staffs and carried them back to Byzantium. Whether this story is true or not, by the seventh century China’s monopoly on silk thread

➤ NOT EVERYONE FAVORED SILK

With its high cost and connection with decadent life, silk cloth was not only coveted but also condemned. Silk, widely used for covering relics, for vestments, and for decorating places of worship, was forbidden as secular war by religious leaders of many faiths. The Quran said that the righteous would be clothed in green silk woven with gold in heaven, but those who wore it on earth would not be allowed to enter. In Christianity, St. Jerome issued similar admonitions against wearing certain luxurious clothing, but Hindus thought that silk was so pure that it was perfect for ritual use. It did not even need to be washed first.

—Rebecca Wendelken

production was broken. Silkworm cultivation centers and a silk thread industry were set up in Syria. Its weavers produced fabulous silk brocades treasured throughout Eurasia, but, like Japan, the West could not produce enough to meet all its needs. The West continued to import large quantities of Chinese silk to meet the growing demand.

During the ninth century the Byzantine silk industry thrived, and the government maintained a monopoly on its production. They produced their own designs but also borrowed motifs from Persia and China. From Byzantium, silk manufacture spread to Italy, again by illegal means. By the tenth century Venice and Amalfi were trading in locally produced illegal silks. As Byzantium’s power waned and turmoil in central Asia caused the Eurasian Silk Roads trade to decline, the Italian peninsula became the primary source of Western silk.

Another early producer of silk fabric was India. India received Chinese silk weaving technology in the Gupta period (400–600 CE) but like the West remained dependent on imported silk thread. Chinese silk was often mixed with native wild silk or cotton to produce spectacular cloth. India resisted silkworm production along Chinese lines because the process killed the pupa to keep the cocoon intact. This may have violated Hindu religious laws, and India continued to import Chinese threads.

As the secrets of silk cultivation spread, China developed many new techniques in silk weaving and dyeing. During the Tang dynasty (612–906), Han warp-patterned brocades were replaced by Western weft-patterned brocade techniques, and motifs moved away from linear Han designs to more overall patterns. Other Western weaving techniques including twill weaves, and new patterns were copied from Sassanid Persia and Byzantium. Foliate patterns, including the palmette and half-palmette, confronted animals, and the Sassanian pearl-edged medallion and royal hunting scenes, were adapted to Chinese tastes. New dyeing techniques such as wax and clamp resists and patterned tie-dyeing also developed, allowing even commoners access to decorated silk clothing. In the eighth century Chinese weavers moved toward more natural designs. In the following century woven textile designs became more

formal, although naturalistic motifs remained popular. By the Song dynasty the patterns and colors became more subtle, and Chinese weavers perfected the satin weave. Although it lost its monopoly, China retained its position as the premier silk producer, and Chinese silk and production technology continued to be avidly sought after in world markets.

—Rebecca Wendelken

Bibliography

- Feng Zhao. *Treasures in Silk: An Illustrated History of Chinese Textiles*. Hong Kong: Costume Squad, 1999.
- Scott, Philippa. *The Book of Silk*. London: Thames and Hudson, 1993.
- Vainker, Shelaugh. *Chinese Silk: A Cultural History*. London: British Museum Press, 2004.
- Vollmer, John. *Silks for Thrones and Altars: Chinese Costumes and Textiles*. Berkeley: Ten Speed Press, 2004.

■ Introduction: Travel Technology

Some very important innovations in travel technology were made during the Era of Expanding Regional Civilizations. Norsemen crossed the Atlantic, traveling west to North America, while Polynesians reached South America from the east, completing their exploration of the eastern Pacific Ocean. That they were able to do this was partly due to their steady innovation of marine technology. The Polynesians did it by constructing large double-hulled oceangoing canoes, which could survive storms and gales, as well as by mastering sailing techniques that allowed them to sail into the wind. On the other side of the globe, the Norsemen in the eighth century began building large oceangoing keeled longboats that allowed them to sail and row the hundreds of miles of open water between Norway (or Scotland) and Iceland, between Iceland and Greenland, and from Greenland to North America.

Probably even before the start of this era, Austronesian speakers from Indonesia began constructing sewn boats to sail, using lateen sails,

across the Indian Ocean to the east coast of Africa and then to Madagascar. These Austronesians may have given the Indians and the Romans the technique of crossing the Indian Ocean with the seasonal monsoon, and they may have imparted to the westerners the use of the lateen sail. Regardless of the way they learned it, the Indians, Romans, and Greeks and then the Arabs and Persians took advantage of the seasonal monsoons to cross the Indian Ocean throughout this period. Also, since the beginning of this era, the lateen sail was known in the Mediterranean, although it probably did not become common in the Mediterranean until about the sixth century. One of the most important innovations in marine navigation was the Chinese invention of the sternpost rudder, perhaps as early as the sixth century.

The use of the lateen sail spread to ships sailing up the Nile River in Egypt. The Nile has been a very busy highway, partly because of the interesting opposition of the prevailing wind and the river current. While the current flows uniformly north, the prevailing wind for much of the year

is upstream, to the south. Sailors on the Nile solved the problem caused by the shifting winds by developing the felucca, a type of river craft that uses lateen sails. River transportation and trade were important wherever there were navigable rivers, such as the Mississippi and Amazon systems. In those two rivers and in many others throughout the world, the dugout canoe was the most widely used river craft. In China, especially on the Yangtze, craft that could carry much larger loads were used. A problem concerning travel on the Yangtze was the powerful current, making travel upstream difficult and sometimes impossible. This problem was ameliorated somewhat by the construction of towpaths along the banks of the river. These towpaths were sometimes chiseled into the rock cliffs that enclosed the river as it rushed through gorges.

During this period, China constructed an elaborate system of inland water transportation using an elaborate combination of rivers, lakes, and canals. The Grand Canal was constructed during the Sui dynasty (589–617) to transport grain from the Yangtze Valley to the capital at Chang'an, which was the longest transport canal ever built.

China as well as other civilizations built roads for communication and transportation. In the Andes, the Wari empire built roads for its human bearers as well as for llama pack animals to travel. Radiating from Chaco Canyon, the inhabitants built a system of roads with communication towers to outlying supply areas. In India, to complement the Ganges River transportation, several dynasties constructed the Grand Trunk highway for express riders and bullock carts from Patlipatra in Bihar to Peshawar, now in Pakistan.

The Romans built one of antiquity's most extensive and durable road systems to move armies across their empire. After the fall of the western Roman empire, the road system there was allowed to fall into desuetude, and the Arab conquerors abandoned the Roman roads in the Roman provinces they conquered. The Arabs had a faster and less expensive transportation technology than the bullock cart previously used. Everywhere the Arabs went, they brought the dromedary camel, which could carry loads of up to 300 pounds and travel through territories without roads. With the spread of the Arab

Muslim empire in the seventh century, transportation and travel became not only less expensive but also more extensive. Travel across the Sahara Desert by camel caravan made cross-desert trade and travel at least an annual occurrence.

The rise of the Muslim caliphate and the Tang dynasty stimulated the transhemispheric trade on the Silk Roads. For this a special hybrid camel was developed, a cross between the Arabian dromedary and the central Asian Bactrian camels, with the strength and endurance of both.

—*Wilfred J. Bisson*

China's Inland Waterway System of Transportation

China has an immense inland waterway system that incorporates 5,600 navigable rivers with a total length of roughly 73,800 miles (119,000 kilometers) as well as a vast network of canals. The majority of China's total length of navigable waterways can be found within the courses of the Yangzi, Pearl, Huaihe, and Heilongjiang rivers. The Yellow River (Huanghe), one of the major rivers of China, is not easily navigated. The Yangzi, together with its tributaries, has a navigable length of approximately 36,000 miles (58,000 kilometers).

China has a vast network of canals, some of which date as far back as the latter years of the Zhou dynasty (ca. 1100–256 BCE). Many of the canals were built in a north-south direction to connect the Yangzi, Yellow, and other rivers, which run from west to east. One of the more ambitious of these canals, the Hong Guo, constructed perhaps as early as the sixth century BCE, connected the Yellow River near Kaifeng to the Si and Bian rivers. The Qin dynasty built an irrigation and transport canal in the Wei Valley that greatly increased the productivity and population of the area. The emperor Han Wudi (r. 141–87 BCE) built a canal connecting the Han capital city of Chang'an (present-day Xi'an) to the Yellow River.

The next burst of canal building occurred during the Sui dynasty (581–618) with the commencement of what was to become the Grand Canal. The canal became necessary due to the migration of China's core economic and agricultural region away from the Yellow River valley

THE GRAND CANAL OF CHINA

China's Grand Canal, which is about 1,200 miles (1,764 kilometers) in length, is the world's longest man-made waterway, linking China's major rivers with many of its major cities. The canals were built to facilitate the flow of food and commercial and military goods quickly from the south to the north.

The construction of the main elements came during the reign of Yang Guang, the second emperor of the Sui dynasty (581–618). The canal extended from Hangzhou northward across the Yangtze River to Yangzhou and then northwest to the region of Luoyang. After 609 the canal was extended northeast to the region of Tianjin and Beijing. This first canal joined up a network of older existing waterways so that barges could travel from the Yangtze to the Yellow River and then on up the Wei to the western capital at Xian. It is estimated that as many as half of the six million workers assembled to build the canal died from exhaustion and/or hunger.

During the Yuan dynasty (1271–1368), the Mongols moved the capital of China to Beijing, thus eliminating the need for the old canal flowing west to Kaifeng or Luoyang. The Mongols built a new canal from Hangzhou directly north across the Shandong massif during the 1280s north to Beijing. A sophisticated system of locks facilitated travel along the canal.

Today the Grand Canal is only navigable in certain sections and functions more as a symbol of past glory rather than as an important economic resource.

—Daniel A. Métraux

in the direction of the area now consisting of Jiangsu and Zhejiang provinces. Its purpose was to facilitate the transport of grain to the capital. With rapid population growth in the Yangzi River valley, many canals had been built to transport grain from the south to the north, but before the Sui period they were not linked together into one network. The Sui reopened the old Han-era canal between Chang'an and the Yellow River in 584.

Within the next decade the Sui had built an ambitious canal between the Yellow River and the Huai and on south to the Yangzi at Yangzhou. By 608 the Sui had completed a canal from

the Yellow River to what is today Beijing in order to better supply Sui armies in their ultimately unsuccessful invasions of Korea. Two years later the Sui extended the canal southward from Yangzhou to the rich rice lands of the Yangzi Delta to the river-port city of Hangzhou. This new network of canals became known as the first Grand Canal. It should be recognized that the Grand Canal at this time was not a continuous man-made canal but rather a collection of often noncontiguous artificial cuts and canalized or natural rivers.

The opening of the Grand Canal connected the basins of the Yellow and Yangzi rivers, thus linking the two major population centers of the country and spurring a critical growth in domestic and, by extension, foreign commerce. The Grand Canal itself was further supplemented by ancillary routes that carried goods to the northwest. With the intense labor of as many as five million men and women under the supervision of Ma Shumou, the first major section of the Grand Canal, called the Bian Qu, was completed by 605. The Grand Canal was fully completed under the reign of the second Sui emperor between 604 and 609 by first linking Luoyang to the Yangzhou (and the Yangzi Valley) and then by expanding south to Hangzhou and north to the area now encompassed by Beijing. Its total length was approximately 1,560 miles. This construction allowed southern areas of China to the northern provinces of China as well as to troops in the north. An imperial roadway was constructed along the canals along with post offices connected by a courier system.

During the Tang dynasty (618–907) the city of Yangzhou near the Grand Canal became the economic hub of China. The city itself was crisscrossed with canals, many built during the Tang period, and, it is said, had more boats than carriages. Yangzhou was the geographical midpoint of the canal and became the major locale for southern goods shipped to the north. A few modifications and additions were made in the canal to cut down travel time, but there was little major canal building during the Tang dynasty. An important innovation of the Tang period, however, was the construction of locks at various junctures along the canal to better facilitate the transport of specially constructed river

barges as well as the flow of the water. By the year 735 it is estimated that as many as 165,000 tons of grain were shipped along the canal.

—Daniel A. Métraux

Bibliography

- Benn, Charles. *China's Golden Age: Everyday Life in the Tang Dynasty*. Westport, CT: Greenwood Press, 2002.
- Brook, Timothy. *The Confusions of Pleasure: Commerce and Culture in Ming China*. Berkeley: University of California Press, 1998.
- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1999.
- Mirsky, Jonathan. *Grand Canal, Great River: The Travel Diary of a Twelfth-Century Chinese Poet*. New York: Blackwell, 2007.
- Needham, Joseph. *Science and Civilization in China*, Vol. 4, *Physics and Physical Technology, Part 3, Civil Engineering and Nautics*. Taipei: Caves Books, 1986.

Roads in the Chaco Canyon State

Archaeologists were amazed during the twentieth century when they discovered the existence of roads around Chaco Canyon in modern New Mexico that were built by the Anasazi Indians 1,000 years before. Speculation followed about the purpose of the roads. The Anasazi had no wheeled vehicles and no pack animals, so archaeologists were mystified as to why they would exert such effort on building roads.

The roads were constructed between 900 and 1100 CE. Most range from 26 to 32 feet (8 to 10 meters) wide, although some are as narrow as 6.5 feet (2 meters). The ones located near major archaeological sites usually are wider, while the segments located in more distant areas are much narrower. The roads were made by excavating and smoothing out the earth. Only a few stretches were excavated to bedrock or had hard tamped soil as a foundation. Most often, the roads followed the contour of the land. In a few cases, high and low areas were leveled. More often than not, ramps or stairways were constructed over difficult terrain. Time and weather have caused damage to many of the road segments as well.

One distinguishing feature about the roads built by the Chaco Canyon dwellers is that the edges of the roads were delineated. Along some stretches, simple rocks were placed periodically along the edge. In other places, rock walls were constructed. In still other parts, an earth curb or a berm was built up. Other constructions have been found near the roads, including rock enclosures and multiroomed buildings known as *zambullida*.

At first, archaeologists assumed that the roads were constructed for economic reasons, to assist trade and communications. The roads appeared to begin in the Chaco Canyon and have been found throughout the San Juan Basin. Some may have been used to transport water from springs to communities. Other roads may have been used to help redistribute food supplies between different communities. A difficulty with this explanation is that many of the roads have gaps or exist as isolated segments. Some segments actually parallel others, with a few hundred meters between them. Although the destruction of some roads since their construction makes it difficult to be certain, the widespread road network does not seem to connect. The north and south roads extend over 40 miles in nearly straight lines, but they do not appear to go to specific destinations.

A religious or political explanation for the roads' existence has been suggested. Many of the roads are associated with great houses or great kivas that were in use by the Anasazis during this time period. Although few details about the Anasazi religious beliefs are known, both structures played a role in their rituals. The roads may have played a symbolic role.

Another explanation is that the roads had a political aspect. Much as the pyramids, they may have been built by local leaders to enhance their prestige or to help tie their communities of people together.

—Timothy J. Watts

Bibliography

- Gabriel, Kathryn. *Roads to Center Place: A Cultural Atlas of Chaco Canyon and the Anasazi*. Boulder, CO: Johnson Books, 1991.
- Nials, Fred, John R. Stein, and John Roney. *Chacoan Roads in the Southern Periphery: Results of Phase II of the BLM Chaco Roads Project*. Albuquerque, NM: U.S. Department of the Interior,

Bureau of Land Management, Albuquerque District, 1987.

Noble, David Grant. *New Light on Chaco Canyon*. Santa Fe, NM: School of American Research Press, 1984.

Boats and Ships of the Mediterranean

During the first millennium CE, vessels that sailed the Mediterranean changed considerably in their appearance from their predecessors of the Greco-Roman period. The overall sizes, types, and methods of construction and propulsion of ships were modified significantly, indicating an advancement of shipbuilding technology. These developments also indirectly reflected the reactions to the various political and economic situations that were emerging in the Mediterranean during this period.

Between the fourth and sixth centuries CE the Roman political and economic dominance that once unified the Mediterranean was fragmenting. New polities from central Europe had reached Italy, Iberia, and North Africa, seriously reducing the empire in size and altering what remained of its western maritime-based commerce and communication routes. The large merchant vessels with several sails once indicative of imperial economic stability and state-controlled commerce were no longer viable. Foreign shores, wider-spread piracy, a lack of broad governmental controls, and changing populations in the west created an environment more conducive to smaller ships. Roman-era cargo vessels of more than 131 feet in length and capacities of more than 400 metric tons gave way to smaller merchant ships that carried a single sail and averaged 49–65 feet in length with a capacity of 40–50 tons. These vessels had fuller hulls that helped maximize the quantity of cargo they could carry.

Galleys, the long and narrow warships that were propelled mainly by oars, also underwent modification. The Roman imperial galleys had possessed more than one row of oars to a side and a heavy bronze ram at their bow; the Byzantine galley (*dromon*) first emerged in the fifth century as a light, fast ship with a single row of oars, a single sail, and a small beak used by soldiers for boarding other ships. Beginning in the

seventh century, nearly identical galleys (sing. *shini*, pl. *shawani*) were also built for the emerging Arab navies in the Levant that readily utilized the maritime skills of native Byzantine shipwrights. The ninth and tenth centuries saw the simultaneous development within the Byzantine and Arab fleets of larger, heavier galleys with two rows of oars, several sails, and experimentation with flaming projectiles.

Ship construction methods also underwent extensive transformation. Typically, a Greco-Roman vessel had been built as a hull with a strong shell of planks that were joined at their edges by closely spaced pegged mortise and tenon joints (a rectangular flat piece of wood, or tenon, set into slots, or mortises, carved in each plank edge and held in place by a wooden peg driven through the plank and tenon). Frames were later added to the interior and attached with wooden dowels to the planks. In the third and fourth centuries CE, mortise and tenon joints had become smaller and more widely spaced along plank edges and lacked pegs to hold them. Gradually, by the end of the first millennium CE, the joints had disappeared, and boats were instead built with closely spaced frames that dictated the shape of the hull and provided its major support. Planks were then nailed to the frames with small iron nails. Ships constructed in this manner used less labor-intensive methods and wood, and the overall building costs were reduced.

The changed political and economic situation of the fourth and fifth centuries caused a reduction in the size of cargo ships sailing the Mediterranean. Smaller vessels with a single sail were easier to maintain and well suited for use by the increasing number of independent merchants who traded within the boundaries of the early Byzantine world or with foreign polities in the south, east, and west. In turn, the lighter galleys were a response to the need for rapidly deployable and maneuverable naval fleets for defense against a myriad of states that occupied the shores of the Mediterranean. These changes were made possible by the development of more economical ship construction methods that remained standard in the Mediterranean world until the nineteenth century.

—Athena Trakadas

THE ADOPTION OF THE LATEEN SAIL

Throughout the Mediterranean, square-shaped sails had been employed on ships to harness the wind since the Bronze Age. During the first millennium CE, however, triangular-shaped lateen sails were slowly adopted by mariners. The ability to set a lateen parallel to a ship's keel improves navigation over a square sail by enabling a vessel to maneuver more easily toward oncoming winds.

The development of the lateen was likely born out of experimentation with the square sail rig. The square sail's brails (ropes) were manipulated to form a triangle or inclined square sail in order to better sail into the wind. This manipulation evolved into the development of a triangular-shaped sail with more adjustable yard.

Artistic depictions in the Mediterranean show that sails different from square rigs appeared early in the first century BCE; by the fifth and sixth centuries CE lateens appear commonly alongside square sails and are described in texts. By the ninth century the square sail had lost favor to the newer rig, and by the twelfth century seagoing Mediterranean ships used only the lateen sail.

Lateen sails were also used by mariners in the Indian Ocean. However, the evidence of the origins of this sail type is not as extensive for this region. The first texts that mention sails, which are probably lateen, appear in the ninth century CE, and artistic depictions of lateens appear in this region in the tenth century. It is likely that the lateen developed in an independent yet parallel process in the Indian Ocean, following the same technical experimentation suggested for the Mediterranean. Some scholars argue, however, that the sail type was invented in the Indian Ocean and introduced



Ship with lateen sails introduced into the Mediterranean by Indian Ocean mariners about 500 CE. (Pearson Scott Foresman)

to the Mediterranean due to contacts between Greco-Roman vessels in the Red Sea and voyaging to India and Indian Ocean vessels in the first several centuries CE.

—Athena Trakadas

Sources

Basch, L. "The Way to the Lateen Sail." *Mariner's Mirror* 75 (1989): 328–332.

Casson, L. *Ships and Seamanship in the Ancient World*. Reprint. Baltimore: Johns Hopkins University Press, 1995.

Bibliography

- Bass, G. F., and F. H. van Doorninck Jr., eds. *Yassi Ada I: A Seventh-Century Byzantine Shipwreck*. College Station: Texas A&M University Press, 1982.
- Hocker, F. M. "Late Roman, Byzantine, and Islamic Galleys and Fleets." In *The Age of the Galley: Mediterranean Oared Vessels since Pre-Classical Times*, edited by R. Gardiner, 86–100. Bath, UK: Conway Maritime Press, 1995.
- Kingsley, S. *Barbarian Seas: Late Rome to Islam*. London: Periplus, 2004.
- Pryor, J. H. *Geography, Technology, and War: Studies in the Maritime History of the Mediterranean, 649–1571*. Cambridge: Cambridge University Press, 1988.

- Steffy, J. R. *Wooden Shipbuilding and the Interpretation of Shipwrecks*. College Station: Texas A&M University Press, 1994.

The Viking Longboat

The longboat was the primary vehicle of Viking discovery, communication, trade, and power, as Scandinavians of the Viking Age lived mostly by the sea or lakes. Made by iron riveting overlapping



The Oseberg ship on display at the Oseberg Ship Museum in Oslo. The Viking longboat lay preserved in clay for more than 1,000 years before its discovery in 1904 by Norwegian farmer Knut Rom. (Sunil Bhawe)

planks and being lighter and more agile than contemporary vessels of their size, the longboat found its classical design probably in the late eighth century. The largest found by archaeologists is 98 feet (30 meters) long and is the biggest of the so-called Skuldelev ships excavated outside Copenhagen in 1962. It was probably built in Ireland in 1042 and was deliberately sunk in order to block access to the Roskilde fjord for Norwegian invaders in 1070. Today it is on display in the Roskilde Viking Ship Museum, Denmark. The vessel was propelled by 30 pairs of oars and could carry about 100 warriors. However, according to Snorre Sturlason's sagas of the Norse Kings, Norwegian king Olaf Trygvason's flagship, the *Ormen Lange*, was between 131 and 164 feet (40 and 50 meters) long.

Construction varied according to purpose. For longer sea journeys ships used a single square

sail, while in shallow water or in battle they relied on oars for which also sleeker ships were specially built. When coming upon impassable streams or enemy coastal defenses, the crews could bypass the obstacles by rolling their ships on logs over land. This technique was used to travel through Russia from the Baltic to the Black Sea and when Vikings sacked Constantinople in 860 CE. During the Late Viking Age, broader ships were developed for transatlantic voyages and bulk transport.

In pre-Christian times, Scandinavian nobility were often buried in ships, suggesting their cultural and religious status. The well preserved Gokstad ship and Oseberg ship were both found in burial mounds from the ninth century. The former was excavated in 1880 and is 78 feet (23.8 meters) long and contained the remains of a man 7 feet (1.85 meters) tall who was 50–70 years old along with three minor ships, a tent, a sledge, and horse harnesses. Grave robbers probably removed other burial goods. The Oseberg ship was 70.5 feet (21.5 meters) long and contained the remains of two women, one thought to be a queen or a priestess, the other a maid. Burial goods still remained within the ship, including carpets and other decorative textiles. The ships are currently on display in the Viking-ship Museum in Oslo, Norway.

—Frode Lindgjerdet

Bibliography

- Atkinson, Ian. *The Viking Ships*. Minneapolis, MN: Lerner, 1980.
- Logan, Donald F. *The Vikings in History*. New York: Routledge, 2005.
- Mulvihill, Margaret. *Viking Longboats*. New York: Gloucester, 1989.
- Sawer, Peter, ed. *The Oxford Illustrated History of the Vikings*. New York: Oxford University Press, 1997.

Polynesian Navigation

Prehistoric seafaring in the Pacific is the eastern part of Austronesian migration. Austronesian-speaking seafarers also sailed west and reached Madagascar off the coast of East Africa. The distance between that island and Southeast Asia is about 4,700 nautical miles (7,500 kilometers). Placing the Austronesian migrants' western and

eastern explorations in perspective, one may perceive the true magnitude of their global endeavor.

For an understanding of the intentionality of the colonization movement in the Pacific region it is important to understand how Polynesians have looked and still look at the world. This means that outsiders—whether Americans, Europeans, or people from Australia, Asia, or Africa—have to take into consideration the perception of Oceania in the cultural memory of the islanders. A modern observer who looks at a map of the Pacific region is impressed by the huge masses of water. This sort of vastness may evoke negative emotional associations such as emptiness of uncontrollable space, perils at sea, untraversable distances, vicissitudes of weather conditions, and the like.

The Polynesian mind-set, however, is differently tuned. An islander perceives the wholeness of Oceania in proportions different from that of outsiders. The many islands, scattered throughout the region, gain in profile as landmarks in a cultural landscape. The waters of the ocean are not perceived as unpredictable or even hostile. Instead, the ocean takes the role of a pathway connecting islands and communities rather than functioning as a boundary to separate them. The vastness of the Pacific Ocean forms part of the islanders' cultural space, a space for interaction between nature and human beings. This mind-set can be reconstructed from early maps that local guides drew for European sailors in the early days of contact. In these maps the masses of water are drastically reduced, whereas the islands are given emphasis as spaces for human agency.

The first migration into Polynesia from the west can be dated to circa 1500–1000 BCE. The migration of Austronesian people into Polynesia from Melanesia began in the second millennium BCE. The Fidji (Fiji) Islands are located in the central part of the area that was colonized during that early period. The Melanesian cultural complex, centered on Fidji, provides the foundation for the subsequently developing Polynesian culture that proliferates into a wide array of local cultures during later migrations. The proliferation of cultures finds its parallel in the direction of gene flow. The Polynesian lineages stem genetically from the gene pool of populations in western Melanesia.

A subsequent migration (ca. 200 BCE) within Polynesia that started from the Fidji group takes seafarers to the east. The settlements on the Society Islands, with Tahiti as their cultural center, date to the time of this migration. In circa 300 CE, a third migration began to eastern Polynesia. In this wave of migrations, the greatest distances in the Pacific Ocean were traversed by migrants from Tahiti. The far-out Easter Island is settled in the early fourth century CE. The sea route to the north of Tahiti also brings settlers to the Hawaiian Islands.

The last migration period (in the tenth century) sees the exploration of the sea route to the southwest of Tahiti, and migrants reach the islands of New Zealand in this period. The last of the bigger islands to be settled is the Chatham group east of New Zealand. The first Polynesians to reach Chatham around 1000 CE most probably arrived there not from New Zealand but instead on an independent voyage from Tahiti. The Moriori culture of Chatham declined in the first half of the twentieth century.

The time frame for the more recent migrations are conservative estimates. The more calibrated radiocarbon dates become available, the more accurate the association with the absolute timescale will be. It has been conjectured that early settlers may have reached the Marquesas Islands in far eastern Polynesia already at the beginning of the Common Era, several hundred years earlier than according to the conservative time frame.

In time, these seafaring endeavors became more frequent and better organized. This was due not only to farsighted planning of voyages but also to the accumulation of knowledge about climatic conditions and to technological advances. Each wave of migrants could profit from the experiences of previous generations to improve their know-how of seafaring. Many of the sea routes that had been explored in the course of colonization were already regularly frequented for trading more than 2,000 years ago.

The migrants who set out on their voyages in a west-east direction through Polynesia were agriculturalists and transferred the knowledge of food production (as horticulture and full-scale agriculture, where this was possible) to newly explored islands. In order to establish

► REENACTING PREHISTORIC POLYNESIAN SEAFARING

In modern times, seafaring with traditional vessels in the Pacific has been reenacted. The first to engage in such endeavors was the Frenchman Eric De Bisschop in the 1930s. De Bisschop's first voyage in a Chinese junk took him from Taiwan to Australia. Another more spectacular voyage was done shortly before the outbreak of World War II, this time from Hawaii to the French territory of the Society Islands in a Polynesian double-hulled vessel. De Bisschop's intention was to demonstrate that seafaring within Polynesia's vast expanse was possible in prehistoric times. The famed Kon-Tiki expedition that Thor Heyerdahl undertook with his crew in 1947 in an east-west direction (that is, from South America to the Tuamotu archipelago) presented a new challenge to De Bisschop, who set out in 1956 to navigate a route from west to east (from Tahiti to South America) in a bamboo raft with the name Tahiti Nui ("Great Tahiti").

Archaeological proof for long-distance trade relations between Hawaii and Tahiti left experts

skeptical as to how navigation over a distance of about 3,000 nautical miles (4,800 kilometers) between the two island groups is possible without modern nautical equipment. The Tuamotu group of islands (to the northeast of Tahiti) offered a special variety of basalt for making adzes. Since Tuamotu lies on the sea route from Hawaii to Tahiti, it is not surprising that adzes made from Tuamotu basalt are found both in Hawaii and in Tahiti.

A modern reconstruction of the Hawaiian two-sailed canoe, called *hokule'a* in the Hawaiian language, was used in 1976 to make a voyage from Maui in the Hawaiian Islands to Tahiti. This voyage was made without the help of modern instruments of navigation, with star configurations and the observation of currents and winds as the only means of orientation. The voyage was successful and may serve as a demonstration illustrating the possibilities of seafaring over long distances in prehistoric times.

—Harald Haarmann

new settlements at a distance from the existing ones, it was necessary to transport plants and livestock (i.e., pigs, fowls, and dogs). To safeguard the continuity of new settlements over generations, the migrant groups had to include both men and women.

It has been demonstrated by means of computer simulations of the migratory movements in space and time that the peopling of the Pacific islands cannot have occurred as the result of accidental drifts. Such accidental drifts would have produced random patterns, with densely populated islands contrasting with widely unpopulated areas. The only explanation for the regularities and the emergence of the dense web of local settlements is that the migrations were carefully planned. Polynesian demography is the outcome of intentional seafaring.

The Polynesians did not have any technical devices to facilitate their navigation, and they did not possess systems of notation to draw charts of currents or star configurations. What they definitely instrumentalized for their orientation at sea was their refined perception of nat-

ural phenomena. Over time a vast amount of specialized knowledge about seafaring accumulated, and this knowledge was transferred by means of oral accounts and memory from master to disciple in the professional domains of specialized handicrafts. The builders of canoes and catamarans would profit from the experiences of seafarers to make their vessels apt for maneuvering against high waves and gusty winds. And the settlers who took livestock and provisions on their journeys would learn from the stories that earlier migrants told to make improvements for their selection.

—Harald Haarmann

Bibliography

- Finney, Ben R. "Voyaging Canoes and the Settlement of Polynesia." *Science* 196(4296) (1977): 1277–1285.
- Irwin, Geoffrey. *The Prehistoric Exploration and Colonisation of the Pacific*. Cambridge and New York: Cambridge University Press, 1992.
- Lilley, Ian, ed. *Archaeology of Oceania: Australia and the Pacific Islands*. Malden, MA, and Oxford, UK: Blackwell, 2006.

Saquet, Jean-Louis. *Le livre de Tabiti—Te fenua*. Tahiti: Editions Avant et Après, 1992.

Arab, Shirazi, and Indian Ocean Navigation

During the first centuries CE, Indian Ocean navigation was dominated by Shirazi (Persian Gulf) and Axumite (present-day Ethiopia) mariners. Goods brought to Sri Lanka by Far East traders would be transported by Axumite ships to the Red Sea, Arabian Peninsula, and East Africa and by the Shirazi to the Persian Gulf. By the sixth century, western Indian ships had entered coastal trade around the Arabian Sea, but Shirazi vessels now dominated the former Axumite regions.

With the rise of the Arab Abbasid caliphate in Baghdad (ca. 750–1250 CE), Persian Gulf ports thrived under the demand for exotic goods. By the ninth and tenth centuries, Arab and to some extent Indian vessels controlled the western Indian Ocean trade routes and even sailed to China.

Knowledge of Indian Ocean seafaring during 300–1000 CE derives largely from a few navigational treatises and pictures, making it difficult to determine if there was great variation in the region's vessels. Unlike the ships of the Mediterranean, the edge-joined planks of the Indian Ocean vessels had seams sewn together by cords of coir (coconut) or palm fiber. The seams were filled with organic material for water tightness, and frames were fitted to the hull with cords as well. This nail-less construction method is documented

► THE BELITUNG SHIPWRECK

In 1997 a shipwreck was excavated off Belitung Island in the Indonesia archipelago between Sumatra and Borneo. The wreck had edge-joined planks sewn together with cords and seams filled with organic wadding. Frames were also attached to the hull by cords, and through-beams were set at the bow and stern. The nearly identical vessel ends were straight and pointed. Reconstructed, the ship was approximately 65–72 feet (20–22 meters) long, approximately 26 feet (8 meters) wide at amidships, and approximately 11 feet (3.5 meters) in depth. A cargo of lead ingots, a variety of Chinese Tang dynasty ceramics, and aromatic resins were recovered. A date equivalent to 826 CE inscribed on one of the ceramics provides the approximate period of the ship's sinking, confirmed by carbon analysis of the hull's timbers.

The vessel's appearance and construction methods are similar to ships described and depicted in contemporary Arab and Indian texts and pictures. Additionally, the woods used in its construction are native to the northwestern Indian Ocean. The wreck was likely an Arabian or Indian merchantman who perhaps sailed with a mixed crew that included Southeast Asians. Although it is possible that the ship had loaded its cargo in an Indonesian port, the uniform load suggests that it had sailed directly from a southern Chinese port and sank during its return voyage to the Arabian Sea region.



Chinese ceramics discovered in the Belitung shipwreck, dating from the Tang dynasty, ninth century CE. (Michael Flecker)

Archaeological finds at coastal sites in the Indian Ocean reveal that Chinese goods had been imported since the late seventh century; by the ninth century, texts state that regular Arabian and Indian voyages to China occurred. The Belitung wreck is the first archaeological evidence that Arabs or Indians traded directly with China during this period and also serves as the only known find of an Indian Ocean seagoing vessel of the first millennium.

—Athena Trakadas

in Roman, Byzantine, and Arabic texts from the first to fifteenth centuries CE and may have been the only method used in the region.

Teak and coconut, wood native to the region, were used to make durable, double-ended hulls. Through-beams near the railing at the ends added longitudinal strength and supported deck cabins. The wood types and sewn construction made it possible to build large flexible ships (approximately 200 tons) that endured hard seas and beaching along coasts lacking natural harbors. The ships were steered by two side rudders set near the stern. Although not mentioned specifically until the ninth century, a large lateen sail made of fiber or cotton was likely used; larger vessels perhaps had a smaller additional lateen.

Several Arab treatises describe regional sailing routes utilized by the mid-ninth century. Voyages could follow the coast, such as along the western shores of the Indian peninsula or along southern Arabia and to East Africa as far as Mozambique and Madagascar. Ships did cross open water, however, and could sail directly between the Persian Gulf and Zanzibar or the Horn of Africa to southern India and across the Bay of Bengal.

The open-water crossings were possible because of the harnessing of regular monsoon winds and the advent of celestial navigation. By the tenth century, primitive astrolabes could measure stars' orbits to determine latitude. Mariners also used shoreline charts, sounding devices (to observe sea-bottom composition), and

methods to read currents and identify seabirds to fix position.

The Arab dominance of maritime trade in the Indian Ocean reached its zenith in the ninth and tenth centuries; there is little information on seafaring again until the fourteenth century. Navigation certainly continued, particularly between the Red Sea and India, as Cairo became an economic and political center under the Fatimid caliphate. Arab writers noted, however, that no Arab ships ventured anymore to the Far East. European powers ultimately affected the remains of the once-prosperous maritime network. Portuguese mariners in the late fifteenth century discovered the regional navigation methods and trading ports. Soon after, French, Dutch, and British vessels also dominated the sea, competing for the valuable goods of the Indian Ocean.

—Athena Trakadas

Bibliography

- Clark, A. "Medieval Arab Navigation on the Indian Ocean: Latitude Determinations." *Journal of the American Oriental Society* 113 (1993): 360–373.
- Hourani, G. *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*. Princeton, NJ: Princeton University Press, 1995.
- Ray, H. P. *The Archaeology of Seafaring in Ancient South Asia*. Cambridge: Cambridge University Press, 2003.
- Ricks, T. M. "Persian Gulf Seafaring and East Africa: Ninth-Twelfth Centuries." *African Historical Studies* 3 (1970): 339–357.

■ Introduction: Early Medieval Medicine, Science, and Alchemy

When Byzantine emperors ordered the medical and scientific schools at Edessa and Athens closed, doctors who practiced medical science as taught by the great Greek and Roman physicians Hippocrates and Galen fled to Persia where, with the patronage of the Persian emperor Kusraw I, they joined the faculty of Gondeshapur, a teaching hospital and university. Although medical science atrophied in the Christian West after the fifth century,

Gondeshapur preserved the medical tradition of the classical Mediterranean world.

After the Muslim conquest, the Muslim authorities supported Gondeshapur and staffed the House of Wisdom (Baytu l-Hikma), a scientific library and research institute founded in Baghdad (832) where classical Greek and Roman medicine, together with Indian Ayurveda, was studied with graduates from Gondeshapur. This led to the emergence of Arabic medicine.

Ayurveda was and is a highly developed medical system that greatly influenced the development of Chinese, Arabic, and European medicine until the nineteenth century. The basic texts of Ayurveda, the *Susbruta Samhita* and the *Charaka Samhita*, were probably written in the last centuries BCE, and they were available in major Muslim cities in Arabic in the eighth century CE. They were widely used from Baghdad to Spain, and they were translated into Latin, probably by the twelfth century.

The *Susbruta Samhita* is a manual for maintaining health and preventing disease. Its focus is on diet and certain types of exercise, particularly breathing and yogic exercises. The *Susbruta* advises self-restraint in eating, sexual activity, and medication. Cleanliness, bathing, brushing teeth, cleaning the eyes, and use of ointments are advised. The *Susbruta* also stresses the use of herbal medicine and different types of massage as part of its health maintenance regimen.

The *Charaka Samhita* discusses more intrusive procedures, such as setting broken limbs, removing cataracts from the eyes, removing hemorrhoids, plastic surgery on the nose, caesarian births, amputations, and other surgical procedures. The Indians produced a wide assortment of surgical implements, which their mastery of the art of making the world's finest steel that could take extremely sharp and durable cutting edges made possible.

It is speculated that the development of medical science in India began in the Buddhist community because of the abhorrence of bodily fluids, blood, and dead bodies by many orthodox Hindus. Since contact with these substances led to ritual impurity, medical careers were closed to higher-caste Hindus but not to Buddhists and followers of some other heterodoxies. According to fourth-century Chinese visitors to Indian Buddhist sites, public clinics were established in some Indian cities, perhaps in the great Buddhist monasteries. The *Charaka Samhita* has passages describing the layout and equipment of such clinics.

Ayurveda traveled with Buddhist missionaries to China, where it influenced traditional Chinese medicine practiced by Chinese Buddhists. But Ayurveda did not have as deep an influence

on Chinese medicine as it did on Arab and, later, European medicine. Chinese medicine was a very highly developed science that, in the end, proved resistant to Ayurvedic influence.

Ayurvedic medical science may have been practiced mainly in the cities, the villages where at least nine-tenths of the Indian population probably depended on a variety of traditional curers for their medical care. Common forms of healing activities were pilgrimages to holy shrines; prayers, enchantments, and exorcism by sorcerers; and the laying on of hands by those thought to be especially holy.

In Europe, especially in the West, medicine as a science was unknown after the fifth century. Even West European rulers seldom had the attentions of a medical doctor trained in the classical tradition. Medicine in the early medieval West was regarded as akin to magic, and the cure of disease was seen as a religious rather than a scientific problem. It was not until toward the end of this era (300–1000) that the Europeans became aware of Arabic medicine.

Alchemy developed from work that closely paralleled that of medicine. In Eurasia, there were three major alchemical traditions: Chinese, Indian, and Arabic/European. While Chinese alchemy developed quite independently of the other two, Indian and Arabic/European were more closely related and had grown out of a common heritage of Hellenistic, Persian, and Indian traditions.

—Wilfred J. Bisson

Early Medieval Chinese Medicine

Medical practitioners of China's medieval period, conventionally 300–1000 CE, which spans from the Wei, Jin, Southern, and Northern dynasties to the early Song dynasty, made important innovations in medical practice. Physicians and intellectuals created medical knowledge and annotated classics, Daoists sought longevity, and Buddhist monks provided medical service in the Buddhist temples.

Inheriting the achievements of the Han dynasties, medical practitioners of this period contributed important innovations to the history of medicine. This can be observed in terms of both quality and quantity. Following the work of Hua

► EQUALITY IN MEDIEVAL CHINESE MEDICINE

Sun Simiao of the Tang dynasty, often revered as the “King of Pharmaceuticals,” had written two important medical books in Chinese history, *Beiji qianjin yaofang* and *Supplement to Beiji qianjin yaofang*. The two books almost included all medical arts of this period such as acupuncture, herbal remedies, dietary restrains, sexual arts, physical exercise, apotropaics, etc., to be like an encyclopedia of medicine. He also emphasized the importance of medical ethics and said, “If patients come and ask for help, a physician should disregard whether the patients are of high or low social position, rich or poor, old or young, pretty or ugly, enemies or friends, Chinese or foreigners, and stupid or wise. They should be treated equally and seen as the physician’s close relatives.”

—Ka Wai Fan

Tuo (most famous for his expertise in surgery) and Zhang Hongjing (the author of *Shang ban lun*) at the end of the Eastern Han, prominent physicians such as Ge Hong, Wang Shuhe, Huangfu Mi, Chen Yanzhi, and Tao Hongjing emerged in the Wei, Jin, Southern, and Northern dynasties. They wrote medical classics that greatly influenced the succeeding generations. *Mo jing* (*The Pulse Canon*) by Wang Shuhe and *Zhenjiu jiaiyi jing* (*The Classic ABCs of Acupuncture and Moxibustion*) by Huangfu Mi continued to be consulted for many centuries. In terms of quantity, according to *Suishu jingji zhi* (*The Bibliographic Treatise from the History of the Sui*), 256 medical treatises were written in this period. Their topics cover a number of subjects: explanation and interpretation of classics, materia medica, medical formulae, diet, breathing conduction, alchemy, the art of sex, and *qigong*.

The number of medical works reflects a diverse range of topics and approaches. We can assess this from three perspectives. First, medical books such as *Suwen* (*Plain Questions*) and *Ling shu* (*The Vital Axis*), both extracted from *Huangdi neijing* (*The Inner Classic of the Yellow Emperor*), and *Huangdi jiaiyi jing* (*The Classic ABCs of the Yellow Emperor*) appeared in various versions. Second, during the Wei, Jin,

Southern, and Northern dynasties, experts in materia medica turned to *Shennong bencao jing* (*Shennong’s Classic on Materia Medica*) as the most fundamental and authoritative work on the subject. Many studies of materia medica appeared, with illustrations and discussions of how to cultivate and prepare herbal remedies. Physicians drew up their own versions of materia medica knowledge informed by their personal experiences. For example, Wu Pu, a student of the famous Han physician Hua Tuo, drew up a quite idiosyncratic *bencao* (materia medica). Third, after the discovery of large numbers of acupuncture points during the Han dynasties, the seminal work on the subject, *Huangdi Mingtang jing* (*The Bright Hall Classic of the Yellow Emperor*), appeared in several different versions. *Suishu jingjizhi* records works on acupuncture written by Bian Que, Hua Tuo, Qin Chengzu, Long Xiansu, the monk Sengkuang, and many others. Although many of these have been lost, passages from a good number were quoted in *Ishinpō* (*A Guide to the Heart of Medicine*) written by Japanese doctor Tanba Yasuyori in 984, which shows clearly that the methods and the very points used by acupuncturists had varied a great deal.

In the 300 years between the end of the third century and the end of the sixth century, two groups took it upon themselves to transmit medical knowledge. Eminent families passed on medical knowledge from generation to generation. Among them, the Xus from Donghai and the Yaos from Wukang were the most prominent. The Xus were physicians for eight generations, and family members wrote *Xuwang bashi jiachuan xiaoyan fang* (*Empirical Formulas Transmitted by the Xu Family for Eight Generations*) and *Xushi jiachuan mifang* (*Secret Formulas Transmitted by the Xu Family*). Another group was Buddhist and Daoist priests, who were all well educated. They used healing as a means of preaching, and places of religious assembly became medical clinics. Daoism has as one of its principal aims the attainment of immortality, and its priests and followers often sought insights into medicine and bodily care. The most famous Buddhist physicians were Zhi Facun and the monk Shenshi; among Daoists, Ge Hong and Tao Hongjing were well known.

The Tang dynasty was a period of consolidation and innovation. Many medical classics were reorganized and richly annotated. Virtually all of the older classics that have come down to us were revised by Tang physicians, including *Suwen*, *Nan jing* (*Classic of Difficult Issues*), and *Huangdi Mingtang jing*. Manuals listing countless formulas were compiled. Sun Simiao's *Beiji qianjin yaofang* (*The Thousand Gold Pieces Prescriptions—In Case of Emergency*) and Wang Tao's *Waitai miyaofang* (*Arcane Essentials from the Imperial Library*) cataloged medical formulas written in the Wei, Jin, Southern, and Northern dynasties. They deleted redundant material, reorganized the formulas, and categorized them according to illness. These became the most important such books in the history of Chinese medicine.

The Tang emperors paid close attention to the development of medicine, and the government took an active role in promoting education, research, and treatment. Early in this period the Imperial Medical Office (*Taiyi shu*) was founded. As the official medical institute, it was responsible for instructing medical students, transmitting medical knowledge, and holding regular examinations. Its curriculum covered medical theories, acupuncture, massage, and apotropaics. It set the curriculum and also monitored students' progress. Students had to pass examinations before practicing medicine. On the other hand, it was also responsible for medical administration, diagnosis and treatment for the emperor and the imperial family, and medicinal control.

Seizing the heterogeneous medical legacy of previous eras, a centralized government and many individual physicians labored to produce a coherent body of knowledge and practices. Studies of materia medica emerged as a great success. The first official pharmacopoeia, *Xinxiu bencao* (*A New Compilation of Materia Medica*), was completed in 659. For both medical education and daily medical practice, this book became the standard. Emperors Xuanzong and Dezong sponsored the compilation and publication of, respectively, *Guangjifang* (*Formulas for Widespread Benefaction*) and *Guanglifang* (*Formulas for Widespread Benefit*).

China's early medieval period was notable for the revision of medical classics and the com-

pilation of medical formulas and materia medica. Religious, kinship, and governmental groups all played significant roles in promoting medical knowledge.

—Ka Wai Fan

Bibliography

- Ho, Peng York, and F. P. Lisowski. *A Brief History of Chinese Medicine*. Singapore: World Scientific, 1997.
- Lo, Vivienne, and Christopher Cullen. *Medieval Chinese Medicine: The Dunhuang Medical Manuscripts*. London and New York: Routledge Curzon, 2005.
- Needham, Joseph. *Science and Civilisation in China*, Vol.6. Pt. 6: *Medicine*. With an introduction by Nathan Sivin. Cambridge: Cambridge University Press, 2000.
- Unschuld, Paul. *Medicine in China: A History of Ideas*. Berkeley: University of California Press, 1985.
- Wong, Chimin, and Lien-The Wu. *History of Chinese Medicine: Being a Chronicle of Medical Happenings in China from Ancient Times to the Present Period*. Reprint. New York: AMS Press, 1973.

Indian Influence on Chinese Medicine through Buddhism

One of the traditional Five Sciences (*pañcavidyā*) studied in Buddhist institutions in India, Indian medicine accompanied Buddhism as it spread throughout Asia over the first millennium of the Common Era. The basic principles of Indian medicine were introduced to the Chinese cultural sphere by Buddhist proselytizers and translators as early as the second century. Over the course of the Chinese medieval period (ca. 300–1000 CE), Indian knowledge increasingly influenced ideas and practices in China and soon became an integral part of Chinese medical culture.

Extant Buddhist medical texts from the medieval period include the *Sutra on Buddhist Medicine*, *Secret Essentials of Curing the Maladies of Meditation*, the *Sutra on the Embryo*, and *Ravana's Teachings on Curing the Maladies of Children*. Disease and healing are also mentioned in ritual texts, monastic disciplinary manuals, spell-texts (*dharani*), hagiographies, philosophical

➤ HEALING AND HAGIOGRAPHY

Stories about monks, bodhisattvas, and other Buddhist heroes with magical powers over disease, drought, famine, and other disasters played an important role in Buddhist proselytism in the medieval period. The hagiography of one miracle healer, Jivaka (known in China as Qiyu or Qipo), became particularly popular in China. Known as the “Medicine King,” Jivaka was said to have been an orphan who had learned the healing arts from a great Ayurvedic physician in northern India. According to legend, Jivaka went on to become physician to the Buddha and to perform a number of miraculous cures including abdominal surgery, trephination, and even resurrecting the dead. By the Tang dynasty, the Medicine King had been deified and was being worshipped for salvation from disease. Stories of Jivaka’s exploits were retold widely, inspiring similar tales about other legendary Chinese physicians, and texts produced in his name or containing medical knowledge attributed to him appeared in Chinese throughout the first millennium.

—C. Pierce Salguero

treatises, collectanea (anthologies), and other genres. Many other Buddhist texts mobilize medical ideas as parables, metaphors, or narrative tropes. These diverse texts introduced China to many Indian ideas about the body, disease, and healing that differed markedly from classical Chinese medical doctrines. They also introduced an array of new therapeutic practices, including Indian dietary regimens, medicinal formulas, medicated butter, herbal baths, meditations, visualizations, spells, talismans, repentance, ritual healing, and even surgery.

By the Tang dynasty (618–907), Indian medical knowledge came to exert an appreciable influence on Chinese medicine. Indian medicinal herbs entered the Chinese pharmacopoeia, traveled to Chinese cities along extensive Pan-Asian trade networks, and became important commercial items in Chinese markets. Surgeries and medicines of Indian origin appeared in Tang medical treatises alongside and intermixed with Chinese remedies. Chinese Buddhist monks

such as Zhiyi (538–597) and Yijing (635–713) as well as physicians such as Sun Simiao (581–682) wrote treatises in which they attempted to reconcile Indian medical doctrines with the classical Chinese concepts of Yin-Yang and Five Phases (*wuxing*) and the system of acupuncture meridians (*mai*) and internal organs (*zangfu*).

As with many other aspects of Tang culture, cosmopolitanism and hybridity were important features of Tang medicine. However, during the Northern Song dynasty (960–1127), Chinese medicine began to be standardized and promulgated at the highest levels of the government. Medical bureaus turned to the earliest Chinese medical classics as sources of authority, and overt references to Buddhist knowledge became increasingly scarce in official medical literature.

Nevertheless, Buddhist healing never ceased to be an important ingredient in the Chinese medical marketplace. Throughout the subsequent history of China, Buddhist temples and shrines—particularly those associated with the Medicine Buddha (Yaoshi Fo) and the Bodhisattva of Compassion (Guanyin)—remained active sites for curative prayer and ritual. Buddhist hospitals, hospices, and dispensaries remained a regular part of Chinese urban life. Monks and nuns continued to serve their communities as healers and as organizers of public medical charity. Buddhist ritual and magic continued to be utilized by the sick of all social classes. These aspects of Buddhist healing became an integral part of Chinese popular culture and continue to thrive today in parts of China and Taiwan as well as in communities of the Chinese diaspora worldwide.

—C. Pierce Salguero

Bibliography

- Birnbaum, Raoul. *The Healing Buddha*. Boulder, CO: Shambhala, 1979.
- Chen Yunü. “Buddhism and the Medical Treatment of Women in the Ming Dynasty: A Research Note.” *Nan Nü: Men, Women and Gender in Early and Imperial China* 10 (2008): 279–303.
- Demiéville, Paul. *Buddhism and Healing: Demiéville’s Article “Byō” from Hōbōgirin*. Translated by Mark Tatz. Lanham, MD: University Press of America, 1985.

Deshpande, Vijaya. "Ophthalmic Surgery: A Chapter in the History of Sino-Indian Medical Contacts." *Bulletin of the School of Oriental and African Studies* 63(3) (2000): 370-388.

Strickmann, Michel. *Chinese Magical Medicine*. Stanford, CA: Stanford University Press, 2002.

Early Medieval Arabic Medicine

Pre-Islamic Arabic medicine is rooted in Bedouin traditional practices in which it was usually women and the elderly who took care of the wounded and general healing via traditional remedies, which included spells and incantations. With the advent of Muhammad (ca. 570-632) and the rise of Islam, these traditional remedies, combined with various treatments mentioned by Muhammad in the hadith (the sayings of the Prophet) became known as Prophetic Medicine or the Medicine of the Prophet, which is still used by many Muslims today.

Early Arab medicine owes its development to the early Arab conquests and expansion, beginning in 634, as the result of which Arabs began to translate and assimilate the vast knowledge of the Byzantines, Persians, and Indians, which included medicine and began late in the Umayyad caliphate (661-750) but flourished particularly during the Abbasid caliphate (fl. 750-ca. 945), especially under the caliphs al-Mansur (r. 754-775), his grandson Harun al-Rashid (r. 786-809), and al-Rashid's son al-Mamun (r. 813-833), centered at Baghdad, the capital of the Abbasid caliphate. The conquests of Alexandria in Egypt and Gondeshapur in southwestern Iran were particularly significant for the development of medicine in Islam because Greek medicine as practiced and taught in Alexandria greatly affected how medicine would be taught in Islamic areas. Moreover, the medical practice at Gondeshapur provided doctors for the Abbasid court as well beginning with Jurjis ibn Jabril ibn Bukhtishu, who treated Caliph al-Mansur in 765. Subsequently the family occupied an important role at the court for eight generations, not only in practicing medicine but also in translating, writing new medical texts, and training doctors. It should be noted that most of these early physicians and translators were either Jewish or

Nestorian Christians (today called Eastern or Syrian Christian).

Masarjawayh, a Jewish physician, was believed to be the first to translate a medical text into Arabic, when he translated the *Pandects* of Ahron of Alexandria (fifth century CE) during the caliphate of the Umayyad Marwan I (r. 684-685), although this is now disputed. A Nestorian Christian physician from Gondeshapur, Masawayh, set up practice in Baghdad. Although well known as a physician and ophthalmologist, he was surpassed in fame by his son, Yuhanna ibn Masawayh (777-857; Latin, Mesue Senior), who was not only a prolific author but also a translator. He was the first to write an original treatise in Arabic on the eye, titled *The Defectiveness of the Eye*. He also wrote a compendium (an encyclopedic work) titled *Perfection and Completion* and numerous other works on subjects such as fever, leprosy, and pharmacology. He was also an avid translator of Greek medical texts into Arabic and was said to have translated many of the medical manuscripts that Harun al-Rashid brought back from his campaign against the Byzantines. Ibn Masawayh was surpassed by his student, fellow physician and translator Hunayn ibn Ishaq (808-873; Latin, Johannitius), in both style and sheer number of translations. He along with his son, Ishaq ibn Hunayn (d. 910) and his nephew Hubaysh ibn al-Hasan called al-Asam ("having withered limbs"; fl. ca. 860), translated about 129 medical works (this excludes Hunayn's translations of other works) mainly from Alexandrian manuscripts, including what became the medical curriculum for Islamic medicine. Of these, Hunayn rendered about 95 of Galen's works from Greek to Syriac (after which Hubaysh translated them into Arabic), another 34 Galenic works directly from Greek into Arabic, and another 15 Hippocratic works into Arabic. Hunayn was also a practicing physician and wrote several of his own works, including 2 on the eye, *The Book of Questions concerning the Eye* and *Ten Dissertations on the Eye*, the latter of which contains arguably the earliest diagram of the anatomy of the eye. Hunayn also wrote a basic text titled *Questions on Medicine*, and his *Introduction to Medicine* became a well-known text in Latin translation.

His corrected version of Dioscorides' *Materia medica* (pertaining to herbal remedies and pharmacology) was also of great influence. Another translator, the pagan Thabit ibn Qurrah (836–901), although more famous in astronomy and mathematics, wrote a medical work titled *The Treasury* that also became a standard medical textbook and contains an early description of both measles and smallpox.

Indian medical works were also translated into Arabic and had wide influence, particularly the *Caraka Sambita*, which is a discussion of surgical procedure at which Indian practitioners excelled. Caraka's description of cataract removal from eyes very likely influenced Hunayn's works. Caraka's *Compendium* (*Caraka sambita*, translated into Arabic as *Saharik al-hindi*), Susruta's *Compendium* (Arabic, *Susrud*), and Vagbhata's *Heart of Medicine* (*Astangabhrdaya*, ca. 600 CE), which combined and organized the information of the two compendia, were available before circa 850 along with another Indian work on poisons, the *Canakya* (Arabic, *Shanaq*). Indian Ayurvedic medicine is similar to Greek humoral medicine; indeed, Greek and Indian medical traditions had likely been influencing each other since Alexander the Great's invasion of India more than a millennium before the flowering of Arabic medicine. Indian medicine differs from the Western tradition in positing only three humors, not four: wind (*vata*), bile (*pitta*), and phlegm (*kapha*). These must be kept in balance with the seven bodily tissues and waste products or else disease results. Although Rabban al-Tabari (ca. 850) included both Indian and Persian medical authorities in addition to Greek authorities in his *Paradise of Wisdom* (possibly the earliest compendium composed in Arabic, written for the caliph al-Mutawakkil), the Greek system would be predominant after 850.

The greatest physician of this early period was Abu Bakr Muhammad ibn Zakariyya al-Razi (ca. 854–ca. 925), known to the Latin West as Rhazes, who, like most Arab scholars, was accomplished in many areas, including music. He wrote over 200 works on logic, philosophy, natural science, alchemy (often tied to medicine), theology, mathematics, and astronomy and 56 on medicine and related areas. Of his medical works, he is most famous for *The Book of Medicine for al-Mansur*, *On Smallpox and Measles*,

and *The All-Inclusive Work on Medicine*. *The Book of Medicine for al-Mansur* is composed of ten books, the first six theoretical (e.g., diet, anatomy, physiology), the last four on practical things such as diagnosis, therapy, special pathology (diseases), and surgery. It was a popular and useful work and became popular in the Latin West as well in the translation made by Gerard of Cremona in 1175 titled *Liber medicinalis ad almansorem*, or simply *Liber almansoris* (*The Book of Almansor*). Book 9 on special pathology circulated alone as the *Liber nonus* (*Book Nine*) in the Latin West, and both these and commentaries on them were published until the seventeenth century in the West. His work *On Smallpox* (measles was only secondarily a concern) was also quite popular and significant, as it treated every aspect of the disease from diagnosis to treatment and was one of the earliest works in the Middle East to do so. It was known in the Latin West as the *Liber de pestilentia* (*The Book of Pestilence*). *The All-Inclusive Work on Medicine* is a compendium that consists of his notes, clinical observations, and quotations from books he read on various subjects, which were compiled, organized, and published after his death. Despite its length and relative lack of organization it was influential, and Faraj ibn Salim translated it into Latin as the *Continens*.

Ali ibn al-Abbas al-Majusi (fl. 983), known to the West as Haly Abbas, brought the compendium to perfection with his work *The Complete Medical Art*, also known as *The Perfection of the Art* or *The Royal Book*, a very well-organized and practical work that reflects al-Majusi's work as the director of the Adudi hospital in Baghdad (founded in 982 by Adud al-Dawlah, r. 949–983). It would be surpassed only by Ibn Sina's (d. 1037) *Canon of Medicine*. Constantine the African (fl. ca. 1080) translated al-Majusi's compendium into Latin as the *Liber pantegni*, and then Stephen of Antioch translated it again into Latin as the *Liber Regius* (*The Royal Book*) in 1127.

Arabic medicine, by the mid-ninth century, was based primarily on the works of Hippocrates of Cos (fifth century BCE and following) and Galen's (d. 216 CE) reworking and development of the Hippocratic tradition. In the Greek humoral tradition, the health of the body is based on maintaining balance and harmony among the

THE COURT PHYSICIAN AND TRANSLATOR OF BAGHDAD

Hunayn ibn Ishaq (808–873), a Nestorian Christian, was a well-known court physician and translator in Baghdad who translated numerous works from Greek to Syriac and Arabic. He also wrote numerous works of his own, including *Introduction to Medicine (Isagoge)*, later translated into Latin. The following is an excerpt:

“Medicine is divided into two parts, namely theoretic and practical. And of these two the theoretic is further divided into three, that is to say, the consideration of the naturals, the non-naturals, and the contra naturals. From the consideration there arises the knowledge of sickness, of health, and of the mean state, and their causes and significations; of when the four humours [*sic*] increase in an abnormal manner or of what may be the causation (*occasio*) or significance of sickness.

Of the Naturals

The naturals are seven in number: elements, qualities (*commixtiones*), humours (*compositiones*), members, energies, operations, and spirits. But some add to these four others: namely, age, colour, figure, and the distinction between male and female.

The Elements

There are four elements: fire, air, water, and earth. Fire is hot and dry; air is hot and moist; water is cold and moist; earth is cold and dry.

The Qualities

There are nine qualities, eight unequal and one equal. Of the unequal, four are simple: namely, hot, cold, moist, and dry. From these arise four compounds: namely, hot and moist, hot and dry, cold and moist, cold and dry.

The equal is when the body is so disposed that it is in good condition and in a mean state, when it has a proper amount of all four.

Of the Humours (De Humoribus)

The humours (*compositiones*) are four in number: namely, blood, phlegm, reddish bile, and black bile. Blood is hot and moist, phlegm is cold and moist, reddish bile is hot and dry, black bile is cold and dry.”

—Kimberly Georgedes

Source

Joannitius (Hunayn ibn Ishaq), *Isagoge*, translated and annotated by H. P. Chomeley, with additional notes by Michael McVaugh, in *John of Gaddesden and The Rosa Medicinæ* (Oxford, UK: Clarendon, 1912), 136, as cited in *A Source Book in Medieval Science*, edited by Edward Grant (Cambridge, MA: Harvard University Press, 1974), 705.

four humors: blood, phlegm, and yellow and black bile, which had corresponding temperaments (sanguine, phlegmatic, choleric, and melancholic, respectively). Health could be affected by or even restored by manipulation of the six nonnatural environmental factors: surrounding air, diet, sleep, exercise, mental (emotional) state, and retention or evacuation of waste. The balance was also maintained by phlebotomy (also called venesection, commonly known as blood-letting) and cupping (putting a heated cup over small cuts on the skin to draw blood).

The human body was viewed as a microcosm of the universe. For diagnostic purposes therefore, in addition to the corresponding tem-

perament, one of the four cosmic elements (earth, air, water, and fire), two of the four primary qualities (wet, dry, cold, and warm) that were associated with the particular element, and one of the four seasons were likewise assigned to each humor. For example, blood (sanguine temperament) was associated with the element of air as well as with the primary qualities hot and wet and with spring. Moreover, the months of the year (distinct from those of the seasons), the signs of the zodiac, and the human ages (childhood, adolescence, adulthood, old age), figured into the system as well.

Hospitals (*bimaristans*) were probably adopted from the Byzantines and the public clinics

described in Indian medical works but were adapted by the Muslims beginning in the late eighth or early ninth century in Iraq. There were several hospitals in Baghdad founded by al-Muqtadir (r. 908–932), his mother, and his vizier. The Adudi hospital (mentioned above) employed 25 doctors of all specialties.

—*Kimberly Georgedes*

Bibliography

- Browne, E. G. *Arabian Medicine*. 1921; reprint, New York: Cambridge University Press, 1962.
- Conrad, Lawrence I. "The Arab-Islamic Medical Tradition." In *The Western Medical Tradition 800 BC to AD 1800*, edited by Lawrence I. Conrad, Michael Neve, Vivian Nutton, Roy Porter, and Andrew Wear. Cambridge: Cambridge University Press, 1995.
- Hamarneh, Sami K. "The Life Sciences." In *The Genius of Arab Civilization: Source of Renaissance*, edited by John S. Badeau, Majid Fakhry, et al. 2nd ed. Cambridge, MA: MIT Press, 1983.
- Pormann, Peter E., and Emilie Savage-Smith. *Medieval Islamic Medicine*. Washington, DC: Georgetown University Press, 2007.
- Turner, Howard R. *Science in Medieval Islam*. Austin: University of Texas Press, 1995.

Medicine in India

Three main types of medicine can be distinguished in India during the period 300–1000 CE: ayurvedic medicine, folk medicine, and tantric medicine. Ayurvedic medicine was based on the classical concepts of Indian philosophy and a theory of the humors, folk medicine relied strongly on magical and religious practices, and tantric medicine was more esoteric and mystical in nature. The boundaries between these strands were, however, not clearly demarcated: the treatment of demonical possession through spells formed, for example, part of the eight branches of ayurvedic medicine.

The origins of medicine in India can be traced much further back to, for example, the Vedas and the great epics. In the *Ramayana*, the monkey general Hanuman is sent on a mission to obtain a certain herb that alone can heal the injured Lakshman, and in the *Mahabharata* the harm of a snakebite is undone by the use of spells and cinders. The fear of snakes and poison

and attempts to control them feature prominently in Indian culture. The Buddha is said to have given a charm against snakebites to his disciple Ananda, and in the *Mudra Rakshasa*, a famous Sanskrit play, a physician tries to poison the king, who is, however, saved because the unusual color of the drink is noticed in time.

The word "ayurveda" consists of elements from the Sanskrit language: *ayus* (life) and *veda* (knowledge). Ayurveda is not only a medical system in the sense that it attempts to cure illnesses but instead is a comprehensive science of life that seeks to help people achieve a wholesome life in accordance with their individual constitution as well as with the rhythms of nature. Influenced by Indian philosophy, especially the Nyaya and Vaisheshika systems, ayurveda holds that every object in the world is composed of the five elements of space, air, fire, water, and earth in differing combinations. A central cause of illnesses consists in the excess or deficiency of some of these elements, and the remedy in restoring a healthy equilibrium through, for example, the consumption of appropriate foodstuffs and beverages. Ayurvedic medicine categorizes people into three broad constitutions according to their dominant physical substance: wind (*vata*), choler (*pitta*), or phlegm (*kapha*). Each of these constitutions is taken to have its own delicacies and requirements for diet and lifestyle, recommendations on which can be found in the Sanskrit treatises.

The most fundamental texts of ayurvedic medicine are the compendia by Sushruta and Caraka, which in their earliest versions might have originated around 300 BCE. However, dating is notoriously difficult in the Indian context, and significant changes and additions were made to both treatises over the subsequent centuries. The Sushruta compendium was repeatedly reworked during the centuries up to probably 500 CE, and the Caraka compendium is known to have been completed and edited heavily by a scholar from Kashmir called Dridhabala, probably during the fourth century or somewhat later. Both of these Sanskrit texts remained highly influential during the whole period under discussion. The Caraka compendium was translated into Persian and Arabic and was keenly studied by Arabic authors such as Ibn-Sina (980–1037). In

return, Muslim physicians brought with them their Unani medicine, which had originally been developed from ancient Greek theories and was to rise to prominence in India during the times of the Delhi sultanate and the Mughals.

A fourth-century birch bark manuscript, called the Bower Manuscript after the British lieutenant who purchased it after its discovery in 1890, illuminates the state of medical knowledge in India at the time. The manuscript is made up of seven distinct texts, which are composed in Sanskrit mixed with Prakrit; contains quotes from the Caraka compendium; and explains treatments with powders, clarified butter, the use of aphrodisiacs, and remedies against various diseases. The first part is a treatise entirely devoted to the use of garlic for medical purposes. While many Hindus do not eat garlic because of the plant's stimulating properties, the text describes it as a divine gift that subdues all diseases and even recommends the performance of a garlic festival during the cold times of winter. The instructions for such a garlic health cure include consuming crushed garlic mixed with clarified butter for ten days at sunrise, followed by a period of regular intake of strained garlic juice.

Ayurvedic tradition sometimes speaks of three great medical authorities. One of these three was Vagbhata, although there might have been several authors with the same name rather than one historical person. The most important medical texts attributed to Vagbhata are the *Ashtanga Hridaya* and the *Ashtanga Samgraha*, which might have been composed around the seventh century. The *Ashtanga Hridaya* includes a chapter on insanity, which according to Vagbhata can be caused by a disturbance of the humors, by mental suffering such as the loss of a loved one, or through poisoning. The recommended treatments for insanity include massages with mustard oil; eye salves made of clarified butter combined with other ingredients such as pomegranate, ginger, jasmine buds, and water lily; and harsher methods such as keeping the troubled person in a dried well until emaciated and shock therapies such as scaring the person with tame lions or snakes.

It was often recommended that a remedy should be accompanied by an appropriate mantra

that is a holy syllable, word, or phrase that was invoked in order to aid healing and to pacify the disease. Spells, prayers, charms, and amulets formed an important part of Indian folk medicine, especially when a disease defied rational explanation or when no other protection seemed possible. While folk medicine knows the use of herbs and usually also has a concept of natural illnesses such as cuts and broken bones, its characteristic feature is its magico-religious orientation. Through dream analysis, astrology, and divination, people sought to understand the powers that caused illness but that were largely unseen and unknown. In many cases illness was explained through evil spirits that possess the body, especially of small infants, and the healing rituals included exorcisms that were to be performed on the patient.

From around the eighth century CE, tantric medicine gained a sizable following in India. There were many different tantric cults, the common elements of which were the belief in a dual principle of the male, static Shiva and the female, energetic Shakti, which together form ultimate reality. The tantric movement developed a system of alchemy based on metallic compounds, especially mercury and sulfur. Mercury was identified with Shiva and sulfur with Shakti, sometimes more explicitly with her menstrual blood. The goal of tantric alchemy was to discover elixirs that would give health and eternal youth to the body, an objective very similar to that of alchemists in China, with which India had an active relationship of cultural exchange. The best-known author of a treatise on Indian tantric medicine was Nagarjuna, who probably lived during the ninth century and who should not be confused with the much earlier Buddhist philosopher of the same name.

There are other elements of Indian culture, which, though not medical systems in the narrow sense, sought to promote good health, mainly because control over the body was taken to be a vital factor for spiritual progress. The *Yogasutras* by Patanjali, possibly written in the fourth century, teach various practices for the attainment of higher consciousness through self-discipline. Among the yogic practices are the postures of hatha yoga, exercises for breath regulation, and various forms of meditation,

which have become popularized all over the world as techniques to improve health and well-being. For the yogi, however, health was not an end in itself. The high regard for renouncers who undergo extreme, sometimes permanently disabling austerities shows that the Indian ideal was to value spiritual progress above physical well-being and that it was acceptable to sacrifice one's physical health in the pursuit of a liberated soul.

Medical theorizing in first-millennium India was not limited to the treatment of humans; it also included instructions for the treatment of animals like cows and horses. Most famously, the *Hastayurveda*, which can be dated before the eleventh century, is a comprehensive treatise devoted entirely to the care of elephants. The text is partly composed in verse, and the medical instructions are embedded into a dialogue between King Romapada and the legendary Palakapya, the most distinguished expert on the veterinary care of elephants. The text contains praise on the greatness of elephants, which in India were used for both labor and as displays of royal power, and describes their proper care in great detail, including a wholesome diet and the construction of the stables.

The *Hastayurveda* categorizes various types of burns, wounds, fractures, and diseases and presents the different forms of surgical interventions with their appropriate surgical instruments. The health problems it describes range from supernumerary teeth to parasites living in the ears to the problems being encountered after being pierced by a poisoned arrow. Drawing from the different sources of the Indian tradition, the text deals with elephant anatomy and applies the ayurvedic theory of the humors to elephants but also contains mythological stories on the origin of fever and magical elements, such as mantras to drive out disease.

—Melanie Mader

Bibliography

- Jaggi, O. P. *History of Science and Technology in India*, Vols. 3, 4, 5, and 7. Delhi: Atma Ram and Sons, 1973–1979.
- Meulenbeld, G. Jan. *A History of Indian Medical Literature*, Vols. 1A and 2A. Groningen: Egbert Forsten, 1999, 2000.

Rosu, Arion. “Mantra and Yantra in Indian Medicine and Alchemy.” *Ancient Science of Life* 8(1) (1988): 20–24.

Wujastyk, Dominik. *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. New Delhi: Penguin, 1998.

Byzantine Science and Medicine Translation to Islam

Byzantine science and medicine were characterized, in the words of noted historian of medicine Owsei Temkin, by a combination of tradition and empiricism. From the fourth to seventh centuries CE, scholars redacted, commented on, and organized the works of classical Greek science and medicine. Their selections ensured the survival of the theories of Ptolemy, Galen, Euclid, and others but also addressed practical problems such as calendar dates or the diagnosis of diseases. Their translation into Arabic or Persian in the eighth and ninth centuries was the basis for Islamic science and medicine. Although the association of Greek science and medicine with Neoplatonic philosophy led to conflict with Christianity in late antiquity, it was eventually accepted as part of the Byzantine classical heritage. In contrast, little Greek science was available in Latin during the early Middle Ages, leaving Western science and medicine without a theoretical basis, dependent on folklore. Byzantine scholars in the ninth and tenth centuries produced little new work, but they studied and recopied ancient texts and revived mathematics as part of the curriculum.

The study of astronomy, astrology, and mathematics in late antiquity was centered in the philosophical schools of Alexandria and Athens, where pagan Neoplatonist philosophers and their Christian successors also studied and commented on Aristotle, Ptolemy, and Euclid. Ptolemy's second-century *Mathematical Synthesis* (*Almagest*), *Handy Tables*, and *Planetary Hypothesis*, which gave geometrical models for mathematical calculation of planetary motion basic to calendars and astrology, and Euclid's *Elements* (ca. 300 BCE) were preserved in commentaries and introductions for students by the fifth-century scholars Theon (ca. 335–405 CE), assisted by his daughter Hypatia (ca. 355–415)

and Proclus (411–485). It was in this form that later Byzantium and Islam knew Ptolemy and Euclid. The regular motion of the stars formed the basis for much of ancient science, from visual observation to the mathematical formulas developed to predict motion. Since Greek science and medicine did not draw modern distinctions between natural and occult learning, astronomy and astrology overlapped, and the same scholars wrote in both fields. Astrology used astral data, Aristotelian physics, and philosophical language to predict individual horoscopes (genethliology), identify favorable times for major events (catarchic astrology), and give responses to questions. Ptolemy's astrological treatise, *Tetrabiblos*, remained the foundation for fifth- and sixth-century scholars (e.g., Hephaestion of Thebes), but collections of other treatises and horoscopes also survive from this period. Alchemy—the transformation of base metals into gold—generated a rich literature in this period, both in concrete recipes and in mystical allegories, and, translated into Arabic, helped establish the Islamic alchemical tradition. Stephanus of Alexandria, philosopher and teacher in the early seventh century, brought many of these strands together, editing Ptolemy's *Handy Tables* for use in Constantinople and writing treatises on alchemy and arithmetic and commentaries on Hippocrates, Aristotle, and Plato.

Scholarly doctors in late antiquity, especially in Alexandria, played a similar role in transmitting Greek medical learning and making Galen's work, along with the Hippocratic tradition, accessible. Galen's theoretical approach to all aspects of medicine, contained in voluminous works, was summarized and organized for clarity by Oribasius (ca. 320–400), Julian's court physician; Aetius of Amida (fl. ca. 530–560); Alexander of Tralles (525–605); and Paul of Aegina (seventh century). As practicing doctors, they amplified their selections with applications from their own experience. The range of topics covered was vast, including disease, pharmacology, gynecology, ophthalmology, surgery, dentistry, pulses, and urine lore. Galen's theory of drugs by degrees, for example, was explicated by Aetius of Amida to illustrate a classification of drugs used until the eighteenth century. Alexander of Tralles combined written sources for specific diseases

THEY KILLED HER BECAUSE SHE WAS TOO SMART—HYPATIA OF ALEXANDRIA

Hypatia of Alexandria (ca. 355–415) was the leading teacher of mathematics and Neoplatonism of the philosophic school of Alexandria from about 390 until 415. She grew up in the school as the daughter of Theon of Alexandria, a famous mathematics and astronomy scholar whose commentaries on Euclid and Ptolemy still survive. Hypatia was his best student, and he acknowledged her contributions to the texts. By the 390s she had a circle of students and wrote commentaries of her own on the works of earlier mathematicians, none of which survive. Her teaching is reflected in letters written to her by one of her students, Synesius of Cyrene, who describes her as the “genuine guide who presides over the mysteries of philosophy.” Hypatia taught both Christian and pagan students and was widely respected by Christians, but in 414 she became the victim of a struggle between Christian factions in Alexandria, who slandered her as a magician and witch. She was killed by a mob in 415, and her body was dragged through the streets and burned like a criminal. Christians as well as pagan intellectuals condemned her death. Although she was not the only learned woman teacher of antiquity, Hypatia's fame as a female philosopher and mathematician was unequaled, and her life has been reflected in many later legends and literary works.

—Dorothy de F. Abrahamse

with his own cases and accounts of local folk treatments from his extensive travels as a doctor, while Paul of Aegina's work on surgery and surgical instruments became the standard for later centuries. Byzantine doctors incorporated amulets, magic, astrology, and healing shrines into their treatments, but their advice in many areas is similar to modern practice.

There is little evidence of Byzantine science or medicine in the eighth century, the era of iconoclasm and the struggle for survival against the Arabs, but the era was epochal for the translation of Greek scientific and medical learning into Arabic. The translation movement was initiated by the caliphs al-Manṣūr (754–75) and al-Mahdī (775–85) as they established the ʿAbbasid state in Baghdad. Al-Manṣūr commissioned

translations of secular Greek works to proclaim Islam the true heir of Greek secular learning, in contrast to the anti-intellectualism of Byzantine Christianity, and to meet his urgent need for Greek astrological computation. Translations were also necessary for practical needs of the regime for educated civil servants. Islamic sources mention Ptolemy, Euclid, and Aristotle among the first translations, and medical tradition describes the translation of Galen and Hippocrates through the writings of Oribasius and Paul of Aegina. Syriac and Greek-speaking Christians in former Byzantine territory, often considered heretics by the Byzantine Church, were the first translators of texts, but eventually trained bilingual translators, often Greek, produced the high-quality Arabic texts that served as a basis for the great Islamic achievements in philosophy, science, and mathematics. By the end of the tenth century the crucial works had been translated, and Arabic scholars began to transmit new scientific knowledge to Byzantium and the rest of the world.

Science, medicine, and mathematics were included in the ninth-century Byzantine scholarly revival, now centered in the imperial school in Constantinople, where Leo the Mathematician (ca. 790–869) taught. Renowned for his mathematical skill, he knew astrology, and his library included Ptolemy, Archimedes, and Plato. Leo's reputation allegedly led the caliph to recruit him, unsuccessfully, for his service. Minuscule script, much faster and more economical to copy, was introduced in this period with a massive project of recopying ancient manuscripts on parchment, becoming the source of later Greek texts. Among the earliest were Euclid, Aristotle's scientific works, Ptolemy's *Handy Tables* and *Almagest*, and Paul of Aegina. How these works were studied is unclear, but manuscripts with the marginal comments of tenth-century Byzantine intellectuals still exist. Historians of Byzantine science and medicine are still addressing fundamental questions about their development in medieval Byzantium, but it is clear that the achievements of Alexandrian and Athenian scholars in science, mathematics, and medicine and their preservation in manuscript copies and transmission to Islam were monumental contributions.

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Bibliography

- Dzielska, Maria. *Hypatia of Alexandria*. Cambridge, MA: Harvard University Press, 1995.
- Gutas, Dmitrii. *Greek Thought, Arabic Culture*. New York: Routledge, 1998.
- Magdalino, P. "The Byzantine Reception of Classical Astrology." In *Literacy, Education and Manuscript Transmission in Byzantium and Beyond*, edited by Catherine Holmes and Judith Waring. Leiden: Brill, 2002.
- Magdalino, Paul, and Maria Mavroudi. *The Occult Sciences in Byzantium*. Geneva: La pomme d'or editions, 2007.
- Scarborough, John, ed. *Symposium on Byzantine Medicine*. Dumbarton Oaks Papers, Vol. 38. Washington, DC: Dumbarton Oaks, 1983.

Arab Medieval Science

After Muhammad's death in 632 CE the great Arab Muslim conquests of the next 90 years confronted the new rulers with enormous challenges for ruling their now diverse subjected populations. In their efforts to deal with these obstacles they were able to use the learning of ancient civilizations of Greece, Persia, and India. By adopting these intellectual developments of the ancients, Islamic civilization further contributed to advances in science and medicine, which were diffused throughout the Afro-Eurasian ecumene in subsequent centuries.

Ancient Greek and Hellenistic philosophy and science were to have the greatest influence on Islamic currents of thought, followed by the contributions of the intellectual traditions of Persian and Indian civilizations. Following the Muslim conquests, Jewish and Christian physicians from Gundishapur were to be the leading physicians in the Umayyad and later Abbasid dynastical states. Eventually their monopoly on the corpus of knowledge of Greek medicine was broken as ideas percolated into Western Christendom and Asian regions. Alexandria was another center of learning where numerous translations of these texts occurred on a vast scale that allowed for their transnational diffusion. The use of Arabic, which had developed as the lingua franca (common language) of the Muslim world, given the military expansions made under the caliphs, made it possible for scientific knowledge and books to be utilized from Spain to India.

► VETERINARIAN FOR THE SULTAN'S HORSES—ABU BAKR AL-BAYTAR

Arab science in the medieval period made many advances in medicine, surgery, and pharmacology. Medical advances aided both humans and animals. In a society where livestock were important for farming, transportation, and military needs, veterinary advances were most welcome. For medieval Muslims, veterinary care for horses included diet, exercise, physiology, and deformities as well as diseases and their treatments. The treatment of diseases included the use of medicines.

Some of the most important veterinary advances in pharmacology were made by Abu Bakr al-Baytar, who was the chief groom and veterinarian at the court of Al-Nasir Muhammad Ibn Qa-laoun, the ninth Mamluk sultan of Egypt in the early 1300s. Abu Bakr al-Baytar was born in Malaga, Andalusia, in Spain.

Abu Bakr al-Baytar wrote a work titled *A Dictionary of Simple Medicines and Foods* that synthesized then-current medical knowledge. For this book, al-Baytar used over 150 sources. He also listed over 2,000 simples (uncompounded drugs) in alphabetical order. Pharmacists and botanists preceding al-Baytar had been able to identify most of the simple uncompounded drugs described in the *Materia Medica*. These drugs were called “simples.”

Al-Baytar's work, the short Arabic title of which is *al-Jami*, was more than just a list of medical

plants. It was the most complete book of applied biology developed during the High Middle Ages. Using information from a variety of traditions, al-Baytar added to his own knowledge of plants the descriptions of other authors in all the languages that he knew. In addition, using Arabic as his standard language, he was able to give Arabic names to virtually all of the plants described, including those in the pharmacology work of Pedanius Dioscorides (first-century CE Greek pharmacologist and botanist), *De Materia Medica*.

The dictionary produced by al-Baytar combined materials synthesized from earlier works with his own field observations. Like other Arab botanists, al-Baytar conducted field research on plants. He traveled to Egypt, North Africa, Syria, Iraq, Iran, Arabia, and Anatolia as well as Greece in order to collect specimens. His dictionary contains over 1,400 entries and describes plants not previously described by Greek and Roman writers.

Al-Baytar's dictionary discussed animal husbandry, breeding, and animal diseases and their treatments. He also prescribed using animal organs for treatments that followed medical traditions from Aristotle's time. One section deals with keeping birds in Syria and Egypt.

Eventually he settled in Egypt, where he became its head pharmacist. He died in Cairo in 1340.

—Jack Waskey

Within two centuries the bulk of Greek and Hellenistic science had been translated into Arabic, and subsequently the antiquated Syriac versions fell into disuse. An emergent generation of scientists studied Greek scientific knowledge in Arabic translation. Along with valuable contributions from ancient Persian and Indian scientific documents, Greek knowledge was grafted and built upon a more sophisticated and enlarged body of medieval Arabic science.

From about 900 to 1200 CE Arabic science (named as such given that it was in the Arabic language) flourished in the lands of Islam. However, not all were Muslims, as many were Jews and Christians who resided in the Muslim realms. During this period dynamic innovations took place with advances in medicine, astron-

omy, mathematics, architecture, and technology that percolated throughout much of North Africa, the Levant, Mesopotamia, Persia, and Spain.

The great social value of medicine was further stimulated by support from the caliphs and other Islamic rulers. With official government support Muslim physicians and scientists interested in medicine wrote numerous medical treatises, which steadily contributed to the growing body of knowledge. By the ninth century Baghdad was the center of medical study of the Islamic realms. From the tenth to the eleventh centuries CE other regional centers of medical study and practice were in competition with Baghdad. By the end of the fourteenth century Damascus had become the center of medical science. During this time Greek and Hellenistic

medical science had been absorbed, and new medical knowledge developed as an end result.

Arabic medical science made advances in anatomy, blood circulation, surgery, and pharmacology. Arabic study of biology and botany aided the development of pharmacology. Pharmacology was also advanced by physicians who catalogued and identified all the simple medicines derived from plants and herbs. By the twelfth century a number of pharmacological encyclopedias were available throughout the Islamic realms. One encyclopedia, *al-Jami li-Mufradat al-Adwya Wal-Aghdhiya* produced by ibn al-Baytar, was widely read even in Christendom for its discussion of both medicines and health foods.

Astronomy was of great practical interest in the Muslim world. Before the advent of Islam, Arabs had developed an astronomical lore for practical matters such as night travel in the desert and what would become the “Islamic problems” associated with worship. As a place of Muslim worship, a mosque has to have a *qibla*, which is a mark in line with the Kaaba in Mecca. The prayers of the worshippers will then be made in line with the qibla. Other problems have to do with time keeping by solar observations so that the five times of prayer each day occur on time. In addition, lunar observations of the crescent moon have to be made just after sunset so that the lunar calendar of Islam can be kept. These practical problems encouraged the study of astronomy as a means of finding viable solutions. Observatories, such as the observatory at Baghdad under the Abbasid caliphate, were sponsored by various rulers.

The first astronomical works translated into Arabic were of Persian and Indian origin. However, studies of the extant translations show that these works were usually a syncretic mixture of Persian, Indian, and Greek astronomy, an example of the cultural diffusion of science during this period. Within a short time Arabic astronomers recognized the superiority of Greek astronomy. The work of Ptolemy was given the Arabic title *Almagest*. Nonetheless, these astronomers continued to build on the legacy of the ancients by instituting their own discoveries and innovations in the field.

Zij al-Sindhind (astronomical tables of Sind and Hind) by al-Khwarizmi was written in the

early ninth century and contained astronomical tables from both Indian and Greek sources. In the tenth and eleventh centuries, advances in mathematics, notably trigonometry, were used to augment developments made in astronomy. As ever larger and more numerous observatories were built, innovations in mathematics allowed for more accurate observations. One of the great practitioners of medieval Islamic science was Aby Rayhan al-Biruni (973–1048). He wrote over 150 works on astronomy, mathematics, geography, mineralogy, metallurgy, pharmacology, and other scholarly subjects. One of his most valuable works was *al-Oanun al-Masudi (Canon Macudicus)*, which was a synthesis of Greek, Indian, and Arabic astronomy.

Al-Biruni along with others contributed to the advancement of theoretical astronomy. Al-Biruni and Ibn Sina (Avicenna) debated the Aristotelian legacy. Al-Biruni rejected a number of Aristotle’s physical theories on motion and on the orbits of heavenly bodies. By 1200 CE two astronomical schools developed. The Maragha School was centered at Maragha (in present-day Azerbaijan). It was more mathematically centered in its treatment of astronomical problems. The other school, in Andalusia, was more philosophically oriented and focused on planetary problems.

Simultaneously, advances in astronomy were matched by developments in mathematics. The Arabs had inherited a system of finger reckoning called *hisab al-jummal*. It used the order of the letters of the Arabic alphabet as a way of denoting numbers. This method was really limited to simple arithmetic. The introduction of Hindu arithmetical symbols of nine digits and a zero established the basis of the modern system of mathematics used throughout much of the world. It also provided a way to work with decimals and with place values.

In the nascent field of algebra a considerable number of contributions were made by the mathematician Al-Khwarizmi who wrote *Kitab al-Jabr wal-Maqabala*, the first algebra book. Arab mathematicians not only advanced the field of mathematics but also applied their findings to other disciplines such as geography or optics. In the case of geography, mathematics was used to calculate the precision of the location of Mecca, which for worship purposes was of practical

concern. Other practical uses for mathematics included construction and irrigation.

—Jack Waskey

Bibliography

- Al-Andalusi, Sa'id. *Science in the Medieval World: "Book of the Categories of Nations."* Translated and edited by Sema'an I. Salem and Alok Kumar. Austin: University of Texas Press, 1996.
- Gutas, Dimitri. *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society (2nd-4th/8th-10th Centuries)*. New York: Routledge, 2002.
- Huff, Toby E. *The Rise of Early Modern Science: Islam, China, and the West*. 2nd ed. Cambridge: Cambridge University Press, 2003.
- O'Leary, De Lacy. *How Greek Science Passed to the Arabs*. 1949; reprint, Chicago: Ares Publishers, 2004.
- Turner, Howard R. *Science in Medieval Islam: An Illustrated Introduction*. Austin: University of Texas Press, 1995.

Early Medieval Chinese Alchemy

Alchemy, a science involving the transformation of metals into gold in an attempt to discover an elixir of life, has been practiced in various cultures around the world throughout history, and it was practiced widely among Daoists in China during its early medieval period.

Alchemy in Daoism focused not only on the transformation of metals but also on the physical, mechanical, and biochemical structure of the human body. It is therefore often referred to as physiological alchemy. A strong interest in longevity, health, and immortality occurred in the roots of Daoist thought that emerged in early Daoist writings of China's Classical Period (700–220 BCE). However, it was the *fangshi* (masters of the formulae) of the Qin (221–206 BCE) and early or Western Han (206 BCE–8 CE) dynasties who first experimented with alchemy. This group, which was also highly influential in the transformation of Daoism into an organized religion during the later Han, practiced various alchemical techniques in its pursuit of immortality. In the fourth century CE members of Shangqing (Supreme Clarity), an important branch of Daoism, embraced the alchemical tradition. At this time, Daoists began to understand alchemy not

only as a means to physical longevity but also as one through which spiritual refinement and transcendence could be accessed.

An important figure in the history of alchemy's relationship to Daoism is Ge Hong (287–347 CE). Ge's famous work, the *Baopuzi* (*Book of the Master Who Embraces Simplicity*), detailed methods of preparing and ingesting elixirs. Ge's work emphasized alchemy as a manner through which human bodies could be transformed into those of immortals.

During the Tang dynasty (618–906 CE) alchemy in China broke off into two different forms of Daoist practice: *waidan* (external alchemy) and *neidan* (internal alchemy). Initially seen to exist together as one method through which immortality could be obtained, in the Tang dynasty both forms of alchemy were understood as separate methods by which practitioners could cultivate their bodies. However, external alchemy, which flourished throughout the Tang, is often seen to have preceded internal alchemy, which became highly developed later on during the Song dynasty (960–1279 CE).

External alchemy focused on the examination of elements external and foreign to the human body and the finding of ways by which these elements could be used for purposes of longevity, immortality, and self-cultivation. In this form of alchemy, the alchemist typically ingested pills or elixirs that had been transformed

THE ELIXIR OF IMMORTALITY

In their search for an immortal elixir, early Chinese alchemists experimented with various substances and created a drug called cinnabar, which was produced from mercury, a metallic element of high toxicity. Although they understood that ingestion of such drugs could be harmful or fatal to the human body, many Daoist practitioners still swallowed the often lethal potions, believing that consumption of the concoctions would lead to their immortalization. Many emperors who ruled during the Tang dynasty (618–906 CE) also died after having ingested special alchemical elixirs made from various substances, including mercury and gold. They also believed that they were immortalizing themselves.

—Anna Hennessey

from various mineral and herb ingredients. Alchemists prepared these ingredients according to recipes that referred to the cosmological principles of yang (creation) and yin (dissolution and return), viewed as the two primal forces of the universe in Daoism. Daoists viewed combinations of yang and yin to be regulated by the five elements of the world: wood, fire, earth, metal, and water. Fire, the physical manifestation of yang, and water, the physical manifestation of yin, both played crucial parts in the work of the alchemist, who heated and cooled the various ingredients used in the alchemical creation of pills and elixirs.

Internal alchemy did not focus on utilizing any substances external to the human body in its search for an elixir of life. Instead, this form of alchemy professed that all of the necessary ingredients in obtaining immortality existed within the human body. Through dietary and meditative exercises, practitioners of internal alchemy therefore focused their attention on cultivating the yin and yang energies believed to dwell inside the body. In the Song dynasty, internal alchemy revolutionized Daoism, advocating a cultivation of mind and body and incorporating elements of both Confucianism and Chan Buddhism into its practices.

—Anna Hennessey

Bibliography

- Benn, Charles. *Daily Life in Traditional China: The Tang Dynasty*. Westport, CT, and London: Greenwood, 2002.
- Kirkland, Russell. *Taoism: The Enduring Tradition*. New York and London: Routledge, 2004.
- Kohn, Livia. *Daoism and Chinese Culture*. Cambridge, MA: Three Pines, 2001.
- Needham, Joseph. *Science and Civilisation in China*, Vol. 5, parts 2–5. Cambridge: Cambridge University Press, 1974, 1976, 1980, 1983.
- Wong, Eva. *The Shambhala Guide to Taoism*. Boston: Shambhala Publications, 1997.

Early Medieval Arabic and European Alchemy

Alchemy is often referred to as the precursor to modern chemistry, which in some sense is an accurate depiction. Medieval alchemists did produce substances such as nitric and hydro-

chloric acid as well as sodium carbonate. In addition, elements such as arsenic and bismuth were isolated and identified for the first time. However, the alchemy practiced in the ancient and medieval worlds was much more than a kind of primitive chemistry. It was a combination of mysticism, philosophy, religion, and science. And in practice, it often involved more art than science.

First developed in antiquity, alchemy evolved independently in various parts of Europe, Asia, and North Africa. There is some dispute as to its exact origins, but most scholars agree that it involved ideas concerning nature as well as the various craft traditions in antiquity. In the West, the Greek works were well circulated throughout the Mediterranean world. In particular, Aristotle's works as well as those of other popular Greek philosophers found a home in the Egyptian city of Alexandria. In Egypt, the interest in alchemy blossomed considerably. It became known as the art of *chemeia*, which came from the black soil of the region. Many of the works were attributed to the mythical Hermes Trismegistos (the thrice-great Hermes). This figure is most likely based on the Egyptian god Thoth. Hermes was the supposed author of the *Hermetic Corpus*, which was written in the second and third centuries CE and expounded an esoteric Hellenistic philosophy that involved Jewish, Roman, and Egyptian mystical concepts. The Hermetic writings would not be well known in the Middle Ages but would later be idealized by renaissance writers and philosophers such as Marsilio Ficino, who dated the authorship to the time of Moses. This is, however, a clear indication that alchemical authors of late antiquity were influenced by various sources. These often included Christian, Gnostic, and Neoplatonic elements. Medieval alchemy, like most areas of science in the Middle Ages, was most profoundly influenced by the works of Aristotle but also owed much to cultural contacts with Chinese and especially Indian thought.

Medieval medicine was based on Galen's second-century doctrine of humor theory, which hypothesized that the body was made up of four humors: blood, black bile, yellow bile, and phlegm. Similarly, Aristotle's four base terrestrial elements—fire, air, water, and earth—

would be an integral part of medieval alchemy. Various combinations of these elements would produce different substances. Eventually the emphasis would be on gold and producing it from other sources (particularly other base metals). Gold in some areas was related to immortality, which was a particular fascination among medieval alchemists.

The interest in the early medieval West was quite limited. This lack of interest perhaps stems from the interpretation by Saint Augustine (354–430) of the importance of science. Augustine characterized the learning of science as an “empty curiosity.” Only after the rediscovery of the Greek corpus of scientific thought in the High Middle Ages, hastened somewhat by the twelfth-century renaissance, did Westerners begin to take a significant interest in most areas of science. This included alchemy.

With the limited interest in alchemy in the Christian West, the major developments came from the Arab world. There was an immediate interest in alchemy among Arab scholars who came in contact with Greek alchemical lore and the synthesis of it with Chinese, Persian, and Indian texts and traditions.

One of the first Muslim alchemists is believed to be Prince Khalid Ibn Yazid, who worked in the late seventh and early eighth centuries. From that point on, Islamic interest in alchemy flourished in centers of learning throughout the Near East. In fact, the word “alchemy” itself is derived from an Arabic word, *al-kīmiya* or *al-khīmiya*. The Greek variation on the word is to add the prefix *al-* to *chumeia*, which is defined as “to cast together” or “weld.”

The eighth-century alchemist Jabir Ibn Hayyan was probably the most renowned of the Arabic alchemists and is often referred to as the “father of chemistry.” A polymath, Jabir is given credit for many chemical procedures, such as distillation and crystallization, and the invention of much scientific apparatus. He is often credited with the discovery of such elements as arsenic, antimony, and bismuth and the processes to produce such substances as sulfuric and hydrochloric acids. Jabir may have been the first to introduce the idea of transmutation. He proposed that by rearranging the qualities (hot, cold, dry, moist) of one metal, it could be transformed into

➤ PHILOSOPHI LAPIS—THE PHILOSOPHER’S STONE

The eighth-century alchemist Jabir Ibn Hayyan may have been the first to introduce the idea of transmutation. He proposed that by rearranging the qualities (hot, cold, dry, moist) of one metal, it could be transformed into another. From this came the philosopher’s stone, the holy grail of medieval alchemy. It is a well-developed concept in Arabic and later Latin literature. The stone provided a substance that could supposedly turn lead and other base metals to gold. It may also have been associated with an elixir of youth, but many scholars now believe that they were two different concepts. In the West, the stone is closely associated with Nicholas Flamel (1330–1417), the late medieval alchemist whose work revolved entirely around the stone and who was reputed to have actually found it. Flamel and the philosopher’s stone have been a permanent part of medieval lore ever since.

—Jace Stuckey

another. From this came the philosopher’s stone, the holy grail of medieval alchemy. It is a well-developed concept in Arabic and later Latin literature. The stone provided a substance that could supposedly turn lead and other base metals to gold.

With the significant interest among the Muslim scholars, there tended to be various interpretations, concerns, and functions among Islamic alchemists. On the one hand, there was the magical and supernatural aspect that dealt with everything from number mysticism to the formation of special elixirs that held untold powers. On the other hand, there was a practical side that focused more on medicinal chemistry. Scholars and alchemists such as al-Razi (ca. 860–925) and Avicenna (980–1037) tended to be interested in the practical medicinal aspect of alchemy. In al-Razi’s most important work, the *Book of the Secret of Secrets*, he discusses the mystical side of alchemy, including transmutation and elixirs, only briefly. The bulk of his emphasis is on practical chemistry, equipment, and laboratory operations. He also composed a general classification of all substances: animal, vegetable, and mineral. There were then subcategories for the major

classes. Other important achievements included the development of a distillation process and the use of hydrochloric and nitric acids to dissolve metals.

In general, alchemy was just one aspect of the broader Islamic interest in science. Although Arab scholars were working with alchemical texts in the early eighth century, Latin scholars would not do significant work for another four centuries. Although alchemy was ultimately condemned by the Church, there were some minor contributions by the monastic community of the early Middle Ages. These contributions often came in the simple form of preservation. Many works of antiquity only exist today because they were copied by monks working in scriptoriums. Gerbert of Aurillac (later Pope Sylvester II), working in Spain in the late tenth century, was one of the first Christian scholars to assimilate Islamic science and introduce it to the Christian West. The close contact between Christians and Muslims in Spain would help foster a renewed interest in science among Christians.

—Jace Stuckey

Bibliography

- Abraham, Lyndy. *A Dictionary of Alchemical Imagery*. Cambridge: Cambridge University Press, 1998.
- Abraham, Lyndy. *Marvell and Alchemy*. Aldershot, UK: Scholar Press, 1990.
- Holmyard, E. J. *Alchemy*. 1957; reprint, New York: Dover, 1990.
- Taylor, F. Sherwood. *The Alchemists: Founders of Modern Chemistry*. London: William Heinemann, 1951.
- Thorndike, Lynn. *A History of Magic and Experimental Science*. New York: Columbia University Press, 1924–1958.

Abu Musa Jabir ibn Hayyan— The Father of Chemistry

Jabir ibn Hayyan (ca. 721–ca. 815) is often called the “Father of Chemistry” because in his practice of alchemy, he used experimentation and created various laboratory processes and devices still in use today such as the alembic, which made the distillation process more systematic for experimentation purposes. More-

over, because of his theory of balance, he believed that substances could be combined (particularly with the alchemical sulfur and mercury) in specific proportions to produce new substances or transmute them into other known substances. His use of proportions is held to be a precursor to the law of constant proportions in chemistry. He is also credited with the discovery of various acids including sulfuric acid, which was known in the Middle Ages as vitriol. Then, by distilling salt with sulfuric acid he discovered hydrochloric acid, and by distilling sulfuric acid with saltpeter (which some also credit him with discovering) he discovered nitric acid. Moreover, he created what is known as *aqua regia* (royal water, or king’s water) by combining nitric acid with hydrochloric acid in specific proportions (1:3, respectively). Aqua regia, which can dissolve gold, had obvious applications for both extracting gold from the ground (or another substance) and purifying it as well and also has uses for engraving. He also discovered how to isolate other acids, including citric, acetic, and tartaric acids. Additionally, he developed several processes that aided or improved leather tanning, cloth dyeing, cloth waterproofing, and steel manufacture and along with it the prevention of oxidation (rust), and in a process still used today in glassmaking, he utilized manganese dioxide to alleviate the green tint caused by iron. He is also credited with discovering the element bismuth, as well as antimony, mercury oxide, lead acetate, arsenious oxide, and cinnabar.

Jabir ibn Hayyan’s system for determining specific weights, densities, ratios, and so on of a specific substance in relation to another was exceedingly complicated. His method relied on a Pythagorean and Neoplatonic numerological system based on the magic square, in which the four numbers of the lower left square (1, 3, 5, 8) add up to 17, but the system was further developed by Jabir to include his numero-alphabetical system in which he assigned a numerical value to each of the Arabic letters.

In addition to the complexities of his thought, Jabir wrote in such a cryptic language that his works were considered nonsensical by many, which may be the origin of the term “gib-

berish.” As Jabir himself said, “One must not explain this Art in obscure words only; on the other hand, one must not explain it so clearly that all may understand it. I therefore teach it in such a way that nothing will remain hidden to the wise man, even though it may strike mediocre minds as quite obscure; the foolish and the ignorant, for their part, will understand none of it at all.”

—*Kimberly Georgedes*

Bibliography

- “Jabir Ibn Hayyan: The Father of Chemistry.” *Al Shindagah* 60 (September–October 2004). <http://www.alshinadah.com/septoct2004/jabir.html>.
- Rapp, George. *Archaeomineralogy*. Berlin: Springer-Verlag, 2009.
- Titus Burckhardt, *Alchemy* (London: Stuart and Watkins, 1967), 30, as quoted in John Eberly, *Al-Kimia: The Mystical Islamic Essence of the Sacred Art of Alchemy* (Hillsdale, NY: Sophia Perennis, 2004), 21.

■ Introduction: Early Medieval Military Technology

In the period 300–1000 CE (as in other periods) military technology and proficiency in military skills were important to virtually all societies throughout the globe. In societies where states had formed, support of the military enterprise was one of the principal functions, perhaps the principal function, of the state, and military technology was, after the technology of agriculture, most important. In this essay, technology concerning infantry and cavalry as well as fortifications, sieges, and naval warfare will be discussed.

The infantry, or foot soldiers, was important and the most numerous branch of most early medieval armies. Infantry fought with thrusting and slashing weapons, such as swords, pikes, battle-axes, and the like. Often they wore leather body armor and sometimes chain mail as well as metal helmets. The Vikings, who fought mainly on foot, sometimes wore chain mail shirts into battle. Early medieval infantry also usually carried shields, usually on the left arm. The Romans used long shields with which they could protect their bodies above the knees, and these could be connected to their neighboring shields to form a wall. Shields were made of leather, cotton, wood, bamboo, wicker, turtle shells, and, less often, metal.

Another variety of foot soldiers was those using missile weapons: bows and arrows, longbows, compound bows, atlatls (spear and dart

throwers), crossbows, and repeating crossbows (in China). The bowmen and particularly crossbowmen stood or knelt behind freestanding shields (in Europe called *pavis*). These bowmen and crossbowmen were not usually considered the same as the infantry who fought with swords and spears because they required a different type of training and organization. Only when the infantry were provided with gunpowder weapons (after the period of concern by this essay) did they fight mainly with projectile weapons. In the Americas, bows and arrows were not introduced until early in the first millennium CE. Many groups fought with atlatls, a type of handheld spear or dart thrower. By the fourth century, the bow and arrow was diffusing southward through North America, resulting in disaster for those groups who did not yet have the new weapon. By 1000 CE, the bow and arrow had probably spread to South America, though many Mesoamerican peoples clung to the atlatls until European contact in the fifteenth century.

The other major branch of the land forces was the cavalry, who were usually horsemen but also cameleers and elephant drivers. The invention and diffusion of the stirrup early in this period revolutionized cavalry warfare because it enabled the horseman to more easily stay mounted as well as enabled him to put the force of his weight and the horse's momentum in his lance thrusts. The stirrup was invented by the

Chinese or adapted by them from the steppe nomads in the fourth century. From the Chinese it spread in all directions: to Korea and Japan, to India, and across the Eurasian steppe. The Muslims adopted it probably in the late seventh century, and in the eighth century the Franks learned of the stirrup. Tradition has it that Charles Martel's army learned of it from the Arabs at the Battle of Tours in 732.

The adoption of stirrups led to the breeding of heavier horses, battle chargers strong enough to carry a heavily armored rider and the armor that covered the horse. To carry this weight of metal chain mail, the horse required special feed: clover or alfalfa hay and grain. The feudal system in Europe may have evolved as a response to the need for a social system that, in the absence of a strong state, could supply the resources to pay for the expensive horses and armored knights.

Early medieval peoples built fortifications in the traditional pattern with heavy earthen or stone walls. China's border fortifications, which had existed for centuries, were of rammed earth until replaced with stone in the Ming dynasty. The Sassanian Persians built defensive walls in the Caucasus and to the east of the Caspian Sea. In the ninth century, two defensive walls were constructed in western Europe: Offa's Dyke, built by the king of the Anglo-Saxon kingdom of Mercia along the border with Wales, and the Danewirke, an earthen and timber wall across the Jutland peninsula for defense against Carolingian incursions.

In the early medieval age, defensive walls of stone protected most cities. In Europe, local strongmen built fortified castles, first of timber and after the ninth century increasingly of stone. With the increasing construction of fortifications, warfare devolved largely into siege warfare. In siege warfare, there was very little innovation from the techniques of antiquity. The army conducting the siege tried to surround, or throw a ring of circumvallation around, the city in an attempt to starve the besieged. The attackers would use battering rams, siege hooks, ladders, and various types of rock-throwing artillery: ballistae, catapults, trebuchets, mangonels, and onagers. The defenders would fire large crossbows, mobile crossbows, and, in China, repeating crossbows through arrow slits and loopholes.

The attackers often tried to undermine the walls by tunneling, mining, and sapping or attempted to get over the walls by building siege towers or constructing ladders.

Another important branch of military technology was naval warfare. The most important innovation in naval warfare during this period was the invention of Greek fire by Byzantine scientists in the late seventh century. With this invention, a kind of flamethrower, it was possible to burn the enemy ships, making unnecessary the ramming and boarding of the enemy craft, as had been the practice previous to this.

—*Wilfred J. Bisson*

Early Medieval Defensive Walls

Early medieval defensive walls were necessary because the protection offered by centralized governments had broken down in western Europe. The lords and population of a region had to protect themselves from invaders such as Vikings. Although variations existed depending on local geography and climate, most defensive walls followed the same general pattern.

For most of its existence, the Roman empire had been far superior militarily compared to its neighbors. Roman armies on campaign built temporary fortifications, but permanent fortifications existed mostly on the borders of the empire. As Rome declined militarily, engineers began to build defensive walls around cities and towns that might be attacked. With the end of centralized Roman authority, these fortifications fell into disrepair.

By the fifth century, local populations in the West were forced to defend themselves. The earliest fortifications were built by common people and were relatively simple structures called burhs. A burh consisted of a wooden palisade or wall with a surrounding ditch. In times of invasion, peasants would flee to the burh with their possessions and help defend it.

As local lords increased their power over communities, they built their own fortifications, which doubled as the lords' residences. These fortifications served as refuges during attacks and also helped to control access to important locations. Some were built in towns, where the garrisons could better control the local popula-

tion. Known as motte-and-bailey castles, these defensive fortifications were built of earth and wood. The central feature was a high mound of earth, or motte. The motte was either natural or man-made. Often, the sides of the mound were reinforced with stones or brush, so it could be as steep as possible. A wooden wall was built around the top of the mound, and a multistory tower was built inside. The tower doubled as the lord's home and a final line of defense. The tower was originally known as the dungeon or donjon. Height was an important feature of the motte because it allowed the garrison to see hostile forces approaching. The additional height reduced the effectiveness of attackers' weapons while increasing the striking power of defensive fire.

A lower mound with a greater surface area was constructed nearby. Known as the bailey, this mound included buildings necessary to maintain the lord. They included stables, storage buildings, and residences for the garrison. A separate wall surrounded the bailey. Both the motte and the bailey were normally enclosed by a ditch. The ditch might be filled with water, spikes, or other obstacles. Wooden drawbridges connected the motte and bailey. An outer wooden wall often surrounded the entire motte-and-bailey complex.

Wooden castles of the motte-and-bailey type survived until the twelfth century. They had many advantages. Wood was plentiful during this time period. Many were also built on the sites of old Roman fortifications. They could be erected very quickly, especially if the materials had been gathered together beforehand. These early defensive fortifications were not able to withstand the increasingly sophisticated siege weapons and techniques that emerged in the twelfth century, however. Returning crusaders brought incendiary weapons such as Greek fire, which could destroy wooden structures. Artillery such as trebuchets were able to overcome the wooden walls as well. Thanks to increased knowledge in stoneworking and shortages of wood, stone castles began to replace the older wooden walls.

—Timothy J. Watts

Bibliography

Gravett, Christopher. *The History of Castles: Fortifications around the World*. Guilford, CT: Lyons, 2001.



Pickering Castle in North Yorkshire, England, is an early motte and bailey castle—a simple, timber construction built on top of a grassy mound, surrounded by earthen banks and ditches. Early medieval strongholds were usually built of earth and wood. A ditch surrounded the enclosure, which was usually placed on a hill. Other natural defensive features, such as rivers, were used to limit attackers' approaches. A fortified keep was located on a raised hill toward the center, allowing defenders to fire on any invaders that penetrated the outer wall. (Skyscan/Corbis)

Kaufmann, J. E., and H. W. Kaufmann. *The Medieval Fortress: Castles, Forts, and Walled Cities of the Middle Ages*. Cambridge, MA: Da Capo Press, 2001.

Stokstad, Marily. *Medieval Castles*. Westport, CT: Greenwood, 2005.

Warner, Philip. *The Medieval Castle: Life in a Fortress in Peace and War*. New York: Penguin Putnam, 2001.

Forts and Castles

The Romans were master engineers who constructed fortified towns and outposts throughout their empire. The frontiers were studded with garrison forts known as *castra* (sing. *castrum*), the origin of the English place name “-chester” and the word “castle” and its Romance variants (*château*, *castel*, *castile*). They preferred to build walls and towers in dressed stone but adapted to local conditions, utilizing rough stone, brick, and wood as necessary. Towers,

which could be round or square, reinforced the corners of the wall structures and were placed along the walls to shorten the length of less-sturdy stretches. The towers provided excellent views of the countryside and elevated platforms from which arrows and other missiles could be launched against an attacking enemy. Since these extended out from the wall, men in the towers could provide cross fire that helped protect the walls themselves from tunneling and ramming. The camps were well laid out on a square grid pattern, the larger being provided with amenities such as baths and temples. They tended to be located on high ground and at strategically valuable points such as mountain passes, ports, and river crossings.

With the defeat or withdrawal of the Roman legions from the western empire's frontier areas, the fortified towns and *castra* came to be occupied by a mix of local folk and recently arrived Germanic peoples. Both Celts and Germanic peoples had long built military camps protected by palisades of wooden logs and understood the defensive value of the fortifications that fell into their hands. Even so, endemic war, a lack of skilled masons, and frequently shifting borders meant that many of the Roman *castra* fell into ruin. In Italy, savvy warlords, bishops, and later Carolingian counts often maintained the city walls that had first appeared in the third century, thereby preserving some elements of urban life and administration. Embattled early medieval kings and other lords—King Alfred of England (r. 871–899) is the best known—had strategically placed in their territories Roman *castra* refortified with stonework and towers in imitation of earlier Roman models. Thirty of these revived English *castra* and other military forts were christened burghs—from the Germanic word for a fortified place (also -burg, borgo, burgos, -borough)—and played key roles in Alfred's defense against the hostile Danes in the later ninth century.

Otherwise unfortified villages, hilltops, and other defensible points also acquired fortifications in the form of rings of ditches and earthworks of the excavated soil. A wooden palisade of vertical logs ringed the top of the earthworks. The interior of the palisade featured a catwalk or running platform from which protected de-

fenders could view the countryside and hurl missiles. Within the palisade was a broad flattened area that could be several acres in size and in which scores or even hundreds of people lived and worked as a village. These simple ring forts of circular ditches with high interior ramparts surmounted by a wooden palisade constitute the earliest proper medieval castles. Smaller and simpler versions served as the residences of local warlords and their families and entourages. Similar structures appeared along the southern frontier of the Rus with the steppe nomads of central Asia, later giving way to larger and more sophisticated fortified villages.

Freestanding stone tower building revived in the Viking era, perhaps originating in the Irish round towers that served as lookout and protective points for monastic settlements. Stone towers (keeps, donjons) were clearly superior to wooden defenses because they could be built higher and sturdier and were far more fire resistant. The earliest known northern stone square keep was built in the mid-tenth century at Doué-la-Fontaine, France. Others quickly followed, both on the European continent and in beleaguered Britain. Some surviving Anglo-Saxon square church towers may have begun as fortifications. Within, stone corbels or brackets that extended from the walls served as platforms on which plank floors were set, allowing multiple stories for storage and living quarters. The uppermost floor was a perch for observation and defensive fighting. Like earlier Roman structures, these were often crowned with crenellations, the toothlike features behind which defenders could fight.

The Byzantine empire relied on the traditional Roman fortifications of walled cities and *castra*. Early Muslim armies captured and occupied many of these, borrowing their forms. They translated them across the growing Islamic empire, as in the Iberian *alcazaba* (fortress) at Baños de la Encina, built in the 960s on the Christian frontier. One of the earliest Muslim architectural works is the seventh-century fortress of Qasr al-Kharanah in Jordan, a compact structure with tall dressed stone walls, round corner towers, and a double gate. In desert regions, adobe brick often replaced stone as the principal building material, proving quite sufficient at

withstanding both the dry climate and the simple technology of marauding Bedouins.

China had long utilized sophisticated frontier fortifications, the most famous of which was its northern Great Wall. Elsewhere, Chinese forts varied from simple ditch and rampart structures to large stone enclosures protected by sturdy towers and sophisticated mechanical weapons. Farther west, Turkish peoples adopted Chinese forms, fortifying their towns (*balıqs*) with double and triple rings of walls and even moats. Indian towns and villages were also protected by often intricate structures of brick or stone, and where these were less available, as in Kashmir, simpler timber works sufficed.

—Joseph P. Byrne

Bibliography

- Gravett, Christopher. *The History of Castles: Fortifications around the World*. Guilford, CT: Lyons, 2001.
- Kaufmann, J. E., and H. W. Kaufmann. *The Medieval Fortress: Castles, Forts and Walled Cities of the Middle Ages*. Cambridge, MA: Da Capo, 2004.
- Lavelle, Ryan. *Fortifications in Wessex, c. 800–1066*. Elms Court, UK: Osprey, 2003.
- Nossov, Konstantin. *Medieval Russian Fortresses AD 862–1480*. Elms Court, UK: Osprey, 2007.

Battering Rams, Catapults, and Other Preexplosive Artillery

Much medieval warfare consisted of sieges and attacks on fortified locations. Sophisticated machines were often used to successfully capture a city or other fortification. These weapons and the techniques with which to use them were common to different cultures.

Chinese military thinkers devoted much attention to siege techniques in their writings. Manuals described the need to bring all useful materials, supplies, and people into a city facing attack. The territory around the city was to be devastated, so the attackers would have few resources available. In response, attackers used a wide variety of weapons. Catapults may have appeared as early as 700 BCE in China. They were definitely in widespread use by the third century CE and came in various forms. One was a rotating version that could be turned on its

frame to fire in different directions. Others were counterweighted trebuchets, which had greater range and destructive power than most early gunpowder weapons. Unusually, the Chinese never used torsion to power their catapults. Instead, large crews of men pulled on ropes to provide power for the catapults.

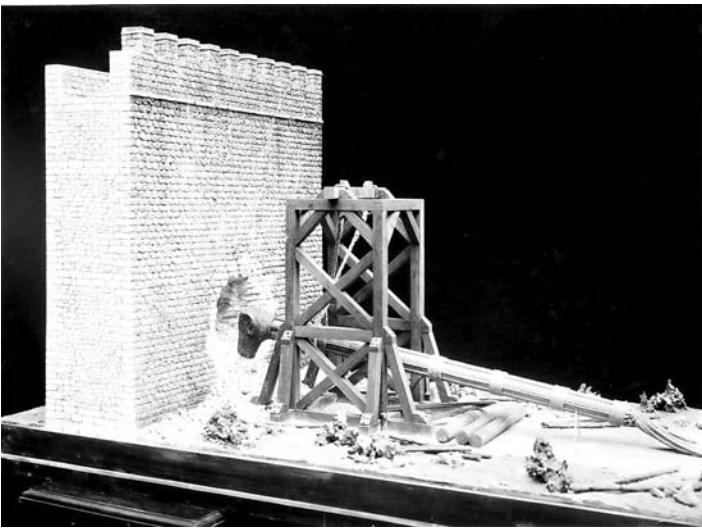
The Chinese also used large numbers of crossbow weapons in sieges. Known as arcuballistas, they were able to hurtle projectiles at least 200 yards with accuracy. Originally they used only one bow, but by the fifth century, multibow arcuballistas were being used. These flat-trajectory weapons were greatly feared since their bolts could penetrate any armor and were often used to snipe at individuals.

Chinese siege weapons threw many types of projectiles. The most feared were incendiary devices intended to set a besieged city on fire. Oil-soaked cotton or other flammable materials were used. Recipes for noxious gases and even gunpowder grenades were available for attackers as well.

Chinese siege machines also included cloud ladders, which were scaling ladders on wheels or artificial tunnels, covered with fireproof hides to protect breaking through a wall.

In medieval India, many forts were built to control important areas or to intimidate neighbors. Siege warfare was not very well developed at the time. Mechanical devices called *yantras* are mentioned in accounts of sieges, and they apparently included catapults and crossbow weapons. Catapults were employed to throw flaming missiles into the forts, but their successes were limited. Crossbows were used to hurtle javelins into the forts. Mining under the walls was also used, but most forts were built on bedrock that prevented that tactic. Assaults using mobile towers were used but rarely succeeded. Elephants were also employed to push down gates when possible. The most successful siege tactics used in India were starvation and bribery.

Arab warriors apparently learned about catapults through trade with the Chinese. Known as *manjaniq*, Arab siege engines appeared in the seventh century and used similar technology. Teams of men pulling on ropes provided the power, while a shooter aimed and made adjustments as needed. Successes in sieges helped



Reconstruction of an elevated battering ram. Early medieval siege machinery built on the siege engines of the Classic Period. (Private Collection/Alinari/The Bridgeman Art Library)

make the rapid expansion of the Muslim empire possible.

Unlike other peoples, the Byzantines had full access to Roman technology. Military manuals described how to carry out sieges against fortified positions. The preferred method was to starve out the enemy, reducing the risk of friendly casualties. Mining was also considered an important siege weapon. Greek fire was used on some occasions. Few examples of Byzantine employment of catapults and other siege engines are given by contemporary writers.

During the early Middle Ages in western Europe, pitched battles between armies were relatively rare. Most conflicts took place within the vicinity of the numerous fortifications that were built during this time. To overcome these early castles, soldiers had to find ways to break down the walls and force their way inside. To a large extent, they relied upon technology that had been inherited from the Romans.

One of the earliest weapons used in sieges was the battering ram. The most primitive versions were simple tree trunks. Later peoples added improvements. By the early Middle Ages in western Europe, the battering ram could be a complex weapon. The heart was still a large wooden beam 20–100 feet long. The greater the mass of the beam, the more effect it would have

on the walls it struck. The beam was reinforced by metal bands around the body of the beam to keep it from splitting. The head of the ram was covered in iron to have a greater impact against the walls or gates it struck. Often, the metal covering resembled the head of a ram, leading to the name. The beam was suspended by ropes or chains from a framework built around the battering ram. Wheels were made for the framework, so the battering ram could be pushed up to a wall or gate. To protect the soldiers who would work the battering ram, a protective roof, or penthouse, was built over it. The penthouse had steeply sloping sides so that rocks and other heavy objects thrown from above would be deflected. To protect the battering ram from incendiary devices thrown by the defenders, the penthouse was covered with layers of leather, sand or earth, and felt. This shielding was usually kept wet by the attackers.

A variation of the battering ram was the bore. Instead of the flat or rounded head of the battering ram, the bore had a metal point that was aimed at mortar between the stones in a castle wall. Both variations were known as the tortoise because of the protective covering, the slow approach to the fortification being attacked, and the similarities between a tortoise's head poking out of its shell and the head of the battering ram emerging from under the penthouse.

Other methods of attacking and defending fortifications included various kinds of artillery. Like the battering ram's technology, these machines were inherited from the Romans. They were known by various names but generally fell into two categories. The first was a machine that fired large bolts or arrows in a flat trajectory. Known today as the ballista, this engine looked very much like a large crossbow. In reality, it consisted of two arms, each inserted into a mass of twisted ropes. The ropes provided torsion when the arms were drawn back by a strong rope. A large arrow or bolt was placed in a groove between the arms. When the arms were released, the ballista could throw a 50-pound weight up to 1,200 feet. Ballistas were usually effective against groups of soldiers and could also throw incendiary devices, which could set wooden walls on fire. They were complex machines and required considerable expertise for accurate work.

The other type of nonexplosive artillery used during the early Middle Ages was the catapult. It was often referred to as the onager, after the wild ass with a powerful kick. Europeans also referred to it as the mangonel. The mangonel had one wooden arm with a sling or a rounded bowl at one end. The other end was inserted into twisted rope or animal sinew. The rope or sinew was tightly twisted. When the arm was pulled down, the tension increased. After loading, the arm was released. It struck a wooden crossbeam when it reached the perpendicular, giving extra energy to its launch. Light mangonels could be transported from place to place, while larger versions were constructed on the spot of a siege. Ammunition for the mangonel included stones and incendiary devices. The stones could break down walls, while incendiary devices could set fire to wooden walls or buildings inside a fortification. Dead humans or animals were also thrown inside a besieged town or castle, either for psychological effect or in an attempt to spread disease. A light mangonel could hurl a stone weighing about ten pounds up to 300 feet. Larger versions had a range of up to 1,500 feet. Range was important, since weapons that were set up too close to a fortification could come under fire by archers, ballistas, or mangonels within the walls.

The artillery of the early Middle Ages required a trained crew to be effective. These men could be considered the few truly professional soldiers who served during this time. They had to be able to construct their weapons, either from pieces transported with them or from material found at the siege. They also needed to be able to calculate ranges and determine how to correct after observing misses.

—Timothy J. Watts

Bibliography

- DeVries, Kelly Robert. *Medieval Military Technology*. Peterborough, Ontario: Broadview, 1992.
- Keen, Maurice Hugh. *Medieval Warfare: A History*. New York: Oxford University Press, 1999.
- Middleton, Richard. *The Practical Guide to Man-Powered Bullets: Catapults, Crossbows, Blowguns, Bullet-Bows and Airguns*. Mechanicsburg, PA: Stackpole Books, 2005.
- Needham, Joseph, and Robin D. S. Yates. *Science and Civilisation in China*, Vol. 5, *Chemistry and*

Chemical Technology; Part VI, Military Technology: Missiles and Sieges. Cambridge: Cambridge University Press, 1994.

Nicholle, David, and Gerry Embleton. *Medieval Siege Weapons*, Vol. 1, *Western Europe, A.D. 585–1385*. Oxford, UK: Osprey, 2002.

Sandhu, Gurcharn Singh, Major General. *A Military History of Ancient India*. New Delhi: Vision Books, 2000.

Greek Fire

Greek fire was one of the most destructive yet mysterious weapons of the early Middle Ages. It had both a physical and psychological impact on its victims. Its creation and use required a level of military sophistication that was not seen again in Europe until the twentieth century.

Artwork and written records indicate that fire was used in sieges at least since the Assyrians. Early incendiary weapons included mixtures of sulfur, pitch, and charcoal that were placed against walls or thrown into fortified places. Often these missile weapons consisted of a vessel, wrapped in a burning cloth, that would break on impact. The hope was that the projectile would smash against something flammable, resulting in a general fire. These weapons were known by a variety of names such as wildfire.

Greek fire was an improvement on early inventions. It is generally accepted that Greek fire made its appearance around 673 CE. Medieval historians credit Callinicus, an architect or engineer from Heliopolis in Syria, as its inventor. Callinicus had fled from the Muslims who overran Syria. Modern historians believe that the actual inventors were alchemists in Constantinople. They received information of discoveries by alchemists in Alexandria before that city was conquered by Muslims. The formula was supplied to the Byzantine emperor and the military. The term “Greek fire” was applied by Western crusaders at a later date. The Byzantines considered themselves to be Romans and referred to it as liquid fire or marine fire.

The ingredients and exact formula for Greek fire were a closely guarded secret. It was described as a wet dark liquid. Modern historians suspect that oil or an oil product was a significant part of the formula. Alchemists in the



Twelfth-century illustration shows how Greek fire could be projected from one ship to another. It was widely feared, and once a ship was set on fire, the flames could rarely be put out. (Prado, Madrid, Spain/The Bridgeman Art Library)

eastern Mediterranean were familiar with oil and many of its properties. Writers describing Greek fire's use indicated that it floated on water, so a major component was probably a light liquid oil product. Modern theories about its ingredients include naphtha, sulfur, niter, quicklime, and phosphorus. The ingredients were apparently heated in a cauldron to create the mixture. Various histories indicate that it either ignited upon contact with water or that it was lit by a small flame when projected. Metallurgical advances by the Byzantines allowed them to create metal siphons or pumps that could project the mixture a considerable distance.

Greek fire was used primarily at sea. Ships could easily hold the large equipment necessary to use the mixture effectively. Long bronze tubes projected from the ships and carried the Greek fire toward its target. Tanks with pumps could be carried inside the ships. Because opposing ships were built of wood, they burned easily when set alight. Greek fire floated on the water, so near misses could still inflict damage on an enemy vessel. Water would not put out the fire; inflammable materials, such as sand, were the best method. These inflammable materials were not usually available at sea, so once a ship was ignited, there was little hope of saving it.

The first recorded use of Greek fire was in 678 CE. A Muslim fleet had established itself at Kyzikos in preparation for a siege of Constanti-

nople. A smaller Byzantine fleet attacked the Muslims. At first, traditional methods were unsuccessful. Then the Byzantines unleashed their Greek fire. The effect was nearly instantaneous. Those Muslim ships that were nearby were set aflame. When water could not put out the fires, the remainder of the fleet panicked. The Muslim fleet was virtually destroyed, with the estimated loss of 30,000 men. The second recorded use was in similar circumstances when a Muslim army and fleet attacked Constantinople in 717. Once again, the Byzantine ships were able to set the opposing fleet on fire, destroying their opponents and forcing them to raise the siege.

Greek fire was sometimes used on land as well. Handheld pumps, with a small supply of mixture, were carried into battle. Small flames were used at the nozzles to set the liquid on fire as it sprayed out. While useful in sieges, Greek fire was less effective in open battle, since opponents could maneuver out of the way or strike at the soldiers who carried the pump.

Because the formula was a closely guarded secret, the Byzantines used Greek fire on only a limited basis. The Muslims eventually developed their own version, but it was relatively weak and used most often on land. The secret to Greek fire was lost by the time Constantinople fell to the Muslims in 1453. Although other incendiary weapons and mixtures later appeared, none matched the original Greek fire.

—Timothy J. Watts

Bibliography

- Mayor, Adrienne. *Greek Fire, Poison Arrows, and Scorpion Bombs: Biological and Chemical Warfare in the Ancient World*. Woodstock, NY: Overlook Duckworth, 2003.
- Partington, James Riddick. *A History of Greek Fire and Gunpowder*. Cambridge, UK: W. Heffer, 1960.
- Volkman, Ernest. *Science Goes to War: The Search for the Ultimate Weapon, from Greek Fire to Star Wars*. New York: Wiley, 2002.

Early Medieval Infantry and Cavalry Weapons

The peoples of Eurasia depended on similar weapons for the infantry and cavalry during the early medieval period. Pole weapons such as

spears and lances were most common and were used by men on foot and on horseback. Swords were less common and usually indicated a social status, such as in the Indian and European armies. Bows and arrows were widely used and played a role in preparing an opponent for an assault. Technological differences were few. The best example might be the Chinese invention and widespread use of the crossbow. The specific details of other weapons depended to some extent on the formations and tactics used by the different armies.

Unlike some other regions during this time, China was ruled by strong governments that could draw on centuries of military experience. Commanders were skilled at using combined arms in battle. Uniform weapons were supplied by the governments. Cavalry was the dominant arm, but disciplined infantry formed a base for maneuver. Individual cavalymen and infantrymen were armed with long spears. At the beginning of this time, infantry pole weapons such as the *ji* included several blades for slashing or hooking opponents as well as points for thrusting. They were succeeded by simpler long spears and lances with simple heads. One reason for this evolution may have been that infantry formations became tighter to form greater obstacles to cavalry charges. Most infantry and cavalry were also armed with swords for close fighting. The *dao* became the weapon of choice. It was a single-edged slightly curved saber intended for slashing attacks. A substantial number of the infantry were armed with bows.

The standard Chinese bow was a composite reflex bow, very powerful and accurate in the hands of a trained warrior. The Chinese were also the inventors of the crossbow, which may have appeared as early as 1000 BCE. It was especially common among soldiers defending fortified positions. The crossbow had superior range and penetration compared to other bows but was hampered by the time it took to cock it. The careful integration of different types of infantry into Chinese formations reduced this disadvantage.

In India and South Asia, invaders from central Asia forced a reevaluation of traditional fighting techniques. Huns and Turks interrupted the internecine warfare that had followed traditional



Anglo-Saxon sax from the ninth century CE. With this heavy iron weapon, a warrior could chop or stab, or it could be thrown as a javelin or spear. (HIP/Art Resource)

patterns for centuries. With their emphasis on cavalry, the invaders confirmed the low level of respect in India for infantry. Most infantry consisted of peasant conscripts or lower social classes. They were poorly trained and armed and were expected to play a minor role in battle. Some infantry used longbows, but the use of compound bows was limited to the nobility. Swords were highly regarded but rare among the infantry. Most carried a long spear about ten feet long known as a *sakti*. Cavalry weapons were similar but of better quality since cavalry was composed of the nobility. Bows and arrows gained favor among the Indian nobility, especially in battles against the invading Huns. A short composite bow of horn and metal was developed for easy use on horseback. Elephants formed their own corps and were most important for their psychological impact. Soldiers mounted on elephants were armed with bows and long lances.

In the Byzantine empire, at first the army drew upon a Roman heritage but was composed of soldiers recruited by individuals. The main striking force consisted of heavy cavalry, but armored spear-bearing infantry provided a secure base for maneuver. After the reforms of the seventh century, heavy infantry was armed with a spear and short sword. Most also carried a short ax known as the *tzikourion*. It had a standard blade on one side and a spike on the other side.

The spike could penetrate any armor encountered by the Byzantines. Light infantry were armed primarily with bows and arrows along with javelins. They carried a dagger and short sword for close combat, but a lack of heavy armor discouraged their use.

The Byzantines' opponents during most of this time period were Muslim armies. At first, horses were scarce among the Arabs, and most fighting was done by infantry. They were armed with spears up to ten feet long known as the *qanab*. It had a large blade with a strong shaft. Blocks of infantry braced the butts of their spears against the ground to create defenses against charging cavalry. Infantry was also armed with short straight swords for thrusting in close combat. After 1000, Muslim craftsmen perfected the curved scimitar, which could be used in slashing attacks. Bows and arrows were common among Arab infantry, but they used simple bows that were limited in their power and penetration.

The weapons of the infantry and cavalry of the early medieval period in Europe were largely based on technology inherited from the late Roman empire. Many of the nomadic and Germanic tribes, especially those with limited contact with the Romans, had their own specialized weapons, but most could be classified as edged or pole weapons. To a large extent, cavalry used the same basic weapons as infantry, although they were modified for use from horseback. Few dramatic advances in weaponry occurred during this period.

With the breakdown of centralized Roman authority, most soldiers had to provide their own weapons. An individual's financial standing determined what weapons he used. The most common and simplest weapon was the spear, although it was known by various names. The basic spear consisted of a sharp pointed metal head on a wooden shaft. The shaft was sometimes reinforced by metal strips to make it harder to break or cut. The small amount of metal made the spear cheaper and easier to produce. Depending on the length, a spear could be thrown or used as a thrusting weapon. Spear carriers tended to stand close together, allowing them to make a dense hedge of spears to discourage cavalry. Cavalry used lances, which were similar to spears but had longer shafts.

When European peasants were called into service as infantry, they sometimes brought their farm tools. One of the most common was a fork mounted at the end of a shaft. Scythe blades and pruning hooks on shafts were also basic infantry weapons for those who could not afford anything better.

Edged weapons were more expensive. Their possession ordinarily marked a soldier as a person of means. Because sword making required hours of work by a blacksmith working layers of steel and iron together, swords took on special significance and expense. Many soldiers during the early medieval period used Roman short swords (about two feet long). They were gradually replaced in western Europe by the *spatha*, a straight two-edged blade about three feet long. Similar weapons included the *sax*, used by the Saxons, that was a long single-edged weapon similar to a machete. These weapons were used more often for slashing, as opposed to the Roman practice of stabbing.

Other edged weapons that were common during this period were battle-axes. The Franks who occupied Gaul gave their name to their throwing axes, known as the *francisca*. Viking warriors often used long-handled battle-axes. Battle-axes could often smash shields or cut through armor. They also could inflict blunt-force trauma, breaking bones and causing internal injuries. Later variations included heads with daggerlike points or spikes. These heads could be used to exploit gaps in an opponent's armor.

The bow and arrow was also used in western Europe in the early Middle Ages but was less common for a number of reasons. One was that European bows were relatively weak. Most were constructed on single pieces of flexible but strong wood, about three feet long. Near the end of the period, stronger compound bows were made by gluing pieces of horn or sinew to the wood to make it less flexible. Archers in several areas also lengthened the wooden bow, giving it greater strength and leading to the famous long-bow. Another reason for the bow's rarity was the time required to master it. Only those who were able to devote large amounts of time could use it effectively. Archers learned to use different types of arrowheads for different types of targets, including those intended to pierce ar-

mor. A skilled archer could hit targets up to 600 feet away and fire ten arrows per minute.

—Timothy J. Watts

Bibliography

- Bennet, Matthew, et al. *Fighting Techniques of the Medieval World, AD 500–AD 1500: Equipment, Combat Skills, and Tactics*. New York: St. Martin's, 2006.
- LePage, Jean-Denis G. G. *Medieval Armies and Weapons in Western Europe: An Illustrated History*. Jefferson, NC: McFarland, 2005.
- Needham, Joseph. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology; Part VI, Military Technology: Missiles and Sieges*. Cambridge: Cambridge University Press, 1994.
- Nicholson, Helen J. *Medieval Warfare: Theory and Practice of War in Europe, 300–1500*. New York: Palgrave Macmillan, 2004.
- Sandhu, Gurcharn Singh, Major General. *A Military History of Ancient India*. New Delhi: Vision Books, 2000.
- Santosuosso, Antonio. *Barbarians, Marauders, and Infidels: The Ways of Medieval Warfare*. Boulder, CO: Westview, 2004.

Early Medieval Body Armor

Body armor varied widely across the medieval world. While all armor was intended to protect its wearer, different cultures used different materials. Iron, steel, leather, and cotton were all used. Different environments and combat tactics used by the cultures determined what kinds of armor were prevalent and provided the best balance between mobility and protection.

The Chinese were among the most technologically mature users of armor during this time. The first iron armor had appeared several centuries before the Common Era. Lacquered leather armor continued to be widely used until the sixth century CE, however. Chinese craftsmen recognized that flexibility was important and developed a system of lamellar construction. Small plates, at first of leather and later of iron or steel, had small holes drilled in the corners. Leather or silk cords passed through the holes to tie the plates together. They overlapped, providing continuous protection while improving the wearer's ability to move. The individual plates and the cords were often colored, indicating to what

unit the individual belonged. Various styles of armor existed depending on the individual's duty. Most had high collars to protect the back of the neck. Cavalry armor had a flared bottom to protect the upper legs. The lower legs were protected by leather guards.

Because cavalry was the decisive arm, most infantry did not have armored suits. Their personal protection was usually limited to helmets that provided protection for the neck, sides, and cheeks, and they also had shields. Shields were normally constructed with a wooden framework with leather or lacquered cloth stretched over it. Leather shin guards completed their protection.

The importance of cavalry was emphasized by the development of horse armor in China. Heavy armored cavalry forced a decision through impact, aided by the adoption of the stirrup by the fourth century. Lamellar armor for their horses increased the cavalry's ability to deliver this attack. Separate face masks, chest and shoulder armor, neck plates, and side and rump armor gave the horses protection while allowing them much freedom of movement.

Armor development in the Indian subcontinent lagged behind that in China and remained largely static during this time period. Body armor was usually provided by individuals according to their economic status. Three types of armor were used. The best quality was *lobajalika* (chain mail), which came in full- or waist-length versions. A hood provided protection for the head. A lesser-quality armor consisted of metal breastplates known as the *lobapatta* that were held in place by leather straps. The armor most common among the poor consisted of thick quilted cloth. *Sutrakankata* consisted of multiple layers of cotton or possibly silk cloth with cotton, wool, or hair padding. It provided reasonable protection against arrows and cutting weapons. Tribesmen used as mercenaries throughout India were known for their use of animal skins, complete with hooves and horns, as body armor.

Most Indian warriors wore metal helmets by the sixth century. Others wore turbans with multiple folds of cloth for protection. Neck guards made of metal were common. Protection was also provided by individual shields. Shields were either for parrying or passive protection.



Model of a soldier that was discovered in a shrine at Ming-oi. Painted stucco, Tang dynasty. (Werner Forman/Art Resource, NY)

Parrying shields were small and were used with swords. They were usually made of metal. Larger shields were made of wood, wicker, or bamboo. They were sometimes covered with leather made from rhinoceros or elephant hides.

The Byzantine empire inherited the technology and traditions of the Roman empire. By the sixth century, however, Byzantine body armor had been influenced by innovations from the East. The decisive arm was the heavy armored cavalry, the cataphracts. They were protected at first with full-length mail coats. Later, the Byzantines adopted lamellar armor suits along with similar protection for their horses. Horses were also protected by platelike shoes to prevent spikes from hurting their hooves. Armored arm and leg guards, along with small circular shields, completed the cavalryman's protection. Armored heavy infantry wore similar lamellar armor. Many Byzantine soldiers were raised by provincial authorities, and their body armor was often less complete. Soldiers in the first and sec-

ond lines might have had full mail or lamellar armor along with steel helmets. Those whose position was in the rear, however, made do with leather or quilted cloth armor. Their head protection was limited to felt caps instead of helmets. Light infantry also wore little if any armor.

The Muslim armies that faced the Byzantines adopted similar body armor. Previously, the Arab warriors had used felt or quilted body armor. Their experiences against Byzantine heavy cavalry taught them the value of mail shirts and lamellar armor. At first, heavy infantry was considered the most important part of the Arab armies, and heavy cavalry was expected to dismount and fight as needed. Warfare against horse archers from central Asia convinced the Muslim leaders of the benefits of combining archers with heavy cavalry. Lightweight armor for horses followed. Light metal helmets also were adopted by most Muslim warriors. Shields in Muslim armies were made of wood or hardened leather.

Early medieval body armor varied widely throughout Europe. Much of it was inherited from the Roman legions, while the barbarian tribes from outside the empire brought their own. Much of the emphasis, however, was on mobility and therefore light equipment. As the centralized authority of the empire disappeared, individuals were usually forced to purchase their own armor or to do without it. The cost of such armor and the time and skill required to make it were important factors in driving up its price. Many of the peasants who served in medieval armies during crises had little or no personal armor except for a shield.

The body armor of Roman soldiers was gradually discarded during the fifth and sixth centuries. The laminated breastplate known as the *lorica* was replaced by a tunic on which overlapping scales of metal or horn were sown. More movement was possible when wearing the *squammata*, as it was called. Chain mail tunics were also introduced in this time period. Chain mail consisted of tiny interlocking rings. Called *byrnie*s, the long chain mail shirts provided effective protection against the slashing weapons most often used during this time. Short sleeves provided some protection for the arms. Cavalrymen wore similar but longer armor. Their mail shirts usually were split in front and back to make sit-

ting on a horse easier. The longer skirts also provided some protection for the upper legs. The lower legs normally had no protection other than high leather boots. By 1000 CE, most warriors had added a chain mail hood called a coif to protect their heads and necks. Plate metal reinforcements were sometimes added to the *byrnies* of the chest area. Those who could not afford chain mail often wore armor made of boiled leather.

Although some barbarians prided themselves on their lack of body armor, most warriors protected their heads with helmets. During the early period, deep Roman helmets were common. They provided protection for the neck and usually had nasal and cheek guards. Helmets were developed by barbarian tribes that were quite different. Known as *spangenhelms*, these helmets were relatively shallow and covered the tops of the heads. They were made of an iron or bronze framework with iron or horn segments. As time passed, more helmets were made in a single piece. They became more conical to better deflect blows from above. A nasal guard was added, but the remainder of the face was usually uncovered.

An individual's body armor was completed by a shield in most cases. The shield was made from a light but tough wood. Linden was the preferred type. The shield would be covered with leather, which added protection. This covering would also help hold the shield together if it was broken into pieces by a blow. A metal rim was usually fixed to the edge of the shield for greater strength. Round shields were most common, but oval shields were used by the Byzantines. Kite-shaped shields were used by Vikings and later by the Normans. The center of the shield usually had a circular cutout. On the inside, a metal handgrip allowed the soldier to hold the shield. On the outside, an iron boss or stud covered the cutout to protect the user's hand and to provide room. In some instances, the boss was pointed and could be used as a weapon.

—Timothy J. Watts

Bibliography

Bennet, Matthew, et al. *Fighting Techniques of the Medieval World, AD 500–AD 1500: Equipment, Combat Skills, and Tactics*. New York: St. Martin's, 2006.

Dien, Albert E. "A Study of Early Chinese Armor." In *Warfare in China to 1600*, edited by Peter Lorge. Burlington, VT: Ashgate, 2005.

LePage, Jean-Denis G. G. *Medieval Armies and Weapons in Western Europe: An Illustrated History*. Jefferson, NC: McFarland, 2005.

Nicholson, Helen J. *Medieval Warfare: Theory and Practice of War in Europe, 300–1500*. New York: Palgrave Macmillan, 2004.

Sandhu, Gurcharn Singh, Major General. *A Military History of Ancient India*. New Delhi: Vision Books, 2000.

Santosuosso, Antonio. *Barbarians, Marauders, and Infidels: The Ways of Medieval Warfare*. Boulder, CO: Westview, 2004.

Diffusion of Stirrups in the Afro-Eurasian Ecumene

The stirrup was one of the most important advances in societies that depended on horses for warfare and travel. The stirrup allowed riders to steady themselves and have a more secure seat on their horses. In warfare, riders with stirrups could use the momentum of the horse to increase the force of a thrust from a lance or the slash of a sword. Without stirrups, a careless rider could well end up on the ground. The stirrups helped make the horseman the dominant figure in warfare and society. During the period between the end of the western Roman empire and the crusades, the use of stirrups spread to the Middle East and into Africa. Although some traditionalists resisted their introduction, the value of stirrups eventually overcame the objections.

The first saddles had no place for a rider's feet. To mount, the rider had to leap on the horse or use a platform that let him step onto the horse's back. Early saddles also did not help secure the rider, since his feet simply dangled on either side. Riders were less effective in combat without stirrups as well. Archers were less accurate, since they could be jostled while shooting. Riders armed with lances or swords depended on the power of their arm to strike at other riders or soldiers on foot. Trying to use the horse's momentum in a charge could more often result in the rider being thrown off his horse than in increased damage to another soldier.

➤ CATAPHRACTS

The adoption of stirrups by the Byzantine Army was an important step in increasing the effectiveness of their heavy cavalry. Known as cataphracts, these disciplined professionals were already the core of the Byzantine Army, thanks to their superb equipment. The cataphract was protected from head to foot. A conical helmet protected his head and had a horsehair tuft colored to indicate to which unit an individual belonged. Flexible armor protected his body, from neck to upper legs. The armor consisted of small scales fastened to each other usually by leather or silk, which allowed considerable movement. Leather boots or metal greaves protected the cataphract's lower legs, while his hands were protected with metal gauntlets. A small round shield was attached to his left arm, leaving both hands free to control his horse or wield weapons. A chain mail curtain hung from his helmet to protect his neck and face. Even the cataphract's horse was armored, with scale armor protecting the head and front body and legs. A separate piece of armor might protect the rear of the horse. Weapons used by the cataphract included a powerful short composite bow, a lance, and a long sword. A battle-ax and dagger were also carried. Although the cataphract was trained to use all these weapons, they were wielded more effectively after the stirrup gave him more stability as well as the ability to stand up in the saddle and deliver a powerful downward blow.

—Timothy J. Watts

The forerunners to stirrups were toe loops attached to the saddle. Depictions of these devices appeared in India during the second century BCE. Their effect was limited, and they could have been dangerous to a rider who was thrown. Also, the toe loop was only practical in warm climates.

The first practical stirrups date to the fourth century of the Common Era in northern China. They appear to have been invented by the Chinese and spread to the nomadic tribes that ranged through this area. The stirrups spread westward as the tribes migrated toward Europe. The exact date of their arrival in Europe is unclear, but stirrups were unknown to the Huns who arrived in the fourth and fifth centuries. A

hundred years later, the Avars migrated from the east and brought the stirrup with them.

The Avars were enemies of the Byzantines, and their mounted archers were particularly effective against the Byzantine Army. During the wars against the Avars in south-central Europe, Byzantine observers realized that stirrups gave their archers greater stability, especially when their horses were moving. Gradually, they copied the Avars and attached stirrups to their saddles. The use of stirrups was described in the *Strategikon*, a treatise on military science probably written in the early seventh century.

Archaeological evidence indicates that early Byzantine stirrups were very similar to modern ones. They consisted of metal (usually iron or bronze) rings, with a relatively flat bottom on which the rider could rest his foot. The bottom was often reinforced with a metal rib to allow a rider to stand in the stirrups without breaking through. A metal extension at the top of the ring had a slot for a leather strap that attached the stirrup to the saddle. The adoption of the stirrup furthered the development of the armored cavalryman as the core of the Byzantine Army. Although armored lancers had been in use earlier, the stirrup increased their effectiveness. Wearing lamellar armor for greater mobility and flexibility, these armored horsemen were known to the Byzantines as *cataphracts*. They were highly trained professional soldiers, able to use a lance or a bow equally well. The stirrup allowed them greater stability, and it also permitted them to brace themselves when making a charge or fighting in a melee. A cataphract could hold his lance tightly and use the horse's momentum to deliver a powerful thrust against an enemy without fearing that he would fall off. More prosaically, stirrups made it easier for heavily armored men to get on and off their horses, especially in the field.

The Byzantines' rivals to the east were the Sassanid Persians. They had a long tradition of powerful armored cavalry units armed with lances in their armies, similar to the cataphracts in the Byzantine Army. The Sassanid cavalry apparently learned about the stirrup from battles against the Turks, to their north. The stirrup's introduction among the Persians appears to have been later than that of the Byzantines, and some art produced just before the Arab conquest

failed to show stirrups being used by riders. Use of the stirrup by the Sassanid Persians was never as widespread as among the Byzantines.

The rivalry between the Byzantines and the Sassanids was upset by Arab invasions during the seventh century. Beginning in 633, Arab raiders began to penetrate both empires' territories. Under Muhammad, the Arab infantry became more disciplined than previously and was the most important part of the Arab armies. Arab cavalry combined mobility and firepower to disrupt its opponents on the battlefield but was especially useful for reconnaissance and pursuit. At first, Arab cavalry played only a limited role. Experience against the armored cataphracts eventually convinced Arab leaders that they needed similar units. The capture of the Persian empire by 650 gave them the resources to accomplish this.

Although Arab warriors quickly learned about stirrups, cultural factors prevented their widespread adoption for some time. Arab poets, such as al-Jahiz, derided the stirrup as leading to warriors becoming effeminate. Traditionally, Arab riders mounted their horses by leaping from the ground over the back or the side. Using the stirrup as an aid was believed to be unmanly. As Muslim cavalry became more and more armored toward the end of the seventh century, stirrups became undeniable necessities for riders. Arab craftsmen modified their stirrups to include more of a platform to support the entire foot instead of a relatively simple ring. Sometimes the inside edges were also sharpened, allowing them to serve as spurs.

Beginning in 639, Arab armies invaded Egypt and moved westward across North Africa. The

region had been a center of horse breeding and mounted warfare for centuries, and the Arabs brought their use of the stirrup with them. Local peoples, such as the Berbers, had been exposed to Byzantine use of stirrups but seem to have adopted them only after the Muslim conquest. By the time Spain was invaded in 711, use of stirrups seems to have been the norm for riders in North Africa.

Stirrups were adopted in western Europe in the eighth century. When the Carolingian ruler of the Franks, Charles Martel, met an Arab army at the Battle of Tours, the Frankish army consisted mainly of heavily armored infantry, while the Arab army was largely lightly armored cavalry, riding with stirrups. Although the Arabs lost the battle, the Franks were so impressed with the Arab cavalry that they swiftly raised their own stirrup-equipped cavalry. In a very short time, stirrup-using cavalry dominated West European combat. The introduction of stirrups in western Europe is said to have led to the rise of knighthood, chivalry, and feudalism.

The spread of stirrups to sub-Saharan Africa did not follow for centuries because of the limited use of horses in those regions.

—Timothy J. Watts

Bibliography

- Bivar, A. D. H. "Cavalry Equipment and Tactics on the Euphrates Frontier." *Dumbarton Oaks Papers* (1972): 273–291.
- Gabriel, Richard A. *Muhammad: Islam's First Great General*. Norman: University of Oklahoma Press, 2007.
- Lev, Yaacov. *War and Society in the Eastern Mediterranean, 7th–15th Centuries*. New York: E. J. Brill, 1997.

■ Introduction: Mathematics and Astronomy in the Early Medieval Age

In the early medieval age, by a remarkable coincidence, India and the Mayas were at the forefront in developing mathematical concepts. In both areas, scholars developed the concept of zero as a placeholder and as a number.

Some historians speculate that the Indians developed the concept far beyond the proto zero sometimes suggested by Greek mathematicians because of the Buddhist theologian's idea of the void, the nothingness that results when

the devotee detaches himself from desire. Among the Maya also, the zero concept may have derived from a sort of religious mysticism, as the Maya sign for zero was a veiled eye, a potent symbol.

From the fifth through the eighth centuries, India experienced a flowering of scientific achievements in mathematics and astronomy. Indian astronomers anticipated Copernicus's heliocentric theory by about 1,000 years, calculated the size of the earth, and correctly plotted the movements of many heavenly bodies.

The Arabs learned the Hellenistic mathematics of the Mediterranean together with that of the Indians and after the ninth century further developed the discipline of algebra. Indeed, the word "algebra" derives from Arabic roots. Other important developments in Indian math were improvements in trigonometry and algebra. Two of India's unique gifts to the world were the decimal numbering system, with its notation in Arabic numbers, and the Fibonacci sequence (a natural numerical sequence found in many natural phenomena, from the spiral of leaves on a twig to the double helix of DNA strands) originally developed by the Indian mathematician Virahanka in the sixth century but introduced to Europe by Leonardo of Pisa (Fibonacci) in the twelfth century. After the twelfth century, Indian and Arab achievements in mathematics and astronomy were available, in Latin translations, to the Europeans, but that fact did not trigger a flowering of European mathematics and astronomy until the European Renaissance.

The Chinese had their own sophisticated tradition of mathematical and astronomic investigation, and even though they were aware of Indian achievements in these fields, they were not greatly influenced by them. It was not until the fourteenth century that Arabic astronomy began to impact China.

—Wilfred J. Bisson

Mayan Astronomy

Astronomy was extremely important to the Maya. Their view of the universe conceived of the heavens, the earth, and the underworld as parts of an integrated system. Human activities needed to follow certain patterns if the harmoni-

ous relationship was to continue. Astronomy told the Maya about the seasons and about when certain rituals should be performed and even predicted disasters and upheavals. Mayan astronomy was passed along to the civilizations that followed, including the Aztecs.

The Maya believed that the sun, the moon, planets, and other celestial bodies represented various gods. They carefully monitored their movements across the sky. Each type of body was believed to reside in its own layer of the 13 levels of the heavens. Human sacrifices and prayers were necessary to strengthen the gods, such as the sun and the moon, as they journeyed each day. In return, the gods brought gifts to the earth such as rain.

Mayan priest-astronomers studied the skies and recorded their observations. They recognized that most heavenly bodies changed their track across the sky on a daily basis. Mayan astronomers were most interested in where the heavenly bodies rose and set on the horizon on different dates. Thanks to their proficiency in mathematics, Mayan astronomers developed two accurate calendars. The first was a ritual calendar with 13 months of 20 days each. This calendar was apparently based on the cycles of the moon. The second calendar was a solar one and had 365 days. The Maya realized that the two calendars would have the same starting date every 52 years. This ending of this cycle was viewed as a time of great change and uncertainty. Later civilizations in Mesoamerica adopted the Mayan calendars.

The Mayan astronomers also paid great attention to tracking other heavenly bodies. The moon was seen as the representation of a female deity. They understood that eclipses involved the sun and the moon and developed mathematical tables to predict eclipses. Because eclipses were seen as significant events that might presage disaster, these tables allowed the priests to prepare people in advance. Because observations were recorded over centuries, at least from 300 CE onward, correction sheets were included with tables of observation.

Venus held a particular interest for the Maya since it was connected with the god Quetzalcoatl. They recognized that Venus rose in the morning during part of the year and in the eve-



The Mayan calendar was quite accurate, thanks to their extensive observation of the moon's positions. Mayans saw time as being organized into multiple cycles. (Corel)

ning at other times. Its rising in the morning was considered a time of bad luck, so most Maya stayed inside during that time.

The Pleiades star cluster was viewed as the center of the stars. When it appeared in the mornings, the Maya knew that planting season had appeared. Other constellations indicated the time of year by the times in which they appeared or disappeared over the horizon.

Astronomy had an important effect on Maya civilization as a whole. Rulers were anxious to be seen as having a connection with the heavens. They claimed descent from the gods. Representations of rulers usually included bands of stars and other heavenly bodies. Battles and wars were fought according to the fortuitous positions of planets such as Venus. The appearance of comets, known as stars that smoke, was seen as a warning of the death of an important person.

Mayan buildings and cities were arranged according to the heavens. For example, the main street in the city of Teotihuacan was aligned on the spot on the horizon where the Pleiades would arise. Specific buildings were sometimes oriented so that they could be used for observations. Another building at Monte Alban was built in the shape of an arrow around 300 CE. Five of the brightest stars at that time set in line with the point of the arrow. The steps of the building were in line with where the star Capella arose near the time when the sun reached its zenith over the city. Other buildings had narrow windows aligned with the points at which the sun

would set on the summer and winter solstices. Other openings were set so that the sun would light up the interior of rooms on specific dates, such as the spring and fall equinoxes. Zenith tubes were dug in the earth so that the passage of the sun overhead would light up the bottom of the structure.

—Timothy J. Watts

Bibliography

- Aveni, Anthony F. *Stairways to the Stars: Skywatching in Three Great Ancient Cultures*. New York: Wiley, 1997.
- Sharer, Robert J., and Sylvanus Griswold Morley. *The Ancient Maya*. Stanford, CA: Stanford University Press, 1994.
- Teresi, Dick. *Lost Discoveries: The Ancient Roots of Modern Science, from the Babylonians to the Maya*. New York: Simon and Schuster, 2002.

Chinese Astronomy and Astrology

In the early medieval age and indeed until much later, most Chinese savants, like their Muslim and European counterparts, did not differentiate between astronomy and astrology. In Chinese astronomy, the basic supposition was that all events and occurrences, terrestrial and celestial, could be explained by discovering the fundamental regularities pervading the cosmos.

The Chinese believed that the motions in the heavens were signs by which the intentions of the universe were indicated to the emperor as veiled instructions. It was incumbent on the ruler to demonstrate his legitimacy by conforming to the order of the universe. It was the obligation of emperors to conduct the imperial rituals in conformity with the instructions encoded in celestial events.

For this reason astronomy and astrology, the study of the heavens, were an important governmental function as well as a jealously guarded state monopoly. All dynasties supervised astronomers very closely and, as part of their governing apparatus, maintained an astronomy agency whose head, the imperial astronomer, was a high-ranking and highly remunerated official. Each succeeding Chinese dynasty, to strengthen its claim to legitimacy, felt it necessary to reform the calendar by "correcting the beginnings of

years and months.” Calendar reform, in all dynasties, was the main function of the Imperial Astronomical Bureau.

The great Western historian of Chinese science, Joseph Needham, claimed that Chinese astronomers “were the most persistent and accurate observers of celestial phenomena anywhere in the world before the Arabs.” The Chinese excelled in observational astronomy, though they were not as likely as their Indian and Western counterparts to use these observations in constructing cosmological theories and models.

Premodern Chinese approaches to the heavens and asterisms have no clear-cut analogues to the Western distinction between astronomy and astrology: the term *tianwen* (“patterns of heaven/nature”) comes closest (heaven in its original sense of heavenly bodies, etc.). Nevertheless, scholars of Chinese science and astronomy argue for interpreting the ideograph *li* (modern Chinese for “almanac,” “calendar,” “diary”) as astronomy (conventionally, the study of the composition and physics of space); they take *tianwen* as analogous to astrology (conventionally, the interpretation and application of astronomy to life on earth). Given the current Western stance toward astrology in the general situation of knowledge (vs. entertainment), the student of Chinese culture may consider all of these as seriously as they would modern astronomy.

Ideas of heaven/nature and its patterns are inextricably tied to Chinese science, cosmology, politics, philosophy, and ritual. The Chinese devised some of the earliest and most accurate methods for predicting the paths of heavenly bodies, developing highly sophisticated time-keeping systems and applying these to calendrical arts. Records of observations of heavenly bodies appear well before 1000 BCE in China. Attention to astrophysical movements, especially deviations in regularity, interpreted as portents, was driven by the belief in heaven, or *tian*, as sentient and expressive of human action. Tian was all knowing and all powerful. As such, it determined when human governance was corrupt and retaliated accordingly by visiting upon humans destructive or inauspicious circumstances. Similarly, auspicious omens expressed approval of human rule. This concept of tian formed the basis of the principle of *tianming*, or the Heav-

enly Mandate, that gave human subjects tacit permission to overthrow morally corrupt rule. The desire to use heaven in determining the proper course of human action drove the Chinese to develop continuously more refined systems of predicting heavenly regularities and especially irregularities. For example, the oldest known system of Chinese divination reads cracks resulting from the application of heat to a prepared oxen scapula bone or tortoise shell (scapulimancy and plastronomy, respectively). These oracle bones record the rudiments of the stem-branch calendrical system. Later, diviners discerned heaven's will (not to be confused with Christian notions of heaven) by constructing combinations of six lines using numbers generated by manipulating yarrow stalks. Rituals developed around these prognostications for most major undertakings: initiating war, the birth of royal progeny, choosing new rulers, and so forth.

Tianwen were the source of civilization, a belief originating in the *Book of Change* (*Yijing*), a revered manual of divination and governance: the mythical sage-ruler Fu Xi looked up and saw the patterns of heaven, looked down and observed the markings of nature, and then modeled human affairs on both. This moment initiated Chinese civilization. The belief in heaven as the source of all power was developed and refined through the millennia of Chinese history. Theories of cosmology with heaven as the source of life and power-giving forces—*yin-yang* (shadow and light, basic complementary life forces), *qi* (universal essence); five phases (phases of change and composition; fire, water, earth, metal, wood)—and the way they could be tapped by humans developed along with philosophical theories of the reciprocal moral resonances between heaven, earth, and human (*ganying*). Some incipient form of all of these likely developed before the imperial era began in 220 BCE. These ideas, along with the Mandate of Heaven, would endure as fundamental ideas throughout imperial China (220 BCE–1911 CE), at least.

By the third century CE, the imperial system of governance, already highly bureaucratized, designated one of its highest offices to the grand astronomer, the head of a bureau of variously ranked experts who specialized in reading and interpreting the heavens and observing and pre-

dicting eclipses, comets, meteor showers, sunspot activity, and other astrological anomalies. This office also generated calendars, a new system of timekeeping usually formally issued with each new reigning emperor. Such experts also generated the Tianwen chapter of the official history for the previous dynasty. This chapter described the constellations, their locations, and astrological anomalies: it took position at the beginning of the official history, attesting to its importance to imperial rule. Originally the grand astrologer headed the entire history-writing project for the dynasty, Sima Qian (145–ca. 85 BCE) being the first and most famous of these.

Competing theories of cosmology—the universe and how it was constructed—became increasingly synthetic through history and deeply influenced Chinese philosophy. The developments of the Tang (618–907) and Song (960–1279) dynasties stand out as a watershed in changing cosmic views. The first change revolves around the idea of *xiang* (constellation, image, symbol, simulacrum, doppelganger, other-identity). In the transition from the Tang to the Song, the conceptualization of *xiang* and its place in cosmology and philosophy deepened. Song philosopher Zhou Dunyi (1017–1073) visually described cosmological forces—the relationship of *yin-yang* to *qi*—shown in the now well-recognized *taiji* diagram. Important changes accompanied his theories: the idea of *xiang* as constellation descended from the heavens and into the human realm as images and symbolizations. These heavenly related images (*xiang*) manifest in concrete things: clouds, certain birds (cranes, for instance, as depicted in Song emperor Huizong's [r. 1100–1125] famous painting *Cranes over Kaifeng*), anomalous animals (traditionally auspicious or inauspicious omens), weather patterns, and so forth. Therefore, earthly phenomena contained and embodied some aspect of heavenly constellations. Polymath Shao Yong (1011–1077) further refined the nature of cosmic forces, developing a theory of four orders of reality—*li* (patterns, principle), *shu* ([heavenly] regularities and also number, category, emblem), *xiang* (images, symbolizations; “constellations” of the Tang), and *wu* (concrete things)—that ultimately connected concrete things (*wu*) to heavenly principles and patterns

(*li*). This vastly expanded the potential for human manipulation of the heavens, and many systems for expressing and taking advantage of the power of heaven through *xiang*, as simulacra, developed.

Given this kind of power, applications to many fields developed: medicine and alchemy, through meditation techniques and treatments that internalized and correlated cosmic models with the organs and various biological systems of the human body; art, especially painting (the Song is particularly known for the era during which painting became an acceptable elite practice); calendrical science; changed concepts of deities and asterisms in Buddhism, Daoism, and popular religion; and military techniques. Because of the geopolitical situation during the Northern Song dynasty (960–1125) at least, the court actively sought experts in the latter field. Cosmography rituals—especially those used exclusively by the military—exploited the gaps in calendrical time and maneuvered *xiang* as simulacrum of heaven to concentrate and direct power. In this system, the Chinese calendar system played a role. The Chinese use a sexagenary time cycle—that is, a 60-year cycle—tracked by means of using Ten Heavenly Stems correlated with Twelve Earthly Branches but nevertheless yielding a 60-year (six decades) rather than a 120-year cycle. The Stem and Branch system was also used, either individually or jointly, to track hours, days, weeks, and months. Each individual therefore has “eight characters” (*bazi*), used today in some Chinese communities to determine dates for christenings, weddings, breaking ground for building, and so forth. Cosmography rituals took advantage of the unused branches—there were two in each decade—and through applying a rather complicated set of operations using a compasslike device called a cosmograph jumped time or space, conjured weather, fogged the enemy, etc., useful indeed for troops surrounded by the enemy.

—M. A. Butler

Bibliography

Harley, J. B., David Woodward, Joseph E. Schwartzberg, and Cordell D. K. Yee. *History of Cartography*, Vol. 2, Book 2, *Cartography in the Traditional East and Southeast Asian Societies*. Chicago: University of Chicago Press, 1994.

- Needham, Joseph, and Wang Ling. *Science and Civilization in China*, Vol. 3. London: Cambridge University Press, 1959.
- Pankenier, David W. "Popular Astrology and Border Affairs in Early Imperial China." *Sino-Platonic Papers* 104 (July 2000). www.sino-platonic.org.
- Schafer, Edward H. *Pacing the Void*. Berkeley: University of California Press, 1977.
- Sivin, Nathan. *Granting the Seasons*. New York: Springer Science + Business Media, 2009.
- Sun Xiaochun and Jacob Kistemaker. *The Chinese Sky during the Han*. Leiden: Brill, 1997.
- Xu, Zhentao, David W. Pankenier, and Yaotiao Jiang. *East Asian Archaeoastronomy*. Netherlands: Gordon and Breach Science Publishers, 2000.

Early Medieval Indian Astronomy and Astrology

The achievements of Indian astronomers and astrologers in the early medieval period are truly fascinating and have proved to be of considerable importance in the subsequent development of mathematics. With references to astronomy in Indian sources dating back to as early as 2000 BCE in the Rig-Veda, the early medieval astronomers and astrologers of the subcontinent were the product of a rich ancient tradition that flourished after the conquest of Alexander the Great in the fourth century BCE. After this time a number of Indian astronomers based their calculations

on Greek epicycle theory. It was from this heritage that India became a center of astronomical and mathematical excellence between 300 and 1000 CE.

By the sixth century CE astronomy had developed into an integral part of Indian society, due in large part to the work of Aryabhata I (476–550 CE). Heavily influenced by Jaina mathematics, Aryabhata's work was the catalyst for new developments in Indian astronomy and mathematics. In his magnum opus, *Aryabhatiya* (498 CE), he proposed a heliocentric model of the universe. He used a mathematical system to suggest that the earth spins on its axis and that the planets follow an elliptical orbit around the sun. He stated that the light from the moon and the planets was reflected by the sun's rays.

Aryabhata is the first known astronomer on the Asian continent to have used a continuous system of counting solar days, and he made an accurate approximation of the earth's circumference and diameter. He also correctly deduced the instantaneous motion of the moon and established numerical and geometric rules for eclipse calculations. Aryabhata's calculations of the sidereal rotation of the earth and its rotations in comparison to lunar orbits are precise and very similar to today's values.

His astronomical calculations were also reliable for fixing the Panchanga (Hindu calendar), thus showing the integration with Hindu cosmology. Whereas *Aryabhatiya* mainly influenced southern Indians, Aryabhata's second work, *Aryabhatasiddhanta*, greatly influenced northwestern India and has been mentioned by various scholars. It is also known to have had some influence on Sassanian and Islamic astronomy.

In the sixth century CE the school of mathematics at the ancient city of Ujjain came to prominence due to the work of astrologer Varahamihira (505–587 CE). In *Pancasiddhantika* (575 CE) he brought together the five systems of astronomy existing in this period: Suryasiddhanta, Romakasiddhanta, Paulisasiddhanta, Vasishtasiddhanta, and Paitamahasiddhanta. Also based in Ujjain, the astronomer and mathematician Brahmagupta (598–668 CE) defined zero as the result of subtracting a number from itself and was the earliest astronomer to use algebra to solve astronomical problems. He also developed methods for calculations

➤ ASTRONOMICAL EDUCATION IN INDIA

Between 300 to 1000 CE, the educational system in India did not offer proper training for those specializing in astronomy, astrology, and mathematics. Disciplines such as astronomy and mathematics developed autonomously, separate from the development of other areas of knowledge, and as a result most people interested in these subjects were family educated. Each family would have a library where they would then pass on their knowledge and skills to future generations. As the main part of study involved learning the work of previous generations including, for example, Aryabhatiya, astronomers would often write commentaries on previous astronomers' work and also on their own work.

—Polly Basak

lating the motion and location of various planets, conjunctions, and eclipses and the values of sines.

During the first half of the seventh century the Indian mathematician Bhaskara I (600–680 CE) prospered in Saurashtra, where he led the Asmaka school. He completed three papers on the works of Aryabhata: the *Mahabbhaskariya*, the *Laghubhaskariya*, and the *Aryabhatiyabhasya*. In all his works Bhaskara I expanded on the complicated and aphoristic style of Aryabhata's astronomy and added various examples and references including detailed mathematical procedures. He estimated the trigonometric sine function by means of a rational fraction and produced accurate and clear results. It is thought that Bhaskara I was the first to write numbers in the Hindu-Arabic decimal system, where he used a circle depicting zero.

The next major advancements in Indian astronomy were made in the ninth century by the mathematician Govindasvamin (800–860 CE) who wrote *Bhasya* (830 CE), a commentary on the *Mahabbhaskariya* of Bhaskara I. *Bhasya* included a place-value Sanskrit system and construction of a sine table. Govindasvamin calculated fractional parts of Aryabhata's tabular sine differences and in doing so produced more accurate results. Three of Govindasvamin's works, *Govindakrti* on astronomy, *Govindapaddhati* on astrology, and *Ganitamukha* on mathematics, are known only from references and quotations by later writers including Sankaranarayana (869 AD) and Udayadivakara (1073 AD).

The ninth century also saw mathematical progress from Mahavira, Prthudakasvami, Sankara, and Sridhara in terms of developing sine tables, solving equations, and indeterminate equations. Aryabhata II and Vijayanandi excelled in the tenth century by adding to the understanding of sine tables and trigonometry, but it was not until the twelfth century that Bhaskara II provided a unique and summarized study of astronomy and mathematics for that time. His work on calculus, astronomy, and the number of systems marked the culmination of a rich period in Indian astronomy that would not be equaled anywhere in the world for several centuries. By the time Nicolaus Copernicus printed his *De revolutionibus orbium coelestium* in 1543, Latin translations of Aryabhata's *Aryabhatiya*

had been available for more than two centuries (and Arabic translations since the eighth century), so it is almost certain that Copernicus' ideas were influenced by Aryabhata's work.

—Polly Basak

Bibliography

- Balachandra Rao, S. *Indian Astronomy: An Introduction*. Hyderabad: University Press (India), 2000.
- Balachandra Rao, S. *Indian Mathematics and Astronomy*. Bangalore: Jnana Deep, 1998.
- Flood, Gavin D. *The Blackwell Companion to Hinduism*. Oxford, UK: Blackwell, 2003.
- Pingree, David. "Indian Astronomy." *Proceedings of the American Philosophical Society* 122(6) (December 1978): 261–364.

Early Muslim Astrology

As with so many of the intellectual pursuits that attracted Arabic scholars, Arabic astrology devolved from Greek philosophy though with a healthy leavening of Indian influences. Excited by the intellectual achievements of the Indians, either Ibrahim al-Fazari or his son Muhammad translated the *Sindhind*, which was itself based upon Alexandrian Greek learning. This text immediately catalyzed interest in the celestial sciences, but as a theoretical treatise on astronomy and mathematics it offered little practical application. For this reason, scholars soon applied themselves to a translation of Ptolemy's *Almagest*. Arabic scholars found themselves drawn to this work because their interest in Greek learning was directed primarily at the practical arts rather than the purely theoretical or aesthetic. The *Almagest* coupled with Euclid's *Elements*—another text translated in the ninth century—provided the basis for applied predictive astronomy, or what would come to be known as astrology.

Despite this broadly held utilitarian approach among Arabic intellectuals, religious officials soon directed their ire at astrology. This is typified by the anonymous charge directed at the ninth-century astrological authority, Abu' Ma'shar, that he had "studied astrology until he became an atheist." The primary reason for this opposition was the concern that a system of knowledge promising to predict the future

► ALBUMASAR

Abu Ma' shar Ja'far bin Muhammad al-Balkhi, known to the West as Albumasar, was the most important scholar of astrology in the Arabic East. He was born in Khurasan in 787 and died in Iraq in 886, and his reputation was never as high in his homeland as it would become in the Latin West. He saw astrology as the preeminent form of natural philosophy, with fields such as medicine simply applying its principles in a narrowly utilitarian fashion. Promoting this view in compendia of astrological axioms intended as practical manuals, these became standard for practicing astrologers in both Muslim and Christian lands.

—Scott Hendrix

would negate man's free will. Before the rise of the Asharite school of theology in the tenth and eleventh centuries, Muslim theologians generally considered free will to be an axiom of their faith. Even with the peak of Asharite influence, seen in the work of the eleventh-century Sufi al-Ghazālī, the idea that the stars might mediate God's influence was distasteful to many religious scholars.

Nonetheless, interest in astrology remained high. The sophisticated intellectuals of the Arabic world found its model of a universe of inter-related bodies interacting with one another in a thoroughly logical and predictable fashion to be eminently appealing. Furthermore, political elites found the promise of astrological guidance to be too attractive to pass up, and soon astrologers could be found at almost every court. Most famously, the caliph al-Mansur planned the laying of the first stone for the city of Baghdad in 762 around the casting of an astrological election, meant to determine the most propitious time for an action, by the Persian Jew Masha'allah.

These early scholars did not greatly differentiate between astrology and astronomy because their Greek sources presented the two as components of a single science. But opponents of the predictive aspect of this science provoked a creative institutional response in the eleventh century. Soon mosques began hiring men skilled in astronomy to fill the new position of *muwaqqit*, or time keeper, in order to maintain the calendar. However, any association with predic-

tive astrology would represent a bar to this position and its guaranteed income.

Soon, beyond a lucky few with secular positions, astrologers were pushed into the streets. Eventually this led to a division in the science once known as *'ilm al-nujum*, or the science of the stars, into *'ilm 'abkam al-nujum* (the science of the decrees of the stars—astrology) and *'ilm al-hay'a* (the science of the [heavenly] configurations). This split, based on religious and social pressures in the Arabic world, would have enormous impact, as the component parts of Ptolemy's astronomical science would eventually be transferred as separate bodies of knowledge to European scholars in the Middle Ages.

This conceptual distinction fundamentally altered the way in which scholars understood the heavens. Buttressed by Abu Ma'shar's ninth-century philosophical justifications for predictive astrology within a monotheistic culture and the mathematical developments of his near contemporary Thabit ibn Qurrah, astrology persisted as a discipline in the Arabic world well into the modern era, influential in many courts though ever suspected in mosques. It was this celestial science—seen as related to but not conjoined with astronomy—that would be passed to the West beginning in the twelfth century.

—Scott Hendrix

Bibliography

- Daniels, Norman. *Islam and the West: The Making of an Image*. Edinburgh, UK: Edinburgh University Press, 1962.
- Makdisi, George. *The Rise of Humanism in Classical Islam and the Christian West, with Special Reference to Scholasticism*. Edinburgh, UK: Edinburgh University Press, 1990.
- Saliba, George. *A History of Arabic Astronomy: Planetary Theories during the Golden Age of Islam*. New York: New York University Press, 1994.

Islamic Astronomy to 1000 CE

Early Islamic astronomy, although often the product of Persians, Syrians, and astronomers of other ethnicities, is known as Arabic astronomy, as Arabic was the lingua franca used by Muslim scholars. From the eighth to the fourteenth centuries CE, Arabic astronomy was the most ad-

vanced in the world, only rivaled (perhaps) by that of the Mayas before the collapse of their civilization in the ninth century.

Arabic astronomy grew out of a synthesis of Hellenistic Greco-Roman astronomical lore, Persian astronomical tables, and Indian astronomy, all of which are indebted to Babylonian astronomers of the first millennium BCE. Important immediate sources of Arabic astronomy were three works: Ptolemy's *Almagest*, a Greco-Roman compendium of Babylonian, Persian, and Greek astronomical tables; Bhramagupta's *Surya Siddhanta*, a compendium of Indian astronomy (written in 628 and translated from Sanskrit into Arabic [777] as *Zij al-Sindhind*); and the *Zij al-Shab*, Persian astronomical tables compiled during the Sassanian era.

The first pressing impetus for astronomical research was religious: the Muslims conducted their holy year according to a lunar calendar based on the sighting of the crescent new moon. Because of the vast expanse of the Muslim conquests, the Muslims needed a system of predicting the appearance of the crescent new moon so that the calendar would be uniform throughout the Muslim dominions. Eventually, Muslim astronomers discovered a system of prediction by using the sine function of spherical trigonometry developed by the Indians rather than the more cumbersome geometric chord system advocated by the Ptolemaic *Almagest*.

Another religious stimulus was the need to know the direction of the Holy City of Mecca, the focus of Muslim prayer. In the far-flung Islamic empire, determining the direction (the *qibla*) in which Muslims should pray became a problem that occupied the interest of many Arabic astronomers. One solution of these Arabic scientists employed an instrument similar to a sundial. At the two days in the year when the sun is directly overhead in Mecca, a shadow will point in the direction exactly opposite from that of Mecca in any place where the sun is shining. This system works only in the half of the globe that shares daylight with Mecca.

Starting in the mid-eighth century, a great flowering of Arabic astronomy took place. Abbasid caliph al-Mamun (r. 813–833) supported the acquisition of scientific knowledge, especially the translation of scientific works from

Greek, Persian, and Sanskrit, by establishing the *Bayt al-Hikma*, said to have been a translation bureau as well as a research center. It is said that on one occasion he refused to sign a peace treaty with the Byzantine empire until the Byzantines delivered to him a copy of Ptolemy's *Almagest*. Al-Mamun is also said to have sponsored astronomical campaigns near Baghdad to determine the length of a degree of latitude. In the tenth century, several Muslim rulers as well as a number of wealthy private individuals established observatories to determine latitude and to study the stars and planets.

The achievements of Arabic astronomy are considerable. Many of the English words dealing with astronomy, such as "azimuth" and "zenith," derive from Arabic.

Arabic astronomers devised or improved many astronomical instruments, such as the armillary sphere, the astrolabe, and the celestial globe. Muslim astronomers, like the Indians and Greeks before them, calculated the circumference of the earth with some accuracy. And some Arabic scientists, such as Jafar ibn Muhammad Abu Mashar, devised a sun-centered theory of planetary motion (as had some Indian savants before him), thus anticipating Copernicus by more than half a millennium. However, most Arabic astronomers, like their European counterparts, clung to the Ptolemaic geocentric model of planetary motion.

A roll call of the great Arabic astronomers would include many who were also accomplished in mathematics, geography, history, medicine, and alchemy.

Al Khwarizimi (ca. 830) was one of the early synthesizers of Hellenistic and Indian scientific traditions with his work *Zij al Sindb*. Al Farghani (ca. 850) discussed Ptolemy's *Almagest* but revised some of Ptolemy's calculations. Also in the ninth century, Abi Mansur subjected Ptolemy's work to careful tests and modified them considerably in *Al Zij al Mumtaban*. The tenth century witnessed a large amount of astronomical observation and description. Al Sufi wrote about the Andromeda Galaxy and the Magellanic Cloud. Ibn Yunis did important work on the description of the sun and the prediction of eclipses. And al Khujandi correctly calculated the tilt of the earth's axis.

From the eleventh to the fourteenth centuries, Arabic astronomy experienced its golden age. Arabic astronomy influenced Indian and Chinese astronomy; in Europe it laid the groundwork for a great upsurge of astronomical achievement after the fourteenth century.

—Wilfred J. Bisson

Bibliography

Huff, Toby. *The Rise of Early Modern Science: Islam, China and the West*. Cambridge: Cambridge University Press, 2003.

Saliba, George. *A History of Arabic Astronomy: Planetary Theories during the Golden Age of Islam*. New York: New York University Press, 1994.

India's Golden Age of Mathematics

During the period 300–1000 CE, India was central to the development and diffusion of mathematical learning. Indian mathematics, which had ancient underpinnings in Vedic and later Jainist thought and likely cross-fertilization from Greek, Mesopotamian, and Chinese learning, underwent its own renaissance in the Classical Period. During the Gupta dynasty (320–550) in northern India, trade, the arts, and learning flourished. Toward the end of this longer period in the eighth century CE, the Muslim world, through conquest and trade, was first introduced to Indian mathematics, including the notation system since termed “Arabic numerals” and adapted it as the universal standard. A flourishing of Indian mathematics developed with the career of the astronomer Aryabhata the Elder (ca. 476–499) and the subsequent astronomers Varahamihira (ca. 505–587) and Bhaskara (ca. 600). Other key figures in Indian math in the latter half of the first millennium include Brahmagupta (b. 598), Mahavira (ca. 850), Sridhara (ca. 900), and Aryabhata II (tenth century). The culmination of this tradition was Bhaskara (ca. 1104) from Mysore who headed the astronomical observatory in Ujjain.

The study of mathematics in India was closely related to religion and cosmology. In ancient India, the study of math was related to the construction of precise altars in wealthy homes and temples. The *sulvasutras* that codified such

information date to as early as 800 to 500 BCE and provided numerous geometric principles. In order to describe vast stretches of time related to Hindu cosmology, that is the four *yugas* that can refer to cycles of years as large as 1.728 million and total only one-thousandth of the larger time cycle known as a *kalpa*, such texts as the *Upanishads* meditatively explored very large numbers and their theory. During the Gupta dynasty, there was a revival of Sanskrit thought and interest in the astronomical texts known as the *siddhantas*. Mathematical study closely dovetailed with astronomical observations and interest in astrology and methods for accurately casting horoscopes.

The works of astronomer Aryabhata I, who lived in the Gupta capital of Pataliputra, were enormously influential. Aryabhata systemized the thought to be found in the *siddhantas* or astronomical texts of earlier centuries. Arguably, much of the mathematical thought presented in the *siddhantas* came to India by way of Greece. One surviving example, the *Surya Siddhantas* (“System of the Sun”) of circa 400 CE and attributed to Surya, the Sun god, presented its theories of astronomy in verse and included mathematical notation that employed ciphers to represent ten numerals. Published at the end of the fourth century, Aryabhata’s central work, the *Aryabhatiya*, also was written in verse and employed a system of 33 letters to represent numbers, in base ten. Drawing from *siddhantas* such as the *Surya Siddhanta* and the *Paulita Siddhanta*, it was divided into sections named *Ganita* (arithmetic), *Kala Kriya*, and *Gola* (both of which treated astronomy, particularly the position of the planets and related calculations). The *Aryabhatiya* included rules for arithmetic and trigonometry, a table of sines, a calculation of pi of 3.1416, algebraic methods for solving quadratic equations, and an analysis of simple indeterminate equations (with one or more unknowns, generating answers in sets).

Mathematical thought continued to flourish with the work of subsequent Indian astronomers such as Varahamihira and Brahmagupta. Varahamihira’s *Pancasiddhantika* (*Five Astronomical Canons*) served as a guide for casting horoscopes based on astronomical calculations; this work included references to the use of the con-

cept of zero and principles of trigonometry. Brahmagupta's *Brahma Sphuta Siddhanta* (*Opening of the Universe*) included the chapter "Kuttaka," or the "pulverizer" (algebra), that elaborated on Aryabhata and included further methods for solving indeterminate equations.

The origins of the concept, notation, and nomenclature of zero are debatable. In Mesopotamia, the Sumerians early on developed cuneiform symbols that the Babylonians later adopted into a place-value system that eventually included an additional cuneiform symbol to indicate a lack of a number in a place value. This was a long process of adaptation, but it was certainly in common use by the eighth century BCE. Although sometimes credited with hatching the zero, Greek geometers did not rely on a system that clearly demarcated place value or zero; however, Greek astronomers of the Hellenistic era did (the concept almost certainly transmitted following Alexander's campaigns in the Near East), and the symbol for zero can be found in Ptolemy's *Almagest*. The zero was independently invented among the Maya as well in about the fourth century CE. The zero surfaced again in India, and by the time of Brahmagupta, in the seventh century CE, the symbol for zero, or *sunya* ("void"), was in use along with place-value specific notation. Some have attributed its adoption to his works, although its pedigree in India may well have stretched back several centuries. And it was from India that the concept dispersed to Arabic learning (where it was called *ifr* ["nothing"]) and later European thought (*zefiro* in Italian).

By the time of Brahmagupta, Indian astronomy and mathematics had gained high regard; translations of Indian works on mathematics and astronomy into Chinese began in about 600 CE, which is also when Indian astronomers were invited to teach in Chang'an in China. Indian mathematics also had a strong impact to its west. The Syrian scholar Severus Sebokht (fl. 660) described with appreciation the accomplishments of Hindu learning and its number system. By the last centuries of the first millennium, while mathematics continued to flourish in India, the center of such thought shifted to Muslim world thinkers such as al-Fazari the Elder, who served at the Abbasid court in Baghdad of Caliph Harun al-Rashid, and al-Khwarizmi, who joined the

WORD PROBLEMS IN BHASKARACHARYA'S *LILAVATI*

Bhaskara II (b. 1114), also called Bhaskaracharya, was a mathematician and astronomer in Ujjain, India, and the author of numerous works that were translated and made available interregionally. Centuries later, for example, the *Lilavati*, from which the word problem below is excerpted, was translated into Persian for the Mughal ruler Akbar. As this colorfully worded selection indicates, mathematical word problems not only have a lengthy pedigree but also take on the flavors of the cultures that produce them. The solution requires calculations involving square roots (the answer, by the way, is 72):

"From a swarm of bees, a number equal to the square root of half the total number of bees flew out to the lotus flowers. Soon after, $\frac{8}{9}$ of the total swarm went to the same place. A male bee enticed by the fragrance of the lotus flew into it. But when it was inside the night fell, the lotus closed and the bee was caught inside. To its buzz, its consort responded anxiously from outside. O my beloved! How many bees are there in the swarm?"

—Fred Nadis

Source

George Gheverghese Joseph, *The Crest of the Peacock* (Princeton, NJ: Princeton University Press, 2000), 274.

academy established by the later caliph al-Mamun (r. 813–833). Among his accomplishments, al-Fazari is said to have translated in 773 a set of Sanskrit astronomical tables into Arabic that introduced the Hindu numerals. Al-Khwarizmi in 825 wrote a short treatise explaining the value of the Hindu numeral system that was later translated into Latin. Such thinkers were able to synthesize and elaborate upon works from India and Greece as well as Latin and Byzantine sources.

—Fred Nadis

Bibliography

- Boyer, Carl B. *A History of Mathematics*. 2nd ed. New York: Wiley and Sons, 1989.
- Joseph, George Gheverghese. *The Crest of the Peacock: Non-European Roots of Mathematics*.

1991; reprint, Princeton, NJ: Princeton University Press, 2000.

Kaplan, Robert. *The Nothing That Is: A Natural History of Zero*. New York and Oxford: Oxford University Press, 1999.

Kokomoor, F. W. "The Status of Mathematics in India and Arabia during the 'Dark Ages' of Europe." In *From Five Fingers to Infinity*, edited by Frank J. Swetz. Chicago: Open Court Press, 1994.

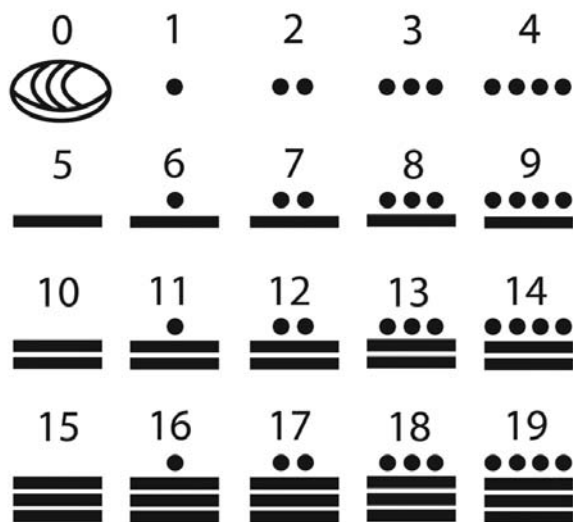
Restivo, Sal. *Mathematics in Society and History*. New York: Springer, 2002.

Smith, David Eugene. *History of Mathematics*, Vol 2. 1925; reprint, Toronto: General Publishing Company, 1953.

Thurston, Hugh. *Early Astronomy*. New York: Springer Verlag, 1994.

Early Medieval Mesoamerican Mathematics

The peoples of Mesoamerica developed sophisticated mathematical systems prior to contact with the Europeans. Their system was based upon 20, with different symbols representing multiples of 20. Mathematics played a key role in the creation of calendars and the tracking of celestial bodies



Mayan numbers consisted of three different symbols: a shell (representing zero), a dot (one), and a line (five). Numbers greater than 20 were represented by symbols placed above the symbols representing "ones," just as numbers greater than 10 are represented by symbols placed to the left of the "ones" in Western mathematics. Although odd-looking by modern Western standards, the system worked very well.

by the Maya and the Aztecs as well as in the building of their cities. Native American mathematicians also developed the concept of zero sometime around the year 300 CE before it made its appearance in European mathematics.

The Maya are generally credited with inventing a system of mathematics that was used throughout Mesoamerica before the Spanish conquest. Unlike the European system, which was based on 10, the Mayan system was based upon 20. It probably originated because both fingers and toes were used for counting. The Mayan system was used by later civilizations, such as the Aztecs. Subsets of 5 were used as well. In the Mayan language, words for numbers larger than 5, such as 6, could be translated as "5 plus 1." A single dot represented 1, while a bar represented 5. Three bars and 4 dots represented 19, and a symbol resembling a flag indicated 20. Symbols representing larger numbers were based on powers of 20. Twenty squared, or 400, was indicated by a feather. A glyph of a bag of copal incense represented 20 to the third power, or 8,000. Mayan mathematicians also developed a system of anthropomorphic figures to represent some numbers as well as nonnumerical symbols to give numbers more aesthetic appeal.

One of the greatest inventions of Mesoamerican mathematicians was the development of the concept of zero. Zero made its appearance in Mesoamerica before the Hindi or Muslim scholars developed it. Mayan monuments dated to 665 CE use symbols for zero. Earlier inscriptions, from at least 357 CE, appear to use the concept as well. Coincidentally, mathematicians in India were using zero as a number and as a place holder by 500 CE.

Mayan mathematicians also developed the use of positional notation in their numbers. Unlike Arabic numbers, which use a left to right arrangement, Mesoamerican mathematicians used a vertical arrangement. The location of a symbol for a number in the stack determined what the actual value of the number was, that is, ones, tens, hundreds, etc.

A sophisticated numerical system allowed the medieval Mesoamericans to gain a more secure grasp of their world. One of the most famous uses of mathematics was the development of accurate calendars. Two separate calendars

were in use, both based on the base 20 mathematical system. One was a ritual calendar of 260 days consisting of 13 months of 20 days each. Modern scholars point out that 260 days is the average length of time that humans are carried in their mother's uterus. The second was a year of 365 days, divided into 18 20-day months with 5 extra days at the end. The Mayans in particular accurately calculated the length of a year and the time of the moon's cycles. Mathematics made accurate observations of the objects in the heavens possible along with accurate predictions of their future movements. Thanks to observations and mathematics, Mayans were able to predict the times in which eclipses might occur, making it possible to prepare the population for those unsettling events.

Mathematics was also used in the organizing of society, ensuring accurate taxation and recording of landholdings. A common measurement called the *quahuil* was used throughout Mesoamerica. It measured approximately 8.2 feet (2.5 meters). Tax rolls were compiled by the authorities to indicate what was expected of different communities. The sizes of different agricultural plots were spelled out on the rolls, indicating the square number of *quahuil* that each included. Lists of tribute expected from subject communities have also survived, indicating the numbers and types of items that were to be supplied to the central government.

Archaeological evidence indicates that medieval Mesoamericans used geometry in construction. Elements such as right angles, symmetry in site layout, and the use of other regular angles all indicate that geometric principles were known to Mesoamerican architects. Even the basic view of the world by the Maya was based on geometric concepts. They believed in harmonizing with the four cardinal directions of north, east, south, and west and used right angles that followed these directions in constructing their cities.

—Timothy J. Watts

Bibliography

- Closs, Michael P. *Native American Mathematics*. Austin: University of Texas Press, 1986.
- Montgomery, Roger. *Twenty Count: Secret Mathematical System of the Aztec/Maya*. Santa Fe, NM: Bear, 1995.

Phillips, Charles, and David M. Jones. *The Illustrated Encyclopedia of Aztec & Maya: The History, Legend, Myth and Culture of the Ancient Native Peoples of Mexico and Central America*. Lanham, MD: National Book Network, 2004.

Teresi, Dick. *Lost Discoveries: The Ancient Roots of Modern Science—From the Babylonians to the Maya*. New York: Simon and Schuster, 2002.

Mathematics in the Muslim World to the Year 1000 CE

The Muslims emerged from Arabia in 636 CE with nearly no high culture of their own, including mathematical knowledge. In light of that deficiency, the zenith reached by mathematicians in the medieval Islamic world is nothing short of amazing, as they introduced to the Mediterranean world fundamental changes including a new arithmetical notation and developed new methods of solving mathematical problems.

The mathematical sciences (*‘ilm al-‘adad*) in the Muslim world developed primarily as an extension and expansion of Greek and Indian mathematics. The Hellenistic tradition had delineated four mathematical sciences—arithmetic, geometry, music, and astronomy—and Islamic scholars excelled in each of these sciences. The major accomplishment of mathematics scholars was bringing together different elements from Greek, Persian, and Indian roots and then combining these ideas into a more sophisticated science. This accomplishment was made possible by the translation in Abbasid Baghdad of Greek mathematical works such as Euclid's *The Elements*, Archimedes's *On the Sphere and the Cylinder*, and even commentaries upon these works, such as Eutocius's *Commentaries on "The Sphere and the Cylinder."* Such works were collected in libraries throughout the ninth century CE and were discussed in scholarly symposia known as *majlis*.

While there were some earlier scholars in the field, the most famous of all was Abu Jafar Muhammad ibn Musa al-Khwarizmi, who is remembered as the founder of algebra and as the man who introduced the Indo-Arabic numbers to the Islamic world. He wrote for the Abbasid caliph al-Mamun (813–833 CE) and was an active member of that circle of translators and scholars in ninth-century Baghdad, sometimes referred to

as the Bayt al-hikma (House of Wisdom). Al-Khwarizmi wrote his most famous text, *Handbook for Calculation by Completing and Calancing* (in Arabic, *Kitab al-mukhtasar fi hisab al-jabr wa'l-muqabala*), to fulfill a request of the caliph for practical works on this science. The book demonstrates two main processes for solving equations. While he may have found both methods in Diophantus's *Arithmetic* and probably derived some of his terminology from Indian mathematical practice, it was al-Khwarizmi who brought these elements together. Theoretically, he shows that equations can be reduced to one of six standard forms. The remainder of the book deals with the practical applications to problems of inheritance, trade, legacies, and various kinds of geometrical problems. Confusing and ironic as it may be, al-Khwarizmi did not use any kind of numerical symbols or algebraic notation; all problems were discussed in words. This work became the foundational text of algebra even within his lifetime. The Ikwan al-Safa' (tenth century CE) in their encyclopedic *Letters (Rasa'il)* use *al-jabriyyun* as the term for the scholars who know this subject.

Equally important, al-Khwarizmi wrote a small work titled *Calculation with Hindu Numerals*. Before his time, Muslims had used an alphabetical number system, as the Greeks had. Like the *Algebra*, this was the first work of its kind in Arabic treating the Hindu numbers including zero and place-value notation. It teaches the use of the numerals, the basic arithmetic operations, fractions, and the extraction of square

roots. Perhaps because it was such an elementary text, this work was initially of limited consequence in the Arabic-speaking world, and the Arabic original has not survived.

Scholars who came after al-Khwarizmi continued to advance the science, taking up problems that the Greeks had left unsolved. Ibn al-Baghdadi (first half of the tenth century CE) discussed the theory of irrational numbers, a conceptual advance beyond Greek knowledge. Abu Kamil Shuja (ca. 850–956 CE) solved systems of equations in up to five unknowns. Ibn al-Haythan solved fourth- and fifth-degree equations, even lending his name to one particularly vexing solution, the so-called problem of Alhazen. It was the contribution of the great Umar Khayyam (ca. 1038–1123 CE) to summarize and systematize the development of algebra up to his time by establishing standard terminology and categorizing the solutions to classes of equations.

The importance of Arabic mathematics is seen in the development of the contemporary sciences of astronomy and geometry. Calculations were made simpler by the use of Arabic numbers, especially zero, and recording of data was greatly improved by reducing confusion inherent in an alphabetical notation system. This development was seminal in world history.

—Michael C. Weber

Bibliography

- Ifrah, Georges. *The Universal History of Numbers*. New York: Wiley, 2000.
- Roshdi, Rashid. *The Development of Arabic Mathematics*. Dordrecht and Boston: Kluwer, 1994.

■ Introduction: Early Medieval History and Geography

The Chinese wrote the best histories in the early medieval age. Each succeeding Chinese dynasty regarded the writing of history as a political, cultural, and religious duty and appointed official historians whose task was to write the history of the preceding dynasty. This practice produced an unbroken stream of history writing, but it sometimes produced very

biased histories. For example, the historians of the Tang dynasty who were charged with compiling the history of the Sui, in order to justify the Tang takeover, left posterity with the view of the two Sui sovereigns as two monstrous tyrants. By the middle of the Tang dynasty, history began to be seen as not just a genre of literature but also as a special discipline with its own goals and

rules. Liu Chih-chi (Wade-Giles) published the world's first study of historiography (ca. 700 CE). At the end of this era, Sima Kuang (1018–1086) produced a second historiographical study of China's histories.

Many modern historians charge that the civilization of India was not oriented to history and that the Indians had little sense of history, particularly of precise chronology. The Puranas, which historians sometimes use as sources, were largely published in the Gupta Age but were mostly composed for oral transmission centuries before. Much of the material in the Puranas is probably based on facts, but it is so mixed with mythology that it creates great difficulties for the modern historian. Again, the chronology in the Puranas is, at best, very confusing and often lacking. Consequently, modern historians of early medieval India must rely heavily on Greek, Persian, Chinese, and Arabic accounts. In the early medieval age, the accounts of the Chinese Buddhist pilgrims to India, Faxian (334–420), Xuanzang (596–664), and Yijing (635–713), were often more informative than Indian sources. There are some exceptions including biographies of some important rulers, such as the seventh-century *Harshacharita* (*Biography of Harsha*) by Banabhatta.

The Byzantines had the benefit of the Roman and Hellenistic tradition of history writing, and they continued the tradition throughout the early medieval age. Byzantine historians focused on ecclesiastical history (indeed, many of their works are titled simply *Ecclesiastical History*), but they also usually compounded political history with that of the church. While the writing of history in Byzantium was not a government enterprise as it was in China, many individuals saw it as their duty to write the history of their age, building on the histories written by those who went before them. The most notable of these historians were the fourth-century Eusebius of Caesarea, whose *Ecclesiastical History* chronicles the triumph of Christianity in the Roman empire, and Procopius, who wrote about the reign of Justinian I and whose *Secret History* has blackened the reputation of that ruler for succeeding generations.

West European historians, like their Byzantine counterparts, were concerned with writing about saints' lives as didactic tools for the young. Nevertheless, some early medieval European his-

torians, such as the sixth-century Gregory of Tours (*History of the Franks*) and the ninth-century Venerable Bede (*Ecclesiastical History of the English People*) wrote valuable accounts of their nations.

Muslim historians were very good at writing about the history of the Islamic world, but they were less interested in pre-Islamic history, the period they referred to as the Age of Ignorance. Beginning in the eighth century CE, a growing stream of history writing by Islamic scholars appeared. Ibn Ishaq's *Life of God's Messenger* (*Sirat Rasul Allah*), published about 730 CE, was the first written biography of the Prophet Muhammad. This work was followed by a spate of works on the early history of Islam, concentrating especially on the early conquests. While in the early Muslim centuries Islamic historians were primarily concerned with telling the story of the triumph of Islam and the growth of the Muslim umma (community) in a world of nonbelievers, this disdain for non-Islamic history gave way to the developing interest, toward the latter years of the first millennium CE, in Firdusi's *Shahnameh* (*History of the Pre-Islamic Persian Kings*) and with the works of al-Biruni on India. Muslim historians were scrupulous in questioning their sources and in reporting what they regarded as fact, eschewing mythology.

Because of the vast expanse of the Islamic world and of the extensive trade carried on by Arabic merchants, Arabic geographers were the most informed in the world in the medieval age. This particular advance and development of geography was also due to the obligation of all Muslims, if they were able, to make a pilgrimage to Mecca. Muslim travel writers described much of the Eastern Hemisphere, from the West African Sudan to Korea.

Most peoples knew neither the shape nor size of the earth, although Hellenistic Greeks, the scientists of India, and Muslim astronomers accurately calculated this. Both the Chinese as well as the Muslims made maps by using longitude and latitude.

The Chinese were equally good as geographers as were the Muslims, but their field of interest was much more circumscribed. They just did not have the practical need for geographical knowledge that the Muslims did.

Besides the Muslims and the Chinese, the rest of the earth's peoples were ignorant of the geography of most of the earth. A partial exception must be made of the Eastern Polynesians, but their knowledge of the vast seascape of the Eastern Pacific, though astonishing, still included only a portion of the earth's surface, and it had the disadvantage of being transmitted by oral tradition, not written down. For the West Europeans, the horizons of their world were very constricted. However, their imaginations were fed by tales of fabulous voyages into the fearsome western ocean, tales that arose from the embellishment of reports of St. Brendan's sixth-century voyage into the North Atlantic.

—Wilfred J. Bisson

Early Muslim Geography

The Muslim study of geography was driven by the rapid conquest of vast territories, the religious need to determine the direction of Mecca for daily prayers, and the necessity of geographic knowledge in order to make the pilgrimage to Mecca (hajj) required of all Muslims capable of it. In addition to the requirement for geographical knowledge for governing the swiftly growing Islamic caliphate, the reinvigoration of old and extension of new trade routes, both by land and by sea, resulted in a veritable explosion of geographical knowledge.

A scant century after the emergence of Islam in Arabia, Muslims ruled territories stretching from Spain to India and from the Sahara Desert to the Siberian forests. Muslim merchants sailed the Mediterranean Sea, and they dominated the Indian Ocean. Their trading colonies settled in coastal towns from the west coast of India to Madagascar and the Swahili coast of East Africa. Thousands of Muslim merchants resided in the South China port of Canton; Muslim traders were settling in towns such as Kumbi Saleh in the West African savannah south of the Sahara Desert. The geographers and mapmakers of the Muslim world responded by organizing and ordering the resulting influx of geographic information.

Caliph al-Mamun (r. 813–833) commissioned a number of mapmakers to organize this wealth of geographical information, anticipating, in this

respect, the role of the fifteenth-century Portuguese statesman Henry the Navigator. Geographers employed by al-Mamun calculated the circumference of the earth at nearly the value arrived at by modern science. Musa al-Khwarizmi was the most outstanding geographer employed by the caliph. Al-Khwarizmi's great work, *Book on the Appearance of the Earth*, included much of the newly discovered geographic knowledge and corrected many of the mistakes in the work of Ptolemy, the great Hellenistic geographer.

Other great early Islamic mapmakers include Istakri, a Persian who in about 850 synthesized, in his *General Survey of Roads and Kingdoms*, most of the newly discovered geographic knowledge. He is said to have been the first Muslim to include Korea in his maps. Another great mapmaker, the early-tenth-century Persian al-Balkhi, started a tradition of extensive mapping that resulted in the production of world atlases. Ibn-Hawqal, who revised and extended Istakri's work, was a great tenth-century traveler as well as a geographical writer. His travels took him to most parts of the Muslim world, from Spain to the Upper Volga, and his great work, *The Face of the Earth*, is still consulted by scholars, especially for its descriptions of the Caucasus, pre-Christian Kiev, the Volga Bulgars, and Khazaria.

The culminating scientific achievement of early Muslim geography came at the end of the Era of Expanding Regional Civilizations in the early eleventh century with the work of al-Biruni. Al-Biruni, a Persian polymath who excelled in many fields, is known as the Father of Geodesy, the scientific measurement of the earth. For the earth's measurement, he used astronomy and spherical trigonometry and described the earth's surface by using a grid of latitudes and longitudes. In his famous work *The Chronology of the Ancient Nations*, he discussed human geography, agricultural systems, customs, and the like.

Thus, great strides in the accumulation of geographic knowledge and its scientific interpretation were made by early Islamic geographers.

—Wilfred J. Bisson

Bibliography

Alavi, S. M. Ziauddin. *Arab Geography in the Ninth and Tenth Centuries*. Aligarh, India: Aligarh University Press, 1965.

Rosenthal, Franz. *The Classical Heritage of Islam*. London: Routledge, 1994.

Early Muslim History Writing

Islamic history was transmitted primarily by oral reciters until the latter part of the eighth century, almost a century and a half after the time of Muhammad. In the first centuries, Muslim historians did not concern themselves with pre-Islamic history, referring to that period as the “days of ignorance” (*jahalia*) and not worth studying. For them important history started with Muhammad, but the memory of Muhammad’s time was preserved only by word of mouth until Ibn Ishaq (704–761 CE) compiled, from oral sources, the first authoritative biography of Muhammad.

Likewise, the hadith, or traditions attributed to the Prophet, which are used in determining proper Islamic behavior as well as in legal judgments, were, until the ninth century, preserved by oral transmission. In the ninth century, authoritative collections of hadith were made, the most important of which were those of al-Bukhari and al-Muslim. In determining which hadiths were authentic, the hadith collectors developed a system of criticizing sources that has become the hallmark of the historical method. Basically, the hadith collectors demanded an *isnad* chain, a list of successive reporters going back to the source, who should be eyewitnesses of the event. For a credible hadith, an *isnad* chain should go back to Muhammad. Any or all of the reporters in the chain would then be examined for validity.

The writing of Islamic history is thought to have started with Ibn Munabbih when he published, in the early eighth century, *The Beginning (al-Mubtada)*. Although this is not considered reliable by later Muslim historians, it had a great influence on the field. The biography of Muhammad by Ibn Ishaq, which came out at about the same time, was said by the early-ninth-century historian Ibn Hisham to be definitive. Ibn Hisham, who is perhaps the best extant source on Muhammad (Ibn Ishaq’s biography of the Prophet survives only in renditions in Ibn Hisham’s work) was typical of the earliest Muslim historians, who concentrated on biographies of the Prophet and descriptions of his battles.

The next genre of Islamic history was that of collective biographies of early Muslim heroes and shaykhs: the Companions of the Prophet. Ibn Saad was outstanding among this group of historians, and his work, *The Great Book of Classes (Kitab al-tabaqat al-Kabir)*, includes over 4,000 biographies, of which 600 are of women.

Narrative histories describing events as well as individuals appeared in the ninth century. Eminent among these are Al-Baladhuri’s works *Kitab Futuh al-Buldan* and *Kitab ansab al-asbaf*. These are histories of the Islamic world from before Muhammad until the mid-eighth century. They are a chronological political narrative but also discuss society, trade and agriculture, ethnic groups, and the like.

The tenth-century Arab historian and geographer al-Masudi, sometimes referred to as the “Herodotus of the Arabs,” traveled through much of the Islamic world and wrote books on world history. The book that made his reputation as a major historian, *The Meadows of Gold and the Mines of Gems (Maruj adh-dhahab wa maadin al-jawahir)*, is al-Masudi’s own abridgement of his 30-volume work, *The History of Time (Akhbar az-zaman)*, which was a comprehensive history of the known world.

The writing of history by Muslim historians reached an apogee with the early-tenth-century Persian al-Tabari. Al-Tabari, writing in Arabic, produced important works of theology and Quranic exegesis as well as history. His major historical work is *History of the Prophets and Kings (Tarikh al-Rusul wa al-Muluk)*, better known in English as the *Annals of Tabari*. This was a universal history from the beginning of the world as depicted in the Quran to 915 CE. It is noted for its attention to detail and its rigorous assessment of sources. Modern historians consider it a reliable primary source for events of the ninth and early tenth centuries. Many scholars rate al-Tabari as the greatest Muslim historian before the fifteenth-century Ibn Khaldun.

—Wilfred J. Bisson

Bibliography

- Donner, Fred. *Narratives of Islamic Origins: The Beginnings of Islamic Historical Writing*. Princeton, NJ: Darwin Press, 1998.
- Rosenthal, Franz. *The Classical Heritage of Islam*. London: Routledge, 1994.

East Asian Historical and Geographical Writing

Few other peoples were as historically minded as the Chinese. From a very early time, the compiling of history was seen as a fundamental task, and in this period Chinese governments took an increasing role in commissioning official historians or historical bureaus. The Han dynasty works Sima Qian's *Shiji* (*Historical Records*) and Ban Gu's *Han shu* (*History of the [Former] Han*) provided the model for all subsequent documentation of history. Succeeding dynasties recorded the history of their predecessors in standard histories. The *History of the Later Han* (*Hou Han shu*) by Fan Ye (398–445) represents the first such work, consisting of large sections copied from the *Han shu* and earlier (now lost) works on the Later Han. However, genuine innovation was not seen until the Tang dynasty. The Tang also provided the majority of historical work that survived from the period 300–1000 CE and oversaw an unprecedented bureaucratization in historical writing.

Most surviving histories covering the period from the fall of the Han to the Tang dynasty were produced by Tang scholars. At least 20 pre-Tang histories of the Jin dynasty were produced, but all were lost after Tang versions superseded them. Some were substantial works, such as Cang Rongxu's (415–488) *Jin shu* (*History of the Jin*), composed of 110 chapters. Surviving pre-Tang works include the *History of Song* (*Song shu*) by Shen Yue (441–513), officially commissioned by the king of Southern Qi, and the *History of Southern Qi* (*Nan Qi shu*), written by a relative of the king, Xiao Zixian (489–537). The *History of Wei* (*Wei shu*) was produced by a “research cluster” headed by Wei Shou (506–572). In their close connection to the ruling dynasty and given the group effort put into the *Wei shu*, these works anticipated future trends.

In 629 the Tang emperor Taizong established the Bureau of Historiography (*Shi Guan*). This department included scholars such as Wei Zheng (580–643) and Yan Shigu (581–645), who were assigned to produce historical works (presented to the throne from 636). The *History of Sui* (*Sui shu*) shows indications of political considerations in this period when the regime was anx-

ious to legitimize its rule (and blacken that of the Sui dynasty ruler Yang-di). Treatises were only included later, in 656. In addition to political concerns, the production team was also hampered by the loss of the Sui imperial library. Some works were lost during fighting in Luoyang, but most works were lost in 622 when boats transporting them to Chang'an capsized. Other commissioned works included the *History of Chen* (*Chen shu*), the *History of Liang* (*Liang shu*), the *History of the Northern Zhou* (*Zhou shu*), and the *History of Jin* (*Jin shu*).

The inevitable result of the bureaucratization of historiography was to standardize the works and eliminate the scope for literary expression. This can be advantageous for the modern historian, since it exaggerated the tendency toward the cut-and-paste technique, thus preserving source materials with less editorial interference. Efforts toward bureaucratization also systematized imperial record keeping with the compilation of Court Diaries and Administrative Records, to be written into *Veritable Records* (*Shi lu*) of an emperor's reign.

Government projects did not preclude private endeavors. Li Yanshou (fl. 618–676) produced two major works, the *History of the Southern Dynasties* (*Nan shi*) and the *History of the Northern Dynasties* (*Bei shi*). The impossibility of direct competition with the Bureau of Historiography may have provided an impetus for others to innovate. Liu Zhiji (661–721) published the *Comprehensive History* (*Shi Tong*) in 710, a work of historiographical criticism that broke from the constraints of dynastic history and traced issues to their ancient origins. His son Liu Zhi published a political encyclopedia called *Governmental Statutes* (*Zhengdian*) in 740 that in turn served as the model for the *Comprehensive Statutes* (*Tongdian*) by Du You (735–812). The *Tongdian* became the first of what are now called the *Ten Encyclopaedic Histories of Institutions* (*Shitong*). The topical divisions included economics, the examination system, the governmental system, rites, music, the military, law, administrative geography, and border defense.

Historiography after the Tang dynasty includes among its landmarks the *Old Standard History of the Tang* (*Jiu Tang shu*), which was written by Liu Xu (887–946), and the history of

the post-Tang age by Xue Juzheng (912–981) in the *Old Standard History of the Five Dynasties* (*Jiu Wudaishi*). Many of the best records for Tang and post-Tang chaos were produced during the Song dynasty after 1000 CE. The *Comprehensive Mirror on Human History* (*Zizhi tongjian*) by Sima Guang (1019–1086) used many lost sources and is thus also an invaluable resource for the study of pre-Song historiography.

From the Later Han dynasty, history had been classified as one of four branches of literature (*sibu*, identified by the color white in Tang imperial libraries), while geography (*dili*), along with annals, biographies, etc., was categorized as one of the subbranches of history. Standard works on geography included the *Shiji*'s memoirs on foreign peoples and lands as well as the *Han shu*'s chapter on administrative geography. These contained the data useful for officials, such as population figures and distance between places. Although various works specifically on geography were produced from the Han dynasty onward, few survive. It is only from the Song dynasty onward that a wealth of national and local gazetteers becomes available. The oldest surviving major geographical work is the *Gazetteer of the World during the Taiping Xingguo Reign Period* [976–983] (*Taiping huanyu ji*) by Yue Shi (930–1007), based largely on Tang dynasty sources. Travel writings, such as those by Li Ao (772–841), also provide geographical information.

The new East Asian states such as Silla (Korea) and Japan, which modeled their governments on that of Tang, also viewed history as a state responsibility. Their histories were on the model of Chinese dynastic histories, and they were written in Chinese characters. Japan produced its first historical works during the Nara period in the eighth century. The *Records of Ancient Matters* (*Kojiki*) and the *History of Japan* (*Nihon Shoki*) were both commissioned by the government and attempted to rationalize and synthesize traditional tales and myths. They were designed to create a respectable history in response to Tang dynasty influences. The *Records of Wind and Earth* (*Fudoki*), produced by provincial officials, described local conditions and traditions. Other regions of Asia did not produce works that can be properly classed as history or geography until after the eleventh

FROM BAMBOO STRIPS TO PAGINATED PAPER—THE EVOLUTION OF CHINESE BOOKMAKING

In the Han dynasty almost all documents were written on bamboo or wood strips. A knife for cutting and scraping them was as much a part of scholar's equipment as brush and ink. Even a modest-sized document would have been too heavy to lift, and a major work could fill a room. The strips were bound by string and if detached could easily get out of order. Silk was an alternative, but it was too expensive for regular use. Paper was already known but only became common in the third and fourth centuries CE, and the state of Chu was the first to institutionalize the use of paper when Emperor Huan Xuan decreed that it should be used instead of bamboo in 404 CE. Paper scrolls were lighter, but it was still inconvenient to consult different parts of a lengthy document. In the ninth century, scrolls were folded and stored flat and were attached at front and back to a single large sheet so that they could be opened concertina-like. Color coding in imperial libraries (white for history), previously done with strips of silk, was now replaced with different-colored covers. This form evolved into books with stitched binding by the thirteenth century.

—Jonathan Bruce Markley

century, such as Korea's *Historical Record of the Three Kingdoms* (*Samguk Sagi*) compiled by Kim Pusik in the twelfth century.

—Jonathan Bruce Markley

Bibliography

- Holzman, Donald, ed. *Chinese Literature in Transition from Antiquity to the Middle Ages*. Variorum Collected Studies, Vol. 605. Aldershot, UK: Ashgate, 1998.
- Leslie, Donald, Colin Mackerras, and Wang Gungwu. *Essays on the Sources for Chinese History*. Canberra: Australian National University Press, 1973.
- McMullen, David. *State and Scholars in Tang China*. Cambridge: Cambridge University Press, 1988.
- Twitchett, Denis C. *The Writing of Official History under the Tang*. Cambridge: Cambridge University Press, 1992.
- Wilkinson, Endymion. *Chinese History: A Manual*. Rev. ed. Cambridge, MA: Harvard-Yenching Institute, 2000.

Legends and Myths of Chinese Exploration

Chinese accounts of distant lands, in the same way as their Western counterparts, often included legends and myths. European sailors spoke of mythical islands in the Atlantic Ocean, and medieval cartographers placed imaginary

► THE CHINESE DISCOVERY OF AMERICA— THE VOYAGE OF FU SANG

Who was the first nonindigenous American to reach the Americas? Was it the Italian, Columbus? Or the Norse, Leif Erickson? Or perhaps the Chinese, Hui Shen?

An old Chinese legend speaks of a land called Fu Sang on the far side of the eastern ocean. One account states that a Buddhist monk named Hui Shen traveled in the fifth century CE to this land. This story is more than 1,000 years old, and various writers have claimed or denied that the place discussed in the tale is, in fact, America. The name “Fu Sang” appears on early Asian maps, with the mapmakers using information from the legend. In the legend itself, of course, the details are too vague to make any kind of positive identification. Because of the resilience of this legend, however, Fu Sang actually appears on the North American continent in some eighteenth-century European maps.

The story of Hui Shen is found in several Chinese accounts dating back to the seventh century CE. In these accounts several places are mentioned, and although none are readily identifiable, some have speculated that Hui Shen reached Mexico. The accounts tell us that Hui Shen and some companions headed east from China, across the seas, until they reached a coastline. They then traveled inland, exploring this new territory. They met various peoples, some of whom were fairly ordinary and some of whom were rather fantastic (for instance, men with dog-shaped heads). The group traveled farther, encountering a culture that had a written language and a form of government. Some have speculated that according to various Chinese texts, Hui Shen returned to China at the end of the fifth century CE and recounted his travels to the imperial court. The identity of the places he and his companions reached remains a mystery.

—Benjamin B. Olshin

peoples in the distant lands beyond the known world. In a similar way, the Chinese had their accounts of mythical kingdoms and people in the far reaches of the globe. Some traditions, in fact, are shared by both Eastern and Western sources. The Chinese in the Tang dynasty spoke of “kingdoms of women,” while the Greek historian Herodotus discussed the Amazons, a fierce nation of women warriors. There are similar shared accounts of dog-faced men, winged peoples, headless races, and so on.

A “kingdom of women” first appears in the *Classic of Mountains and Seas (Shan bai jing)*, a work that includes a great deal of imaginary geography. One passage of this text states that this kingdom is found “west beyond the seas,” and another says “west of the great beyond.” In most accounts of these kingdoms the women are said to reproduce without men. In some there are said to be no men at all, while in others there are men in a completely subservient role.

In the Chinese tradition, early maps include accurate geographical models, more fantastic schemes that include imaginary lands, and works that combine both. A classic example is a series of old circular Korean world maps based on Chinese prototypes. In these, China occupies the main area of the map in the form of a central continent, with Korea, Japan, India, and Southeast Asia nearby. The central continent is surrounded by an ocean, which contains many islands. Beyond this ocean there is another continent, completely imaginary; in turn, an all-encompassing ocean surrounds this second continent. In this final outer sea there are mythical islands to the west and east. The Japanese scholar Hiroshi Nakamura noted that many of the place-names on these maps come from the *Classic of Mountains and Seas*. Other place-names on the maps come from Chinese historical works such as the *Classic of History (Shu jing)*, the oldest of the Confucian classics, and the *Story of King Mu (Mu tian zi zhuan)*.

Chinese texts also speak of voyages to strange and wondrous places. The *Story of King Mu* includes some place-names that can be identified with actual locales, but there is also a great deal of material that is fantastic, such as the main character’s visit to the fabled “Queen Mother of the West.” According to Chinese leg-

end, Emperor Shi Huangdi (who reigned from 246 to 210 BCE) sent out the alchemist Xu Fu in search of an elixir of immortality. This elixir was said to be found in a place called Penglai, one of three islands where the immortals dwelled. Apparently there were a number of voyages sent out in search of herbs that could give longevity or immortality to the user.

One of the most famous Chinese legends of exploration concerns a place called Fu Sang, a land far across the seas to the east. Chinese texts dating back to the seventh century CE recount how a Buddhist monk named Hui Shen, originally from Afghanistan, traveled in the fifth century CE to Fu Sang. In the story, Hui Shen and some companions headed east from China, across the seas, until they reached a coastline. They then traveled inland, exploring this new territory. They met various peoples, some of whom are described in fairly ordinary terms and some of whom are rather peculiar, including a race of men with heads like those of dogs. The group traveled farther, encountering a culture that had a written language and a form of government. According to various Chinese texts, Hui Shen returned to China at the end of the fifth century CE and recounted his travels in the imperial court. The fact that no specific geographical details are given in the account gives it a particularly mythical and fantastic quality. Fu Sang is said to lie many thousands of miles beyond China. The account notes that Fu Sang is the name given to the land itself, and the term is said to be derived from the name of a kind of tree that grows there. The tree is described as supplying food, and its bark is said to be used for clothing. The term “Fu Sang” later came to be applied to Japan.

The story of Hui Shen’s travels appears in a book from the early seventh century CE titled *History of the Liang Dynasty* (*Liang shu*) by Yao Silian and in the later-seventh-century *History of the Southern Dynasties* (*Nan shi*), compiled by Li Yanshou. The *History of the Southern Dynasties* was copied and amended by the Chinese historian Ma Duanlin in his early-fourteenth-century *Comprehensive Studies in Literature* (*Wen xian tong kao*). This work, in a section titled “Investigation of the Four Frontiers,” recounts Hui Shen’s story. The story also appears in a slightly different form in the seventh-century

Memoir of the Four Gentleman of Liang (*Liang si gong ji*).

Ma Duanlin’s *Comprehensive Studies in Literature* speaks of a number of peculiar lands beyond China in the seas to the east. He, too, mentions a kingdom of women, to the east of the mythical Fu Sang, where the inhabitants become pregnant simply by entering a pool of water. In the same text a voyager lost in a storm at sea found an island by chance. Women who appeared to be Chinese but who spoke an unintelligible language inhabited this island. The men had human bodies with dog heads and voices that sounded like barking. These Chinese reports also spoke of a place beyond China called Wen Shen, which means “marked bodies,” perhaps referring to tattooing. Beyond this was a place called Da Han, or “Great China,” said to be abundant in sheep and horses. Early Chinese texts also speak of lands of giant men as well as pygmy races. Perhaps not surprisingly, these lands are frequently said to be in remote regions and are described in only the vaguest of terms.

—Benjamin B. Olshin

Bibliography

- Larson, Robert. “Was America the Wonderful Land of Fusang?” *American Heritage* 17(3) (April 1966): 42–45 and 106–109.
- Needham, Joseph. *Science and Civilization in China*. Cambridge: Cambridge University Press, 1959.
- Vining, Edward Payson. *An Inglorious Columbus, or, Evidence that Hwui Shan and a Party of Buddhist Monks from Afghanistan Discovered America in the Fifth Century, A.D.* New York: D. Appleton, 1885.
- Williams, S. Wells. “Notices of Fu-Sang, and Other Countries Lying East of China, Given in the Antiquary Researches of Ma Twan-Lin.” *American Oriental Society Journal* 11 (1882–1885): 89–116.

Early Medieval Christian History

When Christianity became the official religion of the Roman empire under Constantine in 313, Christian historians began to integrate two very different kinds of history. Roman history centered around the Roman empire, while Christian history was structured around the sequence of events comprising God’s creation of the universe,

➤ EXCERPT FROM *THE CHRONICLE OF ST. JEROME*

“Indeed, if you do not falter in carefulness and when you have diligently pored over the Divine Scripture, from the birth of Abraham back to the Flood of the whole earth, you will find 942 years, and from the flood back to Adam, 2242, in which no completely Greek, or barbarian or, to speak in general terms, gentile history is found. That is why the present little work traces the later years from Abraham and Ninus down to our time; and starts by displaying Abraham of the Jews, Ninus and Semiramis of the Assyrians, because at this time Athens was not a city.”

—Shana Worthen

Source

Jerome, *The Chronicle of St. Jerome* (Jerome's Latin Translation of Eusebius' Chronicle), English translation by Roger Pearse. <http://www.tertullian.net/fathers/index.htm#jeromechronicle>.

the events of the Old Testament, the Crucifixion of Jesus Christ, and the forthcoming Last Judgment. Christian history had a preestablished end point. The earthly world would end with the Last Judgment, and only heaven and hell would remain thereafter.

Eusebius (d. ca. 339), Constantine's adviser, was one of the first Christian historians to unite Christian with Roman history. His *Chronicle*, written in Greek, was a world history from creation to his own time. He integrated the Old Testament with the histories of the Babylonians, Egyptians, and Greeks and the Roman empire. It was the basis for much of Eastern Christian history through the continuations that later scholars wrote and for Western Christian history through Jerome's Latin translation of it (late 370s). Eusebius's text implies that all Christian history is divided into six ages, of which the sixth and last age began with Christ's birth. This established a model for dividing up history that most other medieval writers would subsequently use. Sextus Julius Africanus also wrote a text piecing together Roman with Christian history in the late third century that was influential in Eastern Christendom.

As the Roman empire changed gradually into a series of smaller kingdoms, Augustine of Hippo (354–430) formally distinguished the role of earthly power from that of God in the City of God. He argued that only the historical events with direct bearing on the state of Christianity mattered for Christian history. He also believed that no government could represent God on earth. Although his works were influential and widely read, this particular aspect of them had almost no effect on subsequent history. Orosius, a friend of Augustine, suggested that the Roman empire's acceptance of Christianity made the empire a holy one.

The new German kingdoms thought of themselves, like the Byzantine empire, as the inheritors of the Roman empire. The *History of the Goths*, which Cassiodorus wrote for King Theodoric, explains how the Goths were descended Romans and thus the next step in the unfolding of the universal history. Isidore of Seville (d. 636) went still further, explaining that the Goths were descended from Japhet, one of Noah's sons. Isidore was not interested in promoting the Roman empire so much as tying the new kingdoms to Christian history in particular, believing each of them to be the stewards of God on earth, contrary to Augustine's teachings. Gregory of Tours (d. ca. 593) gave the same attention to the Franks, while Bede wrote the Christian history of the English in 731.

One of the major problems that Christian historians wrestled with was the age of the world. Their calculations, which were based on historical events, ranged from Bede's calculation that the world was 3,952 years old at the time of Jesus's birth to Sextus Julius Africanus's calculation of 5,500 years. The use of “AD” to calculate years after Jesus's birth came into use around the eighth century; Bede used it in his work.

—Shana Worthen

Bibliography

- Bede. *The Ecclesiastical History of the English People*. Rev. ed. Edited and translated by Leo Sherley-Price, R. E. Latham, and D.H. Farmer. New York: Penguin, 1999.
- Breisach, Ernst. *Historiography: Ancient, Medieval, and Modern*. 2nd ed. Chicago and London: University of Chicago Press, 1994.

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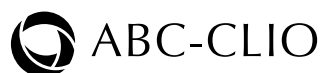
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

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Manufactured in the United States of America

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ERA 5 Intensified Hemispheric Interactions, 1000–1500

This half-millennium-long era begins with Viking settlements in North America, but they were short-lived and had no significant impact on the cultures of any of the peoples touched by the brief encounter. The era ends with the completion of Christopher Columbus's first three transatlantic voyages to the Caribbean and the beginning of the Spanish empire in the Americas, the voyage of Vasco da Gama to India and the origins of the Portuguese overseas empire, the expedition to North America by John Cabot, and the discovery of Brazil by Pedro Alvarez Cabral. The Eastern Hemisphere and the Western Hemisphere were now connected and would never again lose contact with one another. The inevitable result was a global exchange of peoples, cultures, and commodities on an unprecedented scale that profoundly changed the world. The era of increasingly linked and interdependent societies around the globe to ensue was made possible by the accelerating pace of interactions that took place within Afro-Eurasia between 1000 and 1500 CE and, arguably, was also made easier by both the relative isolation of the Americas from the rest of the world during these 500 years and the establishment of significantly large empires in Mesoamerica and South America. Isolation was a significant factor in leaving Native Americans susceptible to Afro-Eurasian microparasites—viruses, bacteria, and other pathogens—that resulted in a sixteenth-century demographic catastrophe of monumental proportions. Almost as significant, the existence of major empires in Mexico and South America, namely the Aztec and Inca, probably made the conquest and colonial exploitation of these areas that much easier by virtue of the regional consolidation that they had achieved. These conquests and their results are central to the period 1450–1770, but the events and factors in both hemispheres that prepared the way for the post-1500 global world are the story of the period from 1000 to 1500 CE.

Intensified Afro-Eurasian Interactions—Africa

Except for the North African coastal areas, Nubia (present-day Sudan), and Ethiopia, Africa lay largely outside the sphere of direct interchange with the various cultures of the Eurasian landmass during antiquity and for most of the so-called early Middle Ages (500–1000). This began to change significantly during this half millennium to the point that it is necessary for us to think of the Eastern Hemisphere as having become an *Afro-Eurasian ecumene*. That is, it was an interconnected community

of peoples who, no matter how far removed from one another by space or culture, had at least some relationship due to the long- and short-distance exchange of commodities, ideas, and even people that tied this hemisphere together. Sub-Saharan Africa's entry into this hemisphere-wide community was due to two major driving forces: trade and religion.

Kingdoms and Empires of the Western Savanna

Trade was the primary factor in the evolution of the great empires of the western savanna, or grasslands, that lay south of the Sahara. The trade between the region of West Africa that came to be known to early Muslim writers as Bilad al-Sudan (Land of the Blacks) and the north long predated the year 1000, having been particularly spurred by the introduction of the dromedary, or Arabian camel, around 300 CE, which made possible the caravans that crossed the Sahara's desolation. By about 1000 CE, four major trans-Saharan trade routes provided avenues for trade in salt, horses, textiles, and other manufactured goods from the north for such items as ivory, hides, slaves, and gold. But long before then, by at least the seventh century, a kingdom known as Ghana had emerged in what is today northern Senegal and southern Mauritania. Centered on its capital of Kumbi Saleh, it controlled and profited from much of this commerce, especially the gold trade. Ghana declined during the late eleventh century and following, in part due to the opening of new gold fields farther east, and during the thirteenth century hegemony over trade passed to a much larger entity, a veritable trade empire, known as Mali, that extended from the Atlantic coast to such major cities along the eastern Niger as Gao and Timbuktu (both in the present-day nation of Mali). At its peak in the early fourteenth century, Mali was one of the richest empires on the face of the earth. Its wealth, largely based on its monopoly over the gold trade, became legendary throughout the Muslim and Western Christian worlds. As Mali weakened militarily in the fifteenth century, primacy passed to the even larger trading empire of Songhai, which was centered on Gao and flourished into the late sixteenth century.

The gold and other products (including slaves) traded within these three polities were powerful magnets for Muslim merchants, diplomats, and even invading armies from North Africa and beyond. The fabled riches of sub-Saharan West Africa were also a spur to Western Europeans. Various Genoese, Catalan, Castilian, and Portuguese sailors set out into the Atlantic during the fourteenth and fifteenth centuries in search of the West African "River of Gold." The result was the discovery and exploitation of the Canary Islands, Madeira, and the Azores; the fifteenth-century presence of Portu-

The fabled riches of sub-Saharan West Africa were also a spur to Western Europeans. Various Genoese, Catalan, Castilian, and Portuguese sailors set out into the Atlantic during the fourteenth and fifteenth centuries in search of the West African "River of Gold."

guese merchants and missionaries along the Guinea, or West African, coast (including their establishment of the first permanent European trading post in continental West Africa in 1482); the eventual rounding of the Cape of Good Hope in 1485; and the Portuguese presence in the Indian Ocean from 1497 onward.

Religion often follows trade, and the Portuguese certainly were avid proselytizers. Before the end of the fifteenth century, the royal family of Kongo, which lay along the lower Congo River, had converted to Christianity and made the faith of the Roman Church the kingdom's official religion. But these Western Christian inroads paled when compared with the spread of Islam in sub-Saharan West Africa. By the mid-eleventh century, Muslims were such an accepted part of the fabric of the kingdom of Ghana that the capital city, Kumbi Saleh, was divided into two entities, one of which was reserved for Muslims, and in 1076 the king of Ghana converted to Islam. Islam became an even greater presence in Mali and Songhai, to the point that it is quite correct to think of them as integral parts of an Afro-Eurasian *Dar al-Islam* (the House of Islam). As was true of Islam elsewhere and of every other world religion, the practices of West African Muslims were a syncretic mix of universal Muslim traditions and traditional ways of life. Thus, the Moroccan traveler and Islamic jurist Ibn Battuta, who visited the sultan of Mali in the mid-fourteenth century, noted approvingly that the people of the western Sudan were avid participants in the Friday congregational prayers at the mosque, but he disapproved of the freedoms enjoyed by their women.

The Swahili Coast

Trade and religion also transformed the face of that portion of the East African coast stretching from Mogadishu (in present-day Somalia) to Sofala (in present-day Mozambique) and brought its inhabitants into closer contact with two great multicultural entities: the family of Islam and the world of the Indian Ocean. This area is known variously as the Land of the Zanj (Persian for "black") and as the Swahili Region (a term deriving from the Arabic *al-sabel*, meaning "the coast"), and its culture, including its vernacular language, is essentially Bantu with strong Arab and even Persian influences. Unlike the trade empires of West Africa, the Swahili world was divided into a number of independent coastal and island cities that were united only by culture. More than anything else, Swahili cities, such as Kilwa and Sofala, were important centers of exchange, serving both maritime merchants from as far away as China and as close as Arabia, whose ships were driven by monsoon winds and currents, and various African peoples of the interior, such as the Shona-speaking builders of Great Zimbabwe, a great stone city in south-central Africa that flourished between about 1250 and around 1350, possibly due to its presumed control of the East African gold trade. Indian Ocean trade items dating from the fifteenth century, including Chinese pottery, have been found as far inland as 500 miles (805 kilometers) from the coast. In addition to gold, important Swahili exports included slaves,

Brought by Arab and Persian merchants, a few of whom took up residence and married local women, Islam began making inroads along the East African coast well before 1000 CE, and with Islamization came urbanization even before the end of the first millennium.

timber, hides, and ivory, with African elephant ivory being far more highly prized than Indian ivory, even in India. The wealth of the Swahili cities so impressed the Portuguese that they attempted to conquer the entire coast in the early sixteenth century, a venture that had limited success and did not end Swahili involvement in the Indian Ocean economy.

Likewise, the Portuguese could not root out Islam in this same region, even though they carried with them a crusading ethos to fight the religion of the “Moors” wherever they found it. Brought by Arab and Persian merchants, a few of whom took up residence and married local women, Islam began making inroads along the East African coast well before 1000 CE, and with Islamization came urbanization even before the end of the first millennium. Nevertheless, it was only in the eleventh century and following that Islam became a distinguishing characteristic of the region and clearly tied its people to the House of Islam that, by 1500, stretched from the Atlantic to the southern Philippines. Like West African Muslims, the Swahili people shared a sacred book and language—the Quran and Arabic—and the Five Pillars of Islam, as well as many other practices, with an Afro-Eurasian-wide community of believers, but their brand of Islam also incorporated a number of indigenous elements. Unlike West Africa, Islam at this time remained confined to the coast and served as a clear marker between the people of the interior and the Swahili.

Jihads and Crusades

Religion could divide as well as unite, but even when it divided parties into fiercely antagonistic entities, it often served as a force for intensifying hemispheric interaction. Such was the case of holy jihads that brought Muslim forces into the heartland of India and into Anatolia (present-day Asian Turkey) and other lands of the so-called Middle East. Such also was the case of the crusades and the jihads they engendered.

Turkish Ghazis

The driving forces behind Islam’s new jihads were recent converts to Islam, Turkish warriors out of Central Asia who began to convert to Sunni Islam in the ninth and tenth centuries largely as a result of their forced recruitment into Abbasid armies as slave-soldiers (*mamluks* or *ghilman*). In the eleventh century, several branches of these new Muslims became *ghazis*, or border warriors. In theory, the ghazi protected Dar al-Islam, the area governed by Sharia, or holy law, from *Dar al-Harb* (the House of War), which was any region governed by infidels (unbelievers), namely non-Muslims. Defense, however, could be and of-

ten was active, rather than passive, in that it involved raiding infidel territory and capturing booty and slaves. Ironically, many of these Turkish ghazis were the progeny of slaves captured in earlier ghazi forays into non-Muslim lands.

Turkish Muslim raids out of Afghanistan and into northern India began in 997 and by 1027 had resulted in the conquest of Punjab, but there was no further advance for the next century and a half. Beginning in 1175, a new series of Turkish invaders, again out of Afghanistan, conquered most of northern India and established the sultanate of Delhi, which lasted from 1206 to 1526. Over these three centuries, tens of millions of northern Indians converted to the Muslim faith. Some converted out of opportunism or due to pressure; many, however, embraced Islam in response to the influence of Sufi mystics, whose wandering *pirs* (preachers) became an integral part of northern Indian life, especially in Bengal. India, already tied to Central Asia and the entire Indian Ocean world by trade as well as by its much earlier exportation of Buddhist and Hindu religious traditions, was now connected to the hemisphere-wide House of Islam. When Mongol invaders devastated Iran and Iraq in the thirteenth century, many Muslim scholars and artists took refuge in the sultanate of Delhi, where they functioned as religious judges (*qadis*) and in a variety of other professions, thereby firmly linking Islamic India to the intellectual, literary, and artistic traditions of the Persian world. Among the many elements introduced by these immigrants were Persian epic poetry, Persian history writing, and the jurisprudence of the Hanafi School of Iraq.

Anatolia, the heartland of the Byzantine empire (330–1453), experienced a similar Turkish-Muslim invasion in the eleventh century and the beginning of a slow process whereby this Asian peninsula was transformed from a bastion of Eastern Christian Orthodoxy into a land that today is known as Turkey. In this case, it was a clan of Turkish warriors known as the Seljuks.

The Seljuk rise to power began with a victory in 1040 over a rival Central Asian Muslim prince and the subsequent conquest of most of Iran and Iraq. By 1055 the Seljuk leader Tughril Beg had expanded his power all the way to Baghdad, where the Abbasid caliph, the “Shadow of God on Earth” and nominal leader of Sunni Islam, named him sultan (ruler), thereby acknowledging that it was Tughril who wielded true military and political power. Other titles bestowed on him were “King of East and West” and “Pillar of Islam.”

In 1071 Seljuk forces routed a Byzantine army at Manzikert in Armenian eastern Anatolia and swept through most of the now largely defenseless peninsula. By 1086 they had also captured most of Syria and were now the dominant Muslim power in western and Central Asia.

The Crusades

Most of the people subject to Seljuk authority in Anatolia and Syria were Christians of various Eastern varieties. Moreover, the Byzantine empire, which was centered in Constantinople, although battered, was fighting

back for control of its lands. It was in that context that in early 1095 Emperor Alexius I appealed to the West for aid in the form of mercenary soldiers. The response was not what he expected. Pope Urban II, head of the Latin Christian Church, launched what later became known as the First Crusade (1096–1099) in order to aid fellow Christians in the East and to liberate Jerusalem, which had been in Muslim hands since 638. The First Crusade armies helped blunt and push back significantly the Seljuk advance through Anatolia and Syria and also captured Jerusalem, which Western crusaders held until 1187 and then, on and off, from 1229 to 1244.

In the course of the crusade and its immediate aftermath, the crusaders established four crusader states in lands that today encompass portions of Turkey, Syria, Jordan, Lebanon, Israel, and the Palestinian Authority. The longest lasting of these four states was held until 1291, the shortest-lasting was reclaimed by Muslim forces in 1150. Whether lasting a half century or two centuries, these states, especially those with Mediterranean ports, allowed for a dramatic upswing in the interchange between the European West and the eastern Mediterranean. Additionally, during the twelfth and thirteenth centuries certain Western crusaders and several European maritime powers gained control of a number of Byzantine islands and lands, including Cyprus, Crete, Rhodes, major portions of mainland Greece, and even the city of Constantinople and adjoining lands. The Byzantines reclaimed Constantinople in 1261, but some of the islands remained in Western hands until the late seventeenth century, whereas other portions of Frankish Greece, as this complex of Western-held islands and mainland is generally known, fell to the Ottoman Turks in the fifteenth and sixteenth centuries.

These Western European colonies in the eastern Mediterranean allowed for a level of maritime transit of goods and people that probably exceeded that of the Roman empire at its height, and with that commerce came cultural exchange. Probably the single most important item

Probably the single most important item gained in these exchanges, so far as Western Europe was concerned, was a taste for and easy access to sugar.

gained in these exchanges, so far as Western Europe was concerned, was a taste for and easy access to sugar. It was on Cyprus, which Western Europeans held from 1191 to 1571, that Italian merchants learned to produce sugar on plantations run with slave labor, a process that other Europeans eventually carried to certain Atlantic

islands in the fifteenth century and to the Americas in the sixteenth century, with consequences of world historical magnitude.

Contrary to popular belief, these eastern Mediterranean outposts were not significant sources for Western Europe's twelfth- and thirteenth-century recovery of ancient Greek philosophy and science as preserved and interpreted by centuries of Arab Muslim scholarship. Spain and Sicily served that purpose. Muslims held parts of Spain (and until the early thirteenth century most of it) from 711 to 1492. Sicily had fallen piecemeal to Muslims between 827 and 965, only to be regained by Norman Frenchmen in a series of campaigns stretching from 1061 to 1091. Re-

ardless of the Christian Reconquista in Spain, which began to get under way in earnest around 1064, and the Norman conquest of Sicily, both lands had strong Muslim presences throughout the entire period of 1000–1500, and what was more significant, both experienced a significant amount of Muslim-Christian interchange.

Travelers to Spain, Sicily, and the crusader states of the eastern Mediterranean were often surprised to discover a high level of peaceful Muslim-Latin Christian interaction, but Spain and the lands of Syria-Palestine were also bloody battlegrounds where holy war—crusade and jihad—often produced massacres and other atrocities by both sides. In the end the Muslims won the war in the east, capturing in 1291 Acre, the last crusader stronghold on the Southwest Asian continent, and Latin Christians won in the west, capturing in 1492 Granada, the last Muslim stronghold in Spain. Even with these victories and defeats, the holy wars went on in the Mediterranean, along the coast of North Africa, and in southeastern Europe well beyond 1500. Arguably, the last great battle between crusaders and jihadists was the siege of Vienna in 1683.

Crusade and jihad were certainly driving forces in both Latin Christian and Muslim societies well beyond the thirteenth century. The Ottoman empire, which grew to massive proportions from around 1300 to 1672, was certainly fueled, at least in part, by jihadist ideology. And crusade ideology became an integral part of the cultural mind-set of Western Europeans. Indeed, the crusade became an endless war against evil, particularly but not exclusively the perceived evil of Islam, with constantly expanding frontiers and theaters of operation. By the mid-twelfth century crusades of conquest and conversion were waged against pagans (and eventually even Christians) in the Baltic, and these crusades dragged on into the early sixteenth century. The search for crusade allies resulted in Christian diplomats and missionaries traveling to Mongolia and China in the period circa 1250 to circa 1350 in an attempt to convert the Mongols and enlist their help against Islam. Certainly the desire to liberate Jerusalem by finding lost Christian peoples, outflanking Islam, and reestablishing contact with the Mongol Great Khan was one of the several motives that propelled the Portuguese and Spanish transoceanic voyages of the fifteenth century.

Conversions to Islam

Despite jihads waged by Turkish ghazis in India, southwestern Asia, and southeastern Europe, Islam during these five centuries spread largely through peaceful means to peoples near and far. This was the case in the islands and along the Malaysian coast of Southeast Asia, where Sufi mystics and merchants were major vectors of the faith after 1200 CE. They were aided in this endeavor by virtue of the fact that the Malay language was already the common tongue of commerce and discourse among the various peoples of the region. As was the case in sub-Saharan Africa, the new faith was married to local customs. Thus, very much like West African female Muslims, Southeast Asian Muslim women were rarely secluded and enjoyed a wide latitude of freedom. As was the case

in East Africa, Islam was largely confined to coastal cities and nearby regions; the people of the interior continued to follow traditional religions.

Two Centers—The Indian Ocean and the Mongol Empire

During these five centuries, Afro-Eurasia had two centers, the Indian Ocean and the Mongol empire, and both were powerful magnets for merchants, missionaries, diplomats, and every sort of other traveler. One was nothing less than a system of winds, currents, and ports that linked peoples from East Africa to South China. The other was the largest land empire in history, stretching from the plains of eastern Europe to the Sea of Japan, from the northern borderlands of Southeast Asia to the edges of Siberia.

The Indian Ocean Ecumene

The Indian Ocean had attracted commerce and travel on a grand scale well before 1000, and through the centuries India consistently served as its fulcrum and chief meeting place. By the early fifteenth century, however, the coastal regions of Southeast Asia were fast becoming almost as important, in part because of the Strait of Malacca through which trade from the Far East passed. A graphic example of this reality is the *Kangnido*, a Korean world map of 1402 (which shows the Mediterranean and also the true shapes of Africa and the Arabian Peninsula). It places an oversized and conjoined India-Southeast Asia squarely in the middle of the map.

Carriers of Indian Ocean trade included Jewish merchants from Cairo; Arab, Persian, Indian, East African, Malay, and Chinese sailors; and even occasional Europeans, to identify but a few of the many peoples who plied these waters. Navies also traveled the sea-lanes. Early in the eleventh century, ships from the South Indian Chola empire captured the Maldives Islands and defeated the fleet of Sri Vijaya, a maritime power that encompassed Malaysia and the islands of present-day Indonesia, all apparently in support of South Indian merchant-shippers. Between 1405 and 1433 seven great Ming fleets under the command of Zheng He sailed majestically through the Indian Ocean, all the way to East Africa and even the port of Arabian Jeddah on the Red Sea, mainly to assert Chinese hegemony and receive tribute from various coastal rulers. A century earlier, in 1341, Ibn Battuta visited the port city of Calicut in

southwestern India and reported that massive Chinese vessels were regular visitors to the port. Each carried 3 to 12 sails and was capable of holding a complement of 1,000 sailors and marines in addition to their wives and children and, of course, the merchants and their retinues, who traveled in comfort in their private cabins.

A century earlier, in 1341, Ibn Battuta visited the port city of Calicut in southwestern India and reported that massive Chinese vessels were regular visitors to the port.

Other evidence shows that he was not exaggerating. Sailing out of such ports as Hangzhou, Quanzhou, and Nanjing in the largest and most technologically advanced ships of their day, Chinese sailors probably ruled the eastern Indian Ocean from the twelfth century through the early fifteenth century. The *Catalan World Atlas*, drawn on the western Mediterranean island of Majorca in 1375 by a Jewish mapmaker in the employ of the Christian king of Aragon, shows a Chinese vessel off the west coast of India and depicts numerous ports dotting that same coastline. Was it any wonder that Western Europeans wanted to find a sea route to the Indian Ocean?

After about 1435, the imperial Ming court decided to turn its back largely on the Indian Ocean. Such ventures as the fleets of Zheng He were too costly and returned too little, and China had more immediate concerns at home, especially along its northern and northwestern borders. It feared the reappearance of the Mongols. In response, it would eventually construct the Great Wall; sometimes intensified hemispheric interactions were just too much.

Invaders from the Steppe and the Mongol Empire

For millennia, the nomadic, pastoral peoples of Central Asia had been full participants in a complex web of relationships with the societies and states that ringed their world. They traded with them, transported their goods, served as their mercenaries, were enslaved by them, and raided and extorted tribute from them as the opportunity arose. Most dramatically, they periodically produced confederations that attacked and carved out kingdoms and empires at the expense of their so-called civilized neighbors. The various Turkish groups that established states in Southwest and South Asia fit into this broad category. So also was the case with the Khitan (Qidan) and Jurchen (also Ruzhen or Nuzhen) invaders of northern China. The Khitans, a proto-Mongol people, established the Liao dynasty (907–1125), which ruled over most of Manchuria, Mongolia, and a strip of northern China. In 947 the Liao khan proclaimed himself emperor of China, even though he held only its northernmost portions. Between 1114 and 1127 another steppe people, the Jurchens out of Manchuria, swept away both the remnants of the Liao state and the brief hold on northern China enjoyed by the native Chinese Northern Song dynasty (960–1126) and established the Jin dynasty (1125–1234), which ruled northern China from its capital at present-day Beijing.

In 1211 the armies of a new confederation, the Mongols, began a sweep across northern China's plains and captured the Jin capital in 1215, and by 1234 they had totally overrun and absorbed the Jin empire. From there they continued their assault on the rest of China, which was fully conquered in 1279. Earlier, in 1271, the Mongol khan, Khubilai (r. 1260–1294), had proclaimed himself emperor of China and adopted a Chinese name for his dynasty, the Yuan (1271 [or 1279]–1368).

All of this and much more had been set into motion by Khubilai's grandfather, Chinggis (Ghengis) Khan (ca. 1162–1227). In a series of

simultaneous western and eastern campaigns, Chinggis and his successors carved out an empire that by 1260 stretched from Ukraine and Syria in the west to the Pacific Ocean in the east, and it was still growing.

The Mongol Peace and Trans-Eurasian Interchange

The Mongol empire was born in great bloodshed. Reportedly, Chinggis Khan ordered the slaughter of the one million inhabitants of Chengdu in China's Sichuan region, and Baghdad's capture in 1258 was accompanied by an equally horrific massacre. After about 1260, however, the Mongols, while still campaigning on many fronts, began to settle down to rule the four constituent khanates of this vast empire. The result was a modicum of trans-Eurasian interconnectedness known with some exaggeration as the *Pax Mongolica* (Mongol Peace), which extended into the mid-fourteenth century.

It was in this period that significant numbers of Western European missionaries, diplomats, and merchants, of whom Marco Polo was but one, traveled all the way to Yuan China. By the end of the thirteenth century, small resident communities of Italian merchants had been set up in China, and a small Latin Christian mission church run by Franciscan friars was also there. Likewise, Dominican missionaries and Italian merchants labored in Central Asia and India.

The Mongol empire began to break up in the mid-fourteenth century due to many factors, not least of which was the Great Eurasian Pandemic, which Western Europeans later called the Black Death.

The Mongol empire began to break up in the mid-fourteenth century due to many factors, not least of which was the Great Eurasian Pandemic, which Western Europeans later called the Black Death. Germs, as well as goods and ideas, were speeded along the trade routes of Eurasia, including *Yersinia pestis*, the bacterium of bubonic and pneumonic plague. The result was massive mortality rates, reaching probably 50 percent in many areas, stretching from China to England from about 1331 to about 1350, with periodic but less lethal epidemics thereafter.

The Mongol empire probably would have collapsed of its own weight and size, but this pandemic surely helped hasten its passing away. Due to this imperial collapse and a number of other factors that combined to sever the land routes that connected the Far West with the Far East, the Western European outposts in China and India dried up and passed away by 1400. But the Western European memory of its former direct contact with the land of the Great Khan was a spur in the fifteenth century to discovering and establishing water routes to the Indies. The unintended result was Western Europe's discovery and exploitation of the Americas.

American Ecumenes

The Americas before 1500 were divided into many thousands of tribes and clan groups, large and small, who spoke several thousand different

languages that belonged to over 200 language families. Some of these divisions resulted in deep animosities, which early European conquerors were able to exploit to great advantage. Cortés, for example, would not have been able to topple the Mexicas' Aztec empire without tens of thousands of Indian allies. Factionalism and civil war also proved to be valuable allies for Pizarro in his conquest of the Inca empire. But well-established avenues of communication and interchange, as well as the urban settlements that served as hubs for these routes and the several empires that promoted and protected them, also helped speed the conquest of portions of the Americas.

The myth of a sparsely populated Western Hemisphere prior to the coming of European settlers is just that, a myth. Population numbers for the Americas before 1492 vary greatly depending on which historical demographer is doing the calculating, but it has become increasingly clear that large areas of the Americas, such as central Mexico and Amazonia in South America, were densely populated, and dense populations meant radiating circles of contact and exchange. The means, methods, and rate of exchange are still largely unclear, but no one can deny that widespread trade networks existed. By 700 CE, for example, maize, which originally was cultivated in the highlands of central Mexico around 7000 BCE, was being grown from present-day Argentina and Chile to Canada. Irrefutable archaeological evidence points to widespread trade networks in a region encompassed today by the southwestern United States and regions of Mexico, and there is plenty of evidence that items such as copper artifacts, shell ornaments, and pottery were exchanged among various Mound Culture groups from present-day Georgia to Illinois.

Such networks were a proverbial double-edged sword. Before the peoples of the Upper Mississippi Mound Culture ever saw a European, they were devastated by Afro-Eurasian diseases brought by Spaniards and their animals far to their south that traveled along trade routes into the heart of densely populated urbanized societies. The result was their collapse as an identifiable culture, although we should note that some of their larger sites, such as Cahokia near present-day East St. Louis, had been on the decline since the early thirteenth century. Likewise, those same Spaniards, the small army of Hernando DeSoto that crisscrossed lands from present-day Florida to Texas between 1539 and 1542, viewed large concentrations of urban settlements, especially in the Lower Mississippi Valley. Those cities and their inhabitants were gone when the next Europeans visited the region almost a century and a half later. Their dense populations had likewise fallen victim to the diseases brought by Desoto's invasion.

Several large American Indian empires also offered Europeans an opportunity to carve out huge colonies once they had gained political-military control of a structure that had already done much of the work for them. Carved out between 1438 and 1527, the Inca empire, in its day, was the single largest empire on earth, at least so far as landmass was concerned. Control over its capital, Cuzco, and its royal family and various noble factions ensured a successful but not always easy or unresisted conquest and cultural transformation of much of South America. To a lesser degree the same was true in Mesoamerica, where the Triple

Alliance, better known as the Aztec empire, held a position of hegemony. The empire was dominated by the Mexica, with two subordinate vassal allies. Spanish control of Tenochtitlan, the Mexica capital, and alliance with the many enemies of the Mexica, such as the Tlaxcalans, almost guaranteed conquest of the Mexican highlands.

Thus, growing hemispheric connections in both the Americas and the Afro-Eurasian world prepared the way for the First Global Age.

—*Alfred J. Andrea*

Environment and Population

Globally, two environmental phenomena overshadowed all others during these five centuries: the so-called Medieval Warming (ca. 900–ca. 1300) and the Little Ice Age, which began around 1300 but extended and intensified for several centuries beyond 1500. Within Afro-Eurasia the single most significant demographic phenomenon was the Great Pandemic of the mid-fourteenth century, which later generations of Europeans came to know as the Black Death. This pandemic stopped dead in its tracks and reversed dramatically Eurasia and North Africa's overall population increase that had occurred during the first three centuries of this era. Data regarding populations in the Americas are difficult to come by and even more difficult to interpret, but it appears that during this half millennium the populations of most regions of the Americas were on the rise, with the greatest increases occurring in Mesoamerica and South America.

A dramatic symbol of the consequences of these climatic and population swings are the two Greenland settlements: the Eastern Settlement on Greenland's southwest coast and the Western Settlement farther north along the west coast. The North Atlantic's milder winters and longer summers and the growing population of Scandinavia contributed equally to the establishment of Norse colonies in Iceland, Greenland, and North America by the year 1000. The Greenland settlements were located in a harsh environment that was made inhabitable for Europeans, who insisted on keeping dairy herds as a major source of food, only because of the Medieval Warming. When the Little Ice Age of the fourteenth century brought with it colder winters and cooler summers, the colonies became increasingly imperiled. Added to that, the great die-off in Norway due to the Black Death further marginalized these faraway colonists. The result was inevitable. The Western Settlement had already collapsed in 1342. The Eastern Settlement lost all contact with Europe sometime in the fifteenth century and probably totally disappeared by 1500. What the Medieval Warming gave, the Little Ice Age took away.

The term "Medieval Warming" is misleading. Whereas western Europe enjoyed the benefits of longer and more productive growing seasons because of a rise in average temperature of one or two degrees Fahrenheit, especially between about 1100 and circa 1250, the high point

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of Europe's so-called Long Summer, the warming was not universal, and even where temperatures did rise elsewhere, the result was not as beneficial as the term "Medieval Warming" might suggest.

Europe continued to enjoy abundant rainfall during this warming trend, although its level of rain fell slightly. The result was a dramatic increase in the lands put under the plow, a more varied diet, and a steep rise in population from about 1000 to the mid-fourteenth century. The great Eurasian steppe, however, which stretches from Manchuria to the fringes of central Europe, seems to have experienced more extreme cycles of warmer and drier weather followed by colder and wetter weather, leading to a seesaw of unpredictable climatic shifts: drought could be followed by a severe winter. For peoples whose very existence depended on the well-being of their herds, these fluctuations appear to have been one of many factors that drove the formation of large aggressive confederations that sought to conquer and occupy more stable and salubrious lands. There is evidence that Chinggis Khan's rise to power coincided with shrinking pasturage due to drier conditions.

Northern China also seems to have experienced a cycle of recurring droughts, which might help explain the dramatic southward shift of the Chinese population after 1000 CE. Certainly the north was now dependent on large shipments of food from China's new center of agriculture in the south. This probably also helps explain the loss of the north to successive waves of Khitan (Qidan), Jurchen (also Ruzhen or Nuzhen), and Mongol invaders beginning in the tenth century. Even when faced with these difficulties, China's population rose dramatically during the Song era (960–1279) until it confronted two successive demographic disasters: the thirteenth-century Mongol invasion and conquest and the fourteenth-century plague.

South and Southeast Asia apparently experienced severe monsoon fluctuations during the period from about 1000 to about 1350. What impact, if any, these drier periods followed by greater amounts of rainfall had on India is impossible to say with any degree of certitude. Were the Muslim invasions out of present-day Afghanistan connected to this? Maybe, maybe not, but whatever it was that drove the invaders into India, drier conditions might have occasioned droughts and famines that weakened Indian resistance to them. Southeast Asia clearly experienced a cycle of severe droughts and floods that probably made the elaborate water management system of the Khmer empire unmanageable. Because this system of canals and reservoirs was crucial to Khmer agriculture and centralized authority, the empire's decline in the fifteenth century and its abandonment of Angkor Wat during the sixteenth century were conceivably consequences of the Medieval Warming.

Sub-Saharan Africa's semiarid savanna region seems to have had numerous long droughts in the eleventh and thirteenth centuries with an intervening period of cooler unpredictable weather. These fluctuations, however, do not seem to have had any significant impact on the trans-Saharan trade that led to the rise of such empires as Mali and Songhai. The dromedaries that carried this trade were just too tough, and their saddles were perfectly made for bearing their burdens.

In the Americas the story was equally complex. The highly urbanized Chimú culture along the arid northern coast of present-day Peru survived periodic droughts and unpredictable El Niños that threatened flooding from torrential rains during the period from roughly 1100 to about 1300. It managed this thanks to two factors: construction of elaborate canal networks that provided adequate water in times of drought and had overflow weirs to handle excess water and a highly centralized administrative system that enabled it to shift resources from one area to another to meet immediate crises. The result was the emergence of a large Chimú kingdom that dominated the entire desert coast from the early fourteenth century to about 1470, when it was absorbed by the Inca empire. The great city-state of Tiwanaku, however, in the Lake Titicaca region of the Andes, began a precipitous downward slide after 1000 CE, possibly due to drought brought about by prolonged cold, dry conditions. By the early twelfth century the city had collapsed, and its people dispersed. Rainfall did not return to pre-1100 levels in the Andes until the mid-fifteenth century when warmer, wetter weather returned, which might have been a factor in the contemporaneous rapid rise and expansion of the Inca empire. In North America, drought appears to have been a factor in the mid-twelfth-century dispersal of the Pueblo people of Chaco Canyon near present-day Gallup, New Mexico, and the abandonment of various cliff-dwelling sites farther north by the late thirteenth century.

Environment can be an influencing factor, but rarely, if ever, does it determine an inevitable historical course. There are too many variables and choices. Hence, the Chumash culture of California's central coast responded to the climatic changes of the Medieval Warming by intensifying its fishing, and its population increased significantly. This in turn occasioned a number of social challenges, such as increased competition and violence, and some environmental issues, such as sanitation problems, pollution, and disease. But the Chumash also created some social and political systems to meet these challenges. The result was a dense population by 1500.

Population numbers for the various segments of the Americas before 1492 are hotly debated, and the debate is made the more contentious by present-day political and social concerns. It does seem, however, that on balance the populations of the Americas were rising throughout these five centuries, with some areas, such as central Mexico, experiencing extreme population density before the native peoples were devastated by Afro-Eurasian diseases. This is not to say that diseases and epidemics were unknown in the Americas before the arrival of large numbers of people and their animals from the Eastern Hemisphere in the sixteenth century and following. But apparently none of those earlier epidemics had the impact of the Afro-Eurasian diseases, especially the pandemics of smallpox and measles.

When it came to pandemics in Afro-Eurasia, none could match that of the onslaught of bubonic and pneumonic plague of the fourteenth century, which probably killed off 50 percent of the populations of Byzantium, Egypt, Syria-Palestine, and Western Europe between early 1347

and mid-1350 and then returned over the next several centuries in increasingly less virulent forms. The so-called Black Death probably originated in Mongol-dominated Central Asia in the 1330s and spread east and west along trade routes. Its true death toll will never be known, and scholars debate its social, cultural, and political impact. What we can say with some certainty is that it ravaged Eurasia from China to England, including India, and it also raced through the Mediterranean coast of North Africa. In densely populated regions its mortality rate was probably from 40 percent to 60 percent, with one in two people succumbing to it being a reasonable guess as to an average.

One set of population statistics might shed some light on this, thanks to reasonably good census records. Around 1100 CE the population of China was about 100 million, with the highest density in the south. This was largely due to an agricultural revolution that involved an expansion of rice cultivation and the introduction of fast-growing multiple-cropping Champa rice from Southeast Asia. By 1207 the Jin empire of northern China had about 53 million persons and the Southern Song empire had about 65 million, many of them concentrated in huge cities, such as Hangzhou. In 1390 China's total population was

half that, about 60 million. Undoubtedly many of those losses were due to indiscriminate, widespread thirteenth-century massacres by Mongol invaders. But it is equally reasonable to infer that a good portion of that drop in population was due to the Great Pandemic of the fourteenth century. It took Western Europe several centuries to return to its preplague population

It took Western Europe several centuries to return to its preplague population numbers. Possibly it did not reach that level until around 1700, despite the introduction of new foods from the Americas.

numbers. Possibly it did not reach that level until around 1700, despite the introduction of new foods from the Americas. China was less slow to recover, despite periodic famines, natural disasters, and rebellions that killed millions. By 1600 its population stood at around 150 million.

Europe's demographic recovery was possibly slowed by the Little Ice Age that began in the early fourteenth century, grew in intensity after 1500, peaked between 1670 and 1710, and ended around 1850. Its global impact has yet to be studied in any systematic manner, but clearly it cooled the Northern Hemisphere, where the weather became stormier and less predictable and made life harder and more uncertain for a peasantry that now experienced shorter growing seasons. The same was true for those who harvested the seas. Fish, Europe's main source of animal protein, moved farther west, driving fishermen all the way to the dangerous but rich Grand Banks by 1500. If we can extrapolate from Western Europe's experiences, the Great Famine of 1315–1322 was an early manifestation of the fact that many summers would be less fruitful and many winters would be more desperate for those people around the globe whose climates became cooler.

In summary, environment and population numbers have always played significant roles in human history, and this was dramatically illustrated during these five centuries by the Medieval Warming, the Little Ice Age, and the Great Eurasian Pandemic. But we must resist the

seductive models of environmental and demographic determinism. As you will see in the entry on the fall of Tiwanaku, historians do not agree on whether or not environment was a critical factor in its collapse. And even if it was, as the Chumash illustrate, humans have choices. Perhaps wiser choices would have prevented collapse, but we will never know. Likewise, significant increases and decreases in population can and usually do have social, cultural, and political consequences, but those consequences vary greatly from time to time and from place to place in both kind and degree. The only constant, as these five centuries show us time and again, is the adaptability, resilience, and complexity of the human species as it faces challenges and attempts to reshape the world to meet its needs.

—*Alfred J. Andrea*

■ Introduction: From the Great Warming to the Little Ice Age

Climatic shifts can be gradual and barely discernible to the average person or can be sudden and dramatically apparent. It seems that the cold and resultant famine that settled in Europe, especially northern Europe, in the early fourteenth century was of the latter variety, even though the shift was only a few degrees Fahrenheit.

Europeans had settled and farmed many marginal lands during the period of the so-called Medieval Warming, and its population had grown in proportion to this expansion of exploited land. When the climate took a long-term turn for the worse, the result was dramatic famine and die-off, with the most severe crisis occurring in 1315–1317 on an axis stretching from the British Isles to Poland.

Chroniclers of the period provide dramatic testimony that often borders on the melodramatic but that nonetheless gives us vivid evidence of a society in crisis, even when we make allowance for hyperbole.

Compared to the sensationalism of the majority of contemporary chroniclers, John de Trokelowe, a Benedictine monk of Saint Albans Abbey, was almost matter-of-fact in his reporting of the effects of the famine of 1315 on the lands held by the English Crown, namely most of the British Isles and Gascony in France. Yet even he could not pass up the opportunity to offer a hor-

rifically tasty tidbit or two, as the following excerpt illustrates.

“In the year of our Lord 1315, apart from the other hardships with which England was afflicted, hunger grew in the land. . . . Meat and eggs began to run out, capons and fowl could hardly be found, animals died of pest, swine could not be fed because of the excessive price of fodder. A quarter of wheat or beans or peas sold for twenty shillings [in 1313 a quarter of wheat sold for five shillings]. . . . The land was so oppressed with want that when the king came to St. Albans . . . it was hardly possible to find bread on sale to supply his immediate household. . . .

The dearth began in the month of May and lasted until the feast of the nativity of the Virgin [September 8]. The summer rains were so heavy that grain could not ripen. It could hardly be gathered and used to bake bread . . . unless it was first put in vessels to dry. Around the end of autumn the dearth was mitigated in part, but toward Christmas it became as bad as before. Bread did not have its usual nourishing power and strength because the grain was not nourished by the warmth of summer sunshine. Hence those who ate it, even in large quantities, were hungry again after a little while. There can

be no doubt that the poor wasted away when even the rich were constantly hungry. . . .

Considering and understanding these past miseries and those that were still to come, we can see how the prophecy of Jeremiah is fulfilled in the English people: ‘If I go forth into the fields, behold those slain with the sword, and if I enter into the city behold them that are consumed with famine’ (Jeremiah 14.18). Going ‘forth into the fields’ when we call to mind the ruin of our people in Scotland and Gascony, Wales and Ireland . . . Entering the city we consider ‘them that are consumed with famine’ when we see the poor and needy, crushed with hunger, lying stiff and dead in the wards and streets.

Four pennies worth of coarse bread was not enough to feed a common man for one day. The usual kinds of meat, suitable for eating, were too scarce; horse meat was precious; plump dogs were stolen. And, according to many reports, men and women in many places secretly ate their own children.”

—Alfred J. Andrea

Source

Johannes de Trokelowe, *Annales*, edited by H. T. Riley, Rolls Series, No. 28, Vol. 3 (London, 1866), 92–95. Translated by Brian Tierney. This text is

part of the Internet Medieval Source Book. The Sourcebook is a collection of public domain and copy-permitted texts related to medieval and Byzantine history.

The West African Great Warming

The period of dramatic climatic change known worldwide as the Great Warming was experienced in West Africa as a sudden onset of drier conditions beginning about 1100 CE. Changes in the Atlantic currents, sea levels, temperatures, and wind patterns significantly altered rainfall patterns in the region and ushered in a long dry period that lasted until about 1500. The geographic and environmental patterns of the region of West Africa are among the most diverse in the world. From desert to rainforest, no area was unaffected by the era’s climate shift, which in turn altered the ecology and political economy of the region.

The West African climate had been established by about 2500 BCE, which marked the end of the Atlantic wet period. Broad bands of climate zones stretched from east to west and included the expansive Sahara desert in the north, the marginal sahel on the desert’s southern edge, and savanna grasslands that buffered the tropical forest regions closest to the southern Atlantic coast. More than two millennia of drought and desiccation occurred, ending about 300 BCE and finally giving way to several transitional centuries as rainfall became moderate between 300 and 700 CE and then abundant between 700 and 1100. The centuries of wetter conditions fostered the expansion of long-distance trade between the region’s ecological zones and intensified the reliance on the ancient trans-Saharan commercial networks in building political and economic stability.

A drier climate after about 1100 resulted in the expansion of the Sahara and the gradual shift of environmental zones from north to south, eventually increasing the grasslands at the expense of forest. Early West African states such as Ghana had occupied territory that became too dry to support agriculture, and these declined, providing opportunities for other political entities to expand from their more favorable locations. Between 1100 and 1500, decreased rainfall



Detail of the Great Mosque in Djenné, Mali. During the reign of Sundiata Keita during the thirteenth century, stunning mosques made of dried mud were constructed throughout the West African empire of Mali. (Juan Manuel García)

➤ A DRIER CLIMATE—THE “FALL” OF GHANA

Evidence for the decline of the eleventh-century Soninke kingdom of Ghana was once based entirely on Arab writings, but recent archaeology and oral traditions provide a more complex picture of the interrelated role of ecology and trade. According to surviving written accounts, the kingdom's commercial and political center was besieged by Almoravids in about 1076, not long after the local ruler converted to Islam. The fall of the kingdom was thus interpreted as the result of external forces alone, a view that is no longer tenable.

Archaeologists have found evidence at Kumbi Saleh for what is thought to have been the capital of Ghana mentioned by the chroniclers. Two possible related sites have been linked, one of which may have been the palace and the other nearby site interpreted as the remains of the Muslim community. The separate Muslim trad-

ing quarter is consistent with later cities and towns that have been excavated and studied. Until about 1100, sheep, cattle, and goats were abundant at the site. After about 1100, drought-resistant goats alone were commonly present, suggesting a gradual adjustment of subsistence strategies in response to changing climatic conditions.

Oral traditions tell of the annual sacrifices to a guardian snake in order to ensure fertility and prosperity. One year the intended sacrificial victim was rescued by her lover, and the snake's revenge resulted in drought and disaster for the local community. Both archaeology and oral tradition thus suggest a story of gradual decline, likely the interconnected result of both the drying up of the region's agricultural basis and the loss of gold resources.

—Candice Goucher

opened up the West African forest to savanna cavalry and allowed warrior states such as Mali to enlarge the territories in which horses could be used effectively.

Changing environmental zones also meant agriculturalists had to seek new lands better suited for their traditional crops. Specialized occupations such as blacksmithing relied on charcoal fuel, and its practitioners were forced to shift operations in search of trees. These dynamic political and economic conditions better integrated regional networks and provided inroads for the expansion of Islam, trade, and technology. After the second half of the fifteenth century, the arrival of European coastal traders ushered in a new era of instability when once again the climate changed sharply to wetter conditions between 1500 and 1630.

—Candice Goucher

Bibliography

- Brooks, George. *Landlords and Strangers: Ecology, Society and Trade in Western Africa, 1000–1630*. Boulder: Westview, 1983.
- Connah, Graham. *African Civilizations: An Archaeological Perspective*. New York: Cambridge University Press, 2001.

The East African Great Warming

The period of the Great Warming from 1000 to 1300 affected the environment and demography of East Africa in significant ways. While many parts of the world experienced a warming in temperatures during this period, with great benefits for agriculture and population growth, the Great Warming in East Africa is most noted for periods of severe drought throughout the region. Data collected by measuring the flood levels of the Nile River in Egypt, which finds its source in East Africa's Lake Victoria, and from analyzing the water levels of other East African lakes suggest that the tenth and thirteenth centuries were times of very little rainfall for the region. Lakes Naivasha, Tanganyika, and Malawi, in addition to Victoria, experienced exceedingly low water levels in the eleventh century.

The peoples of East Africa during this period were comprised primarily of Bantu-speaking agriculturalists, who largely occupied the region by the eleventh century, and a smaller population of Nilotic-speaking pastoralists. The prolonged droughts during the Great Warming made agriculture very difficult and limited the population growth of the Bantus. The largest congregations

THE NILE HYDROMETER

The earliest known Nile Hydrometer, known also as the Rhoda Nilometer, or the Rhoda Column, was constructed in 715 CE by the Umayyad caliph Sulayman Abd al-Malek, although there probably were hydrometers at this site as far back as pharaonic times. Located on a small island in the Nile River close to Cairo, the Nile Hydrometer was built to measure the river's flood levels, a constant and major cause of concern for the rulers of Egypt. Destroyed by an unusually high flood in 850, the hydrometer was reconstructed at the command of the Abbasid caliph al-Mutawakkil in the latter half of the ninth century, possibly under the supervision of the astronomer al-Farqhani, known in the West as Alfraganus. It was subsequently rebuilt in 1092 by the Fatimid caliph al-Mustansir.

The hydrometer is an octagonal column set inside of a stone pit into which the Nile waters flow from three different directions. In addition to verses from the Quran, the hydrometer is marked off with a scale of 19 Egyptian cubits with which to record the Nile's flood levels. Providing scholars with a nearly 1,500-year record of flood levels, including the years of the Great Warming from 1000 to 1500, the Nile Hydrometer is a significant source of climatic information regarding much of East Africa because the Nile begins at Lake Victoria, in the heart of East Africa, and is further watered by runoff from the Ethiopian Highlands.

—Phillip A. Cantrell

lived near the lakes, which, as noted, experienced substantially lowered water levels throughout the era. Thus, while many areas of the world, such as in Europe, the western regions of sub-Saharan Africa, and Great Zimbabwe in southern Africa, saw the rise of more centralized kingdoms in the period from 1000 to 1300, no such centralized kingdoms were established in East Africa. The climate, impacted by drought, served as a severe check on population growth and concentration.

The cattle-herding Nilotes of East Africa existed in small stateless societies and sought out what grasslands they could to herd their livestock. The Bantus generally found agriculture to be a persistent challenge and as a result existed in small scattered chieftaincies across a region



Nineteenth-century Illustration of the Nile Hydrometer on Rhoda Island near Cairo, Egypt. (Library of Congress)

encompassing the present-day nations of Kenya and Tanzania. It was not until after the fourteenth century that one finds significant state growth in the form of centralized kingdom states. The best example of this is the rise of the Buganda Kingdom on the northern shores of Lake Victoria in present-day Uganda.

As a result of the drought-inducing Warm Period, the peoples of East Africa failed to develop political centralization until much later than most areas of the world. By the time of Western contact, East Africa in general and Kenya and Tanzania in particular did not possess sufficient political and state development to resist European coastal incursions and settlements. In very many ways, the region is still in the process of recovering from its delayed political development.

—Phillip A. Cantrell

Bibliography

Fagan, Brian. *The Great Warming: Climate Change and the Rise and Fall of Civilizations*. New York: Bloomsbury, 2008.

Lamb, H. H. *Climate, History and the Modern World*. London: Methuen, 1982.

McIntosh, Roderick, Joseph Tainter, and Susan McIntosh, eds. *The Way the Wind Blows: Climate, History and Human Action*. New York: Columbia University Press, 2000.

It Was Not All Wine and Roses—Incidents of Famine in Europe

Films and novels tend to romanticize medieval European life with idealized depictions of King Arthur's virtuous knights or Robin Hood's merry forest rangers. The reality was often more harsh and certainly more complex. Economic status and geographical location played a great role in determining if someone had a relatively comfortable life. Each social class and culture came with a package of social expectations, but common to all was the fact that people generally valued the community over the individual. Such communal traditions and bonds helped to ensure the survival of villages and families. Despite various ways and means, such as pooling farm equipment, that were aimed at building a community that could withstand hard times, unforeseeable natural disasters occasionally shook cultural foundations to the core. One such chronic yet unpredictable force was famine.

A famine is when people run out of food, but historically the term tends to be applied to large-scale food shortages that affect many people. In the most notorious famines many people died of starvation, but more often individuals simply suffered from malnutrition, eating some food but not enough. Malnutrition set the stage for weakened immune systems and the spread of diseases. Some medical conditions, such as pellagra, resulted directly from a lack of vitamins and minerals that humans need to be healthy, whereas other diseases, often of the communicable type, took advantage of ill health and spread among weakened populations.

Fear of hunger held a powerful grip on communities, which knew that harvests could fail at any time locally or regionally, and a massive famine that carried widespread death in its wake was an ever-constant danger. One example was the Great Famine of the early fourteenth century that lasted seven years, from 1315 to 1322, and



Four Horsemen of the Apocalypse symbolizing famine, death, war, and plague. Woodcut by Albrecht Dürer, 1498. (Jupiterimages)

was widespread throughout Northern Europe. Thirty million might have lived in the affected area, and uncounted but probably large numbers of people died as a result of this great hunger.

In the face of such grim realities, some persons turned to religion in order to seek the cause of, possible prevention of, and cure for famine, the dreaded Third Horseman on a Black Horse of the Book of Revelation (Rev. 6:5–6). The truly religious, who trusted in Divine Providence, condemned those who hoarded food as persons who sinned against both God and humanity. Such persons failed to see that God's righteous wrath directed these calamities on a sinful humanity that had to repent its evil ways, and they likewise sinned by failing to show charity to their fellow Christians. But given human frailty, it is likely that more persons chose hoarding over prayer and penance as a preventative and cure

► THE GREAT FAMINE OF 1030–1033 AS REPORTED BY RALPH GLABER

Our best sources for the history of medieval European famines are eyewitness accounts. However, although such testimony can be vivid and detailed, it is not necessarily reliable. People's memories fade, and writers embellish accounts to add excitement and provide plausible explanations. Even so, we still owe much of our knowledge of the Great Famine of 1030–1033 to observations and reports recorded by the French chronicler Ralph Glaber (Ralph the Bald, 985–1047) in his *Five Books of Histories*, which largely traced the history of France from 900 to 1044. Glaber tells of the horrors of the famine, but we have to be careful readers.

Writing from the Benedictine monastery at Cluny in Burgundy, Glaber tried to recount and explain how a famine swept through Western Europe. Like many Latin Christian writers of the period, he saw contemporary immorality as a chief cause for the catastrophe in an upside-down world

where sins had become common and virtues rare. Perhaps as a symbol of this topsy-turvy world, he reports that people were forced to eat unclean beasts. Worse, according to Glaber, others were reported to have resorted to cannibalism, eating even the bodies of family members; he claimed that mothers ate their babies and that grown men devoured their mothers. How real and widespread such cannibalism was is open to question. Glaber seems to have believed that the end of the world was imminent, and he might have been more influenced by apocalyptic visions and wild rumors than by sober evidence and credible testimonies.

Glaber also mistook an accompanying medical condition called St. Anthony's Fire, or ergotism, as a God-directed plague. In reality, it was a fungal poisoning from contaminated rye bread. Chemicals in the rye constricted blood vessels and caused gangrene, convulsions, and death.

—Steven Sams

and thought of their own and their family's survival before that of others.

Given the paucity of our sources and the lack of anything approaching scientific exactitude in those that we do possess, historians find difficulty in tracing the exact causes of any particular medieval famine. Harvests failed for many reasons: pestilence, bad weather, war, or damaging farming practices. Problems in distribution also created crises; if food could not be moved to populations because of a conflict, then those unlucky folks starved. The same issues that affected crop production affected livestock as well, so food animals starved or sickened alongside the families that depended on them.

Governments at the city and regional levels often tried to store surpluses in case of disaster, but authorities could rarely supply these storehouses with enough provisions to last past two major catastrophes or crop shortages. Furthermore, the vast majority of peasants were subsistence farmers: they grew only enough for their families to survive. Another problem was crop specialization whereby farmers grew a particular product in one area and depended on the importation of other necessities from other regions.

In the face of weather and water conditions that could cause schools of fish to wander far from traditional fishing zones, fishing villages offered no absolute security as well, and similar issues applied to coastal towns where seafood provided a major protein supplement to the diet. In an era when the opportunity to move to another more prosperous location was scarce, peasants and townspeople alike had little else but to hope that God and fate would be kind.

—Steven Sams

Bibliography

- Glaber, Ralph. "On the First Millenium." In *Internet Medieval Sourcebook*, edited by Paul Halsall. Fordham University Center for Medieval Studies, <http://www.fordham.edu/halsall/sbook.html>.
- Hays, J. N. *Epidemics and Pandemics: Their Impacts on Human History*. Santa Barbara, CA: ABC-CLIO, 2005.
- Jordan, William Chester. *The Great Famine: Northern Europe in the Early Fourteenth Century*. Princeton, NJ: Princeton University Press, 1996.
- Schaff, Philip. *History of the Christian Church*, Vol. 4, *Mediaeval Christianity from Gregory I to Gregory VII A. D. 590–1073*. Oak Harbor, WA: Logos Research Systems, 1997.

Environmental Stresses on the Nomads of the Central Asian Steppes

Central Asia is divided into two major ecological zones. To the north are the steppes, the home of the nomads who were (and are) primarily pastoralists, dependent on the health and welfare of their flocks for survival. The southern zone is the zone of farmers and sedentary peoples. Movement of nomads from their traditional area into the south caused a political, economic, and social disruption. During the period 1000–1500 pastoral nomads, such as the Mongols, shook the foundations of many states and societies on the fringes of the great Eurasian Steppe and became, in some instances, state-builders themselves.

The lifestyle of nomadic groups is romantically envisioned as a carefree existence where all needs are met by nature, with nomads moving freely about the steppes. In reality their life was (and is) far from idyllic. Pastoralists wage a constant battle with their environment in order to survive.

Historically, pastoral nomads were found in marginal regions unsuitable for agriculture. In the Central Asian steppes rainfall was sparse but the soil was rich, producing a thick, heavy turf that was impossible to penetrate with existing plows. Those living in the steppes had to exploit the land indirectly through pastoral nomadism.

Central Asian herds were composed in varying proportions of sheep, goats, horses, and camels (largely Bactrian camels, except for some southwestern regions of the steppe, where Arabian dromedaries were to be found) with the addition of yaks at higher elevations. These herds provided food, shelter, clothing, and trade goods, and the variety of animals in a herd helped improve the odds of the nomads' survival. Equally important were the location and quality of water and grass that, along with tradition and agreements with other herding groups, determined a particular group's migratory patterns. As is true in all areas where resources are limited, clashes over prime grazing and watering areas were common.

Weather was the nomad's greatest enemy. Spring rains plus snowmelt swelled rivers and made crossing them dangerous. Adult animals,

➤ WILLIAM OF RUBRUCK DESCRIBES THE WEATHER

Early European travelers to the steppes of Central Asia commented on the unpredictability and severity of its weather. William of Rubruck, a Franciscan friar, traveled to the court of Mongke Khan in the mid-thirteenth century more than 20 years before the arrival of Marco Polo in China. As part of his extensive writings on his trip, he described the weather of the steppes.

“That morning the tips of my toes froze, with the result that I could no longer go around barefoot. The cold in those regions is most intense, and from the time it begins to freeze at no point does it stop until May. In fact, even in May it froze every morning, though during the day it thawed in the heat of the sun. But in the winter it never thaws, the ice remaining in the absence of any wind. If there were a winter wind there such as we have, nothing could survive, but the air is always calm until April and only then do the winds get up. And at the time we were there, around Easter countless animals were killed by the cold which came on the wind. Only a little snow fell there in the winter but around Easter, which came in the latter half of April, it fell in such quantities that it filled all the streets of Carcorum [sic] and had to be carried away in wagons.”

—Rebecca Wendelken

Source

The Mission of Friar William of Rubruck: His Journey to the Court of the Great Khan Möngke, 1253–1255, trans. Peter Jackson (London: Hakluyt Society, 1990), 176–177.

weakened from a long winter on limited rations, forded the rivers at great peril, and unsheared sheep easily drowned when their coats filled with water. However, waiting for the rivers to subside meant that animals could starve to death in the meantime. During the summer, droughts meant that grass did not grow and animal weight and milk production dropped. During extended droughts large numbers of animals died, but moderate summer droughts were also dangerous. Animals weakened from lack of food and water had a lesser chance of surviving the winter.

In the winter animals could push aside or paw through small amounts of snow to reach

the grasses below, but heavy snows meant death. Horses, the best-adapted animals, were able to paw through thick snow layers of 15–20 inches (40 to 50 centimeters), but deeper snow meant starvation. When a snow became covered with a layer of ice, the danger increased. This condition, called a *dzbut* or *dzud*, could be disastrous. If the ice layer was thick, even horses could not penetrate it. Once the snow was past, the danger was not over. A late frost could kill the early growth of grass and devastate a weakened herd.

Climatic pulsations, or longer-term weather changes, also had an impact on the lives of pastoral nomads, although if the changes developed gradually they were easier to survive. Climatic pulsations provide one theory for the initial southward movement of the Turks and Mongols. A shift to a cooler, drier climate increased snowfall in winter and reduced summer grass growth. The Mongols and other groups were forced to expand their territories to feed their herds. This brought them into contact and conflict with nomadic as well as settled peoples.

It is even possible that the climate shifts and forced movements south could have precipitated the development of Turko-Mongol empires. As these groups found themselves without adequate surrounding land for grazing, they became sedentary and began farming.

—Rebecca Wendelken

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. London: Blackwell, 1998.
- Khazanov, Anatoly M. *Nomads and the Outside World*. 2nd ed. Madison: University of Wisconsin Press, 1983.

Fall of Tiwanaku

The apparent harshness of the Bolivian high plains, or *altiplano*, where the capital of the Tiwanaku state lay along the southeastern shore of Lake Titicaca, has long provoked questions about this state's relationship with the environment. Early-twentieth-century explanations of the monumental complex at Tiwanaku proposed that it

was created at a time when the Andes Mountains had yet to reach their present height and was abandoned when the plateau rose too high to sustain its population. Such fanciful explanations have long been abandoned, but scientific data on the ancient environment of the Lake Titicaca basin have given rise to debates about whether or not climate was a critical factor in the decentralization of the Tiwanaku state and the site's abandonment between the tenth and early twelfth centuries CE.

Support for the environmental collapse of the Tiwanaku system stems largely from the work of Alan Kolata. Begun in the 1980s, Kolata's Wila Jawira Project endeavored to explore the ancient environment of the Titicaca Basin and interaction between agricultural land reclamation projects and paleoclimate (the climate of the past). The project examined data from several sources including ice core data from the Quelcaya glacier, geological cores from Lake Titicaca, and pollen and stable isotope analyses. The Quelcaya glacier, located 120 miles (200 kilometers) northwest of Tiwanaku, reveals wetter/colder periods during 610–650 and 760–1040 and drier/warmer periods during 540–730 and 1250–1310. Glacial cores also revealed heavy dust accumulation in roughly 600 and 920. Other data have been interpreted as consistent with the ice-core data.

The Wila Jawira Project researchers concluded that climate had a major impact on the Tiwanaku state. Tiwanaku developed during a period of relatively high precipitation. This enabled state development and management of raised agricultural fields in the Tiwanaku and Katari river catchments, causing the high dust accumulation in the glacial cores around 600. This development resulted in high agricultural yields and the enhancement of the Lake Titicaca fishery. The wetter climate also allowed Titicaca Basin populations to foster colonies in places like the Moquegua Valley of Peru and the eastern Andean region around Cochabamba, Bolivia, that could supplement the agricultural production of the core region.

Published rainfall charts show that after 800 the Titicaca Basin and surrounding zones became progressively drier and warmer on average. A major downturn occurred about 1040, with se-

vere drought following between 1245 and 1310. Kolata and his research team argue that this environmental shift had a deleterious impact on the agricultural system supporting the Tiwanaku state both in the core region and in more distant colonies. As rainfall decreased the water table dropped, rendering many of the existing raised fields useless and damaging fishing in Lake Titicaca.

In the wake of declining precipitation, environmentalists argue that the people of the Tiwanaku region made socioeconomic changes. They constructed additional fields closer to the retreating lakeshore, contributing to the dust found in the 920 layer of glacial cores. As the lake vanished, people rethought their reliance on its resources. Data from regions such as the Moquegua Valley suggest that former colonists distanced themselves from the highland state apparatus, pursuing their own interests. People destroyed state-associated architecture, looted tombs of the elites, and abandoned the cultural and religious symbols of the Tiwanaku state. In areas to the east of the altiplano, where inhabitants may have been less strongly incorporated into the state to begin with, people reverted to an inward (local) focus, severing highland ties.

Several researchers, however, now question the influence of the environment on the Tiwanaku system. Arguments against environmental explanations take several approaches. First, state control was not needed for the construction or maintenance of the raised field systems, as demonstrated by similar field systems constructed before and after the period of the Tiwanaku state. Second, the climate data do not correspond well with the fortunes of the state; the worst of the drought occurred well after the monumental core was abandoned. Third, a reliance on environmental explanations mischaracterizes human behavior. It overestimates the awareness that people have of their own environmental situation while underestimating their ability to cope with environmental fluctuations. As a result, many now conclude that social stresses associated with converting a confederation of related polities into a centralized state were equally to blame, if not more to blame, for the Tiwanaku downfall.

—Jo Ellen Burkholder

➤ RAINFALL AND PALEOCLIMATIC IMPACTS

What do rainfall averages really tell us about ancient climate and agricultural potential? The answer is that it may have a lot to do with interpretation. One problem is that climatic data from ice cores and lake sediments can mean more than one thing. Thick layers of ice, for example, can imply higher rainfall, colder temperatures, or some combination of both. In the same way, heavy lake sediments might signal erosion or construction of raised fields. To resolve these issues, researchers need additional data from the area in question.

Two other problems involve how well data help us understand ancient farming. First, averages from ice and lake cores cannot tell us at what time of year the rain fell. Precipitation in any quantity at the wrong time of year can seriously disrupt agricultural practices, as can colder or warmer temperatures. Second, rainfall indicators represent aggregate data, not an exact plot of where rain actually fell. Since rainfall can vary considerably from place to place, aggregate data may not tell us how well farmers in any one location actually did during a given time frame. To date, we do not have the ability to dramatically improve these kinds of resolution issues to give us a more complete picture of human-environmental interactions.

—Jo Ellen Burkholder

Bibliography

- Erickson, Clark L. "Neo-Environmental Determinism and Agrarian 'Collapse' in Andean Prehistory." *Antiquity* 73 (1999): 634–642.
- Kolata, Alan L., ed. *Tiwanaku and Its Hinterland: Archaeology and Paleoecology of an Andean Civilization*. Washington, DC: Smithsonian Institution Press, 1996.

Drought in North America, Losers and Adapters—Anasazi, Hohokam, Mimbres, Mogollon, and Chumash

During the early eleventh century (990–1060 CE), the middle twelfth century (1135–1170), and the late thirteenth century (1276–1297) several long-term, large-scale droughts occurred in North America. Climatic data indicate that these

droughts may have affected over 50 percent of the western United States. Furthermore, tree-ring data indicate that the droughts of the mid-twelfth century and the late thirteenth century were of a larger scale and affected a wider region of the contemporary western United States than the drought of the early eleventh century and that the 1276–1297 drought was great enough to have substantially touched even parts of the Plains and Mississippian regions.

The Southwest region was particularly affected by these droughts, and each triggered regional demographic shifts of local peoples. The Anasazi peoples (also called the Ancestral Puebloans) of the Four Corners region, for example, had to move east to the Rio Grande area as a result of the first two droughts. During the first drought many of the great houses in the central Anasazi area were vacated, while archaeological data indicate that the second drought resulted in large-scale population decline of the Four Corners region. These multiyear drought periods were characterized by reductions in both winter and summer precipitation, resulting in a depletion of available resources.

These two major drought episodes also contributed to significant change in the adaptive strategies of the Virgin Branch Anasazi, who occupied the southwestern Great Basin. Archaeological data indicate that the first drought promoted the adoption of several alternative buffering strategies, including new agricultural practices, increased reliance on storage, and the organization of large residential labor groups. The second drought, which followed 150 years of favorable climatic conditions and high levels of population growth, had a devastating impact upon the Virgin Branch Anasazi, resulting in rapid population decline of the entire region.

In present-day southern Arizona, the people archaeologically identified as Hohokam also experienced demographic changes as a result of these droughts but of a less extreme magnitude. Evidence based on a combination of macro-regional population studies and local research in the lower San Pedro River valley of southern Arizona, for example, indicates that only a gradual population decline occurred through the first two droughts, while the third drought resulted in a large-scale demographic change.

In the eastern Mimbres area of southwestern New Mexico, these droughts resulted in a shift in the population demographics rather than regional abandonment or large-scale population decline. Architectural, ceramic, and chronometric data provide evidence for occupational continuity and growth of small residential sites during the late eleventh through twelfth centuries in the eastern Mimbres area in the context of the depopulation of large villages. This regional reorganization in settlement indicates that Mimbres populations mitigated the impacts of the various droughts by relocating to nearby zones with more favorable resources.

These droughts also affected the prehistoric Native Americans living in the Mogollon region of southwestern New Mexico and southeastern Arizona. Similar to the neighboring Mimbres area, archaeological evidence indicates that the first two droughts resulted in minor shifts in resource use and demographic densities, that is, some areas increased in population while other areas decreased. By 1250, however, with the beginning of the late-thirteenth-century drought, many subregions including Pine Lawn, Reserve, Hay Hollow, and Jornada-El Paso rapidly declined in population density. As in the Mimbres region, however, evidence indicates that people simply moved to areas with better natural resources, as several Mogollon areas grew in size during this same period, such as Show Low, Pinedale, Four Mile, Point of Pines, and the Grasshopper regions.

To the west in California, these droughts also appear to have had an influence, although not as significant as in the desert Southwest. In the Chumash region of southern California, for example, around present-day Santa Barbara, the first two droughts appear to have had a significant impact in the development of local sociopolitical complexity. Unlike the peoples of the Southwest, who relied heavily on agriculture, the maritime subsistence way of life of the Chumash contained buffering mechanisms that were more equipped to respond to the droughts. However, some areas apparently were temporarily abandoned by the Chumash during the peak of these drought periods, only to be reoccupied later when environmental conditions again improved.

—Peter N. Jones

Bibliography

- Erlandson, Jon M., Torben C. Rick, and Rene L. Vellanoweth. *A Canyon through Time: Archaeology, History, and Ecology of the Tecolote Canyon Area, Santa Barbara County, California*. Salt Lake City: University of Utah Press, 2008.
- Fagan, Brian. *Chaco Canyon: Archaeologists Explore the Lives of an Ancient Society*. Oxford: Oxford University Press, 2005.
- Fish, Paul R., and Suzanne K. Fish. *Hobokam Millennium*. Santa Fe, NM: School of American Research Press, 2007.
- Hill, J. Brett, Jeffery J. Clark, William H. Doelle, and Patrick D. Lyons. "Prehistoric Demography in the Southwest: Migration, Coalescence, and Hohokam Population Decline." *American Antiquity* 69 (2004): 689–716.
- Martin, Paul S. "Prehistory: Mogollon." In *Handbook of North American Indians*, Vol. 9, *Southwest*, edited by Alfonso Ortiz. Washington, DC: Smithsonian Institution, 1979.
- Powers, Robert P. *The Peopling of Bandelier: New Insights from the Archaeology of the Pajarito Plateau*. Santa Fe, NM: School of American Research Press, 2005.

How Cold Was Cold? The Origins of the Little Ice Age

For its 4.5 billion-year history the earth has experienced rapid climate shifts, from its early beginning as a fiery core to glacial ice ages. These glacial periods then gave way to warming, the most recent occurring over 11,000 years ago, creating the more stable climate we currently enjoy. Within these severe climate shifts have been milder shifts, one of which is known as the Little Ice Age.

A period of unusually warm weather reached its height in 1200, giving way to a steady decline in temperature until the mid-1800s. The period of this cooling has been called the Little Ice Age. Although average temperatures at this time were only 1.8 to 3.6°F (1 to 2°C) lower than present, the drop had a large impact on climatic conditions and thus certain societies.

Many climatologists and historians date the beginning of the Little Ice Age to the fifteenth century, as expanding glaciers increasingly cut Greenland off from sea travel. However, archives, journals, and excavations reveal cooling conditions affecting the Northern Hemisphere by the

➤ JEAN DUC DE BERRY'S BOOK OF HOURS

Depictions of winter in European art were rare before the fourteenth century. Among the first was within *Très Riches Heures du Duc de Berry* (The Very Rich Hours of the Duke of Berry), an illustrated book of prayers commissioned by the duke in 1410. It is highly regarded as one of the most exquisite book of hours in existence and is notable for its portrayal of harsh winter conditions.

A book of hours is an illustrated medieval manuscript of texts, psalms, and prayers serving as a guide for Latin Christian worship. *Très Riches Heures* is 416 pages long, and half of the pages are illustrated. Most of the illustrations are filled with details on the prayer and labor rituals of the seasons and the degrees of the zodiac. For this reason manuscripts such as *Très Riches Heures* not only serve as an archive of religious beliefs and social life but also offer a glimpse into weather patterns.

—Christine Shearer

thirteenth century, as sea ice was already spreading around Greenland and as early frosts and crop failures hit Poland and Russia. In addition to the cooling, much of Europe experienced unusually warm, mostly dry summers (known as the Medieval Warm Period) until the weather turned unpredictable at the turn of the fourteenth century, leading to the Great Famine.

The famine is often traced to a series of large rainstorms that pounded Europe from 1315 to 1322, turning fields into lakes and flooding city streets. Not only did hundreds die from landslides and flooding, but the sustained rain ruined arable land and cut off trade routes, leading to widespread hunger. In search of food, many people migrated from rural areas to cities, and the concentration of people weakened by famine contributed to outbreaks of disease. Populations throughout Europe dwindled.

Oral legends, as recorded much later by European settlers in parts of present-day Canada and the northeastern United States, indicate that the effects of cooler climate were noticed by Native Americans in the early fourteenth century although less severely than in Europe and primarily

in the form of colder, longer winters. Native Americans in western North America also reported tribal famines at this time due to changing weather patterns.

While the period known as the Little Ice Age primarily affected the Northern Hemisphere, particularly the North Atlantic, research indicates cooling effects worldwide, although the timing and nature vary across regions. There is, for example, limited tree-ring evidence for cooler climatic conditions in China starting in the 1300s, while research and archives on ice caps in the Andes show glacial advance starting around 1250. Due in large part to present-day human-influenced global warming, the interest in climatology is growing, as is the research and understanding of its effects on different societies before the Little Ice Age.

—Christine Shearer

Bibliography

- Fagan, Brian. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2000.
- Grove, J. M. *The Little Ice Age*. London: Routledge, 1998.
- Ponting, Clive. *A New Green History of the World: The Environment and the Collapse of Great Civilizations*. London: Penguin, 2007.

Fourteenth-Century Famine in Europe

The cataclysmic Great Famine that afflicted Europe for seven years (1315–1322) radically diminished the population through widespread starvation and malnutrition and preceded the Black Death, which would further decimate Europe. The famine was accompanied by massive climatic changes resulting in floods and animal diseases that killed off masses of livestock, worsening the lot of the starving throughout Europe.

Despite the development of new agricultural tools and methods that contributed to higher harvest yields and a long period of mild weather (the Long Summer, ca. 1000–1300), which allowed European farmers to bring marginal lands into cultivation, Europe prior to the fourteenth century was plagued by periodic regional famines due to bad harvest cycles. The Great Famine, however, exceeded the scale of earlier famines in that it was widespread throughout most of Europe. More than that, it was an early manifestation of a major climatic shift that historians know as the Little Ice Age (1300–1850).

Despite these earlier, more localized famines as well as wars, epidemics, and an endemic high infant mortality rate, from about 1000 to around

► MEMORIES OF THE FAMINE FROM THE CHRONICLE OF JEAN DE VENETTE

French chronicler Jean de Venette (ca. 1307–1370), prior of a Carmelite convent in Paris and later provincial (superior of a religious order) of France from 1341 to 1366, wrote profusely about his experiences and his observations of French society. This first excerpt expresses his view of the Great Famine, which occurred early in his childhood. Later in his life, he commented on France's severe climatic fluctuations, illustrating the relationship in the second excerpt between weather and bad harvests.

“Yet you must know that I, at the age of seven or eight, saw this great and mighty famine begin the year foretold, 1315. It was so severe in France that most of the population died of hunger and want. And this famine lasted two years and more, for it began in 1315 and ceased in 1318. Then, suddenly, by God's providence, crops became as abundant as they had been scarce and the famine ceased.”

“The winter of this year 1363 was very severe and long. A hard frost accompanied by frequent snowfalls persisted almost to the end of March, when it broke at last. In midwinter, it had frozen the vines even to their roots, in several localities, and had destroyed many a nut tree. The sheep and lambs of many districts perished as a result of the cold and the lack of fodder. Bread and other foodstuffs were stored to protect them from the cold in very deep vaults and cellars which had always before kept warm all winter. Yet I saw supplies thus protected brought up frozen.”

—Abraham O. Mendoza

Source

Austin P. Evans, ed. and trans., *The Chronicle of Jean de Venette* (New York: Columbia University Press, 1953), 116.

1300 Europe's overall population increased dramatically, multiplying several times over. Now, however, the Great Famine signaled the beginning of a major fourteenth-century downward spiral in its human numbers. Contemporaries were aware that something of unheard-of catastrophic proportions was taking place, as their testimony bears witness.

Animal murrains (diseases) led to the mass death of livestock, which in turn depleted the already meager diet of Europeans. The scarcity of food led to mass starvation, resulting in an estimated death rate of 10–25 percent in many towns and cities, and those who did not perish were weakened from malnutrition. In turn, this created a greater chance to fall prey to disease. The Black Death emerged soon after the Great Famine and struck down especially those with weak immunity to disease. As famine and disease ran rampant, desperation and starvation led some sufferers into cannibalism: they ate their young or the dead.

—Abraham O. Mendoza

Bibliography

- Aberth, John. *From the Brink of the Apocalypse: Confronting Famine, War, Plague, and Death in the Later Middle Ages*. New York: Routledge, 2000.
- Fagan, Brian. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2000.
- Jordan, William Chester. *The Great Famine: Northern Europe in the Early Fourteenth Century*. Princeton, NJ: Princeton University Press, 1996.

The Inuit Move South in Greenland

The present Greenland Inuit people are the descendants of the prehistoric Thule people archaeologically described by the Thule material culture. Beginning 1,000 years ago, these people colonized what is known as the Thule District of northern Greenland, and by the late eleventh or early twelfth century prehistoric Inuit people lived throughout the region. Primarily adapted to hunting sea mammals including large baleen whales, they entered northern Greenland after having spread east across the Canadian Arctic Archipelago during a period of climatic warming.



Greenlanders in polar dress made of animal skins, carrying a spear and a bow and arrow, engraving after a painting made in 1654. (Jupiterimages)

For a century or two their material culture was virtually identical to the earlier Thule culture in eastern Alaska and Canada.

Sometime during the late twelfth and early thirteenth centuries the Inuit people expanded south across Melville Bay to the west coast of Greenland, where archeological evidence indicates that they encountered the Norse. This period has been termed Inugsuk, but the degree of Norse influence on prehistoric Inuit culture as well as the nature and extent of the Inuit-Norse interaction remains uncertain. By the late fifteenth century the Inuit people occupied the entire West Greenland coast as far south as Cape Farewell. Subsequent climatic changes after the fifteenth century, namely the Little Ice Age, have been associated with a decrease in settlement in the northerly regions coupled with migration to more southerly regions. Similarly, during this period evidence indicates that whaling among the Inuit greatly decreased, possibly as a result of

➤ INUIT ORAL TRADITION

Inuit oral traditions from Greenland are clearly divided into two general categories: *oqalugtuat* and *oqalualat* stories. *Oqalugtuat* stories are very old oral traditions that often incorporate supernatural occurrences, mythological creatures, and events from distant times. They are intended to give instructions for proper living, teach social norms, and relate cultural history. *Oqalualat* stories, on the other hand, are accounts of actual events that have taken place within a person's or a community's living memory. These two traditions overlap. Among the recorded *oqalugtuat* (or mythic) oral traditions are several that relate times and events that can be understood as describing the Inuits' southern movement in Greenland. For example, *oqalugtuat* stories discussing the Tuniit reference the people who inhabited the Arctic region prior to the Inuits' arrival. Evidence indicates that the Tuniit were the same people whom archaeologists have labeled Dorset, and oral traditions describe them as a race of large, very strong people whom the Inuit clashed with during their movements. Likewise, the *oqalugtuat* oral traditions of the five brothers describe the brothers' journey across the ice from one landfall to another as they moved down the coast of Greenland.

—Peter N. Jones

increased sea ice. There is adequate archaeological evidence from the decreasing amounts of baleen to argue for a steady decline in bowhead whale hunting after 1400. Rather, evidence indicates that the hunting strategy increasingly focused on seal, walrus, caribou, musk-ox, and other terrestrial animals.

During the late seventeenth or early eighteenth century as the climate began to change again, Inuit social organization and residential patterns also changed. By the seventeenth and eighteenth centuries evidence indicates that the presence of Europeans had a decisive influence on the Inuit communities in Greenland. For example, archaeological data indicate that Inuit communities relocated to European landing places, mostly in the south, for the purpose of trade and exchange.

—Peter N. Jones

Bibliography

Gullov, Hans Christian. *From Middle Ages to Colonial Times: Archaeological and Ethnobiological Studies of the Thule Culture of South West Greenland, 1300–1800 AD*. Copenhagen: Meddelelser om Gronland, 1997.

Maxwell, Moreau S. *Prehistory of the Eastern Arctic*. Orlando: Academic Press, 1985.

Changes in Baltic and Atlantic Fishing Patterns

The emergence of the Little Ice Age in the thirteenth century led to unpredictably colder seasons in the Northern Hemisphere that resulted in gradual yet significant changes in the location and patterns of fisheries in the Atlantic Ocean, the North Sea, and the Baltic Sea. Notwithstanding these changes, dried or salted cod and herring remained a European staple. Traditionally the Norse, fishing in the North Atlantic, had used dried cod as sustenance through the long winter months and as rations while at sea. Permission by the Roman Catholic Church in the eighth century to consume fish on Fridays and other days of abstinence increased the demand for dried or salted cod and particularly herring in Europe. Herring, a fish that was widely abundant and easily preserved, allowed the poor, soldiers, and everyday people the ability to consume fish on days of abstinence. At this point, the Basques, Bretons, and English became actively involved in fishing in coastal waters.

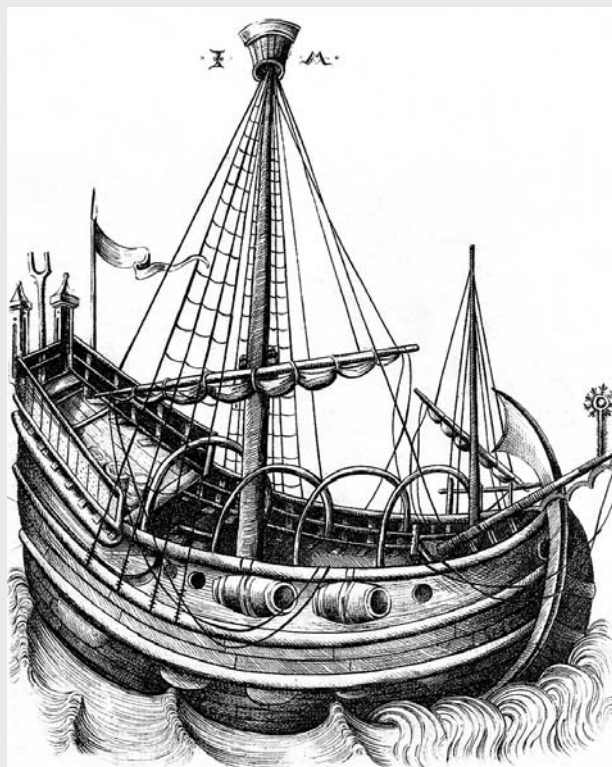
The cooling of oceanic waters during the thirteenth century, however, displaced the cod stocks from the European shelf farther into the North Atlantic and forced enormous herring shoals into the North Sea. In the Baltic Sea, more severe winters created a shift in the timing of herring spawning and constricted the fishing season. Although other species such as sprats, flounder, and eelpout were present, the substantially reduced herring catches played havoc on the viability of Baltic fishing. The gradual reduction and displacement of the traditional cod stocks in the North Sea resulted in an overall inconsistent supply of fish, which in turn spurred greater competition among those states and smaller communities depending on fishing as well as certain maritime technological advancements.

THE BUSS

The development of the capacity to catch and preserve herring on ships while still at sea helped the Dutch become a major competitor in the fourteenth-century European fishing industry. This possibility facilitated the engineering of a new sailing vessel, the buss, that accommodated 18 to 30 men over the course of five to eight weeks. Owing much of its basic design to Norse long ships, the buss had up to three masts and a displacement of up to 100 tons. Buss crews used long drift nets to catch herring, which they immediately gutted, salted, and barreled. Outside of the fishing season, this capable vessel was used as a general transport ship. By the mid-sixteenth century, busses in fleets of up to 400 vessels were operating out of Dutch ports.

—Jonathan H. L’Hommedieu

Dutch herring buss, about 1480. (Science Museum/SSPL/The Image Works)



Prior to the fourteenth century, the Basques were in the forefront of maritime technological advancements in Western Europe. English and Dutch advancements in shipbuilding and fishing techniques and the growing political importance of the Hanseatic League, a network of Germanic free cities around the Baltic Sea, resulted in a significant increase in fishing competition and a further decrease in fishing stocks. As large quantities of herring moved into the North Sea, the Dutch invented a much larger ship, the buss. Similarly, the English established mastery of the new Icelandic cod fisheries with the dogger, a maritime vessel that transformed cod fishing. In the 1430s, correlating with the height of political influence of the Hanseatic League, Germanic fishers began competing with the English for the shrinking cod stocks around Iceland. Diplomatic notes were frequently exchanged, fights among fishers were not unusual, and rivals plundered

cargoes. As the cod stock continued to move toward warmer waters in the Atlantic Ocean after the fourteenth century, the English relentlessly expanded their fisheries farther into the Atlantic. As a result of the Little Ice Age, the scarcity of cod and the abundance of herring in the North Sea led the Dutch, utilizing their superior fishing techniques and the buss, to assume the role of one of the most important fishing nations at the end of the sixteenth century.

—Jonathan H. L’Hommedieu

Bibliography

- Fagan, Brian M. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2000.
- Fleming, James Rodger. *Historical Perspectives on Climate Change*. New York: Oxford University Press, 1998.
- Grove, Jean M. *The Little Ice Age*. New York: Methuen, 1988.

The Little Ice Age in the Americas

During the Holocene epoch in the Americas (10,250 years before the present), the mean temperature and precipitation levels across both continents fluctuated considerably. This caused regional environments and local ecologies to vary greatly across time, ranging from drier and warmer periods to extended colder and wetter periods. One of these extended cold and wet periods occurred in the Americas approximately 700 years before the present and lasted for close to 400 years. During this period, commonly referred to as the Little Ice Age, annual temperature and precipitation regimes throughout the Americas were several degrees colder and wetter than today.

In the mountains of western North America, for example, evidence indicates that glaciers

reached positions more advanced in the 1700s and 1800s than they had at any time since the last major glaciation at the end of the Pleistocene epoch (approximately 10,250 years before the present). This was primarily the result of a decrease in mean summer temperatures coupled with an overall increase in winter precipitation.

Beginning around 700 years ago and peaking in the early seventeenth century, similar climatic evidence from the Coast Mountains of British Columbia in Canada indicates that the ranges of some plants either retracted or extended, especially near tree lines, in response to changes in mean temperatures of 1.8–3.6°F (1–2°C) as well as to changes in summer snow cover. Likewise, in eastern Canada evidence from the long-term growth performance of black spruce trees indicates that significantly smaller trees grew in the eastern Canadian woodlands during the Little Ice Age than today, primarily as a result of the period's more extreme climate.

In South America, evidence indicates that a similar shift in annual temperature and precipitation regimes took place during the Little Ice Age. For example, sediment core data from southern Chile evidences changes in pollen levels during the Little Ice Age, indicating significant shifts in the intensity of the Southern Westerlies and overall precipitation patterns across the southern portion of the continent. Likewise, ice core data from the Peruvian and Bolivian Andes contain evidence of higher precipitation levels and colder mean annual temperature during the Little Ice Age. Because of the change in the Southern Westerlies during this time, evidence also indicates that some areas east of the Andes experienced drier mean annual precipitation regimes. In the Pampas region of present-day Argentina, for example, sediment data indicate that a cooler, drier environment than today existed for several hundred years during the Little Ice Age.

—Peter N. Jones

► THE EVIDENCE FOR SOUTH AMERICA

The evidence for climate change during the Little Ice Age in South America comes from several types of data. Sediment core records recovered from the bottoms of lakes and wetlands contain records of the silt and pollen and other objects and materials that have fallen over time. The lake water or wetlands act as a preservative, and the silt or pollen deposits fall in chronological order, allowing changes in climate to be documented over time. Sediment cores have been recovered from throughout the continent, but the majority have come from Argentina and Chile. Ice core records are similar, relying on the accumulation of snow and ice over many years that have recrystallized and trapped air bubbles from previous time periods. The composition of these ice cores, especially the presence of hydrogen and oxygen isotopes, provides a picture of the climate at the time. Ice core evidence has been recovered from most Andean countries. The other type of evidence for climate change in South America comes from prehistoric bone assemblages. By examining the types of bones found in particular areas over time, archaeologists are able to deduce the change in environment over time by knowing the ecosystem of that animal species.

—Peter N. Jones

Bibliography

- Fagan, Brian. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2001.
- Macdougall, Doug. *Frozen Earth: The Once and Future Story of Ice Ages*. Berkeley: University of California Press, 2006.
- Snow, Dean R. "Late Prehistory of the East Coast." In *Handbook of North American Indians*, Vol. 15,

Northeast, edited by Bruce G. Trigger. Washington, DC: Smithsonian Institution, 1978.

Vallee, S., and Payette, S. "Contrasted Growth of Black Spruce (*Picea mariana*) Forest Trees at Treeline

Associated with Climate Change over the Last 400 Years." *Arctic, Antarctic, and Alpine Research* 36 (2004): 400–406.

■ Introduction: The Human Environmental Imprint—Cities around the World

No one would deny that cities and those who dwell in them have always had a significant impact on the environment, and when they become megalopolises their impact is almost exponentially multiplied.

Between 1000 and 1500 a fair number of massive cities arose around the globe, and smaller cities but of substantial size proliferated on every continent except Australia and Antarctica. The single most urbanized region was China, where cities and towns of every size multiplied and expanded, at least until the Mongol onslaught of the thirteenth century and the bubonic plague pandemic of the fourteenth century, which together resulted in a great deal of destruction, death, and diminution in the numbers and size of the Middle Kingdom's cities and towns. During the early Ming era, however, a rapid recovery was under way, perhaps best symbolized by the creation of a new imperial capital in Beijing, the construction of which was begun in 1406 and initially completed in 1421. Indeed, this was the case for all areas of Afro-Eurasia touched by thirteenth- and fourteenth-century invaders from the Central Asian steppe or by the Great Pandemic: rapid growth in the numbers and size of urban centers for the first several centuries followed by a dramatic reduction of both but then recovery during the fifteenth century and following. Urban recovery in Europe, however, was far slower than in China, although cities such as Florence and Wittenberg provided the setting and impetus for two transformative local movements: the Renaissance and the Protestant Reformation. The cities of the Americas escaped the cruel blows of the thirteenth and fourteenth centuries (their mortal blows came with the sixteenth-century arrival of Europeans), and consequently the Americas'

great and near-great urban areas, such as Tenochtitlan, Cuzco, and Cahokia, could grow in size and complexity in relative security during these five centuries.

Prior to the arrival of the Mongols, many of China's provincial cities could claim megalopolis status. One such great city was Quanzhou, a southern port city in Fujian Province, that in 1120 claimed 500,000 inhabitants within and around the city proper. Due to its large population of resident foreign merchants, the city was a major center of commerce with a world that stretched as far west as northern Africa and Muslim Spain. Another great port city that flourished in the age of Southern Song (1127–1279), when it served as the "temporary" imperial capital, was Hangzhou, which Marco Polo described as the finest and most splendid city in the world. This was high praise, coming as it did from a Venetian whose home city was the center of a great eastern Mediterranean empire. In 1125, roughly a half century before Polo arrived in China, an anonymous Chinese author composed a treatise in praise of Hangzhou titled *A Record of Musings on the Eastern Capital*. In it he lauded its varied and specialized markets, its massive warehouses set along the shores of an artificial lake, and its commercial establishments, especially its teahouses, some of which were notorious for their prostitutes and hustlers. Indeed, what one medieval English writer noted in praise of the qualities of the far-smaller but vibrant London could be equally said of Hangzhou, Quanzhou, and numerous other great cities across the world: The city was a wonderful place in which to live for those who had sufficient money.

What many of these contemporary writers did not remark on—taking it undoubtedly as a given—was the pollution generated by cities and

towns, although some, most notably Tenochtitlan, did a remarkable job of providing fresh water and cleanly disposing of waste. One writer who did comment on urban filth—although it was the filth of the infidel Latin Christian colonists in the Levant—was Ibn Jubayr, an Andalusian Muslim who visited the Latin Kingdom's port city of Acre in 1184. In this meeting place of Muslims and Christians of every variety, he noted that the city stank from its overflow of refuse and excrement.

Yes, cities could be lovely places in which to live for those who could afford them and who were not overly sensitive to noxious aromas. Numerous Chinese silk screen paintings from this period, such as the twelfth-century *Spring Festival along the River* that depicts the Northern Song capital of Kaifeng (960–1126), portray the myriad activities and pleasures of urban life. But pollution and the diseases it bred were equally a morbid and often deadly fact of urban life.

—Alfred J. Andrea

Cities of the Swahili Coast

From southern Somalia to the northern parts of Mozambique, the coast of East Africa is dotted with the ruins of abandoned cities, towns, and cemeteries. Some of these, such as the ruined town of Gedi in Kenya, cover many acres and are littered with the remains of stone-built monumental buildings such as mosques, palaces, and mansions. Others, such as Ras Mkumbuu on the island of Pemba, cover a large area, but most of the remains, except for a few tombs, are visible only to the trained eye of an archaeologist. So common are these ruins that since at least the seventeenth century, ruins have been a favorite theme in the poetic tradition of the coast, allowing poets to contemplate the impermanence of all material things.

The people who built these cities are called the Swahili. The word “Swahili” derives from the Arabic word for “coast”; it is not clear when the people of the coast began to use this term to describe themselves or even when, if ever, they began to think of themselves as a coherent group of people. That the standard name for the people who built the cities and towns of the East African coast derives from Arabic indicates that

although the Swahili are African and speak an essentially Bantu language, they also participated in the larger cosmopolitan world of the Indian Ocean, and these oceanic connections are as much a part of their story as are their local African origins.

The towns that formed the core of the Swahili world at its peak in the period between 1000 and 1500 CE had their roots in smaller fishing and trading towns, some of which date back to the middle of the first millennium. But around 1000 the coast seems to have become more firmly embedded in Indian Ocean trade networks and culture. The result was the Islamization of the coast and the expansion of the coastal villages into towns and cities. Initially these towns were built mostly out of perishable materials (most often mud and wood) with a few public buildings made of stone. Thus, the congregational mosque and the ruler's palace might be made of stone, while the rest of the city would be constructed from sun-dried mud reinforced with termite-resistant mangrove wood.

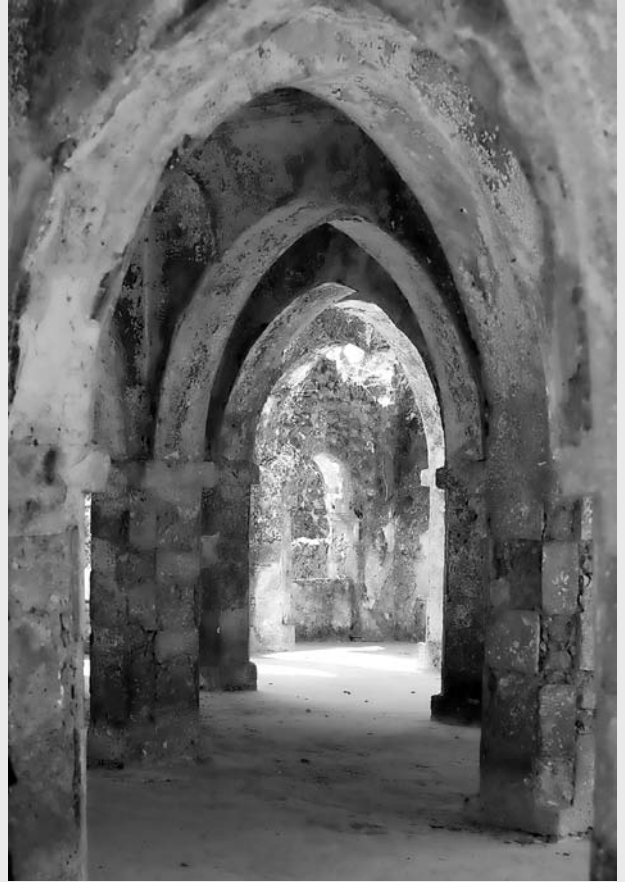
Like many maritime trading cities, the cities of the Swahili coast were city-states. That is to say, there was no Swahili empire or any other overarching political structure on the coast. Each city was self-governing and controlled its own hinterland, but the political reach of the city leaders rarely extended far beyond the gates of the city. Occasionally one town would conquer another, but immediately the leaders of the conquered city would begin plotting a return to independence, and few defeated cities remained politically subordinated for long. The cities were usually ruled by kings, but the powers of the kings seem to have been rather limited and in many instances symbolic. Some towns would go for long periods of time without a king, suggesting that kingship was not central to government. Rather, the real power lay with elite merchants, who are usually described as *waungwana* in Swahili or as patricians in English. Parts of each city were reserved exclusively for patricians, and it was they who chose one of their number to be king, very much like the Venetian merchant patricians of the same era who elected their *doge*, or leader. Many of these Swahili patricians had the leisure to participate in Islamic scholarship and because of their commercial contacts with

THE CITY OF KILWA

The cities of the Swahili coast went through a major expansion in the fourteenth and fifteenth centuries. The greatest of these was Kilwa, located in what is today Tanzania. Kilwa was perfectly situated to control access to one of the major trade goods of the East African coast, the gold that arrived from the interior at the southern port of Sofala and then was transported up the coast. As Kilwa grew rich on Sofala gold, the size and grandeur of the city grew apace. The traveler Ibn Battuta, one of the best-traveled people of his time, visited Kilwa in 1331 and described it as “one of the mostly beautiful and well-constructed towns in the world.”

When the Portuguese first arrived in Kilwa in 1500, they were astounded. In addition to many stone-built houses, the city contained two huge public buildings. One was the Husuni Kubwa, a vast palace and warehouse complex used by the merchant-princes who ruled the city, and the other was a mosque with elaborate vaulted ceilings that was the largest enclosed space in sub-Saharan Africa. The Portuguese liked Kilwa so much that they came back and conquered it in 1505 and in the process burned down much of the city.

—Erik Gilbert



Arches of the Great Mosque on the island of Kilwa off the coast of Tanzania, fifteenth century. It is believed that the mosque had one of the first domes on the East African coast. (Ikachan/Dreamstime)

Arab merchants often intermarried with visiting or immigrant Arab families. Over time, many of these families began to claim alien origins in either Persia or the Arabian Peninsula, which added greatly to the confusion of scholars in the nineteenth century trying to determine the origins of the Swahili world.

The growing wealth of the patrician merchants resulted in a major transformation of Swahili cities in the middle of the fourteenth century. They began to build their homes of stone rather than mud. The houses they built were large and were meant to demonstrate their creditworthiness to potential business partners. They included guest apartments where visiting merchants could

live and storage areas where their guests could keep their trade goods. Inside the houses were carved plaster niches, called *zidaka*, where imported Chinese porcelain and other signs of wealth could be displayed. Thus, by 1500 the Swahili cities were thriving commercial centers, with both public buildings and elite residences built in stone as well as many commoners' houses built from mud and wood.

—Erik Gilbert

Bibliography

- Horton, Mark, and John Middleton. *The Swabili*. Oxford, UK: Blackwell, 2000.
- Kusimba, Chapuruka. *The Rise and Fall of Swabili City States*. London: Altamira, 1999.

Great Zimbabwe—The Built Environment

The massive ruins of Great Zimbabwe (a name derived from the Shona term for stone buildings) in the modern nation of Zimbabwe constitute one of the most important archaeological sites in Africa. Great Zimbabwe consists of three principal ruins: the Hill Ruins, the Great Enclosure, and the Valley Ruins. Together they provide evidence of a thriving medieval African city demonstrating African development, lifestyle, and ingenuity long before European colonizers set foot on the continent.

Human occupation on the Zimbabwe plateau is noted as early as the Stone Age, and a rich record of human activity is found near Great Zimbabwe in the Chamavara and Dengeni caves. The fertile environment provided water, fuel, food, and shelter for inhabitants. By early in the first millennium CE, farming villages occupied a considerable part of the Zimbabwe plateau. It was the centralization of these scattered, small-scale settlements, supported by shifting cultivation and cattle-raising, that gave rise to Great Zimbabwe. Additionally, by the ninth century, gold, ivory, and other products were being traded between the people of Schroda, a village in the Limpopo Valley, and the traders on the seacoast. By the eleventh to twelfth centuries, the rate of development accelerated due to the generational acquisition of wealth and an accumulation of personal property, leading to the creation of stone settlements as a vast display of wealth.

Radiocarbon dating indicates that the first permanent settlement at the Great Zimbabwe site was on the Hill site and consisted of a small village of pole and dacha (clay) huts dating from 1075 ($\pm$ 150 years). Similar radiocarbon dating of the stone walls puts the development of building in stone at Great Zimbabwe at about 1130 ($\pm$ 40 years). Great Zimbabwe's rise to power began in the thirteenth century, and by the start of the fourteenth century the city and state were fully established. It is estimated that at its height, Great Zimbabwe was home to about 18,000 people.

Great Zimbabwe was built in three phases over the course of 300 to 400 years as evidenced by increasing improvement in masonry skills in

the construction of the stone walls. Early walls are sturdy but not neatly built. The stones used in the construction of later walls were carefully matched and fit together so that there was no need to fill gaps between mismatched stones. All stones used to construct the walls of Great Zimbabwe were quarried from the local environment. No mortar was used to join any of the stones.

The designers of the Hill ruins took advantage of the natural beauty of the landscape and utilized the environment to enhance their dwelling places. The Hill ruins are the oldest, and the stone walls are constructed to incorporate massive granite boulders. The Hill ruins show evidence of a number of enclosures. The western enclosure is thought to have been inhabited first and was most likely built to house the royal family. Subsequently, the Great Enclosure was built below the hill, and the royal family relocated to this much grander space. The Hill ruins are thought to have become home to the Spirit Medium, or spiritual leader. The Great Enclosure ruin is Great Zimbabwe's utmost achievement and southern Africa's largest masonry structure. The outer wall of the enclosure is more than 800 feet (255 meters) in circumference and contains some 1 million stones. The ruins of the enclosure were home to five or six separate royal lineage households. The Valley ruins contained approximately 50 separate households living behind the stone enclosures, which demonstrated the power and authority of these families. Residents were most likely the officials of the court and relatives of the king and his tributary chiefs.

Surrounding Great Zimbabwe on nearby hills and granite outcrops, a dozen or more small stone-walled enclosures indicate the existence of dwellings for other members of the elite class. Additional ruins are found between one and two days' walk, and these are thought to be the Zimbabwe, or stone houses, of the junior members of Great Zimbabwe's ruling class or homes and capital seats of tributary rulers. The Great Zimbabwe ruins provide evidence of a thriving culture in the heart of Africa.

—Lorna Lueker Zukas

Bibliography

Caton-Thompson, G. *The Zimbabwe Culture: Ruins and Reactions*. Oxford, UK: Clarendon, 1931.

- Chipunza, K. T. "A Diachronic Analysis of the Standing Structures of the Hill Complex at Great Zimbabwe." In Gilbert Pwiti, ed., *Caves, Monuments and Texts: Zimbabwean Archaeology Today*, 125–142. Studies in African Archaeology 14. Uppsala, Sweden: Department of Anthropology & Ancient History, Uppsala University, 1997.
- Garlake, Peter. *Great Zimbabwe*. New York: Stein and Day, 1973.
- Garlake, Peter. *Great Zimbabwe: Described and Explained*. Harare: Zimbabwe Publishing House, 1982.
- Huffman, Thomas N. *Symbols in Stone: Unraveling the Mystery of Great Zimbabwe*. Johannesburg: Witwatersrand University Press, 1987.
- Ndoro, W. "The Evolution of a Management Policy at Great Zimbabwe." In Gilbert Pwiti, ed., *Caves, Monuments and Texts: Zimbabwean Archaeology Today*, 98–124. Studies in African Archaeology 14. Uppsala, Sweden: Department of Anthropology & Ancient History, Uppsala University, 1997.
- Ndoro, W. "The Preservation and History of Great Zimbabwe." *Antiquity* 68 (1994): 616–623.
- Pwiti, G. "Let the Ancestors Rest in Peace? New Challenges for Cultural Heritage Management in Zimbabwe." *Conservation and Management of Archaeological Sites* 1 (1996): 151–160.
- Randall-Maciver, David. *Mediaeval Rhodesia*. New York: Negro University Press, 1969.

Cities of the Western Sudan

Cities of the Western Sudan benefited from the spread of Islam and developed as increasingly significant centers of commercial and religious life in the second millennium CE. Urbanism expanded during the period between 1000 and 1500 as cities in the Western Sudan became sites where artistic and intellectual pursuits flourished. Anchoring the mercantile and political functions of states, the urban centers grew in size and influence.

Urbanism in the Western Sudan had indigenous roots in settlements with strategic access to secure subsistence and trade, independent of state-focused power. Middle Niger River entrepôts such as Jenne Jenou and Gao collected and exchanged the goods and resources from savanna, forest, river, and desert commercial networks as early as 250 BCE. Later centers such as Sijilmasa were founded as departure points for the caravans between the Western Sudan and

North Africa and developed into urban centers by about the ninth century CE. From the Atlantic coast and the Senegal Valley to the vast regions of the Niger, trade in gold, salt, kola, iron, slaves, and foodstuffs attracted people and wealth to cities through the centuries.

As primarily cities of trade, the Western Sudan centers were typically organized into distinct ethnic and occupational quarters based on artisan or trade interests. The arrival of Islam became the catalyst for a more centralized political role. Rulers exacted tribute and taxes from their hinterlands in the form of gold, using the revenues to support armies and protect trade routes. Once rulers and other elites converted to Islam, trade was further enhanced. Mosques were built, and their patronage supported urban arts and learning. Cities became conduits for the transfer of technology, from weaving to metrics. At that time, West Africa may have produced as much as two-thirds of the world's gold. It is little wonder that the centers attracted pilgrims and merchants, whose diversity and wealth in turn promoted a cosmopolitan atmosphere.

While many of the cities of the Western Sudan now are in ruins, the vivid descriptions of Arab travelers remain as testimony to their size and grandeur. According to the fourteenth-century Egyptian scholar al-Umari, the city of Sijilmasa was reportedly a place of imposing architecture, with many high buildings and gated entryways. At the heart of many cities were the palaces and mosques. Cities had broad tree-lined streets, bustling markets, and ports. Religious and ceremonial structures formed the city center and were surrounded by the residences of city dwellers. An eyewitness account by the fourteenth-century traveler Ibn Battuta also described the mud architecture of one city's houses with their timber and reed roofs, suggesting their reliance on local traditional styles. By contrast, mosques and palaces were often designed by foreign architects whose work was supported by the generosity of wealthy patrons. The ruler Mansa Musa (r. 1312–1327) is said to have brought the Andalusian poet and architect Abu Ishaq al-Sahili to the capital city, where he constructed an elegant building, plastered with colorfully painted designs, as well as the Sudano-Sahelian style mosque that dominated the cityscape.

> TIMBUKTU



Sankore mosque and madrasa of Timbuktu, early fourteenth century. (David Kerkhoff)

The city of Timbuktu was founded by Tuaregs as a trading settlement near the end of the first millennium CE and subsequently grew to the status of a major city during the tenure of the Mali and Songhai empires. Situated near the Niger River, Timbuktu developed as a central meeting point for North African salt traders and caravans carrying gold and slaves from the south. There at the interface between environmental zones, goods were transferred from camel to canoe. Because of its location in an area subject to increasing aridity, the community's population was forced to rely on trade for basic subsistence. A center for Islamic learning at its height, Timbuktu was regarded as the key site in the intellectual life of West Africa. More than 25,000 students attended the Sankore madrasa, where they studied theology, literature, and law. Reportedly more profits could be made off the city's book trade than any other commodity.

—Candice Goucher

Toward the middle of the second millennium, the cities of the Western Sudan achieved new levels of refinement. The development of many cities as centers of Islamic learning meant that the urban centers attracted scholars and clerics. Madrasas (schools attached to mosques) were built, including the legendary madrasa of Timbuktu. Most of the scholars were of Sudanese origin, and their presence became a significant force in the intellectual life of West African urban centers, especially at Timbuktu, Gao, and

Kano. But the Islamic influences constituted only one strand in the complex cultural weave of the region. Even in the palace of converted elites, the traditional masquerades could be observed. While very few people could read the Arabic works in city libraries, many sought objects with quranic verses in Arabic script for their protective qualities and ritual uses within African religions. Such syncretism would continue to blend the influence of Islam with the continuities of the African past.

—Candice Goucher

Bibliography

- Bravmann, Rene A. *African Islam*. Washington, DC, and London: Smithsonian Institution Press/Ethnographica, 1983.
- Connah, Graham. *African Civilizations: An Archaeological Perspective*. New York: Cambridge University Press, 2001.
- Dunn, Ross E. *The Adventures of Ibn Battuta: A Muslim Traveler of the 14th Century*. Berkeley and Los Angeles: University of California Press, 1989.
- Oliver, Roland, and Anthony Atmore. *Medieval Africa: 1250–1800*. New York: Cambridge University Press, 2001.

Cities of the Almohad Empire

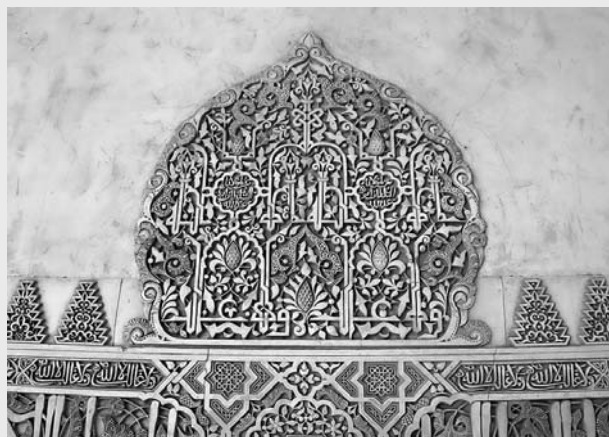
When al-Mahdi Ibn Tumart (d. 1130) started preaching *tawhid* (the Unity of God, or Allah) in the tiny Berber village of Tinmal in the High Atlas Mountains of Morocco, no one imagined that his reformist movement would give rise to one of the most powerful empires of the Muslim West, the Almohads (from *al-Muwahhidun*, “they who proclaim God’s unity”). Ironically, the art and architecture of the Muslim West owe a great deal of their splendor (e.g., the minarets of the Giralda and Kutubiyya in Seville and Marrakech, respectively) to what started as an austere and puritanical movement. Memory still has it that when the first Almohads entered the city of Fez (around 1145), they hid with a layer of whitewash the stucco decoration found at the Qarawiyyin Mosque because it was deemed too lavish for their taste.

Most of the Almohad architectural achievements were commissioned under the patronage of their first four caliphs. These include congre-

➤ ALMOHAD MECHANICAL INNOVATIONS

If the Almohads went to great lengths to fight innovation in religion (*bida* in Arabic), they showed almost the same zeal in acquiring the latest innovations in science and engineering. The mechanical *maqsura* (royal enclosure) in the Kutubiyya Mosque of Marrakech and the mechanical box for storing a copy of the Quran are two good examples in this respect.

Archaeological excavations around the *mihrab* area of the first Kutubiyya, the wall niche that indicated the direction of Mecca, revealed a set of constructions beneath the floor level that intrigued French colonial-period archaeologists. Their function and their relation to the *mihrab* area above remained a mystery until a historian visited the site and recognized in them the remains of the mechanical *maqsura* described in *al-Hulal al-Mushiyya* (*Embroidered Robes*), a medieval anonymous chronicle of the Almoravids and the Almohads. The *maqsura* was commissioned by Abd Al-Mumin (d. 1163) and designed by a Muslim engineer from Malaga in al-Andalus. It consists of six wooden panels linked to an underground mechanism and covered with mats. When the caliph arrived for the Friday prayer, the mats were removed and the mechanism activated. The panels would then rise above the floor to form a royal wooden enclosure. Once the communal prayer was concluded, the *maqsura* would disappear



Moorish wall design in the Alhambra, Granada. (Alfred J. Andrea)

again, and the space within the mosque regained its egalitarian character as was befitting of Almohad orthodoxy.

It was the same Abd Al-Mumin who commissioned a mechanical box for storing the *Mushaf* (Quran) of the Great Mosque of Cordoba. This Quran was placed on a lectern and stored in a wooden box. The Quran came out of its storage box automatically—via a mechanism (*hila*, Arabic for “ruse”)—as soon as a key was introduced and the box unlocked.

—Said Ennahid

gational mosques, palaces complete with royal gardens, waterworks, and monumental gates and towers. The two structuring principles of Almohad art and architecture are monumentality in scope of projects and simplicity in decoration. Almohad architecture relied a great deal on the construction technique of *tabiyya* (cob work), especially for city ramparts (e.g., Marrakech, Rabat, Fez, and Seville). This technique, as described in the *Muqaddimah* of Ibn Khaldun (written in 1377), consists of a mixture of lime, mud, and gravel poured and rammed into a wooden frame and left to dry. The holes left at regular intervals on North African fortifications—which have often intrigued foreign visitors—were left by the beams that kept the wooden frame parallel and were usually uncovered once the plastering fell off.

The cities of Marrakech (Marrakush), Seville (Madinat Ishbiliya), Rabat (Ribat al-Fath), and—to a lesser extent—Fez (Madinat Fas) are still living witnesses to the Almohad ambitious artistic and architectural program in the Maghrib (western North Africa) and al-Andalus (Islamic southern Spain). The Almohad conquest of Marrakech in 1146 and of Seville in the following year marks the proclamation of the Almohads as the new masters of the Muslim West. The cities served as dynastic capitals for the Maghrib and al-Andalus, respectively.

Using a religious discourse centered on moral reform, the Almohads obliterated almost all trace of their predecessors (the Almoravids) in Marrakech, including mosques. All that survived the Almohad zeal was an ablution facility (the Almoravid Dome) and a wooden minbar (the pulpit

used for Friday sermons), which was later relocated to the newly built mosque of Kutubiyya. The Almohads expanded the city toward the south by adding a whole new administrative and palatial complex complete with royal gardens (Agdals). Under Abd Al-Munin, Marrakech saw its underground water-draining system perfected. The water was drained from aquiferous strata of the nearby Atlas Mountains, channeled along underground canals (known as *khattara* or *qanat*), and stored in large basins for drinking and irrigation. The experience would be replicated, with minor adjustments, in Seville.

The Almohads entered Seville in 1147 at the request of its dignitaries and left a lasting mark on the city's urban history. Construction of the city's congregational mosque—where the city's cathedral stands today—started in 1172, and work on its minaret, the Giralda, started in 1184. The Almohads made several additions, modifications, and reinforcements to the city's fortifications, especially the segments damaged by the frequent flooding of Guadalquivir River. Water for the Almohad royal gardens in Seville (e.g., the Buhayra place) was channeled using a Roman aqueduct discovered and put to use again by one of the dynasty's hydraulic engineers. It is important to note in this regard that the Almohad dynastic capitals of Marrakech and Seville were also important intellectual and scientific centers that attracted leading scholars of the world at the time, such as Ibn Rushd (Averroes) and Ibn Maymun (Maimonides).

Rabat was a completely Almohad creation. Its urban history began as a modest military camp for dynastic troops heading for holy war against the Christians of Spain. The victory at Alarcos (al-Arak) in Spain in 1195 marked a turning point in the history of Rabat. Yakub al-Mansur, using the spoils of Alarcos, wanted to build a city, Ribat al-Fath, worthy of Almohad aspirations to create a real empire of the Muslim West. The city's congregational mosque, Hassan, was second only to the Great Mosque of Samarra in Iraq, the largest mosque at that time throughout the Muslim world. The fortifications and the two monumental gates of Bab Ruwah and Bab Udaya date to this period. However, Yakub al-Mansur's great expectations for his capital never materialized. Soon after his death in 1199, his building sites

were abandoned, as evidenced by the half-finished Hassan Tower still standing today.

—Said Ennabid

Bibliography

- Dodds, Jerrilynn Denise. *Al-Andalus: The Art of Islamic Spain*. New York: Metropolitan Museum of Art, 1992.
- LeTourneau, Roger. *The Almohad Movement in North Africa in the Twelfth and Thirteenth Centuries*. Princeton, NJ: Princeton University Press, 1969.
- Rogerson, Barnaby, and Stephen Lavington, eds. *Marrakech: The Red City*. London: Sickle Moon, 2003.

The Alhambra and Avignon

The Alhambra in Granada, Spain, and the Palace of the Popes in Avignon, France, have similarities expressed both physically and symbolically. Although not separated by great distances, an Islamic palace-city built by the Nasrid dynasty (1232–1492) and a second residence constructed for the papacy are traditionally considered worlds apart, falling on opposite sides of a dividing line between East and West that dismisses any possible resemblance. Nevertheless, the permanent home of the last Islamic rulers of Al-Andalus and the residence of the Latin Christian, or Roman, popes before and during the Great Schism (1378–1415) served as fourteenth-century royal residences within both sacred and secular contexts.

The Alhambra and the Palace of the Popes were both fortified locations, near a river and an adjacent town. Within the walls were living quarters with ornamental and agricultural gardens, reception halls, markets, and religious spaces for public and private observance. There were a prison, a mint, a cemetery, barracks for troops, and housing for service workers. Most of these secondary institutions were located in a specific area of the palace-city and did not use more than one-third of the available space within the walls, for these services were not a priority. Both locations were designed for permanent habitation and included a specialized population for the daily functions of the palace-city and to serve its greatest purpose: attending to the most important inhabitant, whether pope or sultan. Because of the surrounding walls, both experienced space limitations that required



Casbah (fortress) gate in Almohad Rabat, Morocco.
(Alfred J. Andrea)

destruction of existing buildings for any new construction.

Both the Nasrid dynasty and the Roman popes were rulers in secular and sacred realms and used symbols from both worlds to legitimate their claims to power and authority. The walls inside the Alhambra are filled with inscriptions of Quranic verses and panegyric poetry singing the many praises of the Nasrid dynasty. At the Palace of the Popes, the court ceremonies that had evolved over hundreds of years, the grandiose styles of architecture, and the many works of art commissioned to decorate the rooms gave an aura of grandeur designed to assist an embattled papacy to legitimate its long-term residence outside Rome. In both cases, the intention was to project a necessary image of power and authority to those around the ruler, whether in the court itself or throughout their respective empires.

The Alhambra fits well within a building tradition in the Islamic world dating back centuries. However, palace-cities were not typical architecture in medieval Europe, and the Palace

➤ INSCRIPTIONS AT THE ALHAMBRA

Calligraphy is an important art form in the Islamic world and has been used to decorate architecture dating back to the eleventh century. Three types of inscriptions are included on the walls of the Alhambra: verses from the Quran, mottoes, and original poetry.

Quranic verses are found in prominent locations such as in the Hall of the Ambassadors, the main reception hall at the Alhambra, or on the entrance gate leading from the royal quarter to the *madina*, or common area. Repetitive inscriptions can be found in prominent public places too, such as the motto of the dynasty, “There is no Victorious One except God,” which is often decorated with a border that makes for a kind of shield or coat of arms found throughout the palace-city. Lastly, original poems by important government officials sing the praises of the dynasty but also demonstrate the values of a tiny kingdom on the far edge of the Islamic world anxious to identify with its Muslim counterparts in the East. All such inscriptions were used to emphasize Nasrid power and authority in both sacred and secular contexts.

—April L. Najjaj

of the Popes has so many similarities with the Alhambra only because it is a European anomaly. With both sites, the loss of their greatest purpose—as a permanent residence for their respective dynasties—signaled their downfall, for the last pope to live in Avignon escaped in the middle of the night in 1403, and the Alhambra was surrendered to the Christians in 1492.

An additional coincidence between the Alhambra and the Palace of the Popes is their survival to the present day. Both were extensively damaged in the decades after the fifteenth century, suffering from wars, fires, natural disasters, and misuse over time. Although renovations were done in the sixteenth and seventeenth centuries, any such efforts ended with the onset of the Napoleonic wars when both sites were occupied by French troops. Only into the early twentieth century have large-scale efforts been carried out to restore and preserve these sites for their historical significance and tourism revenues.

—April L. Najjaj

Bibliography

- Gail, Marzieh. *Avignon in Flower, 1309–1403*. Boston, MA: Houghton Mifflin, 1965.
- Grabar, Oleg. *The Alhambra*. Cambridge: Harvard University Press, 1978.
- Jacobs, Michael. *The Alhambra*. New York: Rizzoli International Publications, 2000.

Cairo and Acre—Capitals of Two Cultures in Conflict

When Latin crusaders seized control of a narrow strip of territory along the eastern shore of the Mediterranean around the turn of the eleventh century, they found themselves in a relatively urbanized environment. Although the new Western rulers of Outremer, “the land beyond the sea,” altered urban topographies in a strictly local sense, they did not, overall, transform the physical environments in which they were now living. Instead, there was a process whereby the new residents of the Levant acculturated to their new homelands.

The walls of cities such as Antioch and Jerusalem initially stood as obstacles to the crusader armies. Once captured, however, the fortified cities of the Latin East offered the nascent states both protection and economic opportunities. The Westerners improved upon defensive structures and learned how to construct new ones from extant buildings. They brokered trade deals

and found themselves immersed in both the Mediterranean and overland trade of the Levant. Governing such locales—filled with what seemed to them to be exotic languages, customs, and religions—proved complex. Frankish traditions of rule overlapped with Eastern Mediterranean (whether Islamic or Christian) norms. Acre, just one of the cities now part of the Latin East, emerged as their most populous and prosperous port. Jerusalem provided the initial political and religious capital, but its distance from the sea ensured a relatively marginal economic stature. Once Jerusalem fell in 1187, Acre gained the political prominence to match its already vibrant economy.

Even as Acre became more important, political authority in the city trended toward decentralization. Immediately after its conquest in 1104, the Genoese, in exchange for their naval support during the siege, claimed a section of the city to operate as their own merchant colony. Pisa and Venice, Genoa’s rivals, also managed to obtain their own quarters eventually. Later, as the military orders gained in prominence, they too were granted possession of fortified dwellings or permission to construct new ones. Other important nobles were granted houses, churches, and other important sites to expand upon and improve as they wished. Furthermore, those who had a stake in Acre were constantly seeking to acquire more territory within the walls. Less studied, Acre depended on trade with the agricultural hinterland and Islamic sites farther to the east, and those involved with the overland trade also required secure and reliable housing and services within Acre. This city lacked a single central market, instead operating with as many as a dozen commercial focal points.

Acre was lost in 1187, as was Jerusalem, but the former was reclaimed in 1191. With the holy city remaining in Islamic hands, Acre became the capital of the kingdom of Jerusalem. If anything, the political role only accelerated existing trends of increased mercantile activity and the decentralization of urban power. It became more critical for every powerful faction to gain a foothold in the city and to keep others from becoming too dominant. For example, after 1191 the new Teutonic Knights gained a tower, and merchants from Marseilles acquired a quarter.



Walls of Acre, probably of Mamluk or Ottoman construction. The Muslim-controlled city of Acre was besieged by Christians during the Third Crusade. Acre fell in July, 1191 after a siege of 23 months, led by Richard the Lionhearted of England and Philip II of France. (Alfred J. Andrea)

➤ IBN JUBAYR'S OBSERVATIONS ON ACRE AND CAIRO

Abu l-Husayn Muhammad ibn Ahmad ibn Jubayr, secretary to the governor of Granada, left his home in 1183 in order to make a pilgrimage to Mecca. En route he stopped in Cairo and recorded his observations. Although he wrote most extensively on Cairo's shrines dedicated to holy men, Ibn Jubayr also noted the improvements to Cairo's infrastructure being undertaken at Saladin's orders. He saw workers cannibalizing blocks of stone from older walls for the various projects. He stopped in diverse villages in the city's hinterlands, noting that he found them both prosperous and hospitable. He praised the new citadel as an "impregnable fortress," built by "foreign Rumi [Roman] prisoners whose numbers were beyond computation." The author sought to present Saladin as a great builder who did not force Muslims into hard labor.

After completing his hajj, Ibn Jubayr stopped in Acre to obtain passage on a ship headed west and home. One must weigh the author's reported experiences against the angry rhetoric he unleashed against the city's current rulers. "Unbelief and unpiousness there burn fiercely," he wrote,

"and pigs and crosses abound. It stinks and is filthy, being full of refuse and excrement." But then the author admitted that one mosque remained in Muslim hands, providing refuge for travelers just like him. The wells were plentiful and the city was rich, in part because of its trade with nearby Muslim-held Damascus. Finally, the worldly traveler found extraordinary beauty in the city, writing that "at the eastern extremity of Acre is a torrent course, along the banks of which extending to the sea is a sandy plain, than which I have seen no more beautiful sight." Soldiers paraded on horseback along this course daily, and the author found the spectacle enjoyable to watch, even though he felt it was necessary to add to the description of the Christian knights "Destroy them, God."

—David Perry

Source

Ibn Jubayr, *The Travels of Ibn Jubayr*, translated by R. J. C. Broadhurst (London: Jonathan Cape, 1952), 43, 318, and 325.

The division of the city did not, according to the research of David Jacoby, result in a wholesale transformation of the spatial arrangements of the preexisting Syrian site. The fortifications were definitely improved both in the early twelfth century and again when Louis IX (r. 1226–1270) of France, fresh from his humiliating captivity in Egypt, tried to salve his pride by spending lavishly on Acre. Other than that, the Latin rulers kept the city's buildings operating in largely the same function as they were before 1104. Mosques frequently became churches, but the sacred landscape remained roughly the same structurally. Markets, bakeries, and bathhouses continued to provide a place to buy and sell, to acquire one's daily bread, or to wash. The old harbor provided ample space for even the greatly accelerated pace of trade under Latin rule and was not expanded upon. New buildings were put up, but these usually aped the structure and function of those already extant. In the long run, the history of crusader Acre provides a case of Latin

adaptation to the norms and physical realities of urban life in the Levant.

The presence of crusaders in Outremer resulted in changes to Muslim-held cities, however. As the balance of power and the tides of trade shifted, Cairo became one of the great capitals of the Islamic world. At the onset of the crusades, Egypt was ruled by the Shia Fatimids, who were threatened by the ever-expanding Seljuk Turks. Although a great city, Fatimid Cairo existed on the periphery of a Sunni Muslim world that focused on places such as Damascus and Baghdad. Multiple factors intervened to change Cairo's relative status, including the collapse of the Fatimids in 1171, the presence of a crusader buffer between Egypt and the Seljuks (and the Abbasids), the rise of Saladin in Egypt, the thirteenth-century destruction of potential rivals by the Mongols, and finally the emergence of the Mamluks.

During the first few decades of the twelfth century, internal weaknesses in Egypt resulted

in the territory becoming a prize in a contest among various Christian and Islamic factions. Saladin (1138–1193) ultimately won control and used Egypt as a staging area for his agenda in Syria. He considered Cairo a potential capital for his empire and began to alter the city to make it suitable for such a purpose by building a massive citadel in the heart of the city. This building, he hoped, would be a symbol of his power to awe his subjects. Among those who built the citadel were Frankish slaves, numbering as many as 50,000 according to one Arabic source. In comparison to Acre, Cairo's history contains a very different way that the presence of crusaders altered the shape of an Eastern Mediterranean city.

It is under the Mamluks that Cairo truly came into its own. The Mamluks, originally Central Asian slave-soldiers, staged a coup in 1250. Once they had stabilized their new sultanate, the Mamluk leaders began to pay attention to the newfound capital city. Baibars al-Bunduqdari (r. 1260–1277) expanded on the citadel by adding a great mosque, as grand as any in West Asia. Qalawun al-Alfi (1279–1290), his successor, built a grand madrasa and hospital next to the site where he eventually was entombed. Elite Mamluks sought to elevate their culture by patronizing the arts and intellectual life. As the Mongol advance stalled and the Latin fortifications of Outremer became either forgotten relics or repurposed possessions of the victorious Muslims, Cairo and the Mamluk empire emerged as a new center of Islamic life, and Acre, which the Mamluks captured and leveled in 1291, became a ghost town.

—David Perry

Bibliography

- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 2000.
- Jacoby, David. "Crusader Acre in the Thirteenth Century: Urban Layout and Topography." *Studi Medievali* 20 (1979): 1–45.
- Jacoby, David. "The Trade of Crusader Acre in the Levantine Context: An Overview." *Archivio Storico del Sannio*, n.s. 3 (1998): 103–120.
- Williams, John Alden. "Urbanization and Monument Construction in Mamluk Cairo." In *Muqarnas 2: The Art of the Mamluks*, edited by Oleg Grabar. New Haven, CT: Yale University Press, 1984.

Byzantine Constantinople

The ancient Greek merchant city of Byzantion (later Latinized to Byzantium) suddenly became the capital of the Roman empire in 330 CE, when the emperor Constantine I (r. 306–337) founded the city eponymously known as Constantinopolis (the City of Constantine). According to myth, Byzas of Megara originally founded the city around 668 BCE after consulting the Oracle of Apollo in Delphi for the best location. Its location on the narrow Bosphorus Strait that connects the Sea of Marmara with the Black Sea proved ideal, and the village quickly prospered into an important economic bridge between East and West.

With the natural harbor of the Golden Horn to the north and east, the Bosphorus Strait along the narrow tip of its eastern shore, and the Sea of Marmara to the south and west, Constantinople was accessible by land on only one side. To defend this approach, the prefect (*exarch* in Greek) of the East, Anthemius, supervised construction of massive defensive walls, known as the Theodosian Walls inasmuch as they were constructed during the reign of Theodosius II (r. 408–450). About four miles (6.5 kilometers) in length, including the adjoining Blachernae walls, they spanned the peninsula. Initially constructed with two parallel perimeters, with a third and lowest perimeter wall (about 5.5 feet or 1.7 meters high) added later, as well as various towers, fortresses, and reinforcements, the triple-tiered land walls varied in thickness: 1 foot (0.3 meters) for the outermost, or screen, wall; 6 feet (1.8 meters) for the second wall; and up to 20 feet (6 meters) in places for the innermost wall. The inner wall stood 40 feet (12 meters) high with towers located every 180 feet (55 meters), each of which stood 66 feet (20 meters) tall. The walls of Constantinople, which also included many miles of seawalls along its three other sides, repulsed numerous sieges over the centuries. On April 12, 1204, however, soldiers and sailors of the Fourth Crusade managed to successfully storm the lesser sea walls that faced the Golden Horn. For the first time in its history the city was captured by direct assault, mainly because recent emperors had not made adequate

► CONSTANTINOPLE DURING THE LATIN EMPIRE

When the soldiers and sailors of the Fourth Crusade captured Constantinople in 1204, they took over a city that had suffered three devastating fires that various crusader contingents had set between July 17, 1203, and April 13, 1204. Major portions of the heart of the city lay in ruin, and a substantial number of inhabitants fled the city as a result of the fires and the Latin conquest. Moreover, the conquerors set in motion a series of events that ultimately reduced the overall wealth and stability of the city. In part this was due to their pillaging of many of the city's treasures during their half century of occupation. In larger part it was due to the fact that the Latin emperors and their underlings did not comprehend, appreciate, or possess the level of engineering technology or administrative expertise necessary to maintain the city.

The Western conquerors divided the city into Frankish and Venetian spheres of sovereignty, with the Frankish Latin emperor receiving five-eighths of the city and the Venetians three-eighths (prime commercial territory along the harbor of the Golden Horn). There were several reasons for this division, but one was ignorance of the interconnected system of taxes, communication, and supply that the empire and a city as large as Constantinople required. In particular, the water supply system required regular maintenance from a large workforce. This required a degree of technical coordination and financing that only a centralized and professional bureaucracy could

manage. The overall size of the city and its diverse functions only intensified the need for a centralized administration and experienced personnel, both of which were in short supply even though some Byzantine officials remained behind to serve their new Latin masters. However, the Latin emperors and their Western deputies imposed a feudal system of patronage and fealty that proved incompatible with the imperial system and hence unable to perform properly the city's administrative and engineering requirements. Consequently, much of the city fell into ruin, especially the imperial five-eighths of the city.

Although the Venetian section of the city suffered from this breakdown of the former city-wide administration, on balance it prospered due to Venetian commercial acumen and its favorable harbor-side location, which had not been gravely affected by the fires. Nevertheless, despite Venetian success with maritime commerce, their activity was primarily a process of wealth extraction, not investment. Consequently, even the harbors suffered neglect and did not receive the regular maintenance they required. Although the Latins occupied Constantinople for only 57 years, the fragmented and largely neglected city they left behind would never regain its former glory, although Byzantium itself would undergo a religious, artistic, and literary renaissance during the two centuries of life left to it.

—George N. Lundskow

preparations. Almost invincible when properly garrisoned, the city's land walls failed only once, in 1453, when the Ottomans succeeded in breaching them with heavy cannon fire. Even so, the Turks still required two months of bombardment to blast the walls open sufficiently to storm the city.

The local environment contributed to security as well because the prevailing winds from west to east across the Golden Horn, in conjunction with the tides, made unwanted access into the harbor extremely difficult. The Byzantines also stretched a massive chain across the 600-foot- (183-meter-) wide entrance to further inhibit unwanted ships, although the Venetians

managed to break the chain and enter the harbor in 1203.

Relatively fertile with moderate temperatures, the area inside the walls amounted to about 40 square miles (100 square kilometers). This compares to 48.4 square miles (125 square kilometers) for present-day Boston, Massachusetts. In medieval Constantinople much of the area was undeveloped, as the distance from the Golden Gate in the Theodosian Walls to the city center (the Augusteum) was about 6.5 miles (10.5 kilometers). This undeveloped land and advantageous growing conditions meant that the city could feed itself adequately during prolonged sieges.



Section of the Theodosian walls of Constantinople that still stands today in present-day suburban Istanbul. These land walls were built in the fifth century by Emperor Theodosius II. The land and sea walls of the city withstood all but two invasions in 1,600 years: the Fourth Crusade in 1204 and the conquest of Mehmed II in 1453. (iStockPhoto.com)

Yet the city's location also required a high degree of engineering infrastructure in order to survive and prosper. Water in particular proved one of the greatest challenges, and this challenge was met through a system of aqueducts and cisterns. The remains of the aqueduct of the emperor Valens (r. 364–378), which brought water from the Belgrade Forest about 12 miles (20 kilometers) northwest, can still be seen. Other aqueducts built during the reign of Justinian I (r. 527–565) greatly expanded the system, which supplied water to several hundred underground cisterns, the largest of which held about 21 million gallons (80 million liters). Also built in the reign of Justinian I was the Basilica Cistern, which resembles an underground palace with numerous vertical marble columns, Corinthian-style pedestals, vaulted ceilings, and brick walls covered with Roman concrete. Today it is a popular tourist attraction.

—George N. Lundskow

Bibliography

- Jacoby, David. "Constantinople, City of." In *The Crusades: An Encyclopedia*, 1:227–279. 4 vols. Santa Barbara, CA: ABC-CLIO, 2006.
- Maclagan, Michael. *The City of Constantinople*. London: Thames and Hudson, 1968.

Turnbull, Stephen. *The Walls of Constantinople, AD 324–1453*. Oxford, UK: Osprey, 2004.

Rebuilding Constantinople

On May 29, 1453, the city of Constantinople fell to the Ottoman Turks, thereby ending the Byzantine empire. When the Ottomans finally entered this highly symbolic capital, they found a city that had been on the decline for some time. In 1453 the population of Constantinople was estimated to be 30,000–40,000. Sultan Mehmed II wanted to move his capital from Edirne to Constantinople in order to lay claim to its various historical legacies, which would convey imperial legitimacy and allow the Ottomans to assert their claim to the lands of the Roman empire. Yet the city was no longer powerful or prosperous; Mehmed II immediately set to work to rebuild the city, which was to become the jewel of the empire.

Constantinople, even in its reduced state, was too big for a single center, so many neighborhoods were created to help inspire growth. The focus of each neighborhood was usually a mosque complex that served its religious, educational, social, and economic needs. These complexes often included soup kitchens, schools, public baths, hospitals, markets, and inns in addition to the mosque proper. To set an example, Mehmed II—or Fatih ("the Conqueror")—built an eponymous complex, which was to be the largest in the empire, to contribute to the restoration of city life. This Fatih Camii, or Conqueror's Mosque, was constructed on the site of the demolished Church of the Holy Apostles, the second greatest church in the former Byzantine empire (after Hagia Sophia) and the place of burial for many of Byzantium's emperors. Mehmed's own tomb was later incorporated into the new mosque's complex. Most other Byzantine churches, such as Hagia Sophia, were converted to neighborhood mosques.

The physical reconstruction of the city had many aspects. Militarily, the city walls needed to be repaired and refortified. Since the city was the new capital, the sultan also needed a palace. He built two: the Forum Tauri (also called Eski Saray), finished 1455, and Topkapı Palace, begun 1459. The construction of covered markets, such

➤ A CONTEMPORARY DESCRIPTION OF MEHMED II'S REBUILDING PROJECTS

Michael Kritoboulos (ca. 1410–1470), better known simply as Kritovoulos, a Greek from the island of Imbros, came into the service of the sultan after the siege of Constantinople and wrote a biography that depicted the conqueror as a hero. Kritovoulos had great respect for the sultan's military prowess and governing abilities.

In his work, Kritovoulos describes Mehmed II's efforts to rebuild and repopulate Constantinople:

"He [Mehmed II] repaired the damaged walls—from cannon or time—and he also laid the foundations of the royal palace. . . .

And he commanded them to construct a very large and very fine marketplace. . . .

He also ordered them to construct splendid and costly baths, and through aqueducts to bring into the City from the countryside an abundance of water. Many other such things he ordered to be

done for the building up and beautifying of the City, and for the benefit and needs and comfort of the inhabitants.

Above all he was solicitous to work for the repopling of the City and to fill it with inhabitants as it had previously been. He gathered them there from all parts of Asia and Europe, and he transferred them with all possible care and speed, people of all nations. . . . So profound was the passion that came into his soul for the City and its peopling, and for bringing it back to its former prosperity."

—Katie L. Johnson

Source

Kritovoulos, *The History of Mehmed the Conqueror*, translated by Charles T. Riggs (Westport, CT: Greenwood, 1970), Part 2, paragraph 2, pp. 54–56.

as the Grand Bazaar that opened in the heart of the city in 1461, and other commercial centers revived the economic life of the city.

While these building projects helped to create an infrastructure, the city still needed people. The conquest of the city had caused many of its inhabitants to flee; the rest were enslaved. Mehmed II settled his share (one-fifth) of the enslaved Greeks in what is now Fener, where they were granted houses and religious privileges and were even tax-exempt for a time. This policy was supposed to inspire those who had fled to return; they were promised houses, land to reestablish themselves, and freedom of religion and work. Jews who had remained in the city were granted their own quarter (Balat); they were soon joined by many other Jews, most of them coming from Europe, especially those who had been expelled from Spain.

Additionally, a state-controlled resettlement policy was put into effect. Newly conquered cities sent families, especially artisans and merchants, to the new capital. From the Ottoman lands, more than 5,000 families—Muslims, Jews, and Christians—were required to relocate to Constantinople. Opposition to the deportations slowed this process, which was never fully real-

ized. In order to support the growing capital, approximately 30,000 peasants from the Balkans were settled in villages around Constantinople.

By the end of Mehmed II's reign, Constantinople was thriving. According to the 1477 census, the population had nearly doubled to 80,000–100,000 people (16,324 families). By the early sixteenth century, Constantinople had grown to 400,000 people. Mehmed II's efforts to rebuild and repopulate the city dominated his reign, and his success can be seen throughout the subsequent centuries.

—Katie L. Johnson

Bibliography

- Babinger, Franz. *Mehmed the Conqueror and His Time*. Bollingen Series 96. Princeton, NJ: Princeton University Press, 1978.
- Imber, Colin. *The Ottoman Empire, 1300–1481*. Istanbul: Isis, 1990.
- İnalçık, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. New Rochelle, NY: Orpheus Publishing, 1989.
- Stavrides, Theoharis. *The Sultan of Vezirs: The Life and Times of the Ottoman Grand Vezier Mahmud Pasha Angelovic (1453–1474)*. The Ottoman Empire and Its Heritage; Politics, Society, and Economy 24. Leiden: Brill, 2001.

Karakorum and Dadu—Two Mongol Capital Cities

In describing the Mongols, Friar John of Pian de Carpini (Plano Carpini) said that they did not build villages or cities with the exception of their capital of Karakorum. The area around Karakorum (Qaraqorem) was originally acquired early in the thirteenth century by Chinggis Khan when he defeated the Naimans, a competing Turko-Mongol confederation. The site lay on a broad plain in the Orkhon Valley with ample water and grazing. It was protected on all sides by hills and was possibly used by Chinggis as a base camp.

Mongols indigenous to the steppe did not build villages or cities because they were pastoral nomads. This is reflected in their indigenous dwellings called *gers*, more commonly known by their Turkic-Russian name *yurts*. The *ger* is designed for mobility. It has walls of collapsible wooden lattice and a roof of poles that radiate from a center ring. The ring is sometimes supported by two decorated center posts. Once the frame has been erected it is covered with a thick blanket of felt, which keeps the *ger* warm and comfortable even in the winter. Gers could also be built on a cart and pulled by oxen or yaks from place to place, perhaps the first truly mobile home.



A stone tortoise sculpture marks the location of Karakorum, Chinggis Khan's capital in Mongolia. Near the sculpture, stupas stand along the wall surrounding the abandoned Buddhist Erdeni Dzuu lamasery. (Dean Conger/Corbis)

In 1235 Ögedei, successor to Chinggis Khan, began the construction of a permanent capital at Karakorum. The area for the capital was enclosed by a wall, and in the tradition of the Chinese the palaces and their gardens were surrounded by a wall to divide them from the rest of the city. The buildings inside the inner wall represented a mix of styles. Diagrams from Russian excavations in the 1940s show some large buildings with rounded corners, possibly gers. The largest was a place for assembly and audiences called the Great Ger, which could hold large numbers of people. The palace and private apartments were long and rectangular and seem to follow Chinese or Jurchen (also Ruzhen or Nuzhen) architectural style.

William of Rubrick visited Karakorum in the 1250s but was unimpressed. He compared the Mongol capital to the village of St. Denis outside Paris, noting that Karakorum was not as important as St. Denis and that the monastery of Saint-Denis was worth twice the amount of the palace of the khan. He also mentioned there was a Nestorian (Assyrian Christian) church at Karakorum, which he described as “large and beautiful, being entirely covered with silken cloths embroidered with gold.”

As they advanced though northern China and Central Asia the Mongols captured skilled workers, who were taken back to Karakorum to help with the building and to populate the city. Nearly 30,000 artisans were taken from Bukhara and Samarkand (both in present-day Uzbekistan) and shipped back to Karakorum. Karakorum remained the capital of the Mongol empire until 1264, but nothing remains of it today except some stone turtles that marked the boundaries. The city's ruins were stripped in the sixteenth century to provide materials to build a nearby Buddhist monastery.

As the Mongols moved eastward they gained control of the Tangut and Jurchen kingdoms of northern China. In 1264 Khubilai Khan shifted the Mongol imperial capital from Karakorum to an area within present-day Beijing, which he renamed Daidu (Great Capital) and the Chinese called Dadu. To many visitors from afar who were awed by it, it was also known by its Turkic name, Khanbalik (City of the Khan). Three years later, building began on a Mongol capital of Chi-

nese design on Chinese soil. Khubilai chose a Muslim architect, but the plans for the new capital were drawn from an ancient Chinese classic on government, the *Zhouli* (*The Rites of the Zhou Dynasty*). A wall of rammed earth roughly 17 miles (27 kilometers) in circumference surrounded the city. Wide avenues were laid out on symmetrical north-south and east-west axes. The wall had 11 gates, each of which had a three-story sentry tower. Inside of the outer wall were two interior walls surrounding the Imperial City and the Great Khan's palaces where Khubilai and his entourage lived. Officials lived outside the Imperial City but within the second set of inner walls. Ordinary Mongols and Chinese lived outside the city. The Imperial City contained many important buildings, including a hall for receiving ambassadors, the khan's palace, and the living quarters of his consorts and concubines as well as storehouses and a Scholar's Hall, which served as a school for the young princes. The Imperial City was landscaped with gardens, parks, lakes, and streams, the latter of which were crossed by decorative bridges of Chinese design. In appearance Dadu resembled typical Chinese capitals of earlier dynasties, although there were a few Mongol elements.

To remind him of his origin, Khubilai had a patch of steppe grass planted in the palace garden. Some gers were also erected in the imperial parks, where many of the khan's sons and relatives lived. When an imperial wife was about to give birth she was moved into a ger so that the birth took place in a Mongol dwelling. Other Mongol touches were the ermine-skin screens in the imperial sleeping quarters, but for the most part the decorative motifs throughout the palaces were Chinese.

To placate the Confucian elite, Khubilai Khan instituted some Chinese court rituals, and several traditional Chinese and Tibetan temples were built near the palaces. One of the most important was the Great Temple (also known as the Ancestral Temple), which carried on Chinese rituals of ancestor veneration. However, the Chinese designs and the concessions to the Chinese angered many Mongols, who viewed the lifestyle at Dadu as decadent and contributing to the increasing weakening of the Mongol rulers. Moreover, many Chinese, especially Confucian scholars,

> A PERSIAN VIEW OF THE MONGOL CAPITAL OF DADU

In the fourteenth century the Persian historian Abdullah bin Fazl-ullah of Shiraz, under the pseudonym Wassaf (the Describer), wrote about his travels to the Mongol court. In the following excerpt of his *Tarikh-i Wassaf* he describes the Mongol capital of Dadu.

"[Khubilai Khan] called the city Dadu [Chinese for 'Great City']. He commanded that artisans and craftsmen should be brought from all directions to this city. Because of the number of its inhabitants and the milling crowds, this city in a short time became a place of assembly resplendent and ornamented overall. On one side of this city he built . . . the throne of rule and khanship. . . . It was built of wood and planks, and was also square with each of its sides four hundred paces long. This elysian structure was endowed with a cupola and windows, putting to shame the pinnacles of the celestial tabernacle, with solid pillars richly decorated and embellished with ornament. The floor was inlaid with jasper. Statues were set up and pictures painted, with both art and wit, radiating talismanic art. Archimedes would have been astonished and baffled by these delicate combinations and Euclidean inventions; the grills in front of the windows were made of gold and silver, and above the pinnacles of the canopy the moon in its three stations . . . trembles with jealousy. [It brings to mind] a quotation: 'The many-columned city of Iram, whose like has never been built in the whole land' [Quran 89:7,8]. Anybody who saw the creations in this place and the beauty of this treasure: 'saw how Spring and the bejeweled fields, just as the hill and the mountain, bowed down.'"

—Rebecca Wendelken

Source

Bertold Spuler, *History of the Mongols*, trans.

Helga and Stuart Drummond (London: Routledge and Kegan Paul, 1972), 169–170. Note: Spuler used a highly nonstandard transliteration set to help readers pronounce the various foreign words in his text. The spelling has been changed here to reflect modern standard transliteration of Persian.

refused to acknowledge the legitimacy of Mongol rule despite these concessions.

Dadu did not survive the Yuan dynasty. In 1368 Zhu Yuanzhang (Taizu), the founder of the Ming dynasty, captured Dadu and burned it to the ground, establishing his capital at Nanjing (Southern Capital). In 1421, however, the Yongle emperor, the third Ming ruler of China, moved the primary imperial capital back to the north, to Beiping (Northern Peace), later renamed Beijing (Northern Capital). Here, as early as 1406 construction had begun on the so-called Imperial Forbidden City, just south of the ruins of Dadu. Although almost no Yuan imperial structures had been left standing from Dadu, its parks and lakes remained and were incorporated into the Ming capital. The popular Beihai Park in the heart of modern Beijing is one of the few remnants left to be seen of Khubilai Khan's Imperial City.

—Rebecca Wendelken

Bibliography

- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1996.
- Komroff, Manuel, ed. *The Contemporaries of Marco Polo*. New York: Dorset, 1989.
- Morgan, David. *The Mongols*. Malden, MA: Blackwell, 1986.
- Rossabi, Morris. *Khubilai Khan*. Berkeley: University of California Press, 1988.

Angkor and Angkor Wat

Angkor Wat, a temple complex dedicated to the Hindu deity Vishnu, was built in the twelfth century CE in the ancient city of Angkor, 192 miles (310 kilometers) northwest of Phnom Penh. It is probably the largest (and, as many have claimed, the most beautiful) religious monument ever constructed. Certainly it is the most famous of all Khmer temples.

Angkor served as the capital of the Khmer empire of Cambodia from 802 until 1295. Evidence uncovered since 1996 has led some scholars to assert that the site may have been occupied some 300 years earlier than first thought, obviously affecting accepted chronologies. Whatever the case, its powerful kings held sway from what is now southern Vietnam to Yunnan, China, and westward from Vietnam to the Bay of Bengal. The

city site was probably chosen for strategic reasons and for the agricultural potential of the region. Khmer civilization was at its height between 879 and 1191, and as a result of several ambitious construction projects, Angkor eventually grew into a huge administrative and social center stretching north to south for 8 miles (13 kilometers) and east to west for 15 miles (24 kilometers). The population possibly reached 1 million.

Apart from the hundreds of buildings—temples, schools, hospitals, and houses—there was an extensive system of reservoirs and waterways. The public and domestic buildings, all of timber, have long since decayed. But because they were the only structures in which masonry was permitted, over 100 temple sites survive. Earlier examples were mostly of brick, but later, the porous, iron-bearing material known as laterite was used, and still later sandstone, quarried about 25 miles (40 kilometers) away.

The city of Angkor was the cult center of the Khmer Devaraja, the “god-king,” and an important pilgrimage destination. Khmer kings, from Jayavarman II (802–850) onward, had come to be worshiped as gods, and the temples they built were regarded as not only earthly structures but as symbols of Mount Meru, the cosmological home of the Hindu deities. The official state religion was worship of the Shiva Lingam, a pillar representing the power of the Hindu god Shiva that also signified the king's divine authority. Jayavarman II had identified kingship with Shiva, and acting upon that precedent, King Suryavarman II (1113–ca. 1150) presented himself as an incarnation of the god Vishnu. He built Angkor Wat as a temple and administrative center for his empire and as his own sepulcher (which is why it faces west).

Financed by the spoils of war and taking over thirty years to finish, the sandstone-and-laterite Angkor Wat occupies a 2,800-by-3,800-foot (850-by-1,000-meter) rectangular site. Its layout provides an architectural allegory of the Hindu cosmology. The temple is surrounded by a 590-foot-wide (180-meter) moat, over 3 miles (5 kilometers) long, which represents the primordial ocean. A causeway decorated with carvings of the divine serpents leads to a 617-foot-long (188-meter) bridge that gives access to the most important of four gates. The temple is reached

by passing through three galleries separated by paved walkways. It is an approximately pyramidal series of terraces and small buildings arranged in three ascending stories—they stand for the mountains that encompass the world—and surmounted at the center by a temple “mountain” of five lotus-shaped towers, symbolizing the five peaks of Mount Meru. Four of the original nine towers have succumbed to time and weather. The temple walls are replete with wonderfully crafted bas-reliefs, many of which were once painted and gilded, including about 1,700 heavenly nymphs and others that depict scenes of Khmer daily life, episodes from the epics *Ramayana* and *Mahabharata*, the exploits of Vishnu and Shiva, and (of course) the heroic deeds of King Suryavarman II.

In 1177 Angkor fell to the Cham army from northern Cambodia, which held it until it was retaken early in the reign of the Khmer King Jayavarman VII (r. 1181–ca. 1215). When he built Angkor Thom nearby he dedicated his new capital to Buddhism, and Angkor Wat became a Buddhist shrine. Many of its carvings and statues of Hindu deities were replaced by Buddhist art. The Thais sacked Angkor in 1431. The following year the Khmers abandoned the city, and it was left to the encroaching jungle for a few centuries. However, Theravada Buddhist monks kept Angkor Wat as intact as possible until the late nineteenth century, making it one of the most important pilgrimage destinations in Southeast Asia.

—Donald Langmead and Christine Garnaut

Bibliography

- Fujioka, Michio Tsuenari Kazumori, and Chikao Mori. *Angkor Wat*. Tokyo: Kodansha International, 1972.
- Langmead, Donald, and Christine Garnaut. “Angkor Wat.” In *Encyclopedia of Architectural and Engineering Feats*, by Donald Langmead and Christine Garnaut. Santa Barbara, CA: ABC-CLIO, 2001.
- Mannikka, Eleanor. *Angkor Wat: Time, Space, and Kingship*. Honolulu: University of Hawaii Press, 1996.

Europe’s Urban Revolution, 1000–1300

Although Western Europe was still an overwhelmingly agrarian society with the majority



Panel painting of an idealized city on the sea by Ambrogio Lorenzetti, early fourteenth century. (Scala/Art Resource, NY)

of its population living in small villages, its towns and cities realized substantial growth from about 1000 to around 1300, a growth that was driven by a dramatic revival of trade and the emergence of specialized artisans and that, in turn, contributed to a further quickening of Europe’s economic pace.

Newly expanded cities grew from two sources. First, towns that had been ancient Roman *civitates* (municipalities) still existed, often as the seats of power of bishops and feudal lords, although they were significantly smaller in size and population than their Roman forerunners had been. Production and commerce never totally disappeared in Europe after the collapse of Roman order in the western half of the empire, but after about 950, both underwent a decided upswing. Consequently, during the eleventh and twelfth centuries merchants began to settle in these towns in increasing numbers, followed by craftspeople, often from nearby manors, who recognized an opportunity to sell or trade their goods to merchants who, in turn, sold them in the wider market. Second, from the late tenth century on, new cities and towns were founded, especially in northern Europe. In this instance, it was generally merchants who founded these new towns, often near a fortified stronghold such as a castle or monastery that was close to a major trade route, preferably a water route. The merchants could take refuge in case of attack within the walls of the fortification, and over

➤ PARIS AND FLORENCE—A STUDY IN CONTRASTS

A comparative examination of Paris and Florence in the late thirteenth century highlights several important differences among the cities of medieval Europe. Paris was the capital of the French monarchy, which was strengthening its power throughout the royal domain by extending the machinery of royal government from Paris into the provinces and subordinating feudal nobles to royal control. An ever-expanding royal bureaucracy in Paris oversaw matters such as finance and royal justice. Furthermore, the city was the site of the great University of Paris, renowned throughout Europe for its theological faculty. In preparation for careers in ecclesiastical or secular government, students from all regions of Europe came to Paris to study, thereby swelling the population and adding a distinctly international flavor to the university quarter of the city on the Left Bank of the Seine River. The Left Bank also held the monasteries of St. Genevieve and St. Germain des Prés. The heart of the city, the *Île de la Cité*, housed the royal residence, the great Gothic cathedral of Notre Dame de Paris, the bishop's palace, and residences of other clergy. In Paris, as in most northern cities, nobles usually did not live in the cities, although Paris had two great royal castles, the Louvre and the Bastille.

In Italy, by contrast, nobles often held urban fortified residences, and their distinctive urban

towers were a distinguishing feature of the urban landscape. Florence, like other cities in northern and central Italy, was a self-governing city-state, encompassing the urban area and the surrounding countryside (or *contado*), without the overlordship of an emperor or king. In Florence governmental power rested in the hands of the guilds, creating a merchant oligarchy, although Florence referred to itself as a republic. The twin pillars of the Florentine economy were the enterprises of banking and textile manufacturing. Florentine banks handled the financial activities of the papacy, and over time Florentine banks, especially the Bardi and Peruzzi banks, became the most influential in Europe, even loaning money to monarchs. Florentine coinage, the gold florin, became the international currency of Europe. Florence boasted the most extensive wool manufacturing in Europe. Wool workers at all levels were members of guilds, which were designated as either major or lesser guilds (*arti maggiori* or *arti minori*, respectively). Like Paris, Florence was also an episcopal seat, but unlike its French counterpart, the Florentine cathedral, or *Duomo*, was not built in the Gothic architectural style, which never gained widespread popularity in Italy, but rather reflects the emerging style of the Italian Renaissance.

—Jan K. Bulman

time if the settlement took root and prospered, walls enclosing the new settlement were added and then expanded.

Cities often were subject to a lord's jurisdiction, and lords tended to regard their cities in the same way they regarded their serfs and vassals. Nonetheless, over time merchants, who required mobility to engage in trade, began to demand liberties that were not available to them as subjects of a lord. Lords, in turn, saw that townspeople were willing to pay for privileges, such as the right to control property, freedom from military obligations to their lord, the right to choose their own governing officials and to administer their own courts, and written charters guaranteeing these liberties. These rights and charters generated a new substantial source of income for lords and guaranteed the

townspeople, or at least the merchant oligarchs who secured these charters, a measure of self-government and permanence as a recognized corporation.

European cities were quite small when compared to their ancient predecessors or to their contemporaries in other parts of the world, such as Constantinople, Cairo, Baghdad, or Hangzhou. For example, thirteenth-century London, the largest city in England, had a population of about 30,000. Trading centers such as Bruges and Ghent, both in Flanders, had populations of about 40,000. In Italy, where cities had never shrunk in size, number, and importance to the extent that they had in northern Europe, urban populations were larger, with Venice, Florence, and Milan each boasting about 100,000 people before the mid-fourteenth century.

The surrounding countryside provided the food to support city inhabitants, so rural and urban spheres were closely connected. As cities grew, their walls often became constricting, creating competition for space within the urban landscape. Streets were narrow and winding, buildings crowded against one another, and second or third stories loomed over confined streets. In many medieval towns, the most substantial buildings were the churches, and if the town was an episcopal city, the cathedral dominated all other structures, including houses, taverns, and collegiate and parish churches. Most medieval cities were divided into sections or neighborhoods in which a particular trade dominated. Fire was a constant threat since most buildings were constructed of wood. Pollution was a constant fact of life. Human and animal waste was dumped into the streets, the air was choked with smoke from wood and coal fires, and rivers were soiled from the refuse that butchers, tanners, and other workers dumped into the waters.

Beginning in the late twelfth century, first merchants and then those who worked in particular urban industries, such as textile manufacture, metalworking, the production of leather goods, etc., began to form organizations called guilds. By the thirteenth century there was a guild dedicated to almost every craft, from tanners and bakers to more specialized groups such as silk merchants, notaries, and spice traders. In the cloth industry, guilds represented each process of the manufacturing process, such as spinning, weaving, fulling, and dyeing. Guilds oversaw nearly every occupational aspect; they established product standards and prices, workers' wages, and the maximum number of occupational practitioners allowed in the town or city. Furthermore, guilds also had social functions; they buried their members, took care of the widows and orphans of the membership, and sponsored religious festivals. Women were sometimes members of guilds, especially as widows if they had worked with their husbands in a particular craft and continued in that work following the husband's death. Female workers dominated certain aspects of textile manufacturing such as spinning silk, which was also reflected in their guild membership. Because guilds were associated with manufacturing and crafts,

they dominated medieval urban life where these occupations were most evident.

Urban residents constituted a small minority of Europe's total population, but because the towns and cities they inhabited were centers of commerce and industry, the wealth that they generated made them an important catalyst in the economic revival of Europe. Although beginning in the mid-fourteenth century cities and towns would experience sharp declines in population in the wake of the Black Death, in general their influence and importance continued to grow throughout the Middle Ages and beyond.

—Jan K. Bulman

Bibliography

- Epstein, Steven A. "Urban Society." In *The New Cambridge Medieval History*, Vol. 5, c.1198–c.1300, edited by David Abulafia. Cambridge: Cambridge University Press, 1999.
- Frugoni, Chiara. *A Day in a Medieval City*. Translated by William McCuaig. Chicago: University of Chicago Press, 2005.
- Miskimin, Harry A., David Herlihy, and Abraham L. Udovitch, eds. *The Medieval City*. New Haven, CT: Yale University Press, 1977.
- Nichols, David. *The Growth of Medieval Cities from Late Antiquity to the Early Fourteenth Century*. London and New York: Longman, 1997.

Tenochtitlan

The capital city of the Mexica (Aztec) empire, Tenochtitlan was founded in 1325 CE and fell to the Spaniards under Hernando Cortés on August 13, 1521. In less than 200 years, the island city had a remarkable growth and development, and by the time the Spaniards arrived it was one of the largest cities in the world. Certainly, it was one of the most beautiful: the Spaniards were in awe of it as they gazed upon the city shortly before meeting the Aztec emperor Motecuhzoma (Montezuma).

According to legend, Tenochtitlan was founded at a nadir in Aztec history. The Aztecs had just been driven out of a city where they had served as mercenaries, having committed atrocities that disgusted their hosts. The Aztecs were forced to flee to a group of low, swampy islands that lay in the western part of Lake Texcoco, the largest of a series of lakes that formed

the heart of the basin of Mexico where Mexico City now stands. It had long been prophesied that they would be given a divine sign by their patron god, Huitzilopochtli, when the time was right to build their city and become ancient Mexico's "chosen people." This sign would be an eagle eating a snake and perched on a prickly-pear cactus, and the Aztec priests saw that sign on those swampy islands in Lake Texcoco.

The Aztecs settled on the islands, driving wooden stakes into the grounds as piles to anchor their building foundations, and gradually their fortunes improved. In 1428, they attacked and beat the most powerful city in the basin of Mexico—the Tepanec city of Azcapotzalco—and from that time they were the most powerful polity in the region. Tenochtitlan grew rapidly in both grandeur and size, ultimately reaching a population of an estimated 150,000–200,000 people and covering perhaps 20 square miles (50 square kilometers).

By the time of the Spaniards' arrival, the city was a metropolis of gleaming white houses and temples interspersed by canals and linked to the mainland by a series of causeways. In the center of the city was a sacred precinct, surrounded by a wall and containing the great temples of the city, a ball court, and a "skull-rack"—a structure that contained the skulls of tens of thousands of sacrificial victims skewered on wooden stakes. All buildings were dominated by a huge pyramid topped by twin temples: one was the house of the Aztec rain god, Tlaloc; the other, that of Huitzilopochtli, the war god and patron of the Aztec people.

Outside the precinct wall, but still at the heart of the city, were the palaces of the various Aztec emperors. Beyond these were the houses of the nobles and commoners laid out in a grid with canals serving as streets (several of the Spanish conquerors compared Tenochtitlan most favorably with Venice). The city was divided into quarters, and each quarter was divided into smaller units called *calpulli*. By all accounts, the city was very clean, orderly, and efficiently run. The great market of the Aztecs was in another city, Tlatelolco, immediately to the north of Tenochtitlan. There, some 60,000 people would pour into the market to exchange wares brought in from every corner of the empire.

After conquering the Aztecs, the Spaniards razed the city and began to build their own capital of New Spain—the city now called Mexico City. The Spaniards reduced most of the Aztec buildings to rubble, reusing many of the stones in their own constructions. Even so, the rubble reached in some parts to a height of about 10–13 feet (3–4 meters), which means that in many parts of Mexico City there are preserved remains of Tenochtitlan. Almost any deep excavation in the central part of the city will reveal such remains, and in 1968, excavations to extend Mexico City's subway system uncovered a perfectly preserved Aztec temple. It was kept as the centerpiece of the Pino Suárez subway station.

In 1978, a huge carved stone was found by electrical workers in central Mexico City. The stone was decorated with the relief of an Aztec moon goddess, Coyolxauhqui, sprawled dead and dismembered on the ground. In fact, the Coyolxauhqui stone was at the base of a stairway leading to the temple of Huitzilopochtli and recalled the Aztec myth telling how Huitzilopochtli killed his half-sister Coyolxauhqui, dismembered her, and threw her body down from Coatepec (Snake Hill). The Aztec Great Temple of Tenochtitlan, then, was the physical reconstruction of Coatepec, with the broken body of Coyolxauhqui at its base.

Subsequent excavation of the Great Temple has revealed the way in which the structure was enlarged over the years, each construction being larger and more elaborate in direct reflection of the growing fortune of the empire. The Great Temple was the ritual heart of the empire, and it was at the very center of Tenochtitlan.

—Peter Mathews

Bibliography

- Broda, J. *The Great Temple of Tenochtitlán: Center and Periphery in the Ancient World*. Berkeley: University of California Press, 1987.
- Mathews, Peter. "Tenochtitlán." In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.

Cuzco—Inca Capital

Cuzco, a name that derives from the mound of stones into which a mythic ancestor of the Incas

had been transformed, took shape as the greatest capital city of South America under the last three independent Incas, Pachacuti, Tupa Inca Yupanqui, and Huayana Capac, who ruled between about 1438 and the mid- to late 1520s. It was also one of the most elevated capital cities in history, situated at an altitude of 10,825 feet (3,300 meters) or roughly two miles high. According to a story recorded around 1550 by the Spanish historian Juan de Betanzos, at the beginning of his reign Pachacuti rebuilt the city according to a plan that he fashioned out of clay models.

The city, which was rectangular in form tapering toward the confluence of two streams, became the administrative and spiritual center of a fast growing empire. From Cuzco, the Incas divided their empire into four *suyus* (regions) that formed the *Tabua-ntin-suyu* (the four united parts). The quarters were the *Anti* sector, which covered the eastern Andean slopes and tropical lowlands; the *Colla*, which extended southeast to the Titicaca region and beyond; the *Cunti*, which stretched southwest to the coast; and the *Chincha*, which covered most of the territory north and west toward the equator. The quarters converged on Cuzco's Temple of the Sun in the Gold Enclosure, the most sacred precinct in the city. The area immediately surrounding Cuzco was a sacred landscape filled with 328 shrines that fanned out along conceptual lines called *ceques*. These shrines ranged from monumental buildings to natural features on the landscape such as crags and springs. Each had its associated stories that were part of the fabric of Inca sacred history.

As befit the capital of an empire ruled by descendants of the Sun, the Incas enforced the removal of both people and sacred objects to the capital. The transported people included skilled craftsmen and the sons of local lords. These latter were trained to fill lower positions in the Inca bureaucracy and were also expected to ensure the loyalty of the ethnic groups from which they came. Removal of a community's primary sacred object (*huaca*) to Cuzco was aimed at both coercing obedience from subject provincial peoples and incorporating their spiritual powers into the empire.

—Alfred J. Andrea



Ruins at Cuzco, capital of the Inca Empire. (Corel)

Bibliography

- Bauer, Brian S. *Ancient Cuzco: Heartland of the Inca*. Austin: University of Texas Press, 2004.
- Zuidema, R. Tom. *The Ceque System of Cuzco: The Social Organization of the Capital of the Incas*. Translated by Ev M. Hooykaas. Leiden: E. J. Brill, 1964.

Chaco Canyon

The sight of the Great Houses of Chaco Canyon—vast multistory constructions containing scores, and in a few cases hundreds, of rooms built in a dry and inhospitable valley in northwestern New Mexico—is nothing short of extraordinary. These and other architectural edifices were built by the ancient Puebloan peoples who occupied the canyon and the surrounding area between about 950 and 1125 CE. The largest Great House, Pueblo Bonito, covers an area of 4.5 acres (1.8 hectares) and contains 700 rooms arranged in an irregular semicircle around a central plaza. The building increases in height from a single story by the plaza to five stories next to the outer wall. In the plaza itself were numerous kivas—underground chambers built for religious ceremonies—of various sizes, including two “great kivas” around 50 feet (15 meters) across.

One of the most intriguing questions about Chaco is why social organization and architectural technology should have reached such impressive heights in such an improbable place and how they were supported. It is clear that a



The extraordinary ruins of Pueblo Bonito in Chaco Canyon, viewed from the mesa to the northwest. (iStockPhoto.com)

huge and well-organized infrastructure was needed, for example, in transporting tens of thousands of large timber beams for the construction of floors and roofs over distances of 60 miles (100 kilometers) or more from the nearest forests. A key issue is the size of the resident population. It seems unthinkable that the scant food sources available could have supported a population that filled all the rooms of the Great Houses, and this, together with other factors such as the preponderance of kivas, invites the suggestion that the canyon was first and foremost a religious center, with a relatively modest number of permanent residents. If so, then it was likely controlled by an elite who exerted both ideological and political control. One suggestion is that pilgrims are likely to have converged here in considerable numbers at particular times and that these times would have been astronomically determined.

In recent years, convincing evidence has emerged that the houses, kivas, roads, stairways, and even middens around Chaco formed a carefully planned ritual landscape centered upon the Great Houses of the canyon itself. Within this scheme of things, it is perhaps not surprising that a number of buildings seem to have been deliberately oriented along one or the other of the cardinal directions or else display a strong degree of symmetry about their north-south

and/or east-west axes. Similar principles seem to have extended to the layout of buildings within the landscape, with several of the principal ones lying on an east-west axis and a north-south axis which cross in the valley. When these axes were first discovered, many scholars dismissed them as fortuitous rather than deliberate, but this changed with the subsequent discovery of the (Great) North Road, which connects with the north-south axis and runs due north from Chaco for more than 30 miles (50 kilometers).

The principles that defined the spatial layout of Chaco buildings and their landscape were apparently derived from a quadripartite cosmology, a perceived division of the world into four quarters around some central place. Such divisions have persisted as a characteristic feature of indigenous North American worldviews up to modern times.

—Clive Ruggles

Bibliography

- Lekson, Stephen H. *Great Pueblo Architecture of Chaco Canyon, New Mexico*. Albuquerque: University of New Mexico Press, 1987.
- Lekson, Stephen H., John R. Stein, and Simon J. Ortiz. *Chaco Canyon: A Center and Its World*. Santa Fe: Museum of New Mexico Press, 1994.
- Plog, Stephen. *Ancient Peoples of the American Southwest*. London: Thames and Hudson, 1997.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

Cahokia

The many huge earthworks or mounds that remain visible in the Mississippi and Ohio valleys form a conspicuous testimonial to the technical achievements of indigenous North Americans before the arrival of European settlers. Inevitably, a number of them have attracted interest in potential astronomical alignments, and it is scarcely surprising that this includes the great Mississippian site of Cahokia.

The Mississippian culture flourished from about 1000 to 1400 CE in the central Mississippi Valley, where the fertile floodplains were ideal for growing maize and other staple crops. Cahokia was not only the main economic and po-

litical focus of this culture but also the largest pre-Columbian town—worthy in fact of being called a city—north of Mexico. At the height of Cahokia's development it covered over 6 square miles (15 square kilometers) and had an estimated population of more than 20,000. The city itself was laid out on a grid that was roughly aligned along the four cardinal directions. At its heart was a ceremonial center containing over 100 earthworks, all serving as temple or house platforms or burial mounds. Most of this "mound center" is now preserved in Cahokia Mounds State Historic Site near East St. Louis.

The rectangular flat-topped earthwork known as Monks' Mound is at the center of the ceremonial grid. It is the largest earthen mound in the whole of the Americas, some 100 feet (30 meters) high and covering around 17 acres (7 hectares). But it was the discovery in the early 1960s of rings of postholes marking the sites of five timber circles to the west of Monks' Mound that triggered intense astronomical interest in the site. By analogy to Woodhenge—a set of concentric oval-shaped timber rings found near Stonehenge in England—the discoverers named them woodhenges, although it is dangerous to draw close similarities between superficially similar sites from completely different cultural contexts.

The five original woodhenges at Cahokia, identified by extrapolating from strings of postholes forming circular arcs running through excavated areas, appear to have had diameters ranging from 120 feet (37 meters) to 233 feet (71 meters). They were good approximations to true circles, with evenly spaced posts. Most remarkably, initial estimates of the numbers of posts in the five circles—24, 36, 48, 60, and 72—implied that numerology was vitally important and that strict design principles were operating. Four of the five posthole circles overlap, suggesting that they represent successive constructions fulfilling a particular purpose. Since this time, a number of other postholes and posthole structures have been discovered at Cahokia.

The original suggestion made in the 1960s was that the various circles of timber posts functioned as devices for observing the rising position of the sun at the solstices and equinoxes, perhaps for the purpose of regulating an agricul-

➤ MONKS' MOUND



(Alfred J. Andrea)

Monks' Mound, the largest earthen structure at Cahokia, contains an estimated 22 million cubic feet (623,000 cubic meters) of earth. It was at the center of the community, which included about 120 mounds over an area of 5 to 6 square miles (13–16 square kilometers).

—Alfred J. Andrea

tural or ceremonial calendar. However, this involved the totally arbitrary selection of data: for instance, three posts—indistinguishable in any other way from all the remaining posts in one of the circles—were identified as putative solar foresights as viewed from a central post. Other corroborating evidence presented at the time—for instance, relating to the orientation of the ramps used in setting each relevant timber post in its place—has proved totally fallacious, as have various further astronomical speculations.

An obvious question to have asked at the outset was why, if sunrise observation was the primary purpose, was a whole circle of posts needed? Indeed, circles of this size—unless supplemented by the use of distant horizon foresights—cannot define the relevant alignments at all precisely. It is possible that the circles had a cosmological function or meaning, but the publicity given to the unfounded astronomical speculations has undoubtedly hampered serious consideration of this issue.

Instead, Cahokia stands as an unfortunate example of bad practice: uncritical spotting of

alignments upon preconceived astronomical targets undertaken without due consideration of the broader interpretative context.

—Clive Ruggles

Bibliography

Aveni, Anthony F. *Skywatchers*. Austin: University of Texas Press, 2001.

Fowler, Melvin, ed. "The Ancient Sky Watchers of Cahokia: Woodhenges, Eclipses, and Cahokian Cosmology." *Wisconsin Archaeologist* 77(3/4) (1996): 1–158.

Krupp, Edwin C. *Skywatchers, Shamans and Kings*. New York: Wiley, 1997.

Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

■ Introduction: The Human Environmental Imprint—Natural Resources

In many respects, the years 1000–1500 constituted, so far as the harvesting and use of natural resources across the globe were concerned, a period of expansion of the human imprint on the environment, but it was not one of revolution.

Essentially all of the important tools and techniques for farming, mining, and processing nature's bounty had been developed and spread beyond their regions of origin well before 1000 CE, and the world would not see significant developments in most of these technologies for several more centuries. Of course, there were exceptions to this general rule, especially in the case of improved water pumps that enabled several societies across Afro-Eurasia to dry out so-called wet wastelands, thereby reshaping the environment, often for agricultural purposes. Such reclamation had severe negative environmental consequences, but awareness of the damage done by drying out fragile sites such as these only became apparent in the late twentieth century. Pumps, along with other new hydraulic machinery, also allowed the extraction of minerals from deep within the earth, and this was especially true for China's coal and iron industries. To drive its iron production, which grew at a rapid rate during the Northern Song era (960–1126), the Chinese denuded vast stretches of northern forestland in their quest for charcoal. By around 1100, however, bituminous coke became the fuel of choice, which placed further pressure on coal mining and also added to air pollution. Some power sources were mercifully

far cleaner. Although the technology was essentially ancient, the use of water- and wind-driven devices, such as grinding mills and water wheels for irrigation, proliferated across Afro-Eurasia. The twelfth-century monastery of Clairvaux in Burgundy, France, for example, had a vast array of water-powered devices in its workshops. The brothers diverted half of the water from the Aube River onto the abbey's inner grounds. Once there the water did its duty, driving spinning wheels and a vast assortment of other machines, and as it flowed out of the monastery complex, it carried waste products, especially the vile remains of its tanning operation, to the river's main channel. One wonders what the Aube looked like downstream.

As with tools and techniques, most major foodstuffs had also spread widely within and across the still-isolated "world islands" of the Americas, Afro-Eurasia, and Australia well before the year 1000. Isotope evidence from human skeletons in southern Ontario, for example, indicates that maize had reached this region from central Mexico by about 650 CE, although it took centuries for it to achieve a place of prominence in the diet of local inhabitants. In like fashion, China had received most of its imported flora from central and western Eurasia, such as grapes, date palms, and melons, in the eras of the Han and Tang dynasties (202 BCE–918 CE). The one major exception was fast-growing drought-resistant Champa rice from Southeast Asia, which appeared in the Middle Kingdom during the early years of the Song dynasty (960–

1279). This rice, which allowed for double- and even triple-cropping, enabled China to expand rice cultivation far into its northern plains, and it was only during Song times that rice became central to the Chinese diet. Similarly, tropical Africa had, much earlier, received such important crops as bananas from across the Indian Ocean.

By and large, edible flora that developed exclusively in a single landmass (such as maize, potatoes, and peanuts in the Americas; wheat, barley, millet, and teff in Afro-Eurasia; and the small-leaved clematis in Australia) remained there and was isolated from the rest of the world until the great transoceanic voyages. The exchange that followed in the wake of these voyages, especially the so-called Columbian Exchange between the Americas and Afro-Eurasia, would have profound environmental, demographic, social, economic, and political repercussions but only after 1500. The only significant exception to the rule that unique plant foods remained isolated within their home landmasses before 1492 was the sweet potato, which somehow made its way from South America to Polynesia sometime probably between 300 and 700 CE.

Although cultivated flora and various tools for exploiting the environment remained fairly unchanged during this half millennium, the areas touched and altered by humans increased substantially, as did the intensity of that exploitation. The fourteenth-century double trauma of the first stages of the Little Ice Age and the Great Pandemic proved a setback to Europeans, who since around 900 CE had been intensely pushing out their physical boundaries while exploiting vigorously internal lands once thought to be marginal areas or wastelands. A retrenchment in Europe that lasted more than a century was now in order, although it did not stop sixteenth-century Western Europeans from expanding overseas and exploiting lands and peoples in the Americas. During the last quarter of the fourteenth century, the Chinese, despite having lost in the previous two centuries as much as 50 percent of their population due to invasions and disease, were moving in a major way into the southwestern frontier regions of Yunnan and Guizhou. Government soldiers, arriving as farmer-colonists, cleared and cultivated some 350,000 acres (140,000 hectares) of land by 1400.

Well before the fourteenth century, governments across Afro-Eurasia had encouraged colonization and cultivation of the land through a variety of means. European lords, especially those pushing out Latin Europe's eastern borders, offered special privileges and freedoms to the peasants who moved onto their lands. In China under the Song (and later the Ming) this encouragement took on a pedagogical form with the production of illustrated government-sponsored manuals that promoted best-practices farming techniques. One such manual printed in 1149 promised that anyone who planned carefully and acted accordingly would enjoy success as a farmer without having to rely on luck. A vast ocean away and several centuries later, all the "big-eared" nobles of the Inca empire, as well as the divine Inca himself, would on certain set days go into the fields and cultivate the land with a plow as an example to all of the worth of such labor. In the process, the face of the land across the world was being transformed.

Transformation is not necessarily a positive phenomenon. Although the reasons for their disappearance as identifiable cultures is uncertain, it is possible that the cliff and pueblo dwellers of the Four Corners (the so-called Anasazi) and the Hohokam of the Salt and Gila river drainage of present-day Phoenix, Arizona, abandoned their cities in part because they had exhausted the land.

—*Alfred J. Andrea*

Equatorial Agriculture in Africa

Cattle herding and banana cultivation provided the basis for socially complex and economically viable food systems in equatorial Africa during the period between about 1000 and 1500 CE. The mix of pastoral and farming communities also reflects the growing diversity of regional political strategies. Linguistic, ethnographic, and archaeological perspectives suggest that shifting food economies may also correlate with new political and social identities during the period.

The Great Lakes region comprises what is today southern Uganda, eastern Rwanda, and northwestern Tanzania, and scholars disagree about the historical origins of distinct cultural identities attached to contemporary herders and

➤ IRONCLAD POWER IN CENTRAL AFRICA

Iron technology in Central Africa not only played a key socioeconomic role but also functioned as a symbol of political authority in the region between the late tenth century and the mid-thirteenth century. Remarkable burials linked to the Early and Classic Kisalian Culture (late seventh through twelfth centuries) reveal the persistent symbols of high status in the form of ceremonial axes, iron bells, and anvils, the signature tool of the blacksmith.

The Upemba Depression, just south of the equator, is dominated by a fertile floodplain, where early technological achievements included complex iron and copper metallurgy and hydraulic systems that controlled water levels with dams and canoe channels. The largest copper deposits in the world are found to the southeast, and iron metallurgy dates back at least two millennia. Both copper and iron were smelted locally and traded long distances as ingots and currency. Metalworking techniques included wire drawing, hammering, and casting used to manufacture chains, pen-

dants, fishhooks, harpoons, spears, knives, hoes, and other goods.

Iron links religion, politics, and technology across the centuries and stretches from the Kisalian Culture to the Luba, a powerful kingdom after 1700. Miniature iron anvils are found in early burials as royal insignia on objects from hairpins to axes, and the anvil is the symbol of royal authority among the Luba even today. Blacksmiths and kings are similarly linked through their transformative powers, since oral traditions suggest that the first ruler was himself a smith. The use of iron symbolism to communicate ideas about sacred kingship and the underpinnings of political power may reflect the significance of iron in the agricultural and economic history of the region. The transformation of iron ore into malleable metal remains among the most powerful metaphors for strength and authority in Central African political and ritual realms.

—Candice Goucher

banana farmers there. The long process of Bantu expansion, a series of long-distance migration over millennia, involved both iron technology and mixed agriculture, eventually assimilating Cushitic and Sudanic linguistic groups. Intensive cattle herding appears after about 300 CE and as late as the eleventh and twelfth centuries in some areas. Long-standing trade and other connections brought into contact the varying economic lifestyles organized around livestock, cereal farming, fishing, and growing yams. Banana cultivation added to this mix by at least 1200 CE and subsequently spread to multiple groups. Based on historical linguistic and archaeological evidence, historian David Schoenbrun has argued that struggles for wealth and political authority may date from the period of the introduction of intensive banana cultivation.

Around the end of the first millennium or the beginning of the second, extensive iron metallurgy and clearing of land with iron hoes led to the diminishment of secondary forests south of the Kagera region (which is situated along the shore of Lake Victoria in present-day Tanzania). Specialized herding by Rutaran speakers eventu-

ally resulted in their movement into the drier and more open grasslands. Not only people but also practices shifted across the landscape of equatorial Africa. Whether or not societies emphasized cattle or bananas, they depended on religious specialists and political officials and their vocabularies of power. The family heads and chiefs, who controlled lands available for intensive cultivation, stood to gain in wealth and prestige as they distributed access to free lands.

Evidence of an increasingly important social hierarchy in the fourteenth and fifteenth centuries comes from the period's construction of large earthworks. These imply the highly centralized control over resources, including labor, at sites such as Ntusi, Bweyore, and Bigo, all in present-day Uganda. Burial sites have been excavated and reveal that elites and even their children were buried with extensive grave goods, such as decorated pottery, jewelry, ivory, glass beads, cowries, and metal currency shaped as crosses. Control over people and land, whether devoted to herding or farming, may have formed the foundations for great wealth and political authority within indigenous state formation.

Estimates of population are extremely difficult to make with any certainty during the pre-colonial period. Some scholars have claimed that the region's agriculture supported the most densely populated region in Africa. The banana thrived in the regions of generally good rainfall and fertile soils and, when cooked, provided a staple food for large numbers of people. Populations along the lakesides shifted during periods of occupation. Sharp increases in child burials can be interpreted as evidence of high child mortality or significant population increase, or both. The close association of populations with animal herds may have contributed to the spread of disease while also supporting exceptional levels of agricultural productivity.

—Candice Goucher

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.
- Schoenbrun, David L. "Cattle Herds and Banana Gardens: The Historical Geography of the Western Great Lakes Region, ca AD 800–1500." *African Archaeological Review* 11 (1993): 39–72.

Salt Production in China and West Africa

Salt, now common and inexpensive, was once neither. States became rich by controlling salt production and trade, and wars were often fought for it. Salt is a necessity rather than a luxury. Without enough salt, our bodies cannot retain or process water. In particular, grain-based diets are poor in salt, and agricultural communities have had to find a way to produce or acquire salt. An examination of salt production and trade in China and the West African savanna region provides us with insights into how agricultural societies in two very different world regions dealt with the problem of getting salt. Furthermore, these case studies give us insights into how the quest for salt influenced the cultures of each region.

East Asia was one of the first parts of the world to establish sedentary agriculture, and the area is also rich in salt. Brine springs and dry lake beds in the interior were sources of salt,

and communities along the seashore could extract sea salt by concentrating the brine and then boiling it. As early as at least the twelfth century BCE, Shang rulers taxed the production and distribution of salt, and by the time of the Qin empire (221–206 BCE), the government monopolized salt production. Salt remained under government control for centuries and during the Ming dynasty (1368–1644) provided more than half of the government's revenue.

Through a system known as *yin fa* (the syndicate system), families in salt-producing regions were required to produce an annual quota of salt. Licensed traders transported the salt to official government depots from where they then carried it to local markets. At each step, the salt was monitored by government bureaucrats.

Compared to East Asia, the inhabitants of West Africa were faced with much greater challenges in developing agriculture and gaining access to salt. However, by the first millennium CE, local farmers were overcoming poor soil and unpredictable rainfall. Soon the local population began to grow and create cities along the Niger River Valley. By the second millennium, large trading empires, such as Mali and Songhai, grew to dominate the savanna region. As elsewhere, these communities needed salt.

Unlike China, there were few local sources of salt in the Niger River Valley. The nearest significant sources lay deep in the Sahara desert, hundreds of miles to the north. The introduction of the dromedary, or single-hump Arabian camel, in the early centuries CE provided merchants, especially the Berbers of northwest Africa, with a superior means of reaching and transporting the salt. Caravans of several thousand camels, each carrying two large slabs of salt, became common, and indeed salt became just as important a part of the trans-Saharan trade system as the gold mined in the forests to the south. Mali and Songhai grew rich by controlling the flow of salt and gold into and out of their borders. In the early sixteenth century, Songhai seized the important Saharan salt mine of Taghaza in order to control salt production as well as its trade.

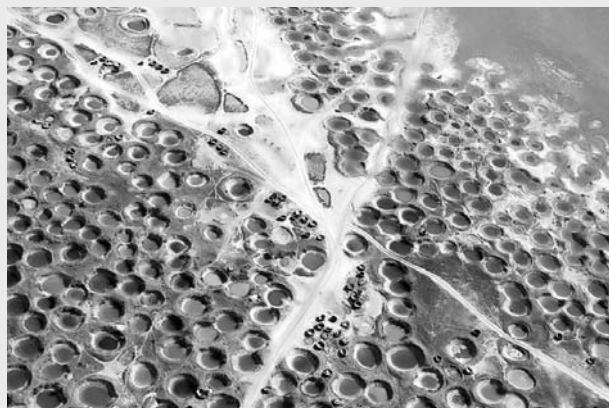
Salt in the savannas was generally acquired via trade, and this meant contact with foreign merchants. In particular, the trans-Saharan trade in salt put the ruling and merchant classes of the

➤ SALT MINES OF THE WESTERN SAHARA

Deep within some of the most arid regions of the Sahara desert lie a number of the most important salt mines of the premodern era. These deposits of salt are a legacy of the region's once temperate and well-watered past. Prior to 10,000 BCE, large lakes were present along the western and southern reaches of the Sahara, of which Lake Chad is the sole survivor.

When the Sahara began to rapidly dry up after 6000 BCE, the evaporation of the lakes created deposits of rock salt, some several meters thick. Populations in the agricultural regions of both North Africa and the savanna regions of West Africa gradually learned to exploit these salt deposits. The mid-fifth-century BCE Greek historian Herodotus mentions salt mining in the African desert, but it was the dromedary, introduced into North Africa early in the first millennium CE, that enabled entrepreneurs to reach and mine these remote deposits.

Major salt mines were established at Teghaza and Taoudeni, near the northwestern corner of modern Mali; Ijlil in northern Mauritania; Tichitt in southeastern Mauritania; and Awlil, on the coast near the northern border of modern Senegal. By 1500 CE, annual combined output was perhaps



Salt pits in Senegal. (Sarasta/Dreamstime)

more than 5,000 metric tons per year. The mining of salt was almost always carried out by slaves, in no small part because the conditions in the desert salt mines were so brutal. Upon visiting Teghaza in 1352, the traveler Ibn Battuta commented, “This is a village with nothing good about it.”

Given the value of the salt excavated from these mines, they were often the focus of political intrigue and military assault.

—Jonathan T. Reynolds

savannas in contact with their counterparts from North Africa. As a result, the trade in salt was a major conduit by which Islam was introduced to the region. By the fifteenth century, for example, many of the merchants and rulers of the savanna had converted to Islam. Notably, the founder of the empire of Songhai, Sonni Ali, was overthrown in part because he was not considered a devout Muslim.

In both China and West Africa, salt and society were deeply intertwined. In China, salt and the government became inseparable. Indeed, the Chinese character for salt shows a government bureaucrat standing next to a salt-boiling pan. Thus, control over the production and trade of salt in East Asia was a major factor in developing Chinese state authority. In West Africa, too, salt became a major source of state income through trade. Furthermore, because trade necessitated contact with the wider world, the salt trade in

West Africa became a major conduit by which a new religion was introduced into the region.

—Jonathan T. Reynolds

Bibliography

- Adshead, S. A. M. *Salt and Civilization*. New York: St. Martin's, 1992.
- Gilbert, Erik, and Jonathan T. Reynolds. *Trading Tastes: Commodity and Cultural Exchange to 1750*. Upper Saddle River, NJ: Prentice Hall, 2005.
- Kurlansky, Mark. *Salt: A World History*. New York: Walker, 2003.
- Multhaupt, Robert. *Neptune's Gift: A History of Common Salt*. Baltimore: Johns Hopkins University Press, 1978.

The Settling of the Kerala Backwaters

The southwestern coast of India, south of Mumbai, also known as the Malabar Coast, is a nar-

row strip lying between the Arabian Sea and the Western Ghats (Sahyadri Mountain Range). The Ghats, once covered by tropical rainforests, range in height from 2,000 to 8,000 feet (610 to 2440 meters) and in many places block the monsoon rains as they blow out of the Arabian Sea and cross the shore. As a result, heavy rains fall along the coast as the cloud banks rise and press into the mountains, seeking out the passes that will carry them across the Deccan Plateau and onward over the Indian subcontinent. These intense rains have shaped the unique environment of coastal western India. In the early modern age, numerous creeks, as large as rivers, rushed down the steep slopes of the Ghats to form an intricate pattern of mangrove swamps and estuaries feeding into lagoons separated from the sea by a chain of sandbars and islands.

In Kerala, the environment of the coastal lowlands differs from that of the northern regions of India's western coast. Here the land lies at sea level, almost perfectly flat and often flooded. What is perhaps even more intriguing about Kerala, however, is that its coastal landscape, known as the Backwaters, is mostly artificial. Like the polders of Holland, the Backwaters are the work of thousands of laborers toiling, over centuries, to harness rivers and win land from the sea. Deposits of marine shells are found at many inland villages in Kerala, and some of these places bear names that suggest that at one time they stood on the seashore. According to Hindu mythology, the divine culture-hero Purushurama raised the lowlands of Kerala from the sea in order to provide a paradise for the settlement of Brahmin priests and therefore atone for past sins. In Kerala, local lore attributes the formation of the lowlands to a "first king" of semi-divine origin.

The western coast of India was thinly populated in ancient times and difficult to farm due to heavy rainfall. Neolithic cultures flourished in this niche, however, some surviving intact well into the nineteenth century. Permanent agriculture carried out on a significant scale gained a foothold on the coast very late, probably in the ninth century CE, and thus farming developed in Kerala after the establishment of local economies based on fishing and commerce. As the first-century *Periplus of the Erythrean Sea* attests,



Kerala backwaters, India. (McKay Savage)

the coast supported several thriving ports, but these were trading posts where hunter-gatherers and herders brought jungle produce, mainly spices and rare woods, to the shore to trade. Eventually, foreign traders settled permanently on the Kerala coast, no doubt attracted by the area's cultural and political openness. Local rulers allowed Jewish, Syrian Christian, and Arab Muslim traders to set up towns and rule themselves according to their own customs.

The kings of Kerala were Hindu, albeit late converts to the Aryanized northern form of the religion. The absence of agrarian villages, however, precluded the rise of a Brahmin-dominated Hindu culture rooted in normative northern Indian notions of caste and dharma. The traditional Aryan pattern of Indian civilization, with its landholding priestly elite, required substantial surplus agricultural production, and in order to promote and anchor Hinduism, the rulers of Kerala had to create rich farmland, the famous Backwaters. The economic impetus for this effort probably was a combination of the need for more land to accommodate a growing population and the desire to profit by provisioning coastal trading enclaves. In any event, tribal communities that already had transitioned to slash-and-burn cultivation in the mountains settled down to permanent farming along the shores of coastal lagoons and built up more land by dredging up the bottoms of lagoons and building a

► THE WATERY, INVINCIBLE MAZE OF THE BACKWATERS

Divided into hundreds of islands by thousands of creeks, sloughs, estuaries, lagoons, and canals, the Backwaters were difficult to unite politically and impossible for outsiders to control. The raja of Cochin dominated the northern Backwaters, holding strategic forts guarding the main river channels along which spices were brought to the coast from the slopes of the Western Ghats. When the Portuguese arrived in Kerala, they allied themselves with the raja of Cochin against the Samudri Raja (Lord of the Sea, known to the Portuguese as the Zamorin) of Calicut, who threatened to invade the Backwaters from the north. Over time, as the Portuguese brought Cochin under their control, however, they found it impossible to impose their regulations very far beyond the limits of the port city and a few Christian villages on adjoining Vypeen Island. Edicts prohibiting the smuggling of pepper were especially ineffectual, since local people knew routes by which spices could be transported across the Backwaters, avoiding Portuguese checkpoints and dodging the Estado da India's monopoly. The Dutch, who took over Cochin in 1666, also tried to dominate the Backwaters but could not control Kerala any more successfully than the Portuguese. Pepper smuggling continued, and in the meantime the expanding state of Travancore, based in southern Kerala, extended its control over the interior hills and the southern Backwaters, eventually drawing the Dutch into a disastrous war that put an end to Holland's prolonged efforts to colonize the Indian mainland.

—James Hoover Frey

system of dikes. As new farmland was slowly developed, groups of Brahmin immigrants were invited to settle in the lowlands and were granted *agrabarams*, which gave them tithing rights over specific areas. These priestly lineages eventually coalesced to form the Nambudri caste, noted for its scrupulous adherence to rules governing ritual purity and pollution.

When the Portuguese arrived in 1498, the Kerala Coast had reached its present location, but the Backwaters were not fully developed. Rivers carrying heavy loads of silt into the Ara-

bian Sea had been striving with the ocean tides and monsoon storms for centuries, forming a chain of sandbars stretching hundreds of miles along the coast, miles out from the mainland, with semibrackish lagoons and marshes developing behind them. Port cities such as Cochin, the site of the first permanent Portuguese garrison in India, stood on one of these sandbar islands, an interface between the spice-producing tribal world of the mountains and the global trading system of the Indian Ocean.

The unusual ecology of the Backwaters has always intrigued foreign visitors to India. During the dry season, saltwater penetrated into the swamps from the sea, and during the monsoons freshwater backed up behind the coastal sandbar. Thus, the size and even the chemistry of the Backwaters were in perpetual flux. Sometimes, if the flood of freshwater broke through the bar and spilled into the ocean too quickly, the equilibrium of the environment could change radically.

Building narrow levees by hand—diving into the murky water to scoop up armfuls of mud with heavy iron hoes—low-caste laborers channeled runoff and drained small fields, subtly managing water flow, water levels, and soil chemistry to build up protected belts of new land, flooded with freshwater and suitable for intensive rice cultivation. The levees meanwhile were stabilized with thick plantations of trees. In a landscape won and maintained through such hard work, nothing was merely aesthetic. All of the trees served some useful purpose; vines were trained upon them for growing spices, and their branches and towering canopies provided shade for the small thatched houses constructed underneath them.

The people of the Backwaters lived abundantly in narrow spaces, adapting to their watery surroundings. As children they learned how to swim, and boats—ranging from small dugout canoes to cargo-carrying barges called *kettu-valams*—provided transportation. The narrow levees in turn shaped the social order: there were no nuclear villages, only strings of separate homesteads, each with its paddy fields, trees, and garden. The landscape of the Backwaters thus encouraged smallholders rather than the development of large estates. In Kerala, lineage, not

control of territory, remained the essential feature of the socioeconomic system.

—James Hoover Frey

Bibliography

- Day, Francis. *The Land of the Perumails, or Cochín: Its Past and Its Present*. 1863; reprint, Madras: Asian Educational Services, 1990.
- Markham, C. R. "On the Inland Navigation of Travancore: An Account of the Alipee Mud-Bank and the Warkallay Barrier." *Journal of the Royal Geographical Society of London* 36 (1866): 195–198.
- Menon, K. P. Padmanabha. *History of Kerala: A History of Kerala Written in the Form of Notes on Visscher's Letters from Malabar*. Edited by T. K. Krishna Menon. 1924; reprint, New Delhi: Asian Educational Services, 1982.
- Simkins, Ethel. "The Coast Plains of South India, Part I." *Economic Geography* 9(1) (1933): 19–50.

Nomadic Life on the Central Eurasian Steppe

Pastoral nomadism was the dominant way of existence on the Central Eurasian steppe, a vast semiarid grassland that stretches from Mongolia to Hungary. Life centered on the so-called five snouts, the domesticated animals necessary to maintain nomads' well-being. The primary animal was the horse, essential for herding, hunting, and warfare and without which pastoral nomadism would have been impossible. As such, horses held an honored position as a symbol of life and status. Whereas wealth was based on the number of animals owned, the condition of one's horses was indicative of social standing. Sheep, the second snout, were necessary for their wool and meat. Goats, the third snout, supplemented the sheep, particularly where there was less pasture. The fourth snout consisted of cows or yaks, depending on altitude. Bactrian camels were the fifth snout. Although not one of the snouts, dogs were also important to the nomads for guarding the herds, particularly from wolves.

Felt from sheep's wool provided covering for the nomads' shelter known as a *yurt* in Turkish or *ger* in Mongolian, round tents with a wooden lattice framework that could be easily disassembled and loaded onto camels or placed on ox-

drawn wagons. Felt, along with camel and goat hair, was also used in the production of clothes, and leather was made from all of the animals' skins and used in a wide variety of applications.

Steppe nomads subsisted primarily on dairy products. Milk from all of the animals produced a variety of foods such as cheese, yogurt, and cheese curds. The Mongols also produced powdered milk. To use the concentrate, they would add water and tie the container to their saddles so that the movement of the horse could bring the mixture to a suitable consistency while traveling. A key item made from mare's milk was *kumiss* (*qumiz*), a fermented drink, normally of low alcohol content, that was consumed in large quantities in the summer due to the abundance of mare's milk after the foaling season. Although mutton dominated meals, meat from the other animals could be used. Due to their value, camels were rarely eaten.

Although animals supplied most of the materials needed to survive, complete self-sufficiency was nearly impossible. The nomads had a symbiotic relationship with their sedentary neighbors, typically states in China, oasis towns in Central Asia, and the Russian principalities. Nomads traded or raided these agrarian communities for goods they could not produce such as silk, grains, tea, and other luxuries. Although there were a few blacksmiths in the steppe, the nomads usually acquired metal weapons and tools from their neighbors.

It is often wrongly assumed that nomads simply wandered around in search of grass and water for their herds. In fact, they planned their migrations carefully so as not to exhaust pasturelands. In the summer, they moved to the highlands. In the winter, they migrated to the lowlands and into valleys. Of course, scarcity—generally brought about by drought or unusual population increases in either animals or people—could disrupt these patterns and lead to competition for pasture and eventual war between tribes.

Although large numbers of nomads congregated for war and tribal meetings, families typically lived miles from anyone else, driven by a need for sufficient pasture. A family could consist of a few yurts, usually one for each wife if the husband had more than one. Extended families

➤ MONGOL LIFE ON THE STEPPE

A mid-thirteenth-century Franciscan diplomat to the Mongols, William of Rubruck, reported back to the Latin West on various aspects of Mongol life, as the following two excerpts illustrate:

How to Make Kumiss

“And so, when they have collected a great quantity of milk, which is as sweet as cow’s milk when it is fresh, they pour it into a large skin or bag and they begin churning it with a specially made stick which is as big as a man’s head at its lower end, and hollowed out; and when they beat it quickly it begins to bubble like new wine and to turn sour and ferment, and they churn it until they can extract the butter. Then they taste it and when it is fairly pungent they drink it. As long as one is drinking, it bites the tongue like vinegar; when one stops, it leaves on the tongue the taste of milk of almonds and greatly delights the inner man; it even intoxicates those who have not a very good head. It also greatly provokes urine.”

The Head-dress of Mongol Women

“They also have a head-dress which they call *bocca*, which is made out of the bark of a tree or of any other fairly light material which they can find; it is large and circular and as big as two hands can span around, a cubit and more high and square at the top like the capital of a column. This *bocca* they cover with costly silk material, and it is hollow inside, and on the capital in the middle or on the side they put a rod of quills or slender canes, likewise a cubit and more in length; and they decorate this rod at the top with peacock feathers and throughout its length all round with little feathers from the mallard’s tail and also with precious stones. . . . So when several ladies ride together and are seen from a distance, they give the appearance of soldiers with helmets on their heads and raised lances . . .”

—Timothy May

Source

William of Rubruck. “The Journey of William of Rubruck.” Translated by a nun from Stanbrook Abbey. In *Mission to Asia*, edited by Christopher Dawson (Toronto: University of Toronto Press, 1980), 98, 102.

might stay in the same vicinity in order to share resources.

Both sexes shared the tasks involved in taking care of the animals, although there was division of labor under normal circumstances. Generally, men handled the animals unless they were hunting or away from the family for war or other reasons. Men also constructed the yurts and wagons, although this often became a task for the entire family. In addition, they churned the kumiss and manufactured saddles and other riding equipment as well as their own weapons. Women performed most of the household duties, such as cooking, making butter and other dairy products, dressing animal skins, and making felt. During migration periods, women also drove the carts and wagons. When the men hunted or were at war, the women cared for the animals. It was not unusual for either sex to do the traditional work of the other.

All nomads had some proficiency as archers with the compound recurved bow of the steppe, and both sexes possessed highly-developed equestrian skills. Children learned to ride at an early age, often before they walked. Children assisted in the care of the animals and were also responsible for procuring fuel for the fire. Wood was scarce on the steppe and was needed for the construction of yurts, bows, wagons, and other items, so it was not used as fuel. Instead, children gathered dried animal dung, which if properly dried burned with little odor.

Marriages were exogamous (outside of one’s immediate kin) and were often arranged while the intended husband and wife were young. It is not certain how extensive polygamy was among the nomads, but it did exist among the nobility. Furthermore, the nomads also practiced levirate marriages in which a widow is allowed to marry her brother-in-law if she agrees. Furthermore, a son could also marry the widows of his deceased father, excluding his own mother, thus ensuring their economic security.

Due to the often precarious nature of a life that required men and women to frequently perform the same duties to ensure the family survival, pastoral nomads tended to have a strong egalitarian streak in their institutions. There was social and political differentiation but much less so than in the patriarchal agrarian societies that

bordered the steppe. Egalitarianism was most apparent in gender relations, responsibilities, and social status. Even in the upper levels of society, women could play an overt role in politics, such as the regency of Töregene, a wife of Ögödei (r. 1230–1240), the second Mongol Khan, who ruled the empire as regent from 1240 to 1246. Indeed, women frequently served as regents at regional levels for the domains of the Mongol princes. Mothers and wives also served as advisors at all levels of society. On several occasions Chinggis Khan (1162–1227) turned to the advice of his mother Ho'elun as well as his wife Börte. Before setting forth against the Khwarazmian empire in 1219, he heeded to the suggestion of another wife, Yesui, and selected a successor. Women were still subordinate to men, but their nomadic lifestyle allowed for a wide latitude of flexibility.

Egalitarian behavior also manifested in the leadership of tribal confederations. There is a widely held but completely inaccurate perception that various leaders of nomadic confederations and empires, from Attila the Hun to Chinggis Khan, exercised absolute control and domination over their people. Tribal leaders were expected to lead effectively and to provide for their people. Those who failed to do so might be ousted from power or find themselves deserted by their followers, especially the great warriors, as they left the tribe to seek a more capable leader.

While not a democratic process, the selection of a khan, or leader, did not necessarily follow any rule of dynastic succession. Candidates were selected from a pool of qualified individuals from the tribe's aristocratic families, with ideally the most suitable selected to rule. It was possible to develop a line of succession for the purpose of nomination, but no nominee was guaranteed success. The previous ruler's nomination was considered a suggestion rather than a decision. Moreover, leadership could move laterally to a brother or a cousin rather than to the ruler's son.

When it came to inheritance the eldest son was not the primary recipient. All sons, and sometimes the daughters, received a share. Indeed, the youngest son received the father's home and pasturelands. Because of their age, elder sons were expected to have established families and

pasturelands of their own and thus were not in need of as much assistance as the youngest son.

This system of inheritance was applied by strong rulers who could impose their dynastic succession decision by dividing up and allocating imperial territories to their heirs. While not necessarily the best decision, it sometimes prevented heirs from engaging in internecine warfare in the short term, but it eroded the stability of the state over time. Appanages (lands given to heirs, especially younger sons) gained through this form of inheritance became smaller and smaller as each son subdivided his territory to his heirs. As territories decreased in size and available resources, conflict arose. Furthermore, because lines of succession were somewhat amorphous, there were more candidates for the throne, and if they were not handled properly, warfare erupted.

Nonetheless, nomadism remained the primary form of economy and society in the Central Eurasian steppe until the nineteenth century. During this period, Chinese and Russian immigration began to forever change the steppe. Although pastoral nomadism endured, it became increasingly marginal.

—Timothy May

Bibliography

- Golden, Peter. *Nomads and Sedentary Societies in Medieval Eurasia*. Essay on Global and Comparative History Series. Washington, DC: American Historical Association, 1998.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Krader, Lawrence. *Social Organization of the Mongol-Turkic Pastoral Nomads*. The Hague: Mouton, 1963.

Europe's Agricultural Revolution

Between 1000 and 1300, Europe experienced a revolution in agriculture due to a milder, drier climate that lengthened growing seasons and improvements in tillage methods, soil management, and crop rotation that had been under way for several centuries before the year 1000. The consequent increase in food production and better nutrition led, in turn, to a substantial growth in population that had begun as early as the seventh century but took off dramatically between about 950 and 1050, depending on the

► CLEARING AND SETTLING MARGINAL LANDS

Beginning in the Early Middle Ages, agricultural laborers undertook a dramatic clearance of marginal land across Europe in order to expand arable ground to feed a burgeoning population. The clearance of woodland in England provides an excellent example of this activity. By 1086, the time of the Domesday survey, or census, of the kingdom, approximately 15 percent of England was wooded. From about 1086 through 1286 the island's population grew rapidly, causing a pressing and urgent need for agricultural land. The response to this demand led to a land-clearance effort that brought fen, waste, forest, and all other varieties of land under the plow. Farmers expanded their holdings in a piecemeal fashion, often clearing small patches of land, called *assarts*, in and along the edges of forests or wastelands. These *assarts* slowly encroached upon the woodlands. In Chilterns and Sussex Weald nearly 450,000 acres (183,000 hectares) of woodland were cleared in approximately 260 years. Extensive clearances occurred in the wooded areas of Warwickshire, Worcestershire, Surrey, Berkshire, Northampton, Derbyshire, Staffordshire, Yorkshire, Somerset, Dorset, and Suffolk. Finally, by 1350 the area of England that remained wooded had shrunk to 10 percent. One-third of the wooded land had been cleared.

—Kevin D. Hill



Oxen pull a wheeled plow, from an English calendar, about 1025–1050. (HIP/Art Resource, NY)

region. The result was that Europe's human numbers probably at least doubled, and maybe even tripled, between 1000 and 1300 despite a high infant mortality rate and a sterility rate among adults that might have been as high as 33 percent.

The first important innovation was a new plow suitable for use in the rich soils of northern Europe. As the Romans moved north of the Alps, they had found that the light, or scratch, plow, which worked well in the light, dry soils of their Mediterranean homeland, could not stand up to the heavier soils north of the Alps, which needed to be turned and often drained. By the end of the sixth century, the heavy, or wheeled, plow appeared in Western Europe to handle this heavy soil.

The scratch plow, which remained in use around the Mediterranean until at least the late eighteenth century, consisted of a light wooden frame with one V-shaped, or triangular, plow-share (cutting blade) that an ox or a man could pull. Inasmuch as the plow barely disturbed the soil, the farmer often had to work the soil twice, cross-plowing for maximum effect. The heavy plow was much larger with wheels and required several oxen to pull it. Most important, the heavy plow's more complicated share and moldboard (the curved plate that turns and breaks up the soil) could completely turn the soil, leaving a furrow and exposed earth. Turning the earth in this manner helped dry out the heavy, damp soil and eliminated the need to cross-plow, reducing labor.

The new plow required more traction, and two subsequent inventions appeared that enabled farmers to make full use of it. The first was the padded horse collar, which originated in China no later than the first century BCE and reached Western Europe by the mid- to late ninth century, and the second was the horseshoe, which reached Europe by the late ninth or early tenth century. As with the horse collar, the horseshoe probably developed far to the east, either in China or Mongolia, around the first century BCE and likely traveled west across the steppes with various nomadic peoples out of Inner Asia.

Centuries earlier, farmers had mastered harnessing oxen with a yoke that rested on the animals' shoulders. Thus, harnessed oxen initially pulled the new plows. Horses were stronger, with more stamina, but ancient and early medieval horse harnesses in the West ran around the animal's neck, which meant that the weight of any load exerted pressure directly on the windpipe, choking the animal and diminishing the work it

could do. The padded collar went on over the horse's head but rested on its shoulders, keeping its windpipe open. With the introduction of the iron horseshoe, which saved the horse's hooves in damp earth, the horse was a valuable traction animal in almost any soil type.

Another major innovation of Europe's so-called Early Middle Ages (ca. 500–1000) was the three-field rotation. Before this, peasants had rotated crops between two fields, using one field for a crop each year and allowing the other to lie fallow and rejuvenate. In this system, farmers used only half their land at a given time. By the late eighth century, cultivators in some areas divided their land into three parts, two of which they farmed in a given year and one of which was left fallow, putting two-thirds of the land into use at a given time and greatly increasing the output and flexibility of the medieval manor or farm.

Much of northern Europe was ideal for the three-field rotation, but peasants soon found that some land was not fertile enough to support the demands of the rotation. Local tradition, established landholding patterns, or a conservative approach to farming also influenced some villages to continue using a two-field rotation, while their neighbors changed to the new system. Communities using two- and three-field rotations continued to exist side-by-side in Europe into the Early Modern Period (ca. 1500–1750).

Despite optimum weather patterns and improved agrarian practices, by about 1300 Europe's greatly expanded population was outstripping its ability to produce food, leaving it vulnerable for when the climate changed and other natural disasters ensued, as happened in the fourteenth century.

—Kevin D. Hill

Bibliography

- Astill, Grenville, and Annie Grant, eds. *The Countryside of Medieval England*. Oxford, UK: Basil Blackwell, 1988.
- Duby, Georges. *Rural Economy and Country Life in the Medieval West*. Translated by Cynthia Postan. London, UK: Edward Arnold, 1968.
- Gies, Frances, and Joseph Gies. *Cathedral, Forge, and Waterwheel: Technology and Invention in the Middle Ages*. New York: HarperCollins, 1994.

White, Lynn, Jr. *Medieval Technology and Social Change*. Oxford: Oxford University Press, 1962.

Scandinavia—Making a Living in Europe's Far North

In Scandinavia, the Viking era was followed by a period of political consolidation, and fixed borders came into place in 1101. The demographic picture is uncertain, as censuses were not undertaken until the seventeenth century, but between 1000 and 1300, a period of temperate climate, Scandinavia experienced a population growth as more marginal land was cultivated, especially through dairy farming. This also led to a stronger stratification of society. Fewer peasants owned their own land, and by 1300 the Crown, the Church, and the nobility owned a larger share.

Wheat was the most important crop in Denmark and southern Sweden, while barley, oats, and rye were more common farther north, where hunting and gathering also supplemented the diet. While people in the southern regions of Sweden and in Denmark lived in villages, the single homestead was most prominent elsewhere in Scandinavia. Fisheries were also important, and while the herring in the Baltic was unpredictable, the seasonal cod fisheries in the North Atlantic proved more certain. Together with timber from Norwegian and Swedish forests, fisheries also provided lucrative cash income from the twelfth century onward for those enjoying trade privileges.

The Black Death first reached Norway by a ship arriving in Bergen from England in the summer of 1349, and the disease had affected most of the country by the end of the year. In 1350 the plague reached Denmark and Sweden. The general mortality rate in Europe due to the plague was about 45–50 percent, but it is estimated that up to 65 percent of the population perished in parts of Scandinavia. The plague became a recurrent epidemic throughout the remainder of the so-called Middle Ages, and population growth did not pick up until the sixteenth century.

In addition to the general traumatic effect of the disease, another consequence was more land available for commoners. Protein and fat became

➤ A TALE OF A PROSPEROUS FISHING COMMUNITY

In the winter of 1431–1432, the Venetian merchant Pietro Querini capsized off the coast of Lofoten in northern Norway, and he and 11 of his crew of 68 were rescued by the islanders from Røst. Querini later wrote an account of his three-month-long stay that offers a unique insight into the lives of ordinary people in these parts, who in Querini's tale stood out as noble primitives in contrast to the decadence of his native Italy.

Querini estimated that 120 people inhabited around 1.4 square miles (3.6 square kilometers), a relatively low density that allowed for rich fishing in the surrounding waters. As with the population in most of northern Norway, the people of Røst depended on trading surplus fish for almost all other supplies and staples they needed, most importantly grain, as farming was difficult in the harsh climate except for keeping the occasional cow. But according to Querini, the fisheries (mostly halibut and cod, the latter the basis for the famous dry fish export) were so abundant that the islanders enjoyed a rich and varied diet. Official documents also reveal that during the late Middle Ages, a fisherman from places like Røst paid three times as much tax as the average peasant in Norway's richest agrarian communities.

—Frode Lindgjerdet

common foodstuffs for the greatly reduced population, as livestock was not affected by the plague. However, the Church and the aristocracy experienced an economic crisis as land-tenure rents and land prices plummeted.

—Frode Lindgjerdet

Bibliography

- Jesch, Judith, ed. *The Scandinavians from the Vendel Period to the Tenth Century: An Ethnographic Perspective*. Rochester, NY: Boydell, 2003.
- Lofgren, Orvar, "Historical Perspectives on Scandinavian Peasantries." *Annual Review of Anthropology* 9 (1980): 187–215.

Agricultural Technology in Mesoamerica

In the period immediately prior to the arrival of the Europeans, the native peoples of Mesoamerica

pursued three major types of agricultural technology. One had to do with the control of water to agricultural lands, including irrigation; the second involved soil preparation; and the third involved planting and tillage practices.

Mesoamericans adopted irrigation methods at nearly the same time that agriculture began in Mexico. Through the use of ditches and canals, two types of water were channeled for agriculture: water from springs and seasonal or continual flows from rivers and streams. In the central highlands there is also evidence of the construction of dams and irrigation canals to distribute water to fields. In some low-lying areas the problem was excessive water rather than too little. In these areas native peoples, especially the Maya of the Yucatan lowlands, cut drainage canals to move excess water from fields. In the Valley of Mexico, the Nahuatl people used the *chinampa*, or floating garden, to establish crop lands in marshy areas.

The second technology involved the preservation and enrichment of soils. Since Mesoamerica lies within the tropics, the effect of sun and rain on soils can be disastrous, with soils losing fertility and friability in just a few seasons. Consequently, lands were tilled for as many as three years and then allowed to lie fallow for a period of from three to seven years. The accumulated brush was then burned, allowing the nutrients to partially return to the soil and also sterilizing the soil from weed seeds. Croplands were also enriched by the muck and aquatic plants brought up from adjoining canals. Lastly, human feces and other waste products were added to the soils.

When it came to tillage and planting technologies, the native peoples of Mesoamerica lacked beasts of burden to harness to plows. Consequently, seeds were planted normally not in furrows but in hills. A digging stick was used to create a hole into which the seed was placed. The natives also developed a system of plant symbiosis known popularly as the Three Sisters, which entailed the planting of maize (corn), beans, and squash in the same hill. The maize provided a support for the climbing beans. Inasmuch as maize rapidly depletes the soil of nitrogen, beans, being a nitrogen-fixing legume, replenish that nutrient in the soil. On their part, squash plants provide broad leaves to protect

CHINAMPA

The *chinampa*, or “floating garden,” is traditionally long and narrow, some 13–23 feet by 130–200 feet (4–7 meters by 40–60 meters). In the Valley of Mexico, marshy land was reclaimed by creating a matlike surface of aquatic plants, reeds, or other organic material. This was fixed to the bottom of the lake using poles. Then willow trees were planted in the corners and along the sides for stability and to prevent erosion. Over time, compost and human, animal, and vegetative waste were spread on the surface along with muck dredged from the lake bottom until a fertile and stable surface was created. Eventually the plot of new open land, rising several feet above the lake surface, became stable enough to plant crops. The *chinampa* provided continual moisture to the roots of crops planted on it, and the trees and surrounding water created a microclimate that was less susceptible to fluctuation. Scholars studying present-day land distribution in the Valley of Mexico have discovered that many plots are based on pre-Columbian *chinampas*.

—John F. Schwaller



Depiction of the floating gardens (*chinampas*) of Tenochtitlan. The city of Tenochtitlan was built on an island, and the Aztecs cultivated year-round gardens along the banks of the island. (Gianni Dagli Orti/Corbis)

the soil from the percussive effects of tropical rain as well as to shade the soil so that nutrients are not leached due to excessive sun. The structure of the leaves and vines of the squash also tends to channel the rainwater back to the base of the plant. Furthermore, beans and maize complement one another in the diet, providing all the essential amino acids, or protein. Squash provided a rich variety of vitamins and minerals to the diet, which was supplemented by equally nutritious chilies, tomatoes, and other fruits, such as avocados and guava. These fruits were cultivated in household gardens normally adjacent to family compounds. In addition to foodstuffs, native peoples also cultivated cotton and maguey for their fibers. Maguey also provided sap that was fermented into the drink known as pulque.

—John F. Schwaller

Bibliography

Farrington, Ian S., ed. *Prehistoric Intensive Agriculture in the Tropics*. Oxford, UK: British Archaeological Reports, 1985.

Fedick, Scott L., ed. *The Managed Mosaic: Ancient Maya Agriculture and Resource Use*. Berkeley: University of California Press, 1991.

Harnessing Desert Rivers—The Hohokam

Around the time of Christ, a Southwest culture known for the construction of massive irrigation works, later called the Hohokam (“those who have gone”) by the Akimel O’odham people (“River People,” also known as the Pimas), emerged along the middle Gila River in the Sonoran Desert region of southern Arizona. The civilization arose, according to most scholars, in four distinct stages: Pioneer (1–600 CE), Colonial (600–900), Sedentary (900–1100), and Classic (1100–1400). Some scholars in the past postulated that Hohokam culture did not truly arise until the migration of peoples from Mexico, yet this theory has all but been abandoned today.

In order to survive in the harsh desert environment, the Hohokam built an elaborate

THE EXTENT OF HOHOKAM CANALS



Ruins of Pueblo Grande, a major twelfth-century Hohokam village along a network of canals, in present-day Phoenix, Arizona. (Alfred J. Andrea)

With very crude tools the Hohokam built a series of canals spanning the Salt and Gila rivers. Their irrigation canals are considered to be the most extensive and sophisticated hydro-engineering system devised by North American Indians, only surpassed in size and scope by the hydraulic societies found in Peru. Many archaeologists surmise that they built somewhere between 125 and 315 miles (200 and 510 kilometers) of canals in the vicinity of Phoenix. Many of the contemporary Salt River Project canals located in the Phoenix area are actually refurbished canals from the days of the Hohokam. So far archaeologists have found that the Hohokam dug ditches measuring as much as 10 feet (3 meters) wide and 15 feet (4.5 meters) deep. Moreover, it is estimated that at their height their canals irrigated from 65,000 to 250,000 acres (25,000 to 100,000 hectares) in the Salt River valley alone. It was on the basis of this canal system that they built a whole series of irrigation communities that sustained Hohokam society and culture.

—John S. Leiby

network of canals encompassing hundreds of miles. Archaeologists have surveyed more than 100 miles (160 kilometers) of such irrigation canals in the Florence area and even more in the Phoenix area (see the sidebar). While the Hohokam relied heavily on the canals they dug, they

also channeled water via hillside terraces known as *trincheras* to retain as much rain drain-off as possible.

The Hohokam harvested and cultivated a host of wild, semidomesticated, and domesticated crops. As with nearly all North American Indians, they grew maize (corn). Some of the other plants they harvested included little barley, chenopods, amaranth, panic grass, devil's claw, and agave. Some scholars have asserted that Hohokam were major cultivators of agave, as signs of this production have been located near the northern Tucson Basin where irrigation canals were not needed due to sufficient rainfall. Because of recurrent floods, the Hohokam had to continually rebuild or abandon many of their canals. The largest such flood occurred in 899 and made irrigation farming untenable for a few years thereafter.

Despite these obstacles, Hohokam culture persevered and even expanded between 700 and 1150 CE. In addition to their canals, they are known for their distinct pottery (red on buff) and their sophisticated ball courts (some 200 have been unearthed by archaeologists). After 1100 Hohokam culture began to decline, probably in part because of the competition of their various communities for the scarce resources of the Arizona desert.

—John S. Leiby

Bibliography

- Fagan, Brian. *Ancient North America*. 2nd ed. New York: Thames and Hudson, 1995.
- Gumerman, George, ed. *Exploring the Hohokam: Desert Peoples of the American Southwest*. Albuquerque: University of New Mexico Press, 1991.
- Haury, Emil. *The Hohokam: Desert Farmers and Craftsmen*. Tucson: University of Arizona Press, 1976.

Andean Agriculture under the Incas

Access to the varied foods of highly contrasting ecological zones has always been of prime importance for Andean peoples. In fact, the vertical world of the Andes almost obligates access to these different environments and their produce. Thus, protein in the form of subtropical beans

➤ ALTITUDE ADJUSTMENTS

Agrarian and pastoral activities in the Andean world were (and are) very much determined by altitude. The lower altitude valleys, known as the yunca zone, extend from around 6,562 feet down to 2,625 feet (2,200 to 800 meters), below which are the coastal plain and Pacific coastline to the west and the tropical lowlands to the east. The yunca zone was warm enough to cultivate delicate crops such as peppers. Around 10,827 feet (3,300 meters), nightly frost can damage crops. Consequently, maize cultivation was not generally attempted above this height, except where there were favorable microclimates. Efforts to develop

arable land transformed steep mountainside gradients into stepped, or terraced, fields (known as Andenes) with irrigation canals channeling running water. Frost-resistant food crops, such as potatoes, were grown at altitudes up to and just above 13,123 feet (4,000 meters). Above this altitude, the puna grasslands that extend up to glacial zones were ideal for the pasture grazing of camelids. The domesticated alpaca and llama and the wild guanaco and vicuña provided humans with transportation, fuel, clothing, and food.

—Paul R. Steele and Catherine J. Allen

➤ ANDEAN MOUNTAIN SHRINES

Probably stretching back to well before Incan times, mountain shrines outside a number of remote Andean villages link mountains, ancestor worship, ritual pilgrimage, and the sea into a spiritual matrix that is the ultimate source of water and fertility. The landscape was seen as animated in the sense that unusual or prominent features were perceived as having a supernatural quality. Local communities often regarded themselves as the descendents of mountain deities. Consequently, mountain peaks—and especially volcanoes—occupied a prominent place in their cosmic beliefs and communal rituals. Mountains and mountain gods were seen as the controllers of rain, and their summits often became important foci of ceremonial activities. These metaphysical convictions had a foundation in the physical world in that prominent mountains have a strong effect on local meteorological phenomena.

Numerous shrines have been discovered on hills and mountain peaks in Peru, Bolivia, Chile, and Argentina. Seashells and river stones were commonly offered to deities for water, but more macabre offerings have also been uncovered: human (including child) sacrifices. Spanish chroniclers record that elaborate pilgrimages were involved in reaching these sacred places. But the intensity

of conviction that motivated the expeditions still defies the imagination. Offerings have been found on mountain peaks as high as 20,000 feet (6,000 meters).

There is every reason to believe that some of the mountain pilgrimages were tied to specific calendrical rituals and that they were astronomically timed. Broadly similar sets of beliefs and practices in central Mexico provide more concrete evidence of calendrical and astronomical associations. However, the specific associations that regulated the Andean rituals remain largely unknown.

—Clive Ruggles

Bibliography

- Reinhard, Johan. *The Nazca Lines: A New Perspective on Their Origin and Meaning*. 4th ed. Lima: Editorial Los Pinos, 1988.
- Reinhard, Johan. "Sacred Mountains, Human Sacrifices, and Pilgrimages among the Inca." In *Pilgrimage and the Ritual Landscape in Pre-Columbian America*, edited by John B. Carlson. Washington, DC: Dumbarton Oaks, in press.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

and dried fish from the Pacific Ocean was supplemented by high-altitude grains and tubers.

Quinoa is an ancient and important protein-rich grain in the Andes that requires little warmth. Quechua and Aymara lexicographers translated wild quinoa as the word *Ayar*. In the Cuzco area, the most influential pre-Inca inhabitants were the Ayarmaca, a name made up of two food plants, *ayar* (quinoa) and *maca*. Maca is an edible root found on the *puna* (high plains) of central Peru and formerly found throughout the high Andean plateau. According to popular myth, the cultivation of maca represents an ancient agricultural tradition in the *puna*, predating the domestication of the potato. Maca is thought to have magical or hallucinogenic properties, and like quinoa, maca is also believed to have special associations with fertility. Thus, the Ayarmaca derived their name from two plants that had magical properties and were adapted to the high altitudes. Later, the Incas adopted the name *ayar* for their own ancestors. This connected them to their most important predecessors, further justifying Inca rule.

The potato—a staple of life throughout much of the Incan-dominated Andes—was domesticated between 5000 and 2000 BCE on a high plateau close to Lake Titicaca, which lies on the border between modern Peru and Bolivia. The high-altitude climate lent itself to long-term storage of potatoes through a process of freeze-drying. During the dry months of May, June, and July, farmers spread potatoes on the ground to let them alternately freeze and thaw, squeezing them during the day to promote the process. The result was a dehydrated potato that could be stored for several years and reconstituted by soaking in water.

Unlike these hardy tubers, American corn, or maize, was more susceptible to frost and required more ingenious techniques of irrigation on terraced slopes to sustain its cultivation at high altitudes. Despite the difficulty of raising this crop, maize production was vigorously promoted by the Inca state and regarded as its most sacred food because it was intimately linked to the cult of the Sun, the divine ancestor of all Incas. Dramatically increased production of maize under the Incas during the fifteenth and early sixteenth centuries was used to pay workers on

state projects in the form of fermented maize beer known as *chicha*. Maize beer was also the principal beverage for ceremonial practices and enjoyed a higher status than other foods.

Despite its statewide cultivation under the Incas, maize was a marginal staple crop compared to the potato. The tuber actually produces more high-quality protein from less land than maize, wheat, or rice.

—Paul R. Steele and Catherine J. Allen

Bibliography

- Graves, Christine, ed. *The Potato, Treasure of the Andes: From Agriculture to Culture*. Lima: International Potato Center (CIP), 2001.
- Rostworowski, María de Diez Canseco. *History of the Inca Realm*. Cambridge: Cambridge University Press, 1999.
- Steele, Paul R., with the assistance of Catherine J. Allen. *Handbook of Inca Mythology*. Santa Barbara, CA: ABC-CLIO, 2004.

Agricultural Life on the Pacific Islands—Environment and Population

Before the coming of Europeans, Oceania's major food crops were taro, yams, and bananas, all of Southeast Asian origin, and sweet potatoes, of South American origin. Domesticated animals included pigs, chickens, and dogs, all brought from Southeast Asia. Throughout this vast region, the cultivation of crops was done without draft animals. From weeding to harvesting, everything was done by hand, and large amounts of land lay fallow at any given time. However, because most of Oceania lies within the tropics (with the exception of New Zealand), farming was not confined to any season and could be done year-round. Moreover, clever farming techniques were adapted to particular environments and used throughout Melanesia, Micronesia, and Polynesia.

In Melanesia, especially in New Guinea, farming allowed the human population to reach and then exceed the carrying capacity of the land. Revenge warfare, so associated with highland New Guinea, may have operated as a kind of population control. In New Guinea only a tiny fraction of food came from wild resources as increasingly more of the land was transformed for

farming. Throughout the highlands sweet potatoes became the staple food, often encompassing more than 90 percent of the diet. To protect the sweet potatoes from pigs and to control the amount of water, the potatoes were often planted in ditches. As in the rest of Oceania, the hard work of clearing the land for farming and the dangerous work of guarding the fields from enemy warriors fell to men, while women were more often responsible for mulching, weeding, and harvesting. Magical practices, usually performed by men, were given much credit for the amount and quality of a harvest.

In Micronesia, where most of the land was comprised of coral atolls only a few feet above sea level, the main problem facing farmers was their inability to escape the salt water near the shore and that which percolated up through the land farther from the shore. Coconut palms provided much of the food and resources in Micronesia because of the plant's resistance to salt water. Because of salinity problems and the limited amount of land, Micronesians remained more dependent on fishing than did other groups in the Pacific.

Polynesia, which is comprised largely of mountainous volcanic islands, was home to a greater variety of crops. Chiefs assigned land to farmers in pie-shaped wedges that extended from the coast up to the mountains so that every family would have access to all of the ecological niches created by differences in elevation. Some plants, such as yams, grew better at lower elevations, and some, such as taro, grew better at higher elevations. The most important crops were sweet potatoes, yams, taro, and bananas, but also important were breadfruit, mountain apple, pandanus, kava, and many fruits. The bark of the paper mulberry tree was pounded into fiber for clothing. In Hawaii, irrigation systems were constructed to grow taro. The domesticated animals present throughout Polynesia were pigs, chickens, and dogs. In Hawaii the construction of coastline fish ponds meant that fish could be harvested much like crops.

—*Sharlotte Neely*

Bibliography

Campbell, I. C. *A History of the Pacific Islands*. Berkeley: University of California Press, 1989.

THE SWEET POTATO'S VOYAGE ACROSS THE PACIFIC

With one exception, every domesticated plant and animal in Oceania originated in Southeast Asia and in most cases was intentionally brought via canoe onto the islands of the Pacific by the first human colonists. The one exception was the sweet potato, which originated in South America. Scientists are confident that sweet potatoes were domesticated in South America because it is only there that wild species still exist. The mystery is how sweet potatoes made the voyage from South America across the Pacific to Melanesia long before Europeans arrived on the scene.

Many theories have been developed to solve the mystery of the sweet potato's spread. Until genetic evidence confirmed an Asian origin for the peoples of the Pacific, it was even hypothesized that Oceania was settled by natives of South America who brought sweet potatoes with them. What probably happened is that Polynesians, already accomplished seafarers, made contact with people in South America and brought sweet potatoes back to Polynesia. Supporting evidence for this theory comes from linguistics. For example, the Quechua-speaking natives of Peru call the sweet potato *kumar*, while the Austronesian-speaking natives of Easter Island call it *kumara*.

—*Sharlotte Neely*

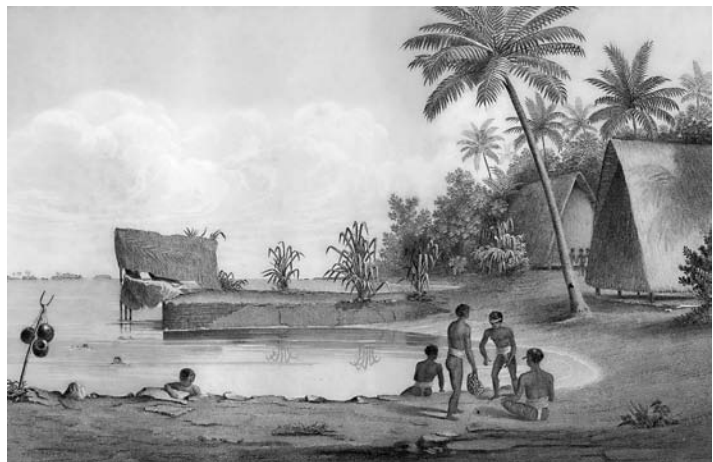


Illustration of a beach and village on Atafu Island in the South Pacific in 1841. (Charles Wilkes, Narrative of the United States Exploring Expedition, 1845)

Oliver, Douglas L. *Oceania: The Native Cultures of Australia and the Pacific Islands I and II*. Honolulu: University of Hawaii Press, 1989.

Strathern, Andrew, et al. *Oceania: An Introduction to the Cultures and Identities of Pacific Islanders*. Durham, NC: Carolina Academic Press, 2002.

Harvesting the Seas in Oceania

Marine resources were a vital component of economic and cultural systems throughout Oceania. People used the faunal resources of the Pacific Ocean as an important source of protein in their diet and as a source of raw material for various technological and decorative artifacts. Oceania is not a homogeneous geographical region, especially in terms of climate and resource availability. For example, there is a tendency for the richness, or number of different species in an ecosystem, of both terrestrial and marine species to decrease from west to east across the Pacific. As a result, people who moved throughout

Oceania were constantly adapting local marine resources to meet their needs.

The Pacific Ocean provided one of the few plentiful protein sources available for many of the peoples and cultures in Oceania. The region was generally poor in wild terrestrial fauna. Wild animals were generally limited to creatures such as birds, bats, seals, and sea lions that could swim or fly to various islands. Seals and sea lions spend most of their lives in the water, but their breeding grounds, usually along rocky shores, provide a prime source of protein for opportunistic hunters. Yet these resources were fairly rare, as most islands in the Pacific Ocean did not support very large populations of marine mammals. One major exception to this pattern of islands lacking terrestrial protein sources was Aotearoa (New Zealand), once home to a genus of giant flightless birds known as moa (which were hunted into extinction) as well as large breeding seal and sea lion populations.

It has been suggested that Oceania should be regarded as a sea of islands in which the ocean is an important component of daily life rather than a boundary, as it often appears to people living on continents. This was especially true for food procurement, where marine resources often played an equal or greater role in the Oceanic diet when compared with food resources gained through farming, hunting, or gathering wild plants. For many people throughout Oceania, in-shore reefs, teeming with fish and shellfish that could be easily harvested, provided a veritable feast. In contrast, the open ocean provided rarer but perhaps more highly prized fish species, such as tuna and mahimahi. In addition to fish and shellfish, various marine invertebrates, such as octopus and sea urchin, were important foods. Finally, various sea turtles and their eggs served to round out the high-protein offerings of the Pacific Ocean.

Yet marine resources were not simply a source of protein for people in Oceania. They also played important technological and symbolic roles in Oceanic cultures. Shells were used throughout the region to manufacture various kinds of fishhooks and lures. In addition, people in Oceania used decorative shell objects, such as rings or beads, in important ritual exchange

► MAORI IMPACT ON MARINE MAMMALS IN AOTEAROA

The Polynesian people who first colonized the islands of Aotearoa, now known as New Zealand, encountered a unique environment in the region. Aotearoa was larger and colder than any of the other island groups in Polynesia, but the Maori adapted quickly to this unfamiliar environment and flourished. Perhaps the most dramatic impact of the Maori on marine resources in Aotearoa was on the large New Zealand fur seal and sea lion populations. Fur seals were especially vulnerable to Maori hunting practices, and the animals' breeding range shrank rapidly. Among the many reasons for population decline were the aggressive hunting strategies employed by the Maori in the first centuries of colonization in Aotearoa and the conservative breeding practices of fur seals, which would only produce one pup per year. Within a few centuries of the initial arrival of Maori in New Zealand, seal and sea lion populations had migrated south, disappearing from North Island completely by 1600 CE.

—James L. Flexner

networks stretching hundreds of kilometers. In island groups where stone was not readily available, people used marine shell as a raw material for adze technology, such as Terebra-shell artifacts excavated from archaeological sites in the Mussau Islands northeast of Papua New Guinea.

Fish could also play an important ideological role in Oceanic culture. Hawaiian people enjoyed a complex toolkit of various fishhooks and lures, which developed from a more general Polynesian fishing technology. Hawaiians also developed the only true aquaculture in the region. All of the major Hawaiian islands have fishponds (*loko i'a* in Hawaiian), which were built to increase the concentration of fish, specifically milkfish (*Chanos chanos*, *awa* in Hawaiian) and mullet (*Mugil cephalis*, *'ama'ama* in Hawaiian). The earliest fishponds may date to the thirteenth century CE. These fishponds were important

symbols of Hawaiian chiefly power and were an integral part of the Hawaiian political economy.

—James L. Flexner

Bibliography

- Anderson, A. "A Fragile Plenty: Pre-European Maori and the New Zealand Environment." In *Environmental Histories of New Zealand*, edited by E. Pawson and T. Brooking. Oxford: Oxford University Press, 2002.
- Kirch, P. V. *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. Honolulu: University of Hawaii Press, 1997.
- Kirch, P. V. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley: University of California Press, 2000.
- Rainbird, P. *The Archaeology of Micronesia*. Cambridge: Cambridge University Press, 2004.

■ Introduction: Population Trends

Of all of the subfields of historical research, demographic analysis is the most difficult and least exact, especially the farther back into the past one goes. As the following entries illustrate, recorded data are sparse at best for all areas of the inhabited world during that half millennium, despite the attempts of some governments, most notably imperial China, various Muslim states, Italian city-states, and the English Church, to keep records of such important pieces of information as taxable households and births, baptisms, and deaths. Beyond that, what records we do have are inevitably flawed and fragmentary. Moreover, all other forms of evidence, such as the archaeological remains of settlements, are ambiguous, open to wide differences in interpretation, and equally incomplete if not more so. Complicating the process further are the occasional demographic controversies that are colored by political or social perspectives. The most notable example is the debate that rages between the proponents of

high and low estimates of the native populations of the Americas, and especially of Mesoamerica and the Caribbean, on the eve of European contact.

Despite these impediments, there are some things that can be said in general about the population of the world between 1000 and 1500. It is clear that for most of the world, population figures were on the rise from 1000 to roughly the middle of the fourteenth century, and then there was a sharp drop-off due in large part to environmental changes and, so far as Eurasia and northern Africa were concerned, the Great Eurasian Pandemic that broke out toward mid-century and reoccurred in waves for several centuries thereafter.

Beyond that, when we focus on specific regions, states, and population groups, sometimes (but far from always) the evidence allows the historian to perceive with a high degree of comfort, but not absolute certainty, general trends and approximate human numbers. It seems fairly

clear, for example, that England's population of roughly 1.4 million around 1100 had risen to about 5 million around 1300 due to a number of factors, including mild weather. During the first half of the fourteenth century that number began to decline slightly due to famine occasioned by the early stages of the Little Ice Age. Worse was to come. With the onslaught of the so-called Black Death in 1347–1348, the population fell precipitously by about 45 percent! In other words, around midcentury England's population was less than 2.75 million and probably declined on a slight downward curve during the next century and a half. It seems equally clear that due to rising agricultural productivity, China's population, including Chinese under alien rule in the north and west, increased from around 80 million in the mid-tenth century to around 100 million in the year 1100 and rose as high as 120 million by 1200, just before the Mongol invasions. In 1290, however, the registered population of China was down to 60 million due to factors already noted in the essay introducing this theme. A century later it was still around 60 million, but unlike England and western Europe in general, a dramatic upsurge was on the immediate horizon.

Regardless of such perceptible trends and approximate figures, we will always have more questions than answers when it comes to both global and regional population fluctuations and numbers during this 500-year period. India's population, for example, defies any consensus among historical demographers. One scholar has posited the theory that around the year 1000 its population stood around 200 million, but by 1500 it had dropped to about 125 million largely due to the great Muslim incursion in the north and resultant wars. Other scholars reject these figures and throw up their hands in despair at ever getting a reasonably accurate picture of Indian population figures before the modern era.

The moral of all of this is: Be wary when presented with population statistics for any society before 1800. We need not go so far as to claim, in concert with the old and trite truism, that there are three levels of lies: lies, damn lies, and statistics. But the problems confronting premodern demographic studies are formidable.

—*Alfred J. Andrea*

What Do We Know about Sub-Saharan Africa's Population?

The reconstruction of sub-Saharan Africa's population during the period from 1000 to 1500 is a daunting challenge. Few states in the region kept what might be considered censuses in the modern meaning of the term. Further, the great variety of environmental and geographical regions means that population densities varied greatly from the savannas to the forests and rain forests. Finally, the fact that remarkably little archaeological research has been done across much of the continent has left the reconstruction of population totals and distribution to be estimated through the process of extrapolating backwards from more modern population totals via estimates of birthrates and mortality. A debate between those who argue that African societies have long utilized high birthrates to overcome high rates of mortality and those who argue that high birthrates are a modern phenomenon dating to the era of the slave trade (or perhaps colonialism) has set much of the tone for research into the subject.

So what do we know about sub-Saharan population in 1000? Rough estimates place the population in 1000 at around 30 million to 45 million and the population in 1500 at around 40 million to 60 million. This low population density compared to other regions of the Old World reflects sub-Saharan Africa's challenging environment, which is typified by soils of low fertility and extensive areas covered by desert or dense forests.

This does not mean, however, that sub-Saharan African populations were not able to find ways to develop the resources that were available to them. Most likely, the bulk of the population was concentrated in three regions: the West African savanna, the Great Rift Valley, and along the East African coast.

The West African savannas, especially along the interior delta of the Niger River, were home to a significant concentration of African peoples. Indeed, by 1000 a thriving matrix of urban trade and manufacturing centers surrounded by relatively fertile lands that produced rice, millet, sorghum, and a variety of vegetable and fruit crops existed across the savannas from the Senegam-

bian Coast (roughly present-day Senegal, Gambia, and Guinea-Bissau) to the region of Lake Chad (in central Africa). The Niger River also provided significant fish resources for surrounding populations.

Another concentration of population existed in the highlands of the Upper Nile and Ethiopia at the northern end of the Great Rift Valley. Here, extremely fertile volcanic soils helped populations thrive through the cultivation of locally developed crops such as teff, ensete, and noog. Like the savannas, this region's density of population gave rise to important urban centers such as Lalibela, the capital of Ethiopia's Zagwe dynasty (ca. 1137–1270).

Farther to the south but also fostered by the rich volcanic soils of the Great Rift Valley, the development of extensive cultivation of bananas and plantains spurred significant population growth in what is present-day Uganda, Rwanda, and Burundi. This region also benefited from the rift lakes' extensive aquatic resources to provide significant sources of protein. Preliminary archaeological studies in the region have suggested that local states developed a system of ever-relocating urban centers that allowed the population to avoid exhausting local environmental resources while still supporting significant concentrations of population. To the east the Golden Age of Swahili society emerged in this period, with dozens of important trading centers developing along the East African coast from present-day Somalia south to Mozambique.

Population densities were much lower in the continent's forest and rain forest regions. Nonetheless, in the period from 1000 to 1500 significant population centers arose in these challenging environments. The kingdom of Benin, in the southern region of present-day Nigeria, and the kingdom of Kikongo, in present-day Angola, are important examples of how human technology, particularly in the form of ironworking, was increasingly allowing humans to carve out more productive agricultural spaces in the African forests and rain forests. Populations of urban agriculturalists were also beginning to establish themselves in the Akan region of modern-day Ghana by the fourteenth century, in part to gain increased access to the region's significant gold reserves. In the period from 1000 to 1500 popu-

lations expanded in the southern African savannas as crops such as sorghum and millet spread and helped diversify the diets of preexisting pastoral lifeways long established in the region.

The population numbers presented here are rudimentary and no doubt will be refined considerably in the future as our knowledge base for African history is improved. This fact highlights the dynamic and ever-changing nature of our understanding of world history.

—Jonathan T. Reynolds

Bibliography

- Cordell, Dennis, and John Gregory. *African Population and Capitalism: Historical Perspectives*. Boulder, CO: Westview, 1987.
- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Iliffe, John. *Africans: The History of a Continent*. Cambridge: Cambridge University Press, 1995.

The Great Afro-Eurasian Pandemic—Did It Originate in Inner Asia?

There are at least three plausible candidates for the original source of the great disease pandemic known as the Black Death of the mid-fourteenth century: the Far East, namely China or India; Ethiopia, or eastern Africa below the Nile River; and Central or Inner Asia, specifically Mongolia. A fourth possibility, that the Black Death originated in Iraq and Kurdistan and spread northward to southeastern Russia, has no support in the historical record. Each of the other three, however, can be buttressed by some kind of contemporary evidence, but the modern scholarly consensus has settled on Mongolia as the most plausible site of origin of the Black Death.

Several European chroniclers of the Black Death were convinced that their affliction began somewhere in the East, and a few of them specified India or China. Native Chinese annals do record a major epidemic in Hopei Province in 1331 and epidemics in other regions beginning in 1345–1346, while the great Muslim travel writer Ibn Battuta mentions a disease epidemic in Madurai in southern India in 1344, from which he himself suffered. But none of the above sources,

THE McNEILL THESIS

In 1976 William H. McNeill published his landmark study, *Plagues and Peoples*, that argued for an expanded role for disease as a major factor in world history. This was not a new idea. Other authors, both ancient and more recent, had made a similar case. But McNeill, with his characteristic breadth of vision, was persuasive in his claim that among the most seismic events of human history were to be counted disease episodes, such as the Black Death of the Middle Ages and the introduction of smallpox and other illnesses by Europeans to the Americas in the early modern period. History, McNeill emphasized, was the casualty of microparasites, such as disease organisms, playing out their symbiotic relationship with macroparasites, humans chief among them, who in turn wreaked their own destructive havoc upon their environment.

In the decades since, other scholars have modified, criticized, and expanded upon McNeill's insights. One theme of this revisionism has been to point out that disease rarely acts alone in bringing change to afflicted societies; rather, it usually works in conjunction with other factors, such as European colonialism and imperialism, which have been largely responsible for introducing disease to other parts of the globe in modern times and have almost always exacerbated the epidemic's impact. Another revisionist complaint about the McNeill thesis is that it too often dwells on the negative aspects of disease's role in human civilization, as opposed to the sometimes surprisingly (and ironic) beneficial outcomes that can result from its mortality. For example, the Black Death certainly disrupted the economy, social relations, and even the psychological assurance and well-being of Europeans during the late Middle Ages, but it also may have provided a much-needed stimulus for enhanced fertility, improved sanitation and public health measures, and technological advances in response to the resulting demographic crisis.

It may well be the questions, rather than any answers, that McNeill posed in *Plagues and Peoples* that will prove to be his most lasting contribution to the study of the history of disease.

—John Aberth

due to the brief nature of their references, positively identify these local disease outbreaks as the same one that spread to Europe and Southwest Asia by late 1347 and 1348. Furthermore, the most likely trade route for the dissemination of plague westward from the Far East was across the Iranian plateau and up the Persian Gulf along the Red Sea and through modern-day Iraq along the Tigris River, yet the available evidence points to the disease spreading to these regions from the north and west, namely from the Crimea or southern Russia and the Mediterranean coast rather than from the south and east. An Ethiopian source for the Black Death is proposed in two contemporary plague treatises written by the Spanish physicians Jacme d'Agramont and Ibn Khatima. However, native Ethiopian sources fail to confirm this opinion, and it seems likely to be derived from a traditional belief that major epidemics in ancient times, such as the Plague of Athens of 430–426 BCE and the Plague of Justinian of 541–542 CE, originated in Africa.

The preponderance of evidence in fact points to our third candidate, Mongolia, as the real home of the Black Death. This is the only region to yield a variety of source material, including contemporary chronicles, archaeological finds, and modern epidemiological studies, in support of its claim. It also forms the heartland of perhaps the greatest overland trade route of the late Middle Ages, linking East to West across the vast Mongol empire, that was made famous by the travels of Marco Polo, among others.

Medieval chroniclers who were most strategically placed to report on the geographical distribution of the Black Death—Muslim authors from Palestine or Egypt, at the hub of shipping throughout the Mediterranean and points East—unequivocally point to Mongolia as the origin of the disease. Ibn al-Wardi, writing from Aleppo in northern Syria in 1348, asserts that the plague “began in the land of darkness,” a reference to the homeland of the inveterate Mongol enemy of his Mamluk rulers. Moreover, al-Wardi claimed that plague had been present in this region for 15 years (i.e., since 1332–1333) and that it spread to China and India from there. Another Muslim author, Ibn al-Maqrizi, writing from Cairo in the fifteenth century, claims, on the basis of information from Uzbekistan in Central Asia, that

the Black Death began “in the land of the Great Khan” in 1341. Several other contemporary authors, who, albeit less well placed, probably derived their knowledge from traveling merchants, also placed the origins of the Black Death in the land of the “Tartars” or the “Khitai.” “Khitai” clearly refers to the former Jin empire of northern China, which the Mongols conquered in 1215; “Tartars” likewise referred to the Mongols. These authors include the Florentine chronicler Giovanni Villani as well as the Spanish Moorish physicians Ibn Khatima and Ibn al-Khatib.

Even more convincing evidence of a Central Asian origin of the Black Death was discovered in the nineteenth century by a Russian archaeologist, Daniel Chwolson, who uncovered a mass grave in the region of Lake Issyk Kul in present-day Kyrgyzstan dating to 1338–1339; three of the headstones at the site contained Nestorian Christian inscriptions stating that ten of the interred had died of plague, or the “pestilence.” Finally, the research of Dr. Wu Liande, a Chinese bacteriologist who headed his country’s response to two major outbreaks of pneumonic plague in Manchuria in the first quarter of the twentieth century, confirmed that the Central Asian steppes harbored an ancient endemic reservoir of the disease among the local tarabagan, or marmot, rodents.

All this persuades most historians that the origins of the disease that was to prove to be the watershed event in Europe and the Middle East throughout the late Middle Ages are to be found in the Central Asian plateau, across which goods and pathogens traveled freely ever since the thirteenth century. Ironically, the Mongol domination of overland routes from Asia to Russia that made possible the revival of the Silk Road was coming to an end by the time the Black Death made its fateful arrival in the West.

—John Aberth

Bibliography

- Aberth, John. *The First Horseman: Disease in Human History*. Upper Saddle River, NJ: Pearson Prentice Hall, 2007.
- Dols, Michael W. *The Black Death in the Middle East*. Princeton, NJ: Princeton University Press, 1977.
- McNeill, William H. *Plagues and Peoples*. Garden City, NY: Anchor Press/Doubleday, 1976.

Norris, John. “East or West? The Geographic Origin of the Black Death.” *Bulletin of the History of Medicine* 51 (1977): 1–24.

Wu, Lien-Teh. “The Original Home of Plague.” In *Far Eastern Association of Tropical Medicine: Transactions of the Fifth Biennial Congress; Held at Singapore, 1923*, edited by A. L. Hoops and J. W. Scharff. London: J. Bale, Sons & Danielsson, 1924.

The Plague Arrives in the Levant

All evidence points to the Black Death coming to the Levant, or the region of the eastern Mediterranean, from southern Russia as early as 1346 or 1347. Our best source for the dissemination of plague in this region is the Muslim author Abu Hafs Umar ibn al-Wardi, who was writing from Aleppo in northern Syria in early 1348 just as the disease arrived in Syria-Palestine. After ascribing the origins of the plague to “the land of darkness,” probably Mongolia, al-Wardi traces its route westward to the Crimea, or the region of the Black Sea, and from there on to Byzantium and Cyprus. But then the plague jumps to the southern end of the Levant, to Alexandria in Egypt, before moving northward through Gaza, Ascalon, Acre, Jerusalem, Beirut, and Damascus, before ending up in Antioch and Aleppo at the northern end of Palestine. The Black Death therefore did not take a straightforward, direct route from north to south in the Levant, according to al-Wardi, but, as everywhere else, seems to have closely followed trade and shipping routes.

Al-Wardi’s testimony is confirmed by other authors. Two Byzantine chroniclers, Nicephorus Gregoras and the former emperor John VI Kantakouzenos, report that the plague arose in Scythia, or southern Russia, in 1346 or 1347 and from there spread throughout the Aegean. Meanwhile, the Egyptian author Ahmad Ibn Ali al-Maqrizi claims that the Black Death arrived in Egypt by the early autumn of 1347. This would place the disease on the same timetable as its arrival in southern Italy; indeed, the same Italian merchants, whom the Piacenzan chronicler Gabriele de Mussis famously describes as besieged by plague-infested corpses lobbed into the town of Caffa on the north coast of the Black Sea by the Mongols, could equally well have carried the

➤ ABU HAFS UMAR IBN AL-WARDI, *ESSAY ON THE REPORT OF THE PESTILENCE*

“The plague frightened and killed. It began in the land of darkness. Oh, what a visitor! It has been current for fifteen years. China was not preserved from it nor could the strongest fortress hinder it. The plague afflicted the Indians in India. It weighed upon the Sind [present-day Pakistan]. It seized with its hand and ensnared even the lands of the Uzbeks. How many backs did it break in what is Transoxiana [present-day Uzbekistan and neighboring regions]! The plague increased and spread further. It attacked the Persians, extended its steps toward the land of the Khitai [northern China, or Cathay], and gnawed away at the Crimea. It pelted Rum [the Byzantine empire] with live coals and led the outrage to Cyprus and the islands. The plague destroyed mankind in Cairo. Its eye was cast upon Egypt, and behold, the people were wide-awake. It stilled all movement in Alexandria. The plague did its work like a silkworm. It took from the tiraz [embroidered silk] factory its beauty, and did to its workers what fate decreed. . . .

Then, the plague turned to Upper Egypt. It, also, sent forth its storm to Barqa [present-day Ashdod in Israel]. The plague attacked Gaza, and it shook Ascalon severely. The plague oppressed Acre. The

scourge came to Jerusalem and paid [with the souls of men] the zakat [a mandatory tax of 2.5 percent on all Muslims]. It overtook those people who fled to the al-Aqsa Mosque, which stands beside the Dome of the Rock. If the door of mercy had not been opened, the end of the world would have occurred in a moment. It, then, hastened its pace and attacked the entire maritime plain. The plague trapped Sidon and descended unexpectedly upon Beirut, cunningly. Next, it directed the shooting of its arrows to Damascus. There the plague sat like a king on a throne and swayed with power, killing daily one thousand or more and decimating the population.”

—John Aberth

Source

Michael Dols, “Ibn al-Wardi’s *Risalah al-Naba’ ‘anal-Waba’*,” a Translation of a Major Source for the History of the Black Death in the Middle East,” in *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles*, edited by Dickran K. Kouymjian (Beirut: American University of Beirut, 1974), 448–450.

infection southward to Egyptian ports as eastward to their homeland. Alexandria, for example, was an important port of call for the Christian maritime trade plying the Mediterranean from the Black Sea and Constantinople. As a matter of fact, al-Maqrizi relates how a slave ship whose sailors and cargo were decimated by the Black Death docked at Alexandria’s harbor, whereupon the remaining survivors died. The plague’s subsequent progress from south to north through Palestine that is recorded by al-Wardi is likewise reported by the great Muslim traveler Ibn Battuta.

The details of the Black Death’s arrival and advance throughout the Levant are an important piece of evidence for our knowledge about the disease. Some scholars have been puzzled as to how bubonic plague could have spread as quickly as the chroniclers record it to have done, given that its principal animal carrier was the black rat, normally not a migratory creature. Yet it is

clear from the evidence of the plague’s dissemination in the Levant that the transmission of the disease was not always so straightforward as a simple rat-to-human contact would make it seem. Despite the fact that northern Syria was far closer geographically to the Crimea and the Aegean than Egypt, the plague struck Egypt first and then traveled northward from there. Contemporaries did indeed observe this strange, atypical migration of the disease, sometimes skipping whole regions before coming back to hit them later, and compared it to how the plague almost seemed to be playing with its victims, moving as if on a chessboard. The most likely explanation is that the insect vector of bubonic plague, the rat flea, can survive for relatively long periods—at least 80 days—away from its host in a comparable environment, such as animal fur, that is transported from place to place as merchandise. In fact, furs were one of the main exports of trading factories at Tana and Caffa operated

by Italian merchants on the north coast of the Black Sea; they were as much in demand as fashion accessories in Mamluk Egypt as in Europe. Of course, it is perfectly possible that plague-bearing rats were yet another cargo on board that then somehow scampered ashore perhaps along mooring ropes, as suggested by one historian, once the ship had weighed anchor in port. But the experience of plague in the Levant compellingly suggests that the disease could travel equally well without its animal host all along the prosperous but deadly trade routes of the eastern Mediterranean.

—John Aberth

Bibliography

- Aberth, John. *The First Horseman: Disease in Human History*. Upper Saddle River, NJ: Pearson Prentice Hall, 2007.
- Borsch, Stuart J. *The Black Death in Egypt and England: A Comparative Study*. Austin: Texas University Press, 2005.
- Dols, Michael W. *The Black Death in the Middle East*. Princeton, NJ: Princeton University Press, 1977.

The Populations of the Middle East and North Africa before and after the Great Pandemic

The demographic impact of the Black Death upon North Africa and the Middle East is harder to measure than in the case of Europe. Yet the *diwans*, or administrative bureaucracies, of the Muslim lands kept records just as good as, if not better than, any of the states in Italy, England, or elsewhere in the West. For instance, during the plague epidemic of 1429–1430 in Egypt, which was said to be comparable in its mortality to the initial onslaught three-quarters of a century earlier in 1348–1349, three kinds of records were kept of the daily death rate in Cairo: the number of dead who left taxable legacies that were reported to the local diwan, the number of dead for whom funerals were held at the various mosques throughout the city, and the number of dead who were counted as they were carried out of the city gates for burial. Since no single one of these methods on its own gives the total death rate for the city, chroniclers had to multiply each figure by some factor that would reflect what they believed was its proportionate repre-

sentation of the whole. Yet these techniques were also much in evidence during the great pandemic of 1348–1349 and acquired wide fame. Even a chronicler such as Gabriele de Mussis, writing from as far away as Piacenza in Italy, heard of how the sultan was able to count the dead in Babylon (Egypt) by recording in his register the death taxes he received, which yielded the fantastic figure of nearly half a million dying in just three months in 1348.

All this should make for a death toll as accurate as any to be found in Europe, yet we are forced to rely on secondhand accounts, such as the chronicle of Ahmad Ibn Ali al-Maqrizi, as our only record of such figures. A broader picture of population loss from the plague is available from the *cadasters*, or tax surveys, that were periodically conducted throughout the various provinces of Egypt, with one dating to 1315 and then revised from circa 1375 to 1420. Even here, however, we must rely on abbreviated versions available in the chronicles rather than on original sources. Last, we can turn to impressionistic statements on the number dying daily from the plague that were made by the Arab chroniclers themselves, who were perhaps no less prone to exaggeration than European writers but who we know had access to the more reliable statistical sources mentioned above.

The demographic conclusions to be drawn from such problematical evidence are therefore completely lacking in the precision and finality of such modern data as census returns (which themselves are never totally accurate). Thus, the best estimates are that Egypt had a population before the Black Death of between 4 million to 8 million, while the populations of Syria, Palestine, Lebanon, and Transjordan (present-day Jordan), also administered by the Mamluk dynasty at this time, numbered between 900,000 and 1.2 million on the eve of the Black Death. Based on the cadastral surveys, the population in Egypt seems to have risen continuously from the twelfth century until at least 1315, when it was at its height. Unlike in Europe, there seems to have been no demographic decline setting in during the early decades of the fourteenth century just prior to the plague. On the contrary, population continued to grow in the Middle East until it was abruptly halted by the disease.

► EXCERPT FROM AHMAD IBN ALI AL-MAQRIZI, *A HISTORY OF THE AYYUBIDS AND MAMLUKS*, FIFTEENTH CENTURY

Ahmad ibn Ali al-Maqrizi wrote numerous works of history from 1418 until his death in 1442. His *History of the Ayyubids and Mamluks* describes the arrival and impact of the Black Death upon Egypt and in particular upon its capital, Cairo. Although written more than half a century after the first outbreak of the plague in 1347–1348, al-Maqrizi's history is thought to incorporate earlier sources, now lost.

“At the start of du l-qada [January 21], Cairo had become an abandoned desert, and one did not see anyone walking along the streets. A man could go from the Port Zuwayla to Bab al-Nasr without encountering a living soul. The dead were very numerous, and all the world could think of nothing else. . . .

“They made a count of the number of persons [who died] from those whose [names] had been recited in funeral prayers in the oratories of the suburbs just outside of Bab al-Nasr, the Zuwayla Gate, the Burnt Gate, the Citadel esplanade, [and] in the oratory of the Lion Slayer opposite the Qawsun Mosque: in two days, they counted 13,800 dead, not counting those who died in the markets, in vacant lots, outside the River Gate, those who had been abandoned in front of the

shops or in the Husayniya quarter and the Ibn Tulun Mosque, and, one can well understand, those who had died in their own homes and whose burial had been delayed.

“According to another estimate, 20,000 dead had been [counted] in only one day. The count [based] on the funerals in Cairo, during the months of saban and ramadan [November–December], yields a figure of 900,000, still not counting the deaths in vacant lots, as well as those in the Husayniya and Saliba quarters, and in the streets of the immediate suburbs of Cairo, which would more than double [the above count]. The number of [funeral] biers was around 1,400, [but] then there are those [bodies] that they missed, and they [also] carried the cadavers on the trellises [and] window shutters of shops and on simple boards, and in addition, they [often] transported two or three cadavers on only one bier or on only one board.”

—John Aberth

Source

Gaston Wiet, “La Grande Peste Noire en Syrie et en Egypte,” *Etudes d’orientalisme dédiées à la mémoire de Lévi-Provençal*, 2 vols. (Paris: G.-P. Maisonnouve et Larose, 1962), 1:376–377.

The Black Death dealt a crippling blow to the Mamluk populations in Egypt and Syria from which they did not recover until well after the Middle Ages, perhaps not even until the nineteenth century. Estimates made by European observers in the late eighteenth and early nineteenth centuries, some based on census returns, put the population of Egypt at around 2 million, down from as much as 8 million prior to the plague, and the population of Cairo, which was perhaps 500,000–600,000 before the Black Death, at 250,000. Thus, population in the region is thought to have continued to decline even after the region was conquered by the Ottoman empire in 1517.

During the first outbreak of the Black Death in Cairo, which lasted five months from September 1348 to January 1349, the chronicler al-Maqrizi, claiming to base his figures on a count

of funerals at various oratories throughout the city, counted up to 20,000 dying a day at the height of the epidemic and a total of 900,000 dead, which far surpasses the total population estimated for Cairo even before the plague. A more sober estimate for plague mortality in Cairo that was made during the epidemic of 1429–1430 and was based on the three statistical methods mentioned above gives a daily death rate of just over 2,000 per day at the height of the disease and a total loss of 100,000 people, representing a fifth or sixth of Cairo's preplague population. Historians have therefore revised Cairo's loss during the plague of 1348–1349 to a peak daily mortality of at most 10,000 and a total population loss of 200,000, representing anywhere from one-third to two-fifths of the city's preplague numbers. In Damascus, the leading city in Syria, where the first plague outbreak

lasted from June 1348 until March 1349, the daily death rate reached 1,000–2,000 at the epidemic's height, and 30,000 out of 80,000 in total died, a decline of 38 percent. If we accept al-Maqrizi's general estimate that the Black Death of 1348–1349 wiped out one-third of the population of Egypt and Syria, then Egypt's population declined by as much as just under 3 million, and Syria's population declined by as much as 400,000. The cadastral surveys, which record an average 12 percent decrease in tax revenues from before the Black Death to the third quarter of the fifteenth century, have been translated into a rural population decline for Egypt of 20–30 percent, although this is considered by most historians to be far too low.

In general, the plague, due to its repeated occurrences throughout the latter half of the fourteenth century and throughout the fifteenth century, is held largely responsible for a sustained population decline in the Middle East and North Africa that, unlike in Europe, did not begin to recover as the Middle Ages came to an end. However, other factors undoubtedly contributed to this decline besides plague, and in Egypt these included famine, flooding, and emigration (despite Muslim religious taboos against flight during a plague outbreak). This had quite severe agricultural and economic impacts that contributed substantially to the tumultuous end of the Mamluk dynasty in Egypt and Syria by the early sixteenth century.

—John Aberth

Bibliography

- Dols, Michael W. *The Black Death in the Middle East*. Princeton, NJ: Princeton University Press, 1977.
- Russell, Josiah C. "The Population of Medieval Egypt." *Journal of the American Research Center in Egypt* 5 (1966): 69–82.

China's Population Shifts

Today Asia is home to a significant portion of the world's population, as it was in the year 1000. During the era of the Tang dynasty (618–907), China had a population of approximately 60 million. Despite the decades of chaos and disunity that followed its collapse, the population rose to

about 100 million by the year 1100. Although such periods of disunity were not unusual for China, the dominant Han ethnic and cultural group longed for the return of a unified central government. In 960 the vast majority of Tang territory was conquered by the ethnic Chinese Song dynasty (960–1276), but the far north remained beyond its reach. Because the non-Chinese Liao, Xia, and Jin states were a permanent threat, the Song elected to pay tribute to their northern neighbors. Despite the payments, in 1127 the Jurchen (Ruzhen), who had created the Jin empire, conquered all of northern China. Historians think that the Song may also have been weakened due to a cooling trend in the world's temperatures that caused crop failures.

The Song court fled south, where previously hot temperatures and diseases such as malaria flourished in the swampy lands surrounding the Yangzi River (also known as the Changjiang, or Long River). Despite its territorial losses the Song still ruled 60 percent of China's population, and the country thrived. It benefitted from the world's first commercial revolution, even though more than 90 percent of the Song population was composed of peasants who lived in poverty and rarely escaped the cycle of borrowing from landlords or moneylenders. Although many Han Chinese still pined for the lost north, they came to appreciate the benefits of the Yangzi River Valley. The northern Yellow River was laden with loess, or wind-blown silt, and was hard to navigate compared to the Yangzi. Using the Yangzi for transportation of goods not only lowered costs but also helped to expand market distribution. The continued shift of the population south that initially began in the eighth century resulted in the draining of the muddy lands for settlement and farming. Soil and weather conditions, the introduction of a new strain of rice from Vietnam, and seed hybridization resulted in double-cropped and, at times, triple-cropped rice. Before this most farmers were self-sufficient, buying few items other than salt. Now, farmers who no longer had to use the bulk of their land to grow grain to eat or for taxes or rent could specialize in high-value crops such as lichee, lotus root, and tangerines. Farmers also had more time to produce handicrafts, and some left farming completely.

➤ DISEASE DATA FOR YUAN CHINA

China's Yuan dynasty (1279–1368) was only one part of the Mongol empire. It is speculated that the nomadic Mongols suddenly burst forth from the steppe north of China and south of Siberia in search of new grasslands due to climatic changes that resulted in a dramatic drop in temperatures. Traditionally, Mongol tribes roamed the steppe grasslands with their flocks of horses and sheep. Unfortunately, animal husbandry also facilitates the spread of disease due to the transfer of animal pathogens to humans. Hence, when Chinggis Khan unified the Mongol tribes, captured northern China, and moved west toward Europe, disease traveled with him. The Mongols are associated with terror and warfare in their empire, which encompassed eastern Europe and the Middle East, but the Pax Mongolia that facilitated trade along the Central Asian Silk Road and other sea and land trade routes proved equally deadly. Epidemics of diseases such as the bubonic plague (believed to be the Black Death), smallpox, and measles increased in number. Spread by fleas that live on rats (rats can themselves build up an immunity), the plague is estimated to have killed close to half of Europe's population. The Mongols were not immune to the scourge, for which there was no antidote or cure. Although entire towns and peoples were decimated through warfare by the Mongols in Yuan China, diseases such as the plague also took a toll. Tax revenues of the Yuan fell as the Chinese people were devastated by the epidemic, which, it is estimated, claimed the lives of 90 percent of Hubei Province's population alone in 1331. Yuan China's population decreased by an estimated 30 million to 40 million or more. There is no doubt that disease contributed to the Yuan dynasty's collapse.

—Tracy Lee Steele

The population of the Southern Song soared, perhaps surpassing 100 million. This may be attributed to many factors, such as sufficient foodstuffs and improved diets, but ironically the number of epidemics increased. Trade and travel facilitate the spread of disease, but so do wet rice cultivation and animal husbandry. Untreated human excrement was often used in fertilizers, particularly rice paddies where shoeless farmers

toiled. Not surprisingly, the number of chronic infectious and parasitical diseases such as schistosomiasis, which is caused by waterborne blood flukes, increased. Close contact between domesticated animals and humans also allowed animal parasites to contaminate humans beings, as is believed to be the case with smallpox (from cattle) or the flu (from pigs and ducks). Hence, the South recorded the highest incidence of epidemics in China in this period. Still, the population grew until the time the Mongols overran the Song and established the Yuan dynasty (1279–1368), when the population is believed to have declined by at least 30 million and quite possibly much more, as much as by 50 percent.

A great deal is known about the people of the Ming dynasty (1368–1644) due in large part to the Yellow Registers. First compiled in 1381, they included information on all household residents including name, age, ancestral home, and occupation as well as land and animal stock holdings. According to the register, China's population was then between 60 million and 65 million, but many scholars think that the actual number was higher. This government effort was not a census but was used to bind all the households into units of 110 and subunits of 11 in order to control the people who were primarily farmers and to ensure payment of taxes and the labor service required by the government. Needless to say, many people may have avoided registration to avoid payment, and girls may also have been overlooked. Hence, these population numbers could be considerably higher. Ultimately, peace and agricultural improvements resulted in a doubling of Ming China's population to between 150 million and 200 million.

—Tracy Lee Steele

Bibliography

- Atwell, William S. "Time, Money, and the Weather: Ming China and the 'Great Depression' of the Mid-Fifteenth Century." *Journal of Asian Studies* 61 (2002): 83–113.
- Benedict, Carol. "Bubonic Plague in Nineteenth-Century China." *Modern China* 14 (1988): 107–155.
- Duan, Chang-Qun, Xue-Chun Gan, Jeanny Wang, and Paul K. Chien. "Relocation of Civilization Centers in Ancient China: Environmental Factors." *Ambio* 27 (1998): 572–575.

- Ebrey, Patricia Buckley, Anne Walthall, and James B. Palais. *East Asia: A Cultural, Social, and Political History*. New York: Houghton Mifflin, 2006.
- Elvin, Mark. "The Environmental Legacy of Imperial China." *China Quarterly* 156 (1998): 733–756.
- Fairbank, John K., Edwin O. Reischauer, and Albert M. Craig. *East Asia: Tradition and Transformation*. Boston: Houghton Mifflin, 1989.
- McClendon, John H. "The Changing Pace of Population Growth in China." *American Biology Teacher* 48 (1986): 159–165.
- Morabia, A. "Epidemic and Population Patterns in the Chinese Empire (243 B.C.E. to 1911 C.E.): Quantitative Analysis of a Unique but Neglected Epidemic Catalogue." *Epidemiology and Infection* 137 (2009): 1361–1368.

Europe's Population, 1000–1347

Population trends for medieval Europe, even before the major disruption of the Black Death, remain elusive. Perhaps the best estimates exist for England, where the most records survive, but even here demographers have only two kingdom-wide surveys of population to go on: the famous Domesday Book of 1066 and the Poll Tax returns of 1377, taken after the country had suffered no less than three major bouts of plague. These and other records have generally led scholars to conclude that England and Europe experienced a population boom throughout most of the thirteenth century, but then the population started a long, slow decline from about 1290 until the onslaught of the unprecedented demographic crisis of the Black Death beginning in 1348. But these conclusions are subject to much uncertainty and to the necessity of making broad assumptions.

More useful perhaps are local surveys of population, particularly in assessing demographic trends over the course of several decades. But by their very nature, local trends, especially when compared with each other, can appear contradictory and are hard to extrapolate to a broader geographical region. For example, tithing records for six manors in Essex, England, suggest that population crested at the turn of the fourteenth century and then commenced a steady decline from the time of the Great Famine beginning in 1315; however, comparable records from two manors in Worcestershire and northeastern Nor-

THE POSTAN THESIS

The Cambridge historian M. M. Postan first published his thesis that Europe's population was destined to decline by the early fourteenth century in an essay published in the *Economic Historical Review* in 1950. Essentially, Postan revived the ideas of the great English economic theorist Thomas Malthus, who postulated in 1798 that population growth, since it increases at an exponential rate, would always outstrip a society's food supply and therefore needed to be brought back into balance through either positive checks (such as disease) or through preventative checks (such as human decisions about birthrates). However, Postan believed that a Malthusian crisis by circa 1300 was greatly exacerbated by the fact that the thirteenth century's population boom was mostly fueled by *assarting*, or the conversion of wasteland into arable land. These lands quickly became exhausted, Postan argued, and since medieval farmers had no other ways of increasing yields, this soon led to a subsistence crisis, as clearly indicated by the arrival of the Great Famine in 1315. Although Postan's thesis held sway during the 1950s and 1960s, it began to be challenged in 1976 by the Marxist historian Robert Brenner. Most recently, scholars have attacked Postan on various grounds, which include evidence of regional variations in medieval agricultural production, the difficulty of determining how wastelands should be defined, and the fact that the Great Famine was largely due to the unpredictable vagaries of the weather.

—John Aberth

folk point to a nearly opposite trend, one of modest population growth in the decades in between the famine and the onset of the Black Death. At the very least, historians seem to agree that medieval Europe's population, even if it did grow during the early fourteenth century, did so at a far less robust rate than during the first three quarters of the thirteenth century.

The most memorable demographic event to occur in northern Europe before the plague was the Great Famine, which struck in 1315 and persisted, in some areas, until as late as 1322. Demographic evidence from England as well as from Flanders on the Continent indicates that mortality

losses due to the famine were on the order of 10–15 percent. This was significantly higher mortality than normal, yet historians of the famine do not consider it insurmountable, to the point that population could not recover to its previous levels, or even higher, before the onset of the plague. In other words, the mortality caused by famine had no long-lasting impact on overall population trends in the early fourteenth century. Nonetheless, contemporary chroniclers were certainly impressed by the famine, with some even reporting cases of a desperate resort to cannibalism or to eating grass and the raw carcasses of cattle.

On the whole, there is no conclusive evidence that the Black Death was an inevitable component of a downward trend in Europe's population prior to 1348, as the Postan Thesis would have it. Much, if not most, of the population decline before the plague can be attributed to a single demographic crisis, the Great Famine of 1315–1322. The Black Death should therefore be seen as a quite unique demographic event in medieval Europe's history that struck like a hammer blow on an unsuspecting population that may otherwise have expected to continue to grow during the rest of the fourteenth century.

—John Aberth

Bibliography

- Aberth, John. *From the Brink of the Apocalypse: Confronting Famine, War, Plague, and Death in the Later Middle Ages*. New York: Routledge, 2000.
- Campbell, Bruce M. S., ed. *Before the Black Death: Studies in the "Crisis" of the Early Fourteenth Century*. Manchester, UK: Manchester University Press, 1991.
- Jordan, W. C. *The Great Famine: Northern Europe in the Early Fourteenth Century*. Princeton, NJ: Princeton University Press, 1996.

Europe's Black Death—Origins and Spread

There is a famous story told by the Piacenzan chronicler, Gabriele de Mussis, about how the Black Death first came to Europe from Asia. Sometime in the year 1346, according to Mussis, a Mongol army, undoubtedly under the command of the Kipchak khan of the Golden Horde,

Janibeg, besieged some Genoese merchants holed up in Caffa (present-day Feodosiya) on the northern coast of the Black Sea. In an apparent stroke of good fortune for the defenders, the Mongols suddenly got the plague; unfortunately for the Italians, however, the besiegers decided to lob the dead bodies of their comrades into the town in what is perhaps the first recorded instance of germ warfare. Although it is hard to believe that plague-carrying fleas could survive the violence of being catapulted, it is nonetheless quite likely that plague first came to Europe from this region. The trading factories of Caffa and Tana on the Black Sea were important suppliers of expensive animal furs, such as ermine and marten, that were much in demand among the well-to-do in Europe. But in the year of the plague, such furs became a deadly luxury when infested with fleas.

Several chroniclers besides Mussis continue the tale with how some Genoese galleys, variously recorded as two, three, or four in number, subsequently made the more than 2,000-mile (3,220-kilometer) journey back home to Italy, where they imported disease as part of their cargo. Louis Sanctus, writing to a friend in April 1348 from Avignon near the southern coast of France, mentions that these Genoese refugees first infected Greece and then Sicily and finally their home port of Genoa on the Italian mainland, where "they were expelled from that port with flaming arrows and diverse engines of war, because anyone who dared touch them or have any business dealings with them immediately died." From Italy, the Genoans next docked at Marseilles, where, according to Sanctus, they infected the inhabitants there and last were seen making their way along the coast of the southern Mediterranean toward Spain. The Greek chroniclers Nicephoras Gregoras and John VI Kantakouzenos confirm that plague came to Constantinople in the spring of 1347, while the Sicilian chronicler Michele da Piazza reports that no fewer than 12 Genoese galleys, whose sailors carried the disease "down to the very marrow of their bones," called at the port of Messina in October of the same year. There is thus broad agreement among the chroniclers that Italy, and Sicily in particular, were the first ports of call for the plague in Europe.

► GABRIELE DE MUSSIS, *HISTORY OF THE PLAGUE*

Gabriele de Mussis, a lawyer from Piacenza in Italy, wrote a *Historia de Morbo (History of the Plague)* sometime before his death in 1356. His account is considered one of the best sources on the arrival of the Black Death in Europe.

"In the year of our Lord, 1346, in eastern parts, an infinite number of Tartars [Mongols] and Saracens succumbed to an inexplicable disease and to sudden death. And there, the broadest regions, infinitely large provinces, magnificent kingdoms, cities, castles, and places that once had been full with a great multitude of men . . . were in a short space of time emptied of their inhabitants. . . . Behold how the infidel Tartar races, suddenly pouring in from every side and surrounding the city of Caffa, besieged the Christians shut up there, a siege that lasted for nearly three years. . . . And behold, the whole army of the Tartars was laid low by the disease, so that it seemed that every day, thousands upon thousands were wiped out, as if by arrows raining down from the sky. . . . The Tartars . . . abandoned the siege as if thunder-struck and stupefied on every side, recognizing

that there was no hope of escaping death. But they ordered that their dead be loaded onto their catapults and lobbed into the city of Caffa, so that the cadavers might kill everyone with their intolerable stench. Thus it seemed as if mountains of the dead were thrown in, so that the Christians . . . could not escape this disaster, even though they consigned as much of the dead as they could to the waves of the sea. And soon the whole air was infected and the water poisoned by the putridity of the corpses, and the stench grew to the point that hardly one out of every thousand even attempted to escape what remained of the Tartar army. And those who had been poisoned carried the poison to others wherever they went, infecting all, both places and men, with the disease by look alone."

—John Aberth

Source

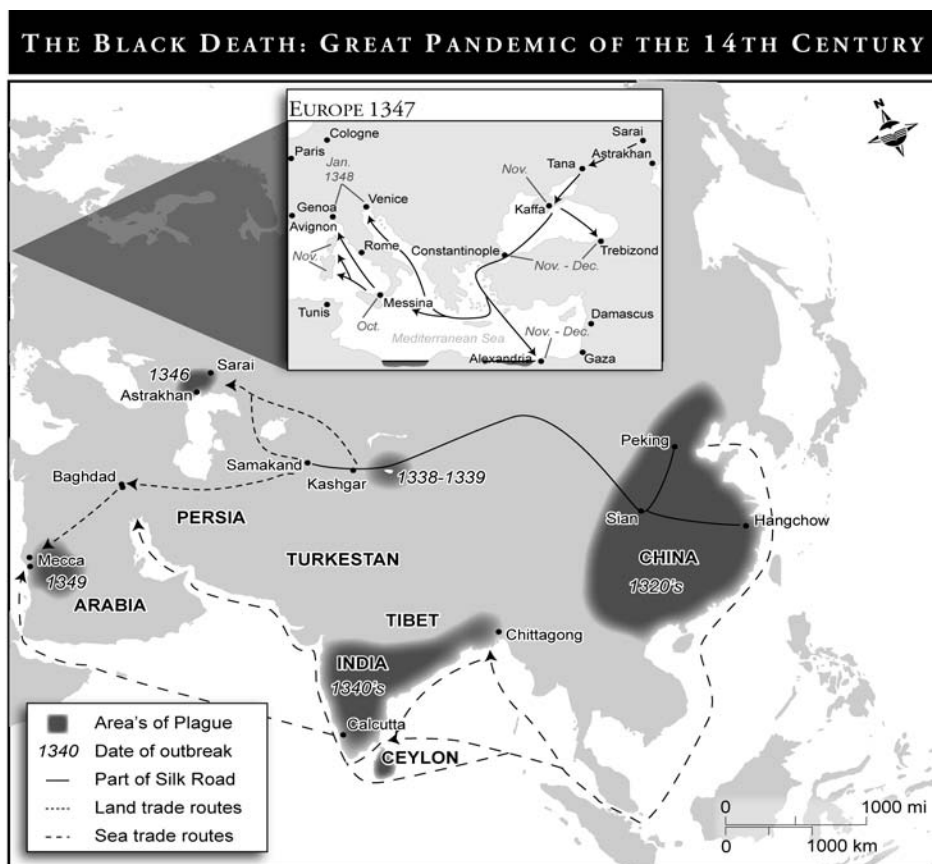
A. W. Henschel, "Document zur Geschichte des schwarzen Todes," in *Archive für die gesamte Medicin*, edited by Heinrich Haeser II (Jena, 1842), 48–49. [Translated by John Aberth.]

On the basis of other regional chronicles, historians have reconstructed the subsequent path of the Black Death across Europe. After making landfall in Sicily and perhaps Genoa and Marseilles in late 1347, the plague began its terror in earnest in 1348, when it spread throughout Italy, France, and Spain and invaded Switzerland, Austria, England, and perhaps Denmark. By 1349–1350 plague had come to all of Germany and eastern Europe, the Low Countries, all of the British Isles, and all of Scandinavia. It reached Russia (probably coming by way of Sweden) in 1352, while the silence of the records indicates that it skipped over Poland and Bohemia.

Some historians have doubted whether the Black Death was largely bubonic plague, since, they argue, the speed of its spread across Europe precludes a rat-borne disease. Yet it can live for 80 days without an animal host and thus travel independently of rats in animal furs, wool packs, and other merchandise. Indeed, the path of the Black Death seems to closely follow in the wake of the trade routes crisscrossing Europe.



Burying plague victims of Tournai, 1349, from the *Annals* of Gilles de Muisit, 1352, Abbot of Saint-Martin. (Snark/Art Resource, NY)



An additional factor contributing to the plague's rapid spread—and one that is all too readily discounted by many historians—is the possibility that the more deadly pneumonic plague could erupt and spread independently of the bubonic variety. For example, Michele da Piazza describes the first victims in Sicily, the inhabitants of the port city of Messina, as coughing up “bloody sputum” and dying within three days, symptoms that are typical of pneumonic plague. He then goes on to affirm that the Messinese who fled the city proceeded to spread the disease throughout Sicily with their “infectious breath.” A rapid virulent spread therefore seems not inconsistent with an identification of the Black Death with plague, especially in all its insidious forms.

—John Aberth

Bibliography

Aberth, John. *The Black Death: The Great Mortality of 1348–1350; A Brief History with Documents*. Boston and New York: Bedford/St. Martin's, 2005.

Horrox, Rosemary, trans. and ed. *The Black Death*. Manchester, UK: Manchester University Press, 1994.

The Demographic Impact on Europe, 1347–1500

One of the most frequently heard shibboleths about the plague—endlessly repeated by historians like some mind-numbing mantra—is that the Black Death, in its first outbreak of 1347–1350, wiped out only a third of Europe's population. This is, quite simply, wrong. Its only support comes from perhaps the least reliable demographic source for plague mortality: the English inquisitions post mortem, which were conducted after the death of a landlord in order to determine who should inherit an estate. These give us a death rate of 27 percent for England during the Black Death, yet they are limited to a very narrow and privileged portion of the population, a sample of just over 500 potential plague victims, who were at undoubtedly lower risk of

► THE STATUTE OF LABORERS

One of the more telling records of the social and economic dislocations created by the first outbreak of the Black Death in 1348–1349 is the labor laws that were enacted by England, France, the kingdoms of Castile and Aragon in Spain, and several cities in Italy. Perhaps the most famous of these laws is the Statute of Laborers that was enacted by the English Parliament in 1351, building upon the earlier Ordinance of Laborers that had been enacted by the king and council in 1349, when Parliament was not in session due to the plague. The preamble of the statute, printed below, attests to the new economic realities created by the extraordinary mortality among the population and to the government's persistent efforts to respond.

“It was lately ordained by our lord the king, with the assent of the prelates, nobles and others of his council against the malice of employees, who were idle and were not willing to take employment after the pestilence unless for outrageous wages, that such employees, both men and women, should be obliged to take employment for the salary and wages accustomed to be paid in the place where they were working in the 20th year of the king's

reign [1346], or five or six years earlier; and that if the same employees refuse to accept employment in such a manner they should be punished by imprisonment, as is more clearly contained in the said ordinance. Whereupon commissions were issued to various people in each county to make inquiry and punish all those offending against the ordinance. And now the king has been given to understand by a petition of the Commons in the present Parliament that the said employees, having no regard to the said ordinance but rather to their own ease and exceptional greed, withdraw themselves to work for great men and others, unless they are paid livery and wages double or treble what they were accustomed to receive in the said 20th year and earlier, to the great damage of the great men and the impoverishing of all the Commons, for which the said Commons pray for remedy.”

—John Aberth

Source

A. Luders et al., *Statutes of the Realm, 1101–1713*, 11 vols. (London, 1810–1828), 1:311.

contracting the disease. The inquisitions also do not record the deaths of all members of a family. Behind every surviving heir to a vacant estate, there may have been several others whose deaths went unrecorded.

Perhaps the most reliable demographic records for plague mortality are bishops' registers, which record vacancies that occurred in every parish church within a diocese. These records were compiled conscientiously by the most literate members of medieval society, and ten such registers survive from the plague period in England from dioceses distributed throughout the land. They collectively yield a death rate of 45 percent during the first outbreak of the Black Death in England in 1349. Manorial records from England, which record the death dues, known as *heriots*, paid by the families of deceased serfs to their lords register mortality rates ranging from 40 percent to 70 percent on manors across the country, including those in Cornwall, Somerset, and Worcestershire in the west; Suffolk, Nor-

folk, and Cambridgeshire in the east; Hampshire, Wiltshire, Essex, and Oxfordshire in the south; and Durham in the north.

What little evidence survives from the Continent suggests that death rates there were no lower than in England. For the first plague period from 1348 to 1350, a variety of records that include parish registers, tax assessments, household census returns, scribal records, and bishops' registers reveal death rates ranging from 45 percent to 68 percent at Givry and Albi in France, San Gimignano in Italy, and Perpignan and Barcelona in Spain. Given all this evidence, the average mortality for all of Europe during the first outbreak of the Black Death should be revised upward to around 50 percent.

For the next 150 years after the first arrival of the Black Death in Europe in 1347–1348, population throughout England and the Continent held steady and may even have slightly declined. Recovery of demographic numbers was scarcely possible in an era nicknamed the “Golden Age of

the Germ.” In England, further national outbreaks of plague occurred in 1361, 1369, 1374–1379, and 1390–1393; as many as 11 more major epidemics struck during the fifteenth century, particularly during the 1420s, 1430s, 1460s, and 1470s. Mortalities during these subsequent outbreaks were considerably lower than in 1348, but cumulatively over time they added up to some striking population losses. For example, tax records that survive from Italy attest that by 1427, four cities, including Florence, San Gimignano, Pistoia, and Prato, suffered population declines from anywhere between 62 percent and 75 percent. Meanwhile, farther north in eastern Normandy, *monnéage* (hearth tax records) point to an astounding cumulative decline of 130 percent between 1347 and 1442. Furthermore, the detailed obituary lists for Christ Church Priory in Canterbury, England, record that life expectancies for even these exceptionally well-cared-for monks reached a nadir of 23 years at birth, largely due, it seems, to the occurrence of no less than 27 higher-than-normal mortalities throughout the fifteenth century.

The pursuit of a complete and accurate demographic picture of Europe during the time of the Black Death is no mere academic exercise. Only extraordinarily high mortalities can explain the dramatic social and economic dislocations that afflicted Europe during the latter half of the fourteenth century and throughout the fifteenth century.

—John Aberth

Bibliography

- Aberth, John. *From the Brink of the Apocalypse: Confronting Famine, War, Plague, and Death in the Later Middle Ages*. New York: Routledge, 2000.
- Hatcher, John. *Plague, Population and the English Economy, 1348–1530*. London: Macmillan, 1977.
- Russell, Josiah Cox. *British Medieval Population*. Albuquerque: University of New Mexico Press, 1948.

Artists and the Cult of Death in Western Europe

There are many ways to measure the impact of the Black Death upon Europe. One approach is to examine the art produced by the generation

immediately following the plague of 1348–1350, even if its themes make no literal reference to disease or death. The limitations of this approach stem from the difficulties in dating medieval works precisely—and thus establishing the Black Death as a definitive break in a genre—and by the subjective nature of interpretation. In one view, the Black Death brought the Early Renaissance spirit of innovation to a grinding halt through the deaths of its leading artists, inaugurating a more conservative and rigid school. But in another view, the plague was a positive force, either by reinforcing faith through a refocused depiction of traditional plague saints, such as Saint Roch, or by providing a major impetus to the Renaissance theme of individualism. Many patrons felt impelled to commission portraits to be remembered in the face of mass death.

Perhaps a more rewarding approach to this subject is to focus on art and literature, whose themes are intimately connected with and thus highly revealing of late medieval attitudes toward death. In particular, the emphasis here is on artistic and poetic depictions of a dessicated and decaying corpse, a type of representation known as the macabre, or *memento mori* (remembrance of death). Of all artistic representations, this genre, although its origins predate the Black Death, is most closely associated with the plague. Two of its most emblematic themes are the Dance of Death and the *transi* tombs.

It is quite possible that a dance associated with the figure of Death first arose in conjunction with the Black Death of 1348. The *Great Chronicle of France* testifies to a dance performed in that year to ward off the plague. Other chronicles report that in 1374 a dancing mania seized hundreds of people in German and Flemish towns. The people periodically interrupted their dance to fall to the ground and allow onlookers to trample on them in the belief that this would cure them of their “extreme oppression,” although it is nowhere stated that this was the disease. These people may have been exhibiting or masking through dance one of the neurological symptoms of the bubonic plague, called chorea, or St. Vitus’s Dance, that produces involuntary muscle contractions. The dances also indicate that the plague may have engendered mass psychosis.

➤ A DISPUTACIOUN BETWYX THE BODY AND WORMES

A variation on the debate poems between the body and soul that were popular during the Middle Ages, *A Disputacioun betwyx the Body and Wormes* is unique in that it is illustrated by marginal water-color drawings, the first of which shows the tomb of a great lady, while her shrouded cadaver underneath is riddled with what look like worms, frogs, and salamanders. The ten-line caption below the tomb illustration reads:

“Take hede un to my fygure here abowne [above]
And se how sumtyme I was fresche and gay
Now turned to wormes mete and corrupcoun
Bot fowle erth and styntyng slyme and clay
Attende therfore to this disputacioun written here
And writte it wisely in thi hert fre
At that sum wisdom thou may lere [learn]
To se what thou art and here after sal be
When thou leste wenest [expect]: *venit mors te
superare* [“death comes to conquer you”]
When thi grafe greves [grave awaits]: *bonum est
mortis meditari* [“it is good to think on death”]”

In the style of other debate poems, the *Disputacioun* then proceeds with a dream vision by the poet, who in this case has fallen asleep next to a lady’s tomb in a church along his pilgrimage route. Significantly, the pilgrim-poet informs us that he was moved to make his pilgrimage “In the ceson of huge mortalite/Of sondre disseses with the pestilence.” What follows is a rather bizarre debate between the lady’s corpse and the worms that

crawl through it, complete with marginal illustrations of a skeleton in female headdress conversing with the wriggling worms below. The corpse must accept that the worms will continue to devour her once-beautiful body, as worms have conquered all the great men and women of the past. However, by the end of the poem the body reconciles with the worms on the grounds that at the Resurrection its flesh will be restored and remade whole out of its present corruption:

“This that I hafe complemed and sayd
In no displesyng take it yow unto.
Lat us be frendes at this sodayn brayde [outburst],
Neghbours and luf as before we gan do.
Let us kys and dwell to gedyr evermore,
To that God wil that I sal agayn upryse
At the day of dome [Last Judgement] before the
Hye Justyse,
With the body glorified to be.
And of that nowmbyr that I may be one
To cum to that blis of heven in fee [by right]
Thorow the mene [intervention] and the mediacione
Of our blissed Lord our verry patrone.
Thar in abilitie [good condition] to be for His hye
plesauce.
Amen, amen pour charite at this instance.”

—John Aberth

Source

British Library, MS Additional 37049.

The Dance of Death lends itself artistically to the experience of the Black Death for a number of reasons. As the great leveler, Death comes for all regardless of their position in the social hierarchy, just as plague made no distinctions in its onslaught on Europe’s population. Typically, expressions of the dance in painting or poetry, such as the fresco that once adorned the cemetery of Les Innocents in Paris, dated to 1425, or the poem by John Lydgate, who claimed to be transcribing verses from Les Innocents during the 1430s, portray a whole descending order of victims who must dance with Death, from pope and emperor on down to hermit and poor man. But in other versions of the dance Death is a chess player, which seems to express the arbi-

trary and unpredictable nature of the plague’s geographical behavior that was recorded by some chroniclers. In addition, a dancing Death, though frightening, is more approachable and familiar than the awesome figure of the Fourth Rider of the Apocalypse. Here, at least, a mortal can communicate with Death before being taken away. Perhaps the most elaborate expression of this theme is the late medieval English morality play *Everyman*. Even though Death appears at the beginning of the play to claim Everyman and lead him to his “reckoning,” Death eventually grants Everyman a stay of execution in order to prepare his soul for the afterlife. The most revealing commentary comes at the very end of the play in a monologue by Doctor, who points

to the coming resurrection at the Last Judgement, when “we may live body and soul together.” The implied message here is that even a body rent by plague boils and other deformities will be fully restored at the end of time.

The transi tomb, a term derived from the Latin word *transire*, meaning “to pass away,” provided a variation on tomb monuments by substituting or contrasting a skeletal and rotting cadaver beneath to the idealized lifelike portrait of the patron above. Such tombs had their heyday in the fifteenth century, but they persisted as late as the seventeenth century. Nearly 200 examples survive from Northern Europe, particularly in France and England.

An intriguing feature that occurs on many of the transi tombs is a reference to or depiction of worms. For example, the tomb of François de la Sarra at La Sarraz, Switzerland, one of the earliest transi tombs constructed, in the 1390s, depicts worms on the arms and legs of its patron. As a sign of corruption and decay, worms were closely associated with the Black Death. Several physicians attributed plague to a “generation of worms” inside the body and prescribed dietary and other preservatives against worms. Likewise, the double-decker tomb of Henry Chichele, archbishop of Canterbury, at Canterbury Cathedral references worms in its epitaph of circa 1425: “I was a pauper born, then to this primate raised/Now I am lain in the ground, ready to be food for worms.” Usually, modern observers “read” downwards on this tomb, seeing the cadaver as the gruesome end product of decay of the resplendent lifelike effigy from above. But reading upward, one can also see the upper effigy as rising in resurrected glory out of the ashes of the corpse below, accompanied by a host of heavenly angels, some of which are depicted on Chichele’s pillow as well as on the canopy above.

The Dance of Death and transi tombs and other art forms representing death or mortality often have been invoked to symbolize the waning of late medieval society and culture, which supposedly had become obsessed with death. Scholars either dismiss late medieval memento mori art as, in the words of the Dutch historian Johan Huizinga, “the too much accentuated and too vivid representation of Death hideous and

threatening” or characterize the art and literature of the period as “pervaded by a profound pessimism and sometimes a renunciation of life.” There is, however, an alternative interpretation of memento mori, one that sees it as a positive, even uplifting, response to the morbid atmosphere created by the Black Death. This interpretation is closely related to medieval beliefs concerning the Apocalypse, the final destruction of the world and the salvation of the righteous as prophesied in the book of Revelation in the New Testament. Yes, medieval minds imagined the end of the world as a time of great suffering, terror, and death. But at the same time, the end of the world also holds out the promise of rebirth, renewal, and resurrection. Although it does not deny the terrible evils that plague could bring in its wake, this outlook could provide great comfort and reassurance in the face of mass death.

—John Aberth

Bibliography

- Aberth, John. *The Black Death: The Great Mortality of 1348–1350; A Brief History with Documents*. Boston and New York: Bedford/St. Martin’s, 2005.
- Aberth, John. *From the Brink of the Apocalypse: Confronting Famine, War, Plague, and Death in the Later Middle Ages*. New York: Routledge, 2000.
- Huizinga, Johan. *The Waning of the Middle Ages: A Study of the Forms of Life, Thought and Art in France and the Netherlands in the Dawn of the Renaissance*. Translated by Frederik Jan Hopman. London: E. Arnold, 1924.
- Meiss, Millard. *Painting in Florence and Siena after the Black Death: The Arts, Religion, and Society in the Mid-Fourteenth Century*. Princeton, NJ: Princeton University Press, 1951.

What Was the Population of the Caribbean and Mesoamerica before 1492?

Demographic researchers estimate that the Americas had anywhere from 8.4 million to more than 100 million indigenous inhabitants prior to European contact in 1492. To reach these approximations, scholars have used a myriad of techniques, including documentary evidence, projection models, and archaeological and ecological studies.

Demographic scholars start with an analysis of the available documentary data on aboriginal populations, which include European chronicle accounts of the number and size of native communities, baptismal and mortality records, and partial censuses taken for the purpose of tribute collection or labor drafts. Researchers supplement such limited and flawed documentary evidence with the use of projection models that estimate regional populations; total population counts based on numbers of tributaries, warriors, heads of households, or adult men; calculations of total populations based on known age groups and genders; and population estimates derived from quotas of tributary goods per family. Depopulation ratios based on population counts at earlier and later points in time also are used to approximate native populations. At the same time, scholars apply archeological and ecological studies of settlement remains, cultivation patterns, the production of foodstuffs, and environmental circumstances to enhance their research. It should be emphasized, however, that since documentary evidence, projection models, and archeological and ecological studies are imprecise, demographic researchers are not able to accurately determine pre-Conquest populations.

Estimates of the indigenous population of the Caribbean range widely from 200,000 to over 8 million people, but more current approximations limit the number to less than 1 million. Historical demographers have concentrated their debate primarily on the island of Hispaniola, the first Spanish colony in the Americas. On the higher end, Sherburne F. Cook and Woodrow Borah argue that Hispaniola had a pre-Conquest population of 8 million inhabitants based on an enumeration of tributaries that was possibly made in 1496. On the lower end, Ángel Rosenblat contends that Hispaniola possessed a native contact population of 100,000 to 120,000. He derives this estimate from Friar Bartolomé de las Casas's statement of there being 60,000 persons in 1508, taking into account indigenous population decline following European contact. For Cuba, aboriginal population estimates also fluctuate broadly between 16,000 and 600,000, but recent studies limit the number of indigenous peoples on the eve of Spanish contact to 112,000.

➤ THE GREAT POPULATION DEBATE

At its most extreme, the debate on the number of indigenous peoples living in the Americas, especially in areas colonized by the Spaniards, on the eve of European conquest has divided demographic scholars into two opposite camps: those who support low population estimates and those who adhere to high approximations. Supporters of the lower estimates argue against depending heavily on defective documentary evidence to make extrapolations. Moreover, they reject the possibility of unrecorded epidemics of European diseases, which some scholars use to calculate large contact populations and elevated depopulation ratios. At the same time, proponents of higher estimates criticize those who furnish lower figures as being too skeptical of documentary data and not giving enough credence to the various causes of indigenous demographic decline, including epidemics, armed conflicts, and socioeconomic dislocation following conquest.

It has been suggested that some who support higher estimates promote, for ideological reasons, the basic veracity of the Black Legend, a propaganda charge espoused by sixteenth- and seventeenth-century European rivals of Spain, especially the English, that denounced Spaniards as brutal colonizers who massacred millions of indigenous peoples. As a supporter of higher estimates, however, Woodrow Borah contends that other European imperialists were just as harmful to indigenous populations as their Spanish counterparts.

—Vanessa M. Ziegler

Of all the regions of the Western Hemisphere, documentary evidence on which to base population estimates are most plentiful for central Mexico. Cook and Borah employed fragmentary tributary data as well as European chronicles. Estimating that each indigenous family had an average of 4.5 individuals, they placed the population of central Mexico at 25.2 million inhabitants before the arrival of Spanish conquistador Hernán Cortés in 1519. Some researchers, however, do not agree with Cook and Borah's methodology and accept demographic calculations of 10 million to 15 million for the region instead. Additionally, the population of the Aztec capital of Tenochtitlan has been assessed at 150,000 to

200,000 inhabitants. South of central Mexico, the Maya population of Yucatán has been estimated at 800,000 people for the year 1528.

Demographic historians have found the indigenous population of Central America difficult to gauge due to the scarce documentary data available for research. Contact population estimates range from 2.25 million to 5 million indigenous peoples for the entire region.

—Vanessa M. Ziegler

Bibliography

- Burkholder, Mark A., and Lyman L. Johnson. *Colonial Latin America*. 6th ed. New York: Oxford University Press, 2008.
- Cook, Sherburne F., and Woodrow Borah. *Essays in Population History: Mexico and the Caribbean*, Vol. 1. Berkeley and Los Angeles: University of California Press, 1971.
- Denevan, William M., ed. *The Native Population of the Americas in 1492*. Madison: University of Wisconsin Press, 1976.
- Dobyns, Henry F. *Native American Historical Demography: A Critical Bibliography*. Bloomington: Indiana University Press, 1976.
- Henige, David. *Numbers from Nowhere: The American Indian Contact Population Debate*. Norman: University of Oklahoma Press, 1998.
- Newton, Linda A. "Demographic Catastrophe in Sixteenth-Century Honduras." In *Studies in Spanish American Population History*, edited by David J. Robinson. Boulder, CO: Westview, 1981.
- Pérez, Louis A., Jr. *Cuba: Between Reform and Revolution*. 3rd ed. New York: Oxford University Press, 2006.
- Rosenblat, Ángel. "The Population of Hispaniola at the Time of Columbus." In *The Native Population of the Americas in 1492*, edited by William M. Denevan. Madison: University of Wisconsin Press, 1976.

The Population of South America

The estimated size of the native population of South America prior to the Spanish and Portuguese conquest ranges widely from 4 million to 39 million inhabitants. For South America, demographic research has converged on the central Andes (Peru, Bolivia, and Ecuador) since it constituted the Inca empire and held the greatest concentration of indigenous peoples in South America. Based on limited documentary evidence

and the use of depopulation ratios, approximations for the central Andes vary broadly from 3 million to 30 million inhabitants. For Peru, Noble David Cook estimates an original population in the year 1520 of 9 million inhabitants. Research on Bolivia has resulted in a partial population estimate of 743,000 inhabitants, while the total contact population for Ecuador ranges from 500,000 to 1 million people.

Demographic calculations have been made for other parts of the Andean region as well. The Venezuelan population has been estimated at 350,000 inhabitants, and Colombia's contact population has been calculated as high as 3 million.

The southern region of South America had a small indigenous population prior to the Spanish conquest. Based on documentary evidence, projections of the contact population of Argentina vary from 300,000 to 981,500 inhabitants. For Chile, aboriginal population estimates range from 500,000 to 1.5 million prior to European contact. Finally, the Uruguayan and Paraguayan precontact populations have been calculated at 5,000 and 280,000 native inhabitants, respectively.

Amazonia encompasses the area surrounding the Amazon River and its offshoots as well as the tropical zones of the South American interior. William M. Denevan offers an estimate of over 8 million indigenous people for all of Amazonia based on documentary data, depopulation rates, and the ecological patterns of different habitats in the region.

The calculation of the Brazilian aboriginal population has fluctuated from under 1 million to 3 million people. John Hemming provides perhaps the most accurate estimate based on firsthand European sources, an assessment of the land arability in each region, and the consideration of indigenous depopulation as a result of the proliferation of diseases stemming from European contact, social dislocation, and slavery. For the year 1500, Hemming estimates that there were approximately 2.4 million indigenous people living in Brazil.

—Vanessa M. Ziegler

Bibliography

- Burkholder, Mark A., and Lyman L. Johnson. *Colonial Latin America*. 6th ed. New York: Oxford University Press, 2008.

- Cook, Noble David. *Demographic Collapse: Indian Peru, 1520–1620*. Cambridge: Cambridge University Press, 2004.
- Denevan, William M. “The Aboriginal Population of Amazonia.” In *The Native Population of the Americas in 1492*, edited by William M. Denevan. Madison: University of Wisconsin Press, 1976.
- Denevan, William M., ed. *The Native Population of the Americas in 1492*. Madison: University of Wisconsin Press, 1976.
- Hemming, John. *Red Gold: The Conquest of the Brazilian Indians*. Cambridge: Harvard University Press, 1978.
- Pyle, Jane. “A Reexamination of Aboriginal Population Estimates for Argentina.” In *The Native Population of the Americas in 1492*, edited by William M. Denevan. Madison: University of Wisconsin Press, 1976.

The Population North of the Rio Grande

The histories of Native American populations north of the Rio Grande before 1500 are diverse and idiosyncratic. Encompassing all of present-day Canada and the United States, each specific cultural region within this area had its own unique demographic history and population dynamics. In some areas the natural environment and resources allowed for large populations to develop and reside over long periods of time, while in other areas the environment and resources precluded the local population from ever growing beyond a few hundred or thousand.

For example, archaeologists have estimated that between 10,000 and 20,000 families populated the Four Corners area of the Southwest region 800 years before the present. However, within a short time period, roughly 150 years, these large population groups had moved to other areas of the Southwest. During the mid-eleventh century most of the great houses in the area were vacated, and by the late twelfth century most of the remaining great houses and smaller villages experienced large-scale population decline.

Slightly earlier and to the north in the eastern Great Basin of present-day Utah, Native American populations archaeologically classified as Fremont also experienced large demographic fluctuations. Archaeological evidence, for exam-

➤ OUR EVIDENCE FOR NATIVE AMERICAN POPULATIONS

Evidence for understanding Native American populations north of the Rio Grande before 1500 stems primarily from archaeological and physical anthropological data. Archaeological evidence includes prehistoric village size and building uses, shell and refuse midden sizes, site and regional densities, and the overall occupation chronology of both the site and the region. When studied together, these data allow archaeologists to estimate the total number of individuals living within a particular area over a set period of time. Physical anthropological data include osteological evidence (evidence garnered from the study of bones), our knowledge of human adaptive responses to environmental and population stresses, and estimates of population birth rates, infant mortality rates, and general mortality rates. Taken together, these two forms of data—archaeological and anthropological—allow researchers to develop a fairly rigorous understanding of a site’s occupational chronology and the larger region’s demographic history.

—Peter N. Jones

ple, indicates that relatively large populations lived in the northern part of the greater Uinta Basin of northwestern Utah between 640 and 1000 CE and that these populations then rapidly declined. At the same time, populations grew in the southern part of the basin between 1000 and 1150. By 1200, however, the entire basin was rapidly depopulated, as the local climate changed and people had to look elsewhere for sufficient resources.

In California, however, where subsistence regimes were oriented more toward the coast and riverine resources, the population demographics remained more stable overall, although some areas, such as San Francisco Bay, apparently experienced some redistribution of populations, as evidenced by shell mound locations.

In the Mississippi region to the east, a similar pattern of fluctuating demographic history is also evident. Cahokia, one of three Mississippian archaeological sites that made up a part of a large political-administrative complex in the middle Mississippi River Valley, is estimated to have

grown from around 10,200 people to 15,300 people between 1050 and 1100. It has been estimated that at the same time the regional population swelled to between 30,000 and 50,000 people. A similar demographic evolution also took place on the eastern coast of the United States as chiefdoms expanded, contracted, and migrated across the landscape. In other regions such as the Plains, Subarctic, and Arctic, lack of subsistence resources precluded the prehistoric peoples from reaching beyond a few thousand.

—Peter N. Jones

Bibliography

- Coltrain, Joan B., and Steven W. Leavitt. "Climate and Diet in Fremont Prehistory: Economic Variability and Abandonment of Maize Agriculture in the Great Salt Lake Basin." *American Antiquity* 67 (2002): 453–485.
- Doyel, David E., ed. *Anasazi Regional Organization and the Chaco System*. Albuquerque, NM: Maxwell Museum of Anthropology, 2001.
- Emerson, Thomas, and Barry Lewis. *Cabokia and the Hinterlands: Middle Mississippian Cultures of the Midwest*. Urbana: University of Illinois, 1991.

The Peoples of the Pacific—Environment and Population

Melanesia was first occupied by modern humans tens of thousands of years ago, while Micronesia and Polynesia, among the last places on Earth to be peopled, were first occupied only thousands of years ago. By 1000 CE more than a million people lived scattered across Oceania's diverse land masses. On the basis of their study of archaeology, ecology, linguistics, oral histories, and estimates by early Europeans, demographers such as John Caldwell of the Australian National University have been able to arrive at rough approximations of population numbers for the various societies of Oceania.

Much of Melanesia, including New Guinea, and New Zealand in Polynesia are continental land masses with a diversity of plants and animals. Many of the smaller land masses, such as Fiji and Hawaii, are high islands formed by a combination of volcanic activity and coral buildup. These are less biologically diverse than the continental land masses. The low islands of the Pacific, including most of Micronesia, are coral

atolls only a few feet above sea level. Low islands are less biologically diverse than either the continental land masses or the high islands.

Almost every type of climate zone known on the planet can be found in Oceania. Even though most of Oceania is within the tropics, variations in altitude result in a variety of ecological niches. Environments throughout the region range from seacoasts to mangrove forests, swamps, rainforests, cloud forests, alpine forests and meadows, semitropical coniferous forests, and semitropical deciduous forests.

Tens of thousands of years ago, during times when the sea level was lower than it is now, the first modern humans migrated out of an area that now includes Indonesia and into Melanesia and Australia. In 1000 CE the population of Melanesia was about 564,000. By 1500 CE it had increased to about 718,000. Evidence of the great length of time that modern humans have lived in Melanesia is reflected in the diversity of languages spoken there. In New Guinea alone about 1,300 languages, maybe a fourth of the world's total, were spoken. Most of these languages are classified as Papuan. With diffusion and migrations into Melanesia from Micronesia and Polynesia, Austronesian languages appeared at later dates.

Austronesian languages probably have their origins in southern China and Taiwan. From those points Austronesian became one of the most widespread language groups on the planet. The seafaring skills of Austronesians spread their languages to the nearby Philippines; south into Island Southeast Asia; west as far as Madagascar, 250 miles (400 kilometers) off the east coast of Africa; and east as far as Easter Island, 2,300 miles (3,700 kilometers) off the west coast of South America. The distance between these extreme east-west points of settlement is 210 degrees of latitude, or 58 percent of the circumference of Earth.

Micronesia was settled in more than one migration with the earliest influx of modern humans into Micronesia about 6,000 years ago. The earlier group of migrations probably started in the Philippines, Taiwan, the Indo-Malaysian archipelago, and/or parts of Melanesia and ended up in the western part of Micronesia. The central and eastern parts of Micronesia were settled

in later migrations, probably from Melanesia to the south but also maybe from western Micronesia. In 1000 CE the population of Micronesia was about 86,000, but by 1500 CE it stood at about 137,000.

Polynesians are probably the descendents of Austronesian-speaking peoples from Indonesia or the Philippines who pushed into northern Melanesia and then about 3,000 years ago into the Samoa-Tonga-Fiji region of western Polynesia. It is on Samoa and Tonga that typically Polynesian culture developed and spread eastward to the Marquesas and then to other areas of eastern Polynesia. The last area of Polynesia, Aotearoa (New Zealand), was settled only about 1,000 years ago. As populations reached their carrying capacity on particular islands, groups of seafarers set out in search of new lands, ultimately populating all of Oceania. Searching for new lands may have been an incentive to lower-ranking individuals of chiefly families who could establish new societies in which they were the highest ranked. In 1000 CE the population of Polynesia stood at about 78,000. By 1500 CE it had increased to about 160,000.

—*Sharlottte Neely*

Bibliography

- Caldwell, John, et al. "The Population of Oceania in the Second Millennium." Conference on the History of World Population in the Second Millennium, Florence, Italy, 2001.
- Campbell, I. C. *A History of the Pacific Islands*. Berkeley: University of California Press, 1989.
- Oliver, Douglas L. *Oceania: The Native Cultures of Australia and the Pacific Islands I and II*. Honolulu: University of Hawaii Press, 1989.
- Van Tilburg, Jo Anne. *Easter Island: Archaeology, Ecology, and Culture*. London: British Museum Press, 1994.

➤ DEBATE OVER THE POPULATION OF EASTER ISLAND

Until recently archaeologists have generally agreed that Easter Island was first settled around 350 CE by 50 to 200 people from elsewhere in Polynesia. By 1500 CE the population of Easter Island had reached its maximum carrying capacity of about 8,000 people. Yet the population continued to grow, maybe to 20,000 people. At that time the expanding population resulted in food shortages, deforestation as more land was cleared for farming, soil depletion, intergroup conflict, and religious upheavals. The shortage of timber meant a halt in boat-building that would have allowed people to exploit tuna and other offshore fish. When Europeans arrived in the eighteenth century, the population of Easter Island may have dropped to 3,000 people.

New radiocarbon dating on Easter Island has suggested to some archeologists that Polynesian settlers first arrived much later. Terry Hunt and Carl Lipo argue that if the first Polynesians arrived in 1200 CE, there would not have been time for overpopulation to occur. A population of about 3,000 at the time of European discovery may have been the maximum the island ever supported. Rather than attribute the demise of Easter Island society to natives' destruction of the environment, Hunt and Lipo blame rats and Europeans. The Polynesian rat, an uninvited passenger on the canoes of the first settlers, may have destroyed much of the island's food. Europeans then introduced new diseases and began slave raids that destroyed the culture.

While Hunt and Lipo's theory is intriguing, until more evidence in support of their explanation comes to light, most archaeologists continue to advocate the older interpretation.

—*Sharlottte Neely*

■ Introduction: Envisioning the Environment

Nature can be forbidding, even terrifying, and its ways are mysterious for those who have no means of explaining, adapting to, and even protecting themselves from its rhythms. For that reason, human societies since

the beginning of the species have attempted to make the world of nature a comprehensible and comfortable place in which to live through their myths, legends, visual arts, and, if sufficiently literate, their literature.

The entries contained under this topic illustrate only a few of the many ways that both settled and nomadic as well as literate and illiterate cultures envisioned and represented the natural environment in which they lived during this half millennium. Cumulatively, these entries can only give us a glimpse, and a partial one at that, of the global varieties of this phenomenon.

Most historians, unlike social scientists, are reticent to search for and to proclaim general rules and patterns supposedly at work in human history. They are too mindful of social and cultural differences and the roles that chance and accident play in the unfolding of the human story. Yet more so than most of their colleagues who practice the discipline of history, world historians are, very much like anthropologists, open to perceiving commonalities, as well as differences, within the human experience. One such commonality that seems evident to those who study the visual and literary arts is that as societies become more settled and stable, one might even say more mature, their visual artists and writers tend to portray nature as less hostile and more benign and even inviting. That certainly appears to have been the case for many societies around the world between the years 1000 and 1500.

The folk tales of dark and dangerous forests filled with menacing creatures tended to give way in twelfth- and thirteenth-century Western Europe to edifying tales of nature tamed, as seen in the popular story of Saint Francis of Assisi's converting "Brother Lupo," the wild wolf of Gubbio, to a life of peaceful coexistence with the citizens of this Italian town. This same saint, the author of the *Canticle of the Creatures*, also was portrayed, in a fresco mural painted by Giotto and his students in the church of San Francesco in Assisi, preaching the love of God to birds.

Although Francis and Western Europe's so-called Twelfth-Century Renaissance are represented in these pages, unfortunately China's Song-era paintings of nature have not yet found an author or a voice here. This is unfortunate, because the greatest artistic glory of Song China (960–1279) was its landscape painting. In fact, nature and landscape were not mere background for Song painters; they were the focus. Song China raised landscape painting to a pinnacle

that few cultures have equaled and none have surpassed in beauty, sophistication, and philosophical complexity. Underlying this art was a uniquely Chinese combination of philosophical and religious traditions. Daoists extolled the awe-inspiring mystery of nature and underscored the insignificance of the human imprint on the vast all-encompassing cosmos. Neo-Confucianists asserted that there exists an infinite Moral Principle (*li*) that pervades, harmonizes, and energizes the universe and all that is contained within it. On their part, Buddhists emphasized the need for a harmonious interaction between humanity and nature, whereas traditional folk religion, which greatly influenced Chinese Buddhist devotion, held that mountains were sacred spaces where the immortals dwelled. Proceeding from such roots, Song artists portrayed a natural world that was harmonious yet complex, ordered yet mysterious, inviting yet awe-inspiring. Nature so portrayed became both an entity unto itself, to be appreciated for its intrinsic beauty, and a metaphor for a well-ordered empire within an orderly universe.

Indeed, a desire to portray a perceived order in nature was common to all of the artistic and literary traditions reflected in these entries, be they artists incising animals on stones, gardeners fashioning and caring for the taifa gardens of Al-Andalus, or Mesoamerican and Incan urban planners replicating sacred space in the built environment of their cities.

—Alfred J. Andrea

Sub-Saharan Art of Nature

Scholars have noted that the unique qualities of sub-Saharan African art were inspired and necessitated by an understanding of animals in the savanna (grasslands) and the forest. According to this theory, African art is typified by two fundamental tenets that have guided the artists in their art production. The first is a strong feeling for the attributes of animals as they affect humans and the environment. The second is the idea that humanity is essentially a creation of nature. In African masks and artistic representation of animals, we see continuity in motifs and forms from the art of the people who occupied the central Sahara 8,000 years ago to the art of

the people in the grasslands of Central and South Africa transmitted down to today.

Africa south of the Sahara has been home to communities that lived in accordance with the environment and the seasons. Moreover, these peoples farmed and hunted, and consequently they were principal actors in societies in which knowledge of the behavior of animals was of paramount importance. Many myths were built around these animals, and the peoples' social systems and religious beliefs were affected by their knowledge and interpretation of the appearances and behaviors of these animals.

In many societies as widely spread as the Buganda in Uganda to the Basotho in southern Africa, animals were recognizable as characterizing certain types of people by well-known artistic conventions. The symbolic representation of animals and their attributes was not restricted to any particular tribe or location. For example, the bush cow of the Poro on the Ivory Coast, with its threatening sound, can also be found represented in the art of Malawi. The python usually associated with the Fon throne of Bamun was also a powerful symbol in Swaziland. And the Chameleon of the Chief sitting on the bush cow horns in Nigeria was a motif of equal importance among the Bayaka of the Congo.

Several centuries before 1000 CE, the Igbo-Ukwu culture of eastern Nigeria made artifacts in bronze iron and terra-cotta that reflected their environment. Insects, shells, and animals were characteristic Igbo Ukwu forms and decoration. Between 1000 and 1500 CE (according to radiocarbon-14 dating), the Ife, or Yoruba, artists of southwestern Nigeria made stone sculptures in the form of mud fish and animals.

The Tellem people of Mali built granaries between the eleventh and fifteenth centuries CE. Strong evidence abounds that the granaries served both as food storage areas and as burial vaults. Caves were also used as burial vaults. Significantly, grave gifts have been found in these burial chambers that reflect the occupations and status of the deceased. Farmers are recognized by the hoes buried with them, and hunters are recognized by their bows and arrows and the skulls of game animals. The Dogon people, who arrived later and occupied the land when the Tellem people left, invariably maintained a simi-

➤ THE SIGNIFICANCE OF THE LEOPARD IN BENIN ART



Bronze plaque decorated with two leopards, from Benin City, Nigeria, possibly late seventeenth century. Such plaques adorned the walls of the palace of the obas (divine kings) of Benin. (Werner Forman/Art Resource, NY)

Images of various creatures were explored in the art of Benin that dates from circa 1400 CE. The forms were executed in three media: bronze, wood, and ivory. Creatures such as leopards, pythons, horses, frogs, lizards, and birds were used as symbolic motifs. The leopard in particular was ascribed such human attributes as leadership, authority, and courage. The animal was associated with royalty and was elaborately used in the art of Benin's royal court.

—Tolulope Lawrence Akinbogun

lar culture. The Dogon believe in a supreme creative force, Amma, who resides in the skies. Thus, their art, consisting of wood carvings, was fashioned in a manner that was consistent with their religious and philosophical beliefs as well as their concept of cosmology. The Dogon cosmology holds a mythological position that Amma created the earth and had a sexual relationship with it. Through the earth, Amma procreated and had fox (*Vulpes pallida*) as its first child. The earth bore a set of twins for Amma during the second birth. The twins were called Nommo. They were human beings from head to waist and serpentlike below the waist. These mythological beings were often depicted in Dogon carvings.

—Tolulope Lawrence Akinbogun

Bibliography

- Biobaku, Saburi O., ed. *The Living Culture of Nigeria*. Lagos: Thomas Nelson, 1976.
- Duerden, D. *African Art: An Introduction*. London: Hamlyn Publishing Group, 1974.
- Fagg, William, and Herbert List. *Nigerian Images*. London: Lund Humphries, 1963.
- Imperato, P. J. *Dogon Cliff Dwellers: The Art of Mali's Mountain People*. New York: L. Kahan Gallery/African Arts, 1978.

Japanese Reverence for the Natural World

The Japanese reverence for the natural world is anchored in the tradition of an animistic worldview that favors the idea that all things in nature (i.e., animals, plants, formations of landscapes such as mountains, lakes, or rivers) are spirited. The term for nature is *shizen* in Japanese, and the literal meaning of the Chinese character with which this word is written is “from itself thus it is.”

Humans are considered an integral part of nature, as are spirits. Consequently, respecting the natural environment is part of humanity's protection of its own living space. The Japanese do not perceive nature as a realm to be dominated. Shaped by a long tradition of animism, proper social conduct includes communing with

the spirits of nature as a symbolic act to further the sustainability of community life. This communion with the spirits requires the observance of offering ceremonies and regular visits to temples.

Perceptions of a spirited world are widespread among the indigenous populations in Northern Eurasia and North America. Japan—located on the eastern rim of Eurasia—forms part of this cultural convergence and, as an ancient cultural layer, has perpetuated animistic ways of looking at the natural environment up to the present. The animistic worldview of the Japanese people is called Shintoism, a derivation from Shinto (spirits; divine beings), a fairly modern term modeled on such equally vague and overly general terms as “Buddhism” or “Hinduism.” In Western descriptions of Japan, Shintoism is often identified as a religion. In fact, Shintoism is a way of life.

The central spiritual category of Shintoism is *kami*. The same Chinese character is used to write the two expressions *kami* (an indigenous Japanese term) and *shin* (a Sino-Japanese term, with a reading according to the Chinese tradition). *Kami* and *shin* refer to the spirit that resides in every object and/or place. For instance, Mount Fuji (Fujiyama) is no mere landmark in a wider landscape; it is a sacred spirited space, a place of pilgrimage, where the Japanese have let themselves be impressed by the experience of watching the sun rising over the mountain's top and where the feel for Japanese identity readily crystallizes.

The respect for nonhuman life forms is similar in Shintoism and Buddhism. Therefore, Buddhist thought is much less alien to the Japanese mind than Christian monotheism. Buddhism, a religious import from Korea and China that infiltrated the islands beginning in the sixth century CE, spread easily in Japan, and it engaged in a dynamic interaction with the older worldview to create patterns of a symbiotic coexistence in the lives of Japanese people. Both Shintoist and Buddhist ceremonies may be attended by the same person.

According to H. Byron Earhart, among the Japanese people the basic principles of respect for nature “are more readily experienced as directly perceived sentiments than as logically dem-

► THE SUN IN JAPANESE TRADITION AND POPULAR THOUGHT

The sun was not chosen as the central motif in the modern national flag of Japan in 1870 because of the concept of Japan being the “land of the rising sun,” as is popularized in Western lore. Rather, as the supreme *kami*, the sun is a central mythical symbol. In Japanese mythology and popular thinking, this celestial body is a goddess, named Amaterasu (Heavenly Shining One).

Mythological tradition has it that Amaterasu founded the Japanese nation by sending her grandson Prince Ninigi down from the Plains of Heaven to govern the islands. Consequently, Amaterasu's grandson was the founder of an unbroken lineage of Japanese emperors.

—Harald Haarmann

onstrated propositions.” Japanese art, literature, and folklore have been infused with the effort to establish a balanced relationship between the living space of human beings and nature. Manifestations of this traditional mind-set are first documented during medieval times. In Murasaki Shikibu’s early-eleventh-century classic *Tale of Genji*, the rhythm of nature in its seasonal cycles is a major thematic element. Likewise, the painting of nature, of beautiful landscapes, of birds and flowers, became popular during the fourteenth century.

—Harald Haarmann

Bibliography

- Bocking, B. *A Popular Dictionary of Shinto*. Richmond, Surrey, UK: Curzon, 1996.
- Earhart, H. Byron. “Nature in Japanese Religion.” *Kodansha Encyclopedia of Japan* 5 (1983): 357–358.
- Harvey, G. *Animism: Respecting the Living World*. London: Hurst, 2005.
- Singh, M., ed. *The Sun in Myth and Art*. London: Thames and Hudson, 1993.
- Yamaguchi, M. *A Cultural Dictionary of Japan*. Tokyo: Japan Times, 1979.

Animal Effigies in the Art of Inner Asia

A common theme in Inner Asian art revolves around animals. Considering the importance of animals in the lives of pastoral nomads, this is not surprising. Horses, camels, sheep, goats, and cows or yaks are central to the lives of all nomads. In addition, other animals appear frequently in Inner Asian art, with horses, wolves, and deer being the most common. Animal effigies carry not only artistic importance in Inner Asian culture but also significant symbolic importance. The animal may be the totem animal of a tribe, such as a wolf for many Turkic tribes. These effigies often appear as animal shapes cut from leather or felt and then sewn onto clothing or the tent known as a *ger* (Mongolian) or *yurt* (Turkic).

The animals also appear quite frequently as petroglyphs (rock carvings) throughout Inner Asia. Among the most famous are deer stones that appear in virtually all eras but that first originated in the Neolithic period. They were then refined by the Tagar culture of Siberia (eighth



These petroglyphs depicting deer were carved well before 1500. The first, in present-day Kazakhstan in the western steppes, shows the typical stylized deer of Inner Asia with backward-flowing antlers. The second, in the present-day province of Inner Mongolia, China, depicts a less stylized deer and what appears to be a ground rodent with an exaggerated tail. (Alfred J. Andrea)

through second centuries BCE) and the roughly contemporaneous Scythian culture of the western steppes. Rather than being carved into cliff walls, deer stones usually appeared in slabs that were then inserted upright into the ground and served as menhirs, or obelisks. These are notable insofar as the Scythians and later artists adopted a common form, with the antlers of the deer flowing backward for almost the entire length of the deer’s body, and the deer is often described as flying. Over time, the deer stone model of a deer transitioned into other art forms, such as finely crafted bronze and gold jewelry and appliqué. Although archaeologists have speculated on the meaning of the deer stones, their exact purpose and meaning remain unclear. Nonetheless, they appear to have been associated with the shamanistic worship of a deer goddess, who was the source of life and death in the steppe.

Animal effigies carried great significance among shamans. Often their staves had an animal head carved into them, typically a horse. As the shaman traveled in the spirit world the staff was his mount, in a fashion similar to the European concept of witches on broomsticks. The staff housed the shaman’s spirit helper; hence, a horse-headed staff transformed into a horse. Other spirit helpers also took the form of animals

that might be included in the gear of a shaman such as hawks, owls, foxes, wolves, and elk. Often the shaman's drumstick also bore an animal's head. This has carried over somewhat into the modern period in Mongolia. The *morin buur*, alternatively known as the horsey-fiddle or horse-headed fiddle, is the national musical instrument of Mongolia. As the name implies, the top of the neck of the instrument has an ornately carved horse's head.

Animal effigies also served a totemic purpose. The early Turkic empires identified with the wolf and often carried banners with a wolf or wolf head on it, as they considered themselves descended from a she-wolf. Other legends have the wolf leading them to new lands or aiding them when in peril, and wolves adorned belts and garments. The banners of Chinggis Khan carried the emblem of a falcon, the symbol of the Borjigin clan whose originator survived his early days by hunting geese with the aid of a falcon he caught and trained to hunt.

—*Timothy May*

Bibliography

- Christian, David. *A History of Russia, Central Asia and Mongolia*, Vol. 1, *Inner Eurasia from Prehistory to the Mongol Empire*. Malden, MA: Blackwell, 1998.
- Jacobsen, Esther. *The Deer Goddess of Ancient Siberia: A Study in the Ecology of Belief*. Leiden and New York: E. J. Brill, 1993.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Reeder, Ellen D., ed. *Scythian Gold: Treasures from Ancient Ukraine*. New York: Harry N. Abrams, 1999.
- Soucek, Svat. *A History of Inner Asia*. New York: Cambridge University Press, 2000.

The Taifa Gardens of Al-Andalus

Garden design and construction during the Taifa period (1031–1091 CE) owe much to the legacy of its Andalusian predecessor, the Caliphate of Córdoba, and its greatest palace-city, Madina al-Zahra (see Era 4). Despite the collapse of unified rule in Al-Andalus by 1031, the cultural and architectural legacy of not only the Spanish Umayyad court but also its Syrian Umayyad predecessors was assured, and these styles would

be consciously reproduced in both the palaces and gardens built throughout Islamic Spain during the Taifa period. In addition, such forms and designs would later be incorporated into the models and themes found in both Muslim and Christian contexts throughout medieval and early modern Spain.

Gardens in Al-Andalus were not public spaces but instead were private places intended for the use and pleasure of the owner, whether khalifa (caliph), emir (prince), nobleman, or merchant. One type of garden was found within the walled spaces of palace residences and contained a variety of ornamental trees and exotic flowers. A common design found in these gardens was a layout with an open roof and a cross-axis below where the available space was divided into four equal parts, creating elevated walkways, and sunken beds of plants filled each section. A basin or fountain could often be found in the center of the axis, and channels or pools of water ran along the outer edges of the garden.

Many such residences were built adjacent to or just outside the city walls and often included larger surrounding garden spaces intended for agriculture. Orchards with fruit or olive trees and vineyards were often located in this type of garden and were watered with irrigation techniques developed in the Middle East and brought to the arid environment of Al-Andalus. These residences were often built with terraces or a raised vantage point, called a mirador, allowing the viewer to enjoy panoramic vistas of the landscape and countryside outside the confines of the residence.

Whether intended for ornamental or agricultural use, gardens throughout the medieval Islamic period in Al-Andalus were designed with a sense of order and harmony between the buildings and the land and were an early expression of what is known today as landscape architecture.

—*April L. Najjaj*

Bibliography

- Robinson, Cynthia. *In Praise of Song: The Making of Courtly Culture in Al-Andalus and Provence, 1005–1134 AD*. Leiden, Netherlands: Brill, 2002.
- Ruggles, D. Fairchild. *Gardens, Landscape, and Vision in the Palaces of Islamic Spain*. University Park: Pennsylvania State University Press, 2000.

► THE ALJAFERÍA

A famous taifa residence is in Zaragoza, where Abu Jafar al-Muqtadir (1046–1082) built a walled palace complex, the Aljafería. Al-Muqtadir was a poet, mathematician, and astronomer, and his court attracted writers and intellectuals from all over Al-Andalus.

The garden at the Aljafería was the interior style and today is known as the Patio of Santa Isabel. Rectangular-shaped with an open roof, it included reflecting pools and ornamental plants. The garden was the backdrop for al-Muqtadir's court, famous for its poetry recitations and musical performances.

Little of the current site is original, the complex having undergone many renovations. Long after the Christian conquest of the city in 1118, the site was used to house the Spanish Inquisition. Today it is the headquarters of the provincial government of the province of Aragón.

—April L. Najjaj

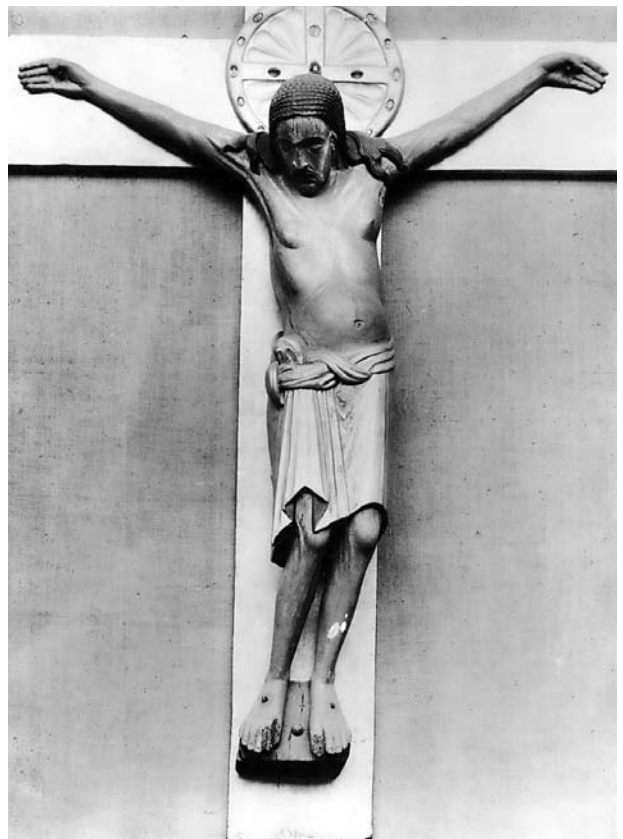


(Alistair Young)

Changing Perceptions of the Natural World—Europe, 1000–1400

During the period circa 1000–1300, Western Europeans entered into a dynamic relationship with nature that is exemplified by a revolution in the arts. Indeed, European artists drew upon various traditions and stimuli to create an art that was increasingly vibrant and naturalistic, especially from the late twelfth century and onward. This dynamism can be traced in part to a renewed interest in Roman statuary and classical Latin literature, as well as to a new emphasis on human emotions, including physical love, as expressed in Europe's emerging vernacular literatures. These and so many other strands, such as Europe's new general prosperity and relative stability, coalesced to create a multiplicity of expressions that proclaimed the intrinsic beauty and worth of all creation. One of the most important was an increasing emphasis on the humanity of Christ, which became central to this artistic revolution and the naturalism that was an integral part of it.

An early example of this emphasis on the humanity that all persons share with Jesus is the



Crucifix of Archbishop Gero, Cathedral of Cologne, Germany. (Foto Marburg/Art Resource, NY)

➤ EXCERPT FROM FRANCIS OF ASSISI'S CANTICLE OF THE CREATURES

“All praise be yours, my Lord, through all that you have made,
And first my lord Brother Sun,
Who brings the day, and light you give to us through him.
How beautiful is he, how radiant in all his splendor!
Of you, Most High, he bears the likeness.
All praise be yours, my Lord, through Sister Moon and Stars;
In the heavens you have made them, bright and precious and fair.
All praise be yours, my Lord, through Brothers Wind and Air,
And fair and stormy, all the weather’s moods,
By which you cherish all that you have made.
All praise be yours, my Lord, through Sister Water,
So useful, lowly, precious and pure . . .
All praise be yours, my Lord, through Sister Earth, our mother,
Who feeds us in her sovereignty and produces Various fruits with colored flowers and herbs.”

—William Landon

Source

“The Canticle of the Creatures,” in Benan Fahy, O.F.M., trans., *The Writings of Saint Francis of Assisi* (Chicago: Franciscan Herald Press, 1963), 130–131.

Gero Crucifix, which was crafted in the Rhineland around the year 1000. It depicts Christ hanging on the cross, apparently just moments after his death. The image is moving, even unsettling, in its frankness, but that graphic depiction of the God-man’s suffering and death lends dignity to the natural state of all mortals. Indeed, the realism of this crucifix foreshadows much of the naturalism that was to follow.

That naturalism was taken to new levels by the sculptors who worked on the great twelfth- and thirteenth-century Romanesque and Gothic cathedrals that are found throughout Western Europe from England to Italy. Indeed, many of those cathedrals, particularly Chartres in northern France, became centers of language, learning, and art.

The sculptural art at Chartres is stunning in its scale and vibrancy. The West Portal (ca. 1225–1245), for example, is austere yet inviting, evocative of the ancient Roman world’s artistic realism, but combined with the Latin Church’s emphasis on the human Christ, the brother of all persons. A person walking through the portal is greeted by an image of the risen Christ on a throne, inviting visitors to enter into the church’s sanctuary. Beyond this obvious religious symbolism, Chartres cathedral was home to a school that emphasized study and emulation of the thought and literature of the classical Roman world but blended with the Christian tradition. Interestingly, some of the masters of Chartres were avid students of nature. Some modern scholars have suggested that the twelfth-century writers, philosophers, and artists produced by such cathedral schools as Chartres were precursors to the Renaissance that developed later in Italy. If so, and it appears to have been the case, then twelfth-century Latin Christendom was a chief foundation stone upon which the later Renaissance in Italy was built. But it was not alone in this role.

Just as Byzantine scholars played a role in the later Italian Renaissance, Byzantine art played a complementary role to this earlier European revival of antiquity’s realism. Examples abound of Byzantine-influenced art and architecture from southern Italy to France and Germany, but it is debatable whether Byzantine or Byzantine-influenced art ever reached the intense realism and naturalism that medieval Europeans produced, despite some early-fourteenth-century fresco art in Constantinople’s church of the Holy Savior in Chora that is striking in its portrayal of the human body. To illustrate this point regarding Western art, it is helpful to examine briefly the life of St. Francis of Assisi (ca. 1182–1226).

Francis’s life is symbolic of the newfound realism and naturalism that evolved in European art. He called for his followers to live simply and to respect nature as God’s creation. His *Canticle of the Creatures* exemplifies his care for nature and his devotion to God. Francis’s devotion was multidimensional. Fittingly, the Italian painter Giotto’s depictions of important moments in the saint’s life at Assisi’s Basilica of San Francesco were equally multidimensional.

In these paintings, known collectively as the *Vita Cycle* (*The Life Cycle*), the viewer is confronted with a world in which the characters live and thrive. Giotto's *St. Francis Preaching to the Birds* (ca. 1297–1299) illustrates this well. There we see the Saint interacting with and caring for birds, thus showing his followers how they ought to follow his example. There are some Byzantine influences in Giotto's frescos (as there is in a great deal of Italian art from that period), but it is clear that Giotto went beyond the stylized formality of most Byzantine art. It is equally clear that Giotto's art evolved as part of a larger European concern with nature and the recovery of antiquity's realism.

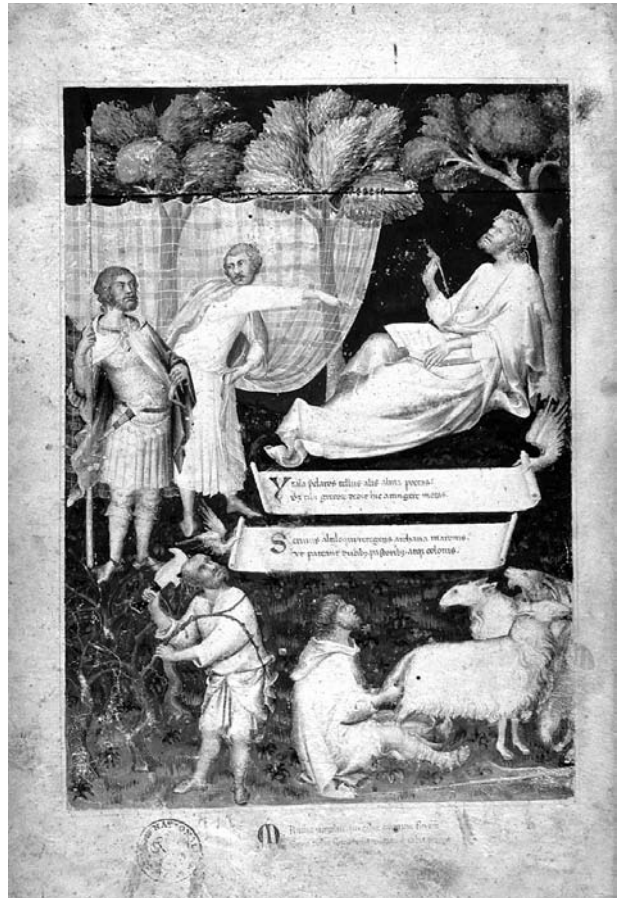
—William Landon

Bibliography

- Clark, Kenneth. *Civilisation*. New York: Harper and Row, 1970.
- Evans, Helen C., ed. *Byzantium: Faith and Power (1261–1557)*. New York: Metropolitan Museum of Art, 2004.
- Evans, Helen C., and William D. Wixom, eds. *The Glory of Byzantium: Art and Culture of the Middle Byzantine Era, A.D. 843–1261*. New York: Metropolitan Museum of Art, 2000.
- Mackenney, Richard. *Renaissances: The Cultures of Italy, c. 1300–c. 1600*. New York: Palgrave Macmillan, 2005.
- Ullmann, Walter. *Medieval Foundations of Renaissance Humanism*. Ithaca, NY: Cornell University Press, 1977.

Early Renaissance Visions of the Natural World

Early Renaissance Italy (ca. 1300–1500) witnessed an explosion in artistic, literary, and architectural creativity that had not been matched in volume or scope in the West since classical antiquity. While there are certainly glimpses of similar revivals in contemporary central and northern Europe, an especially high concentration of *ingegno*, or ingenuity, in Italy's diverse communes and city-states seems to have borne the greatest artistic fruit. Florence, Venice, Rome, and Ferrara might come immediately to mind when one thinks of the Renaissance cities and courts that produced artistic brilliance, but Siena in the first years of the fourteenth century



Frontispiece to a manuscript of the works of Virgil by early Renaissance painter Simone Martini. (Scala/Art Resource, NY)

surpassed all of those pillars of culture in the stunning number of brilliant artists that it produced. Indeed, Siena, with its population of perhaps 30,000 people, made a lasting mark on the evolution of art in Renaissance Italy and eventually throughout central and northern Europe, especially France. What was so special about the Siennese school that its influence became international? It revolutionized the way in which artists portrayed humanity and particularly nature. Indeed, Siena's painter-artists brought to their mural frescos and manuscript illuminations a revolutionary realism and naturalism.

When examining Siennese artists, one is forced to consider their inspiration, the Florentine school that included such notables as Cimabue (ca. 1240–ca. 1302) and Giotto (ca. 1267–ca. 1337). The two were towering talents of the late medieval and early Renaissance period, but they

➤ PETRARCH'S CANZONIERE (SONNET), 77

(To thank Simone Martini for drawing Petrarch's beloved Laura)

"If Policlitus endeavored to gaze intently
(With the others who are famous in that art)
For 1000 years, he would not see the tiniest part
Of the beauty which has, my heart, conquered;
But certainly my Simone was in paradise
(from whence this noble lady springs),
[And] there he saw her and sketched her on paper
So that by her lovely visage faith might spread
[here on earth] below.
The work truly was of the kind that in heaven
One might be able to imagine, [but] not [down]
here among us,
Where the body is made to veil the soul.
A gracious gesture, though he could do nothing
more there
Once he had descended to test the heat and ice,
And saw as mortals do with his eyes."

Translated by William Landon

—William Landon

failed to reach the lyrical and emotional qualities of their Siennese neighbors to the south. Of the Siennese artists, one comes to the fore: Simone Martini (ca. 1280/1285–1344). Martini is of particular interest because he was certainly influenced by his fellow Siennese painters as well as by artists from Florence, but he was also influenced by the Gothic French style, which provided an element of volume and space to the characters and scenes he depicted.

Martini served Robert of Anjou, a French monarch, at the court of Naples. There, it seems, Martini became increasingly influenced by French style. However, he never allowed French gothic influences to suppress his dual Florentine and Siennese heritage. On the contrary, what made Martini unique is that he produced a blend of these divergent styles to produce a new international form of painting. Indeed, his fame at the French court at Naples could not be contained. Word of his talent traveled to the exiled papacy at Avignon, where he was called to serve as a court painter.

While in France, Martini became acquainted with Francesco Petrarch. Evidently the two became fast enough friends that Petrarch included Martini in his *Sonnets*. Evidence that the friendship was mutual can be found in a manuscript of Virgil (the *First Eclogue* and other extracts) that Martini illustrated for Petrarch. That small painting deserves further attention as it serves to illustrate how revolutionary Martini's style became. Martini's illuminated *Virgil codex* brings together various strands of the early Renaissance: revived Latin literature, Petrarch's humanism and, of course, Martini's own emerging naturalism.

Martini's brushwork in the *Virgil codex* is elegant, and the mannerisms, gestures, and posture of his figures are altogether different from those of other Italian painters of the period. One might argue that Martini's lyricism and naturalism might even surpass that of Giotto. Some historians have gone so far as to suggest that Martini's languid and beautiful brushstrokes resemble those of the nineteenth-century French impressionists Monet and Renoir. This might seem to be a strained connection, but nonetheless it gives us some idea of Martini's grasp of the movement of light, the relationship of the figures in the painting to one another and to their increasingly naturalistic environment. Perhaps, most importantly, Martini's mixture of French gothic and Siennese styles produced a magical combination that emphasizes the relationship of the viewer and the painting, a revolution in Western art.

—William Landon

Bibliography

- Berenson, Bernard. *Looking at Pictures with Bernard Berenson*. New York: Harry N. Abrams, 1974.
- Lord, Mary Louise. "Petrarch and Virgil's First Eclogue: The Codex Ambrosianus." *Harvard Studies in Classical Philology* 86 (1982): 253–276.
- Petrarch, Francesco. *Canzoniere, or Rerum vulgarium fragmenta*. Trans. Mark Musa and Barbara Manfredi. Bloomington: Indiana University Press, 1999.

American Indian Views on the Environment

The phrase "religion and ecology" refers to the influence of belief systems on human attitudes

and activities affecting nature. An alternative model for studying Native Americans' approach to the environment employs the concept of "lifeways," whereby the religious, ecological, and sociocultural aspects of life are aspects of a seamless whole, rather than discrete areas of activity. Traditional narrative stories for entertainment and the passing on of knowledge reveal the conflation of these categories. Characters in the stories are human and nonhuman, or combine human and animal qualities, signifying a close commonality between human and nonhuman populations. Indeed, many stories describe a time when human and nonhuman animals spoke the same language, and the stories suggest the possibility that knowledge of nonhuman languages is not completely lost. Persistent descriptions in American Indian stories of a relational model of daily life among all life, including human, is the basis for a worldview representational of an interconnected, interdependent universe, dynamically sustained by humans through an ongoing matrix of reciprocal relationships.

Although it is difficult to speak of generalities concerning the native populations throughout the Americas, it is clear that a common idea of the interdependence of all life was prevalent in the centuries preceding the Columbian Exchange, and it remains so down to today. This interdependence is created and sustained through a protocol of respect-based relationships, or reciprocal relationships. Many narrative stories of various Native American traditions describe the need for the maintenance of respectful reciprocity between humans and the nonhuman world, and many describe the negative consequences of disrespectful or unconscious actions. Briefly, the earth and larger universe are often considered as inseparable from the prime creative power responsible for bringing the world into being. The maintenance of respectful relationships helps to ensure not only the survival of those engaged in relational activities (for humans, that includes actions such as gathering food, hunting, trading, and living in community) but also the ongoing health of the world at large.

Linguists have commented on the striking lack of terminology in American Indian languages concerning "nature" as a discrete concept. Like-

wise, there is no word for religion in most Native American languages, exemplifying the integrative nature of their worldview. The activity of daily life is religion, and all actions have a sacred dimension: there are a "right" way and a "not-so-right" way of living one's life. Being in harmony with the world, with the ways of the ancestors, with society, with community, and with family is a properly lived religious life. The maintenance of a proper relationship with one's surroundings implies sustainability, rendering the creation of a secondary self-identity as an environmentalist unnecessary.

—John Baumann

Bibliography

- Baumann, John. "Ecology and Environmentalism." In *American Indian Religious Traditions: An Encyclopedia*, edited by Suzanne J. Crawford and Dennis F. Kelley. Santa Barbara, CA: ABC-CLIO, 2005.
- Martin, Calvin. *Keepers of the Game: Indian-Animal Relationships and the Fur Trade*. Berkeley: University of California Press, 1985.
- Nelson, Richard K. *Make Prayers to the Raven: A Koyukon View of the Northern Forest*. Chicago: University of Chicago Press, 1986.

Mexica Sacred Geography

The Mexica (also known as the Aztec) empire—the last of the great Mesoamerican civilizations—dominated the highlands of central Mexico at the time of the arrival of Hernán Cortés in 1519. The Mexica empire had risen to power following a series of military conquests just a century or two earlier and maintained economic control by extracting tributes in the form of foodstuffs and raw materials (as well as personal services) from conquered populations. The Mexica capital of Tenochtitlan, situated at the center of present-day Mexico City on an island approached along three long causeways, had an estimated population of 250,000. The mass sacrifices to the Mexica war and sun god Huitzilopochtli, which took place at the great Templo Mayor in the center of the city, are legendary.

The landscape around the Mexica capital is characterized by strings of mountains and towering volcanoes that surround and dominate flat valleys, creating obvious associations among

mountains, clouds, rains, fogs, thunderstorms, springs, and rivers. Under the valley floors and mountain slopes are numerous caves created by ancient lava flows. In Mexica times, the landscape was also peppered with magnificent human constructions, both the temples of the Mexica themselves and the conspicuous remains of earlier temples dating back to the Preclassic period (at least as far as the mid-first millennium BCE). This combination created, in the Mexica mind, a vibrant perceived world strewn with the abodes of powerful spirits: mountains were sources of water and rain, caves were entrances to the underworld, and the huge ceremonial center of Teotihuacan with its enormous pyramids, 1,000 years old by this time, was itself seen as a magnificent creation of the gods.

Tributes to the gods had to be made in the appropriate place but also at the correct time. One of the most critical actions was to appease Tlaloc, the god of rain and fertility, and persuade him to send water for the year's maize crop. Petitions to Tlaloc were timed in relation to calendar festivals and often involved the sacrifice of children. Thus, on the first day of the month Atlcahualo in the 365-day calendrical cycle (*xihuitl*), or around the middle of February in the Gregorian calendar, the bodies of sacrificed children were thrown into caves close to mountain sanctuaries, since the water was thought to remain there, inside the mountain, until released by the gods as rain. On the summit of Mount Tlaloc itself, at an elevation of more than 13,000 feet (4,000 meters), was a shrine containing an idol of the rain god where the nobles from Tenochtitlan and adjacent cities converged during a great festival in the month of Hueytozoztli, at the end of April. Here a young boy was sacrificed, while in a complementary ceremony taking place at a nearby lake a similar fate awaited a young girl, who was appropriately dressed in blue.

Many different calendrically timed rituals such as these, taking place all over the Mexica empire, generated a network of relationships in people's minds among sacred places in the landscape (particularly mountains), the activities that took place there, and the timing of those activities. Evidence suggests that those perceptions were reinforced both by the positioning of tem-

ples in the landscape and by solar alignments deliberately built into those temples. It has been proposed that the Templo Mayor was (at least approximately) aligned upon Cerro Tlaloc on the horizon to the east, that the sun would have risen more or less behind that mountain on the equinox, and that two prominent mountains on the eastern horizon from Cerro Tlaloc itself, across the next valley, aligned with sunrise on two important days when mountain ceremonies were taking place on that peak. More recent work suggests that the later phases of the temple were in fact oriented upon sunset at the feast of Tlacaxipehualiztli, which coincided with the Julian vernal equinox in 1519 and was duly recorded by the Franciscan chronicler Motolinia. Whatever the details in this case, the combination of post-Conquest accounts relating to the nature and timing of ceremonies, archaeological evidence of votive offerings at sites such as mountain shrines, and archaeoastronomical data on orientations and alignments makes a convincing case that many relationships such as these were real enough in the Mexica mind.

—Clive Ruggles

Bibliography

- Aveni, Anthony F. *Skywatchers*. Austin: University of Texas Press, 2001.
- Boone, Elizabeth H. *The Aztec Templo Mayor*. Washington, DC: Dumbarton Oaks, 1987.
- Carmichael, David, Jane Hubert, Brian Reeves, and Audhild Schanche, eds. *Sacred Sites, Sacred Places*. London: Routledge, 1994.
- Carrasco, David, ed. *To Change Place: Aztec Ceremonial Landscapes*. Niwot: University Press of Colorado, 1991.
- Ruggles, Clive. *Ancient Astronomy: An Encyclopedia of Cosmologies and Myth*. Santa Barbara, CA: ABC-CLIO, 2005.

The Andean World in Miniature

People throughout the Andes sculpted or molded diminutive figures and artifacts small enough to be held in the hand. Many examples show an architectural layout, complete with buildings and even people, which, according to the Spanish chroniclers, was used to help people reorganize themselves spatially. Pachacuti Inca, for example, was believed to have used clay models when re-

constructing Cuzco and reorganizing its political, economic, and ritual life.

The Garden of the Sun that Pachacuti constructed in Cuzco's center reputedly contained many gold and silver figurines of animals and plants, such as maize cobs, reproduced to a high degree of accuracy. This miniature garden world was the twin of the natural world that the Incas attempted to control. This was perhaps an attempt to achieve a balance between the volatile forces of nature such as water and lightning and the more ordered forces of the cultural world. Inca stone and metal sculptures of animals and plants were also repositories of health and well-being for the herds and crops they represented. Furthermore, miniatures were thought to help with the future acquisition of the objects they represented; some even allowed the possessor to gain skills, such as weaving.

Miniatures also served as grave items and in particular accompanied sacrificial victims to their resting places on high mountain peaks. Exemplifying the duality of the Inca world, the sacrificial victims were sometimes a couple, a boy and a girl. They were accompanied by miniature household items only centimeters high, such as paired sets of serving utensils and miniature textiles carefully crafted in imitation of sumptuous full-size garments and complete with borders. The votive offerings and selection of the youths represented in miniature the world of adults. Children were believed to have special ability to communicate with the powerful Apukuna, or guardian lords, who were believed to inhabit the high mountain peaks from where they watched over the surrounding region and its people and commanded the deities of the lower hills. Communication with an Apu could be achieved through play, and miniature toys that were used by children also acquired this special power. For Inca society, human child sacrifice was considered a legitimate expression of children's special role as mediators between the physical and spiritual worlds.

—Paul R. Steele and Catherine J. Allen

Bibliography

Dransart, Penny. *Elemental Meanings: Symbolic Expression in Inka Miniature Figurines*. Research Papers, Institute of Latin American Studies. Lon-

THE HARVEST FESTIVAL OF HÁTUN RAIMI

Around 1550, Pedro de Cieza de León, a Spanish chronicler of Andean history and culture, described the Inca August harvest festival in which he mentioned the use of small effigies of llamas and women as religious tokens. We can only guess at their meaning.

"In the middle of the plaza they had erected . . . a great theater with tiers, covered with cloth of feathers thick with beads of gold, and great blankets of their finest wool, embroidered in gold and jewels. At the top of this throne they place the figure of their Tici-Viracocha, large and richly adorned, whom, as they held him to be the supreme god, author of all creation, they seated at the top Below this throne there was the image of the sun. . . and that of the moon, and other statues of gods carved in wood and stone. . . . Thus the Inca and the high priest and the courtiers of Cuzco and many people from the neighboring regions, after enthroning their gods, made them obeisance and laid before them many little idols of gold, and llamas of gold, and figures of women, all small, and many other jewels."

—Alfred J. Andrea

Source

Pedro de Cieza de León, *Chronicles of Peru*, in *The Incas of Pedro de Cieza de León*, translated by Harriet de Onis, edited and with an Introduction by Victor Wolfgang von Hagen (Norman: University of Oklahoma Press, 1959), 182–183.

don: Institute of Latin American Studies, University of London, 1995.

McEwan, Colin, and Maarten Van de Guchte. "Ancestral Time and Sacred Space in Inca State Ritual." In *The Ancient Americas: Art from Sacred Landscapes*, edited by Richard F. Townsend. Chicago: Art Institute of Chicago; Munich: Restel Verlag, 1992.

Meddens, Frank. "Mountains, Miniatures, Ancestors and Fertility: The Meaning of a Late Horizon Offering in a Middle Horizon Structure in Peru." *Bulletin of the Institute of Archaeology* 31 (1994): 127–150.

Sillar, Bill. "Playing with God: Cultural Perceptions of Children, Play and Miniatures in the Andes."

Archaeological Review from Cambridge 13(2) (1996): 47–63.

Steele, Paul R., with the assistance of Catherine J. Allen. *Handbook of Inca Mythology*. Santa Barbara, CA: ABC-CLIO, 2004.

Perspectives on Petrographs, Petroglyphs, and the Historian's Craft

History is as much an art as a science. The narratives that historians craft and the interpretative insights that they offer depend as much on their ability to enter imaginatively into the past and to bring that past alive as they do on painstaking research into the evidence. Put another way, the story that a historian tells depends as much on his or her personality, life experiences, breadth of vision, and narrative powers as it does on technical expertise. It is this reality that makes history a humanistic discipline that is constantly evolving, multifaceted in ways that defy counting, and endlessly fascinating, just like the flesh-and-blood humans who research and write it.

As a small example of this all-too-often overlooked aspect of historical scholarship, we offer two entries on a common topic: rock carvings in North America. Sounds like a pretty straightforward topic, does it not? Not much room for creativity or variety of presentation there. Right? Well, let us see.

—Alfred J. Andrea



Anasazi petroglyph, Mesa Verde National Park in Colorado. (Frank Bach/Dreamstime)

Example 1: Petrographs and Petroglyphs—The Art of Sacred Landscape in North America

Rock art was a common medium of expression for the various peoples who inhabited North America before 1500 and continued as such down into modern times. “Rock art” is a general term embracing all petroglyphs and petrographs made in or on rock surfaces. The term “petroglyph” refers to marks made by removing a portion of the rock surface by pecking, incising, or grinding. The term “petrograph” refers to marks made by adding paint or other substance to the rock surface. The term “pictograph” is also sometimes used the same way, but it more correctly refers to picture writing in any medium.

Most North American Indian rock art was made or used in a religious context. Indeed, rock art and landscape were and are inextricably linked, because rock art is believed by contemporary Native Americans to appear at places where the spirits dwell, and there is every good reason to conclude that their ancestors who dwelled in these lands before European contact believed likewise. It is never clear, however, whether the spirits inhabit a place because it has sacred markings or whether the sacred markings appear because the rock is a spirit home.

Religious Indian rock art falls into several categories: rock art created during ceremonies; rock art used in individual devotion, such as the vision quest; images of mythic beings or stories; images of ceremonies or items used in ceremonies; and depictions of religious experiences, such as visions or trances. Many Indians believe that spirits create the markings as messages to the people from the spirit world. In some cases, this may mean that the rock art is very old and thus associated with the time before people. It may also have reference to people creating rock art while impersonating a spirit being. Shamans and other spiritual leaders as well as ordinary people might take on the role of a spirit being to validate or publicize their visions. In that role they might make rock art on behalf of the spirit being. A widespread belief is that rock art will reveal a message about the future to holy men or women who have fasted and prayed nearby.

At other times the rock art will convey a sacred message to an ordinary person, but he or she may need the help of a religious specialist to understand it. These beliefs assume that the rock art mysteriously changes to convey the correct message or, from another perspective, that the spirits change how the viewer sees the image.

Some rock art conveyed simple messages, such as a group's whereabouts, and some recorded warriors' exploits or a group's visit to a particular place. However, because all activities, including warfare and travel, traditionally included elements of ritual and prayer, one cannot draw a strict line between secular and religious rock art.

Some rock art in the Americas is thousands of years old and is thus difficult to interpret. The further back one goes in time, the less likely it is that historically recorded information will pertain to the rock art. Nevertheless, some ancient rock art can still be recognized as religious because it shows ceremonial activities or religious symbols that persisted into historical times, such as the thunderbird. Rock art comprising the abstract designs and colorful images typical of trance states is often assumed to have a religious origin. An example is the painted rock art of southern California. Religious art often is highly symbolic or metaphorical, making its interpretation especially difficult. In some cases, tribal historians have retained detailed knowledge of old symbols and are experts on their meaning.

Much Indian rock art depicts myths or mythical beings. Caves in Missouri and Wisconsin depict a culture hero called Red Horn. Petroglyphs in the Cave Hills of South Dakota illustrate myths connected to eagle trapping, and others in western Wyoming show mythical beings such as Water Ghost Woman. Images of kachinas (spirit beings that control rain, fertility, and well-being) appear in southwestern rock art.

Researchers have yet to develop reliable methods for determining the age of rock art. Most promising so far is accelerator mass spectrometry-aided radiocarbon dating. Tiny amounts of pigment can be collected and dated through the radiocarbon method but only if the pigment contains residues of organic material such as charcoal, albumin, or blood. It may eventually be possible to measure the rate of

chemical change to the rock surface initiated when the surface was broken in creating a petroglyph. Dating methods in use now include measuring the age of buried archaeological material that covers rock art panels or contains bits of fallen rock art; measuring the age of materials covering rock art, such as wasp nests or cliff swallow nests; and correlating the stranding of rock art panels with episodes of erosion. These methods yield only minimum ages rather than absolute ages.

Other clues to the age of a petroglyph or petrograph come from the items depicted. If an extinct animal is pictured, the rock art presumably was made before the species died out. If European trade goods or horses are shown, then the image must have been made after those items arrived in the Americas. Sometimes an unusual motif found in rock art is also found in portable objects from the same area that can be more readily dated.

—*Linea Sundstrom*

Example 2: Petroglyphs and Petrographs in North America

Petroglyphs and petrographs are rock-cut designs or images made by pecking, incising, abrading, scratching, or otherwise engraving a figure or image on a rock or cliff face and are found throughout North America, although the majority are found in California, the Western Plateau, the Great Basin, the Plains, and the Southwest regions. They apparently date from approximately 2000 BCE (or slightly earlier) to the beginning of the twentieth century. Because petroglyphs and petrographs are engraved in rock, it is exceedingly difficult to accurately date individual designs or images, and some examples may date to an earlier time.

Petroglyphs or petrographs were cut through rock surfaces darkened by either "desert varnish" or patina, which is a thin accretion of manganese, iron oxides, clay minerals, and other elements, so that the resulting imagery contrasted with the surrounding rock surface. Over time a new layer of the patina formed on the engraved imagery, resulting in contrasting shades of varnish. In other areas the images were incised or carved into soft rock surfaces, such as

the sandstone petroglyphs and petrographs of the Plains region and Southwest desert.

Based on archaeological and oral tradition evidence, petroglyphs and petrographs were made for a variety of reasons, including economic, social, and religious. Sites that contain petroglyphs and petrographs, for example, may designate sacred sites where communication with the supernatural was possible or otherwise important localities in the landscape, such as sites associated with important mythical events. Likewise, these images have been made in the context of vision quests and puberty, curing, and hunting ceremonies; to mark social boundaries and land-use rights; to document important events; and to represent status objects.

A large group of petroglyphs, all versions of a single “horseshoe” symbol carved in high relief, have been found on an isolated volcanic peak in California. The more realistic ones appear to represent female genitalia, whereas the rest seem to be more abstract versions of the same motif. Archaeological evidence indicates that similar motifs are located in other parts of southern California, and ethnological evidence indicates that the same “horseshoe” symbol survived until recently as a magical element in the Diegueno Native American girls’ initiation ceremony.

Along the Salmon River basin in the Western Plateau region, petroglyphs and petrographs commonly portray human and animal stick figures as well as dots and dashes. Common animals depicted include elk, deer, mountain sheep, and dogs. On the other hand, in the Sweetgrass Hills, Little Rock, and Little Belt Mountains of the Plains region, the imagery often consists of highly abstracted symbols that appear to represent masks, mazes, and geometric shapes. Some date to the Late Archaic, such as the example found in the Bighorn Basin of Wyoming at a large site known as Legend Rock.

In the Southwest region, petroglyphs and petrographs are not as abstract, and in fact many are highly specific in their imagery. For example, there are several depictions of Puebloan kachinas, including the Hunchback deity, sun shields with macaw feathers, and heart lines in animal figures, as well as stylistic resemblances to known prehistoric kiva murals. Other Puebloan traits found in petrographs and petroglyphs include cane arrow shafts, macaw images, sandals, close-coiled basketry, tubular pipes, tablitas, masks, gourd dippers and canteens, woven cloth, and tools for spinning and weaving.

—Peter N. Jones

Bibliography

- Bostwick, Todd. *Landscape of the Spirits: Hobokam Rock Art at South Mountain Park*. Tucson: University of Arizona Press, 2002.
- Chippendale, Christopher, and Paul S. C. Taçon. *The Archaeology of Rock Art*. Cambridge: Cambridge University Press, 1999.
- Diaz-Granados, Carol, and James R. Duncan. *The Petroglyphs and Pictographs of Missouri*. Tuscaloosa: University of Alabama Press, 2000.
- Francis, Julie E., and Lawrence L. Loendorf. *Ancient Visions: Petroglyphs and Pictographs of the Wind River and Bighorn Country, Wyoming and Montana*. Salt Lake City: University of Utah Press, 2002.
- Keyser, James D., and Michael A. Klassen. *Plains Indian Rock Art*. Seattle: University of Washington Press, 2001.
- Schaafsma, Polly. *Indian Rock Art of the Southwest*. Santa Fe: School of American Research, 1980.
- Shafer, Harry J. *Ancient Texans: Rock Art and Lifeways along the Lower Pecos*. Houston: Gulf Publishing, 1986.
- Sundstrom, Linea. *Storied Stone: Rock Art of the Black Hills Country*. Norman: University of Oklahoma Press, 2004.
- Whitley, David S. *The Art of the Shaman: Rock Art of California*. Salt Lake City: University of Utah Press, 2000.

Society and Culture—The *Longue Durée* and Innovation

The terms “society” and “culture” are as vague and all-encompassing as any two allied words can be, but regardless of their ambiguity and plasticity, or perhaps because of these qualities, they lie at the heart of historical research and writing. Viewers of the History Channel might be led to think that the study of history consists mainly of tracing the movements of armies, plotting the rise and fall of polities, and analyzing the actions of so-called great men and women. While such phenomena and people are historically important, it has been, is, and always will be the underlying cultural attitudes and values as well as modes of social behavior and organization that provide the fabric of history. If we fail to understand a society’s culture, we fail as historians.

During the period from 1000 to 1500 CE, the vast majority of humanity lived in what we might correctly term traditional societies. That is, such societies functioned according to norms and in ways that had been established centuries and even millennia earlier, and those living within these societies were not aware of there being any opportunity for meaningful change in the ways of life. To be sure, natural disasters occurred; invading armies came and went, often destroying much in their wake; and states experienced every sort of fortune and fate. Regardless of such external stimuli, however, modes of expression and behavior tended to remain constant for most humans in most societies across the globe. As with just about everything else, the French have a term for this phenomenon: *longue durée*, roughly translated as “long-lasting reality.”

One of those realities was that states, with the possible exception of small mercantile city-states, such as Venice, and the early Mongol empire, had economies based on agriculture. No matter how large and productive a state’s industrial and commercial enterprises might be and no matter how populous and vast its cities, its basis for wealth was land and products produced from that land. Consequently,

whether recognized as such or not, the peasant was the backbone of society, and agrarian villages were its vital organs. This anatomical metaphor might be strained, but it describes a reality that is often overlooked if we concentrate solely on the great events of this 500-year era that dominate the pages of textbooks. Without farmers’ paying rents

No matter how large and productive a state’s industrial and commercial enterprises might be and no matter how populous and vast its cities, its basis for wealth was land and products produced from that land.

and taxes, states would cease to function; without farmers' feeding the ever-hungry markets of Tenochtitlan, Hangzhou, Baghdad, Timbuktu, and numerous other great centers of commerce and industry, cities would wither away. As we might expect, despite this age's unquestioned innovations, some of which had long-term revolutionary impact, the values espoused by most in these agrarian-based polities were conservative. Steady and traditional are the hallmarks of most successful farmers and the societies they support.

Such conservatism was evident throughout settled societies around the world. As had already been the case for millennia, empires and smaller states, almost without exception, were ruled by monarchs who claimed some sort of heavenly or divine mandate. Social classes tended to be ordered according to strict hierarchical standards, even in religious cultures such as Judaism, Christianity, and Islam that taught the equality before God of all believers. It is equally true, however, that the rising number of large and economically complex cities allowed some social fluidity, but urban dwellers were a small minority in the aggregate. Likewise, gender relations and the relative power of men and women, in most but not all settled societies, also tended to be weighted in favor of men. Indeed, there is reason to conclude that upper- and middle-class women in China tended to lose autonomy during this half millennium. On the other hand, West African women, both Muslims and those practicing the ancient religions, seem to have much more freedom than most of their sisters living in settled communities throughout the rest of Afro-Eurasia.

As already suggested, of course, the period 1000–1500 was not static, and cultures and societies experienced changes in response to both external and internal stimuli. In sub-Saharan West Africa, for example, Islam was making major inroads in the various commercial states, such as Mali, and with this new religion came new cultural norms. But old ways died hard, and more often than not the values and practices of Islam in sub-Saharan Africa, as elsewhere, were married to traditional ways of life.

To this point we have discussed settled, or so-called centered, societies that were based on agriculture and produced states. Nomadism as practiced by pastoralists, however, was also a way of life for a significant number of people, especially on the great Eurasian steppe that stretches from Manchuria and Siberia to eastern Europe. Although their numbers were small relative to their settled neighbors, these peoples on the periphery of Eurasia's great states proved to be important driving forces in the history of this great landmass during these five centuries, and some of them even became great state builders once they settled down (as entries grouped under the themes of "Politics and Statecraft" and of "War and Diplomacy" demonstrate). Regardless, their nomadic cultures and societies were conservative, even though many of their values and ways of life differed substantially from those of settled agriculturalists. For example, gender and social relationships tended to be much more egalitarian. Just as significant, when, as happened on a fairly regular basis, a confederation of nomadic pastoralists would conquer or settle in part or all of a neighboring state, such as the various Turkic

peoples who settled in western Eurasia or the Jurchen (Ruzhen) in northern China, they invariably underwent a process of acculturation in which they adopted and adapted to their ways of life the cultures of the peoples into whose lands they had moved.

All people, whether nomads, village-dwelling farmers, or urban dwellers, have richly variegated cultures that allow them to make the world a comfortable, understandable, and enriching place in which to live. This was true for tens of thousands of years before 1000 CE, just as it is equally true today. A fair number of the entries in this section will demonstrate some of the many different ways in which people around the globe gave expression to their artistic sensibilities and their need to shape the world about them.

One aspect of human culture that is of prime interest to the historian is the manner in which it is transmitted from one generation or group to another. The half millennium under discussion here was noted for its proliferation of schools of every sort around the globe. By their very nature, most schools before the modern era (and maybe even so today) were fairly conservative insofar as they existed primarily to transmit values and received wisdom and knowledge. Yet some of these centers of learning, such as the great madrasas within the Islamic metropolises and capital cities, Neo-Confucian academies in China and Korea, and the new universities of Latin Christian Europe, could be and were mediums for both the transmission of new ideas from outside and the generation of innovative ideas from within. Schools, especially those centered in large cities, at times functioned as vehicles for social and cultural change. In this section we shall see some of those centers for religious and secular learning, while other entries, grouped under the themes “Thought and Religion” and “Science and Technology,” will indicate the innovations they helped generate and disseminate.

In conclusion, although most people who lived during the period from 1000 to 1500 inhabited miniworlds and societies that were conservative in their ways, cultural change did happen, and much of it was of historical significance.

—Alfred J. Andrea

■ Introduction: Families, Hierarchies, and Class Relationships—Cultures of Lordship

Sima Guang (1019–1086) wrote in his sweeping history of China known as *The Comprehensive Mirror to Aid in Governance* (*Zizhi tongjian*) that because humans cannot govern themselves, they necessarily need a ruler who is able to prevent violence, protect the lives of people by removing all harmful matters, and prevent disaster by rewarding good and punishing evil. Such a

notion was almost universal throughout the world in the period 1000–1500, whether that ruler, or lord, was an emperor, a king, a feudal prince, a tribal chief, a manorial lord, a slave master, or a clan elder. Lordship, in which the many were governed (and presumably protected) by the few and those who served these lords (and, in rare exceptions, female leaders), was

the norm. As Sima Guang correctly noted, conditions were such that this type of rule was perceived as necessary, and it probably was necessary.

More than that, lordship was underpinned by ideology. Whether the ruler was the Son of Heaven as in China, the direct descendant of the Sun Goddess as in Japan, the Shadow of God on Earth as was the claim of the Abbasid caliphs, or a living god as was claimed by the Incas, emperors and kings, as well as governing empresses and queens, had an authority that was based on cosmological principles and supported by religious ritual. As a Norman polemicist known variously as the Norman Anonymous and the Anonymous of York (see “The Christian God-Anointed Monarch”) wrote around 1100 in support of the unfettered powers of kings, “The king is consecrated and made like unto God.”

In like fashion, lords and ladies, chiefs and elders, masters and mistresses of lower rank who also wielded power of any sort over others, and in many cases a power free of any controlling authority from above, quite often enjoyed the comfort of believing that their power was likewise part of the natural order and, more often than not, divinely instituted or blessed.

—*Alfred J. Andrea*

Varieties of Hierarchies and Class in Sub-Saharan Africa

By 1000 the Bantu-speaking peoples, the most influential sub-Saharan African language group and ethnic community, occupied most of Africa south of the equator. As a result of centuries of outward migration in search of fertile lands to cultivate, the Bantu formed new settlements and gradually organized their societies. With the development of increasingly complex societies, powerful states emerged in sub-Saharan Africa around 1000 CE that featured elaborate hierarchies and clearly defined varieties of classes: ruling elites, administrative officials, priests, merchants, artisans, peasants, and slaves.

Prior to 1000, most sub-Saharan African peoples settled in communities with populations averaging about 100 people. Early Bantu societies governed themselves not through an elaborate hierarchy of ruling elites and officials but rather through self-sufficient kin-based societies. Therefore, the primary unit of social organization in these small autonomous communities was the extended family. The male heads of families constituted the community’s council that managed the group’s affairs. A chief was chosen from among the most prominent family heads, and it was he who represented the community in interactions with neighboring settlements. Some kin-based community populations expanded to include thousands and hundreds of thousands, but with growth came challenges.

Growing populations strained resources available to the community such as fertile land and wild animals. Also, conflicts among neighboring settlements became more frequent as societies expanded and interacted with one another. Some societies became powerful kingdoms by conquering and consolidating smaller communities. Threatened by these stronger kingdoms, various small communities marshaled their military forces together and selected a powerful chief to lead them. Although family-governed communities did not completely disappear with the rise of powerful sub-Saharan chiefdoms and kingdoms—some persisted well into the nineteenth century—kin-based societies were gradually replaced by chiefdoms, large kingdoms, and



Mapungubwe, situated south of the Limpopo River in South Africa. (Sara Atkins)

powerful states in the centuries after 1000 as Bantu peoples developed more formal structures of government not yet seen in sub-Saharan Africa.

A common feature of these powerful sub-Saharan African states was a ruling class of elites. The acquisition of wealth brought about the development of a hierarchy of elites that resulted in significant visual changes within the state's social and physical structures. Political elites based their power on a combination of mixed farming and cattle herding and long-distance trade in metals such as gold, copper, iron, and tin. At Mapungubwe, situated south of the Limpopo River, hierarchy became visually expressed for the first time as the ruling elite clearly distinguished itself from various other classes. Mapungubwe's rulers built huge walls constructed of stone around their residences, which were located on a hilltop that overlooked the surrounding valley. It was in the valley, with a clear vantage point of the ruling elite's palaces perched on the hilltop, that the commoners resided in their traditional homes. At Great Zimbabwe, Mapungubwe's successor, the ruling class erected two impressive stone structures that housed the powerful state's elite. These structures are indicative of an increasingly complex society deep in the interior of sub-Saharan Africa that possessed the resources to invest in such elaborate and expensive construction projects.

Scholars estimate that some of these powerful sub-Saharan African civilizations supported tens of thousands of people. These states generated not only a ruling elite but also various other social classes. Administrative officials and priests served to reinforce the political and sacred power of the ruling class. Merchants and artisans provided the exotic goods and symbols of high culture that legitimated the ruler's position in society. Peasants and slaves offered tribute and increased agricultural production, which enhanced the elite's wealth. Each of the various classes of powerful sub-Saharan African states provided the symbolism and accumulated the wealth that enabled the ruling class to project order and legitimacy, which therefore solidified its role as the carrier of civilization.

—William Hardy

➤ IBN BATTUTA DESCRIBES COURT PROTOCOL IN MALI

During 1352–1354, Abu Abdallah ibn Battuta (1304–1368/1369) traveled from Morocco to sub-Saharan West Africa. There he visited Mali, a trade empire where Islam had taken root among its elites. In his *rihla*, or book of travels, he describes the protocol surrounding Mansa (King or Sultan) Sulaiman (d. 1360).

“The blacks are the most humble of men before their king and the most extreme in their self-abasement before him. They swear by his name, saying, ‘Mansa Sulaimanki’ (the law of Mansa Sulaiman). When he calls one of them . . . the man invited takes off his clothes and wears patched clothes, takes off his turban, puts on a dirty cap, and goes in raising his clothes and trousers up his legs half-way to his knees. He advances with humility looking like a beggar. He hits the ground with his elbows, he hits it hard. . . . When one of them speaks to the sultan and he (Mansa Sulaiman) gives him an answer, he removes his clothes from his back and throws dust on his head and back.”

—William Hardy

Source

Said Hamdun and Noël King, eds. and trans., *Ibn Battuta in Black Africa* (London: Rex Collins, 1975), 49.

Bibliography

- Connah, Graham. *African Civilizations: An Archaeological Perspective*. 2nd ed. Cambridge: Cambridge University Press, 2001.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia Press, 2002.
- Oliver, Roland, ed. *The Cambridge History of Africa*. Vol. 3, *From c.1050 to c.1600*. Cambridge: Cambridge University Press, 1977.

Hierarchy and Class in the Islamic World

Umma, the Arabic word for “community,” makes no distinction between the citizens of individual cities or rural districts and the worldwide Islamic community. During the Umayyad (661–750) and

» SULTANS AND SUBJECTS

“Sultan” (one who has authority) was the preferred title of many Arab and Turkic Islamic rulers. It generally signified the rank of a Muslim ruler who claimed full sovereignty over a large region but was subservient to the caliph. One exception was the Ottoman sultans who actually claimed the caliphate in the period 1517–1875. The title of sultan referred not only to the actual ruler and head of the dynasty but also to the larger extended ruling family. Essentially, sovereignty belonged to the dynasty as a whole, and any prince or other powerful member could claim the title and be seen as an independent ruler who merely owed formal allegiance to the head of the family. While the overwhelming majority of sultans were male, several female sultanas such as Shajar al-Durr (r. 1250–1257) in Egypt and Radiyya Sultan (r. 1236–1240) in Delhi, India, proved that the most important aspects of a ruler were that they maintained security, upheld Islam, provided charity, and acted as philanthropists.

The sultan demanded absolute power as the secular leader of a region, and subjects were expected to follow his or her commands unquestioningly. Nevertheless, the sultans’ power rested on the ability to rule strongly and justly. A sultan who failed to uphold justice or defend her or his territory or did not perform charitable works for her or his subjects would lose considerable prestige and might then be disobeyed in favor of a strong rival leader.

—Julie T. Abouzelof

Abbasid caliphates (750–1258) there existed such uniformity in the laws and institutions that bound Muslims to the larger umma that one can speak of a virtually universal society stretching from the Atlantic to China. Class and hierarchy structures in the Middle East and North Africa contained many of the characteristics of the Islamic umma dating as far back as the seventh- and eighth-century Islamic conquests. Moreover, this social structure remained fairly unified long after many other regions were incorporated into different political, religious, or social systems.

The highest class of the social hierarchy consisted of the caliphate, ruling families, their retainers, and scholars and jurists, both religious

and secular. The middle class was largely urban and consisted of merchants, craftsmen, and other skilled and/or educated professionals, with specific rank being determined largely by the economic status or social respect accorded to the individual or profession. Since both the Middle East and North Africa were strictly patriarchal, adult males enjoyed significantly higher social status than adult women or children of either sex.

The lower classes were the urban poor and rural peasants. While servants held a low status, the class position of slaves was dependent on the status of the family by whom they were owned. Thus, the slave of a rich family could have a higher status than a poor freeman. Soldiers had a similarly ambiguous social status, which depended on whether they were free or slave soldiers and also depended on the specific military climate of the region and period. At the bottom of the social hierarchy were nomads and semi-nomads, despite Islamic roots in Bedouin (desert dwellers) tribal society. During the Umayyad and Abbasid periods the vast majority of people in the Middle East and North Africa lived in rural areas in villages tied to agricultural production. Villages were traditionally autonomous in the sense that they were largely self-governing. As such, Christian and Jewish villages were allowed to practice their own systems of law. Most of the time, peasants and nomads appear to have lived in a symbiotic relationship with each other. Nomads depended on the grains and fruit that the peasants provided, while the peasants bought the animals, wool, and other animal products produced by the nomads.

The Ayyubids (1171–1250) were responsible for a major rise in the status of Egypt in the Sunni world. Under their rule, Cairo became one of the major centers of Sunni learning, actively recruiting scholars from Syria, Iran, and Iraq, especially in the wake of early-thirteenth-century Mongol invasions of these areas. By the mid-thirteenth century, Cairo had become the cultural capital of the Muslim world, a status that was sealed in 1258 when the Mongols destroyed what was left of Baghdad. For almost three centuries, Cairo would remain the center of Islamic scholarship.

Muslims had a higher social status (if not necessarily economic status) than other religious

groups in the Middle East and North Africa. The status of Sunni, Shia, and other Islamic groups depended on which group was the majority in a specific region. In North Africa and much of the Middle East the religious majority has traditionally been Sunni. Exceptions to this include regions such as the Iranian Plateau and dynasties like the Fatimids in Tunisia (909–973) and Egypt (969–1171), both of which were Shia. The status of Jews and Christians was that of “People of the Book,” meaning people who believed in the God of Abraham and therefore shared a common religious background with Muslims. As such, they enjoyed *dhimmi* status, having at least implicitly entered into a contract of toleration (*dhimma*) with Islam whereby they could practice their faith and pursue their traditional professions and crafts but with some restrictions on their public behavior. Some Jews and Christians did rise to important posts in several Islamic courts. Adherents of all other religions were officially classified as polytheistic unbelievers and had virtually no rank in the social hierarchy except as slaves, but in fact Zoroastrians and other so-called polytheists were often tolerated.

—Julie T. Abouzelof

Bibliography

- Egger, Vernon O. *A History of the Muslim World to 1405: The Making of a Civilization*. Upper Saddle River, NJ: Pearson Education, 2004.
- Goitein, S. D. *A Mediterranean Society: The Jewish Community of the Arab World as Portrayed in the Documents of the Cairo Geniza*, Vol. 2, *The Community*. Berkeley and Los Angeles: University of California Press, 1978.
- Heath, Jennifer. *The Scimitar and the View: Extraordinary Women of Islam*. Mahwah, NJ: Hidden Springs, 2004.
- Keohane, Alan. *Bedouin: Nomads of the Desert*. London: Kyle Cathie, 1994.
- Robinson, Francis, ed. *Cambridge Illustrated History: Islamic World*. Cambridge: Cambridge University Press, 1996.

Death and Burial in the Latin East—Evidence of Cross-Cultural Interchange?

Death and burial in the Latin, or Frankish, East is a subject that has not been studied in great



One of the slab tombs found in the crusader cemetery at Atlit, its incised decoration depicts a Latin cross and the tools of a stonemason, namely the hammer (left) and set square (right). The hammer appears to be a type used in crusader architecture in Europe, Anatolia, Armenia, and Mesopotamia. This likely means that the stonemason who constructed this tomb used the hammer as both tool and model. It appears that one stonemason was honoring another in death. (Jennifer A. Thompson)

detail up to now. In general, studies of cemeteries and of burials have been limited to studies of skeletal remains, ceramics and artifacts found in burials, and the type of grave in which the remains were found. These three areas have been considered separately but have never been combined to form a cohesive picture of the burial customs of the peoples of the Latin East.

There are several different types of burial found in the Latin East. It is also important to distinguish between grave types and tomb types. Graves are the part of the burial located below ground, whereas the tomb is the burial superstructure. Most of the burial sites in the Latin East lack tombs, although there are a number of well-preserved tombs to be found throughout the Latin East.

The site with the largest number of well-preserved tombs is the crusader cemetery at Atlit just south of Acre (Akko) in Israel. Here, there are several hundred tombs located in a walled cemetery located outside the fortified walls of Pilgrims' Castle, one of the most important castles belonging to the Knights Templar. Within the cemetery, there are five types of tombs and one type of grave. None of the burial sites has yet been excavated, so it is not known what type of grave was used in those burials.

Similar tomb types are generally grouped together in separate areas of the cemetery, and the largest and most elaborate tombs have been found in the portion of the cemetery closest to the road leading to the gates of Pilgrims' Castle. It is likely that these belonged to the higher classes of society, whereas the least elaborate belonged to the Knights Templar, each of whom had sworn a vow of poverty regardless of the class from which he came, and to the poorer sections of society.

Do these and other burial sites in the Latin East present any evidence of cross-cultural fertilization? It appears from the evidence that most of the burial customs and grave and tomb types of Frankish colonists had a European influence. For example, pottery in these burial sites can be traced back to the medieval French practice of depositing pottery with the deceased. Nevertheless, there is some evidence of cross-cultural influence.

Frankish Cyprus and Latin settlements near Constantinople and on mainland Greece present some evidence of cultural interchange. At Corinth, in the former principality of Achaea, there is evidence that the Greek Christian population adopted some Frankish burials rites, such as inclusion of pottery with burials. Conversely, at Galata, a Genoese colony at Constantinople, some of the tombs at the monastery of Saints Paul and Domenico show Byzantine influences, such as Byzantine crosses.

There is even some indication that Islamic influences crept into the burial rites of the Frankish population of the Latin East. At the crusader cemetery at Atlit, one type of tomb had a border of rough stones with an upstanding stone at either the head or the foot of the grave and possibly at both ends. The tomb was then likely plastered over. This manner of tomb construction is similar to the Muslim graves that are described from ethnographic studies of Muslim villages in Palestine in the early to mid-twentieth century.

The excavation of burials has become a delicate subject in much of the world over the last few decades. It is no different in the area of the Latin East, especially in the state of Israel. With restrictions in place that curtail the excavation of burials, it is unlikely that new information on death and burial in the Latin East will come from the crusader sites in Israel. Therefore, precise information regarding the status of people buried under the tombs at Atlit is not available because the tombs have never been excavated, nor are they likely to be in the near future.

—Jennifer A. Thompson

Bibliography

- Boas, Adrian J. *Crusader Archeology: The Material Culture of the Latin East*. London and New York: Routledge, 1999.
- Pringle, Denys. *The Churches of the Crusader Kingdom of Jerusalem*. 2 vols. Cambridge: Cambridge University Press, 1993, 1998.

Foot Binding of Chinese Women

The Chinese custom of foot binding became widespread between 1000 and 1500 CE. Apparently the practice began in court circles, but by

the Ming dynasty it was common among all classes. The procedure was excruciatingly painful. Although the age of the girls varied, at some point between their fourth and eighth year the grandmothers and mothers of the household would begin applying tight bandages of silk or cotton to the girls' feet. The purpose was not only to stop growth but to reshape the little feet as well. As the binding was tightened, the four small toes were folded under the foot and the arch pulled inward until the ball of the foot touched the heel. Walking was always difficult for women who had undergone the procedure, and the discomfort confined many to their homes. The crippling effect was not limited to feet. Modern scientists have noted that a disproportionate number of women with bound feet suffered from crippling osteoporosis.

The origin of foot binding is a mystery. During the Tang (618–907) and Song (960–1279) periods, some sources linked foot binding to an ancient folk tale that described Daji, a female wizard with the body of a fox, who used her tiny paws to seduce King Zhou (d. 1027 BCE), a tyrant of the Yin (late Shang) dynasty. His resultant sexual obsession led to the ruin of his kingdom. Other sources repeated the story of the heroine Wu Yueniang, a southern Chinese girl, who attempted to assassinate the exceptionally brutal ruler of the Sui dynasty, Emperor Yang Guang (r. 605–617), who selected young girls with small feet from the south to serve him. Yueniang broke her insteps and hid a knife under one of her bound feet. Her attempt failed, and the enraged emperor thereafter forbade women with bound feet to be in his company. But her hometown women, in honoring Yueniang and demonstrating their defiance to the tyrant, volunteered to get their own feet bound. Other tales suggest that foot binding in China was inspired by Buddhist art, which often depicted barefooted females dancing on lotus petals. Another story, that of Yaoniang whose name means “lady with high eyebrows,” thereby implying her non-Chinese ethnic identity, told of how Emperor Li Yu (r. 961–75), the last ruler of the Southern Tang dynasty, enjoyed having Yaoniang wear lotus-shaped golden shoes and performing her toe dance on a golden lotus stage.

These latter sources thus offered an explanation of why a bound foot, which ideally was less than three inches (7.5 centimeters) long, was called a golden lotus.

Despite these folktales, concrete and convincing evidence of foot binding as a popular practice in China before 1000 CE remains problematical at best. All solid evidence indicates that foot binding was largely a literary or artistic motif before the turn of the millennium and not a widespread reality, since neither Buddhist women of non-Chinese origin nor southern Chinese women had their feet bound. The fact that foot binding became a pervasive social practice in the era of the Northern Song dynasty (960–1126) suggests that the court ladies of Northern Song were not as free or as athletic as their polo-playing counterparts in the Tang court. It also points to the increasing prosperity of China's growing merchant and artisan classes, whose women were having their feet bound in increasing numbers as their labor became less valued or necessary.

Even though erotic associations remained strong, foot binding also became associated with Chinese aspirations for just government following the collapse of the Northern Song dynasty in 1126, when Jurchen (Ruzhen) invaders established their dominance over northern China. Many Chinese, including imperial bureaucrats and intellectuals, followed the Song court to southern China. While migrating southward, some intellectuals recorded their cultural shock caused by the big feet of the southern Chinese and ethnic minority women they encountered. Moreover, their writings revealed a contemptuous attitude toward both the foreigners who had defeated them and the people of the South, among whom they were now living, that they expressed by ridiculing the natural feet of their women. This indicates that foot binding had become socially practiced at least among elite ladies in northern China during the Northern Song period and began to spread among the southern Chinese in the Southern Song era (1127–1279).

China's Mongol rulers of the Yuan dynasty (1279–1368) discouraged Mongol women from binding their feet but were tolerant of the practice by the ethnic Chinese. The Mongols implemented a militaristic government to replace the

► PU SA MAN (A POEM OF LOTUS FEET)

Su Shi (1037–1101), better known by his alias Su Dongpo, a poet of the Northern Song dynasty, recorded his enjoyment of a courtly dance in this lyric poem, which was set to music.

Step by step, her lotus feet spread fragrance,
Blowing and fading;
Wrinkle after wrinkle, her skirt flies,
Approaching and disappearing.
I can still sense the wind,
Twisting and turning;
Where she is hiding now,
I cannot see.
Standing on one toe,
She is as solid as a palace building,
Pairing them together,
She trembles as if she is sleepy;
I cannot find words to describe
Their beauty and delicacy;
They can only be appreciated,
Only when I hold them in my palm.

Source

Su Shi, “Pu Sa Man,” *Quan Song Ci*, Vol.1, ed. Tang Guichang (Beijing: Zhong Hua Shu Ju, 1965), 321.

—Translated by Wenxi Liu

well-established Chinese civilian bureaucracy and degraded Confucian scholars to the ninth rank in a social hierarchy that had a scale of 1 to 10: below prostitutes and above only vagabonds. Chinese intellectuals were so reduced in status that women’s bound feet became the only ego-boosting treasure left to them as they suffered under the repression of the uncivilized others.

Foot binding became widespread during the Ming era (1368–1644). The first Ming emperor, Zhu Yuanzhang, also known as the Hongwu Emperor (r. 1368–1398), was born a peasant. His wife Empress Ma, who was loved by many Chinese commoners, had big feet, but few (if any) women emulated her. Foot binding had become a rite of passage, an expression of female commitment to virtue that became more widespread under Zhu, one of the most proactive Chinese rulers when it came to regulating the morality

of his subjects. Women became restricted in an ever-shrinking space in the inner circles of the family.

Meanwhile, the growth of urban and commercial culture accelerated the trend of degrading women as commercial objects. The circulation of erotic literature, such as *Jin-Ping-Mei* (the title of which incorporated the names of the male character’s three concubines Golden Lotus, Vased Flower, and Plum Blossom), glorified to some extent the polygamy of the neo-Confucian scholar-officials and the urban rich in which a husband could be sexually obsessed with the golden lotuses of his numerous concubines. Bound feet became a norm for judging a woman’s social status and her virtue. Normal feet revealed a woman’s low status as a domestic servant, a poor peasant, or a non-Chinese barbarian. Bound feet also became a prerequisite for a girl to marry a suitable husband. The statement “you would never find a husband with your unbound feet” was the most coercive persuasion that a mother could use to force her very young daughter to go through the painful process of foot binding. At the same time, the most highly valued feet became increasingly smaller and more radically curved, and lotus shoes became ever more delicate and decorated. The trend continued into and throughout the Qing period (1644–1911), and was finally abolished by the government of the newly established Republic of China in 1912.

With the triumph of another barbarian people from the north in 1644, history repeated itself but with a twist after the Manchu (Qing) empire was established in China. From the very beginning, the imperial authority ordered Chinese men, under the threat of death, to shave their hair in front and wear a Manchu braid (queue) and forbade Chinese women to bind their feet. Chinese men, under pressure, shaved their heads and wore the hated plait, but Chinese women persisted in binding their feet. Emperor Kangxi (r. 1661–1722) ceased enforcement of the order, although foot binding remained prohibited for Manchu women. In time, however, some Manchurian women accepted foot binding as their dynasty became sinified. In response to this phenomenon, Confucian scholars coined the

phrase “men-surrendered-and-women-resisted” to signify their delight in the partial victory of Chinese civility over alien barbarianism.

Few Confucian scholars questioned the moral implications of foot binding. Indeed, many defended the practice as a cultural treasure. Nonetheless, it is inaccurate to think of the practice as something forced upon women by males. Modern scholars point to records that reveal that many Chinese women were staunch supporters of foot binding and full participants in the creation and maintenance of the cultural gender roles. Foot binding was a measure of a woman's status, virtue, beauty, security, and sexuality. For many, it was a source of self-esteem. It was only the reluctant interactions of the Chinese elite with Western culture in the late nineteenth century that produced indigenous criticism of this tradition.

—Wenxi Liu

Bibliography

- Feng, Jicai. *The Three Inch Golden Lotus*. Translated from the Chinese title *San cun jin lian* by David Wakefield. Honolulu: University of Hawaii Press, 1994.
- Jackson, Beverley. *Splendid Slippers: A Thousand Years of an Erotic Tradition*. Berkeley, CA: Ten Speed Press, 1997.
- Ko, Dorothy. *Teachers of the Inner Chambers: Women and Culture in Seventeenth-Century China*. Stanford, CA: Stanford University Press, 1994.
- Mann, Susan. *Precious Records: Women in China's Long Eighteenth Century*. Stanford, CA: Stanford University Press, 1997.
- Waltner, Ann. “Recent Scholarship on Chinese Women.” *Signs* 21(2) (1996): 410–428.

The Christian God-Anointed Monarch—Byzantium, Ethiopia, Serbia, Bulgaria, Russia, Armenia, Georgia, and the Latin West

Christianity defined not just the religious identities but also the governing ideologies of many medieval cultures. The concept of a God-anointed sovereign, with secular and sacred powers, was integral to Byzantium and appeared to varying degrees in Western Europe, the Eastern Christian kingdoms, and Ethiopia.

In the Byzantine empire, the emperor and the Church were closely united. The proximity of the imperial palace, the Bukoleon, and the adjacent patriarch's seat, the Church of Hagia Sophia, was echoed in the sacrosanct nature of the imperial office.

In 629, Emperor Heraclius (r. 610–641) changed his title from Emperor Caesar Augustus, which had underscored continuity with imperial Rome, to *Basileus*. In ancient Athens this title was borne by the official in charge of public worship and criminal proceedings. Thus, he now stressed the divine grace that enabled his rule. In the ninth century, Basil I (r. 867–886) emphasized that the sovereign should embody an image of God for his subjects to imitate. Among the emperor's adulations were *Christos Kyriou* (anointed of the Lord) and *Zosa Eikon Christou* (living icon of Christ).

The latter expression is particularly telling. Icons are images that through their likeness allow what they represent to become present on earth. Just as a painted icon of Christ by the altar made Christ present during Communion, the emperor, as a living icon of Christ, sat on the throne, ruling in Christ's place. Like his holy prototype, the emperor mediated between the divine and the human and personified the moral, judicial, and political voice of God on earth.

Elaborate coronation rites celebrated the ascendancy of the emperor to this role. The *Book of Ceremonies*, written by Emperor Constantine VII Porphyrogenitus (r. 913–959), describes the coronation ritual of the tenth through twelfth centuries and emphasizes the emperor's sacerdotal powers, permitted to no other layman. The emperor-elect, clothed in special vestments, entered the imperial door of the Hagia Sophia, prayed before the *chancel* (the enclosed space around the altar), lit candles, and ascended to the *ambo* (the ecclesiastical pulpit) with the patriarch. Here, he attained the imperial insignia, was crowned, and addressed the people. He then went to his throne within the church, where dignitaries filed past, prostrating themselves and kissing his knees. An interesting footnote to this ritual is the *akakia*, a pouch filled with earth that the emperor held in his hand. It reminded the monarch that while the office

elevated him to a divine icon, his body remained human.

In the twelfth century, imperial unction became part of the coronation. Echoing the anointing of King Solomon, it served to align the emperor with the Davidic kings of the Bible. A fourteenth-century treatise transcribes the prayer of the patriarch when he marks the cross: “deign to anoint with the oil of gladness your faithful servant. . . . Endow him with power from on high . . . bless him . . . [to] whom you have entrusted the earthly kingdom.” This unction gave the emperor the unique status of *epistemonarches* (supreme regulator of ecclesiastical discipline), as the twelfth-century canon lawyer Theodore Balsamon wrote: the emperor was allowed within the holy sanctuary, he could judge the patriarch, and he was the living law, with power over his subject’s souls as well as their bodies. Near the end of the Byzantine empire, however, unction became increasingly controlled by the Church. The direct union between the ruler and God became diluted, transforming the iconic relationship into a vague symbolism, more like what predominated in the West.

In Western Europe there was no universal acceptance of divine kingship as in Byzantium, although many concepts, such as God-granted monarctic power, were similar. The West lacked the Byzantine intimacy between the Crown and the Church, with the Alps physically dividing most of Europe from the Roman papacy. This disjuncture between the *sacerdotium* (priesthood) and the *regnum* (royal power) was a source of ceaseless debate in the medieval centuries.

The tenth-century Ottonian era, however, started Europe off on a strong note of sacral kingship. The Synod of Hohenaltheim in 916 dubbed the king *Christus domini* (anointed of the Lord). Ottonian emperors styled themselves as theocrats, even copying Byzantine attributes and intermarrying with Byzantine nobility. Ecclesiastical royal anointing, which included investment with the secular implements of crown, sword, and scepter, rendered the king semiholy: to oppose him would be sacrilege. The Ottonian rulers appointed politically powerful bishops, whose loyalty stabilized the empire, and after Otto I (r. 936–973) deposed Pope John XII (r. 955–964), they assumed the right to choose popes as well.

By the middle of the eleventh century, this custom of the royal investiture of bishops began to cause problems, since laymen, rather than the Church, were authorizing ecclesiastical power. Tensions increased when King Henry IV (r. 1056–1106) and Pope Gregory VII (r. 1073–1085) chose rival candidates for the bishopric of Milan. Gregory considered kings mere policemen and outlawed the practice of laymen—even royal ones—investing churchmen with their holy office. In 1075 he released the *Dictatus Pape* (*Proclamation of the Pope*), which placed popes above human judgment and gave them the right to depose emperors. To underscore this, Gregory excommunicated Henry. These so-called Gregorian Reforms were contested by a theological tract of circa 1100 written by an anonymous Norman cleric. He claimed that the king was superior to a priest as a representative of Christ since he echoed Christ’s divine nature, whereas the priest echoed Christ’s human nature. Thus, the king was essentially elevated to heaven, since all earthly power was inferior to his.

Many polemical texts on both sides of the issue were written over the next several centuries as the empire and papacy fought for theoretical supremacy, but in essence the Gregorian Revolution had dealt a mortal blow to Western imperial theocracy. At the same time, however, popes never gained in reality the full theoretical powers that Gregory VII and his successors claimed over secular rulers. Moreover, by the late thirteenth century a number of kings were able to gain wide-sweeping control over their national churches and even to claim successfully that they ruled by God’s grace, although their claims and powers never rivaled those of the earlier Ottonians.

The smaller Christian states in the East were both aided and harassed by the Byzantine and Western superpowers as they struggled for independence and fought against Islamic or Mongol invasions. The short-lived kingdoms and empires that emerged generally followed the prototypes of either the iconic rulers of Byzantium or the anointed kings of the West.

The Serbian empire (1346–1389) under Stephen IV Dushan (r. 1331–1355), despite relations and intermarriage with the West, followed the Byzantine model, promoting its archbishop to

➤ GOD-ANOINTED KINGS AND EMPERORS

The apex of Christological ruler ideology in the West occurred during the Ottonian empire. The portrait on the frontispiece of the *Aachen Evangelary* from shortly before 1000 depicts Otto III (r. 983–1002) crowned by the hand of God. Otto is enthroned and holds the royal insignia, symmetrical and forward-facing like a Roman Caesar. Two archbishops and two warriors, representing sacred and secular power, stand in the bottom register, while two crowned kings above them bow in subservience to the emperor. Tellus, the earth, crouches below the throne, personifying the empire's enormity.

In addition to this imperial imagery, the miniature includes religious iconography, essentially re-creating the traditional scene of Christ in majesty with Otto in Christ's place. The almond-shaped halo around the emperor, the gold background, and the four beasts of the Apocalypse (symbols for the evangelists) are all attributes of Christ. The beasts hold a white drapery across Otto's body that acts as the veil of heaven, placing the emperor partly in paradise and partly on earth. Otto's head and chest are emphasized by the veil and the intersection of his halo with the one surrounding God's hand. This was precisely where the ruler was anointed in the Ottonian coronation liturgy: head, breast, shoulders, and brachial joints. The image portrays a highly unusual glorification of a living emperor, exalting the ability of divine unction to create Christ's representative on earth.

—Annika Fisher



Otto III, king of Germany during 983–1002 and Western Roman Emperor during 996–1002, was known as a well-educated and idealistic leader who believed firmly in the divine character of his position. (Foto Marburg/Art Resource, NY)

Source

Liuthar Group: *Otto III in Majesty*, from the Aachen Gospels of Otto III, folio 16 recto. 983/1002. Aachen, Cathedral Treasury.

patriarch in order to perform imperial unction. Eastern protocol was carefully followed, since Stephen's aim was to conquer Byzantium. He cultivated an expensive relationship with the monasteries of Mount Athos, hoping—mistakenly—that this revered Orthodox center would provide him with sufficient divine favor.

Bulgaria's allegiances vacillated between the West and East. The early empire of the tenth century followed the Byzantine liturgy, whereas a second empire under the Asenevetsi dynasty was established in 1187. In 1202 the ruler Karlojan (r. 1197–1207) requested imperial coronation and establishment of a Bulgarian patriarchate from Pope Innocent III (r. 1198–1216). Against

these wishes, the pope's legate crowned Karlojan as only a king and created a mere primature (a primate-archbishopric rather than a patriarchate) for the Bulgarian Church. Kalojan, undeterred, wrote to thank the pope for his imperial coronation. Bulgarian allegiance then quickly returned to the East, when the Byzantine emperor, Alexius III (r. 1195–1203), offered to recognize Kalojan's title as emperor.

The large Georgian Bagratid kingdom arose in the late eleventh century by defeating the same Seljuk Turks who captured the Byzantine emperor in 1071. Accordingly, the Georgian monarchs saw themselves as equals to the rulers of Constantinople and used the title *basilius*.

Queen Tamar the Great (r. 1184–1212) was sovereign during Georgia's height and was hailed "by the will of our Lord, King of Kings and Queen of Queens."

Armenia was separated by mountains and its Monophysite interpretation of Christianity (which held that Christ had a single solely divine nature instead of dual human and divine natures). Levon the Great (r. 1198/1199–1219), founder of the Cilician kingdom (1198–1375) in southern Anatolia, petitioned the Western emperor Henry VI (r. 1190–1197) for the Crown in exchange for his acceptance of Catholic doctrine. Levon's coronation by the papal legate in 1199 featured a translation of the Latin rite with unction by the Armenian *catholicos*, who was the primate, or chief archbishop, of the Armenian Church. Several months later, the Byzantine emperor (again, Alexius III) sent a competing diadem from Constantinople, but Armenia remained Catholic until the Turkish conquest of 1375.

While Russia's real attempts at autonomy began in the sixteenth century, Byzantine ideologies of rule were introduced by Vladimir of Kiev (r. 980–1015) and Metropolitan Alexis (r. 1354–1378), who, in particular, argued for the powerful Russian Church's subjugation to the secular ruler. These ideas reached new extremes with the development of the imperial tsar (caesar) in the later Middle Ages. The tsar was considered fully above all worldly laws, anointed and guided by God in all his actions. He dictated all political, judicial, moral, and religious decisions for his subjects and demanded their "joyful obedience" in return.

Far from these empires was another Christian realm under the rule of a divinely anointed king: Ethiopia, a mountainous redoubt amid Muslim Northeast Africa. In the fourth century King Ezana established Christianity there, claiming a heaven-sent right to rule.

After centuries of struggle with Islam, a Christian kingdom was reestablished in 1270 by Yekuno Amlak (r. 1270–1285), who founded a dynastic line, the Solomonids, that endured into the twentieth century. Yekuno claimed descent from King Solomon and the Queen of Sheba and employed this heritage as the basis for his divine rule. The legal code of Ethiopia, the *Fetba nagast*, or "Laws of the Kings," provided a scriptural

basis for the sacred right of the rulers, employing particularly Paul's epistle to the Romans. Paramount among the royal duties was protection of the endangered faith. Kings engaged in many religious tasks, such as translating theological tracts into Ge'ez (the ancient language of Ethiopia), founding monasteries, and establishing an altar at the Church of the Holy Sepulcher in Jerusalem. Yekuno was a devout patron, inscribing on his rock-hewn chapel in Roha: "By the grace of God, I, King Yekuno Amlak, after I had come to the throne by the will of God, built this church."

Royal power reached an apex under Zara Yaqob (r. 1434–1468). His elaborate court ceremonies demonstrate an extreme interpretation of divine kingship. When riding throughout his realm, Zara Yaqob was preceded by chained lions and officers with whips and drawn swords. Looking directly at the king was prohibited and punishable by immediate execution.

—Annika Fisher

Bibliography

- Blumenthal, Uta-Renate. *The Investiture Controversy*. Philadelphia: University of Pennsylvania Press, 1995.
- Chahin, M. *The Kingdom of Armenia*. London: Croom Helm, 1987.
- Dagron, Gilbert. *Emperor and Priest: The Imperial Office in Byzantium*. Translated by Jean Birrell. Cambridge: Cambridge University Press, 2003.
- Durham, Thomas. *Serbia: The Rise and Fall of a Medieval Empire*. York, UK: William Sessions, 1989.
- Kantorowicz, Ernst H. *The King's Two Bodies: A Study in Medieval Political Theology*. Princeton, NJ: Princeton University Press, 1957.
- Lang, David Marshall. *The Bulgarians from Pagan Times to the Ottoman Conquest*. London: Thames and Hudson, 1976.
- Pankhurst, Richard. *A Social History of Ethiopia*. Addis Ababa: Institute of Ethiopian Studies, 1990.
- Presniakov, Alexander E. *The Tsardom of Muscovy*. Gulf Breeze, FL: Academic International Press, 1986.
- Tierney, Brian. *The Crisis of Church and State, 1050–1300*. Toronto: University of Toronto Press, 1988.

Marriage Law of the Latin Church

From 1000 to 1500 CE, marriage law in the Latin West was comprised of the canons, or ecclesias-

tical rules, of the Roman Church that were drawn from numerous sources: biblical prescriptions; the decretals, or legal decisions, of popes; laws enacted in ecumenical councils; the decrees of regional synods; and the opinions of the Church's Fathers (its ancient teachers) and its academic canon lawyers. At the same time, canonical justice regarding marriage and the family closely followed Roman civil law and its procedures but also showed flexibility by adapting certain rules to Germanic customs.

In medieval Western Europe, secular courts in general deferred litigations involving the validity of a marriage and the legitimacy of children to ecclesiastical courts. These two issues linked marriage not only to a family's properties and privileges but also to alimony, custody, child support, and other related matters. In practice, a secular court would adjudicate a dispute over inheritance and other relevant issues only after an ecclesiastical court established the legitimacy of a marriage or an heir. This separation of jurisdiction gave the Roman Church exclusive authority in legislating and enforcing laws of marriage and the family.

The Church did not officially declare marriage a sacrament until the Council of Trent (1545–1563). However, for centuries many theologians and canon lawyers had discussed the idea of sacred marriage, and many of them had accepted the image created by St. Augustine (354–430) that construed marriage as a symbol of the union of Christ and the Church. Although theologians often considered earthly marriage as an unfortunate necessity with the single purpose of procreation, church authorities were, in general, quite tolerant of literary and philosophical speculations about true love between married couples and the pleasures of marital sex. The main reason the Catholic Church held firmly to the idea of chastity as being a superior state to that of carnal marriage was to rein in fornication, concubinage, and other forms of sexual misconduct among its clergy. Of course, this constant reinforcement of the notion of chastity did have a profound impact on shaping popular perceptions of marriage and sexuality.

Medieval canon law did not formally establish a minimum age for legal marriage, leaving issues of underage marriages and parental con-



Illuminated marriage contract, French, fourteenth century. (Krause, Johansen/Archivo Iconografico, SA/Corbis)

sent to be regulated by local customs. Canon law also discouraged marriage across religions, and some canonical courts imposed severe sanctions against those who married adherents of other religions. Such a policy brought increasing pains to Catholic believers during the late medieval period, when crusades against heresy and the madness of witch-hunting victimized religious dissidents and jeopardized their families.

"Free will to consent" was one of the most controversial subjects speculated on by canon lawyers. Most believed that consent to marriage by both male and female partners was crucial because marriage involved a permanent commitment. However, while advocating the idea that no one is to be married to another save by free will, legal texts offered a tremendous amount of argument over its judicial ramifications based on hypotheticals, but none offered a straightforward definition of free will. It was Pope Alexander III

➤ INDISSOLUBLE MARRIAGE

After Abelard, a twelfth-century theologian and schoolmaster of Paris, was castrated by ruffians sent by the angry uncle of his wife Heloise, Abelard and Heloise took vows to submit themselves to the monastic life. In one of their correspondences, Abelard wrote to Heloise about their indissoluble marriage and durable love:

“Come too, my inseparable companion, and join me in thanksgiving, you who were made my partner both in guilt and in grace. For the Lord is not unmindful also of your own salvation, indeed he has you much in mind, for by a kind of holy presage of his name he marked you out to be especially his when he named you Heloise, after his own name, Elohim [Hebrew for ‘God’]. In his mercy, I say, he intended to provide for two people in one, the two whom the devil sought to destroy in one; since a short while before this happening he had bound us together by the indispensable bond of the marriage sacrament.”

—Wenxi Liu

Source

Betty Radice, trans. *The Letters of Abelard and Heloise* (Harmondsworth, UK: Penguin, 1974), 194.

(r. 1159–1181), himself a canon lawyer, who ruled that a bridegroom would be declared to have consented to a marriage by free will unless he had acted in response to a level of fear sufficient to move a constant, or steadfast, man. Afterward, juristic interpretation of the rule of moving a constant man became the focus of new canonical debate. Most canon lawyers preferred a restrictive interpretation that suggested that the rule should be narrowly applied to annulling a coercive marriage initiated by rape or other kinds of excessive violence if such a marriage did not endure a long enough time period to appear as a normal marriage.

As was the case in Roman civil law, for an ecclesiastical court to declare a marriage valid, a couple must have exchanged pledges of mutual consent in the present tense. If a couple exchanged pledges of mutual consent in the future tense, such a marriage would be declared valid

only after sexual consummation was ascertained. Ecclesiastical courts did not automatically reject a marriage constituted on one or more conditional pledges of mutual consent. Rather, they would first examine whether the conditions were realistic, reasonable, and moral before rendering a judgment. Ecclesiastical judges, while applying those rules to settle a dispute over the validity of a marriage, would often adjust canonical technicalities to regional and local customs, since most marriages of the popular masses were clandestinely (privately and without the presence of a priest) contracted in rural Europe. In late medieval church courts, many marriage disputes involved various sorts of precontracts, namely that someone who claimed to have had a prior marriage to one of the partners challenged an ongoing marriage. If the court established that a pledge of mutual consent was legal in the earlier marriage, though clandestinely done, the later one would be declared annulled.

Under the leadership of Pope Innocent III (r. 1198–1216), the Fourth Lateran Council (1215) enacted canons to either reaffirm or reform the judicial rules governing and regulating marriage. One canon forbade clandestine marriage by requiring that a marriage be publicly contracted in the Church, with a suitable time being fixed beforehand within which impediments of any kind would be adduced. However, this law had limited impact on encouraging people to give up privately contracted marriages until the sixteenth-century Age of Reformation. Another canon enacted in the council redefined prohibitions against marriage by reducing the impediment of marriage by consanguinity (blood relationship) and affinity (relationship by marriage) from the seventh to the fourth degree. However, this canon did not stop people from contracting marriages within the forbidden degree of third cousins, nor did it discourage marriages to the siblings or close blood relatives of deceased spouses. Moreover, church authorities never strictly enforced laws against consanguinity and affinity in royal and aristocratic marriages. For various political reasons, the papacy usually granted dispensations for such marriages to be blessed.

Since canonical theory defined a marriage as a permanent commitment instead of an ongoing process, it insisted that a marriage, once legiti-

mately contracted, could never be dissolved. Therefore, legal divorce did not exist in ecclesiastical jurisdiction. A marriage could be declared annulled (namely, it was judged never to have been a legitimate marriage) only if the judge should find a flaw in the process of free consent to a union or discover an impediment to such a union, such as a prohibited degree of consanguinity. One consequence of this legal practice was the victimization of children. Once a marriage was annulled, the union was rendered to have never existed, and the children born to that union became illegitimate and lost the legal right to inheritance.

From the mid-eleventh century onward, church authorities repeatedly announced and enforced laws against clerical marriage and all other forms of sexual encounter by the clergy by announcing that women involved in such relationships were concubines and the children born from those relationships illegitimate. Canonical authorities also implemented rules against and imposed severe penalties for certain sexual practices such as fornication, adultery, bigamy, rape, prostitution, incest, homosexual sex, and even masturbation, which the Church viewed as sinful behaviors against the procreative purpose of sexual intercourse. Some of the lists of sins in certain areas and during certain time periods actually ranked masturbation as worse than rape and incest, which were believed to serve the procreation purpose even if they were wrong and criminal. Those rules became deadly when they were used abusively to try, convict, and punish heretics and witches in late medieval Europe.

The Church's absolute stand against polygamy and clerical incontinence and its view that a second marriage was legitimate only if the previous one was legally ended by death or annulment led to some interesting attitudes and legal rules. For example, a twice-widowed man or a man whose deceased wife was a widow was banned from the priesthood, and second marriages should omit a formal blessing by a priest.

In short, marriage law, family law, and laws regulating sexual conduct were interrelated in the medieval canon law of the Latin West and reflected the ideals and doctrines of the Church of Rome. In articulating the mission of the Fourth

Lateran Council of 1215, Innocent III announced that the purpose of those ideals and doctrines was "to eradicate vices and to plant virtues, to correct faults and to reform morals, to remove heresies and to strengthen faith, to settle discord and to establish peace, to get rid of oppression and to foster liberty."

—Wenxi Liu

Bibliography

- Brooke, C. N. L. *Medieval Idea of Marriage*. Oxford: Oxford University Press, 1989.
- Brundage, James A. *Medieval Canon Law*. London and New York: Longman, 1995.
- D'Avray, D. L. *Medieval Marriage: Symbolism and Society*. Oxford: Oxford University Press, 2005.
- Duby, Georges. *Medieval Marriage: Two Models from Medieval France*. Translated by Elborg Foster. Baltimore: Johns Hopkins University Press, 1991.
- Helmholz, R. H. *Marriage Litigation in Medieval England*. Cambridge: Cambridge University Press, 1974.
- McCarthy, Conor. *Marriage in Medieval England: Law, Literature, and Practice*. Rochester, NY: Boydell, 2004.

Mexica (Aztec) Marriage Customs

Our knowledge of the marriage customs of the Mexica, or Aztecs, is based on the observations of early Spanish missionaries and travelers. Although there were variations in their accounts, these records collectively provide a fairly good overview of how Mexica society dealt with marriage.

A young woman married between the ages of 11 and 18, and it was expected that she would be a virgin. A young man would be married by the age of about 22 unless he intended to become a priest. Because the Mexica were brought up to honor and obey their parents without question (and even adults treated their parents with great deference), marriage rarely took place without parental consent. A young man who married without the consent of his parents and kinsfolk was regarded as ungrateful and ill-bred. Indeed, parents' kin usually chose a son's or daughter's marriage partner.

Mexica civilization was organized on a clan basis, and usually marriage partners were sought

► TYING THE KNOT

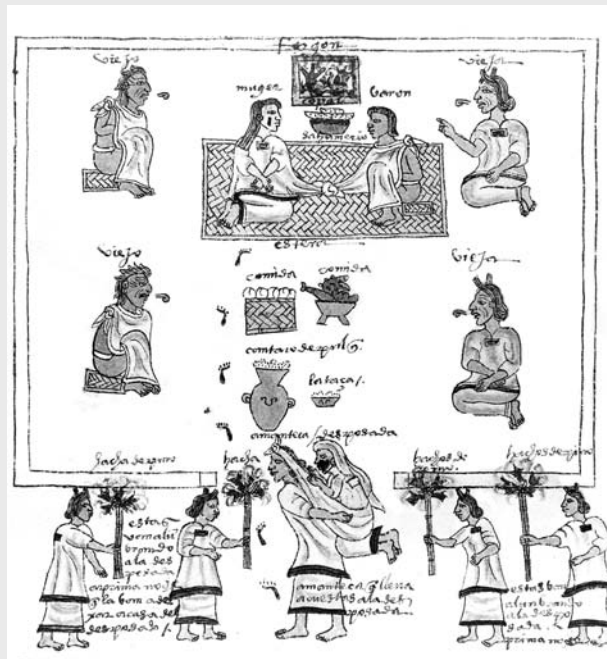
In the mid-sixteenth century, the Franciscan priest Bernardino de Sahagún and his native assistants recorded the oral testimonies of elders regarding every imaginable aspect of Aztec beliefs and customs. The result was the 12-volume *General History of the Things of New Spain* (known also as the *Florentine Codex*). The following excerpt describes one of the many rituals involved in the marriage ceremony.

“[W]hen they had gone to take her to the home of the man, then they placed her before the hearth. Then they also placed her bridegroom there before the hearth. And when the two were together, they placed the woman to the left, and they placed the man to the right of the woman. And the mother of the man then went to give gifts to her daughter-in-law. She placed the shift on her. . . . And the mother of the woman then also went to give gifts. She tied a cape on [the man]. . . . And the elderly matchmakers then tied them together. They took the corner of the man’s cape; also they drew up the woman’s shift; then they tied these together.”

—Alfred J. Andrea

Source

Bernardino de Sahagún, *General History of the Things of New Spain: Florentine Codex*, translated by Arthur J. O. Anderson and Charles E.



“The Tying of Garments” after an illustration in the Codex Mendoza, vol. 3, folio 61, with English translations of the Nahuatl inscriptions. (Private Collection/The Bridgeman Art Library)

Dibble (Santa Fe, NM: School of American Research, 1950–82), 7:131–132.

from outside the parents’ own clan. When the parents had chosen a partner, the priests would be consulted to ensure that the couple’s birthdates were harmonious and to determine the lucky or unlucky days for holding the ceremony. Once the priests had given a favorable report, the man’s parents would get his tutors to release him from his education so that he could marry. Two older women would then approach the girl’s father, with gifts so that they would be welcomed, and ask for his daughter in marriage. By convention he would refuse, several times. Each time they made the request, they offered more-valuable gifts. Eventually the father would agree to seek the approval of the girl’s clan, and if they agreed the most auspicious day for the wedding would be established by the priests.

The wedding began around midday on the chosen day with a banquet at the girl’s home. Presents were given to the bride by married women; this was followed by the bathing of the bride. Her hair was washed and arranged, and she was dressed in a heavily embroidered dress with the legs and arms decorated with red feathers. Older members of the groom’s family now visited her and welcomed her to their family, and at nightfall they escorted the bride to her new home. She was carried there by an older woman and escorted by her friends and relatives and numerous well-wishers in a procession lighted by flaming torches.

The wedding ceremony was performed by the family hearth. The couple sat side by side on mats, and the groom’s mother presented the bride

with new clothes. The bride's mother gave a similar present to the groom. The two women who arranged the marriage on behalf of the groom's family then tied the cloaks of the bride and groom together, after which the couple shared a maize cake. The couple then sat and listened to orations and instructions from their elders about married life and about their obligations. Before the marriage was consummated the couple separated for four days, during which they fasted and prayed. The marriage was then consummated on a bed of piled mats and feathers with pieces of jade interleaved, the latter to ensure that the couple managed to have many children. After the consummation, the couple went for a ritual bath and a blessing and purification from the priest.

—George P. Monger

Bibliography

- Berdan, Frances. *The Aztecs of Central Mexico: An Imperial Society*. 2nd ed. Belmont, CA: Thomson Wadsworth, 2005.
- Carrasco, David, with Scott Sessions. *Daily Life of the Aztecs: People of the Sun and Earth*. Westport, CT: Greenwood, 1998.
- Monger, George P. *Marriage Customs of the World: From Henna to Honeymoons*. Santa Barbara, CA: ABC-CLIO, 2004.

Family and Social Structure in Mississippian Cultures

"Mississippian" is a name utilized by archaeologists to describe the material remains of maize farmers who lived along the Mississippi River and its tributaries between about 1000 and 1650 CE. Many Mississippians constructed earthen mounds, building on a long history of mound building in the present-day eastern United States extending back several thousand years. Scholars often divide Mississippian cultures into two major groups: Middle and Upper Mississippian. Middle Mississippian mound centers were often located along major river floodplains, such as the region of Saint Louis, Missouri. In contrast, Upper Mississippian villages were generally located in prairie patches in the northern portion of the U.S. Midwest. This distinction appears to correspond to a degree of maize dependency,

which was lower for Upper Mississippians than neighboring Middle Mississippians.

A variety of economic and social factors led to the development of Mississippian cultures from local predecessors, and connections with Mesoamerica have long been drawn. However, except for maize and a few other domesticated plants, which diffused from Mesoamerica through the present-day U.S. Southwest, no other significant influences on these cultures have been clearly demonstrated.

Mississippian social organization focused on the economic and political integration of regional populations through rituals focused on fertility and warfare. Mississippian societies are often described as tribes or chiefdoms, chiefdoms being ranked societies expressed in funerary rituals and settlement hierarchies. Mississippian communities varied greatly in size and complexity, the largest of which are considered by some researchers to be emergent states. These typological constructs (tribes, chiefdoms, states), however, mask much variation, particularly transitional points along the continuum of social complexity and particular historical trajectories. Cahokia, outside present-day East St. Louis, Illinois, was the largest and most complex mound center and may have played a key role in the Mississippianization of the eastern United States through migration and trade.

The Mississippian family was one based on lineal descent, with multiple generations of kin inhabiting neighboring households that shared activity areas such as storage features, cemeteries, and ritual structures. Production of food and crafts occurred predominantly at the household level. Residential architecture was variable, but many houses were constructed of earth and wood and had grass-covered roofs. Lineages were often ranked vis-à-vis each other, the most powerful of which were leaders within the settlements.

The largest mound in a settlement was usually a platform on which a leader's residence was situated. Smaller mounds ringing the plaza often contained residences of other important family heads. Construction of platform mounds occurred in multiple stages, suggesting the regular reconstitution of the authority of ruling families. Trade for exotic artifacts interred with these

► SUNWATCH VILLAGE



The SunWatch Village site, occupied between 1150 and 1450 CE. (Robert A. Cook)

SunWatch village is an Upper Mississippian site of a few hundred people that was occupied between 1150 and 1450. The site is located along the upper portion of the Great Miami River south of Dayton, Ohio, in an area that was a pocket prairie during occupation. A circular stockade enclosed houses arranged around a large cedar post and plaza. Burials and storage pits are located between the houses and the plaza. Houses were constructed of earth, wood, and prairie grass. Residential units consisted of individual houses and associated burial and pit features linked together into extended family groups of three or four houses each. These may have been corporate clans, with members in other villages. The village leader, a 35-year-old male with a lightning whelk shell ornament, was buried in the western part of the site near a tall red cedar house that was likely his residence as well as a communal structure, marked off by closer proximity to the center pole and by positions of key solar alignments and burial groups. This individual rose to power during a time of contact with Middle Mississippians, late in the occupation of the village. This interaction occurred during a time of marked environmental and social change in Middle and Upper Mississippian societies.

SunWatch is a National Historic Landmark owned and operated by the Dayton Society of Natural History. Each year more than 20,000 people from throughout the United States and various other countries visit the partially reconstructed village and the Heilman-Kettering interpretive center.

—Robert Cook

individuals fueled in part the leaders' growing prominence. These individuals—usually male—orchestrated large gatherings involving feasting, sacrifice, and likely the telling of important myths. The diet of these high-status individuals sometimes involved more than average meat consumption, and there is some evidence that choice cuts, which served as tribute, were processed in small, somewhat distant communities prior to travel to the mound centers. It is clear that leaders wielded considerable ideological power, but it is less clear how much of an impact this had on the economy, such as control over craft production and tribute extraction. Whatever power a leader held was regularly contested, particularly during times of crop failure and warfare.

Sacrifices of retainers or servants have been documented in association with the burials of important leaders. Charnel houses, used to prepare bodies for burial, have also been found in a variety of settlements. The focus on ancestor veneration in public ceremonies has deep roots in the eastern United States extending back several millennia.

Relationships between Middle and Upper Mississippian groups were complex. Early researchers frequently invoked migration scenarios to account for the origin of Upper Mississippian groups, namely that Upper Mississippians descended from Middle Mississippians adapting to different environments. Subsequent research, however, has shown that Upper Mississippians shared many traditions with local populations as well as being influenced by Middle Mississippian culture. Thus, there is now disagreement as to the significance of Middle Mississippian influences on Upper Mississippian developments. We know that tribes often form in relation to more complex societies such as chiefdoms and states, and this phenomenon partially helps to explain Upper Mississippian origins. For example, at SunWatch, Middle Mississippian contact occurred simultaneously with the settlement's development of ranked lineages and a village leader.

—Robert Cook

Bibliography

Cobb, Charles. "Mississippian Chiefdoms: How Complex?" *Annual Review of Anthropology* 32 (2003): 63–84.

Cook, Robert. *SunWatch: Fort Ancient Development in the Mississippian World*. Tuscaloosa: University of Alabama Press, 2008.

Goldstein, Lynne. *Mississippian Mortuary Practices*. Kampsville, IL: Northwestern University Archeological Program, 1980.

Hudson, Charles. *The Southeastern Indians*. Knoxville: University of Tennessee Press, 1976.

Milner, George. *The Cahokia Chiefdom: The Archaeology of a Mississippian Society*. Washington, DC: Smithsonian Institution Press, 1998.

Muller, Jon. *Mississippian Political Economy*. New York: Plenum, 1997.

Pauketat, Timothy. *The Ascent of Chiefs*. Tuscaloosa: University of Alabama Press, 1994.

Chiefs and Commoners in Oceania

Although most typical of Polynesia, societies known as complex chiefdoms existed throughout Oceania. While much of Melanesia was occupied by tribal peoples without chiefs and much of Micronesia was occupied by people living in simple chiefdoms, complex chiefdoms existed in all three areas of Oceania. Chiefdoms differ from other types of societies in being composed of at least two ranks of people—chiefs and commoners—who occupy those statuses for life. In complex chiefdoms there may be additional

WHAT HAPPENED TO THE STATUES OF RAPA NUI (EASTER ISLAND)?

Shortly after the Polynesian settlement of Rapa Nui (Easter Island) around 350 CE, the land was divided into districts headed by the paramount chief and each of his sons. Construction of huge monolithic statues (*moai*) so characteristic of the island began about the year 700. Moai are thought to represent the deified ancestors of chiefs and faced inland so that their *mana* could protect the population. Statue building reached its peak about 1100 and continued for five more centuries.

The moai were probably commissioned by individuals or families. At inland quarries stone carvers roughed out a rectangular slab of volcanic rock. Next the distinctive features of the statues, including long sloping noses and prominent chins, were carved. While the average height of a moai was 13 feet (4 meters), some were as tall as 70 feet (20 meters). The statues were hauled using wooden sleds or rollers to the coast, where they were erected.

By about 1500, the population of Easter Island expanded beyond the carrying capacity of the land, resulting in deforestation, soil deprivation, and the inability to produce enough food. Conflict among chiefly districts, mainly between those on the higher-ranking west side of the island and those on the lower-ranking east side, resulted in the toppling of moai and a halt to the building of new ones. Gradually religious practices based on the moai were replaced by the Birdman Cult, which sought to restore peace through a system that



Moai figure on Easter Island. (Corel)

rotated annual leadership from chiefly district to chiefly district.

—Charlotte Neely

ranks, such as priests, navigators, and artisans. Chiefs themselves may be ranked into paramount chiefs, district chiefs, village chiefs, and so on. Complex chiefdoms are also typically characterized by the construction of large public works such as temples.

Three main factors typically came into play in determining whether a person was from a chiefly or commoner family: inherited *mana*, being a first-born rather than a later-born child, and being male rather than female. Mana was a powerful spiritual force present to some degree in all animate and inanimate objects. Chiefs were believed to have more inherited mana than commoners because they could trace their genealogy back to prominent gods and goddesses. While both chiefs and commoners could acquire additional mana through their accomplishments, such as learning how to be a navigator or training to become a priest, chiefs always possessed more total mana. Within both chiefly and commoner families, first-born children had more rank than their later-born siblings. Chiefs were typically the first-born child of a first-born child going back through a line of first-borns to the god from whom the family traced its genealogy. While not always the case, males typically had more rank than females.

Although commoners did the actual work of farming, fishing, tending animals, building boats and houses, making bark cloth, producing important crafts, and so on, the ultimate economic success of a group was attributed to the mana of its chief, who was seen as a kind of demigod. The political and spiritual harmony of a group was also attributed to a chief's mana. If enough unfortunate events occurred, however, the chief might be thought to lack the mana he was supposed to possess. The gods could withdraw a chief's mana for reasons understood only by the gods. Such an occurrence created a situation in which latter-born siblings of the chief or, theoretically, even a commoner with great achieved mana could rise to a chiefly position.

To preserve their mana, chiefs had to observe many taboos that restricted their freedoms. Typically a chief could only minimally interact with those of lesser rank, who were required not to touch him, to bow down in a chief's presence, and to avoid using or touching any posses-

sion of the chief. In Tahiti chiefs were carried in litters so that their feet would not touch the ground walked on by commoners. A chief often wore distinctive clothing that designated his rank. In some cases only a chief's sister had enough rank and mana to become his wife. A chief's wife was often guarded day and night until she gave birth so that no one could question the legitimacy of the chief's first-born.

—*Sharlotte Neely*

Bibliography

- Kane, Herb Kawainui. *Ancient Hawaii*. Captain Cook, HI: Kawainui, 1997.
- Oliver, Douglas L. *Oceania: The Native Cultures of Australia and the Pacific Islands I and II*. Honolulu: University of Hawaii Press, 1989.
- Strathern, Andrew, et al. *Oceania: An Introduction to the Cultures and Identities of Pacific Islanders*. Durham, NC: Carolina Academic Press, 2002.

Slavery in the World

Slavery, or the involuntary subjugation of one human being to another that normally included exploitation of labor, existed in all civilizations on the European, Asian, American, and African continents between 1000 and 1500. Most religions of the world, including Christianity, Judaism, and Islam, accepted slavery, and few questioned its existence. Men, women, and children became slaves as the result of war, kidnapping, legal judgment, and poverty. One striking characteristic of slavery between 1000 and 1500 is the religious and ethnic diversity of slaves because traders and owners did not single out one racial group for enslavement. The birth of the Atlantic slave trade by 1500, however, initiated a highly racialized form of human bondage.

Between 1000 and 1500, warfare was the major means through which people were enslaved, inasmuch as conquering armies captured groups of people, used them as laborers, or sold them in slave markets. Slave traders also conducted raids to gain captives whom they sold to merchants, individuals, or overland caravan routes. In Africa, slavery was part of various tribal social structures. Although harsh treatment and work practices existed, most slaves captured through tribal warfare were integrated into the tribes and families that owned them and were

treated accordingly. Poverty forced people into slavery as well. For example, in twelfth-century India, persons sold themselves or family members into slavery to ensure their survival during economic hardships. The Delhi sultanate also accepted slaves in place of cash, as revenue, and enslaved people who resisted the sultan's authority and refused to pay taxes. In thirteenth-century Angkor, Cambodia, individuals gave slaves to particular temples as philanthropic endowments to demonstrate their devotion to a specific god or to fulfill tax obligations.

Buddhists, Muslims, Jews, and Christians considered those who did not espouse their faith to be infidels (and often uncivilized unbelievers as well) and often justified their enslavement on this basis alone. But justification of the enslavement of "the other" also went beyond religious grounds. For example, rice farmers in thirteenth-century Southeast Asia considered nomads of the uplands as savages, organized raids on the mountain tribes, and used or sold their captives as slaves. Although Christians and Muslims alike believed that it was generally wrong to enslave coreligionists, during both the crusades in the Levant and the lengthy battle for control over the Iberian Peninsula, military antagonists considered each other as a source of slaves, and this included believers in one's own religion who happened to be fighting on the wrong side. During the age of the crusades, the Roman Church even threatened enslavement of any Christian selling or carrying strategic war materials to Muslims. Indeed, enslavement was legal punishment for serious crimes imposed on coreligionists by Muslims and Christians alike.

Slave traders and owners did not single out one particular race or ethnic group for the purpose of enslavement, but prejudicial stereotypes shaped the usage of slaves. Muslims, for example, preferred Turks and Circassians as slave soldiers (mamluks) for their alleged military talents, Indians as guards for their trustworthiness, and black Africans as laborers for their endurance.

The trade in human beings expanded across Europe, Africa, and Asia between 1000 and 1500. As a result of early Islamic expansion, Muslim slave traders initially bought and sold slaves from Egypt, North Africa, Central Asia, India, and Spain. They also learned about the Egyptian prac-

tice of enslaving black Africans and used trans-Saharan caravan routes from the Sahel, or savanna region, of West Africa, Bornu in central Africa, and Nubia (present-day Sudan) in northeast Africa to bring black Africans and Berbers to slave markets in Morocco, Tunisia, Libya, and Egypt. Arab traders who controlled the slave trade in eastern and central Africa from Cairo used the Nile River Valley to transport slaves to Mediterranean slave markets or for export across the Red Sea. Along Africa's Swahili, or East, Coast, another large slave trade existed. Arab traders bought Africans in close cooperation with local tribal chiefs who supplied the human cargo through tribal warfare or raids or from within the tribe. Traders then sold slaves via routes across the Indian Ocean to the Persian Gulf, India, and wealthy families in twelfth-century Guangzhou (Canton), China. Slavery existed in India for millennia before the arrival of the Muslims, but between 1000 and 1500 Muslim rulers increased and expanded the regional slave trade to Central and East Asian markets. Sunni Muslims sold Shia from Iran, and Iranians bought Hindu slaves in Lahore (present-day Pakistan) or Kabul (present-day Afghanistan).

The Mediterranean slave trade connected southern Europe, the Black Sea, western Asia, and northern Africa in a complex exchange of human beings. Genoese merchants traded slaves from central and eastern Europe over land to France and Spain or through the Crimea to the Middle East. They purchased slaves from Central Asia and sold them in Cyprus, Venice, and Genoa. Muslim traders supplied markets in the southern and eastern Mediterranean with slaves they raided or bought from Turkish and Mongol tribes in Central Asia and with Circassian slaves from the Caucasus region. Through slaves transported over land across the Sahara, these Muslim traders also familiarized Europeans with African slavery.

Slaves, wherever found, were largely laborers. They tended livestock, produced pottery, and dug canals. Male slaves did heavy manual labor in mines or agriculture. In the Arab world slaves usually did not work in large-scale agricultural production, but in Bahrain slaves dove for pearls, and in Basra they labored in date plantations. Rulers benefited from slavery by hiring

➤ SUGAR AND SLAVES IN THE MEDITERRANEAN AND ATLANTIC

During the crusades, European Christians discovered sugarcane in the Levant, and on Cyprus (in the eastern Mediterranean) they encountered slaves working in sugarcane fields. Crusaders brought sugarcane cultivation to Sicily, Corsica, and southern Spain, where the rapid rise in taste for sugar contributed to its large-scale production on plantations. The fourteenth-century Great Plague, however, had reduced the labor supply, and sugar producers quickly adopted as a solution the labor system of slavery that they had encountered on Cyprus. Genoese and Venetian slave traders sold slaves from the Balkans, the Black Sea, and Africa to these sugar producers. Consequently, by the early fifteenth century slavery in the Mediterranean was intricately linked to sugar production. Commercial production of sugarcane contributed to the preservation of slavery as a cheap labor source in the Mediterranean. Although the trade in black Africans gradually increased in the Mediterranean, it was not yet the most important one. That would change during the late fifteenth century when sailors in the employment of Portugal and Spain began to explore the Atlantic Ocean.

Explorers sailing along the West African coast discovered and claimed the Azores, Madeira, Canary, and Cape Verde Islands. Portuguese and Spanish settlers transplanted plantation-style sugar production from the Mediterranean to these

islands and used conquered indigenous people as their labor force. Continuously growing demand for sugar required increased and improved production and a larger labor supply. As natives could no longer fulfill the labor demands, Portuguese and Spanish sugar producers utilized the already well-established trade network with nearby West Africa to tap into the existing source of slavery already familiar to them. Although amounting to no more than 2,000 slaves per year by 1500, sustained demand for improvements in commercial sugar production and location contributed to increased reliance upon enslaved labor from West Africa. When sailors in the employment of Spain and Portugal explored the Caribbean and South America during the late fifteenth and early sixteenth centuries, they brought with them the knowledge of plantation-style sugar production. The Portuguese were the first to transplant it to their possession in the New World, in Brazil, in 1544. Once the labor supply of native peoples dwindled due to high death rates, Spanish and Portuguese settlers quickly adopted the labor system already familiar to them through the East Atlantic Islands, black African slavery. The emphasis of the slave trade now shifted from the Mediterranean to the Atlantic connecting the European, African, and American continents.

—Petra DeWitt

out state-owned or municipal slaves to private individuals. Militaries used slaves as professional soldiers. Wealthy families sought slaves as domestic servants, cooks, gardeners, seamstresses, wet nurses, and watchmen. Noble men bought female slaves as concubines, and both female and male slaves were sent to brothels. Although Islamic law forbade bodily mutilation, eunuchs, or enslaved castrated men who received their operation before arriving at their destinations, were in high demand as guards for harems.

Tax records for Genoa indicate that nearly 8 percent of urban trading center populations on the Italian peninsula were slaves. In the slave markets in the northern Mediterranean world, women outnumbered men because Europeans sought slaves primarily for domestic work. In

fourteenth- and fifteenth-century Florence, Italy, 10 percent of all female servants and wet nurses were slaves.

Laws regulating the rights of slaves varied by region. In fourteenth-century Naples, slaves could own property and sue their masters. Although female slaves could not protect themselves from sexual advances by their male owners, laws in Ragusa and Siena in present-day Italy required that fathers adopt children gained through such unions or provide for their financial well-being. Male slaves in Mediterranean or Islamic commercial centers were usually educated, acted as agents for their owners, and had the opportunity to accumulate property. In Sicily, Greek Orthodox Christian slaves could gain freedom six years after conversion to Latin Christianity. In

the Jewish world, slaves who converted to their owner's religion did not necessarily gain freedom, but a manumitted slave who had converted to Judaism held full membership privileges in the religious community including the right to marry. Under Islamic law, slave marriages with consent of the master were valid, and it was possible for slave women who gave birth to her master's son to gain her freedom. The son born to the slave woman could inherit his father's property if the master's wife had no sons.

Slaves could rise to prominence, but individual success stories such as Balban, a Turk of the Ilbari tribe who was sold into slavery in India in 1232 and rose from personal attendant to sultan in 1265, were rare. Professional slave soldiers, by contrast, could gain wealth, freedom, and power. Mamluks, or white slave soldiers of Turkish or Circassian origin, rose in the ranks to become officers and commanders of Islamic armies. Obedience to the master translated to loyalty to the commander, and once a mamluk gained his freedom for service, the former slave could become a monarch, such as the Mamluk sultans who reigned in Egypt (1250–1517), Syria (1260–1516), and India (1206–1290).

Owning slaves was a sign of status in all societies. After the Black Death epidemic of the mid-fourteenth century, slaves in the Mediterranean world were no longer just a sign of wealth but an economic necessity. Agricultural slavery in southern Europe began to grow at the same time with the advent of sugarcane production and required an increasing number of male slaves. Spanish and Portuguese rulers also entered the slave trade in the thirteenth and fourteenth centuries, as their military reconquest weakened the stronghold of Muslims over the Iberian Peninsula. With the shift of empires, the slave trade in the western Mediterranean changed from Muslims selling Christians and other nonbelievers to buyers in the Islamic and Christian worlds to Christians trading Muslims in Córdoba (Spain), Narbonne (southern France), and Genoa.

Although slavery continued to exist throughout the world after 1500, the institution witnessed important changes. The Mediterranean

slave market changed as the rise of the Ottoman empire in the eastern Mediterranean slowed the flow of slaves from Central Asia and Turks diminished the importance of Arab merchants. Between 1000 and 1500, northern Europeans largely ended the enslavement of fellow Europeans in favor of serfdom and a free peasantry. By contrast, southern Europeans perpetuated slavery in the Mediterranean and through exploration contributed to the establishment, maintenance, or expansion of slavery in new possessions abroad. Successful production of sugarcane for export in the Mediterranean and on various Atlantic islands, such as São Thome off the African coast, encouraged southern Europeans to use African slaves more widely. Spaniards and Portuguese consequently imposed racial purity laws during the 1490s and no longer divided society along religious lines but instead divided it along racial lines. As early as 1518, Charles I (V) of Spain initiated the large-scale transportation of slaves from West Africa to its possessions in the Americas because indigenous people were already dying out. In 1544, the Portuguese set up plantation-style sugar production and slavery in Brazil. Settlers on the North American continent would transform slavery into a race-specific labor system that uprooted millions of Africans.

—Petra DeWitt

Bibliography

- Arbel, Benjamin. "Slave Trade and Slave Labor in Frankish Cyprus (1191–1571)." *Studies in Medieval and Renaissance History* 24 (1993): 149–190.
- Epstein, Steven A. *Speaking of Slavery: Color, Ethnicity and Human Bondage in Italy*. Ithaca, NY: Cornell University Press, 2001.
- Gordon, Marray. *Slavery in the Arab World*. New York: New Amsterdam Books, 1992.
- Lal, K. S. *Muslim Slave System in Medieval India*. New Delhi: Aditya Prakashan, 1994.
- Lewis, Bernard. *Race and Slavery in the Middle East: An Historical Enquiry*. New York: Oxford University Press, 1990.
- Lindsay, Lisa. *Captives as Commodities: The Transatlantic Slave Trade*. Englewood Hills, NJ: Prentice Hall, 2007.

■ Introduction: Medieval Identities—Confronting the Other

In 1352 Abu Abdallah Muhammad ibn Battuta, who had already spent 26 years traveling throughout much of Afro-Eurasia, undertook one last journey. This final adventure took him from his home in Morocco, across the Sahara, to the empire of Mali in the grasslands of western Africa, a land that Islamic geographers characterized as *bilad al-sudan*, the “Land of the Blacks.” Upon his return he narrated his almost three decades of experiences and impressions to a professional writer, who fashioned them into a *Rihla*, a book of travels.

When discussing the people of Mali, who were, like Ibn Battuta, Sunni Muslims, the traveler displayed a mixture of admiration and scorn bordering on disgust. Whereas Ibn Battuta praised the Blacks for their well-run state and honesty, as well as their piety, he disapproved of the freedoms enjoyed by their women and especially their shocking lack of modesty. He was also disgusted by their eating unclean animals, such as carrion, dogs, and donkeys.

A century and a half later, Christopher Columbus composed a letter shortly before arriving back in the Iberian Peninsula in April 1493. In that letter, which was meant for wide circulation, he described the people whom he had encountered in the “Indies.” He reported that he had found no “human monstrosities,” meaning dog-headed persons or people with no heads and eyes set in their chests or similar “monsters,” as several millennia of Greco-Roman, Arab, and European geography had led him and most others to expect in lands yet to be explored. Rather, he found them “well-formed” but timorous in the extreme, quite innocent, and ripe for conversion to Roman Christianity. Those who remained “idolaters” would be prime candidates for slavery.

Such combinations of sentiments were common to many accounts by persons across Afro-Eurasia who, during these five centuries of dramatically increased travel and interchange, met and had dealings with persons of other ethnicities and cultures. Ethnocentrism was rampant, and religious affiliation was often a major

factor in coloring a person’s view of a stranger. But religion was not always a determining factor.

The early-thirteenth-century Mongols were generally tolerant of all religions and those who practiced them but had a deep contempt for urban dwellers. Moreover, perhaps in reaction to traditional Chinese attitudes and policies toward the “barbarian” peoples along the Middle Kingdom’s frontiers, the Mongols harbored a special dislike and distrust of the Chinese. When finally all of China had been conquered and the Yuan dynasty was established, native Chinese who had been subjects of the Southern Song dynasty were placed at the bottom of a four-part class system, well below the Mongols, who naturally stood at the top of the hierarchy, and also beneath the Mongols’ many non-Chinese allies and civil servants, such as Tibetans, Persians, and Uighurs. They even were ranked beneath the Chinese and sinicized non-Chinese who had been subjects of the alien Jin empire that had occupied northern China until 1234 and had become comfortable with Mongol ways because of their proximity to Mongolia and early submission to Mongol rule. Moreover, most Mongol khans in China took great pains to preserve Mongol identity and to prevent their people from being assimilated into Chinese culture.

On their part, many Chinese elites—the literati—retired from public life, refusing to serve Mongol masters. That, however, was not the whole story. There was a pro-Chinese faction within the ruling family that was constantly at odds with those Mongols who sought to maintain the purity of the traditional ways of the steppe. Several of the later Yuan emperors even emulated Chinese ways. To counter such acculturation, one Mongol chancellor, acting in the name of the last of the Yuan emperors, Toghon Temur (r. 1333–1368), established a law forbidding the Chinese from learning Mongolian. In the end, hated Mongol rule was overthrown in 1368 by a nativist revolution.

The narratives of Ibn Battuta and Columbus and the experiences of Chinese and Mongols during the Yuan era combine to illustrate the

complex nature of identity during these five centuries. In a world far more parochial than the twenty-first century, ethnocentrism and religious bias were undoubtedly far more deeply rooted than today, and the alien other was certainly less easily embraced and accepted. Notwithstanding, sufficient anecdotal evidence exists to suggest that there was also room for finding common ground and even for cultural interchange and adaptation.

—Alfred J. Andrea

Was There a Bilad al-Sudan?

The era from 1000 to 1500 CE was one of significant changes in the savanna and forest regions of West Africa. One key component of the social, economic, and political developments going on at the time was the expansion of contact with the predominantly Muslim populations of North Africa. While archaeology, linguistic analysis, and oral histories provide important information about the region during this period, the writings of Islamic geographers, who were among the most learned scholars of their time, are another important source of information. For example, our best description of the political system of Ancient Ghana comes from the late-eleventh-century Spanish Muslim geographer Abu Ubaydallah Al-Bakri. These sources must be used cautiously, however, because they also fail to distinguish between the believable and the outrageously fanciful. Ibn al-Fiqih, for example, wrote that gold grew in the soil and was plucked up each day “like carrots.”

Another troublesome aspect of these early geographic sources was their frequent description of the regions south of the Sahara such as the *Bilad al-Sudan*, Arabic for “Land of the Blacks.” Similarly, the peoples of the savanna and forest regions of West Africa were frequently referred to as “the Sudan.” This is notable in that it is one of the earliest classifications of a people in what would now be considered overtly racial terms. Such terminology is problematic in that it tends to lump a great diversity of African ethnic groups into a single category. This is not unlike the tendency of some modern books to make sweeping generalizations about “Black Africa,”

➤ AL-BAKRI, *THE BOOK OF ROUTES AND REALMS* (1067/1068)

“The city of Ghana consists of two towns situated on a plain. One of these towns, which is inhabited by Muslims, is large and possesses twelve mosques. . . . Around the king’s town are domed buildings and groves and thickets where the sorcerers of these people, men in charge of the religious cult, live. In them too are their idols and the tombs of their kings. The king’s interpreters, the official in charge of his treasury and the majority of his ministers are Muslims. Among the people who follow the king’s religion only he and his heir apparent (who is the son of his sister) may wear sewn clothes. All the other people wear robes of cotton, silk, or brocade, according to their means. . . . [The king] sits in audience or to hear grievances against officials in a domed pavilion around which stand ten horses covered with gold-embroidered materials. Behind the king stand ten pages holding shields and swords decorated with gold, and on his right are the sons of the [vassal] kings of his country, wearing splendid garments and their hair plaited with gold. The governor of the city sits on the ground before the king and around him are ministers seated likewise.”

—Jonathan T. Reynolds

Source

N. Levtzion and J. F. P. Hopkins, eds., *Corpus of Early Arabic Sources for West African History* (Princeton, NJ: Marcus Wiener, 2000), 79–80.

something that makes scholars of Africa very uneasy.

Notably, many of these early Arabic scholars also described the Sudan in what today would be considered racist ways. The Sudan are often characterized as ugly, violent, dishonest, and sexually immoral. In part, these negative descriptions of the peoples of West Africa may be attributed to the fact that what is unfamiliar is often feared, demonized, or just dismissed as inferior. Furthermore, since Islam at the time permitted the enslavement of so-called pagans, there was a need to dehumanize those who might be enslaved. Such characterizations were also apparent during the era of slavery in the Americas.

By around 1500, however, the term “Bilad al-Sudan” was being used less often. Rather, as savanna populations converted to Islam, the region was characterized as just another part of the Dar al-Islam (Abode of Peace). This switch in terminology reflects the changing attitudes of Muslim scholars as they came to know more about West Africa and the people who lived there.

So, was there a Bilad al-Sudan? The answer is, sort of. Such a place existed in the minds of Islamic scholars and in the books they wrote, and the term lives on in the name of the modern nation of Sudan. In the final analysis, however, this is another example of the fact that the way people identify and name a region or culture often tells us more about the people who are doing the naming than about what they are trying to describe with a convenient tag.

—Jonathan T. Reynolds

Bibliography

Levtzion, N., and J. F. P. Hopkins, eds. *Corpus of Early Arabic Sources for West African History*. Princeton, NJ: Marcus Wiener, 2000.

The Copts

For the Copts, the largest Christian community of Egypt, the years between 1000 and 1500 represented a period in which they struggled to maintain a coherent sense of identity while increasingly relinquishing their influence in public life, having long since resigned themselves to their status as a demographic minority within a permanent Islamic polity. Even so, their fate as a community proved to be inextricably tied to wider Egyptian society during these centuries. Sociopolitical stability for the region often brought them the same; times of crisis—whether famine, crusades, or fiscal difficulties—proved to be dangerous for their collective success and safety. Their role in Egyptian society was also far from negligible. Many successive Muslim rulers took interest in their fortunes, for better or worse, and the Copts themselves managed to find meaning and renewal in the most unexpected times and places of this difficult age.

From 969 to 1171 Egypt was ruled by a small sect of Ismaili Shia known as the Fatimids. From

the time it captured Egypt from its Sunni Abbasid governor, this dynasty maintained an unusually amicable relationship with its non-Muslim constituency, largely to bolster public support from any community other than the Sunni majority. It was by no means a period without its dark days for the Copts, however: the mercurial caliph al-Hakim (r. 996–1021), for example, ordered in 1009 a harsh enforcement of lapsed restrictions on non-Muslims throughout his lands. Copts were ordered to wear only certain clothing styles and colors, wear heavy wooden crosses around the neck, and ride only donkeys (i.e., only Muslims could ride horses). This pressure eventually culminated in the caliph’s order of the destruction of many churches and monasteries around the country, as well as the conversion of masses of Christians under duress. With equal unpredictability, al-Hakim then repealed his orders, paid for and in some cases personally monitored the reconstruction of many of the targeted sacred structures, and even made the unusual move of granting permission for many of the forced converts to Islam to revert to Coptic Christianity. It is also worth noting that all of Egypt, particular greater Cairo, suffered under his rule. His occasional social crackdowns, for example, were reported to include a ban on women leaving their homes without caliphal permission and an order to slaughter every dog in the city.

The reign of al-Hakim and the benign approach of the Fatimid state during much of the rest of its history were representative of just how varied the experience of the Copts throughout the period of medieval Islamic rule could be, and the ensuing years of the Ayyubid dynasty (1171–1250) proved just as unpredictable. Its founder, the famed general and reconqueror of Jerusalem Salah al-Din (Saladin), began his time in office by removing all non-Muslims from government posts, the Copts chief among them, but he quickly reinstated them once the point of his authority had been made. The crusader attacks of the period, meanwhile, also led to the some of the harshest conditions of the era for the Coptic community. As successive waves of invasions by the Franks turned to the Nile Delta beginning in 1218, suspicion toward Egyptian Christians led the otherwise benign ruler al-Adil

(r. 1207–1218) to place pressure on Copts and other local Christians. This included his order to destroy the Church of St. Mark in Alexandria, a site dear to the heart of Coptic Orthodoxy in tradition if not practice by then, for the evangelist Mark was believed to have been Alexandria's first Christian bishop. Ironically, the Copts suffered greatly during the so-called Fifth Crusade (1217–1221) when large numbers of them died through starvation and combat wounds due to crusader sieges.

The Copts managed to overcome periodic Ayyubid pressures in the thirteenth century, and they enjoyed a brief cultural renaissance in the 1220s and 1230s during which time a weak (and largely vacant) patriarchate contributed to their channeling resources, energy, clerical interest, and lay attention to artistic and intellectual pursuits. This included unique and colorful iconographic projects at the monastery of St. Anthony by the Red Sea (including images of Roman equestrian saints such as St. Mercurius, who are depicted donning the distinct gear of thirteenth-century Turkish cavalry) and that of the Syrians in Wadi al-Natrun, as well as the popularization of Arabic-Coptic grammars to revitalize knowledge of the Coptic language, which had fallen completely from popular use and significantly from liturgical use by that time.

By the time the Mamluk dynasty (1250–1517) seized control of Egypt and turned its attention to decades of resistance to the last crusades, the remnants of the crusader states, and the imminent Mongol threat to the north, the Coptic mini-renaissance had largely faded back into status quo. In fact, it was under the Mamluks that the Copts faced their most devastating communal losses to repression and subsequent conversion. The ruling classes of the Bahri Mamluks (r. 1250–1382) were entirely of Central Asian origin and had little experience with or interest in local non-Muslims. Thus, when harsh economic conditions struck Egypt in the mid-fourteenth century and unrest on the part of the Muslim majority turned in part to violence against their non-Muslim neighbors, the Mamluk rulers were decidedly slow to act upon their official obligations to protect their *dhimmi* (tolerated non-Muslim) subjects. It is now widely accepted by historians that when the dust settled, the Copts

➤ BADR AL-JAMALI

The Fatimid era maintained a general atmosphere of tolerance toward the Copts, sometimes leading to surprising encounters. For example, a half century of political disarray followed the death of al-Hakim in 1021, and only the intervention of an imported Armenian army under the leadership of the general and vizier Badr al-Jamali (r. 1074–1094) restored stable authority to the dynasty. The general was a convert from Armenian Christianity, and apart from the military and political prestige that he retained until his death, he also affected the religious balance of the country for a time. Thousands of Armenian Christians flooded into the country behind his army and settled in the vicinity of Greater Cairo, and he also demonstrated surprising respect for local Coptic traditions. The *History of the Patriarchs of the Egyptian Church* claims that in 1086 he personally convened a meeting with the Coptic patriarch and bishops in his palace garden after news reached him of deep divisions within the Church and there ordered them to return two weeks hence with a new compendium of canon, or church, law. The chronicle mentions that following the meeting, the general ordered the execution of a wayward layman who reportedly mocked and humiliated the patriarch, explaining that there was no excuse for disrespect of the successor of St. Mark. When the bishops returned with this collection of canons at the appointed time, Badr al-Jamali is reported to then have given a rather Christian-like sermon, explaining that he ordered the canons so that the Copts could be reminded of their own traditions and convicted by their guilty consciences of their need for unity in the process. His leadership, it appears, extended to spiritual as well as military and administrative affairs.

—Kurt J. Werthmuller

had undergone their worst-yet wave of mass conversion to Islam, leaving them as a greatly reduced minority.

—Kurt J. Werthmuller

Bibliography

Bolman, Elisabeth, ed., and Patrick Godeau, photo. *Monastic Visions: Wall Paintings in the Monastery of St. Antony at the Red Sea*. New Haven and London: Yale University Press, 2002.

Ibn al-Mukaffa, Sawirus, Bishop of al-Asmunin. *History of the Patriarchs of the Egyptian Church, Known as the History of the Holy Church*, Vol. 2, pt. 2, *Kbaël III-Senouti II (A.D. 880–1066)*. Translated and annotated by Aziz Suryal Atiya, Yassa 'Abd al-Masih, and O. H. E. Burmester. Cairo: Société d'archéologie Copte, 1948.

Ibn al-Mukaffa, Sawirus, Bishop of al-Asmunin. *History of the Patriarchs of the Egyptian Church, Known as the History of the Holy Church*, Vol. 4, pt. 2, *Cyril III Ibn Laklak (A.D. 1216–1243)*. Translated and edited by Antoine Khater and O. H. E. Burmester. Cairo: Publications de la Société d'Archéologie Copte, 1974.

Little, Donald P. "Coptic Conversion to Islam under the Bahri Mamluks, 692–755/1293–1354." *Bulletin of the School of Oriental and African Studies, University of London* 39(3) (1976): 552–569.

Ethnic-Cultural Diversity amid Religious Identity and Unity in Dar al-Islam

The Quran provides the basis for the unity of the *umma*, or Muslim community, that makes up Dar al-Islam (or lands of Islam under Islamic rule). Simultaneously, it supports ethnic, cultural, and linguistic diversity, as reflected in the passages "O, humankind! We . . . made you into nations and tribes so that you may know each other" (Sura 49:13) and "Among His signs are . . . the variations in your languages and your colors" (Sura 30:22).

Between 1000 and 1500 CE, Islam continued as the dominant religion throughout most of the realms stretching from far western India northward into Central Asia and across Persia, the Arab Middle East, and Berber North Africa, as well as portions of the Iberian Peninsula (until 1492). During these 500 years, Islam also made vigorous inroads into central and eastern India, the coastal regions of Swahili Africa and Africa's western Sudan, the western and northern regions of interior China, and China's southern coastal area, with some Muslim scholars suggesting penetration as far east as Korea by the seventh or eighth century. Additionally, Islam was moving vigorously into the coastal areas of Southeast Asia. Both among the various peoples of these already-established domains of Dar al-Islam and among newly Islamicized regions, the deli-

cate balance between ethnic and cultural diversity and religious identity and unity manifested itself.

After initial advances into Azerbaijan and surrounding regions, Islam penetrated into the more northern areas of the Caucasus in the eleventh and twelfth centuries. Among the myriad Indo-European, Indo-Iranian, and Turkic-based local dialects there, Arabic arose to replace such former trade languages as Aramaic, Pahlavi, and Albanian, thus producing a shift in cultural expression among the region's newly converted peoples, with Arabic serving thereafter as the primary literary and religious language. But here too a unique form of Caucasian Islamic devotion grew, which proved culturally distinct from the Bulgarian, Turkic Central Asian, Persian, Arab Middle Eastern, and other forms of Islam surrounding them.

It was likewise from out of newly Islamicized Turkic Central Asian groups in this period that four of the greatest Muslim writers arose to lay the foundations for a strong Turkic linguistic and cultural-based tradition within Islam. In the heartland of the Qaraqanid khanate (or Karakanid: 845–1212), Yusuf Balasaguni produced his famous *Kutadgu Bilig (Wisdom of Royal Glory)* in his own Turkic dialect in 1069, with its strong allusions to pre-Islamic Turkic cultural and political traditions. Mahmud Kashgari, a Turkic Muslim from Kashgar in the eastern reaches of the Qaraqanid realm, composed the *Diwan lughat al-Turk (Dictionary of Turkic Languages)* in 1076, affirming the high value of the Turkic mother tongues. Among the Qipchaq (Kipchak) Turks, Kozha Akhmet Yasawi, founder of the Yasawi Sufi Order of Central Asia, bequeathed his *Diwani Khikmet (Book of Wisdom)* in the mid-twelfth century as he spread Sufi Islamic devotion among the predominantly nomadic Turks of the Qipchaq steppe. Several centuries later the Naqshbandian Sufi writer Ali Shar Nawai (1441–1501), who earned the title "Shakespeare of Central Asia" from later admiring generations, produced one of the greatest arrays of Turkic literature yet to appear, all written in his native Chagatay dialect, the precursor of modern Uzbek.

Meanwhile, the newly converted Seljuk and Ghaznavid Turks, who had migrated into and taken over reign of the Arabo-Persian Middle East,

had both embraced and even promoted Persian, along with Arabic, as a genuine Muslim language. Nonetheless, it was the earlier Samanid Persian state (819–999) in the heart of Central Asia that played the most significant role in supporting the development of a linguistically and culturally distinct Persian form of Islamic devotion. Under the Samanids, Firdowsi (934–1026) wrote the *Shahnama* (*Book of Kings*) in Persian with its strong allusions to pre-Islamic Persian cultural and political traditions. Included within the great Persian Islamic literary heritage that followed was the impressive commentary of Mibudi and Jalaladin Rumi's (1207–1273) masterpiece, the *Mathnaw* (or *Masnawi: Spiritual Couplets*), which aimed to lift out the inner spiritual meaning of the Quran.

Developments of a uniquely Indian-laced Islamic identity began to take clearer shape nearly two centuries after the initial Ghaznavid invasion of the Punjab and northwest India, which occurred in the early eleventh century. Building upon the initial Ghaznavid conquest, Turko-Afghan military units of mamluks (slave soldiers) took over the Ghaznavid domains and extended their reach deeper into Indian territory late in the twelfth century. By the early fourteenth century they had moved into the heartland of central India. After an initial two centuries or so of religious persecution of indigenous Indian traditions, relations between Muslims and Hindus began to achieve a greater degree of coexistence, yielding a cross-pollination of Arabo-Turko-Persian Islamic and Indian art and architecture as well as poetry and other forms of literature. This was in large part based in a cross-influencing and even merging of mystic spiritual paths, particularly the Sufi Islamic and Bhakti Hindu forms of affective, or emotional, devotion.

Farther east, traditional Islamic and Chinese calligraphy as well as other art forms interacted to develop a unique synthesis, while Chinese Muslim participation in all levels of Chinese life was evidenced. Expressions of a distinctly Chinese form of Muslim devotion eventually inspired Wang Taiyu to produce an explanation of Islam in largely Confucian terms in the seventeenth century.

The first records of Dar al-Islam's penetration into Southeast Asia appear in the thirteenth

➤ THE KURDS

The Kurds—culturally, linguistically, and even religiously—have long been one of the most singular people of the Islamic Middle East. They have for centuries inhabited Kurdistan (“Land of the Kurds”), though today their land is an unrecognized nation divided up among four other nations. Kurdistan is predominated by the high Taurus and Zagros mountain ranges intermixed with plains stretching from present-day western Turkey across northern Iraq and Iran. Kurds also reside in Syria.

Kurdish is distantly related to Persian, of which there are at least three dialects: Kurmanji among the Kurds of Turkey, Behdini in Iraq, and Sorani in Iraq and Iran. Kurds have generally identified themselves as Sunni Muslims, though historically there has been and remains a significant Shia and even Christian presence among them, not to mention the various Sufi orders, most notably the Naqshbandi, which was formed in the late fourteenth century, and the Mevlavi, or Whirling Dervishes, which traces its origins to thirteenth-century Konya and the mystical poet Jalauddin al-Rumi (1207–1273). Medieval Kurds also had their Jewish minorities. Yazidism, a religion with origins shrouded in mystery but generally considered an amalgam of Zoroastrian, Jewish, Christian, Manichean, and Islamic elements, has historically been another minor faith among the Kurds.

The most prominent figure of medieval Kurdish history was Sultan Salah ad-Din Yusuf ibn Ayyub (1138–1193), known in the West as Saladin, a champion of Sunni orthodoxy and founder of the Ayyubid dynasty that ruled Egypt from 1174 to 1250 and Syria from 1176 to 1260.

—R. Charles Weller

century, with Sufi preachers from the Arabian Peninsula, as well as the Indian subcontinent, playing the predominant role in its spread. They translated classic Arabic and Persian works into Malay, aiding significantly in the development of Malay as a “Muslim language” and, with it, a distinctly Malay form of Islamic devotion. Islam also found its way to the Javanese islands around the fifteenth century, though the Muslim presence in Java at that time seems mainly to have consisted of Chinese who migrated there. But

Persian traces are to be found as well, with both mixing with indigenous elements to give Javanese Islam its own unique ethnic-cultural blend.

In sub-Saharan Africa the influx of new African peoples into Dar al-Islam from the eleventh century onward brought with it still other ethnic-cultural forms of expression of the faith. Included among these new groups were the peoples of Ghana and Mali, as well as Songhai and Hausa. Within Mali the city of Timbuktu became a center of Islamic learning, contributing not only to the broader heritage of Dar al-Islam but also to the development of distinctly Black African forms of Islamic expression.

Amid this ethnic-cultural diversity within Dar al-Islam, the Arabic language continued to flourish as a primary base, helping to provide ongoing religious unity. Famous Muslim scholars of various ethnic-cultural as well as political heritages did their teaching and produced their greatest works in Arabic. These included the Turkic scholar al-Farabi (870–950) from the southern region of present-day Kazakhstan; Ibn Sina (980–1037), whose roots were in the Turko-Persian heartland of Bukhara in what is now Uzbekistan; the Muslim traveler al-Biruni (973–1048) from the northwest regions of that same modern state; the Persian Sufi scholar al-Ghazali (1058–1111); Ibn Rushd (1126–1198), residing in Andalusian Cordova; the Persian courtier and historian Rashid ad-Din (1247–1318); and the Moroccan world traveler Ibn Battuta (1304–1377).

Ibn Battuta's life and adventures highlight another way in which a common Islamic religious identity and unity were fostered in this postclassical period. His extensive travels throughout Dar al-Islam were made successful in large part by the Muslim heritage that he and his many ethnically, culturally, and politically diverse hosts shared. The same can be said of the travels in this period undertaken by al-Biruni and others.

The annual hajj, or pilgrimage, to Mecca made by thousands of Muslims each year also bears witness to the strong sense of religious identity and unity among Muslims. The hajj of the king of Mali, Mansa Musa, in 1324–1325 so captured the attention of the Muslim world that his journey is still recounted to this day as one of the most memorable in Islamic history.

—R. Charles Weller

Bibliography

- Ahmed, Nazeer. *Islam in Global History: From the Death of the Prophet Mubammed to the First World War*. Concord, CA: American Institute of Islamic History and Culture, 2000.
- Berkey, Jonathan P. *The Formation of Islam: Religion and Society in the Near East, 600–1800*. Cambridge: Cambridge University Press, 2003.
- Canfield, Robert L., ed. *Turko-Persia in Historical Perspective*. Cambridge: Cambridge University Press, 2002.
- Nasr, Seyyed Hossein. *Islam: Religion, History and Civilization*. San Francisco: Harper San Francisco, 2003.
- Robinson, Francis, ed. *The Cambridge Illustrated History of the Islamic World*. Cambridge: Cambridge University Press, 1996.
- Ruthven, Malise. *Historical Atlas of Islam*. Cambridge: Harvard University Press, 2004.

Hindu and Muslim Cross-Fertilization in India

The 1,000-year history of Islam in India has often been marked by confrontation, antagonism, and even open warfare with indigenous Hinduism. Theologically, it would be difficult to find two religions more different. Yet in the Indian environment, different forms and attitudes developed, and Hinduism under challenge reacted and reshaped itself like an oyster that encounters a splinter.

Islam first reached India via Arab and Persian merchants who landed along the coast of the Arabian Sea during the seventh century and accepted Indian hospitality similar to that of their pre-Muslim predecessors. Unfortunately, the role of Muslims in the subcontinent best remembered is that of Arab conquerors in eighth-century Sind (in present-day Pakistan) and temple plunderers and iconoclastic destroyers, most famously the Turkic Mahmud of Ghazni in the eleventh century. Conquering bands of Muslim Turks and Afghans settled in as sultans of Delhi in 1205.

Alien warrior bands could not closely administer a widespread settled populace, so they began with a garrison state in which traditional local leaders continued in place, paid the taxes, and genuflected toward the seat of power in the fortified garrison. However, apartheid could not last; rude warriors from the hills needed missing

pieces of society: merchants, moneylenders, artisans, lawyers, clerks, accountants, and so on. In this way the new rulers' constant antagonism with the massed Hindus soon eased into an acceptance of them socially as *dhimmis* (tolerated unbelievers), however much Islamic theologians might object.

Within a short period, significant minorities of Indians had converted to Islam, mostly from lower castes, attracted by Muslim ideals of egalitarianism. Sufis had a major role in these conversions. These Muslim preachers and mystics went about singing of the glories of Allah and the promises of his Holy Quran. The devotion and compassion of the Sufis did more to build India's Muslim community than the political pressures of sultans or the formal prayer rituals of imams.

However, the vast majority of Hindus stayed true to their traditional faith and lifestyle. Many reacted by joining sects of the emotional bhakti (devotional Hindu) movement, shouting, singing, and perhaps even dancing in adoration of Krishna, Shiva, or some other personification of the godhead. Bhakti saints such as Chaitanya and Mirabai and poets such as Tulsidas put new fervor and zeal into their old faith.

By 1500 Islam had penetrated most of the South Asian subcontinent and created distinctive communities in the south as well as the north. If many Indian Muslims were poor peasants, many others were proud and powerful elites. Most Muslims of India, like most elsewhere, were Sunni, but there were notable Shia communities in Lucknow in the north, Bijapur in the south, and the trading ports of Gujarat and Sind in the northwest.

Separate communities of Hindus and Muslims usually found ways to get along. Only if some incident occurred or something upset the status quo might there be a communal quarrel or even a riot. Friendships might cross communal lines, but dining and marriage arrangements hardly ever crossed communal lines, despite fictional depictions of them.

Nonetheless, one can see the gradual development of a composite Hindustani culture. Well-to-do Hindus began secluding their wives and daughters as Muslims did. Muslim parents began arranging their children's marriages (or at least their engagements) in childhood. Hindus began appreciating the roast meat or vegetable dishes

➤ NAMDEV AND KABIR

The attractions of Islam presented a challenge to the older religions of South Asia. How could Hindu leaders combat the relatively simple, egalitarian, and dynamic preachings of Islam, especially the Muslim sufis? Some tried to strengthen the appeal of Hinduism through the bhakti, or devotional, approach, emphasizing personal ties to a specific aspect of the divine. An example is Namdev, a fourteenth-century poet-preacher who composed many hymns in the Marathi language of west-central India. His hope for salvation was Vishnu, whom he called "Vitthal" or "Vithoba." He was one of a series of bhakti saints who helped form the Maratha popular and regional identity.

Kabir (1440–1518) took a more radical turn. A Banares weaver of uncertain origin, Kabir scorned the use of priests, prayer rituals, and sacred texts. He asked, "What is a Hindu? What is a Turk? Both inhabit the same earth. One reads the Veda, and the other the Quran and the Khutba. . . . [B]oth are misled, none has found God." Caste distinctions and idol worship were frequent targets of his sharp wit. Being against sects, he refused to found one, but his followers, the Kabir-panthis, wrote down his songs and promulgated his ideas.

—Edwin Hirschmann

that the hill folk had brought into India (along with syrupy sweets), while the newcomers learned the creative use of robust spices. North Indian men began wearing trousers (i.e., pantaloons, pajamas, and jodhpurs) instead of wrap-arounds, such as the dhoti.

Hindustani music presents clearer evidence of how these peoples bridged the communal gap. Here the ragas (themes) and their variations, the tala rhythmic counts, and the moods show no earmarks of Hindu or Muslim. The kathak dance style of the North Indian courts is also used to present Hindu-based pieces. Monumental architecture might be Hindu or Muslim (i.e., Central Asian) in style, but not until Mughal times (of the early sixteenth century through the early nineteenth century) was there an adroit blending of the two.

The most intricate blending came in the field of language. The Muslim invaders, with their

capital at Delhi, picked up enough of the local dialect (called Khariboli) to communicate with area people in bazaar Hindustani or Zaaban-i-Urdu, the speech of the camp. The official language of administration was always Persian, as it was for refined literature. Not until the eighteenth century were there significant efforts to develop Urdu as a literary language. It used the Perso-Arabic script and borrowed abstract words from Persian. This made it largely a Muslim product and its use a source of Muslim pride.

Out in the *mufasssil* (grassroots), however, theological boundaries were sometimes lost. An anthropologist in the late twentieth century found a remote South Indian village where no Muslims lived, but a centuries-old grave with a Muslim name was regularly decorated and venerated by the villagers. Apparently, a wandering Sufi had settled there and attracted the villagers with his personality and his vision of the divine, and they did not associate him with “Hindu” or “Muslim,” if they even knew those names.

—Edwin Hirschmann

Bibliography

- Char, S. V. Desika, *Hinduism and Islam in India*. Princeton, NJ: Markus Wiener, 1993.
- De Bary, Wm. Theodore, ed. *Sources of Indian Tradition*. New York: Columbia University Press, 1958.
- Ikram, S. M. *Muslim Civilization in India*. New York: Columbia University Press, 1964.
- Lal, K. S. *Early Muslims in India*. New Delhi: Books and Books, 1984.
- Wink, Andre. *Al-Hind: The Making of the Indo-Islamic World*. Leiden: E. J. Brill, 1990.

The Armenians in Late Medieval Society

From Flanders to China, the Armenians were an often-silent yet ubiquitous presence in late medieval life, maintaining a strong commercial profile and religious presence in the East and West before, during, and after the Pax Mongolica (ca. 1250–1368).

After the year 1100, Armenians were the dominant presence in two areas of southwestern Asia: Greater Armenia, their original homeland located in the mountainous Caucasus region between the Caspian Sea and the Euphrates River, and Lesser (or Cilician) Armenia in the

southeast corner of Anatolia (modern Asiatic Turkey), which migrants from Greater Armenia colonized in the second half of the eleventh century. In addition to these two Armenias, they established diaspora communities of merchants and artisans throughout much of the Afro-Eurasia, especially along its major trade routes. Despite their diffusion, Armenians resisted amalgamation into their host cultures because of their strong sense of ethnic identity; their distinctive Indo-European language, which had a rich tradition of secular and religious literature dating back to the early fifth century; and their Christian faith, based on an autonomous church that had separated from Constantinople and Rome around the mid-fifth century.

Armenia was recognized in the West as the first Christian state (the traditional date is 301), and the religious devotion of its people drew widespread respect despite doctrinal differences. Matthew Paris in his *Chronica Majora* (*Major Chronicles*) reported on some Armenian clergy visiting St. Ives in England in 1250: “These brethren were of most honest life and amazing abstinence, being always in prayer, with rugged, honest faces and beards. The one who died was their leader and master, George by name, and he is thought to have been a most holy man and a bishop; he now began to perform miracles.”

Initially, the violent disruptions occasioned by the first Mongol incursions of the early thirteenth century into historically Armenian territories sent Armenian monks, such as George and his brethren, to the West for help, but within a very short time they accepted the challenge of ministering to the Mongols. At the Mongol *ordos* (camps), Armenian clergy were welcomed at the highest levels since many of the Mongol leaders’ wives were Nestorian (Assyrian) Christians from birth. William of Rubruck, Franciscan envoy to the Mongols, noted with some envy in 1255 that the Armenians had a beautifully decorated church in Karakorum, the original Mongol capital, where the Great Khan’s wife often worshipped. With the arrival of Latin Christian missionaries in Central and East Asia, Armenian merchants living in far-flung colonies throughout the Middle East and China supported them spiritually and financially. As noted in the book *Christians in China before the Year 1550*, Fra Andreas da Perugia (An-

drew of Perugia), a Franciscan bishop in Mongol China, reported back to the West in 1326 from Zaitun (present-day Quanzhou): “[A] wealthy Armenian lady built a sufficiently beautiful and large church, which indeed, after it had been made a cathedral by the Archbishop, she gave of her own will while she was living, and left at death with adequate endowment.”

From the first years of the crusades, Armenians based in Cilicia forged military and trading partnerships with the crusader states and the Genoese and Venetian merchants who had now become a dominant factor in the eastern Mediterranean. Reciprocal trade agreements with the Italians in the Levant, which the Armenians cemented during the thirteenth century by intermarriage, gave rise to vibrant Armenian merchant colonies in Italy and other parts of Europe as well, particularly in Flanders under the dukes of Burgundy. Armenians are first mentioned in Bruges in the mid-fourteenth century, where they were given the right to sell carpets on the steps in front of St. Donation’s Church. In Italy they had flourishing colonies in Perugia, Bologna, Venice, and elsewhere. Several superb yet little-known Armenian illuminated manuscripts were produced in Italy: one from a scriptorium in Bologna dated to the 1260s presages the work of Cimabue and Duccio; another was produced in Perugia in 1331. Both are now in the Matenadaran Library in Yerevan, Armenia.

—Lauren Arnold

Bibliography

- Bournoutian, George A. *A Concise History of the Armenian People*. Costa Mesa, CA: Mazda, 2002.
- Chahin, M. *The Kingdom of Armenia*. New York: Dorset, 1987.
- Ghazarian, Jacob G. *The Armenian Kingdom in Cilicia during the Crusades*. Richmond, UK: Curzon, 2000.
- Hewson, Robert H. *Armenia: A Historical Atlas*. Chicago: University of Chicago Press, 2001.
- Korkhmazian, Emma, Irinia Drampian, and Gravard Hakopian. *Armenian Miniatures of the 13th and 14th Centuries from the Matenadaran Collection Yerevan*. Translated from the Russian by Ashkhen Mikoyan. Leningrad: Aurora Art Publishers, 1984.
- Lang, David Marshall. *Armenia: Cradle of Civilization*. London: Allen and Unwin, 1970.



Armenian castle of Silifke dominates the hill above the Silifke River in Cilicia, along the coast of present-day southern Turkey. (Alfred J. Andrea)

Moule, Arthur C. *Christians in China before the Year 1550*. London: Society for Promoting Christian Knowledge, 1930.

Vaughn, Richard, ed. *The Illustrated Chronicles of Matthew Paris: Observations of Thirteenth-Century Life*. Cambridge, UK: Corpus Christi College, 1993.

Ethnic Classification and Hierarchy during the Yuan Era

China’s Yuan dynasty (1279–1368) presided over an era known as China’s Mongol period because it was at this time that Mongol tribes, previously unified as an army under the leadership of Chinggis Khan (ca. 1162–1227), defeated the armies of China and extended their empire across eastern Asia. Khubilai Khan (1215–1294), a grandson of Chinggis Khan, became the first Mongol to rule over all of China with his defeat of the last Song emperor in 1279. While adapting to local customs was a key factor in how the Mongols attempted to integrate ethnically and culturally with the people of the places they had conquered, their success at integration is debatable.

Having lived in northern China during his childhood, Khubilai Khan was highly influenced by the teachings of Chinese Confucians and Buddhists. Even as his armies were driving south against the last remnants of Song resistance, Khubilai began construction in 1266 of his new capital, Dadu, at the site of present-day Beijing

➤ XU HENG AND THE PROMOTION OF CHINESE NEO-CONFUCIANISM UNDER MONGOL RULE

As ruler of China's Mongol period, Khubilai Khan attempted to appeal to a wide variety of ethnic, ideological, and religious groups. These included Tibetan and Chinese Buddhist monks, Neo-Confucian scholars, Muslim communities, and even Christians, such as Marco Polo. Khubilai made certain to appoint to his administration powerful Chinese scholars such as Xu Heng (1209–1281), a strong proponent of Neo-Confucian ideology who was known as one of the greatest thinkers of his time. Although Xu retired briefly from his position under Khubilai after a scandal in 1262, he returned and by 1267 had been appointed chancellor of education at the Imperial College. There he utilized the main books of Neo-Confucianism to teach many important figures, including Mongols and Central Asians. Through his teaching, Xu therefore found an avenue through which he could promote Neo-Confucian ideology within prominent political circles of the Yuan empire.

—Anna Hennessey

and claimed the title of Chinese emperor in 1271, giving his dynasty not a Mongol name but instead the Chinese name: Yuan. The title translates as “Great Originator,” a term that appears in the classic text the *Book of Changes*, where it refers to the “origins of the universe” or the “original creative force.”

Not only did Khubilai choose a Chinese dynastic name, but the Mongol ruler also built up his government by employing Chinese Neo-Confucian scholars as advisors who would educate Mongol officials about the cultural standards and practices of the Chinese. Important scholar-officials promoted Neo-Confucianism during China's Song dynasty (960–1279) and had already begun to revolutionize China's systems of education, philosophy, and government ahead of the Mongol invasions. By adopting this new philosophy and incorporating its precepts into their own form of government, the Mongols attempted to strengthen a growing intellectual trend that was Chinese and not Mongol at its root. Given

that internal conflicts arose within the administration, leading to events such as the disloyalty and subsequent execution in 1262 of the Chinese scholar-official Wang Wentong, the success of this attempt at political integration is not clear.

Prior to the Mongol invasions, the Chinese had sustained a long historical tradition of fighting off foreign invaders in their attempts at maintaining their own ethnic identity, an identity often termed “Han.” During his reign, Khubilai tried to construct a three- and later four-tiered ethnic hierarchy in China, placing Mongols at the top, Uighurs and other western and Central Asians next, followed by the northern Chinese and various sinicized peoples of the north, such as the Jurchen (Ruzhen), and lastly by the southern Chinese. The members of the two Chinese groups were excluded from a number of the most important civil offices. Thus, although the Mongols' embracement of a Neo-Confucian agenda within the sphere of politics may have played a part in the path to the intellectual reformation that many of these Chinese reformers themselves so desired, many Chinese later looked back on the Yuan era as a time of hated foreign domination.

—Anna Hennessey

Bibliography

- Chan, Hok-lam, and William Theodore De Bary. *Yuan Thought: Chinese Thought and Religion under the Mongols*. New York: Columbia University Press, 1982.
- Langlois, John D., Jr. *China under Mongol Rule*. Princeton, NJ: Princeton University Press, 1981.
- Rossabi, Morris. “Khubilai Khan: His Life and Times.” Berkeley, Los Angeles, and London: University of California Press, 1988.
- Rossabi, Morris. “The Mongols and Their Legacy.” In *The Legacy of Genghis Khan*, edited by Linda Komaroff and Stefano Carboni. New York: Metropolitan Museum of Art, 2002.
- Walton, Linda A. *Academies and Society in Southern Sung China*. Honolulu: University of Hawaii Press, 1999.

Europeans or Christians? The Medieval European Sense of Self

“Europe” as the name of a continent is ancient, having been invented by Greek geographers who

conceived of a world that had three continents of equal size: Asia, Africa, and Europe. Nevertheless, the idea of Europe as we understand it today—a cultural entity that is the foundation stone of Western civilization—held no meaning for the Greeks or Romans, and this remained true throughout most of the so-called Middle Ages. In the oldest known European map of Europe, made by a twelfth-century monk of Saint-Omer in Flanders, Europe was only a place; there was still no notion of European civilization.

Those who lived in this land called Europe had a sense of unique self, but it was a self defined by religious identity. Between the sixth and sixteenth centuries CE—the period we now know as the Middle Ages—most of the people inhabiting the western end of the Eurasian land-mass came to identify themselves as Christians, especially as they came into increasing contact with non-Christians, and it was this sense of shared identity that drove them to acknowledge the spiritual authority of the pope and to embark on medieval Europe's greatest foreign adventure, the crusades. A notion of a common Christian identity, however, did not negate ethnic pride. By the twelfth century, French speakers in the lands around Paris, for example, thought of themselves as belonging to "Sweet France," which they assumed was culturally richer (and more Christian) than any other area of Christendom. A twelfth-century English historian and monk, William of Malmesbury, while celebrating the common effort of Western, or Latin, Christians in the First Crusade, also noted that its participants included Norwegians, who left behind their raw fish, and Scotsmen, who "abandoned their fellowship with lice." Negative stereotypes of other ethnicities that emerged from an inflated sense of one's own ethnic superiority were not a modern invention.

Toward the end of the Middle Ages, somewhere between the thirteenth and sixteenth centuries, the idea of Europe as more than just a geographic expression emerged and began to coincide with that of Christianity. Ironically, the word "European" (L. *Europaeus*) was first used to describe an inhabitant of the West by Aeneas Sylvius Piccolomini, the future Pope Pius II (r. 1458–1464), in a treatise he wrote calling for a new crusade against the Turks. In it Piccolomini

clearly identified Europe with what he referred to as the "Christian Republic."

In the following centuries as Europe was transformed by the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment, a self-conscious Christian identity receded in the minds of many intellectuals, and it became common for writers to think of themselves and their culture as "European." This was especially true as they became increasingly aware of the older and exceedingly sophisticated cultures of East and South Asia.

It must be kept in mind, however, that the vast majority of people remained poor and illiterate and that it was not until after the French Revolution, industrialization, and the age of colonialism, that is, well into the nineteenth century, that the average European had any sense that he or she was "European."

—David Blanks

Bibliography

- Delanty, Gerard. *Inventing Europe: Idea, Identity, Reality*. New York: St. Martin's, 1995.
- Geary, Patrick. *The Myth of Nations: The Medieval Origins of Europe*. Princeton, NJ: Princeton University Press, 2002.

The Jew as Other in Catholic Europe

As the eleventh century dawned, Jews were fairly well assimilated into Western Europe's culture. However, as the power of the Latin Christian Church grew, pressure to convert increased, and they endured not only discrimination and persecution for imagined offenses but also physical violence and ultimately expulsion from England (1290), France (1394), Spain (1492), and Portugal (1497). In the eleventh and twelfth centuries, crusader armies, fired up against unbelievers, occasionally massacred Jews who refused Christian baptism, especially in the Rhineland. In the twelfth century, accusations of Jewish ritual murder of Christians and their desecration of churches and the Eucharistic host began. Yet despite discrimination, there were periods of peaceful coexistence between Christians and Jews, and some individuals were tolerant of and even protective toward this minority.



Badges and hats worn by Jews, from the *Bible Historiale* de Pierre Comestor, fourteenth century. The wearing of badges by Jews was ordered by Pope Innocent III at the Fourth Lateran Council in 1215. (Singer, Isadore, ed. *The Jewish Encyclopedia*, 1901)

Protected by Roman citizenship, Jews had settled in Gaul in late antiquity, moving northward along the major rivers and especially the Rhine, which were trade thoroughfares. They spoke the local forms of vernacular Latin, dressed as their Christian neighbors did, and engaged in a variety of occupations, including agriculture, viticulture, medicine, and various crafts. Valued for their long-distance trade connections and linguistic skills, they were protected by the Carolingian emperors Charlemagne (r. 768–814) and his son Louis the Pious (r. 814–840). Jewish merchants were exempt from certain tolls and duties on transported merchandise and enjoyed royal protection of their lives and property. Within the later German empire of the Ottonians and their Hohenstaufen successors, this favorable attitude became the basis of alliances, often defined in official charters, that made Jews dependent on the goodwill of local and imperial authorities. Speyer's bishop granted such a charter in 1080. Similar alliances were formed in England and France, although the French kings issued no formal charter. The alliances, however,

were unilateral, could be broken at any time, remained valid only while the Jews were useful, and subjected Jews to arbitrary taxation.

Although official papal policy from the reign of Pope Gregory I (r. 590–604) was to allow Jews to practice their religion and observe their own laws and customs, a policy that was reiterated by Calixtus II (r. 1119–24) in the papal bull *Sicut Judeis* and promulgated into canon, or church, law in the *Decretals* of Pope Gregory IX (r. 1227–1241), the Western Roman, or Latin, Church continued to assert its authority over Jews. Of particular ecclesiastical concern was the prevention of both subservience of Christians to Jews and any social interaction and intermarriage between the two groups as well as promotion of Jewish conversion to Christianity.

It was the failure of the Jews to convert that occasionally prompted massacres, most notably in the German cities of Worms, Mainz, Cologne, and Speyer in 1096 and in York, England, in 1190. When in 1095 Pope Urban II (r. 1088–1099) announced a military expedition to recover Jerusalem, the response, known as the First Crusade, was almost overwhelming. Large baronial armies and other less well-organized bands set off on the mission to the Holy Land. Some of the latter took the opportunity to attack nearby Jewish communities, including a group led by a certain Count Emicho. Marching through the Rhineland, these troops interpreted the pope's message by trying to force conversion on the so-called infidel enemies at home and attacking and even killing those who refused baptism. (And apparently many other Jews committed suicide and even killed their loved ones to avoid the profanation of forced baptism.) These attacks took place even when some Christian bishops attempted to shelter the Jews within the walls of their own palaces.

The myth of ritual murder of Christian children as a Jewish religious practice also developed in mid-twelfth-century England, where the alleged victims, especially William of Norwich (1144), Harold of Gloucester (1168), Robert of Bury St. Edmunds (1181), and Hugh of Lincoln (1255) were venerated as saints in cults sponsored by church authorities. Ritual murder and blood libel allegations, which sprang up on the continent as well, resulted in the deaths of in-

nocent Jews and further discrimination against them. Likewise, during the fourteenth-century onset of the Black Death, many Jewish communities were accused of having poisoned wells in order to kill Christians, and significant numbers of Jews were killed as a consequence.

The lives of French Jews varied regionally. Many lived peacefully, but there were conversion attempts and exiles. Philip II Augustus (r. 1180–1223) expelled them in 1182 to take control of their property, to stabilize his treasury, and to win popular support but recalled them in 1198. Jews expelled from England in 1290 migrated to France but soon, influenced by the Church's hardening attitude, were expelled again (1306) by Philip IV (r. 1285–1314). The decree was reversed in 1315 by Philip's son, Louis X (r. 1314–1316), but French Jews were finally expelled in 1394. Many migrated to Spain, where Jews were still tolerated.

Jews from Rouen first settled in England after the conquest in 1066, invited by William I (r. 1066–87). By 1189, there were 24 provincial Jewries, largely unmolested because as serfs of the king, they enjoyed his protection. English Jews engaged in large- and small-scale money lending. The king helped them collect unpaid debts, took possession of some loans himself, and arbitrarily taxed the Jews. Misunderstandings and the desire to destroy records of debt provoked violent attacks in England. In 1189, London Jews were attacked following the coronation of Richard I (r. 1189–1199) when prominent Jews attempted to enter Westminster and the banquet that followed the ceremony; other attacks followed elsewhere in England.

The York massacre of March 1190 followed attacks on the Jewries of Lynn, Stamford, and Bury St. Edmunds. To escape death, York Jews barricaded themselves in Clifford's Tower, part of the king's castle, and as in the Rhineland in 1096 many, facing starvation or forced baptism, killed their families and themselves. Survivors who emerged to accept baptism were murdered by the mob.

English kings taxed the Jews heavily in the following years. When Anglo-Jewish wealth diminished, the Jewish position grew more difficult. Their livelihood, money lending and pawn brokering, was abolished by royal legislation. In

➤ THE CHARTER OF THE JEWS OF SPEYER

In some European communities Jews were given special charters outlining their status within the community. Bishop Rudegar granted such a charter containing what he believed to be the most favorable conditions of any Jews in the German empire to the Jews of Speyer in the German Rhineland in 1080.

According to the charter, the Jews of Speyer were to live “in a place apart from the dwellings and association of the other inhabitants of the city; and that they may be protected from the attacks and violence of the mob, I [Bishop Rudegar] have surrounded their quarter with a wall.” They received “a piece of land of the church as a burial-ground,” and legal cases involving Jews were to be judged by the chief priest of the synagogue. Specific clauses gave the Jews “free right of changing gold and silver coins and of buying and selling everything they wish within their own walls and . . . throughout the whole city” and exemption from payment of the city toll for Jewish guests of Speyer's Jews. Especially noteworthy is the permission to “hire Christian nurses and Christian servants” because laws in many places forbade employment of Christians by Jews.

—Frances H. Mitilneos

Source

Rudegar Huozman, “Charter to the Jews of Speyer,” in *The Medieval Record: Sources of Medieval History*, ed. Alfred J. Andrea (Boston and New York: Houghton Mifflin, 1997), 255–257.

his 1275 Statute of the Jewry, Edward I (r. 1272–1307) forbade Jews to lend money for interest, urged them to make their living by other means, and required them to wear a cloth badge on their outer clothing identifying them as Jews as mandated by the Fourth Lateran Council in 1215. Finally, Edward expelled all Jews from England in 1290.

Expulsion from Western European countries pushed Jewish settlements steadily eastward. In Hungary, a small community of Jews was chartered by Bela IV in 1251 in the hope that more Jews would settle in Hungary and help to improve his country's economy. Hungarian Jews

were initially traders and craftsmen and later toll collectors, tax farmers, and moneylenders. Although expelled in 1360, Jews returned to Hungary in 1364. Poland was an attractive alternative to Hungary. The charter granted by Duke Boleslav of Kalisch in 1264 included provisions for a fair trial for Jews accused of blood libel and punishment for Christians who brought the charge falsely. The occupations of Polish Jews mirrored those of Hungary, but later Polish Jews became estate managers for aristocrats. Mongol invasions and epidemics of plague made Polish authorities more rather than less supportive of their Jewish communities.

By 1500 the Jews had been expelled from most major regions in Western Europe. Victims of expulsion from England, France, and Germany had moved either eastward or to the Iberian Peninsula. The 1492 expulsion from Spain sent Jewish refugees to Italy, the Netherlands, North Africa, and the Ottoman empire, but 150,000 Sephardic (Spanish) Jews moved to Portugal. Their residence in Portugal ended in expulsion in 1497, whereupon most migrated to various areas in the Ottoman-dominated Middle East, where many assumed leadership roles in old established Jewish communities.

Although sometimes welcomed and well treated, Jews continued to be identified as “the other,” restricted by law, urged to embrace Christianity, and forced to migrate, generally eastward.

—Frances H. Mitilineos

Bibliography

- Chazan, Robert. *The Jews of Medieval Western Christendom, 1000–1500*. Cambridge: Cambridge University Press, 2006.
- Glick, Leonard. *Abraham's Heirs: Jews and Christians in Medieval Europe*. Syracuse, NY: Syracuse University Press, 1999.
- Roth, Norman. *Medieval Jewish Civilization: An Encyclopedia*. Vol. 7 of *Routledge Encyclopedia of the Middle Ages*. New York: Routledge, 2003.
- Singer, M. A., and John Van Engen, eds. *Jews and Christians in Twelfth-Century Europe*. Notre Dame: Notre Dame University Press, 2001.
- Skinner, Patricia, ed. *Jews in Medieval Britain: Historical, Literary and Archaeological Perspectives*. Woodbridge, UK: Boydell, 2003.

Gerald of Wales and the Irish—An Ethnic Stereotype in Medieval Europe

The uncomplimentary portrayals of Ireland and the Irish in the twelfth-century writings of the Cambro-Norman (Welsh and Norman) ecclesiastic Gerald of Wales (Giraldus Cambrensis, ca. 1146–ca. 1223) held a dominant place in medieval and early modern Irish historiography, as well as in popular notions and depictions of Ireland. Although he was a consummate storyteller whose accounts are lively in style and colorful in content, Gerald's works have drawn substantial criticism because of blatant ethnic stereotyping, countless inaccuracies, and familial, political, and other prejudices and purposes. Yet for all their shortcomings, Gerald's accounts of the Irish provide a unique and contemporary perspective on the English conquest of Ireland as well as on various historical figures and events.

A member of the powerful Geraldine family who was much involved in the first Anglo-Norman conquest of Ireland (1170), Gerald was



A monk writing, late twelfth–early thirteenth century, from *Topographia Hibernica*, a work by Gerald of Wales. (HIP/Art Resource, NY)

one-quarter Welsh and three-quarters Norman and of noble stock in both instances.

Gerald was not only the first foreigner to compose a book about Ireland, but he alone of medieval chroniclers is known to have visited Ireland, not once but four times. He first went for a year during 1183–1184 to assist his relations in Ireland. Later in 1184 he was appointed court chaplain to Henry II of England (r. 1154–1189) and embarked for Ireland a second time at the king's behest. During Easter 1185, Gerald was part of the royal fleet that sailed for Waterford. He was handpicked to accompany Prince John, styled the “lord of Ireland,” on this second invasion of Ireland as both chaplain and adviser. Gerald remained in Ireland until the late spring of 1186.

During this second trip to Ireland Gerald began to work on two books: *Topographia Hibernica* (*The Topography of Ireland*), which he completed in 1188, and *Expugnatio Hibernica* (*The Conquest of Ireland*), completed in 1189. The former is divided into three parts that cover Ireland's topography and animal life, its wonders and miracles, and the Irish race and its history. The *Expugnatio* covers the history of the English conquests of and doings in Ireland from the exile of Diarmait mac Murchada in 1166 to the latest conquest of 1185–1186, followed by instructions on how the Irish were to be subdued and governed.

In his books Gerald describes the Irish as barbarians and inhospitable primitives who live like beasts, practice backward and immoral customs, and are Christians in name only. He further sees Norman civility, religious instruction, and Anglo-Norman social, legal, and political order as urgently needed remedies for the sinful and deplorable state of Ireland and its people.

The historian John O'Meara asserts that what Gerald saw firsthand was quite limited. Likewise, bias toward his own lineage and ethnicity influenced his accounts. Moreover, ethnic prejudice, his ecclesiastical reform agenda, and his association with the family and court of Henry II combined to justify, in his mind, the Anglo-Normans' legal and moral right to rule Ireland.

Gerald's unflattering conclusions continued to be a source for subsequent medieval and early

➤ EXCERPT FROM *THE HISTORY AND TOPOGRAPHY OF IRELAND*

“They are a wild and inhospitable people. They live on beasts only, and live like beasts. They have not progressed at all from the primitive habits of pastoral living. . . . This people then is a barbarous people . . . a filthy people, wallowing in vice. Of all peoples it is the least instructed in the rudiments of the Faith. They do not yet pay tithes or first fruits or contract marriages. They do not avoid incest. They do not attend God's church. . . . Moreover, above all other peoples they always practice treachery. When they give their word to anyone, they do not keep it. . . . You must be more afraid of their wile than their war; their friendship than their fire; their honey than their hemlock; their shrewdness than their soldiery; their betrayals than their battle lines; their specious friendship than their enmity despised. . . . These are their characteristics: they are neither strong in war, nor reliable in peace.”

—Katharine Olson

Source

Gerald of Wales, *The History and Topography of Ireland*, rev. ed., translated by John O' Meara (London: Penguin, 1982), 101–2, 106–7.

modern literary and historical depictions of the Irish. Contrariwise, Gerald's works were much criticized in seventeenth-century Irish broadsides and especially in the works of the early modern Irish historian Geoffrey Keating. In his condemnation of Gerald's accounts of Ireland, Keating wrote of their lasting influence: “Every one of the new Galls [Scottish Protestant immigrants] who writes on Ireland writes . . . in imitation of Cambrensis . . . because it is Cambrensis who is the bull of the herd for them in writing the false history of Ireland, wherefore they had no choice of guide.”

—Katharine Olson

Bibliography

Gerald of Wales. *Expugnatio Hibernica: The Conquest of Ireland*. Edited and translated by A. B. Scott and F. X. Martin. Dublin: Royal Irish Academy, 1978.

Gerald of Wales. *The History and Topography of Ireland*. Translated by John O' Meara. Rev. ed. London: Penguin, 1982.

Gerald of Wales. *The Journey through Wales and The Description of Wales*. Translated by Lewis Thorpe. London: Penguin, 1978.

Keating, Geoffrey, and John O'Mahony. *The History of Ireland, from the Earliest Period to the English Invasion*. Kansas City, MO: Irish Genealogical Foundation, 1983.

Rambo, Elizabeth. *Colonial Ireland in Medieval English Literature*. London and Toronto: Associated University Presses, 1994.

The Ethnic and Linguistic Divisions of the Americas on the Eve of the Columbian Exchange

Upon arrival on the coast of Mesoamerica, the Spaniards encountered a continent with an impressive ethnic and linguistic diversity, the product of thousands of years of cultural interaction among people living in diverse but interdependent ecological niches.

Our knowledge of the ethnic and linguistic division of the Americas comes principally from two types of sources. First, current linguistic distribution and ethnic affiliation have a direct relation to the situation just prior to contact, despite demographic and social changes that have occurred since the sixteenth century. Language, in fact, is a resilient feature of ethnic identity, because linguistic variations only occur very slowly over centuries and millennia. Linguists are therefore able to map and trace a family of languages over large expanses of territory and long periods of time. Today in countries such as Mexico, Guatemala, Ecuador, Peru, and Bolivia, millions of people continue to speak their pre-Conquest native tongues as a first language. The second source of information is historical documentation produced during the colonial period. Since the 1530s, missionaries of the Franciscan, Augustinian, Dominican, and Jesuit orders learned the native languages in order to preach to and convert the local populations. These efforts resulted in the creation of hundreds of dictionaries and grammars, compiled by these scholar-priests with the assistance of indigenous intellectuals. As early as 1536, for example, in Mexico City,

once capital of the Aztec empire, there was a college that trained indigenous nobility not only in Latin and Spanish grammar and rhetoric but also in Nahuatl (the language of the Aztecs), producing an intellectual elite responsible for an incredibly rich production of historical, literary, and religious texts throughout the colonial period.

On the other hand, Amerindian languages were and are primarily oral. That is, they did not have a consistent written tradition. As a result, the majority of these tongues, and their many local variations, have not been clearly documented. The work of linguists and anthropologists is still ongoing. Finally, before proceeding to a summary presentation of the different culture areas of the Americas and their linguistic and ethnic divisions, a word of caution must be added about the use of the term “ethnicity” itself. This is, in fact, a descriptive category coined and employed by anthropologists. More often than not, these categories were and are not recognized by the very people whose cultures and languages they claim to describe. While today we tend to consider language as a fundamental aspect of cultural affiliation, in pre-Columbian America major linguistic variations were found even within small geographic areas and did not constitute a marker of ethnic identity. On the other hand, people speaking closely related terms would consider themselves as totally distinct groups.

North America was host to more than 300 languages prior to European contact. Roughly 50 language families have been identified in North America. Families are languages that are thought to derive from a common ancestral language, although they need not be and in fact most of the time are not mutually intelligible. Each family can vary greatly on the number of distinct languages. One of the most extended families is the Algonquian-Ritwan, which stretches from present-day Labrador to the North Carolina coast and westward to Alberta. Languages of this family are also spoken in Illinois, Montana, and the Dakotas. The Athabaskan, or Na-Dene, family includes a large portion of the western Arctic region, including the Tlingit on the northwest coast and reaching into the Navajo and Apache regions of the present-day American Southwest. Another important group is the Kiowa-Tanoan family spo-

ken in the southern plains, the great basin area, and what is currently northern Mexico. The west coast, including the northwest coast and California, is the area with the greatest linguistic diversity. Finally, the Zuni of the Southwest are a linguistic example of what linguists call an “isolate,” that is, a language that is not part of any known language family. Nonetheless, their cultural and linguistic heritage shares many features with the other people of the region. Special ceremonial terms, for example, have been shown to be borrowed from different languages.

In Mesoamerica at the time of the Conquest, more than 200 languages were spoken. Of these, the most common were those of the Uto-Aztecan family, which also includes Nahuatl, the language of the Aztecs. Nahuatl also served as an international language that the Spaniards employed through translators after entering the region. Uto-Aztecan languages are found throughout Mesoamerica, from the northern desert stretches to present-day Honduras. On the other hand, the macrofamily of Mayan languages is found almost only in the so-called Maya area that includes the modern Yucatán and Chiapas in southern Mexico, Guatemala, Belize, and Honduras, with the exception of the Huastec, and is still spoken on the northern Gulf Coast. To this day, the greatest linguistic diversity is found among Otomanguean languages in the modern states of Puebla, Guerrero, and Oaxaca of southwestern Mexico.

Central America and northern South America were inhabited mostly by speakers of Chibcha and Arawakan languages, which are also found in the Amazon Basin, perhaps indicating that this is their place of origin.

South America is home to the most widely spoken indigenous language in the Americas: Quechua. Partly as a consequence of the Inca expansion in the fifteenth century, which included present-day Ecuador, Peru, parts of Bolivia, and northern Chile, Quechua is still spoken today by 8.5 million people. It is divided into several dialects (language variations that are still mutually intelligible) and shows many similarities with the Aymara language, spoken in the Bolivian highlands. The Quechua and Aymara people lived in very close proximity and interacted for thousands of years.

➤ MAYAN CULTURAL RESILIENCY

Even after the so-called Classic Maya collapse that brought about the end of the powerful city-states that dominated the southern lowlands (roughly corresponding to present-day Chiapas, Guatemala, and Honduras) by the end of the eighth century CE, Mayan civilization continued to thrive in other regions. While some important features of Classic Mayan civilization disappeared, the traditional political arrangement in city-states continued until the arrival of the Spaniards. The cult of rulership, based on ritual enactments of the king's divine powers, was typical of the Classical period but changed during the so-called Terminal Classical and Post-classical periods to the glorification of the kingdom as a whole and their patron gods. Mayan kingdoms of this period were large dominions that included several settlements and polities organized hierarchically. Allegiances achieved through marriages between different lineages constituted the most common basis of diplomatic relations. The large cities of Chichén Itzá and Mayapán ruled over large parts of the northern Yucatán throughout the Post-classical period. Located in the inland of this riverless territory, however, they heavily relied on maritime commerce that was carried out through the major ports located in the eastern coast of Yucatán. The major sites there were Tulum, Cozumel Island, and Santa Rita. In the Mayan Highlands, present-day Guatemala, major changes occurred in settlement patterns, with a shift from valley to hilltop settlements, reflecting increasing warfare activities.

—Alessia Frassani

Finally, another important language family is the so-called Guaraní, with over 5 million speakers in Paraguay today. It is estimated that about 400,000 lived in the area at the time of contact. Related languages are found in the Amazon Basin, northern Argentina, and parts of Bolivia.

—Alessia Frassani

Bibliography

Bákula, Cecilia, Laura Laurencich Minelli, and Mireille Vautier. *The Inca World: The Development of Pre-Columbian Peru, A.D. 1000–1534*. Norman: University of Oklahoma Press, 2001.

Chase, Arlen F., and Prudence M. Rice. *The Lowland Maya Postclassic*. Austin: University of Texas Press, 1985.

Coe, Michael, and Rex Koontz. *Mexico: From the Olmecs to the Aztecs*. 5th ed. New York: Thames and Hudson, 2002.

Coe, Michael, Dean Snow, and Elizabeth Benson. *Atlas of Ancient America*. New York: Facts on File, 1986.

Joseph, Alvin M., ed. *America in 1492: The World of the Indian People before the Arrival of Columbus*. New York: Knopf, 1992.

Moseley, Christopher, R. E. Asher, and Giles Darkes. *Atlas of the World's Languages*. 2nd ed. London: Routledge, 2007.

■ Introduction: Gender Relations around the World—Does One Model Serve All?

The question posited in the subtitle of this essay is rhetorical. An even cursory glance at the entries under this topic reveals that gender relations and gender identities were not always and everywhere the same in the period 1000–1500 or in any other era of human history for that matter.

As we see, intersexed people, who had both female and male genitalia, were especially honored as “two spirit people” within many North American cultures, a phenomenon that seems unimaginable in many Afro-Eurasian cultures of the same time, such as China, Christian Europe, and Byzantium. It appears that this privileged status was accorded them because they were perceived as possessing the special and respected attributes, or spirits, of both women and men.

On the Great Asian Steppe, home to a number of Turco-Mongol nomadic cultures that were essentially similar in lifestyle, we find differentiated sex roles, to be sure. We also see, however, a rough-and-ready egalitarianism between the sexes, despite the fact that khans and other important male leaders could have 20 or more wives (each of whom, however, had her own ger, or yurt). We further have evidence of a number of women who exercised positions of at least persuasive authority. Given the primacy of honor accorded warriors in these cultures, this might seem surprising until we realize that the harsh conditions of steppe life gave value to the work and wisdom of each person. Moreover, a number of sources inform us that women rode the tough steppe horses as skillfully and courageously as

men, and this counted for quite a bit in a culture that centered on the horse.

Given its vast space and diversity of cultures, trying to sum up gender relations across Oceania in a single formula is imprudent. Clearly, gender-specific work roles were the norm, and men dominated in the area of religion. Overall, therefore, the social status of men was higher than that of women.

The same was generally true in the settled cultures of Afro-Eurasia, such as China, Japan, India, and the Christian and Islamic worlds. Although patriarchal traditions, notions of masculinity and a warrior ethos, scriptural mandates, legal constraints, and a variety of other factors placed men in a position of superiority within these complex cultures, extraordinary high-born women, such as Anna Comnena or Shajar al-Durr, could and did rise to positions of prominence. Evidence is lacking, but it is also quite likely that at the village, town, and even city levels, women who were peasants, artisans, shopkeepers, or merchants or who assisted their husbands, sons, or nephews in these occupations probably had a fair amount of autonomy and authority within their limited spheres.

We should also remember that gender roles were rarely positive or negative in any absolute sense. Women within most Hindu sects, for example, despite very real constraints on their lives by virtue of the traditions of dharmic law, had important religious roles to play in their households. When they performed these and all of their other gender-specific tasks well and selflessly,

they were considered to be *satis*, or virtuous women, who by their actions brought good karma on their families. In China the wife of a family's youngest son was little more than a servant, but if she and her husband lived long enough and had a sufficiently large and prosperous family of their own, she could rise to the honored position of matriarch, exercising over her daughters-in-law the same power once wielded over her in her mother-in-law's household.

These widespread cultures and "worlds" of Afro-Eurasia were also not monolithic in any sense of the term. While visiting the Islamic trading empire of Mali in sub-Saharan West Africa in the mid-fourteenth century, Ibn Battuta, a *qadi*, or Islamic jurist, from Morocco experienced the following incident:

"One day I went into the presence of Abu Muhammad. . . . In the courtyard of his house there was a canopied couch with a woman sitting on it conversing with a man seated. I said to him: 'Who is this woman?' He said: 'She is my wife.' I said: 'What connection has the man with her?' He replied: 'He is her friend.' I said to him: 'Do you acquiesce in this when you have lived in our country and become acquainted with the precepts of *Sharia* [Islamic religious law]?' He replied: 'The association of women with men is agreeable to us and a part of good conduct, to which no suspicion attaches. They are not like the women of your country.' I was astonished at his laxity. I left him, and did not return thereafter. He invited me several times but I did not accept."

—*Alfred J. Andrea*

Source

N. Levtzion and J. E. P. Hopkins, eds., *Corpus of Early Arabic Sources for West African History* (Cambridge: Cambridge University Press, 1981), 286.

Muslim Women—Veiled and Hidden?

Most available information regarding Islamic women that was composed between the years 1000 and 1500 deals exclusively with urban women, and all of it was written by men. Not-



As this thirteenth-century sculpture from eastern India demonstrates, Hindu society celebrated the ideal of sensual, romantic love between a woman and a man, despite the constraints placed on women. (Museum of Fine Arts, Boston, Massachusetts, USA/Keith McLeod Fund /The Bridgeman Art Library International)

withstanding, it is possible to discern a general picture of the status and lifestyles of Islamic women during these centuries.

In the context of Islam's spiritual and ethical teachings, men and women are equal before God. In everyday life, though, the situation has been quite different, and this was certainly the case in medieval Islam. To be sure, the activities and actions of Islamic women today and in the past have varied considerably depending on region and social status, and these variations have ranged substantially, from styles of Islamic dress (called *hijab*) to polygamy, seclusion, and marriage and divorce practices. Nevertheless, as already noted, it is possible to discern a general picture of the status and lifestyles of Islamic women, especially during the period 1000–1500.

In considering this issue, it is important to note that the era of the early Abbasid caliphate,

➤ SHAJAR AL-DURR

Besides involvement in religion and economics, women also took part in politics. The most famous example is Shajar al-Durr (String of Pearls).

Shajar al-Durr, a Turk who had been a slave to the Abbasid caliph in Baghdad, was given to the Egyptian sultan al-Salih Ayyub. Al-Salih fell in love with Shajar al-Durr and married her. In 1249 al-Salih died, and to protect the throne Shajar al-Durr kept the sultan's death a secret until his successor, Turan-shah, returned to Cairo. In the ten months between al-Salih's death and Turan-shah's arrival, she effectively ran the government at a time when Egypt was combating the crisis of a crusader invasion.

Turan-shah turned out to be unpopular and was murdered a short time later, probably at Shajar al-Durr's command, ending the Ayyubid dynasty's rule in Egypt (1171–1250). As a result, Shajar al-Durr reigned as sultana for almost three months, styling herself “Queen of the Muslims,” the only sultana in Islamic history. Under pressure to step aside because of her gender, she abdicated her title and married an officer of the imperial guard, Aybak (Aybeg), thereby establishing the Mamluk dynasty (1250–1517), which would rule Egypt and Syria for almost 300 years. There followed seven years of uneasy corule. Although no longer sultana, Shajar received diplomats, and coins were minted in both their names. In 1257 she arranged Aybak's assassination but was herself murdered three days later, reportedly tortured to death by slave women. Her tomb, which she had ordered constructed before her death, can still be seen in Cairo and is one of the best-surviving examples of thirteenth-century funerary architecture.

—April L. Najjaj

roughly 750 to 1000, was pivotal for the development of Islamic law (*sharia*) in regard to religious and social issues. Moreover, as the new religion spread out from the Arabian Peninsula, many non-Arab cultures were assimilated into the Islamic world, and a number of their practices regarding the treatment of women, most of which were products of male-centered societies, influenced this developing Islamic law and custom. Additionally, by the early tenth century

Islamic law was considered finalized, and the primary duty of judges (*qadis*) now was seen as upholding earlier rulings rather than developing original case-specific interpretations of the law. This meant that after the year 1000 Islamic women, especially in the so-called Middle East, were expected to live lives and follow customs that had been made law centuries earlier and that were a composite of a number of androcentric (male-centered) cultural traditions, many of which had roots that went back millennia.

Within this Islamic tradition, women were required to live under the guardianship of a male relative, whether father, husband, or son. Many women were active in the local economy but usually only within the limits allowed by society and sharia. Upper-class women did own property in their own right and sometimes created religious endowments called *waqfs* to provide housing, work, and religious instruction for poor women, widows, and orphans. Nevertheless, the amount of property these women owned and the income they derived from it seldom allowed for any woman to be self-sufficient. Among the lower classes, women were involved in textile production and served as shopkeepers, bakers, midwives, prostitutes, professional mourners, and singers, or they could enter the homes of the wealthy to sell food and luxury goods.

The typical design of houses in the medieval Islamic world was inward looking and emphasized family privacy. Domestic space was organized where windows were above street level, and doorways were offset from the outside entrance so that passersby could not see inside the residence. Such a design also allowed for greater seclusion for the women of the house. Houses could be large and could contain separate living quarters for several women (the *harems*, or area of female seclusion, privacy, and security). Throughout its history, Islam has strongly encouraged marriage for both sexes, and the marriage age for girls in the medieval period usually ranged between 12 and 17. Sharia allows a man to have as many as four wives but only if he can equally support and spend time with each wife; thus polygamy, while allowed, was usually beyond the financial or physical means of most men and was rarely found outside the ruling classes.

The orthodox view of women encouraged by the religious establishment was not the only perspective, however, for other groups within Islam tradition took several significantly different views. One group, the Kharijis, an Islamic sect that originated soon after the Prophet's death, preached and practiced an egalitarianism that went so far as to allow women to fight in battle, and a second group, the Qarmatis, a tenth-century Shia sect that also preached and practiced a rough-and-ready equality of all believers, banned polygamy and the veil. Both groups, however, as well as many other Islamic sects that deviated from mainstream practices, were persecuted out of existence. A third group, the Sufis, expressed a more mystical version of Islam and also challenged orthodox views on gender. Women were considered to be significant contributors to Sufi traditions, including one of the best-known early Sufis, Rabia al-Adawiyya (d. 801). Another was Fakhru-n Nisa, "The Glory of Women," a follower and close confidant of Jala-luddin al-Rumi, the great thirteenth-century Sufi mystic and poet of Konya. Unlike Kharijism and Qarmatism, Sufism has survived to the present day.

Toward the end of the medieval period, at least upper-class girls had increasing access to education but were usually taught informally at home by a male (or sometimes female) relative. For boys and girls, the basis of early education would have been religious instruction, but the close association between Islam and the Arabic language would have required reading and grammar skills, encouraging at least a basic level of literacy.

—April L. Najjaj

Bibliography

- Ahmed, Leila. *Women and Gender in Islam*. New Haven, CT: Yale University Press, 1992.
- Keddie, Nikki R., and Beth Baron, eds. *Women in Middle Eastern History, Shifting Boundaries in Sex and Gender*. New Haven, CT: Yale University Press, 1991.
- Musallem, Basim. *Sex and Society in Medieval Islam*. London: Cambridge University Press, 1983.
- Smith, Margaret. *Rabi'a the Mystic and Her Fellow Saints in Islam*. Cambridge: Cambridge University Press, 1984.

Womanhood in Early and Medieval Japan

The status and role of women in Japanese history has changed drastically through the ages. A woman-centered marriage system in ancient times is a strong indication that women had considerable political and religious influence in Japan's earliest centuries. Chinese chronicles from the third century CE provide vivid descriptions of a female ruler in Japan, Pimiko, who wielded considerable power. Likewise, Japan's earliest anthology of poetry, the eighth-century *Manyoshu* (*Collection of Ten Thousand Leaves*), has poems in which love marriages and great respect for women are the rule.

Women-centered marriages, where it was customary for the husband to join the family of his wife or to live separately and to visit his wife on certain nights, continued through the eleventh century. Furthermore, a daughter of a property-owning family was entitled to the family house



Murasaki Shikibu at work, illustration by Suzuki Harunobu, eighteenth century. (Burststein Collection/Corbis)

➤ SEI SHONAGON AND *THE PILLOW BOOK*

Sei Shonagon (fl. late tenth century) was the author of *The Pillow Book* (*Makura no soshi*), one of the great classics of Japanese literature. A descendent of a long line of noted scholars and poets, she was born around 965 and served as a lady-in-waiting at the court of Empress Sadako (976–1001). Sei Shonagon married at least once and apparently had several liaisons that produced at least one child, a daughter. She became famous for her quick wit and cynical but amusing commentary, and she won a reputation for her familiarity with the Chinese classics, considered an unusual accomplishment for a woman.

The Pillow Book is a masterful collection of eyewitness narratives, casual essays, impressions, reflections, lists of things that the author likes and dislikes, and imagined scenes. Writing in a highly cynical manner, Sei Shonagon vividly describes the affairs of men and women at court, but she also dwells on a wide range of topics including vivid descriptions of the four seasons.

In addition to fascinating descriptions of goings-on about the court and musings on life and nature,

The Pillow Book includes lists of items such as “Things That Cannot Be Compared” and “Things That One Is in a Hurry to See or Hear.” Few of Shonagon’s lovers please her, though, finding themselves included in her list of “Things That Irritate Me.” Apparently, they snored and stumbled around in the darkness the morning after while trying to find their clothes and fans and in general behaved like inept lovers. The author sought a world more structured to meet her likes and dislikes: Young people, babies, and high-ranking government officials should be chubby; if they are not, they look “nervous.” “A [Buddhist] priest should be handsome,” she asserts, “to make the worthiness of his sermon easily appreciable,” but an unattractive priest might cause his congregation to become sinful.

—Daniel A. Métraux

Source

Paul Varley, *Japanese Culture* (Honolulu: University of Hawaii Press, 2000), 48–77.

and a share of family income when an inheritance was divided. Some upper-class women became important leaders in society and were well educated and highly literate.

The status of women began to decline during the Nara period (710–794) and reached new lows in the Heian era (794–1185) and throughout the medieval period (1200–1600). There is much speculation as to why Japan shifted clearly to a more patriarchal pattern and women lost considerable status. Confucianism and Buddhism imported from China via Korea emphasized the central role of men and the subservient position of women in society. Wealthier or high-ranking families increasingly used marriages as a way of cementing ties between families and/or increasing the wealth of the family, with little thought to love as the foundation. Starting with the Taika Reform in the mid-seventh century, women were barred from becoming government officials, and a woman’s share of government-distributed land was set at two-thirds of that for a man. It was also stipulated that women could no longer hold

the office of emperor, a rule that holds true to this day.

Women in Japan, however, never reached the lowly status of women in traditional China and Korea. Upper-class women continued to be well educated and quite literate. Japan’s leading writers during the Heian period, most of whom were centered around Japan’s vast imperial court in Kyoto, included many women. While male courtiers struggled to master the more prestigious imported styles of Chinese poetry and prose, female writers were free to write in their native language. The great women writers of the Heian period include Ono no Komachi, Lady Ise, Sei Shonagon, Murasaki Shikibu (973–1014/1025), Izumi Shikibu, Akazome Emon, and the authors of highly poetic diaries such as *Kagero Nikki* (*The Gossamer Journal*), *Sarashina Nikki* (*Lady Sarashina’s Journal*), and *Sanuki no Suke no Nikki* (*The Emperor Horikawa Journal*).

The masterpiece of Heian literature is Murasaki Shikibu’s very long novel, *The Tale of Genji* (*Genji Monogatari*), composed in the early

eleventh century. Murasaki traces the life of a fictional handsome prince, Genji, through his marriage at court and his many subsequent romantic affairs. Whereas *The Tale of Genji* is noteworthy for its psychological insight on a fictional level, Michitsuna no Haha's *Kagero Nikki* (*Kagero Diary*) is a poignant autobiography describing a noblewoman's anguish and anger over her husband's many open affairs with other women at court.

The works of these women writers were widely read, often causing rivalry among the authors as well as caustic comments in their own journals. One famous statement found in the journal of Murasaki Shikibu concerns her contemporary Sei Shonagon. Murasaki had a rather low opinion of her, ignoring the older author's wit and focusing instead on her allegedly shallow learning and aggrandizing nature, as this excerpt from Murasaki's *Diary* illustrates:

"Sei Shonagon: the very picture of conceit and arrogance. When one looks carefully at the compositions in Chinese script which she pretentiously scatters about, their inadequacies are legion. Anyone who takes such pleasure in making herself different from others, will inevitably fall in their regard and her fortunes will go from bad to worse. Once addicted to a life of glamour, she will proceed to give displays of her fine feelings even on the dreariest and most ridiculous occasions, and in her efforts not to miss out on anything exciting, she will as a matter of course become notorious for her triviality. What good can come to such inanity in the end?"

The status of women declined even further in the twelfth century with the end of the Heian era and the onset of the Japanese Middle Ages, when central authority broke down and regional military figures vied for power. The new warrior-based culture had little place for women or feminine literature.

—Daniel A. Métraux

Bibliography

Keene, Donald, ed. *Anthology of Japanese Literature*. New York: Grove, 1955.

Morris, Ivan, trans. *Pillow Book of Sei Shonagon*. New York: Columbia University Press, 1992.

Morris, Ivan. *World of the Shining Prince: Court Life in Ancient Japan*. New York: Kodansha International, 1964.

Varley, Paul. *Japanese Culture*. Honolulu: University of Hawaii Press, 2000.

The Parallel Cults of Mary and Guanyin

From the standpoint of theology, the Virgin Mary of Christianity and the bodhisattva Guanyin of Chinese Buddhism represent the presence and activity of positive feminine energy operating within the framework of their respective patriarchal religious traditions. From the standpoint of psychoanalysis and mythology, the subconscious functions performed by Mary and Guanyin are considered by many scholars to be similar, even overlapping, and exercise upon the human psyche a creative universal feminine power that transcends religious difference.

In the late nineteenth and twentieth centuries as the disciplines of mythology, anthropology, comparative religion, and psychoanalysis began to converge, religious and mythological motifs of particular cultures were increasingly interpreted as archetypes of the human psyche and driving impulses within the evolution of consciousness. Thus, the notion that these historical devotional cults operate in parallel derives more from modern scholarship than from historical links, although some fourteenth-century iconographical connections are now widely accepted by art historians.

Jungian psychologist Erich Neumann describes the feminine archetype as possessing both a static, elementary character (i.e., its role as a vessel or container) and a transformative character (i.e., its activity of reproduction and development). Within these feminine characters are positive and negative aspects of each. For example, a positive container might describe a nurturing womb or a fertile valley; a negative container might describe a trap or an unhappy home. Positive transformation might take the form of fruition or child rearing; negative transformation might be identified in such mythical motifs as child devouring or destruction. As

developmental phenomena, the negative and positive qualities of the feminine character can be arranged along axes whose poles are defined by such terms as “Great Mother,” “Virgin,” “Muse,” “Witch,” etc.

From this perspective, Mary and Guanyin both vividly represent the universal properties of purity, maternal love, life, healing, and compassion, and throughout history they have emblemized the highest qualities of the positive feminine. Yet the importance of Mary and Guanyin within their respective religious traditions exceeds their capacity to embody mere psychological categories. To the devotees of their respective cults, these two “goddess” types are widely and passionately venerated, whether as sanctified exemplars of humanity, as in the case of Mary, or as authentic divinities in their own right, as in the case of Guanyin.

Guanyin (Japanese, Kannon) is Chinese Buddhism’s representation of Avalokitesvara (Sanskrit), the Bodhisattva of Compassion, or Divine Mercy. A divinity of ambiguous gender in his homeland of India but clearly more male than female, Avalokitesvara’s metamorphosis into a compassionate goddess followed the establishment of Mahayana Buddhism in China and Japan.

Like all bodhisattvas, or Buddhas-to-be, Guanyin vows to refrain from entering into Nirvana, the final release from earthly existence, until all sentient beings on earth attain enlightenment. Known in Buddhist theology as the bodhisattva who “hearkens to the weeping of the world” (a literal translation of the names Avalokitesvara and Guanyin), Guanyin exhibits boundless compassion for suffering people and helps guide souls to Amido (Japanese, Amida; Sanskrit, Amitabha), the celestial Buddha, who reigns as lord of the Western Paradise. Images of Guanyin abound in Chinese and Japanese art, and enshrined statues of the goddess continue to draw endless streams of pilgrims, especially in Japan.

The Bible states that Mary of Nazareth was chosen by God to give birth to the Christ Child, Jesus. Mary’s willingness to submit to the divine will is considered an act of perfect obedience. According to Christian tradition, Mary conceived Jesus through the action of the Holy Spirit and gave birth to the founder of Christianity sometime around 4 BCE. While legends of Mary’s sup-

posed association with the Essene monastic community can be found in a number of apocryphal sources, the traditional Christian teaching is that she gave Jesus a conventional Jewish upbringing and was among his very first followers. The first miracle recorded in the New Testament, the transformation of water into wine, was performed by Jesus on Mary’s request and is said to be evidence that prayers by the faithful directed to Jesus through Mary are especially efficacious. Mary appears to have been with Jesus at every stage of his career, up to and including the crucifixion in Jerusalem when, according to scripture, Jesus entrusted the care of his mother to the apostle John.

Mary is believed to have lived with John in Ephesus or Jerusalem for the remainder of her earthly life. According to teachings that became dogmatic in the Roman Catholic and Eastern Orthodox faiths, Mary never died but was rather assumed bodily into heaven, where she remains in the perpetual presence of her divine son. She is venerated by Eastern Christians and Roman Catholics as their heavenly queen and spiritual mother, a redemptive counterpart to their natural mother, Eve. As such, Mary prays for the souls of human beings, engages in battle with Satan, and, in keeping with a long tradition of Marian apparitions, which are popular in the Catholic Church’s traditions, occasionally makes direct contact with people on earth, offering admonition, consolation, and encouragement.

The cult of Mary has gone through a number of transformations over the centuries. In late antiquity and the early Middle Ages, veneration of Mary seems to have resonated closely with the worship of older pagan goddesses such as Isis, Astarte, Aphrodite, and Diana. In times of crisis, from the challenge of the Albigensian heresy of the twelfth and thirteenth centuries through the Protestant Reformation and into the twentieth century, the Catholic Church turned to Mary for help in delivering Christendom from wickedness and impiety. Praying the holy Rosary, a practice that emerged in the thirteenth century as a Latin Christian response to heresy and the Islamic resurgence in the Holy Land (but an aid to prayer that had origins in Hindu and Buddhist religious practices, with the rosary serving as one of Guanyin’s primary iconic symbols), continues into the

present day as a popular devotion among those who venerate the Blessed Virgin.

As is the case with Mary, Guanyin's influence and intercession are believed to be irresistible in the courts of Heaven, and also like Mary, she is seen by the faithful to possess such limitless grace, compassion, and power that she perpetually transforms and revitalizes the patriarchal structure she inhabits. In their capacity as primordial Great Mothers, Mary and Guanyin give life to the very gods that create them, and as personified sources of positive feminine energy, they mediate and transform the overweening influence of male power in a patriarchal world.

—Mark Schumacher and Alfred J. Andrea

Bibliography

- Dexter, Miriam Robbins. *Whence the Goddesses: A Source Book*. Athene Series. New York: Teacher's College Press, 1990.
- Neumann, Erich. *The Great Mother*. Translated by Ralph Manheim. Princeton, NJ: Princeton University Press, 1963.
- Sjöö, Monica, and Barbara Mor. *The Great Cosmic Mother: Rediscovering the Religion of the Earth*. San Francisco: Harper, 1987.

Gender and Politics in Byzantium

The gender most associated with politics in Byzantium is male, especially as for the most part men authored the sources, and their biases are recorded therein. However, the eleventh through fifteenth centuries saw a rise in elite female participation in the Byzantine world, including as business owners, patrons, authors, and power brokers.

The eleventh century had empresses who ruled in their own right, including Zoe and Theodora (who were returned to power in 1042 by a mob of both men and women), but there were also other women who exemplified female political influence in Byzantium in this period. This empowerment, to use a modern word, may have started with the education of women as attested to by no less a source than Michael Psellos, who recorded the lives and deeds of the tenth- and eleventh-century emperors and empresses but who was referring to his own daughter. Most famously, Anna Comnena authored the *Alexiad*, one of the main sources on her father's (Alex-

ius I Comnenus, r. 1081–1118) reign and was clearly educated not just in reading and writing but also in a wide variety of classical disciplines and authors. This education allowed her to play a more active role in advocating for her husband (Nicephoras Bryennios) against her brother John (later John II Comnenus, r. 1118–1143), and even after that she failed as an advocate against John and his son Manuel.

One of the most useful aspects of Anna's writings is that she preserved stories about other strong female political advocates, something that many male authors failed to do, including stories about her grandmother Anna Dalassena and her mother Irene Doukaina. Anna Dalassena was a role model for Anna Comnena and a particularly good example of a woman in politics. She was appointed as regent for and by her adult son Alexius I when he was off on military campaigns against Robert Guiscard. Irene, Anna Comnena's mother, fought off the dowager empress Maria's assault on her position, an attempt to gain the ear of Irene's husband, and Irene helped her daughter advocate for Bryennios against her own son and also followed her husband on his many military campaigns. In the twelfth century, Euphrosine, wife of Alexius III Angelos (r. 1195–1203), was the main power broker in the empire and the source of imperial favor. She also managed to survive charges of infidelity and subsequent banishment, returning later to her former position of influence in Constantinople, a clear illustration of one of the problems that women in political positions had in Byzantium. Though none of these women ruled alone, they were incredibly influential figures who strengthened Byzantine rule.

Women did not have to be empresses to have political power. Another Irene, the wife of Andronikos Comnenus (son of John II), was a patron of the arts and also opposed Manuel Comnenus (r. 1143–1180), for which she was politically persecuted. Manuel's daughter, Maria Porphyrogenita, led the aristocrat's plot of 1181 against her stepmother Maria of Antioch, who was acting as regent for Maria Porphyrogenita's brother Alexius (r. 1180–1183), two examples of powerful women. Maria Porphyrogenita turned Hagia Sophia into an armed camp, recruited foreign mercenaries, organized armed combatants fighting

► THE LAST OF THE MACEDONIANS

Zoe and Theodora, daughters of Emperor Constantine VIII (r. 1025–1028) and *porphyrogenitae* (daughters “born to the purple,” whose fathers were reigning emperors when they were born), were the last of the Macedonian line of Byzantine rulers. Zoe, the elder, was married to Romanus III Argyrus when her father died in 1028. Inasmuch as power had to pass through the Macedonian line but only to a male ruler, her husband became emperor by reason of his marriage. She remained empress for the next 22 years through three successive imperial husbands (Romanus III, Michael IV, Constantine IX Monomachus) and a period of co-rule with her sister in 1042, whom Zoe despised. During this time though she focused mainly on her own interests, such as perfume making. The passage of the imperial throne was often aligned with Zoe’s interests. Early in Zoe’s rule as empress, Theodora had been sent to a nunnery. However, during the misrule of Michael V (Zoe’s adopted son), the Byzantine Church and the people of Constantinople united behind both sisters and their bloodline to expel him and place the sisters on the throne where they ruled in their own right for less than a year. They remained co-empresses through Zoe’s third, and final, marriage to Constantine IX (r. 1042–1055). After Zoe and Constantine IX’s deaths, Theodora reigned alone from 1055 to 1056. Theodora’s death in 1056 ended the once great Macedonian dynasty. She named as her successor a man, Michael VI, who was favored by the aristocracy in Constantinople but was hated by the Church and the military, and he was overthrown within a year.

—Christian Raffensperger

on the streets of Constantinople, and eventually helped Andronicus Comnenus (r. 1183–1185), her cousin, to the throne. Both women were powerful figures in Byzantine politics and were treated as such by both friends and enemies.

Though unusual, it was also not unheard of for a woman to participate in or direct military operations, especially in the last centuries of the empire. Irene, wife of John VI Cantacuzenos (r. 1341–1354), was commander of multiple military units during the civil war of 1341–1347 and was also responsible for the defense of Constanti-

nople in 1348. Another active participant in the civil war was Empress Anne of Savoy. Anne had been the wife of Andronicus III and was regent for their son John V (r. 1341–1376, 1379–1391), against whom John VI was revolting (or at least against his government). Anne was deeply engaged in the war, including pawning her royal jewels in Venice, negotiating for 6,000 mercenaries from the Turks to be sent to fight against Cantacuzenos in 1346, and even attempting to reconcile the Latin and Orthodox churches as part of an attempt to preserve the empire.

Elite women had many political opportunities available to them, and some (like those illustrated here) took advantage of them. However, the vast majority of women in Byzantium were restricted from the political process. Women, in general, were sequestered away from men, were discriminated against in law, and had few opportunities for advancement or political power. It must be remembered that the women presented here are members of the noble class, and though not unique in their class, they were unique for their gender and their time.

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Bibliography

- Cavalo, Guglielmo, ed. *The Byzantines*. Translated by Thomas Dunlap, Teresa Lavender Fagan, and Charles Lambert. Chicago and London: University of Chicago Press, 1997.
- Garland, Lynda. *Byzantine Empresses: Woman and Power in Byzantium, AD 527–1204*. London and New York: Routledge, 1999.
- Kazhdan, A. P., and Ann Wharton Epstein. *Change in Byzantine Culture in the Eleventh and Twelfth Centuries*. Berkeley and Los Angeles: University of California Press, 1985.
- Nicol, Donald M. *The Byzantine Lady: Ten Portraits, 1250–1500*. Cambridge: Cambridge University Press, 1994.

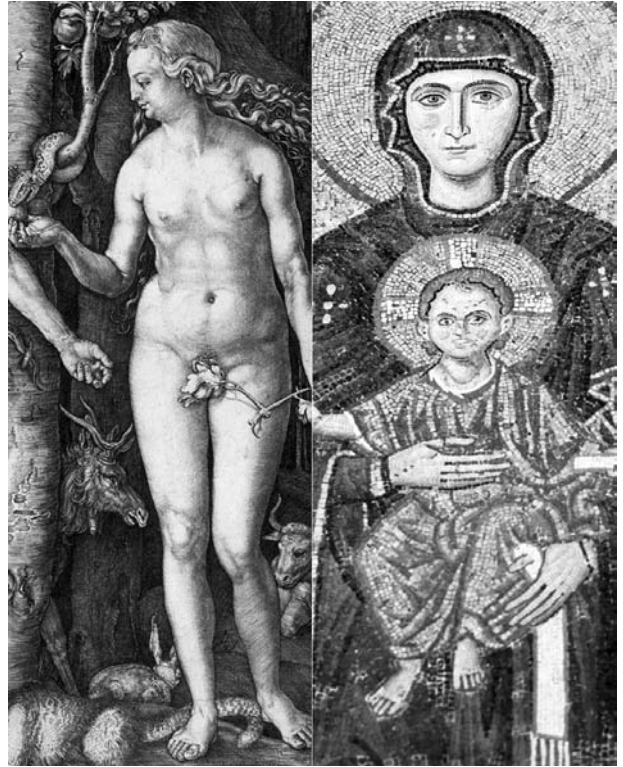
Eve and Mary—Western Christian Attitudes toward Women

From 1000 to 1500 CE, Catholic theologians reiterated frequently a twofold idea drawn from scriptural interpretations of the early Church Fathers. At the turn of the fifth century, St. Jerome (d. 419) succinctly stated this idea with the formula “death through Eve, life through Mary,”

while St. Augustine (d. 430) exoterically phrased it as “through women, death; through women, life.” Six hundred years later, a group of reform-minded theologians revived this contradictory and paradoxical idea. Their works would have a profound impact on shaping the misogynic attitudes of the high clergy in the Latin West.

The increasing discussion of women as origins of evils symbolized by Eve was closely linked to the church reforms of the eleventh century, later named the Gregorian Reform after Pope Gregory VII (r. 1073–1085). The reformers, as part of their program to restore papal authority over the Church and to free ecclesiastical institutions and the clergy from secular interventions, campaigned vehemently to improve the morals of the clergy. This campaign quickly led to the reformers’ establishing canons (ecclesiastical rules) to regulate the daily lives of priests and also encouraging the laity to cherish celibacy as a virtue. In order to achieve these goals, reforming theologians, appealing to what they perceived to be the tradition of the early Church Fathers, revisited and repeated the dual arguments that women are subordinate to men because Eve had been created by God from Adam’s rib and that women should be held responsible for the fall of humanity because Eve, after being seduced by the serpent, had persuaded Adam to taste the forbidden fruit in the Garden of Eden. Not only were the theologians able to persuade their audience, both lay and ecclesiastical, that those arguments were grounded in the Bible and therefore true, but they also became more willing than their predecessors to derogate women as the weak and wicked sex, the deadliest trap for men, the root of all human evils, and the victims of their own voracious flame. Sometimes their rhetoric was only a small step away from condemning all women as prostitutes simply because the early Church Fathers established that Eve’s deception had caused the fall of humanity from God’s grace.

Affirmation of these teachings by the Church’s hierarchy was a very different matter from implanting these ideas in people’s minds and affecting people’s daily lives. The time period of Gregorian Reform (ca. 1049–1122) also witnessed the rapid growth and spread of Marian veneration, which led to the flourishing of cathedrals



Left: Eve, from *Adam and Eve*, by Albrecht Dürer (1504); Right: Virgin Mary with Christ from the Mosaic of the Donors, Hagia Sophia, Istanbul, Turkey, eleventh century. (Library of Congress/Jupiterimages)

dedicated to Notre Dame (Our Lady) throughout twelfth- and thirteenth-century Western Europe. This trend was due to a concatenation of multiple social and cultural changes of the most profound sort: the feudalization of land and property, the revival of urban trade and commerce, various movements of popular piety, the revival of Greek learning, new emphasis on pilgrimage, and the crusades. Most important of all, female voices began to be heard, including the voices of aristocratic ladies as they resonated in chivalric literature. These ladies demanded the powers, properties, and privileges that they deserved, and most of all they desired the love and dignity manifested in the Virgin Mary.

Clerical responses to this trend were perplexing. On the one hand, the reform-minded theologians, again appealing to the tradition of the early Church Fathers, affirmed Mary as the Virgin Mother of the God-man, Jesus. At the same time, they emphasized that (1) since the virginity

of Mary existed before, during, and after delivery, celibacy and virginity as a lifestyle ought to be preferred to marriage; and (2) since the Virgin Mary gave birth to Jesus without being tainted by Original Sin, she became the mediator of God's grace for human redemption from the curse of Eve. Moreover, highly placed Catholic clerics, while accepting and even embracing the growing popular devotion to the Virgin Mary, purposefully identified St. Mary Magdalene as a former prostitute and sexual aberrant who was brought to grace only through a total repudiation of her sexuality. This campaign to distort the character of Mary Magdalene was not accidental. There was a well-concerted effort by theologians to composite such a Mary based on at least three Marys mentioned in the Gospels and to persistently link Mary Magdalene, the supposed reformed prostitute, to Eve in order to pinpoint the intrinsic moral defects of women and to underscore the belief that such fallen women could only be saved through an asceticism that included total sexual abstinence. Thus, the two Marys, although given radically different spiritual biographies, were equally employed to emphasize the value of virginity and sexual abstinence. What is more, the Virgin Mary was upheld as the New Eve who participated in the redemption of fallen humanity through her willingness to bring into the world her son Jesus, and Mary Magdalene became a redeemed Eve by virtue of her devotion to that Son and her total repudiation of her former life of sensuality. Interestingly, neither Mary was ever viewed as a symbol of liberation for morally and socially suppressed women, at least so far as high clerical culture was concerned.

From the thirteenth century onward, scholastic theologians recast Catholic doctrines within the context of a new interest in Aristotelian logic and philosophy. Thomas Aquinas (ca. 1225–1274), the greatest of these theologians, devoted significant amounts of energy to synthesize a rational, universal truth regarding women's status. On the one hand, he compared Aristotle's argument that a female is a defective male (because of her lack of male genitalia) and thus has no vital force with the biblical story that Eve was created from Adam's rib. This comparison confirmed his belief that women were, indeed, created sep-

arately after men and from men by God's grand design and should be therefore subordinated to the rule of men. On the other hand, he also expanded the role of the Blessed Virgin Mary from the mediator for human redemption to the intercessor between Christ and humanity. In one of the prayers he composed, he taught that as the Mother of God she was therefore the Mother of all humans; she was the Mother of the kingdom of Heaven and therefore the refuge of all human needs. It was her mercy that the believers embraced more fondly, thought of more often, and invoked more frequently, and it was through her grace that humans found God. Thomas's scholastic Mariology not only consolidated the traditional Catholic Marian doctrines—the Mother of God and the Perpetual Virgin—but also laid the foundations of the new doctrines of the Immaculate Conception (her being conceived in her mother's womb without the stain of Adam and Eve's Original Sin) and the Assumption (her having an incorruptible body by virtue of her total sinlessness and therefore her assumption into Heaven in body as well as in soul). The Roman Church was tolerant of the spread of these two pious novelties because both were believed to have also been rooted in the traditions of the early Church Fathers. Now, a more humanistic image of Mary changed somewhat social perceptions of women, who could be loving wives and devoted mothers, adored mistresses in a courtly romance, or even virtuous women who would help men move toward that which was good, such as Dante's Beatrice. Regardless of the Virgin Mary's status as intercessor for all humankind before the throne of her Son and her new role in elevating the status of women so far as some social norms were concerned, the Church showed no intention at all to change its misogynic attitude and teachings.

The new waves of popular piety that centered on the Virgin Mary coincided with the more humanistic Mariology in late medieval Europe. Both, in turn, flourished in Renaissance art and literature in which Mary became a central figure of humanity as well as of divinity. However, controversy surrounding the character and the nature of the Virgin Mary continued in the Latin Church. Emphasis on the humility and passivity of Mary continued to dominate Catholic theology,

despite the growing popular belief that she was the model of motherhood and the mediator of all graces. Attempts to praise her in order to empower women in the church hierarchy and to promote women's rights in the real world often ended miserably, with women being condemned as heretics and even burned at the stake by Catholic authorities. Soon, Protestant hostility toward Mariolatry (the Protestant term for what they perceived to be undue worship of Mary) emerged as a basis for iconoclastic campaigns against the Catholic establishment and its Marian art.

While the Blessed Mary did not bring about the liberation of women at the end of the Middle Ages, the weak, sinful, and wicked Eve would stay in the elite and the popular culture of the West for centuries to come.

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Bibliography

- Anderson, Gary A. *The Genesis of the Perfection: Adam and Eve in Jewish and Christian Imagination*. Louisville, KY: Westminster John Knox, 2001.
- Aquinas, Thomas. *The Three Greatest Prayers: Commentaries on the Our Father, the Hail Mary and the Apostles' Creed*. Translated by Laurence Shapcote. Westminster, MD: Newman, 1956.
- Dalarun, Jacques. "The Clerical Gaze." In Christiane Klapisch-Zuber, ed., *A History of Women*, Vol. 2, *Silences of the Middle Ages*. Cambridge: Harvard University Press, 1992.
- Pelikan, Jaroslav. *Mary through the Centuries: Her Place in the History of Culture*. New Haven, CT: Yale University Press, 1997.
- Ward, Jennifer. *Women in Medieval Europe, 1200–1500*. London: Longman/Pearson Education Limited, 2002.

Women in China and the Latin West

There were many similarities between the lives of Chinese and European women during the period between 1000 and 1500, but there were also interesting differences in household living arrangements, laws pertaining to marriage and divorce, and perceptions regarding the inherent nature of females. Both societies were steadfastly patriarchal, but, in both cultures, male domination was more of a societal norm with

origins in the distant past rather than an overt manifestation of contemporary misogynistic tendencies. Both societies were intent on regulating female behavior.

In the Latin West, early medieval Latin Christian theologians constantly reiterated the idea that virginity and chastity were preferred moral values, as opposed to sexual desires and activities. At the same time, these church leaders conceded that marriage was legitimate because it was the necessary instrument of human continuity, it was a means of avoiding sexual promiscuity, and it was blessed by Jesus at Cana. Yet, virginity was still considered and taught to be a "higher, more spiritual calling."

In order to reconcile the heavenly ideal with mundane reality, Latin theologians developed a system of extremely complicated theories on womanhood and sexuality. While acknowledging that women were equal to men in Christ's redemption of them from Original Sin and in their potential for salvation, theologians shared a firm conviction that women inherited a weak and wicked nature from Eve, and were largely incapable of resisting diabolical temptation. Moreover, their ability to tempt men sexually caused them to be considered by some Christian theologians to be the "Devil's Gateway" to sin and, therefore, morally inferior to men.

Even nuns were treated and regarded differently from monks, their male counterparts. The Church reformed and consolidated female monasticism by affirming nuns' spiritual dedication to God and encouraging their ascetical life styles as avenues to moral perfection, but the Church also placed nuns under the supervision of men, either monks or bishops. Although a few nuns were canonized as saints by the papacy, leading theologians never failed to point out that, while their spiritual devotion was indeed commendable and admirable, their sanctity, however, came from the gift of prophecy and all it entailed, or from the grace of God. The literature of nuns themselves seldom disputed the inferior status of women in this world, and often accepted the teaching of women's secondary role in God's creation.

In the early thirteenth century, the Church finally sanctioned marriage as a grace-giving sacrament on the basis of a theological metaphor

► THOMAS AQUINAS ON WHY A WOMAN'S SECOND MARRIAGE IS NOT A SACRAMENT

“Although a second marriage taken in itself is a perfect sacrament, yet taken in relation to a first marriage it has something of a defect in the sacrament, since it does not have full signification, since it is not of one woman to one man, as with the marriage of Christ and the Church; and by reason of this defect the [Church’s] blessing is withdrawn from the second marriages. But this should be understood of the case where the second marriage is the second for both the man and the woman, or for the woman only. For if a virgin contracts marriage with a man who has had another wife, the marriage is blessed none the less: for the signification is in some way preserved even in relation to the first marriage, since Christ, even if he had a single Church as a bride, nevertheless has many persons within one Church as brides; but the soul cannot be the bride of any other but Christ, since with the demon it commits fornication, and there is no spiritual marriage there; and because of this, when a woman marries for the second time, the marriage is not blessed because of a defect of the sacrament.”

Source

Thomas Aquinas, “The Summa Theologica,” question 63. English translation is adopted from D. L. D’Avray, *Medieval Marriage: Symbolism and Society* (Oxford: Oxford University Press, 2005), 147.

that allegorized the relationship between the Church and Christ as a holy union. However, some theologians used this metaphor to emphasize that marriage was the reintegration of women with men after Eve’s betrayal and fall, and, in addition to biological necessity, it was a moral path—by which the inferior female would go back to the guiding principle, the male. Moreover, Western Europe’s culture of the time revealed an ambivalent attitude toward women in the dualist symbolism of Eve versus Mary: the sinning temptress versus the sinless virgin mother of Christ.

To thirteenth-century Neo-Confucian scholars in China, women were not the Devil’s Gateway;

rather, they were malleable and could be brought to virtue, if men would dutifully guard the family’s gateway to keep the devils out. Influenced by the Turkic steppe peoples, the ideal male of the Tang dynasty (618–907) had been a literate warrior with a strong interest in athletic pursuits, hunting, and warfare. Rejecting the “barbarian taint” of the previous dynasty, the ideal Song male (960–1279) was a refined, sensitive scholar who spent his time in intellectual and artistic pursuits. Redefining masculinity necessitated a reevaluation of proper characteristics and behavior for women. Song-period Chinese emphasized a more restrictive approach based on the *san-cong* (the three obediences) in which daughters obey fathers, wives obey husbands, widows obey sons.

If the ideal Chinese male became more intellectual and less active during the Song era and in the subsequent Yuan period of Mongol rule (1279–1368), the ideal woman became an exquisite flower with “lotus feet,” faithful to her husband even after his death. Historians have not precisely identified the origins of footbinding, but it is clear that the practice became spread far beyond court circles during the Song era, perhaps as a means of emphasizing the fragile delicacy of Chinese women. Mongol women, who had considerable freedom even at the Yuan court, were prohibited from binding their feet, but their freedom does not seem to have been transferred to their Chinese counterparts. During the Yuan and Ming (1368–1644) periods Chinese women were also burdened with other restraints, particularly regarding diminished control of their dowries and their increasing inability to retain them after being widowed or divorced, thus substantially limiting the resources available to them.

In theory, Daoism and Buddhism challenged Confucian social structures. Confucianism’s primary goal is to provide a blueprint for a well-ordered hierarchy. A wife’s relationship with her husband would ideally be a replication of a subject’s relationship with a monarch; theoretically, a husband was required to act in a wife’s best interest, just as a ruler was responsible for the well-being of his subjects. As discussed below, reality was much more complex. Daoism, a more mystical approach, tended to associate female power with creativity. One passage of the *Dao*

Dejing: The Classic Book of Integrity and the Way, translated by Victor H. Mair, advises, “Having realized the mother you thereby know her children. Knowing her children, go back to abide with the mother. To the end of our life, you will not be imperiled.” Buddhism, a missionary religion, was introduced to China from Persia (present-day Iran) and points east some time around the first century CE, and was widely disseminated by the Tang period (618–907). Buddhism had broad appeal, but was particularly attractive to women, with its basic assumption that women were equal to men in their ability to seek spiritual fulfillment.

While classical Chinese philosophy generally promoted the notion that women should be in a supportive role at the bottom of the hierarchy, there was little or no implication that females were inherently any more or less evil than men. Nevertheless, there were always cautionary tales about hen-pecked husbands and shrewish wives. Most were comedies, but some were presented as tragedies, wherein the shrew’s husband, mother-in-law, father-in law, or all three died of shock and shame over her vile behavior.

Beginning in the Song era, a succession of Chinese scholars known as Neo-Confucians redefined the cosmic balance of the female principle, or *Yin*, and the male principle, or *Yang*, a balance that they viewed as the origin of and purpose behind both the natural universe and all Chinese social and political structures. The foundation of this cosmic balance was the gender harmony that existed in all families, in which men ought to fulfill “outer” duties and women “inner” duties. In a family, *Yang* and *Yin*, corresponding to the husband and the wife respectively, were metaphysically interdependent, and the “outer” duties of the man and the “inner” duties of the woman were complementary. Instead of justifying a husband’s right to his wife and his power over her, the cosmic Moral Principle of Harmony known as *Li* demanded that the husband was expected to provide for the family and protect the family members, including his wife. Meanwhile, instead of maligning a wife’s inherent moral character because she was a woman, *Li* taught that the wife was expected to *perfect* her manners, which were moral qualities, and thereby better the household in order to please

all family members, especially her husband. This Neo-Confucian deontology, a code of duty-centered ethics for both man and woman, idealized gender relationships and soon became the core value of the family. It was this idealized family that epitomized all socially and politically constructed networks in China.

Arranged marriages—often entered into for reasons of prestige or to forge ties between families—were the norm for upper classes in both societies, although it appears that it was far less ubiquitous in the lower rungs of European society. Dowries were important in both societies as well, but the degree to which a woman controlled her dowry varied from place to place and time to time in both. Although they were somewhat more likely to impoverish a bride’s family in China, particularly during the Song dynasty, they could be burdensome in Europe as well. Both societies stressed the importance of order in family hierarchies. A Chinese male, if his family had sufficient wealth, might have many concubines, but he could have only one wife at a time. A wife could sometimes limit or shape her husband’s behavior, but his mother would have a greater influence. The adult males of Chinese families were rarely intimately involved in the day-to-day issues of household management or child rearing; women bonded closely with their sons. A husband’s authority was subject to his filial duty to his parents. In practice, a husband’s mother ruled the household. A young wife might be oppressed; if she survived, she would also know that she would be likely to rule her own sons’ wives some day.

In China, lineages comprised of households with concubines and maids (generally sexually available to their master) were likely to grow faster due to a high birth rate. This growth rate was seen as a distinct advantage, but there was one complication: up to 20 percent of Chinese males were not able to secure wives or concubines for themselves. Women could generally better their status by marriage or by becoming affiliated as a concubine or maid and move up in the hierarchy, but the high percentage of unattached males constituted a problem, particularly during times of unrest or economic downturn. During periods of famine or other hardships, a husband’s parents exercised birth control by

keeping young married couples apart. Unwanted pregnancies, proof that couples disobeyed parental guidance, were a source of embarrassment, and heartily condemned by older family members. There were instances of young wives committing suicide rather than facing family condemnation.

Women had few options available to them during times of family discord or disruption. Men could initiate divorces for misbehavior (such as talking too much and being disrespectful), but women could not. By the period of the Ming dynasty, a husband had full control over his wife, concubines, and maids, subject only to his filial duty to his parents. From the Song dynasty onward, widow remarriage was frowned upon, but even though the aspect of romantic and sexual loyalty to one's husband is emphasized in Chinese literature, it seems more likely that the prohibition grew from a concern about property rights. If a widow left her husband's family for that of another man, she might have a claim to the family property—and her sons definitely would. Widow remarriage could well diminish the holdings of the family, a serious issue in a society organized around male lineages. Unlike European women, Chinese women did not have recourse into a celibate religious life, except those very few who opted to become Buddhist nuns—a choice that was less available to women, with the state's closing down and secularizing many Buddhist monasteries and nunneries in the mid-ninth century. Even a Buddhist revival under the Yuan and Ming emperors did not substantially raise the number of Buddhist monastic retreats.

The various cultures of Europe also underwent dramatic changes during the period 1000 to 1500. By the eleventh century, the Church had assumed a leadership position, albeit within the context of a continuing struggle with secular emperors, kings, and princes. Regardless of this power struggle for a position of primary authority over the lives of Western Europeans, by and large the Christian concept of women's role in the world (secular as well as sacred) had become ubiquitous. After the eleventh century, perceptions about the nature of women came primarily from the pens of men, many of whom struggled with their own sexuality. Eve was the temptress, whose transgression brought pain,

sin, and death into the world. The sexuality associated with Eve seems to have been especially threatening to monks, who had taken vows of perpetual chastity, and to a priesthood for which the state of celibacy was becoming increasingly the mandated norm. It should be noted that not all men found women to be as menacing as did pious churchmen, but the association of women with sin did at times endanger non-conforming women.

Nevertheless, the Church was patronized by wealthy women. These patronesses seem to have been motivated by a desire to do good works, but one cannot avoid theorizing that some of these women had internalized the Mary/Eve dichotomy and were striving for virtue. By the fourteenth century, there was unease about aggressive women, called “viragos” in English (literally, “one who acts like a man”). There was some concern that the heat and intensity of these assertive women might cause them actually to grow penises, thereby disrupting the entire order of the world.

Despite their different theoretical approaches, both Neo-Confucian scholars in China and Christian theologians in the Latin West would agree that women should be kept out of the public sphere and perform domestic duties: giving birth and taking care of children, preserving order in homes, and offering love and comfort to their husbands. Both would even agree tentatively that virtuous women at home could help men achieve moral good in public. However, in the Latin West, although women were constantly reminded of their moral defects, peasant or common women might enjoy the limited right to choose their marriage partners; a wife could expect to live with one husband at a time protected by the Church's law of monogamy; and a widow could exercise some degree of discretionary authority over her property, as permitted by law. Most of all, the West's feudal law of primogeniture did not totally exclude women from holding property, and women of substance could, therefore, enjoy limited autonomy and exercise some authority over their property.

In China, by contrast, a woman's private freedom was much more constrained by the social norms prescribed by Neo-Confucian teachings, namely the three obediences. A girl was expected

to obey her father's choice of her future husband; a wife was expected to obey her husband totally and to be tolerant of his concubines and fair to their children, especially when she could not reproduce a male heir; and a widow was expected to obey her eldest son. Moreover, a woman should demonstrate her *si-de* (four virtues) in front of men: her dignified grace, delightful beauty, decorous vocabulary, and domestic artifices. Within the bondage of those invisible norms, an aged wife might exercise her authority over the domestic affairs of her family, often after her grown-up sons married and fathered their own children. However, she ought to continue dutifully obeying the decisions of her husband, respecting her parents-in-law's disciplining her sons and daughters-in-law properly, and managing the complicated relationships among family members skillfully and fairly.

Sometimes, a woman might become the head of a family, when she was widowed and acknowledged as the regent of the heir, her son, particularly if she had earned respect from the male members of the family by embracing and perfecting her feminine qualities. At the same time, a woman, especially a concubine, might endure many years of manipulation and humiliation in order to demonstrate her moral perfection and earn herself respect from the family members. Her husband could easily desert her, if she was unable to fulfill her primary duty of reproducing children, especially a male child. The most miserable treatment that a woman had to endure in the duty-centered family network often befell a young widow, who happened to be a concubine without a male child of her own. She was expected to remain chaste in honor of her dead master and to commit suicide if she was accused of a promiscuous deed or was sexually violated by a man. No law required her to do so, but social norms were often powerful enough to induce such tragedies.

In the public sphere, women in neither Europe nor China were allowed to hold government offices, to serve in the military, or to be ordained priests, although European women could hold positions in some trade and even merchant guilds in parts of the West. Both the ecclesiastical and secular laws of the Latin West intentionally excluded women from performing most

SEVEN REASONS TO DESERT A WIFE

Neo-Confucian scholars listed seven reasons, alleged to be the words of Confucius, for a husband to desert his wife:

"Disobedience to her husband's parents, failing to produce children, being licentious, being jealous, having an incurable disease, being too talkative, and stealing."

—Wenxi Liu

Source

"Hsiao-hsueh chi-chieh," edited by Chang Po-hsing (1651–1725), in *Kuo-hsueh chi-pen ts'ung-shu*, edited and reprinted (Taipei: Commercial Press, 1968), p. 35. Translation by Wenxi Liu.

public functions, and similarly Neo-Confucian scholars viewed women's entry into the sphere outside their families as breaking the harmony of the cosmic order, which would inevitably lead to disasters.

There actually were a few brilliant queens in Europe during the period 1000–1500. These women fought industriously either for their own hereditary rights or on behalf of their children's legitimate claims to power, and their struggles to obtain what belonged to them (thrones, fiefs, and hereditary offices) often earned them respect and support from their subjects. In China, on the contrary, there were neither empresses nor prominent female politicians during the same period. Moreover, Neo-Confucian scholars always depicted Empress Wu Zetain (625–705) of the Tang dynasty, the only Chinese woman ever to hold imperial power in her own right, as an evil ruler daring to surround herself with Buddhist monks and other evil advisers who forged a Buddhist sutra to legitimize her usurpation of her husband's throne. She is also accused of committing murders and various other abuses of power, as well as encouraging evil men to satisfy her scandalous sexual appetite. This misrepresentation of Empress Wu successfully persuaded emperors of the Song and Ming dynasties to implement laws prohibiting women's participation in politics.

During this time period, Neo-Confucian scholars also harshly condemned a few imperial concubines who dared to involve themselves in court politics. In their minds, these women's political ambitions and promiscuous life styles threatened to not only debase court order but also to destroy the empire. Therefore, the resolute enforcement of *Li* throughout the centuries actually confined Chinese women increasingly within the "inner" circle of family and undermined their talents in public politics. Women did not have another opportunity to exercise real political power until the Qing dynasty (1644–1911), when ethnic Manchurians dominated China.

Despite institutional suppression and intellectual misogyny, many women in both China and the Latin West refused to marginalize themselves. Within the compressed private sphere, some struggled to educate themselves, write about their lives, and voice their concerns. Some of their literary works not only influenced women readers of their era but also left marks on future generations. The works of Christine de Pisan (ca. 1364–before 1430) in the Latin West and the poems of Lady Li Qingzhao (1084–after 1155) in China represented the highest literary achievements of their respective ages. With the growth of an urban economy and the expansion of trade and commerce, many townswomen became more visible in operating businesses independently in spite of legal restrictions and social biases against them. Literature gradually flourished, exploring the female awareness of their bodies, love, and sexuality, and indicating a desire to enter and compete in the male-dominated professions.

Some of the bravest female individuals were victimized in the West's witch-hunts of the late Middle Ages and beyond, simply because they dared to break the rules set by the Catholic Church. During the same time period, many women in China committed suicide in order to conform to the social norm of widow's chastity, after the first Emperor of Ming, Zhu Yuanzhang (r. 1368–1398), unprecedentedly sanctioned *chi* (integrity) as a virtue for the people, especially women. Except for a few such as Joan of Arc (ca. 1412–31) in the Latin West, most females, activists and victims alike, died unnoticed; they are,

however, being rediscovered, remembered, re-evaluated, and respected today.

—Wenxi Liu and Carolyn Neel

Bibliography

- Bary, William Theodore de, and W. Chaffee John, eds. *Neo-Confucian Education: The Formative Stage*. Berkeley: University of California Press, 1989.
- Block, R. Howard. *Medieval Misogyny and the Invention of Western Romantic Love*. Chicago: University of Chicago Press, 1991.
- Mann, Susan, and Yu-yin Cheng, eds. *Under Confucian Eyes: Writings on Gender in Chinese History*. Berkeley: University of California Press, 2001.
- Rose, Mary Beth, ed. *Women in the Middle Ages and the Renaissance: Literary and Historical Perspectives*. Syracuse: Syracuse University Press, 1986.
- Shahar, Shulamith. *The Fourth Estate: A History of Women in the Middle Ages*. Translated by Chaya Calai. London: Methuen & Co., 1983.
- Wang, Robin. *Images of Women in Chinese History and Culture: Writings from the Pre-Qin Period through the Song Dynasty*. Indianapolis: Hackett Publishing, 2003.

Gender Relations on the Eurasian Steppe

The task of taking care of the animals, the very basis for life and livelihood on the steppe, was shared by both sexes. Men handled the animals unless they were hunting or away from the family for war or other reasons. Men also constructed the yurts (or gers) and wagons, although this often became a task for the entire family. In addition, they churned the *kumiss* and manufactured the saddles and other riding equipment as well as their own weapons.

Women did most of the household duties, such as cooking, making butter and other dairy products, dressing animal skins, and making felt. During migration periods, women also drove the carts and wagons. When the men hunted or were at war, the women would take care of the animals. It was not unusual for either sex to do the traditional work of the other.

All of the nomads had some proficiency as archers with the compound recurved bow of

the steppe, and both sexes were known for their equestrian skills. Children learned to ride at an early age, often before they walked.

Children assisted in the care of the animals but also had the duty of procuring fuel for the fire. As wood was scarce on the steppe and needed for the construction of yurts, bows, wagons, and other items, it was not used as fuel. Instead, children gathered dried animal dung, which if properly dried burned with little odor.

Due to the often precarious nature of life, which depended on men and women to frequently perform the same duties to ensure the family survival, pastoral nomads tended to have a strong egalitarian streak in their institutions. There was social and political differentiation but much less so than in the patriarchal agrarian societies that bordered the steppe. Egalitarianism was most apparent in gender relations, responsibilities, and social status. Even in the upper levels of society, women could play an overt role in politics, such as the regency of Töregene, a wife of Ögödei (r. 1230–1240), the second Mongol khan, who ruled the empire as regent from 1240 to 1246. Indeed, women frequently served as regents at regional levels for the domains of the Mongol princes. Mothers and wives also served as advisors at all levels of society. On several occasions Chinggis Khan (1162–1227) turned to the advice of his mother Hoelun as well as his wife Börte. Before setting forth against the Khwarazmian empire in 1219, he heeded to the suggestion of another wife, Yesui, and selected a successor. Women were still subordinate to men, but their nomadic lifestyle allowed for a wide latitude of flexibility.

—Timothy May

Bibliography

- Golden, Peter. *Nomads and Sedentary Societies in Medieval Eurasia*. Essay on Global and Comparative History Series. Washington, DC: American Historical Association, 1998.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Krader, Lawrence. *Social Organization of the Mongol-Turkic Pastoral Nomads*. The Hague: Mouton, 1963.
- Lane, George. *Daily Life in the Mongol Empire*. Westport, CT: Greenwood, 2006.

➤ MARRIAGE AMONG THE EURASIAN NOMADS

Marriages were exogamous (outside of one's immediate kin) and often arranged while the intended husband and wife were young. It is not certain how extensive polygamy was among the nomads, but it existed among the nobility. Furthermore, the nomads also practiced Levirate marriages in which after the husband's death, the wife, if she agreed, could marry her brother-in-law. Furthermore, a son could also marry the wives of his deceased father, excluding his own mother, thus ensuring their economic security.

—Timothy May

Western Concepts of Masculinity

Masculinity in the European Middle Ages was not a private matter of personal identity but rather a public performance of actions that had to conform to explicit cultural expectations. Aristocratic males, and to a lesser extent clerics and commoners, faced significant pressure to earn a reputation as real men in the eyes of their peers. Meanwhile, the Catholic Church sought to reorient traditional secular masculinity to fit with its own value system. Chief among the male impulses that the Church set its sights upon was the familiar tandem of sex and violence.

Men in the secular world were obliged to demonstrate their masculinity constantly lest they be stigmatized as effeminate. One of the primary ways to prove one's manhood was to engage in regular sexual intercourse. Men needed to keep their women sexually satisfied, for the medical philosophy of the day held that sex kept women in good health (and, since women were considered lustful, sex at home was thought to deter a woman's inclination toward adultery), and, of course, it led to conception, which the Church preached was the only legitimate purpose for this inherently sinful activity. Fathering many children, especially sons, was a typical sign of virility. Moreover, fashionable articles of clothing such as pointed shoes were meant to call to mind the male anatomy; indeed, one term for a manly yet stylish young fellow was *poulain*, from the Latin *polana* (pointed shoe). Such

► THE FUSION OF SECULAR AND SACRED

St. Bernard, in his treatise *In Praise of the New Knighthood* (ca. 1130), heartily advocated for knights to abandon their secular, materialistic ways (which he ridiculed as weak and effeminate) and instead to adopt a lifestyle that emulated the monk in piety and asceticism. Unlike monks, however, the new knights, specifically the military order of the Knights of the Temple, shed blood in the name of Christ. Killing infidels, Bernard assured them, was a holy undertaking because it was *malicide* (killing evil) rather than homicide. Never before had the spiritual masculinity of the church and the secular masculinity of the warrior class been so closely intertwined. Bernard argued that death in holy warfare was the best conclusion to a secular, or nonclerical, man's life:

"How blessedly martyrs die in battle! Rejoice, brave athlete, if you live and conquer in the Lord; but glory and exult still more if you die and join your Lord. Life is indeed fruitful and victory glorious, but more important than either is a holy death. If they are blessed who die in the Lord, how much more so are those who die for the Lord!"

—John William Sutton

Source

Bernard of Clairvaux, *In Praise of the New Knighthood: A Treatise on the Knights Templar and the Holy Places of Jerusalem*, trans. M. Conrad Greenia (Kalamazoo: Cistercian Publications, 2000), 34.

youths chafed at the antisexual culture fostered by religious authorities.

Throughout this era the Church steadily attempted to restrict the sexual lives of clergy and laity alike. For much of the first millennium of its existence, the Church had tacitly tolerated marriage and concubinage among men of the cloth, but by the twelfth century clerical celibacy was becoming a rule and not just an ideal. Laymen, meanwhile, faced an increasingly complex system of ecclesiastical law, no small amount of which was dedicated to sexuality. Gratian's *Decretum* (ca. 1140), a compilation and synthesis of canon law, provided the Church with ample grounds for prosecuting men for their nonmari-

tal sexual encounters. There was little method for enforcement, though, so punishment could be evaded by the clever.

By the early fourteenth century the legal systems of secular governments had reached the sophistication of church law, and between the outbreak of the Black Death in 1347–1348 and the beginning of the sixteenth century, secular authorities rivaled their ecclesiastical counterparts in attempts to curtail sex. Like the Church, governments took a dim view toward nonmarital sex and prosecuted a wide range of activities, including masturbation, fornication, adultery, and homosexuality. If the law was strict for men, it was far worse for women. Men by far had freer sex lives, benefiting from centuries-old beliefs in the natural superiority of masculinity on both the physical and spiritual levels. Compared to men, women were seen as more sexually voracious, more likely to commit adultery, and more likely to be the cause of problems in marital relationships.

Males of the aristocracy, in turn, found a new model of manhood. Ideal masculinity for the warrior class had long been a matter of physical prowess. The Church had struggled in vain against the knightly proclivity toward violence, passing edicts such as the Peace of God, which tried to forbid aggression against the clergy and poor, and the Truce of God, which proscribed violence on certain days of the week. With the advent of the First Crusade in 1095–1096, however, the Church readily sanctioned masculine violence so long as it was channeled against more "appropriate" targets, such as the Muslims who ruled over Jerusalem and who were identified as the enemies of Christ. A major motivation for men who took part in the crusades was (as they saw it) to avenge Christ's death. Church authorities such as St. Bernard of Clairvaux (ca. 1090–1153) promised that the man who died a holy death in battle was a martyr and would earn a sure ticket to heaven.

Now the male roles of man of God and man of war could be fully reconciled in the person of the holy warrior. Earlier these two models of masculinity had been mutually exclusive, as seen in the evolving conception of the English king and martyr, St. Edmund. The historical Edmund was a king of East Anglia who died in battle against Viking invaders in 870. Chronicle ac-

counts give no indication that he was a particularly holy man, but after his death writers began to depict him as an ideal Christian who eschewed violence and willingly died as a martyr for Christ. In the two centuries following the First Crusade, however, Edmund was portrayed as a martial figure, though no less holy for his newfound bellicosity. He thus evolved from a character who emulated a peaceful Christ to an archetypal crusader who won God's love by dying in battle against His enemies.

—John William Sutton

Bibliography

- Brundage, James A. *Law, Sex, and Christian Society in Medieval Europe*. Chicago: University of Chicago Press, 1987.
- Bullough, Vern L. "On Being a Male in the Middle Ages." In *Medieval Masculinities: Regarding Men in the Middle Ages*, edited by Clare A. Lees. Minneapolis: University of Minnesota Press, 1994.
- Murray, Jacqueline. "Hiding behind the Universal Man: Male Sexuality in the Middle Ages." In *Handbook of Medieval Sexuality*, edited by Vern L. Bullough and James A. Brundage. New York: Garland, 2000.

Courtly Love, Romance, and Gender Stereotypes in Europe

In the twelfth and thirteenth centuries, French troubadours imagined a unique kind of male-female relationship, which they referred to as *fine amour* (refined love), for entertaining a targeted audience: aristocratic ladies. Since the late nineteenth century, this model of emotional and physical relationship has attracted both historians and literary critics as scholars search for the medieval traces of female gender consciousness and the origins of European misogyny. The *fine amour* is thus now commonly termed "courtly love."

Eleanor of Aquitaine (ca. 1122–1204), queen first of France and then of England, was the most powerful stateswoman in twelfth-century Europe, noted for her vigorous defense of her hereditary right to title, property, and privileges; for her role in the Second Crusade (1147–1149); and for her intrigue in the Franco-English conflict at the turn of the thirteenth century. Meanwhile, she was also the wealthiest and most



Manuscript illumination of troubadours performing before a royal couple, from Alphonse Le Sage's *Las Cantigas*, late thirteenth century. Troubadours were professional composers of music and poetry, and were among the chief entertainers in the royal courts of Europe. (Gianni Dagli Orti/Corbis)

colorful individual of her time, with a sophisticated taste in the arts, especially poetry, music, and fashion. It has long been alleged that in her court at Poitiers, she and her daughter Marie, countess of Champagne, generously received and entertained guests, mostly aristocratic ladies and their companions. Although whether and how often courtly love-styled liaisons between noblewomen and chivalric knights actually occurred inside the court remains murky, it is quite certain that a new literary genre—romance, with courtly love as the central theme—emerged from and circulated in that court. This new genre accommodated female courtiers and satisfied their psychological needs.

During Europe's High Middle Ages (ca. 1000–1350), a romance (*roman* or *romant*) meant a piece of popular courtly literature in verse and in the vernacular Old French, or *romanz*, language instead of Latin. Romance stories about

FROM ANDREAS CAPELLANUS, *DE AMORE*

“Know, then, that the chief rules in love are these twelve that follow:

- I. Thou shalt avoid avarice like the deadly pestilence and shalt embrace its opposite.
- II. Thou shalt keep thyself chaste for the sake of her whom thou lovest.
- III. Thou shalt not knowingly strive to break up a correct love affair that someone else is engaged in.
- IV. Thou shalt not choose for thy love anyone whom a natural sense of shame forbids thee to marry.
- V. Be mindful completely to avoid falsehood.
- VI. Thou shalt not have many who know of thy love affair.
- VII. Being obedient in all things to the commands of ladies, thou shalt ever strive to ally thyself to service of Love.
- VIII. In giving and receiving love’s solaces let modesty be ever present.

IX. Thou shalt speak no evil.

X. Thou shalt not be a revealer of love affairs.

XI. Thou shalt be in all things polite and courteous.

XII. In practicing the solaces of love thou shalt not exceed the desires of thy lover.”

“Not only is every woman by nature a miser, but she is also envious and a slanderer of other women, greedy, a slave of her belly, inconstant, fickle in her speech, disobedient and impatient of restraint, spotted with the sin of pride and desirous of vainglory, a liar, a drunkard, a babbler, no keeper of secrets, too much given to wantonness, prone to every evil, and never loving any man in her heart.”

—Wenxi Liu

Source

Andreas Capellanus, *The Art of Courtly Love*, ed. and trans. John J. Parry (New York: Columbia University Press, 1941), 81–82 and 201.

Troy, Alexander the Great, Emperor Charlemagne, Roland, and King Arthur and his knights recast Germanic and Celtic epics, legends, and folktales, and the adventures of brave knights with their ladies, idealistic noblewomen who were often married to someone else, occupied center stage. On one level, the courtly love relationship was an imitation of the feudal relationship between a lord and his vassal, or warrior retainer. In many romance stories, the knight served his noble lady by following the norms of courtesy, obedience, loyalty, readiness to serve, and willingness to sacrifice his life in the same way that an idealized feudal vassal served his liege lord. This literary model of love invited contemporary criticism because it defied the ecclesiastical pronouncements on feminine inferiority and the sacredness of marriage. It also made secular noblemen feel uncomfortable because their marriages were usually connected to a convenient concern for inheritance.

However, the lyrics and poems of the courtly love model continued to grow in number and popularity, and courtly love turned from a cen-

tral element of romance stories into a code of love. Segregated noble ladies in various courts might dream of playing central and commanding roles in a real world. They might even fantasize breaking sexual taboos and challenging conventional virtues of womanhood. For most of them, however, a sexual or at least emotional relationship out of wedlock was of far lesser concern than fulfillment of the ideals of true love and nobility. Therefore, the code of courtly love mixed social reality with literary exoticism, religious doctrines, and philosophical speculations and was constructed with a set of inherent dichotomies that complemented one another: knightly bravery vis-à-vis courtly gentility, virginity vis-à-vis sexual escapade, passion vis-à-vis restraint, the art of love vis-à-vis accursed love. From the thirteenth century onward, norms of noble behavior and romantic love derived and refined from this mixed code gradually filtered down from the nobility to people of the lower social strata, which in turn gave the European ideals of nobility, genteel behavior, and romantic love a distinguishably paradoxical character.

Around 1200, a priest known as Andreas Capellanus (Andrew the Chaplain), who served Countess Maria of Champagne, produced (in Latin) the book *De Amore* (*Concerning Love*), also known as *De Arte honeste amandi* (*The Art of Courtly Love*), which he loosely based on the *De Amore* of the Roman poet Ovid (43 BCE–17 CE). Ever since its circulation, readers and commentators have been divided by the contradictions and ironies embodied in the chaplain's narratives and commentaries. Was it a primer aimed at teaching young knights the rules of courtly love to help them move up in the aristocratic hierarchy, or was it a scathing critique, denouncing extramarital and promiscuous sexual adventures while advocating a principle of true womanhood acceptable to the Church? Regardless of its author's intention, the last part of the book included extremely derogatory and vicious statements against women. Those misogynic remarks, even though they might have been sarcastically made as some scholars suggest, reflected a major and enduring aspect of an already centuries-old Western culture of gender and sexuality.

Alongside these sentiments, however, the West inherited other notions from the literary genre of courtly love, not only the idea that true love, as opposed to a marriage of convenience, is possible and even ennobling but also that the lover places his beloved on a pedestal, ironically thereby objectifying her. It has surely been an ambiguous heritage.

—Wenxi Liu

Bibliography

- Andreas Capellanus. *The Art of Courtly Love*. Edited and translated by John J. Parry. New York: Columbia University Press, 1941. Reissued 1990.
- Boase, Roger. *The Origin and Meaning of Courtly Love: A Critical Study of European Scholarship*. Manchester, UK: Manchester University Press, 1977.
- Cherchi, Paolo. *Andreas and the Ambiguity of Courtly Love*. Toronto: Toronto University Press, 1994.
- Owen, D. D. R. *Eleanor of Aquitaine: Queen and Legend*. Oxford, UK: Blackwell, 1993.
- Swabey, Fiona. *Eleanor of Aquitaine, Courtly Love, and the Troubadours*. Westport, CT, and London: Greenwood, 2004.

Transvestism in Western Culture—Saints and Sinners

Transvestism, or cross-dressing, is well attested in medieval European literature and culture, and provides a clear illustration of the premodern Western gender hierarchy that exalted males and masculine characteristics. Women who cross-dressed gained in status because they were seen to be making themselves more masculine, whereas men who did so were condemned unless their transvestism was overtly intended as harmless spectacle.

Cross-dressing was not disparaged in classical Greek and Roman times, when it was associated with the worship of deities such as Dionysus and Aphrodite. There are also myths of cross-dressing heroes including one about Achilles, who was disguised as a girl by his mother so that he would not be taken away to the Trojan War, an episode recounted in the *Achilleid*, the unfinished Virgilian epic of the Roman poet Statius (ca. 45–ca. 96 CE).

The Judeo-Christian tradition, however, was more hostile to transvestism. The practice was explicitly prohibited by the Hebrew scriptures (Deuteronomy 22:5), probably to distinguish Judaism from other faiths that did incorporate cross-gender rituals. Christianity forbade transvestism (though with no means of enforcement) at the Council of Gangra (before 341), claiming that women who tried to live as monks were doing so only in pretense of holiness.

It is difficult to say how many women did, in fact, attempt to disguise themselves as monks, but a vast tradition of such stories circulated throughout Europe in the early Middle Ages. The women, such as St. Eugenia, in these tales are depicted favorably and are admired for their cross-dressing. In the secular literature, the thirteenth-century French poem *Le Roman de Silence*, by Heldris de Cornuälle, involves a heroine named Silence who is raised as a boy in order to circumvent a law prohibiting women from inheriting. In the end, she is revealed as a woman and reverts to a stereotypically feminine role by marrying the king. *Silence* highlights the fact that such tales, while seeming to empower women, construct holiness or heroism in masculine terms;

► THE STORY OF ST. EUGENIA

The tale of St. Eugenia, originally composed in the eastern Mediterranean in the sixth or seventh century, is typical of the hagiographies (saints' lives) that deal with cross-dressing women. Eugenia's story was included in a number of prominent hagiographical texts, including Jacobus da Varagine's thirteenth-century *Legenda aurea* (*The Golden Legend*), a compilation of saints' lives that was translated into many vernacular languages and was beloved throughout Europe for centuries. In the tale, Eugenia is the daughter of Philip, the pagan Roman governor of Egypt. When she learns about Christianity she converts and then disguises herself as a man in order to join a monastery. The truth about her womanhood is known to the abbot, who has received a message from God, but he decides to keep her secret. Eugenia, now Eugenius, proves to be an exemplary monk, but problems arise when a wicked woman named Melanthia falls in love with Eugenius. The monk rebuffs her advances, but Melanthia spitefully accuses Eugenius of trying to seduce her. Philip himself adjudicates the case, and in order to prove her innocence Eugenia must bare her breasts. Now reunited with her estranged family, Eugenia helps them all to convert to Christianity, and they later die as martyrs for the faith.

—John William Sutton

they do not question the gender hierarchy in which the male is seen as superior. Thus, in order to better themselves, women must ape the male gender.

Female cross-dressing seems to have been accepted when women were trying to be more like men, but it was severely condemned when women used transvestism as a vehicle for challenging or usurping male authority. Consider the case of the mythic Pope Joan. According to legend, a ninth-century woman named Joan (the name varies depending on the source) took a male identity and rose through the ranks of the Church until she was elected pope and reigned for more than two years under the name John Anglicus (John the Englishman). Her womanhood was revealed graphically when she gave birth in the street to a child fathered by her

lover. In most accounts, she dies in childbirth. The earliest references to Pope Joan do not occur until centuries later, and while today it is accepted that she never existed, many throughout history have believed the story to be true. Protestant reformers referenced Pope Joan among their attacks on the Church, while the Church vehemently denied Joan's story. All sides did agree, though, that it was unthinkable for a woman to reign over Christendom. Joan of Arc (ca. 1412–1431), the most famous medieval transvestite, was another woman whose cross-dressing was condemned because of the power she wielded over men. Joan was executed for heresy because, although she had promised her captors that she would stop wearing male clothing, she relapsed and did so again, claiming that it was God's will. Ironically, by this claim, Joan herself conformed to the patriarchal belief that heroism and godliness were inherently male qualities.

Male cross-dressing, meanwhile, was rigorously persecuted. Any man who dressed as a woman was reviled for lowering his status in the gender hierarchy. Male transvestism was only allowed when it was clear that the individual was unmistakably a man. The thirteenth-century knight Ulrich von Lichtenstein, for instance, claims in his (perhaps fictionalized) autobiography that in order to honor women, he once dressed in female attire for a journey and along the way competed in several jousting matches, while so attired. Likewise, in one episode from Thomas Malory's fifteenth-century Arthurian cycle, Lancelot, fed up with another knight's constant verbal jabs, disguises himself as a woman, defeats the knight in a joust, and then forces him to wear a dress so that he can be mocked before Arthur's court.

Additionally, men and boys were permitted to dress as women to play female roles on the stage. This tradition continued in England well into the seventeenth century, decades after most other European countries had allowed women to act. This transition was resisted in England largely because of the weight of historical precedent for males playing female roles and the opposition of such actors to having women usurp their livelihood.

—John William Sutton

Bibliography

- Brundage, James A. *Law, Sex, and Christian Society in Medieval Europe*. Chicago: University of Chicago Press, 1987.
- Bullough, Vern L. "Cross Dressing and Gender Role Change in the Middle Ages." In *Handbook of Medieval Sexuality*, edited by Vern L. Bullough and James A. Brundage. New York: Garland, 2000.
- Bullough, Vern L., and Bonnie Bullough. *Cross Dressing, Sex, and Gender*. Philadelphia: University of Pennsylvania Press, 1993.
- Donovan, Leslie A., trans. *Women Saints' Lives in Old English Prose*. Cambridge, UK: D. S. Brewer, 1999.
- Hotchkiss, Valerie R. *Clothes Make the Man: Female Cross Dressing in Medieval Europe*. New York: Garland, 1996.

Gender and Sexuality—Two Spirit People in North American Indian Cultures

In many pre-contact American Indian nations, including the Klamath, Chumash, Hopi, Ojibwa, Winnebago, Crow, Cheyenne, Diné (Navajo), Ute, Papago, Teton Lakota, Oglala Lakota, and Santee Dakota, certain individuals, identified as "two spirit people," were believed to have both masculine and feminine spirits that accorded them special status in their communities. Intersexed people—or people who have a combination of male and female internal and external genitalia—were considered to be two-spirit by many cultures, as were biological males choosing to express feminine gender characteristics and biological females choosing to express masculine gender characteristics. Although some two-spirit people engaged in sexual activity that would today be considered homosexual, their positions within their communities focused on the responsibilities and privileges given to them because of their special gender expression rather than on their sexual practices.

Feminine gender roles in pre-contact North America were considered powerful positions. Native American women maintained sophisticated relationships with the plants and animals that surrounded them. Women provided food, building materials, and medicinal plants for their families. As the suppliers of more than half of the food supply and materials for trade, women played

a fundamental role in these traditional economies. Likewise, male gender roles, such as hunting, fishing, and warfare, were equally honored. Indeed, reciprocity was the principle through which relationships between sexes and genders were cultivated and refined, and through which a person's contributions to the continued existence of society were recognized.

Within this context of respect for the work performed by both women and men, two-spirit people found an honored place. Individual nations accorded unique statuses to women-men (men performing a feminine gender role) and allowed for varying degrees of flexibility. The performance of feminine tasks was noted among many California tribes, including the Chumash, Pomo, and Yurok. This included gathering food, preparing meals, weaving, and sewing. Feminine occupations for women-men also existed among the Kutenai, Klamath, Quinault, Aleut, Ojibwa, Winnebago, Crow, Cheyenne, Teton Lakota, and Santee Dakota. The Crow *boté*, the Chumash *joya*, the Cocopa *elxa*, and women-men among the Santee Dakota, Oglala Lakota, Diné, Ute, Papago, and Pomo are described as having an early proclivity for feminine tasks. Women-men in other communities performed a combination of masculine and feminine tasks.

Women-men married or had sexual relations with men or women depending on the nation. Sexual relationships between women-men and men occurred among the Crow, Yuma, Apache, Santee Dakota, Klamath, Chumash, Diné, Cheyenne, Hopi, Papago, Ute, Zuni, Pomo, and others. Scholars report sexual relationships between women-men and women among the Zuni, Diné, Papago, Crow, Klamath, Osage, and others. In some cultures women-men remained celibate, while in others they were sexually available to many. Among the Cheyenne, Chumash, Natchez, Cree, Kutenai, Crow, Papago, Yuma, and Pima, researchers noted an early preference for female company among women-men. The Lakota *winkte*, Zuni *lba'ma*, and women-men among the Santee Dakota, Osage, Hopi, Cheyenne, Diné, and the Yuki were described as speaking in a feminine manner.

Most pre-contact nations believed that two-spirit people engaging in sexual activity with each other was improper. Sex between two-spirit

people was sometimes understood to be like sex between members of the same family. In many areas the terms used for sex between males were different from those for sex between a man and a woman-man.

Man-woman status (a woman performing a masculine gender role) also allowed for flexibility in dress, work, and sexual relationships. Among the Achomawi of northern California, men-women dressed in feminine clothing but performed masculine work and married women. One Klamath man-woman assumed masculine responsibilities, including marriage, but continued to wear primarily feminine clothing. Mohave, Quinault, and Paiute men-women performed masculine tasks, wore masculine clothing, and often married women. Warfare was usually associated with men but could be performed by women and did not necessarily coincide with masculine or ambiguous gender identification. Thus female warriors were not always viewed as changing gender roles and are excellent examples of gender-role crossing without full status change. Yet in some nations, full status change was possible, as some individuals could hold two-spirit status for a period of time and then take on an exclusively masculine or feminine status.

Both women-men and men-women often had specialized roles. As historian Sabine Lang has indicated, women-men were typically healers, “gravediggers, conveyers of oral tradition and songs, and nurses during war expeditions; they foretold the future, conferred lucky names on children or adults, wove, made pottery, arranged marriages, and made feather costumes for dance.” Women-men healers were common within cultures in which female healers were prevalent. Because women-men were considered to have both masculine and feminine spirits, they were believed to have extraordinary access to the spirits and special insight into relationships between men and women. For example, the Lakota winkte had special powers symbolized by wearing women’s clothing, and much like other powerful people they carried symbols of their spirit healers in medicine bags. Feminine clothing represented connection to spiritual power, a connection so potent that medicine people approached winktes for advice.

—Elizabeth Currans

Bibliography

- Brown, Lester B., ed. *Two-Spirit People: American Indian Lesbian Women and Gay Men*. New York: Haworth Press, 1997.
- Currans, Elizabeth. “Gender and Sexuality, Two Spirits.” In *American Indian Religious Traditions: An Encyclopedia*, edited by Suzanne J. Crawford and Dennis F. Kelley. Santa Barbara, CA: ABC-CLIO, 2005.
- Lang, Sabine. *Men as Women, Women as Men: Changing Gender in Native American Cultures*. Austin: University of Texas Press, 1998.
- Roscoe, Will. *Changing Ones: Third and Fourth Genders in Native North America*. New York: St. Martin’s Press, 1998.
- Roscoe, Will. *The Zuni Man-woman*. Albuquerque: University of New Mexico Press, 1991.
- Williams, Walter L. *The Spirit and the Flesh: Sexual Diversity in American Indian Cultures*. Boston: Beacon Press, 1992.

Female Spirituality in the Americas

Prior to the arrival of Europeans, most American Indian women and men understood their roles and lives to be mutually complementary in all aspects, including spirituality. Women functioned shamanistically (that is, as intermediaries between the human and spirit world) no differently than men, and many of their ritual roles were similar. In other cases, men and women had different ritual roles that complemented one another: men often identified with a male Sky and women with a female Earth. But in all traditions for which there are relevant data, it is clear that women were understood to be spiritually more powerful than men because of several factors. Women are clearly linked to Earth in a number of significant biological ways, whereas men do not mirror Sky so directly. Women also were understood innately to connect with the spirit realm, whereas men normally needed ritual activity to enter the same trance states. While women and men had equal access to the spirit realm, men had to work harder at it.

For nearly all American Indian religious traditions, the realm of the sacred, prior to the influence of Christianity, was one of female and male complementary deities. The virtually ubiquitous tobacco offerings, whether or not in a pipe,

were invariably to the zenith and nadir, or the male Sky and female Earth, and the four cardinal directions, the order varying; the four directions represent the Four Winds, some male and some female. Female Moon is paired with male Sun (some traditions reverse the gender because of particular geographical circumstances); the male Morning Star is paired with the female Evening Star; and so forth. Associated with these cosmic deities are various animal and plant deities, gendered according to their function. Those animal spirits on which humans subsist are female; those perceived primarily for their predatory or protecting virtues are perceived as male. Hence, the black Bear, the major healing deity, was perceived as female, while the ferocious grizzly Bear was understood to be male.

Throughout North America, in gatherings for rituals such as Sacred Pipe ceremonies, it was (and is) common for women and men to sit at opposite sides of a circle; hence, they are separate, yet together they complete a sacred circle. Often, in ritual lodges, men and women take on separate, complementary roles; for example, men tend the sacred fire, and women prepare the ritual feast. In constructing Midewiwin (the Grand Medicine Society of the Ojibway tribes of the Great Lakes region) lodges and many Spirit ("sweat") Lodges, men gathered the wooden poles for the framework and women gathered boughs. Each has a different role in their construction. In summary, American Indian religions are those in which both genders have complementary, essential roles.

—Jordan Paper

Bibliography

- Paper, Jordan. "Female Spirituality." In *American Indian Religious Traditions: An Encyclopedia*, edited by Suzanne J. Crawford and Dennis F. Kelley. Santa Barbara, CA: ABC-CLIO, 2005.
- Paper, Jordan. *Through the Earth Darkly: Female Spirituality in Comparative Perspective*. New York: Continuum, 1998.
- Underhill, Ruth M. *Papago Woman*. New York: Holt, Rinehart and Winston, 1979.

Women and Men in Oceania

In most of Oceania there was a bias toward tracing inheritance through the male line (patriline-

➤ AN ALMOST LOST FEMALE RITUAL PRACTICE

An important set of rituals, primarily engaged in by females, were those directly involved with foraging and gardening—women's contribution to a society's subsistence. Unfortunately, because early Western social scientists linked religion exclusively to male activities, they studiously ignored many of these foraging and gardening rituals as practiced throughout North America. The oversight was usually not deliberate; most ethnologists were just totally oblivious to them. We have detailed studies of subsistence rituals in horticultural-hunting Plains cultures that leave out the gardening rituals, and the important planting rituals of the Eastern Iroquoian-speaking peoples are simply not to be found in the ethnographic literature. The only depiction of the female aspects of these rituals is limited to Amazonian cultures, and then in only a single study.

—Jordan Paper

al descent), giving men relatively higher status than women. Since rank was so highly valued, however, in many parts of Oceania, including Hawaii and New Zealand, a kind of ambilineal descent, tracing inheritance through a line of men or women of highest rank, prevailed. Being a first-born or a later-born was often more important than one's gender in determining rank. In some cases, most famously the Trobriand Islands that lie in the Solomon Sea off New Guinea, outright matrilineal descent (whereby inheritance was traced through a line of women) dominated.

Throughout Oceania division of labor by gender was similar. Often the land and gardening were associated with women, while the sea and fishing were associated with men. Women were more likely than men to focus on tasks near home such as taking charge of child care, the daily tending of the garden, the making of tapa cloth, and clothing, weaving, and cooking. Men were more likely than women to take charge of activities farther from home such as fishing, warfare, the heavy labor of clearing the land for gardening, house and canoe building, stone tool manufacture, trade, and religious activities. Some of these divisions of labor by gender have

➤ WOMEN OF POWER IN TONGA

To suggest that in Oceania men usually had more power and status than women is to simplify the complex relationship between the genders. In Tonga, for example, where, along with Fiji and Samoa, Polynesian culture is thought to have first developed, women had an extraordinary amount of power and status, especially in chiefly families.

In Tonga a person's political rank was inherited through the father. Therefore, male chiefs passed along their chiefly positions to their sons. Social and spiritual rank, however, came from one's mother. Individual Tongans obtained their rank and place within the social order through their mothers. Among siblings, women always had more rank than men. In order to improve the rank of their children, men attempted to marry as high a ranking woman as possible.

In chiefly families the higher rank of sisters to their brothers presented a unique problem. While typically a paramount chief had more rank than anyone else in society, a chief's sisters and all their children outranked him. A chief's sisters' sons could even appropriate the chief's possessions because they outranked him. This problem was mitigated by either a chief's sisters never marrying or marrying high-ranking men from Fiji. Because of such intermarriage a chief's sisters' sons were Fijian, not Tongan, and not a threat to the chief.

—*Sharlotte Neely*

a certain logic. With greater upper-body strength, men dominated in activities requiring heavy activity such as cutting down trees to clear an area for gardening. Without child care duties, men dominated in dangerous activities such as warfare.

There were, however, significant deviations from these routines throughout Oceania. In the

highlands of New Guinea, for example, men rather than women typically did the weaving. In Hawaii men did the cooking, mainly because it was believed that men's greater spirit (*mana*) could be corrupted by eating food cooked by women.

Among some groups the activities of men and women were strictly segregated. In Hawaii, for example, men and women never ate meals together. In the Trobriand Islands, where premarital sex was more than tolerated, unmarried teenagers of the opposite sex could not eat together.

Nowhere was the distinction between men and women more obvious than in the area of religion, where men dominated. In the highlands of New Guinea men were responsible for building the ghost houses to divert the spirits of the dead away from the living. In the Trobriand Islands the magical practices that made food grow, canoe trips safe, and life in general good were performed by men. Temple building in Polynesia was done by men and was such important work that high-ranking chiefs labored alongside commoners. In Hawaii, as elsewhere, priests were men and were typically believed to possess greater *mana* than women. A first-born woman from a chiefly family, however, might outrank almost every man.

—*Sharlotte Neely*

Bibliography

- Campbell, I. C. *A History of the Pacific Islands*. Berkeley: University of California Press, 1989.
- Kane, Herb Kawainui. *Ancient Hawaii*. Captain Cook, HI: Kawainui, 1997.
- Oliver, Douglas L. *Oceania: The Native Cultures of Australia and the Pacific Islands I and II*. Honolulu: University of Hawaii Press, 1989.
- Strathern, Andrew, et al. *Oceania: An Introduction to the Cultures and Identities of Pacific Islanders*. Durham, NC: Carolina Academic Press, 2002.

■ Introduction: Centers of Religious and Secular Learning—Were the Great Academies Outside of Europe Universities?

Culture is passed from one generation to another through a variety of media. In its most basic form, it is through example and instruction imparted by parents to their children. In preliterate societies it also consists of elders, and not necessarily blood relatives, training boys and girls in traditions that are deemed critical for a community's well-being. Since the dawn of civilization, literate sedentary societies have instituted formal schools for the education of future leaders and those who serve the society in specialized capacities. During the period 1000–1500, education of this last sort grew in quality and quantity across the globe.

The most dramatic development, which would become a global phenomenon well after 1500, was the rise of universities in Western Europe during the twelfth and thirteenth centuries. The Latin term *universitas* means “a corporation” or “a community.” It came to be applied to institutions of higher learning in Europe that were legally recognized communities of masters and students (*universitates magistrorum et scholarium*), that offered multiyear instruction according to a set curriculum, and that awarded degrees, or teaching licenses, in both the Seven Liberal Arts and in at least one of the advanced faculties, or disciplines, of theology, ecclesiastical canon law, Roman civil law, and medicine. To achieve such degrees, students had to navigate successfully through a series of lecture courses and examinations.

Such schools originated in Italy and France, but by the year 1500 Latin Europe counted slightly more than 50 universities, each charted by an ecclesiastical or secular authority (and in some cases both), that were located from Scotland and Portugal in the west to Sweden in the north and Hungary and Poland in the east. Most universities attracted professors (as they were also known) and students from all over the Christian West, but despite the fact that they spoke a variety of native languages, church Latin was their common tongue and the language for all instruction and testing. Thus, Paris's left bank

of the Seine, where its university was located, became known as the Latin Quarter.

As the various entries under this topic illustrate, educational institutions that offered a complex array of primary, secondary, and advanced instruction proliferated in number and tended to grow in size around the world during this half millennium. Given this fact, it has become fashionable in some circles to bestow the title of “university” on some of these large multidisciplinary academies, such as the three madrasas at Timbuktu in the empire of Mali that have often been cumulatively referred to as a university or the fourteenth-century Madrasa of Sultan Hassan in Cairo, which offered instruction in all four schools of Islamic jurisprudence. There is no denying that these and many other madrasas throughout Dar al-Islam were spiritual and intellectual centers that offered instruction in a wide variety of fields, both religious and secular. But they were not universities in the sense of European universities, which, as noted, offered set curricula and academic decrees for the successful completion of formally established academic programs. These schools, such as thirteenth-century Oxford and Cambridge, and only these schools, were the progenitors of modern universities.

Whereas European universities were proliferating and becoming an increasingly important element in the Latin West's intellectual, social, and economic life, the same was not universally true for Buddhist monastic academies. Ceylon, Japan, Tibet, Mongolia, and Southeast Asia witnessed a growth in the numbers and size of Buddhist monasteries, but this was not the case in Central Asia, India, and China, where wars, raids, and the surge of Islam (in Central Asia and northern India) brought in their wake the destruction of numerous ancient Buddhist centers of devotion and learning and a clear and sharp diminution of their religious and educational significance. A case in point was the monastic complex of Nalanda in Bihar, India. This monastery, which has been characterized as “one of the first great universities in the world,” was a center of advanced

study in a wide variety of Buddhist and Hindu religious traditions, as well as secular subjects since at least the fifth century CE. The great seventh-century Chinese pilgrim-monk Xuanzang had studied and taught there, and over the centuries the monastery's fame as a center of piety and scholarship attracted Buddhists from all over Asia. In the last decade of the twelfth century the monastery was destroyed by Turkic Muslim raiders, a sad but fitting symbol of the rapid decline of Buddhism in the land of its origin.

Nalanda has remained in ruins to this day, although there is serious discussion of building on its site Nalanda International University, a graduate-level research university. When and if Nalanda rises again, much of its curriculum will focus on Buddhist subjects and on issues of special significance to contemporary Buddhism, such as peace and environmental ecology. But there are also plans to incorporate within it a School of Business Management and Development. This new institution with an ancient name will undoubtedly follow the model of what was once an exclusively European form of institutionalized instruction but is now international, the degree-granting university.

—*Alfred J. Andrea*

The Madrasas of Islam

The *madrasa* is the archetypal school of Islamic religious sciences, which include such studies as Sharia (religious law), quranic exegesis, theology, and hadith (the sayings of the Prophet), all taught systematically from secondary to a higher level following a youth's *kuttab* (primary) education. Madrasas have traditionally been given the task of maintaining Islam's ideal religious orientation and during the period 1000–1500 could be found from Spain and western North Africa to China in the east and sub-Saharan Africa in the south but were largely concentrated in the Islamic heartland, the so-called Middle East. The word “madrasa”—romanized as *medrese* in Turkish and Persian due to the phonetics of these languages—derives from *darasa*, a generic place where the acts of “reading, understanding, learning, and memorizing by repetition” take place.

The madrasa went through certain phases of development as it evolved to become a long-

lasting, discrete center of learning. In the first phase, the mosque functioned as an instructional core by concentrating primarily on the sacred texts and scriptures, which were learned by heart, thereby inculcating an understanding of the Quran in the early Muslim community at the time of the Prophet in Medina (622–632) and for at least the rest of the century. Muslim students traveled extensively to seek knowledge and learn from prominent teachers, and teachers also traveled about, searching for opportunities to teach and to learn from others by discussing and exchanging ideas with scholars in distant lands. In so doing, they were following the strictures of one early hadith, or saying, ascribed to the Prophet: “Seek knowledge even if it is in China.” The *jami-khan* (inn at the mosque) complex emerged naturally in the second phase, when the khan (inn) was built next to the jami (mosque) around the eighth century and served as a lodging place for students who came from remote areas. The third phase, which occurred around the eleventh century, witnessed the madrasa as an independent institution of learning, primarily in religious studies but expanding sometimes to other fields of knowledge, such as medicine and astronomy. Both prior to the emergence of the madrasa and after, Muslim education, as it had been from earliest days, was a characteristically personal and informal affair, and thus as the madrasa began to develop, the jami still continued to function as a school as in the past, centering on basic religious studies and sometimes on Islamic studies. Indeed, there was a good deal of intersection between madrasas and jamis for quite a while.

In 1067 Nizam al-Mulk, the great vizier (1064–1092) of the Seljuk sultans Alp Arslan and Malik Shah, established the Madrasa Nizamiya, named after him, in Baghdad in order to confront intellectually and to dismantle Shia teachings in the region. This institution marked a turning point in the history of madrasas, as it became one of the greatest educational foundations of higher learning in the Muslim world. Endowing scholarships for the students and attracting many leading scholars to teach, his model of a madrasa immediately spread throughout Iraq and into Khurasan and other neighboring regions.

Madrasas were essentially charitable institutions based on a deed of trust (*wakf*). As the founder was free to establish any type of organization or project, he or she was also free to determine the subject matter and books to be taught in the newly established madrasa as long as neither violated the tenets of Islam. Therefore, the deed of a foundation contains significant information about the curriculum and the teachers and students. According to the deed of foundation of Altun-aba Madrasa, for instance, written in 1202 in Konya in Anatolia, this madrasa accommodated three groups of students (from beginners to higher levels) along with a professor (*mudarris*), his assistant (*muid*), an imam (prayer leader), and other supporting staff and custodians. The *wakf* of the madrasa also outlines how much a professor, students in the varying levels, and the whole staff would get paid and how much should be spent on buying books annually. It even tells us when the madrasa had the right to expel a student (apparently it expelled a student if he failed at the end of the fifth year).

Madrasas were generally established to teach one or more of the four major schools of Islamic juristic thought (*fiqh*). In some instances during this period all four would be taught in a single madrasa but in separate classes. Although many different subjects, ranging from the traditional religious disciplines to logic and literature, were taught in madrasas, philosophical subjects were not always in their curricula and were sometimes disparaged and excluded. All subjects, however, were taught in an integrative style, supplementing one another. Linguistic sciences, for instance, were taught in relation to the study of the Quran and hadith, and mathematical subjects were taught in relation with the musical theory of tones (*al-musiki*).

As was also the case in the universities of Latin Europe at the time, lecturing and learning by heart were generally the basic method of instruction in madrasas. Dictation (*imla*) was slow and methodic, as the students wrote down the lectures, usually verbatim. Then, students usually quizzed one another to foster their learning and comprehension of the subject in question, whereby the concept of *mudhakara* (“a calling something to mind with another”; “conferring

➤ THE OTTOMAN SAHN-I SEMAN MADRASAS

The Sahn-ı Sema Madrasas were established by Sultan Mehmed II inside the complex named after him (Fatih Külliyesi) between 1463 and 1470 in Istanbul to provide higher education in both Islamic disciplines and the rational sciences at the most advanced level. All madrasas in the complex were divided into *Semâniye* (higher level) and *Tetimme* (secondary level), with each Tetimme madrasa leading to a corresponding higher level of Semâniye madrasa. Although it is known from the deed of trust of Semâniye and also from the practice until the end of the sixteenth century that both Islamic disciplines and rational sciences were taught integratively, the prominent Ottoman traveler Evliya Çelebi said that these madrasas were opened only to teach religious knowledge. In the seventeenth century, Çelebi described these madrasas as follows:

“There are eight madrasas on the right and left side of Sultan Mehmed Han mosque, . . . which are called ‘semâni madrasas’ by scholars. [Mehmed II] constructed these eight madrasas looking like heaven in the world to revere and encourage religious knowledge, and honor the people of knowledge (*Ulemâ*). Each garden of a madrasa turns into a garden in heaven with the signboard of knowledge. This place has fairly high esteem among the *Ulemâ*. . . . There is a hospital on the eastern part of the madrasas for sick, poor and wretched people, and a large kitchen covered by seventy domes that serves generously for the needy.”

—Seyfi Kenan

Source

Orhan Şaik Gökyay, *Evliya Çelebi Seyahatnâmesi*, Vol. 1 (İstanbul: Yapı Kredi Yayınları, 1995), 129. Translated by author.

with another”) developed. The most significant and innovative method developed in madrasa education, especially in legal studies, was the process of disputation (*munazara*), which was comprised of a systematic knowledge of divergent legal opinions on the matter and a thorough knowledge of dialectic and the skill of disputation. This very much paralleled a similar form

of disputation that was then prevalent in the universities of Latin Europe from the twelfth century onward. Although there were many points of contact and interaction between Europe and the Muslim world through Sicily and al-Andalus (Muslim Spain), it would be hard to prove if one influenced the other, but it is not inconceivable.

Starting from the eleventh century, madrasas were usually located within the complex of the larger mosques. There they included classrooms, a prayer hall, kitchens, lodging places, and, more importantly, libraries, where books were gradually collected from gifts and bequests, especially donated by local scholars whose common habit was to give their books for the use of seekers of knowledge. Although there was a great deal of variation in the design of madrasas, the distinctive construction of a madrasa was a square, of one or two stories, encircled by a courtyard. These educational institutions also hired scribal personnel, such as a copier, a stationer, a proof-reader, and a bookbinder, to meet their instructional needs. In large madrasas, such as the Mustansiriyyah in thirteenth-century Baghdad or the Süleymaniye in sixteenth-century Constantinople/Istanbul, subjects such as medicine, mathematics, and astronomy were taught within the same complex as religious disciplines.

It would be erroneous to imagine the madrasas as a monolithic entity or as unchanging, static, frozen schools unaffected by the sociocultural, religious, and political changes that surrounded them. As Islamic schools of law varied according to geographical and cultural settings and from one era to another, so did the curricula of the madrasas, although instructional modification was not always significant or obvious.

—*Seyfi Kenan*

Bibliography

- Makdisi, George. "An Islamic Element in the Early Spanish University." In *Islam: Past Influence and Present Challenge*, edited by A. T. Welch and P. Cachia. Albany: State University of New York Press, 1979.
- Makdisi, George. *Religion, Law and Learning in Classical Islam*. Hampshire, UK: Variorum, 1991.
- Makdisi, George. *The Rise of Colleges: Institutions of Learning in Islam and the West*. Edinburgh, UK: Edinburgh University Press, 1981.

Rosenthal, Franz. *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*. Leiden: Brill, 2007.

Semaan, K. I. H., ed. *Islam and the Medieval West: Aspects of Intercultural Relations*. Albany: State University of New York Press, 1980.

Tritton, A. S. *Materials on Muslim Education in the Middle Ages*. London: Luzac, 1957.

von Grunebaum, G. E., ed. *Logic in Classical Islamic Culture*. Wiesbaden: Otto Harrassowitz, 1970.

Islamic Book Production

The production of luxury books, featuring increasingly exquisite levels of calligraphy, illumination, illustration, and binding, was strongly supported across the Islamic world between circa 1000 and 1500. This apparently elite pursuit nonetheless sustained the composition and preservation of classic texts in all branches of learning and literature, mirroring the vigor of a wider intellectual community. Already by the year 1000, famous libraries with holdings of many thousands of volumes were accumulated by bibliophile collectors, both rulers and civilian elite, in cities across the Islamic world such as Umayyad Córdoba, Fatimid Cairo, Abbasid Baghdad, and Buyid Shiraz. These libraries were accessible to private scholars, and some even provided facilities for visitors to make their own fresh copies from older exemplars on the shelves, with ink, paper, and even copyists made available. Books were therefore produced at different levels of expense but to similar ends: as trophies of cultural refinement and ambition and as sources of intellectual life.

The arrival of paper technology from western Central Asia and ultimately from China in the eighth century supported wider book production considerably as did calligraphic reforms, which improved legibility and the connoisseurial appreciation of Arabic script. While book culture was well established by the year 1000, this point marks two historical milestones: one of the earliest extant Quran manuscripts to be written on paper (dated 1000–1001), copied in Baghdad by master calligrapher Ibn al-Bawwab, and also the first extant illustrated book in Islamic art, a copy of al-Sufi's *Book of Constellations* (dated 1009–1010), copied and beautifully illustrated by the

astronomer's son possibly in Rayy, Iran. Earlier anecdotes and tantalizing fragments bespeak the currency of illustrated books before this, but extant examples of manuscript painting survive with increasing frequency only from the later twelfth century onward, attributed to Iraq, Syria, and Anatolia. These works cover an impressive range of subject matter: astronomy, medicine, zoology, pharmacy, botany, and mechanical literature of both classical Greek and Islamic-world authorship, along with works of Arabic *adab* (elegant literature), such as the *Kitab al-aghani* (*Book of Songs*) and the *Maqamat* (*The Assemblies*).

The illustrations are didactic or narrative, depending on the character of the original text, but conditions of composition and patronage are laid out in the frontispiece, usually a full-page painting in the opening pages, portraying the major contributors to the book's production. Initially this privilege was reserved for the author himself and is a late classical inheritance. Increasingly, the princely patron was included to the eventual exclusion of the original author. By the Timurid period (late fourteenth–fifteenth centuries in western Central Asia), the frontispiece painting typically delivers a portrait of a royal patron at leisure, reading among friends in an intimate garden setting and attended by servants and musicians. This describes the illustrated book as a treasured possession in its most elite context. Until the Persian Il-khanid period (late thirteenth century to the 1330s), it is difficult to make traditional art-historical attributions of manuscript paintings to any particular court or dynasty, with rare exceptions. Several twelfth- and thirteenth-century illustrated manuscripts specify that they were produced for private citizens or do not overtly proclaim any patron royal or otherwise, implying speculative production for the open market. Certainly, there was a lively economy in this trade, as books old and new were marketed to the interested public from the *sug al-warraqin* (stationer's market) in all major cities.

From the early fourteenth century, princely libraries and/or associated workshops (*kitabkhana*) served as exclusive production centers where teams of craftsmen contributed to the

➤ CAIRO—CITY OF SCHOLARS

In 969, the Fatimid army established a new capital in Cairo, on behalf of the Ismaili caliphate. Just northeast of the wealthy commercial quarter of Fustat, the Fatimid caliphs built a new palatine precinct named al-Qahira (the Victorious), where the Eastern and Western Palaces, gardens, army barracks, and ceremonial mosques were located, with monumental gateways set around the perimeter. Political propaganda underlay the ambitious architectural glamour: the majesty of (Ismaili Shia) Fatimid Cairo was an open challenge to metropolitan Baghdad, where the (Sunni) Abbasid caliphate was based. Perhaps in the same vein was the Fatimid policy regarding the support and advancement of learning: Cairo became a renowned center of scholarship and teaching for classical Greek sciences as well as Ismaili theology at grand public libraries as well as mosques, such as al-Azhar. In 1005, Caliph al-Hakim (r. 996–1021) founded the prestigious Dar al-hikma (House of Wisdom), at the Western Palace. This scholarly institution had teaching facilities for astronomy, mathematics, and medicine and also had an open-access library, with many volumes contributed from al-Hakim's considerable personal collection. The foundation document stipulates an annual budget to be spent on paper, ink, and pens for visiting readers as well as the upkeep of the bookbindings, provision of carpets during winter, and the librarian's salary.

The termination of the Fatimid caliphate in 1171, with Saladin's restoration of Sunnism in Egypt, caused many of the great Cairo libraries to be broken up. Ismaili texts regarded as heretical were destroyed, while works on classical sciences were sold off or claimed by bibliophiles in the new administration for their own collections.

—Moya Carey

design and execution of luxury books: Il-Khanid Tabriz, Jalayirid Baghdad, and Timurid centers in Samarkand, Shiraz, and above all Herat. The remarkable *Arzadasht* progress report (ca. 1430), apparently written by the *kitabkhana* director of Timurid prince Baysunghur in Herat, describes several ongoing projects, from designs for leatherwork to book illustration, and details the contributions of individual painters and calligraphers

as well as any setbacks encountered, including poor health.

The model of an ideal ruler was attached firmly to cultural sophistication, and princes were usually keen to sponsor intellectual and artistic life at court, either by welcoming poets and scholars or by commissioning new copies of classic texts. The best example of this is the enduring meaning of the *Shahnama* (*Book of Kings*), the Iranian national epic composed around 1000 by the poet Firdausi. From the Ilkhanid period forward, remarkable illustrated copies were commissioned by all rulers aspiring to Iranian kingship; having one's personal copy has been characterized as a "touchstone of royalty." Books therefore had political meaning as well as cultural value in the Islamic world; they were collected, treasured, consulted, and reproduced at different levels of a society with an enduring bibliophile culture.

—Moya Carey

Bibliography

- Bloom, Jonathan M. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven and London: Yale University Press, 2001.
- Gutas, Dimitri. *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early Abbasid Society (2nd–4th/8th–10th centuries)*. London: Routledge, 1998.
- Hoffman, Eva R. "The Beginnings of the Illustrated Arabic Book: An Intersection between Art and Scholarship." *Muqarnas* 17 (2000): 37–52.

Pedersen, Johannes. *The Arabic Book*. Translated by Geoffrey French. Edited with an introduction by Robert Hillenbrand. Princeton, NJ: Princeton University Press, 1984.

Wasserstein, David. "The Library of al-Hakam II al-Mustansir and the Culture of Islamic Spain." *Manuscripts of the Middle East* 5 (1990–1991): 99–105.

Formal Education in Southeast Asia

Prior to European contact, Southeast Asia had strongly developed traditions of literacy and formal education. These traditions were built upon the region's diverse religious and cultural heritage and the Hindu, Buddhist, and Islamic institutions integral to the local societies. Buddhism, largely of the Theravada variety, with an educational system based on the monasteries, was firmly established in lands that today are the nations of Myanmar (Burma), Thailand, Laos, and Cambodia. Islamic schools existed in Malaysia, Brunei, and Indonesia. In northern Vietnam, Confucian principles derived from China underpinned a highly systematized pattern of education, and Mahayana Buddhist monasteries provided education in southern Vietnam. Only in the Philippines is there little evidence of a tradition of religious education.

Religious education in Southeast Asia's Buddhist societies was provided by monks attached to monasteries. The first stage of education was a prerequisite for young men to be ordained as monks, an important rite of passage in these societies for most males, even those who had no intention of becoming monks for life. Typically, at the age of five or six boys were sent to the local monastery, where monks taught them to read religious texts, do simple arithmetic, and learn religious principles. The instruction was individualized, as a monk would have no more than 10 or 12 pupils, each working through his lessons at his own pace. Usually there was no specific curriculum or formal examination, although there was progression through texts and tasks. Boys were free to come and go as they wished from the classes.

Most young men trained in the monasteries did not continue their formal education past or-

► FAMILY-BASED EDUCATION

It is impossible to determine precisely to what extent formal religious education touched the lives of children in premodern Southeast Asia, especially in its more remote areas. Family-based education provided the skills needed for daily agricultural and domestic life and was probably the most common form of education available to boys as well as girls throughout traditional Southeast Asia. In those regions where animism was the major form of religious and spiritual belief, education could also include apprenticeships in shamanistic practices, magic, and sorcery.

—Christine Inglis

dination into the *sangha*, or monastic community. This included the minority who remained in the monastery for life and the vast majority who were part of the ordained community for only a few years or less before returning to the outside world, where they would marry and pursue secular lives. Although they had gained some secular knowledge, the main purpose of this system was to gain a moral education that properly situated them within both the monastery and, if they returned to the outside world, the larger Buddhist community. The system did, however, provide an avenue of social mobility for young men from poorer backgrounds.

Because this type of learning was a religious act, monastic education was common among young men, but girls were excluded from it. If they learned to read or write, it was either at home from members of the family or, for girls from elite families, with a tutor.

—Christine Inglis

Bibliography

- Inglis, Christine. "Education, Traditional Religious." In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.
- Keyes, Charles, ed. *Reshaping Local Worlds: Formal Education and Cultural Change in Rural Southeast Asia*. New Haven, CT: Yale University Southeast Asian Studies, Yale Center for International and Area Studies, 1991.
- Mohd, Taib Osman, ed. *Islamic Civilization in the Malay World*. Kuala Lumpur: Dewan Bahasa dan Pustaka and the Research Centre for Islamic History, Art and Culture, Istanbul, 1997.
- Postlethwaite, T. Neville, and R. Murray Thomas, eds. *Schooling in the ASEAN Region: Indonesia, Malaysia, the Philippines, Singapore, Thailand*. London: Pergamon, 1980.

Rhetoric and Education in Byzantium

The Byzantine empire inherited its educational and literary culture from the Hellenistic world and late ancient Christianity, and these traditions were fundamental to its thought, expression, and intellectual life. Far more than Western Europe, Byzantium remained a literate society where civic and church officials were expected

to be educated and able to write in a literary prose style and where classical as well as Christian texts were studied. Elementary and secondary education took place in private schools, where Hellenistic Greek language, grammar, and rhetoric were taught, and students prepared for civil service. Higher education sponsored by the state was revived in the eleventh century in Constantinople, including the study of law and philosophy, and theology was studied in a Patriarchal Academy. In both spheres, classical writers such as Plato, Aristotle, Homer, and the Greek tragedians as well as Christian theologians were read. Students mastered grammar and style through specially composed passages (*schedographia*) and interpreted and debated these texts, posing problems themselves, and by the eleventh and twelfth centuries intellectual circles knew, analyzed, and imitated a large body of classical and Hellenistic learning.

The ancient rhetorical tradition was the most important influence on Byzantine literary culture. Oratory was an essential part of public life in antiquity, where rhetoric included not only the ability to speak effectively with persuasive words but also the ideas and moral issues conveyed. Byzantine rhetoric preserved the tradition of virtuoso speeches given for praise (panegyric), information (*ekphrasis*), or blame (invective). The rules of rhetoric were learned from handbooks by Hermogenes, Menander, and Aphthonius, written from the second to fourth centuries CE, that spelled out the elements of prose (*progymnasmata*). These became the basis not only for Byzantine speeches but also for literary prose of all kinds, from history to saints' lives and military manuals.

Professional oratory survived throughout the Byzantine empire. It was performed by rhetors in settings that ranged from weddings and funerals to inaugural addresses and annual encomia in aristocratic homes, churches, tombs of saints, and the streets of Constantinople. Speeches were part of theatrical occasions that could include music, dance, and processions in what has been described as the Byzantine media. Most important were the panegyrics given by the imperially appointed master of rhetoric on ceremonial occasions. Rhetorical texts, filled with literary conceits and difficult to understand, were written

➤ MICHAEL PSELLUS

Michael Psellus (ca.1018–ca.1081), one of the leading intellectuals in eleventh-century Byzantium, epitomized the importance of learning and rhetoric in this era. Although his family was not wealthy, he was educated by a leading scholar and became a member of a circle of influential intellectuals. As court philosopher, Psellus served as a tutor or adviser to emperors. A wide-ranging scholar, his prolific writings included works of philosophy, theology, rhetoric, law, and history. Psellus's most famous work, the *Chronographia*, offers vivid portraits of the emperors from Basil II (r. 976–1025) to Michael VII (r. 1071–1078). Psellus saw the traumatic events of the eleventh century as a result of imperial character rather than of divine will or fate, and he emphasized the strengths and weaknesses of each ruler, generally from firsthand observation. His brilliant portrayals of the empresses Zoe and Theodora and Constantine IX Monomachus (1042–55) give an unmatched view of court life and politics.

—Dorothy de F. Abrahamse

down after the performance and today give little understanding of what the overall experience would have been. But when read carefully, they demonstrate political themes and even veiled satire.

Rhetoric and its classical antecedents permeated Byzantine intellectual culture. Its language was that of classical antiquity and was quite separate from the spoken Greek of the streets. The use of ancient models led historians to identify, for example, all northern peoples as Scythians (Indo-Aryan nomads from Central Asia whom the Greeks encountered around the Black Sea in the sixth and fifth centuries BCE) and to construct their narratives by the principles enunciated in the rhetorical handbooks of late antiquity. Only by analyzing the rhetorical underpinnings of Byzantine literature can it be understood and appreciated.

—Dorothy de F. Abrahamse

Bibliography

Jeffreys, Elizabeth. *Rhetoric in Byzantium*. Aldershot, UK: Ashgate, 2003.

Kazhdan, Alexander, and Ann Wharton Epstein. *Change in Byzantine Culture in the Eleventh and Twelfth Centuries*. Berkeley and Los Angeles: University of California Press, 1985.

Robins, R. H. *The Byzantine Grammarians: Their Place in History*. Berlin and New York: Mouton de Gruyter, 1993.

Sewter, E. R. A., trans. *Fourteen Byzantine Rulers: The Chronographia of Michael Psellus*. Harmondsworth, UK: Penguin, 1953.

Byzantine Scholars in Renaissance Italy

As the Ottoman Turks completed their encirclement of Constantinople in the late fourteenth century, a succession of scholars began to flee the Byzantine empire for Italy. Over the next century, as the last vestiges of the empire were overrun, these scholars were responsible for a flowering of Greek culture in the Latin West that broadened the scope and agenda of Italian humanism. They brought with them new manuscripts of the literary treasures of Greek antiquity, both pagan and Christian, and the intellectual tools for their interpretation and assimilation.

From the earliest days of the Renaissance, Italian humanists had been aware that they needed to read Greek texts in the original in order to round out their conception of antiquity. But it was not until the very end of the fourteenth century that Coluccio Salutati, the humanist chancellor of Florence, succeeded in lobbying his state to hire Manuel Chrysolaras as a teacher of Greek at the University of Florence. Although Chrysolaras only remained in Florence from 1397 to 1400, the effect of his sojourn was remarkable. He trained a generation of Italian scholars in Greek, including such luminaries as Leonardo Bruni, and in so doing helped broaden the scope of humanism. Chrysolaras also introduced his students to a new theory of translation that stressed the importance of rendering a readable text that retained the sense and spirit of the original. While he was in Florence, Chrysolaras was invited by Giangaleazzo Visconti to come to teach in Pavia. Although Chrysolaras was loath to go, the Byzantine emperor implored him to do so, for the emperor hoped that by nurturing Western interest in the culture of Greek antiquity he

➤ CARDINAL BESSARION



Cardinal Bessarion by Joos (Justus) van Ghent, fifteenth century. (Erich Lessing/Art Resource, NY)

In the preface to his translation of *Thucydides*, Lorenzo Valla famously described Cardinal Bessarion as the “most Latin among the Greeks and the most Greek among the Latins.” While certainly an exaggeration, Valla’s comment reflects the profound contribution that Bessarion made to the preservation of classical Greek learning and its assimilation into Renaissance scholarship.

Born in 1403 in Trebizond on the Black Sea and educated in Constantinople, at age 20 Basil Bessarion became a monk of the Order of St. Basil and later was ordained a priest. In 1438, he traveled to Italy as part of the emperor’s delegation to the Council of Ferrara-Florence and despite his youth gave the first address to the council on behalf of the Byzantine Orthodox party. At the

council, Bessarion worked hard to foster union between the two branches of the faith, eventually proposing a compromise position over the *filioque* controversy that opened the door to the union that was proclaimed in July 1439.

Almost immediately upon Bessarion’s return home in 1439, word reached him that he had been proclaimed a cardinal in the Roman Church, at which point he immediately returned to Italy. There, and for the rest of his life, Bessarion saw his role as twofold. He wanted to organize a crusade against the Turks and, especially after the capture of Constantinople in 1453, preserve as much of the intellectual heritage of classical Greece in the West as he could, until such time as it could be returned to its homeland. Although his crusading efforts led to naught, Bessarion became a focal point for Greek studies in Italy. He was a patron to many Greek émigré scholars, encouraging their work as translators of Greek texts and even sending them into the former lands of the Byzantine empire to copy or acquire more manuscripts of classical texts on his behalf. By his death in 1472, Bessarion had acquired one of the largest private libraries in Europe, comprising 746 manuscripts, 482 of which were Greek. This he left to Venice, where it came to form the heart of the *Biblioteca Marciana* in the middle of the next century.

—Richard Raiswell

might be able to arouse Latin support for the plight of his empire.

After Chrysolaras returned home in 1403, his legacy in Italy was taken up by George of Trebizond. Despite his name, George was actually born in the Venetian colony of Crete. However, finding few opportunities for a literary career on the island, he immigrated to Venice around 1420. As a scholar, he made his reputation with a rhetorical manual he penned in 1434. While manuals of rhetoric were always popular with humanists, George’s text was unique in that he tried to fuse Latin rhetorical theory with the hitherto largely unknown Byzantine tradition. The result was a Renaissance classic that offered Italian humanists a new and productive means of interpreting the literature of antiquity.

Despite the growing awareness of the cultural legacy of ancient Greece, a major stumbling block to Western aid for the Byzantine rump state in the early fifteenth century centered on religion, namely the Greek refusal to accept papal primacy, as well as certain theological issues, such as *filioque*. But with the Turkish threat becoming ever more acute, in 1438 the emperor agreed to attend a council in Ferrara that would negotiate the terms of union between the two churches. While the presence of so many Greek scholars in northern Italy for 18 months was important in itself, outside the council the major talking point came over a lecture given by Gemistus Pletho, a Byzantine Neoplatonist, on the differences between Aristotle and Plato. To many Italian humanists, Pletho’s assessment of Platonism

along with the 1469 *Against the Detractor of Plato*, written by Cardinal Bessarion, a former Byzantine Orthodox monk turned Catholic prelate, opened the door to the assimilation of the Platonic corpus, giving them a comprehensive philosophical alternative to the scholastic Aristotelianism of the universities.

From the middle years of the century, the flow of émigré scholars to Italy grew larger. Many of these men supported themselves as teachers, scribes, and translators. Indeed, Pope Nicholas V personally retained a number of Greek scholars who specialized in the translation of technical scientific and philosophical texts into Latin. In the decades after the 1453 capture of Constantinople, some scholars were employed by wealthy humanists, such as Lorenzo de' Medici, to comb the lands of the former empire to recover more manuscripts of antique Greek texts. And with the establishment of Aldus Manutius's printing press in Venice toward the end of the century, some were able to secure employment proofreading and copyediting Greek texts. In this way, then, the contribution of Byzantine scholars to the content, form, and direction of quattrocento (fifteenth-century) humanism was profound. Not only did they reorient the trajectory of the Italian Renaissance, but they also created a climate in Italy that fostered the preservation of the intellectual heritage of classical Greece.

—Richard Raiswell

Bibliography

- Geanakoplos, Deno John. *Greek Scholars in Venice: Studies in the Dissemination of Greek Learning from Byzantium to Western Europe*. Cambridge: Harvard University Press, 1962.
- Hankins, James. *Plato in the Renaissance*. 2 vols. Leiden: E. J. Brill, 1990.
- Kristeller, Paul Oskar. *Renaissance Thought and Its Sources*. New York: Columbia University Press, 1979.
- Monfasani, John. *Byzantine Scholars in Renaissance Italy: Cardinal Bessarion and Other Émigrés; Selected Essays*. Aldershot, UK: Variorum, 1995.

Intellectual Patronage by the Early Ottomans

As a frontier principality in northwestern Anatolia, the Ottoman sultanate was rooted in a rich

tradition of courtly patronage of art and scholarship, which the early Ottoman sultans seem to have embraced for reasons related to Ottoman self-image and political legitimacy. Having been acculturated within the same sociocultural milieu as previous and contemporary Muslim dynasties in Anatolia and the Middle East, the early Ottomans appreciated intellectual patronage as the etiquette of royalty and sought scholars and scholarship in order to make a case for their dynasty in the ideological war over legitimacy among competing dynasties and polities (Mongol, Turkic, Mamluk) spanning from Central Asia to Russia, the Middle East, and Egypt. The engagement of the Ottoman sultans with both their heritage and their political environment commenced a trend of successful intellectual patronage through which poets, artists, and scholars filled bureaucratic positions and frequently served as counselors, physicians, and astrologers to the sultans.

Scant evidence about the dawn of the Ottoman sultanate notwithstanding, we know that Orhan integrated jurists into his bureaucratic hierarchy by appointing them as judges (*qadis*) and oversaw the opening of the first Ottoman *medrese* (an institution for advanced education) in 1331 in Iznik (Nicaea). Under succeeding sultans, major centers of the Ottoman sultanate were ornamented with advanced medrese complexes, thanks to sultanic patronage and charitable foundations mushrooming throughout Ottoman territories. From 1425 onward, the office of *şeyhülislam* (chief jurisconsult) came to represent the administration of education and the judiciary, and medreses emerged as an essential part of the Ottoman administrative system, which demanded more graduates at an ever-increasing pace. By the sixteenth century, there were in most major Ottoman cities alone more than 115 medreses.

The Ottomans knew that hosting and patronizing scholars of stature, especially if transferred from other regions, projected an image of success, prosperity, and legitimacy. Ottoman sultans actively recruited scholars of renown and encouraged the circulation of scholars and scholarship by facilitating the means of travel and education. An example of such Ottoman efforts can be seen in the recruitment of Molla Gürani

(1416–1488), a scholar serving under the Mamluks in Egypt. He was introduced to Murad II (r. 1421–1444 and 1446–1451) by an Anatolian scholar and soon was appointed as the teacher of Prince Mehmed, who would become Mehmed II (r. 1444–1446 and 1451–1481). Similarly the Italian Jewish physician Giacomo di Gaeta, after serving Murad II, continued to serve Mehmed II as his private physician. Of course, the opposite was also true; rival dynasties competed for the patronage of skilled scholars, as is the case with the would-be first chief jurisconsult Molla Fenari (d. 1431) over whom the Ottoman Bayezid I (r. 1389–1402) and Murad II and the Karamanid Alaeddin Ali and Mehmed Bey competed. Although Molla Fenari eventually returned to Bursa, he served more than a decade under Karamanid rule.

The funding, compensation, and privileges offered to scholars and artists were substantial enough to encourage education and stimulate social and regional mobility. Scholars were considered part of the ruling class and were given tax exemptions that extended to their progeny. An early example is that of Molla Fenari's sons and grandsons, who were appointed as medrese teachers and given a luxurious daily compensation of 40 golden akçes. As incentives such as this became more common and widespread, aspirants for a better life embarked on education and soon realized the importance of holding on to their privileges. This realization led to the emergence of scholarly dynasties through a process of handing down knowledge from father to son and through family relations, which created a wide scholarly-class network.

Perhaps Mehmed II epitomizes the culmination of early Ottoman achievements in many respects, including intellectual patronage. He is known to have built a palace library housing books in Latin and Greek. Credit must be given to him for commissioning and overseeing the construction and operation of the famous Sahn-ı Seman Medrese at the Fatih Mosque in Istanbul, which set an example for subsequent medreses, and for organizing the education and educational bureaucracy and codifying the regulations governing educational system in sultanic laws (*kanunnames*). The demarcations among the three major branches of the sultanate's administration—



Fatih Mosque in present-day Istanbul, Turkey housed the Sahn-ı Seman Medrese. Both were commissioned by the Ottoman sultan Mehmed II in the fifteenth century. Photograph from about 1900. (Library of Congress)

➤ THE COURT OF MEHMED II

According to Zorzo Dolfin's fifteenth-century *Chronicle*, an eye witness, Giacomo de' Languschi, had this to say about Mehmed II:

"The sovereign, the Grand Turk Mehmed Bey, is a youth of twenty-six. . . . Daily he has Roman and other historical works read to him by a companion named Criaco of Ancona and another Italian. He has them read Laertius, Herodotus, Livy, Quintus Curtius, the chronicles of the popes, the emperors, the kings of France, and the Lombards. He speaks three languages, Turkish, Greek, and Slavic. He is at great pains to learn the geography of Italy and to inform himself of the places where Anchises and Aeneas and Antenor landed, where the seat of the pope is and that of the emperor, and how many kingdoms there are in Europe. He possesses a map of Europe with the countries and provinces. He learns of nothing with greater interest and enthusiasm than the geography of the world and military affairs; he burns with desire to dominate; he is a shrewd investigator of conditions."

—Hayrettin Yücesoy

Source

Franz Babinger, *Mehmed the Conqueror and His Time*, ed. William C. Hickman, trans. Ralph Manheim (Princeton, NJ: Princeton University Press, 1992), 112.

ilmiye (education), *kalemiye* (chancery), and *seyfiye* (army)—and the rules for each began to emerge during his reign. Mehmed II was an enthusiastic sponsor of scholars and artists, Muslim and non-Muslim alike, from faraway places, as is indicated in his portrait by the Italian Gentile Bellini; his private physician, the Jewish Italian Giacomo di Gaeta; his spiritual mentor, the Damascene Akşemseddin; his mentor, the Egyptian Molla Gürani; and the mathematician Ali Kuşçu of Samarqand.

—Hayrettin Yücesoy

Bibliography

- Fleischer, Cornell. *Bureaucrat and Intellectual in the Ottoman Empire: The Historian Mustafa Ali*. Princeton, NJ: Princeton University Press, 1986.
- Halil, Inalcık. *The History of the Ottoman Empire: The Classical Age 1300–1600*. Translated by Norman Itzkowitz and Colin Imber. London: Weidenfeld and Nicolson, 1973.
- Ihsanoğlu, Ekmeleddin, et al. *History of the Ottoman State, History and Civilization*. 2 vols. Istanbul: IRCICA, 2002.
- Repp, Richard C. *The Müfti of Istanbul: A Study in the Development of the Ottoman Learned Hierarchy*. Atlantic Highlands, NJ: Published by Ithaca Press London for the Board of the Faculty of Oriental Studies, Oxford University, 1986.

The Origins and Nature of European Universities

The medieval European university was a unique institution in terms of organization, methods of instruction, degrees offered, and privileges. Several factors coalesced in the eleventh and twelfth centuries that had an impact on the rise of the Latin West's universities, including the Gregorian Reform Movement, which was the struggle of the papacy to reform the Church and free itself from the control of secular rulers; Europe's recovery of Roman Law; the growth of towns and international trade; expanding civil and ecclesiastical bureaucracies; and the need for lawyers and notaries in those bureaucracies. Moreover, Western Christendom's recovery of Aristotelian works created the need for it to assimilate and respond to Aristotle's thought and that of his Jewish and Arab commentators.

A common medieval term for a university was *studium generale*, which signified the ability of a school to draw students from all over Europe, and another of their special qualities was indicated by a second term associated with them, *universitas*, the Roman legal term for a corporation, or guild, of professionals within a certain field or craft. Universities were organized either as guilds of masters (such as Paris and Oxford) or of advanced students (such as Bologna). As such, they had the right to set academic standards and to recognize levels of proficiency, which became known as degrees. Those who reached the degree of master were granted a license to teach.

Although exact foundation dates are unknown, the first known university to develop in the twelfth century was Bologna, followed by Paris and then Oxford. As Europe's seminal universities, Bologna became the model, in terms of organization, for universities south of the Alps, and Paris became the model for those north of the Alps. By the year 1500 there were at least 50 universities throughout Europe.

The origins of Europe's earliest universities are somewhat shrouded in mystery. Some of the earliest universities rose almost imperceptibly (at least to us) out of cathedral schools that initially served to train local clerics. Eventually, however, these once-modest and now-famous and important schools eventually received official rec-



Library of the University of Bologna, Italy. At its height in the twelfth and thirteenth centuries, the university was one of the earliest and most esteemed in Europe. (Kelly Borsheim)

ognition through papal statutes and royal or imperial charters that confirmed their status and special privileges as *studia generalia*. For example, the emperor Frederick I Barbarossa issued *Authentica habita* in 1158 affirming the status of Bologna, and King Philip II of France chartered Paris in 1200, followed by papal recognition around 1209, 1215, and 1231; a papal legate issued statutes to Oxford around 1215 confirming the status of the masters and the school. Unlike modern universities, each of Europe's first universities received several grants of recognition and privileges over time and often from competing kings and popes, not just one foundation charter that was meant to cover every anticipated situation. Although most early universities were religious foundations, as guilds they strove to become independent of local civil and ecclesiastical authorities, usually by obtaining privileges from kings, emperors, and popes, as noted above. Once these privileges were obtained, the university had a great deal to say about curricular matters, the cost of food and rents, and anything else the students required. As clerics the students were exempt from civil courts, which meant that the rowdiness of youth often went unpunished, and bloody town-gown battles became a problem. In return for these privileges, universities provided qualified men, usually lawyers, for positions in the bureaucracies of church and state.

Students (male, not female) entered the university around the age of 14 already with a basic knowledge of Latin, the language of scholars and clerics across all of Western Europe. Ideally the student would first obtain the bachelor's degree in the Arts faculty, where he studied primarily the arts of language, logic, and natural philosophy or science, all based loosely on the Late Roman trivium (Latin grammar, rhetoric, and logic) and the quadrivium (mathematics, geometry, astronomy, and music). Many students could not afford to obtain higher degrees, and some left even before obtaining the Bachelor of Arts degree. Nevertheless, what education they gained was of great use to them in improving their lot socially and economically. If the student had economic support, he would obtain the degree of Master of Arts (from the Latin *magister*, or teacher, interchangeable with "doctor," which

➤ THE STATUTES OF POPE GREGORY IX FOR THE UNIVERSITY OF PARIS, 1231

"Gregory, the bishop . . . to his beloved sons, all the masters and students of Paris—greeting and apostolic benediction. . . . [C]oncerning the condition of the students and schools, . . . each chancellor [of the cathedral of Notre Dame], . . . at the time of his installation . . . shall swear that, in good faith, according to his conscience, he will not receive as professors of theology and canon law any but suitable men. . . . Before licensing anyone, . . . the chancellor shall make diligent inquiries . . . concerning the life, knowledge, capacity, purpose, prospects and other qualities needful in such persons; and after the inquiries . . . he shall grant or deny the license to the candidate, as shall seem fitting and expedient. . . .

In other matters, . . . we grant you [the masters] the right of making constitutions and ordinances regulating the manner and time of lectures and disputations, the costume to be worn, the burial of the dead; and also, concerning the bachelors, who are to lecture and [at] what hours, and on what they are to lecture; and concerning the prices of the lodgings or . . . interdictions [prohibitions] of [any and all of] the same; and concerning fit punishment for those who violate your constitutions and ordinances, by exclusion from your society."

—Kimberly Georgedes

Source

Gregory IX, "Statutes of Gregory IX for the University of Paris," in *Translations and Reprints from the Original Sources of European History*, Vol. 2, No. 3, edited and translated by D. C. Munro (Philadelphia: Department of History of the University of Pennsylvania, 1902), 7–9.

also means teacher). Many ended their schooling at this stage. Those with patronage and/or benefices (income from an ecclesiastical office) might proceed to one of the four higher faculties: theology, canon (or church) law, Roman (or secular) law, and medicine. The successful student would receive another bachelor's degree, then the master's degree. Once a student incepted, or was accepted, as a master in any faculty, he was required to teach for two years, a period known as

a regency, or reign. Many Masters of Arts seeking higher degrees took classes in one of the higher faculties while serving their regency in Arts. As masters, they were granted the license to teach anywhere, although in practice recognition of the license was not automatic from institution to institution.

Courses were taught by lecture, either ordinary (taught by masters) or extraordinary (or cursory, taught by formed, or graduated, bachelors), and consisted of reading and commenting on the assigned text. The method included the use of the *quaestio*, or scholastic method, which entailed posing a question, listing the authorities for and against, and then resolving the problem and responding to the objections. Examinations were in the form of oral disputations, or determinations, held at certain specific times, such as Lent. Masters were also required to hold public disputations in which they debated anyone on anything. Although licensed to teach, the masters did not form a permanent teaching class. Most, after their final two-year regency, left the university to find gainful employment.

Despite antecedent ancient and Islamic educational models, the medieval European university was a unique institution in terms of organization, methods of instruction, and privileges. Medieval European universities provided the foundation for modern universities throughout the world with respect to the types of degrees offered, the division of curriculum into lower and higher faculties, and the mission of preparing graduates for future employment.

—*Kimberly Georgedes*

Bibliography

- Cobban, Alan B. *The Medieval English Universities: Oxford and Cambridge to c. 1500*. 1988; reprint, Berkeley: University of California Press, 1990.
- Cobban, Alan B. *The Medieval Universities: Their Development and Organization*. London: Methuen, 1975.
- Courtenay, William J., and Jürgen Miethke, eds. *Universities and Schooling in Medieval Society*. Boston: Brill, 2000.
- Ferruolo, Stephen. *The Origins of the University: The Schools of Paris and Their Critics*. Palo Alto, CA: Stanford University Press, 1998.

Haskins, Charles Homer. *The Rise of the Universities*. Ithaca, NY: Cornell University Press, 1923.

Leff, Gordon. *Paris and Oxford Universities in the Thirteenth and Fourteenth Centuries: An Institutional and Intellectual History*. New York: Robert E. Krieger, 1975.

Rashdall, Hastings. *The Universities of Europe in the Middle Ages*. 3 vols. Edited by F. M. Powicke and A. B. Emden. 1936; reprint, London: Oxford University Press, 1958.

The Study of Foreign Languages in European Universities

Although knowledge of Latin was essential to study at all European universities, the acquisition of other foreign languages did not initially play a significant role in the university curriculum. However, three factors served to increase interest in their study. First, many scholars began to recognize the importance of Arabic, Greek, and Hebrew for philosophical and scientific study. Second, the development of a strongly evangelical spirit, especially with the establishment of the mendicant orders (most notably the Franciscans and Dominicans), spurred interest in learning the most important non-Christian languages for missionary purposes. Finally, the humanist movement, with its emphasis on textual criticism and a growing interest in the original languages of the Bible and classical learning, encouraged the study of Greek and Hebrew at European universities.

The intellectual riches of the Muslim world had already begun to attract Western interest by the tenth century CE. Already in the 960s, Gerbert of Aurillac, the future Pope Sylvester II, traveled to Spain to study Arabic mathematics. He quickly established a reputation as the most learned man of his day (leading some to speculate that he had made a bargain with the Devil). In the decades that followed, Christian scholars continued to seek access to Islamic learning, both in Spain and Sicily. At the same time, an increasing number of translations of Arabic, Greek, and Hebrew texts flowed in the opposite direction.

By the time of the foundation of the first universities in the twelfth century, a significant

➤ **RAMON LLULL, A TREATISE ON THE STUDY OF EASTERN LANGUAGES (1298–1299)**

In 1298 or 1299, Ramon Llull sent a letter to the masters of the University of Paris in hope of persuading them to establish chairs of Eastern languages for missionary purposes. The following is an excerpt from that plea.

“Here the prick of conscience stings me and compels me to come to you, whose high discretion and wisdom it behooves to act in such a matter, so pious, so meritorious, in a service so grateful to God and useful to the entire world, namely, that here at Paris, where the fountain of divine wisdom rises, where the light of truth shines on Christian peoples, there should be founded study of Arabic, Tartar [Mongol], and Greek, that we, having learned the languages of the adversaries of God and ourselves, by preaching to and teaching them may overcome their errors in the sword of truth and render the people acceptable unto God and convert enemies into friends. If this be done and it please God that it so be, Christen-

dom will receive the greatest exaltation and extension. And of this so inestimable thing you will be the foundation, and thou, university of Paris, wilt by no means be least among the doctors, for from thee will come light to all peoples, and thou wilt offer testimony to the truth, and masters and disciples will flock to thee, and all shall hear all sciences from thee. What good will the Greeks and Arabs have in their volumes that will not be known to thee, when thou shalt understand their tongues without an interpreter? Who will estimate how great praise, how great honor to God, how great compassion of charity towards poor sinners, and how great good would result in and from this place?”

—David Scheffler

Source

Lynn Thorndike, ed. and trans., *University Records and Life* (New York: Columbia University Press, 1944), 127.

body of Greek and Arabic texts had been translated into Latin, and by the thirteenth century nearly the entire extant corpus of Aristotle had been translated. At the same time, an increasing number of university scholars were proficient enough in Greek and even Arabic to consult these texts directly. At Oxford, two of the most famous scholars of the day, Robert Grosseteste (d. 1253) and Roger Bacon (d. 1294), were especially interested in foreign languages. Grosseteste organized the first translation of Aristotle's *Nicomachean Ethics*, and Roger Bacon studied Greek, Hebrew, and Arabic. Their language skills, however, were obtained outside of the official university curriculum, which had as yet not institutionalized their study.

Formal efforts to introduce the study of languages into the curriculum of the schools received additional impetus with the foundation of the mendicant orders and their arrival at the universities in the mid-thirteenth century. The mendicants were first and foremost preaching orders. As such they enthusiastically supported training in foreign languages.

In 1236 the chapter general of the Dominicans required the establishment of schools for the study of foreign languages within every province of the order. In 1256 the master general of the Dominican Order, Humbert of Romans, commended the brothers for their study of “foreign tongues to spread the name of our Lord Jesus.” Inspired by the same evangelical spirit, the Franciscan tertiary, Ramon Llull, founded a school in his native Majorca that focused on the study of Eastern languages, most notably Arabic and Aramaic (Chaldean).

In 1312 due in large part to the efforts of Ramon Llull, the council of Vienne ordered the establishment of two teachers of Hebrew, Arabic, and Aramaic at the universities of Paris, Oxford, Bologna, and Salamanca and at the papal court. Although Greek was taught in Florence in the 1360s and some traces remained of the study of Hebrew at Oxford in the 1320s, the decree was not generally followed. As a result, those who wanted to study foreign languages continued to rely on schools outside of official university structures until the mid-fifteenth century.

Driven in part by the growing importance of the humanist movement, chairs in the study of Greek and Hebrew began to appear at many universities by the end of the fourteenth century. In 1397 the humanist Coluccio Salutati recruited Chrysoloras, a Byzantine diplomat, to teach Greek at the University of Florence. His pupils quickly established the study of Greek in many northern Italian universities. There is also some evidence of the study of Greek, Hebrew, and Aramaic at Paris in the 1430s as well as at many of the newly founded German universities.

Although the study of foreign languages never held a dominant position in the medieval universities, by the end of the fifteenth century religious, political, and intellectual leaders increasingly saw the study of languages, especially Greek and Hebrew, as essential to the mission of the university.

—David Scheffler

Bibliography

- Nardi, Paolo. "Relations with Authority." In *A History of the University in Europe*, Vol. I, *Universities in the Middle Ages*, edited by H. de Ridder Symoens. Cambridge: Cambridge University Press, 1992.
- Rashdall, Hastings. *The Universities of Europe in the Middle Ages*. 3 vols. London: Oxford University Press, 1936.
- Rüegg, Walter. "Epilogue: The Rise of Humanism." In *A History of the University in Europe*, Vol. I, *Universities in the Middle Ages*, edited by H. de Ridder Symoens. Cambridge: Cambridge University Press, 1992.

Literary Neoclassicism among Europe's Humanist Scholars

Although medieval European intellectual traditions included classical authors, humanist writers, scholars, and teachers began to look at these works in new ways. Unlike the scholastic tradition, which applied dialectic, or logic, to the vast body of medieval commentaries and often relied on *florilegia* (excerpted portions of a text), humanists placed greater emphasis on the texts themselves. In addition, they increasingly applied the skills of textual criticism to the inherited body of classical texts while gathering and

emending ancient works that had been lost or little used during the Middle Ages.

By the late thirteenth and early fourteenth centuries, protohumanists such as the notary Lovato dei Lovati (1240–1309) and his talented pupil and fellow Paduan Albertino Mussato (1261–1329) combined the desire to compose classical-style poetry with the application of increasingly sophisticated philological tools to ancient texts. Lovato focused on the tragedies of Seneca, which he himself had rediscovered, while Mussato composed a Senecan drama to warn his compatriots of the dangers of tyranny.

The next generation of humanists applied neoclassical styles to a variety of literary forms. Geri d'Arezzo (1270–1339) composed classical-style letters. Dante Alighieri (1265–1321) wrote Vergilian bucolic poetry. Petrarch (1304–1374) wrote letters in the style of Cicero. Coluccio Salutati (1331–1406) wrote a neoclassical treatise on tyranny derived from Lucan. Leonardo Bruni (1370–1444) wrote a classically inspired oration in praise of the Florentine Republic. By the end of the fifteenth century, humanist influence was evident in the universities of Spain, most noticeably Salamanca, in England, and within many German-speaking lands.

As humanist influence expanded geographically, humanist scholars extended their interests beyond the emulation of classical styles. Lorenzo Valla (d. 1457) applied his knowledge of philology to establish conclusively that the *Donation of Constantine* was a forgery. In their efforts to track down ancient texts, humanists edited and published a large body of medieval works, most famously those of the tenth-century playwright Hrotsvitha of Gandersheim, which the German arch-humanist and first imperial poet laureate Conrad Celtes (1459–1508) rediscovered in the late fifteenth century. Finally, some hu-



Painting of Dante Alighieri by Renaissance painter Giotto di Bondone. (Corel)

▶ LEONARDO BRUNI, *ON THE STUDY OF LITERATURE*

Around 1424, Leonardo Bruni presented to Battista Malatesta, a renowned female scholar, an essay on the study of literature, from which this excerpt is taken.

“In sum, then, the excellence of which I speak comes only from a wide and various knowledge. It is necessary to read and comprehend a great deal, and to bestow great pains on the philosophers, the poets, the orators and historians and all the other writers for thus comes that full and sufficient knowledge we need to appear eloquent, well rounded, refined and widely cultivated. Needed is a well developed and respectable literary skill of our own. For the two together reinforce each other and are mutually beneficial. Literary skill without knowledge is useless and sterile; and knowledge, however extensive, fades into the shadows without the glorious lamp of literature. . . . It was the two joined together that advanced the glory and fame of those ancients whose memory we venerate; Plato, Democritus, Aristotle, Theophrastus, Varro, Cicero, Seneca, Augustine, Jerome, Lactantius, with all of whom

we can scarce decide whether it is their knowledge or their literary power that is the greater.

To conclude: the intellect that aspires to the best, I maintain, must be in this way doubly educated, and it is for the sake of acquiring these two knowledges that we mass up our reading; yet we must also take stock of the time at our disposal. . . . It is religion and moral philosophy that ought to be our particular studies, I think, and the rest studied in relation to them as their hand-maids, in proportion as they aid or illustrate their meaning; and it is with this in mind that we must fix upon the poets, orators, and other writers; in literary study care should be taken to employ noble precepts and long and perceptive observation, and never to read any but the best and most approved books.”

—David Scheffler

Source

Craig W. Kallendorf, ed., *Humanist Educational Treatises* (Cambridge, MA, and London: Harvard University Press, 2002), 123.

manists, most notably Erasmus of Rotterdam (1467–1536), also began to apply their skills to patristic and biblical texts, leading to new translations of the Bible from the original languages.

Humanist influence on vernacular literature was also profound. Although many early humanists expressed disdain for the vulgar tongue, the fact that the much-admired authors Petrarch and Giovanni Boccaccio (1313–1375) wrote in both Latin and Italian ensured a place for the vernacular in humanist circles. Baldassare Castiglione’s (1478–1529) influential work *The Courtier* reflected the influence of Neoplatonism, while the poetry of Ludovico Ariosto (1474–1533) and Torquato Tasso (1544–1595) consciously drew upon Vergilian forms for their vernacular poems. Beyond Italy, humanist influence on the vernacular is evident in the writings of François Rabelais (1483–1553), Edmund Spenser (1552–1599), and to a lesser extent Miguel de Cervantes Saavedra (1547–1616), to name only a few.

Despite the growing influence of the humanists, the emphasis on philology, the study of classical authors, and their classicizing styles were not without critics. Some questioned the usefulness (or worse) of pagan letters to a Christian society. Others bristled at the suggestion that the entire apparatus of scholastic debates had been based on inadequate editions of ancient texts. As humanist approaches began to influence the higher studies (medicine, law, and especially theology), the criticism grew even more pronounced. Professors of theology, law, and medicine resented the presumptive attitudes of humanist scholars. They were, according to the established professors in these fields, unqualified (most were only trained in the liberal arts), uninformed, and frequently unorthodox. Even an author with humanist leanings such as Boccaccio continued to question the compatibility of Christianity and the pagan authors.

—David Scheffler

Bibliography

- Black, Robert. *Humanism and Education in Medieval and Renaissance Italy: Tradition and Innovation in Latin Schools from the Twelfth to the Fifteenth Century*. Cambridge: Cambridge University Press, 2001.
- Kristeller, Paul Oskar. *Renaissance Thought and Its Sources*. New York: Columbia University Press, 1979.
- Mann, Nicholas. "The Origins of Humanism." In *The Cambridge Companion to Renaissance Humanism*, edited by Jill Kraye. Cambridge: Cambridge University Press, 1996.
- Nauert, Charles G. *Humanism and the Culture of Renaissance Europe*. Cambridge and New York: Cambridge University Press, 2006.
- Witt, Ronald K. *In the Footsteps of the Ancients: The Origins of Humanism from Lovato to Bruni*. Leiden and Boston: Brill, 2000.

Humanist Academies and Traditional Universities—The Struggle for Intellectuals in Western Europe

Beginning around the mid-fourteenth century, distinctions between educational programs in northern and southern Europe began to appear as Renaissance educators in Italy emphasized the *studia humanitatis* (humanistic studies), or the cycle of disciplines consisting of grammar, rhetoric, poetry, history, and moral philosophy. Although Renaissance educators often referred to this suite of disciplines as the liberal arts, they actually differed in significant ways from the liberal arts curriculum that was taught in medieval universities. The universities taught a set of disciplines inherited from late antiquity called the trivium, consisting of grammar, rhetoric, and dialectic (or logic), and the quadrivium, composed of arithmetic, geometry, astronomy, and music. Of these seven liberal arts, dialectic or logical analysis was preeminent in all respects, especially from the late twelfth century onward. Differences between curricula set apart the Italian Renaissance humanists (that is, teachers of the *studia humanitatis*), who stressed studying the compositional art and thought of writers from antiquity, from their medieval counterparts of the universities, who followed a method of analysis and expression often called scholasticism.

Universities, such as the one in Paris, taught the trivium, which focused on the study of word usage, argument, and language, and the quadrivium, which focused on mathematics, and the higher, more advanced disciplines of theology, civil and canon (church) law, and medicine using the methods of scholasticism. The essence of the scholastic method was arranging questions or issues in logical order and then approaching each question didactically, positing the (often conflicting) views of authorities and concluding with an opinion or a resolution of conflicting authorities.

The *studia humanitatis* taught in Renaissance academies, such as in Florence, stressed a curriculum that focused on language, literature, and moral philosophy and rejected what the humanists thought of as the rigid and narrowly technical educational program of the universities. The humanists' curriculum reflected the Renaissance enthusiasm for antiquity, especially early Christian and ancient Latin and Greek authors. Humanists believed that ancient authors bridged the centuries and that they held universal significance, which spoke more meaningfully to students than did the scholastic programs of the universities. In fact, humanists consciously juxtaposed the *studia humanitatis* to scholasticism of the late medieval universities and attacked it on several fronts. First, the universities taught students to write in awkward, ineloquent Latin that humanists labeled "barbaric" when compared to the eloquent Latin taught in their academies in imitation of ancient authors, such as Cicero. Second, the content, which focused on practical training for administrative careers in the Church or royal government, was irrelevant and did not adequately address the moral questions facing the leading citizens of the self-governing Italian city-states. According to the humanists, the classical authors addressed the abiding questions that were central to the human condition, such as how to live a moral and virtuous life, how to arrive at self-understanding, or how to govern effectively.

Humanistic education fit the needs of the Italian urban elite, who saw themselves as active participants in the civic life of their city-states. Renaissance academies received support from either civic governments or wealthy patrons. A

➤ VITTORINO DA FELTRE—HUMANIST EDUCATOR

In mid-1423 Vittorino (Rambaldoni) da Feltre (1378–1446) traveled from Venice, where he had run an independent boarding school for young boys, to Mantua at the invitation of Marquis Gianfrancesco Gonzaga. There Vittorino established a school called the Casa Giocosa (House of Joy) for the Gonzaga and other children of the court that he presided over for the rest of his life. Vittorino's school became famous as a boarding school for the children of wealthy elites, but he also took in many poor students, whom he boarded at his own expense. His students ranged in age from 4 to 20 years, although most entered his school between age 12 and 14, and they usually remained for 4 to 6 years. Although most of his students were boys, at least three students were

girls, including two Gonzaga daughters. Vittorino believed in a strong academic and athletic program, and he thought that students learned best when they lived and studied in close proximity to their masters (or teachers).

The Casa Giocosa became one of the foremost schools in Italy. Vittorino taught future princes, humanists, and masters. Schooled in the *studia humanitatis*, with an emphasis on oration, poetry, and history, Vittorino's students helped to spread humanistic education, since when they assumed positions of authority as adults they established or sought out humanistic schools for their own children.

—Jan K. Bulman

number of humanists wrote on the importance of humanistic education and the best way to teach students and created model schools based on these principles. Pier Paolo Vergerio (ca.1368–1444) wrote on the importance of educating leaders, and Vittorino da Feltre (1378–1446) made his ideas a reality when he established a school for the children of Gianfrancesco Gonzaga of Mantua. Guarino Guarini da Verona (1434–1513) directed a school similar to Vittorino's for the children of Duke Niccolò III d'Este of Ferrara and others.

The *studia humanitatis* launched a shift in the educational curricula that had profound effects throughout Europe, and by about 1500 this humanistic curriculum had spread to France, Germany, the Low Countries, and England, altering educational programs north of the Alps as it had in Renaissance Italy.

—Jan K. Bulman

Bibliography

- Black, Robert. *Humanism and Education in Medieval and Renaissance Italy: Tradition and Innovation in Latin Schools from the Twelfth to the Fifteenth Century*. Cambridge and New York: Cambridge University Press, 2001.
- Grafton, Anthony, and Lisa Jardine. *From Humanism to the Humanities: Education and the Liberal Arts in Fifteenth- and Sixteenth-Century Europe*. Cambridge: Harvard University Press, 1987.

Grendler, Paul. *Schooling in Renaissance Italy: Literacy and Learning, 1300–1600*. Baltimore and London: Johns Hopkins University Press, 1989.

Grendler, Paul. *The Universities of the Italian Renaissance*. Baltimore: Johns Hopkins University Press, 2002.

Kallendorf, Craig W., ed. and trans. *Humanist Educational Treatises*. Cambridge: Harvard University Press, 2002.

The Mexica *Telpochcalli* and *Calmecac*—Secular and Religious Education for Boys

The Mexica *telpochcalli* and *calmecac* were schools intended for common and noble boys, respectively, and both prepared young men for their future careers and their place in a structured society. The *telpochcalli* was intended to prepare youths for secular careers, whereas the *calmecac* trained future religious and high political leaders. Each type of school used brutal discipline and rituals to impress on the students that they must follow society's norms, thereby helping to ensure that the existing order was accepted and sustained.

The *telpochcalli*, translated as “Youths’ Houses” or “Bachelors’ Houses,” were associated with the different wards, or neighborhoods, in Tenochtitlan and other Mexica cities. Each ward

► THE CODEx MENDOZA

This page from the Codex Mendoza shows 15-year-old boys going to the *calmecac* and the *telpochcalli* for training.

The Codex Mendoza, apparently commissioned by Antonio de Mendoza, viceroy of New Spain, and shipped to Europe in 1542, was created to illustrate the history and culture of the Mexica for Charles V using native art styles and motifs. French pirates captured the galleon carrying the codex and sent it to France, where it was acquired by Andre Thevet, cosmographer to the French court. Richard Hakluyt later purchased the codex and brought it to England. The last owner was John Selden, whose heirs deposited the codex at the Bodleian Library at Oxford University in 1659.

This illustration comes from a section of the codex that outlines everyday life among the Mexica. The top half shows how young men around age 15 received religious training at the *calmecac* and training in secular matters at the *telpochcalli*. Each student wears distinguishing clothing and has a haircut associated with his career. Each was also marked with ritual scars on his head and chest. The 15 round dots below the boys indicate the age of the students. The text is Spanish, describing how one boy is being delivered by his father to the *calmecac* to be trained as a priest while the other is being sent to the *telpochcalli* to learn the duties of a Mexica man.

The lower portion shows two young people getting married. At the bottom of the illustration, the matchmaker who arranged the marriage is carrying the bride to the groom's house on her wedding night. Four women precede them with torches to light the way. The upper part of the illustration shows the wedding ceremony. The couple's clothing is knotted together, signifying the joining of their lives. Four elders surround them to



(The Art Archive/Bodleian Library Oxford)

offer advice and witness the marriage. Between the couple is a fire with copal incense, to be offered to the fire god. A feast was held in the couple's honor, and the other symbols signify the different kinds of food, tobacco, and flowers offered to the guests. Special importance is given to the pulque, an alcoholic beverage served on special occasions.

—Timothy J. Watts

had its own *telpochcalli*, and much of the ward's public business took place there. Boys were dedicated to the *telpochcalli* as infants but began to attend when they were nine years old. They spent their days at the *telpochcalli*, returning home to sleep at their parents' homes. Each morning the appointed master organized them into groups to undertake public works, with the tasks ranging from building houses to tending

fields owned by local temples. After working all day the boys returned to the *telpochcalli*, where they learned the rituals and activities that all adult Mexica men were expected to know and follow.

Slightly older boys at the *telpochcalli* were trained to use weapons, and at puberty they accompanied soldiers into battle. By the time they were 15 years old, they were fighting alongside

the soldiers. They also manned guard stations in the neighborhoods to keep order.

Discipline in the *telpochcalli* was strict, and virtues such as obedience, honesty, and cleanliness were expected. Minor violations of the rules were brutally punished with bloodletting and beatings. More serious violations, such as drunkenness, brought immediate death.

Boys remained at the *telpochcalli* until age 20. Their parents could then petition for their release to marry a woman the parents had chosen and set up their own households.

In contrast, attendance at the *calmecac* was restricted to the nobility. Only seven were recorded as existing in Tenochtitlan. Each *calmecac* had a priest, known as the Mexicatl teohuatzin, in overall charge. Another priest known as the Tepan teohuatzin oversaw the boys.

After being dedicated to a *calmecac* as infants, boys formally joined the school at age 15, although some began as early as 5 or 7 years of age. They went through a series of ranks and performed increasingly important jobs. The value of traditional virtues was also impressed upon them with brutal punishments. Bloodletting was commonly used both as a punishment and a sacrificial ritual, along with more severe punishments. While most students were trained as warriors, they also received education in painting, interpreting and using calendars, astronomy, and reading sacred books. Philosophical questions, such as the importance of gods in human life, were also studied. Ultimately, students at the *calmecac* became the guardians of Mexica culture and religion. Those who became priests became the intermediaries between humanity and the gods, and it was believed that their care in performing rituals ensured good weather and protection for the people. Other graduates of *calmecacs* were the military leaders of Mexica armies, important government officials, and emperors.

—*Timothy J. Watts*

Bibliography

- Brundage, Burr Cartwright. *A Rain of Darts: The Mexica Aztecs*. Austin: University of Texas Press, 1972.
- Calnek, Edward E. "The Calmecac and Telpochcalli in Pre-Conquest Tenochtitlan." In *The Works of*

Bernardino de Sahagun: Pioneer Ethnographer of Sixteenth-Century Aztec Mexico, edited by J. Jorge Klor de Alba et al. Albany: Institute for Mesoamerican Studies, State University of New York, 1988.

Mexica Convent Schools for Noble Girls

Education was highly regarded by the Mexica, who saw it as a key to helping children become productive persons who knew their role in society and could help promote the common good. For most women, their role was centered in the home, where they were charged with maintaining order, feeding their family, and producing children who fit well into society. Some noble women, however, were given the opportunity to be educated in schools associated with temples, becoming priestesses who served an important role of intermediary between certain gods and people.

When a girl was 20 days old, her parents would begin the process of deciding the direction of her life. Nearly all children, including commoner girls, attended the *telpochcalli*, or neighborhood school. Mexica society was quite unusual during the fifteenth and sixteenth centuries in offering basic education for all children, including females. Some noble girls, however, would be dedicated by their parents to attend one of the *calmecac* schools that were associated with important temples in Tenochtitlan. These infant girls received small incisions on their hips and breasts to mark their dedication to the gods.

Infants were also presented with miniature symbols of the duties expected of them as adults, and girls received tiny brooms, baskets, and distaffs and spindles, since they would be responsible for the home. Bernardino de Sahagun's work on Aztec history and culture indicates that even children intended for the *calmecac* received the gifts usually given to their gender, since they were also expected to possess skills to fulfill their duties. Being a productive member of society was a religious as well as a secular duty. When a girl reached the age of four years old, her parents began to train her in the basic duties expected of all Mexica women. These tasks included

> FERNANDO ALVA IXTLILXOCHITL

Fernando de Alva Cortes Ixtlilxochitl (d. 1648), a Mestizo, or person of mixed Spanish and Mexica blood, was a direct descendant of Ixtlilxochitl I and Ixtlilxochitl II, rulers of the state of Texcoco, and was also the great-great-grandson of Cuiclahuac, the next-to-the-last Aztec ruler of Tenochtitlan. Fernando Ixtlilxochitl's father and maternal grandfather were both Spanish. He was educated at the Imperial College of Santa Cruz de Tlatelolco, where he studied both Spanish literature and Nahuatl.

Although Ixtlilxochitl came from an illustrious family, he lived most of his life in poverty. He wrote a number of histories of the pre-Spanish Mexica, and he is one of the most important sources on Aztec society and beliefs. Unlike most other Spanish writers, Ixtlilxochitl used Mexica writings and oral traditions as source materials. His earliest works were four *Relaciones* that tell the story of Mesoamerican society from the perceived beginning of the world to the fall of the Toltec capital at

Tollan. Much of the information and most of the rulers listed therein are not found in other works. Ixtlilxochitl has been criticized because some information is repetitious and the chronology is confused.

Ixtlilxochitl's most important work is the *Historia de la nacion Chichimeca*. Most of the history tells the story of the rise of the Triple Alliance of Tetzcoco, Tenochtitlan, and Tlacopan, which became the Aztec empire. Ixtlilxochitl assigns most of the credit and glory for the empire that the alliance created to his ancestors from Texcoco. As such, Ixtlilxochitl provides an interpretation different from the one found in most Spanish writings. His work is also valuable for its insights into Mexica culture and society and for its highly organized and sophisticated nature. In his histories, Ixtlilxochitl recorded information about the formal and informal roles that Mexica noble women played and the training they received.

—Timothy J. Watts

weaving, cleaning, and cooking and were intended to produce a person who would accept the established order of society. Around the age of 12, girls would attend the *telpochcalli*, although they were instructed separately from the boys. Girls learned religious songs and dances along with Mexica history and traditions. After classes at the *telpochcalli* concluded, the girls and boys would be taken to the *cuicacalli*, the House of Song, where they learned religious songs and dances. The *cuicacalli* was associated only with the *telpochcalli*. Girls continued to attend the *cuicacalli* from the age of 12 until they were married.

Girls from noble families could attend the *calmecac* when they were 15 years of age. The curriculum was more intellectually challenging than that of the *telpochcalli*, and girls learned to read, write, and draw. They also received training in astronomy and the timing for religious rituals. Separate facilities were maintained for boys and girls. Students swore an oath to remain celibate, and sexual misconduct was severely punished, with penalties ranging up to death. Mexica children were also taught that premarital sex

was offensive to the gods and would result in deformities and failure to mature. Noble families taught their children that sexual relations outside of marriage displayed a lack of self-discipline common to the lower classes.

The woman who mastered her studies became a *cibuatlamacazqui*, or female priest. Although the most important religious ceremonies were performed by male priests, the priestesses were essential for some rituals, especially those related to fertility. The feast of Ochpaniztli was dedicated to the mother goddess Toci, and the rituals were celebrated by priestesses. Other priestesses had the responsibility to ritually clean and decorate the temples. In all ceremonies celebrated by the priestesses, they were carefully dressed to demonstrate the importance and solemnity of the ritual. In a ceremony known as Quecholli, priestesses dressed to represent goddesses carried ears of corn in a procession through Tenochtitlan. At sundown, they threw colored maize kernels and pumpkin seeds to the crowds as symbols of a good harvest to come.

Priestesses could leave the priesthood to get married. A suitor had to ask her family, the lead-

ing priestess of the temple, and the woman herself to gain permission. Only when everyone approved could such a priestess leave her religious duties to be married and lead the life that most Mexica women accepted. Those priestesses who did not get married continued to care for the temples and instructed the girls in the convent schools.

—Timothy J. Watts

Bibliography

- Carrasco, David. *Daily Life of the Aztecs, People of the Sun and Earth*. Westport, CT: Greenwood, 1998.
- Kellogg, Susan. "The Woman's Room: Some Aspects of Gender Relations in Tenochtitlan in the Late Pre-Hispanic Period." *Ethnohistory* 42 (Autumn 1995): 563–576.
- Van Tuerenhout, Dirk R. *The Aztecs: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2005.

The Yacha Huaci, Schools for the Children of Inca Nobles

To maintain their extensive empire, the Inca needed a class of noble warriors who were familiar with the traditions, religion, and accomplishments of those who had gone before. The Yacha Huaci, or House of Learning, was an imperially sponsored school in Cuzco, the Incan capital city, where noble male youths were given the training they needed to maintain the empire in accordance with its strict hierarchical structure.

The founder of the Yacha Huaci was the sixth emperor Inca Roca (r. ca. 1350–ca. 1380), who built a school for the sons of Cuzco's nobility. The ninth emperor, Inca Pachacutec (r. 1438–1471), enlarged the Yacha Huaci, creating a complex of buildings joined by a common facade in the center of Cuzco. Moreover, because

► THE YACHA HUACI, SCHOOLS FOR THE CHILDREN OF INCA NOBLES—QUIPUS

Quipus (khipus) were used by the Incas to record numerical and other information using a decimal system. The position of a thread and the number and form of knots on a thread have numerical values. The Spanish colonial authorities recognized this fact and at first accepted Incan quipus to settle legal disputes regarding payment and similar financial matters.

The Spanish acceptance of quipus soon changed when they realized that the strings could well represent other information. Different-colored threads and spacing as well as different kinds of knots could be used as mnemonic devices to carry messages. Many conquistadores also considered the quipus to be related to pre-Columbian religious beliefs. Most quipus were destroyed, and today only about 600 remain in existence.

Without knowing the context in which individual quipus were created, deciphering them is nearly impossible. Some archeologists believe, however, that they represent a three-dimensional form of written language, using a binary code. Those Incans who were trained to read the code could spread the message to their listeners, similar to the way in which a musician uses a score to play a song.

—Timothy J. Watts



A quipu, the knotted cord device used by the Incas for keeping accounts, Peru, 1430–1532. (Werner Forman/Corbis)

the empire expanded greatly during his reign, Pachacutec included noble sons from the various provinces into the Yacha Huaci's student body.

Unlike the Aztec *calmecac*, the Yacha Huaci had a more informal curriculum, with emphasis on practical education. Primary attention was given to teaching fluency in the Quechuan language, which was used throughout the empire. Oratorical skill was highly valued in Incan society, and correct and elegant speech was considered a mark of authority among the nobility. Other important areas of instruction included the empire's legal system and Incan religious beliefs and cults.

Most of the students' time, however, was taken up with learning Incan history and legends. Teachers used short standardized poetic verses to teach students about the exploits of earlier rulers and great soldiers and about the different clans that made up the nobility and their relation to the emperor. Such schooling in culture and tradition depended upon students learning extensive amounts of oral poetry. To memorize the material, students learned how to use *quipus*, or multicolored sets of knotted threads. Although archeologists remain uncertain about how information was recorded on the quipus, they do know that different types of knots on different types and colors of threads had specific meanings. The teachers in the Yacha Huaci were known as *amautas*, or sages, a title that reflects the fact that they were highly regarded for their

learning and wisdom. There may have been as few as four or five *amautas* at one time teaching in the Yacha Huaci, aided by poets and other scholars. When students had completed the curriculum, the *amautas* tested their knowledge in a series of oral exams. After successfully passing the exams, students completed their training at the emperor's court. Under the mentorship of a particular noble, they learned court etiquette, administration, and construction of public works such as roads or water systems.

Some writers have characterized the Yacha Huaci as a form of university, although it seems to be a questionable use of the term "university." Leaving aside semantic quibbling, it suffices to note that the Yacha Huaci's most important role was to transmit Incan traditions and culture, and in doing that it helped stabilize society and maintain the existing system of beliefs.

—Timothy J. Watts

Bibliography

- Brundage, Burr Cartwright. *Lords of Cuzco: A History and Description of the Inca People in Their Final Days*. Norman: University of Oklahoma Press, 1967.
- Collier, John. *The Indians of the Americas*. New York: Norton, 1947.
- Malpass, Michael A. *Daily Life in the Inca Empire*. 2nd ed. Santa Barbara, CA: Greenwood, 2009.
- McEwan, Gordon F. *The Incas: New Perspectives*. New York: Norton, 2006.

■ Introduction: Art and Architecture—The Monumental Balanced by the Human-Sized

Whereas states and highly organized religions (and often they were indistinguishable from one another) built monumental structures that served their needs, such as effigies of rulers, palace complexes, temples, mosques, and churches, the persons ruling over these entities were also served by artists and artisans who crafted smaller human-sized items of beauty and utility in the service of their masters. Moreover, these rulers also constructed

edifices in the service of those whom they governed, such as hospitals, caravansaries, and marketplaces. Beyond this, artists and artisans also served directly the ever-growing and insistent demands of "commoners" for their own items of beauty and utility. This was true at least for those common folk who resided in towns and cities and enjoyed at least a modicum of disposable income. Indeed, more often than not the useful was crafted with an eye to beauty, such as the

fine ceramic wares of China and the Islamic world, the hand scrolls of China and Japan, the books of the Islamic and Christian worlds, the feather and textile blankets of the Americas, and the ceremonial clothes of rulers, priests, and other great officials around the world. These and numerous other items of this sort made life comfortable and delighted the eye. More than that, they usually, as the phrase goes, made a statement, a statement of the status and wealth (and even power) of the individual who possessed and displayed them.

Away from the cities in Central Asia, parts of East Asia, sub-Saharan Africa, the Americas, and Oceania, pastoral, agricultural, and hunter-gatherer cultures expressed themselves spiritually and artistically in carved rock art as well as in the fashioning of beautiful items of everyday use, including weapons. Indeed, the crafting of handsome as well as deadly weapons was raised to a high art in a number of both settled and nomadic cultures, such as the steel swords of Afro-Eurasia, crafted with loving care from Spain to Japan, and the compound recurved bows of the steppe.

Another phenomenon at work during this half millennium was the transit of artistic styles and motifs across Afro-Eurasia and the Americas. One example among many was the manner in which ceramic artisans in Persia and Iraq continued to emulate the *sancai* (three-colored) glazes of Tang China's export wares well into the twelfth and thirteenth centuries.

Perhaps most striking to the casual tourist are the great edifices raised during these five centuries: the Romanesque and Gothic cathedrals of Western Europe; the temples erected to the worship of Shiva and Vishnu by the Chola monarchs of South India; the temples of Angkor Wat; Byzantine-style churches raised in Russia, Serbia, and other areas of Eastern Europe and the Balkans; the temples of Mesoamerica; the stonework structures of the Incas; and the great palace complex in Beijing known as the Forbidden City. All are symbols not only of great pride, wealth, and power but also of a highly developed aesthetic.

Finally, let us not forget art for art's sake: paintings, calligraphic scrolls, and countless other portable items of beauty that were created for the sheer love of beauty. Of course, more often

than not they were created with an eye toward profit and the satisfaction of a patron, but the purpose was still primarily aesthetic.

Every age creates its own forms of beauty in multiple ways, and this was no less true for all of human cultures around the world during this era. The entries that appear below can provide only a small sample of the richly variegated ways in which beauty was crafted in all sizes, at all levels, in so many different media, and around the globe from 1000 to 1500 CE.

—*Alfred J. Andrea*

The Artists of Sub-Saharan Africa

Art and artists flourished in sub-Saharan Africa between 1000 and 1500 CE, a period in which patronage and possibilities supplied by long-distance trade encouraged the growth in artistic production. Much of the visual art was associated with divine kingship, ritual, and political culture. Achievements in architecture, terra-cotta sculpture, copper-alloy casting, and ivory carving characterized the role of the arts in maintaining cultural memory systems across the continent.

Christianity's inroads in the Nile Valley and Ethiopian highlands earlier in the first millennium were grafted on an ancient urban world with extensive gold, silver, and bronze working skills; monumental stonework; and wide trade connections. Despite Islamic incursions after the seventh century, the Christian Church of Ethiopia survived around remarkable examples of stone architecture that required the mobilization of labor and resources by local elites. The thirteenth-century rock-hewn church of St. George at Lalibela was constructed within its deep quarry by carving the structure's interior and exterior out of one stone block more than 34 feet (10 meters) high. A proliferation of neck and handheld crosses fashioned of silver and brass and local illuminated manuscripts also mark the era's artistic and religious expression.

About the same time as Lalibela, the large southern African urban center of Great Zimbabwe also excelled in stone working, including entirely indigenous architectural and sculptural traditions. The site itself was partly built on a hillside, where impressive buildings, towers, and protective walls have survived the centuries.

► IFE—ARTS FROM THE CENTER OF THE WORLD

Ife's spiritual primacy is reflected in the urban growth and artistry of the royal capital. The Yoruba city of Ife (in present-day Nigeria) is claimed by oral traditions to have been the place where the gods descended from the sky to create the world. By at least the thirteenth century, the city housed royal artisans, who worked in clay, copper, glass, and ivory. Their terra-cotta, copper, and copper-alloy sculptures attained an astonishingly naturalistic style and may have figured in key rituals that sustained the connections between divine rulers and the spirit world.

The urban origins of Ife can be traced archaeologically to at least the fourth century BCE, and by 800 CE Ife had become an influential political and religious center. Yoruba rulers trace their lineage back to the creation of humankind out of clay at Ife. Whereas Yoruba women worked in clay, metalurgy was the exclusive domain of male artistry. Human figures are best known, but depictions of animals, diseases, and other subjects make the art a rich source for the historian. The arts of Ife challenged Western ideas about African art and fueled debates about the independence and antiquity of West African artistry.

—Candice Goucher

These labyrinths of stone were more than 30 feet (9 meters) high and were likely constructed by the ancestors of the region's Shona people without the use of mortar. It is also likely that the stone architecture marked important ceremonial and political features in the urban landscape that supported an estimated population of more than 10,000 through extensive trade with the Indian Ocean world in gold, ivory, and other goods.

Long-distance trade in metals provided resources for the royal arts of West Africa. At the political centers of Ife and Benin, lost-wax casting of copper alloys and sophisticated ivory carving techniques provided objects that legitimized political rule. Artisans were housed in palaces and patronized by the royal family. Control over trade in ivory and metals ensured a royal monopoly on artistic production. Portraits of rulers played a role in commemorative shrines

and rituals associated with divine kingship. Objects such as hip masks and medallions were likely used as more portable symbols of political authority outside the royal centers.

Islamic merchants played a role in enhancing West African trade and sometimes altered the organization and styles of the region's material cultures. Cotton-weaving technology spread along the trans-Saharan trade routes, and the horizontal loom of the Islamic world shifted textile-manufacturing industries into the hands of men. Religious prohibitions on human imagery gave way to the emphasis on rich geometric patterns in architectural decor, textiles, leatherwork, and Arabic-inscribed metal vessels.

Objects and artisans moved along the trade networks, and their artistry served as inspiration across vast distances. Leatherwork known in twelfth-century European markets as Moroccan actually originated in the region of what today is northern Nigeria. North African Islamic brass containers became items of prestige among the Akan elite in communities of southern Ghana. Although much of the art of African daily life did not survive the centuries, historical descriptions of hairstyles, basketry, textiles, wood and raffia masks, dance, and music suggest the rich interplay of visual and performing arts.

—Candice Goucher

Bibliography

- Bravmann, Rene A. *African Islam*. Washington, DC, and London: Smithsonian Institution Press/Ethnographica, 1983.
- Connah, Graham. *African Civilizations: An Archaeological Perspective*. New York: Cambridge University Press, 2001.
- Drewal, Henry John, John Pemberton III, and Rowland Abiodun. *Yoruba: Nine Centuries of African Art and Thought*. New York: Center for African Art, 1989.
- Eyo, Ekpo, and Frank Willett. *Treasures of Ancient Nigeria*. Exhibition catalogue. New York: Knopf, 1980.

Artistic Interchange between China and Islam

Muslim traders formed communities in China as early as the seventh century during the height of the Tang dynasty (618–907), from where they

exported exotic items, largely over land, to Persia, Arabia, Syria, and other regions of the far-flung Islamic world as well as to the Christian and pagan lands to Islam's west and north. In return, caravans carried metalware, glassware, wine, and similar commodities to China. However, during the Song dynasty (960–1279), sea trade between China and the lands of the Indian Ocean grew dramatically in volume, thereby making the sea routes China's main avenue to the West and Islam's main thoroughfare to the Far East. The result was commerce that was safer, faster, and far larger in scale than ever before. As a consequence, the artistic interchange between China and Islam that occurred after the year 1000 had a profound impact on the development of Islamic art.

Of all China's exports, Song porcelains, noted for their pure whiteness, were especially appreciated by wealthy Muslim connoisseurs, and this ceramic ware became a major influence for the development of subsequent Islamic pottery. Demand for Chinese porcelain and ceramics was overwhelmingly high and could not be met solely by importation, but Middle Eastern Muslim potters lacked the raw materials in their native locales to produce exact replicas of these luxury wares. Most serious of all, their local clays could not withstand the high kiln temperature needed to produce true porcelain. This disadvantage encouraged innovation, such as Iranian potters' development of white slip (a thin clay overlay used for decoration) and the development in Iraq of an opaque white glaze. In this manner, Muslim potters were able to meet the demand for Chinese-style ceramics, and even if the quality was inferior, the price was right.

The Mongols eventually destroyed the Song dynasty, replacing it with their own Yuan dynasty (1279–1368) as part of an empire that stretched from the Pacific to the borders of Syria. Travelers and traders using the revitalized overland routes of the Silk Road enjoyed the protections and other advantages of the so-called Pax Mongolica, a period of relative stability and unity across Eurasia that lasted from around 1260 to about 1340. Although only severely limited numbers of such items have survived to our day, it seems that highly portable objects, such as Chinese woven silks, lacquerwares, and paint-

ings, made their way in large quantities along Eurasia's caravan routes to Iran and Iraq, the heartland of the Mongol Il-khanate of Persia (1256–1353), which became part of Dar al-Islam with the conversion of Il-khan Ghazan (r. 1295–1304). Here they served as the main sources of inspiration for Chinese-like designs that now appeared in Il-Khanid court art. Chinese motifs, such as flying cranes, ducks, phoenixes, and dragons, were now incorporated alongside classical Islamic decorations, such as complex designs of intertwined geometric and floral figures known as arabesque and inscriptions in Arabic or Persian.

In addition, Chinese painting began to play an important role in the development of Persian manuscript art. Coiled Chinese clouds, detailed landscapes, flowing plants, and Chinese flowers were adopted by Persian manuscript artists from the late thirteenth century onward.

Influences, however, ran both ways. As the scale of trade grew, Islamic tastes began to significantly influence wares produced in China. Densely decorated surfaces with geometric patterns were clearly adapted from Islamic ceramics, glass, and metalware, especially the exotic designs of Persian art. Moreover, the size of ceramic pieces produced by Chinese potters was influenced by the demands of the Islamic marketplace. Inasmuch as communal eating was a Muslim custom, export wares, particularly celadon ware (ceramics with a pale blue-green or olive-green glaze) and blue and white dishes, were produced at the appropriate large size for this market.

Like their Il-Khanid predecessors, the Turco-Mongol Timurids (ca. 1369–1506) were great patrons of art, and under their patronage Chinese porcelain continued its influence on Islamic ceramic production. Ming blue-and-white porcelain ware, produced with an underglazing of high-grade cobalt from Central Asia, was especially popular, with a significant amount of it imported by Timurid patrons as well as by patrons elsewhere in the Islamic world.

Timurid art went beyond merely imitating Chinese styles and motifs, whereby artists and artisans, under court patronage, used Chinese-inspired motifs as decoration for their own artistic expressions. Timurid chinoiserie (Chinese-

KITABKHANAS

Persian art matured during the Timurid Age, and it was royal and princely support more than anything else that made this possible. Patronage of the arts added to the Timurids' political and religious prestige, but most of the Timurids were also avid connoisseurs. More Persianized than their Il-Khanid predecessors, the Timurids accepted the Persian tradition that practicing the fine arts was an integral part of a prince's education. Consequently, some Timurid rulers and family members were accomplished artists, such as Baysunghur, a calligrapher (1397–1433).

Evidence strongly suggests that sometime in the 1430s the Timurids established royal workshops known as *Kitabkhanas* (literally book houses but more broadly understood as studios) in their leading centers of artistic activity: the Iranian cities of Tabriz and Shiraz as well as Herat, which today is located in Afghanistan. Housed in these *Kitabkhanas* were artists' materials and, most important, visual models—drawings and objects acquired largely from abroad through trade, diplomacy, and war. Thus inspired and supported, Timurid artists refined the Chinese-inspired motifs that characterized their work. One of the results of this institutional support was a standardization and idealization of motifs and compositions.

—Kumi S. Martin

inspired motifs that emphasized intricate patterns and elaborate decoration) flourished in every sort of artistic medium under the control of Timurid royal ateliers, or workshops. Of these media, the most notable were paintings, woodcarvings, manuscripts, textiles, bookbinding, and architectural decoration. Moreover, Timurid chinoiserie deeply influenced all subsequent Islamic art, such as that of Safavid Persia (1501–1736), Mughal India (1526–1858), and Ottoman Turkey (ca. 1302–1922).

—Kumi S. Martin

Bibliography

- Blair, Sheila, and Jonathan Bloom. *The Art and Architecture of Islam, 1250–1800*. New Haven, CT, and London: Yale University Press, 1994.
- Brend, Barbara. *Islamic Art*. London: British Museum Press, 1991.

Hillenbrand, Robert. *Islamic Art and Architecture*. London: Thomas and Hudson, 1999.

Irwin, Robert. *Islamic Art*. London: Laurence King, 1997.

Porter, Venetia. *Islamic Tiles*. London: British Museum Press, 1995.

Vainker, S. J. *Chinese Pottery and Porcelain*. London: British Museum Press, 1991.

The Visual Arts and Crafts of Dar al-Islam

The period from 1000 to 1500 was one of particular efflorescence in the Islamic world for arts and crafts, and they were as varied and as plentiful as were the many peoples, lands, and cultures that made up the Islamic Ecumene. Here we shall consider only a few of the more important and representative arts and crafts: ceramics, textiles, metalwork, and the architecture of mosques.

Ceramics

The production centers of Islamic ceramics were Iraq, Egypt, Syria, and Persia, and during this period potters achieved a series of extraordinary breakthroughs.

Around the tenth to the eleventh centuries, Islamic potters began to respond to the clear superiorities of Chinese ceramics to satisfy their local patrons. Despite lacking the clays of China that gave porcelain its unique translucence and whiteness, Islam's potters eventually were able to craft ceramics that rivalled the beauties of Chinese porcelain.

At the same time, Islamic potters produced types of glazed ceramics special to them. For example, lusterware, which is produced by adding metallic oxides to the glaze to produce a metallic sheen, became extremely popular. Initially the Mesopotamian area and Egypt were its primary centers of production, but following the fall of Egypt's Fatimid dynasty, Kashan in Iran became the Islamic world's finest center of ceramic production. In addition to dinnerware, other important products of Kashan were polychrome and luster tiles. Used to decorate buildings, they also served a religious function when

employed to define a mosque's *mibrab*, the niche in a wall that indicates the direction of Mecca and therefore the direction of prayer.

Under Seljuk rule, which basically controlled Anatolia, Iran, and Syria between about 1038 and 1194, Iran took the lead in ceramic innovation and production. As moneyed classes grew during this period, more sumptuous materials and time-consuming ceramic products were required to satisfy their tastes. A multicolored pottery known as *minai* (enamel), which required multiple firings at different temperatures, was invented in late-twelfth-century Iran. *Lajvardina*, a rare ceramic, was often decorated with cobalt blue, red, and white enamels and gold leaf and was often employed in the interior decoration of mosques and palaces. However, because of their cost and the intensive labor involved, production of both proved fleeting.

Textiles

Textiles were woven throughout the Islamic world and at all social levels, from nomadic households to royal studios. They also served many purposes, ranging from simple daily garments to luxurious ceremonial gowns and carpets that graced the floors of nomadic tents and royal courts. Likewise, they were made from a wide range of materials, especially cotton, linen, wool, and silk. Textile decorative motifs drew inspiration from a wide variety of sources. Pre-Islamic Sassanian art, Byzantine decoration, the artistic imagery of China, Central Asia, and Coptic Christian Egypt were only some of the sources from which Islamic weavers drew their inspiration. Even tapestries with Western heraldic and Christian iconographical decorations were woven for European Christian patrons, some of which are preserved today by churches and families in Europe. So valued were Islamic fabrics in the West that they were often used to wrap the holy relics of saints.

The Mamluk era in Egypt and Syria (1250–1517) was an important period in terms of Islamic class development during which an elaborate and rigid social system took shape. Along with it came an increased taste for luxuries, especially in clothing and other textile products

whose materials, colors, and designs were used to indicate the social and economic rank of the wearer or owner. Silk interlaced with gold or silver threads, for example, became a much-prized commodity.

The early history of Islamic carpet production is unclear, but clearly by the year 1000 it was a major industry that had centers of production that ranged from a few families in a village to state-owned factories. Indispensable as furniture for Muslim social life, carpets, made largely from wool, provide warmth and comfort for persons sitting or standing on a floor or the ground, riding a horse, or praying in a mosque, at home, or on the road. Most carpets were woven domestically for family use, but more luxurious carpets were produced in studios and factories for export as luxury items and diplomatic gifts as well as to beautify the homes and courts of the rich and powerful.

Metalwork

The Middle East has produced fine metal objects since antiquity, and the tradition was carried on with great skill throughout this vast region. In the twelfth century gold and silver metal ware with inlay became popular. Until then, the competition between metal and pottery did not often favor metal ware. Precious metals such as gold and silver were expensive, and lusterware, which has a metallic body, satisfied patrons' desires for glitter. The technique of inlay was not new to Islamic metal craftsmen, but serious shortages of precious materials seemed to encourage the revival of inlaid metal work, whereby a small amount of gold, silver, or copper was used as inlay decoration in a vessel made of baser metal. Khorasan province, especially the city of Herat (today in Afghanistan), was the center of inlay production, and Mosul in Iraq was not far behind. In this craft, surface decoration became extremely intricate. Hunting scenes, princely activities, and zoomorphic and astrological motifs were inlaid in a variety of objects, such as bowls, plates, ewers, incense burners, and candlesticks. The motifs were very similar to those depicted in contemporary textiles and manuscripts.

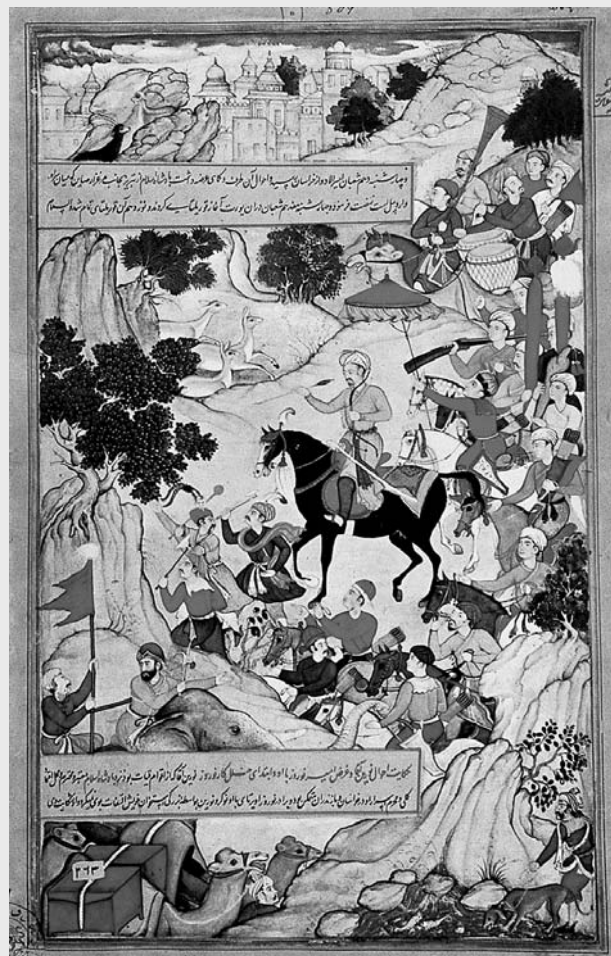
ISLAMIC FIGURATIVE ART

A common misperception is that Islamic art consists totally of nonfigurative decoration such as geometric patterns, abstract floral designs, and inscriptions. To the contrary, figurative representations were an integral part of Islamic art from its early days because the inspirations for early Islamic art came from Byzantium and Sassanian Persia as well as from Syria. Sassanian art was famed for its representations of court and princely activities, and this artistic tradition continued to play an important role in the development of medieval Persian Islamic culture.

Whereas Arab-Islamic artistic traditions emphasized geometric and calligraphic designs, the Persian-Islamic tradition continued to focus on scenes depicting humans and animals. During the eleventh century the Turks became the new driving force in Islam by virtue of their control of much of the Middle East, including lands that were an integral part of the Persian sphere of cultural influence, mainly Mesopotamia and the Iranian Plateau. Through these Persianized Turks, Persian artistic traditions as well as the faith of Islam spread deeply into Central Asia.

Very much like the Turks, the thirteenth-century Mongols who established the Il-khanid of Persia adopted an artistic tradition that gloried in miniature paintings portraying hunts, battles, princes and princesses drinking wine, courtship ceremonies, courtiers playing musical instruments, and a wide variety of other nonreligious scenes. In much the same manner, this Persian tradition was later adopted by the Timurids and passed on to the Mughals of India, each by and large a devoutly Muslim dynasty but each also a patron of artists who practiced a tradition of representation that deviated greatly from the more austere, abstract artistic forms that came out of the Islamic west.

—Kumi S. Martin



Ghazan Khan Leaves Tabriz from the fourteenth-century Mongol history, Jam al-Tawarkh. Mahmud Ghazan was the most prominent leader of the Mongol Il-khanid dynasty in Persia (present-day Iran). He expanded the city of Tabriz and made it into a successful capital, and also requested that his vizier, Rashid al-Din, write a comprehensive history of the Mongols, the Jam al-Tawarkh. (Corel)

Herat flourished until the arrival of the Mongols. Chinggis Khan's army invaded the eastern part of Persia in the 1220s, destroying cities and villages. Metal production in Herat appears to have stopped, and inlay technique migrated to the western regions of Persia and farther west to Syria, Egypt, and Anatolia as artisans fled to these lands.

Inlay technique reached a high point in Syria and Egypt, especially in Damascus and Cairo, during the Mamluk era, thanks to the support of wealthy patrons. Large metal objects decorated with elaborate designs known as blazons and with bold Arabic inscriptions, each decoration a proclamation of its owner's social status, were commonly produced in the workshops of these

two lands. Moreover, metallic items were often produced as propaganda to glorify rulers.

A notable feature of Persian metal production under the Il-khanids (1256–1353) and the Timurids (1370–1507) was the appearance of a distinctive Chinese influence. The availability of Chinese luxury items encouraged Muslim craftsmen to create a unique style that combined Chinese shapes and motifs with classical Islamic organic decoration and bold Arab-Islamic inscriptions.

Mosques

Mosque architecture and decoration were strongly influenced by pre-Islamic and regional traditions, as were all other forms of Islamic art. Over the centuries, many different types of mosques and other buildings were erected. In Egypt and Syria, stone was the principal material for the construction of mosques, which were also characterized by wide central aisles and multiple tiers of minarets. During the Fatimid period, mosque complexes were formed. Initially, *madrasas*, or Quranic schools, were often attached to the mosque, and later other religious buildings were added. Some had a religious or charitable function, while others were of a more nonreligious nature.

In Iraq, Iran, and a large part of Central Asia, bricks and stucco were the primary material. With the development of ceramic production in Iran, the exterior and interior of buildings were decorated with colorful tiles, and *mibrab* areas, which indicated the direction of prayer, were often extensively decorated with luster tiles.

—Kumi S. Martin

Bibliography

- Brend, Barbara. *Islamic Art*. Cambridge: Harvard University Press, 1991.
- Ettinghausen, Richard, and Oleg Grabar. *The Art and Architecture of Islam, 650–1250*. New York: Viking Penguin, 1987.
- Irwin, Robert. *Islamic Art in Context: Art, Architecture, and the Literary World*. Upper Saddle River, NJ: Prentice Hall, 1997.
- Mitchell, George, ed. *Architecture of the Islamic World: Its History and Social Meaning*. London: Thames and Hudson, 1978.
- Ward, Rachel. *Islamic Metalwork*. London: Thames and Hudson, 1993.

Persian Architecture in the Il-khanid and Timurid Eras, 1256–1507

Violence and massive ruin accompanied the conquests of the region of Southwest Asia loosely known as Persia (present-day Iran, Iraq, Afghanistan, eastern Turkey, and some adjoining lands) by the Mongols in the first half of the thirteenth century and Timur-i Leng (Tamerlane) in the latter half of the fourteenth century. Notwithstanding the initial destruction, the ruling dynasties that resulted from each conquest, the Il-khanids (1256–1335) and the Timurids (1369–1506), became great patrons of the arts and builders of mosques, palaces, and other complexes on a grand scale. The result was a golden age of Persian art, including architecture.

The age of glory for Seljuk art and architecture ended with the invasion of Iran by Chinggis Khan (r. 1206–1227) in 1218. By the end of the thirteenth century, however, his successors in Southwest Asia had carved out for themselves a Mongol empire that was essentially independent of the control of the Great Khan in faraway China. Known as the Persian Il-khanids, they had converted to Islam and were fascinated with Iranian culture. Gradually and with the help of their Persian ministers, they established the foundations of a new age of artistic brilliance.

Hulegu (r. 1256–1265), grandson of Chinggis Khan and the first il-khan of Persia, rebuilt several cities and even ordered some new construction, such as a Buddhist temple at Khoy and a seat of learning in Maragha, the first Il-khanid capital, located in today's southern Azerbaijan. This complex contained the *Rasadkhaneh*, an astronomical observatory that attracted scholars from far beyond the lands of Islam, and a Christian church.

Hulega's son and successor Abaqa (r. 1265–1282) increased substantially the tempo of building and rebuilding. Around 1275 he began construction of a summer palace on a site known as *Takht-i-Sulayman*, which dated back to Sasanian times. He also established Tabriz in Iran as his new administrative capital, and he and subsequent il-khans lavished on the city a variety of superb monuments.

Ghazan Khan (r. 1295–1304), a devout convert to Islam, undertook an ambitious program of

➤ SAMARQAND

Timur was born near Kish (in present-day Uzbekistan), which he captured and turned into his first capital in 1363, renaming it Shahr-i Sabz (the Green City). The following year he and an ally took Samarqand, about 50 miles (80 kilometers) north of his capital, and in 1370 he gave Samarqand a new citadel and walls to replace those destroyed by the Mongols. In 1379 Timur ordered construction of a palace at Shahr-i Sabz, of which little remains today. Eventually, however, because Shahr-i Sabz was too remote, he moved his capital to Samarqand, an ancient city that had been a major center of trans-Eurasian commerce in the early centuries CE.

It was to this new capital that Timur ordered artisans transported from lands conquered by his armies and even from regions beyond their grasp. Sculptors, stonemasons, and stucco workers came from Azerbaijan, Isfahan, and Delhi; mosaic workers traveled from Shiraz; and weavers, glass blowers, and potters arrived from Damascus. Samarqand's major architectural projects during Timur's lifetime included the Gur-i Amir Mausoleum (ca. 1400–1404), the Bibi Khanum Mosque (ca. 1398–1405), and the Shah-i Zinda (The Living King) Mausoleum complex.

The Gur-i Amir complex includes three buildings—a mausoleum, a madrasa, and a *khanqah*, or Sufi convent—all of which are located around a square courtyard. A minaret dominates each corner of the courtyard, and rising from the mausoleum is a ribbed blue-tiled dome that is 112 feet (34 meters) high. The decoration of the entire complex, such as its tile work and architectural niches, reveals a strong Iranian influence largely because its architect came from Isfahan. The Bibi Khanum Mosque, named in honor of Timur's favorite wife, was constructed out of materials brought from India. As a result of several earthquakes, most of this structure is in ruins. The Shah-i Zinda complex was built to commemorate Qutham ibn Abbas, a cousin of the Prophet Muhammad, who came to preach



Domes of Timur's mausoleum, Gur-i Amir, in Samarqand, present-day Uzbekistan. (Konstantin Shishkin)

Islam in Samarqand in 676 and was purportedly martyred on the site the following year. Already by the eleventh century a sizable mausoleum marked the spot, but between 1370 and 1405 about 20 buildings were added. A steep walkway, which stretches some 227 feet (69 meters) upward, allows access to the main tomb. On either side of the pathway are several mausoleums, each notable for its characteristic Timurid features such as blue-tiled domes, glazed brickwork, and mosaics.

—Mohammad Gharipour

rebuilding what he termed his “ruined inheritance.” He ordered a mosque and public bath constructed in every city and dotted the major trade routes of his empire with large caravansaries to house itinerant merchants and their animals. His single most important building project was his

mausoleum, which rivaled in scale and complexity ancient Persepolis. Located at Sham, a suburb of Tabriz, the complex of buildings that surrounded his tomb contained a hospital, a library, an academy, an observatory, and a wide variety of other charitable and academic foundations.

Uljeitu (r. 1304–1316), Ghazan's brother and successor, transferred the capital to Sultaniyya (which means "imperial"), a new city on which construction was begun in 1305. Dedicated in 1313, it was dominated by his domed octagonal mausoleum, one of the supreme architectural achievements of Persia. Tragically, it is the only remaining building from this once-magnificent imperial city.

The direct line of Hulegu died out in 1335 with Abu Said Khan (r. 1316–1335), and a number of small states divided up the former il-khanate and competed among themselves for supremacy until they were all swept away in the 1380s and 1390s by Timur-i Leng (1336–1405), a man who claimed to have inherited and reconquered the Il-khanate of Hulegu.

In addition to the high level of murder, mayhem, and destruction that accompanied Timur's armies as they rampaged through lands that stretched from India to Anatolia, this Turkish Muslim warrior sent back large numbers of enslaved artisans to beautify his capital of Samarqand. The crowning achievement of this work was the Registan (Place of Sand), a large central plaza surrounded by mosques, caravansaries, and the Gur-i Amir (Tomb of the Amir), Timur's mausoleum.

The transition of the Timurid capital to Herat (in present-day Afghanistan) by Timur's successor and son, Shahrukh (r. 1405–1447), caused a shift in architectural focus. The Great Mosque and Madrasa complex at Herat, for example, built under the patronage of Shahrukh's wife Gawharshad (d. 1457), was the epitome of fifteenth-century architectural innovation. Unfortunately, as is the case with most Timurid architecture, few of the original structures remain due to wars, earthquakes, and time, but Gawharshad's richly ornamented family mausoleum is one of the fortunate survivors, a fitting resting place for a woman whose name means "luculent jewel."

Despite Herat's new prominence, the Timurids continued to build in Samarqand (and in many other cities and locales as well). One of the glories of Samarqand's Registan is the madrasa built between 1417 and 1421 by Shahrukh's son Ulugh Beg (r. 1447–1449) while governor of the former capital. This building, which faces onto

the square, was the largest and most complex structure built by the Timurids. A lover of astronomy, he also built a large observatory on the same plaza, but it no longer exists.

Under Timur and his descendants the Registan became one of the most beautiful urban squares in the world, and its buildings were some of the finest examples ever produced of typical Timurid architecture: brick structures of monumental scale with glittering polychrome exterior tile work, multiple minarets, and large bulbous domes.

Ulugh Beg ruled for only two years before he was deposed and executed by his son. Even before his death, the Timurid empire suffered numerous incursions and chronic internal unrest. After 1449 the Timurid empire was rent apart by invasions and rebellions until the dynasty was terminated in 1507. But patronage of the arts and construction of buildings went on, even in the face of declining Timurid authority. Most notable in this regard was Husayn Bayqara (r. 1469–1506), whose power was confined to eastern Iran and the capital of Herat but who made his truncated kingdom a major literary and artistic center.

In addition to members of the royal family, patrons during the Timurid era included military figures, bureaucrats, and Sufi masters and their devotees. To be sure, many patrons erected palaces and pavilions as well as formal gardens, but most of the roughly 250 surviving Timurid buildings served a religious function. With increasing public interest in Sufism, newly constructed Sufi convents and tombs of Sufi saints became centers of Timurid religious orthodoxy.

—*Mohammad Gharipour*

Bibliography

- Golombek, Lisa, and Donald Wilber. *The Timurid Architecture of Iran and Turan*. 2 vols. Princeton, NJ: Princeton University Press, 1988.
- Hillenbrand, R. "Ilkhanids." Grove Art Online, Oxford University Press, 2005, <http://www.groveart.com/>.
- Pope, Arthur Upham. *Persian Architecture*. New York: George Braziller, 1965.
- Wilber, Donald. *The Architecture of Islamic Iran: The Il-Khanid Period*. New York: Greenwood, 1969.

Artistic Patronage under Mehmed II

Immediately after conquering Constantinople in 1453, Ottoman sultan Mehmed II (r. 1444–1446, 1451–1481), honored as “the Conqueror,” set about revitalizing the city as the seat of his power and the prestigious intellectual, cultural, and artistic capital of a world empire. This city was to become known as Istanbul or, as Mehmed punned, Islambul (“full of Islam”). Not only did

► PORTRAIT OF MEHMED II

Gentile Bellini (1429–1507) was a member of a celebrated artistic family. His most famous surviving work is the *Portrait of Mehmed II* (1480).

The calm, relaxed pose and three-quarter view of Mehmed were in keeping with Bellini’s preferences in portraiture. His addition of the three-dimensional arch heightens verisimilitude and dignity, also giving some distance between the viewer and sultan, probably an effect that Mehmed wanted. The elaborate bejeweled cloth with tulip motifs evokes Ottoman designs. The faded Latin text on the bottom left plaque probably says “Victor Orbis” (“Conqueror of the World”); the lower right plaque has the date November 25, 1480. The three-crown devices hovering above the arch probably represent the lands of Asia, Greece, and Trebizond, which Mehmed had conquered. These crowns were replicated on the reverse side of the portrait medallion that Bellini sculpted for Mehmed and with which the artist was rewarded for his service.

Bellini’s Ottoman period benefited his later work, particularly *Saint Mark Preaching in Alexandria* (1504–1507). Notably, Bellini himself is in this latter painting, proudly wearing the gold chain and medallion awarded him by Mehmed. Though his Venetian contemporaries had some familiarity with the appearance of the various Ottomans who visited and traded with the city, Bellini had a keener eye for Islamic architecture and the diversity of Muslims and Ottomans, including Ottoman women’s style of dress. His sketches from his Ottoman period were used for later paintings, most of which are lost, as well as being used by other Renaissance painters who wanted Orient-type figure drawings for their own work.

—Peter C. Valenti



Portrait of Mehmed II by Gentile Bellini. (The Art Archive/National Gallery London/Eileen Tweedy)

he see himself—and was seen by his contemporaries—as the sultan of a powerful empire, the mightiest of Turkic dynasts, and a champion of the Islamic world, he also claimed to be the heir of the great Roman/Byzantine tradition, a logical argument given his possession of Constantinople and most of the former Byzantine (eastern Roman) empire. Mehmed thus continued to promote artistic and cultural traditions derived from his Turko-Islamic heritage but also from Greco-Roman traditions. His activities included refurbishing buildings that had fallen into disrepair under the late Byzantine period, inaugurating a large building campaign, sponsoring artistic projects, and inviting and settling (sometimes forcibly) in his new capital key groups and professions, such as merchants and artisans.

Among his grandest building projects was the Fatih (Conqueror) mosque complex (built during 1463–1470); the Eyüp mosque-shrine complex (begun in 1458 and changed over time); a great bazaar complex (built in stages from 1456

onward) today called the Kapalıçarşı, or Covered Bazaar; and Topkapı Palace (1459–1479), the latter remaining the seat of government and the residence of Ottoman sultans until the late nineteenth century. He also transformed the Hagia Sophia church into a mosque (Aya Sofya). These monumental buildings, surrounded by plazas, caravansaries, workshops, and administrative buildings, fundamentally shaped the layout and visual impact of the city, a legacy still evident today amid the modern sprawl of Istanbul.

Mehmed was expanding upon established Ottoman tradition. Previous Ottoman (and Seljuk) sultans built mosques, mosque complexes (*imaret*), bathhouses (*hammam*), schools, hospitals, soup kitchens, bazaars, and merchant establishments (*khans*, or *caravansaries*), many of which had elaborate tile work and decoration. Until 1453 the most lavish Ottoman building projects occurred in Edirne and Bursa, the previous capitals of the Ottoman empire. For example, all Ottoman sultans up to Mehmed II built *imaret* in Bursa and had their tombs there. The architecture of these early years incorporated both Byzantine and Seljuk styles into broader Turco-Persian and Islamic styles. It is clear that Byzantine architecture—the best example being Hagia Sophia—continuously inspired Ottoman architects in Istanbul from 1453 onward, as the original plan of the Fatih mosque and Sultan Süleyman (Suleiman) the Magnificent’s stunning Süleymaniye mosque (1550–1557) demonstrate.

Throughout the early Ottoman period up to and including the era of Mehmed II, the predominant artistic influence in the Ottoman empire was Turco-Persian, the so-called Timurid style named after Mongol-Turco-Persian cultural traditions of empires and dynasties derived from Timur-i Leng (1336–1405), also known as Tamerlane, and his successors. In the Ottoman empire this entailed recruiting countless artisans and craftsmen from Iran or other locations farther east, such as Transoxiana and Khurasan (present-day Uzbekistan and neighboring nations).

Until the early 1500s, ceramics workshops (most famously producing underglaze-painted blue-and-white tiles) were run by master craftsmen from Tabriz or other parts of Iran. For example, the earliest large-scale architectural tile decoration is found in the Yeşil mosque and tomb

complex of Mehmed I in Bursa (1419–1424), with the tile work signed by the “Masters of Tabriz.” Once Istanbul became the new capital, these masters moved there and, under Mehmed’s patronage, expanded operations. Their extensive work is evident in the Fatih mosque, as well as in the pavilion called Çinili Köşk (1472) at Topkapı Palace. Over time, the apprentices in these workshops, natives of the Ottoman empire, advanced to take over the workshops and/or open new ones; by the late 1400s the city of Iznik (formerly Nicaea) became a major ceramic production center. In addition, Mehmed strengthened the long-established tradition of the Ottoman dynasty of fostering silk and textile manufacturing (in Bursa) and carpet workshops (in Uşak); many such workshops were later opened in Istanbul. The Ottoman empire’s status as a terminus for the Silk Road meant that doing so held artistic and economic imperatives.

The Ottoman record of patronage of the Timurid tradition is further evidenced in Mehmed’s recruiting of the Uzbek court painter Baba Nakkaş and Ali Kuşçu the astronomer from Tabriz (credited with revolutionizing Ottoman astronomy and influencing Copernicus). Mehmed’s scriptorium and chancery employed many men immersed in the Timurid tradition; one such was the famous calligrapher, anatomist, and book-binder Giyas al-Din of Isfahan. Like preceding Ottoman sultans and other Turkic dynasties, Mehmed’s court patronized numerous Persian poets and musicians.

As with earlier Ottoman rulers, Mehmed commissioned manuscript books and translations. Topkapı contained many illuminated manuscripts, mainly Persian but also western European and Chinese. The value given to art is demonstrated by the fact that upon capturing the Turkmen prince Yusufca Mirza in 1472, Mehmed demanded that his ransom be paid in manuscripts and pictorial albums. His court collected the major works of the Arabic, Persian, and (various) Turkic canons but also significant works in Hebrew, Greek, and Latin. Mehmed was particularly interested in historical and geographic works from the classical Greek tradition, including the *Iliad*, and biographies, especially of Alexander the Great. Mehmed had not only Arabic, Persian, and Quranic tutors but also Greek and Latin tutors.

Seeing himself as the inheritor of the Roman/Byzantine empire and classical tradition, Mehmed gave strong demonstrations of his knowledge and admiration of the Greek heritage during his visits to Athens in 1458 and Troy in 1463 (partially explaining why he had the Parthenon converted into a mosque by 1460). He even collected classical sculptures.

Mehmed hired the services of the Bolognese architect and engineer Aristotele Fioravanti and the Florentine architect Filarete. He also repeatedly requested the services of painters, sculptors, and carvers from various Italian city-states. The most famous was the 1479–1481 visit of the Venetian painter Gentile Bellini. Bellini was the greatest artist of his time in Venice, and so his visit to Mehmed was both a major artistic exchange and of great diplomatic significance. While there Bellini executed a series of paintings and bronze medallions, though only two paintings of this period survive: the *Portrait of Mehmed II* (1480) and the *Seated Scribe* (1479–1481). While the Ottoman empire, and the Islamic world in general, had a rich tradition of miniature painting and portraiture (the latter primarily Persian), Mehmed's patronage of Bellini represented an encouragement of Italian Renaissance portraiture, not necessarily embraced elsewhere in the Middle East. Nevertheless, both of the above Bellini paintings were later emulated by Ottoman and Persianate painters.

—Peter C. Valenti

Bibliography

- Campbell, Caroline, and Alan Chong, eds. *Bellini and the East*. London: National Gallery Company, 2005.
- Kuran, Aptullah. "A Spatial Study of Three Ottoman Capitals: Bursa, Edirne, and Istanbul." *Muqarnas* 13 (1996): 114–131.
- Necipoğlu, Gülru. *Architecture, Ceremonial, and Power: The Topkapı Palace in the Fifteenth and Sixteenth Centuries*. New York: Architectural History Foundation and MIT Press, 1991.
- Ousterhout, Robert. "The East, the West, and the Appropriation of the Past in Early Ottoman Architecture." *Gesta* 43(2) (2004): 165–176.
- Raby, Julian. "A Sultan of Paradox: Mehmed the Conqueror as a Patron of the Arts." *Oxford Art Journal* 5(1) (1982): 3–8.

Japan's Indigenous Aesthetic

After an intense phase of borrowing in which Japan remade itself on the model of the great civilization of China, by about 1000 an indigenous style emerged as the Japanese synthesized and modified imported ideas and institutions. Japan's hybrid aesthetic continued to evolve over the next five centuries, informing all aspects of culture from language and literature to art and architecture. Hints of a native approach to artistic design and expression were apparent much earlier in the asymmetrical Jomon pottery (the world's oldest, dated well before 10,000 BCE) or in Yayoi-period wooden buildings (ca. 300 BCE), with their distinctive construction details and roof design. Furthermore, awareness and nascent standards of what was beautiful were evident in the awe toward nature of the domestic Shinto religion. These enticing signs of Japan's indigenous artistic sensibility were then swamped by the massive wave of Chinese culture from the mid-600s. The initial conduit of learning from China was the Indian religion of Buddhism, initially imported via Korea. Buddhism not only brought with it religious texts and artwork but also opened the way for a flood of Chinese things, including written language, governmental institutions, and continental styles of gardening and architecture and further forms of Buddhism. The heyday of borrowing from China was delineated by a series of 12 official embassies dispatched directly to the Chinese capital in the period 630–837. Following the end of these tributary missions—and the dynastic decline of Tang China (618–907) in the mid-eighth century—the Japanese turned inward to digest and revise the vast knowledge acquired from China. After two centuries of relatively indiscriminate emulation of all things Chinese, there came a time of more selective borrowing and a reinterpretation of previously imported culture.

By the middle of the Heian period (794–1185), Japanese culture had come into its own as a discrete and recognizable entity, defined by elevated standards of beauty and behavior. The emergence of a native style also involved the written language. While both Chinese and Japanese poetry remained popular, the real innova-

tion in language and literature during the Heian period was a vernacular literature written in a mixture of Chinese characters and a phonetic syllabary expressing the sounds of spoken Japanese. This new literature was all the more revolutionary because it was invented by the ladies-in-waiting of the Heian court. Key works of Heian literature included Murasaki Shikibu's *Tales of Genji*, the world's first psychological novel, and Sei Shonagon's *Pillow Book*, an acerbic commentary on the love lives and behavior of the Heian aristocracy. Both works reflected the rarified culture of the Heian court and its standards of what was beautiful in clothing, appearance, and artistic and spoken expression.

Along with the appearance of new sects of Heian Buddhism, religious art became recognizably Japanese (especially wooden sculpture, in contrast to China, where the medium was typically stone). Religious art was joined by the new brightly colored Japanese-style painting and, by the late Heian era, hand-scroll paintings, such as the famous illustrated version of the *Tales of Genji*.

There was no continental prototype for one feature of the Heian age: the growing power of samurai warriors, who grasped control of the country following a brief civil war during 1180–1185. The first artistic output of the ensuing Kamakura period (1185–1333) consisted of war tales, such as *Tales of the Heike* describing the poignant fall of the relatively effete and aesthetically sophisticated warrior clan of Taira in the war of 1180–1185. Another new development was the expansion of Zen Buddhism, with its stress on individual enlightenment and seated meditation, to meet the spiritual needs of the active warrior class, thereby supplanting the elaborate rituals of classical Mahayana Buddhism. Following the lead of the earlier Heian period, Japanese indigenous artistic expression became increasingly independent from Chinese models, especially in painting and sculpture. Particularly innovative was the Zen monk Unkei, whose lifelike sculptures were crafted of multiple solid wood blocks and painted bright colors.

Under the second samurai government, during the Muromachi period (1336–1573), there came a renewed interest in China, not so much

➤ SESSHU TOYO—ARTIST TO THE MERCHANT CLASS

Sesshu (1420–1506) was the epitome of a Zen Buddhist monk-artist. While a young man at Kyoto's Sokoku-ji, Sesshu first encountered many works of fine art, especially monochromatic ink paintings of China's Song dynasty, that became models for his own work. He also became a student of Shubun, one of the great artists of the day, although Sesshu displayed more independence from shogunal control than his teacher. (In this sense, as his patrons were more of the merchant than the warrior class, even though Sesshu was born into a samurai family, one can refer to him as an artist to the merchant class.)

With the outbreak of war in Kyoto in 1467, Sesshu fled westward and then on to China, where he studied Buddhism and journeyed to famous scenic places such as West Lake, although he found no living master to serve as his teacher in China. Upon his return to Japan he produced his most famous works from his studio in Yamaguchi. His characteristic style involves brushwork akin to calligraphy, influenced by Zen in its abbreviated or suggestive use of sparse lines to suggest deeper content or meaning. His masterpiece, the *Long Scroll of the Four Seasons*, depicts a landscape through the climatic changes of a year. Six paintings attributed to Sesshu are ranked among the National Treasures of Japan.

—Lawrence Fouraker

to emulate the contemporary Ming dynasty (1368–1644) as to acquire artwork and knowledge from previous dynasties, especially the Song (960–1279). Popular imported Song artwork included calligraphy, ceramics, lacquer, and, above all, monochromatic ink landscape paintings. Many great Muromachi artists were Zen monks, and especially in ink painting one can infer an ascetic discipline in the monochromatic limitation of artistic expression. A similar influence of Zen is apparent in the withered landscape of dry rock gardens, expressing the image of water in its absence, such as the garden at Ryoanji Temple, composed of 15 rocks in a field of raked sand. Zen influence was likewise apparent in the classic tea ceremony, linking art, religion, and

architecture in new ways. Rustic small tea huts constructed of natural materials focused one's concentration on the act of preparing and consuming tea. The tatami floor matting, sliding doors, decorative alcove, and generally sparse decoration of these huts remain the model of a traditional Japanese room to this day. The intentional limitation of the materials used and the avoidance of ostentation is one by-product of the Zen aesthetic, although the stress on simplicity did not deny a countervailing tendency to prize and collect precious tea ceremony implements and artwork, particularly the outwardly rough tea bowls that were the center of the ceremony. And so in the midst of internecine samurai warfare on a new scale, we find yet another stage in the ongoing development of the indigenous Japanese aesthetic sense.

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Bibliography

- Gutiérrez, Fernando G. "Sesshu and His Masters." *Monumenta Nipponica* 16(3/4) (1960–1961): 221–262.
- Sansom, G. B. *Japan: A Short Cultural History*. Stanford, CA: Stanford University Press, 1931.
- Tanaka, Ichimatsu. *Japanese Ink Painting: Shubun to Sesshu*. Translated by Bruce Darling. New York and Tokyo: Weatherhill/Heibonsha, 1972.

Totman, Conrad. *Japan before Perry: A Short History*. Berkeley and Los Angeles: California University Press, 1981.

Varley, H. Paul. "Cultural Life in Medieval Japan." In *The Cambridge History of Japan*, Vol. 3. Cambridge, New York, and Melbourne: Cambridge University Press, 1990.

The Buddhist Monuments of Pagan

Pagan, the capital city and religious center of the kingdom of Pagan that dominated central Burma from roughly 1044 to about 1287, contained several thousand religious structures, all devoted to furthering the Law of Theravada Buddhism.

The religious buildings of Pagan were of five different types: temples, stupas (see below), monasteries, other religious structures (such as the Pitaka-taik Library, which housed Buddhist sutras), and underground or half-underground monasteries, or image houses, that recall the cave temples of India, such as at Ajanta and Ellora.

The most common type of temple was square with one central chamber (the shrine, which contained a statue of the Buddha) with either one entry or a central core with a corridor (ambulatory) around the core; a variation of this was a round structure with a round or square central chamber. A second type consisted of two parts: a smaller four-sided or quasi-octagonal structure attached to a larger one, the smaller part an entrance hall and the larger part the shrine; another type was similar except that the larger section had a central core with a corridor around it. A number of other variations existed, including five-sided temples on a pentagonal base. Apparently unique to Burma, the incentive for the development of monuments of this sort was the desire to honor the five Buddhas of the present cycle of time: Krakuchanda, Kanakamuni, Kasyapa, the historic Buddha Gautama, and the future Buddha Maitreya. Today 15 temples in this unique form exist amid Pagan's 2,217 registered monuments.

The stupa (in Burmese *zeidi*) originated in India as a domed structure that housed deep within it a relic of the Buddha or his Companions (such as the Great Stupas at Sarnath and Sanchi),



Buddhist stupas at Pagan in present-day Myanmar (formerly Burma). Pagan was the capital of Myanmar from 1044 to 1286, during which time the stupas were constructed. There are more than 10,000 temples and other religious structures scattered across the plain at Pagan. (Jeremy Edwards)

but in time it came to be any free-standing domed structure of veneration that especially attracted pilgrims. Burmese stupas consist of five main parts: the base, three stepped terraces, the bell (the main part, or body), a spire tapering upward, and the umbrella (a series of parallel disks around a pole) at the top of the spire. The body of the stupa, which in India was originally a hemisphere, supposedly represents an overturned alms bowl (although its origin can be found in pre-Buddhist funerary tumuli), and the spire, in its earliest form a smaller hemisphere with flattened bottom, represents an overturned drinking cup.

Monasteries varied greatly in design, but all followed two basic forms. One design is illustrated by the So-min-gyi-ok-kyaung Monastery, which had 11 rectangular cells (the individual rooms in which monks lived and meditated) around a courtyard, each with a window in the outer wall; a shrine on one side of the courtyard; and an entrance hall on the opposite side. There was originally an upper story, but all that now remains is another smaller shrine above the main one. Another monastic complex, Hsu-taung-pyit, exemplifies the second basic design. It is a spacious square enclosure inside of which there is an inner walled area around the main residence with a temple in one corner of the enclosure; placed in rows within the open space were 38 or more small subhouses where monks, novices, and servants resided, 10 of which are still standing.

—Roger Finch

Bibliography

- Ministry of Culture, Archaeology Department. *Pictorial Guide to Pagan*. Rangoon: The Printing and Publishing Corporation, Burma, 1979.
- Pichard, Pierre. *Inventory of Monuments at Pagan*, Vols. 1–5. Paris: United Nations Educational, Scientific and Cultural Organization, 1995.
- Pichard, Pierre. *The Pentagonal Monuments of Pagan*. Bangkok: White Lotus, 1991.
- Soni, Sujata. *Evolution of Stupas in Burma: Pagan Period, 11th to 13th Centuries A.D.* Delhi: Motilal Benarsidass, 1991.
- Strachan, Paul. *Pagan: Art and Architecture of Old Burma*. Whiting Bay, Arran, Scotland: Kiscadale Publications, 1989.

➤ THE TEMPLE PAINTINGS OF PAGAN

In spite of the passage of more than 700 years since the fall of the kingdom of Pagan, when the construction of new Buddhist monuments was almost entirely brought to a halt, frequent earthquakes, which reduced many monuments to mounds of brick rubble, vandalism (including the wholesale removal of some of the finest mural paintings for sale in Europe and the defacing of paintings with graffiti), and the continued “refreshing” of those temples still in use by the application of successive coats of whitewash over underlying older decorations, many important paintings remain in remarkably good condition and are presently being maintained and restored.

Some of the paintings’ subjects of greatest interest are entrance guardians, the Buddha and his disciples, the attack and defeat of the army of Mara (the Evil One), the robing of Queen Maya (mother of Siddhartha Gautama, also known as Sakyamuni, the historical Buddha), the nativity scene of the Buddha, Gautama’s tonsure, and the ascent (of Gautama) to Buddhahood, as well as figures of various Hindu/Buddhist deities (such as Brahma, Shiva, Vishnu, Indra, and Sarasvati), bodhisattvas, dancers, drummers, and celestial musicians (*apsarasas*), and scenes from *jatakas* (stories of the former incarnations of bodhisattvas, especially of the historical Buddha).

—Roger Finch

The Glory of Byzantium

Between 1025 and 1204 art, architecture, ritual, and culture (of great brilliance) displayed Byzantine imperial ideals and orthodox Christian beliefs to a world that extended far beyond the geographical boundaries of the empire. Even as the empire failed in its last centuries, from 1261 to 1453, its arts and literature flowered and outlasted it by more than a century. Between 1000 and 1500 Byzantine culture extended, in different ways, to the Islamic world, Latin Christendom, and the emerging polities of southeastern Europe, Russia/Ukraine, and northern Eurasia. Byzantium’s influence can still be seen in churches and monasteries, icons, manuscripts, and luxury goods that have survived in widespread locations.

Recent scholarship also underlines the contributions of Byzantine learning, less immediately accessible to modern sensibilities, to intellectual developments in neighboring civilizations. Byzantine art and culture, now mostly viewed through widely scattered museum objects, reflect a world where emperors, churches, monasteries, and an unrivalled treasury of sacred art and relics offered a compelling vision of the divine order (*taxis*) on Earth.

Orthodox Christianity permeated Byzantine culture, and the ninth-century restoration of icon veneration initiated the development of new forms of architecture, liturgy, and religious images that filled churches, imperial buildings, public spaces, and private homes. Churches and monasteries, generally domed structures of modest size, were covered with golden mosaics and frescoes culminating in an image of *Christos Pantokrator* (Christ, Ruler of All) at the apex of the central dome. A screen, eventually covered with icons (the iconostasis), separated the worshipper from the sanctuary and enhanced the holiness of the Eucharist. Icons, portable images of holy figures, were central to public and private worship. Orthodox believers regarded each not as a painting but as the focus for reverent communication with the holy figure spiritually present in the image. Late Byzantine icons of the fourteenth and fifteenth centuries, less stylized than earlier sacred images, conveyed increased emotion, humanism, and a sense of the immanence of Christ and Mary to the individual worshipper. As candles, incense, and liturgical chant reflected the mosaics and images in the liturgy, the Byzantine worshipper had an intense experience of the ordered reflection of Heaven. Its heritage survives today in monasteries at Mt. Athos, Mt. Sinai, and Meteora. The same elements in imperial ceremonies reinforced the emperor's role as protector of divine order, and although surviving remains are fragmentary, visitors' descriptions convey their impact on aspiring cultures.

Byzantine sacred and imperial culture had its most profound influence on the peoples of Eastern Europe and northern Eurasia, a world that has been described as the Byzantine Commonwealth. Beginning with the ninth-century missions of Cyril and Methodius, Byzantine Christianity was adopted by rulers of the Bulgars,

Serbs, Rus, and other peoples, to whom it offered a model of divinely ordained rule. In the wake of conversion, Byzantium's sacred learning and artistic expressions were adapted to the cultural environment and languages of the Slavic world. Translations of Greek Christian texts into the alphabet and vocabulary created by Cyril's disciples for the South Slavs in tenth-century Bulgaria (Old Church Slavonic) were later adapted to the East Slavonic language of the Rus and formed the basis of written culture throughout the Slavic regions of Orthodox Christianity (whereas other Slavic Christians, such as the Poles, followed the Latin traditions and culture of the Roman Church). Byzantine artists, craftsmen, and copyists were sent to Slavonic rulers and monasteries to train local craftsmen, producing monuments such as the cathedral of Sviata Sofia in Kiev in the twelfth century, late medieval Serbian monasteries and frescoes, and the rich Russian tradition of icon painting. The monasteries of Mt. Athos in northern Greece, representing all Orthodox cultures, served as a spiritual and textual community. Long after the fall of the Byzantine empire the concept of a Byzantine order remained, and the orthodox rulers of Moscow claimed to be its successors in the so-called Third Rome.

Eastern Christian communities and monasteries in the Islamic world, from Syria to Egypt, Ethiopia, and Nubia, were important centers of religious and cultural exchange. Their manuscripts, frescoes, and icons demonstrate continued Byzantine interaction with native traditions and, frequently, the presence of Byzantine artists and copyists. The Greek monastery of St. Catherine in Sinai, which has maintained an unbroken tradition of worship since the sixth century, was a pilgrimage destination for Byzantine Orthodox, Armenian, Syrian, Coptic, Ethiopian, and Latin worshippers and today houses the greatest existing collection of Eastern Christian manuscripts and icons. Its multilingual manuscripts and the extraordinary quality of its images reflect the importance of pilgrimage as a vehicle for intellectual and artistic communication across linguistic and theological divides. Despite religious and political antagonism, Byzantine and Islamic courtly culture and ceremony, trade, and scientific learning were vehicles for

► VENICE AND KIEV

The cities of Venice, Italy, and Kiev, Ukraine, had deep connections with Byzantium that can still be seen in their principal churches. In Venice, San Marco, initially the doge's chapel (and later the state church), was modeled in the eleventh century after the five-domed cross-in-a-square Church of the Apostles in Constantinople (the imperial mausoleum) but adapted to Latin liturgical needs. Its walls were covered with mosaics first completed between the eleventh and thirteenth centuries by Byzantine masters and the Venetian mosaicists they trained in a Byzantine program that became progressively Italian as the structure was completed and restored over the centuries. San Marco was filled with Byzantine objects, including the core of its early-twelfth-century gold enameled retable, or altarpiece, the Pala d'Oro (the Golden Altar Cloth). In the thirteenth century when the Fourth Crusade filled San Marco with treasures ranging from marble pieces and mosaic tesserae (fragments) to the famous bronze horses mounted on the basilica's facade, it became a showplace for Byzantine arts. San Marco is a unique reflection of the city's relationship with Byzantium, first as a source of artistic and cultural inspiration for the doges and later as a showplace for objects that made it a museum of Byzantine art.

Prince Iaroslav (1036–1154), ruler of eleventh-century Kiev, also modeled his capital on Constantinople, including a Golden Gate like that of Constantinople. He brought Byzantine artists and craftsmen to build a new cathedral of St. Sophia in the Byzantine style and fill it with mosaics and frescoes, often using imported materials. With its Christ Pantokrator, mosaic inscriptions in Greek,



Mosaic depicting the transfer of the body of Saint Mark at the Basilica of San Marco, Venice, Italy, thirteenth century. (Elio Ciol/Corbis)

and scenes of the Constantinopolitan court, St. Sophia was a Byzantine church. Iaroslav's successors built other churches at nearby monasteries, notably the golden-domed church of the archangel Michael, using Byzantine craftsmen who taught their arts to Kievans. Kiev's churches were plundered, remodeled, and destroyed over the centuries, so only St. Sophia's interior preserves its original Byzantine work today.

—Dorothy de F. Abrahamse

cultural exchange. Byzantine luxury goods such as silk were prized for their quality as diplomatic gifts and trade items, and recent studies have shown an ongoing cross-fertilization of Byzantine and Arabic learning in subjects such as astronomy, astrology, dream interpretation, and medicine.

Current scholarship underlines the complexity of Western appropriation of Byzantine art and culture, extending well beyond the fall of the empire and throughout Europe. Latin Christians, despite theological differences, prized Byzantine

icons, architecture, and relics. Through the twelfth century Europeans encountered Byzantium in Venice, where San Marco was built and decorated as a Byzantine-style cathedral, and in formerly Byzantine southern Italy, whose Norman cathedrals such as at Palermo displayed Byzantine mosaics on a grand scale. Greek monasteries survived in southern Italy, but it was not until the fifteenth century that humanist scholars sought their manuscripts as sources of learning.

The crusades and Western European trade colonies in the eastern Mediterranean exposed

Byzantine culture to the West. Artists in the crusader states collaborated with their Byzantine counterparts, but the encounter of Byzantium and the Latin world was dramatically changed by the conquest of Constantinople in 1204. Looted relics and other treasures of Constantinople were dispersed to Venice, Rome, and northern Europe, where they inspired awe. Although many of the Byzantine art objects in Europe can be traced to this source, their direct artistic impact is still debated. Byzantine images, however, became central to the growing individual devotion of the European late Middle Ages. Mendicant friars, especially the Franciscans, adapted Byzantine images as a focus of their spirituality, while Latin rule in Cyprus and Crete created centers of artistic cross-fertilization and image production for a growing Western market. Their impact can be seen in Renaissance art from Venice and Florence to the Flemish masters. Byzantium's other great contribution to Western European culture, the transmission of classical and Christian Greek texts, depended on access to language and manuscripts. Both were brought to the West in the fifteenth century by Byzantine émigré scholars, who brought manuscripts to Western libraries, taught Greek (although some learned persons in the West had mastered Greek in the preceding centuries), and published and translated classical Greek texts for humanist scholars and their patrons who based the so-called Renaissance on their supposed recovery of classical learning.

Traditionally the glory of Byzantium has been seen in the periods of its greatest political strength, the Justinianic (527–565) and Macedonian (843–1025) eras.

Byzantium's enduring heritage, however, was certainly the transmission of ideas and beliefs through images and words to the medieval and early modern worlds, and these expressions reached their fullest development in Byzantium between the eleventh and fourteenth centuries. The process of appropriation was always complex and interactive, varying from the formative influence of Byzantine Christianity and the creation of Slavonic literature in the "Byzantine Commonwealth" to the more focused use of Byzantine scholars in the Italian Renaissance. The brilliance of Byzantine culture in Constantinople can only be reconstructed in the imagination,

but its elements are powerfully conveyed in its refractions.

—Dorothy de F. Abrahamse

Bibliography

- Cormack, Robin. *Byzantine Art*. Oxford, UK: Oxford History of Art, 2000.
- Evans, Helen C. *Byzantium: Faith and Power (1261–1557)*. Exhibit catalog. New York: Metropolitan Museum of Art, 2004.
- Evans, Helen C., and William D. Wixom, eds. *The Glory of Byzantium: Art and Culture of the Middle Byzantine Period, A.D. 867–1261*. Exhibit catalog. New York: Metropolitan Museum of Art, 1997.
- Nelson, Robert S., and Kristen M. Collins. *Holy Image, Hallowed Ground: Icons from Sinai*. Exhibit catalog. Los Angeles: Paul Getty Museum, 2006.
- Obolensky, Dimitrii. *The Byzantine Commonwealth: Eastern Europe, 500–1453*. Crestwood, NY: St. Vladimir's Seminary Press, 1982.

The Art of Latin Europe—Cathedrals and Ivories, Tapestries, and Reliquaries

The term "Gothic Architecture" conjures the image of an enormous medieval European stone church containing religious images in stained glass, stone sculpture, fresco, and carved wood. Existing exemplars draw pilgrims and tourists worldwide and are easily accessible online. York Minster in northern England, the largest Gothic cathedral in northern Europe, was built over a span of 250 years beginning in the 1220s. It is 486 feet (148 meters) long and 223 feet (68 meters) wide, rises 184 feet (56 meters) to the wooden vaulting inside the tower, and presents a variety of architectural styles.

In 631 Pope Honorius I made York the northern ecclesiastical capital of the Roman Church established in Britain. A stone minster (mission) built to house the cathedra (bishop's seat) in 670 was replaced by a Norman church in the 1070s. In 1227 its clergy made a successful argument in Rome for the canonization of Archbishop William Fitzherbert (d. 1154). The saint's relics were transferred to a new shrine behind the high altar in 1284, in the presence of King Edward I. William's head, kept by itself in a reliquary covered in silver, gilt, and jewels, was the cathedral's out-

► REPRESENTATIONS OF THE VIRGIN MARY

Portable devotional objects for the wealthy, such as Paris's mid-thirteenth-century, ivory *Sainte-Chapelle Madonna*, carried details that recalled the monumental sculpture common to both Romanesque and Gothic cathedrals. The curved stance of this Virgin, which places one hip higher than the other to support the child, is a result of the demands of working with elephant ivory. The best carvers, who often worked in wood as well, were able to combine the demands of material and style, capitalizing on the curve of the tusk and the patina of the ivory and then adding touches such as vivid lapis lazuli paint for the eyes of the Virgin.

In Carlo Crivelli's *Annunciation with St Emidius* (1486), the Virgin is bent over a book as light from Heaven strikes her forehead. Gabriel, on his way to visit her, has stopped to talk with Emidius, the patron saint of Ascoli, Crivelli's hometown. The saint carries a detailed model of the city, which gained its rights of self-government on the Feast of the Annunciation in 1482. We can peek through the doorway to see Mary's room. Traditional elements of portraits of the Virgin, such as the dove and light as reminders of the Incarnation, the liquid draperies of Romanesque and Gothic statues, and the prayerful folded hands of the leaning figure, recall the medieval devotional context as vividly as the architecture reaches further back into the Roman past. But the focus of the painting is on the lovingly detailed material luxuries that surround the beautiful young girl. They announce, as Lisa Jardine has noted, "Italian access to markets from northern France to the Ottoman Empire," showing rugs from Constantinople, tapestry from Arras, glass from Venice, metalwork from Spain, porcelain and silk from China, and broadcloth from London. The Virgin presides over Europe's successful Mediterranean



St. Chapelle Madonna, French, about 1250. (Scala/Art Resource, NY)

trade and becomes symbolic, in her youth and beauty, of a luxury that is housed in Renaissance buildings that recall Italy's classical Roman past.

—Corliss Slack

Source

Lisa Jardine, *Worldly Goods: A New History of the Renaissance* (New York and London: Norton, 1998), 9.

standing attraction, brought out for King Henry VII's daughter to kiss on a state visit in 1503. Pilgrims, hoping for miraculous healings, followed these royal visitors. Christian altars were sanctified by the relics of saints, which became the church's most valuable possessions, and their containers proclaimed their importance and their connection, through the saint, to eternal glory and the power to heal.

Pilgrimage brought visitors who made offerings to the church and spent money in the city. Their presence combined with local needs to create a constant demand for books, paintings, reliquaries, tapestries, liturgical dress, altar furnishings, and a host of other objects beyond the stone and glass of the building. Administration, pilgrimage, and local or regional markets made cathedral cities part of a network of medieval

travel, open to foreign influences from as far away as Byzantine Constantinople and Islamic Alexandria, which acted as middlemen for goods from Asia, or the coast of Africa, where by the thirteenth century the Swahili trade corridor supplied ivory for the reliquaries and altar furnishings of European churches. Just as the texture and shape of elephant tusks were worked into the ivory forms of the Madonna and Child, so the network of trade and travel affected the design of medieval churches and their furnishings.

In the mid-twelfth century the massive pillars and walls of the Romanesque style, a fortresslike design based on the Roman basilica but roofed in stone instead of wood, gave way to thinner walls used as frames for stained glass. An innovation in vaulting and the use of flying stone buttresses allowed Abbot Suger (ca. 1081–1151) of the abbey of St. Denis near Paris to radically increase the size of windows in his church and to use them to display brilliant colored glass designs. Like the ornamental sculpture that turned buildings into stories to be read by the initiate, the glass offered a medium for symbol and narrative. This new Gothic (or northern European) style overwhelmed the viewer with a light that shifted with the outside illumination and constantly demanded attention to pictures of events in the Gospels or from the lives of Old Testament prophets and kings, all conveyed in brilliant color on massive canvases of glass. Canterbury, York's rival as the chief cathedral in Britain, was rebuilt in the new style in 1175, part of a trend that some scholars have called International Gothic by the time of its greatest influence in the late 1300s. York itself, rebuilt almost a century after Abbot Suger's innovations, participated in Romanesque, in Gothic, and in a number of other styles identifiable in not just church construction but also in the design of other buildings and objects in Europe during the medieval era. Gothic can be seen as a set of values in architecture that came to permeate all media large and small. Objects such as portable ivory statues imitated larger Gothic statuary, for instance. Such small luxury items circulated widely, allowing people access to the new style in art as they appreciated the texture and patina of the ivory.

—Corliss Slack

Bibliography

- Barnet, Peter. *Images in Ivory: Precious Objects of the Gothic Age*. Princeton, NJ: Detroit Institute of Arts and Princeton University Press, 1997.
- Bynum, Caroline Walker. "Body-Part Reliquaries and Body Parts in the Middle Ages." *Gesta* 36 (1997): 3–7.
- Jardine, Lisa. *Worldly Goods: A New History of the Renaissance*. New York and London: Norton, 1996.
- Morrison, Karl. "The Gothic Choice." *Haskins Society Journal* 11 (1998): 137–163.
- Wilson, Christopher. *The Gothic Cathedral: The Architecture of the Great Church*. London and New York: Thames and Hudson, 1990.

A Revolution in Artistic Perspective—Early Renaissance Painting, Sculpture, and Architecture

In late medieval and early Renaissance Europe, a change in the artistic world that began with the twelfth-century northern European revival of interest in Roman art and architecture was taken to new heights by the artists and architects of Italy and particularly those of Florence. In order to understand how this came about, it is important to understand Renaissance humanism and its scholars.

Fourteenth- and fifteenth-century Florentine poets, historians, and political theoreticians such as Francesco Petrarca, Coluccio Salutati, and Leonardo Bruni, building upon the work and enthusiasms of twelfth- and thirteenth-century predecessors, focused their energies on reviving the humanistic, that is the literary, traditions of classical Roman antiquity. To attain this goal, they and others set out to find ancient Latin manuscripts that had remained in obscurity since the early medieval period. Rooting through monastic libraries and other obscure places, these scholars brought to light almost-lost works of such important literary figures as Cicero, Horace, and Virgil. Of equal importance, they also discovered some mathematical and architectural works, the ancient Roman Vetruius's architectural theory being the most influential of these rediscovered texts. But what did the humanists' revival of ancient literature and mathematics have to do with a revolution in the world of art?

➤ WHAT IS PERSPECTIVE?

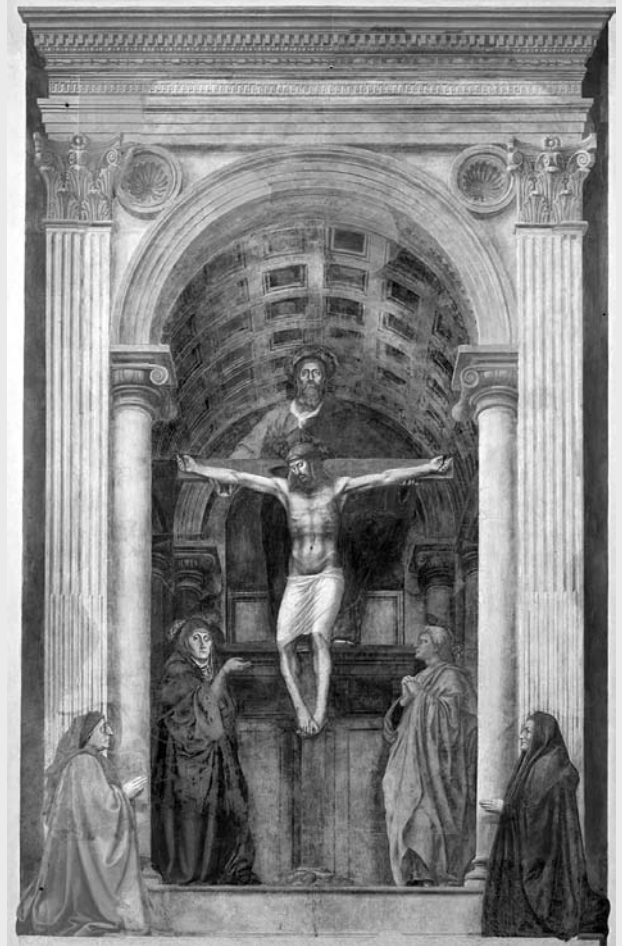
Perspective is an artistic technique that adopts principles of geometry to trick the viewer's eye into thinking that a two-dimensional painting or drawing is three-dimensional. In order to make this illusion work, an artist must place a fixed point, called a vanishing point, on the canvas or fresco. Once a vanishing point is determined, all parallel lines in the painting must intersect and end at that determined point.

The vanishing point in Masaccio's *Holy Trinity* is just below the cross on which the crucified Christ hangs—actually, on top of the first step upon which the two patrons who commissioned the fresco sit in prayer. The result is that the viewer is drawn into the scene.

Of equal importance, Masaccio created a light source (shining in from the right side of this fresco) that illuminates and gives his figures sculptural volume. When linear perspective and a light source are used together, the effects are stunning, and the illusion of three-dimensionality is striking.

—William Landon

Masaccio's Holy Trinity, about 1425 CE, S. Maria Novella, Florence, Italy. (Scala/Art Resource, NY)



In the early Renaissance period there was no distinct separation of disciplines. A Florentine humanist could be a well-versed mathematician, a poet, and an artist all at the same time. Indeed, when these various disciplines were brought together, a revolution was introduced into the world of Florentine art: the discovery of perspective, a blend of artistic creativity and mathematical precision.

Several Florentine artists were associated in special ways with the discovery of perspective: Brunelleschi (ca. 1377–1446), Donatello (ca. 1386–1466), and Masaccio (ca. 1401–1428). Brunelleschi is known for his architectural designs, Donatello for his sculptures, and Masaccio for his paintings. We will focus only on Masaccio because his work brings together Brunelleschi's architec-

tural talent and Donatello's careful sculptural eye in a single painting, the *Holy Trinity*.

Scholars are not sure of the exact year in which Masaccio painted the *Holy Trinity* and date it anywhere between 1425 and 1428. That painting, more specifically a fresco (a mural painted into fresh wet plaster that bonds with the pigments as it dries), is located in the Church of Santa Maria Novella in Florence. A brief description of the painting illustrates its originality and its revolutionary qualities.

At the center is a realistic depiction of the crucified Christ. Standing behind Christ is God the Father, whom Masaccio depicts as somber and regal; flying between God the Father and the God the Son is a snow-white dove, which, in the Christian tradition, represents the Holy

Spirit. This iconographic depiction of the Trinity was not, in and of itself, unusual or revolutionary, but the setting was.

The Trinity is situated in what appears to be a three-dimensional world, and here the revolution of mathematical perspective is felt most keenly, for the Trinity appears to exist in a real environment. Indeed, the viewer feels that it is possible to reach into the space in which the Trinity is depicted. The architectural detail of the painting's vaulted ceiling, which reminds us of one of Brunelleschi's buildings, is almost tangible, and the almost sculptural detail of the painted figures, which bring to mind statuary such as Donatello's *David*, trick the viewer's eye into thinking that the fresco is a window in the church's wall, a window that opens straight into Heaven where the Trinity dwells. The three-dimensional illusion that Masaccio's fresco creates is nearly perfect, and such an illusion would not have been possible without the discovery of perspective.

When the *Holy Trinity* is compared with earlier religious masterpieces that are strikingly two-dimensional, it becomes clear that Masaccio's painting represents the culmination of Renaissance humanism and a work of rare and unprecedented genius, a new perspective in Western art.

—William Landon

Bibliography

- Goffen, Rona, ed. *Masaccio's "Trinity."* Cambridge: Cambridge University Press, 1998.
- Mackenney, Richard. *Renaissances: The Cultures of Italy, c. 1300–c. 1600.* New York: Palgrave Macmillan, 2005.

Sacred Architecture in Mesoamerica

The beginning of the so-called Postclassic period in Mesoamerica (ca. 900–1521) is marked by the fall of the great city-states and empires such as Tikal and Copán in the Maya area and Teotihuacan in central Mexico. While the reasons for the collapse are still debated, it is undoubted that major readjustments occurred in all aspects of Mesoamerican society: political arrangement, economic interdependence, and, not least, religious beliefs.

An iconic figure of this period is Ce Acatl Topiltzin Quetzalcoatl (Our Lord One Reed Feathered Serpent), a king and priest who lived in central Mexico at the end of the tenth century. Historical sources dating to the time of the Spanish conquest relate stories of a man from the city of Tollan (or Tula) who left this great town to go to the land of the east. There he had an encounter with the Sun God. Ce Acatl Topiltzin eventually came back to Tula and spent the rest of his life as a ruling priest. Although he was a historical character, his significance transcended mere political or ruling abilities. In late Mesoamerican lore he became a cultural hero, credited with the invention of writing, philosophy, metallurgy, and medicine. Ce Acatl Topiltzin's attribute of Quetzalcoatl further underscores his divine character. The feathered serpent has been part of Mesoamerican lore since the first millennium BCE. He is the god of the whirlwind, which clears the sky before rain comes. It may be that Ce Acatl Topiltzin had a special ability to transform himself into the deity for the propitiation of agricultural fertility.

The most striking manifestation of the relationship between the historical figure and the deity is found in major archaeological sites, mostly pyramids, that may have served the purpose of glorifying the priest after death. In the city of Cholula, in central Mexico, rises the largest structure ever built in the ancient Americas. While the pyramid, known as Tlachihualtepetl (man-made mountain), was initially built in the Late Formative period (around the beginning of the Christian era), since the early Postclassic period (950 CE) the city was consecrated to the cult of Quetzalcoatl. It is hypothesized that Cholula was in fact Tollan, the city of origin of the historical Quetzalcoatl. The great site of Chichén Itzá, in the Yucatán Peninsula, shows a great deal of central Mexican influences both in the style and iconography of its major buildings. Most notably, the pyramid of Kukulcan (Quetzalcoatl in Yucatec Maya) is accessible on four sides, similar to the Cholula pyramid, and is decorated on every side with large feathered serpents descending from the top to the base of the structure along large stairways. Other "central Mexican" buildings at Chichén Itzá are the impressive I-shaped ballcourt (the largest in Mesoamerica), a skull

► HOW FAR DID THE INFLUENCES OF MESOAMERICA SPREAD?

Flourishing between 900 and 1400 in the American Southwest and in the basin of the Mississippi River are the sites of the first native North American civilizations that practiced a sedentary life, inhabited large settlements, cultivated maize, and engaged in long-distance trade. Cahokia, in southern Illinois across the river from St. Louis, is the largest and presumably most important site of the Mississippian civilization. Its large platform pyramids (or mounds), built within enclosures (or plazas), make Cahokia similar to the great pyramid compounds of central Mexico, such as Cholula. Around the same time, the ancient Puebloan people, or Anazasi, began building large structures around Chaco Canyon, in northwestern New Mexico, and Mesa Verde, Colorado. The rise of these native North American cities coincides chronologically with the Toltecs to the south, raising the question of which way influences were

flowing. Quetzalcoatl and the city of Cholula in particular were sacred to the merchants, and it is well known that long-distance trade, especially in conch shells and turquoise, constituted a major means of elite aggrandizement in Mesoamerica and the American Southwest and Southeast. Large caches of these materials were found in burials associated with high status. Fine attires included large ear spools, winged costumes, and conch gorgets, similar to those found in Mesoamerican elite burials.

Oral and contemporary traditions among the North American Indians show striking similarities with Aztec mythology and beliefs as they were recorded by Spaniards in the sixteenth century, yet the relationship may in fact be much older, dating to the Archaic period (10,000 BCE).

—Alessia Frassani

rack platform (known as Tzompantli in Nahuatl) for the placement of the skulls of sacrificial victims, and the Temple of the Warriors, which bears a striking resemblance to a platform pyramid at Tula in central Mexico. It is possible that the place to the east that Ca Acatl Topiltzin visited in his journey was indeed the Maya city of Chichén Itzá. Apotheosized after death, this legendary priest became the main god, under the name of Quetzalcoatl/Kukulcan, in early Postclassic Mesoamerica.

When the Mexica gained power in central Mexico a few hundred years later, they still recognized the great legacy of the Toltecs (people from the legendary Tula) and its leader. The political ideology of the Mexica, however, revolved around the cult of their patron deity Huitzilopochtli, under whose guidance they entered the Basin of Mexico and founded their capital city, Tenochtitlan, on a lake. Found at the site of modern Mexico City, Tenochtitlan was designed around the so-called sacred precinct, an area that included the most important shrines. The Mexica continued the Toltec tradition of building skull racks and ballcourts. The most important monument was, however, a double pyramid dedicated to the rain god Tlaloc and the Mexica

patron deity Huitzilopochtli. Worshipped in two distinct shrines on top of the pyramid, they expressed the double nature of late Mesoamerican religion. While Tlaloc is an ancient god of paramount importance for ensuring the continuation of the agricultural cycles, the patron deity was newly introduced in order to tie Mexica rule to the maintenance of cosmological order. This temple, known as Templo Mayor, or Heuyteocalli (“ancient temple” in Nahuatl), was conceived as the center of the universe, connecting all realms: the earth and sky vertically and the four directions horizontally. The twin temple was rebuilt at several occasions, and caches of offerings were found during excavations that coincided with several stages of construction and enlargements of this never-ending act of god worshipping.

—Alessia Frassani

Bibliography

- Broda, Johanna, David Carrasco, and Eduardo Matos Moctezuma. *The Great Temple of Tenochtitlan: Center and Periphery in the Aztec World*. Berkeley: University of California Press, 1987.
- Carrasco, David, and Eduardo Matos Moctezuma. *Moctezuma's Mexico: Visions of the Aztec World*. Niwot: University Press of Colorado, 1992.

Hall, Robert L. *An Archaeology of the Soul: North American Indian Belief and Ritual*. Urbana: University of Illinois Press, 1997.

Nicholson, H. B. *Topiltzin Quetzalcoatl: The Once and Future Lord of the Toltecs*. Niwot: University of Colorado Press, 2001.

Reilly, Kent F., III, and James F. Garber, eds. *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography*. Austin: University of Texas Press, 2007.

■ Introduction: Literature and the Performing Arts— A Flourishing of Bards around the World

During years 1000–1500, the literature and performing arts of a number of cultures around the world reached new levels of creativity. In many cases, this creativity was a continuation of and expansion upon earlier traditions; in some instances, it was revolutionary.

China provides examples of both phenomena. Most of China's vast poetic output during these five centuries was a maturation of poetic forms established during the Tang era (618–907). At the same time, however, due to its dramatic rise in urbanization, expanding levels of literacy, and a flourishing book-printing industry, China also gave birth to two new forms of literary expression: the theater, which appealed to all levels of urban society, and the novel.

Given the high level of Chinese interchange with India during the Song era (960–1279), it seems likely that earliest Chinese theater was influenced by Indian drama, which had roots going back centuries to at least the Gupta era (ca. 320–ca. 550). Whatever the case, Chinese playwriting was in its infancy during the Song centuries, and very little evidence remains of these early ventures. However, building upon these modest origins, theater blossomed and bore marvelous fruit during the Yuan (1279–1368) and Ming (1368–1644) eras. Confucian scholars were largely denied civil posts by the Mongols, and this enforced retirement from public life appears to have been a prod to some to turn their hands to expressing themselves and giving vent to their frustrations by writing for the theater. Some 600 known plays were crafted during this century, of which about 160 survive today. During the Ming period, theater—plays for both elites

and the masses—proliferated across China and also splintered into a wide variety of regional forms.

The Chinese novel has roots in Buddhist stories, especially early *jataka* tales that relate the Buddha's many incarnations, and in secular short stories. The latter were quite popular and proliferated during the Song era. Neither genre, however, reached the level of complexity and narrative of a true novel. During the fourteenth century, collections of stories loosely strung together began to appear, and these were followed in the fifteenth century by true novels, most of which were set in historical or legendary contexts. Many were written in vernacular Chinese, as opposed to formal classical Chinese. One of the earliest, whose dates of origin are debated (anywhere from the fourteenth century to the latter half of the fifteenth century), was Luo Guanzhong's *Romance of the Three Kingdoms*, which, although set in the second and third centuries CE, spoke to contemporary political realities and aspirations.

Another literary revolution, actually a set of parallel revolutions, took place in the latitudinal extremes of Afro-Eurasia—Japan and Western Europe—where poets and prose writers broke cleanly away from the constraints of an inherited classical tradition and created new deeply expressive poems and stories in their vernacular tongues.

In Japan, where for centuries male scholars and poets had fashioned literary texts in Chinese that followed strictures set down in Tang China, a group of aristocratic women at the imperial court in Heian created Japan's first native literature. Not only did they write in Japanese,

but their work also displayed a range of imagination, emotion, and critical analysis beyond what was normally allowed by Chinese models. Around the year 1000 and shortly thereafter, two court ladies, apparently rivals and certainly opposites in personality, dominated this literary revolution and crafted works that became defining models of Japanese literature. Murasaki Shikibu (ca. 973–1025?) is generally regarded as the greater of the two. Her *Tale of Genji*, a work that has often been characterized, rightly or wrongly, as “the world’s first novel,” is a complex masterpiece of psychological insight. Equally probing in its ability to plumb the human psyche is her *Diary*, a highly polished work written for public consumption that does not shrink from revealing Madam Murasaki’s innermost thoughts, even her darkest ones. On the lighter side, the *Pillow Book* of Sei Shonagon (ca. 965–after 1000) is a collection of witty, often biting observations on life at the Heian court. Unlike Murasaki Shikibu, Sei Shonagon did not probe the darker side of the human psyche, but also unlike her rival, she did not keep secret her sexual life.

On the other side of Eurasia and more than a century later, Western European authors began to break away from the language and models inherited from classical Latin antiquity and write in their native tongues. The result was as liberating in Europe as it was in Japan. During a period that has been characterized by some as the “Twelfth-century Renaissance,” poets in the southern regions of the kingdom of France created a new lyric poetry in their native Provençal, whereas to the north writers of epics and chivalric romances were employing an equally flexible Old French as their medium. Influenced by these currents to their west, courtly *Minnesänger* (love poets) employed Middle High German for the same ends. Building upon these new movements but far exceeding them, Dante Alighieri (1265–1321) and Geoffrey Chaucer (ca. 1343–1400) almost singlehandedly transformed Italian and English into literary languages of great range and subtlety.

These three cultures—China, Japan, and western, or Latin, Europe—certainly had no monopoly on literary and dramatic creativity, as the entries under this topic illustrate. Indeed, as the entries and sidebars cumulatively bear witness,

the genius and imagination of bards around the world soared during these 500 years.

—Alfred J. Andrea

Persian Literature’s Golden Age

The Golden Age of Persian literature began in the ninth century on the eastern frontiers of the Abbasid caliphate. Earlier, Persian was the vernacular of the eastern part of the Islamic world but not a literary language, inasmuch as Arabic served as the dominant language of literature, law, and the caliph’s court. The ninth-century rise of Persian was partly due to the fact that by that time the Abbasid empire had become decentralized. In the Iranian and Central Asian provinces, local courts adopted Persian, and additionally many viewed it as a reassertion of their native Persian culture over a foreign Arab one. Patronage from the Samanid (819–999) court in Bukhara, in present-day Uzbekistan, and others in eastern Iran bolstered the awakening. Part of this renaissance included reviving pre-Islamic epics yet modifying them to respect Islamic sensibilities. As a result, former Sassanian artistic, political, and literary ideas found new life, even as Persian writers now wrote with the Arabic script and often incorporated elements, including vocabulary, from Arab and Islamic traditions. In addition to pre-Islamic stories being reintroduced, other themes became commonplace, such as wine poetry whereby poets discussed the virtues of wine yet also used wine as a metaphor to describe the intoxicating effects of God’s love, thereby making it often difficult to discern exactly the true meaning of the poem.

The Ghaznavid dynasty (975–1187) based in Afghanistan continued these efforts by patronizing Persian scholars and writers. Indeed, Ferdowsi (935–1020) presented the *Shahnama* (*Book of Kings*) to the greatest Ghaznavid ruler, Mahmud the Great (998–1030), in 1010. This epic, which became one of the most beloved, read, and lushly illustrated pieces of Persian literature, took Ferdowsi 30 years to complete and contains 60,000 verses. In addition to Ferdowsi, Mahmud also supported works on architecture and science. Samanid and Ghaznavid patronage led to a favoring of certain poetic forms such as the *ghazal*, a lyric poem of 7 to 15 couplets; the

➤ RASHID AL-DIN

Rashid al-Din Tabib (1247–1318), known to history as Rashid al-Din, was one of the chief ministers of the Il-khanid empire (1260–1335) and a polymath in addition to being one of the principal figures in the Golden Age of Persian literature. Born in Hamadan, Iran, to a Jewish family, he entered the court of the Il-khans as a physician and then rose to the office of chief *wazir* (vizier), or minister. During the reign of Ghazan Khan (r. 1295–1304), Rashid al-Din was among the most influential and powerful figures in the Islamic world.

Although Rashid al-Din ran the day-to-day affairs of the empire, he also proved to be an immensely talented scholar and writer and is often credited with writing the first universal world history. Ghazan Khan originally commissioned the work in order to preserve the history of the Mongols. Although the *Jamiat al-Tawarikh* (*Compendium of Chronicles*) focuses on the Mongol empire, Rashid al-Din also demonstrated considerable knowledge of other regions of the world far beyond the borders of any Mongol state. The work is invaluable as a historical resource, but it is also remarkable because it deviated from normal trends in medieval Persian histories. The writing style is simple and lucid rather than convoluted and poetic. Contrary to tradition, it is not interspersed with Arab poetry, or Quranic verses, to emphasize a point. The book was produced and lavishly illustrated in a workshop funded by Rashid al-Din, thus making it one of the more accessible medieval Persian works. He also compiled works on agriculture, medicine, and government.

—Timothy May

rubia, a quatrain; and the *masnavi*, or rhyming couplets used in fables, stories, and even histories.

During the centuries of Central Asian rule, Persian literature entered its Golden Age. Persian writers greatly influenced the courts of the Great Seljuk Turks, who in the eleventh century dominated most of the Middle East from Syria to Afghanistan. This was especially the case with the great vizier Nizam al-Mulk (1018–1092), whose guidebooks of advice on how to rule that he composed for these Seljuk sultans influenced the popularity of the Mirror genre. By the time

the Great Seljuk empire disintegrated in the late twelfth century, the Persian language and culture had permeated most aspects of court life. Thus, later Seljuk successor states, such as the sultanate of Rum located in Anatolia, used Persian in most of their official correspondence and record keeping, as well as patronizing Persian scholars and poets.

Indeed, it was in Konya, the capital of the sultanate of Rum (in present-day Turkey), that the greatest Sufi poet resided. Jalal al-Din Rumi (1207–1273) fled there as a child with his family from his home in Balkh, Afghanistan, just as the Mongols made their appearance in Central Asia. As he spent the majority of his life in Rum, he became immortalized as “Rumi.” He became a Sufi and eventually penned his masterpiece, the *Masnavi* (*Spiritual Couplets*), which, as the name indicates, is written in rhyming couplets. In this we see traditional Persian poetry motifs woven into Sufi thought, fables, and stories.

Most of the Islamic world was certain that the Mongols, whom Jalal al-Din’s family had fled, were God’s punishment for their sins as well as the greatest calamity to befall the earth since the flood. Oddly enough, the Mongols were crucial to the growth of the Golden Age of Persian literature. Many Persian literati fled to safer lands such as northern India, where many scholars, poets, and religious figures found refuge in the sultanate of Delhi. Indeed, combined with the traditions of patronage instituted from the Ghaznavid period, the Turkic Muslim elite of northern India now became thoroughly Persian in court and literary culture.

In addition to spreading Persian literature through refugees, the Mongols also brought stability to Iran, which had endured approximately 150 years of political disorder. In 1258, the Mongols destroyed the Abbasid caliphate with the sacking of Baghdad. While Sunnis mourned the loss of the titular leader of Islam, this act dramatically shifted the center of Islamic learning and creativity from Baghdad to a number of new centers. For the Arab world, Mamluk Cairo became the new center of culture, but farther east it was the many Turkic and Mongol courts, all of which were Persian in culture. The Il-khans of Persia, as the Mongol rulers of Southwest Asia were known, became crucial patrons of the arts,

as were many of the local dynasts who submitted to them. Indeed, during the Il-khanid period (1258–1335), there was truly a flowering of Persian literature unmatched in earlier centuries.

In the aftermath of the Il-khanid collapse, Timur-i Leng (ca. 1335–1405), known as Tamerlane in the West, arose. Although his name is synonymous with destruction, his capital at Samarqand (in present-day Uzbekistan) became a center of Persian culture, and his successors, the Timurids, who ruled until 1506, were among the most influential patrons of arts and science in the Islamic world.

Hafez (1325–1390), considered by many the greatest poet in Persian literature, lived and wrote his works in Shiraz, Iran, which Timur conquered in 1387. Although Hafez constantly ran afoul of the religious authorities for his sensual poetry and lifestyle, his poetry celebrated love for God as well as pleasure. He specialized in the *ghazal*, in which he wrote of everyday experiences in a style that avoided ornateness and artificiality. He also incorporated motifs from Sufism into his poetry, using erotic imagery to describe God's love. The last great Persian poet of the Golden Age was Jami (d. 1492) of Herat, in present-day Afghanistan, who quite unlike Hafez returned to using the ornate and stylistic forms of traditional Persian poetry. Jami also continued the practice of using Sufi motifs in erotic yet mystical poetry. The Timurids continued to patronize various poets and writers, but they also made substantial contributions in other ways.

A few of the Timurid rulers wrote poetry and other forms of literature. Furthermore, they helped establish Bukhara and Herat as centers of manuscript illustration and production, thus helping the spread and continuation of Persian literature.

The end of the Golden Age of Persian literature is generally considered around 1500, with the rise of the Safavid dynasty (1502–1736) centered in Iran. Although the Safavid court continued to patronize poets and writers, the militant and puritanical Shiism of the Safavids disapproved of Sufi-influenced metaphors of Golden Age poetry, whereby erotic imagery or the celebration of wine served as a means of describing the mystical experience. In general, while older forms of literature continued to be circulated,

very little innovation now entered into Persian literature.

—Timothy May

Bibliography

- Egger, Vernon O. *A History of the Muslim World to 1405*. Upper Saddle River, NJ: Pearson Prentice Hall, 2004.
- Lane, George. *Early Mongol Rule in Thirteenth-Century Iran: A Persian Renaissance*. Studies in the History of Iran and Turkey Series. London: Routledge Curzon, 2003.
- Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.
- Subtelny, Maria E. *Timurids in Transition: Turko-Persian Politics and Acculturation in Medieval Iran*. Brill's Inner Asian Library, Vol 19. Leiden: Brill, 2007.

South India's Performing Arts and Literature

The period 1000–1500, or more certainly the years around 1300 CE, witnessed the apogee of classical Indian civilization. During this period, royal patronage of the performing arts as a form of festival worship reached its peak, with artists performing before a specific deity at appointed hours during festival days.

Based on traditions that extended far back into antiquity, Indian performing arts were divided into dance, drama, and vocal and instrument music. According to tradition, these arts, which apparently originated in southern India's Tamil Nadu region, emerged from a sacred book known as the *Natya Sastram*, which tradition maintains that Brahma, the god of Creation, gave to the sage Bharatha, who thereby lent his name to *Bharatnatyam*, India's classic form of rhythmic dance. Available forms of this text mention that they were rewritten from an ancient treatise of the seventh century BCE.

An entire set of performing arts was prominently and exclusively developed from the *Natya Sastram* for temple worship. Its practitioners were considered to be servants of a particular god (normally Shiva or Vishnu), and their only profession was to sing, dance, and enact plays for that god without seeking any monetary gain. These art forms, along with the priests' chanting of the Vedas, performing vedic rituals, ringing

► THE PRIESTS OF CHIDAMBARAM

The origin of the priestly community that serves the Nataraja (Lord of the Dance) Temple in Chidambaram, Tamil Nadu is mired in legend and myth. Today the community numbers about 254 people (including family members), of whom about 100 officiate as priests. They are an endogamous community, meaning that marriages are confined within the community, and only a married man can become a priest. According to tradition, during the first epochal age called *Krita Yugam* (5 million years ago), Lord Shiva Nataraja blessed Chidambaram in the month of Thai (February–March) by choosing it as the site to provide a vision of the cosmic dance to a group that consisted of some sages whose pride he had tamed, various devas (gods), and two great devotees of his, one of which was Adi Seshan, the multiheaded cobra who serves as Lord Vishnu's couch and canopy, and Vyaghra Padar, a saint from Benaras. After this Lord Nataraja appointed 3,000 priests, who had accompanied him from his abode, to serve in the temple.

The current temple dates from at least the mid-first millennium CE, and various Chola monarchs, especially after 1000 CE, enriched, expanded, and fortified it, inasmuch as Shiva Nataraja was their dynasty's patron deity.

The priests follow an ancient system of ritual, worship, and temple duty, which has remained largely unchanged for nearly 2,000 years. They consider themselves to be the slaves, the keepers, the guardians, the devotees, and the worshippers of the Lord of the Cosmic Dance. Apart from Lord Nataraja and their worship of his anklet-girt (dancing feet), they have no existence of their own.

In the tumultuous period following the decline of their Chola patrons in the late thirteenth century, their numbers and fortunes declined precipitously, but never did they disappear totally or cease their temple services.

—K. Sethumadhaven

bells, anointing idols with sandalwood paste, and stringing flowers for bouquets, anklets, and corsages, were considered to be a service to the Almighty. The themes of these dances, plays, and music were usually taken from stories found in the Puranas (postvedic religious narratives), or the *Ramayana* and *Mahabharatha* epics, and

normally centered on the contest between the Almighty and evil.

Tamil literature dating back to the so-called Sangam period (ca. 600 BCE–500 CE) describes in great detail the various performing arts, emphasizing their finer points and nuances, the great expertise of its practitioners, and their meticulous observances of the rules governing their art. Two offshoots of the *Natya Satram* mentioned in the Sangam classics and that were prominent during the subsequent classical era were *Kutiyattam* and *Chakyar Koothu* (Chakyar Dance). The scripts of these dramatized dances were predominantly in Tamil and Sanskrit, but after 1500 many were translated into other vernacular tongues such as Malayalam, which is spoken in Kerala along the Malabar Coast. Both forms of dramatic dance are now designated as UNESCO world heritage arts.

Kutiyattam was and remains a dance drama form of worship centering on themes drawn from the *Ramayana*, the *Mahabharatha*, and the Puranas. Many inscriptions from the reigns of the eleventh-century Chola emperors Raja Raja the Great and Rajendra describe the performance of Kutiyattam temple plays during various annual festivals. The artists are said to have received a ration of rice and clothing on a yearly basis. Kutiyattam performances were accompanied by various drums and cymbals. Most of these instruments were also used as accompaniments for the singing of temple hymns.

Chakyar Koothu were/are dance dramas traditionally performed by the Chakyar community, an upper subcaste (*jati*) of religious performers whose members, as was true of Kutiyattam performers, lived in or around a temple and depended on it for their food and other sustenance. One form of Chakyar Koothu exclusively performed by women was (and is) *Nangyar Koothu*, narrative stories revolving around the life and exploits of Lord Krishna (an incarnation, or avatar, of Vishnu), which are transmitted by facial expressions, hand movements, and bodily gestures, all to the accompaniment of a drum.

Both Chakyar Koothu and Kutiyattam were strictly acts of worship and were staged in temple theatrical halls called *koothambalams* (*koothu* means “dance” or “drama,” and *ambalam* means “temple”).

The other form of dance drama also in vogue during this period was (and still is) known as *Ariya Koothu*, which probably had a connection with an ancient form of *kathak*, or storytelling. From an inscription of Aditya Karikala II (r. 950–965), we learn that this form of religious drama was also performed in temples by the Chakkayar community. Inscriptions further note that the seven acts of this play were to be performed every year, divided among the Tamil festivals of Thai Poosam, the feast of the Full Moon during February–March, and Margazhi Tiruvadira, a festival dedicated to the ascent of the star of the same name that was ascendant when the Lord Shiva shot a flaming arrow to destroy three evil cities. This latter festival is held during December–January. Their artists were entitled to a yearly stipend of cereals and clothing.

The use of musical instruments for worship is described in detail in many inscriptions of Uttama Chola (r. 965–984), and from those inscriptions it is possible to infer that the kind of temple ritual music prevalent then, when it was known as *Ksbetra Vadyam* (“temple music”), is still in vogue in the southern state of Kerala.

The rule of the powerful Chola/Pallava emperors also witnessed a great spurt in literary activity, especially in the Tamil language, but many or most of these works are no longer extant. As already noted, Sanskrit religious plays were composed during that period. Moreover, a spate of Saivite and Vaishnavite works (works dedicated to the worship of Shiva and Vishnu, respectively) in Tamil and Sanskrit were also produced during that period. The collection of hymns known as *Tiruthondar Tiruvandadi* (*The Story of Great Devotees*), compiled around the year 1000 by the Saivite saint Nambi Andar Nambi, and Sekkilar’s *Periya Puranam* (*Great Epic*), written around 1140, that recounts in Tamil the lives of 63 Saivite saints are some examples of the outpouring of religious literature during this fecund era.

Umapathi Sivacharyar, who lived in the Saivite pilgrimage city of Chidambaram in south-eastern India during the thirteenth century, was a great scholar of both Sanskrit and Tamil, and he has left behind several poetical narrative works in both languages, including the Tamil masterpieces *Siva Prakasam* (*The Light of Lord Shiva*), *Nenju Vidu Doothu* (*The Messenger Sent*

by the Heart), and *Vina Venpaa* (*Poetry in the Meter of Venpaa*). He also wrote a book on the history and significance of Chidambaram. Apart from these, he also authored several works in Sanskrit and also composed some Sanskrit *slokas* (two-line devotional verses) in praise of Lord Shiva.

Manikkavasagar, who lived in the Chola kingdom during the ninth century, may also be considered a product and literary artist of this period. His mystic *Tiru Vasagam* (*Dialogues with the Divine*) is a work of profound poetry whose verses, according to legend, were transcribed by Lord Shiva himself. These beloved poems are still memorized and sung all over contemporary southern India.

The last and most prominent of the 12 Vaishnavite *Alvars*, or early medieval Tamil saints of southern India devoted to the worship of Vishnu, was Nammalvar, who lived during the late ninth and early tenth century. He was to Vaishnava hymns what Raja Raja and Nambi Andar Nambi were to the hymns of the canonical Nayanmar saints of southern India who were devoted to the worship of Shiva. Nammalvar, also known as Sadagopan, not only composed 1,000 hymns, which he incorporated into the *Divya Prabandham* (*Divine Travelogues*) but also codified the works of previous great Alvar saints into the same collection.

Examples of courtly works are the *Kalingat-tupparani* (*Details of War in Kalinga*) by Jeyam Kondar, poet laureate of the Chola court who lived during the period of Kulothunga I Chola I (r. 1075–ca. 1115), and the *Muvarula* (*In Praise of the Three*) by the poet Ottakuttan, who lived at the court of Raja Raja II (r. 1046–1063), as well as that of other Chola monarchs. The former work details the two invasions of Kalinga by Kulothunga I; the latter is a poetic entertainment that praises the piety, physical strength, handsome appearance, ability to wield weapons of war, and conquests of three twelfth-century Chola emperors: Vikrama, Kulothunga II, and Raja Raja II. It should be noted that these works as we now have them might have been revised in subsequent ages, as is suggested by apparent anachronisms and erroneous details. A commentary on Tamil grammar called *Nannool* (*Collection of Strings*) by a Jain known as Bhavanandi,

who lived in the court of Amarabharanan (r. 1178–1192), a vassal chieftain to Chola emperor Kulothunga III (r. 1178–1213), is another work that has survived. Except for the authors of the above-mentioned devotional literature, we are ignorant of the reputations and standing of these authors of courtly and other secular literature as well as the significance of their work during their time of composition.

Many other now-lost works of merit might have been written of which we are now ignorant. Among the known lost works that scholars lament is the play *Tiru Rajarajeswaram Tiru Natakam* (*The Drama Surrounding the Building of Raja Rajeswaram*), a Tamil drama that told the story of the construction of a great temple at Tanjore by Raja Raja the Great.

In essence, so far as literary and dramatic production was concerned, the period 1000–1300 was more vibrant, eventful, and important than the eras that followed.

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Bibliography

- Silappatikaram or Story of the Anklet*, by Illanko Atikal. English translation by G. Parthasarathy. Oxford: Oxford University Press, 2002.
- South Indian Inscriptions*, Vol. 2, Pt. 3. New Delhi: Archaeological Survey of India, 1991.
- South Indian Inscriptions*, Vol. 12, 265 Miscellaneous Pallava Inscriptions. New Delhi: Archaeological Survey of India, 1991.
- Tiru Vachagam, or Dialogues with the Divine by Saint Mnikkavasagar*. English translation by G. U. Pope. Oxford: Oxford University Press, 2002.

Performing Arts in China through the Early Ming Period

China has an ancient theatrical tradition. The combination of song, dance, costume, gesture, and representation by one person of another, or of a spirit or animal, goes back to very ancient shamanistic ceremonies, possibly as early as the third millennium BCE. Records and archaeological remains concerning proto-theatrical performances abound. Communal dancing for festival celebrations or other purposes, including the use of costumes and impersonation of animals,

dates back to the prehistoric period. Despite Confucian dictates that were highly critical of theater and, in particular, dance, these arts thrived. Many of the most ancient dynasties, from the Zhou on, had court offices overseeing performances connected to official ceremonies. Tang dynasty (618–907) emperor Xuanzong (a.k.a. Minghuang, r. 712–756) set up a music school in the Pear Garden (*Liyuan*) in his capital Chang'an. Actors today continue to be called “children of the Pear Garden.”

During the Tang dynasty, a genre of skits developed called *canjun xi*, distinctive for the role types of “adjutant” and “grey hawk.” These were actually the basis for many later comic types. During the Song dynasty (960–1279) and the alien Jin dynasty (1115–1234) of northern China, which expelled the Song to the south in 1126 but was itself overcome by the Mongols in 1234, *canjun xi* developed into a farce called *yuanben*, the term a contraction of *hangyuan zhiben* (literally, “scripts from the performers’ quarters”). Sometimes also called *zaju*, it flourished at all levels, from popular to court. Yuanben had several role types. Rather than just single items, there were music, dance, comic sketches, acrobatics, and slapstick. Central to it was a short comic play with a simple but identifiable story, and themes including love affairs, ghosts, gods, or demons. Costumes and properties were more complex than before, as were masks and makeup. A range of wind instruments and drums, as well as a plucked lute (*pipa*), provided music.

In the twelfth century, southern China enjoyed *nanxi*, a popular form based on folk song and with percussion only. In contrast to *yuanben*, these were stand-alone theatrical pieces. Because *nanxi* clearly included complex storylines showing a number of sophisticated theatrical conventions, some scholars regard it as China’s earliest drama form, the beginnings of *xiqu*. Although it declined when the Mongols took over southern China in 1279, it is the basis of many later southern forms, including *chuanqi* and *kunqu*.

Today, many regard the Yuan dynasty (1279–1368) as the “great age of Chinese drama.” Certainly, *zaju* was the most developed theatre yet produced. Although the music has not survived, the instrumentation suggests musical adaptation

into later styles. Beginning in the north, *zaju* spread all over China. During the late Yuan and early Ming (1368–1644) dynasties there was a revival of southern styles like *chuanqi* and from the sixteenth century the rise of *kunqu* and other regional styles.

Several Ming theatre features endured to the early twentieth century. One is the stronger differentiation into popular and aristocratic theatre, with *kunqu* the “elegant” drama of the educated classes and aristocracy while other regional styles are mass theatre. The higher classes owned private troupes, seen at banquets and special occasions. For the popular styles, venues were mainly temple stages, temporary stages in marketplaces, or any open space; performance occasions included fairs and festivals. In China, the actors’ low social status was legally confirmed through edicts. Discrimination against women was greatly strengthened, with male-only theatre companies becoming the norm, and most actresses being prostitutes. At court, the Ming set up a eunuch entertainment agency in 1390, which came to include drama, and from about 1740 the Qing trained eunuchs at court with the special duty of performing plays.

—Colin Mackerras

Bibliography

- Dolby, William. *A History of Chinese Drama*. London: P. Elek, 1976.
- Hsu, Tao-ching. *The Chinese Conception of the Theatre*. Seattle: University of Washington Press, 1985.
- Mackerras, Colin. “China.” In *Encyclopedia of Asian Theatre*, edited by Samuel L. Leiter. Westport, CT: Greenwood Press, 2006.
- Mackerras, Colin. *Chinese Drama, A Historical Survey*. Beijing: New World Press, 1990. Distributed by China International Book Trading Corporation.
- Mackerras, Colin, ed. *Chinese Theatre from Its Origins to the Present Day*. Honolulu: University of Hawaii Press, 1983.

Christian and Islamic Universal Histories

As monotheistic religions that envisioned history as the stage upon which God’s Divine Plan for humanity was played out in a series of unique

moments that spanned the ages from Creation to the Last Judgment, both Christianity and Islam encouraged the writing of universal histories (i.e., the history of the world from Creation to the time of the author). Yet neither tradition produced that many, perhaps because of the intellectual and even psychological hurdles that would-be universal historians had to overcome. As seen in the few that were written, while they were superficially similar in approach and outlook, both the Christian and Muslim conceptions and expressions of universal history were, in fact, quite different.

The mold for Christian universal histories was found in the Bible. Accordingly, those medieval Christian historians who were bold enough to write universal histories focused their work on the moral lessons they could extract from history and subordinated their study of the past to the role of a didactic tool. The heart of their message was ethical monotheism, the notion that a single God of Infinite Goodness governs the universe and commands certain moral behavior of humanity. Within this framework history was linear, dynamic, and purposive, with a God-created beginning and a God-ordained end and goal. The significance of human events paled in the face of the moral implications of the Final Judgment.

The first Christian universal history is credited to a Greek bishop, Eusebius of Caesarea (ca. 260–339/340), the so-called Father of Church History whose ten-book *Church History* placed the trials and triumphs of the early Church down to his own day into the context of God’s providential plan for His people. In the Latin West, the two most influential early voices were Augustine of Hippo (354–430), a North African bishop, and his disciple Paulus Orosius (fl. 390–420). Augustine’s *City of God* (413–427), a rambling work of theology and not history, rejected the notion of human progress and postulated instead a sixfold division of an ever-degenerating human history, which however would end gloriously at the End of Time in the triumph of the City of God, a community of all who love God above self and reject the vanities of this world. Orosius’s *Seven Books against the Pagans* roughly popularized Augustine’s theology of

history by attempting to illustrate the miseries of human existence, especially before the Christian dispensation. Clearly, the problem with this sixfold division of human history (which paralleled the six “days” of creation) was that the sixth age—the current age that stretches from the life of Christ to his Second Coming—is an era of senility and increasing decay. This was poor incentive to write a universal history.

For all of the popularity of Eusebius and Augustine in later centuries and for all of the history writing that proliferated throughout Christendom, especially in the West after 1100, few Christian historians in the East or West had the intellectual confidence or learning to attempt a universal history. Notable exceptions were a German, Bishop Otto of Freising (ca. 1112–1158), and two Frenchmen, Friar Vincent of Beauvais (ca. 1190–ca. 1264) and his older contemporary Cardinal Jacques de Vitry (1160/1170–1240).

Otto’s *History of the Two Cities*, which he dedicated in 1157 to his nephew, Emperor Frederick I, traced the history of the world from Adam to 1146. Although Otto adopted the Augustinian schema of two cities—the heavenly City of God and the terrestrial City of Man—he departed from Augustine’s vision by tracing the progress in his own day of the earthly city. Undoubtedly he was influenced by the religious revivalism of his age as well as by the apparently successful Western empire carved out and governed by his nephew. A century later, the Christian West witnessed the flowering of encyclopaedists, one of whom was Vincent of Beauvais, a Dominican friar. Contained within his *Speculum universale* (*The Universal Mirror*), an attempt to present in systematic fashion the sum total of human knowledge, was the *Speculum historiale* (*The Mirror of History*), which presented in 31 books and 3,793 chapters a panoramic view of history from Adam to 1250 and the crusade of Louis IX of France. Between Otto and Vincent stood Jacques (James) of Vitry. His *History of the East* and *History of the West* (both completed ca. 1223 while he was bishop of Acre in the kingdom of Jerusalem), even when correctly considered as two parts of a single history, is not as sweeping in scope as the histories of Otto and Vincent, but the *History of the East* traces the vicissitudes of Jerusalem from the Old

Testament down to about 1210. Included in his treatment of the initial Muslim conquest of the Holy City in the seventh century is an account of Muhammad’s life and the doctrines of Islam.

Cardinal Jacques, himself a crusader, exemplifies the fact that most of the twelfth- and thirteenth-century Western historians of the crusades shared the visions and purposes of the writers of universal histories, even though their histories generally focused on relatively short periods of time. That is to say, they wrote to help make clear the workings of Divine Providence and Justice in human events and to encourage their coreligionists to lead lives that were consonant with that Divine Plan. Without a doubt, the greatest of these crusade historians was Archbishop William of Tyre (ca. 1130–1185/1186), a native-born Jerusalemite who was educated in Europe but returned to the East to serve the Church in the Latin kingdom of Jerusalem. Almost unique among Latin Christian historians because of his knowledge of Arabic and use of Islamic sources, William composed the massive *Jerusalem History* (also known as *A History of Deeds Done beyond the Sea*) that traced Christian-Islamic relations in the Holy Land from the seventh century to the late twelfth century. He also composed *The Deeds of the Eastern Princes*, which covered the period from Muhammad to 1184. Unfortunately, it is now lost. A critical historian who drew upon a wide variety of sources for his *Jerusalem History*, William did not hesitate to praise Muslims and condemn Christians when he deemed such judgments warranted. After all, for all of these Christian universal and semiuniversal historians, history was a divinely guided morality story.

To the contrary, in the Islamic world the primary focus of historical writing was not didactic. Rather, it provided a context for the prophetic career of Muhammad in its earliest phases and the success of the Muslim *umma* (community of believers) and their caliphs in later times. History writing therefore reflected the aims and ideas of the community rather being an attempt to modify or guide them. It is important to note that the majority of the earliest extant Islamic historical writing came from the mid-ninth and early tenth centuries, with one key exception. The historical accounts of the Prophet Muham-

mad's life and career appear toward the beginning of the ninth century, appearing in the form of redacted excerpts from earlier (now largely lost) sources. The key example of this style is the *Sirat Rasul Allah* (*The Biography of God's Messenger*) of Ibn Ishaq (d. 761). While the original work is lost, we possess extensive passages that were redacted by later historians, such as Ibn Hisham (d. 835) and al-Tabari (d. 923).

By the early ninth century, histories written about the Prophet began to have a definite pattern. Prophetic history was written with discrete sections: the *Kitab al-Mubtada* (*The Section, or Book, of the Beginning*, which deals with Arabia before the Prophet), the *Mabath* ("the sending," in this context, *God's Sending of the Prophet*), the *Maghazi* (*Raids and Battles of the Prophet*), and finally the *Tarikh al-Khulafa* (*History of the Caliphs*). In the case of Ibn Ishaq, his pre-Islamic section and his history of the caliphate are not extant; the only portions remaining are his sections on the life of Muhammad. It was in this way that the earliest Muslim histories were universal histories.

By the tenth century, this four-part segmentation of the early history of Islam began to break down. In its place, these divisions largely became separate genres in their own right. However, the notion of a universal approach was maintained. These works were not minor discursions. In the case of al-Tabari's *Tarikh al-Rusul wa al-Muluk* (*History of the Prophets and Kings*), which was the most influential of the Islamic universal histories, a span of 14,000 years is covered in roughly 8,000 pages, with the lion's share belonging to the development of the umma after Muhammad.

The difference between this work and previous universal histories shows the development of historical method in the Islamic world. The life of the Prophet Muhammad, previously represented in the aforementioned *Mabath* and *Maghazi* sections, merged into a new genre referred to as *Sirah* ("Biography") literature. This literature served as an important source of *hadith* (the Prophetic tradition), which had ritual implications for the community. History, for all its myriad of uses, could not claim to do this. As a result, Prophetic history diverged from other genres of history, became subject to rigorous in-

➤ RASHID AL-DIN TABIB'S UNIVERSAL HISTORY

The universal history of Rashid al-Din Tabib ranks among the great achievements in Persian literature from the period of the Il-khanate (1256–1336). The Mongol ruler Ghazan-Khan (r. 1295–1304), worrying that the Mongols were forgetting their roots, commissioned his vizier, Rashid al-Din, to write the history of the dynasty. However, upon Ghazan-Khan's death the next khan, Uljaytu (r. 1304–1315), ordered Rashid al-Din to expand it to include the histories of every people with whom the Mongols had come into contact. Thus, Rashid al-Din, with the aid of researchers and translators, began to write his history.

The work has four key sections: the Mongol and Turkish tribes from Chinggis Khan (d. 1227) to the death of Ghazan-Khan; a history of Uljaytu (now lost); a history from Creation to his day, including sections on the Arabs, Jews, Franks, and Chinese; and a geographical compendium (also lost). So dedicated to the preservation of this work was Rashid al-Din that he set aside money to have the serial segments of his work copied (in both Arabic and Persian) each year and sent out to various libraries. Additionally, an entire quarter of Tabriz, known as the *rabi Rashidi* (Rashid's quarter), was staffed with the most accomplished copyists and book binders to accomplish this task. Written on the finest paper and lavishly illustrated, these versions of the *Jami al-Tawarikh* were highly valued. However, when Rashid al-Din lost favor the project was halted, and time destroyed all but two copies made by this scriptorium. One extensive portion, with original illustrations, resides in Edinburgh; the other (an Arabic version of 120 pages) was sold at auction in 1980 for \$2,017,050, the highest price ever paid for an Arabic manuscript.

—Rasheed Hosein

terpretation, and was considered a science (*ilm*). History itself, other than Prophetic history, was not a science according to Islamic thought, and thus its practitioners began to focus on the *Tarikh* genre, a strictly narrative account of the vicissitudes of the umma, or community after 632. In the case of al-Tabari, his history had a simplified *Mubtada* and *Sirah* and an extended *Tarikh* section. This allowed for a more specialized approach. Since these Islamic histories reflected the

communities they chronicled, they took on political and sectarian aspects, leading inexorably to the Abbasid caliphs (750–1258) under whom the earliest of these works still extant were written.

The universal history as a genre did not end with the Abbasid fall in 1258. While political situations changed in the Islamic world, the notion of situating one's patron in the sweep of history remained valid. However, under Ibn Khaldun (d. 1406), the writing of universal history reached a level of sophistication that would not be rivaled until modern times in either Europe or the Islamic world. In the introduction (*Muqaddimah*) to his universal history known as the *Kitab al-Ibar* (*The Book of Evidence*), he not only set out to record a history since Creation but also set out to empirically explain the processes behind history, trying to describe the essential dynamic between the nomads and sedentary society and why dynasties fell after showing much promise at their inception.

The tenth century also marked an important change in the language in which history was written. Beginning with the Saffarid dynasty (fl. ninth century) and extending through the Samanid dynasty (875–999), Persian emerged again as a literary language in the eastern lands of the Islamic world. The great figures of this movement were the universal historians Ferdowsi (d. 1020), who wrote the *Shahnameh* (*Book of Kings*); Juvayni (d. 1283), who composed the *Tarikh-i Jaban Gushay-i* (*History of the World Conqueror*); and Rashid al-Din Tabib (d. 1318), author of the *Jami al-Tawarikh* (*The Collection or Compendium of Histories*). Within these texts, the notion of a separate Persia began to assert itself in distinction to the Arab-Islamic culture that had dominated since the conquest of the Iranian plateau by the Arabs in the seventh century. Under Ferdowsi, the poetry of pre-Islamic mythohistory and heritage emerged in the *Shahnameh*, wherein the stories of the great kings and military figures of pre-Islamic Persia became mirrors for young princes to emulate. While didactic in nature, the aim was political, not moral as in the Christian tradition. This work has been referred to as the “Persian Quran” by the great Kurdish historian Ibn al-Athir (d. 1233), who was himself writing a universal history in Arabic

under the title *Al-Kamil fi al-Tarikh* (*The Complete History*).

As exemplified by the work of Juvayni and Rashid al-Din, Islamic histories composed after the Mongol onslaught were exceptional examples of universal history. Rashid al-Din and, to a lesser extent, Juvayni wrote and lived in the largest contiguous empire ever created, linking Korea in the east to Poland in the west. Juvayni's history was ostensibly centered on the life of the great steppe conqueror Chinggis Khan (d. 1227) but was much more than that. Even though his history chronicled only the history of the peoples of Central Asia, including the Turks and Mongols, his work (according to Spuler) formed an important component in the universal Islamic history genre. More importantly, this history was seen as a landmark in Persian historical writing and served as a stylistic template for future writers. While stylistically well regarded, Rashid al-Din's *Jami al-Tawarikh* proved more noteworthy for its use of Chinese and European sources. Moreover, Rashid al-Din melded the Arabic tradition with the still-emerging Persian style and attempted to create the most complete world history ever attempted. For his efforts, Rashid al-Din is counted among the greatest Muslim historians.

—*Rasheed Hosein and Alfred J. Andrea*

Bibliography

- Donner, Fred M. *Narratives of Islamic Origins: The Beginnings of Islamic Historical Writing*. Princeton, NJ: Darwin, 1998.
- Khalidi, Tarif. *Arabic Historical Thought in the Classical Period*. Cambridge: Cambridge University Press, 1994.
- Kramer, Lloyd, ed. *A Companion to Western Historical Thought*. Oxford, UK: Blackwell, 2002.
- Meisami, Julie Scott. *Persian Historiography to the End of the Twelfth Century*. Edinburgh, UK: Edinburgh University Press, 1999.
- Robinson, Chase F. *Islamic Historiography*. Cambridge: Cambridge University Press, 2003.
- Smalley, Beryl. *Historians of the Middle Ages*. New York: Scribner, 1974.
- Spuler, Bertold. *Die historische und geographische Literatur in persischer Sprache [Historical and Geographical Literature in the Persian Language]*. Leiden: Brill, 1968. Reprint edition translated by M. Ismail Marcinkowski under the title

Persian Historiography and Geography (Washington, DC: Ibex Publishing, 2003).

The Transit of Proverb Literature— From Islam to the West

The Dicts and Sayings of the Philosophers, a compendium of heterogeneous philosophical lore attributed to classical and mythological sages, was the first book William Caxton produced after bringing the printing press to England in the mid-fifteenth century, but for the ultimate origins of this text we must look centuries earlier, to the Islamic world.

Dicts and Sayings and other works of wisdom literature (collections of proverbs and maxims) were among the many Islamic texts that passed through Muslim Spain and found their way into Christian Europe during the High Middle Ages. Even though these works were produced by non-Christian authors, they were welcomed by the West because clergymen and other elite Europeans approved their message of obedience to authority.

The roots of Islamic wisdom literature can be found in the intellectual renaissance that took place during the era of Harun al-Rashid (r. 786–809), the fifth Abbasid caliph. He and his son al-Mamun, known as Mamun the Great (r. 813–833), encouraged scholars to study the written work of earlier civilizations, including the Persians (who had been absorbed into the Muslim empire) and the Greeks. In 830 al-Mamun created the House of Wisdom, a college in Baghdad for the translation of Greek works into Arabic. The Greek language and literary tradition were unknown in most of Europe at this time, but here the study of Greek flourished; Greek philosophy, or *falsafa* in Arabic, was especially popular and formed the basis of Islamic philosophy. As in the West, Plato and Socrates were readily monotheized to make their teachings more consistent with religious doctrine. Aristotle, held in the highest esteem, was not so easily reconciled with Islam.

Generations of Muslim scholars sought to find the right balance between faith and *falsafa*. Al-Farabi (d. 950), for instance, demonstrated the consistency of Aristotelianism and faith while

THE DICTS AND SAYINGS OF THE PHILOSOPHERS

The following, a brief excerpt from *The Dicts and Sayings of the Philosophers*, is the beginning of the chapter on the sayings of the Athenian statesman Solon (ca. 630–ca. 560 BCE) and is typical of the prescriptive nature of this type of wisdom literature.

“Solon established the law in Athens and compiled many books of good sayings, and he was a resident of that city of Athens, which in those days was full of wise men. He made certain verses, by which he taught that a man should flee from his own willfulness. And he said: ‘When you do anything, do not follow your own will, but seek counsel, for by counsel you shall understand the truth of things.’ Some asked him a question: for what traits is a man most renowned? And he answered: ‘To know himself and to keep himself in safety, and not to speak in places where he should not speak, and to keep himself from anger . . . and not to covet the things that he cannot have.’”

—John William Sutton

Source

The Dicts and Sayings of the Philosophers, edited by John William Sutton (Kalamazoo: Western Michigan University Press, 2006), 25.

maintaining the primacy of Islam. The famed physician Ibn Sina (980–1037), or Avicenna as he was known in the Latin West, made al-Farabi’s philosophies more canonically Islamic. And Ibn Rushd (1126–1198), or Averroës, argued that Islam and philosophy needed no reconciliation because they are separate spheres of truth that are not mutually exclusive.

In this intellectual climate arose a genre of literary works that collected philosophical wisdom in the form of pithy proverbs. *The Dicts and Sayings of the Philosophers* was one of the most ambitious. *Muhtar al-bikam* (*Chosen Sayings*), as it was titled in Arabic, was compiled by the eleventh-century writer Mubassschir ibn Fatik. Little is known for certain about the man or the exact body of sources he used. *Muhtar al-bikam*

presents, in roughly chronological order, the wisdom of such ancient thinkers as Pythagoras, Diogenes, and Socrates as well as a number of lengthy prose narratives about their lives and exploits.

The work's tour through Europe began when *Muhtar al-bikam* was translated into Castilian Spanish in the first half of the thirteenth century. The Spanish version was translated into Latin in the second half of that century, and its popularity throughout Europe is demonstrated by the vast number of manuscripts that survive. A few decades later the French courtier Guillaume de Tignonville (d. 1414) translated the Latin text into his native tongue and titled it *Dits Moraulx*. Guillaume's version reached English readers in the fourteenth century, and Chaucer's friend John Gower (ca. 1330–1408) used it as a source for his poetic masterpiece *Confessio Amantis* (*The Lover's Confession*). Chronicle writers, meanwhile, mined the work for anecdotes about the lives of philosophers. Several Englishmen translated *Dits Moraulx* in the mid-fifteenth century, and the translation by Earl Rivers was the one used by Caxton in 1477 as the first book ever printed in England.

It is surely not any sort of artistic or literary value that accounts for the widespread and enduring popularity of wisdom literature. *Dicts and Sayings* tends to be dull and repetitive, as are most of the wisdom texts that originated in the Middle East. Consider also the ninth- or tenth-century *Secret of Secrets* (*Sirr al-asrâr*), spuriously attributed to Aristotle. The text purports to be the philosopher's letter of advice to his former pupil Alexander the Great, and while this seems at first to be an interesting narrative conceit, it soon becomes apparent that behind this thin veneer is little more than a list of didactic precepts. The reader is meant to follow Alexander's example and dutifully receive the author's wisdom. *Dicts and Sayings* has much the same agenda: encouraging the reader to accept and internalize the various teachings, which are all the more compelling because they are ascribed to the likes of Hippocrates, Plato, and the other eminent philosophers. Since most of the proverbs are about how people should live their lives, wisdom literature can thus be seen as an instrument of social control.

—John William Sutton

Bibliography

- Alon, Ilai. *Socrates in Medieval Arabic Literature*. Leiden: Brill, 1991.
- Bühler, Curt F., ed. *The Dicts and Sayings of the Philosophers: The Translations Made by Stephen Scrope, William Worcestre, and an Anonymous Translator*. EETS o.s. 211. London: Oxford University Press, 1941.
- Sutton, John William, ed. *The Dicts and Sayings of the Philosophers*. Kalamazoo: Western Michigan University Press, 2007.

Christian and Islamic Histories of the Crusades

Crusade sources were written for particular audiences and must be interpreted in the context of where, when, and in whose interest they were composed. Their diversity is demonstrated in that they were authored over nearly two centuries by Christians, Muslims, and Jews writing in languages that included Latin, Old French, Arabic, Greek, Armenian, and Hebrew. The sources comprise personal letters, ecclesiastical documents, charters, financial records, biographies, and histories of specific crusades and the crusading movement. Unlike most other crusade sources, the biographies and histories offer sweeping narratives that provide a sense of human drama.

Christian Histories of the Crusades

The events of the First Crusade (1096–1099) and its aftermath are the subject of the earliest Christian histories of the movement. The accounts of three participants—an anonymous Norman warrior who composed the *Gesta Francorum* (*The Deeds of the Franks*), Fulcher of Chartres who authored the *Historia Hierosolymitana* (*The Jerusalem History*), and Raymond of Aguilers who crafted the *Historia Francorum* (*The History of the Franks*)—inspired many early-twelfth-century Latin Christians to take up their pens in an effort to write more thorough and interpretive histories of the crusade. The works of Robert the Monk, Albert of Aix, Raoul of Caen, Baldric of Dol, and Guibert of Nogent are among the later histories, which were in varying degrees based on eyewitness accounts of the First Crusade.

Such works were often written several years, or even decades, after the events they describe.

The earliest and most influential eyewitness account of the First Crusade was the *Gesta Francorum*, which is believed to have been written around 1100 and was a major source for the construction of later histories. Among those later histories was Guibert of Nogent's *Dei Gesta per francos* (*The Deeds of God Performed by the Franks*). Guibert provided a history of the First Crusade that was recorded within ten years of the expedition and framed events relating to the crusade in the context of providential history. In doing so, Guibert compared the efforts of the crusaders with those of the armies of the Hebrew Scriptures that were often called to fight on God's behalf. While he relied heavily on the *Gesta Francorum* for much of his account, Guibert likely was in attendance at the Council of Clermont in 1095 and would have been familiar with the general enthusiasm aroused by Pope Urban II's speech.

The most important primary source for the Second Crusade (1147–1149) was Odo of Deuil's *De profectione Ludovici VII in orientem* (*The Journey of Louis VII to the East*). Unlike the glowing histories of the successful First Crusade, Odo's work served to defend the actions of Louis VII during the failed Second Crusade by emphasizing the unforeseen misfortune that befell his king. Among the most valuable of all Christian histories of the crusades is the work authored by William, archbishop of Tyre (r. 1175–1185/1186), who was born in the Holy Land around 1130 and was among its most prominent residents. William's only extant work, the *Jerusalem History*, which is commonly known as the *History of Deeds Done beyond the Sea*, is a detailed account of the crusading movement and the kingdom of Jerusalem from its inception to 1184. Although William used works by Fulcher of Chartres and others, his work is valuable as a primary source for his personal insights concerning the crusader states and Holy Land in the twelfth century. The popularity of William's work is demonstrated by its use as a source in the construction of the thirteenth-century chronicles of James of Vitry and Matthew Paris. A translation into Old French, known as *L'Estoire de Eracles empereur* (*The History of Emperor Heraclius*), was well circu-

➤ CHRISTIAN REACTIONS TO THE CRUSADER CAPTURE OF JERUSALEM, 15 JULY 1099, FROM THE *GESTA FRANCORUM* (CA. 1100)

"Soon our men were running all around the city [Jerusalem], seizing gold and silver, horses and mules, and houses filled with all kinds of goods. Rejoicing and weeping for joy, our people came to the sepulcher of Jesus our Savior to worship and pay their debt [fulfill their crusading vow]. At dawn our men cautiously went up to the roof of the Temple and attacked the Saracen men and women, beheading them with naked swords. Some of the Saracens, however, leaped from the Temple roof. . . . Our men then took council and decided that everyone should pray and give alms so that God might choose for them whomever he pleased to rule over the others and govern the city."

—Andrew Holt

Source

Histoire anonyme de la première croisade [*Gesta Francorum et Aliorum Hierosolymitanorum*], trans. and ed. Louis Brehier (Paris: H. Champion, 1924), 38–39. Trans. James Brundage, *The Crusades: A Documentary History* (Milwaukee, WI: Marquette University Press, 1962), 64–65.

lated and had many anonymous additions made to it in the thirteenth century.

Among the important thirteenth-century Christian histories of the crusades are two in Old French by Geoffrey de Villehardouin and Jean de Joinville, both high-ranking lords. Villehardouin participated in the controversial capture of Constantinople during the Fourth Crusade (1202–1204). His account of the expedition argues that the crusaders' actions were the result of a number of unforeseen events that left them with no choice. Joinville recorded the events of the failed crusades of his friend, the monarch Louis IX. Joinville's account is similar to that of Odo of Deuil in that he cast the efforts of his king in the best possible light.

Islamic Histories of the Crusades

The scholar Ibn al-Qalanisi was the first Arab chronicler to produce a lengthy history of the

➤ MUSLIM REACTIONS TO SALADIN'S CAPTURE OF JERUSALEM, OCTOBER 2, 1187, FROM IMAD AD-DIN (CA. LATE TWELFTH CENTURY)

"Sweet was it for him [Saladin] to be victorious [at Jerusalem]; his throne seemed as if surrounded by a lunar halo. Qur'anic reciters sat there reciting and admonishing in the orthodox tradition. Poets stood up to declaim and to demand, banners advanced to be displayed, pens scribbled to spread the joyful news, eyes wept with great joy, hearts felt too small to contain their joy at the victory, tongues humbled themselves in invocations to God. . . . Thus with my quills I gave good news to the four quarters of the earth, and with the prodigies of my pen I expressed the marvels of memorable events; I filled the towers with stars and the caskets with pearls. This joyful news spread far and wide . . . it was welcomed with enthusiasm and its sweetness surpassed candied fruits and sugar. The world of Islam was ready and adorned for a festival to celebrate the fall of Jerusalem. Her merits were illustrated and described and the duty to visit her explained and specified to everyone."

—Andrew Holt

Source

Imad ad-Din al-Isfahani, *al-Fath al-qussi fi l-fath al-qudsi* [Ciceronian Eloquence on the Conquest of the Holy City], trans. Francesco Gabrieli, *Arab Historians of the Crusades*, trans. E. J. Costello (Berkeley and Los Angeles: University of California Press, 1969), 160–161.

crusades covering a period from the First Crusade until his death in 1160. His work, commonly known as the *Damascus Chronicle*, is one of the main primary sources for nearly all later Arab historians of the crusades. The work traces the hardening of Muslim feeling against the crusaders and the unification of Islam during the twelfth century. Ibn al-Athir is among the most important Arab historians of the later crusades due to the scope of his massive history of the Muslim world, commonly translated as *The Perfect History*. The work contains the author's extensive eyewitness accounts of the career of Saladin and ends with the death of the author in 1233.

Other important Islamic historians of the crusades include Baha ad-Din and Imad ad-Din. Like

Ibn al-Athir, both authors devote much of their attention to Saladin's reign (1174–1193). This is unsurprising in that it was during this period that the Islamic world experienced its greatest initial successes against the crusaders. Baha ad-Din, as a member of Saladin's household, was uniquely positioned to author a biographical account of the life of Saladin. His portrayal of Saladin is of a deeply religious and just ruler with a passion for expelling the crusaders from the Holy Land. Interestingly, Baha ad-Din also writes positively of the character and spirit of Richard the Lionheart, which seems misplaced in light of his otherwise scathing critique of the crusaders. Imad ad-Din, as a secretary to Saladin, was equally well positioned to record the deeds of his leader and argued that Saladin's successes signaled the beginning of a new era for Islam.

The Religious Framework of the Histories

While examining crusade sources, the reader should keep in mind the deeply religious nature of the conflict. Religious sentiment and considerations dominated the interpretive framework of nearly all authors of crusade histories. Both Christian and Islamic writers argued that their armies fought with divine sanction. The earliest Christian chroniclers presented the crusaders' efforts as essentially acts of charity. Those who were pure of heart and willing to take crusading vows would reap spiritual benefits for going to the aid of Eastern Christians and holy places suffering under the yoke of Turkish oppression. In addition, they were just wars in the tradition articulated by Saint Augustine in the fifth century. In other words, they were defensive wars fought against unjust, as well as unholy, invaders of sacred lands that rightly belonged to Christendom. Muslim historians in turn presented the crusades as an invasion of their sacred homeland and assured potential warriors of the glory and spiritual benefits they would receive for their fight against the infidel. In the wake of victory, crusade-era chroniclers, whether Christian or Muslim, gave thanks to God for their success. Following sometimes humiliating defeats the same chroniclers, who had previously argued that God supported their efforts, had to explain the con-

tradition of failure. Christian and Muslim chroniclers alike usually attributed such losses to the sinful conduct of the losing armies, either before or during the battle, or the sins of the people who supported them, which in turn caused God's displeasure and His allowing them to suffer defeat for the purgation of their sins.

—Andrew Holt

Bibliography

- Gabrieli, Francesco. *Arab Historians of the Crusades*. Translated from Italian by E. J. Costello. Berkeley and Los Angeles: University of California Press, 1969.
- Robinson, Chase. *Islamic Historiography: An Introduction*. Cambridge: Cambridge University Press, 2003.
- Tyerman, Christopher. *The Invention of the Crusades*. Toronto: University of Toronto Press, 1998.

From Epic to Romance to the Nitty-Gritty

Literature often reflects, while at the same time interprets, the conditions of a culture. The poets of Western Europe's High and Late Middle Ages (ca. 1000–1500) produced works that uniquely reflected the social ideals of the medieval Latin West. Their themes ranged from crusading knights to romantic interludes between lovers and from the humorous and ironic to penetrating images of death and suffering.

The poets (and prose writers) of this period of European history, which was far from being a “Dark Age,” created some of the most important literary works of Western civilization. In fact, medieval Latin literature far exceeded in quantity the body of classical Latin literature preserved from Roman antiquity. Medieval European literature also includes an extensive collection of vernacular works in such languages as French, Italian, Spanish, English, German, and Icelandic, which became increasingly pronounced after 1100.

In the early twelfth century vernacular literature was primarily epic. In particular, French *chansons de geste* (songs of heroic deeds) were the most popular style. As the term suggests, these were sung narrative poems performed by jongleurs (itinerant musicians) describing the “high deeds” and “heroic exploits” of Christian



A young Roland, with attendants. Illustrated page of French text showing a young man attended by servants, a crowned figure, and a bishop, possibly from the twelfth-century *Chanson de Roland*. (HIP/Art Resource, NY)

heroes. Numerous factors suggest that these epics were the product of a long oral tradition that appeared in written form in the twelfth century. Regardless of their origin, which is still an ongoing debate, it is incontrovertible that the twelfth century was the period when epic became prominent in the medieval West.

Medieval Latin literature, which tended to be formulaic, heavily influenced the vernacular epics, giving them likewise a formulaic typology. In other words, the epics shared standard themes and standardized ways of describing places, characters, and their behavior. This certainly was the case with the *chansons*.

Most authors of the *chansons de geste* situated their stories in an idealized (and anachronistic) Carolingian period (ca. 750–850). Many of the stories concern battles between the forces of Islam and Christianity, and more than half describe the exploits of the Carolingian king and emperor Charlemagne (r. 768–814). Although Charlemagne was often (wrongfully) claimed by the twelfth-century French as an early French king and emperor, the *chansons de geste* were not confined to a French audience. In fact, the style and themes were quickly adapted and became very popular in Spain, Germany, Italy, and Scandinavia. The *chansons* emphasize great

➤ A STUDY IN CONTRASTS—CHRÉTIEN DE TROYES AND FRANÇOIS VILLON

The works and lives of Chrétien de Troyes and François Villon illustrate the shift in European literature that took place between the late twelfth and mid-fifteenth centuries.

Chrétien (ca. 1140–before 1200) was the first great poet of courtly romance. He was a university graduate and a member of the court of Countess Marie de Champagne. His topics centered on the knights of the Round Table and often focused on the psychology of love. His characters and their relationships were quite complex. He helped develop the concept of courtly love, particularly in the romance *Lancelot*. This love was rarely identified with marriage but instead usually involved a young knight and a woman married to an aristocrat. His stories also often included adventurous journeys by brave knights that were often metaphors for individual spiritual quests. Chrétien's portrait of a highly idealized world of courtly love, honor, and chivalry appealed almost exclusively to the aristocratic patrons for whom he wrote and whose values he helped shape.

On the contrary, François Villon (1431–after 1463) spent more time with outlaws and revolutionary groups than with the nobility. He was a University of Paris graduate but also a career thief and bandit. Villon was arrested countless times, spent time in prison, was responsible for the deaths of at least two men, and was twice banished from the city of Paris. Like Chrétien, his poetry was widely popular during and after his lifetime, but it was not limited to an aristocratic audience. It went through a number of printings and is largely credited for helping form the foundation of modern French poetry. Perhaps it was his vagabond life that helped stimulate Villon to write poetry that ranged from humorous and ironic caricatures of the rich to passionate and sincere descriptions of death and poverty, such as in one of his most famous works, *The Testament*. At the age of 34 he wrote his last work, *The Ballad of the Hanged*, while awaiting a sentence of death in Paris. The poem is Villon's last testament about the injustice of the world in which he lived. However, he escaped the noose by virtue of a last-minute appeal, which reduced his sentence to banishment from the city. He was never heard from again.

—Jace Stuckey

deeds, courage in battle, loyalty, duty, and religious faith. The oldest complete and most well known of these works is the *Chanson de Roland* (*Song of Roland*), which describes the attack on the rear guard of Charlemagne's army while on its way back to France after a seven-year campaign in Spain. The story's namesake, Roland, is Charlemagne's nephew and commander of the rear guard. Once attacked by the Muslim army, Roland is too prideful to call for help until it is too late. He fights bravely but loses all of his men and eventually his own life in the battle. Charlemagne takes revenge and destroys the Muslim army.

Roland is an ideal example of the *chanson* because it is one of the earliest. Its oldest extant manuscript dates to the mid-twelfth century, but it undoubtedly was already in circulation as an oral epic around 1100. Arguably, all subsequent poems owe something to it. Although highly emotional in places, in these stories deeds are more important than inner feelings and motives. Moreover, their themes are not complex. The poet's concern with characterization is minimal, and women usually have little place in most of these twelfth-century epics.

The epics reflect the emerging knightly ideals that helped to define the early crusading age of the twelfth century. The cause of crusading and defense of Christendom were the primary focus. The literature of this period represents a culture that found its ethos and role models in the lives of kings and conquerors from an idealized past. The crusading theme incorporated into the genres of the period served as propaganda for a culture that embraced emerging chivalric values.

There were also numerous works of the *chanson de geste* genre that explored the inherent tension in the relationship between the nobility and royalty. These complex and problematic feudal relationships were the primary theme of the rebellious-baron cycle of the chansons and celebrated the exploits of local barons rather than the king.

However, the chivalric image created by the heroic epics would quickly be expanded upon by the emerging romance works beginning with Chrétien de Troyes in the late twelfth century. The romance broke from some of the formulaic

restrictions of the epic and introduced aristocratic readers and listeners to the three major cycles of stories: the Matter of Rome (hence “romances”), which actually centered on Alexander the Great; the Matter of Britain, which were the stories and legends of King Arthur, Tristan, and the knights of Celtic lore and courtly love; and the Matter of France, the tried-and-true story tradition revolving around Charlemagne. Although romance would not prevail until the thirteenth and fourteenth centuries, there were clearly signs that worldviews and literary tastes were changing. With the rise of romance, there was an increased interest in the individual and in personality and the complexity of human and romantic love. Characters were more multifaceted, and the stories appealed to a more literate audience that often preferred to read them privately rather than hear them publicly. Women became important characters. The poet often focused on individual relationships and individual exploits, and less focus was given to major events. The story was often more about an individual journey or a spiritual quest rather than a great battle. This also marked the beginning of a move away from strictly religious themes and toward more secular interests, such as love between a woman and a man.

Epic poetry and literature continued to be produced during the thirteenth and fourteenth centuries but now with a significant influence from the romance movement. In addition, there was a profusion of comic and satirical elements that also changed the tenor of the themes and the way audiences and readers viewed the works.

Romance, too, would be transformed by the changing social and cultural norms of Europe's late medieval world. In the fourteenth and fifteenth centuries the works of Geoffrey Chaucer, Christine de Pizan, and François Villon moved far beyond the idealized themes explored in epics and romances by introducing social and political commentaries that had bite. In addition, the humanist movement with its emphasis on antiquity led to the production of classically inspired histories, especially in Italy.

—Jace Stuckey

Bibliography

Owen, D. D. R. *Chrétien de Troyes Authorian Romances*. London: J. M. Dent and Sons, 1991.

Southern, R. W. *The Making of the Middle Ages*. New York: Hutchinson's University Library, 1953.

Zumthor, Paul. *Toward a Medieval Poetics*. Translated by Philip Bennett. Minneapolis and Oxford: University of Minnesota Press, 1992.

Oral and Written Sources for the Mongol Empire

The study of the Mongol empire tends to be somewhat problematic due to the number of languages required and the origins of the sources. Indeed, *The Secret History of the Mongols* is one of the very few documents concerning the Mongols from the Mongol point of view. Although it is said that the victors write history, in the case of the Mongols, more often than not, the defeated and conquered populations wrote it. Most of the primary sources on the Mongols were written by Persians, Chinese, Russians, Arabs, Armenians, Western Europeans, and others. While some of the documents were written by people employed by the Mongols, their history was almost always written from the viewpoint of an outsider.

Due to this, the *Secret History* remains one of the most important sources for the study of the Mongol empire. Although it only goes up to the reign of Ogoidei (r. 1229–1241), it tells the reader much about the Mongols. While it is an important historical source, it is also in the form of epic literature, often blending history with myth, particularly concerning the origins of the Mongols. Indeed, much of it was written years after the events it narrates, as the Mongols did not have a written language until around 1204. Prior to this, their own history was contained in an oral tradition.

The title of the *Secret History* comes from the idea that it was something meant only for the eyes of the Mongols. While this is true, the book did not simply glorify the Mongol rulers. Instead it gives an intimate portrayal of Chinggis Khan from his youth to his rise as ruler of a vast empire and does not attempt to conceal embarrassing facts or weaknesses. From the *Secret History* we learn that Chinggis Khan killed his half brother, was afraid of dogs, and fled when his wife was kidnapped during an attack on his camp.

➤ EXTRACT FROM *THE SECRET HISTORY OF THE MONGOLS*

Here we read how Temujin (Temüjin), later known as Chinggis Khan, killed his elder half-brother Bekter. At the time, their father Yisugei was dead, and they had been abandoned by their tribe. Their family attempted to live off of the land, hunting birds and fishing. The scene takes place after Bekter stole food from Temujin and his younger brother Qasar.

“At that time Bekter was sitting on a hillock, guarding their nine horses, the light-bay geldings. Temüjin, hiding from behind, and Qasar, hiding in front, were approaching and about to draw out their arrows when Bekter saw them and said ‘Just when we cannot put up with the outrage of our Tayici’ut kinsmen and ask ourselves who shall be able to take vengeance on them, why do you regard me as a lash in the eye, a thorn in the mouth? When

We have no friend but our shadow,

We have no whip but our horse’s tail,

How can you harbour such thoughts towards me? Anyway, do not destroy my hearth, pray do not make away with Belgütei!’ So he said, and sat cross-legged, waiting for their arrows. Temüjin and Qasar, one from the front and one from the rear, shot at him at close range and went away.”

—Timothy May

Source

Igor de Rachewiltz, *The Secret History of the Mongols: A Mongolian Epic Chronicle of the Thirteenth Century* (Leiden and Boston: Brill, 2006), sec. 77.

Another characteristic of the *Secret History* that adds to its value as a source is that it provides insight into the Mongol mind. Because it was written for Mongols, many things are omitted or just barely referred to, as a Mongol would automatically understand certain statements or comprehend what was implied. To the modern reader it can be somewhat difficult to understand, with many deeper meanings overlooked in often simple statements. Yet it is a rich source of information particularly on the early stages of the Mongol empire.

Other Mongol sources existed at some point and found their way into Chinese and Persian accounts. These help in filling the gaps and verifying information from *The Secret History*. One such source was the *Altan Debter*, or *Golden Book*. This was an official court record that is now lost. Non-Mongols were not allowed to view it, much like *The Secret History*. However, material from it and other sources appeared in Rashid al-Din’s (1247–1317) *Jamiat al-Tawarikh*, or *Compendium of Chronicles*. Although he was commissioned to write it by the Mongol court of Persia, he did not have access to the *Altan Debter*. However, he was given information from it by Bolad, a high-ranking Mongol who had served Khubilai Khan (r. 1260–1294). Bolad arrived in Persia in 1285 as an ambassador and then served in a variety of positions until his death in 1313.

Similar material also appears in the Chinese chronicle known as the *Shengwu Qinzhen Lu*, or the *Record of the Personal Campaigns of the Sagely Warrior*. This covers the campaigns of Chinggis Khan and closely corresponds to the *Secret History*. The idiom is clearly Mongolian and appears to be a translation or adaptation of a Mongol source, possibly the *Altan Debter*.

Other sources may also include elements from either the lost *Altan Debter* or from oral tradition. Unfortunately, scholars may never be able to determine exactly what information came from the Mongols and what was observed by the author of each work.

—Timothy May

Bibliography

- Allsen, Thomas. *Culture and Conquest in Mongol Eurasia*. Cambridge: Cambridge University Press, 2001.
- Morgan, David. *The Mongols*. 2nd ed. Malden, MA: Blackwell, 2007.
- Rachewiltz, Igor de, trans. and ed. *The Secret History of the Mongols*. 2 vols. Leiden, Netherlands: Brill, 2004.

Literature in Pre-Columbian Mesoamerica

The vast literary and theatrical heritage of the peoples of Mesoamerica was preserved and passed down to later generations by two major

means: oral tradition and picture writing. Performers memorized and reproduced extremely long texts, while pictography served as a major mnemonic device and tool of learning, conveying in authoritative and durable form stories that often conveyed important historical, political, and ideological information.

Given that Mesoamerican literature was basically oral (as was true for all other Native American societies), its stylistic features were tied to modes of enunciation. Performance was the major means of a text's circulation, in contrast to the modern practice that focuses on silent and private reading. The most common stylistic device was the couplet, a pair of parallel verses that were repeated with only slight wording variations. In this manner, abstract concepts were expressed by juxtaposing concrete terms in subsequent verses. For example, the term for poetry was expressed with the phrasing "flower-and-song," authority was defined as "seat-and-mat," and war was metaphorically expressed as "fire-and-water." The same technique of coupling concrete terms to express an abstract concept is also found in pictographic forms where political or religious leaders frequently are depicted with flowery scrolls coming out of their mouths, signifying their ability to produce good speeches; ruling dignitaries and marital alliances are usually depicted as couples seated on reed mats; and the outbreak of an armed conflict is similarly represented with the clashing of water and fire.

Mesoamerican literature included different genres, among which moral speeches, historical accounts, lyric poetry, and sacred hymns were the most common. Most of our knowledge of these traditions comes from the time of the Spanish Conquest, when friars began to transcribe in Latin script the vast Nahua lore (the Nahuas being speakers of Nahuatl, the indigenous language of central Mexico). Friars also took over the education of Aztec nobility, thereby creating an educated indigenous class of people who soon began to write about their own culture using the Latin alphabet. The pre-Columbian tradition of pictography, however, was by no means discontinued, and a large body of painted documents of religious, historical, and economic subject matter also exists from the ensuing period.

➤ MEXICA HISTORIES

The Mexica, or Aztecs, form part of the larger ethnic group known as the Nahuas, who inhabited central Mexico. According to their own accounts, they originated in the northern desert region of modern Mexico from an ancestral place called Aztlan (from which the word "Aztec" originates). The journey is related in several slightly different versions, all of which equally entail a cultural and geographic shift of epic proportions. Although no document has survived from the pre-Columbian period, several postconquest maps and pictographic historical accounts tell the epic story of a wandering group of hunters and warriors who decided to leave the northern desert. The leaders were guided by the Mexica patron deity Huitzilopochtli. In the thirteenth century they entered the Basin of Mexico, where ancient civilizations had developed agriculture, large cities, and a sophisticated culture for over two millennia, forms of lifestyle, language, religion, and subsistence that the Mexica soon embraced.

The story of the Mexica migration is ultimately a tale of how a group of newcomers was able to settle, propose, and create a center of preeminent power (based on their city of Tenochtitlan, founded on a lake) by adopting and claiming the heritage of other great ancient civilizations, such as those of Teotihuacan and the Toltecs.

—Alessia Frassani

Political leaders gave moral speeches on special occasions, such as accession ceremonies. In ancient Mesoamerica as well as in modern Native American traditions, great emphasis was placed on the oratorical skills of political leaders. Known as *buehuetlatolli* in Nahuatl, which means "ancient speech," this phrase can also be understood as the "knowledge of the elders." These speeches were meant to give guidance and rules of conduct to the younger generations. Many were collected by the Franciscan friar Bernardino de Sahagún in the sixth book of the so-called *Florentine Codex*, a sixteenth-century encyclopedia of Nahua culture.

Historical accounts combined genealogical reckoning with epic accounts of the deeds of cultural heroes. This was particularly the case of the Mixtecs in southwestern Mexico, whose

pictographic manuscripts are the only ones that have survived from the pre-Hispanic period. The legitimation of dynastic rule was cast into a large epic lore, part of the common heritage of the Mixtecs. Despite this mythohistorical background, the historical accuracy of the dates (expressed according to the ancient Mesoamerican calendar) and geographical places is undisputed.

Lyric poetry was an important aspect of Mesoamerican court literature. In contrast to the grand narratives of epic history, these poems, most notably those by Nezahualcoyotl, ruler of the city of Tezcoco in the Basin of Mexico, express an intimate view of Mesoamerican courtly life. They focus on love, friendship, the frailty of life, and the mystery of death and the divine. Finally, sacred hymns were chanted during religious ceremonies and centered on specific deities. Depending on the month, the gods of rain, maize, war, and so on were summoned for their powers or thanked for their intercession. Most of the time, priests acted as impersonators of the deity invoked.

—Alessia Frassani

Bibliography

- Hill-Boone, Elizabeth. *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*. Austin: University of Texas Press, 2000.
- Jansen, Maarten E. R. G. N., and Gabina Aurora Pérez Jiménez. *Encounter with the Plumed Serpent: Drama and Power in the Heart of Mesoamerica*. Niwot: University Press of Colorado, 2007.
- León-Portilla, Miguel. *Fifteen Poets of the Aztec World*. Norman: University of Oklahoma Press, 1992.
- León-Portilla, Miguel. *Pre-Columbian Literatures of Mexico*. Translated from the Spanish by Grace Lobanov and the author. Norman: University of Oklahoma Press, 1969.
- Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. Translated by Dennis Tedlock, with commentary based on the ancient knowledge of the modern Quiché Maya. New York: Simon and Schuster, 1996.
- Sahagún, Bernardino de. *Florentine Codex*, Book Six, *Rhetoric and Moral Philosophy*. Edited by Arthur J. O. Anderson and Charles Dibble. Salt Lake City and Santa Fe: University of Utah Press and the School of American Research, 1982.

Theater among the Incas

The absence of alphabetic writing among the Incas and the targeted eradication of Inca culture by Spanish authorities have made it difficult to reconstruct the world of Inca theater with any precision. Most of what we know about the theater of the Incas before contact with Europeans comes from early chroniclers who described Inca practices before colonial incursions had significant influences on them. Because the chroniclers were trying to understand and record what they saw according to their own European frame of reference, however, they tended to describe unique indigenous practices in European terms.

For example, chroniclers describe the indigenous forms *wanka* and *aránway* as tragedy and comedy, even though they do not correspond neatly with those categories. Instead, the *wanka* was a ritual representation of military deeds and victories by great leaders of the past, sharing with the European genres of tragedy and historical plays the depiction of exploits of noble figures. The *aránway* enacted scenes from agricultural and domestic life, analogous to the material of some European comedic forms. Both forms incorporated music, song, and sometimes dance in their enactment.

In addition to these forms that appear to have been most similar to European theater, Inca ritual performance tradition included the *wawaki*, a song sung back and forth in dialogue at certain festivals; the *taki*, a form of communal music celebration involving instrumentation and sung verse; and the *wayñu*, a form of poetry, song, music, and dance. Some of the Inca-influenced colonial dramas included these genres within them, employing a chorus that participates in the dialogue, like many plays of ancient Greece.

The more theatrical of these pre-Conquest spectacles, or public rituals, were enacted in an open space called an *aranwa*, at the center of which was the *mallki*, a small collection of trees or bushes that served as a type of scenery. The participants gathered around the *mallki* and remained there until the representation or performance ended. The nonparticipants, much like a

modern-day audience in a circular theater, gathered in a circle around the actors at a distance from the mallki.

Beyond these forms of ritual performance, one chronicler, Juan de Santa Cruz Pachacuti Yamqui, describes what seem to be specific dramatic pieces, including a “joyous representation,” “a farce,” and “a tragedy,” although these could also refer in the original Quechua to roles that participants might play in the ritual performances. Regardless of whether these refer to specific performances or ritual roles, Quechua has significant theatrical terms such as *yachapayay*, which means to imitate or represent; *puqlay*, which means to play; *yachachikuy*, which means to rehearse; and *pampakuy saynatakuy*, which means to put on a mask. All of these support the presence of an established dramatic tradition before European contact.

Regarding authorship, according to multiple chroniclers, *amautas*, who were the learned men of the Inca empire, served as philosophers, historians, poets, and teachers of the nobility. In these roles, they were charged with remembering the great deeds and figures of Inca history, therein producing an oral literature, some of which was performed, that served to bolster the values of the Inca ruling class. Of course, these early dramaturges remain anonymous.

While no authoritative pre-Columbian texts of Inca dramas have been preserved, there are two specific texts worth mentioning. Bartolomé Arzáns de Orsúa y Vela describes in his *Historia de la Villa Imperial de Potosí*, written between 1702 and 1735, dramatic representations that took place in 1555. The precise source of his description of the events of 1555 in Potosí has yet to be found, but his text describes four dramas dealing with the origin of the Inca monarchs, the triumphs of Huayna Capac, the tragedy of Cusi Huascar, and the death of the Inca Atahualpa. The second significant text, *Ollantay*, a play composed in Quechua containing indigenous material and Spanish forms, can be traced to a manuscript

➤ OLLANTAY

Ollantay presents the story of a high-level official in the Inca empire, Ollantay, who is not of the Inca royal class but falls in love with Cusi Coyllur, the daughter of the Inca Pachacutec (also known as Pachacuti, ca. 1438–1471). His request to marry Cusi Coyllur is denied, so Ollantay rebels. At the beginning of the ten-year-long rebellion, Cusi Coyllur is confined to a monastery-like home where she gives birth to a daughter. After meeting initial successes, Ollantay is subsequently defeated and captured by the general of the new Inca Tupac Yupanqui (ca. 1471–1493). Instead of executing him, the Inca pardons Ollantay and reunites him with Cusi Coyllur and their daughter.

This play was reputed to have been performed in front of Tupac Amaru II, the leader of an indigenous rebellion in the 1780s that culminated a century of violent social conflict and resurgent indigenous nationalism. Given this socio-historical setting, many scholars view the performance tradition of *Ollantay* in connection with a desire to reconstruct and glorify the indigenous past in the eighteenth century, while others see *Ollantay* as essentially a pre-Columbian work that was merely written down after the conquest but has retained its uniquely indigenous character. Its depiction of Inca life, culture, and history, its Quechua prose and poetry, and its predominantly Spanish Golden Age dramatic form suggest that it is a hybrid text that incorporates traditional indigenous dramatic material into a Europeanized form.

—Luke Goble

brought to light in 1853, though some scholars argue for its pre-Columbian origin.

—Luke Goble

Bibliography

- Higgins, James. *A History of Peruvian Literature*. Liverpool: Francis Cairns, 1987.
- Montoya, Rodrigo. “Quechua Theater: History, Violence and Hope.” *Indiana Journal of Hispanic Literatures* 1(2) (1992): 53–77.

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A World on the Move—The Growing Interconnectedness of Peoples

An intensified movement of individuals and peoples took place on both “world islands,” Afro-Eurasia and the Americas, between 1000 and 1500, and this activity, which sprang from a host of motives and took many forms, served to bring large numbers of peoples into closer contact with one another, for better and worse. Much of that travel was for peaceful purposes, as pilgrims, merchants, missionaries, diplomats, and adventurers trekked along caravan routes in the safe company of many companions, pursued more dangerous solitary pathways on foot or on the backs of animals of burden, traveled through inland waterways, or plied the numerous sea-lanes that washed along all hemispheres and through all seas and oceans. Some travelers were less peaceful, as invading armies, seaborne pirates, and land-based bandits traveled along these same routes and roads carving out states, establishing border outposts in distant lands, raiding neighboring lands, and, on a less macroscopic level, preying on vulnerable travelers wherever they might be found. Somewhere between the two extremes were the mass migrants—peoples on a move—who could be and were, by turns, peaceful and warlike as the situation demanded. Whatever their motives and actions, when travelers met other people, an almost inevitable exchange of culture and ideas, as well as goods, took place. In the process, the perceptual distances between cultures and peoples shrank.

Pilgrims on a spiritual quest of every sort—American Indian vision seekers as well as Jewish, Christian, Muslim, Hindu, and Buddhist pilgrims on their way to their respective holy places—were certainly not a new phenomenon, but their numbers seem to have increased exponentially during these centuries, and the guidebooks and places of refuge created to serve their needs proliferated at a high rate during this half millennium. One of the most fascinating pilgrims was Rabban (Master) Sauma (ca. 1225–1294), an Eastern (Assyrian) Christian monk of Ongut Turkic heritage who was born in northern China in the region of present-day Beijing and set out for Jerusalem with a disciple named Markos around 1275. An unsettled military situation prevented them from reaching Jerusalem (after all, no one said travel was easy and safe during these centuries), and both monks settled down in the Mongol il-khanate of Persia (essentially present-day Iraq and Iran), where large numbers of their coreligionists had resided since the fifth century. Eventually

Markos was named supreme catholicus of the Assyrian Church of the East, and in 1287 Il-khan Arghun chose Sauma to undertake an ultimately unsuccessful diplomatic mission to the Christian monarchs of Byzantium and Latin Europe. The monk used this opportunity to combine pilgrimage with diplomacy, first visiting the Church of Hagia Sophia in Constantinople, where he venerated many relics, including a picture of the Virgin supposedly painted by Saint Luke. From there Sauma went west. In Paris he venerated the presumed Crown of Thorns at the royal Sainte Chapelle, and in Rome, which he visited twice, he concelebrated mass with Pope Nicholas IV. After visiting the many churches of the city, Sauma requested and was granted the extraordinary privilege of being given a few holy relics from the papal trove “because he had traveled from such a distance,” and in 1289 he returned to the il-khanate, where he lived out his days. As far as we know, Sauma was the first traveler from northern China to make it all the way to the Far West in this period. Even more significant, merchants and missionaries from the Latin West, mainly Italian traders and Franciscan friars, were making their way eastward to Mongolia and China in this same period, thanks to the so-called Mongol Peace. Marco Polo and his father and uncle were only three of many.

Likewise in this period Muslim merchants and missionaries (often they were one and the same) were increasingly spreading goods and, more importantly, the faith into the grassland kingdoms of West Africa, along the Swahili Coast of East Africa, and into coastal Southeast Asia. In

Likewise in this period Muslim merchants and missionaries (often they were one and the same) were increasingly spreading goods and, more importantly, the faith into the grassland kingdoms of West Africa, along the Swahili Coast of East Africa, and into coastal Southeast Asia.

less pacific ways, Muslims out of present-day Afghanistan were carrying the faith into the Indian heartland.

Indeed, whether they were a people on the move seeking new and richer lands or conquerors seeking hegemony over other peoples, the mass migrants, rather than individuals, were the major story. Some of these migrations ended up as dead ends, such as the tenuous colonization of North American Vinland by the Norse.

Others were the roots of great states, such as the Tanguts, who established the XiXia empire along China's northern and western frontier, and the Qidan (Khitan) Mongols and Ruzhen (Jurchen), who successively established empires modeled on that of the Middle Kingdom in the Yellow River region of China. The greatest of them, of course, were the Mongols, who in the thirteenth century established hegemony over that portion of Eurasia that stretches from Korea to Russia-Ukraine, the greatest land empire in history.

Ultimately more significant than the Mongol conquests was the movement of Turkic peoples west and south into Southwest Asia (and ultimately into Southeast Europe) and India. Building from the Seljuk Turkish states that emerged in Southwest Asia in the eleventh century, the great Ottoman empire was alive and expanding by the mid-fifteenth century, with its crowning achievement being the capture of Constanti-

nople in 1453. Shortly after 1500, the equally great Mughal empire would emerge in India, the result of invaders from Afghanistan.

Mass migrations in the Western Hemisphere were equally significant. Algonquins, Sioux, and Athabascans were on the move in North America north of the Rio Grande, while in Mesoamerica Toltecs and Nahua were taking over central Mexico. One Nahua people, the Mexica, would rise from obscurity to control the great Aztec Confederation centered on Tenochtitlan. In the Caribbean and South America, important groups of migrant peoples included the Caribs, Arawaks, Chibchas, and Tupis. Far to the west in the Southern Hemisphere of the Pacific, a Polynesian people whom history would identify as the Maori were completing the Polynesian Triangle with their settlement of Aotearoa (New Zealand).

Some of these folk migrations engendered fierce resistance. Imperial China certainly did not readily surrender lands to the invaders from the steppe. One of the most historically important acts of resistance came in response to the Seljuk Turkish advance through the Byzantine lands of Anatolia. The result was a counter-invasion—the crusades out of Latin Christian Europe—that not only introduced a new people (Latin crusaders and colonists) into the lands of the eastern Mediterranean but also proved to be a significant flare-up of the until-then largely smoldering tension between Islam and Latin Christendom. The result was centuries of conflict in the Mediterranean and beyond.

One of the long-term results of both the crusades and the West's momentary taste of direct contact with East and South Asia during the age of the Mongol Peace was a state-sponsored attempt by Portugal and the Spanish kingdom of Castile-León to establish contact with the "Indies" by way of the ocean. The result by 1500 was discovery of and preliminary colonization of the Americas, with all of the mass migrations and dislocations that this would entail, and establishment of the Portuguese as a new factor in the Indian Ocean.

Another series of state-sponsored expeditions that merits notice, if only for their magnitude if not their results, were the seven great Ming voyages into the Indian Ocean that took place from 1405 to 1433. Although they have been the subject of some exaggeration and even downright fabrication by some writers motivated more by agenda and profit than historical accuracy, these massive fleets displayed the already centuries-long position of importance that China's sailors enjoyed throughout the Indian Ocean littoral.

As the entries that appear in this section demonstrate, the above catalogue of instances of travel and migration is inadequate to encompass all of the travel and exchange that was taking place in and even, in limited ways, between these two "world islands" and some of the areas between them in the period 1000–1500. By 1500, thanks to these almost universally anonymous migrants and travelers, much of the world had indeed shrunk.

—*Alfred J. Andrea*

■ Introduction: The Road to Sanctification—Pilgrimage Routes

Pilgrimage, a journey to a sacred place, is as old as the first human awareness of the Sacred Other and is part of every religious tradition, although some, such as Buddhism, Hinduism, most branches of Christianity, and Islam, emphasize this form of devotion far more than others. Pilgrims, whether traveling in large caravans or by themselves, undertake such journeys for a wide variety of reasons. In those religious traditions in which personal sin is a major issue, the expiation of guilt is often a driving force, the belief being that the privations of this pious excursion, the sanctity of the site visited, and the prayers, rituals, and often monetary contributions offered there combine to cleanse the soul. According to one legend, Mansa Musa of Mali went on *hajj* to Mecca in 1324 because he had inadvertently killed his mother. Pilgrimage can be and often is also a means of affirming one's membership in a faith community. This has always been a particular attribute of the Islamic *hajj* in which all pilgrims, regardless of status, wear the same simple clothes and perform the same rituals as an affirmation of their belonging to a single *umma*, or community of believers, and their equality before God. Needless to say, pilgrimages such as the *hajj*, which regularly drew worshipers from far-distant and widely scattered regions of the earth, were prime means for cultural interchange.

During the period 1000–1500, most of the ancient sites of pilgrimage remained popular, although some, such as the vast majority of the great Buddhist monasteries and shrines of India and Central Asia, disappeared from the scene due to a variety of religious, political, military, demographic, and environmental factors. The sweep of Islam through northern India and western Central Asia was accompanied by the substitution of a new set of pilgrimage sites—the tombs of Muslim saints—for former sites of Buddhist spirituality. Indeed, many Buddhist holy places were systematically destroyed or defaced by Muslims. The same was true for Hindu temples in northern and central India but to a far lesser extent, and ultimately most of the Hindu holy

places in areas ruled by Muslim princes remained vibrant magnets for devotees. In southern India, this was an age of widespread construction of magnificent new temples under the patronage of the Chola monarchs.

Across the oceans in the highlands of Mexico, the Toltec city of Cholula, which already for 500 years had served as a pilgrimage center for the cult of Quetzalcoatl, erected a massive ceremonial pyramid, the largest in Mesoamerica, around the year 1100. The size of this structure bears witness to the tens of thousands or more of Nahua people who annually trekked to Cholula to worship the god. By reason of the large numbers of pilgrims it attracted, Cholula also became the commercial nexus of a far-ranging trade network. Pilgrimage sites and the routes that led to them were good for business the world over.

One phenomenon that bears special notice is the creation of substitute “Jerusalems” for the Christian faithful in both the Latin West and Ethiopia. Jerusalem is sacred to three religions—Judaism, Christianity, and Islam—and during these centuries large numbers of members of all three faiths traveled to the holy city to worship at the Western Wall, the Holy Sepulcher, or al-Haram al-Sharif (the Noble Sanctuary). But what about persons who could not travel that far?

During the twelfth century and beyond, beginning with the Latin crusader occupation of Jerusalem (1099–1187), a number of substitute Jerusalem pilgrimage sites sprang up in Western Europe. Knights Templar constructed domed churches in France, England, Spain, and elsewhere in imitation of the Church of the Holy Sepulcher that the crusader-conquerors had rebuilt on the presumed site of Mount Cavalry and Jesus's empty tomb. Between 1228 and 1253 the Roman Church constructed the great basilica of San Francesco in Assisi to house the body of Saint Francis, the *alter Christus* (Other, or Second, Christ). Many of the architectural elements of this massive church were modeled on Jerusalem's Church of the Holy Sepulcher. In both cases, pilgrims were offered sanctifying alternatives to the costly and often dangerous passage to Jerusalem.

In late-twelfth-century Ethiopia, whose Christians claimed to be the direct spiritual descendants of ancient Israel, the Zagwe royal family began the process of transforming the sleepy town of Roha into a New Jerusalem. According to tradition, King (and Saint) Gebre Mesqel Lalibela began the enterprise following his pilgrimage to Jerusalem and that city's reconquest by Saladin in 1187. Whatever the truth of the legend, a New Zion arose at this spot as Ethiopia's holiest pilgrimage site, characterized by massive rock-hewn churches, each a symbolic memorial of the Holy Sepulcher. In memory of the saint responsible for the transformation, Roha's name was changed to Lalibela. This new Zion was undoubtedly begun, at least in part, to strengthen the royal legitimacy of the Zagwe dynasty, but less than a century later the family was supplanted by the Solomonids in 1270. On their part, the Solomonids, who claimed direct blood descent from King Solomon of Israel and the Queen of Sheba, proved to be generous patrons of the New Zion, and Lalibela's position as Ethiopia's primary pilgrimage destination grew accordingly.

So, while some pilgrimage venues disappeared or shrank in significance, others sprang up or expanded in importance. Whether old or new, pilgrimage sites that attracted worshipers from near and far continued to be, as they had already been for millennia, centers not only for devotion but also for commerce and the exchange of culture.

—*Alfred J. Andrea*

New Routes to Mecca

With the expansion of the Islamic domain and the consolidation of Muslim rule in the Middle East and beyond, business, social, and religious life thrived. Within the Islamic world, traveling for religious or economic reasons was made easier, and distances between place of worship and trade became closer by virtue of an improved infrastructure. The largest and most important routes for pilgrims to travel to Islam's holiest sites, Mecca and Medina, usually started in the urban centers of Cairo and Damascus. Pilgrims from the Maghreb (western North Africa and Islamic Spain) and sub-Saharan Africa joined caravans in Cairo, which then traveled for a month

➤ MANSA MUSA'S HAJJ OF 1324–1325

Kankan Mansa Musa I was king of Mali from 1312 until his death in 1337. Under his rule, his kingdom experienced a significant economic boom. Mansa Musa performed a legendary pilgrimage to Mecca in 1324–1325, which caused a sensation both within and outside of the Islamic world. During his travels to Islam's most sacred places he exhibited great splendor and spent large amounts of gold on servants of the Egyptian sultan and pilgrims in Mecca. Through the accounts of Venetian merchants who met Mansa Musa during his stay in Cairo, news about the powerful and rich kingdom of Mali passed to Europe for the first time. His grandiosity also led to a substantial decline of the value of the currency of that time, the Egyptian dinar. On his return, he experienced the side effects of this when he realized that the gold he carried with him had lost its value substantially, and he had to borrow money. However, he brought back with him numerous scientific and scholarly papers and treatises, as well as many Muslim scholars and craftsmen. Among them was the Arab poet and architect as-Sahadi, who changed the urban landscape of Timbuktu and built the Grand Mosque, as well as other public and sacred buildings. The city thus became the religious and economic center of western sub-Saharan Africa.

—*Sebastian Maisel*

or two through the Sinai and Hijaz (western Arabia) to Mecca. Travel accounts by Nasir-e Khosraw, Ibn Jubayr, and Ibn Battuta depict a lively picture of the people and places involved in this great annual endeavor. The Egyptian caravan brought with it the Kiswah, a precious cover for the Kaabah, the sacred cubelike structure that stood in the heart of Mecca's Great Mosque, that had to be replaced every year. Toward the end of the fifteenth century, some 30,000 African pilgrims performed the Hajj annually. Muslims from Anatolia, Iran, Iraq, and Syria formed another gigantic caravan that started in Damascus and reached Mecca a month later.

The Hajj was also considered a dangerous endeavor in which pilgrim caravans often were attacked on their way to Mecca by looting Bedouin tribes or religious competitors, such as the Shia sects of the Ismailis and Qarmatians, as well

as by crusaders. In 1183, for example, Reynald of Châtillon, lord of Transjordan, sank a vessel filled with pilgrims to Mecca in an attack on the rich ships and ports of the Red Sea. This violent relationship sometimes turned into a business, when the former attackers started to provide protection for the caravans and collected large tributes. During times of political instability, the Hajj was sometimes cancelled.

The pilgrimage routes to Mecca were part of an extended global network of trade routes connecting the Atlantic Ocean with southern China, an Afro-Eurasian trade zone that included large populations and different professions and lifestyles. Not only pilgrims but also merchants, businessmen, armies, ambassadors, teachers, beggars, and lawyers traveled on these roads. Non-Muslim minorities, such as Christians and Jews, also used them for economic and religious travel.

While most of the Islamic expansion prior to the year 1000 was directed north and east, the focus after the turn of the millennium was on sub-Saharan Africa. Trade relations already existed, and gold from the western Sudan was probably the most valuable commodity, which later contributed to the founding of powerful states on both sides of the Sahara, such as in Mali, Niger, and the Maghreb. Cities such as Algiers or Timbuktu became metropolises. Trade across the desert and along the Nile River further connected the Islamic West with the rest of Dar al-Islam and beyond. During an impressive and sensational pilgrimage in 1324–1325, the king of Mali, Mansa Musa, traveled to Mecca with a retinue that reputedly numbered 8,000. Travel also went both ways on these African pilgrimage routes. Muslim scholars, architects, entrepreneurs, and others from North Africa traveled to and settled in the new areas of Islamic sub-Saharan Africa, where they influenced the practice of Islam, the economy, the arts, and society significantly.

—Sebastian Maisel

Bibliography

- Birks, J. S. *Across the Savannas to Mecca: The Overland Pilgrimage Route from West Africa*. London: C. Hurst, 1978.
- Wolfe, Michael, ed. *One Thousand Roads to Mecca: Ten Centuries of Travelers Writing about the Muslim Pilgrimage*. New York: Grove, 1998.

The Waning of Buddhism in China and along the Silk Road

Around 1000 CE Buddhist shrines in Central Asia and the pilgrimages connected with them began to decline. During its time in Central Asia and China, Buddhism had fallen victim to invasions, suppression, and the influx of new religions on several occasions. The difference was that this time it would not recover completely.

The decline dates to the Battle of the Talas River in 751 when Arab forces defeated the Chinese. After that Islam controlled the western end of the Silk Road and moved slowly eastward, assisted by the Muslim domination of trade. When Buddhist temples and shrines came under Muslim control, monks and nuns were forced to leave, buildings and monuments fell into disrepair, and Buddhist art was often defaced by Muslim iconoclasts. Increased warfare and decreased governmental support made pilgrimages to India increasingly difficult.

Despite the attempts to stamp out Buddhism, the remains of Buddhist culture could still be found. When the popular Iranian general Abu Muslim al-Khorasani was executed in 755 by order of the Abbasid caliph, rumors of his reincarnation began to circulate through the region of Khorezm (Khwarazm) in western Central Asia, a throwback to Buddhist beliefs. Buddhist statues were brought to Baghdad from Kabul in the ninth century, and Buddhist temples and monuments across Central Asia were recycled for new uses. A Buddhist temple in Bukhara (in present-day Uzbekistan) was turned into a fire temple by the Zoroastrians, and later Muslims transformed the area into a place for a twice-a-year fair where Buddhist statues were sold. In the Tarim Basin of eastern Central Asia, former Buddhist monuments became mausoleums for four imams.

The spread of Islam cut Chinese Buddhism off from remaining religious centers in India and Central Asia. Inside China Buddhism was briefly suppressed under Emperor Tang Wuzong (r. 840–846). Buddhist properties were seized, bronze and iron statues were melted down, and monks and nuns were punished and forcibly secularized. The emperor died one month after persecutions started, and later many of the more repressive

measures were relaxed, but the damage had been done.

Destabilization accompanied the fall of Tang in 907, and sections of the Silk Road came under Tibetan control. This was accompanied by a general de-urbanization along the northwest routes of pilgrimage. Although Buddhist pilgrims continued to visit the shrines, they did so in smaller numbers. As political turmoil continued and China broke into the Ten Kingdoms, eight in the south and two in the north, pilgrimages continued to decline. By the time of the Southern Song dynasty (1127–1279), most of northern China, including the Gansu Corridor, which gave ready access to the major western routes of the Silk Road, had fallen to the Khitan (Qidan), the Tanguts, and the Jurchen (Ruzhen), warlike peoples from China's periphery. The Tanguts, a Tibetan people, established the kingdom of XiXia in 1038, deposing the Tibetans and taking control of the Gansu Corridor. Despite the fact that the Tangut leaders were ardent Buddhists, it is possible that their invasion caused the monks of the Mogao Caves near Dunhuang to seal their 50,000 manuscripts, paintings, and other artifacts in the famous treasure room or Library Cave (Cave 17), in order to protect them. The Song dynasty made numerous peace agreements with the Tangut Liao dynasty and with the Jurchen, agreeing to make annual payments in return for peace in the region. However, in its isolation from other Buddhist centers China molded Buddhism into a distinctly Chinese form.

The Silk Road region was further disrupted when the Mongols attacked the Buddhist kingdom of XiXia in 1209 and the Jin empire of the Jurchen (who were predominantly Buddhist, as well) in 1211. By 1215 the Mongols had captured Zhongdu, the Jin capital (present-day Beijing), and four years later they were in the heart of Central Asia. Although the Mongols were fairly indifferent to religious differences, that did not stop them from plundering the rich Buddhist monasteries. This was especially true for the Buddhist Tanguts of XiXia, who refused to fully subordinate themselves to the Mongols in 1209. When they were fully subjugated in 1227, the Mongols took their revenge, destroying religious and secular buildings. The Tanguts are seen as the last Buddhists on the Silk Road proper. Ironi-

➤ DEFACING THE KIZIL CAVES

In 1906 and again in 1916, German expeditions headed by Albert Grünwedel and Albert von Le Coq visited the Buddhist temple caves of Kizil near the town of Kucha. The walls of these caves were covered with fabulous paintings depicting the life of the Buddha and other elements of worship. The caves, the oldest of which date to 500 CE, were especially important because they demonstrated a distinctively Kuchan style that was free from Chinese influence. China did not control Kucha until 658. Despite their remote location, the paintings had been savaged. Natives, knowing it to be excellent fertilizer, had shoveled out the loess soil that collected in and around the caves. The tools had damaged many of the paintings. Even the pigment was scraped off the walls to put on the fields. The paintings were not the only materials destroyed. Five wagon loads of manuscripts found by the locals were thrown into the river because they were afraid the writings were dangerous. Local Muslims had also defaced the figures by deliberately scratching out the eyes and faces. Both Grünwedel and Le Coq set to work removing remaining paintings by cutting them into sections and removing them from the walls of the caves. Much of the material they collected was sent to museums in Berlin. Unfortunately, many of the paintings were damaged or destroyed during the bombings of World War II.

—Rebecca Wendelken

cally, the Mongols later adopted a Tibetan form of Buddhism.

The Daoists took advantage of the Tanguts' plight by seizing the monasteries, although much of the property was later returned. Buddhism was supported under the Mongol khan Ogodei, and new Buddhist temples were built at Karakorum in the present-day Republic of Mongolia, but Buddhist monks were strictly controlled. Farther west, however, the Mongols destroyed Buddhist monuments in Balkh, Herat, and Peshawar.

In Western Central Asia the last vestiges of Buddhism were wiped out by the armies of Amir Temur, also known as Timur-i Leng and Tamerlane (1336–1405). In their ravaging of Central Asia and North India they destroyed monasteries and monuments.

➤ DUNHUANG—DEFACING THE MOGAO CAVES

The Buddhist Mogao Caves near the Silk Road town of Dunhuang were begun, according to tradition, in the late fourth century CE. For centuries hand-hewn decorated caves and grottoes were added to the site until they totaled 492. When trade shifted away from the trans-Eurasian trade routes, the caves were forgotten by the outside world until they were rediscovered by European explorers in the early twentieth century. Sir Aurel Stein explored the caves in 1907 and photographed the wall paintings but was unable to remove any. When the American art historian and adventurer Langdon Warner visited the caves in 1924, he found that many wall paintings had been defaced. In 1921 the Chinese government used the caves as temporary housing for 400 Russian soldiers, refugees from the White Army. During their six-month stay the soldiers defaced the frescos, gouging out the eyes and scratching graffiti into the fragile surfaces. Angered, Warner decided to preserve some of the remaining paintings by removing them. By covering the surfaces with solvent-soaked gauze, Warner was able to peel 12 paintings from the walls. Eleven survived the long trip to Harvard University's Fogg Museum in Cambridge and the tedious reattachment of the paint to a stable surface.

—Rebecca Wendelken

China experienced a Buddhist revival under the Ming dynasty (1368–1644). The founder of the dynasty was a Buddhist, and he worked to revive the native Buddhist sects and to suppress the power of the Tibetan Lamaist Buddhists, who had gained great power under the Mongols. Although the Ming supported Buddhism, Buddhism did not rise to its former glory.

—Rebecca Wendelken

Bibliography

- Ch'en, Kenneth K. S. *The Chinese Transformation of Buddhism*. Princeton, NJ: Princeton University Press, 1973.
- Christian, David. *A History of Russia, Central Asia, and Mongolia: Inner Eurasia from Prehistory to the Mongol Empire*, Vol. 1. Oxford, UK: Blackwell, 1998.

Pilgrimage Literature—Islamic Rihlas and Western Christian Guidebooks

Pilgrimage literature in the Middle Ages spanned the range from useful guidebooks to colorful travelogs and fulfilled the practical needs of pilgrims as well as the interests of those who remained at home. Since pilgrimage involved dangerous travel, intercultural contact, and spiritual revelations at holy sites, the resultant tales merged adventure with religious contemplation and became very popular.

Much pilgrimage writing was practical. The twelfth-century *Liber Sancti Jacobi* (*Book of Saint James*), also known inaccurately as the *Codex Calixtinus* (*Book of [Pope] Calixtus [II]*), provides information for pilgrims seeking the popular shrine of St. James (Santiago) in Compostela, Spain. The book has chapters on the various roads to Santiago de Compostela with specific advice: locations of good hospices and drinking water, shrines with relics of other saints to visit en route, and the (highly stereotyped) characteristics of peoples and regions in France and Spain. About western Spain, the guide warns: “the impious Navarrese and the Basques not merely. . . rob the pilgrims going to St. James, but also . . . ride them as if they were asses and . . . slay them . . . Their face is ugly, and they are debauched, perverse, perfidious, disloyal, and corrupt.”

Other pilgrimage texts are individual accounts that convey the human experience of the journey, allowing the reader to share in the fears, dangers, excitement, and emotional responses of the writer-pilgrim.

Bernard of Angers, an eleventh-century cleric, wrote about the miracles of St. Foy of Conques, France, in the *Liber miraculorum Sanctae Fidis* (*Book of the Miracles of St. Foy*) of circa 1050. Bernard initially undertook his own pilgrimage to Conques to scoff at the ignorant multitudes of pilgrims who knelt before Foy's golden reliquary, which he called an idol, like a statue of Venus. Once he learned of the miracles enacted by the reliquary, however, Bernard had a change of heart and realized that the statue deserved veneration. His personal conviction moti-

➤ IBN JUBAYR AT MECCA

In this excerpt from his *rihla*, Ibn Jubayr describes how he prepared himself for the rites of the Hajj, which commence annually in Mecca on the seventh day of Dhu al-Hijjah. His preparations included the Umrah, or Lesser Pilgrimage, which is a series of devotional acts that puts the pilgrim into a proper physical and spiritual state for the Hajj proper. Several of the Hajj's prescribed rituals take place within the Haram es Sherif (the Noble Sanctuary), the mosque complex that houses the Kaaba. The Kaaba, the most sacred site in Islam, is a cube-shaped shrine believed to have been dedicated by Ibrahim (Abraham) for the worship of God.

Note how Ibn Jubayr's devotion did not preclude his enjoying the fruits of Mecca.

"Throughout the daylight hours of Wednesday we stayed resting at al-Qurayn [a pilgrimage staging post and camp], but when evening had come, we left it in the pilgrim garb to perform the *Umrah*, and marched throughout the night. With the dawn, we came near to the *Haram* and descended as the light was about to spread.

We entered Mecca . . . by the Imrah Gate. As we marched that night, the full moon had thrown its rays upon the earth, the night had lifted its veil, voices struck the ears with the *Talbiyat* [the pilgrim's ritual prayer: "Here I am, Lord. What is Your command?"] from all sides, and tongues were loud

in invocation, humbly beseeching God to grant them their requests, sometimes redoubling their *Talbiyat*, and sometimes imploring with prayers. Oh night most happy, the bride of all the nights of life, the virgin of the maidens of time. . . .

We took lodging in Mecca at a house called *al-Halal* ["that which is lawful"] near to the Haram and the Bab al-Suddah, one of its gates, in a room having many domestic conveniences and overlooking the Haram and the sacred *Kaaba*. . . .

The choicest of the fruits we tried were the water-melon and the quince. All [Mecca's] fruits are good, but the water-melon has a particular and exceptional merit in that its odor is the most fragrant of smells and the best. When someone approaches you with one, you find the fragrant odor coming first to you so that from the enjoyment of its sweetness you almost abstain from eating it; and when you taste it, it seems to you like sugar-candy or purest honey. It may be that the reader of these worlds will think that in this description there is some hyperbole. No, in the name of God it is more than I described, and above what I said."

—Annika Fisher

Source

The Travels of Ibn Jubayr, trans. by R. J. C. Broadhurst (London: Jonathan Cape, 1951).

vated the zeal with which he details Foy's many miracles.

While seeing sacred places inspired pilgrimage, an avid interest in sight-seeing and curiosity about other cultures are evident in many texts, without the negative generalizations of the *Codex Calextinus*.

Ibn Jubayr (1145–1217) went on pilgrimage to Mecca in 1182 and traveled for two more years, visiting Jerusalem, Medina, Damascus, Mosul, Acre, and Baghdad. His account was among the first of the genre of the Islamic *ribla*, or pilgrimage travel journal. He includes many intercultural experiences, such as his practical advice for Muslims traveling on Genoese trade ships together with Christian pilgrims and his wonder at

the luxurious lifestyle of the Christian king William II of Sicily, who employed Muslim physicians, astrologers, and servants.

The most extraordinary writer of an Islamic *ribla* was Ibn Battuta (1304–1368 or 1377). Born in Morocco, he went on *Hajj* to Mecca in 1325 at age 22 and continued traveling for nearly 30 years, covering about 75,000 miles (120,000 kilometers) and about 44 present-day countries. His *ribla*, which was composed and amplified by a professional writer, Ibn Juzayy, to whom Ibn Battuta narrated his adventures, describes his extensive pilgrimages to see holy sites and Muslim saints. It also includes, however, tales of the cultures, geography, climates, and sights he observed in the Middle East, India, China, and

sub-Saharan Africa. His contacts with other faiths are particularly interesting: a Hindu yogi levitating himself, Byzantine Christians denying him entrance to the Church of the Hagia Sophia in Istanbul for refusing to bow before the cross, and worshippers of the Mongol emperor of China creating a huge burial mound, filled with furnishings and slaves and topped with horses impaled on staffs. Ibn Battuta marvels further at other Muslim cultures, such as the matrilineal Walatans (in present-day Mauritania) whose beautiful women were shamelessly unveiled and had sexual relations with many men, all the while keeping up with their Islamic prayers.

The *Sanctae Peregrinationes (Holy Pilgrimages)* by Bernhard von Breydenbach (1440–1497), a canon of Mainz, was published in 1486 and became Europe's first best-selling work of printed, mass-produced pilgrimage literature. Bernhard describes his trip from Venice to Jerusalem, listing many sites in the Holy Land. He provides a sample contract with a ship's captain, Arabic word lists, and tips about seasickness and delousing. Elaborate woodcuts by Erhard Reuwich illustrate the holy locales as well as exotic costumes and animals. Bernhard apologizes for his profound interest in other cultures and includes many entertaining sidebars describing altercations about camels, wonders such as egg incubators, and the time he and his companions were mistaken for slaves.

Felix Fabri (1441–1502) traveled with Bernhard. Felix set out intending to write a narrative of his pilgrimage and prepared by reading all available pilgrimage accounts and taking careful notes during his trip. The resultant *Evagatorium (Wandering)* constitutes the most thorough Western pilgrimage account, employing Felix's preacherly rhetoric and classical learning to their full advantage. Inversely to Ibn Jubayr, Felix traveled on an Islamic vessel and recalls how the pilgrims sang the Christian hymn of divine praise, the *Te Deum*, softly when approaching Jerusalem so as not to upset their Muslim escorts. At every turn he describes his personal emotions, admitting to boredom on the journey, fear while at sea, and pure joy while he wept before the Holy Sepulcher despite being mocked by other brutish pilgrims for his exuberance.

—Annika Fisher

Bibliography

- Dunn, Ross E. *The Adventures of Ibn Battuta: A Muslim Traveler of the 14th Century*. Berkeley: University of California Press, 1986.
- Euben, Roxanne L. *Journeys to the Other Shore: Muslim and Western Travelers in Search of Knowledge*. Princeton, NJ: Princeton University Press, 2006.
- Howard, Donald R. *Writers and Pilgrims: Medieval Pilgrimage Narratives and Their Posterity*. Berkeley: University of California Press, 1980.
- Ibn Battuta. *Travels in Asia and Africa, 1325–1354*. Translated by H. A. R. Gibb. New York: Robert M. McBride, 1929.
- Melczer, William, trans. *The Pilgrim's Guide to Santiago de Compostela*. New York: Italica, 1993.
- Sheingorn, Pamela, trans. *The Book of Sainte Foy*. Philadelphia: University of Pennsylvania Press, 1995.

Old and New Christian Sites of Pilgrimage

Although the earliest Christian pilgrimages were to places associated with the life and death of Jesus Christ, several important new pilgrimage sites emerged during the Middle Ages. It was believed that exposure to such sites, especially the holy relics that were enshrined there, provided spiritual graces for the pilgrim willing to endure the hardships of travel. Secular and ecclesiastical rulers also benefited from the promotion of such piety, as often the surrounding economies of popular pilgrimage sites were partly, and sometimes wholly, dependent on money spent by pilgrims.

A reinvigorated pilgrimage movement to the Holy Land emerged in the eleventh century as Europe experienced significant economic and population growth. Although Muslims were generally loath to interfere with the profitable pilgrimage traffic, the increase in the numbers of pilgrims headed to the Holy Land happened at a time when the Seljuk Turks became a destabilizing power in the region, and this resulted in several clashes between the two groups. Consequently, reports of the Turkish abuse of Christian pilgrims contributed to popular enthusiasm in Europe for the birth of the crusading movement at the end of the century. Indeed, the crusades were initially understood as armed pilgrimages, with the granting of indulgences (release from

➤ ANNALIST OF NIEDER-ALTAICH—THE GREAT GERMAN PILGRIMAGE OF 1064–1065

European pilgrims traveling to the Holy Land were sometimes considered a nuisance by local communities and occasionally suffered attacks by other Christians as they made their way through Hungarian and Byzantine territories. Yet during the eleventh century such pilgrims became much more concerned about encountering militant Turks and Arabs along the way. These concerns, however, seem to have done little to dampen the enthusiasm of European pilgrims for the Holy Land, as the great German Pilgrimage of 1064–1065 reportedly had more than 12,000 participants. The following account, provided by the contemporary annalist of Nieder-Altaich, gives a sense of the dangers they faced.

“They [German pilgrims] left Constantinople a few days later and, after passing through various difficulties and tribulations, came to Latakia [a port city in Syria]. Bishop Gunther made their troubles clear when he wrote from Latakia to his people who were still at home. He said, among other things: ‘Brethren, we have truly passed through fire and water and at length the Lord has brought us to Latakia, which is mentioned in the Holy Scriptures

as Laodicea. We have had the Hungarians serve us without faith and we have had the Bulgarians prey secretly upon us; we have fled from the open raging of the Uzes [Oghuz Turks] and we have seen the Greek and imperial arrogance of the citizens of Constantinople; we have suffered in Asia Minor, but worse things are yet to come.’

While they were staying for a few days in Latakia, they began to meet each day many people returning from Jerusalem. The returning parties told of the deaths of an uncounted number of their companions. They also shouted about and displayed their own recent and still bloody wounds. They bore witness publicly that no one could pass along that route because the whole land was occupied by a most ferocious tribe of Arabs [here the author errs; they were Turks] who thirsted for human blood.”

—Andrew Holt

Source

Annales Altahenses Maiores, 8, a. 1065, MGH, SS. XX. 815–817, trans. James Brundage, *The Crusades: A Documentary History* (Milwaukee, WI: Marquette University Press, 1962), 4.

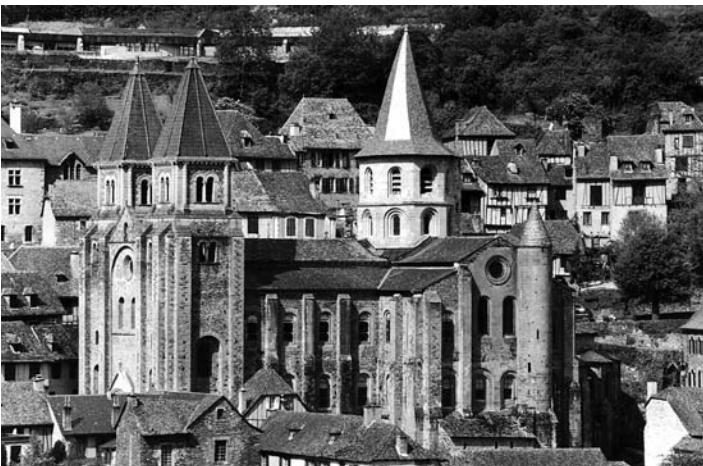
penance for forgiven sins) similar to those given for other pilgrimages.

The establishment of four crusader states in the wake of the First Crusade contributed to an even greater upsurge in pilgrimage activity, as Christian rulers encouraged pilgrimage to the Holy Land and made efforts to provide security and sanctuary for those willing to hazard the long and often dangerous journey. The first military-crusading orders, namely the Templars and the Hospitalers, were initially established in the twelfth century to protect and serve pilgrims in the Holy Land.

The many pilgrims who made the journey were rewarded with the opportunity to worship at hundreds of Christian shrines. They included such important sites as the place of Christ’s birth in Bethlehem; the Church of the Holy Sepulcher, containing both Mount Calvary and the tomb from which Christ was believed to have been bodily resurrected; and the newly discovered Tomb of the Patriarchs in Hebron, believed to be

the resting place of the biblical patriarchs and matriarchs Abraham, Isaac, Jacob, Sarah, Rebecca, and Leah and a site revered by Jews, Christians, and Muslims alike.

For pilgrims making their way to the Holy Land, a stop in the Byzantine capital city of Constantinople would have been highly desirable on account of the enormous collection of relics it housed. Sources from the crusading era record a number of impressive relics among the city’s collection, including traces of the blood of Christ, Christ’s Crown of Thorns, pieces of the True Cross, the bones of John the Baptist and St. James the apostle, and countless other relics of Christian virgins, martyrs, and saints. In addition to Constantinople, pilgrims visited other sanctified locales on their way to the Holy Land (or to other major pilgrimage sites) due to the availability and popularity of a number of guidebooks that provided them with information on holy sites of interest along the way as well as the safest routes for travel and lodging.



Abbey Church of Sainte-Foy in Conques, southern France, begun about 1050. The city of Conques possesses the relics of the child martyr St. Foy, and was a stop for pilgrims as they traveled to Santiago de Compostela. (Phillip Capper)

The city of Rome was perhaps the most important Christian pilgrimage destination in Europe. Rome's spiritual prestige was due to its having been the city where the apostles Peter and Paul, as well as numerous other Christians, had been martyred and the fact that it was the see, or seat of power, of the Roman pope. Pilgrims who were not always able to make the longer and more dangerous journey to the Holy Land often opted for Rome, where they could visit the tomb of St. Peter, the catacombs in which early Christians had been buried, and numerous other relics of early Christian saints and martyrs. An enormous number of pilgrims visited Rome after Pope Boniface VIII declared a Jubilee Year in 1300, a special year of remission of sins and universal pardon, for those who made a pilgrimage to Rome. Additional holy years were announced by popes over the ensuing centuries, and these holy years also drew large crowds of pilgrims.

The Italian cities of Assisi and Turin were also major pilgrimage destinations. Assisi rose to prominence as a site of pilgrimage during the thirteenth and fourteenth centuries, when pilgrims came to visit the places most associated with the life of St. Francis of Assisi, as well as the tomb of St. Clare, his female counterpart. The city of Turin also achieved fame as a pilgrimage

site in the later Middle Ages, as pilgrims flocked there to see the Shroud of Turin, believed to be the burial shroud of Jesus on which his image had been imprinted.

The most important European pilgrimage site outside of Rome, however, was Santiago de Compostela in Galicia, or northwestern Spain. Pilgrims believed that the bones of the Apostle James the Greater (Santiago) were miraculously transmitted to Spain not long after his death in Jerusalem. These bones were then buried where a shepherd had spotted a star, and the first cathedral of Santiago de Compostela was consecrated over the spot in the ninth century, with larger cathedrals to follow as pilgrim traffic grew. Enormous numbers of pilgrims from throughout Europe made their way to Compostela, especially after the year 1000. Various routes to the tomb of St. James were mapped out, several popular guide books were written for the edification of pilgrims, and, as was true for routes to other popular pilgrimage sites, numerous churches, shrines, and hostels along the way provided assistance, lodging, and food. Moreover, many sites along the various paths to Compostela, which were collectively known as the Way of St. James, became pilgrimage destinations in their own right, such as the small southern French city of Conques, which possesses the relics of the child martyr St. Foy.

The most-visited pilgrimage site to emerge in northern Europe during the later Middle Ages was at Canterbury, England. Beginning in the late twelfth century, pilgrims flocked to see the tomb, then later the shrine, of the martyr Thomas Becket (d. 1170). The shrine's popularity in England began to wane with the onset of the English Reformation, and the shrine was destroyed in the mid-sixteenth century.

—Andrew Holt

Bibliography

- Barber, Richard. *Pilgrimages*. Woodbridge, UK: Boydell, 1991.
- Birch, Debra J. *Pilgrimage to Rome in the Middle Ages*. Woodbridge, UK: Boydell, 1998.
- Hopper, Sarah C. *To Be a Pilgrim: The Medieval Pilgrimage Experience*. Stroud: Sutton, 2002.
- Kessler, Herbert L., and Johanna Zacharias. *Rome 1300: On the Path of the Pilgrim*. New Haven, CT: Yale University Press, 2000.

Sumption, Jonathan. *The Age of Pilgrimage: The Medieval Journey to God*. Mahwah, NJ: Hidden-Spring, 2003.

Webb, Diana. *Medieval European Pilgrimage, c.700–c.1500*. New York: Palgrave Macmillan, 2002.

Webb, Diana. *Pilgrims and Pilgrimage in the Medieval West* (International Library of Historical Studies). London: I. B. Tauris, 2001.

Selling Sanctity—The Pilgrimage Trade Is Good Business

Although motivated by otherworldly goals, pilgrimage brought immediate earthly rewards to popular destinations. Taxes on pilgrims, donations to shrines, and purchases made at the markets that sprang up around holy sites allowed pilgrimage towns to thrive.

The pilgrimage trade could single-handedly support a local economy. On the sacred mountains of Tibet, strict parameters preserved the hallowed landscape, forbidding hunting, land cultivation, and husbandry of unclean animals. Income from the *Bonpo* (devotees of Bon, Tibet's ancient religion that venerates nature) and Buddhist pilgrims enabled the survival of the resident communities. In India, income from massive Hindu temples, like that of Nathdwara in Rajasthan, could sustain over 1,000 families.

Pilgrimage could also permit a town to accrue great wealth. Due to the miracles that followed Thomas Becket's murder and their subsequent promotion by the town's clergy, Canterbury, England became a major pilgrimage center, at its height rivaling even Rome and Jerusalem. The shrine's healing powers, extolled in Chaucer's *Canterbury Tales*, motivated vast numbers of pilgrims during the Black Death in the 1340s. The plentiful visitors (100,000 during the 1420 Jubilee alone) and sustained royal patronage yielded great prosperity. Until the sixteenth century, Thomas's tomb remained among the greatest concentrations of wealth in England.

Such accumulation of revenue was possible due to the expenditures required of pilgrims on their trek. Food and shelter were sometimes free, such as the provisions placed in Buddhists' begging bowls or the housing offered Christians in Jerusalem by the Hospitalers, but they usually required money. Donations and further pur-

➤ PILGRIMAGE SOUVENIRS—CHRISTIAN AMPULLAE AND TIBETAN BUDDHIST AMULETS

Christian and Buddhist pilgrims purchased inexpensive souvenirs to commemorate their travels.

Christians collected clay or lead ampullae (small round bottles with two handles) filled with water, oil, or dust from holy sites. Extremely popular from the twelfth to fifteenth centuries were those from the shrine of St. Demetrius in Thessalonica, the city's patron and a popular warrior saint throughout the Christian East. Miraculous oil called *myron* flowed from the saint's remains, and droves of pilgrims brought flasks home. These ampullae, worn around the neck, bore images of the saint and prayers, such as "Anointed by thy blood and *myron*, the bearer prays thee to be his warm defender."

Common Tibetan souvenirs were clay reliefs called *tsha-tsha*, originally attained at Indian pilgrimage sites and produced after the eleventh century at Tibetan shrines. They were worn within amulets or deposited inside devotional stupa towers. Recalling the Christian ampullae, the *tsha-tsha* could contain relics, since the ashes of lamas were sometimes kneaded into the clay. They depicted holy figures, like the ampullae, but their texts were Buddhist doctrine rather than individual requests: "The Tathagata [the Buddha], the great truthful ascetic, revealed the cause of the things having their beginning from a cause, and their disappearance."

Both of these forms of souvenirs allowed pilgrims to wear upon their bodies relics or clay from the holy site, enabling them to retain this proximity at home.

—Annika Fisher

chases, such as incense or flowers, were necessary for rituals. Souvenirs were also common.

The French town of Conques was supported from the ninth to the thirteenth centuries by pilgrims visiting St. Foy. The saint's bones resided in a statue that embodied her requests for gifts. Miracle accounts report how Foy, who was martyred as a young girl, particularly desired jewelry. Pilgrims were compelled to "donate" such items after Foy appeared—and occasionally threatened them—in visions. The reliquary that contained St. Foy's earthly remains was such a

reliable source of income that it was paraded through the countryside whenever the cathedral needed funds.

Conques lay on the *iter Sancti Jacobi* (Route of Saint James), a major pilgrimage road that culminated in Santiago de Compostella, Spain. The pilgrimage business was so lucrative at Conques that the burghers and clergy fought for decades over control of the marketplaces. When cathedral-owned souvenir stands cut into the people's profits, rioters nearly assassinated the bishop. The clergy claimed it required the funds to aggrandize the cathedral, which would in turn encourage more pilgrimage. Such tactics spurred the great church-building boom of the High Middle Ages.

Whereas Christian pilgrims were exempt from taxes in Europe, cities on other continents often taxed pilgrims. Muslims arriving in Mecca had to pay eight gold *dinars* to the amir or they, together with the ship captains who brought them, were severely punished. At times, such heavy fees even worked to decrease the number of pilgrims undertaking the *hajj* to this holiest site in Islam. Excessive taxation similarly affected the Anasazi pilgrimage destination of Chaco Canyon in New Mexico. Around 1050, construction of elaborate tombs, ceremonial *kivas*, and broad roads jumped 600 percent as the area became a major center. By 1111, however, the Anasazi ceremonial capital moved north to a site today known as Aztec, New Mexico, likely due to the excessive tribute pilgrims were charged.

Commercial venues also worked in convergence with pilgrimage traffic. Medieval European markets were timed to fall upon the feast days of local saints when pilgrims flooded the towns. A similar symbiosis occurred at the Hindu Vitthala temple in Vijayanagara, where markets surrounded the shrines and pathways led the pilgrims away from residential zones and toward these ritual and commercial areas.

Many pilgrimage sites were along trade arteries, like Mecca on the major route between India and the Mediterranean, or the Buddhist caves near Dunhuang in the Gobi desert along the Silk Road. Dunhuang's success at appealing both to travelers motivated by profit and by piety made it wealthy for over 1000 years. Genera-

tions of artists were employed decorating the 492 grottos of the cave complex.

—Annika Fisher

Bibliography

- Appadurai, A., and C. A. Breckenridge. "The South Indian Temple: Authority, Honor, and Redistribution." *Contributions to Indian Sociology* 10 (1976): 187–211.
- Butler, John. *The Quest for Becket's Bones: The Mystery of the Relics of St. Thomas Becket of Canterbury*. New Haven, CT: Yale University Press, 1995.
- Coleman, Simon, and John Elsner. *Pilgrimage: Past and Present in the World Religions*. Cambridge, MA: Harvard University Press, 1995.
- Liber miraculorum sanctae Fidis (The Book of Sainte Foy)*. Edited and translated by Pamela Sheingorn. Philadelphia: University of Pennsylvania Press, 1995.
- Mortel, Richard T. "Taxation in the Amirate of Mecca during the Medieval Period." *Bulletin of the School of Oriental and African Studies, University of London* 58, no. 1 (1995): 1–16.
- Stokstad, Marilyn. *Santiago de Compostella in the Age of the Great Pilgrimages*. Norman: University of Oklahoma Press, 1978.

North American Indian Travelers to Pipestone Quarries

Throughout much of aboriginal North America, the ceremonial pipe complex, consisting of tobacco, kinnikinnick (a mixture of bark, tobacco, and dried leaves—usually bearberry), pipe stems, and pipe bowls has been integral to religious, sociopolitical, and economic dimensions of indigenous life. Although the ceremonial use of pipes crafted from pipestone extends into prehistoric times, it was not until 1836 that information about the quarry near Pipestone, Minnesota, where Native Americans mined the soft red stone used in making pipes, was popularized through the writings and paintings of American artist George Catlin and later in the poetic musings of Henry Wadsworth Longfellow in *Songs of Hiawatha*.

Native Americans of the Great Plains, Woodlands, and Southeast revere pipestone due to its associations with the ancestors and legendary beings such as the Thunderbeings and the Little

People. In the following Dakota legend, described by Catlin, the sacred nature of the pipestone is revealed.

“At an ancient time the Great Spirit, in the form of a large bird, stood upon the wall of rock and called all the tribes around him. Taking out a piece of the red stone, he formed it into a pipe and smoked it, the smoke rolling over the whole multitude. He then told his red children that this red stone was their flesh, that they were made from it, that they must all smoke to him through it, that they must use it for nothing but pipes: and as it belonged alike to all the tribes, the ground was sacred, and no weapons must be used or brought upon it.”

Long before the arrival of Euro-Americans, indigenous groups of the Great Plains, Great Lakes, and Mississippi Valley began adopting rituals including the smoking of the Calumet (or peace pipe) in conjunction with trading, the establishment of alliances, and treaties. In the eastern Plains, ritual use of the Calumet pipe extends back to as early as 1200 CE. Between 1542 and 1673 this ceremonial complex spread from the Great Plains through the Mississippi River valley. The establishment of bonds between independent clans or ethnic groups and the barter of pipestone and Euro-American material culture may have catalyzed the diffusion of the Calumet ceremonies, particularly to the Illinois tribe by the Osage and the Missouri tribes in the 1700s. By the eighteenth century the Calumet ceremony was well established in many parts of the Southeast, including the Lower Missouri Valley.

Native Americans have traditionally mined and traded pipestone from multiple quarries in southeastern South Dakota; southwestern Minnesota; northwest, central, and south-central Wisconsin; and places in Illinois and Kansas. It was not uncommon for representatives of different ethnic communities to share control of the same quarries. For example, tribes from the Appalachians to the Rocky Mountains shared the pipestone quarries of Minnesota. Among them were the Ottawa, Omaha, Iowa, Ponca, Lakota, and Ojibwa tribes. Each quarry was considered sacred



Pipestone Quarry, Minnesota. (National Park Service)

➤ WHAT IS PIPESTONE?

Pipestone is a soft red stone that many indigenous groups of the Great Plains and Eastern Woodlands use to make ceremonial pipes in which tobacco or kinnikinnick is smoked. Pipestone is composed of argillite, a clay that has metamorphosed into stone. It can be fashioned into many types of pipes including tubular, disk, elbow, and t-shaped peace pipes called calumets. One variety of pipestone known as Catlinite is named after the nineteenth-century American artist George Catlin, who recorded information about the quarry now preserved at the Pipestone National Monument. Other varieties include Kansas pipestone and Wisconsin pipestone.

—Alex K. Carroll

and neutral ground among Native Americans, who shared historic alliances as well as animosities, and thus served as a region of refuge where traditional enemies could barter and trade without fear of reprisal. Widespread documentation of maintenance of peace at quarries extends from Wisconsin to Missouri River sites, where Lewis and Clark passed during their famous expedition that terminated in Fort Clatsop, Oregon.

—Alex K. Carroll

Bibliography

- Blakeslee, Donald J. "The Origin and Spread of the Calumet Ceremony." *American Antiquity* 46(4) (1981): 759–768.
- Brown, Ian W. "The Calumet Ceremony in the Southeast and Its Archaeological Manifestations." *American Antiquity* 54(2) (1989): 311–331.
- Catlin, George. *Letters and Notes on the Manners, Customs, and Condition of the North American Indians*. New York: Wiley and Putnam, 1841.
- Coues, Elliott, ed. *History of the Expedition under the Command of Lewis and Clark*. 1893; reprint, New York: Dover, 1965.
- Sabo, George, III. "Rituals of Encounter: Interpreting Native American Views of European Explorers." *Arkansas Historical Quarterly* 51(1) (1992): 54–68.
- Sigstad, John S. "A Field Test for Catlinite." *American Antiquity* 35(3) (1970): 377–382.
- Springer, James Warren. "An Ethnohistoric Study of the Smoking Complex in Eastern North America." *Ethnohistory* 28(3) (1981): 217–235.

■ Introduction: Peoples on the Move—The Passage of Willing and Unwilling Migrants

Humans have always been on the move, and their movements have been both voluntary and otherwise. During the period 1000–1500, large numbers of persons were displaced due to the vicissitudes of war and other forms of violence that uprooted them and set them on the road to somewhere else. An unknown number of these persons were enslaved and were either brought to slave markets and sold there or carried off to their captors' homes. In any case, whether sold off or retained, whether they served as common laborers or were valued for their special talents, they normally could expect to be transported far from home. Thus, in order to beautify his capital of Samarkand, which he was rebuilding into a new city, Timur-i Leng carried off thousands and probably tens of thousands of captive artisans of every sort from the lands his armies conquered. We can only guess at the numbers of persons who, while not enslaved, were forced by the circumstances of the campaigns of the Mongols and Timur, as well as numerous other invaders, to leave ravaged cities, towns, and countrysides and to seek out better and more peaceful lands. Then there were persons who, while remaining free, were forced to resettle in alien lands as part of a policy of systematic population readjustment followed by either their conquerors or the polities into which they had been born. This phenomenon was at

least as old as the ancient Assyrians, who carried the so-called Ten Lost Tribes of Israel into captivity, resettlement, and change in ethnic identity, and it was practiced during this half millennium by the Incas as a means of integrating recently conquered peoples into their fast-expanding empire.

Not all disasters and crises precipitate mass movements of peoples, however. From what we know of the devastating onslaught and immediate effects of the Great Pandemic that swept through Eurasia and North Africa in the mid-fourteenth century, it does not appear likely that significant numbers of persons fled their locales in order to escape the disease's impact. Possibly new evidence will force a reevaluation of that conclusion.

In addition to forced migrations, there were the voluntary movements of peoples in groups ranging in size from a family to huge confederations of tribes. In most cases they were seeking better lands and opportunities, such as the Polynesians who discovered and settled Aotearoa (present-day New Zealand). In some cases they took advantage of the weakness of a people or state into whose lands they moved. Often, but not always, these migrations were accompanied by violence, such as the Turkic movement into Byzantine Anatolia and the migration of the Aztecs into central Mexico. In other cases they re-

settled themselves in lands into which they were invited (or ordered) by a state that desired their presence there for political and/or economic reasons. In this manner, the Chinese empire had already for centuries encouraged migration of Han Chinese into border areas that were coming under direct governmental control and continued these policies during this 500-year period. Peasant farmers were particularly important in this process.

Outsiders can also be invited in, such as when a state invited in border “barbarians” to serve as mercenaries in its armies, thereby not only building up its frontier forces but also pacifying potential or past enemies. Such was often the case along the Chinese northern and western borders. This policy could and sometimes did prove counterproductive, as when the Jurchen (Ruzhen), whom the Northern Song dynasty used as allies in its struggles against the Khitan (Qidan), turned on the Chinese empire and carved out the Jin empire along the Yellow River in the traditional heartland of China.

All of these migrations must be distinguished from the ways of pastoral nomads, who normally follow fixed seasonal patterns and pathways, and do not deviate from these annual cycles and well-established pasturages unless extraordinary factors occur to force them to do otherwise. Such was the case when various Central Asian tribes and confederations abandoned their regular patterns of seasonal migration and became a people on the move, pushing into alien lands at the expense of the people already settled there. The most dramatic and historically significant example of this was, of course, the carving out of the Mongol empire in the thirteenth century.

Whatever the motives or factors behind re-settlements such as these, each and every movement contributed to significant shifts in the demographic face of the world well before the globalization that followed upon the heels of the European colonization of the Americas.

—*Alfred J. Andrea*

North African and Arab Migrants to Sub-Saharan Africa

Migrants from North Africa and the wider Arab world significantly altered the cultural and reli-

gious landscapes of sub-Saharan Africa between about 1000 and 1500. Not only the expansion of Islam via state building but also the regular movements of travelers, merchants, pilgrims, clerics, artisans, and others created significant and lasting connections across the regions of West Africa and coastal East Africa. Opportunities for conversion and commerce led to political, social, and economic contributions to urban growth.

Ancient commercial networks in both regions attracted Muslim merchant-clerics with the spread of Islam after the seventh and eighth centuries CE. Converts to the Islamic faith grew in urban enclaves, which became crucibles for the transfer of language and culture.

By the fourteenth century Berber and Arab migrants in larger numbers had spread across the lands west and south of Egypt (as far as Mauritania), known collectively as the Maghrib (the West). Largely pastoralists and mercenaries, they enabled warlords and states to collect taxes and tribute along the caravan routes at the desert's edge.

Muslim elements similarly spread down the Red Sea and Indian Ocean into East African coastal settlements. Converted Oromo and Sidama pastoralists in the Horn of Africa traded salt and other goods. By the thirteenth century commercial agents had planted deep local roots through intermarriage in and around urban centers. The mix of bilingualism and imported religious education furthered the cultural and social changes in the African communities that housed migrants, creating by the fifteenth century what one Islamic writer considered to be the hemisphere's southern fringe of Islam.

Migrants contributed to West Africa's vibrant commercial connections between the hinterlands of the Senegal and Niger rivers and most of Eurasia. In East Africa, Muslim merchants took advantage of the pattern of monsoon winds to build the region's maritime trade with parts of South, Southeast, and East Asia. Successful merchants ruled their sultanates from coastal sites, such as Zanzibar, Pate, Lamu, Kilwa, Mombasa, and Mogadishu. The widespread adoption of the migrant's religion also stimulated intellectual life and introduced unifying features such as the Arabic language and script and the Islamic ounce (weight system) across vast regions of the continent.

➤ MANSA MUSA BRINGS NORTH AFRICAN SCHOLARS TO MALI

The pilgrimage of Mansa Musa to Mecca and Medina (1324–1325) secured the reputation of Timbuktu as the spiritual and intellectual capital of Islamic West Africa. A devout Muslim, the ruler of Mali is said to have carried with him forty mule-loads of gold and built six mosques along the way. According to the great chronicler of Timbuktu, Mahmud Kati, when the king reached Mecca, he offered vast sums of gold to any cleric-scholar who would follow him back to his homeland when he returned. Not only scholars, but also manuscript books made the journey. By the sixteenth century, the Timbuktu book trade was reportedly more lucrative than any other business. The scholar Mahmud Kati himself owned a vast library and more than 3,000 of the books from his collection are still preserved by Kati's West African descendants.

—Candice Goucher

The African languages most heavily influenced were Hausa and Kiswahili, both of which became regional *linguae francae*, especially in urban centers. The spread of literacy resulted in the conversion of oral traditions into written records after the tenth century. In West Africa, *tarikhs* were traditional histories written down in Arabic that recorded the genealogies and local legends. Ruling groups in coastal East Africa professed Islam, and their cultural heritage reflected historical links with the Arabian and Persian gulfs as well as African groups. While not all the places mentioned by chroniclers can be matched to archaeological sites, it is clear that the widespread exchange of African gold and ivory for Chinese porcelain, silks, and other luxury goods created a cosmopolitan lifestyle for city dwellers and elites.

—Candice Goucher

Bibliography

Dunn, Ross E. *The Adventures of Ibn Battuta, A Muslim Traveler of the 14th Century*. Berkeley and Los Angeles: University of California Press, 1986.

Oliver, Roland, and Anthony Atmore. *Medieval Africa: 1250–1800*. New York: Cambridge University Press, 2001.

The Turkic Invasions of India

The Turkic invasion of India began in the eleventh century CE by the Turkic people of Afghanistan under the leadership of Mahmud of Ghazna (971–1030) and was continued by the later Ghaznavid sultans for the next 175 years. At its height, the Ghaznavid empire stretched from Afghanistan into eastern parts of the Punjab in India, and its major cities were Kabul, Ghazna, and Lahore. By 1160, another Turkic group of warriors from Afghanistan, the Ghurids, under the leadership of Muhammad of Ghur (r. 1173–1206) conquered Ghazna. By 1187, the Ghurids assumed control of Lahore and continued raiding into India. Ghurid control of India lasted until 1215.

Prior to the Turkish conquests, the northern alluvial plain of Punjab was home to internecine conflict among the various Hindu and Muslim Rajput kingdoms, the Rajputs being the major *jati* (subcaste) of the warrior Kshatriya *varna* (caste) of northwestern India. Also present in the area were the Ismaili Shia kingdom of Multan and Buddhist and Jain communities of missionaries. Mahmud of Ghazna's defeat of the Hindu Shahi king Jayapala in 1001 marks the beginning of the intensified Islamic conquest of northern India. Mahmud was a staunch orthodox Sunni and saw himself as the defender of the Abbasid caliphate. Consequently, he declared a jihad against the rival Ismaili Fatimid caliphate that had made inroads into India. As such, he called for *ghazi* troops, or "warriors of the faith," to push into the subcontinent and defend Islam against heterodoxy. The Ghaznavids launched nearly constant raids into India, and these operations were financed largely through looting and destruction of the rich Hindu temples and Buddhist monasteries that were prevalent in northern and western India.

After defeating the Ghaznavids in 1186, Muhammad of Ghur continued raids into India. Unlike the jihadist Ghaznavids, the Ghurids waged campaigns based on expansion, conquest, and desire for booty. The Ghurid military was formi-

dable and swept the entire Gangetic plain all the way to Bengal. The Senas, Shaivite Hindus (worshippers of Shiva), attempted to resist the Ghurid attacks in Bihar and Bengal by installing defensive garrisons near the walled citadels of two major Buddhist monasteries at Odantapuri and Vikramashila (both located in present-day Bihar). In 1199–1200, the Ghurids attacked and razed them, thus almost totally destroying the Buddhist presence in northern India. The death of Muhammad of Ghur in 1200 was effectively the end of Ghurid central control in India. By 1206, Turkish slave soldiers founded the Delhi sultanate, and several Turko-Afghan dynasties ruled from the city of Delhi until 1526.

The Turkic invasions of India are a source of controversy and tension for historians of the subcontinent. Some scholars point to the destruction of Hindu temples, the virtual eradication of Buddhism from India, and the casualties of constant warfare as devastating consequences of the Islamic conquest. Other scholars contest the loss of life and degree of destruction, maintaining that Hindus were always treated as *dhimmi* (protected people), and Muslim generals often co-opted Hindu warlords to do much of the fighting and looting. Furthermore, the Turkic presence, specifically during the Delhi sultanate, created a great cultural renaissance in language, architecture, and religion. Sufism, or mystical forms of Islam, spread deeply into the subcontinent, created new forms of philosophy and literature, and attracted many native Indians to Islam who perceived its mystical forms of devotion as consonant with Hindu bhakti and Buddhist Mahayana traditions. Persian as a literary language and Persian thought and architectural forms also became an integral part of the rich cultural matrix of Indian lands subject to Muslim authority.

—Ruma Niyogi-Salhi

Bibliography

- Bosworth, Clifford Edward. *The Later Ghaznavids: Splendor and Decay; The Dynasty in Afghanistan and Northern India, 1040–1186*. New Delhi: Munshiram Manoharlal, 1992.
- Jackson, Peter A. *The Delhi Sultanate: A Political and Military History*. Cambridge: Cambridge University Press, 2003.

➤ MAHMUD OF GHAZNA—THE SWORD OF ISLAM

Mahmud of Ghazna (971–1030) was the son of a Turkish slave and personal guard to a Persian Samanid general. After the overthrowing of the Samanids, Mahmud rose to become an independent ruler, or sultan, founding the Ghaznavid dynasty that stretched from eastern Iran to the Yamuna River in India. As successor to the Samanids, Mahmud consolidated all the smaller Afghan kingdoms and eastern Iranian states under his authority. Among his many accomplishments, he is remembered for his staunch Sunni orthodoxy, and his jihads against Shias and Hindus earned him the sobriquet “The Sword of Islam.”

Mahmud turned the city of Ghazna into the major cultural and Sunni religious capital in Central Asia. He founded madrassas and built monumental architecture, gardens, palaces, and caravansaries. Furthermore, he patronized important scholars such as Ferdowsi, author of the *Shahnameh*, and Al-Biruni, author of *The History of India*. Mahmud promoted Persians into his court administration and favored Persian language and customs over Turkish ones.

—Ruma Niyogi-Salhi



Mahmud of Ghazna, leader of the Ghaznavid dynasty, is portrayed in Rashid-al-Din's *The Arrival of an Indian Embassy before Sultan Mahmud of Ghazna*, painted in the late fourteenth century. Ghazna, who ruled from 998 to 1030, expanded the dynasty into present-day Iran and northern India. (Burststein Collection/Corbis)

Wink, André. *Al-Hind: The Making of the Indo-Islamic World*, Vol. 2, *The Slave Kings and the Islamic Conquest, 11th–13th Centuries*. Leiden, Netherlands: Brill, 2002.

Before the Mongols—The Continuing Movement of Border Peoples into China—Khitans (Qidan), Tanguts, and Jurchens (Ruzhen)

Between the fall of China's Tang dynasty in the early tenth century and the conquest by the Mongols in the thirteenth century, northern and northwestern China saw the creation of many peripheral states as nomadic and seminomadic groups wrestled for control and the right to extract tribute. In some cases these nomadic groups even took control of Chinese territory, ruling it for extended periods.

Early in the tenth century the seminomadic Khitans conquered portions of northern China, Mongolia, and Manchuria under the leadership of Yelu Abaoji. He seized the reins of power within the tribe, taking complete control and ending

the Khitans' tradition of a three-year rotating leadership. The Khitans had tried many times before to set up an independent state but were always thwarted by China. Finally in the political turmoil that accompanied the fall of the Tang dynasty, they set up a dynasty of their own called the Liao (907–1115). Their dual governmental organization combined Khitan traditional law with Chinese bureaucratic methods. Under this dynasty, Chinese-style rule was introduced deeper into Mongolia than ever before. The Liao divided their empire into two parts: the northern section administered the tribal areas and tributary states, while the southern section dealt with the Chinese-inhabited areas. Chinese under the Liao dynasty were ruled as a separate tribe. Because the Khitans had already begun developing their own script based on Chinese and Uighur before they completely conquered northern China, they did not sinicize as quickly or as completely as other peripheral groups. Liao emperors continued their nomadic ways, moving seasonally from one camp to another and expecting their Chinese officials to visit them wherever they happened to be at that time.

► SINICIZING THE INVADERS

The Chinese have a long history of sinicizing their enemies. Rough barbarian groups took readily to the silks and civilization of China. The Chinese government used that interest in the luxuries China had to offer to “civilize” real or potential invaders. Their methods included paying tribute in silks and other goods, marrying Chinese princesses (often servant or nonnoble women who were elevated for the purpose of the diplomatic marriages) to “barbarian” rulers, presenting foreign rulers with Chinese titles, and trade.

By creating a dependence on Chinese goods, the Chinese weakened the tribes and kingdoms along their periphery. One Turk warned of the difficulties of such dependence and cautioned his people about becoming too familiar with the Chinese:

“They [the Chinese] gave us gold, silver, and silk in abundance. The words of the Chinese people have always been sweet and the materials of the Chinese people have always been soft . . . having

heard these words, you unwise people went close to [the Chinese] and were killed in great numbers. If you go towards those places, O Turkish people, you will die; if you stay in the land of Otuken [Mother Earth—the ancestral central Asian homeland of the Turks], and send caravans from there, you will have no trouble.”

Despite the warning, the lure of China's luxury goods and civilization continued to attract peripheral groups, eventually bringing them under China's control.

—Rebecca Wendelken

Source

Quoted from Luc Kwanten, *Imperial Nomads: A History of Central Asia, 500–1500* (Philadelphia: University of Pennsylvania Press, 1979), 29; Larry W. Moses, “T'ang Tribute Relations with the Inner Asian Barbarians,” in *Essays on T'ang Society*, ed. J. C. Perry and B. L. Smith (Leiden: Brill, 1976), 83–85.

The Liao dynasty continued its policy of indirect control, but to the northern peoples its rule seemed harsh. Tribes under Liao control frequently rebelled. One of these groups, the Jurchens of Manchuria, protested against the abusive Liao officials and the large tribute payments they were forced to make. The final insult came when the Liao emperor humiliated the Jur-chen leader by ordering him to dance. In the 1120s the Jurchens overthrew the Khitans, who had been weakened by numerous rebellions. The Jurchens took the dynastic name of Jin (gold) and ruled northern China from 1115 to 1234. Although Khitan rule had ended, its memory lived on in the name “Cathay,” a term used to indicate northern China.

Many Khitans fled the new regime, but others stayed and worked for the Jurchens, who had retained the Liao political system. Unlike the Khitans, the Jurchens were more quickly and completely sinicized, even adopting Chinese philosophy. The Jurchen emperor, like the emperor of China, titled himself a “son of heaven.” The Jurchens successfully held more of China than the Khitans, eventually ruling all of northern China. The Jurchens made greater use of Chinese advisers and officials, and a far greater percentage of the population of the Jin dynasty was Chinese. The Jurchens resettled much of their population in Chinese territory, where daily contact with Chinese broke down Jurchen traditions, which were inadequate for life in a settled society. To survive, the Jurchens became Chinese in culture and politics.

In 1142 the Jurchens signed a peace treaty with the Southern Song dynasty. Despite the treaty, the Jurchens attempted in 1161 to invade Song lands and take more territory but failed. The Khitans who remained under Jin rule revolted several times between 1161 and 1177. Some of them collaborated with Mongols who chafed under Jin administration. Some Khitans who moved westward into Central Asia to avoid Jurchen rule formed a new empire, the Qara Khitai. In 1141 they fought and defeated the Seljuk Turkish ruler, Sanjar, in Samarqand. Known as the XiLiao (Western Liao) dynasty by the Chinese, at the height of their power their empire stretched from the borders of China to the Aral Sea. It remained intact until 1234 when the West-

ern Liao fell to the Mongols after nearly 25 years of fighting.

In 990 the Tanguts, a Tibetan group, created a new kingdom in northwestern China that the Chinese knew as XiXia (Western Xia, 990–1227). Originally nomadic, the Tanguts became sedentary, settling down and building towns and numerous walled cities. The XiXia dynasty controlled the Gansu Corridor and the Ordos desert plateau, both of which lay to the northwest of the Chinese heartland, and the kingdom was rich because it controlled the trade routes that ran through these two areas. Although the dynasty entered into a treaty with the Mongols, it refused to send troops for the Mongols’ western campaigns, violating their treaty and sealing its fate. Once the Mongols defeated Khwarazm in the west, they turned on the Tangut cities and destroyed them along with the XiXia empire.

—Rebecca Wendelken

Bibliography

- Biran, Michael. *The Empire of the Qara Khitai in Eurasian History: Between China and the Islamic World*. Cambridge: Cambridge University Press, 2005.
- Hsueh-man Shen, ed. *Gilded Splendor: Treasures of China's Liao Empire (907-1125)*. New York: Asia Society, 2006.
- Kwanten, Luc. *Imperial Nomads: A History of Central Asia, 500-1500*. Philadelphia: University of Pennsylvania Press, 1979.
- Morgan, David. *The Mongols*. Oxford, UK: Blackwell, 1986.
- Tillman, Hoyt Cleveland, and Stephen H. West, eds. *China under Jurchen Rule*. Albany, NY: SUNY Press, 1995.

Ming Migration to Yunnan

The Ming expanded into regions that had previously not been part of China but had been part of the Mongol empire, with Yunnan in the southwest the primary region for this expansion. Yunnan only became a province of China in 1382; prior to this it had been outside of Chinese dominance, although Chinese influence had reached into the region. The Mongols conquered Yunnan in the period 1253–1254, and it served them well as a base of operations not only against the Southern Song empire but then for an unsuccessful

► NON-HAN ETHNICITIES IN YUNNAN

Prior to the Mongol conquest of Yunnan, it was known as the Kingdom of Dali, which dated back to 937, and was ruled by the Duan dynasty of Bai ethnicity, although it claimed Han ancestry in order to better relations with China. Bai people remained a considerable presence during the Ming era and occupied much of the western part of the province.

Other significant groups existed alongside the Bai, all of them speaking different languages and having distinct cultural identities. The Yi, or Lolo, dominated the central and northern parts of Yunnan during the Ming period. During the Yuan period large numbers of Muslims, often of mixed ancestry, moved into the region as part of the Mongol incorporation of Yunnan. In addition Tibetans, Dulong, and Nu people occupied other parts of the northern and western parts of Yunnan but in smaller numbers than the Yi or Bai. In the southern parts the Dai and other groups speaking Tai languages comprised the majority of the population. Due to their language they maintained close contacts with many areas of Southeast Asia. Meanwhile in the mountainous eastern regions of Yunnan, the Miao and Yao along with smaller groups coexisted but had linguistic and cultural differences.

Due to the vast ethnic, linguistic, and cultural differences among the populations of Yunnan, the Ming had a difficult time establishing their control over the region. Only with the immigration of a substantial Han population into the region could effective and permanent Chinese domination and integration into the empire occur.

—*Timothy May*

attempt at expansion into the northern regions of Southeast Asia. Because Yunnan possessed pasture land, it became an important area for Mongol garrisons. Many of the Mongols who failed to return to Mongolia after the collapse of the Yuan state were stranded in Yunnan, and with the collapse of Mongol rule the Ming inherited Yunnan. Yunnan was peculiar, as it not only possessed a Mongol population but, like much of southwest China, had an indigenous population that was largely non-Han Chinese.

Initially much of the Han, or ethnic, Chinese migration into Yunnan was motivated by a de-

sire to escape the chaos of the Red Turban Rebellion that raged from the 1340s to 1368 and eventually became the vanguard of a China-wide rebellion that drove the Mongols out of China. The movement began as the White Lotus Society, a Buddhist secret society that had a millenarian shade to it, as its members expected the imminent arrival of the Maitreya Buddha (the Buddha of the Future), a promised messiah-like figure. Gradually the movement underwent a metamorphosis into a militant rebellion that included changing head coverings from white to red, deemed a more auspicious color than white, and thus becoming known as the Red Turbans.

In the course of the Red Turbans' successful attempt to drive out the Mongols, chaos reigned in many areas until the Ming dynasty established its hegemony over China. After fears of a return of the Mongols subsided, the Hongwu Emperor (r. 1368–1398) turned his attention to dealing with the Red Turbans, of which he was a former leader. Rivalry among the Red Turbans' leadership had always been high, resulting in not all of them recognizing his rule; hence conflict ensued. Although Yunnan was not a center of Red Turban activity, it bordered Sichuan, which was a Red Turban stronghold. In the early 1370s Ming armies crushed the Red Turbans of Sichuan, and the fighting sent many additional peasants fleeing to the safety of Yunnan.

Although the Yuan dynasty fell in 1368, the Ming court did not deal with the Yunnan Mongols until 1381. The court desired not only to end any potential threat from the Mongols but also to bring the region under its administrative authority. This decision, which resulted in a 300,000-man Ming army being sent into Yunnan, marked the official beginning of Han Chinese migration to Yunnan. With the conquest of the region in 1382 Yunnan became part of the Ming empire, with the army permanently stationed there. Along with the soldiers came their wives and children, thus forming a sizable Han population but still a minority within Yunnan. The majority of the population consisted of Yi, Tibetans, and numerous Tai-speaking groups.

The Ming, like the Mongols, also sought to expand into Southeast Asia from Yunnan but with similar negative results in the early fifteenth century. Nonetheless as numerous armies entered

the area, the process cemented Yunnan to the Ming state and brought in more Han settlers. More troops also came to quell unrest and various rebellions among the non-Han peoples. It also became the Ming empire's penal colony. Political offenders (both prisoners and those who lost favor in the court) were sent to die in Yunnan, as it was thought that the climate produced miasmas that would kill anyone who spent too much time there. Over time this idea faded, and Yunnan's varied geography of mountains, lakes, and pastures attracted artists and scholars interested in studying the indigenous population. The exile of various persons to Yunnan also served strategic ends, removing many of the entrenched aristocrats' influence at court who, once in Yunnan, could serve as Ming officials.

Although there were border raids into Yunnan from Tibet and Southeast Asia, the Ming on their southern and southwestern frontiers did not face anything even approaching the dangers of raids on China's northern and northwestern frontiers. Consequently, the spread of Chinese culture and influence into Yunnan proceeded at a fairly even pace.

—Timothy May

Bibliography

- Dreyer, Edward. *Early Ming China: A Political History, 1355–1435*. Palo Alto, CA: Stanford University Press, 1982.
- Mote, Frederick. *Imperial China, 900–1800*. Cambridge: Harvard University Press, 2000.
- Rossabi, Morris. *China and Inner Asia, from 1368 to the Present Day*. New York: Pica, 1975.

The Continued Dispersal of Turkic Peoples to the West

In the sixth and seventh centuries, various Turkic groups moved westward out of the Mongolian plateau as part of the Gok Turk empire or as a result of being displaced by the Gok Turks. The majority remained in the steppes north of the Caspian and Aral seas. Others, however, migrated southward into Central Asia and the Middle East, resulting in the eventual Turkification of some areas, such as Anatolia, or in military domination of regions where non-Turkic peoples remained the majority.

➤ TURKIFICATION OF ANATOLIA

The Turkification of Anatolia began with Seljuk penetration of Anatolia in the eleventh century. In 1071, Sultan Alp Arslan's (r. 1063–1071) victory at Manzikert not only crushed a sizable Byzantine army but also stripped the Byzantine empire of the central Anatolian lands, which up to that point had provided the Byzantine army with a large number of troops and taxes. Still, the Seljuks considered Anatolia an afterthought, although it eventually emerged as an independent state, known as the Sultanate of Rum (Rome). Other Turkic groups also continued to move into the region. As late as the early thirteenth century, however, most of the inhabitants of central Anatolia remained Greek and Christian, even though the Seljuks of Rum controlled the interior. The Turkification and Islamization of Anatolia gained momentum during the period of Mongol expansion, as numerous Muslim scholars, Sufis, and nomads fled from Iran, Iraq, and other eastern Muslim regions to Anatolia. The nomads were encouraged to move to the frontier to search for pasture, while the others settled in the cities. The syncretic form of Islam preached by Sufis found adherents not only among the nomads but also among the Christian peasants. Over time, the sedentary population acquired many of the practices and customs of the nomads, and a syncretic culture emerged that blended the Turkic and Greek elements together. In the Islamic world, Anatolia increasingly became known as *bilad al-Turkiyya*, or the land of the Turks, from which the name "Turkey" is derived.

—Timothy May

Turks gradually entered the Middle East as mercenaries and even more so as military slaves (mamluks) in the eighth and ninth centuries, but the major Turkish influx into the Middle East occurred in the eleventh century with the arrival of the Seljuk Turks, a branch of the Oghuz Turks who had been nomads in the region of present-day Kazakhstan. As they filtered south across the Amu Darya River, they slowly converted to Islam. In what started as a quest for pasture, the Seljuks soon established an empire by dominating much of Iran in the mid-eleventh century. Their leader, Tughril Beg (ca. 990–1063), found legitimization for Seljuk expansion and dominance by liberating

Baghdad and the Abbasid caliph from Shia domination in 1055 and was rewarded with the title of sultan (“the possessor of temporal power”).

As the Seljuks settled down to rule their empire, other Oghuz groups also entered the Middle East throughout the course of the eleventh and twelfth centuries. Realizing the potentially destructive encounters between the new, still nomadic Turks and the sedentary Iranian peasantry, the Seljuks encouraged and forced the newcomers to continue their westward path. Indeed, the majority of the western part of the Seljuk domains in Syria and Anatolia were conquered by these nomads, some recently converted to Islam. As such, they were viewed as *ghazis*, or warriors of the faith, although their zeal may have been fueled as much by glory, gold, and girls as much as God. Nonetheless, it legitimated the Seljuks as Defenders of the Faith. In return for the western pastures and the freedom to pillage and plunder on the borders, the nomads recognized the Seljuks as their overlords, even if it was only nominal recognition. Still, to an outsider all of the Turks appeared to be Seljuks. Furthermore, the military dominance of the Seljuks and the other Turkic nomads helped solidify the Turks as the ruling warrior class in Southwest Asia, the so-called Middle East. Ultimately, fratricidal struggles over succession to the sultan’s throne routinely fractured any unity within the empire. Indeed, by 1157, the empire ceased to exist in any practical form, although remnants and successor states emerged and ruled much-reduced territories.

While the Oghuz Turks penetrated the Middle East, another Turkic branch continued westward. In the tenth century, the Pechenegs settled in the Pontic steppes above the Black Sea in present-day Ukraine and Russia. While pastoral nomads had dwelled in the region for centuries, the Pechenegs are the first clear Turkic group, as others tended to be of mixed ethnicities ranging from Iranian, Turkic, and perhaps even some Mongolian at different periods. The Pechenegs dominated the western end of the Eurasian steppe and interacted with the East Slavs in the nascent Kievan state in Russia.

In the mid-eleventh century a new group, known alternately as Polovtsy, Cumans, and Kip-

chak depending on the source, entered the steppe. The Kipchaks cemented the Turkic identity of the Pontic and Caspian steppes. Indeed, they spread Turkic culture and customs into the Rus principalities as they formed alliances, married, traded, and engaged in military activities with the Rus. Even the Mongol onslaught in the thirteenth century could not change the Turkic identity of the steppe. The Golden Horde, the Mongol state that dominated the Black Sea and Caspian Sea states, ultimately adopted Kipchak Turkic as its primary language, a reasonable move since most of the population was Turkic.

—*Timothy May*

Bibliography

- Christian, David. *A History of Russia, Central Asia, and Mongolia*, Vol. 1. Malden, MA: Blackwell, 1998.
- Findley, Carter Vaughn. *The Turks in World History*. New York: Oxford University Press, 2005.
- McCarthy, Justin. *The Ottoman Turks: An Introductory History to 1923*. New York: Longman, 1997.

The Continuing Drang nach dem Osten—Western European Colonists Move Eastward

The drive for west-central Europeans to move east, known as the Drang nach dem Osten (drive to the east), contributed to the resettlement of more than 300,000 migrants during the High Middle Ages (ca. 1050–1350). Peasants, merchants, lords, and clergy left overpopulated regions in search of farmland, commercial interests, military power, and religious converts for new lands in central and eastern Europe.

Rapid population growth in the western regions of Europe required agricultural expansion. The large-scale migration of peasants to eastern territories began as early as the ninth century and continued well into the fourteenth century. Flemish, Danes, Saxons, and other Germanic speakers moved east of the Elbe River to Polish and Baltic regions to drain lowlands, clear farmland, and cultivate grain crops. Miners, smelters, and artisans from Swabia, Flanders, and Lower Saxony moved to silver and copper mines in Bohemia, southern Poland, and Transylvania.

Merchants, searching for new commercial markets and goods, moved to newly established cities in the east such as Riga. They expanded the northern European trade network and increased the economic power of the Hanseatic League in particular as they exported Baltic grain crops to the Netherlands, England, and France and imported Flemish cloth.

People also moved to eastern Europe for religious and political reasons. During the twelfth and fifteenth centuries knightly crusading orders, such as the Sword Brothers and Teutonic Knights, following a sense of divine mission and the appeals of Slavic rulers for protection against opposing neighbors, conquered territory from ethnic Prussians, Lithuanians, and Livonians during the Baltic Crusades. Germanic, Swedish, Danish, and Polish princes used this crusade to convert perceived heathens to Christianity and to expand their political realms eastward. To solidify their power and increase revenue, conquering lords hired recruiters to attract and settle migrants in their new domain. The Teutonic Knights maintained military control in the Baltic until their defeat at the Battle of Tannenberg in 1410 by an allied force led by King Władysław Jagiello of Poland.

Latin Christian missionary monks and bishops, long interested in preventing the Orthodox Church of Constantinople and its Russian affiliate from expanding farther into Slavic and Baltic regions, also saw the crusades as an opportunity to more aggressively convert the local populations and to end pagan practices in the area. Polish and Baltic leaders quickly converted to Latin Christianity and encouraged their subjects to do likewise.

The resettlement of so many people had an impact upon identity and ethnic formation. Although migrant groups in Transylvania established closed and ethnically homogeneous settlements, the majority of West-Central Europeans who moved to the rural regions integrated with local inhabitants. By contrast, urban centers such as Riga became ethnically heterogeneous as foreign merchants and lords interacted but did not necessarily mix with the local elite and residents. Merchants and artisans from west and central Europe also brought with them political

THE STATUS OF IMMIGRANT PEASANTS

Peasants who participated in the move to lands east of the Elbe River arrived as part of an organized effort to Christianize pagan Slavs. German lords and clergy, such as Frederick, archbishop of Hamburg and Bremen, attracted peasants to several colonies in Poland and the Baltic region by promising certain privileges. Peasants still had to pay tributes and tithe and had to obey canon law and their bishop. Yet they were free, owned land, regulated secular matters through their own courts, and established their own Catholic churches wherever they wished. Consequently, peasants, who hoped to escape serfdom in their homeland, willingly resettled east, at times traveling in wagon trains.

—Petra DeWitt

and commercial practices based on German customs and thus contributed to German becoming the language of trade in the Baltic region.

The Great Plague and poor harvests during the fourteenth century ended the medieval *Drang nach dem Osten*; however, the drive to move east remained a constant in the minds of west-central Europeans. Merchants expanded their trade activities into Euro-Asian commercial networks, Jews and Mennonites looked toward Poland and Russia as they escaped religious persecution in west-central Europe, and Germans for generations viewed the Euro-Asian borderland as a *Lebensraum* (living space).

—Petra DeWitt

Bibliography

- Andrea, Alfred J. *The Medieval Record: Sources of Medieval History*. Boston: Houghton Mifflin, 1997.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Kleinschmidt, Harald. *People on the Move: Attitudes toward and Perceptions of Migration in Medieval and Modern Europe*. Westport, CT: Praeger, 2003.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. New York: Oxford University Press, 1998.

Folk Migrations in Mesoamerica— Toltecs and Nahuas

The migrations of the Toltecs and of the Nahuas (Mexica) are distinct and in many ways opposite while complementary. The older of the two is the Toltec people. The Toltecs inhabited the large and powerful city of Tollan, identified by most modern scholars as Tula, Hidalgo. Their civilization was the fusion of two cultural groups that arrived sometime before 900 CE and merged with various indigenous peoples. One, related to the Nahuas, came from the northwest, having developed in the fertile riverine region known as the Bajío, the region drained by the Lerma River. The other group came up from the tropical lowlands of the Gulf Coast, a region known as the Huasteca, mostly along the Pánuco River. In Tula these two groups created a civilization that would influence all of Mesoamerica.

During their Post-Classic period (ca. 950–1150), the Toltecs used the techniques of irrigation, practiced long-distance trade, and developed the fine and practical arts. They gained renown as artisans. They had a powerful central government and worshiped the major gods of the Mesoamerican pantheon. Their agricultural and artisanal success allowed them to expand far beyond their capital, mostly by virtue of trade networks that stretched far into southern Mexico

and possibly up into the U.S. Southwest. Yet the success was relatively short-lived. Around 1150 during the reign of the legendary Topiltzin Quetzalcoatl, Tula was wracked by civil war and also was attacked by nomadic tribesmen from the far north collectively known as the Chichimeca. The opponents were led by the also legendary Huemac. Topiltzin Quetzalcoatl was forced to abdicate and was either sacrificed or fled. The result was that there was a diaspora of Toltecs, mostly to the south and southeast. Some migrated to the not-too-distant Valley of Mexico. Others followed routes of trade and conquest and occupied part of the Yucatán lowlands in the Mayan city known as Chichen Itza. Still others fled to sister cities nearby such as Tulancingo (New Tollan) and Cholula. These fleeing Toltecs carried with them both the imperial aura of their fallen city and the technologies developed there. As a result, they came to found highly honored dynasties in the cities that accepted them. In the Valley of Mexico, for example, both the Acolhuas of Texcoco and the Culhuas of Culhuacan claimed descent from the Toltecs. Thus, the Toltec migration was a diaspora from Tollan throughout Mesoamerica.

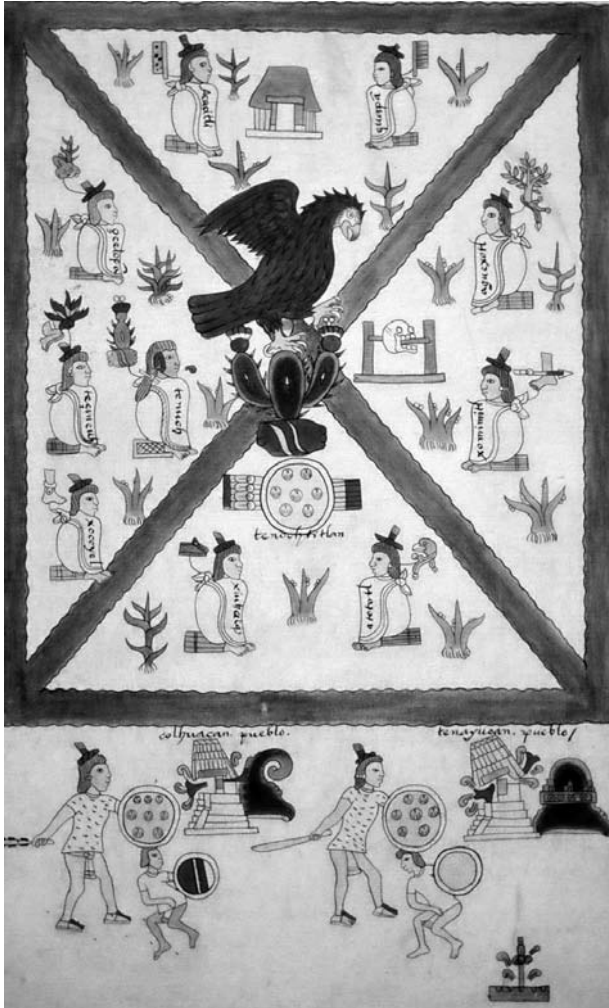
The Aztecs, also known as the Mexica, began a long migration of their own shortly before the fall of Tula. According to their legends, they began in the city of Aztlan (hence, Aztecs), located in a lake. They migrated for several generations, passing through several confrontations with other tribes and with their gods, always led on by their tribal god, Huitzilopochtli (Hummingbird on the Left). Scholars have concluded that the migration legends of the Mexica indicate that they started in the northwestern regions of modern Mexico and slowly migrated toward the Valley of Mexico. As such, they were one of many nomadic peoples who made up the Chichimecas, who moved from the north when climatic conditions began to make the region more arid, into the better-watered central zones. Eventually in the thirteenth century, they entered the Valley of Mexico.

The Valley of Mexico was already fairly densely populated and home to at least three major cities. The Mexica gained permission to settle near a rocky outcropping on the western shore of the central lake, Lake Texcoco, in a place

➤ LEGEND OF THE EAGLE AND THE SNAKE

Popular legend has it that the omen that the Mexica saw when they founded their city was an eagle perched on a cactus with a serpent in its mouth. This image is found on the Mexican national flag and on Mexican currency and is closely identified with the Mexican nation. Nevertheless, the snake is a new addition. Originally there was no snake, only the eagle and cactus. In all likelihood, someone mistook a scroll near the bird's mouth for a snake. The symbolism of the image is important. The eagle was a representation of Huitzilopochtli. The cactus was important for its fruit, the prickly pear, which was a symbol for a human heart. Thus, the eagle on the cactus represented human sacrifice to Huitzilopochtli.

—John F. Schwaller



Frontispiece from the Codex Mendoza, about 1540. According to legend, Huitzilopochtli, the Aztec war god, told the Aztec people that a divine sign would guide them to their new homeland. After hundreds of years of wandering, the Aztec came into the Valley of Mexico and found the sign—an eagle perched atop a cactus. (Bridge-man Art Library)

called Chapultepec. They gained support from several of the local city-states and began to intermarry. They adopted the agricultural methods used in the valley, including reclaiming land through the *chinampa* system of “floating gardens.” Moreover, they proved to be strong warriors and assisted the Culhuas in their wars with other valley cities. By the early fourteenth century the Mexica had gained enough status to be recognized by the powerful Culhua empire of the southwestern corner of the Valley. Yet when a Mexica prince married a Culhua princess, the

Mexica sacrificed her to the god of regeneration and springtime, Xipe Totec. This infuriated the Culhuas, who attacked the Mexica and drove them from Chapultepec into Lake Texcoco. There the Mexica took refuge on two low-lying mudflats, where they saw an eagle perch on a cactus, an omen that this was where they should found their city and cease their migrations. Traditionally this has been dated as 1325 CE.

—John F. Schwaller

Bibliography

- Davies, Nigel. *The Aztecs: A History*. Norman: University of Oklahoma Press, 1980.
- Davies, Nigel. *The Toltecs: Until the Fall of Tula*. Norman: University of Oklahoma Press, 1977.
- Diehl, Richard A. *Tula: The Toltec Capital of Ancient Mexico*. London: Thames and Hudson, 1983.
- Heyden, Doris. *The Eagle, the Cactus, the Rock: The Roots of Mexico-Tenochtitlan's Foundation Myth and Symbols*. Oxford, UK: BAR International, 1989.

Folk Migrations in South America and the Caribbean—Caribs, Arawaks, Chibchas, and Tupi

When Columbus landed in the Caribbean during his second voyage, he encountered two main ethnic groups, Tainos, who belonged to the Arawak linguistic family, and the Caribs. The Tainos described the Caribs as savage, cannibalistic intruders to their lands. The Caribs are most often described as a migrant group originating in the Brazilian Amazon and spreading throughout the Lesser Antilles. However, the real origin for this group of islanders is shrouded in mystery that archaeological, ethnohistorical, and linguistic evidence has not yet resolved.

European colonists documented several versions of a Carib migration myth. One myth of the Dominica Island Caribs was recorded in the 1600s and tells the journey of Kalinago, the ancestor of all Caribs, and his family from the shores of the Guianas. The myth also tells of the conquest of the Caribbean Arawaks, who also originated in South America. Another myth from St. Vincent tells the story of the Caribs living in what are today the Guianas. They were under Arawak rule, fought against them, and fled to the islands. In this myth, no groups of people were

➤ WERE THE CARIBS CANNIBALS?

When Christopher Columbus landed in the Bahamas in 1492, he befriended a group of Taino villagers. Months later Columbus would sail to the island of Hispaniola after Taino warnings of cannibalistic activities on both this island and Cuba. Carib cannibalism has maintained a mythical status, but its truth is still debated by scholars.

According to Columbus, although not welcomed with the enthusiasm of the Taino, the Caribs of Hispaniola were generous once he told them that the Spaniards were Christian. Columbus's Bahamian guides, however, would not even walk on the deck of the ship for fear of the Carib practice. Columbus soon believed that *canibas* and *caribas* were actually stylized labels for *Khan-ibas*, those under the rule of the Grand Khan. Columbus still thought that he was on the right track to the Indies and discounted the Tainos' worries. Indeed, firsthand accounts of cannibalistic activities are scarce, and some researchers conclude that later Europeans exaggerated the use of this practice to justify slave raiding. Others

conclude that the Tainos gave Columbus false information to prevent loss of trade to their islands or to persuade Columbus to land on an island closer to their home.

However, the close relationship between the Caribs and populations in South America may lend support for cannibalistic activities in the Caribbean. Anthropologists have found cannibalism to be extensive throughout the South American lowlands. In addition, both Father Bartolomé de Las Casas (ca.1484–1566) and Father Raymond Breton (1609–1679) recorded cannibalism as part of Carib culture. The priests did not have any reason to lie about their observations and were the most reliable ethnographers for the Caribbean populations of the sixteenth and seventeenth centuries. It is unknown whether these instances of cannibalism were nutritional or symbolic.

It appears that although Carib cannibalism is still debated, evidence may support its reality in both the precontact and postcontact Caribbean.

—Melissa Sue Halverson

previously living in the islands. The third myth tells the story of the Caribs stealing the Caribbean Islands from the Guianas Galibis tribe. A German explorer writes that the Caribs originated in the Parana River valley of Argentina with subsequent conquest of northern South America and the Caribbean. The details of the myths are not as important as the one binding tale: a migration from South America to the islands.

The archaeology of the Carib migration is difficult to interpret. The Carib islanders used ceramics defined as the Suazoid series. This pottery has been dated to 1100 CE and forms a complete break with the preceding Saladoid series. However, archaeological evidence supporting similar ceramic styles in South America (and hence the migration) is scant. Indeed, the ceramic series attributed to the Caribs is unique to the Lesser Antilles and is found in greatest quantity in Barbados, an island on which a Carib occupation is not reported. In addition, self-identified Caribs of what is today Saint Kitts used post-Saladoid but not Suazoid ceramics. However, historic Carib ceramics are similar in

appearance and style to Carib pottery from the Guianas. Why aren't Suazoid Carib ceramics similar to historic Carib ceramics?

When evaluating the ethnohistorical and linguistic knowledge, the truth concerning Carib origins is still muddled. A seventeenth-century Carib dictionary tells us that the Island Caribs at the time of European contact called themselves Kalinago. This evidence supports their origin myths because the tribes in Surinam and the Guianas call themselves the Kalina. The Island Caribs were unique in having three separate spoken languages: one spoken by men, one by women, and one used for special occasions. The women's language is clearly Arawakan in origin, probably due to the fact that so many of them were captives. This language is similar to that of the Caribbean Tainos and other Arawak peoples from Venezuela. It is thought that the Carib language split from this original language around 1000 BCE. The women's language still owes 22 percent of its vocabulary to mainland Kalina, with the men's language similar but with a higher percentage of Kalina words.

Experts have evaluated this evidence but disagree on its message. Allaire believes that the Island Caribs either migrated much later than originally thought or that the Island Caribs acculturated with the mainland tribes through intensive trade. He favors the acculturation hypothesis, however, because it supports the archaeological evidence. Davis and Goodwin believe that the Island Caribs were actually Arawaks with a long Caribbean occupation whose cultural and linguistic similarities to South American groups formed after the evolution of intensive trade, raiding, alliance, intermarriage, and gift exchange with the region. Taylor argues that the Kalina vocabulary in the men's Carib language supports a migration from South America. Taylor and Hoff argue that the men's Carib language is actually a form of pidgin that assisted in inter-island trade and communication. This hypothesis argues against Allaire's recent migration model. Researchers are still debating Carib origins, with the hope that future archaeological work both in the islands and in South America will contribute to their knowledge.

—Melissa Sue Halverson

Bibliography

- Allaire, Louis. "The Caribs of the Lesser Antilles." In *The Indigenous People of the Carib*, edited by Sam Wilson. Gainesville: University of Florida Press, 1997.
- Allaire, Louis. "On the Historicity of Carib Migrations in the Lesser Antilles." *American Antiquity* 45 (1980): 238–245.
- Church, Colonel George Earl. *Aborigines of South America*. London: Chapman and Hall, 1912.
- Davis, Dave D., and R. Christopher Goodwin. "Island Carib Origins: Evidence and Nonevidence." *American Antiquity* 55 (1990): 37–48.
- Granberry, J. "West Indian Languages: A Review and Commentary." *Journal of the Virgin Islands Archaeological Society* 10 (1980): 51–56.
- Honychurch, Lennox. "Crossroads in the Caribbean: A Site of Encounter and Exchange on Dominica." *World Archaeology* 28 (1997): 291–304.
- Taylor, D. *Languages of the West Indies*. Baltimore: Johns Hopkins University Press, 1977.
- Taylor, D., and B. J. Hoff. "The Linguistic Inventory of the Island Carib in the Seventeenth Century: The Men's Language—A Carib Pidgin?" *International Journal of American Linguistics* 46 (1980): 301–321.
- Wilson, Sam. *Hispaniola*. Tuscaloosa: University of Alabama Press, 1990.

Folk Migrations in North America—Muskogeans, Iroquois, Algonquians, Sioux, and Athabascans

A rich archaeological record and oral traditions help archaeologists and cultural anthropologists to reconstruct the diverse folk migrations of the influential Muskogeans, Iroquois, Algonquians, Sioux, and Athabascan nations who occupied large portions of the present United States and Canada prior to the arrival of European immigrants. Such migrations allowed them to make optimum environmental adaptations, establish and maintain elaborate trade networks, and adjust to changing social and political conditions associated with intertribal warfare.

The Muskogee, or Creek, Indians were a powerful confederation of tribes who lived in central and northern Georgia, Alabama, and Florida. They first reached the Southeast via the Red River, whereupon they killed, displaced, or assimilated into the early mound building culture that occupied Georgia. Scholars indicate that they may have traveled from the eastern Rockies between 800 and 1000 CE. As a result of large populations and food scarcity, the Creek migrations continued, and they established numerous towns along the rivers and creeks connecting with the eastern branches of the Mississippi. After crossing the Mississippi around the confluence of the Ohio, they expanded their influence and soon thereafter began entering into diverse trading alliances with English, French, and Spanish colonists. In Charleston, South Carolina, the Lower Creek Indians from the Chattahoochee River established trade with the English as early as 1670. More formal agreements followed in the wake of the Yamassee War of 1715 and then again in 1733 and 1739 with the signing of the Treaty of Coweta in which the Creeks ceded land to Georgia.

The Northern Iroquois also established a powerful alliance called the Iroquoian Confederacy between 1400 and 1600. This included the five nations of New York: Mohawk, Oneida, Onondaga, Cayuga, and Seneca. It was once believed

WHAT ARE TODAY'S ATHABASCAN LANGUAGES?

Speakers of the Athabascan (Na-Dene) language family live in diverse geographic areas ranging from Alaska and northwestern Canada to southern Oregon, northern California, the U.S. Southwest, and northern Mexico. This language family is comprised of the Northern, Pacific Coastal, and Southern Athabascan branches. Today, the largest number of native speakers exists among the Navajo (Diné), who report an estimated 150,000 native speakers. Among this group are the famous U.S. Marine Corps code talkers of World War II. Within the Southwest, more than 15,000 people continue to speak Apachean languages. Athabascan languages are resilient in British Columbia as well where Carrier (2,000), Chilcotin (1,200), Babine-Witsuwit'en (500), Kaska (500), and Sekani (100) are spoken. In the Northwest Territories, Chipewyan (4,000), Dogrib (2,500), Slavey (2,500), and Gwich'in (700) are among the official languages. Smaller numbers of people speak Tutchone (400), Beaver (300), and Upper and Lower Tanana (130). Only a handful continues to speak Hupa, Tolowa, and Tututni of the Pacific Coastal branch. Similar risks are posed to the Han, Holikachuk, Koyukon, Tanacross, Upper Kuskokwim, Tanaina, and Ahtna languages.

—Alex K. Carroll

that the Saint Lawrence Iroquoians were ancestral to the Oneida or Onondaga Iroquois of the Northeast; however, these theories have since been proven untrue. Today archaeological evidence shows that each of the original five nations developed in the areas they occupied in historic times rather than arriving via long-distance migrations.

By contrast, many of the Algonquian groups carried out significant migrations. The Central Algonquians include the Ojibwas or Chippewas, Potawatomis and Ottawas, Illinois, and Miamis. The Ojibwas, also known as the Anishinabe or “original people,” migrated to Lake Superior from east of Montreal between 1000 and 1400 CE. Within oral narratives, Madeline Island of the Apostle Islands and the mouth of the St. Lawrence River are revered as the originating places. At Mackinac Island in Lake Huron southeast of

Sault Ste. Marie, the Three Fires, which includes the Ojibwas, Potawatomis, and Ottawas, split. The Ottawas moved to the northern shores of Lake Huron, the Potawatomis traveled to Michigan, and the Ojibwas journeyed to the southern shores of Lake Superior.

Tensions over land and resources sometimes resulted in intertribal conflicts between the Anishinabe and the neighboring Sioux, who underwent many migrations before settling into Wisconsin and Minnesota. Their first homeland comprised parts of Ohio, Illinois, Kentucky, and possibly Tennessee. From the Green River in Kentucky the Late Archaic period Sioux (3000–1000 BCE), described by archaeologists as the Indian Knoll Culture, migrated in many directions, following the rivers as well as the Allegheny Mountains and waterways of the Atlantic seaboard. They migrated through portions of Kentucky, Tennessee, Alabama, North Carolina, South Carolina, Virginia, Ohio, Indiana, and Illinois. Next, the Sioux established themselves in Wisconsin and Minnesota, developing the Effigy Mound Culture by 700 CE. They were profoundly influenced by people from the South whom archaeologists call the Hopewell Culture, which terminated around 1300. Under this influence, they established themselves within the Ohio Valley and maintained extensive trade routes along the Mississippi, which the Europeans noted at first contact. The Sioux remained in the woodlands until the late 1700s, whereupon they relocated to the Great Plains.

The Athabascans made large migrations before settling into the areas where they were found at the time of first European contact. Approximately 2,000 years ago, Athabascans began migrating from southern Alaska. In multiple migrations they journeyed east across Canada, down the northern California coast, through the Southwest, and into northern Mexico. The Diné (Navajo) migrated from western Canada to the Southwest around 1350 CE. Following the occupation of the traditional lands of the Paiute and Hopi of the Colorado Plateau, they began to engage the Pueblo villages in trade. The Apaches continued their migrations, settling in portions of Arizona, New Mexico, Texas, and Oklahoma around 1500.

—Alex K. Carroll

Bibliography

- Ethridge, Robbie. *Creek Country: The Creek Indians and Their World, 1796–1816*. Chapel Hill: University of North Carolina Press, 2003.
- Fernald, Theodore B., and Paul R. Platero, eds. *The Athabaskan Languages: Perspectives on a Native American Language Family*. New York: Oxford University Press, 2000.
- Gibbon, Guy E. *The Sioux: The Lakota and Dakota Nations*. Malden, MA: Blackwell, 2003.
- Kerber, Jordan E. *Archaeology of the Iroquois: Selected Readings and Research Sources*. Syracuse, NY: Syracuse University Press, 2007.
- Warren, William. *History of the Ojibway People*. 1885; reprint, St. Paul: Minnesota Historical Society, 1984.

The Peopling of Aotearoa (New Zealand)

New Zealand was the last settled archipelago in Polynesia and the last substantial landmass to be colonized by prehistoric peoples. Its cultural history of about 800 years and remarkable isolation provide a detailed record of human adaptation and human impact on pristine natural environments. Aotearoa (“the long white cloud” to the native Maoris) differs from other Polynesian islands in its substantial landmass, temperate rather than tropical climate, and great regional diversity in natural resources. Consequently, New Zealand provides a wonderful case study of how isolation and environment affect cultural change.

Linguistic and archaeological evidence indicate that New Zealand was settled from the core of central Eastern Polynesia, but the exact time of human colonization has been sharply debated, and consensus has yet to be reached. Early theories privileged Maori legends and genealogies and argued for the arrival of Kupe in 950 CE, Toi in 1150 CE (both are culture heroes), and the Great Fleet in 1350 CE. The Great Fleet was described as a single great migration of canoes from a homeland known as Hawaiki. Analysis has since debunked this theory of the Great Fleet as flawed, both on historical and archaeological grounds.

Linguistic models demonstrate that New Zealand Maori is related to both Tahitian and Rarotongan and support the notion that Aotearoa was settled from central Eastern Polynesia. Ar-

➤ KUPE'S WIFE SIGHTS AOTEAROA

According to Maori legend, before Kupe set off in a pursuit of the giant octopus Te Wheke, who was causing the fishermen of Hawaiki great problems, his wife Hine-i-te-aparangi warned him not to leave because she had dreamt that he would die on the voyage. Enraged that she tried to keep him from his duty, he ordered her and his children to accompany him. As they sailed south in his *waka*, it was she who first sighted new land, crying out “He ao! He ao! (A cloud! A cloud!).”

—Alfred J. Andrea

chaeological data indicate that coastal areas of North Island and South Island were settled by 1200 CE. The initial discovery of New Zealand may predate this, but human-induced landscape changes, suggesting deliberate forest clearance with fire (typical of early settlement sites in Polynesia), similarly date to around 1200 CE. While some argue that bones of the Polynesian rat, which was introduced to New Zealand by humans, may be as much as 2,000 years old, the accuracy of these dates is still disputed.

DNA evidence from New Zealand rat populations, however, indicates that multiple voyages were involved in the initial settlement of New Zealand, while DNA data for human skeletal populations suggest that a minimum number of 70–190 women arrived in the first voyages settling New Zealand. Unlike other islands in Eastern Polynesia, pigs and chicken were never introduced to New Zealand; perhaps they simply did not survive the initial colonization voyage.

These first colonists must have been astounded by the size of New Zealand, the diversity of its forests, and the “naive” fauna (animals with no fear of humans). The latter included huge flightless birds (*moa*), which had lost the ability to fly in this isolated environment that lacked terrestrial predators up to the time humans arrived. The colonists, however, would have been challenged by the temperate environment. The absence of banana, breadfruit, and coconut—staples in other Eastern Polynesia societies—was simply due to the fact that New Zealand was too cold to support these tropical crops. However,

fish, shellfish, and seals were abundant in coastal areas, and a plethora of bird species was found throughout.

The great regional diversity in New Zealand's natural resources did not allow for a single type of subsistence lifestyle to be practiced across the region. New Zealand's natural resources are particularly well suited to hunter-gathering, and the initial colonists, who were agriculturalists, adapted accordingly.

Groups settling the middle to southern reaches of South Island, outside of the zone in which crops could be grown, gave up their agricultural way of life and became hunter-gatherers, specializing in the collection of the rich maritime resources (seals, fish, shellfish) and extensive hunting of native birds. The native moa populations were nearly hunted to extinction a few centuries after initial human settlement. By about 1500 they were virtually extinct, although small remnants might have survived for more than a century before they fully vanished. With their demise came the shift in South Island from permanent settlements focused on moa hunting to a more transient settlement pattern associated with a broader hunter-gathering subsistence. After about 1500 CE, fowling of smaller native birds was a specialized subsistence activity, while the fishing and hunting of marine mammals continued.

Those introduced crops that could grow were cultivated in the milder climatic regions of North Island and only in the northern part of South Island. These included the sweet potato, a South American domesticated plant that was introduced prehistorically into Eastern Polynesia. Sweet potato is tolerant of temperate climates and overwinter storage and became the principal crop in those regions of New Zealand where agriculture was a viable option.

Horticulture was an important part of subsistence from the early colonization period onward. On North Island, sweet potato cultivation and storage were intensive and extensive and associated with diverse forms of storage pits. Fortified villages, known as *pa*, were constructed on the North Island landscape initially between 1300 and 1500. They include well-defended sites with ditches and palisades, which at times enclosed storage pits. This suggests that warfare and com-

petition for resources had escalated because of the sizable Maori population on North Island in later prehistory.

—Jennifer Kahn

Bibliography

- Davidson, J. M. *The Prehistory of New Zealand*. Auckland: Longman Paul, 1984.
 Howe, K. R. *Vaka Moana: Voyages of the Ancestors*. Auckland: David Bateman, 2006.
 Kirch, Patrick V. *On the Road of the Winds*. Berkeley: University of California Press, 2000.

Moving Sugar Plantation Laborers to the Atlantic Islands

During the late fifteenth and early sixteenth centuries, large numbers of African slaves were taken from their homes to work on sugar plantations on Atlantic islands controlled by the Portuguese. Traders learned that they could tap into an existing slave trade network to obtain the many laborers needed to produce sugar profitably. This pattern became the model for later slave trading that sent an estimated 12.5 million Africans to work in the Americas over the next three centuries.

During the 1430s, Portuguese expeditions continued to explore the Atlantic coast of Africa and the nearby waters. They may have discovered the Canary Islands as early as 1336, but the inhabitants there fiercely defended themselves. A number of other uninhabited islands were discovered, including the Azores, the Cape Verde Islands, São Tomé, and Madeira. Portuguese settlers gradually colonized the islands but found that most European plants were not suited to cultivation there. However, they found that sugar grew well and had a ready market in Europe. In 1420, Prince Henry of Portugal imported sugarcane plantings as well as experts from Sicily to help establish sugar plantations on the Atlantic islands. Following the model developed in the Mediterranean, the Portuguese established sugar plantations with large units of land and equipment to refine the sugar. However, one key element—plentiful labor—was missing.

Few Portuguese were willing to migrate to the Atlantic islands, so landowners turned to slaves. Slavery had existed in Iberia on a small scale since antiquity, and the Portuguese conquest

of Ceuta in 1415 allowed merchants to participate in the existing North African slave trade. Slavery was legitimated by Pope Nicholas V in the papal bull *Dum Diversas*, issued on June 18, 1452. The bull authorized King Alfonso V of Portugal to reduce any non-Christians whom Portuguese explorers encountered to perpetual slavery. Later popes reaffirmed that nonbelievers, particularly Muslims, were to be enslaved.

At first, Portuguese explorers working their way down Africa's west coast tried to take slaves and other goods by force, but indigenous resistance made this unprofitable. By the middle of the fifteenth century, the Portuguese recognized that they instead could rely on existing trade networks in Africa. The slave trade was well developed in Africa, with caravans bringing enslaved people to coastal centers in present-day Ghana, Togo, Benin, and Nigeria. Later, many slaves were obtained from the Congo region. The Portuguese brought trade goods, including copper, cloth, firearms, gunpowder, liquor, horses, and salt. In exchange, they received slaves from African traders. The system was agreeable to both sides. African rulers did not want Europeans traveling inland, while Europeans often had fallen victim to the many diseases found farther inland.

By the end of the fifteenth century, a well-regulated trade system provided small numbers of African slaves to the Atlantic sugar plantations. Trading forts were established along the African coast. São Jorge de Mina (present-day Elmina, Ghana) was the first such fort and provided the model for others. Although fortified, they rarely were attacked since the Africans found peaceful trade more profitable. Slaves and African products were gathered at the forts for shipment to the islands or to Portugal, and goods from Europe were stored there until needed for trade. Caravels were often assigned to each fort to carry trade to and from the regional markets. An average caravel could carry up to 250 slaves on each trip between a trading fort and African trading centers. For short trips, such as from São Tomé to the African coast, the caravels could make up to four trips in one year.

Between 1450 and 1500, approximately 500 African slaves were annually exported to the sugar plantations on the Atlantic islands. Although

➤ THE SUGAR PLANTATIONS OF SÃO TOMÉ

In the early sixteenth century, São Tomé, an island off the coast of West Africa, which the Portuguese colonized during the last decade of the fifteenth century, became a center of European sugar production. Its equatorial climate, fertile volcanic soil, and abundant water supply made the island exceedingly suitable for sugarcane. The greatest need was a supply of cheap labor. Significantly, although the last of the Atlantic islands to be colonized by the Portuguese, São Tomé became the first place in the Atlantic world where sugar was primarily produced by African slave labor. Inasmuch as the African kingdoms of Kongo and Benin were only several hundred miles to the east (and the king of Kongo had adopted Latin Christianity from the Portuguese in 1491), captives were fairly easily obtained from these African states. Approximately 2,000 slaves worked the island's plantations during the early 1500s. As a result, São Tomé, more than the Canaries and Madeira, which produced far more sugar, became the model of the slave-based sugar plantation that was later brought to Brazil. São Tomé was also well known as a collection point for slaves being sent to other Portuguese possessions.

—Timothy J. Watts

small by comparison to the millions that followed, this period set the model followed for the next three centuries.

—Timothy J. Watts

Bibliography

- Elbl, Ivana. "The Volume of the Early Atlantic Slave Trade, 1450–1521." *Journal of African History* 38 (1997): 31–75.
- Lovejoy, Paul E. *Transformations in Slavery*. New York: Cambridge University Press, 2000.
- Mota, A. Teixeira da. *Some Aspects of Portuguese Colonization and Sea Trade in West Africa in the 15th and 16th Centuries*. Bloomington: African Studies Program, Indiana University, 1978.

Forced Migration under Inca Rule

The Inca empire was plagued by revolts and uprisings, which endangered the survival of the state and its production of wealth. Consequently,

➤ PACHACUTI'S MITIMAES

The Basque-Galician mariner, explorer, humanist, and historian Pedro Sarmiento de Gamboa (1532–1592) wrote probably the fullest and best account of the history of the Incas and the cultures of the Andean peoples. In the following selection, he describes how Pachacuti Inca (also known as Pachacutec, r. ca. 1438–1471) created a system of forced migration in order to maintain peace in his newly carved-out empire.

“[Inca] Pachacuti then ordered others to go to the same provinces and, together with the *tucuricos* (provincial governors), take some young men and their wives from each town. This done, they brought couples to Cuzco from all the provinces, thirty from one and one hundred from another, more or less according to the size of each town. When these chosen couples appeared before the Inca, he ordered that they be taken to settle in different regions. Those who were from Chinchaysuyu were to be settled in Antisuyu, and those from Cuntisuyu in Collasuyu, so far from their

native lands that they could not communicate with their relatives or countrymen. He ordered that they be settled in valleys similar to those of their native birth, and that they take seeds from their land so that they could sustain themselves and not perish, giving them abundant lands to sow after taking them [away] from the natives of that place.

The Inca called these people *mitimaes*, which means “transposed” or “moved.” He ordered them to learn the language of the natives where they were settled and not to forget the general language, which was the Quechua language that the Inca had commanded all should learn and know in all the provinces that he had conquered.”

—Gordon McEwan

Source

Sarmiento de Gamboa [1572], *The History of the Incas*, ed. and trans. Brian S. Bauer and Vania Smith (Austin: University of Texas Press, 2007), 137.

the emperor took steps not only to suppress rebellions but also to forestall their occurrence. One of the principal tools used by the Inca for consolidating the empire and ensuring domestic tranquility was a technique of social engineering that involved transplanting groups of people referred to as *mitimaes*. Throughout its short life of only 50–80 years, the empire moved hundreds of thousands of people from their homes to distant parts of the realm through forced migration.

The Spanish Jesuit chronicler Bernabé Cobo (1582–1657) relates that one of the first things that the Inca ruler did after conquering a province was to remove several thousand families from the conquered population and move them to another part of the empire where they were surrounded by people who had been under Inca rule longer and were more loyal. At the same time, these transplanted families were replaced in their recently conquered homeland by people brought from distant regions that were known to be loyal to the empire. Thus strangers were

introduced into the midst of a potentially rebellious population, disrupting cultural cohesion and traditional power networks and potentially acting as spies for the government. The other side of the coin was the introduction of recently conquered people into a larger, culturally different population of proven loyalty that could keep them under surveillance.

Great care was taken by the rulers to make sure that the peoples transferred about as *mitimaes* were sent to lands of equivalent quality and in similar environmental zones. The object was to maintain the health and productivity of the *mitimaes*. People removed from their communities in this manner were relieved of their obligations to their native rulers and became subjects of the lords in the lands to which they were taken. Once they arrived they were given land to farm and materials with which to build their houses, and they became permanent residents of the lands to which they had been moved. They were ordered to adopt the local customs and culture of the peoples native to the lands

to which they had been moved with one important exception: they were required to retain their distinctive dress and headgear so that they could be easily distinguished from the natives of the lands by the Inca rulers.

The distances over which the *mitimaes* were moved were often enormous. Peoples native to what is now Bolivia were resettled thousands of miles away in what is now Ecuador at the opposite end of the empire. Cobo noted that so many people were relocated during the reign of the Incas that there was hardly a valley in Peru that did not have at least a small population of foreign native groups.

An additional use for *mitimaes* was to place them in Inca administrative centers throughout the empire, where they functioned as a military garrison. In addition to farming to support themselves, they were responsible for enforcing decrees of the local Inca governor and defending imperial installations. These obligations were passed through the generations from parents to children in perpetuity.

Mitimaes were also used to even out the distribution of population within the Inca empire. People in densely populated areas were uprooted and forced to migrate to sparsely populated lands. Friction due to competition for resources could be eliminated by arbitrarily removing part of the population and thus lowering population density. This also had the desirable effect of evening out agricultural production throughout the em-

pire because no good lands would lack people to work them.

Another motive for moving *mitimaes* was to satisfy the individual whim of the Inca ruling elite. Communities could be moved to work on particular state projects or estates. There was also desire on the part of the Inca rulers to collect and concentrate the best artisans at their capital of Cuzco. Thus the famed metal smiths and artisans of the Chimu culture were carried off from the northern coast of Peru to the Inca capital, although without regard in this instance for the drastic difference in climate between the coast and sierra.

—Gordon McEwan

Bibliography

- Cieza de León, Pedro de. *The Incas of Pedro de Cieza de León*. Translated by Harriet de Onis and edited by Victor W. von Hagen. Norman: University of Oklahoma Press, 1959 [Part 1, 1553; and Part 2, 1554].
- Cobo, Bernabé. *History of the Inca Empire: An Account of the Indians' Customs and Their Origin Together with a Treatise on Inca Legends, History, and Social Institutions*. Translated and edited by Roland Hamilton. Austin: University of Texas Press, 1979 [1653].
- Sarmiento de Gamboa. *The History of the Incas*. Edited and translated by Brian S. Bauer and Vania Smith. Introduction by Brian S. Bauer and Jean-Jacques Decoster. Austin: University of Texas Press, 2007 [1572].

■ Introduction: The Vicissitudes of Avenues for Exchange—Caravan Routes and Sea Lanes

Humans have followed well-known pathways and waterways and, as well, blazed new trails and established fresh sea routes since time immemorial. During the period 1000–1500, large numbers of traditional routes that had existed for at least several millennia continued to flourish, other routes shut down or shifted due to environmental or political-military realities, and a significant number of new routes opened up as a result of a wide variety of factors.

The so-called Silk Road is a case in point of how old routes underwent challenges and changes. Well before the year 1000, Japan had been added as the easternmost terminus of the Silk Road. To be sure, although Baltic amber, furs, and slaves had been traded along the pathways of the Silk Road well before that same symbolic year, around the turn of the millennium Russia and Scandinavia became full Silk Road partners in the far northwest, thereby integrating

more completely the Baltic Sea region into this complex network. While new cultures were being tied into the Silk Road, the traditional cross-Eurasian routes that followed the oasis towns that skirted the northern and southern fringes of the Taklamakan desert became less important as avenues of interchange between (very roughly) 1000 and 1250. Merchants, pilgrims, diplomats, missionaries, and many others still trekked the many different portions of the Silk Road during these two and a half centuries, but sea-lanes from Japan to Africa and everywhere in between became increasingly important and well-trafficked routes for commerce and travel. This was largely due to developments in navigation and naval technology that made sea travel faster, cheaper, safer, and surer than long-distance overland travel. When the Mongol Peace rejuvenated Silk Road travel across Eurasia for about a century (roughly 1260–1368), its main routes shifted northward toward and through the Mongol heartland. After the collapse of the Mongol empire, Timur-i Leng's city of Samarqand in present-day Uzbekistan became a new nexus for the Silk Road for about a century, thanks to his and his Timurid successors' patronage and aggressive commercial policies. By 1500, however, with the entry of Western Europeans into the Indian Ocean by way of the Cape of Good Hope, the caravan routes of the Silk Road were again being superseded by maritime routes, and the volume of traffic along its many routes fell dramatically. Of course, insofar as political, military, and environmental factors allowed, these caravan routes were never abandoned, especially when it came to tying India, China, and Russia to Central Asia. In the centuries to follow and until the rise of railroads, however, oceanic travel was the element above all else that tied the world into a globalized entity.

Old routes were expanded, and new routes developed across the Sahara and deeply into the savanna empires of West Africa. In Oceania, expert navigators added routes to and from Aotearoa (New Zealand) to the Polynesian Triangle, and in South America, the Incas transformed mountain pathways into a coherent Incan road system in order to tie their vast empire together.

Finally, a brand new route opened up during the last decade of the fifteenth century that ulti-

mately proved transformative in the course of world history, namely the sea route connecting Iberia (and West Africa) with the Americas. Within a few short decades, connections between the Eastern and Western Hemispheres of the world would be multiplied many times over.

—Alfred J. Andrea

Caravans across the Sahara

The caravan trade across the Sahara supplied most of the world's gold and became a conduit for the spread of Islam in West Africa between 1000 and 1500. Dominance over trade routes became a major factor in the rise and fall of savanna states including Ghana and Mali. An ocean of sand, the Sahara was traversed at great risk and for even greater profits.

Although Berber and Tuareg merchants traded gold before the arrival of Islam, regular caravan trade was made possible by the introduction of the single-humped camel, or dromedary, around the second century CE. The growing demand for gold in Eurasia led to the development of commercial networks. Islam in turn sparked the growth of ports on the edge of the desert (the so-called *sahel*, or shore of the desert) and helped to unify the cultural and commercial life of these outposts and other urban centers to the south.

During the first half of the second millennium, gold was mined from the alluvial deposits at Bambuk and Bure on the Senegal and Niger rivers, the Lobi gold fields along the Upper Black Volta, as well as the exceedingly rich forest and coastal sites farther south in Akan territory. African gold was a well-known commodity, as illustrated by the 1375 map by Abraham Cresques of Majorca, known as the *Catalan World Atlas*, showing Mansa Musa, the ruler of Mali, holding an enormous gold nugget. Yet most Muslim merchants from the north were unaware of the locations of the gold sources, since goods were transferred to camel caravans in cities along the Niger for the next journey northward. Indigenous West African Dyula merchants, who steadily converted to Islam over the years, were among those who carried the gold northward to collecting points in the *sahel*. They settled in communities that had relatively few converts to Islam

such as Begho north of the Akan gold fields, occupying distinctive Muslim quarters of the town and maintaining responsibility for the steady flow of technology and trade.

More than gold was traded across the Sahara. Foodstuffs, textiles, salt, copper, horses, ivory, books, kola nuts, leather, and slaves as well as ideas and diseases also made their way via camel caravan. Merchants were joined by pilgrims on their hajj to Mecca and by other adventure travelers, scholars, and craftsmen. Travel itself became a virtue, as many cultural proverbs testify.

Trans-Saharan caravans were organized by specialized merchant families, which acted as hosts and agents and provided the key connections linking buyers and sellers of goods stored in warehouses. The caravan journeys were speeded up with the use of the camel, which could travel for more than ten days without water while carrying loads of anywhere from about 330 pounds to 440 pounds (150 to 200 kilos) in weight. Because of the intense heat of the desert sun, travel took place in early morning or late afternoon. When joined by hundreds of slaves, porters, or pilgrims on foot, these caravans could stretch for many miles. The fourteenth-century traveler Ibn Battuta described one small leg of the journey along the trail from the copper mines of Takadda northward to a site north of Air in southern Morocco during which the travelers saw no sign of habitation for weeks at a time.

Shorter caravan routes across the Sahara stretched southward from Fez to the walled towns of Kanem in the central Sudan and the borders of Darfur to the east. Kanem was ruled by a Muslim dynasty in the eleventh century, and the empire expanded militarily during the reign of Mai Dunama Dibalami (r. 1210–1247). With legendary horse cavalry of some 40,000 troops, the empire secured the entire length of caravan routes between the Lake Chad basin in the Sudan and the Fezzan, the outpost of Moroccan rule. Tuareg control of horses, salt, and copper extended caravan trade to the Hausa states, where the goods were exchanged for cotton textiles and leatherwork by the end of the fifteenth century. The Hausa language would become West Africa's lingua franca and the conduit for commercial and cultural change for centuries to come.

—Candice Goucher



A West African king, probably Mansa Musa, holds a gold nugget amid scenes depicting the rich trade of the Saharan region. From the Catalan Atlas, crafted for the king of Aragon by the Jewish cartographer Abraham Cresques, probably in 1375. (The Art Archive/John Webb)

THE LOST CARAVAN OF MAJABAT AL-KOUBRA

Not every trans-Saharan caravan arrived safely, and one of the unfortunate failures was the journey of a twelfth-century camel caravan buried in sand dunes halfway across the desert at Majabat Al-Koubra. Discovered and excavated by the French archaeologist Theodore Monod, the remains of the site's cargo lost in the Mauritanian Sahara provide material confirmation of the extensive long-distance trade in two key commodities: copper-alloys and cowrie shells.

About 2,000 brass rods together with cowrie shells of the species *Monetaria moneta* had been loaded on camels in North Africa. Both commodities were used as currencies in the western Sudan, but the copper alloys in particular would have provided materials in high demand for the metallurgical arts of industrial West Africa. Which had traveled the longer distance? Historians still debate the sources of copper, but the shells were more than 5,500 miles (8,850 kilometers) from their source in the Maldive Islands of the Indian Ocean. Their survival in the sands of the Sahara gives witness to the remarkable world connections of African trade in the past millennium.

—Candice Goucher

Bibliography

- Connah, Graham. *African Civilizations: An Archaeological Perspective*. New York: Cambridge University Press, 2001.
- Dunn, Ross E. *The Adventures of Ibn Battuta, a Muslim Traveler of the 14th Century*. Berkeley and Los Angeles: University of California Press, 1986.
- Oliver, Roland, and Anthony Atmore. *Medieval Africa: 1250–1800*. New York: Cambridge University Press, 2001.

From the Straits of Malacca to Madagascar—The Indian Ocean Ecumene

The band of interacting trading communities located on the coasts of the Indian Ocean constituted a cultural continuum by 1300 CE. This was a multi-ethnic world, which nevertheless shared a common conversation in civilization and culture. This Indian Ocean ecumene developed in two phases: 1000–1250 and 1250–1500. During the early phase, the Indian Ocean trade route connected the different communities in the Indian Ocean littoral, but culturally the area of Muslim preeminence was confined to the area west of India's Malabar (southwestern) Coast. East of that coast and across the Bay of Bengal into the Malay Archipelago, it was largely Tamil Hindu beliefs and practices that dominated the cultures of continental Indians and the coastal peoples of the central Indian Ocean and Southeast Asia. This early phase witnessed the most expansive period in the power of the Tamil empires of the Cholas and the Pandyas who held the Malay Srivijaya empire in the Malay Archipelago in a tributary relationship until Srivijaya was destroyed by its own tributaries in 1293. The second phase in the development of the Indian Ocean ecumene witnessed the mostly peaceful conversion in the thirteenth through the fifteenth century of the peoples in the Malay Peninsula and archipelago.

Around the year 1000, the Malay Peninsula and Sumatra were part of the Buddhist Srivijaya empire, which controlled and protected oceanic trade through the straits of Sunda and Malacca. Srivijaya, under the Sailendras dynasty, had formerly also controlled much of central Java, but in the mid-tenth century, a Hindu dynasty replaced

the Buddhist Sailendras there. One of the most important economic and cultural concerns of Srivijaya was the care and protection of Buddhist pilgrims from Southeast Asia, China, Japan, and Korea. Buddhist monasteries near the present-day city of Palembang served as rest houses for pilgrims on their way to the great Buddhist monastic center of higher education at Nalanda (in present-day Bihar, India). In 1025, the Tamil ruler Rajendra Chola took his navy across the Bay of Bengal and sacked the Srivijaya capital. The Chola kings, devout worshippers of Shiva, reduced Srivijaya to a tributary status and changed the dominant religion to Saivite Hinduism. From the conquest of Srivijaya to the mid-thirteenth century, the Tamil Chola empire dominated the eastern part of the Indian Ocean ecumene, including the Malay Peninsula and some of the archipelago (present-day Malaya, Indonesia and the Philippines), as well as South India, northern Sri Lanka and the Maldives Islands. The Cholas disseminated Hindu culture in the process of exerting Tamil power. Tamil merchants frequented all of the ports in this empire, bringing Brahmin priests, Saivite rituals, and the Hindu epics of the *Mahabharata* and *Ramayana*. Southeast Asian culture, already highly saturated by Indian influences, became even more so.

Meanwhile, in the far western part of the Indian Ocean ecumene, the Swahili cities on Africa's east coast had begun conversion to Sunni Islam before the tenth century, and their inhabitants were noted for their Islamic piety. In the process of conversion, the Swahili coast became an integral part of Dar al-Islam and was noted for the beauty of its mosques and the correct manners of its people.

In the last centuries of the first millennium, the Swahili people had constructed trading towns on the coast and coastal islands from Mogadishu to Sofala. During the early part of this period, the chief cities were Lamu, Mombassa, and Kilwa. All of these cities were independent city-states whose rulers claimed descent from Shirazi Persian or Wadebuli Indian merchant kings. These cities were involved in the export of ivory, rhinoceros horn, ebony, gold, pig iron, and slaves. On their part, the Swahili cities imported gold from Zimbabwe and traded with Malagasy colonies in the Comoro Islands and northwestern

Madagascar. Indigenous Bantu merchant houses handled much of the commerce, but they intermarried with immigrant Arab, Omani, Persian and Indian merchants to form a Swahili ethnicity that has persisted into modern times.

Cairo, which had been founded as a Fatimid city in the tenth century, emerged as the nerve center and great emporium of the Indian Ocean ecumene. From Cairo, Muslim merchants, as well as some Jewish and occasional Christian (mostly Italian) traders, set forth into the Red Sea and from there to the Indian Ocean. Before the thirteenth century, these merchants usually journeyed as far as the Malabar ports of India. In those ports, Indian traders, members of Indian merchant guilds, took over, and shipped some of the merchandise that had originated in Cairo to the Malay Peninsula and archipelago. In Cairo the Jewish merchants left what has become the most important surviving historical archive of medieval Cairene trade in the synagogue's geniza, a depository of Jewish letters and records, many of which were commercial transactions.

After Cairo, other important western Indian Ocean merchant communities were in Oman where merchandise (including slaves) from the Swahili cities was transshipped to the ports on the Malabar Coast. The trade in horses from Arabia to India was a profitable and growing item of commerce for Omani merchants. Siraf, one of the most important Persian Indian Ocean ports, shipped out blue cobalt ore for use in the production of Chinese blue porcelain.

The Malabar Coast of southwestern India was perhaps the most interesting ethnic potpourri of the Indian Ocean littoral. Extending from near present-day Mumbai (formerly Bombay) to Cape Comorin, this region had traded across the Arabian Sea since the early centuries of the Roman empire. It was a very productive region, manufacturing the best steel swords in antiquity and the medieval period, and it was the source of most of the globe's pepper, the world's most-used spice. Wealthy merchants, who were given special privileges by the rulers, dominated its cities, particularly Calicut, Cochin, and Kanner. From the time of the emergence of the Islamic caliphate, Arab and Persian merchants had formed expatriate Muslim colonies in these cities but also, from early in the Common Era, these cities

➤ PROMOTING COMMERCE AT CALICUT

Two visitors to Calicut on the Malabar Coast, the famous trans-Afro-Eurasian traveler Ibn Battuta, who arrived there in 1341, and Ma Huan, who visited the port city on at least one of the seven voyages of the fleets led by Zheng He (1405–1433), provide valuable testimony regarding the city's flourishing maritime commerce. What is particularly remarkable is that the city had no natural harbor. Ships had to anchor off the coast and transport their goods to shore in small craft. As these visitors' two accounts suggest, however, the policies put in place by Calicut's *samudri rajas* ("lords of the sea," a title corrupted by the Portuguese to *zamorin*) more than compensated for that deficiency.

According to Ibn Battuta, 13 Chinese vessels of various sizes were anchored there, several of which were four-masted and held a complement of 600 sailors and 400 marines. One of the reasons so many Chinese and other merchants did business at Calicut was that its *sultan Sâmári* (as Ibn Battuta termed the *samudri raja*) returned intact to its owners any and all shipwrecked cargo, rather than confiscating it. Of all the cities of this coast, Calicut alone did not claim such goods for its treasury.

Ma Huan informs his readers that the "king" of Calicut appointed two brokers to superintend all sales, and to guarantee the honesty of all transactions and the inviolability of contractual arrangements. As a result, "foreign ships from every place come there."

—Alfred J. Andrea

had been the homes of Cochin Jews, who claimed descent from refugees fleeing the destruction of the Second Temple in 70 CE, as well as Syrian, or St. Thomas, Christians, most of whom were said to be converts from the Cochin Jews evangelized by Christian missionaries in the fourth century. Before its demise in the thirteenth century, the Chola empire ruled much of the Malabar Coast, but after that, local rulers were more important. Calicut's *Zomorin* (raja, or lord) emerged as a powerful ruler because of his dealings with Arab merchants and his army of Muslim mercenaries.

After the fall of Chola power and the rise of the Delhi sultanate in India, Muslim merchants

came to dominate almost all of the Indian Ocean trade. Muslim influence displaced that of the Hindus in coastal Southeast Asia as well as the Malay Peninsula and archipelago. Muslim merchants settled in Malay cities and began the process of converting the Hinduized indigenes. Marrying into local families, Muslim merchants, because of the hemispheric reach of their trade network, became the “big men” of their communities. In the late fourteenth century, Malacca became a Muslim sultanate. Within a few decades, most of the Malay Peninsula was ruled by Muslim sultans, and, by the end of the fifteenth century, the Hindu empire of Majapahit, which ruled most of Indonesia and some of the Philippines, had fallen, to be replaced by Muslim sultanates. The Indian Ocean had become a Muslim lake, and the Indian Ocean coast did indeed, constitute an “Indian Ocean ecumene.”

Throughout this period, the pilgrim trade, transporting pilgrims to the holy Muslim cities of Mecca and Medina, was one of the principal elements of commerce in the Indian Ocean. With the Islamic conversion of large populations in South and Southeast Asia, especially after the thirteenth century, the transportation of Muslim pilgrims burgeoned as never before and overshadowed all other varieties of commerce in the Indian Ocean. The pilgrimage to Mecca (Makkah) served to unify the increasingly Islamicized high culture of the Indian Ocean littoral, as pilgrims and students from every corner of the Muslim world imbibed, in Mecca and Medina, the latest in Muslim scholarship and practice and brought it, together with the “civilized” manners (*adab*) of the refined Muslim gentleman, back to their homelands. Muslim teachings also involved the acceptance of Sharia, the Muslim system of jurisprudence that included a system of commercial law that came to govern commercial relations throughout the ecumene.

—Wilfred J. Bisson

Bibliography

- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Hall, Kenneth R. “The Economic History of Early Southeast Asia.” In *The Cambridge History of Southeast Asia*. Vol. 2, *From Early Times to c.*

1500, edited by Nicholas Tarling. London: Cambridge University Press, 1999.

Kearney, Milo. *The Indian Ocean in World History*. New York: Routledge, 2004.

Pearson, Michael. *The Indian Ocean*. New York: Routledge, 2003.

Jewish Travelers in the Early Middle Ages

By the early Middle Ages, the Jewish Diaspora had included one of the most widely dispersed populations in the history of the world. Jewish communities could be found from the Atlantic Ocean in the west to the South China Sea in the east and from Ethiopia and India in the south to the steppes of Siberia in the north. This dispersion, together with the consolidation of the major trans-Eurasia trade network under the relatively stable Frankish, Byzantine, Khazar, Abbasid, Uighur, and Chinese empires, created an ideal set of circumstances for Jewish traders, adventurers, and explorers.

Some Jews wandered the roads and sea-lanes in search of wealth. Jewish travelers and merchants could rely on sanctuary and hospitality in Jewish communities situated in towns all over Eurasia and northern Africa. The Radhanites, a Jewish mercantile association that traded between Europe and China, are a prime example of Jews who took full advantage of the beneficial aspects of dispersion, bringing prosperity to many communities along their trade routes. Other Jewish merchant guilds may have existed in either competition or cooperation with the Radhanites. According to the tenth-century Arabic book *Ajaib al-Hind* (*The Wonders of India*) by Buzurg ibn Shahriyar of Ramhurmuz, a Jew named Ishaq traveled from Oman to India, Bhutan, and China, where he lived for 30 years and became fabulously wealthy. He returned to Oman in 912 or 913 but was later murdered in Sumatra on orders of Oman’s governor, Ahmad ibn Hilal. Another Jewish merchant, Ibrahim ibn Yaqub of Tortosa (present-day Tartus in Syria), visited France, Germany, and Bohemia, plying his trade at the court of the German emperor Otto I in 966. Yaqub later visited the Vikings of Hedeby (southern Denmark) and the nascent kingdom of Poland.

➤ BENJAMIN OF TUDELA

Benjamin ben Jonah, a medieval rabbi and explorer, was born in the middle of the twelfth century in the town of Tudela in Christian Spain. He began his journey from Saragossa in 1160 as a pilgrim to Jerusalem. It is unclear whether Benjamin also had a commercial motive for his travels. He went down the valley of the Ebro River and crossed into France, setting sail from the port of Marseilles for Rome and then Constantinople. From there he traveled through Anatolia, turning south through Syria, the Galilee, and Judea before stopping in Jerusalem. At some point thereafter he went to Mesopotamia and Persia before setting sail again for Egypt and North Africa (via the Arabian and Red Seas), returning to Spain in 1173.

During his 13-year journey Benjamin visited more than 300 cities, including Rome, Constantinople, Alexandria, Jerusalem, Damascus, and Baghdad. He took what was colloquially known as the long road, meaning that he made frequent extended stops, where he studied the local Jewish community, making detailed notes about local customs, politics, geography, and other matters, especially the status and state of the local Jewish community. He visited and described many people who are otherwise obscure and poorly attested to, including the Druze of Lebanon, the Nizari (Assassins) of Syria and Iraq, and the Wallachians of what is now Romania. He made extensive observations regarding the court of the Byzantine emperor and the caliph of Baghdad as well as the Jewish exilarch, or head of the People in Exile, who resided in Baghdad and enjoyed, thanks to the patronage of the Abbasid caliph, extensive prestige and authority over the Jews of West Asia.

After Benjamin's return to Spain his observations were organized and published under the



Engraving of Benjamin of Tudela, twelfth-century Spanish traveler and rabbi. (Roger-Viollet/The Image Works)

title *Sefer ha-Maasot shel Rabbi Benjamin* (*Book of the Deeds of Rabbi Benjamin*). In it he describes the places he visited, the people he met, and sites and landmarks he passed along the way. Unlike many medieval chroniclers, Benjamin not only reported facts but also cited his sources and is regarded by modern historians as an invaluable source.

—Brian Gottesman

Many Jews, fluent in a number of languages in order to communicate with their brethren in other lands, turned their talents toward diplomacy. A man known as Isaac the Jew, an adviser in the court of Charlemagne, accompanied the emperor's embassy on a visit to Caliph Harun al-Rashid in 797 as an interpreter. Isaac returned several years later with an elephant, sent as a gift by the caliph to Charlemagne. Hisdai ibn Shaprut (915–70), a Spanish Jew who became court

physician and foreign minister to Caliph Abd-ar-Rahman III of Cordoba, relied on Jewish travelers to carry his diplomatic correspondence. The correspondence between King Joseph of the Khazars, who dwelt in the region of the Caspian Sea, and Hisdai indicates that a number of Jewish adventurers, including Judah ben Meir, Joseph Gagris, and Isaac ben Eliezer from the land of Nemetz (Germany) were responsible for transmitting Hisdai's letter to the king.

Still other travelers appear to have wandered for purely spiritual reasons. From the sixth to the eleventh centuries Jewish communities around the world often submitted queries of a religious nature to the *gaonim*, the heads of the Talmudic academies of Sura and Pumbedita in Mesopotamia, as well as to other famous rabbis in the centers of learning in the Holy Land. The rabbis and *gaonim* would reply with written documents called *responsa*, many of which still survive to this day. The questions and their responses would have to be carried by emissaries who often traveled for months or even years to reach and return from Babylonia. Along the route they would be hosted at Jewish communities, who would scrupulously copy down the answer of the *gaonim* for their future reference. Travelers from these towns would in turn transmit the *responsa* to nearby communities, propagating a uniform observance of the Torah and *halakha* (Jewish religious law). Some rabbis traveled for the purpose of bringing their learning to Jews living at the margins of the Jewish world. For example, medieval Jewish sources report that a rabbi called Isaac ha-Sangari was responsible for converting the Khazars, a Turco-Mongol people, to Judaism in the ninth century and bringing in scholars to teach them Jewish law and customs, but historians today debate his historicity; a later rabbi, Isaac ben Abraham, is reported by the scholar Saadia Gaon to have moved from Iraq to Khazaria, possibly as a missionary.

Pilgrimage was a common motivation for travel. Judah ha-Levi, a famous tenth-century jurist, scholar, and poet of Muslim Spain, left the comforts of Cordova to make the difficult journey to Jerusalem while in his sixties; he died shortly after completing his voyage. Jews such as Benjamin of Tudela and Petachiah of Ratisbon (both late twelfth to early thirteenth century) probably began their far-flung travels as pilgrims. Petachiah traveled east from Bohemia through Eastern Europe and southern Russia before turning south into Caucasus, Armenia, Mesopotamia, and Persia. He then traveled west into the Levant, ending his journey in Jerusalem before returning home via Greece and the Balkans. His contemporary Benjamin of Tudela traveled across Europe to reach Jerusalem before setting off on a series of expeditions in Asia and Africa.

Jews sometimes traveled to collect charity from the communities they passed, either for a specific family or person, to fund a yeshiva (school of religious learning), or to provide relief to Jews suffering from hardship. A Jew of Kiev made a long journey carrying a letter from the rabbinical council of the city in the tenth century; his purpose was to collect alms to pay off his extensive debts and prevent his sale into debt-slavery. His letter has been found in a Cairo synagogue; whether he died in Egypt or left the letter behind, having achieved his goal, is unknown. Moses ben Hanoch, another tenth-century Jew, left Iraq with his wife and son to collect funds for the yeshiva of Sura. The family was captured by pirates, and Moses's wife committed suicide to avoid rape; shortly thereafter Moses and his son were redeemed by the community of Cordoba, where he became a prominent religious authority.

Travel for study was common. Those who were promising enough and whose communities could afford it were often sent to Mesopotamia, the Holy Land, or Kairouan in North Africa, to study Jewish law and jurisprudence. Rabbis from Kiev studied in England in the eleventh century, and Abraham ibn Daud reported that Khazar Jews studied in the Talmudic academies of Spain in the thirteenth century. Some Jews traveled for more secular studies; Jacob ben Sheara and Jacob ibn Tariq were two Mesopotamian Jews of the tenth century who journeyed to Sri Lanka to study astronomy and brought back astronomical texts upon their returns. Abraham ibn Daud also mentions a Jew named Joseph who reportedly studied mathematics in India and brought the so-called Arabic numerals to Europe. A Jewish school of cartography existed on Majorca during the twelfth through the fifteenth centuries; the mapmakers who studied there relied on Jewish travelers for much of their information. A document of King James IV of Majorca mentions a Jew named Yuceff Faquin whose claims to have circumnavigated the globe in the late fourteenth century are impossible to substantiate.

Then there are those travelers whose motivations are difficult to categorize. Perhaps the most mysterious was a man who called himself Eldad ha-Dani ("Eldad of the Tribe of Dan") who

arrived in Spain around the year 880. Eldad claimed to have come from Ethiopia (where Jewish tribes and statelets did exist) and to have traveled extensively in North Africa and the Middle East. He brought fabulous tales (almost certainly exaggerated or invented) of Jewish kingdoms, mythical beasts, and ancient civilizations, including an island protected by a magic river where the descendents of Moses lived in contemplation and prayer. Seven decades later scholars were still puzzling over Eldad's tales; Hisdai ibn Shaprut's letter to the Khazar king Joseph contains a query regarding their veracity.

Abraham ibn Ezra, a famous twelfth-century Spanish rabbi, left home after a series of family tragedies and wandered aimlessly through Provence, Italy, France, England, north Africa, Greece, the Middle East, and India. His book *Reshit Hokhmah* contains important information on these regions, especially the Jewish communities. Judah al-Harizi, whose extensive travels in Europe and Asia from 1216 to 1230 were documented in his classical work *Tabkemoni*, provided invaluable insights into geography and the political landscape of his period.

The collapse of many trans-Eurasian trade routes in the eleventh and twelfth centuries made travel in general, and for Jews in particular, exceedingly difficult. Nonetheless, Jews continued to involve themselves with exploration and travel. Luis de Torres, Columbus's interpreter, was a Jew baptized the day before the expedition's departure. Joao Peraz of Covilha, Alfonso de Paiva, Abraham of Beja, and Joseph Copateiro, all Jews, were prominent in Portugal's early expeditions to discover overland and sea routes to India and East Asia. Hernando Alonso, a Spanish Jew, was an aide and master shipbuilder for Cortez. In 1528 Alonso was denounced as a Judaizer (a convert who had secretly relapsed to Judaism) and became one of the first people burned at the stake by the Inquisition in the New World. David Reubeni, a self-proclaimed messiah who appeared in Italy in 1524, came from Arabia or India. Pedro Teixeira, a converso, circumnavigated the globe with Magellan and explored the Amazon basin. These travelers and others like them, in addition to contributing to human knowledge generally, served a vital function in continuing to keep the lines of communi-

cation between the far-flung communities of the Jewish world open.

—Brian Gottesman

Bibliography

- Adler, Marcus Nathan. *Jewish Travellers in the Middle Ages: 19 Firsthand Accounts*. London: Routledge, 1930.
- Bendiner, Elmer. *The Rise and Fall of Paradise*. New York: Putnam, 1983.
- Benjamin of Tudela. *The Itinerary of Benjamin of Tudela*. Cold Spring, NY: NightinGale Resources, 2004.
- Rabinowitz, Louis. *Jewish Merchant Adventurers: A Study of the Radanites*. London: Edward Goldston, 1948.

The Silk Road during the Pax Mongolica, 1260–1368

During the period of peace and stability that prevailed after the Mongol conquests, conventionally known as the Pax Mongolica (1260–1368), trade flourished along the Silk Road (the overland commercial routes linking Western Eurasia and China, named collectively in 1877 by the German geographer Ferdinand von Richthofen after one of the principal commodities, silk). Merchants from West and Central Asia, as well as a considerable number of Europeans, of whom Marco Polo is undoubtedly the most famous, traveled throughout the Mongol empire plying their wares and at times taking posts in the Mongol administration. They traded luxury items such as fine jewels, as well as less expensive goods such as plain raw silk. Their two main routes were the overland trail from the port city of Tana through the territory of the Golden Horde in Central Asia to China and the route from Trebizond, in what is now northeastern Turkey, to Tabriz in Iran and from there around the periphery of the Taklamakan Desert to China.

There were two main reasons for the influx of merchants and growth in trade during this period: the development of a safe and secure transportation infrastructure and the direct promotion of commerce by the Mongols. In order to facilitate communication across their vast empire, the khans—particularly Chinggis Khan's successor, Ogedei (r. 1229–1241)—developed a sophisticated postal relay system (*yam*). Spaced

➤ DID MARCO POLO GO TO CHINA?

In *Did Marco Polo Go to China?* (1995), Frances Wood argued that although Marco's father and uncle went to China, Marco himself probably did not travel beyond the Black Sea. Wood's thesis, which she has drastically toned down recently in the face of overwhelming criticism, rests principally on arguments from silence, the most important being Marco's failure to mention the Great Wall; his failure to mention important aspects of Chinese life, such as the Chinese writing system and tea; and the failure of Chinese sources to mention Marco or his visit.

All of these omissions, however, can be adequately explained. The Great Wall, for instance, did not yet exist at the time of Marco's visit. Although a series of unconnected walls existed along China's northern border, the massive wall that stands today was not built until the Ming dynasty. As for Marco's failure to mention important aspects of Chinese life, it should be kept in mind that Marco spent most of his time with the

Mongol overlords and foreign merchants, not the subject Chinese. This fact likewise explains the failure of Chinese sources to mention Marco and his visit.

Two details cannot be explained on the assumption that Marco did not go to China: (1) Venetian court records confirming the existence of the three gold paiza given by Khubilai Khan to the three Polos, as well as Marco's possession of a gold paiza at the time of his death, and (2) his knowledge of the 1290 embassy escorting Princess Kokechin to Arghun, the il-khan of Persia. Marco's account of the embassy tallies perfectly with the only other two sources—Chinese and Persian, respectively—that detail this episode. In fact, it alone provides us with the details that allow us to reconcile the other two accounts. Since Marco could not have obtained this information from any written source and an oral source is unlikely, we must conclude that his information was firsthand.

—John Wei

a day's journey apart, these relay stations provided fresh mounts, free food, and accommodations to all those traveling on official business, that is, all those who possessed appropriate tablets of authority, known as *paizas*. Paizas were oblong or round inscribed tablets given to dignitaries and envoys on official missions or to certain officials as signs of office. Their material—gold, silver, and bronze—differed according to the recipient's status. Marco Polo and his family members, for instance, received seven paizas, four of which were made out of gold. The protection that merchants such as the Polos received along the postal relay routes, as well as the food and accommodations, essentially amounted to a government subsidy of trade.

The khans also promoted trade in more direct ways. During the first half of the thirteenth century, they implemented policies that attracted merchants to the Mongol court, such as buying goods at above-market prices and making advantageous loans to merchants. Mongols entered into trade partnerships, known as *ortaq*s, investing large sums of money that they then received back with interest. Later on, the Mongols took a direct

hand in organizing various industries, most notably the textile industry. Already in the expansionist phase of the Mongol empire, the Mongols took care to identify and spare the lives of artisans, whom they resettled in Inner and East Asia. In the 1230s and 1240s, a formal organization of artisans on a wide scale took place, while beginning in Khubilai Khan's reign (r. 1260–1294) a further reorganization of artisans took place throughout Yuan China. This forced resettlement of peoples facilitated not only the transfer of goods but also the interchange of artistic techniques and methods of production. The goods produced by these transplanted colonies of artisans and court-sponsored workshops were used by the Mongols themselves as well as traded along the Silk Road.

The large concentration of merchants in Mongol-controlled territories coupled with the Mongols' own unfamiliarity with governing sedentary peoples led quite naturally to an alliance between the two groups. Large numbers of foreign merchants entered government employment, taking jobs as commercial agents, diplomats, spies, tax collectors, and bureaucrats. Literate, able to

keep accounts, and skilled in foreign languages, merchants adapted very well to these posts. Moreover, since foreign merchants—unlike the local elites employed by the Mongols—were outsiders, they had to depend upon the government for support; consequently, they were more likely to look upon the Mongols as benefactors and less likely to foment trouble by siding with subject peoples.

Unfortunately, many of the foreign merchants employed by the Mongols engaged in oppressive practices, in particular, extortion, usury (charging excessive interest), and tax farming. Tax farming was the age-old practice of a private person paying the government a stipulated sum for the right to collect and keep tax monies. The potential profit was a strong incentive for wringing excessive amounts from taxpayers. Complaints about these abuses appear repeatedly in Chinese documents from this period. Yet aside from Khubilai Khan, no other emperor seems to have tried to curtail or rectify these practices. This unchecked corruption eventually led to the overthrow of the Mongol Yuan dynasty and the establishment of the Ming dynasty in 1368, two events that along with other political disorders in Central Asia and the outbreak of the plague brought about the decline of Silk Road trade.

—John Wei

Bibliography

- Allsen, Thomas T. *Commodity and Exchange in the Mongol Empire: A Cultural History of Islamic Textiles*. Cambridge: Cambridge University Press, 1997.
- Allsen, Thomas T. "Mongolian Princes and Their Merchant Partners." *Asia Major*, 3rd series, 2 (1989): 83–126.
- Endicott-West, Elizabeth. "Merchant Associations in Yüan China: The *Ortogh*." *Asia Major*, 3rd series, 2 (1989): 127–154.
- Jackson, Peter. "Marco Polo and His Travels." *Bulletin of the School of Oriental and African Studies, University of London* 61 (1998): 82–101.
- Larner, John. *Marco Polo and the Discovery of the World*. New Haven, CT: Yale University Press, 1999.
- Wood, Frances. *Did Marco Polo Go to China?* London: Secker and Warburg, 1995.
- Wood, Frances. *The Silk Road: Two Thousand Years in the Heart of Asia*. Berkeley: University of California Press, 2002.

The Silk Road after the Collapse of the Mongol Empire

After the collapse of the Mongol empire, European trade along the Silk Road came to a virtual end. Already in the late 1330s with the division of the Chaghatai khanate, the smallest of the Mongol khanates, into two entities, Mughulistan and Transoxiana, the overland trade routes in Central Asia were becoming dangerous and inhospitable to merchants. Warfare in the following decades—civil war in Byzantium, attacks by the Golden Horde, the expansion of the Mameluks, the initial expansion of the Ottomans, and the rise of Timur-i Leng (Tamerlane)—combined with the outbreak of the highly infectious bacterium *yersinia pestis* in its bubonic and pneumonic forms, known in Europe as the Black Death (1347–1350), further discouraged trade and travel. Essentially the western ends of the two major overland routes linking Europe to China, the one through Anatolia and the one north of the Caspian Sea, were closed. For instance, while we know the names of dozens of merchants who traveled to East Asia during the period 1260–1363, we know the existence of but two active there between 1363 and 1440: Niccolo from Fulin and Nicolò de' Conti from Chioggia.

The closing off of the Silk Road to the West led to Christian Europe's greater reliance on trade with Muslim middlemen in Egypt and Syria. This, along with a desire to find Christian allies in the East (the mythical Prester John), provided Europeans with a strong stimulus to search for alternative routes to the "Indies." Their efforts eventually touched off the age of exploration: Columbus's discovery of America in 1492 and Da Gama's rounding of the Cape of Good Hope in 1498.

Despite the decline in the western portions of the Silk Road, trade in the Central and East Asian portions continued, albeit at a much reduced level. The collapse of the Mongol dynasty followed by the establishment of the Ming dynasty in China in 1368 led to a dropoff in trade between the northern steppe and China. Under Timur-i Leng (ca. 1330–1405) and his successors, however, Samarqand became a major economic hub that attracted merchants and caravans from both China and the West. At the same time, the

► TIMUR-I LENG'S SAMARQAND AND THE SILK ROAD'S INDIAN SUMMER

In 1403 King Henry III of Castile-León dispatched Ruy González de Clavijo on an embassy to Timur-i Leng. After 15 months and almost 3,000 miles (4,828 kilometers) of travel, Clavijo reached Timur's court in Samarqand. His effort to establish an alliance against the Muslim powers of western Asia failed, but Clavijo left behind an important account of his adventures. In the following selection, he describes Samarqand's place on the Silk Road.

"... Samarqand is not only rich in food stuffs but also in manufactures, such as factories of silk. . . , also crapes, taffetas . . . which are all produced here in great numbers. Further, they make up special fur linings for silk garments, and manufacture stuffs in gold and blue with other colors of diverse tints dyed, and besides all these kinds of stuffs there are the spices. Thus trade has always been fostered by Timur with the view of making his capital the noblest of cities: and during all his conquests wheresoever he came he carried off the best men of the population to people Samarqand, bringing there the master-craftsmen of all nations. Thus from Damascus he carried away with him all the weavers of that city, those who worked at the silk looms . . . also the craftsmen in glass and

porcelain, who are known to be the best in all the world. From Turkey he had brought their gunsmiths . . . and all men of other crafts wheresoever he found them, such as silversmiths and masons. These all were in very great numbers, indeed so many had been brought together of craftsmen of all sorts that of every denomination and kind you might find many master-workmen established in the capital . . . The markets of Samarqand further are amply stored with merchandise imported from distant and foreign countries. From Russia and Tartary [the khanate of the Golden Horde] come leathers and linens, from Cathay silk stuffs that are the finest in the whole world . . . From India there are brought to Samarqand the smaller spices, which indeed are the most costly of the kind, such as nutmegs and cloves and mace with cinnamon . . . all these with many other kinds that are never to be found in the markets of Alexandria."

—Alfred J. Andrea

Source

Ruy González de Clavijo, Embassy to Tamerlane, 1403–1406, trans. by Guy Le Strange (New York: Harper & Bros., 1928), 290–292.

early Ming emperors encouraged trade in the form of diplomatic and tributary embassies in which the bestowal of Chinese "gifts" camouflaged the Middle Kingdom's paying of tribute to various neighbors, especially steppe nomads. These embassies traveled not only overland, following the Silk Road, but also by sea. The celebrated seven voyages of Zheng He (1405–1433) are the most well-known instances of these embassies, as well as some of the last examples of them, for as the fifteenth century progressed, Ming officials seem to have begun losing interest in trade with foreigners. Although Ming China continued to allow entry to foreign merchants and envoys, it stopped sending embassies of its own to Central Asia and beyond.

This last period of particular vitality along the Silk Road suffered a major decline with the collapse of the Timurid dynasty in 1506 and the growth and dominance of European traders in the Indian and Pacific oceans in the sixteenth

century. Yet despite all of this maritime activity, Western Europeans did not usurp or dominate all trans-Eurasian trade. Not only did the Silk Road continue to bear some long-distance traffic in the sixteenth century, but under China's Manchu, or Qing, dynasty (1644–1911) there was a marked upturn in overland trade along the ancient pathways of the Silk Road with China's victories over the Mongol Junghurs in 1758–1759 and establishment of the Xinjiang (New Province) district in eastern Turkistan.

—John Wei

Bibliography

- Lybyer, A. H. "The Ottoman Turks and the Routes of Oriental Trade." *English Historical Review* 30 (1915): 577–588.
- Manz, Beatrice Forbes. *The Rise and Rule of Tamerlane*. Cambridge: Cambridge University Press, 1989.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. Oxford, UK: Clarendon, 1998.

Viking Expansion—To the Faroes, Iceland, Greenland, and North America

The inner Scandinavian expansion marked by cultivation of new agricultural land and population growth from about 500 CE not only spurred the Viking raids on continental Europe and the British Isles but also led to the discovery, followed by the settlement, of the North Atlantic islands of the Faroes, Iceland, and Greenland. Norse immigration to the Faroes commenced in the early ninth century, but Celtic monks had already visited the islands. The majority of immigrants came from the southwestern parts of modern Norway. The medieval population lived mostly on subsistence farming, fishing, and whaling that produced no economic surplus that could form the basis of central governance. From the eleventh century, the Faroe people were taxed by the Norwegian Crown and were placed under the same jurisdiction as Shetland, also part of the Norwegian medieval North Sea empire. A bishopric was established on the islands in 1153 and made subject to the archbishopric of Nidaros in Norway.

During the thirteenth century, Iceland developed a rich written literary tradition that documented in detail its legends and history from the age of the first settlers. From these sources, known as the Icelandic Sagas, we know that Norse navigators discovered Iceland around 870. As with the Faroe Islands that lie north of Scotland, Celtic monks might have also visited Iceland prior to the arrival of Scandinavians. Many who resisted consolidation of the Norwegian Crown in the late ninth century left to settle on Iceland. Some also came over to escape injustice in the old country. The majority of these immigrants came from northwestern parts of Norway, but many also arrived from other Norse colonies.

Most of the arable land on Iceland was occupied around 930. The Icelanders now felt a need to develop a judicial system, and an envoy was sent to Norway to study the courts and laws there. Subsequently, the Allthing was established, where free men met each summer to settle disputes and pass laws. Over the ensuing decades the Icelandic court system was further developed, and the island was divided into 12 and later 13 jurisdictions that again were divided into 3

➤ A NORSE PENNY

Aside from the L'Anse aux Meadows site, only one other authentic Norse artifact has been found along the eastern coast of North America. This was a Norse penny minted between 1065 and 1080, about a half century after the Vinland voyages mentioned in the sagas. It was recovered from a prehistoric Native American occupation site on the coast of Maine. Other artifacts found at the site included a unique stone from Ramah Bay in far northern Labrador and a distinctive artifact of a type made by people using the Dorset technology. This has led archaeologists to conclude that it was brought to Labrador during a late-eleventh-century Norse voyage and that from there it reached present-day Maine through prehistoric Native American trade routes and exchange networks.

The Norse probably contacted Native American populations in southern Labrador and Newfoundland, Dorset ancestral Eskimos in northern Labrador, and probably the Inuit in the eastern Canadian Arctic. Occasional contacts involving both trade and plundering probably occurred over a period of several centuries. There is no evidence, however, that these contacts had any major influence on indigenous North American populations in terms of demography or culture.

—Peter N. Jones

subdivisions presided over by a local justice of the peace. Further reforms followed, and a supreme court was established with the Allthing in the early eleventh century. The Allthing adopted Christendom in 1000; the first bishopric was established in 1056 and a second in 1106. Both became subject to the archbishop of Nidaros in 1152.

A treaty between the Allthing and the Norwegian Crown guaranteed citizen's rights for Norwegians in Iceland and vice versa. But Norway gained further influence, benefiting from the division among the Icelanders, fear of civil war, and economic dependency on Norway. Finally in 1262, Iceland was made subject to the Crown. Law reforms were passed, royal officials replaced the justices of the peace, and the Allthing was reformed to become more in tune with its counterpart in Norway.

► THE EXCAVATION OF NORSE SETTLEMENTS ON NEWFOUNDLAND

The discovery and settlement in North America by Norse people around the year 1000 had long been known through Icelandic sagas. Final proof and the exact location of Norse settlements were not available until 1960, when Norwegian explorer and archaeologist Helge Ingstad and his wife Anne Stine waded ashore in L'Anse aux Meadows on the northern tip of Newfoundland. They were greeted by a local fisherman, who upon learning of their mission showed them an elevation in the surrounding landscape. Ingstad stated later that he sensed an aura of mystique about these features. They were barely visible but bore a striking resemblance to remains of known Norse settlements on Greenland. The local residents had believed them to be remains of an Indian camp but were soon to learn otherwise.

Excavations commenced the following year. They uncovered eight houses, an iron forge, a spinning wheel, multiple hearths, iron rivets, and many other artifacts and constructions. The layout of the houses was distinctively Norse, and the houses may have been home to between 70 and 80 individuals. They were oblong-shaped and were divided into several rooms. The walls were made of peat, and a box made of slate was placed beside the hearth to conserve the glowing coals over night. Any doubt that the findings were of Norse origin ended when a decorative bronze



L'Anse aux Meadows, site of an early-eleventh-century Viking colony at the tip of the Great Northern Peninsula of the island of Newfoundland. (Dylan Kereluk)

needle was found by Stine on September 2, 1968, the final day of the excavation.

The findings affected the contemporary local community. The site became a major tourist attraction and has been placed on the UNESCO World Heritage List, a welcome feature for a small community threatened by depopulation. A museum with a courtyard surrounded by reconstructed Norse longhouses has been erected, and local cafés and motels have taken on names such as Valhalla and The Norseman. L'Anse aux Meadows also hosted the presumed 1,000-year anniversary of Leiv (Leif) Erikson's discovery of North America in 2000.

—Frode Lindgjerdet

In 982, Erik the Red from Iceland arrived at the south of Greenland and returned three years later with a party of settlers. The Norse immigrants established themselves mainly in the Eastern Settlement near present-day Qaqortoq and the Western Settlement in Godthåbsfjorden. The settlers soon adopted Christianity, and a bishopric was established in 1124. About 1261, the Greenlanders voluntarily also became subjects of the Norwegian Crown. Approximately 3,000–6,000 people lived in these Norse settlements. In addition to fishing and farming, they traded ivory from walrus for grain to supplement the meager local agricultural output. Around 1300 the climate got colder, leading to failed crops and ice flows that prevented supplies from reaching the settlements. Economic and demographic cri-

ses in Europe also undermined their exports markets and thereby the basis for their much-needed foodstuff imports. The outside world lost contact with the Western Settlement after about 1350 and with the Eastern Settlement sometime after 1409. Both disappeared sometime before 1500, probably due to a combination of climatic change, the southward migration of the Inuit, epidemics, and raiding by pirates and slave traders.

From Greenland, Leiv (Leif) Erikson, son of Erik the Red, reached North America around the year 1000. The circumstances regarding Norse presence in the Western Hemisphere remain unclear, and the sagas seem to be full of inaccuracies and fictional adaptations on this point. They do relate that 140 people accompanied Erikson on a second voyage three years after his ini-

tial discovery. They settled at a place they called Vinland but soon left, according to the sagas, due to attacks from Native Americans, whom the Vikings called *skraelinger* (weaklings or wretches) because of their small physical stature compared to that of the Norsemen. Norse presence in North America in the Middle Ages was universally acknowledged following the 1960–1968 discovery and excavation of the irrefutable remains of a Norse settlement at L'Anse aux Meadows on the northern coast of Newfoundland.

Formal sovereignty over Greenland, Iceland, and the Faroe Islands followed Norway into union with Denmark in 1387, and the Danish king remained their sovereign after the mother country ceased to be an independent kingdom after 1450. While the Norse settlements on Iceland survived, contact with the outside world remained sporadic until the eighteenth century. Greenland and the Faroe Islands remain Danish dependencies today.

—Frode Lindgjerdet

Bibliography

- Barnes, Geraldine. *Viking America: The First Millennium*. Cambridge, UK: D. S. Brewer, 2001.
- Byock, Jesse L. *Viking Age Iceland*. London: Penguin, 2001.
- Jones, Gwyn. *The Norse Atlantic Saga*. 2nd ed. New York: Oxford University Press, 1986.
- McGhee, Robert. "Contact Between Native North Americans and the Medieval Norse: A Review of the Evidence." *American Antiquity* 49, no. 1 (1984): 4–26.

The Vinland Map

On the eve of Columbus Day 1965, Yale University Library announced that it owned a small black-and-white manuscript world map from about 1440 that showed the location of the North American region that Norse travelers had explored in the early eleventh century and named Vinland (Wine Land). Aided by a book-length commentary released at the same time, this allusion to medieval Norse contact with North America caught the public imagination, for prior to 1965 the earliest known depiction of Vinland had been Sigurd Stefansson's speculative "Skalholt Map" (about 1590) combining Norse saga descriptions with late-sixteenth-century geogra-

phy. Bound with an account of Friar John of Plano Carpini's mission during 1245–1247 to the Mongols (the so-called *Tartar Relation*), the map had been purchased in 1957 by Laurence C. Witten, a dealer in New Haven, Connecticut. At that time, the map was not only unprovenanced (no known history of origin and ownership) and in bad condition but was also anonymous and untitled.

The volume's provenance has still not been proved beyond 1957 and a connection to the Spanish-Italian dealer Enzo Ferrajoli de Ry; the map's condition has deteriorated further, and its likely author and purpose are still debated. The map had been named for its most striking feature by 1959, however, when Paul Mellon bought the "Vinland Map" volume from Witten and placed it in Yale's custody together with four separately bound sections of the thirteenth-century world history text *Speculum Historiale* (*Historical Mirror*) by Vincent of Beauvais. Matching wormholes supposedly connected the texts and apparently validated the map as a mid-fifteenth-century work, the period to which the paper marks in the two texts may be assigned.

The map was drawn on poor-quality parchment (cured animal skin) with crumbling carbon-based ink and shows a roughly mid-fifteenth-century concept of Eurasia and northern Africa, to which were added Iceland and Greenland in the northwestern Atlantic along with the feature identified by one short and one long legend, or caption, as *Vinilanda Insula* (The Island of Vinland). Five widely dispersed map captions indicate a worldwide Roman Church outreach and reveal a concern with illustrating medieval Christian missionary activity.

Both the map's failure to show the long Canadian coastline that the Norse kept exploring long after they had discovered grapes farther south and the outline of *Vinilanda Insula* are based on the nineteenth-century mistaken assumptions that the Norse voyages to America had been short-lived and that Vinland was Nova Scotia and Cape Breton combined. The precociously named *Magnum mare Tartarorum* (Great Tartar Sea) separating Northeast Asia from two unidentifiable islands in the farthest east has also worried scholars about this map, a work that furthermore lacks both antecedents and descendants

and that was never copied. Additional perennial concerns include the wormholes, the handwriting, the source of the map's fabric and sister texts, and the likely composition of the original codex (bound manuscript) involved.

The anomalous composition of the map's ink has nevertheless dominated the authenticity debate since 1974, when the McCrone Institute in Chicago found that the residual ink line contains anatase crystals modified by methods available only after about 1920. Confirmed by later studies, this discovery has led to a general, but not unanimous, conclusion that the "Vinland Map" is a modern fake. This conclusion is supported by the longer legend accompanying *Vinilanda Insula*, which contains references to medieval Norse historical events that are as colored by erroneous nineteenth-century ideas as the outline and placement of Vinland, a region that cannot in fact be defined because the medieval Norse neither used nor made maps and the literary sources are vague in that respect. They are clear enough, however, to reveal that the author of the "Vinland Map" was as ignorant about Norse naming practices as about Bishop Eirik of Greenland, who is in the historical record as having gone to Vinland in 1121 but whose fate and purpose are otherwise unknown. Both Vinland captions also run contrary to historical fact when claiming that Leif Erikson and Bjarni Herjolfsson discovered Vinland together, a notion that did not appear until 1765, when David Crantz made this ultimately unsubstantiated claim in his *Historie von Grönland*.

The cartographic, historical, and chemical indications that the Vinland Map is a modern fake preclude speculations that the map could have influenced fifteenth- and sixteenth-century European explorers in the North Atlantic.

—Kirsten A. Seaver

Bibliography

- Seaver, Kirsten A. *Maps, Myths, and Men: The Story of the Vinland Map*. Stanford, CA: Stanford University Press, 2004.
- Shailor, Barbara. *Catalogue of Medieval and Renaissance Manuscripts in the Beinecke Rare Book and Manuscript Library, Yale University*, Vol. 2. Binghamton, NY: Medieval and Renaissance Texts and Studies, 1987.

- Skelton, R. A., Thomas E. Marston, and George D. Painter. *The Vinland Map and the Tartar Relation*. New Haven, CT: Yale University Press, 1965.
- Wallis, Helen, et al. "The Strange Case of the Vinland Map: A Symposium." *Geographical Journal* 140(2) (1974): 183–217.

Chola Imperialism and the Sanskritization of the Malay Peninsula and Archipelago

In the first millennium CE, Indian civilization spread from South Asia to the many kingdoms of mainland and island Southeast Asia, expanding the zone in which Indian literature, religions, and manners were a shared cultural currency. The transfer of Indian civilization to the Southeast Asian peninsula and the Malay (Indonesian) archipelago began in the early to middle centuries of the first millennium CE. It was a process mainly carried out by Indian and Southeast Asian merchants, missionaries, chiefly Buddhist, and, occasionally, embassies from Southeast Asian kingdoms intent on studying Indian culture. Large-scale migrations were not involved, although mercantile diasporas involving small numbers did play a role. Conquest of Southeast Asian kingdoms and imperialism by Indian states did occur, although it played a distinctly minor role.

The period in which Indian kingdoms exhibited the most bellicose imperialism towards the Southeast Asian kingdoms occurred during the late Chola empire (985–1279), especially during the reigns of the founder of the late Chola empire, Rajaraja Chola (r. 985–1014), and his successor Rajendra Chola (r. 1014–1044). Rajaraja created the Chola empire by defeating, but not destroying, the kingdoms of the Cheras on the Malabar Coast, the Pandyas (at the southern tip of the Indian Peninsula, centering on Madurai), and the Chalukyas, as well as subduing the northern half of the island of Sri Lanka. Rajendra extended Rajaraja's conquests to the Ganges, and, for a time, occupied all of Sri Lanka, although he never extinguished Singhalese resistance. Rajendra's land conquests were impressive, but his greatest achievement was the creation of a sea empire. Rajendra's powerful fleet patrolled the

eastern reaches of the Arabian Sea, annexing the Lakshadweep and Maldiv Islands. In the east, Rajendra's fleet raided all of the Southeast Asian coastlands and forced both mainland and island states to pay tribute. In 1025, Rajendra's ship-borne forces occupied and sacked the capital of Srivijaya, an empire with which the Cholas had hitherto been on excellent terms. The sacking of Srivijaya marked the zenith of Chola overseas imperialism. In the twelfth century, Southeast Asian tributes had become mere tokens, and Sri Lanka had regained its independence.

By the eleventh century, the ruling classes in the Southeast Asian kingdoms had become *sanskritized*; that is to say that they had adopted the "high culture" and religions of India, such as Mahayana and Theravada Buddhism, Saivite and Vaishnavite Hinduism, and, frequently, a *mélange* of these. Indian literature, especially the great epics (the *Mahabharata* and the *Ramayana*), was naturalized in all the Southeast Asian cultures, and the Indian conception of divine kingship was being used by all Southeast Asian rulers to define and legitimize their status. Brahmin priests, often from India, officiated at Hindu public rituals in Southeast Asian royal courts, and Southeast Asian kings took names from Sanskrit to increase their claims to divine favor.

In many parts of Southeast Asia Sanskrit, or Indian, culture, after permeating the courtly levels of the ruling classes, seeped out to the rural villages to influence the popular village culture. This was nowhere more true than in the Malay Peninsula and archipelago (present-day Malaysia, Indonesia and some of the Philippines) where the great Indian epics merged with the indigenous oral literature to produce art forms such as the shadow plays accompanied by gamelan music presented in rural villages even today, though this region is now largely Muslim.

The political history of the sanskritized kingdoms of the Malay Peninsula and archipelago has become part of the popular folklore, kept alive in the oral history along with versions of the *Mahabharata* and *Ramayana*. Briefly stated, we are told of three powerful native empires, which dominated the region consecutively: Srivijaya (late sixth to thirteenth century, centering in eastern Sumatra), Singhasari (thirteenth cen-

tury, East Java), and Majapahit (fourteenth through sixteenth century, centered in East Java).

Srivijaya was an empire of the sea, profiting from hemispheric trade that passed through the Sunda and Malacca straits. The rulers of Srivijaya used their strong navy to suppress piracy in those straits, but also to collect tolls from the merchants plying these waters. Srivijaya exercised hegemony over a wide swath of territory, stretching from the kingdom of Langkasuka in Malaya to the Brantas River in central Java. It was a devoutly Buddhist realm that, in the ninth century, built the great temple-monument of Borobudur. Although driven out of Java in the ninth century by a Saivite kingdom that built the impressive Hindu monument temple complex of Prambanan, and sacked by the Cholas in the eleventh century, Srivijaya endured as an important maritime power until the rising power of Majapahit destroyed it in 1377.

Singhasari and Majapahit were both East Javan states that exercised hegemony in the Malay Archipelago from the thirteenth century until the rise of Islam in the Malay Archipelago in the sixteenth century. In thirteenth-century Java under Singhasari rule, the process of adapting or naturalizing Indian forms to indigenous culture proceeded apace. Javan court as well as folk culture was a type of Hindu culture even as it was peculiarly localized and insisted on its strong Javan identity. Indian epics, temple dances, and artistic forms now all found their Indonesian voice.

In 1293, when the Mongols sent a powerful armada to Java to punish the Singhasari ruler for "impertinence," the local forces repulsed the Mongols, but in the melee, Majapahit overthrew the Singhasari state. Majapahit grew very powerful, creating the largest Southeast Asian empire in history. This empire included territory from Papua to western Malaya, and some of southern Philippines.

The fourteenth and fifteenth centuries were the golden age of Hindu Indonesia. Old Javan literature flourished, and old Hindu stories were recast in Indonesian forms. The caste system of India was reshaped into an Indonesian social system, with the peasants as the lowest caste. The different castes were very distinct, relying on

different dialects when speaking to each other, as in modern Bali.

By 1400, Majapahit power reached its zenith. As already mentioned, in 1377 a Majapahit force destroyed Srivijaya. This may have been a Pyrrhic victory, however, because one of the princes of the erstwhile Buddhist sea kingdom found allies among the Muslim traders in Aceh, on the western coast of Sumatra, and converted to Islam. This former prince of Srivijaya then established his power as the Sultan of Malacca, a city-state that in the subsequent century became a central force in the Islamification of the Malay Peninsula and archipelago. In the early 1500s, a coalition of Muslim sultanates defeated Majapahit and drove the Hindu society to take refuge on Bali.

—Wilfred J. Bisson

Bibliography

- Grousset, René. *The Civilization of India*. New York: Cooper Square Publishers, 1967.
- Hall, Kenneth. "Economic History of Southeast Asia." In *The Cambridge History of Southeast Asia*, vol. 1, *From Early Times to c. 1500*, edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1999.
- Stein, Burton. *A History of India*. Oxford: Blackwell Publishers, 1998.
- Taylor, Keith W. "The Early Kingdoms." In *The Cambridge History of Southeast Asia*, vol. 1, *From Early Times to c. 1500*. Edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1999.

Chinese Oceanic Commerce in the Age of Southern Song

Oceanic trade in the time of China's Southern Song dynasty (1127–1279) established strong diplomatic and economic relations with its trade partners, integrating China as an influential player in foreign economies across Southeast Asia and the Indian Ocean. Southern Song's flourishing domestic economy created high demand for imported luxuries and growth in the ranks of private investors willing to finance foreign trade endeavors. Additionally, the climate of instability in Song's military relations with its neighbor to the north, the newly established Jin dynasty (1115–1234), contributed to its commit-

ment to the development of naval and shipbuilding capabilities.

After the loss of the Song capital of Kaifeng to Jin conquerors in 1126, Song leaders retreated below the Yangzi River to reestablish a government in Hangzhou. Protected to a certain extent by natural barriers of rivers and lakes, as well as by agreeing to make annual tributary payments to the Jin to deter aggression, the Southern Song government turned to greater investment in its maritime interests. The Song established China's first permanent navy in 1132, bolstering the protection and improvement of its harbors and major seaports at Quanzhou, Hangzhou, Xiamen, and Fuzhou. The abundance of large merchant ships sailing international trade routes—complete with multiple decks and masts, sails as well as oars, the innovation of compass use, and the ability to carry several hundred sailors—illustrated the technological superiority and advancement of Song shipbuilding.

The Song also enjoyed a prosperous economic and cultural elevation at this time. Earlier improvements in rice cultivation enabled the southern regions to increase both the production and trade of rice, resulting in a significantly larger and wealthier population by the onset of the twelfth century. This in turn produced a growth in city populations as well as commercial contact throughout the region. An increasing number of investors and merchants found leisure and entertainment in fine art, cultivation of intellectual and philosophical pursuits, and refined culinary tastes. This higher standard of living engendered a greater demand for foreign luxuries, and vigorous and widespread Chinese oceanic trade provided them in bulk.

Although overland trade with Song's northern neighbors and those along the Silk Road had long played an important role in sustaining its commerce, oceanic trade surpassed land trade during the Southern Song era. The government sent emissaries to Korea, Japan, and various Southeast Asian countries to invite trade to China. The prevalence of Chinese trade ships in the Indian Ocean rivaled the number of Indian and Arab traders. Sea junks transported massive amounts of goods from the Spice Route along the East Indies. Sumatra and Java supplied so-called long pepper and herbal medicines; ginseng, fra-

grant wood, and quicksilver were among the imports from Korea and Japan; and Arab traders brought pearls, tortoiseshell, frankincense, and rose. Myrrh and cinnabar arrived from Somalia to turn large profits for lucky investors. Cloves and nutmeg were transported from the Spice Islands (Maluku Islands or Moluccas), Indian black pepper from its namesake, and Ceylonese cinnamon from Sri Lanka.

The export commerce of Chinese merchants in the Southern Song era was indicative of an economy that was vastly improved in organization. Large-scale oceanic trade endeavors were known to turn very high profits, but they also posed the possibility of huge losses. The establishment of a shareholder system in which an excursion was financed by several investors provided effective risk management. Production became highly specialized, and in larger cities craftsmen were organized into guilds that became known for the quality of specific goods, such as tea, paper, and rice. The rise in development and production of iron and textiles provided a large source of exports. Traditional Chinese exports such as silk, porcelain, and ceramics were also vastly improved in quality and craftsmanship, creating far-spread demand overseas; remnants of porcelain identified to the Southern Song era have been discovered as far as East Africa.

Burgeoning overseas commerce created ample opportunities for diplomatic ties as well. The volume and prevalence of Chinese trade earned admiration among foreigners. The Moroccan geographer al-Idrisi wrote in 1154 of the impressiveness of Song ships bringing goods to the Euphrates River. Muslim traders who traveled to China were known to have stayed in official advisory roles over economic affairs. The Southern Song government welcomed the revenue gained in import taxes—much of which came from Arab trade—that by this point had become more profitable than the traditional land tax.

The high profile of Chinese trade in the age of Southern Song was largely responsible for the economic prosperity of the region and its partners around Southeast Asia and the Indian Ocean. Some historians believe that the climate of economic cooperation—in lieu of military aggression—as well as mutual prosperity provided

➤ PAPER MONEY

Commerce grew so rapidly that imports into the Southern Song region began to greatly outweigh exports. Copper currency—round coins with holes in the middle that could be tied together on a string—had long been the standard for conducting business. However, as the volume of traded goods increased, so did the number of coins carried on string, up to hundreds and thousands on one string. These became quite a burden to carry and use.

The first use of paper banknotes occurred in China with the “flying cash” of the Tang dynasty (618–907), so-named because of its propensity to fly away. Private merchants were issued transferable certificates for government purchases that could be traded for cash at the capital. However, it was not until the 1120s in the Song dynasty that widely circulating government-issued paper money appeared. With the expansion of the economy in the Southern Song era, there was a need for a less cumbersome means of currency. Additionally, the standardization of paper money freed up copper for use in other avenues of production. As the Yuan dynasty succeeded the Song, the practice was adopted by the government, and printing expanded to the point that inflation necessitated several overhauls of the value system.

—Jennifer Lei

an environment in which an introspective moral philosophy, such as Neo-Confucianism, was able to develop. The long-standing network of trade relations established in this era lasted well after the conquest of the Song dynasty by Khubilai Khan in 1279.

—Jennifer Lei

Bibliography

- Embree, Ainslee T., ed. *Encyclopedia of Asian History*, Vol. 3. New York: Macmillan, 1988.
- Fairbank, John King, and Merle Goldman. *China: A New History*. 4th ed. Cambridge: Harvard University Press, 2006.
- Hansen, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.
- Levathes, Louise. *When China Ruled the Seas*. New York: Simon and Schuster, 1994.
- Lewis, Mark, and Timothy Brook. *China between Empires: The Northern and Southern Dynasties*.

History of Imperial China Series. Cambridge: Harvard University Press, 2009.

Morton, W. Scott, and Charlton M. Lewis. *China: Its History and Culture*. New York: McGraw-Hill, 2005.

So, Billy K. L. *Prosperity, Region, and Institutions in Maritime China: The South Fukien Pattern, 945–1368*. Cambridge: Harvard University Asia Center, 2000.

Prester John

In December 1144, the Seljuk Turkish *atabeg* (governor) of Mosul, Zengi, captured the crusader-held city of Edessa. When news reached Pope Eugenius III in 1145, it was accompanied by a report (delivered by Hugh, Latin bishop of Jabala, Syria) about a Christian priest-king in the “Indies,” that is, somewhere in distant Asia, named John. According to Bishop Otto of Freising’s account of Hugh’s report, John was a descendent of the Magi who, after defeating “the Persians and Medes,” had tried to come to the aid of Jerusalem but was unable to cross the Tigris River.

Somewhat later, during the reign of the Byzantine emperor Manuel I Comnenus (r. 1143–1180), a letter began to circulate in Europe addressed to him claiming to be from Prester (Priest) John. In it, he described the glory and extent of his realm, extending over “the Three Indias,” and announced his plan to visit the Sepulcher of Jerusalem and defeat the enemies of Christ. In succeeding decades belief in the leg-

end of Prester John grew, fueled by Europe’s need for an ally in its ongoing conflict with Islam.

In 1177 Pope Alexander III dispatched an embassy to Prester John, seeking to convert him to Latin Christianity, but the embassy never returned. During the Fifth Crusade (1217–1221), a report reached the crusaders at Damietta, Egypt in 1221 that a Christian king of India named David, a descendent of Prester John, would soon join them in the fight against the Muslims. The expected help never materialized, and the crusaders were subsequently defeated by the Mamluk ruler of Egypt.

What were the roots of the Prester John legend? Prester John’s letter incorporated many elements of the *Alexander Romance* and played on European ideas of Asia’s great wealth, fabulous wonders, and grandiose rulers. However, the stories themselves almost certainly originated in the East, probably Central Asia, where many Syriac Christians (commonly called Nestorians) lived. In particular, they may reflect Eastern Christian traditions about the Magi and St. Thomas, both of whom were connected with Prester John.

Prester John himself was modeled on a series of Inner Asian rulers, none of whom were Christians. The historical basis of the 1145 report was probably the defeat near Samarqand of the Seljuk sultan Sanjar in 1140/1141 by the Qarakhitai, refugees from the recently dissolved Liao state of the Khitan (Qidan) Mongols in northern China. Although anti-Muslim, they were Buddhists, not Christians. Another Inner Asian ruler who probably influenced the development of the legend was Küchlüg, a Naiman prince who was raised Nestorian but converted to Buddhism after ousting the Qarakhitai ruler in 1211.

Stories about Chinggis Khan, the Mongol conqueror who defeated Küchlüg (1218) and then the Khwarezm-shah Muhammad (1219–1221) in his steady advance westward, also probably played a role in the development of the legend. Because all three rulers attacked Muslims, Christians who heard these stories erroneously thought them to be fellow Christians. This fantasy was soon abandoned when Mongol hordes subsequently invaded the Middle East and eastern Europe, slaughtering Muslims and Christians alike, until they were recalled eastward in 1241 because of the need to elect a new khan of khans.



Detail from a portolan chart of the Indian Ocean shows Prester John seated on a throne, by Diego Homem, about 1558. (The British Library/StockphotoPro)

Nonetheless, the myth of Prester John hung on, and Europeans who traveled to China kept their eyes open for signs of the elusive monarch. John of Plano Carpini (1247) located him in southern India, whereas William of Rubruck (ca. 1255) associated him with the ruler of the Mongol Naiman tribe, now subservient to Chinggis Khan. Later, Marco Polo (1298) identified him with Unc (Wang) Khan, the Nestorian Christian ruler of the Kerait Turks who was originally Chinggis Khan's mentor but was killed by him around 1200.

Polo also referred to another historical figure as a descendent of Prester John: George, Prince of the Ongut Turks, a vassal of Khubilai Khan, who was later converted from Eastern, or Assyrian (Nestorian), Christianity to the faith and practices of the Roman Church by John of Monte Corvino (ca. 1305). The last attempt to locate Prester John in Inner Asia was around 1328, when Odoric of Pordenone described him as living to the east of Cathay. Both he and Rubruck observed that very little of what was said of this ruler was true, indicating growing pessimism in some quarters about the legendary figure.

Most accounts of Prester John had located him in "India" or "the Indies," which at the time was considered to be composed of Nearer India, Farther India, and Middle India, corresponding to northern India (extending north into Inner Asia), southern India, and Ethiopia. It was now clear that Prester John was not to be found in Nearer India. Marco Polo, visiting the shrine of St. Thomas in southern India en route back home (1290–1291), found no evidence of him there either. The only place left to look was Ethiopia.

European Christendom was well aware that the rulers of Ethiopia were Monophysite Christians. Beginning in 1270, a vigorous new Ethiopian dynasty was founded that claimed to be descended from King Solomon. It is likely that an Ethiopian embassy to Spain around 1310 revived hope in Prester John's existence. By 1324 a Catholic bishop of southern India, Jordan Catalani, was openly equating him with the emperor of the Ethiopians. The Muslim capture of the last major crusader stronghold of Acre in 1291, the conversion of the Mongol il-khanids in Persia to Islam in 1295, and the subsequent rise of two new Turkish powers, the Ottomans in Anatolia

➤ THE LETTER OF PRESTER JOHN

"Prester John, by the power and virtue of God and our lord Jesus Christ, lord of lords, to Emmanuel, governor of the Romans. . . . It has been reported to our majesty that you esteem our excellency and that mention of our High One has reached you. . . . We wish and long to know if, as with us, you hold the true faith and if you, through all things, believe in our lord Jesus Christ. . . .

If you truly wish to know the magnitude and excellence of our Highness and over what lands our power dominates, then know and believe without hesitation that I, Prester John, am lord of lords and surpass, in all riches which are under the heaven, in virtue and in power, all the kings of the wide world. Seventy-two kings are tributaries to us. I am a devout Christian, and everywhere do we defend poor Christians, whom the empire of our clemency rules, and we sustain them with alms. We have vowed to visit the Sepulcher of the Lord with the greatest army, just as it is befitting the glory of our majesty, in order to humble and defeat the enemies of the cross of Christ and to exalt his blessed name.

Our magnificence dominates the three Indias, and our land extends from farthest India, where the body of St. Thomas the Apostle rests, to the place where the sun rises, and returns by slopes of the Babylonian desert near the tower of Babel. Seventy-two provinces serve us, of which a few are Christian, and each one of them has its own king, who all are our tributaries. . . ."

—Mark Dicken

Source

Micael Uebel, *Ecstatic Transformation: On the Uses of Alterity in the Middle Ages* (New York: Palgrave Macmillan, 2005), 155–160.

and the Timurids in western Central Asia, once again brought home the need for Europe to have allies against the ongoing Muslim threat.

However, it was not until much later, around 1520, that Portuguese envoys were finally able to reach Ethiopia from the east coast of Africa. Although a member of the mission, Fr. Francisco Alvares, titled his memoirs of the embassy *The Prester John of the Indies*, it was clear to those who had traveled to see the elusive ruler that his

kingdom was nothing like that described in the letter written 350 years before. Shortly thereafter the dream of a powerful Christian king in the East who would come to the aid of his European coreligionists died.

—Mark Dicken

Bibliography

- Beckingham, C. F., and Bernard Hamilton, eds. *Prester John, the Mongols and the Ten Lost Tribes*. Aldershot, UK: Variorum, 1996.
- de Rachewiltz, Igor. *Prester John and Europe's Discovery of East Asia*. Canberra: Australian National University Press, 1972.
- Silverberg, Robert. *The Realm of Prester John*. London: Phoenix Press, 2001.
- Slessarev, Vsevolod. *Prester John: The Letter and the Legend*. Minneapolis: University of Minnesota Press, 1959.

The Western Missionary Presence in the East

Western missionary presence in China, the Middle East, and India roughly paralleled the era of the Pax Mongolica (ca. 1250–1350). The Dominicans, who were already active during the early thirteenth century in the Latin empire of Constantinople and in the Holy Land by 1250, began to push their proselytizing efforts east in the fourteenth century, sending missionaries along the established trade routes by sea as far as southern India and by land into the il-khanid territories in present-day Iran, Iraq, Armenia, and Turkey. The Franciscans established a missionary presence in China in 1294 in response to a specific request by Khubilai Khan (r. 1260–1294) that 100 Latin Christian monks be sent to him at the Mongol court known as Dadu (close by the imperial city of Khanbalik, or City of the Khan; both were located in present-day Beijing). Responding to the presumed success of the mission, the pope in 1306 made the Mongol capital of Dadu/Khanbalik an archbishopric, and over the next four decades the Franciscans established a presence at the imperial court and strengthened the Latin Christian presence in Guangzhou, Yangzhou, and other cities.

In 1318 Pope John XXII formally recognized the de facto split of the eastern territories between the two proselytizing orders but decided

that the Dominicans should supervise their more radical Franciscan brethren. The pope elevated to an archbishopric the Dominican house in Sultanieh, which was located within the Il-khanid empire, and put its new archbishop in charge of all missionary activity in the East. The Franciscans maintained a vibrant, growing presence in China until the ascension of the xenophobic Ming dynasty in 1368. And although the Dominican mission to India was virtually moribund by 1350 and the entire Latin Christian missionary presence in the Middle East was badly depleted during the reign of Timur-i Leng (r. 1370–1405), known in the West as Tamerlane, the Dominicans retained small mission houses in Armenia and Turkey as late as the seventeenth century. The missionary presence of both the Franciscans and the Dominicans in China, India, and the Middle East during this turbulent era had an impact on the emerging art, architecture, and scientific thought of the pre-Renaissance West.

The Franciscan mission to China served a threefold purpose: to convert the Mongols, the Chinese, and various Turkic peoples of the region to the Latin Christian faith; to support the European merchants who flocked to China during the Yuan dynasty (1279–1368); and to act as diplomats between the emperor at Dadu and the pope in Rome (and later Avignon). During the 100-year course of this diplomatic exchange, 1250 to 1350, letters and gifts were regularly exchanged. The pope sent the emperor vestments, manuscripts, and relics and, on one singular occasion, a magnificent gift horse. The emperor reciprocated with rich portable goods from China. The Dominican mission to the Middle East and India had a lasting effect on medical and scientific inquiry in fourteenth- and fifteenth-century Italy. The Dominicans were herbalists of the first order, and the pharmacy of Santa Maria Novella in Florence was famous for centuries. Early missionaries to the East sent back reports filled with descriptions of medicinal herbs and plants and undoubtedly collected many of the rare specimens that are depicted in medical manuals of the era. The Dominicans also had a mission house in the one-time il-khanid capital of Maragha, Iran, where, in addition to a madrasa with a library reported to have hundreds of thousands of books,

► LANGUAGE INSTRUCTION FOR THE ROMAN CHURCH'S MISSIONARIES

The missionary activity of Franciscan and Dominican friars in North Africa and Asia necessitated their learning languages that would enable them to communicate with those whom they sought to convert. A leader in promoting missionary-specific language study in Latin Europe was the Catalan poet, novelist, scholar, university professor, theologian, and mystic Ramon Llull (ca. 1232–1316), who according to a pious tradition died a martyr's death as a result of injuries sustained on his third mission to North Africa. A native of the island of Majorca, which passed from Muslim to Christian Aragonese hands around the time of his birth, Llull had grown up in a culturally complex society in which knowledge of a variety of languages was almost a necessity. He was fluent in his native Catalan and in Occitan (the language of southern France), Latin, and Arabic.

Llull, who was deeply influenced by both Sufi and Franciscan ideals, dedicated the last five decades of his life to the spiritual unification of all humanity, which he expounded in a large body of books in Latin, Catalan, and Arabic. An activist as well as a theorist, he convinced King Jaume (James) II of Aragon (r. 1291–1327) to establish

a short-lived school of Oriental languages for missionaries on Majorca. Llull also openly but unsuccessfully urged the masters of the University of Paris, Latin Europe's premier school, to establish chairs of Eastern languages. His efforts in this latter endeavor appeared to have been rewarded in 1312 when the Council of Vienne, a General Council of the Roman Church that met in southeastern France, mandated that the universities of Paris, Oxford, Bologna, and Salamanca, as well as the papal court, provide six professors each, two for each language, for the teaching of Hebrew, Arabic, and Chaldean. This last language, also known as Syriac and Neo-Aramaic, was spoken by Eastern Assyrian, or Chaldean, Christians in Iraq, Iran, and neighboring areas.

There is often a great gap between ideal and reality, and there certainly was in this case. The decree enjoining the five institutions to establish chairs of Eastern languages went largely unrealized, even by the papacy that had convened and presided over the council. The cause of the failure might have been a scarcity of qualified professors to teach the languages.

—Alfred J. Andrea

a significant astronomical observatory was built between 1260 and 1270 during the reign of Hulegu. The observatory was famous for the work of two Arab astronomers—Kaje Nassir al-din al-Tusi and Muhyi al-din al-Maghribi—who made observations of solar eccentricities and the sun's apogee. Al-Maghribi also translated a number of Greek scientific and mathematical treatises into Arabic, which preserved this ancient body of work from destruction.

The Dominican humanists of the early Renaissance era were keenly interested in the seasonal movements of sunlight, as it determined the date of Easter. It is likely that some of the early scientific work done at the observatory at Maragha (although the structure itself was ruined in an earthquake ca. 1330) informed their thought. Cardinal Bessarion, a scholar-refugee from the Byzantine empire who converted to Latin Christianity, encouraged several humanist

scientists to put their minds to the problem around 1460, and the newly constructed dome of the *duomo*, or cathedral, of Florence in 1475 became the site of one of the first *meridiana* (simply a hole in the ceiling of a large dark building with a rod in the floor that marked the return of sunlight to the same spot every year, signaling the vernal equinox). A *meridiana* was installed in the Dominican church of Santa Maria Novella in 1575.

—Lauren Arnold

Bibliography

- Arnold, Lauren. *Princely Gifts and Papal Treasures: The Franciscan Mission to China and Its Influence on the Art of the West, 1250–1350*. San Francisco: Desiderata, 1999.
- Heilbron, J. L. *The Sun in the Church: Cathedrals as Solar Observatories*. Cambridge: Harvard University Press, 1999.

European Missionaries, Diplomats, and Merchants in East Asia

During the century between about 1240 and 1340, Europeans had an unprecedented opportunity to travel to East Asia. Envoys, missionaries, and merchants regularly visited Mongolia, China, and India and returned to relate new information about the peoples and cultures they encountered. The result was an explosion of knowledge about the wider world and Europe's place within it.

By far the most important factor producing these new conditions was the rise of the Mongol empire. By 1206 Chinggis Khan had turned the nomadic groups of the Mongolian steppes into a formidable conquering army, and by the 1270s his descendants ruled an empire that sprawled from China to Russia and covered much of the Middle East. Europeans got their first experience of this new power in the 1220s when raiding parties struck into Russia. Then, between 1237 and 1241, Mongol armies devastated Russia, Poland, and Hungary, only breaking off their attack at news of the Great Khan Ogedei's death. Though Europeans initially reacted to these incursions with horror and fear, it soon became apparent that a vast new area of the world was now accessible to European travelers.

The first Europeans to venture into the Mongol heartlands were members of the new Franciscan and Dominican orders who shared an ideal of wandering, begging, and preaching. These friars were mobile, well educated, and loyal to the papacy and hence ideal for long-distance missions as papal envoys. The first important embassy to the Mongols was led by the Franciscan John of Plano Carpini, who departed from Lyons, France, in April 1245; reached devastated Kiev by early 1246; and was relayed from one Mongol official to another until arriving at Karakorum, the Mongols' "tent city" in Mongolia, in July. After a five-month stay, John returned to Europe and wrote his *History of the Mongols*, a sober account of the Mongols' customs, morals, origins, religion, and fighting tactics. Another Franciscan, William of Rubruck, made a similar journey a few years later. Departing from the crusader kingdom of Jerusalem around March 1253, he arrived in Karakorum in December 1253 and was

back in the Holy Land by August 1255. His account of his journey, which he presented to King Louis IX of France, while not as widely read as John of Plano Carpini's, was more lively and personal. A number of other mendicants, most notably the Dominican Andrew of Longjumeau, undertook similar diplomatic missions to the Mongols in these years.

What these friars found was a cosmopolitan world in which cultures, religions, and ethnicities converged on the capital of Karakorum. The Mongols valued capable craftsmen, engineers, and administrators wherever they could find them and traditionally adhered to a shamanistic religion that did not preclude considering other beliefs. Consequently, Muslims, Buddhists, Daoists, and Latin, Orthodox, and Assyrian (Nestorian) Christians all competed for favor. William of Rubruck actually participated in a debate among these religious groups and described a number of Buddhist practices to Western readers for the first time. He also provided lively accounts of various Central and East Asian peoples whom he had encountered, such as Uighurs, Tibetans, and Chinese, although he never entered into Tibet or China.

Following in the footsteps of these envoys, European merchants quickly recognized an opportunity for profit. Among the first to venture east, and certainly the most famous, were the Polos, a Venetian merchant family already established in the Black Sea trade. Around 1260 Niccolò and Maffeo Polo set out to trade in Mongol-controlled Russia but were prevented from returning via Constantinople and were forced east by the outbreak of hostilities between Berke, khan of the Golden Horde in Russia, and Hulegu, the il-khan (subordinate khan) of Persia. Three years later the Polos arrived in northern China at the court of Khubilai, the Great Khan, who eventually sent them back to Europe with letters for the pope. In 1271 they set out once more on the long trek east, this time taking with them Niccolò's 17-year-old son Marco. During their three-year trip across Asia (which they broke up with long stays at towns along the way), Khubilai had essentially completed the Mongol conquest of southern China. Thus, unlike earlier travelers, the Polos experienced firsthand all of the wealth and sophistication of Chinese civilization. Some-

time shortly after 1290 they departed with a seaborne mission to Persia via India, traveled overland to the Black Sea, and reached Venice in 1295. Three years later while imprisoned in Genoa and in collaboration with his ghostwriter Rustichello of Pisa, Marco produced the famous account of his travels. The book describes the wealth and power of Mongol China, gives a geographic tour of the Mongol domains with attention to local customs and products, and includes the only Western European mention of Japan in the medieval period. Rustichello's embellishments may be to blame for some of this book's unsustainable claims about Marco's exalted role in the Mongol administration, but, a few modern doubters notwithstanding, the work and its widespread influence rested on Marco's authentic Asian travels.

The Polos were only the most famous of a substantial number of similar Italian merchant voyagers. A number of Genoese and Venetian merchants were in India between 1315 and 1340. John of Monte Corvino and Andrew of Perugia refer to Genoese in Khanbalik (present-day Beijing) and Zayton (Quanzhou) between 1305 and 1326, and the Genoese merchant Andalo da Savignone traveled to China several times in the 1330s and 1340s. Perhaps the most moving evidence for these mercantile contacts is the tombstone, discovered in 1951, of Caterina Vilioni, who died at Yangzhou in 1342. The Vilioni were a well-established Venetian merchant family with connections across the Mongol world, apparently secure enough in China to have at least one young female member of the family there.

The Mongol conquests also afforded Latin Christians new opportunities for missionary work, most spectacularly the mission undertaken by John of Monte Corvino, first Catholic bishop of China, and his Franciscan brethren. Another Franciscan, Odoric of Pordenone, traveled through Iran, India, and Southeast Asia to reach Khanbalik in 1325 and returned overland to Europe by 1330. His account of his travels is entertaining but filled with improbable marvels and rumors. Nevertheless, his wide-eyed account of the glories of the Great Khan's capital of Daidu (or Dadu) and the great seaport city of Hangzhou ring with authenticity. At the same time,

➤ JOHN OF MONTE CORVINO

The career of John of Monte Corvino (ca. 1247–ca. 1330) is one of the most interesting of the entire medieval era. An Italian Franciscan, John was a missionary to the Mongol-controlled Middle East in the 1270s. In 1289 he was named by the pope to head a delegation to Mongol China. John traveled east through Iran and then by sea from the Persian Gulf to India, finally reaching Khanbalik (present-day Beijing) by 1294. There he had some success convincing local Nestorian Christians of Turkic ethnicity to embrace Latin Christianity and was able to build a new church, translate the New Testament into Mongol script, and baptize about 6,000 people (or so he claimed). The pope, learning of John's successes, named him the first Catholic archbishop of Khanbalik in 1307 and sent Franciscan reinforcements. Three of these friars successfully reached China in 1313 and were appointed John's suffragan (or subordinate) bishops. John had in the meantime moved south to Zayton (Quanzhou), where he led a small flock of Western Christians until his death around 1330. A number of poignant letters from John and his companions survive, revealing both the facts of their mission and the recurring sense of isolation that enveloped them as they ended their days so far from home.

—Sean Field

the Dominican Jordan of Séverac traveled widely in the Middle East and India, where he was named first bishop of Quilon in 1329. Thus, for a time in the early fourteenth century, the Church hoped to incorporate the vast expanses of Asia into its diocesan structure. Although by 1330 these contacts were becoming increasingly precarious, the era of Franciscan travelers to China was not quite over. John of Marignolli was sent in 1338 to Beijing to assess the situation and reported the continuing existence of Franciscan houses in the southern seaport city of Quanzhou. On his return voyage through India in 1346 he found Dominicans still ensconced in Quilon. As late as 1412 popes were still attempting to name archbishops of Khanbalik.

Such hopes were by then illusory, however, for the conditions that had allowed relatively safe travel across such a wide area were coming

to an end. When the Florentine merchant Francesco Balducci di Pegolotti wrote around 1340 that the route to Cathay was quite safe, he may have been stretching the truth only a bit.

The Mongol empire was still theoretically a single entity up through the early fourteenth century, but increasingly the reality was one of regional powers in conflict with each other. This disintegration was hastened by religious conversions; Mongol leaders in the east adopted Buddhism, while those in the west converted to Islam. As these rival leaders turned on each other, the fearsome military power of the Mongols began to decline. The il-khans in Persia were deposed around 1335, and the last Mongol ruler of China was overthrown in 1368. Though Mongol overlords continued to control parts of Russia and Central Asia into the fifteenth century, the age of Mongol dominance was over.

In spite of its brevity, this era was of immeasurable importance to European perceptions of the world. It was now apparent that the Latin West was only a small corner of the known world and that it was vastly inferior in terms of wealth and power to the teeming cities of the Far East. Christianity, moreover, was revealed to be the religion of only a small number of people when compared to the Muslim, Buddhist, and Hindu populations of Asia, especially China and India. In addition, one of the great surprises for Latin travelers in Asia was the discovery of extensive Eastern, or Assyrian (Nestorian), Christian communities paying allegiance to neither the pope in Rome nor the patriarch in Constantinople. As a result, the centrality of Latin Christianity itself was cast into doubt. At the same time, at least a few people like William of Rubruck realized that when compared with Eastern traditions such as Buddhism, Christianity and Islam shared a great deal, having emerged from the same Western, Abrahamic tradition. On the other hand, the general lack of success for missionizing efforts led to new claims that Muslims and Asians in general were irrational and stubborn.

European travelers in the Mongol empire bequeathed to the West new images of the fabulous wealth of China, examples of the enticing possibilities and frustrating limits of Christian missionizing, and self-justifying claims about the

irrationality of the “Orient.” This mental picture accompanied Christopher Columbus as he sailed west to find the land of the Great Khan and informed the early modern contacts between Europe and the rest of the world.

—Sean Field

Bibliography

- Arnold, Lauren. *Princely Gifts and Papal Treasures: The Franciscan Mission to China and Its Influence on the Art of the West*. San Francisco: De-siderata, 1999.
- Dawson, Christopher. *Mission to Asia*. Toronto: University of Toronto Press, 1980.
- Jackson, Peter, trans. and ed., and David Morgan, ed. *The Mission of Friar William of Rubruck*. London: Hakluyt Society, 1990.
- Larner, John. *Marco Polo and the Discovery of the World*. New Haven, CT: Yale University Press, 1999.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. Oxford, UK: Clarendon, 1998.

The Franciscan Origin of the Image of Child-giving Guanyin

It took several centuries and vast cultural upheavals in China before the Buddhist image of the benevolent male guide of souls—the bodhisattva Avalokitesvara—evolved into the distinctive folk goddess of mercy, Guanyin. It is important to note that Avalokitesvara (“The One Who Hears the Cries of the World”), known as Guanshiyin or Guanyin in Chinese, was always understood to be masculine within the Indian scriptures, although androgynously so. In China, however, Avalokitesvara/Guanyin underwent a sex change. Ever since around the Sui dynasty (589–618), Guanyin had been represented in female as well as male form, and by the time of Southern Song (960–1126/27) the female form predominated. Inasmuch as the *Lotus Sutra*, the main text for this bodhisattva’s cult, stated that Avalokitesvara/Guanyin would assume any form in order to save a devotee, this shift between sexes presented no problem to believers. Moreover, even in his male form, the bodhisattva’s power to grant children was clearly stated in the *Lotus Sutra*, and as early as the eleventh century miraculous births of children were being reported



White-robed Guanyin holding a child, about 1420, detail of a stele with inscribed text attributed to the poet Qin Guan (1049–1100). From *Lidai Guanyin Baoxiang Minghua*, vol. 2, no. 144. (Chun-fang Yu. *Kuan-yin: The Chinese Transformation of Avalokitesvara*, 2001)

after prayers to him/her. This creative power passed easily to the unmistakably female form, with Guanyin extolled as Perfect Wisdom, “the mother of bodhisattvas.”

One particular form of Guanyin arose during the turbulent years of the transition from the Song to the Yuan dynasty. The divinity appeared—as a woman—in a dream to a pilgrim on the island of Putuo off the coast of China in 1276. Coincidentally, around the year 1300, just as this womanly Guanyin was receiving widespread attention and was being prayed to locally for sons, the Christian image of the Madonna of Humility was introduced into the same area by Franciscan missionaries from Italy.

The largely forgotten Franciscan mission to China (ca. 1300 to 1400) is well documented in both Western and Chinese sources. They established schools and churches in the Mongol capital of Dadu (present-day Beijing) and in all the major cities on the southern seacoast of China that were visited by European merchants, and archaeological evidence of their presence has been found in several cities. In the city of Yangzhou a grave marker excavated in 1951 was discovered

➤ FRANCISCAN GUANYIN



Tombstone of Catarina Vilioni, 1342. (Ricci Institute for Chinese-Western Cultural History, University of San Francisco)

By the fifteenth century, medieval Christian devotional images had helped local artists visualize and transform White-robed Guanyin into a distinctly Chinese depiction of the Child-giving Guanyin. By the time the Jesuits arrived in the late sixteenth century, the early Christian context had been completely subsumed into a uniquely Chinese image.

—Lauren Arnold

to have Latin script and Franciscan imagery carved on it. Dated to 1342, the marker testified to the life and death of Caterina Vilioni, whose father Dominico had been an Italian merchant living in the city.

No images of the Child-giving Guanyin are known before the year 1400. The Yangzhou Madonna of 1342, then, can be understood as a link between the evolution of images of the goddess Guanyin in her many roles. Popular images of Guanyin—who had always been prayed to for children—by 1400 were being overlaid upon images of the seated Madonna tenderly holding her son, becoming a melded but distinctly Chinese depiction of Guanyin in her child-giving role. These early-fifteenth-century images no longer had overt Christian overtones, as the Franciscan presence on the southern coast was largely diminished and underground if not extinct by this time due to a Ming governmental ban on Christianity as a foreign religion. But the evolved image of Guanyin is clearly based on the Franciscan prototype, when compared with the carvings on the Yangzhou tombstone of 1342.

By the time the Jesuits landed on the southern seacoast of China in the 1580s, all memory of the Franciscan mission to the very same area had been lost. Without this knowledge, the Jesuits expressed surprise that images with a distinctly Marian flavor were already being worshipped locally when they arrived. The leader of the Jesuits in China, Matteo Ricci, went to his grave never knowing that his brother Franciscans had ever set foot in the country, let alone had thousands of converts. Yet the images that Ricci saw—the Child-giving Guanyin that resonated as the Madonna and Child in his eyes—were truly the fruits of the Franciscan effort before him. Ricci was seeing not only a transformed and locally distinct image of Guanyin but also a relic of medieval European presence.

—Lauren Arnold

Bibliography

- Arnold, Lauren. *Princely Gifts and Papal Treasures: The Franciscan Mission to China and Its Influence on the Art of the West, 1250–1350*. San Francisco: Desiderata, 1999.
- Bailey, Gauvin. *Art on the Jesuit Missions in Asia and Latin America, 1542–1773*. Toronto: University of Toronto Press, 1999.

Yu, Chun-fang. *Kuan-yin: The Chinese Transformation of Avalokitesvara*. New York: Columbia University Press, 2001.

Artistic Exchange between East and West during the Mongol Era

Dante, Boccaccio, and Chaucer all mention the astonishing beauty of objects brought back to Europe from China, the Middle East, and India. Certainly, Giotto, Simone Martini, Ambrogio Lorenzetti, and many other artists of their time were equally aware of and influenced by the lure of the East: Mongol and Indian faces peer out of altarpieces and church frescos of the period, angels and saints wear robes of recognizable Chinese and Persian silks, and the Madonna stands upon exquisite oriental carpets. The presence of these Eastern items in religious paintings speaks not only to merchants moving along the trade routes but also to Latin Christian missionaries traveling along them. The Mongol descendants of Chinggis Khan—founders of the Yuan dynasty in China (1279–1368) and the Ilkhanid dynasty in present-day Iran and Iraq (1256–1353)—at varying times actively welcomed or at least tolerated Western missionaries within their territories. The presence of the Franciscans in China and the Dominicans in the Middle East and India during the Pax Mongolica (ca. 1250–1350) virtually ensured that Eastern influences would find their way back to churches in the West. Art created for the missionary home churches in Assisi and in Florence at Santa Maria Novella in particular underline this Eastern contact in fresco cycles, altarpieces, and illuminated manuscripts.

The Franciscan mission to China was the conduit to the West of gifts from the emperor of China, many of which entered the papal treasury beginning in the late thirteenth century. Over a hundred items specifically labeled “Tartarico” are cited in the papal inventories of 1295 and 1314. Most are luxury goods such as silk, metalwork, and other precious, easily portable commodities, but listed among them is a *papirum tartaricorum* (Tartar scroll), presumably a painted scroll of late Song or early Yuan fabrication. Chinese paintings of that era were distinctive for their atmospheric natural landscapes



The mountainous background in this fresco can be seen as a hesitant interpretation of a late Song/early Yuan Chinese landscape scroll. (Giraudon/The Bridgeman Art Library)

and their voluminous solid figures. Such a scroll in the hands of Giotto and his contemporaries would have had a penetrating influence on this generation of artists, who were rapidly distancing themselves from the *maniera greca* (Greek, that is Byzantine, style) of their mentors. The rocky landscapes and the weighty figure forms so similar to Chinese exemplars are particularly evident in works painted by Giotto and Simone Martini (who were completing fresco cycles at Assisi in anticipation of the Jubilee of 1300) and in a fresco by Ambrogio Lorenzetti several decades later at the Church of San Francesco in Siena.

The Dominican mission to the Middle East and India was supported by a series of active mission houses and scriptoria (centers for book production) established in major cities along the eastern trade routes. Dominicans are documented in Nachivan in Greater Armenia; in Mo-

sul and Baghdad in modern-day Iraq; in Tabriz, Maragha, and Sultanieh in Iran; and in the southwestern Indian port city of Quilon in Kerala Province. Many of these cities, especially Tabriz, Mosul, and Baghdad, had renowned Muslim scriptoria, and there is strong evidence of cross-fertilization of imagery among the illuminators. For example, images of the Apotheosis of St. Thomas Aquinas (especially in the Dominican chapter house in Florence and elsewhere) are strikingly similar to Muslim illumination archetypes of the enthroned king. Conversely, the *Birth of the Prophet*, painted circa 1330 in Tabriz, Iran, where the Dominicans had a mission house, has long been noted as clearly based upon a Western prototype, the *Nativity of Christ*.

The introduction of certain Eastern architectural techniques into the West may also have been fostered by missionary contact. The il-khanid capital of Sultanieh, site of the domed mausoleum of Oljeitu (r. 1304–1316), completed by 1313, was also the seat of the Dominican archbishop, who was in regular contact with his superiors in Florence. Given the significant presence of the Dominicans in both cities, the extraordinary dome of Oljeitu's tomb must be considered as a possible influence on the one that Brunelleschi (1377–1446) designed for Florence's *duomo* (cathedral church), begun in 1420. Certainly, Florence's double-shelled dome, with its unusual interlocking herringbone brickwork reinforcing the interior shell—both characteristic of medieval Islamic mosques and tombs—is virtually unique in Europe at the time.

There is evidence that the Franciscans and the Dominicans, their missionary work in the East facilitated by portable illuminated manuscripts and small painted and carved altarpieces, left a lasting artistic influence there as well. Franciscan sources are probably the origin of the image of the Child-giving Guanyin. There are also archaeological data that indicate Franciscan architectural activity in a temple complex that survives in the Nanjing area.

—Lauren Arnold

Bibliography

Arnold, Lauren. *Princely Gifts and Papal Treasures: The Franciscan Mission to China and Its Influence on the Art of the West, 1250–1350*. San Francisco: Desiderata, 1999.

Blair, Sheila. "The Religious Art of the Ilkhanids." In *The Legacy of Genghis Khan: Courtly Art and Culture in Western Asia, 1256–1353*. New York and New Haven, CT: Metropolitan Museum of Art and Yale University Press, 2002.

King, Ross. *Brunelleschi's Dome: How a Renaissance Genius Reinvented Architecture*. New York: Penguin, 2000.

Prip-Moller, Johannes. "The Hall of Lin Ku Ssu, Nan-king." *Artes* 3 (1935): 171–196.

Two Fourteenth-Century Friars' Accounts of the Wonders of Asia

The mid-fourteenth century saw the creation of a new genre of illustrated writings in Western Europe—the travel compendium—that grew out of the reports of wayfarers and missionaries who went to the East. More than 100 examples of illustrated travel compendia have survived in manuscript form. Each was unique and pictorially rich and drew from a variety of sources. Nevertheless, they shared a common core: the tales of their respective trips to China as reported by Fra (Friar) Odorico da Pordenone and Marco Polo.

Odorico's and Polo's widespread popularity was possibly due to pure serendipity: the equally vivid account of Jordanus de Severac, a contemporary of Odorico who traveled in India and the Middle East during the 1320s, was filed away soon after it arrived in Europe and remained relatively unknown until the nineteenth century.

Odorico da Pordenone

Odorico da Pordenone (also known as Blessed Odoric of Pordenone, ca. 1265–1331) was a Franciscan who wandered the mission fields of southern Russia, Persia, and India before arriving in China, where he assisted Archbishop John of Monte Corvino. Fra Odorico arrived in Censcalan (Guangzhou, or Canton) on the southern coast of China around 1322–1323, bearing the bones of several Franciscans who had met martyrdom in Tana (present-day Azov in Ukraine). These he took for burial to Fra Andreas of Perugia, the bishop of the city of Zaiton (Quanzhou), where the Franciscans had two churches. Odorico was eager to travel in Mongol-dominated China. According to Odorico, "Having stayed for some

days we set out and arrived at a wonderful city called Kampsay (Hangzhou), which in our tongue means to say 'City of Heaven.' This city is the largest that there is in all the world." He was enthralled by cosmopolitan Hangzhou, where he was treated as an honored visitor by some of the wealthy Christian converts. From there he traveled on to the new imperial court of Dadu (Great Capital) just outside the city of Khanbalik (present-day Beijing), very likely making this long trip at least in part by barge on the Grand Canal. The dynastic upheavals of 1323 do not seem to have restricted his travels in any way.

Odorico spent three years at Dadu with his highly placed Franciscan brothers, who had "an assigned place in his [the Yuan emperor's] court" and where "it is always our duty to go and give him our blessing." According to Odorico, in return the emperor treated the Latin missionaries with high regard.

Following his return to Italy around 1329–1330 and very shortly before his death on January 14, 1331, he dictated an account of his travels, known simply as the *Report*. Because of its rich detail, it became one of the most widely read travel accounts in fourteenth- and fifteenth-century Europe. Odorico was a credulous and gullible listener when reporting hearsay from fellow travelers, but he was a first-rate reporter when describing what he had observed. For that reason, the most compelling portions of his report are his wide-eyed descriptions of enchanting Hangzhou and of the Yuan emperor's court. Odorico's tales of the opulence of China and of the rest of "the Indies" was, along with Marco Polo's account, instrumental in fixing within the European imagination a picture of the unimaginable riches that awaited those bold enough to reestablish contact with the Great Khan.

Jordanus de Severac

The Dominican Jordanus de Severac (also known as Jordan of Severac, ca. 1296–1331) traveled extensively throughout the Middle East and India in the first decades of the fourteenth century, and around 1330 he recorded his recollections in *Mirabilia Descripta* (often loosely translated as "The Wonders of the East"). Unlike Franciscan accounts of the East, Jordanus's version is filled

with descriptions of medicinal plants and animals of interest to his healing brethren, the Dominicans of Florence, who were famous for their pharmacological work.

Jordanus was a vivid observer and described India in great detail and with genuine delight. The coconut palm, he wrote, produces “a very large fruit, as big as a man’s head . . . and both flowers and fruit are produced at the same time . . . so there are flowers and fruit in eleven stages of growth to be seen together. . . . A wonder! And a thing which cannot be well understood without being witnessed.” Of the coconut he says: “The kernel at first is very tender and pleasant to eat [with a milk from it] as good as milk of almonds; and an oil is made from it [the kernel] of great medicinal virtue. . . . The fruit is that which we call *nuts of India*, and from the rind of that fruit is made the twine with which they stitch their boats together.” He also observed the fearsome crocodile, and parrots enchanted him because they were “quite different from what are found on this side of the world. When tamed and kept in cages, [they] speak so that you would take them for rational beings. . . . The birds of this India seem really like creatures of Paradise.” Elephants and bats equally fascinated him, as did curious customs.

Jordanus reported on the Indian custom in which the wife of the deceased would willingly walk into the cremating fire consuming her husband’s body. As a Dominican sensitive to heresy, he was also disturbed by the customs of the Parsis, descendants of Iranian Zoroastrians, who worshipped fire, believed in two conflicting First Principles (Good and Evil), and exposed the bodies of their dead in roofless towers where they would be consumed by birds.

It has been conjectured that Jordanus either went to Tibet or was the recipient of a first-person account of its religious customs, which he reports in some detail. His account of Chaldea (Iraq) was less admiring than that of India, and he visited the ruins of Babylon, just south of the great city of Baghdad, where nocturnal sounds produced such a state of terror that “one would not dare to pass a single night there, even with a great army.” Yet because he was interested in all things medicinal, pools of black liquid farther to the north drew his interest: “whence

➤ FRIAR ODORICO DESCRIBES THE RICHES OF DADU

“I passed through many cities . . . before arriving at the noble city of Khanbaliq, an exceedingly . . . ancient city in . . . Cathay. The Tartars (Mongols) took the city and then built another one-half mile away, which they called Taydo (Dadu). This second city has 12 gates, spaced two miles apart from one another. A large population resides between the two cities, and together the cities have a perimeter that extends more than 40 miles. The Great Khan resides in this city and has a great palace, the walls of which are a good four miles in circumference. . . . For this palace . . . is vast and beautiful. Its ground floor is raised about two paces (6 feet), and inside are 24 columns of gold. . . . In the center of the palace there is a great cistern, more than two paces in height, totally fashioned out of a single precious stone called *merdacas* [jade]. It is bound all around in gold. . . . This cistern also has a hanging network of great pearls that fringe it, and these fringes of pearls are a good yard wide.”

—Lauren Arnold

Source

Translated from the Latin by Alfred J. Andrea, in Alfred J. Andrea and James H. Overfield, *The Human Record: Sources of Global History*, 5th ed., 2 vols. (Boston: Houghton Mifflin, 2005), 1:443–444.

is extracted and drawn a certain oil, which is called *naft*, and it is a very warm oil of medicinal virtue, and it burneth passing well.” He saw the same black liquid in Persia. As Henry Yule remarked with some astonishment in his nineteenth-century translation of Jordanus: “Can [this] scarcely be a reference to the petroleum of Pegu (Baku) at this early date?” Indeed it is.

—Lauren Arnold

Bibliography

- Boyle, John A. “The Alexander Legend in Central Asia.” *Folklore* 85 (1974): 217–228.
- Omont, Henri Auguste, ed. *Le livres des merveilles*. A facsimile of the famous travel compendium Ms Fr. 2810, Bibliotheque Nationale, Paris. Paris, 1907.
- Wittkower, Rudolf. “Marco Polo and the Pictorial Tradition of the Marvels of the East.” In *Oriente*

Poliano: Studi e conferenze tenute all'Is. M.E.O. in occasione del VII centenario della nascita di Marco Polo (1254–1954). Rome: Istituto Italiano per il Medio ed Estremo Oriente, 1957.

Yule, Sir Henry. *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*. London: Hakluyt Society, 1866. Revised by Henri Cordier, London: Hakluyt Society, 1913.

Zheng He's Voyages

The voyages of Zheng He (1371–1433) represent one of the most significant ventures in exploration ever undertaken by the Chinese. Under orders from the Yongle (Perpetual Happiness) emperor of the Ming dynasty (r. 1402–1424), Admiral Zheng He carried out a series of important voyages to Southeast Asia, South Asia, Arabia, and Africa in the early fifteenth century. The voyages took place in an era of expanding trade for the Chinese and also served as a demonstration of imperial power.

Zheng He was born as Ma He into a mixed family of Muslim Chinese descent and was raised in Yunnan. He was reported to be of great physical stature and handsome in appearance. When a Ming military expedition captured Yunnan, he was taken captive and made a eunuch of the imperial court. Ma He initially was a page to Prince Zhu Di (1360–1424) and served the prince in a number of battles. For his faithful military service, Ma He received the honorific name Zheng, possibly for his bravery at a battle at Zhenglunba. When Zhu Di became the Yongle emperor, he continued to place trust in and use to advantage the services of Zheng He.

The Yongle emperor was an activist. In a series of military campaigns, his armies pushed out the Mongols to the northwest and also expanded Chinese dominion southward into Annam (present-day Vietnam). The emperor also moved the capital from the southern city of Nanjing to the north, where he established the Forbidden City in Beijing in 1421. He is also famous for commissioning an important compendium of classic Chinese texts, the *Yongle Dadian* (*Yongle Encyclopedia*), a work that included information on everything from medicine to agriculture to astronomy.

It was in this context of imperial expansion and learning that the emperor ordered Zheng He's education, sending him to Nanjing Taixue (Imperial Central Academy) and later tasked him with leading naval expeditions into the Indian Ocean.

The first expedition began in 1405, with Zheng He leading a massive fleet of some 300 ships and more than 25,000 men. There were six subsequent voyages, each one venturing farther west. The fleet included some of the largest vessels then in existence and brigades of soldiers for any possible military engagements, as well as for ceremonial purposes. The expeditions served a number of functions: diplomacy and a show of power, particularly the desire to bring to many of these foreign lands a reassertion of presumed Chinese hegemony; reestablishment of the trade ties China had enjoyed before and during the era of Mongol rule; scientific activity, which included the search for new flora and fauna for medicinal and other purposes; and the exploration and charting of areas of which the Chinese had no certain knowledge. Finally, there was also the declared objective of finding the Yongle emperor's predecessor, whom he had driven from the throne and whose body had never been discovered.

Zheng He's fleet comprised a number of different kinds of ships. These included treasure ships, for the imperial envoys and key officials, and horse ships that carried tribute goods as well as horses and equipment for the fleet. Supply and water ships carried food and water for the fleet. Military support was maintained by troop transport ships and warships, the latter of which carried cannons, rockets, and mines. The largest ships in Zheng He's fleet were said to have been over 400 feet (122 meters) in length, although this size has been recently disputed.

Zheng He's first voyage (1405–1407) proceeded south and west, reaching Java, Sumatra, Ceylon (Sri Lanka), and finally the southwestern, or Malabar, coast of India. Zheng He's fleet battled pirates in the Strait of Malacca and brought back captives to Nanjing, where they were executed. The second voyage (1407–1409) went to present-day Thailand and again India, where the Chinese helped to install a new raja of Calicut.

► CLAIMS OF GAVIN MENZIES

On March 15, 2002, Gavin Menzies, a retired Royal Navy submarine commanding officer, delivered an address in London declaring that a Chinese fleet, led by Zheng He, had reached America seven decades before Columbus. Later that same year, Menzies' *1421: The Year China Discovered the World* was published in Britain. An American edition quickly followed with a slightly modified title: *1421: The Year China Discovered America*.

Menzies, in fact, made a broad variety of claims about the extent of early Chinese explorations. He claimed that they reached Australia in this same period, that they had navigated the Straits of Magellan well before Magellan was born, and so on. His "evidence" was, however, sparse and poorly organized; Menzies ignored key Chinese texts, misinterpreted early maps, and assembled an odd hodgepodge of questionable archaeological evidence to support his arguments. Meanwhile, a series of earlier careful studies of Zheng He and Chinese maritime explorations went unnoticed outside academic circles.

After the appearance of his book, Menzies continued to make, through his web site and public appearances, further claims and strove to rally support for his contention that the Chinese reached the Americas before Columbus. In a review of Menzies' book, the historian Robert Finlay commented that "Menzies . . . laments that China did not become 'mistress of the world,' with Confucian harmony and Buddhist benevolence uniting humankind. Instead the cruel, barbaric West, secretly and fraudulently capitalizing on Chinese achievements, imposed its dominion around the globe."

In fact, prior to Menzies, there were a number of claims that the Chinese reached the Americas

before the Europeans. In 1761, the French scholar of Chinese culture Joseph de Guignes (1721–1800) put forth the idea that the Buddhist monk Hui Shen had reached America in the fifth century CE. Other writers in France, Germany, and the United States further promoted these speculations. These claims, too, were sometimes based on the conception of the Chinese as somehow kinder, gentler investigators of new worlds and other peoples, especially when contrasted with the Spaniards, Portuguese, and English and their militaristic histories of exploration and conquest. The China scholar Joseph Needham argued that the motivations for the Chinese explorations were scientific, not capitalistic. But such assumptions betrayed a manipulation of the historical evidence and Needham's Marxist ideology. Finlay points out that we should not ignore "the ambitions of the Chinese emperor [who sent out Zheng He's fleet], the commodities carried in the junks, and the army which marched ashore in every port." Most recently, the speculations of Gavin Menzies have been ably debunked by Geoff Wade, a scholar at the National University of Singapore, and by Captain Philip J. Rivers, a master mariner and a far better interpreter of naval charts and waters than Menzies.

This has not, however, stopped Menzies' assault on history. In 2008 he produced an equally outlandish sequel, *1434: The Year a Magnificent Chinese Fleet Sailed to Italy and Ignited the Renaissance*. As the reviewer for *China Journal* wrote, "But what we're already wondering is what Menzies is planning next. Perhaps '1447: The Year Zheng He Became the First Man on the Moon.'"

—Benjamin B. Olshin

The third voyage (1409–1411) explored the islands and coastal regions of Southeast Asia, the southwestern coast of India, and again Ceylon. The fourth expedition (1413–1415) saw the fleet divide up, with some ships carrying out further explorations of the islands and coastal regions of Southeast Asia while others sailed as far as Ormuz (Hormuz) in the Persian Gulf. During this fourth voyage Zheng He's fleet, on imperial or-

ders, restored the rightful king of Samudera (modern Aceh Province in Sumatra). Zheng He routed the usurper Sikandar and his forces; Sikandar himself was taken to China in 1415 and later executed.

This fourth expedition also led to closer contact between China and the greater Muslim world and the subsequent arrival in Nanjing of ambassadors from the East African city-states of

Mogadishu and Brawa (in modern Somalia) and Malindi (in present-day Kenya). They were returned home courtesy of another Chinese expedition that set out in 1417. This fleet again split into two groups: one sailed to Java, Brunei, and the Ryukyu Islands that extend between Japan and Taiwan, while the other explored the Persian Gulf and the northeastern Horn of Africa. On the fourth expedition, one part of the fleet went to Bengal and brought a giraffe back for the emperor. This event is recorded in a still extant painting by a Chinese court artist Shen Du (1357–1434). The giraffe had been given by Saifuddin, the sultan of Bengal, who in turn had received it from the king of Malindi. A later voyage (1421–1422) continued explorations of the coasts of the Arab world and East Africa.

Meanwhile at home, changes were taking place. In 1424, the emperor died; his son and successor, Zhu Gaozhi, terminated overseas exploration. However, this emperor died the following year and was succeeded by the Xuande emperor (r. 1426–1435). Under his reign, the last of the expeditions of Zheng He set out. This fleet, numbering some 300 vessels, left in 1431 and went on to establish diplomatic and trade relations with many kingdoms and territories. The expedition went to many places that the earlier voyages had visited, including Java, Malacca, Sri Lanka, and India; part of the fleet went to Africa. Zheng He, around 62 years old at this time, died on the return voyage in 1433 and was buried at sea.

Zheng He's final expedition returned to China in that same year, and two years later the emperor died. Although China continued its trade and contacts throughout Southeast Asia, it never again sent out state-sponsored expeditions on the scale of the grand voyages of Zheng He. A struggle had shaken the imperial court following the deaths of the Yongle and Xuande emperors, who had supported maritime ventures. Now others in the court, citing Confucian teachings against mercantilism as well as the prohibitive cost of the expeditions, won out. Chinese naval power waned.

There are extant Chinese and Arab sources for the voyages of Zheng He. One of the earliest was the 1434 *Xi yang fan guo zhi* (*Record of the Foreign Countries in the Western Ocean*) by

Gong Zhen, a military officer who sailed on the seventh and final voyage. The *Ying ya sheng lan* (*Overall Survey of the Ocean's Shores*), written by Ma Huan, a Chinese Muslim interpreter who had also been a member of Zheng He's staff, appeared in 1451. There was also the *Xing cha sheng lan* (*Overall Survey of the Star Raft*), written in 1433 by Fei Xin, another officer in the fleet; the book is a mixture of firsthand accounts and secondhand reports. The star raft of the title refers to the ship in the fleet assigned to carry the imperial ambassador. A navigational chart of part of Zheng He's voyages, preserved in Ma Yanyi's seventeenth-century *Wu bei zhi* (*Treatise on Military Preparations*), includes many details such as ports, islands, bearings, and sailing distances as well as hundreds of place-names. Unfortunately, Zheng He's logs are lost, apparently destroyed in 1477 by a minister who wished to prevent China from embarking on another series of such "wasteful" expeditions.

—Benjamin B. Olsbin

Bibliography

- Chang, Kuei-Sheng. "The Ming Maritime Enterprise and China's Knowledge of Africa Prior to the Age of Great Discoveries." *Terrae Incognitae* 3 (1971): 33–44.
- Dreyer, Edward L. *Zheng He: China and the Oceans in the Early Ming Dynasty, 1405–1433*. New York: Pearson Longman, 2006.
- Finlay, Robert. "China, the West, and World History in Joseph Needham's *Science and Civilisation in China*." *Journal of World History* 11(2) (2000): 265–303.
- Finlay, Robert. "How Not to (Re)Write World History: Gavin Menzies and the Chinese Discovery of America." *Journal of World History* 15(2) (2004): 229–242.
- Hébert, John R. "1421: *The Year China Discovered the World* [Review]." *Imago Mundi* 57(1) (2005): 95–96.
- Levathes, Louise. *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–1433*. New York: Oxford University Press, 1996.
- Ma Huan. *The Overall Survey of the Ocean's Shores*. Translated from the Chinese text edited by Feng Ch'eng Chun, with introduction, notes, and appendices by J. V. G. Mills. Cambridge, UK: Hakluyt Society at the University Press, 1970.
- Mote, F. W. "China in the Age of Columbus." In *Circa 1492: Art in the Age of Exploration*, edited by

Jay A. Levenson. New Haven, CT: Yale University Press; Washington, DC: National Gallery of Art, 1991.

Rivers, Philip J. *1421 Voyages: Fact & Fantasy*. Ipoh, Malaysia: Perak Academy, 2004.

Salmon, Claudine, and Roderich Ptak, eds. *Zheng He: Images & Perceptions*. Wiesbaden: Harrassowitz, 2005.

Suryadinata, Leo, ed. *Admiral Zheng He & Southeast Asia*. Singapore: International Zheng He Society and Institute of Southeast Asian Studies, 2005.

European Voyages into the Atlantic

In the early fifteenth century, merchants, fisherman, sailors, and pirates of various nationalities regularly sailed the waters of the eastern Atlantic Ocean. Sometimes they ventured farther. For centuries there had already been regular Norse and English traffic to Iceland and Greenland, although the Norse Greenland colonies were dying out. The Greenland Western Settlement passed away probably around the mid-fourteenth century and the Eastern Settlement sometime after 1409, the last recorded date of contact between the colony and Scandinavia. The Canaries had been reached for slave raiding, and the other Atlantic islands, the Azores and Madeira, had been reached and named. Evidence indicates that the Canaries were sighted by Genoese sailors in 1271 and 1321 and visited around 1336 in an expedition led by the Genoese Lancelotto Malocello, who was in the service of the Portuguese. Madeira and the Azores were also reached probably before the mid-fourteenth century, apparently also by Genoese sailors serving the Portuguese. However, these early discoveries were not exploited, memory of the exact location of the islands was lost, and it was only after 1400 that they were rediscovered and finally settled. There was hope too that one day maritime explorers would find what would eventually prove to be but legendary places such as St. Brendan's Island, Antillia, and the Island of the Seven Cities. By the end of the fifteenth century, however, technological breakthroughs and dogged exploration, especially by the Portuguese, led in the long run to mastery of the Atlantic and the discovery of the New World and the sea route to India and beyond.

The North Atlantic was first mastered by the Irish. Without compass or chart, they managed by dead reckoning to reach the Faroe Islands and then Iceland—halfway across the Atlantic—as early as the eighth century. The Vikings soon followed. By 900 as many as 2,000 settlers a year were traveling to Iceland; it was the first great era of Atlantic exploration and colonization. By the late tenth century the Norwegians had set up colonies in Greenland, and around the year 1000 they became the first Europeans to reach the coast of North America.

During Western Europe's High Middle Ages (1000–1500) trading, farming, and fishing communities were set up in Greenland and Iceland, visited not only by the Norse and the Irish but also by the English, the Germans, and the Dutch. And although the Greenland settlements were finally abandoned, knowledge of how to get there was never lost. By the early fifteenth century sailors from Bristol were conducting regular voyages to Iceland, Gascony, Spain, Portugal, Ireland, and probably Madeira and the Canaries. In the popular imagination, the Bristol sailors' contribution to navigation and shipping in the Atlantic has been largely overshadowed by the voyages of the Spaniards and the Portuguese to the south, but in all likelihood mariners from Bristol had reached the fisheries of Newfoundland a good generation before Columbus made landfall in the Caribbean.

Farther to the south under the auspices of Prince Henry of Portugal, exploration of the Atlantic proceeded in fits and starts. Although the Azores, the Madeiras, and the Canaries were known in the fourteenth century, the first prolonged attempts to chart and colonize them were made in the fifteenth century, especially by the Portuguese. Contrary to popular opinion, Henry was not aiming at a sea route to the Indies. Rather, his interest, while often couched in crusading terms, was trade and conquest. He was particularly obsessed with the Canaries, which in 1402 the Spanish kingdom of Castile had begun trying to colonize and conquer from the native Guanches, a hunter-gatherer people. This Spanish enterprise can be viewed as the first of Europe's colonial conquests in the Atlantic world since the Viking age. Beginning in 1424 Henry launched a number of ill-fated expeditions aimed

► PRINCE HENRY THE NAVIGATOR



Prince Henry of Portugal, called “the Navigator” by the English (but not by the Portuguese), is regarded as one of the initiators of the great age of discovery. (Corbis)

Known today as “The Navigator,” Prince Henry (1394–1460) was the third son of King João I and Philippa of Lancaster, the daughter of John of Gaunt. Henry’s adult life centered on two preoccupations: Portugal’s explorations along Africa’s west coast and crusading expeditions against Morocco, an Islamic power only miles from Portugal’s shores. It is generally believed that Henry had a major hands-on role in the explorations

and navigational innovations, but this was not the case. He did not participate in any voyages, and there is no evidence that he opened any navigational school. He was, however, the main financier of the sailors and ships that undertook these voyages. He also was instrumental in convincing his brother, King Duarte I, to embark on several

expeditions against Morocco in his single-minded desire to achieve a Christian victory over Islam. This mind-set even led him to sacrifice his own brother Fernando to the enemy in order to hold on to Ceuta, a key Moroccan port city, after a disastrous expedition to Tangiers in 1437.

Funding for these expeditions came from two chief sources: (1) the Order of Christ, the Portuguese successor to the Knights Templar that Henry became grand master of in 1420, and (2) the “royal fifth” he was granted by King Duarte, which guaranteed Henry one-fifth of all profits from trade in the lands he discovered. He was also given a monopoly on all expeditions that sailed beyond Cape Bojador along the present-day Western Sahara, the southernmost region known to European sailors at the time. In 1434 Gil Eanes commanded an expedition funded by Henry that rounded the cape. Trips along the African coastline continued, and in 1444 Portugal was finally able to outflank Muslim trading routes across the Sahara and bring gold and slaves back to Portugal by sea. During Henry’s lifetime the islands of the Azores, Madeira, and Cape Verde became Portuguese possessions, and within 30 years of Henry’s death Bartholomeu Dias rounded the Cape of Good Hope.

—Monique Vallance

at wresting the Canary Islands away from their native inhabitants and the Spaniards. By the last decade of the fifteenth century the Spaniards had succeeded where Henry had failed and finally achieved victory over strong Guanche resistance. The Portuguese successfully colonized the islands of Madeira and Porto Santo, where they grew wheat, grape vines, and sugarcane; cut timber; and harvested dragon’s blood, a valuable tree resin used in dyeing and for medicines. To work their sugar plantations the Portuguese introduced slaves from Africa, thereby anticipating the great slave-labor plantations of Brazil and the West Indies.

In 1434 Henry’s men finally reached Cape Bojador, on the Guinea coast. It was an important psychological and navigational barrier, for this was the point beyond which, Arab and European geographers agreed, it was not safe to nav-

igate. From there discovery proceeded apace as Henry’s men for the first time sailed into uncharted waters. By 1444 they had reached the Cape Verde Islands, which are as far from Lisbon as Newfoundland is from Bristol (approximately 2,000 miles or 3,200 kilometers).

By the mid-fifteenth century, charting the west coast of Africa and setting up trading stations had become a regular business. Mariners, who were given licenses of exploration by the Crown, returned with cargoes of slaves and gold as well as oryx skins, gum, wax, palm oil, ivory, ostrich eggs, and civet cats, which produced a highly prized musk.

Although Henry died in 1460, the Portuguese continued their voyages of exploration. Private investors leased from King Afonso V rights to the Guinea enterprise in return for a fixed rent and the promise to explore 100 leagues (300 miles

or 480 kilometers) of coast annually. By the reign of João II (r. 1481–1495), the Crown itself was financing voyages of discovery. From 1483 to 1487 the navigator Diogo Cão explored nearly 1,500 miles (2,400 kilometers) of unknown tropical coast, erecting along the way stone columns to mark his progress and placing the last one just north of the Tropic of Capricorn in what is today Namibia. That same year Cão's successor, Bartolomeu Dias, left Lisbon on the historic journey that would take him around the Cape of Good Hope and open the way to India.

—David Blanks

Bibliography

- Marcus, G. J. *The Conquest of the North Atlantic*. Suffolk: Boydell, 1980.
- Parry, J. H. *The Age of Reconnaissance: Discovery, Exploration and Settlement, 1450–1650*. London: Phoenix Press, 2000. First published 1963.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. Oxford, UK: Clarendon, 1998.
- Russell, Peter. *Prince Henry 'the Navigator': A Life*. New Haven, CT, and London: Yale University Press, 2000.

European Travelers to South Asia before 1498

Until the opening of a sea route to India in 1498, Europeans received only occasional and intriguing reports (often a mixture of facts and fiction) about South Asia from returning individual merchants and missionaries. Although direct trade between the West and India had flourished during the Roman empire, it declined as the Romans lost control over the Red Sea in the third century CE. Nonetheless, commercial links never completely died out, and contact between the West and the East slowly increased with the revival of Europe's population and economy in the eleventh century. In the thirteenth century, the formation of the Mongol empire provided safe opportunities for European merchants, missionaries, and diplomats to travel to Persia, China, and South Asia. Italian merchants, already prosperous in the Mediterranean, set off for Eastern lands along the land and sea routes. Western missionaries and diplomats set out to convert the Mongol khan and gain an ally in defeating the Muslims in the Levant. Often these travelers

would reach India. Christian pilgrims sought the tomb of St. Thomas, which they believed was located at Mylapore on the east coast of India. They were also seeking a legendary and powerful Christian king, Prester John, rumored to exist somewhere in the East, possibly India (and after 1330 in Ethiopia), who might someday help European Christians reclaim Jerusalem.

The most famous traveler to the East and to South Asia during the medieval era was the Venetian merchant Marco Polo, who departed for China via an overland route in 1271. After serving Khubilai Khan for almost 17 years, Polo left China in 1292 via the Indian Ocean sea route and visited Sumatra, Ceylon (modern Sri Lanka), and the southern coast of India. In his account of that voyage, Polo reported on the customs and products of India, his pilgrimage to the tomb of St. Thomas, and the alleged miracles surrounding St. Thomas's shrine. Polo also referred to tales of Prester John throughout his narrative. Like most merchants at this time, Polo returned with more than goods; he also delivered diplomatic messages from the Great Khan to the pope.

The founding of two missionary orders in the thirteenth century, the Franciscans and the Dominicans, also led to increased contact between Europe and South Asia. The first medieval European to provide an account of India was the Franciscan John of Monte Corvino. On a papal mission to China to make contact with the khan, John, along with his companion the Dominican friar Nicholas of Pistoia, traveled by sea from Persia to India in 1291. John spent 13 months in the vicinity of St. Thomas's shrine, where he claimed to convert 100 Indians. Next, the Franciscan friar Odoric of Pordenone arrived on the Malabar Coast in 1321. Also en route to China, Odoric spent a year in India and generated a thorough account of the region, including its cultivation of ginger and pepper. In 1321–1322 the Dominican Jordan of Séverac reported in his *Book of Marvels* on India's harsh climate, its strange flora and fauna, and the customs and practices of the Hindus, including the practice of *sati*, namely the immolation of widows on their husbands' funeral pyres. He also remarked on the martyrdom of four friars at Thana, near Bombay, who were burned to death by local Muslims for committing blasphemy against Muhammad.

➤ AFANASII NIKITIN

The first known Russian to travel to India was Afanasii Nikitin, who departed from Tver, Russia, in 1468 to trade furs in the north Caspian region. Near Astrakhan, however, Nikitin fell prey to a Tatar attack and lost all his goods. He crossed the Caspian Sea and ventured through Persia and then India in hope of recouping his losses. After three years in India, Nikitin began his return to Tver across the Arabian Sea and finally the Black Sea. Before reaching home, Nikitin died in 1475 near Smolensk. Although nothing is known about Nikitin's life before his journey, he is remarkable because he kept an account of his expedition in a text subsequently titled *Voyage beyond Three Seas*. Nikitin reported in astute detail Hindu customs and the geography of India. This account occupies a unique place in Russian historical and literary studies because it was unusual for a Russian merchant to travel such distances and even more extraordinary for a merchant to document his journey. Furthermore, Nikitin recorded his personal thoughts and feelings, offering scholars a glimpse into the mind and heart of a business-minded medieval Russian.

—Mary Jane Maxwell

To the Europeans, the accounts of these travelers were all strange and marvelous. All three friars searched fruitlessly for Prester John while in India.

In the mid-fourteenth century, contact between Europe and the Farther East temporarily waned due to the Black Death, collapse of Mongol rule, devastations caused by Timur-i Leng's campaigns, and economic decline. Nonetheless, Italian merchants maintained their commercial ties with the Muslim-controlled ports in the eastern Mediterranean. From Genoa and Venice they funneled goods from the Far East and South Asia throughout western Europe. In 1419 the Venetian merchant Nicoló de Conti set off on a Muslim caravan to India in an attempt to bypass the Arab middlemen of the eastern Mediterranean ports. For the next 25 years he traveled and traded primarily in South Asia along the Arab-controlled land and sea routes that connected Europeans to the East. Upon his return to Venice

in 1444, Conti petitioned the pope to forgive his conversion to Islam while abroad. As light penance for his absolution, Pope Eugenius IV required Conti to provide an account of his travels to the papal secretary and renowned humanist scholar Poggio Bracciolini. Conti's detailed observations of South Asia's products, customs, and geography were published by Poggio in his *Historia de varietate fortunae* (*A Story of the Vicissitudes of Fortune*). Conti's account, as told by Poggio, influenced fifteenth-century geographers and cartographers including the maker of the Genoese World Map of 1457, who also took into account Marco Polo's observations. This map placed the continents of Africa, Asia, and Europe in roughly their proper proportion and depicted Africa as navigable by sea. Such information gave hope to European explorers who attempted to reach India via a sea route at the end of the fifteenth century.

—Mary Jane Maxwell

Bibliography

- Bracciolini, Poggio, and Ludovico de Varthema. *Travelers in Disguise*. Edited and with an Introduction by Lincoln Davis Hammond. Translated by John Winter Jones. Cambridge: Harvard University Press, 1963.
- Lach, Donald. *Asia in the Making of Europe*, Vol. 1, *The Century of Discovery*, Book 1. Chicago and London: University of Chicago Press, 1965.
- Lenhoff, Gail, and Janet Martin. "The Commercial and Cultural Context of Afanasij Nikitin's Journey beyond Three Seas." *Jahrbücher für Geschichte Osteuropas* 37 (1989): 321–344.
- Neill, Stephan. *A History of Christianity in India*. New York: Cambridge University Press, 1984.
- Nikitin, Afanasii. "Afanasii Nikitin's Voyage beyond Three Seas." In *Khozhdenie za tri moria Afanasia Nikitina, 1466–1472*, edited by C. N. Kumkes and translated by S. Z. Apresyan. Moscow: Geographgeiz, 1960.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. New York: Oxford University Press, 1998.
- Phillips, Seymour. "The Outer World of the European Middle Ages." In *Implicit Understandings*, edited by Stuart Schwartz. Cambridge: Cambridge University Press, 1994.
- Polo, Marco. *The Travels of Marco Polo*. Translated and with an Introduction by Ronald Latham. London: Penguin Books, 1958.

Europe's Overseas Explorations and the Crusading Tradition

The Reconquista, or Reconquest, which various Iberian Christian states waged against the Moors of Al-Andalus from roughly the middle of the eleventh century to 1492, left an undoubted imprint on Iberian Christian culture, and it was one of several factors that drove the overseas explorations of Portugal, Castile-León, and Aragon.

Prince Henry of Portugal (1394–1460), who had already crusaded in North Africa at Ceuta in 1415 (and would crusade again in 1437 and 1458), assumed administration of the Order of Christ in 1420 in order to further this Portuguese crusader-military order's operations against Islam in North Africa and beyond. To this end, Prince Henry used the resources of the order to finance the small expeditions of exploration that he sent out almost annually into the Atlantic and down the west coast of Africa beginning in 1419. As his contemporary biographer Gomes Eannes de Azurara noted in the *Chronicle of Guinea*, a sycophantic history of Henry's promotion of these voyages, the prince wanted to discover how far the dominion of the Muslims extended because "every wise man is obliged . . . to wish to know the power of his enemy." Beyond that, he sought to discover some yet-unknown Christian king or prince with whom he could ally in his continuing struggle against these "enemies of the faith."

Azurara exaggerated Henry's role in these ventures and failed to acknowledge the equally significant role that Henry's brother Pedro played in promoting the expeditions. Nevertheless, the fact that resources that had been donated to the Order of Christ for waging holy war against Islam were used to subvent the voyages and that Azurara took pains to point out the prince's crusading motives speaks volumes about popular perceptions, values, and motives in regard to such overseas adventures. Indeed, a series of papal bulls was issued praising Portugal's exploration endeavors and expressing the hope that such efforts would result in Latin Christendom's linking up with Prester John, the faraway Christian priest-king whom crusading Europe had been searching for since the twelfth century. Additionally, to spur Portugal to further efforts, the papacy granted the small monarchy exclusive

COLUMBUS EVALUATES THE MEANING OF HIS FIRST VOYAGE TO THE INDIES

On his homeward voyage in early 1493, Columbus composed an account of his successful expedition to the "Indies" for Luis de Santángel, a counselor to King Fernando and one of Columbus's most avid supporters. Upon landing in Lisbon in March, Columbus dispatched the letter to the Spanish court in full expectation that news of his accomplishment would be warmly received. He was not disappointed. Known subsequently as *A Letter Concerning Recently Discovered Islands*, this report was soon circulated widely throughout Europe. The following excerpt is from the letter's closing lines.

"[S]ince Our Redeemer has given this victory to our most illustrious king and queen, and to their renowned kingdoms, in so great a matter, for this all Christendom ought to feel delight and make great feasts and give solemn thanks to the Holy Trinity with many solemn prayers for the great exaltation which they shall have, in the turning of so many people to our holy faith, and afterwards for temporal benefits; for not only Spain but all Christians will have hence refreshment and gain."

—Alfred J. Andrea

Source

Cecil Jane, ed. and trans., *Select Documents Illustrating the Four Voyages of Columbus* (London: Hakluyt Society, 1930–1933), 1:18.

commercial rights in Africa and the "Indies." Needless to say, the papacy recognized fully that secular motives as well as crusading fervor drove the Portuguese. But God's agents deserved their just reward.

The momentum initiated by Henry and Pedro picked up considerably during the later years of the reign of Afonso V (r. 1438–1481) and especially during the reign of his son João II (r. 1481–1495), both of whom also crusaded in North Africa. João, who famously rejected as impractical the overtures of Christopher Columbus to sail west to reach the Indies, lived long enough to see the realization of his long-expressed hope that his captains would circumnavigate the tip of Africa. In 1488 Bartolomeu Dias, whom King

João had specifically instructed to seek out Prester John, rounded the Cape of Good Hope. Dias did not find Prester John, although early Portuguese visits to Christian Ethiopia, beginning in the last decade of the fifteenth century, would, at least momentarily, appear to have achieved that goal. What Dias did do was to open the way for the voyage of Vasco da Gama to Calicut, India, and his triumphant return home.

When da Gama reached Calicut in May 1498 he visited a temple dedicated to a Hindu goddess, which he mistook for a church raised in honor of the Virgin Mary. Laboring under that misperception, he informed the town's raja that for 60 years the monarchs of Portugal had been searching for Christian kings such as he, and this was the primary motive behind his voyage. That was a bit of dissembling, but regardless of the unquestioned mercantile motives that primarily drove this voyage, evidence strongly suggests that da Gama and King Manuel I (r. 1495–1521), who had dispatched da Gama to the Indies, shared Prince Henry's desire to find Prester John and to open a new crusade front. The Portuguese soon learned that the vast majority of India's coastal population was not Christian, and they subsequently sent missionary friars to the "Indies." Such missionary activity along the coasts of India, Africa, and other regions of the expanding Portuguese empire in the East was accompanied by an equally sincere desire to wage holy war at Islam's back door, a desire on which the Portuguese acted with militant gusto during the early sixteenth century. In 1541, for example, a contingent of Portuguese soldiers led by Christovão da Gama, son of Vasco da Gama, arrived in Ethiopia to assist Emperor Gelawdewos, whose lands were being overrun by the neighboring Adel sultanate led by Ahmad ibn Ibrihim al-Ghazi (also known as "the left-handed"). The Portuguese were a key factor in the victory at Wayna Daga (February 13, 1543) that resulted in Ahmad's death and led directly to Ethiopia's driving Adelite forces out of the empire. To be sure, worldly purposes mainly drove Portugal's adventures and empire building in the Indian Ocean, but as this campaign suggests, it would be wrong to disregard Portugal's continuing desire and efforts to wage crusades.

Another example of this mind-set is the military career of Afonso Albuquerque (1453–1515), viceroy of India and a *commendador* of the Spanish military order of Santiago, which had served as one of the primary driving forces of the Reconquista since its founding in 1170. Albuquerque had fought Muslims in Morocco, the Atlantic, and Italy prior to going to the Indian Ocean in 1503. In 1507 he won a singular victory over an Arab fleet off of Hormuz. According to the *Commentaries of Afonso Albuquerque the Great*, a posthumous compilation of selections from his papers strung together by his son, when Albuquerque's sailors fished the bodies of Muslim sailors from the waters, they found about 80 who had been killed by arrows, although no one in the Portuguese fleet had possessed a bow or knew how to use one. The *Commentaries* notes that God performed this miracle to demonstrate how victory is guaranteed for those who fight with true faith against unbelievers. That putative miracle and sentiment could just as easily have been recorded and expressed by any chronicler of the First Crusade, but a sixteenth-century epic poet, Luís Vaz de Camões (ca. 1524–1580), was as impressed by this reported incident as any twelfth-century historian would have been. He noted in his great national epic poem the *Lusiads* (1571), which celebrated the voyage of da Gama and placed the events of 1497–1499 into the context of the crusades, that this miracle showed "How God will fight for them who fight for Him." Camões himself had been a crusader and had lost an eye fighting Moors in North Africa.

By 1488 Columbus realized that the Portuguese Crown would not support his grand plan to reach the Indies by sailing west. He had, however, other potential patrons in the persons of the Catholic monarchs of Spain, Fernando II of Aragon (r. 1479–1516) and Isabel of Castile and León (r. 1474–1504). Both were avid crusaders in Iberia, and with their subjugation of Granada on January 2, 1492, the way was open for their minimal but real support of Columbus's venture. Many motives drove Columbus, but one purpose that inspired this complex and often inconsistent man was the dream of converting the Great Khan of Cathay and joining with him in a final,

great, and successful crusade against Islam, which in turn would usher in even greater events. In his so-called *Book of Prophecies*, a compilation of texts prepared essentially between 1501 and 1505 for Fernando and Isabel, the master mariner placed the discovery of the Indies into the grand divine plan for the forthcoming salvation of all humanity, the Final Judgment, and the End of Time. He argued that his voyage to the west had been the first step in the process of liberating Jerusalem, itself a necessary step in the unfolding of God's plan of universal salvation. Leaving aside the issue of whether or not he actually believed these messianic prophecies (and it seems he did), it is clear that Columbus was appealing to a widespread belief that the road to Jerusalem lay through the Indies. After all, he was appealing to two crusaders who saw their victory over Granada as more than just the culmination of over four and a half centuries of crusading in Iberia. It was another stepping stone in their God-sanctioned global struggle against Islam, a struggle that was foreordained to result in triumph.

—Alfred J. Andrea

Bibliography

- Ames, Glenn J. *Vasco da Gama: Renaissance Crusader*. New York: Longman, 2005.
- Flint, Valerie I. J. *The Imaginative Landscape of Christopher Columbus*. Princeton, NJ: Princeton University Press, 1992.
- France, John. *The Crusades and the Expansion of Catholic Christendom, 1000–1714*. London: Routledge, 2005.
- Phillips, J. R. S. *The Medieval Expansion of Europe*. 2nd ed. Oxford, UK: Clarendon, 1998.
- Phillips, William D., Jr., and Carla Rahn Phillips. *The Worlds of Christopher Columbus*. Cambridge: Cambridge University Press, 1992.

The Early Voyages of Columbus

On October 12, 1492, after 33 days in the Atlantic searching for a western route to Asia, Christopher Columbus and 90 men landed in the Bahamas. On his second trip in 1493 Columbus sailed with 17 ships and more than 1,500 settlers. The objectives had shifted from discovery and trade to conquest and colonization, and a

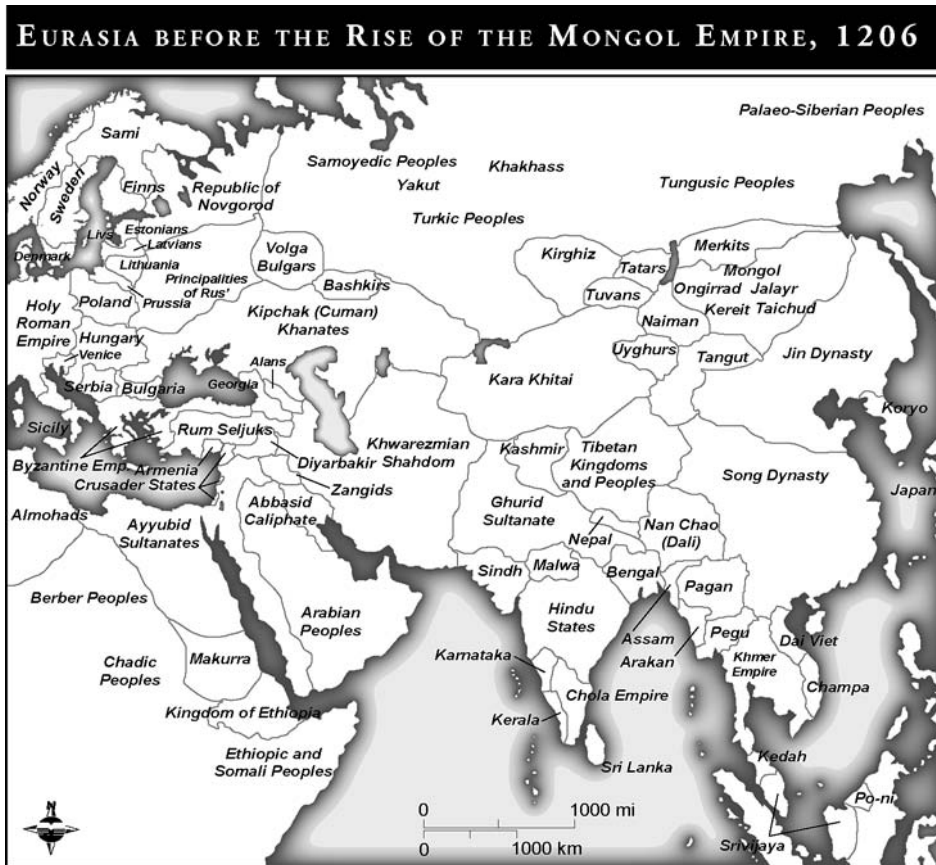
new era in world history had begun, one that would see the rise of Europe as a global power and the destruction of the indigenous peoples of the Americas.

Born in the Italian port city of Genoa, Christopher Columbus (1451–1506) began life in his father's weaving business but took to the sea at an early age and gained considerable experience of the western Mediterranean and the Atlantic. In his mid-20s he moved to Lisbon, where he earned a living in various maritime activities and where he first conceived of the idea of sailing west to Japan and Cathay.

Through his wife's family's connections, Columbus approached King João II of Portugal with his proposal but was turned down. In 1485 he went to Spain to try his luck with King Fernando and Queen Isabel, rulers of Aragon and Castile-León. They listened to Columbus's ideas as he showed them maps and explained his theories, and they set up a commission to review the project. But the Spaniards rejected it too, at least in part on the grounds that Columbus had overestimated the size of Asia and underestimated the size of the Earth. They concluded that the eastern shores of Japan and Cathay were not nearly as close to Europe as he claimed they were, and they were correct.

But Columbus persevered. Back in Portugal in 1488, he once more tried to persuade João II of the viability of his project when, to Columbus's great misfortune, Bartolomeu Dias appeared in Lisbon after a two-year voyage with the news that he had rounded the cape of Africa and that the way to India lay open. Any hopes that Columbus might have had were dashed. But this time—perhaps because of the Portuguese success—the Spaniards decided to support him. After all, it was a relatively small outlay of capital with a potentially huge payoff if Columbus was correct.

On their first voyage, Columbus and his Spanish cocaptains sailed three small ships westward from the Canary islands by dead reckoning, which means that in the absence of charts they used their accumulated experience with stars, winds, compass, and hourglass to estimate distance and to set a course at the same latitude. After a month the crew began to grumble, and there



was the threat of mutiny: Columbus had promised a crossing of between 700 and 750 leagues (2,100 and 2,250 miles or 3,380 and 3,600 kilometers) and they had already sailed 800 leagues (2,400 miles or 3,800 kilometers).

Within days, however, land was sighted, and Europeans made their first contact with the Tainos, an Arawak people, on an island they called Guanahani (probably San Salvador). It was not what the explorers expected: instead of the wealth and cities of the Far East, they found poor, primitive tribal people and barely a trace of gold. To make matters worse, within weeks one of the Spanish cocaptains absconded with the *Pinta*. A month later Columbus's flagship the *Santa Maria* foundered on a reef, and he found himself stranded on Hispaniola (Haiti/Dominican Republic) with but the smallest ship *Niña* and too many crew members. Eventually the *Pinta* and *Niña*, the two remaining ships, were reunited, but Columbus was forced to leave a colony of 39 men when he returned to Spain in

early March 1493. It was the last he or any other European ever saw of them.

The second voyage, which lasted for three years (1493–1496), was a much larger expedition. In addition to soldiers, farmers, and craftsmen, Columbus brought with him cows, horses, chickens, pigs, and seeds for wheat, vegetables, and fruit; in return, staples such as sweet potato and maize (corn) and other crops such as tobacco and cacao were introduced to Europe, thereby altering farming, nutrition, and food production on a worldwide scale.

They also brought germs. With no natural immunities to protect them, native peoples were devastated by epidemic Afro-Eurasian diseases such as smallpox. It is estimated that over the course of the following centuries up to 95 percent of the indigenous peoples of the Americas succumbed to smallpox and other deadly diseases, something on the order of between 60 million and 80 million people. Columbus continued to insist that he had found Asia, but by the

➤ WHY TRAVEL TO THE INDIES?

The following account is from the *Logbook (Roteiro) of the First Voyage of Vasco da Gama*. The journal was kept by an anonymous crewmember aboard Vasco da Gama's ship the *São Rafael*. This account of the long and costly journey of spices from Calicut to the Mediterranean indicates one of the several reasons why the Portuguese desired direct access to the Indies. Crusade ideology was not the only, or even the main, factor driving Portuguese exploration.

"From this country of Calicut . . . come the spices that are consumed in the East and the West, in Portugal, as in all other countries of the world, as also [are] precious stones of every description. The following spices are to be found in this city of Calicut, being its own produce: much ginger and pepper and cinnamon. . . . Cloves are brought to this city from an island called Melqua [Malacca]. The Mecca vessels carry these spices from there to a city in Mecca [in Arabia] called Judea [Jeddah], and from the said island to Judea is a voyage of 50 days sailing before the wind. . . . At Judea they discharge their cargoes, paying customs duties to the [Mamluk] Grand Sultan. The merchandise is then transhipped to smaller vessels,

which carry it through the Red Sea to a place close to Santa Catarina [Monastery] of Mount Sinai, called Tuuz [El Tur] where customs dues are paid once more. From that place the merchants carry the spices on the backs of camels . . . to Quayro [Cairo], a journey occupying ten days. At Quayro duties are paid again. On this road to Quayro they are frequently robbed by thieves. . . .

At Quayro the spices are embarked on the river Nile . . . and descending that river for two days they reach a place called Roxette [Rosetta], where duties have to be paid once more. There they are placed on camels, and are conveyed in one day to a city called Alexandria, which is a sea-port. This city is visited by the galleys of Venice and Genoa, in search of these spices, which yield the Grand Sultan [an annual] revenue of 600,000 cruzados."

—Alfred J. Andrea

Source

E. G. Ravenstein, ed. and trans., *A Journal of the First Voyage of Vasco da Gama, 1497–1499* (Hakluyt Society, 1898), First Series No. 99 (reproduced by Burt Franklin [1963?], pp. 77–78. Modernized by Alfred J. Andrea.

time of his fourth voyage (1502–1504) he had lost much of his credibility, and many were arguing that what he had actually done was to discover an entirely unknown continent.

—David Blanks

Bibliography

- Ames, Glenn J. *The Globe Encompassed: The Age of European Discovery, 1500–1700*. Upper Saddle River, NJ: Prentice Hall, 2007.
- Columbus, Christopher. *Journal of the First Voyage*. Edited and translated by B. W. Ife. Warminster, UK: Aris and Phillips, 1990.
- Flint, Valerie I. J. *The Imaginative Landscape of Christopher Columbus*. Princeton, NJ: Princeton University Press, 1992.
- Lunenfeld, Marvin, ed. *1492: Discovery, Invasion, Encounter; Sources and Interpretations*. Lexington, MA: D. C. Heath, 1991.
- Phillips, William D., Jr., and Carla Rahn Phillips. *The Worlds of Christopher Columbus*. Cambridge: Cambridge University Press, 1992.

The Inca Highway

One of the most important elements in the success of the Inca empire was its remarkable system of highways extending for at least 24,500 miles (40,000 kilometers). For the empire to operate, it was essential to be able to move goods and people rapidly from place to place. An all-weather road was particularly important for the rapid movement of the army when campaigning to expand the empire or when moving to suppress rebellions. This system also served as a communications network linking all of the many provinces of the empire to a central command system.

The imperial highway system, called the Capac Ñan in the Inca language Quechua, was comprised of two main trunk roads that ran roughly north-south. One was the coastal route from Tumbes on the Peruvian north coast extending south to Talca in modern Chile. The other

THE INCA POSTAL SYSTEM

The Inca postal system was intimately tied to the highway system. Relay runners called *chasqui* were stationed all along the road at intervals of about .9 miles (1.4 kilometers). The swiftest-running young men from the nearest communities performed this duty as laborers, serving a term of one month. They were stationed in pairs at small stone houses along the highway and took turns keeping watch for approaching messengers. A message could be relayed verbally or carried on a *quipu*, or knotted string, passed from one runner to the next. Small amounts of goods could sometimes be carried, and it is said that the emperor could dine on fresh fish from the Pacific Ocean brought to him in fewer than two days. The speed of this system has been estimated at about almost 150 miles (240 kilometers) a day.

—Gordon McEwan



Ancient stone steps lead upward on the Inca Trail in Peru. The Inca Trail was built more than 500 years ago and connected Machu Picchu to the southern Inca capital, Cuzco, and the northern capital, Quito (in present-day Ecuador). (Ben Ferguson)

was the highland route, which extended from Quito in modern Ecuador to Mendoza in modern Argentina. These two trunk roads were cross-connected by a network of shorter highways that linked all of the Inca provincial centers into one large system. Use of this highway system was

restricted to those on official imperial business. Commoners were not allowed to travel on it without special permission.

The construction of the roads varied from place to place depending on the circumstances of the terrain. The width of the highway varied from 3 to 13 feet (1 to 4 meters). The surface treatment ranged from fine paving stones on one extreme to natural dirt surfaces on the other, depending on the climate and terrain to be crossed. Because there were no wheeled vehicles that needed to use them, Inca roads often rose precipitously, climbing steeper slopes with long flights of steps or making use of extensive switchbacks to gain altitude over relatively short distances. Where the ground was marshland or bog, the Inca engineers built raised causeways. Drainage was achieved through gutters and culverts, and often low walls delimited the margins of the road, keeping it free of windborne sand and other obstacles. Tunnels and retaining walls were frequent features of a road as it crossed steep and mountainous terrain.

Bridges were a vital part of the highway system, and without them the highways would have been useless. In the steep canyons and rugged terrain of the Andes, rivers tend to be swift and very difficult to cross. Thus, bridges of various types were constructed and carefully maintained. The most famous are the suspension bridges constructed of rope made from ichu grass. Bridges of this type were up to 65 feet (20 meters) long. These bridges required specialists for their construction and maintenance and had to be renewed on an annual basis. Usually a small community that had the specific task of keeping the bridge was located near the crossing. Bridges crossing shorter distances and more placid waters could be made of pontoon rafts, wood beams, or even stone slabs. One other method commonly used to cross rivers was a device called an *oroya*, which consisted of a basket suspended under a cable that spanned the river. A passenger sat in the basket and was pulled along the cable crossing the water.

As with the bridges, construction and maintenance of the roads were the responsibility of the communities nearest where they passed. Each community was responsible for its segment of the highway as part of its labor tax, and in

this way the work was distributed over a large segment of the population with no one being overly burdened.

An important feature of the royal road system was the presence of way stations known as *tampu*, located approximately every 13.5 miles (22 kilometers). According to Pedro de Cieza de León (1520–1554), the rate of travel for official parties of high rank and not on urgent business was about 12.5 miles (20 kilometers) a day, meaning that the *tampu* were placed at intervals of about a day's travel. *Tampu* varied depending on their location, but all provided lodging, food, and supplies for those traveling on official business. Later, this network of roads served to facilitate the movement of Spanish forces in their drive to conquer the Inca.

—Gordon McEwan

Bibliography

- Cieza de León, Pedro de. *The Incas of Pedro de Cieza de León*. Translated by Harriet de Onis and edited by Victor W. von Hagen. Norman: University of Oklahoma Press, 1959.
- Cobo, Bernabé. *Inca Religion and Customs*. Translated and edited by Roland Hamilton. Austin: University of Texas Press, 1990.
- Hyslop, John. *The Inca Road System*. New York: Academic Press, 1984.
- Rowe, John H. "Inca Culture at the Time of the Spanish Conquest." In *Handbook of South American Indians*, edited by Julian Steward. Bureau of American Ethnology, Bulletin 143, Vol. 2. Washington, DC: Smithsonian Institution, 1946.

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Politics and Statecraft—Internal and External State Expansion

Toward the middle of the eleventh century, Abu al-Hasan Ali ibn Muhammad ibn Habib al-Mawardi (972–1058), an Islamic jurist in Baghdad, composed a treatise on government titled *Ordinances of Government*, in which he delineated the qualities and duties of an ideal caliph. According to al-Mawardi, the caliph's many obligations included executing justice, defending Islam from intrusions, ensuring peace by maintaining the safety of internal routes and the integrity of frontier fortifications, using the treasury wisely, and employing capable and trustworthy ministers.

Ironically, this was a period in which the Abbasid caliphs of Baghdad had lost all effective control over governmental matters, initially to Buyid emirs and then to Seljuk sultans. Nevertheless, the caliphal responsibilities that al-Mawardi enumerated nicely summarize the political realities of the period 1000–1500 so far as Afro-Eurasia was concerned. Regardless of who governed their affairs, most states were becoming increasingly complex so far as their organs of government were concerned, and much of this was in response to increasing demands from all levels of society for justice, security, and good government. Consequently, many of them (certainly not all, as Song China bore witness) tended to grow in size, with some of them becoming virtual empires across large portions of Afro-Eurasia. Moreover, as they expanded there was a continued trend toward interaction among them. In brief, Afro-Eurasia was becoming a world community. In the course of the thirteenth century, this was most dramatically manifested in the Mongol empire, the largest land empire in history. In western sub-Saharan Africa, great trading empires such as Ghana, Mali, and Songhai were emerging, all of which had profound contact with the greater Islamic world in North Africa and Southwest Asia. And Zimbabwe in East Africa was tied into the world of the Greater Indian Ocean by reason of its contacts with coastal trading emporia.

Across the oceans a similar phenomenon was at work in the Americas, which were untouched by the developments taking place in Afro-Eurasia. Before the fifteenth century had ended, two of the Americas' greatest empires had emerged and were prospering, the Aztec empire of central Mexico and the Inca empire of the South American Andes. These might be the two best-known pre-Conquest empires of the Western Hemisphere, but they were only two of the many complex polities that flourished and interacted throughout the Americas. Certainly the Mississippian culture centered on Cahokia near present-day East St. Louis, Illinois, had far-reaching contacts.



In like fashion, many other Afro-Eurasian states tend to be unjustly overshadowed in the pages of history because of the mesmerizing attraction to modern students of the Mongol empire. Chief among these is the so-called forgotten empire of Byzantium that reached heights of cultural, political, and military influence in the early eleventh century; underwent a series of crises later in that century; witnessed its capital city seized in 1204 and held by crusaders until 1261; and was fragmented by attacks from both Western coreligionists and Islamic Turks but held on grimly through all of these trials until 1453. In the course of these four and a half centuries, Byzantium not only survived against all odds but also played profoundly important diplomatic and cultural roles in the Balkans, eastern and central Europe (most notably the land of the Rus), and Italy.

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Other Christian states played equally significant roles including Ethiopia, which was the sole Christian state in Africa during these centuries. Even more significant perhaps, the emerging nations, principalities, and city-states of western and central Europe were not only expanding the frontiers of Latin Christendom into the Baltic and deep into the Iberian Peninsula during the period from roughly 1100 to 1300

but were also supporting the crusader states of the eastern Mediterranean. During the fourteenth and fifteenth centuries, the fairly new kingdoms of the Iberian Peninsula, notably Portugal, Castile, and Aragon, supported overseas explorations that, by the end of the fifteenth century, opened up the African coasts, the Indian Ocean, East Asia, and, most important of all, the Americas to direct contact by western Europeans.

Within Dar al-Islam (the House of Islam), which by 1500 stretched from West Africa to the southern Philippines, a wide variety of political communities followed this same general pattern of growth, increasing complexity, and outreach far beyond their borders. The Fatimid empire of the eleventh century and much of the twelfth century certainly played a significant role as a conduit of trade and cross-cultural contacts, and this was but one of many Islamic states that evolved highly effective bureaucratic infrastructures and had far-reaching influences across major portions of Afro-Eurasia. One of the most dramatic was the late-fourteenth-century empire of Timur-i Leng (Tamerlane), a short-lived attempt at creating a world empire along the lines of the Mongol empire. Although this effort died with its would-be world conqueror in 1405, Amir Timur (or Temūr) laid the basis for both the culturally brilliant Timurid dynasty of western Central Asia and even the long-lived Mughal dynasty that established itself in India in the sixteenth century. Timur's legacy was mixed. His armies ravaged large swaths of Central Asia, the Caucasus, Southwest Asia, and eastern Europe, destroying many great cities in the process and killing untold numbers of people. Yet he also established his capital of Samarqand (in present-day Uzbekistan) as a focal point of the Silk Road during what might well be called the Indian Summer of this great trans-Eurasian network of caravan routes.

Of all the Islamic state builders and rulers who arose in Southwest Asia—the Seljuks, Ayyubids, and the Mamluks, to name but three of the most important—the Ottoman Turks who emerged in fourteenth-century Anatolia were certainly the most significant. By 1500 they had established an empire that not only had captured Constantinople but also extended deeply into southeastern Europe and was on the verge of dominating the Arabian Peninsula and much of North Africa. The Ottoman empire, a vast multiethnic entity, would play a major transregional role in world history down into the early twentieth century.

Whereas the Islamic sultanate of Delhi dominated northern India, where Muslims and Hindus were forced by circumstances to reach some sort of accommodation, the southern portions of the subcontinent saw the rise of strong native states, most notably the Chola kingdom and Vijayanagara. Of these, the former had a political and cultural reach far into the Indian Ocean. The smaller states of India that proliferated along its two coasts enjoyed the prosperity that came with fostering, controlling, and taxing the commerce that attracted maritime merchants who arrived from all points between East Africa and South China and, finally, at the very end of the fifteenth century from Western Europe.

China during these five centuries witnessed much of its northern and western territories overrun by such “barbarian” peoples as the Tanguts, who established the XiXia empire; the Khitan (Qidan) Mongols,

who established the Liao kingdom; and the Jurchen (Ruzhen), who created the Jin empire. Despite this loss of territory, China's Song dynasty, in both its Northern (960–1126) and Southern incarnations (1127–1279), managed to maintain and improve on what was probably the most effective governmental bureaucracy in the world at that time. What is more, the attraction of Chinese civilization resulted in a significant level of sinification of the XiXia, Khitan, and Jurchen peoples and their states. Eventually all of China was conquered by the Mongols, who established the Yuan dynasty (1279–1368), which now claimed the Mandate of Heaven. The mandate lasted only a century, but during that time travelers from as far as Western Europe came to the Middle Kingdom. The native Ming dynasty (1368–1644) that threw out the Mongols initially sought to extend Chinese political and commercial influence far into the waters of the Indian Ocean with the seven voyages of Zheng He's fleets (1405–1433). After abandoning this enterprise, the Ming empire concentrated its energies on its northern frontier in order to ensure that never again would the Mongols overrun China. With this focus on its steppe frontier, the Ming set in place a policy that several centuries after their being replaced by the Qing dynasty (1644–1911) would result in major Chinese expansion into Mongolia and eastern Central Asia, today's Xinjiang.

Mainland Southeast Asia, so deeply influenced by both China and India (and, hence, its being known into modern times as Indo-China), saw the rise of several hybrid states that were essentially native in their cultures but exhibited strong outside influences, sure evidence of their contacts with a world greater than their immediate borders. Chief among these were the Khmer empire, which for centuries dominated a vast region encompassed by present-day Cambodia and major portions of Laos, Thailand, and southern Vietnam, and the Dai Viet kingdom of northern Vietnam.

Korea was essentially unified under the Koryo, or Goryeo, dynasty (918–1392), and during its first century plus of rule the family set Korea firmly on the path to establishing a central government modeled on that of China but with distinctly Korean overtones. By 1200, however, power passed from the royal court to military aristocrats, thereby causing a sharp departure from the Chinese model. This largely paralleled what was happening at the same time in Japan, where native aristocratic elements overwhelmed many of the bureaucratic institutions and forms of government that the Japanese had copied from Tang China (618–907) in the seventh and eighth centuries.

Unlike Japan, which twice successfully resisted Mongol invasions, Korea submitted to Mongol rule and became a vassal state of the empire. This was probably a blessing for the weak royal family, which was propped up by its Mongol overlords into the fourteenth century. In 1392, however, the Koryo dynasty gave way to the Yi (also known as Choson) dynasty, which reigned until 1910. Under the Yi, Confucianism flourished in large part due to close diplomatic ties with the Ming court at Beijing. Indeed, Confucian values and systems so dominated Korean culture and the structures of Yi government that Korea under the Yi has been termed “the perfected Confucian state.”

Across the waters of the Sea of Japan, to the contrary, Japan, enjoying relative isolation or, rather, separation on its terms, developed into a feudal society with governmental structures that sharply deviated from those crafted in imitation of Tang China centuries earlier. In 1185 the Minamoto family established the shogunate, a military form of government in which all power was in the hands of the shogun, or commander in chief, while a puppet emperor reigned in Kyoto. This feudal system, known as the *bakufu* (tent government), dominated the island empire's government and shaped the lives of all Japanese until modern times.

Japan might not have been interacting with its neighbors to the degree of other strong governments, and it certainly was not expanding its territory, but very much like the vast majority of other states around the world, Japan witnessed during these five centuries a growth in effective government, despite its feudal underpinnings.

—Alfred J. Andrea

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■ Introduction: Sub-Saharan Africa

Rarely does a society or state develop in isolation. It is normal for polities to not only grow organically out of the cultures of the people who craft them but also to be influenced by external stimuli and to borrow from or model themselves on foreign entities. Such was the case in sub-Saharan Africa. It would be wrong to consider such states as Ghana, Mali, Gao, Great Zimbabwe, and the Swahili cities as creations imposed on Africans from outside. Yet each rose in response to certain opportunities presented by both distant and closer-to-home forces, namely trade. Additionally, with the major exception of Great Zimbabwe, they all embraced Islam in the course of their developments as states. Islam did not create them, but their embracing of Islam, in whatever form and to whatever degree, was a factor in their growth.

Very much like the emerging kingdoms of Europe in the period from roughly 500 to 1000, in which conversion to Byzantine and Latin forms of Christianity provided monarchs and their nascent states with a certain legitimacy and sup-

port, and, just as important, integration into a large network of societies and states that espoused the same religion, so also Islam provided this opportunity for these sub-Saharan kings and their states.

Writing in 1067–1068, the Andalusian geographer al-Bakri noted the different levels of Islam's penetration into sub-Saharan West Africa.

The monarch of Takrur on the lower Senegal River had enthusiastically embraced Islam, imposed Sharia (Islamic holy law) on his subjects, and waged holy jihad against his non-Muslim neighbors. Takrur appears to have been the first state in the West African savanna to have embraced Islam, and initially Islam benefitted the kingdom economically and politically, especially insofar as it allied with the powerful Almoravids, a militantly fundamentalist Muslim state to their north. But ultimately Takrur disintegrated, finally being swallowed up by a new Islamic state, Mali, in the late thirteenth century. Quite possibly Takrur's Islamization proved ultimately to be a classic double-edged sword, a factor that

worked for and against its best interests. Its Almoravid allies passed out of existence by the mid-twelfth century, and Takrur had made too many enemies close to home.

Wagadugu, better known today as the kingdom or empire of Ghana (although “Ghana” was actually the title accorded its monarchs), was a political and economic competitor of Takrur. Its monarch (or ghana), Tunka Manin, maintained allegiance to traditional religious ways but was generous in inviting Muslims to live in his kingdom. Indeed, his capital, Koumbi-Saleh, was a double city consisting of two separated walled towns connected by a strip of private dwellings. One of those two walled entities was inhabited by Muslims and contained 12 mosques. In addition, Tunka Manin employed Muslim interpreters, and all the officials in charge of the treasury were Muslims, as were a majority of his other ministers. Obviously he realized the economic and political advantages presented by Islam, even as he followed the ancient ways of his Soninke people. But this adherence to what Muslims disparagingly called “idol-worship” did not last much longer. According to another Andalusian geographer, al-Zuhri, who was writing in the 1130s, the people of Wagadugu converted to Islam in 1076. How sweeping and complete that conversion was initially is impossible to say, but the kingdom and its people were firmly Muslim a century later when the kingdom was absorbed by Mali, a state in which Islam had taken firm root.

Islam therefore, obviously an import from outside, must be seen as a significant tool in state building and expansion for many but not all of the polities of sub-Saharan Africa. That noted, however, as was true for both Takrur and Ghana/Wagadugu, as well as for all the other sub-Saharan African polities of the eleventh century that were beginning to welcome in Muslims and even to adopt Islam, Islam did not create these kingdoms and city-states. Their foundations were indigenous.

—*Alfred J. Andrea*

Ethiopia

In the half millennium between 1000 and 1500, the Ethiopian kingdom took a shape that later generations deemed definitive. Two major politi-

cal developments were the emergence and overthrow of the Zagwe dynasty (ca. 1150–1270) and its replacement by the Solomonic, or Solomonid, dynasty, which ruled until 1974. During this period Ethiopia shared in the expansion of Red Sea trade, which grew steadily following the tenth-century establishment in Egypt of the Fatimid dynasty. With expanding trade, the political power of Islam spread in northeastern Africa. The Zagwe stimulated a cultural revival, which carried through the Solomonic period. Within the Ethiopian Orthodox Church monastic renewal took place. Finally, as Ethiopian rulers expanded their territory, the peoples whom they ruled became increasingly diverse.

The events of the first centuries of the millennium are obscure. The rise toward the middle of the twelfth century of the Agaw-speaking Zagwe, based in the mountains around the headwaters of the Takazze River, brings developments into sharper focus. This region had already been important in the sixth century, and the Zagwe emergence reflected the steady southward shift of power after the eclipse of Aksum in the seventh century. The dynasty's most enduring achievement was construction of a remarkable complex of rock-hewn churches. Tradition ascribes them all to the dynasty's most famous ruler, Lalibela, after whom they have come to be known. Lalibela ruled roughly from 1205 to 1235 and was subsequently regarded as a saint. The complex symbolically reproduces the geography of the Holy Land, which was becoming a destination for an increasing number of Ethiopian pilgrims. However, a further shift of power led in 1270 to the violent overthrow of the last of Lalibela's successors by Yikunno Amlak, the founder of a new dynasty, who claimed descent from the biblical King Solomon and the Queen of Sheba and also claimed to be the heir of the political legacy of Aksum.

The Solomonic rise is surrounded by legends. Tradition holds that the dynasty came to power peacefully through the intervention of Saint Takla Haymanot, an outstanding representative of monastic renewal. Allegedly, he persuaded the last Zagwe king to acknowledge the rightful claim of the Solomonic. In return, tradition holds that Yikunno Amlak gave the Church one-third of the land in the kingdom. The legend of a dynasty



Bet Giyorgis (St. George's), one of a number of rock-hewn churches reportedly built under Lalibela, a Christian king of Ethiopia during the twelfth or thirteenth century. (Klaas Lingbeek van Kranen)

of Christian kings, descended from Solomon, emerged in the Middle East and was elaborated in a text, the *Kebra Nagast* (*Glory of the Kings*). By the ninth century, the legend had attached itself to Ethiopia. The Zagwe, who were Kushitic rather than Semitic speakers, prevented the translation of the text from Arabic into Ge'ez, the Ethiopian literary language. Yikunno Amlak successfully appropriated the legend and used it as propaganda. The substance of his claim was that his people were Semitic-speaking Christians—the Amhara—and products of the southward spread of language, culture, and material technology from the classical empire of Aksum.

The Solomonic dynasty was not firmly established until the rise, after decades of succession conflicts, of Amda Seyon (r. 1314–1344), one of the dynasty's great rulers. Amda Seyon expanded his empire in all directions, challenging the control of international trade by a string of Muslim principalities to his east and establishing his rule

around Lake Tana, the source of the Blue Nile. His name, which means “Pillar of Zion,” reflects the identification of the Solomonic rulers with the kings of biblical Israel. To them, Christian Ethiopia was the new Zion. This did not preclude conflict with the Church, with which Amda Seyon's relations were turbulent. His polygynous practices were attacked by the generation of monastic leaders who succeeded Takla Haymanot. In spite of these conflicts the Church expanded rapidly, with only the Muslim communities proving resistant over the long run.

Amda Seyon's grandson, Dawit (r. 1382–1411), reconciled the monks with rich land grants and paved the way for his son, Zara Yaqob (“Seed of Jacob,” r. 1434–1468), under whom military expansion continued. However, Zara Yaqob is most noted for his impact on Ethiopian Christianity. He was an author and theologian and led the Ethiopian Church to recognize as normative long-standing practices, distinct from those of its mother Alexandrian Church, such as the recognition of Saturday (the Sabbath) as a holy day equal in status to Sunday and a greatly expanded devotion to Mary the Mother of Jesus. The historian Tadesse Tamrat describes Zara Yaqob's reign as marked by a sense of “religious nationalism.” Nevertheless, the subjects of Zara Yaqob were heterogeneous in language, ethnicity, and religion. Military expansion had brought under the Solomonic sway peoples speaking numerous Semitic, Kushitic, and Omotic languages and committed to distinctive religious practices, which the king himself viewed as pagan but that prevailed even in his own court.

Ethiopia's larger world in the middle of our period was marked by the crusades in which the country was not directly involved. However, in the Holy Land Ethiopians and Western Europeans became increasingly aware of each other, with the Western Europeans attaching to Ethiopia yet another myth about a powerful Christian priest-king called Prester John in the lands beyond Islam. In 1450 Zara Yaqob established direct, if tenuous, relations with Western Europe by sending an embassy to Italy.

This stage of Ethiopia's history ends properly during the reign of Zara Yaqob's great-grandson, Lebna Dengel (“Incense of the Virgin,” r. 1508–1540). The Solomonic kingdom dominated its

➤ A ROYAL BURIAL

Francisco Alvares was the chaplain to a Portuguese embassy that arrived at the court of King Lebna Dengel (1508–1540) in 1520. In the following passage Alvares describes the burial of the king's father.

“On Saturday, 12 January [1521], there was a great assembly of clergy in the said church [Mekana Sellase], and all the night they were engaged in much singing and playing of instruments and they said that they were consecrating the church. Mass had not yet been said in this church, for it was said in another small church which was close to this, in which was buried the father of this Prester [Lebna Dengel]; and he wished to remove him to the large church which he had ordered to be built and had begun in his lifetime, and which his son had finished; and they said that it was thirteen years since he died. [Jan. 15] Whilst we were standing thus . . . there passed between us and the big church all the clergy and people in a very well ordered procession, and they brought the bones of the father

of the Prester, and carried them to the big church; and there came in this procession . . . the Queens, that is, the Queen Elena, mother of the Prester, and the Queen his wife; and each of them with her black canopy for mourning. . . . The bier in which the bones came was under a canopy of gold brocade, closed in with curtains of satin. So they placed the said canopy and bier in the church, in the cross part, where we stood with the people who could not get into the church. We came to this service at sunrise, and we went away by night with [innumerable] torches.”

—Donald Crummey

Source

C. F. Beckingham and G. W. B. Huntingford, *The Prester John of the Indies: A True Relation of the Lands of the Prester John Being the Narrative of the Portuguese Embassy to Ethiopia in 1520 Written by Father Francisco Alvares*, 2 vols. (Cambridge: Cambridge University Press for the Hakluyt Society, 1961), 2:360–361.

region almost continuously from 1270, but in 1527 Muslim principalities along the trade routes of northeastern Africa united under a charismatic leader, Ahmed ibn Ibrahim (known in Christian Ethiopian tradition as Grañ, “the left-handed”). They inflicted a military defeat on Lebna Dengel's army and ushered in a century of violent upheavals and international transformation marked by the rise of the Ottoman Turks and Portuguese expansion into the northwest Indian Ocean. This century shook to their core the institutions of Solomonic Ethiopia.

—Donald Crummey

Bibliography

- Beckingham, C. F., and G. W. B. Huntingford. *The Prester John of the Indies: A True Relation of the Lands of the Prester John Being the Narrative of the Portuguese Embassy to Ethiopia in 1520 Written by Father Francisco Alvares*. 2 vols. Cambridge: Cambridge University Press for the Hakluyt Society, 1961.
- Crummey, Donald. *Land and Society in the Christian Kingdom of Ethiopia: From the Thirteenth to the Twentieth Century*. Urbana: University of Illinois Press, 2000.

Tamrat, Tadesse. *Church and State in Ethiopia, 1270–1527*. Oxford, UK: Clarendon, 1972.

Ghana—A Trading Empire of the West African Savanna

Ghana was the first of three empires that wielded considerable economic and political influence in the West African savanna region from around the fourth through the sixteenth centuries. Ghana's rise was possible because local populations not only developed agriculture in this environmentally challenging region but also took advantage of a number of opportunities provided by the physical and economic geography of West Africa. First, the presence of a number of significant river systems, particularly the Senegal, Gambia, and Niger rivers, allowed the movement of people and goods along the savanna's east-west axis. Furthermore, the savanna was well placed to mediate between pastoralist populations in the Sahel, the semiarid area bordering the Sahara to the north, and the forest regions to the south. Thus, grains and finished goods from the agricultural and urban regions of the

savanna could be traded for forest products and gold from the south and finished goods and salt from the north. Such trade was greatly facilitated by the introduction of the dromedary, or Arabian camel, to the region sometime around 300 CE. Thus, while the beginnings of Ghana are best attributed to the skillful innovations and adaptations of local populations, the region's wealth was in no small part a result of its status as a broker between very different environmental (and cultural) zones to its north and south.

Much of what we know about the empire of Ghana in the period around the end of the first millennium comes from archeological sources and also the accounts of Muslim geographers. The historical picture created by these sources is of a decentralized trading empire that was at the peak of its power around 1000 CE. Indeed, ancient Ghana's two main cities, Kumbi-Saleh and Awdaghost, were located on the northern fringe of the savanna, suggesting that the importance of trade to the north was great enough to encourage the establishment of cities in an agriculturally marginal zone. Much of Ghana's wealth appears to have come from a direct tax on salt and gold traded into and across the empire's borders. So great was this wealth that Islamic geographers often stressed that the rulers of Ghana were among the world's richest and most powerful. The trade with the north also seems to have been a major conduit for the introduction of Islam into the savanna region.

By the eleventh century a number of factors were contributing to Ghana's decline. The drying up of the region was making agriculture, particularly in the northern savanna, less reliable. Also, the rise of the Almoravid empire to the northwest led to competition over control of major trade centers and routes running north across the Sahara. In 1076, for example, an Almoravid army seized the city of Awdaghost from Ghana, a defeat that no doubt cost the empire dearly. Furthermore, by the period of around 1100, a number of new urban complexes, such as Niani and Goa, were becoming the centers of new trading states to the east. Thus, a number of factors conspired to limit Ghana's ability to control an expanding system of trans-Saharan trade. Nonetheless, so great was the legacy of ancient Ghana that in 1957 the former British colony of

➤ AL-BAKRI, *THE BOOK OF ROUTES AND REALMS* (1067/1068)

"The city of Ghana consists of two towns situated on a plain. One of these towns, which is inhabited by Muslims, is large and possesses twelve mosques. . . . Around the king's town are domed buildings and groves and thickets where the sorcerers of these people, men in charge of the religious cult, live. In them too are their idols and the tombs of their kings. The king's interpreters, the official in charge of his treasury and the majority of his ministers are Muslims. Among the people who follow the king's religion only he and his heir apparent (who is the son of his sister) may wear sewn clothes. All the other people wear robes of cotton, silk, or brocade, according to their means. . . . [The king] sits in audience or to hear grievances against officials in a domed pavilion around which stand ten horses covered with gold-embroidered materials. Behind the king stand ten pages holding shields and swords decorated with gold, and on his right are the sons of the [vassal] kings of his country, wearing splendid garments and their hair plaited with gold. The governor of the city sits on the ground before the king and around him are ministers seated likewise."

—Jonathan T. Reynolds

Source

N. Levtzion and J. F. P. Hopkins, eds., *Corpus of Early Arabic Sources for West African History* (Princeton, NJ: Marcus Wiener, 2000), 79–80.

the Gold Coast chose to rename itself Ghana in honor of this early African empire.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. 2nd ed. Upper Saddle River, NJ: Prentice Hall, Inc., 2008.
- Connah, Graham. *African Civilizations: An Archaeological Perspective*. Cambridge: Cambridge University Press, 2001.
- McKissack, Patricia, and Frederick McKissack. *The Ancient Kingdoms of Ghana, Mali, and Songhay: Life in Medieval Africa*. New York: Henry Holt & Co., 1995.

Mali—A New Islamic State of the Western Sudan

With the decline of the Ghana empire in the eleventh and twelfth centuries, a political vacuum developed in the savanna (grasslands) and *sabel* (the semiarid “coast” bordering the southern Sahara) regions of West Africa. Numerous states vied for power and dominance as a result, each seeking to assert control over local agricultural production and also the lucrative trade in salt and gold. By the early thirteenth century, the state of Soso, under the king Soumaoro, had succeeded in subjugating many smaller states in the region near the headwaters of the Niger River.

Soumaoro’s attempt at empire building, however, was challenged by a young prince named Sundiata from the city-state of Niani. Building a

coalition of Mandinka and Soninke groups, Sundiata met and defeated his rival at the Battle of Kirina, which probably took place in 1235. Following his victory, Sundiata was named *mansa*, a term that had previously meant king but took on the implication of emperor. Sundiata established the precedent of ruling in collaboration with those who granted him sovereignty and established the Gbara (Grand Assembly) to give voice to representatives of the various groups that constituted Mali.

The oral account of the clash of Sundiata and Soumaoro was handed down through generations of griots. Combining both real history and literary drama, this epic poem is now a classic of world literature. Soumaoro is identified as the villain not only because of his alleged brutality but also because of his reliance on witchcraft for his power. Sundiata, on the other hand, is identified as good, in no small part because he eschews witchcraft for Islam. Not surprisingly, this account reflects the growing influence of Islam among the political and economic elites who lived in the urban centers of the savanna and sahel during this period. Indeed, Sundiata’s dynasty created a fictional lineage that traced their origins all the way back to Bilali Bunama, the first *muezzin* (leader of daily prayer at mosques) of Medina and Mecca who, according to Islamic tradition, had been a slave from Africa before the Prophet gave him his freedom.

The Mali empire grew to far exceed the borders of ancient Ghana. By the fourteenth century, it stretched from the Atlantic coast of the Senegambia eastward to what is today northern Nigeria. Located largely within the savanna and sahal zones, the empire drew upon a diversity of ecological zones, in no small part thanks to the presence of the Niger River, which ran west to east through much of the empire. This ecological diversity meant that the Mali empire could draw upon surpluses of rice, millet, and sorghum; meat produced by pastoralists; and fish caught from the river. Trade in gold, which came from the forest regions to the south of the empire, and salt, which came from the desert to the north, were also crucial to its economy. Although the state controlled the production of neither, its ability to tax these vital resources as they passed through its borders was a source of great wealth.

► THE GRIOTS OF WEST AFRICA

In recent years, griot (pronounced gree-oh) has become a generic term for anyone in West Africa who memorizes and relates oral histories, genealogies, and epic poems. The origin of the word is poorly understood, but as a result of its growing usage, a number of other terms (such as *jali* in southern Mande) have fallen out of use, particularly in Western scholarship.

The training and role of a griot could vary considerably. Among the Mande, a people who dominate the region of the upper Niger River in contemporary Mali and Guinea, griots have traditionally comprised a class separate from the rest of society. The children of griots were required to marry the children of griots, what is known as an endogamous community. Parents were expected to pass down the stories verbatim to their children. Within the empire-states of the savanna, such as Ghana, Mali, and Songhai, griots were supported by the state, and it was their duty to preserve and tell the histories that legitimated the ruling family. The most famous of these oral histories is the *Epic of Sundiata*.

In other societies, the position of griot was less regulated by the ruling class or state, and a griot could be anyone who took it upon himself or herself to learn and pass on oral traditions.

—Jonathan T. Reynolds

The combination of wealth and the expanding influence of Islam in the region became famous in 1324–1325 when Mansa Musa undertook the pilgrimage to Mecca. With some 5,000 attendants and 100 camel loads of gold in his train, Musa made rather a splash as he traveled through Egypt and Arabia on his way to Mecca. More so, on his return he brought books and scholars with him to Mali and undertook a state-sponsored initiative to foster more orthodox Islamic practices and greater Islamic scholarship within the empire. Among the scholars was the architect Abu Ishaq Ibrahim al-Sahili, originally from Islamic Spain (Al-Andalus), who was instrumental in creating the Savanna Style of mosques typified by the great mosque of Jenne. Musa's investment in scholarship was so great that the academy at Sankore, based in Timbuktu, eventually became one of the Islamic world's great centers of scholarship. When the famed traveler Ibn Battuta visited Mali in the middle of the fourteenth century, he recorded his favorable impressions of the Malians' dedication to Islam and the safety and security of the region (always a concern to travelers). He was, however, concerned with the so-called lack of modesty of women in the region. Indeed, while the influence of Islam was growing during this period, it is important to note that many local practices, such as allowing women freedom of mobility and association, continued.

In the fifteenth century, Mali began a long period of decline. In particular, the rise of the Songhai empire, which grew from the city-state of Gao located near the Niger Bend region in the east, gradually eroded Mali's control over production and trade. There is no clear date for the fall of Mali, but by the latter half of the fifteenth century it had been eclipsed by Songhai as the dominant power in the region.

—Jonathan T. Reynolds

Bibliography

- Hale, Thomas A. *Griots and Griottes: Masters of Words*. Bloomington: University of Indiana Press, 1998.
- Ibn Battuta, Abu Abdalla. *Ibn Battuta in Black Africa*. Translated and edited with commentary by Said Hamdun and Noel King, with a new foreword by Ross E. Dunn. Princeton, NJ: Marcus Wiener, 1994.

Levtzion, Nehemia. *Ancient Ghana and Mali*. London: Methuen, 1973.

Niane, D. T., ed. *Sundiata, an Epic of Old Mali*. Translated by G. D. Pickett. London: Longman, 1995.

Other Islamic States—Kanem-Bornu, and the Hausa City-States

The middle centuries of the second millennium CE saw the extensive growth of urban centers and Islamic states across the savanna and sahel regions of West Africa. In addition to the major savanna empires of Mali and Songhai, a number of other Islamic states grew up in the area around Lake Chad and also in what is now northern Nigeria and the region of southern Niger.

The process of state formation in the Lake Chad region began around 1100, with a number of Kanuri-speaking groups creating polities and competing for control of the region's fishing and salt resources and growing trade networks. Islam was also being introduced to the region by Berber traders from the Fezzan region of contemporary Libya. In the early thirteenth century, the Kanuri leader Mai Dunama Dibbalemi, of the Saifawa dynasty, reputedly converted to Islam. He then launched a series of campaigns (sometimes identified as jihads) and created the Kanem empire, which stretched from Lake Chad northward to the Fezzan. Kanem's influence to the west was largely limited by the power of the Mali empire and later by Songhai.

In the late fourteenth and early fifteenth centuries, a series of internal disputes significantly weakened Kanem's power. A Kanuri state, that of Bornu, began to grow in power in the area just to the southwest of Lake Chad. Bornu eventually grew powerful enough to dominate the entire region surrounding the lake and, as a result, is often referred to as "Kanem-Bornu." Bornu's capital, N'gazargamu, became known as an important center of Islamic scholarship.

To the west of Lake Chad, spanning the border of contemporary Nigeria and Niger, is a large Hausa-speaking region. Here, relatively fertile soils and good rainfall had long supported millet- and sorghum-based agriculture and higher-than-average population densities. In the early centuries of the second millennium CE, a number of urban centers began to develop in the region.

► LEGEND OF BAYAJIDA—THE ORIGINS OF THE HAUSA

The Legend of Bayajida recounts the founding of the Hausa city-states. In the story, a “Prince of Baghdad” named Bayajida (sometimes identified as Abu Yazid) arrives in the town of Daura and seeks water for himself and his horse. He is informed that the town’s well is guarded by an evil snake named Sarki (the Hausa word for “king”) and will only allow water to be drawn on Fridays. Bayajida goes to draw water anyway and slays the snake when it attacks him. The queen of the city is so pleased that upon determining who killed Sarki, she offers Bayajida half of her kingdom. Bayajida accepts but only on the condition that the queen marry him. Their children go on to found the major cities of the region.

The legend is generally assumed to represent both the introduction of Islam into the region and the subsequent shift from matrilineal to patrilineal succession.

—Jonathan T. Reynolds

These towns served as centers of iron, textile, and leather production and soon came to be centers of political power as well. By the middle centuries of the millennium, the major towns of the region were defined by extensive earthen fortifications. Each town was ruled by a *sarki* (king) and functioned largely as an autonomous city-state, though during the period they often paid tribute to Mali and Songhai. Among the most important of these cities were Kano, Katsina, Zaria, Gobir, and Zinder. Islam became increasingly prevalent among the urban populace during the thirteenth and fourteenth centuries. In the fifteenth century, the Islamic scholar al-Maghili visited the region and authored the text *The Obligations of Princes* for the sarki of Kano, outlining the proper behavior for an Islamic ruler.

—Jonathan T. Reynolds

Bibliography

Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice-Hall, 2008.

Levtzion, Nehemia, and Randall L. Pouwels. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.

Great Zimbabwe

The Great Zimbabwe state, which reached its peak between circa 1250 and 1350 in present-day south-central Zimbabwe, is best understood in its relationship to other Zambebian states during an extended period of time beginning in the tenth century CE. Before Great Zimbabwe, the Mapungubwe state thrived in the Limpopo Valley, and after Great Zimbabwe two strong states developed: the Mutapa state (founded ca. 1420) on the northern plateau margins and the Torwa-Changamire state in southwestern Zimbabwe. Thus, political state structures in what is today Zimbabwe developed over several centuries.

The political centralization of the small-scale horticultural settlements around Great Zimbabwe occurred during the second millennium CE and was based on control of strategic resources, such as labor, cattle, ivory, copper, and gold. It appears that the traditional kinship practices and politics of the Karanga, a people who spoke Shona, a Bantu language, aided by trade and new economic practices, as well as religious and ideological beliefs led to state formation in Great Zimbabwe.

A traditional clan-based system with a four-tiered hierarchical structure ranging from the family controlled by a male head of household to the village controlled by a headman to a group of villages controlled by subchiefs, and above this a society controlled by the king provided basic political and social organization. Social relations were based on kinship ties and were conducted through a system of obligatory duties and reciprocal functions. Extended family (including affinal [related by marriage] members, who join by association rather than by birth or marriage) and lineage members practicing shifting cultivation (moving from one farming area to another) carried the principles of kinship alliances over large areas of the Zimbabwe Plateau. The accumulation of wealth and political power in this society most likely developed based on cattle, which were a source of movable wealth. Families who owned cattle were able to gain social and political power by loaning cattle to neighbors,

➤ RIDDLE OF RHODESIA

A number of fanciful tales have been told over the past 400 years about the ruins at Great Zimbabwe. Portuguese sailors, early explorers, and colonial administrators have made claims that the ruins of Great Zimbabwe were once home to the queen of Sheba, the kingdom of Prester John (the Christian king beyond the Islamic realm), the source of King Solomon's gold, or home to a lost white tribe of Africa. These magnificent ruins have been touted by outsiders to be historic evidence of a lost civilization but not the remnants of a thriving medieval African empire.

In the nineteenth and twentieth centuries, detailing and describing the Great Zimbabwe ruins produced a spate of white chauvinistic writing determined to prove that the city and architecture were not African in origin. Among the first publications of these now discredited theories were J. Theodore Bent's *Ruined Cities of Mashonaland* (1892) and Richard Hall's *Ancient Ruins of Rhodesia* (1902). These works supported the colonial enterprise, and their myths were perpetuated by postcards such as the one developed in 1938 by the Rhodesian government showing the ghost of the queen of Sheba standing at Great Zimbabwe with a subservient African kneeling to offer her gold and a question mark placed above the Zimbabwe bird. Today these myths are still given credence in some circles, but an African origin thesis for Great Zimbabwe has been convincingly demonstrated.

—Lorna Lueker Zukas



Poster issued by the Southern Rhodesia Publicity Office in 1938. (Garlake, P.S. Great Zimbabwe, 1973)

who were then obligated to provide support and assistance in return. Cattle forged new political relationships and incorporated outsiders into existing political and social networks.

Cultural practices and religion seemed to have aided state formation at Great Zimbabwe. Through kinship and trade networks, Shona chiefs possessed vast knowledge of the Zimbabwe Plateau and a wide area of south-central Africa. As Bantu speakers, their cultural and linguistic affinity to other peoples enabled many communities to share in and contribute toward a greater Shona common good. In addition, a widespread belief in a High God, deep respect for ancestors,

and the practice of spirit possession helped create political unity among dispersed people.

By the twelfth century, the inland empire on the Zimbabwe Plateau was ruled by the Karanga (Shona) people who organized and facilitated regional and long-distance trade with a greater Indian Ocean world. Trade provided new forms of social relations and enabled individuals to rise to prominence. Key markets, or trading centers, were established to help move goods and enabled the Karanga (Shona) to keep in touch with local, regional, and perhaps international events. The resultant society was highly structured with a powerful centralized authority, and

it featured a complex division of labor with farmers, pastoralists, artisans, craft workers, and priests (spirit mediums). By the thirteenth century they had built Great Zimbabwe and established it as the seat of a vast African state that controlled trade routes from the interior of southern Africa to the East African coast. Portuguese documents suggest that Great Zimbabwe was strategically placed to exploit and dominate important grazing lands and to control possession of the gold fields.

The ancient Great Zimbabwe state was unable to sustain itself, and after about 200 years, around the mid-fifteenth century, internal dissent and complications in subsistence production led to the abandonment and breakup of the state. Two smaller states emerged that left similar stone ruins: the Torwa state marked by the Khami ruins near present-day Bulawayo and a smaller state known as the Mutapa state with a capital at Fura in northeastern Zimbabwe.

Excavators of the Great Zimbabwe ruins have found seven-and-a-half carved soapstone birds. These birds are thought to be symbols of religious or political power. As religious symbols, the birds are thought to link the king to spirits of past kings who could be called upon for help. The political significance of the birds began when the first one was stolen from the ruins in 1889 and was purchased by Cecil Rhodes. The bird was used by Southern Rhodesian white settlers on the Southern Rhodesian coat of arms and currency. In 1980 the new African government named the newly independent nation Zimbabwe and reappropriated the bird as a symbol of power handed down from ancient African kings. The bird is now on the Zimbabwe flag, is used on the front of coins, and is frequently used as a symbol of national pride.

—Lorna Lueker Zukas

Bibliography

- Beach, David. *The Shona and Their Neighbours*. Cambridge, UK: Blackwell, 1994.
- Garlake, Peter. *Great Zimbabwe*. New York: Stein and Day, 1973.
- Martin, David. *Great Zimbabwe: Houses of Stone*. Harare: African Publishing Group, 1998.
- Mudenge, S. I. G. *A Political History of Munhumutapa, c 1400–1902*. Harare: Zimbabwe Publishing House, 1988.

Pikirayi, Innocent. *The Zimbabwe Culture: Origins and Decline in Southern Zambebian States*. Walnut Creek, CA: AltaMira, 2001.

Steffof, Rebecca. *Finding the Lost Cities*. New York: Oxford University Press, 1997.

Buganda—The Founding of a Kingdom and Its Constitution

Buganda, the largest and most influential kingdom in what is today Uganda (Uganda being the Swahili variation of the name “Buganda”), came into existence in the late 1300s with Kintu, a semilegendary person, as its founder and crafter of the kingdom’s first constitution, parts of which are still in use. Because the story was handed down orally, several versions exist detailing the kingdom’s founding. However, there is agreement that the area of Uganda today known as Buganda was inhabited by a group of Bantu people known as Baganda before the 1200–1500 general migration and settlement of the area.

Although these people shared a language and cultural practices, they were not organized in one central political unit; instead, they grouped themselves into ancestral clans, each headed by a hereditary clan leader. The clan leader had various responsibilities, including protecting the clan and its traditions, settling disputes among clan members, and day-to-day overall administration of the clan. Generally all clans were considered equal and independent, but every now and then a militarily strong clan leader would annex a number of clans and declare himself their overall leader. One such leader, Bemba, was in charge of 6 clans when a stronger leader, Kintu, with control of 13 clans, took over leadership of the region.

Intriguing versions abound in the oral traditions regarding the origin of the name “Buganda” and the identities of Bemba and Kintu. We are still uncertain whether Bemba and Kintu were related, whether Kintu was born in Buganda and grew up in the northeast, or whether he was an invader. What seems certain is that Bemba was harsh and hated by those he ruled, some of whom helped Kintu to defeat him. After overthrowing Bemba, Kintu consolidated his power over the 19 clans by convening the first-known constitutional conference in Buganda. Kintu in-

vited the clan leaders to this conference, and in consultation with their people they openly discussed and crafted the kingdom's first and only constitution, articles of which are still in use although it was never put on paper. Fourteen political offices were created, including the most important one up to today, that of *katikkiro* (prime minister), and the officers were appointed by Kintu from the assembled clan leaders.

The 14 political officers constituted the first administrative team of the kingdom headed by the prime minister, and Kintu became the first *kabaka* (king). Under this constitution, clan leaders retained their responsibilities, including what is still today the most important task of a clan leader, that of sustaining and preserving the clan's identity, traditions, and sense of pride. By preserving the clan system and sharing power with his appointed chiefs, Kintu created a significant and strong sociopolitical structure with a political component headed by him and a social component under clan leaders. Although these two components functioned effectively side by side, Kintu has to be credited for having empowered the clans by making them strong, viable administrative structures. The clan system has historically sustained the identity, pride, and integrity of the Baganda people through very hard times, especially when the political component was either too weak to function effectively or not in existence.

—Immaculate N. Kizza

Bibliography

Gukiina, P. M. *Uganda: A Case Study in African Political Development*. Notre Dame, IN: University of Notre Dame Press, 1972.

➤ BAGANDA SOCIAL STRUCTURE

The Baganda clan structure is an intricate hierarchical unit headed by a king. But even in the absence of a king, the group keeps functioning because of the clan administrative system. Within the group are specific clans (*bika*), each headed by a hereditary clan leader; each clan has its own distinct set of names as well as its own headquarters, motto, totem (which is the clan name), and subtotem. Furthermore, clan members cannot intermarry. A clan is divided into several *masiga*, or subclans, each headed by a clan elder. Each *siga* (singular for *masiga*) is comprised of various *mituba* (family trees), and each *mutuba* (singular for *mituba*) is further subdivided into many *nyiriri* (family lineages-lines) with each *lunyiriri* (singular for *nyiriri*) being made up of numerous families (*enda*). This is information that every *muganda* (singular for Baganda) person has to know, and a *muganda* person introducing himself or herself to another *muganda* is supposed to state all the categories that he or she belongs to. For example, a *muganda* might introduce herself as Nnamakula of *lugave* clan and then state the names of her various division leaders beginning with the clan head down to her father who is head of the *enda*. This structure is the essence of Baganda, not some physical space on a map.

—Immaculate N. Kizza

Kiwanuka, M. S. M. *A History of Buganda from the Foundation of the Kingdom to 1900*. New York: Africana, 1972.

Kizza, I. *Africa's Indigenous Institutions in Nation Building*. Lewiston, NY: Edwin Mellen, 1999.

■ Introduction: Islam—Ideally a Single Community, in Reality Diversity

The ideal of Islam, as articulated in the Quran and Hadith (the traditions of the Prophet and his Companions), is that just as Allah—the God—is indivisible, so His people must be one, a single community, or *Umma*, gov-

erned by His law and those empowered by Him to lead that community. Originally that leader was the Prophet and the single community was Medinat al-Nabi, the City of the Prophet, better known as Medina. At the time of the Prophet's

death in 632, however, ruptures were already appearing within the Umma, and they became larger and more irreparable in the years between 632 and 661 as the schism between Sunni and Shia took shape.

As the entries and sidebars under this topic show, Islam between 1000 and 1500 was divided into a dizzying collection of polities along sectarian, political, ethnic, personal, and dynastic lines. Indeed, for much of the tenth century and part of the eleventh century, there were three competing caliphates, each presided over by a monarch who claimed to be the rightful caliph, or deputy, of the Prophet: the Sunni Abbasid caliph in Baghdad, the Sunni Umayyad caliph in Córdoba, and the Shia Fatimid caliph in Cairo. Each of these caliphates in turn suffered fragmentation as competing Muslim leaders and states divided and redid them in the course of the eleventh and twelfth centuries.

The same was true for newcomers to Islam and new Muslim states. The Seljuk Turks were divided into several polities, the two most important being the empire of the Great Seljuk and the empire of Rum. In Iberia and Sicily, two lands in which Islam was progressively losing ground against Latin Christendom from the mid-eleventh century onward, much of that regression and eventual total defeat was due to severe divisions among the Muslim principalities and other entities within these lands. The same was true for the initial successes of the Latin crusaders, especially during and shortly following the First Crusade (1096–1099). The capture of Jerusalem and the carving out of four crusader states in the eastern Mediterranean were made easier, and probably even made possible, by the severe factional divisions within Islam at that time and in that region. The fact that the Latin kingdom of Jerusalem was able to hold on for two centuries was also due, at least in part, to factional splits among the would-be champions of Islam. Often enough, Muslim princes allied with Frankish lords in their struggles with fellow Muslims in Iberia, Sicily, and the eastern Mediterranean.

Indeed, some jihadist Muslim warriors were equal-opportunity campaigners, ferociously warring against and butchering large numbers of both Christians and Muslims. The most notori-

ous of these was Timur-i Leng, or Tamerlane. Before Tamerlane there were the Assassins, a Shia Ismaili entity that compensated for its small numbers by employing terror: the terror of assassination, a word derived from the name given them by their enemies. The numbers of their victims were not that great, especially when compared to the state-sponsored terror of warrior-polities such as the Mamluks of Egypt and Syria, but the fear they inspired was far out of proportion to their murderous reach. And the vast majority of those who fell to Assassins' knives were Muslim enemies, usually Sunni Muslims. Even the great Saladin, sultan of Egypt and Syria and the man who restored Jerusalem to Muslim control, was threatened by the Assassins and became so terrified by that threat that for the rest of his life he left them in peace.

Peace (*salaam*, the traditional Arab greeting and blessing) has always been an ideal of Islam, but more often than not the reality was division, distrust, and even war among its many different groups and states. But the same was true for Christendom during this half millennium.

—*Alfred J. Andrea*

Abbasid Caliphs and Seljuk Sultans—A Shift of Power in Southwest Asia

From their capital of Baghdad (established in 762), the Sunni Abbasid caliphs ruled through the strength of their armies, armies that until the reign of the eighth caliph al-Mutasim (r. 833–42) were largely composed of Arabs from Khurasan in northeastern Iran. However, by the middle of al-Mutasim's rule, Turkish military slaves (*mamluks*) began to replace the standard tribal armies in defense of the caliphate.

In the tenth century, Shia Muslims—largely politically quiescent until this point—began to dominate the caliphate. The Buyid dynasty (932–1061), which belonged to the Shia sect known as Twelvers, held the Sunni caliph as a virtual prisoner in Baghdad. It is into this environment that the Seljuk Turks arrived. While Turkic peoples had already held important military and political posts in the caliphate, their entry into Islamic lands prior to the Seljuks was largely piecemeal.

Thus, the coming of the Seljuk Turks marked the first mass migration of a nomadic tribally based Turkic group into Islamic lands.

The Seljuks were members of the Oghuz Turkic branch, one of six branches that ethnographers use to classify the Turkic peoples. Tradition holds that the Seljuks converted to Islam in 985 at Jand, an important trade center on the lower Syr Darya (Jaxartes River) in Central Asia. Seljuk ibn Duqaq, the eponymous founder of the Seljuk tribe, was a military commander under the pagan Turkic ruler—known as the Yabghu—of the region. However, after a falling out with the Yabghu, Seljuk fled with his flocks and followers to Jand and offered to convert to Islam in exchange for defending the city from pagan Turkic raiders under the authority of his former leader. Over the next half century, the Seljuks and the armies of the Yabghu battled for control of the region.

From this new area, the Seljuks hired out their services to various Muslim polities in the region, including the Samanid Persians (819–1005) and the Qara-Khanids, their eventual successors. However, this period of consolidation was not kind to the Seljuks. Constantly changing allegiances and an environment rife with political instability meant that they faced an almost constant state of privation. These hardships, though, also served to forge the Seljuks into an effective and efficient military power. The great power of the region was the Ghaznavid empire (962–1186), centered in Afghanistan and made extremely wealthy through its conquests of sections of the Indian subcontinent. At the height of their power under the great ruler Mahmud of Ghazni (r. 971–1030), the Ghaznavids in 1025 invited some of the Seljuks into Khurasan to help maintain their authority. These Seljuks ultimately proved to be unruly and were forced out by Ghaznavid forces. However, the political instability that accompanied the death of Mahmud just five years later allowed the Seljuks to reenter Khurasan and quickly subdue the province.

Intermittent fighting between the two groups culminated with the Battle of Dandanqan in 1040. It proved a decisive victory for the Seljuks, closing off all but the Indian subcontinent to the truncated Ghaznavids while providing the Seljuks



Seljuk fortress in Ephesus (in present-day Turkey), dating from the eleventh century. After conquering much of Southwest Asia in the early part of the century, Seljuk Turks defeated Byzantine troops at the Battle of Manzikert in 1071. They eventually swept through much of Anatolia, including Ephesus and other Byzantine cities along the Aegean coast. (Peter Long)

➤ TUGHRIL BEG

Abu Talib Muhammad b. Mikail was born toward the end of the tenth century in the Central Asian steppes, north of the Transoxiana Valley. After the death of his father Mikail, Abu Talib Muhammad was brought up by his grandfather, Seljuk b. Duqaq, in Jand. In his youth, Abu Talid Muhammad received the name Tughril, which was Old Turkish for the crested goshawk, a formidable bird of prey on the steppes. As was the nature of Central Asian steppe peoples, political sovereignty was not through primogeniture (passed on to the eldest male heir) as in some societies. Rather, political authority was corporate in nature. Any male from the ruling lineage had the theoretical right to rule. It seems that Tughril and his brother Chagri ruled jointly. In practice, they split their patrimony, with Chagri the ruler (or beg) of the eastern territories and Tughril the beg of the western lands. After his liberation of the Abbasid caliph al-Qaim, the newly titled sultan Tughril Beg attempted to unite his house with that of the caliph through a political marriage. However, the caliph refused for two years until Tughril Beg threatened to confiscate caliphal property. The marriage, though, was never consummated, and Tughril Beg died in 1063 without a male heir.

—Rasheed Hosein

with the core territories that would form the Great Seljuk empire. From this center in Khurasan, a Seljuk group under Tughril Beg (990–1063) began to prosecute attacks against the Shia Buyids in the name of liberating the Sunni caliph, while his brother Chagri Beg maintained control at their newly won capital of Nishapur. In 1055 the Seljuks took Baghdad and effectively broke Buyid dominion over the central regions of the caliphate. As a result, the caliph al-Qaim (r. 1031–1075) granted to Tughril Beg the title of *sultan* (holder of temporal power), and the Seljuk coins of this period were the first to use that title officially.

Alp Arslan (1029–72), the son of Chagri Beg and the second sultan of the Seljuks, increased these holdings substantially in the West with the conquest of Armenia and Georgia in 1064 and the invasion of the Byzantine empire in 1068. Skirmishing on the margins of Anatolia for the better part of two years, the Byzantines, under the direct command of Romanus IV Diogenes (r. 1068–1071), finally met the Seljuks at Manzikert in the Armenian region of eastern Anatolia in 1071. The resulting Seljuk victory opened up the Anatolian peninsula to the Seljuk Turks and greatly weakened the prestige of the Byzantine empire. The net effects of these Seljuk successes were many. Primarily, the victories marked the formal introduction of Turks into Anatolia, which now forms about 90 percent of the landmass of the present-day nation of Turkey. The victories likewise opened the way to future migrations by Turkic peoples such as those who followed Osman Bey (1258–1326), the founder of the Ottoman dynasty, into the region. Finally, the Sunni Seljuks reduced the threat of Shia control in Southwest Asia for more than 400 years until Shah Ismail I (r. 1487–1524) made Shia doctrine the official state religion of the Safavid Persian empire (1501–1736) in the early sixteenth century.

—*Rasheed Hosein*

Bibliography

- Findley, Carter V. *The Turks in World History*. Oxford: Oxford University Press, 2005.
- Morgan, David. *Medieval Persia, 1040–1797*. London: Longman, 1988.
- Turan, Osman. "Anatolia in the Period of the Seljuks and the *Beyliks*. In *Cambridge History of Islam*, Vol. 1a. Cambridge: Cambridge University Press, 1970.

The Great Seljuk Empire

The migration of the Turkic Oghuz peoples out of Central Asia in the tenth century fundamentally changed the nature of the Islamic world. During the period directly preceding this relocation of Turkic peoples, there was great political and religious strife within lands historically subject to the caliphate, as families and factions jockeyed for power over lands previously subject to the caliphs. However, under the Oghuz Seljuks, most of the Islamic world of southwestern Asia was once again unified and subject to the religious authority of the Abbasid caliphate but now under Seljuk political-military hegemony. In this way, the nature of power and authority was radically altered, setting the stage for the future development of the Middle East under the great empires of the early modern period.

Under the Seljuks, the Sunni nature of the caliphate was protected. Prior to their entry into the Islamic world, the Seljuks had converted en masse to the Sunni creed and presented themselves as the champions of an isolated and marginalized Abbasid caliphate. In the tenth century the core lands of the caliphate had been previously dominated by Shia groups such as the Ismaili Fatimid dynasty (969–1171), which claimed universal authority by its adoption of the title of caliph, and the Buyid dynasty of Iraq and Iran (932–1061), which was a Twelver Shia dynasty and kept the caliph as a virtual prisoner in Baghdad. The Seljuk invasion had two major repercussions. First, it restored the Sunni nature of the core Islamic lands, renewing the legitimacy of the previously embattled Abbasids. Second, it created a new aristocratic lineage around which power and authority could coalesce.

Prior to the advent of the Seljuks, power and authority were derived from one's lineage vis-à-vis the Prophet Muhammad. According to Sunni theory, a ruler had to belong to the tribe of Quraysh (the Prophet's tribe), as was the case of the Rashidun ("Rightly Guided"; 632–661), Umayyad (661–750), and Abbasid caliphs. The Shias were even more restrictive, recognizing only direct descent from the Prophet Muhammad's family through the marriage of Ali, who was the Prophet's cousin, and the Prophet's daughter Fatimah. The Seljuks' tremendous suc-

cesses, however, now imbued the lineage of their patriarchal ancestor Seljuk b. Duqaq with a similar authority. Previously, caliphs had appointed Turks to govern territories, and Turkish military commanders often held great sway over weak caliphs, but the idea that a Turk had the right to temporal rule was established with the Seljuk success and would last until the early twentieth century.

Historians mark the beginning of the Seljuk rise with their victory at Dandanqan in Khurasan (northeastern Iran) in 1040 over the previously dominant Ghaznavids (962–1186). Their success in this battle opened up the heartland of Dar al-Islam to their influence and formed the core of the Great Seljuk empire (1040–1194), which at its height stretched from eastern Anatolia and northern Syria to the western fringes of modern Pakistan. At this time the Seljuks were jointly ruled by Tughril Beg (990–1063), who earned the title of sultan (the possessor of temporal power) after liberating the Abbasid caliph in 1050 and who continued to campaign, and his brother Chagri Beg (d. 1060), who maintained authority over the Seljuks' eastern lands from Nishapur in Iran. This feature, known as corporate sovereignty, was a hallmark of Central Asian peoples. Essentially, any Seljuk prince (be he a son or brother of the previous ruler) was entitled to territory and the right to rule. What was uncommon was the degree of cooperation that existed between the two brothers, as this system tended to lead to civil war as claimants tried to reconstitute the original patrimony under a single individual's control.

With the deaths of Chagri and Tughril in the early 1060s, Alp Arslan (1029–1072), the son of Chagri Beg, emerged to claim the title of sultan and to unite the Great Seljuk empire after a brief period of instability, ruling from Chagri's capital of Rayy (near present-day Tehran). The basis for the Seljuk military successes prior to Alp Arslan had been the use of seminomadic Oghuz Turkic groups, of whom the Seljuks were but one. However, while effective in warfare, these elements were not easily settled, preferring instead a life of raiding and campaigning. Their support of the Seljuk cause was contingent upon the ability of the Seljuk ruler to provide an outlet for these martial tendencies. Toward the end of Alp Arslan's

➤ ADMINISTRATION IN THE GREAT SELJUK EMPIRE

Two administrative institutions made it possible for the Great Seljuk empire to achieve a reasonable level of short-lived but effective centralized authority. The first was the *dargah*, a military and judicial council that essentially acted as the sultan's Privy Council. Drawn from the most powerful military commanders, it allowed the great emirs access to the sultan while providing the sultan with a measure of control over these commanders. The second was the *diwan*, or bureaucracy. The bureaucracy was staffed by able Persians, such as the renowned scholar and educator Nizam al-Mulk (1018–1092) who administered the diwan for Sultan Malik-Shah until his murder in 1092, apparently at the hands of an Ismaili assassin. Significantly, 1092 was also the year in which Sultan Nizam al-Mulk died, and as such it was a watershed in Great Seljuk fortunes. Until the empire's precipitous decline after 1092, however, these two bodies helped bind together a state that was by its very nature tenuous and unstable. More significant, the administrative structure represented by these two institutions would be the hallmark of subsequent Iranian dynasties until the nineteenth century.

—Rasheed Hosein

reign, the Oghuz Turks reached Byzantine Anatolia and began to raid, as was their custom. The sultan marched west to restrain these incursions in order to maintain his truce with the Eastern Roman, or Byzantine, empire. However, the Byzantine emperor Romanus IV Diogenes (r. 1068–1071) also sent his forces into eastern Anatolia to curb these raids, which the Seljuks viewed as a breach of the truce. Seljuk and Byzantine forces met at the Battle of Manzikert (1071) in eastern Anatolia, where the Seljuks inflicted the worst defeat on an eastern Roman army since the Battle of Adrianople in 378. During the course of fighting the Byzantine army was smashed, the emperor was captured, and control of central and eastern Anatolia was lost forever. Despite continued existence for almost another four centuries, the Byzantines would never again be able to field as large an army in battle.

With the death of Alp Arslan in 1072, his son Malik-Shah (r. 1072–1092) achieved the title of



sultan and control of the Great Seljuk empire after a brief interregnum. In many ways the reign of Malik-Shah marks the apogee of the Great Seljuk empire. Malik-Shah prospered from the maturation of two key institutions, the *dargah* and the *diwan*, which helped to centralize Seljuk rule.

Despite these centralizing institutions, the Great Seljuk empire was irrevocably fractured upon the death of Malik-Shah. Claiming the right to rule under the theory of corporate sovereignty, the sultan's brother Tutush I (r. 1092–1095) succeeded him in Syria. In the east the situation was far more tenuous, as Malik-Shah's son Mahmud I (r. 1092–1094) earned the title of sultan but was challenged by his brothers Barkiyaruq (r. 1094–1105) from western Iraq, Muhammad Tapar I (r. 1105–1118) from Baghdad, and Ahmad Sanjar (r. 1118–1153) from Khorasan, each of whom acted as the titular head of the fractured state at various times over the next half century. After the death of Ahmad Sanjar, the state continued in a greatly diminished capacity for another 40 years,

until it was subsumed by the Khwarezm shahs from eastern Iran (1077–1231).

—*Rasheed Hosein*

Bibliography

- Cahen, Claude. *The Formation of Turkey: The Seljukid Sultanate of Rum, from the Eleventh to the Fourteenth Century*. Translated and edited by P. M. Holt. London: Longman, 2001.
- Findley, Carter V. *The Turks in World History*. Oxford: Oxford University Press, 2005.
- Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. New York: Longman, 1986.
- Morgan, David. *Medieval Persia, 1040–1797*. New York: Longman, 1988.
- Muller, Herbert. *The Loom of History*. New York: Harper and Bros., 1958.
- Turan, Osman. "Anatolia in the Period of the Seljuks and the *Beyliks*." In *Cambridge History of Islam*, Vol. 1A, *The Central Islamic Lands from Pre-Islamic Times to the First World War*, edited by P. M. Holt, Ann K. S. Lambton, and Bernard Lewis. Cambridge: Cambridge University Press, 1970.

The Seljuk Sultanate of Rum

The death of Malik-Shah, the Great Seljuk sultan, in 1092 opened the door for remote lineal relations to peel off peripheral territories from the central state. Sulayman b. Qutulmush (r. 1077–1086), a distant cousin of Malik-Shah, founded the sultanate of Rum (1077–1307) largely by chance and circumstance. During the interregnum immediately following the death of Alp Arslan, all of the Seljuk-appointed military commanders returned to the capital of Rayy, leaving their regiments in the field. As a result of Malik-Shah's eventual triumph over all other claimants to the title of sultan, the losers were banished to the remote areas of the empire. Sulayman ended up in Anatolia and was able to unite under his banner the Oghuz tribesmen in the region. With this fortunate turn, the Seljuk prince was able to carve out a substantial holding in Anatolia, and by 1175 he had conquered much of central Anatolia, including the key cities of Iconium (Konya) and Nicaea (Iznik), naming the latter as his capital. In 1077 Sulayman officially broke with the Great Seljuk empire, proclaiming himself sultan of the Seljuk sultanate of Rum (Arabic for “Rome,” the term by which the Byzantine empire was referred to in Arabic sources).

With the Byzantine empire still in disarray from the defeat at Manzikert, it sued for and received peace from Sulayman. Turning his attention eastward, Sulayman looked at the lands held by his rival Malik-Shah and sought to bring them under his hegemony. After successes over the Armenian kingdom of Cilicia (1078–1375), wherein Sulayman gained control of the city of Antioch (present-day Antakya), he came into conflict with the Syrian Seljuk commander Tutush I, the brother of Malik-Shah. In the ensuing battle Sulayman was killed, and his son was sent into Malik-Shah's custody at Rayy, where he stayed until the Great Seljuk sultan's death in 1092.

During the confusion of the interregnum period after Malik-Shah's death, Sulayman's son Kilij-Arslan I (r. 1092–1107) escaped captivity and succeeded in reestablishing his father's patrimony in Anatolia. However, with the advance of the crusaders in 1097, Kilij-Arslan I was forced to withdraw from his father's capital of Iznik

(Nicaea), choosing instead Konya for defensive reasons. Having established control of the central and eastern portions of the Anatolian plateau and agreeing to terms with the crusader-strengthened Byzantine empire, Kilij-Arslan I again tried to expand into the Great Seljuk empire. However, at the Battle of the Khabur River in 1107, he was defeated and killed by the Great Seljuk sultan Muhammad Tapar I. The resulting anarchy in Anatolia allowed the Byzantines to strengthen their control over the coasts, pushing the Seljuk borders farther back.

For the next decade, power among the Seljuks of Rum was wielded ineffectively by Kilij-Arslan's eldest son Shahanshah (r. 1110–1116), although effective power remained with the Great Seljuk sultan. With the accession of Rukn al-Din Masud (r. 1116–1155), however, the picture began to change. The reign of Masud I marked a high point for the Seljuks of Rum, for its strength and longevity, coupled with the internal instability of the Great Seljuk empire, meant that Masud I was able to finally peel Anatolia away from the core Seljuk state. Under his able administration the Seljuks of Rum were able to reverse all of the losses of the previous years, as they were able to absorb vast areas of the Anatolia Peninsula.

With the death of Masud I in 1155, the succession passed to Kilij-Arslan II (r. 1156–1192) after a brief interregnum. Looking to secure his own power, Kilij-Arslan II sought the aid of Nur al-Din Zangi (r. 1146–1174), the *atabeg* (military commander and vicegerent) of Aleppo and Mosul in Syria. The office of the *atabeg* would mark the low point of the Great Seljuk sultans and provide the Seljuks of Rum with a critical ally in maintaining their independence. Because the Seljuks had established their right to rule by virtue of their noble lineage, the sultans of Rum were nominally in command throughout the empire. Increasingly, though, many young Seljuk princes came to rule outright through the practice of corporate sovereignty. To aid these young princes, the Seljuk sultan would send *atabegs* as tutors to instruct them in how to rule. Often these tutors would be further bound to the ruling family through a political marriage to the young prince's mother. However, soon *atabegs* were assuming total control of territories, eventually removing their princes outright.

➤ KONYA (ICONIUM), THE CAPITAL OF RUM

Located on a broad treeless plain in central Anatolia, Iconium (present-day Konya) was a garden city due to the presence of an oasis. The world traveler Ibn Battuta (1304–1377) described the city, during his visit there in the late 1320s, as a verdant city with broad avenues and many markets. The ancient city of Iconium became the capital of the Seljuk sultanate of Rum in 1097 after the original capital of Iznik (ancient Nicaea) became impossible to defend. Called Konya by the Seljuk Turks, it reached its zenith between 1205 and 1239 during the Golden Age of Kay Khusraw I and his sons. At this time, the far-sighted trade policies of the Anatolian Seljuks created vast wealth through the maintenance and development of caravansaries, using them to encourage overland trade through their lands.

Under Sultan Ala al-Din Kay Qubadh I (r. 1219–1236), known to the West as Sultan Aladdin, the city became a true capital. Possessing a passion for building, the “Seljuk Justinian” used the wealth generated by trade to beautify the city, sparking the old Turkish phrase “see all the world—but see Konya.” The city attracted the artistic and religious elite of its age, including the great mystics Ibn Arabi (1165–1240) and Jalal al-Din Rumi (1207–1273), the latter being interred there. However, the situation was not meant to last. With the conquest of the Seljuks by the Mongols in 1243, the city faded in political and economic importance, serving only as a regional center by the Ottoman period (1300–1924). It became, however, and remains to this day a major center of pilgrimage because of al-Rumi’s tomb.

—*Rasheed Hosein*

Nur al-Din had replaced the Seljuks in the regions of northern Iraq and northern Syria as hegemon. Actively involved against both the Frankish states and the heterodox Fatimid caliphs of Egypt (969–1171), the atabeg was happy to make peace with Kilij-Arslan II. This allowed the Seljuks of Rum to deal with the Byzantines, who were again looking to reclaim lost territory. The two sides would meet at the Battle of Myriokephalon (1176), which ended as a major Seljuk victory and arguably was even more pivotal than Manzikert a century earlier. This solidified the

Turkish presence in Anatolia. The period after Myriokephalon looked to be one of stability for the Seljuks of Rum. The Great Seljuks were in their final days, with the last Great Sultan passing in 1194, while both the Byzantines and the Franks were recovering from the Muslim reconquest of Jerusalem after the Battle of Hattin in 1187. However, despite these positive external developments, the period directly preceding the death of Kilij-Arslan II in 1192 would prove to be one of great internal turmoil. The aging sultan would lose control of his sons, throwing the state into jeopardy. The resulting civil war left the sultanate of Rum fragmented and weakened, allowing the crusaders to temporarily occupy Konya in 1190.

A brief reprieve was given to the Seljuks of Rum when the crusaders of the Fourth Crusade conquered their coreligionists in Constantinople in 1204 instead of their Muslim foes. Taking advantage of the brief reprieve, the Seljuks reconsolidated their rule during the second of Kay Khusraw I’s two reigns (r. 1192–1197 and 1205–1211). It is at this time that two domestic policies of the Seljuks of Rum came to fruition, leading to a golden age for the dynasty. Due to the destabilization of trade caused by constant warfare, the Seljuks began to refortify caravan stops (caravansaries) throughout Anatolia and obtained trade deals with Venice, all with an eye to diverting trade through their lands. This created great wealth for the Seljuk sultans. Their other policy would prove more durable and pragmatic.

Stretching back to the Seljuk victory at Manzikert, which opened up Anatolia to Turkish migration, the sultans distributed land seized from Byzantine aristocrats, as well as ownerless lands to the landless inhabitants, thereby offering them a livelihood and a means to increase their standing. These lands, classified as *miri* (state territory), still belonged to the Seljuks, but each tenant held as much land as he could work. This formed the basis of both Seljuk and the later Ottoman agricultural policy, allowing the sultans to win over native populations to their cause and providing a means to sedentarize the incoming Turkic peoples from Central Asia.

This golden period ended just prior to the death of Kay Khusraw II (r. 1237–1246). In the last days of his rule, the Seljuk sultanate of Rum

would be too fractured to be effectively ruled by one ruler. This led to periods where there were cosultans followed by general instability throughout the Seljuk territories, lasting until the Mongol entrance into Seljuk lands after their victory at Kose Dagħ (1243). Thereafter, the Anatolian Seljuks would serve as Mongol auxiliaries, paying tribute to the Mongol il-khanate of Persia (1256–1353) until the last Seljuk ruler died in 1303 as a mere figurehead.

—*Rasheed Hosein*

Bibliography

- Cahen, Claude. *The Formation of Turkey: The Seljukid Sultanate of Rum, from the Eleventh to the Fourteenth Century*. Translated and edited by P. M. Holt. London: Longman, 2001.
- Findley, Carter V. *The Turks in World History*. Oxford: Oxford University Press, 2005.
- Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. New York: Longman, 1986.
- Morgan, David. *Medieval Persia, 1040–1797*. New York: Longman, 1988.
- Muller, Herbert. *The Loom of History*. New York: Harper and Bros., 1958.
- Turan, Osman. "Anatolia in the Period of the Seljuks and the *Beyliks*." In *Cambridge History of Islam*, Vol. 1A, *The Central Islamic Lands from Pre-Islamic Times to the First World War*, edited by P. M. Holt, Ann K. S. Lambton, and Bernard Lewis. Cambridge: Cambridge University Press, 1970.

Baghdad, 1000–1258—Capital of a World Empire?

Between 1000 and 1258, the Abbasid caliph in Baghdad lost most of his decision-making power, becoming a local puppet ruler with primarily symbolic religious authority. The caliphate experienced the rise of a military rule along with a decline of the economy and agricultural production, as well as political fragmentation, bureaucratic decentralization, religious divisions, and a series of Turkish invasions from Inner Asia.

Around 1000 a recently Islamized Turkish nomadic tribe, known as the Seljuks, emerged in the region of Bukhara (in present-day Uzbekistan) and rapidly started expanding its power into western Iran, Azerbaijan, and Iraq. The Seljuks reached Baghdad in 1055, but instead of attack-

ing the city and destroying the caliphate, they declared themselves "protectors and promoters" of Sunni Islam and assured their loyalty to the caliph. In return, by way of a retrospective act of legitimizing the usurpers, the caliph recognized the Seljuk ruler as "sultan" (holder of power) and honored him with all due regalia. The newly instated sultan received seven robes to symbolize the seven climates, two swords for his rule over the eastern and western empire, and the duty to rule according to Sharia (Islamic holy law). The unruly nomadic warriors were sent farther west, to Anatolia. In 1071 at the Battle of Manzikert, in a region of eastern Anatolia known as Greater Armenia, they defeated the Byzantine emperor and his army and opened the entire Anatolian Peninsula to Turkish migrations and settlements, thereby beginning the long process of ethnic and cultural transformation in what is today Asiatic Turkey.

While the unity of the Abbasid empire disintegrated, different regional identities and local cultural expressions became increasingly possible. Baghdad saw itself competing with cities such as Cairo, Fez, and Cordova in the West and Bukhara, Samarqand, and Isfahan in the East. As Baghdad declined as a political and administrative center, its role as a religious and intellectual capital remained. Historical writing, chronicles, geographies, and biographies surged, and Baghdadi poetry and elaborate rhymed prose flourished, with examples such as the *Maqamat* (*Assemblies*) of al-Hariri (d. 1122), a collection of witty adventure tales. As centers for religious and legal instruction, the *madrasas* in Baghdad continued to grow and thrive. Nizam al-Mulk (d. 1092), the leading *wazir* (chief minister) of the early Seljuks, was known for building several schools and endowing them with funds. He was thus able to use the schools as a way to influence the population, control major legal and theological institutions, and create an education system that provided highly educated young men to fill positions in the government and administration.

The madrasas housed the four Sunni schools of legal interpretation and their scholars, judges, and students. The madrasas taught subjects related to the Quran, Hadith (traditions), Arabic grammar, jurisprudence, theology, and sometimes Sufism. The Nizamiya School in Baghdad, named

➤ EXCERPT FROM NIZAM AL-MULK, *SIYASAT NAMA*—THE BOOK OF GOVERNMENT

In *The Book of Government*, Nizam al-Mulk, the leading chief minister of the early Seljuks, defined the image of a just ruler and provided lessons for statecraft. In this excerpt, al-Mulk emphasizes the grace that Allah reserves for kings who protect and show compassion toward their subjects:

“It is for kings to observe His pleasure (His name be glorified) and the pleasure of The Truth is in the charity which is done to His creatures and in the justice which is spread among them. A kingdom which is blessed by its people will endure and increase from day to day, while its king will enjoy power and prosperity; in this world he will acquire good fame, in the next world salvation, and his reckoning will be easier. Great men have said, ‘A kingdom may last while there is irreligion, but it will not endure when there is oppression.’ . . .

Of a certainty The Master of the World (may Allah perpetuate his reign) should know that on that great day he will be asked to answer for all those of God’s creatures who are under his command, and if he tries to transfer [his responsibility] to someone else he will not be listened to. Since this is so it behooves the king not to leave this important matter to anyone else, and not to disregard the state of God’s creatures. To the best of his ability let him ever acquaint himself, secretly and openly, with their conditions; let him protect them from extortionate hands, and preserve them from cruel tyrants, so that the blessings resulting from those actions may come about in the time of his rule, if Allah wills.”

—Hend Gilli-Elewy

Source

Nizam al-Mulk, *The Book of Government, or Rules for Kings: The Siyasat-Nama or Siyar al-Muluk*, translated by Hubert Darke (New Haven, CT: Yale University Press, 1960), 12–13.

after the wazir, became a prestigious institution and attracted scholars from across the Islamic world such as al-Ghazzali (1058–1111), a famous legal scholar, philosopher, and Sufi master. The new Turkish leaders also promoted a new literary genre known as Mirrors for Princes—books of advice on ethics, good government, and state-

craft. Nizam al-Mulk composed a treatise called *The Book of Government* in which he defined the image of a just ruler, gave examples of ancient rulers, and provided lessons in statecraft. Al-Ghazzali also composed the *Book of Counsel for Kings* with a much more religious content.

Although the Seljuks envisaged a universal empire united by Islam, Iraq’s economy and bureaucratic structure were too weak to support a centralized government. Furthermore, the nomadic heritage of the Seljuks and their Turkish tribal concept of sovereignty and succession led to further provincial fragmentation and rivalry. A last attempt to revitalize and strengthen the caliphate in Baghdad came under Caliph an-Nasir li-Din Allah (r. 1180–1225). He associated himself with a group called the *futuwwa* (youthful nobility) in Baghdad. Previous caliphs had tried to control the doings of this political warrior band that had often terrorized Baghdad inhabitants. An-Nasir now reversed this policy; he stressed the Sufi-inspired Muslim virtues of courage, chivalry, and manliness and created the image of a disciplined, virtuous Muslim knightly order. He became their leader and ordered the aristocracy to become members as well. With the *futuwwa* as his new army, the caliph was successful in uniting many provincial rulers and emirs behind him and strengthening Baghdad’s role, but new invasions from the east ended all hope. The Mongols were advancing westward; they reached Transoxiana in 1219 and stood before the gates of Baghdad in 1258, marking the end of the Abbasid caliphate.

—Hend Gilli-Elewy

Bibliography

- Boyle, J. A. *The Cambridge History of Iran*, Vol. 5, *The Saljuq and Mongol Periods*. Cambridge: Cambridge University Press, 1968.
- Frey, Richard Nelson. *The Cambridge History of Iran*, Vol. 4, *From the Arab Invasion to the Saljuqs*. Cambridge: Cambridge University Press, 1975.
- Kennedy, Hugh. *When Baghdad Ruled the Muslim World: The Rise and Fall of Islam’s Greatest Dynasty*. Cambridge, MA: De Capo, 2005.
- Le Strange, Guy. *Baghdad during the Abbasid Caliphate: From Contemporary Arabic and Persian Sources*. Mansfield Centre, CT: Martino, 2005. First published 1900 by Clarendon.

Nizam al-Mulk. *The Book of Government, or Rules for Kings: The Siyasat-Nama or Siyar al-Muluk*. Translated by Hubert Darke. New Haven, CT: Yale University Press, 1960.

Yucesoy, Hayrettin. *Messianic Beliefs and Imperial Politics in Medieval Islam: The Abbasid Caliphate in the Early Ninth Century*. Columbia: University of South Carolina Press, 2009.

The Order of the Assassins— Terrorist States in Iran and Syria

Originally known as Al-Dawa al-Jadida (The New Preaching), the Order of the Assassins were Nizari Ismaili Shia who carried out high-profile political murders from the late eleventh century to the late thirteenth century. The sect began in northern Iran as a militant messianic form of Shia that, under the leadership of a Persian poet of Arab descent, Hasan-i Sabbah (ca. 1048–1124), opposed the rule of Sunni Seljuk Turks.

Due to a succession quarrel within the Shia Fatimid dynasty of Egypt, the New Preaching became embroiled in Islamic politics far beyond its place of origin. Over time, control of the Fatimid government had passed to powerful Turkish viziers who were Sunni Muslims, and Nizar, the presumptive heir and eldest son of the Fatimid caliph, conspired to retake control in 1094. The New Preaching joined Nizar's movement. Nizar, however, was defeated and killed, and continuing attacks by the government in Cairo as well as by the Seljuks kept Hassan-i Sabbah's followers constantly on the defensive. Although efforts to wipe them out failed, they were forced to retreat to several mountaintop strongholds in northern Iran and along the northern coast of Syria, where they carved out small independent principalities.

One of the Iranian fortresses, Alamut, which Hassan-i Sabbah had already conquered in 1090, became a central base in which he subjected his followers to a rigorous course of military and religious training that stressed discipline and absolute obedience. In order to threaten those who opposed this small sect and to curry favor with local rulers, these Ismaili Shia started carrying out political assassinations in very public places. When sent out on a mission, members usually traveled in groups of two or three and attempted to blend in with the local environment. After

➤ THE OLD MAN OF THE MOUNTAIN

Rashid al-Din Sinan (ca. 1133–ca. 1193), often referred to as the “Old Man of the Mountain,” was a grand master of the Order of Assassins who took over the organization in 1164 and established a base of operations at the fortress of Masyaf in the mountainous coastal region of northwestern Syria.

Under his leadership, the Assassins twice attempted to murder Salah al-Din (Saladin) but failed. Shortly after Sinan's death, the Assassins made an alliance with the Frankish crusader Count Henry of Champagne. According to an unreliable thirteenth-century source, in order to impress Henry with the loyalty and discipline of his followers, his successor, also known as the Old Man of the Mountain (as were all subsequent grand masters of the Syrian branch), ordered two Assassins to jump to their deaths from the fortress walls, which they did without hesitation. Although the story was repeated in various forms in Europe and elsewhere for generations, there is no trustworthy evidence this death leap ever occurred.

—April L. Najjaj

studying their victim, they usually struck during a moment of weakness, such as when the man emerged from a mosque after Friday prayers or walked in the street during daylight hours. The unswerving loyalty and almost certain deaths of those who committed these murders led opponents to believe that they could have carried out such missions only if they were taking drugs. A well-known narcotic in the Arab world is hashish, and consequently these men were referred to in Arabic as *hashishin* (takers of hashish), hence the origin of the word “assassin.” There is, however, no credible evidence that they conducted their assassinations under the influence of this or any other drug.

Although Shia in origin, the Assassins showed no religious loyalty outside their own sect and carried out attacks against Christians and Sunni and Shia Muslims alike. Their more famous victims included two governors of Mosul, the Turkish *atabeg* (deputized guardian of a young Seljuk prince) Mawdud in 1113, and Aksungur al-Bursuqi in 1126. The Assassins twice attempted to kill Salah al-Din (Saladin), in 1175 and 1176, but were

unsuccessful. On the Christian side, the Assassins were responsible for the murder of Conrad of Montferrat in 1192, a crusader who laid claim to the throne of the Latin kingdom of Jerusalem.

With increasing political instability in the region around the mid-thirteenth century, most Assassin fortresses were captured and the residents killed by Mongols and Mamluks alike. By the 1270s the Assassins had ceased to be a significant political force. There is little known today about the original beliefs of the Assassins because their library was destroyed in 1256 with the Mongol conquest of Alamut. However, the group continued a tenuous existence in Iran, where they came to emphasize spiritual means for achieving their goals as opposed to violent political action. Eventually, they fled during unrest with the Qajar dynasty (1794–1925) and established a community in Bombay (Mumbai), India, in 1845 under the rule of Aga Khan I, Hasan Ali Shah, considered a direct successor to Hasan-i Sabbah. The group continues today as a scholarly and philanthropic organization that works to preserve Islamic heritage throughout the world.

—April L. Najjaj

Bibliography

- Daftary, Farhad. *The Assassin Legends: Myths of the Ismailis*. London: Tauris, 1994.
- Holt, P. M. *The Age of the Crusades: The Near East from the 11th Century to 1517*. London: Longman, 1986.
- Lewis, Bernard. *The Assassins: A Radical Sect in Islam*. New York: Basic Books, 1968.

Almoravids

One way to identify the Almoravids is to describe them as the enemy of the legendary Spanish hero El Cid (ca. 1043–1099). Indeed, they fought against El Cid numerous times and lost, but this does scant justice to the Almoravids. Originally, they were Berber nomads from the western Sahara who emerged in the mid-eleventh century to build one of the richest, most powerful empires in western Islam. The dynasty was born among the Saharan Sanhaja, a confederation of some 70 tribes. These tribes lived close to nature, earning their living by raising camels, sheep, and goats and by giving safe passage to

caravans that passed through their desert land. They were steadfast in their effort to survive in this harsh environment and were hardy warriors, swift, mobile, and brave in the face of adversity. They also demonstrated a sense of moral righteousness that took the form of loyalty toward the tribe and confederation.

The Saharan Sanhaja became Muslim sometime during the tenth century as Muslim merchants and missionaries passed through their land. They became Almoravids when one of their tribal chiefs returned home from pilgrimage to Mecca and brought a fiery preacher to teach them, a scholar from a school in southwestern Morocco called Dar al-Murabitin (the house of those who are bound together in truth); “Almoravid” is an Anglicization of al-Murabitin. That teacher, Abd Allah ibn Yassin, taught a version of Sunni Islam that was fundamentalist, at least in the sense that it was based on strict, literal interpretation of scripture. It was puritanical and reformist in that it rejected alcohol, music, womanizing, or compromise of any type with the infidel (broadly defined to include deviant Muslims). When the preacher offered his religious endorsement to a specific candidate as the new chief for the confederation and won a party of tribesmen over to his version of Islam, religious ideology became the force that now drove the Almoravids, and it became a drive to victory against all odds.

The mission of the new religious movement was jihad. Initially jihad was understood as a struggle to attain and uphold a “true” understanding of Islam. Eventually, however, it evolved into “holy war.” First, it involved fighting against non-Muslim desert tribesmen, nonbelievers who obstructed the spread of this puritanical, reformist Islam in the western Sahara. Next it meant defeating the regimes of “bad” Muslims in North Africa and imposing Almoravid royal authority over them, as they did in Sijilmasa. Finally, jihad brought the Almoravids to Iberia to wage war against Christian infidels who were advancing against Islam.

When the people of Sijilmasa in southern Morocco petitioned the Almoravids in 1054–1055 to rescue them from their tyrannical rulers of the Bani Wanudin tribe, the Almoravids obliged. They expelled the Bani Wanudin and moved into the garrison themselves. The following year, the

➤ ARCHAEOLOGY AND THE ALMORAVIDS IN SIJILMASA

Chroniclers tell us that soon after the Almoravids took Sijilmasa, they banned non-Quranic taxes, smashed musical instruments, and destroyed shops where wine was sold. There is definitive and dramatic archaeological evidence of their puritanical, prohibitionist policy. Analysis of archaeobotanical specimens shows that early in Sijilmasa's history, grapes were among the most abundant crop in the surrounding region. But from the middle of the eleventh century to the middle of the thirteenth century, which corresponds exactly to the reign of the Almoravids and the equally puritanical Almohads, grapes are almost totally absent from the archaeological record.

Archaeology also reveals that the *dar al-imara* (house of government) was transferred from its original location to, archaeologists think, the high plateau on the northern edge of the site, where they enclosed it within a citadel that was itself within the larger circuit walls of the city. As foreigners themselves, the Almoravids evidently felt the need

to protect themselves from Sijilmasians as well as from an outside enemy.

The end of Almoravid rule in Sijilmasa is even more dramatically portrayed in the archaeological record than is their arrival. It is well known that when the Almohads took control of distinctly Almoravid mosques, they altered them to suit their more austere aesthetics and changed the orientation of the *mihrab* (the interior niche that indicates the direction of Mecca). Within the Almoravid mosque of Ibn Abd al-Malik in Sijilmasa, archaeologists found fragments of carved stucco covered with a layer of smooth plaster to camouflage the intricate carving, a decoration such as is seen at the Almoravid Qarawayin Mosque in Fez. Also, the Almohad extension of the mosque shifts three degrees farther to the south, as is also seen in the Almohads' Kutubiya Mosque in Marrakech. Both of these renovations occurred in the mid-twelfth century, exactly the time of the Almohad conquest.

—Ronald Messier

Almoravids conquered Audaghust on the southern edge of the desert. It, like Sijilmasa, was a city on the edge of the great desert "sea." Both cities were key to the gold trade from West Africa to the Mediterranean, which provided the Almoravids with the wealth they needed to build an empire.

It took the Almoravids another 20 years to conquer the rest of Morocco and western Algeria. The Almoravids established Aghmat as their principal residence and capital city for the next 13 years. The Almoravid emir Abu Bakr (d. 1087) married a local princess in Aghmat, Zainab al-Nafzawiya, a woman who became legendary for her beauty, energy, intelligence, and political savoir faire. Legend has it that when suitors called, she said that "nobody shall marry me but the one who rules the whole Maghrib [western North Africa]." Abu Bakr divorced her when a rebellion broke out in the Sahara, requiring him to return. So, she married Abu Bakr's cousin, Yusuf Ibn Tashfin (1009/1010–1106), whom Abu Bakr had appointed to rule in his stead in the Maghrib. Zainab became his confidant and political advisor, and she placed her immense for-

tune at his disposal. Yusuf went on to conquer the whole of the Maghrib. In deference to the emir who returned to the Sahara, Yusuf struck coins in Abu Bakr's name until the latter was killed, according to legend, by a blind bowman.

Soon after the Almoravids arrived in Aghmat, the sheikhs (leaders) of the Wurika and Haylana, two local Berber tribes, complained that the city "became overcrowded and people were oppressed there." A more likely scenario is that the Almoravids felt uncomfortable in the foothills of the High Atlas mountains where their opponents resided. The Almoravids were desert people, not used to fighting in the mountains. So they moved 18 miles (30 kilometers) away across flat plains to build a new capital city from scratch, the city of Marrakech, in 1070–1071.

Across the Strait of Gibraltar, the Muslim city of Toledo fell to the Christian king Alfonso VI of Castile-León (r. 1065–1109) in 1085. The Christian Reconquista of Iberia had now begun in earnest. The weak and divided Muslim kings of southern Spain felt that they had no choice but to invite the Almoravids to their shores to defend them. The Almoravids stopped the Christian

advance in 1086 and again in 1089 and ostensibly rescued these so-called *taifa* (factional) kings, but by 1094 they had made Al-Andalus (the Arabic name for Muslim-dominated Spain) part of their empire. Almoravid southern Spain, today known as Andalusia (from *al-Andalus*, the Arabic name for Muslim-dominated Spain), was a wealthy land whose riches were based on the introduction of new crops and agricultural technology. Moreover, it was a producer of fine industrial goods and the western end of the east-west axis of trans-Mediterranean trade, making it a considerable prize for a dynasty from the western Sahara. For the first time since Roman antiquity, southern Iberia and the Maghrib were under the same regime.

The Almoravids brought political stability and economic prosperity to both, although some say that the Almoravids killed “high culture” in Andalusia. To the extent that Andalusian high culture resulted from the interaction of Muslim, Jewish, and Christian minds, perhaps they did; the latter two communities had less freedom under the Almoravids. A number of Muslim poets fled Andalusia and went to the Maghrib as unhappy, exiled political opponents of the Andalusian *fugaba* (Islamic legists). But the very fact that these poets could go to the Maghrib and continue writing suggests that the Almoravid hierarchy at the very top was anything but anti-intellectual. Indeed, they were also patrons of Andalusian artists and poets, whom they brought home to adorn the courts of North Africa. To that extent, they fostered a degree of cultural unity between the Maghrib and Andalusia that was unprecedented since the passing of the Roman empire in the West.

In the end, holding on to Andalusia cost more than the Almoravids could afford. Their credibility depended on sustaining a jihad against the enemy. It also depended on upholding their policy of no non-Quranic taxes. But they simply could not finance a two-front war (the second front being Morocco itself) without raising taxes. Moreover, their reformist ideology was challenged by another Islamic reformer, in another tribal confederation, trying to establish a new dynasty buttressed by a new religious ideology. Its adherents were called al-Muwahiddin, or Almohads, “those who profess the oneness of God.”

The theology of the new regime condemned the Almoravids as polytheists, claiming that their scriptural literalism made a god out of scripture. On a popular level, they promised little that differed from the Almoravids: suppression of wine, women, and song and no non-Quranic taxes. The vitality of the new regime held promise for the masses, who were disappointed that all of their expectations of the Almoravids had not been fulfilled.

The end came quickly for the Almoravids. Ali Ibn Yusuf, who succeeded his father in 1106, died in 1144. Revolt broke out again in Cordoba that year, and most of Andalusia recognized the authority of the Almohads. In the Maghrib, in 1145, Ali's son Tashfin lost his life trying, unsuccessfully, to defend the city of Oran. Fez was the next to fall, and within weeks several other cities in the Maghrib fell. Ceuta sent a delegation to the Almohads seeking protection. Meknes and Salé surrendered without resistance; Marrakech, the capital, was the last to fall in March 1147.

—Ronald Messier

Bibliography

- Burkhalter, Sheryl L. “Listening for Silences in Almoravid History: Another Reading of ‘The Conquest That Never Was.’” *History in Africa* 19 (1992): 103–131.
- Conrad, David, and Humphrey J. Fisher. “The Conquest That Never Was: Ghana and the Almoravids, 1076. II. The Local Oral Sources.” *History in Africa* 10 (1983): 53–78.
- Farias, Paulo Fernando de Moraes. “The Almoravids: Some Questions Concerning the Character of the Movement during Its Periods of Closest Contact with the Sudan.” *Bulletin de L'Institut Fondamental D'Afrique Noire* 29B (1968): 794–878.
- Fletcher, Richard. *Moorish Spain*. New York: Henry Holt, 1992.
- Hrbek, I., and J. Devisse. “The Almoravids.” In *UNESCO General History of Africa*, Vol. 3, *Africa from the Seventh to the Eleventh Century*, edited by M. Elfasi and I. Hrbek. Berkeley: University of California Press, 1988.
- Laroui, Abdallah. *The History of the Maghrib*. Princeton, NJ: Princeton University Press, 1977.
- Levtzion, N. “Abd Allah B. Yasin and the Almoravids.” In *Studies in West African History I: The Cultivators of Islam*, edited by J. R. Willis. London: Frank Cass, 1979.

Messier, Ronald A. "The Almoravids and Holy War." In *The Jihad and Its Times*, edited by Hadia Dajani-Shakeel and Ronald A. Messier. Ann Arbor: Center for Near Eastern and North African Studies, University of Michigan, 1991.

Messier, Ronald A. "Quantitative Analysis of Almoravid Dinars." *Journal of the Economic and Social History of the Orient* 23 (1980): 104–120.

Messier, Ronald A. "Re-Thinking the Almoravids, Re-Thinking Ibn Khaldun." *Journal of North African Studies* 6(1) (2001): 59–80.

The Fatimid Caliphate from Glory to Dissolution

The Fatimid caliphate of North Africa and Egypt (909–1171) rose up as one of the most serious threats to the Abbasid caliphate in Baghdad. It took its name from its founder Ubayd Allah, a religious refugee who fled the Islamic heartland in the Middle East like so many others in the early tenth century due to Sunni persecution. A Shia Muslim, he claimed the messianic title of al-Mahdi (the Guided One), the long-promised deliverer of Islam, and justified that as well as the title of caliph, or deputy of the Prophet, by claiming descent from the Prophet Muhammad through his daughter Fatima and her husband Ali.

Ubayd Allah established his caliphate in 909 in Ifriqiya, present-day Tunisia, replacing the rule of the Aghlabids in Ifriqiya as well as in Sicily. He built a new city there to serve as a port for Qayrawan, the hitherto religious and political capital of Ifriqiya 90 miles (145 kilometers) inland from the coast; al-Mahdi called the new city al-Mahdia. It seems clear that Ifriqiya was from the start a base to build up resources for further imperial expansion. He and his successors sent out agents east and west to assess their options. As a result of this intelligence, the Fatimids conducted no fewer than five temporarily successful expeditions to conquer Sijilmasa in the west in order to control the gold routes to the western Sudan and launched three early campaigns to conquer Egypt to their east. On their fourth attempt they succeeded in 969.

The conquering hero was Jawhar al-Siqili (the Sicilian), who established Fatimid headquarters immediately north of the Egyptian capital of Fustat and called it al-Qahira (Cairo, "the city of victory"). He built an imperial palace and the al-



Fatimid fresco of a seated man holding a cup, tenth–eleventh century. (The Art Archive/Corbis)

Azhar (brilliant) Mosque, which would play a major role in the teaching of Islamic law. The mosque eventually became a major center of learning and an instrument of the state to propagate Shia theology in a land that heretofore had been solidly Sunni. The Fatimid caliph al-Muiz (r. 953–975) moved east to Cairo four years later in 973.

The Fatimids peaked early in Egypt. The caliph al-Aziz (r. 975–996) focused with great success on imperial administration, which launched a period of relative peace and prosperity. What has survived of Fatimid material culture is testimony to a rich and sumptuous life, at least for the rulers: palaces decorated with exotic woods from Africa that were sculpted and often painted and inlaid with ivory, creating abstract geometric design or Arabic script in *kufic* (stylized, angular) design. The elite wore clothing of silk, wool, and embroidered cotton, and they also wore jewelry such as necklaces, bracelets, rings, and earrings of gold encrusted with pearls, glass beads, and semiprecious stones. They ate their meals on beautiful ceramic lusterware and glassware that

➤ AL-HAKIM—A MAD CALIPH?

The reign of Caliph al-Hakim (r. 996–1021) was a curious one. At first, he was meticulous about his duties as ruler and worked to increase the empire's prosperity, as al-Aziz had done. Al-Hakim brought in famous scholars, such as the physicist Hassan ibn al-Haytham whose seven books on optics (*Kitab al-Manazir*) were translated into Latin in the late twelfth century. Manuscripts of it made their way to Oxford University, where they had a profound impact on the study of optics there in the late thirteenth century. The *Kitab al-Manazir* later deeply influenced Johannes Kepler (1571–1630), who produced his own work on optics shortly after a translation of it was printed in Europe. But when al-Haytham's theoretical calculations failed to regulate the Nile floods, the scientist was forced to hide from the caliph's wrath for the rest of his life.

Had the caliph gone mad? His defenders say that he was trying to restore the laws of Islam, which he felt had been allowed to lapse. His reformist ideology forbade wine, women, and song. He prohibited the cultivation of grapes and destroyed vineyards. Banquets and music were

banned. Eventually even walking along the Nile was prohibited. Women were generally forbidden to leave the house; thus, penalties were imposed on the finishing of women's shoes. Generally, Fatimid rulers were very tolerant toward the *dhimmis*, namely Christians and Jews who were given protected legal status. But al-Hakim enforced restrictions that earlier were only theoretical. *Dhimmis* were forced to wear distinctive clothing, including an iron cross on the neck for Christians and a yoke with bell for Jews. Numerous churches and synagogues were destroyed, including the Church of the Holy Sepulcher in Jerusalem. Today in Cairo, Shia Muslims continue to venerate the memory of al-Hakim. After the caliph's death, a new sect broke off from Islam under its leader Muhammad ibn Ismail al-Darazi. What is distinctive about the sect, beyond a mystical pantheism, is continued worship of al-Hakim as an incarnation of God. Today the sect, which largely survives in the highlands of Lebanon, Syria, and Israel, is known as the *Druze*.

—Ronald Messier

Fatimid artisans made better than any other or on blue and white porcelain imported from China. The wealth of Fatimid Egypt was based on abundant agriculture, which had become legendary in Egypt; on the production of skilled craftsmen; on long-distance trade; and on taxes assessed on all of this. Dinars (gold coins) struck in Fatimid mints had a degree of fineness, higher than any other coinage on the market, and for the first 100 years of Fatimid rule enjoyed the reputation of being the dollar of the Mediterranean.

Imperialist expansion continued to be a hallmark of the Fatimids. The coastal corridor connecting Egypt to Palestine and Syria that saw so many armies pass since early antiquity now invited the Fatimid armies of Caliph al-Aziz. As a result, the Fatimids took Jerusalem in 969, Tripoli (in what is today Lebanon) by 975–976, and Damascus in Syria in 978. Aleppo in Syria proved too resistant until the reign of al-Hakim (r. 996–1021) and fell in 1015. Fatimid armies moved also into the Hejaz, or western regions of the Arabian Peninsula, in 970–971, occupying the holy cities

of Mecca and Medina, which they held until the reign of al-Mustansir (r. 1036–1094). But as the Fatimids gained ground in the east, they lost it in the west.

The Fatimids began to lose their grip on their empire in the second half of the reign of al-Mustansir, gradually losing control of Ifriqiya and Sicily by the middle of the eleventh century. In spite of the leadership of the vizier Badr al-Jamali, they were unable to prevent the Seljuk Turks from taking Syria. The Seljuks took Jerusalem in 1071 and Damascus in 1076. The Seljuks had declared themselves defenders of Sunni Islam and as such were bitter enemies of the Fatimids. Warfare between them was so intense that just before they lost Jerusalem to the Seljuks, the Fatimids had forbidden Christian pilgrims from coming to the Holy Land. This was not an anti-Christian policy; rather, it was simply too dangerous; they could not protect people traveling through this war-torn region, from which large numbers of pilgrims failed to return home safely. Word of this unrest and lack of security in the

Holy Land fueled rumors in the West that Eastern Christians were suffering at the hands of Muslims and provided one of the rationales behind the launching of the First Crusade in 1095–1096.

The Fatimids retook Jerusalem in 1098 but lost it again the very next year to a new enemy, the Christian crusaders. In the grand scheme of things, the crusaders were but another foe, but they contributed significantly to increasing instability and the gradual decline of the dynasty. The able vizier Badr al-Jamali was succeeded in that position by his son al-Malik al-Afdal, who appointed and controlled the next caliph, al-Mustalli (r. 1094–1101). This caused a split among the Fatimids. A splinter group under the missionary Hassan al-Sabbah supported Nizar, a different son of al-Mustansir. This movement became known as the Nizaris, better known as the Assassins.

Badr al-Jamali also appointed the next caliph, al-Amir (r. 1102–1130). But al-Amir was resentful of the vizier's guardianship and had him killed in 1121. In the end, it was the Seljuks who terminated the Fatimid caliphate. The last of the Fatimid caliphs, al-Adid (r. 1160–1171), was forced to appoint as his vizier Shirkuh, a Kurdish general in the employ of the Seljuk ruler of Syria, Nur ad-Din. It was Shirkuh's nephew, the famous Salah al-Din ibn al-Ayyub (Saladin), who overthrew the dynasty in 1171 and established his own Ayyubid dynasty to rule Egypt and Syria.

—Ronald Messier

Bibliography

- Brett, Michael. *The Rise of the Fatimids: The World of the Mediterranean and the Middle East in the Fourth Century of the Hijra, Tenth Century CE*. Leiden, Netherlands: Brill, 2001.
- Daftary, Farhad. *The Isma'ilis: Their History and Doctrine*. Cambridge: Cambridge University Press, 1990.
- Halm, Heinz. *The Empire of the Mabdi: The Rise of the Fatimids*. Translated by Michael Bonner. Leiden, Netherlands: Brill, 1996.
- Halm, Heinz. *The Fatimids and Their Traditions of Learning*. London: Tauris, 1997.
- Lev, Yaacov. *State and Society in Fatimid Egypt*. Leiden, Netherlands: Brill, 1991.
- Stern, S. M. *Documents from Islamic Chanceries*. Cambridge: Harvard University Press, 1965.

The Ayyubids of Egypt and Syria

The political position of Egypt prior to the arrival of Salah al-Din b. Ayyub (Saladin, r. 1137/1138–1193) was tenuous. Ruled from Cairo by an Ismaili Fatimid dynasty (910–1171) that was increasingly ineffective, Egypt appeared to be a ripe prize for the crusader kingdom of Jerusalem poised just to its north. When the Fatimids repudiated agreements to pay the Franks tribute and launched campaigns to disrupt Frankish trade, King Baldwin III of Jerusalem (r. 1143–1163) raided and captured the key Levantine port city of Ascalon in 1153. This setback caused massive political upheavals in Egypt as people scrambled for power, leading ultimately to the assassinations of the first minister and the Fatimid caliph.

Out of this political instability emerged Saladin. Using the political turbulence as a pretext to enter Egyptian affairs, the Turkish *atabeg* (governor) of Syria, Nur al-Din Zangi (r. 1146–1174), put forward Saladin, a Sunni Kurd from Tikrit. Initially, Saladin came to Egypt as an aide-de-camp to his uncle, the Zangid-appointed governor Shirkuh (d. 1169), but with his uncle's untimely death in 1169, Saladin's position became insecure. As a Sunni, his allegiance lay with the Abbasid caliph in Baghdad, yet he was able to become the chief minister of the Shia Ismaili caliph. Also, although Saladin was the leader of Nur al-Din's forces in Egypt, they were few in number in comparison with the size of the Fatimid army, and Saladin had no real authority over these latter forces.

When the sickly Fatimid caliph al-Adid (r. 1160–1171) fell ill prior to his twentieth birthday in 1171, Saladin initiated plans to take Egypt for himself. The Friday sermon, long a sign of political legitimacy, was given in the name of the Sunni Abbasid caliph al-Mustadi (1170–80), the first time in 200 years that a Sunni caliph was so honored in Egypt. The death a few weeks later of the young Fatimid ruler had three important consequences. First, it sounded the death knell for the Shia Fatimid dynasty in Egypt. Second, it marked the formal return of Egypt back to Sunni Islam. Third, it inaugurated the rise of the Ayyubid dynasty (1171–1250), which received its name from Saladin's father, Ayyub, and would rule Egypt and Syria for almost 80 years.

➤ SULTAN AL-KAMIL—THE CONSUMMATE DIPLOMAT

Born in 1180, Nasir al-Din al-Malik al-Kamil came to the aid of his father al-Adil in 1199 during the power struggles that followed Saladin's death. For his help, al-Kamil was made viceroy of Egypt for the duration of his father's reign. After the death of al-Adil in August 1218, the situation again deteriorated. Crusaders had already invaded coastal Egypt in May 1218 as part of the Fifth Crusade (1217–1221), and various Ayyubid princes made bids to assume power over Egypt and Syria. In November 1219 the key port city of Damietta fell to the crusaders. However, the crusaders failed to press their advantage and were defeated in the Nile Delta in 1221. In victory, al-Kamil, who always seemed to prefer diplomacy to battle, showed mercy, allowing the crusaders to negotiate a safe departure from Egypt in return for Damietta.

Victory, however, brought little respite. Domestic strife threatened to split the territory, with al-Muazzam (d. 1227) gaining Syria and al-Kamil retaining Trans-Jordan (present-day Jordan). The death of al-Muazzam shortly thereafter created an opportunity for al-Kamil to restore Saladin's entire patrimony, but at that moment the crusaders, under the command of the Western emperor Frederick II (r. 1212–1250), chose to make yet another bid for Egypt with the Sixth Crusade (1227–1229). Now caught in a siege of Damascus with the crusaders to his back, al-Kamil sought first to delay and then to negotiate and eventually reached an agreement with Frederick II. The price was Jerusalem, which the sultan handed over in the Treaty of Jaffa of 1229, but the sacred prize was hardly worth it. Jerusalem was indefensible, its walls having been destroyed in 1219. Moreover, the treaty guaranteed Islamic control of the Temple Mount and the free exercise of their religion and law for all Muslims residing in the city. The treaty was disliked by Muslims and Christians alike, but in the end it proved to be another diplomatic victory for al-Kamil. Emperor Frederick II had been neutralized, and the Christian gains were ephemeral. Jerusalem was reconquered by the Muslim lord of Transjordan in 1239, lost in 1241 but recovered for Islam in 1244. It remained in Muslim hands until 1917.

Among the Coptic Christians of Egypt today, al-Kamil is still honored and remembered as a fair and just ruler.

—*Rasheed Hosein*

The Ayyubid period can roughly be divided into three distinct phases: the period of Saladin himself (1171–1193), the period of consolidation up to the death of Sultan al-Kamil (r. 1218–1238), and finally a rapid decline, which ended with the removal of the dynasty in 1250.

Saladin's career presents many challenges to modern historians. It seems that he spent most of his first 15 years solidifying his position against his coreligionists rather than concentrating his attacks on the Franks. Only the death of his nominal overlord Nur al-Din in 1174 prevented the two from fighting each other. In a series of political maneuvers, Saladin was able to have the caliph al-Mustadi invest him formally with Egypt, Yemen, parts of Syria, and all the lands he could reconquer. Saladin was also able to eventually claim the guardianship of Nur al-Din's successor al-Salah Ismail (1163–1181), who was then only a teenager.

Once Saladin was able to solidify his power, he finally engaged in battle with the Franks with extreme efficiency, inflicting upon them a catastrophic defeat at the Battle of Hattin on July 4, 1187. The way to Jerusalem now lay open, and after a brief siege the city surrendered to Saladin on October 2, 1187. Unlike the conquest by the crusaders 88 years prior, Saladin did not perpetrate a horrific bloodbath on the city. He continued to push his advantage, and at the height of his conquests the Franks were reduced to a thin coastal area around the cities of Antioch, Tripoli, and Tyre. However, the armies of the Third Crusade (1188–1192) managed to regain Acre, Jaffa, and other key coastal areas, thereby stabilizing the situation for the crusader states. Notwithstanding, at his death in 1193 Saladin was Islam's most successful jihadist against the Western crusaders.

The period of Ayyubid consolidation is marked by the careers of two key figures: Saladin's brother al-Adil Sayf al-Din (r. 1193–1218) and the latter's son al-Kamil (r. 1218–1238). Sayf al-Din, known as Safadin to the crusaders, was largely able to prevent the disintegration of Saladin's patrimony by installing his many sons in key positions. However, their allegiance did not extend to Safadin's chosen successor al-Kamil. A consummate political strategist, al-Kamil went to the crusaders for aid. The price, however, was

steep. Jerusalem was ceded back to the crusaders, but the Islamic religious heart of the city remained, with its Muslim inhabitants. While neither side was thrilled with the Treaty of Jaffa (1229), the nature of the Ayyubid polity necessitated such compromise, and al-Kamil emerged as the undisputed Ayyubid ruler.

Unlike the crusaders, primogeniture inheritance was not practiced by the heirs of Saladin. Rather, they followed the notion of corporate sovereignty, which held that each member of the ruling family had an equal share of property and the dignity of rule. As a result, there were soon many Ayyubid princes commanding estates and territories of various sizes. Both Safadin and al-Kamil were able to command the loyalty of these “lesser” Ayyubids by force and fiat, but they were the high-water mark of the later Ayyubids. With the death in 1249 of al-Salih Ayyub, al-Kamil’s son and the last great Ayyubid, a period of rapid collapse followed, leading to the usurpation of Egypt and Syria by the Mamluk dynasty (1250–1517) within the year.

—*Rasheed Hosein*

Bibliography

- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 2000.
- Holt, P. M. *The Age of the Crusades*. London: Longman, 1986.
- Humphreys, R. Steven. *From Saladin to the Mongols: The Ayyubids of Damascus*. New York: State University of New York Press, 1977.
- Lewis, Bernard. “Egypt and Syria.” In *Cambridge History of Islam*, edited by P. M. Holt, Ann K. S. Lambton, and Bernard Lewis. Cambridge: Cambridge University Press, 1970.

Mongols and Muslims—The Mongol Impact on Dar al-Islam

Medieval Muslims viewed the world as divided into two parts. The area ruled by Muslims was known as *Dar al-Islam*, the Abode of Islam, or Submission (to God), whereas areas dominated by nonbelievers were known collectively as *Dar al-Harb*, the Abode of War, or Confusion. Theoretically, a permanent war existed between these two abodes, or houses, until ultimately Dar al-Islam would prevail and the whole world would know God’s peace. In the thirteenth century,

however, a major portion of Dar al-Islam suddenly became Dar al-Harb.

In 1219 Mongols under Chinggis Khan (1165–1227) began their invasion of the Islamic world. The invasion began in the Khwarazmian empire (present-day Afghanistan, Uzbekistan, Turkmenistan, and much of Iran and Pakistan) when a Mongol-sponsored caravan was massacred there. In retaliation, the Mongols quickly overwhelmed this Muslim state, sending it into anarchy. The Mongol conquests of the Middle East continued in the 1230s when another Mongol army conquered Iran, Transcaucasia, and much of Afghanistan. In the 1240s the Mongols extended their control over the Seljuk sultanate of Rum, comprising much of present-day Turkey.

During their conquests, the Mongols destroyed any opponent who defied them but generally allowed all religions to be practiced without discrimination and exempted clerics and religious institutions from taxes. Indeed, this level of religious toleration was one of the hallmarks of the Mongol empire that set it apart from most of its contemporary societies. The Mongols did this not out of humanitarian reasons but rather as a form of celestial insurance so as not to offend any god and to avoid religious clashes that might cause instability in their empire.

Nonetheless, much of eastern Dar al-Islam was now transformed into Dar al-Harb. In the midst of these invasions, particularly the early ones, Muslims viewed the Mongols as a punishment from God for their sins, a view shared by Christians when the Mongols invaded Eastern Europe. It was a terrifying time for many, and streams of Muslim refugees flowed into the unconquered regions of Dar al-Islam.

Between 1250 and 1260 three clashes occurred that drastically altered Dar al-Islam. In 1250 Mongke Khan, the fourth ruler of the Mongol empire, sent his brother Hulegu to finish the conquest of Southwest Asia. His first target in 1256 was the Nizari Ismailis, or so-called Assassins, of northern Iran, members of a minority form of Shia Islam. Having maintained their position of independence since the late eleventh century through the use of disguised assassins and terror, the Nizari Ismailis’ destruction was

➤ MONGOL CONVERSIONS TO ISLAM

Although the Mongols began their empire with a policy of religious tolerance, it weakened over time as the Mongols converted to the religions of most of their subjects. Initially most of the Mongols were shamanistic, a religious system in which the spirit world interacts with the everyday world in beneficial and harmful ways and in which certain spirit-possessed persons, known as shamans, act as intermediaries between the two spheres of existence. Typically, shamanistic peoples lack a canon of doctrinal beliefs, or a formal faith. Consequently, they convert relatively easily to more complex world religions such as Islam, Buddhism, and Christianity due to the appealing moral aspects of these religions, the certitude they offer in the form of a defined creed of faith, and the sense of equality that is inherent within each.

The first Mongol to definitively convert to Islam was Berke, son of Chinggis Khan's eldest son, Jochi. There are variant accounts that date his conversion, ranging from his birth to his young manhood, but all affirm that it was a sincere conversion and was guided by a Sufi mystic. Most Mongols in the western portion of the empire converted to Islam while under the guidance of Sufis.

Sufis, who generally sought a more personal relationship with God, were often frowned upon by both Sunni and Shia Muslims, depending on time and location. Nonetheless, Sufism was instrumental in spreading Islam among the Mongols, as well as into India, Africa, and Southeast Asia. While it is often thought that the Sufis' success in converting the Mongols was because they often resembled shamans, their success hinged on their syncretic views, which allowed the Mongols to incorporate many of their older traditions into their new religion. Thus, they did not completely abandon their traditional ways. Sunni religious scholars, however, still often viewed them as infidels.

—*Timothy May*

generally viewed by Sunni Muslims as a welcome achievement.

The second event was the destruction of the Abbasid caliphate in February 1258. The Abbasids had endured since 750 and had transformed Baghdad into the religious and cultural center of the Islamic world, but the Mongol destruction

of Baghdad and execution of the caliph, who claimed to be the deputy of the Prophet and the Shadow of God on Earth, changed this forever. Although Baghdad gradually recovered, it never regained the religious importance it once held in the Islamic world. Although the Mamluk sultan of Egypt set up an Abbasid refugee as caliph in Cairo in 1261 and this line of puppet Abbasids-in-exile continued to proclaim its legitimacy into the sixteenth century, in reality the Abbasid caliphate ended in 1258, and the office of caliph had become an empty honor.

The final event occurred in September 1260 at the Battle of Ayn Jalut in present-day northern Israel, when the Mamluks of Egypt turned back a Mongol advance that aimed to drive all the way to Egypt. The Mongols had already conquered Syria but were subsequently forced out by the Mamluks of Egypt. This victory at Ayn Jalut, in the eyes of many, made these same Mamluks, Turkish professional soldiers who had seized power in Egypt in 1250, the new defenders of Islam, a position they claimed until their own conquest in 1517 by the Ottoman Turks, another champion of Islam. Afterward the Mongol empire divided into four warring states. One of them, the Jochid Ulus, popularly known as the Golden Horde, became an ally of the Mamluk sultanate. Its ruler, Berke, had converted to Islam in his childhood and used the destruction of the Abbasid caliphate as his rationale for a war with Hulegu's domain of the il-khanate of Persia. This war lasted basically until the demise of the Il-Khanids in 1335 even though Il-Khan Ghazan embraced Islam in 1295.

The Mongol impact on Dar al-Islam was immense. While their invasions drastically altered its political and social structure, they also caused a shift in populations. The ramifications were numerous, but three had great significance. Among those who fled west into present-day Asian Turkey was a group of Turks who took advantage of the power vacuum after the fall of the il-khanate to establish the Ottoman empire. The Ottomans would soon become a new driving force in Islam.

Second, the Mongols were at least partially responsible for some major shifts in the makeup of the Islamic world. The Sufi, or mystical, variant of Islam received great support throughout the western portions of the Mongol empire, in-

cluding the il-khanate of Persia, the Golden Horde of the Volga, and the Chaghatayid khanate centered in Central Asia. Indeed, by the fourteenth century most of the Mongols in western and central Eurasia had converted to Islam (but not in Mongolia, where they became Tantric Buddhists). Thus, once again Dar al-Harb receded, and Dar al-Islam now expanded into portions of Eurasia where it previously never had any roots. Moreover, one Sufi leader, Saif al-Din of the Safavi Sufis in Azerbaijan, received immense patronage from the il-khans. Gradually his followers became militant Shia Muslims who established the Safavid empire of Iran and imposed Shia Islam as its state religion, thus transforming Iran from a Sunni-dominated region into a Shia-dominated region.

Third, with the destruction of Baghdad and the rise of the Mamluks in Egypt and later in Syria, Cairo became the religious and cultural center of Islam. Viewed as the defenders of Islam, including the holy cities of Mecca and Medina, the Mamluks spent considerable wealth to reinforce this image by supporting religious scholars, building mosques, and endowing other institutions. In many ways, Cairo remains the cultural center of Dar al-Islam today and the seat of the most prestigious Islamic center of learning, Al-Azhar, which received considerable support from the Mamluks.

—Timothy May

Bibliography

- DeWeese, Devin. *Islamization and Native Religion in the Golden Horde*. University Park: Pennsylvania State University Press, 1994.
- May, Timothy. "Attitudes towards Conversion among the Elite in the Mongol Empire." *E-ASPAC: The Electronic Journal of Asian Studies on the Pacific Coast* (2002–2003), <http://mcel.pacificu.edu/easpac/2003/may.php3>.
- Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.

Rebuilding Baghdad, 1258–1335

Muslims in the Middle East saw the Mongol invasions as an unprecedented catastrophe that reached its height in the conquest of Baghdad and the extermination of the last Abbasid caliph, al-Mustasim, in 1258, and all of it was accompa-

nied by pitiless cruelty with calamitous results: death, destruction, depopulation of cities, deportations, enslavement, and migrations. Also, the arrival of Mongols and numerous Turks led to an increased nomadization and a significant decline in agricultural production. How many people died during the conquest of Baghdad remains unclear. Estimates vary from 200,000 to 2 million. A large part of the city was destroyed, including the caliphal tombs, the caliph's mosque, the holy tombs of Shia imams, and the grand library, which contained innumerable valuable books and manuscripts. Hardship and difficult living circumstances following the invasion, as well as natural catastrophes, and epidemics influenced the perspective on life of inhabitants in the region. They provoked apocalyptic visions and promoted the spread of the belief in miracles and a saint-cult among the Baghdad population. The number of presumed saints and the reports of supernatural apparitions grew considerably during the latter half of the thirteenth century.

The feeling of doom described in the sources, however intense it may have been, is moderated by accounts of immediate reconstruction and reorganization. Before the Mongol commander Hulegu continued his conquests farther west, he confirmed both the *wazir* (prime minister) and the chief financial officer and appointed the head of religious endowments and directed him to commence the reconstruction of the city as soon as possible. Hulegu also ordered that the bazaars be reopened and that the Baghdad mint continue its production. In addition, he confirmed Islamic law by immediately naming judges, although he was rather religiously tolerant and did not grant Islam any dominant position. Furthermore, the family of the caliph was not systematically destroyed. Some of his successors survived and later became highly respected personalities in the city; however, they remained excluded from any important public office. The female members of the caliph's family were popular marriage partners, indicating their high social reputation. Through the adoption of the existing structures and the reinstatement of former officials, Mongol rule guaranteed a certain sense of continuity in the city.

Ala ad-Din Juwayni was appointed governor of Iraq in 1260, and the fact that he served in

► THE ABBASID CALIPH OF BAGHDAD— HOLY IMAM OF SUNNI ISLAM

Since its foundation under the second Abbasid caliph al-Mansur in 762, Baghdad had been the capital Abbasid city, seat of the caliph, and the cultural, religious, and economic center of the Islamic world. However, since the middle of the twelfth century, the caliphate had been in a process of decline and had already lost most of its political sovereignty and power to Seljuk Turkish sultans. Nevertheless, the role of the caliphate as imamate, or chief religious authority, still symbolized the only legitimate Islamic rule for Sunni Muslims. When the caliph's ambassadors were trying to dissuade the Mongol commander Hulegu from attacking Baghdad, they are reported to have said, "If the caliph is killed, the whole world will be disorganized, the sun will hide its face, the rain will cease to fall, and the plants will no longer grow." The Mongols, who had some ideas concerning the sanctity of sovereignty, seem to have believed the ambassadors. They feared that if they killed the caliph with a sword and his blood was spilled on the ground, there would be an earthquake. Therefore, Hulegu had him rolled up in a carpet and trampled to death without shedding any blood. Despite the violent death of Caliph al-Mustasim in 1258, the sun reemerged and rain continued to fall, but the Mongol il-khans did not revive the Abbasid caliphate. Even the Mamluk sultans of Egypt and Syria, who installed a surviving Abbasid prince as caliph in Cairo in 1261, could not resuscitate the Abbasid caliphate's religious authority over all of Sunni Islam; these so-called caliphs remained merely puppets in office until 1517.

—Hend Gilli-Elewy

office for more than 20 years signaled an effort to create continuity in Baghdadi life after the break induced by the Mongol conquest. He ameliorated the situations of the province and the city as well as of peasant life, and it is fair to say that he made the province more prosperous than it had been under the last caliphs. He especially distinguished himself by his active interest in construction and public projects.

Once the il-khanate of Persia converted to Islam under Ghazan Khan (r. 1295–1304), Baghdad regained some of its symbolic significance as the

center of Sunni Islam, and Islam again became the official religion of Iraq and Iran. Ghazan Khan's extensive reforms were aimed at Islamizing the Mongol administration and at physical reconstruction and the revival of city life, infrastructure, and agriculture. The il-khan visited Iraq several times and embarked on an active cultural policy in support of Islam. Shia holy sites in Baghdad, Najaf, and Hilla were also visited by Mongol pilgrims and benefited from new endowments and construction projects. Iraqi Shia shrines enjoyed even more attention when the last il-khan, Abu Said, converted to the Shia branch of Islam. After his death in 1335, the il-khanate collapsed, and Iraq regained some of its territorial unity independent of Iran. Baghdad reemerged as a local center of Iraq and reverted back to some of the pre-Mongol political structures until the end of the century, when Baghdad was struck again by a new wave of conquests from Central Asia, this time under the Turkish conqueror Timur-i Leng (Tamerlane) in 1393 and 1401.

—Hend Gilli-Elewy

Bibliography

- Amitai-Preiss, Reuven. *Mongols and Mamluks: The Mamluk-Īlkhānid War, 1260–1281*. Cambridge: Cambridge University Press, 1995.
- Boyle, J. A., ed. *The Cambridge History of Iran*, Vol. 5, *The Saljuk and Mongol Periods*. Cambridge: Cambridge University Press, 1968.
- Spuler, B. *The Mongol Period*. Princeton, NJ: Markus Weiner, 1994.

The Mamluk Sultanate, 1250–1517

The final dissolution of Saladin's patrimony was accomplished in a relatively short period of time. The career of the last great Ayyubid ruler, al-Salih Ayyub (r. 1240–1249), was struck short due to disease. This left an outcast heir, other Ayyubid claimants to power, and crusaders marching on Cairo to start the Seventh Crusade (1248–1254). It was only the quick actions of al-Salih's widow Shajar al-Durr (d. 1257) that saved the day. Hiding her husband's death from all but his most trusted advisors, forging her husband's signature, and imposing an oath of fealty in the name of her son Turan-Shah (d. 1250), she was able to hold remnants of the state together to

repel the crusaders. At the Battle of Mansura (1250) the crusaders were defeated. During their retreat to the coast the army was decimated, and the French king Louis IX (r. 1226–1270) was captured and ransomed.

Once in Cairo, Shajar al-Durr had her son pronounced sultan, and news of al-Salih Ayyub's death was finally released. One of the first acts of the new sultan was to promote his own private guard at the expense of his father's military commanders. The former commanders, military slaves, or *mamluks* (Arabic for "taken in possession"), known as the Bahriyyah because of the location of their fortress on one of the islands of the Nile River as it flowed through Cairo, did not approve of their demotion and engineered a coup in 1250 that eliminated Turan-Shah and effectively ended the Ayyubid dynasty. Although minor Ayyubids continued to rule elsewhere for another century, none would ever rule outright.

Although Shajar al-Durr had displayed acumen as a ruler, Egypt's stature as the military and political champion of Islam caused many to call for a male ruler. The choice fell to al-Muizz Izz al-Din Aybeg al-Turkumani (r. 1250–1257), one of al-Salih Ayyubid's most trusted slave-soldiers and the first Mamluk sultan of Egypt. It is important to note that the use of military slaves was already long established by the thirteenth century. Born as unbelievers on the outskirts of the Islamic world, these individuals were bought as youths, trained in military tactics and practice, converted and given an Islamic education, and finally manumitted (freed) upon completion of training. Ostensibly they provided a loyal cadre for their patron and came to forge a group identity, separate from other groups belonging to other leaders. In this way they developed a modified corporate identity, with their servile origins as a hallmark. In terms of the dynasty's legitimacy, they relied on the faded prestige of Saladin's line. Though they initially served the Ayyubids, the Mamluks, as this sultanate would become known, briefly used the Ayyubids as puppet rulers before deposing them outright.

Internal power struggles and conflicting interests led to Aybeg's murder in 1257 when he was at the height of his power. In the resulting disorder, two major groups competed for power: the remnants of al-Salih Ayyub's mamluks (the

➤ THE MAMLUK DYNAMIC

The mamluk system as it came to be practiced in Egypt during the Ayyubid period (1071–1250) and after the subsequent usurpation of power under the Bahri (1250–1382) and Burji (1382–1517) dynasties was rare and noteworthy in that a former slave could become a ruler. The dynamics of the system revolved around the *khushdash* (military household), meaning those soldier-slaves obtained, trained, and emancipated by a master, known as the *ustadh*. As mamluks were originally slaves, often imported at a young age and from alien lands, the *ustadh* became an important part of an individual mamluk's identity, extending to the adoption of the *ustadh*'s name as an honorific (e.g., a mamluk of al-Salih Ayyub was referred to as "Salihi").

Additionally, this identification extended to the other mamluks in the service of one's *ustadh*. This bond of loyalty and brotherhood, known as *khushdashiyyah*, created a cohesive group, and the success of one meant the success of all. Thus, when a member of a *khushdash* was promoted to a political or military office, other members from his military household served as his most trusted auxiliaries. The most preferable position for a mamluk was becoming a royal mamluk, which meant having the ruling sultan as one's *ustadh*.

The relationship was reciprocal. A mamluk needed his *ustadh* to advance, and the *ustadh* needed mamluks to prosecute his agenda. However, as the system evolved, individual mamluks became masters in their own right, forming their own military households and purchasing their own mamluks. Thus, while a mamluk used his *khushdash* to obtain power, his first move was often the liquidation of his comrades in favor of his own mamluks. This dynamic, while seemingly unstable, provided extended periods of durable rule for both Egypt and Syria during each region's premodern history.

—Rasheed Hosein

Bahriyyah) and those of Aybeg (the Muizziyyah). Rising out of the political intrigue, Qutuz (d. 1260), a mamluk of Aybeg's cadre, achieved supremacy. The remaining members of the Bahriyyah were relocated to Syria. However, a dire threat to the Islamic world again altered the

dynamics of the Mamluk sultanate, as the Mongols descended from the central Asian steppes and smashed Baghdad in 1258, killing the Abbasid caliph al-Mustasim (r. 1242–1258) and ending the cultural and religious hegemony of the once proud city. Qutuz would lead the Mamluks to victory over the Mongols at the Battle of Ayn Jalut in 1260, stopping the Mongol advance in Syria, but just after the battle the Bahriyyah faction struck him dead and elevated one of its own, Baybars I (r. 1260–1277), to the rank of sultan, inaugurating the Bahri dynasty that would rule Egypt until 1382.

Of the Bahri sultans, the reigns of Baybars I, Qalawun (d. 1290), and al-Nasir Muhammad (d. 1341) rank the highest. Under Baybars I, the Mamluks effectively fought the Frankish crusader presence in the Levant, captured the city of Antioch in 1268 (something Saladin could not accomplish), established a border with the Mongol il-khanate of Persia (1256–1336), and even briefly retook Seljuk Anatolia. Qalawun's rule was noted less for its conquests and more for its diplomacy, as Qalawun entered into treaties that exploited the existing divisions over the right of succession among the crusader states. Through this strategy Qalawun was able to conquer three of the four major crusader strongholds (Tripoli, Tyre, and Jaffa). By 1290 only Acre remained, but just as Qalawun was massing his forces outside its walls, he fell ill and died. The city fell to his successor al-Ashraf Khalil (r. 1290–1293) in a blood-bath the following year, and the last major crusader bastion in continental Southwest Asia was effectively removed. After the untimely death of al-Ashraf, his successor al-Nasir Muhammad (d. 1341) had the longest rule of any Mamluk sultan. Beginning in 1293 with the murder of his brother and predecessor, he ruled with two brief interruptions until his death. He was noted for his public works and was much revered for championing Egypt's Sunni revival. The period of al-Nasir Muhammad also witnessed the demographic shift that finally made Egypt a majority Muslim territory. Prior to his reign, evidence indicates that Egypt was still a majority Coptic Christian land.

Despite amassing vast wealth and power, the reigns of the later Bahri Mamluk sultans largely constituted a period of decline. The favorable

position of Egypt on the spice trade routes from the Red Sea and the overland Silk Road from central Asia generated vast wealth for the Mamluk dynasty. One late-fifteenth-century Portuguese writer estimated that the Mamluk sultans received annually 600,000 gold coins in tax revenues from the spice trade alone. Added to this was the practice of importing slaves, which made Egypt a trading powerhouse. However, as new markets opened, the ethnic makeup of these new slaves began to change.

While the majority of the Bahri mamluks were ethnically Qipchak Turks, these new slaves were Circassian from the Caucasus, and they began to forge a new dynasty known to history as the Burji Mamluk dynasty (1382–1517). Beginning with a revolt in 1382, al-Zahir Sayf al-Din Barquq (r. 1382–1399) was able to topple the Bahri regime and elevate the Burji. These sultans are largely viewed as inferior in comparison to their predecessors, but this may be due to the major shift in power and authority in the Islamic world that accompanied the rise of the Ottoman dynasty (1299–1923) and the devastation that the Black Death inflicted on Egypt's population.

Egypt eventually was incorporated into the Ottoman polity after its defeat by Selim the Grim (r. 1512–1520) at the Battle of Marj Dabiq (1517), thereby ending the Mamluk dynasty.

—*Rasheed Hosein*

Bibliography

- Holt, P. M. *The Age of the Crusades*. London: Longman, 1986.
- Irwin, Robert. *The Middle East in the Middle Ages*. Carbondale: Southern Illinois University Press, 1986.
- Lewis, Bernard. "Egypt and Syria." In *The Cambridge History of Islam*, edited by P. M. Holt, Ann K. S. Lambton, and Bernard Lewis. Cambridge: Cambridge University Press, 1970.
- Northrup, Linda. "The Bahri Mamluk Sultanate, 1250–1390." In *The Cambridge History of Egypt*, Vol. 1, *Islamic Egypt, 640–1517*, edited by Carl F. Petry. Cambridge: Cambridge University Press, 1999.

The Il-khanid Dynasty of Persia

The Il-khanid dynasty of Persia (1256–1335), centered in Mesopotamia, Iran, and adjoining territories, was originally an integral part of the

Mongol empire, with its il-khans (subordinate khans) subject to the authority of the Great Khan in China, the successor of Chinggis Khan. The political turmoil into which the Mongol empire was plunged in 1259 with Mongke Khan's death, however, allowed the Il-khanids to go their separate way, although they continued for quite a while to acknowledge the suzerainty of the Great Khan who, in the reign of Khubilai Khan (r. 1260–1294), became the Yuan emperor of China. Although originally shamanistic in religious orientation and culturally nomadic, by the end of the century the Il-khanids ruled over an officially Islamic state that adopted and patronized the ancient and richly variegated cultural traditions of the region. With the death of Abu Said Khan (r. 1316–1335), the direct line of succession ended, and the il-khanate broke up into a number of competing petty principalities that were swept away in the 1380s and 1390s by Timur-i Leng (also known as Tamerlane, 1336–1405), a man who claimed to have inherited and reconquered the il-khanate. In fact, he established a new dynasty, the Timurids, and a new political entity.

In 1253 Mongke Khan, a grandson of Chinggis Khan, sent his trusted brother Hulegu (1216–1265) from Mongolia to Iran to destroy the Ismailis, a sect also known as the Assassins. According to one story, they had threatened the life of the Great Khan, and a local Muslim *qadi* (judge) had also petitioned the Mongols for help against the Assassins ensconced in the fortress of Alamut in northern Iran. Apparently, Hulegu was also to demand that the Abbasid caliph of Baghdad acknowledge Mongol overlordship.

It took Hulegu three years to complete the mission of effectively destroying the Assassins of Iran (but not of Syria) and reducing that land to Mongol rule. Whatever Hulegu's or the Great Khan's original plan, Hulegu did not return to Mongolia after the mission. He and his army moved on to Mesopotamia, where they besieged Baghdad. When Caliph al-Mustasim (r. 1242–1258) refused Hulegu's generous offer to spare the city and the caliph's office and life in return for submission, the Mongols and their allies invested and looted the city and murdered the caliph in February 1258, thus effectively ending a dynasty that had reigned for more than five centuries.



Mongols under the leadership of Hulegu Khan storming and capturing Baghdad in 1258, from the Jam al-Tawarkh, by Rashid al-Din, about 1310. (The Art Archive/Bibliothèque Nationale Paris)

According to a letter that he sent in 1262, Hulegu claimed that more than 200,000 died in the massacre that ensued. The Mongols took countless items and people as booty, including Baghdad's artists and scientists such as Nasir al-Din Tusi, who would run an astronomical observatory that Hulegu established on a hill outside Maragha, the first Il-khanid capital.

After conquering Mesopotamia, Hulegu proceeded westward until the Mamluks of Egypt forces halted his advance at Ayn Jalut in the Galilee (present-day northern Israel) in 1260 and forced his retreat back into the heartland of Persia. Although Hulegu's successors would repeatedly invade Syria after 1260, they never stayed for long. The advance of the Mongols into the so-called Middle East had been stopped but not before Hulegu had captured most of Anatolia as well as Iran and Mesopotamia.

In 1259 Mongke Khan died in China, and a war of succession ensued, but circumstances were too dangerous for Hulegu to march east and join the race for the Great Khanate. He faced the enmity not only of the Mamluks, who now occupied Syria, but also of his cousin, Berke (r. 1257–1267), khan of the Golden Horde. Berke, the Mongol leadership's first convert to Islam, disapproved of Hulegu's actions at Baghdad to the point that he entered into what became a long-standing alliance with the Mamluks against

➤ RELIGION UNDER THE IL-KHANIDS

Originally, the Mongols were a shamanistic people who combined animistic practices with forms of Tibetan Buddhism. Hulegu himself was such a Buddhist, but his trusted general Kito Bhuqa was an Assyrian (Nestorian) Christian. Once established in Persia, Il-khanid rulers before Ghazan practiced, or at least patronized, a wide range of religions, but it is questionable how seriously they were attached to any of them. What is clear is that until Ghazan's conversion to Islam, many different religious groups flourished in Persia.

Early in the Il-khanid era, Assyrian and Jacobite Christians played an influential role. Assyrian Christianity was especially popular among Mongol elites and the wives of various il-khans. Indeed, baptism was a popular practice with Il-khanid royalty. Arghun, for example, although a Buddhist, had his son, the future Oljeitu Khan, baptized under the Christian name Nicolas in honor of Pope Nicholas IV, with whom Arghun's ambassador to the West, Rabban Sauma, had negotiated. Very much a religious adventurer, Oljeitu also espoused Buddhism for a while before he converted to Islam, and as a Muslim he vacillated between the Shia and Sunni branches of the faith.

This laissez-faire policy toward religion changed under the next il-khan, Ghazan, whose conversion to Islam in 1295 proved to be a major turning point in Il-khanid history. A policy of conversion or exile was put in place, and it was in this context that Rashid al-Din converted to Islam. Ghazan also ordered the destruction of Buddhist shrines, and as a result very little is known today about Buddhist architecture in Persia.

Notwithstanding Ghazan's fervor for his new faith, he maintained diplomatic relations with Christian rulers to his west largely because two nearby Muslim powers, the Mamluks and the Mongol Golden Horde, remained his enemies.

—Kumi S. Martin

Hulegu and went to war against the Mongols in Persia in 1261 or 1262. Another factor that kept Hulegu from going east was that the grasslands of northern Persia were suitable for maintaining Mongol soldiers and their horses. Consequently, he established the seat of his authority at Maragheh, located in present-day southern Azerbaijan.

His son and successor Abaqa (1265–1282) moved the capital to Tabriz in Iran, which served this function until Oljeitu Khan (r. 1304–1316) built a new capital city, Sultaniyya, in Iran. Abaqa also built a palace known as Takht-i Suleyman, which was decorated with Chinese and Islamic motifs. This new Sino-Islamic decorative vocabulary became the dominant feature of late medieval Islamic art.

Although the Il-khanids built lavish permanent palaces, they did not abandon the Mongol custom of living in *gers* (known to the Turks as *yurts*), or circular tents with an internal wooden frame. However, unlike the simple felt *gers* of the steppes, these tents were extremely luxurious, often woven with silks and embroidered with gold.

The short reigns of Teguder Ahmed (r. 1282–1284), Arghun (r. 1284–1291), and Geikhatu (r. 1291–1295) were followed by the longer and more significant reign of Ghazan (r. 1295–1304). Up to this point the il-khans had largely been shamanistic animists who favored Tantric Buddhism, although Teguder had converted to Islam, and Arghun seems to have taken Buddhism seriously and patronized Persia's Assyrian (Nestorian) Christians. As soon as Ghazan succeeded to the throne, however, he wholeheartedly converted to Islam, thereby ending the il-khanate's nominal subordination to the Great Khans in China. At the same time, political relations between China and the il-khanate continued because of the threatening presence of the Golden Horde and the Mamluks of Syria and Egypt.

Ghazan attempted to reform the il-khanate's economy with the help of his chief minister Rashid al-Din, a Jewish convert to Islam, physician, theologian, historian, and statesman. In order to secure a stable source of revenue, Ghazan imposed a new tax system and ordered all properties registered for taxation. Coinage and the official system of market weights were also reformed, at least officially, and the postal system was improved in order to expedite the delivery of documents and decrees across the il-khanate and to ensure the safe travel of envoys. The most significant reform attempted was paying a regular salary to soldiers rather than allowing them to enrich themselves through plundering. How effective all of these attempted reforms were is open to question.

Ghazan's brother Oljeitu (r. 1304–1316) succeeded to the il-khanate and managed to expand its territory to the Caspian Sea. Other than that, his most important contribution was as patron of a major building program, especially of religious structures. He ordered his own mausoleum to be constructed at his new capital city, Sultaniyya. Another of his contributions to medieval Persian culture was commissioning Rashid al-Din to write the *Jam al-Tawarikh* (*Collection of Histories*), a massive world history that ranges from China to the West, covering such topics as Jewish history, pre- and post-Islamic Persia, the Prophet Muhammad, the caliphs, and, of course, the Mongols.

After this brief revival, the 11-year-old Abu Said (r. 1316–1335) took the throne. Although he eventually was responsible for a significant change in Il-khanid foreign relations by making a peace treaty with the Mamluks, he could not save the il-khanate from collapse. He died without an heir, and with his death the il-khanate essentially ceased to exist.

The il-khanate lasted less than a century, but the Mongol impact on Persia and the rest of Eastern Islam was neither short-lived nor insignificant. First and perhaps foremost, the sense of legitimacy that came with a claim to being a descendant of Chinggis Khan served well Timur-i Leng, founder of the succeeding Timurid dynasty of Persia, and Babur, founder of India's Mughal dynasty. Second, as patrons of the arts, the Mongols helped bring Persian culture to a new level, especially with the new assimilation of Chinese motifs and styles that resulted in a form of Persian art and architecture that would have a profound impact on Islamic tastes and artistic production from the Mediterranean to India, namely on art of the Ottomans and the Mughals as well as the Timurids.

—Kumi S. Martin

Bibliography

- Goldschmidt, Arthur, Jr. *A Concise History of the Middle East*. Boulder, CO: Westview, 1997.
- Morgan, David. *Medieval Persia, 1040–1797*. London: Longman, 1988.
- Morgan, David. *The Mongols*. London: Blackwell, 1986.
- Rashid al-Din. *The Successors of Genghis Khan*. Translated from the Persian by John Andrew

Boyle. New York: Columbia University Press, 1971.

Timur-i Leng's Empire

Known in the West as Tamerlane, Timur-i Leng (ca. 1330–1405) ruled a Central Asian empire from his capital at Samarqand (in present-day Uzbekistan, where today he is a national hero). Timur (more correctly, Amir Temür), who was Mongol by descent, Turkic in speech and culture, and Muslim in religion, was born into the Barlas tribe near Kish (south of Samarqand) in the late 1320s or early 30s. There is no good reason to accept as fact the traditional birth date April 9, 1336. Kish was then located within the Chaghatay khanate, which Chinggis Khan had bequeathed to his son of that name in 1227. Timur acquired the Persian nickname *leng* (or *lang* or *link*), meaning “the lame,” because of wounds that he received in an ambush in 1363/1364, which left him permanently lame in his right leg and with a crippled right arm. At some unknown time, he also lost two fingers in his right hand. These disabilities did not stop him from acquiring a deserved reputation as a skillful and brave warrior. His given name, Timur, which means “iron” in Turkish, proved fitting for a would-be world conqueror whose campaigns were characterized by wanton massacres and terror tactics.

The Chaghatay khanate, the smallest of the four divisions of the Mongol empire, encompassed the core of Central Asia. In the southwest, it extended into Afghanistan, and in the east, its neighbors were China and Mongolia. To the north, it slightly reached into (present-day) Kazakhstan, and in the south, it was bordered by India and Tibet. After the Great Khan Khubilai moved his capital to northern China in 1274, the Chaghatay khans enjoyed a great deal of autonomy. By the late 1330s, however, the khanate was divided into two: Mughulistan (the land of the Mongols) to the northeast, a land of steppes and mountains, whose people were still largely traditional pastoralists and animistic in religion, and Transoxiana (also known as the Ulus Chaghatay) in the southwest, which was centered on the ancient, now Islamic cities of Bukhara and Samarqand. Timur's homeland and future seat of



power was in Transoxiana, where he established the Timurid dynasty, which flourished for only a century after his death (1405–1506) but which gave birth to the great Mughul dynasty of India (1526–1857). Timur never managed to incorporate Mughulistan into his empire, and its khans survived into the mid-seventeenth century.

Timur, who began his career as a brigand, supported the initial invasion of Transoxiana in 1360 by the Chaghadayid khan of Mughulistan, Tughluq Temūr (r. 1347–1363). For his support, Timur was made chief of his tribe and *amir* of the region around Kish. When Tughluq Temūr returned in greater force in 1361, he installed his son Ilyas Khoja as ruler of Transoxiana. Now unable to accept Mughul rule, Timur went into exile in Khorosan, recruiting supporters. In 1364, Timur-i Leng and his ally Amir Husayn overthrew Khoja, and Husayn declared himself head of Transoxiana, while appointing a puppet Chaghadayid khan to legitimate his rule. In 1366, Timur and Husayn seized Samarqand, ruthlessly killing off

rival Turkish rebels who held the city against the Mughuls. In 1370, the two allies fell out, and Timur acquiesced in the murder of Husayn, his sons, and Husayn's khan. He then married Husayn's widow, a princess of the blood of Chinggis Khan, thereby legitimating his rule over Transoxiana. Through this marriage he acquired the title *güregen* (royal son-in-law). He also installed his own puppet Chaghatai khan, contenting himself with the title *amir* (commander), in order to maintain the fiction that he ruled in the name of the Chaghadayid dynasty. On April 9, 1370, he assembled a *khuriltai* (princely assembly) of Ulus Chaghatai tribal leaders at Balkh, a city chosen because of its association with two other world-conquerors—Alexander the Great and Chinggis Khan. The *khuriltai*, which by tradition was the assembly in which a khan was acclaimed and accepted, formally acknowledged his authority. He also began to turn Samarqand into the splendid capital of an emerging empire that he ruled autocratically.

Timur was ever mindful of the imperial model established by Chinggis Khan and his immediate successors. However, instead of claiming the support of an indeterminate Heaven, as a Muslim he claimed to have the special blessing of Allah to establish a world empire—a sanction received through the agency of an angel. He further understood that first he must become master of his own region, uniting all tribes as Chinggis had done, and with this in mind he set out to reunite the entire Chaghatay khanate. In addition to adding to his prestige and power base, this policy also enabled him to unite more fully the fractious tribes of Transoxiana by employing their energies in war and winning their loyalty with booty. Conquest, in other words, became his chief political tool.

In 1370 he initiated a series of campaigns to conquer Mughulistan, which failed, leading to a peace accord and alliance in 1397. He was more successful in his invasion of Khorezm to his northwest, a region immediately south of the Aral Sea that commanded the rich routes of the Silk Road and which he invaded in 1372. In 1379, his army brutally sacked Urganch, ending the prosperity of a once-vital mercantile city. With this flank secured, he began his expansion westward.

Often Timur cloaked his campaigns in the mantle of religion, claiming they were jihads against infidels and deviant Muslims, but his brand of Islam was pragmatic and not ideological, despite his patronage of Sufis. Probably several million Shia and Sunni Muslims died horrible deaths as his armies rampaged through the heart of Dar al-Islam. Islamic lands that felt his wrath between 1370 and his death in 1405 (as he was preparing to invade China) included regions encompassed by the modern nations of Afghanistan, Azerbaijan, India, Iran, Iraq, Kazakhstan, Kyrgyzstan, Pakistan, Syria, Tajikistan, Turkey, Turkmenistan, and Uzbekistan. Likewise, he swept through Christian Armenia, Georgia, Russia, and Ukraine. Everywhere the progress of his armies was marked by mountains of skulls, and many of the fortunate survivors were enslaved. Systematic terror was one of the chief weapons in his arsenal.

Two of Timur's more significant campaigns were his invasion of northern India and sack of Delhi in 1398, a feat accompanied by frightful

➤ TIMUR-I LENG'S JUSTICE

In 1402–1403, Timur conducted diplomatic exchanges with a number of European Christian rulers who sought an alliance with him against the Ottoman Turks, whom Timur had defeated in 1402. One of those princes, King Henry III of Castile-León, dispatched three envoys to Samarqand, two of whom survived the journey of almost 3,000 miles (approximately 4,800 kilometers), arriving at Timur's court in summer 1404. The envoys failed to get a commitment from Timur, who was then preparing to invade Ming China. Not all was in vain. One of the ambassadors, Ruy González de Clavijo, produced a detailed account of what he experienced and saw, and it is one of our best eye-witness sources for the next-to-last days of this aspiring world-conqueror. Here he describes Timur's preparations for the wedding of his grandson in October 1404.

“By proclamation . . . he [Timur] let it be known that although he intended to gratify and give enjoyment to all the common-folk at his festival, he also intended to give a warning and make an example of those who had offended him and done evil deeds, and he would proceed to the public execution of criminals.

The first of those to suffer his justice was the chief mayor of Samarqand. . . . Earlier, when Timur had set out on his late expedition . . . this man had been appointed chief magistrate, and Timur left him as governor of Samarqand. But his Highness had learned since his return that this man had betrayed his trust, using his office to misgovern and oppress the people. He now commanded this . . . chief mayor to be brought before him, and after judgment, he was immediately taken out and hanged without delay. All the wealth he had so unjustly gathered was forfeited to the state. This act of high justice in which a person of such high rank (and notably one in whom his Highness had placed much trust) was condemned to death, made everyone tremble.”

—Alfred J. Andrea

Source

Ruy González de Clavijo, *Embassy to Tamerlane, 1403–1406*, translated by Guy Le Strange (New York: Harper Brothers, 1928), 249–250. Text modernized by Alfred J. Andrea.

slaughter, and his defeat, capture, and humiliation of the Ottoman Sultan Bayazid I at Ankara in 1402. The former reduced the sultanate of Delhi to a conglomeration of petty states that barely held on until Babur (1483–1530), a direct descendant of Timur, invaded and conquered northern India from his base in Afghanistan and established India's Mughul dynasty in the early sixteenth century. The latter set back the Ottoman advance against the Byzantine empire and gave Constantinople an additional half century of freedom from conquest.

Timur's campaigns and regime in Central Asia have been credited with having caused a precipitous decline of both animism and Assyrian (Nestorian) Christianity among various Turkic peoples, but there is no hard evidence to support that conclusion. His destructive campaigns across Central and Southwest Asia have also been blamed for shutting down the ancient Silk Road. This is an oversimplification. Silk Road traffic had already suffered a serious drop-off due to two mid-fourteenth-century phenomena, the Great Eurasian Pandemic (the so-called Black Death) and the Mongols' loss of China. Arguably, because Samarkand now became a magnet for scholars and artists, as well as merchants and diplomats, Timur and his family bestowed a century-long Indian Summer on the Silk Road. Timur has also been characterized by some as a military "flash-in-the-pan," who left behind nothing of political or cultural consequence. It is true that many of Timur's conquests in the West were ephemeral, but he left behind a fairly stable, albeit quickly truncated, Central Asian state ruled by a family noted for its century-long patronage of the arts, learning, science, and religion. What is more, he continued a tradition of Mongol thunder from the steppes that would serve his descendant Babur well in his conquests in Afghanistan and India.

—Alfred J. Andrea

Bibliography

- Manz, Beatrice Forbes. *The Rise and Rule of Tamerlane*. Cambridge: Cambridge University Press, 1989.
- Marozzi, Justin. *Tamerlane: Sword of Islam, Conqueror of the World*. Cambridge, MA: Da Capo Press, 2006.

The Early Ottoman Sultanate, 1300–1500

The legend goes that the ancestor of the Ottomans, Osman (ca. 1260–1324), saw himself in a dream slumbering with his saintly companion, the Sufi sage Edebali. A full moon rose from the chest of Edebali and sank upon the bosom of Osman and disappeared. Then a miraculous tree sprang forth from Osman's chest and grew in strength and beauty until its leaves and branches shadowed the whole earth. Under the tree, mountains stood high, rivers flowed from the roots of the mountains, and people drank from the water, watered their vegetation, and erected springs for others. After hearing the dream, Edebali knew that the moon was his daughter and the tree was the kingdom given to Osman and his progeny. Osman and Edebali's daughter were married. Osman's dynasty was destined to rule the world.

Attributed to its founder Osman, the Osmanli, or Ottoman, sultanate originated in the northwestern frontiers of Anatolia in the wake of the Mongol conquests of the thirteenth century. From a frontier principality in the beginning of the fourteenth century, the Ottoman sultanate evolved into a formidable empire on the Afro-Eurasian landscape in the sixteenth century. It embraced and furthered existing cultural traditions in the territories it ruled and brought into contact otherwise disconnected regions and cultures. The multi-cultural, multi-ethnic Ottoman empire survived the debacles of modern history until the beginning of the twentieth century, when it was replaced by the Republic of Turkey and more than 30 nation-states in its European, Asian, and North African territories.

The history of the Ottoman origins is a complicated journey deserving a world-historical context. The Ottomans originated from Turkic-speaking nomadic tribes in northern Mongolia. In their westward migration during the tenth century CE, these migrating tribes came into contact with Muslims largely through missionary activities, which commenced a process of sometimes slow and at other times en masse conversion to Islam. Paramount among these tribal groups was one led by a chieftain named Seljuk. Under his leadership, this group advanced into

the central Islamic lands and eventually dominated the Iranian plateau (1043), Iraq (1055), and Byzantine Anatolia following the victory in 1071 at Manzikert against the Byzantines, thereby leading to the formation of two coexisting Seljuk sultanates, the Great Seljuk empire and the sultanate of Rum. By the middle of the twelfth century, the larger part of Anatolia was governed by various Turcoman (Türkmen) principalities (*beyliks*), which strove to carve larger spaces for themselves against the Byzantines and each other.

The arrival of Turks into central Islamic lands initiated major changes beyond politics for both these Turkic-speaking people and the heartland of Islam. Recent converts to Sunni Islam, Seljuk leaders left the caliph in his post, being satisfied with the title “sultan” for themselves. They adopted the Perso-Islamic tradition of administration, politics, and culture in their new homeland, although they adamantly preserved the secular political traditions of Central Asia. Turkish continued to be spoken, but their high culture was expressed in Arabic and Persian. Seljukid colleges (*medreses*) produced Sunni scholars, and their system of land tenure (*iqta*), by which the administration of agricultural land was assigned to the military and administrative class in return for service, ensured effective control of the realm.

Mongol conquest of Anatolia accelerated the centrifugal movement of the Turcoman beyliks. Reduced to an ineffective vassal status, the Seljuks of Anatolia were undermined by the ambitious petty warlords (*beys*), who designated themselves *gazis* (holy warriors) struggling against Christian Byzantium and ruled over beyliks that only nominally recognized the suzerainty of the Seljuks and the Mongols. These numerous principalities, of which Osman’s beylik was but one, were constantly supplied with new migrants fleeing the Mongols. Osman’s dream illustrates well the ideology of this militant piety (*gaza*) prominent in West Asia in the wake of the Mongol conquests.

Located along the Byzantine frontier in northwestern Anatolia only a few miles east of Bursa, Osman’s beylik rose to prominence after inflicting a major defeat on the Byzantines at Baphaeon in 1301 by Osman himself and the capture

of Prusa (Bursa) by his son Orhan I (r. ca. 1324–1362) in 1326. Designed as a new seat of power, Bursa conferred an aura of permanency to the beylik, which minted its own coinage for the first time (1327) and established its first medrese, in Nicaea (renamed Iznik), immediately after its capture in 1331. The great leap of fortune for the Ottomans came after they were invited into the Balkans to get involved in an intra-Byzantine conflict. Orhan willingly crossed the Dardanelles in 1345 but was not equally enthusiastic about returning to Bursa. He established a stronghold in the Balkans, and eventually his successor Murad I (1362–1389) captured Adrianople (today Edirne) in 1361, making this ancient Southeast European city his new capital. The Ottoman crescent now encircled the faltering Byzantine empire and was poised to expand throughout the fragmented, conflict-ridden Balkans.

The consolidation and organization of the sultanate received favorable attention from Orhan’s son Murad I (r. 1362–1389), the first Ottoman to adopt the title of sultan for himself, and his son Bayezid I (r. 1389–1402). Murad contained the Byzantines and consolidated his power in Balkan Thrace with further expansion and the incorporation of local Christian knights, noblemen, and soldiers in his service. Bayezid I turned his attention to the Anatolian frontier and consolidated his authority over much of the Anatolian Peninsula. With the efforts of both sultans, a central bureaucracy and a professional army began to take shape, further removing the Ottomans from their nomadic roots and social formation. Central bureaucracy, tax collection, provincial administration, and the army were all organized and reorganized to allow the sultan direct control of his realm. The institution of a slave army was not new, but what Murad I and particularly Bayezid I created was ingenious. They recruited male children (*devşirme*) from Christian Balkan families as a levy. The children were raised as Muslims and given appropriate education and training to serve the sultan. Depending on their abilities and education, they were employed in either the civil administration or the military. The *devşirmes* served the Ottomans as the core imperial army known as the Janissaries (*yenîçeri*, or “new soldier”) until they were abolished in the early nineteenth century.

➤ BURSA—FIRST OTTOMAN CAPITAL



Green Tomb of Mehmed I, reigned 1413–1421. (Mattes/StockphotoPro)

After the Ottoman conquest of Bursa (Greek: Prusa) in 1326, this northwest Anatolian city became the Ottoman capital and remained its sole capital city until 1365, when the Ottomans conquered Adrianople (Edirne) in the Balkans. Edirne then became a co-capital from which the Ottomans governed their expanding holdings in Southeast Europe and from which they tightened the noose around Constantinople. Bursa remained the administrative center for the more expansive Ottoman lands in Anatolia, and it remained so until Constantinople (Istanbul) was captured and transformed into the sole Ottoman capital. Nevertheless, Bursa remained a major center for provincial administration.

—Alfred J. Andrea

By the fifteenth century, the Ottoman beylik was transformed into a prominent sultanate and was poised to incorporate Byzantium. However, everything came to a sudden halt in 1402. The Çagatatay Turkish conqueror Tamerlane (Timur-i Leng) claiming heirship to the Mongols and having swept across western central Asia since 1360, inflicted an almost-mortal blow to the Ottomans in the middle of the Anatolian Peninsula. At Ankara, the site of Turkey's modern capital, he destroyed Bayezid's army; captured the sultan, who died a few months later of grief; and pursued the remaining Ottoman army across the Dardanelles. What remained of the Ottomans after the battle was, for more than a decade, a bitter civil war among Ottoman princes over whatever they could salvage from the ruins.

When fraternal strife finally diminished, Mehmed I (r. 1413–1421) was recognized as sultan in 1413. He recovered much of his father's territories and struggled to pacify rebellions by princes, centrifugal Turcoman tribal groups, and charismatic religious figures. His son Murad II (r. 1421–1451) undertook a major rebuilding project. He consolidated the Ottoman territories, erased the effects of the civil war, revitalized the *devşirme* recruitment system, and attended the rebuilding and restoration of prominent cities. When he passed away and left his throne to Mehmed II (r. 1451–1481), the Ottoman sultanate was secure, centralized, and prosperous and, far from its origins, was a sedentary Islamic empire.

Mehmed II, known as “the Conqueror” (Fatih), exemplified the inauguration of the Ottoman classical age. The landmark achievements of Mehmed II were the capture of Constantinople in 1453 and the uniting of his sultanate's territories in the Balkans and Anatolia. He put Serbia under Ottoman control, eliminated the last vestiges of the Byzantine empire in Anatolia, and entered a protracted struggle with Venice until 1479. The economic, political, and psychological benefits of his conquest of Byzantium cannot be overestimated. It catapulted the Ottoman state from an upstart sultanate into an empire integral to the early modern Islamic Middle Eastern and European imperial politics. Mehmed II extended the function of the *devşirme* system to the detriment of Turkish aristocratic families, which he

viewed as dangerous to his throne, and organized the administration to shore up the responsibilities of government institutions. Another landmark achievement was the collection and promulgation of administrative laws (*kanun*), which were then put into codes (*kanunname*) to make up imperial laws. Ruling over a large Christian population, Mehmed II fostered the toleration and autonomy of religious communities in an arrangement to be later known as the *millet* (religious community) system. Constantinople underwent an overhaul, and the mushrooming new monuments gave the city its new Islamic character.

His conquest of Constantinople made Mehmed II immune to threats. However, his death in 1481 sparked another episode of confrontation between the *devşirme* and the Turkish aristocratic families over who would succeed him. The *devşirme* won the competition, and his son Bayezid II ascended the throne with their help and support. Unlike his father, Bayezid was a calmer sultan with little desire for further conquest. His limited successes in the Balkans and his inconclusive rivalry with the Mamluks in Egypt were overshadowed by his achievement in preserving the sultanate and providing a calmer period for political stability, urban and economic expansion, and administrative organization. By the beginning of the sixteenth century, the Ottoman sultanate was ready to become a naval power and a formidable contender in the rivalry for the supremacy in the Mediterranean. When Selim I ascended the throne in 1512, the Ottomans were facing another great threat from the East, the newly emerged but extremely active power, the Safavids, who came to occupy a good portion of his reign.

—Hayrettin Yücesoy

Bibliography

- Finkel, Caroline. *Osman's Dream*. New York: Basic Books, 2006.
- Goodwin, Jason. *Lord of the Horizons: A History of the Ottoman Empire*. New York: Holt Paperbacks, 2000.
- Imber, Colin. *The Ottoman Empire, 1300–1481*. Istanbul: Isis, 1990.
- İnalcık, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. London: Weidenfeld and Nicolson, 1973.

Kafadar, Cemal. *Between Two Worlds: The Construction of the Ottoman State*. Berkeley: University of California Press, 1995.

McCarthy, Justin. *The Ottoman Turks: An Introductory History to 1923*. Harlow, Essex, UK: Addison Wesley Longman, 1997.

Shaw, Stanford J. *History of the Ottoman Empire and Modern Turkey*, Vol. 1, *Empire of the Gazis: The Rise and Decline of the Ottoman Empire, 1208–1808*. New York: Cambridge University Press, 1977.

Al-Andalus

By the year 1000, Muslims had ruled Al-Andalus for almost 300 years. The greatest years of Islamic rule began with Abd al-Rahman I (756–788), a nephew of the Umayyad caliph, who fled Syria in 750 because of his family's defeat by the Abbasids and arrived in the Iberian Peninsula several years later. He established his capital at Córdoba, where his descendants ruled for the next 250 years. A caliphate (in opposition to the Abbasids at Baghdad) was declared in 929 and ushered in a Golden Age of Islamic rule on the western edge of the medieval Mediterranean Islamic world.

However, the strength of the Umayyads in Al-Andalus was not as great as it appeared, and the dynasty weakened after 1000 CE. The spread of a *fitna* (a civil war with religious implications) broke out and resulted in the collapse of the caliphate in 1031. With the loss of centralized rule, the peninsula divided up into more than 20 small kingdoms called *taifas* (factions). Berber tribes ruled the *taifas* of Málaga, Granada, Valencia, Badajoz, and Toledo, while Arab families ruled those of Seville and Zaragoza. Despite political fragmentation, this period was a time of flourishing culture in the arts. One extant architectural example is the palace complex of the Aljafería in Zaragoza (Saragossa) built by the Ibn Hud family.

The weakening of Islamic rule in the Iberian Peninsula gave Christian rulers to the north an opportunity to expand their territories at the expense of their Muslim neighbors. The *taifa* kingdoms were militarily shaky, so they asked for help from an emerging Berber dynasty in North Africa, the Almoravids (1056–1147), that had

► THE ALHAMBRA

The Alhambra is an Islamic palace-city located adjacent to the city of Granada. Its name derives from *al-qasr al-hamra* (red palace) because of the iron-rich earth used to construct its walls. The hilltop site dates back to at least the ninth century, when troops of the Umayyad emir Abd al-Rahman II (822–852) stayed there. The site was also occupied by the Zirid taifa kingdom in the eleventh century, the Almohads in the twelfth century, and the Nasrids in the thirteenth century.

The Alhambra's greatest expansion was done in the fourteenth century under the Nasrid sultans Yusuf I (1333–1354) and Muhammad V (1354–1359, 1361–1391). Completely surrounded by walls, the Alhambra became a permanently inhabited palace-city that also served as the capital for the dynasty. Gardens, mosques, markets, prisons, a mint, a cemetery, and housing for service personnel were all found within the walls. Although self-sufficiency was never a factor, there were storage spaces for food, and small vegetable gardens and fruit trees were kept throughout the grounds.

After 1492 the Alhambra became a seasonal residence for the Spanish monarchy. The city fell into disrepair by the 1700s and was partially destroyed by Napoleon's troops in 1812. After use as a powder magazine, a fish-cleaning operation, and a home for transients, the site was largely taken over by the Spanish provincial government in the late nineteenth century and is today one of the leading tourist attractions in Spain.

—April L. Najjaj

been founded by the military and religious leader Yusuf ibn Tashufin. They established a capital at Marrakesh in 1062 and expanded throughout North Africa. Upon arrival in Al-Andalus, their disapproval of the lifestyles of the *taifa* rulers led them to not only fight the Christians but also take over most of the small kingdoms and eventually place all of Al-Andalus under Almoravid rule.

Back in North Africa, a second Berber dynasty, the Almohads (1130–1269), defeated the Almoravids and built an empire that stretched from present-day Morocco to Tunisia and Tripoli in the east. Their founder, Ibn Tumart, died in

1130 and did not live to see the triumph of the group he founded. The Almohads killed the last Almoravid ruler in 1147, incorporated Al-Andalus into their empire, and established a northern capital at Seville. Despite their religious intolerance, the Almohad period produced works of literature, philosophy, and architecture, such as La Giralda, the present-day bell tower of the cathedral of Seville, the remains of a mosque's minaret that was built around 1185. It has a twin in Marrakesh, Morocco.

Almohad rule in Al-Andalus did not endure much longer than the Almoravids. Defeat at the hands of Christian forces at Las Navas de Tolosa in 1212 signaled not only the end of the Almohads but also the beginning of the end of Islamic rule throughout Al-Andalus. The ensuing power vacuum allowed Christian armies to conquer cities that had been ruled by Muslims for more than 500 years: Córdoba in 1236, Valencia in 1238, and Seville in 1248. Internal weaknesses among Christian rulers in the north, however, led to increasing disagreements, and the Reconquista faltered and ground to a halt, leaving southern portions of the peninsula in Muslim hands.

The last Islamic dynasty of Al-Andalus, the Nasrids (1238–1492), was founded by Muhammad Ibn Nasr (1195–1273), who established a capital at Granada. As Muhammad I, he began renovations on a residence located on top of a hill adjacent to the city that was greatly expanded over the next 100 years. Known as the Alhambra, the site became the permanent royal residence for the Nasrid dynasty. Granada itself overflowed with refugees streaming in from northern cities recently conquered by the Christians. This latest kingdom, however, was just a shadow of the former Al-Andalus, which by now only included the tip of the peninsula south of the Guadalquivir River.

Sandwiched between the northern Christian kingdoms and the Marinids of North Africa who had displaced the Almohads, the Nasrid sultans ensured their survival for the next 250 years through the accident of geography (mountains to the north, sea to the south) as well as the exercise of careful diplomacy and regular tribute payments. Throughout its history, however, the dynasty was plagued by family squabbles and political intrigue, with the result that few Nasrid

sultans died of natural causes. The height of the dynasty was with Yusuf I (1333–1354) and his son, Muhammad V (1354–1359, 1361–1391).

The last century of Islamic rule can be described as brief periods of peace between ongoing war with the Christians. Dissent within the Nasrid ruling family had further destabilized the government, and rampant inflation with recurring food shortages led to widespread discontent and revolt. The last Muslim ruler of Spain, Muhammad XII (1486–1492), known to the Spanish as Boabdil, entered into negotiations with Fernando and Isabel and surrendered in the Alhambra on January 2, 1492. He eventually died in exile in North Africa.

Boabdil surrendered in part because of the *Capitulaciones*, an agreement signed with Fernando and Isabel in 1491 that allowed the Muslim population of Granada to continue practicing its religion and living under its own law. In addition, they were assured that they could keep property and stay in the country if they wished or be free to sell their property at a fair price and leave for North Africa. Despite these assurances, the Spanish government declared the *Capitulaciones* null and void by 1500, and the last Islamic communities of Al-Andalus were forced to convert to Christianity. Nevertheless, the new converts (now called Moriscos) were still culturally Muslim and never assimilated to the new political, social, and religious realities of

sixteenth-century Spain, thereby engendering investigation and persecution by the Spanish Inquisition. They were eventually expelled from the country by 1614.

Al-Andalus ceased to exist as a political entity in 1492, but the reality of almost 800 years of Islamic rule in the Iberian Peninsula endures in the historical memory of not only Spain but also the whole of the Islamic world. Large numbers of Muslim refugees left the newly unified Catholic Spain and made their way to North Africa. Even today, there are many social and cultural similarities between people in southern Spain and northern Morocco. This legacy is not only in North Africa but throughout the Middle East as well, and historians, poets, and artists in the Islamic world remember with pride and nostalgia the centuries of Islamic rule in Al-Andalus.

—April L. Najjaj

Bibliography

- Fletcher, Richard. *Moorish Spain*. New York: Henry Holt, 1992.
- Grabar, Oleg. *The Alhambra*. Cambridge: Harvard University Press, 1978.
- Harvey, L. P. *Islamic Spain, 1250 to 1500*. Chicago: University of Chicago Press, 1990.
- Jacobs, Michael. *Alhambra*. New York: Rizzoli International Publications, 2000.
- Reilly, Bernard F. *The Medieval Spains*. Cambridge: Cambridge University Press, 1993.

■ Introduction: India—The Heart of the Indian Ocean Community

The Indian Ocean was the economic and cross-cultural center of Afro-Eurasia in the period 1000–1500, although the largely land-fixed Mongol empire challenged that position for a bit more than a century. Given the Indian Ocean's role in joining Africa and Southwest Asia to East Asia, it is not surprising that the Indian subcontinent served as the heart of this great ecumenical complex of cultures and politics. India, as had been true for essentially all of its history to that time, was politically divided

during these centuries, but that was a major factor contributing to its role as the essential core of Afro-Eurasia.

The sultanate of Delhi ruled over the northern regions of India from the early thirteenth century to 1526, and the successive Turco-Afghan dynasties that held the sultanate tied India to the Central Asian lands that lay beyond northwestern India's Hindu Kush mountain range and, more significantly, to the larger world of Dar al-Islam. Because of the sea routes of the Arabian

Sea, the Persian Gulf, and the Red Sea, western India had been connected economically and culturally with the lands of Southwest Asia, most notably present-day Iraq and Iran, since antiquity, but its ties were now far closer. This was due not only to improved seagoing vessels and navigation tools but also to the simple fact that the rulers of these regions shared a common religion. Moreover, Muslims from much farther away also had good reason to seek opportunities in India, even though Muslims constituted only a small percentage of the sultanate's inhabitants. In fact, because of that demographic imbalance, adventurous Muslims from afar sought political preferment in northern India.

On September 12, 1333 (or 1335), Ibn Battuta, a native of Tangier, Morocco, crossed into the Indus Valley from Afghanistan and from there traveled to the court of Sultan Muhammad Tughluq. The sultan and his predecessors had been successfully holding off Mongol advances for more than a century and, along with the Mamluks of Egypt and Syria, had earned the reputation as premier champions of Islam. This reputation and the fact that the sultanate was a refuge from the Mongol scourge added to its allure, as skilled and learned Muslims, especially from Southwest Asia and western Central Asia, streamed into Delhi and other cities of the north, transforming them aesthetically and culturally. Joining them were many persons on the make who possessed more confidence and ambition than skill or learning. Such a one was Ibn Battuta. Although his legal studies had been spotty, he was invested with the office of *qadi*, or religious judge, an office he held for about seven years, becoming an exceedingly rich man in the process.

Around 1340 Ibn Battuta traveled south to India's Malabar Coast from where he planned to travel on a diplomatic mission to the court of the Yuan emperor of China, Toghun Temur. As Ibn Battuta made his way down the west coast, he discovered a number of small, fairly autonomous maritime principalities that competed for the lucrative oceanic trade that passed through India's ports on both coasts. At Kozhikode (known to the Arabs as Kalikut and later to the British as Calicut), he discovered that the local ruler, the *samudri raja*, promoted commerce by cere-

moniously welcoming and protecting merchant visitors, including ensuring the integrity of shipwrecked cargoes and returning them whole to their owners. Another traveler to Kozhikode, the Muslim-Chinese Ma Huan who arrived there one or more times while with the fleets of Zheng He in the early fifteenth century, reported that the local "king" appointed officers who negotiated fair prices for all merchandise and guaranteed that these prices would not be altered. Obviously, as was true for contemporary coastal Italy, the Swahili cities of East Africa, and many other entrepôts across the Indian Ocean, political autonomy and resulting competition were conducive to vibrant commercial activity.

South India had been active in Indian Ocean enterprises since at least the first century CE, with the Bay of Bengal to the east providing an avenue to Southeast Asia and beyond. The Chola dynasty, which enjoyed its apogee of power and influence from about 985 to roughly 1070 (but persisted into the early thirteenth century), gave its name to India's eastern shore, the Coromandal (Chola Circle) Coast. During its period of heightened power, this Tamil empire also controlled the Malabar Coast and extended its imperial reach to Ceylon (Sri Lanka) and the Maldiv Islands and as far east as Sumatra. The Chola dynasty's navy was the strongest in the Indian Ocean during the eleventh century, and in 1025 it defeated the fleet of Srivijaya, a maritime empire that encompassed the Malay Peninsula and many of the islands of present-day Indonesia. The singular artistic achievement of the Cholas was cast bronze religious statuary, especially of *Shiva Nataraja* (Shiva, Lord of the Dance). The fact that numerous Chola bronze statues of Buddhist and Shaivite (relating to Shiva) divinities have been found in the coastal regions of Southeast Asia is testimony of the far political, economic, and cultural reach of this empire down to the early thirteenth century.

Numerous other examples can be cited of the central role in the Indian Ocean played by India's numerous polities during these five centuries. Suffice it to say, to change the metaphor, that India was the fulcrum of the Indian Ocean from well before 1000 CE and continued to play that role during this half millennium, just as the

Indian Ocean was the center of Afro-Eurasia. It was no simple happenstance that brought the fleets of Zheng He and Vasco da Gama to India at the very beginning and very end of the fifteenth century.

—Alfred J. Andrea

The Late Chola State in Southern India, 1000–1250

It was during the last phase of its reign, often identified as the medieval phase of empire, that the Chola dynasty reached its apex. Whereas the earliest Chola phases are quite difficult to identify and study due to scant evidence, this last period is far clearer, confirming the dynasty's wide-ranging influence and power.

With the invasion of northern Sri Lanka by Rajaraja Chola I (r. 985–1014) that was completed by Rajendracola Deva I (r. 1014–1044), the establishment of control of the Gangavadi district by Rajaraja Chola I (r. 985–1014) located today in the modern state of Karnataka in southwestern India, the conquest of Kerala (approximately by 996) on the Malabar Coast, and the invasion by Chola fleets of the Malay Archipelago by Rajendracola Deva I (r. 1014–1044), Chola expansion extended far beyond the traditional boundaries of the Tamil cultural area. Nevertheless, the last two centuries of the empire were marked by resistance and the reemergence of forces previously kept under control by the Cholas, forces that now claimed their own suzerainty and tried to reaffirm their ambitions of independence. Thus, the Sinhallas in Sri Lanka, the Chalukyas in the western Deccan Plateau of south-central India, and the Tamil Pandyas in their traditional territories in southern India never ceased being a threat to the empire. For this reason, starting in the tenth century, in order to keep the equilibrium of power in the region, Chola sovereigns were often engaged in battle with the many ethnic-political components of southern India.

This last phase also saw many great Chola sovereigns who were able to extend and consolidate the empire's boundaries and administer the state ably. The first great emperor responsible for a number of Chola successes during this medieval phase was Rajaraja I who, at the end of his reign,

SHIVA NATARAJA (SHIVA LORD OF THE DANCE)

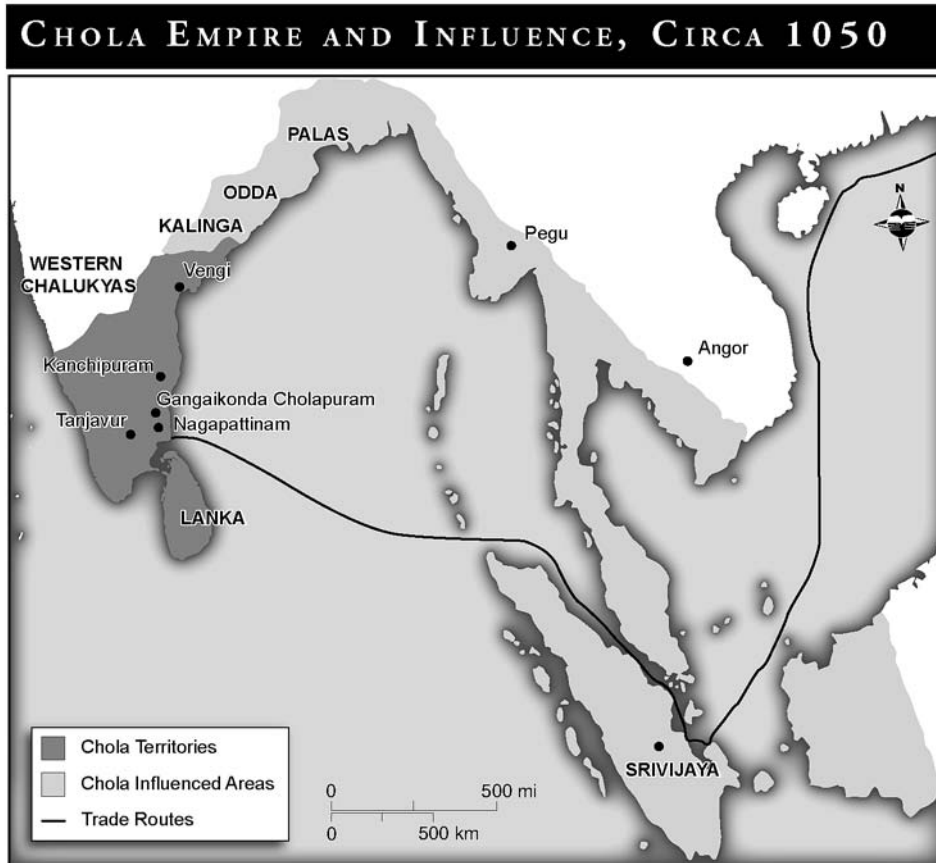


(Jupiterimages)

The most famous sculptural motif of the southern Indian school, superbly rendered in bronze, is Shiva Nataraja, or Shiva Lord of the Dance. According to the Dravidian imagination, Shiva's dance, the *Nadanta*, epitomizes the conception of life as an eternal becoming. Here Shiva, the Lord, personifies the universal flux of energy in all matter, the forces of creation and destruction within the cosmic system.

—Sara Mondini

had annexed two archipelagos southwest of India: the Lakshadweep Islands and the Maldives. His son Rajendracola Deva I and his son's successor, Rajadhiraja (r. 1044–1054), were responsible for the further extension of the Chola dominions and their consolidation, while Kulothunga I (r. 1070–1122) and his immediate successors could be considered the last great monarchs to ascend the throne before the decline of the empire.



The Cholas constituted the first dynasty capable of dominating the entire southern portion of the Indian peninsula, extending their territory from the west to the east coast and controlling the whole region south of the Tungabhadra River. Chola kings also were at the head of an efficient and all-pervading administration, assisted by a strong bureaucracy that was competent in executing orders and mandates. They were patrons of religion, especially the cult of Shiva, and great constructors of temples, such as the great granite temple of Brihadisvara at Thanjavur built by Rajaraja I as a testimony to his dynasty's relationship with the Divine Order. Moreover, they not only patronized religious centers but also focused on numerous worldly activities, such as commerce. Their building of a large naval fleet was not only of crucial importance for their overseas conquests but was also one of the main channels through which they extended their influence and commercial and cultural contacts within the greater South Asian network.

In the affirmation and consolidation of their empire, the Cholas also gave great importance to the arts. This medieval imperial period was characterized by the primary role accorded to Tamil culture, which enjoyed its Golden Age during these centuries. Regrettably, the majority of the Tamil literary production of this period has been lost, but the great number of literary citations and engraved inscriptions enable us to trace the outlines of numerous medieval masterpieces. The pouring out of a considerable quantity of high-quality Tamil devotional literature, especially poetry, was undoubtedly closely connected with the contemporary revival of Brahminical Hinduism, especially the cults of Shiva and, to a lesser extent, Vishnu, and the consequent erection of a large number of temples, the most important of which were dedicated to Shiva. In continuing the previous Pallava building traditions, the Cholas were able to offer a significant contribution to the further development of a Dravidian temple style. Starting in the tenth century, Chola sover-

eigns began to promote and patronize structures on a large scale. These temple complexes were enriched outside and within by elegant relief sculptures and freestanding bronze statuary. Indeed, the art of bronze sculpture reached an unparalleled level of beauty, sophistication, and technical brilliance during this age. One notable example was the emergence of the sculptural motif known as *Shiva Nataraja* (Shiva Lord of the Dance) that became a veritable hallmark of Chola religious culture. The two most brilliant results of Chola patronage are the aforementioned Shiva temple of Thanjavur (completed around 1009) and the temple of Gangaikondacholisvaram at Gangaikondacholapuram (completed around 1030). Each of these temples has been declared a World Heritage Site by UNESCO because each perfectly incarnates the maturity and grandeur of Chola architecture and art.

The decline of the dynasty seems to have begun around the first half of the thirteenth century with a progressive loss of Chola importance and prestige and the dynasty's replacement in southern India by the Pandyan empire, at that time at its apex.

—Sara Mondini

Bibliography

- Ali, D. "War, Servitude and the Imperial Household: A Study of Palace Women in the Chola Empire." In *Slavery & South Asian History*, edited by I. Chatterjee and R. M. Eaton. Bloomington: Indiana University Press, 2006.
- Chopra, P. N., T. K. Ravindran, and N. Subrahmanian. *History of South India: Ancient, Medieval and Modern*. New Delhi: S. Chand, 2003.
- Day, U. N. *Some Aspects of Medieval Indian History*. Delhi: Kumar Bros., 1971.
- Gilmartin, D., and B. B. Lawrence, eds. *Beyond Turk and Hindu: Rethinking Religious Identities in Islamic South Asia*. New Delhi: India Research Press, 2002.
- Heitzman, J. "State Formation in South India, 850–1280." In *Indian Economic Social History Review* 24 (1987): 35–61.
- Kulke, E., and D. Rothermund. *History of India*. London: Routledge, 2004.
- Sastri, K. A. N. *A History of South India from Prehistoric Times to the Fall of Vijayanagar*. Oxford: Oxford University Press, 1958.
- Stein, B. *A History of India*. Cambridge, MA: Blackwell, 1998.

Thapar, R. *Recent Perspective of Early Indian History*. Columbia, MO: South Asia Books, 1995.

Wolpert, S. *A New History of India*. Oxford: Oxford University Press, 2004.

The Arrival of Islam and the Sultanate of Delhi

As early as around 711 there was a Muslim presence in Sind (the area of the lower Indus that today is part of Pakistan), after the Umayyad governor of Iraq sent in a military force to combat local pirates, but Islam, as a political entity, advanced no farther into the Indian subcontinent for almost three centuries. In 997 Mahmud of Ghazni (971–1030), a Turkic warrior from a remote area south of modern-day Kabul near the Afghan-Pakistani border, initiated the first of no fewer than 17 raids into the Punjab, in the northwest region of the Indian subcontinent. Before his death Mahmud, known as "the Sword of Islam," had transformed the region into a frontier province of his kingdom.

Mahmud was interested in northwestern India mainly as a source of wealth to finance expansion of his kingdom deeper into central Asia and the building of Ghazni, his capital city. Indeed, the wealth of India helped transform his Afghan kingdom into one of the most brilliant centers of eleventh-century Islamic culture. His systematic plundering also ruined the economy of the northern Hindu states. Mahmud's desire for plunder was reinforced by religious zeal and a desire to destroy Hindu temples and sacred images. For that he is also known as "the Image-Breaker." One court chronicler claimed, with exaggeration, that Mahmud's army razed 10,000 temples in the region of one city alone. Although these raids continued almost to his death, northern Hindu princes failed to see the danger and thus failed to unite.

Mahmud's kingdom disintegrated after his death, but in the twelfth century a new kingdom, called Ghur, arose near Ghazni. In 1185 Muhammad Ghuri conquered Lahore in northern India. In 1191 the Rajputs (literally "the king's sons," a Hindu ethnic group noted for its military abilities) defeated him, but the following year he came back and defeated the Rajputs, which gave him all of India right to the gates

➤ RAZIYYA—THE FEMALE SULTAN

When Sultan Shams-ud-din Iltutmish (r. 1211–1236) died, he was succeeded by his daughter Raziyya (after she had dispatched a brother or two). There are many legends about her, but little is actually known of her short reign. Apparently she was glamorous and single, and nobles clamored to marry her because of her beauty and the throne that would come with marriage. She stalled, and when she finally chose it was too late and the wrong political choice. She and her husband were killed in 1240, less than four years after her reign had begun, and a body of palace guards, known as “the Forty,” ruled for the next six years. Raziyya was one of the first and few women to reign over a Muslim kingdom (or, for that matter, to reign in India). Because she was a woman, however, her overthrow was almost a foregone conclusion, as was that of her Egyptian contemporary, Shajar al-Durr, who also fell victim to mamluk (slave-soldier) intrigue.

—Fritz Blackwell

of Delhi. Thereafter his generals conquered the eastern Gangetic plain clear through Bengal.

Unlike Mahmud, Muhammad’s purpose was conquest. He was successful in that pursuit for three broad reasons. First, the Hindu kingdoms of northern India were stagnant and disunited. Second, Muhammad’s armies, which included tough Afghan fighters and skilled Persian cavalry, were overall superior to those of the Hindus. The equally tough and skilled Rajputs were too few to stem the tide. Finally, as Muslims these Turkic warriors were more committed to their cause not only militarily but also religiously. By the time of Muhammad’s assassination in 1206 the entire north of India was under Muslim control. Muhammad was succeeded by his general Qutb-ud-din Aybak, a freed slave who founded the Delhi sultanate’s first ruling dynasty, the so-called Slave (Mamluk) dynasty (1206–1290).

The year 1206 is a landmark date. The Hindu era of governance over northern India was over; the Delhi sultanate would reign for 320 years through five successive dynasties. It was a new

era, with a startlingly new ingredient. These new rulers were not about to be assimilated into the Hindu mainstream in the manner of previous invaders such as the Rajputs, who had originated in Central Asia. First, they were Muslims. Second, they were proudly conscious of being conquerors and Turkic chieftains from Afghanistan and neighboring areas of central Asia. Consequently, for the next three centuries they refused to see themselves as Indians and retained a distinctly separate identity, even from those Hindus whom they managed to convert to Islam.

The term “Delhi sultanate” can be misleading if it is taken as applying to a unified kingdom or empire comprising northern India. It was the dominant political power of northern India, but it was more feudal than imperial in structure. The problem was the position of the sultan vis-à-vis the nobles. Typical of Indian political history from earliest times, there were pronounced centrifugal tendencies, with regional leaders establishing their own bases of power and challenging central authority in Delhi. Four changes of dynasty as well as frequent changes of sultans within dynasties and the inability of most sultans to exercise power over the nobles, who were able to maintain and make hereditary their regional power bases, prevented the development of empire. Indeed, it was the continuation of local rulers and the basically unchanged land and tax system that allowed for underlying stability, despite the relatively frequent changes at Delhi. On occasion a sultan or two did exercise supreme power, but it was based on military force and did not last after his death. Administrative infrastructure was never developed to the extent that successful sultans could rule without having to pay personal attention to day-to-day events.

—Fritz Blackwell

Bibliography

- Blackwell, Fritz. *India: A Global Studies History*. Santa Barbara, CA: ABC-CLIO, 2004.
- Jackson, Peter. *The Delhi Sultanate: A Political and Military History*. New York: Cambridge University Press, 1999.
- Qureshi, Ishtiaq Husain. *The Administration of the Sultanate of Delhi*. 5th rev. ed. New Delhi: Oriental Books Reprint Corporation, 1971.

The Kingdom of Delhi—Picking Up the Pieces after Timur-i Leng (Tamerlane)

Besides destruction and death, the immediate consequence of the invasion by Amir Timuri Leng, also known as Tamerlane, was its contribution to the fragmentation of the Delhi sultanate. According to the sources, in 1399 when Amir Timur left Delhi, the Indian capital was almost depopulated and in the grip of famine and plague, offering a scene of desolation and destruction. The last Tughluq sovereign, Muhammad Shah II (r. 1399–1413), had escaped from the city, and Timur-i Leng, before leaving, appointed Khizr Khan (r. 1399–1421) governor of Multan, Lahore, and Dipalpur.

The Tughluq sultans who had succeeded Firuz Shah (r. 1351–1388) to the Delhi throne had been weak and unable to maintain a stable hold on their power. A measure of their weakness was that even after the departure of Timur-i Leng, Muhammad Shah II, a virtual prisoner of his prime minister, Mallu, was unable to retake Delhi.

Following Muhammad Shah's flight, the man who actually ruled the city was Daulat Khan Lodi (r. 1413–1414), an Afghan whom the nobles subsequently recognized as sultan after the death of Muhammad Shah. This, however, proved to be but a brief one-year prologue for what would later be the rule of the Lodi dynasty. In 1414 Khizr Khan besieged and conquered the city, thereby founding the Sayyid dynasty (1414–1451).

The Sayyid reign was not long, and it is often pointed to as one of the weakest dynasties to reign over the sultanate inasmuch as it was able to control only Delhi and its immediate surroundings, with most of its territories fragmented into numerous tribal kingdoms. Moreover, the new sovereign, despite his attempts to reorganize the administration and reconstruct the sultanate, had to face the hostility of Turkish and Afghan nobles and the majority of the non-Muslim population. As a consequence, his resources were inadequate for expanding the sultanate or giving it necessary stability.

The Lodi dynasty (1451–1526) succeeded in replacing the Sayyids in 1451, when Bahlol Lodi

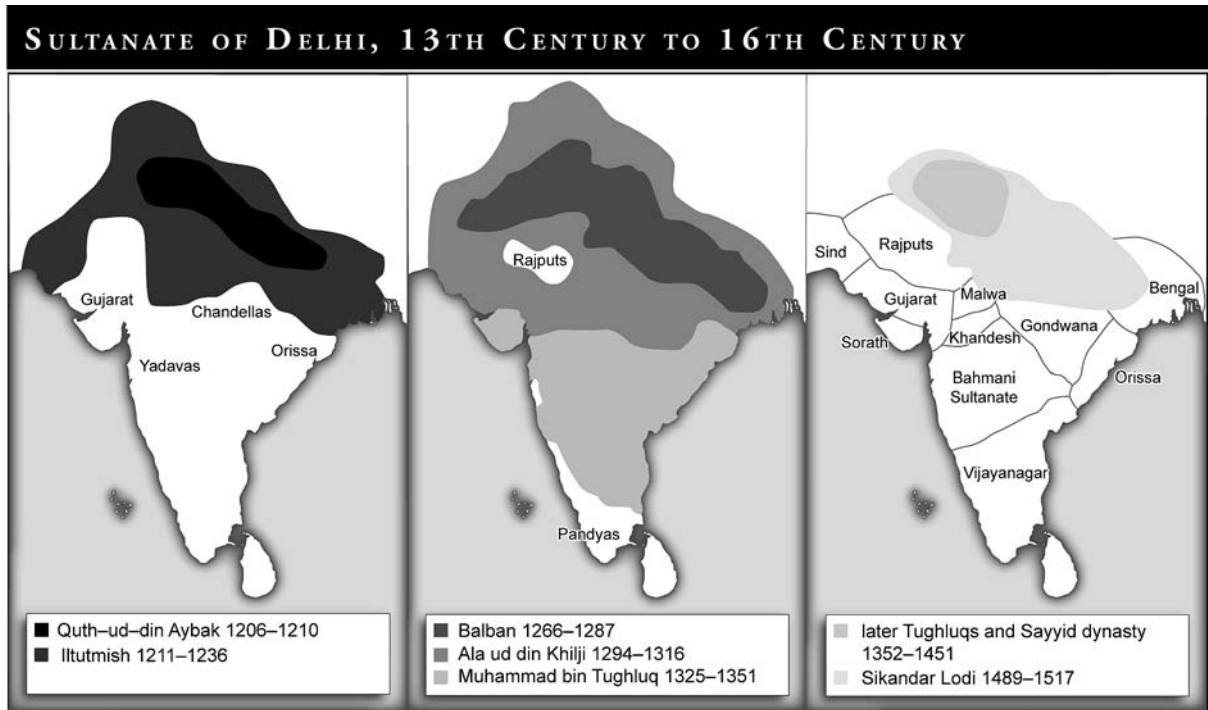
➤ NEIGHBORS OF THE DELHI SULTANATE—ZAIN UL-ABIDIN OF KASHMIR AND NASIRUDDIN MAHMUD SHAH OF BENGAL

While the Delhi sultanate was ruled by the Sayyid and Lodi dynasties, their neighbors, Kashmir and Bengal, seem to have enjoyed periods of relative prosperity. In Bengal, Nasiruddin Mahmud Shah (r. 1435–1459) was probably favored by historical circumstances, inasmuch as the conflict between the Lodi dynasty and the Sharqi sultans of Juanpur (r. 1394–1479) probably kept Bengal safe from the rivalry and ambition of neighbors and allowed the sovereign to focus on his monumental building activities. This program of erecting of mosques and mausoleums promoted by Nasiruddin, who was noted for his pacific nature and interest in architecture, was an integral aspect of the steady Islamization of the region.

During the same period in Kashmir, under Muslim control since 1346, Zain ul-Abidin (r. 1423–1474) could be considered the most important sovereign to have ascended its throne. The sultan was a patron of arts and sciences and introduced Persian as the administrative language at his court. His strong dedication to reconciling Hindus and Muslims led him to allow Hindus, who had previously been obliged to embrace Islam, to return to their various Hindu practices, an act of tolerance and respect never seen in Muslim-dominated India to that point. This era of religious tolerance and political stability ended with his death, the weakness of his successors, and the formation of opposing political factions.

—Sara Mondini

(r. 1451–1489) ascended to the throne of Delhi after many campaigns directed against the city from Sirhind, where he had established his headquarters. Bahlol Lodi's role as sultan is open to debate. His historic image oscillates between someone who displayed the traits of a despot in regard to the nobles of his court, who were treated poorly by arrogant royal servants, and the portrait of a sovereign who felt comfortable seated in assembly with his nobles in accord with the Afghan tribal tradition of a king surrounded by his equals. Regardless of this debate, historians



generally acknowledge that in the face of the fragmentation of the sultanate's lands and the setting up of numerous kingdoms that had brought about the fall of the Sayyids, Lodi's founder was able to bring these disruptive forces under check.

His successor Sikandar Lodi (r. 1489–1517), contrary to Afghan tradition, demanded that his nobles acknowledge him as “all-powerful king,” a tactic aimed at consolidating his control over northern India and avoiding, or at least reducing, rebellions and the claims of the nobles to sovereign independence. Regardless, the problem of fragmentation arose again during the reign of Ibrahim Lodi (r. 1517–1526), who had to face many rebellions. But ultimately his undoing came from Afghanistan with the arrival of Babur, ruler of Kabul, who invaded India in 1526 and killed Ibrahim at Panipat, thereby establishing the Mughal empire (1526–1857).

—Sara Mondini

Bibliography

Day, U. N. *Some Aspects of Medieval Indian History*. Delhi: Kumar Bros., 1971.

Dowson, J., ed. *The History of India as Told by Its Own Historians: The Muhammadan Period*; Ed-

ited from the *Posthumous Papers of the Late Sir H. M. Elliot*, Vols. 1–8. New York: AMS Press, 1966.

Eaton, R. M., ed. *India's Islamic Traditions, 711–1750*. New Delhi: Oxford University Press, 2006.

Gilmartin, D., and B. B. Lawrence, eds. *Beyond Turk and Hindu: Rethinking Religious Identities in Islamic South Asia*. New Delhi: India Research Press, 2002.

Haig, W., ed. *The Cambridge History of India*, Vol. 3, *Turks and Afghans*. Cambridge: Cambridge University Press, 1928.

Husain, A. M. *The Rise and the Fall of Muhammad bin Tughluq*. Delhi: Idarah-i Adabiyat-i Delli, 1972.

Hussain, S. E. *The Bengal Sultanate: Politics, Economy and Coins, A.D. 1205–1576*. New Delhi: Manohar, 2003.

Kulke, E., and D. Rothermund. *History of India*. London: Routledge, 2004.

Majumdar, R. C., ed. *The Delhi Sultanate: The History and Culture of Indian People*, Vol. 6. 2nd ed. Bombay: Bharatiya Vidya Bhavan, 1990.

Siddiqi I. H. *Some Aspects of Afghan Despotism in India*. Aligarh: Three Men Publication, 1969.

Srivastava, A. L. *The Sultanate of Delhi*. Agra: Shiva Lal Agarwala, 1950.

Wolpert, S. *A New History of India*. Oxford: Oxford University Press, 2004.

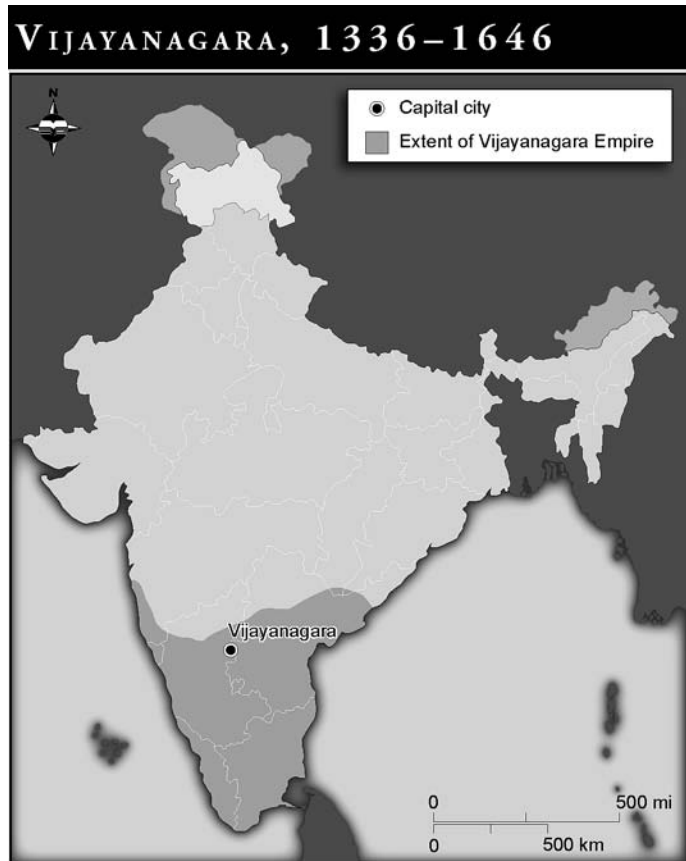
Vijayanagara, 1336–1565

Vijayanagara, named after its capital city, Vijayanagara, from the Sanskrit “City of Victory,” was one of the most powerful empires of south-central India from the mid-fourteenth century to the mid-sixteenth century.

Despite long debates concerning the origins of its founders, historians generally agree on the crucial role of five brothers who probably came from the region of Warangal, today a district within the state of Andhra Pradesh. Around 1336 they founded the Sangama dynasty, and of the five, two—Harihara and Bukka—seem to have been the first to ascend Vijayanagara’s throne. Their capital arose south of Badami, and its impressive ruins—today a World Heritage site—surround the heart of Hampi, in the modern state of Karnataka.

Vijayanagara, whose authority extended to the whole of the Indian peninsula south of the Krishna River, has often been seen as the last bastion of Hinduism that opposed the advances of Islam from the north in a geopolitical world where this river was considered to be a cultural-political-religious boundary. Apparently one of the objectives of Vijayanagara was to serve as a barrier against the Muslims’ attempts to extend their rule from the Deccan into the southernmost regions of the subcontinent. And, indeed, the Deccan Plateau of south-central India witnessed the rise of its first independent Muslim state in 1347, the Bahmanid Sultanate, and following the collapse of the Bahmanid polity in 1527, successor Muslim sultanates in the Deccan emerged as enemies of Vijayanagara and a growing danger to Hindu independence to the south.

More than that, Vijayanagara, under Sangama guidance, was not only able to extend its territory but soon became one of the major centers of power in the Indian subcontinent. By 1377, it was the most extensive regional state in southern India. Its great capital, Vijayanagara, was a symbol and tangible manifestation of the splendor of the court and of the cosmopolitan atmosphere promoted by its sovereigns, who hosted men of literature and science, politicians and artists, and mercenary soldiers, who were drawn not only from Hindu India but also from



Muslim polities within and outside of India, such as Central Asia.

The Sangama lost power around 1485 when, profiting from the pressing threats of the Bahmanis and the Raja of Orissa, the Saluva family usurped the throne. Then, in 1503, Tuluva Narasa, a high officer of the court, succeeded to the throne, and power passed into the hands of the Tuluva dynasty.

The decline of Vijayanagara began in 1565 after the Battle of Talikota in which the empire, led by its prime minister, Rama Raya, was totally defeated by an alliance of Deccan Muslim sultanates. The pillage and plunder of the city of Vijayanagara followed in its aftermath. After the destruction of the city, Tirumala, brother of Rama Raya, and his descendants seized control of the southern remnants of a now severely truncated empire and founded the Aravidu dynasty, establishing a new capital at Penukonda. Around 1614, what remained of the empire collapsed because

➤ RAMA RAYA (1484–1565)

Despite theories concerning the constant opposition between the Muslim north and the Hindu south, the cultural and political reality of the Deccan region seems to suggest a more complex dynamic. Vijayanagara, rather than an isolated bastion, appears to have been a crucial part of the Deccan, an open terrain where politicians and men of literature enjoyed great mobility, moving from one court to another according to the winds of political change.

In this sense, the experience of Rama Raya was emblematic. His name appeared in 1512 when he was appointed military commander by the sultan of the emerging state of Golkonda. After leaving the court of Golkonda in 1515, Rama Raya appears to have crossed the Krishna River and taken up service in the Vijayanagara court during the reign of Krishna Raya (r. 1509–1529). The life and career of Rama Raya, as of other soldiers or members of the elite, demonstrated the permeability of the Bahmani-Vijayanagara frontier and the mobility between the Muslim and Hindu reigns of Deccan.

—Sara Mondini

of internal intrigues, its largest feudatories declared independence, and the empire was partitioned by the Muslim sultanates of Bijapur and Golkonda in 1646.

Until its demise, the role of Vijayanagara in the medieval Deccan was undoubtedly crucial in balancing the equilibrium of power and in constituting, together with the coeval Muslims sultanates, an articulated mosaic of regional realities and identities.

—Sara Mondini

Bibliography

- Day, U. N. *Some Aspects of Medieval Indian History*. Delhi: Kumar Bros., 1971.
- Dikshit, D. P. *Political History of the Chalukyas of Badami*. New Delhi: Abhinav Publications, 1980.
- Dowson, J., ed. *The History of India as Told by Its Own Historians: The Mubammadan Period; Edited from the Posthumous Papers of the Late Sir H. M. Elliot*, Vols. 1–8. New York: AMS Press, 1966.

- Eaton, R. M. *A Social History of the Deccan, 1300–1761*. Eight Indian Lives. New York and Cambridge: Cambridge University Press, 2008.
- Eaton, R. M., ed. *India's Islamic Traditions, 711–1750*. Oxford India Paperbacks, Oxford in India Readings, Themes in Indian History. New Delhi: Oxford University Press, 2006.
- Gilmartin, D., and B. B. Lawrence, eds. *Beyond Turk and Hindu: Rethinking Religious Identities in Islamic South Asia*. New Delhi: India Research Press, 2002.
- Kulke, E., and D. Rothermund. *History of India*. London: Routledge, 2004.
- Majumdar, R. C., ed. *The Delhi Sultanate: The History and Culture of Indian People*, Vol. 6. 2nd ed. Bombay: Bharatiya Vidya Bhavan, 1990.
- Wolpert, S. *A New History of India*. Oxford: Oxford University Press, 2004.

Srivijaya

The best known of the trading states to emerge in the Indonesian Archipelago was Srivijaya, a Buddhist state that came to prominence in the seventh century. Srivijaya was located in southern Sumatra, somewhere near the present site of the city of Palembang, some distance up the large, navigable Musi River, which flows into the Malacca Strait. The river provided access to large quantities of forest products and a safe harbor for Malacca Strait shipping. Initially it seems that Srivijaya could produce sufficient food locally to meet the needs of its sizable population. As it expanded to become the preeminent port in the region, it was able to secure rice from Java through a symbiotic relationship it established with the state of Mataram.

Leaving aside sundry episodes of warfare, such as that of 1016, which resulted in a temporary defeat for Mataram, these two states coexisted in a mutually beneficial, if competitive, fashion, a relationship they cemented with intermarriage. The latter was by no means the only example of astute diplomacy on the part of Srivijaya. Regular diplomatic missions to China established an excellent relationship with Chinese emperors, one that the Chinese saw as tributary, though it was probably more ambiguous from the Srivijayan perspective. Whatever its precise character, the arrangement paid off handsomely

for Srivijaya as thereby traders operating with the assent of Srivijaya and its allies and clients gained privileged access to the lucrative China trade. By such means Srivijaya expanded its power until it acquired the size and status of a major maritime empire extending its sway over the Malacca and Sunda straits and for a considerable distance along the north coast of Java.

Srivijaya's dominance eventually proved unsustainable, however. Although victorious in its battle with Mataram, the victory evidently proved draining. Less than a decade later, in 1025, another blow came when an expeditionary force dispatched by the Indian kingdom of Chola briefly captured Srivijaya's capital. Rivals to the north as well as to the south now confronted Srivijaya. But Srivijaya's biggest problem was probably its inability to sustain the monopoly on trade with China because during the twelfth century Chinese merchants began to engage directly in regional trade.

During the thirteenth century, Srivijaya's political fortunes waned. It was briefly a vassal state of the Khmer empire which was centered in present-day Cambodia and subsequently a tributary state of the kingdom of Sukhothai in what is today Thailand. It totally collapsed as an identifiable state in the fourteenth century and largely was forgotten until rediscovered by historians and archaeologists in the twentieth century.

—Steven Drakeley

Bibliography

- Drakeley, Steven. *The History of Indonesia*. Westport, CT: Greenwood Press, 2005.
- Munoz, Paul M. *Early Kingdoms of the Indonesian Archipelago and the Malay Peninsula*. Singapore: Editions Didier Millet, 2006.
- Stuart-Fox, Martin. *A Short History of China and Southeast Asia: Tribute, Trade, and Influence*. London: Allen and Unwin, 2003.

The Khmer Empire

Between 800 and 1400 CE the Khmer empire dominated much of mainland Southeast Asia. At its height it controlled all of present-day Cambodia as well as large parts of southern Laos, eastern Thailand, and southern Vietnam. The Khmer



View of Angkor Wat and its surrounding moat. (PhotoDisc, Inc.)

empire was founded in 802 by Jayavarman II, who moved his capital from the lower Mekong to the area between the Kulen Hills and the Tonlé Sap. He marked the occasion with an elaborate Hindu ceremony aimed at fusing the temporal power of the king with that of Hindu and local deities and enabling the ruler to build a coherent state from the fragmented polities that at the time marked the Cambodian landscape.

At the center of this empire was the sprawling Khmer city of Angkor, which may have had a peak population of 1 million. Angkor was remarkable for its many stone monuments built with immense labor and intended to glorify Siva, Vishnu, and the Khmer kings. As such monuments reflect, the Khmer were originally devotees of various Hindu cults, having received religious and cultural influences from South India centuries earlier before adopting forms of Mahayana and finally Theravada Buddhism. Regardless of the devotional changes, Khmer kings stood at the apex of a sophisticated society supported largely through rice production. Its economic centrality notwithstanding, there is a considerable amount of controversy regarding one aspect of Khmer rice production. Some scholars have argued that the huge reservoirs located at Angkor and other sites may have been used to irrigate rice paddies during the dry season, while others have identified the reservoirs as having a purely ceremonial function.

Jayavarman VII, one of the last great Khmer rulers, came to power in 1181 during a period in

➤ ZHOU DAGUAN

Since the nineteenth century, archaeological research has been conducted at Angkor and other sites across Cambodia. Most attention has been paid to restoring, preserving, and studying monumental architecture; little actual excavation, which might give an insight into the daily lives of ordinary Khmer, has taken place. At these sites, inscriptions in Khmer and Sanskrit describe the activities of gods and Khmer rulers. While the bas-reliefs on the Bayon depict such common activities as food preparation and cockfighting, it is the account of Zhou Daguan that provides the only glimpse of what life must have been like in the Khmer empire.

The Chinese official Zhou Daguan arrived in 1296 as part of a Mongol trade and diplomatic mission and stayed for a year. He describes in great detail the capital, with its ceremonial bridges, elaborate colonnaded palaces, and busy markets. The Khmer ruler was an awesome figure, only leaving the palace in a great procession of elephants, guards, officials, and retainers. The king was rumored to keep between 3,000 and 5,000 concubines and to mate on a daily basis with a nine-headed serpent in the shape of a beautiful woman; failure to do so would bring disaster. Cambodians wore little clothing on account of the hot weather. Rice was plentiful; according to Zhou Daguan it could be harvested up to four times a year. Zhou Daguan felt that Cambodia, although inhabited by non-Chinese “barbarians,” was a pleasant place to live and noted that many Chinese had in fact moved there, taking Cambodian wives and engaging in trade.

—Michael Wood

which the Khmer were under increased pressure from the neighboring kingdom of Champa. This Buddhist monarch built the Bayon, the last major monument constructed at Angkor. Soon after his death the Khmer empire entered a period of sharp decline and was increasingly at the mercy of Vietnamese, Cham, and Thai armies. Angkor was sacked by the Thai in 1431.

Reasons for the decline and fall of the Khmer empire are murky. Environmental change and mismanagement of soil and water resources may have led to bad harvests. The building projects

intended to glorify the Khmer rulers, which required the services of untold laborers and artisans, may have taxed society to the breaking point. Finally, victorious foreign armies would have deported large numbers of Khmers, as was usual in Southeast Asia.

Angkor was not totally abandoned. Small-scale building projects may have been undertaken as late as the mid-1500s, and the temples were long home to Buddhist monks. But Cambodia’s political center shifted south to Phnom Penh, where it remains to this day. In ensuing centuries, Cambodia became a minor player in mainland Southeast Asia and during the nineteenth century was in danger of being swallowed up by Thailand and Vietnam before it passed under French colonial control. The French discovered the ruins of Angkor in the jungle and spent the first half of the twentieth century restoring and studying its monuments; it became and remains one of the world’s great tourist sites. For modern Cambodians, the Khmer empire has continued to be a symbol of national achievement.

—Michael Wood

Bibliography

Coe, Michael. *Angkor and the Khmer*. London: Thames and Hudson, 2005.

Higam, Charles. *The Civilization of Angkor*. New York: McArthur, 2003.

The Kingdom of Laos

Before the kingdom of Lan Xang (translated as Land of a Million Elephants and the White Parasol) was established by Fa Ngum (r. 1353–1373) in 1353, it is believed that the area was mostly Khmer and Dvaravati/Mon dominated. The kingdom of Lan Xang encompassed an area that took in all of present-day Laos and the northeast region of Thailand and extended into parts of Vietnam and Cambodia. Its strength was derived from the successful unification of the various established muangs (provinces), which enabled the kingdom to become one of the strongest monarchies in the region. The kingdom’s peak period was from the fifteenth century to the latter half of the eighteenth century, when it declined due to gradual loss of territory, increased factional

fighting, and eventually loss of sovereignty to various countries, including France.

It is believed that from around 800 to about 1000 migrating Tai from China and other areas of Southeast Asia moved into present-day Laos, Thailand, and Upper Myanmar (Burma). Contemporary historians also postulate the existence of indigenous Lao within the general area who would have been living under the auspices of Khmer or Mon rulers.

During this time of migration, political and religious affairs were governed through mandalas, which were an integral part of the socio-political structure of the Dvaravati and Khmer kingdoms. Mandalas are circles of social and political power that traditionally radiate outward from the king in the center toward the other ruling parts of the kingdom. Legitimizing the power of the king and his ties to the religious center, they existed in the central Mekong area as early as 192 CE. Muangs supported the mandala by assisting in the administration of local rules and the strengthening of communal ties (in particular the strengthening of ruling families in certain areas). By the fourteenth century, it appears that the local Tai rulers had displaced the traditional Khmer or Mon mandala rulers and became governors of their own muangs, thereby effectively creating principalities throughout Laos.

Fa Ngum's accession as lord of Muang Sua in 1353, with a loyal army of more than 10,000 soldiers, strengthened his position in the area. He managed to entice other muang lords to join with his mandala, which increased his strength in the area. The confederated muangs eventually became the kingdom of Lan Xang.

The new kingdom's first capital was Luang Prabang, located in north-central Laos at the junction of the Mekong and Khan rivers. Despite its initial small size, the nearby kingdoms of Ayutthaya and Sukhothai did not immediately oppose its presence due to their preoccupation with fighting each other over territory. The threatened expansion of the kingdom of Angkor also diverted attention away from the new thriving kingdom. Fa Ngum's reputation grew, especially that of his military prowess. Due to his desire to create a cohesive unified Lao polity kingdom, Fa

➤ FA NGUM

Fa Ngum is an enigmatic historical figure due to our lack of knowledge surrounding his childhood and early adult life, in particular how he grew up in exile within the royal court of Angkor and eventually married a Khmer princess. Leaving the Khmer capital where he spent his childhood, Fa Ngum gathered a huge army of more than 10,000 Khmer and Lao soldiers and fought his way along the Mekong, controlling all the towns he came across. His successful subduing of *muangs* in the middle Mekong area resulted in a substantial increase in the amount of territory under his control, which in turn became the kingdom of Lan Xang.

Fa Ngum became a revered figure, and Lan Xang prospered. Religion was initially an important part of his life; however, the death of his beloved Buddhist wife in 1368 resulted in his total loss of interest in everything concerned with religion and the kingdom. His sudden lack of concern in his royal duties and his questionable actions resulted in his dethronement in 1373 and his subsequent exile to the principality of Nan, a tributary to Lan Xang (in present-day northern Thailand). He died in exile some years later.

—*Samaya Sukha Chanthaphavong*

Ngum expanded it significantly so that in 1359 a golden Buddha (Phra Bang) was received as a gift from the Angkor court in recognition of Fa Ngum's rule.

Laws were enacted so as to further unify Lan Xang and to provide for social, economic, and political stability. Stability in Lan Xang was often precarious in that local lords resented Fa Ngum installing himself as monarch, and his demand for the subordination of all regional power centers to a central mandala created resentments and rifts. The kingdom grew in part from the regular tributary payments collected from surrounding rulers whose trade goods (such as spices and woods) provided much-needed revenue. Slaves and war booty also boosted Lan Xang's revenue.

Lan Xang was a Theravada Buddhist kingdom, influenced by Khmer and Sri Lankan Buddhist principles. Although Buddhism enjoyed

royal patronage, some indigenous animistic beliefs and traditions survived and were incorporated into the sanctioned doctrine so as to appeal to a wider segment of society.

Despite the kingdom's relative success, it suffered constantly from internal pressures and threats. Fa Ngum himself was dethroned in 1373 by his son Unheuan, also known as Samsaenthai (r. 1373–1417). The issue of royal succession was Lan Xang's greatest weakness, as it eroded and habitually weakened the kingdom's political structure. Unheuan's death and that of his son Lan Kham Daeng (r. 1417–1428) created further instability, and an astonishing six kings all died prematurely between 1428 and 1440. During this time the kingdom of Lan Xang was ruled by its only queen, who is referred to as Maha Devi (r. 1428–1442) (Sanskrit translation, mother goddess or great goddess). Maha Devi's identity remains a mystery due to the lack of historical records surrounding her rule; however, many believe that she was Fa Ngum's widow.

Under King Chakhaphat (r. 1442–1479) Lan Xang experienced a somewhat stable political atmosphere. He installed his family in highly sought-after administrative roles in an attempt to stave off any future political crisis. The king, a staunch Buddhist, was also able to strengthen the practice of religion within the kingdom. Despite Lan Xang's increased political strength, it was invaded by the Vietnamese emperor Le Thanh Tong in 1479. Vietnamese forces sacked Luang Prabang and plunged the kingdom into another tumultuous period of instability. In order to defeat Emperor Le's forces, Chakhaphat's son Souvanna Banlang (r. 1479–1485) sought support from the Tai principality of Nan. After successfully retaking Lan Xang, King Banlang died and was quickly replaced by his younger brother, Lasaenthai Puvanart (r. 1486–1496). Upon Puvanart's death, his son Somphu (r. 1496–1501) took the Crown. Since the kingdom's inception in 1353, it was able to enjoy relatively few moments of peace.

—*Samaya Sukha Chanthaphavong*

Bibliography

De Marini, G. F. *A New and Interesting Description of the Lao Kingdom*. Translated by Walter E. J.

Tipps and Claudio Bertuccio. Bangkok: White Lotus, 1998.

Evans, G. *A Short History of Laos: The Land In Between*. Australia: Allen and Unwin, 2002.

Stuart-Fox, M. *Historical Dictionary of Laos*. 2nd ed. Lanham, MD: Scarecrow, 2001.

Stuart-Fox, M. *A History of Laos*. Cambridge: Cambridge University Press, 1997.

Tarling, N. *The Cambridge History of South-East Asia*, Vol. 1, *From Early Times to c.1800*. London: Cambridge University Press, 1992.

The Philippines

Most of the documentation regarding the Philippines between 1000 and 1500 comes from Chinese sources. The first recorded tribute mission from the archipelago to China took place in the first decade of the eleventh century. The mission came from Butuan (Puduan in Chinese) on the northern coast of the island of Mindanao. Butuan is described as a small kingdom farther than Mai (the Philippine island of Mindoro) and east of Champa, a kingdom in southern Vietnam. In addition, the records indicate that Butuan had regular contact with Champa but only rarely with China. One of the purposes of the mission was to request equal status with Champa. The request was denied, but Butuan was in fact a vassal under Champa's authority, which indicates a long-standing relationship between the two entities.

In the middle of the thirteenth century, Zhau Rugua, the superintendent of maritime trade in the province of Fujian, produced a book on the various peoples with whom the Chinese had traded. It should be noted that his work borrowed heavily from Zhou Kufei's handbook of 1178. He correctly located Mai as a place north of Borneo and recorded that the inhabitants lived in large villages of more than 1,000 houses located on opposite banks of streams and rivers. Trading ships would go to specific locations designated for trade. Local leaders were said to use white umbrellas, an Indian symbol of royalty that indicates an earlier Hindu imprint on the archipelago. He also mentioned Balaoyou, now known as the island of Palawan, and a region called Bisheya, which is believed to be the Bisayas in the central Philippines. A century later, Wang

Dayuan published a book after some 20 years of traveling overseas as a trader. He mentioned specific goods from specific locations: pearls from Sulu and forest products from Mindanao.

When the Ming dynasty came to power, emissaries were sent out to invite surrounding kingdoms to send tribute. Luzon is recorded as having responded. Early in the fifteenth century, emissaries were sent out to announce a new emperor. Several kingdoms in the Philippines responded, including Pangasinan (Feng Jiaxian), which sent five tribute missions over the next five years.

It was during this period that Islam came to the Philippines. Although Arab traders had been coming to the archipelago for centuries, it was Chinese Muslim traders along with Arab missionaries who brought Islam to the Philippines, Sulu specifically. Legends have emerged about those who brought the faith to Sulu and the works they performed. The result was a Muslim population with Muslim leaders. But it was a *raja* from Sumatra who is credited with founding the Sulu sultanate in the fifteenth century. Raja Baguinda (*baguinda* means “prince”) from Minangkabau, Sumatra, sailed along with wealthy merchants to Mindanao looking for a Muslim settlement. He and the merchants settled there, and he married a local woman. It was his son-in-law, also from Sumatra, who became the first sultan of Sulu. While Sulu was developing as a wealthy port, the sultan of Brunei established control over the Manila Bay area, bringing the Islamic faith with him. When the Spaniards first visited Manila in 1570, they found Muslim leaders ruling over the area.

All of this information does not tell us anything about the day-to-day lives of the inhabitants of the archipelago. But it does serve to correct any misconceptions of an isolated people without any significant outside contact until the Spanish intrusion.

—Damon Woods

Bibliography

- Jocano, F. Landa. *Filipino Prehistory: Rediscovering Precolonial Heritage*. Quezon City, Philippines: PUNLAD Research House, 1998.
- Patanñe, E. P. *The Philippines in the 6th to 16th Centuries*. Metro Manila: LSA Press, 1996.

> A ROYAL TOMB

In 1417 a tribute mission from Sulu, including three leaders along with a retinue of more than 340 persons, left for the Ming capital at Nanjing. According to the Ming annals, the three leaders were the eastern king (of Sulu) Paduka Batara, the western king Maharaja Kolamating, and the mountain king Paduka Prabhu. It should be noted that the titles of these kings have Indian origins: Paduka was a title used in the Hinduized Majapahit empire of eastern Java (ca. 1293–1500) and later by Muslim courts; Maharaja was a Sanskrit title meaning “great king.”

It is clear from the Chinese accounts that these leaders were Muslim. They presented to the emperor a letter of gold engraved with characters and also presented pearls, tortoise shell, and other items. The mission had a dual purpose: for each leader to be recognized as the king of his country and to secure a decision as to who should be given higher status over the other two. The Yongle Emperor chose the eastern king, Paduka Batara of Sulu.

However, before he could return to Sulu, the eastern king died in Shantung Province. The emperor sent an official to perform sacrifices and ordered that the authorities provide the funeral and make arrangements for his tomb. Paduka Batara was buried in Dezhou with elaborate funeral rites and the emperor himself in attendance. Because Paduka Batara was considered royalty, a memorial arch and gateway were built in his honor. The Ming court assigned three Hui (Muslim Chinese) households to help maintain the grave.

—Damon Woods

Scott, William Henry. *Prehispanic Source Materials*. Rev. ed. Quezon City: New Day, 1984.

The Buddhist Kingdom of Pagan

Pagan (today Bagan), once the capital of the kingdom of Pagan, is situated on the east bank of the Irrawaddy River in central Burma (Myanmar). Once a thriving metropolis extending some 10 miles (16 kilometers) along this bank and covering an area of approximately 25 square miles (65 square kilometers), today Pagan is just one of a

➤ KING KYANZITTHA



Ananda Pagoda at Pagan in present-day Myanmar.
(R. Stanek)

Kyanzittha (r. 1084–1113), who possibly was a younger son of King Anawrahta, seized the throne in 1084, held it for almost three decades, and extended its hegemony by virtue of his military abilities. More than just a soldier, he promoted Pagan's transformation into a premier center of learning and Buddhist art and architecture. Indeed, he is credited with having inaugurated the twelfth-century Golden Age of Burmese temple building. Chief among the architectural masterpieces that he patronized was the Ananda Pagoda (ca. 1105), today the largest and best preserved of the surviving temples from ancient Pagan and one of the finest examples of Southeast Asian Buddhist architecture. The pagoda was severely damaged by an earthquake in 1975 but has been restored.

—Alfred J. Andrea

collection of small villages in the most arid part of central Burma. Some 2,217 registered monuments scattered throughout this area, however, attest to the former splendor of the city of Pagan and the opulence of the kingdom.

The first mention of Pagan in native chronicles dates from the sixth century CE and describes it as a group of 19 villages, each possessing its own *nat* (local spirit). Its inhabitants at the time were the Pyu, a Tibeto-Burman people related to the Burmese who had migrated from the mountains of the north. Apparently the Burmese fol-

lowed the Pyu there at the end of the eighth century and the beginning of the ninth century.

The history of Pagan as a significant polity, however, did not begin until the accession to the throne of Anawrahta (r. 1044–1077), the first historically identifiable king of the dynasty of Pagan. He is noted for increasing the territory of the kingdom, for constructing an irrigation system so that this area became the granary of Upper Burma, and for establishing Theravada Buddhism as the state religion.

Just as Buddhism was declining in India, southern Burma was becoming an increasingly important center for Theravada Buddhist learning, and in 1050, a monk known as Shin Arahan from Thaton, southern Burma's principal city, came to Pagan to convert its people from Mahayana Buddhism, animism, and various Hindu cults to the Theravada sect. He not only won over King Anawrahta to his doctrine but also convinced him that since he had brought no copy of the Tripitaka—the Three Scriptures of Buddhism—with him, the king should request copies of the texts from King Makuta of Thaton. When Makuta refused, Anawrahta invaded his land, and after a three-month siege he captured Thaton, took Makuta captive, and brought back with him not only all of the city's 30 copies of the Tripitaka but also the king's ministers, monks, and a large number of artisans. This was the end of Thaton as a royal city, which never recovered its prosperity; on the other hand, Pagan became the administrative capital and religious center of central and southern Burma.

In spite of some questions about the depth of Anawrahta's religious zeal, he was responsible for the construction of some of the first important Buddhist edifices in Pagan, including Shwe-hsan-daw, the first architecturally developed stupa in Pagan; the Pitaka-taik, a large library meant to house the 30 sets of the Pali Tripitaka; and the Kyauk-ku-ohn-min, a temple provided with chambers for monks to use for meditation. Moreover, the artisans he brought from Thaton possessed the skill needed to undertake other building projects, thereby transforming Pagan into a splendid city.

The building of Buddhist monuments and other structures, as well as the vitality of the kingdom, continued through the reigns of the

next ten kings, but the demise of the dynasty of Pagan and of Pagan as an important political entity coincided with the end of the reign of the tenth successor, Narathihapate (r. 1256–1287). An army sent by Khubilai Khan, Yuan emperor of China, defeated the forces of Narathihapate in 1287, took over the capital, and occupied it for some months. Narathihapate is also known by the name Tarok-phyi (or Tarokpyemin), meaning “he who fled from the Mongols,” because four years earlier, when Khubilai dispatched an army to subdue the kingdom, Narathihapate turned away from battle and fled to the mountains. The king, dejected by this second defeat and forced

to send tribute to Khubilai in order to recover his capital, had to face the scorn of his people for cowardice. His son, taking advantage of the king’s loss of support, had him poisoned. Following Narathihapate’s death, the kingdom fragmented.

—Roger Finch

Bibliography

- Aung, Maung Htin. *A History of Burma*. New York and London: Columbia University Press, 1967.
- Coedes, G. *The Indianized States of Southeast Asia*. Honolulu: University Press of Hawaii, 1964.
- Luce, Gordon H. *Old Burma: Early Pagan*, Vols. 1–3. Locust Valley, NY: J. J. Augustin, 1969.

■ Introduction: China and Chinese-Influenced East Asia

As it evolved from the era of the Qin dynasty (221–206 BCE) to that of the Tang (618–907) and was later refined under the Song (960–1279) and Ming (1368–1644) dynasties, the Chinese imperial system, which has often been called a Confucian-Legalist hybrid, consisted of the following elements: (1) a centralized state modeled, at least in theory, on China’s core institution, the family; (2) a “father” emperor, known as the Son of Heaven, who was acknowledged as the person who alone maintained harmony not only within the state and society but also between Heaven and Earth; (3) an emperor who maintained this harmony by virtue of his possessing the Mandate of Heaven, a mandate that allowed him to rule as long as he was virtuous and followed the ways of the ancestors; (4) the belief that once that mandate was lost, cosmic forces would bring ruin on his empire, its people, and his dynasty, and the mandate would necessarily pass to a worthy family; (5) an emperor who was served by salaried ministers and officials chosen for their learning, a learning that, in theory, would ensure that they acted virtuously and would serve as the “fathers and mothers” of the people; (6) learned officials who were selected through a rigorous three-tiered system of examinations in the Confucian classics; (7) officials who, once chosen, were

subject to periodic evaluations and potential dismissal; (8) the principle that China, known as the “Central Country” (*Zhongguo*) but translated into English as “the Middle Kingdom,” was not only the center of the Earth but was surrounded by barbarians; (9) the concomitant notion that the Chinese, known as “All under Heaven” (*Tianxia*), were a civilizing influence on these barbarians; and (10) the assumption that it was the duty of barbarians to acknowledge the fatherhood of the Son of Heaven by offering him tribute.

Given China’s early development of governmental theory and structures (far earlier than those of its immediate neighbors), its imperial reach, and the attractiveness of its sophisticated culture, it was natural that its system of government would have some influence on Korea, Japan, Vietnam, and the steppe peoples of eastern Central Asia. The story, however, of how these societies adopted and adapted the Chinese model is a complex one. Many examples can be given, but those of Vietnam, Korea, and Japan suffice to illustrate that there was not just one story line or only one denouement.

Vietnam derived much of its civilization by adapting native ways to cultural influences from India, but that was much more the case for southern Vietnam than northern Vietnam. Northern

Vietnam, a neighbor of China, was periodically pulled into the imperial and cultural grasp of China. Indeed, the Chinese name for this area was Annam, which means “the pacified south.” Due to occupation during the Tang era and imposition on Annam of a Chinese bureaucracy, Chinese forms of government, including the examination system and Confucian orthodoxy, were imposed on Vietnam. Vietnam also received Mahayana Buddhism from China and the Chinese imperial practice of patronizing and closely regulating religion. Although Annam secured its independence from China in the tenth century, under the Li dynasty (1010–1225) Annam maintained a centralized state system based on the Chinese model, complete with a salaried bureaucracy composed of men recruited through an examination system. Subsequent dynasties, namely the Tran (1225–1400) and later the Le (1428–1789), maintained and even expanded upon these Chinese forms of government but also fiercely and successfully resisted invasions by China’s Mongol Yuan dynasty (1279–1368) and by the early Ming dynasty, whose armies were forced to evacuate in 1427. Although Vietnam kept the Chinese at arm’s length, their monarchs continuously sent tribute to the Chinese emperors, and in their official relations with China they tactfully referred to themselves as “kings,” even though they otherwise claimed to be emperors.

Although Da Viet (Great Viet), as they styled their empire, continued to expand southward, Vietnam remained small compared to massive China. One consequence was that its Chinese-style bureaucracy was overly complex and overstaffed relative to the country’s size.

As was the case with Vietnam, Korea’s Silla kingdom (57 BCE–935 CE), which was at its height for a century after its unification of almost the entire peninsula in 668, was deeply influenced by Tang China and became a Chinese tributary state, albeit remaining independent of direct Chinese control. Although Silla attempted to emulate Chinese political institutions, it failed to create an effective bureaucracy, with real power remaining in the hands of aristocratic families. In the tenth and eleventh centuries, however, the new Koryo dynasty (918–1392) created a state structure modeled on China that was to last. It went so far as to lay out Kaesong, its pri-

mary capital city, according to the grid system of Chang’an, Tang China’s primary capital. Like China, the Koryo dynasty also established auxiliary capitals. In 958 it established a Chinese-like civil service examination system, and in order to prepare young men for the examinations, the central government established schools at which the essential Confucian texts were taught.

Conquest by the Mongols in the thirteenth century resulted in Korea being pulled into the orbit of the Mongol empire and particularly of Yuan China. As a consequence, Neo-Confucianism, which later became the new examination matter for Ming China’s civil service examinations, also had a strong impact on Korean education. Under the Yi dynasty (1392–1910) Confucianism flourished, and eventually the Neo-Confucianism of China’s thirteenth-century Zhu Xi School prevailed as the sole orthodoxy in intellectual and political circles. The examination system, modeled on the Ming system, became the primary pathway to status, power, prestige, and wealth for industrious and bright young men from every class.

It is no exaggeration to say that the Yi dynasty adopted Ming Chinese culture and political structures with fervor. For example, in 1395 Yi Korea adopted the Ming criminal code, although it later added native elements and continued its revision down to 1485. If ever there was a model Confucian society, it was Yi Korea.

Japan also avidly borrowed many of the political and social institutions of Tang China during the sixth, seventh, and early eighth centuries, even sending embassies to the Middle Kingdom to learn its ways. Court rituals and ceremonies were largely imitations of those employed by the Chinese, and the entire country was reorganized into provinces modeled on those of China. As was the case in Korea, Nara and Heian (present-day Kyoto), both early imperial capital cities, were laid out in a grid pattern in emulation of Chang’an. Despite this absorption of vast amounts of Chinese influences, there was no effort to create a real bureaucracy as a counterweight to the traditional aristocratic families or to institute an examination system to promote meritorious young men beyond the limits of rigidly divided social classes. Ultimately this meant that centralized political control, if ever achieved in Japan,

would be realized in ways that did not follow those of China.

Beginning in the ninth century, the imperial house came under the control of the Fujiwara clan, instituting a period from 858 to 1160 known as the Fujiwara era. Emperors reigned but did not rule, and the organs of central government withered. As the grip of the Fujiwara loosened, other provincial aristocratic families vied for supreme power, with the Minamoto clan finally winning out in 1185.

Rather than seizing the imperial office for himself, in 1192 Minamoto Yoritomo accepted the title of *shogun*, or “imperial commander in chief,” and elected to rule over a number of military governors from his remote base at Kamakura, while a puppet emperor reigned at Kyoto. This feudal system, known as the *bakufu* (tent headquarters), shaped the politics and culture of Japan for centuries to come. The Kamakura shogunate ended in 1333, but the shogunate system persisted down to 1868, with only two brief periods of interlude.

Although Japan had adopted and adapted to its culture vast elements of Chinese civilization, Chinese political structures were not a successful transplant.

—Alfred J. Andrea

China—The Northern and Southern Song Eras

One of the persistent themes in Chinese politics has been the tension between the centrifugal forces of local autonomy and the centripetal forces of national integration. That this should be so is not surprising in a country that for so long comprehended one-quarter of the world's total population and that lacked until recent times the benefits of modern communications technology. The Song dynasty (960–1279) conformed to this pattern as well. The Song followed a long period of political decentralization and military conflict in the late Tang dynasty and during the early tenth century, and for that reason its leaders tended to favor integration over autonomy.

That fear of fragmentation gave rise to the two main characteristics of politics during the Song dynasty: a greater emphasis on civilian

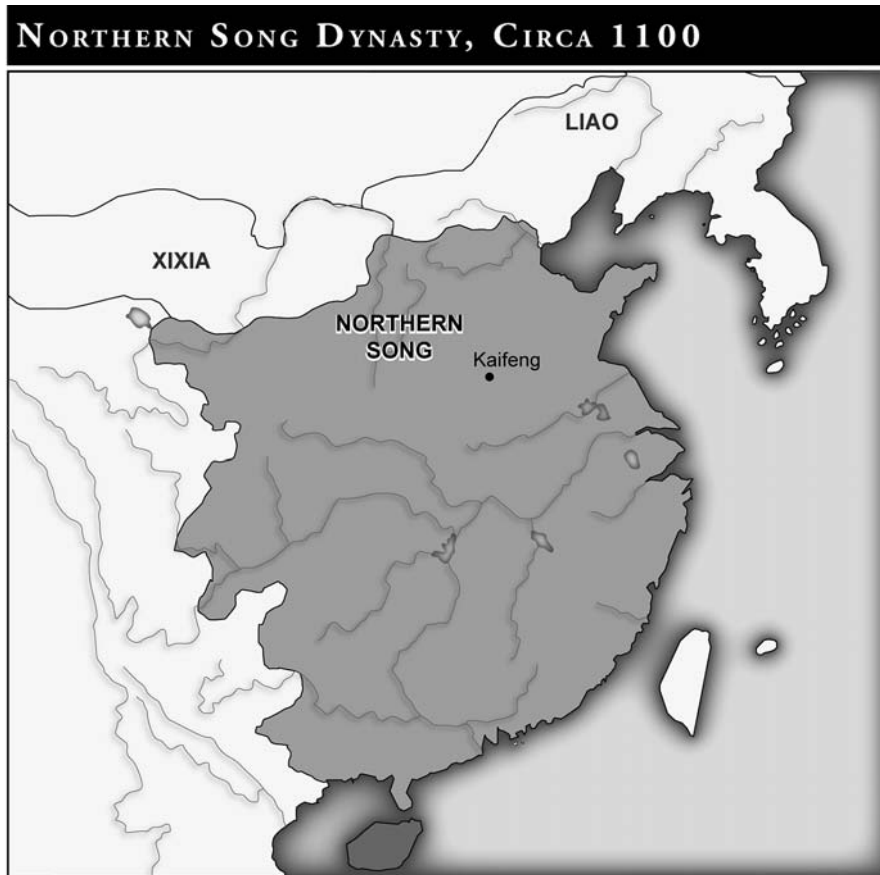
➤ EMPEROR HUIZONG

Emperor Huizong (r. 1100–1126) was as blessed with prodigious artistic talents as he was cursed with poor political judgment. On the one hand, he was a gifted calligrapher and painter in his own right, a connoisseur of exquisite taste who was also deeply interested in Daoist philosophy. On the other hand, he had the misfortune to rule when the qualities of leadership demanded by the circumstances of the time were utterly different than his own. His government presided over a series of ill-conceived and poorly executed decisions in foreign policy that ultimately led to his abdication in 1126 and then to the defeat of the Northern Song dynasty by the invading Jin dynasty in 1127. In the aftermath of that defeat, Huizong himself was captured and spent the rest of his life in captivity in the forests of Heilongjiang in Manchuria, eventually dying in 1135. Although later Chinese historians—who felt compelled to give a moralistic explanation for the military weakness of the dynasty—castigated him as having squandered the resources of the state in extravagant gardens and expensive living while the empire collapsed around him, his true legacy is more complex. He was also responsible for policies that were designed to foster public education and health as well as social welfare for the poor.

—Alan Wood



Once one of at least 2,000 mud-walled forts built by the Northern Song dynasty (960–1126) along its northern frontier to contain the XiXia empire, today this structure serves as a farmer's garden. (Alfred J. Andrea)



rather than military power and a gradual process of centralizing power into the hands of the emperor and his immediate staff. In pursuit of the former goal, the early emperors of the Song professionalized the officer corps and put them under the control of civilian bureaucrats. The Song emperors also stationed the best troops in the capital, rotated commanders more frequently than before, centralized promotions, and shifted revenue collecting to civilian agencies. The curtailing of the military was matched by an equivalent revival of civilian administration. The examination system for civilian officials was reinstated, with the result that the average number of top degrees (*jinsbi*) conferred between 1020 and 1057 was higher than at any other comparable time in Chinese history. The examination system became in the Song one of the most important institutional forces for unity in Chinese politics by creating a common language of thought and discourse throughout all of China. Social, economic, political, cultural, and philosophical integration was fostered by a shared

curriculum and a single avenue to power and prestige.

Centralization of power was also enhanced by early emperors who appropriated the powers formerly given to the prime minister and brought them under the direct control of the emperor and his palace staff. The emperor also developed a spy system operated out of the palace to ensure that he had alternative sources of information outside the normal bureaucratic channels. In general, the period of the Song dynasty is unquestionably one of the high points of good government in all of Chinese history. The quality of leadership, in terms of both the emperors and the public officials, was very high. There were two major lapses in an otherwise positive appraisal. The first occurred in the second half of the eleventh century, when the civilian bureaucracy was riven by disputes between two factions of officials, both motivated by high ideals but each unwilling to compromise with the other. The second lapse, far more serious to the politics of the whole, was the failure to de-

fend the northern borders against attacks by central Asian peoples, which eventually resulted in the loss of the north to the Jin dynasty in 1127. The Song court was forced to retreat south and reestablish a new capital in Hangzhou, where it remained for another century and a half until both the Jin and the Song were defeated by the Mongols in the thirteenth century.

In the Southern Song, the orientation of the political elite shifted inward from a preoccupation with national politics to a new focus on local affairs. Instead of working toward reform from the top down, at the level of the central government, the Southern Song scholar-elite sought to build institutions at the local level that would reform the state from the bottom up (or from the inside out, starting with self-cultivation and then moving to the family and the local community). They committed themselves to supporting charitable estates, schools and academies, community granaries, and community compacts, all of which were devoted to social welfare but outside the formal institutions of state control.

If the civilian orientation of government during the Song can be seen as a great strength, it can also be seen as a great weakness. Failure to maintain an effective military force made the Song vulnerable to attack by Central Asian peoples who had ready access to horses and who were far more skilled in the military arts. In addition, the Southern Song government made the mistake of allying with the Mongols in order to defeat their former enemy, the Jin, only to discover—too late—that the Mongols had no intention of stopping their conquest with northern China. They wanted the south as well, and they even learned how to conduct a naval campaign in order to defeat the Song navy. By 1279 the conflict was over and the Southern Song had ceased to exist, putting an end to one of the most prosperous, well-governed, and culturally rich periods in all of Chinese history.

—Alan Wood

Bibliography

- Chaffee, John. *The Thorny Gates of Learning in Sung China: A Social History of Examinations*. Cambridge: Cambridge University Press, 1985.
- Ebrey, Patricia Buckley, and Maggie Bickford, eds. *Emperor Huizong and Late Northern Song China*:

The Politics of Culture and the Culture of Politics. Cambridge, MA: Harvard East Asian Monographs, 2006.

Kuhn, Dieter. *The Age of Confucian Rule: The Song Transformation of China*. Cambridge: Harvard University Press, 2009.

Twitchett, Denis, and Paul Jakov Smith. *The Cambridge History of China: The Sung Dynasty and Its Precursors, 907–1279*, Vol. 5, Pt. 1. Cambridge: Cambridge University Press, 2009.

XiXia

What is known of the Tanguts, rulers of the Xia, or XiXia, dynasty (1038–1227) who carved out a state in lands that lay largely northwest of the Yellow River, comes primarily from Chinese records. Although the Xia dynasty can be delineated on a map, it remains obscure even though the Tanguts developed their own writing system in 1036. Religious texts and other documents exist, including those held by the British Museum. The script, which includes 6,000 ideograms similar to Chinese-type characters, was used to translate Chinese texts and record Buddhist songs and rituals, but it is considered one of the most difficult languages in the world. Hence, the Tanguts have yet to find their voice in the modern era



Tomb of an unknown XiXia emperor. Located at the foot of the Helan Mountains, the XiXia mausoleum complex covers 33 square miles (53 square kilometers) and includes nine imperial tombs, along with 253 other funerary sites. The Mongols desecrated and pillaged these tombs in 1227. (Alfred J. Andrea)

➤ WHO WERE THE TANGUTS?

The Tanguts were a non-Chinese ethnic group related to the Tibetans with whom they shared a language group. In the ninth century these nomadic people, who herded for a living, left their homeland in the Tibetan highlands as the Tibetan empire disintegrated into numerous small political units. The Tanguts settled in that region of China and Mongolia that earlier had been controlled by China's Tang dynasty (618–907). Part of the land they occupied was what is today China's Gansu Province, where they left their imprint as patrons of Buddhist devotion and art at such Silk Road sites as the Mogao Caves at Dunhuang. With their capital, Xingqing (present-day Yinchuan, the capital of China's Ningxia Hui Autonomous Region), located on the Yellow River, the Tanguts were poised to take advantage of their location astride trade routes that linked Mongolia, China, and Central Asian lands to the west. Soon they controlled the lucrative horse trade business with China.

—Tracy Lee Steele

and will not until linguists agree on translations of their puzzling script.

The Tanguts migrated in the ninth century to what is today part of northwestern China. Dramatic changes were made under the leadership of Yuanhao (r. 1032–1048). Yuanhao proclaimed himself Tangut emperor in 1038 and declared independence for Da Xia (Great Xia), the Chinese name for the Tangut empire. This dramatic shift was quickly followed by Yuanhao's demand, copied from the actions of the Khitan (Qidan) Liao dynasty (907–1125), which had carved out an empire to the Tanguts' northeast, that the Song rulers of China recognize him as their equal. The Song, however, refused to recognize the Tangut ruler as an equal as well as Yuanhao's counteroffer to call the Song emperor his father. The Song agreed that the Tanguts could use the title "ruler," which was considered to be higher than king but lower than emperor. The Tanguts agreed on the condition that the Song pay them an annual subsidy. Hence, the Song were forced to make tribute payments to the Tanguts, now known to the Chinese as the

XiXia, or the Western Xia dynasty, as a way of indicating their geographic position in relation to the Song. Despite this success with the Song, a year later the Xia ruler was forced to acknowledge the superiority of the Liao empire, to which the Tanguts in turn paid tribute.

Like the Liao, the Tanguts drew on Chinese models for a variety of governmental needs, including adopting China's style of foreign policy (such as tribute relations), its imperial titles, and elements of Confucian statecraft, as evidenced by the translation of key Chinese texts. The Tanguts even copied Chinese styles for royal tombs. Like other nonethnic Chinese governments, they often employed Chinese officials and ruled ethnic Han Chinese peasants and merchants who lived in Xia territory. They also borrowed from their non-Chinese neighbors, particularly the Liao, whose policies toward the Song they often mimicked. In terms of religion, the Tanguts were devout members of a Tantric Buddhist sect, as were the Tibetans, Liao, and the Jurchen (Ruzhen).

In 1125 the Liao succumbed to the Jin dynasty (1115–1234) that had been founded by the Jurchen, who originated in Manchuria. In turn, the Jin dynasty came under attack by the Mongols. This left the Xia in a delicate position regarding the Mongols, with whom they allied in 1209 to help Chinggis Khan in his campaign against the Jin empire. Interestingly, the Tanguts, as non-Chinese Mongol allies similar to the Persians, were classified for taxation and other purposes higher than the Chinese, Khitan, or Jurchen by the Mongols. Despite this, the Xia took advantage of Chinggis's preoccupation with other campaigns by seeking alliances with the Song and the surviving Jin. In 1226 Chinggis Khan returned to the Xia homeland bent on its destruction. The Xia capital held out for five months, during which time Chinggis died, but the Mongols kept this secret. Ultimately the Xia surrendered, and their leader was hacked to death. The Tanguts, who had angered the Mongols by performing better than expected on the battlefield, were annihilated in 1127.

—Tracy Lee Steele

Bibliography

Ebrey, Patricia Buckley, Anne Walthall, and James B. Palais. *East Asia: A Cultural, Social, and Political History*. New York: Houghton Mifflin, 2006.

- Grinstead, E. D. "Tangut Fragments in the British Museum." *British Museum Quarterly* 24 (1961): 82–87.
- Hanson, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.
- Kepping, Ksenia Borisovna, and George van Driem. "The Name of the Tangut Empire." *T'oung Pao* 80 (1994): 357–376.
- Steinhardt, Nancy Shatzman. "The Tangut Royal Tombs near Yinchuan." *Muqarnas* 10 (1993): 369–381.

Liao and Jin States of Northern China

With the collapse of the Tang dynasty in 907, China entered a long period of trouble. Northern China, a major cradle of Chinese civilization, was progressively overrun by several non-Han nomadic forces over the next four and a half centuries. In order to govern a large polyethnic society in the north and rival the Han Chinese in the south, all of these "barbaric" peoples founded imperial states modeled on previous Chinese dynasties. The states of Liao and Jin were two remarkable examples.

The Khitan (Qidan), a pastoral seminomadic people out of Mongolia and Manchuria, were originally subjects of the Tang dynasty. When the Tang dynasty passed away, the Khitans gained their independence, with Yelu Abaoji as their great khan. Following the Chinese dynastic tradition, they later named their state Great Liao (also known as Liao, 907–1125), with Abaoji thus becoming the founding emperor of a new dynasty.

Abaoji was a military and administrative genius. He successfully united all the Khitan tribes and organized them into effective fighting units, and Khitan warriors then embarked on a vigorous campaign to conquer several dozen nomadic and sedentary peoples on their borders. To manage this diversified new empire, Liao officials created a dual governing system: the northern government, based on a tribal structure, ruled over nomadic and seminomadic peoples; the southern government, modeled on the traditional Chinese bureaucracy, controlled the Chinese whom they had conquered.

When the Song dynasty was founded in 960 in China's heartland, the Khitans invaded repeatedly. Wars between Liao and Song lasted for over 25 years and finally ended with the signing of



The Pagoda of 10,000 Sutras, an octagonal, seven-story Buddhist structure constructed by the Qidan (Khitan) Mongols of the Liao Empire around the eleventh century. (Alfred J. Andrea)

the Treaty of Chanyuan Zhi Meng in 1005. The treaty stipulated that Liao and Song were equal brothers, but Brother Song must pay to Brother Liao an annual "gift" in silver and silk. The treaty put the Sinocentric world order completely upside down: the "civilized" Chinese now had to pay the "barbaric" steppe people and respect them as equals.

In 1125 the Liao dynasty was overthrown by one of its subordinate tribal leaders named Wanyan Aguda. Aguda was from a warlike ethnic minority group known as the Jurchen (Ruzhen, or Nuzhen, in Pinyin). In the Liao dynasty, the Jurchens were cruelly exploited and discriminated against by the Khitan rulers. In 1115 Aguda unified the whole Jurchen tribe and raised a rebellion against the Liao by declaring the founding of a new dynasty known as Jin (Golden, 1115–1234) in Manchuria. The Jurchens won brilliant victories against a much larger Liao army and later against the much wealthier army of the Song dynasty. After the Liao capitulation, the Jurchens moved their capital from Manchuria to

➤ AGUDA AT THE FIRST-FISH FEAST

It was customary for a Liao emperor to go ice fishing in the Songhua River early each spring. After fishing, he would enjoy a feast and collect tribute from the local Jurchen tribal leaders. Overburdened Jurchens hated it, but they were too frightened to challenge the emperor.

One early spring morning in 1112 the Liao emperor Tianzuo arrived at the Songhua River. As a matter of long-standing practice, all Jurchen chieftains gathered in Tianzuo's house with their gifts for the emperor and freshly caught fish for his "first fish" feast. The fish was delicious, and Emperor Tianzuo was having a great time. When he was about half drunk he suddenly stood up and commanded the Jurchen chieftains to arise and dance.

Jurchens always believed it degrading and humiliating for a man to dance in public to entertain anyone, even an emperor. However, the chieftains knew only too well that they must meekly obey the emperor. They stood up and danced, one after the other. Only Aguda refused. He was repeatedly pressed to do so but in the end was adamant in refusing.

Emperor Tianzuo was furious and wanted him executed. Aguda narrowly escaped and two years later started rebelling against the emperor. In 1115 Aguda proclaimed the founding of Jin, and in 1125 Emperor Tianzuo was captured.

—Liangwu Yin

Yanjing (now Beijing) and then to Bian (now Kaifeng) after driving away the Song from northern China. The Jurchens gradually incorporated the vast areas into their empire that extended from the Sea of Japan to the Yellow River, with the weak Southern Song and XiXia states made into tributaries. The Jin dynasty prospered for over a century before it fell victim to the joint assaults launched by Mongols and Chinese in 1234.

Like the Liao dynasty, the Jin adopted a dual administration to govern the Han Chinese and tribal peoples separately. Also like the Khitans, the Jurchens made a conscious effort to retain their cultural, ethnic, and linguistic identities. They chose not to use written Chinese and developed their own script, derived from Khitan script that had been modeled on classic Chinese

script but separate from it, for their language. However, the Han Chinese sedentary lifestyle proved too comfortable to ignore. Gradually they modified their economic and social attitudes by engaging in agricultural and manufacturing production. Their warrior spirit also gradually disappeared, and the ethnic identity of those Jurchens who resided within the traditional heartland of China became blurred. Liao-Khitans, Jin-Jurchens, and Han Chinese all eventually became members of one entity in northern China.

—Liangwu Yin

Bibliography

- Franke, Herbert, and Denis Twitchett, eds. *The Cambridge History of China: Alien Regimes and Border States, 907–1368*, Vol. 6. New York: Cambridge University Press, 1994.
- Li, Xihou, and Bei Bing. *Liao Jin Xi Xia Shi* [History of Liao, Jin and Xi Xia]. Shanghai: Shanghai Renmin Chubanshe, 2008.
- Mote, Frederick W. *Imperial China, 900–1800*. Cambridge: Harvard University Press, 2003.
- Tuo, Tuo, et al., eds. *Jin Shi* [History of Jin]. 8 vols. Beijing: Zhonghua Shuju, 1975.
- Tuo, Tuo, et al., eds. *Liao Shi* [History of Liao]. 5 vols. Beijing: Zhonghua Shuju, 1974.
- Wittfogel, Karl A., and Feng Chia-sheng. *History of Chinese Society: Liao (907–1125)*. *American Philosophical Society, Transactions*, Vol. 36. Lancaster, PA: Lancaster Press Inc, 1949; reprint, New York: Macmillan, 1949.

China—The Yuan Era, 1260–1368

The Yuan dynasty, which presided over an era of Mongol rule in China, was officially named in 1271. Yuan derived from *Da Yuan* (Great Origin), a term from the *Yijing* (*I Ching*), or *Book of Changes*. This was suggested by a Chinese adviser to Khubilai Khan (r. 1260–1294), Chinggis Khan's grandson, who had been acclaimed Great Khan in 1260 and escalated the Mongols' campaigns against the Song dynasty, which was eradicated in 1279. Khubilai, who assumed the Chinese throne name Shizu, also transferred the Mongol capital from Karakorum in Mongolia to the area of present-day Beijing in 1264. He established his new city, Dadu, just slightly northeast of the former Jin dynasty (1126–1234) capital of Zhongdu (Central Capital).

➤ KHUBILAI KHAN



Khubilai Khan, from a Chinese engraving. The grandson of Chinggis Khan, Khubilai firmly established the Mongol-Chinese Yuan dynasty. (Library of Congress)

Khubilai Khan was born on September 23, 1215, the same year that his grandfather Chinggis Khan captured the Jin capital, Zhongdu. His mother, Sorghaghtani Beki, saw that all her sons were educated, and Khubilai was literate in Mongol but not in Chinese. His father was passed over as khan, and Khubilai himself remained in the background until after

the death of his uncle Ogedai in 1241. Khubilai's brother Mongke became khan in 1251. Meanwhile, Khubilai consolidated his own power in northern China around his appanage of Xingzhao, and he was given two other territories, Jingzhao and Huaimeng. He promoted trade in his territories by printing paper money, and he established offices to maintain the peace. In 1252 Mongke Khan ordered him to take the rebellious southern territory of Dali, which Khubilai successfully brought under Mongol control.

In 1259 Mongke died, and Khubilai was made Great Khan in 1260, ruling until his death in 1294. He drew his advisers from a variety of ethnic and

religious groups including Uighurs, Chinese, Tibetans, Confucians, Assyrian (Nestorian) Christians, Muslims, Buddhists, Latin Christians, and many others. But his most important and trusted adviser was his wife Chabi, whom he consulted on most of his decisions.

Khubilai continued to fight to bring the remainder of China under Mongol control, but the subjugation of the Song dynasty was not completed until 1279. Unlike his predecessors, Khubilai conquered the Chinese with a minimum of destruction. Landowners retained their estates, and local institutions were left mostly undisturbed. Once China was pacified, Khubilai turned his face to the east, with two disastrous attempts to conquer Japan in 1274 and 1281. His expeditions into Southeast Asia were also less than successful, although he was able to conquer Nan-Chao (present-day Yunnan), which became a permanent part of China.

Khubilai was a Buddhist and embraced the Lamanistic, Tantric traditions of Tibet. He ordered his Buddhist adviser, the lama Phags-pa, to create a new alphabet for the Mongols to replace the former Uighur-influenced one. Known as Phangs-pa, it became the official script and was compulsory on government documents after 1269.

After the death of his wife Chabi, Khubilai became deeply depressed. He became increasingly fat and consumed large amounts of alcohol. He died in 1294, beset by gout and numerous other ailments.

—Rebecca Wendelken

Under Mongol rule, China was divided into a number of largely autonomous regions that were given to Mongol generals and nobles who controlled them in the name of the Great Khan. Decentralized government meant that direct Mongol rule was generally felt only in the region around the capital and in a few of their non-Chinese holdings. The other regions maintained a loose relationship with the capital through a Chinese-style bureaucratic administration. The most powerful of the bureaus was the Censorate, which divided the empire into three districts and through its investigative powers kept ruling nobles and generals in check. This helped to overcome some of the problems associated with a

decentralized and loosely constructed governmental structure. The Yuan emperor was also the final court of judicial appeal.

The Yuan emperor maintained a monopoly on the appointment and dismissal of officials, reserving the highest posts for non-Chinese. The Mongols also divided the population of China into four classes. At the top were the Mongols. Next were Western and Central Asians, followed by the former subjects of the Jin empire of northern China. At the bottom were the subjects of the former Song dynasty: namely, the Han Chinese. Needless to say, the Mongols distanced themselves from their Chinese subjects. Mongols were discouraged from marrying Chinese

women, and Khubilai took only Mongol women into his palace. The Chinese were kept in their place by laws that limited their freedom. For example, they were forbidden to gather in public or to own weapons. When the civil service examinations were reinstituted in 1315, three-quarters of the degrees were reserved for non-Chinese, with fully half going to Mongols and other Central Asians and another quarter to the former subjects of the Jin empire.

Because of such harsh restrictions, it was once assumed that Mongol rule forced Chinese culture and civilization underground. More recent studies have shown that this was not the entirely the case. Chinese writers may well have had more freedom of expression. Lack of control in the provinces due to decentralized government opened a door for more literary freedom. Because Chinese literati were largely banned from higher governmental positions, many had a greater opportunity to engage in literary pursuits. Landscape painting, another pastime of the literati, also blossomed. Drama, which had its origins as a Chinese art form in the Jin empire, also flourished, and its themes were sometimes subtly anti-Mongol. Since few Mongols spoke or read Chinese, writers and dramatists were relatively safe. At the same time, the Mongol rulers were avid patrons of the theater.

An important aspect of the Yuan dynasty for the future history of China was its role in reuniting northern and southern China under one rule. Northern China had been under foreign rule for nearly 300 years by steppe peoples such as the Jurchens (Jin empire). In the intervening period China's two halves had begun to grow apart culturally and politically. Moreover, China experienced a relatively favorable economic environment under the Mongols. The Grand Canal was repaired and reopened and helped to unite the North and South economically. International trade, especially seaborne commerce, flourished, and goods from throughout Asia and beyond were brought to China for trade. The Mongols maintained a communication system, the *yam*, that connected the various Mongol holdings. Many travelers from Europe are known to have visited Yuan China, including Marco Polo, Odoric of Pordenone, and John of Marignolli.

However, taxation under the Mongols was high, and inflation also became a major problem. Adding to its economic woes was a major population decrease during the Yuan era, in large part occasioned by early Mongol devastations, subsequent epidemics, and other natural disasters. The combined Jin and Southern Song populations were around 120 million in 1207; by 1290 the registered population of all of China was around 60 million, and it stayed at that level for about a century. Needless to say, for all of these reasons there was a good deal of anti-Mongol sentiment in China. Certainly the anti-Mongol plays point to festering hatred. Despite this sentiment, other Chinese copied Mongol dress and names, perhaps to curry favor.

At his death, Khubilai Khan was succeeded as Great Khan by his grandson Temur Oljeitu, but neither Temur nor any of the subsequent Yuan emperors ever reached Khubilai's skill in leadership. The situation grew even worse after the assassination of Emperor Shidebala in 1323. The last Yuan emperor, Toghon Temur, took the throne in 1333 at the age of 13. His reign was marked by natural disasters, economic difficulties, and peasant uprisings, sure signs of the loss of Heaven's favor and mandate to rule. The Yellow River flooded repeatedly, and there were numerous plagues. Poor harvests and disease triggered peasant uprisings in the South which were supported by the White Lotus, a secret Buddhist society. These uprisings disrupted the rice trade, causing food prices to rise. The government attempted to compensate by printing more money, but this only increased the amount of inflation.

During the last years of the Yuan dynasty, the Mongols fell to infighting, and power was held not by the emperor but rather by warlords. Some Mongols blamed the dynasty's decline on Sinitic influence, arguing that the Mongols in China were becoming too Chinese and thus increasingly weak. Mongols in Mongolia rebelled against edicts coming from Dadu. In 1368 Toghon Temur was driven out of the capital by Zhu Yuanzhang, later known as Taizu and also as the Hongwu emperor, the founder of the Ming dynasty. Toghon Temur fled to Karakorum, where he died two years later.

—Rebecca Wendelken

Bibliography

- Ch'en Yüan. *Western and Central Asians in China under the Mongols*. Translated by Ch'ien Hsing-hai. Los Angeles: University of California Press, 1966.
- Lane, George. *Daily Life in the Mongol Empire*. Westport, CT: Greenwood, 2006.
- Morgan, David. *The Mongols*. Malden, MA: Blackwell, 1986.
- Rossabi, Morris, ed. *China among Equals: The Middle Kingdom and Its Neighbors, 10th–14th Centuries*. Berkeley: University of California Press, 1983.
- Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.
- van DeRachewiltz, Igor, et al. *In the Service of the Khan: Eminent Personalities of the Early Mongol-Yüan Period, 1200–1300*. Wiesbaden, Germany: Harrassowitz, 1993.

Early Ming and Its Frontiers— From Nanjing to Beijing

After expelling the Mongols from China in 1368, the nascent Ming empire (1368–1644) now had to consider its borders. The largest threat came from the north. Although the Mongols had been defeated, by no means were they weak. In addition, the Ming had an expanding population. The rebellion against the Mongols, along with the general poor administration during the waning years of the Yuan dynasty, displaced numerous peasants. Ming efforts to bring these individuals back into Chinese society and government control led to an expansion of the frontier.

Originally the Ming capital was far from the modern Beijing, located at the port city of Nanjing (Southern Capital) on the Yangzi River. Even before the official shift of the capital to Beijing, the Hongwu emperor (r. 1368–1398) was concerned with Nanjing as the capital, as no dynasty with its primary capital based in the south had successfully controlled all regions of China. A site in the north seemed more ideal, especially with the ever-present Mongol threat. However, as time passed, the Hongwu emperor settled on Nanjing and focused on consolidating his empire, leaving the conundrum of a suitable northern capital to his successors.

In 1421, the Yongle emperor (r. 1403–1425) shifted the capital to Beijing (Northern Capital). The site was selected for a variety of reasons.

One was the Hongwu emperor's earlier concern that only dynasties with a capital in the north successfully ruled all of China. Although the weight and consideration of tradition and history always have had an impact on monumental decisions in China, pragmatism also played its role. The Yongle emperor was increasingly focusing his attention on the Inner Asian frontier. With the rise of the Oirats and continued Mongol raids, Nanjing was simply not a suitable location for directing defenses and campaigns.

The site also had some symbolic importance, as it was formerly the Jin and Yuan capitals as well. Thus, the Yongle emperor not only rebuilt its Yuan walls but also replicated his Nanjing palace there, but in a far greater dimension. Construction began in 1407 and ultimately yielded a much larger city than that of the Yuan period but also created cities within the city. The territory contained in the outer city walls formed the imperial city (*buangcheng*), while a second set of walls and a moat demarcated the palace city (*zijincheng*). Located in the *zijincheng* were residences of several of the Ming princes and other nobles, and the emperor's palace resided in another section. This final layer was what is known as the Forbidden City, which housed the imperial household and immediate attendants.

With a new capital, the Ming now could deal with threats from Inner Asia more effectively. Being closer to the frontier did not resolve all of the issues, but Beijing's proximity eased some logistical, diplomatic, and military problems. Initially the Ming took the battle to the Mongols; however, Mongol attacks between 1483 and 1489 thwarted further efforts. After this, the Ming could only defend their frontiers. Indeed, the Mongol threat necessitated the Ming maintaining approximately 1 million men to defend the northern frontier. In addition, to prevent or at least impede further Mongol attacks, the Ming improved and extended existing walls and fortifications along the northern frontier and, more importantly, constructed a series of new ones during the late fifteenth and sixteenth centuries. These massive defensive barriers collectively constitute the bulk of what today is misleadingly known as the Great Wall. Even at its full extent and strength, the Great Wall never spanned the entire northern frontier.



Contrary to popular opinion, the Great Wall of China is not a single, unbroken wall. Although frontier forts predated the unification of China in 221 BCE, and the Qin and subsequent dynasties connected and expanded portions of these frontier barriers, it was not until the era of the early Ming dynasty that the massive walls tourists visit today were constructed. This is a rebuilt portion of that Ming wall, reconstructed a few years ago. (Corel)

Consequently, it was never an absolute barrier, as the Mongols tended to find gaps. Moreover, the Mongols were even often able to penetrate places where its imposing walls stood guard simply by recourse to such tactics as bribery or cutting off and storming isolated posts. Nonetheless the wall served its purpose, as it slowed Mongol raids and brought part of the frontier under Chinese influence, allowing the Ming to interject themselves diplomatically and economically, if not militarily, into the steppe.

A more serious threat came from another nomadic people on China's northwest frontier: the Oirats, or Western Mongols. The Yongle emperor had prevented the Oirats from coalescing into a major force, but that situation quickly changed upon his demise in 1425. The Oirats did not attempt to revive the Yuan dynasty, nor did they necessarily recognize that their ruler had to be a descendent of Chinggis Khan. Nonetheless, they raided the borders of China incessantly and proved to be a dangerous threat by capturing the Zhengtong emperor (r. 1436–1449, 1457–1464) after defeating Ming forces in 1449 near Beijing. Fortunately for the Ming, the Khalkha, or Eastern Mongols, also viewed the Oirats as a threat, and their internecine fighting spared China potential conquest from either source.

—Timothy May

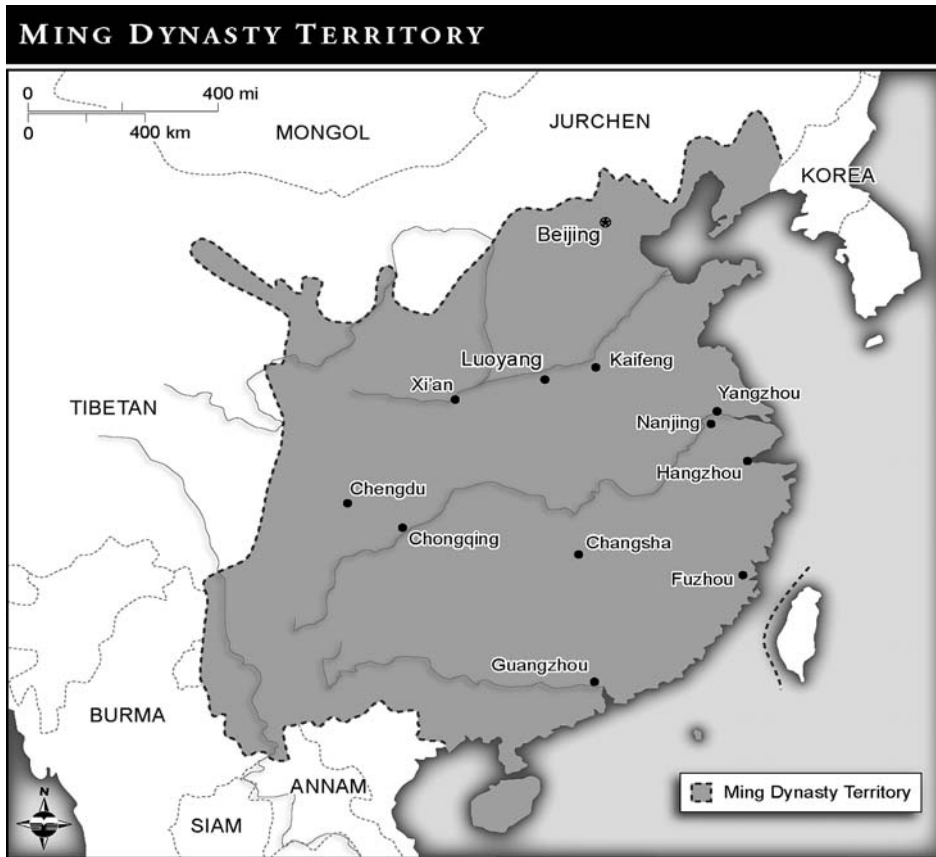
Bibliography

- Dreyer, Edward. *Early Ming China: A Political History, 1355–1435*. Palo Alto, CA: Stanford University Press, 1982.
- Mote, Frederick. *Imperial China, 900–1800*. Cambridge: Harvard University Press, 2000.
- Rossabi, Morris. *China and Inner Asia, from 1368 to the Present Day*. New York: Pica, 1975.
- Tsai, Shih-shan Henry. *Perpetual Happiness: The Ming Emperor Yongle*. Seattle: University of Washington, 2001.
- Waldron, Arthur. *The Great Wall of China: From History to Myth*. Cambridge: Cambridge University Press, 1990.

China—The Early Ming Era, 1368–circa 1500

Sandwiched between two of the mightiest cosmopolitan regimes in East Asian history, China's Ming dynasty (1368–1644), the name of which (*Da Ming*) translates as “Great Brightness,” has for too long been relegated to obscurity by historians. When compared with the two alien regimes—the vast Eurasian empire of the Mongols that preceded it and the Manchu Qing colossus that followed—the Ming has appeared less significant, less accomplished, more introverted, defensive, some say xenophobic, and lackluster than the two non-Chinese regimes. Nevertheless, as research into this last native-Chinese dynasty grows, appreciation for the importance of Ming China in world history increases.

The appearance of the Ming dynasty marked a significant turning point in Eurasian, as well as Chinese, history. It put an end to the Mongol Yuan dynasty's much resented, nearly century-long military occupation of China and restored Chinese governance to parts of northern China that had known nothing but alien rule for more than four centuries. Furthermore, a now-reunified China under native rule was neither a mere restoration of the Song (960–1279) nor insignificant in size. At over 1.5 million square miles (nearly 4 million square kilometers), Ming territory rivaled the Tang empire (618–907) in some respects and was larger than the Song, both glorious Chinese dynasties that the Ming dynasty claimed as its ancestors. With a dense and productive population of between 60 and 80 million at its founding, China's Ming population rebounded sharply



under the early Ming after a steep decline during the era of Mongol invasions and occupation. With the fragmentation of the Mongol empire, China again became the most populous country on earth, and by its end likely contained a fourth of the world's total population. Due to 277 years of relative stability, growth, and prosperity, the population seems to have doubled to at least 150 million by 1600. By 1500, the Ming was already beginning a dramatic commercial expansion that would take its products to the far corners of the Afro-Eurasian world.

The restoration of native rule to a reunified China aspiring to reclaim its position as an East Asian powerhouse resulted from the dramatic rise to power of the rebel leader Zhu Yuanzhang (1328–1398), one of the most influential figures in Chinese history. Once he dispelled the Mongols back to their homeland, he immediately shaped the new regime according to his vision of what China could be and needed to become.

Adopting the reign title Hongwu (Abundantly Martial), the new emperor (r. 1368–1398)

imposed strict law and order in equal measure. His means were the threat and application of physical coercion and a major re-codification of the law, *The Ming Code*, which was amplified by many supplements, administrative regulations, and imperial pronouncements and was posted even in remote villages. All was designed to promote obedience and reinvigorate centralized government by invoking Tang and Song precedents, imposing Neo-Confucian orthodoxy, and eventually restoring civil service exams based on merit. His suspicion of intellectuals and bureaucrats, however, led him to abolish the office of chancellor or prime minister, in existence since the Han dynasty (202 BCE–220 CE). This meant a less centralized bureaucracy, one on which the emperor could impose his will directly, but such attention to the detailed workings of so many government ministries and agencies mightily increased the emperor's workload. Few subsequent rulers were as obsessive, and most left the work either to palace eunuchs or to secretaries recruited from officialdom. The result was

► THE YONGLE EMPEROR

The Yongle emperor (b. 1360, r. 1403–1424), third ruler of China's Ming dynasty (1368–1644), was one of the most capable and audacious in Chinese history. By constructing Beijing's best-known monuments and demonstrating China's power through unprecedented maritime expansion, he left an enduring mark on Chinese and world history. However, from a Confucian perspective, he was a very unfilial son.

Born the fourth son of Ming founder Zhu Yuanzhang, the future Yongle emperor (personal name Zhu Di) was never in line for the throne. Upon maturity Zhu Di was made the Prince of Yan and was sent to Beiping (Northern Peace) to protect the empire's northern border against the Mongols. On this strategic frontier, Zhu Di's military prowess and political ambitions grew, despite his father's constraints. When the emperor died in 1398 leaving a teenage grandson, Jianwen (r. 1399–1402), on the throne, Zhu Di employed his military advantage to usurp power from his nephew. During the ensuing civil war the nephew died in a palace fire. A bloody purge of the emperor's loyalists followed.

Adopting the reign title of Yongle (Everlasting Happiness), the new ruler ignored his father's dynastic intentions and remade the empire to his own liking. Foremost, in 1421 he relocated the

capital from Nanjing to the north, renaming his home base Beijing (Northern Capital). There he built a new dynastic capital more glorious than his father's. He supervised the building of Beijing's monumental walls and gates, its sprawling Forbidden City, and its awe-inspiring Temple of Heaven. Even in preparing his final resting place, Zhu Di constructed on the outskirts of Beijing a tomb (still unexcavated) more grandiose than his father's in Nanjing.

With similar zeal, Zhu Di spread China's influence, at least for a time, well beyond its borders, personally leading five military campaigns into Mongolia (dying while on the fifth) and, most astonishingly, launching Admiral Zheng He's voyages to Southeast Asia, the Indian Ocean, the Persian Gulf, the Red Sea, and the shores of East Africa. An exceptional Ming ruler, Zhu Di showed an adventurous spirit and dynamism in foreign affairs but did little to diminish imperial despotism at home. On the contrary, he created a supra-bureaucratic force of eunuch henchmen and spies whose periodic excesses and interference in the functioning of government remained one of the Ming's most persistent and debilitating weaknesses.

—*Roland L. Higgins*

mutual distrust, hostility, and competition between the two groups vying for the emperor's attention, and frequently these deep divisions evolved into political struggles that ended badly. Still, no one dared reverse the founder's decision in this or many other matters.

Some observers see the legacy of Mongol rule influencing the Hongwu emperor's tyrannical behavior, his harshness, physical brutality, elimination of suspected rivals, wholesale bureaucratic purges, and generally autocratic governing style, because these lacked any precedent in Song times. Yet that is only part of the answer. The desperate times in which Zhu lived and the ruthless methods required in his rise to power certainly shaped his attitudes about governing. Furthermore, while still authoritarian, most subsequent Ming emperors either lacked the will,

disposition, and energy or were too preoccupied with their own problems, pastimes, and palace intrigues to replicate the dynastic founder's excesses to such savage degrees. Also, Confucian officials strived constantly to corral disruptive rulers. To take a broader perspective, global historians have identified a number of other countries, from Russia to Japan and Vietnam, that underwent a heightened sense of ethnic distinctiveness and an urgent impetus to (re)centralize their regimes in the immediate post-Mongol aftermath.

Even though the Hongwu emperor planned for an orderly succession and had groomed his eldest son to carry on, when the latter died, the emperor bypassed other sons and chose a grandson, who assumed power in 1399. Offended and indignant at this snub, the most ambitious and

powerful of the young emperor's princely uncles, Zhu Di, moved south with an army from his stronghold in present-day Beijing and overthrew his nephew. With this act of usurpation, the second most extraordinary reign in Ming times began. Under the reign title Yongle (r. 1403–1424), Zhu Di's every action seemed calculated to affirm the legitimacy of his claim to rule and to enhance the glory of his empire. He reoriented the empire by shifting the primary capital from Nanjing (Southern Capital) to his powerbase in the north in 1421, the former, now-razed Mongol capital of Dadu, which he rebuilt into Beijing (Northern Capital). Here he could keep an eye on Mongol activity and northern defenses. By 1500, Beijing, which remained the capital of China with scant interruption to the present, was well on its way to becoming the world's greatest city and continued to be well into modern times.

In foreign affairs, the Yongle emperor, mindful of Khubilai Khan's example, ignored his father's admonitions and took a more expansionist approach by attempting to extend the empire's borders and to project Ming power to distant lands. More successfully than Khubilai, he annexed Vietnam in 1407 (although the occupation ended after two decades) and personally led five military campaigns into Mongolia. Although disappointed in failing to achieve a decisive victory over the Mongols or a means to integrate the steppe lands into his empire, the Yongle emperor nonetheless compensated in part by vigorously restoring the Chinese Tributary System, and in this he was abundantly successful. One of the main purposes of launching the diplomatic and commercial voyages of his trusted eunuch Admiral Zheng He was the opportunity to herald the restoration of Chinese power and the Son of Heaven's prestige throughout the maritime world from the East China Sea, through the Indian Ocean, to East Africa. This was truly an unprecedented feat for any monarch, Chinese, Mongol, or other. Dozens of countries responded favorably by sending tributary missions to China.

At the time, the Indian Ocean operated as the principal crossroads for extensive Afro-Eurasian maritime trading networks. The dramatic arrival of the awe-inspiring Chinese fleets demonstrated the preeminence of China in such areas as shipbuilding technology, carrying capacity, long-

distance navigation and communications, and state sponsorship of large-scale maritime enterprises, as well as the projection of diplomatic and potentially military clout. It was an impressive display of Chinese know-how, and it must have pleased the Yongle emperor to accomplish things the Mongols only dreamed of; their maritime ventures had all failed. Although these large-scale voyages did end after the emperor's death, one important legacy of Zheng He's voyages was the restoration of contacts and the rebuilding of linkages between overseas Chinese trading communities, especially in Southeast Asia and the homeland. It had been an open invitation for Chinese merchants to resume business as before, and that is what they did.

Too much has been made of the precipitous end of the early Ming state-sponsored voyages in 1433, and frequent statements regarding China's subsequent "isolation" and "turning inward" are exaggerated. After 1433, but well before 1500, there is evidence of persisting overseas contact, maritime trade, coastal smuggling, pirate activity, and private shipbuilding, all suggesting official bans against these activities had little impact at the local level along China's southeast littoral. This trend only continued to grow after 1500 and contributed to the Ming's sixteenth-century commercial expansion, generated in part by the export overseas of its manufactures, especially silk, the Ming period's famous blue and white porcelains, and many other luxury items, as well as products for practical use. Furthermore, throughout the period, besides the clandestine trade at Quanzhou, for example, legitimate and recognized tributary missions from overseas countries continued to arrive in such designated ports as Ningbo, Fuzhou, and Guangzhou. In addition, even though Mongol raids on the northern border did recur from time to time, long periods of mutually beneficial trade, the "tea-horse" trade, did take place there as well.

After Zhu Yuanzhang and Zhu Di, whose dynamic reigns did so much to mold a dynasty they hoped would endure for ten thousand years, the second half of the early Ming era witnessed a succession of younger, weaker emperors, who often ended up mired in palace politics and intrigues. Their reigns, with one or two exceptions, are marked by eunuchs' abuses of power,

corruption, bureaucratic timidity, and political factionalism. In one rare, but misguided burst of enthusiasm, a naïve emperor in 1449 led an abortive military campaign into Mongolia and ended up ambushed (at Tumu), with his army slaughtered and himself taken captive. Soon after this humiliation, the rebuilding and reinforcing of the Great Wall was resumed in earnest.

Despite its vicissitudes, by 1500, the Ming dynasty had succeeded in restoring confident self-rule, frontier security, a loyal and well-educated class of hard-working officials, social stability with a modicum of social mobility, agricultural productivity, Confucian values, and a strong foundation for population growth, commercial expansion, and a rising standard of living. Soon after 1500, the Portuguese and eventually other Europeans arrived off the Chinese coast seeking the land of abundance Marco Polo had described. To a great degree, they were not disappointed. What would disappoint them is the difficulty of gaining direct access to that abundance in the way they would have liked while the Ming system was in place.

—Roland L. Higgins

Bibliography

- Brook, Timothy. *The Troubled Empire: China in the Yuan and Ming Dynasties*. Cambridge, MA: Belknap Press, 2010.
- Goodrich, L. C., and Chaoying Fang, eds. *Dictionary of Ming Biography*. 2 vols. New York: Columbia University Press, 1975.
- Mote, F. W., and Denis Twitchett, eds. *The Cambridge History of China*, Vol. 7, *The Ming Dynasty, 1368–1644*, Part 1. Cambridge: Cambridge University Press, 1988.
- Twitchett, Denis, and F. W. Mote, eds. *The Cambridge History of China*, Vol. 8, *The Ming Dynasty, 1368–1644*, Part 2. Cambridge: Cambridge University Press, 1998.

Peasant Rebellions in China

Rebellions in China originated at least as early as the Qin empire (221–206 BCE), and their historical roots can be traced to peasant discontent, which tended to reach volatile levels during periods of dynastic decline. The breakdown of imperial order and the rise of peasant rebellions were so frequently linked that each was inter-

preted as a sign or a cause of the other. However, before the year 1000, only one peasant rebel leader managed to attain the dragon throne: the founder of the Han dynasty, Liu Bang, in 202 BCE. In subsequent periods, that exceptional path to power would often be tried but would be successfully repeated only once with the founding of the Ming dynasty in 1368 by a rebel of peasant origin named Zhu Yuanzhang.

Members of China's peasant class, the rural villagers whose hard work and productivity sustained the agricultural foundations of the empire and created the bulk of its wealth, generally thrived in periods of imperial peace and stability. Although free to buy and sell land and to live by the fruits of their labor, nonetheless most peasants lived near the margins of subsistence and were generally subject to the vicissitudes of economic life: competition for land and water, the tax and corvée (forced labor) systems, market forces, the impositions of local magnates and officials, and, of course, the always unpredictable weather. Few parts of China were spared the periodic calamities caused by drought, famine, floods, pests, diseases, and the threats associated with dynastic decline: corrupt and predatory tax collectors, rapacious landlords, banditry, civil war, and invasion. Any combination of these factors or a serious enough case of any one might set off a potentially dangerous rebellion. Any single rebellion, accompanied by a sufficient grievance, an ambitious and charismatic leader, an inspiring doctrine, and loyal and motivated followers, might threaten or topple a dynasty. A good example of a popular ideology of rebellion is the White Lotus Society, whose legendary founder was a fourth-century CE monk. Its eponymous symbol of a beautiful flower arising out of the mud evokes not only Buddhist transformation but also the promise of a corrupt society purified by popular rebellion.

In this later period of Chinese history, an ideological descendant of the White Lotus known as the Red Turbans appeared in response to a great crisis of legitimacy. After the death of Kubilai Khan in 1294, feuds among Mongol princes disputing the imperial succession deteriorated into civil war. After decades of Central Asian oppression, heavy taxation, depredations caused by Yellow River floods, and the onerous burden

► THE RED TURBANS

The Red Turbans were the principal mid-fourteenth-century Chinese rebel movement contributing to the downfall of the Mongol Yuan dynasty (1279–1368) and the rise of the Ming (1368–1644). The Red Turban movement incorporated influences from various sources, some of which entered China during the era of Mongol rule. Ideologically, it qualifies as a popular, subelite, sectarian movement with origins in Persian Manichaeism, the belief that forces of goodness and light are locked in a cosmic battle with the forces of evil and darkness. This belief blended in China with Mahayana Buddhist notions of the existence of a Buddha of the Future (Maitreya) who, in a time of chaos, will descend from the Tushita Heaven to create a perfect earthly order.

During the 1340s when the Mongols began to lose control of their Chinese empire, local monks and spiritual leaders spread these ideas rapidly from south of the Yangzi River through to the

Yellow River Valley and the North China Plain. After 1351, when massive peasant discontent in North China led to armed revolt, the movement developed political aspirations. Several rebel leaders emerged, heading large peasant armies and proclaiming new dynasties. The Red Turbans' insignia was the red headband, or scarf, which symbolized the forces of fire, or light, seeking to purify the world of evil. One early Red Turban member, Zhu Yuanzhang, gradually emerged as the leader of the strongest branch of the movement. Based in Nanjing, he defeated all rivals and founded the Ming dynasty as the Hongwu emperor (1368–1398). Although his dynasty's name—Ming, which means “Bright”—echoes core Red Turban ideals, Zhu Yuanzhang as emperor turned his back on his rebel past and restored the Confucian-bureaucratic style of rule already familiar under the Chinese Song dynasty (960–1279).

—Roland L. Higgins

of labor service repairing dams and dikes, myriads of discontented peasants arose in open rebellion under Red Turban auspices. From the 1330s onward, several rebel leaders appeared under this mantle, each building on anti-Mongol sentiment. One of them, Zhu Yuanzhang, a former monk, arose from humble beginnings in the Yangzi Valley to become a great general and rebel leader. Defeating or subordinating all his rivals, he chased the Mongols and their allies out of China; destroyed their capital at Dadu, near Beijing; and proclaimed the Ming dynasty with its capital in Nanjing, which had been Zhu's headquarters since 1358.

—Roland L. Higgins

Bibliography

- Dardess, John W. “The Transformation of Messianic Revolt and the Founding of the Ming Dynasty.” *Journal of Asian Studies* 29 (1970): 539–558.
- Large, Peter. *War, Politics, and Society in Early Modern China: 900–1795*. New York: Routledge, 2005.
- Teng, Ssu-yü. *Protest and Crime in China: A Bibliography of Secret Associations, Popular Uprisings, Peasant Rebellions*. New York: Garland, 1981.

The Chinese Educational and Examination System

During the Song and Ming dynasties (960–1279 and 1368–1644, respectively), government-sponsored education, a standardized civil service examination, and the civil bureaucracy evolved into a mature integrated system that undergirded China's meritocracy. It offered many commoners opportunities for upward social mobility, helped the imperial government exercise effective control over a large population and massive territories, and furthered the integrity of sovereign authority against the hereditary aristocracy and wanton warlordism. At the same time, flaws in the system became exposed and criticized by some perceptive intellectuals.

Zhao Kuangying (also known as Taizu), the first emperor (r. 960–976) of the Song dynasty, was himself a regional warlord before seizing imperial power. Around the time of his coronation he crushed a rebellion of generals and followed it up with a banquet, at which he convinced the generals who had remained loyal to him to retire with generous pensions. Thereafter he built a central bureaucracy run by scholar-officials,

which led to a much greater concentration of imperial power in his hands than had been seen in any previous dynasty.

During the next three centuries, despite the occupation of northern China by various non-Chinese peoples, such as Khitans (Qidans), Tanguts, Jurchen (Ruzhen), and Mongols, the Song government continued sponsoring and managing education at academies in the imperial capital, first at Kaifeng and then, after Kaifeng was captured by the Jurchen in 1126, at Hangzhou. While *kuozhijian*, the School of the Imperial Talents, was transformed into a ceremonial temple, *taixue*, the Advanced School of Classics, was reorganized and expanded. According to regulations drafted by Wang Anshi (1021–1086), the reform-minded councilor of Emperor Shenzong (r. 1067–1085), strict rules of advancement by grade were established for this school. From an annual examination of 2,000 first-year students of the Outer School, a certain number were selected to move up, filling vacancies in the Inner School. There, 300 students would be required to participate in a biennial examination, and the successful ones moved up again, filling vacancies and continuing their academic careers in the Upper School, which was composed of 100 of the empire's most talented students. A significant number of imperial bureaucrats were then "recommended," or chosen, from these 100 after an intensive and progressive process of internal examinations, competitions, and selection. The process was called *gongju*, the civil service recommendation. It is recorded that for a few years when the uncertainty of Councilor Wang's extensive social and economic reforms led to the suspension of the civil service examination, there were 3,800 students enrolled in the school, and internal recommendation became the only means of selecting civil bureaucrats.

Meanwhile, during the early Song years both local academies and itinerant tutoring and learning grew at a much faster pace than state-sponsored education. While the imperial academies slowly recovered from the damage caused by the wars of the tenth century, the prefectures and counties sponsored their own educational academies for recruiting civil servants. Their initiatives and active promotion of education, supported by reform-minded officials, in turn

stimulated the remodeling and formalization of the *keju*, the civil service examination. A privately tutored person would be able to obtain the degree of Learned Talent after passing a county examination. He became a Qualified Candidate after passing the prefectural examination and thus became eligible to be tested directly by the emperor in the imperial palace, along with graduates from the government-sponsored academies. Most of the Northern Song emperors (960–1126) were personally involved in testing the Qualified Candidates and rewarded the best among them, often 36 in number, with the title of Advanced Scholar. An Advanced Scholar was often appointed to the post of County Magistrate or its equivalent. However, palace examinations continued to be held irregularly by special imperial edicts.

By the end of the Northern Song period, the Chinese political structure had become so bureaucratic that scholar-officials, both those advanced through examination and those advanced solely through recommendation, formed a newly emerging social class. Moreover, factional struggles between conservatives and reformers poisoned the politics of the imperial court. Among many of the policy disputes between the two parties, the issue of how to reform the civil service system was major. The reformers, led by Councilor Wang, who promoted a systematic imperial examination system as opposed to the internal system of recommendation, won a temporary victory because of the emperor's personal support, which certainly helped the civil service examination system gain popularity. However, the lives and careers of the bureaucrats on both sides depended so much on the emperor and the imperial political apparatus that neither side was able to form a unified voice to advocate an agenda independent of imperial authority. After the reformers failed to bring about real positive changes and exhibited incompetence in dealing with the Jurchen invasion of northern China in 1125, the conservatives won the battle, at least for the moment. They revoked many of Councilor Wang's social and economic reforms but preserved his rules and regulations for the imperial academies. At the same time, the civil service examination system had been so well established that after a few years of setback at the hands

➤ ADMINISTERING THE HUISHI

The official *History of the Ming*, which was compiled under the direction of the Manchu, or Qing, emperors and completed in 1739, details the procedures and regulations of the *huishi*, the imperial examination held in the capital in the fourteenth and fifteenth centuries:

“The Ministry of Rites designates two official examiners to be in charge of the national examination, the *yushi* [scholar and chief examiner] running the inner-section of the Examination Compound and an *anchashi* [inspector and administrator] running the outer-section. During the examination, the *yushi* is responsible for handling questions and booklets, and a group of special associates is designated to supervise such procedures as concealing examinees’ identities, hand-copying the answers by standardized inscription, proof-reading the hand-copies, distributing and circulating the booklets, guarding the doors of examinees’ cells, and searching for and confiscating materials illegally carried into the examination.

The qualified candidates are those who are graduates from the Great School and from the schools of prefectures, provinces, and counties, those who are scholars without holding offices, and those who are civil servants without formal official ranks. All of them must have been inspected officially and judged to be morally sound, behaviorally upstanding, and literarily competent by the official inspectors. Meanwhile, whoever are being disciplined by their schools, or have been removed from the offices of the civil service, or come from a family of prostitutes or other indecent professions, or are in the time period of mourning the death of their parents are barred from taking the examination.

On the front page of a booklet, an examinee’s parental names of three generations, his place of

birth, and his age are recorded together with the book titles of the classics he has studied and the seals of the proper offices of recommendation and inspection. On the day of examination, an examinee’s identity is checked through a brief interview in order to prohibit the entry of any impersonator. An examinee will be given three candles if he does not finish the answers before sunset. In writing answers, he must avoid using words that imply his name or the name of his ancestral temple, and must not tell stories about his family. A special official conceals personal information of an examinee by pasting a patch on top, and afterwards stamps a specific identification number along the seams of the patch. An examinee uses black ink to write, and his answering sheet is called “the black sheet,” and a hand-copier uses vermilion ink to make a copy, and it is called “the vermilion sheet.” The examinees live in the same compound, with each having his own separate cell. A troop is assigned to guard the compound. After the entry of the examinees, both the inner-section and outer-section doors are locked, allowing the inner and outer officials to carry out their respective duties.

The Chief Examiner and his associates, composed of distinguished palace officials and outstanding literary scholars, collectively read the papers, rank them, and make a list of candidates to be examined by the Emperor in the imperial palace.”

—Wenxi Liu

Source

Zhang Tingyu, ed., “Ming-shi, Xuan-ju-zh” [“Record of Selection and Recommendation”], in *The History of the Ming* (1739), translated by Wenxi Liu.

of the conservatives it would regain momentum in the Southern Song dynasty (1127–1279), when the south became the sole area ruled over by native Chinese emperors and the up-to-then marginalized southern Chinese became increasingly enthusiastic about becoming a part of the civil meritocracy.

The complicated relationship between the civil examination system and Neo-Confucian

scholarship during the two successive Song dynasties is worth noting. Song Neo-Confucian scholars, led by Zhu Xi (1130–1200), introduced the concept of *Li*, the cosmological principle that enabled them to integrate various archaic Chinese notions and ideals, such as the Daoist concept of *Dao* (the Way), along with alien ideas, such as the metaphysics of Buddhism, into a new Confucian construct. They reinvented the

theories of the ancient Confucian sages by editing and offering commentaries on the Four Books (*Book of Great Learning*, *The Middle Way*, the *Analects* of Confucius, and the *Book of Mencius*) and Five Classics, the core of traditional Confucian learning. They also expanded the focus of previous Confucian scholarship. As had been the case for centuries, they focused primarily on the daily ethics of human relations, but they did so now by outwardly embracing the cosmological truth of the universe and inwardly emulating the heart and soul of the ancient sages. It was also through their efforts that Confucian scholarship began to truly occupy the center stage of Chinese education and the civil examination. Schools at all levels emphasized study of the Confucian classics but now with a Neo-Confucian perspective; the civil service examination tested how to interpret and develop Confucian theses and arguments within this Neo-Confucian system of thought, and scholar-officials became ever more conscious of their social responsibility to save the world. Moreover, many of the leading Neo-Confucian scholars established private academies, spreading the new Confucian learning and ideology all over China, especially in southern China, and this enabled southern Chinese youths to compete with their northern counterparts. More than a dozen private academies emerged, each commanding hundreds of followers and thousands of admirers. Renowned scholars traveled around the country lecturing in front of often large audiences to promote the scholarship of Neo-Confucian Li and encourage listeners to cultivate their inner perfection, preparing for the noble mission of serving the empire and the people. The main stream of Chinese intellectuals departed from the escapism and rhetorical vogue of previous centuries, and many turned out to be conscientious duty-bound reformers.

The Chinese meritocracy suffered a setback during the Yuan dynasty (1279–1368). The Mongol military aristocracy and its non-Chinese functionaries dominated government operations, and the Chinese-styled bureaucracy was kept at a minimal level to perform managerial tasks. The size of the imperial academies was significantly reduced to enroll no more than 300 students, at least half of them being gifted youths of Mongol

and central Asian ethnicity. Private schools survived only after they had been forced to conform to Mongol rules and regulations. The civil service examination ceased to be open to the public, and civil servants were recruited exclusively from the graduates of the imperial academies. Neo-Confucian scholarship became marginalized, and its scholars were reduced to the ninth social rank, lower than thieves and only above prostitutes. In general, instead of intellectual work, artisan skills and inventive manufacturing marked the realm of Chinese achievements under Mongol dominance.

However, no sooner did Zhu Yuanzhang, better known as the Hongwu emperor (r. 1368–1398), establish the native Ming dynasty than he restored the Chinese-styled meritocracy. He did so partially because he had witnessed the persecution of Confucian scholars by the Mongols and partially because he needed to attract capable men to consolidate his authority, since he was himself of humble origin and was brought to power through a peasant rebellion. The emperor and his successors rebuilt and regularized the civil service examination according to Tang and Song models. However, the reinvented system differed from the previous ones in four respects.

First, the practice of recommending scholar-officials directly from the imperial academies, after flourishing during the early Ming period, began to fall into disuse from the mid-Ming onward. Privately tutored students obtained equal status with state-sponsored ones in pursuing the degree of Qualified Candidate through prefectural/provincial examinations, and graduates from the imperial academy were required to join Qualified Candidates to first pass triennial national examinations in the capital and then be tested by the emperor in the imperial palace in order to be appointed to government posts.

Second, the Four Books and Five Classics, widely circulated in Song times, now became the only authorized textbooks for education and the civil service examination. However, after the early Ming period of about half a century, during which students were required to study from a list of authorized interpretations of the textbooks by renowned Song Neo-Confucians, the Yongle emperor (r. 1403–1424) organized a group of scholars to compile a new multivolume text-

book, *The Complete Collection of the Four Books and Five Classics*, supplemented with new commentaries. After its completion, it became the standard textbook for the civil examination. The new scholarship now emphasized the responsibility of intellectuals to serve and obey imperial authority instead of saving the world in general and translated the cosmological principle of Li into the inward meditative nature of heart and mind, exploring the inner potential of humans toward realizing the Mandate of Heaven, knowledge, good conscience, individual perfection, and the noncraving mind. The Ming philosophy of *Xin*, scholarship of heart and mind, now became the preferred Neo-Confucian school as well as an alternative to Song teachings regarding Li.

Third, the civil service examination gradually became regularized as a progressive three-tiered system with certainty and predictability. A fixed date was set for either a local or a prefectural/provincial examination, held annually and triennially, respectively. The degrees of Learned Talent and Qualified Candidate were rewarded to those who were selected from the respective examinations. It was also fixed that the year after the prefectural/provincial examination, the Qualified Candidates were summoned to participate in the national examination held in the imperial capital, and the successful among them were to be tested in person by the emperor himself. Different ranks of the highest degree (Advanced Scholar) and corresponding official appointments would be rewarded to them.

Fourth, the Eight-legged Essay was adopted as the official essay format for the written test, the most important component of the examination. The format was originally used in Song times to encourage test takers to demonstrate their ability to analyze timely controversies, based on accumulated materials quoted from the ancient Confucian sages, in order to avoid offering simplistic solutions. The Ming format of the Eight-legged Essay was designed to produce a thesis paper according to much more restrictive rules. From opening statement to conclusion, an acceptable composition was required to take eight steps, each conforming to specific technical rules including the number of words, the style of sentences, paragraph layout, rhyming, symmetry, tone balance, and couplet style. More-

over, discussion of historical events occurring after 221 BCE (the first year of the Qin dynasty) was disallowed, since the ancient Confucian sages could not have anticipated what would happen after they passed away. History had hitherto been always a major component of and the most meaningful reference point for the knowledge possessed by Chinese intellectuals, but this rule pushed them to rediscover and reinvent the truth in their hearts not from the experiences of the recent past but rather from the archaic past. This immediately raised the eyebrows of the critics, who correctly suspected that this rule was intended to prevent any ridicule and critique of Zhu's imperial reign. In the long run this rule had a profound and long-lasting impact on the worldviews of Chinese elites, who would often feel more comfortable with truths based on the mythic glories of an archaic past than with experimentation with new perspectives.

Contrary to what is often stated, the Ming emperors were not xenophobic. Zheng He's seven naval expeditions of 1405–1433, the active involvement of Christian missionaries in the cultural affairs of the imperial court during the sixteenth and seventeenth centuries, and the spreading of Buddhist and Daoist temples all over the country marked a quite tolerant imperial policy toward aliens and alien cultures. At the same time, the imperial government spent huge amounts of tax revenues, collected from revived agriculture and fast-growing trade and commerce, to sponsor elite academies and libraries and to print multivolume encyclopedic collections of the Chinese classics and other literature. Moreover, a large number of students from Japan, Korea, Southeast Asia, Mongolia, and central Asia were attracted to the Ming court to study the Chinese classics and to take the examinations, and Jesuit missionaries from Europe were certainly impressed by the Chinese meritocracy when comparing it with the deteriorating aristocracy in their home countries.

However, while the civil meritocracy was enjoying full bloom, criticisms centered on the flaws of the civil service examination system emerged. Critics exposed cheating of all kinds to the public, ridiculed career students for wasting their whole lives to pursue an illusive goal, questioned the tricks of favoritism played by

supervising officials in the selection processes, and, most of all, cast doubts on the pedagogical shortcomings of the Eight-lagged Essay format, which was progressively becoming more distanced from reality due to the applying of bizarre rules to historical interpretations.

Meanwhile, the structure of the civil service bureaucracy began to suffer from crises and critics of its own. Of course, the Chinese people, commoners and elite alike, preferred the present civil bureaucracy to the aristocracy and warlordism of the past simply because the examination system, despite its intrinsic flaws, often produced 40–50 percent of the civil servants from comparatively plebeian origins, which gave average people hope for upward social mobility. And most of the scholar-officials used their positions and influence at the imperial court to bring real benefits to their home villages and towns. However, just as with the clans, which had dominated post-Han China for more than three centuries (220–589), and the warlords, who had disturbed Tang's tranquility, some of the Ming scholar-officials accumulated enormous amounts of wealth and power and also turned their offices into hereditary quasi-aristocratic holdings. They eventually formed their own court factions, often allied with eunuchs, the emperor's in-laws, and other interest groups; divided the imperial court; engaged in sectarian battles against each other; and destabilized imperial authority. It is well recorded that the court of the late Ming dynasty experienced the most ugly political havoc in Chinese history.

Moreover, with more and more degree holders produced by more and more regular examinations, the Ming bureaucracy grew so rapidly that it added unbearable financial burdens on the government. More degree holders asked for more bureaucratic posts, a bigger bureaucracy demanded a greater amount of tax revenue, and heavier taxation upon the people led to higher levels of social discontent and resistance. The malignancies caused by the successful operation of the civil service examination, the rapid growth of the bureaucracy, and the ever more bloody court battles between bureaucratic factions would ultimately bring down the Ming dynasty when it faced Manchu pressures in the 1600s.

—Wenxi Liu

Bibliography

- Chaffee, John W. *The Thorny Gates of Learning in Sung China: A Social History of Examination*. Cambridge: Cambridge University Press, 1985.
- Elman, Benjamin. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.
- Franke, Wolfgang. *The Reform and Abolition of the Traditional Chinese Examination System*. Cambridge: Harvard University Press, 1960.
- Kracke, Edward A. *Civil Service in Early Sung China, 960–1067*. Cambridge: Harvard University Press, 1953.
- Meskill, Johanna M. M. *The Chinese Civil Service: Career Open to Talent?* Boston: Heath, 1963.
- Miyazaki, Ichisada. *China's Examination Hell: The Civil Service Examinations of Imperial China*. Translated by Conrad Schirokauer. New York: Weatherhill, 1976.

Japan from the Late Fujiwara Era through the Kamakura Shogunate

Until the rise of the Kamakura shogunate in the twelfth century, the Fujiwara family dominated Japanese society, serving as the conduits who bound provincials to the imperial court and by simply awing the same provincials with their power. The Fujiwara family ascended to power by monopolizing the position of regents to the emperors of Japan. They bypassed state institutions and controlled Japan through private rule until their position was challenged by Emperor Go-Sanjo in 1068, which aided the rise of two other powerful clans, the Minamoto and Taira, who challenged Fujiwara power. The Taira family displaced the Fujiwara but were later defeated at the hands of the Minamoto clan during the Gempei War (1180–1185), which also led to the death of the reigning emperor.

After defeating the Taira clan, the founder of the Kamakura shogunate, Minamoto Yoritomo, promised regional security that bypassed the emperor and the imperial court of Kyoto and guaranteed the land holdings of his followers. Given the title of shogun (military commander) in 1192, Minamoto Yoritomo maintained a puppet emperor in Kyoto and ruled Japan from his provincial headquarters, or *bakufu* (tent), at Kamakura, thereby establishing the Kamakura

➤ KUSUNOKI MASASHIGE, THE IDEAL SAMURAI

The *Taiheihki* (*Chronicle of the Grand Pacification*), which was composed by a number of anonymous Buddhist monks between roughly 1333 and maybe as late as 1370, recounts the battles and intrigues that characterized the period 1318–1333, when Emperor Go-Daigo was in the process of destroying the Kamakura shogunate.

In telling the story of the defense of Akasaka castle in 1331 by a small band of warriors led by Kusunoki Masashige, the monkish historians noted how this spirited defense, in the face of overwhelming odds, revitalized the imperial cause—a cause that had suffered a major setback with the recent capture of the emperor, along with many of his followers, at the fortified monastic temple of Kasagi.

According to the *Taiheihki*, 300,000 enemy soldiers (obviously a gross exaggeration) faced Masashige's small band of several hundred. However, because this samurai was one who would “scheme in his tent to defeat an enemy a thousand leagues distant,” the imperial forces were able to hold out day after day, employing a number of clever stratagems to defeat and kill large numbers of their foes. Finally, after killing numbers of the enemy “beyond counting,” and

when all of the castle's food was gone, Masashige planned one final coup. Believing that “the true man of courage ‘is cautious in the face of difficulties and deliberates before acting,’” he decided to fake his and his men's deaths, thereby living to fight another day. He ordered that a large hole be filled with the bodies of slain enemies and the castle set ablaze. Before the fire was lit, he and his men slipped away by threes and fives. The opposing army, seeing the fire, rushed in, determined to give no quarter to an enemy that had constantly frustrated and defeated it, but all that the soldiers discovered were bodies burned beyond recognition. In their apparent victory, they honored their presumed fallen foe by saying, “Though he was an enemy, his was a glorious death, well befitting a warrior.” Meanwhile, Kusunoki Masashige was safely away. Within two years, he would lead his forces to total victory over the shogun.

—Alfred J. Andrea

Source

The Taiheihki: A Chronicle of Medieval Japan, trans. by Helen Craig McCullough, 33rd ed. (North Clarendon, VT: Tuttle Publishing, 2003), 86–91.

shogunate, Japan's first feudal military government (r. 1185 to 1333). After Yoritomo's death, his widow, Hojo Masako, usurped effective ruling power from his Minamoto clan. With the rise of the Hojo family within the shogunate, the imperial court at Kyoto was completely subjugated; the shogunate even decided imperial succession. As Hojo family power solidified, Japan entered a period of new agricultural technologies and a cash economy.

The golden period of the shogunate ended with the arrival of the Mongols. In 1274 and 1281, the Japanese repelled two Mongol invasions that also altered the balance achieved by the Hojo family, inasmuch as the victory resulted in many requests for rewards by local daimyos, or lords. The shogunate had little land to give, however. The resultant discontentment among the Hojo clan's aristocratic followers, as well as the strains

on its resources occasioned by the Mongol invasions, severely weakened the shogunate. The result was an attempt by Emperor Go-Daigo (r. 1318–1336) to reestablish the position of the emperor as the supreme head of the state and its government. The resultant “imperial rebellion” by the emperor and his supporters spelled the end of the Kamakura shogunate. In 1333, the Hojo clan was totally defeated by a coalition led by the emperor and his most loyal supporter Kusunoki Masashige, whom Japanese tradition subsequently revered as the ideal samurai. Another key supporter was Ashikaga Takauji, who switched his loyalty from the shogunate to the emperor at a key moment in 1333. A short-lived Kemmu Restoration of imperial authority followed (1333–1336), but Go-Daigo quickly lost the support of the samurai class. A rebellion ensued, led by Ashikaga Takauji, with Kusunoki Masashige

remaining loyal to his emperor. The emperor's foolish strategy and tactics resulted in the destruction of his army and the death-by-suicide of the defeated Kusunoki in 1336. Ashikaga Takauji subsequently appointed a puppet emperor and in 1338 was given the title of shogun, thereby establishing Japan's second military government, the Ashikaga shogunate (1338–1573).

—*Timothy Bernard*

Bibliography

- Hall, John Whitney, and Jeffrey P. Mass, eds. *Medieval Japan: Essays in Institutional History*. New Haven: Yale University Press, 1974.
- Inoue, Mitsusada. *Introduction to Japanese History Before Meiji*. Tokyo: Kokusai Bunka Shinkokai, 1968.
- Jansen, Marius B. *Warrior Rule in Japan*. Cambridge: Cambridge University Press, 1995.
- Mass, Jeffrey P. *The Development of Kamakura Rule: 1180–1250: A History with Documents*. Stanford, CA: Stanford University Press, 1979.
- Sansom, George. *A History of Japan to 1334*. Stanford, CA: Stanford University Press, 1958.
- Yamamura, Kozo, ed. *The Cambridge History of Japan*, Vol. 3: *Medieval Japan*. Cambridge: Cambridge University Press, 1990.

Japan—The Ashikaga (or Muromachi) Period

The second of three feudal military governments that ruled Japan, the Ashikaga shogunate lasted from 1338 to 1573. The Ashikaga shogunate is commonly called the Muromachi period, or the Muromachi *bakufu* (tent government), after the district in Kyoto where the third shogun, Ashikaga Yoshimitsu (r. 1368–1394), located Ashikaga residences and administrative headquarters.

The founder of the shogunate, Ashikaga Takauji, abandoned his obligations to the preceding Kamakura shogunate and the powerful Hojo family by aiding Emperor Go-Daigo's ascension to the throne during the brief Kemmu Restoration (1333–1336). Takauji's motives for defection were mixed, but the result was that the Ashikaga were able to legitimate themselves as the new shoguns. Although the office of shogun was legally under the authority of the emperor, the shogun never received written definition or legal formulation until the Ashikaga dynasty. Un-

der the Ashikaga, the title of shogun was recognized as the chief of the military estate, the keeper of the warriors' customary law, and the ultimate guarantor of land rights.

A major result of the founding of the Ashikaga shogunate was the reestablishment of Kyoto as Japan's administrative, commercial, and cultural center. The principal reason for the dynasty's good fortune was the shogun's transformation not just into supreme military leader but also into civic and cultural leader. The shogunate reached its crescendo from the time of Ashikaga Yoshimitsu to Ashikaga Yoshinori (r. 1429–1441). Rising affluence in Japanese life under the Ashikaga contributed to the creation of such new traditions as the procession of the shogun at the New Year holiday to the classical tea ceremony. Moreover, the official patronage of the Noh theater, linked-verse poetry (*renga*), and Zen Buddhism throughout Japan epitomized the greatest Ashikaga contributions to Japanese cultural history.

The Ashikaga ruled Japan for more than 200 years, and over that period, the bakufu system of government was solidified both socially and institutionally. However, the Ashikaga shoguns had difficulty in exercising their power because most power still remained in the hands of the provincial daimyos, or landholders. The shogunate depended largely on the loyalty of the daimyos, and in many cases, the daimyos worked hard to balance the shogun's interests with their own affairs. By the end of the Ashikaga shogunate, the daimyos increasingly pursued power until open warfare led to the collapse of the Ashikaga dynasty. It was replaced in 1603 by Japan's third and final feudal military government, the Tokugawa shogunate.

—*Timothy Bernard*

Bibliography

- Hall, John Whitney, and Jeffrey P. Mass, eds. *Medieval Japan: Essays in Institutional History*. New Haven, CT: Yale University Press, 1974.
- Inoue, Mitsusada. *Introduction to Japanese History before the Meiji Restoration*. Tokyo: Kokusai Bunka Shinkokai, 1968.
- Perez, Louis G. *The History of Japan*. 2nd ed. Westport, CT: Greenwood Press, 2009.
- Yamamura, Kozo, ed. *The Cambridge History of Japan*. Vol. 3, *Medieval Japan*. New York: Cambridge University Press, 1990.

► THE DAIMYO SYSTEM

During the Ashikaga shogunate the designation *daimyo* (great names) came to be used increasingly for a new class of military men. Most were “men on the make,” the former subordinates of feudal lords who had lost their positions in the war that had ended the Kamakura shogunate. Indeed, the era has been characterized as the “Age of Gekokujo” (Rule of the Mighty by the Lowly) as one proud family after another was supplanted by their former subordinates. It rang as true for the imperial house that was controlled by the Ashikaga, as it did ironically later for the Ashikaga themselves.

These daimyo, who had only recently won their wealth and power by wresting them away from their feudal superiors, were not about to let anyone, even the shogun, take them away. When the Ashikaga tried to rein them in, they resisted. When the bakufu tried to limit their landholdings, their armies, or the extent of their power, they entrenched their defensive positions within castles. They consolidated their lands and men, their samurai were now required to reside within the castle all the time, and no one was thereafter granted land as a reward for service.

Many of the new daimyo had parlayed small tracts of land into larger holdings, often at the

expense of their own direct feudal lords. Some had been adopted into powerful houses, others had killed their lords, and still others had risen to the top behind their loyal peasant-samurai. Because they did not wish that their samurai would do the same to them, they never allowed their samurai the right to actually live on the land. The samurai now “lived as in an inn.” Everything was provided for them by the daimyo within his castle—meaning that they had no personal retainers, and therefore no band of followers with whom to plot against their lords. They had become professional soldiers.

The daimyo were so independent that they no longer even bothered to seek the official imperial offices that had meant power in the Kamakura era. Control of the land, the taxes, and the samurai was all that counted now. Even the bakufu had become unimportant in the lives of the daimyo. By the middle of the fifteenth century, the only people who cared about the bakufu offices were those who actually held them.

—Louis G. Perez

Bibliography

Perez, Louis G. *The History of Japan*. 2nd ed. Westport, CT: Greenwood Press, 2009.

Korea—Influenced by China But Only Semi-Dominated

Yi Songgye (more commonly called Taejo) founded Korea’s longest-lasting dynasty (1392–1910). This kingdom, named Choson, saw its capital moved from Kaesong to Seoul, which became the political, economic, and cultural center of Korea, and it has remained so ever since. To protect the new capital, Taejo ordered the construction of a great 10-mile (16-kilometer) wall with massive gates, parts of which remained into the twenty-first century.

Taejo continued the traditional relationship of tributary diplomacy with China. At least four missions visited the Chinese capital annually. The purpose of each was political, but they also allowed for cultural borrowing and economic exchange. Articles exported included horses, gin-

seng, furs, and hemp. In return, Korea received silk, medicines, books, and porcelain. During the next five centuries, Korea gave virtually unquestioned loyalty to Chinese political institutions and readily accepted cultural influences.

In spite of the fact that Taejo was a devout Buddhist, he directed the dynasty to adopt Neo-Confucianism as the state philosophy. While Confucianism had influenced Korea for centuries, the new approach was to create an ideal society in harmony with the particular attitudes and concerns of the Choson dynasty. The establishment of Neo-Confucian schools became a high priority.

For its first 200 years, Choson experienced peace and prosperity. Taejo and his successors built a strong foundation for the dynasty: they restructured society through the bureaucracy, strengthened the kingdom’s defenses, and

THE EARLY YI EXAMINATION SYSTEM

Confucianism influenced the growth of the Chinese examination system that had been used during the Koryo dynasty (918–1392); in the Choson dynasty, however, it was the principal means of attaining high government office. This system selected officials based on academic achievement as opposed to social status, military success, or wealth, and made professional service the most certain route to acquisition of wealth. The examination system initially produced an effective bureaucracy, but in time it deteriorated and finally ended with the overthrow of the Choson dynasty by the Japanese in 1910.

—Mary E. Connor

promoted its economy and culture. The country's boundaries were established along the Yalu and Tumen rivers.

Taejo's son, Taejong (1400–1418), dedicated himself to the completion of reforms that had begun under his father's rule. Taejong's successor, Sejong (1418–1450), became Korea's greatest monarch by bringing stability and prosperity to his kingdom. In addition to mastering Neo-Confucian learning, he was able to successfully negotiate with the *yangban* (office-holding aristocrats). His rule was known for progressive government, the creation of a phonetic script, economic development, scientific discovery, and technological innovation. He showed great concern for the peasants, providing relief in times of drought and flood as well as tax reform. Scholars were instructed to draw on the knowledge of elderly peasants to publish a book on agriculture; this book became the classic book on Korean agriculture.

During the Choson dynasty, Korea became a model Neo-Confucian society and emphasized the importance of education, social stability, filial piety, and good government based on a hierarchical social order of the elite selected through competitive civil service examinations. Another dimension of Neo-Confucian principles related to male-female relationships. Women were raised to understand that they were inferior and should

be submissive to men at all times; they should be obedient to their fathers, then later to their husbands and in-laws, and when widowed, to their sons. These ideas extended to the practice of ancestor worship, and the eldest male was the spiritual head of the family.

Neo-Confucianism had a strong impact. Prior to this time, Buddhist and Confucian beliefs basically coexisted, but now there were restrictions against the practice of Buddhism and limitations on the number of Buddhist monasteries. Neo-Confucianism condemned the reclusive life of Buddhist monks and rejected the Daoist search for immortality. The civil service examinations were essentially limited to the *yangban*. Consequently, the hereditary elite continued to serve as the majority of the high officials in government. A scholar during the time of King Sejong formulated the idea that, as in China, rulers had a Mandate from Heaven. As articulated by Chinese political philosophers several thousand years earlier, ethical conduct was essential for preserving their mandate to rule, and bad conduct destroyed that right, thereby justifying rebellion.

The influence of Confucianism contributed to the stability of society and perpetuated for centuries the continuation of a rigid class structure. Ten percent of the population was of the *yangban* class, whose goal was education in the Confucian classics and government or military service. They married within their class and lived apart from the rest of society. More than 50 percent of the population was known as *yangmin* (good people), namely farmers, merchants, fisherman, and artisans. The next class, the *chonmin* (the lowborn), consisted of people who followed certain disdained hereditary professions, such as butchery, or were shamans, entertainers, or slaves. It is estimated that more than one-third of the population was enslaved in this system, which existed into the twentieth century.

Confucianism also had an impact on economic development. Its beliefs helped to perpetuate a static agrarian society and promoted contempt for the development of commerce, an activity seen as self-serving and socially divisive. A road system was maintained, but trade within the country and with the outside world (except for China and Japan) remained limited.

In spite of the continuous flow of goods and ideas from China, Korea remained culturally distinct. In social structure, economic development, character traits, language, homes, dress, and food, it was in no danger of being culturally absorbed. Items exported to Japan included rice, cotton, hemp, and porcelain ware. The Buddhist *Tripitaka* (the three sets of canonical Buddhist sutras), Confucian writings, histories, temple bells, and Buddhist images were among Korea's cultural exports to Japan. In exchange, the Japanese exported minerals not available in Korea and luxury items for the yangban class.

Despite the conservative tendencies of Neo-Confucianism, there were significant technological advances in early Choson. A rain gauge was invented in 1442, and accurate records were maintained some 200 years before Europe began such practices. Movable type was more prevalent in Korea in the fifteenth century than any other place in the world. King Sejong and the Academy of Scholars made one of the greatest cultural innovations: a writing system. Known today as hangul, it allowed people to write in alphabetic characters appropriate to their spoken language rather than in Chinese-style (as well as Japanese-style) ideographic characters. The educated classes, however, preferred Chinese characters and continued using them in important documents, whereas women and the lower classes used hangul. The influence of China can also be seen in the arts. Chinese-style landscapes, shrines, and music were characteristic of Choson. During this dynasty, green celadon gave way to white porcelain, and brownware appeared in the sixteenth century.

In spite of the work of its early monarchs, there were signs of difficulties that ultimately weakened the Choson dynasty. Its kings had limited power and for the most part were not highly respected by the yangban. To garner their support, the monarchs doled out generous grants of nontaxable land. For the peasants, this meant increasingly burdensome taxes. Since yangban were forbidden to participate in trade, their principal objective was to serve in the bureaucracy. Extreme competition for government posts led to the growth of hereditary groupings that could no longer marry or associate with rival families. Geographic rivalries between yangban resulted

in systematic purges of hundreds of officials, even executions. Feuds among the nobility had existed in China, but it was a much greater problem in Korea because the kings did not have the power of a Chinese emperor.

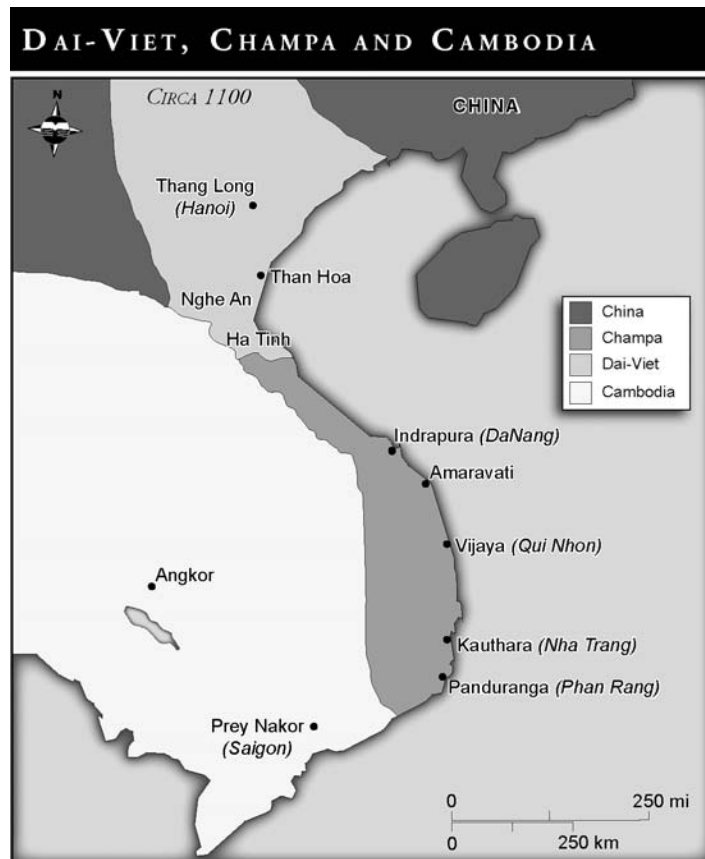
—Mary E. Connor

Bibliography

- Connor, Mary E., ed. *The Koreas*. Santa Barbara, CA: ABC-CLIO, 2009.
- Lee, Hyun-hee, Sung-soo Park, and Nae-hyun Yoon. *New History of Korea*. Seoul: Jimoondang Publishers, 2005.
- Seth, Michael J. *A Concise History of Korea: From the Neolithic Period through the Nineteenth Century*. New York: Rowman & Littlefield Publishers, 2006.

The Vietnamese Empire—Influenced by China But Not Dominated

The title of the Vietnamese empire, *Dai Viet* (Great Viet), first adopted by the ruler Ly Thanh Tong (r. 1127–1138), connoted an empire that



► THE CHINESE TRIBUTE SYSTEM

The rhetoric and rituals of the Chinese emperor receiving tribute from a lesser ruler were rooted in the political structure and ideology of China from ancient times. After a unified empire was established in 221 BCE, the Chinese extended what had originally been customary obeisance on the part of lesser Chinese lords to the king into a tribute system that they applied to all foreigners who wanted relations with China. Thus, the system reached well beyond Chinese boundaries and ultimately became one that was more elaborately evolved than any other tributary system in the world. With occasional breaks when China was weak and in disorder, the system was maintained for over 2,000 years. Because of the relative accuracy and volume of Chinese records from the Han dynasty (202 BCE–220 CE) to the Qing (1644–1911), the system's details and refinements are well documented. In fact, from Han to the Ming dynasty (1368–1644), its institutions grew increasingly sophisticated, and the rationale for this system of “barbarian management” became better defined. It was so impressive and dominant by the fifteenth century that it has led to the idea that the system was the basis for a premodern Chinese “world order.”

—Wang Gungwu and Alfred J. Andrea

Bibliography

Gungwu, Wang. “Chinese Tribute System.” In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

ruled all the Viet people. Several seemingly contradictory claims legitimated this vision: every dynasty had defeated Chinese invasions; the Viet state and people were civilized according to the Chinese model; and their level of civilization extended to maintaining Viet customs.

During the tenth century native Viet rulers inherited the land the Chinese called *Annam* (Pacification of the South), a former protectorate of China's Tang dynasty that was centered in northern Vietnam's Red River Delta. From 973, its rulers regularly sent tribute to China and disguised their imperial titles. Despite this, China's

Northern Song dynasty (960–1226) regarded northern Vietnam as a rebellious colony and tried to reconquer in 980 and 1075. Both invasions failed and the borders between Dai Viet and China were fixed by treaty in the 1080s. In 1174, Ly Anh Tong (r. 1138–1175) was recognized by China's Southern Song dynasty (1127–1279) as King of the Nation of Annam, a title that implied recognition of Annam as a separate state, although it was still expected to pay tribute to China. From that point until the eighteenth century, Dai Viet maintained a dual identity and diplomatic face. To China, it was the vassal state of Annam; to its Southeast Asian neighbors, such as Champa and Cambodia, it claimed to be a Chinese-styled empire to which they should be subject.

Under the Tran dynasty (1225–1400), a heightened imperial consciousness developed due to Dai Viet's victory over Mongol invaders. A compilation of Chinese-styled imperial annals entitled *The History of Dai Viet* and the creation of legendary imperial founders (the Hong Bang dynasty and Hung kings) also contributed to this consciousness because both traced Dai Viet's origins back to a point that predated the era of Chinese dominion, which had extended from the second century BCE through the ninth century CE. After twenty years of Chinese occupation of northern Vietnam, the Le dynasty (1428–1789) drove the Ming armies out in the early fifteenth century. In its declaration of independence, the *Great Imperial Edict of Pacification of the Ming*, the Le defined Dai Viet as an empire that shared a common civilization with China but had its own territory, customs, emperors, and history.

Already as early as the fourteenth century, Dai Viet expanded to the south, due to its development of Chinese-styled government and intensive agriculture in the Red River Delta (which resulted in never-ending population pressures). Champa, located in present-day central Vietnam, was crushed between the fifteenth and seventeenth centuries, and to the west, Laos came under Dai Viet's pressure beginning in the fifteenth century. Ironically, the expanded empire lost its unity. The sixteenth century witnessed civil war that divided northern Vietnam.

—Momoki Shiro

Bibliography

Momoki, Shiro. "Dai Viet and the South China Sea Trade: From the 10th to the 15th Century." *Crossroads* 12, no. 1 (1998): 1–34.

Momoki, Shiro. "Dai Viet (939–1407 C.E.)." In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*. Vol. 1, *From Early Times to ca. 1800*. Cambridge: Cambridge University Press, 1992.

■ Introduction: The Mongol Empire— A Trans-Eurasian Ecumene

The term “ecumene” derives from the Greek *oikoumenos*, which means “that which is inhabited.” The ancient Greeks used it to refer to the known inhabited world. Among world historians, however, it has come to mean an interconnected community of different cultures that not only communicate with one another and exchange goods but also cross-fertilize one another through the exchange of ideas, flora, fauna, and everything else that constitutes culture.

For about a century, between roughly 1260 and 1368, under the leadership of Khubilai Khan and his Yuan dynasty successors in China as well as the khans of the three other major divisions of this great trans-Eurasian empire, the Mongol empire presided over a phenomenon known as the *Pax Mongolica* (Mongol Peace). Inasmuch as the empire at its height reached from the Pacific to (briefly) the eastern Mediterranean, this was an event of world historical significance.

Much like the *Pax Romana* (Roman Peace) of the first and second centuries CE, one should not understand the term *Pax Mongolica* literally. There was plenty of warfare, destruction, and general mayhem in regions of the Mongol empire during this century, especially when a khan died and surviving kin vied to succeed him. Regardless of the uncertainty of maintaining life and limb, especially along the caravan routes of Central Asia, the Mongol khanates did provide a modicum of security along the routes that ran through their lands, enabling adventurous travelers to pass from west to east and east to west.

Given the origins of the Mongol empire, born in widespread destruction and slaughter, this

Mongol Peace certainly might strike the reader as curious beyond belief, but like many other conquerors before them, the Mongols learned that the arts of effective governance are different from the techniques of conquest.

As numerous entries throughout these pages illustrate, in this age of the Mongol Peace the Far East and Far West were joined in a manner never witnessed before, however tenuous and temporary that union was. We already saw under “The Vicissitudes of Avenues for Exchange” an entry on the Silk Road in the age of the Mongol Peace, as well as essays and sidebars on Latin Christian missionaries who traveled to eastern Central Asia and China during this century and the manner in which artistic influences were carried across the trade routes of Eurasia from Latin Europe to China and vice versa. And these are but a few of the instances recorded in these pages of interchange and exchange during the Mongol Peace.

Without recounting such phenomena again, this topic’s entries illustrate how such a trans-Eurasian ecumene came into being, how it was governed, how and why it broke apart, and the consequences of that collapse. One consequence not dealt with here, but already noted in several of the last entries to “The Vicissitudes of Avenues for Exchange,” is that the Mongol Peace gave Latin Europe a taste for direct contact with “the Indies” that was not forgotten after the rupture and death of the Mongol Peace. The result, as we know, was the fifteenth-century oceanic explorations of Portugal and Spain.

—Alfred J. Andrea

Egalitarian Leadership on the Steppe

Egalitarian behavior, which dominated Turco-Mongol social life, was also manifested in the leadership of tribal confederations. Although various leaders of nomadic confederations and empires, from Attila the Hun to Chinggis Khan, gained historical reputations of absolute control and domination over their people, it is an inaccurate perception. Tribal leaders were expected to lead effectively and to provide for their people. Those who failed to do so could be ousted from power, or their followers, especially the great warriors, would seek a more capable leader and leave their current tribe.

While not a democratic process, the selection of a khan, or leader, did not necessarily follow the rule of dynastic succession. Candidates were selected from a pool of qualified individuals from the tribe's aristocratic families, with ideally the

most suitable selected to rule. It was possible to develop a line of nominated succession, but a nominee was not guaranteed succession. The previous ruler's nomination was considered more a suggestion than a decision. Moreover, leadership could move laterally to a brother or a cousin rather than to the ruler's son.

When it came to inheritance all sons, and sometimes the daughters, received a share, and the eldest son was not the primary recipient. Indeed, the youngest son received the father's home and pasturelands. Because of their age, elder sons were expected to have established families and pasturelands and thus were not in need of as much assistance as the youngest son.

This system of inheritance was applied by strong rulers, who could impose their dynastic succession decision by dividing up and allocating imperial territories to their heirs. While not necessarily the best decision, it sometimes prevented heirs from engaging in internecine warfare in the short term, but it eroded the stability of the state over time. Appanages (lands given to heirs, especially younger sons) gained through this form of inheritance became smaller and smaller as each son subdivided his territory to his heirs. As territories decreased in size and resources available, conflict arose. Furthermore, because lines of succession were somewhat amorphous there were more candidates for the throne, and if not handled properly warfare erupted.

—*Timothy May*

➤ NOT ALWAYS EGALITARIAN

As the Mongol empire grew, its Great Khan became increasingly an emperor, leaving behind the rough-and-ready egalitarianism of earlier times. Friar John of Plano Carpini, who traveled to the court of Guyuk Khan in the period 1245–1247 as a papal diplomat and spy, described in a report of his adventures, the first eyewitness Western account of the Mongols, the authority wielded by the khan.

“The Tartar [Mongol] emperor exercises remarkable power over everyone, and no one dares abide anywhere except where he has assigned him. . . . Moreover, whatever order he gives them, regardless of time or place, they obey without a word of dissent. Even if he asks for an unmarried daughter or sister, they give her to him without a murmur. Indeed, every year or every few years, he gathers together young girls from every part of the land of the Tartars. If he wants to keep any of them for himself, he keeps them. The others he gives to his men as it pleases him to do so.”

—*Alfred J. Andrea*

Source

Translated from the Latin by Alfred J. Andrea.

Bibliography

- Golden, Peter. *Nomads and Sedentary Societies in Medieval Eurasia*. Essays on Global and Comparative History Series. Washington, DC: American Historical Association, 1998.
- Khazanov, Anatoly. *Nomads and the Outside World*. Madison: University of Wisconsin Press, 1994.
- Krader, Lawrence. *Social Organization of the Mongol-Turkic Pastoral Nomads*. The Hague: Mouton, 1963.

Power and Authority in the Mongol Ordu

Founded by Chinggis Khan in 1206, the Mongol empire became the largest land empire in world history, extending from China across Central Asia, the Middle East, and into the eastern bor-

ders of Europe. At the heart of this empire was the Mongol royal camp, the *ordu*. The royal *ordu* was the mobile center of Mongol political and military power, where the khan made all major decisions; convened the *quriltay*, the general assembly of all important Mongol chiefs; received ambassadors; celebrated feasts; and held audiences. It housed the khan's family, his entourage, and his court. A temporary tent city on the move, it included housing for emirs, princes, and princesses as well as markets and shops for clothing, food, drinks, and tools. A camp of a 10,000-man Mongol *tumen* (the largest Mongol military unit) could stretch over 50 miles (80 kilometers).

The *ordu* traveled between summer and winter camps. When the khan directed the *ordu* to camp in the vicinity of a city, it often meant disastrous consequences. These included attacks from the encamped nomads, depletion of food and resources, a rise in prices, and especially the destruction of agricultural land that was used for pasture, since the *ordu* also brought with it a large number of livestock, including horses, pack animals, and herds of sheep and goats. On the other hand, the *ordu* camp might have also meant that special attention from the ruling house was granted to a certain region, which almost overnight became the center of the political scene and a bustling commercial center.

The mobile court and the khan's golden *ger* (a circular felt tent with an opening in the vaulted ceiling, also known as a *yurt* in Turkish) were strictly structured and organized. The anonymously written *Secret History of the Mongols* describes a rigid protocol (attributed to Chinggis Khan) for all activities within the royal court: the tent's entrance always faced south, and visitors had to wait along the west wall before being admitted. The protocol even included regulations on serving *qumis*, a drink made from fermented mare's milk, a much-loved Mongol delicacy.

The *ordu* was a symbol of Mongol sovereignty, deeply rooted in the nomadic heritage of the steppe and Chinggis Khan's tradition. The Mongols were a military elite who saw themselves as superior to their subject peoples and desired to set themselves apart from these sedentary agricultural populations whom they had

➤ SUCCESSION TO CHINGGIS KHAN'S POSITION

Overcome by an incurable illness, Chinggis Khan called his sons to discuss the future of the khanate. He warned them of dissent, rivalry, and disobedience and advised loyalty to his third son Ogedai, whom he appointed as his heir, in opposition to Mongol traditions. After his death on August 18, 1227, the *ordus* of the different family members and princes gathered at the royal *ordu* in the region of Keluren to hold a general assembly, a *quriltay*, to discuss the state of the realm and the testament of Chinggis Khan. Ogedai showed reluctance at first to accept succession to his father's throne. According to Juvaini, he declared:

"Although Chinggis Khan's command was to this effect, yet there are my elder brothers and uncles, who are more worthy than I to accomplish this task, and moreover, in accordance with the Mongol custom it is the youngest son from the eldest house that is the heir of his father, and Ulugh-Noyan is the youngest son of the eldest *ordu* and was ever in attendance on Chinggis Khan day and night, morning and evening, and has seen, and heard, and learnt all the *yasas* and customs. Seeing that all these are alive and here present, how may I succeed to the khanate?"

After 40 days of discussion, debate, and feasting, Ogedai obeyed the command of his father and the counsel of the present princes and ascended to the throne.

—Hend Gilli-Elewy

Source

Ala al-Din Ata-Malik Juvaini, *Genghis Khan: The History of the World Conqueror*, translated from the text of Mizra Muhammad Qazvini by J. A. Boyle (Seattle: University of Washington Press, 1997), 186.

conquered and now ruled. In order to maintain this dichotomy, the Mongols integrated local customs, laws, and functionaries into their civil administrative apparatus but kept them separate from the Mongol military administration, which followed the *yasa* (law) as represented in the *ordu*. The *ordu* then also served as a military tribunal for Mongols to be judged and punished according to Mongol law.

Even later Turco-Mongol rulers such as the Timurids, who had assimilated into a sedentary lifestyle and spent considerable resources building palaces, mosques, and madrasas, still felt strongly attached to the model and ideal of Chinggis Khan, namely a nomadic military ruler. They preferred to live in the tents of the ordu in the vast gardens set outside their palaces.

—Hend Gilli-Elewy

Bibliography

Gronke, Monika. "The Persian Court between Palace and Tent: From Timur to 'Abbas I.'" In *Timurid Art and Culture: Iran and Central Asia in the 15th Century*, edited by Lisa Golombek and Maria Subtelny. Leiden: Brill, 1992.

Juvaini, Ata Malik. *Genghis Khan: The History of the World Conqueror*. Translated and edited by J. A. Boyle. Seattle: University of Washington Press, 1997.

Secret History of the Mongols, Vol. 1. Translated by F. W. Cleaves. Cambridge: Harvard University Press, 1982.

Spuler, Bertold. *History of the Mongols, Based on Eastern and Western Accounts of the Thirteenth and Fourteenth Centuries*. Berkeley: University of California Press, 1972.

Chinggis Khan

Chinggis Khan (1165–1227), often referred to as Genghis Khan, was given the name Temujin at birth. During his lifetime he subjugated more territory than any other conqueror to that point in time, and his successors established the Mongol empire as the largest contiguous land empire in history.

Born to Mongol nobles Yesugei and Hoelun, Temujin was betrothed to Borte of the Onggirad tribe. After the assassination of his father Temujin endured many hardships, but slowly he recruited supporters and assumed a mantle of leadership among the Mongols. A key to his success was an alliance with his father's *anda* (blood brother) Toghril, khan (or leader) of the Keraites, a powerful tribe in central Mongolia. With Toghril's early support, Temujin slowly became the paramount power in the steppe. In the midst of this process, the alliance of Temujin and Toghril dissolved; they went to war with one another, and Temujin emerged victorious. In 1206 Temujin received the title "Chinggis Khan"

after defeating all rivals in Mongolia. The title is thought to have meant Firm, or Resolute, Ruler; an earlier theory that the title meant Oceanic, or Universal, Ruler has been discounted.

Although Chinggis Khan united Mongolia, he soon became ruler of a larger empire. Scholars have proposed a number of reasons why he embarked on a career of conquest. These include a need for booty to keep his supporters pleased, revenge for past offenses against the Mongols, and a maniacal greed for territory and riches. Yet as with all wars of conquest, a single reason is rare, and a variety of factors came into play.

By 1210 the Mongols conquered the XiXia empire, a Tangut state that comprised much of northwestern China and parts of Tibet. Then in 1211 Chinggis Khan led his armies against the Jurchen (Ruzhen) Jin dynasty (1126–1234) of northern China. War continued against the Jin until 1234, well after Chinggis Khan's death. In 1219 in the midst of this war, Chinggis Khan was forced to invade the Khwarazm empire in Central Asia in retribution for the massacre of a Mongol-sponsored trade caravan on the border. Leaving a small force in northern China, he marched west with his main army accompanied by his four sons Jochi, Ogedai, Chaghatai, and Tolui. In a campaign that lasted into 1222, he destroyed the Khwarazm empire by striking at it from several directions, a brilliant strategy that even today excites admiration.

While the Mongols were in Central Asia, the Tanguts of the XiXia empire rebelled in 1222–1223 and joined forces with the Jin. It is often written that the rebellion began when the ruler of XiXia refused to provide troops to Chinggis Khan against the Khwarazm empire. This does not seem likely given the date of the rebellion and the fact that XiXia troops still fought alongside the Mongols in China.

After returning from Central Asia, Chinggis Khan invaded XiXia in 1226. During the campaign he fell from his horse while hunting. Although he eventually died from resultant internal injuries, he insisted that his followers finish the campaign. Afterward they buried Chinggis Khan in a location that remains a mystery, although several modern expeditions have attempted to find it.

The legacy of Chinggis Khan remains impressive even today. An organizational and strategic

BORTE

Borte (1164/65–ca.1225) was the first wife of Chinggis Khan. The daughter of Dei Sechen, leader of the Onggirad tribe, Borte was influential in the life of Chinggis Khan. Betrothed to Temujin Khan in 1174 when they both were children around the age of nine, Borte married the young Mongol leader in 1182.

For her dowry, Borte brought a beautiful sable cloak. This cloak allowed Temujin to cement his alliance with his father's old ally, Toghril of the Kerait. Sentimental ties were nice, but other than the cloak Temujin had little to offer a powerful leader such as Toghril. Yet the alliance was fortunate, as shortly after Borte was kidnapped by the Merkits. This was allegedly to avenge a similar action carried out by Yesugei, Temujin's father, when he kidnapped Hoelun from her Merkit husband. Forced to flee for his life, Temujin abandoned Borte but, with the aid of Toghril, later rescued her. However, Borte was pregnant, possibly with the child of the Merkit prince who had taken her as a wife. Nonetheless, Temujin accepted the boy as his own. Until his death in 1225, Jochi was considered Chinggis Khan's

eldest son. However, concerns of his legitimacy remained a source of trouble throughout the existence of the Mongol empire.

Borte bore Chinggis Khan three other sons: Chaghatai, Ogedai, and Tolui. Ogedai eventually became Chinggis Khan's heir precisely because Jochi and Chaghatai constantly fought over the circumstances of Jochi's conception, and Tolui was considered too young. Besides providing him with children, Borte was often consulted by her husband on matters of state. She was instrumental in ending a power struggle with the shaman Teb-Tengri that threatened Chinggis Khan's dominance after becoming ruler of Mongolia.

Although Chinggis Khan eventually married several other wives, perhaps as many as 23, he considered only his children from Borte as heirs to his power and treated them with preference. Even after Chinggis Khan began to spend increasing time with his newer wives, Borte remained his valued adviser until her death. She died before Chinggis Khan, but the exact year of her death remains uncertain.

—Timothy May

genius, he created one of the most highly disciplined and effective armies in history, but this same genius also gave birth to the core administration that ruled it. His nonmilitary achievements include the introduction of a Mongol writing system, based on the Uighur script, that is still used in Inner Mongolia today; the practice of religious tolerance throughout his empire; and unification of the disparate and often warring tribes of Mongolia. In short, Chinggis Khan's greatest accomplishment cannot be counted in terms of territory gained or military victories but rather in the abiding presence of a Mongol nation and culture. Mongols still venerate him as the founding father of Mongolia.

—Timothy May

Bibliography

- de Hartog, Leo. *Genghis Khan: Conqueror of the World*. New York: Tauris Parke Paperbacks, 2004.
- Lane, George. *Genghis Khan and Mongol Rule*. Westport, CT: Greenwood, 2004.

Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.

Onon, Urgunge, ed. and trans. *The Secret History of the Mongols: The Life and Times of Chinggis Khan*. With an introduction by Urgunge Onon. Richmond, UK: Curzon, 2001.

Ratchnevsky, Paul. *Genghis Khan: His Life and Legacy*. Translated and edited by Thomas Nivison Haining. Cambridge, MA: Blackwell, 1991.

Chinggis Khan's Successors

Before invading the Khwarazmian empire in 1219, one of Chinggis Khan's wives, Yesui, urged him to plan his succession should he die. Ultimately, Chinggis Khan selected his third son, Ogedai (r. 1230–1240), to be his heir. His selection, although in some ways by default, was not without good reason. Ogedai, among all of Chinggis Khan's sons, possessed a singular ability to find compromises among the various Chinggisid princes. His munificence also became legendary.

➤ CHOOSING A KHAN

Unlike many Western societies, succession to Mongol leadership did not automatically fall upon the eldest son. Inheritance was typically divided among male heirs in a somewhat equal fashion, with the youngest maintaining the actual home or hearth. Political succession among steppe nomads was even more complicated, as leaders had to demonstrate ability not only in war but also in diplomacy by resolving disputes peacefully. For the Mongol empire, a leader also had to be descended from Chinggis Khan.

Ogedai's succession was not without problems, as he was not the first choice. Chinggis Khan may have favored his eldest son, Jochi, but there were questions concerning his lineage. Jochi, born shortly after Chinggis Khan's wife was rescued from the Merkit in 1183–1184, may have been fathered by a Merkit and not the Mongol ruler. Chaghatai, Chinggis Khan's second son, was Jochi's greatest adversary. Chinggis Khan wisely removed the two brothers from consideration due

to their animosity. Tolui, his youngest son, probably distinguished himself the most in terms of ability in both war and peace, but his youth also remained a concern.

Ogedai's succession led many to the conclusion that the throne would always be held by his descendants. Of course, as he had several wives and sons, this led to complications in selecting the appropriate candidates. The *quriltay* in many ways served as a political convention where candidates sought the support of the other princes and generals.

The Toluid coup of Mongke dramatically changed the process, opening the door ideally to descendants of Tolui. The split of the Mongol empire, however, opened the door for any descendant of Chinggis Khan to be a legitimate ruler. Later even powerful rulers, such as Timur-i Leng (Tamerlane), would never take the title of khan but would maintain the pretense of having a Chinggisid puppet on the throne.

—Timothy May

Ogedai proved to be an adept ruler and laid the organizational framework for the Mongol empire.

In addition to directing the completion of the conquest of North China's Jin empire in 1234, Ogedai ordered armies into the Middle East in 1230 and into the western steppes of Russia-Ukraine and other regions of Eastern Europe beginning in 1236. While Ogedai justifiably is known for the expansion of the Mongol empire, Chinggis Khan's historical and mythical image overshadows Ogedai's pivotal role in creating the empire.

Ogedai built upon the rudimentary administration that Chinggis Khan initiated and quickly realized the importance of non-Mongols in administering the empire such as Mahmud and Masud Yalavach, whom he confirmed as governors in North China and Turkestan. Chinggis Khan had originally appointed this father and son to office. Ogedai also turned to the counsel of Yelu Zhuzai, a former official in the Jin empire, for advice in running the empire. Additionally, Ogedai extended the *yam*, or postal system; continued provisions to safeguard the widows

and orphans of fallen Mongol warriors; and encouraged trade. He also built the Mongol capital of Karakorum, forcing trade routes and diplomacy to center in Mongolia. During Ogedai's reign, the Mongol ideology of conquest—that they are destined to rule the world—also took shape.

When Ogedai died in 1240 from the effects of alcoholism or poison (or a combination of the two), his heir was not apparent. Ogedai's own formal election as khan was a foregone conclusion because Chinggis Khan's word and deeds increasingly became viewed as sacred and inviolable. All other khans, however, did not enjoy this benefit. Thus, a *quriltay*, or assembly, of the Chinggisid princes and highest-ranking generals and officials within the empire convened. Ogedai's regent and wife, Toregene, convened the *quriltay* after considerable delay. In the end, her own political acumen won the day with the election of her son, Guyuk, in 1246, over two of Ogedai's other sons but from different wives.

Although short-lived, Guyuk accomplished much. Unfortunately, most of this concerned the

elimination of corruption, nepotism, and cronyism that had crept into the Mongol administration during the regency of Toregene. No major campaigns occurred, although Guyuk drafted orders to complete the conquest of China, the Middle East, and Europe. Allegedly he planned to lead the invasion of Europe himself. However, most contemporary witnesses believed that this was simply a ploy to eliminate his rival, Batu. Batu and Guyuk had quarreled during the initial campaign into Russia, with the argument stemming from the questionable parentage of Batu's father, Jochi. Guyuk, however, died not long after beginning his march. Had he lived, the Mongol empire most likely would have been divided by civil war due to the conflict between Guyuk and Batu, the most senior prince in the empire.

The death of Guyuk led to another period of regency under his wife, Oghul-Qaimish. Like the regency of Toregene, this period marked an era of mismanagement but without the political acumen of Toregene. Oghul-Qaimish spent more time with shamans, fortune-tellers, and that ilk than in affairs of state. She did little to begin the process of selecting a new Great Khan. This led Mongke, the son of Tolui (Chinggis Khan's youngest son), to stage a coup. Supported by his mother, Sorqoqtani, who was also one of the leading figures within the empire, and Batu, Mongke convened a quriltay, won acceptance, and ascended the throne.

His election was not without opposition. Shiremun, a son of Ogedai who had lost his previous bid to power to Guyuk, attempted a coup against Mongke. Mongke learned of the plot and quickly purged the empire of many members of the Houses of Ogedai and Chaghatai, leaving only those who swore oaths of loyalty. In addition, Oghul-Qaimish was brought to trial on charges of mismanagement of the affairs of the empire and possibly witchcraft. Despite her high rank, she was found guilty and executed.

Mongke was perhaps the Mongols' most successful ruler, conservative in nature and deliberate in his actions. His first task was to reform the administration and eliminate sources of corruption. Once this was settled, he decreed that two armies set forth and subdue the remaining enemies of the Mongols. He personally led, along with his brother Khubilai, a large army against

the Song dynasty of southern China. Meanwhile, his brother Hulegu led an army that eliminated the Ismaili Assassins of northern Iran in 1256 and the Abbasid caliphate in 1258.

Mongke's promising career ended in 1259 during the campaign in China. His death set the stage for the dissolution of the empire. His brother Khubilai ultimately won a civil war against Ariq-Boke, the fourth son of Sorqoqtani, in 1265. Yet in the five years of war, the empire fragmented. Hulegu found himself at war with the descendants of Jochi and with the descendants of Chaghatai. Although Khubilai maintained the title of Great Khan, his power over the other khanates was illusory, and they increasingly acted on their own even as Khubilai established the Yuan dynasty, which ruled East Asia until 1368.

—Timothy May

Bibliography

- Allsen, Thomas. *Mongol Imperialism*. Los Angeles: University of California Press, 1987.
- Buell, Paul D. *Historical Dictionary of the Mongol World Empire*. Lanham, MD: Scarecrow, 2003.
- Halperin, Charles. *Russia and the Golden Horde*. Bloomington: Indiana University Press, 1987.
- Jackson, Peter. *The Mongols and the West, 1221–1410*. New York: Longman, 2005.
- Lane, George. *Daily Life in the Mongol Empire*. Westport, CT: Greenwood, 2006.
- Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.
- Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.

Governing the Mongol Empire

Mongol government originated in two sources: the imperial clan (the lineage of Chinggis Khan) and the *keshik* (the khan's bodyguard). The imperial clan viewed the Mongol empire as its joint property, and thus all members had representatives to watch over their interests throughout the administrative apparatus. On its part, the *keshik* served not only as a bodyguard but also as a training center for generals and provincial governors, or *jarquci*. Few governors of large territories came from outside of the *keshik*.

Although these two institutions ultimately ran the empire, the empire functioned because of the abilities of other groups. As the Mongols

► THE YASA

The Mongol empire was governed by a rule of law known as the *Yasa*. This law code was a combination of steppe nomadic tradition and imperial decree and was strongly influenced by the *biligs* (maxims) of Chinggis Khan. It was originally compiled by Chinggis Khan's adopted brother, Shiqi Qutuqtu. Although the *biligs* were often considered examples of proper and virtuous behavior, they were not laws. The *Yasa* was not the law of the land but instead was applied to the nomadic population of the empire.

Although there are plenty of examples of *biligs* in the primary sources, there is no surviving example of the *Yasa*, if indeed a written copy of it ever existed. As it was primarily customary law of the steppe nomads and applied to nomads, it is likely that no one saw a need to write those laws down, as all of the nomads understood them. Nonetheless, it remained in use in the fourteenth century well after the Mongol empire had split into four khanates in 1265. Even after the Mongols began convert to Islam, many resisted the switch to Islamic law.

—Timothy May

conquered territories, they appropriated many of the ruling structures and personnel of the conquered. The Mongol khans always respected and recognized the need for talented administrators. For example, Yelu Qu Cai (1189–1243), formerly of the Jin empire, entered their service, and Mahmud Yalavach (d. 1262) and his son Masud Beg, both formerly of the Khwarazmian and possibly Kara-Khitan empires, joined the Mongol administration, as did countless others. Furthermore, when local rulers submitted peacefully they often maintained their rule as Mongol vassals; thus, very little changed for the region in administrative terms. These facts have led many to conclude that the Mongols relied basically on native administrators to run their empire. Modern scholarship, however, has refuted that theory.

The Mongols spent considerable energy in organizing their territories. In 1206 the newly proclaimed Chinggis Khan distributed people and

territory to his sons and generals, organizing the society not only for military action but also for gathering tribute and taxes. The key principal element for the organization and administration of society was the *mingan*, or unit of a thousand. This could be 1,000 people for warfare or 1,000 households for nonmilitary purposes. Furthermore, although illiterate, Chinggis Khan recognized the value of written records and commenced an educational program for his offspring and the creation of a secretariat.

Once outside of Mongolia, the key for the Mongols was their dual system of governance: military and civilian. During the period of the initial conquests the generals also governed. This was particularly true along the frontier, where *tammacin* were stationed. These special armies varied in size but had the purpose of not only defending the borders but also expanding Mongol influence either directly or indirectly. The leader of the *tammacin*, known as a *tammaci*, also served as a governor. The quality of rule by these *tammaci* varied from excellent to rapacious. The various populations that came under their jurisdiction also held different opinions. Chormaqan, who ruled much of Persia, Georgia, Armenia, and Azerbaijan in the 1230s, was considered by the Armenian Christians to be a fair and moderate governor, whereas many of his Muslim subjects considered him a thug.

Gradually, though, the military governors were replaced by a *jarquci*, aided by civil administrators known by three terms: *daruqaci*, *basqaq*, and *shabna*. The variance in terms reflects the origins of the words. *Daruqaci* is a Mongolian word, whereas *basqaq* and *shabna* are Turkic and Persian, respectively. The so-named officials had the same duties but were identified by different local titles. These officials had only a few soldiers at their command, but as the *tammaci* had pacified the region and then moved to a new frontier, there was little need for military support. The *daruqaci* was accompanied by secretaries and other officials to integrate conquered regions into the empire. When retained in power, local rulers were often given the title of *daruqaci*.

Because of its breadth the empire contained many ethnicities and cultures, and this was reflected in the empire's administrators. In China,

the Mongols preferred Westerners (anyone born west of China) and non-Chinese, such as Manchurian Jurchen and Khitans, both of whom had previously ruled vast areas of northern China. Marco Polo gained employment under Khubilai Khan because of this preference, although there is no evidence that he ever attained a high rank. Generally speaking, the *shi*, the traditional Confucian bureaucrats of China, were left out of the administration. This was due partially to the Mongols' distrust of the *shi* but also to attitudes of the *shi* themselves. *Shi* distrust came from the fact that the Mongols did not value the Confucian system of governance; these new imperial masters limited the positions and level in which the *shi* could serve in the administration. Thus, many retired to a private life of scholarly or artistic pursuits.

The government of the Mongol empire was an entity that was flexible and efficient when managed properly. However, because of its flexibility, it was also easy for corruption to penetrate it and create the circumstances where the population was heavily exploited.

—Timothy May

Bibliography

- Halperin, Charles. *Russia and the Golden Horde: The Mongol Impact on Medieval Russian History*. Bloomington: Indiana University Press, 1987.
- Lane, George. *Genghis Khan and Mongol Rule*. Greenwood Guides to Historic Events of the Medieval World. Westport, CT: Greenwood, 2004.
- Morgan, David. *The Mongols*. 2nd ed. Malden, MA: Blackwell, 2007.
- Ratchnevsky, Paul. *Genghis Khan: His Life and Legacy*. Translated and edited by Thomas Nivison Haining. Cambridge, MA: Blackwell, 1991.
- Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.

Breakup of the Mongol Empire and Its Consequences

The civil wars that ensued after the death of Mongke Khan (1250–1259/1260), the last ruler of a unified Mongol empire, had far-reaching consequences. While the Mongol empire fragmented into four smaller yet still very powerful states, some unity remained. The divisions among them, however, held ramifications not only for the em-



Fifteenth-century miniature painting depicting a hunting scene and the meeting of Marco Polo and Khubilai Khan. Polo finally reached the court of the Mongols at Dadu about 1275. From a copy of *Libre des Merveilles du Monde* ("The Book of Marvels"), by Marco Polo. (Archivo Iconografico, SA/Corbis)

pire but for other regions as well. The war for succession fought between Mongke's brothers, Ariq Boko and Khubilai, lasted from 1260 to 1264, four years of war that allowed the other parts of the empire to establish their own independence as well as their own wars.

With Khubilai Khan's accession to power in 1264–1265, the Mongol empire now consisted of four states. Khubilai Khan ruled the khanate of the Great Khan, consisting of East Asia. The house of Chaghatai, Chinggis Khan's second son, ruled Central Asia. The Jochids, descendants of Chinggis Khan's eldest son, Jochi, dominated present-day Russia, Ukraine, and Kazakhstan. This khanate later gained the name of the Golden Horde but at times consisted of several divisions, or hordes (camps), including the Blue Horde in present-day Siberia, the White Horde in Kazakhstan, and the Golden Horde that ruled from the Volga River to the Carpathian Mountains. In the Middle East, Hulegu, a brother of Khubilai, established the il-khanate of Persia. In theory this state was subordinate to the Great Khanate but carried out its own interests and typically only recognized the Great Khan in diplomatic functions.

Endemic warfare among the khanates was a major consequence of the breakup of the Mongol empire. The house of Jochi and the il-khanate fought several wars over territory in present-day

➤ TRADE AND THE FALL OF THE MONGOL EMPIRE

Goods, knowledge, and ideas had crossed Eurasia freely during the Mongol empire as the Mongols promoted trade. Exotic goods reached Europe in more abundance and with a lower price. Initially, trade still flowed throughout the Mongol empire even as it fragmented, but as wars consumed the Mongol states, trade suffered in many areas. Many routes closed due to chronic warfare, and some merchants refused to use them due to the raiding of caravans. At the same time, new routes opened due to necessity and for nontrade reasons, as the rulers of the Il-khanate and the Great Khanate maintained relations via sea. This aided in sea-borne trade, particularly through the Persian Gulf.

The creation of new states meant new tariffs and taxes, hampering the flow of goods and also increasing prices. Earlier, in the thirteenth and

fourteenth centuries, many Europeans, primarily merchants and clergy, had traveled in the Mongol empire either in hope of converting them or to trade. One such traveler was Marco Polo, the son of a Venetian merchant, who stayed in various parts of the Mongol empire for 17 years. When he returned to Europe, an account of his travels was published. While many did not believe parts of his accounts, his tales of the luxury and wealth of China inspired many. Combined with an increasing knowledge of the world and a desire for luxury goods, such as silk, porcelain, dyes, and spices, many West European states sought new trade routes to India and China to obtain these goods. One person who read and was inspired by Marco Polo's account was Christopher Columbus.

—*Timothy May*

Azerbaijan. Tied to this was Hulegu's destruction of the Abbasid caliphate. The Jochid ruler, Berke, a Muslim, disagreed with Hulegu's actions and used this as a pretext and possibly the real reason for their wars. Over time, both the il-khanate and the Golden Horde adopted Islam; however, religion did not aid in reconciliation, although Islam became the dominant religion throughout the western domains of the Mongol empire.

War continued and contributed to a breakdown in administration as well. The Mongol states gradually declined, disappeared, or spawned new states. The il-khanate collapsed in 1335 and left a power vacuum. This allowed a small kingdom of Turks to fill the void and establish the Ottoman empire. The il-khans also supported a Sufi movement known as the Safavis, or Safavids. In the early sixteenth century, this movement crystallized into the Safavid dynasty and established Shia Islam over present-day Iran, where it remains the state religion.

The Great Khanate ruled by the Yuan dynasty fell in 1368 and led to the rise of the Ming dynasty in China. The remnants of the Yuan fled to Mongolia and attempted to regroup. However, the Mongol princes viewed the Yuan as more Chinese than Mongol and resisted their efforts. Incessant civil war lasted in Mongolia, with vari-

ous groups attempting to gain dominance until the rise of China's Qing empire (1644–1911) that dominated East Asia in the seventeenth century.

The gradual collapse of the Chaghatayid khanate gave rise to Emir Timur-i Leng, known to the West as Tamerlane. Although not descended from Chinggis Khan, Tamerlane attempted to reestablish the Mongol empire and often ruled with a Chinggisid prince on the throne. Although a Muslim, his wars of conquest brought him into conflict with such Islamic states as the Ottoman empire, the sultanate of Delhi, the Mamluk sultanate, and the Golden Horde. Tamerlane never lost a war, and he set back by decades the Ottomans' rise to prominence in Anatolia after capturing Sultan Bayazid in 1402 and provoking civil war in the Ottoman lands. In 1398 Tamerlane also destroyed the sultanate of Delhi of North India. Wars between Tamerlane and the Golden Horde contributed to the demise of that state as well. Tamerlane ultimately died in route to conquer China in 1405.

The Golden Horde slowly fragmented into a number of khanates including the Crimea, the Great Horde, Kazan, Astrakhan, the Nogai Horde, and eventually the Uzbeks. As it fragmented, the Russian principality of Moscow gained its independence in 1480. In many ways, Moscow be-

came a successor to the Golden Horde, as its primary opponents and rivals proved to be the various offshoots of the Golden Horde. Muscovy eventually consumed these, but these groups also proved to be the basis of a number of Central Asian nations.

Among them were the Uzbeks, who under the leadership of Muhammad Shaybani crossed the Syr Darya River in 1500. This forced a descendant of Tamerlane named Babur to abandon Central Asia. Babur in turn established the Moghul (Persian for Mongol) empire in India that effectively lasted until the mid-eighteenth century (and the dynasty lasted till the mid-nineteenth century). Even before the Uzbeks crossed the Syr Darya, some of the Uzbeks resented attempts at central authority and broke away from them, becoming known as the Kazakhs.

—Timothy May

Bibliography

- Abu-Lughod, Janet. *Before European Hegemony: The World System, A. D. 1250–1350*. New York: Oxford University Press, 1991.
- Buell, Paul D. *Historical Dictionary of the Mongol World Empire*. Lanham, MD: Scarecrow, 2003.
- Jackson, Peter. *The Mongols and the West, 1220–1410*. New York: Pearson Education, 2005.
- Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.
- Polo, Marco. *The Travels*. Translated by Ronald Latham. New York: Penguin Classics, 1958.
- Weatherford, Jack. *Genghis Khan and the Making of the Modern World*. New York: Crown, 2004.

Russia and the Mongols, 1200–1400 CE

On the western banks of the Dnieper River in 980 CE, Prince Vladimir I assumed the throne of Kiev in a realm known as Kievan Rus and later known as Russia and Ukraine. As a member of the Riurikid dynasty that ruled the Slav and Finn tribes of the north, Vladimir consolidated his power by uniting the eastern Slavic tribes in the region, which he accomplished through military force and by introducing a common religion among the pagan Slavs, Orthodox Christianity adopted from Byzantium. By the thirteenth century, approximately 300 urban centers comprised Kievan Rus in which leaders in Kiev, the fore-

most city, oversaw the civil, military, and ecclesiastical administration of all Rus territories. A Riurikid prince governed each city and recognized the suzerainty of and paid tribute to the grand prince of Kiev. In these urban centers, craft production and foreign and domestic trade thrived, but peasant farmers comprised the bulk of the population. The fusion of Riurikid princes, eastern Slavs, and the Orthodox Church created a distinct and cohesive society that survived not only early Mongol raids during the first half of the thirteenth century but also the Mongols' political hegemony over Rus, which lasted more than two centuries.

The Mongols initially invaded southern Rus in 1223. According to Russian scribes who recorded this event in the *Novgorodian Chronicle*, "In the same year, for our sins, unknown tribes came, whom no one exactly knows who they are, or where they came from, or what their language is, or what race they are, or what their faith is, but they call them Tatars." Rus sources refer to all the peoples of the steppes, including the Mongols, as Tatars. After their initial foray in 1223, the Mongols completed their conquest of the Black Sea and Caspian steppe regions south of Kiev and then returned to Rus in full force in the campaigns of 1237–1240. In the winter of 1237–1238 they sacked and destroyed four Rus cities northeast of Kiev and by the end of 1239 had subdued the entire south. In 1240 Kiev surrendered to the Mongols' massive siege, but Novgorod, to the far north and west, was unmolested. However, despite their initial destruction of Rus urban centers, the Mongols ultimately made significant contributions to emerging Russian political institutions, administrative procedures, and military affairs in the same way that the Byzantine empire continued to influence Russian ecclesiastical matters.

The death of Chinggis Khan in 1227 touched off a power struggle among his sons and grandsons, who eventually divided his vast empire into four regional khanates. The Qipchaq (Kipchak) khanate (commonly referred to as the Golden Horde) ruled Rus indirectly from its capital at Sarai on the lower Volga River from the mid-thirteenth century to the late fifteenth century. Following their conquest of Rus, the Qipchaq Mongols maintained their predominately nomadic

► TALE OF THE DEATH OF MIKHAIL IAROSLAVICH IN THE HORDE

A vicious rivalry for the throne of the grand prince of Rus marked the early decades of the fourteenth century. This excerpt from the *Tver Chronicle* tells how Prince Yuri (Iurii) of Moscow traveled to Sarai in hope of persuading Khan Uzbek to confer on him the title, which rightfully belonged to Mikhail Iaroslavich of Tver, and the result of that entreaty.

“In the year 6826 (1317–1318) Grand Prince Mikhail sent Oleska Markovich to Moscow as an ambassador of good will, and Prince Iurii killed him. That same year Prince Iurii Danilovich and Kavgadyi [a Tatar general] went to the Horde. . . . When Prince Iurii and the instigator of all the evil, the lawless and cursed Kavgadyi, arrived at the Horde, by the devil, they began to slander Grand Prince Mikhail to the lawless Tsar [Khan] Uzbek, saying, ‘Prince Mikhail has gathered much tribute from the cities, and he is intending to go to the Germans [with the tribute], but he won’t be coming to you.’ The Tsar became enraged, ordered his [Mikhail’s] son Prince Konstantin starved to death, and locked him up in a chamber. When this happened, certain people said to the tsar, ‘If you kill him, his father will not come to you.’ And he ordered him to be released. When that same year was coming to an end, the orthodox Grand Prince Mikhail came to the Horde. . . . And as was the custom he gave presents to the princes, to the tsar’s children, and then to the tsar himself. When Blessed Mikhail had been in the Horde for one month, the tsar spoke to his councilors: ‘What have you told me about Prince Mikhail? Judge him with Iurii.’ Then they judged [Mikhail] as guilty, not telling the tsar the truth, but slandering him to the lawless Tsar Uzbek. The next week they brought him to the court bound, and having judged him, they said thus to the Tsar: ‘Mikhail is deserving of death.’”

—Mary Jane Maxwell

Source

Translated by Mary Jane Maxwell from *Polnoe sobranie russkikh letopisei*, Vol. 15, pt. 2, *Tverskaia Letopis'* (Petrograd: Nauka, 1922), col. 410–411.

way of life and tribal customs, and because their khan was primarily concerned with maintaining his power on the steppes, they largely refrained from intervening in the internal affairs and cultural practices of the Russians. As a result, the Riurikid dynasty and the Orthodox Church transcended Mongol hegemony. What the Qipchaq Khanate did demand from the local Rus princes was annual tribute (*iasak*) delivered by the prince in person, after which the khans conferred upon the Riurikids the *iarlyk*, or the right to rule for another year. In addition, the Mongols expected the Rus princes to take a census of the local population, provide goods and troops for the Mongol army, maintain the Mongol system of posts called the *yam*, and collect taxes. Thus, the Mongols were less interested in the Russians as subjects and more interested in extracting tribute, gifts, and commercial products from the region.

The Mongol impact on Russian society, therefore, primarily affected its elite: rulers, nobles, court officials, clergy, and merchants who traveled to the khanate to deliver goods. Due to their frequent and often extended visits to Sarai, Russian princes observed Mongol administrative procedures and incorporated them into their own practices at home. One example is the Muscovite *pomest'e*, a system of military land grants that not only permitted the Russian princes of Muscovy to maintain a standing cavalry but also to use the military to collect taxes and provide other administrative and judicial functions in certain Rus provinces.

The Russian Orthodox Church flourished during the Mongol period. In the thirteenth century the shamanistic Mongols exhibited considerable religious tolerance toward all religions and granted the Russian Church substantial autonomy. The Qipchaqs believed that all religions were true and linked all people with one God. Even after the Qipchaq Khanate converted to Islam in the fourteenth century, the Mongols maintained their permissive religious stance. Six extant *iarliki* (Mongol decrees) granted the Russian clergy protection from all taxation and tribute and even protected Church property from any interference from Mongol or Russian secular authority. All that the Mongols required of the Church was

prayers for the health of the khan in exchange for Mongol protection and support.

Many scholars associate the rise of the small principality of Muscovy in the fourteenth century with the Mongols because the title of grand prince of Rus depended more on Mongol military support than traditional dynastic conventions. For example, in 1317 the Mongol khan, Uzbek, awarded the title of grand prince to Iurii Danilovich of Muscovy because Iurii had married the khan's sister and presented himself as the most capable of collecting and delivering tribute to the Mongols. The Riurikid dynasty had a difficult time accepting the Danilovichs as legitimate grand princes, which led to a series of fourteenth-century conflicts among the princes of Rus. This in turn forced the Danilovichs of Muscovy to serve the Qipchaq Khanate faithfully in order to maintain their power. Tribute payments were on time and even exceeded the required amounts.

Throughout the fourteenth and fifteenth centuries, Muscovy embarked on a mission of territorial expansion and political consolidation of Rus principalities. The Muscovite princes, who spent a great deal of time with their Tatar overlords, integrated Mongol political and administrative practices—as well as the Tatars themselves—into Muscovite society and its institutions. Moreover, Muscovy pursued alliances, including marriage alliances, with other Rus principalities in order to gain dynastic acceptance. The Qipchaq Khanate, meanwhile, began a period of internal conflict and demise. By the time the Qipchaq Khanate succumbed to the Crimean Khanate in 1502, the Muscovite princes had already gained their political independence even though they continued to pay tribute to the Crimean khans.

Also during the fifteenth century the Muscovite princes turned to the Russian Orthodox Church in order to create an image of legitimacy for their clan. The Church responded by formulating an anti-Tatar ideology in its effort to legitimize the Muscovite princes as defenders of the Christian faith against the oppressive—and Muslim—"Tatar Yoke." These sentiments were interpolated into revisions of the Rus chronicles after 1448; that is, at a time when Russian church

officials no longer had to follow the dictates of the Byzantine Church, which had maintained a policy of accommodation with the Qipchaq Khanate, the Russian scribes inserted derogatory terms and phrases against the Mongols whenever they recopied the old Rus chronicles into new manuscripts. Why this shift in policy with the Byzantine Church? In 1439 representatives of the Byzantine (Greek) Church met with their Western (Latin) Church counterparts in Florence and agreed to unite the divided Christian churches by accepting the principle of papal primacy. In reaction against this perceived apostasy from the Orthodox faith, the bishops of Rus appointed their own Russian metropolitan without the approval of the "heretical" patriarch of Constantinople. After 1448, the Muscovite clergy were free to construct a Byzantine (i.e., Orthodox Christian) rather than Mongol (i.e., Muslim) model for their ideal secular government. This served the political interests of the Muscovite prince by presenting themselves as defenders of the Christian faith. Yet prior to 1448, church scribes writing the chronicles generally followed the rule that the less said about alliances between Christian states and their Mongol (and eventually Muslim) neighbors, the better. Even so, some unrevised chronicles portray the Tatars as fair rulers whom God had placed in a position of power.

Recent research suggests that in subsequent centuries, historians reading the interpolated Russian chronicles concluded, incorrectly, that the Rus princes had consistently striven to throw off the so-called Tatar Yoke. Today, however, the cross-cultural connections between the Russians and the Mongols that lasted for more than two centuries are receiving new attention, and the picture that emerges is of a relationship not exclusively defined by hostilities or economic and political oppression. Frequently, religious tolerance, princely intermarriages, military cooperation, learned administrative practices, Tatar assimilation, and mutually supportive trade dealings defined Rus-Mongol relations.

—Mary Jane Maxwell

Bibliography

De Hartog, Leo. *Russia and the Mongol Yoke, 1221-1502*. New York: British Academic Press, 1996.

Fennel, John. *A History of the Russian Church to 1448*. New York: Longman, 1995.

Halperin, Charles J. *Russia and the Golden Horde: The Mongol Impact on Medieval Russian History*. Bloomington: Indiana University Press, 1985.

Martin, Janet. *Medieval Russia, 980–1584*. New York: Cambridge University Press, 1995.

Ostrowski, Donald. *Muscovy and the Mongols: Cross-Cultural Influences on the Steppe Frontier, 1304–1589*. Cambridge: Cambridge University Press, 1998.

Zenkovsky, Serge, ed. and trans. *Medieval Russia's Epics, Chronicles, and Tales*. New York: Penguin, 1974.

■ Introduction: Christendom—The Ideal of a Single Community; The Reality of Diversity

According to the Gospel of John (17:21), shortly before his arrest and death Jesus prayed that all who believed in him would be one. Such was never the case. From its earliest days, Christianity experienced personal, doctrinal, and sectarian divisions, and as various polities adopted the Christian faith as a state religion, those divisions took on political characteristics.

During the period 1000–1500, Christianity was divided into a large number of cultural and doctrinal varieties. In his eyewitness account of the Fifth Crusade (1217–1221), Bishop Oliver of Paderborn devoted eight chapters to describing the different Christian groups that he encountered while overseas. And they were just a few of the major branches of that faith that flourished in the East.

Despite this multiplicity of branches, there was only one major political division within Christendom that could be said to have had a religious-cultural basis: the growing schism between states that followed the Byzantine traditions of Constantinople and those that adhered to the Latin traditions of Rome. To put it in terms used by persons then, it was a struggle between New Rome on the Bosphorus (Constantinople) and Old Rome on the Tiber.

To be sure, within each of these two traditions—Byzantine and Latin—there were numerous divisions and political struggles. The second Bulgarian empire, for example, whose people followed the religious traditions of Constantinople, emerged out of a revolt against the Byzantine empire in the 1180s. Under the energetic leadership of Ioannitsa (r. 1197–1207), also known as

Kalojan, it successfully battled first the Byzantines and later the Latin Christian conquerors of Constantinople but only after Ioannitsa had flirted with the Roman papacy and was crowned king by a legate sent from the court of Pope Innocent III (r. 1198–1216). Innocent had been moved by the Bulgarian leader's tantalizing (but never consummated) promise of submitting the Vlacho-Bulgarian Church to the religious authority of Rome. Within the politically splintered Latin West, bloody strife between states that equally owed spiritual allegiance to Rome was especially pronounced. One famous example is that of kings Richard I the Lionheart (r. 1189–1199) of England and Philip II Augustus (r. 1180–1223) of France who went off on crusade together in 1190 but became implacable enemies by late 1191, largely for dynastic and political reasons. From 1193 until Richard's death in 1199, their armies clashed often in western France, and the war continued when King John (r. 1199–1216) succeeded his brother.

That noted, the major religious division within Christendom—Constantinople versus Rome—was inextricably connected with politics. First, there was the issue of competing “Roman” empires. The Byzantines, who called and thought of themselves as *Romaioi* (Romans, the term “Byzantine” being a modern historiographical convention), saw their empire as the legitimate continuation of the Roman empire, which existed in an unbroken line of succession from the reign of Caesar Augustus (r. 27 BCE–14 CE) to their own day, whenever that was. To the contrary, the West entertained the theory of *translatio imperii* (transfer of empire). According to that

theory, just as Constantine had “translated” the empire to Constantinople in 330, the papacy had transferred it back to the West with the coronation of Charlemagne in 800 because the “Greeks” (the Byzantines) were unworthy of it. Therefore, the Germanic “Holy Roman Empire” (as it became known in the twelfth century) was the true continuation of the Christian Roman empire established by Constantine I (r. 306–337), also known as Constantine the Great.

The Fourth Crusade further complicated this situation when its army captured Constantinople in April 1204 and shortly thereafter established the Latin empire of Constantinople (1204–1261), with Frankish emperors who owed religious allegiance to Rome sitting on the imperial throne in Constantinople’s Boukolean Palace. Although Latin prelates were imposed on the churches of the Latin empire of Constantinople in those areas of Greece, Anatolia, and elsewhere that fell to the Frankish crusaders, the vast majority of “Greeks” remained loyal to their Byzantine Christian traditions.

After Constantinople was recovered in 1261 by the forces of Emperor Michael VIII Palaeologus (r. 1259–1282), the threat of conquest by outside forces caused several emperors, including Michael, to seek political accommodation with the Latin West. In return for political-military assistance, several emperors were prepared to offer submission to the religious authority of the Roman papacy. In order to blunt the projected assault on his empire by Charles of Anjou, Michael VIII ordered his emissary at the Second Council of Lyons to offer submission to the Roman Church, which he did on July 6, 1274. Papal pressure forced Charles to abandon his projected campaign against Byzantium, and Byzantine fortunes seemed to have taken a decided turn for the better. The cost, however, was internal turmoil because most inhabitants of the empire refused to submit to Rome, considering such surrender of their sacred traditions to be a sacrilege. In 1277 a Byzantine council declared the emperor a heretic. Complicating matters, the new pope, Martin IV (r. 1281–1285), a Frenchman and total tool of Charles of Anjou, repudiated the deal with Emperor Michael and declared him a deposed schismatic. Once again, now with full papal support, Charles of Anjou was plotting a

massive assault against Michael’s empire. With church union dead, Michael turned to other means to blunt the Angevin’s advances. Michael’s agents stirred up a successful rebellion in Sicily from which Charles had planned to launch his expedition against Constantinople. The empire was saved by the rebellion, known as the Sicilian Vespers of 1282.

Threatened by the advances of the Ottoman Turks, the “Roman” empire of Constantinople turned to the West several times for military assistance in the fourteenth and fifteenth centuries, offering church union in return. Each attempt came to naught. Emperor John V (r. 1341–1391), the son of a Latin mother, offered such a deal to Pope Innocent VI (r. 1352–1362) in 1355 but was not taken seriously by the pope. As the situation became graver, Emperor John traveled to Rome in 1369 (but no representative of the Byzantine Church joined him in this venture), where he publicly accepted the teachings and authority of the Latin Church. But this achieved nothing. Western aid was not forthcoming, and the Byzantines so hated the Latins and their Church that nothing could convince them to join their emperor’s conversion.

As the Ottoman noose closed, one more desperate attempt was made to secure Western assistance at the cost of ecclesiastical independence. Emperor John VIII (r. 1425–1448) left for Italy in 1437, accompanied by the patriarch of Constantinople and determined to submit his Church to Rome in order to save the remnants of his empire. Church union was jubilantly declared in Florence at the Council of Ferrara-Florence on July 6, 1439. Despite the acceptance of Roman obedience by the emperor and his patriarch, once again little was accomplished. A few Byzantine prelates became cardinals of the Roman Church, but only a small percentage of Eastern Orthodox accepted this union and acknowledged papal supremacy. Moreover, Western aid was too little, too late. Fourteen years, less 39 days, after the declaration of union, Constantinople, the last bastion of the eastern Roman empire, fell to the forces of Mehmed II, also known as Mehmed the Conqueror.

One immediate consequence of the union of Ferrara-Florence was a rupture between Russia and Byzantium from which the Russians had

accepted Christianity four and a half centuries earlier. Up to that point, Byzantine emperors and their patriarchs had appointed the chief churchmen of the Russian Orthodox Church including the Greek Isidore of Thessalonica, whom John VIII had appointed as metropolitan of Russia in 1437 because of Isidore's avid support of church union. Upon Isidore's return to Moscow from Italy, where he had accompanied the emperor and been made a cardinal of the Roman Church, he was deposed by the grand duke of Moscow, Basil II (r. 1425–1462), and imprisoned. A Russian successor was named, and henceforward Russian metropolitans were appointed by Russians. The Russians now looked upon the "Greek Church" of Constantinople as heretical. Following the fall of Constantinople it became fashionable in Russia to call Moscow the "Third Rome." The first two Romes had fallen because of their apostasy; the third, led by its orthodox tsar (Caesar), would persist until the end of time as the bulwark of the true faith and the legitimate continuator of the Christian Roman empire.

—*Alfred J. Andrea*

Ethiopia—The Land of Seyon

The Land of Seyon covered a vast territory of the Horn of Africa, identified mainly with present-day Ethiopia, Eritrea, and Djibouti. It reached its peak in the fourteenth century under the rule of King Amda Seyon I (r. 1314–1344) of the Solomonic (Solomonid) dynasty. He spread Christianity by expanding the Ethiopian territory into Muslim provinces. Christianity dominated the region since the Aksumite empire, but conflicts with bordering Muslim provinces have shaped Ethiopian history and politics to the present.

The kingdom of Aksum, which emerged in the first century CE, functioned as a major trade center for slaves and ivory. Christianity became its state religion in the fourth century. Muslim dominance of the Red Sea trade led to its eventual decline in the eighth century and disappearance in the ninth or tenth century. The succeeding Zagwe dynasty reigned over part of the old kingdom down to 1270. The greatest ruler of the House of Zagwe was King Gebre Mesqel Lalibela (r. late twelfth/early thirteenth

century). According to tradition, during his reign, the famous rock-hewn churches of Roha, his capital (present-day Lalibela), were largely built.

After the death of Yitbarek, the last Zagwe king, a new dynasty arose farther south in the upper territory of Sheba. King Yekuno Amlak (r. ca. 1268–1283) is considered the first king of the Solomonic dynasty. Another interpretation is that he restored the Solomonic dynasty to the Ethiopian throne. According to this theory, the dynasty can be traced back to the meeting of King Solomon and the Queen of Sheba recorded in the Bible and was only disrupted by the Zagwe. Even though the royal chronicles began during his reign, most of the records about the restoration of the Solomonic dynasty are apocryphal and were written centuries later.

Yekuno Amlak imposed Amharic as the court language, while Geez (also called Old Ethiopic) was still in use in the Church. He established his capital in the Shebean region of Tegulet. Sheba included also the rising Muslim kingdom of Adel in the south. Growing friction between the two rival forces, the Solomonic dynasty and the Muslim state, as well as with other neighboring Islamic states kept Ethiopia isolated for almost six centuries.

King Amda Seyon I (r. 1314–1344), grandson of Yekuno Amlak, was a singular figure who dominated the Horn of Africa in the fourteenth century. He expanded his kingdom beyond the Muslim borderlands, conquering lucrative trade routes and establishing a tributary state in the southern part of the territory. Due to these expansions, Christianity spread to frontier areas, and trade flourished. Archeologists have found Byzantine textiles, coins, and other goods in the treasuries of Ethiopian monasteries and churches. Trade disputes, however, between the Christian North and Muslim South resulted in a series of wars and political instability. Furthermore, because royal succession was not dictated by primogeniture, rivalries accompanied each transfer of power.

During Amda Seyon's rule some of the earliest works of Ethiopian literature were composed, the most important being the *Kebrä Nagast* (*The Glory of Kings*). Among the most notable works is Giyorgis of Segla's *Mashafa Mestira Samay Wamedr* (*The Book of the Mysteries of Heaven*

and Earth), which describes the creation of all things. The *Zena Eskender (History of Alexander the Great)* is the Ethiopian version of ancient tales circulating the Middle East and depicts Alexander the Great as a pious Christian.

Sacred art and literature was only found within monasteries. The northern state adhered to its nomadic tradition, with emperors and their entourage living in royal camps. As a consequence, the region did not develop an urban culture. The first permanent capital was Gonder, established in 1632. The nomadic lifestyle had a disastrous impact on the ecological balance. The massive army and the extensive royal court destroyed large parts of those regions in which they temporarily settled.

The crusades to the Holy Land weakened the Muslim neighbors bordering the Red Sea and restrained international trade, although Ethiopians did not participate in these religious wars launched from Europe. In the late fifteenth century, trade in the region slowly recovered, mainly on account of the arrival of the Turks and the Portuguese. Besides the merchants, a large number of missionaries, treasure hunters, scholars, and adventurers came to Ethiopia in search of the mythical Prester John. The myth emerged in Latin Europe in 1145. Some Latin Christians believed that the emperor of Ethiopia was Prester John, a priest-king who could liberate the Holy Land. The Portuguese sent their first diplomatic envoy in 1520, only to find out that the Ethiopian emperor was an ordinary ruler. Even so, the European belief that a mythical king reigned over a powerful and wealthy Christian kingdom in Africa persisted until the seventeenth century.

—Carmen De Michele

Bibliography

- Henze, Paul B. *Layers of Time: A History of Ethiopia*. New York: Palgrave, 2000.
- Marcus, Harold G. *A History of Ethiopia*. Berkeley: University of California Press, 1994.
- Middleton, John, ed. *Encyclopedia of Africa South of the Sahara*. New York: Scribner, 1997.
- Prouty, Chris, and Eugene Rosenfeld. *Historical Dictionary of Ethiopia*. Metuchen, NJ: Scarecrow, 1981.
- Tamrat, Tadesse. *Church and State in Ethiopia (1270–1527)*. Oxford, UK: Clarendon, 1972.

THE UNDERPINNING OF A ROYAL HOUSE—THE MYTH OF KING SOLOMON AND THE QUEEN OF SHEBA

The mythical meeting of King Solomon and the Queen of Sheba inspired poets and artists for centuries. The ancient country of Sheba extended from southwestern Arabia to the eastern end of the Red Sea, covering the territory of present-day Yemen. Ethiopia presumably also belonged to this wealthy and peaceful kingdom, which had been ruled by queens for more than 1,000 years.

The Queen of Sheba, named Makeda (Greatness) in Ethiopian, was known not only for her legendary wealth but also for her sagacity and beauty. She decided to visit King Solomon of Israel to listen to his wisdom. The king seduced Makeda and converted her to his faith. Their son, Menelik I, stole the Ark of the Covenant, which he then transported from Jerusalem to Aksum, and became the first king of Sheba, ending the matriarchy.

The biblical book of Kings (1 Kings 10:1–13) and the historian Flavius Josephus describe this epic meeting. A more extensive version can be found in the *Kebrä Negast*, which narrates the myth of Solomon and Makeda, the genesis of the second Kingdom of Zion in Ethiopia, and the demise of Israel. These mythical events constitute the foundation of the Ethiopian Orthodox Church and the Solomonic dynasty, which persisted to emperor Haile Selassie (r. 1930–1974).

—Carmen De Michele

Ullendorff, Edward. *The Ethiopians: An Introduction to Country and People*. Oxford: Oxford University Press, 1973.

Byzantium, 1025–1204

At the time of Basil II's death in 1025, the Byzantine empire was the major power in the Mediterranean, with territory that stretched from southern Italy to northern Syria and areas around the Black Sea. Sixty years later, it had disintegrated into civil war and lost much of its core in Anatolia. Dynastic failure was a major problem: Basil II (r. 976–1025) never married, and the empire devolved to his elderly nieces Zoe and Theodora and Zoe's consorts. Basil's expansion

► THE SACK OF CONSTANTINOPLE, APRIL 13–15, 1204

Nicetas Choniates, a Byzantine aristocrat whose family fled Constantinople on April 17, 1204, after being sheltered by a Venetian resident-merchant whom he had earlier befriended, vented his spleen against the Latin conquerors in his monumental *Annals*, a work that spans Byzantine history from August 1118 through the autumn of 1207.

“From the very beginning they [the Latins] revealed their race to be lovers of gold. . . . Having opened the graves of those emperors which were in the burial ground situated in the area of the church of Christ’s Holy Apostles, they stripped all of them during the night, and if any golden ornament, pearl, or precious stone still lay inviolate in these (tombs) they sacrilegiously seized it. When they found the corpse of the Emperor Justinian, which had remained undisturbed for so many years, they marveled at it, but they did not refrain from (looting) the funerary ornaments. . . . [T]he bronze statue of Hera, standing in the agora of Constantinople, was broken into pieces and consigned to the flames. These barbarians—who do not appreciate beauty—did not neglect to overturn the statues standing in the Hippodrome (the chariot-racing stadium). . . . Rather, these too they turned into coinage, exchanging great things for small, thus acquiring petty coins at the expense of those things created at enormous cost.”

—Dorothy de F. Abrahamse

Source

Nicetas Choniates, *Historia*, ed. I. Van Dieten (Berlin: De Gruyter, 1975), 647–651. Translation from Deno John Geneakoplos, *Byzantium: Church, Society and Civilization Seen through Contemporary Eyes* (Chicago: University of Chicago Press, 1984), 371–372.

required harsh taxation policies and autocratic control of the aristocracy that could not be sustained, and powerful military clans launched constant rebellions against his successors. New threats developed along the expanded borders: the Petchenegs (or Patzinaks), a seminomadic Turkic people out of Central Asia, crossed the Danube River into the Balkans in 1033; the Seljuks were moving into eastern Anatolia in the

1050s; and about the same time Norman adventurers had established themselves as a major threat to Byzantine territories in southern Italy. Constantine IX Monomachos (r. 1042–1055) attempted to reform the empire for a peacetime economy, weakening the provincial armies. When Romanos IV Diogenes (r. 1068–1071) was captured by the Seljuks in a disastrous battle at Manzikert, civil war followed, leaving Anatolia open to Turkish settlement. Stability was restored when Alexius I Comnenus (r. 1081–1118) seized the throne and established a dynasty that endured through the twelfth century. Comnenian rule was based on distributing power to their extended family and allied clans.

Alexius immediately faced external crises. Simultaneously, the Petchenegs again invaded the Balkans, Seljuk settlements encompassed almost all of Anatolia, and the Norman Robert Guiscard, who had conquered the last remnants of Byzantine southern Italy in 1071, invaded Epirus (present-day Albania) in 1081, claiming the imperial throne for a puppet emperor. After several years of difficult campaigning, Guiscard’s death in 1085 ended the Norman threat, and Alexius defeated the Petchenegs by calling in another Turkic group, the Cumans, in 1091. By 1095 he was ready to restore lost territory in Anatolia. Byzantium now depended on mercenaries from outside the empire (including Turks and Normans), so Alexius turned to the West to seek help and almost certainly requested assistance from Pope Urban II in 1095. The result was the First Crusade.

Alexius extracted oaths of fidelity and promises to restore lost Byzantine territory from the crusader leaders, and fortresses in Anatolia were returned to the emperor. Formerly Byzantine Antioch, however, was retained by the crusaders after a bitter siege, largely due to the crusaders’ belief that the emperor had abandoned them to the Turks. Alexius restored Byzantine stability but on the basis of uneasy agreements with Western powers. Managing the threat posed by the subsequent crusader states and the later crusades that came through the empire became a major focus of Comnenian policy.

John II Comnenus (r. 1118–1143) and Manuel I Comnenus (r. 1143–1180) continued to expand Byzantine stability by leading constant

campaigns. Their success was above all a result of skillful diplomacy and alliances with other states in the Mediterranean. Manuel's wide network of alliances extended from Western Europe to Egypt and included traditional enemies. John and Manuel negotiated marriages with the rulers of Hungary, made the sultanate of Rum in Anatolia a client state, and increased Venetian trade privileges. Alliances with the crusader states were a cornerstone of Manuel's policy, sealed by an oath of allegiance from the ruler of Antioch. Italian republics played a dominant role in trade, and the presence of Latins in Constantinople grew as Byzantine provinces shared in the growth of the Mediterranean economy. Twelfth-century Byzantium regained its prestige through a network of alliances rather than regaining direct control of its lost provinces.

Dynastic failure and the reversal of Comnenian policies proved disastrous for the empire after Manuel's death. His young heir was quickly overthrown in a violent coup. The brutal reign of Andronicus I Comnenus (r. 1183–1185) was noted for his anti-Latin policies and the suppression of aristocrats, and it ended with his being torn alive by the city's mob. His successors, Isaac II Angelos (r. 1185–1195 and 1203–1204) and Alexius III Angelos (r. 1195–1203), were unable to control rivals or provincial separatism, and they unwisely rejected Manuel's policy of alliances with the crusader states. By 1203 the Byzantine empire was disintegrating from within and had created dangerous animosities with the Western powers with which the empire was now irrevocably entangled.

The conquest of Constantinople during the Fourth Crusade was not a Western plot or the inevitable outcome of Byzantine-Latin hostility. The crusaders were drawn into Byzantine factional struggles when they agreed to help a displaced prince, Alexius IV (r. 1203–1204), gain his throne in return for unrealistic promises of men, money, and religious unity. They attacked the city in desperation after Alexius IV and his restored father, Isaac II, who had been unable to keep their commitments, were deposed by the fiercely anti-Latin Alexius V (r. 1204). The crusaders captured the city on April 13, 1204, and sacked the city for three days in search of treasure. The Latin conquest of Constantinople gen-

erated powerful myths that endure today, but above all it demonstrated the failure of inconsistent policies and the danger of factional struggles in a world that Byzantium could no longer control.

—Dorothy de F. Abrahamse

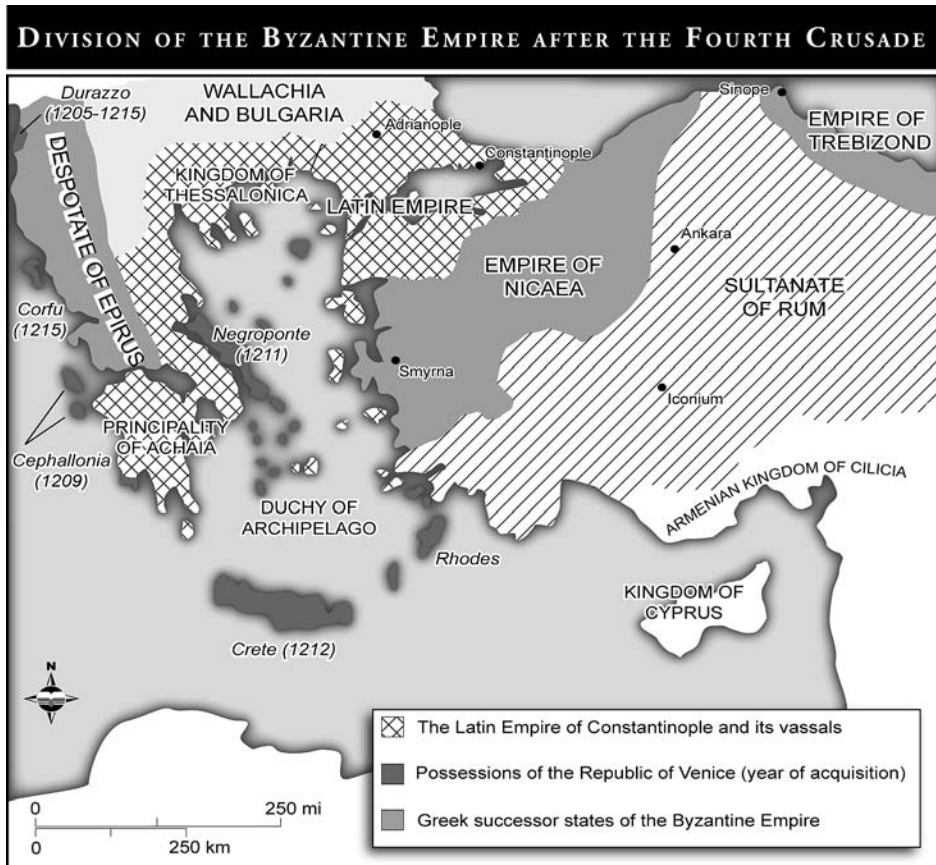
Bibliography

- Angold, Michael. *The Byzantine Empire, 1025–1204: A Political History*. 2nd ed. New York: Longman, 1997.
- Angold, Michael. *The Fourth Crusade*. Edinburgh, UK: Pearson, 2003.
- Brand, Charles M. *Byzantium Confronts the West, 1180–1204*. Cambridge: Harvard University Press, 1968.
- Harris, Jonathan. *Byzantium and the Crusades*. London: Hambledon and London, 2003.
- Kazhdan, Alexander, and Ann Wharton Epstein. *Change in Byzantine Culture in the Eleventh and Twelfth Centuries*. Berkeley: University of California Press, 1989.

Byzantium, 1204–1453

The Latin conquest of Constantinople in 1204 appeared to be the end of the Byzantine empire, but the feudal Latin empire soon disintegrated and lost most of its territories. Three Greek states developed in exile: Trebizond on the Black Sea coast, Epirus in northwestern Greece, and Nicaea in northwest Anatolia. By the 1220s, Nicaea and Epirus were contending with one other to recover Constantinople. The rulers of Nicaea were especially successful in creating a viable state, and in 1261 they retook Constantinople. Michael VIII Palaeologus (r. 1259–1282) inaugurated a dynasty that ruled the empire until its demise in 1453.

The Palaeologan emperors inherited a ruined capital, threats on all borders, and internal opposition. They were forced to maneuver among attacks from the Latin West, Orthodox Christian Balkan kingdoms, and the Turks in Anatolia in a period that saw the growth of a strong Serbian empire and the rise of the Ottoman Turks. Survival depended on widespread diplomatic alliances, resources to support an army, and the ability to command internal resources. Like the twelfth-century Comnenian system, Palaeologan rule was dynastic, and power was shared through



the extended family. In a weakened empire, strife within the ruling family was to prove fatal.

Michael VIII restored the empire and staved off disaster through diplomatic brilliance, but his rule demonstrated the cost of survival. He initiated a building program to restore Constantinople from crusader depredation and neglect and continued the reconquest of Byzantine territory in Greece. Resources came from taxes on aristocrats, debasement of the gold currency, and commercial privileges for Italian cities, especially Genoa. His greatest achievement was to save the empire by averting a Western attack through a web of alliances, fomenting a popular rebellion in Sicily, and even agreeing to religious union with the papacy at the Second Council of Lyons (1274). Rejection of the union at home demonstrated the limits of compromise.

Michael's successors Andronicus II (r. 1282–1328) and Andronicus III (r. 1328–1354) faced new external threats and lacked his finesse in managing them. To conserve resources, Andronicus II reduced the army and virtually eliminated

the navy, relying on the Genoese. An expanding Serbian state attacked Byzantine fortresses along the Macedonian border, culminating in the creation of a minor empire under Stephen Dušan (r. 1331–1355) and a treaty that brought Byzantine cultural influences to Serbia, resulting in some of the greatest masterpieces of Byzantine painting in Serbian monasteries. At the same time, the Ottoman Turks began their expansion and by 1337 controlled most Byzantine territory in Anatolia.

The greatest devastation to the empire, however, was caused by two civil wars over imperial succession. The first took place between Andronicus II and Andronicus III (1321–1328); a second more serious conflict (1341–1357) pitted the supporters of John V (r. 1341–1376 and 1379–1391), heir to Andronicus III, and the regent John Cantacuzenus. Each side called in Serbian, Bulgarian, and Turkish rulers and their troops. By the end of the conflict, Serbia had taken much of western Greece, and the Ottoman Turks held territory in Thrace, positioning themselves to

➤ MOUNT ATHOS

As Byzantine political power weakened, its Orthodox identity grew. From the tenth century onward, Mount Athos, the Holy Mountain (Agion Oros), was the most important ascetic center in the Orthodox world. Founded on an isolated peninsula in northern Greece, it housed monasteries of Georgian, Bulgarian, Russian, Serbian, Armenian, and Greek monks. Its original charter was strict, prohibiting eunuchs, women, and even female animals from the peninsula. In the late Byzantine period, Athos became a center of Hesychasm (a form of silent mystical prayer) and later adopted a semieremitic lifestyle. The communities of Mount Athos were an important vehicle for transmission of Orthodox literature, art, and spirituality in the Orthodox world. Its libraries contain some of the greatest surviving medieval manuscript collections. Mount Athos survived the Ottoman conquest and was allowed to remain an autonomous community. Its monks still preserve the ascetic traditions of the past as a living inheritance from the Byzantine world.

—Dorothy de F. Abrahamse

Hilandar is a Serbian Orthodox monastery on Mount Athos, founded in 1198. (Mladen Prokic)



expand farther into Europe. The second civil war was also a struggle between a wealthy aristocracy, represented by Cantacuzenus, and the urban poor, who temporarily controlled Thessalonica, the empire's second most important city. Religious controversy over Hesychasm, a contemplative practice that led to visions of the Divine Light, also split the contenders. When John V finally took undisputed rule of the empire in 1354, it was in desperate shape, and the impact of war was exacerbated by bubonic plague.

The remaining century of Byzantine history was a period of vassalage and appeals for help as the empire shrank to little more than the capital itself. John V Paleologus even traveled to Rome to personally accept the primacy of the pope without any resulting aid or true church union. In 1371 after the Ottoman defeat of the Serbs isolated Constantinople, John V Paleologus agreed to pay tribute to the Ottoman sultan. His son Manuel II Palaeologus (r. 1391–1425) traveled to

European capitals to ask for help, while the Turkish sultan Bayezid besieged Constantinople. The invasion by Timur-i Leng (Tamerlane) of Anatolia and his victory at Ankara in 1402 postponed the inevitable conquest for half a century. In 1438–1439, John VIII (r. 1425–1448), accompanied by the patriarch and leading clerics and scholars, attended a papal council in the Italian cities of Ferrara and Florence and signed a statement of union supposedly ending the centuries of schism, but even at this late date it was effectively opposed in Constantinople and throughout most of the Orthodox Christian East.

The final siege of an isolated and depopulated city took place in 1453 in a methodically planned attack by Mehmed II. The emperor Constantine XI (r. 1448–1453) and his citizens resisted for almost two months, helped only by volunteer Italian commanders, until a final Ottoman attack on May 28. Constantine led the defenders and was lost in the final assault, while a

last liturgy took place in Hagia Sophia. Symbolically, Mehmed entered the church and had a Muslim prayer proclaimed. The siege of Constantinople was remembered throughout the Christian world as a tragic yet noble end to an empire that had existed for more than a millennium.

The political failure of late Byzantium, however, overlooks the complexity of a period in which its territories were part of a thriving Mediterranean economy controlled by Italian merchants and in which mercenaries, marriages, alliances, and above all religion contributed to a multiethnic world where ideas, cultural products, and beliefs were formed and transmitted. Through these connections, Byzantium long survived its political existence.

—Dorothy de F. Abrahamse

Bibliography

- Evans, Helen, ed. *Byzantium: Faith and Power (1261–1557)*. New York: Metropolitan Museum of Art, 2004.
- Laiou, Angeliki, ed. *The Economic History of Byzantium*. Washington, DC: Dumbarton Oaks, 2002.
- Nichol, Donald. *The Last Centuries of Byzantium*. 2nd ed. Cambridge: Cambridge University Press, 1993.
- Runciman, Steven, *The Fall of Constantinople, 1453*. Cambridge: Cambridge University Press, 1965.
- Speake, Graham. *Mount Athos: Renewal in Paradise*. New Haven, CT: Yale University Press, 2004.

The Byzantinized States of Eastern Europe

The Byzantine empire, though shrinking after 1125, extended its influence throughout Europe, particularly by significantly influencing the formation of Balkan and Eastern European states.

Byzantine emperors identified themselves as Romans (*Romaioi*) and their empire as the Roman empire, claiming a legacy back to Julius Caesar. Byzantium's longevity and this connection to Rome led the newly forming kingdoms of Europe to appropriate aspects of Byzantium's glory, prestige, and legitimacy for themselves. They did this by, among other things, appropriating titles, terminology, art, and architecture and through more physical connections, such as cultural exchanges and marriages.

Respect for Byzantium's heritage enhanced the Byzantine emperors' sense of their own imperial ideology, which originated with Constantine I (r. 306–337). He created a new imperial identity through Christianity, when the pagan idea of a god-emperor ceased to be looked on favorably due to increasing Christianization. According to this imperial ideology, there could be only one Christian emperor, who acted as God's vice-regent on Earth and to whom all other rulers were subordinate. Thus, Constantine and his successors referred to other Christian and non-Christian rulers as sons, using familial language as a way of asserting dominance.

Byzantium was a model for all of Europe, and its emperors' imperial ideology included the entire world, as is evident in the sixth-century *Barberini Ivory*, which shows the emperor (probably Justinian I) receiving homage and tribute from Central Asians and Indians, who are below his horse's hooves. Much closer to Constantinople, the areas most identified with Byzantine influence are Southeastern and Eastern Europe because of their conversion to Byzantine forms of Christian worship, customs, and belief. Most of the Slavic states in these regions were in close contact with Byzantium and attempted to emulate it.

The Balkans generated two of the most strongly Byzantine-influenced kingdoms: Bulgaria and Serbia. This was due largely to Byzantium's interest in protecting its borders in a region that it had previously controlled. The Balkans were also a borderland in which there were at least three competing foreign interests: Byzantine, papal, and German imperial. This is perhaps revealed most clearly in the religious-cultural split between Byzantinized Bulgarians and Serbs and Latin Croats and Slovenians.

The Bulgars, a non-Slavic, possibly Turkic-speaking people out of Central Asia, arrived in the Balkans in the seventh century, taking a portion of Byzantine territory for themselves and thus beginning 700 years of conflict. In the process of their settling down in the Balkans, the Bulgars were slowly absorbed culturally and linguistically by the Slavic majority, which had settled the region a century earlier, but Bulgar lords remained as a ruling warrior-elite. After over a

century of warfare, Byzantium used Khan Boris I's (r. 852–889) Christianization in 864 to gain control over the Bulgarian leadership. Boris solicited missionaries from the papacy, the German empire, and Byzantium and due to political factors aligned himself with the Byzantine Church and took the baptismal name Michael. The presence of Byzantine churchmen in Bulgaria under the control of the patriarch of Constantinople, however, was not acceptable, as the Bulgarian rulers desired autonomy and feared forced unification with Byzantium.

The two factors that brought religious autonomy to Bulgaria were the introduction of the Slavonic liturgy, originally created by Byzantine missionaries Cyril and Methodius, late in the reign of Khan Boris, and Boris's grandson's marriage to a Byzantine princess, which made the Bulgarian Church autocephalous (having its own head, or primate, who is not subject to any higher-ranking bishop) while also bringing increased Byzantine formulas, titles, and ceremonies into the royal court. This first Bulgarian empire was defeated by Basil II "the Bulgar-Slayer" (r. 976–1025), a Byzantine emperor who wanted to end the ever-present Bulgarian threat. The competition between Byzantium and Bulgaria was renewed after the extinction of Basil's line in the eleventh century and the creation of a second Bulgarian empire. For the next three centuries, Byzantium and Bulgaria warred over territory and influence in the Balkans, while Bulgarian rulers took the title of *tsar* in an attempt to appropriate the heritage of the caesars and become a new Byzantium.

The early Serbian states had to deal not only with Byzantium but also with a powerful Bulgaria. Serbian rulers, such as Michael of Zahumlje (d. ca. 945) and Časlav (r. 927/928–ca. 960), used Byzantinization, including conversion to Byzantine Christianity, to combat the Bulgarian threat. Stefan Nemanja (r. 1166–1196) unified and enlarged Serbia, aided by discord in Byzantium due to its conflict with rising Islamic powers in the Middle East and with Christian crusaders. Nemanja and his dynasty balanced Byzantine, papal, and West European alliances to solidify the dynasty's power and independence. Serbia's strength peaked with the rise of Stefan IV Dušan

➤ ALEXANDER "NEVSKY"

Alexander Iaroslavich (1220–1263), prince of Novgorod (r. 1236–1263) and later grand prince of Vladimir (r. 1252–1263), earned the nickname "Nevsky" (of Neva) with a victory over invading Swedes on the Neva River in 1240. He is well known today due to Sergei Eisenstein's 1938 film, which used Nevsky's life and myth to mobilize anti-German sentiment prior to the Molotov-Ribbentrop Pact of August 1939.

Nevsky ruled at a pivotal time in Russian history, leading Rus forces against the Livonian Sword Brothers, a branch of the Teutonic Knights, and Swedish crusaders, who were attempting to convert Rus to Latin Christianity and garner new territory. His greatest victory was the Battle on the Ice on frozen Lake Peipus in April 1242 fought against the Sword Brothers. He also faced a new threat from the east, the Mongols, who invaded in force in 1237 and destroyed the cities of Vladimir in 1238 and Kiev in 1240. Nevsky allied with the Mongols rather than fight them, a move that he viewed as the only way to preserve his people and consolidate his power. The tactic was a success. The Mongols ultimately supported his claim to the throne of Vladimir, making him the undisputed ruler of Rus. The Russian Orthodox Church canonized him as a saint in 1547, and his successors ruled Russia until the end of the sixteenth century. The results of his actions, however, increased the separation between Russia and the West, changing the future of Europe.

—Christian Raffensperger

(r. 1331–1355), who capitalized on internal strife in the region to build Serbia into a major power and take the title of "Tsar of the Serbs and Greeks" in 1345. Like the Bulgarians before him, Dušan used modified Byzantine titulature and ideology to create a Byzantine-style empire, and he even expressed a desire to capture and rule from Constantinople, a dream cut short by his death.

The rulers of Kievan Rus (the medieval kingdom that is the ancestor of modern Ukraine, Belarus, and Russia) of the ninth and tenth centuries played the parts of raider, mercenary, and trader with Byzantium. The closest relationships

were created, however, via Christianization, beginning with the conversion of the regent Olga in the mid-tenth century. Though her son remained pagan, Olga's grandson, Vladimir (r. 978–1015), converted to Byzantine Christianity to marry Anna, sister of Basil II, and converted Rus in his wake. The relationship created via conversion was Byzantium's strongest tie to Rus. Politically, Rus largely chose other paths in order to assert its position in Europe, but the growing power of the Christian Church in Rus as well as the fragmentation of the kingdom into warring principalities helped increase Byzantinization beginning in the twelfth century. This continued in the thirteenth century with two specific events. The first was the growing feeling in the Latin Church that Byzantine Christianity was heretical, making it the object of crusades, including the Fourth Crusade that sacked the Byzantine capital of Constantinople in 1204 and the Livonian Sword Brothers' ill-fated crusade against Novgorod in 1242. The second event was the Mongol invasion in 1237 that subjugated Rus, making the kingdom the westernmost part of the Mongol world rather than the easternmost part of the European world. These events strengthened Byzantine ties, which were used to the advantage of the growing power of Moscow in the fourteenth and fifteenth centuries, when its rulers began to appropriate the Byzantine mantle for themselves, including using the title of tsar.

—*Christian Raffensperger*

Bibliography

- Curta, Florin. *Southeastern Europe in the Middle Ages, 500–1250*. Cambridge: Cambridge University Press, 2006.
- Fine, John V. A., Jr. *The Late Medieval Balkans: A Critical Survey from the Late Twelfth Century to the Ottoman Conquest*. Ann Arbor: University of Michigan Press, 1987.
- Franklin, Simon, and Jonathan Shepard. *The Emergence of Rus, 750–1200*. New York: Longman, 1996.
- Gregory, Timothy. *A History of Byzantium*. Malden, MA: Blackwell, 2005.
- Sullivan, Richard E. "Khan Boris and the Conversion of Bulgaria: A Case Study of the Impact of Christianity on a Barbarian Society." *Studies in Medieval and Renaissance History* 3 (1966): 53–140.

Sacred and Secular Authority in the Latin West

By 1048, the Holy See of Rome, with imperial support, had escaped domination by the Roman nobility. Pope Leo IX (r. 1048–1054) and his successors encouraged reform, prohibiting the sale of ecclesiastical rites and offices (simony) and clerical concubinage. This renewed papacy struggled with the patriarch of Constantinople over issues of theology, liturgy, and authority. The result was a growing schism that progressively divided the Churches of Rome and Byzantium. Starting with Gregory VII (r. 1073–1085), reforming popes also openly opposed the German emperors by resisting imperial promotion of bishops. This opposition led to a temporary papal triumph in 1077 when Henry IV begged the pope to absolve him from excommunication. The empire, however, regained the initiative, and a long struggle ensued. It was resolved by compromise in the Concordat of Worms (1122), which left emperors able to regulate ecclesiastical elections but without appearing to bestow spiritual power on new bishops.

The struggle with the Western empire, which was centered in Germany and northern Italy, led the papacy to seek allies, with popes often supporting fractious nobles within the empire. Additionally, popes claimed the authority to review and confirm imperial elections. Outside Germany, popes encouraged the emergence of strong kings. These included William of Normandy, who conquered England in 1066, and the Norman rulers of southern Italy.

Part of the new papal program and self-image was presenting itself as the defender of all Christians. In an attempt to aid Eastern Christians against the onslaught of the Seljuk Turks and to restore full ecclesiastical relations with the Eastern Roman, or Byzantine, empire, Pope Urban II (r. 1088–1099) launched the First Crusade in 1095–1096. This effort to domesticate violence in the Church's cause was only intermittently successful. The Fourth Crusade, which ended in the sack of Constantinople (1204), only further embittered East-West relations. The Eastern emperors regained the city in 1261, but they were unable to control anti-Latin sentiment. Even the threat of Turkish conquest was insufficient

to earn widespread support for imperial efforts at ecclesiastical reunion. The agreement reached at the Council of Florence (1439) failed through widespread resistance of both clergy and laity in Constantinople's remaining territories. The Turkish capture of the city in 1453 only served to cement separation of East and West.

In the West, the Salian dynasty, which had imposed reform on Rome and then quarreled with the papacy, died out in 1125, but imperial authority was reasserted by the Hohenstaufen family in the later twelfth century. The campaigns of Frederick I Barbarossa (r. 1152–1190) drove the papacy into alliance with the city-states of northern and central Italy. Barbarossa failed to control Italy, but Frederick II (r. 1212–1250), his grandson, inherited a combined claim to the empire and the Norman kingdom in Sicily and southern Italy. At first, Frederick's minority, dependent in part on Pope Innocent III (r. 1198–1216), defused this threat to papal autonomy. Later Frederick proved too powerful, and successive popes fought against him but with little success. After Frederick's death in 1250, a new papal champion, Charles of Anjou, brother of King Louis IX of France, managed to oust the Hohenstaufens from southern Italy and Sicily, but this left Rome under the thumb of another political power, Angevin Naples.

Earlier, Pope Innocent III had exercised more political power than most popes, even bringing King John of England to swear allegiance to the Holy See. Other kings were less submissive, but they were often unable to ignore Innocent's combination of moral authority and political pressure. His claims to represent a vastly superior authority, that of Jesus whose vicar, or deputy, he claimed to be, and to exercise ultimate authority over all matters "by reason of sin" (namely, by virtue of his supreme priestly power to judge sins) gave the pope considerable moral authority. Under his thirteenth-century successors, however, this prestige declined, and the kings whom papal Rome had once favored became potential enemies. This sea change culminated in an attack at Anagnini in 1303 by French agents on Pope Boniface VIII (r. 1294–1303), then at odds with the Capetian king of France, Philip IV. Thereafter the papacy, whether present in Rome or resident at Avignon (1309–1377 and 1378–1417),

➤ *SOLITAE*—POPE INNOCENT III WRITES TO THE EMPEROR OF CONSTANTINOPLE

In late 1200, Pope Innocent III sent the letter *Solita* (named for its opening word, which means "usual") to Emperor Alexius III (r. 1195–1203) in response to Alexius's claim that imperial power was superior to that of priests. The pope's rejoinder was such an unambiguous and original articulation of the primacy of papal power that it became enshrined in the canon law of the Roman Church.

"You ought to know that God made two great lights in the firmament of heaven—the greater light to preside over the day, the lesser light to preside over the night. . . . The word 'day' we understand to mean 'spiritual,' and 'night' means 'carnal.' . . . He [further] instituted two dignities, which are pontifical [papal] authority and royal power. The one that rules over days, that is over spiritual matters, is greater; the one that rules over nights, that is over carnal matters, is lesser. Thus, it is recognized that the difference between the sun and the moon is as great as that between pontiffs and kings."

—Thomas M. Izbicki

Source

Translated by Alfred J. Andrea in Alfred J. Andrea, *The Medieval Record: Sources of Medieval History* (Boston: Houghton Mifflin, 1997), 320.

was treated by rulers, be they friend or foe, like any other prince. The English Crown went so far, at the height of the Hundred Years' War, as to forbid appeals from English clerics to the pope.

Despite this weakening, the papacy maintained high claims to temporal power. Boniface VIII even declared subjection to Rome, exact meaning undefined, to be necessary for salvation. These claims aroused opposition from writers such as Dante Alighieri, who defended imperial power, and Marsalis of Padua, who denied that the clergy could have coercive power. A different challenge, arising from the Great Western Schism (1378–1417) and known as Conciliarism, treated general councils as the true representative of the infallible Church and as the sole body that had the power to regulate and to sit in judgment of popes. Conciliarism benefited the

princes, who were able to extract concessions from the popes who sought their support against the Conciliarists. Ultimately Conciliarism lost out, but the papacy did not emerge unscathed. Popes retained their theoretical claims to universal supremacy over the Church, but in reality by the end of the fifteenth century they had become little more than Italian princes ruling over the Papal States of central Italy. At the same time, these popes were still able to wring large sums of money from various Europeans north of the Alps, especially in Germany, whose princes conspired with papal agents. Reactions against this “foreign” Roman power were among the factors permitting the Protestant Reformation to triumph in various areas in the North.

—Thomas M. Izbicki

Bibliography

- Barracclough, Geoffrey. *The Medieval Papacy*. New York: Harcourt, Brace and World, 1968.
- Ehler, Sidney Z., and John B. Morrall, ed. and trans. *Church and State through the Centuries*. Westminster, MD: Newman, 1954.
- Lynch, Joseph H. *The Medieval Church: A Short History*. London: Longman, 1992.
- Tierney, Brian. *The Crisis of Church and State, 1050–1300: With Selected Documents*. Englewood Cliffs, NJ: Prentice Hall, 1964.

National Monarchies and Representative Assemblies in Europe

Around the year 1000, land and therefore power was held by kings, dukes, counts, barons, and viscounts; even archbishops, bishops, abbots, and abbesses were lords who held land and exerted considerable power. Although in theory the king was the greatest lord in the land, and all other lords held their land from him, in practice the king was often unable to exert influence over lords in his kingdom. However, beginning around the mid-eleventh century, especially in France and England, kings began to consolidate their power at the expense of the local lords, a process that eventually led to the growth of national monarchies. As the complexity of royal government grew, kings in various parts of Western Europe, beginning with the Spanish kingdom of León in 1188, began to call representative

assemblies of lords and commoners to gain the consent of the realm for various projects, such as levying taxes or mobilizing consent for royal policies. Their objective was not to share power but instead to gain widespread support that reached from the highest to the lowest levels for an ever-expanding growth of royal power.

For the central monarchy to assert authority over powerful lords, kings used two interconnected strategies. First, they extended the machinery of royal government into the provinces, the seat of local baronial power. Second, kings obtained baronial loyalty and support for their authority through a variety of means. In England, the impetus toward consolidation of monarchical power grew from the conquest of Anglo-Saxon England by William, Duke of Normandy, in 1066. With his successful conquest, William I (r. 1066–1087) became the king of England, a kingdom that already had sophisticated governmental structures. To secure his conquest and to reward the knights who had fought for him, William gave out parcels of land as fiefs that were held in exchange for the knights’ loyalty and service to the king, thereby displacing most of the defeated Anglo-Saxon landholders with men who were loyal to him. Furthermore, William demanded that all nobles and knights swear an oath of loyalty to him and recognize him as the sole ruler of England.

In the twelfth century royal power was extended further into the provinces when King Henry II (r. 1154–1189) expanded the number of criminal cases tried before the king’s court and initiated legal procedures that took property cases away from the courts of local lords and gave them to the royal courts, thereby expanding royal authority and increasing royal revenues at the expense of the barons of the realm. However, during the reign of King John (r. 1199–1216), many English barons expressed their dissatisfaction with royal heavy-handedness. They rose in rebellion and forced John to agree to the *Magna Carta* (Great Charter, 1215), which guaranteed feudal liberties by articulating royal and baronial responsibilities and obligations.

Institutionalized representative government in England emerged during the reign of Edward I (r. 1272–1307) in response to Edward’s need for revenue. The word “parliament” (from the Old

French verb *parler*: the place where discussion took place) had always been used to describe meetings of the king's Great Council, in which barons and important churchmen of the realm met to give the king advice and to adjudicate important cases. However, in 1295, driven by his need for revenue, Edward summoned two knights from every county and two burgesses (towns-men) from every borough (town or city) to meet with the Great Council to consent to a new tax levy. Although Edward did not know it at the time, he had called the first Parliament, which came to be comprised of two representatives from each borough and county plus the great barons and ecclesiastics in the realm. Over time these groups separated into the House of Commons (the burgesses and the knights) and the House of Lords (the barons and ecclesiastical lords). As time went on, the Parliaments of the English kings consented to taxes, discussed politics, passed laws, and handled important legal business, including removing several unpopular kings, with the first parliamentary participation in a royal deposition taking place in 1399.

In France, royal consolidation faced similar challenges as in England: how to overcome the power of the lords without losing their support. In 987 the nobles of France chose Hugh Capet as king (r. 987–996), establishing a royal dynasty, known as the Capetians, that produced an unbroken line of kings down to 1328. The early Capetians were kings in name, but in fact they did not wield power beyond the royal *demesne*, a small territory around Paris known as the Île-de-France that he inherited and ruled directly as a feudal lord, because the great lords of France, such as the dukes of Normandy, Brittany, and Aquitaine, were more powerful than the king himself. They technically owed allegiance to the king as their overlord, but in practice the king had no way to enforce his authority in the lands of these men because the machinery of royal government was weak, and he had no way to administer justice or collect taxes beyond his *demesne*.

This situation began to change significantly in the reign of King Philip II Augustus (r. 1180–1223), who successfully waged war with the English kings who also held the French territories of Normandy, Maine, Anjou, and Aquitaine by right

➤ KING EDWARD I SUMMONS A PARLIAMENT

In 1295, Edward I of England, facing crises on several foreign fronts, realized that he would need to raise a massive amount of financial support from his English subjects. To that end, he decided to convene a larger-than-usual Parliament at Westminster, by including in this assembly two representatives each from every town, city, county, and borough. The following document, to the sheriff of Northamptonshire, stipulates precisely what is expected of these knights and burgesses—the commoners—and suggests why the king decided that such representatives would best serve his ends.

“The said knights are to have full and sufficient power . . . for the community of the aforesaid county, and the said citizens and burgesses for . . . the communities of the aforesaid cities and boroughs . . . for doing what shall then be ordained according to the common council . . . so that the aforesaid business shall not remain unfinished in any way. . . .”

—Alfred J. Andrea

Source

E. P. Cheney, trans., *University of Pennsylvania Translations and Reprints* (Philadelphia: University of Pennsylvania, 1897), 35.

of feudal inheritance. By taking most of these lands in France away from King John of England, Philip II gained considerable territory for the French monarchy, and he asserted his royal authority in the newly acquired territories by sending in royal administrators to collect taxes and render royal justice. Throughout the thirteenth century, French kings continued to bring additional territory under royal influence by military conquest, diplomacy, or strategic marriages.

French royal power was reinforced considerably in the reign of Philip IV (r. 1285–1314). He strengthened the royal bureaucracy and brought a representative body together in 1302 that consisted of representatives from the three estates, or classes: the clergy (the first estate), the nobles (the second estate), and townspeople (the third estate). This body, known as the Estates-General, had little formal power and was called to give

sanction to Philip's domestic and foreign policies. Almost five centuries later, however, the Estates-General would spark the French Revolution of 1789.

Other European polities also summoned assemblies to affirm monarchical agendas. For instance, in the Germanic and Italian lands east and south of France, which came to be called the Holy Roman Empire, the king and emperor Frederick II (r. 1212–1250) called the Council of Melfi in 1231 to exact recognition of his sovereignty over his nobles in Sicily and southern Italy and to enact a new code of legislation. Yet the Holy Roman Empire illustrates that the rise of the national monarchies in Europe was neither inevitable nor unvarying. Through the course of the eleventh century, the German kings had begun to develop a strong monarchy, but two German kings from the Hohenstaufen dynasty, Frederick I (r. 1152–1190) and his grandson Frederick II, tried to enforce their overlordship in Italy with disastrous results. Frederick I saw the wealthy northern Italian city-states as a valuable source of revenue, but when he tried to assert German dominance in Italy, he was defeated in 1176 by a coalition of northern Italian cities in Lombardy that had developed a strong tradition of independence, with support from the papacy. As a result, Frederick recognized the rights of the northern Italian cities to freely elect their own town magistrates, a type of government called a commune, although the Italian communes still acknowledged that they were imperial agents and paid a large annual sum for the exercise of imperial justice.

Frederick II had inherited the kingdom of Sicily and had ambitions to create a strong central state in northern and southern Italy. However, he ran into stubborn resistance from the papacy, which feared that a strong single state uniting northern and southern Italy would weaken papal power in its central Italian territories, called the Papal States, and from the northern Italian cities, which did not want to surrender their independence. In 1231, the same year he issued the *Constitutions of Melfi*, Frederick promulgated the *Constitutions in Favor of the Princes* in which he conceded to each of the important German barons sovereignty in their own territories, effectively declaring that Freder-

ick's energies would be directed toward creating a strong central monarchy in Italy and that its princes would rule Germany. Although Frederick won many battles to secure his Italian state, he was ultimately defeated in northern Italy. The German emperors' struggles in Italy had very important consequences. By devoting attention to their failed Italian ambitions, the German emperors largely had ignored their lands in Germany, and many German lords developed independent principalities, thereby leaving the German monarchy weak and unable to centralize its power. Throughout the later Middle Ages, therefore, neither Germany nor Italy developed strong national monarchies, and they were not unified until the second half of the nineteenth century.

—Jan K. Bulman

Bibliography

- Abulafia, David. *Frederick II: A Medieval Emperor*. London: Penguin, 1988.
- Clanchy, M. T. *England and Its Rulers, 1066–1272*. Oxford, UK, and Malden, MA: Blackwell, 1998.
- Dunabin, Jean. *France in the Making, 843–1180*. 2nd ed. Oxford and New York: Oxford University Press, 2000.
- Everard, Judith, and Elizabeth M. Hallam. *Capetian France, 987–1328*. 2nd ed. Harlow, UK, and New York: Longman, 2001.
- Hudson, John. *The Formation of the English Common Law: Law and Society in England from the Norman Conquest to Magna Carta*. London and New York: Longman, 1996.
- Munz, Peter. *Frederick Barbarossa: A Study in Medieval Politics*. London: Eyre and Spottiswoode, 1969.
- Sayles, G. O. *The Medieval Foundations of England*. London: Methuen, 1988.
- Waley, Daniel P. *The Papal State in the Thirteenth Century*. London: Macmillan; New York: St. Martin's, 1961.

What a Difference Two Generations Make—Louis IX and Philip IV of France

During the reigns of the French kings Louis IX (r. 1226–1270) and his grandson Philip IV (r. 1285–1314), the consolidation of monarchical power proceeded apace. Both were capable kings who commanded the respect of their contem-

poraries, whether ally or enemy. Only 15 years separated their reigns; nonetheless, their challenges and responses were strikingly dissimilar.

By most surviving medieval accounts, Louis IX (canonized as St. Louis in 1297) was a king who exhibited bravery, honor, piety, and generosity. Known for his even-handed justice, Louis extended royal justice but also demanded fairness and balance from royal agents. To this end, he sent out traveling agents of the Crown known as *enquêteurs* who were instructed to investigate abuses committed either in the name of the king or by local officials. He also encouraged vassals of lords, even if they were outside of the royal demesne, to appeal to the royal courts if they felt that their lords had not treated them justly. As a result there was an influx of judicial business before the royal courts, and to cope with the increased load Louis established a regular permanent court (as opposed to the itinerant traveling court of his predecessors) manned by a professional staff of jurists. During Louis's reign, this court of final appeal became known as the Parlement (not to be confused with the English representative assembly known as Parliament), and it expanded the machinery and authority of royal government. Furthermore, Louis, himself a distinguished crusader, detested warfare between Christians and forbade his barons from engaging in private warfare. Louis was a pious and unwavering ally of the Church and defender of the clergy, but on several occasions he refused to bring civil sanctions against persons whom he was not convinced had been legitimately excommunicated by the Church. In short, Louis was preoccupied with doing justice and establishing a just society.

Philip IV le Bel (literally "the Handsome" but translated into English as the ambiguous "the Fair") also worked to extend royal power. Philip continued to enforce the prohibition of private warfare and to encroach on noble jurisdiction. Due to the rise in judicial business, the Parlement was enlarged into three sections, the *chambre des plaids*, which heard cases; the *chambre des requêtes*, which decided if complaints should be heard; and the *chambre des enquêtes*, which was a permanent body to conduct investigations. As royal authority grew, Philip needed to improve accounting of royal revenues, which had not

➤ LAWYERS GONE WILD—THE CHARGES AGAINST POPE BONIFACE VIII

In his struggle with Boniface VIII, Philip IV unleashed his lawyers. At a meeting of the royal council in 1303, these royal advocates presented a list of accusations regarding the pope's supposed heresies, sins, and crimes. As is often the case when the Big Lie is employed in political rhetoric, the charges were meant to rally public support rather than to serve as a sober bill of indictment. The following are only a few of the more lurid charges.

"He does not believe in the eternal life to come. . . . He is reported to say that fornication is no more a sin than is rubbing one's hands together. . . . He has a private demon whom he consults on all matters. . . . He is guilty of sodomy. . . . He has had many clerics murdered in his presence, taking joy in their deaths. . . . He seeks not the salvation of souls but their damnation."

—Alfred J. Andrea

Source

P. Dupuy, ed., *Histoire du différend d'entre le pape Boniface VIII et Philippe le Bel* (Paris, 1655), 102–106, *passim*. Translated by Alfred J. Andrea.

changed much since the days of Philip II Augustus (r. 1180–1223). Philip IV le Bel created a permanent financial body known as the *chambre des comptes*, staffed with professional bureaucrats, and moved the royal treasury into the Louvre, the royal fortress in Paris. Therefore, under Philip, much more than under Louis, royal government became institutionalized and staffed by permanent personnel; the operation of government became routinized and was no longer dependent on the talents of an individual but instead depended on a cadre of trained professional bureaucrats, many of them educated as lawyers.

On the other side of the coin, Philip did not share his grandfather's comfortable relationship with the Church. The order of the Knights of the Temple, a crusading order, was attacked and dissolved after Philip accused it of a string of sordid crimes. Moreover, with sanction from the Estates-General, Philip asserted and defended the

supremacy of royal over ecclesiastical rights in France and even had royal agents travel to Rome to impose, by force if necessary, Pope Boniface VIII's (r. 1294–1303) acquiescence. Philip's men handled Boniface roughly, and some medieval commentators blamed Philip for Boniface's death soon after. Therefore, in Philip's reign much more so than in Louis's, one can glimpse the germ of the rise of the absolute monarchy and the indomitable government bureaucracy run by persons loyal only to the Crown that would characterize the postmedieval period.

—Jan K. Bulman

Bibliography

- Denton, Jeffrey H. *Philip the Fair and the Ecclesiastical Assemblies of 1294–1295*. Philadelphia: American Philosophical Society, 1991.
- Jordan, William C. *Louis IX and the Challenge of the Crusade: A Study in Rulership*. Princeton, NJ: Princeton University Press, 1979.
- La Barge, Margaret Wade. *Saint Louis: Louis IX, Most Christian King of France*. Boston: Little, Brown, 1968.
- Le Goff, Jacques. *Saint Louis*. Translated by Gareth Evan Gollrad. Notre Dame, IN: University of Notre Dame Press, 2009.
- Strayer, Joseph Reese. *The Reign of Philip the Fair*. Princeton, NJ: Princeton University Press, 1980.

Western Europe—City-States and Regional Principalities

The fragmentation of Europe throughout the Middle Ages due to the devolution of power at the expense of centralized monarchies, the conflict between the Church and various monarchies, and the autonomous character of city-states created by commerce was responsible for the multiple political entities that existed from 1000 to about 1500. Principalities, bishoprics, imperial cities, and city-states, among others, were examples of the sort of smaller political structures that spanned Europe, especially within the German-Italian regions that later constituted the Western empire, known as the Holy Roman Empire from the mid-twelfth century onward. First divorced from central monarchies and then largely subsumed by modern nation-states in a later period, these small territorial entities represented a period in European history illustrative of auto-

nous polities ruled by princes, dukes, margraves, mercantile oligarchies, and high clergy.

The Western empire's very existence as a meaningful political entity was contingent on the ability of its leaders to maintain military superiority over enemies and vassals alike. However, the collapse of the Carolingian empire and the severe weakening of the Holy Roman Empire after 1250 were a result of the inability of both to maintain control over the political destinies of their lands and peoples and the lords who owed the emperors presumed fealty. The basis of feudalism relied on the loyalty that a vassal held toward his lord in his provision of military service when necessary. The process of gradual evolution from holding a fief in precarious tenure and solely at the lord's pleasure to holding a fief by right of inheritance created many a schism between a lord and his vassals within the Western empire from the lowest to the highest levels of authority. By the late eleventh century, many vassals were reluctant to follow the policies of their lords when they did not benefit their interests. As a result, Western emperors frequently quarreled with their vassals as they attempted to assert control over them. Moreover, many regional princes and bishops acquired substantial territories and wealth rivaling that of their lord monarch. At times this allowed lords and even so-called imperial cities to extract concessions from their monarch in the form of exacting greater autonomy (such as Emperor Frederick II's *Constitution in Favor of the Princes* of 1230), more agency in monarchical policy, or even making the office of emperor an elective position contingent on the wishes of prince-electors, who were the more powerful dukes, archbishops, and lords.

In contrast with events in central Europe, the emergence of national monarchies in England, France, the Scandinavian states, and the Iberian states, such as León-Castile, was based on the centralization of royal power. This process was largely due to royal-ecclesiastical cooperation and royal control over many aspects of national or territorial churches. It was the empire that ultimately suffered from conflict with the Roman Church and was ultimately emasculated by the late thirteenth century. The Church's struggle with the Holy Roman Empire further eroded im-

perial political control and augmented that of the smaller political structures within the empire. Already splintered by localism, ethnic divisions, and the nature of feudalism, this conflict propelled further the devolution of imperial power since these smaller principalities, city-states, and bishoprics threw in their lot with whatever larger political entity would prove beneficial to their own growing autonomy. After more than a century of disputes and even wars between the Roman Church and the Western empire over such issues as investiture, control of the Italian cities, and ecclesiastical jurisdiction as well a series of struggles between the Welf and Hohenstaufen families for control of the imperial Crown, the thirteenth century witnessed a significant increase in the autonomy of German and Italian principalities and city-states. The already semi-autonomous commercial cities within the Western empire augmented their control over their destinies due to these conflicts, and clerical and lay lords alike switched their loyalties to whichever side or imperial claimant promised them more land and more influence.

In the twelfth century, for example, the conflict between the Hohenstaufen emperor Frederick I Barbarossa (r. 1152–1190) and various popes, especially Alexander III (r. 1159–1181), weakened the power of the emperor, as some of his subordinates, especially the commercial cities of Lombardy, sided with the papacy to further chip away at the political strength of their sovereign. In response to Barbarossa's excursions into Italy, various Italian cities converged into an alliance known as the Lombard League in defense of the cities of Lombardy. By 1183, the Lombard League had won its *de facto* independence from imperial control, although the cities' officials acknowledged that they ruled as imperial agents, and the cities agreed to pay large annual subsidies to the Crown for the privilege of exercising imperial jurisdiction over their own affairs. In essence, imperial influence over northern Italian affairs had been seriously eroded but not totally destroyed. That would only come after 1250 and the death of Barbarossa's grandson, Frederick II (r. 1215–1250).

The commercial cities of the Hanseatic League in Germany also emerged as powerful political centers splintered from the Western empire. The

formation of these cities along vital waterways and trade routes allowed the mercantile classes to acquire substantial fortunes and ensured political control of the destinies of their cities. Indeed, the growing political class that emerged from the mercantile class was crucial in developing the autonomy and economic power of the Hanseatic, Italian, and Low Countries' city-states. Venice was tightly controlled by the leading merchant families, which ensured its development of a formidable naval capacity to protect its commercial links and trade. Genoa, Pisa, and Florence had similar merchant-controlled political structures. The Hanseatic League also ensured tight political control over its allied cities' destinies in order to protect their wealth and commerce from the grip of princes and emperors, who were always eager to tax them to augment their political power. The nascent cloth trades in the Low Countries also encouraged the local merchant class to develop strong city-state polities, such as the city of Ghent. The threat of French royal incursion encouraged Ghent to seek alliances against its more powerful neighbor to ensure its autonomy, often turning to England in this regard. The growing loyalty of local populations to their city-state rather than to any sovereign allowed them to fight against



Holy Roman Emperor Frederick I Barbarossa receives the Venetian ambassadors, from the Codex Correr, fourteenth century. Frederick I spent decades in the twelfth century battling the authority of the papacy in northern Italy, a battle concluding in the Peace of Venice in 1177. (Art Resource, NY)

➤ BLESSED LADY SPAIN

Around the year 1240, the canon lawyer Vincentius Hispanus (Vincent the Spaniard, d. 1248), in one of his most famous legal opinions, offered a ringing declaration of Spanish sovereign rights within greater Christendom. By “Spain” he meant the entire Christian Iberian Peninsula, which at that time was divided into four independent kingdoms: Castile-León, Navarre, Aragon, and Portugal. To their south lay the emirate of Granada, the last remnant of Muslim authority in Iberia.

“[According to Johannes Teutonicus (John the German, d. 1253)] no kingdom can be excluded from the empire, for it would be headless and without a head it would be a monster. . . .

Make an exception, O Johannes Teutonicus, for the Spaniards who are exempted by the law itself and who barred the way to Charlemagne and his peers. I, Vincentius, say that the Germans have lost the empire by their folly. Every city contends with them for independence and every hut usurps lordship for itself. Only the Spaniards have ac-

quired an empire by their valor, and they too have chosen bishops. . . . [Is it not known] in France and England, in Germany and Constantinople that the Spaniards rule blessed lady Spain, that they brought this lordship into existence and, as lords, are expanding it by their virtues of boldness and probity? The Spaniards then are supported by their merits and worth; and like the Germans they do not lack a body of prescripts and customs. Who can number your praises, O Spain?—rich in horses, famous for food, shining with gold, slow to retreat, prudent, the envy of all, versed in the laws and standing high on sublime columns.”

—Abraham O. Mendoza

Source

Vincentius Hispanus, gloss on *Decretales*, 1.6.34 (ca. 1240), ed. G. Post, *Speculum* 29 (1954): 206, translated in Brian Tierney, *The Crisis of Church and State, 1050–1300, with Selected Documents* (Englewood Cliffs, NJ: Prentice Hall, 1964), 162.

encroachments on their respective city-states’ autonomy, as the Flemings demonstrated on July 11, 1302, when the combined urban militias of Bruges, Ghent, and other Flemish towns destroyed a powerful invading French army, composed largely of feudal contingents, at the Battle of the Golden Spurs.

The complications created by feudalism begat further problems when sovereigns who were vassals to other sovereigns sought to demand greater autonomy or even competed for the Crown of their lord. Since the Norman conquest of England in 1066, the issue over English territories in France exacerbated many of the problems that existed between these two kingdoms. As French vassals, English kings had to pay homage to their French overlord for territories in Normandy, Aquitaine, and Gascony. As powerful kings in their own right, English kings often came into conflict with their French lords. King John (r. 1199–1216) lost most of England’s possessions in France but retained Gascony in the south, which would prove to be a bone of contention in future English-French issues. The Hun-

dred Years’ War (1337–1453) ignited when King Edward III of England (r. 1312–1377) claimed the French Crown, which led to a century of warfare that assisted in the beginning of the long-term process of royal centralization in both kingdoms. The English Crown proved successful in centralizing its political hold within England and much of the rest of Britain, ultimately achieving this with the end of the Wars of the Roses in 1485. Developments in France furthered the centralization of power of the monarchy and the expansion of the royal domains surrounding Paris. However, these twin processes were rather complicated by the fact that major vassals continued to vie for power at the expense of the monarchy and were successful at pitting their forces against the ever-encroaching power of either the French or English Crown.

—Abraham O. Mendoza

Bibliography

Chittolini, Giorgio. “Cities, ‘City-States,’ and Regional States in North Central Italy.” *Theory and Society* 5(18) (1989): 689–706.

Jordan, William Chester. *Europe in the High Middle Ages*. New York: Penguin, 2004.

Lane, Fredric Chaplin. *Venice: A Maritime Republic*. Baltimore: Johns Hopkins University Press, 1973.

Tilly, Charles. "Cities and States in Europe, 1000–1800." *Theory and Society* 5(18) (1989): 563–584.

Scandinavia—A Special European Experience?

Around the year 1000, Scandinavian kings traveled from estate to estate in order to assert their power, and it was only from the thirteenth century onward that they settled in permanent capitals. The core of their military organization as well as civil administration was the *hird*, a body of personal retainers often called *housecarls* (house men). In times of war they could also call on the *leidang*, a conscripted naval force, and frequently also a *landvern*, a peasant militia. In Sweden and Denmark cavalry became the major component of their military forces at the end of the thirteenth century.

Viking kings had to be accepted by regional parliaments. During the eleventh century the Council of Noblemen in each kingdom emerged as the most important body for sanctioning the enthronement of kings. Later, and very much as in contemporary England, kings also had to present a written charter to the Council in which they stated the parameters of their rule. Generally, the Scandinavian monarchies did not become fully hereditary until the mid-sixteenth century.

The Roman Church was another major force in both politics and everyday life in pre-Reformation Scandinavia, and monarchy and church enjoyed a symbiotic relationship. Early Scandinavian Christianity was first put under the patronage of the archbishop of Bremen in northern Germany. The archbishopric of Lund in southern Sweden, founded in 1060 by the Danish king who then controlled Sweden, became the religious center of northern Scandinavia from 1103. Local saints were also important. The grave of King Olaf Haroldson (d. 1030) became a major pilgrimage site, and a cathedral was raised over his grave at Trondheim. His cult became the basis for the archbishopric of Nidaros, founded in 1152. Sweden got its own archbishopric in

Uppsala in 1164, and St. Brigitte (1303–1373) became the national patron saint and the basis for a powerful religious order.

At the end of the Viking era, central power was considerably weaker in Sweden than in Norway and Denmark, and the country was only unified around 1000. Christianity was introduced under King Olaf Skiötkonung (r. ca. 995–1022), but he had little power to counter non-Christian opposition, which was especially strong among the Svear, a tribe of central Sweden that gave its name to the land, while the Goths to the south accepted the new faith more readily. Various clans as well as foreign interests played their part in the succession process, and from 1130 to 1250 the families of Sverker and Erik were the major contestants. Under Earl Birger, acting as Lord Protector (1248–1266), unity was restored, and Sweden expanded to the north and into Finland. Birger also became ancestor to the royal house of Folkunge, which reigned until the Union of Calmar of 1397 (dissolved in 1523) that united Sweden, Norway, and Denmark under a single king while retaining their individual identities.

Christianity had been introduced to Finland already in the eleventh century, partly from Scandinavia but also from Orthodox Christian Novgorod to the east. During the twelfth century three waves of Swedish crusades consolidated its position but also placed Finland under the Swedish Crown, and many ethnic Swedes settled in the southwestern region of the country. The first Finnish bishopric was founded at Åbo in 1209. The Russians made several incursions but were forced back by the Swedes, who expanded farther into Karelia to the south and east. Here, Viborg was founded in 1293. The Peace of Nöteborg consolidated Swedish control in 1323.

In 1050 Norway stretched south to modern Gothenburg and also included Jämtland and Herjedalen (Swedish from 1658), the Faeroe Islands, Shetland, and the Orkneys. The Hebrides and Man were also part of the Norwegian empire between 1100 and 1266, as was Greenland from 1261 and Iceland from 1262. Norway entered a time of civil war and unrest from 1130 to 1227. State building picked up again in the latter half of the thirteenth century. A universal civil code was introduced in 1274, and reforms in 1308

► THE HANSA IN SCANDINAVIA

The state has not always been the sole sovereign political entity in the Western world. Before 1200, weak central power allowed the church and feudal lords autonomy from kings and emperors. This also enabled merchant guilds to dominate the politics of many medieval towns. Beyond that, a confederation of self-governing guilds known as the German Hansa or Hanseatic League, which controlled various maritime towns in northern German and neighboring regions, became a major power in the Baltic-North Sea area between 1200 and 1600. *Hansa* meant “association” in medieval German, and the word came to mean “a syndicate of commercial guilds or towns.” The Teutonic-speaking regions of northern medieval Europe witnessed a number of *hansas* from the eleventh century onward, but the Hanseatic League dominated northern maritime commerce and played a major political and military role in Scandinavia.

In the latter half of the thirteenth century the Hansa gained control over the profitable dry fish trade in Norway and soon established the so-called German Office in Bergen. Its financial power led the Norwegian king to grant the Hansa extensive privileges in 1343. Violence and abuse by the Germans, whose power threatened the Crown, led to discontent among the Norwegians. In 1367 war broke out between Denmark-Norway and the Hansa, but the latter managed to defend its position.

In the thirteenth century the Hansa also established itself in Stockholm, Sweden, from which copper, iron, butter, and hides were exported. The Hansa gained an export monopoly and exemption from customs tariffs when it funded Gustav Vasa’s liberation of Stockholm from the Danes in 1523. Its interference in Scandinavian politics, however, ended when Denmark-Norway and Sweden united in crushing the Hansa in 1534–1536. Ultimately, the Hansa could not compete with the growing organizational skill and resources of these emerging nation-states; its power vanished as modern states emerged. The Hansa was essentially dissolved during the Thirty Years’ War (1618–1648), with its last official assembly held in 1669.

—Frode Lindgjerdet

strengthened the king’s control. The relationship between church and the Crown also received a codified form in 1277 with the Accords of Tunsberg, which granted the former extensive autonomy.

In addition to its present-day territory, medieval Denmark also included the southern tip of present-day Sweden and the Duchy of Holstein to the south. Various parts of the southern rim of the Baltic and the Island of Gotland were also periodically under Danish rule. Denmark too experienced a civil war around the mid-twelfth century that also coincided with an agrarian crisis. In 1154–1157 Valdemar the Great succeeded in eliminating his rivals to the throne and consolidated Denmark’s southeastern borders against pagan Slavic tribes. His son Valdemar II continued the expansion, and in 1219 Estonia fell under Danish control, which lasted to 1346.

During the fourteenth century, dynastic policies of the royal families eventually led to Scandinavian unification. The young Olaf Haakonson, heir to the Norwegian throne, became king of Denmark in 1375 and king of Norway in 1380. Real power lay, however, with his ambitious mother, Queen Margareta I of Denmark. When Olaf died in 1387, Margareta was declared “Denmark’s mistress and master” by the nobility. She continued the process of Scandinavian unification, and in 1388 the Swedish aristocracy hailed her as regent as well. Margareta’s gender precluded her from formally becoming the reigning monarch, and in 1395 her nephew Eric of Pomerania was crowned king of Norway and the following year also of Sweden and Denmark. In 1397 the Treaty of Calmar formalized the union among Norway, Denmark, and Sweden.

A series of wars with the powerful Hansa soon led to uprisings against the union by the Swedish aristocracy from 1434. In 1523 the victorious Gustav Vasa entered Stockholm and was crowned king of Sweden. Frequent wars over hegemony in Scandinavia would continue to mark the relationship between the two kingdoms until the end of the Napoleonic Wars. The crisis following the Black Death decimated the Norwegian nobility as their already meager income fell. In 1397 the seal of the realm was transported to Copenhagen, and Norway became a Danish dependency, formalized by the Charter

of King Fredric III in 1536. The representatives of the Norwegian church were an independent force for some time, but that was also eliminated with the Reformation and the triumph of Lutheranism as the official state religion in 1537.

In 1362 Finland became an integral part of Sweden, with Finns receiving the same judicial and political rights as Swedes. Finland also followed Sweden into the Union of Calmar and, like Sweden, later embraced Lutheranism in 1527. Scandinavia saw a general strengthening of central political power, of which the dynastic unifying of the region could be seen as an integral part.

—Frode Lindgjerdet

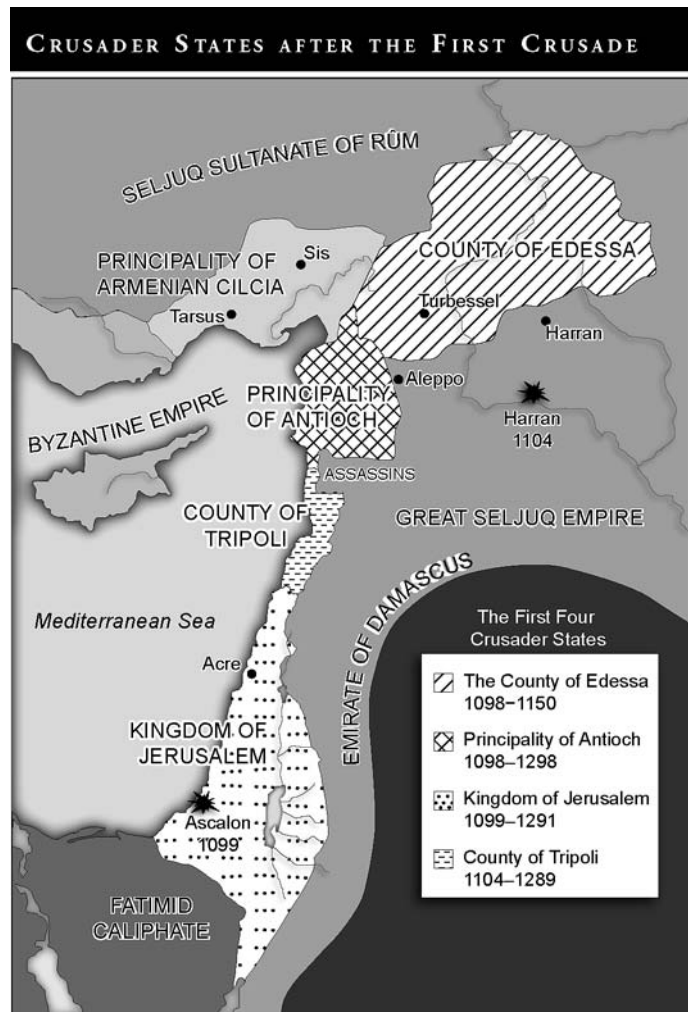
Bibliography

- Helle, Knut, ed. *The Cambridge History of Scandinavia*, Vol. 1, *Prehistory to 1520*. Cambridge: Cambridge University Press, 2003.
- Pulsiano, Phillip, Kristen Wolf, Paul Acker, and Donald K. Fry, eds. *Medieval Scandinavia: An Encyclopedia*. New York: Garland, 1993.
- Sawyer, Birgit, and Peter Birgit. *Medieval Scandinavia: From Conversion to Reformation, Circa 800–1500*. Minneapolis: University of Minnesota Press, 1993.

The Crusader States—Europe's Levantine Colonies

Between 1098 and 1109 the armies of the First Crusade (1096–1102) carved out four states in a region that Latin, or Western, Europeans came to know as *Outremer* (across the sea). The lands of Outremer today lie in southeastern Turkey, Syria, Jordan, Lebanon, Israel, and areas subject to the Palestinian Authority. All four crusader states—the county of Edessa (1098–1150), the principality of Antioch (1098–1268), the kingdom of Jerusalem (1099–1291), and the county of Tripoli (1109–1289)—served as cultural and commercial links between Western Europe and the lands and peoples of the Levant, or the Eastern Mediterranean, and beyond. They were also vexing reminders of the invasion and occupation of lands sacred to Islam and therefore the cause for periodic calls for jihad, or holy struggle, against the Western colonists, or *Franj* (Franks) as they were known.

By 1291 the last vestiges of the four original crusader states had been swept away. However,



other, newer crusader states in the eastern Mediterranean persisted into early modern times. Most notable were the kingdom of Cyprus (1191–1571), which Richard the Lionheart captured from a Byzantine overlord while on the Third Crusade (1188–1192); the principality of Achaia (1205–1432), also known as the Morea, which was located in southern Greece and was conquered in the wake of the Fourth Crusade (1202–1204); and Rhodes, the island headquarters of the Knights Hospitaller from 1309 to 1522. All three states were conquered by the Ottoman Turks between 1460 and 1571.

The colonists who settled these states brought with them ways of life and government that differed substantially from the traditions of the Levant, and probably very few were initially sympathetic toward the alien cultures they encountered. Circumstances, however, required



them to fashion a Franco-Levantine culture that adopted many Eastern Mediterranean features. Edessa had been an Armenian Christian state prior to its takeover by Baldwin of Boulogne in 1098. Because Baldwin and his successors presented themselves as the legitimate heirs of the former Armenian prince of Edessa, the county's Frankish lords adopted many Armenian institutions. Moreover, because so few Latin colonists took up residence in the crusader state of Edessa during its half century of existence, those same lords depended greatly on Armenian subordinates. Antioch, also captured in 1098 but of longer duration as a crusader state, was Byzantine Greek in population, culture, and institutions, having only been under Islamic domination for 14 years before the crusaders' arrival. Despite the influx of Normans and other French, Antioch

never lost its Byzantine flavor under the crusaders. The kingdom of Jerusalem, formed after the crusaders captured Jerusalem on July 15, 1099, had a mixed indigenous population of Muslims and Eastern Christians, and these natives played a major role in the kingdom's civil administration, especially as secretaries and scribes, because deeds and other legal documents were often written in Arabic. Tripoli, centered along the northern coast of modern Lebanon, was likewise richly diverse in population and traditions, which were reflected in the customs and institutions of the county.

As early as 1127, Fulcher of Chartres, former chaplain to King Baldwin I of Jerusalem, remarked on the new culture of the Frankish East:

Consider . . . how in our time God has transferred the West to the East. For we who were Occidentals have now been made Orientals. . . . We have already forgotten our birthplaces. . . . Someone who was a citizen of Rheims or Chartres now has been made a citizen of Tyre or Antioch. . . . Some have taken wives not merely from among their own people but from among Syrians, Armenians, or even Saracens who have received the grace of baptism. . . . Here also are grandchildren and great-grandchildren . . . [who] use the speech and ways of discourse of different languages.

These children, grandchildren, and great-grandchildren of crusaders, namely native-born Frankish inhabitants of the four crusader states of Syria-Palestine, were generally known as *Pou-lains*, an Old French slang word that originally meant "stylish young people with an attitude." Poulains were often of mixed heritage, having a parent or at least one grandparent who was an Eastern Christian or a converted Muslim. Although their education, religion, and general culture largely reflected that of Western Europe, they were not wholly European in tastes, attitudes, and speech. Their dress, diet, and day-to-day activities were often indistinguishable from that of their non-Latin neighbors, servants, and relatives, and the vast majority fluently spoke at least two languages, a West European tongue and a Levantine one. In addition to the suspicious

➤ IBN JUBAYR VISITS CRUSADER ACRE

In 1184 Abu al-Husayn Muhammad ibn Ahmad ibn Jubayr, a pilgrim from Valencia in Muslim Spain, spent 32 days in the crusader kingdom of Jerusalem as he traveled home from Mecca. Throughout his pilgrimage he kept an almost-daily journal of his experiences, and he had occasion to write extensively on Acre, the chief port of the kingdom, which he visited twice and from which he sailed to Sicily on his homeward journey.

"We were in Damascus—may God protect it—on the point of departure to Acre—may God restore it to us—to seek passage by sea with some Christian merchants. . . . We left Damascus . . . in a large caravan of merchants travelling with their merchandise to Acre. One of the strangest things in the world is that Muslim caravans go forth to Frankish lands, while Frankish captives enter Muslim lands. . . . Acre is the capital of the Frankish cities in Syria, the unloading place of ships . . . and a port of call for all ships. In its greatness it resembles Constantinople. It is the focus of ships and caravans, and the meeting place of Muslim and Christian merchants from all regions. Its roads and streets are choked by the press of men, so it is hard to put foot to ground. Unbelief and unpiety there burn fiercely, and pigs and

crosses abound. It stinks and is filthy, being full of refuse and excrement. The Franks ravished it from Muslim hands, . . . and the eyes of Islam were swollen with weeping for it. . . . Mosques became churches and minarets bell-towers, but God kept undefiled one part of the principal mosque, which remained in the hands of the Muslims as a small mosque where strangers could congregate to offer the obligatory prayers. . . . To the east of the town is the spring . . . from which God brought forth the cattle for Adam [Quran, 20:115]. . . . Over it is a mosque of which there remains in its former state only the mihrab [a wall niche indicating the direction of prayer], to the east of which the Franks have built their own mihrab, and Muslim and infidel assemble there, the one turning to his place of worship, the other to his. In the hands of the Christians its venerableness is maintained, and God has preserved in it a place of prayer for Muslims."

—Alfred J. Andrea

Source

The Travels of Ibn Jubayr, trans. R. J. C. Broadhurst (London: Jonathan Cape, 1952), 313, 318–319.

practice of frequent bathing, which drew criticism from less culturally acclimated observers from the West, many Poulains were quite willing to tolerate the religious practices of their non-Latin and even non-Christian neighbors.

In addition to the native-born, there was also a constant influx of newcomers from the West, including crusaders who were there only for a short while in order to fulfill a crusade vow, merchants who took up residence for an indefinite period of time in one of the various port cities along the Levantine coast, and persons of every rank from nobles to peasants who, seeking a better life, intended to settle permanently in this region. Newcomers also included convicted criminals who chose passage to the crusader states over more serious punishments back home.

Whether they wanted to or not, all of these Franks, native-born and immigrant alike, were

forced to relate on a series of levels and in diverse ways with the Muslim and Eastern Christian majorities, whose combined numbers probably outnumbered the Franks by at least ten to one. Quite often this meant that they allowed their non-Frankish subjects a great deal of autonomy. Often the local Muslim *rais*, or patriarchal head of the council of elders, continued to oversee the running of the agricultural village where his family had ancient roots, and he collected taxes for the nonresident Frankish lord. Likewise, local *qadis* (Islamic judges) or councils of elders usually decided cases touching religion and custom that involved only Muslims.

Despite certain accommodations with indigenous Muslims and Eastern Christians and even with neighboring Muslim states, the crusader states were constantly on a war-footing. Frequent combat meant numerous wounds, which resulted in a significant development of reasonably

effective surgical and medical procedures. Such practical medicine stood in stark contrast to the study of theoretical texts that dominated medical education in Latin Europe's emerging universities.

Contrary to popular myth, the crusader states were not a conduit for the transfer to the West of Greco-Arabic philosophy and science. Despite a few exceptions, such as Archbishop William of Tyre, a native-born, twelfth-century historian who knew Arabic and was interested in the Islamic faith and its people, most of the colonial Latin clergy of the crusader states were not well educated and had little or no intellectual interchange with Eastern Christian, Muslim, and Jewish scholars. The schools associated with crusader churches were mediocre at best, and persons of promise who wanted a solid education went to universities in France and Italy. At age 16, William of Tyre left Jerusalem around 1146 to study the liberal arts, theology, and law in Orleans, Paris, and Bologna and returned in 1165.

Likewise, the crusader states were not the cause of Western Europe's economic revival, an economic upsurge that predated the First Crusade by decades and probably helped propel it. Once captured, however, the port cities of the crusader states, such as Acre and Tyre, were a major economic stimulus. They were magnets for Europe's maritime merchant powers, especially the Italian city-states of Genoa, Pisa, and Venice, which established self-governing quarters in them to serve their expanding commercial interests. From these port cities, commodities from farther east flowed into Western Europe in unprecedented quantities, thereby sharpening European tastes for Eastern goods.

One taste that Europeans discovered they had an almost insatiable appetite for was refined sugar, which they used as both a sweetener and

a medicine. Frankish colonists learned the process of refining sugarcane syrup from Arabs and set aside large tracts of land in the original crusader states for its production. Late in the thirteenth century, especially after 1291, the cultivation and manufacture of sugar moved to Cyprus, where it became the island's major industry during the fourteenth and fifteenth centuries. Processed on plantations by slave labor and transported west in Venetian ships, refined sugar fueled a demand that ultimately led in the sixteenth century to major environmental and demographic changes in the Americas as a consequence of the introduction of sugar production into Brazil and the Caribbean.

—Alfred J. Andrea

Bibliography

- Aziz, Philippe. *The Palestine of the Crusaders*. Translated by S. Van Vliet White and L. Van Vliet White. Geneva: Freni, 1979.
- Ben-Ami, Aharon. *Social Change in a Hostile Environment: The Crusaders' Kingdom of Jerusalem*. Princeton, NJ: Princeton University Press, 1969.
- Boas, Adrian J. *Jerusalem in the Time of the Crusades: Society, Landscape, and Art in the Holy City under Frankish Rule*. London: Routledge, 2001.
- Edbury, Peter W. *The Kingdom of Cyprus and the Crusades, 1191-1374*. New York: Cambridge University Press, 1991.
- Powell, James M., ed. *Muslims under Latin Rule*. Princeton, NJ: Princeton University Press, 1990.
- Prawer, Joshua. *The Latin Kingdom of Jerusalem: European Colonialism in the Middle Ages*. London: Weidenfeld and Nicolson, 1972.
- Prawer, Joshua. *The World of the Crusaders*. New York: Quadrangle, 1972.
- Richard, Jean. *The Latin Kingdom of Jerusalem*. 2 vols. New York: North-Holland, 1979.
- Smail, R. C. *The Crusaders in Syria and the Holy Land*. New York: Praeger, 1974.

■ Introduction: Pre-Columbian Complex Societies—The Case of Amazonia

When dealing with the Americas after 1000 CE but prior to the arrival of Columbus, textbooks in world history always mention the Aztecs and the Incas, but generally leave it at that, giving the unwary reader the false impression that these were the only complex societies in the Americas after 1000 and prior to 1492. This notion is tantamount to the claim that the Americas constituted a vast hemisphere largely devoid of large settlements of people. Further, it dismisses the Americas as peripheral to world history prior to 1492.

A major reason behind this oversight and the wrong-headed conclusions that follow from it is the relative lack of documentary evidence relating to most of the many cultures that inhabited these lands. Most historians are fixated on written sources and are not trained in the use and interpretation of the artifactual evidence uncovered by archaeologists or of oral traditions passed down for generations and that extend back into a misty past. Happily, today's new breed of historians, especially those who turn their hands to world history, are becoming more comfortable with such data. A prime reason for this shift is the fact that so many of the new world historians were initially trained as specialists in areas such as sub-Saharan Africa and Central Asia, where use of non-documentary evidence is mandatory. They are even steadily making an older generation of world historians, who began their careers as specialists in the histories of such literate cultures as East Asia and Europe before they turned to world history, aware of the necessity to go beyond documents in order to uncover a fuller and richer past.

The entries under this topic only hint at the rich diversity of the complex cultures, or civilizations, that existed in the Americas between 1000 and 1500. Among the complex societies not accounted for in these essays and sidebars are some that rarely, if ever, are noticed by world historians: the large, well-organized communities of Amazonia. The reason for this failure to

deal with the pre-Columbian cultures of Amazonia is that so little about them has entered historical literature, confined as the topic is to largely technical archaeological, geographical, and ecological reports. It is time to begin to correct that flaw in the historical record.

The popular view of Amazonia is of a mysterious tropical rain forest in which the human hand has had little or no impact until recently, when bulldozers have cleared large swaths of "the forest primeval" in order to feed the world's insatiable appetite for cheap beef. Further, there is the shared assumption that it is an environment where it has been possible for only the most primitive native cultures to have subsisted, and such subsistence was in such harmony with nature that these marginal societies left no identifiable imprint on the environment. Certainly the idea that large complex societies, which managed, manipulated, and altered the environment, could have existed and even flourished in this hostile environment prior to the modern era is counter intuitive. But intuition is not a valid basis for either scientific or historical conclusions.

First, the vast region known as Amazonia consists of much more than jungle and a mighty river. In fact, Amazonia, which is roughly the size of the forty-eight contiguous states in the USA and covers about forty percent of South America, contains the world's largest rain forest, but that rain forest constitutes only about fifty percent of a richly diverse environment. Second, archaeological research in widely scattered regions of Amazonia has revealed the undeniable traces of societies that, for centuries, significantly altered the lands on which they lived. Third, evidence also suggests strongly that such alterations of the landscape and its flora were only possible through large-scale, well-organized communal efforts. Finally, the evidence also leads to the conclusion that many of these populations were quite large, at least before a massive population decline that occurred after the coming of the Spaniards and Portuguese and that was probably largely due to imported diseases.

The archaeologist Clark Erikson and his colleague, the anthropologist William Baleé, who have spent more than a decade and a half studying the Beni, a Bolivian province of some 30,000 square miles (77,700 square kilometers) dotted with islands of rain forest amid grasslands, have demonstrated beyond any reasonable doubt that, from at least 1000 CE until the arrival of Europeans, large, complex societies blossomed and matured in the Beni. In the savanna regions of the Beni, Erikson and others have found irrefutable evidence of large raised agricultural fields, fish farms, and more than 6,000 miles (9,655 kilometers) of constructed causeways. In both rain forest and amid grasslands, Erikson and his colleagues have also discovered the remnants of large numbers of cultivated groves of cacao trees, from which chocolate is derived, that long predated the conquest of South America by Europeans. What is more, the native farmers did not practice the highly destructive, semi-sedentary slash-and-burn, or swidden, method of agriculture. Rather, they carefully built up the soil on permanent raised farms that they laboriously constructed and cultivated. Slash-and-burn methods were introduced by the Europeans.

On the massive island of Marajó, located at the mouth of the Amazon River in Brazil, the archaeologist Anna Roosevelt discovered evidence of a complex society that persisted and did quite well there for more than a thousand years. Marajó, which is about 15,500 square miles (40,000 square kilometers), making it the world's largest fresh-water island, appears to have nourished a total population of roughly 100,000 inhabitants spread about the island in large communities that housed themselves on clusters of artificial platforms raised high above wet bottom lands. Their farms, on which they cultivated manioc (or cassava) and over a hundred other crops, stretched far and wide.

Other archeologists reported in 2006 the discovery of what has been termed an "Amazon Stonehenge," near Brazil's border with French Guyana. There they found 127 granite blocks, some as high as 9 feet (3 meters) tall, spaced at regular intervals around a hill and creating a crown-like entity that is 100 feet (30 meters) in diameter. At the winter solstice, the shadow of one of the blocks disappears when the sun is di-

rectly behind it, leading to the logical inference that this was an astronomical observatory. Dating the supposed observatory is not easy, and estimates based on nearby ceramic fragments (for these people did make clay pots) place its construction at anywhere from 2,000 to 500 years ago.

The North American cultures described by archaeologists in the entries under this topic, namely the Hohokam, the pueblo and cliff dwellers of the present-day Four Corners, and the mound builders of the Mississippian drainage, demonstrate beyond all doubt that America north of the Rio Grande River had indigenous civilizations well before the advent of the Spaniards. Likewise, the archaeological evidence emerging from Amazonia shows us that this vast region was not a jungle inhabited only by isolated bands of hunter-gatherers before 1500. Rather, it contained large, complex societies whose remains are only now coming to light and being understood for what they are.

—*Alfred J. Andrea*

Post-Classical Mayan States of the Yucatán and Guatemala

Following the Classic Maya collapse in the eighth century, a major readjustment occurred in the Mayan region, which mostly involved the abandonment of major cities and the founding of new polities elsewhere. While the causes for the end of the great Mayan civilization of the southern lowlands were multiple, including internal warfare, population pressure, and economic instability, many of the cultural features that had developed for over 1,000 years carried through in the Post-classical period, along with important ideological innovations.

During a transitional period defined by archaeologists as "Terminal Classic," a number of cities, probably created by a concentration of prior scattered settlements but also fueled by immigration, began to rise in the southern part of the Yucatán Peninsula. This region, known as Puuc, gave rise to a distinctive architectural style characterized by heavy superimposed decorations culminating in exaggerated roofs. Decoration tends to be rather abstract, planar, and geometric. While little is known of Puuc politics

and social organization, cities were well connected with one another, especially through the *sacbeob* (raised causeways), indicating communities' interdependence rather than isolation or conflict. A dominating center in this period was probably Uxmal, where the Classic Mayan tradition of divine rulership continued, celebrated with the erection of stelae (vertical stone slabs). At the same time, elements typical of central Mexican iconography bespeak a new trend that would become fully evident in the following centuries.

Chichén Itzá, one of the largest and best-known Mayan archaeological sites, rose to prominence in the ninth century and remained a hegemonic force in the Yucatán for the following four centuries. The core of the site is constituted by a series of large monumental structures adjacent to a large *cenote*, a natural well of water. In this dry region of Mexico there are no rivers, and cenotes are the main source of water. For the same reason, cenotes also acquired great religious significance. Chichén Itzá's cenote received the sacrifice of human beings along with hundreds of objects that were tossed in to please the gods, especially the rain god Chaac. Objects retrieved from the cenote come from places as far away as Panama to the south and the present-day American Southwest to the north, attesting not only to an extended commercial network but also to the paramount importance of Chichén Itzá as a pilgrimage center. The architecture of the site is also striking, combining Yucatec Puuc style in the southern part, including a round observatory, with central Mexican style and iconography in the monuments found in the northern part of the site. Here the Great Ball Court is the largest in Mesoamerica, measuring 380 by 223 feet (116 by 68 meters). The so-called El Castillo is a quadrangular pyramid with stairways on the four sides that prominently displays the powerful Feathered Serpent, whose cult was widespread in Mesoamerica in the Late Classical and Post-classical periods. The political and social organization of Chichén Itzá is poorly understood due to the scarcity of documentary or epigraphic (writing on stone) sources. Scholars tend to believe nonetheless that the city was ruled by a confederation of lineages (elite families), much in the same way that many Yucatec cities were at the time of the Spanish conquest.

➤ THE LEAGUE OF MAYAPÁN

The large city of Mayapán was governed through an institution known as *multe pal*, meaning "joint rule" in Yucatec Maya. Such administration is believed to be a major change from the more typical organization of the Classic Southern Lowland Maya, where rulership was confined in the hands of a single king who claimed power on the basis of claimed religious power. In the *multe pal* system, on the other hand, lineages prevailed over the single-person rulership. The coalition of different lineages allowed for the creation of a confederacy of states throughout the Yucatán Peninsula that lasted until the time of the Spanish conquest. It is thanks to sources written in the Mayan and Spanish languages through the course of the late sixteenth century that information on the basic outlook of the Post-classical states is known. In the *Books of the Chilam Balam*, for example, it is stated that an alliance of different families presided over large territories, defined as provinces, in the northern and western Yucatán. They formed the so-called League of Mayapán, whose ruling family was considered "first among equals." In the arts, this sharp contrast with the charismatic nature of Classic Mayan kingship is evidenced in the lack of portraiture in most Yucatec public monuments, where instead patron gods and the cardinal directions are emphasized.

—Alessia Frassani

The same urban, architectural, religious, and possibly political outlook of Chichén Itzá is replicated at the site of Mayapán, which usurped Chichén Itzá's position of hegemony in the middle of the thirteenth century. While historical sources point to a violent takeover, archaeological excavations are still lacking. This city grew to be larger than its predecessor, with an estimated population of 12,000 inhabitants. People lived in a densely settled area, in part due to the long walls (roughly 5.6 miles, 9 kilometers) that surrounded the main settlement. This city retained hegemonic status well into the fifteenth century, only a few decades before the arrival of the Spaniards.

In the Guatemalan Highlands, sociopolitical changes similar to the ones that occurred in the

Yucatán took place. Central Mexican influences, with explicit reference to the “Toltecs,” abound in sixteenth-century Mayan texts, our primary source on Post-classical Guatemala. All of the most important lineages claimed ancestry in the mythical city of Tula (the Toltec place of origin), such as the Quiché Maya, whose history is narrated in the *Popol Vuh*. The Quiché established their capital at Kumarcaah, also known as Utatlán, which in Maya means “Tula.” The city is a fortified citadel on a hilltop. Its planning reflected the complex web of lineages that constituted the city and gave it its strength. Lineage temples and community houses were situated around a plaza, at whose center was the temple of the Feathered Serpent, known as Kucumatz in Quiché Maya.

—Alessia Frassani

Bibliography

- Carmack, Robert M. *The Quiché Mayas of Utatlán: The Evolution of a Highland Guatemala Kingdom*. Norman: University of Oklahoma Press, 1981.
- Masson, Marilyn. “The Dynamics of Maturing Statehood in Postclassic Maya Civilization.” In *Maya: Divine Kings of the Rain Forest*, edited by Nikolai Grube. Cologne: Könemann, 2001.
- Sachse, Frauke. “Martial Dynasties: The Postclassic in the Maya Highlands.” In *Maya: Divine Kings of the Rainforest*, edited by Nikolai Grube. Cologne: Könemann, 2001.
- Schele, Linda, and David Freidel. “Kingdom and Empire at Chichén Itzá.” In *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: Morrow, 1990.
- Sharer, Robert. *The Ancient Maya*. 6th ed. Stanford, CA: Stanford University Press, 2006.

The People of Chichén Itzá

Chichén Itzá, one of the largest and most important of the Maya ruins, is located on the low, broad plain that forms the northern part of Mexico’s Yucatán Peninsula.

Chichén Itzá has been the source of considerable controversy over the years, largely involving the ethnic identity of the “Itza” and the two rather distinct architectural and art styles that exist at the site. Even the chronology of the site has long been in dispute. Traditionally, Chichén Itzá’s history has been divided into two major

phases. In the earlier phase (ca. 800–1000 CE) the site was purely Maya, and its buildings were in a regional style called Puuk (Puuc). Then, around 1000 CE, the site was taken over by a group whom some identified as the Toltecs from Tula. The Toltec foreigners (according to this traditional view of Chichén Itzá’s history) gained control of the site through conquest, and they controlled much of the northern part of the Yucatán Peninsula until shortly after 1200 CE, when they collapsed as a dominant society.

There are several problems with this reconstruction, which is still common in popular literature. For example, the dedication date (carved in Maya hieroglyphs) of the Great Ballcourt at Chichén Itzá is 18 November 864—impossibly early for a building argued to be one of the site’s quintessentially “Toltec” buildings. Additionally, “Maya” architecture and art at Chichén Itzá are not as clearly separated from and consistently overlain by “Toltec” architecture and art as was once thought. The current view is that there is considerable overlap between the two styles, although how much overlap is still a source of dispute, as is the absolute chronology of the site. It has been argued by some that Chichén Itzá may represent a kind of “cosmopolitan style” of art and architecture, borrowing freely from several areas for inspiration. Further, the art and architecture of Chichén Itzá seem to reflect a different order of government at this northern Yucatán site. There are none of the grandiose portraits of individual kings that are the hallmark of the kingdoms to the south. Rather, the hieroglyphs of Chichén Itzá describe a multiplicity of contemporary individuals, and the site’s art shows parades of lords: it appears that the site may have been ruled by some sort of council rather than a single succession of kings.

Who were the Itza, the people who are said to have ruled Chichén Itzá? Later descriptions call the Itza foreigners and tricksters and portray them as “lewd” and unable to speak fluently. This depiction clearly indicates that they were foreigners—but whether they were Toltecs from Tula or some other group remains a subject of debate. Much evidence points to the southern Gulf of Mexico region where Mexicanized Maya groups lived and honed their skills as some of Mesoamerica’s greatest long-distance traders.

More recently, evidence has arisen to indicate that the Itza might have been refugees from the internecine warfare of the southern Maya lowlands in the late-classic period. The name *Itza*, in fact, shows up in classic-period texts from Motul de San José, a site not far from Tikal, so we know that some Itza lived and ruled there. Maya chronicles describe a long series of migrations from the Itza homeland until these people founded and settled in Chichén Itzá.

Dominating the site of Chichén Itzá are the buildings arranged on a huge platform that is 1,475 by 1,970 feet (450 by 600 meters) in area. Near the center of this platform is the so-called Castillo, or Castle, the tallest temple-pyramid at the site. On the western edge of the platform is the largest ballcourt in Mesoamerica. The Great Ballcourt is richly decorated with imagery symbolizing the Mesoamerican mythology of creation and the sacred charter of government, as well as murals that document the wars of conquest that gave the victors the right to rule.

Chichén Itzá is also famous for its Sacred Well, which was used as a place of ritual offerings by the Maya even after the site was abandoned. The well has been dredged several times, and thousands of archaeological pieces have been recovered. These include huge numbers of carved jade artifacts; wooden objects such as scepters, weapons, and idols; ceramics; balls of resin incense; human bones; and bells, disks, and figurines of gold. Chichén Itzá in general and the Sacred Well in particular were used as places of pilgrimage well into the Spanish colonial period, much to the consternation of the Spanish priests and administrators.

According to legend, the city fell through sorcery and trickery, but almost certainly its demise was due to fighting among rival lineages. Maya chronicles from the Spanish colonial period say that in 1221 CE, the ruler of Chichén Itzá was defeated by the ruler of the nearby, emergent city of Mayapan and that the Itza were driven from their capital. Today Chichén Itzá is one of the most frequently visited archaeological sites in Mexico. It is a dramatic location, with broad vistas punctuated by some of the most grandiose pyramids and decorated temples in the entire Maya area.

—Peter Mathews

➤ THE CENOTES OF CHICHÉN ITZÁ

The Yucatán Peninsula is composed of limestone (it is an ancient, shallow seafloor), and there is little surface water in the region: the rain soaks through the thin soil and forms caves below the surface. If the roofs of these caves collapse, sinkholes (*cenotes* in Spanish, from the Maya *tz'onot*) are formed. Chichén Itzá has several of these sinkholes within the confines of the site. The term *Chichén Itzá*, which means “the mouth of the well of Itza,” is derived from the name of the largest of these sinkholes—the so-called Sacred Well.

—Peter Mathews

Bibliography

- Castañeda, Quetzil E. *In the Museum of Maya Culture: Touring Chichén Itzá*. Minneapolis: University of Minnesota Press, 1996.
- Coggins, Clemency Chase, and Orrin C. Shane III, eds. *Cenote of Sacrifice: Maya Treasures from the Sacred Well at Chichén Itzá*. Austin: University of Texas Press, 1984.
- Jones, Lindsay. *Twin City Tales: A Hermeneutical Re-assessment of Tula and Chichén Itzá*. Niwot: University of Colorado Press, 1995.
- Mathews, Peter. “Chichén Itzá.” In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.

The Toltecs

Toltecs is the name given to a group of people who were considered by the Mexica (or Aztecs) and most of their contemporaries to have represented the golden age in Mesoamerican history. Toltec means “people of the place of reeds,” and Tollan (Tula), the name of their capital city, which means “the place of reeds,” figures in the origin myths of many Mesoamerican peoples from the Maya to the Mexica. Descriptions of Tollan as a mountain surrounded by reedy swampland may well have been an evocation of the environment of Mesoamerica’s first civilization, the Olmecs, and their human-made mountains in the swampy lowlands on the southern borders of the Gulf of Mexico.

Because of the widespread origin myths involving Tollan, there are actually many places in

THE TOLTEC LEGACY

Despite the devastation of the city, the Toltecs left an important legacy. Tollan was the metaphor in Mesoamerica for civilized life, and the Toltecs were eulogized as master artisans and artists. Later peoples went to great lengths to claim Toltec heritage. For example, the ruling families of the cities in the basin of Mexico all claimed descent from Toltec royal lines, and those groups that didn't have Toltec blood sought to marry into lineages that did: having royal Toltec ancestry was a major prerequisite of legitimacy. The Mexica were one such group, and their leaders went to great pains to obtain Toltec ancestry through marriage. Once they had achieved that end, the Aztecs reinforced their "Toltec heritage" by looting the site of Tula and incorporating its sculptures and other relics into their own imperial capital's buildings and ritual offerings.

—Peter Mathews

Mexico that have used or incorporated the name (which was corrupted by the Spaniards to Tula). Archaeologically, the Toltecs have been identified specifically with the site of Tula, about 43 miles (some 70 kilometers) north of Mexico City. This site was first occupied during the eighth century CE, as the ancient city of Teotihuacán, which had dominated Mexico during the first millennium CE, was declining. By 900 CE, Tula was a major site, and in the following 300 years, it came to dominate central Mexico.

At its height during the eleventh and early twelfth centuries, Tula covered about 8 square miles (13 square kilometers) and had a population of up to 60,000 people. The central part of the site had broad plazas punctuated with temple pyramids, ball courts, and colonnaded palaces. Toltecs who were farther down on the social scale lived in flat-roofed houses with sleeping rooms arranged around open patios where many of the daily activities would be undertaken. Family altars and shrines have been found in the patios of several houses, and the houses themselves were connected by passageways and alleys. There is evidence that much of the city was laid out in a rough grid. Workshops abounded in Tula, especially for work in obsidian and ce-

ramics. Agriculture was carried out with the aid of irrigation because rainfall is low and unpredictable in the area, and the dozens of small farming hamlets that have been found within about 9 miles (15 kilometers) of the city must have provided much of Tula's food supply. In the Mesoamerican tradition, additional food and other commodities would have flowed into the city as tribute from subject regions.

By the late twelfth century, Tula was in trouble. The central ceremonial part of the site was sacked and burned, and there are signs of destruction in the suburbs as well, for some courtyards and altars were looted. Later historical accounts mention a civil war in the city, but the final collapse of Tula may well have been at the hands of invaders from the north, the "Chichimeca" peoples.

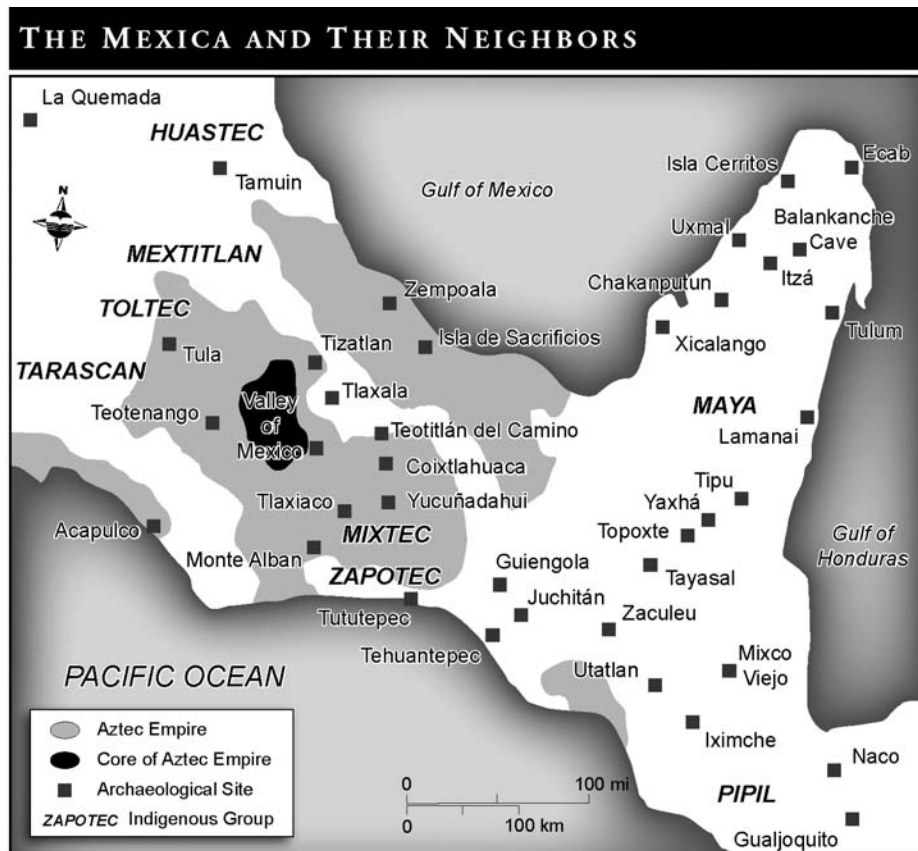
—Peter Mathews

Bibliography

- Davies, N. *The Toltec Heritage: From the Fall of Tula to the Rise of Tenochtitlán*. Norman: University of Oklahoma Press, 1980.
- Mastache de Escobar, Alba Guadalupe, Robert H. Cobean, and Dan M. Healan. *Ancient Tollan: Tula and the Toltec Heartland*. Boulder: University of Colorado Press, 2002.
- Mathews, Peter. "Toltecs." In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.

The Mexica and Their Neighbors

On the eve of the arrival of the Spaniards, central Mexico was a land rich in diverse cultures, languages, and polities, a fact often overlooked by many modern historians who tend to concentrate on the Mexica, or Aztecs. When the Mexica arrived in the Valley of Mexico in the late 13th century, it was already fairly densely inhabited. The valley was called Anahuac, meaning "near the water." The most important political unit of Mesoamerica was the city-state (*altepetl*). The *altepetl* normally consisted of two to four internal neighborhoods (*calpolli*) and other nearby towns and villages that provided tribute and labor for the benefit of the *altepetl*. The Mexica had founded two cities on the mudflats in Anahuac. The principal city was Tenochtitlan. But a secondary city, Tlatelolco, had also grown up on a nearby islet



to the north. Tlatelolco would become the mercantile capital of the Mexica and gain fame for the richness and diversity of its market.

At least four powerful city-states dominated parts of the valley: Texcoco, Chalco-Amaquemecan, Culhuacan, and Atzacapotzalco. Two of these—the Acolhua of Texcoco and the Culhua of Culhuacan—claimed descent from the Toltecs. As heirs of the Toltecs, these two city-states exemplified the highest levels of culture, dedication to the arts, and good government. Texcoco controlled the northeastern part of the valley. The far northeast was semiarid, while the eastern region was better watered and possessed many natural springs. In general, all of the major city-states controlled some of the rich agricultural lands along the edge of the lake. Culhuacan occupied the southwestern region of the valley. It was well timbered but also home to a rugged nomad's land of volcanic rock, later known as the Pedregal. Chalco-Amaquemecan was blessed with plentiful fresh water and some of the most extensive agricultural areas and was located at the

intersection of routes leaving Anahuac toward the south and east. Atzacapotzalco, home to the Tepanec, occupied the northwestern region of the valley. Like Texcoco, the northern reaches were semiarid and rocky, but the central region was home to the famous springs of Chapultepec. In general, the southern reaches of the valley had more fresh water. In the northern regions, what lake water there was tended to be saltier since there was no natural outflow for the valley's water. The water flowed generally from south to north in increasing degrees of salinity. The second major city of the Tepanec region was Tlacopan, a junior city to Atzacapotzalco. While the ruler of Atzacapotzalco had originally been a protector for the Mexica, they overthrew his lordship and established the triple alliance with Tlacopan and Texcoco.

The Tepanec also had a significant area of influence outside of Anahuac toward the west, principally in the Toluca Valley. Beyond them to the west and north was the powerful Purepecha kingdom of the Tarascans. The Purepecha were

► THE AZTECS, THE MEXICA, AND THE NAHUA

The people we popularly call the Aztecs called themselves the Mexica. The term “Aztec,” which means “the people from Aztlan,” was not used to any great degree before the nineteenth century. The migration legends of the Mexica state that they originated in Aztlan and traveled over the course of several generations to what is now the Valley of Mexico. Like the other peoples of the valley, they spoke the Nahuatl language. Consequently, all of those people could correctly be called Nahua, along with many people in the surrounding valleys of Toluca, Tlahaica, and Tlaxcallan-Huehotzinco-Cholollan. In the fourteenth century the Mexica of Tenochtitlan, under the leadership of Motecuhzoma Ilhuicamina, became independent from Atzacapotzalco and allied themselves with two other city-states, Texcoco and Tlacopan. Tlacopan was a junior member of the Tepanec empire that gained dominance with the fall of Atzacapotzalco. Many people term that triple alliance “the Aztec alliance.” Consequently, the term “Aztec” can be used for the alliance of the three city-states or to refer specifically to the migratory people who left Aztlan.

—John F. Swaller

ethnically and linguistically distinct from the Nahuatl-speaking peoples of Anahuac and its environs. Their empire was based in the lakes region known to the Nahua as Michoacán (“place of the fishermen”). Although the Mexica had attempted major invasions of the Purepecha region, they had failed. An uneasy peace developed in the Toluca Valley between the Nahuatl-speaking peoples associated with the Mexica and the Purepecha speakers of the Tarascans.

Beyond Anahuac to the north were the lands of the nomadic hunters and gatherers known generically as the Chichimeca (“people from the place of sucking”). These were ethnically diverse groups including both Nahuatl speakers and speakers of Otomí, a distinct indigenous language. Because this region was mountainous and drier than Anahuac, there had been few efforts on the part of the Mexica to conquer it.

The kingdom of the Tlahaica formed the region to the south of Anahuac. The Tlahaica were

also Nahuatl speakers and were culturally similar to the Mexica. The main city was Cuauhnhuac (Cuernavaca). The region fell to the Mexica during the reign of Itzcoatl. Because this area was significantly lower in altitude than Anahuac, tropical fruits and other hot-land crops could be successfully grown there. Moreover, its many thermal springs and pleasant weather made it a favorite vacation destination for the Mexica elite.

To the east of Anahuac there were three major city-states: Tlaxcallan, Huejotzinco, and Cholollan (Cholula). All three of these were Nahuatl-speaking areas that generally shared the same culture as Anahuac. Cholollan claimed a Toltec heritage, with many of its leading families tracing their lineage to the Toltec diaspora. Huejotzinco was a newer city, perhaps also founded at the time of the fall of Tula (ca. 1200 CE), but it thrived due to its productive agriculture and location along a major long-distance trade route. Tlaxcallan was a distinctive political entity. Unlike the other states in which there was one dominant city, Tlaxcallan consisted of four powerful cities allied in a single political unit. Its territory contained both cold mountain highlands and hot valley lowlands, allowing it a diversity of agriculture and gathering from many varied climatic zones. While both Cholollan and Huejotzinco had at one time or another been defeated by the Mexica, Tlaxcallan had remained independent.

—John F. Swaller

Bibliography

- Carrasco, Pedro. *The Tenochca Empire of Ancient Mexico: The Triple Alliance of Tenochtitlan, Tetzcoco, and Tlacopan*. Norman: University of Oklahoma Press, 1999.
- Davies, Nigel. *The Aztec Empire: The Toltec Resurgence*. Norman: University of Oklahoma Press, 1987.
- Lockhart, James. *The Nahua after the Conquest*. Stanford, CA: Stanford University Press, 1992.
- Van Zantwijk, Rudolph. *The Aztec Arrangement: The Social History of Pre-Spanish Mexico*. Norman: University of Oklahoma Press, 1985.

The Aztec/Mexica Empire

Aztec is the name popularly used today to label the people who dominated central Mexico around

1500 CE. Actually, “the Aztecs” never used the term to describe themselves; rather, they were Nahuatl-speaking peoples divided into about twenty different ethnic groups. The most famous of these groups, and the preeminent one when the Spaniards arrived in Mexico, were the Mexica.

The Mexica arrived in the basin of Mexico (where Mexico City stands today) probably some time during the thirteenth century CE. According to their own legends, they arrived along the western shores of Lake Texcoco as an impoverished, uncouth group into a region that was already fairly fully occupied by a series of kingdoms. Despised as barbarians by the existing inhabitants, their only skill was an aptitude for warfare under the strong influence of their patron god of war, Huitzilopochtli.

Gradually, the Mexica grew stronger. They settled their capital, Tenochtitlan, sometime around 1325, and toward the end of the fourteenth century began to make a concerted drive to achieve a position of strength in the region. In 1428, they and several allies overthrew the Tepanecs of Azcapotzalco, the most powerful kingdom in the basin of Mexico at the time. In one sudden move, the Mexica had become the most powerful group in ancient Mexico. With their main allies, the Texcoco and the Tlacopan, the Mexica formed a so-called triple alliance that proceeded to expand its territory aggressively throughout central Mexico; they were still doing so when the Spaniards arrived in 1519.

The Mexica controlled what has often been called “the Aztec empire.” In fact, the empire was a collection of subjugated groups and kingdoms held together by a combination of force and intimidation. A major aspect of this subjugation was tribute. If a town or region submitted voluntarily to Mexica might, the amount of tribute that it would have to pay annually might be quite light; regions captured in war or rebellious towns would be assessed a far more onerous amount. There are detailed surviving accounts of the tribute that poured into Tenochtitlan each year: the tribute was one of the things the Spaniards were most interested in as they wished to continue the process for their benefit.

The Mexica are perhaps best known for the warfare they waged and for their practice of hu-

➤ LORD ACAMAPICHTLI

The semi-legendary Lord Acamapichtli was the first Chief Speaker of the Mexica (r. ca. 1369–1403), whose reign marked the beginning of the Mexica’s drive to become an independent political entity. By paternal blood and marriage, he also linked the Mexica royal line with the Toltecs and their patron deity Quetzalcoatl, an ancestry that now gave the Mexica a civilizing legitimacy. He was also perceived as acting as the “likeness” of the Mexica patron deity Huitzilopochtli, who was closely associated with the great god Tezcatlipoca. This first ruler therefore embodied two of the most powerful deities in the Nahuatl cosmos, Quetzalcoatl and Tezcatlipoca, and thus served as a harbinger of the Mexica’s later dominance over central Mexico.

—Kay Almere Read and Jason J. González

Bibliography

Read, Kay Almere, and Jason J. González. “Acamapichtli, Lord.” In *Handbook of Mesoamerican Mythology*, edited by Kay Almere Read and Jason J. González. Santa Barbara, CA: ABC-CLIO, 2000.

man sacrifice (something they had in common with all the other peoples of ancient Mexico). But they were also great engineers, architects, artists, and poets. The Spaniards could barely believe the beauty of Tenochtitlan when they entered it and were astounded by the great artistry of the Mexica in paint, wood, ceramic, stone, and silver and gold (almost all of which the Spaniards melted down into ingots).

“Who could defeat Tenochtitlan, who could shake the foundation of heaven?” asked one Mexica poem. In fact, the Mexica were conquered by the Spaniards and a host of native allies, chief of whom were the Tlaxcaltecs. Although the majority of the people of Tlaxcalteca (or Tlaxcala) were, like the Mexica, speakers of Nahuatl, they were bitter enemies of the Aztec empire and had managed to retain a precarious independence, despite being surrounded by Mexica-dominated lands. After a siege of several months, Cortés’ troops and his tens of thousands of indigenous allies entered Tenochtitlan on August 13,

1521, signaling the end of the Mexica empire. For their key role in overthrowing the Aztec empire, the Tlaxcaltecs were rewarded with honors, tax exemptions, and limited self-rule by the Spanish colonial government.

—Peter Mathews

Bibliography

- Aquilar-Moreno, Manuel. *Handbook to Life in the Aztec World*. New York: Facts on File, 2006.
- Mathews, Peter. "Aztecs." In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.
- Smith, M. E. *The Aztecs: A History*. Oxford: Blackwell, 1996.

The Chimú State

The Chimú dynasty, about which we know very little, ruled a large kingdom that stretched for several hundred miles along the Andean desert coast in present-day Peru from around the early fourteenth century until the late fifteenth century. A series of ten Chimú kings ruled the kingdom of Chimor, which produced the magnificent capital city of Chan Chan (located near present-day Trujillo). The city's foundations go back to around 850 CE, and it grew progressively over the centuries, reaching its peak under the Chimú. The high level of organization established by the Chimú state and the wealth it amassed, undoubtedly

attracted the Incas, who annexed the kingdom into their growing empire around 1470.

According to later Spanish accounts, early in the fourteenth century the Chimú dynasty, which originated in the Moche Valley, began to dominate and consolidate a number of smaller kingdoms into an empire. The Chimú king, who ruled from Chan Chan, was considered divine and consequently was responsible for the well-being of his people through his connections to the gods.

The Chimú were dependent on large-scale agriculture to support their growing population, and they built many canals and improved on others left by earlier peoples to bring water from several rivers to the dry areas of their empire. Chimú society was divided into strict class levels, with a few nobles at the top and the mass of peasants and artisans at the bottom. Chimú culture is not known for its innovation, but it is famous for the highly developed skills of its artisans, especially in crafts involving textiles, wood, shells, and metals.

Despite an extensive defensive line of fortifications, the Inca empire easily defeated the last Chimú king, Minchançaman, at the Battle of Chan Chan and incorporated his kingdom around 1470. The Incas absorbed many parts of the Chimú culture, including its political organization, irrigation systems, and roads. Many Chan Chan metal craftsmen were deported to work for the Incan ruler, but in typical Incan fashion a large number of Chimú lords continued to administer their local areas.

—Alfred J. Andrea

▶ CHAN CHAN'S WORKING CLASSES

Most artisans lived in one of the many Chimú cities and towns, including Chan Chan. Much of what is known about the Chimú was learned from the remains of their large capital, which covered at least 12 square miles (31 square kilometers) and was home to between 50,000 and 100,000 residents at its peak. Excavation at the site, which was already heavily looted, only began in 1969.

Ten massive *ciudadelas* (citadels or little cities) dominated the city, each of which was surrounded by thousands of small irregular rooms that served as the living and working quarters for the city's laborers and artisans, who constituted the majority of the city's population.

—Alfred J. Andrea

Bibliography

- Malpass, Michale A. *Daily Life in the Inca Empire*. Westport, CT: Greenwood, 1996.
- Moore, Jerry D. *Cultural Landscapes in the Ancient Andes: Archaeologies of Place*. Gainesville: University Press of Florida, 2005.
- Moseley, Michael E., and Alana Cordy-Collins, eds. *The Northern Dynasties: Kingship and Statecraft in Chimor; A Symposium at Dumbarton Oaks, 12th and 13th October 1985*. Washington, DC: Dumbarton Oaks Research Library and Collection, 1990.
- Moseley, Michael E., and Kent C. Day, eds. *Chan Chan: Andean Desert City*. Albuquerque: University of New Mexico Press, 1982.

Murray, Tim. "Chan Chan." In *Encyclopedia of Archaeology: History and Discoveries*, edited by Tim Murray. Santa Barbara, CA: ABC-CLIO, 2001.

Steele, Paul R., with the assistance of Catherine J. Allen. *Handbook of Inca Mythology*. Santa Barbara, CA: ABC-CLIO, 2004.

The Incan Empire

In approximately 1200 CE, a small tribe called the Incas migrated north from the Lake Titicaca Basin into the Cuzco Valley in modern Peru. Over the next three centuries, the Incas built what would become the most powerful and far-reaching pre-Hispanic empire in Andean experience. Between 1450 and 1532, the Incas conquered and then governed diverse peoples and cultures stretching from modern Ecuador and Colombia to central Chile. Many observers have compared this Incan achievement with ancient Rome. Indeed, although these represented two very different civilizations, they shared several features and traits.

While the Incas incorporated and then expanded upon many pre-Incaic traditions and technologies, they are perhaps best known for constructing a sophisticated network of imperial roads and for their suspension bridges and stone-masonry techniques. This communications and transportation grid connected all four administrative divisions of the empire to Cuzco, the Incas' capital. Incan engineers constructed pathways through vast stretches of desert, sandy beaches, and treacherous highland passes. Although many of these roads and bridges have disappeared over time, archaeologist Nigel Davies estimates that this network, at its zenith, included over 25,000 miles (40,000 kilometers) of roads and bridges. Perhaps the most important road linked Cuzco to Quito. It averaged 10–50 feet (3–16 meters) in width.

The Incas employed a system of relay runners called *chasqui* to deliver important messages via this communications system. This included couriers carrying *quipus* and other small goods. It functioned as a fast-paced highly efficient system. In Cuzco, for example, the emperor's meals usually included a selection of fresh fish from Chilean waters.

This communications system represented a unique achievement in world history. The Incas lacked alphabetic writing, but they did not lack records. We do not know for certain whether the Incas recorded historical information, however. They inherited and incorporated an earlier Andean information storage and retrieval system known as the quipu. Quipus were complex multi-dimensional and multicolored arrays of up to several dozen cotton or woolen cords, subsidiary cords, and top cords spun and then knotted in at least three different ways each and in quite diverse combinations.

Until recently, scholars believed that the professional, administrative *quipocamayo* class kept strictly operational, or census and accounting, data mainly concerning tribute and taxes. But in 1985 ethnohistorian John Howland Rowe discovered a colonial-era document that suggests that a quipocamayo read historical data from a quipu into court records. And since then, ethnohistorians, such as Gary Urton, have proposed that Incaic quipus served a far more complex purpose than the previously agreed upon mnemonic one, comparable to, say, a simple message stick. This uncertainty notwithstanding, scholars do know that chasqui runners often couriered quipus to Cuzco over great distances, thus staffing and operating the above-described communications system.

These and other administrative tools and techniques enabled Cuzco to field, direct, and support large armies and run ambitious military operations. These organizational advantages ensured the Incas' strategic and decisive superiority in the Andes. Only the Spaniards, possessing Eurasian-derived biogeographic and military advantages, including smallpox, oceangoing ships, horses, and steel weapons, defeated and conquered them.

In addition to the Incas' adaptations and innovations in communications, transportation, and administration, they remain renowned for their unparalleled, indeed uncanny, expertise in fine stone masonry. Relying on relatively primitive technology and tools and only human labor, Incan engineers and architects selected large stone blocks at faraway quarries. They then moved these stones over long vertical distances without the benefit of draft animals or the wheel.

➤ INCAN RULERS

We know almost nothing about the earliest Incan rulers. According to Incan myth, Manco Capac, the first known Inca king, conquered and settled the Cuzco Valley circa 1200. His three brothers turned into sacred stones, or *huacas*. Seven kings succeeded Manco Capac. They supposedly ruled until 1438.

Two moieties, or upper and lower halves, divided Cuzco and many other Andean kingdoms as well, some of them pre-Incaic. Several hypotheses exist to account for this. One suggests that two kings, and not one, ruled the Incas during these early years. While this would not be unique in world history, as both the Spartans and the Romans elected two kings and two consuls, respectively, the data are inconclusive with respect to the early Incas.

Pachacuti, the ninth and perhaps greatest Inca ruler, began an ambitious expansionistic empire-building program, probably in the mid-fifteenth century, although this, like much else in pre-Hispanic Andean history, remains tentative and uncertain. He also renovated Cuzco and appears to have consciously revised Inca history so that it would represent and justify the new Incan order. Pachacuti created *panacas*, or royal houses, consisting of former rulers' descendants. The *panacas* served as depositories of official history, which included not only quipus but paintings and oral traditions as well. These royal houses also cared for the former king's mummified remains, which the people of Cuzco worshipped as divine. Early colonial Spanish writers such as Pedro de



Manco Capac, seventeenth-century depiction. (David Marley)

Cieza de León drew on this information in the chronicles they produced.

—James Douglas Lockhart

When the stones arrived at the construction site, these engineers and workers shaped the stones into sometimes polygonal, sometimes perfectly rectangular shapes and then precisely fitted them together without mortar, forming immense walls, canals, and other structures. Today, five centuries after the Conquest, one cannot insert so much as a knife between any two of these shaped stones at any juncture. Some of the most notable examples of this craft remain visible at Machu Picchu and Sacsahuaman, a military fortress outside Cuzco. One famous stone, called Hatun Rumiyok, features 12 corners.

Apart from these technologies, the Incas' genius lay in their incorporating, mastering, and then refining preexisting grassroots Andean socioeconomic patterns to suit their needs. Peru's Indian peoples had long relied on what ethnohistorian John V. Murra described as a vertically oriented archipelago economy. Villages and kin groups called *ayllus*, which primarily inhabited one specialized ecological zone, such as the highlands, would colonize or trade with others, which primarily inhabited other specialized ecological zones, such as the coast or the rainforest lowlands. These polities created obligations and

paid debts through an elaborate reciprocal gift-giving and community service system.

The Incas' central government respected and built on this older pattern. The Incas not only relied on it when constructing roads and bridges or staffing their armies. They also used it to expand on terraced agricultural fields and the canals that serviced them and to stock strategic state storehouses with foodstuffs and wool, among other vital goods and necessities.

Through imperialism, military conquest, and good government, the Incas accumulated vast sums of gold, silver, and other wealth. Incan elites stored much of this jewelry in shrines. They also wore some of it. After the conquistador Francisco Pizarro seized Atahualpa at Cajamarca in 1532, the emperor offered to pay an enormous ransom to secure his freedom. Atahualpa promised to fill a room measuring some 22 by 17 feet (6.7 by 5 meters), up to a height of approximately 8 feet (2.5 meters), with gold objects. The Incan ruler also pledged to give twice that amount in silver. He promptly delivered on his promise. But Pizarro, fearing intrigue, still garroted him.

The conquistadores later raided every Incan shrine they could find for gold. At sites such as Coricancha, Spanish cavalymen discovered gold statues in the image of former rulers as well as in one fantastic find, a garden adorned with imposing water fountains and many stylized birds, all cast in gold and silver. The Spaniards seized and bickered over most of this treasure. The Spanish king received one-fifth of this. He melted it and then used it to finance his wars in Western Europe and the Mediterranean.

The Incas were also rich in other respects. After executing Atahualpa, Pizarro elevated Manco Inca in his place. Manco organized a *chaco*, or a great royal hunt, just outside Cuzco. He invited Pizarro and several other conquistadores to observe and participate. They reported witnessing approximately 10,000 Indians encircle and then, making a good amount of noise, drive inward tens of thousands of animals, where hunters killed or captured for their meat or wool as many as Manco asked for.

Such displays of the Incas' mastery over their environment ceased to occur by the late sixteenth century, as the Spanish Crown consoli-

dated its gains and position in Latin America and the Caribbean. Spanish rule indeed assaulted and destroyed Incan government and society on multiple fronts. And today little remains of this once undeniably prodigious civilization.

—James Douglas Lockhart

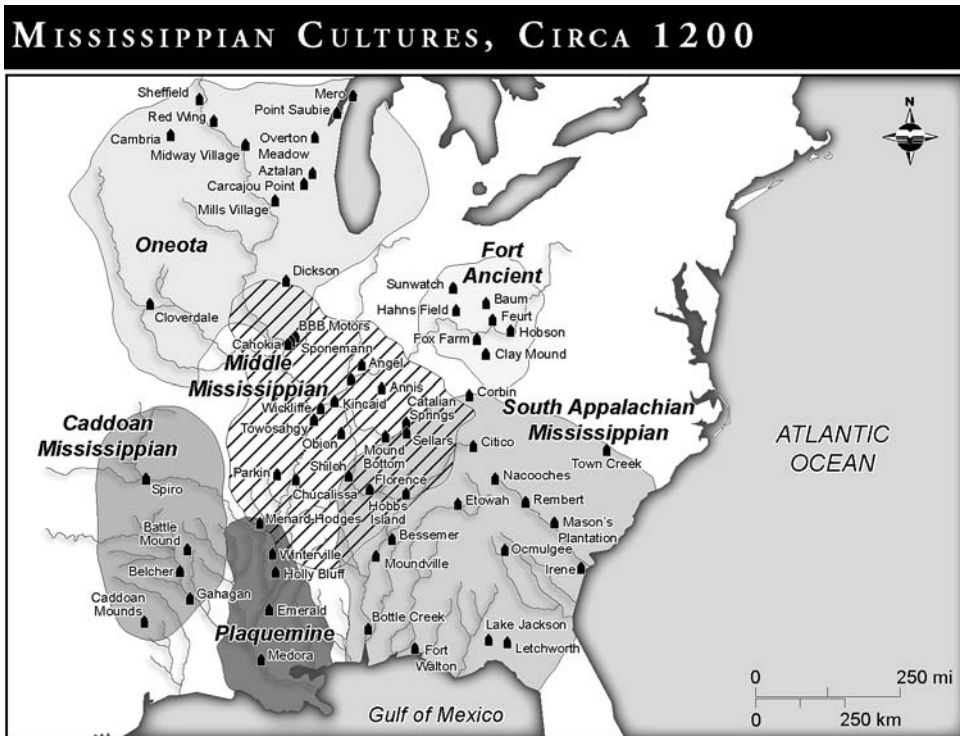
Bibliography

- Davies, Nigel. *The Incas*. Niwot: University Press of Colorado, 1995.
- Hemming, John. *The Conquest of the Incas*. New York: Harcourt, Brace, Jovanovich, 1970.
- Murra, John V. *The Economic Organization of the Inka State*. Greenwich, CT: JAI, 1980.
- Stern, Steve J. *Peru's Indian Peoples and the Challenge of Spanish Conquest*. Rev. ed. Madison: University of Wisconsin Press, 1993.
- Urton, Gary. *Signs of the Inka Khipu*. Austin: University of Texas Press, 2003.

Mississippian Peoples of North America

Mystery pervades the origins of what archaeologists call the Mississippian Culture, which emerged around 700 CE along the banks of the lower Ohio, Illinois, Tennessee, and Middle Mississippi rivers. Archaeological research from the excavation of burial mounds throughout the United States suggests that this society/culture reflected a movement toward more elaborate burial practices and hence a much more stratified social structure. Moreover, many scholars postulate that Mississippian Culture was an outgrowth of Hopewell Culture. While the early members of this culture were hunters and gatherers, they moved gradually to the cultivation of native crops and then between 450 and 800 CE to the extensive farming of maize and beans. It seems plausible, according to many archaeologists, that this shift resulted from overpopulation and/or demands of elites.

Accompanying the extensive maize and bean cultivation, Mississippian Culture saw a major transformation between 800 and 1000 to more elaborate settlements as reflected in new pottery forms (decorated often with engravings or paintings), sophisticated platform mounds, and large rectangular houses. The masses of these villages lived around a rectangular or pyramidal flat-topped mound, which had wooden temples



or houses of the leading men constructed on its summit. Some of these settlements possessed palisades, which many archaeologists attribute to the movement to bigger (more complex) villages and hence to the emergence of a more hierarchical society. In addition to their cultivation of maize, squash, and beans, Mississippian communities harvested nuts, fruits, berries, and seed-bearing plants. Moreover, many of these natives were adept hunters whose skill allowed their families to feast on deer, raccoon, and waterfowl. It is estimated by some scholars that more than 50 percent of the Mississippian villagers' diet came from fish and waterfowl. This sophisticated multisource food chain suggests a changing and more hierarchical society with an increasing concentration of power in the hands of a few men and clans.

The largest Mississippian town so far located and excavated is Cahokia, Illinois, a World Heritage Site found on the east bank of the Mississippi River almost directly opposite present-day St. Louis, Missouri. From archaeological excavations, it is inferred that Cahokia once boasted more than 100 earthen mounds and supported a population of perhaps 30,000–35,000. As the in-

habitants possessed no earth-moving equipment or any wheeled conveyances or beasts of burden, it seems likely that construction of the town required tens of thousands of laborers carrying earth in baskets over a period of a few hundred years.

The largest mound at Cahokia—today known as Monk's Mound because of a Catholic monastic community that apparently once farmed its terraced slopes—covers nearly 16 acres (6.5 hectares), rises to a height of ten stories in two terraced levels, and was built in four discrete stages between the ninth and eleventh centuries. Standing at the center of the community, it had a thatched temple on its summit. Around this central core/plaza were constructed other mounds, temples, administrative buildings, and the houses of noblemen.

Cahokia's center, or downtown, encompassed an area of more than 200 acres (80 hectares) and included a palisade fence surrounding its perimeter along with watchtowers. Lesser mounds and structures of suburban-type communities were located outside of Cahokia's fenced interior, each with its own plazas and burial mounds. The residential core of the town, with its pole

and thatch houses, encompassed in its heyday an area of more than 2,000 acres (800 hectares). The dimensions and scope of Cahokia suggest the extent of planning employed and the level of central authority required to construct and manage such a vast community.

Cahokia, while the most extensive of the Mississippian urban centers, was not unique. Great temple-centers were erected in Spiro, Oklahoma; Moundville, Alabama; and Etowah, Georgia. Archaeologists surmise from their excavation of Mississippian burial mounds that most of their settlements were dominated by central chiefs along with a priestly class and noblemen. As with the Hopewell Culture, the most important people within these Mississippian communities were buried in richly decorated graves indicating their social status. In addition to indicating the status of various individuals, the funerary artifacts discovered within the burial mounds also reveal a common set of ritual beliefs. In many burial mounds of the Southern Cult, or Southeastern Ceremonial Complex, which flourished from around 1000 to about 1600 throughout the American Southeast all the way to Texas and Oklahoma and north to the lower Ohio and Mississippi rivers, the art therein exhibits a consistent presence of bird symbolism and weeping-eye (or hawkeye) symbols that presumably had religious significance. Yet some scholars such as Jon Muller postulate the differences found in Mississippian art motifs emanated from centuries of artistic exchanges among the hundreds of existing Mississippian communities.

Most of the important ceremonial centers were past their prime by 1500, but although Cahokia had already been abandoned, many lesser settlements persisted within the mid-South and Southeast until the arrival of Europeans. While many Southeast natives succumbed to the spread of European diseases (that spread along native trade routes even before direct contact with Europeans), a number of communities prospered, as evidenced by the 1540–1542 Spanish description of (for lack of a better term) the kingdom of Coosa, which encompassed a number of towns and chiefdoms stretching from present-day eastern Tennessee to Alabama and Georgia, and the 1720 French description of the Natchez people of the Lower Mississippi Valley, who built flat-

➤ WHERE DID THE MISSISSIPPIANS GO?

Mississippian Culture had reached its peak by the time of the arrival of Europeans in the sixteenth century. Initially, the old ceremonial centers were abandoned for reasons that are not clear, and then these peoples dispersed to increasingly smaller settlements. Great population declines occurred, especially in the Caddoan area and lower Mississippi Valley, as a result of diseases transmitted from the Europeans. Although the French encountered remnants of the Mississippian Culture (such as the Natchez people), the mound-building cultures grew less and less distinct. Yet other groups persisted, such as the Chickasaws, Choctaws, and Cherokees, that were in the final stages of mound building when the Europeans arrived in the Southeast.

—John S. Leiby

topped ceremonial mounds. According to this latter account, the Natchez were led by an absolute ruler called the Great Sun, so-named because they believed that he was descended from the Sun Woman goddess. For that reason, power passed matrilineally (to the son of the former chief's sister). The Natchez people consequently had a highly stratified society, with the Great Sun and his relatives at the pinnacle of power. The Natchez, the last of the significant Mississippian Mound Builder cultures, were effectively destroyed as an identifiable people in their wars with the French during the 1720s, leaving behind their name, which lives on in a city in Mississippi and in an ancient trade route (the Natchez Trace), and their genes in the Muscogee (Creek), Chickasaw, and Cherokee tribes.

—John S. Leiby

Bibliography

- Galloway, Patricia, ed. *The Southeastern Ceremonial Complex*. Lincoln: University of Nebraska Press, 1989.
- Jennings, Jesse D., ed. *Ancient Native America*. 2nd ed. San Francisco: Freeman, 1983.
- Perigrine, Peter N. *Mississippian Evolution: A World-System Perspective*. Madison, WI: Prehistory Press, 1992.

Shaffer, Lynde N. *Native Americans before 1492: The Moundbuilding Centers of the Eastern Woodlands*. Armonk, NY: Sharpe, 1992.

The Hohokam—A Civilization of the Sonoran Desert

Archaeologists continue to debate the precise origins of the Hohokam culture that evolved primarily along the banks of the Gila and Salt rivers of southern Arizona. Emil W. Haury, who began his studies of the Hohokam in the 1930s, postulated that perhaps they had migrated from Mexico, yet this theory has largely been discarded. What is generally accepted is that they were among the peoples who made their way to what today is the American Southwest sometime after 7000 BCE as hunter-gatherers. The Hohokam eventually located themselves in southern Arizona and northern Mexico, although they established some communities northward in the direction of present-day Flagstaff.

This culture constructed elaborate irrigation canals, ball courts, and platform mounds, which enable archaeologists to classify the principal characteristics and historical stages of their civi-

lization. Haury delineated Hohokam evolution into four stages: Pioneer (1–900 CE), Colonial (600–900), Sedentary (900–1000), and Classic (1100–1400). As evidenced by their distinctive red-on-buff pottery, they inhabited, in the various stages of their evolution, some 27,000 square miles (70,000 square kilometers) of land.

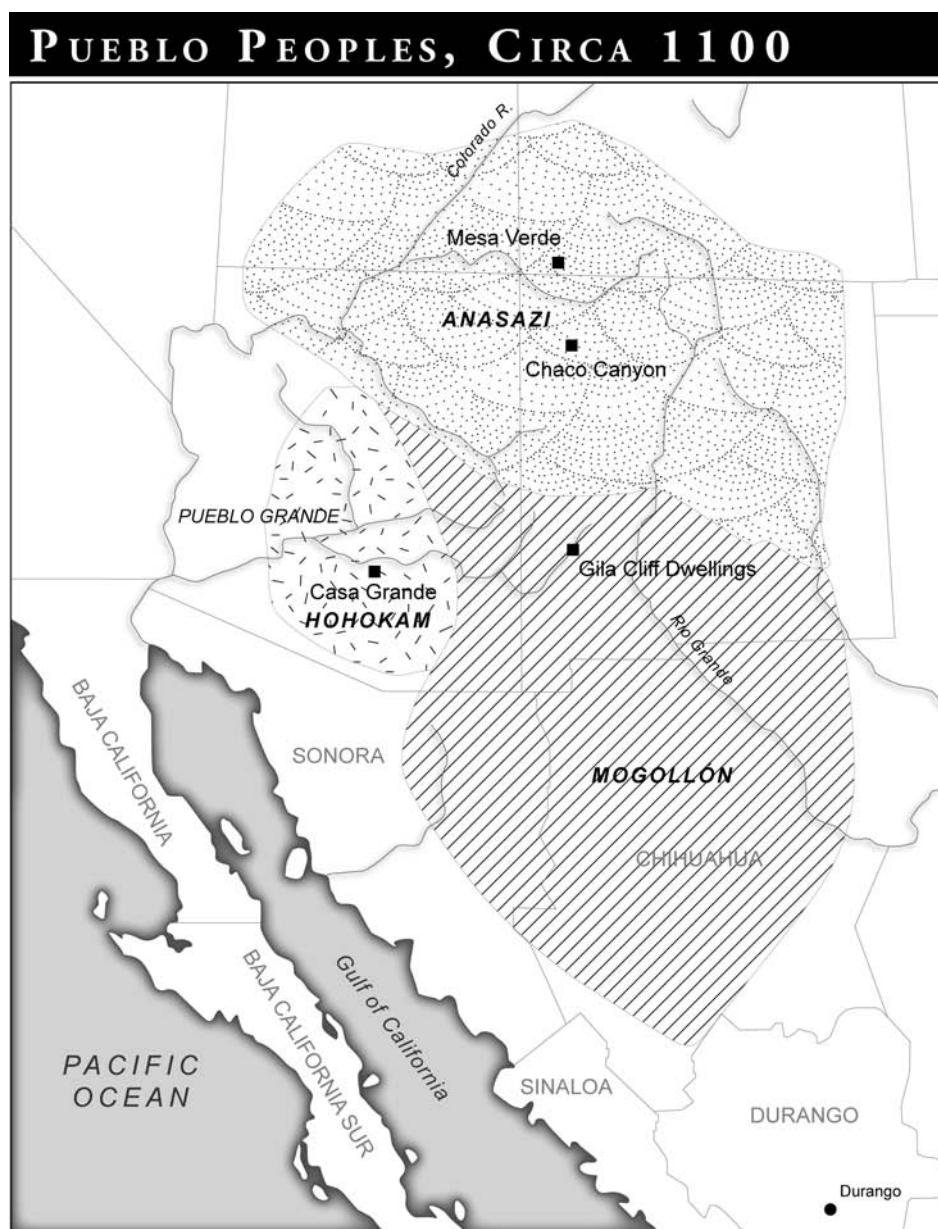
Through their knowledge of the desert terrain and use of effective irrigation canals (most constructed with few tools), they built a series of impressive communities primarily in the Gila River valley around present-day Phoenix that housed between 5,000 and 10,000 people during the Classic period. As a consequence of their adept knowledge of their environment, the Hohokam were superb farmers who grew a wide variety of crops such as maize (corn), jackbeans, tepary beans, lima beans, squash, barley, amaranth, gourds, cotton, and tobacco. In addition, they harvested wild desert plants, especially agave and cholla cactus. Many archaeologists surmise from excavations of bone fragments that the Hohokam were effective hunters who supplemented their vegetarian diet with various rodents, birds, jackrabbits, cottontail rabbits, mule deer, pronghorn antelope, and bighorn sheep. Additionally, the Salt and Gila rivers as well as their canals provided fish.

In the 1930s archaeologists began to excavate what today is the best-known and most elaborate and extensive Hohokam settlement, Snaketown, located at the juncture of the Gila and Salt rivers in the Phoenix Basin. In its prime it had a populace of perhaps 500–1,000 around 900 CE living in more than 125 pithouses and boasted the presence of two ball courts (each nearly 60 feet [18 meters] long and 40 feet [12 meters] wide), which most archaeologists regard as the most elaborate yet excavated in the American Southwest. Snaketown's sophisticated configuration, like that of other significant Hohokam communities, indicates a complex social structure.

Casa Grande (Big House), a single four-story structure located near the present-day town in southern Arizona with the same name, was another Hohokam construction. It was constructed in the early 1200s and then abandoned by the mid-1400s according to tree-ring and carbon testing. Such structures were characteristic of the



Casa Grande (Big House) was a Hohokam structure built in the early 1200s and then abandoned by the mid-1400s. Such structures were characteristic of the multi-storied adobe complexes that the Hohokam built during their Classic Period, but Casa Grande is the largest and only intact “big house” dating from that era. Some scholars have surmised that it served as an astrological observatory. (James Jones)



multistoried adobe complexes that the Hohokam built during their Classic period, but Casa Grande is the largest and only intact big house dating from that era. Some scholars have surmised that it served as an astrological observatory.

Pueblo Grande (Big Town), in present-day downtown Phoenix, which saw some settlement prior to 500 CE, is another example of the evolution of Hohokam culture. Within a short span of a few centuries, it expanded to encompass a town more than a mile in diameter.

In addition to their magnificent ball courts (more than 30 from more than 20 villages have

been located and identified) the Hohokam built platform mounds that were the cornerstones of major villages (more than 50 have been identified). These mounds appear to have been modest in size during the 800s but by the 1200s had emerged into large rectangular mounds. Some archaeologists have suggested that the Hohokam elite resided on top of them, whereas others have argued that they were used for important ceremonies or rituals linked to agriculture. Whatever the truth, it is clear from the extent of the platform mounds, ball courts, and canals that the Hohokam had a hierarchical society. It also

➤ WHERE DID THE HOHOKAM GO?

When sixteenth-century Jesuit missionaries encountered the *rancherías* (communal villages) of the Akimel O’Odham (the River People, also known as the Pimas) and the Tohono O’Odham (the Desert People, also known as the Papagos), they could not believe that these people could be descendants of the Hohokam because of the wretched nature of their settlements. Their simple brush houses surrounding a central ramada (and kitchen area) did not evidence the sophistication of the ruins found at Snaketown, Casa Grande, and Pueblo Grande with their elaborate ball courts and platform mounds. Most archeologists now accept the likelihood that the River and Desert People were direct descendants of the Hohokam. Both shared the same Uto-Aztecan language, and Hohokam means “those who have gone” or “wasted away” in the Akimel O’Odham dialect. Many Pima legends refer to the Hohokam. Indeed, one legend claims that a Pima revolt resulted in the destruction of all of the Hohokam platform mounds. Furthermore, some Hopi clans claim that that their ancestors migrated northward to Hopi-land after having lived previously in southern Arizona. Some scholars also suggest that the Yuman groups located in southwestern Arizona are kin to the Hohokam. It is now nevertheless generally accepted that while many Hohokam may have migrated away, both the Akimel O’Odham and Tohono O’Odham are the lineal descendants of the ancient Hohokam.

—John S. Leiby

appears that shamans assisted them in connecting to the holy people or spirits whom they depicted in their murals.

By about 1450, the Hohokam had abandoned all of their major villages. One of the suggested causes may have been soil salinization, which they had overcome in previous epochs but may have become increasingly insurmountable during the Late Classic period. Another (probably more plausible) reason tendered by many is climate change: droughts and floods. Tree-ring data indicate that Hohokam lands underwent massive floods in 1358 and again in the 1380s. Other theories concerning the decline center around warfare, European-introduced diseases

(although many discount this explanation, as the Hohokam had already reached their nadir by the time of the arrival of the Spaniards), and overpopulation (many excavated remains indicate the presence of malnutrition). Whatever the factors that led to the demise of this civilization, the Hohokam became the “people who wasted away.” Or did they?

—John S. Leiby

Bibliography

- Andrews, John P., and Todd W. Bostwick. *Desert Farmers at the River's Edge: The Hohokam and Pueblo Grande*. Phoenix: Pueblo Grande Museum and Archaeological Park, 2000.
- Cordell, Linda. *Prehistory of the Southwest*. San Diego: Academic Press, 1984.
- Plog, Stephen. *Ancient Peoples of the American Southwest*. London: Thames and Hudson, 1997.
- Reid, J. Jefferson, and David E. Doyel, eds. *Emil W. Haury's Prehistory of the American Southwest*. Tucson: University of Arizona Press, 1986.

The Pueblo and Cliff-Dweller Peoples of the Four Corners

The Anasazi—“enemy ancestors” in Navajo (although others claim that it means “ancient ones”)—are largely regarded as the ancestors of the modern Pueblo tribes of the American Southwest. Most scholars regard the Anasazi heartland as encompassing the southern Colorado Plateau and the upper Rio Grande drainage. Before 500 CE the Anasazi populated—took shelter—in caves and along rock overhangs. Yet as water tables rose and arroyos filled with sediment, agricultural yields multiplied, which spurred the construction of more permanent communities located on mesas above flowing rivers and streams.

Expansion of Anasazi towns resulted in the construction of more elaborate pit houses, which could number 100 in a single town. The movement to maize production led the Anasazi to grow other crops (such as beans and squash) and to domesticate such animals as turkeys. With these changes, by the tenth century the Anasazi had ceased to be basketmakers and instead were the producers of ceramic vessels, which signified the continuing evolution toward a sedentary lifestyle.

➤ WHERE DID THE ANASAZI GO?

The general decline of the Anasazi intensified during the last quarter of the thirteenth century. While the immediate cause for this decline can be attributed to the protracted drought between 1276 and 1299, it appears that other factors such as internal warfare among clans also contributed to the eventual abandonment of Anasazi sites. The surviving Anasazi fled to new locations, which today are known as the pueblos.

From about 1300 to 1450, Pueblo Indians (so-named by the Spanish) underwent a Golden Age of evolution within their new locations. The western pueblos—namely the Hopis (Arizona) and Zuñi (New Mexico)—saw a flourishing of their pueblos, especially in the spiritual arena. The eastern pueblos were also able to grow and flourish during this same epoch. They included Acoma and Laguna (located on the high plateaus of west-central New Mexico) and those located along the Rio Grande (Taos, Isleta, Jemez, Nambé, Picurís, Pojoaque, Santa Clara, San Ildefonso, San Juan, Sandia, and Tesuque). Other pueblos grew

and prospered for a time between 1300 and 1450, such as in Verde Valley, the Tonto Basin, the Salt River Basin, and portions of the Hohokam heartland (located in central and northern Arizona and northern Mexico). Yet these newer pueblo communities waned after 1450.

After 1450 the decline of the pueblos accelerated so that by the time of the coming of the Spaniards, no Pueblo Indians resided in any part of the Southwest with the exception of those inhabiting communities near the Rio Grande (central New Mexico), in Acoma, in the Zuñi heartland, and the Hopi villages farther west. The Pueblo Indians, like the Anasazi, had built kivas, which led to the Pueblo Kachina cult that flourishes today within the Hopi and Zuñi. The kachinas depicted in dance are not gods but rather divine beings so that mankind can find a bridge to the gods. It seems likely that most contemporary kachina dances originate from the dances/rituals of the Anasazi.

—John S. Leiby

The period spanning 1000–1150 is regarded by many archaeologists as the heyday of Anasazi society. The Kayenta—one of the branches of the Anasazi—settled across the entire Colorado Plateau, controlling all of the Grand Canyon and as far as the upland of northern Black Mesa. During this epoch, what many archaeologists call the Chaco Phenomenon occurred in an area roughly 10 miles (16 kilometers) in circumference in northwestern New Mexico. This evolution, however, largely bypassed the Anasazi of northern Arizona. There arose within Chaco Canyon during that epoch a cluster of communities/pueblos integrated by a network of converging roads. Richard Wetherill, an early Chaco Canyon archaeologist, counted within the canyon 11 large pueblos, or houses, each of which contained between 100 and 500 rooms. By 1100, Pueblo Bonito, which was located within Chaco Canyon, was a huge D-shaped complex of 800 rooms rising several stories. Many scholars surmise that the Chaco Canyon settlements indicate that the Anasazi experienced a much more elaborate stratified society as the pueblos grew; a

more hierarchical society would have evolved in tandem with the need to supervise the agricultural economy needed to feed the many mouths within these settlements.

Common to all Anasazi communities were subterranean kivas, or ceremonial chambers, whose small openings were (and still are) believed to be humanity's doorway from the underworld. Chaco Canyon's kivas (especially at Pueblo Bonito), however, were built on a much larger scale, which relates to an increasing reliance on a priesthood. This meant that Anasazi shamans gained greater power during the period from the tenth to the mid-twelfth centuries. Chaco Canyon's expanse would have necessitated agricultural surpluses obtained either from the productive capacity of its pueblos or via trade with outlying (perhaps even more distant) communities.

Most archaeologists believe that the Chaco Phenomenon petered out by the mid-twelfth century. The explanations for this collapse include protracted droughts, overpopulation, depleted resources, religious discontent, civil/political strife

within the Anasazi communities, and even perhaps actual warfare among various Anasazi settlements. The population scattered, which led to the construction of other (though smaller) Anasazi pueblos, such as the village of Aztec (misnamed by early Anglo settlers) along the banks of the Animas River, a few miles below the Colorado state border. During the thirteenth century the San Juan/Mesa Verde people emerged and built their small pueblos on mesas and talus slopes in southeastern Utah and southwestern Colorado. Even today some remain, including the famed cliff dwellings of Mesa Verde that were abandoned by the late thirteenth century. To the west, in northern Arizona, southern Utah, and southeastern Nevada, the Kayenta branch of the Anasazi built their own elaborate cliff dwellings. Yet like their Mesa Verde counterpart, the

Kayenta abandoned most of their villages by the end of the thirteenth century and scattered into the communities now called Southwest Indian Pueblos.

—John S. Leiby

Bibliography

- Fagan, Brian M. *Ancient North America*. 2nd ed. New York and London: Thames and Hudson, 1995.
- Fiedel, Stuart J. *Prehistory of the Americas*. 2nd ed. Cambridge: Cambridge University Press, 1992.
- Joseph, Alvin M., Jr. *Indian Heritage of America*. New York: Knopf, 1969.
- Plog, Stephen. *Ancient Peoples of the American Southwest*. London and New York: Thames and Hudson, 1997.
- Reid, J. Jefferson, and David E. Doyel, eds. *Emil W. Haury's Prehistory of the American Southwest*. Tucson: University of Arizona Press, 1986.

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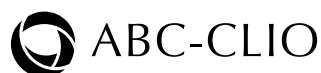
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

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Santa Barbara, California 93116-1911

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Manufactured in the United States of America

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Economics and Economic Activity

Every schoolchild in the West has heard about Marco Polo (ca. 1253–1324). Were it not, however, for a fortunate incarceration following his capture in 1298 in a war with Genoa and his chance meeting with a writer of romances, Rustichello of Pisa, during that period of enforced inactivity, Polo, his father, and uncle would be largely lost to history. It was Rustichello who took Polo's rambling, often disjointed oral account of his adventures in Asia—adventures whose basic validity cannot be doubted, despite the narrator's obvious self-puffery, exaggeration, and sometimes faulty memory—and turned it into a fourteenth-century best-seller. Even if these three Venetian merchants were unknown to us, we would still have plenty of evidence of direct Western European economic (and missionary) activity in China during the latter part of the thirteenth century and the early fourteenth century. The Polos were just three among many.

The riches of China and the rest of the so-called Indies had been a lure for merchants from all over Afro-Eurasia for centuries. Western Europeans were simply late in joining the rush.

But the economic realities of Afro-Eurasia (and of the rest of the world) were far more complex than the search for luxury items. Luxury items were but a small part of the vast array of goods produced and distributed during these five centuries. What we can and should say is that Afro-Eurasia's economy was broad-based and vigorous, despite periodic downturns, and likewise the economies of the Americas and Oceania were healthy.

As noted in the introductory essay for the theme "Society and Culture," the economic basis for all settled societies was agriculture, whereas nomads depended primarily on their herds, while the world's small number of hunter-gatherers depended on the riches of nature. But while all of that was true, commercial and industrial productivity was on the rise, especially in Afro-Eurasia and the Americas, through much of this period, and both were vital to the economies of the various states around the world. Some states, such as the trading empires of sub-Saharan West Africa, emerged or at least grew larger and more powerful when their monarchs proved able to control and tax commercial transactions.

Indeed, sub-Saharan Africa enjoyed an unprecedented surge of economic activity, with routes across the Sahara and into the savanna regions of West Africa providing avenues for manufactured goods, horses, textiles, salt, books, and a wide variety of other commodities, which were largely exchanged for gold and slaves. But that was not the only area of Africa south of the Sahara to prosper from trade. Along the Swahili coast of East Africa, trading cities reached deep into the forest and

savanna interior, largely through the intermediary help of inland centers such as Great Zimbabwe, to extract items such as ivory that would then make their way to ports throughout the Indian Ocean and its adjacent bodies of water. Indeed, because of its superior quality, Chinese and even Indian artisans preferred African elephant ivory over that of India.

The Mediterranean, the meeting place of three civilizations—Islam, Byzantium, and Latin Europe—witnessed Italian merchants, especially Genoese, Pisans, and Venetians, becoming a major force in the economic life of this sea, especially from the late eleventh century onward. As in sub-Saharan Africa, empire building followed commercial success but in different ways. Both Genoa and Venice gained political control of vital commercial centers in the eastern Mediterranean and the Black Sea in the course of the thirteenth and fourteenth centuries.

Commerce could only flourish when there were sufficient goods to trade. In addition to transporting and selling the high-profit luxury goods of South and East Asia, such as spices, dyes, and silks, the merchants of Cairo, Damascus, Constantinople, Marseilles, Venice, and numerous other Mediterranean entrepôts also drew from products produced closer to home, such as wine, olive oil, silks, fine tapestries and brocades, steel, and a wide variety of both high- and low-bulk items. If there was a demand for it, it was produced and traded.

During the fourteenth century and thereafter, following the lead of the Byzantines and Seljuk Turks before them, the Ottoman Turks made careful fostering of their commercial and industrial economy a state priority. Consequently, the Ottoman empire grew fabulously rich during its early centuries.

The fabled Silk Road (which was only so-named in 1877 by a German geographer, Ferdinand von Richthofen, who preferred the plural “*die Seidenstrassen*,” whereas in English most scholars use the more romantic singular) continued to provide numerous (and often shifting) caravan routes across the heart of Eurasia, linking China, Japan, and Korea with the Mediterranean and beyond. However, due to its inherent dangers and the high cost of transshipping goods through many hands and across many thousands of miles of deserts, steppe, mountains, and forest, sea routes through the Indian Ocean and adjacent seas began to replace these land routes from about the eleventh century onward as naval technology improved to the point of providing better craft and navigational aids. During the age of Southern Song (1127–1279) and throughout the Yuan era (1279–1368), Chinese merchants sailing out of southern Chinese ports became a fixture in the Indian Ocean, where they met and traded with Arabic-speaking Jewish merchants from Egypt, East Africans and Malays, Indians, Arabs, Persians, and even the occasional Western European. Although there were many ports of call and centers of vibrant trade throughout the Indian Ocean, South India, which can rightly be termed “the bazaar of Afro-Eurasia,” drew the heaviest concentration of foreign merchants, including the Chinese. Ibn Battuta, a Moroccan who traveled through the port city of Calicut in southwestern India in 1341, recorded that some of the merchant junks from China that visited India had four decks, 12 bamboo sails, and numerous private cabins and salons. The ships carried a complement of

600 sailors and 400 men-at-arms. Even allowing for possible exaggeration, the sheer size of these ships, which probably had been dispatched for both diplomatic and commercial reasons, speaks volumes for the amount of commerce that the Chinese conducted in the Indian Ocean.

Thanks to the so-called Mongol Peace of circa 1250–1350, the land routes of the Silk Road became safer and surer than they had been for centuries, providing direct avenues for Western European merchants (and missionaries) to China, and for a short while small diaspora communities of Latin European merchants sprang up in Mongol-dominated China. Among these, the Genoese were especially prominent. With, however, the expulsion of the Mongols from China in 1368 and a number of concomitant other problems, such as the Great Eurasian Pandemic and the devastation across Central Asia wrought by the armies of Timur-i Leng, these diaspora communities withered away, and direct overland travel between Europe and China became a distant memory. As noted in the introductory essay for the theme “Politics and Statecraft,” however, Samarqand under Timur and his successors became a new focal point for trans-Eurasian commerce. Because the amir had also forcibly transported large numbers of artisans from all over Central Asia and beyond to Samarqand, the city also became noted for the high quality of its hand-crafted products.

High-value, hand-crafted items are an important part of any economy, but mass-produced, widely needed industrial products must drive any economy that claims to be complex. Without a doubt, China was the economic giant so far as both commerce and industry were concerned during this 500-year period, and its industrial capacity was unparalleled in the world. Traditional Chinese crafts, such as silk and ceramics, not only attained their highest levels of artistry but also became large-scale factory industries producing a high volume of silk textiles, fine porcelains, and everyday ceramics for expanding export and domestic markets. Textile machines that multiplied many times over the labor of a single worker became the norm in China’s textile factories, especially during the Song era. Papermaking also flourished under workshop conditions, meeting the high demand of bookmakers and printers of documents and money. Heavy industry, especially iron production (as well as some high-quality steel), grew at an amazing rate, with the region around the city of Kaifeng producing more iron than anywhere else on earth by the late eleventh century. Many iron-smelting and steel-producing factories were located close to huge coal deposits, which, as was also the case with salt production, was a major government-managed and taxed extraction industry.

Coal and coke were used in the production and fabrication of these and other metals, and China was the only place in the world at this time using these two hot-burning fuels in the production of industrial metals.

All of this large-scale industrial and commercial activity fueled an urban explosion throughout China, one that was without precedent to that point in human

Heavy industry, especially iron production (as well as some high-quality steel), grew at an amazing rate, with the region around the city of Kaifeng producing more iron than anywhere else on earth by the late eleventh century.

history. Without a doubt China was the most urbanized country in the world, with the largest number of megacities. Hangzhou, the capital of Southern Song (1127–1279) and a major mercantile center, probably had a population of about 900,000 in 1270. The city, located in the Yangzi Delta, was noted for its huge warehouses that stood alongside a large constructed lake. In like manner, large numbers of moderate- to large-scale provincial cities grew and prospered in this economic atmosphere, and even larger numbers of market towns sprang up in more distant rural areas. That noted, however, we should remember that most Chinese lived directly on the land and drew their livelihood from it. As with all premodern societies, the basis of China's wealth was still land and its products.

Outside of Afro-Eurasia products were still hand-crafted, and geographic distance and barriers often were formidable but not insurmountable obstacles to long-distance interchange, as the trade networks of Oceania and the Americas make clear. As people around the world demonstrated during this 500-year period, although modes of production, products, and methods of distribution and exchange might differ from culture to culture, economic activity is an essential human endeavor.

—Alfred J. Andrea

■ Introduction: Sub-Saharan Africa— Not as Isolated as Many Suggest

An eminent world historian once remarked that sub-Saharan Africa was peripheral to world history until the modern era. This is a wrong-headed judgment that has no foundation in historical reality. It is certainly not true in regard to economic interchange.

During the period 1000–1500, Africa south of the Sahara was involved in a tremendous amount of regional, transregional, and even intercontinental exchange of goods (and the ideas that traveled with them) in ways that not only precipitated significant cultural adaptations and shifts in a number of African societies but also greatly influenced and enriched the world beyond Africa's shores.

The essays in this section underscore three of the many forms of economic activity that were of primary importance during this half millennium: trans-Saharan trade from and into the savanna empires of West Africa; Great Zimbabwe; and the Swahili cities of coastal East Africa.

If the network of caravan routes that crisscrossed Eurasia has been labeled the Silk Road,

the dromedary-caravan routes across the western Sahara might well be termed the Salt and Gold Roads because these two commodities—salt from the north and gold from the south—defined the trade along them. In 1375 Abraham and Jehuda Cresques of Mallorca crafted a map of Afro-Eurasia subsequently known as the *Catalan World Atlas*, in which they depicted a road of gold stretching across Africa from southwest to northeast, and close by that road the fabled but very real monarch of Mali, Mansa Musa (r. 1312–1337), is shown holding a huge nugget of gold. Of course, as we learn from the lead entry on this topic, salt and gold were not the only commodities exchanged across the Sahara. Trade items included, but were not limited to, cotton and silk textiles, tanned leather goods and pelts, ivory, horses, books, and, tragically, slaves.

Just as these caravan routes connected interior West Africa south of the Sahara with the Mediterranean and beyond, interior East Africa south of the Sahara was connected to the vast ecumene of the Indian Ocean by reason of Great

Zimbabwe and the Swahili cities of the coast. At its apogee in the thirteenth and fourteenth centuries, Great Zimbabwe was the nexus of an extensive agricultural and commercial network, and it seems likely that it was the emporium through which gold, ivory, and other highly valued items (including slaves) were brought to the coastal cities and from there to Arabia, Persia, Iraq, India, Southeast Asia, and even China. On their part, the elites of Great Zimbabwe were able to secure precious trade items from these distant lands. On a more local level, Great Zimbabwe also functioned as a center for local exchange, especially trade in livestock.

The coastal cities of East Africa, which received goods from such interior centers as Great Zimbabwe, enjoyed an economic revolution between 1000 and 1500, and the greatest of these cities was Kilwa, an island port-city off the coast of present-day Tanzania. As Islam made deeper inroads into these cities, book production as well as trade helped drive their economies, and Kilwa also had a textile industry. Ibn Battuta, who visited Kilwa in 1331, complimented the city on the beauty of its houses and its inhabitants for their Islamic piety.

Tied in as these coastal cities were to the vast world of Dar al-Islam, it is no wonder that until the arrival of the Portuguese in the sixteenth century, they flourished commercially and culturally. It is also not surprising that trade wares from faraway China, as well as from closer locales, proliferate within their archaeological sites.

—*Alfred J. Andrea*

Horses, Salt, Manufactured Goods, Islamic Books, Gold, and Slaves—What Was Traded across the Sahara and Why?

Trade across the Sahara Desert originated in the last millennium BCE. Rock art from the Sahara itself, as well as written documents from North Africa, provide evidence for long-distance trade utilizing oxen-drawn carts, which were used to bridge the distances between the desert's scattered oases and the better-watered regions of the savannas in the south and the Mediterranean coast in the north. Though little is known about this early trade, it is believed that the key trade

➤ WHERE WERE THE GOLD MINES OF WEST AFRICA?

Prior to the discovery of the Americas by Europeans, the vast majority of the gold in circulation in Europe and the Middle East came from West Africa. Merchants and scholars in these regions knew that the gold came from somewhere south of the Sahara, but exactly where and how was a mystery. In the tenth and eleventh centuries, for example, Arab geographers wrote that the gold grew in the ground like carrots and was plucked from the soil each dawn. Such myths were obviously the result of ignorance. Since the production of gold was controlled by local Africans, knowledge as to its location was closely guarded.

The truth was far less fanciful. West African gold is alluvial, meaning it is deposited over a wide area in tiny flakes. Nuggets are rare. The gold was collected by excavating large pits in areas where alluvial soil had previously been deposited and then panning the soil to remove the heavy gold flakes. The two regions that accounted for most West African gold were the Bambuhu/Bure and Akan goldfields. The Bambuhu/Bure fields were located near the headwaters of the Niger River in present-day Guinea and Mali. The Akan goldfields were centered on the Black Volta River in what is now Ghana. Both regions are heavily forested and lay outside the borders of the great savanna empires of Ghana, Mali, and Songhai.

—*Jonathan T. Reynolds*

goods included finished works of iron and bronze as well as the region's core trade goods of salt and gold.

As western savanna urban centers such as Kumbi Sallah, Jenne-Jeno, and Goa began to expand rapidly in the first millennium CE, demand for salt in the region grew, just as the rise of Rome in the Mediterranean fostered more demand for West African gold. The introduction of camels across the savannas from the Upper Nile region around 300 CE revolutionized trans-Saharan commerce, since these desert-adapted animals could carry heavier loads greater distances across more forbidding terrain than oxen could cross.

By the second millennium CE, the trans-Saharan trade had expanded both in size and scope. Caravans of well over 1,000 camels were

not uncommon, and the range of goods transported by these expeditions was remarkable. Gold and salt remained key components of the trade, but as the demand on each end of the trade grew, so did the diversity of items exchanged. Exports from the savannas included cotton cloth, worked iron, copper, leather goods (from cattle, goat, and hippopotamus), ivory (raw and carved), animal pelts obtained from the forests to the south, and ostrich shells. Grains were also traded a shorter distance from the savannas to desert-dwelling communities living in the Sahara's southern half. Enslaved individuals were also a component in the trade from the south, though the rigors of the journey kept the numbers of captives relatively small (averaging perhaps 3,000 to 5,000 individuals per year), with concubines and eunuchs for the households of political and economic elites being the main focus of this aspect of the trade.

Items traded out of North Africa were in some ways similar to those traded north. Silk textiles and thread were popular goods, as were worked iron products. Small numbers of slaves from North Africa (and even as far away as Southern Europe) were also imported to serve in the homes of wealthy West Africans. By the thirteenth and fourteenth centuries, two trade goods in particular were beginning to stand out as key components of the trade: horses and books. As western savanna states such as Ghana, Tekrur, and Mali grew in size and influence, so did their desire for military power. The open terrain of the savannas was well suited to cavalry, which allowed states to project power quickly across large distances. However, because of the presence of trypanosomiasis (sleeping sickness), a disease particularly hostile to horses, it was difficult for savanna communities to breed their own mounts. As such, the demand for horses was huge, and owning horses became a marker of elite status for wealthy members of the savanna societies, just as it did in places such as China and Europe.

Books grew in significance as a component trade following the pilgrimage of Mansa Musa, ruler of Mali, in 1324–1325. Musa returned from Mecca with a desire to expand Islamic learning within Mali. He brought not only books but also

scholars and architects with him upon his return. His patronage of education fostered a growing demand for scholarly materials, and books on theology, jurisprudence, medicine, and other topics became a major component of the trans-Saharan trade. However, by the fifteenth century, scholars in the region were often copying and producing works of their own, allowing the region to export its own books to other parts of West Africa. These texts were not only produced in Arabic but also used Arabic script to write in local languages, such as Mande, Bamana, and Hausa. Often referred to as the “library of Timbuktu,” these books actually found homes in mosques and homes across the savanna region. In recent years, the discovery and electronic storage of these texts have provided considerable insight into the intellectual history of the region.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Levtzion, Nehemia, and Randall L. Pouwel. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.
- McKissack, Patricia, and Frederick McKissack. *The Royal Kingdoms of Ghana, Mali, and Songhay: Life in Medieval Africa*. New York: Holt, 1995.

Great Zimbabwe as an Economic Entity

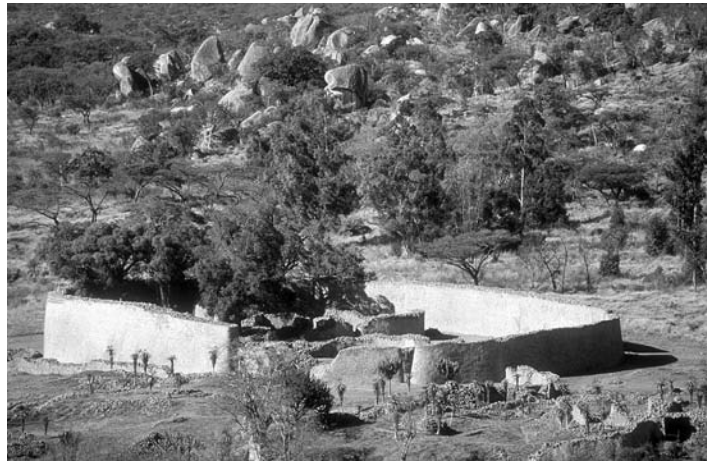
There is general scholarly consensus regarding much of the history of Great Zimbabwe, but questions and academic debates remain regarding the complex society behind these ruins. Some argue that Great Zimbabwe was inhabited from about 900 to 1450 CE and served as a thriving center of trade for more than 500 years. Others mark the development of Great Zimbabwe with the building of stone walls in the twelfth century and claim that it was occupied for only a little more than 200 years. Despite these differences, it is agreed that Great Zimbabwe existed as a key metropolitan area, significantly involved in farming, cattle raising, trade, and commerce. At its peak in the thirteenth and fourteenth centuries, Great Zimbabwe was the largest and most

powerful settlement in eastern sub-Saharan Africa, and the empire occupied an important trade position between the interior and the East African Coast.

Occupying roughly 1,800 acres (720 hectares), the ruins of Great Zimbabwe are situated 200 miles (320 kilometers) inland, almost directly east of the Indian Ocean coastal trading port of Sofala. At the height of power, Great Zimbabwe's reach extended from the edges of the Kalahari in the west to the outskirts of Sofala in the east. Most likely, the massive stone structures were built as status markers and as dwelling places of the elite whose vast wealth was derived from control of cattle, local gold and ivory production, and trade of these goods with Arab and Swahili merchants.

Great Zimbabwe's economy developed in part on regional and long-distance trade. People in the Great Zimbabwe region had been trading with Sofala prior to the development of Great Zimbabwe. Sofala's harbor was the oldest in southern Africa. By the early tenth century, Arab traders were visiting this coastal port in order to trade for gold from the gold-bearing regions of the Zimbabwe plateau. During the fourteenth and fifteenth centuries, Sofala remained a key southern outpost of the Islamic sultanate of Kilwa, and Arabs maintained trade relations with the Great Zimbabwe state. At Great Zimbabwe, the major administrative and commercial center elaborated a highly stratified society separated into hierarchical classes dividing common tribesmen from their rulers. These social divisions were demonstrated by the elites' choice of hilltop locales for their residences and the erection of enclosures of massive and impressive architectural design.

The villagers, or common people, of Great Zimbabwe did not enjoy luxurious lifestyles. Trade goods found mostly within the confines of the Great Enclosure demonstrate that mainly the elite families were able to import luxury items. Goods from India, China, and the Islamic world were imported to Sofala and sent into the interior. Excavated items found at Great Zimbabwe include a glazed Persian bowl from the thirteenth or fourteenth century, Chinese celadon dishes, shards from a Chinese stoneware vessel,



The Great Enclosure at Great Zimbabwe, most likely built by Bantu-speaking Shona. Great Zimbabwe, which comprises 100 acres of stone buildings, was the center of a thriving trade region up until the fifteenth century. (Corel)

➤ THE HISTORICAL PUZZLE OF GREAT ZIMBABWE

The origins of Great Zimbabwe are fully African, but questions about how this vast society developed and why it declined remain a matter of debate. For generations the abundant grasslands of the Zimbabwe plateau provided excellent grazing for cattle, allowing local pastoralists to grow wealthy with an ever-increasing number of cattle. However, poor soil conditions would not have supported the large-scale crop production necessary to feed Great Zimbabwe's population, so grain and other food staples were supplied by distant farmers. The plateau was rich with gold deposits, and the trade in gold clearly helped to develop the local economy and create prosperity; however, much of the gold trade occurred almost a century after the building of Great Zimbabwe. Thus, key questions asked by archeologists and historians familiar with the site remain unanswered: Why did a vast civilization develop in this location? How could such an influential power develop in an area so ill-suited for large-scale human habitation? Could cattle wealth and trade alone have afforded the inhabitants of Great Zimbabwe a superior way of life, or was there something else, a political or religious ideology, that gave them a competitive edge over neighbors and enabled them to harness the manpower necessary for the construction of the site? This remains the historical puzzle to be solved.

—Lorna Lueker Zukas

and fragments of engraved and painted Near Eastern glass. Other more common imported items include cotton cloth and Persian glass beads. Exported items included ivory, gold, leopard skins, iron, copper, wax, and other products. Production of crops and livestock also provided profit as they were sold along the trade routes.

Great Zimbabwe was part of the oceangoing trading networks of the Eastern Hemisphere that brought African goods to China and Chinese goods to Africa. Ships leaving Sofala sailed north along the Swahili coast to Kilwa and then along the Red Sea and the Persian Gulf, traveling to trading ports in India and through the Strait of Melaka (Malacca) to China. The rise of trade on the east coast of Africa coincides with the period of Great Zimbabwe's political dominance, and this is the period of greatest prosperity for the Swahili trading city of Kilwa.

The trading of gold from Sofala to Kilwa, on which Great Zimbabwe's wealth depended, reached its height in the fifteenth century and then went into a steep decline, precipitating the rapid decline of Great Zimbabwe as a political and mercantile center. The site was abandoned around 1450, perhaps as a result of declining economic opportunities coupled with environmental degradation as a result of overpopulation. As Great Zimbabwe declined, power shifted northward to new gold-producing regions on the Zambezi tributaries.

—Lorna Lueker Zukas

Bibliography

- Beach, David. *The Shona of Zimbabwe, 900–1850*. Portsmouth, UK: Heinemann, 1980.
- Coquery-Vidrovitch, Catherine. *The History of African Cities South of the Sahara: From the Origins to Colonization*. Princeton, NJ: Markus Wiener, 2005.
- Garlake, Peter. *Great Zimbabwe*. New York: Stein and Day, 1973.
- Garlake, Peter. *Great Zimbabwe: Described and Explained*. Harare: Zimbabwe Publishing House, 1982.
- Pikirayi, Innocent. *The Zimbabwe Culture: Origins and Decline in Southern Zambezi States*. Walnut Creek, CA: AltaMira, 2001.
- Randall-Maciver, David. *Mediaeval Rhodesia*. New York: Negro University Press, 1969.

Trade on the East African Coast to 1500

Since at least the early centuries of the Common Era, coastal East Africans have been involved in long-distance trade. The first evidence of this comes from a work called the *Periplus of the Erythrean Sea*, a guidebook to Indian Ocean trade written during the first or second century CE in Greek by a merchant from Alexandria in Egypt. According to the book, trade with the East African coast was dominated by South Arabian merchants. They along with some Indian and Greco-Roman merchants sailed south on the monsoon winds to a place called Rhapta, where they exchanged iron, glassware, wheat, wine, and cloth for ivory, tortoiseshell, beeswax, and a few slaves. Judging from the *Periplus*, Rhapta was probably in either present-day Kenya or Tanzania. However, archaeologists can find no trace of Rhapta and presume that it was either situated near the mouth of a river that has since shifted and destroyed the site or was an annual trade fair site that came into existence only while the visiting merchants were there and not a permanent settlement. A few Roman coins have turned up in East Africa, but other than that there is not much archaeological corroboration of the trade described in the *Periplus*.

There is only modest evidence of trade in East Africa in the years between the *Periplus* and the year 1000. During that time, villages on the coast grew into towns, and beginning in the early eighth century there was a Muslim presence on the coast, probably resident Muslim merchants from Arabia. By the early tenth century there were large congregational mosques in several Swahili towns, and it appears that the majority of the coast's city dwellers were Muslims. Again, it appears that the root of this development was a growing number of Muslim merchants on the coast and the conversion of local African merchants to Islam. But it is unknown what goods were traded and the volume of that trade.

Between 1000 and 1500 the commercial life of the East African coast went through a revolution. The volume of trade increased as new trade routes to Central Africa brought gold from the interior to the coast, enriching the cities that

controlled the trade. The products of earlier trade, such as ivory, tortoiseshell, and slaves, continued to be exported, and trade became increasingly central to the economic life of the coast. Trade also seems to have increased the complexity of the local economy and triggered the growth of local manufactures and the local minting of coins.

Before the European discovery of the New World and the flood of gold and silver that came with it, Africa was one of the major sources of the gold used in Eurasian commerce. While the gold that came across the Sahara from West Africa is better known, East Africa was a major supplier as well. The gold that the Swahili cities sold to visiting Arab merchants came from mines in what is now Zimbabwe. Many states emerged in the gold-producing areas, but the best known of them was the one that produced the Great Zimbabwe, a huge stone enclosure that was probably a royal palace and fortress. Trade routes exceeding 500 miles (800 kilometers) in length reached from the goldfields of the interior to the coastal city of Sofala in present-day Mozambique. Curiously, Sofala never controlled the gold trade itself. It is so far south that ships that came from Arabia or from India could not be sure of getting home in a single monsoon cycle if they went all the way to Sofala. Instead they relied on merchants from more northerly cities to move the gold from Sofala to points on the coast that enabled them to get home in a single year. The city that dominated this trade the longest was Kilwa, which was situated about as far south as Arabian ships could get in a single year's monsoon cycle. Kilwa grew rich off this trade and became the biggest and most opulent of the Swahili cities.

Gold was the only commodity that had a supply chain that stretched deep into the interior. The other major trade goods—ivory, various other forest products, and slaves—were obtained closer to the coast, often from the Swahili's immediate neighbors. East African ivory has been in demand since antiquity in part because it is so easily worked and because it ages nicely. Although India has its own elephants, it was a major market for the superior African ivory because ivory bangles were part of a married woman's attire and usually were cremated with her at her

THE MITEPE

One of the big questions concerning the Swahili Coast during its commercial heyday (1000–1500) is whether Swahili merchants were primarily intermediaries between visiting Arab and Indian merchants and the people of the East African interior or whether they were involved in the broader trade networks of the Indian Ocean. In short, were they merchant-sailors or stay-at-home merchants?

They certainly had boats that were seaworthy enough to make it to Arabian ports. These were the famed *mitepe* (sing. *mtepe*) that plied East African waters from at least the fourteenth century until the middle of the twentieth century. *Mitepe* were built entirely without iron. Their hulls were sewn and pegged rather than nailed. *Mitepe* used sails woven from palm fronds rather than cloth sails. These boats were surprisingly seaworthy and in the nineteenth century were used to smuggle slaves to South Arabian ports.

Interestingly, there are no reports of these vessels being sighted in the major ports of the Indian Ocean during our period. There is a report of a merchant from Kilwa in Melaka (Malacca) on the Malay Peninsula, but it does not specify how he got there. Thus, it may be that the Swahili used their own boats at home but relied on others to move goods on the longer routes.

—Erik Gilbert

death. Thus there was a steady demand for replacement ivory to make these bangles. Slaves likewise were in steady demand, but the numbers exported seem to have been relatively low and sustainable in the sense that they were supplied locally for many centuries.

As coastal trade grew, the local economy became more complex. Some of the major towns began to produce their own coinage, something virtually unknown elsewhere in sub-Saharan Africa. In some cases these were high-value coins made from precious metals, but at Mtambwe on the island of Pemba, archaeologists have found a trove of tiny copper coins. These coins were low in value, which suggests that money may have been used for mundane everyday purchases as opposed to major transactions for which gold

and silver coins were used. Local manufactures also flourished during this time. Smiths produced high-quality iron and semisteel for local consumption and for exchange with the interior. There was a cloth industry, and in the city of Kilwa scribes copied and bound books for a regional trade.

Also during this period, trade goods show up in many archaeological contexts. Chinese porcelain was widely used to decorate tombs and even mosques. Perhaps the most telling sign of the ubiquity of trade goods during this time is that

even now when farmers on the offshore islands hoe their crops, they routinely turn up broken bits of Chinese porcelain. Trade had so thoroughly penetrated Swahili society that it left behind plenty of exotic trash.

—Erik Gilbert

Bibliography

Gilbert, Erik, and Jonathan Reynolds. *Africa in World History*. Upper Saddle River, NJ: Prentice Hall, 2004.

Horton, Mark, and John Middleton. *The Swabili*. Oxford, UK: Blackwell, 2000.

■ Introduction: The Mediterranean and the Black Sea—The West's Portals to the Riches of the Indies

Both the Mediterranean and Black seas served as gateways for the West to the riches of Farther Asia since antiquity when, beginning in the eighth century BCE, Greeks established trading-posts and, later, colonies along the periphery of each. Indeed, Byzantium, which commands the entrance to the Bosphorus, the narrow, roughly 23-mile- (37 kilometer-) long strait that connects the Sea of Marmara with the Black Sea, was founded in this fashion in the seventh century BCE. To the Romans, of course, the Mediterranean was *Mare Nostrum* (Our Sea), essentially a huge salt-water lake that lay at the core of the empire, and the Black Sea remained its sea-water avenue to Inner Asia.

For military and economic reasons, as well as religious ones, Constantine I, the Great, transformed Byzantium (Byzantion) into Constantinople, the New Rome and capital city of his Christian Roman empire, in 330 CE. Moreover, Anatolia, which runs along the southern coast of the Black Sea, became the heartland of the Eastern Roman, or Byzantine, empire. As in Greco-Roman antiquity, the shores of the Black Sea were a key source of grain for the Byzantine empire. During the reign of Basil II, the Great (r. 976–1025), the Byzantines dominated the southern and western littorals of the Black Sea and also held the southern portion of the Crimea (the peninsula jutting into the north-central Black Sea

in present-day Ukraine). Despite the eleventh-century incursions of Turks into Anatolia, the Byzantines managed to hold onto control of most of the southern and western coasts of the Black Sea and their toe-hold in the Crimea until the late twelfth-early thirteenth century. Further advances by the Seljuks, the rise of the Bulgarian empire, the expansion of the Russian state, and the conquest of Constantinople by the Latins in 1204 severely changed the situation and drastically reduced Byzantium's hold on its Black Sea regions. Adding to this critical situation was the severe decline in numbers and sea-worthiness of the empire's naval and merchant fleets during the latter half of the twelfth century and following.

Just as the Byzantine empire was surrendering its hold on the Black Sea, however, Italian merchant powers, notably Venice and Genoa, were becoming a major factor in Black Sea commerce. Before its entry into the Black Sea, the Latin West first had to reestablish itself in the Mediterranean. The migrations by various so-called fringe peoples into western Europe between the fourth and tenth centuries, and their establishment of kingdoms and other states, broke the back of Roman unity and the Latin West's focus on the Mediterranean. Although direct Western trade in the Mediterranean did not cease totally, it declined to a trickle for several centuries, especially from the sixth through ninth centu-

ries. Jewish merchants known as Radhanites (*al-Radhaniyya*), with ties to a network of trade that stretched all the way to India and China, provided Western Europe with most of its relatively few exotic goods during the eighth and ninth centuries, and exported from the West such high-end commodities as slaves and furs.

The tenth century, however, began a long period of economic expansion for all three civilizations that bordered or were situated in the Mediterranean—Islam, Byzantium, and the Latin West. Islam's commercial cities along the Mediterranean coast stretched from Syria-Palestine to the Maghreb (western North Africa) and al-Andalus (Islamic Spain), making Muslim merchants the sea's dominant factors during the tenth and eleventh centuries. Yet, traders from Latin Europe's maritime cities, such as Amalfi in southern Italy, were able to become junior (yet valued) partners in this commerce. Special buildings for foreign merchants, known as *fanadiq* (singular *funduq*) in Arabic (transliterated to *fondaco/fondaci* by Italians), began to spring up, offering shelter, protection, and privileges to commercial itinerants. It also allowed governments to keep these outsiders (and often non-believers) under surveillance.

In time, the *fanadiq* evolved into "quarters," which at their best (or worst, depending on one's perspective) had their own officials and laws and even churches or mosques. Such self-governing mercantile quarters became especially powerful and important in the Latin crusader states' port cities after 1100 and down to 1291. Through these *fondaci* and quarters, West African gold and luxury items from the East, such as silks, cottons, spices, exotic woods, pharmaceuticals, brocades, and dyes, flowed in increasing volume into the West. Luxury items, however, were only part of the total volume of imported goods, as the introductory essay for the topics covering commerce and industry in the Indian Ocean will show.

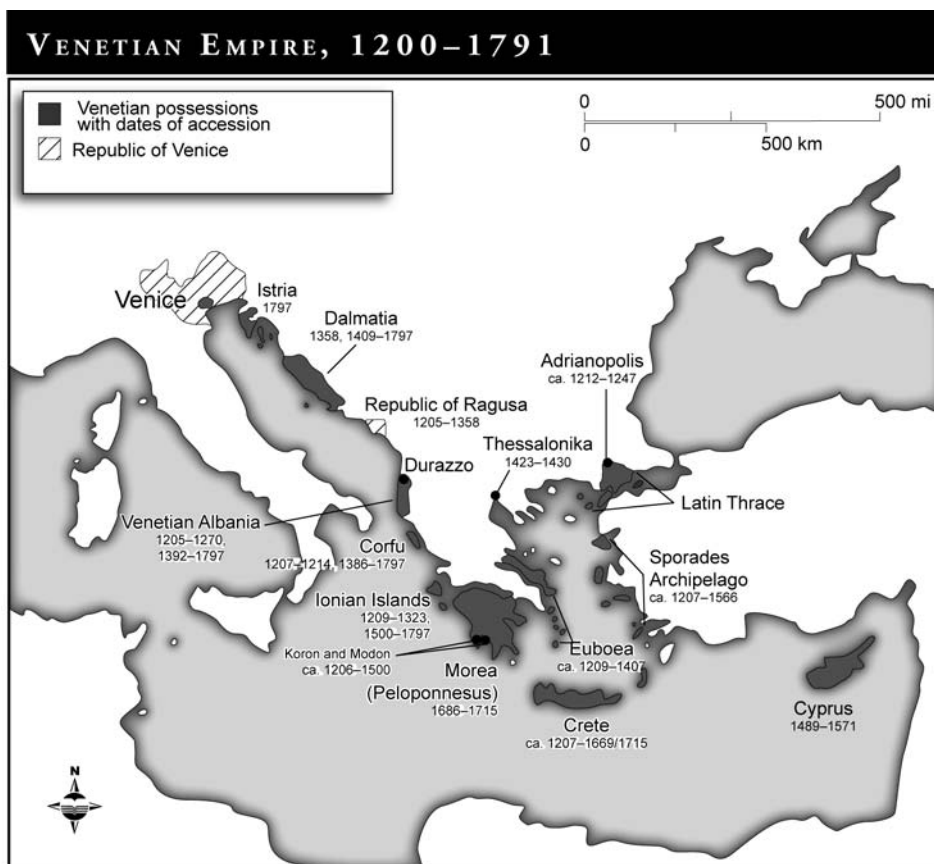
The maritime cities of Latin Europe, especially Pisa, Genoa, and Venice, but not just these three northern Italian city-states, were growing demographically and economically, and their mercantile reach was expanding well before the First Crusade (1096–1099). In 1082, for example, Venice secured substantial commercial conces-

sions from the Byzantine empire, which awarded Venice the position of highly favored, untaxed trading partner, with an independent quarter in Constantinople, in return for its promised naval support against the Normans of southern Italy. Such rapid growth positioned these three Italian maritime powers to take full advantage of opportunities afforded by the crusades, and their opportunism established them as major economic forces in the eastern Mediterranean.

Opportunism also allowed these maritime powers to move into the Black Sea in a significant way, following the Latin conquest of Constantinople in 1204. Western vessels had traded in the Black Sea prior to 1204, but the establishment of the Latin Empire of Constantinople (1204–1261) opened it to unrestricted traffic by Western merchants, especially the Venetians, who were now firmly ensconced in Constantinople and other territories seized from the Byzantine empire. Joining the Venetians in this windfall were merchants from Pisa, Ancona, Amalfi, and Provence. Genoa, which had tense relations with Venice and whose quarter in Constantinople suffered diminution after 1204, played a minor role—at least for the moment. Following Mongol consolidation of southern Russia around 1240, the Venetians and other Western merchants were able to increase the range of their commerce both around the periphery of the Black Sea and farther eastward. In 1260, two Venetian merchants, Niccoló and Matteo Polo, the father and uncle of Marco Polo, passed through Constantinople to the southern coast of the Crimea and from there across Central Asia to the court of Khubilai Khan on the first of their two expeditions to China. The Black Sea was now fully integrated into the Mediterranean mercantile system, and Italian traders, taking advantage of the Pax Mongolica, were the driving force.

When Byzantium recovered Constantinople in 1261, the empire could not reverse the trend. Before 1204 it had controlled trade through the Bosphorus and with the Black Sea in order to protect domestic production, such as the silk industry of Thebes. But there was no turning back to pre-Conquest protectionism.

Genoa, which the restored Byzantine emperor looked upon favorably, was the chief beneficiary. Its quarter in Galata, which is situated



across the harbor of the Golden Horn, grew rapidly into a self-governing town. Even today, its nine-story tower constructed in 1348 dominates the skyline. Genoese merchants sailing from Constantinople became a fixture in the Black Sea. In 1266 they established a colony at Caffa in the Crimea. Close by was the Venetian trading center at Soldaia, and sometime in the 1260s the Venetians established a second entrepôt at Tana, which lay at the mouth of the Don River, thereby giving easy access to the heartland of Russia. Additionally, both Italian powers established trading centers along the southern coast of the Black Sea in an area known as Trebizond. Merchants traveling east and west along the northern Silk Road, made relatively secure by the Mongols, used these ports to transport silver to the East and exotica to the West. Upon disembarking at a Black Sea port, some Italian merchants traveled across Central Asia all the way to Cathay (northern China), where they established small diaspora communities. Many more traveled southeast from the Black Sea to Iran and Iraq and from there to

India and the Indian Ocean, and some went even farther east to southern China. Yet, such voyagers and their luxury goods were not the mainstay of merchant traffic across the waters of the Black Sea. Grain and other agricultural produce, timber, furs, and slaves provided the real profits for Genoese and Venetian merchant-mariners. Slaves were in high demand, especially for the armies, courts, and harems of the Mamluk sultans of Egypt and Syria and as laborers on eastern Mediterranean plantations, principally on islands possessed by Genoa and Venice. Tana, in fact, served as one of Afro-Eurasia's premier slave emporia.

By the mid-fourteenth century, fortunes were changing, and the Black Sea was becoming less hospitable for Westerners. In 1343 a massacre of Western merchants took place in Caffa, and three years later, it and Tana were besieged by Mongols from the Golden Horde. There is good reason to accept the traditional story that bubonic plague—the Black Death—which traveled from east to west across the heartland of Eurasia

in the 1330s and 40s, was carried to Europe by Latins fleeing these sieges. It is unlikely, however, that these were the only two points from which the plague reached the West. The Genoese rebuilt Caffa after the siege of 1346, but it and Tana were leveled by the forces of Timuri Leng (Tamerlane) in 1395. Rebuilt again, Caffa was lost to the Ottoman Turks in 1475; likewise, Venetian control over a rebuilt Tana ended sometime after the mid-fifteenth century. The Genoese and Venetian colonies in Trebizond also fell to the Ottomans during the fifteenth century.

If the Latin West wanted direct mercantile contact on a regular basis with the farther reaches of “the Indies,” it would have to find new routes.

—*Alfred J. Andrea*

The Mediterranean—Meeting Place of Three Civilizations

Despite ongoing wars and religious tensions, trade flourished in the medieval Mediterranean. Fur and wood from Scandinavia, ginger and cinnamon from Indonesia, gold and slaves from the Sudan and West Africa, copper and salt from Morocco, Frankish swords, English wool, Indian pepper, and Chinese silk all found their way onto vessels that sailed regularly between North Africa, Southern Europe, and the ports of the Levant, linking Latin Christendom, Byzantium, and the Muslim world in a global market.

Even before the crusades led to increased commerce, Muslim, Greek, and Italian merchants conducted an active trade in the eastern Mediterranean. As early as the mid-tenth century, Byzantine merchants sailed regularly from Constantinople to Alexandria and then up the Nile River to Fustat (Old Cairo), where they were allowed to establish a marketplace-residential building, called a *funduq* in Arabic. There they traded storax (a vanilla-scented gum resin used in medicines and perfumes), timber, and a highly prized Byzantine silk for expensive commodities from the Indian Ocean such as spices and dyes that had been shipped up the Red Sea, transported across the desert in caravans, and then floated down the Nile.

Conversely, Muslim merchants, especially Egyptians and Syrians, had also by the mid-tenth century established trading headquarters and

➤ “SPICES” TRADED IN THE MEDITERRANEAN

The term “spice” meant more than seasonings to medieval European merchants. It encompassed all sorts of raw materials. The following excerpt from a list of 288 “spices” compiled by Francesco di Balduccio Pegolotti of Florence in the first half of the fourteenth century suggests the wide variety of goods traded throughout the Mediterranean and their diverse places of origin.

Quicksilver
Castile alum
Anise
Sheet silver
Fresh oranges
Rose water
Alcohol
Cotton of Syria
Borax
Wax of Riga
Cultivated cardamons
Cinnabar
Paper of Damascus
Cassia bark
Red corals
Elephant tusks
Pistachios
Fennels of Tunis
Cinnamon flowers
Malabar ginger
Cloves
Gum Arabic
Frankincense
Mace
Myrrh
Coconut
Theban opium
Round [black] pepper
Pearls
Dried grapes of Armenia
Sugar of Cairo
India gingerbread

—*David Blanks*

Source

Robert S. Lopez and Irving W. Raymond, eds.,
Medieval Trade in the Mediterranean World
(New York: Columbia University Press, 1955),
109–114, *passim*.



residences called *mitata* in the Byzantine capital of Constantinople. The imperial government even permitted the building of a mosque in the city for the use of foreign residents and visiting merchants.

The Italians, too, were active in the Levant well before the First Crusade (1096–1099). Merchants from Genoa, Pisa, Venice, and especially Amalfi had set up their own *fondaci* in Constantinople, Antioch, Jerusalem, and some North African ports. In 996 there was a popular uprising and massacre of Amalfitans in Fustat. Perhaps they were enraged at the presence in their midst of infidel foreigners who did not respect Muslim prohibitions against drinking wine and eating pork. Normally, however, even in the face of piracy, warfare, religious differences, and sectarian violence, trade was protected and encouraged by state officials, Egyptian and Byzantine alike.

The capture of Jerusalem, Acre, Tripoli, and the ports and hinterlands of the surrounding territories by crusaders led to a gradual opening up of new markets for Italian traders, especially the

Venetians and the Genoese. Both the Byzantines and the new Latin Christian rulers gave them important trading rights and concessions. In 1092 on the eve of the First Crusade, the Byzantine emperor Alexius I issued the Golden Bull, which allowed the Venetians to trade freely throughout the empire except in Crete and Cyprus and a few of the ports of the Black Sea; within a century more than 60,000 Italians were living and working in Constantinople.

Similarly, rulers of the new crusader states gave Italians extensive trading privileges in the so-called Latin East. In 1124, for example, in return for their assistance in destroying the Fatimid fleet in Egypt and leading an assault on Tyre, the Venetians were given a third of the city and exemption from customs duties. The Genoese had been given similar customs exemptions in Caesarea in 1101, where they helped the king of Jerusalem capture and sack the Palestinian port city, and earlier they had received extensive privileges for their crucial assistance in capturing Antioch in 1098. Pisa enjoyed special privileges at

Jaffa and Beirut in return for its naval support in capturing these ports. Other settlements were established throughout the Latin East and in Muslim and Byzantine lands by mariner-merchants from southern France, Catalonia, Dalmatia, and even Norway. Throughout the twelfth, thirteenth, and fourteenth centuries, raids and trading concessions gave way to the establishment of permanent mercantile communities. It is worth noting, however, that similar Muslim communities were not set up in the Latin West due to a combination of Christian intolerance and the fact there was plenty of room for lucrative Muslim expansion to the east, where local rulers and officials successfully blocked European access to overland trade routes except during the period of the Pax Mongolica (ca. 1250–ca. 1350).

Military and commercial aggression was by no means limited to the eastern Mediterranean. The crusading ideal was equally at play in Muslim Spain, North Africa, and the western islands, where Italian and Catalan adventurers worked up and down the coasts. In 1088 Genoese merchants captured al-Mahdiah, a large seaport in Tunisia, returning the city to its ruler under the condition that they be exempted from all tolls and taxes.

Nor was this emerging global market limited to gold and luxury items. War materials such as timber and iron were sent to Egypt even at the height of hostilities. Black Sea fish, East European and African slaves, Egyptian alum (used in the Italian textile industry), wool from the north, grain, wine, oil, and Cretan cheese were all transported and sold regularly throughout the region.

With the discovery of the sea routes to India by the Portuguese and to the New World by the Spaniards in the late fifteenth century, this global Afro-Eurasian market was extended to a worldwide scale, ultimately leading to the expansion of Europe, colonialism, and the modern international capitalist system.

—David Blanks

Bibliography

Abulafia, David. "Asia, Africa, and the Trade of Medieval Europe." In *The Cambridge Economic History of Europe*, Vol. 2, *Trade and Industry in the Middle Ages*, 2nd ed., edited by M. M. Postan

and Edward Miller. Cambridge: Cambridge University Press, 1987.

Abulafia, David. *Mediterranean Encounters, Economic, Religious, Political, 1100–1550*. Aldershot, Hampshire, UK: Ashgate/Variorum, 2000.

Jacoby, David. *Commercial Exchange across the Mediterranean: Byzantium, the Crusader Levant, Egypt and Italy*. Aldershot, Hampshire, UK: Ashgate/Variorum, 1988.

Jacoby, David. *Trade, Commodities and Shipping in the Medieval Mediterranean*. Aldershot, Hampshire, UK: Ashgate/Variorum, 1997.

Lopez, Robert S. "The Trade of Medieval Europe: The South." In *The Cambridge Economic History of Europe*, Vol. 2, *Trade and Industry in the Middle Ages*, 2nd ed., edited by M. M. Postan and Edward Miller. Cambridge: Cambridge University Press, 1987.

Runciman, Steven. "Byzantine Trade and Industry." In *The Cambridge Economic History of Europe*, Vol. 2, *Trade and Industry in the Middle Ages*, 2nd ed., edited by M. M. Postan and Edward Miller. Cambridge: Cambridge University Press, 1987.

Overland Trade in Anatolia Under the Seljuks

The Seljuks were a powerful Turkoman dynasty that established its dominance of Anatolia with the defeat of the Ghaznavids at the Battle of Dandagan in 1040. The Anatolian Peninsula (sometimes inaccurately called Asia Minor) had historically been a crossroad for Afro-Eurasian trade for millennia by reason of the Tin Road (inaugurated ca. 2700 BCE), the Persian Royal Road (from the sixth century BCE to the mid-sixth century CE), and the Silk Road, branches of which stretched to several of its port cities along the Mediterranean, such as Smyrna (present-day Izmir) and Antalya. As the Byzantine empire's control over Anatolia was weakening politically and militarily in the late eleventh century, the Seljuks assumed control of much of the overland trade through the peninsula, especially the significant volume of trade that passed through Konya.

The Seljuks developed and fortified their inland cities and attracted mercantile interests from as far away as Genoa, Pisa, Florence, and Russia. In order to facilitate trade and to ensure the safety of travelers from an inhospitable climate and

➤ A SELJUK CARAVANSARY

Throughout their overland trade routes, the Seljuks established caravansaries, or *hans* or *ribats* (religious fortresses), to assist travelers and merchants. Founded upon the Islamic principles of charity and hospitality, the caravansaries were located throughout Anatolia and Iran approximately every 19 to 25 miles (30 to 40 kilometers), or a day's journey, and provided up to three days of food, fodder, accommodations, and, in some cases, entertainment, for travelers. The word “caravansary” is Persian in origin, deriving from *karwan* (group) and *saray* (large inn). As the harsh desert and mountainous climates of the region made overland trade formidable, the earliest caravansaries were thought to have originated as a protective walled enclosure around a well or water supply. Furthermore, caravansaries offered safety from theft and robbery to merchants and their goods. Caravansaries consisted of a rectangular walled courtyard structure that was simple and plain in decoration except for the main portal door, which was generally ornate and decorated with Quranic calligraphy. The caravansary structure itself contained rooms and sections for various purposes including lodging quarters, storage depots, and stables. As caravansaries were charitable institutions, they were often built by imperial or wealthy patrons as pious endowments.



Courtyard and mosque of the Sultan Han caravansary near Kayseri, present-day Turkey. (Vanni Archive/Corbis)

Caravansaries in Anatolia often had at their centers freestanding mosques. The Great Han caravansary, the largest in Anatolia, was built by Sultan Aleyeddin Keykubad I between 1229 and 1236. Located near Kayseri, between Aksaray and Konya, this caravansary included separate areas for prayer, bathing, and sleeping and service areas for kitchen staff, physicians, and musicians. Many modern towns and roads of Anatolia are believed to be centered around medieval caravansaries.

—Ruma Niyogi-Salhi

theft along these trade routes, the Seljuks built caravansaries. These were charitable foundations that provided food, lodging, places of worship, and entertainment to travelers and merchants at intervals of approximately 19 miles (30 kilometers).

The arrival at the end of the eleventh century of European crusaders, who established states both within Anatolia (such as the county of Edessa) and along its periphery, greatly increased Anatolian trade. Europeans developed an acute taste for Oriental goods, Chinese luxury items, Islamic textiles and handicrafts, and even religious souvenirs that were traded in major inland Anatolian cities such as Sivas, Aksaray, and Kayseri. These cities were linked overland to the major trading centers in Tabriz (Iran), Baghdad, and Aleppo (Syria).

Although the Seljuks mainly imported their goods for trade to Europe, they did develop local industries for trade among themselves. Local trade within Anatolia was often handled by Armenians or Greeks living in the cities. The currency for trade was the *dirrbem*, and most of the coinage used by the Seljuks was struck at the mint in Konya. The Seljuks also accepted Fatimid coins, Syrian coins from Aleppo, and the Florentine *florin* as legal currency. More importantly, the Seljuks made extensive use of the Arabic and Islamic banking system of *bawala*, or trust, whereby money could be transferred at any place within Islamic lands by way of a handshake and verbal agreement, a system that continues to this very day in Islamic countries.

Major overland trade routes crossed Anatolia in all directions. Some have speculated that the

well-established paved roads of Turkey today follow the original medieval Seljuk roads. The Grand Road, or Ulu Yol, was an axis connecting Konya, Aksaray, and Kayseri. Other important routes included the High Road between Alanya and Konya, and numerous caravan paths led from Konya to the Mediterranean port cities in the south.

Overland trade in Anatolia was greatly weakened by the Mongol invasions of 1242–1243 that fundamentally destroyed sedentary life and the urban infrastructure in most areas. The Mongol conquest of much of Anatolia shifted the control of power to other Turkoman warrior clans of the frontier, most notably to the Turkish group led by Ertugrul (d. 1280) and his son Osman Bey, the founders of the Ottoman empire.

—*Ruma Niyogi Salhi*

Bibliography

- Asatekin, Gül, and Georges Charlier. *Along Ancient Trade Routes: Seljuk Caravanserais and Landscapes in Central Anatolia*. Rekem-Lanaken, Belgium: Maasland, 1996.
- Cahen, Claude. *Pre-Ottoman Turkey: A General Survey of the Material and Spiritual Culture and History, c. 1071–1330*. London: Sidgwick and Jackson, 1968.
- Rice, Tamara. *The Seljuks in Asia Minor*. New York: Praeger, 1961.

Trade under the Ayyubids and Mamluks

Muslim conquests during the seventh and eighth centuries had brought together a variety of formerly hostile regions under the control of the Islamic empire, or Dar al-Islam. Under the Umayyad (661–750) and especially the Abbasid (750–1258) caliphates, these territories were entwined more firmly together by three common factors: settled agriculture, urbanization, and long-distance trade. As new cities were created, they stimulated a demand for all kinds of goods, from timber to food and from clothing to luxury items. Cities depended on agricultural areas to produce surpluses to match the increased needs of the growing population. This need was met by the arrival of new crops and farming techniques, which significantly changed agriculture throughout Eurasia.



View of Cairo showing the defensive walls originally constructed by the Ayyubids, and later added to by the Mamluks and Ottomans. (Library of Congress)

While many regions had been connected by ancient transcontinental-transoceanic trade routes, under the banner of Dar al-Islam the east-west exchange of goods and technical achievements expanded significantly. Merchants, soldiers, missionaries, diplomats, and adventurers traveled across the Muslim realms and by so doing encountered new foods, fashions, architectural styles, military strategies, and other goods and ideas. The eleventh, twelfth, and thirteenth centuries brought waves of invaders to the Middle East, including European crusaders and Asian Mongols. Despite the warlike intentions of both groups, each served to stimulate trade by introducing new goods and technologies and consolidating existing trade routes.

When Saladin, the great Muslim hero of the crusades and founder of the Ayyubid dynasty (1171–1250), died in 1193, he left his descendants a rich empire that was strongly positioned to dominate the trade routes of the medieval world. Economically, the Ayyubid period was one of growth and prosperity, particularly in Egypt. The Ayyubids oversaw a major rise in the status of Egypt in the Sunni world. The capital city of Cairo became not only an economic center but also the cultural and intellectual center of the Muslim world. Building on the policies of the

➤ DAMASCUS—CITY OF STEEL AND COMMERCE

Syria lies at the crossroads of the Old World, with routes extending east to India and China, west to the Mediterranean and Europe, north to Central Asia and Russia, and south to Africa and the Indian Ocean. Intercontinental and transoceanic trade in necessary and luxury goods produced great wealth for the inhabitants of its cities, particularly Damascus. As a result of its enviable position between ancient and medieval civilizations in the East and West, Damascus was uniquely suited to lead developments in many key industries. Under the Umayyad caliphate, which made Damascus its capital, and the Ayyubid caliphate in Baghdad, Damascus was a leader in several of the most technologically dynamic industries, including glass, ceramics, fabric, and metalworking. Damascus became especially famous for two developments. The first was a new kind of fabric, damask, that was named after the city and contained elaborate patterns woven into cloth. The second was Damascus steel used in Middle Eastern sword making from around 1100 to around 1700. Syrian swords were of an almost mythical sharpness and strength and were purportedly able to cut through the crusaders' European swords and even rocks without losing their edge. Although modern sword smiths are sometimes able to mimic the complex designs found on the surface of medieval Damascus steel, the actual technique for making these legendary swords remains something of a mystery.

—Julie T. Abouzelof

previous Fatimid dynasty (969–1171), the Ayyubids succeeded in firmly shifting the axis of east-west trade from Baghdad to Cairo. Because they controlled Yemen, the dynasty had control over the Red Sea and Persian Gulf. This gave the Ayyubids an important commercial and strategic advantage over other Muslim dynasties by allowing them to dominate the spice and incense trade.

The east-west trade routes controlled or used by Muslim merchants were responsible for introducing a variety of specialized goods and new ideas to the medieval world. For example, China was known for its fine porcelains, silks, horses, jade ornaments, tea, camphor, and other luxury items. Likewise, India exported all manner of

crops, from henna to apricots to cotton, as well as a variety of precious stones. The various islands of the Indian Ocean traded in spices, scents, and tortoise shells. Many of these goods were brought to the West along the ancient Silk Road. Italian, French, and Catalan merchants in the eastern Mediterranean used ports under Ayyubid control as well as port cities in the crusader states. These merchants exported goods produced throughout the Middle East and along the Indian Ocean, including fabric, ceramics, glass, and spices, to anxious markets in Europe. Trade also flowed east, spreading European goods such as timber, amber, and fur to cities in western and central Asia. The trade routes of Dar-al-Islam extended south to West and East Africa as well from which slaves, gold, and exotic pelts and ivory from sub-Saharan Africa were exchanged for goods from other regions.

The Mamluk dynasty (1250–1517) succeeded the Ayyubids as the primary military and economic power of the Sunni world. During the Turkish Mamluk period (1250–1382) the new rulers of Egypt continued many of the favorable trade policies initiated by their predecessors. For example, commercial relations between Venetian and Genoese merchants and the Mamluks remained largely friendly despite lingering hostilities between the Muslim and Christian realms caused by the crusades. However, during the Circassian Mamluk period (1382–1517) local and international trade declined significantly. The Mamluk monopoly on the spice trade in the Indian Ocean was eventually taken over by the Portuguese, and other Mamluk trade monopolies were increasingly threatened by the Ottoman empire from the mid-fifteenth century onward.

Possibly the best primary sources for information on trade during the Ayyubid and Mamluk periods can be found in the business and personal documents of Jewish merchants from the Cairo Geniza. Jewish religious beliefs dictate that any writing that contains the name of God should be buried like a human body in a repository known as a *geniza*. The Cairo Geniza preserved almost 200,000 documents spanning eight centuries, including the correspondence of merchants extended across all the main ports of the Mediterranean and the western and central Indian Ocean. The Cairo Geniza was opened in

1890 after being discovered during a renovation following a fire, and its contents were then scattered to libraries and private collections throughout the world. Scholars are indebted to S. D. Goitein's massive *A Mediterranean Society: The Jewish Community of the Arab World as Portrayed in the Documents of the Cairo Geniza* for bringing together and interpreting thousands of these documents. The most well-known items date from the second part of the tenth century to the end of the thirteenth century and cover the Fatimid and Ayyubid periods as well as the entire crusader era. Unfortunately, many of the documents dating from the Mamluk and later periods appear to have disappeared into private collections and are not as readily available as those from earlier periods.

—Julie T. Abouzelof

Bibliography

- Egger, Vernon O. *A History of the Muslim World to 1405: The Making of a Civilization*. Upper Saddle River, NJ: Pearson Education, 2004.
- Goitein, S. D. *A Mediterranean Society: The Jewish Community of the Arab World as Portrayed in the Documents of the Cairo Geniza*, Vol. 1, *Economic Foundations*. Berkeley and Los Angeles: University of California Press, 1978.
- Robinson, Francis, ed. *Cambridge Illustrated History: Islamic World*. Cambridge: Cambridge University Press, 1996.
- Wink, André. *Al-Hind: The Making of the Indo-Islamic World*. New York: Brill, 1990.

Genoa, Pisa, and Venice— The Big Three of Italian Maritime Commerce

A quick glance at the histories of the three greatest maritime commercial cities of medieval Italy—Venice, Genoa, and Pisa—reveals clear distinctions in terms of origins, geographical placement, and initial economic focus. In a global sense, however, their internal developments and external interests emerge as strikingly similar. In fact, their similarities, rather than their distinctions, drew all three cities into conflicts with each other. The disputes played out through diplomacy, military action, and economic competition and ultimately undermined each city's stability.

Pisa and Genoa had ancient origins as urban sites, but Genoa's population and relevance declined along with the weakening of Roman authority in the West. Pisa, in comparison, managed to thrive during the tumultuous years of Ostrogothic, Byzantine, Lombard, and finally Carolingian dominance. In the eleventh century, Pisa fought with neighboring Lucca for independence, won that war, and started a period of considerable expansion at the expense of Muslim powers in southern Italy and the islands of the western Mediterranean. With the removal of Muslim pirates and the capture of treasuries in places such as Palermo and Corsica, Pisa began to assert its economic power regionally. The city also began ambitious construction projects, reshaping the physical profile of the city. Like Genoa and many other cities of Italy, the newly impressive Pisa went through an internal political transition that left a commune, or a group of citizens who elected their leaders, in control.

But just as the commune of Pisa was reaching new heights of authority and economic prosperity, Genoa emerged first as an ally then as a rival. Like Pisa, Genoa was technically part of the Holy Roman Empire, but imperial oversight was only sporadically enforced over such cities. Genoa emulated Pisa in exploiting the relative weakness of nearby Muslims as the second millennium began, turning the tables on the Islamic forces that had sacked the city repeatedly over the previous centuries. In 1016, Genoa defeated the Sardinian Arabs. Based on that success, the Genoese accelerated their program of economic expansion, bringing themselves increasingly into contact, cooperation, and ultimately dire conflict with Pisa.

Venice's history evolved differently. Although people had long harvested salt from the Venetian lagoon, the city itself incorporated when refugees from the Lombard invasion of 568 fled to the islands in the marsh in order to take advantage of the protection of Byzantine ships. Centuries later, Byzantium needed Venice's help at sea, and the Italian city sent its ships to protect the Greeks against the Normans of Sicily. In either 1082 or 1092, as a reward, the Byzantine emperor Alexius Comnenus (r. 1081–1118) granted Venetian merchants a complete exemption from tariffs for goods passing through Constantinople.

➤ GUGLIELMO PORCO (BILLY THE PIG)

The conflict between Venice and Genoa lasted for centuries, involved direct economic and military contests, and sometimes drew in other major powers in unexpected ways. When Venice assisted other Latin crusaders in the conquest of Constantinople in 1204 as a result of the Fourth Crusade, the resulting Venetian influence in the Aegean and the new Latin empire of Constantinople severely threatened Genoese interests. Venice acquired the island of Crete from Marquis Boniface of Montferat, one of the leaders of the crusade, a powerful northwestern Italian noble, and ironically a former ally of Genoa. The Genoese sent a delegation to Venice and demanded that their rivals either relinquish their claim to the island or face war. Venice refused to acquiesce.

But how to fight the Venetians? The city was still at war with Pisa and did not want to engage in hostilities directly. Instead, the Genoese turned to its citizens to serve as privateers. Guglielmo Porco and Enrico Belamuto, elite citizens of Genoa, mustered six galleys and set out for the Aegean in order to harass Venetian ships and try to limit the gains of the Republic of St. Mark. As luck would have it, Porco seized a ship in the late summer or fall of 1204 bearing the Templar brother Barozzi. A Venetian and the master of the Temple of Lombardy, he was an emissary from Emperor Baldwin of Constantinople to Pope Innocent III. The privateers released Barozzi and sent him on his way but kept the rich haul of gems, jewelry, gold and silver altar ware, and relics that had been intended as gifts to the pope and the temple.

Innocent III was furious, not because of the piracy but because gifts that belonged to him had been taken. He threatened the city of Genoa with interdict unless the items were returned. Genoa was never placed under interdict, so we must suspect that the precious and sacred items were returned.

—David Perry

This Golden Bull (*chrysobull*) helped to propel Venice's economic activity to new heights while also resulting in the development of a permanent self-governing Venetian colony in the city of Constantinople. Over the next century, Venice became the principal conduit through which trade goods moved from Constantinople to the West.

Venice, like other Italian cities, also experienced internal, often violent, political reform. The titles of the chief officials remained static, but the power shifted from hereditary autocrats to councils of elite citizens. As new families rose in economic prominence, they could sometimes manage to gain access to the centers of political power. Theoretically, the Serrata (Closing) of the Great Council of Venice in 1297 simultaneously brought one final group of families into the elite circles of Venetian governance while imposing a new order of social stratification.

For all three cities, religion—through public rituals, the cult of relics and saints, and other local practices—served as a glue to bind the commune, the community, and the rulers together in a common identity.

But success created conflict. In the twelfth century, Italians from all three cities participated in the crusades to the Holy Land. As a result, they were granted quarters in the Latin-ruled cities of the Levant and gained better access to the east-west luxury trade. In the late twelfth century up to 1194, Genoa and Pisa aided the Hohenstaufens in the conquest of Sicily but fell into war with each other over division of the spoils. Genoa won that round and claimed valuable positions in Sicily (as Pisa went into relative decline when this defeat coupled with the silting up of the Pisan harbor, a more permanent blow) only to witness Venice make equally great strides. Venice took advantage of the conquest of Constantinople in 1204 as a result of the Fourth Crusade. The Venetians conquered Crete, various islands of the Aegean and Adriatic seas, and expanded Constantinople's Venetian quarter throughout most of the breadth of the harbor of the Golden Horn. But Venice was not able to keep Genoa out of the Black Sea. The Genoese allied with Byzantine exiles, helped those exiles retake Constantinople in 1261, and tried to exclude the Venetians. Over the next two centuries, Genoa and Venice fought over Byzantium, drew Byzantium unprofitably into their conflicts, and made dominance over Byzantine trade their most important goal. Each city had large overseas holdings as well as colonies throughout the eastern Mediterranean and the Black Sea, and thus the battles between these two cities affected many different peoples and polities. One such Genoese holding,

the city of Caffa in the Crimea, seems to have been the point of access for the Black Death into Europe. Genoese sailors from that city may have brought the plague to Genoa in 1348. From there, it spread throughout Italy and into most of the rest of Western and Eastern Europe. Throughout the Late Middle Ages, Venice and Genoa, their colonies, and their allies would fight war after war, send privateers after each other's merchants, and generally undermine regional economic and political stability.

One must not, however, think of these three cities as particularly unique in medieval Italian history. True, they were the three most vibrant maritime republics of Italy. Venice maintained its dominance over the Adriatic and much of the Aegean for centuries. Each city developed particular and important traditions of art, architecture, and literature. Although on a lesser scale, the same could be said of many of the medieval Italian city-states. Before any of the three cities had become economically mighty, Amalfi and Bari had built vibrant economies based on widespread Mediterranean trade. Siena and Florence, two inland commercial-industrial cities, came to dominate their respective regions of Italy in the later Middle Ages, rivaled only by Venice and Rome as sites of Renaissance political power and artistic patronage. The rise and fall of the communes and the power of clan affiliations in urban political cultures are common threads not just in the three cities but throughout medieval urban history (and not just in Italy). Genoa, Venice, and Pisa offer many examples of important trends but should not be considered anomalies.

Finally, it is no coincidence that many early Atlantic explorers and the cartographers who recorded the changing world came from Italy, particularly Genoa. Italians had introduced the wealth of the East to Europe through overland trade and exploration. Marco Polo and other Italian merchants who voyaged to Central and East Asia provided inspirational stories of voyages to foreign lands. Francesco Pegolotti, the author of *The Practice of Commerce* of circa 1340, and other writers of merchant manuals produced concrete guides for foreign trade. In Pegolotti's case, his manual provided a step-by-step description of how an Italian merchant might travel over land all the way to Cathay (northern China)

in some relative comfort and safety and make a handsome profit for his troubles.

When the demise of the crusader states, the collapse of Byzantium, the collapse of the so-called Mongol Peace, and the expansion of Ottoman, Timurid, and Mamluk hegemonies rendered the eastern Mediterranean and western Asia less hospitable to Latin merchants, the economics of scale were transformed. The lost Vivaldi brothers of Genoa (who sailed away to "the Indies" by way of Africa in 1291, never to be heard from again) and the Genoese navigator Christopher Columbus (who never found the Indies but never admitted it) are evidence of the decline of the Italian merchant empires in the Mediterranean and the rise of the Atlantic world.

—David Perry

Bibliography

- Crouzet-Pavan, E. *Venice Triumphant: The Horizons of a Myth*. Translated by Lydia G. Cochrane. Baltimore: Johns Hopkins University Press, 2002.
- Epstein, S. *Genoa & the Genoese, 958–1528*. Chapel Hill: University of North Carolina Press, 1996.
- Fotheringham, J. K. "Genoa and the Fourth Crusade." *English Historical Review* 25(97) (1910): 26–57.
- Heers, J. *Le clan familial au Moyen Age: Étude sur les structures politiques et sociales des milieux urbains*. Paris: University Press of France, 1974.
- Herlihy, D. *Pisa in the Early Renaissance: A Study of Urban Growth*. New Haven, CT: Yale University Press, 1958.
- Katele, I. B. "Piracy and the Venetian State: The Dilemma of Maritime Defense in the Fourteenth Century." *Speculum* 63(4) (1988): 865–889.
- Lane, F. C. *Venice: A Maritime Republic*. Baltimore: Johns Hopkins University Press, 1973.
- Thompson, A. *Cities of God: The Religion of the Italian Communes, 1125–1325*. University Park: Pennsylvania State University Press, 2005.

Economic Activity in the Early Ottoman Empire

Thirteenth-century Anatolia was in serious economic crisis due to certain sociopolitical factors. Although the Seljuks had endeavored to create a vigorous economic atmosphere through massive state spending, such as constructing large social and civic buildings, including strategically placed caravansaries, and establishing various markets, they failed politically toward the end of their era.

► TIMAR SYSTEM

Timar is a special term for nonhereditary, largely agrarian sources of income to maintain a cavalry army and a military hierarchy in the central provinces of the Ottoman empire, especially in Anatolia and the Balkans during the fourteenth through sixteenth centuries. The basic duty of the grantee was to protect the rights of each individual in the lands placed under his control and to join the imperial army whenever called, although duties varied to a certain extent depending on the size of the timar.

If a timar grantee failed to participate in a campaign when called, he would be dismissed. Theoretically, grantees also lost their timars if they committed a grave crime or implemented oppressive policies against the people under their protection. The characteristic that differentiated the Ottoman timar system from the European feudal system was the timar system's nonhereditary aspect, although Ottoman law recognized the right of a son to a certain part of the timar of a deceased father during the early Ottoman period.

The Ottomans sometimes used different forms of the timar system in conquered lands with respect to their policies of fostering reconciliation and contentment and gaining the goodwill of non-Muslims. For instance, the Ottomans kept many former Christian *pronoia*-holders in their place and recognized them as timar grantees. Being Muslim or converting to Islam was not a prerequisite for a timar. Indeed, in some regions half of the timariots were Christian, especially in the Balkans during the fifteenth century.

—Seyfi Kenan

Worsening the situation further were the Roman pope's decrees prohibiting Catholic Christians in Latin Europe to trade with Muslims. Although many Europeans failed to heed this prohibition, it had an effect, and western European trade with Muslims in Anatolia and other regions in the Middle East was reduced significantly as Europeans increased local production to supply their domestic markets' needs. This situation becomes clearer if one considers the low value of the first silver Ottoman coin that was minted in the early fourteenth century. A second piece of evidence is the low price of goods and services

in Anatolia, as Ibn Battuta, the prominent fourteenth-century traveler, observed. A third clue is the fact that young men were rushing to join the Ottoman regiment of foot soldiers in the same period due to the shortage of job opportunities in the region.

The decline of the regional economy, however, was periodic, and western Anatolia's economy rebounded in the fourteenth century due to the policies of various Turkish principalities. The Turcoman states of western Anatolia, especially the Menteşe and Aydın principalities, which emerged after the collapse of the Seljuk dynasty, concluded important trade agreements with various Italian mercantile states. While these Turkoman states were exporting wheat, cotton, carpets, dried fruits, horses, oxen, sheep, wax, and other similar items, they were importing wine, soap, and textiles.

The fourteenth century was also the era of Ottoman expansion, especially westward. As they expanded, the Ottomans endeavored to attract merchants and artisans, whom they considered to be indispensable agents for developing their new metropolises, by granting them tax exemptions and immunities. Consequently, the Ottomans eventually managed to turn Bursa, Edirne (Adrianople), and Constantinople into major commercial and industrial centers of the empire, as they became successive Ottoman capitals (1326–1402, 1402–1453, and 1453 onward). Upon their conquest of Constantinople, for example, they endeavored through both peaceful and forceful means to repopulate the neglected city with Turkish, Greek, Armenian, and Jewish migrant communities. Further, in order to rejuvenate the city's economy, Sultan Mehmed II established several commercial centers, including the Grand Bazaar, a huge covered area that still functions today and encompasses more than 58 streets in the heart of the city. Similar policies were implemented in other cities as Mehmed was transforming the state into an empire. Istanbul and Bursa became the major commercial centers for commodities that passed between the Middle East and Europe, while the local silk industry of Bursa supplied brocades and other silk fabrics to local and international markets.

In addition to the east-west trade route in the Mediterranean passing from the Middle East

to Venice or Genoa, a south-north international trade route evolved beginning in the early fifteenth century and ran from Damascus in Syria through Bursa in Anatolia and Akkerman on the Black Sea (present-day Bilhorod-Dnistrovsky) to Lviv in Poland and beyond. Three of its focal points became part of an expanding Ottoman empire: Bursa in 1326, Lviv in 1484, and Damascus in 1516. Oriental goods from near and far, such as spices, silks, and cotton, made their way by this route to the Baltic countries and Muscovy. Hungary and Slovakia also obtained their goods through this south-north trade by way of various Danubian ports and Braşov in Transylvania.

Many historians have concluded that credit was always poorly available in the Ottoman empire because of a religious prohibition regarding the charging of interest, and therefore its markets permanently suffered from a shortage of precious bullion and coinage. Such shortages, however, were not a permanent feature of Ottoman economic life. Beginning in the early fifteenth century, the empire enjoyed significant economic wealth and abundance until the eighteenth century, although the Ottomans went through certain periodic shortages of specie. The use of money in both urban and rural settings was widespread, as the empire's people participated in its markets through a wide variety of economic activities. Moreover, as the Ottoman army expanded into new territories from the early fourteenth century to the late sixteenth century, people from the rural areas of Anatolia as well as nomads began to settle in these newly conquered lands, acquiring *timars*, a source of revenue granted by sultanic diploma in return for regular military service. These settlements and sources of income contributed significantly to the development of a wide range of economic activities.

Following Byzantine precedents, the Ottomans initially sought to regulate economic activities, but they became cognizant of the limitations of state interventionism. After the fifteenth century they understood how hard it was to enforce price ceilings because such regulation was not in accord with underlying market realities. For this reason, they intervened selectively, implementing interventionist policies only when they encountered extraordinary conditions, such as

➤ OTTOMAN BURSA—MORE THAN JUST A POLITICAL CAPITAL

After the Ottoman conquest of the city in 1326, Bursa (Greek: Prusa) became the first Ottoman capital city and, just as important, a center of trade between the Ottoman dominions, Syria, and Egypt. As such, it affected commerce throughout the Levant. Ottoman registers of the late fifteenth century show that a diverse body of merchants (Levantine, Italian, Indian, Arab, and Byzantines from Muslim, Christian, and Jewish backgrounds) frequented the city to trade in wax, textiles, silk, cotton, spices, and dyes. The tax revenue generated from the spice trade was significant. In 1478 the duties from imported saffron, gum lac, and spice in Bursa amounted to 100,000 *akça* (over 200 Venetian gold ducats). This had been even higher earlier (135,000 *akça*). In 1500, Bursa custom records show that the merchant Abu Bakr of Aleppo sold spices worth 200,000 *akça* (over 4,000 gold ducats) in merely one transaction.

Spices were sent by ship and then caravans from India to Mecca or Egypt and from there to Syria and across Anatolia to Bursa. Spices were transported to the Balkans and then from the ports of the Black Sea and the Danube River to Moldavia, Poland, and Russia. The land route from Aleppo to Bursa followed roughly the ancient diagonal route across Anatolia. When B. de La Broquiere joined in 1432 a caravan of pilgrims and merchants coming from Mecca with 3,000 camels, the caravan took 50 days from Damascus to Bursa. At Akşehir de La Broquiere came across 25 Arab merchants in a caravansary and in Bursa met Genoese and Florentine merchants. The Florentine Benedetto Dei noted that Venetians bought spices with silver and gold currency, while the Florentines were allowed to barter spices for textiles. In the century after the conquest, Bursa's silk industry's main function was reexporting and processing Persian raw silk imported from Iran's Gilan region. The silk industry was organized as a system of guilds, and slaves constituted a substantial portion of the total labor force in the fifteenth century.

—Hayrettin Yucesoy

war, exceptional difficulties in provisioning the cities, or periods of financial instability.

It should be emphasized that the underlying principles of Ottoman economic policies from the beginning until the end of the eighteenth century were essentially based on three principles. The first principle was provisionism; that is, production within the empire was not geared toward export but rather toward providing ample goods and services for the internal market so that prices would be affordable for everyone. The second was fiscalism, the idea that the purpose of all economic activity was to maximize treasury revenue as much as it was possible. And the third principle was traditionalism, which means that once the Ottoman economic model, along with its institutions, completed its evolution by the middle of sixteenth century, it became a classical tradition that eventually turned into a principle to be sustained.

—Seyfi Kenan

Bibliography

- Çizakça, Murat. "A Short History of Bursa Silk Industry (1500–1900)." *Journal of Economic and Social History of the Orient* 23 (1980): 142–152.
- Faroqhi, Suraiya. *Making a Living in the Ottoman Lands, 1480 to 1820*. İstanbul: ISIS Press, 1995.
- Faroqhi, Suraiya. *Towns and Townsmen of Ottoman Anatolia: Trade, Crafts and Food Production in an Urban Setting, 1520–1650*. Cambridge: Cambridge University, 1984.
- İnalcık, Halil. "Bursa and the Commerce of the Levant." *Journal of Economic and Social History of the Orient* 3 (1960): 131–147.
- İnalcık, Halil. "Capital Formation in the Ottoman Empire." *Journal of Economic History* 29 (1969): 97–140.
- İnalcık, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. Translated by Norman Itzkowitz and Colin Imber. London: Weidenfeld and Nicolson, 1973.
- İnalcık, Halil, and Donald Quataert, eds. *An Economic and Social History of the Ottoman Empire, 1300–1914*. Cambridge: Cambridge University Press, 1994.
- Kafadar, Cemal. *Between Two Worlds: The Construction of the Ottoman State*. Berkeley: University of California Press, 1995.
- Pamuk, Şevket. *A Monetary History of the Ottoman Empire*. Cambridge: Cambridge University Press, 2000.

Zachariadou, Elizabeth. *Trade and Crusade: Venetian Crete and the Emirates of Menteshe and Aydın, 1300–1415*. Venice: Library of the Hellenic Institute of Byzantine and Post-Byzantine Studies, 1983.

Zachariadou, Elizabeth, ed. *The Ottoman Emirate, 1300–1389*. Rethymnon: Crete University Press, 1993.

Mediterranean Sugar Production

The Muslim conquest of a large portion of the Mediterranean coasts by the early eighth century led to the introduction of sugar into the region. The Arabs had learned of sugarcane from civilizations to the east and spread it from Syria to Spain. Production required considerable capital investment as well as technological expertise. Sugar, however, gradually assumed an important role in the commerce of the Mediterranean, and its use spread into northern Europe. The techniques used in the Mediterranean for sugar production were later adopted for European plantations and refineries off the west coast of Africa and in the Americas, which quickly replaced the Mediterranean centers of production.

Arab conquerors probably first imported sugarcane from Iran and began cultivation in Lebanon and Syria during the eighth century. Sugarcane requires warm sunny weather with abundant water. Because Mediterranean weather includes lengthy dry seasons, Arab agriculturists developed extensive irrigation systems for the cane. The water requirements along with the need for large amounts of fuel to refine the sugar limited its production by Muslim growers to the Levant, the Nile Delta, parts of southern Morocco, the southern coast of Spain, and northern Sicily. Latin European attempts at sugarcane cultivation in southern France and Italy were unsuccessful. Mature sugarcane requires 12 to 14 months of growth, but most Mediterranean sugarcane was harvested after less than a year due to environmental factors, which meant that the sugar content was less than ideal. Realizing this, Muslim medieval writers noted how different manures could raise the sugar content to some extent.

At harvest, sugarcane was cut into small sections and crushed by large stone millwheels.

These were usually operated by oxen or human power, but some water mills were used during the fourteenth and fifteenth centuries. The cane was then pressed to extract as much juice as possible. The juice was boiled in cauldrons to reduce it to a thick syrup. Lack of wood for fuel helped limit where sugar could be produced. The syrup was placed in earthenware cones placed over jars. Fine holes in the bottom allowed molasses to drip out, leaving sugar crystals. The molasses was reboiled to produce more sugar crystals. When no more crystals could be produced, the remaining molasses would be used locally. The best sugar was produced by boiling the crystals a second or third time. The sugar was graded according to its color and whether it was fully crystallized or in loaves.

The large investment required to refine sugar meant that production was in the hands of the wealthy. In most Muslim societies, large landowners parceled out the fields to peasant sharecroppers, who turned a varying proportion of the harvest over to the landowners. In Egypt, serfs cultivated sugarcane on state-owned land granted to Mamluk military officers.

Although sugar was produced and traded among Muslims since the eighth century, it was an exotic food to Latin Christian Europe. The Norman French who conquered Sicily in the course of the eleventh century were the first Latin Christians to have access to sugar on a regular basis. As significant as this was, it paled in comparison with the impact of the crusades on Latin Europe's taste for and access to sugar. The key was the establishment of Latin crusader states in the Levant. Not only were they conduits for the transportation of sugar from Muslim lands, but several of them became centers of sugar production. During the twelfth and thirteenth centuries, Western colonists turned over large tracts of land to sugar production in those regions of the crusader states in Syria-Palestine that had sufficient water to grow the thirsty cane. This included the coastal region of present-day Lebanon and Israel and the Jordan Valley. There was a security problem, however, given that this land was contested between various Muslim and Latin Christian forces. When Acre, the last significant crusader bastion on the continent, fell in 1291, primacy in sugar production, as far as the West

➤ SLAVE LABOR PLANTATIONS OF CYPRUS

A declining population on Cyprus led to greater reliance during the fourteenth century on imported slave labor. Inasmuch as slavery at this time had no particular ethnic or racial basis, these slaves represented many ethnic groups, including Greeks, Bulgarians, Turks, and Tatars. Muslim slaves who had sugar-production experience were especially prized and were often obtained as captives taken by crusaders or pirates. As a result of their skills, they were generally well treated, whereas the heavy and dangerous work in the fields and production centers fell to the large majority of unskilled slaves.

—*Timothy J. Watts*

was concerned, passed to the Latin-held islands of Cyprus and Crete on which Western colonists had been producing sugar since the early thirteenth century. Of the two, Cyprus became the West's major source for sugar during the fourteenth century, and sugar became an increasingly important part of its agricultural productivity during the fourteenth and fifteenth centuries.

Sugar production on the two islands centered mainly on large plantations, where the cane was both grown and processed. The great sugar-producing landowners included the Frankish Lusignan kings of Cyprus; wealthy Italian families, such as the Cornaro clan; and religious orders, including the Knights of St. John (the Hospitalers). Unlike the sugarcane farms of Syria-Palestine, where Latin landlords, following the age-old traditions of the region, had depended largely on free sharecropper peasants, the sugar producers of Crete and Cyprus depended on slave labor due to a lack of sufficient free labor. But this was not unprecedented. Muslim growers had previously turned to slave labor on plantations in Iraq centuries before, which had occasioned the great ninth-century Zanj Revolt among the East African slaves working on these plantations.

By the mid-fourteenth century, production in Mamluk-dominated Syria-Palestine and Egypt began falling. One reason appears to be rural depopulation because of the Great Eurasian Pandemic known in the West as the Black Death.

When cities saw their populations fall by about 50 percent, wages naturally rose, and many peasants left the countryside for the cities, attracted by these higher wages. Wars, particularly the Mongol invasions of Syria in the thirteenth and fourteenth centuries, also disrupted production. Consequently, the complicated irrigation systems needed by sugarcane fell into disrepair. Conversely, the Latin Christian centers of Crete and Cyprus increased their production after 1300. Even so, production on Cyprus by 1500 was less than 700 tons of sugar annually.

By 1500, Mediterranean sugar faced stiff competition from Atlantic islands recently colonized by Europeans. Sugar grown on Madeira arrived in Europe soon after 1450 followed by that produced on other Portuguese islands off the coast of Africa, such as São Thomé. Due likewise to the scarcity of available local labor on these Atlantic islands, the Cretan-Cypriote model of slave-labor plantations was employed. Farther west, sugar production was established in Brazil in the early 1500s. Thanks to the climate of this region of South America, Brazilian sugarcane had a higher sugar content than anything produced in the Mediterranean. This meant that despite the high cost of transportation, sugar from the New World could undersell any produced in Crete or Cyprus. The abundance of wood for fuel and the lack of irrigation requirements opened markets for American sugar in Constantinople and Sicily. When Brazil came under Spanish control in 1580, new markets for Brazilian sugar became available throughout Europe.

Although eventually destroyed by the American sugar production, the Mediterranean sugar producers established a pattern followed in the New World. The technology remained virtually unchanged for years, and the slave-based plantation system created on Cyprus and Crete to produce sugar was the pattern used by Portuguese producers in Brazil and later by other Europeans throughout the Caribbean.

—Timothy J. Watts

Bibliography

- Abbott, Elizabeth. *Sugar: A Bittersweet History*. Toronto: Penguin Canada, 2008.
- Galloway, J. H. *The Sugar Cane Industry: An Historical Geography from Its Origins to 1914*. Cambridge: Cambridge University Press, 2005.

Macinnis, Peter. *Bittersweet: The Story of Sugar*. St. Leonards, New South Wales: Allen and Unwin, 2002.

Mintz, Sidney Wilfred. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Viking, 1985.

Wartburg, Marie-Louise von. "The Medieval Cane Sugar Industry in Cyprus." *Antiquaries Journal* 63 (1983): 298–314.

Mediterranean Silk Production

Fabrics and clothing made of silk were the most desirable in the Mediterranean region during the European Middle Ages. They were worn by royalty and as ritual garments by the high clergy, and silk cloths decorated churches as well. Because of the great demand, silk commanded high prices, leading rulers throughout the Mediterranean region to encourage its production. In this same period, silk production became one of the economic foundations of the cities of northern Italy.

Silk production originated thousands of years previously, probably in the Yellow River (Huang He) valley of China. Despite attempts to restrict knowledge of production methods, the secrets of silk production had traveled as far west as the Eastern Roman (Byzantine) empire of Justinian I by the mid-sixth century. Byzantine silk production was a state monopoly, and production centers were established in Constantinople and Syria. Muslim conquest of Syria-Palestine in the seventh century brought the secrets of silk production into a fast-expanding Muslim world. Silk production was introduced into Spain after its conquest in the early eighth century. Sicily also became a center of silk production under both Muslim and Norman rulers. When Byzantium initially lost Syria to the Muslims, many silk makers from the region relocated to Thebes and Corinth. Trade in silk clothing and fabrics remained strong throughout this period even between Arabs and Christians, with many Jewish merchants serving as intermediaries.

The crusades helped make more Europeans aware of luxuries available from the East. Goods such as spices, sugar, and silk all made their way to markets throughout Europe, where demand for them increased greatly. Demand increased

trade, which increased the power and wealth of some Italian cities. These cities had already benefited from their role as middlemen in trade between different parts of the Mediterranean world, and the increased traffic made their merchant classes more powerful. Some Italian cities, especially Lucca and Bologna, developed silk industries by importing raw silk from Sicily. The silk was woven into fabrics and clothing and then exported to markets throughout Europe and the Mediterranean. By the fourteenth century, Italian merchants had established groves of white mulberry trees in the peninsula and were producing their own silkworms. The lower costs of silk production then allowed the Italians to undercut the prices of their Muslim competitors.

Weavers learned to produce different qualities of silk fabrics. The heaviest-weight silks were in greatest demand and were the most expensive. Medium- and lighter-weight silk fabrics were less expensive since they required less raw material. For many ceremonial garments and fabrics, other materials were interwoven with silk threads. Gold and silver in particular were drawn into long, thin, and flexible threads and combined with colored silk to create fabrics used by the highest classes of government and the Church.

At first, silk production in Italy used traditional labor-intensive methods that had been practiced in other regions for thousands of years. The demand for silk products and the effort to produce more at lower costs, however, led to some early applications of mechanical devices. In Bologna, a silk production center became one of the first large-scale factories using nonanimal power. In 1272, a silk-throwing machine was installed, which used water power and produced yarn. Several hundred workers were replaced by two to four operators. Another invention from the thirteenth century was the introduction of the Eastern drawloom. Early versions originated in Sassanian Persia, but it was perfected in Italy. Boards holding intricate designs were placed over the looms. When the weaver wanted to insert the design into the cloth, he or his assistants used pulleys to open leashes suspended from the boards, allowing the loom's shuttle to pass through. Later developments of this concept included the jacquard loom of the nineteenth cen-

➤ BOLOGNA'S SILK-THROWING MACHINE

The innovative silk-throwing machine, first developed in Bologna in 1272 and powered with an undershot waterwheel, allowed three to four operators to do the work of several hundred craftsmen. The machine took silk filaments and twisted them together to create yarn. It had two concentric circular parts, measuring about 16 feet (5 meters) across. The inner part of the machine turned, thanks to the waterwheel. The outer section was stationary, with various reels and spindles that turned, thanks to the inner portion. Bobbins with the silk filaments were rotated, with the filaments being fed into reels located above them. Multiple filaments were twisted onto the same reel to produce strong threads of yarn. The skeins of yarn were then taken and boiled to remove the sticky sericin gums that held the filament together. After rinsing and drying, the skeins were bleached and later dyed. The density of the twists determined the quality of the yarn and the textile it produced. The development of the silk-throwing machine helped the Italian cities to be Europe's silk-producing centers for nearly 400 years.

—*Timothy J. Watts*

tury and machines controlled by punched cards, including early mainframe computers.

From the beginning of the twelfth century through the end of the fifteenth century, Italian cities dominated the silk trade in the Mediterranean. Venice, Genoa, and Florence as well as Lucca and Bologna became important silk centers. The Norman rulers of Sicily also tried to establish a strong silk industry after they captured that island from its Muslim rulers. In 1147, Norman armies sacked Thebes and Corinth, centers of the Byzantine silk production. The artisans who produced the silk were deported to make high-class silk in Palermo, the Norman capital. The capture of Constantinople in 1204 by crusaders also resulted in a broadening of silk production. Many skilled workers were relocated to Venice, jump-starting the Venetian silk industry.

Italian silk production remained unrivaled in Europe until the sixteenth century, when

production in southern France assumed an artistic and technical lead.

—*Timothy J. Watts*

Bibliography

- Burns, E. Jane. *Medieval Fabrications: Dress, Textiles, Clothwork, and Other Cultural Imaginings*. New York: Palgrave Macmillan, 2004.
- Crowfoot, Elisabeth, Frances Pritchard, and Kay Staniland. *Textiles and Clothing, c. 1150–c. 1450*. Rochester, NY: Boydell, 2001.
- Jenkins, D. T. *The Cambridge History of Western Textiles*. New York: Cambridge University Press, 2003.

Shipbuilding

The period between 1000 and 1500 CE witnessed a rebirth of shipbuilding in the European portions of the Mediterranean. Early in this era, European shipwrights continued to use many of the techniques of Antiquity. The crusades and the increased demand for trade, however, spurred construction and innovations in construction and financing. Innovations from Byzantine and Muslim sources were adopted by the Europeans. Financial dealings with eastern Mediterranean societies helped change how shipbuilding was organized and financed. By the close of the period, elements of ship design from northern Europe had melded with Mediterranean styles to create handy ships that were suited to European worldwide exploration voyages, far beyond the confines of the Mediterranean.

The end of the Roman empire brought an end to the trade routes across the Mediterranean. In the West in particular, shipping became localized and was largely restricted to small coastal vessels of 100 tons displacement or less. The breakdown in centralized authority also led to a rise in piracy and a decline in commercial operations. Merchants in the Byzantine areas continued to move goods by water but over shorter distances.

During the tenth century, waterborne trade in the Mediterranean increased, leading to increased shipbuilding as well as an increase in the size of the ships. Innovations such as the replacement of clay jars (*amphora*) by barrels allowed ships to carry more cargo for their size as well. These ships had sailing characteristics

that were improvements over their larger Roman predecessors.

The Byzantine, Muslim, and Western shipbuilders learned from each other, observing ships produced in other parts of the Mediterranean. Byzantine shipbuilders preserved and developed Roman techniques. When the Muslims conquered Egypt and North Africa, they assumed control over the shipbuilding facilities from Byzantine authorities. They also introduced innovations and new types of shipping from Muslim areas on the Indian Ocean. For example, most Muslim ships were constructed frame-first, with planking added after the ribs were in place. Western and Byzantine shipwrights adopted this technique as well. They also abandoned the labor-intensive mortise-and-tenon technique used by the Romans since it required much time and skill and was correspondingly expensive.

During the eleventh century, trade between different Mediterranean regions increased. Improved ships made it possible for merchants to pursue a triangular trade. Generally speaking, merchants carried agricultural products and raw materials from Western Europe to Tunisian and Egyptian ports. In exchange, they received gold, spices, and oils, which they took to Byzantine ports. Byzantine products included jewels, ceremonial clothing, and other luxury products produced by Byzantine craftsmen. Trade between the regions continued despite periodic wars and religious differences. Jews were often involved in the trade, serving as middlemen between Muslims and Christians.

During the early portion of this period, ship captains usually built and owned their own ships. Crews were recruited for a share of the profits. By the twelfth century, the growing demand for ships to carry the increasing trade changed the patterns of ownership. More commonly, groups of investors, usually merchants, formed partnerships to build ships. The partnerships then hired captains and crews for trading voyages. Increasingly, government subsidies helped pay for the construction of large ships that could be pressed into service as warships in time of troubles.

Ship types could generally be divided into round ships, whose width was only two or three times their length, and galleys, which were narrower and used oars as their primary source of

movement. Round ships were primarily cargo vessels and were powered by sails. During the thirteenth century, shipbuilders in Italy began to build great galleys. These ships were wider and larger than the normal galleys and could be powered by both sails and oars. The great galleys were able to carry considerable amounts of cargo while still maintaining the higher speed of galleys. They were used especially to carry valuable cargo, including wealthy passengers.

Great galleys were among those ships whose construction was subsidized and overseen by the various Mediterranean governments, since they were very useful in warfare. Muslim port authorities were among the first, since Muslim law required that all ships be inspected and certified before they could sail. The officials who carried out the inspection were known as *urafa al-sinaa*, from which the word “arsenal” comes. In the West, the most famous example of this collaboration between public and private authorities was the Arsenal at Venice. The Arsenal was a publicly funded and maintained shipyard, based upon similar institutions in Byzantium. The shipyard’s employees built and maintained privately owned vessels, which were then available for military service during wartime. By ensuring the quality of materials and skilled labor, the Venetian government helped private businessmen to prosper, adding to the city’s revenues.

Increasing corporate ownership and changing management methods encouraged new technologies that would increase profits. Crude compasses consisting of magnetized needles in bowls of water were introduced during the late twelfth century. Cotton sails replaced linen ones, since they dried more quickly and sagged less. New ship designs gradually replaced traditional ones when they promised greater efficiency and profits. Design features of the cog, a type of ship common in northern Europe, appeared in Mediterranean ships toward the end of the period. The cog’s high castles at the front and rear of the ship made it more easily defended, and the cog’s square sail was combined with the Mediterranean triangular lateen sail for greater efficiency. A sternpost-mounted rudder replaced the Mediterranean steering oar. The resulting ship was known as a carrack. With the carrack, a separate Mediterranean style of shipbuilding came to an

➤ AIGUES MORTES, A ROYAL NAVAL ARSENAL

Aigues Mortes (Dead Waters) was a military arsenal and port on the Mediterranean coast of France established by King Louis IX (Saint Louis) in 1241. Its name came from the brackish lagoons located between the city and the Mediterranean. Louis’s engineers cut canals through the spits of land that divided the lagoons from the sea. The passages often had to be dredged because they filled with silt. An outer harbor provided anchorage for larger vessels.

Aigues Mortes, which had recently become part of French royal lands, was chosen as the site for a royal port because all the existing ports along the southern coast of France belonged to other states. Marseilles, for example, was under the control of the German emperor. Ports to the west were controlled by the king of Aragon.

Louis was determined to lead a crusade to the Holy Land. Since his army and supplies would go by sea, he needed to establish a port under royal control. To attract settlers to this marshy and unhealthy area, Louis granted exemption from most taxes. Thanks to Louis’s huge expenditures in preparing for his crusade, nearly 15,000 people had settled in Aigues Mortes by the end of the thirteenth century. Besides serving a military purpose, Aigues Mortes was an entry port for trade from the east.

Because Louis’s subjects had limited experience and capabilities for building large ships, he depended largely on Genoese experts. The shipbuilding facilities at Aigues Mortes were built by the Genoese, and the admirals who commanded the fleet on the crusade were also Genoese. Most ships that transported Louis’s army were built by the Italians. Later, a limited number of French ships were built at Aigues Mortes, but the facilities were always inferior to those of Marseilles.

Louis left on the unsuccessful Seventh Crusade from Aigues Mortes in August 1248. His forces included a reputed 1,500 ships and 35,000 men. Although defeated, he was determined to try again. On July 2, 1270, Louis sailed from Aigues Mortes to Tunis on the Eighth Crusade, only to die less than eight weeks later.

—Timothy J. Watts

end. The carrack and its descendants became the European ships of discovery.

—Timothy J. Watts

Bibliography

Byrne, Eugene H. *Genoese Shipping in the Twelfth and Thirteenth Centuries*. Cambridge, MA: Mediaeval Academy of America, 1930.

Gardiner, Robert, and Richard W. Unger. *Cogs, Caravels, and Galleons: The Sailing Ship, 1000–1650*. Annapolis, MD: Naval Institute Press, 1994.

Hutchinson, Gillian. *Medieval Ships and Shipping*. Rutherford, NJ: Fairleigh Dickinson University Press, 1994.

■ Introduction: The Indian Ocean—Market Place of Afro-Eurasia

The Indian Ocean was the market place without peer for Afro-Eurasia, attracting merchants from the Far East, East Africa, the Mediterranean, and even the farther reaches of Western Europe to its bazaars and emporia. And of all of the centers for commerce, the two coasts of India, which dominated the core of the world of the Indian Ocean, drew the most traffic. India was not only the producer of a wide variety of valuable trade items, it was also a center for the trans-shipment of goods traveling from east to west and west to east. During the later thirteenth and early fourteenth centuries, the Yuan emperors of China deliberately promoted a heavy volume of maritime trade between southern China and both coasts of India. A world map of 1375, known as the *Catalan World Atlas*, which was produced on the Aragonese-controlled island of Majorca in the western Mediterranean, depicts a large, multi-masted Chinese junk lying off the Malabar Coast, and nearby pearl divers are gathering these precious trade gems.

Some of the most revealing evidence for the volume and complexity of export-import commerce in India comes from documents recovered from the Cairo Geniza. A *geniza* is a chamber attached to a synagogue and set aside for the pious storage of any form of discarded writing in which a reference to God was made or implied. A significant number of these geniza texts date to the eleventh through thirteenth centuries and reveal the activities of an Arabic-speaking Jewish community of “India traders,” who resided in Fustat. Fustat was the commercial center of

Egypt, which was located about 2.5 miles (4 kilometers) south of Cairo.

Commerce with India and other locales throughout the Indian Ocean was intimately connected with Mediterranean trade. It has been estimated that more than 50 percent of all commodities traded in the Mediterranean between 1000 and 1300 CE came directly from or through lands washed by the waters of the Indian Ocean. This substantial volume of goods included, of course, items from China and other regions of the Far East.

The Jewish merchants of Fustat were not the only Western traders in the Indian Ocean, but they were a significant presence there. Their travels took them overland to the Red Sea, through which they sailed to their mid-way point, Aden, on the southern tip of the Arabian Peninsula, where a substantial community of Jewish merchants resided.

Aden, cut off by mountains from the farmlands of the southern peninsula, was supplied with food by ships and existed solely because of its strategic location along the shipping lanes of the Indian Ocean. At least it had its own water supply, which was not the case with the port of Hormuz at the southern end of the Persian Gulf. Even Hormuz’s water came to it by ship. If ever commerce created two important port cities that should not have otherwise existed, they were medieval Aden and Hormuz.

From Aden, the Jewish-Egyptian merchants picked up the south-westerly monsoon, or trade, winds that brought them to their Indian ports of call. These were usually the cities of the west

coast, but the Fustat Jewish traders were also known to circumnavigate the peninsula and carry on business along India's east coast. If luck held out and their business was concluded in a timely fashion, the merchants returned home the following year, driven by north-easterly trade winds. At a minimum, the merchant was absent from home for two years but, more often than not, circumstances prolonged that absence. In a letter written around 1204 to his wife (which might never have been sent because of its frankness), a merchant named Solomon, who had traveled all the way to Southeast Asia, notes that he has been away so long his wife is importuning him for a divorce, but he begs her to reconsider, lest she "lose these long years of waiting." Because the letter was deposited in the geniza, at least one scholar has concluded that he finally arrived home safely and was reunited with his wife. One hopes so.

Evidence from the letters, contracts, shipping bills, accounts, and court records found at the geniza provides a detailed picture of the items exchanged in this Mediterranean-Indian Ocean commerce. Chief among the goods carried both ways were textiles. In fact, Spanish silk from al-Andalus was at times used by the Jewish merchants, instead of golden Egyptian dinars, to pay for goods and other expenses, including labor, incurred in their travels. It was even used for this purpose in India, despite the fact that India had produced silk for centuries. Because textiles, including Indian and Egyptian cottons, were such an important item of exchange, dyes were likewise prime commodities. Lac, a scarlet, resinous insect secretion from China, was highly valued, and indigo, grown in both the eastern Mediterranean and India, traveled both ways. Even though China had its own cinnabar, a toxic mineral that produces a bright red (vermilion) color, Spanish cinnabar was highly prized in the eastern reaches of the Indian Ocean. Fragrant woods from Asian forests went west, while various metals, especially copper and its alloys, as well as Sudanese gold and Spanish silver, traveled east.

If one wishes to speak of a trade imbalance, it was the West that sent a disproportionate amount of precious specie, silver and gold, in return for goods. Aromatics, incenses, precious

gems, especially pearls, as well as cheap ornaments, were popular, easily carried items of trade, and largely moved from east to west. At the same time, the finely crafted jewelry and vessels made by Mediterranean gold- and silversmiths were avidly sought after in the Indian Ocean. Pharmaceuticals traveled both ways. Scammony, a powerful purgative from the eastern Mediterranean, was brought into the Indian Ocean, but in return a wide variety of *ayurvedic* (the science of life) *medicamenta* from India made their way west, including camphor and celandine, a herb of the poppy family from which a tonic was made. Sweet-smelling thyme and honey and much-prized olive oil from the eastern Mediterranean were more than offset by the spices of the Indian Ocean, including Indian pepper and cardamom, cinnamon from Ceylon (present-day Sri Lanka), and cloves and nutmeg from the spice islands of Southeast Asia (present-day Indonesia).

Manufactured metal ware from the workshops of Egypt and Syria was brought east for trade, but also damaged metal vessels and utensils were transported to India, where they were expertly repaired at prices that justified their transportation. Bronze ware went both ways, especially the highly-prized cast bronzes produced in southern India. One wonders, however, if these pious Jewish merchants (and the equally pious Muslim merchants with whom they interacted) ever handled the exquisite Chola bronzes of Hindu and Buddhist deities. I know of no evidence to suggest they did.

Despite this lamentable lack of evidence regarding Chola bronzes (and an absence of evidence is not evidence of an absence), it is no exaggeration to say that records show that there was a high level of interchange of commodities of almost every sort between the Mediterranean and the Indian Ocean in the years preceding the voyages of da Gama into these waters.

—Alfred J. Andrea

Everyone Meets in Malacca— The Pivotal Place of Malacca in the Indian Ocean

In the fifteenth century the port city of Malacca came to dominate trade in the Indian Ocean. Controlling the strategic waterways between

➤ TRADE AND STATE BUILDING GO HAND IN HAND

Malacca combined rapid growth as a port with the consolidation of state power. This rise was helped by the protection provided by China. Beginning in 1405, the Ming emperor sent out massive fleets into the Indian Ocean region to trade, gather intelligence, and project Chinese power. Contacts were established with local merchants, and pirate nests were destroyed. Admiral Zheng He offered security to Malacca in the form of a tributary relationship with China. In 1431 the voyages were stopped, but by then this arrangement had secured Malacca from Javanese and Thai attacks. The rulers of Malacca also converted to Islam, an act that encouraged commerce and bolstered state power. The sultan of Malacca ruled as an Islamic ruler with the assistance of officials responsible for military, commercial, and diplomatic affairs. A great deal of emphasis was placed on court ceremonies, both to impress foreign guests and to legitimize the sultan's rule.

—Michael Wood

Sumatra and the Malay Peninsula, Malacca grew wealthy through trade networks linking China, India, and the Middle East. Malacca rose to prominence not through military victories but through providing facilities for international transactions in commodities and luxury goods. It was also a relatively open society, home to foreign visitors and long-term residents.

Malacca was founded in 1402 by Paramesvara, who had earlier tried to establish a trading center in the region but had been blocked by Thai forces and by the Java-based empire of Majapahit. But the power of Majapahit was in decline, and the increased Chinese interest in Southeast Asia allowed the city to flourish. Malacca was able to establish a close relationship with China while exploiting its strategic position and good harbor facilities. In addition, Paramesvara or possibly his son converted to Islam. By adopting Islamic titles, the rulers of Malacca gained prestige and were able to link up with Muslim trade networks spanning the Indian Ocean.

In subsequent decades Malacca developed into the premier port of the region. The city handled spices from the Moluccas, porcelain and

silk from China, textiles from India, and pepper, gold, resins, and animal skins from Sumatra. Malacca acted as a venue for foreign merchants to meet and for trade goods gathered from smaller local ports. Because of the monsoon winds, visitors often resided in Malacca for many months. Foreign merchants included Tamils, Javanese, Chinese, Arabs, Siamese, and especially Gujaratis. The port was run by officials known as *shabbandar*, who were usually drawn from these foreign communities. *Shabbandar* were entrusted to collect taxes, unload vessels, and ensure accuracy in weights and measures. A maritime code, combining Islamic law with indigenous concepts, provided detailed rules for all aspects of trade. Members of the local Malay elite were also involved in long-distance trade. Lower-end trade using smaller vessels met the city's basic needs; Malacca was dependent on Java and Siam for its rice. In the fifteenth century Malacca may have had a population of between 40,000 and 50,000.

By the start of the sixteenth century Malacca was thriving, drawing merchants from as far away as East Africa. In 1511 a Portuguese fleet captured Malacca and the local Malay elite fled. The Portuguese built a large stone fort and a separate residential area for themselves. However, attempts were made to keep the previous trade system intact. Foreign communities continued to govern their own affairs, and it was hoped that Indian merchants would be attracted to the city. Marriages between Portuguese and local people were encouraged, and little effort was made to impose Christianity. But Malacca went into economic decline at this time, as Muslim merchants preferred to operate out of Johor and Aceh. Malacca later passed to Dutch and then British control. But it remains a powerful symbol for modern independent Malaysia as a successful Muslim city-state that thrived through international trade.

—Michael Wood

Bibliography

- Hooker, Virginia Matheson. *A Short History of Malaysia*. Crows Nest, New South Wales: Allen and Unwin, 2003.
- Risso, Patricia. *Merchants and Faith: Muslim Commerce and Culture in the Indian Ocean*. Boulder, CO: Westview, 1995.

Shaffer, Lynda Norene. *Maritime Southeast Asia to 1500*. Armonk, NY: Sharpe, 1996.

The Spice of Life— The Trade in Spices

Spices are so commonplace now that it is difficult for the modern reader to imagine the economic role they once played. That wars have been fought over pepper, something that is now given away free in restaurants, and that imperial policy was shaped by nutmeg and cloves is difficult to fathom. Ancient Roman authors even fretted that the pepper that Rome imported from India was leaving the empire with a crippling trade deficit.

While there are many spices and herbs that are used to flavor the food of the world's various cuisines, there are four spices that are esteemed widely and cross-culturally: pepper, cloves, cinnamon, and nutmeg. Pepper was and still is the most widely consumed of all four. The other three, which are collectively known as the fine spices, have always been rarer and hence more expensive. Now when the fine spices are used by modern Western cooks, they usually appear in sweets, but between 1000 and 1500 they were widely used in savory dishes, such as meats, and to flavor wine and beer. They were also believed to have medicinal qualities in many parts of the world. Cloves were used as breath fresheners and for their oral anesthetic qualities. The cuisines of India, the Middle East, and China all made extensive use of pepper and the fine spices especially in the foods that were consumed by the elite. Thus, since long before 1000 there had been a spice trade.

All of the spices thrive in tropical places and refuse to grow in cold or dry places. Most of the people who ate these valuable foods lived far from where the spices grew, making spice one of the earliest goods to be traded over long distances. Most of the world's pepper, the dried seed of a viny plant, came from the southern tip of India. The best cinnamon, the bark of a shrubby tree, came from the island of Ceylon (present-day Sri Lanka). Cloves, the dried flower buds of a tree, came from the Moluccas Islands in what is now Indonesia, as did nutmeg, which is the stone of a tree fruit. Thus, all grew in fairly

restricted places that were distant from the markets where they were desired.

Within the Indian Ocean trading world pepper was widely traded and treated less as an exotic rarity and as more of an expensive staple. Unlike the fine spices, the production of which was restricted to islands and in the cases of nutmegs and cloves rather small islands, pepper was grown throughout southern India and thus was reasonably plentiful and in reasonable proximity to its markets. Ships calling at the pepper ports of Calicut, Cochin, and Mangalore in southern India carried large quantities of pepper to the Middle East and to China. The fine spices, in contrast, were valuable even within the Indian Ocean and were treated as luxury foods.

The spice trade had previously been responsible for bringing Indian influence, especially Hinduism and Buddhism, to the court culture of coastal Southeast Asia. During our period it was more often Islam that spread along the spice trade routes. The pepper ports of southern India had significant Muslim populations, some of whom were local converts, called *Mapillas*, as well as Arab merchants who became permanent residents. These pepper ports were also home to Jews, Armenians, and Persians who came there to pursue the spice trade. An interesting feature of these ports was the growth of mystical religious groups that appealed to both Hindus and Muslims. In Southeast Asia, Islam spread through the region during this period, gradually moving from the port cities into the countryside until by 1500 it was the dominant religion of insular Southeast Asia.

For Europeans, pepper remained a rare luxury. Pepper consumption was minimal in Europe before the twelfth century when the crusades brought large numbers of Europeans into contact with the spice-using cuisines of the Arab world. Once they realized what they had been missing, Europeans became enamored of pepper and the fine spices. It was, however, difficult for them to get access to the spice markets of the Indian Ocean. Their spice supply had to pass up the Red Sea to Egypt. The rulers of Egypt sold spice to only one group of Europeans, the Italian city-state of Venice. The Venetians sent an annual convoy to the Egyptian port of Alexandria, where they purchased as much spice as they could.

► NUTMEG—THE AMBROSIA OF INDONESIA

Nutmeg was the rarest and most expensive of the fine spices. Nutmegs are not actually nuts but the stone of a fleshy fruit. On the outside of this stone is a leathery membrane called mace. Mace tastes much like nutmeg but has a subtle and less assertive flavor. It is also more valuable than nutmeg. Compared with the other fine spices, which have strong flavors, nutmeg is rather mild and delicate in flavor. Most familiar to modern Americans as the dominant flavor in eggnog, nutmeg was once used to flavor a broader variety of foods than it is now. In North India the fragrant sauces served over meats were spiced with nutmeg. In Europe nutmeg became one of the spices in the classic French spice mixture called *quatre épices*. Nutmeg was used to flavor meats and to complement the flavor of vegetables, especially spinach. It was also a popular flavoring in beer and in wine. Grown almost exclusively on the diminutive island of Banda in the present-day nation of Indonesia, nutmeg crossed the trade routes of Eurasia, reaching the tables of epicures from Hangzhou in China to Delhi in India to Paris in Europe. It was a truly global food.

—Erik Gilbert



The nutmeg, illuminated French manuscript, fifteenth century. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

They then sold that spice to Europe at a very high price.

Long after pepper had become relatively commonplace in the food of Asians, the long chain of middlemen and monopolists who stood between Europe and the pepper fields of India kept pepper a dear commodity in Europe. The fifteenth century saw several efforts by European mariners to bypass those middlemen and sail directly to India. One of those voyages, that of Christopher Columbus in 1492, failed to find India but did find the Americas. The second voyage, that of Vasco da Gama in 1497–1498, made it to India and returned laden with a cargo of pepper. Thus, two of the most significant voyages in world history were triggered by European desire for cheaper pepper.

—Erik Gilbert

Bibliography

- Chaudhuri, K. N. *Trade and Civilization in the Indian Ocean*. Cambridge: Cambridge University Press, 1985.
- Dalby, Andrew. *Dangerous Tastes*. Berkeley: University of California Press, 2002.
- Gilbert, Erik, and Jonathan Reynolds. *Trading Tastes*. Upper Saddle River, NJ: Prentice Hall, 2006.

Indian Industries

Indian medieval industrial centers were of small scale except for a few royal workplaces set up by Muslim rulers, beginning around the mid-fourteenth century, to produce luxury products for palace use and as diplomatic gifts. Regardless of the modest size of most of its individual industrial enterprises, India at this time housed a wide

range of industries. Of these the textile industry was the most important, not only in scale but also in terms of export and early development. Indian fabrics were highly valued for their quality and decorative resist-dyed patterns.

The main centers of textile production were Bengal, Gujarat, the Deccan, Orissa, and the Coromandel Coast for cotton; Kashmir for cashmere wool; Varanasi, Gujarat, the Deccan, and Kanchipuram for brocades; and the Ganges Delta, Gujarat, and Varanasi for silk. Most export textiles went to either southern Arabia and Oman, which entirely depended on this trade for cloth, or Southeast Asia.

During this period the cotton industry produced three typical Indian fabrics that would have a great impact on later European fashion. Calico originated in Kozhikode on the Malabar Coast, and its modern name derives from Calicut, the British name for the city. It became popular in Europe in the seventeenth century in its block-printed flower-patterned variety known as chintz, often referred to as calico as well. Finely woven muslin, which was also introduced into Europe in the seventeenth century, probably originated in Dhaka in present-day Bangladesh.

The silk-weaving industry mainly used imported yarn from China. Silk from three indigenous silkworm species was used to a lesser extent. These nonmulberry silkworms produce a flatter filament than the conventional Chinese species. In addition, their cocoons are collected after the larvae have matured and chewed through the cocoon, resulting in cut and thus shorter fibers. Indigenous silks, such as tassar, were mainly produced in Bihar, West Bengal, Bangladesh, and Assam.

Indian brocades of this period displayed a wide range of patterns and appeared in various local styles. Brocades from Gujarat and the Deccan retained traditional decorative patterns known since the Gupta period, whereas those from Varanasi displayed a large variety of innovative patterns. Fabrics entirely made of silver or gold threads were rare and were for royal use only. Brocades were also made in great amounts at the royal workplaces.

The dye industry was closely related to the textile industry. Indigo was economically most important and had been exported as a luxury

product to the West since the Roman era. It was produced in large quantities in northern India, especially in Bengal. Gujarat housed the main lac industry, which produced a red dye, as well as shellac, derived from the lac, or secretions plus bodies, of a number of insect species. Other dyes were safflower, waras, Indian madder, turmeric, and jackfruit, as mentioned by the eleventh-century Sanskrit author Kshemendra. Four dye techniques were applied: wax-resist dyeing (*batik*), tie-dyeing of cloth (*bandhana*), tie-dyeing of the warp or weft yarns (*ikat*), and block printing. *Ikat* fabrics can be traced back to the late thirteenth century in Gujarat and Rajasthan and in the early fourteenth century to Orissa. Block-printed textiles and *batiks* were exported in bulk to Arabia and Egypt, and remains have been unearthed at twelfth-century and earlier Egyptian sites.

The nonprecious metal industries, distributed all over India, processed iron, wrought iron, steel, copper, brass, and bronze. The precious metal industries were mainly found at the capital cities of the various kingdoms. Noteworthy among the metal products is the legendary wootz steel, a crucible steel with a typical banded pattern containing trace amounts of tungsten or vanadium. It was the preferred steel to make swords and was exported to the Middle East and China. Wootz steel may have been the basis for the famous Damascus steel, but at present there is no consensus on this. The copper, brass, and bronze industries produced mainly household utensils, ornaments, jewelry, bells, and religious and devotional items. Tinned ware appeared only in the fifteenth century and was restricted to Kashmir and the northern Punjab. The gold and silver industries were much prized for their inlay and delicate work, especially the silver inlay work of Bidar in the Deccan, which was developed in the fourteenth century, became known as *bidriware*, and was a highly prized export item.

India's legendary gem industry figures in medieval travel accounts and fantastic stories, and the flourishing diamond industry of Golconda ranked first among all in terms of its products. The term "Golconda diamond" is still in vogue to describe very transparent, chemically pure natural diamonds. The diamonds were mined at

➤ GUJARAT—A CENTER OF MANUFACTURING AND COMMERCE

Thanks to its strategic position on India's northwestern coast, the region of Gujarat emerged as one of India's main centers for trade and commerce. The region was connected with the Silk Road via routes through northwestern India and Afghanistan as well as with the empires of the south via the Deccan plateau. Its extended coastline had harbored several important ports since the Bronze Age.

Al-Biruni (973–1048) describes the early trade from the port of Somnath with Zanzibar and China. Gujarat's maritime commerce grew especially after the thirteenth century due to a growing spice trade, a sound currency system, and massive expansion of European commerce. Gujarati merchants and agents were found in commercial ports on India's Malabar (southwestern) Coast, along the Persian Gulf and the Red Sea, and in East Africa. Marco Polo (ca. 1254–1324) mentions the multitude of ships and cargoes of the port of Khambhat and its regular exports to Arabia and Southeast Asia. Khambhat, a major port during the thirteenth through fifteenth centuries, silted up by the end of the fifteenth century, and main activities shifted to Surat.

The growing demands of both trade and the new elite class boosted artisanal activities. Gujarat housed various flourishing industries. The region became one of India's major textile producers and India's main exporter of textiles during the fourteenth and fifteenth centuries. Areas in south Arabia and Oman relied entirely on this trade for clothing, as observed by Ibn Battuta in 1341. Gujarati textiles were further exported in bulk to Egypt by Arab traders. Silk from Khambhat was much in demand, even though Gujarat did not produce silk but instead relied entirely on its importation of silk yarn.

In the fifteenth century, Gujarat's paper industry had become India's leading manufacturer. The glass industry of Kapadvanj manufactured bottles, scent sprinklers, and vases. In Khambhat a prosperous agate industry developed, producing decorative household objects, jewelry, beads, and leather burnishing tools for the Gujarati leather industry.

—Alexandra van der Geer

the Kollur mines of Andhra Pradesh, which yielded the world's then-largest diamond, the Koh-i-Nur, mined sometime before 1323. Other Indian precious stones were rubies and sapphires from Ratnapura (City of Gems) in Sri Lanka (Ceylon) and emeralds from the Swat Valley of Pakistan. Among the nonprecious gems were topaz, agate, lapis lazuli, onyx, quartz, zircon, carbuncle, cat's eye, pearls, and red coral. Seasonal large-scale pearl fishing was concentrated in the waters between Sri Lanka and the southern coast of mainland India. The industry was so famous that the *Catalan World Atlas* of 1375, drawn in faraway Majorca, depicted pearl divers off of the Malabar Coast of southwestern India.

Bahmani glass was a high-quality glass developed in the Deccan under the Bahmani sultans of the fourteenth and fifteenth centuries. Its main products were bangles, bowls, and flasks in different colors. An innovation was the manufacture of more complicated glass beads, especially opaque white beads with impressed design and green beads intermingled with yellow. Glass beads were manufactured at several centers in the Deccan and the Ganges Valley.

The introduction of the technique of paper-making is attributed to the sultan of Delhi, Firuz Shah Tughlaq (r. 1351–1388). Ma Huan, a Muslim Chinese interpreter who traveled to India in several of the early-fifteenth-century fleets of Zheng He, noticed a white glossy paper made from the bark of a tree during his visit to Bengal. Toward the end of the fifteenth century, Gujarat had become India's largest paper producer. Sultan Zainu al-Abidin (r. 1423–1474) introduced the technique from Samarqand into Kashmir in the early fifteenth century. Within a few years Kashmiri paper became desired for its durability and strength, and Zainu al-Abidin presented it as a gift to dignitaries. Paper production is said to have been introduced into Nepal from China via Tibet already in the seventh century.

Pottery was but one of the many minor industries. Unglazed pottery was made in practically every settlement. Glazed pottery, on the other hand, was limited to regions in Sindh, Punjab, and Tamil Nadu. The earliest remains date back to the fourteenth century. Glazed tiles became popular only toward the end of the fifteenth century.

—Alexandra van der Geer

Bibliography

- Das, Sukla. *Fabric Art: Heritage of India*. New Delhi: Abhinav Publications, 1992.
- Ramaswamy, Vijaya. "Artisans in Vijayanagar Society." *Indian Economic & Social History Review* 22 (1985): 417–444.
- Ramaswamy, Vijaya. *Textiles and Weavers in South India*. 2nd ed. Delhi and New York: Oxford University Press.
- Raychaudhuri, Tapan, and Irfan Habib, eds. *The Cambridge Economic History of India*, Vol. 1, c. 1200–c. 1750. Cambridge: Cambridge University Press, 1982.
- Trier, Jesper. *Ancient Paper of Nepal: Results of Ethno-technological Field Work on Its Manufacture, Uses and History—With Technical Analysis of Bast, Paper and Manuscripts*. Copenhagen: Gyldendal, 1972.
- Vanina, Eugenia. *Urban Crafts and Craftsmen in Medieval India (Thirteenth–Eighteenth Centuries)*. Delhi: Munshiram Manoharlal, 2004.

Muslim Trading Groups in the Indian Ocean

Around the turn of the first millennium CE, trade in the Indian Ocean underwent a number of structural changes. Long-distance single-voyage trade between east and west became segmented into three distinct trade circuits centered on the Arabian Sea, the Bay of Bengal, and the South China Sea, respectively. This system reflected the navigational range of the seasonal monsoon winds and allowed merchants to realize a faster return on their investments. As a result, regions situated on the intersection of these trade circuits, such as southern India or coastal Southeast Asia, developed into key transshipment centers. This development was accompanied by the spread of Muslim communities along the ocean's littoral. The rapid expansion of Islam across the Indian Ocean has led historians to characterize it as a Muslim lake. While this description overlooks the continued role of Jewish, Indian, Southeast Asian, and Chinese traders, it rightly emphasizes the increasing prominence of Muslim trading groups in the region's maritime commerce between the years 1000 and 1500.

Arabs and Persians had traded with India since ancient times, but with the rise of Islam and the formation of powerful Islamic caliphates,

these contacts expanded in scope and frequency. This expansion was also driven by the prosperity of China under the Song dynasty (960–1279), when the country's population and economy increased enormously, drawing in trade and traders from across Asia. Increased contacts and trade were the basis for the spread of Islam along the Indian Ocean littoral. Muslim merchants financed the construction of mosques in overseas ports and were followed by religious scholars and Sufis. Inter-marriage of expatriate Muslim merchants with local women and conversion integrated Islam into coastal societies across the Indian Ocean and produced familial links between Muslims in Arabia and Asian port cities. This was of special importance for trade, as medieval long-distance commerce was usually organized along kinship lines.

In the absence of regular communication, merchants tended to organize their businesses through agents drawn either from their own family or other families connected through marriage or a shared origin. This form of organization was typical of trade diasporas, a term that historians use to describe merchant groups that live in foreign lands for the purposes of trade. Trade diasporas were the most efficient form of business organization in premodern trade because their internal coherence made it possible to have diaspora members situated in a number of foreign locations. Trade diasporas were thus able to send capital to purchase goods abroad, learn about market conditions in different ports, and deal with misconduct by excluding aberrant members from future transactions. Such groups were usually internally stratified, with apprentices learning the trade, itinerant traders who undertook the sea crossings and spent time in overseas ports, and senior merchants who remained sedentary.

Muslims born of intermarriages were particularly suited to act as brokers; they usually adhered to the Islamic faith of their father and learned at least some Arabic but were also fluent in the local language and culture. Similarly, converts to Islam could serve as local links in the far-flung chains of Muslim trade networks. The establishment of Muslim communities in port cities in East Africa, South and Southeast Asia, and China thus provided an infrastructure and

➤ MONSOON-STYLE MOSQUES

South Indian and Southeast Asian mosques are a vivid illustration of how Islamic culture spread along the Indian Ocean littoral, not as a monolithic practice but in a dialogue with existing cultural traditions. The Malabar Coast in southwestern India was one of the earliest sites of mosques on the subcontinent. Malabar's old mosques stand in strong contrast to archetypal Islamic mosque designs. They do not feature domes or minarets but instead show clear similarities to the region's vernacular houses and Hindu temples. Their style is partly the result of the local conditions—for instance, the steeply sloped roofs were necessary to cope with the heavy rainfall—as well as the availability of building materials and the skills of local craftsmen. Yet their design also shows a desire to reflect the existing ritual architecture, presenting the mosques in a way that was instantly recognizable as a sacred structure in Malabar. Moreover, since Malabar's Muslim communities were founded within the context of Hindu states, there was little impetus to use their sacred structures to visually demonstrate the beginning of a new era, as would happen in northern India after the establishment of Muslim rule in the twelfth century.

Mosque architecture in coastal Southeast Asia, where Islam was also introduced peacefully by Muslim traders and itinerant Sufis, is closely analogous to that of the Malabar Coast. This similarity has prompted the historian Stephen Dale to speak of a distinct commercial monsoon style of Islamic religious architecture in the Indian Ocean



Mithqalpalli is one of the largest mosques in Kozhikode (Calicut), on the southwest coast of India. It was constructed by Nakhuda Mithqali, a local trader, in the fourteenth century. The Portuguese burned the building in 1510 and it was reconstructed later. (Sebastian R. Prange)

littoral. Inscriptions show that many of the early mosques of coastal South and Southeast Asia were financed or endowed by Muslim merchants or shipmasters who had settled in these regions. Such mosques provided an important resource for maritime traders as well as a focus for the emerging local Muslim communities. They exemplify the transition of Islam from an Arabian faith to a cosmopolitan religion that linked its adherents across the Indian Ocean world.

—Sebastian R. Prange

framework within which individual trade networks could flourish and interact. While Muslims continued to trade with merchants of different faiths, there were advantages to dealing with other Muslims. These included the common use of the Arabic language (although not all Muslims spoke Arabic, it became the lingua franca of Indian Ocean trade) and the shared legal standards of Sharia in case of disputes. Muslim trade also benefitted from the development of other networks such as the circulation of religious scholars and Sufis, who often had kinship links to merchant families and frequently engaged in trade

themselves. Muslim networks thus overlapped and interacted on various levels. The pilgrimage to Mecca (*hajj*) further promoted connections as well as served as a platform for trade between Muslims from across the Indian Ocean world.

The fourteenth-century travelogue of Ibn Battuta gives a vivid impression of the span and organization of these Muslim networks. For example, in southern China he met a fellow Moroccan, a Muslim scholar whom he had previously met in Delhi. Even more remarkably, some years later Ibn Battuta encountered this man's brother in a Saharan trading town. Muslims were able

to move within these networks and profit from their family connections, scholarly training, and religious prestige. However, the trading groups that formed Muslim networks were not monolithic but instead were highly diverse; often, they stood in competition to each other. Muslim trading groups were differentiated not only by kinship affiliation and place of origin but also by their adherence to different religious denominations, schools of law, or Sufi orders. The Bohras of Gujarat in western India, for instance, were a particular subgroup of Shia Islam prominent in maritime trade, an association already apparent in the name “Bohra,” which is derived from the Gujarati word for “trader.” Groups such as the Bohras, who over time split into further subgroups, persisted because of their clear understanding of who belonged to the community and who was outside of it. Business misconduct was discouraged by the threat of exclusion from the group. There were many similar Muslim communities active in the Indian Ocean trade that were identified with a specific region, the specialization in particular trade routes or goods, or their religious beliefs and cultural practices.

In contrast, there were also merchant networks that seem to have been inclusive rather than exclusive. The Karimi merchants of Egypt, who from about the twelfth century played a key role in the spice trade from India to Europe, are an example of such a group. While all of the Karimi merchants recorded in the sources were Muslims (although some were converted Jews or Christians), group membership was not based on the adherence to any particular belief or legal school within Islam, as in the case of the Bohras. Rather, status, wealth, and business acumen seem to have been the crucial admission criteria for this association. Its close links to the ruling elite and the sheer profitability of its commerce ensured its longevity. The commercial preeminence of the Karimi merchants was only eroded in the fifteenth century, when the Egyptian ruler attempted to bring the spice trade under more direct state control.

The fate of the Karimi highlights a crucial aspect of the operation of trade networks: their relationship to political power. The immense wealth of long-distance merchants always formed

a temptation for rulers. Rulers could expect little opposition when seizing assets of expatriate merchants, who usually had no entrenched local power base. However, the international nature of the merchant networks meant that they could respond to political pressure by relocating to other locations. On the Malabar Coast, for example, Muslim merchant groups were able to exploit the competition between different princely states over the revenues of maritime trade to gain favorable conditions for the continued pursuit of trade as well as a degree of political influence. Merchants could also be useful to rulers in other ways, such as through their knowledge about conditions in other ports or even by supporting military expeditions with their ships and sailors.

Networks are by their nature difficult to study: they evolve, overlap or decay, and rarely constitute a defined entity that can be unambiguously identified in the sources. In recent years, social network analysis has provided new ways of examining such trading groups. It focuses on connections between individuals, the flows of communication, and the emerging patterns of organization. This allows for a more flexible approach to studying the multidimensional relationships within and between networks and their evolution over time.

—Sebastian R. Prange

Bibliography

- Chaudhuri, Kirti N. *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750*. Cambridge: Cambridge University Press, 1985.
- Dale, Stephen F. “Islamic Architecture in Kerala: A Preface to Future Study.” In *Islam and Indian Regions*, edited by A. L. Dallapiccola and S. Zingel-Avé Lallemand. Stuttgart, Germany: F. Steiner, 1993.
- Pearson, Michael. *The Indian Ocean*. London and New York: Routledge, 2003.
- Risso, Patricia. *Merchants and Faith: Muslim Commerce and Culture in the Indian Ocean*. Boulder, CO: Westview, 1995.
- Shokoohy, Mehrdad. *Muslim Architecture of South India*. London and New York: Routledge, 2003.
- Wink, André. *Al-Hind: The Making of the Indo-Islamic World*. 3 vols. Leiden, Netherlands, and Boston: Brill Academic, 1990–2004.

Hormuz and Aden—Cities Built on and for Commerce

The material wealth of the medieval Indian Ocean world was clearly reflected in the prosperity of its great port cities. In the late thirteenth century Marco Polo, who had grown up in Venice and was thus accustomed to the sight of thriving trade, marvelled at the immense commerce of Hormuz and Aden, the former at the mouth of the Persian Gulf and the latter near the entrance to the Red Sea. Some 50 years later, the Moroccan wanderer Ibn Battuta confirmed this impression by describing the great wealth that merchants in these ports possessed, especially from their lucrative trade with India. Strangely, Hormuz and Aden on the face of it had little to recommend themselves as cities of commerce. They did not produce trade goods, suffered from unfavorable climatic conditions, and had to import not only all the crops needed to feed their inhabitants but also fresh water. That in spite of these limitations they developed into two of the most prominent port cities in the western Indian Ocean is testament to the key importance of location: the prosperity of Hormuz and Aden was built on their positions on the strategic choke points of maritime trade routes that enabled them to funnel the riches of Asia through their harbors, customhouses, and markets.

Hormuz (also known as Ormus or Hurmuz) was originally situated on the eastern mainland at the entrance to the Persian Gulf, but around the year 1300 its king, exasperated because of increasingly frequent raids by marauding tribes, moved all its inhabitants to an island a short distance off the coast. It was in this location that Hormuz developed into a major entrepôt, linking the trade within the Gulf (most importantly with Basra, which connected it to the Euphrates and Tigris rivers), Persia's overland trade routes, and the maritime trade in the Arabian Sea. The latter was of particular significance, as the monsoon wind system provided swift and predictable communication with the ports of India's west coast from whence the lucrative trade goods of Asia could be imported. Of particular importance to Hormuz was its trade in horses, which were brought from the Iranian steppes and the

Arabian Peninsula to be sold to Indian rulers for whom the animals were of great military significance.

While Aden was farther from India, merchants were attracted to it for its links to the Arabian caravan routes; the short sea crossing to East Africa, where gold, slaves, and ivory could be obtained; and, most crucially, the Red Sea route toward the rich markets of the Levant and Egypt. Of key importance was Aden's role as a clearinghouse for the trade in Yemeni incense as well as Indian and Southeast Asian spices. This is evident, for example, in the records of Jewish merchants of the eleventh and twelfth centuries. These also show the complex business practices of Aden's merchants that included the provision of credit and insurance, investments in diverse trading ventures, regular correspondence with agents in overseas locations in order to ascertain market conditions, and dealing with numerous different currencies, weights, and tax regimes.

Hormuz and Aden also exemplify the competition between the trade circuits centered on the Persian Gulf and the Red Sea, respectively. In 1250 the Mamluks took control of Egypt and soon expanded its sphere of influence over Aden. The stability and prosperity of this dynasty underpinned a flourishing of trade relations among Egypt, East Africa, India, and China, with Aden as the key entrepôt. Hormuz, on the other hand, experienced a temporary decline in its trade as a result of the Mongol conquests and insecurity on the caravan routes. A century later, however, Hormuz benefited from the strength of the Timurid empire for which it provided an important link to the maritime trade routes, while Aden and the Red Sea route suffered from the contraction of Mamluk power that resulted from the devastating impact of the plague on Egypt. These developments highlight that the commercial fortunes of port cities such as Hormuz and Aden fluctuated with the broader economic and political trends. At the same time, they were able to preserve a remarkable degree of autonomy. While rulers were at times tempted to extract higher taxes or even appropriate merchants' wealth outright, they also recognized that the revenues of maritime trade were dependent on merchants frequenting the ports. In this way, the competition between Hormuz and

THE GENIZA LETTERS

A unique insight into the activities, organization, and mind-set of medieval merchants is afforded by a set of sources known as the Geniza documents. In Judaism (as in some other religions), it is believed to be sacrilegious to destroy documents that contain the name of God. As most letters and business documents invoke the divine in phrases such as “God willing,” “God be my witness,” or “thanks be to God,” a place was needed to deposit unwanted papers. One solution was the construction of a discrete chamber, known as a *geniza* and often attached to a synagogue, for this purpose. When the chamber was full, it would be sealed and over time might no longer be remembered or even distinguishable from the general edifice. One such chamber was discovered in Cairo in the late nineteenth century. Soon European scholars and antiquity dealers learned of this discovery and bought the papers, most of which were fragments, by weight. Although the University of Cambridge was able to assemble the single most comprehensive archive, many of the Geniza documents remain dispersed in public and private collections in Europe, Russia, and the United States. The documents are written in a style called Judeo-Arabic that is in the Arabic language but rendered in the Hebrew script.

The Cairo Geniza is of particular importance because it contained a large volume of secular documents from Jewish traders operating in the Mediterranean Sea and the Indian Ocean between the eleventh and thirteenth centuries. Official and private correspondence, contracts, invoices, bills of lading, and such give an unparalleled insight into their business practices. Although mostly concerned with the Jewish traders who transferred



Fragment from the Geniza documents, early thirteenth century. (Isadore Singer, ed. *The Jewish Encyclopedia*, 1901)

the documents to the Cairo Geniza, they also show their interaction with merchants of other faiths and origins. They are a crucial source for the trade of Aden, where Jewish traders were integrated into the Islamic state and occupied key commercial and political positions.

—Sebastian R. Prange

Aden protected both from overbearing political interference.

—Sebastian R. Prange

Bibliography

- Floor, Willem. *The Persian Gulf: A Political and Economic History of Five Port Cities, 1500–1730*. Washington, DC: Mage, 2006.
- Goitein, Shlomo D. *Letters of Medieval Jewish Traders*. Princeton, NJ: Princeton University Press, 1973.

- Goitein, Shlomo D., and Mordechai A. Friedman. *India Traders of the Middle Ages: Documents from the Cairo Geniza* (“India Book”). Leiden and Boston: Brill, 2008.
- Hourani, George F. *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*. Princeton, NJ: Princeton University Press, 1951.
- Margariti, Roxani E. *Aden and the Indian Ocean Trade: 150 Years in the Life of a Medieval Arabian Port*. Chapel Hill: University of North Carolina Press, 2007.

On the Way to Egypt—Commerce on the Red Sea

Between the eleventh and fifteenth centuries, the Red Sea was a major thoroughfare for trade between Egypt and the Mediterranean world and the ports of East Africa and the Monsoon Seas of Asia as far as China. This period is bracketed by the Fatimid conquest of Egypt in 969 and the Portuguese opening of a sea route from the Atlantic to India in 1498. Coincident with

► THE PORT OF JEDDAH

In the seventh century, the ancient fishing port of Jeddah was designated the port of entry for seafaring pilgrims bound for Mecca, about 40 miles (65 kilometers) away, to which all Muslims who can afford to are obliged to make a pilgrimage at least once. The northern half of the Red Sea is uniformly arid, a fact noted repeatedly by visitors. The tenth-century Arab geographer al-Muqaddasi wrote of Jeddah:

“A fortified, well-developed, populous place, its people are merchants, and well-to-do; it is the merchant of Makka, the entrepôt of al-Yaman and Misr [Egypt]. Here is a distinguished mosque. However, the people here suffer great inconvenience from deficiency of water, though the town has many reservoirs; water has to be brought from some distance away. The Persians are the predominant class there, where they have splendid mansions. Its streets are straight, the situation excellent, but the heat excessive.”

Four centuries later, Ibn Battuta was similarly impressed by the “pits for water, bored in the solid rock and connected with each other in numbers beyond computation. This year was one of little rain, so water was brought to Judda from the distance of a day’s journey.”

—Lincoln Paine

Source

Al-Muqaddasi, *The Best Division for Knowledge of the Regions (Ahsan al-Ta'asim fi Ma'rifat al-Aqalim)*, translated by Basil Collins (Reading, UK: Garnet, 2001), 73; Ibn Battuta, *The Travels of Ibn Battuta, A.D. 1325–1354*, translated by H. A. R. Gibb, 5 vols. (London: Hakluyt Society, 1958–2000), 2:360.

these epochal events were the decline of the Abbasid caliphate at Baghdad and the resulting contraction of commerce on the Persian Gulf from the tenth century as well as the Ottoman conquest of Mamluk Egypt in 1517.

Evidence for the trade of the Red Sea in this period is varied but sparse and ranges from Arabic and Persian geographical and historical writings to the eleventh- and twelfth-century Judeo-Arabic correspondence of Jewish merchants sailing to India (the so-called Cairo Geniza letters), a small collection of thirteenth-century correspondence found at the Egyptian port of Quseir, and fifteenth-century Arabic navigational treatises. These have been supplemented by archaeological investigations at some of the sites most frequently mentioned in written sources.

As well as being a source of fish and coral and an avenue of communication for people native to its shores, the Red Sea is best known for its role in the trade between Egypt and the East and as a major route for Muslim pilgrims making the hajj to Mecca via Jeddah, the most important port on the west coast of the Arabian Peninsula. On the opposite shore there were four major ports spread at almost equal intervals across 870 miles (1,400 kilometers): Quseir, 90 miles (150 kilometers) due east of Qina on the Nile; Aydhab/Halaib, on the Egypt-Sudan border; Sawakin, Sudan; and the Dhalak archipelago near Massawa, Eritrea.

For much of this period the busiest port was Aydhab, which from at least the eleventh century was, according to the Persian pilgrim Nasiri Khusraw, “a custom station for ships coming from Abyssinia, Zanzibar and the Yemen,” including Aden (in Yemen), a major stop on the way to and from India. Aydhab is also the most frequently mentioned Red Sea port in the Geniza letters and seems to have been a major rendezvous for merchants. Its most important function, however, was as the terminus for pilgrims en route to Jeddah, less than 190 miles (300 kilometers) to the east. While the route via Aydhab is mentioned earlier, this traffic picked up dramatically after the start of the crusades and the Christian threat to the overland route via Sinai and the Hijaz.

One of the imperatives of the Fatimid, Ayyubid, and Mamluk rulers of Egypt was to protect

access to the holy sites of Mecca and Medina, and they denied Christians direct access to the commerce of the Red Sea. However, they proved less effective in countering indigenous threats to merchants. Piracy was widespread throughout the reef-strewn sea, and there were hostilities between regional powers on either shore, notably in the early twelfth century when the ruler of Mecca attacked Aydhab. The only crusader to launch attacks on the Red Sea, Reynald de Châtillon, sank 16 ships at Aydhab in 1183 before being routed by an Ayyubid squadron, but this was an extraordinary undertaking. To compensate for the inadequacies of state protection against piracy, merchants formed a *karim* (a convoy of ships that sailed together for mutual protection) that quickly dominated the trade to India. The Mamluks undercut anyone they suspected of amassing excessive influence, and the later *karim* may have evolved to protect merchants from arbitrary seizures of their goods as much as from pirates. Sultan Barsbay monopolized the spice trade in 1429, but the opening of direct trade between Europe and India in 1498 caused an irreversible shift in the Red Sea's place in world trade.

—Lincoln Paine

Bibliography

- Blue, Lucy. "Locating the Harbour: Myos Hormos/Quseir al-Qadim: A Roman and Islamic Port on the Red Sea Coast of Egypt." *International Journal of Nautical Archaeology* 36(2) (2007): 265–281.
- Goitein, S. D., and Mordechai A. Friedman. *India Traders of the Middle Ages: Documents from the Cairo Geniza—"India Book."* Leiden: Brill, 2007.
- Guo, Li. "Arabic Documents from the Red Sea Port of Quseir in the Seventh/Thirteenth Centuries, Part 1: Business Letters." *Journal of Near Eastern Studies* 58(3) (1999): 161–190.
- Guo, Li. "Arabic Documents from the Red Sea Port of Quseir in the Seventh/Thirteenth Centuries, Part 2: Shipping Notes and Account Records." *Journal of Near Eastern Studies* 60(2) (2001): 81–116.
- Imamuddin, S. M. "Maritime Trade under the Mamluks of Egypt (644–923/1250–1517)." *Hamdard Islamicus* 3(4) (1980): 67–77.
- Peacock, David, and Andrew Peacock. "The Enigma of 'Aydhab: A Medieval Islamic Port on the Red Sea Coast." *International Journal of Nautical Archaeology* 37(1) (2008): 32–48.
- Tibbetts, G. R. "Arab Navigation in the Red Sea." *Geographical Journal* 127(3) (1961): 322–334.

■ Introduction: China, Economic Powerhouse of Afro-Eurasia

China during the era of the Song dynasty (960–1279) experienced massive growth and development of its economy. Although Song China was not as territorially large or even as militarily powerful and significant as the preceding Tang dynasty or the successor Yuan or Ming dynasties, Song China's economy experienced massive expansion. This commercial and industrial revolution elevated China to an economic level that was markedly higher than earlier periods and produced an institutional framework that remained in place well into the nineteenth century. Achievements in many fields of endeavor during this creative age placed China in the forefront of global technological innovation, material production, political philosophy, governmental institutions, and high culture. Explosive economic and cultural growth, how-

ever, contrasted sharply with a decline in military power, which in time made China susceptible to non-Chinese military invasion and domination from the north and west.

A major factor in the technological and material growth during the Song was a dramatic rise in population and urbanization. China's population, officially tallied at about 60 million around the year 2 CE, declined in later centuries and seems to have regained the 60 million threshold at the height of the Tang dynasty in the mid-700s. The population grew to about 100 million during the Northern Song era (960–1126) and stood at about 120 million at the end of the twelfth century, during the early stages of the Southern Song dynasty (1127–1279). The city of Kaifeng, the political and administrative center of Northern Song, had a population approaching

1.5 million. Hangzhou, which became the so-called temporary capital of the Southern Song dynasty after Ruzhen (Jurchen) invaders took over Kaifeng in 1126 and established the Jin dynasty in northern China, grew even larger. Before the Mongol conquest of 1279, Hangzhou had a population of well over a million (and some estimates put it at between two million and three million).

The growth of these and other Chinese cities fostered the growth of private commerce. While earlier Chinese dynasties had sought to control and even restrain trade, commerce grew so rapidly during the Song period that it soon outgrew these restrictions.

Major commercial cities began to appear for the first time which, unlike earlier Chinese cities that had mainly been centers of political administration, were now great emporiums of trade. Cities also became great centers for cultural and social life with vast numbers of restaurants, teahouses, theaters, specialty stores, and many other kinds of commercial establishments.

The rapidly rising population led to an abundance of cheap labor. The great concentration of wealth in the town and the poverty of rural areas combined to promote a constant flow of labor into the major urban centers. Cheap labor allowed major commercial establishments and industries to reap major profits that they could reinvest in their businesses, thus enhancing growth. One result of the growth in the labor supply was an extraordinary degree of specialization. The labor market was very well organized thanks to the growth of guilds, which acted as major employment exchange centers. It was to them that both employers and employees applied.

Kaifeng's location at the junction of the Yellow River and the early Grand Canal, at the head of barge transport from the Lower Yangzi grain basket, made the city the wealthiest in China and the center of its commercial and industrial revolutions. One major innovation of Song ironworkers was a decarbonization method for steel-making. Water transport to the capital of iron and coal from mines in northern China allowed the vast expansion of pig iron. By 1078 China was producing more than 114,000 tons annually,

twice the amount that Great Britain would produce 700 years later.

Technical advances also led to the rapid improvement of traditional industries. There was a vast expansion in the quantity and quality of silk textiles, lacquerware, and porcelains, stimulating trade as demand for Chinese goods grew. Another technological advance was the development of gunpowder for explosive weapons. Chinese developed mines, hand grenades, and other explosive projectiles that compensated somewhat for the weakness of China's weak cavalry. The abacus came into use and for centuries remained the main calculating device for merchants across East Asia.

There was a massive expansion in agricultural production during the Song years. The introduction of a quickly maturing strain of rice from the Champa region of Vietnam greatly increased rice yields in southern China. Major water-control and irrigation projects across China greatly increased the total area that was devoted to irrigated paddy fields. The result was an almost doubling of China's rice production between the eleventh and twelfth centuries. There was a massive increase in the production of tea on hillsides and of cotton, which greatly accelerated China's textile industry. Improved road and water transportation greatly spurred domestic and international trade and encouraged the growth of regional specialization in crops, which brought much higher yields in many areas.

Vast improvements in nautical technology improved China's prospects for trade. China developed the world's largest compartmented ships, with as many as four decks, four to six masts, and a dozen sails. The ships, now guided by a sternpost rudder and the use of complex charts and the compass, could go on long voyages overseas, carrying as many as 500 passengers and crew.

The Song dynasty also saw the massive expansion of printing and printed books. Although paper had existed in China since the early Han dynasty, improved techniques for making paper from plant fibers and the development of woodblock printing led to an explosive demand for paper and for printed books. Printed books led to simultaneous growth in the number of schools, a

vast increase in general literacy, and an improvement in the quality of students taking the exams that staffed Song's government bureaucracy.

China's economic wealth and technological progress, however, did not translate into military power. The result was that Southern Song resisted bravely but ultimately succumbed to the invading Mongols, who terminated the dynasty in 1279, after years of bitter fighting, especially in China's southern regions.

—*Daniel A. Métraux*

Chinese Light Industry from Song through Early Ming

The period from the Song dynasty to the early Ming era (960–early 1400s) witnessed a vast expansion in the production and demand for a wide variety of light industrial goods including porcelain, silk and other textiles, lacquerware, and furniture as well as printed books. The development of a vibrant handicraft industry in the southern areas of China promoted the growth of a strong market economy, regional specialization, and rapidly growing urbanization. Production of high-quality goods for the growing number of middle- and upper-class Chinese households as well as for an expanding export market rivaled the manufacture of lower-quality goods for ordinary Chinese.

Porcelain was one of the major growth industries of this period. Although invented several centuries earlier, porcelain became a major daily commodity during the Song dynasty not only for the upper classes but for lower social groups as well. One factor leading to the increased use of porcelain was the government's prohibition of using bronze for items of daily use. The beauty, durability, and lower price of porcelain made it a worthy replacement material. Another factor in the product's startling growth was the huge demand it generated in trade, first by land and sea across Asia and even to East Africa and, much later, across oceans to Europe and the Americas. Mass production of this chinaware often occurred in kilns that could fire as many as 20,000 pieces at once.

The Song government heavily promoted the manufacture of silk and other textile materials.

THE PORCELAIN OF JINGDEZHEN

The most famous porcelain in China was produced in the kilns located at Jingdezhen in the north-central region of the country. Founded during the Yuan dynasty, Jingdezhen gained worldwide recognition for the quality of its products when the imperial porcelain factory was established there during the early years of the Ming dynasty. Working with a long tradition of making fine pottery, Chinese potters during the Song period had developed the technique of using a special form of clay now known as *gaolin*. When the clay is covered with a glaze and fired at a temperature of about 1,400 degrees Centigrade, the body fuses. The resultant object, now turned white, is so hard that it is impervious to liquids, is resonant when struck, and cannot be scratched with steel. Jingdezhen porcelain, which had a brilliant monochromatic glaze, was sold to the imperial court and to wealthy Chinese families. It was also eagerly sought by foreign traders. Long before the technique for making fine porcelain reached other peoples, Chinese porcelain, which was known by the Persian term *chini* (chinaware) in western Central Asia and India, was highly valued throughout Eurasia and in parts of Africa.

—*Daniel A. Métraux*

The state controlled numerous silk and brocade production facilities and hired the requisite number of workers rather than resorting to *corvée* labor. Whereas during the Tang period (618–906) most silk manufacture was located in northern China, the very real danger of foreign invasion during the latter Song dynasty forced the transfer to points farther south. By the Ming dynasty the largest state manufactures could be found in Suzhou, Chengdu, and Hangzhou.

There was also a huge expansion in the manufacture of cheaper coarse clothing made of hemp, linen, wool, and cotton. Cotton, first introduced from the southern island of Hainan early in this period, became a major crop in southern China and led to the growth of a major cotton textile industry in the Shanghai region and elsewhere in China.

Driving this upsurge in textile production but also made necessary by the great upturn in

consumer demand during the Song period was the invention of massive water-driven spinning wheels and other sophisticated textile manufacturing machinery that, with a minimum of operators, could perform the work previously performed by many hands.

During the Song period, many kinds of high-quality furniture were manufactured for upper- and middle-class families, including tables, chairs, stools, beds, and benches. Highly decorated waisted cornerleg furniture grew in popularity among the elite. Other basic patterns of furniture continued to mature in the Yuan and Ming periods into well-rounded and robust forms that were often smoothly finished with lacquer coatings and finely detailed with painted decoration. Later in the Ming period furniture made of durable imported hardwood from Southeast Asia became popular, especially among the scholar official class and the rising nouveau riche merchant class. The use of hardwoods led to advancements in joinery techniques and the creation of open and elegant forms of furniture not available with softer domestic woods. Furniture, smaller lacquer products such as mirrors, and even jewelry became increasingly important export items throughout Asia during this period and to the West in later years.

Although lacquerware was a very old art form in China, there were significant advances and expansion in the production of lacquerware during and after the Song period. Common products employing some degree of lacquer (a lustrous varnish made from tree sap) included plates, furniture, musical instruments, and coffins. The increased wealth of urban and rural elites led to a high demand for luxury goods made with lacquer. This demand in turn gave rise to greater varieties of lacquerwares, among which the most distinctive style was single-color lacquer work that required very meticulous craftsmanship. Like so many other Chinese products of the period, lacquer also became an important export item.

Starting in the Song period, printing became very common, and printed books of all kinds appeared in large numbers. Because of the vast number of Chinese characters used in writing, the Chinese generally found it easier to have a whole block of wood, usually representing two

sides of a page or pages of a single folded sheet of a book, carved as a single unit. The need for paper increased substantially, and paper production became a much more important industrial branch than ever before. The development of printing and vast improvements in the production of cheaper high-quality paper led not only to an explosion in the production of books and in the number of book stores but also to an increase in general literacy. Books included works of poetry, numerous encyclopedias and gazetteers, and the vast canon of Buddhist sacred literature.

—Daniel A. Métraux

Bibliography

- Needham, Joseph, et al. *Science and Civilisation in China*. Volume V, *Chemistry and Chemical Technology*. Part 1, *Paper and Printing*. Cambridge: Cambridge University Press, 1985.
- Needham, Joseph, et al. *Science and Civilisation in China*. Volume V, *Chemistry and Chemical Technology*. Parts 9 and 10, *Textile Technology*. Cambridge: Cambridge University Press, 1988.
- Needham, Joseph, et al. *Science and Civilisation in China*. Volume V, *Chemistry and Chemical Technology*. Part 12, *Ceramic Technology*. Cambridge: Cambridge University Press, 2004.
- Vainker, Shelagh. *Chinese Silk: A Cultural History*. London: British Museum Press, 2004.

Commercial Crops

During the period of the Northern and Southern Song dynasties (960–1279), all regions of China experienced a major agricultural revolution, with an enormous expansion of commercial crops. The success of Chinese agriculture contributed significantly to China's huge population growth rate throughout the Song era and played a key role in the transformation of Chinese cities from centers of political administration to great emporiums of trade. The increase in the volume of agricultural trade products greatly encouraged the regional specialization of crops, which in turn brought greater and at times higher-quality yields.

Historians often refer to the enormous commercial revolution of the Song era as being premodern in character. The growth of nonagricultural cottage industries, such as silk, together

with the proliferation of cash crops led to the extension of market forces into the lives of ordinary Chinese, and this pattern of economic development remained in force well into the twentieth century.

After the economic dislocation of the later years of the Tang dynasty (618–907) and the subsequent period of division (907–960), agricultural production had declined markedly. One of the early acts of the new Song government was to encourage the vast expansion of new plowed land and to inaugurate well over 10,000 significant irrigation projects. There was also extensive dike building, land reclamation, and construction of dike-pond systems in the Pearl River Delta in South China as well as in other areas across China. Extensive use of a curved iron plow developed during the Tang era as well as a new steel plow for reclaiming wasteland greatly enhanced the spread of cultivation.

Another factor in the transformation of barren land into good crop land and the recovery of overfarmed plots was the introduction of night soil (human excrement) as a fertilizer. Farmers used at least ten kinds of fertilizers, ranging from human and animal excrements to ash and varieties of mineral salts and silts. Fertilizer was especially important in such densely populated areas as the lower Yangzi region, where multiple fertilizing permitted several harvests a year.

There were also important advances in cultivation techniques. Farmland in South China was often rotary, alternating between wet field and dry field. For example, during the Southern Song era, while three harvests of wet rice were possible, after the second rice harvest, beans, sesame, or hemp was often planted in the dryer areas. Moreover, the growing of wheat, originally a crop of the north, became more common. Mulberry trees, essential to silk production, were also often planted in drier areas to supplement individual farm family incomes. Hemp plants, whose roots had different lengths and exploited the soil in different strata, were planted alongside the mulberry trees.

The result of these efforts was the tripling of cropland across China as well as the diversification of agricultural products. There were also significant improvements and changes in the quality of food products grown in China. For ex-

➤ THE SONG TEA CEREMONY

Tea drinking became the rage among government leaders and leading intellectuals during the Southern Song period (1127–1279). It was stylish to read poetry, write calligraphy, draw or paint, and discuss philosophy or the affairs of state while sipping cups of tea.

In this period, a new powdered form of tea became popular. Tea leaves when picked were quickly steamed to preserve their fresh form and color. The leaves were dried and ground into fine powders that were then whisked in wide bowls. The tea produced in this manner became widely known for its deep emerald or iridescent white color and its ability to rejuvenate the body. The white tea was prized above all and was often used in the famous whisked tea competitions of that era.

Over time this Song style of tea preparation incorporated powdered tea and refined ceramic ware in an aesthetic ceremony that became known as the Song tea ceremony. Japanese monks visiting China at the time studied Song tea preparation and brought it home with them. Although the Chinese later abandoned this practice, this Song style of tea evolved into the Japanese tea ceremony, which endures to this day.

—Daniel A. Métraux

ample, Chinese had been growing rice for many centuries, but the introduction of blends of high-yield Champa rice from southern Vietnam, known for its rapid maturation, greatly increased rice yields in southern China. Overall, it is thought that the rice crop across China more than doubled in the eleventh and twelfth centuries.

Cotton, which was introduced to central China from Hainan Island, became an important cash crop during the Song period and greatly added to the textile resources of the country. Extensive areas on the Jiangnan Plain north of the Yangzi and major portions of Shanghai and neighboring countries experienced major cotton cropping. At the start of the Song dynasty, most ordinary people wore clothes made of plant fibers such as hemp, ramie, kudzu vine, and so on, but by the end of the period, cotton textile clothes were most common. Woven cotton cloth

rapidly exceeded but did not totally replace earlier use of ramie and linen. Hemp, from which linen was made, was still widely planted.

There was also a major increase in the number of mulberry farmers who grew considerable numbers of mulberry trees and bred silk-worms. Consequently, the cost of high-quality silk dropped, and it became the fabric of choice for wealthier families across China. The Chinese silk industry expanded greatly during this period, producing increasingly higher qualities of goods not only for domestic consumption but also for foreign export, particularly to Southeast Asia.

Tea, most often grown on hillsides across China, became an important cash crop of the Song period. The methods involved in the production and preparation of tea underwent extensive change. The tea of Song included many loose leaf styles, and a new powder form of tea also emerged. Sugarcane had long been grown in China, but there was a rapid increase in the growth and commercialization of cane throughout the period. Advancements in technology allowed the milling of sugarcane into powdered sugar.

The growth of cities led to the rapid growth of highly specialized vegetable farms in the suburbs that grew a wide variety of green goods as well as other products for highly lucrative urban markets. Song-period peasants cultivated more than 30 kinds of vegetable and planted dozens of fruit species, among them many different kinds of citrus fruits. A growing number of nurseries produced flowers, notably peonies, for these urban markets as well.

The result of this agricultural revolution was that China remained largely self-sufficient in food production, even as the population grew by millions over the next few centuries.

—Daniel A. Métraux

Bibliography

- Ebrey, Patricia. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1999.
- Gernet, Jacques. *Daily Life in China on the Eve of the Mongol Invasion, 1250–1276*. Translated by H. M. Wright. Stanford, CA: Stanford University Press, 1962.

China's Inland Waterway System

China's inland waterway system, built around the Grand Canal that linked northern China with the south, reached its height during the Yuan (1279–1368), Ming (1368–1644), and Qing (1644–1911) dynasties. The canals permitted the easy and secure flow of grain and other foods, military supplies as well as troops, and other commodities. The construction of the canals greatly enhanced both the domestic security and the prosperity of China before the coming of the West. The building of the canals also required several innovations in canal engineering, including the construction of locks.

China's main rivers, the Yellow River (Huang He) and Yangzi (Chang Jiang), flow from west to east. The result is that China has no natural communication route running north to south except for the coast. The Chinese compensated for this deficiency through the construction of the Grand Canal system, one of the great feats of premodern hydraulic engineering. The canal linked the two great rivers and made it possible to move grain and other commodities from major agricultural centers to the principal cities of China. At its height during the Ming dynasty, the Grand Canal system extended 1,553 miles (2,500 kilometers) from Beijing in the north to Hangzhou to the south and Luoyang to the east. The result was the connection of the political centers of the Chinese empire in the north with the critical agricultural and economic regions of central and southern China. The canal system also linked China's two most important river basins and breadbaskets, the Yellow River and the Yangzi River.

The first elements of the Grand Canal were built by the Sui dynasty after 605 CE for both commercial and military purposes. It was extended on several occasions. One of the great bursts in canal building occurred when the Mongols established their capital at inland Dadu (present-day Beijing) and extended the canal all the way north of Dadu/Beijing to join a river system at Tianjin (the Son of Heaven's River Ford), thereby transforming a village that had access to the sea by way of its riverways into a prosperous maritime city by the time of the early Ming. Dur-

► THE YANGZI AND ITS TRIBUTARIES

The Yangzi, or Chang Jiang, the third-longest river in the world at 3,900 miles (6,300 kilometers), courses through the heart of China and has been the geographical and cultural divider between the northern and southern portions of the country since earliest days. Rising in far western China and traversing eight provinces before entering the East China Sea, it has over 700 tributaries, the most important of which are the Yalong, Min, Jialing, Tuohe, Han, and Fushui rivers.

The Yangzi is geographically divided into three parts. The Upper Yangzi reaches from its source in Qinghai Province to Yichang in Hubei Province, a distance of 2,700 miles (4,400 kilometers). This stretch is one of great beauty, traversing vast mountain ranges, and it has served, especially during the Song era and following, as the source of inspiration for countless poets and artists. The Middle Yangzi reaches Hukou at the mouth of Poyang Lake in Jiangxi Province, a distance of about 620 miles (1,000 kilometers). Here, the river

widens and flows through flat low-lying land and is fed by waters from two huge lakes, the Dongting and the Poyang. The Lower Yangzi reaches 560 miles (900 kilometers) through flat delta plains to the estuary.

Given its fertility, the Yangzi served medieval China not only as a means of rapid transportation of bulk items and a source of inspiration for flights of artistic creativity but was also a breadbasket, especially for the production of rice. Most of China's rice was produced in this region, as opposed to the wheat-producing north. It was also the source of high-quality protein in its freshwater fish and a major center of cotton production. This productivity allowed for China's rapid rise in population during the Song era and its equally rapid demographic recovery during the Ming era. Likewise, its cotton helped fuel China's immense textile industry during the era of the Southern Song (1127–1279).

—Daniel A. Métraux

ing the Ming and Qing dynasties, the Grand Canal made it possible for Beijing, the imperial capital after Dadu, to secure sufficient grain and rice from the south.

The extension of the Grand Canal system after 1000 CE required innovations in canal-building engineering. North of the Yangzi, the canal must ascend a slope of more than 131 feet (40 meters). To solve this problem in order to get barges up the canal and past rapids, the Chinese developed one of the world's first system of locks as well as a number of feeder lakes and lateral canals. The development of the more sophisticated pound lock is attributed to engineer Qiao Weiyo, who worked on the internal waterway system at the end of the tenth century. He constructed two flash locks on the Grand Canal only about 656 feet (200 meters) apart. He came to the realization that he had created a pool that would be at either the upper or the lower level of the canal depending on which barrier was open. Furthermore, the barrier separating patches of level water could be opened without the obstruction of water pressure.

There were further innovations in canal building during the Ming dynasty. Since seafaring was dangerous and could not allow for the adequate transportation of grain, the Ming by 1415 switched from relying on the transport of grain by sea to interior canal transport. The security of Ming Beijing therefore depended on further advances in the art of canal building to hold water in the steps of the watercourse crossing over the western spur of the Shandong hills. The Mongols had tried this with only limited success. The great breakthrough came in 1411 when engineer Song Li, the president of the Ministry of Works, and his staff were able to split the flow of the combined Wen and Si rivers at Ji Neng by means of a Heaven Well Lock and create a chain of 15 locks between Ji Ning and Lin Qing, at each of which officials could control water by opening and shutting the gates as seasonally necessary. This new waterway was 13 feet (4 meters) deep and 32 feet (10 meters) wide.

From a military point of view, the canals improved the interior lines of communication and the transport of supplies and troops. The canals

linked China's diverse economic regions into a unified whole and socially tied the nation together. Under these circumstances the control of a unified, stable, and prosperous China with a population of over 400 million people became a possibility.

—Daniel A. Métraux

Bibliography

- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1999.
- Fairbank, John King, and Merle Goldman. *China: A New History*. 2nd enlarged ed. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2006.
- Needham, Joseph. *Science and Civilization in China*, Vol. 4, *Physics and Physical Technology*, Part 3, *Civil Engineering and Nautics*. Taipei: Caves Books, 1986.

Chinese Market Towns

A picture of the Chinese countryside taken from the air anywhere from the Song dynasty (960–1279) through to the early Ming period (1368–1644) would reveal a cellular tabloid below of endless stretches of contiguous market communities. During this period these largely self-sufficient communities consisted of a central market town surrounded by two or more rings of villages. The average Chinese market town was surrounded first by a ring of 6 villages and then by a second

ring of perhaps 12 villages. Each of these 18 villages had roughly 75 households, and each household might have an average of five persons, often two parents, two children, and a surviving grandparent. Each village was no more than 2 or 3 miles (3 or 5 kilometers) from the market town and was connected by footpaths or, on occasion, a waterway. Thus, even the farthest village from the town was an easy day's walk for the village farmer with a carrying pole, barrow, or donkey or, if using a waterway, employing a sampan. Market towns were generally in quite close proximity to each other, somewhere between 5 to 10 miles (8 to 16 kilometers) apart.

The farming village, which has formed the bedrock of Chinese society for many centuries, is formed from family units that are permanently settled there from generation to generation and depend on the use of certain designated land-holdings. Each family household was itself both a social and economic unit whose members made their living by deriving their sustenance from the fields surrounding the village. Life in the village followed the ebb and flow of the seasons. But it was the market town unit of villages rather than each village on its own that served as the center for social and economic life for the greater community.

The market town served as the hub of these villages and housed a town market as well as stores that sold basic goods to the villagers, shops maintained by artisans that served the agricultural community, and a number of specialty shops. There were also tea shops, where villagers could meet, and often a Buddhist or Daoist temple, where important social or religious events and festivals might occur.

Towns and their villages depended on the itinerant merchants to bring desired goods from other centers, since the average villager rarely traveled outside his own market town zone. These traveling merchants also brought news from the outside world and might convey messages from one town to another.

When added together, each market town community consisted of about 1,500 households, or 7,500 people. The villagers in each community often congregated together on market day, and it is estimated that a village farmer would visit the market town at least ten times in a month. While



Detail from an eleventh-century scroll shows the bustling town of Kaifeng, China. (Pierre Colombeau/Corbis)

these market town units were not self-sufficient, each market community was in effect a distinct economic unit as well as a self-contained social universe. Marriages often, but not always, occurred between individuals from different villages within the same market town unit. Most if not all significant festivals were celebrated in the town, and if there was a secret society there, their lodge meetings would be held at a regular locale in the town. And it was in the town that representatives of peasants might meet members of the ruling class, such as tax or rent collectors.

The market town system came of age during the heyday of the Song dynasty period. They fared less well under the foreign dominance of the Yuan dynasty but recovered in the early years of the Ming dynasty.

It is important to note, however, that despite the social cohesiveness of the market town unit, it was not an air-tight system. Often social networks like secret societies, militia groups, or the security system of mutual responsibility might work outside of the tight confines of the market town community.

—Daniel A. Métraux

Bibliography

Chao, Kang. *Man and Land in Chinese History: An Economic Analysis*. Stanford, CA: Stanford University Press, 1986.

Prasenjit, Duara. *Culture, Power and the State: Rural North China, 1900–1942*. Stanford, CA: Stanford University Press, 1988.

China's Commercial Cities

The rapid expansion of the Chinese economy during the Song dynasty, coupled with a significant growth of China's population throughout China but especially in the south, led to the rise of both large and small commercial cities throughout China. These rapidly growing and expanding cities served as commercial hubs for surrounding market towns. The cities had large markets as well as artisans producing a wide variety of goods, general and specialty shops, teahouses and other places of entertainment, and administrative governments for the local region.

While China during the Tang dynasty had largely been an agrarian country, during the Song

➤ PERIODIC MARKETS

Unlike markets in the modern industrialized world, where a firm or a seller has a permanent place and a fixed schedule to sell its products, the rural marketers in China during the Song, Yuan, and Ming dynasties were mobile, and the markets operated on a regular but periodic basis. This system grew out of local economic necessity. Producers of goods in villages needed to divide their time between producing the goods for market and selling them at the market. Itinerant peddlers needed this arrangement so that they could travel from one market to another on a regular basis, since no one market could bring enough demand for all of their goods.

Market town networks operating in close proximity to each other held their market days on a periodic basis depending on the volume of goods produced and the seasons of the year. Neighboring market towns would often hold three markets during a set ten-day period. Town A, for example, might act on a 1-4-7 schedule while contiguous Town B might work on a 2-5-8 routine, allowing itinerant merchants to travel conveniently from one town to another and on to larger market towns and commercial cities to acquire goods for further distribution.

—Daniel A. Métraux

period China experienced a great increase in its urban population, which grew by factors of four and five. Kaifeng during the era of Northern Song had a population of 250,000 households, while Hangzhou, the major city of Southern Song, had nearly 400,000 households. Other regional cities also grew in size, as did larger and smaller market towns throughout China. Major urban centers grew along the Yangzi River, making the region the economic and cultural center of China. The construction, expansion, and repair of a vast network of canals including the Grand Canal, the growth of new industries and regional specialization of finished goods and crops, and the vast expansion of international trade during this period greatly bolstered China's market economy.

Although actual figures are sketchy, it is clear that China experienced a vast expansion of

➤ SUZHOU

Suzhou (Soochow), located on the lower reaches of the Yangzi River and the shores of Lake Taihu in Jiangsu Province, is an ancient market town. Renowned for its traditional beauty, Suzhou has often been referred to by the Chinese as both the Paris and the Venice of Asia. Suzhou has long been an important center of commerce and traditional industries as well as a haven for scholars, artists, and skilled craftsmen.

When the Grand Canal was completed near the end of the Sui dynasty (581–618), Suzhou found itself located on China's most prosperous trade route. It rapidly became an important regional center of trade, finance, and processing industries, especially for the weaving and dyeing of silk and other textiles. Silk produced in Suzhou had a brilliant empire-wide reputation and became a major export item as well. The neighboring Song-jiang region was a major center for cotton cloth production, using cotton sent through Suzhou from other provinces in northern and southern China and sending its finished products back through Suzhou for sale throughout China. Today, the city is a major tourist attraction famous for its stone bridges, pagodas, and intricately designed gardens.

—Daniel A. Métraux

trade and commerce between the eighth and thirteenth centuries. Early Tang dynasty rulers and officials, with traditional Confucian contempt and suspicion of commercial activity, had sought to control and restrict trade, but the explosion in commerce quickly made such practices untenable. Previously, much of China's commercial and cultural life had occurred in rural areas and towns and cities, but the expansion of commerce led to a growing demand for city and town markets, especially after 1000 CE.

Previously, markets had been carefully regulated and controlled, and there had been many restrictions on trading, with private dealers restricted mainly to luxury goods. Now, however, in the Song era, most of China's trade was in private hands, which further encouraged greater specialization in commercial activities. Cities and towns became larger and more numerous,

especially those along the major trade routes or chosen as provincial capitals. In brief, China's commercial revolution led to the establishment of open markets in commercial cities.

Indeed, a key to the rapid urbanization of Song China was a major commercial revolution that converted cities from being administrative centers into commercial centers. Many older urban centers had been small walled cities with old official marketplaces, but the growth of Song-era centers made the walled cities obsolete and spread commerce beyond the marketplace to shops of all sizes located throughout the city and surrounding areas.

China's urbanization was also, to some extent, brought on by the vast expansion of the nation's population during the Song period. Some scholars estimate that the Chinese population during Northern Song passed the 100 million mark, and the population in southern China is said to have tripled between the eighth and eleventh centuries. This huge growth in population led to the development of not only major metropolitan areas but smaller commercial centers as well. By the end of the Song dynasty, towns and cities with a population of almost 100,000 became commonplace all over China. This booming growth was particularly evident in southern China. Here the natural environment was more rewarding, land was more productive, and people were freer from older traditions and restrictions. All these factors favored conditions for the growth of commercial activities, and it was here in the south where many of the new market towns grew during this period.

Many smaller commercial cities grew up along the Grand Canal or the many smaller rivers and canals that fed into the Grand Canal network. Many of these 2,000 or more commercial cities also became important collection points of tax grain as well as grain and other food products for regional and nationwide distribution. They also became important distribution centers for light industrial goods, such as porcelain, cotton textiles, lacquerware, and silk.

An important innovation during the Song period was the increased use of money. The use of money in the form of copper coins and later silver greatly accelerated trade within China and led to the development of credit. Another

important related development in the advance of the Song was the establishment of the world's first government-issued paper-printed money. The growth of a money rather than a barter economy facilitated trade and greatly encouraged the expansion of commerce and the growing reputation of commercial cities as major centers of finance.

A further innovation was the rapid growth in foreign trade. Chinese goods were traded as far away as Africa and the Middle East, and China's commercial cities, especially those along the Yangzi and coastal areas, became areas of major mercantile activities and services as well as the home or base of a great number of foreign traders and merchants. Guangzhou, with its prime location on the Pearl River near what is now Hong Kong Harbor, grew at a very rapid pace into one of the major commercial hubs for Chinese foreign trade, especially with Southeast Asia.

Commercial cities thenceforth became the centers of Chinese economic, social, and political life. To be sure, until the early twentieth century, China remained a country of villages that contained 75 percent of the population, but commercial cities remained as critically important centers from the Song era onward.

—Daniel A. Métraux

Bibliography

- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1999.
- Fairbank, John King, and Merle Goldman. *China: A New History*. 2nd enlarged ed. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2006.
- Lorge, Peter. *War, Politics and Society in Early Modern China, 900–1795*. New York: Routledge, 2005.

China's Tea and Horse Trade

Although the Chinese bred horses for government and military use, the Ming, like most dynasties, could not breed sufficient numbers of high-quality horses for military purposes. Although the Great Wall could deter or slow attacks from the steppe, ultimately only cavalry could oppose the Mongols in the field. The Chinese did gain some horses through tribute, but their numbers were not sufficient for their needs.

A larger part of the problem was that a fixed quota of horses did not exist in the Ming court's tribute agreement with the various Mongol tribes, Tibetans, and Turks on its northern and northwestern borders. Tribute amounts varied, and the terms were negotiated virtually every year. For example, if the Mongol side was deemed stronger, the Ming conceded to its terms and often gave more for less, whereas if the Ming held the position of strength, the empire could dictate the terms. Regardless of who had the upper hand, some negotiation and haggling occurred behind the scenes.

As a result of the irregular flow of horses, the Ming followed the example of numerous dynasties before them by seeking to trade Chinese goods for horses with such Inner Asian powers as the Mongols, Oirats, Tibetans, and Turks. Although silk and other luxury goods remained in demand, another item became a key product for the horse trade: tea.

Although tea was not a native steppe drink or one that traditionally the nomads drank on a regular basis in earlier times, and hence one reason why Marco Polo did not mention it in his travels, nomads slowly acquired a taste for tea, which they drank usually with a liberal dose of milk and butter. The transition to tea among the various trading partners occurred for a variety of reasons. A simple fact was that tea is a hot and stimulating drink and was welcomed in the cold climates of the steppes and highlands of Inner Asia. In addition, it stayed fresh for a long period. While kumiss (qumiz), fermented mare's milk, remained the favored drink of the steppe nomads, it generally is only available in the spring and summer months. Another reason for tea's popularity was that boiling water to brew the tea removed many of the pathogens found in the water sources of the steppe.

As the Ming emperors held a complete monopoly on tea production and trade, they easily shifted some of it to the steppe. The government also devised theories to rationalize the trade. The most obvious reason was that trading tea for horses was significantly cheaper than trading silk and finished products. Yet this was not a sufficient reason. While there is no proof that their hypothesis was correct, many in the bureaucracy believed that drinking tea made the Mongols

➤ MONGOLIAN HORSE



(Timothy May)

These tough Mongolian horses, which the Ming sought to acquire, have not changed significantly over the centuries. They are small, almost ponylike in size, but are known for their incredible endurance. The short mane and the long tail of the horse makes the Mongolian horse quite distinctive. On the hindquarters of the horse in the foreground is the *tamga*, or brand, of the horse's owner. In the background is a *ger* (known to Turkic speakers as a *yurt*), the felt home of a typical Mongol nomad and still in use today. Behind it is a *tuq*, or battle standard, that looks like a cross with horse tails hanging from it.

—Timothy May

and other steppe peoples more docile and thus less likely to raid borderlands. The Mongols and other border peoples who drank tea probably experienced no radical physiological or psychological changes that made them less bellicose, but strangely this idea held some truth. As long as the nomads received their tea, they had no reason to raid in order to acquire it.

An official agency, the Horse Trading Office, was created in Shaanxi Province and was the only legal authority that could trade tea for horses. Its operations began in 1375 and met with great success, particularly in the early years of the Ming dynasty. Eventually four branches opened to deal not only with the Mongols but also with

the trading cities farther west in Central Asia, such as Hami and Kashgar. Despite the monopoly, a thriving smuggling trade also existed on the frontier. In the fifteenth century, the government assented to relinquishing its monopoly on the tea trade to Chinese merchants. Although the monopoly ended, the Ming still profited through tariffs of up to 50 percent on the tea trade.

Unfortunately for the Ming, tea did not make the Mongols docile herders. In the mid-1400s, increased Mongol raids on the northern frontiers disrupted the trade. By 1500, the political instability of central Asia resulted in the rise of a number of powers, including the Oirats, hostile to Ming interests, and the Ming found themselves without any trading partners. Thus, entering the sixteenth and seventeenth centuries, the Ming were again a kingdom without a horse.

—Timothy May

Bibliography

- Cooke, Bill. *Imperial China: The Art of the Horse in Chinese History*. Louisville, KY: Harmony House Publishers, 2000.
- Dreyer, Edward. *Early Ming China: A Political History, 1355–1435*. Palo Alto, CA: Stanford University Press, 1982.
- Mote, Frederick. *Imperial China, 900–1800*. Cambridge: Harvard University Press, 2000.
- Rossabi, Morris. *China and Inner Asia, from 1368 to the Present Day*. New York: Pica, 1975.

Markets beyond China

The Afro-Eurasian world economy welcomed another one of its revolutions beginning around the tenth century, and this one turned out to lay down the foundations for a continuous expansion across different cultures.

In China, the founding of the Song dynasty in 960 was accompanied by a gradual shift of the economic center from the Yellow River valley in the north to the Yangzi River valley in the south. This shift was accelerated as invading nomads—the Khitan (Qidan), the Jurchen (Ruzhen), and then the Mongols—set in motion a continuous migration toward the south. The more fertile southern lands, sufficient water supplies, new crops, and longer growing seasons prompted an economic revolution. In addition to the traditional land routes that connected China

and the markets beyond, known collectively as the Silk Road, a thriving economy and easier access to southern ports allowed the Chinese to expand the reach of their trade and to integrate themselves into already long-established sea routes that brought them into the ports of southern Asia and eastern Africa.

Earlier, other merchant mariners—Arabs, the Indians, Malays, and many others from the waters of the Indian Ocean and its adjacent seas—had frequented southern Chinese ports. But now China, especially during the age of the Southern Song (1127–1279), became a major maritime trading entity and a full partner in an Afro-Eurasian economic revolution at sea. A new instrument, the needle compass, made available to navigators was crucial in this revolution. Shipping also became less dangerous because of advances in shipbuilding technology.

The Chinese port cities of Guangzhou, Quanzhou, Hangzhou, and Shanghai emerged as commercial hubs of a widespread trade network across Afro-Eurasia. Of these ports, Quanzhou was particularly prosperous. The Southern Song government appointed a local governor who concurrently held the position of the chief of seafaring affairs to oversee foreign trade. His job was to welcome all foreign traders as guests, attend to their needs, provide information about the favorable winds and tides, and perform rituals to invite the goddess Mazu to protect all of those at sea. He was also responsible for registering Chinese merchants who were to depart from Quanzhou bound for the deep blue sea.

Ships departing from Quanzhou and other Chinese ports were junks. A junk was a flat-bottomed ship with internal sealed bulkheads and stern-mounted rudders and came with multiple watertight compartments to increase its stability and safety. A large junk contained as many as four decks, six masts, and a dozen sails and could carry up to 500 men. It was indeed the best ship in the world at that time. Those who sailed on the junks went south first to Srivijaya (or Java) in the Malay Archipelago; from there they navigated their way through the Strait of Melaka (Malacca), a choking point between the South China Sea and the Indian Ocean. One of the destinations for Chinese seafaring merchants was Quilon (Kollam), on the Malabar Coast of

➤ CHINESE CERAMIC WARES IN AFRICA

Ever since the rise of the Arab empire in the seventh century, societies across the Indian Ocean were connected by a network of maritime trade routes through which a large variety of commodities were shipped from one end of Afro-Eurasia to another. As oceanic cross-cultural trade expanded, the Arabs perhaps were the first to carry Chinese ceramic wares to Africa. The export of Chinese ceramics to Africa picked up momentum during the Yuan dynasty (1279–1368), climaxed during the Ming (1368–1644) when Zheng He sailed to the African coast in the early fifteenth century, and continued through the Qing (1644–1911). Recently, Chinese ceramic wares have been discovered in more than 200 sites in seven African countries, mostly along the east coast, such as in Kenya, Tanzania, and Ethiopia. Many of these ceramic wares were then exported from the coast to the interior of Africa and to northern Madagascar. Among these were included the world-famous porcelains of Jingdezhen.

—Yi Li

southwestern India. The fourteenth-century Arab world traveler Ibn Battuta witnessed the thriving community of Chinese merchants in the Malabar Coast, who obviously participated in, if not dominated, the cross-cultural trade on that side of the Indian Ocean. While Arab merchants had a much better command of trade on the other side of the Indian Ocean, some Chinese merchants also ventured into markets as far as East Africa.

Quilon was undoubtedly one of the most important commercial hubs in the world at that time. Peoples from all over the world gathered there, attracted mostly by the profit of trade. Ancient Romans and Phoenicians had left their marks there, and Arab merchants constituted the largest constituency in Quilon's foreign community. Chinese junks bound to Quilon usually filled their cargos with tea, silk, and porcelain, which were the most sought-after commodities in foreign markets. Along the way they picked up passengers and commodities from East Asian markets. From Quilon, Chinese goods were further distributed across other parts of Afro-Eurasia:

western Asia, Europe, and the East African coast. From Quilon, Chinese junks would bring home spices, perfumes, textiles, and even animals from tropical countries.

While the early-thirteenth-century Mongol conquests across Eurasia might have been responsible for a temporary interruption of the network of caravan trade routes that stretched across the heart of Central Asia, the impact on the sea routes was far less violent and substantial from the start. Moreover, trade between China and the world beyond continued to expand in the wake of the Mongol conquest of the Middle Kingdom (which was completed in 1279) and climaxed in the seven great voyages commanded by Zheng He in the early fifteenth century. A close look reveals that Zheng, in his maritime voyages, roughly followed the existing sea routes that the merchants from China, India, Arabia, and many other places had been using for many centuries. The trade between China and the world beyond was an ever-continuous venue of premodern cross-cultural exchanges.

—Yi Li

Bibliography

- Abu-Lughod, Janet. *Before European Hegemony: The World System, 1250–1350*. New York: Oxford University Press, 1991.
- Fage, D. J., and Roland A. Oliver. *The Cambridge History of Africa, from c. 1050–1600*. Cambridge: Cambridge University Press, 1979.
- Frank, Andre Gunder. *ReOrient: Global Economy in the Asian Age*. Berkeley: University of California Press, 1998.
- Wong, R. Bin. *China Transformed: Historical Change and the Limits of European Experience*. Ithaca, NY: Cornell University Press, 1997.

Chinese Merchants in the Song Era

China's Song era (960–1279)—particularly the Southern Song era (1127–1279)—gave rise to a new merchant class that had an impact not only on the Middle Kingdom's long-standing system of social stratification, but also on its domestic prosperity and level of foreign trade. This evolution of the merchant's role in society continued throughout the period of the Yuan dynasty

(1279–1368), as a consequence of the continued success of overseas trade, and flourished conspicuously in the Ming era (1368–1644), during which there was a growing recognition of the merchant's value in the increasingly interdependent mercantile communities that flourished at home and abroad.

China's central government had often sought to manipulate or contain the growth of trade in the centuries preceding the Song dynasty, due to a worldview that portrayed the work of merchants as parasitic on society and of low moral value. Traditional Confucian ideology placed scholarly government officials (*shi*) at the top of the four basic social classes, organized by profession. The farmers (*nong*) and craftsmen and artisans (*gong*) followed in descending order because of their contributions to the sustenance of the populace and provision of needed goods. Merchants and traders (*shang*) fell into the lowest stratum, as early philosophers held that this class did not contribute any real good, profiting only by trading and selling the products of others' labor.

In China as well as other societies, theory and reality often diverge. Whether a merchant family accepted the Confucian classification principles or not, money provided a means of moving to the top of the social ladder. In order to compete in the provincial and empire-wide examinations for entry into government offices, one had to have years of training and education, requiring time and resources that were not easily had by all. Increasingly, the ranks of successful examination-takers were being swollen by the sons of wealthy merchants and even, in some cases, by former merchants. Indeed, the opportunities made available by China's growing commercial economy provided even small traders and poor laborers from rural areas a chance at wealth and social mobility.

Numerous factors were instrumental in the developing wealth and power of the merchant class. Advances in rice technology in the tenth century allowed for larger-scale rice production, which increased not only the relevance of the southern regions in commerce, but population expansion as well. The population boom provided an abundance of cheap labor for the pro-

duction of goods. An estimated 31,000 miles (50,000 kilometers) of waterways, rivers, and canals contributed substantially to an ease of domestic trade. The Grand Canal, which had been employed since the Sui era (589–618) as a major route for indigenous trade ships, especially ships transporting grain and other foodstuffs, was a notable example of how the Chinese controlled water for commercial advantage. The Canal was used not only as a trade route for centuries preceding the Song, it was further developed in this era as a means of defense. As a consequence, the Grand Canal south of the Yangzi River was severely damaged in 1128 due to efforts to impede the advance of invading Jurchens (Ruzhens) of the Jin empire, and it was further used as a defensive system when the Southern Song faced (and ultimately succumbed to) the Mongol invasion. Upon their conquest of China, the Mongols expanded the canal system northward to their newly established capital of Dadu (Beijing). The southern Grand Canal was fully restored for use by the Ming dynasty, providing merchants an efficient means of shipment from Beijing to Hangzhou, a distance of 1,103 miles (1,176 kilometers).

As for foreign trade, the advancement of naval technology by Southern Song shipwrights produced the most innovative seagoing vessels of their time—complete with multiple decks and the ability to transport several hundred sailors. Consequently, China enjoyed a burgeoning overseas commerce that took its merchant sailors from Japan to East Africa. Additionally, eased governmental restrictions on trade in this era enabled merchants to augment their profits, as well as to pay trade and import taxes that became a major source of government revenue.

Merchants in the Song era became more sophisticated and specialized in their business techniques. Joint-stock companies were established to allow several investors to participate in trade ventures. This enabled multiple merchants to profit from successful overseas shipments, as well as providing effective risk management in case of loss. The increased use of paper money circulated by the government simplified large transactions, and the availability of credit and financiers willing to provide it afforded smaller merchants and producers of every sort and scale an op-

➤ HUIZHOU MERCHANTS

The enterprise and skill of merchants hailing from the Huizhou region in the Pearl River Delta demonstrated the prominence that the merchant class was able to achieve through effort and ingenuity in the Ming dynasty (1368–1644). It is believed that the advancement of the Huizhou merchant class began to develop in the Southern Song era (1127–1279) and progressed steadily for several centuries, illustrating the power and sophistication that well-trained and respected merchants came to possess by the Ming era.

Huizhou merchants became involved in commerce due in part to a lack of agricultural work available in the area. Parents sent their 12- and 13-year-old sons into town to study a craft under apprenticeships, and it was widely reputed that native Huizhou sons were conducting their own business throughout the empire by the age of 17. By the beginning of the Southern Song dynasty, it was said that Huizhou merchants had a hand in all manner of trade, from tea, wood, salt, and other local goods to services rendered as pawnbrokers. Many Huizhou entrepreneurs left the region for years at a time to make their fortunes as far away as Thailand and Japan and brought wealth and prestige back to their hometowns. The power and affluence enjoyed by these merchants enabled them to sponsor academies and examination halls and educate their own sons for entry into governmental offices. Not only did this ingratiate them with powerful administrators who provided political advantages in business, but by the Ming era it increased the numbers of officials who came from merchant families. Although this assimilation was illustrative of the merchant's upward mobility, the continued aspiration of the merchant family to attain scholar-official status represented, to some extent, its acquiescence to enduring class subordination.

—Jennifer Lei

portunity to enter China's domestic and foreign markets.

Indeed, an abundance in the production of goods necessitated the organization of guilds that specialized in certain products such as tea, paper, wine, salt, porcelain, and textiles. The heads

of guilds facilitated placement for those seeking work, as well as those who were hiring, and often served the government by enforcing restrictions and assessing taxes.

Not only did Southern Song's home markets flourish, overseas trade now surpassed overland trade across eastern and central Asia's caravan routes for the first time in China's long history, and it continued at this pace in the era that immediately followed. After the Song dynasty's fall to the Mongols in 1279, the succeeding Yuan dynasty maintained these international economic networks of trade, which only began to be reduced after the 1430s during the early Ming era.

Although overseas commerce leveled off and fell during the fifteenth century, the same was not true for domestic commerce and the fortunes of China's merchant class. The first Ming emperor, Hongwu (r. 1368–1398), despised the merchant class and attempted to dismantle its influence through massive taxation and forced relocation, but his efforts were ultimately fruitless when the restrictions failed to hold with subsequent rulers. In fact, the merchant class enjoyed greater social respect than ever before during the Ming era. Government officials had already recognized the importance of the revenue generated by trade taxes, and became increasingly dependent on the merchant class's participation in funding government projects. The government became more dependent on merchant expertise in the workings of the market, breaking up state monopolies—such as highly regulated salt production—in favor of privatization. In addition, even in times of diminishing overseas trade, the revitalized canal system allowed for continued domestic trade and merchant prosperity. Wealthy merchants were called

upon for contributions in times of natural crises, and were regarded highly for their sponsorship of public projects beneficial to the empire's infrastructure, including the building of schools and provision of books necessary to sustain the nation's examination system. In turn, the merchant class now enjoyed a higher and better social standing as *merchants*, a result of their previously disdained wealth and power.

The role of merchants from the Song through Ming dynasties represented a dichotomy in the cultural national ideology. Whereas the widely accepted tenets of Confucian social classification strove to undermine the role of traders, their commerce was essential to the health of China's economy. The work of merchants in this era was fundamental to China's flourishing domestic wealth and established its global position as an economic leader. In the early fourteenth century, Marco Polo commented on the wealth of Chinese harbor cities and the abundance and vigor of their trade ships. The efforts of these Chinese merchants represented the beginning of a commercial revolution that, despite its later decline, greatly influenced first Afro-Eurasian and later global trade.

—Jennifer Lei

Bibliography

- Brook, Timothy. *The Confusions of Pleasure: Commerce and Culture in Ming China*. Berkeley: University of California Press, 1998.
- Esherick, Joseph, and Mary Rankins, eds. *Chinese Local Elites and Patterns of Dominance*. Berkeley: University of California Press, 1990.
- Shiba, Yoshinobu. *Commerce and Society in Sung China*. Translated by Mark Elvin. Ann Arbor: University of Michigan, Center for Chinese Studies, 1970.

■ Introduction: Europe's Economic Revolution

In many respects, Europe was far behind most of the urbanized areas of Asia when it came to economic development during these five centuries, and Europeans were well aware of that disparity. An anonymous member of Vasco da Gama's crew that sailed from Portugal

to Kozhikode (Calicut) on India's Malabar Coast wrote in wonder of the vast wealth to be gained through direct access to the spice trade of the East. According to him, the Mamluk sultan of Egypt enjoyed an annual revenue of 600,000 *cruzados*, or gold coins, from duties imposed on

the spices transshipped from the East, up the Red Sea to Egypt, and beyond to European emporia. The maritime cities of Venice and Genoa also made handsome profits in their capacity as middle agents of this trade, and other Europeans, especially the Portuguese and Spaniards, were eager to tap directly into this lucrative trade.

The quest for direct access to the “Indies” drove the travels of da Gama, Columbus, and those who followed, but such a thirst would not have been possible except for two phenomena. Europeans had initially acquired a taste for direct access to the Indian Ocean and China during the *Pax Mongolica*. Moreover, from the early eleventh century until at least the early fourteenth century, Western Europe had undergone its own economic revolution, although its economy paled in comparison to that of China and the overall Islamic world.

The following entries can give only a taste of the parameters of that revolution. During these roughly three centuries, European banking, especially as created within the commercial cities of Italy, grew at a rapid pace from essentially nothing to a system in which banking houses, such as the Bardi of Florence, had subsidiary banking concerns far beyond their places of origin. Rich merchant-bankers in both Italy and the north, especially France and the Low Countries, became financiers to kings, but there was always the real possibility and reality of ruin when monarchs defaulted on their loans.

Well before the crusades gave a boost to overseas trade, the Italian maritime cities of Pisa, Genoa, and Venice as well as other Mediterranean cities enjoyed profitable trade relations with the Byzantine and Islamic ports that ringed the eastern and southern Mediterranean. Once the crusades offered these Western merchant cities direct entry into the Levant by providing them with their own self-governing quarters in the port cities of the crusader states, trade and profits multiplied many times over. During the thirteenth century, first Venice and then Genoa gained access to the port facilities of the Black Sea, the gateway to central Asia.

With the *Pax Mongolica*, a handful of Italian merchant-adventurers established houses in China, and around 1340 a Florentine bean counter, Francesco Balducci Pegolotti, found it worth-

while to compile *The Practice of Commerce*, a book of useful information for European merchants traveling to the land of the Great Khan, a sort of “On the Road to Cathay for Dummies.”

With the mid-fourteenth-century Great Eurasian Pandemic, the dissolution of the Mongol empire, devastations wrought by the armies of Amir Timur-i Leng (Tamerlane), and the rise of the Ottoman empire, direct access to China was severed. But although European commercial activity underwent retrenchment due to the gross depopulation occasioned by the so-called Black Death and other disasters of the fourteenth and fifteenth centuries, European merchants and bankers (and usually they were one and the same) proved resilient and resourceful. The pruning that took place allowed for the rise of the innovative and bold, such as the Medici of Florence. By 1500, rich merchant-bankers were generous patrons of the arts that were flourishing in Italy and lands north of the Alps, especially in Flanders and other regions of the Low Countries.

Although far less romantic and profitable than the exotica imported from the East, trade in home-produced staples, such as timber, wool, furs, and grains, was booming, at least until the mid-fourteenth century, thanks to the inland waterway system of northern Europe that allowed for relatively fast and inexpensive movement of such high-bulk, low-profit items. And most of this trade was for home consumption. By 1200, the level of internal trade from the Atlantic to Poland might well have exceeded that of the entire Roman empire of the second century CE.

During these centuries European industry never reached the scale that it did in Song China, but the textile weavers of Europe, especially those of the Low Countries, France, and Italy, contributed to the overall economic health of Europe, even as so many of them were terribly exploited by the entrepreneurs who employed their labor.

Europe suffered an economic depression due to the crises of the fourteenth century when the Four Horsemen of the Apocalypse—Plague, War, Famine, and Death—rode with abandon. But Europe's overall economic structures were sound enough and its entrepreneurs confident enough for recovery to have begun before 1500. Of course, the great sixteenth-century influx of

silver and gold (especially silver) also helped in that recovery, although it caused its own problems, mainly massive inflation. But that is a story for another period of world history.

—*Alfred J. Andrea*

The Fairs of Northern Europe

Trade fairs that emerged in the northern parts of Europe in the eleventh century ultimately became an early major component of Latin Europe's economic development during its so-called High Middle Ages, but by the mid-thirteenth century they had been superseded in economic importance by more fixed establishments, such as Italian banking houses. Regardless, they continued to exist, assuming increasing social and recreational purposes, and a number of modern European fairs can rightfully trace their origins back to those medieval entities. Unlike regional and town markets that occurred on a regular basis throughout the year in a single location, Europe's medieval fairs were moveable institutions, lasting anywhere from several days to several weeks, that followed fixed schedules as they trav-

eled from place to place, allowing buyers, sellers, and financiers an opportunity to congregate and conduct their business. As populations grew in the region from France to southern Scandinavia, people wished to sell surplus products and obtain goods that were not available locally. While several fairs could trace their origins to the Roman empire, Latin Europe's fairs were largely a new phenomenon that came into being to meet the basic commercial needs of a developing society and eventually evolved into early centers of European international trade.

The earliest fairs revolved around religious celebrations at locations such as monasteries and churches. Such fairs included the fair of St. Denis, held midpoint between the abbey of St. Denis and neighboring Paris and presided over by the abbey's monks, who obtained royal authorization from Louis VI (r. 1108–1137) for the fair to begin on the second Wednesday of June and run through St. John's Eve (June 23). The monks of St. Denis claimed, perhaps correctly, that their fairs originated in the early seventh century.

Whatever their origins, as fairs developed it became apparent that landlords could profit from

► CHAMPAGNE

The then semiautonomous province of Champagne hosted one of the most important network of fairs in northern Europe during the high medieval period. Taking advantage of the traditional trade routes that connected the Mediterranean core of the Roman empire to the trans-Alpine north, the counts of Champagne sponsored six fairs throughout the year in the towns of Lagny, Bar-sur-Aube, Troyes, and Provins. The earliest known record, dated to 1114, notes that they revolved around the moveable religious observances of Lent and the Ascension and the fixed feasts of St. John's Day (June 24) and All Saints' Day (November 1).

Although the autonomous actions of Champagne's counts and the province's agricultural output served as an important impetus for the origin of the fairs, there were two external factors responsible for their transregional importance. First, throughout most of the twelfth century, cloth producers in northern Europe would travel

to Italy with their textiles. By 1190, however, Italian merchants began traveling northward. Second, King Philip II (r. 1180–1223) guaranteed protection to all traveling merchants with an additional promise to allow merchants three months to leave France should his guarantee be revoked.

Although cloth was the most important commodity involved, during the Champagne fairs' peak in the thirteenth century, merchants from Italy, England, Spain, the Germanic Territories, and France sold goods ranging from exotic items, such as spices, lacquer, and dye woods, to staples, such as grain, wine, and horses. By 1320 Champagne lost its international importance partly due to a downturn in the commercial economy and the military campaigns of King Philip IV (r. 1285–1314). The primary reason, however, was the increase of maritime trade directly between the important ports of the Low Countries and Italy.

—*Jonathan H. L'Hommedieu*

imposing taxes, tolls, and tariffs on the land on which fairs were held and on the roads leading to them. Between roughly the twelfth and the fifteenth centuries, networks of strategically located fairs developed throughout Flanders, France, England, the Germanic territories, and Scandinavia. The Flemish towns of Ypres, Lille, Mesen, Torhout, and Bruges represented one of the earliest of such twelfth-century fair networks. Merchants at such fairs focused on selling a variety of local items and purchasing goods, such as English wool, chalk, and cumin. The most important Scandinavian fair at Scania revolved exclusively around the Hanseatic League's most important commodity, herring. The famous circuit of six fairs in Champagne of significance in the twelfth and thirteenth centuries was a notable exception, as they truly had global implications for trade.

As the resources or the technological requirements to establish permanent trade centers were initially absent in northern Europe, fairs were an essential component of regional and local economic development. During the first half of the thirteenth century, the primary valuable commodities produced in the north were wool and cloths, in demand for distribution in the Mediterranean world. The Italian merchants responsible for initiating this trade brought in exchange spices, silk, perfumes, dyes, and gold to the region. The disparity in value between what Italian and northern merchants brought to fairs resulted in the phenomenon whereby large quantities of gold, silver, and currencies would be exchanged. To cope with this, an early system of credit known as *lettres de foire* (fair letters) was established. This often led to letters being paid at fairs in other locations at a later date. Although fairs began to lose their importance in commercial trade by the thirteenth century, they continued to serve an important function as a payment clearinghouse for north-south trade.

The decline of fairs can generally be attributed to the natural economic development of the later medieval period. As political power centralized, new taxes placed on fairs reduced their attractiveness to merchants from afar. New trade routes also allowed merchants to travel directly to cities that had become permanent trading centers in coastal areas, bypassing the formerly

natural location of fairs along traditional trade networks. This process began in the fourteenth century as the French fairs' primacy was undermined by Italian merchants beginning to travel directly to the coastal fairs of London, Bruges, and Antwerp. Although by 1500 major permanent commercial hubs superseded the importance of fairs in northern Europe, they continued to exist in peripheral areas of central and eastern Europe.

—Jonathan H. L'Hommedieu

Bibliography

- Evergates, Theodore. *The Aristocracy in the County of Champagne, 1100–1300*. Philadelphia: University of Pennsylvania Press, 2007.
- Hodget, Gerald. *A Social and Economic History of Medieval Europe*. London: Routledge, 2005.
- Hunt, Edwin S., and James Murray. *A History of Business in Medieval Europe, 1200–1550*. Cambridge: University of Cambridge Press, 1999.
- Lopez, Robert. *The Commercial Revolution of the European Economy*. Cambridge: University of Cambridge Press, 1972.
- North, Douglass C., and Robert Paul Thomas. *The Rise of the Western World: A New Economic History*. Cambridge: University of Cambridge Press, 1976.
- Postan, M. M., E. E. Rich, and Edward Miller. *The Cambridge Economic History of Europe*, Vol. 3, *Economic Organizations and Policies in the Middle Ages*. Cambridge: University of Cambridge Press, 1963.

Italy and the European Commercial Revolution

Between the middle of the eleventh and the early fourteenth centuries, Europe underwent an economic revolution comparable in significance, if not in scale, to the Industrial Revolution of the late eighteenth century. Led by the city-states of northern Italy, this revolution fundamentally altered the way Europeans did business by developing new techniques and creating new institutions to facilitate long-distance commerce. More profoundly, this commercial revolution helped forge a distinctive mercantile culture in northern Italy and in so doing paved the way for far-reaching changes in the realms of politics, social theory, religion, and culture of feudal Europe.

Largely because of its geography, it was Venice that took the lead in this commercial revival.

► THE HOUSE OF THE BARDI

Founded in 1267, the House of Bardi was the largest of what has been dubbed the medieval supercompanies. Along with two other Florentine companies, the Peruzzi and the Acciaiuoli, these supercompanies were characterized not just by their size but also by the volume of their trade and their ability to keep their capital productively employed.

The success of the Bardi hinged upon providing Florence with two vital commodities, grain and wool. With the Florentine countryside increasingly unable to feed the city by the late thirteenth century, the Bardi filled this need by importing grain from southern Italy. Similarly, the Bardi were instrumental in helping transform the Florentine cloth industry into a high-value luxury trade by furnishing it with the best raw material of the day, English wool.

Although the core of their operation was centered on commodity trading, the Bardi quickly diversified into insurance and banking, handling financial transfers for the papacy and becoming the principal bankers to the English Crown by the late 1320s. With the virtue of hindsight, the Florentine chronicler Giovanni Villani described this policy as foolish. According to Villani, Edward II owed the Bardi some 900,000 florins when it failed in 1346. Although the Bardi's involvement in Florentine politics must not be discounted as a factor in its collapse, Villani noted that the effects of the failure and that of the other two supercompanies in the same decade were such that "hardly any substance was left amongst our citizens."

—Richard Raiswell

Founded in a malarial swamp with no arable land upon which to grow crops, from its earliest days Venice needed to import food to survive. With land at a premium, successful merchants had little choice but to reinvest their profits in commerce. Consequently, trade became the city's lifeblood. Although Venetian trade extended throughout the eastern Mediterranean, the key to the city's prosperity lay in its close ties to Constantinople, which served as the western terminus to a series of trade routes from the East. Here Venetians could buy all sorts of ex-

ceptionally valuable Asian commodities, particularly silks and spices, that they reexported at a considerable profit into the heart of Europe.

Toward the end of the eleventh century, Venice's commercial hegemony was challenged by Pisa and Genoa. Both of these states had initially taken to the seas to repel Muslim pirates, but by 1088 they were venturing into Muslim North Africa. Along with Venice, the position of these states was consolidated in the ensuing decades by the crusades. In exchange for transporting men and material to the Levant, these city-states were granted a host of commercial rights and were permitted to set up their own trading colonies in the coastal cities captured by the crusaders. With demand mounting for expensive Eastern luxury goods in northern Europe, some progressive nobles tried to encourage trade within the lands they ruled by establishing regular and protected fairs at which Italian merchants could sell or trade their wares. From the beginning of the twelfth century, the chief of these fairs were sponsored by the counts of Champagne.

Because the Asian commodities that the Italians sought were expensive and the voyages they undertook were dangerous, this trade required new and practical methods of financing. In this respect, the most important innovation was the *commenda* contract. Under a *commenda*, an investor (*commendator*) would supply capital to a traveling partner (*tractator*), who would purchase goods abroad. Upon his return, the *tractator* would receive a quarter of any profits, the balance going to the *commendator*. In the early stages of the commercial revolution, the *commenda* had a series of distinct advantages. First, it facilitated the entry into commerce of capable young men who had no capital of their own, allowing them in effect to apprentice in the trade. Second, because *commenda* contracts usually did not specify where the *tractator* should trade, he could take advantage of regional fluctuations in supply and demand, thereby maximizing the profits for both parties. Third, as the *tractator* could secure investments from a number of different *commendatores*, each individual investment could be quite small. Consequently, a significant proportion of the population of these Italian states was invested in trade, and this be-

came reflected by the establishment of merchant oligarchies in these city-states. Finally, because the returns on the investment were uncertain, it gave merchants a way around the Church's prohibition of usury, or lending money at interest. This ensured that merchants construed their returns as licit and that they would leave their fortunes to their heirs rather than hand them over to the Church to atone for usurious practices.

By the thirteenth century the *commenda* contract was passing out of favor. With competition stiffening and profits declining, merchants needed to rationalize their trading practices. In this climate, many larger merchant confederations began to employ permanent salaried factors, or agents, in the regions where they most often did business. While this eliminated much of the uncertainty of ventures under *commenda* contracts, it tended to fix trade along regular routes and between particular centers, eliminating the ability of agents to take advantage of regional price differences and signaling the end of the Champagne fairs.

The development of the factor system dramatically changed merchant culture. With factors scattered across Europe, the eastern Mediterranean, and into the Black Sea, merchants needed to have regular and detailed information about the price and supply of different commodities. As a result, the thirteenth century saw an explosion in the volume of mercantile correspondence. Moreover, with trade now conceived as a continuous rather than per-venture occupation, it was important for a merchant and his factors to keep running accounts so that they might know who owed what to whom and when. Furthermore, many merchant companies began to compile handbooks for their factors that contained information about how to distinguish the quality of various desirable commodities and described the weights under which they were sold. Other manuals included information about trade routes, local customs, taxes, and currency. All of this meant that it was increasingly necessary for merchants and factors to have a practical, secular education that stressed basic numeracy and vernacular literacy.

By the end of the thirteenth century, the age of rapid fortunes won on the frontiers of commerce was truly over. Trade had become fixed

➤ A FACTOR OF THE HOUSE OF BARDI DESCRIBES COMMERCE IN CHINA

Around 1340, Francesco Pegolotti, an agent who had served the Bardi banking house at posts from London to Cyprus, composed *The Practice of Commerce*. In addition to its lists of facts and figures, it included a short essay of advice for merchants bound for Mongol-dominated China. Although Pegolotti himself had not traveled that far east, his information, based on the accounts of others who had done business there, was quite good. In this excerpt he describes the use of imperial paper money, a practice that had begun under the Song dynasty in the 1120s and was continued by the Mongols.

"Whatever silver the merchants may carry with them as far as Cathay the lord of Cathay will take from them and put into his treasury. And to merchants who thus bring silver they give that paper money of theirs in exchange. . . . And . . . with this money you can readily buy silk and all other merchandise. . . . And all the people of the country are bound to receive it. And yet you shall not pay a higher price for your goods because your money is of paper."

—Richard Raiswell

Source

Henry Yule, ed. and trans., *Cathay and the Way Thither*, 2nd ed. (London: Hakluyt Society, 1967), 3:155.

along particular routes; success depended upon economies of scale and rate of turnover. In the early fourteenth century, though, Europe's economy was rocked by a series of devastating economic and demographic crises that ushered in the economic depression upon which the European Renaissance was founded.

—Richard Raiswell

Bibliography

- Cipolla, Carlo. *The Monetary Policy of Fourteenth-Century Florence*. Berkeley: University of California Press, 1982.
- Hunt, Edwin. *The Medieval Super-Companies: A Study of the Peruzzi Company of Florence*. Cambridge: Cambridge University Press, 1994.

Lopez, Robert S. *The Commercial Revolution of the Middle Ages, 950–1350*. Cambridge: Cambridge University Press, 1976.

Lopez, Robert S. "Trade of Medieval Europe: The South." In *Cambridge Economic History of Europe*, Vol. 2, *Trade and Industry in the Middle Ages*, edited by M. Postan and E. E. Rich. Cambridge: Cambridge University Press, 1952.

Latin Europe's Textile Industry

Latin Europe's medieval industrial revolution began as early as the ninth century, as the production, finishing, and dyeing of cloth gradually moved out of the realm of the home to become a specialized industry. While the cloth trade was initially conducted in outdoor fairs, late in the tenth century northern cities in Flanders set up more permanent places of trade, with indoor cloth halls in Bruges, Ghent, and Ypres.

Textile guilds appeared as early as 925 in Germany and paved the way for a labor system that would dominate the rest of the period. The

medieval guild was an organization that was developed to protect the rights of its members and to regulate prices of raw materials and finished products. The guild regulated the number of workers allowed in each trade and provided an apprenticeship system for new recruits. However, although the guilds served as a powerful protective organization for many artisans, some, such as dyers, and in some regions, tailors, were excluded to suffer a more difficult path.

Overall, the importance of the textile industry in northern Europe cannot be underestimated. It is probable that approximately half of the population in the textile centers such as Bruges, Ghent, and Ypres was employed in the business. The merchants in the north were responsible for importing wool from England, shipping it across the channel to Bruges, where it was woven and dyed. Each merchant supplied wool to workers, who sorted it and washed it to remove the lanolin. After it was dried, women carded it and spun the fiber into yarn.

One of the important issues to consider in the study of textiles in the medieval period was the change in the organization and division of labor between the sexes. In the early Middle Ages, women performed all of the tasks relating to making cloth—shearing, cleaning the fibers, spinning, weaving, dyeing, and finishing. By 1300, men had taken over the weaving and dyeing, while women continued to do the preparatory tasks for weaving. Historians have attributed this change to several factors. As manorial ties waned, which were the basis of organization in the early medieval period, peasants had more freedom to move around geographically and seek better lifestyles. This increased the population in towns, where men who previously worked the land were forced to find new occupations. The towns became concentrated centers of industry, and organizations such as the guild structure provided support for men to prosper in their trades, while excluding women from this practice. In addition, capital for large industry was required with the advent of technological advances. Large looms and water mills were not within the reach of a woman with a small cottage industry run in her home. Women did, however, continue to weave. Some women wove cloth in the home for

▶ EUROPE'S SILK INDUSTRY

During the eighth and ninth centuries, *sericulture*, the cultivation of silkworms, was introduced by Arab artisans and tradesmen into Spain and Sicily. In 1147, King Roger II, Norman king of Sicily (r. 1130–1154), imported Greek and Jewish silk weavers into his kingdom, which included southern Italy, as well as Sicily. Their descendants were responsible for the spread of sericulture throughout the Italian Peninsula. Under Emperor Frederick II (r. 1215–1250), who was also king of Sicily (r. 1197–1250), dyeing was controlled mainly by Jewish immigrants, as was silk weaving. Foreign influence can likewise be attributed to the development of Levantine forms of brocaded silk and velvet weaving in Italy. Although sericulture and silk weaving were, by far, the most developed in Italy, the lucrative industry spread to other countries, including Portugal and France. In 1147, the first mulberry trees, essential for feeding silkworms, were transported from Syria to be planted in France. With the so-called Pax Mongolica (ca. 1260–1368), silk production techniques from India and China also made their way to Italy.

—Marie Botkin

their own use, but the majority of women who were involved in the weaving process were connected in some way to a man that was protected by the guild system.

In the late twelfth century, Italy began to compete with the northern cloth centers in Flanders. While they could not compete with the quality of wool that was available in England, many Italian cities got around this by importing unfinished cloth and dyeing it themselves at great profit. The guild system in Italy also developed and formed a powerful establishment. In Florence, there were twenty-one guilds, seven of which were called the "Greater Guilds." Three of these important guilds were related to the textile industry: the cloth finishers, the silk merchants, and the woolen merchants. The guilds had great benefits for their members and wielded a lot of political power as well. Men with any political aspirations in medieval Florence were inclined to join one of the guilds to gain support.

—Marie Botkin

Bibliography

- Botkin, Marie. "Medieval Clothing." In *The Greenwood Encyclopedia of Clothing through World History: Volume 1, Prehistory to 1500 CE*, edited by Jill Condra. Westport, CT: Greenwood Press, 2007.
- Schoeser, Mary. *World Textiles: A Concise History*. London: Thames & Hudson, 2003.
- Wilson, Kax. *A History of Textiles*. Boulder, CO: Westview Press, 1979.

The Inland Waterway System of Europe

The inland waterway system of Europe consisting of various river systems, canals, and links to the Mediterranean, Baltic, and Black seas among other major bodies of water allowed Europeans to establish vital trade links throughout late antiquity and the centuries that followed. The emergence of economic centers, such as the Île de France, Lombardy, western Germany, and Flanders during the so-called High Middle Ages (ca. 1050–ca. 1350), was due to their fortuitous location on or near important waterways, contributing to the expansion of European commercial networks with linkages to Muscovy and the Is-

lamic World and indirectly to South and East Asia.

Rivers carried some of the trade in the late Roman empire, but the reliance on roads and maritime trade overshadowed that of internal waterways, and it was these army-constructed and maintained roads and Rome's Mediterranean fleets that occupied the attention of the empire's merchants, military officials, and politicians. The collapse of the Roman world in the West ended the dominance of these means of transport, at least so far as Europe was concerned. The emergence of Latin Christendom in the sixth and seventh centuries, in a more circumscribed world than that of the Romans, led to the development of commercial trade networks closer to home and established connections with the greater Mediterranean, Scandinavian, and Slavic worlds.

Navigable rivers and canals that the Romans had built became the initial primary means of transport for European merchants, but eventually they proved inadequate, leading feudal kingdoms, principalities, and other territorial political units to subsidize their expansion and construction of adjunct canals and facilities. Such improvements to infrastructure, in the form of canal building, the building of ports along river cities, and the dredging of shipping channels, led to considerable expansion of river-borne trade. Rivers such as the Seine, the Loire, the Rhine, the Danube, and the Rhone, along with their tributaries and canals, became pivotal links for intra-European trade and hubs for extra-European commercial expansion, connected as they were with vital seaports, such as Bruges, Venice, Genoa, and Marseilles.

The German cities of the Holy Roman Empire that were adjacent to navigable inland waterways were able to flourish economically due to the easy access to markets and trade hubs made accessible through them. In the thirteenth and fourteenth centuries, the Hanseatic League (also known as the Hansa), an association of northern German cities and German merchant settlements spread throughout Scandinavia and the Slavic realms to the east, dominated commerce from Flanders to the eastern Baltic Sea. This phenomenon was possible due to the commercial revolution that began in the twelfth century in much

THE RHINE RIVER

The Rhine River has proven to be a vital waterway to European trade, linking internal trade from Germany and France to external markets for centuries. Among the most pivotal inland waterways in Europe, the Rhine is navigable for nearly 500 miles (800 kilometers) inland from its mouth in the North Sea to Lake Constan­z (the Bodensee in German). The Rhine is linked directly and by canals to many of the other major rivers of Western Europe, such as the Moselle, the Meuse, and the Main, among many others. The development of the Rhine and its adjacent waterway networks is a continuous project whose origins extend back to various centuries. Its contributions to trade also resulted in political repercussions because it was the source of wealth for cities and regions that benefited from its proximity, and this often translated into political autonomy.

As part of the inland waterway system that was under development in Europe, particularly in the twelfth and thirteenth centuries, the Rhine offered a link between the commercial centers of west Germany and those of the Dutch and Flemish ports, which acted as further hubs of international trade. The economic and cultural significance of German member cities of the Hanseatic League, particularly Dortmund, Cologne, and Münster, is attributed to their geographical proximity to the Rhine, either directly or through access by a tributary or a canal. Immense amounts of river traffic due to the expansion of trade created the



Pfalzgrafenstein Castle, on the Rhine River in Germany, was built as a toll station for river traffic in the fourteenth century. (Allan T. Kohl/Art Images for College Teaching)

need for further canals to be cut through much of this period in adjacent regions to connect cities and their ports to the Rhine.

—Abraham O. Mendoza

of the northern Holy Roman Empire and the Low Countries (present-day Belgium and the Netherlands) and was directly linked to the access to trade given to these flourishing centers for commerce by efficient and affordable water transport along the expanding waterway system of the Rhine.

—Abraham O. Mendoza

Bibliography

- Calvert, Roger. *The Inland Waterways of Europe*. London: Allen and Unwin, 1963.
- Crone, G. R. "Inland Waterways of Germany." *Geographic Journal* 4(93) (1939): 333–339.
- Lopez, R. S. "The Evolution of Land Transport in the Middle Ages." *Past and Present* 9 (1956): 17–29.

Christendom's Relics—Trade, Thievery, and Counterfeiting

Throughout the Middle Ages, Christian relics were bought, sold, stolen, given as gifts, broken into pieces, taken as plunder, and otherwise moved throughout the European and Mediterranean regions.

The Christian practice of venerating the remains of holy men and women emerged out of the religion's persecuted beginnings. Disciples of early martyrs would gather the remains of their departed fellows and employ them as focal points in the development of local churches. Similarly, objects closely associated with a saint could acquire sacred value to Christian commu-

nities. During the era of persecution, the cult of relics was a profoundly local phenomenon.

As normative Christianity developed in the late Roman era, items became more broadly recognized as relics. In this era, early Christian emperors sought to turn Constantinople into a true capital city of the Christianized Roman empire and to use religion as a means of inspiring cultural cohesion and loyalty. To this end, many Christian emperors extracted relics from the Holy Land and brought them in great numbers to their city. These included the relics of the Passion, Christendom's most sacred items. The great process of relic acquisition led to a much less august process, a pattern repeated in later eras (major relic translations leading to minor ones). Eastern prelates and rulers would take tiny fragments of key relics, encase them in beautiful reliquaries, and use them as diplomatic favors. In this way, Orthodox relics moved throughout the Christian world.

In the West, there had long been conflicts between religious houses over the authenticity and possession of relics. During the Carolingian period, the presence of newly empowered political entities with a unified religious culture spurred an increase in the perceived need to have relics that were at least as grand as those nearby. Clerics and secular allies of religious houses wanted prestige, spiritual patronage of a given saint, and the money that came with the pilgrim traffic. A commodification of relics gradually occurred in which relic traffickers traveled from Italy with relics that they had bought, stolen, or forged and sold them on the other side of the Alps. New literary traditions thrived as the result of the increased exchange and acquisition of relics via theft, pillage, and purchase. Recipients of new relics needed to document the authenticity of their possessions and legitimate their removal from their original homes; often, this required explaining how the relics had been acquired and recounting the miracles that accompanied their transfer. The point was that the saint whose relics were translated approved, and even directed, the transfer from a less worthy possessor to a more worthy one.

A resurgent papacy tried to take greater control over relics after the mid-eleventh century. Around 1140, the Italian lawyer-monk Gratian

➤ THE FOURTH LATERAN COUNCIL ON RELICS

In November 1215, Pope Innocent III summoned the leading clerics of the Latin Christian world (as well as several Eastern Christian church leaders) to Rome to participate in the Fourth Lateran Council, which dealt with high affairs of state and, more important, the intended spiritual reformation of Christian society. Each of the canons, or rules, issued was aimed at correcting a serious systemic problem as perceived by Innocent and his advisors.

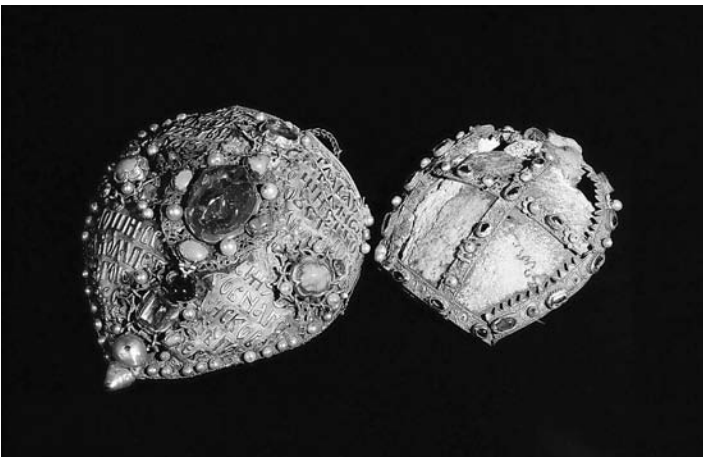
Canon 62 addressed one such perceived abuse. It reads: "Because some expose for sale and exhibit recklessly the relics of saints, great injury is sustained by the Christian religion. . . . We ordain . . . that in the future old relics may not be exhibited outside of a vessel or exposed for sale. And no one may presume to venerate publicly new relics unless they have been approved by the Roman pontiff. In the future, bishops shall not permit those who enter their churches to venerate sacred relics to be deceived by worthless fabrications or false documents, as has been done in many places for the sake of profit." Ultimately, however, this effort was ineffective. In large part due to widespread dispersal of relics from Constantinople after the Fourth Crusade, relics of every sort and often doubtful authenticity remained alluring, powerful, and all too available (if expensive!). Chaucer's fictional fourteenth-century Pardoner, who had a pillowcase that he said was the veil of the Virgin Mary and a jar of pig's bones that he passed off as saints' bones, was an all too common reality.

—David Perry

Source

Papal Encyclicals Online, "Fourth Lateran Council: 1215," <http://www.papalencyclicals.net/Councils/ecum12-2.htm>.

ruled in his codification of canon law that it was not permitted to move a relic without permission from one's religious superior unless one did so in order to protect the relic or to find a more advantageous resting place for the saint. Translators of relics took full advantage of these loopholes. Innocent III (r. 1198–1216) tried to close the loopholes in the Fourth Lateran Council in 1215. That many later councils also enacted canons



Relic of part of the skull of Saint John the Baptist, decorated with gold and semiprecious stones. The inscription shows that the work is Bulgarian. (Werner Forman/Art Resource, NY)

forbidding the trafficking of relics serves as evidence that such prohibitions were ineffective.

Several factors contributed to the expansion of relic trafficking in the later medieval period. The crusades, the fading power of Byzantium, and increased travel from Western Europe to Eastern lands all allowed Catholics new access to old relics. Elites brought back prominent relics to benefit their own churches and reward their friends and allies. For example, Louis IX (r. 1226–1270) acquired the relics of the Passion from the Latin emperor of Constantinople in 1241 and built the Gothic masterpiece Sainte Chapelle to house them. St. Louis's acquisition, however, is merely the most famous example of a widespread practice. Furthermore, although common pilgrims, merchants, and crusaders lacked diplomatic channels, they could acquire relics through purchase, pillage, and theft. Many unscrupulous

vendors no doubt forged relics instead of stealing or buying better-attested sacred items.

In the long term, a type of relic inflation took place. Once many communities and religious houses had new relics pertaining to the Holy Family, the Apostles, or other important saints, rival sites tried to emulate their neighbors. The old local saints no longer functioned as sufficiently prestigious patrons. In such an atmosphere, relic trafficking thrived. Felix Fabbri, in his fifteenth-century pilgrimage guide to Jerusalem, warned pilgrims against buying the bodies of martyrs from locals, as they were merely the mummies smuggled out of Egypt. Others seeking relics bought them from vendors later lampooned by Chaucer's character, the Pardoner, in the *Canterbury Tales*.

Overall, although the relics moved throughout Christendom, it is not clear that foreign ideas or knowledge accompanied the objects. Instead, owners of relics from far away generally tried to make them their own. They developed new stories in which the saint acted locally to heal the sick or smite the unworthy. The vector of medieval relic exchange is clear: east to west and rarely, if ever, back again.

—David Perry

Bibliography

- Geary, Patrick J. *Furta Sacra: Thefts of Relics in the Central Middle Ages, 800–1100*. Princeton, NJ: Princeton University Press, 1978.
- Geary, Patrick J. *Living with the Dead in the Middle Ages*. Ithaca, NY: Cornell University Press, 1994.
- Gunther of Pairis. *The Capture of Constantinople: The "Hystoria Constantinopolitana" of Gunther of Pairis*. Edited and translated by A. J. Andrea. Philadelphia: University of Pennsylvania Press, 1997.

■ Introduction: Overcoming the Challenges of Geography

Geography and environment often present challenges, but rarely, if ever, do they determine in any absolute manner the course of human activity. As the entries and sidebars under this theme show, the peoples of

the Americas and Oceania faced the daunting challenges of vast distances, intimidating barriers, and dangerous natural forces as they endeavored to communicate and exchange commodities with one another. The fact that they established

long-distance trading networks is a testament to their determination, courage, and skills and perhaps is also evidence of a deep-rooted human need to reach out beyond the limits that nature appears to impose.

The Red Knot, a North American sandpiper, breeds in Canada's Arctic and migrates south to Tierra del Fuego at the southern tip of South America, a distance of approximately 9,300 miles (15,000 kilometers). There is no known human equivalent to this feat in the period 1000–1500, but there is plenty of evidence of human interaction and exchange in the Americas over long distances and across mountains, deserts, rivers, plains, prairies, and forests of every sort during this half millennium.

All of this was accomplished without wheeled vehicles or animals of burden on which travelers could ride. In other words, human travel was exclusively by foot or boat, which greatly restricted the size and quantity of traded commodities. The only animal bred and used for carrying goods was the South American llama, but its use was restricted to the high Andes. Whereas a full-grown llama can carry about 100 pounds (45 kilograms) long distances over rugged terrain and at oxygen-poor altitudes, a Bactrian camel (a distant Asian cousin), which was a mainstay pack animal on the eastern routes of the Silk Road, could transport loads of more than 450 pounds (200 kilograms), although around 330 pounds (150 kilograms) was a more comfortable load for long-distance travel over deserts and mountains. The Bactrian camel, only one of many transport animals used in Afro-Eurasia, also worked in a wider range of climates and altitudes than the llama. Given this relative handicap, it is amazing that long-distance commodity exchange took place in the Americas. But it did.

Archaeological evidence unearthed to date suggests that the Americas had nothing to compare in size, complexity, and scope of activity with such Afro-Eurasian trading networks as the Silk Road and the trans-Saharan caravan routes that are collectively known as the Gold Road. Yet, as the entries included here show, it did have more modest but quite important commercial systems that extended for significant distances. These entries only hint at their number, and one that is not mentioned here, but only

hinted at in the entry on the economic activities of the inhabitants of Chaco Canyon, is the so-called Turquoise Road.

At its height, the Turquoise Road linked the Pacific Coast of present-day California (from which shells were exported to far-distant artisan carvers) to Mexico's Yucatán Peninsula on the Caribbean. The network existed for centuries prior to 1000 CE, but in the period immediately following 1000 CE, Chaco Canyon seems to have been a major distribution and craft hub, connecting the turquoise mines of the present-day American Southwest, especially New Mexico, with central Mexico and beyond. With Chaco's petering out as a community around the mid-twelfth century, other centers picked up the slack. South of the Rio Grande River, the city of La Quemada in northern Mexico appears to have been a major center for trade in turquoise down to the period of the Spanish Conquest. Prior to Chaco's collapse, however, it and other "Anasazi" communities of the American Southwest received and integrated into their culture a number of Toltec customs and traditions out of central Mexico. As is almost always the case, ideas traveled along with commodities.

If long-distance travel was difficult in the Americas, it was ever so much more so in Oceania. The Pacific Ocean covers nearly one half of the Earth's surface, and its islands, even those whose inhabitants share a common culture, such as the more than 1,000 islands that comprise the Polynesian Triangle, are often separated by great distances in an ocean known for being anything but "pacific." Yet due to the technology of the outrigger canoe and a tradition of seamanship in which currents could be read as though they were nautical maps, the Austronesian mariners of the Pacific, namely Polynesians, Micronesians, and Melanesians, were able to voyage and trade not only within their island chains (which is where most interchange took place) and culture groups but occasionally beyond both. We know not whether regular exchanges took place between South America and Polynesia, but surely exchange did occur, with the former giving the sweet potato to the latter and, in turn, receiving a new type of fowl.

Since antiquity mariners have ventured onto the wine-dark sea. Regardless of what drives the

initial adventurers, eventually, almost inevitably, they will be followed by persons who trade goods, and with goods often comes cultural interchange.

—Alfred J. Andrea

The Staple Industries of Mesoamerica

Hernando Cortés, in his travels through the area now known as Mexico, was thoroughly impressed by the cities and markets that he saw. In the market of the city he called Temixtitan (Tenochtitlan), he estimated that more than 60,000 people were present, all engaging in buying and selling goods and services. Many were staple industries, namely activities that provide the greatest economic benefit to a region.

The primary industry in Mesoamerica was agriculture. Maize, or corn, formed the basis of subsistence in pre-Hispanic society. Countless millions of farmers worked their fields raising maize for their families, their overlords, and for barter. In addition to maize, other food crops such

as squash and beans were indispensable. Often these were grown intermixed with the maize or in nearby gardens. Cortés noted that the market had an abundance of green vegetables, which were grown in raised gardens called *chinampas*.

Other agricultural products were grown primarily for barter and trade. The flower industry of the Aztecs, for instance, focused on providing flowers during the year for the upper classes. These were grown locally and were moved by canoe to the marketplace. Likewise, certain chilies, herbs, roots, and medicinal plants were traded in the market.

The most important nonfood crop was cotton. Cotton was used for clothing and bedding and was traded in the marketplace. Cotton sellers sold bolls, dyed yarn, and mantas (blankets). Mantas were sufficiently valuable to the economy that they were one of the few standard units of measure in the moneyless economy of Mesoamerica. Under Spanish rule, cotton mantas became the most valued article from the New World after precious metals. Other fibers were also important, such as maguey fibers. Maguey

➤ MESOAMERICAN CERAMICS

Ceramics were a principal industry in Pre-Hispanic Mesoamerica and came in many sizes, shapes, and designs. Bowls were used for cooking, cylinders were cups, and large basins held water. Each could be decorated in a myriad of ways, yet like fashions everywhere, their size, shape, and decorations changed over time. Archaeologists therefore analyze ceramic forms as a means of understanding change in society. As a general rule, episodes of wealth increased the diversity and decoration of wares, while periods of economic depression constricted styles.

Ceramics were a cottage industry for Mesoamericans. The available labor often came from individual families. Children were sent to riverbanks for clay, and family members broke down the clay clumps and strained out impurities. Because the wheel was essentially unknown, all ceramics were made by hand or in molds and then were painted. The finished products were placed under piles of brush and wood, which were burned



Aztec hand-coiled domestic pottery. The bottom of the dishes have been scored, suggesting they may have been used for grinding chilies. (Werner Forman/Corbis)

to fire the pots. The finished products were then traded in the market.

—Zachary Nelson

was used for ropes and the coarse clothing of the poor. The fermented sap of the maguey plant became pulque, a potent alcoholic drink related to tequila.

A tour of the market revealed other kinds of economic specialization. For instance, obsidian (a volcanic glass stone) flint knappers were present who would reduce a prepared prismatic core into blades. These specialized craftsmen were at the end of a consumption line that started at the Otumba mines, approximately 30 miles away. Miners chipped large obsidian blocks from their geologic matrix. These blocks were then shaped with hammer stones into rough cores. The cores were then carried to the market, where they underwent a final polish with pressure flaking and percussion shaping techniques. Then, the craftsmen could barter obsidian blades stricken from the core. Because metal was extremely rare in Mesoamerica, obsidian and chert (quartz) tools were primarily used.

Metalsmiths were also present in the market. Their objects were fashioned elsewhere and were brought by hand into the market. Metal ore from the Tarascan area of Mexico was dug out of the mountains and carried to villages renowned for metalworking. These villages were located in wooded areas because it was easier to move the ore to the wood than move the large quantities of wood necessary to heat the ore up the mountain. Workers would then reduce the wood to charcoal and burn the charcoal over the metal-bearing ore. After several hours of burning and blowing on the charcoal, a pool of molten metal remained under the slag. This pool was allowed to harden, and then it was beaten into desired shapes. Popular shapes included bowls, bells, and other ornaments. These were then carried by hand to the market to be traded for cotton, obsidian, maize, or other products.

Each valley in Mesoamerica focused on producing different products. The staple industry in one valley could be ceramic pots, while a neighboring valley was better suited for basalt metates, which were blocks of a hard volcanic stone with a shallow concave indentation that were used, along with a grinder known as a *mano*, for grinding maize. In this way, each village could trade for what it needed.

—Zachary Nelson

Bibliography

- Boone, Elizabeth Hill. *The Aztec World*. Exploring the Ancient World Series. Washington, DC: Smithsonian Institution, 1995.
- Pagden, Anthony, ed. *Hernan Cortés: Letters from Mexico*. New Haven, CT: Yale University Press, 1986.
- Sharer, Robert J., and Loa P. Traxler. *The Ancient Maya*. 6th ed. Stanford, CA: Stanford University Press, 2006.

Luxury Industries in Mesoamerica—Metalware and Feathered Garments

Tenochtitlan, the heart of the Aztec (Mexica) empire, in the year 1492 was one of the largest cities in the world. In its great marketplace one could buy anything the New World offered. Merchants bartered maize, amaranth, clothing, perfumes, ointments, stone implements, feathered garments, and even gold and silver. Metal production was a recent innovation (ca. 600 CE) from South American cultures, whose expertise in fashioning metal objects began as early as 1400 BCE. Current theories posit that metalworking expertise was passed along the Pacific coast via oceangoing ships. Despite Central Mexico's late start in working metal, by the arrival of the Spanish, metal objects permeated the empire.

An initial gift to Cortés from Moctezuma consisted of a large golden disk shaped like the sun and worth an estimated 10,000 pesos; a silver disk shaped like the moon; realistic animal figurines such as ducks, dogs, jaguars, pumas, and monkeys wrought in gold; and many other objects as recorded by Bernal Diaz del Castillo. Gold was more prized than silver to the Mexica, although both were mined. Copper was also mined and was commonly used for bells and tweezers. Metal was required as tribute (taxes) by the empire in the forms of unrefined grains, purified ore, and worked pieces. Recent work by Blanca Maldonado on pre-Hispanic metallurgy documented the technological processes behind the artifacts. Ore was mined in the mountains or panned from streams and then was brought to metallurgical compounds in forested areas for processing. It was easier to bring the ore to the heat source (fire wood) than bring sufficient wood to ore-bearing locales. The ore was cooked

► THE POCHTECA

The great aviary of Moctezuma was filled with tropical birds brought alive from Chiapas or Guatemala. Yet these birds were too few to supply the needs of Tenochtitlan and its inhabitants. Tribute requirements from just the province of Tlaxtepec included 24,080 bunches of feathers annually. But trade, as well as tribute, was a major means of feeding Tenochtitlan's constant demand for feathers.

Professional traders, known as *pochteca* (singular: *pochteca*), established routes and contacts within 40 days' travel of Tenochtitlan. They would barter feathers for precious stones, amber, provisions, or whatever would fetch a good price in the next port. Traders traveled in all directions from the empire, returning with porters loaded with exotic goods destined for the upper classes. However, the life of traders was not always easy, and their professional activities were not always straightforward. The Franciscan missionary Bernardino de Sahagún describes the *pochteca* entering into the Chiapas area. Wanting to poach feathers and tropical valuables, they cut their hair like the natives, learned the language, and wore the right clothes. Upon infiltrating the area, they hunted the birds, being careful not to touch the plumage directly. If they were caught, death was their reward. Success meant fame and fortune.

—Zachary Nelson

until it melted, and the slag was then broken up (and remelted sometimes). Workers took the cooled metal, broke it into proper sizes, and hammered it into ornaments. In addition to hammering, trained artisans cast intricate artworks using lost wax techniques. Villages and towns specialized in metallurgic tasks and techniques, which required the raw metals to move from place to place for further refinement.

Another prized industry for the Aztec empire was feather crafts. Feather work is virtually unknown in today's society, but for ancient peoples feathers added pomp to garments and especially to headgear. Rare feathers, such as the long tail feathers from quetzal birds in faraway Guatemala, brought prestige and honor to the wearer. Royal clothing was festooned with feath-

ers, as were most headdresses. Feathers were incorporated into cloth, adding iridescent colors and softness to the outfit. Feather embroidery was an honored craft among the peoples of pre-Columbian Mesoamerica, and trained professionals were valued for their artistic arrangements of cloth and feather. Part of the general difficulty of feather crafts was working with certain feathers. The bright plumage of many tropical birds would rapidly stain when handled. The feathers needed to be plucked, transported, and woven without being touched or else oils from the hands ruined the colors. While some birds could be bred in aviaries, many of the prized feathers were sent as tribute items. This meant that provinces needed to scour the nearby forests for birds. Care was taken to capture the birds without damaging their feathers, which were then hand-carried to the heartland, a distance of more than 500 miles in many cases.

—Zachary Nelson

Bibliography

- Díaz del Castillo, Bernal. *The Discovery and Conquest of Mexico*. Translated by A. P. Maudslay. New York: Farrar, Straus and Giroux, 1956.
- Maldonado, Blanca. "Preindustrial Copper Production at the Archaeological Zone of Itziparatzico, a Tarascan Location in Michoacán, México." Unpublished PhD dissertation, Pennsylvania State University, 2006.
- Peterson, Amy A., and A. Townsend Peterson. "Aztec Exploitation of Cloud Forests: Tributes of Liquid Amber Resin and Quetzal Feathers." *Global Ecology and Biogeography Letters* 2 (1992): 165–173.

Trade throughout Mesoamerica and Beyond

On October 13, 1492, Christopher Columbus was surprised when a long dugout canoe came out to trade with him as his ships were anchored off the coast of a Caribbean island. The canoe could hold 40 people and was full of trade goods common to the area: cotton, parrots, javelins, and many other items. Columbus did not realize that he was the newest member of the Mesoamerican-Caribbean trade network. The trade network was an informal system for the movement of goods and services throughout all of Mesoamerica and beyond. For the most part, trade occurred at

➤ TULUM—LAST OUTPOST OF MAYAN COASTAL COMMERCE?

The popular tourist destination of Tulum, Quintana Roo, Mexico, is very different than the thriving, living town that Juan de Grijalva compared to Seville in 1518. The main pyramid stands as a silent witness to the great changes that have occurred over the last five centuries. It was built with its back to the sea to protect its religious images from hurricanes and sea storms. But it could not protect its people from the perils of trade and commerce. As Cortés once explained, there was in his country a peculiar illness that only gold could cure. It was this remedy that the Spaniards were looking for in their travels.

Tulum was probably built as a trade center under the direction of the lords of Mayapan around 1200 CE. Situated on the Yucatan's eastern coast, it had sea access to goods shipped from Panama to Honduras. A break in the nearby coral reef allowed canoes access to its beaches, while strong walls protected the city itself from irate customers and enemies. Ocean-plying boats



(Keith Walbolt)

transported ceramics, valuable seashells, dried fish, salt, jade, honey, beeswax, stingray spines, exotic spices, resins, cotton, and worked stones to and from this important trade center.

a very local level; precious feathers from the forest might be traded for cacao beans from a neighbor's tree. Each village also had a local market where goods exchanged hands. For example, potters traded their ceramic vessels for weaver's cloth. Current models of pre-Columbian trade networks in Mesoamerica indicate that elite wares were traded long-distance and that most subsistence items were traded locally.

Perhaps the greatest marketplace known in the New World was the great market of Tlatelolco, which received trade goods from the entire Aztec empire. The market was carefully regulated by police officers to prevent theft and deception. Merchants whose wares were suspect could be fined, beaten, or killed. Each section of the market was devoted to a particular kind of good or service, so buyers could compare prices with nearby stalls. Incidentally, the market did not operate with money. Items were bartered with other goods, although some valuable items acted as currency. Cacao beans as well as cotton cloth could be universally traded.

Trade goods were brought into the city by porters or boats. The city of Tenochtitlan was

situated in a lake (now dried up and under Mexico City). Vegetables and flowers were grown in the lake on raised earth terraces known as *chinampas*. These fertile fields contributed greatly in supplying the food needs of the city. Canoe transport would bring the harvest directly to the market in the city. Maize, cotton, metals, ceramics, and other trade goods also came from the land around the city and as far away as Chiapas to the south. These were carried on the backs of porters, for Mesoamerica did not have pack animals. A typical weight would be 50 pounds (almost 28 kilos) supported on the back by a rope that passed across the forehead (tumpline). Because humans do not carry as much as pack animals, archaeologists have posited that large-scale movement of basic goods over land in pre-Hispanic Mesoamerica would not be reasonable over long distances. The argument is that the porter would eat more in calories than the worth of his burden over these large distances. The assumptions behind this model are still questioned.

It is at the higher levels of trade systems that archaeologists begin to grasp the complexity of

pre-Hispanic networks. When obsidian from Hidalgo, Mexico, was found at Spiro, Oklahoma, it demonstrated the enormous distances that materials could travel in pre-Columbian antiquity. Chaco Canyon in northwestern New Mexico housed pens for tropical macaws whose feathers were used for religious purposes in the Puebloan area. In return, turquoise from New Mexico has been found in Mexican sites. The trade between Spiro and Hidalgo probably occurred indirectly, one trader to another who then traded with another and so on down the line rather than professional Mesoamerican traders, known as the Pochtecatl, traveling from Central Mexico all the way north.

Toward the southern edge of Mesoamerica, the post-Classic Maya centered their trade on sea routes and along rivers. Coastal resources such as salt, fish, stingray spines, and other ritual objects were moved inland via canoes and eventually human porters. Cotton cloth, fine ceramics, feathers, jade, and resins probably moved toward the coast. Excavations from sites currently under water along the Atlantic coast hint at the variety of ways the Maya exploited the sea. Port facilities such as at Tulum facilitated the movement of large quantities of items around the Yucatán Peninsula and perhaps to Panama. Unfortunately, many trade goods do not preserve well in the humid environment, and this constricts the archaeological record. As new sites and artifacts are sourced to their origin, our understanding of this important human activity improves.

Finally, trade is not always tangible. Ideas and stories were traded across Mesoamerica as much as goods. Markets of any kind lend themselves to news and stories. These intangible goods are impossible to find with trowels, but similar stories of gods and heroes appear across Mesoamerica and extend well beyond its boundaries.

—Zachary Nelson

Bibliography

- Barker, Alex W., Craig E. Skinner, M. Steven Shackley, Michael D. Glascock, and J. Daniel Rogers. "Mesoamerican Origin for an Obsidian Scraper from the PreColumbian Southeastern United States." *American Antiquity* 67 (2002): 103–108.
- Drennan, Robert D. "Long-Distance Movement of Goods in the Mesoamerican Formative and Classic." *American Antiquity* 49 (1984): 27–43.

Kehoe, Alice B. "The Fringe of American Archaeology: Transoceanic and Transcontinental Contacts in Prehistoric America." *Journal of Scientific Exploration* 17 (2003): 19–36.

McKillop, Heather. "Underwater Archaeology, Salt Production, and Coastal Maya Trade at Stingray Lagoon, Belize." *Latin American Antiquity* 6 (1995): 214–228.

Artisan Crafts in the Andes—Textiles and Metals

The period from 1000 to 1500 CE in the Andes produced some of the most spectacular surviving craft work from that region of the world. The region was eventually united under Inca rule (roughly 1400–1532), and under the empire people produced exquisite crafts either as part of a taxation system called *mita* or for the personal use of the nobility. This craft production was specialized often, with whole villages devoted to the production of a specific craft. Inca predecessors, however, should be credited with the development and perfection of these crafts, especially textile production and metalwork.

Textiles have a long and important history in the Andes. Textile production relied on cotton and camelid fibers (from alpacas and llamas) that were spun by drop spindle and dyed with plant and animal products, with urine and other reagents, or mordants, used to fix the colors. Cochineal, indigo, *Schinus molle*, and a variety of other plants and minerals served as dyes. Weavers used back-strap, or self-tension, looms of varying widths on which they could produce a variety of different textures or weaves. Deluxe textiles included additions of feathers, metal and shell sequins, beadwork, animal fur, and decorative fringes and tufting.

Textiles had high social value for many reasons. Exchanges of cloth and clothing played a role in coming-of-age and marriage ceremonies. They were also an important part of religious offerings used to clothe large idols and votive figurines. Cloth, in the form of clothing, footwear, and headgear, also served as a strictly enforced marker of ethnic identity and status. Decorative elements, colors, and design organization often marked the ethnic origins of particular textiles, distinguishing pieces by region and even village

of origin. In the case of textiles for royalty and the nobility, designs may also have had symbolic, narrative, or calendrical meanings.

In the Andes, textiles and their production were also highly gendered. Almost all Andean people could use a drop spindle to produce cotton and wool thread, but weaving was closely associated with femininity. Ideal visions of Inca womanhood rested in the production of cloth and represented one of the primary ways in which women paid tax to the Inca empire. One primary function of the *acllas*, women controlled directly by the state, was production of *cumbi* cloth of vicuña wool reserved for royal use. Men on the other hand took almost sole responsibility for the production of feathered textiles, producing the cloth and obtaining and attaching the feathers.

Metallurgy also has a long history in the Andes stretching back to the second millennium BCE. Gold and silver were most valued, but copper alloys were also common. Gold-, silver-, and copper-bearing ores were smelted in small furnaces. The search for such ores may have partially motivated the southern expansion of the Incans into present-day Bolivia, Chile, and Argentina, where men and women worked to produce metal items. Artisans commonly hammered purified metals into sheets that they could cut, shape, and decorate using inlay, gilding, repoussé, and even paint.

Almost all metalwork in the Andes was ornamental in nature. Jewelry of inlaid gold and silver was a common inclusion in burials of the elite and was presumably worn during their lifetime. The Inca craftsmen also produced three-dimensional human, animal, and even plant images ranging in size from a few inches—used for votive offerings—to full-sized idols such as those that graced the Qorikancha temple in Cuzco. Even items such as tweezers, knives, bottles, and cups may have served more as markers of the owner's status than as purely functional items. The Sapa Inca, for example, reputedly used a gold or gilded hoe to till the soils of the royal fields near Cuzco.

During this period metals were often valued for their color and symbolic associations. The sun god *Inti* was associated with the color of gold. As “sons of the sun,” Inca males placed high

➤ HOW VALUABLE WAS METAL?

How much did ancient Andean people value precious metals? The answer appears to be both more and less than we might think. Precious metals such as gold and silver were clearly the province of the elite and were used to emphasize their high status when it was incorporated into jewelry, headdresses, and garment decorations. We use gold and silver in much the same way. People additionally gave precious metals religious significance. The Inca covered temples in hammered sheets of metal and wrought from gold and silver idols of and offerings to their most important deities. Some people also venerated large nuggets of gold or heavily veined ore as minor deities.

At the same time, archaeological discoveries suggest that for some people in the Andes, gold did not hold exactly the same value as it did for others. Some offerings were thrown into lakes or abandoned on mountaintops rather than placed in temples, where people could see the wealth and power of the Inca state religion. People also placed gold in tombs rather than saving it or passing it on to subsequent generations. Some people even painted over gold with thick layers of pigments, much the way they would paint adobe walls.

—Jo Ellen Burkholder



Gold figurine of an Inca and two silver llama figurines.
(Gordon McEwan)

value in gold jewelry, such as ear spools. The major temple of the Sun, the Qorikancha, is reported to have been heavily embellished with gold plating. The moon goddess *Mama-Quilla* was associated with silver. Inca women often fastened their dresses and mantles with large silver

pins called *tupus*. Commoners were sometimes associated with copper or bronze implements.

—Jo Ellen Burkholder

Bibliography

D'Altroy, Terence N. *The Incas*. New York: Blackwell, 2002.

Lechtman, Heather. "Andean Value Systems and the Development of Prehistoric Metallurgy." *Technology and Culture* 25 (1984): 1–36.

The Incan Economy

Andean geography presented distinctly vertical challenges to the region's pre-Hispanic peoples and cultures. Moreover, while domesticable Andean crops and animals included coca, manioc, potatoes, llamas, and guinea pigs (Mesoamerican maize, or corn, arrived as an import), wheat, barley, horses, oxen, and cows did not appear until the so-called Columbian Exchange introduced these and other elements from Afro-Eurasia's biota during the early colonial era. Andean and ultimately Incan economic life, then, necessarily conformed to this harsh environment and its particular food-production package.

Local clans and ethnic groups, or *ayllus*, diversified their agricultural and economic interests, creating, for example, what ethnohistorian John V. Murra called outliers, or colonies. Those primarily inhabiting one particular ecological zone colonized, contracted, or traded with those who primarily inhabited different ecological zones, sometimes only vertically distant. These groups created obligations and paid debts through an elaborate reciprocal gift-giving and community service system, although at least some ethnic competition and conflict occurred within these complex economic webs of influence.

This uniquely Andean economy produced sufficient agricultural surpluses to support several polities and religious movements. The Incan empire (ca. 1450–1532) was only the last and most powerful of the polities that emerged. The Incas, based in Cuzco, their capital city, skillfully imposed their state bureaucracy over preexisting traditional economic patterns. They negotiated with, assimilated, co-opted, or relocated other ethnic groups and resorted to intrigue, intimidat-

tion, and military force against the varied peoples and cultures whose economic activities they managed and taxed.

One of the most effective pre-Incaic patterns that Cuzco absorbed and made its own was the reciprocal and redistributive economic relations of the local lords (*curacas*). In exchange for relieving the curacas from agricultural work, for example, including tending their lands and herds, locals expected and received gifts and other benefits, including large-scale religious celebrations where no one wanted for *chicha*, or Andean beer. Because Cuzco expanded on such patterns and moved to transform its diverse Andean subjects into something akin to a peasantry, scholars sometimes call the Incan empire a redistributive state.

However useful descriptive concepts they may be, the terms "reciprocity" and "redistribution" suggest a more harmonious Incan political economy than actually existed. Historian Steve J. Stern uncovered both pre-Hispanic ethnic rivalries and post-Conquest realignments whereby large numbers of curacas and the communities they represented willingly joined the conquistadores to overthrow the Incas.

These realignments notwithstanding, the Incas successfully extracted vast resources from their subjects for as long as they ruled the Andes. These resources included labor and other services, some of it specialized. This enabled Cuzco to create and staff administrative machinery and a complex communications and transportation grid; storehouses; royal herds; palaces and shrines, some constructed to harness local religious traditions; military facilities; and well-disciplined garrisons.

As it is, this Incan economy and the deeper Andean economic pattern underlying it remain outside mainstream macroeconomic-oriented world history, a line of inquiry that continues to study Eurasia or, according to some, Afro-Eurasia, as if this area represents the world. That is, the pre-Hispanic American past does not presently appear in macroeconomic-oriented world history. Only specialized Andeanist ethnohistorians investigate, theorize, and reconstruct it.

Economic historian Andre Gunder Frank recently reconceptualized macroeconomic-oriented

➤ PROFESSOR EMERITUS JOHN VICTOR MURRA

Much of what we know about the Incas and their history derives from archaeological remains; early colonial records, including oral histories; and the ethnographic present. University of Chicago-trained ethnohistorian John Victor Murra (1916–2006) contributed a powerful interpretive Andean framework in 1956. Murra's dissertation "The Economic Organization of the Inca State" and Murra's concepts, like "vertical archipelago," remain current. And those who studied under or collaborated with Murra while he taught at Cornell from 1968 to 1982 have in turn produced much of the literature treating the Incan empire and its historiographical problems.

Born in the Ukraine and raised in Rumania, Murra immigrated to the United States to study anthropology at Chicago in December 1934. His long-standing activist radical politics, which included several short-term jail sentences in his youth, led him to enlist to fight in the Spanish

Republican Army's international brigades after he earned his bachelor's degree in June 1936. This Spanish experience drew Murra's attention to Andean history. Murra also described falling in love with Spain. Had the Republicans won, Murra would not likely have returned to the United States. He once explained that he had graduated not from Chicago but rather from the Spanish Civil War.

In any case, Murra returned to Chicago in 1939. He earned a master's degree and contributed to the *Handbook of South American Indians* in 1942. Murra's political past caused problems for him as a doctoral student, however. He received American citizenship and a passport only after 1956. Murra researched and defended his dissertation, then, without having left the United States. He later taught in Puerto Rico and Peru before joining Cornell's faculty in 1968.

—James Douglas Lockhart

world history, attacking its alleged Eurocentrism. Frank's reimagined macroeconomic-oriented world history places East Asia at the center of world history while relocating Western Europe to its periphery. But Frank fails to include pre-Hispanic America. This failure derives partly from the task's daunting unmanageability and partly from a dearth of sources among other disadvantages, including the apparent historical fact that the Americas had no contact with Eurasia prior to 1492. Nonetheless, for students of world history, and not only those interested in macroeconomic patterns, reincorporating pre-Hispanic American history into the larger narrative remains an enticing challenge. Meeting this challenge will signal the Incas' and other pre-Hispanic American peoples' and cultures' inclusion in the world history narrative, thus reversing a trend that the Columbian Exchange began long ago.

—James Douglas Lockhart

Bibliography

Frank, Andre Gunder. *ReOrient: Global Economy in the Asian Age*. Los Angeles and Berkeley: University of California Press, 1998.

Murra, John V. *The Economic Organization of the Inka State*. Greenwich, CT: JAI, 1980.

Rowe, John Howland. "An Interview with John V. Murra." *Hispanic American Historical Review* 64 (1984): 633–653.

Stern, Steve J. "Pre-Columbian Landscapes." In *Peru's Indian Peoples and the Challenge of Spanish Conquest*, edited by Steve J. Stern. Rev. ed. Madison: University of Wisconsin Press, 1993.

Chaco Canyon—Consuming Nexus of a Trading Network

Chaco Canyon is an ancient city that has intrigued scholars and the general public since the mid-nineteenth century. Situated in the San Juan Basin on the Chaco Plateau of northwestern New Mexico, this site was occupied by the Anasazi from approximately 500 to about 1300 CE. Concentrated in a ten-mile radius, the core of this nexus consists of 14 multilevel stone pueblos known as great houses, multiple below-ground ritual spaces called kivas, small house sites, signaling stations, water control systems, and roads with north-south axis alignments. The



Kiva at the Anasazi site of Chaco Canyon, in present-day New Mexico. (Zack Frank)

THE EVIDENCE

The roads of Chaco Canyon supported a vast trade network linking Chaco Canyon proper with outlier settlements including Salmon Ruin, Aztec (a name given this ruin in the mistaken belief that the Aztecs, or Mexica, had built it), and Kin Bineola as well as more distant localities in Mesoamerica. A laboring class built many of these roads during the Classic Bonito phase (1000–1100 CE), whereas others, particularly those linking Chaco to northern outlier settlements, were built after this time and helped link people to resources in the region, including wood for construction and clay for pottery. In the 1970s, archaeologists began to positively identify these exchange networks with the aid of aerial photographs. This research revealed that the roadways of Chaco extend far beyond the core architectural features of Chaco Canyon and total anywhere between 129 and 1,490 miles (208 and 2,400 kilometers).

The roads of Chaco have unique characteristics that may help to shed light on their prehistoric functions. First, they are aligned to a north-south axis rather than to the changing topography of the landscape, leading one researcher to describe these pathways as ceremonial highways. Next, the expansion of these roadways is associated with the development of outlier settlements. Known as the Chaco Phenomenon, this florescence catalyzed the movement of people, knowledge, and material culture.

—Alex K. Carroll

spatial dimensions of Chaco Canyon are carefully planned, resulting in a built environment characterized by well-defined ritual and domestic spaces as evidenced by concealed areas such as the great kivas and more visible spaces such as the public plazas.

Three principal models have been proposed to explain how Chaco Canyon functioned. According to the first model, Chaco Canyon served as a trading outpost of the Mexica (Aztec) empire of Mexico. A second theory suggests that Chaco Canyon was the hub of an elite power complex whose economy was founded upon a corporate political structure. And a third school of thought proposes that Chaco Canyon was a center of religious devotion attracting pilgrims and adherents from Mexico as well as diverse populations from throughout what is today the U.S. Southwest. Inasmuch as archaeological evidence supports aspects of each model, it is beneficial to examine Chaco as a complex society with strong sociopolitical, economic, and religious dimensions.

Around 1000 CE, there was a sudden flourishing of activity in Chaco Canyon that resulted in the construction of many of the large buildings for which it is now well known. Within the next 100 years, Chaco's population reached its apex and thereafter began to decline. One theory suggests that Chaco first rose to power as a result of agricultural surpluses. Scholars have noted that the most ancient great houses of Chaco Canyon—Pueblo Bonito, Una Vida, and Peñasco Blanco—are located at the junctures of important drainages. It is surmised that the early inhabitants of Chaco experienced agricultural bounty, which in turn facilitated the progressive economic, sociopolitical, and religious development of this settlement. Recently it has been suggested that the society of Chaco Canyon was structured as a matrilocality, meaning that married couples settled in the location of the wives' families. It is posited that within this social structure women maintained strong agricultural economies, whereas men's labor was directed toward the development of local, regional, and long-distance trade.

A select group of people, possibly even a ranked priesthood, increasingly directed the use of land and resources, and several economies

began to emerge. These included the economy of local residents; trade between local residents, visitors, and other communities; the sustenance of pilgrimage visitors; and the imports and exports of pilgrim goods, including tributes, ritual offerings, and items of sacred material culture purchased in conjunction with pilgrimage activities.

The people of Chaco Canyon traded turquoise, ceramic wares, wood figurines, copper bells, feathers, and shells as well as core subsistence items. Long-distance trade may have occurred with the *pochteca*, middlemen traders from Mesoamerica, or pilgrims who exchanged luxury items, including copper bells, macaw birds and feathers, and shell inlay. Other items, such as turquoise, ceramic wares, and wood figurines, were most likely produced and exchanged within Chaco Canyon and surrounding settlements within the Southwest. For example, Chaco played a key role in the production and exchange of turquoise. At Pueblo Bonito, the first site excavated at Chaco Canyon, archaeologists unearthed 56,000 pieces of turquoise dated from the period 900 to 1500 CE. Many people within Chaco Canyon fashioned ornaments out of turquoise. Production of turquoise was done principally at the household level rather than through specialized craft areas. Outlying communities of Chaco Canyon also supported a thriving pottery industry. During each phase of Chaco development, the styles of pottery changed. The earliest potters who lived and worked in the Anasazi Basketmaker III period (400 or 500 CE to 725 or 750) created pottery with simple designs made in the vicinity of Chaco. By the late Bonito phase (1120–1220), Chaco residents increasingly imported ceramic wares from the Hopi and Mesa Verde areas.

—Alex K. Carroll

Bibliography

- Cordell, Linda. *Archaeology of the Southwest*. 2nd ed. San Diego: University Museum University of Colorado Boulder, Colorado Academic Press, 1997.
- Earle, Timothy. “Economic Support of Chaco Canyon Society.” *American Antiquity* 66(1) (2001): 26–35.
- Hayes, Alden C., David M. Brugge, and W. James Judge. *Archaeological Surveys of Chaco Canyon New Mexico*. Washington, DC: National Park Service, U.S. Department of the Interior, 1981.

Lekson, Stephen H. *The Archaeology of Chaco Canyon: An Eleventh-Century Pueblo Regional Center*. Santa Fe, NM: School of American Research Press, 2006.

Lister, Robert H., and Florence C. Lister. *Chaco Canyon: Archaeology and Archaeologists*. Albuquerque: University of New Mexico Press, 1981.

Renfrew, Colin. “Production and Consumption in a Sacred Economy: The Material Correlates of High Devotional Expression at Chaco Canyon.” *American Antiquity* 66(1) (2001): 14–25.

Trade along the Waterways of North America

Native Americans had a wide variety of trade and exchange networks throughout North America prior to the arrival of Europeans. Many of these trade networks followed natural geographic features such as canyons, mountain passes, and especially waterways. Rivers, large bodies of water, and coastlines were all used to transport such items as obsidian and other stone materials,

➤ OUR EVIDENCE FOR TRADE EXCHANGES

The evidence for trade along the waterways of North America comes primarily from archaeological data. By analyzing the number of artifacts found at a site, the artifact type(s), and the site's general location, archaeologists are able to deduce how these artifacts arrived there. Those artifacts made from a nonlocal material had to have been either brought there by the inhabitants themselves or acquired through trade and exchange. If there are a relatively large number of nonlocal artifacts over a wide chronological period, archaeologists conclude that some form of trade or exchange network must have existed between the resource and site locations. When all of this evidence is present at a site and the site is located near or along a current or prehistoric waterway, archaeologists are able to conclude that the trade or exchange network relied on the waterway for the transportation of goods. In some instances specific water-based transportation vehicles or artifacts have been recovered, reinforcing the conclusion that trade occurred along the waterway.

—Peter N. Jones



Hohokam shell pendants recovered from the site of Pueblo Grande, in present-day Arizona. The Hohokam traded for shells from the Gulf of California and the Pacific Coast, which they used to make ornaments for personal adornment and also for trade. The Hohokam were proficient in cutting and grinding shells into rings, bracelets, pendants, and animal figures. (Pueblo Grande Museum, Laura Andrew photographer)

shells, copper, feathers, fur, and other trade goods. These goods were highly valued for a variety of economic, religious, and social functions. Although evidence indicating exactly how these goods were transported is minimal, it appears that they were either transported by foot or watercraft, as Native Americans did not acquire the horse until after European contact.

Obsidian, a razor-sharp volcanic glass that made superior knives, and other stone materials, for example, were traded over long distances throughout the period preceding contact with Europeans, linking areas as vast as Mesoamerica to the southeastern regions of the present-day United States and the Arctic regions of present-day Canada and Alaska to the Great Basin (present-day Nevada and bordering desert areas). The prehistoric and protohistoric trade of Edziza (northern British Columbia) obsidian occurred throughout the western Subarctic, northern Plateau, and southern Arctic regions. Edziza obsidian was traded down the Stikine River and then north and south along the British Columbian and Alaskan coasts and is documented to have reached as far away as the Alaska Panhandle to

the west, north into the Yukon, south and east into the interior of British Columbia, and across the Rocky Mountains into Alberta. Likewise, obsidian from Oregon (e.g., Newberry Crater obsidian) appears to have been traded down the Columbia River to the coast and then north through Puget Sound and up the Fraser River into the interior of British Columbia as well as into southern Idaho and parts of the Great Basin. Shells from several varieties of species appear to have been traded up and down the Columbia River system, most originating either in the Puget Sound area of Washington or farther south, along the California coast. Similarly, shells traceable to central California have been recovered as far away as Danger and Hogup Caves in Utah and north into southern Idaho via Columbia River waterways.

There is also a large body of archeological evidence indicating constant trade connecting the Gulf Coast and the Great Lakes across the Appalachian Plateau and down to the Susquehanna or Hudson rivers as well as to the lower Missouri River, the Northern Plains, and up into Canada, in essence creating one large trade network. Furthermore, archaeological and ethnological evidence indicate that there was an east-west pattern of exchange along the waterways, which directly tied the Northern Plains to the Great Lakes and the Missouri River west across the Rocky Mountains to the Pacific coast.

—Peter N. Jones

Bibliography

- Carlson, Roy L. "Trade and Exchange in Prehistoric British Columbia." In *Prehistoric Exchange Systems in North America*, edited by Timothy G. Baugh and Jonathon E. Ericson. New York: Plenum, 1994.
- Erickson, K. "Marine Shell in the Plateau Culture Area." *Northwest Anthropological Research Notes* 24 (1990): 91–144.
- Fitzgerald, Richard T., Terry L. Jones, and Adella Schroth. "Ancient Long-distance Trade in Western North America: New AMS Radiocarbon Dates from Southern California." *Journal of Archaeological Science* 32 (2005): 423–434.
- Vehik, Susan C., and Timothy G. Baugh. "Prehistoric Plains Trade." In *Prehistoric Exchange Systems in North America*, edited by Timothy G. Baugh and Jonathon E. Ericson. New York: Plenum, 1994.

The Trade Network of the Thule Inuit

The prehistoric Thule people of Arctic Canada and Greenland occupied one of the most desolate regions of the Arctic approximately 1,000 years before the present. Originating in northern Alaska, the prehistoric Thule peoples spread eastward across Arctic Canada in a matter of a few centuries. Relevant archaeological sites are located on Victoria Island, Baffin Island, the Queen Elizabeth Islands, Arctic Canada, and northern Greenland. Across this desolate and harsh region, the prehistoric Thule people established a complex and wide-ranging trade network that stretched from Alaska to Greenland, south into central Canada, and even into far western Europe.

Organized into various local and subregional population groups, the prehistoric Thule peoples traded iron, smelted copper, soapstone, whale meat, and other goods of value. Iron, for example, was an important trade commodity, as indicated by the many small pieces of iron found in many Thule archaeological sites. Iron of meteoric and European smelted origin found on Thule sites in the central and eastern Arctic probably originated from Greenland, where many items of Norse manufacture have been found in Thule sites. Likewise, other objects of European manufacture have been found in several Thule sites across the high Arctic, indicating at least indirect contact over a period of several centuries with the Norse Greenland colonies. Similarly, evidence for iron has been recovered as far west as Silumiut, on the west coast of Roes Welcome Sound in present-day Nunavut.

Lamps and pots carved from the soapstone deposits of the central Canadian Arctic have been recovered in Thule sites around Foxe Basin in southern Nunavut, and archaeological evidence indicates that by 1200 CE they began to be traded westward to the northern Alaska coast. Likewise, evidence indicates that Thule peoples traded ivory south into the Canadian Arctic as well as down along the northeastern coast along present-day Labrador. In the western Canadian Arctic, the Thules used local copper to make harpoon blades, and regional trade of soapstone is evidenced.

UNCOVERING THE THULE INUIT TRADE NETWORK

Archaeological sites located across the Canadian Arctic give evidence to the extent and complexity of the Thule Inuit trade network. Collections from these sites have a high frequency of copper, iron, and bone tools, indicating a strong trade network. For example, the Silumiut, located in northwestern Hudson Bay, have produced a substantial number of iron fragments that neutron activation analysis shows were originally sourced from western Greenland. Approximately 2,650 whole or broken artifacts of stone, bone, antler, ivory, baleen, wood, iron, and copper were also recovered from the site, only a few of which were locally available. Likewise, the composition of iron found at Naujan, located on Repulse Bay in Nunavut, indicates that it traded all the way from Melville Bay in western Greenland. The copper recovered at the site, on the other hand, was traded from the Coppermine River-Coronation Gulf area of Canada. The copper artifacts recovered included a projectile point or end blade, a knife blade with a narrow tang, a thin broken knife blade fragment, and a small knife blade fragment embedded in a wooden handle. The iron pieces recovered included a large knife blade fragment, an almost whole projectile point, and a small metal piece set into the blade slot of an eroded antler lance head. Together, this and other evidence recovered across Canada indicate that the Thule Inuit maintained a long-distance trade network that spanned the Canadian Arctic from Alaska to Greenland.

—Peter N. Jones

This trade network not only ran from the Canadian Arctic east to Greenland and south into central Canada but also west along the coast and into Alaska. Evidence of long-standing trade between the central and western Arctic and the increased number of Thule cultural traits appearing in northern Alaska during the century prior to European contact indicate that this trade network was extensive and well established.

—Peter N. Jones

Bibliography

Gullov, Hans Christian. *From Middle Ages to Colonial Times: Archaeological and Ethnohistorical Studies of the Thule Culture of South West*

Greenland, 1300–1800 AD. Copenhagen: Meddelelser om Gronland, 1997.

Maxwell, Moreau S. *Prehistory of the Eastern Arctic.* Orlando, FL: Academic Press, 1985.

McCartney, A. P. *Thule Eskimo Prehistory along Northeastern Hudson Bay.* National Museum of Man Mercury Series. Archaeological Survey of Canada Paper 70. Ottawa: National Museums of Canada, 1977.

McGhee, Robert. “Norsemen and Eskimos in Arctic Canada.” In *Vikings in the West*, edited by Eleanor Guralnick. Chicago: Archaeological Institute of America, 1982.

The Network of Exchange in Micronesia

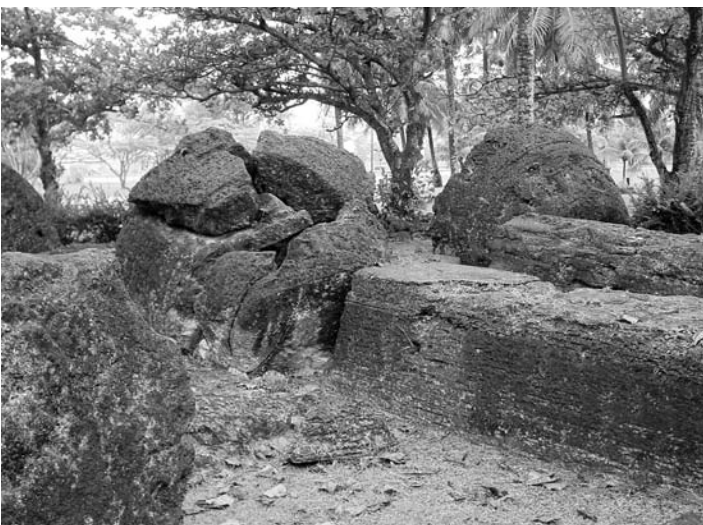
The three main areas and peoples of Micronesia who have historically engaged in a network of trade, each with selected wares exchanged, are western, central, and eastern Micronesia. Western Micronesia includes the Mariana Islands highlighted by Saipan and Guam and the islands of Yap and Palau; central Micronesia includes the Caroline Islands, Nukuoro, and Kapingamarangi islands, and Pohnpei and Kosrae; and the eastern section of Micronesia includes the Marshall Islands, Nauru, and the Gilbert Islands, featuring the atolls of Kiribati.

Around 1000 CE a new architectural style building in stone instead of wood developed called the Latte Phase, and this new style indi-

cates active trade patterns. The latte style relies on large stone pillars with capstones to support important communal houses and canoe sheds, with the best examples to be found on Tinian and at Agana, Guam. Either coral limestone or volcanic rock was used in constructing latte columns, and these building stones were locally traded. Seafarers of Yap sailed to Palau to trade for argonite stone, which they then transported back by canoe. This stone was used in making the large stone disks used as Yap stone money called *fae*. These disks (with a hole in the center to carry it with a pole) usually remained on clan estates leaning against clan houses as a mark of status, wealth, and prestige. During marriage ceremonies, the *fae* were given as a gift by the bride’s family to the man’s family, which presented shell money in return.

The ancient prestige of the “Yap empire” is illustrated by the traditional *sawei* exchange system. This was an annual tribute exchange system in which several canoes laden with valuables sailed from Namonuito, Pulap, Puluwat, and Pulusuk—eastern islands of the Caroline Islands—to Elato, Lamotrek, and Satawal picking up additional canoes destined for Yap along the way. This *sawei* fleet proceeded on to Ifalik, Woleai, and Eauripik and then on to Fais, Ulithi, and finally to Yap, where the presents (tribute consisting of sennit rope, coconut oil, woven mats, plaited skirts, and shells) were awarded to the chief of the village of Gatchepar. Three types of tribute—canoe, religious, and land tribute—were presented. Land tribute was granted by various islands’ representatives to their trading partners in Yap in recognition that the Yapese chief claimed the lands within this entire island network. The Yapese would reciprocate with scarce goods, such as turmeric, wood, flint, and needed food items. This annual tribute brought by the *sawei* fleet maintained harmonious relations between trading partners. Smaller trading networks existed, as among Lamotrek, Elato, and Satawal islands, with the chief of Lamotrek receiving sea turtles, coconuts, and breadfruit as tribute in exchange for granting to the other islanders fishing rights on Lamotrek-claimed reefs.

All islanders of the region pledged assistance to each other in time of food shortages produced by natural disasters such as typhoons. Canoe build-



Latte stones on the Micronesian island of Tinian. (C. T. Snow)

ing was highly developed, with many specialized types of canoes crafted. Navigators crossed wide expanses of the ocean to trade, relying on the winds and stars as compasses.

In the west, the Marianas produced and traded pottery called Marianas Red, a plain, red-slipped ware. Its decor may have reflected ancient traditions and styles inherited from the Philippines. This pottery is decorated with circles and impressed lines filled with white lime.

In central Micronesia, early pottery found on Pohnpei may reflect influences from the late Lapita culture, which had originated in Melanesia and may indicate migration patterns into Micronesia. The basalt stone-block ceremonial center of Nan Madol in eastern Pohnpei built on nearly 100 artificial islets has been called the “Venice of the Pacific,” as the islets were interconnected through boat travel. Nan Madol was a significant administrative center in central Micronesia from which the Saudeleur dynasty of chiefs known as the Lords of Teleur ruled from the ninth through the sixteenth centuries, dominating the regional trade essential to their power. The stones used in Nan Madol’s construction and expansion (including burial sites) were a vital part of Pohnpei’s local trade, as the stones were brought some distance from where they were quarried.

In eastern areas as elsewhere, Micronesians traded extensively in taro and breadfruit—important food sources—as well as coconuts, bananas, and coconut palms. Betel nut, the seed or nut of the areca palm, which when taken with lime and leaves of an astringent species of pepper acts as a stimulant to be chewed (staining the saliva and teeth red), was often circulated through trade channels. Kava, called *sakau* in Pohnpei and Kosrae, was widely traded as a hospitality-welcoming drink for visitors or for ceremonies. Chickens, pigs, and dogs were widely exchanged, as were fish and shellfish of all types. Pandanus leaves, tolerant of salt conditions, were traded for making canoe sails or were woven into fine matting. Peoples of the Caroline Islands made loomed wraps woven from hibiscus or banana leaves to be used as waterproof garments. In the Gilbert Islands men wore armor made from coconut fiber to protect them against weapons made with shark teeth, and these were

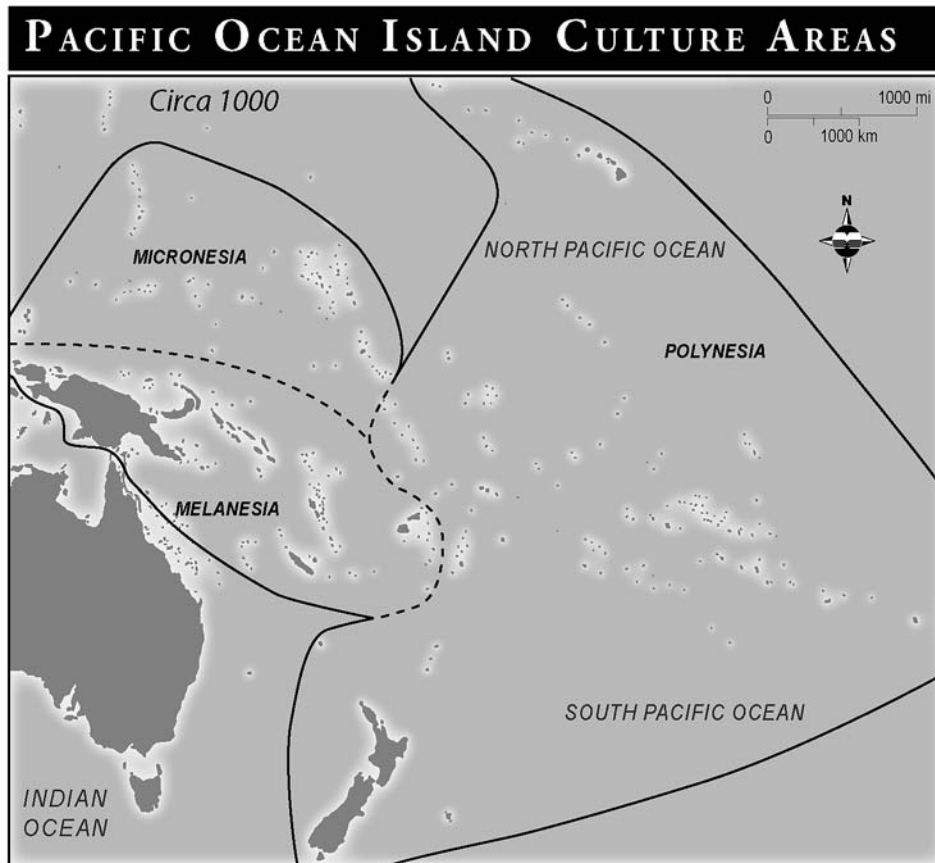
➤ PALAU BEAD MONEY

The bead money of Palau consists of strings of glass and ceramic beads that were not of local manufacture. The exact origin of these beads remains in question but may point to trade links with Asia via the Philippines and may even extend back through ancient times to China and its cross-continent links via the caravan Silk Road trade to the Mediterranean world. The fine glass beads appear to have been influenced especially by the glassmakers’ techniques of ancient Italy. Trade in these beads could reach as far back as Roman times. The ceramic beads, which are hollow tubes of fired clay, are similar also to African trade beads and may indicate a historical link with Africa as well, although the African ceramic beads were usually hand-painted with brightly colored designs. However, this may reflect more recent developments in Africa after pigments were introduced. As the glass and ceramic beads were not of local manufacture and were received through trade, the Palau bead money indicates the connections of Micronesia with far-flung regions of the Pacific Rim.

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goods also sold in trade circles. Palau was known for its craftsmanship of wooden boxes inlaid with shells. Barkcloth, made by pounding the inner bark of the paper mulberry or breadfruit trees, was also used in making sails and was widely traded. Tattooing was practiced in the Caroline and Marshall Islands, and tools for this art form, including fine bone chisels with teeth, mallets, and pigments, were items of trade. Status was often reflected in the quality of the tattoo, hence the highest-quality tools for incising this bodily art form were coveted trade goods. The development of Micronesian trade networks helped spread Austronesian migrants and their languages.

In Micronesia, social organization was usually based on matriarchal kinship, often with both land and goods passing through the female line. Marriages and the exchange of bride wealth took place between matrilineal clans. On Pohnpei, ranked titles descended through these matriarchal clans as well. Typically a large rectangular open-sided



thatched house called the *maneaba* offered the community a common focus throughout Micronesia and was usually the site for ceremonial trade exchanges, and trade, as in adjacent Pacific island communities, was the basis for political authority.

—Barbara Bennett Peterson

Bibliography

- Hage, Per, and Frank Harary. *Island Networks: Communication, Kinship, and Classification Structures in Oceania*. Cambridge: Cambridge University Press, 1996.
- Nile, Richard, and Christian Clerk. *Cultural Atlas of Australia, New Zealand & the South Pacific*. Oxfordshire, UK: Andromeda Oxford, 1996.
- Terrell, John E. *Prehistory in the Pacific Islands*. Cambridge: Cambridge University Press, 1986.

Trade within the Polynesian Triangle

The Polynesian Triangle had formed by 1000 CE with its three corners based in Hawaii, New Zea-

land (Aotearoa), and Easter Island (Rapa Nui). In the Triangle's center, trade developed first locally and then spread to close islands and extended over longer distances. Trading circles developed within the Fiji-Samoa-Tonga island complex and within the Tahiti-Tuamotu complex, with trade extending outward from Tahiti to nearby islands of the Marquesas, Manahiki-Rakahanga, the Cooks, Tubuai, and Rapa. Longer-distant trade took place between these two major trading circles. Trade reached westward from the Fiji-Samoa-Tonga complex through the New Hebrides, Tikopia, and Santa Cruz islands, extending to Ninigo and northwest to the Gilberts.

Commodities exchanged included taro, yam, breadfruit, sweet potato, coconut, chestnuts, pigs, dogs, chickens, harvested fish and shellfish, and bark cloth (*tapa*) made from the paper mulberry tree. The presence of the sweet potato, native to South America's Andes, indicates some type of early trade contact between eastern Polynesian islands (perhaps Tahiti) and mainland South America. Recent radiocarbon and DNA evidence

► POLYNESIAN DOUBLE-HULLED CANOES

The Polynesian double-canoe, which consisted of two parallel canoe hulls joined by crossbeams to form a stable craft capable of carrying large loads on long ocean voyages, evolved through hundreds of years of boat-building processes, beginning with the rudimentary early dugout canoes found in islands of the Southeast Asian archipelagos and culminating with the Tongan Tongiaki double-hulled canoes seen by early contact Europeans that carried 30 to 100 people.

A mast with a low-set sail was originally attached to the dugout canoe. But as larger sails were desired, the larger masts made the canoe unstable, giving rise to the Lapita people's solution of attaching an outrigger float on one or both sides to prevent tipping. In Polynesia canoes became longer and deeper as planks were attached on each side and tied to the V-shaped dugout hull. Braces were fixed on the inside, planks were added for seating, and covered areas were added across the hull for protection against inclement weather. Lashings were made from sennit, which was woven from coconut fibers or palm leaves, and caulking was made using a paste of breadfruit gum. Sennit lashings made the canoe flexible on the ocean so that it would not break apart in violent storms. Eventually a second long V-hulled canoe was attached to take the place of the float, producing the double canoe for long-distance voyaging. Larger sails as well as two sails could then be used. A strong platform was built across the void to hold the two canoes together, and a grass hut for sleeping was constructed on this platform. In front of the hut was a sandbox container for building a small fire for cooking. In



*Double-hulled canoe of the Society Islands, about 1800.
(Mary Evans Picture Library/The Image Works)*

essence, Polynesian mariners had constructed a catamaran.

The double-hulled canoe was steered by a large oar at the stern acting as a rudder. The lateen, inverted triangular sails, were woven from pandanus leaves. Navigators used the sun as a compass by day and used the stars by night and could read directions using winds, currents, and the flight patterns of birds. The double-hulled Polynesian canoes were the oceangoing craft capable of crossing thousands of nautical miles within a month that accomplished long-distance migrations and colonized the three distant corners of the Polynesian Triangle. These were the canoes, plus their smaller versions, that conducted voluminous trade within Polynesia.

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also indicates that prior to European contact, Polynesians introduced chickens to Chile, where in 2007 Araucana fowl bones found on the Arauco Peninsula were dated to between 1304 and 1424 CE. These chicken bones were similar to bones found in Tonga and American Samoa dating from the same period. Seafaring Polynesians it is now believed landed in the Americas before Columbus by crossing the Pacific to trade and possibly to settle.

Lapita pottery as an item of trade had entered the western regions of the Polynesian Triangle

around 1000 BCE from the Santa Cruz Islands, Vanuatu, and New Caledonia areas and continued to be made and traded within the Fiji-Samoa-Tonga trading complex. The Lapita Pottery Trail marked the path of early Polynesian migrations eastward. The pottery crafted and exchanged, known as Polynesian Plainware, became simpler in design and decoration and eventually died out entirely in eastern Polynesia, where the inhabitants used gourds and woven baskets. Later Fiji potters developed a paddled-impressed ware that was influenced by styles in New Caledonia. After

1100 CE another style developed in Fiji related to the wares from Vanuatu, indicating the exchange of ideas and techniques in trade in addition to the barter for the clay pots themselves.

In New Zealand, cooler climates dictated a limited range for the growth and distribution of tropical food crops; yam was grown only along the northern coast of the North Island. New Zealand's staple was the sweet potato (kumara), introduced in the canoes of the first Maori colonists from Hawaiki and cultivated on the North Island and the northern coastal regions of the South Island. Trade around both islands allowed for exchange of these various foodstuffs. Maori traded such minerals as argillite, chert, greenstone (nephrite jade), and obsidian for tool making. Moa, seal, whale, and dolphin meats (and moa eggs) were exchanged food products, as were fish and shellfish, and the roots of native fern and the cabbage tree and flax were used in weaving local cloth for apparel and trade. Greenstone was a favorite trade commodity for personal ornaments, ceremonial adzes, and household decorations. South Island, the best source for this jade, was called Te Wahi Pounamu (Place of Greenstone). The trading circle in New Zealand included both major islands and the offshore Chatham Islands, where sealing was especially good.

In southeastern Polynesia, a smaller triangle of trade included Pitcairn Island, Henderson, and Mangarava. Mangarava was famed for its black pearls and mother of pearl shells, both made into jewelry for trade. This region specialized in healthful exotic fruits: limes, lemons, pomegranates, papayas, passion fruits, bananas, and coconuts. The lime was native to Southeast Asia, carried into Polynesia and hybridized (crossed with a lemon) in Tahiti.

On Easter Island the stone statues (*moai maea*) on ceremonial platforms (*ahu*) that housed buried ancestors were key elements of this remote Polynesian society, with the quarry at the volcanic crater of Rano Raraku furnishing the stone for the *moai* and a quarry at the cinder cone of Puna Pau supplying the stone for the red topknot (*pukao*). Local trade exchanged sweet potato, yam, taro, sugarcane, gourds, seabirds and eggs (Sooty tern), chickens, and spearheads of volcanic glass. Around 1500 CE a birdman cult

developed as a competition to collect the season's first tern egg and claim the chief-warrior title of *matatoa*.

In Hawaii around-island and interisland exchanges involved barter in pigs, breadfruit, coconut, vegetables, taro, yam, sweet potato, bananas, sugarcane, ti root, and *awa* (kava, a drink from the pepper plant), fish and shellfish, fishhooks, netting, tapa (or kapa) cloth, conch shells, feathers (red and yellow especially), weapons, carvings, nose flutes, feathered capes, cloaks and helmets, and sandalwood.

Throughout Polynesia trade was often ceremonial, involving a welcome for visitors and an exchange of gifts. Trade satisfied basic needs, cemented alliances, and assisted kinship groups. With the coming of Europeans, iron would become the most sought-after trade good in the Polynesian Triangle because Polynesians had lacked metals.

—Barbara Bennett Peterson

Bibliography

- Lewis, David. *We, the Navigators: The Ancient Art of Landfinding in the Pacific*. Honolulu: University of Hawaii Press, 1994.
- Nile, Richard, and Christian Clerk. *Cultural Atlas of Australia, New Zealand & the South Pacific*. Oxfordshire, UK: Andromeda Oxford, 1996.
- Storey, A. A., et al. "Radiocarbon and DNA Evidence for a Pre-Columbian Introduction of Polynesian Chickens to Chile." *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 104(25) (Jun. 19, 2007): 10335–10339.

Trade in Melanesia—Trade in Essential and Symbolic Wares

In Melanesia, political leadership was often associated with a chief's ability to secure vast wealth in and control over prestigious trade goods. This dominance in trade wealth translated into political power and alliances. The *kula* ceremonial exchange network served to empower ambitious potential leaders and also served to connect peoples in the southeastern promontory of Papua New Guinea and islands offshore in the Solomon Sea: Normanby Island, D'Entrecasteaux Islands, Trobriand Islands, Marshall Bennett Islands, Woodlark, Laughlan Islands, Louisiade Archipel-

ago, and the Engineer Group of islands. The path of the kula trade formed a circle among these islands through which two types of valuable goods moved, inasmuch as kula was of two types: red shell necklaces called *soulava* moved clockwise around this circuit, while the armbands or bracelets of white shells called *mwali* moved counterclockwise.

This trade was conducted between trade friends or trading partners both locally and between neighboring islands of the circle, and these trading-friendship networks lasted throughout life, often cementing alliances and kinship groups. Usually the men of a village would go with their chief to visit their trading partners on other islands in ceremoniously carved and painted canoes decorated with cowrie shells. Presenting large amounts of *soulava* and *mwali* earned them great prestige, and custom demanded that their partners reciprocate in a return visit. If one was presented with a *soulava*, he was duty bound to return a *mwali* of equal value in the future, and thus the trade circle continued indefinitely. The finest shells were sought for the kula jewelry, and exchange of other goods—foodstuffs, masks, costumes, feathers (bird of paradise and parrots especially), shells, mats, tattoo chisels, and bamboo flutes—followed the exchange of kula and the attendant ceremonies of respect and friendship. Trade within the kula ring is at least 500 years old. This was a highly structured and repeated reciprocal exchange of valuables and essential commodities with elaborate ritual ceremony. The kula trade allowed former antagonisms between villages to heal and reestablished good relations, thus minimizing warfare and regional hostility.

Additional gift-giving ceremonies took (and take) place on a more localized level in the Trobriand Islands during mortuary ceremonies, when women compete with each other to give gifts of skirts and banana leaf bundles to other women attending the burial in order to gain respect and status and, not incidentally, to bind the family together.

Several Melanesian islands created (and still create) symbolic wares, such as the slit-gongs or slit-drums (*tam tam*) topped with carved human faces, especially in Vanuatu on the islands of Ambrym and Malekula where they were placed

➤ TROBRIAND ISLAND YAM HOUSE

Yams were a symbolic form of wealth in the Trobriand Islands of New Guinea, conveying wealth and status and garnering for their owner political respect. Much of the yam crop was grown for ceremonial exchange by women who competitively cultivated huge yams in their household garden plots. These large yams were seen as being owned by the women who cultivated them. Yams require dry well-drained soil conditions and were most important in Melanesia and western Polynesia. At harvest time the yams were piled into conical pyramids, with the largest on the bottom for display in the front yard to be admired by all. After a few days the yams were placed in the household yam house by the wife-cultivator to become the pride of her husband and a source of his power and prestige in the community. A full yam house was viewed as a treasure chest of money to be used to purchase other commodities. In Tonga, yams were once a tribute item presented to the paramount chief known as Tu'i Tonga in a "first fruits of the season" ceremony.

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on open ritual dancing grounds. They were used in song and dance ceremonies and to signal inhabitants to attend, and the carved faces may represent ancestors and the drums themselves the seat of the ancestors' spirits during ceremonies. These drums were often used in ceremonies to celebrate an individual's rise in rank through a graded society, as were tree fern sculptures, with each form reflecting the participant's new rank. In Vanuatu individuals moved through ranked grades of the *warsangul*, or the social hierarchy, by making sacrifices or payments in goods and submitting to essential rituals of initiation. Many rituals were accompanied by the creation of artistic carvings, and the special designs were owned by their creator. The *malanggan* ceremonies (honoring the recent dead and ancestors) of New Ireland, Papua New Guinea, dictated the creation of new artistic carvings done for each special celebration. These symbolic wares used many different materials—wood, plaited rattan, decorated bark cloth, and

especially shells—and their styles were often identifiably related to specific localities.

Melanesian societies were usually self-sufficient food producers. However, several communities produced specialized trade articles. The Motu people living in Port Moresby made pottery that they exchanged for sago. They traveled with their Motu pottery along the northern coast of New Guinea in multihulled trading canoes. So successful were the Motu that they became (with the friendship and sailing skills of their allies, the Siassi, to assist them) middlemen in trade extending from northern New Guinea throughout the islands of New Britain in the Bismarck Archipelago. The Motu traded in pottery and specialized meats (pigs and dogs). Motu pottery may have been influenced by Lapita pottery that had been produced without a wheel as early as 1600–1300 BCE in New Caledonia as well as by another pottery tradition in central Vanuatu, Mangaasi ware, developing around 700 BCE to 1200 CE, that included relief decorations and incising.

Trade was used in Melanesia to unify its distinct cultural groups whose peoples spoke more than 1,000 Austronesian languages. Trade enabled the exchange of both subsistence farming commodities—taro, yam, sweet potato—and domesticated and marine resources. Melanesians harvested reef fish, shellfish, sea urchins, sea cucumbers, sea slugs, and seaweed plus seabirds and turtles as trade items. Trade also established status. A full yam house represented high status. In the Highlands of New Guinea, a large herd of pigs identified its owner as a “big man” who held power through symbolic wealth. Melanesian “big men” were not hereditary chiefs but attracted supporters through ceremonial exchange and feast giving. A traditional form of wealth in Malaita, Solomon Islands, was “shell money.” Long strands of shell beads were made by working individual shells into disks and stringing them. Shell money was used most commonly at weddings as a form of bride wealth whereby the groom presented shell beads to the bride’s family. Shells were also sought for knives and scrapers. Large shells were ground into adzes and used as tools rather than polished stone. Through trade, tribute, or their extended family,

Melanesian chiefs accumulated food surpluses and symbolic wares as symbols of power.

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Bibliography

- Burenhult, Goran, ed. *New World and Pacific Civilizations: Cultures of America, Asia, and the Pacific*. McMahon's Point, Australia: Weldon Owen, 1994.
- Godelier, Maurice, and Marilyn Strathern, eds. *Big Men and Great Men: Personification of Power in Melanesia*. Cambridge: Cambridge University Press, 1991.
- Malinowski, Bronislaw. *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagos of Melanesian New Guinea*. 1922. Reprint, n.p.: Malinowski Press, 2008.

New Guinea and the Solomon Islands—Trade between Peoples of the Coast and Peoples of the Interior

Extending far into the distant past, New Guinea’s rich tradition of body adornment dependent on trade goods was a strong impetus to exchange between the peoples of the coast and the peoples of the Highlands. Moreover, throughout Melanesia political leaders have long sought to control prestige items of trade to maintain influence. Shells from the coast pass through several levels of exchange on their way to the Highlands of New Guinea, while feathers used in personal adornments have been and continue to be traded southward toward the coast. People of the Mount Hagen region of the Highlands thus gain decorative shells necessary to their local ceremonial trade between trade friends and for personal bodily decoration. Men have traditionally worn linked small bamboo sticks down their chest indicating how many pearl shells they have given to their friends in trade, thus marking their status and generosity. In return, coastal people gain from the Highlands decorative dark tail feathers and the crown plumes of various types of Birds of Paradise plus plumage from parrots, cassowaries, and eagles, which they use for self-decoration. For centuries and probably millennia, body adornments have traditionally been worn throughout

New Guinea, especially in the elaborate headdresses used in religious cult performances, dance rituals, and cultural fests called Sing Sings. The most elaborate occasions for self-adornment have been traditionally associated with the events of ceremonial gift giving. Both men and women participate in these rituals and have different decorative styles, with men adorning themselves more ornately, such as with brighter feathers, and with the most highly prized items gained through trade. This continuous need for body adornments has perpetuated ritual exchange and harmonizes relations between regional societies.

Since before the arrival of Europeans, the traditionally elaborate headdresses of the Highlands have been made of human hair sculpted into wigs and adorned with feathers, plumes, strings of seed pods, fur of marsupials such as the tree kangaroo and the cuscus, pig tusks, and dried flowers. These headdresses have various names such as *manda tene*, or down-turned wig. Yellow and red are the traditional colors of paint applied to the face, especially by men, in self-decoration. Women wear pearl-shell crescent necklaces and cowrie shells woven into their head coverings or as necklaces as status symbols in the Highlands.

Pigs were an important item in the *tee* exchange system of the Tombema-Enga people living in New Guinea's western Highlands. This trade was usually dominated by a "Big Man," whose wealth in pigs allowed him the political power to dominate the exchange in the shells-for-feathers trade between the Highlands and the coast. The hereditary chiefs of the Purari of the southern coast maintained power by accumulating shell ornaments used in trade with the Highlands and through obligations to themselves earned through the giving of food.

In the Solomon Islands coastal peoples exchanged fish and palm oil for fresh vegetables, cocoa, and timber from the interior. They also exchanged items similar to the New Guinea trade used in personal adornment. In both New Guinea

➤ HEREDITARY CHIEFS

In Papua New Guinea the chieftainship was usually inherited from father to son as among the Mekeo, a clan that lived along the southeastern coast, but they also developed a system of dual chiefs. There were a civilian chief ("chief of the village") for preserving harmony through trade and a military chief ("chief of the spear") for potential threats faced in battle. The civilian chief was usually a senior member of the community, and the military chief was a junior but physically stronger society member. Only the chief of the village's position was based upon wealth, and this served to emphasize the need to accumulate goods garnered through trade to maintain his more prestigious power and to preserve the peace. "Big Men" of the Melpa of the Highlands were also drawn from a close-knit dominant group that controlled the major exchange of valuables. Thus, the most influential power was maintained by trade both along the coast and in the interior.

—Barbara Bennett Peterson

and the Solomon Islands this trade linked peoples of related but distinct languages and customs. The exchange of valuables between trading partners has for unknown ages been a means of preserving the peace, with everyone, from the coast to the interior Highlands, receiving the items necessary to their way of life.

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Bibliography

- Feil, D. K. *The Evolution of Highland Papua New Guinea Societies*. Cambridge: Cambridge University Press, 1987.
- Nile, Richard, and Christian Clerk. *Cultural Atlas of Australia, New Zealand & the South Pacific*. Oxfordshire, UK: Andromeda Oxford, 1996.
- Strathern, Andrew. *The Rope of Moka: Big-Men and Ceremonial Exchange in Mount Hagen, New Guinea*. Cambridge: Cambridge University Press, 1975.

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War and Diplomacy

War is a constant fact of human life, and this was particularly true in the period 1000–1500 CE. It was an age of invasions on a grand scale that involved vast numbers of attackers and victims alike. It witnessed holy wars in both hemispheres. It was a half millennium in which wars were fought with great brutality and no rules by most combatants, but it was also an era in which some sought to ameliorate the horrors of war by establishing codes of warrior conduct. A few even sought peace as a noble goal. As is true of every time and culture, it was also an age in which many combatants were not reticent to negotiate alliances, truces, and surrenders when it suited their purposes. A few even sought to turn enemies into friends.

This last phenomenon is exemplified by the meeting during the Fifth Crusade (1217–1221) between Nasir ad-Din Muhammad al-Kamil, sultan of Egypt, and Francis of Assisi, an Italian religious reformer, in the late summer of 1219 in the Egyptian delta. Al-Kamil, who had succeeded to the sultanate during the initial stages of the crusaders' assault on Egypt, desired peace for practical reasons. His throne was far from secure. Twice in 1219 he opened negotiations with the crusaders, offering them Jerusalem and other generous terms in return for their quitting Egypt. In the midst of the second period of negotiations and momentary truce, Francis visited the sultan's camp in an effort to convert him to Christianity. Possibly word had reached Francis that the sultan was known for his generosity toward Egypt's Coptic Christians. Al-Kamil received Francis and his companion, Brother Illuminatus, in peace, asking them why they had come. A Franciscan legend maintains that Francis proposed walking through flames, protected only by a copy of the Gospels, to prove the truth of Christianity. The sultan refused the challenge and the offer to convert but offered Francis and Illuminatus food and rich gifts. They declined the latter. Al-Kamil then had Francis escorted back to the Christian lines. Whatever the truth of the particular elements of this story, it is clear that al-Kamil treated Francis and Illuminatus with generosity and a certain sympathy, even as crusaders were attacking his land. The sultan probably saw in Francis a mirror image of the Sufi mystics of Egypt whom he patronized.

Neither Francis nor al-Kamil was a pacifist in the modern sense of the term. Francis and his friars perceived their missionary work as a complement to Christendom's armed struggle against Islam. On his part, al-Kamil desired peace for largely strategic reasons. And yet when the army of the Fifth Crusade was encircled and defeated in 1221, the sultan chose to offer the crusaders a peaceful withdrawal from Egypt in exchange for the city of Damietta, which they had captured, rather than

annihilating them. He even provided the enemy army with food, and the sultan's act of statesmanship appears to have filtered down to the Egyptian populace. A crusader from Germany remarked with awe: "Those, whose parents, sons and daughters, brothers and sisters we killed with various tortures . . . or whom we cast naked from their houses, refreshed us with their own food as we were dying of hunger, even though we lay under their control and power."

Eight years later, al-Kamil and Emperor Frederick II shocked Muslims and Christians alike when the Western emperor accepted the sultan's offer of Jerusalem (but with continued Muslim control of the city's major Islamic shrines) in return for Frederick's ending the Sixth Crusade (1227–1229) and agreeing to a ten-year truce that freed both monarchs to pursue their interests at home. The accord was roundly denounced by pious Muslims and Latin Christians alike. Although Muslims and crusaders had, for strategic reasons, periodically negotiated truces throughout the twelfth century, negotiating away a holy city or allowing infidels to retain possession of some of its holy sites was beyond the norms of accepted behavior. Holy war, be it crusade or jihad, was just too deeply ingrained in the psyches of thirteenth-century Western Christians and Muslims.

War was also an integral part of the cultures of so many other peoples, be it the sacred Flower Wars of Mesoamerica, in which captives were sought for sacrifice to various deities, or the warfare practiced by the steppe nomads of Central Asia, which was noted for such a level of brutal skill and daring that relatively small armies of Turco-Mongol horsemen were able, on several occasions, to topple or at least shake to their foundations mighty empires.

Two of the greatest, but certainly not the only, "Thunderstorms out of the Steppe" during these centuries were the campaigns of the Mongols (ca. 1209–ca. 1279) and the conquests of Amir Timur-i Leng (Tamerlane), which spanned the period 1370–1405. Both onslaughts resulted in millions of deaths.

Even Song China (960–1279) engaged in defensive and offensive wars, and this was an empire that was largely guided by an educated elite who accepted, at least in theory, the Confucian principles that war is an abandonment of reason and that soldiers must be placed low on the social scale, somewhere around the level of prostitutes. Indeed, to maintain peace along the frontier, earlier dynasties had often opted to negotiate with their so-called barbarian neighbors and even were willing to bribe them, but always under the cloak of gift exchange. Even so, imperial China had always maintained large armies, and throughout the centuries it used them frequently. So it was with Song China. A desire to recover northern China from the Khitans (Qidans) led Emperor Huizong to ally in 1125 with the so-called Wild Jurchens (Ruzhens) out of Manchuria. The Jurchens, however, proved just too warlike, and after defeating the Khitans, they overran the north for themselves, driving the imperial Chinese court southward to Hangzhou in 1127. The Southern Song court largely followed a nonaggressive policy for the next century, but then it and the Chinese of the south put up a spirited 27-year-long defense against the Mongols before succumbing in 1279. After the Ming

restored native rule in 1368 by means of a bloody revolution, it initially promoted campaigns along its northern border, although later it came to rely more heavily on a new static defense, the Great Wall. Even the fleets of Zheng He, which sailed through the waters of the Indian Ocean in the early fifteenth century, intervened militarily in regional affairs in coastal Southeast Asia as part of the Ming court's overall diplomatic goal of reestablishing a tributary relationship with the rulers of this region.

Japan's warrior class, the samurai, defeated combined Mongol-Korean invasions of Japan in 1274 and 1281. Although aided by the weather on both occasions, the samurai were probably the deciding factor each time. Bushido, "the Way of the Warrior," a code that celebrated the samurai who joined martial virtues, such as loyalty, valor, and skill at arms, to a cultivated mind and disciplined spirit, became a widespread ideal during these centuries. Zen, a form of meditation that Buddhism imported from China, became one of the major means by which a samurai reached a high state of physical, mental, and moral discipline. One so trained would, as was said of Kusunoki Masashige (d. 1333), "scheme in his tent to defeat an enemy 1,000 leagues away." But when artful ploys and military skill proved insufficient, samurai such as Kusunoki were expected to meet death rather than to surrender in defeat, as he did.

Half a world away another warrior class, Western Europe's feudal knights, were developing their own code of conduct—Chivalry—a set of values theoretically unique to the chevalier, or mounted warrior. In the eleventh century when this code began to be articulated, the ideal warrior was essentially only a brutally effective and loyal soldier. By the mid-thirteenth century he had evolved, at least in theory, into a hereditary gentleman who was also a brave and loyal warrior. Added to this was the concept of the warrior of God, or the knight as the vassal of Jesus Christ. This new warrior emerged in the twelfth century in the context of the crusades. Ironically, the crusades had grown partially out of the tenth- and eleventh-century Peace and Truce of God movements, which had been aimed at lowering the level of violence in Western Christendom. As far as Latin Christian contemporaries were concerned, the finest warriors of God were members of the military orders, such as the Templars, who lived in religious communities but carried out military functions in defense of Christendom.

American elite warriors were equally acknowledged as belonging to a special class. In Mesoamerica the finest warriors, who were noted for their ability to take captives in war, belonged to a hierarchy of warrior societies, each distinguished by its dress and place in battle, with the members of the most-honored societies, such as the Aztec empire's Otomi-class warriors, having the most elaborate feather battle costumes. In South America bejeweled gold and silver statuettes of warriors were a common item, apparently crafted as a way of honoring the warriors who had, in such a short space of time, created by conquest the Inca empire.

Most soldiers during these five centuries employed traditional hand and projectile weapons that long predated the year 1000. The exception was gunpowder weaponry: firelances, bombs, mines, cannons, and firearms. In the hands of the Chinese, the Mongols, and even Western

Ironically, the crusades had grown partially out of the tenth- and eleventh-century Peace and Truce of God movements, which had been aimed at lowering the level of violence in Western Christendom.

Europeans, they proved effective at times, especially during sieges, but their revolutionary impact on land and sea would only begin after 1500.

In summary, the arts of war and diplomacy during this half millennium were hardly balanced. War was a much more common phenomenon than negotiation, although even the most rabid enemies could and did enter into treaties when it suited their needs.

—Alfred J. Andrea

■ Introduction: The Ideology of War and Peace

Except for certain religious sects, such as the Jains of India who taught and largely practiced *ahimsa*, or absolute nonviolence, and some but far from all Hindu and Buddhist groups, as well as certain radical thinkers and their followers, most persons on the face of the earth during this 500-year period thought of war as a natural human enterprise and malady and did not entertain any theory of an achievable permanent peace on earth. Ending war was probably as unimaginable to them as stopping the daily rising and waning of the sun. One exception to this rule were Christian millenarists who, following the New Testament's Book of Revelation, believed that Jesus's Second Coming would usher in a thousand-year period of peace and prosperity followed immediately by the End of Time. But this final peace on earth would be the product of a cataclysmic battle between the forces of Good and Evil, and although humans would serve as agents of God in this last struggle, that peace would be generated at an indeterminate time decided by God alone. Meanwhile life was a constant battle, both metaphorical and physical. This included the scourge of war.

Because armed violence was such a constant plague on human society, there were some attempts to at least mitigate its evils and even convert war to religious purposes. The most strikingly new, even revolutionary, example of such endeavors was Latin Christian Europe's Peace and Truce of God and, far more spectacu-

larly, the crusades. Ironically, the crusades, which developed in part out of the Peace and Truce of God movements, turned out to be especially brutal and bloody scourges on much of Europe and the Middle East, especially the eastern lands of the Mediterranean. As the several excerpts on these related movements demonstrate, the Roman Church taught that violence improperly exercised on protected persons, or within sacred precincts, or during prohibited periods of time was a damnable act that imperiled the perpetrator's immortal soul. To the contrary, warfare waged against enemies of the Faith or the Church and sanctioned by that Church was potentially a salvific act. It was even a quasi-sacramental act, and the holy warrior enjoyed special protected and honored status.

Much earlier, Saint Augustine of Hippo (354–430) had provided Latin European civilization with the notion of the just Christian war, a war fought dispassionately and even as an act of charity on behalf of reestablishing peace. Western theologians during the thirteenth century, especially Thomas Aquinas, continued to refine this theory, which has continued to influence Western attitudes toward war—or at least justifications for war—into the twenty-first century.

The Eastern Christian churches, such as those of Byzantium or Ethiopia, never articulated such a clearly delineated ideology of holy war as the Latin Christian crusade, although each revered its protector warrior saints such as George, who

was universally honored by the Ethiopian, Byzantine, other Eastern Orthodox, and Roman Churches. Moreover, the Ethiopian and Byzantine empires were founded upon the assumption that any wars waged by their respective God-anointed emperors in defense of their sacred empires were *ipso facto* holy and just. After all, the emperor was the deputy of God on earth. Wars waged against Muslim neighbors by Ethiopia's emperor Amda Seyon (r. 1314–1344) were certainly presented as just and holy in the *Kebra Negast* (*Book of the Glory of Kings*), a chronicle that was probably crafted during his reign to legitimate his Solomonid dynasty (1270–1975). The Byzantine empire rarely declared anything even approaching a Latin-style crusade. Two exceptions were when the emperors- and patriarchs-in-exile at Nicaea called for throwing out the hated Latin empire of Constantinople (1204–1261), which had been established in the wake of the Fourth Crusade, and, ironically, when its emperors issued pleas for Western crusaders to rally to the cause of an empire besieged by Ottoman Turks in the fourteenth and fifteenth centuries.

The theoretical underpinnings and juridical rules governing the complexities of jihad in the way of God, namely Islamic holy war against unbelievers, had been established well before the year 1000. During this half millennium jihads continued to be proclaimed by *ghazis* and *mujahidin*, especially Turkic ghazis, whether they were struggling against crusaders and Latin colonists in Syria-Palestine or invading the lands of Dar al-Harb (The House of War), which were any lands ruled by non-Muslims. The ghazis who swept into India out of Afghanistan certainly saw and presented themselves as righteous jihadists. So far as the rules of proper jihad conduct were concerned, as is always the case in war, it all depended on who was interpreting the rules and acting accordingly.

Even when followed scrupulously, the rules for warfare in Afro-Eurasia allowed a high degree of violence against combatants and non-combatants alike. Throughout Eurasia and North Africa, for example, it was generally accepted as a norm of war that any city or fortification that resisted its besiegers left itself vulnerable to the inevitable three days of unrestricted plunder allowed the conquering army. It was not only pun-

ishment for failure to capitulate peacefully but was also payment to the warriors for the dangers they had faced. The Mongols carried this to an even greater degree by putting the entire populations of resisting cities to the sword, an effective means of ensuring the capitulation of those who heard of these massacres. When the army of the Fourth Crusade captured Constantinople in April 1204, its leaders attempted to force the crusaders to put all plunder into a common hoard for equal distribution according to rank and status. Even though a few soldiers who violated this order were executed publicly, an estimated half of the plundered treasure was secreted away. The numbers of killings and rapes that were visited upon the populace of Constantinople during these three days can only be guessed at.

Ritualistic combat, which assumed importance within many societies in America, sub-Saharan Africa, and Oceania, often preserved noncombatants from such violence. As far as modern students of history are concerned, the most well known of these ritualistic forms of combat were the so-called Flower Wars as practiced by numerous cultures in Mexico and beyond. Their purpose was to capture a suitable number of courageous enemy warriors for sacrifice to a city's deity. Often these captives would be sacrificed in an act of symbolic combat in which they "battled" a fully armed warrior while armed only with token weapons. So far as worldwide ritualistic combat was concerned, the Flower Wars were a rare phenomenon. More commonly, ritualistic combat's purpose was to establish or reestablish harmony through limited conflict or to provide young men with an opportunity to prove their manhood. Moreover, wherever war was ritualistic, it rarely included large-scale killing on the battlefield or the seizure of lands. In many ways, therefore, some forms of ritualistic war can be interpreted as the means of securing and even maintaining peace or, at least, putting limits on violence.

—Alfred J. Andrea

Jihad

The word "jihad" comes from the Arabic root *ja-bada*, meaning "to exert an effort" or "to strive" toward a goal, and the term is often used in the

➤ RULES OF THE LESSER JIHAD

An account demonstrating the rule that jihad of the sword is not allowed for the sake of hatred or blind revenge is found in Book I of the *Mathnawi* by the Sufi mystical poet Jalal al-Din Rumi (d. 1273) and relates the actions of Ali ibn Abi Talib (d. 661), the nephew and son-in-law of the Prophet Muhammad. In hand-to-hand combat during a battle in the early days of Islam, Ali overpowered his enemy and threw him to the ground. As a last act of hatred, the opposing soldier spat in Ali's face. At that point, Ali got up, put away his sword, and refused to kill the man. The enemy soldier expressed surprise and asked Ali why he did not kill him. Ali answered that previously he had been fighting for the truth (*al-Haqq*) of Islam, but when the soldier spat in his face, he had become angry. Remembering the rule that fighting for the sake of hatred or revenge is not allowed, Ali stopped himself and refused to kill the soldier. The account concludes by saying that Ali's actions so impressed the enemy warrior that he immediately converted to Islam.

—April L. Najjaj

Muslim world in several different ways. Indeed, in the Middle East, “jihad” is often used in social or economic contexts, similar to the West where politicians or newspapers speak about waging a crusade against poverty, homelessness, or illiteracy. The Muslim use of the word “jihad,” however, is often misunderstood in the West, and the common English translation of it as “holy war” is overly simplistic and emphasizes only one of several different aspects of this word.

In its most basic sense, there are two different kinds of jihad: *al-jihad al-akbar* (the greater struggle or effort) and *al-jihad al-asghar* (the lesser form of struggle). The greater jihad refers to the internal struggles that all people deal with on a daily basis to be good and honest and to obey the laws of God. The difficulties of living a morally upright life when faced with the world's constant temptations is the most common use of the term “jihad” in the Islamic world; such a struggle between doing good and avoiding evil is a concept common to all religious traditions and is not unique to Islam.

On the other hand, the lesser jihad refers to the outer, and at times military, struggle in defense of the true religion, Islam. Just as often, if not more so, the outer, or lesser, jihad can involve simply preaching the faith to unbelievers. But when jihad involves military action, not just anyone can declare what can also be referred to as a jihad of the sword, and there are strict rules for waging such military efforts. At times, the term has been used freely by individuals in the Muslim world who have no authority to declare a jihad but attempt to use religious terminology as a rallying point in furtherance of their own secular political or military agendas, such as Saddam Hussein's declaration of a jihad against coalition forces invading Iraq in 1991. In addition, suicide bombers often describe themselves and are reported by the media as waging jihad; however, taking one's life is forbidden in Islam, just as in Christianity, and thus such incidents should not be considered within the context of struggle for the sake of the religion but rather as an expression of political, social, and/or economic disenfranchisement.

A jihad of the sword can only be declared or sanctioned on the basis of a religious authority, such as a widely recognized Muslim scholar or judge. Modern-day scholars in both the Sunni and Shia traditions agree that such a jihad is only permissible for the purposes of defense. In addition, the lesser jihad is never waged to force conversion to Islam, for Surah (Chapter) 2:256 of the Quran allows for freedom of religion and is translated as saying that “There is no compulsion in religion.”

The religion of Islam spread throughout the Arabian Peninsula and far beyond in the seventh and eighth centuries, eventually extending from Spain and Morocco in the West to as far as northwest India in the East by roughly 750. These early centuries witnessed frequent warfare, and the rules established by the religion in governing the conduct of warfare became an effort to exercise some control over these ongoing conflicts. These same rules apply to the exercise of jihad and can be found not only in the Quran but also in the Hadith (the recorded sayings and actions of the Prophet Muhammad) and eventually were incorporated into the corpus of Islamic law. For example, warfare is to be limited to com-

batants only, and it is not permissible for Muslims involved in any kind of warfare to kill women (except when they take up arms against Muslim armies), children, the elderly, or the injured; to torture or otherwise humiliate prisoners of war (although they can be killed in certain circumstances); or to destroy places of worship, crops, trees, or livestock. In addition, there is a code of honor and behavior that all Muslims must follow that clearly outlines treatment and exchange of prisoners, avoidance of blind revenge or retaliation, and insistence on mandatory peace negotiations at the enemy's request. Moreover, the jihad must be openly declared, and the enemy must first be given the opportunity to convert to Islam before an attack can be launched.

An example from Islamic history when the lesser jihad, or jihad of the sword, was properly employed for the defense of the religion and proclaimed openly through the appropriate channels can be seen in the wake of the First Crusade. Refugees from Jerusalem, which had been captured and sacked in 1099, fled to Damascus and appeared before the grand *qadi* (religious judge) of Damascus, Abu Saad al-Harawi, to relate what had happened to the third-holiest city in Islam. The grand *qadi* then traveled to Baghdad to inform the Abbasid caliph, al-Mustazhir Billah (r. 1094–1118), of these events, and the proclaiming of a jihad against the European invaders soon followed. Although it would take approximately another 50 years for Muslim armies to begin to mount an effective counterattack against the European crusaders, this call for jihad is considered to be the first act of resistance in defense of Islam and its holy sites in Jerusalem during this period.

—April L. Najjaj

Bibliography

- Cook, David. *Understanding Jihad*. Berkeley: University of California Press, 2005.
- Firestone, Reuvan. *Jihād: The Origin of Holy War in Islam*. New York and Oxford: Oxford University Press, 1999.
- Johnson, James Turner. *The Holy War Idea in Western and Islamic Traditions*. University Park, PA: Penn State University Press, 1997.
- Khadduri, Majid. *War and Peace in the Law of Islam*. Baltimore: Johns Hopkins University Press, 1955.

Rumi—Sufi Apostle of Love

The thirteenth century was marked by crusades and jihads of the sword, yet that same age also produced several apostles of love and peace. The story of the Christian saint Francis of Assisi (ca. 1182–1226) is well known in Europe and America. The fame of the Muslim Sufi saint Mevlana Jalaluddin Rumi (1207–1273) is gaining equal status in the West; in the Islamic world he has been one of the most widely beloved, read, and quoted poets for over 700 years.

Known in the West as “Rumi,” he is known among Persian speakers as “Mawlawi” and among Turks as “Mevlana.” The name “Rumi” signifies that he lived in Turkish Anatolia, which the Seljuk Turks called Rum, meaning “the land of the Romans,” signifying that they had conquered the territory from the East Roman, or Byzantine, empire in the eleventh century. His titles “Mawlawi” or “Mevlana” mean “our master.” By whatever title, this Sufi holy man and poet is recognized as one of thirteen-century Islam’s preeminent advocates of an ecumenical love that mirrors God’s love for all humanity.

Rumi was born on September 30, 1207, in Balkh (modern Afghanistan). In 1208 his father, a scholar and Sufi sheikh, moved the family to Samarqand. Anticipating the encroaching Mongols, they continued to Baghdad, Mecca, Damascus, and Konya in Anatolia, where they settled by 1229. Here Rumi prepared to succeed his father as a teacher. Since Rumi was only 24 years old when his father died in 1231, he asked one of his father’s students to serve as his spiritual director. After studying the Quran, Hadith (traditions regarding the actions and sayings of the Prophet and his Companions), Hanafi law, and theology in Aleppo and Damascus, Rumi returned to Konya in 1237 and taught in Konya’s *madrasas*.

Rumi was transformed by his relationship with Shamsuddin Tabrizi (whose name means “sun of the faith from Tabriz”), who became Rumi’s spiritual guide, intimate friend, and poetic muse, beginning in 1244. Shams was a scholar of Islamic jurisprudence, logic, math, and astronomy. Eccentric and iconoclastic, Shams emphasized that following the Prophet Muhammad’s exemplary precedent meant sharing his mystical experiences, including the heavenly ascension.

➤ THE GREATER JIHAD

Hadith records that upon returning from a military expedition against Mecca, the Prophet Muhammad told his companions: “We have returned from the lesser Jihad to the Greater Jihad.” In his *Masnevi-i Manavi* (also known as the *Mathnawi*), a massive work of spiritual stories and poems in Persian whose title translates as *Rhyming Couplets of Profound Spiritual Meaning*, Rumi explains the meaning of this story.

“O kings, we have slain the outward enemy, (but) there remains within (us) a worse enemy than he.

To slay this (enemy) is not the work of reason and intelligence; the inward lion is not subdued by the hare.

This carnal self is Hell, and Hell is a dragon (the fire of) which is not diminished by oceans. . . .

When I turned back from the outer warfare, I set my face towards the inner warfare.

We have returned from the lesser Jihād, we are engaged along with the Prophet in the greater Jihād. . . .

Deem of small account the lion (champion) who breaks the ranks (of the enemy): the (true) lion is he that breaks. . . himself.”

—Alfred J. Andrea

Source

The Mathnawí of Jalálu'dín Rúmí, 8 vols., translated by Reynald A. Nicholson (London: Printed by Cambridge University Press for the Trustees of the “E. J. W. Gibb Memorial,” 1925–1940), 2:76.

Rumi's passionate love for Shams transformed him from a scholarly sheikh into an ecstatic poet of passionate spiritual love. Rumi experienced Shams as the perfect human being and divine beloved; Shams regarded Rumi as a spiritual guide worthy of sainthood. Either in response to the jealousy of Rumi's disciples or as part of their training together, Shams left for Syria in 1246. Though returning briefly in 1247, Shams again disappeared, initiating Rumi's poetry of intense longing for reunion. Although hagiographic accounts narrate that seven of Rumi's jealous disciples murdered Shams in 1247, textual and

historical evidence suggests that Shams might have died while returning to Tabriz.

Shams taught Rumi a form of “whirling” meditation using poetry, music, and movement to reach ecstasy, which became for Rumi the perfect expression of love for God. Rumi and his followers, the Mevlevi Brethren, men following a semimonastic form of spiritual life while fully engaged in secular professions and generally also married with families, became known popularly as Whirling Dervishes because of this distinctive form of meditative prayer. On his part, Rumi composed and dictated poetry while engaging in this ecstatic activity. In 70,000 lines of verse and a volume of discourses, Rumi evoked the beauty and power of passionate love over reason, the heart over intellect, and silence over words.

When Rumi died on December 17, 1273, Jews, Greek and Armenian Christians, and Turkish and Arab Muslims followed his funeral procession and honored him in a display of ecumenical spirit that still surrounds him and his order. His mausoleum (the Green Dome) at Konya today attracts more than 500,000 pilgrims of every faith annually and remains the center of the Mevlevi Order. In like fashion, the tomb of Francis at the Sacro Convento in Assisi is a focus of ecumenical pilgrimage on a massive scale and the center of the Conventual branch of the Order of Friars Minor (the Franciscans).

—Hugh Talat Halman and Alfred J. Andrea

Bibliography

- Chittick, William C. *The Sufi Doctrine of Rumi*. Bloomington, IN: World Wisdom, 2005.
- Lewis, Franklin D. *Rumi: Past and Present, East and West*. Oxford, UK: Oneworld, 2001.
- Rumi. *The Essential Rumi*. Translated by Coleman Barks. San Francisco: HarperCollins, 1995.
- Rumi. *The Pocket Rumi Reader*. Translated by Kabir Helminski. Boston: Shambhala, 2001.
- Rumi. *Rumi and Islam: Selections from His Stories, Poems, and Discourses*. Translated and annotated by Ibrahim Gamard. Woodstock, VT: Skylight Paths, 2004.
- Rumi. *Selected Poems of Rumi*. Translated by Reynold A. Nicholson. New York: Dover, 2001.
- Schimmel, Annemarie. *Rumi's World*. Boston: Shambhala, 2001.

Wines, Leslie. *Rumi: A Spiritual Biography*. New York: Crossroad, 2000.

Mongol Justification of War

Despite the stereotype of bloodthirsty, ravaging barbarians, the Mongols justified their wars in more complex ways than just a desire for plunder. Chinggis Khan's invasions primarily began out of a desire to protect his new state in Mongolia and for revenge rather than in any attempt to conquer the world. As several steppe leaders fled from Mongolia during the wars of unification (1189–1206), Chinggis Khan pursued them into the kingdom of Xia, or Xixia (present-day Ningxia in China), and into western Siberia and Kazakhstan. This prevented them from rallying their defeated tribes and attempting to overthrow Chinggis Khan, a very real possibility. The invasion of northern China in 1211 served not only to limit Chinese influence in the steppe regions, because China had traditionally attempted to control and expand its steppe borders in order to keep strong non-Chinese states from rising there, but Chinggis Khan also sought to avenge past Chinese transgressions against the Mongols committed by the Jin empire, which was then located in northern China.

Revenge also factored in a number of other wars. In 1218 the Khwarazmian governor of Otrar massacred a Mongol-sponsored caravan. The Khwarazmian ruler, Muhammad II, refused to turn the governor over to the Mongols and then killed the Mongol envoy. Unlike in many of the sedentary states of Eurasia, nomads considered the safety of messengers sacrosanct. By killing the envoy, the offender not only violated this taboo but also brought dishonor to the Mongol ruler. As a result, the only way to restore honor was by avenging the death.

By the reign of Ogedai Khan (r. 1230–1240), the Mongols had adopted the idea of divine right of conquest. Although this idea is often attributed to Chinggis Khan, Ogedai is the one who carried it out. In short, Tenggri (Heaven) decreed that Chinggis Khan and his sons should rule the world. Those who did not submit were therefore in rebellion against the will of Heaven. Before invading, the Mongols asked for

➤ MONGKE KHAN'S LETTER TO LOUIS IX

In 1253 the Franciscan William of Rubruck set off for the land of the Mongols to preach the Gospel. Although he enjoyed the support of King Louis IX of France, Friar William was scrupulous in not presenting himself as the king's diplomatic envoy. Nevertheless, prior to his return to the West, William was entrusted with a letter to Louis from Mongke Khan. Its tone and message reflected the shift in ideology that had taken place under Mongke's predecessor Ogedai.

"This is the mandate of the eternal God. 'In Heaven there is only one God eternal; on Earth there is only one lord, Chinggis Khan. . . .' We have revealed to you the mandate of the eternal God. Once you have heard and believed it, if you are willing to obey us, send us your envoys. In this way we will know for certain whether you wish to be at peace with us or at war. When, by the power of God eternal, the entire world, from the rising of the sun to its setting, has become one in joy and peace, then it will become apparent what we are going to do. If, however, after hearing and understanding the decree of God eternal, you are unwilling to acknowledge or believe it, and say 'Our country is far away, our mountains are mighty, our sea is vast,' and, with this confidence, you make war upon us—how can we know what will happen? He, God eternal, who has made what was difficult easy and made what was distant near—He knows!"

—Timothy May

Source

William of Rubruck, *Itinerarium*, in *Sinica Franciscana, I. Itinera et relationes Fratrum Minorum saeculi XIII et XIV*, edited by A. Van den Wyngaert and translated by A. J. Andrea (Florence, 1929).

the submission of a ruler. If he did not submit, then there was no alternative but invasion and conquest.

—Timothy May

Bibliography

Amitai-Preiss, Reuven. *Mongols and Mamluks*. New York: Cambridge University Press, 1995.

➤ CHINGGIS KHAN'S CAREER AND CONQUESTS

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|---|---|
| <p>1167—Probable birth date of Temuchin</p> <p>1206—Temuchin proclaimed Chinggis Khan; raids into XiXia lands</p> <p>1209–10—The first XiXia campaign</p> <p>1210—Surrender of Yinchuan</p> <p>1211—Invasion of northern China (campaign against the Jin empire lasts to 1234 and the fall of Kaifeng)</p> <p>1215—Zhongdu (Beijing) captured</p> <p>1216–1219—Invasion of Korea in pursuit of Khitans whom the Mongols had driven there</p> <p>1218—The Kara-Khitai campaign; capture of Kashgar</p> | <p>1219–1221—The campaign against the Khwarazm empire</p> <p>1219—Capture of Bukhara</p> <p>1220—Capture of Samarkand</p> <p>1221—Campaigns begun in Afghanistan against Sultan Jalal al-Din; capture of Tirmiz, Balkh, Merv, and Nishapur</p> <p>1222—Visit of Changchun to Chinggis Khan in Afghanistan</p> <p>1227—The second XiXia campaign; completion of the conquest of XiXia</p> <p>1227—Chinggis Khan dies</p> |
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➤ CHINGGIS KHAN'S LETTER TO CHANGCHUN

In 1219 Chinggis Khan sent an invitation to the Chinese Daoist sage Changchun (1148–1227) to travel to his court to instruct the Mongol khan in the Way. Chinggis Khan was not so much interested in wisdom as in the secret of immortality, which he presumed the monk possessed. Although Changchun claimed no such knowledge, he eventually reached the Mongol leader in Afghanistan in May 1222, where he lectured the khan on leading a life of moderation and abstinence. Ironically, both men died in 1227.

In the prologue to his letter of invitation, the Great Khan explained how he had carved out his empire. The first reason that he offered—China's having lost the Mandate of Heaven and his having gained it because of his virtue and wisdom—was completely Confucian and suggests the work of a Chinese counselor.

“Heaven has abandoned China owing to its arrogance and extravagant luxury. But I, living in the northern wilderness, do not have inordinate passions. I have only one coat and one food. I eat

the same food and am dressed in the same rags as my humble herdsmen. I consider the people my children and take an interest in talented men as though they were my brothers. We always agree in our principles, and we are always united by mutual affection. At military exercises I am always in the forefront, and in battle I am never in the rear. In the space of seven years I have accomplished a great work, uniting the whole world in one empire. I do not myself possess extraordinary qualities. However, the regime of the Jin is inconstant, and therefore Heaven assists me in obtaining the Jin throne. The Song to the south, . . . the XiXia to the east, and the barbarians in the west, have all acknowledged my supremacy. It seems to me that such a vast empire has not been seen since the remote time of our ancestral khans.”

—Alfred J. Andrea

Source

Modernized by A. J. Andrea from E. Bretschneider, *Mediaeval Researches from Eastern Asiatic Sources* (London, 1875), 1:37.

Buell, Paul D. *Historical Dictionary of the Mongol World Empire*. Lanham, MD: Scarecrow, 2003.

Jackson, Peter. *The Mongols and the West, 1220–1410*. New York: Pearson Education, 2005.

Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.

Rossabi, Morris. *Khubilai Khan: His Life and Times*. Berkeley: University of California Press, 1988.

Saunders, J. J. *The History of the Mongol Conquests*. Philadelphia: University of Pennsylvania Press, 1971.

Western Europe—The Peace and Truce of God

In the Peace and Truce of God movements, medieval ecclesiastics attempted to restrain aristo-

cratic violence. The Peace of God councils prohibited violence against the persons and property of ecclesiastics and the peasantry, while the Truce of God generally prohibited violence during days of significance to the Church, such as feast days of saints, Advent and Lent, and Thursday to Sunday. The movements were also expressions of the growing power of the Church as a major property holder that sought to protect its own interests and expand its authority over the laity.

The earliest evidence for the Peace of God movement comes from late-tenth-century Aquitaine and Burgundy. In 975, Bishop Guy assembled a diverse group of people, including clerics, monks, nobles, and peasants, in a field at Le Puy to discuss the imposition of the Peace, and Archbishop Gumbald of Bordeaux did the same in 989–990 in Charroux. During these councils, they proclaimed that acts of violence against members of the clergy or peasants and theft of Church property or peasants' livestock were offenses punishable by excommunication. By protecting the peasantry, the Church fulfilled its pastoral obligations while also protecting its tithing revenues. After denouncing violence against these targets, the councils then called upon lay lords to swear oaths to honor the Peace. In order to highlight the importance of these councils, ecclesiastical organizers brought the relics of local saints. The saints' presence was guaranteed to bolster the participation of the laity, and they also served as heavenly witnesses to the oaths.

Beginning in the 1040s, the Peace of God was augmented by the Truce of God, which sought to restrict aristocratic violence to certain times. This change was significant because it called into question the morality of aristocratic violence; if violence against Christians was inappropriate during Christian holidays, then it was perhaps also blameworthy at all times.

While details of the Peace and Truce of God councils are evident in the extant records, historians continue to debate their impetus. The debate revolves around their place in the so-called Feudal Revolution. Some scholars argue that the movements were necessary because of the growing violence of the aristocracy following the dissolution of Carolingian public authority in the tenth century. Others, however, contend that the

➤ A TRUCE OF GOD PROCLAMATION OF 1035–1041

During the period 1035–1041, Archbishop Reginald of Arles and several other high-ranking ecclesiastics of France composed the earliest extant proclamation of a Truce of God. In it, they call upon Italian clerics to join them in denouncing violence on days of the week connected with Christ's Passion, namely from Wednesday night to Monday morning, so that "all persons may have peace, and, trusting in this peace, may go about their business without fear of their enemies." In order to facilitate compliance, the proclamation offers absolution of sins as a reward for those who honor the Truce, and it threatens those who violate it with excommunication and anathematization.

—Kate McGrath

movements did not so much reflect the growing violence of the nobility but instead reflected the growing power of the Church and its competition with the nobility for control of property and authority over the peasantry. While the reasons behind and meaning of the initial development of the movements will likely continue to be debated, it is clear that they had a profound effect on medieval society. Pope Urban II was able to use their rhetoric in his call for crusade in 1095 to promote participation in the campaigns to capture Jerusalem. Moreover, the language of the movement had a certain resonance with the nobility's own development of standards for the use of violence, better known as the code of chivalry.

—Kate McGrath

Bibliography

- Bisson, Thomas N. "The Organized Peace in Southern France and Catalonia, ca. 1140–ca. 1233." *American Historical Review* 82(2) (1977): 290–311.
- Cowdrey, H. E. J. "The Peace and the Truce of God in the Eleventh Century." *Past and Present* 46 (1970): 42–67.
- Head, Thomas, and Richard Landes, eds. *The Peace of God: Social Violence and Religious Response in France around the Year 1000*. Ithaca, NY: Cornell University Press, 1992.
- White, Stephen D. "Debate: The 'Feudal Revolution'; Comment 2." *Past and Present* 152 (1996): 205–223.

Christian Warrior Saints

Warrior saints were universally popular in the Latin West in the age of the crusades, but their cults were equally strong within the churches of Eastern Christendom, where their veneration stretched back into Christianity's early centuries.

All Christian saints—persons whose lives of heroic sanctity earned them passage into Heaven and veneration as special friends of God and protectors of those who pray for their help—are metaphorically *milites Christi* (soldiers of Christ), inasmuch as they successfully battled the forces

of Evil and their own sinful appetites while on earth. A few saints, however, had served as soldiers while they were alive and were believed to have retained their martial qualities while serving as heavenly helpers.

In one of the most dramatic moments in the First Crusade, on June 28, 1098, a starving crusader army launched a counterattack against a numerically superior force besieging it within the city of Antioch. According to the *Gesta Francorum* (*The Deeds of the Franks*), an important eyewitness account of the battle composed by an anonymous Norman-Italian soldier, as the crusaders marched out to meet the enemy, they saw a countless host of warriors on white horses riding down from the mountains. At first confused, the crusaders soon realized that this was a heavenly host led by Saints George, Mercurius, and Demetrius, coming to their aid. Thus emboldened, the crusaders routed the enemy.

One can find many non-miraculous explanations for this morale-boosting phenomenon, but there is no denying that the crusaders believed in these warrior saints, the greatest of whom was Saint George. Eastern Christians had had a long, strong, and widespread devotion to the soldier-saint known as George, whom they venerated as an early-fourth-century martyr from Anatolia. Although the cult of Saint George had found its way to the West by the sixth century, the saint's popularity rose appreciably during the age of the crusades, as he and similar warrior saints became identified with holy war against Islam. The *Golden Legend*, a mid-thirteenth-century Latin collection of saints' stories, recounts the tale of a handsome young man who appeared to a crusader priest and identified himself as George, captain of the Christian host. He promised to accompany the army to Jerusalem, where they would carry his relics. Later during the assault on the city, as the crusaders hesitated to climb their scaling ladders, George appeared in white armor marked with a red cross and led them safely over the walls to victory. By the late Middle Ages, George was the patron of such kingdoms as Aragon, England, Germany, Hungary, Lithuania, and Portugal. Additionally, a large number of principalities and cities throughout Europe adopted George as their heavenly protector. Italy alone had one hundred and eighteen

› SAINT MAURICE

Visitors to the Cathedral of Saints Maurice and Katharina in Magdeburg, Saxony are often surprised to see a mid-thirteenth-century statue of a black African in full Western chain-mail armor standing guard near the tomb of Emperor Otto I. Indeed, it is generally assumed to be the first artistic depiction of an ethnic African in central Germany. The knight is none other than Saint Maurice (originally, Mauritius), patron of the cathedral. As understood in Roman antiquity, the Latin word *Mauritius* meant "black African" or "Moor," which might suggest that Mauritius (or Maurice or Moritz, as in St. Moritz, Switzerland) was a composite person of legend rather than a single individual. Whatever the truth, according to tradition, Mauritius, an Egyptian from Thebes, commanded the Theban Legion, which was (according to an unreliable legend) composed entirely of Christians. Ordered by Emperor Maximian (r. 285–310) to attack Christians in present-day Switzerland, the legion, bolstered in its resolve by Mauritius, refused to comply. Consequently, Mauritius, along with the entire legion of 6,666 men, was martyred at a site known today as Saint Maurice-en-Valais.

In 961, Otto I, king of Saxony (r. 936–973) and future Western emperor (r. 962–973), transferred Mauritius's body to Magdeburg, where it resided as the patron not only of the newly created cathedral (which was rebuilt after being destroyed in 1207) but of Otto's kingdom and empire. The warrior saint's presumed sword and spurs (a rather anachronistic touch) served as imperial insignias in the subsequent coronations of Western emperors.

—Alfred J. Andrea

communes, or independent cities, that carried George's name.

Joining George in this heavenly army of warrior saints venerated in the West were such early soldier-martyrs as the aforementioned Demetrius and Mercurius, as well as Maurice, Sebastian, Theodore, and Victor. Of these, Theodore, Sebastian, and Maurice were the most popular, although none probably reached the level of George's popularity.

In the East, military saints were legion in numbers. Demetrius and Theodore were especially popular. Demetrius, an officer in the Roman army who was beheaded in 303, served as the patron saint of Thessalonica (present-day Thessaloniki), the site of his martyrdom and the second most populous and important city in the Byzantine empire. Saint Theodore, known as Theodore the Great or Theodore the General, was equally revered by Byzantine and Ethiopian Christians, being prominently featured in the religious art of both traditions. When depicted on horseback by Ethiopian artists, Theodore was always astride a distinctive red horse. Theodore was also revered by Armenian Christians, who dedicated February 24 as his feast day. As Constantinople's fortunes faded in the thirteenth century and following, in the face of a host of determined enemies, the cult of these warrior saints rose appreciably in volume within the Byzantine Church. Two of the more popular heavenly warriors whom the Byzantines vainly implored for help were Sergius and Bacchus, two early-fourth-century soldier martyrs from Syria. Of course, the various Syrian branches of Christianity revered these two warriors and looked to them for aid, as did Egypt's Coptic Christians. Needless to say, the Byzantine cult of military saints passed to the various Slavic peoples who adopted Constantinople's form of orthodox Christianity. Sergius and Bacchus, as well as Theodore, George, and a host of other soldier saints are prominent in Slavic icons, especially Russian holy pictures.

One of the Latin West's most revered heavenly warriors—Saint James the Greater, an apostle of Jesus—had never been a soldier on earth but assumed in legend and cult the status of a saint who assured victory in holy war and protected those who waged such wars. Indeed, he

was metamorphosed into *Santiago Matamoros* (Saint James the Moor-Slayer), the patron saint of the Reconquista, who fought to protect both his relics, which lay in Compostela in northwestern Spain, and the Christians who revered them. It was claimed that he could be seen in the heavens at crucial moments in battle, as Christians fought Moors in Iberia, sitting astride a white horse and carrying a drawn sword and flowing banner. Invariably, so the legends had it, such apparitions assured a Christian victory. Legend further maintained that Santiago's role as a warrior commenced in 844 at the Battle of Clavijo (which probably was never fought), where he suddenly appeared and killed thousands of the Moorish enemy. Significantly, "¡Señor Santiago!" became the battle cry of the Order of Santiago, a religious military order founded in León in 1170. Not only did the order become one of the cutting edges of the Iberian Reconquista, a significant number of its members, including Hernán Cortés, later served as conquistadores in the Americas, where they called upon their saintly patron for aid as they battled presumed heathens.

—*Alfred J. Andrea*

Bibliography

- Riches, Samantha. *St George: Hero, Martyr and Myth*. Stroud: Sutton, 2000.
- Walter, Christopher. *The Warrior Saints in Byzantine Art and Tradition*. Burlington, VT: Ashgate, 2003.
- Warrior Saints*. New Grecian Gallery Exhibition Catalogue. London, 1973.

Islam's Counter-Crusade Ideology

When European crusaders arrived on the coast of what is today Turkey in the late eleventh century and traveled south to Syria-Palestine, the area had been in disarray for decades. Although it was nominally ruled by the Abbasid caliph farther east in Baghdad, local competing Turkish dynasties had served as de facto rulers throughout the region.

Since the coming of Islam in the seventh century, Jerusalem, a city holy to Jews and Christians for centuries, had taken on a similar role for Muslims, third in importance only after Mecca



Battle between Muslims and Crusaders, miniature from the Roman de Godefroi de Bouillon, 1337. (The Gallery Collection/Corbis)

➤ IBN AL-ATHIR—MUSLIM CHRONICLER OF THE CRUSADES

One of the most important chroniclers of the Muslim perspective on the crusades was Izz ad-Din Ibn al-Athir (1160–1233), an Arab of Mosul in Iraq and author of *Kamil al-Tawarikh* (*The Collection of Histories*), which considers Muslim world history from the pre-Islamic period until only a few years before his death. In an age characterized by continuing warfare between the Franj (Western, or Latin, Europeans) and Muslim forces in the Levant, Ibn al-Athir not only wrote about the momentous events in the eastern Mediterranean but also considered Christian warfare against Muslims in other lands, beginning with his coverage of battles in Al-Andalus (Islamic Spain) and the Norman invasion of Sicily (1061–1091), all of which he viewed as parts of a single concerted attack on Islam by Christendom. With this perspective, he presented the Muslim reaction to Christian aggression as justifiable defensive jihad. Likewise, he saw Muslim responses to the Mongol threat from the east in the early thirteenth century in the same light.

—April L. Najjaj

and Medina in the Arabian Peninsula. There is an account in Surah (Chapter) 17 of the Quran called *Al-Isra* (*The Night Journey*) that recounts what Muslims believe to be the Prophet Muhammad's miraculous overnight journey in 621 from Mecca to Jerusalem. Once he arrived in the city, the Prophet ascended to Heaven, considered a miracle in Islamic tradition and referred to in Arabic as *al-miraj*; and a shrine, known as the Dome of the Rock, would be built circa 690 over the site to commemorate the event. In addition, the Al-Aqsa mosque, part of an area in the old city of Jerusalem called Al-Haram al-Sharif (The Noble Sanctuary), was built about 710 by the Umayyad dynasty (661–750) and stands adjacent to the Dome of the Rock; the two sites together continue to be sacred to Muslims today.

With the crusaders' capture and pillaging of Jerusalem in 1099, Muslim refugees had headed eastward to Damascus and appeared before the grand *qadi* (judge) of Damascus, Abu Saad al-Harawi, to relate the events of the previous months. The grand *qadi* then traveled to Baghdad to inform the Abbasid caliph, al-Mustazhir Billah (r. 1094–1118), and the proclaiming of a jihad against the European invaders soon followed. Despite the religious significance of Jerusalem and the plight of the refugees, the weaknesses of the Abbasid caliphate together with the continuing warfare of competing local dynasties throughout the Islamic world would result in a delay of approximately 50 years before Muslim armies would begin to mount an effective counteroffensive against the European crusaders. The leadership of the governor of Mosul, Zengi (ca. 1127–1146), who used the rhetoric of jihad to encourage support, began the process with consolidation of his rule over Syria, at times allied with and other times fighting against the Frankish colonists who now ruled the crusader states, in part resulting in his conquest of Edessa in 1144. Only with the arrival of Nur al-Din (ca. 1146–1174), arguably the first true jihadist in this period who would set the model for future leaders, the most important being the son of one of his generals, Salah al-Din Yusuf al-Ayyubi (known in the West as Saladin, d. 1193), would the Muslim leadership be organized and begin to wage an effective counterattack that was motivated by jihadist ideology. Sunni Muslim forces

under Saladin's leadership conquered Egypt in 1169 and then moved to Syria to take Damascus (1174), Aleppo (1183), and Mosul (1186). With these victories, a united Syria and Egypt, still under the command of Saladin, moved against and defeated the forces of the Latin kingdom of Jerusalem at the Battle of Hattin in July 1187 and ensured the subsequent surrender of Jerusalem a few months later.

The Third Crusade (1188–1192) rewon some of the cities and territories lost to Saladin (most notably Acre and Jaffa but not Jerusalem), and three truncated but still vital Latin crusader states remained a presence along the coast of Syria-Palestine until the late thirteenth century. Finally, however, Mamluk jihadists, most notably Baybars (r. 1260–1277), Kalavun (r. 1279–1290), and al-Ashraf Khalil (r. 1290–1293), used the call for holy war to crush the last vestiges of Latin occupation in Syria-Palestine, with the final major crusader bastion, Acre, falling in 1291.

—April L. Najjaj

Bibliography

- Gabrieli, Francesco. *Arab Historians of the Crusades*. London: Routledge and Kegan Paul, 1969.
- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 2000.
- Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. London: Longman, 1986.
- Maalouf, Amin. *The Crusades through Arab Eyes*. New York: Schocken, 1985.

Malicide not Homicide— The Military Religious Orders of the West

Military religious orders (or simply the military orders) began to appear in the twelfth century in Latin Christendom as a fusion of the religious and military vocations. As such, they represented a new stage in the development of Christian thought both about war and also about the nature of the religious life. A few writers were skeptical about the possibility of combining these two vocations, but the majority of medieval Latin Christian thinkers approved.

The first military order per se was the Order of the Poor Knights of the Temple of Solomon (Templars), founded in 1120 by a handful of

knights who dedicated their lives to protecting pilgrims between Jaffa and Jerusalem. The Templars took religious vows of poverty, chastity, and obedience and were given quarters in the al-Aqsa mosque (which the crusaders identified as the site of Solomon's Temple) on the Temple Mount by King Baldwin II of Jerusalem. With Bernard of Clairvaux's support, they obtained a rule from the Council of Troyes in 1129. Thereafter they shouldered an increasing share of the defense of the kingdom of Jerusalem, acquiring castles and maintaining an extensive intelligence network throughout the region.

Another military order can claim an earlier foundation though not earlier militarization. The Knights of the Hospital of St. John of Jerusalem (Hospitallers) began existence as care providers at a hospice in Jerusalem for sick and injured pilgrims around 1080. By 1126 the Hospitallers had a constable-brother in charge of troops, and by the mid-twelfth century they too were playing an important role in the defense of the Kingdom of Jerusalem although they never abandoned their vocation of hospital work and maintained extensive, sophisticated hospitals in Jerusalem (and later in Acre and on Rhodes and Malta).

Members of military orders were not crusaders. Crusading required its own special vow. Having already taken religious vows, military order members were not free to take crusade vows. However, they usually played a significant role in major crusades; the Templars and Hospitallers shared responsibility for the vanguard and rear guard on campaigns, with each order taking an end of the column, and on numerous occasions provided a disciplined example that prevented a crusader army from disintegrating.

Military orders were generally "exempt"; that is, they owed their primary obedience directly to the papacy and were not under the control of local ecclesiastical authorities. This gave them considerable flexibility and strength but also attracted hostility from local authorities at times.

Both major orders developed extensive economic networks throughout the Latin Christian world, and the Templars seem to have been particularly adept at finance and banking. Popular opinion considered them to be wealthy, although most of the money that passed through their hands was swiftly spent; maintaining men and

➤ ST. BERNARD OF CLAIRVAUX, “IN PRAISE OF THE NEW KNIGHTHOOD”

Bernard of Clairvaux (1090–1153), the most influential Latin churchman of his day, played a seminal role in popularizing the Templars and laying a theological foundation for such holy warriors in his undated treatise *De laude novae militiae* (*In Praise of the New Knighthood*). Here he compares the sin of homicide with the virtuous act of malicide, the killing of evil.

“A new kind of knighthood seems recently to have appeared on the earth. . . . It indefatigably wages a twofold combat, against flesh and blood and against a spiritual host of evil in the heavens. . . . [W]ho would not consider this very worthy of great admiration, even more so since it has hitherto been unknown? Truly a fearless knight and secure on every side is he whose soul is protected by the armor of faith just as his body is protected by armor of steel. . . . Why should he fear to live or to die when for him *to live is Christ, and to die is gain?* . . .

The knights of Christ may safely do battle [for] their Lord, fearing neither the sin of smiting the enemy nor the danger of their own downfall, inasmuch as death for Christ, inflicted or endured, bears no taint of sin, but deserves abundant glory. In the first case one gains for Christ, and in the second one gains Christ himself. . . .

The knight of Christ . . . is God’s minister in the punishment of evil doers and the praise of well doers. Surely, if he kills an evil doer, he is not a man-killer, but, if I may so put it, an evil-killer. . . .

Yet this is not to say that the pagans are to be slaughtered when there is any other way of preventing them from harassing and persecuting the faithful; but only that now it seems better to destroy them than to allow the rod of sinners to continue to be raised over the lot of the righteous. . . .”

—Paul Crawford

Source

Excerpted from chapters 1 and 3 of St. Bernard of Clairvaux, *In Praise of the New Knighthood: A Treatise on the Knights Templar and the Holy Places of Jerusalem*, trans. Conrad Greenia (Kalamazoo, MI: Cistercian, 2000), 33–43.

castles in the eastern Mediterranean was ruinously expensive.

As a result of the Third Crusade, a third military order was chartered in 1198: the Order of the Knights of the Hospital of St. Mary of the Germans (Teutonic Knights), an order that followed Hospitaler practices in fusing care for the sick with military activity but adopted the Templar rule and recruited almost exclusively from German-speaking areas of Christendom. In the diminished Kingdom of Jerusalem that existed after 1187, however, this order never managed to achieve the prominence of the Templars and Hospitalers and began to look for fields of action elsewhere, assisting the king of Hungary with frontier defense in the 1220s and moving north into the Baltic region shortly thereafter.

In 1291 when Muslim forces destroyed the mainland crusader states in Syria-Palestine, the military orders lost their central commands, a significant percentage of their manpower, and, most dangerously, their reason for existence. Two of the three great orders found new missions. The Hospitalers took the island of Rhodes in the later 1310s and converted themselves into a naval power, continuing their battle to defend Christendom from Islam. The Teutonic Knights, after a short period of internal debate, withdrew most of their resources from the Mediterranean and focused their attention primarily on the Baltic region.

The Templars, however, attracted the hostile attention of King Philip IV of France. For reasons that are unclear and that historians have been debating ever since, he had them arrested and charged with heresy and gross immorality in 1307. In 1312 Pope Clement V suppressed them without finding them guilty, saying that their reputation had been so damaged that no decent man would want to join. Although that was probably true, the pope was almost certainly also seeking to defend the legal precedent that only a pope could discipline an exempt order of the Church. After 1312 the Templars ceased to exist as an organization despite an extensive later mythology that claims their survival into the present day and attaches various occult mysteries, unanimously rejected by professional historians, to their history.

The attempts of the Teutonic Knights and Hospitalers to redefine themselves were successful, however. The Hospitalers held Rhodes until the Ottoman Turks captured the island in 1522 and allowed them to leave with honor on January 1, 1523. The Hospitalers were then given the island of Malta by Emperor Charles V in 1530. In 1565 they survived a Turkish siege and remained on the island until driven off by Napoleon in 1798. Some decades of chaos ensued; they were reformed in the nineteenth century without their military functions. They exist today as the Catholic Sovereign Military Order of Malta (SMOM), a charitable organization and sovereign state, with its headquarters in Rome.

The Teutonic Knights set up an “order-state” in Prussia and Livonia, where they remained until the Reformation. At that time substantial elements within the order became Lutheran and evolved into the Duchies of Prussia and Courland. The order continued a reduced existence in Catholic countries such as Austria. In the twentieth century the Nazis appropriated to their mythology a distorted version of the memory of the Teutonic Knights while simultaneously persecuting its modern Catholic members. Today it survives as a purely religious order.

Other smaller military orders included the Order of St. Lazarus, which accepted knights with leprosy; the tiny Order of St. Thomas of Acre, almost exclusively English; the Spanish military orders of Alcantara, Calatrava, and Santiago; and a surprisingly large number of others. The popularity of this model led to the creation of monarchic orders such as the Order of the Sword and the Order of the Dragon, organizations patterned on the military order model but controlled by national monarchies rather than the papacy. As the model developed further in the secular world, these monarchic orders became loose societies and then mere decorations, awarded at the pleasure of the monarch.

—Paul Crawford

Bibliography

- Barber, Malcolm. *The New Knighthood: A History of the Order of the Temple*. Cambridge: Cambridge University Press, 1994.
- Boulton, Jonathan. *The Knights of the Crown: The Monarchical Orders of Knighthood in Later Me-*

dieval Europe, 1325–1520. 2nd ed. Woodbridge: Boydell, 2000.

Forey, Alan. *The Military Orders from the Twelfth to the Early Fourteenth Centuries*. Toronto: University of Toronto Press, 1992.

Nicholson, Helen. *The Knights Hospitaller*. Woodbridge: Boydell, 2001.

Riley-Smith, Jonathan. *The Knights of St. John in Jerusalem and Cyprus, c. 1050–1310*. New York: St. Martin's, 1967.

Urban, William. *The Teutonic Knights: A Military History*. London: Greenhill, 2003.

American Indian War as Ritual

The native peoples of America certainly fought for economic gain, to take captives, to give valued status to young men, and to guard territorial boundaries. Beyond that, pre-Columbian Native American warfare had its religious aspects, though it was mostly not viewed as a conflict between religious belief systems. Native Americans were not usually out to change or destroy an enemy's religious precepts or to further a particular ideology. Rather, they fought to satisfy certain religious responsibilities and to maintain a healthy relationship with the spirit world.

One of the best examples of making war for the sake of fulfilling religious obligations was the Mexica Flower War. The Mexica, or Aztecs, had created an empire in central Mexico through war. Once they had established both political efficacy and religious orthodoxy, the Mexica constructed a hegemonic-tributary imperial system as opposed to one based on military occupation or the plantation of colonies. Non-Mexica subjects paid tribute to the central government but for the most part were not deliberately colonized.

The Mexica Flower War was fought to obtain captives for ritual execution and sacrifice to the Mexica deities. After ritual purification, a Mexica army issued a challenge to and took the field against a traditional enemy that had not yet been incorporated into the empire. Mexica military culture—indeed the military culture of all central Mexico—emphasized taking prisoners over killing enemies. The principal hand-to-hand weapon, for example, was a flat club lined with obsidian (glasslike volcanic stone) blades. This swordlike weapon was designed to inflict shallow

THE JAGUAR WARRIORS AND SACRIFICIAL COMBAT



Pictograph from the Florentine Codex by Juan de Tovar, sixteenth century. (Courtesy of the James Carter Brown Library at Brown University)

An Aztec Jaguar warrior engages in ritual combat with a tethered captive taken in a Flower War. The captive is armed only with a light shield and a wooden sword, the obsidian blades of which have been replaced with feathers. It was a form of human sacrifice that was intended in part to demonstrate publicly the martial capabilities of both the Aztec warriors and their enemies. The captive warrior had lived an honored life for a full year in his captor's house prior to the day of his ceremonial execution. He was perhaps viewed as a supreme sacrifice to the Mexica deities, especially if he had demonstrated extreme bravery in his final battle. After death he was decapitated, and his skull was put in a place of honor. He was also flayed, and his skin was worn by his captor.

—Tom Holm

wounds or to incapacitate a foe without killing. The most honored Mexica warriors were those who had captured the most prisoners in combat.

One form of Mexica ritual sacrifice emphasized the spiritual relationship among combatants, captives, and captors. A captive was adopted by his captor and taken in as a favored son for a period of about a year. The captive knew full well that he was to become a victim of ritual sacrifice—he was shown where and told how he would die—yet he stayed on with his adoptive family.

After a year the son/captive was taken to the temple of the war god, tethered to a raised platform, and forced to fight representatives from the various Mexica regiments. The victim was armed with a feathered war club, while his opponents carried their usual obsidian-bladed swords. He was never killed outright but was wounded over and over again with cuts from the extremely sharp obsidian blades until finally he dropped from exhaustion and loss of blood. He was sacrificed in this condition and his body flayed. The captor, who was an important witness to the ritual slaying and attended the ceremonies, was given the victim's skin, which he wore on his own person until it rotted away.

The macabre but intensely religious act of human sacrifice was not limited to the Mexica. Several of the nations of the eastern woodlands of North America practiced what has been called mourning war. Among these peoples, grief was understood as a disruptive and nearly uncontrollable force. The mourning wars amounted to the raiding of traditional enemies in order to replace dead relatives, physically and spiritually. The tribes of the Haudenosaunee, or League of the Iroquois, practiced this type of warfare in its purest form.

A widow or clan mother who sought to replace a deceased relative usually instigated the mourning war. An experienced war leader might then raise a party of warriors to raid a traditional enemy. If the raid was successful, the party would return with a few captives to be handed over to the women of the clan who had sustained the loss of a loved one. The women, in turn, would decide whether a captive was a suitable replacement for the deceased. Children and female captives were most often adopted into a clan. The clan took on the responsibility of assuming the cost of an adoption ceremony and providing for the welfare of and eventually assimilating the captive. Indeed, the constitution of the Haudenosaunee provided unambiguous directions for the adoption of captives. Quite often the adopted captive would take on all of the honors and titles of the deceased person being replaced. Gender was not especially important in the adoption ritual, and consequently young female replacements might even receive male

names or war honors that had been awarded to a dead clansman.

Adult male captives, although often adopted, were occasionally tortured, slain, and ritually cannibalized in an act of spiritual substitution or sacrifice. The victim, like those of the Mexica sacrifices, was often a complicit partner in the entire process. While being tortured by the women, armed usually with burning torches or sharp sticks, the victim defiantly sang songs and downplayed the women's attempts to cause him pain. When the victim grew weary or collapsed from blood loss or pain, the women spoke to him in kinship terms—brother, son, grandson—and gave him water and food to revive his strength. Finally, when the captive could endure no more he was killed. If he had been especially brave in his defiance of their efforts, parts of his body would be cooked and eaten so that his captors could ingest his spiritual essence.

Ultimately, the sacrifice was a victory for both captors and captive. The captive had demonstrated extreme courage and had gained a spiritual triumph. The captors had demonstrated ascendancy over a traditional enemy and had shared this triumph with those who had directly participated in the raid that resulted in the enemy's defeat. Clan grief had been diverted and even assuaged. Overall, the mourning war was a deeply religious act that counteracted the deleterious effects of grief, renewed the bonds of kinship, restored order, and maintained beneficial relations with the spirit world. In one form or another, virtually all American Indian nations practiced mourning war.

On the Great Plains, numerous tribes engaged in the practice of counting coup in battle. Often associated with a system of graded war honors, counting coup was a form of spiritual battle. It was widely understood that acts of coup in battle were ranked in order. First and foremost was touching an enemy in battle with a special coup stick, lance, bow, or even the hand. The lowest form of coup was killing the enemy. The idea of humiliating the enemy, or "capturing his spirit" and leaving him alive to suffer his defeat, was central to this type of highly ritualized spiritual warfare.

—Tom Holm

Bibliography

- Hultdrantz, Ake. *The Religions of the American Indians*. Berkeley: University of California Press, 1980.
- Turney-High, Harry Holbert. *Primitive War: Its Practice and Concepts*. Columbia: University of South Carolina Press, 1971.
- Turney-High, Harry Holbert. *Way of the Warrior*. Alexandria, VA.: Time-Life Books, 1993.

Curing the Ills of War—War Ceremonies in North America

Life within pre-Columbian America's societies was remarkably nonconfrontational and markedly pacific. By definition, a tribe is a society based on kinship. An ethos of cooperation and the give and take of well-defined relationships between all members of society are constantly reinforced through story, song, sacred history, ritual, language, and even economic practices. Violence was normally directed toward other groups, most notably traditional enemies. Having traditional foes in many ways strengthened the internal cooperative ethos of tribal groups and made war an act that was considered the very opposite of normal behavior. Most American Indians did not have a specific word for war as defined in the Western world. In the O'odham language, for example, war is the equivalent of chaos. In consequence, most Native American peoples devised specific war ceremonies intended to convey individual warriors, as well as entire societies, from normality to abnormal circumstances and behaviors and back again.

Before a war expedition was undertaken, medicine people were called upon to perform purification and protection ceremonies to ensure the safe return of warriors. Medicine people were also consulted to interpret signs and omens regarding a forthcoming conflict. Special prayers and songs were used to call upon the spirits in order to guarantee the success of a war party. Cherokee warriors were secluded for a period of time, then took part in a series of dances intended to inspire them to victory. Upon their return from a successful raid or pitched battle, Cherokee warriors handed over captives or booty to their female relatives and again went into seclusion. When properly cleansed of the taint and

trauma of battle, the warriors often donned masks and danced in a victory celebration.

Like the Cherokees, most tribes devised ceremonies that honored returning warriors and attempted to heal them both physically and emotionally of the trauma of battle. Because conflict was viewed as an extraordinary and disruptive activity, it was often treated very much like any other serious illness. The Diné (Navajo) Enemy Way, for example, is usually a four- to seven-day ceremony during which a medicine man and his helpers utilize sand paintings, songs, and particular symbols to restore the individual warrior to health. Diné medicine functions to cure the body, mind, and spirit of the individual. But Diné medicine, like that of most other tribal forms, also seeks to restore the harmony of the individual's environment. In other words, Native American medicine, especially that connected with warfare, recognizes that an individual's trauma spreads across an entire community, disrupting the balance of life. Nearly every tribal society has a particular word to describe the goal of a balanced, orderly, and harmonious existence within a particular landscape. Loosely translated, the terms mean the "peace," the "way," or the "path."

Each tribe's sacred history usually includes stories about how and why a ceremony to cure a particular illness is used. Most often, holy people, heroes, or the spirits give a ceremony to the people so that they will have the power to restore health and harmony to their particular world. The Diné Enemy Way ceremony is a recitation of the story of Monster Slayer, who slew the monsters of the world in order to provide a safe place for human beings to dwell. After he had accomplished that formidable task and had abused his special powers to do so, he fell ill. Another Holy Being recognized that Monster Slayer's illness had been brought on as a result of the death and destruction he himself had

wrought. The Holy Being devised the Enemy Way to purge Monster Slayer of the trauma of seeing so much death and to restore the beauty of the natural world. The teachings of the Diné sacred history are thus applied to certain curative processes, in this case warfare.

Although Native Americans went to war for many different reasons, they all recognized it as an extraordinary, perhaps even mysterious, event. Warriors often sought spiritual powers to aid them in combat; they also sought supernatural assistance in returning them to peace. War, among some peoples, may have been a spiritual experience or a way of serving the deities to ensure a prosperous and happy life. All Native American peoples, however, understood that because war was a terrible and terrifying experience, it absolutely required religious comprehension and sacred attention.

—Tom Holm

Bibliography

- Beck, Peggy V., et al. *The Sacred: Ways of Knowledge, Sources of Life*. Tsale, AZ: Navajo Community College Press, 1995.
- Holm, Tom. "American Indian Warfare." In *A Companion to American Indian History*, edited by Philip J. Deloria and Neal Salisbury. Malden, MA: Blackwell Companions to American History, 2002.
- Holm, Tom. *Strong Hearts, Wounded Souls*. Austin: University of Texas Press, 1995.
- Hultdrantz, Ake. *The Religions of the American Indians*. Berkeley: University of California Press, 1980.
- Jennings, Francis. *The Invasion of America: Indians, Colonialism and the Cant of Conquest*. New York: Norton, 1976.
- Turney-High, Harry Holbert. *Primitive War: Its Practice and Concepts*. Columbia: University of South Carolina Press, 1971.
- Turney-High, Harry Holbert. *Way of the Warrior*. Alexandria, VA.: Time-Life Books, 1993.

■ Introduction: The Many Ways to Conduct War

Since the rise of organized armies, military tactics, strategy, armaments, and organization, however varied around the world,

have shared a single all-consuming goal: to force an enemy to submit to one's will. This normally has involved violence and bloodshed. But strata-

gem and psychological ploys, essentially the ability to compel surrender without recourse to attack, have always played their roles. As noted in these pages, the Mongols, who were known for the brutality of their attacks, also employed psychological warfare and a variety of other means to undermine their opponents' morale and to effect their peaceful submission.

These common elements noted, it is no exaggeration to say that tactics, strategy, armaments, and military organization reflect the cultures of the societies that create and employ them. They have historically not been so embedded in a culture that they could not be modified and even radically changed in order to meet new challenges or to adopt some apparently superior military technique or technology. Often such borrowings were initially seen on the field of battle and then adopted and adapted to the new host's needs and culture. Sometimes the new element was improved upon, as appears to have been the case with the transit of both the trebuchet and gunpowder weaponry across Eurasia.

Sometimes the adoption was only partial. The heavy-armored mounted knights of the First Crusade, who depended on mass shock to break an enemy's ranks, were often successful in the open field, but they also had their bloody setbacks and defeats. The main opponents who provided a serious challenge to them were lightly armored Turkic horsemen who rode fast horses and used the tactic of the feigned retreat to cut off and cut to pieces a pursuing foe and whose primary weapon was not a heavy lance but rather the deadly recurved compound bow of the steppe. During the twelfth century the armies of the crusader states and military orders, such as the Knights Templar, employed their own light horsemen known as Turcoples (Sons of Turks), who fought in the Turkish manner with compound bows. Most often these troops were Eastern Christians, but some were Muslims. Used mainly as a screening force, the Turcoples rarely if ever constituted the heart of any Latin army on the battlefield. The status of the heavy-armored knight in Europe was such that the crusader leaders and their vassals continued to arm themselves as knights and to fight in the same manner as their predecessors of the First Crusade. To put aside their ever-evolving

and increasingly heavy armor and the weapons suitable for shock troops was unimaginable.

As you read the entries and sidebars under this topic and elsewhere within this theme, ask yourself these questions: What attributes of the armies described here seem to have been culturally specific, even unique? Which elements seem to have been common to a wide variety of armies, and which elements were simply responses to the exigencies of time and place?

—Alfred J. Andrea

The Armies of the Islamic Middle East

In the history of the world, very few polities can claim to match the stunning conquests made by Islam's earliest rulers. By 750, a little over a century after the death of Muhammad in 632, Arab armies conquered lands stretching from the Iberian Peninsula in the West across North Africa and the Near East and into the Tang Chinese empire (618–907) in the Far East. However, by the year 1000 internal strife and changes in the internal demography and society of the Islamic world totally altered the nature and composition of the Islamic armies. In the early periods of Islamic history, the armies were drawn largely from tribal levies and lived in garrison towns (*amsar*, sing. *misr*). By the turn of the millennium, these Arab military units were long since demobilized, and the descendants of these original forces were now largely indistinguishable from the native populations.

In their place, the Abbasid caliphs of the mid-ninth century began the practice of importing polytheistic Turkic peoples to serve as cadres of loyal slave-soldiers (*mamluk*, pl. *mamalik*). These slaves were usually manumitted (freed) after completing their training and upon their conversion to Islam. Because of their presumed loyalty and the elite units in which they served, some rose so high as to assume the caliphate's most powerful political and military posts. This model, in varying forms, would prove to be the dominant military hallmark of Islamic polities until the nineteenth century.

The procurement of slaves was done largely through the practice of *ghaza* (raiding). As the *thughur* (borderlands) between Islamic and non-

➤ MAMLUKS AND JANISSARIES

While there seems to be much in common between the mamluk (derived from the Arabic for “taken in possession”) and the janissary (anglicized from the Turkish *jeniçeri*, meaning “new soldier”), there is much that differentiates these soldiers. Both groups were originally servile in origin; both were trained in political, military, and Islamic religious theory; and both derived their identity and their standing in society from their association with their corps. However, it is here that the resemblances end.

Mamluks were purchased from among non-Muslim populations, primarily from western Central Asia in the beginning and later from Circassia and the Caucasus. They were brought into the Islamic world largely to replace the demilitarizing Arab tribal levies after the Umayyad period (661–750). The mamluks were also able to rule Egypt and Syria in their own right as the Mamluk dynasty. Most importantly, though, they were freed after their training and conversion to Islam but remained bound in loyalty to the caliph or sultan whom they served.

Janissaries, on the other hand, were drawn from Christian families of newly conquered territories in the form of a tax (known in Turkish as the *devşirme*, literally meaning “blood tax”). They were brought in to form a paid corps of loyal bodyguards to the Ottoman sultan. While they were able to influence the succession to the sultanate in certain instances, they were never able to rule in their own right. Finally, they remained the property of the sultan throughout, technically never becoming free even though they received wages. Recognizing their own importance, the Janissaries revolted for a higher salary in 1449. The repeated capitulations of generations of sultans would



Mounted Janissaries of the Ottoman Turkish army, from an early-eighteenth-century manuscript. (The Art Archive/Topkapi Museum Istanbul/Dagli Orti)

create a corps rife with corruption, leading to their eventual liquidation by Sultan Mahmud II (r. 1785–1839) in 1826.

—Rasheed Hosein

Islamic lands was often an unlawful and unruly place, enterprising raiders (*gbazi*) would raid and skirmish with their non-Muslim counterparts. In the case of Byzantium, these were special border troops known as *akritai*, many of whom were Armenians. It is important to note that these incursions were not official raids. Rather, they appear to have been done more for commercial gains than religious reasons. Notwithstanding, the East Roman (Byzantine) empire

and the Islamic caliphate rarely punished these raiders, and in the popular mind *gbazis* were often revered as holy warriors (*mujahidin*).

Due to the revenues generated by raiding and the need for slaves, extensive infrastructure was required to streamline the shipment of goods and people back into Islamic lands. This led to increased commercial and social contact in the *thughur* and to the increased permeability of the borders that separated Dar al-Islam (the Abode

of Islam) from non-Muslim territories (Dar al-Harb, or the Abode of War), thereby allowing Islam to spread into regions not formally under Islamic control. This trend can best be seen with the movement of the Oghuz Seljuk Turks in the tenth century. Their coming marks the first mass migration of an entire nomadic tribe, already Islamized, into the caliphate. This Turkic group would establish the Seljuk dynasty (1038–1194) and rule in the name of the Sunni caliph, expanding the borders of Islam into the Anatolian Peninsula.

While the Seljuk Turks at their height would stabilize and rule much of the core lands of the Islamic caliphate (i.e., present-day Iran, the northern third of modern Iraq, parts of the Anatolian Peninsula, the Levantine lands of present-day Syria, and Lebanon, Jordan, Israel, and the Palestinian state), they would also practice the time-honored but essentially destabilizing central Asian custom of appanage corporate sovereignty. This practice held that any Seljuk prince had the right to rule. Thus, rulers would carve their patrimonies into portions for each son to rule. The theory held that the strongest son would reconstitute the original patrimony and rule as the survivor. However, in practice this created a series of fractionalized principalities that were continually at war with each other. Increasingly, these principalities came to be governed by minors. In these cases, the strongest Seljuk rulers placed an individual known as the *atabeg* (father-ruler), who theoretically acted as a military and political tutor for the young ruler but often dispatched the child-ruler and governed outright. The net result was the division of the Seljuk army, an almost constant state of internal strife between principalities, and in some cases civil war between forces loyal to the *atabeg* and those loyal to the Seljuk prince within a single principality. It is into this situation that the crusaders appeared.

Beginning in 1096, the First Crusade established a Latin Christian bridgehead in the Levant with the establishment of the four crusader states, especially the kingdom of Jerusalem. The shock of the initial crusader victories and subsequent Frankish colonization united the previously factionalized Muslim rulers. In response, the Seljuks reverted to the use of the *iqta* (assignment of

land revenue) in order to address the new crusader threat. The *iqta* was not a Seljuk invention, but the Seljuks used this institution to help revitalize the military. In exchange for the rights over revenue of a territory, an *amir* (in this context meaning a military commander) would pledge military service. It is important to note that this form of *iqta* bears only a superficial resemblance to the feudal fief of Western Europe. It only involved assignment of revenue generated by the territory; it did not include the right to govern the land. Most importantly, there were term limits to the revenue assignment, and the fiduciary rights could be revoked at any moment by the Seljuk ruler.

Both the appanage system and the military *iqta* would be used to combat the crusaders, lasting into the Ayyubid period (1171–1250) when the Kurdish dynasty founded by Salah al-Din Ayyub, or Saladin, ruled Egypt and Syria. However, the systemic faults of corporate sovereignty were not removed by the presence of the Franks; they were merely interrupted. As regional Ayyubid rulers and *atabegs* vied for power, they began to build armies using the time-tested slave-soldier model. This led to internal strife and dissent until 1250, when a cabal of mamluk cavalrymen seized outright control of Egypt. Over the next decade, the Mamluk dynasty (1250–1517) set out to unify Egypt and the Syrian littoral until the second great external threat arrived. In the mid-thirteenth century, Mongol forces smashed into the Islamic world, sacked Baghdad in 1258, and effectively ended the Abbasid caliphate. It would only be the powerful Mamluk cavalry that proved able to stop the Mongol conquests, defeating them at Ayn Jalut (1260) and preserving the Arab nature of Egypt. Under this dynasty, Egypt experienced prosperity and power not seen since the time of the pharaohs. However, in 1517 the Mamluks of Egypt were swept aside by the Turkish Ottoman dynasty (1300–1924), which also used slave-soldiers in its fearsome Janissary corps.

—*Rasheed Hosein*

Bibliography

- Findley, Carter V. *The Turks in World History*. Oxford: Oxford University Press, 2005.
- Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. New York: Longman, 1986.

- Inalcik, Halil. *Ottoman Empire: The Classical Age, 1300–1600*. New York: Aristide D. Caratzas, 1989.
- Kennedy, Hugh. *Armies of the Caliphs: Military and Society in the Early Islamic State*. New York: Taylor and Francis, 2001.
- Morgan, David. *Medieval Persia, 1040–1797*. New York: Longman, 1989.

The Armies of Byzantium

The Byzantine military system evolved from the defense against the Arab invasions that allowed the empire to survive during the seventh and eighth centuries. As they were ravaged by yearly raids and invasions, Byzantines defended themselves in walled settlements and fortresses guarding the major passes, and since they lacked the manpower to defeat the invaders in open battle, they developed a strategy of defensive warfare that relied on local forces, ambushes, and well-developed intelligence. The empire was divided into military zones known as *themes*, each with a roster of local soldiers required to show up for

campaigns annually with horse and equipment. Through the middle Byzantine period, most thematic soldiers (*thematikoi*) were supported by grants of land, but landholders often paid for a soldier rather than fighting themselves. Byzantium also had full-time professional forces (*tagmata*) who served as imperial guards and specialized forces. In the tenth century, as Byzantine rulers were able to lead offensive campaigns against Bulgars and Arabs, the use of *tagmata*, including heavy armed cavalry and mounted archers, increased, and mercenary soldiers were hired from within and outside the empire. Eleventh- and twelfth-century Byzantine forces were made up of all three elements and were increasingly multiethnic, drawing on the populations of reconquered and resettled peoples such as Cumans and Pechenegs as well as foreign mercenaries ranging from Varangians from the north to Norman and Frankish knights and Turkish archers. Provision of foreign soldiers was frequently included in twelfth-century treaties. Unlike many Western European rulers, Byzantine emperors had no ideological proscriptions that prevented their hiring non-Christian forces (but the Norman and Hohenstaufen rulers of Sicily and various lords of the crusader states in the East also employed Muslim mercenaries).

Several features distinguished Byzantine warfare from that of their neighbors. The science of warfare was the subject of treatises on strategy and tactics that gave advice on diversionary tactics, battle formations, enemy characteristics, and leadership. Regular exercises and training were conducted. The empire also provided sophisticated logistical planning for supplies of food, weapons, and horses for campaigns. Through 1204 Byzantine armies were imperial armies, paid and commanded by emperors and their generals; this was part of a planned imperial strategy. This disciplined approach to war made it possible for armies to win against less-organized forces even when they were greatly outnumbered and was the decisive factor in Byzantine military success.

As the twelfth-century Byzantine empire faced new military challenges on all borders and new styles of warfare, its military resources were no longer adequate, and emperors increasingly relied on foreign troops. The situation was

► THE VARANGIAN GUARD

Byzantine emperors were guarded by legendary troops known as the Varangian Guard. The term “Varangian” originally described the Vikings and Rus (Russians) who raided and traded in Byzantium, but the guard was created by Basil II when Prince Vladimir of Russia sent 6,000 Varangian warriors to Byzantium as part of a treaty in 988. The Varangians became the imperial guard, known for their long axes and vow of loyalty to the emperor, a prized characteristic in an age of intrigue. They served as the personal bodyguard of the emperors at court and had prominent ceremonial roles, but they were also frontline warriors in battle and provided critical defense of the emperor against internal rebellions. Varangians were recruited from throughout the northern world, and their exploits are celebrated in Norse sagas. Many Anglo-Saxons joined the guard after the Norman conquest. The Varangian guard’s last military role was in the defense of Constantinople against the Latin crusaders in 1203–1204, where they fought valiantly against their coreligionists.

—Dorothy de F. Abrahamse

exacerbated after the Latin Conquest of 1204, when the restored empire lacked financial resources to support soldiers. Thematic soldiers disappeared, and larger landholders were increasingly given the rights to rents and peasant obligations on state property (*pronoia*) in return for service. Treaties and payments were used to procure mercenaries, but limited resources meant that the Byzantine military was very small. Foreign soldiers could prove a greater problem than benefit; the Grand Catalan company, hired to fight the Turks in Anatolia, went on to ravage Greece and rule its own state in Athens in the fourteenth century. In a violent age, late Byzantine armies were no different than those of many other small states, and the soldiers who fought were often identical to their opponents. By the fifteenth century, the resources, discipline, and strategy that had once given Byzantium its superiority now belonged to the Ottoman Turks.

—Dorothy de F. Abrahamse

Bibliography

- Bartusis, Mark. *The Late Byzantine Arm: Arms and Society, 1204-1453*. Philadelphia: University of Pennsylvania Press, 1992.
- Blöndal, Sigfús. *The Varangians of Byzantium: An Aspect of Byzantine Military History*. Cambridge, London, and New York: Cambridge University Press, 1978.
- Haldon, John F. *Byzantium at War, AD 600-1453*. New York and London: Routledge, 2002.
- Haldon, John F. *Warfare, State and Society in the Byzantine World, 565-1204*. London: UCL Press, 1999.
- Treadgold, Warren. *Byzantium and Its Army, 284-1081*. Stanford, CA: Stanford University Press, 1995.

The Armies of India—Muslim and Hindu Asia

The period between 1000 and 1500 CE witnessed the establishment of Islam and Muslim kingdoms in northern and central India, accompanied by ongoing wars among Hindu and Muslim rulers. Politically, the many small clan-based Indian states were gradually replaced by more centralized larger states based upon military effectiveness. Initially, invading Muslim armies shared many technical characteristics with their

Hindu opponents but introduced more effective tactics, logistics, and discipline, and ultimately they prevailed because of superior firepower due to their growing use of firearms. Gunpowder weapons were introduced into India as early as the thirteenth century, possibly through Mongol invaders, and certainly they were to be found in India in the fourteenth century. With such weapons, there was a tendency of larger and wealthier states to absorb the smaller ones. Because the technology was expensive, however, only the richest rulers could afford firearms. As artillery became more powerful, these rulers were more able to capture the fortresses of their neighbors.

By 1000, northern India was divided among many small states ruled by an aristocracy known as Rajputs. The Rajputs were divided into clans, with the different clans often at war with one another. At times Rajput rulers put their differences aside to form alliances when facing outside threats, but the lack of centralized control weakened their armies.

Hindu armies of the time consisted mainly of three arms: cavalry, infantry, and elephants. Cavalry was the most prestigious and was reserved for the nobility. Most war horses were obtained from Central Asia, and the expense of obtaining and maintaining a horse was beyond the means of most Indians. Riders wore chain mail armor and were armed with Central Asian recurved composite bows as well as swords. Infantry was largely composed of poorly trained peasant farmer levies that helped provide a base around which the cavalry could maneuver. Elephants, usually covered in armor, had archers mounted on their backs and were used to break up opposing formations. As with artillery later, only the leading states had more than a few elephants due to their cost and the expense of their maintenance.

Around 1000 a Muslim Turk out of Afghanistan, Mahmud of Ghazni (r. 971-1030), began raiding into India, apparently driven by a desire to spread Islam and to obtain loot. On November 28, 1001, Mahmud defeated the local Hindu ruler at Peshawar. Following this victory, Muslim raiders continued to harass neighboring Hindu states.

Like similar Muslim armies, especially out of Central Asia, Mahmud's forces were mostly

VOYAGE BEYOND THREE SEAS

Afanasii Nikitin, who sojourned in India between 1471 and 1474, is the only known eyewitness to have recorded a battle between the two greatest powers on the Indian subcontinent in the fifteenth century: the Muslim Bahmanid kingdom and the Hindu kingdom of Vijayanagar.

“The sultan [Muhammad III, r. 1463–1482] set out of Bidar. . . . He had twenty-six viziers—twenty Muslim and six Indian viziers. From the sultan’s court there came out 100,000 warriors on horseback, 200,000 foot soldiers, 300 elephants in armor with towers on them and 100 ferocious beasts, each held by a double chain. . . . And every vizier had ten or fifteen thousand warriors and twenty thousand on foot. . . .

The prince of Vijayanagar had an army of 40,000 mounted warriors with him, and also 100,000 foot soldiers, and forty elephants in armor with four warriors with guns on each of them. . . . And the Great Indian Prince is very powerful. . . . His fortress stands on a mountain; and his capital city Vijayanagar is very large. It is surrounded by three moats, and a river flows through it; one side of the city is a wild jungle, and on the other side there is a very beautiful valley, good for anything. The opposite side is impassable—the way lies through the town; it is impossible to capture the town from any side; the mountain is large and the thicket is severe and thorny. The [sultan’s] army stood near the town for a month, and people died of hunger and thirst; they could see the water but could not reach it.

Khodja Melik-at-Tujjar [the sultan’s general] captured the Indian town [Gulbarga]—took it by force; twenty days and nights the troops fought and did not eat or drink; besieging the town with cannons. And 5,000 of his best warriors were killed. When they seized the town they killed 20,000 men and women, and 20,000 more were taken captive—adults and children. They were sold into slavery for ten or five coins, the children for two coins. But they didn’t take the treasury. And he did not capture the capital city.”

—Mary Jane Maxwell

Source

Translated by Mary Jane Maxwell from Ia. S. Lur’e and L. S. Semenov, *Khozhdenie za tri moria Afanasia Nikitina* (Leningrad: Nauka, 1986), 54–56.

cavalry. The main striking force was a core of chain mail-armored cavalry who were experts with powerful composite bows. Using long lances and swords, they also rode down their disordered opponents. Less well-armored cavalry provided additional archers. Mahmud and other Muslim invaders also used religious volunteers known as *ghazis* (holy raiders) as infantry and additional cavalry. Unlike the highly disciplined regular cavalry, the ghazis were an unruly group.

Technologically, the Muslim and Hindu armies were evenly matched. The Muslims prevailed, however, because of their superior tactics and generalship. Elephants, for example, were defeated by the use of flaming projectiles and arrows shot against their unarmored legs.

By 1191, the Ghori dynasty ruled Afghanistan and northwestern India. That year Mahmud of Ghori led an army toward Delhi, capital of the Rajput ruler Prithviraj. Prithviraj managed to form a coalition of Rajput rulers and defeated Mahmud at Tarain. The Hindu army was quite a bit larger and managed to overwhelm the Muslims by force of numbers. Mahmud was badly wounded and barely escaped. Prithviraj, however, failed to pursue and lost his chance to destroy his Muslim enemy. The following year, the two leaders again fought at Tarain. Although outnumbered, Mahmud used his horse archers to wear down the Indians. Prithviraj’s allies were reluctant to take orders from him, making the Hindu army a ponderous, disordered mass. Toward the end of the day Mahmud unleashed his reserves, shattering the Hindus. Prithviraj was captured and put to death. Mahmud subsequently established the Delhi sultanate, controlling most of northern India. Many Hindu warriors were incorporated into his army, including those hired as mercenaries.

The Delhi sultanate continued to expand against its smaller neighbors, but it suffered invasions from Mongols out of Central Asia almost as soon as it was created. In 1221 two Mongol tumens (about 20,000 men) raided through northwestern India. In 1235 Mongol forces invaded Kashmir, turning it into a dependency. The highly disciplined Mongol cavalry army was able to easily outmaneuver the Indian forces sent to stop them. The raid, happily for the sultanate, was just that: a hit and run raid.

The sultanate used the time between Mongol raids to strengthen border fortresses and to create more mobile units that were intended to defeat Mongol raiders before they reached important cities. Although Mongol invasions and raids took place in 1304 and 1328, they were defeated by the sultanate's armies. Mongol inroads into northwestern India then ceased until 1398, when Timur-i Leng's Turkic-Mongol army out of western Central Asia (present-day Uzbekistan) captured and plundered Delhi. Although the sultanate continued on, its power was broken.

The Delhi sultanate survived for over 300 years. Despite its increasing technological lead over other Indian states, its rulers adopted many of the feudal characteristics of the Indian rulers they displaced. As a result, the Muslim sultan was defeated at the First Battle of Panipat on April 21, 1526, by the invading Mughal army out of Afghanistan, ironically the ancient homeland of the Delhi sultans. The Mughals under Babur successfully combined horse archers and gunpowder weapons to defeat a much larger Delhi army.

The conquest of northern India by Muslims threatened the remaining Hindu kingdoms in the south. Two brothers, Harihara and Bukka Raya, managed to unite these kingdoms in 1336 by using their shared Hindu culture, establishing the Vijayanagara empire. The Vijayanagara army consisted of a central force estimated at around 100,000 infantry, 20,000 cavalry, and 900 elephants. This force was supplemented by feudal levies that could have resulted in one million soldiers. The army recruited members of all classes and depended mostly on infantry consisting primarily of archers and swordsmen. The Vijayanagarans were especially noted for their widespread adoption of gunpowder weapons, especially the *ban*, a steel tube filled with gunpowder attached to a length of bamboo.

—Timothy Watts

Bibliography

- Gommans, Jos J. L., and D. H. A. Kolff, eds. *Warfare and Weaponry in South Asia, 1000–1800*. New York: Oxford University Press, 2003.
- Jackson, Peter. *The Delhi Sultanate: A Political and Military History*. New York: Cambridge University Press, 1999.

Khan, Iqtidar Alam. *Gunpowder and Firearms: Warfare in Medieval India*. New York: Oxford University Press, 2004.

Lorge, Peter A. *The Asian Military Revolution: From Gunpowder to the Bomb*. New York: Cambridge University Press, 2008.

The Armies of China

Chinese armies in the period between 1000 and 1500 experienced great change, as societal priorities and foreign invaders reshaped China's military institutions. Social and economic conditions in eleventh-century Song China (960–1279) were quite different from those that existed under the Tang dynasty (618–907). During the Northern Song period (960–1126), the opening up of the south stimulated economic growth and increased wealth and social mobility. A return to Confucian values raised the status of the *shi*, or local scholar gentry, who emphasized civil rather than military institutions. Consequently, the Chinese army found itself under the firm control of civilian authorities, and the position that military men held in society was downgraded from that in Tang times.

Rank-and-file soldiers during the Northern Song period were often mercenaries, serving for pay and rations and recruited from the lowest echelons of society (criminals, vagrants, and amnestied bandits). Introduced in the 960s, this *yang-ping* system was not only intended to provide soldiers for the Song dynasty but also served as a social welfare program employing the destitute, thereby further eroding the reputation of the military. The result of the *yang-ping* system was poorly trained and poorly motivated soldiers, often exploited by the officer class and by the government itself. By the 1040s, this mercenary army was only receiving one-tenth of its promised wages, precipitating an environment in which mutinies, desertion, and military banditry became a constant threat to domestic tranquility. In 1043, the Winged Tiger army sent to restore order in Shandong Province defected en masse to the rebel Khitans (Qidans). Not only was the *yang-ping* system inefficient, but it also proved very expensive, as the Chinese military rolls tripled in size from 378,000 soldiers in 960 to more than 1.2 million in 1141,

► THE RISE OF CHINESE INCENDIARY AND GUNPOWDER WEAPONS

China was a civilization of walled cities rather than castles, and the size and strength of a city's walls often determined its status in the hierarchy of rule. Although there are many examples of successful assaults on strong urban fortifications, the Chinese art of war preferred the taking of a city by treachery or surprise rather than by storm. And if this did not work, blockade was seen as more effective than assault. But if an assault was undertaken, China's armies from the Song dynasty onward developed or employed technologically advanced weapon systems, including counterweighted sling-propelled trebuchets of all sizes that could launch stone projectiles and naphtha-filled canisters, fierce fire oil that was probably similar to Greek fire in the West, and hand-held fire lances (short-range flamethrowers). The Chinese had developed early forms of the sling trebuchet by at least 121 CE, with stones propelled from these devices by human teams pulling on ropes. As the trebuchet moved westward, huge counterweights, normally baskets of rocks, replaced the pulling teams, giving the artillery piece greater range and force. Probably during the twelfth century, this improved far-reaching machine reached China from the Islamic world.

Perhaps most significantly, gunpowder was developed and perfected as a weapon in the

period 1000–1500. Initially discovered around 850 CE and used for its incendiary properties, gunpowder's true potential was finally understood when the proportion of saltpeter was raised to around 75 percent, creating a devastating blast. Under the military-minded Mongol Yuan dynasty, more efficient projectile weapons were created and employed, including rockets, bombs, and handguns. Ming China continued to develop gunpowder technologies. Under the Yongle emperor, a special headquarters was established in Beijing to train gunners, and under the direction of the military reformer and general Qi Jiguang (1528–1588), hand gunners were integrated at the squad level next to bowmen, swordsmen, and spearmen. Unlike the Europeans and the Muslim gunpowder empires of the period, the Chinese did not attempt to fully exploit the potential of handguns through the standardization of manufacturing techniques and calibers or the creation of new tactics and tactical formations. Consequently, the Chinese lead in gunpowder technology evaporated in the early modern era, leading to a clear European superiority in weapons and the forced opening of China in the 1800s.

—Brian Todd Carey

eventually consuming 80 percent of the governmental budget.

Song military reforms took place under the Shenzong emperor (r. 1067–1085) with the introduction of the *baojia* system. In order to reduce the cost of a large standing professional army, local villages were given the responsibility of organizing militias to provide local security and provide reserves in times of war. Each unit of ten households was required to provide one man to undergo training. The Shenzong emperor also provided war horses to local villagers in suitable areas and gave peasants permission to use the horses for agricultural purposes as long as they were maintained in good condition and the government was compensated if the horse died. He also set up a Directorate of Weapons to improve the quality of Chinese armaments.

Chinese infantry in this period was organized around squads of five men who would fight five files deep. Late Song era manuals and archaeological evidence point to the best-equipped heavy infantry in Chinese history up to that time. Soldiers were armed with swords, spears, various types of polearms, and most notably the crossbow (*nu*). Crossbows were manufactured in state armories, and improved designs were continuously developed. Crossbowmen were employed in separate units and were often protected by archers. Early Song generals had access to mercenary cavalry composed of non-Chinese steppe nomads, who were adept in horse archery, but Chinese commanders during the Southern Song era (1127–1279) were forced to use native Chinese cavalry, and the quality of these cavalry units was inferior due to their restricted access

to both the horses and horsemen of the northern steppes. The largest maneuver unit of a Chinese army of the Southern Song period consisted of 3,200 soldiers, with cavalry and infantry coordinated on the battlefield through the use of flags, banners, bells, and drums.

Still, despite the employment of state-of-the-art trebuchets, flamethrowers, and other incendiary devices, the Song rulers lost northern China to the Jurchen (Ruzhen) Jin dynasty in 1126, ushering in the Southern Song period. Decades later, the Mongols replaced the Jin, and by 1279 the Mongols had captured all of China, which they ruled under the Yuan dynasty (1260–1368).

Yuan armies were made up of four components: a large Mongol cavalry arm directly under the emperor's control, the armies of Mongol clans allied with the emperor but who fought under their own commanders, a composite army made up of subject or tributary peoples (Khitans, Jurchens, Koreans, and Tibetans), and captured Song forces conscripted into infantry and artillery units, traditionally the least reliable and most expendable troops. The Mongols organized their armies according to a decimal system into *tumans* of 10,000 men and *minghans* of 1,000 men, though in practice Yuan tumans varied in size between 3,000 and 7,000 men. True to their Mongol roots, Yuan generals emphasized mobility, surprise, and deception on the battlefield and used their light cavalry archers to attack the flanks and rear of enemy formations or to goad enemy cavalry into following a feigned retreat and into a preplanned ambush.

Yuan emperors used the Chinese infrastructure (roads, canals, and bridges) inherited from the Song to project force throughout the empire and launched campaigns into difficult terrain (the mountains of Sichuan, the Gobi desert, and Burmese jungles) to expand Mongol suzerainty, while Yuan commanders understood the tactical specialization of their troops and used them accordingly. Native Chinese infantry accompanied Mongol cavalry into mountainous areas, and northern Chinese and Korean soldiers and sailors were deployed along major rivers, in coastal areas, and on naval expeditions (against Japan in 1274 and 1281 and Java in 1293). Song Chinese and captured Muslim engineers employed siege artillery, while the former also introduced new

gunpowder weapons to the Yuan arsenal, most notably antipersonnel mines, handguns, and wheeled rocket launchers capable of firing hundreds of projectiles at a time. Archaeological evidence points to a continuity in infantry tactics, arms, and armor from the Song to the Yuan period, though Mongol variations of cavalry equipment (composite bow and lamellar armor) did appear. Yuan military structures would be adopted by early Ming commanders in the fourteenth century with an emphasis on new gunpowder technologies, especially cannons cast in both bronze and iron despite low rates of fire and prevalent malfunctions. Gunpowder weapon development stagnated in the fifteenth century, and superior European-designed handguns and cannons quickly replaced Chinese weapons in the sixteenth century.

Succession problems (seven Mongol emperors in the 40 years after Khubilai's death) followed by natural disaster and rebellion weakened the Mongol hold on China, and in 1368 native Chinese rule was restored under Zhu Yuanzhang (r. 1368–1398), founder of the Ming dynasty (1368–1644). Taizu, as he is also known, was a vigorous campaigner, winning control of all of China and extending Chinese hegemony west to Central Asia, north to Inner Mongolia, and northeast into Manchuria and Korea. Under Emperor Chengzu, or the Yongle emperor as he is more often known (r. 1402–1424), the Chinese continued their offensive against Mongol power in Inner Asia while bringing Annam (North Vietnam) in Southeast Asia into the empire. The Yongle emperor is perhaps most famous for sponsoring the great Ming maritime expeditions that briefly established China as the premier naval power in East Asia and in the Indian Ocean.

—Brian Todd Carey

Bibliography

- Dreyer, Edward L. "Continuity and Change." In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.
- Kierman, Frank A., Jr., and John K. Fairbank. *Chinese Ways in Warfare*. Cambridge: Harvard University Press, 1974.
- Peers, C. J. *Soldiers of the Dragon: Chinese Armies, 1500 BC–AD 1840*. Oxford, UK: Osprey, 2006.
- Peers, C. J., and David Sque. *Medieval Chinese Armies, 1260–1520*. London: Osprey, 1992.

Van de Ven, Hans. *Warfare in Chinese History*. Leiden: E. J. Brill, 2000.

Early Ming—Grand Strategy along the Steppe Frontier

For well over 2,000 years, the Chinese were preoccupied with policing their northern border lands against powerful nomadic peoples. Steppe societies either menaced imperial China from a distance (e.g., the Xiongnu, Turks, and Uighurs) or conquered significant portions or the entirety

of China during this long period (e.g., the Jurchen [Ruzhen] Jin dynasty, the Mongol Yuan dynasty, and the Manchu Qing dynasty). Although vastly outnumbered by their Chinese opponents, steppe warriors possessed superior cavalry skills and used maneuver warfare and hit-and-run tactics to secure victory over their infantry-heavy Chinese foes. But relations with the steppe peoples were not always adversarial. The rise of the so-called Silk Road benefited both China, which produced the luxury items, and the Central Asian peoples who often controlled the land routes

► THE GREAT WALL OF CHINA—MYTH AND REALITY

Few examples of monumental architecture are more closely associated with their civilizations as the Great Wall is to ancient China. Conventional wisdom maintains that the first parts of this fortification were erected during the Qin dynasty in the third century BCE as a bulwark against barbarian incursions. Over the millennia, the Great Wall was then either added to or fell into a dilapidated state, depending on the relationship between the ethnic Chinese and their northern nomadic neighbors. Recent scholarship, however, has shed light on the dating of the Great Wall of China, and it is now accepted that the structure we associate with this linear defense was mainly erected during the early Ming dynasty, in the late fifteenth and sixteenth centuries, though it is likely that previous fortifications were incorporated into this comprehensive barrier.

Other myths and uncertainties persist concerning the Great Wall. Although an iconic structure, there is not an agreed estimate of its length. To the Chinese, it is “The Ten-Thousand Li Great Wall,” a *li* being about one-third of a mile or about half a kilometer. But “10,000 *li*” is a traditional Chinese phrase meaning “very long.” Conservative estimates place it at 1,500 miles (2,400 kilometers) in length, while a more liberal accounting places it at nearly 4,000 miles (6,500 kilometers) in length. The accuracy of any number is made problematical because, contrary to popular belief, the wall is not a single continuous fortification but rather a series of walls and towers with large gaps and also parallel lines in some places. Moreover, the Chinese often used natural topography when possible to augment the wall. Another myth without any



The Great Wall before the Ming Great Wall. Constructed as early as the Warring States Period (about 475–221 BCE), this segment of earthen wall and beacon towers stretched for over 600 miles across a portion of North China, and was rebuilt and maintained down to the thirteenth century CE. It was one of many such berms along China's northern and western frontiers. (Alfred J. Andrea)

basis in reality is that the Great Wall can be seen from the moon. Likewise, there is no evidence that dead bodies fill the interior of the Ming era structure. Indeed, their decomposition would have weakened the walls and towers, and the engineers knew that. Still, the Great Wall is a marvel of military engineering, towering to over 25 feet (7.6 meters) in height, spanning some 30 feet (9 meters) in width, and tapering from the base to the top. The Great Wall served the Ming dynasty well as a force multiplier, as a tollgate for nomadic and Chinese goods, and as a symbol of ethnic Chinese power.

—Brian Todd Carey

from East Asia to the very lucrative markets in western Eurasia. A symbiotic relationship existed between these two societies, but differences in culture bred distrust and invariably war. In order to maintain a balance of power, the Chinese developed (and sometimes abandoned) various grand strategies to deal with the persisting nomadic threat.

Historians and anthropologists have generated various theories to explain Sino-nomadic relations. The “trade-or-raid” thesis posits that pastoral societies required three commodities that they could not produce for themselves: grains, textiles, and metals. As long as the Chinese granted access to these resources through marriage alliances, tribute missions, and border market towns, peace was maintained. If the Chinese closed down these mechanisms, tensions rose and nomadic armies invaded. Another explanation places more emphasis on the role of luxury goods in cementing relationships between local nomadic chieftains and their regional rulers. When the Chinese disrupted this flow of goods, it created unrest within barbarian communities, and the ties that bound these societies together unraveled, causing instability and eventually war.

During the Song dynasty (960–1279) the Chinese were on the defensive, maintaining strong tribute relations first with the Khitans (Qidans) and then with the Jurchen. This policy enriched both the Chinese and the nomadic dynasties, but the rise of the Mongols and their eventual displacement of the Jurchen in 1234 placed the ethnic Chinese in a precarious position. Their economy faltering, the Song finally succumbed to the Mongol military machine in 1279, ushering in a 90-year Mongol occupation of China under the Yuan dynasty (1279–1368). When native Chinese rule was reestablished in 1368 under the Ming dynasty, its first emperor, Taizu (r. 1368–1398), led military campaigns deep into Mongolia to keep the Mongols off balance and established a line of eight garrisons within the steppe lands, while his successor Chengzu, known more often as the Yongle emperor (r. 1402–1424), abandoned seven of his father’s steppe garrisons but ordered the construction of watch and signal towers and “long walls” (*changcheng*) at certain strategic places along the steppe frontier, especially in mountain passes. This was

not, however, a prototype of the so-called Great Wall that one sees today; its construction lay in the future. To augment its offensive military campaigns and linear defenses, Ming grand strategy also included hiring Mongol and Jurchen military groups to fight with the Chinese against their nomadic brethren.

By the late fifteenth century, however, these means proved insufficient, as China experienced increasing pressure from its nomadic neighbors to the northwest, especially the Oirats, or Western Mongols. Consequently, the Ming Court accepted the recommendation of the border official Yu Zijun, who advocated the construction of a static line of defense—an earthen wall—along the border of the Ordos Plateau. This first wall, some 566 miles (910 kilometers) in length, was completed in a few months in 1474 by about 40,000 conscripted men. It and a nearby wall, which was 129 miles (207 kilometers) in length and constructed at the same time, initiated the Ming Great Wall project that continued and grew throughout the next century, metamorphosing into stone and brick walls and watch towers from 1572 onward.

—Brian Todd Carey

Bibliography

- Barfield, Thomas J. *The Perilous Frontier: Nomadic Empires and China, 221 BC to AD 1757*. Oxford, UK: Basil Blackwell, 1989.
- Jagchid, Sechin, and Van Jay Symons. *Peace, War and Trade along the Great Wall: Nomadic-Chinese Interaction through Two Millennia*. Bloomington: Indiana University Press, 1989.
- Roberts, Claire, and Geremie R. Barmé. *The Great Wall of China*. Sydney: Powerhouse Publishing, 2006.
- Waldron, Arthur. 1990. *The Great Wall of China: From History to Myth*. Cambridge: Cambridge University Press, 1990.
- Wright, David C. “The Northern Frontier.” In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.

East Asian Navies, 1000–1600 CE

In the period 1000–1600 the navies of China, Japan, and Korea became the most sophisticated in the world, building large oar- and sail-propelled vessels capable of transoceanic voyages and well supplied with modern armaments.

➤ THE “DIVINE WIND” (*KAMIKAZE*) AND THE RISE OF THE SHOGUNATE

In 1266, 13 years before he fully subdued Song China, Khubilai Khan sent a messenger to Japan demanding submission. The Japanese refused. In preparation for the invasion to come, the Mongol ruler assembled a navy of 900 ships to transport some 90,000 Mongol, Chinese, and Korean troops. The fleet crossed the Strait of Korea in 1274 and landed near Hakata on the northern shore of the island of Kyushu. Here, the assembled samurai met the Mongol invaders with fierce resistance, and after two days of fighting the invasion force withdrew. Heavy casualties did not deter Khubilai Khan from trying again. He renewed his demands, but his envoys were beheaded by the Kamakura shogun. Determined to crush the Japanese, Khubilai Khan dispatched a massive invasion force in 1281 consisting of 140,000 Mongol, Korean, and Chinese men. The landing area was once again Hakata, but the Japanese had spent the intervening years preparing the area, building a large defensive wall along the bay and, more importantly, training the samurai to fight as a group, a much different style than the individual combat customary in Japanese warfare to that time. For seven weeks the armies fought until a great storm, called the *kamikaze* (“divine wind”) by the Japanese, swept through northern Kyushu and wrecked the Mongol fleet. The Mongol invasions represent a watershed in Japanese history. The Kamakura shogunate (1192–1333) marshaled the resources of Japan to meet this threat, but after this threat dissipated, the shogun’s control over the countryside did not. The *bakufu* (literally “tent government,” thus “field commander’s government”) and not the imperial court was now the true power in Japan.

—Brian Todd Carey

Although the Chinese had made use of waterborne operations to cross their many large rivers since ancient times, the first independent navy was not created until the Han dynasty (202 BCE–220 CE) with the creation of the Tower Ship Navy. So-named after the large carvel-built ships sporting layers of superstructure ideal for supporting missile troops and marines, these massive ships were also equipped with rudders,

anchors, oars, and sails and were supported by smaller warships and troopships. These Tower Ships continued to be featured in Chinese naval warfare until the thirteenth century. By this time, Tang- and Song-era improvements in ship design and navigation (e.g., the addition of cross-ribbing to strengthen the ship’s beam and the invention of the compass) as well as new ship designs (human-powered, paddle-wheeled warships) greatly increased the versatility of the Chinese Navy. The largest of these paddle-wheeled warships was driven by 36 wheels and could transport 1,000 troops.

Song naval superiority helped keep the Jurchen (Ruzhen) at bay, a lesson that the later Mongols under Khubilai Kahn would learn. In 1270, Khubilai ordered the construction of 5,000 warships and the training of 70,000 warriors in naval combat. Several thousand Mongol warships went into action against the Song Navy in 1273, and the Song were finally defeated in a climactic sea battle off the island of Yaishan in 1279. The Mongols also used their own navy, and those of the Chinese and Koreans, to launch expeditions against Japan (1274 and 1281) and Vietnam (1282 and 1287). These campaigns represented the apex of Mongol naval ambition.

Chinese naval power during the native Ming dynasty (1368–1644) was unrivaled anywhere in the world. Initiated by the Yongle emperor (r. 1402–1424), the Chinese used a form of “gun-boat diplomacy,” sending out seven expeditions between 1405 and 1433 to reestablish Chinese influence after the Mongol interregnum, impose imperial control over the sea-lanes, and impress the peoples of the Indian Ocean littoral. Commanded by the Muslim eunuch Admiral Zheng He, these flotillas contained perhaps 300 ships, including scores of massive six-masted “Treasure Ships,” and were crewed by perhaps 28,000 sailors. These voyages were eventually seen as too expensive and were discontinued. Ming regional naval supremacy waned and was faced with a new maritime threat in the sixteenth century, Japan.

The naval histories of Japan and Korea are intertwined. The Korean Peninsula lies only 30 miles (48 kilometers) from the Japanese island of Tsushima and 150 miles (240 kilometers) from the main Japanese islands, making the sea-lanes

across the Strait of Korea a classic invasion route in both directions. Archaeological evidence points to a Korean origin for the Japanese aristocracy, while Japanese navies assisted the Korean kingdom of Paekche against its rivals Silla and Koguryo in the seventh century CE. It is, however, only in the twelfth century that a clear picture of Japanese naval tactics emerges. During the Gempei Wars, rival samurai armies lashed ships together and laid down planks to create a surface on which to fight. In the thirteenth century, Khubilai Khan used Korea as a base of operations for two unsuccessful attacks against Japan, requiring the Koreans to build 900 ships for the expeditions.

Even before the failed Mongol invasions, a major naval activity in the Strait of Korea consisted of Japanese pirates menacing the coastlines of both countries. Known as *wako*, these Japanese marauders greatly increased their activity in the fourteenth century, tallying 174 recorded raids on Korea between 1376 and 1385. Japanese raiding expanded to China, but a threat by the first Ming emperor to invade Japan forced the Japanese government to rein in the pirates. Korea also fought back. In 1380 over 500 Japanese pirate ships were set on fire at the mouth of the Kum River, and in 1389 and again in 1419 Korean ships attacked the pirate bases on Tsushima. At the end of the fifteenth century, official commercial relations between Japan and Korea warmed up, but the sixteenth century witnessed a return to open warfare when the powerful Japanese ruler Toyotomi Hideyoshi (r. 1585–1598) ordered an invasion of Korea. This conflict involved the navies of Japan, Korea, and China. Japanese forces landed unopposed in Pusan Harbor, but the Koreans, with assistance from the Ming emperor, were able to keep the invaders from taking the peninsula, and the expedition was abandoned after Hideyoshi's death in 1598.

One of the most fascinating maritime developments of this period of naval warfare was the emergence of the Korean turtle ship under the command of the celebrated Korean admiral Yi-Sun-sin (1545–1598). This unusual ship design enclosed the entire superstructure under spiked boards and was probably first introduced in response to Japanese pirates. Known as the

p'anokson, these armored, sailed, and oared vessels were solidly built and capable of ramming but also carried forward-, rear-, and side-mounted cannons. A dragon's head was placed on the prow, purportedly with a cannon mounted in its mouth. Korean cannons of this period were carriage-mounted and fired stone or iron shot or a large wooden arrow with an iron head and leather or iron fletching, the largest of which were 9 feet (2.7 meters) in length. These arrows were preferred over shot due to their increased range and were very effective against the primarily wooden vessels of the Japanese. Contemporary accounts also claim that these shafts could be easily converted to fire arrows. In battle, this warship advanced in the vanguard of a fleet, breaking up the enemy line with close-range cannon fire, and then withdrew quickly. This type of capital ship was quite expensive, and there is no record of more than five operating in a single engagement. The well-armed and armored turtle ship has been associated with Korean self-determination ever since and is a powerful reminder of the Hermit Kingdom's successful defense against Japanese imperialism.

—Brian Todd Carey

Bibliography

- Farris, William Wayne. *Heavenly Warriors: The Evolution of Japan's Military, 500–1300*. Cambridge: Harvard University Press, 1995.
- Lorge, Peter. "Water Forces and Naval Operations." In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.
- Turnbull, Stephen. *Fighting Ships of the Far East*, Vol. 2. Oxford, UK: Osprey New Vanguard, 2003.
- Underwood, Horace. *Korean Boats and Ships*. Seoul: Yonsei University Press, 1979.

Armies of Japan

The administrative and ideological models that Japan's rulers had imported from Tang China in the 700s included an army of conscript peasants. This had rapidly proved both unaffordable and impractical, given that the roles for armed force in Heian Japan were limited to campaigns in the north against the indigenous peoples there, for which smaller, more professional forces not tied to the land were more useful, and to internal

➤ SAMURAI—TERMINOLOGY AND MYTHOLOGY

The word *samurai* derives from the verb *saburu* (to serve), and originally meant simply a retainer of any sort. It came to be associated especially with military retainers and, in Western historiography, with Japanese elite warriors generally. The problem is, “samurai” really has no connotation of elite status. It was the term *bushi*, from *bu* (warrior) and *shi* (class) that denoted the elite warriors of the Kamakura and Ashikaga eras. And not all bushi were retainers, so bushi and samurai were at best limited synonyms in Kamakura and Ashikaga times. The problem was reversed with the rise of the mass armies of the sixteenth century: now, not all samurai, the armed retainers of the *daimyo* (land-owning noblemen), were bushi—indeed, very few had elite status, and many (including Toyotomi Hideyoshi, the unifier of Japan) rose from very modest origins.

The synonymy of the terms really dates to the beginning of the Tokugawa era (1614–1868), when the rulers of Japan froze social mobility and restricted the right to bear arms to those already serving as *daimyo* retainers. Thus, retainer and elite warrior became the same. Tokugawa writers also invented *bushido*, the supposed code of warrior behavior that idealized Kamakura and Ashikaga warriors as always loyal, brave, and willing to die for their lords, and raised the samurai sword to a cult item. This had far more to do with Tokugawa social politics than with the Horse and Bow warriors of 1000–1500.

—Stephen Morillo

policing, for which conscript infantry were ineffective. Thus, by 1000 CE Japanese armies were composed of small groups of warriors drawn from rural, provincial elite families, retained both by the central court and the civil aristocratic families who resided in the capital at Kyoto. Warfare was their profession and their lifestyle. Their main weapon was the bow, which they used from horseback. Mobility and firepower made them ideal for offensive campaigns in the north and for chasing bandits, many of whom were other members of the same emerging warrior class, the *bushi*. The difficulty of using the long, asymmetrical and relatively weak Japanese bow from atop smallish, ill-tempered horses that

lacked stamina made this style of warfare difficult to master, and skill at the Way of Horse and Bow therefore served as a marker of status. Provincial warrior families were inferior to court aristocrats and derived the legitimacy of their military actions solely from orders issued by the central government. But these “teeth and claws” of the courtly elite were clearly superior to the peasantry. The best tended to come from the good horse-raising country of the eastern Kanto plain around modern Tokyo.

The deep political divisions that split the court in the twelfth century also split the warriors supporting the courtly factions, and in the Gempei War of 1180–1185, Minamoto Yoritomo, a leader of a large network of eastern warriors, used a commission from the imperial government to defeat his enemies and establish the *bakufu*, or “tent government,” at Kamakura, with himself appointed as Sei Tai-Shogun, or “barbarian-suppressing generalissimo.” But the establishment of the Kamakura shogunate in fact did little to change the structure of military forces in Japan. The legitimacy of military actions still derived from imperial sanction, even if now filtered through the shogunal administration, which existed in parallel to the civil bureaucracy still centered in Kyoto. The shogunate’s judicial mechanisms regulated the everyday disputes of the warrior class, but military action was still predominantly a matter of small-scale policing actions and was organized around the clan connections of the Hojo, the family of Yoritomo’s wife, who ran the shogunate after Yoritomo’s death.

Only four times did the Kamakura shogunate have to call out substantial armies. The first time, in the Jokyu War of 1221, a large mustering of Hojo vassals easily defeated an attempted revolt against shogunal rule organized by the retired emperor, Go-Toba. The next two times, in 1274 and 1281, were probably the high points of Kamakura military achievement, as warriors from all over western Japan, few of whom were direct Hojo vassals, answered Kamakura’s call to repel the Mongol invasions of those years. Mongol disciplined mass action and firepower surprised the Japanese in 1274 (the Japanese ethos being more oriented towards individual action and glory-seeking, and the Mongol composite bow

having superior range and penetrating power), but the famed *kamikaze* (“divine wind”) typhoon largely wrecked the invasion. In 1281 the Japanese showed they had learned, entrenching themselves behind walls surrounding the landing site and displaying improved group cohesion.

The problem for Kamakura was that the defensive nature of these wars provided them no land with which to reward the claims of those who had fought, and the political decline of the shogunate followed its success. In 1331 the emperor Go-Daigo raised a revolt against Kamakura. This succeeded in bringing down the shogunate but failed to restore direct imperial rule as Go-Daigo had planned. Instead, Ashikaga Takauji, a defender of Kamakura who switched sides, eventually established a new shogunate while the imperial family split, leading to sixty years of confused civil war. During this time, individual warriors and fighting styles continued unchanged, but larger patterns of war shifted from battle-seeking to skirmishing and warfare based around holding and besieging small fortifications. An uneasy order was restored in 1392, but though warriors now ruled almost unfettered by imperial or court rivals, they also lacked legitimacy. Eventually, the leading warrior families, now located in Kyoto with the Ashikaga shoguns, destroyed themselves in the Onin War (1467–1477).

It was in this context of fragmented political authority and competition among the second rank of warrior families (the *sengoku daimyo* of the sixteenth century) that Japanese armies were radically transformed from small elite forces of cavalry archers into rigorously disciplined professional mass armies of spear- and bow-armed infantry (and by the 1570s musketeers as well) and heavy cavalry. The era of the Way of Horse and Bow was then over.

—Stephen Morillo

Bibliography

- Friday, Karl. *Samurai, Warfare and the State in Early Medieval Japan*. New York: Routledge, 2004.
- Morillo, Stephen. “Cultures of Death: Warrior Suicide in Europe and Japan.” *The Medieval History Journal* 4, 2 (2001): 241–257.
- Morillo, Stephen. “Guns and Government: A Comparative Study of Europe and Japan.” *Journal of World History* 6 (1995): 75–106.

Turnbull, Stephen. *The Samurai. A Military History*. Richmond, Surrey: Japan Library, 1996.

Varley, Paul. *Warriors of Japan as Portrayed in the War Tales*. Honolulu: University of Hawaii Press, 1994.

The Mongol Army

One of the most important institutions of the Mongol empire was the army. After becoming the ruler of the steppes of Mongolia in 1206, Chinggis Khan immediately began to reorganize his nomadic warriors into an army whose feats remain unparalleled today.

As part of this reorganization, Chinggis Khan transformed steppe society from a tribal base into a premodern version of a military-industrial society. Tribes that had opposed him were dispersed among loyal tribes. In addition, all groups were divided along decimal lines. Initially, the primary unit of organization was the *mingan*, or unit of 1,000. These were then divided into a corresponding number of *jaghun* (hundreds) and *arban* (tens). Later, the *tumen* (10,000) increased in importance for the empire’s organization. The households that belonged to these units not only produced the warriors who filled these units but also supplied them with equipment. To make sure that the new system stayed in place, Chinggis Khan decreed that no one could move to a different unit. He also appointed the commanders, who then selected their junior officers.

Chinggis Khan did not invent the system of decimal organization, as it had been common, but as only a form of military organization, among the Khitans, who dominated much of Mongolia during their reign as the Liao dynasty (907–1125) of northern China. In addition, the Kereit tribe that ruled central Mongolia during Chinggis Khan’s rise to power used it. Chinggis Khan, however, innovated the use of it to organize society. By reorganizing society, he broke the tribal divisions that had kept Mongolia in an incessant state of war.

Additionally, Chinggis Khan devised the *kes-bik*, or bodyguard, that became a training ground for not only his generals but governors of the empire as well. Consisting of 10,000 men and divided into dayguards, nightguards, and quiver-bearers, the keshik guarded the khan and served

THE MONGOL BOW

The composite recurved bow of the steppes served as the main weapon of the Mongols. It was a recurved bow because it was strung by bending it against its natural curve. Unstrung, the bow took the form of the letter “C.” Made from composite layers of horn, wood, sinew, and glue, this weapon typically possessed a pull ranging from 80 to 160 pounds, although the latter was a rarity. Due to the bow’s heavy tension and high pull, the Mongol arrow had little problem penetrating even the armor of the knights of thirteenth-century Europe who, until their earlier encounter with the recurved bow in the hands of Turkic light cavalry during the crusades, had been protected against virtually all hand weapons except the crossbow. Years of experience and practice gave the Mongols not only the appropriate strength, as one might gain from lifting weights, but also the proper technique to draw the bow. The Mongol bow possessed a maximum effective range of approximately 300 yards (275 meters). However, archery from more than 150 yards (135 meters) was intended to disrupt enemy ranks rather than inflict casualties. Although the composite bow was an excellent weapon, it did have some drawbacks, such as damp weather being detrimental to it.

Unlike European and Native American shooting styles, the nomads of Central Asia used a thumb ring to pull their bowstring, which prevented strain on the thumb. The Mongols held the bow in the left hand but set the arrow on the right-hand side, as the thumb ring affected how the arrow flew. If placed on the left-hand side of the bow, the shot tended to be less accurate.

The Mongols’ arrowheads were shaped in a variety of forms and made from iron, steel, horn, or bone. Each arrowhead had different functions, such as armor piercing, signal arrows that produced a whistling sound, and knobbed stun arrows.

—Timothy May

as his household staff. A commander, or *noyan*, from the keshik outranked a non-keshik commander by one rank. Thus, a commander of mingan in the keshik held the same rank as a commander of a tümen outside of the keshik.

Initially, light cavalry comprised the entire Mongol army, but as they expanded the Mongols

incorporated other military units into their forces. This included heavy cavalry and siege engineers. Initially the Mongols had little use for infantry but later used them extensively in regions ill-suited for cavalry warfare, such as southern China.

A key force in the Mongol military was the *tamma*. These were special units or even armies that drew upon soldiers from throughout the empire. *Tammacin*, or those who served in a *tamma*, played a vital role in the expansion of the empire because they were stationed on the borders. Their orders were to maintain control of the region and, if possible, extend Mongol control or influence into the neighboring territory. As the Mongols moved forward to conquer new territory, the *tammacin* often served as the army’s vanguard.

The Mongol army steadily grew as it conquered new territories and incorporated conquered groups into the military. Most important of the new additions were Turkic nomads who lived a lifestyle similar to the nomadic Mongols. In 1206 the Mongol army numbered approximately 95,000 men. By 1260 the Mongol empire stretched from the Sea of Japan to the Mediterranean Sea and the Carpathian Mountains and could mobilize approximately 1 million men under arms.

—Timothy May

Bibliography

- Hartog, Leo de. *Russia and the Mongol Yoke*. New York: Tauris, 1996.
- Martin, H. D. *The Rise of Chingis Khan and His Conquest of North China*. Baltimore: Johns Hopkins University Press, 1950.
- May, Timothy. *The Mongol Art of War*. Yardley, PA: Westholme, 2007.
- Turnbull, Stephen. *Genghis Khan and the Mongol Conquests, 1190–1400*. Oxford, UK: Osprey, 2003.
- Turnbull, Stephen. *Mongol Warrior, 1200–1350*. Oxford, UK: Osprey, 2003.

The Armies of Europe

In Europe’s Early Middle Ages (ca. 500–1000), armies were raised by nobles for either themselves or their king. The majority of such forces were composed of volunteers hoping to gain from spoil and plunder, freemen obligated to pro-

vide military service by virtue of their ownership of land, and vassals who owed varying levels of feudal obligations to the nobility. As more centralized governments developed during the Later Middle Ages (1000–1500), significant changes took place in the way armies were raised. This included the more extensive use of mercenaries and led to the development of Europe’s professional armies.

While members of the nobility continued to fight primarily as the result of social and feudal obligations, other soldiers increasingly fought for pay. Although in theory some vassals in the later Middle Ages were obliged to serve their lord annually for up to 40 days in the field, if they had the financial ability they would often pay someone to serve in their stead. The limited service requirements of feudal obligations could also cause severe problems concerning a lord’s ability to sustain prolonged warfare. Once a vassal’s required service was over, he could theoretically withdraw if alternative arrangements had not been made. Thus, in addition to calling up their vassals, wealthier lords and kings often employed mercenaries. Successful use of mercenaries was usually dependent on their morale, as they were prone to flee when battles went poorly or pay was tardy. Finally, cities sometimes recruited armies from local populations or, if recruitment efforts were unsuccessful, raised armies through conscription.

Once an army was raised, the issue of logistics was paramount. Supply was so important that it often determined the makeup and size of armies. Among the most important members of an army’s leadership was the marshal, whose duties included marshaling, or gathering, the forces; organizing the army’s heavy weapons; and providing for the army’s constant provisioning. While all soldiers were responsible for providing their personal arms and armor, the leadership was obliged to provide weapons beyond the pocketbook of the common soldier, such as siege engines. Moreover, although soldiers would bring an initial supply of rations for themselves, the army’s leadership was responsible for plotting a route that allowed for resupply. This was done by maintaining supply chains, purchasing supplies from local populations, or, more often than not, foraging (plundering). Whatever the means

➤ SACK OF LIMOGES, 1370

The following, taken from the *Chronicle* of Jean Froissart (ca. 1337–ca. 1410), describes the capture and sack of Limoges in 1370 during the Hundred Years’ War (1337–1453). Although the author was not present at the battle, this selection claims to record the successful siege tactics as well as the brutal treatment of the town’s conquered populace, employed by English forces under the leadership of Edward, the Prince of Wales, known as the Black Prince.

“[Having mined under the town walls] the miners set fire in their mine, and the next morning, as the prince had ordained, a great piece of the wall fell and filled the moats, whereupon the well armed Englishmen in the field were glad and poised to enter the town. The foot soldiers entered at their ease and ran to the gate and beat down the fortifications and barriers, as no one was there to defend against them because it was done so suddenly that the town was caught unaware. Then the prince . . . and all the other [leaders] with their companies entered into the city. The foot soldiers were equipped to do evil, and to pillage and rob the city, and to slay men, women, and children who kneeled before the prince for mercy. But he was so inflamed with ire that he took no heed of them, but put all of them to death. There was no pity taken on the poor people . . . for more than 3,000 men, women, and children were slain that day.”

—Andrew Holt

Source

James Harvey Robinson, *Readings in European History* (Boston: Ginn, 1904), 472–473. Modernized by Andrew Holt.

of provisioning, food and drink were a constant worry and often in short supply.

Medieval European armies were normally arranged in three sections (battles or battalions) that included a vanguard, a main body, and a rear guard. The vanguard was the forward division of the army, usually comprised of archers and other soldiers who wielded long-range weapons. Their purpose was to inflict as much damage as possible on an opposing army before the main bodies, composed of infantry and armored

cavalry, clashed. The main body comprised the bulk of the army's forces, and its performance was usually crucial to the army's success. The rear guard was usually comprised of less heavily armored and more agile cavalry, often mounted sergeants who could move quickly around the battlefield and chase down fleeing enemy soldiers. It also guarded the main force's rear as well as the army's supplies and camp followers (noncombatants who accompanied the army). Each section deployed in either a linear or block formation depending on the situation on the battlefield. While a block formation could better withstand cavalry charges, a linear formation allowed nearly the entire army to take part in a battle.

The importance of the mounted knight in medieval armies was foundational to Europe's social order. The prohibitive cost of proper arms, armor, and horses limited knighthood primarily to the landed feudal class. The typical knight was generally much more effective on the battlefield than the common infantryman, as he was not only better equipped but also better trained. Knights were usually placed in command of the cavalry (many of whom were less well-armed sergeants from lower social classes), which was used primarily to overrun enemy positions and break up enemy formations. If the cavalry charge was successful, infantry was positioned to exploit any break in the enemy line.

The infantry was composed of pikemen, archers, crossbowmen, swordsmen, and others who fought on foot and were usually joined by knights and other cavalry who had lost their horses. While some infantry were experienced warriors, many were poorly trained and only sporadically went into combat under the leadership of their local lords. Pikemen defended against enemy cavalry by pointing a concentrated number of pikes (long spears) in the direction of an onrushing cavalry charge, while archers could fill the sky with arrows to devastate the ranks of their approaching opponents. After several volleys, the archers could step aside to allow the cavalry and other infantry to engage their then-weakened opponents. When the main bodies of two armies clashed on the battlefield, infantrymen armed with swords, battle-axes, and similar

weapons provided screening for the cavalry and were essential for hand-to-hand combat. As the battlefield became chaotic, communication was usually limited to audible commands (sometimes produced by musical instruments), messengers, or visual signals that included the use of banners, standards, or flags.

The development of effective siege warfare was necessitated by the common use of defensive walls to protect medieval cities. Many cities also contained a keep, or elevated fortification, for additional protection in case the walls were breached by an enemy. Medieval strategists understood that the most effective way for an army to overcome defensive walls was simply to knock them down and rush through any openings. This was less risky than maneuvers that involved scaling ladders while fending off the attacks of defenders who benefited from their elevated position. Consequently, a variety of powerful siege engines that included the mangonel, the ballista, and the trebuchet were used to launch heavy projectiles at resisting cities and batter their defenses. Additionally, attacking armies used siege towers to position soldiers on a level equal to those defending a city wall, while forces on the ground would also employ battering rams to knock down gates or sappers to undermine walls.

Archers also played an important role in siege warfare. Talented marksmen could wreak havoc on the opposing armies of both sides. The skill and range of archers defending a city's walls determined the placement of the attacking army's camp, as it was important to make sure that the attackers were out of range of arrows. In the case of those who used the powerful English longbow rather than the more common short bow, archers had a much higher rate of fire and effective range, which made them especially valuable for use in siege warfare and by the vanguard on the battlefield.

Technological developments also aided armies defending cities or castles under siege. Concentric castles were developed during the period of the crusades, as were architectural improvements, such as the round tower, to make walls stronger and more defensible. Deeper wells allowed better access to water during lengthy sieges, and small openings in the wall for defending archers

provided them protected positions. Attackers were also repelled from city walls with boiling oil or water as well as molten lead. Yet the most revolutionary changes in tactics, strategy, equipment, and organization emerged with the introduction of gunpowder to European battlefields in the fourteenth century. Powerful cannon tipped siege warfare in favor of the attacking army, while hand cannon and other firearms made the armor of knights obsolete. This led to the diminished importance of the mounted nobility, which contributed to the rise of full-time professional armies in the early modern period.

—Andrew Holt

Bibliography

- Contamine, Philippe. *War in the Middle Ages*. Oxford: Basil Blackwell, 1984.
- France, John. *Western Warfare in the Age of the Crusades, 1000–1300*. Ithaca, NY: Cornell University Press, 1999.
- Lepage, Jean-Denis G. G. *Medieval Armies and Weapons in Western Europe: An Illustrated History*. Jefferson, NC, and London: McFarland, 2005.
- Nicholson, Helen. *Medieval Warfare*. New York: Palgrave Macmillan, 2004.
- Nicolle, David. *French Medieval Armies, 1000–1300*. Oxford, UK: Osprey, 1991.

The Peoples' Crusade of 1096

The First Crusade had strong popular support. Along with the Church's clergy, unauthorized preachers propagated the ideology of holy war to the masses. One of the most important from this latter group was Peter the Hermit, a charismatic leader who, during the summer of 1096, wandered around northern France and the Rhineland inspiring a great many, especially from the lower social classes, to join the expedition to Jerusalem.

Likewise, the passage of crusade pilgrims through Europe in 1096 stimulated additional religious fervor. Pope Urban II had not made any reference to European Jewry while preaching the crusade. Common people, unfortunately, were not able to reconcile the principle of domestic toleration with the idea of holy war against Muslims in the Holy Land. The ideology of divinely ordained violence in the name of Jesus Christ on



Peter the Hermit preaching the People's Crusade of 1096. (Pixel That)

one hand and the ideal of a united, homogenous Christendom on the other did not encourage toleration of non-Christians in Europe's heartland.

In the Rhineland and elsewhere, anti-Semitic notions led to serious outbursts of violence. Some local Christian bishops intervened to protect the Jews of their cities, but except for the town of Speyer, the bishops were not able to control public anger. In Rouen, Worms, Mainz, Cologne, Trier, Metz, Regensburg, and Prague a significant number of local Jews lost their lives, many at their own hands or at the hands of loved ones, as they sought to avoid forced baptism.

These attacks were typically orchestrated by local townspeople or a haphazard coalition of burghers and crusaders. The assailants were often determined to convert the Jews, and in general those Jews who accepted baptism could

> TAFURS

The First Crusade produced a popular legend of King Tafur, who together with his rag-tag army fights his way through the countryside devastating, raping, and killing until no one is left alive. During periods of famine, they were reported to eat enemy corpses. The legend seems to bear some resemblance to elements of the People's Crusade as well as some groups within the main crusade armies that came later. Crusade historian Guibert of Nogent describes the Tafurs as poor and desperate crusader pilgrims led by a Norman knight who had lost his horse. In the twelfth-century poem *La Chanson d'Antioche (The Song of Antioch)* Tafurs are depicted fighting with stones and maces without any protecting equipment. The poem proceeds to describe them as horrible people who grind their teeth while attacking the enemy.

—Sini Kangas

spare their lives. In most cases, the aggression arose spontaneously. Distinguished local knights and burghers of high social standing typically took part in the persecutions, and few if any of them then proceeded to the Holy Land.

An exception to this general pattern was Mainz, where an ideologically committed and organized crusader army initiated the persecution. The Jewish community of the town was large and firmly established, and it seems likely that Count Emicho of Leiningen, who was in command of the crusade army that had marched to the city in May, carefully planned the attack and intended from the beginning to eradicate the Jews of the city. When the archbishop's soldiers fled, the Jews were left unprotected, and the vast majority of them died in the resulting carnage. After rioting around northern Germany, the army of Count Emicho was routed and dispersed by local Christian resistance in Hungary along with two other armies from Germany, each led by an unauthorized priest.

Peter the Hermit, who apparently was never an ordained priest, was a controversial figure in his own day and is still able to divide opinion sharply. Some modern historians credit him as an initiator of the crusade (along with Pope Urban II), while others see him as a maladjusted

opportunist. On the arrival in Trier of his contingent of the People's Crusade, Peter presented the leaders of the Jewish community with a letter from French Jews, who advised their brethren to financially support Peter and his army. In return, the crusaders would refrain from violence. An agreement was made, and Peter and the crusaders departed peacefully.

While the crusade princes were still gathering their forces back in Europe in early August 1096, Peter and his followers, in the company of a second crusade contingent led by the knight Walter Sansavoir, had already crossed the Bosphorus from Constantinople into Asia. After their hasty departure from the Byzantine capital, where these early crusaders had been sacking the palaces of the city and stealing the lead from the roofs of the churches, the People's Crusade was annihilated in Civetot by the Turks. Some survivors returned to Constantinople, where they joined the crusade proper. In the end a few of them, including Peter, reached the Holy Land.

—Sini Kangas

Bibliography

- Blake, E. O., and Colin Morris. "A Hermit Goes to War: Peter and the Origins of the First Crusade." *Studies in Church History* 22 (1984): 79–107.
- Chazan, Robert. "The Anti-Jewish Violence of 1096: Perpetrators and Dynamics." In *Religious Violence between Christians and Jews*, edited by Anna Sapir Abulafia. Houndmills, UK, and New York: Palgrave, 2002.
- Chazan, Robert. *In the Year 1096: The First Crusade and the Jews*. Philadelphia and Jerusalem: Jewish Publication Society, 1996.
- Eidelberg, Shlomo, trans. and ed. *The Jews and the Crusaders: The Hebrew Chronicles of the First and Second Crusades*. Hoboken, NJ: Ktav Publishing House, 1996.
- Porges, W. "The Clergy, the Poor and the Non-combatants on the First Crusade." *Speculum* 21 (1946): 1–23.

Armies of the First Crusade, 1096–1099 (or 1102)

Traditionally the First Crusade has been dated between the spring of 1096, when the first crusader armies set out from Europe, and the summer of 1099, when crusaders captured Jerusalem and then successfully defended their gains over

Fatimid forces from Egypt. The First Crusade, however, was an extensive popular movement. Depending on scholarly perspective, the definition may also be extended to the People's Crusade (1096) and the so-called Crusade of 1101 (1100–1102).

The main force of the First Crusade consisted of four separate armies, which left Europe between August and October 1096. The leaders belonged to the elite of the Western nobility. Compared to many later crusades, however, there were no kings among them.

The Lotharingian contingent from northwestern Europe was led by Godfrey of Bouillon, later hero of the expedition, and his brothers Eustace and Baldwin. The second force from Normandy, Flanders, and Central France marched under Robert Curthose, the eldest son of William the Conqueror, the king of England, as well as under Robert of Flanders, Stephen of Blois, and Hugh of Vermandois, the brother of the excommunicated king of France.

The third and largest army came from southern France, commanded by the exceedingly rich Raymond of Toulouse, who traveled with Bishop Adhémar of Le Puy, the papal legate, or envoy, to the crusade. Normans of southern Italy constituted the fourth contingent. They were led by the ambitious Bohemond of Taranto and his nephew Tancred, who was not yet 20 years old.

During the crusade, allegiances often changed. The same applied to social standing; mounted warriors who lost their horses were demoted to foot soldiers, and some common soldiers were raised to the status of either mounted sergeant or knight. Moreover, Pope Urban II's apparent attempt to restrict the crusade to men equipped to fight was not successful. A large number of noncombatants accompanied the armies on this journey to the Holy Land. Many warriors took their families with them, and additionally a great number of people from all social groups joined the expedition. In all, the First Crusade was a fluid entity, and the division between combatants and noncombatants was constantly shifting. One commonality, however, bound them all. Given their goal—Jerusalem—and the spiritual benefits promised them for their efforts, each person, regardless of sex or social status, was a pilgrim.

➤ WOMEN ON THE FIRST CRUSADE

Women were not encouraged to join the crusades. In his initial crusade sermon on November 27, 1095, Pope Urban II appears to have prohibited any woman from leaving without a legitimate guardian. A good two years later, Symeon, Greek patriarch of Jerusalem, stated in a letter to the West that only men should go on crusades.

At the same time, women could not be denied the ancient penitential practice of a Jerusalem pilgrimage on any theological grounds. Besides, medieval armies conventionally had women following the rear guard. Many of them traveled under the protection of a husband or a relative, but a certain amount of independent women were always present as cooks, washerwomen, merchants, or prostitutes.

In the male-dominated sources of the First Crusade, women are found in auxiliary roles carrying water or missiles into battle, taking care of the wounded, and lamenting for lost ones. The repertoire of feminine figures is wide-ranging. At one end of the spectrum, there is the noble and outstandingly beautiful Ida of Austria who, according to a legend not to be believed, was taken captive at the Battle of Heraclea in 1101 and taken to a harem, where she gave birth to Zengi, the great hero of jihad. At the other end, there is the reality of a dull-eyed mother who has left her starving baby behind on the long road to Jerusalem.

—Sini Kangas

The four armies took different routes to their agreed meeting place, Constantinople, which they reached separately between November 1096 and mid-May 1097. From Constantinople the army marched through Anatolia (present-day Asian Turkey) and Syria to Palestine. It was a long journey laden with internal strife, hunger, thirst, disease, and continuous skirmishes with the enemy. During the seven-and-a-half-month siege of Antioch, which lasted from October 21, 1097, to June 3, 1098, crusaders met their physical limits. The winter of 1097–1098 was extremely cold, the lack of food escalated into famine, and infectious diseases reaped grave harvest among the ranks. When Anselm of Ribemont wrote back home in November 1097 begging prayers for his deceased companions, he mentioned that 6 out

of 13 had died of disease. Anselm's list includes only adult males from the higher social classes, which suggests a very high mortality rate among women, children, and the poor.

The outcome of the crusade echoed its expectations. Crusader victories at Antioch and Jerusalem, which they captured by storm on July 15, 1099, were seen by contemporaries as miracles, and crusaders returning from Palestine were the champions of Christ and the Holy Sepulcher (Tomb of Christ), which they had liberated from the hands of unbelievers.

The reception was quite the reverse, however, for the many who had deserted while the crusade was under way, including the crusade leaders Stephen of Blois and Hugh of Vermandois, who were excommunicated by the Church and despised by their families. When a new crusade expedition set out in 1100 in order to reinforce the newfound kingdom of Jerusalem, both saw in it an inviting second chance to redeem themselves and their crusade vows.

The so-called Crusade of 1101 ended in disaster. The main force, consisting of peasant Lombards allied with French, Burgundian, and German crusaders, was crushed at the Battle of Mersivan in August 1101 on its way to free Bohemond of Taranto, who was held captive by the Turks in Niksar. The same fate awaited two other contingents, one led by Count William of Nevers and the other consisting of crusaders from southern France and Bavaria. Both were ambushed during their march through Anatolia. Mortally wounded, Hugh of Vermandois died shortly thereafter. Only remnants of the two armies reached Jerusalem. Stephen of Blois did not live to see his lands either. After celebrating Easter of 1102 in Jerusalem, he sojourned in Jaffa waiting for a favorable wind to sail back home. There he received the news of an approaching Egyptian force and decided to stay. The meeting of Frankish and Egyptian forces at the Battle of Ramla in May 1102 ended in Muslim victory, and Stephen was killed, probably executed together with the majority of Christian captives.

—*Sini Kangas*

Bibliography

Asbridge, Thomas. *The First Crusade: A New History*. Oxford: Oxford University Press, 2004.

France, John. *Victory in the East: A Military History of the First Crusade*. Cambridge: Cambridge University Press, 1994.

Peters, Edward, ed. *The First Crusade*. 2nd ed. Philadelphia: University of Pennsylvania Press, 1998.

Riley-Smith, Jonathan. *The First Crusade and the Idea of Crusading*. 2nd ed. London: Athlone, 1995.

Setton, Kenneth, ed. *A History of the Crusades*. 6 vols. Philadelphia: University of Pennsylvania Press, 1969.

Thirteenth-Century Crusader Armies

By the thirteenth century, the European crusading movement had evolved far beyond what Pope Urban II (r. 1088–1099) had declared at Clermont, France, in 1095. Originally intended for fighting the Muslim infidels in the Holy Land, the thirteenth-century version of crusading became interpreted much more broadly and resulted in armies attacking not only infidels in the Near East but also accused heretics and other sects of Christianity within Europe.

The leaders of the Fourth Crusade (1202–1204) had planned to go to Egypt, but a shortage of funds to pay for their trip found the crusaders entangled in the regional power politics of Venice, the Balkans, Hungary, and the Byzantine empire. At the instigation of the city-state of Venice, the crusaders attacked and conquered the Christian city of Zara (present-day Zadar in Croatia), for which Pope Innocent III (r. 1198–1216) excommunicated the entire army. Nevertheless, the crusaders continued south and east, attacking the capital of the Byzantine empire, Constantinople, in support of the deposed emperor Isaac II (r. 1185–1195 and 1203) and his son, the future Alexius IV (r. 1203–1204). Burning and looting of the city followed, and much of the population fled; the Byzantine capital never recovered.

Another crusading movement took place not in the Holy Land but in southern France against Gnostic heretics known as Albigensians (1209–1229), also called Cathars and Bogomils. King Philip II Augustus of France (r. 1180–1223) initially resisted the urging of Pope Innocent for a crusader army to attack the Cathars but finally agreed to cooperate, at least passively. A crusader army of largely northern French moved south in 1209 and on July 22 captured the town of

➤ LOUIS IX AND THE TWO QUEENS

King Louis IX, whose father and royal predecessor, Louis VIII (r. 1223–1226), died when Louis was 12 years old, grew up under the control of his mother, Blanche of Castile, and her influence on Louis and the French court lasted until her death in 1252. From 1126 until Louis reached his majority in 1234, the queen mother served as regent for her underage son and was instrumental in defeating both a coalition of French nobles, who sought to weaken royal authority during Louis's minority, and the attempt of King Henry III to recover lands in France lost by his father, King John, to Louis's grandfather, King Philip II.

In 1234 Louis, then 21 years of age, married the 13-year-old Margaret of Provence in a marriage arranged by Queen Blanche. His mother and his equally strong-minded wife did not get along well, and the queen mother did everything she could to keep the royal couple separated. The attempt was not totally successful. Margaret bore Louis 11 children, 3 of whom were born during the Seventh Crusade (1148–1154), apparently a crusades birth record. Probably in part because of Margaret's desire to be her own woman and probably also because of the force of his mother's personality, Louis and Margaret never developed a complete bond of marital affection.

Notwithstanding this coolness, Margaret accompanied Louis on his initial crusade and

proved to be one of the ablest and most heroic crusaders in his retinue. In 1250 on the very day she had given birth to a son and only three days after hearing of her husband's capture in the Nile Delta, Margaret took control of Damietta and prevented its premature abandonment by the panicked Latins who had remained behind in the city. Her quick and decisive action allowed the city to be used as a bargaining chip in the negotiations that led to Louis's ransom and release. After spending the next four years in Palestine with Louis, she sailed for home with him in 1254. During the homeward journey, her quick reaction in suppressing an onboard fire saved the ship and the lives of its crew and passengers.

Queen Blanche had disapproved of Louis's crusading, but before her son left for the Holy Land in August 1248 he appointed his mother regent of France. Once again, her personality and talents proved more than equal to the task. Age and infirmities finally caught up with her, however, and she died in November 1252 more than a year before her son returned home.

Queen Margaret apparently disapproved of Louis's second crusade and did not accompany him to Tunis. Following his death there, she lived on as dowager queen until 1295.

—April L. Najjaj

Béziers, where it killed an unknown number of Cathar believers and Catholics alike and then besieged and captured the key city of Carcassonne, where the reconstructed fortress stands today. Although the commander of the Crusading army, Simon de Montfort, was killed in 1218, the conquest continued and resulted in large-scale confiscations of property, allowing for considerable expansion of French monarchical authority in the south. Once defeated, the Albigensians became one of the first heretical sects to be tried by the newly created Inquisition.

Philip Augustus's grandson Louis IX (r. 1226–1270) also played an important role in the thirteenth-century Crusading movement, as he led two separate crusading efforts aimed at liberating Jerusalem by way of North Africa. The first,



Louis IX of France disembarks at Damietta during the Seventh Crusade, from Grand Voyage de Hierusalem, published 1522. (Jupiterimages)

referred to by historians as the Seventh Crusade, took place in Egypt during 1249–1250; his second effort, the Eighth Crusade, began and ended in Tunis in 1270. Both failed and made little lasting impact on European control of the region.

With the Seventh Crusade, Louis's armies landed in Egypt and conquered the coastal city of Damietta in June 1249. However, their success proved to be short-lived, as the yearly flooding of the Nile River had made travel difficult. As the army attempted to capitalize on its victory and move farther south, they became confused navigating the many different branches of the river, and the Egyptians not only defeated the crusader army but also took Louis and many of his noblemen prisoner. The king's wife, Margaret of Provence, had traveled with Louis, and she negotiated the surrender of Damietta and the release of Louis after payment of a hefty ransom. With their freedom, Louis and his entourage continued east into the area of Palestine and arrived later in 1250. He and his army stayed in the crusader fortress-city of Acre for four years helping to build up the remaining Christian fortifications in the Latin Kingdom; he returned to France in 1254.

The Eighth Crusade is considered one of the last efforts that could still be described within the medieval tradition of the Christian crusading movement. The Mamluk sultan in Cairo, Baybars (r. 1260–1277), had captured the Christian outpost of Antioch in May 1268. Despite his age and poor health and against the advice of many of his noblemen, Louis decided to take up the cross a second time and traveled with his three sons to North Africa. Louis's brother, Charles of Anjou, king of Sicily, had wrongly advised Louis that the emir of Tunis would be sympathetic to the crusaders' cause and would allow Christians to set up a base of operations for an attack on Egypt. However, upon arrival in North Africa in 1270, Louis and many of his men died from disease. The crusade fell apart at Louis's death, and his army returned to France without ever arriving in the Holy Land.

—April L. Najjaj

Bibliography

Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. London: Longman, 1986.

Joinville, Jean de, and Villehardouin, Geoffroy de. *Chronicles of the Crusades*. New York: Penguin, 1963.

Nicholson, Helen. *The Crusades*. Westport, CT: Greenwood, 2004.

The Inca Army

As an empire based on conquest, the Inca state depended on military power for its existence, and warfare was a primary occupation for the ruler and the highest-ranking nobility. All young Inca males were trained in the military arts as part of their basic education. Each ruler was expected to expand the empire and demonstrate success in war as evidence of his fitness to rule.

The size of the Inca armies was astonishing even by modern standards. Sources disagree on exact numbers, but all agree that armies numbering between 35,000 and 140,000 men were raised on various occasions, with several large armies in the field at once. Maneuvering a body of men this large requires phenomenal organizational ability. The highest-ranking officers were more or less professional soldiers and came from the Inca nobility. Lower-ranking officers were drawn from the ranks of traditional tribal rulers. Common soldiers were drafted from the masses and participated as part of their labor tax obligation. They were only provided with food, clothing, and arms as payment. In order to keep production stable while so many men were occupied on military campaigns, only a few men from each village were called up so that their kinsmen could easily work their lands for them in their absence.

Within the army, divisions of different sizes were organized based on ethnicity. Units were placed in marching order depending on their reliability and how long they had been under Inca dominance. Troops from the most recent conquests were placed in the front of the line at the greatest distance from the Inca ruler.

Discipline within the Inca armies was strict. Movement was exclusively on foot except for the highest-ranking generals and the emperor, who were carried in litters. On the march the men were kept in ranks and were closely supervised, and looting, pillaging, and straggling were not tolerated. Cowardice or flinching in the face of the enemy could be punished by death.

Inca armies employed a variety of weapons for both long-range and hand-to-hand fighting. All of their weaponry could be classed as light armaments since they did not employ heavy artillery of any sort, nor did they use siege engines. Whole units were equipped with a single type of weapon, and thus there were squadrons of archers, slingers, spearmen, and so forth.

For long-range combat various weapons were available, with slings, which could fire small stones with great accuracy, being perhaps the most common. Bows and arrows were used by some units, while others used spear throwers and javelins. At a closer range, bolas were used to entangle the legs and feet of the enemy, and stones were thrown or rolled down from a high position onto attackers.

For close-quarters combat the preferred weapon was a short club called a *champi*, which was about 2 feet (60 centimeters) to 3 feet (1 meter) in length with a heavy weight on one end. This type of weapon has been called the star-headed mace because its weight of bronze or stone was donut-shaped with five or six projecting knobs on its perimeter, resulting in an asterisk or star shape. Another type of club, the *macana*, was made of the hard wood of the chonta palm and was shaped like a sword, being about 4 feet (1.2 meters) in length with a maximum width of 4 inches (10 centimeters). Battle-axes, ax-mace combinations such as European halberds, and spears with metal points were also used in hand-to-hand fighting.

The battle equipment of Inca soldiers included more than weapons. Soldiers wore tunics and sandals, much like their everyday wear, but added to that was a type of armor made from quilted cotton and wrapped in lengths of cloth around the body. On their backs warriors wore small round shields made of woven palm-wood slats and cotton. They also carried a larger rectangular shield covered with a decorated cloth that extended below the shield itself as a banner. The soldiers' heads were protected with helmets of wood or canes strong enough to withstand heavy blows. Over their defensive armor the soldiers wore their finest clothing and ornaments, such as what they wore on holidays and festivals.

—Gordon McEwan

➤ INCA MILITARY LOGISTICS

The art of military logistics was highly developed in the tightly organized Inca empire. In order to move and supply such large armies, the Inca provided for the storage of enormous caches of food, weapons, and other supplies, such as tunics, helmets, sandals, and tents, at key administrative centers and at *tampu* along the royal highway. This allowed the army to move without having to carry all of its supplies and provided spares and replacements as necessary. Most importantly, this allowed the army to be fed without placing any burden on the provinces through which it moved. Unlike contemporary European armies that lived off the land and often despoiled even their own territory, Inca armies did no damage to the landscape, towns, or facilities that they passed.

Once the army left the borders of the empire and began a war of expansion, it was supplied by llama trains and large groups of human porters; added to this was any food that it might capture. The people drafted for this duty were only required to carry for a fixed distance and rotated frequently so as to spread the burden evenly. Inca armies also moved with many camp followers. Individual soldiers had wives or relatives accompany them to look after their daily needs and, more importantly, to care for them if they should be wounded or sick.

—Gordon McEwan

Bibliography

- Cobo, Bernabé. *Inca Religion and Customs*. Translated and edited by Roland Hamilton. Austin: University of Texas Press, 1990.
- D'Altroy, Terrence. *The Incas*. Oxford, UK: Blackwell, 2002.
- Heath, Ian. *The Armies of the Aztec and Inca Empires, Other Native Peoples of the Americas, and the Conquistadores, 1450–1608*. Vol. 2, *Armies of the Sixteenth Century*. Guernsey, UK: Foundry Books, 1999.
- Hemming, John. *The Conquest of the Incas*. London: Macmillan, 1970.
- Murra, John V. *The Economic Organization of the Inca State*. Greenwich, CT.: JAI, 1980.
- Rowe, John H. "Inca Culture at the Time of the Spanish Conquest." In *Handbook of South American Indians*, Vol. 2, edited by Julian Steward, 183–330. Bureau of American Ethnology, Bulletin 143. Washington, DC: Smithsonian Institution, 1946.

Evidence for Warfare in North America

Although warfare most certainly took place in North America between small groups throughout the Holocene era, which began about 11,000 years ago following the last Ice Age, evidence is largely lacking until the latter part of the period. This is because it is difficult to establish whether the archaeological evidence specifically supports warfare or some other phenomenon. Two lines of evidence—defensive settlements and injuries in human skeletal remains—have been used in archaeological reconstructions of violence and the establishment of prehistoric warfare. The burning of sites and settlements has also been important for identifying the consequences of war and investigating more subtle aspects of strategy and directionality. Weaponry and iconography have provided important but more limited insights into warfare in North America. Although considerable disparities exist between North American regions in the archaeological evidence for intragroup and intergroup violence, all regions show a marked increase in

warfare around 1000 CE, toward the end of the Archaic period.

For example, warfare intensified in the Bering Strait region of the Arctic circa 1000–1400 CE, with the development of complex social organizations that involved the control of marine resources from coastal promontories. Archaeological data indicate that several different social groups fought each other over access and control of resources in the region, as evidenced in over 800 burials from the Point Hope, St. Lawrence Island, and East Cape regions.

On the contrary, in the Plains region of North America evidence indicates that warfare developed in response to indigenous cultural-ecological processes rooted in unpredictable environmental fluctuations and population-to-resource imbalances. Because the environmental conditions of the Plains region fluctuated greatly during the Holocene era, people had to move from area to area. This process brought various groups into conflict with each other. In the Plains, warfare occurred as a result of these different groups coming into contact with each other, while in the Bering Sea evidence indicates that warfare occurred as a result of resource competition. In the Southeast region, warfare was also conducted over access to resources, although the resources in this region were not migrating animal populations but instead fertile valley bottoms.

During the Mississippian period in the Southeast (ca. 800–1500 CE), for example, evidence indicates that warfare was the result of a struggle over the fertile silt and sandy loam bottomland soils and was instituted to increase the agricultural territories of demographically expanding Mississippian groups. On the contrary, in northeastern North America skeletons of victims and remains of palisaded settlements—the only information consistently available for intergroup hostilities for the region—indicate that the prevalence of conflicts varied greatly over time and space. Evidence further indicates that occasional attacks, typically ambushes of small numbers of people, cumulatively resulted in numerous casualties. Likewise, variation in palisade strength is consistent with the organizational structure and demographics of late prehistoric societies for

WARFARE IN THE SOUTHEAST

During the Late Woodland period in the North American Southeast region (ca. 500–1000 CE), evidence indicates that relatively large-scale forms of intergroup warfare took place. This period was characterized by population increases, growths in settlement size, and the saturation of the landscape with scattered family groups and small communities. As a result of these factors, prehistoric peoples of the Southeast region during this period constructed palisaded villages as a defensive measure against the increasing intergroup warfare. Furthermore, several small triangular arrow points have been found embedded in human skeletal remains from the period, indicating that peoples of the region were in regular conflict with other groups. Because these arrow points were manufactured from nonlocal chert, it has been concluded that warfare took place on an inter-regional scale and was not confined to just a few communities in one region.

—Peter N. Jones

the region, supporting the conclusion that warfare was prevalent in the region.

—Peter N. Jones

Bibliography

- Bamforth, Douglas B. "Indigenous People, Indigenous Violence: Precontact Warfare on the North American Great Plains." *Man* 29(1) (1994): 95–115.
- Dickson, D. Bruce. "The Yanomamo of the Mississippi Valley? Some Reflections on Larson (1972), Gibson (1974), and Mississippian Period Warfare in the Southeastern United States." *American Antiquity* 46(4) (1981): 909–916.
- Gibson, Jon. "Aboriginal Warfare in the Protohistoric Southeast: An Alternative Perspective." *American Antiquity* 39(1) (1974): 130–133.
- Lambert, P. M. "The Archaeology of War: A North American Perspective." *Journal of Archaeological Research* 10(3) (2002): 207–241.
- Mason, Owen K. "The Contest between the Ipiutak, Old Bering Sea, and Birnirk Politics and the Origin of Whaling during the First Millennium A.D. along Bering Strait." *Journal of Anthropological Archaeology* 17(3) (1998): 240–325.
- Milner, George. "Warfare in Prehistoric and Early Historic Eastern North America." *Journal of Archaeological Research* 7(2) (1999): 105–151.
- Nassaney, Michael S. "Spatial-Temporal Dimensions of Social Integration during the Coles Creek Period in Central Arkansas." In *Stability, Transformation, and Variation: The Late Woodland Southeast*, edited by M. S. Nassaney and C. R. Cobb. New York: Plenum, 1991.

■ Introduction: Diplomacy around the World

Some Western historians have claimed that the craft of diplomacy was essentially born amid the shifting political alliances wrought by Italian polities during the period circa 1300–1600. That is nonsense. Without denying the sophisticated diplomatic protocols employed by these states, it is no exaggeration to say that a number of states had raised diplomacy to a high art long before the year 1000, and this was particularly true of the Chinese, Abbasid, and Byzantine empires. Moreover, after 1000 CE, not only did China, Byzantium, and established Islamic states, such as the Fatimid empire, continue to use and refine their diplomatic skills and traditions, a number of emerging states in Afro-Eurasia were employing to great effect the tools of long-distance diplomacy. These included, but were not confined to, the Roman papacy, the trading empires of sub-Saharan West Africa, the Holy Roman empire, the Seljuk Turkish states of Anatolia and surrounding regions, and the Inner Asian polities carved out by the Mongols in the thirteenth century and by the Timurids in the fourteenth and fifteenth centuries. And then there was one of the most dramatic series of diplomatic (and military) expeditions of this entire half millennium: the seven early-fifteenth-century

voyages of Zheng He, an unambiguous effort to project Ming imperial influence into the lands washed by the waters of the Indian Ocean and adjoining seas.

Obviously the few entries that appear within this topic do not accurately reflect the range and depth of diplomacy being practiced across Afro-Eurasia in the period 1000–1500, but even the few essays that do appear here allow us to say with confidence that diplomacy was alive and well across this great landmass.

Diplomacy was also not confined to the states of Afro-Eurasia. The pre-Conquest Americas also witnessed diplomatic exchanges and alliances of great significance. Efforts have been made to place the origins of the Iroquois Confederacy of Five Nations (later six), which Longfellow's *Song of Hiawatha* has made famous, as far back as the late fourteenth century. Analysis of the oldest excavated smoking (or peace) pipes, however, points strongly to a date no earlier than about 1590. Despite this inconvenient inference, as some disappointed mythmakers would see it, if we look farther south, into Mesoamerica and South America, we can find unmistakable evidence of well-established and effective diplomatic traditions well before the arrival of

Europeans, as several entries under this topic point out.

As already noted, the art of employing diplomatic means to represent the interests of a state or ruler predated 1000 CE and, indeed, long predated the Common Era. During the period 1000–1500, however, the number of polities employing this device expanded significantly around the world, and the techniques of diplomacy also became more refined.

—*Alfred J. Andrea*

China's Border Policies and Diplomatic Tactics

China's diplomacy on its frontiers gained allies or neutralized foes by recognizing the status of border peoples in return for their loyalty and through tributary relations. The Chinese had developed payment of tribute, a common fruit due any superior power, into a system and enforced it when they could, whereby inferiors kowtowed to the Chinese emperor, offering gifts. The Chinese emperor, as the Son of Heaven, responded with generous presents.

The tribute system reinforced China's prestige and a Chinese-centered view of the world. The tribute system was an ideal that never entirely reflected the complexity of Chinese diplomacy and policy. Basically, the Ming tribute system restricted contact with foreigners, with the exception of the expansion of contacts by the Yongle emperor in the early fifteenth century.

In a reversal of tribute roles, so-called barbarian northern peoples forced the Chinese Song dynasty (960–1279) to pay it to them. The Song gave tribute to the Khitan Liao dynasty (907–1119) from 1004. Modeled on the treaty with the Liao, the Song agreed to pay tribute to the Tangut XiXia state in 1044. The Jurchen Jin dynasty (1115–1234) ended the Northern Song in 1126 and made the Southern Song (1127–1279) pay tribute in silk and silver in 1141. To show its sincerity to the Jin, the Song court also executed Yue Fei, one of its more capable generals in the war against the Jin, who is today a symbol of Chinese patriotism. Expensive as it was, the militarily weak Southern Song rationalized that the payment of tribute was less costly than continuing war. All the while, Annam (northern Vietnam) to the south and

Yunnan in the southwest kept their independence at the cost of being tributaries of the Song.

The Mongols of Khubilai Khan's Yuan dynasty (1271–1368), which extinguished independent Chinese rule in 1279, continued the tribute system, even receiving it from 12 countries stretching from Sumatra to India in the 1280s, but this relationship did not last.

The Ming dynasty (1368–1644) replaced the Mongols and engaged in tributary relations with Korea, Japan, and central, southeast, and south Asia. On the frontiers, the emperors co-opted tribal leaders to keep the peace by confirming their hereditary leadership in return for behavior as tributaries. The Hongwu emperor (r. 1368–1398) organized nearby Mongol units as a defense against more distant Mongols. The Yongle emperor (r. 1402–1424) played off western Mongols and eastern Mongols and effectively organized tribal military units in Manchuria of western Mongols there and the Jurchen farther to the east. The Yongle emperor detached Jurchen tributaries of the Koreans by using Jurchen envoys steeped in Chinese culture.

The Ming constantly had to oversee these relationships as they frequently changed. When the Jurchen switched allegiance to the western Mongols in the 1440s and threatened China's ties to Korea, the Ming successfully regained the Jurchen as tributaries. When Jurchen tributary missions to China became disruptive, the Chinese built a horse market north of the Great Wall for tribute exchange. The Chinese also built fortifications to protect overland Korean tribute missions to China.

The Ming dynasty's reach went to the Hami oasis in modern Xinjiang, through which passed trade and some 38 tribute missions along the Silk Road from Central Asia. Horses and furs from the steppe went to China in exchange for silk cloth, clothing, tea, and manufactures. Although the Ming restricted private individuals from trading with foreigners, officials as well as merchants continued to do so. The dynasty had to prohibit private Chinese commerce in swords. Smuggling was also a problem. Commerce, not stressed as essential, in fact was fundamental to the tribute system.

Relations with Japan were vexing. Japan did not willingly acknowledge Chinese superiority.

➤ WHEN USING BARBARIANS TO CONTROL BARBARIANS FAILS—THE EXAMPLE OF THE JURCHEN

Imperial historians would lament the decision of the Song dynasty to use barbarians to control barbarians, a divide and rule policy of the ancient Han dynasty, in the conflict between two northern barbarian groups, the Jurchen (Ruzhen) and their Liao dynasty overlords. The Song, in alliance with the Jurchen, hoped to recover 16 prefectures below the Great Wall, including the area of present-day Beijing, occupied by the Liao since 936.

The Jurchen Jin (Gold) dynasty (1115–1234) overthrew the Liao in 1125, while the Song attack from the south floundered. The poor performance of their Song ally encouraged the Jurchen to attack the Song capital at Kaifeng in 1126. The Jurchen lifted the siege upon payment of a large ransom. Later in the year the Jurchen resumed the siege, took Kaifeng, and captured the Song court, includ-

ing the emperor and the former emperor. The Northern Song dynasty (960–1126) ended as the Jin occupied the land down to the Huai River and raided beyond the Yangzi River. A Southern Song dynasty (1127–1279) continued to rule in the south from Hangzhou.

At the Southern Song court the militant idealists who wanted to continue the war against the Jin lost out to the realists who bought peace in 1141 with payments of silver and silk. To show its sincerity to the Jin, the Song court also executed Yue Fei, one of its more capable generals in the war against the Jin, who is today a symbol of Chinese patriotism. For the Song, the tribute system remained reversed.

—Henry J. Antkiewicz

However, for commercial purposes, Yoshimitsu, the third Ashikaga shogun (r. 1368–1394), acceded to Chinese protocol as a tributary, much to the delight of the Chinese and the chagrin of other Japanese leaders.

The Ming dynasty pursued stability in the south with the non-Chinese peoples within its borders in much the same way as in the north, by recognizing their status in return for loyalty. Like the Mongols before him, the Hongwu emperor also sent out tributary expeditions by sea. The tributary system reached its height under the Yongle emperor, who sent out great maritime expeditions reaching into the Indian Ocean. The later Ming emperors followed more modest ambitions beyond their borders but always kept an eye on the northern frontier.

—Henry Antkiewicz

Bibliography

- Chaffee, John W. *Branches of Heaven: A History of the Imperial Clan of Sung China*. Cambridge: Harvard University Asia Center, 1999.
- Mote, Frederick W., and Denis Twitchett, eds. *The Cambridge History of China*, Vol. 6, Part 1, *Alien Regimes and Border States, 907–1368*. Cambridge: Cambridge University Press, 1994.
- Mote, Frederick W., and Denis Twitchett, eds. *The Cambridge History of China*, Vol. 8, Part 2, *The*

Ming Dynasty, 1368–1644. Cambridge: Cambridge University Press, 1998.

Ambassadors of the Venetian Republic

From the High Middle Ages (1000–1300) through the early modern period, Venetian diplomacy maintained a level of international stability in the Mediterranean basin that allowed for economic and political expansion of La Serenissima. In their capacity as representatives of the interests of Venice, diplomatic envoys provided business contacts, peace negotiations, alliances, and intelligence from their respective diplomatic stations, particularly in the Byzantine and Ottoman empires. Venetian diplomacy evolved from the use of legates, modeled on those of the papacy, to that of the office of ambassador, which resided permanently and represented the interests of Venice at foreign courts. As part of the growing usage of diplomacy as a means of reducing the endemic warfare that plagued the Mediterranean, Venetian ambassadors were quite successful in carrying out their duties and contributing to the grandeur of their city.

Through much of the Middle Ages, Venetian foreign affairs were primarily conducted through

➤ BERNARD DU ROSIER ON THE DUTIES OF THE AMBASSADOR

The French cleric Bernard du Rosier (1404–1475) composed the first known textbook in Europe on the duties and roles of the secular diplomatic ambassador. In that work of 1436, known as the *Ambaxiator brevilogus* (*Treatise on Ambassadors*), he wrote:

“The causes of sending ambassadors are as various as the developments which occur: . . . for the glory of the imperial highness; for maintaining the rights of kingdoms; for offering obedience to superiors; for aiding fathers and the fatherlands; for peace and justice; for friendship, for courting good will; for settling wars; for initiating and strengthening truces. . . . for all and singular purposes which tend to the good of the commonwealth of any kingdom, principality, ecclesiastical, or worldly power, of any city, land, place or country, it is praiseworthy to send ambassadors.”

—Abraham O. Mendoza

Source

Donald E. Queller, *The Office of Ambassador in the Middle Ages* (Princeton, NJ: Princeton University Press, 1967), 85.

the offices of the legate (*nuncius*), the procurator (plenipotentiary), and the *baiulo* (consular official, distinguished from the procurator or legate). Medieval conceptions of the role of diplomatic envoys contributed to the evolution of the Venetian diplomat. The Venetian legate, modeled on the papal representatives to foreign courts, had the capacity to relay messages directly from Venice to foreign courts, serving as messengers and able to negotiate treaties and issues regarding affairs between the two states. However, legates were unable to directly represent the state of Venice without first consulting with officials back home for permission to conclude any official business. Procurators, who had the legal authority to directly represent the wishes of the Venetian state, served as direct liaisons of Venice to foreign courts in their capacity as legal representatives. Unlike the legates, procurators did not have to refer back to Venice for permis-

sion. However, procurators typically represented private interests, concerned as they were with commercial and trade issues, and were used only sporadically for direct diplomacy. Given the special trade relationship between Venice and Byzantium, the Venetian *baiulo*, who resided in Constantinople, such as Girolamo Lippomano (1588–1591), served limited diplomatic functions. The office of ambassador and the office of *baiulo* could both be granted to the same individual, as was usually the case for the envoy to Constantinople and Rome.

From approximately the late 1300s to 1500 CE, the Venetian office of the ambassador developed into an amalgam of the roles given to legates, procurators, and *baiuli*. Venetian ambassadors served as direct liaisons of the Venetian state; resided abroad in their host countries, such as Rome, London, Paris, Cairo, and Constantinople; and had full legal authority to carry out business for Venice without having to return home to consult with their superiors. Ambassadors from Venice typically emerged from the patrician class, which included the leading merchant families and had firm control of the city's economic and political institutions. The office of ambassador, which imparted a high degree of prestige that brought honor to the family of the officeholder, was a post to which Venetian patrician sons could aspire. The position of ambassador served as a form of preparation for future endeavors in business and politics in that it gave the officeholder valuable experience in representing the economic and political interests of Venice, which usually were one and the same.

Venetian ambassadors to Constantinople, both in the Byzantine empire and its successor, the Ottoman empire, maintained a pivotal role in ensuring that these eastern Mediterranean states were friendly to Venetian interests, thereby maintaining important economic links with the region. After the fall of Constantinople to the Turks in 1453, Venice shifted its policy to accommodate its relationship with the growing regional power, the Ottomans.

—Abraham O. Mendoza

Bibliography

Mattingly, Garrett. *Renaissance Diplomacy*. Boston: Houghton Mifflin, 1955.

Nicol, Donald M. *Byzantium and Venice: A Study in Diplomatic and Cultural Relations*. New York: Cambridge University Press, 1988.

Queller, Donald E. *The Office of Ambassador in the Middle Ages*. Princeton, NJ: Princeton University Press, 1967.

Papal Legates to Eastern Christians

The internationalization of the papacy that resulted from the eleventh-century papal reform movement, along with the establishment of crusader states in the Holy Land, led to increased contact between the papacy and Eastern Christians. Mainly through the intermediary of legates—churchmen empowered to represent the pope—the papacy held talks and negotiations with Eastern Christian bodies. These discussions dealt with political, military, and economic matters but focused above all on the issue of church union. In the papacy's view, church union meant recognition by Eastern Christians of papal primacy and jurisdictional supremacy as well as the acceptance of certain theological doctrines and religious practices that had developed in the West. These included the doctrine of the double procession of the Holy Spirit from the Father and the Son, with the consequent insertion of the *filioque* (and from the Son) clause into the Nicene Creed, and such traditions as using unleavened bread (azymes) for the Holy Eucharist. The papacy particularly desired union because it believed that a united East and West offered the best means for liberating and/or protecting the Holy Land from Muslim forces. By the early thirteenth century, under the influence of millenarian theorists, many popes and Latin churchmen also believed that church union was a necessary step toward ushering in the Final Days and the Last Judgment. In contrast, Eastern Christians often took up negotiations more for political than religious reasons, using the prospect of church union as a means of obtaining Western military aid.

The papacy expended the most effort at church union on the Byzantines, or Greeks, of Constantinople and the various churches of Eastern Europe that had accepted Christianity from Byzantium, such as the Bulgars. Over the centu-

ries, different political circumstances and ecclesiastical traditions had caused the Latin and Greek Churches to drift apart. The reform papacy's first attempt to improve the situation, the 1054 legation of Cardinal Humbert to Constantinople, ended disastrously with the laying down of mutual excommunications. Although historians often date the East-West schism from this event, the episode was not, in fact, of lasting importance, as contact continued almost immediately afterward between the papacy and Byzantium. Of much greater importance was the conflict and misunderstanding occasioned by the First Crusade and the sacking of Constantinople (1204) during the Fourth Crusade. Although Pope Innocent III interpreted the conquest of Constantinople as a miracle, believing that it had brought about by force the long-desired union between the Latin and Greek Churches, in actuality the conquest made the schism even more permanent by ingraining in the Byzantines a deep-seated hatred and distrust of the Latin West.

After the establishment of a Latin empire at Constantinople (1204–1261), the popes maintained cardinal legates there almost continuously until 1226. These legates attempted, with only mixed success, to gain the adherence of the Greek clergy under Latin control to church union; served as judges in the numerous lawsuits that arose concerning ecclesiastical property; and acted as the pope's agents in dealings with the rulers of the Latin empire and with the Latin patriarch of Constantinople. From 1229 until the recapture of Constantinople by the Greeks in 1261, however, popes appointed the Latin Patriarchs of Constantinople as their permanent legates in the region.

Although papal legates—for instance, the Franciscan minister general John of Parma in 1248 and Bishop Constantine of Orvieto in 1256—carried on negotiations with the Greek successor states of the Byzantine empire, serious talks on church union only resumed with the Greek recovery of Constantinople and restoration of the Byzantine empire under Michael VIII Palaeologus in 1261. His efforts, aided particularly by the papal legate John Parastron, led to a proclamation of church union at the Second Council of Lyon in 1274. Michael, however, was ultimately unable to gain the acquiescence of

➤ INNOCENT IV



(Library of Congress)

Sinibaldo dei Fieschi was a skilled canonist and administrator who ascended the papal throne as Innocent IV on June 25, 1243. His commentary on Gregory IX's *Liber Extra* or *Decretals* (the second book of what became the Catholic Church's Corpus of Canon Law) had an enormous influence on the Western legal

tradition. In it he argued that the pope had jurisdiction over non-Christians and could call for a just war against them if they occupied Christian lands or refused to let missionaries preach in their territory. Much of Innocent's pontificate was spent struggling against Emperor Frederick II Hohenstaufen (r. 1212–1250) over control of central Italy. This conflict left its imprint on many aspects of Innocent's pontificate, including the First Council of Lyon (1245). Nevertheless, Innocent also devoted much attention to the East and Eastern Christians. In 1245, for instance, he commissioned four separate embassies to the Mongols, one of which was led by the Franciscan John of Plano Carpini, the author of one of the most important sources from this period, the *History of the Mongols*. And in 1246 Innocent commissioned another Franciscan, Lawrence of Portugal, as papal legate to the whole East. Innocent died in Naples on December 7, 1254.

—John Wei

the Greek Church, and the union was repudiated soon after his death in 1282.

The fourteenth century saw sporadic attempts at union, initiated for the most part by Byzantine emperors increasingly concerned over the Ottoman Turkish menace on their borders. In 1357 the legate Peter Thomas was sent to Constantinople, where he managed to convert John V Palaeologus to the Latin faith, although this did not effect union between the Churches. And during the Turkish siege of Thessalonica (1383–1387),

Emperor Manuel II held talks with another papal legate that resulted in the proclamation of union, which, however, did not outlive the fall of that city to the Turks.

Attempts in the fifteenth century at ending the schism led finally to the Council of Ferrara-Florence (1438–1439), where Emperor John VIII and Patriarch Joseph II accepted papal primacy and the Roman Church's position on all controversial points except for the Byzantine rite, which they were allowed to keep. Although this was the most serious of all attempts at union and produced a small Byzantine rite—the Greek Uniate branch of the Catholic Church—it was repudiated throughout most of the Greek Church. Indeed, almost all of the 33 Byzantine churchmen who had signed the papal bull of union in Florence recanted upon their return home. Following Constantinople's capture by the Ottoman Turks on May 29, 1453, Patriarch Genadius proclaimed that it was deserved punishment for the momentary betrayal of the Orthodox faith at Florence.

Legations to other Eastern Christians had mixed results. Some, such as Innocent IV's appointment of Brother Lawrence of Portugal as legate to the East in 1246, simply brought chaos to Cyprus and produced no tangible results. Others, such as the legations under Pope Innocent III to Kalojan, the tsar of Bulgaria, merely resulted in nominal church union for a few decades. Much less typical were the 1197 legation of Cardinal Conrad of Wittelsbach and other legations to Armenia, which resulted in a union with the Armenian Church that lasted until the conquest of Armenian Cilicia (southern Anatolia) by the Mamluks in 1375. The only lasting success was the union with the Maronites of Lebanon. Scholars favoring the view that the Maronites originally professed Monothelitism, or the doctrine that there is only one will in Christ, often follow William of Tyre (d. 1185) in dating the union to 1180–1181 or place it in 1215, when the Maronite patriarch, Jérémie of Amchite (1199–1230), attended the Fourth Lateran Council. In contrast, defenders of the Maronites' uninterrupted orthodoxy, who tend to be Maronite, usually date the union to shortly after the First Crusade (1095–1099).

—John Wei

Bibliography

- Gill, Joseph. *Byzantium and the Papacy: 1198–1400*. New Brunswick, NJ: Rutgers University Press, 1979.
- Gill, Joseph. *Church Union: Rome and Byzantium (1204–1453)*. London: Variorum Reprints, 1979.
- Muldoon, James. *Popes, Lawyers, and Infidels: The Church and the Non-Christian World, 1250–1550*. Philadelphia: University of Pennsylvania Press, 1979.
- Richard, Jean. *La papauté et les missions d'orient au moyen âge (XIIIe–XVe siècles)*. Deuxième édition augmentée d'une postface. Rome: École Française de Rome, 1998.
- Whalen, Brett W. *Dominion of God. Christendom and Apocalypse in the Middle Ages*. Cambridge, MA: Harvard University, 2009.

Byzantine War and Diplomacy

In Byzantine thought, diplomacy and warfare were a continuum to protect the imperial state as God's earthly kingdom. The emperor's highest duty was always to bring peace to the Christian Roman empire and to bring others into the Christian civilization over which he presided. Defending the empire in war, especially against non-Christian invaders, was considered doing God's will, but war was justified only when diplomacy failed. Strong and well-trained armies were essential and prowess in battle valued, but unlike the Western crusades that promised forgiveness of sins, Byzantine theology never included the belief that warfare against infidels was a religious duty. There were equally pragmatic reasons for the Byzantine preference for diplomacy over battle. The geopolitical setting of the empire, surrounded by actual or potential invaders, meant that there was never enough manpower to defend all borders. A defensive strategy evolved in the early Middle Ages based on the belief, often justified, that Byzantine armies would always be outnumbered by their enemies and the consequent need to minimize the loss of imperial forces. Using institutions and practices inherited from late Rome, Byzantium negotiated treaties, religious conversions, marriages, payments, and even bribes with current and potential enemies. Nevertheless, in reality, emperors spent much of their life on campaign, and military exploits were celebrated.

➤ MANUEL COMNENUS

Manuel I Comnenus (r. 1143–1180) epitomized the use of diplomacy in twelfth-century Byzantium. In his 37-year reign, he used all the tools of diplomacy—marriages, treaties, honors and titles, and much gold—to create complex and ever-changing alliances to preserve Byzantine authority. Manuel's policy focused on the Western European powers, especially the crusader states, the various polities of Italy, the pope, and the German emperor. He married two Latin brides, negotiated Latin marriages for his son and nine Comnenian princesses, and introduced feudal concepts and chivalric tournaments to his court. Manuel's goal was to create indirect ties of vassalage in states surrounding the empire and to reinforce the acknowledgment of Byzantine sovereignty. His conflict with the German emperor Frederick Barbarossa centered on the imperial title (Frederick's insulting use of "king of the Greeks" for Manuel and "Roman Emperor" for himself) and actual political control of Italian city states. To counteract Frederick, Manuel negotiated with Pope Alexander III to resolve theological and disciplinary differences between the Churches. Although the Churches were not reunited (and Manuel's zeal for rapprochement did not extend to submitting the Greek Church to papal overlordship), Manuel was remembered warmly in papal circles as a friend. At the end of his rule, Manuel's Western engagement failed, and he lost a major battle to the Seljuk Turks at Myriokephalon in Anatolia.

Manuel's historical reputation has proved controversial. Some believe that he sowed the seeds of the Latin conquest of 1204, while others argue that his attempts to create indirect power in a multicultural world were the mark of a brilliant ruler.

—Dorothy de F. Abrahamse

Diplomacy revolved around the emperor and the ceremonies that surrounded him. At a time when most rulers in the Latin West had no permanent capital, Constantinople and its monuments and the ancient ceremonial of the palace provoked awe, and until the late empire, embassies that visited Constantinople witnessed the marvels of the imperial throne room, where mechanical lions roared and the throne levitated,

and were invited to vast banquets designed to demonstrate the wealth and power of the emperor. Neighboring states to the north and west, less developed than Byzantium, were encouraged to become part of a so-called family of kings in which the Byzantine emperor, ruler of the civilized universe (*oikoumene*), might adopt a ruler as a spiritual son, or godson, if he converted to orthodox Christianity. Byzantine rulers protected their borders by supporting tribal groups outside the empire with treaties that offered annual payments, titles, and elaborate gifts. Until the eleventh century, Byzantium was surrounded by satellite peoples linked by treaty.

The character of Byzantine diplomacy changed in the eleventh century when neighboring states became aggressive, and organized kingdoms, especially in the West, and Byzantium's emperors found themselves requesting military assistance as brother Christians rather than superior rulers. Thus, Alexius Comnenus used oaths to forge personal bonds with crusade leaders. Throughout the twelfth century, Byzantine emperors increasingly relied on imperial marriages to create alliances, especially with Western rulers, in the hope that the marriage would bring lasting influence within the foreign court and family as well as immediate alliances and the material gifts of dowry. They forged alliances that enmeshed Byzantium, for the first time, in the growing international politics of Europe and the Mediterranean world and sought to preserve Byzantine prestige through symbolic lordship over smaller neighboring states. Even in the thirteenth century the Palaeologan rulers of Byzantium, now a small and poor state, were able to use historic traditions and diplomatic expertise to maneuver for survival against would-be conquerors. The tragedy of Byzantium's last century was reflected in its diplomacy as the descendants of emperors whose capital and courts had awed foreigners now made their way to the West to beg for help.

Byzantine diplomacy depended on well-developed institutions and offices. Embassies were regularly sent to foreign rulers with power to negotiate treaties, often with carefully worded letters and verbal messages of interpretation sealed with oaths and confirmed in a document bearing the imperial signature and seal. Along with

merchants and other travelers, ambassadors collected intelligence about customs, diplomatic strategy, and military practices in reports that were maintained by a high-ranking official in charge of foreign affairs (*Logothete of the Dromos*). Elaborate protocol and official regulation governed the visits of foreign embassies to Constantinople. The symbolic role of Byzantium as the Christian Roman empire could be as important as real power, as reflected in conflicts with the West's Holy Roman emperor and the pope over imperial titles.

To outsiders, Byzantine diplomacy, its rulers' willingness to use money and titles to gain allies and prevent war, and the rhetorical language and ritual that governed Byzantium's foreign relations gave it a reputation for deviousness, guile, and a lack of courage and trustworthiness. But those same traditions and the institutions that were developed to support them allowed the empire to survive simultaneous threats on multiple borders, create a lasting orthodox civilization, and maintain respect and influence for centuries far beyond its actual power.

—Dorothy de F. Abrahamse

Bibliography

- Haldon, John F. *Warfare, State and Society in the Byzantine World, 565–1204*. Oxford: Routledge, Abingdon, 1999.
- Harris, Jonathan. *Byzantium and the Crusades*. London and New York: Hambledon and London, 2003.
- Magdalino, Paul. *The Empire of Manuel I Komnenos, 1143–1180*. Cambridge: Cambridge University Press, 1993.
- Obolensky, Dimitri. "The Principles and Methods of Byzantine Diplomacy." In *Byzantium and the Slavs: Collected Studies*, No. 1. London: Variorum, 1971.
- Shepard, Jonathan, and Simon Franklin, eds. *Byzantine Diplomacy*. Society for the Promotion of Byzantine Studies. Aldershot, UK: Variorum, Ashgate, 1992.

Zhenghe and Early Ming Diplomacy

The traditional rationale for the voyages to Southeast Asia and the Indian Ocean authorized by the Yongle emperor is that he sought to increase

China's international prestige while reaffirming his own legitimacy in the eyes of China's neighbors near and far and to raise money through tribute trade at a time when the Silk Road across Central Asia was controlled by the armies of Timur-i Leng (Tamerlane), and perhaps because of a desire to find his predecessor, whom he had deposed and probably killed but who was rumored to be living abroad. Much is made in the popular media of the peaceful intention of the voyages, but when examined in such detail as the sources allow and in the context of other contemporary foreign policy initiatives, the voyages more closely resemble explicit efforts to assert Chinese hegemony overseas in what one historian has likened to a form of gunboat diplomacy.

In the late fourteenth and early fifteenth centuries China annexed Yunnan, on the border with Burma (Myanmar) and now an integral part of China, and Dai Viet (northern Vietnam), which was ruled as a province from 1407 to 1428. Ming records claim that the latter cost the lives of seven million Vietnamese, which, while exaggerated, confirms the violent nature of Chinese expansion. Zheng He's missions were accompanied by tens of thousands of soldiers who were deployed on at least three occasions. On Sumatra, Palembang was already home to many Chinese expatriates, one of whom, declared a pirate by Zheng He, was captured and executed in 1407. Subsequently, the Chinese installed a ruler in Palembang, which they viewed not as an independent country but as a "pacification superintendency," a term normally reserved for semiautonomous territories along the Chinese border.

The same year, the Chinese demanded reparations for nearly 200 soldiers killed on Java and warned that "What happened in Annam [Vietnam] can serve as an example" if the ruler of Majapahit failed to comply. Four years later, Zheng He captured a Ceylonese king and brought him and his family to China, where he was pardoned for being "insulting and disrespectful" in refusing to recognize the emperor as his overlord. In the meantime, Zheng He had appointed a Ming puppet to rule in his stead. Although the Chinese generally exercised influence in Burma via the southwestern land route through Yunnan, in

➤ ZHENG HE IN YEMEN

While the most enduring influence of the Zheng He expeditions was felt in Southeast Asia, the *Chronicle of the Rasulid Dynasty* of Yemen mentions the visit of a Chinese emissary to Aden during the fifth expedition (1417–1419), during which lavish gifts were exchanged between "the Lord of China" and "our Lord the sultan al-Malik al-Nasir." The sultan received "a splendid present consisting of all manner of rarities, splendid Chinese silk cloth woven with gold, top quality musk, storax [an aromatic], and many kinds of china-ware vessels." A sixteenth-century Yemeni historian adds that the emissary

"had an audience with al-Malik al-Nasir without kissing the ground in front of him, and said: 'Your Master the Lord of China greets you and counsels you to act justly to your subjects.' And [the Sultan] said to him: 'Marhaban [welcome], and how nice of you to come!' And he entertained him and settled him in the guesthouse. Then al-Nasir wrote a letter to the Lord of China: 'Yours it is to command and [my] country is your country.' He dispatched to him wild animals and splendid sultan robes, an abundant quantity, and ordered [the envoy] to be escorted to the city of Aden."

—Lincoln Paine

Source

Chronicle of the Rasulid Dynasty, quoted in R. B. Serjeant, "Yemeni Merchants and Trade in Yemen, 13th–16th Centuries," in *Society and Trade in South Arabia*, edited by G. Rex Smith (Aldershot, UK: Ashgate, 1996), 74–75.

1409—at the start of the same expedition that saw the arrest of the Ceylonese ruler—the emperor threatened to invade a local ruler's lands using forces coming "from the ocean route."

One of Zheng He's mandates was to instruct foreign rulers to send "tribute" missions to the Ming capital at Nanjing, and the Chinese established hostels to house the envoys who accompanied these in the southern provinces. The unprecedented numbers of ships and men commanded by Zheng He sufficed to persuade most rulers to accede to this request, if only so they could benefit from the emperor's tributary system,

which was then the only legal form of overseas trade with China. These demonstrations of Chinese superiority, if not invincibility, also compelled a number of Asian rulers to visit China themselves at a time when rulers seldom left their realms for diplomatic visits. According to one account of the voyages, 30 states, including Egypt and Mecca, sent ambassadors to the Ming emperor.

Coercive though Zheng He's treasure fleets might have been, they had positive effects as well, especially in securing the future of the strategically situated port of Melaka (Malacca). Founded just before the start of Zheng He's voyages, by the voyages' conclusion the city's population was more than 100,000. Six centuries later Malayan Chinese continue to revere Zheng He, and incense burns in his memory at the Sam Poh Kong Temple in Melaka to this day.

—Lincoln Paine

Bibliography

- Dreyer, Edward L. *Zheng He: China and the Oceans in the Early Ming Dynasty, 1405–1433*. New York: Pearson Longman, 2007.
- Ma Huan, Ch'eng-chun Feng, and John Vivian Gottlieb Mills. *Ying-yaisheng-lan = The Overall Survey of the Ocean's Shores, [1433]*. Cambridge: Published for the Hakluyt Society at the University Press, 1970.
- Serjeant, R. B. "Yemeni Merchants and Trade in Yemen, 13th–16th Centuries." In *Society and Trade in South Arabia*, Vol. 1, edited by G. Rex Smith. Brookfield, VT: Ashfield, 1996.
- Wade, Geoffrey. "Ming China and Southeast Asia in the 15th Century: A Reappraisal." Asia Research Institute Working Paper Series No. 28, July 2004, http://www.ari.nus.edu.sg/docs/wps/wps04_028.pdf.
- Wade, Geoffrey. "The Zheng He Voyages: A Reassessment." Asia Research Institute Working Paper Series No. 31, October 2004, http://www.ari.nus.edu.sg/docs/wps/wps04_031.pdf.

Zheng He and Early Ming Diplomacy—A Second View

Ma He (1371–1433), a Muslim from Yunnan Province in China's southwest, was made into a eunuch in 1385 and given to imperial prince Zhu Di, Prince of Yan, whose seat was Beijing (North-

ern Peace), the future Beijing (Northern Capital). The prince later awarded Ma He the titular name Zheng He for his faithful service. In 1402, Zhu Di usurped the throne, becoming the Yongle emperor (r. 1402–1424). In 1403, the Yongle emperor ordered Zheng He to oversee the construction of a fleet at the Ming capital of Nanjing, which he then commanded as it sailed from the coast of Fujian.

Zheng He's seven treasure-ship fleets, the largest naval expeditions to that time (1405–1433), sought the acknowledgment of Chinese supremacy far into the Western Sea, that is, beyond Southeast Asia to India, the Middle East, and the coast of East Africa. Palace eunuchs led the soldier-filled fleets and, on behalf of the emperor, invested rulers with titles, fought when necessary, and conveyed emissaries to China and back to exchange gestures of tribute for valuable presents. The treasure fleets kept vital sea-lanes open to traffic and conducted considerable trade, which benefited the imperial household since it barred private Chinese merchants from these transactions.

The Yongle emperor's public reasons for the expeditions were to end rumors that the predecessor whom he had overthrown, the Jianwen emperor, had not perished and had fled abroad and also to parry threats from Central Asia, such as the one by Timur-i Leng (Tamerlane), who died in 1405 while preparing an invasion of China. A less public reason for the expeditions was the Yongle emperor's need to gain respect for his imperial status. Hence, he ordered these fleets to proclaim his and the Ming dynasty's imperial stature, both at home and abroad, by recourse to the traditional Chinese tribute system.

The first fleet in 1405 had over 300 ships of various sizes, with a crew of just under 28,000. Sixty-two of the largest vessels, the 12-masted bargelike treasure ships, were possibly 444 feet (135 meters) long, about one and a half American football fields long or five times longer than Columbus's *Santa Maria*. The fleet reached the great emporium of Calicut on the Malabar Coast in southwestern India, destroyed the threat to shipping by Chinese pirates in the Malacca Strait, and returned with ambassadors and tribute. The diplomatic success of this mission inspired fur-

ther expeditions. Subsequent expeditions were more or less the same size but sometimes split up to take side trips.

On the second trip, 1407–1409, the Chinese invested in office the new king of Calicut and left an inscribed memorial stone celebrating the occasion. The king of Brunei on Borneo returned with the fleet to China to thank the emperor for protecting Brunei from Java. The king unfortunately died during the visit. During the third expedition, 1409–1411, the fleet protected its tributary, Malacca, on the strategic Strait of Malacca, from Siam. In Ceylon (Sri Lanka), Zheng He intervened in a struggle for the throne that included the disposition of a Buddha-tooth relic. Zheng He shipped both claimants to Nanjing for judgment.

The first three fleets reached Calicut. The next fleets went farther west. The fourth trip, in 1413–1415, reached Hormuz at the mouth of the Persian Gulf and returned with tribute missions, including some from the coast of Africa. The fifth fleet, 1417–1419, reached Aden near the entrance to the Red Sea, Mogadishu on the coast of Somalia, and perhaps Malindi on the coast of Kenya.

The sixth voyage, 1421–1422, again reached the Somali coast of Africa. This was the last of the treasure-ship expeditions of the Yongle emperor's reign, which were curtailed because of budgetary problems, expeditions against the Mongols, the war in Vietnam, and the building of the new capital complex in Beijing, the new capital. Upon the Yongle emperor's death, the Hongxi emperor (r. 1424–1425) ended the treasure-ship excursions. The Xuande emperor (r. 1425–1435) ordered Zheng He on a seventh trip (1431–1433) because tribute had ceased from the Western Sea countries. Zheng He probably died in 1433 on this final voyage of the treasure ships.

The Ming court thought that giraffes, sent to the emperor as tribute in 1414 and 1416, were actually *qilin*, a mythological animal regarded as auspicious, and these animals were a sign that acknowledged the beneficial spread of Chinese influence to the Western Sea. However, the Chinese would never repeat the diplomatic efforts of Zheng He's expeditions. In 1498, some 80 years later, it was the Portuguese Vasco da Gama, who sailed to Calicut from Malindi, aided by a local

pilot, to alter once again the direction of history on the seas in Asia.

—Henry Antkiewicz

Bibliography

- Dreyer, Edward L. *Zheng He: China and the Oceans in the Early Ming Dynasty, 1405–1433*. New York: Pearson Longman, 2007.
- Levathes, Louise. *When China Ruled the Seas. The Treasure Fleet of the Dragon Throne, 1405–1433*. Oxford: Oxford University Press, 1994.

Mexica Diplomacy

In 1426 the Aztec Triple Alliance, representing the combined might of the city-states Tenochtitlan-Tlatelolco, Texcoco, and Tlacopan, smashed the Tepanec empire, seated at Atzacapotzalco, and seized hegemony for themselves. Next they embarked on an ambitious imperialist project that would lead them to dominate Mesoamerican affairs until the Spanish Conquest (1519–1521). During this 100-year period, the Mexica (often referred to as the Aztecs), the tribe who resided in Tenochtitlan, led the alliance and shaped a new empire. And their ruler-commanders, or *huey tlatoque*, concentrated all powers in their own hands, becoming in effect absolute monarchs between the Tepanec War and the Spanish conquistadores' arrival.

Early Aztec conquests took and secured vast tracts of *chinampa* and other prime agricultural lands as well as strategic trade routes. Tenochtitlan, the capital, conscripted troops and laborers and demanded foodstuffs and other basic goods from those it conquered. It also exacted tribute, including gold and silver, jade, exotic animal pelts and feathers, cacao, and other precious commodities. By the time Spaniards such as Hernán Cortés and Bernal Díaz entered the Valley of Mexico and recorded what they saw, Aztec elites had amassed vast stores of wealth and landholdings.

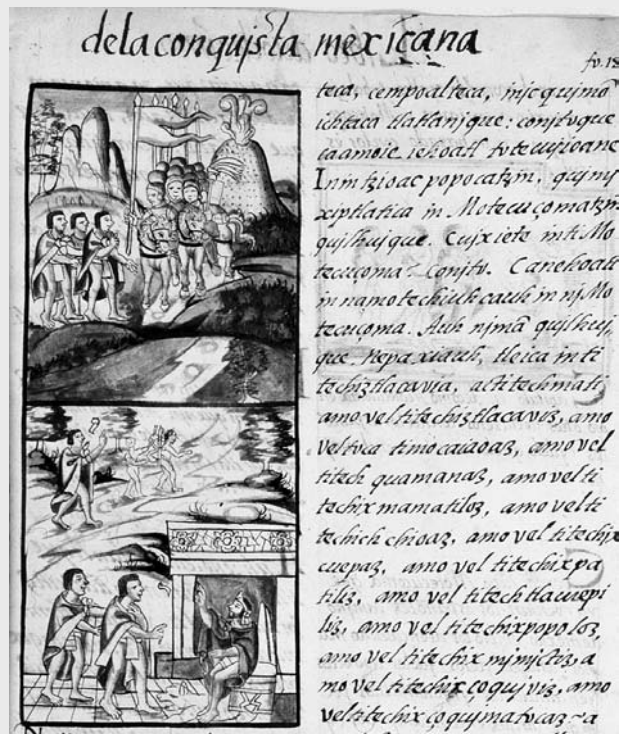
Tenochtitlan's armies achieved this by force. But the Aztecs did not defeat all their opponents. They suffered defeats against the Tarascan city-state and also at Metztlán in the late fifteenth century. And Tlaxcala never capitulated. The Aztecs reached accommodation with others. Under

➤ MOTECUHZOMA II'S EMISSARIES TO CORTÉS

Tenochtitlan's last independent ruler-commander, Motecuhzoma II (r. 1502–1520), sent five high-ranking emissaries to Hernán Cortés when he arrived at the coast in 1519. According to Cortés, they offered submission, showered him with gold and other gifts, and sought to clarify how much tribute Spain would require the Aztecs to pay. Motecuhzoma only asked that for political reasons, the Spaniards should not enter the Valley of Mexico.

Bernardino de Sahagún's *Florentine Codex*, an Aztec account, tells a different story. According to Sahagún's informants, Motecuhzoma and his astrologers had witnessed omens foretelling calamity years before the Spaniards arrived. Then when Cortés landed, Motecuhzoma mistook him for Topiltzin Quetzalcoatl, the mythical Toltec lord and deity who had presumably returned home to reclaim his dominions. Motecuhzoma's emissaries delivered Topiltzin Quetzalcoatl's accoutrements to Cortés. But Cortés seized and shackled these men. Then he fired his cannon as a show of force. This terrified the emissaries and in turn demoralized a now-despondent, virtually paralyzed Motecuhzoma.

Did the Aztecs truly take the Spaniards for gods? Why did Motecuhzoma not move to annihilate Cortés's small force before it entered Tenochtitlan? This cross-cultural encounter between previously unknown peoples and cultures replayed elsewhere as Western Europeans colonized much



Conquistadores Encounter an Indigenous Delegation, from the *Florentine Codex*, by the Franciscan friar Bernardino de Sahagún, sixteenth century. (Art Resource, NY)

of the globe after 1500. And such questions remain vigorously debated in world history.

—James Douglas Lockhart

Motecuhzoma I (r. 1440–1469) and his adviser Tlacaelel, for example, Tenochtitlan waged quasi wars, known as Flower Wars, against Huexotzingo to take captives and then ritually sacrifice them to the war god Huitzilopochtli.

These exceptions notwithstanding, Aztec military power remained unrivalled throughout Mesoamerica. Later ruler-commanders such as Ahuizotl (r. 1486–1502) asserted Aztec sovereignty as far north as modern-day Michoacán and as far south as the Tehuantepec Isthmus. Mexican diplomacy followed an identifiable pattern, such as at Coixtlahuaca in the late 1450s. There Tenochtitlan claimed its merchants had suffered attack and, seizing on this pretext, dispatched emissaries who demanded redress. Then it de-

clared and waged war. Tenochtitlan's conquest and tributary system proved unstable, however. Its armies returned to the provinces again and again to suppress periodic rebellions. The Aztecs, then, required more than mere military superiority and the threat of punitive campaigns to maintain such a far-reaching multiethnic empire. And they understood this.

To legitimate their power, the Aztecs rewrote history, suppressing others' traditions and emphasizing their alleged Toltec descent. They also created an imperial administration, and their diplomatic efforts included efforts at alliance building in the provinces. Tenochtitlan often allowed local rulers to remain in place, provided tribute flowed uninterrupted to the Aztec capi-

tal. The Aztecs sometimes installed client rulers or arranged political marriages to bind local elites to their rule. They also created an imperial legal code to control provincial judges and the peoples and cultures over whom they presided at the grassroots level.

The Aztecs supervised large central marketplaces at Tlatelolco and elsewhere. These markets partly depended on a long-distance trading class called the *pochteca*. The *pochteca* traveled well beyond Tenochtitlan's sphere of influence. One specialized division of these hereditary merchants, the *naualoztomeca*, quietly adopted local customs and dress in order to discreetly gather intelligence for Tenochtitlan. Mexica foreign policy and its various devices, then, all aimed to facilitate military conquest and also to enforce tribute collection from the provinces, thereby enhancing Aztec power.

—James Douglas Lockhart

Bibliography

- Lockhart, James, ed. and trans. *We People Here: Nahuatl Accounts of the Conquest of Mexico*. Berkeley and Los Angeles: University of California Press, 1993.
- Padden, R. C. *The Hummingbird and the Hawk: Conquest and Sovereignty in the Valley of Mexico, 1502–1541*. Columbus: Ohio State University Press, 1967.
- Schwartz, Stuart B., ed. *Victors and Vanquished: Spanish and Nahuatl Views of the Conquest of Mexico*. Boston: Bedford and St. Martin's, 2000.
- Townsend, Richard F. *The Aztecs*. Rev. ed. London and New York: Thames and Hudson, 2000.

Incan Diplomacy

From Pachacuti Inca's reign (ca. 1438–ca. 1471) until Francisco Pizarro seized the ruler Atahualpa at Cajamarca (1532), Incan diplomacy pursued imperial aims. It sought to expand Cuzco's reach from the Andes and coastal Peru to the Amazon Basin, conceived and implemented strategies to pacify the large multiethnic population of the Andes, and designed policies to peaceably extract tribute and *mita* labor drafts for military, administrative, and large-scale, state-directed construction projects. Like most great empires in world history, the Incan state, or, as the Incas themselves referred to it, Tahuantinsuyo, intended

➤ PEDRO DE CIEZA DE LEÓN

Much of what we know about Incan history derives from the Spanish conquistadores who recorded what they saw and heard and not from the Incas themselves, who lacked writing. Perhaps the most important of these Spaniards was Pedro de Cieza de León. Cieza traveled throughout Peru in the mid-sixteenth century and, aided by translators, interviewed local informants who were probably one or more factions of Incan elites. After Cieza returned to Spain he wrote *Crónica del Perú*. It was eventually published in four parts.

We remain concerned whether early colonial documents like Cieza's *Crónica* recorded history or just myth or merely the impressions of writers who lacked the ethnographic training they would have required to observe, record, and interpret the native voice. Moreover, whether writers like Cieza faithfully and accurately represented Andean traditions or unconsciously superimposed a Hispanic sense of historicity onto what some believe was an ahistorical culture remains vigorously debated.

Ethnohistorian Catherine Julien has proposed a nuanced reading of Cieza and the other chroniclers' accounts. She advocates "excavating" these texts and corroborating whatever facts might be extracted from this sensitive process with those derived from the archaeological record, thus rescuing the native voice through an interdisciplinary all-source methodology. Julien premises this proposal on her belief that Incan history is indeed encoded in Cieza and the others' narratives and that we can recover it.

—James Douglas Lockhart

to assert and consolidate its sovereignty and political economy as far and wide as possible.

Pachacuti and his successors employed several devices to meet these ends. Many of these, such as mummification, ancestor worship, and a solar-oriented theocracy, had pre-Incaic origins. Incan rulers also used political marriage, alliance, and negotiation and, when necessary, intrigue, intimidation, and military force to accomplish these goals. Pachacuti, for example, dispatched an army to explore Peru's southern coastline in the mid-fifteenth century. This Incan force operated jointly with another force from a neighboring

kingdom, Chanca. When the opportunity presented itself, however, Pachacuti ordered his commanders to assassinate the Chancan commanders, thus moving to decapitate and subordinate a rival in what became the war that launched large-scale Incan expansion.

As Cuzco incorporated diverse kingdoms, peoples, cultures, and new lands, its officials expended great effort to preserve and co-opt the so-called *curaca* classes, or the local hereditary nobility, to facilitate Incan administration. Cuzco offered curacas Inca-by-privilege status. The Incas sometimes even attempted to destroy inconvenient local governments, creating curacas where there had been none before. Some refused and resisted assimilation. In most cases, whether the curacas accepted cooptation or not, the Incas took and virtually held their sons hostage. Once in Cuzco these children learned Quechua, the imperial language, and other Incan customs. When these children returned home, they took their place in Incan society as loyal administrators.

Cuzco also resorted to forced resettlement by incorporating the preexisting *mitmaq* institution. This affected individuals, families, and, in some cases, entire communities. As might be expected, these colonists were sometimes rebels whom the state relocated for security purposes. Sometimes they were loyal subjects whom Cuzco dispatched to dissident communities to discreetly surveil suspected troublemakers. The *mitmaq* could also remove potential rivals from the emperor's own family, sending them away from Cuzco. Some resettled volun-

tarily, as was customary in the Andes. Scouts, garrisons, agricultural specialists, and others were called to serve the state in faraway posts. In each case, however, an assertive Cuzco intervened in community life to further imperial statist projects.

Scholars continue to discuss just how successful Cuzco was in achieving these objectives. It is clear, however, that by the time the Spanish conquistadores arrived at Cajamarca, Pachacuti and his successors Topa Inca (r. 1471–1493) and Huyana Capac (r. 1493–1525) had expanded Tawantinsuyu's borders to include present-day coastal Peru and most of Ecuador to the Colombian border and as far south as central Chile. A vast system of sophisticated roads facilitated rapid communication and transportation from one end of the empire to the other. The Incas had also penetrated the Amazon Basin, east of the Andes, although they never pacified the peoples and cultures living there.

—James Douglas Lockhart

Bibliography

- Adorno, Rolena, ed. *From Oral to Written Expression: Native Andean Chronicles of the Early Colonial Period*. Syracuse, NY: Maxwell School of Citizenship and Public Affairs, Syracuse University, 1982.
- Julien, Catherine. *Reading Inca History*. Iowa City: University of Iowa Press, 2000.
- Patterson, Thomas C. *The Inca Empire*. Providence, RI: Berg Publishers, 1991.
- Rostworowski de Diez Canseco, María. *Pachacutec Inca Yupanqui*. Lima: Editorial Torres Aguirre, 1953.

■ Introduction: An Era of Large-Scale Conflicts

War on all scales of combat has been a constant and unhappy fact of human life since at least the rise of Neolithic settlements, but the period 1000–1500 seems to have been an especially bloody one, particularly in Afro-Eurasia. This great expanse of land and seas witnessed almost five full centuries of struggles between Byzantines and Turks, an equally long period of crusading that then spilled over

into the sixteenth century, the thirteenth-century Mongol conquests, Japan's twelfth-century Gempei War and its successful but costly repulse of two massive Mongol invasions in the thirteenth century, Western Europe's Hundred Years' War, the campaigns of Timur-i Leng (Tamerlane), and Chinese counterattacks against the Mongols during the Ming era. This list does not exhaust the catalogue of major wars in Afro-Eurasia during

this half millennium that cumulatively killed and maimed tens of millions of human beings, most of them noncombatants or unwilling participants in these wars, and wasted countless cities, towns, and countrysides. Some of the devastated settlements and areas took generations to recover. As the ruins that still are visible today in regions such as Central Asia bear witness, some never recovered.

Given so many conflicts when war must have seemed a natural human activity, it is not surprising to find even a few mythic wars, military campaigns that never took place but entered into popular lore and even modern historiography. Such a mythic nonexistent war is the supposed Almoravid invasion and conquest of Ghana in 1076. Myth is not needed, however, to validate the fact that for Afro-Eurasia this was an era of bloodshed on a major scale.

In the Americas, wars were an integral part of the many “courage cultures” that were to be found throughout the length and breadth of the hemisphere, although the ethos of the warrior did not infuse the culture of absolutely every society in the pre-Conquest Americas. Despite this widespread warrior culture, conflicts in the Americas tended to be more localized and of smaller scale, with two notable exceptions: the Aztec subjugation of much of central Mexico and, far more significant, the campaigns and conquests that established the Inca empire.

Were this topic to include all of the major conflicts that plagued this era and their many interesting and important facets, it would fill a volume by itself. Let these entries and sidebars and the many entries that appear under other topical headings in this section of this volume suffice to present a glimpse, no matter how incomplete, of this age of major conflicts.

—*Alfred J. Andrea*

The Seljuk Turks and Byzantium— A Byzantine Perspective

The Seljuk migration into the Middle East in the mid-eleventh century initiated major demographic change in the Mediterranean world, as core Byzantine territory in Anatolia became the home of Islamic Turkish tribes. The initial invaders were nomadic Turkmen followers of Seljuk

> ALEXIUS COMNENUS

Alexius I Comnenus (r. 1081–1118) inaugurated the last great period of Byzantine preeminence. He restored Byzantine prestige by stabilizing its currency, strengthening family power, and conducting constant campaigns against and alliances with surrounding powers. The Comnenian dynasty expanded its power through marriage alliances with aristocratic families, negotiations in which Alexius’s mother was often central. The system that Alexius created engaged Byzantium deeply with emerging neighboring states. Best known in the West for his encounter with the crusaders, Alexius is vividly portrayed in contemporary sources. Most First Crusade chroniclers described him as devious and arrogant, but to his daughter, Anna, Alexius was a hero. Her early-twelfth-century laudatory biography of her father, the *Alexiad*, written in classical historical style, is one of the greatest extant Byzantine literary sources. It brings Alexius, his campaigns, the leaders of the time, and the challenges to the Comneni to life from his daughter’s unique but biased viewpoint.

—*Dorothy de F. Abrahamse*

rulers who conducted raids along the Byzantine frontiers. As border defenses were neglected in the third quarter of the eleventh century (1054–1071), incursions increased, and in 1071 Emperor Romanus IV Diogenes (r. 1068–1071) engaged the Seljuk Sultan Alp Arslan in a battle at Manzikert in eastern Anatolia that resulted in a Byzantine defeat and his own capture.

During the civil war that followed, Turkmen in search of plunder and pasture for their flocks poured into Anatolia, where they settled. Anatolia was now divided into Byzantine and Seljuk spheres of authority. The resultant struggle for control of the entire peninsula lasted for more than a century and was marked by major battles, ongoing raids, and the growth of several independent Turkish states. Seljuk rulers developed highly organized polities in their attempt to control the nomadic Turkmen, who continued to transform much of Anatolia from an urban and agrarian to a nomadic economy of raiding and pastoralism.

The Seljuk ruler of Nicaea, located in northwestern Anatolia near Constantinople, took the title of sultan and called his kingdom Rum, the Turkish term for Rome. It expanded to include much of Byzantine territory in southern Anatolia and Syria, including Antioch. When Emperor Alexius I Comnenus (r. 1081–1118) made an appeal for Western warriors that resulted in the First Crusade, his aim was to recover Byzantine control of Anatolia. The crusader siege of Nicaea resulted in the return of western Anatolia to Byzantium, but other crusader conquests became Latin kingdoms, and the Seljuk rulers of Rum moved their capital to Iconium (present-day Konya) in southeastern Anatolia. Alexius's successors John II (r. 1118–1143) and Manuel I Comnenus (r. 1143–1180) stabilized Byzantine borders against the Turks through energetic campaigning and successful diplomacy but did not restore significant territory. In 1180 Manuel Comnenus attempted a major attack on the Seljuk capital of Iconium, but his army was defeated at Myrioccephalon. It was not this battle but the empire's subsequent disintegration that opened Byzantine territory to Turkmen raids once again. A final period of recovery for both Greeks and Seljuks took place during the Latin rule in Constantinople when the Greek rulers of Nicaea (1211–1261) created a prosperous state and a stable peace with the Seljuk sultans in Iconium.

Byzantine relations with the Seljuks were governed by pragmatism rather than ideology. They combined warfare with the use of diplomacy and peaceful interactions, as with other neighboring peoples. Alexius Comnenus and his successors made successful alliances with the Seljuk rulers against rival Turkish powers, and Manuel I Comnenus even adopted by treaty the Seljuk sultan Kiliç Arslan as a son. Byzantine and Seljuk aristocrats lived in exile in each other's courts, and the Byzantine imperial service included Turks who held high offices. They were expected to be baptized as Christians, but no other obstacles hindered their success. Turkish troops fought in Byzantine wars as mercenaries, and Turkish captives were resettled on Byzantine land, where they formed a part of the increasingly multiethnic fabric of the empire.

—Dorothy de F. Abrahamse

Bibliography

- Angold, Michael. *The Byzantine Empire 1025–1204: A Political History*. 2nd ed. London: Longman, 1997.
- Anna Comnena. *The Alexiad of Anna Comnena*. Translated by E. R. A. Sewter. Harmondsworth, UK: Penguin, 1969.
- Brand, Charles. "The Turkish Element in Byzantium, Eleventh-Twelfth Centuries." *Dumbarton Oaks Papers* 43 (1989): 1–25.
- Vryonis, Spiros. *The Decline of Medieval Hellenism in Asia Minor and the Process of Islamization from the Eleventh through the Fifteenth Century*. Berkeley: University of California Press, 1971.

The Jerusalem Crusades, 1096–1272

On November 27, 1095, while preaching the First Crusade (1096–1099 or 1102) at the Council of Clermont against Muslim powers in the Holy Land, Pope Urban II opened to Europe's masses "a new way into salvation," as Guibert of Nogent put it. This papal appeal received an overwhelming response, and the next year a great multitude of crusaders from northern France, Flanders, Norman Italy, and Provence set forth toward the East.

The march through the Byzantine empire and Turkish Anatolia was long and exhaustive. Many died or were left behind. The crusaders were, however, strongly motivated and uncompromising in their zeal to liberate Jerusalem and the Holy Land. In the summer of 1098 the city of Antioch fell to the crusaders, and a year later, July 15, 1099, the expedition culminated in the capture of Jerusalem. The city was plundered, and surviving Muslim inhabitants were expelled from it.

After fulfilling their crusading vow and visiting the holy places of Syria-Palestine, the major part of the surviving crusaders returned home. A minority stayed behind to defend the newly founded crusader states. For the following two centuries, these Latin states in the East were in constant need of manpower and material support from the West. The lack of manpower to defend the crusader kingdom was a major problem especially before the founding of the military orders in the twelfth century, and a new expedi-

tion was organized in 1100 in order to strengthen Frankish power in this region of the Levant.

The main armies of Lombard—French, Burgundian, and German crusaders of this expedition, known variously as the Crusade of 1101 and as the third wave of the First Crusade—were defeated by Seljuk Turks at the Battle of Mersivan in August 1101, and the separate military forces from France and Bavaria were ambushed by the Turks near Heraclea during their march through Asia Minor. The few survivors continued on to Jerusalem.

Over the next two centuries a series of crusades large and small followed upon the successes and failures of the First Crusade, as men and women of every class and from all regions of Europe, from even as far away as Iceland and Greenland, swore sacred vows to travel to the East in defense of the Holy Land. Crusaders probably headed to Outremer (the land across the sea) yearly. Modern historical tradition, however, has bestowed numbers on only seven or eight of these crusades, depending on who is doing the counting.

On Christmas Eve of 1144 Zengi, Muslim ruler of Aleppo and Mosul, captured Edessa, capital of the Frankish county of Edessa. When the news reached Europe, Louis VII of France took the cross as the first European crusader-king. In Germany, papal legate Bernard of Clairvaux preached the crusade to Emperor Conrad III, who decided to join the expedition as well.

The German crusaders who left Europe in May 1147 were severely hit by a flash flood during the march toward Constantinople, and the Turks demolished the main force, which had split into two, only a few days after crossing the Bosphorus. Survivors joined the French, who were following them. While passing the Cadmus Mountains in Anatolia, the combined crusader army was not able to keep formation in difficult terrain, and again the Turks attacked, causing the army great losses. When the survivors finally reached Frankish Antioch, a bitter feud flared up between King Louis and Raymond, count of Antioch, who was supported by his niece Eleanor of Aquitaine, Louis's queen, thereby putting a strain on a royal marriage that was dissolved following their return to Europe.

In July 1148 the crusaders finally reached Syria, where they took part in the siege of Damascus. Due to a tactical blunder, the army was cut off from its water supply and was compelled to withdraw. With the collapse of the siege, the Second Crusade (1147–1149) ended in failure. Despite high expectations, the main accomplishment was the capture of Lisbon and Almeria in 1147 by crusaders making a halt on their way east to take part in the Iberian Reconquista.

Disappointment over these meager results and great losses precipitated a surge of criticism toward crusading. William of Tyre, a chronicler of the late twelfth century, describes the atmosphere in Europe: "Kings and princes . . . had been forced to return, covered with shame and disgrace. Nor were they alone affected. . . . [H]enceforth those who undertook the pilgrimages [to the East] were fewer and less fervent."

On July 4, 1187, Saladin, sultan of Egypt, Damascus, and Aleppo, destroyed a major Frankish army at Hattin and in the weeks following conquered most of the lands, cities, and castles held by the Latins in Outremer. On October 2 Jerusalem itself capitulated to Saladin. Almost as soon as the shocking news reached Europe, arrangements began for a rescue operation. The Third Crusade (1189–1192) was led by several of Europe's most important monarchs: Philip II Augustus of France, Richard I Lionheart of England, and Frederick I Barbarossa, Holy Roman emperor of Germany.

Emperor Frederick marched out from Regensburg in May 1189 with an enormous army. Unlike Philip and Richard who had decided to sail to the Holy Land, Barbarossa preferred the traditional land route through Hungary and Byzantine lands. His crusade came to an end when the elderly emperor drowned in the River Saleph (Calycadnus) on June 10, 1190. Many of his crusaders turned back, and the remaining army, under the command of his son, Duke Frederick of Swabia, entered the Holy Land exhausted by battles and march. After the death of the duke in January 1191, the last German crusaders set sail home.

Meanwhile, Philip II and Richard Lionheart had set forth from Vézelay. During an eventful journey east, Richard sacked Messina and conquered Cyprus from its Byzantine usurper-ruler

Isaac Comnenus, thus initiating Latin rule over the island for almost four centuries. After reaching Palestine in the spring of 1191 (April 20 and June 8, respectively), Philip and Richard joined the siege of Acre, which capitulated in July. Soon thereafter Philip returned home, while Richard continued his campaign. Eventually troubles back home (largely Philip's attempts to conquer Richard's feudal holdings in France) and insufficient forces in the Holy Land forced the English king to enter into a treaty with Saladin in September 1192, a treaty negotiated and sealed by their representatives (the crusade's two most famous princes never met). The treaty recognized the Christians' hold of the coastal strip between Tyre and Jaffa, most of which had been wrested away from Saladin's control, but the main target of the expedition, Jerusalem, remained in Muslim hands. Christian pilgrims, however, were allowed free passage to the city.

The Fourth Crusade (1202–1204), summoned by Pope Innocent III and consisting largely of French, Venetians, northern Italians, and Germans, was aimed at liberating Jerusalem by first destroying the power of the Ayyubid sultan of Egypt (Saladin's brother and successor, al-Adil) by capturing the port city of Alexandria and marching on Cairo. The main body of the crusade force never got any farther than Constantinople. Due to an unforeseen concatenation of events, the crusaders wound up capturing the Byzantine imperial city in April 1204 and establishing the Latin empire of Constantinople (1204–1261). Smaller bands of crusaders did make their way to Syria-Palestine, where they helped stabilize and expand the truncated kingdom of Jerusalem, with its capital at Acre.

Likewise, the Fifth Crusade (1217–1221) was directed toward Egypt; in this case the port city of Damietta in Egypt was its initial target. Once again, the idea was to neutralize the Ayyubid sultan's base of power and then to march to Jerusalem. The enthusiasm toward crusading was, however, fading among the European nobility, and finding a unanimously acceptable leader for the expedition proved to be impossible. Thus, the siege of Damietta was conducted by the papal legate Pelagius, a man thoroughly inexperienced in military matters, and John of Brienne, the king of Jerusalem.

In August 1219 St. Francis of Assisi arrived in order to try to convert Sultan al-Kamil, al-Adil's son and successor. At that point the siege had lasted more than a year, and the king and legate were openly quarreling. Brother Francis set out to the Muslim camp, where he was received in courtly fashion by Sultan al-Kamil, himself a patron of Sufi holy men, and was even allowed to preach (but to no avail). The saint departed the sultan's camp on friendly terms, but the military situation remained unaltered.

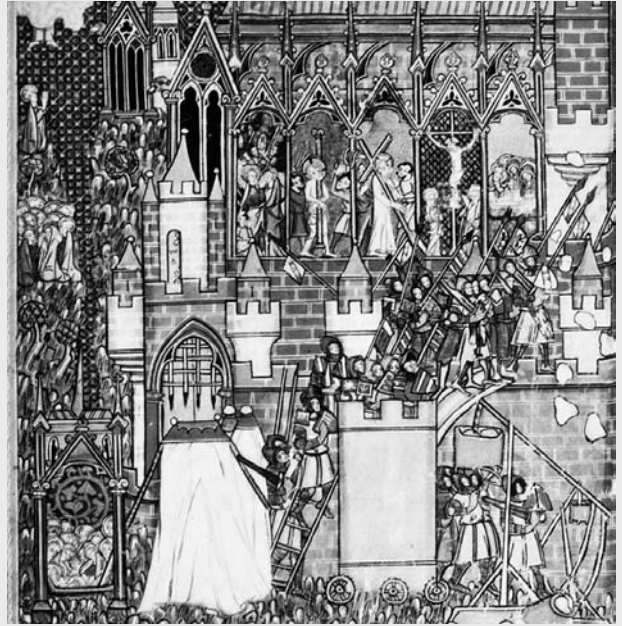
Eventually crusaders were able to capture Damietta in November 1219 without resistance from the city's inhabitants, who were seriously weakened by famine and disease. The crusaders delayed in Damietta until June 1221 waiting for reinforcements from Europe. Sultan al-Kamil even offered Jerusalem back three times in exchange for Damietta, but the offer was repeatedly rejected by Legate Pelagius against the will of the other leaders. Finally, a disastrous attack was launched against the Muslim forces encamped at Mansurah. Crusaders, cut off by the rising waters of the Nile and enemy forces, were compelled to ask for a truce, and the hostilities were ended with an exchange of prisoners and the restoration of Damietta to the sultan. Al-Kamil, noted for his diplomacy and generosity of spirit, treated the defeated crusaders well, even supplying them with food and allowing them to retire from Egypt unhampered. Nevertheless, the failure was bitter, especially when the crusaders had earlier been offered Jerusalem. In his reproach, William the Cleric writes that clerks should leave fighting to knights and instead concentrate on reciting the Scripture and Psalms.

Jerusalem was recovered, for a short while, by Emperor Frederick II in 1229 during what some call the Sixth Crusade (1227–1229). Ironically, it was accomplished largely through diplomatic and not military means and by a crusader who lay under the ban of excommunication. Frederick's crusade vow, initially sworn in 1215, had outlived two popes, and Gregory IX finally excommunicated the emperor in 1227 for his long delay. Despite that ban, Frederick insisted on embarking for the Holy Land, in large part because his marriage in 1225 to Isabelle of Brienne, heiress of the kingdom of Jerusalem, gave him a claim to that kingdom. In May 1228 he set

► THE CONQUESTS OF JERUSALEM, 1099, 1187, AND 1244

After years spent on armed pilgrimage, Frankish crusaders captured Jerusalem on July 15, 1099. Western sources, quoting the Scriptures, stress the totality of the killing that ensued. Raymond of Aguilers reports, with obvious exaggeration, that in the Temple of Solomon (al-Aqsa mosque), infidels were slaughtered until the floods of blood reached the horses' bridle reins. Crying with joy, crusaders entered the Church of the Holy Sepulcher, the legendary place of the burial and resurrection of Christ, and the *umbilicus mundi*, the navel of the world, for medieval Christians. The city was pillaged, and its surviving Muslim and Jewish inhabitants were expelled.

On July 4, 1187, the allied forces of the kingdom of Jerusalem, the county of Tripoli, the two major military orders (Templars and Hospitalers), and various recently arrived crusaders were crushed by Saladin at the Battle of the Horns of Hattin near Tiberias. In the aftermath of the battle, the Franks lost the relic of the True Cross, and King Guy of Lusignan and many nobles were taken captive. After Hattin, Saladin marched toward Jerusalem. The defense of the city was led by Balian II of Ibelin, the native-born lord of Nablus and one of the few nobles who had been able to escape from Hattin. The defenders fought bravely, but there were too few of them. To avoid massacre and enslavement of the survivors, the Frankish leaders decided to plead for safe conduct in return for surrender. Saladin refused, citing the conquest of 1099 and claiming that Muslims would deal with crusaders just as crusaders had dealt with the population of Jerusalem in 1099. Balian responded by threatening to kill women and children, burn the city, desecrate Muslim holy places, and slaughter all Muslim prisoners held in the city. In response, Saladin granted the Franks an assurance of safe conduct against ransom. Queen Sibylla of Jerusalem and some other noble ladies were exempted from payment. Despite Balian's best attempts to raise the required money to redeem all of Jerusalem's Latin Christians and the generous release of several thousand Franks without ransom by



Illuminated manuscript depicting the capture of Jerusalem in 1099 during the First Crusade. (Library of Congress)

Saladin and his brother al-Adil, a number of the city's poorest—anywhere from 11,000 to 16,000—were enslaved.

Jerusalem was returned to Latin Christian control by the treaty of 1229 between al-Kamil and Frederick II. Jerusalem was recaptured by the Muslim lord of Transjordan in 1239, but a temporary alliance with the sultan of Egypt allowed the Franks to reoccupy the city in 1241. In 1244 Khorezmian bands in the service of the sultan of Egypt stormed the city. After the surrender of the citadel, the Franks left Jerusalem for good. During the march out, the citizens saw Frankish flags waving from the towers, and the majority of fighting men turned back assuming that a rescue force had arrived. As soon as they got inside the walls, they were ambushed and killed by Khorezmians. Those who had continued the march endured harassment all the way to Jaffa. Only a couple hundred survived.

—Sini Kangas

sail with a small army consisting mainly of German and Sicilian crusaders. Despite the size of his force, the situation was favorable due to dynastic problems that confronted Sultan al-Kamil. Negotiations between the emperor and the sultan ended in a treaty in February 1229 that returned Jerusalem, Bethlehem, and Nazareth to Christian rule and secured a truce for ten years that allowed freedom of worship in Jerusalem to both Christians and Muslims. The treaty was criticized by Christians and Muslims alike as a betrayal of religion. In Italy, Pope Gregory IX gave an order to attack imperial lands in Apulia, an attack that ended disastrously for the papal forces.

In 1244 Jerusalem was reconquered for Islam in a bloodbath by Khorezmian mercenaries from Central Asia who had fled west to escape the Mongols. King Louis IX of France, the last European monarch truly attached to crusading, was the West's only ruler to react to the loss of Jerusalem by taking the cross, thereby initiating the Seventh Crusade (1248–1254). Louis planned the crusade carefully. Supplies were sent to Cyprus in advance, and shipping was organized directly from southern French ports. The king sailed forth from Aigues-Mortes in August 1248 with Queen Margaret and a great army.

Damietta was again chosen as the first target. Remembering the horrors of 1218–1219, the citizens left without fighting. From Damietta, the crusaders marched out in November 1249 intent on attacking Cairo by way of the Nile Delta. As in 1221, Muslims cut off the crusaders. Infectious diseases broke out, and Louis was compelled to surrender to the sultan while trying to retreat toward Damietta. Queen Margaret had stayed behind in Damietta. Within a few months she gave birth to Prince John, organized the defense of the city, negotiated a treaty, and gathered ransom for the king. After surrendering Damietta in May 1250, the majority of crusaders sailed home. King Louis and his remaining force sailed to Acre, where the French king stayed until April 1254 rebuilding the defenses of the coastal cities. After Louis returned to France, the French maintained a garrison in Acre until 1286.

Louis IX never forgot the failure of 1250, and after the crusader city of Antioch fell to the

Mamluk sultan Baybars in 1268, Louis decided to take the cross for the second time. The crusade of 1270, sometimes called the Eighth Crusade, was planned to begin with the conquest of Tunis, a supplier of Mamluk Egypt, and the conversion of its emir, who Louis wrongly believed was ready to become a Christian. The landing near ancient Carthage was successful, but soon thereafter a severe epidemic broke out in camp. Among the dead were King Louis and Prince John, who had been born in Damietta. The new king, Philip III, who had accompanied his father and two brothers on crusade, was gravely ill, and his queen, Isabelle of Aragon, died while giving birth to a stillborn child. Because of Philip's incapacity, Louis's brother, Charles of Anjou, who had arrived on the day of King Louis's death, took over command of the army and negotiated a peaceful withdrawal and favorable truce with Emir al-Mustansir.

Prince Edward of England had planned to link up with King Louis at Tunis. With the retreat of the French from northern Africa, Edward's plans changed. He sailed to Acre by way of Sicily. Arriving there in May 1271, he campaigned off and on (largely off) for a year before giving his blessing to a peace treaty with the Mamluk sultan in 1272. On his way back home Edward discovered that his father, Henry III, had died, and Edward was now King Edward I.

Even before the ten-year truce of 1272 had run its course, the Mamluks of Egypt and Syria renewed their pressure on the last remaining Frankish holdings in Syria-Palestine. One by one they fell until finally Acre, the last remaining Latin stronghold on the coast of Palestine, fell to Sultan al-Ashraf in May 1291. With the loss of Acre the kingdom of Jerusalem came to an end, although Latin kings on Cyprus continued to bear the title of king of Jerusalem for several additional centuries.

The period of the great crusades to the Holy Land was over, but the crusades themselves had not ended. Throughout the fourteenth, fifteenth, and sixteenth centuries and arguably down into the seventeenth and eighteenth centuries, various Catholic powers in Europe continued to lay plans for the liberation of Jerusalem and battled Islamic forces, largely (but not always) the Otto-

man Turks, in the Mediterranean and even along the Atlantic coast of northern Africa, all in the name of holy crusade.

—*Sini Kangas*

Bibliography

- Andrea, Alfred J. *Encyclopedia of the Crusades*. Westport, CT: Greenwood, 2003.
- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 2000.
- Madden, Thomas F. *A Concise History of the Crusades*. 2nd ed. Lanham, MD: Rowman and Littlefield, 2006.
- Murray, Alan V. *The Crusades. An Encyclopedia*. 4 vols. Santa Barbara, CA: ABC-CLIO, 2006.
- Riley-Smith, Jonathan. *What Were the Crusades?* 3rd ed. San Francisco: Ignatius, 2002.
- Setton, Kenneth M., ed. *A History of the Crusades*. 2nd ed. 6 vols. Madison: University of Wisconsin Press, 1958–1989.
- Tyerman, Christopher. *Fighting for Christendom: Holy War and the Crusades*. Oxford: Oxford University Press, 2004.
- Tyerman, Christopher. *God's War: A New History of the Crusades*. Cambridge, MA: Belknap, 2006.

Counter Crusades and Jihads— From Zangi to the Reconquest of Acre, 1291

The First Crusade (1095–1099 or 1102) witnessed Latin Christian armies carving out small principalities in the Levant at the expense of Islam and various Eastern Christian polities. The crusaders were successful militarily, destroying a Seljuk Turkish army at Dorylaeum in 1097 and then besieging and taking the important cities of Edessa and Antioch on the way to their ultimate prize, Jerusalem. The Holy City was finally captured on July 15, 1099, and a substantial percentage of the population was put to the sword. The crusaders' attacks upon Islamic populations in Anatolia, Syria, and Palestine became a rallying point for Muslims throughout the region, and an Islamic counter-crusade developed at the beginning of the twelfth century.

Over the first decades of the twelfth century, the Latin crusaders consolidated their rule by systematically taking such eastern Mediterranean coastal ports as Tyre, Beirut, Jaffa, and Acre,

securing the means for direct reinforcement from Europe while extending in significant ways Western European involvement in the lucrative Mediterranean maritime trade routes. This was especially true for the Italian merchant cities of Genoa, Pisa, and Venice. By the 1140s the Christians controlled the Levant from the Taurus Mountains to the Sinai Peninsula, having carved out for Latin Christendom the County of Edessa, the Principality of Antioch, the County of Tripoli, and the Kingdom of Jerusalem.

But this period also saw the rise of Islamic resistance under two powerful Sunni Turkish rulers, Imad al-Din Zangi and his son Nur al-Din. Zangi used his position as *atabeg* (governor) for the young Seljuk prince of Mosul to capture Aleppo from the Christians in 1128. The Great Seljuk empire was now in decline, allowing Zangi to expand his influence and territory, culminating in the seizure of the crusader stronghold of Edessa in 1144. Zangi was assassinated two years later.

Nur al-Din built on his late father's legacy, taking the independent Islamic city of Damascus in 1154, then turning his attention on Egypt where the Shia Fatimid dynasty was in control. Under military pressure by the crusaders in Palestine, the Fatimids allowed Nur al-Din's forces to enter Egypt in order to keep the Nile under the banner of the Crescent. In 1169, Nur al-Din acknowledged that the Kurdish general Saladin (Salah al-Din Yusuf) represented his interests in Fatimid Egypt, not that he had much choice in the matter, and in 1171, with the death of the Fatimid caliph of Egypt, the authority of Sunni Islam was reinstated there. Saladin acknowledged Nur al-Din's nominal overlordship but in fact acted independently in Egypt.

Saladin proved to be an extraordinary general and statesman for the cause of Islam. After Nur al-din died in 1174, Saladin proclaimed the Ayyubid sultanate in Egypt (named after his father, Ayyub) and used his wealth and position there to begin a campaign to wrest control of Syria from his Islamic rivals. Over the next 13 years, Saladin acquired Damascus and Aleppo and gained nominal power over Mosul as well. Now the most powerful figure in Islam, Saladin marshaled his resources and challenged the crusader

► DEFENDING THE “KINGDOM OF HEAVEN”— TURCOPOLLES AND THE CRUSADER ART OF WAR

The challenge of maintaining Latin possessions so far from Western Europe forced the crusaders to seek new ways to meet their manpower needs. To supplement their numbers and readdress the tactical disadvantage to Seljuk horse archers, the armies of the various crusader states hired Turcopolles (Sons of Turks), indigenous mercenaries who served as mounted archers and other types of light cavalry, a way of fighting that was foreign to the heavy cavalry-based armies of Christian Europe. Turcopolles became a standard feature of crusading warfare, serving as large native contingents in the armies of lay rulers and the Military Orders while often retaining their own officers.

These troops came from various sources. The original Turcopolles were ex-Muslim soldiers who converted to Christianity because the early crusaders would not allow Muslims to serve in the military. If recaptured by Muslim forces, they were invariably executed as apostates. Subsequently, the term “Turcopole” was applied to the offspring of Christian and Muslim marriages and to Eastern Christians (Byzantine Orthodox and Armenian) who fought using Muslim equipment and tactics. In battle, Turcopolles usually rode quick, light, hot-blooded horses and fought with saber, javelin, or the short composite bow characteristic of Eurasian horse archers. They acted as scouts or flank guards, important duty in the mountainous terrain of the Levant. The Turcopolles became so important to the crusader art of war that their commander, the Grand Turcopolier, was a high-ranking officer in the king of Jerusalem’s chain of command, ranking just below his second in command, the marshal.

—Brian Todd Carey

states directly, obliterating a large Latin army at Hattin on July 4, 1187. That same year he besieged Jerusalem and negotiated the transfer of the city into Muslim hands on October 2, foregoing what would have certainly been a massive retaliatory bloodletting in revenge of the Christian sack of 1099. He also swept away most of the remaining crusader-state holdings with the exceptions of Tyre, Antioch, and Tripoli.

Saladin’s recapture of Jerusalem and adjacent lands precipitated the Third Crusade (1188–1192), pitting the Kurdish ruler against the capable English king Richard I. Richard and his army successfully retook most of the coastal plains, including the important port of Acre in 1191. And although Richard beat Saladin on the battlefield at Arsuf that year, the crusaders were ultimately unsuccessful in their main goal of recapturing the Holy City for Christendom. Still, the Third Crusade breathed new life into the crusader occupation. Saladin died in 1193, although his Ayyubid Dynasty would dominate the Near East for another 60 years.

Saladin’s successors controlled the Ayyubid sultanate from their capital in Cairo based on a loose confederation of princes ruling from such capitals as Damascus and Aleppo. These princes maintained their power against rivals through the use of soldier-slaves known as Mamluks, steppe warriors from southern Russia. The Ayyubids were powerful enough to resist the assault of the Fifth Crusade (1217–1221) on Egypt during 1218–1221 but weak enough to negotiate with the Holy Roman emperor Frederick II in 1229 to return Jerusalem to Christian control. Ayyubid continued to decline over the next two decades. In 1250 the Mamluk bodyguard in Cairo murdered the newly enthroned Sultan Turah Shah and seized Egypt, setting up a new ruling dynasty that would last until 1517. Other Ayyubid princes tried to reassert control over Egypt, but the appearance of a powerful new enemy in the East, the Mongols, realigned regional strategic priorities.

The Mongols first appeared in western Eurasia between 1236 and 1242 when Chinggis Khan’s grandson Batu Khan invaded Russia and Eastern Europe, forcing Christendom to mobilize against the steppe warriors. A succession problem in Karakorum possibly aborted the Mongol conquest of Europe, but hostilities against powers to their west resumed in 1256 when another of Chinggis Khan’s grandsons, Hulagu, attacked Islamic possession in the Near East. The Ismaili Order of the Assassins was eradicated in 1256, while Baghdad, the traditional seat of Islam since 762, was brutally sacked in 1258. Hulagu next turned his attention on the Levant but was

defeated and rolled back in 1260 by a Mamluk host at Ayn Jalut (the Spring of Goliath), which is located in the northern Galilee in present-day Israel. The significance of that defeat is debated by historians, but it did mark the deepest advance into Syria-Palestine by the Mongols.

In 1262 the strategic situation in the Near East changed radically. The Mongol empire founded by Chinggis Khan and expanded by his grandchildren was finally breaking into smaller khanates, often antagonistic toward one another. The two westernmost of these, the Golden Horde in Russia and the il-khanate of Persia centered in Mesopotamia (Iraq) and Iran, sought alliances with established powers. The Golden Horde formed an alliance with the Mamluks in Egypt, and the Il-khans sought to combine forces with the crusaders. For their part, the Latin Christians were enthusiastic about an alliance with the Mongols, but both the logistical challenges of linking forces so far apart and the gradual conversion of the Il-khans to Islam dashed Christian hopes. By the 1260s the Mamluks, fresh off an impressive victory at Ayn Jalut, began to press their advantage against remaining crusader states.

The architect of the Mamluk victory over the Mongols was Sultan Baybars I. He and his successor Kalavun whittled away at the remaining crusader strongholds, seizing Antioch in 1268 and Tripoli in 1289. Soon, only the port of Acre remained in Christian hands. Despite one last Christian reinforcement of Acre by Venetian and Aragonese galleys, the city was finally taken after a bloody siege at the end of May 1291 by a massive Mamluk army commanded by Kalavun's son and successor, al-Ashraf Khalil. The 200-year crusader occupation of the Levant was over.

—Brian Todd Carey

Bibliography

- Amitai-Preiss, Reuven, and David Morgan. *Mongols and Mamluks: The Mamluk-Ilkhanid War, 1260–1281*. Cambridge: Cambridge University Press, 1995.
- Gabrieli, Francesco, ed. and trans. *Arab Historians of the Crusades*. Translated from the Italian by E. J. Costello. Berkeley and Los Angeles: University of California Press, 1969.
- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 1999.

Lyons, Malcolm C., and D. E. P. Jackson. *Saladin: The Politics of Holy War*. Cambridge: Cambridge University Press, 1997.

Marshall, Christopher. *Warfare in the Latin East, 1192–1291*. New York: Cambridge University Press, 1992.

Riley-Smith, Jonathan. *The Atlas of the Crusades*. New York: Facts On File, 1990.

The Baltic Crusades, circa 1150–1500

A frontier region between Christianity and paganism, as well as between Western (Latin) and Eastern (Russo-Byzantine) Christendom, the Baltic Sea formed a link among a number of culturally, linguistically, and ethnically diverse peoples. By 1400 paganism had at least officially been defeated by the Christian faith, but the division between the Christian denominations turned out to be a permanent one. In the course of the era of the crusades, the Baltic peoples became absorbed into the Western Church. Except for the Spanish Reconquista, no other crusade had such a lasting effect.

In the autumn and winter of 1146–1147, Bernard of Clairvaux, papal legate, was preaching in the territory of the German (Holy Roman) empire in order to win support for the Second Crusade in the East. The southern coast of the Baltic already had a long tradition of warfare between Christians and neighboring pagans, and numerous missions had been launched by the German archbishops of Bremen, Magdeburg, and Bamberg but without any major result. Now, in 1147, rather than fighting Muslims in the Holy Land, many among the Danish and Saxon nobility preferred to attack the heathen Wends to their east, and a number of Saxon lords requested leave to wage holy war against these pagans under the patronage of the pope.

As a result, Pope Eugenius III issued the bull *Divina dispensatione* in April 1147 declaring that those who fought against pagans in the Baltic would receive the same remission of sins as those who traveled to Jerusalem. By the formal inclusion of the northern pagans as the enemies of the Church, the original scope of crusading, the liberation of the Holy Land, was radically extended.

➤ CONVERSION OF THE FINNS

The Christianization of the Nordic countries was a parallel process to the establishment of permanent hereditary kingship. The king, backed by a military elite, played a central role in the founding of the Roman Church in the realm of medieval Sweden, which also included the area of present-day Finland. The Church, in return, provided important support for the institutionalization of central power.

The conversion of the Finns was a gradual nonconflictual development fueled by commercial exchange rather than a result of military campaigning. According to archaeological findings, a chain of early medieval chapels existed in Finland, and there is evidence of predominantly Christian burial practices there around 1040–1150, about the same time as in Dalecarlia and Gotland in present-day Sweden.

According to a later medieval legend, however, the Christianization of the Finns began in 1155 or 1158 with a Swedish crusade led by King Erik IX Jedvardsson (ca. 1153–ca. 1160) and the bishop Henry, later the patron saint of Finland. The tradition of St. Henry describes the Swedes slaying the pagans in a great battle and then returning to Sweden (where Erik was later venerated as Sweden's patron saint). Bishop Henry, who stayed behind preaching the gospel, was soon martyred by the savage tribesman Lalli. After the murder, Henry's sainthood became widely known through a series of powerful miracles. The funerary chapel in Nousiainen became a popular center of pilgrimage during the late Middle Ages.

Authentic twelfth-century sources concerning St. Henry do not exist. The earliest versions of the legend and liturgy of the saint date from the last quarter of the thirteenth century. Likewise, the first extant papal reference to St. Henry dates from 1296, and no document of canonization has survived. It seems probable, therefore, that the cult originated from later ecclesiastical imagination rather than a crusade.

—*Sini Kangas*

The first officially launched crusading campaign in the Baltic, the so-called Wendish Crusade, took place in the summer of 1147. The army consisted of Danish and Saxon crusaders under Duke Henry the Lion of Saxony and two rival claimants to the Danish throne, Sven Grathe (r.

1147–1157) and Canute V (r. 1147–1157), who first exchanged hostages before embarking on this common enterprise. After baptizing the garrison of the Wendish town of Dobin, the crusaders ravaged pagan lands and burned a pagan temple in Malchow. Next the army turned against the Christian city of Stettin, which narrowly escaped an attack by displaying crosses on the city walls. The crusader army dispersed in autumn with little to show in the way of success.

The Wendish Crusade hardly differed from a traditional summer raid against the pagans. This was, however, the start of systematic colonization of the southern Baltic by German-speaking settlers. The process took several centuries, gradually extending German control over Silesia, Prussia, Latvia, Estonia, and Lithuania up to Lake Peipus (Peipsi), which today lies along the border of Estonia and Russia.

After 1147, Danish kings continuously led expeditions against the Wends. In 1168 King Valdemar I (r. 1157–1182) established permanent Christian rule over the island of Rügen. Encouraged by Pope Alexander III in 1171, Danish interests then were directed toward Estonia. The crusade had little success until the battle of Lyndanese in 1219, which enabled the building of the fortress of Reval (Tallinn) in the same year. Danish grip on Estonia, however, remained limited to northern coastal cities.

In the spring of 1200 German crusaders set out toward the mouth of the River Düna under the newly consecrated bishop of Livonia, Albert of Buxhövdén. Riga was founded in the next year, and the founding in 1202 of the religious order of Sword Brothers as a permanent force under the bishop's command enabled the strengthening of German power in Livonia.

By 1215, campaigning was extended from Livonia toward Estonia, where crusader warfare was especially cruel despite papal complaints regarding the harsh treatment of pagans. Men were killed, women and children were taken into captivity, and villages were burned. Subsequent war parties ravaged the land between 1215 and 1224 until the area was exhausted by famine. Livs and Estonians responded by applying for the help of Russian princes.

Even though Orthodox Russians had not made any great effort to convert the Baltic lands,

they objected to losing the tribute paid for them by local chieftains. The conflict was soon extended into a struggle between the Eastern and Western Churches. The German conquest continued until 1242, when Prince Aleksandr Nevskii defeated the Teutonic Order at the Battle of Lake Peipus, thus bringing the order's eastern expansion to a halt.

After the death of Albert of Buxhövden, Livonia was taken over by the Teutonic Order. The Order, originally established in the Holy Land in 1198, had been invited to the area by the Polish prince Conrad of Masovia, who offered Kulmerland to the knights in return for the protection of the frontier against pagan Prussians. In 1237, the Sword Brothers were assimilated into the Teutonic Order.

By 1290 Prussia and Livonia were turned into an autonomous monastic state. Despite the setbacks of Prussian revolts in 1240–1249 and 1260–1283, the order was able to expand its power farther east toward Estonia, where the Danes were bought out in 1346. In Prussia a German-speaking population became dominant, while in Livonia and Estonia Germans remained a minority. In 1309 the headquarters of the order was moved from Venice to Marienburg in Prussia.

In 1386 Lithuania, the last pagan power in the Baltic, and Poland formed a dynastic union by the marriage of Lithuanian grand duke Jogaila (Jagiello) and Queen Jadwiga of Poland. As a condition for the marriage, the duke was converted to Catholic Christianity. In July 1410, a joint army of Poles, Lithuanians, Czechs, Russians, and Mongols gathered their forces and inflicted a crushing defeat to the Teutonic Order at the Battle of Tannenberg.

The Teutonic Order never recovered from the severe economic and political consequences of the defeat. Renewed warfare between Poland and the knights and the formation of the powerful Prussian League in 1440 dictated the gradual downfall of the Teutonic Order in the Baltic. In 1525 Grandmaster Albert of Brandenburg-Ansbach transformed the remaining Prussian lands into a hereditary fief of the Hohenzollerns. Similar development followed in Livonia, where Landmaster Gotthard Kettler likewise became a fief-holder under the Polish Crown in 1561.

By contrast to the southern Baltic, where feudal conquest and conversion went hand in hand, the conversion of western Finland, then under the control of Sweden, was conducted peacefully by the early thirteenth century, causing no major dispute between the freeholding peasantry and Swedish aristocracy. In eastern Finland, Tavastia, Savolax, and Karelia, the Eastern and Western Churches competed for religious power. In 1242 the first major conflict between Russians and Swedes over possession of Tavastia ended in Swedish victory. The first surviving peace treaty of Nöteborg (Pähkinäsaari) between Sweden and Novgorod, dated to 1323, ended a lengthy period of hostilities.

—Sini Kangas

Bibliography

- Christiansen, Eric. *The Northern Crusades*. 2nd ed. London: Penguin, 1997.
- Housley, Norman. *The Later Crusades, 1274–1580*. Oxford: Oxford University Press, 1992.
- Johnson, Edgar N. "The German Crusade on the Baltic." In *A History of the Crusades*, Vol. 3, *The Fourteenth and Fifteenth Centuries*, edited by Kenneth Setton. Madison: University of Wisconsin Press, 1975.
- Murray, Alan V., ed. *Crusade and Conversion on the Baltic Frontier, 1150–1500*. Aldershot, UK: Ashgate, 2001.
- Villads Jensen, Kurt. "Denmark and the Second Crusade: The Formation of a Crusader State?" In *The Second Crusade*, edited by Jonathan Phillips and Martin Hoch. Manchester, UK: Manchester University Press, 2001.

The Reconquista in Spain

Much of the early history of the Reconquista in Spain, the centuries-long effort by Christians to reconquer Spain, is shrouded as much in fiction as in historical fact. Primary sources do record that when Muslim armies, made up largely of Berber troops, crossed over from North Africa into the Iberian Peninsula in 711, the Visigothic rulers of Spain were quickly defeated, and the Muslim conquerors proceeded to take over almost all of the Iberian Peninsula. The Muslims were stopped in their advance into northwestern Spain in 718 at the Battle of Covadonga, and it is from this mountainous region called Asturias



that later traditions claimed to be the starting point for the Christian reconquest of Spain.

For approximately the next 300 years, the Muslim dynasty of the Andalusi Umayyads, based in their capital of Córdoba, exercised control over much of the Iberian Peninsula. The small Christian kingdoms across the northern tier of the peninsula had made modest advances and controlled the regions of León, Castile, Aragón, and Navarre and the county of Barcelona. However, with the fall of the caliphate of Córdoba in 1031, al-Andalus (Islamic Spain) broke apart into tiny entities called *taifa* (factional) kingdoms. With this breakdown in central authority in Muslim lands, the Christian Reconquista began again in earnest, and the capture of a number of cities, including Barbastro in 1064 and then Toledo in

1085 by the armies of Alfonso VI of León-Castile (r. 1065–1109), signaled expanding Christian control over central Spain.

In response to the growing Christian threat looming from the north, Muslim rulers in several of the *taifa* kingdoms appealed for assistance from a new power emerging in North Africa, a Sanhaja Berber tribe called the Almoravids. This puritanical Muslim sect had conquered what is today Morocco and Algeria and spread northward to Spain in 1086. During this same period of Almoravid rule can be found the exploits of Spain's medieval national hero, Rodrigo Díaz de Vivar, popularly known as El Cid (ca. 1043–1099), who during the course of his military career fought for both Muslims and Christians and came to symbolize the shifting allegiances typical in

relations between Muslims and Christians in medieval Spain.

In the end, Almoravid rule was short-lived, as many of the newly arrived North Africans succumbed to the temptations of the more sophisticated lifestyles enjoyed by the Andalusian Muslims. As a result, a Christian advance, spearheaded by the kingdoms León-Castile and Aragon, pushed the Almoravids below Spain's geographic midpoint by about 1140. The mortally weakened Almoravids were displaced by a second Berber fundamentalist army, the Almohads, that crossed over from North Africa in 1146, conquered much of the same territory previously held by the Almoravids, and brought to a momentary halt the Christian advance in central Spain. Even so, a combined army of Iberians and crusaders from the north on their way to the Second Crusade captured Lisbon in 1147, and by 1250 the kingdom of Portugal, led by the efforts of King Sancho II (r. 1223–1248), had pushed its frontiers to their final limit.

Meanwhile, the other Christian Spanish kingdoms had been disputing among themselves during the late twelfth and early thirteenth centuries to the point that Pope Celestine III (r. 1191–1198) and Pope Innocent III (r. 1198–1216) had to remind these rivals that Spain was a crusading zone and that they should be fighting the Muslims and not each other. Shortly thereafter, Alfonso VIII of Castile (r. 1158–1214) led the combined armies of Castile, Aragon, and Navarre (and with substantial assistance from Portugal, León, and the military orders) to a decisive victory over the Almohads at the Battle of Las Navas de Tolosa, not far from Jaen in southern Spain, on July 16, 1212. The battle dealt a heavy blow to Almohad rule in Spain, and this second Berber dynasty subsequently retreated back to North Africa. With the ensuing power vacuum, the Christian armies were able to conquer the major southern cities of Córdoba in 1236 and Seville in 1248.

The last stage of the Reconquista came with the expansion of Christian control over almost all of the Iberian Peninsula, with the only exception being the emirate of Granada at the southern tip of the peninsula. This tiny state was able to hold on for almost 250 years, in part because of the political and diplomatic skills of several of



Seville Cathedral and Giralda Tower in Spain. An example of Moorish architecture, the tower originally functioned as a mosque's minaret in the twelfth century. After the Reconquest of Spain by Christians, the minaret was converted into the bell tower of a Christian cathedral. (Corbis)

its early emirs and also because of the infighting that had broken out again between Spanish monarchs such as Castile's Pedro I the Cruel (r. 1350–1369) and his half-brother Enrique of Trastámara (r. 1369–1379), which resulted in a civil war and Pedro's eventual murder by Enrique. Such distractions often slowed down the progress of the Reconquista movement and gave the Nasrids, the last Islamic dynasty in Spain, room to maneuver and combat the Christians in the waning decades of Muslim rule.

With the marriage of Fernando II of Aragón (r. 1479–1516) and Isabel of Castile (r. 1474–1504), the two Christian kingdoms of Spain were united, at least militarily and diplomatically, and a ten-year siege of Granada began in 1482 that would be the last push of the Reconquista, resulting in a unification of Spain under Christian rule. The last Muslim ruler of Spain, Muhammad XII (known in Spanish as Boabdil), abdicated his throne and surrendered his emirate to Fernando and Isabel on January 2, 1492. The Christian reconquest of Spain was now complete.

Despite the centuries of warfare between Christians and Muslims in the Iberian Peninsula, these centuries also included prolonged periods

► SANTIAGO MATAMOROS

According to legend, the cult of St. James the Apostle (Santiago in Spanish) began at the Battle of Clavijo in 844, a battle that some historians dispute ever took place. Spanish Christians claimed that Santiago had traveled to Spain before his death between 41 and 44 CE, and his body had been returned miraculously to Spain and buried at Compostela. With the construction of a cathedral in the ninth century, Santiago de Compostela became one of the most important pilgrimage sites in medieval Europe. According to the story, Christian soldiers believed that Santiago had appeared on the battlefield wearing full armor, riding a white horse, and bearing a sword and a banner to lead them to victory over the Muslims. From that time on, sources record numerous sightings of Santiago Matamoros (Santiago the Moor Slayer) at battles between Christians and Muslims in the Iberian Peninsula until the last Islamic rulers of Spain were defeated in 1492. With the Reconquista completed in Spain, the cult of Santiago would be brought to the New World and used to motivate the Spanish conquistadors to fight the new infidels, the Indians of Central and South America. A number of early conquistadors, such as Hernán Cortés, were members of the military order of Santiago, which had been founded in 1170 in León, and their battle cry was “Santiago!”

—April L. Najjaj

of trade and cultural exchange among Spain's different religious groups. Américo Castro, one of the twentieth century's foremost scholars on Spain during the period of the Reconquista, coined the term *convivencia* to describe the prolonged economic, social, and cultural interactions common among Christians, Muslims, and Jews in the world of medieval Iberia. Other scholars have suggested the term “coexistence” to be more appropriate.

The mind-set of the Reconquista that prevailed throughout the Middle Ages in Spain, however, did not end in 1492. In the months toward the end of 1491, while the final siege of Granada was concluding, Christopher Columbus came to apply to Fernando and Isabel for funding to pay for a trip across the Atlantic Ocean to

reach the Great Khan in the Indies. The funds they ultimately provided to Columbus enabled him to travel to the New World, where the crusader mentality of medieval Spain found a new home. Likewise, early Portuguese expansion into the Indian Ocean and beyond was characterized by a similar crusader mindset.

—April L. Najjaj

Bibliography

- Barton, Simon, and Richard Fletcher, eds. *The World of El Cid: Chronicles of the Spanish Reconquest*. Manchester, UK: Manchester University Press, 2000.
- Fletcher, Richard. *Moorish Spain*. New York: Henry Holt, 1992.
- Lowney, Chris. *A Vanished World: Medieval Spain's Golden Age of Enlightenment*. New York: Free Press, 2005.
- O'Callaghan, Joseph F. *Reconquest and Crusade in Medieval Spain*. Philadelphia: University of Pennsylvania Press, 2003.
- Reilly, Bernard F. *The Medieval Spains*. Cambridge: Cambridge University Press, 1993.
- Simmons, Marc, and Joan Myers, et al. *Santiago, Saint of Two Worlds*. Albuquerque: University of New Mexico Press, 1991.

Crusades against Heretics— From Languedoc to Bohemia

Historians have long debated what qualifies as a crusade. The traditional view for the past several centuries has been to recognize as proper crusades only those holy wars against Islam in the East that spanned the period 1096–1291 and had at least one of three goals: to liberate the Holy Land, particularly Jerusalem; to assist and defend Eastern Christians; and to defend or expand the crusader states. Yet the late twentieth century witnessed a shift in interpretation whereby a majority of crusade specialists abandoned the traditionalist model and embraced the pluralist model. The pluralist position envisions a longer crusading movement that extended well beyond the thirteenth century into at least the late sixteenth century if not beyond. It also envisions a broader movement that included large numbers of expeditions in Europe proper against Muslims, pagans, papal political opponents, and religious dissenters, or heretics.

The most well-known crusades against heretics were the Albigensian (1209–29) and Hussite Crusades (1420–31), which focused on religious dissenters in southern France (Languedoc) and Bohemia. The former, whose gathering storm, course of fighting, and long aftermath dominated southern French society and politics for most of the thirteenth century, ended in a Catholic victory and the eradication of heresy in its homeland. The latter, whose gathering storm, course of fighting, and long aftermath dominated Czech and German politics for most of the fifteenth century, ended in compromise and without the eradication of heresy in its homeland.

The Albigensians, or Cathars (the Pure) as they called themselves, were deemed heretical by the Catholic Church because they were dualists, believing in two gods, one for the spiritual world and one for the physical world. Many of the beliefs of the Albigensians were similar to the doctrines of Manichaeism, an eclectic faith that arose in Iran and Mesopotamia in the third century CE, and many of the forms of Gnostic Christianity that had flourished in the early centuries CE. Consequently, historians speculate that Catharism originated out of surviving strains of Gnosticism and Manichaeism in the East and traveled west along trade routes, eventually taking root in Languedoc and northern Italy. The southern French town of Albi, which gave its name to this religion, was one of its principal sites.

According to Inquisitors' records, the Cathars believed that the material world is evil, the creation of a god of darkness and corruption. Consequently, they advocated vegetarianism and nonreproductive sex along with a number of other practices that grew out of their rejection of corporeal existence. Perhaps most galling for the established Church, they rejected the sacraments including holy orders, which bestowed on priests their special powers and authority. The Roman Church had begun efforts to convert the Cathars to orthodox belief and practice during the twelfth century, when even the renowned St. Bernard of Clairvaux (1090–1153) preached against them. The Catholic Church's preaching efforts, however, were ultimately unsuccessful, as demonstrated by the existence of at least 11 Albigensian bishoprics in France and Italy by the end of the twelfth century.

THE INQUISITOR BERNARD GUI ON THE HERESY OF THE ALBIGENSIANS

"They [Albigensians] assert that they occupy the place of the apostles, and that. . . the Roman Church, namely the prelates, clerks, and monks, and especially the inquisitors of heresy persecute them and call them heretics, although they are good men and good Christians, and that they are persecuted just as Christ and his apostles were by the Pharisees. Moreover they talk to the laity of the evil lives of the clerks and prelates of the Roman Church, pointing out and setting forth their pride, cupidity, avarice, and uncleanness of life, and such other evils as they know. They invoke with their own interpretation and according to their abilities the authority of the Gospels and the Epistles against the condition of the prelates, churchmen, and monks, whom they call Pharisees and false prophets. . . . Then they attack and vituperate, in turn, all the sacraments of the Church, especially the sacrament of the Eucharist, saying that it cannot contain the body of Christ, for had this been as great as the largest mountain Christians would have entirely consumed it before this. They assert that the host comes from straw, that it passes through the tails of horses, to wit, when the flour is cleaned by a sieve (of horse hair); that, moreover, it passes through the body and comes to a vile end, which, they say, could not happen if God were in it."

—Andrew Holt

Source

J. H. Robinson, *Readings in European History* (Boston: Ginn, 1905), 381–383.

At the beginning of the thirteenth century the Albigensians were clearly growing in number and influence, especially throughout Languedoc, and the Catholic Church found itself increasingly concerned. During the reign of Pope Innocent III (r. 1198–1216), the Church intensified its activity in the region, and these efforts may have served as a provocation for the murder of a papal legate, Peter Castelnau, in 1208. The murder of the legate reportedly served as the spark for Innocent III's calling of the Albigensian Crusade that began in 1209. The nobility of northern France was quite willing to make war against

the wealthy nobility of southern France and responded vigorously to the pope's call for a crusade. The conflict continued with varying degrees of intensity for more than 20 years and did not end until the 1229 Treaty of Paris, which stipulated humiliating terms of surrender for Count Raymond VII of Toulouse. After 20 years of war, the land and vibrant culture of Languedoc were equally devastated. Then the Inquisition moved into the region and began the lengthy process of extirpating the heresy, with occasional outbursts of violence mostly related to the storming of various Albigensian strongholds and castles. The last known Albigensian leader (known as a "perfect") is believed to have died in the early fourteenth century.

The Hussite Crusades, also called the Hussite Wars, were a series of conflicts between Catholics (largely German Catholics) and the Hussites, followers of the Bohemian religious reformer John (or Jan) Huss. Following the death by burning of Huss (1415) as well as the execution of other important leaders of their movement, the Hussites drew up in 1420 the Four Articles of Prague, which demanded the freedom to preach, communion in both kinds (i.e., both wine and bread) for the laity as well as priests, limits on Church property, and the civil punishment of mortal sins including simony (trade for profit in spiritual goods, especially priestly offices). While the conflict between Catholics and Hussites began primarily over religious disagreements, a social divide between the landed and peasant classes as well as the nationalist loyalties of Germans and Czechs also contributed to feelings of mutual hostility.

In the wake of the death of Emperor Wenceslaus of Bohemia in 1419, the Hussites in Bohemia and Moravia banded together to prevent Sigismund, the former emperor's brother and their worst enemy, from coming to the throne. The Hussites had many military successes, as they were better organized and used superior tactics to repulse five crusades between 1420 and 1431. In frustration at so many reports of failure and in the wake of reported attacks on civilians by the Hussites, Joan of Arc in faraway France wrote a letter to Hussite leaders in 1430 threatening to lead a crusade against them. Yet Joan's threat

never came to pass, and the crusaders continued to meet with failure.

In 1433 the Council of Basel was called to provide a venue for negotiations between Catholic and Hussite leaders. Their efforts resulted in allowing a moderate faction of Hussites back into the graces of the Catholic Church, but this compromise was rejected by more radical Hussites. Finally in 1436 a further compromise agreement was ratified between Catholics and Hussites that recognized Sigismund as the king of Bohemia, bringing a temporary but much needed respite from major hostilities. Additional hostilities broke out in the decades to follow, with peace not really being made until 1478, but by then the religious element of the wars had largely disappeared. Regardless of the decreasing religious tenor of later hostilities, the fact remained that the Hussite movement had not been rooted out, and the facade of a single Western Christendom subject to the authority of Rome had been cracked.

In addition to the crusades launched against Albigensians and Hussites, the political crusades that took place in Italy (the so-called Italian Crusades) were often justified chiefly through accusations of heresy. Personal and collective accusations of heresy by the leadership of the Church were often leveled at the pope's enemies, such as Emperor Frederick II (r. 1212–50). Additionally, Catholic clergy complained about the growth of heresy that resulted from their opponents' successful military efforts. For example, in response to the Ghibellines' seizure of church property and abuse of Catholic clergy in northern Italy, Pope Urban IV (r. 1261–1264) lamented that the inability of churchmen to operate in such areas resulted in the spreading of heresy to such a degree that it even affected monastic houses.

—Andrew Holt

Bibliography

- Barber, Malcolm. *The Cathars: Dualist Heretics in Languedoc in the High Middle Ages*. Harlow, UK: Pearson Education, 2000.
- Fudge, Thomas. *The Crusade against Heretics in Bohemia, 1418–1437*. Hampshire, UK: Ashgate, 2002.
- Housley, Norman. *The Italian Crusades: The Papal-Angvin Alliance and the Crusades against*

Christian Lay Powers, 1254–1343. Oxford: Oxford University Press, 1982.

Housley, Norman. *Religious Warfare in Europe, 1400–1536*. Oxford: Oxford University Press, 2002.

Sumption, Jonathan. *The Albigensian Crusade*. London and New York: Faber, 2000.

Thirteenth-Century Mongol Campaigns, Conquests, and Setbacks

From 1209 until 1260 when the Mongol empire split into four warring khanates, Mongol armies marched across Eurasia in all directions and appeared unstoppable. During the reign of Chinggis Khan (1206–1227), the Mongols conquered much of northern China, Manchuria, and Central Asia to the Amu Darya River, although Mongol armies marched much farther than that. One force marched out of Central Asia, crossed the Caucasus and then back to the steppes of Kazakhstan, defeating all who opposed it, while other armies swept into Korea and Afghanistan and even penetrated India.

Ogedai Khan, the second Great Khan (r. 1230–1241), continued the trend by conquering the rest of China north of the Yangzi River and western steppe lands all the way to the border of Hungary, and also momentarily invaded and devastated Hungary and Poland. Other Mongol forces secured Afghanistan, Iran, and Transcaucasia. Only Ogedai's death and the subsequent contest for the Grand Khanate seem to have saved not only Europe, but much of the Middle East, and the rest of China, at least for the moment.

Between 1241 and 1250, few additional conquests took place. A Mongol army under Baiju conquered much of Anatolia, or present-day Asiatic Turkey, but during two long regencies and the brief reign of Ogedai's son Guyuk (r. 1246–1248), little in the way of sustained conquest occurred. Nonetheless, the Mongols raided neighboring states extensively.

In 1250, Mongke Khan (r. 1250–1259) came to power in a coup and sent an army to the Middle East to further expand the empire. Led by his brother, Hulegu, Mongol armies extended their control to the Euphrates, and most of Syria and Palestine, with the exception of the crusader

states, submitted. Meanwhile, Mongke and his brother Khubilai led armies against the Song dynasty in southern China. Mongke's death in 1259 brought the conquests to a halt. Civil war broke out in 1260 throughout the empire, as it split into four pieces. In this same year, in the west, a Mongol army suffered defeat in Palestine at Ayn Jalut, and the Mamluks of Egypt drove the Mongols out of Syria, occupying that region for themselves.

After the civil war, only Khubilai continued successful wars of expansion, primarily because he alone possessed the resources to deal with rebellions and external threats and still had a desire to conquer more territory. The rest of China fell in 1279. In addition, he launched unsuccessful invasions against Japan in 1274 and 1281. On both occasions Japan avoided conquest with the assistance of the *kamikaze* (divine winds), typhoons that destroyed the Mongol fleets. He also launched a series of unsuccessful invasions of various states in coastal and insular Southeast Asia, the largest being an invasion of Java in 1292. The various states and peoples of Southeast Asia played a successful game of guerilla warfare and paying tribute in order to convince the Mongols to depart.

Even with these setbacks, the Mongol empire stretched from the Sea of Japan to the Carpathian Mountains and Mediterranean Sea. Despite this overall record of success, the Mongols suffered a number of setbacks. Throughout their wars, the Mongols lost battles, and defeat was not unknown to them. When defeat happened, the Mongols typically viewed it as a momentary setback that would be rectified in the near future. It was only a question of when.

At times geography and climate proved to slow the Mongols. Lack of pasture in Syria prevented the Mongols from stationing sufficient troops to hold it against the Mamluks. The mountainous terrain and rice paddies of South China slowed the Mongols considerably as it took more than forty years to conquer it. Many Mongols also found the climate and diseases of South China not to their liking. A similar situation occurred when the Mongols entered India. Eventually, the Mongols decided that the long-term conquest of India was detrimental to their health solely because of the hot climate. This,

➤ AYN JALUT—HOW PIVOTAL?

In 1260, an army of Mamluks, led by Sultan Qutuz and his rival Baybars, advanced into Palestine and defeated a Mongol army led by Ket-Buqa on September 3 at Ayn Jalut, in what is today northern Israel. Initially, it appeared that a Mongol victory was near, but desertion by a Muslim vassal and a rally by Qutuz shattered the Mongol forces. Ket-Buqa died in the battle, and the Mamluks drove the remaining Mongols from the field and from Syria.

Often described as a turning point in history, one must ask how pivotal was Ayn Jalut? The key to the answer is one's perspective. For the Mongols, it was a minor setback. Indeed, the troops in the region were considered second rate. When Hulegu invaded Syria, he pulled most of his army back to Azerbaijan after hearing of the death in 1259 of his brother, the Mongol ruler Mongke Khan. Hulegu had no doubt that Syria could be regained and the Mamluks conquered. Unfortunately for the Mongols, civil war prevented their attempting this again until 1299–1300, and then they failed. Simply put, the lack of pasture in the region prevented them from garrisoning sufficient troops there.

From a non-Mongol point of view, the battle's importance only increased with time. For the Mamluks, the battle doubled their empire and inspired other Muslim forces. Not long after Ayn Jalut, a small Mongol army of 6,000 men entered

Syria, only to be defeated by a smaller Muslim army of 1,400 men-at-arms at Homs in 1260. Prior to this, most of the Muslim princes simply surrendered rather than face the Mongols. Thus the victory at Ayn Jalut restored their confidence.

The greatest consequence was the rise of Baybars (r. 1260–1277). After the battle, Baybars killed Qutuz and ruled the Mamluk state and set the foundation for the Mamluk sultanate, which lasted until the Ottomans conquered it in 1516–1517. Baybars then began the systematic destruction of the crusader holdings in the Near East, the last of which fell with Acre in 1291. Baybars also attacked Mongol allies in Lesser Armenia (Cilicia). In addition, Baybars allied himself with the Golden Horde, who became the Il-khanids' primary enemy, despite their shared Mongol blood and Islamic faith. This alliance helped ensure that the Il-khanids could rarely, if ever, focus their attention on the Mamluks.

Ayn Jalut's importance, while often overstated, nonetheless remains. It was not the first defeat of the Mongols or the last. Moreover, it was not the primary reason why the Mongols did not continue their conquests, as is often argued, but it did spell doom for the crusaders, who ironically, had allowed the Mamluk force to pass unhindered through the crusader states on their way to Ayn Jalut.

—Timothy May

however, did not preclude them from launching periodic raids.

Perhaps the biggest setback for the Mongols was the death of a Great Khan. Choosing a new ruler involved a lengthy process that required the presence of the generals and the Mongol princes, thus depriving the armies of leadership. As a result, until a new Khan came to the throne, little more than raiding occurred. Indeed, in many cases, highly successful campaigns ended because of the death of a Khan, such as in eastern Europe in 1241. Mongol armies decimated Hungarian and German forces, as well as a wide assortment of forces in Poland. There is little reason to think that the Mongols would not have continued to move west if not for the death of Ogedai.

Ultimately what halted the Mongol conquests was not so much defeats from external enemies, but rather civil wars. As the four khanates entered a period of almost perpetual warfare, their resources became focused on these endeavors. During lulls, all of the khanates launched other invasions, such as the aforementioned attacks by Khubilai Khan. In addition, Poland and eastern Europe suffered from a number of raids, as did India and Syria. Yet, conquests like those of the thirteenth century did not manifest themselves due to dissension with the empire.

—Timothy May

Bibliography

Amitai-Preiss, Reuven. *Mongols and Mamluks*. New York: Cambridge University Press, 1995.

- Buell, Paul D. *Historical Dictionary of the Mongol World Empire*. Lanham, MD: The Scarecrow Press, 2003.
- Jackson, Peter. *The Mongols and the West, 1220-1410*. New York: Pearson Education, 2005.
- Morgan, David. *The Mongols*. Oxford: Basil Blackwell, 1986.
- Rossabi, Morris. *Khubilai Khan, His Life and Times*. Berkeley: University of California Press, 1988.
- Saunders, J. J. *The History of the Mongol Conquests*. Philadelphia: The University of Pennsylvania Press, 1971.

The Later Crusades

While much attention has been devoted to the eight relatively well-known crusades to the Holy Land (from 1096 to 1272), considerably less attention has been paid to the crusading movement that followed. In fact it is only a recent development in crusading historiography that these later efforts are considered crusades at all. Scholars have generally followed the lead of historian Norman Housley in assigning the so-called later crusades to the period beginning with the Second Council of Lyon in 1274 and ending with the signing of a Spanish-Turkish truce in 1580. Other historians have assigned an even later date for the end of the crusading era, placing it during the reign of Peter the Great in the early eighteenth century. During this period hundreds of conflicts took place from Russia to North Africa and throughout Europe as Christians crusaded against political enemies, Muslims, pagans, and heretics.

Although efforts to expel Muslims from Spain began in the eighth century, it was not until the eleventh century that the Reconquista, the Christian reconquest of the Iberian Peninsula, began in earnest. The growing legitimacy of Holy War in Christian thought and the disunity that affected Muslim Spain following the collapse of the Cordoba caliphate in 1031 provided the inspiration and opportunity for Christian armies to go on the offensive. Over a period of five centuries Iberian, French, and other European Christians launched a series of wars, initiated alliances, and made truces with each other (and sometimes their Muslim opponents) in an effort that would ultimately bring the whole of Iberia under Christian control. The crusaders' efforts only ended



John III Sobieski, king of Poland, defeats the Ottomans under Kara Mustapha Pasha at the gates of Vienna in 1683. The siege was the second and last major effort by the Ottoman Turks to break through Vienna's formidable fortifications. Painting by Franz Geffels, late seventeenth century. (Imagno/Getty Images)

with the capture of Grenada, the last Muslim stronghold in Spain, in January 1492.

Later crusading efforts were also directed toward pagans (those not of the Abrahamic faith) in northern Europe. The so-called Northern, or Baltic, Crusades consisted of military conflicts in the name of Christianity that were waged around the Baltic from the mid-twelfth century into the sixteenth century. They began when Scandinavian rulers found themselves shut off from the long-range overseas conquests of the past and challenged by the newly invigorated Slavic peoples at home. Arguably, the crusading movement against pagans began with the papal authorization in 1147 of a holy war against the so-called heathen of the North and ended at the Russian frontier when the final crusading bull against pagans was issued from Rome in 1505.

Crusading efforts against pagans in Europe were intensified with the end of crusading efforts in the Holy Land at the end of the thirteenth century, which made available considerable additional manpower and resources. After the fall of Acre in 1291, the Teutonic Order moved its headquarters first to Venice and then, in 1309, to Prussia. As the Teutonic Knights established themselves in Prussia and Livonia, their crusading policies came to dominate the foreign policy of these states. As a result, the Teutonic Knights increasingly found themselves waging controversial

» ACCOUNT OF PREPARATIONS FOR THE BATTLE OF LEPANTO, OCTOBER 7, 1571

The following is from an account of the sixteenth-century historian Gianpietro Contarini.

“Then they hoisted their banners and standards on their galleys, and on his Catholic Majesty’s *Reale* [Philip II of Spain’s royal flagship] that of the Holy League was raised, on which were the arms of the three allied powers [Spain, Venice, and the papacy]. Every other kind of banner, pennant and insignia was unfolded, both on the flagship and on all the other galleys, as decoration, celebration, and to raise everybody’s spirits. . . . Almighty God, the Father, Son and Holy Ghost, was invoked with devotion, and His name, together with that of the most blessed Virgin Mary, His mother, was saluted by all in a loud voice. Quickly the priests, and many galley-captains as well, went from stern to bow with crucifixes in hand, exhorting and encouraging everybody, with devout and efficacious remarks, to consider Him, who at this point had descended from Heaven in person to fight against the enemies of His most holy name. Inflamed and moved by such exhortations, they all became one body, one will and one desire. Without a moment giving heed or thought to death, they prepared to fight for Jesus Christ.”

—Andrew Holt

Source

Norman Housley, ed., *Documents on the Later Crusades, 1274–1580* (New York: St. Martin’s, 1996), 192.

wars against Polish and Russian Christians. By the end of the fourteenth century the vast majority of Lithuanians had converted to Christianity and formed a military alliance with Poland to fend off the Knights. The most significant early victory to result from this alliance took place during the First Battle of Tannenberg in 1410, after which the badly defeated Teutonic Knights were effectively crippled as a force in the region.

The later crusades also included military expeditions against heretics. Perhaps the most notable later crusades against heretics were the five unsuccessful expeditions launched against the followers of the Bohemian religious reformer

John (Jan) Huss in the early fifteenth century. Also counted among the later crusades against heretics are the military campaigns launched by the papacy against Italian political opponents during the thirteenth and fourteenth centuries (the so-called Italian Crusades), which were often justified through contentious accusations of heresy.

The expansion of the Ottoman Turks during the fourteenth through seventeenth centuries also provided inspiration for crusading. The stunning military successes of the Ottomans against European powers during this period could not be ignored, as they carved out an empire that included all of Anatolia and the Balkans, totally swallowing up the remnants of the Byzantine empire in the process, and drove deeply into central Eastern Europe. Yet Europe’s initial crusading efforts against the Ottoman Turks proved futile. A crusader army was crushed at the Battle of Nicopolis in 1396, after which many European leaders fell into Turkish captivity. A Hungarian-Polish army was defeated at Varna in 1444, and this was soon followed by the Turks’ conquest of Constantinople in 1453. Athens fell in 1456, and by 1478 Serbia, Bosnia, and Wallachia also came under Ottoman control. The Ottomans even succeeded in briefly establishing a base for further military operations at Otranto in Italy in 1480, which caused fear that Rome itself could fall to a Turkish attack.

During the sixteenth century European crusading armies experienced a change in fortunes against their Ottoman opponents. The Ottomans were defeated when they besieged Vienna in 1529. The Christian success at Vienna was followed by other crusading victories, of which the most well known happened at Lepanto in 1571 under the auspices of the so-called Holy League. It was there that a coalition of Christian forces, including the Knights of Malta, defeated the Turks in a naval battle off the coast of western Greece. Following Lepanto, the Habsburgs and Venetians continued to battle the Turks well into the seventeenth century.

Perhaps the most notable conflict that took place during this period was the second siege of Vienna in 1683. Although greatly outnumbered, the inspired leadership of Jan III Sobieski led the combined Habsburg and Polish forces to victory

over the invading Ottoman army. The Christian victory marked a turning point for the Central European powers in their centuries-old struggle with the Ottomans. Christians followed up this success when Pope Innocent XI formed a new Holy League in 1684. The league was initially comprised of Habsburg Austria, Venice, and the Polish-Lithuanian Commonwealth, with the Russian empire later joining the league in 1686. The league engaged in a series of successful wars with the Ottomans and ended in success in 1699 when the Ottomans were forced to cede considerable territories to the members of the Holy League with the signing of the Treaty of Karlowitz.

In the wake of the Treaty of Karlowitz, the Russian tsar Peter the Great (sole ruler from 1696 to 1725) continued crusading efforts against the Ottomans. Since 1698, Peter had been sending observers to learn of the training and abilities of the Knights of Malta and inquire on the possibility of future joint ventures with the knights against the Turks. In 1711 Peter attacked the Ottomans in a "crusade" that proved disastrous for the tsar and resulted in the return to the Ottomans of lands originally acquired by Peter from the Turks at the end of the seventeenth century.

—Andrew Holt

Bibliography

- Christiansen, Eric. *The Northern Crusades*. London: Penguin, 1997.
- France, John. *The Crusade and the Expansion of Catholic Christendom, 1000–1714*. London: Routledge, 2005.
- Fudge, Thomas. *The Crusade against Heretics in Bohemia, 1418–1437*. Hampshire, UK: Ashgate, 2002.
- Housley, Norman, ed. *Documents on the Later Crusades, 1274–1580*. New York: St. Martin's, 1996.
- Housley, Norman, ed. *The Italian Crusades: The Papal-Angevin Alliance and the Crusades against Christian Lay Powers, 1254–1343*. Oxford: Oxford University Press, 1982.
- Housley, Norman, ed. *The Later Crusades from Lyons to Alcazar, 1274–1580*. Oxford: Oxford University Press, 1992.
- Housley, Norman, ed. *Religious Warfare in Europe, 1400–1536*. Oxford: Oxford University Press, 2002.

The Hundred Years' War

Perhaps the signature war of Europe's Late Middle Ages (1300–1500) took place between Eng-

land and France and their respective allies. Known as the Hundred Years' War, this 116-year-long conflict (1337–1453) was one in which the English won most of the memorable battlefield victories but the French won the war.

The war began when England's King Edward III (r. 1327–1377), grandson of the French monarch Philip IV (the Fair), laid claim to the French throne when the French king, Charles IV, died without a male heir. To further complicate matters, Edward was also a major landholder in France, with titles and possessions dating back to the Norman conquest of England in 1066. Piracy in the English Channel and territorial disputes in Gascony acted as a primer for the war, which broke out in May 1337.

For most of the conflict the initiative lay with the English, and the main fighting and devastation took place nearly exclusively in France. Militarily, the Hundred Years' War pitted a uniquely English style of defensive warfare against the more orthodox and offensively orientated French brand of battle typical of continental warfare. Although the French way of war was in appearance a combined-arms army (one that balanced horsemen and footmen), its overreliance on heavy cavalry lancers precluded them from fully using their archers and crossbowmen. In these campaigns, the French would continue to use what had been successful for centuries, while the English showed an amazing ability to adapt tactically during the long war. These two tactical systems clashed numerous times during the Hundred Years' War, with the French suffering defeat at the hands of English longbowmen right from the beginning of the conflict at the naval battle of Sluys (1340) and later on land at Morlaix (1342), Auberoche (1345), St. Pol de Leon (1346), and Crecy (1346).

After Crecy, Edward III continued to press his advantage in France, this time against the new French king, John II (r. 1350–1364). The English monarch had a powerful and capable subordinate in his son, Prince Edward (the Black Prince), who now commanded an army of his own. Prince Edward launched a mounted raid, or *chevauchée*, in central France, provoking a response from King John, who trapped the Black Prince outside of Poitiers in September 1356. Taking cues from his father's success at Crecy,

THE MAID OF ORLÉANS

Joan of Arc (1412–1431) was born a well-to-do peasant in the region of Champagne. The youngest of five children, she never learned to read or write but was apparently skilled in sewing and spinning. At the age of 13 she heard the voices of angels and saints, who eventually encouraged her to cut her hair and come to the aid of one claimant to the throne of France, the Dauphin Charles. At age 16, Joan convinced the Dauphin himself of her mission. After passing an examination by leading French theologians, Joan was given the rank of captain and sent to rally the French defenders at the besieged city of Orléans.

Dressed as a knight, Joan began her military successes with the relief of Orléans during May 1429, earning her the title “Maid of Orléans.” This miraculous victory was followed up with another against the English at Patay along the Loire River. With the invaders clearly on the run, the Dauphin was crowned King Charles VII of France at Rheims Cathedral two months later on July 18. But the relationship between Joan and her liege soured when Charles insisted on a truce with the English, something that the Maid of Orléans could not tolerate.

A year later, Joan was captured by the Burgundians (longtime allies of the English) and sold to the English. The English charged her with heresy and witchcraft. The records of the trial reveal the simplicity and nobility of the virgin warrior as well as the determination of the English and their French accomplices to find her guilty. Joan was burned at the stake in Rouen on May 30, 1431, her death supposedly serving English aims. Ironically, the Maid of Orléans’s martyrdom became a rallying point for nascent French nationalism, and her ultimate objective, the expulsion of the English invaders, was reached within a generation.

—Brian Carey

Edward seized a strong defensive position on broken ground and waited for the inevitable French attack. Once again, the English lines held while the longbowmen decimated the attacking French horsemen and footmen. King John was captured, and by 1360 there was a break in the war with the signing of the Treaty of Brétigny. The English strategy paid huge dividends, forcing the French to confirm the widest extent of

lands held by the English Crown in nearly 200 years.

With lands in France seemingly secure, King Edward and the Black Prince set their sights on spreading English influence in Spain. Edward III allied with Castile to benefit from its fleet, while Prince Edward campaigned to aid Pedro I of Navarre. As the English intrigued in Spain, the new French king, Charles V (r. 1364–1380), surrounded himself with able mercenary commanders and, ignoring the Treaty of Brétigny, set out to regain lost French territory.

The most capable of Charles’s new commanders, Bertrand du Guesclin, rose to fame through his defense of Rennes in 1356–1357 and defense of Normandy against a Navarrese royal expedition in 1364. A minor noble from Brittany, du Guesclin became constable of France in 1370, defeating the English in Spain at Montiel and winning back Poitou and Saintonge in France. He even pursued the English into his native Brittany between 1370 and 1374. He died on a military expedition in Languedoc in 1380. But by that time, the French had seized the initiative. English campaigns in Spain did not help their cause, and the heavy taxes raised to support these campaigns undermined English control of their French territories. The French continued to build on their successes, even launching naval raids on England’s southern ports. By 1400 English possessions on the continent had dwindled to Calais and a strip of coast stretching from Bordeaux to Bayonne in Gascony. But English fortunes would soon change with the ascension of King Henry V to the throne in 1413.

A man of unlimited ambition and great military skill, King Henry V (r. 1413–1422) decided to take advantage of the political division in France and revive Edward III’s claim to the French throne. After successfully besieging the city of Harfleur, Henry set out for Calais with a small army. The English army would be overtaken by a larger French host near the village of Agincourt in late October 1415. The resulting Battle of Agincourt pitted English longbowmen and dismounted knights against the flower of French chivalry, and once again the English won a spectacular victory.

Henry V went on to conquer Normandy and negotiate the French Crown for his dynasty. In

1420 he signed the Treaty of Troyes and married the French princess Catherine of Valois (daughter of the periodically insane Charles VI, who agreed to take Henry V as his regent and successor). But sickness overtook the brilliant English king and resulted in his untimely death in 1422 at the relatively young age of 35. Charles VI (r. 1380–1422) died only two months after Henry, and the future of France was again in question.

The final phase of the Hundred Years' War is closely associated with the reign of the French monarch Charles VII (r. 1422–1461). After the death in 1431 of Joan of Arc, whose short-lived but spectacular military career in 1429–1430 had turned the tide in favor of the French, Charles continued to press his advantage. He made peace with Burgundy in 1435, denying England its most potent ally on the continent. He liberated Paris from the English a year later after a 14-year occupation. After their defeat at Fromigny, the English lost Bayeux and Cherbourg and consequently their traditional bastion of Normandy. The French went on to dislodge the English from their stronghold at Bordeaux in Gascony, the same region that sparked the conflict 116 years before. By 1453 only Calais remained as an English possession; the English would continue to hold Calais until 1558. The war, however, was over.

—Brian Carey

Bibliography

- Allmand, Christopher. *Henry V*. New Haven, CT: Yale University Press, 1997.
- Allmand, Christopher. *The Hundred Years War: England and France at War, c. 1300–1450*. Cambridge: Cambridge University Press, 1998.
- Barber, Richard. *Edward, Prince of Wales and Aquitaine: A Biography of the Black Prince*. Woodbridge, UK: Boydell, 2003.
- Bennett, Matthew. *Agincourt, 1415: Triumph against the Odds*. London: Osprey, 1991.
- Froissart, Jean. *The Chronicles*. Translated by Geoffrey Brereton. New York: Penguin, 1978.
- Hobbins, Daniel. *The Trial of Joan of Arc*. Cambridge: Harvard University Press, 2005.

Wars in Japan

With the exception of the Mongol invasions (1274 and 1281), Japan's wars from the eleventh

to the fifteenth centuries represent the violent process through which the samurai class (mounted warriors from the lower court aristocracy and provincial elites) wrested power from the imperial court in Kyoto. War during this time was conducted by relatively small bands of samurai (several dozen to a few thousand in number) supplemented by foot soldiers belonging to individual warrior households. Initially, politically connected warrior aristocrats, whom the court called upon to restore order through military intervention, mustered these forces through private warrior networks (*bushidan*) that they had established while serving as imperial provincial governors. Even in the midst of organized military campaigns, members of bushidan preferred individual combat in order to prove their martial skills and attain honor and status among their peers. The individualistic nature of Japanese warfare remained the general rule until the sixteenth-century introduction of European firearms undermined the tactical superiority of mounted warriors over foot soldiers.

Until the twelfth century the imperial court maintained its control over the samurai. However, rumblings in the eastern provinces of the Kanto (modern-day Tokyo region) presaged samurai independence. From the rebellions of Taira Masakado (935–940) and Taira Tadatsune (1028–1030) to the Early Nine Years' War (1051–1063) and the Later Three Years' War (1083–1087), the imperial court called upon the warrior aristocrats, particularly the Taira and Minamoto clans, to subdue eastern warriors who rejected imperial authority. Warfare resulted in the desolation of the countryside as both rebel and imperial forces destroyed their enemy's economic capacity to perpetuate war. Buildings, granaries, fields, and even peasants and livestock were easy targets when an enemy refused to engage in direct combat. In the war's aftermath, provinces were often granted tax relief for many years. This kind of destructive war continued until the sixteenth century, when warlords preferred to preserve the productivity of the land they conquered in order to utilize its wealth immediately.

From the twelfth to the fourteenth centuries incessant warfare vividly illustrated the samurai's incremental displacement of the imperial court as the masters of Japan. This process originated

➤ GEMPEI WAR, 1180–1185

Ostensibly a conflict for supremacy over the samurai class waged by the Taira (Heike) and the Minamoto (Genji) clans, most warrior houses joined the side that appeared most advantageous, regardless of bloodlines. Indeed, the most significant divide between Taira and Minamoto supporters was geographical, and local rivalries over land and resources became enmeshed in the empire-wide conflict as parties justified self-serving violence in the name of either Minamoto or Taira.

The preference of self-preservation over clan loyalties is clearly revealed by the support of clan chief Minamoto Yoritomo by a minor Taira family, the Hojo. Attempting to eliminate a future Minamoto threat, Taira clan chief Kiyomori ordered the Hojo to foster Yoritomo after his father's execution in 1159. In fact, Yoritomo became their son-in-law, ensuring that a Minamoto triumph would mean influence and power for the Hojo if not for the Taira. Yoritomo's largest bloc of support came from the eastern provinces of the Kanto (modern-day Tokyo), where a tradition of fierce independence had long been cultivated and Minamoto warrior networks were strongest. Taira warrior networks, on the other hand, extended west from the Kyoto region to Kyushu, where the imperial court had long dominated affairs. In effect, Yoritomo's victory (assisted no doubt by a timely drought in the western provinces that diminished Taira capacity to wage war) gave credence to the eastern samurai reputation as fierce warriors and earned for the Taira a reputation as effete courtiers who had lost their taste for battle.

—David G. Nelson

in the power struggles among court officials and the imperial family. Aristocrats turned to the military might of samurai clans, particularly the Taira and Minamoto, in order to outmaneuver their political rivals. Beginning with the Hogen Disturbance (1156), followed by the Heiji Uprising (1159), and culminating in the Gempei War (1180–1185), a fractured court lost much of its real power, first to the Taira and then to the Minamoto, the latter of which established the Kamakura shogunate in 1192, formalizing the independence of samurai authority from the imperial court. The subservience of the imperial

court was ensured after the Jokyu Disturbance (1221), when retired emperor Go-Toba attempted but failed to destroy the shogunate by rallying warriors dissatisfied with the shogunate. Even the crisis of the Mongol invasions in 1274 and 1281 only increased shogunal authority; the imperial court officially authorized shogunal command over all warriors, vassal and nonvassal alike, in order to establish a unified defense of Japanese territory.

The death knell for imperial authority came only after a brief return to absolute imperial power in the midst of the Genko War (1331–1336). Sitting emperor Go-Daigo, steeped in Confucian learning, orchestrated the downfall of the Kamakura Shogunate in 1333. This was only possible after several key Kamakura generals, in particular Ashikaga Takauji, turned upon their former masters. Once Go-Daigo revealed his intention to ensure samurai subservience, however, Takauji moved against Go-Daigo by supporting another claimant to the imperial throne. In 1336 Go-Daigo fled the capital and established a court in exile, thus providing others with justification (until a 1392 reconciliation within the imperial family) for violence against the new Ashikaga shogunate. From its headquarters in Kyoto's Muromachi district the Ashikaga completely dominated the imperial court, completing the samurai assumption of power.

The Ashikaga shogunate, weakened by strife deriving from imperial division, became so intertwined with the court aristocracy that it failed to maintain sufficient ties to the provinces. The shogunate's military governors wielded a great deal of power in the new regime, and any personal disputes among the most powerful governors had the potential to cause a civil war. This was exactly what caused the Onin War (1467–1477). A shogunal succession dispute gave cause to expand these personal rivalries into full-scale war. Unfortunately, the call to arms quickly escaped the control of the rival military governors. Local warriors called up to fight chose instead to seek the betterment of their own circumstances, turning upon their neighbors and even against their superiors, up to and including the military governors and shogunate. While a relative calm was established in 1477, Japan had officially entered the Sengoku (Warring States) period, a

century-long civil war in which local warlords, called *daimyo*, established their own control of the provinces.

—David G. Nelson

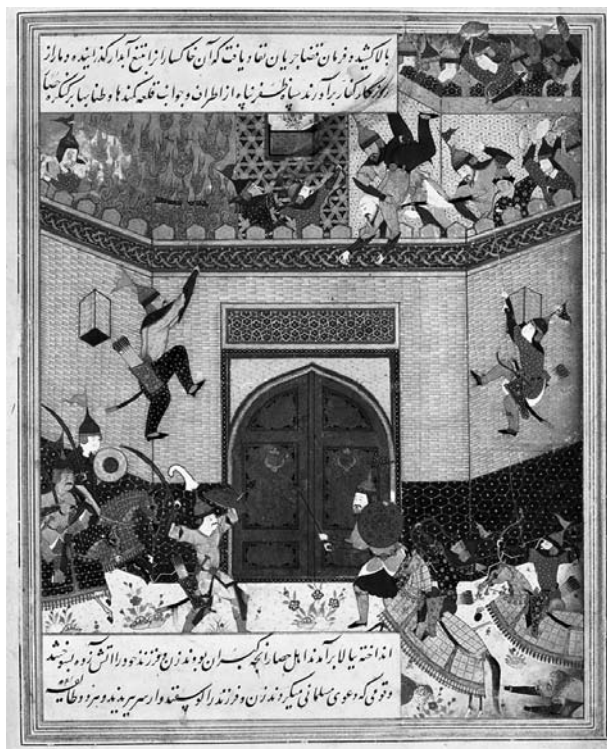
Bibliography

- Farris, William Wayne. *Heavenly Warriors: The Evolution of Japan's Military, 500–1300*. Cambridge: Harvard University Asia Center, 1996.
- Friday, Karl. *Hired Swords: The Rise of Private Warrior Power in Early Japan*. Stanford, CA: Stanford University Press, 1992.
- Ikegami, Eiko. *The Taming of the Samurai: Honorable Individualism and the Making of Modern Japan*. Cambridge: Harvard University Press, 1995.
- Souyri, Pierre F. *The World Turned Upside Down: Medieval Japanese Society*. Translated by Käthe Roth. New York: Columbia University Press, 2001.

Timur-i Leng's Campaigns

Timur (1336–1405) was born near Samarqand (in present-day Uzbekistan) in 1336 as a member of the Barlas tribe, a tribe of Mongol origin but thoroughly Turkic in ethnicity by the fourteenth century. In his youth, Timur was a minor leader and sometimes bandit amid the disorder that existed in central Asia as the Mongol empire dissolved. With the collapse of the Mongol empire, new opportunities arose, and Timur prospered, serving as the lieutenant of his brother-in-law Emir Husain. Before a falling out between the two in 1370, they gained control of Mawarannahr (Land across the River, or the Amu Darya), also known as Transoxiana. Timur emerged the victor in this fraternal dispute.

Timur spent the next decade consolidating the region under his control and defending it from raids by the remnants of the Chaghatai khanate. However, he became embroiled in external events in 1380 when he lent support to Toqtamysh, a prince of the khanate of the Golden Horde in Russia and Ukraine, who was embroiled in a civil war. Timur viewed this as an opportunity to secure his border and gain influence with the Golden Horde. Also in the 1380s, Timur decided to expand his state and crossed the Amu Darya into Persia and Afghanistan. By 1394 the regions of Fars, Iraq, Armenia, and Georgia had succumbed, but it is unclear if he



Timur's army storms Bhatuir in 1398, from a Persian miniature. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

wanted to create a stable empire or simply preferred to plunder.

At the same time, Timur's protégé, Toqtamysh, challenged Timur's authority. As a descendant of Chinggis Khan, Toqtamysh viewed himself as the rightful leader of the world of the post-Mongol empire. Toqtamysh invaded Timur's empire in 1385 and 1388, defeating Timur's generals twice. In retaliation, in 1391 Timur invaded the Golden Horde and defeated Toqtamysh. Toqtamysh quickly regained power and invaded Timur's empire again in 1395. This forced Timur to pursue Toqtamysh, and at the Battle of the Kur River, Timur defeated him. Then, Timur broke the power of the Golden Horde by inciting and supporting various contenders for the throne and destroying the cities of Sarai and New Sarai. He also ensured that none of the contenders could threaten his power. While Timur destroyed the Golden Horde's power, he did not incorporate it into his empire, perhaps realizing that as a non-Chinggisid prince he would never be accepted as the ruler in that region.

➤ MARCHING THROUGH GEORGIA

Timur invaded the Christian kingdom of Georgia, located in the Caucasus Mountains, several times. The first invasion occurred during the summer of 1386. As with most of Timur's campaigns, the destruction was incredible, and also as with many of his campaigns, Timur justified the invasion as a jihad against infidels. By the winter of 1386, the Georgian capital, Tbilisi, was sacked, and King Bagrat V was hauled away in chains. Timur released him after Bagrat converted to Islam, which Bagrat renounced once Timur departed Georgia.

The second invasion occurred in 1394–1395. This time, however, it was more of a pillaging expedition, as Timur was passing through to invade the Golden Horde's territory. However, the incursion laid the foundation for a third invasion when the Georgians defeated Miranshah, Timur's son, in battle.

In 1399 Timur revenged Miranshah and devastated eastern Georgia. Then in the spring of 1400 he marched on Tbilisi, pillaging and burning all before him. King Giorgi VI, who fled to the mountains, agreed to pay tribute, whereupon Timur departed to deal with the Mamluks.

Yet Timur was not finished with Georgia and returned in 1403 after defeating Bayazid at Ankara. It is alleged that Timur destroyed 700 villages and towns, which included the massacre of their citizens. Furthermore, he demolished every Christian church he encountered. Rather than face Timur, the Georgian nobility fled to their mountain fortresses, but sometimes not even this was enough to escape his wrath.

—Timothy May

Timur's next target was in India invading the sultanate of Delhi in 1398. His armies sacked and burned Delhi in a wanton display of destruction. As always after a campaign, wealth from the plunder poured into his capital at Samarqand. The sultanate never fully recovered.

Despite the massive haul of plunder from India, Timur did not remain at his capital. In 1399 he marched west against the Mamluk sultanate in Egypt and Syria and the Ottoman empire in Anatolia, as both had supported rebellions against him. In 1401 Timur invaded Syria and defeated the Mamluks, sacking Aleppo and Damascus in

the process. He then invaded the Ottoman empire and crushed Sultan Bayazid at Anakara in 1402. Bayazid was taken prisoner and was marched off to Central Asia as Timur again left two more empires in turmoil rather than conquering them.

With his western frontier secure from the threat of attack, Timur returned to Samarqand in 1404. Despite being carried in a litter for most of his later campaigns, Timur did not plan a life of ease yet. Instead, he planned an invasion of China. The invasion ended prematurely, as Timur died on January 19, 1405, in the city of Otrar. Although he had designated a successor, his empire, held together primarily through the force of his will, quickly disintegrated into smaller states ruled by his sons and grandsons, the Timurids.

—Timothy May

Bibliography

- Hookham, Hilda. *Tamburlaine the Conqueror*. London: Hodder and Stoughton, 1962.
- Manz, Beatrice Forbes. *The Rise and Rule of Tamerlane*. New York: Cambridge University Press, 1991.
- Marozzi, Justin. *Tamerlane: Sword of Islam, Conqueror of the World*. New York: Perseus, 2004.
- Nicolle, David. *The Mongol Warlords*. Poole, UK: Firebird Books, 2004.

Ottoman Conquests to 1500

The Ottomans were one of the Turkic clans that emerged when the Mongol invasion ended Seljuk rule in Anatolia in 1243. The Ottomans linked their origins to Central Asian Turkic nomads, describing their founder Osman (1290–1326) and his ancestors as heroic men who dedicated their lives to jihad at the Christian frontier. This honorable image, however, was a later construction, and Osman was actually the leader of a band of Muslim and Christian men who made their living by pillaging the Byzantine frontier.

Osman's most important conquest was a small town named İnegöl (1299), whereas his son Orhan I (r. 1324–1362) conquered Bursa (1326), Nicaea (1331), Nicomedia (1337), and Adrianople (1361), each a Christian metropolis left largely defenseless due to the Byzantine empire's weakening position. Meanwhile, the Ottomans also formed alliances with local Christians. Orhan's first wife was Greek. Inasmuch as he had helped

➤ BAYEZID THE THUNDERBOLT

Bayezid I (r. 1389–1402) took the Ottoman throne after his father Murad was assassinated during the Battle of Kosovo in 1391. Bayezid's first military campaign was the siege of Constantinople, but when King Sigismund of Hungary started to harass Ottoman territories, the Ottomans abandoned the siege and attacked Sigismund's army, defeating the Hungarians in 1392. Bayezid then commenced attacks on Muslim lords in Anatolia, seizing Kayseri, Sivas, Samsun, and Sinop. He also focused on the Venetian territories in the Aegean. By 1395 the Ottomans possessed an area from the Adriatic to Hungary, excluding only the cities of Athens and Constantinople. In 1396 the Ottomans renewed the siege of Constantinople, which initiated the formation of a Christian crusade. The crusaders were defeated in the Battle of Nicopolis, and a new peace treaty made Bayezid suspend the harassment of Constantinople.

Meanwhile, Bayezid's campaigns against Muslim Anatolian lords were criticized, and the defeated lords sought help from Timur-i Leng (Tamerlane).

The two leaders clashed, first verbally and then militarily, in the Battle of Ankara (1402). Bayezid's Tatar allies deserted him, and even his sons left the battlefield when they saw Timur's superiority. Bayezid was captured, put into a cage, and paraded about as Timur's court traveled from one city to another. Bayezid died the same year, probably poisoning himself.

The Ottomans always questioned Bayezid's wisdom. His deviation from the siege of Constantinople, his attacks on Muslims, his careless language and temper, his drinking habits, and his marriage to a Christian princess were blamed for his downfall. In the West, Christopher Marlowe's (1564–1593) play *Tamerlane* immortalized Bayezid as the tragic figure who stopped the crusaders but fell prey to a Muslim tyrant. Later on, Jean Magnon's play *Le Gran Tamerlan et Bejezet* (1648), Handel's score *Tamerlano* (1725), and Vivaldi's *Bayezid* (1735) as well as numerous European paintings explored this historical character.

—Murat Cem Menguc

bring John VI Cantacuzenus (r. 1347–1354) to the Byzantine throne in 1346, Orhan, albeit often an enemy of Byzantium, was a guest of honor in the celebrations and was married to John's daughter Theodora.

In their newly gained territories, the Ottomans transferred legal authority to Muslim scholars and converted churches to mosques, but they also allowed Christian worship and kept the economy intact. Bursa was their capital city until 1363. During Orhan's son Murad's reign (r. 1361–1389), southern Bulgaria and Thrace were annexed during 1363–1365, and a victory at Chermanon in 1373 forced local Christian rulers to accept vassalage. After Sofia was taken in 1385, a Christian-Balkan coalition was formed, but the Ottomans defeated them at Kossova-Polje in 1389.

Rapid expansion generated unprecedented quantities of booty. Murad is described as the first Ottoman ruler who hoarded a treasury, and he was accused of abandoning the modesty of his ancestors. A slave tax was introduced, and the palace began to collect young Christian men,

converting them to Islam and forming an elite military corps with them. They later evolved into janissaries (new troops), the most important division in the Ottoman army for centuries.

The Ottomans depicted their military campaigns as an Islamic venture, but they fought their Muslim adversaries too. They seized the Muslim city of Ankara in 1356 and campaigned vigorously against the Karamans of south-central Anatolia, who became their main Muslim rival in the struggle for supremacy over the subcontinent. During such expeditions, non-Muslim mercenaries and Christian Slavic lords from Thrace assisted the Ottoman army.

Murad's son Bayezid (r. 1389–1402) inherited a domain that spread from the Danube to the Taurus Mountains. Although he gained fame for defeating the crusaders in the Battle of Nicopolis (1396), he was brought to a tragic end by his later mishaps. In the Battle of Ankara of 1402, he was defeated and captured by the Turkic Muslim amir Timur-i Leng and later died as a war prisoner. Bayezid's death caused an interregnum from which his son Mehmed I (r. 1412–1421) emerged

as the victor. Mehmed reconsolidated Ottoman power, in 1414 defeated the Karamans (who tried to take advantage of the civil war), and built fortresses along the Danube to seal the borders, all while raiding Hungary, Bosnia, and Styria. All along, he maintained peace with Constantinople, where his half brother Mustafa was kept prisoner.

When Mehmed died, Mustafa was released to initiate a civil war. Assisted by the Genoese, Mehmed's son Murad II (r. 1421–1451) defeated his uncle in 1422 and put Constantinople under siege. Soon the Byzantines and Karamans formed an alliance and armed another Mustafa, Murad's half brother, to fight against him. Murad abandoned the siege and defeated his half brother, which sealed his legitimacy. Thereafter the Ottomans took Smyrna (1425) and Selonica (1430) and annexed Serbia (1439). But John Hunyadi of Hungary and his Christian allies joined forces with the Karamans, and while Christian forces invaded the Balkans, the Karamans harassed Anatolia. Murad first defeated the Karamans and then stopped the Christian coalition in 1443, forcing it into a truce. Believing that peace was attained, Murad decided to retire and put his son Mehmed in charge. But a new crusade was launched, and Murad returned to command the army. This crusade was defeated at the Battle of Varna in 1444, after which Murad retired again. However, a janissary rebellion against Mehmed brought Murad back. The Ottomans invaded Albania, Serbia, and Kosovo until Murad's death in 1451.

Mehmed II (r. 1451–1481), also known as el-Fatih (the Conqueror), inherited a territory that he transformed into a world empire. A well-educated and ambitious man, he dreamed of world domination. First, the Ottomans put Constantinople under siege and then captured and sacked it in May 1453. Muslims had dreamed of this conquest for centuries. Constantinople was a landmark for both the Christian and Muslim faiths. After its initial plunder, the Ottomans rebuilt and repopulated the city, turning it into their new capital, while the army campaigned to acquire Serbia and the Morea Peloponnesus) in 1459, Trabzon (Trebizond) in 1461, Karaman in 1468, and the Crimea in 1475. During Mehmed's reign, adversaries remained incapable of form-

ing an alliance due to the shock of the Byzantine collapse and their own internal conflicts.

Mehmed also waged long and ruthless campaigns, exhausting his troops, who both admired and hated him. In 1479 the Ottoman army attacked and seized the islands of Levkas, Cephalonia, and Zante in Ionia. Mehmed II's goal was to use this as a base to further attack southern Italy. The following year Otranto was brought under brief Ottoman control (1480–1481), which Christian forces retook following the Conqueror's death. Mehmed II's last expedition was aimed toward eastern Anatolia, but he died a few days after leaving Constantinople/Istanbul. It is reported that his army did not mourn his death and quickly returned to the city.

Bayezid II (r. 1481–1512) became the next sultan, but his brother Cem also fought for power, and their struggle stalled the Ottoman surge. Only after Cem's death in 1495 was Bayezid able to launch serious military campaigns, among them the Lepanto expedition (1499–1503), which is suggested to have transformed the Aegean Sea into an Ottoman "lake."

—Murat Cem Menguc

Bibliography

- Finkel, Caroline. *Osman's Dream: The History of the Ottoman Empire, 1300–1923*. New York: Basic Books, 2005.
- Imber, Colin. *The Ottoman Empire, 1300–1650*. New York: Palgrave Macmillan, 2002.
- İnalçık, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. New York: Phoenix Press, 1973.
- Kafadar, Cemla. *Between Two Worlds: The Construction of the Ottoman State*. Berkeley: University of California Press, 1995.
- Lowry, Heath. *The Nature of the Early Ottoman State*. Albany: State University of New York Press, 2003.

Ming China's Conflicts—Civil Discord, Japanese Raids, and Campaigns along the Frontiers

The Ming dynasty paid a high price to keep the peace. It controlled domestic unrest but did not end it, failed to eliminate Japanese raiders, and curtailed the scope of its military campaigns across its frontiers. Emperors reacted strongly to challenges to their absolute will but could only

contain and not prevent civil strife. Civil disorders and foreign threats, alone or together, could destabilize the dynasty and were a priority for Ming policy.

The Ming founder, the Hongwu emperor (r. 1368–1398), suspicious of disloyalty in the bureaucracy, controlled it with numerous mass trials, executions, and public beatings, a humiliation for a class that was traditionally exempt from corporal punishment. He gathered information through spying on officials, and he relied on eunuchs to inform him on the condition of the empire. The third Ming emperor, the Yongle emperor (r. 1402–1424), seized power in a bloody civil war and extended the surveillance innovations of the founder to prevent similar civil discord from being used against him.

The Ming dynasty suppressed banditry and the many rebellions to which it led, but these efforts were often unsuccessful. Millennial Buddhism, for example, inspired insurrections in Shandong, a religious movement and a province that equally tended to be centers of rebellion for much of Chinese history. On a more secular plane, dispossessed peasants turned to smuggling or mining; the latter was a restricted occupation to prevent the illicit manufacture of weapons. Silver miners joined rebelling peasants in Fujian in 1448–1449. Other rebellions of miners continued through the end of the century. The Ming defeated its most serious rebellions of non-Chinese, the Yao in Guangxi, in 1464–1466, and of Chinese, in Hubei, in 1465–1476. Banditry and rebellions continued, however.

To stop the raids of Japanese *wokou*, pirates or “dwarfs,” the first Ming emperor sent unsuccessful missions to Japan and finally cut off contact with the country. He suspected that his domestic enemies colluded with the pirates. The Japanese raided freely along the coast, but *wokou* actually included many Chinese of various classes whose smuggling interests coincided with piracy. The first emperor raised both naval and land forces and built coastal fortifications for defense that contained yet did not eliminate piracy.

The Yongle emperor restricted Japan to two tribute missions each decade at the port of Ningbo. He excluded private Chinese participation in this trade, but they ignored these restric-

➤ A SIEGE MENTALITY—REBUILDING THE GREAT WALL

The inability of the early Ming dynasty to end the raids from the pastoralists of the north caused its later emperors to create the fortifications that we recognize today as the Great Wall of China. The shift from an aggressive and mobile policy against the steppe nomads to a defensive one where the Chinese hunkered behind a barrier gave them hope that they could withstand a siege of their country, as the walled city of Beijing had withstood a Mongol siege in the disastrous year of 1449.

In 1474 Yu Zizhun built an earthen wall south of the great bend in the Yellow River that defied the Mongol attack of 1482. Elated by success, the Ming extended the wall. Later, nearer Beijing and to the coast, the Ming strengthened the wall with masonry. Constructing the wall cost the government much in treasure and labor, yet it did not end nomad raids or the need for Chinese retaliation.

The Chinese Ming dynasty never forgot that it had come to power when it overthrew the foreign Mongol Yuan dynasty, and foreigners continued to probe the wall. The Ming knew that their survival depended on the diligence with which they kept the wall equipped with soldiers and in repair.

—Henry J. Antkiewicz

tions where feasible, with the eager cooperation of the Japanese. The Yongle emperor reconstructed the Grand Canal in 1415 to avoid the high seas and piracy.

The Ming founder’s reign name, Hongwu, means “Great Military Conqueror.” He overthrew the Mongol Yuan dynasty and invaded deep into Mongolia. He left a legacy that advised the dynasty not to invade foreign countries but excluded the north, the active threat to China.

The Yongle emperor, a skilled military leader, ignoring the Ming founder’s advice, invaded and incorporated Annam (northern Vietnam). At the same time, he moved the capital north from Nanjing to Beijing, from where he personally led five campaigns against the Mongols, dying during the last one. The Xuanzong emperor (d. 1436) abandoned the occupation of Annam, reverting to the foreign policy of the founding emperor.

In a low point for the empire, the eunuch Wang Zhen badly advised the Zhengtong emperor to accompany a military campaign against the Mongols that led to defeat and the capture of the emperor in 1449 at the Battle of Tumu. Failing to take Beijing, where cannon was first employed in defense, the Mongols found little value in keeping the emperor and returned him to resume valuable tributary relations with the Ming.

Retreating from the steppe, reorganizing the army, and starting to reconstruct a Great Wall occasioned a military revival in the latter part of

the fifteenth century that allowed, for example, the Ming to fight in the northeast alongside the Koreans against the Jurchen.

—Henry J. Antkiewicz

Bibliography

Mote, Frederick W., and Denis Twitchett, eds. *The Cambridge History of China*, Vol. 7, *The Ming Dynasty, 1368–1644*. Part I. Cambridge: Cambridge University Press, 1997.

Waldron, Arthur. *The Great Wall: From History to Myth*. Cambridge: Cambridge University Press, 1992.

■ Introduction: The Age of Great Captains and Their Warriors

Given the high incidence of warfare during this 500-year period, it should come as no surprise that the period produced a large number of better-than-average military leaders and even a few brilliant strategists and tacticians. It also witnessed a handful of exceptional battlefield innovators and numerous cohorts of highly skilled and motivated warriors who fought with élan and normally prevailed in battle.

Strategy, which derives from the Greek *strategos* (general), refers to the master plan of war—the “big picture,” as some soldiers call it—whereas tactics, which derives from the Greek *taktikos* (arrangement), refers to the operational use of force on the battlefield in order to achieve a specific objective. Great strategists, such as Nur al-Din and Hulegu, conqueror of Baghdad and founder of the il-khanate of Persia, could also be brilliant battlefield commanders; and charismatic warriors who led their soldiers to victory after victory, such as Chinggis Khan, also did have on occasion an excellent sense of grand strategy, but one talent did not necessarily include the other.

Among the great strategists who were able to articulate a coherent master plan and bring it to a successful conclusion were Pachacuti Inca, Sundiata, Saladin, Mehmed II, and Zhu Yuanzhang. Three of these master strategists are in-

cluded within this topic; the other three, sultans Saladin and Mehmed the Conqueror and Khubilai Khan, are dealt with elsewhere in these pages.

Brilliant battlefield warriors, who often were able to snatch victory from defeat by reason of their training, instincts, and ability to adapt to unexpected challenges or who entered the fray with such careful preparation that victory was almost ensured before the contest began, included Alp Arslan, Godfrey of Bouillon, and Timur-i Leng (Tamerlane).

Great generals who combined both abilities were not as rare as one might imagine. Among these were the aforementioned Chinggis Khan and Nur al-Din, father of the jihadist counter-crusade, several of Chinggis Khan's successors, such as Hulegu; Baybars, the Mamluk sultan whose campaigns set in motion the end of the crusader states in Syria Palestine; and Richard the Lionheart. The latter might seem an unlikely candidate, given his almost suicidal courage on the battlefield and reputation for impulsive brutality, but his grasp of grand strategy as it related to war in both France and the eastern Mediterranean made him a formidable foe whose successes were a wonder to his contemporaries.

Of all the innovators, the greatest might well have been Motecuhzoma Ilhuicamina, who set in motion the Flower Wars of Mexico that, for a

bit more than a century, became a defining element in the culture of central Mexico.

Military groups, or bands of warrior-brothers, who achieved deserved reputations for their esprit and skills were numerous during this half millennium and could be found worldwide. They included, but were not limited to, Turkish *ghazis*; crusaders (and especially the military orders, such as the Knights of the Temple); the various special ranks of warriors in Mesoamerica, such as the Aztec Otomi warriors; Europe's feudal vassals; northern India's Rajputs; Japan's samurai, who managed to meet and defeat Mongol invaders on two occasions; and the Mongol and Turkic followers of Chinggis Khan and his successors and of Timur-i Leng, who devastated much of Central Asia and beyond in the thirteenth and fourteenth centuries.

The latter two groups of warriors were members of what have been termed "courage cultures," and such cultures, which valued highly and even above all else the values and presumed virtues of the warrior, were found throughout the Americas (but not everywhere), in Oceania (but again not everywhere), and certainly in central Asia, home of the Mongols and Turks. Likewise, bands of holy warriors, such as *ghazis* and crusaders, exhibited the characteristics of a courage culture. If one wishes to read an epic in the Western tradition that clearly articulates these values and characteristics, one could do no better than the *Chanson de Roland* (*The Song of Roland*), which was put into its more-or-less final version around 1100. Ironically, it celebrates not only the flawed but eventually successful grand strategy of a mythic Charlemagne but also the tactical stupidity of his nephew Roland. Courage cultures could produce terrible strategists and inept tacticians, even as they also allowed for the emergence of such warrior-geniuses as Chinggis Khan.

—Alfred J. Andrea

Sundiata, Malinke Hero

The famed thirteenth-century Malian emperor and warrior Sundiata (alternately identified as Sunjata, Sun Djata, Mari Jata, and Sologon Keita) represents an interesting case of how West African history has been remembered and reconstructed.

➤ SUNDIATA—THE EPIC ORIGINS OF MALI

The epic poem *Sundiata* is a classic example of African oral history. Passed down by generations of professional oral historians known as griots, this tale became famous in the West when it was recorded and translated by D. T. Niane in 1960. Niane, a Guinean author and playwright, recorded a performance and commentary on the poem by the griot Djeli Mamoudou Kouyate. It tells the story of the rise to power of Sundiata and the founding of the Mali empire in the early thirteenth century.

Like most epic poems, the story of Sundiata combines elements of history, literature, and political propaganda. It served to legitimate rule of the Keita dynasty, of which Sundiata was the first *mansa*, or king. As such, it presents him as a noble and wise ruler who overcame great obstacles in order to become king. For example, Sundiata is born a cripple but is later miraculously healed when he takes hold of a massive iron bar. Later he must form and lead a confederacy of local groups to defeat the evil King Soumaoro Kante.

The story of Sundiata is also notable for the way it presents Islam, which was becoming increasingly prevalent in the West African savanna region during the period. In particular, Sundiata is often represented as a Muslim, while his nemesis, Soumaoro, is presented as a pagan sorcerer-king.

—Jonathan Reynolds

Most of the sources available regarding Sundiata take the form of oral epics recounted by what are typically identified as griots. There are many versions of the Sundiata Epic, though the best known is a version narrated to the Malian scholar D. T. Niane by the griot Djeli Mamoudou Kouyate in the 1950s. Niane published a translation in French and later English. Thus ironically, this version of the oral history has become something of a standard text by virtue of having been written down. The oral version of Sundiata's rise to power was initially produced and maintained to legitimate his dynasty's power over the empire he created. However, in the centuries since the decline of the Mali empire, it has become a blend of legend, history, and entertainment. This is an excellent example of how oral history blurs the line between history and literature.

In broad terms, the *Sundiata* Epic outlines what we believe to be historical events. *Sundiata* clearly pulled together a coalition of forces from around the upper Niger River valley to defeat an unpopular ruler known as Soumaro at the Battle of Krina (ca. 1235). In so doing he created a powerful state, with a number of local kings handing sovereignty over to him, identifying him as the Mansa, or “King over Kings.” Many of these historical elements are corroborated by other sources, such as in an Arabic history authored by Ibn Khaldun.

Many specific elements of the story are clearly symbolic. *Sundiata*, for example, is born a cripple, unable to walk. One day in his early teens, he requests that a huge iron bar be made by a group of blacksmiths. He uses the iron bar to pull himself upright and is miraculously healed of his disability, bending the bar into the shape of a great longbow in the process. This is usually interpreted as symbolic of how *Sundiata*’s command of technology, nurturing of economic productivity, and military prowess would guarantee his success as a ruler.

Another key theme that runs through the epic is *Sundiata*’s religious legitimacy. Reflecting the dominance of Islam in the region’s cities, when in urban settings *Sundiata* dresses “in the robes of a Muslim King.” *Sundiata* also interacts frequently with Muslim merchants. But when traveling outside of the cities or when leading his army, he appears dressed as a hunter, like the “First Kings of Mali,” reflecting the ongoing practice of indigenous religion as found in the rural areas. The *Epic of Sundiata* thus reflects the careful balance that the region’s kings had to strike between an increasingly influential urban Muslim population and the empire’s still predominantly traditional rural populace.

—Jonathan Reynolds

Bibliography

- Conrad, David C. “Searching for History in the *Sundiata* Epic: The Case of Fakoli.” *History in Africa* 19 (1992): 147–200.
- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice-Hall, 2008.
- Niane, D. T. *Sundiata: An Epic of Old Mali*. Upper Saddle River, NJ: Pearson, 2006.

Alp Arslan—The Brave Lion of Manzikert

Alp Arslan (ca. 1029–1072) was born in the region of Khwarezm in northern Iran. He assumed the name Muhammad ibn Daud Chagribeg upon his conversion to Islam. He was subsequently accorded the honorific name Alp Arslan (Valiant Lion) for his military prowess and valor in battle. The second sultan of the Seljuk dynasty, he was the great-nephew of the eponymous founder of the dynasty. Along with his uncle Tughril Beg (r. 1055–1063) and son Malik Shah (r. 1072–1092), Alp Arslan created, organized, and brought to the heights of power the Great Seljuk sultanate.

Alp Arslan became *wali* (governor) of Khurasan, a northeastern region of Persia, succeeding his father in 1059, and fought the Turkmens, a Turkish tribe located in present-day Turkmenistan, Afghanistan, and Iran. Following the death of Tughril Beg, who in 1055 had established the Seljuk sultanate in Baghdad, he fought his brother and uncle for the office, winning out in 1064, thereby becoming the Great Seljuk and the sultan of Persia, Oxus, and Iraq.

Preferring war to governmental organization, Alp Arslan was fortunate to be assisted by the justly celebrated and talented *wazir* (prime minister) Nizam al-Mulk (active 1063–1092), who was instrumental in reorganizing the empire. On his part, Alp Arslan reformed the army, using soldiers from nomadic Turkish tribes and drawing on the resources of the sedentary Iranian and Arab populations. This allowed him to field a huge standing army without depending on tribute from conquests to pay his soldiery. He not only had enough food for his military campaigns but also collected taxes from traders and merchants that made it possible for him to wage long campaigns.

After a brief period of time, Alp Arslan declared his son Malik Shah I as successor in order to free himself to start an aggressive campaign of plunder against the Byzantines in the region of Cappadocia in south-central Anatolia, where he intended to take the capital Caesarea, well known for the immense potential booty in St. Basil’s church. In 1067 Turkish armies sacked the city.

In 1068 Emperor Romanus IV Diogenes led his troops into Armenian Cilicia, located in south-eastern Anatolia, in order to fight the Seljuks there and farther south in Syria. After two years of campaigning, the emperor fought the Turks to a stalemate in 1170, and Alp Arslan, who seems not to have had a desire to conquer all of Anatolia but instead had designs on conquests farther afield, removed his army and crossed the Euphrates into northern Syria.

The next year, however, the Byzantine emperor took the offensive in the Armenian regions of far eastern Anatolia. There, at Manzikert on August 26, 1071, Byzantine and Turkish forces clashed after Romanus rejected the sultan's proposed terms of peace. The result was desertion from the Byzantine army of a crucial cadre of Cuman Turkish mercenaries and a crushing Byzantine defeat. Emperor Romanus was captured and brought to the presence of Alp Arslan. According to tradition, the following dialogue took place:

Alp Arslan: "What would you do if I were brought before you as a prisoner?"

Romanus: "Perhaps I'd kill you, or exhibit you in the streets of Constantinople."

Alp Arslan: "My punishment is far heavier. I forgive you, and set you free."

In point of fact, Alp Arslan's leniency flowed from his desire to reach an accord with Byzantium, which would free him to continue his drive to assert his supremacy over Islam in the Caucasus, throughout western Central and Southwest Asia, and as far as Egypt. Ultimately he added Georgia and Armenia to a vast and growing realm that reached beyond the Pamirs in the east and as far south as Oman. Although he asserted his hegemony over much of Syria-Palestine, Seljuk power never extended to Egypt.

When Romanus returned to Constantinople he was deposed, blinded (a normal practice used both by the Byzantines and the Muslims), and exiled to the island of Prote in the Sea of Marmara, where he died after a short time.

A year later, Alp Arslan undertook a new military campaign in Turkestan against the rebel governor Yussuf al-Harezmi. In victory, however,

➤ HOW DECISIVE WAS THE BATTLE OF MANZIKERT?

Many historians, such as Edward Gibbon, have considered the Battle of Manzikert (in 1071) as the effective date of the beginning of the end of the Byzantine empire. It is true that the conquest of Constantinople would only be achieved by the Ottoman sultan Mehmed II in 1453, but if we consider the territorial decadence of the empire after Manzikert or after the conquest of the city by the crusaders of the Fourth Crusade in 1204, we are able to recognize how the defeat at the hands of Alp Arslan was of considerable relevance.

It was important also because before this fateful date, the Byzantines during the Macedonian dynasty (867–1056) were able to promote a cultural and military renaissance, with the reconquest of many regions dominated by the Muslims since their invasions of the seventh century. During the reigns of John I Tzimiskes (r. 969–976) and Basil II (r. 976–1025), for example, Byzantine armies were able to reconquer various cities and territories in Syria. The defeat at Manzikert, regardless of its almost accidental nature, placed an end to this historical period of retrenchment and, moreover, firmly secured the eastern regions of Anatolia for the Seljuks. Beyond that, it initiated a centuries-long process whereby Anatolia, the heartland of the Byzantine empire and the source for much of its human and economic resources, was slowly transformed into a Turkish land. Finally, the shock of Manzikert opened the Byzantines to the idea of seeking Western aid against the Seljuk menace, which ultimately led to the First Crusade and all that followed from that eventful expedition. Arguably, without the events of 1071, the events of 1204 would not have occurred.

—Marco Demichelis

Alp Arslan met death when the captured Yussuf al-Harezmi struck him a mortal blow with a knife. Alp Arslan died on November 25, 1072, four days after receiving his wound. Malik Shah, his son, inherited the role of sultan and held it until 1092.

—Marco Demichelis

Bibliography

Findley, Carter V. *The Turks in the World History*. New York: Oxford University Press, 2005.

Jenkins, Romilly J. H. *Byzantium: The Imperial Century, A.D. 610–1071*. Toronto: Toronto University Press, 1987.

Roxburgh, David. J. *Turks: A Journey of a Thousand Years, 600–1600*. London: Royal Academy of Arts, 2005.

Godfrey of Bouillon—Defender of the Holy Sepulcher

Godfrey de Bouillon (1058–1100), French duke of Lower Lorraine and one of the most important leaders of the First Crusade, set out for the Holy Land in 1096 with his brother Baldwin in response to Pope Urban II's calling of the crusade. Godfrey's early commitment to crusading

was perhaps best demonstrated by his mortgaging his duchy to pay for the thousands of knights and foot soldiers he brought with him, primarily Germans, Flemings, and Walloons.

Godfrey was the first crusade leader to reach Constantinople and meet with Emperor Alexius I Comnenus, which meant that he was the first of the crusaders to deal with Alexius's unexpected demand of an oath of allegiance. As a member of the Western nobility, Godfrey and the other leaders of the crusade who followed him were uncomfortable with taking an oath to an Eastern emperor. Yet Godfrey realized that good relations with the emperor were necessary. As a result, he set the pattern for those who followed by taking an oath that in exchange for proper Byzantine support for the crusaders' efforts, the crusaders would return all captured lands that had once been under the authority of the Byzantine empire to the control of Alexius.

While Godfrey was active in the early crusader conquests of Nicaea and Antioch, he is most noteworthy for his efforts during the siege and capture of Jerusalem in 1099. His troops were the first to break through the city walls and reportedly began a massacre of the Jewish and Muslim inhabitants. During the massacre, Godfrey allegedly demonstrated his piety when he stripped off his armor and cast down his arms as he made his way barefoot through the mayhem to pray in the Church of the Holy Sepulcher in fulfillment of his crusading vow. In the wake of the conquest of Jerusalem, Godfrey was chosen by the crusaders as ruler of the holy city. The support that Godfrey received from the other leaders for his new position was quite an accomplishment in light of the earlier rivalries that existed among the crusading princes as well as between the lay lords and the clergy. Yet Godfrey had fought well in the conquest of Jerusalem and also had the support of his powerful brother Baldwin, who by then controlled the county of Edessa. Although Godfrey declined the title of king of Jerusalem, even if he ultimately held an equal authority, he did accept the title of Defender of the Holy Sepulcher.

During Godfrey's brief reign he expanded his authority as well as the overall successes of the crusaders by bringing several surrounding towns under his control, including Ascalon in 1099. He

► RAYMOND D'AGUILIERS—THE SELECTION OF GODFREY OF BOUILLON AS DEFENDER OF THE HOLY SEPULCHER

Accordingly, after six or seven days the princes solemnly began to consider the matter of choosing a ruler, who, assuming charge of all matters, should collect the tributes of the region, to whom the peasants of the land could turn, and who would see to it that the land was not further devastated. While this was taking place, some of the clergy assembled and said to the princes, "We approve your election, but if you proceed rightly and properly, you will first choose a spiritual vicar, as eternal matters come before temporal; after this, a ruler to preside over secular matters. Otherwise, we shall hold invalid whatever you do." The princes were exceedingly angered when they heard this and proceeded the more quickly with the election. . . . The princes, disregarding admonition and opposition, urged the Count of St. Gilles to accept the kingdom. But he said that he abhorred the name of king in that city, though he would consent to have others accept it. For this reason they together chose the Duke [Godfrey of Bouillon] and placed him in charge of the Sepulchre of the Lord.

—Andrew Holt

Source

August C. Krey, *The First Crusade: The Accounts of Eyewitnesses and Participants* (Princeton, NJ: Princeton University Press, 1921), 262–263.



Image from an illuminated manuscript depicting, at left, Godfrey of Bouillon on horseback wearing a crown, with the river Jordan below. At right, he is depicted decapitating a camel with his sword in a scene which evokes his legendary strength. (Library of Congress)

also rebuilt the nearby city of Jaffa, making it the primary port of arrival for crusaders and other pilgrims on their way to Jerusalem. Among his final acts, he made an agreement with the Venetians to besiege Acre but took sick and died in July 1100 before he could take part in the siege. Godfrey was succeeded by his brother Baldwin I (r. 1100–1118) who, unlike Godfrey, was willing to accept the title of king of Jerusalem.

Godfrey was buried in the Church of the Holy Sepulcher, where his tomb remained until it was destroyed in the nineteenth century.

—Andrew Holt

Bibliography

- Anderssohn, J. C. *The Ancestry and Life of Godfrey of Bouillon*. Bloomington: University of Indiana Press, 1947.
- Aube, Pierre. *Godefroy de Bouillon*. Paris: Fayard, 1985.
- Morris, Colin. *The Sepulchre of Christ and the Medieval World: From the Beginning to 1600*. Oxford: Oxford University Press, 2005.

Two Parallel and Divergent Jihadists—Nur al-Din and Baybars

With the launching of the crusades by Pope Urban II (r. 1088–1099) at the Council of Clermont in 1095, Muslim hegemony over the lands of the

Middle East was thrown into jeopardy. However, out of this turmoil and strife arose two great Turkish champions of Islamic orthodoxy: the *atabeg* (military commander and vicegerent) of Aleppo and Mosul Nur al-Din (r. 1146–1174) and the Mamluk (freed slave-soldier) Sultan Baybars I al-Bunduqdari (r. 1260–1277). While the careers of both show similar approaches to the military threats of their times, both leaders also employed different tactics, with each earning lasting fame and respect.

During the early twelfth century, Frankish authority in the Levant was ascendant, and it is into this milieu that al-Malik al-Adil Nur al-Din Abu al-Qasim Mahmud Ibn Imad al-Din Zangi, better known as Nur al-Din, was born in 1118. With the assassination of his father, Imad al-Din Zangi, in 1146, the Muslim response to the Franks was placed in jeopardy. In keeping with custom, Zangi's two surviving sons, Saif al-Din Ghazi (r. 1146–1149) and Nur al-Din, each received portions of their father's patrimonial estate. Taking advantage of the political instability, Raymond of Poitiers, Prince of Antioch (r. 1136–1149), launched a series of raids against the two Zangid rulers. However, both brothers united and repelled the Franks.

It is at this early period that Nur al-Din began to distinguish himself as a pragmatic ruler, entering into agreements and partnerships with his elder brother to present a united front to the Franks. This policy proved to be especially useful, but his brother passed away a mere three years after their father. On the other side, the Franks were unable to unite and dislodge the now sole Zangid ruler from his territories. Joscelin II of Edessa (d. 1159) tried to reconquer Edessa, which was lost to Nur al-Din's father in 1144. However, despite the assistance of the native Armenian Christian population, his attempt failed, and the Armenians were forced by Nur al-Din to evacuate the town.

Recognizing the weak Muslim position but also the weakness of the Frankish position, Nur al-Din sought to gain strategic alliances—characterized by the historian P. M. Holt as the “Syrian federation”—with various Muslim governors and military commanders across the region. Foremost among them was the strategic city of Damascus. In 1147, through a series of agreements with Muin

➤ TWO CROWNING ACHIEVEMENTS—THE OCCUPATIONS OF DAMASCUS AND ANTIOCH

The occupations of the great cities of Damascus by Amir Nur al-Din and of Antioch by Sultan Baybars I al-Bunduqdari reveal very different strategies employed by these two great jihadists of the crusader period. In the case of Damascus, Nur al-Din needed the city as the linchpin for his Syrian federation. With Frankish control of the coastal regions and Jerusalem, the city's location astride the route from the grain-rich areas of Hawran and the Biqa Valley made its control essential to the Muslim resistance. Under the rule of the regent Amir Muin al-Din Unur (r. 1140–1149) of the Burid dynasty (1104–1154), there was cooperation between Damascus and Nur al-Din, but by 1150 the situation had changed greatly. The new ruler, Mujir al-Din, did not want to lose his autonomy and entered into agreements with the Frankish kingdom of Jerusalem. Thus, Nur al-Din, in preservation of both his own position and the grand Syrian federation, laid siege to a Muslim city and conquered it in 1154. The city was refortified and again became a military, cultural, and political capital.

Roughly a century later, the sultan Baybars laid siege to the city of Antioch (present-day Antakiya in Turkey). Antioch had fallen to the Frankish armies of the First Crusade in 1098, and territory surrounding the city comprised the principality of Antioch (1098–1268). By the mid-thirteenth century the principality was reduced to the status of a vassalage of the Armenian kingdom of Cilicia (1078–1375). With the other crusader states in general disarray, the real threat to Muslim hegemony came from the invading Mongols, whom Baybars routed at Ayn Jalut in 1260 and again in 1277 at Elbistan. However, the prince of Antioch, under orders from the Armenians, entered into agreements with the Mongols, necessitating the Mamluk sultan's attack and capture of it in 1268. Unlike Damascus, which held strategic value to Nur al-Din, Antioch's Orontes River had silted up, preventing large ships from docking in the city as they had in antiquity. Seeing the city as more of a liability, Baybars reduced it to rubble and sold its Frankish and Eastern Christian populations into slavery. Its removal opened up the coastal region to Mamluk control and effectively ended Frankish authority in Syria.

—*Rasheed Hosein*

al-Din Unur (r. 1140–1149), the governor of Damascus, the Zangid ruler was able to bring the city into his Syrian federation. In response, Conrad III of Germany (r. 1138–1152) and Louis VII of France (r. 1137–1180) led the armies of the Second Crusade (1147–1149) against Damascus in July 1148 but were easily repelled after a siege of only four days. In 1149 Muin al-Din Unur died, and his successor Mujir al-Din Aybek (d. 1169) did not accept Nur al-Din's leadership. However, Nur al-Din earned the support of the city and ousted Mujir al-Din in 1154, leaving the Zangid as the unquestioned leader of the Muslim response to the Franks. Damascus, for the first time since the Umayyad dynasty (661–750), was the capital of a major unified Muslim territory.

The legacy that Nur al-Din presents to posterity is one of an urbane and quietly effective warrior and a sincerely pious Sunni Muslim. He restored the dignity of Damascus as a major capital. His decisive military actions stemmed the threat of the Second Crusade to the Muslim centers of the Syrian littoral. While he was not averse to using force and even calculated brutality to obtain support for his Syrian federation, his first choice was always diplomacy, and he used his diplomatic skills to great advantage. Nur al-Din also respected the Frankish crusaders and colonists. While he clearly viewed them as a dangerous threat to Islam, those who earned his respect were honored, and those who broke faith were given no quarter. The best example of this is his refusal to attack the Franks upon the death of King Baldwin III of Jerusalem (r. 1143–1162), whom he held in high regard. The Franks did not offer Nur al-Din's widow the same respect upon his death in 1174.

In contrast, the future Mamluk ruler al-Malik al-Zahir Rukn al-Din al-Salihi, known to history as Baybars I, was born among the seminomadic Turkic peoples of the Kipchak steppes around 1223. Purchased by the last great Ayyubid sultan al-Salih Ayyub (r. 1240–1249), he was given to the Turkish officer Aydakin Bundukdar. Baybars was said to have extraordinary physical features, being abnormally tall and blond and possessing a curious white spot in one of his eyes. These features caused Aydakin to later sell the young slave at a steeply reduced price, something that shamed and galled the future ruler.

Baybars enters the historical records on the register of prisoners at al-Karak, where he was incarcerated along with al-Salih Ayyub in 1239. However, after Baybars earned his release, he began to distinguish himself in combat on the Syrian frontier. These military successes culminated in his decisive command of Mamluk forces at the Battle of Mansura (1250), which led to the complete rout of Frankish forces and the capture of the French king Louis IX (r. 1226–1270). A decade later and commanding the Mamluk vanguard forces, Baybars led the defense of Egypt against the Mongol threat. At Ayn Jalut in September 1260, the Mamluks routed the seeming invincible Mongols, sparing Egypt and much of Syria from Mongol depredations, unlike unfortunate Iran and Iraq.

Baybars proved a ruthless politician, being linked conclusively with the murders of the Ayyubid ruler Turan-Shah (d. 1250) and the Mamluk ruler Qutuz (d. 1260). Once in power in Egypt, Baybars demonstrated this same ruthless resolve in securing his other territories. With the presence of both Mongols and Franks in the littoral, he took the offensive and attacked the Frankish stronghold of Acre in 1263. While this initial attack was unsuccessful, his subsequent battles against crusader outposts yielded more favorable results. By 1268 he reduced the great city of Antioch to rubble, selling its captured population into slavery. However, the Mongol threat proved more pressing, and the sultan turned his attentions to that threat, perhaps passing up the opportunity to totally remove the Franks from the Near East.

Territory conquered under Baybars received extensive infrastructural upgrades with an eye to integration and defense. In attacking his foes, the sultan systematically destroyed Frankish defenses, forcing them to expend energy that might otherwise be directed against him. Internally, Baybars contributed extensive revenues toward upgrading existing military fortifications and the construction of naval vessels. However, arguably the most important infrastructural upgrade was the development of a military postal system that could deliver letters between Damascus and Cairo in roughly four days. In addition to his military building, Baybars was a consummate civilian builder, establishing many important mosques

in Cairo and even renovating the Dome of the Rock on the Temple Mount in Jerusalem. Death came to Baybars in the same way as had power. He imbibed some poison meant for another while in Damascus in early July 1277. He was laid to rest in the library complex that he established in that city.

Baybars's death left unfinished his goal of totally evicting the Franks from the Levant, but because of his military successes against Franks and Mongols alike, a successor, al-Ashraf Kahil, completed the task in 1291.

Baybars's popularity, especially in Syria, lives on, despite his bloody rise to power and somewhat bloodthirsty rule. His life was immortalized in the *Sirah al-Sultan Baybars* (*The Life of the Sultan Baybars*). This source is more a work of heroic and romantic deeds than a straightforward historical source, but it remains an immensely popular work. His military, state-building, and political exploits, in addition to this romanticism, have kept his image alive in the popular imagination of Levantine Arabs and Egyptians today. Key among these attributes were his exploits as a jihadist, which hold special resonance to Middle Eastern Muslims today. The state that he was instrumental in founding and its concomitant instruments of legitimation continued to prosper for almost 300 years until its ending by the Ottomans in 1517.

—*Rasheed Hosein*

Bibliography

- Hillenbrand, Carole. *The Crusades: Islamic Perspectives*. New York: Routledge, 2000.
- Holt, P. M. *The Age of the Crusades: The Near East from the Eleventh Century to 1517*. New York: Longman, 1986.
- Holt, P. M. *Crusader States and Their Neighbours, 1098–1291*. London: Pearson, 2004.
- Holt, P. M., Ann K. S. Lambton, and Bernard Lewis, eds. *The Cambridge History of Islam*. Cambridge: Cambridge University Press, 1970.
- Ibn al-Qalanisi. *The Damascus Chronicle of the Crusades, Extracted and Translated from the Chronicle of Ibn al-Qalanisi*. Translated by H. A. R. Gibb. 1932; reprint, New York: Dover, 2002.
- Irwin, Robert. *The Middle East in the Middle Ages*. Carbondale: Southern Illinois University Press, 1986.
- Northrup, Linda. "The Bahri Mamluk Sultanate, 1250–1390." In *The Cambridge History of Egypt*, Vol. 1,

edited by Carl F. Petry. Cambridge: Cambridge University Press, 1999.

Thorau, Peter. *The Lion of Egypt: Sultan Baybars and the Near East in the Thirteenth Century*. New York: Addison-Wesley, 1991.

Crusader and Jihadist Atrocities and Acts of Chivalry

As a movement with religious militancy at its core, the crusades unsurprisingly produced a considerable number of atrocities but also acts of chivalry. Indeed, one person's atrocity might be another's act of chivalry. Such was the case with the slaughter of Jews by some of the earliest crusaders making their way through Europe to the Holy Land in 1096. While likely acting out of a variety of motives, at least some of the crusaders reasoned that since they were going to fight the infidel in the Holy Land, they would please God by eliminating the infidel living in their midst, by forced baptism that too often turned into murder. Contemporary Christians were divided over the event, with some condemning it and others approving.

Some of the early battles in the East produced stories of crusaders eating the dead bodies of their fallen Muslim opponents. The most gruesome accounts focused on events at the sieges of Antioch and Maarra in 1098. Christian chroniclers reported specific incidents that included graphic descriptions of filleting dead Muslims, boiling their bodies in pots, and impaling their children on grilling spits. While starvation was reported as the chief cause of cannibalism during the prolonged siege of Antioch, some crusaders also appreciated the terrifying shock value that such actions had on their enemy. The historian Guibert of Nogent notes that one group of crusaders at Maarra publicly roasted the bodies of dead Muslims in full view of their opponents.

Added to the often sensationalized but generally true tales of cannibalism were accounts of the mass slaughter of the inhabitants of Jerusalem after the crusaders' capture of the city in 1099. Recent estimates put the figure at around 3,000 slain. The account of Ibn al-Qalanisi also mentions a particularly troubling incident during the capture in which a congregation of Jews

perished when the synagogue where they were seeking refuge was burned down. While such an event may not seem out of place in light of earlier attacks on Jews in Europe, some historians have noted that it is a myth that the crusaders specifically targeted the Jews of Jerusalem in 1099.

Controversial acts committed by the crusaders continued throughout the crusading period. Among the most notable was King Richard the Lionheart's slaughter of thousands of Muslim captives at Acre in 1191. Also, the Byzantine historian Nicetas Choniates recorded a particularly brutal rampage through Constantinople by crusaders following their capture of the city in 1204. Many scholars now tend to discount Nicetas's lurid account and argue that the massacre was not as great as many have traditionally thought. Indeed, there might not have even been a massacre. Yet as with the slaughter of the Jews during the First Crusade, the successful conquest of Constantinople was interpreted in some crusader accounts as evidence of God's favor, while other crusader accounts are silent on the issue, suggesting ambivalence or even a sense of shame over the city's desecration. Perhaps the most hostile Western source on the sack of Constantinople was written in 1205 by Pope Innocent III, who described the city's despoliation with language that equals Nicetas Choniates's hyperbole.

The crusaders' Muslim opponents were also accused of atrocities. Perhaps the most well known of these was committed by Saladin. Following his crushing victory over Christian forces at the Battle of Hattin in 1187, he carried out a mass execution of captured members of the Knights Templar and Hospitalers. While he spared the life of the valuable grand master of the Temple, whom he hoped to ransom later, all the other members of the military orders were beheaded by Sufis to ensure that Saladin would not have to face them in later battles. Numerous atrocities were also attributed to the thirteenth-century Mamluk leader Baybars, a man known for his cruelty to Christians and Muslims alike. In 1268 Baybars's forces captured Antioch and razed the city, killing or enslaving the mostly Christian population. Likewise, on occasions when Bay-

➤ KILLING PRISONERS OF WAR AT HATTIN AND ACRE

Saladin orders the execution of Christian prisoners:

On the morning of Monday two days after the victory [Battle of Hattin July 4, 1187], the Sultan sought out the Templars and Hospitalers who had been captured and said: "I shall purify the land of these two impure races." . . . He ordered that they should be beheaded, choosing to have them dead rather than in prison. With him was a whole band of scholars and sufis [Muslim mystics] and a certain number of devout men and ascetics; each begged to be allowed to kill one of them, and drew his sword and rolled back his sleeve.

Source

Imad ad-Din al-Isfahani, *al-Fath al-qussi fi l-fath al-qudsi* ["Ciceronian Eloquence on the Conquest of the Holy City"], translated into Italian by Francesco Gabrieli, *Arab Historians of the Crusades*, translated into English by E. J. Costello (Berkeley and Los Angeles: University of California Press, 1969), 138.

King Richard orders the execution of Muslim prisoners:

However, upon that day, the pagans neither produced the Holy Cross [which had been captured at Hattin and was demanded back as part of their ransom], nor the Christian captives, nor yet the money which they had promised for the safety of their life and limbs: in consequence of which failure, all those pagans were sentenced to undergo capital punishment. . . . [T]he King of England caused all the pagans who belonged to him from the capture of Acre to be led out before the army of Saladin, and their heads to be struck off in the presence of all. . . . The number of the pagans thus slain was five thousand, all of whom the Christians disemboweled, and found much gold and silver in their entrails, while they preserved their gall for medical purposes.

—Andrew Holt

Source

Roger de Hoveden, *The Annals of Roger de Hoveden Comprising the History of England and of Other Countries of Europe from A.D. 732 to A.D. 1201*, Vol. 2, translated by Henry T. Riley (London: H. G. Bohn, 1853), 219–220.

bars initially failed to take strategic crusader castles, it was common for him to take out his rage on the local peasant population.

In contrast to these atrocities, many acts of chivalry took place during the crusades. In fact, it should be understood that the foundation of our understandings of chivalry originated with the ideals embraced by the knights of the crusading era. Although the crusades were violent expeditions, there existed a code of behavior, whether faithfully observed or otherwise, that was supposed to guide the knight's actions. The knight who lived according to chivalric values was courteous to women, defended the weak, and was loyal to king and God. Perhaps most important was the understanding that a knight was to show bravery in battle and mercy to a vanquished enemy.

King Louis IX of France provides perhaps the best example of a chivalric crusader-warrior.

Louis, who was proclaimed St. Louis in 1297 only 27 years after his death, was the architect and leader of the Seventh and Eighth crusades. Accounts of Louis IX's efforts during the crusades are full of instances of bravery and sacrifice. In one case the king reportedly took the risk of riding into the front ranks of the enemy in a successful effort to save his brother. In another instance, although sick from dysentery and subject to numerous fainting spells, Louis refused to abandon his troops during a fierce battle that led to his capture and imprisonment in 1250 during the Seventh Crusade. According to the account of Jean de Joinville, the future saint had access to a galley that would have allowed him to escape, but he chose to remain in danger rather than desert his suffering warriors.

Other noteworthy crusaders who earned reputations for chivalry include Godfrey de Bouillon and Richard the Lionheart. Godfrey's deeds

were eventually elevated to nearly mythic proportions, as he was celebrated both in the many histories of the First Crusade and later *chansons de geste* (songs of heroic deeds). Among the many deeds of valor attributed to Godfrey is the story that during the siege of Antioch, he led a band of only 12 knights who fought so ferociously that they forced the retreat of 150 Turks. In addition to his bravery in battle, Godfrey's religious devotion was also demonstrated by his refusal to accept the title of king of Jerusalem. He reportedly did this out of respect for the holiness of the city and considered such a proposal unseemly.

Like Godfrey, King Richard I was praised for his valor in combat. His military success during the Third Crusade was in several instances known to have inspired the otherwise demoralized crusaders. Richard's victories over Muslim forces at Arsuf and Jaffa proved that the seemingly invincible Saladin could be defeated. It was also reported that at Jaffa, a key port city, Richard personally led charges that rallied the crusaders to victory over a numerically superior Muslim force. The king was also occasionally hailed for his mercy to captured enemies. In one such instance in 1192, Richard ordered the execution of a number of captured Muslim raiders who were harassing Christian pilgrims in Palestine. Yet when Saladin's herald was discovered among the prisoners, Richard spared his life.

No other Muslim participant gets as much credit for acts of chivalry during the crusades as Saladin. The sultan's biographer Beha ad-Din records one instance in which the three-month-old child of a Christian woman in the crusaders' camp was kidnapped by Muslim slavers, who brought the child to Saladin's camp. The woman risked her life to secure an audience with the sultan and beg for her child back. Saladin, reportedly brought to tears by the woman's anguish, ordered that the child be found and returned to its mother, who was then given safe passage to the crusaders' camp.

Saladin was equally renowned for his dealings with his Christian opponents. Among the many chivalrous deeds attributed to him include an instance in which the victorious sultan offered water as a sign of mercy to Guy de Lusignan, the defeated king of Jerusalem. Sources also

tell us that upon hearing the news of Richard the Lionheart's sickness, Saladin offered the services of his physicians to the ailing crusader king.

—Andrew Holt

Bibliography

- Barber, Richard. *The Knight and Chivalry*. London: Cardinal, 1974.
- Gabrieli, Francesco. *Arab Historians of the Crusades*. Translated from the Italian by E. J. Costello. Berkeley and Los Angeles: University of California Press, 1969.
- Gervers, Michael, and James M. Powell, eds. *Tolerance and Intolerance: Social Conflict in the Age of the Crusades*. Syracuse, NY: Syracuse University Press, 2001.
- Nicholson, Helen, and David Nicolle. *God's Warriors: Crusaders, Saracens and the Battle for Jerusalem*. Oxford, UK: Osprey, 2005.

Hulegu—Conqueror of Baghdad

Mongol hostilities resumed in the Near East in 1256 under the late Chinggis Khan's grandson, Hulegu. Years of succession problems in Karakorum had disrupted the momentum of Mongol conquests, and the western Eurasian khans were anxious to spread Mongol hegemony across the Euphrates and into Syria and Egypt. The new great khan Mangu rewarded Hulegu's fidelity in the succession fight with newly conquered lands centered in Persia and Khorasan and then charged him with subjugating the Abbasid caliph in Baghdad and the destruction of the last remaining great power in the Near East, the Mamluk sultanate in Cairo. As a prelude to his attack on Syria and Egypt, Hulegu decided to isolate the two smaller independent Islamic powers that stood on either side of Syria's eastern flank, the Ismaili Order of Assassins in the north and the Abbasid caliphate in the south.

Drawing on assistance from troops from the Golden Horde in Russia, Hulegu Khan entered Persia in 1256 with an army of over 100,000 men and a very substantial siege train manned by 1,000 crews of Chinese engineers. The Ismaili mountain fortresses were his first objective. As the Mongol military machine reduced castles in Mazanderan, Meimundez, and Alamut, the last Master of the Assassins, Rukn ad-Din, threw himself on the mercy of Mangu Khan, journeying to

the court in Karakorum only to be denied an audience. Rukn ad-Din was murdered on the way back to Persia, kicked to death by his escorts. By February 1257 over 100 of the Ismailis' castles had been demolished, their inhabitants, including women and children, slaughtered.

Hulegu next sent letters to the caliph of Baghdad, al-Mustasim Billah, ordering him to dismantle his walls and come to the khan's tent and swear allegiance. Al-Mustasim refused, replying that many armies had failed against Baghdad in the past. Unfortunately, centuries of neglect had left the city's walls in disrepair, and its garrison of some 50,000 men was ill-equipped and poorly trained. The caliph also failed to heed the warnings of his generals to conscript more soldiers. And even though his position as the Abbasid caliph gave him the authority to summon assistance from the whole of Islam, the only two regional powers left, Syria and Egypt, refused to assist him. Finally recognizing the gravity of his situation, the caliph ordered the walls repaired only one day before the Mongols arrived.

His patience at an end, Hulegu commanded the Mongol army to converge in four columns on Baghdad. In response, al-Mustasim ordered a force of 20,000 cavalry to delay the steppe warriors' advance. As the Muslim army approached, the Mongols broke the dikes on the banks of the Tigris River, flooding the garrison's camp and cutting off the army's line of retreat. Only a few Muslim warriors survived the flood and the engagement with Hulegu's vanguard, returning to the city with the throngs of refugees.

Digging a ditch and rampart around Baghdad's walls, Hulegu ordered the bombardment to commence on January 30, 1258. After seven days of uninterrupted barrage with the trunks of palm trees, foundation stones, and shot, the caliph offered his submission, but the khan would accept nothing short of unconditional surrender. On the morning of February 6 the Mongols stormed and captured the entire eastern wall.

Over the next seven days the city was pillaged, and its libraries, madrasas (schools), mosques, and palaces burned. The garrison was put to the sword, and according to one account, the caliph and his three sons were sewn up in Persian carpets and trampled to death under the hooves of Mongol horses. Baghdad, once the cul-

THIRTEENTH-CENTURY MONGOL CAMPAIGNS, BATTLES, AND DIPLOMATIC MISSIONS AFTER CHINGGIS KHAN'S DEATH

- 1232—Siege of Kaifeng
- 1234—Conquest of the Jin empire of northern China
- 1237—Invasion of Russia
- 1240—Capture and destruction of Kiev
- 1241—Victories at Cmielnik (Poland), Leignitz (Silesia), and Mohi on the Sajo River (Hungary); Bosnia and Albania invaded
- 1242—Mongols depart from central Europe, never to return
- 1243—Grand Prince Jaroslav of Vladimir and Kiev submits to the Golden Horde
- 1253—Khubilai commences the invasion of southern China; Hulegu sets off on his Persian campaign
- 1254—Fourth invasion of Korea commences
- 1256—The Assassins of Iran are destroyed
- 1257–1258—Annam (northern Vietnam) is invaded and becomes a vassal state
- 1258—Baghdad is captured and destroyed
- 1260—Defeat at Ayn Jalut
- 1273—Korea becomes a vassal state
- 1274—First invasion of Japan is defeated
- 1279—Conquest of Song China is completed
- 1281—Second invasion of Japan is defeated
- 1281–1285—Disastrous campaign against the kingdom of Champa (southern Vietnam)
- 1282—Siam (Thailand) voluntarily becomes a vassal state
- 1287—Invasion and defeat of the kingdom of Pagan (Burma/Myanmar); second invasion of Annam and capture of Hanoi
- 1288—Defeat at the naval Battle of Bach Dang in Annam; Annam and Champa offer Khubilai Khan token tribute to prevent further attacks
- 1292–1293—Unsuccessful invasion of Java
- 1296—Khmer kingdom of Cambodia enters into alliance with the Mongols
- 1299–1300—Invasion and brief occupation of Syria by Il-khanids

tural and intellectual center of the Islamic world, lost a few hundred thousand of its inhabitants. The carnage was so great that the Mongols were forced to abandon their camps because of the stench of decomposing corpses. With the Abbasid caliphate destroyed, Hulegu attacked the

Mamluk sultanate in Syria and Egypt but was defeated by the Mamluks at the Battle of Ayn Jalut in 1260, blunting the Mongol offensive in the Near East.

—*Brian Todd Carey*

Bibliography

- Chambers, James. *The Devil's Horsemen: The Mongol Invasion of Europe*. New York: Atheneum, 1979.
- Hildinger, Erik. *Warriors of the Steppe: A Military History of Central Asia, 500 B.C. to 1700 A.D.* New York: Sarpedon, 1997.
- Morgan, David. *The Mongols*. Oxford, UK: Basil Blackwell, 1986.

Zhu Yuanzhang—From Impoverished Peasant to First Ming Emperor

Zhu Yuanzhang, who ascended the imperial throne of China on January 23, 1368, as the Hongwu (Vast Military Power) emperor, rose from the ranks of the peasantry to found the Ming dynasty (1368–1644) after leading a popular rebellion against the Mongol Yuan dynasty (1279–1368). Only two emperors share the distinction of rising from the peasantry to the imperial yellow: Liu Bang, who became Han Gaodi (r. 206–195 BCE), founder of the Han dynasty, and Zhu Yuanzhang. Both accomplished this feat at the head of a rebel army.

Born on October 21, 1328, Zhu Yuanzhang was the son of an itinerant laborer. In 1344 famine claimed his parents and two elder brothers, and Zhu joined a Buddhist monastery to avoid a similar fate. Even this was not sufficient for him to escape hunger, so he took to the roads as an itinerant monk with begging bowl. Three years of wandering brought him into contact with a number of radical religious sects that preached rebellion against the hated Mongol overlords of China. After returning to his monastery, he was forced to leave for a life of renewed wandering when the monastery was destroyed by Mongol militia. Homeless again, he joined one of the many factions of the Red Turbans in 1352, a rebel group that drew heavily on the teachings of Manichaeism, Daoism, and the cult of the Maitreya Buddha, the Buddha of the future who would descend from his abode in the Tushita Heaven to usher in a new age. Zhu rose quickly through the

ranks of the rebel band and in 1355 took command. The following year his army captured the southern city of Nanjing, which became his base. When the leader of the Red Turbans died under mysterious circumstances in 1367 while he was Zhu's guest, Zhu declared his own imperial ambitions. As Zhu's army marched north, the last Yuan emperor, Toghon Temur (r. 1333–1368), fled the capital of Dadu (in present-day Beijing) for Mongolia. Zhu razed Dadu; declared himself founder of a new imperial dynasty, the Ming (Brightness); assumed the imperial temple name of Taizu; and proclaimed the Hongwu Era. He then returned to Nanjing, which he transformed into his capital. In 1370 he drove the Mongols farther north, and by 1387 he had regained and reunited all of China.

Because China continued to be threatened with Mongol invasions, Ming Taizu believed that China had to maintain a strong military presence along its frontier, especially its northern border with Mongolia. He created a standing army of more than 2 million soldiers, which he used in expeditions into Central and Southeast Asia, but this massive army was largely for defensive purposes and internal security. No serious attempt was made to invade and conquer Mongolia. His reliance on the army to gain and then defend his empire led him to modify the traditional Confucian principle that soldiers are vastly inferior to scholars because military violence represents a loss of decorum and rationality. His increased attention to the well-being of the army greatly raised the military's prestige. At the same time he tried, with some success, to make the army fairly self-supporting by settling soldiers and their families on lands that they were given to farm.

His ventures into militarism were balanced by diplomatic forays, with Chinese envoys demanding tributary obeisance from such states as Korea, Japan, Tibet, Annam (northern Vietnam), Champa (southern Vietnam), Borneo, Java, Sumatra, and even Coromandel on the eastern coast of India.

At home Zhu concentrated power into his own hands, abolishing the post of prime minister in 1380. As an autocrat he strengthened agriculture; instituted a successful campaign to reforest large areas of China; reformed landhold-

ing to the benefit of peasants; outlawed private slavery; improved China's infrastructure, especially its canals and dikes; and reinstituted the civil service examination system, which tested candidates on their knowledge of Confucian literary and philosophical texts. On the less-positive side, his misuse of government-issued paper money caused massive inflation. By 1425 paper money had dropped to 1/70th of its initial value, and the state had to return to copper coinage. He also conducted massive purges, killing off or disgracing numerous potential rivals, many of whom were former supporters. When he died in June 1398 in the 31st year of his reign, he was followed to the grave by 38 concubines who were immolated along with him in conformity to the traditions of his Mongol predecessors.

—Alfred J. Andrea

Bibliography

Chan, Albert. *The Glory and Fall of the Ming Dynasty*. Norman: University of Oklahoma Press, 1982.

Motecuhtzoma Ilhuicamina— The Heaven Shooter

The Mexica (Aztecs) had a series of a dozen rulers, the *buey tlahtoani*, from the time of the foundation of their capital, Tenochtitlan, until the arrival of the Spaniards. One of the most famous was Motecuhtzoma Ilhuicamina, popularly known as Montezuma I (r. ca. 1440–1468). His name translates as “He who scowls in lordly anger, he who shoots an arrow into the sky.” The last Mexica emperor was also named Motecuhtzoma but with the sobriquet of Xocoyotzin (The Younger).

The Mexica chose their rulers from the male members of a single ruling family. Thus, the leadership more frequently passed from brother to brother or uncle to nephew than from father to son. In his case, Motecuhtzoma Ilhuicamina succeeded his uncle Iztcoatl (Obsidian Snake) under whom he had served as a military leader. Iztcoatl governed along with his brother Tlacaelel, who was an adviser and strategist and second-in-command, holding the title of *cibua-coatl* (female snake). Under Iztcoatl, the Mexica gained their independence from the city-state of Azcapotzalco, a rival in the Valley of Mexico.

THE CONCEPTION OF MOTECUHTZOMA ILHUICAMINA

Mexica history provides some very colorful stories regarding the birth and youth of the men who would become emperors. One of the most colorful, and in some ways even romantic, was the story of the conception of the great emperor Motecuhtzoma Ilhuicamina.

The emperor of the Mexica, Huitzilihuitl, sought a bride. He heard of a great beauty, Miahuaxihuitl, princess of Cuauhnahuac (present-day Cuernavaca), and resolved to make her his queen. Her father, the sorcerer king, Oxomatzin, had her guarded behind high walls and protected by powerful spells. Unable on several attempts to gain entry to the palace and continually rebuffed by her father, Huitzilihuitl shot an arrow, decorated with symbols of his love and carrying a precious jade bead, into her compound. When it landed the arrow broke open. Miahuaxihuitl saw the arrow and understood the symbols of love. She picked up the bead and tested it with her teeth, accidentally swallowing it, and thus magically became pregnant. Her child was Motecuhtzoma Ilhuicamina. Perhaps this is the origin of his sobriquet: Ilhuicamina, “He who shoots an arrow to the sky.”

—John F. Schwaller

The rule of Motecuhtzoma saw several important events in Mexica history. In the early years of his rule the Mexica became bogged down in a seemingly never-ending war against Chalco, a rival city to the southeast in the valley, but the Mexica were eventually victorious. Famine caused by unseasonable frosts, drought, and other climatic disturbances also gripped the region. This coincided roughly with celebrations for the New Fire ceremony, the equivalent of the end of a century, in reality a 52-year cycle. According to Mexica thought, the world would end at the conclusion of such a cycle, and so the ceremonies were extremely important to ensure the continuation of existence. The combination of famine and the New Fire ceremony caused Motecuhtzoma, advised by his uncle Tlacaelel, to inaugurate a new type of warfare, known as the Xochiyaotl (Flower Warfare). The purpose of this warfare was to capture opponents to be

used in human sacrifice. Thousands of victims were needed for the New Fire ceremonies. The surrounding peoples also shared the same religious beliefs as the Mexica and thus were willing to participate in these wars. While their primary purpose was to gain captives, the Mexica and their neighbors also used them to further political ends by gaining power over other cities, all of which furthered Mexica expansion.

Motecuhtzoma ranks as one of the great lawgivers in Mexica history. He developed the legal system to a greater degree than had his forebears, and he established a series of courts to hear cases from throughout his realms. Some of the judges were highly specialized, such as the judges in the marketplace who heard cases arising from the business of the market. Each of the neighborhoods of the city also had judges, and Motecuhtzoma established a supreme council of judges to hear appeals from lower courts. Moreover, he developed a system of sumptuary laws

whereby warriors and rulers could wear certain types of garments that were forbidden to others. While the nobility had generally been limited to those who could claim descent from the ruling family, under Motecuhtzoma it was opened to leading warriors.

—John F. Schwaller

Bibliography

- Berdan, Frances. *The Aztecs of Central Mexico: An Imperial Society*. 2nd ed. Belmont, CA: Thomson Wadsworth, 2005.
- Davies, Nigel. *The Aztecs: A History*. Norman: University of Oklahoma Press, 1980.
- Fagan, Brian. *The Aztecs*. New York: W. H. Freeman, 1984.
- Gillespie, Susan D. *The Aztec Kings: Construction of Rulership in Mexica History*. Tucson: University of Arizona Press, 1989.
- Hassig, Ross. *Aztec Warfare: Imperial Expansion and Political Control*. Norman: University of Oklahoma Press, 1988.
- Smith, Michael E. *The Aztecs*. 2nd ed. Oxford, UK: Blackwell, 2003.

THE HISTORICAL PACHACUTI

Solid historical evidence regarding Inca rulers up to and including Pachacuti is elusive. Even the dates of their reigns are uncertain because the Andean people were not concerned with recording historical events in terms of solar years. The sixteenth-century Spanish chronicler Miguel Cabello de Valboa dated Pachacuti's reign from 1438 to 1471, which seems reasonable in light of the oral traditions available to him. The record of Pachacuti's conquests was also retained on the *quipus*, the Incas' knotted-string recording devices. However, it also seems reasonable to suggest that maybe the impressive list of reforms and later conquests ascribed to Pachacuti was not so much the work of a single individual but instead reflects a less dramatic longer-developing emergence of Inca predominance in the Andes. Moreover, Pachacuti's reputed interest in history possibly was a manifestation of his or others' desire to manipulate the accounts of Inca origins and expansion. It is conceivable that part of what might have been an invented history of the emergence of the Inca empire was an exaggerated or wholly fabricated account of the Chanca attack.

—Paul R. Steele and Catherine J. Allen

Pachacuti Inca, Legendary Empire Builder

According to tradition, Pachacuti Inca (r. ca. 1438–ca. 1471) was the youngest son of the eighth Inca, Viracocha. Around 1438, the city of Cuzco was threatened by the Chancas, a rival ethnic group. Viracocha Inca and his eldest son, Urco, fled the city, leaving its defense to Pachacuti (who at the time bore the name Inca Yupanqui). While Yupanqui struggled to gain help from surrounding people, he was unexpectedly aided by the miraculous appearance of 20 squadrons of Pururaucas, stone warriors who after the victory turned back into rocks on the landscape. Many of the more than 300 shrines surrounding Cuzco were believed to be these stone warriors.

The chroniclers also described Yupanqui's struggle with his father and older brother for the royal tassel, the Inca insignia of sovereignty. After this miraculous victory, Viracocha was forced to return to Cuzco to confirm Yupanqui as the new Inca. During this ceremony, Viracocha bestowed a new name on his successor: Pachacuti Inca Yupanqui Capac Indichuri, which

means “World Reversal (literally ‘time change’), King Yupanqui, son of the Sun.”

The use of the epithet “Pachacuti” is often thought to apply to the new king’s role as revolutionary reformer of Inca society and creator of the Inca empire. Tradition further records that following his installation as Inca, Pachacuti embarked on a wholesale reorganization of all facets of life in and around Cuzco, which he rebuilt according to a grand new plan. Central to the reconstructed city was the Temple of the Sun, whose cult seems to reflect Pachacuti’s personal devotion and patronage. The reforms that inaugurated Pachacuti’s reign were followed by rapid expansion of the Inca state through an impressive series of conquests, and as his armies advanced they brought with them the Sun cult. The conquests continued under Pachacuti’s son and grandson, Tupa Inca Yupanqui and Huayana Capac. By the 1520s the Incas dominated most of the area covered by the Andean mountain chain, roughly 3,100 miles (5,000 kilometers) from north to south. Never before had this vast region been united under one state.

Apparently aware of his pivotal place in Inca history, Pachacuti likewise took great interest in the histories of previous Incas and ordered the performance on ceremonial occasions of poetic songs that recalled the deeds of his predecessors. Pachacuti’s mummified body was later housed in a temple located in Cuzco. Lying beside the dead Inca was the body of his enemy, the defeated Chanca leader.

—Paul R. Steele and Catherine J. Allen

Bibliography

- Betanzos, Juan de. *Narrative of the Incas*. Translated and edited by Roland Hamilton and Dana Buchanan from the Palma de Mallorca. Manuscript, 1551-1557; reprint, Austin: University of Texas Press, 1996.
- Julien, Catherine. *Reading Inca History*. Iowa City: University of Iowa Press, 1999.
- Sarmiento de Gamboa, Pedro. *History of the Incas*. Translated and edited with notes and an introduction by Clements Markham. 1907. Reprint, Mineola, NY: Dover, 1999.
- Steele, Paul R., with the assistance of Catherine J. Allen. *Handbook of Inca Mythology*. Santa Barbara, CA: ABC-CLIO, 2004.



Pachacuti built the ceremonial complex of Sacsayhuaman, located on a hill above Cuzco, in the fifteenth century. (Corell)

Warriors by Caste—The Rajputs

The Rajputs, warriors of mixed ethnic and social-historical background, rose to prominence during the ninth to eleventh centuries and ruled many northern and central Indian kingdoms and princely states in a vast region known as Rajputana (Land of the Rajputs) until the nineteenth century. The Rajput ethos was martial. Death on the battlefield was their highest achievement and was considered equal to a sacrifice. Memorial stones for fallen warriors and their horses contributed to the deification of historical heroes, and poets gave further voice to this warrior ethos. The warrior enhanced his reputation and that of his clan by gaining epic fame or even divine status after his self-sacrifice in battle.

Rajputs generally combined agricultural settled life and cattle herding with military service. Little consensus exists on early Rajput history, as available historical data consist mainly of semi-historical, often legendary collections of facts and figures, names, and different versions of stories. Early Rajput genealogies are to be regarded with caution. What is evident, though, is that the earliest Rajput kingdoms were founded by small war bands, groups of armed men in search of plunder and land who managed to occupy a modest territory. They ardently defended and protected their newly won terrain and especially the cattle

➤ RAJPUT ORIGINS

Because Rajputs are not mentioned in ancient sources, various theories on their origins have been advanced. The word *rajput* itself is a corruption of the Sanskrit *rajaputra* (son of a king). The term was widely used in ancient texts, but the persons referred to were not necessarily all early Rajputs, as is often claimed. Instead, Rajputs form a collection of various clans from different regions and likely lack a shared ancestry. Rajputs claim descent from three major lineages, all somehow connected to the Hindu god Vishnu: the Sun lineage (Suryavamsha), the Moon lineage (Chandravamsha) and the Fire lineage (Agnivamsha). The first lineage began with the mythical king Ikshvaku and included Rama, an *avatar*, or incarnation, of Vishnu. The second lineage belonged to epic kings, such as Bharata, Kuru, and Yudhishtira, and to Krishna, another avatar of Vishnu. The third lineage originated from fire and the god Agni. According to one myth, the kings of northwestern India were exterminated by Parashurama, another avatar of Vishnu, in the last centuries BCE. A sacrificial fire was lit at Mount Abu, Gujarat, to seek new protectors from the gods. Depending on the version told, a youth or four warriors and an elephant emerged. Rajput myth and histories mention two additional lineages: one that claims ancestry from divine snakes (Nagavamsha) and the other that traces its history to the ancient Seers (Rishivamsha).

—Alexandra van der Geer

won in battle or robbed during the many cattle raids.

During the twelfth to fourteenth centuries, these territories grew larger and gradually developed into kingdoms. Typically the founders of Rajput realms were ascribed a glorious past, including a heroic death. Whereas the early Rajput warriors came from different social and ethnic backgrounds, later Rajput rulers claimed a “pure-blooded” aristocratic status.

Rajput territories were repeatedly invaded by Afghans, Mongols, and Turks beginning in the early eleventh century. For political reasons, several Rajput rulers agreed upon military and marriage bonds with the Islamic invaders, but only a few converted to Islam, contrary to what most

Mughal and colonial sources maintain. Except for rulers and high-ranking military officials, the majority of Rajputs came into contact with Mughals only intermittently.

Of these invasions, the fall of Chittor (1303) is especially remembered in legends and stories until today. Ala-ud-din Khilji, sultan of Delhi, supposedly attacked the fort after having heard of the beauty of its queen. When defeat was unavoidable, the men of the city sallied toward the besieging army in saffron-colored mourning garments for one final heroic fight to certain death, while the queen led the women of the citadel, dressed in wedding dresses, into death by fire. This self-immolation, known as Jauhar, and suicidal fighting, known as Saka, were a regular practice among Rajputs when defeated, whether by Mughals or by rival Rajputs.

Three major lineages (*vamsbas*) are recognized in official Rajput myths and 36 major clans (*kulas*). There is evidence that in their early period of development Rajputs married outside their clans. As they developed a self-consciousness as a people apart from others, however, Rajputs were expected to be strictly endogamous, marrying only within their clan and lineage. Within the Hindu social system, Rajputs traditionally reckon themselves to be of the Kshatriya caste, the social order of warriors and rulers. However, this mythical link is thought to have gradually lost its meaning from the tenth century onward, when part of the emerging Rajput aristocracy no longer felt the need to legitimate its ambitions by claiming Kshatriya status but instead defined their role solely in terms of being Rajputs.

—Alexandra van der Geer

Bibliography

- Chattopadhyaya, B. *The Making of Early Medieval India*. Delhi: Oxford University Press, 1999.
- Kolff, D. *Naukar, Rajput and Sepoy: The Ethno-history of the Military Labour Market in Hindustan, 1450–1850*. Cambridge: Cambridge University Press, 1990.
- Malavika, K. *Embattled Identities: Rajput Lineages*. Delhi: Oxford University Press, 2002.
- Peabody, N. *Hindu Kingship and Polity in Precolonial India*. Cambridge: Cambridge University Press, 2003.
- Sinh, R. *Studies on Maratha and Rajput History*. Jodhpur, India: Research Publishers, 1989.

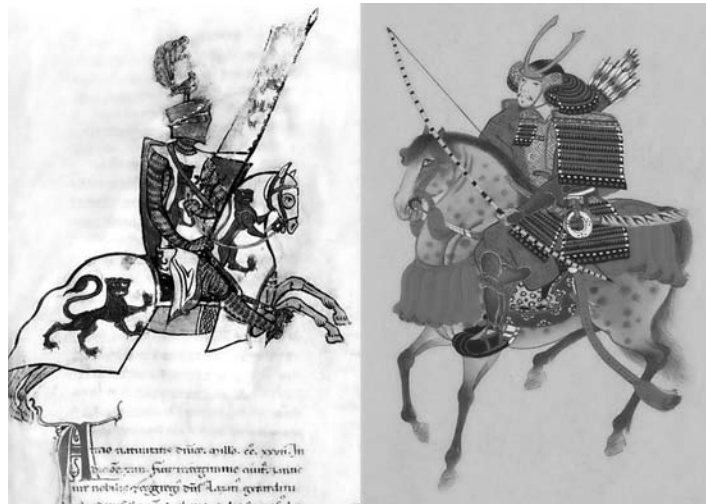
Talbot, C. "Becoming Turk the Rajput Way: Conversion and Identity in an Indian Warrior Narrative." *Modern Asian Studies* 43 (2009): 211–243.

Thapar, R. *Interpreting Early India*. Delhi: Oxford University Press, 1999.

Knights and Samurai

During the era 1000–1500 CE, two types of mounted warrior rose to political and social prominence in Eurasia: in Western Europe the heavily armored warrior known as the knight, and in Japan the archer-swordsman known as the samurai (retainer). These mounted warriors differed from earlier European and Japanese cavalry not so much in the weapons and tactics they employed as in their culture and organization. Although mostly of humble origin and stemming from diverse social backgrounds, both knights and samurai eventually developed into distinct privileged classes. In Europe, the old aristocracy came to coalesce with the new military elite to form a single knightly class. In Japan, on the other hand, the samurai ended up replacing the old court aristocracy. Changes in technology, tactics, and military organization made knights outmoded from approximately the late fourteenth century onward. In contrast, samurai retained their military, social, and political importance until the Meiji Restoration of 1868.

Both knights and samurai attained political and social prominence as a result of governmental weakness. In northwestern Europe, the breakup of the Carolingian empire in the mid-ninth century and the unrest stemming from the tenth-century Viking invasions led to the proliferation of petty lords and castellans, who took advantage of the instability to usurp the duties and prerogatives of comital officials, such as collecting taxes and dispensing justice. These minor warlords carved out their own private domains, which they dominated by means of small fortresses and castles. Together with the garrisons of their fortresses and castles, these minor warlords came to comprise the bulk of the new knightly class. In the interest of self-preservation, they bound themselves to greater lords by oaths of fealty and acts of homage, an act of symbolic subservience by which a vassal (subordinate) became “the man” of a lord. In exchange for military



Knight from a twelfth-century Genoese manuscript, juxtaposed with a Samurai on horseback from a nineteenth-century illustration. (Corbis/Library of Congress)

service and a limited number of other duties, known as feudal dues, they received protection and grants of income-producing property—usually lands—as fiefs from their overlords. Because the Latin term for fief is *feudum*, historians have termed this relationship *feudalism*.

In Japan, the inability of the imperial government to maintain the old Ritsuryo system of land tenure and military organization led to the militarization of many of the wealthier provincial families and their transformation into military houses. They became responsible for the police and military work of the provinces, and the imperial government relied upon them to put down the numerous rebellions that occurred there in the eleventh and twelfth centuries. The involvement of these newly evolved samurai—hereditary professional warriors skilled at archery, swordsmanship, and riding and possessed of extensive landholdings—in the court politics of the mid-twelfth century led to their wresting power away from the aristocracy and emperor and to the establishment of successive military governments: the Kamakura bakufu, or “tent government” (1185–1333); the Ashikaga shogunate (1338–1573); and finally the Tokugawa shogunate (1603–1867).

A number of factors contributed to transforming knights and samurai into distinct social classes. In Europe, similar military training, the

➤ FEUDALISM

It used to be fashionable to describe the political, military, economic, and social organization of medieval Europe and premodern Japan as “feudal” or as examples of “feudalism,” namely a system in which lords, served by a warrior elite who enjoyed a measure of social and economic status and often some delegated political authority, ruled over essentially autonomous local governments even as they acknowledged the theoretical sovereignty of a king or emperor. Many contemporary historians, however, have begun to avoid these terms, which they criticize as vague and uninformative and which, according to at least some of them, group together unrelated phenomena as parts of a single coherent system. In the case of Japan, moreover, these terms are further criticized as simply another instance of cultural imperialism, the attempt to impose a Western conceptual model on an incommensurate Japanese reality. Regardless of whether we ought to use the term feudal to describe Europe and Japan in the era 1000–1500 or whether feudalism ever existed as a system in either region during this period, it is clear that the components of feudal society or feudalism existed in both medieval Europe and premodern Japan, the most important of these being a military aristocracy bound by ties of kinship or loyalty to other members of the same military class and dependent primarily on landed property rather than commerce or industry for their wealth and a subject peasantry both exploited by the military aristocracy and dependent on it for protection.

—John Wei

use of common ceremonies, and the development of a code of chivalry, or knightly conduct, led to a conception of knighthood as a brotherhood in which all members, whether simple warriors, minor nobles, greater magnates, or kings, were equal. However, the very fact that fighting on horseback was the principal occupation of the nobility, coupled with the desire of nonnoble knights to enhance their status and guard their privileges, led over time to an elevation in the status of the ordinary nonnoble knight to the ranks of the nobility and to restrictions on entering the knightly class.

In Japan, a common culture also contributed to the development of samurai into a separate social class, although the main factor was legislation in the late 1500s and early 1600s. Most samurai originally came from small landowning families able to equip and train their sons for war. The most prominent, however, such as the Taira and Minamoto, were descended from cadet branches of the imperial or aristocratic families. With the rise in social position occasioned by the establishment of the Kamakura Bakufu and later military governments as well as the concomitant increase in opportunities for samurai to acquire property, the samurai increasingly came to form a privileged class, adopting many of the habits and culture of the court aristocracy. The need for larger armies during the Warring States Era (1478–1578), however, served to blur the boundary between samurai and nonsamurai by spurring *daimyos* (lords) to recruit new samurai retainers from among the more well-to-do peasantry. This confused state remained until the edicts of Hideyoshi in the 1580s and 1590s and the legislation of the early Tokugawas, which established a rigid class system, making warfare the sole preserve of the samurai and banning nonsamurai from carrying arms.

Changes in military organization and improvements in technology had different effects on knights and samurai. In Europe, the increasing use of mercenaries and the rise of the foot soldier and archer led to the knight's military decline from the fourteenth century onward. Because the usual feudal contract obliged knights to only 40 days of military service, kings in the later Middle Ages often preferred that knights pay a fee, known as *scutage*, in lieu of service, using the money gained from *scutage* and other taxes to hire mercenaries. Unlike the poorly trained levies of peasants often used earlier in the millennium, in the several centuries before and after 1500 mercenary pikemen would stand firm against cavalry charges, presenting a wall of spears capable of skewering knights and horses. The increasing use of skilled archers also contributed to the military decline of knights, as did the development of firearms.

Samurai adapted more readily to changes in military tactics and technology. During the War-

ring States Era, warfare came to depend more on organizing large armies than on individual skill and one-on-one combat. Although samurai continued to remain the military elite, they now served as army officers, commanding contingents of common soldiers rather than simply engaging in battle on horseback. They devised tactics for integrating infantry maneuvers with cavalry and for using Western firearms and cannon. The samurai's military dominance throughout the following Tokugawa period (1603–1867), however, was not due to any special military prowess or adaptability on their part but instead was the result of Tokugawa legislation that made samurai the sole military force.

—John Wei

Bibliography

- Duus, Peter. *Feudalism in Japan*. 3rd edition. New York: McGraw-Hill, 1993.
- Lewis, Archibald. *Knights & Samurai: Feudalism in Northern France and Japan*. London: Temple Smith, 1974.
- Reynolds, Susan. *Fiefs and Vassals: The Medieval Evidence Reinterpreted*. Oxford: Oxford University Press, 1994.

Courage Cultures—Turks, Mongols, Warriors of Oceania, and American Indians

Although courage plays a significant role in many societies, a few cultures may be considered courage cultures due to the particular emphasis that is placed on courage, particularly in regard to leadership. Generally, courage cultures have been found in nonsedentary or semisedentary societies that have dwelt in harsher environments or at least without the amenities of large cities and towns. Furthermore, in these societies male warrior elites have formed bonds of personal loyalty to each other and their leader, dominating society by reason of their martial valor. Although physical prowess and courage have traditionally been highly valued attributes, the warrior elites' ability to provide wealth for the tribe, including adding to its numbers of animals and even people, have mattered the most. In addition, endemic interclan or tribal warfare historically helped maintain the importance of the warrior

elite and also prevented cooperation between competing groups. Among the most notable courage cultures of the period 1000–1500 were the Turks, the Mongols, warriors of Oceania, and American Indians.

The Turks and Mongols had similar concepts of courage, as they possessed strikingly similar pastoral nomadic cultures and inhabited the same regions of Central Asia. Indeed, the fluid nature of Inner Asian nomadic tribal life allowed members of the same tribe to claim two separate ethnicities. Although lineage played an important part in choosing leaders, ultimately the selection came down to the best fit in terms of providing wealth for the tribe and the leader's warrior companions. This included success in war, raiding, livestock rustling, and occasionally personal combat. Success in doing so inevitably attracted *nōkōrs*, or warrior companions, to a leader, providing him a loyal body of men who were often not originally members of his tribe. A leader's failure to provide goods and the resultant loss of honor could also lead to his companions abandoning his cause.

Courage in battle could be manifested in a variety of forms. Unlike many courage cultures, such as the Celts and Germans of antiquity, pastoral nomads did not place an emphasis on close combat or one-on-one duels. Rather, one's ability to ride expertly and even recklessly and accuracy with the composite bow were crucial qualities for any warrior who aspired to high status, although the best archer or the best rider was not necessarily the chief. Although their forms of warfare depended essentially on carefully honed tactics that depended on the equine and archery skills of the entire body of warriors, individual warriors could and did improve their status through acts of courage. One such opportunity for displaying personal courage took place during the *nerge*, a battue-style hunt in which a circle of hunters on horseback closed in on their prey. As the ring of hunters tightened, individuals tried to impress the khan with their valor by such acts as wrestling with lions, tigers, or bears with a knife or bare hands. Others demonstrated their archery abilities by shooting small animals at a gallop.

The warriors of Oceania were a sedentary courage culture, although they could be

➤ COUNTING COUP

Counting coup was a tradition among most of the tribes of the Great Plains, most notably the Cheyenne. The term is derived from the French verb *couper*, meaning “to cut or strike.” During a battle, a warrior rode toward the enemy, even as they shot at him, and touched the enemy with a coup stick, bare hands, or even a weapon in a nonlethal manner. Although killing an opponent was a display of courage and martial prowess, the ability to demonstrate that “I could kill you but I choose not to” showed the warrior’s comrades and enemies alike the superiority of his skills and courage. Those who were killed after counting coup also received great honor in their memory. As the tradition progressed, warriors carried coup sticks, often decorated and ornate. Warriors would vie to be the first to count coup against an enemy. Depending on the tribe, the first three or four touches would be counted and awarded. Those who did this successfully and survived received eagle feathers for their headdress or an increase in tribal status. The warrior who was the fourth touch might be awarded a buzzard feather. Of course, this form of bravery also exposed the warriors to great perils, particularly when fighting against societies that did not practice counting coup.

—Timothy May

considered sea nomads. Perhaps the most notable were the Maoris of Aotearoa (New Zealand), who placed emphasis on single combat or duels over group warfare. Although the Maoris engaged in group combat on a regular basis, it was in single combat where the warrior demonstrated his courage and pride. To demonstrate his courage and ability and to intimidate his foes, a Maori often displayed his *mana*, or powers of self-confidence, during the *haka*, a stylized war dance that combined storytelling with acts of physical intimidation (a practice that today is memorialized before each match by New Zealand’s national rugby team, the All Blacks). In addition, the bravery of a warrior could be shown through daring raids and sorties. Leaders also demonstrated their prowess and skill not by headlong charges into combat but by arranging am-

bushes and successful raids with little loss of life. Leaders who had high body counts among their men rapidly lost honor.

Less savory aspects of the courage culture of the Maori, at least from the viewpoint of the defeated, were cannibalism. The Maori practiced ritual cannibalism by eating their vanquished foes. In doing so, the Maori not only physically defeated their enemies, but the consumption of the body destroyed their mana. Maori cannibalism consisted of not only eating the flesh but also drinking the blood of the enemy. Heads were taken as trophies, as were hands. Contrary to popular myth, the Maoris were not headhunters. Rather, the heads came from the slain or those devoured in the ritual cannibalism. Furthermore, ritual anthropophagy only occurred as part of sacred warfare, and not all prisoners were eaten. This was done to demonstrate to the defeated that “we can do this anytime we want.” In effect it was a very visual display of dominance.

Displays of courage among Native American warriors took place in many ways. Bravery in combat almost always equated with an increase in status in the tribe. This could be achieved by rescuing fellow warriors, attacking or overcoming great odds, and horse rustling, particularly if it involved sneaking into the enemy’s camp. Killing an enemy in close combat was more honorable than shooting him from a distance. Among many Great Plains tribes, the greatest display of personal bravery came in the form of counting coup. Among the Kiowa and Crow, the status of the chief was based on acts of bravery, especially counting coup. Some groups wore eagle feathers to indicate the number of enemies a warrior had slain or against whom he had counted coup. Bravery was encouraged among Native American youth through a series of rites of passage, the most notable being the vision quest. In this quest, the youth ventured into the wilderness alone, often with no clothing or food, and awaited a vision, which was later interpreted by the tribal elders.

Many tribes also viewed bravery under torture as a virtuous quality among warriors. Among many northeastern groups such as the Huron and Iroquois, prisoners had to run a gauntlet in which they were subjected to attack and unable to defend themselves. If they survived the gaunt-

let, the warrior could be adopted into his captor's tribe or even released due to his bravery. If he failed, he was usually tortured and executed. The torture was not confined to that conducted on enemies but also included ritual torture or self-mutilation in rites of passage such as that practiced by the Mandans, or Numakikis, in the Okipa ceremony. The individual's breast was pierced, and then he was suspended by the piercings in hopes of attaining a vision.

All of these groups placed an emphasis on courage as a qualification for status and leadership. While sedentary city-based societies often dismissed them for their primitive manners, they also, sometimes begrudgingly, admired them for their courage. Indeed, in many cases it was the honor and courage that these groups displayed that redeemed them in the eyes of their neighbors. In Eurasia, Turks became a favored mercenary group, while in the Americas, Europeans routinely used Native American warriors partially due to the ferocity of their attacks that came from the milieu of their courage culture.

—Timothy May

Bibliography

- Afton, Jean, David Halaas Fridtojo, and Andrew Edward. *Cheyenne Dog Soldiers: A Ledgerbook History of Coups and Combat*. Denver: University of Colorado Press, 1997.
- Findley, Carter Vaughn. *The Turks in World History*. New York: Oxford University Press, 2005.
- Golden, Peter B. *An Introduction to the History of the Turkic Peoples: Ethnogenesis and State Formation in Medieval and Early Modern Eurasia and the Middle East*. Wiesbaden: Otto Harrassowitz, 1992.
- Morgan, David. *The Mongols*. 2nd ed. Peoples of Europe Series. Malden, MA: Blackwell, 2007.
- Mishkin, Bernard. *Rank and Warfare among the Plains Indians*. Lincoln: University of Nebraska Press, 1992.
- Schafer, William John. *Mapping the God Zone: A Primer on New Zealand Literature and Culture*. Honolulu: University of Hawaii Press, 1998.
- Starkey, Armstrong. *European and Native American Warfare, 1675–1815*. Warfare and History Series. New York: Routledge, 1998.
- Vayda, Andrew P. *Maori Warfare*. Maori Monographs no. 2. Wellington, New Zealand: Polynesian Society, 1960.

■ Introduction: The Tools of Warfare

Leaving aside the issue of whether warfare can be either a science or an art, there is no denying that the period 1000–1500 was one in which several significant changes took place across the world in the ways in which war was conducted. Both its techniques and technology took a radical turn and, in at least one instance, had consequences that profoundly altered the course of world history.

Without a doubt, the most significant development was the origin and continuing development of gunpowder as a tool of combat and the consequent diffusion of gunpowder weapons. Gunpowder weaponry, when used and improved upon by the Mongols, enabled horse-riding steppe warriors to become successful besiegers of cities in the thirteenth century. Projectile-firing weapons propelled by gunpowder began to revolutionize warfare in Western Europe in the fourteenth

century, enabled Western Europeans to begin to establish a significant presence along the North and East African coasts during the fifteenth century, and would make far easier their entry into the Indian Ocean and the Americas in the years immediately preceding and following 1500. Cannon capable of firing balls long distances enabled the Ottoman Turks to isolate Constantinople by shutting down its maritime lifeline and then to breach its massive triple land walls that had, to that point, successfully kept invaders at bay for 1,000 years. With the capture of Constantinople in 1453, the first of the three great Islamic “Gunpowder Empires” had reached maturity.

Contrary to popular opinion, cannons did not render static fortifications useless, just as earlier artillery that was capable of battering down walls, such as the counterweighted trebuchet, had not made strongholds of stone obsolete. What both

forms of artillery did influence, from the twelfth century onward and well into the late eighteenth century, was the engineering of more sophisticated and artillery-resistant fortifications and the technique of counterbattery fire, whereby soldiers in a defensive position concentrated fusillades upon the enemy's artillery positions.

For western Eurasia, the horse was a major military factor during these five centuries and would be so for centuries to come, even though by the fifteenth century cavalry was increasingly giving way to well-disciplined and often professional infantry in Europe. In Central Asia and China the horse of the steppe was a primary means of attack throughout this period, especially when ridden by the Mongols and the armies of Timur-i Leng. Although driven out of China in 1368, Mongol horsemen continued to be a major disturbing factor along the Middle Kingdom's northwestern border well past 1500, necessitating the Ming dynasty to construct major portions of the Great Wall that now so impresses tourists. The wall was not a static defensive barrier but served rather as an outpost from which beacon towers could immediately signal the rapid advances of steppe invaders and was also a fortified position from which offensive forays could be launched. In Africa's western Sudan, the horse, imported as a precious commodity from across the Sahara, not only became a symbol of status but also allowed the trading empires of Mali and Songhay, as well as smaller polities, to develop increasingly large cavalry squadrons. The horse was unknown in the Americas until brought there by the Spaniards. Once introduced, it proved to be an intimidating element during the early stages of Cortés' campaign in Mexico. Later, wild horses, captured and trained by the natives of the North American Plains, would revolutionize their entire culture and ways of fighting.

Naval vessels also underwent significant changes during these centuries. During the crusades, Italian maritime cities developed horse transports that allowed for the fairly safe passage and, just as important, fast disembarkation of horse and rider during amphibious operations. The grand fleets of the Yongle emperor that sailed into the waters of the Indian Ocean during the early-fifteenth-century voyages of Zheng He included massive transports, or treasure ships.

Such ships enabled the admiral to transport tens of thousands of combat troops, who successfully asserted Chinese military power on several occasions. It appears, however, that these ships, while suitable for the relatively placid waters of the Indian Ocean and adjoining seas, would not have fared well had they attempted a cross-Pacific voyage or attempted to round the southern cape of Africa. Much smaller craft developed by the seagoing kingdoms of European Iberia proved, by the end of the fifteenth century, to be much more suitable to the latter task and also for transatlantic voyages. Moreover, fitted as they were with superior cannon, they enabled the Portuguese and, later, other Europeans to become a major presence in the Indian Ocean and beyond.

As we have already seen, warfare remained a constant of life around the world during these five centuries, but several technological innovations in Eurasia, most notably the application of gunpowder to military use and the development of effective cannons for use on both land and sea, set the stage for a coming revolution in world history.

—*Alfred J. Andrea*

Transit of Arms and Armaments across Eurasia

Most military powers have always tried to learn from their opponents and acquire arms and armaments that might even the odds or allow an advantage, but in the medieval period two events in particular contributed to the spread of arms and armaments across Eurasia: the crusades and the advent of the Mongol empire. The crusades brought about an exchange in weaponry, tactics, and defensive technology through the medium of warfare. While the Mongols brought an unprecedented level of warfare to Eurasia, their primary contribution to the transit of arms and armaments across Eurasia came through the Pax Mongolica and the resultant exchange of ideas.

Military architecture is one of the most obvious transfers that occurred during the crusades, as veterans of the crusades returned to Europe having seen the impressive Byzantine, Armenian, and Islamic fortifications of the Middle East. At the same time, other transfers occurred. Siege

► DESIGN OF CROSSBOW AND TREBUCHET

Two of the most important weapons of the medieval period, particularly in terms of advances in technology, were the crossbow and the trebuchet. Both weapons had a tremendous impact on warfare and caused changes in armor and defenses simply to lessen their effectiveness. This, however, then triggered new changes in the design of each weapon to overcome the new defensive technology.

A basic wooden stock with a groove for a bolt with a short bow at the end was all that was required for the crossbow. A trigger, resembling a lever, was added to allow the user to handle the weapon better. Due to the shortness and stiffness of the bow, the crossbow had considerable power, and its bolt was able to penetrate chain mail quite easily. Also unlike traditional bows, it was much easier to aim, thus making it an ideal weapon for mass formations. The bow was drawn first by hand but later with a loop. A foot was placed in the loop, and the archer bent over and then stood up to pull the bowstring back. As the bow became more powerful, a hook, or claw, was used to assist the crossbowman in arming his weapon. In the late fourteenth and fifteenth centuries as the bow's strength was increased, often by being made or reinforced with metal, a hand crank was used that gave the bow a pull of 150 pounds, slightly greater than either the Welsh longbow or the Mongol war bow.

The early trebuchet, or traction trebuchet, functioned as a fulcrum and lever system. Essentially a plank with one end constructed to accommodate a missile, usually a stone, sat atop a fulcrum structure, often appearing as an inverted "U." The weapons crew shot the weapon by pulling ropes attached to the other end of the plank. Trajectory could be adjusted by adjusting the plank so that the missile side could be lengthened or shortened. Distance and power were adjusted by adding more manpower. The size and length of the plank ultimately dictated how powerful the weapon could be. Thus, it could be used as an antipersonnel weapon to clear walls or as artillery to shatter walls. The trebuchet was modified by adding a sling to it so that as the lever was pulled, the sling was pulled from underneath, and the missile was released at the apex of the firing arc, thus allowing greater range and power. It is not clear when the sling was added, but definitely

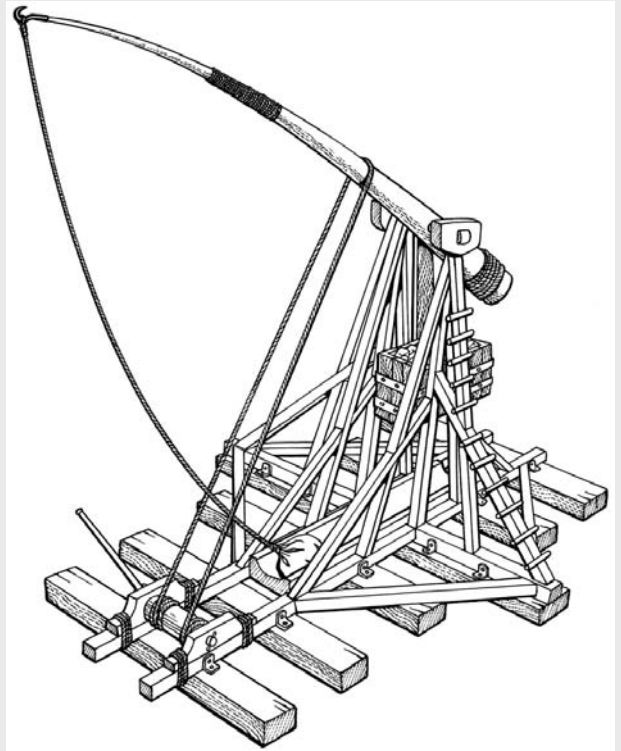


Illustration of an early thirteenth–fourteenth-century counterweight trebuchet. (Art-Tech)

it was present by the tenth century, as all illustrations after this show slings. Perhaps the most significant change occurred in the late twelfth century as manpower was replaced by weights that could be increased or decreased, again providing a greater range and more force to the missile.

It is not clear who first created the counterweight trebuchet, but it appears that it was in the Middle East. Evidence points to Muslim, Byzantine, and even Western European engineers; in the volatile era of the crusades the most common military engagement was the siege. In the late thirteenth century it could also be modified to fire massive logs as well as stones. The counterweight was significant not only in that it provided greater power and the ability to fire heavier missiles, but it was also potentially safer for the crew. In at least one recorded instance with a manually pulled trebuchet, the missile barely left the sling and killed one of the trebuchet crewmen.

—Timothy May

warfare advanced considerably due to the crusades. Just as Europeans copied the military architecture they encountered during the crusades such as the Armenian round tower, they also had to find new ways of overcoming it. Although Middle Eastern military architecture was more advanced than that of Europe, crusaders and the colonists who followed brought new carpentry skills that assisted in the development of better siege engines, including ultimately the counterweighted trebuchet.

The crusades also helped spread the use of the crossbow, which the Chinese had developed more than 1,000 years earlier, and they also contributed to its technical improvement. The crossbow had already been used in Europe for a long while, but the Church officially banned its use against Christians even though the ban was often ignored. Richard I (1157–1199) of England greatly promoted its use during the Third Crusade (1189–1192) and demonstrated its effectiveness at Arsuf in 1191. Ironically, he was killed by a crossbow bolt while campaigning in France in 1199. Muslim armies did not use the crossbow extensively, but it became a prominent feature of the Franks during the decades that followed. It also became, along with the heavily armored knight, a hallmark feature of crusading armies whether in the Holy Land, Spain, or the Baltic.

Perhaps the best example of the transit of arms and armaments in the age of the crusades and following is the counterweighted trebuchet. The traction trebuchet was used in ancient China as early as 121 CE, with missiles being fired by traction, namely by men pulling a lever with ropes. By the late sixth century the Byzantines were using traction trebuchets that had apparently been introduced to them by the Avars in their attacks on Byzantine territories. The Avars, a steppe group that may have been displaced by the Turks in Mongolia, presumably brought the technology from China. Arab armies adopted traction trebuchets by at least 683 CE. Presumably these trebuchets spread through most of Europe not long after, as they were used in sieges in Germany by the 900s. Yet it is not clear if all of these machines were trebuchets or another type of siege weapons known as petreries. Petreries, or smaller traction stone throwers, were used in the First Crusade at Antioch (1097–1098), but

these were more antipersonnel weapons and were not capable of demolishing walls.

Traction trebuchets were used in the crusades by the twelfth century, and counterweight trebuchets made their appearance by the late twelfth century. Indeed, by 1187 Saladin had manuals that discussed both traction and counterweight trebuchets. Counterweight trebuchets reached England around 1200. Although Marco Polo claims credit for bringing the technology to China, the Mongols already were employing counterweight trebuchets a few years before Polo arrived. Indeed, Muslim engineers from the Middle East built them in 1273, and it was the deciding element in the siege of Zaitun. Thus, the trebuchet returned to China in its new form. In addition to its devastating ability to destroy walls, the counterweight trebuchet forced defensive engineers to construct higher walls due to its higher trajectory.

Although somewhat late in adopting the counterweight trebuchet, the Mongols were quick to adopt other weapons, and they and their empire spread arms and armaments in an unprecedented manner. The rapid pace of the Mongol conquests demonstrated the superiority of the steppe composite bow and the mounted archer. While much of Central Asia and the Middle East had already adopted large numbers of mounted archers, new areas also incorporated them. Although the princes of medieval Russia had fought against and alongside steppe nomads for centuries, their forms of fighting and equipment remained quite different. This changed with the Mongol conquests. Almost immediately, the Rus realized how ineffectual their own military equipment was against the Mongols and began transforming from a cavalry based on shock and melee weapons to horse archers. Western Europeans did not transform their militaries in face of the Mongol threat, although at least one observer, John of Plano Carpini (ca. 1180–1252), strongly urged them to double their armor and equip themselves more like the Mongols.

Some scholars also attribute the spread of scimitars and sabers to the Mongols. It is known that most swords in the Middle East were straight-bladed until around the thirteenth century, whereas pastoral nomads tended to use curved blades, which were better suited for war-

fare from horseback. Still, the evidence is not conclusive, as Turks had migrated into the Middle East and India centuries earlier.

The spread of gunpowder may also be attributed to the Mongols. Although there is no evidence that they used gunpowder weapons outside of East Asia, in the mid-thirteenth century recipes for gunpowder circulated in Europe in the writings of Roger Bacon (d. 1292), a Franciscan scientist and philosopher. It is probably not a coincidence that Bacon communicated with William of Rubruck, a Franciscan friar who traveled to Mongolia in the years 1253 to 1255 and left a detailed record of his impressions. Although he does not mention gunpowder in his own account, it is quite possible that Friar William served as a spy, much like his predecessor, John of Plano Carpini.

With the Pax Mongolica, moreover, travelers such as Marco Polo and Ibn Battuta could travel extensively across Eurasia in relative safety, thus witnessing and bringing back new ideas and technology as well as sharing their own knowledge. Furthermore, the early cannons of Europe were suspiciously like those of the Yuan dynasty. In addition, fourteenth-century Europe witnessed the arrival of lances and spears with gunpowder tubes attached to them, early flamethrowers very much like the fire-lances that the Chinese used against the Mongols a century earlier.

—Timothy May

Bibliography

- Allsen, Thomas T. *Culture and Conquest in Mongol Eurasia*. Cambridge Studies in Islamic Civilization. New York: Cambridge University Press, 2001.
- Bradbury, Jim. *The Medieval Siege*. Rochester, NY: Boydell and Brewer, 1992.
- France, John. *Western Warfare in the Age of the Crusades, 1000–1300*. Ithaca, NY: Cornell University Press, 1999.
- Marshall, Christopher. *Warfare in the Latin East, 1192–1291*. New York: Cambridge University Press, 1992.
- May, Timothy. *The Mongol Art of War*. Yardley, PA: Westholme, 2007.
- Nicolle, David. *Medieval Warfare Source Book: Christian Europe and Its Neighbours*. London: Brockhampton, 1996.
- Prestwich, Michael. *Armies and Warfare in the Middle Ages*. New Haven, CT: Yale University Press, 1996.

Gunpowder Weapons before 1500

Gunpowder weapons originated in China in the eleventh century and spread outside of East Asia through the agency of the Pax Mongolica (Mongol Peace). Trade routes became substantially better guarded and more open during the Mongol empire, thus allowing merchants to not only travel safely but also to facilitate the greater movement of goods and ideas, including the recipe for gunpowder.

Early uses of gunpowder included fireworks, but the earliest military use of gunpowder in the eleventh century, during the Song dynasty (960–1279), was in the form of incendiary devices such as firelances, gunpowder-filled bamboo tubes attached to a spear. When lit, it acted as a primitive flamethrower. Other uses included a variety of gunpowder recipes that when used in bombs or other devices either produced noxious and possibly poisonous smoke or ignited into a ball of flame, rather than an explosion, that was difficult to extinguish. Some had spikes attached to the bomb, but not to be used as shrapnel. Rather, when the bomb was hurled from a trebuchet against a ship or a building, it would attach itself, and the resulting fire would spread from that point rather than hitting and igniting but then falling away harmlessly.

During the twelfth and thirteenth centuries the Song empire developed recipes for gunpowder with explosive properties, and its soldiers began launching projectiles from bronze tubes and vases. These usually fired arrows or exploded and channeled the blast forward, again into an eruption of flame. While these devices were not very effective by themselves, the Song often mustered these into groupings of hundreds and even thousands, demonstrating that large amounts of gunpowder were available. The first actual firearm appeared in the first half of the thirteenth century with a short barrel 6.9 inches (17.5 centimeters) long and 1 inch (2.5 centimeters) in diameter. Actual cannon, often made from cast iron, did not appear until the 1300s. Although primitive, unwieldy, and unreliable, they were produced in large quantities for use against fortresses in China by the Mongols and the nascent Ming dynasty. Generally speaking, most of the

➤ EARLY FLAMETHROWERS

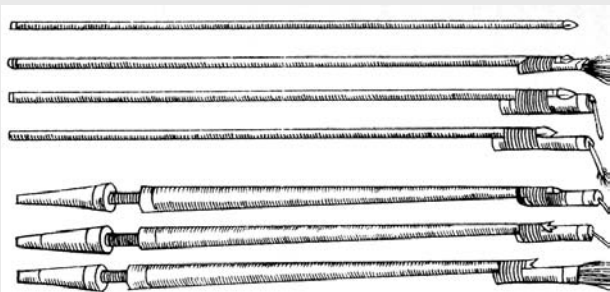


Illustration of fire lances from *De la Pirotechnia* by Vannoccio Biringuccio, 1540. (World History/Topham/The Image Works)

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—Timothy May

firearms and cannon took a long time to load and were not very accurate, thus often rendering them rather ineffective. However, the fact that soldiers could become adept in their use quickly allowed the sheer volume of large numbers of firearms to overcome some of their deficiencies.

The Mongols were tied to the rise of European hegemony by more than their spreading gunpowder via trade routes. The Mongols also influenced their neighbors through their tactics and weapons. As the composite bow of the steppe nomads had a better range, accuracy, and rate of fire than early firearms, nomadic armies could decimate firearm-wielding infantry. Furthermore, not until the sixteenth and seventeenth centuries did cannon-manufacturing techniques produce easily maneuverable light artillery that could counter the mobility of the nomads.

Meanwhile, kings in Western Europe were virtually the only ones who could afford the expense of making cannon, thus allowing them to increase their power and authority vis-à-vis their nobles. As European fortifications improved against traditional siege weapons, rulers became dependent on cannon to smash castles in order to defeat their enemies and bring recalcitrant vassals into line. Western European armies fought steppe nomads less regularly as well. Thus, mobility was not an issue to knights who had to increase their armor to protect them against crossbows, longbows, and early firearms. As a result the knight became less mobile. Early cannon and firearms, moreover, could be effective against the relatively slow-moving European knights and infantry in a way they could not be against the swift steppe nomads. Of course, the knight gradually disappeared, while light and medium cavalry appeared to counter the artillery.

A similar effect occurred in China. Although cannon were widely available to the Ming dynasty, which drove the Mongols out in 1368, cannon artillery played only a small role in defeating the Mongol, or Yuan, dynasty. Indeed, the Ming use of cannon was limited to siege warfare and battles in South China, although apparently 38 varieties of firearms existed in China and for a wide range of purposes. For the reasons described above, after 1368 the Ming did not use firearms extensively in battles on their northern frontier with the Mongol tribes.

The ramifications of this strategy were great across Eurasia. Countries sharing borders with steppe nomads initially had less reason to develop gunpowder artillery than those that faced sedentary states and consequently lagged behind in the use of cannon. But this began to change toward the end of the seventeenth century when field artillery pieces became more mobile, thus providing support for musket-wielding infantry. These new cannon easily disrupted steppe cavalry formations and possessed a greater range than the composite bow. Only then did steppe warfare decline as the dominant form of warfare. Prior to the 1600s only one state, the Ottoman empire, had formed a truly effective method of dealing with horse archers. This may have been because of the Ottomans' need to deal simultaneously with the strongly fortified cities of

Southeast Europe as well as with the horse archers of the various powers on their eastern border, ranging from the Aq Qoyunlu and the Safavids (defeated at Chaldiran in 1514) to the Mamluk sultanate (conquered in 1516 in Syria and in Egypt in 1517).

—*Timothy May*

Bibliography

- Chase, Kenneth. *Firearms: A Global History to 1700*. Cambridge: Cambridge University Press, 2003.
- Crosby, Alfred W. *Throwing Fire: Projectile Technology through History*. Cambridge: Cambridge University Press, 2002.
- Khan, Iqtidar Alam. *Gunpowder and Firearms: Warfare in Medieval India*. New Delhi: Oxford University Press, 2004.
- Sawyer, Ralph D. *Fire and Water: The Art of Incendiary and Aquatic Warfare in China*. Boulder, CO: Westview, 2004.

Mongols and Gunpowder Weapons

The spread of gunpowder across Eurasia is directly related to the rise of the Mongols. Gunpowder recipes had slowly exited China into nearby regions, but the Pax Mongolica accelerated the spread. Although the Mongols may have used catapult-launched bombs in siege warfare outside of China, there is no definitive documentary evidence to confirm it, as the terms later used for gunpowder weapons are synonymous with naphtha, a petroleum-based incendiary, or with catapults and trebuchets.

The Mongols encountered gunpowder-based weapons early in their campaigns against the Jin empire (1125–1234) in northern China. While firearms in the modern sense did not exist for another 100 years, the Jin did use explosives and fire lances. Explosives, generally known as thunder crash bombs, were primitive yet effective. These were metal containers filled with gunpowder and a fuse, and then delivered through a variety of methods such as hurling them from a catapult or lowering them by chains against Mongol troops at the base of walls.

The explosive, while strong enough to annihilate the enemy as well as wooden or skin-covered shelters, did little damage to the thick city walls. At times the bombs were used as mines.

THE MONGOL HORSE

Although firearms may not have played a primary role in the Mongols' military operations, a major reason for the success of the Mongol armies can be found in their horses. Although small in stature, the size of ponies, the Mongol horse was strong and surpassed all others in endurance. Each soldier took an average of five horses on campaign. When a horse tired, the rider switched and rested the horse for several days. This practice allowed a high rate of travel, up to 100 miles (160 kilometers) in one day compared to 10 or 20 miles (16–32 kilometers) by most armies of the era. The Mongols also trained their horses to increase their endurance, producing a horse that was easily managed by its rider. They also preferred the more docile geldings and mares over stallions, which dominated the battlefield of Europe. One advantage of this choice was that they used mare's milk as an essential part of their rations.

Unlike sedentary armies, the Mongols did not worry about bringing fodder to feed their mounts. Grazing comprised the entire diet of their horses even in winter, as the horses knew how to dig through snow to find grass. Of course, this meant that a constant source of pasture had to be found, which limited the areas in which Mongol armies could campaign successfully and for long periods of time. This more than anything else might have inhibited Mongol advances into India and Southeast Asia and certainly into Syria-Palestine.

—*Timothy May*

Although these were not efficient, inasmuch as lit fuses were needed to ignite the bomb, when properly placed in ambushes they proved to be effective in causing physical and psychological damage.

The Jin used another gunpowder recipe in their fire lances, which were bamboo tubes affixed to spears and functioned as a primitive flame thrower. Like the Jin, the Southern Song empire (1127–1279) also used gunpowder weapons such as thunder crash bombs and fire lances. The Chinese also used fire arrows, or arrows fired from small bronze vessels by a gunpowder explosion. Although not accurate, they could launch an arrow for several hundred yards.

Defending against the thunder crash bombs and fire lances proved a difficult challenge for the Mongols, and it does not appear that they developed any particularly effective defenses against them. Rather, Mongol perseverance in sieges proved to be their most effective counter-tactic. This included starving the opposition as well as pummeling them with trebuchet missiles and flaming arrows. Of course, once the technology was made available to them, the Mongols used explosives against the Jin. However, it is not clear if the Mongols used thunder crash bombs in sieges west of China. One reason may be that whereas in China the necessary materials to manufacture gunpowder, such as saltpeter, were available in sufficient quantities and the expertise to properly mix and store it was also easily available, this was not necessarily true elsewhere. Indeed, even though Chinese engineers accompanied them in their campaigns beyond China, the logistical difficulty of transporting volatile gunpowder may have discouraged the Mongols from carrying significant amounts.

It is known, however, that the Mongol empire was the primary transmitter of the knowledge of gunpowder whether directly, through its use in war, or simply because most of the major trade routes ran through the empire. While it is unlikely that Europe received gunpowder directly from the Mongols, we do know that it appeared there only after the Mongol invasion. Most likely merchants from Europe, such as the Polo family, or from the Middle East traveling through the Mongol empire carried the recipe back. Indeed, gunpowder appeared in the arsenals or in celebrations in the form of fireworks in India, Central Asia, and the Middle East in addition to Europe only after these regions encountered the Mongols. The biggest impact was in Europe, where it contributed significantly to Europe's rising prominence on the world stage after 1600.

—Timothy May

Bibliography

- Chase, Kenneth. *Firearms: A Global History to 1700*. Cambridge: Cambridge University Press, 2003.
- Iqtidar Alam Khan. *Gunpowder and Firearms: Warfare in Medieval India*. New Delhi: Oxford University Press, 2004.

May, Timothy. *The Mongol Art of War*. South Yorkshire, UK: Pen and Sword, 2007.

Sawyer, Ralph D. *Fire and Water: The Art of Incendiary and Aquatic Warfare in China*. Boulder, CO: Westview, 2004.

Cavalry vis-à-vis Infantry

There can be little doubt that from a military perspective, the period after 1000 was the age of the mounted warrior in continental Eurasia. In Southwest Asia and the Asian steppe, Turco-Mongol nomadic horsemen expanded their influence far beyond their traditional boundaries. In Western Europe and Russia, armies were raised that depended on the heavily armored mounted knight, developing traditions of military service for their upper classes that were ingrained with the concept of men-at-arms. By 1500, however, the age of the preeminence of the mounted warrior was waning. The necessity of infantry forces had already made itself felt with the increase of siege warfare as opposed to battles on the open field, and by the sixteenth century the demonstrated ability of disciplined infantry forces to overcome traditional European cavalry along with the growing prevalence of firearms and the continuation of fortresses as the loci of battles combined to make the mounted warrior if not obsolete then less of a defining force.

When armies engaged in battle, they freely borrowed ideas from each other. Formations, technologies, and the balance between infantry and cavalry were adapted based on new encounters. Nowhere is this cultural diffusion more evident than in the military encounters that settled societies throughout Eurasia had with Asian nomadic tribes. China, which had for centuries been dealing with the "barbarian" threat from the north and west, as early as 300 BCE felt the need to counter these tribes with similarly equipped troops and began to develop cavalry. Similarly, the western Eurasian cultures with which the nomadic warriors engaged also adapted fighting forces in imitation of them.

The European fighting style based on the mounted knight, as it had developed by the late eleventh century, focused on a single massed charge with a lance followed by infantry forces who would then engage in ground combat. This

technique was singularly unsuccessful against the Turks and Mongols from the East. Nomadic warfare in its essence consisted of lightning strikes by mounted horsemen. Both the Turks and Mongols developed this style of warfare to a high degree, using highly trained horses and, from the saddle, firing arrows launched by composite recurved bows. The Turks were also skilled at using lances from the saddle.

The ability of these nomadic horsemen to fight in formation created special difficulties for Western knights during the crusades era. When the knights engaged in a massed charge against an army of mounted Turks or Mongols, the nomads typically refused to engage directly, instead pulling away before impact and then showering the knights with a volley of arrows as they milled around in confusion. Armies on the march, which tended to progress slowly because of the attendant foot soldiers and baggage, were particularly vulnerable, as the highly mobile mounted archers could easily pick men off.

While the Middle East and the West did not have the indigenous tradition of mounted archers as did the Eastern nomads, they did adapt mounted crossbowmen and developed troops of mounted archers as part of their forces. In the Christian East and in Russia, this adaptation went even further. After encountering the Turkish horsemen in the eleventh century, it was not long before the Christians in the East and, later, colonists in the crusader states added regiments of mercenary *turcoples* (light cavalry equipped in the Turkish manner) to their armies. The Russians, after the Mongol invasions of the thirteenth century, copied their style of arms and dress, recognizing its superiority in steppe warfare.

As the cultures that encountered the Turks and Mongols in battle felt compelled to adapt their cavalry style to effectively fight them, so too the nomadic warriors borrowed from China and the West in their development and use of infantry.

The term “infantry” referred to a great many different sorts of skills ranging from archers and crossbowmen, sometimes on horses, to foot soldiers equipped with pikes and other hand weapons to the skilled craftsmen needed to construct siege engines and other accoutrements of war. Even though the nomads would have had little

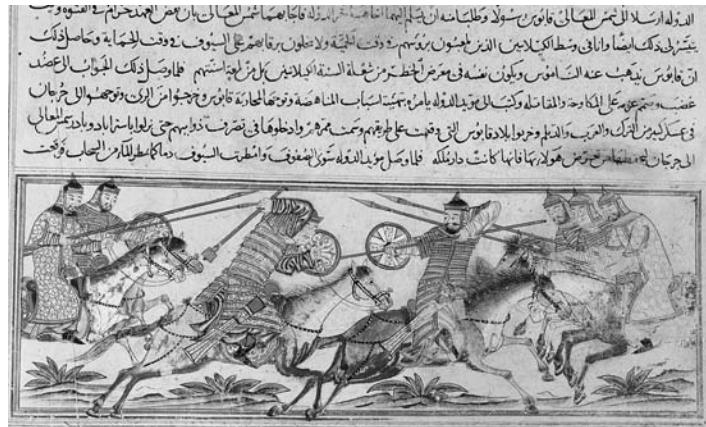


Illustration of an attack by the Persian cavalry, showing arms and armor of the Mongol army, from Jamia al-Tawarikh, fourteenth century. (The Art Archive/Edinburgh University Library)

use for an infantry force in their traditional style of battle, their usefulness in siege warfare was evident. While the Turks borrowed from Arab and Byzantine examples, the Mongols emulated the Chinese. In their thirteenth-century conquest of China, lacking a large population pool from which to draw, they conscripted infantry of all types from local conquered peoples. At the same time, strong infantry became ever more vital for siege warfare in western Asia and Europe. A massed charge of heavily armored knights was ineffective against stone walls, and other than to enforce a blockade, mounted archers were little better. While the cavalry still maintained a role in siege warfare, it was mainly involved in auxiliary raids in the surrounding countryside, reconnaissance, and finally fighting if and when a breach in a fortress was achieved.

Europe also saw the development of infantry forces conscripted from urban and rural populations for local defense, and in contrast to the more professional foot soldiers who accompanied knights into battle, these formed a formidable force against the knights. When Flemish merchant guilds rebelled against Philip IV of France (r. 1268–1314) in 1302, he sent 2,500 knights and 8,000 infantry to relieve the siege at Courtrai Castle, which was being held by an infantry of guildsmen armed with pikes and small weapons. Strategically positioned to use the natural terrain to their advantage and united by a common cause, they planted the ends of their pikes into

► KNIGHTS AND HORSEMEN FROM THE STEPPE

While there is no denying the cultural importance of mounted warriors in both European and Mongol societies, their training varied greatly. In Europe, sons of noblemen were sent at an early age to the household of a knight or to court, there to spend several years developing their individual fighting skills. In Mongol culture training also started early, with all children riding horses at the age of three or four, but the education of a warrior was handled communally. The goals of each type of training also differed. Children of the steppe were expected to become expert horsemen and archers with a composite bow and to be able to fight in strictly ordered regiments and formations. European youths training to become knights also learned to ride, to handle a lance when charging, and to fight on foot with a sword, but the emphasis was on individual performance. Although many European armies also had mounted archers, there was a clear distinction between the archers and the knights, and the former were considered part of the infantry forces. The horses that they were learning to handle differed greatly as well. The great European warhorses seemed large and clumsy next to the sturdy little Mongolian horses, which had impressive stamina and could live off of forage.

Perhaps the most interesting difference was in the training for group military exercises. For Europeans, much of this happened as a matter of course in the private wars that frequently erupted between families, as well as on the tournament ground, but although the massed charge was the most important element of a cavalry attack, maintaining a strict military organization among the knights was not as highly emphasized. For Mongol horsemen, regimental organization and discipline were crucial to their overall battlefield strategy, and a great hunt was designed that imitated the encirclement tactics used by the soldiers in war. The hunt took place over several days, and any warrior who allowed game to slip by was punished severely, as was his commander. These differences all came into play in determining the long- and short-term outcomes of the direct encounters that knights and Mongols faced in the thirteenth century.

—Laura Wangerin

the ground and did not budge when the massed charge of knights bore down on them. A thousand knights perished, and the French infantry retreated in confusion. This victory was not lost on other armies, which began to employ similar tactics. By 1385, full cavalry charges were becoming a rare occurrence on the battlefields of Europe and the Levant.

Because battles fought by infantry tended to have large numbers of soldiers engaged at close quarters, European chivalric customs, such as hostage taking and ransoming, were no longer practical, and casualty numbers among knights rose sharply. Casualties among infantry also increased, and the battlefields became bloodier. In an effort to maintain large infantry forces, rulers began to hire men to fulfill the various roles of foot soldiers, heralding the beginnings of the large standing armies that became a defining part of the post-1500 early modern West.

—Laura Wangerin

Bibliography

- Allsen, Thomas T. *Mongol Imperialism: The Policies of the Grand Qan Mongke in China, Russia, and the Islamic Lands, 1251-1259*. Berkeley and Los Angeles: University of California Press, 1987.
- Creel, H. G. "The Role of the Horse in Chinese History." *American Historical Review* 70(3) (1965): 647–672.
- Keen, Maurice, ed. *Medieval Warfare: A History*. New York: Oxford University Press, 1999.
- Nicolle, David. *Medieval Warfare Source Book: Christian Europe and Its Neighbors*. London: Brockhampton, 1996.
- Rogers, Randall. *Latin Siege Warfare in the Twelfth Century*. 1992; reprint, Oxford, UK: Clarendon, 2002.
- Verbruggen, J. F. *The Art of Warfare in Western Europe during the Middle Ages: From the Eighth Century to 1340*. 2nd ed. Translated by Sumner and Mrs. R. W. Southern Willard. Edited by Matthew Bennett. Warfare in History Series. Woodbridge, UK: Boydell, 1997.

Castle Design in Southwest Asia and Europe

The castles of medieval Europe and Southwest Asia differed from earlier fortifications in that they were largely designed for private, not public, defense. Castles were an excellent solution

► KRAK DES CHEVALIERS

The crusader castle Krak des Chevaliers, dominating the foothills of the Syrian mountains northeast of Tripoli, held a central role in the ongoing power struggles in the area. Originally an eleventh-century Muslim fort (Hisn al-Akrad, or Castle of the Kurds), Krak (from the Syriac word for “fortress”) was strategically located between Christian Tripoli and Muslim Hamah and Homs. Granted to the Knights Hospitaller by the count of Tripoli in 1144, Krak des Chevaliers became the epitome of fortified strength and power. At its apogee Krak could garrison 2,000 troops and was believed by many in the thirteenth century to be impenetrable to attacking armies.

Krak presents an interesting example of castle design in the Levant, as it was almost continuously being built and rebuilt over the course of the Hospitalers’ tenure. It was first remodeled when the knights took control of it, but improvements and design refinements continued throughout the thirteenth century, probably to within a few years of its capture by the Mamluk sultan Baybars in 1271. This ongoing work on the structure of Krak testifies both to its wealth and to the need for its continued military strength in the region. It also demonstrates an interesting amalgamation of castle design elements, including older square towers, the incorporation of round towers and half-round mural towers, concentric curtain walls,



(Courtesy Graham Loud)

and box machicolations (projecting galleries at the top of a wall or tower with openings in the floor through which missiles, burning pitch, and the like could be discharged).

Krak provides an interesting example of the various functions that a castle might serve. Not only important and effective as a defensive structure, it was used as an administrative center for the extensive lands under its control. Krak also functioned offensively as a convenient base from which the knights could raid their Muslim neighbors and enforce the collection of tribute.

—Laura Wangerin

to defending borders and controlling disputed territories, and as they increasingly became a regular landscape feature, sieges became the predominant way of waging war. In addition to providing important defensive capabilities, castles were also commanding symbols of the wealth and power of their lords. In time, some of them, especially in Europe, also became the centers of new towns that developed around them.

During the period 1000–1500, two factors drove changes in the design of Europe’s castles: the need to respond to technological innovations in warfare and the desire to incorporate certain practical elements observed in Byzantine and Near Eastern fortifications that were encountered during the crusades. The first Euro-

pean castles, appearing in the ninth and tenth centuries, were simple motte-and-bailey structures built of earth and timber. Although there was great variety in the execution of these fortifications based on the terrain and the needs of the garrisons defending them, they all had as common elements a wooden watchtower on a motte (a hill, or mound of earth) surrounded by a stockade to create an enclosure (the bailey). Most motte-and-bailey castles had dry moats dug around them as an additional defense. The greatest advantage to this style of fortification was that it was relatively quick to construct and therefore was useful in areas needing rapid fortification. Disadvantages were that it was susceptible to fire, siege engines, escalade (scaling the walls with ladders and other devices), and mining

techniques, all likely offensive elements in a siege. The logical consequence was that castles began to be constructed in stone.

The earliest stone castles in Europe, dating from the late tenth and early eleventh centuries, still followed the basic motte-and-bailey design of a tower surrounded by a walled enclosure. The tower was strengthened into a *donjon*, a massive square keep that could serve as a refuge if the outer fortifications were breached. These outer fortifications also became more complex, incorporating into the design elaborate earthworks, towers integrated into the curtain walls, gatehouses, and loopholes for archers. When possible, natural landscape features were used as part of a castle's defenses, including rivers, escarpments, and marshes.

The eleventh and twelfth centuries saw a flurry of castle building in Europe as a response to political instability and the development of a hereditary aristocracy interested in protecting fiefdoms and projecting military-political influence. Following his conquest of England, King William I (r. 1066–1087), for example, found that the realm contained fortified towns but few royal fortifications. Drawing upon his experience as the duke of Normandy, he undertook an extensive castle construction project in order to establish kingdom-wide authority. By the end of his reign he may have built as many as 500 castles throughout the country, the most famous of which is the present-day White Tower in London.

Frankish colonists in the crusader states also found castles useful for asserting and maintaining their control over newly conquered territories and securing strategically important frontier areas. Given their small numbers of men-at-arms relative to what their enemies could muster, they found castles particularly well suited to defensive warfare.

When the first crusaders arrived in the East in the late eleventh century, they found very few castles. Those they did encounter tended to have the Byzantine-Armenian design elements of round towers and curtain walls with semicircular flanking towers. Although it has been an issue of some scholarly debate, it is now generally agreed that when crusaders built castles in the Levant they relied far more on European designs than on Arab or Byzantine models, and their cas-

tles and fortifications in the East followed building trends occurring simultaneously in the West. This is not to imply, however, that the West was opposed to borrowing useful innovations in castle design. The increasing use in siege warfare both in the Levant and in Western Europe of the trebuchet, a counterweighted catapult with devastating force and accuracy, fostered one essential modification to castle design. Borrowing from the Byzantines and Armenians, European castle builders made the round tower the standard throughout Europe and the crusader states in the course of the twelfth century, effectively replacing the square donjon. Rounded surfaces were more resistant to trebuchet bombardment, as a hit was more likely to be glancing and inflict less damage. Round towers also were harder to mine and sap and had fewer blind spots, all advantages to a defending force.

An additional adaptation brought back to Europe with the crusaders was the incorporation of concentric designs into castle architecture, an innovation that reached its climax in the mid-to late thirteenth century. Concentric design elements could include multiple moats, concentric encircling walls of varying heights, and ditches. The most impressive example of this type of defensive fortification that the crusaders encountered was Constantinople's triple set of land walls. Any such concentric structure was sure to slow down a besieging army and at best could force it into a position whereby the defending garrison could attack it at an advantage.

In the fourteenth century primitive gunpowder technology began to be used in simple cannon, and in the fifteenth century castles were being built or modified both in defense of and to take advantage of developing gunpowder weaponry. Curtain walls were lowered to present a smaller target to siege ordnance. They were also strengthened to resist hits, and platforms were often added to towers so that cannon could be used defensively. Arrow loops were widened to accommodate defensive artillery. While there were specific adaptations made to account for the increasing prevalence of gunpowder artillery in sieges, as with earlier adaptations there was not a sudden revolution in castle design. The diffusion of architectural innovations was not rapid, and the spread of adoption was not uniform.

What is remarkable is how well and for how long traditional castle designs held up to the new siege technologies as they arose.

—Laura Wangerin

Bibliography

- Glick, Thomas F. *From Muslim Fortress to Christian Castle: Social and Cultural Change in Medieval Spain*. Manchester, UK: Manchester University Press, 1995.
- Keen, Maurice, ed. *Medieval Warfare: A History*. New York: Oxford University Press, 1999.
- Kennedy, Hugh. *Crusader Castles*. Cambridge: Cambridge University Press, 1994.
- Nicolle, David. *Crusader Castles in the Holy Land, 1097–1192*. Oxford, UK: Osprey, 2004.
- Prestwich, Michael. *Armies and Warfare in the Middle Ages: The English Experience*. New Haven, CT, and London: Yale University Press, 1996.
- Verbruggen, J. F. *The Art of Warfare in Western Europe during the Middle Ages: From the Eighth Century to 1340*. Translated by Sumner and Mrs. R. W. Southern Willard. Edited by Matthew Bennett. Woodbridge, UK: Boydell, 1997.

Siege Warfare across Eurasia

Siege warfare was an important element of small- and large-scale military conflicts across Eurasia throughout the period 1000–1500. A siege consisted of an armed offensive force surrounding a fortification with the object of forcing surrender by encirclement and blockade, bombardment, starvation, and other forms of harassment, stratagem, and deceit and, if necessary, direct attack.

In Japan, siege warfare first came into wide use during the eleventh century and by the twelfth and thirteenth centuries was standard practice. Unique to the Japanese, most defensive preparations for sieges in the Kamakura period (1186–1333) included plans for escaping by horse or by ship and fortifications tended to be defensive lines consisting of ditches, barricades of stacked brush, moats, and perhaps walls of packed earth, all with large gates that could be opened to allow mounted defenders to gallop out and attack. These fortifications were specifically intended to be temporary. By the Nambokucho period (1336–1392), although this defensive-line style of fortification was still being used, a new type of stronghold and siege style appeared in

Japan that more strongly resembled those on the continent, with garrisons occupying and defending permanent fortifications.

Land conflicts in Southeast Asia tended to focus on gaining control of strategically placed towns, often protected by substantial plastered walls with elaborate ditches, and thus the siege was central to waging war. Due to this area's unique geography and low population density, the goals of siege warfare in Southeast Asia included not only expansion of political influence but also the capture and resettlement of local populations.

The Chinese developed most of the siege weapons and techniques that became common throughout Eurasia during the period 1000–1500. China had seen the development of many new styles of war during the Warring States period (453–221 BCE), including those relating to sieges, and little changed in Chinese siege techniques and technologies even after the introduction of gunpowder artillery more than 1,000 years later. Mining and sapping, namely digging under walls in order to collapse them, were age-old techniques that continued to be used. To shield the men working at undermining the walls, armies built tanks or mobile sheds with protective roofs. The Chinese also developed crossbows and counter-weighted catapults as well as a host of other machines designed to weaken walls or throw rocks and incendiary devices over them. Ladders were often used if a frontal assault was to be attempted, albeit with the risk of heavy casualties.

In addition to cavalry, crossbowmen, and infantrymen able to perform the martial and manual labor that accompanied a siege, large numbers of specialized professionals were necessary. These included engineers to design and operate siege engines and expert craftsmen to construct them. This kind of specialized support remained crucial to the execution of a successful siege campaign throughout Eurasia.

By the thirteenth century much of China's siege technology had diffused into central Asia, the eastern Mediterranean, and Europe, where the proliferation of walled towns and small fortresses made siege warfare the primary form of engagement. The West also eagerly adapted Chinese gunpowder technology for siege warfare

➤ MONGOL SIEGES

A seventeenth-century Mongol chronicle reports that when Chinggis Khan (ca. 1162–1227) encountered his first Chinese fortified city, he devised a clever way to overcome it. Having surrounded the city, he asked the city officials for 1,000 cats and 10,000 swallows as the price to raise the siege. Once these had been delivered, he ordered that scraps of fabric be tied to their tails and lit on fire. The animals then all ran or flew home, and as the city burned the Mongols entered and conquered it. While the accuracy of the tale is doubtful, the central element—that Chinggis Khan's forces lacked experience with siege warfare—was a genuine problem for the Mongols. While there was never any question of the superior abilities of Mongol cavalry, the army was challenged by the increasing frequency with which it had to deal with fortified towns and cities as it pushed the frontiers of empire south into China and west into Persia, Russia, and eastern Europe.

The Mongols solved this problem by employing an age-old practice in a new way. Turco-Mongol armies had traditionally conscripted defeated soldiers into their armies in order to bolster their numbers. The Mongols now extended conscription to include engineers and artisans skilled in the building and handling of siege engines and military leaders experienced in the tactics of siege warfare, especially Chinese engineers and tacticians. Thus armed with people who could advise and supervise the various elements of siege warfare, the Mongols ensured that their military preeminence was not impeded by their own lack of familiarity with this style of waging war and were able to continue their conquests unabated.

—Laura Wangerin



Scene depicting the capture of a Chinese town by Chinggis Khan, from the fourteenth-century Persian manuscript *Jami al-Tawarikh*. After coming to power in 1206, Chinggis immediately launched an invasion of China. It took 20 years to gain complete control of the Jin dynasty. (Corel)

when it became available in the fourteenth century, although it was another 100 years before it became a truly effective weapon of war. Although the Chinese developed some cannon at about the same time that the West was experimenting with gunpowder artillery, it is interesting that they did not refine this technology. When in the early modern era Europeans arrived in China with their guns and cannon, the Chinese were astounded by their efficacy and precision.

The Mongols also freely adopted and adapted the siege technologies of China in their thirteenth-century wars of expansion. The rapidity with which they were able to acquire expertise in deploying these new machines and tactics was devastating for the cities they besieged. Chinggis Khan (ca. 1162–1227) made his first venture into China in 1209. Over the course of the next several years the Mongols struck repeatedly at China, and by 1215 the effort had evolved from a looting campaign to a conquest. The experience gained

and the personnel acquired in the sieges of Chinese cities were applied to the subsequent subjugation of lands to the west. Although much has been made of the great bloodshed that accompanied the sieges of the Mongol invasions, it should be noted that whole-scale massacre was not an unusual fate for cities taken by force by either European or Asian armies. The Mongols clearly exploited this fearsome reputation, sparing cities that capitulated without resistance and massacring the populations of those that did not.

In the great invasion of Russia undertaken by Chinggis Khan's successors in the period 1237–1240, the startling efficiency of their approach becomes clear. The siege of Ryazan early in 1237 was over in five days. The attack on Vladimir began on the morning of February 7, 1238, after troops had been in place for four days, and was over by noon. The siege of Kiev in 1240, perhaps the most dramatic, saw the city completely surrounded by Mongol troops. Siege guns were used with great effect against the walls, and when they fell the fighting commenced, with the Mongols gaining control of the city after battling through the night. Contemporary Russian chroniclers writing about the invasion reported with awe and dismay the Mongols' advanced siege technology, including catapults and battering rams, as well as their sophisticated use of psychological warfare and the speed and skill with which they attacked.

The single siege of this time period that historically had perhaps the greatest implications for both the Asian and European worlds was the siege of Constantinople by the Ottoman Turks in the mid-fifteenth century. Byzantine emperors had for some time been trying to garner Western military support against the Islamic forces, which by then commanded most of Anatolia. The few allies they had managed to acquire to bolster their garrison at Constantinople were vastly outnumbered by the troops with which Sultan Mehmet II laid siege to the city in 1453. Over the course of nearly two months Constantinople held out while he wore down its defenses with a blockade, heavy artillery, siege engines, and sheer numbers. On May 29, 1453, the great walls surrounding the city were finally breached, and the city was sacked by the sultan's forces. The fall of Constantinople ended the Byzantine em-

pire and, with the expansive and effective use of gunpowder artillery as siege weapons by the Ottoman Turks, ushered in the beginning of a new military era.

—Laura Wangerin

Bibliography

- Charney, Michael W. *Southeast Asian Warfare, 1300–1900*, Vol. 16, *Handbook of Oriental Studies*. Edited by V. Lieberman et al. Leiden and Boston: Brill, 2004.
- Duffy, Christopher. *Siege Warfare: The Fortress in the Early Modern World, 1494–1660*. London and New York: Routledge, 1996.
- Friday, Karl F. *Samurai, Warfare and the State in Early Medieval Japan*. Edited by Jeremy Black. Warfare and History Series. New York: Routledge, 2004.
- Graff, David A. *Medieval Chinese Warfare, 300–900*. New York and London: Routledge, 2002.
- Haldon, John. *Byzantium at War, AD 600–1453*. New York and London: Routledge, 2003.
- Kennedy, Hugh. *Crusader Castles*. Cambridge: Cambridge University Press, 1994.
- Morgan, David. *The Mongols*. Edited by James Campbell and Barry Cunliffe. The Peoples of Europe Series. Oxford, UK: Basil Blackwell, 1986.

War and Transport Ships around the World

Warships and the nature of naval warfare underwent spectacular change between 1000 and 1500, especially in Western Europe. Modes of sea fighting changed more in this period than in the previous 2,000 years. While developments in western Eurasia had the greatest ramifications, Chinese shipbuilders constructed vessels that incorporated a number of cutting-edge innovations.

In 1000 the most-feared warship in European waters was the Viking longship, a supple undecked vessel with low freeboard—that is, the distance between the waterline and the gunwale (the upper edge of the hull)—and a single mast setting a square sail for long-distance passages before a favorable wind but generally powered by oars, especially in battle. Size was indicated by the number of pairs of oars, one man per oar. Longships generally had between 13 and 23 pairs of oars, although “great ships” could have 25 pairs or more. With relatively flat bottoms, the

► DESIGN OF A HORSE TRANSPORT

Medieval shipwrights built different styles of ship in different places, but there was little functional specialization: the same vessels carried people, silks, spices, grain, fish, timber, livestock, and other animals, including horses and, in Asia, elephants. Ships that carried horses were fitted with stalls and tie-downs to secure the animals for the passage. Vikings carried horses from Norway to Iceland in *knarrs* in the ninth century, William the Conqueror ferried 2,000 to 3,000 horses across the English Channel in similar ships in 1066, and four authors of the thirteenth to fifteenth centuries—from Venice, Turkey, Persia, and China—describe the shipment of thousands of horses annually from Arabia and Persia to India.

The first horse transports built as such seem to have been Mediterranean oar-powered *tarides* or *uissiers*. French records from 1246 and 1274–1281 include detailed specifications for *tarides*. The earlier vessels measured about 118 feet (36 meters) long by 13 feet (4 meters) broad and carried 20 horses. The later ships were 125 by 16.5 feet (38 by 5 meters) and carried 30 horses in stalls three abreast and with slings under their bellies to prevent them from falling. The horses walked on and off the ships—sometimes mounted—on stern ramps measuring 12 by 4.8 feet (3.7 by 1.5 meters).

—Lincoln P. Paine

ships were run up on beaches for raids, but battles at sea were not uncommon. These opened with volleys of arrows and stones, but battle was joined when the ships were made fast to one another and the crews fought as they might on land. It was in such vessels that Vikings raided from Scandinavia to Britain, France, and Spain in the west and down the rivers of eastern Europe to the Caspian and Black seas. From the Black Sea and Atlantic Spain, Vikings also entered the Mediterranean from east and west.

The standard Viking cargo ship was the *knarr*, similar in form to the longship but shorter and with a lower length-to-beam ratio. The Vikings sailed these across the Atlantic to Iceland, Greenland, and Newfoundland as well as in their ordinary trade. As the Viking age ended in the

twelfth century, in the field of maritime commerce *knarrs* were replaced as northern European merchants devised altogether different kinds of ships: the hulk and the cog. Mounting a single square sail, they relied on oars only for auxiliary propulsion. The vessels were squat with a length-to-breadth ratio of only 3-to-1 rather than 4- or even 6-to-1, and they were much deeper in the hold, qualities that gave them a large carrying capacity well suited to traffic in bulky low-value goods like fish, grain, and timber. The lack of permanent navies in northern Europe meant that sovereigns depended on requisitioning merchant ships to engage in naval operations, so cogs became the model for warships. With greater freeboard, sailors in cogs had the advantage of being able to fire down on the enemy, especially when towering sterncastles and forecastles were added to the hull.

In the Mediterranean, oared galleys that had evolved directly from classical antecedents remained the standard ship of war. Unlike Viking longships, these usually had more than one man per oar, up to a maximum of eight. The weaponry was also more sophisticated, involving catapults and *ballistae* (crossbowlike artillery) for shooting arrows or hurling rocks and firepots. They also used lime to blind the enemy and soap to make them lose their footing. Mediterranean vessels also carried triangular lateen sails set parallel to the centerline of the ship. One of the earliest and most complete set of specifications for Mediterranean war galleys relates to the fleet of Charles I, the Angevin king of Sicily, in the 1280s. These vessels were about 130 feet (40 meters) long and 12 feet (3.7 meters) in beam (a ratio of nearly 11:1) and carried 108 oars. Whereas in antiquity and the early Middle Ages galleys carried one oar per bench—though frequently with more than 1 rower per oar—now there were three or more rowers per bench, each pulling his own oar. In addition to the oarsmen, these Angevin galleys carried 36 marines, 2 masters, 4 helmsmen, and 2 boys. The specifications also enumerate the different types and quantities of weapons, including crossbows, shields, lances, halberds, axes, helmets, padded jackets, vessels for holding combustibles, grapnels, and quicklime. The crews were generally

comprised of people with regional specialties: Sicilian oarsmen and Genoese or Catalan crossbowmen, for instance.

Two other significant differences between northern and southern shipbuilding traditions were the former's use of centerline rudders (starting about 1200), rather than steering oars or quarter rudders hung from the side of the ship, and the use of shell-first rather than frame-first construction. In the ancient shell-first shipbuilding technique, the hull of the ship was erected from the outside in: the hull planks were fastened to each other first, and frames or ribs were inserted to strengthen the form. In the early Middle Ages, Mediterranean shipwrights began to rely instead on frame-first construction and first erected the interior frames of their ships—the ribs coming off of the keel, like a skeleton—after which they applied the planks of the hull.

As the crusades drew increasing numbers of northern European mariners to the Mediterranean from the twelfth century on, shipwrights began to adopt and combine the most useful qualities of the two traditions. By the fifteenth century, this had resulted in the earliest fore-runners of the full-rigged ship-of-the-line, found in both northern European and Mediterranean waters: ships constructed frame-first, with two or more decks, a combination of fore-and-aft and square sails, and steered by a centerline rudder. They also grew substantially in size. The largest Venetian ship in 1400 had a capacity of about 400 tons. Half a century later there were six ships of 600 tons, and by 1500 Venice had a ship of 1,000 tons.

The early fourteenth century also saw the development of the first iron and bronze cannon in Western Europe, and within ten years of the earliest written evidence for cannon in Europe, they were being used aboard ships, in a French attack on Antwerp in 1336. Given their size and weight, bronze and iron cannon were well suited for use aboard ships. Initially, small-caliber anti-personnel guns were mounted on the stern and forecastles, but over time larger guns were carried on deck and fired broadside over the bulwarks or through holes cut in the bulwarks. Their incorporation had a dramatic effect on ship design and naval tactics; for example, mounting

guns below the upper deck required the development of watertight covers for gun ports—holes in the hull of the ship near the waterline—in the early 1500s.

By the 1470s, Venetian galleys were armed with heavy guns mounted in the bows on the centerline of the hull. (Oars and oarsmen made it impossible to mount guns broadside.) Such guns, powerful enough to sink a ship, would not appear on sailing ships for another half century. In a battle off Brest in 1513, a French galley squadron armed with large bronze cannon known as basilisks sank one English sailing ship and badly damaged another.

It is very likely that other seafaring peoples such as the Cholas of southern India, who sailed across the Bay of Bengal in 1025 to invade the Sumatra-based kingdom of Srivijaya, differentiated between ships used for war and those used for trade. But before the sixteenth century outside of Europe and the Mediterranean, the only people who have left clear evidence of purpose-built warships are the Chinese. In this period, Chinese ships were rigged fore and aft and mounted centerline rudders, an innovation that some believe may have inspired its introduction into Europe although the meager evidence is inconclusive.

The institution of a formal Chinese navy is generally credited to the Southern Song dynasty (1127–1279), which in the twelfth century created a standing fleet of 11 squadrons of ships fitted with gunpowder bombs thrown by catapults. The development of Chinese naval craft did not undergo as pronounced a metamorphosis in this period as did European ships, nor were the innovations brought to the same level of refinement as in the West. Many reasons for this have been advanced, but the most significant are the lack of foreign rivals of comparable ability and the fact that most of China's naval warfare was confined to inland waters—rivers, canals, and lakes—and the coasts rather than on the high seas. Most significant was the application of the human-powered treadmill-operated paddlewheel as the means of propulsion for warships, which gave them incomparable maneuverability. Originally developed in the eighth century if not earlier, paddlewheel vessels were extensively used

by the Southern Song, first in their campaigns against the Jurchen (Ruzhen) invaders of the twelfth century and later in the period of civil unrest that plagued the dynasty. The first Song paddlewheel ships carried either two or four eight-bladed paddles. Rather than build larger paddles for longer vessels, shipwrights increased the number of paddles, the largest being powered by 24 paddles and capable of carrying over 1,000 men on several decks. Because these ships had no need for masts and sails, their upper decks could be covered with iron plates to protect the soldiers.

Chinese tactics differed from those in western Eurasia in one crucial respect that antedates this period but was maintained throughout it. This was the use of a long spiked lever, the end of which could be dropped on enemy ships not to facilitate boarding but rather to keep an enemy ship at a distance so that it could be raked with fire by bombs or crossbows.

—Lincoln P. Paine

Bibliography

- Bachrach, Bernard S. "On the Origins of William the Conqueror's Horse Transports." *Technology and Culture* 26 (1985): 505–531.
- Chakravarti, Ranabir. "Early Medieval Bengal and the Trade in Horses: A Note." *Journal of the Economic and Social History of the Orient* 42(2) (1999): 194–211.
- Cipolla, Carlo M. *Guns, Sails, and Empires: Technological Innovation and the Early Phases of European Expansion, 1400–1700*. 1965; reprint, Manhattan, KS: Sunflower University Press, 1988.
- Gardiner, Robert, and Richard W. Unger, eds. *Cogs, Caravels and Galleons: The Sailing Ship, 1000–1650*. Annapolis, MD: Naval Institute Press, 1994.
- Lane, Frederic Chapin. *Venetian Ships and Shipbuilding of the Renaissance*. Baltimore: Johns Hopkins University Press, 1934.
- Needham, Joseph. *Science and Civilization in China*, Vol. 4, *Physics and Physical Technology*, Part 2, *Mechanical Engineering*. Cambridge: Cambridge University Press, 1965.
- Needham, Joseph, with Wang Ling and Lu Gwei-djen. *Science and Civilization in China*, Vol. 4, *Physics and Physical Technology*, Part 3, *Civil Engineering and Nautics*. Cambridge: Cambridge University Press, 1971.
- Pryor, John H. "The Transportation of Horses by Sea during the Era of the Crusaders: Eighth Century to 1285 A.D." 2 parts. *Mariner's Mirror* 68(1–2) (1982): 9–27, 103–125.

Mesoamerican War Strategy, Battle Tactics, and Armaments

The Indians of pre-Hispanic Mexico developed strategic war aims, battlefield tactics, and arms and armaments to suit the societies they created. Aztec warfare, as well as that of other neighboring polities and cultures, primarily aimed to capture but not kill opposing warriors, who would then be sacrificed to various deities. Whereas Eurasian armies developed well-organized and highly maneuverable infantry and cavalry formations, the Aztecs and their neighbors, as well as all of their predecessors, lacked close-ordered drill and instead stressed charges and individual combat designed to win prestige by acquiring sacrificial victims. They still, however, also fought for larger objectives, namely conquest and subjugation, as representations of stylized burning temples and tribute lists in the few extant Mexica codices (bound books) make abundantly clear.

The Aztec (or Triple Alliance) order of battle illustrates the height of pre-Hispanic arms and armaments in Mesoamerica. The Aztecs fielded armies as large as 100,000 to 200,000 fighting men, divided into 8,000-man units. Lightly armed scouts and skirmishers, carrying atlatl launchers and spears, preceded the more heavily armed main body of warriors. These warriors wore quilted cotton armor; carried painted, sometimes feathered, round shields; and employed razor-sharp obsidian-bladed clubs and knives as well as slings, darts, and other weapons to make war. The highest-ranked among them, including commanders and members of prestigious military orders, such as the Otomi who were named after an especially fierce tribe of neighboring Indians, and at times the emperor himself wore elaborate feathered costumes and sandals. The more elite the military order, the more elaborate the feathered costume. Reserve forces, including conscripted troops from conquered provinces, followed.

Such formations failed to survive Spanish battlefield tactics and arms and armaments during the conquest of Mexico. While the Aztecs'

obsidian-bladed club could and did decapitate horses, it proved too unwieldy and could not match the Spaniards' steel swords, which could parry, slash, and thrust, not to mention the Spaniards' determination to destroy and not merely capture their opponents in war.

—James Douglas Lockhart

Bibliography

- Hassig, Ross. *Aztec Warfare: Imperial Expansion and Political Control*. Norman: University of Oklahoma Press, 1995.
- Padden, R. C. *The Hummingbird and the Hawk: Conquest and Sovereignty in the Valley of Mexico, 1503–1541*. New York: Harper and Row, 1970.

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Thought and Religion

The modern divisions of philosophy, science, and religion are largely meaningless when we discuss thought and religion in the period 1000–1500. Philosophers tended, more often than not, to be theologians or at least cosmologists (as was the case with the Neo-Confucians). Theologians tended to be philosophers, involving themselves in what today would be considered the philosophical branches of metaphysics, logic, and ethics. Science, as understood today, was then essentially a branch of natural philosophy, being essentially grounded in theory rather than empirical investigation. Of course, as any student of history is aware, such sweeping general statements as these must allow for exceptions. As entries in the section on “Science and Technology” indicate, medicine in the Chinese, Indian, Arab, and Western traditions was founded both on theory and clinical experience, even though the former outweighed the latter. Moreover, astronomy was based on observation of the skies.

Another distinction to keep in mind is that doctrine and theological speculation do not sum up the totality of religion. Religion is not only belief. It is also practice, and probably for the vast majority of humans who professed adherence to a religious tradition during these 500 years, doctrine was largely inconsequential, or at least it took a distant second place to the religious practices that informed one’s life. Entries for the theme “A World on the Move” already have highlighted one of the major religious practices common to so many religions around the world: pilgrimage to sacred spots. Ritual, whether it was pilgrimage, prayer, fasting, the performance of various acts, or the wearing of special clothes, tokens, and amulets allowed the devotee to feel connected to both a deity or spirit and to a community of like-minded individuals.

In addition to the religious traditions that offered articulated canons of belief, such as the various forms of Buddhism, Christianity, and Islam, to name but three great traditions among many, there were what we might term traditional religious practices that often lacked clearly formulated bodies of doctrine but did have their myths—often origin myths—and, more important, practices that brought meaning, solace, and a sense of right order to their practitioners. One example is the various blessings and purgative ceremonies performed by Diné, or Navaho, singers, persons often mistakenly called “medicine men.” Many of these traditional ways of relating to and touching the Beyond fell within the category of what are loosely termed animist religions that were based on the belief that spirits possess every manner of being, and humans must establish a proper relationship with these spirits as protection against evil and in the hope of a good life. The Ari people of southwestern Ethiopia, for example, believed (and still do) that each person is

The Ari people of southwestern Ethiopia, for example, believed (and still do) that each person is created by a personal deity, either a male Sabi or female Beri.

created by a personal deity, either a male Sabi or female Beri. Moreover, these deities can come to dwell within the person whom they created, and when that happens these divine spirits need to be accorded other dwelling places, normally trees or bushes, and require regular sacrifices.

In this theme we will first explore the search for the Divine Other around the world, seeing how both the so-called world religions and traditional religions that were confined to a single culture or people functioned and in some cases originated and spread. When we use the term “world religion,” no value is attached. Such religions are not superior to traditional religions practiced by a single folk. Quite simply, a world religion, such as Buddhism, Christianity, and Islam, is one that offers a universal message, claiming to be valid for all peoples everywhere, and that travels from its place of origin to new cultures and from them to other cultures. In the process of this complex transit, it is not only adopted by its hosts but is also adapted by them to their ways of life. That is, it is integrated more or less comfortably into these cultures through a process we term *syncretism*. This is not a one-way process. A new religion, especially one that has already evolved a complex set of beliefs and practices, will force compromises and changes in lifestyle and mind-set on its new adherents. Thus, for example, Ibn Battuta who traveled through the West African empire of Mali in the early fourteenth century was edified to see young boys being trained to memorize the Quran in Arabic, and those who failed in this endeavor were chained. At the same time, however, he noted that Muslim native women were, in his estimation, shamefully free in their friendships with male friends, something that would not be tolerated in his Moroccan homeland.

As we shall also see here and elsewhere, world religions were often at loggerheads with one another. Thus, Christians and Muslims fought holy wars against one another, and during these centuries Turkic Muslims were the single most important factor in the virtual disappearance of Buddhism from much of Central Asia and North India, regions where it had flourished for over a millennium. Major world religions, because of their claims to universal Truth, also tend to see religious doctrine in terms of right and wrong, truth and falsehood, orthodoxy and heresy. Indeed, for many devotees of such religions, heresy, the supposed perversion of the truth by a person who professes to be a member of that faith, is far worse than unbelief. What is more, one sect of a religion often ascribes to members of a variant sect the basest of motives, morals, and behavior, juxtaposing the rectitude of true believers and the perversity of apostates. For these reasons, Shias and Sunnis have often been at odds and war with one another, and, in like manner, Christians who follow a majority form of the faith have often persecuted the minority “heretic Christians” within their midst. Even supposedly nonviolent Buddhists have oppressed “deviant Buddhists.”

Philosophical schools also have their orthodoxies, and within the Islamic and Latin Christian worlds of this period no philosopher was more preeminent than Aristotle, a fourth-century BCE Greek thinker

whose thought was largely preserved by Muslim scholars and passed on to the West through Muslim and Jewish scholars, philosophers, and (if we may make the distinction) theologians. But Aristotle was more than some long-dead philosopher. He had articulated a highly organized system of logical analysis, metaphysics, ethics, and natural philosophy (to name only the most significant areas in which he worked and wrote), and Muslim, Jewish, and Latin Christian theologians who were exposed to his brilliant and startlingly original ideas were forced to come to terms with his theories and modes of analysis, either trying to integrate them into their own doctrinal traditions or articulating reasons for rejecting them (and in the process often using Aristotelian logic and terminology to refute him and those who espoused the philosophy of this pagan).

Two of the most significant fields in which Aristotle worked were social and political philosophy, or ethics and political science. As he noted, the human is by nature a social animal. These 500 years were noted for an outpouring of original work throughout Afro-Eurasia in these allied branches of philosophy. Some of it clearly showed the imprint of Aristotelian influence. Toward the end of this era, some social and political thinkers in Western Europe were also exhibiting the influence of the recently discovered (as far as the Latin West was concerned) Plato, the teacher from whom Aristotle so radically deviated. Some of it was quite independent of Greek philosophy, the most striking example being the Neo-Confucianism of Song China.

It is tempting and partially correct to see these 500 years as a prelude to the great religious and ideological movements and changes across the globe of the three centuries that followed. Yet to treat these five centuries as simply a precondition for what followed is to fail to see the inherent importance that religion and thought in all their forms played in the lives of human beings around the world between 1000 and 1500. The great nineteenth-century German historian Leopold von Ranke wrote that “Every age is immediate to God” (*“Jede Epoche ist unmittelbar zu Gott”*), by which he meant that the historian must understand every era on its own terms and seek to perceive its inherent logic and meaning without reference to what follows, for no period of human history is inferior to what comes next, nor does it exist to usher in its antithesis or an improvement upon itself. Nowhere is this dictum more appropriate than when we study the religion and thought of this epoch.

—Alfred J. Andrea

■ Introduction: The Search for the Divine Other

To call the period 1000–1500 an “Age of Faith,” as it is often termed, is to reduce a complex half millennium to a single facet, and such reductionism does grave disservice to history. That noted, almost countless varieties of religious experience and expression were alive

and flourishing during these five centuries. Faith outweighed unbelief many times over, and religion, however expressed, was accepted by most people as a normal part of life. For most persons, it was a form of security in this life and preparation for death and the Beyond. In those cases

where there was no concept of a personal after-life, it nevertheless defined one's place in the universe and put one right with spiritual forces.

The large number of entries under this topic suggests the importance of religion and spirituality during this half millennium, but cumulatively they give only a tantalizing taste of its many religious currents and movements. They do not even hint at the origins of two important movements that began in the most humble manner during the last years of the fifteenth century and only became significant phenomena during the following century and beyond. The more important of the two was the introduction of Latin Christianity, also known as Roman Catholicism, to coastal Africa, into the Americas, into South Asia, and onward to East Asia due to fifteenth-century Portuguese and Spanish voyages of discovery and exploitation. By the end of the sixteenth century, the globalization of Christianity was a reality that would have lasting world historical significance. The second movement that originated toward the very end of the fifteenth century was confined to India, but there it took on great importance and has remained so to the present. This was Sikhism, a monotheistic faith that originated in the Punjab and today is embraced by over 25 million believers. According to Sikh tradition, its first guru, or teacher, Nanak (1469–1538), experienced his initial prophetic revelation in 1499 and began preaching the path of a single God who was neither Hindu nor Muslim.

Of all of the religious developments that took place during these five centuries and were noticeable to those who took care to take notice, the two most significant were the continued spread but also partial retreat of Islam and the simultaneous spread and retreat of Buddhism.

After 1000 CE Islam, almost exclusively in its Sunni form, made major advances into six areas of Afro-Eurasia: Africa, western Central Asia, Anatolia and the Balkans, eastern Central Asia, India, and coastal Southeast Asia. In addition, the large non-Muslim populations in regions conquered in the seventh and eighth centuries, such as Egypt, Syria, and Iran, were progressively turning to Islam, although significant non-Muslim minorities in these lands remained faithful to their traditional religions.

The only area in which Islam was in retreat was the Iberian Peninsula where, in the face of the Reconquista, Muslim states progressively fell to Christian crusader forces from the mid-eleventh century to 1492, when Granada, the last Muslim bastion, was swept away by the Catholic monarchs of Spain, Fernando of Aragon and Isabel of Castile-León. The bitter choice of forced conversion or migration for Muslims and Jews followed upon the heels of this final Christian victory.

In Africa, Islam took deep root in sub-Saharan West Africa, overwhelmed Christianity in the area south of Egypt that is present-day Sudan, and even advanced somewhat at the expense of Christian Ethiopia. Islam also advanced farther south along the East African coast, finding welcoming homes in the Swahili cities. In all of these areas, as well as elsewhere across Afro-Eurasia, Islam merged with local traditions. Moreover, as in lands that had become part of Dar al-Islam (the House of Islam) many centuries earlier, the process of converting the masses, especially rural masses, was far slower than the process of converting elites who more readily perceived the advantages of becoming Muslims.

In western Central Asia, Islam continued a process begun in the seventh century, with progressive displacement of Zoroastrian, Buddhist, and Assyrian Christian enclaves in such areas as present-day Afghanistan, Uzbekistan, Kazakhstan, and adjacent lands during the period 1000–1250. In the eleventh century, recently converted Seljuk Turks began the slow process of transforming Byzantine Anatolia into a Muslim Turkic region, and the process was completed, at least politically, under the Ottoman Turks, although large minorities of Greek, Syrian, Armenian, and other Christian groups remained an integral part of Anatolian society until the early twentieth century. The Ottomans also began the conquest of that area of southeastern Europe known as the Balkans, although the majority of persons living there under Ottoman rule remained Christian. Islam also made major inroads into Central Asia east of the Pamir Mountains, a region today that is the Uyghur Autonomous Region of Xinjiang, China. Originally Manicheans and Buddhists, the Uyghurs, the single largest Turkic group in this

vast area, slowly converted to Islam as the religion spread from west to east between the late tenth and seventeenth centuries. By 1000 CE, Kashgar in the far western regions of eastern Central Asia was already a Muslim town, and by 1500 Islam was a major force throughout most of Central Asia.

There was, however, a temporary countervailing trend. Beginning in the eleventh century, a number of Turkic and Mongol tribes residing alongside and within the northern and western borders of imperial China converted to Christianity, the brand of Christianity practiced by the Assyrian Church of the East, with its spiritual center in Iraq. These were the so-called Nestorian Christians whom Marco Polo and many other Latin Christians from the West encountered in Central Asia and China in the thirteenth and fourteenth centuries. These conversions were made all the easier because Assyrian Christian missionaries tolerantly allowed converts to maintain many of their customary beliefs and practices, thereby creating a Turco-Mongol-Christian synthesis that Friar William of Rubruck remarked upon in the mid-thirteenth century. Because a number of Mongol khans were married to Christians or had Christian mothers, counselors, and generals, these Christians fared well under the Mongol empire. Indeed, under the Mongols, the Church of the East was able to expand its reach throughout China, establishing churches far to the south. At the same time, a significant number of Assyrian Christian Turks were “converted” to Latin Christianity by Franciscan friars, who arrived in the late thirteenth century and following and were likewise tolerated by the Mongol emperors. Most notable among the Ongut Turk converts was a king known as George. This association with the hated Mongols was also a curse for Christianity, inasmuch as following the Yuan dynasty’s collapse in 1368, the Christian Churches in China, both Assyrian and Latin, withered away in the face of Chinese hostility under the Ming to anything foreign. There is no evidence of persecution in the form of martyrdoms, but by 1400 both churches were largely things of the past in China and fast dying out. Meanwhile, Assyrian Christians along Ming China’s borders were converting to either Islam

or the Tibetan-style of Tantric Buddhism now espoused by the Mongols of eastern Central Asia.

The Mongols had initially been the greatest challenge ever to Islam in western Asia, greater even than the crusades, as the capture and sack of Baghdad in 1258 bore witness. By the end of the thirteenth century, however, the Mongol il-khan of Persia had embraced Islam, and the Mongols of western Central Asia were fast becoming Muslims. Under these Muslim il-khans the Assyrian Christian Church experienced some sporadic persecutions in the early fourteenth century, but it was nothing compared to the destruction wrought by the conquering armies of Timur-i Leng (Tamerlane). Amir Timur, a Muslim Turk who claimed legitimate authority derived from the Mongols’ Chagatai khanate of western Central Asia, was not only a would-be world conqueror but also a self-conscious *ghazi* who waged war against infidels, even though many of his campaigns were against fellow Muslims. Regardless of his attacks on coreligionists, his campaigns often assumed the guise of holy wars against Christians of every type, including Georgians, Armenians, and Assyrians. Churches were destroyed, and populations were killed off or enslaved. By the time of Timur’s death in 1405 and a loosening of his anti-Christian policies by his Timurid successors, the Assyrian Church of the East had been severely diminished. It has, however, survived to the present.

Islam had a presence in India since the seventh century, when Arab-Muslim merchants established themselves and constructed mosques along its Malabar, or southwestern, coast, and in the eighth century Arab armies conquered Sind in present-day Pakistan. Islam, however, only became a permanent presence in the northern heartland of India, the Indo-Gangetic Plain, with the successful expeditions out of Afghanistan of a Turkic *ghazi* known as Mahmud (or Muhammad) of Ghazni, who during the last quarter of the twelfth century conquered a number of key cities, including Lahore and Delhi. Following his assassination in 1206, one of his generals established the sultanate of Delhi, which was ruled by successive Turco-Afghan dynasties from 1206 to 1526. The sultans of Delhi followed various policies in regard to their non-Muslim subjects,

at times persecuting and at other times tolerating, with different levels of benevolence, Hindus, Jains, Buddhists, Parses (Zoroastrians), and even a handful of Christians. Although non-Muslims remained a majority, great strides were made in conversion to Islam because of a multiplicity of factors, including the attraction of its egalitarianism, as opposed to the fairly rigid Hindu caste system, and the spirituality of Sufi mystics, which struck a resonant chord among a people who revered holy people.

Sailing from India, Arabia, Iraq, East Africa, and elsewhere, Muslim merchants were becoming an increasing presence in the rich coastal cities of Southeast Asia, where they established diaspora communities from which the process of conversion began. Sufi missionaries and Muslim merchants combined to convert local leaders and others, as a hybridized form of Islam took root that combined traditional Muslim practices with native customs. By 1500 the islands of present-day Indonesia, as well as Malaysia on the Malay Peninsula, were on their way to becoming the demographic heartland of the House of Islam, as they are today with their combined populations of more than 240 million Muslims.

Mainland Southeast Asia also experienced a major infusion of Theravada Buddhism during these centuries. Mahayana Buddhism had already been part of the religious landscape of Southeast Asia for many centuries, with tradition ascribing its origins there to missionaries dispatched by King Asoka (r. ca. 269–232 BCE) of India's Mauryan empire. In the late thirteenth century, however, Ram Khamhaeng the Great (r. 1279–1298) established Theravada Buddhism as the state religion in the Sukhothai Kingdom, a forerunner of present-day Thailand. Whereas earlier Mahayana forms of Buddhism had coexisted alongside the worship of Shiva in the Khmer kingdom of what is today Cambodia, after the thirteenth century Theravada Buddhism became the state religion due to influences from Ceylon (Sri Lanka), where Theravada Buddhism has dominated down to today. What followed in Cambodia was mass conversion to this form of Buddhist search for Enlightenment. The story was much the same for all other mainland areas of Southeast Asia in the late thirteenth and fourteenth centuries except for northern Vietnam, where Mahayana Bud-

dhism prevailed because of strong influences from China.

Likewise, Ming China (1368–1644) experienced a close relationship between the state and the Mahayana Buddhist *sangha*, or community. Indeed, due to imperial patronage, Chinese Buddhism, which had strong Daoist, Confucian, and Tantric elements woven into it, experienced a renaissance in Ming China.

Tibet's form of Buddhism, which had ancient roots, was largely a multifaceted variant of Mahayana Buddhism known as Vajrayana (the Thunderbolt Vehicle) and also known as Tantric, or Esoteric, Buddhism. During the eleventh century it spread from Tibet to various peoples of eastern Central Asia, and in the late thirteenth century it took root among the Mongols of China's Yuan dynasty. From that time forward, Tantric Buddhism has dominated Mongolia's religious landscape, even as many of its Turkic neighbors turned to Islam.

While these revivals were taking place, Buddhism was largely passing from the scene in northern India, its homeland, due to Turkic Muslim destruction of most of its monastic centers, and also in many areas of Central Asia, especially its western regions, due to the rising tide of Islam.

So, although it is simplistic to call these five centuries an Age of Faith, there is no exaggeration in stating that this half millennium experienced profound religious developments.

—Alfred J. Andrea

Major Indigenous Religious Traditions of Sub-Saharan Africa

A great variety of words have been used by observers of sub-Saharan Africa to define the nature of the continent's religious traditions. They include animism, paganism, polytheism, fetish, primitive religion, superstition, and juju, to name just a few. Most of these characterizations say more about how those outside of Africa have sought to define Africa's spiritual history than the actual nature of Africans' belief systems. Indeed, most of these terms do more to denigrate African religious systems than they do to help others understand the diversity and the complexity of the spiritual and moral universe that Africans have long inhabited.

It is necessary, first, to note that a great variety of religious traditions existed in sub-Saharan Africa during the period 1000–1500. Indeed, there were probably as many distinct religious systems as there were languages, which means hundreds at least and perhaps over 1,000. These systems varied according to the lifeways and particularities of the local populations. Sedentary agriculturalists, for example, often have different concerns from those of pastoralists. However, at the same time, it is possible to address certain general themes that can be used to describe most indigenous sub-Saharan African religious systems.

In general, most indigenous African religious systems then and now were pantheistic but with a monotheistic twist in that the Entire Divine, or all that is sacred, was believed to be encompassed by a single High God. That High God, however, is so powerful and incomprehensible as to be inaccessible to all but the most extraordinary of individuals. For example, among the Nyamwezi people of Tanzania, to even speak the name of the High God is to risk spiritual disaster. In order to bridge the gap between the High God and the living, almost all African religions have a class of intermediate deities who specialize in specific spiritual tasks. Some might be elemental deities, such as of lightning, or tied to certain places, such as a forest or a river. These deities were and are perceived to be emanations of the High God but accessible to human needs. Most African religious systems also have had a deity who specializes in communication with oracles and diviners and another “trickster” god whose job it was to constantly test the morality of the living.

Human beings can interact with the divine in a number of ways. Priests, priestesses, and other religious specialists have long enjoyed special relations with the particular deities to which they are devoted. Oracles and diviners have for centuries specialized in trying to determine the will of the divine and proper human actions. Notably, a central element of many African religions was (and is) the belief that individuals could be chosen by deities and provided with special insights or powers through spirit possession. Rituals, sacrifices, and prayer, whether in the context of special holidays (such as the harvest) or day-

➤ THE YORUBA CREATION STORY

The Yoruba story of creation was passed down as an oral tradition for generations. It relates that in the beginning the world was a great marshy waste, which was visited occasionally by the gods. One day the Supreme God, Olorun, decided to create solid land, and he asked Orisa Nla, the head of the lesser deities, to spread earth upon the marsh. After Orisa Nla had created land, Olorun provided seeds for the planting of trees. Among these was the oil palm, a tree that produces oil, edible fruits, and wine and was critical to human sustenance in the heavily forested region.

Finally, Olorun instructed Orisa Nla to form humans from clay so that he could bring life to them. The first humans settled at *Ile Ife*, a city that thrives today in southwestern Nigeria and that Yoruba traditionalists still hold to be the original home of humanity.

—Jonathan T. Reynolds

to-day life, provided individuals then and now with the ability to interact with the divine. Notably, the belief that moral individuals join the divine as Ancestors following death meant that their descendants could call upon them, as well as more powerful deities, for assistance in life.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Mbiti, John S. *An Introduction to African Religion*. New York: Heinemann, 1991.

The Continued Spread of Islam in Sub-Saharan Africa

The expansion of Islam in sub-Saharan West and East Africa during the period from 1000 to about 1500 built upon contacts with the wider world that had initially been established via long-distance trade across the Sahara and via the Indian Ocean. During the early ninth century, communities of North African and Middle Eastern Muslims had established themselves in urban centers in the Niger River region of West Africa

and along the East African coast. Beginning in the eleventh century, contacts between these merchants and urban populations began to result in conversions of local populations to Islam.

The process of conversion was interesting in that it tended to take place first among elites, in the persons of rulers and merchants. For example, the ruler of the empire of Ghana reputedly converted to Islam in 1076. Indeed, particularly in West Africa, Islam during the period from 1000 to 1500 is often referred to as a religion of court and commerce. Many scholars have identified these conversions as being driven by economic considerations, suggesting that the desire to expand trade relations with North Africa motivated West African rulers and merchants. While economics are always influential, other factors should also be considered. Rulers and merchants often inhabited worlds that were cosmopolitan and multiethnic. As such, they may have found Islam's universal message appealing in the face of local religions that seemed less adapted to an expanding and increasingly socially complex world.

The conversion of rulers and merchants, however, did not necessarily demand a transformation of the region's religious mores. Most rulers practiced something called dual kingship in that they practiced Islam in the cities and traditional religions when touring rural regions. Such a move may well have been based on the ruler's pragmatic awareness that divorcing themselves from local systems of belief would substantially undermine their legitimacy. Thus, growing connections with the wider world demanded that these rulers carefully balance local and trans-regional constituencies.

The pilgrimage of Mansa Musa in 1324–1325 represents something of a turning point for West African Islam. Mansa Musa was the ruler of the empire of Mali, and by the time of his reign it was not unusual for political elites in the savannah region to be Muslims. Mansa Musa, however, took the remarkable step of setting out on a pilgrimage to Mecca, a journey of thousands of miles that took two years to complete. This trip shows a growing embrace of Islam and also highlights just how big the world of a West African ruler could be at this time. Notably, Mansa Musa's focus was not only on his own spiritual develop-

ment but also on that of his people. He returned from his pilgrimage with thousands of books (according to the sources, he had some 5,000 subjects accompany him on his journey) as well as a group of Islamic scholars and architects, whom he had hired to help foster the practice of Sunni Islam in the region. The scholars helped found the Sankore madrasa at Timbuktu, which eventually grew to be one of the greatest academies in the Islamic world. The architect Ibrahim al-Sahili, who originally hailed from Muslim Spain, also returned to Mali with Mansa Musa and helped found the Savannah Style of mosque architecture for which the region is now famous. Mansa Musa's actions set the stage for a much more formal and state-supported practice of Islam in the region. In East Africa, the ease of movement between the coast and maritime regions of the Middle East helped foster similar conversions among local rulers and merchants.

Notably, those who converted to Islam did not necessarily see themselves as converting to a foreign religion. The rulers of Mali, for example, developed a mythology that they were descended from Bilali Bunama, one of the companions of the Prophet Muhammad and the first muezzin of Medina and Mecca. Similarly, the founding myth of the Hausa city-states (in present-day Nigeria and Niger) reports that a "prince from Baghdad" traveled to the region and fell in love with a local queen, and the children from their union went on to found the region's cities. Further, through a process of syncretism, many elements of local religious belief were intertwined with Islamic elements.

A particularly powerful force in the indigenization of African Islam was the increasing influence of Sufism. Sufi saints in particular were believed to have the power to intercede with God on behalf of their followers, and after their death their tombs often became sites of pilgrimage. Thus, Sufis saw these tombs as sacred spaces that were both Islamic and local.

Together, the expansion of Islam among urban populations and the growing state investment in Islam meant that by the latter part of the fifteenth century, Islam had become an established part of life in the West African savannahs. The influence of Sufism and the growing syncretism between Islam and local religious beliefs

were also setting the stage for a second wave of Islamic expansion into rural areas, a development that would take place over the next several hundred years.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Levtzion, Nehemia, and Randall L. Pouwel. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.
- McKissack, Patricia, and Frederick McKissack. *The Royal Kingdoms of Ghana, Mali, and Songhay: Life in Medieval Africa*. New York: Henry Holt, 1995.

The Continued Advance of Islam and the Retreat of Buddhism in Central Asia and North India

The arrival of Islam in Central Asia and North India spelled the death for Buddhism there, as it not only brought a dynamic religion into both regions but also coincided with the arrival of the Turks. Islam proved to be a dynamic and expansive religion that replaced Buddhism as a competitor against Brahminical Hinduism, which emphasized caste differences. Both Buddhism and Islam served as alternatives to the caste system, as both religions viewed all people as equal in religion. But Islam had the advantage of being the religion of the conquerors, and by converting to Islam one could increase one's opportunities. In addition, various Muslim Sufi groups introduced a syncretic form of Islam to North India and Central Asia that focused on knowing and loving Allah (God) over rite, law, and ritual. This allowed many Hindu traditions, festivals, and holy sites to remain in place but cast in an Islamic light.

Muslim influence in India began when an Arab army conquered the Indus Valley region of Sind (in present-day Pakistan) in 711–713. Subsequently Abbasid armies entered Central Asia, defeating armies of the Tang empire at Talas in 751. With the implantation of Islamic forms of law and government, many of the elites converted to Islam to ensure their privileges, while others, including some Buddhists, resisted conversion but

found acceptance as *dhimmis*, or “tolerated non-believers.” For Buddhism, the Muslim victory at Talas was perhaps the more significant event. If the Tang armies had won, Central Asia might have remained a vital pilgrimage route from China to India. Under Islamic rule, however, the number of pilgrims and resident Buddhists declined, as they were not allowed to proselytize. In addition, by the tenth century Sufi missionaries found success in many areas of Central Asia.

Perhaps the most aggressive individual in expanding Islam in Central Asia and North India was Sultan Mahmud of Ghazna (998–1030). A brilliant military commander, he made 17 invasions into India from his base in Afghanistan. His armies roved across much of modern Pakistan and northern India, reaching as far as Gujarat. His primary targets were the wealthy Hindu temple complexes, such as the one he destroyed at Somnath during 1025–1026. Although he sanctioned all of his actions under the guise of jihad, the fact that he rarely occupied territory south of the Hindu Kush Mountains indicates that his primary goal was to extract wealth. Nonetheless, as his actions were primarily against non-Muslims, the Abbasid caliph and his own subjects viewed him as a defender of the faith. Furthermore, he established a tradition that lasted for centuries: using Afghanistan as a base of operations to plunder India.

In the twelfth century the Ghurid dynasty (1173–1215) replaced the Ghaznavid dominance. By 1192 the Ghurid territory stretched from the Hindu Kush Mountains to Delhi. After their empire collapsed from external pressure, a Ghurid general named Qutb al-Din Aybeg conquered Delhi and established the sultanate of Delhi (1206–1526). From Delhi the sultanate extended its rule over Gujarat and Rajasthan and into the Deccan. Despite the advance of this Islamic state, the majority of the population remained Hindu.

With the steady advance of Islam in western Central Asia, Buddhism declined, not primarily through bloody engagements but gradually over the centuries, until it essentially disappeared. To be sure, some rulers sought to convert by the sword, as happened when the formerly religiously tolerant Mongols converted to Islam in the western regions of Central Asia that were encompassed by the Chaghatayid khanate and the

➤ HOW SIGNIFICANT FOR BUDDHISM'S WANING IN INDIA WERE THE DEVASTATIONS BY TURKISH MUSLIMS?

Although the Turkic invasions were destructive, their role in Buddhism's waning in India can be overstated. The most significant challenge for Buddhism was the lack of a political patron. Since the collapse of the Mauryan empire (ca. 323 BCE–ca. 185 CE), a strong Buddhist state did not exist in India, where subsequent states tended to be almost exclusively Hindu. Although Buddhism continued to have appeal and transregional connections with East and Central Asia, the lack of state patronage hindered the growth of shrines and especially monasteries, the institutions that brought the faith and its ritual practices into the lives of laypeople.

To be sure, Buddhist temples and monasteries were plundered and often destroyed in the course of various Turkic invasions and at the command of some rulers. But more Hindu temples suffered more damage than all the Buddhist structures combined simply because most of the cities had Hindu majorities. But Hinduism in all of its many forms persisted and even flourished in northern India, while Buddhism essentially died out. Hindu temples were simply too numerous to eradicate. But beyond that, the very nature of Hindu worship insulated it from total destruction. Buddhist monasteries and temples were the focal points of Buddhist worship and learning. Without them, Buddhism largely withered away. The various varieties of Hinduism, however, suffered less falling away of devotees because the home was the traditional center of Hindu worship.

—*Timothy May*

il-khanate of Persia. There many Buddhists and others were given the choice to leave or convert. Yet by and large, the process of Islamization was evolutionary, as syncretism transformed old traditions into Islamic forms and their origins faded in memory.

As evinced by the now-destroyed Buddhas at Bamiyan (Bamiyan), Afghanistan, and the great Buddhist cave and grotto complexes farther east in the western reaches of China, Buddhism had had a vibrant presence for many centuries throughout Central Asia. There was a brief re-

surgence under the Qara Khitan empire (1126–1219) and then under Mongol rule, but with the western Mongols' aforementioned conversion to Islam in the late thirteenth and early fourteenth centuries, it ended in the regions west of the Pamirs. Temples and monasteries were converted to mosques and Islamic charitable institutions, just as Christian (and other) sites of worship had been in the early centuries of Islamic expansion. The process was slower in eastern Central Asia (largely present-day Xinjiang, China) but no less complete, thanks to the embracing of Islam by various Turkic peoples there. The exception was Mongolia, which remained firmly Buddhist. The same was true in Tibet, whose Lhamist Buddhism was adopted by the Mongols of Mongolia. Indeed, the current line between the Buddhist and Islamic worlds in Central Asia follows roughly along the same borders that separated those thirteenth- and fourteenth-century Mongol khanates that accepted Islam from those who converted to Buddhism.

In India the process was more complex. Buddhism remained steadfast, particularly in eastern Bengal and in the foothills of the Himalayas. Elsewhere in India, conversion to Islam did not completely eradicate Buddhist practices and beliefs, but they slowly dwindled among the population. The syncretic qualities of Sufism enabled many Buddhists to convert to Islam without significant changes to their cultures or daily lives. Combined with the establishment of an Islamic state and the introduction of Islamic symbols at the local levels of government, increasing numbers of the commoners in northern India, Buddhism's original homeland, and Bengal converted to Islam.

This process of Islamization was further aided by official inertia. Muslim rulers were prohibited by the dictates of their faith from promoting any other religion. No temples or monasteries received state patronage, and most Muslim rulers even prohibited the erection of new Hindu and Buddhist places of worship by local devotees. Moreover, repairs to existing physical structures were left to the local population, if they were allowed at all. In case of war or natural disaster, destruction could be so substantial as to be beyond the meager resources of the villages to repair.

—*Timothy May*

Bibliography

- Eaton, Richard M. *Rise of Islam and the Bengal Frontier*. Berkeley: University of California Press, 1993.
- Jackson, Peter. *The Delhi Sultanate: A Political and Military History*. New York: Cambridge University Press, 2003.
- Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.
- Vogelsang, Wilhelm. *The Afghans*. Malden, MA: Blackwell, 2001.

The Turkic Christians of Inner Asia

According to the Syriac writer Bardaisan, there were already Christians in Bactria (present-day northern Afghanistan and bordering areas) by the late second century. Between the fifth and seventh centuries, the Syriac (also known as Assyrian) Church of the East (mistakenly called Nestorians) appointed bishops and metropolitans (archbishops) for the cities of Merv, Herat, and Samarkand. Around 550, the Hephthalite Huns became the first of several nomadic tribes to receive a bishop after their ruler requested one from Catholicos (Patriarch) Mar Aba I.

Arabic, Byzantine, and Syriac chronicles testify to the presence of Christians among both the Central Asian Turks and their neighbors, the Iranian-speaking Sogdians (located largely in present-day Uzbekistan), from the sixth century on. An anonymous seventh-century Syriac chronicle describes how Elia, Metropolitan of Merv, converted a Turkic king and his army around 644, and Catholicos Timothy I (r. 780–823) mentions his appointment of a metropolitan for the Turks around 782, again at the request of their ruler.

Archaeological finds also provide evidence of a vibrant Christianity that preceded the seventh-century Arab invasions of Central Asia and continued to endure even after the area became largely Muslim. These include crosses inscribed on coins, ossuaries (caskets for preserving bones), pots, and rock cliffs, as well as Christian churches and monasteries unearthed in Turkmenistan, Uzbekistan, Kyrgyzstan, and Xinjiang, China.

From Central Asia, Syriac Christianity moved northward and westward. Sogdian traders along with Syriac and Persian clerics and monks carried the faith into China as early as the seventh

century. Many Christian texts—written in Syriac, Sogdian, and Old Uighur—have been discovered in Dunhuang and Turfan, sites in western China to which the Uighurs fled after their empire was overthrown by the Kirghiz in 840. These texts show how Christianity was able to thrive alongside Buddhism and Manichaeism in an atmosphere of religious plurality and tolerance that was typical of many pre-Islamic Turkic states.

With the rise of the Persian Samanid dynasty in Bukhara in 875, Christianity began to wane in Transoxiana (the land between the Oxus and Jaxartes rivers, today known as the Amu Darya and the Syr Darya). The Persian historian Nārshakhi records the conversion of churches in Bukhara and Taraz (Talas) into mosques, and Sufi legends describe military expeditions against Christian rulers of various towns and cities. However, although Transoxiana was largely Muslim by the turn of the millennium, Christians could still be found in Khwarezm (located south of the Aral Sea) as well as in major cities such as Samarkand. Moreover, so-called Nestorian missionaries and merchants continued to carry the faith north into the steppes.

Syriac and Christian Arabic chronicles describe a large-scale conversion of Central Asian Turks, probably the Keraites, in 1007–1008. Two centuries later, after Chinggis Khan conquered them, intermarriage between Mongol rulers and Kerait princesses became common practice. The most famous example is Sorqaqtani, a Christian Kerait princess who became the mother of three Mongol rulers: Mongke, Khubilai, and Hulegu. At some point, the rulers of another Turkic group, the Onguts, also adopted Christianity. As loyal allies of the Mongols, they too intermarried with the family of Chinggis Khan.

Although the Keraites and Onguts were the only Turkic groups with Christian rulers, archaeological finds, Muslim historians, and later European travelers show that Christianity was also present during this period among a number of other Turkic groups dwelling across the northern steppe and into northwest China, including the Oghuz, Qipchaqs, Kirghiz, Qarlucs, Uighurs, Naimans, and Merkits. Of particular interest are the Qipchaqs, called the Cumans in Western sources. One of their constituent tribes, the Qun,

➤ YAHBALLAHA III AND RABBAN SAUMA

The fourteenth-century Syriac *History of Mar Yahballaha* tells the story of two Turkic Christian monks, Rabban (Master) Bar Sauma (1230?–1294) and his disciple Marcos (1245–1317), who traveled the Silk Road from east to west in the late thirteenth century. Both went on to play important roles in the Mongol il-khanate of Persia. Although the Syriac writer Barhebraeus called them Uighurs, they were probably Ongut Turks.

The *History* describes how they decided to leave China around 1275 on pilgrimage to Jerusalem. Upon their arrival in 1279 in present-day Azerbaijan, they learned that the road to Jerusalem was not safe, so they stayed in Mongol territory where the catholicos (patriarch) of the Syriac Church of the East, Denha I, made Marcos metropolitan (archbishop) of China and Sauma visitor general.

When Denha died in 1281, Marcos was elected catholicos in his place, adopting the title Yahballaha III (r. 1281–1317), the first and only catholicos who was not Syriac or Persian. His election was largely due to his knowledge of the language and customs of the Mongol rulers. During his time in office, he served a total of eight Mongol il-khans, eventually seeing Christianity fall from favor after the conversion to Islam of Ghazan Khan in 1295. However, prior to that when the Mongols were actively seeking an alliance with Europe against the Mamluk rulers of Egypt, Marcos played an important role in promoting the status of Christianity under the Il-khanids.

In 1287 Yahballaha and Il-khan Arghun jointly dispatched Rabban Sauma to the pope and the rulers of the Christian West in an effort to seek

support for the Mongol campaign to capture Syria and Palestine from the Muslims. Rabban Sauma visited Constantinople, Naples, Rome, Tuscany, Genoa, Paris, and Bordeaux speaking with European rulers and church leaders and viewing churches, shrines, and relics. He was questioned by the cardinals in Rome about whether his patriarch recognized the authority of the pope, and he discussed the possibility of a Mongol-Western alliance with Philip IV of France, served communion to Edward I of England, and celebrated mass with Pope Nicholas IV in Rome.

Arghun was so pleased with the mission that he had his son baptized and promised to be baptized himself when the Mongols captured Jerusalem. Subsequent Mongol embassies were dispatched in 1289 and 1290, but apart from short missionary visits by a few Dominicans and Franciscans in the period 1288–1291, the papacy did little in the way of follow-up, and the kings of France and England did nothing due to their preoccupation with European affairs.

After Arghun's death in 1291, most il-khans were either weak and ineffectual rulers or devout Muslims who persecuted Christians. Rabban Sauma died in 1294, but Yahballaha continued to lead the Church for another quarter century, during which time churches were destroyed and Christians were massacred in Maragha and Arbela. After years of service, including a time of imprisonment and torture under Ghazan Khan, Yahballaha said, "I am weary of serving the Mongols" and retired to the monastery he had built in Maragha, where he died in November 1317.

—Mark Dickens

are described as "Nestorian Christians" by the Muslim historian Marvazi (ca. 1120). Although we do not know when they converted to Christianity, later writers (including Michael the Syrian and Ibn Battuta) refer to the Qipchaq-Cumans as Christians, and the *Codex Cumanicus* documents the efforts of Franciscan missionaries among the Cumans in the fourteenth century. Records of the Church of the East further indicate several additional metropolitans (archbishops) during Mongol times, including Turkestan, Kashgar, and

probably Almaliq (the latter two in present-day Xinjiang, China).

Mongol rulers were well known for their tolerance of many religions among their subjects. Perhaps due to the dynastic links with the Keraits and Onguts, Christianity was especially favored by the grand khans in Mongolia and the Yuan dynasty founded by Khubilai Khan in China. Their general presence and their influence as advisers, generals, and even governors were recorded by both European travelers to the East

(especially John of Plano Carpini, William of Rubruck, Marco Polo, and John of Montecorvino) and Muslim historians (notably Juvayni and Rashiddudin).

Christians could also be found in the other Mongol khanates: the Chaghatayid khanate, the Golden Horde, and the il-khanate of Persia. They were initially favored above Muslims in the il-khanate, and there was even a Turkic patriarch, Yahballaha III, of the Church of the East in the late thirteenth century. However, life for Christians in these khanates grew more difficult after the ruling classes converted to Islam in the late thirteenth and early fourteenth centuries. Evidence of the initial flourishing and then gradual decline of Christianity at this time can be seen in the hundreds of Christian gravestones, engraved in the Syriac script, found near Lake Issuk-Kol, Kyrgyzstan. As a result of plague and persecution after the Mongol ruling elite outside of Mongolia and China became Muslims, Christian communities in Central Asia gradually died out.

Largely in response to the Mongol invasion of eastern Europe, the Church of Rome organized missions to Mongol territory in the mid-thirteenth century. Their purpose was twofold: to gather information that would be useful to the pope and other European rulers and to convert the Mongols and their subjects to Latin Christianity. For a short time, Franciscan and Dominican missionaries experienced limited success in Central Asia and China, and in the fourteenth century Catholic bishoprics were established in Samarqand, Khwarezm, and Almaliq. In 1339 several Latin missionaries in Almaliq were martyred, including the bishop, Richard of Burgundy. The changing political situation that accompanied the spread of Islam in Mongol territory outside China and Mongolia proper and the fall of the Mongol Yuan dynasty in China in 1368 subsequently resulted in the persecution and eventual disappearance of the remaining Turkic Christians, whether Syriac or Latin. Although there were still some Christians left in Samarqand during the time of Amir Temur (also known as Timur-i Leng, or Tamerlane, r. 1370–1405), references to them cease soon after, ending a presence of nearly 1,000 years in Inner Asia.

—Mark Dickens

Bibliography

- Baumer, Christoph. *The Church of the East: An Illustrated History of Assyrian Christianity*. London: I. B. Tauris, 2008.
- Budge, E. A. Wallis. *The Monks of Kublai Khan, Emperor of China*. London: Religious Tract Society, 1928.
- Gillman, Ian, and Hans-Joachim Klimkeit. *Christians in Asia before 1500*. Ann Arbor: University of Michigan Press, 1999.
- Hunter, Erica C. D. "The Church of the East in Central Asia." *Bulletin of the John Rylands University Library of Manchester* 78(3) (1996): 129–142.
- Mingana, Alphonse. "The Early Spread of Christianity in Central Asia and the Far East: A New Document." *Bulletin of the John Rylands Library* 9 (1925): 297–371.
- Moffett, Samuel Hugh. *A History of Christianity in Asia*, Vol. 1, *Beginnings to 1500*. Maryknoll, NY: Orbis Books, 1998.
- Montgomery, James. *The History of Yaballaha III*. New York: Columbia University Press, 1927.
- Moule, A. C. *Christians in China before the Year 1550*. London: SPCK, 1930.
- Rossabi, Morris. *Voyager from Xanadu: Rabban Sauma and the First Journey from China to the West*. New York: Kodansha International, 1992.

Fatimid Shia and the Origin of the Druze

The Druze religion and Shia Islam share many links and attributes. In fact, the links between these two faiths were so strong that many (even into the latter part of the twentieth century) often identified the adherents of the Druze faith as Shia Muslims or less egregiously as some hyphenated hybrid. We may assign much of this confusion to a simple lack of knowledge, but much of it may also be deliberate dissimulation practiced by the Druze themselves. Within this veil of secrecy, the Druze have thrived amid the hills of Lebanon, Israel, and Syria, yet little is known of their religion and its origins. As a result, many myths and legends have attached themselves to this faith over time, obscuring this movement's true history and aims.

The Druze (as an independent group) enter history during the reign of the Fatimid caliph al-Hakim (r. 985–1021), who seems to have been a caliph of great extremes: capable of great

► THE CALIPH AL-HAKIM

The Shia Fatimid Caliph Abu Ali al-Mansur, known by his regnal title al-Hakim bi-Amr Allah, remains a figure shrouded in mystery. He appears in the historical records as an arbitrary ruler with fits of extreme cruelty toward almost all religious groups, including the Sunni Muslims of his lands. It has been argued that he presented no systematic approach to his administration of Egypt, imposing sumptuary (dress) laws and then relaxing them and fixing commodities' prices as if on a whim. Indeed, he is rather indelicately referred to as the "Mad Caliph" in some sources.

Of all the features of al-Hakim's reign, his pro-Shia measures are arguably the most important. The caliph was universal in the application of his edicts against Sunni Muslims, Christians, and Jews. For instance, it became law for all Christians and Jews to wear black turbans, and it was illegal for them to ride on horseback. In 1009 al-Hakim ordered the demolition of the Church of the Holy Sepulcher in Jerusalem, the site believed by Christians to be where Jesus was crucified, interred, and resurrected, and this would help spur Pope Urban II (r. 1088–1099) to call for a crusade at the Council of Clermont in 1095. However, the caliph was unusually tolerant of apostasy, allowing people who converted to Islam to return to their former religions. This uneven historical policy and his tolerance for a cult of personality have led many to question the historical record on al-Hakim bi-Amr Allah.

—*Rasheed Hosein*

patience and forbearance and at other times of wanton cruelty and intolerance. He was the perceived heir to the temporal and spiritual authority of Ali according to a particular branch of the Shia sect known as the Ismailis and ruled Egypt as the Fatimid caliph from the age of 12. During his lengthy reign this caliph did many noteworthy things, such as stopping East Roman (Byzantine) expansion under Basil II (r. 976–1025) and bringing Syria fully under Fatimid control. However, his reign was also the scene of brutal persecutions directed at minority religious groups within his realm.

His legacy presents posterity with a confusing and contradictory image. Indeed, even his

final day as caliph was problematic. On the evening of February 27, 1021, the caliph rode out into the desert, ostensibly to meditate, and never returned. This would allow some people within Fatimid Egypt to hold the heretical belief (according to basic Islamic principles) that the caliph was in fact divine and would return as part of a modified Islamic eschatology surrounding the last days. These believers in the divinity of al-Hakim would refer to themselves as the *al-muwahhidun* (the people of unity) and survive today principally amid the hills of Lebanon and Syria under the title of the Druze.

The notion of *taqiyyah* (dissimulation before unbelievers), derived from Shia Islam as a defense against Sunni persecution, colors everything we know or think we know about the Druze. Perhaps we may ascribe the *taqiyyah* of the Druze as a form of self-defense as a result of going to the public with a radical new take on religion and then being forced to silence. However, this practice rapidly began to define the Druze as stories gave way to legends, and myths began to surround the faith, forming an almost impenetrable barrier. Only recently, with a more liberal policy of toleration shown in the Druze homelands and a diaspora of sorts taking Druze adherents to the liberal democracies of Europe and North America, have the Druze begun to emerge from isolation and reveal aspects of their faith to the world.

Generally, there are three major theories on the nature of the Druze religion. The first claims that the Druze faith is a Zoroastrian-Islamic hybrid. Persianized Arabs moved into the region in waves beginning around the time of the Prophet Muhammad through the reign of the first Umayyad caliph Muawiyah (r. 661–680). The dualism of Zoroastrianism explains the contradictory actions of al-Hakim, as both the embodiment of good and evil were housed in one man. The second theory is that the Druze faith marks a return to a more unitary concept of the deity. While we have no record of al-Hakim sanctioning his veneration, it is clear that he did not discourage it. Thus al-Hakim was worshipped not as a religiously inspired imam but as the living God of the people who would become the Druze. The third is the theory of existent pairs as embodied by the roles of the first major figures of the faith,

Darazi and Hamza. Darazi embodied inner truth (*tawili*), and it is from Darazi that the Druze would derive the name of their movement. Hamza was the patient helper (*wali*). Hamza claimed to be the imam, elevating al-Hakim to the role of deity (*al-Bar*). This notion of pairs was an established element in Islam's notion of prophethood, as each Messenger, or major prophet, had a helper. Together, both would help to define the religion of the Druze, and within a century of Hamza's death, the faith would close ranks and allow neither conversion into nor adherents leaving the faith.

—*Rasheed Hosein*

Bibliography

- Abu-Izzeddin, Nejla M. *The Druzes: A New Study of Their History, Faith, and Society*. Leiden: Brill, 1984.
- Bryer, David. "The Origins of the Druze Religion." *Der Islam* 52 (1975): 47–83, 239–262.
- Hitti, Phillip K. *The Origin of the Druze People and Religion*. New York: Columbia University Press, 1928.
- Hodgson, Marshall G. S. "Al-Darazi and Hamza in the Origin of the Druze Religion." *Journal of the American Oriental Society* 82 (1962): 5–20.

Saivism in Tamil India

The worship of Sri (Lord) Shiva is of great importance in India. This is especially true in the case of southern India and particularly Tamil Nadu in India's extreme southeast, where for centuries Saivite saints, who came from every social level, caste, and *jati* (occupational sub-caste), were among the region's most creative elements, especially in their contributions to hymnology and worship ritual.

Known as *nayanmars*, these Saivite saints were great poets, composers, and devotees of Shiva, and it is generally accepted that they did not use devotion for commercial gain. Among those who stand out in their contribution toward the revival of Saivism and the development of hymns of devotion to Sri Shiva are four early saints: Appar (Father), who lived during the seventh century CE; Sundarar, who probably lived in the eighth century; and the two great hyperlexics (precocious children), Thirugnanasambandar (or Sambandar) and Adi Sankara. According



Chidambaram Temple in present-day Tamil Nadu, dedicated to the god Shiva. (iStockPhoto)

to tradition, Appar converted the great Pallava emperor Mahendravarman I (r. ca. 600–630) from Jainism back to devotion to Shiva after curing him of an illness. Sundarar, who according to tradition was transported to Heaven on an elephant dispatched by Shiva, referred to himself as “the servant of the Lord’s servants,” a title that coincidentally echoed the title “servant of the servants of God” that was adopted by the popes in faraway Rome around the year 600 (but we can only speculate about possible connections).

It is interesting to note that all of Adi Sankara’s works are in Sanskrit, not Tamil, and that his birthplace was Kalady in Kerala on the Malabar, or southwestern, coast, far from Tamil Nadu. His teachings had a more philosophical content than the highly emotional, or affective, hymns of nayanmars such as Sambandar. It is true, however, that the prodigious and precocious Sambandar was as much a scholar in Sanskrit as he was in Tamil, in which we are told that he left an estimated 10,000 hymns of which 4,232 have survived, even though he died, probably in the seventh century, while still in his teen years. Adi Sankara, who probably flourished in the eighth century, acknowledged Sambandar’s contribution to Saivism by referring to him as *Dravida Sisu* (Tamil Child) in his *Soundaryalahari* (*Succulence of Beauty*).

By the time of the Imperial Cholas (ca. 848–1279), the Saivite sect was vibrant and highly productive. Many kings and princes of the Chola

► THE POETRY OF NAMBI ANDAR NAMBI

Here Nambi Andar Nambi sings of a mystic experience of Sundarar.

“Servitor to the servitors of our Lord Thirumoolan (Shiva) am I’

Sang Sundarar.

The Lord who entered the body of the tender Of the herd of cows of Sathanoor of long established families;

He who praised in perfect Tamil, the Lord with a sickle moon on his head (Lord Shiva),

Exactly as in the words of the Vedas eternally prevailing on earth;

He who made his feet rest on my head.

He is the compassionate one called Moolan.”

—K. Sethumadhavan

Source

Periyapuranam, by Sekkizharr (Saint, twelfth century CE), Abridged translation by Ramakrishna Math, 1984. First published translation into English, 1750.

clan, themselves leading devotees of Shiva, were mentored by Saivite teachers. King Raja Raja I (r. 985–1014) had as his mentor the great saint Karuvurar Devar, and Raja Raja’s son Rajendra I received his *deeksha* (spiritual initiation) from a certain Sarva Siva Pandita.

Among the greatest of Saivites who lived during the Chola imperial period was Nambi Andar Nambi, who revised and expanded upon the work of Sundarar. A contemporary of Raja Raja I, Nambi Andar Nambi was born to affluent parents in Chidambaram. The story has it that as Raja Raja set upon himself the task of discovering the hymns called *tevarams* that were composed by nayanmars, he came to know about the devotion of the young Nambi Andar Nambi and with the child’s help was able to trace the hymns to the cupboards at Chidambaram temple. Nambi Andar Nambi was an erudite scholar who could sing the praises of various devotees hailing from different sections of society and those who lived in different centuries under the patronage of different kings. Nambi Andar Nambi’s works are known also for their riveting details. Thus, he is

as much known for his poetic skills as for his unflinching devotion to Shiva.

The rule of the Imperial Cholas was a golden period for Saivism. As a significant development, the newly discovered *tevaram* hymns were reinstated for worship at Chidambaram Temple during the reign of Raja Raja I. A group of 48 singers would chant the hymns daily and received a small gift of rice weekly for their work. The construction of the temple known as Raja Rajeswaram (Shiva worshipped by Raja Raja) was another great achievement. Among the other noted works on Saivism during the period were *Siddhanta Saravali* (*Stream of Expositions*) by Trilochana Sivacharya in Sanskrit and the *Periya Puranam* (*Detailed Legend*) comprising lives and works of 63 canonical nayanmars by the scholar Sekkizhaar.

—K. Sethumadhavan

Bibliography

Nilakanta Sastri, K. A. *The Development of Religion in South India*. Bombay: Orient Longmans, 1963.
Orr, Leslie. *Hindu Temple Women of the Chola Period in South India*. Montreal: University of Victoria, 1993.

Diaspora Jewish Theologians and Philosophers

Some of the most influential figures in Jewish religious thought, such as Maimonides, Rashi, and Judah ha-Levi, flourished in the so-called High Middle Ages. Major works written in this time include classic commentaries on the Hebrew Bible, philosophical works, Halakhic (Jewish law) compilations, and poetry.

Commentary on biblical texts is almost as old as the Hebrew Bible itself and can be found in the Dead Sea Scrolls, in rabbinical homilies (midrash), and elsewhere. However, systematic commentaries that follow the order of the verses and attempt to explain problems in each and every verse began only in the Middle Ages. The earliest commentaries were written in Arabic or Judeo-Arabic (Arabic text written in Hebrew letters) by Saadia Gaon (882–942) in Abbasid Iraq and tenth-century Karaite (Followers of Scripture) exegetes, who were also located within the Abbasid caliphate.

The most prominent exegete, whose commentary is considered authoritative to this day, is Rashi (1040–1105), a Hebrew acronym for Rabbi Shlomo Yitzhaqi. Rashi, who lived in Langedoc (today southern France), wrote a commentary on all the books of the Hebrew Bible and also on the Talmud. His commentary is characterized by its brief nonallegorical notes on biblical verses in which he explained in a straightforward manner difficult words or discrepancies in the text. Like other traditional commentators, he tended to rely on rabbinical midrash as a source for solving textual problems. In some cases he explained difficult words by providing their equivalent in his contemporary French, thus making his commentary a source for scholars of Old French.

Many other commentators wrote systematic glosses on the Bible during this period, some on all the books of the Bible and some only on the books of the Pentateuch (the first five books of the Bible, also known as the Torah, or Law) or books selected for their interest. Abraham Ibn Ezra (1089–1164) of Spain was a mathematician and philologist whose commentary is characterized by philological discussions on the meanings and origins of words. Another great philological exegesis was that of David Kimhi (Radak, 1160–1235) of France, the most prolific commentator of a family of exegetes. (We also have commentaries of his father and brother.) This family tradition was not uncommon. Rashi's grandson, Shmuel son of Meir (Rashbam, 1080–1160), like his grandfather, offered brief straightforward commentaries, which are known in Hebrew as Peshat. A different kind of exegesis can be found in the works of Moshe ben Nachman (Nahmanides, 1194–1274) of Spain, a mystic who believed that Scripture has hidden meanings and should not be read only at a literal level. But he generally did not provide the presumed hidden meanings, only hints.

Jewish philosophy in this period should be viewed against a political and religious background. At the height of the crusades and the struggles between Christian and Muslim powers, Jews were forced to defend themselves theologically. Indeed, they were compelled to explain, to themselves and others, why they did not convert to the religion of the majority, either Christianity or Islam. Consequently, the body of Jewish

apologetical and polemical literature from this period is rich.

Two major works, both influential in Jewish thought to this day, are characteristic of the times. *The Kuzari* by Judah ha-Levi (1075–1140) is an imaginary dialogue on religion between a Jew (named “The Friend”) and the king of the Khazars. The king eventually acknowledges the superiority of the Friend's arguments and converts, together with his kingdom, to Judaism. The subtitle of the book, “In Defense of the Shamed and Despised Religion,” reflects the polemical

and defensive mind-set of Jews at that time who felt and often were oppressed. The book's main arguments are that God's commandments are designed to elevate humanity to a higher moral level. Since the Jews have preserved a record of sacred history that is accepted by both Christians and Muslims, their teachings and practices have a longer tradition and are more authentic.

The other major philosophical work of the time is *The Guide for the Perplexed* by Moses ben Maimon (Maimonides, 1135–1204). Maimonides, a physician who lived in Islamic Spain and later in Egypt, was a great legal and religious authority, which is reflected in his traditional sobriquet “The Great Eagle.” His philosophy was deeply influenced by Aristotle, mainly through neo-Aristotelian ideas mediated through Muslim philosophers such as Ibn-Sina, Al-Farabi, and Ibn Rushd.

In the book, Maimonides emphasizes God's transcendence by denying him any attributes. That is to say, any characteristic attributed to God will belittle him, since God is beyond any human understanding. Hence, one cannot describe God as “wise” or “strong” because these are human qualities. In order to explain biblical anthropomorphisms regarding God, Maimonides stresses that the Bible should be read allegorically. He maintained that the Bible was written in a way that could be understood by the people of its time and that its literal meaning does not



Maimonides was a leading Jewish philosopher and intellectual of the Middle Ages, and one of the outstanding physicians of the time. (National Library of Medicine)

➤ EPISTLE TO YEMEN

The *Epistle to Yemen* was composed by Maimonides to the Jewish community in Yemen in 1172 in response to questions presented to him by Jacob, son of Nethanel al-Fayyumi, in the name of the Jews of Yemen. This community was suffering great pressure and persecution by their Muslim neighbors. These persecutions led some Jews to convert to Islam and also led to high messianic expectations. Al-Fayyumi sought guidance from Maimonides on these issues, both on theological and practical levels. Maimonides' response indicates that Jacob's questions centered on maintaining faith in an age of hardships and included such queries as how one recognizes the Messiah and whether the Jewish community should accept back someone who converted to Islam out of fear but wishes to return to Judaism once the danger has passed.

Maimonides' response was a long treatise with implications for Jewish theology in general, not just the Jews of Yemen. Mindful of its greater application, Maimonides concluded the Epistle by writing: "I beg you to send a copy of this missive to every community in the cities and hamlets, in order to strengthen the people in their faith and put them on their feet. Read it at public gatherings and in private."

Throughout the Epistle, Maimonides stressed the importance of faith and the validity of the revelation at Sinai, arguing that the truth of God's word cannot be confirmed or refuted by miracles. Maimonides considered the truth of the Books of Moses to be evident and the divine revelation at Sinai to be historical due to the fact that the whole community participated in it. He also warned against calculating the time of the Messiah according to astrology but encouraged the people to continue hoping for the Messiah in their suffering.

Maimonides did not consider Jews who converted to Islam out of fear to be true apostates. He argued that Islam is closer to Judaism than Christianity by virtue of its uncompromising monotheism, whereas Christianity is not strictly monotheistic due to the doctrine of the Trinity. Scholars today believe that this is a stance construed from the fact that he was then living in a Muslim society—Ayyubid Egypt—and that under different circumstances he might have pointed to shared elements between Judaism and Christianity.

—Aryeh Amihay

Source

Isadore Twersky, *A Maimonides Reader* (New York: Behrman House, 1972), 461.

reflect its true ideas. He also did not accept prophecy, understood literally as a genuine manifestation of revelation. Instead, he considered the philosopher the model of the true prophet of God. *The Guide for the Perplexed* is considered in Jewish orthodoxy to be an ambiguous book, on the borderline of heresy. Some have contended that if it were not for the authority of Maimonides in Jewish law, the book would not have survived.

His other major work, *Mishne Torah* (*The Further Law*), is a code of law in which he ventured to collect all the law embedded in the Talmud and to determine the law in all cases left ambiguous in the Talmud. His stated aim was to close any disputes over legal issues in order to crystallize Jewish law. Though disputes did not end with this book, it became a major source of reference and citation for rabbis through the ages. One final contribution of Maimonides to Jewish

philosophy was his formulation of the 13 principles of the Jewish faith, including monotheism, prayer, the authority of scripture, and the coming of the Messiah. This formulation, which also reflects a response to interreligious polemics, has become part of the Jewish liturgy.

In stark contrast to Judah ha-Levi's and Maimonides' attempts to conceptualize the Jewish faith in the context of contemporary philosophical trends, there was also a rising interest in mysticism. One of the major works of Jewish mysticism, the *Zohar*, was compiled in thirteenth-century Spain. *Sefer Chassidim* (*Book of the Pious Sect*), a composition of the twelfth century that reflects the customs of a Jewish group in Germany (called Chassidei Ashkenaz, or the "Pious of Germany"), also includes various mystical references.

The literary production of Jewish philosophers and theologians of the period was vast

and diverse. It encompassed a wide geographic range (and several languages, including Hebrew, Arabic, and Middle High German) and a wide range of ideas expressed in various genres: biblical commentaries, philosophical treatises, and legal codes. It was not uncommon at the time to be skilled in more than one discipline. The philosopher Judah ha-Levi was also a poet and wrote both liturgical and religious poetry as well as secular love songs. Ibn-Ezra, known for his exegesis of the Bible, also wrote poetry in addition to his interest in philology and mathematics. Maimonides, trained as a physician, included health advice in his legal writings.

—Aryeh Amihay

Bibliography

- Banitt, Menahem. *Rashi, Interpreter of the Biblical Letter*. Tel Aviv: Chaim Rosenberg School of Jewish Studies, Tel Aviv University, 1985.
- Maimonides. *Epistles of Maimonides: Crisis and Leadership*. Translated by Abraham Halkin with discussions by David Hartman. Philadelphia: Jewish Publication Society, 1993.
- Schwartz, Dov. *Central Problems of Medieval Jewish Philosophy*. Leiden: Brill, 2005.
- Silman, Yochanan. *Philosopher and Prophet: Judah Halevi, the Kuzari, and the Evolution of His Thought*. Albany: State University of New York Press, 1995.

Buddhism—From Court to Commoner

The Kamakura period (1185–1332) was a turning point in Japanese Buddhism, highlighted by the spread of Buddhism among the illiterate commoners and by a new spirit of realism in religious imagery. The period gave birth to new and reformed Buddhist movements—Pure Land, Zen, and Nichiren—each devoted to the salvation of common people and stressing pure and simple faith over complicated rites and doctrines. Prior to this Buddhism was largely the faith of the imperial court, upper classes, and monastic orders.

Why the Kamakura era? First, decades of social unrest had culminated in the victory of Minamoto Yoritomo (1147–1199) and his establishment of the Kamakura shogunate in 1185. The emperor's authority was thereafter overshadowed for nearly seven centuries. Second,

simplicity and frugality became the watchwords of the new military class, replacing the perfumed embroidery of the court and the intellectual elitism of the entrenched monasteries. Third, manliness was prized over scholarship, and the physical and mental vigor of the individual became the keynote of Japanese feudal life. Thus arose the idea that any man, from any class, might climb to power by employing his mind and energies.

Religion fell naturally under the same leveling impulse, as did secular art. Monks appeared who walked among the common folk preaching simple faith, in particular Saigyō (d. 1190), Shinran (d. 1262), Nichiren (d. 1282), and Ippen (d. 1289). There were antecedents to be sure, notably the popular monk Kuya (903–972). The Saint of the Common Folk, Kuya had also walked among the masses, praying constantly to Amida Buddha for their salvation and their rebirth in Amida's Western Pure Land, a spiritual paradise where the souls of departed devotees were reborn to pursue the path to eventual enlightenment.

These missionary monks did not appeal to the court, established Buddhist powers, or nobility to help spread their teachings, and this attracted both dissatisfied clergy and the lower classes. Another factor underpinning Buddhism's popularization was a widespread belief in the "Three Periods of the Law," a concept of society's rise and fall that originated much earlier in Indian Buddhism but came to prominence later in China and then Japan. It foretold of the world's ultimate decay and the complete disappearance of Buddhist practice. The Japanese believed that the third and final period, the Age of Mappō (Decline of the Law), had begun in 1052. The ensuing decades, moreover, were marked by civil wars, famine, and pestilence. A sense of foreboding thus filled the land, and people from all classes yearned for a gospel of salvation.

The Jōdo (Pure Land) sects came to prominence in this era, although Jōdo faith was practiced in Heian times by Japan's court and monasteries. Japan's popularized Jōdo sects were founded by Hōnen (Hōnen) Shōnin (1133–1212) and his disciple Shinran (1173–1262). Both taught that anyone, whether noble or peasant, could gain rebirth in the Pure Land by faithfully reciting the name of Amida Buddha. The

► THE BUDDHIST IMPACT ON THE ARTS IN THE KAMAKURA ERA

The popularization of Buddhism had a profound impact on religious art and architecture. It sparked a new spirit of realism in sculpture. Unkei (d. 1223), the most brilliant Japanese sculptor of the early thirteenth century, infused temple statuary with humanistic vitality, and his school is credited with such innovations as using crystal eyes in Buddhist statues. Unkei's surviving sculptures are still prized today as the peak of greatness in Japanese Buddhist statuary. Portrait sculpture and portrait paintings of prominent monks and people were also innovations of the Kamakura period, with the Zen sect in particular pursuing this form of expression.

The great popularity of Jodo faith transformed temple architecture, as the small ornamented sanctuaries of earlier times had to be vastly enlarged in size and simplified in furnishing to accommodate much larger congregations. The Jodo faith also led to the predominance in religious art of three deities: Amida for the coming life in paradise, Kannon for assistance in earthly life, and Jizo for release from the torments of hell. These three remain the bedrock of Buddhism for the commoner to this day. Their effigies are found throughout Japan, and hundreds of pilgrimage routes have been developed. The most widely known Kannon pilgrimage covers 100 sites. Making the circuit is said to save believers from hell and to open the gates to everlasting life.



Giant metal statue of Amida Buddha at Kōtoku-in Temple in Kamakura, Japan, thirteenth century. Measuring over 37 feet in height, the statue is known as the Kamakura Daibutsu (Big Buddha of Kamakura). (Mark Schumacher)

Kannon legends are particularly widespread in Japan. One states that Minamoto Yoritomo, the founder of the Kamakura shogunate, always carried a small statue of Kannon under his helmet (inserted in his hair topknot) during battle. Another says that an amulet containing the *Lotus Sutra* (the key scripture in Japan underpinning Kannon belief) deflected an arrow and thus saved the life of Kusunoki Masahige, the most celebrated samurai of the early fourteenth century.

—Mark Schumacher

popularity of Jodo faith among commoners was a serious challenge to the institutionalized Buddhist monasteries in Kyoto and Nara, which attempted to block this popularization by proclaiming it subversive to public order. They prevailed upon the government to have Hōnen exiled to Shikoku Island. In 1211 he was pardoned and returned to the capital, only to die two months later.

Shinran, in particular, provoked Buddhist authorities by declaring that meat eating and matrimony were not contrary to the Buddha's teachings, even though the reigning Buddhist sects forbade both practices among clergy. Shinran was expelled from the monastic community for taking a wife. He further angered the establishment by declaring the Amida faith alone as

sufficient for salvation, other Buddhist deities and practices being unnecessary. In later years his followers extolled the virtues of religious practice among the laity and argued that a spiritual secular life was just as valid as a monastic life. Indeed, the monastic ideal was discarded. The sect's priests stopped shaving their heads and started dressing in ordinary clothes. They did not consider themselves enlightened but instead considered themselves to be part of a community of seekers. Today, Hōnen's school (Jodo) remains monastic, while Shinran's sect (Jodo Shin) is purely a lay Buddhist group, one of the largest in Japan.

Zen Buddhism also gained tremendous favor during the Kamakura era, although it too, like Jodo faith, entered Japan via China in earlier

centuries. The monk Eisai (1141–1215) sparked a great flowering in Zen's popularity from his base in Kamakura. He taught that personal enlightenment was not found in sutras or rituals. Rather, it was found within the self through meditation, restraint, and self-reliance. Zen attracted the samurai in particular and infused the arts with new life.

Nichiren (1222–1282) was the last of the great Kamakura-era teachers. He was a radical reformer who once studied at the powerful Tendai monastery on Mt. Hiei, as did Hounen, Shinran, Eisai, and other noted monks. Nichiren vehemently disagreed with the new Jodo sects and proclaimed both the old and new Buddhist movements to be false religions. He preached in the streets, hoping to revive the purity of the Tendai faith in the *Lotus Sutra*. He believed that faith in the *Lotus Sutra* alone would bring liberation and that recitation of the phrase “Hail to the *Lotus Sutra*” was the sole path to salvation.

He was exiled to remote locations twice but after a few years was released on both occasions. According to his own account, he was to be executed in 1271 while on the way to his second exile but was miraculously saved by the *Lotus Sutra*.

The new schools of the Kamakura era broke through the eclecticism and elitism of Japan's earlier Buddhist orders. By allowing the common people to enjoy worldly benefits with the promise of salvation in the afterlife (or enlightenment in this life), the new Kamakura sects gained widespread popularity. These movements, however, did not consolidate their gains until the Muromachi era (1392–1568). Today, the Jodo Shin, Zen, and Nichiren movements remain the most popular schools of modern Japanese Buddhism.

—Mark Schumacher

Bibliography

- Brinker, Helmut. *Zen: Masters of Meditation in Images and Writings*. Zurich: Artibus Asiae, 1996.
- Fenollosa, Ernest F. *Epochs of Chinese and Japanese Art*. 2 vols. New York: Dover, 1963.
- Iso, Mutsu. *Kamakura: Fact and Legend*. 1918; reprint, North Clarendon, VT: Tuttle Publishing, 1995.
- Kashara, Kazuo, and Paul McCarthy. *A History of Japanese Religion*. Tokyo: Kosei, 2001.

Machida, Soho. *Renegade Monk: Honen and Japanese Pure Land Buddhism*. Berkeley: University of California Press, 1999.

Mori, Hisashi. *Sculpture of the Kamakura Period*. New York: John Weatherhill, 1974.

Morrell, Robert E. *Kamakura Buddhism: A Minority Report*. Berkeley, CA: Asian Humanities Press, 1987.

Okazaki, J. *Pure Land Buddhist Painting*. Tokyo: Kodansha International, 1977.

Payne, Richard K. *Re-visioning “Kamakura” Buddhism*. Honolulu: University of Hawaii Press, 1998.

Eisai and the Triumph of Zen Buddhism in Japan

The Buddhist monk Eisai, or Yosai (1141–1215), has been credited with establishing Chinese Chan Buddhism in Japan, where it became known as Zen Buddhism (Zen is derived from Chan, meaning meditation). In fact, Zen was likely present in Japan as early as the late seventh century, but Eisai was instrumental in laying the foundation for Zen's becoming Japan's preeminent form of Buddhism with his establishment of the Rinzai school, one of Japan's two major sects of Zen Buddhism (the other being Dogen's Soto school). Rinzai took hold among Japan's Samurai, or warrior, elite during the fourteenth and fifteenth centuries when it enjoyed the patronage of the Ashikaga shoguns and was supported by the government, because its austere forms of mental and physical discipline fit so well the social and political agendas of the shogunate. The triumph of Zen also had a profound impact on Japanese culture, especially the arts, including architecture, poetry, ceramics, painting, calligraphy, gardening, the tea ceremony, and flower arrangement, and numerous crafts, such as sword-making.

Born in 1141 into a family that practiced traditional Shinto forms of worship, Eisai was sent off to study with a Buddhist priest. At age fourteen, he began his career as a monk of the Tendai sect, a school of Buddhism imported from China during the late eighth century. Tendai, a branch of Mahayana Buddhism, teaches that all sentient beings possess the buddha-nature and can become enlightened by discovering this inherent nature within themselves, especially through study of the *Lotus Sutra*.

➤ DOGEN, ZEN'S OTHER FATHER

Dogen (1200–1253), the most significant Japanese Buddhist of the thirteenth century, established the Soto school of Zen Buddhism, after a successful trip to China. Second only to Eisai in the role that he played in establishing Zen Buddhism in Japan, Dogen advocated a pure Zen that was devoid of elements of esoteric Buddhism common in earlier Japanese sects of Buddhism and in Eisei's Rinzai practices. In a desire to offer enlightenment to all, he opened his monastic communities to everyone regardless of intelligence, social status, sex, or profession. He also abolished the separation between laity and monks and adopted only the Mahayana religious precepts as necessary.

Unlike Zen Buddhists of some schools, Dogen accepted scriptures, arguing that an enlightened mind was free to elucidate and use the scriptures. He accorded a secondary importance to *koans* (enigmatic statements made by past masters that were used in meditation), although he did not reject them. For Dogen, the primary mode of practice was *zazen* (seated meditation). His writings on seated meditation contained a spirit of urgency because he believed that, since human beings have had the luck to be born with a human body necessary to achieve liberation, it was foolish to waste one's life.

—Carl Olson

Eisai traveled to China in 1168, where he studied Chan Buddhism and brought back texts for the further dissemination of Chan doctrine and practices. He went on a second trip to China in 1187, with the intention of traveling to India and its holy sites, but ended up staying in China. There, he studied Chan in greater depth and gained a seal of recognition for spiritual attainment and approval to teach it. In 1191, he returned to Japan and constructed a Zen temple in the Rinzai tradition. In spite of vigorous opposition from the Tendai sect, which was noted for its complex, ritually based tradition, he was able to establish monasteries in the cities of Kyoto and Kamakura. Indeed, unlike the slightly later rival Soto school of Zen, which spread through Japan's rural areas, Rinzai became firmly entrenched in Japan's cities.

Due to initial strong opposition to Zen, Eisai was forced to present his sect of Meditation Buddhism within a context that included Tendai and esoteric practices. To those who opposed its introduction, Eisai argued that Zen was not something new because it had been taught by the founder of the Tendai sect. To objections to his claim that Zen was true to the teachings of Buddhism, Eisai argued that Zen agreed with the spirit of Tendai and could contribute to its renewal. Ironically, Eisai called for a purified, independent Zen devoid of the all extraneous, esoteric, and ritualistic elements but, in seeming contradiction, taught a synthesis of Tendai thought, Tantric esotericism, and Zen.

Along with his younger contemporary, Dogen, Eisai was instrumental in promoting tea in Japan. When he returned from China, he brought seeds with him and began to cultivate tea gardens on temple grounds. He has also been credited with composing the first book advocating the health benefits of tea drinking. He praised it as a stimulant that was helpful for the practice of meditation and claimed that it had healing properties.

—Carl Olson

Bibliography

- Collcutt, Martin. *Five Mountains: The Rinzai Zen Monastic Institution in Medieval Japan*. Cambridge, MA: Harvard University Press, 1981.
- Dumoulin, Heinrich. *Zen Buddhism: A History*. Vol. 2, *Japan*. Translated by James W. Heisig and Paul Knitter. New York: Macmillan, 1990.
- Olson, Carl. "Dogen (1200–1253 C.E.)." In *Holy People of the World: A Cross-Cultural Encyclopedia*, edited by Phyllis C. Jestice. Santa Barbara, CA: ABC-CLIO, 2004.
- Olson, Carl. "Eisai (1141–1215 C.E.)." In *Holy People of the World: A Cross-Cultural Encyclopedia*, edited by Phyllis C. Jestice. Santa Barbara, CA: ABC-CLIO, 2004.

Nat Worship and the Ari Religion of Burma

Although Theravada Buddhism became the royal religion of Pagan in the eleventh century, it is wrong to think of it as an exclusive faith. Existing alongside it were forms of Mahayana and Tantric Buddhism, various Hindu sects, and two

religious expressions known as *nat* worship and the Ari cult.

Nat worship, presumably part of the original animist religion of the Burmese people, was a belief in nature spirits who need to be propitiated by offerings to ensure success and to avoid the calamities that followed when they were offended.

Once the Burmese had accepted Theravada Buddhism in the eleventh century, they incorporated belief in *nats* into Buddhist doctrine by equating them with the *devas* (gods) who inhabit Heaven, the highest of the six worlds of existence. Indeed, since in the wheel of existence humans may be reborn as gods, this opened up the possibility of transforming people in Burmese legends who were martyred or especially saintly into *nats*.

Moreover, despite the overlay of Theravada Buddhism, worship of *nats* as nature spirits never died out in Burma, especially in the countryside where even today every village has a shrine housing its protective spirit; every house, in fact, has its own guardian *nat* to whom offerings are made in order to guarantee protection from intruders, disease, or other misfortunes, and there are frequently *nat* figures along the wayside where the traveler may pray for safety on a journey. And there are *nat* figures even in the Buddhist temples, where they have been incorporated not so much perhaps as members of the Buddhist pantheon but as fellow worshipers paying homage to the Buddha.

The same is not true for the mysterious Ari religion whose connections to Buddhism are murky at best and that had no demonstrable connections to *nat* worship. The Ari, priests of a cult that held sway in Upper Burma until the late eleventh century, have been described as bearded, with hair four fingers long, and dressed in blue-black robes; they are also said to have drunk liquor, boxed, rode horses, gone into battle, and exercised the right of deflowering a bride on her wedding night, the sacrifice of her maidenhood to the officiating priest being considered an offering to their god or gods. It has also been claimed that the religion was centered on the worship of a Naga (a supernatural serpent that is often portrayed with a human face and upper body but with snakelike lower extremities)



Mount Popa, spiritual home of Burma's most important Nats, and a pilgrimage site for their worship. (Bill Snelson)

and that the religion also featured the Buddha with *shakti* (the female counterpart of his male cosmic force) wives, just as Hindu deities, such as Shiva, had their *shakti* consorts. Furthermore, it has been maintained that they had books of magic and a Mahayana Buddhist canon in Sanskrit and that the sect was in fact a debased form of Mahayana Buddhism. But none of this has been substantiated.

According to ancient Burmese chronicles, many generations before Anawrahta (r. 1044–1077), the first king of the Pagan dynasty and the person who instituted Theravada Buddhism as the royally patronized religion, the kings of that country believed in the “false doctrines and teachings” of the 30 Ari lords. These lords resided at Thamahti, a town a few miles southeast of Pagan, and reportedly had 60,000 disciples. It is stated also that they rejected the teachings of the Buddha, that each monk preached to his followers according to his own beliefs, and that at least some wrote books setting forth these beliefs. If a person took the life of another, even his own father or mother, so long as he recited the prayer for deliverance he would be absolved. The remark that the Ari renounced Buddhist doctrine has generally been interpreted as meaning that their belief was a deviant or perverted form of Buddhism, but taken at face value it might mean they were not Buddhists of any sort.

An alternative theory has proposed that this sect's name derives from the Sanskrit *aranyavasi*,

THE CUCUMBER KING

According to the Burmese chronicles, Nyaung-u Sawrahan (r. 931–964), known as the Cucumber King because he was formerly a farmer who owned a cucumber plantation, after mistakenly killing the former king, was asked to take that king's place on the throne. As king, Sawrahan decided to construct a pleasure garden, and in the middle of this garden he erected a large image of a Naga. He also consulted Ari priests regarding the form of the garden's pagodas. However, in no way does this imply that Sawrahan intended to establish the Ari cult as the royal religion. Yet when he finished building his private temples, he set up in them neither images of *nats* nor of the Buddha but instead set up figures of Nagas, which he worshiped in apparently private devotion.

—Roger Finch

designating monks living in the forest, and its priests were degenerate Theravada monks who rose to power from their jungle-based monasteries in the late twelfth century. However, the only deviant practices noted about these so-called degenerate Theravada monks is that they partook of meat and alcohol on the occasion of certain festivals, and these transgressions are negligible compared to those attributed to the powerful eleventh-century Ari priests of Upper Burma (whose name might just as well derive from the Sanskrit *ari*, meaning “hostile” or “enemy”).

Whatever their origins and practices, the last specific mention of the Ari dates from 1314, when Ari priests were counted among the army of Sawyun, grandson of Narathihapate, the last king of the Pagan dynasty. And yet their sect must have persisted at least for a while, for during the reign of Minhkaung (r. 1401–1422), chief of Ava (not far south of Mandalay), a group of monks known as Descendants of the Ari frequented the palace and there, indulging in perhaps the least of all the vices attributed to them, often drank too much and had to be carried back to their monastery on palanquins.

—Roger Finch

Bibliography

Tin, Pe Maung, and G. H. Luce, trans. *The Glass Palace Chronicle of the Kings of Burma*. London: Humphrey Milford, 1923.

Buddhism and the Cult of Shiva—Side by Side in Java

During the half century and more immediately preceding the rise of Islam in Java, roughly 900–1500 CE, the ecclesiastical class was divided into two main groups, Shivaite (Brahmin priests of the cult of the Hindu deity Shiva) and Buddhist monks, and there are religious texts pertaining to both groups, though the number of Shivaite texts is greater than that of Buddhist ones.

The last attested material Buddhist monument to be found in Java is the portrait statue of Kritanagara (r. 1254–1292), the last ruler of the Kingdom of Singhasari, in the form of the Buddha Akshobya (the Eastern Buddha, one of five transcendental Buddhas), in Surabaya, on the north coast of eastern Java. This king is notable not only for his determination to extend the authority of Java over various neighboring countries but also for his devotion to the *kalachakra* (Wheel of Time) form of Tantric, or Esoteric, Buddhism that developed in the tenth century CE (about 965) in northern India, Kashmir, and Nepal. This form of Tantrism must have held a certain attraction for Kritanagara, either because of its incorporation of elements of Shivaism or because its emphasis on the redemption of the souls of the dead shared certain features in common with original Javanese ancestor worship. Whatever the case, the sect reached its culmination in Java at this time.

—Roger Finch

Bibliography

- Coedes, G. *The Indianized States of Southeast Asia*. Honolulu: University Press of Hawaii, 1964.
- Hall, Daniel George. *A History of South-East Asia*. London: Macmillan Education, 1955.
- Pigeuad, Theodore G. *Literature of Java*, Vol. 1, *Synopsis of Javanese Literature (900–1900 A.D.)*. The Hague: Martinus Nyhoff, 1967.
- Singhal, D. P. *India and World Civilization*. 2 vols. East Lansing: Michigan State University Press, 1969.

Snellgrove, David. *Indo-Tibetan Buddhism*. London: Serindia Publications, 1987.

The Spread of Islam into Southeast Asia to 1500

During the thirteenth century, Islam emerged as an influence among the peoples of the islands and peninsular coastline of Southeast Asia. The original stimulus for this adoption is a matter of contention among historians, though most accept that Islam was brought to Southeast Asia through trade. This view is supported by local myths, which tell of a visit from either an Arabian or Indian holy man. Whoever they were, it seems that local rulers bestowed protection on such traders, waiting for the monsoon winds to continue on to China or to return westward, and their long-standing presence might ultimately have facilitated royal conversions to Islam. Evidence for this process can be seen in the reports of Marco Polo in 1292 and Ibn Battuta in 1345–1346, who both visited Sumatra in their travels.

It is probable, though, that the diffusion of Islam was more complex than the simple arrival of Muslim traders on Southeast Asian shores, for foreign Muslims are known to have passed through Southeast Asia well before the thirteenth century. Southeast Asians were themselves active traders in the Indian Ocean and northward to China, where Muslims had an established presence since the ninth century. For such reasons, A. H. Johns was the first to argue that Southeast Asian rulers became attracted to the religion in a world changed by the Mongol invasions, seeing Islam as making an inward turn and crediting Sufi mystics as the main transporters of Islam into Southeast Asia.

Whatever the mechanism was, the first surviving witness to a royal conversion in this region can be found on the tombstone of Sultan Sulayman bin Abdullah al-Basir, found in northern Sumatra and seemingly dated to 1211. A perhaps more reliable witness can be found in the headstone commemorating the death of another Sumatran ruler, Sultan Malik al-Salih of Samudra, in 1297. Across the long strait separating Sumatra from the Malay Peninsula, the kingdom of Malacca embraced Islam around 1400. It would

➤ SOME PROBLEMS WORKING WITH OLD JAVANESE TEXTS

The number of texts in Old Javanese, dating from the period beginning about 900 up to 1500 CE, is rather small. Compounding the problem facing historians who rely on this documentary evidence is the fact that few out of this severely limited body of texts provide reliable information as to when they were written. In many cases the date mentioned in the text refers to when the copy was made and not to when the original text was composed. Furthermore, in some cases it is open to question whether a given text was written in Java or in Bali, because during this period the same literary language was in use in both places. On the basis of the nature of the language of the texts and the form of the letters used to write the text, however, it is possible to distinguish between authors living during the period of the Kadiri kings (up until about 1200 CE) and their predecessors, on the one hand, and those written in the subsequent Singhasari-Maja-pahit period, on the other.

—Roger Finch

come to control a majority of the trade that occurred between India and China and act as a major base from which further conversions within the archipelago would occur.

Islam moved easily along trade routes because the Malay language, already a popular commercial language, served as a medium for preaching the faith. By and large, early Southeast Asian conversion to Islam was not the result of conquest by Muslim armies from abroad, nor was it identified with the wholesale acceptance of Arab culture. At first, Islamization probably followed simple outward forms for the majority of Southeast Asian populations, as rulers such as Malik al-Salih took Muslim names and began to forsake pork and practice circumcision and Muslim funerary rites. In time, many Muslims sought instruction in the texts of Islam as compiled and disseminated by their religious scholars, the ulama, thereby becoming more fully integrated into the worldwide family of Islam. Nevertheless, their particular form of Islam was long noted for its strong indigenous identity. Practices such as

➤ MARCO POLO'S ACCOUNT OF SUMATRA

Around the year 1292, Marco Polo (along with his father and uncle) departed from the court of Khubilai Khan and traveled by sea to Khorasan (a region comprised of portions of present-day Iran, Turkmenistan, and Afghanistan). Along the way, they visited the Malay islands, Vietnam, and Sumatra, where Polo made the following observations about the spread of Islam in that area:

“You must know that the people of Ferlec [Perlak in northern Sumatra] used all to be idolaters, but owing to contact with Saracen merchants, who continually resort here in their ships, they have all been converted to the law of Mahomet. This applies only to the inhabitants of the city. The people of the mountains live like beasts. For I assure you that they eat human flesh and every other sort of flesh, clean or unclean. They worship many different things; for whatever they see first when they wake in the morning, that they worship.”

—Alfred J. Andrea

Source

Marco Polo, *The Travels*, translated by Ronald Latham (London: Penguin, 1958), 253.

cockfighting and gambling were often tolerated. Women rarely took the veil, and even among the upper classes female seclusion was limited.

—M. F. Laffan

Bibliography

- Feener, R. Michael, and Michael F. Laffan. “Sufi Scents across the Indian Ocean: Yemeni Hagiography and the Earliest History of Southeast Asian Islam.” *Archipel* 70 (2005): 185–208.
- Johns, A. H. “Sufism in Southeast Asia: Reflections and Reconsiderations.” *Journal of Southeast Asian Studies* 26 (1995): 169–183.
- Ricklefs, M. C. *A History of Modern Indonesia since c. 1200*. 3rd ed. Stanford, CA: Stanford University Press, 2001.

The Cumans

The Cumans, a Turkic people who migrated westward out of East Asia, are known in Russian historical sources as Polovtsy and in Arabic sources

as Kipchak, although the Arabic author al-Marwazi (writing circa 1120) called them Qun, which corresponds to the Hungarian name Kún for the Cumans. The Kipchaks have been identified as the remainder of the Turkut (or Turk) empire, which was located in what is the present-day Mongolian Republic and collapsed in 740. Some historians, to the contrary, maintain that the Kipchak and the Cumans were two distinct tribes. In any case, the Cumans were the westernmost group of this loosely associated tribal confederation, which in time came to extend from areas along the Danube River in Europe eastward to an ill-defined area in the Kazakh steppe and western Siberia. The Pechenegs, who preceded the Cumans in the general westward migration of these various Turkic tribes, eventually settled in the steppes of southern Russia, but they were swept aside by the Cumans, who subjected neighboring Slavic principalities to constant raids and attacks.

Of particular interest is the attitude of these various Turkic tribes toward religion. As they moved gradually westward and came in contact with the sedentary populations of Eastern Europe and the Middle East, they appear to have converted rather easily from their original animistic-shamanistic beliefs to the various religions of their new neighbors, probably more in an effort to assimilate Western culture than due to any strong religious convictions. The most notable example of this is perhaps that of the Khazars. In spite of welcoming the Christian missionary Constantine (or Cyril), sent by the emperor in Constantinople in 851 to convert them, the khan together with his court adopted Judaism as their religion, although there is no evidence that Judaism became the official religion of the Khazar state. And not long afterward, around 965, they renounced this faith in favor of Islam. Indeed, the majority of the Turkic tribes that migrated westward adopted Islam as they settled near neighboring Islamic countries to the south, but the Cumans became Christian.

As the Cumans moved across the steppe they settled in five areas: the western Central Asian region of present-day Kazakhstan, the Volga area, the Don River region, the Dnieper River region, and the Danubian River region. Early Cuman settlements in Hungary date from probably around

► THE *CODEX CUMANICUS*

The *Codex Cumanicus* (*Cuman Codex*, a codex being a bound manuscript), preserved at the Biblioteca Marciana (the Library of San Marco) in Venice, was written as part of an attempt to convert the Cuman Turks to Latin Christianity. It consists of two parts, the first a grammar and glossaries (word lists) of the Cuman language, written toward the end of the thirteenth century by an Italian colonist, possibly in Crimea; copied in 1303 at the monastery of St. John, probably at Saray, on the Volga River; and then recopied between 1330 and 1344. About ten years later some Franciscan friars from Germany added glosses in German to the lists of words in the first part; the second part is primarily a translation of Christian texts in prose and in verse. This manuscript was acquired later by certain Italian merchants who were residing in the area north of the Black Sea, and eventually it made its way to Venice. There is a legend that the manuscript at one point belonged to the famous Italian poet Petrarch (1304–1374), but there is no foundation for this story in fact.

The manuscript contains 82 folios (pages), written on both sides. The first part consists of 55 folios, and the second part consists of 27 folios. The first part begins with the conjugation of the Latin verb *audio* (to hear) in Latin followed by the corresponding forms in Persian and Cuman Turkish and then a list of Latin verbs together with nouns derived from the same verbs (for example, *auditus* “hearing; sense of hearing” from *audio*) in alphabetic order, a list of adverbs, a table showing

the declension of nouns and pronouns, and finally a list of nouns grouped according to category, such as terms pertaining to religion, colors, parts of the body, vegetables, and mammals. The second part begins with several pages listing words in Cuman with German glosses, and this is followed by texts; these include not only prayers, sermons, and religious hymns (some with music notation) but also riddles, additional notes on the Cuman language, and short lists of other words occurring in the preceding prayers and hymns.

Apparently the Cuman-language prayers and other ritual texts of the second part were widely disseminated. In the account of his travels between 1396 and 1427, the Bavarian Johann Schiltberger stated that he was taken prisoner in the Battle of Nicopolis against the Ottoman Turks by the eldest son of Sultan Suleiman and was appointed page to the sultan, and he gives an example of the Tatar-language *Pater Noster* (*Lord's Prayer*) that he collected at some place he visited. In the battle of the Ottoman Turks against Amir Timur (Tamerlane) in Ankara in 1402, Schiltberger was again captured, and it was in the service of Timur that he traveled throughout “Tatary,” where he collected this example of the *Pater Noster*. The prayer as he heard it and later wrote it down is much the same as that in the *Codex Cumanicus*, the main difference being that in the Tatar version certain originally Turkic words have been replaced by Arabic words.

—Roger Finch

1070. The Cumans in time became masters of the entire southern Russian steppe zone. This empire collapsed suddenly, however, when in the winter of 1238–1239 the Cumans were attacked and defeated by the Mongols of Batu Khan. Following this disaster, part of the Cuman population, under Kuten Khan, fled to Hungary, where the earlier Danubian Cuman groups had settled, and Kuten sought refuge for himself and his people from the king of Hungary, offering to convert to Latin Christianity, a proposition that was received eagerly by King Andras. Early in the thirteenth century Hungary, with encouragement from the pope, had become very interested

in Cuman affairs. Already the diocese of Milkovia had been created in Moldavia, a region in present-day Romania bordering on the Black Sea, the jurisdiction of which extended to the land where the Cumans had been living, and the archbishop of Esztergom was named papal legate in Cumania to follow up on earlier successes of Dominican friars in converting the Cumans to the east of Hungary.

The second conversion of Cuman people occurred during the following century in the land from which this refugee group under Kuten Khan had fled. As a result of Italian commercial expansion on the north shore of the Black Sea during

the fourteenth century and the evangelizing activities of Franciscan friars, at least a portion of the population was converted to Latin Christianity. It even appears that these missionary activities were encouraged by Ozbek, the khan of the Golden Horde, in spite of the fact that he had been converted to Islam, and in 1338 he made a gift of land in this area as a site for a monastery.

—Roger Finch

Bibliography

- Barthold, W. *Turkestan down to the Mongol Invasion*. Philadelphia: Porcupine Press, 1977.
- Christian, David. *A History of Russia, Central Asia, and Mongolia*. Oxford, UK: Blackwell, 1998.
- Hambly, Gavin. *Central Asia*. London: Weidenfeld and Nicolson, 1969.
- Phillips, E. D. *The Royal Hordes: Nomad Peoples of the Steppes*. London: Thames and Hudson, 1965.
- Pritsak, Omeljan. *Studies in Medieval Eurasian History*. London: Variorum Reprints, 1981.
- Sinor, Denis. *The Cambridge History of Early Inner Asia*. Cambridge: Cambridge University Press, 1990.
- Sinor, Denis. *Inner Asia*. Bloomington: Indiana University Press, 1969.
- Tefler, J. Buchan, ed. *The Bondage and Travels of Johann Schiltberger*. First published by the Hakluyt Society, New York. Reprint, New York: Burt Franklin, 1970.

Christendom beyond the West

Christendom in the Middle East, Africa, and Asia during the period 1000–1500 was transformed by disease, war, persecution, religious competition, foreign invasions, isolation, and political, cultural, and religious change. Christian churches were scattered over vast geographic distances and relied on trade routes to connect with one another. The churches of non-Western Christendom, more often than not subject to non-Christian polities, were also reliant upon religious tolerance and political favor to thrive during this 500-year period. Consequently, as empires rose and fell in Afro-Eurasia, Christianity was transformed from primarily a non-Western religion to a religion that would remain dominant only in the West and in kingdoms such as Ethiopia, where it was linked to political power.

Through their travels along the Silk Road and other Eurasian trade routes, Christian missionar-

ies and laity helped unite churches and monasteries from Mesopotamia across Central Asia to Mongolia and China. Migrations of Christians from one region to another also allowed ecclesiastical leaders (a patriarch or archbishop) to maintain ties with cities, churches, and monasteries that were often thousands of miles away from the center of ecclesiastical power. For example, the Syrian Orthodox Church held influence over churches in geographic regions as diverse as Egypt, Persia, and India, while the Armenian Church, the Church of the East (mistakenly referred to as the “Nestorian Church” in the West and today known as the Holy Apostolic Catholic Assyrian Church of the East), the Georgian Church, and others claimed authority over churches scattered across Afro-Eurasia. Many of the divisions that distinguished the various churches from each other centered on disputes or misunderstandings about Christian doctrine, ecclesiastical leadership, or socioreligious identity.

Political power also played a key role in the life of Churches. Since political rulers usually determined religious practice in regions under their control, Christians attempted to gain the favor of rulers. The close association of political power with indigenous Christians did not necessarily equate to the long-term survival of a particular church in a kingdom or region, even though it may have been beneficial for a significant period of time. Persecution usually accompanied new political dynasties when churches were closely identified with the previous now-discredited regimes. Consequently, by the end of the fifteenth century non-Western Christendom was in severe decline due to changes in Afro-Eurasian politics.

Christendom in the Middle East, Asia, and Africa experienced a pendulum-like swing from expansion to contraction during this period. For example, Assyrian, or Church of the East, missionaries operating along the Silk Road are credited with converting Kerait, Naiman, Ongut, and other Turco-Mongol tribes of Central Asia in the eleventh and twelfth centuries, which would eventually lead to the reintroduction of Christianity in China in the thirteenth century. After the establishment of the Mongol Yuan dynasty (1271–1368), its capital city of Khanbaliq (present-day Beijing) and several other Chinese cities would have Latin Christian archbishops, churches, and

➤ BARHEBRAEUS

Barhebraeus (1225/1226–1286), known in Arabic as Gregory abul Faraj ibn al Ibri, served as the *maphrian* (archbishop) of the Eastern Syrian Orthodox Church from 1264 until his death in 1286. Tradition claims that he was the son of a prominent physician of Jewish descent. In his youth, during a period of Mongol expansion, his family moved from its home in Malatya in Anatolia to the still largely Greek Orthodox city of Antioch in northern Syria. Educated there by Christian teachers who held conflicting theological viewpoints, Barhebraeus learned to appreciate differences among the various Christian Churches represented in the Middle East but also saw the need for Christian unity. While in Antioch, he also made the decision to pursue a life of service to the Church by becoming a monk.

His time as a simple monk was short-lived, and he was installed in his first bishopric at Gubos around the age of 20. He was later promoted to the bishopric of Aleppoin in southern Syria. In 1264 he was made maphrian, also referred to as a *catholicos*, of the Eastern Syrian Orthodox Church.

Faced with challenging political and social circumstances, he worked tirelessly to revitalize the churches under his leadership that suffered from fragmentation and alienation due to war and persecution. He made pastoral visits to these churches, reorganized the leadership of the Church, and even worked to win the favor of Mongol il-khans of Persia for the Church. Besides revitalizing the churches under his authority, he attempted to bring unity among the Christians living in the Middle East and managed to earn the respect and admiration of those in the Armenian Church, the Greek Orthodox Church, and the Church of the East.

Barhebraeus was also a prolific scholar who wrote on topics including Christian theology, canon law, spirituality, logic, astronomy, ethics, medicine, philosophy, and grammar. His most significant book, *Chronicle*, is a historical work that tells the story of the Christian Church and the development of civilization.

—Darin D. Lenz

monasteries. Christianity in China thrived until the collapse of the Yuan dynasty, when the religion became detested as a foreign religion imposed by foreign rulers. The Middle East, in contrast to China, saw a different sequence of events that also resulted in the deterioration of the Christian presence there. The slow decline of the Greek Orthodox Byzantine empire, which began in the eleventh century with the rise of the Seljuk Turks from Central Asia, sparked the crusades as the Latin West's response to this crisis in Christendom. Ironically, this period of warfare destabilized the Church of the East, the Greek Orthodox Church, the Syrian Orthodox Church (mistakenly called "Jacobite"), the Maronite Church, and other churches. Although persecution of Eastern Christians by Latin Christians and Muslims alike did occur during the crusades, the real challenge to non-Western Christendom began with the thirteenth-century Mongol invasions and, later, militant Muslim rule in the Middle East and Central Asia. The process of expansion and contraction was therefore not uni-

form, and the remnants of once politically connected churches often survived as minority religious communities in regions where other religions dominated culturally and politically.

The primary challenge to Afro-Eurasian Christendom through the end of the fifteenth century was the continued movement of Islam far beyond the Arabian Peninsula, a phenomenon that began in the seventh century. Even the devastating Mongol invasions from Central Asia that began in the thirteenth century did not do as much damage to non-Western Christendom as the continued expansion of Islam. This was partly due to the fact that the Mongols embraced religious toleration based on a tradition that did not show favoritism to one religion over another, even though the Mongol khans had mothers, wives, soldiers, and generals who professed Christianity. The Mongols proved that they were indifferent to Christians by conquering Christian kingdoms, such as Russia and Georgia, or forcing them to become vassal states. Yet religious and diplomatic envoys traveled across Asia from the courts of

both Mongol rulers and European rulers with the aim of creating an alliance to destroy Islamic civilization, which both viewed as a chief threat to their own power. One envoy sent from Rome, the Franciscan John of Montecorvino (1247–1328), convinced the Ongut ruler and vassal prince of the Yuan dynasty, King George, to convert from the Church of the East to Roman Catholicism at the end of the thirteenth century. King George was falsely linked to the lineage of the mythical Prester John by Marco Polo, and his conversion was triumphed throughout Europe. King George's conversion marked the high point of medieval Roman Catholic missionary work in China that ended sometime around the second half of the fourteenth century, when the Black Death ravaged China and the Yuan dynasty collapsed under the resulting chaos. Without the support of the Yuan dynasty, Christianity was seen as a foreign religion and rapidly disappeared from China. Similar to Mongol rule in China, Christianity in Mongol (or Il-khanate) Persia was able to reach its height of influence. However, the political situation changed when the Mongol ruler Il-khan Ghazan (r. 1295–1304) became a Muslim and sanctioned the persecution of Christians in Mesopotamia, Iran, and adjoining lands. Likewise, the already-battered Christian Churches in Mesopotamia, Persia Anatolia, and Central Asia would also struggle to survive the successive persecutions launched by various other Muslim rulers, such as Tamerlane. For example, under the rule of the Ottoman Turks, churches in Anatolia, the Caucasus, and the Balkans were undermined by the periodic conscription and forced conversion of Christian youths to Islam in order to serve as janissaries in the Ottoman army. Likewise, in Persia and Mesopotamia at the start of the sixteenth century (and the dawn of the Safavid empire), Christians who survived the series of invasions over previous centuries now faced persecution from Shia Muslims. India alone presents the single exception to the decline of Christendom in Asia during this period. The St. Thomas Christians, who claimed their origins from the Apostle Thomas in the first century, were located along the Malabar Coast in southwestern India and held status as a distinct caste in Hindu society. They were influenced by monks and lay Christians who immigrated to the region

from the Middle East. The Indian Church during this period remained vibrant, although it was almost completely isolated from violent events that altered Christendom in the rest of Asia.

African Christianity, like Eurasian Christianity, was also transformed by the expansion of Islam during this era. In Egypt in 996, the Fatamid caliph al-Hakim came to power and initiated a period of severe persecution targeting the Egyptian Church, which claims a lineage dating back to the Apostle Mark. The Coptic Church, as Egyptian Christians are referred to, saw thousands of churches and monasteries destroyed or converted into mosques, while untold numbers converted to Islam in order to avoid persecution. Periods of persecution were, however, sporadic. Under the Ayyubid dynasty (1171–1250) the Copts participated in civil government, while the Mamluk sultans (1250–1517) launched a new era of persecution that took aim at all churches in Egypt, including the Copts, the Armenian Church, and the Syrian Orthodox Church. Persecution, religious competition, and changing political circumstances all led to the decline of Christianity in Egypt as Islam continued to grow among the population. Even disease would play a role in undermining Egyptian Christianity, as it did in Eurasia, when the Black Death arrived in the fourteenth century and devastated churches and especially monasteries.

South of Egypt along the Nile River, the Nubian Church, in present-day Sudan, also embraced the influence of the Coptic Church and benefited from a monarchy that promoted and protected Christianity. It was unable, however, to resist the expansion of Islam, and ultimately it faltered and collapsed as Islam subjugated North Africa. The last Christian king of Nubia was defeated in 1323 by a Mamluk army, and by 1500 remnants of Christendom seem to have entirely disappeared from Nubia.

Nubia's neighbor to the south, Ethiopia, was also threatened by the migration of Muslims into the interior of Africa. However, beginning in the thirteenth century during a period referred to as the Solomonic Revival, the Ethiopian Orthodox Church, which was also connected to the Coptic Church, strengthened an already existing four-part relationship that connected Ethiopia's Semitic heritage, Judaism, Christianity, and the

monarchy. It did so by claiming that it possessed the Ark of the Covenant; that its consecrated kings were saintly, direct descendants of King Solomon of ancient Israel; and that Ethiopia was the New Zion. Consequently, Ethiopia alone managed to emerge from this 500-year period with a renewed sense of Christian identity that tied the history of its kingdom to sacred history.

—Darin D. Lenz

Bibliography

- Atiya, Aziz S. *A History of Eastern Christianity*. Enlarged and updated ed. Millwood, NY: Kraus Reprint, 1980.
- Baumer, Christoph. *The Church of the East: An Illustrated History of Assyrian Christianity*. London: I. B. Tauris, 2006.
- Hastings, Adrian, ed. *A World History of Christianity*. Grand Rapids, MI: Eerdmans, 1999.
- Irvin, Dale T., and Scott W. Sunquist. *History of the World Christian Movement*, Vol. 1, *Earliest Christianity to 1453*. Maryknoll, NY: Orbis Books, 2001.
- Isichei, Elizabeth. *A History of Christianity in Africa: From Antiquity to the Present*. London: SPCK, 1995.
- Jenkins, Philip. *The Lost History of Christianity: The Thousand-Year Golden Age of the Church in the Middle East, Africa, and Asia—and How It Died*. New York: HarperCollins, 2008.
- Meinardus, Otto F. A. *Christians in Egypt: Orthodox, Catholic, and Protestant Communities Past and Present*. Cairo: American University in Cairo Press, 2006.
- Moffett, Samuel Hugh. *A History of Christianity in Asia*, Vol. 1, *Beginnings to 1500*. 2nd ed. Maryknoll, NY: Orbis Books, 1998.
- Parry, Ken, David J. Melling, Dimitri Brady, Sidney H. Griffith, and John F. Healey, eds. *The Blackwell Dictionary of Eastern Christianity*. Foreword by Rt. Revd. Kallistos Ware. Oxford, UK: Blackwell, 1999.
- Standaert, Nicolas, ed. *Handbook of Christianity in China*, Vol. 1, *635–1800*. Leiden: Brill, 2001.

The Widening Divide—Orthodox Constantinople and Catholic Rome, 1000–1453

During the era circa 1000–1500, members of the Byzantine (or Greek) Orthodox Church of Constantinople and the Latin Catholic Church



Early-thirteenth-century mosaic depicts the surrender of Constantinople in 1204 during the Fourth Crusade. (Adrian Fletcher)

of Rome formally recognized that they were in a state of ecclesiastical schism. Despite their historical differences in doctrine, rites, and customs, there is no evidence that Greeks and Latins before this period believed there to be an irremediable divergence between their two communities. Events during the eleventh through the fifteenth centuries, including the papal reform movement in the Roman Church, the crusades, and the Ottoman conquest of the Byzantine empire, all contributed to the divide between these two branches of Christianity.

Before the eleventh century, Rome and Constantinople had experienced a number of misunderstandings and crises over the question of papal primacy. Based on their belief that the first bishop of Rome was Saint Peter, “the prince of the Apostles,” whom Christ had singled out as the “rock” (*petros* in Greek) upon which his Church would be built (Matthew 16:13–19), the later bishops of Rome claimed to have inherited Peter’s authority. Therefore, they possessed ultimate jurisdiction over all other Christian bishops, including the patriarch of imperial Constantinople. Although the Church of Constantinople accorded the bishop of Rome the honor of being

► THE APOCALYPTIC REUNION OF THE LATIN AND GREEK CHURCHES

The twelfth and thirteenth centuries were a period of creativity in Latin Christian thought about the meaning of history, including a belief that the division of Christendom into its Latin and Greek (Byzantine) halves was a divinely ordained event. This view of the past was accompanied by predictions that the two churches would be reunited before the end of time. According to the apocalyptic thinker Joachim of Fiore (d. 1202), the schism between the Latins and Greeks was an inevitable part of God's plan for history, just like the biblical division between the two tribes of the kingdom of Judah and the ten tribes of the kingdom of Israel (1 Kings 12–13). Due to the Greek rejection of Roman doctrine and authority, the Eastern empire had suffered a divinely ordained punishment through the loss of its territories to the Muslims centuries beforehand. Joachim also believed, however, that a special order of monks from the Latin Church would lead the Greeks back to the true community of the faithful during a future age of spiritual transformation. As Joachim wrote in his *Book on the Concordance of the Old and New Testament*:

“After the Babylonian transmigration [a future period of tribulation for the Church], there will not be lacking a remnant of the faithful among the Latins, in which the Holy Spirit will carry out its work up until the consummation of the ages. Through them not only the Greeks, who seem nearer to grace, but also the Jews, who wander farther from it, shall be led back to the unity of the faith.”

Joachim's vision of an apocalyptic reunion between the Latin and Greek churches under the leadership of the Roman Church was highly influential. After the Fourth Crusade seized Constantinople in 1204, Pope Innocent III (d. 1216) quoted Joachim in two of his letters addressed to the Latin clergy in the captured city and expressed his own belief that the fall of Constantinople would be followed by the reunion of the two churches, the conversion of the Jews, and the spread of Christianity throughout the world before the end of time. Predictions about the future reunification of the two Christian peoples persisted over the following decades, especially among members of the Franciscan order who were attracted to Joachim's apocalyptic thought. Shortly after the Second Council of Lyons in 1274, Franciscan monk and chronicler Salimbene of Parma (d. 1287) declared that the union between the churches achieved at the council represented a fulfillment of Joachim's prophecies. Although the results of Second Lyon were short-lived, prophecies about the future restoration of Christian unity continued to be popular well into the fourteenth century and beyond.

—Brett Edward Whalen

Source

Abbot Joachim of Fiore: Liber de concordia novi et veteris testamenti, Vol. 73, edited by E. R. Daniel and translated by Brett E. Whalen, 137, Transactions of the American Philosophy Society (Philadelphia: American Philosophical Society, 1983).

first among equals, it did not recognize the papacy's more sweeping claims.

Developments in the eleventh-century Roman Church pushed this source of periodic conflict to the foreground. Starting with Pope Leo IX (r. 1049–1054), the papacy and its supporters sought a clearer separation between clergy and laity, including the sacred authority of popes and the secular power of emperors. As part of this program to reform the Church, the papacy insisted more strongly than ever that all Christians owed their obedience to Rome. At the same time, popes and reformers demanded a greater

level of conformity to Roman teachings and religious practices.

This innovative emphasis on Roman primacy was not well received by the emperors and patriarchs of Constantinople. One famous example of increased tension between the two churches occurred at Constantinople in 1054. Among numerous issues, representatives of the Latin and Byzantine Churches argued over papal authority and over which kind of bread was appropriate for the Christian sacrifice of the Eucharist: unleavened bread (the Latin practice) or leavened bread (as used by the Byzantines). In the midst

of this wrangling, several long-standing differences between the two churches were newly exposed and magnified, including the Filioque Controversy. According to Greek doctrine, God the Holy Spirit proceeds from the Father alone, while Latin theologians taught that the Holy Spirit proceeds from the Father “and from the Son” (in Latin, *filioque*). The seriousness of these disagreements became evident when papal legates and the Greek patriarch mutually excommunicated each other.

Despite lingering modern notions to the contrary, this crisis did not result in a lasting rupture between Rome and Constantinople. Toward the end of the eleventh century, the Byzantine emperor Alexius I Comnenus (r. 1081–1118) and Pope Urban II (r. 1088–1099) both expressed their desire to bring the churches closer together. Urban came to envision an armed campaign of Latin warriors that would free Constantinople from the threat of Islamic conquest, liberate Eastern Christians from Muslim domination, and recapture Jerusalem for all Christian believers. This expedition became known as the First Crusade. The crusade, which captured Jerusalem on July 15, 1099, did not bring about meaningful improvement between Latins and Greeks (as Westerners called the Byzantines). Sporadic violence between crusaders and Byzantine forces during the march to Jerusalem, the widespread belief that Emperor Alexius had betrayed the crusade, and the subsequent establishment of a Latin Church in Palestine that disenfranchised Greeks and other Eastern Christians equally served as sources of tension between Rome and Constantinople.

Crusading activity during the twelfth century fueled additional conflicts. During the Second Crusade (1147–1149), some crusaders advocated an open assault on Constantinople. This growing gap between the two churches, however, was not uncontested. During the Second Crusade, for example, other crusaders insisted that an attack on fellow Christians would be illicit and would violate their crusading vow. Throughout the twelfth century, clergy on both sides continued to seek common ground between the sibling faiths, Western mercenaries continued to serve in Byzantine armies, and aristocrats from both churches continued to marry.

In light of such continuing connections between Latins and Greeks, the three-day sack of Constantinople by the army of the Fourth Crusade that began on April 13, 1204, should not be seen as the inevitable outcome of growing Latin animosity for the Greek Church. The crusader conquest of the city was the combination of unique historical circumstances, although most Latin churchmen, including Pope Innocent III (r. 1198–1216), interpreted the capture of Constantinople as a rightful act directed by a just but merciful God. It was both a means of momentarily punishing the Greeks for their rejection of Roman authority and teachings and, more importantly, of returning the Church of Constantinople to the guidance of its “mother,” Rome. In fact, however, the devastating seizure of the city, accompanied by a series of fires and the plunder of its ecclesiastical treasures, resulted in a heightened state of animosity between Latin and Greek Christians. For nearly 60 years, until the Byzantine emperor-in-exile Michael VIII Palaeologus (r. 1259–1282) recaptured the imperial capital in 1261, Latins and Greeks shared an uneasy co-existence that was alternately punctuated by armed conflict and negotiations for the reunion of the churches.

At the Second Council of Lyons in 1274, Pope Gregory X (r. 1271–1276) and representatives of the Greek emperor reached a tentative agreement that resolved to Rome’s satisfaction their major disputes, including over papal primacy and *filioque*. The majority of the Greek clergy, however, repudiated this one-sided agreement, which completely dissolved under Pope Martin IV (r. 1281–1285) and the Byzantine ruler Andronicus II (r. 1282–1328).

During the fourteenth and early fifteenth centuries, the basic conditions of the schism between Rome and Constantinople did not change substantially. The papacy continued to insist on the recognition of its position as the ultimate arbiter in the Church and also required a meaningful level of Greek conformity to Roman doctrine and rites.

From the Greek perspective, a genuine resolution to the now undeniable schism could only come about by an ecumenical council that represented the collective and infallible authority of the Christian ecclesiastical hierarchy. Within this

framework, the possibility of reunion was raised at the Councils of Constance (1414–1417), Basel (1431–1449), and Ferrara-Florence (1438–1439). At Florence, tentative terms for another union were accepted by the Byzantine emperor John VIII (r. 1425–1448) and his patriarch but were repudiated by the vast majority of Greek clergy and laity. By this time, the official Byzantine policy of seeking an accommodation with Rome was driven by the expanding Ottoman conquests of Byzantine territories and Constantinople's need of Western Christian allies. In 1453 Turkish armies captured Constantinople, a turn of events that rendered any immediate negotiations between the Church of Rome and the now devastated Orthodox Church effectively impossible. The formal schism between the two Christian communities has continued into the twenty-first century, as have periodic efforts to end the division of Christendom.

—Brett Edward Whalen

Bibliography

- Chadwick, Henry. *East and West: The Making of a Rift in the Church from Apostolic Times until the Council of Florence*. Oxford: Oxford University Press, 2003.
- Gill, Joseph. *Byzantium and the Papacy, 1198–1400*. New Brunswick, NJ: Rutgers University Press, 1979.
- Kolbaba, Tia. *The Byzantine Lists: Errors of the Latins*. Chicago: University of Illinois Press, 2000.
- Kolbaba, Tia. "Byzantine Perceptions of Latin Religious 'Errors': Themes and Changes from 850 to 1300." In *The Crusades from the Perspective of Byzantium and the Muslim World*, edited by A. E. Laiou and R. P. Mottahedeh. Washington, DC: Dumbarton Oaks, 2001.
- Whalen, Brett E. *Dominion of God: Christendom and Apocalypse in the Middle Ages*. Cambridge, MA: Harvard University Press, 2009.

Popular Piety and Heresy in Latin Christendom

Popular piety and heresy were two interwoven religious tendencies in the culture of the Latin West during the period 1000–1500. On the one hand, faithful believers strove to find the true meaning of Christian prophecy, either individually or through their communities, even if their efforts might intentionally or inadvertently defy

church authority. On the other hand, the papacy was determined to eliminate invasions of the work of the devil into popular perceptions and practices in order to defend the theological orthodoxy and good order of the Church.

Several factors contributed to the rise of popular piety. Parish churches and other religious institutions reached into almost every corner of the European countryside, bringing religious services to the mass peasantry. Beyond that, the growth of a vibrant commercial economy and the increase of Europe's urban population added a new dynamic element within the Christian laity, whose lifestyles and religious needs differed significantly from those of rural people. Moreover, women, aristocratic and common alike, became active participants in the Catholic faith and demanded that their voices be heard and their concerns addressed. Additionally, liberal arts education in schools and universities led to the introduction of logic and humanistic perspectives into the study of theology. The spread of lay literacy, due in large part to the adoption of Europe's vernacular languages in public discourses, also expanded the public spaces where new religious perceptions and ideas might be expressed. Overlying all of this was the Church's self-defined role of encouraging and rewarding acts of popular devotion to God and the saints and pious service to fellow Christians.

The cult of Mary, the Virgin Mother of Jesus, was the most widely embraced form of popular piety promoted by the Church. From the twelfth century onward, the Virgin Mary became not only the most popular saint for female believers but also the universal symbol of human perfectibility and the universal mediator between God and humans. Pilgrimages to holy sites and the veneration of canonized saints (deceased holy people whom the Church recognized as heavenly intercessors) constituted another aspect of officially sanctioned popular piety. A special form of pilgrimage, the crusade, became a widely embraced form of popular devotion sponsored by the Church, and from the crusade movement evolved the institution of indulgences, gifts of heavenly grace bestowed by the Church upon the faithful who performed pious acts.

However, from the very beginning of its formation in late antiquity, the Roman Church me-



Pope Innocent III excommunicating the Albigensians, from the Chroniques de France ou de Saint Denis, fourteenth century. (HIP/Art Resource, NY)

ticulously and passionately defended its integrity against heresy, which it perceived to be the work of the devil. From the eleventh century onward, some independent-minded priests and lay community leaders instigated the spread of novel ideas and religious practices that church leaders viewed as deviations from the Church's official teachings as based on the consensus of tradition, the decrees of ecumenical councils, and past papal decisions. The Church equally feared the radical defiance of intellectuals and the irrational, superstitious practices of the masses. Suspicious of subversion from below, the Church, often assisted by secular authorities, revived the pursuit of heresy, which had been absent from church politics for centuries.

In the twelfth century, this revived pursuit of heresy began to focus on regional movements of evangelical piety that often expressed discontent with the perceived wealth and worldliness of the established clergy by calling for a return to the presumed apostolic poverty of the Church of the martyrs (before the early-fourth-century reign of Emperor Constantine I). Often these movements were led by charismatic individuals and even by some intellectuals. Because they

claimed to seek a return to an older, presumably purer, and more authentic form of Christian faith and practice, the Church viewed these pietistic movements as especially disorderly, subversive, and dangerous. In 1184, Pope Lucius III banned a group of lay Christians known as the Waldensians for their unauthorized preaching. The Waldensians were a small group of largely urban laity in Lyon, France, who followed their leader, a shadowy person known as Waldes or Valdes (to which later tradition added the forename Peter), by giving up their property for a life of austerity and devoting their worldly goods and energy to preaching to and serving the poor. In response to the ban, the Waldensians formed a church of their own that adhered to much of Catholic orthodoxy but rejected purgatory (a place of purification for souls after death and before admission to Heaven) and indulgences and continued to appoint nonordained persons and even women to preach. The movement soon spread all over French Languedoc and northern Italy.

Alarmed by the failure to bring down the Waldensian heresy as well as other heterodox movements, Pope Innocent III began to contemplate and orchestrate a crusade against heresy during his pontificate (r. 1198–1216), which resulted in the Albigensian Crusade (1209–1229) and the subsequent Inquisition, which his kinsman and successor, Gregory IX (r. 1227–1241) inaugurated. Innocent, Gregory, and the rest of the popes of the thirteenth century were not religious fanatics. In campaigning against heresy, they drafted rational judicial procedures within the framework of canon law. In dealing with the evangelical poverty movement and heresy in general, they favored persuasion to persecution. For example, instead of condemning Francis of Assisi for his refusal to become an ordained priest, Pope Innocent III compromised by allowing him to accept the lesser order of deacon and blessed him for renouncing his wealth and inheritance, for preaching to the sick and the disenfranchised poor, and for making all men and women his siblings. With papal blessing, the Order of Friars Minor (Lesser Brothers), known popularly as the Franciscans, was founded on the basis of Jesus's statement "Leave all and follow me." In 1217, Pope Honorius III (r. 1216–1227) approved the Order of Preachers, commonly known as the Dominican

➤ GRIEVANCES AGAINST THE PAPACY

John Wycliffe (ca. 1330–1384), the Oxford scholar and spiritual leader of the English Lollards, summarized people's numerous complaints over the moral decay of the papacy:

"And it seems to them that the pope is Antichrist on earth, because he is the opposite of Christ in life and lore.

Christ was a very poor man from His birth to His death and forswore worldly riches . . . , in accord with the state of primal innocence, but Antichrist, in contrast to this, from the time he is made pope to the time of his death, covets worldly wealth and tries in many shrewd ways to gain riches. Christ was the most meek man and urged that we learn from Him, but people say that the pope is the proudest man on earth, he makes lords kiss his feet, whereas Christ washed His apostles' feet. Christ was a most unpretentious man in life, deeds, and words. People say that this pope is not like Christ in this way, for whereas Christ went on foot to cities and little towns alike, they say this pope desires to live in a castle in a grand manner."

—Wenxi Liu

Source

Translated by Alfred Andrea in *The Medieval Record: Sources of Medieval History*, edited by Alfred Andrea (Boston: Houghton Mifflin, 1997), 396.

Order, whose friars, like their counterparts the Franciscans, practiced a form of apostolic poverty similar to that of the Waldensians. The difference between the friars (and other orthodox movements, such as the Humiliati, that emphasized lives of poverty and humility) and the Waldensians (and Albigensians) is that the former accepted papal leadership, confirmed the authority of priests (and, in time, most Franciscans themselves became priests), and coordinated their preaching with official church doctrines. Furthermore, the Dominican friars joined the papacy in the crusade against the Albigensian heresy. The Franciscans were less enthusiastic about directly confronting heresy at the beginning of their movement but contributed to Europe's growing popular piety by stressing devotion to the life

and suffering of Jesus. Indeed, Francis was seen as the *alter Christus* (Second Christ), with no blasphemy intended or perceived, because of his life of self-sacrifice and uncompromising poverty and loving service. It was accepted as fact that Jesus himself imprinted on Francis's body the stigmata, the wounds of the crucifixion, as a token of Francis's Christlike life.

The crusade against the Cathars of Languedoc destroyed their political base but did not root out their faith. Indeed, heretical ideas were spreading over much of continental Western Europe, which forced Pope Gregory IX to establish the Inquisition Commissions in 1232. Thereafter, inquisitors, often Dominican or Franciscan friars or monks selected from established monastic orders noted for their detachment from the world and thus viewed as impartial to human affairs, were appointed by successive popes to carry out a series of judicial inquiries regarding heresy.

However legalistic and humane the intention and theory might have been, it was often the case that no sooner did an Inquisition begin in a locality than draconian justice took over. To begin with, the basic proceedings of the Inquisition were flawed. Viewed more as a confessional than a legal proceeding, it usually began by trying to persuade a suspect to confess his or her error. To confess and seek absolution was to receive mercy and forgiveness, although some penalty or penance was also applied. If a person failed to confess, after failed attempts at counsel and persuasion, the accused would often be subjected to a secret trial during which no legal counsel was permitted and no formal rules of evidence were at work, and a confession could be obtained by torture. After conviction, the heretics deemed the most obstinate and dangerous were often delivered to the secular arm to be burned at the stake and their goods confiscated. Therefore, the outcome of an Inquisition depended greatly on the motives, beliefs, humanity, and integrity of the inquisitors. In addition, seldom would an Inquisition be carried out as formally and as humanely as the Church intended. Local lay and ecclesiastical leaders had interests at stake (and often personal vendettas to settle), and moreover, local religious fanatics often played active roles in convicting the accused through the pressure of public opinion and perjured testimony.

Beginning in the fourteenth century, the Latin West went through a volatile and profound social and political transformation due to many factors, including climate change, the Black Death, the Hundred Years' War between the English and French monarchs, the Great Schism within the Catholic Church itself, the increase of commercial activities domestically and overseas, and the restructuring of rural society and royal governance.

In the midst of this maelstrom, movements of popular piety gained momentum in the worship of sacred images whereby some untutored laypeople lapsed into various forms of idolatry. The Church certainly was worried lest pious veneration of holy objects and symbols degenerate into image worship, but the Catholic elites, including some prominent popes of the later medieval period, sincerely embraced the forms and some of the ideas of Greek humanism and encouraged experiments in new artistic expressions of biblical prophecy and the Catholic faith. Their efforts encouraged the boom in the early Renaissance's humanistic arts and literature, but they also added to the sum total of captivating, often starkly realistic statues and paintings that some of the faithful were using not as aids to prayer and devotion but as objects of devotion.

At the same time, movements of popular piety became increasingly concerned with addressing social injustices and challenging the mischief, both real and perceived, caused by church institutions and unworthy clerics. The Lollards inspired by John Wycliffe (ca. 1330–1384) in England, the Hussites who were attracted to the teaching of John Hus (1370–1415) in Bohemia, and various other sects hostile to papal authority in continental Europe shook the very foundations of Roman Catholic unity. The Church increased and intensified trials for and denunciations of heresy, witchcraft, magic, and superstition. Regardless, more and more people, particularly north of the Alps, became willing to affiliate with the novel ideas and simple practices of heresy to protest clerical abuses and the perceived errors of Catholic orthodoxy and to demonstrate their overall discontentment with the establishment. And heretical theologians, who took the lead in this attack, fought the Roman Church on numerous fronts, attacking its moral

decay; contesting its interpretations of Scripture and its traditions, such as monasticism; rejecting its priest-centered liturgy and sacraments; and denying its claimed legitimacy as the sole avenue to salvation. Such attacks were sometimes supported by regional lords and even occasionally earned some degree of sympathy from secular kings.

In the sixteenth century, heresy eventually merged into the Reformation, which in turn religiously decentralized the old Catholic world. At the same time, various Christian pietistic movements, both within the bounds of Roman Catholic orthodoxy and outside of it, continued to emerge, grow, and fight, in an ever more diversified Christian culture, for their freedom of worship and belief.

—Wenxi Liu

Bibliography

- Aston, Margaret. *Faith and Fire: Popular and Unpopular Religion, 1350–1600*. London and Rio Grande: Hambledon, 1993.
- Kamerich, Kathleen. *Popular Piety and Art in the Late Middle Ages: Image Worship and Idolatry in England: 1350–1500*. New York: Palgrave, 2002.
- Lambert, Malcolm. *Medieval Heresy: Popular Movements from the Gregorian Reform to the Reformation*. 3rd ed. Oxford, UK: Blackwell, 2002.
- Lea, Henry Charles. *A History of the Inquisition of the Middle Ages*. 3 vols. New York: Macmillan, 1922.
- Russell, Jeffrey Burton, and Douglas W. Lumsden. *A History of Medieval Christianity: Prophecy and Order*. New York: Peter Lang, 2000.

Orthodoxy and Heresy in the Latin West

The half millennium between 1000 and 1500 was a period of intense intellectual and theological activity in the Latin West during which the institutional Church became more rigid and centralized, while popular religious movements, many of them anticlerical and antiauthoritarian, sprang up and spread across Europe. The papacy emerged from a period of impotence and subservience to secular rulers and attempted to establish itself as the ultimate spiritual authority in Christendom and a political power. This authority and power often ended up being exercised

► THE BEGUINES—FEMININE MYSTICISM IN WESTERN EUROPE

Arising in the twelfth-century Low Countries, the Beguine movement began with the desire of unmarried or widowed lay women, many of whom worked in the textile industries of northern Europe, to live a communal, spiritual life without taking formal, life-long vows that joined them to an organized religious order of the Roman Catholic Church. Their name derives from an early spiritual advisor, Lambert le Bègue, a priest of Liège. Beguines had the freedom to form whatever type of community they deemed most appropriate, but all vowed chastity while living in the community, though they were free to leave at any time. They did not take the traditional monastic vows of obedience and poverty, but pledged to work with their hands, and many communities took it upon themselves to minister to the needy. Most communities resided in cities or towns, but not all.

One common feature of the Beguines was their predilection toward mysticism. Many of their devotions centered on either the image of the primeval monastic desert of the early Christian centuries or the image of the mystical marriage of soul and Christ, which relied heavily on a spiritualized erotic metaphor. The movement was persecuted as a heretical sect beginning in the late thirteenth century, and troubles plagued the groups for years thereafter. Eventually, most Beguines were incorporated into the Church's regular orders.

—Michelle M. Sauer

Bibliography

Sauer, Michelle M. "Beguines (12th cent. C.E.–present)." In *Holy People of the World: A Cross-Cultural Encyclopedia*, edited by Phyllis C. Jestice. Santa Barbara, CA: ABC-CLIO, 2004.

against those who sought to pursue forms of belief or spiritual practices outside of ecclesiastical norms. Another consequence of this growth of papal claims to supremacy over the Church was a widening rift between the Churches of Rome and Constantinople.

Within the Church, the eleventh and early twelfth centuries were dominated by attempts

at moral reform that had long-term political consequences. The reform movement is generally called the Gregorian Reform after Pope Gregory VII (r. 1073–1085), although some of the policies he implemented were proposed by his predecessors. The reformers sought to end simony (the practice of buying and selling ecclesiastical offices) and lay investiture (the appointment of church officials by secular rulers) and to impose celibacy on all clergy. The ensuing controversy resulted in a greater degree of independence for the Church from secular control and the increased use of canon (church) law and church councils to enforce ecclesiastical policy from the papacy down to the lowest levels.

One of the most important tools of papal governance to emerge was the church council. During the Gregorian reform papal legates and even popes traveled across Europe, summoning local councils at which regional bishops were expected to implement the reformist agenda. In addition to these local councils, nine ecumenical councils (councils supposedly representing the Church as a whole) were called by the papacy and held in the West between 1123 and 1445. The First Lateran Council met in 1123 to confirm the agreement reached between Pope Callixtus (r. 1119–1124) and Emperor Henry V (r. 1106–1125) that ended the Investiture Controversy. It also issued 22 canons, or regulations, most of which expressed the aims of the Gregorian reformers. The Second Lateran Council (1139) had as its immediate purpose the goal of repairing problems caused by a schism between the supporters of Pope Innocent II (r. 1130–1143) and the followers of Antipope Anacletus II (d. 1138). The Third Lateran Council (1179) also met in the aftermath of a schism, and among its canons were provisions to ensure smoother papal elections. The Waldensian and Cathar heresies were also a topic of discussion, as was the behavior of the ordained religious. The Fourth Lateran Council (1215), widely considered the most important ecumenical council of the High Middle Ages, covered a wide range of topics. They included efforts to combat heresy, plans for the Fifth Crusade, liturgical and doctrinal matters (such as mandating that the laity confess and take communion at least once a year and approval of the doctrine of transubstantiation, the belief that

bread and wine are transformed by a priest into Christ's body and blood), clerical independence and discipline, and the primacy of the papacy in religious matters.

The First Council of Lyons (1245) also made provisions for future crusading activity and ordered the excommunication and deposition of Emperor Frederick II (although the latter was never carried out). The Second Council of Lyons (1274) was called specifically to address the schism between the Greek and Latin churches, and while some progress was made during the council, it proved fleeting. The Council of Vienne (1311-1312), summoned partly on the insistence of King Philip IV of France, disbanded the Knights Templar. The Council of Constance (1414-1418) met in an attempt to end the Great Schism, which it did by deposing two competing popes, accepting the resignation of the third, and electing Pope Martin V (r. 1417-1431). Finally, the Council of Basel/Ferrara/Florence (1431-1445), while marked by conflict between the papacy and the council over who had greater authority, and despite moving its venue twice and eventually splitting into two schismatic councils, still managed to come close to mending the rift with the Greek Church. It also discussed the Hussite heresy and ecclesiastical reforms.

Some of the ideas put forward by the ecclesiastical reform movements as ideals of the more perfect religious life, such as celibacy and voluntary poverty, proved appealing to laypeople. In addition, the gap between the ideals of the reformers and reality, the recurring schisms in the Church, and the conflicts between secular and ecclesiastical powers led to disillusionment among lay Christians as well as provided circumstances in which alternative spiritualities could be pursued. Not all attempts to find different and theoretically holier forms of Christian living ended in heresy and persecution, but it is a fact that the period between 1000 and 1500 saw ever-increasing attempts by the Church to enforce its version of orthodoxy, through violence if necessary. The different varieties of heterodoxy and heresy often influenced and interacted with each other and can be broadly divided into three categories.

First were those groups that sought an ascetic life without taking traditional monastic vows. One of the earliest groups of this sort was the Walden-

sians, who were named after their founder, a burgher of Lyons known as Valdes or Waldo (d. ca. 1218). Waldo and his followers took vows of poverty and took up the life of wandering preachers. This brought them into conflict with the Church, and after their condemnation as heretics by the Third Lateran Council, the Waldensians began to preach rejection of the entire ecclesiastical hierarchy. About the same time that Waldo was preaching in France, namely the late twelfth century, groups of laymen and laywomen began to voluntarily undertake a quasi-monastic lifestyle in the Low Countries. Known as Beghards (men) and Beguines (women), these groups received a mixed reception. They attracted a degree of official suspicion (especially those members who engaged in more mystical practices), and they also enjoyed the support of some high-ranking and influential churchmen. Consequently, periods of papal approval alternated with periods of persecution. The Beguines and Beghards were occasionally associated with the Brethren of the Free Spirit, a nebulous group that apparently believed that God is in all things and that the mystical union of the individual soul with the Holy Spirit obviated the need for organized religion and its practices.

The second major thread in later medieval heresy was a dualistic faith known as Catharism (or Albigensianism) but often called Manicheism in medieval sources, although there is no clear connection between the Manichees of Late Antiquity and the medieval Cathars. Cathar dualism held that there are two gods: the evil, worldly, fleshy God of the Old Testament and the good, spiritual God of the New. Such beliefs, possibly with ties to early Gnostic Christianity, emerged in the Balkans in the tenth century, and Bogomilism (as the Eastern form of Christian dualism is called) spread to the Latin West along trade routes by the early twelfth century. It took root most thoroughly in Languedoc (southern France), where the Cathar Church became a viable alternative to the Roman Church. The Roman Church responded by condemning Cathar beliefs at a series of councils and in numerous papal letters, by instituting the Inquisition as a method of dealing with heresy, by approving new orders of preachers (the Dominicans and Franciscans), and in the end by calling for an internal crusade

(the Albigensian Crusade, 1209–1229). As a result, Catharism effectively disappeared from western Europe by the end of the fourteenth century.

The third major category included those groups that began as attempts to reform the Church but eventually, due to frustration with the ecclesiastical authorities or internal theological developments, split with orthodox Christianity entirely. In fourteenth-century England the followers of John Wyclif (1320–1384), known as the Lollards, called for the translation of the Bible into English, minimizing the role and authority of the priesthood, and adoption of a life of poverty and piety. Although heavily persecuted for centuries, some elements of Lollardy proved influential in the English Reformation. In Bohemia, the Hussites (followers of Jan Hus, ca. 1359–1415) proved troublesome to the established Church. Although the Hussite movement began mainly with demands for greater lay participation in the liturgy and removal of the clergy from the political sphere, it eventually developed into a national Church that was able to maintain itself as a religious, social, and military force, despite several crusades launched against its Bohemian devotees, until well after the medieval period. Both the Lollards and the Hussites influenced the Protestant Reformation of the sixteenth century, by which point the papacy was no longer able to present itself as the arbiter of orthodoxy for all of western Europe.

—Stephen A. Allen

Bibliography

- Cohn, Norman. *The Pursuit of the Millennium: Revolutionary Millenarians and Mystical Anarchists of the Middle Ages*. Oxford: Oxford University Press, 1970.
- Grundmann, Herbert. *Religious Movements in the Middle Ages: The Historical Links between Heresy, the Mendicant Orders, and the Women's Religious Movement in the Twelfth and Thirteenth Century, with the Historical Foundations of German Mysticism*. Translated by Steven Rowan. Notre Dame, IN: University of Notre Dame Press, 1995.
- Lambert, Malcolm. *Medieval Heresy: Popular Movements from the Gregorian Reform to the Reformation*. Oxford, UK: Blackwell, 2002.
- McGinn, Bernard. *Visions of the End: Apocalyptic Traditions in the Middle Ages*. New York: Columbia University Press, 1998.
- Moore, R. I. *The Formation of a Persecuting Society: Power and Deviance in Western Europe, 950–1250*. Oxford, UK: Blackwell, 1987.
- Oakley, Francis. *The Western Church in the Later Middle Ages*. Ithaca, NY: Cornell University Press, 1979.
- Southern, R. W. *Western Society and the Church in the Middle Ages*. Harmondsworth, UK: Penguin Books, 1970.

Conversions in Iberia

The Iberian Peninsula experienced two significant conversion movements in the European Middle Ages: from Christianity to Islam after the Muslim conquest in the eighth century, and from Islam and Judaism to Christianity in the course of the long reconquest of the eleventh through fifteenth centuries. Neither Muslim conquest nor Christian reconquest had as an object the conversion or expulsion of infidels; rather, they aimed at the displacement of the vanquished ruling classes and the redirection of tax revenues to the conquerors' fisc. That said, the success of the victors' societies provoked conquered peoples to adopt the cultural and religious practices of the new regimes to the measure that these were seen to fill needs that their own cultures could not provide. Under Christian rule, official coercion, popular violence, and proselytizing all failed ultimately to convert or integrate Jews and Muslims.

Scholarly opinion varies regarding the rate of conversion of Christians to Islam under Muslim rule, but the broad consensus is that the overwhelming bulk of the native population had converted by the late ninth century. Christians who adopted the cultural and linguistic manifestations of Islam but who retained their faith (known as *Mozarabs*) remained a significant minority into the twelfth century despite emigration to Christian lands. The descendants of converts (Arabic *muwallads*) often adopted the genealogy of Islamic patrons and were thus profoundly integrated into Andalusian society, although rebellions in the ninth century demonstrated that they maintained a distinct identity until that time. Jewish conversion to Islam was limited, but cultural assimilation was dramatic.

Under Christian rule before 1492, native Jews and Muslims (*Mudejars*) tended to be involved in

royal, ecclesiastical, and local economies (the former as financiers, the latter as producers and laborers) to such a degree that it was rarely in the interests of clerical or secular institutions to actively promote conversion. Nevertheless, the missionary ideal was publicly promoted, although subtle legal obstacles were often presented to would-be converts, who for their part found that adopting the Christian religion was no guarantee of social acceptance. In the thirteenth century, missionary work was undertaken by the Dominicans and Franciscans (including the lay brother Ramon Llull), who obliged non-Christians to attend sermons, studied the Hebrew and Arabic scriptures, lobbied against Muslim and Jewish participation in Christian society, wrote polemics, and engaged in public debates. None of these techniques yielded much success, except among the Muslim slave population, whose members saw conversion as a step toward manumission.

In the fourteenth century religious and social boundaries became more rigid as increasingly elaborate codes of dress and conduct were prescribed for minority members. Pressure on Jews increased with Christian competition in the economic spheres that they had previously dominated, and as clerics, frustrated by their failure to rationally convert Jews, characterized them as obstinate. Finally, these pressures increased as the population at large came to perceive marginal groups (including lepers and Muslims) as responsible for its misfortunes. Occasional outbreaks of violence, particularly during Eastertime, culminated in widespread pogroms in 1391. In the aftermath of these events many Jews converted out of either fear or opportunism, some secretly maintaining their beliefs as crypto-Jews (*Marranos*). Converts, however, remained marginalized by a society that distinguished between “old” and “new” Christians. In 1492, the Spanish kingdoms adopted policies that called for conversion or execution (with the option of exile in Castilian and Aragonese lands). Many Jews fled abroad, particularly to Muslim lands and the Netherlands; those who remained became a favorite target of the Inquisition.

Officially marginalized, Muslims occasionally rose in local revolts, which were sometimes responded to with mass deportations. Perceived, however, as less of a threat than the Jews, Mude-

➤ AFTER 1492—AN EPILOGUE

The sixteenth century was characterized by persecution, expulsion, and forced conversion in Portugal (1497), Castile (1502), Navarre (1515), and Aragon and Valencia (1526). Later in the century, the Inquisition and the prohibition of traditional culture prompted further revolts among the converts (*Moriscos*), while increasing reactionaryism in the Spanish Church and society led to the promulgation of decrees of expulsion from 1609. Over the following decade the Moriscos were exiled and sought refuge in North Africa and Ottoman territories.

—Alfred J. Andrea

jars’ resistance to conversion did not tend to elicit the violent reaction that the Jewish presence did until the late fifteenth century. Following the fall of Granada in 1492, pressure increased, thanks in part to the machinations of Archbishop Cisneros of Toledo and the military threat posed by the Turks.

—Brian A. Catlos

Bibliography

- Bulliet, Richard. *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*. Cambridge, MA: Harvard University Press, 1979.
- Burns, Robert I. *Muslims, Christians and Jews in the Crusader Kingdom of Valencia*. Cambridge: Cambridge University Press, 1984.
- Catlos, Brian A. “Conversion: Iberia.” In *The Crusades: An Encyclopedia*, edited by Alan V. Murray. Santa Barbara, CA: ABC-CLIO, 2006.
- Coope, Jessica. *The Martyrs of Córdoba: Community and Family Conflict in an Age of Mass Conversion*. Lincoln: University of Nebraska Press, 1995.
- Kedar, Benjamin Z. *Crusade and Mission: European Approaches toward the Muslims*. Princeton, NJ: Princeton University Press, 1984.
- Webster, Jill. *Conversion and Co-existence: The Franciscan Mission in the Crown of Aragon*. Leiden: Brill, 1996.

Mozarabs

The Christian minority of Muslim-dominated Iberia that adopted the language and outward manifestations of Arabo-Islamic culture came to

➤ SISNANDO DAVÍDEZ

Sisnando Davídez, a Portuguese Mozarab, is emblematic of the changes that took place in the status and fortunes of Mozarab Christians with the advent of the Christian Reconquista in the mid-eleventh century. Having served as an official of the Muslim ruler of Seville, he became the first governor of Coimbra for Ferdinand I of Castile and León (1064) and of Toledo for his son Alfonso VI (1085), also serving as envoy to the courts of Zaragoza and Granada. In a famous speech to the Taifa king Abd Allah ibn Bulughghin, he enunciated Alfonso's program of Christian reconquest.

—Alfred J. Andrea

be referred to as Mozarabs (from the Arabic word *mustarib*, “would-be Arab”) in the later European Middle Ages.

In the centuries following the Islamic conquest of Iberia (711–715), the overwhelming majority of the native population converted to Islam, leaving a small but cohesive Christian minority, strongest in Toledo (the Visigothic metropolitanate) and Córdoba (the Muslim capital). Offered security in exchange for submission by the Islamic pact of *dhimma* (the “pact of protection” granted by Islam to non-Muslims), Christians were free to live and worship according to their traditions provided they did not affront Islam or challenge its authority. An episcopal structure survived at least into the ninth century, but family-dominated monasteries seem to have comprised the nuclei of piety.

Social pressures resulting from conversion to Islam and the encroachment of Arabic culture, and which precipitated the incidents of the mid-ninth-century “voluntary martyrs” of Córdoba, are reflected in the writings of St. Eulogius (d. 859), archbishop of Toledo and himself one of the last of these martyrs, and his contemporary Paul Alvar. The martyrs can be divided into two types. Technical apostates, that is, Muslim men's children who had been raised under the influence of a Christian mother or relatives, were put to death if they persisted in the Christian faith. Deliberate martyrs, by contrast, were Christians who provoked their own deaths by pub-

licly insulting the Islamic faith and subsequently refusing the various offers made by the Muslim authorities to secure pardon. Yet many Christians occupied important posts in the Muslim administration through the period of the caliphate (to ca. 1035); the tenth-century courtier, scientist, and diplomat Bishop Reccemund (Arabic Rab ibn Zayd) is an example. Some also chose to emigrate, settling in the frontier zone of the river Duero, where examples of their churches survive to this day.

With the fragmentation of the caliphate and the rise of the independent Taifa (factional) kingdoms in the eleventh century, the politico-military initiative passed to the Christian principalities of the Iberian Peninsula, provoking profound changes in the situation of the Mozarabs. With the arrival of the Almoravids and their domination of the Taifa kingdoms, the position of Mozarabs under Muslim domination deteriorated. Allegations that they had abetted the famous raid of Alfonso I of Aragon into the south of Spain in 1132 and thus abrogated their pact of protection led to a mass deportation to North Africa, where they and their descendants remained until the advent of the Almohads in the late twelfth century.

By the late eleventh century the Mozarabs clearly comprised a distinct ethnic group, a fact recognized in the privileges and promulgations of the Aragonese and Castilian kings. Despite their contacts with Christendom abroad, they had remained isolated from Latin innovations and maintained, for instance, their own “Visigothic” liturgy. This soon became a target for agents of the Roman Church, notably the Cistercians and Pope Gregory VII (r. 1073–1085), who provoked Alfonso VI to ban the rite following a rigged trial by ordeal to which it was subjected in 1077. Increasingly marginalized in Toledo itself, some Mozarabs emigrated to the principality of Valencia or to Aragonese lands, where they joined local Mozarabs and refugees whom Alfonso I had led back from his incursion into Almoravid territory.

Thanks to their facility with the Arabic language, learned Mozarabs played an important role in the transmission of classical and Arabic learning to the West, notably through the translation activity that took place in Toledo. But apart from

there, within a century or so Mozarabs seem to have been all but completely assimilated by the culture of the Latin Christian settlers who arrived with the Christian conquests. In 1500 the Mozarabic rite was rehabilitated, undoubtedly because it could no longer be construed in any way as a threat to the Roman Church.

—*Brian A. Catlos*

Bibliography

- Burman, Thomas E. *Religious Polemic and the Intellectual History of the Mozarabs, c. 1050–1200*. Leiden: Brill, 1994.
- Catlos, Brian A. “Mozarabs.” In *The Crusades: An Encyclopedia*, edited by Alan V. Murray. Santa Barbara, CA: ABC-CLIO, 2006.
- Coope, Jessica. *The Martyrs of Córdoba: Community and Family Conflict in an Age of Mass Conversion*. Lincoln: University of Nebraska Press, 1995.

Western European Visions of World Conversion

The eleventh through the fifteenth centuries were an era of broadening horizons for the Christian inhabitants of Western Europe, whose activities outside their borders included political expansion, crusading, pilgrimages, missionary work, and long-distance trade. At the same time, this growing involvement in the wider world was accompanied by an imagined expansion of what Christian Europeans envisioned as “Christendom” (*Christianitas*). Contemporaries defined Christendom as the community of right-believing and right-practicing Christians who were assembled under the authority and spiritual guidance of the Roman papacy. In reality, Christendom was confined to the regions of the Western, or Latin, Church. In theory, however, Christendom was without limits, able to encompass both the Western and Eastern Churches along with numerous peoples who had yet to hear the word of Christ. Reacting to their growing reach in the world, the Christians of Western Europe began to predict that believers and nonbelievers everywhere would be gathered together under the authority of the Roman Church before the consummation of history, namely the Last Judgment as prophesied in the Book of Revelation. This vision of a global conversion before the End of Time persisted into the early modern era of Europe’s overseas

expansion, continuing to shape how Christian Europeans saw their place in both the progression of history and the world.

From their origins, Christian ideas about the destiny of their Church and the meaning of history were universal in scope. According to the Gospels, Christ himself predicted that the end of history was near and would be accompanied by horrible apocalyptic tribulations. He also declared that his message of salvation would be offered to all the peoples of the world before the consummation of time (Matthew 24:14) and commanded his disciples to baptize among “all the nations” in the name of the Father, Son, and Holy Spirit (Matthew 28:19), thereby forming “one flock” of believers under “one shepherd” (John 10:16). Another tradition maintained that after the “fullness” of the Gentiles (i.e., non-Jewish peoples) had entered into the Church, a remnant of Israel (i.e., unconverted Jews) would also turn to the Christian faith (Romans 11:25). Over the ensuing centuries as the expectation of an imminent apocalypse waned among mainstream Christian communities, there was a growing realization that the universal spread of the Gospels, begun by the apostles, was an ongoing and as yet unfinished process.

During the eleventh through the fifteenth centuries, historical circumstances in Western Europe infused apocalyptic thought with a new vitality, reshaping ideas about the end of history and the universal spread of the Christian faith to the ends of the world. The growing power and authority of the Roman papacy during this period brought with it a sense that the bishops of Rome and their followers would oversee the creation of a global flock before the end of history. Two factors in particular contributed to this development. First, starting around the middle of the eleventh century, the so-called reform movement in the Roman Church brought about a far-reaching revolution in notions of papal authority over the universal body of the faithful. Although the ideology of the reform papacy was not explicitly set in apocalyptic terms, papal efforts to reshape the medieval world order were implicitly eschatological, anticipating the realization of God’s plan for his Church. Second, at the close of the eleventh century, the capture of Jerusalem from its Muslim rulers by the First Crusade on July 15,

► CHRISTOPHER COLUMBUS AND THE BOOK OF PROPHECIES

During 1501–1502, between his third and fourth voyages to the “New World,” Christopher Columbus and an assistant, a Carthusian monk from Italy named Gaspar Gorricio, compiled a collection of biblical authorities, prophecies, and other sources that seemed to predict both the Christian recovery of the holy places in Jerusalem and the conversion of the world’s peoples to Christianity. This collection, which became known as the *Book of Prophecies*, suggested that Columbus’s own voyages of exploration were part of a divine plan for the course of history, one that would see the spread of the Catholic Church throughout the globe before the approaching End of Time under the authority of his patrons, King Fernando II (r. 1479–1516) of Aragon and Queen Isabel (r. 1474–1506) of Castile.

It is clear from the *Book of Prophecies* along with his own correspondence and a number of works annotated in his own hand (including Marco Polo’s *Il milione*) that Columbus had read widely before and during his previous voyages in the fields of both geography and history, including materials that speculated about the course of future events. In his own writings, he drew upon a wide range of sources, including the well-known seventh-century prophecy of Pseudo-Methodius and texts that were attributed to the famous twelfth-century apocalyptic thinker Joachim of Fiore. In addition to seeking gold and trade routes, Columbus believed that he had a duty to spread Christendom throughout the entire globe, thereby helping to realize the “one flock” under “one shepherd” that had been promised by Christ to his disciples (John 10:16). Columbus persisted in these beliefs until the end of his life. During his fourth voyage, for example, writing to Fernando and Isabel, Columbus again predicted that the holy city of Jerusalem would be rebuilt by Christian hands and that the Christian faith would be spread to all the peoples of the world. In this sense, the voyages of Columbus, who is often portrayed as a modern thinker who dared to reject the received knowledge of the medieval past by journeying into the unknown, represented yet another stage in a long-standing Christian dream of world conversion.

—Brett Edward Whalen

1099, contributed to an unprecedented sense among the followers of the Roman Church that they were carrying out God’s will on a historical stage in a manner that had not been seen since the days of biblical Israel.

The twelfth and thirteenth centuries would prove to be an even more creative period in Christian European theories about the progression of history and the future of their Church due in large part to the apocalyptic thought of the highly influential mystic, biblical commentator, and monastic reformer Joachim of Fiore (1140–1202). Joachim envisioned a future union of the Latin and Greek Churches followed by the conversion of the Jews and the spread of Christianity to pagan peoples by a new spiritual order of monks. At points, he indicated that perhaps even Muslims would convert to the Christian faith. In 1204 not long after Joachim died, the capture of Constantinople by the Fourth Crusade seemed to promise to some in the Western Church, including Pope Innocent III (r. 1198–1216), that the reunion of Latins and Greeks was at hand, presaging the conversion of pagan peoples and the recovery of the Holy Land for Christendom before the end of time. Over the subsequent decades, the development of the Mongol empire connected Christian Europeans to a larger world than they had previously thought possible, suggesting that an alliance of converted Mongols and Christians might defeat Islam once and for all. In this environment, prophecies and apocalyptic schemes about the union of all Christian churches, the conversion of non-Christian peoples, and the spread of Christianity to the ends of the earth circulated with increasing popularity. This was particularly the case around the time of the Second Council of Lyons (1274), when representatives of the Greek Church formally (if briefly) recognized the authority of the Roman papacy while the papacy carried out diplomatic relations with a Mongol legation.

Generally speaking, the fourteenth and fifteenth centuries were a period of temporary contraction for Western Europe, marked by war, famine, plague, and economic dislocation. Although its prestige was damaged by the period of the Avignon papacy (1309–1378) and the Great Schism (1378–1415), the papacy continued to envision itself as responsible for the reunion

of Christian peoples around the world along with spreading the Christian faith among infidels and pagan peoples. Even some of the most vehement critics of the “decadent” Avignon papacy, such as the Franciscan prophet and biblical exegete John of Rupescissa (ca. 1310–1365), predicted that the future would bring about a union of Greeks and other Eastern Christians, Jews, pagans, and Muslims into a single flock that would be assembled under the spiritual guidance of a transformed and purified papacy. Increasingly, however, the dream of converting the world to the Christian faith was assigned to the rising power of national European powers, such as Spain. Christopher Columbus (ca. 1451–1506) typified this continued fascination with prophecy and apocalyptic thought, declaring on several occasions the belief that his voyages of exploration under the authority of the “Catholic Monarchs,” King Fernando II (r. 1479–1516) of Aragon and Queen Isabel (r. 1474–1506) of Castile, were part of a divinely ordained plan to spread the Gospel among all the peoples of the world and to recapture the holy places of Jerusalem from the Muslims. Although secular notions of progress and the civilization mission came to characterize Western European colonialism and imperialism in the modern era, the idea that the West had a providential role to play in the course of global history would continue to inhabit the European imagination for generations to come.

—Brett Edward Whalen

Bibliography

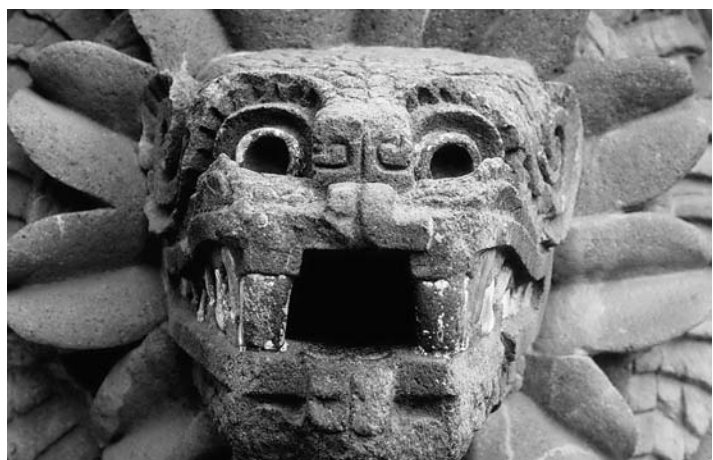
- Daniel, E. R. “Apocalyptic Conversion: The Joachite Alternative to Crusade.” *Traditio* 25 (1969): 127–154.
- Kedar, Benjamin Z. *Crusade and Mission: European Approaches toward the Muslims*. Princeton: Princeton University Press, 1984.
- Lerner, Robert. “Refreshment of the Saints: The Time after Antichrist as a Station for Earthly Progress in Medieval Thought.” *Traditio* 32 (1976): 97–144.
- McGinn, Bernard. “Angel Pope and Papal Antichrist.” *Church History* 47 (1978): 155–173.
- Watts, Pauline Moffitt. “Prophecy and Discovery: On the Spiritual Origins of Christopher Columbus’s ‘Enterprise of the Indies.’” *American Historical Review* 90 (1985): 73–102.
- Whalen, Brett E. *Dominion of God: Christendom and Apocalypse in the Middle Ages*. Cambridge, MA: Harvard University Press, 2009.

The Major Pantheons of Mesoamerica

To the ancient Mesoamericans, the earth as well as the creatures and the forces of the natural world were deemed to be linked to sacred gods or forces. The sky, earth, and underworld were especially sacred. In this regard, caves constituted entrances to the netherworld and consequently represented powerful and magic places. Likewise, they looked upon mountains, which bridged the sky and earth, as sacred. Elements of nature, moreover, took center stage in delineating sacredness. Animals such as jaguars, harpy eagles, sharks, caimans, and others consequently were appropriated throughout Mesoamerica as the images of the gods.

The Olmecs developed the first known codified pantheon and religious structure for Mesoamerica. Were-Jaguar, brought about by the mating of a human and a jaguar of the opposite sex, was the principal deity of the Olmec. According to the cultura madre theory, which postulates a mother culture that deeply influences all subsequent cultures, were-jaguars were primarily rain gods, and it was from the Olmec rain gods that all other Maya, Central Mexican, and Zapotec deities were derived. Olmec deities were generally associated with the powerful creatures found in the rain forests such as the snake, harpy eagle, shark, caiman, and jaguar or combinations thereof.

The Rain Baby was undeniably one of the Olmecs’ most important and enduring deities. The



Carving of Quetzalcóatl, one of the most important gods in the Aztec pantheon. (Corel)

► THE POPOL VUH

The *Popol Vuh* (*The Book of the Community*, or *The Council Book*) is the most important sacred text of the Quiché Maya of the Guatemalan highlands to have survived the Spanish Conquest. Originally written in the hieroglyphic script of the Quiché, the text was reportedly compiled by an anonymous native aristocrat in the mid-sixteenth century in order to preserve Quiché cosmological beliefs. The text was subsequently transcribed by another hand into the Roman alphabet. Largely forgotten until the eighteenth century, it was rediscovered when a Spanish friar, Fray Francisco Ximénez, learned of the existence of the manuscript located in Chichicastenango. Fluent in the Quiché language, he translated it into Spanish, and now this version resides in the Newberry Library in Chicago.

The *Popol Vuh* comprises three sections. The first contains the Maya version of the creation of the earth and its first inhabitants. The second relates the epic story of the Hero Twins and their ancestors. The third part elucidates the founding and evolution of the Quiché dynasties up to the Spanish Conquest.

In its first part, the *Popol Vuh* outlines the creation of the earth and the animals that populated it. It relates several attempts to create

humankind and humanity's subsequent destruction because humans forgot their makers, the gods. After this destructive event, the *Popol Vuh* chronicles the stories of the Hero Twins, Hunalpu and Xbalanque. In this epic the Hero Twins defeat the false sun and vanquish the gods of the Underworld. The last and lengthiest section starts with the Ancestral Couple attempting to create a being who would praise the gods. The result was the first four men, ancestors of the Quiché who were fashioned from maize paste. As they praised their divine makers they flourished, yet their near perfection alarmed the gods, who decided to limit their knowledge only to what was nearby or at hand. Subsequently, the founders journeyed to Tulan Zuyua (the Mountain of the Seven Caves), where they encountered the gods and then transported them home in bundles. Balam Quitzé, one of the four primeval men, subsequently received the deity Tohil (the one who gave humans fire) although only after human sacrifice had begun in his name. This epic manuscript closes with a listing of the 14 lineage heads, or generations, from Balam Quitzé down to his descendants in the mid-sixteenth century.

—John S. Leiby

Personified Earth Cave God represented the earth and the entry point into it. The Olmec Dragon was the principal sky god and was apparently derived from a crested harpy eagle. The Sea God personified by a shark appears infrequently in the iconography of the Olmecs. Mystery nevertheless still clouds the precise identification of Olmec gods, and continuing research and analysis will continue for some time to come.

For the Mayan gods, Paul Schellhas was the first to analyze their pantheon through the Dresden, Paris, and Madrid codices. These three Mayan manuscripts, apparently written between 1200 and 1450, continue to be the only authenticated sources depicting the Maya world (in Yucatán) prior to the Spanish Conquest. In developing his analysis, Schellhas delineated the gods found in the codices by a letter designation in order to lessen the chance of ascribing a tenu-

ous or uncertain meaning to the Mayan deities he studied. God A referred to the skeletal god of death with the name of Cizin (flatulent one). God B (called Chac) referred to the Mayan god of rain and lightning, Ku or Chù. God C, according to Schellhas's schema, represented the god of the north star or the personification of sacredness. God D, one of the most important gods found within the Mayan pantheon, was delineated in the form of the aged creator god and usually went by the name of Itzamma. This god was most closely associated with divination and writing. Other important deities included God E (the god of maize), God G (the sun god), Goddess I (the moon god), God K (associated with lightning, fire, and dynastic descent), God L (an important deity of the underworld), and God N (responsible for supporting the sky). In essence, the Maya maintained that the cosmos was dic-

tated by 13 heavens and 9 hells, all controlled by four chief gods who converged at the cardinal points and consequently held up the world.

To the west and north of the Zapotecs, a remarkable people known as the Mixtecs inhabited the mountains. Yet by the thirteenth century, they had penetrated into the Zapotec heartland. Their system of deities was distinct from but clearly influenced by the Toltecs' system of gods. These Indians carved stone beings referred to as *ñuhu*, which were their gods of the earth and vegetation. One of the more important and enduring deities of the Mixtec was a figure called Yahui (a flying figure wearing a fire serpent headdress and a turtle carapace on his back), who most likely was a lightning god probably appropriated from the pantheon of the Zapotecs.

The Mexica, or Aztecs, and nearly all Central Mexican peoples believed in a glorious past that they attributed to the Toltecs, who ruled from Tula. To Central Mexicans of the period immediately preceding the Hispanic incursion, the Toltecs were the originators of all artistry. In fact, the very name "Toltec" was akin to the word "artist" or "craftsman." According to tradition, they were ruled by a fabled monarch named Quetzalcoatl who lived in a great palace, the buildings of which were oriented to the four cardinal directions. In reality, Quetzalcoatl was none other than a god whom the later Mexica appropriated as their own deity.

At the time of the Spanish conquest the Mexica were polytheistic, worshipping a multitude of gods whom they had largely appropriated from other Mesoamerican civilizations. In the Mexica mind, Tezcatlipoca—generally known as the First Sun—was a particularly powerful deity. He was their war god and the god of festivals and was further believed to be a practitioner of black magic. As such, Tezcatlipoca dominated the early Mexica, who especially worried that he would plunge them into perpetual darkness.

The Second Sun according to the Aztecs emanated from the Toltec leader Quetzalcoatl who was apparently transformed into the god of kindness, holiness, and beauty. The Toltecs asserted that he was only a god because of his humane qualities that were invested with a mortal body. In addition, Quetzalcoatl, the Mexica claimed, was the god of the morning star and of wealth.

Tlaloc, the rain god, presided over the Third Sun, and because of his centrality to successful harvests, the Mexica included him in their pantheon, which also symbolized their dominance over Central Mexico. Tlaloc's female counterpart while creating the Fourth Sun was actually dominated by the Mexicas' primary deity, Huitzilopochtli. According to Aztec/Mexica lore, he was their sun god and war god. Both Tezcatlipoca and Huitzilopochtli were akin to one another. Tezcatlipoca was the god of the night sky and warrior of the north, while Huitzilopochtli was the god of the blue sky and warrior of the south.

—John S. Leiby

Bibliography

- Clendinnen, Inga S. *Aztecs: An Interpretation*. Cambridge: Cambridge University Press, 1991.
- Coe, Michael. *The Maya*. 4th ed. London: Thomas and Hudson, 1987.
- Miller, Mary, and Karl Taube. *The Gods and Symbols of Ancient Mexico and the Maya*. London: Thames and Hudson, 1993.
- Richmond, Douglas W. *The Mexican Nation: Historical Continuity and Modern Change*. Upper Saddle River, NJ: Prentice Hall, 2002.

Cosmological Duality in the Andean World

Duality, the notion that the cosmos, or world, is kept in balance by opposite forces, pervaded the earliest imagery of the Andean peoples, and served as an underlying principle for all aspects of the Inca world, from its kinship systems to the fabric of its government to its religious beliefs and practices. In his *Account of the Ancient Kingdom of Peru* (1613), the native chronicler Pachacuti Yanqui, an Andean of non-Inca heritage, presented a sketch of a great golden altar in the then-destroyed Temple of the Sun at Cuzco that depicted a universe structured in terms of dual oppositions: Sun is parallel to Moon, Morning to Evening, Male to Female, Dry Season to Rainy Season.

A dual system of social organization predated the Incas and still exists in many parts of the Andes, and much, if not all, of Andean oral tradition appears to be structured around dual, opposing, or inverse elements, such as the conqueror and the conquered or the insider and the outsider. A

➤ THE ORIGIN OF THE INCAS

Garcilaso de la Vega (1539–1616), a historian whose Spanish father was a conquistador and whose Andean mother was a cousin of the last Inca kings, relates in his *Royal Commentaries* the legend of the origins of the family of royal Incas, a story that he had often heard from his mother and other Inca relatives. In reading this story, keep in mind that each Inca king was expected to marry his sister, who would serve as primary wife and bear the title of “Coya.” If he had no sister, he married the woman of highest possible rank.

“[I]n olden times, . . . people . . . lived like wild beasts, with no religion or government and no towns or houses, and without tilling or sowing the soil, or clothing or covering their flesh. . . . Our father the Sun . . . took pity and was sorry for them, and sent from heaven to earth a son and a daughter of his to . . . give them precepts and laws by which they would live as reasonable and civilized men. . . . [H]e told them . . . I establish and nominate you as kings and lords over all the people you may thus instruct with your reason, government, and good works. . . . [The son and daughter reach the valley of Cuzco.] Then our Inca said to his wife: ‘Our father the Sun bids us remain in this valley and make it our dwelling place and home in fulfillment of his will. It is therefore right,

queen and sister, that each of us should go out and call together these people so as to instruct them and benefit them as our father the Sun has ordained.’ . . . Thus our imperial city began to be settled: it was divided into two halves . . . upper Cuzco and . . . lower Cuzco. The distinction did not imply that the inhabitants of one half should excel those of the other. . . . All were equal like brothers, the children of one father and one mother. The Inca only wished . . . that the fact that some had been gathered by the king and others by the queen might have a perpetual memorial. . . . In imitation of this, there was later the same division in all the towns, great and small, of our empire.”

According to the legend, the Inca then instructed the men in the crafts of agriculture, irrigation, tool making, and making footwear, and the queen instructed women in the arts of spinning and weaving and other domestic duties.

—Alfred J. Andrea

Source

Garcilaso de la Vega, *El Inca, Royal Commentaries of the Incas and General History of Peru*, translated by Harold V. Livermore (Austin: University of Texas Press, 1966), 1:42–45.

dual solar cosmology was key to the belief system of the people of Peru’s central coast, where the Sun’s two sons, Pachacamac and Vichama, opposed each other as night and day, respectively. On the north coast the deity Chicopaec was described as the creator, while Aiapaec was identified as the maker. In Huarochirí, the regional cult of the highland male deity Paria Caca was complemented by the female cult of Chaupi Ñamca in the lower valleys toward the coast. Together, their cults constituted a cosmology formed from the essential interaction between coast and highlands.

In Andean myth and history, characters do not necessarily remain static. They can migrate between the opposite categories of *hanan*, a state of male dominance and structure, and *burin*, a state of female subservience and chaos. Thus, the story relating the dispute in 1438 between

Inca Yupanqui and his father, Viracocha Inca, culminated with the deposed Viracocha Inca forced to wear women’s clothing and drink dirty *chicha*, a beer made from maize. Inca Yupanqui (now renamed Pachacuti Inca) assumed the dominant category of *hanan*, while the disgraced Viracocha became subservient. Likewise, the sun cult, patronized by Pachacuti Inca, replaced the previous religious focus of his father on Viracocha, the creator deity, whose name he had assumed upon taking the office of Inca. Whereas Viracocha represented primeval birth, Pachacuti’s male sun symbolized the period of expansion and the height of the Inca state.

—Paul R. Steele and Catherine J. Allen

Bibliography

Maybury-Lewis, David, and Uri Almagor, eds. *The Attraction of Opposites: Thought and Society*

in the Dualistic Mode. Ann Arbor: University of Michigan Press, 1989.

Platt, Tristan. "Mirrors and Maize." In *Anthropological History of Andean Politics*, edited by John V. Murray, Jacques Revel, and Nathan Wachtel. New York: Cambridge University Press, 1986.

Steele, Paul R., with the assistance of Catherine J. Allen. *Handbook of Inca Mythology*. Santa Barbara, CA: ABC-CLIO, 2004.

Andean and Mesoamerican Sacred Caves

The pre-Hispanic populations of the Andes and Mesoamerica incorporated the natural landscape, especially caves, into their ritual practices, local mythologies, and cosmologies. Andean and Mesoamerican origin stories tell of the emergence of ancestors from caves. Such mythologies no doubt developed from the long-standing use of the numerous caves scattered throughout these varied landscapes and incorporated into the sacred landscape or built environment of many sites.

The minimal records of preconquest Andean beliefs and practices derive largely from the Inca, the ruling population at the time of Spanish arrival and the introduction of writing to South America. The records tell of Inca origin, stories meant to legitimate Inca rulership and to explain social hierarchies among Andean culture groups. While written down after Spanish arrival and thus biased by both the Inca informants and Spanish chroniclers, the stories provide insight into pre-Hispanic Inca worldviews.

The Inca legitimated their rule based in part on myths about their origin in which they claimed to be the first humans to emerge onto earth under the guidance of Viracocha, the creator. The founding ancestors of the Inca, foremost among them Manco Capac, reputedly exited at first sunlight from the central cave at Pacariqtambo, roughly 22 miles (35 kilometers) south of the capital city of Cuzco. In some versions of the myth this cave was connected to an underground pathway that extended from an even more distant and symbolic source, Lake Titicaca in southernmost Peru. In this case the Inca came into being at this mountain lake, which in Andean cosmology was symbolic of the greater sea that encircled but also surfaced within the ter-

restrial mountains. The Inca thus claimed connection to the sun, Inti, who shone on them first in creation, as well as to the sea through connection to the greatest mountain lake of the Andes, Lake Titicaca. From this locale they further linked themselves to the Tiwanaku (100–1200 CE), the preceding Andean culture whose impressive stone monuments still distinguish their ancient lakeside capital city.

The Inca origin myths allude to the symbolic role of caves in Andean thought as conduits for the terrestrial realm and as links to sources of water. Caves worshipped in the Andean landscape are commonly associated with springs, lakes, or even canals. Water is perceived to travel underground throughout the mountains, thus connecting distant locations through association of water sources. Many such conceptions of the world design and the role of caves continue in modern Andean communities.

The principal views of caves found in the Andes, as locations of origin or as sources of water, are likewise encountered in the Mesoamerican region. A number of Mesoamerican myths that survive from the Post-Classic period (1000–1500 CE) tell of a seven-chambered cave from which local ethnic groups emerged. Illustrations of this mythic locale, called Chicomoztoc in Nahuatl, the language of the Aztecs and other Central Mexico populations, appear in surviving post-Conquest codices, or texts. The grottos under the Pyramid of the Sun in the center of Teotihuacán, Mexico, may have recalled physically this mythic cave site as early as 100 CE. The natural cavern formations, which were subsequently altered and enhanced, likely determined the location of the Pyramid of the Sun. The final chambers lie directly beneath the pyramid summit, extending from an access at the pyramid's central stairway. Holley Moyes and James Brady note that a number of sites with man-made caves, which model the seven-chambered cave of Chicomoztoc, occur throughout the Maya Highlands and Central Mexico, thus reinforcing the importance and wide distribution of this origin myth and its physical replication.

In Maya cosmology, the four-cornered terrestrial world may be demarcated by the presence of four directional mountains and a fifth at the center, an ideal by which to model the local

community. Each mountain, or at least ideally the central one, contained a cave. Heyden and other scholars have readily acknowledged the common use of caves and images of caves in naming various Mesoamerican site centers. In fact, the Classic Maya community was termed *chan ch'een*, or “sky cave.” Pre-Conquest and post-Conquest Mesoamerican communities often centered their site on particular caves or *cenotes* (sink holes); these served practically as water holes for the community and symbolically as *axes mundi*.

Caves have received long-standing ritual use in various Mesoamerican practices, given their perceived role as residences for certain deities or as portals to an underworld or otherworld. Such caves, as possible portals, were visually rendered in Mesoamerican iconography through a quatrefoil design. From the time of the earliest Olmec thrones (1000 BCE), which depict elite individuals seated within or emerging from cavernlike niches, Mesoamerican rulership was linked with cave entrances. Palace doorways in some Late Classic (700–900 CE) Yucatan sites were decorated with jaguar mouths, creating the symbolic image of the ruler's emergence from this metaphoric cave opening. During the Late Post-Classic period, Aztec rulers replicated this theme in the impressive rock-cut constructions at Malinalco, in Central Mexico.

Caves in Mesoamerica were closely associated with water, thunder, and rain. Following upon ethnographic work with the Q'eqchi Maya, James Brady has addressed the nature of sacred landscapes in pre-conquest Mesoamerican centers. In one major study Brady focused on the arrangement of the Late Classic Maya site of Dos Pilas, specifically its integration of both large- and small-scale underground caves into the built environment. He demonstrated that the Cueva de los Murciélagos (Bat Cave) was situated directly beneath the most elite complex at Dos Pilas, the Bat Palace. As the point of resurgence for a network of underground channels, the Cueva de los Murciélagos amplified the sound of rushing water at the start of the rainy season into the site complex. This audible hydraulic power presumably was associated with the elite of the Bat Palace and their role(s) in connection to this natural resource.

Many other Mesoamerican centers had caves or cenotes incorporated into their design and

layout. The caves at Dos Pilas evince extensive use as early as the Late Pre-Classic (200 BCE–200 CE), despite the largely Late Classic (700–900 CE) construction and settlement of the site. The Pre-Classic deposits thus speak to the long-standing ritual practice and worship of the caves prior to their integration into the site layout and appropriation by the elite residents. Research into such sacred landscapes and built environments is still relatively innovative in Mesoamerican studies. Undoubtedly, investigations such as those performed at Dos Pilas and Teotihuacán will provide for ever-greater understanding of the role of caves within the visual programs, cosmologies, and sociopolitical structures of the Mesoamerican region.

—Kimberly L. Jones

Bibliography

- Brady, James. “Settlement Configuration and Cosmology: The Role of Caves at Dos Pilas.” *American Anthropologist* 99(3) (1997): 602–618.
- Heyden, Doris. “An Interpretation of the Cave underneath the Pyramid of the Sun in Teotihuacán, Mexico.” *American Antiquity* 40 (1975): 131–147.
- Moseley, Michael E. *The Incas and Their Ancestors: The Archaeology of Peru*. London: Thames and Hudson, 2001.
- Moyes, Holley, and James E. Brady. “The Heart of Creation; the Heart of Darkness: Sacred Caves in Mesoamerica.” *Expedition* 47(3) (2005): 31–36.
- Sherbondy, Jeanette E. “Water Ideology in Inca Ethnogenesis.” In *Andean Cosmologies through Time: Persistence and Emergence*, edited by Robert V. H. Dover, Katharine E. Seibold, and John H. McDowell. Bloomington: Indiana University Press, 1992.
- Townsend, Richard F. “Malinalco and the Lords of Tenochtitlan.” In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by Elizabeth Hill Boone. Washington, DC: Dumbarton Oaks, Trustees for Harvard University, 1977.
- Urton, Gary. *The History of a Myth: Pacariqtambo and the Origin of the Inkas*. Austin: University of Texas Press, 1990.

Ball Games North of the Rio Grande

Traditional ball games have been and continue to be key cultural elements for many Native peoples throughout the Western Hemisphere. Many of the ball games and their associated traditions

differ, and the ball games offer different meanings in different contexts. Ball games have been the focus of ritual religious activity in some communities and on occasion have been associated with healing practices. In some communities they have served primarily as social events that are part of both religious and secular festivals, and in some cases they have had no apparent sacral meaning.

The earliest account of a ball game written by a European comes from the *Jesuit Relations*, in which in 1636 Jean de Brébeuf wrote about the game occurring in the area then known as New France. He said that a Huron medico-religious specialist, whom he characterized as a “sorcerer,” might prescribe a game of “crosse” for the benefit of the entire nation or for a sick individual, and sometimes a person would dream that a game was necessary for recovery from illness. Racket and ball games were the most widespread of those ball games that had explicit associations with Native American religious systems.

Research suggests that Native peoples have played many different types of ball games, including double ball, shinny, and games that employ rackets now widely known as “lacrosse-type,” as well as engaging in ball racing and ball throwing. Racket games in general, and specifically those versions played by communities in what is now the northeastern United States and southeastern Canada, are generally considered to be the precursors to the sport of lacrosse. At one time indigenous groups that played racket and ball games included many along the Eastern Seaboard of North America and across the inland Southeast, as well as in the Great Lakes region and surrounding areas. A few tribes in present-day California and the Pacific Northwest region of North America also played versions of the game.

Many Native American communities have preserved accounts of ball games in cultural narratives in which nonhuman beings played against humans, or in some cases against each other in a time before humans inhabited the earth. In the Cherokee narrative tradition there are accounts of ball games played by supernatural beings (the Sons of Thunder) and games between teams of birds and four-legged animals, as well as famous games between Cherokee teams and teams from other nations. Choctaw, Muskogee, Seminole, Mohawk, and Onondaga narratives of similar games

between birds and animals exist, and in all the pivotal figure of the bat is rejected by one or both of the teams before being allowed to play. The narratives differ regarding such details as which team finally accepted the bat and why, but the team that did so always wins in the end.

—Michael J. Zogry

Bibliography

- Culin, Stewart. *Games of the North American Indians*. 1907. Reprint, New York: Dover, 1975.
- Eyman, Frances. “Lacrosse and the Cayuga Thunder Rite.” *Expedition, The Bulletin of the University Museum of the University of Pennsylvania* 6, no. 4 (1964): 15–19.
- Mooney, James. “The Cherokee Ball Play.” *American Anthropologist* 31 (1890): 105–132.
- Mooney, James. *Myths of the Cherokee and Sacred Formulas of the Cherokees*. Nashville: C. Elder Bookseller, 1900.
- Speck, Frank G., in collaboration with Alexander General (Deskáheh). *Midwinter Rites of the Cayuga Long House*. 1949. Reprint, Lincoln: University of Nebraska Press, 1995.
- Vennum, Thomas, Jr. *American Indian Lacrosse: Little Brother of War*. Washington, DC: Smithsonian Institution Press, 1994.
- Zogry, Michael J. *Anetso, the Cherokee Ball Game: At the Center of Ceremony and Identity*. Chapel Hill: University of North Carolina Press, 2010.
- Zogry, Michael J. “Ball Games.” In *American Indian Religious Traditions: An Encyclopedia*, edited by Suzanne J. Crawford and Dennis F. Kelley. Santa Barbara, CA: ABC-CLIO, 2005.

Major Religious Traditions in Oceania

Oceania, a region comprising most of the islands in the Pacific Ocean, including Australia, New Guinea, Island Melanesia, Micronesia, and the Polynesian Triangle of Hawaii, New Zealand, and Rapa Nui (commonly known as Easter Island), is home to a diverse array of cultures, thousands of languages, and an equal variety of religious practices. The range of religions in Oceania prior to the arrival of European missionaries in the eighteenth century, many of which are still practiced today, included everything from ancestor worship and belief in the supernatural power of nature in places such as Australia and New Guinea to official state-level religious practice in the kingdoms of Hawaii.

➤ TABOOS

The term “taboo” is used commonly in modern Western culture to refer to that which is forbidden, or off-limits, both physically and ideologically. Few people know that this term has ancient roots, which can be traced back linguistically to the ancestral Proto-Oceanic (*Tabu*) and Proto-Malayo-Polynesian (*Tabus*) languages from many of the contemporary languages of the Pacific Islands (for example, *kapu* in Hawaiian). The concept of taboo or *tapu*, along with *mana*, formed one of the core concepts in almost all Oceanic religions. Based on deep religious beliefs, taboos structured many aspects of daily life in Oceania. More than dictating what was off-limits, taboos were about determining what one did to ensure that the universe was ordered appropriately. Taboos determined, among other things, whom one could marry, when certain resources could or could not be harvested, and even when, what, and with whom people ate. For example, bananas, pork, and certain kinds of fish were off-limits for Hawaiian women, while the belief in the importance of upholding *kapu* in food preparation can be seen archaeologically in Hawaiian house compounds (*kau hale*), which often have separate cookhouses for men and women, especially in chiefly houses.

—James L. Flexner

Two important concepts that are pervasive in Oceanic religions are *mana* and *tabu* (*taboo*). *Mana* is a concept that is almost universal to Oceanic religions and can be taken to mean “spiritual or supernatural power,” though the term may mean more specific things in different contexts. Other important aspects of Oceanic religion are worship of ancestors or ancestral spirits and the belief in supernatural power dwelling in the natural world. Materially, upright stones are commonly involved in Oceanic religious rituals, as is the consumption of kava (*Piper methysticum*), a plant with mild narcotic properties whose use can be traced to ancestral Polynesian rituals. While some general patterns are consistent across time in Oceanic religions, several unique developments can be traced to the period spanning roughly 1000–1500 CE, especially in Polynesia and Micronesia. This is not to

say that religious practices in Australia and Island Melanesia were somehow static; rather, archaeological evidence for monumental architecture reveals a different understanding about religious practices in the past than can be inferred from contemporary ethnography. Future research may produce a clearer picture of religion in these areas during the period in question, especially in Island Melanesia.

The continent of Australia was first settled at least 40,000 years ago during the Pleistocene era. Australian Aboriginal religions are themselves very diverse. Australian Aboriginal peoples speak some 200 languages that share similarities, as do their religions. Australian Aboriginal religions are distinctive when compared with the rest of the world’s religions but also very distinct among themselves. Because of the great time depth involved, it is difficult to base interpretations of ancient religious practices on observations of living people. However, there is evidence that many Australian Aboriginal people continue to use rock art sites that are thousands of years old for religious purposes, and many documented traditions appear to have great antiquity, notably bark painting, which sometimes shares motifs with rock art and which can refer to ancient landforms and historical events. While observed Aboriginal religious practices are absolutely not the same today as they were many millennia ago, certain common characteristics may have derived from more ancient practices.

One of the most important characteristics of Australian Aboriginal religions is a belief in a concept usually called the Dreaming in English (obviously each Aboriginal language has its own name or set of names for this concept). The Dreaming consists of an interconnected set of meanings, including beliefs about the creation of the world by ancestral beings, the continued presence and power of those beings in the landscape, a way of life couched in a morality and set of rules based on these beliefs, and a person’s place within this cosmology. The Dreaming is both about an understanding of the past, how the world came to be, and the present, how the world works based on the logic of how it came to be and continues to emerge. The diversity of environments on the Australian continent, which range from sandy deserts in the interior to tropi-

cal rainforests in the northeast to mild forested landscapes in the southeast, also contributes to the diversity of Aboriginal religions because they are tied so closely to the natural world.

The religions of Melanesia, also widely documented by ethnographers, are even more diverse than those of Australia. The island of New Guinea alone may have contained thousands of different languages before European contact, especially in remote highland valleys. This diversity makes it particularly difficult to identify religious practices in the past, though certain common strains of religious thought may hint at structural elements of Melanesian religions. One such structural characteristic is a belief in the presence of supernatural beings in the natural world, though the specific beliefs are widely variable. Another common characteristic is the relationship of warfare to ritual cycles, especially between different social groups. As in Australia, it is usually extremely difficult to attribute specific religious practices or beliefs observed in the present in places such as New Guinea to past societies in anything but the most general terms.

In Polynesia, archaeological evidence points to a variety of religious developments that grew out of an Ancestral Polynesian religious system. Anthropologists Patrick Kirch and Roger Green reconstructed this system based on linguistic, ethnographic, and archaeological evidence. Included among the archaeological remains of religious practices are monumental works of stone, perhaps most famously the stone heads, or *moai*, of Rapa Nui, which are unique in the region. The scale of religious construction projects can be related to the rise of more hierarchical societies in Polynesia, often called chiefdoms. In some places such as the Marquesas, where massive sacred plazas have been recorded, Polynesians constructed raised stone altars, or *ahu*. Polynesian chiefdoms with more rigid hierarchies often developed some of the more elaborate religious structures, such as the Tahitian *marae* or Hawaiian *heiau*. Oral traditions and archaeology suggest that contact between Tahiti and Hawaii occurred between 1000 and 1300 CE, possibly mutually influencing religious development, after which the two cultures developed separately. Religious practices in Hawaii were especially

highly structured, linking the annual Makahiki cycle to tribute collection for the Hawaiian chiefs. In Hawaii and among the Maori of New Zealand, ritualized cycles of revenge, carried out on a larger scale than those observed in Melanesia, were connected chiefly to competition over land, and these cycles can be traced to the construction of *pa* (hill forts) in New Zealand. Hawaiian temples, called *heiau*, became places where sacred cosmic events were intertwined with the historical and mundane.

Finally, one of the most striking conjunctures of historical events, religious belief, and monumental construction in all of Oceania occurs at Nan Madol, a massive complex of artificial islands with megalithic constructions of prismatic basalt built off of Pohnpei Island in Micronesia. The site was constructed during the Saudeleur dynasty (roughly 1200–1600 CE) as a religious center. Saudeleur rituals included turtle sacrifice and worship of a sacred eel kept in one of the islets of Nan Madol. Other examples of megalithic temples dating to this period have been documented elsewhere on Pohnpei, suggesting a widespread official religion under the Saudeleur. According to legend, the Saudeleur dynasty met its end when the last ruler tried to capture one of the gods, Nan Sapwe, only to be defeated by Isokelekel, the son of Nan Sapwe, and 333 warriors, bringing in a new age and a different way of life in Pohnpei.

—James L. Flexner

Bibliography

- Charlesworth, M., H. Morphy, D. Bell, and K. Madcock, eds. *Religion in Aboriginal Australia: An Anthology*. St. Lucia: University of Queensland Press, 1984.
- Kirch, P. V. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley: University of California Press, 2000.
- Kirch, P. V., and R. C. Green. *Hawaiki, Ancestral Polynesia: An Essay in Historical Anthropology*. Cambridge: Cambridge University Press, 2001.
- Kirch, P. V., and S. J. O'Day. "New Archaeological Insights into Food and Status: A Case Study from Pre-Contact Hawaii." *World Archaeology* 34(3) (2003): 484–497.
- Swain, T., and G. Trompf. *The Religions of Oceania*. London: Routledge, 1984.

■ Introduction: Aristotelianism—Acceptance, Rejection, Accommodation

Although Aristotle (384–322 BCE) was a pagan who had lived centuries earlier, his writings constituted the single largest and most authoritative body of knowledge and wisdom inherited from Greek antiquity so far as many Islamic, Jewish, and Latin Christian thinkers were concerned. Aristotle had put his mind and writing stylus to many subjects, such as biology, botany, theoretical physics, meteorology, zoology, theater, rhetoric, music, political theory, and poetry, but it was his philosophy, especially logic (the art of critical analysis), metaphysics (theoretical philosophy that focuses on the nature of Being), and ethics that most captivated theologians within the Abrahamic tradition, namely Jews, Christians, and Muslims.

A significant number of medieval Muslim, Jewish, and Christian theologians accepted Aristotle's system. They included the Andalusian Ibn Rushd (1126–1198, in Latin "Averroes"), a polymath who is generally regarded as the greatest of Islam's many great medieval scholars and thinkers; Moses ben Maimon (1135–1204, in Latin "Maimonides"), acknowledged as the greatest Jewish thinker of the Diaspora; and Thomas Aquinas (1225–1274), the Roman Church's "Angelic Doctor" whose voluminous works have had a lasting impact on Catholic theology. Indeed, Aquinas and many other Latin Christian theologians of his age were so impressed by Aristotle that they consistently referred to him not by name but reverentially as "*ille philosophus*" (the Philosopher). Moreover, Aquinas and his peers acknowledged their debt to Ibn Rushd's voluminous commentaries on Aristotle, which had been translated from Arabic to Latin, referring to him respectfully as "the Commentator." Maimonides was equally indebted to Ibn Rushd's insightful commentaries, and he in turn influenced Aquinas's thought.

Acolytes such as Ibn Rushd, Maimonides, and Aquinas were predisposed to accept as definitive anything written by or ascribed to Aristotle as long as it did not contradict Divine Revelation and dogmatic Faith. But there was the problem. Aristotle had espoused several theories that con-

tradicted the shared beliefs of Jews, Christians, and Muslims. His ordered universe allowed no room for the intervention of Divine Providence and miracles. He also denied personal immortality. Just as serious, he taught that matter and, therefore, the cosmos are eternal. To the contrary, the Abrahamic tradition holds as sacred truth the belief that God created the universe out of nothing, that God has intervened in human affairs at special moments in history and has suspended the laws of nature to perform miracles, and that the physical cosmos will one day be destroyed, in keeping with the Divine Plan. Both the Christian and Islamic faiths also firmly hold to the dogma of personal immortality, whereas Jewish opinion is divided on the issue. For theologians, who were so captivated by the elegance and coherence of the Aristotelian system, the question was: How might it be accommodated to Revelation? For those who saw this pagan philosopher-scientist as a threat to the Truth, the question was: How might we best protect the Faith from his pernicious influence?

As the entries under this topic illustrate, the struggle to accommodate Aristotelianism to the Abrahamic faiths was a messy process. Moreover, in the end Islam and the Latin Church followed two separate paths and reached different solutions.

—*Alfred J. Andrea*

Arab and Jewish Aristotelians

The development of Islamic (or Arabic) and Jewish philosophy, especially after 1000 CE, would have a tremendous impact on the medieval scholastic philosopher-theologians of the Latin West in the thirteenth and fourteenth centuries. In both cases, Muslim and Jewish philosopher-theologians attempted to integrate ancient Greek thought, especially the teachings of Aristotle (384–322 BCE), into monotheistic systems of belief, thereby balancing reason and revelation. Their efforts profoundly influenced European Christian thinkers, who acknowledged their debt.

Islamic philosophy developed first in the eastern Islamic lands before 1000 and then in Muslim Spain, reaching its zenith in both areas after 1000. The height of Islamic philosophy in the Muslim East was reached by Abu Ali al-Husain ibn Sina (980–1037), a Persian known to the West as Avicenna. Although he was most well known as a physician and for his medical writings, he is nevertheless regarded as the greatest philosopher of the Islamic Peripatetic School, which combined Aristotelian and Neoplatonic thought. His *Book of Healing* is considered the best elucidation of Aristotle produced in the early eleventh century. Ibn Sina was influenced greatly by *On the Objects of Metaphysics* by Abu Nasr al-Farabi (ca. 870–950), one of the first Islamic philosophers to comment on the works of Plato and Aristotle. One of Ibn Sina's most significant contributions to philosophy was his discussion of Being, which may have been influenced by discussions of Being in *kalam*, orthodox Islamic speculative theology. He maintained that with the exception of the Necessary Being (in which essence and existence are one), there is a division in Being between essence and existence. Moreover, there are degrees of Being, beginning with God and moving down the (Neoplatonic) hierarchy of Being to the material world. In all things outside of the Necessary Being, existence is separate from essence, and such beings are only possible beings unless or until they are brought into existence by the Necessary Being. This Being is itself one and simple, and Ibn Sina identified this as Allah. Ibn Sina's metaphysical proof for the existence of the Necessary Being is that there cannot be an infinite regression of merely possible beings that exist, otherwise nothing would have come into existence.

For Ibn Sina, creation is necessary and eternal, which was at odds with the Islamic doctrine of creation. Regarding the immortality of the soul, Ibn Sina was likewise at odds with Islamic doctrine because although he maintained that all human souls survive, he taught that the body cannot be resurrected.

Such unrestrained rationalism in the Sunni world was met by a counterattack led by Abu Hamid Muhammad al-Ghazali (d. 1111), author of *On the Incoherence of the Philosophers* that was directed primarily against Ibn Sina's philos-

ophy. Al-Ghazali, who embodied a union of Asharite theology, which employed modified Greek logic to elucidate the truths of the Quran, and mystical Sufism, was a formidable opponent because of his grounding in both Greek logic and Islamic spirituality. After al-Ghazali's attack, the study of philosophy declined among Sunnis in the Islamic East, although the Eastern Shias were more amenable to the use of philosophy in religious discussions. In the West, however, particularly in Al-Andalus (Muslim Spain), philosophy flourished among Jews and Sunni Muslims.

One of the most important Andalusian Jewish philosophers was Solomon ibn Gabirol (ca. 1021–ca. 1057), known in the Latin West as Avencebrol or Avicebron. His Neoplatonist philosophy, which is found in *The Fountain of Life*, a work written originally in Arabic and then translated into Latin in the twelfth century, influenced a number of leading scholastic philosophers in thirteenth-century Latin Christian Europe, especially the Franciscans' leading theologian, Bonaventure. Gabirol's system, which was predicated on a doctrine known as universal hylomorphism (universal material forms), maintained that matter and form (or spirit) are inseparable and are found throughout the universe, even in incorporeal things. Gabirol maintained that matter is part of everything except God and emanates from the divine Will, forming the foundation for subsequent emanations, the lowest of which is the corporeal world. Humanity is the microcosm of the universe, meaning that all of the primary characteristics of the cosmos are also found in humans, whose ultimate end is to know the divine Will. His thought was criticized by Jewish scholars as non-Jewish, while many Christians thought him a Christian.

The first Islamic philosopher of note in Spain was Ibn Bajjah (ca. 1070–1138), known in Latin as Avempace. In his two major works, *The Regime of the Solitary* and *Treatise on the Union of the*



Ibn Sina, known to Latin Europeans as Avicenna, was among the foremost medieval Muslim philosophers and physicians. (Library of Congress)

► THE HERESY OF IBN RUSHD

In 1195, due to conservative religious influences at court, Ibn Rushd and other philosophers in Muslim Spain were accused of heresy. Ibn Rushd was forced into exile and his writings ordered burned, but he was only briefly out of favor and returned to Marrakesh, where he died in favor in 1198. In his works concerning religion, the most important of which was *The Decisive Treatise Determining the Nature of the Connection between Religion and Philosophy*, and in his *The Incoherence of the Incoherence* (against Ibn Sina, as well as al-Ghazali), he took pains to demonstrate how religion and philosophy do not necessarily conflict. In these works he expressed belief in the resurrection of the body, although it was a different but identical body. Nevertheless, in his strictly philosophical works, he appears to have maintained heretical positions, such as the eternity of the cosmos and the necessity of creation (hence, no miracles are possible); that the Material Intellect, which survives the body at death and returns to the Agent Intellect, is the same for all people; and although there is no individual immortality, the human species as a whole lives on eternally through the Material Intellect.

—Kimberly Georgedes

Intellect with Man, he primarily addressed the question: How best does one obtain the Ultimate End, which is to know and love God? Unlike most other Islamic philosophers, Ibn Bajjah maintained that the best way to reach this goal is outside of society, living a solitary life and pursuing knowledge of the forms through actualizing one's potential intellect so that it becomes the acquired intellect. For Ibn Bajjah, one obtains the ultimate end when the acquired intellect is absorbed into the Agent Intelligence. His contributions were unique so far as Islamic thought was concerned in that he maintained that the quest for beatitude can be achieved not only outside of society but also without revelation.

Abu al-Walid ibn Rushd (Averroes in Latin), who was born in Cordova in 1126 and died in 1198, was trained as a jurist and physician. In 1168 he was introduced to the Almohad ruler

in Marrakesh, Morocco, Abu Yaqub Yusuf, who in 1169 requested that Ibn Rushd begin commenting on Aristotle and appointed him as a judge in Seville. In 1171 Ibn Rushd was appointed judge of Cordova, and in 1182 he became court physician. His philosophical works were very influential, more so in the Christian West than in the Muslim East. (Most of his works survive only in Latin or Hebrew copies.) To Latin scholastic theologians and philosophers he was known simply as “the Commentator.” The purest Aristotelian among Muslim philosophers, he wrote 38 commentaries on various Aristotelian works. He also wrote treatises, particularly on physics and epistemology (the study of the nature of knowledge), and two defenses of philosophy against al-Ghazali's *On the Incoherence of the Philosophers* and the attacks of other conservative Islamic theologians. Ibn Rushd believed that both reason and revelation are sources of truth and lead to the same end, that there is harmony between revelation and reason, and that the Quran encourages those with the intellectual capabilities to study philosophy. He maintained, however, that for those incapable of reasoning rigorously, the Quran suffices as the source of truth. Indeed, he argued that philosophy should be hidden from those incapable of understanding it, as it would only harm their faith.

Ibn Rushd responded with his *On the Incoherence of the Incoherence*, to al-Ghazali's *On the Incoherence of the Philosophers*, although Ibn Rushd's work did not have a great impact on the Islamic East. His thought was more rationalistic and less metaphysical than that of Ibn Sina, and Ibn Rushd was considered less congenial to Muslim thought. He rejected Ibn Sina's metaphysical arguments for the existence of God, arguing that the existence of God can be proved only through physics, specifically via causality, extrapolating back via cause and effect to the Prime Mover. In essence, Aristotle's proof for a Prime Mover, or First Cause, found in Book 8 of his *Physics*, was for Ibn Rushd the only demonstrable proof. He also rejected Ibn Sina's division of Being into essence and existence as well as the Neoplatonic idea of creation by emanation but argued that all of the Intelligences and their motions are created directly by the First Being.

Ibn Rushd was the last of the great Aristotelian philosophers in the Muslim tradition.

Moses ben Maimon (1135–1204), known as Maimonides but also as Athe Rabbi, was the most important and influential Jewish philosopher-theologian of the Middle Ages. Born in Cordova, Spain, he died in Cairo, Egypt, where, like many philosophers in the Islamic world, he made his living as a physician. His most famous work is *The Guide for the Perplexed*, which he wrote to remove the doubts of Jews concerning the nature and relation of religion with science, philosophy, and the traditional Talmud. Primarily a theological treatise, its purpose was to find harmony among theology, Jewish revelation and tradition, and philosophy. He maintained that most men should not study philosophy and argued that moral virtues must precede the study of philosophy. He also criticized Islamic *kalam* as well as Aristotelian science. He argued that *kalam* is internally defective, often accepting philosophical arguments merely because they agree with religious teachings. Moreover, he maintained that Islamic theologians who engaged in *kalam* failed to adequately explain creation out of nothing. Likewise, he maintained that Aristotle's arguments for the eternity of the world were insufficient. Much more than just a negative critic, however, Maimonides presented several proofs from reason for the existence of God that were similar to those of previous thinkers but that significantly served as the most direct source for Thomas Aquinas's famous proofs. Maimonides' cosmology was similar to that of the Muslims as well, although depending on the type of work he was writing he appears to have held both that the world is eternal and that it was created by God.

In an age that witnessed crusades, jihads, and pogroms of Jewish communities by some Christian and Islamic communities and leaders, theologian-philosophers of these three Abrahamic faiths were struggling with similar conundrums as they attempted to reconcile the best science and rational philosophy available to them with the monotheistic doctrines of their respective religions. In the process, Islamic and Jewish thinkers profoundly influenced the development of Western rationalism.

—Kimberly Georgedes

Bibliography

- Adamson, Peter, and Richard C. Taylor, eds. *The Cambridge Companion to Arabic Philosophy*. New York: Cambridge University Press, 2005.
- Frank, Daniel H., and Oliver Leaman, eds. *The Cambridge Companion to Medieval Jewish Philosophy*. New York: Cambridge University Press, 2003.
- Goodman, Lenn E. *Avicenna*. New York: Routledge, 1992.
- Leaman, Oliver. *Averroes and His Philosophy*. Rev. ed. Richmond, Surrey, UK: Curzon, 1998.
- Leaman, Oliver. *Moses Maimonides*. Rev. ed. Richmond, Surrey, UK: Curzon, 1997.
- Nasr, Seyyed Hossein. *Three Muslim Sages*. New York: Caravan Books, 1976.

The Early Application of Logic to the Christian Faith

The late tenth and eleventh centuries saw an intellectual revival in the Latin West that began in the monasteries and cathedral schools but became the hallmark of its new universities by the mid-twelfth century. Known generally as Scholastic philosophy, this was a method of rational analysis applied to theology and canon, or church, law that became the hallmark of the scholastics, or teachers, of Europe's schools.

This revival began with the study of basic Aristotelian texts on logic as translated and commented on by the sixth-century Christian scholar Boethius (d. 526). Early key figures in the recovery and use of logic in the West include Gerbert of Aurillac (ca. 946–1003), who headed the cathedral school at Reims, whose great interests were dialectic (logical argumentation) and mathematics, and who ended his life as Pope Sylvester II (r. 999–1003). His pupil Fulbert of Chartres began the cathedral school at Chartres, where he set in place an important literary and philosophical program of studies. Berengar of Tours (ca. 1010–1088), a pupil of Fulbert, attempted to explain the Eucharist in terms of the Aristotelian categories, which was opposed by, among others, Lanfranc (1005–1089) of Bec (and later archbishop of Canterbury) and the Italian monastic reformer St. Peter Damien (1007–1072), the latter of whom opposed the use of dialectic and rationalism in theology in general. Although Berengar's views were condemned by the Church,

➤ SELECTION FROM ABELARD'S *SIC ET NON*

In the following passage, Abelard introduces and justifies the scholastic method that would set the standard for Western advanced education for generations:

“Among the multitudinous words of the holy Fathers some sayings seem not only to differ from one another but even to contradict one another. Hence it is not presumptuous to judge concerning those by whom the world itself will be judged. . . . In view of these considerations we have undertaken to collect various sayings of the Fathers that give rise to questioning because of their apparent contradictions. . . . This questioning excites young readers to the maximum of effort in inquiring into the truth, and such inquiry sharpens minds. Assiduous and frequent questioning is indeed the first key to wisdom. Aristotle, that most perspicacious of all philosophers, exhorted the studious to practice it eagerly, saying, ‘Perhaps it is difficult to express oneself with confidence on such matters if they have not been much discussed. To entertain doubts on particular points will not be unprofitable.’ For by doubting we come to inquiry; through inquiring we perceive the truth, according to the Truth Himself.”

Abelard then poses 156 questions that compel students to entertain both supporting and opposing arguments to suppositions such as “God is one,” “God can do all things,” and “Peter and Paul and all the apostles were equal.”

—*Kimberly Georgedes*

Source

Peter Abelard, “Sic et non,” trans. Brian Tierney, in *Great Issues in Western Civilization*, 2nd ed., ed. Brian Tierney, Donald Kagan, and L. Pearce Williams (New York: Random House, 1972), 1:412–414.

nevertheless his impact on the application of dialectic to theology was significant, particularly concerning the theology of the Eucharist.

Arguably the two most important thinkers of the eleventh and twelfth centuries, however, were St. Anselm of Canterbury and Peter Abelard. Anselm (ca. 1033–1109), a northern Italian who eventually became archbishop of Canter-

bury, is known as the Father of Scholasticism because of his use of logic without reference to divine Revelation to prove the existence of God. Two of his greatest works were the *Monologion* (1077) and the *Proslogion* (1078). The former was written at the request of his monks, who wanted a proof for God’s existence based on reason alone, and sets forth several proofs for God’s existence based on value theory (i.e., if there is a good and a better of something, there must be a best, and the Ultimate Best is God). The *Proslogion* contains the famous Ontological Argument for God’s existence, which continues to be criticized and defended by philosophers to this day. Anselm’s basic argument was that if one accepts the definition of God as that than which nothing greater can be thought or conceived, it cannot exist only in the understanding; it must also exist in reality, because if it exists only in the understanding, it can be thought to exist in reality, and this is greater. Moreover, if it existed only in the understanding, then that than which a greater cannot be conceived is that than which a greater can be conceived, which is a contradiction. Therefore, it must exist in reality (*Proslogion*, chap. 2). Anselm is also known for *Cur Deus Homo* (*Why God Became Man*, 1092) concerning the Incarnation and atonement. His attitude toward theology was “I believe in order that I may understand,” which would be countered by Abelard’s attitude that doubt leads to inquiry and inquiry leads to the truth, including the Perfect Truth—God.

Peter Abelard (ca. 1079–1142) was well known for his teaching, stormy disputes, and tragic affair with his student Heloise (which he chronicled in his *History of [My] Calamities* as well as his letters). His career as a master philosopher-theologian began, characteristically, with his disagreement with two of his contemporary leading logicians, Roscellinus and William of Champeaux, regarding the issue of “universals,” general terms used to describe an entire class of individual entities, either concrete items, such as “dog,” or abstractions, such as “beauty.” Roscellinus took an extreme nominalist position, arguing that a universal is simply a name (*nomen* in Latin) and has no existence apart from the specific objects it describes. Put another way, universals exist only in the mind of the person who finds commonali-



Peter Abelard tutors his student and wife, Heloise, from a fourteenth-century French manuscript. (Giraudon/Art Resource, NY)

ties among disparate objects. William of Champeaux, to the contrary, took an extreme realist position, arguing very much like Plato many centuries earlier that universals have a real and separate existence apart from the particulars to which they give form and apart also from the mind of the person who perceives them. Abelard assumed a middle position, called by some scholars conceptual realism, reaching essentially the same conclusion as had Aristotle centuries earlier but without knowledge of the Greek philosopher's solution because Aristotle's *Metaphysics* was not yet available in Latin translation. Although his position is much more complex than this, according to Abelard universals are necessary creations of the intellect because they exist not before the thing is perceived (the realist position) and not only after the thing is perceived (the nominalist position), but rather they exist inherently in the thing. That is, universals are

concepts in the mind (which are not things in themselves) that correspond to the essential qualities of the entities they describe.

This controversy was no idle game of words because the issue of universals stands at the heart of Christian theology and ethics. Are there virtues such as love or only loving acts? If the latter, how can the Gospel say "God is love"? Is there such an entity as the Church or only individual Christians? If one accepts that there is a universal Church, does it follow that it existed from all eternity? Did not Christ institute the Church? Abelard's answer to this conundrum set the stage for future discussions on this key issue in Western Christian thought.

His application of logic to theological problems was also significant to the development of the scholastic method of posing a question and marshaling authorities for and against and testing the weight of those authorities. This is the method he used in *Sic et non* (*Yes and No*, ca. 1121–1122), a sourcebook of conflicting authorities on a variety of theological issues. The text was designed to have his students apply logic and critical analysis in addressing theological questions. Abelard posed no solutions himself because he wished to challenge his readers, and his approach alienated some conservative church leaders. Nevertheless, his method greatly influenced later writers, such as Peter Lombard, whose *Four Books of Sentences* (1150–1152) became the standard textbook in theology second only to the Bible, and Gratian, whose *Decretum* or *Concordance of Discordant Canons* (ca. 1140) became the basic text for the study of church law. The scholastic method, which revolved around the challenge of resolving posited questions, became the West's dominant method of advanced instruction in the generations following Abelard. He was also known for his *Scito te ipsum* (*Know Yourself*, ca. 1136–1140) in which he argued for an ethics based on intent, not result.

Abelard's ideas on the Trinity were condemned, and St. Bernard of Clairvaux (the major exponent of the time of a form of monastic theology that emphasized love and compunction and meditating on the Bible in order to understand its truths, as opposed to subjecting it to logical analysis) was an ardent opponent of Abelard and was instrumental in his condemnation

at Sens in 1142. Nevertheless, the trend of rationally analyzing and systematizing theology would continue and lead to greater accomplishments in the thirteenth century.

—*Kimberly Georgedes*

Bibliography

- Brower, Jeffrey E., and Kevin Guilfooy, eds. *The Cambridge Companion to Abelard*. New York: Cambridge University Press, 2004.
- Davies, Brian, and Brian Leftow, eds. *The Cambridge Companion to Anselm*. New York: Cambridge University Press, 2005.
- Evans, Gillian R. *Anselm*. Wilton, CT: Morehouse-Barlow, 1989.
- Marebon, John. *The Philosophy of Peter Abelard*. New York: Cambridge University Press, 1999.

The Rebirth of Aristotelian Philosophy in the Latin West

With the Latin West's recovery of the majority of Aristotle's works from the late eleventh century into the thirteenth century, Christianity once again had to deal with Tertullian's famous question, which he posited about 1,000 years earlier: "What has Athens to do with Jerusalem?" Western Christendom was now faced with a large, logically consistent body of material that contradicted many significant Christian doctrines including such issues as the necessity of creation, the eternity of the world, and the immortality of the soul. Moreover, Latin Christian scholars were faced with commentaries on Aristotle by Muslims and Jews that would have to be dealt with as well. A huge task of sifting and assimilating awaited the Christian scholastics of the late twelfth and thirteenth centuries.

These newly discovered works of Aristotle were recovered primarily through translations into Latin from Arabic translations, and Spain, where Islam and Christianity met along ever-shifting borders, was the center of transmission. Toledo, which had been captured by Christian forces in 1085, was the main center for two translation programs. One was initiated by Gerard of Cremona (1114–1187), who began a program of translating Aristotle along with his Arabic commentators (approximately 70 translations altogether), including al-Farabi (d. ca. 950), Ibn Bajjah (d. 1138, known in Latin as Avempace), and Ibn

Rushd (1126–1198, known in Latin as Averroes). The second program was that of Dominicus Gundisalvi (fl. 1162–1190), who directed the translation of various works more favored by Jewish scholars, primarily those of Ibn Sina (980–1037, known in Latin as Avicenna) and his tradition. In the thirteenth century Michael Scot, a Scotsman working in Sicily, and Hermanus Allemanus (Herman the German) brought the two traditions together in their translations. During the thirteenth century, some Western scholars also began to study and translate from the original Greek texts. James of Venice and Burgundio of Pisa translated Aristotle's books on natural philosophy from the Greek while they were in Constantinople in 1136. Additionally, William of Moerbeke (ca. 1220–1286), arguably the most important of the translators, revised some of James's translations and made many more (approximately 50) from the Greek.

This recovery of the works of Aristotle, particularly the logical works of the *Organon* (*The Prior Analytics*, *The Posterior Analytics*, *The Topics*, and *Sophistical Refutations*), which became known as the New Logic (whereas the few Aristotelian works previously made available to the Latin West by Boethius in the early sixth century were now known as the Old Logic), redefined Western Christian Europe's educational system, particularly in the nascent universities of Paris and Oxford in the thirteenth century. Aristotle's works on moral philosophy, such as his *Nicomachean Ethics*, on natural philosophy (what is called science today), such as *Physics* and *On Corruption and Generation*, and on metaphysics, such as his *Metaphysics* and *On the Soul*, were also translated in whole or part.

Richard Rufus of Cornwall, a Franciscan at Oxford, was probably the first to comment on Aristotle's *Physics*. William of Auvergne, a secular master at Paris and bishop of Paris from 1228, used both the works of Aristotle and Avicenna, although he rejected Aristotle's concept of the eternity of the world and Avicenna's determinism as well. William of Sherwood, who taught at Paris and then Oxford (1252), was the first to make an impact on the New Logic with his *Introduction to Logic* and greatly influenced later logicians, including Peter of Spain (later Pope John XXI, r. 1276–1277), who wrote the most

popular text on logic. Robert Grosseteste, bishop of Lincoln, although more of an Augustinian and Neoplatonic thinker himself, was also a translator of Greek writings, and in 1246–1247 he made a complete translation of Aristotle's *Ethics*, along with Latin translations of many Greek commentaries on the work, and commented on the *Posterior Analytics*. Grosseteste's impact on thirteenth-century thought was considerable not just for his translations.

Among the religious orders in the universities, the Dominicans in general tended to be the most favorable to the thought of Aristotle. The two most famous Dominican Aristotelians, both of whom were masters of theology in Paris, were the German St. Albertus Magnus (Albert the Great, 1193/1206–1280), known for his encyclopedic learning and translations, and his student the Italian St. Thomas Aquinas (ca. 1225–1274). Thomas is known for his *Summa Theologiae* (*A Compendium of Theology*), thought by many to be the apex of medieval Christian thought and the greatest synthesis between Aristotelianism and Christianity and probably intended to be a textbook for young Dominicans in their provincial schools, prior to university study, as well as for his *Summa contra gentiles* (*A Compendium in Opposition to the Heathens*) and his “Five Ways” of proving the existence of God. Although Dominican theologians tended toward Aristotelianism, they rejected and condemned the errors of Latin Averroists in the Arts Faculty at the University of Paris, who preferred to accept and study Aristotle on his own terms without reference to theological parameters and limitations. The Dominicans also tended to emphasize apologetic theology, that is, arguing persuasively against non-Christians. This was likely the primary purpose of Aquinas' *Summa contra gentiles*, which attempted to prove basic certain Christian doctrines through logic and reason alone.

The writings of Aristotle were not wholeheartedly accepted initially, and assimilation was slow and not without resistance, especially concerning the works on natural philosophy and particularly at the University of Paris. Nevertheless, by 1255 students in the Arts Faculty at Paris had to hear lectures on all of his available works on logic, ethics, metaphysics, and natural philos-

➤ AQUINAS AND ISLAMIC AND JEWISH THINKERS

The influence of Thomas Aquinas on Catholic thought, particularly since the Reformation, has been incalculable, and although many understand the influence of Aristotle on Aquinas, the influence of Islamic thinkers such as Ibn Sina (Avicenna), Ibn Rushd (Averroes; i.e., the “Commentator”), and the Jewish rabbi Moses ben Maimon (or Maimonides, 1135–1204) on Aquinas is just as profound. Far from accepting Averroes' interpretation of Aristotle outright, particularly regarding Averroes' interpretation of Aristotle's views on the intellect, Aquinas' views on Aristotle were also affected by Platonism, including Avicenna's Platonized Aristotelianism. Indeed, from Ibn Sina, Thomas gained the distinction between the one Necessary Being and possible being that allowed him to come to his insight regarding his metaphysics of being between essence and existence. Maimonides also influenced Aquinas in a number of ways, not the least of which was in how to converse with adherents of another religion. Maimonides also was probably a source for Aquinas's “Five Ways” for proving the existence of God through reason alone. For example, the first way is based on change, or movement. Whatever moves is moved by another, but there cannot be an infinite regression of movement; otherwise, nothing would be moved. Therefore, there must be an unmoved first mover or an unchanged agent of change, which “everyone” understands to be God. The second way, similarly, is based on cause and effect, the third way on contingency and necessity (possible and necessary beings), the fourth way on degrees of perfection, and the fifth way on teleology, that is, Aristotle's view that everything has its proper or final end, which indicates an order in the universe that in turn indicates an intelligence that orders each thing to its proper or final end.

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ophy. This new focus on Aristotle's logic and natural philosophy at Paris, Oxford, and elsewhere gave initial impetus to the rise of a new European empiricism and science. Logic became central to education along with speculative grammar and linguistic analysis. Aristotle's empirical emphasis and his emphasis on the

inseparability of form and matter began to replace the Platonic emphasis on form and matter as separate entities and the real world being that of forms or archetypes, as opposed to the unreal phenomena that we sense in the physical world (i.e., the question of universals). Rhetoric remained strong at Bologna, however, since it was connected to law. Even in the faculty of Theology, though to a lesser degree than in Arts, Aristotle became a source of authority, known simply as “The Philosopher,” and Averroes was “The Commentator.” This declined somewhat in the fourteenth century due to the condemnations of 1277, although logic remained central to theology.

—Kimberly Georgedes

Bibliography

- Grant, Edward. *The Foundations of Modern Science in the Middle Ages*. New York: Cambridge University Press, 1996.
- Kretzmann, Norman, and Eleonore Stump, eds. *The Cambridge Companion to Aquinas*. New York: Cambridge University Press, 1993.
- Marenbon, John. *Later Medieval Philosophy (1150–1350)*. New York: Routledge, 1987.
- Marenbon, John, ed. *Medieval Philosophy*. The Routledge History of Philosophy, Vol. 3. 1998, reprint, New York: Routledge, 2000.

The Rejection of Aristotle and the Condemnations of 1277

Aristotle's works had a great impact in both the Islamic world and the Latin West, but in neither culture was his thought accepted without resistance. In the Muslim East, the assimilation of his thought was opposed by the *ulama* (religious scholars), especially Asharite theologians, who maintained that apparent cause-effect relationships were illusions, and then virtually brought to a halt by the genius and arguments of al-Ghazali. In the Latin West, the Condemnations of 1270 and 1277 served to slow but not stop the assimilation of Aristotle into the fields of philosophy, theology, and natural science.

Abu Hamid Muhammad al-Ghazali (Latin, Al-gazel, 1058–1111) was an Islamic lawyer and a speculative theologian (*mutakallim*) trained in the Asharite school of theology (though critical of it) and, after a spiritual crisis, was perhaps most well known as a *sufi* mystic who legiti-

mized Sufism among Sunni Muslims. He has been called the “Proof of Islam” due to his many works in defense of Sunni Islam and is well known for his opposition to the use of philosophy in Islamic theology, specifically the Neoplatonized Aristotelianism of Ibn Sina (Latin, Avicenna). Nevertheless, his attitude toward philosophy was more complicated than this brief description suggests. For example, he wrote the *Standard for Knowledge* not only to explain Avicennan logic but also to encourage its use among theologians, whose logic, ontological arguments (ontology being the study of reality and the nature of being), and criticism of Islamic-Aristotelian philosophers were less sophisticated than those of the philosophers whom they attacked. Moreover, believing the Aristotelian logic of the philosophers to be superior, he criticized them for not always adhering to it. Also, to prepare for writing his masterpiece, the *Incoherence of the Philosophers*, he wrote a summary work entitled *The Aims of the Philosophers*, which summarized Islamic philosophical thought, especially that of Ibn Sina. Because this work was subsequently translated in the medieval Latin West, but without its explanatory passages, and because the *Incoherence* was not translated until the early Renaissance, much of the medieval West mistook al-Ghazali for an Avicennan philosopher!

Nevertheless, *The Incoherence of the Philosophers* (*Tabafut al-falasifa*, ca. 1091–1095), known to the Italian Renaissance as *Destructio philosophorum*, struck a serious blow to the study and use of philosophy in Islam, particularly in the Islamic East. So seriously was it taken that in Spain, Ibn Rushd (Latin, Averroes, d. 1198) felt the need to respond to al-Ghazali's attack point by point in his *On the Incoherence of the Incoherence* (*Tabafut al-Tabafut*, known to the Renaissance West as the *Destructio destructionis*), even though al-Ghazali's attack was directed primarily against Ibn Sina, and Ibn Rushd was no follower of Ibn Sina himself. It should be noted, however, that the use of philosophy did not completely cease in the Islamic East and indeed continued in the Platonic school of illuminationism of the Iranian theologian al-Suhrawardhi (1154–1191). But he was executed in 1191 on the orders of Salah ad-Din (Saladin), ostensibly for his religious views.

Initially, the writings of Aristotle were not wholeheartedly accepted in the Latin West either, particularly at the University of Paris where assimilation was slow and not without resistance. By 1255, however, students in the Arts Faculty of Paris were required to hear lectures on all of his available works. Even so not all was well, as there were philosophers in the Arts Faculty, usually termed “Latin Averroists,” such as Siger of Brabant and Boethius of Dacia, who wished to study Aristotle on his own terms without reference to theology or revelation. Nevertheless, they touched on theological issues such as the eternity of the world, much to the chagrin of the theologians. As a result, in 1270, 13 non-Christian propositions were condemned, including the doctrine of the Double Truth, that one can hold contradictory propositions, one true in philosophy, the other in theology, each true in its own realm (the idea being that some proposition or other of Aristotelian philosophy or science would be true if Scripture did not teach otherwise). Actually, no medieval Latin philosopher held this position, but some seem to have come close, such as Siger of Brabant.

In 1277 the archbishop of Paris, Etienne Tempier, at the request of Pope John XXI (the well-known logician Peter of Spain), condemned either 219 or (as now thought) 220 propositions. Most were non-Christian, and many were drawn from Aristotle, although some dealt with courtly love, magic, and necromancy. Similar condemnations at Oxford soon followed. Some scholars argue that the condemnations were specifically aimed at the Dominican theologian Thomas Aquinas, but because only about 13 of the propositions were positions held by Thomas, it is a theory difficult to defend.

The results of the condemnations confined use of Aristotle to certain areas, that is, as a philosophical rather than a theological authority, and limited theology as a science, making it more speculative, with discussion now focused largely on God’s absolute and ordained powers, very much like the concerns of Islamic Asharite theologians. Although the use of Aristotelian thought in theology was now more precisely delineated and confined, ironically those who used him were more strictly Aristotelian than those before, the greatest example being Thomas Aquinas. Never-

➤ AL-GHAZALI ON CAUSE AND EFFECT

In *The Incoherence of the Philosophers*, al-Ghazali addressed the issue of the necessity of apparent cause-effect relationships in nature. Does nature operate according to laws that are independent of a Divine Power?

“The connection between what is customarily believed to be a cause and what is believed to be an effect is not necessary, according to our opinion; but each of the two [namely, cause and effect] is independent of the other. The affirmation of one does not imply the affirmation of the other, nor does the denial of one imply the denial of the other; the existence of one does not necessitate the existence of the other, nor does the non-existence of one necessitate the non-existence of the other. [Take] for example: quenching thirst and drinking, satisfying hunger and eating, burning and contact with fire . . . and so forth for all the things which are observed to be connected in medicine, astronomy, the arts, and the crafts—indeed the connection of these occurs because the decree of God preceded their being created in this sequence, not because the existence [of this connection] is necessary in itself, not receptive of separation. On the contrary, it is within the power [of God] to create satisfying hunger without eating, . . . and so forth for all connections. The philosophers, however, deny the possibility of this and affirm its impossibility.”

—Kimberly Georgedes

Source

Algazel, *Tahâfot al-Falâsifat*, edited by M. Bouyges, S.J., and translated by Arthur Hyman (Beirut: Imprimerie Catholique, 1927), in Arthur Hyman and James J. Walsh, eds., *Philosophy in the Middle Ages: The Christian, Islamic, and Jewish Traditions*, 2nd ed. (Indianapolis: Hackett, 1973), 283.

theless, the boundaries of natural theology decreased after 1277, as the limits of “faith” and “reason” were more strictly delineated. In addition, scientific development, especially in such areas as optical physics and motion, now increased, as Aristotle had less of a hold on natural philosophy (the study of the physical universe). Thus, the Condemnations of 1277 have been

► THE REHABILITATION OF THOMAS AQUINAS

The death of Thomas Aquinas in 1274 precluded any possibility of Thomas defending himself from the charge that he held a number of the propositions condemned in 1277. The Dominicans, however, took up his defense, which culminated in his canonization as a saint in 1323. The order defended Thomas's teaching in 1279 against a work by the Franciscan William de la Mare entitled *Correctorium* (*The Correctory*), which the Dominicans referred to as the *The Corruption* (*Corruptorium*), and replies to the Franciscan rejoinder were known as *The Corrections of the Corruption* (*Correctoria corruptorii*). The Dominicans tolerated no opposition to Thomas's teaching within the order, and the 1279 General Chapter held at Paris prohibited any attack on Thomas's thought by any Dominican friar. Further, in 1286 the order stipulated that all Dominicans must promote and defend Thomas's teaching. This was reiterated in 1313 and again in 1314 due to the fact that Friar Durandus of Saint-Pourçain openly held positions contrary to those of Aquinas. The order also stipulated that all young Dominican friars who desired to attend the order's school in Paris (and ultimately the University of Paris) had to first complete three years' study of Thomas's works.

The process of Thomas's canonization began in 1317 and was completed on July 18, 1323, under Pope John XXII (r. 1316–1334). Thomas's rehabilitation became complete on February 14, 1325, when the bishop of Paris, Étienne Bourret, re-



Thomas Aquinas, thirteenth-century Italian theologian and saint, fresco by Fra Angelico. (Bettmann/Corbis)

moved the sentence of excommunication from the propositions condemned in 1277 that touched on Aquinas's teachings.

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viewed as a watershed in late-thirteenth-century thought and an impetus for fourteenth-century scientific, philosophical, and theological thought.

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Bibliography

- Adamson, Peter, and Richard C. Taylor, eds. *The Cambridge Companion to Arabic Philosophy*. New York: Cambridge University Press, 2005.
- Frank, R. M. *Al-Ghazali and the Ash'arite School*. Durham, NC: Duke University Press, 1994.
- Gracia, Jorge J. E., and Timothy B. Noone, eds. *A Companion to Philosophy in the Middle Ages*. Malden, MA: Blackwell, 2003.
- Grant, Edward. "The Condemnation of 1277, God's Absolute Power, and Physical Thought in the Late Middle Ages." *Viator* 10 (1979): 211–244.

Weisheipl, James A., O.P. *Friar Thomas D'Aquino*. With corrigenda and addenda. Washington, DC: CUA Press, 1983.

William of Ockham and the Nominalist Challenge

The Franciscan William of Ockham (ca. 1285–1347) was arguably the most significant thinker in the Latin West of the fourteenth century. Ockham has traditionally been called the founder of late medieval Nominalism, a school that (among other things) is traditionally thought to have held that universals (characteristics or qualities, such as humanity) are merely names (*nomines* in Latin) and do not exist apart from the mind or

apart from the particular things to which they give form. In fact, however, he held what is called the *intellectio-theory*: that universals exist primarily as concepts or acts of understanding in the mind and are qualities but are only secondarily related to the words that represent them. This was a position similar but not identical to that of Peter Abelard. As a result, some scholars prefer to call Ockham a conceptual realist or a mental act theorist. Interestingly, Ockham never referred to himself as a nominalist, nor did anyone until the late fifteenth century, and then the reference (in his defense) was to his logic, not to his position on the problem of universals. Moreover, recent research on the origins of Nominalism in the twelfth century calls into question whether it had anything to do with the status of universals at all. Indeed, Peter Abelard was referred to as the “Prince of the Nominalists,” yet he was not a nominalist regarding the status of universals. Nevertheless, there was a controversy regarding universals among medieval thinkers, even if the term “nominalist” was incorrectly applied to one of the positions by later scholars, as seems now to be the case.

Ockham is well known for the principle of parsimony, often called “Ockham’s razor,” one form of which is “Plurality is not to be posited without necessity” and that, in other forms, is sometimes interpreted to mean that the simplest answer is usually the correct one. Although this principle was commonly used by both ancient and medieval philosophers prior to Ockham, he seems to have used it to an extreme.

Ockham also emphasized the radical contingency of creation by emphasizing God’s power and freedom. While some scholars have argued that Ockham’s God can change the created order arbitrarily according to his absolute power, for Ockham there is only one power in God, viewed from two different perspectives (absolute and ordained power). God’s absolute power consists of all the possibilities open to God prior to creation but now no longer open to him due to his creation of the current order. Through creation, he has established a covenant with that order and thus freely binds himself to observe that order. God acts only according to his ordained power but not absolute power, and he will not arbitrarily change any aspect of the or-

➤ WILLIAM OF OCKHAM, “HERETICAL” FOE OF POPE JOHN XXII

The Franciscan minister general Michael of Cesena had been called to Avignon because of the crisis with the Franciscan Spirituals, who wanted to live the Franciscan *Rule* and *Testament* of Francis to the letter, particularly as they pertained to the issue of apostolic poverty. Michael asked Ockham, who was at Avignon undergoing his own examination for heresy (no formal censure was ever issued on any of his work), to examine the bulls of John XXII (r. 1316–1334) on Franciscan poverty, which declared heretical the idea that Christ and the Apostles owned nothing, thereby appearing to contradict what Pope Nicholas III had declared was Gospel teaching in 1279. The pope further transferred all property used by the order from papal ownership to the ownership of the order, thus abrogating the conception of poverty of even the more liberal Conventuals, the mainstream of the Friars Minor, who had accepted a modification of Francis’s strict definition of apostolic poverty by living in convents that they technically did not own. Based on Scripture, Church tradition, and previous papal bulls, Ockham, who up to this point had not been involved in the poverty controversy, determined that John XXII had fallen into heresy on both this and another issue. In 1328 Michael and Ockham fled to the court of Louis IV (r. 1328–1365) of Bavaria and were excommunicated for leaving Avignon without papal permission. A now-radicalized Ockham spent the period from 1328 to 1347 writing antipapal works concerning papal and imperial authority, papal infallibility and heresy, and the proper relationship between church and state. He died in Munich in 1347.

—Kimberly Georgedes

der he has created (i.e., ordained). Moreover, by his own nature God was not obligated in any way to, for example, create the cosmos in this particular way according to these particular physical, moral, and soteriological (i.e., those pertaining to salvation) laws. He could have chosen to create another order in another way. Nevertheless, using this dialectical analysis of God’s powers was a convenient way for theologians such as Ockham to discuss counterfactual possibilities, such as whether God could cause the past not to

have happened or whether he could have created a better world. The use of this distinction for such discussions became important after the Condemnations of 1277 and would aid in the rise of science in the West.

Ockham also greatly stressed humankind's freedom of will and the "liberty of indifference," in which one is not necessitated to choose an object or act simply because the intellect presents it as good to the will, nor is one bound to choose any object or act at all. There are still differences of opinion about many aspects of Ockham's thought, including his epistemology (the nature and extent of human knowledge) and ethical theory. While there is clearly an aspect of Divine Command to Ockham's ethical theory (that is, acts are right or wrong simply because God says so, through revelation), nevertheless there is also a strong foundation of natural law and right reason both in Ockham's ethics and political thought.

—*Kimberly Georgedes*

Bibliography

Adams, Marilyn McCord. *William Ockham*. 2 vols. 2nd rev. ed. Notre Dame, IN: University of Notre Dame Press, 1989.

Boehner, Philotheus. "The Realistic Conceptualism of William of Ockham." In P. Boehner, O.F.M., *Collected Articles on Ockham*, 2nd ed., edited by Eligius M. Buytaert, O.F.M. St. Bonaventure, NY: Franciscan Institute, 1958.

Courtenay, William J. *Ockham and Ockhamism: Studies in the Dissemination and Impact of His Thought*. Leiden: Brill, 2008.

Maurer, Armand. *The Philosophy of William of Ockham in the Light of Its Principles*. Toronto: PIMS, 1999.

McGrade, Arthur Stephen. *The Political Thought of William of Ockham: Personal and Institutional Principles*. New York: Cambridge University Press, 1974.

Noone, Timothy B. "William of Ockham." In *A Companion to Philosophy in the Middle Ages*, edited by Jorge J. E. Gracia and Timothy B. Noone. Malden, MA: Blackwell, 2003.

Normore, Calvin G. "The Tradition of Mediaeval Nominalism." In *Studies in Medieval Philosophy*, edited by John F. Wippel. Studies in Philosophy and the History of Philosophy, Vol. 17. Washington, DC: Catholic University of America, 1987.

Spade, Paul V., ed. *The Cambridge Companion to Ockham*. New York: Cambridge University Press, 1999.

■ Introduction: The Place of the Human in the Cosmos

Humans seek to define their place in the universe through both religion and secular studies. Prior to modern times, religion was the primary means used to explain humanity's position in the cosmos and to make clear the purpose of human life. Notwithstanding the primacy of religion in this regard, a number of thinkers—philosophers, scientists, jurists, writers, and scholars of the humanistic arts—also offered at least tentative answers to this basic human quest during this half millennium.

In China, philosophy was secular, rational and, for the most part, eminently practical, with most philosophers concentrating on ethics and political philosophy. Indeed, both were intimately connected. Virtue merited an imperial dynasty the Mandate of Heaven (or the right to rule that

was bestowed by Heaven, a cosmic moral force and not a deity). Improper behavior was punished by disasters of every sort, including natural catastrophes such as floods, and the consequent loss of the Mandate of Heaven. Even the thirteenth-century Neo-Confucians, who introduced metaphysical elements into what had been for more than 1,500 years a down-to-earth Confucianism, emphasized moral behavior above all else.

Although several Chinese dynasties during this age promoted various forms of Buddhist devotion, namely the Yuan and Ming dynasties, religion on a family level in China tended to be personal and syncretic, with most families practicing a mixture of Daoist, Buddhist, Confucian, and folk-religious rituals. On the state level it was largely Confucian, with the emperor performing

rituals that ensured the favor of Heaven and prosperity for the Middle Kingdom.

The lines between theology and philosophy were blurred at best within the Abrahamic tradition to the point that Jewish, Christian, and Muslim philosophers were, by and large, primarily theologians, although there were exceptions to that rule. The same could be said for the dizzying variety of Hindu traditions in which the countless and ever-expanding sacred texts of India defined life and human behavior. Within Buddhism, which had become a pan-East Asian phenomenon well before 1000 CE, Theravada and many Chan, or Zen, savants were able to separate the search for Enlightenment from issues relating to the existence of the gods. Thinkers within the many varieties of Mahayana Buddhism, however, which predominated throughout most of East Asia, tied their search for answers to a multiplicity of divine Buddhas and bodhisattvas.

History and law also offered answers, or at least partial answers, to the question of humanity's place in the cosmos. Within many, but certainly not all, cultures these two areas were likewise tied to religion.

An understanding of the course of history within the traditions of such Mesoamerican and South American peoples as the Maya, the Aztecs, and the Incas proceeded from cosmological principles deeply rooted in their respective religions. In nonliterate societies across the globe, history consisted of oral traditions that placed a people squarely into the context of Creation and the ways of deities and spirits, thereby providing a pattern for proper behavior.

Within the monotheistic Abrahamic tradition, human history was primarily a subset of Sacred History, inasmuch as the actions of humans were interpreted within the context of the eternal Divine Plan. Thus, humans either functioned as agents of God or as agents of Evil and were judged accordingly. There were, however, significant exceptions to this rule. In Latin Christian Europe by the thirteenth century a number of persons were writing purely secular histories, and the numbers of such historians multiplied in the centuries that followed. The later crusades, the city-states of Italy, and the emerging nations of France and England proved exceptionally fer-

tile breeding grounds for secular historiography (the writing of history) such as the *Chronicles* of Jean Froissart (ca. 1337–ca. 1405), which focused on chivalric deeds. But even Giovanni Villani (ca. 1280–1348), a banker-historian of Florence, a city that is often termed “the birthplace of the Renaissance,” could compose a sweeping history of his city that was based on the assumptions that the forces of Good and Evil are in constant struggle and that human events are driven by Divine Providence. On its part, Byzantium produced many secular histories and did so far earlier than the Latin West because the Byzantines had classical Greek historians as their models. Very much like Plutarch (46–120 CE), Michael Psellus (1017/1018–1096), one of Byzantium's greatest historians, focused on the human psyche as a driving force in history in his *Chronographia*, a history of the reigns of 14 emperors and empresses. Yet even though their histories were essentially secular in scope, most Byzantine historians spent many pages and much ink on chronicling religious disputes because of the intimate relationship between empire and church. Islam also produced a fair number of historians who wrote purely secular histories, the greatest being Ibn Khaldun (1332–1406). Although he was trained as both a theologian and an Islamic jurist, his *Kitab al-Ibar (Universal History)* and especially its *Muqaddimah (Prologue)* mark him as not only a secular historian who displayed a special interest in cultural dynamics but also as the progenitor of several social sciences, including economic theory, demography, and sociology.

Secular historiography was a venerable Chinese tradition stretching back at least to China's greatest historian Sima Qian (145 or 135–86 BCE), and within this tradition history was seen as a guide to proper behavior, especially on the part of emperors and their ministers. As already noted, virtuous behavior, which meant conformity to the values and ways of the Ancestors, ensured the favor of Heaven. It was in this vein that Song China's greatest historian, Sima Guang (1019–1086), composed his *Comprehensive Mirror as an Aid to Government*, a universal history of China that enjoyed imperial patronage and guidance.

As with historiography, Chinese law was eminently down-to-earth and practical. Judges were

expected, at least in theory, to be rational in their investigation of each case and application of the law. To the contrary, law in the Hindu tradition was *dharmā*, or sacred caste law, as articulated in such compendia as the *Laws of Manu*, which spelled out the rules governing behavior for castes and sub-castes (*jatis*). As such, these laws, although they included many contradictions, were considered timeless and a manifestation on earth of Brahman, or the Universal Soul.

Within the Abrahamic tradition, Jewish law was the sacred Torah, which had been given by God to Israel through Moses, and the Talmudic commentaries on it. Because Jews lacked a state of their own (except for the short-lived Khazar kingdom), the rabbis who administered this law did so within the confines of Jewish communi-

ties that were the subjects of non-Jewish polities. Islam, to the contrary, was both a religion and a state (actually many different states), and Sharia, its sacred law, which had been given by God to the Prophet and was interpreted by trained *qadis*, functioned in both spheres. Indeed, within the ideal Islamic community, there was no separation between religion and government. Within the Christian traditions of Latin Europe and Byzantium, there were church law (known as canon law in the West) and secular law, although there were significant overlaps. In both traditions, for example, heresy, or perverse religious belief, was an offense against the state as well as God and the Church and was punishable accordingly by the temporal authority.

In summary, despite some obvious parallels, attempts by humans to fix their place in the cosmos and to give meaning to their lives were as varied as the many cultures that flourished around the globe.

—Alfred J. Andrea

► THE QADI IBN BATTUTA

Abu Abdallah ibn Battuta (1304–1369) is better known for his remarkable journeys, which he undertook during 30 years of his life, than as a qadi, or religious judge. When Ibn Battuta arrived at the Delhi court in 1334, the sultan, Muhammad Tughlaq, was a ruler with a reputation for preferring to hire into his administration and judiciary foreign professionals from Islamic countries. Indeed, it was this policy, the reputed generosity of the sultan, and the famed splendors of the Delhi court that had attracted Ibn Battuta to travel to India. Although he had not yet established a reputation as a jurist, Ibn Battuta was nonetheless appointed as a Maliki qadi of Delhi. His *Rihla*, or account of his travels, provides very little information regarding his seven-year-long service as a qadi. His narrative, however, vividly depicts Islam in India and also provides impressions of the majesty of the Delhi sultanate court and the ambivalent character of Sultan Muhammad Tughlaq, who was very generous and an ardent lover of knowledge, especially of the Hanafi branch of sharia jurisprudence. At the same time, he was capricious and capable of taking extreme measures by applying the penalties of Sharia for minor offenses. Disturbed by such an environment, Ibn Battuta found a way to escape from the Delhi sultanate when the sultan asked him to leave for China as an ambassador.

—Husain Kassim

The Application of Sharia in India

Sharia, or Islamic religious law, was first introduced to India by Muhammad ibn Qasim, with the conquest of Sind in 712 and its incorporation into the Abbasid caliphate. Later Sharia was enforced in India as an administrative and judicial policy by the Delhi sultans of various dynasties from 1210 to 1526. Its authority was formally accepted throughout the Delhi sultanate period mainly to underscore their legitimacy to rule. Moreover, revenue from the poll tax (*jizya*) imposed on non-Muslim subjects was substantial. However, the policy of levying the poll tax varied from one sultan to another. Alauddin Khilji (r. 1294–1316), instead of levying a poll tax, introduced a policy of taxation on agricultural produce at the rate of 50 percent, the maximum allowed by Sharia. In addition, he levied a grazing tax (*charat*) and a tax on dwellings (*sakumatgarbi*) that were not sanctioned by Sharia. The pious Firuz Shah Tughluq (r. 1351–1388), on the other hand, abolished all taxes that were not sanctioned by Sharia, levying instead four permissible taxes: a land tax (*kbraj*), state-collected alms-giving of 2.5 percent (*zakat*), the poll tax, and one-fifth of booty (*kbums*). A fervent anti-

➤ IBN KHALDUN'S MEETING WITH TAMERLANE

It is often surprising for people to learn that Ibn Khaldun's *Muqaddimah* was written during a brief period of inactivity in the writer's life. Ibn Khaldun was many things in his long and distinguished career, from a political aide to a jurist and theologian. His many travels brought him to Cairo, where the Mamluk sultan Barquq (r. 1382–1399) appointed him *qadi al-qudat* (supreme judge). Although somewhat elderly, being in his late 60s, the *qadi* ended up in Mamluk-dominated Damascus during its conquest and sack in 1401 and was asked to join the forces that were sent out to meet Timur-i Leng (Tamerlane) in battle. After the defeat of the Mamluk defenders, Ibn Khaldun was forced to negotiate his own surrender.

In his autobiography, Ibn Khaldun dealt at length with his meetings with Tamerlane, providing us with great personal insight. He noted that Tamerlane seemed to be neither Sunni nor Shia and mentioned his leniency to those who capitulated. That is not to say that Ibn Khaldun was enamored with Tamerlane. He reserved his harshest language for the destruction of the Umayyad mosque in the city's heart and commented at length on the cruelty of Tamerlane in subsequent personal letters. But while Tamerlane might display cruelty at one moment, Ibn Khaldun also noted that he was always ready to play chess or debate complex theological and philosophical questions.

—Rasheed Hosein

Muslim historians, such as al-Tabari and Masudi, and commented upon them (and the errors they made) in the *Muqaddimah* of his *Kitab al-Ibar* (*Universal History*). With his training, Ibn Khaldun proved useful in many governmental capacities.

The North Africa of Ibn Khaldun's time was unstable, with new ruling dynasties replacing older ones every few years. As a result, he moved from court to court as political fortunes dictated. His journeys took him from Tunis to Fez (then the center of learning in Muslim West Africa) and eventually to his ancestral home of Seville in Christian Spain. After brief periods of service to various rulers of the region, he retired for a period of four years to the castle of Ibn Salama (near Oran), where he began his composi-

tion of the *Muqaddimah* and the *Kitab al-Ibar*. Once they were completed he moved back to Tunis, but eventually he grew disenchanted and left under the pretext of going on pilgrimage, or Hajj, to Mecca. His life in the eastern part of the Islamic world was no less tumultuous. He witnessed the sacking of Damascus by Tamerlane and attended the purging of corrupt *qadis* (judges) in Cairo. Ibn Khaldun died in Cairo on the 26th of Ramadan (March 16, 1406) at the age of 74.

In terms of its structure, the *Muqaddimah* translates into roughly six chapters of varying lengths. The first chapter deals with civilization in general, with specific references to Arab and North African models. In six prefatory discussions, Ibn Khaldun looked at why some contemporary societies were more advanced than others. This all amounted to a concerted effort to describe the world in scientific terms.

Overall, Ibn Khaldun's novel approaches to the nomad-sedentary dynamic and the rise of dynasties are two of his greatest contributions to the historical record. According to him, both activities are the product of *asabiyyah* (solidarity). It is something inherent within humanity and varies in intensity depending on whether one is nomadic or settled. According to Ibn Khaldun, nomadic groups have a higher *asabiyyah* than those that live in cities because the nomad lives free in nature, while the city dweller lives under the law. The law forcibly subverts the nature of the man, making him weak. Therefore, when conflict occurs, the group with the higher *asabiyyah* wins. This replicates the cycles of history witnessed by Ibn Khaldun himself. However, once the nomads are brought into contact with the settled peoples and begin to rule over them, they in turn settle. Their solidarity weakens, opening the door for conquest by a more unified group. Thus, a chain is formed. Humanity needs *asabiyyah* to survive in the wild; it also compels people to establish rule over those who are weaker, and it makes possible the formation of laws. Thus, the rise and fall of civilization is a self-sustaining enterprise, one that is by nature a necessary expression of *asabiyyah*.

Within the larger dynamics of the rise and fall of civilization there occurs the smaller cycle of the rise and fall of dynasties. Ibn Khaldun placed the life cycle of any given dynasty at four

generations. When a group becomes dissatisfied with the state of affairs, it is compelled to overthrow those in power. Since this works in accord with the will of the people, the founder is almost always held in high esteem. With the second generation still connected strongly to the *asabiyyah* that created the dynasty, we begin to see discontent as the ruler begins to promote his own interests. Totally removed from the *asabiyyah* that established the dynasty, the third-generation ruler forsakes the law in favor of policies to satisfy his vices and becomes alienated. Ancestral prestige is destroyed by the excess and vice of the fourth and last generation. However, if there is no one in possession of *asabiyyah*, then the dynasty will gain a brief reprieve until one group rises to challenge it. Ibn Khaldun places the time frame at 120 years. It is important to note that these conclusions were born of his historical observations, marking Ibn Khaldun as a major social historian.

—*Rasheed Hosein*

Bibliography

- Azmeh, Aziz al-. *Ibn Khaldun (Arabic Thought and Culture)*. London: Routledge, 1990.
- Ibn Khaldun. *Muqaddima*. Translated by F. Rosenthal, abridged by N. Dawood. Princeton, NJ: Princeton University Press, 1967.
- Mahdi, Muhsin. *Ibn Khaldun's Philosophy of History*. London: Allen and Unwin, 1957.
- Simon, Robert. *Ibn Khaldun: History as Science and the Patrimonial Empire*. Translated by Klára Pogátsa. Budapest: Akadémiai Kiadó Rt., 2002.

Zhu Xi and the Neo-Confucian Reshaping of Chinese Thought

Zhu Xi (1130–1200) is the most influential Chinese thinker of the past 800 years. His reinterpretation of the Confucian classics dominated education and official ideology from the Yuan dynasty (1279–1368) until the abolition of the examination system in 1905. Zhu's position in laying the foundations of Neo-Confucian orthodoxy has often been compared with that of Thomas Aquinas (ca. 1224–1274) in the Western Christian tradition.

Zhu Xi must be regarded as a major world philosopher and religious thinker because he completed the task of reconstructing Confucian-

➤ MASTER ZHU ON MORAL PERFECTION AND BOOK LEARNING

Long before Zhu Xi's philosophy was canonized as official state orthodoxy, his students wrote down and collected their master's conversations, which were ultimately published in book form in 1270. The following quotation is an example of his philosophy:

"Book learning is of secondary importance. It would seem that moral principle is originally complete in man; the reason he must engage in book learning is that he hasn't experienced much. . . . Now in book learning we must simply apprehend the many manifestations of moral principle. Once we understand them, we'll find that all of them were complete in us from the very beginning, not added to us from the outside."

—*Alfred J. Andrea*

Source

Daniel K. Gardner, ed. and trans., *Learning to Be a Sage: Selections from the Conversations of Master Chu, Arranged Topically* (Berkeley: University of California Press, 1990), 128.

ism into a complete system of cosmology, metaphysics, ethics, and spiritual practice fully capable of competing with Buddhism and Daoism. The latter traditions had dominated Chinese spiritual life for over a millennium, from the end of the Han (202 BCE–220 CE) into the Song (960–1279) dynasties. The radical shift in Chinese elite culture represented by Neo-Confucianism was closely related to the decline of the aristocracy following the fall of the Tang dynasty (618–907) and its replacement in the Song by a meritocratic system of officeholding based on the examination system, which required years of study of the Confucian classics.

Zhu Xi spent 40 years of his life in educational work and served as an official for less than 10 years, a fact that clearly affected the nature of his teachings. In his disputations with other Confucian scholars, he emphasized the importance of broad learning, observation, and systematic intellectual inquiry over the contemplative pursuit of virtue, which he thought was too close to

Buddhism and Daoism. Nevertheless, he still believed that the goal of learning was not simply the accumulation of knowledge and literary skills but rather the achievement of a penetrating insight into the fundamental nature of things that would transform a person's character and physical nature. He also emphasized the importance of quiet sitting (meditation) as a balance to engagement in study and work. And the most important aspect of knowledge was the understanding of moral principles, an understanding that requires one to put one's knowledge into practice in both personal relationships and government service.

It was through his emphasis on the reality and rational accessibility of unchanging metaphysical principles that create order in both the natural and human worlds as well as his insistence on the importance of objective knowledge of the world that Zhu completed the work of his predecessors in revitalizing Confucianism. These principles were called *li*, a character that as a noun refers to regular patterns or orderliness and as a verb means to put things in order. Principles—particularly the fundamental moral principles that are the basis of social order and harmony—were also referred to by the word “Dao” (Way). All the principles of individual things and affairs, Zhu Xi taught, were particular manifestations of a single principle, for which he used the term “Supreme Ultimate” (*Taiji*). Individual things or human beings are also able to fully manifest the *Taiji* in themselves, and the *Taiji* is the foundation of their existence. The differences between things and persons are due to their different endowments of *qi* (material force).

All things and affairs are governed by definite principles and norms and necessary laws, and if people are in accord with these principles and laws, they can manage affairs easily with no need to resort to artificial effort. Accordingly, an understanding of principle must come first, and action follows. *Li*, moreover, is present within human beings as their nature (*xing*), the virtuous nature mandated by Heaven as opposed to the physical nature, the mixture of *li* and *qi* that gives rise to human desires. Historically, Zhu believed that the world was ruled in accord with heavenly principle by sage rulers in the ancient period of the Three Dynasties (Xia, Shang, and

Zhou) but that subsequently human desires ran amuck, and rulers began to rule by force and despotism instead of the power of virtue. It was Zhu Xi's commentaries that established the Four Books—*The Great Learning*, *The Analects*, *The Teachings of Master Mencius*, and *The Doctrine of the Mean*—as the core object of study for China's civil service examinations from the fourteenth century to the early twentieth century.

Zhu Xi's Neo-Confucianism traveled to Korea and found a home in Japan as well. Early in the seventeenth century, Ieyasu, the first Tokugawa shogun, adopted Neo-Confucian thought as official ideology to buttress his reorganization of Japanese society.

—Barry D. Steben

Bibliography

- Ching, Julia. *The Religious Thought of Chu Hsi*. Oxford: Oxford University Press, 2000.
- Feng, Youlan. *A History of Chinese Philosophy*. Translated by Derk Bodde. 2 vols. Princeton, NJ: Princeton University Press, 1952–1953.
- Siu-chi Huang. *Essentials of Neo-Confucianism*. Westport, CT: Greenwood, 1999.

Neo-Confucianism in Japan and Korea

Neo-Confucian scholarship and philosophy arrived in both Korea and Japan shortly after its systemization in China during the Song dynasty (960–1279) and became a crucial part of the cultures of both Korea and Japan, although its impact was more pronounced in the former rather than the latter before 1500.

After the fall of the Song dynasty, Korean representatives traveled to China in order to establish relations with the new Yuan dynasty (1279–1368). It was during these visits that Korean scholars became acquainted with Neo-Confucianism. As the Yuan dynasty declined, so too did the fortunes of the Koryo dynasty (918–1392) in Korea. Inspired by the moral philosophy of Neo-Confucianism, Korean scholars called for reform. These efforts, however, could not save the dynasty, and it was overthrown in 1392. The founder of the Joseon dynasty (1392–1910), Yi Seong-gye (1335–1408, r. 1392–1398), brought some of these reformers into his government. With

their help, he established a new state founded on Neo-Confucianism.

Buddhism was an important part of the history of Neo-Confucianism in both Japan and Korea. There had always been an affinity between the two traditions even in Song China. Chinese Chan (known as Zen in Japan) monks and priests embraced Neo-Confucianism as fundamentally the same as Chan, while Neo-Confucian scholar officials denied any similarity between the two. This ambivalent relationship between Buddhism and Neo-Confucianism carried over into Korea and Japan. Buddhist monks who studied Neo-Confucianism were mostly Zen, especially those of the Gozan temples in and around Kyoto. In Korea, the Neo-Confucians who helped create the Joseon state began a persecution campaign against Buddhism, which they linked to the moral degeneracy of the previous dynasty. Through the connection in Neo-Confucianism between moral teachings and political theory, they believed that they could avoid the fate of the Koryo. In a similar way, Neo-Confucianism grew in influence during the Southern Song dynasty (1127–1279) in China following the capture of the north by the Jurchen in 1127. The most influential of China's Neo-Confucians, Zhu Xi (1130–1200), asserted that China's main goals were to shore up its moral foundations and to recapture the north. According to traditional Chinese thought, proper moral behavior was the foundation of a stable society, and immoral behavior invited inevitable social and political disaster.

The separation of Buddhism and Neo-Confucianism also occurred in Japan but not until the middle of the sixteenth century. Prior to this time, the monks who studied Neo-Confucianism were mostly Zen Buddhists, especially of the Gozan temples of Kyoto. Since they were primarily Zen Buddhists, the similarities between the two traditions were especially appealing to them. For example, the Zen notion of enlightenment (*satori*) resonated with the Neo-Confucian concept of original goodness (*bonzen no sei*). Other than Confucius (ca. 551–ca. 479 BCE), the Neo-Confucians admired the philosopher Mencius (372–289 BCE), and they placed special emphasis on his idea of original goodness. According to this notion, one was born in a state of near moral

➤ JOSEON ENDORSEMENT OF CONFUCIANISM

The following passage is from Jeong Dojeon (1342–1398), one of the chief Neo-Confucian advisers to Yi Seong-gye (1335–1408), the founder of the Joseon dynasty. In it, he dismisses both Buddhism and Daoism as harmful to the Korean state.

“Through the discussion of the following poems this essay will mainly argue for the correctness of the principle of righteousness of Confucianism and, by reasoning against Buddha and Lao Tzu (Laozi), it tries to make the reader aware of their falseness. . . . If one keeps righteousness in his heart and nourishes it, he will eliminate the shroud of material desires, all will become lucid. . . . If one concentrates his righteousness while nourishing and expanding his material force, it will become the greatest and stoutest power, strong and moving . . . filling up all between heaven and earth. The beginning and the end will join together and the internal and external will be cultivated alternately. This is why the learning of the Confucians is correct and is not like the biased learning of the Buddhists and the Taoists (Daoists).”

—Mark McNally

Source

Peter Lee, ed., *Sourcebook of Korean Civilization*, Vol. 1 (New York: Columbia University Press, 1993), 454–458.

perfection; during the course of one's life, this moral state became corrupted with the accumulation of selfish desires. Thus, in order to return to that state of original goodness, one had to eliminate those desires. In Buddhism, the elimination of desires is also a central goal for its adherents; thus, as one worked to restore one's original goodness, one was at the same time moving toward enlightenment. Building on the ideas of Mencius, the Neo-Confucians outlined ways in which people could morally rectify themselves. Specifically, they devoted themselves to the study of the Confucian canon (the Four Books and the Five Classics). Moreover, certain rigorous practices such as quiet sitting (which was similar to Zen meditation) were crucial as well.

—Mark McNally

Bibliography

- Armstrong, Robert Cornell. *Light from the East: Studies in Japanese Confucianism*. New York: Gordon, 1974.
- De Bary, Wm. Theodore, and JaHyun Kim Haboush, eds. *The Rise of Neo-Confucianism in Korea*. New York: Columbia University Press, 1985.
- Lee, Peter, ed. *Sourcebook of Korean Civilization*, Vol. 1. New York: Columbia University Press, 1993.

Western Ethical Philosophy from Abelard to the Early Humanists

Peter Abelard (1079–1142) started a process that altered the study of ethics in the Latin West by raising questions about the authorities on which the scholastics relied and by suggesting a moral standard that was grounded in general revelation (God revealed through nature) rather than special revelation (God revealed through the prophets and supernatural intervention). This focus on human ethical actions that emphasizes the primacy of reason over religious authority is generally known as humanism.

Abelard stands out as having one of the most turbulent professional and personal lives among the scholars of Europe's Middle Ages. His relationship with Heloise is well known. His ethical theory is in part an explanation of his behavior toward her, a rejection of Realism (the theory that universals are real in themselves, as was taught by Plato), and a return to Greek philosophy's study of the good and human nature. In rejecting Realism, Abelard opened the door for other humanists to argue for Nominalism (the view that there are no universals) or perhaps Conceptual Realism (the view that universals exist only in the mind) and the divine command theory (the morality of an act depends solely on whether God commands or prohibits it).

During his time as a student in Paris, Abelard was taught by William of Champeaux, who was a Realist. In opposition to William's Realism, Abelard argued for what has come to be called Conceptualism, which states that universals are concepts in the mind, ultimately the mind of God. Like Nominalism, this view maintains that universals are not real in themselves, but unlike Nominalism it does not deny the existence of universals altogether.

It was during his time in Paris that Abelard first met Heloise and worked as her tutor. This led to a romantic relationship that culminated in a secret marriage that Heloise denied out of fear that being married would harm Abelard's career. In anger at this situation, Heloise's uncle paid ruffians to castrate Abelard. Thus shamed, Abelard and Heloise both spent the rest of their lives under monastic vows, with letters from Heloise displaying her continued devotion to Abelard, while his display a distant reserve. His explanation of these events, in *The Story of My Misfortunes* (*Historia calamitatum*), is a demonstration of his ethical theory in that although he recounts behavior that was not good, he argues that his intentions were good, and so what happened to him was misfortune rather than deserved consequences.

The development of Abelard's humanist philosophy worked through these personality and behavioral issues. His questioning of William's authority and struggle against the monastic ideal of the day were expressions of Abelard's philosophy. Perhaps Abelard's most significant influence is in his work *Sic et Non* (*Yes and No*) in which he used a dialectical framework to display answers from the Bible and Church fathers to various weighty theological questions. The answers are apparently contradictory. Abelard made suggestions about how the contradictions might be reconciled, but this aid did not appear in the work itself. The application of dialectic to theology influenced later thinkers, such as Peter Lombard. However, Abelard's method raised questions about the authority of the Church fathers. Even if the contradictions are only apparent, there must be some authority in addition to the Church fathers that allows humans to understand what is being said and to work out the apparent contradictions into a coherent system. This reliance on reason led to the appearance of conflict between reason and theology that would be an important part of later humanism.

Abelard expressed his ethical theory most clearly in *Know Thyself*. The title is an indication of his reliance on Greek philosophy. In itself this was not unique for his time, but coupled with the questioning of authority implicit in *Sic et Non*, Abelard's direction was to ask what can

be known from general revelation about the good and God.

Abelard's answer about what makes an action good was that this depends on intentions. Good intentions behind a harmful action are better than evil intentions behind a beneficial action. Abelard even extended this to those who crucified Christ, saying that since they believed that what they were doing was good, their action was not as bad as someone who intended evil. Although in some ways this definition of "good" raises problems about the objective distinction between good and evil, Abelard seems to have grounded evil in a contempt for God shown through an intention to break God's law. Yet as Alistair MacIntyre points out, Abelard provided a standard for judging what is good and evil that is not necessarily tied to a Christian or theistic outlook.

Abelard's legacy in the academy, and one of the reasons that humanism can be traced to him, is that he helped develop the study of subjects that were not within an earlier theological-philosophical framework and raised important questions about what humans can know apart from special revelation.

Benefiting from Abelard's attack on Realism, William of Ockham (ca. 1285–1349) also contributed to thinking about ethics. Ockham did not believe that there are universals regarding "the good" that exist independent of the mind. Consequently, he developed what is called the divine command theory, which is defined above. This action of God in determining what is good is not grounded in the nature of things (which implies universals) but is solely dependent on the will of God. As such, Ockham was also a voluntarist, rooting the good in the divine will and independent of the human intellect or emotions (or intentions). Francesco Petrarca (1304–1374), also known as Petrarch, has been given the title "father of humanism" in the sense that he ushered in Renaissance humanism. Whereas Abelard helped open the field of study to new subjects, Petrarch contributed to numerous fields, including philosophy and literature, in a way that others before him had not. He argued that God gave humans a mind and that it should be developed to the fullest of its abilities. This led him to

➤ SIMONY IN WESTERN THOUGHT

Simony is the practice of buying or selling a church office or anything that is sacred. It is named after Simon Magus who, as recorded in the book of Acts, witnessed the Apostles performing miracles and asked if he could buy such power. Although it is common for one's initial intuition to be against the practice of simony, its origins are not merely in an avaricious appetite for power and wealth but rather in the relationship between the civil and ecclesiastical authorities.

In the European Middle Ages, popes such as Gregory VII (r. 1073–1085) and Innocent III (r. 1198–1216) worked to reform the Church and cleanse it of simony, which in their minds corrupted ecclesiastical offices by handing over the sacred to the secular. However, the practice of civil authorities appointing bishops and abbots was related to the fact that these church officials controlled large tracts of land and therefore had extensive civil authority. Consequently, kings and other lords wished to ensure that whoever occupied a bishopric or the abbatial office of a monastery would be favorable to their policies. Thus, even when the actual practice of simony was more consistently prosecuted, kings and lords continued to insist on having some influence on who would be appointed to these positions.

One suggestion about how to end civil influence on who holds a church office was that these offices should not have vast possessions of land and wealth. Indeed, it was argued that this was contrary to the spirit of Christianity, and persons such as Francis of Assisi (1181/1182–1226) took vows of absolute poverty in the belief that this was how a Christian should live. This ideal, however, was never widely adopted, and simony remained a fact of ecclesiastical life well past 1500.

—Owen Anderson

look both at earlier Christian scholars, such as Augustine, but also at non-Christians, such as Cicero. Petrarch promoted the Renaissance ideal that Roman and Greek scholars had fully developed some of their human qualities but needed special revelation and grace to complete their humanity.

Petrarch's ethical philosophy expressed a kind of moral dilemmas approach. He wrestled with questions about whether the public political life or the reclusive contemplative life is best. As was the case with Dante (ca. 1265–1321), Petrarch idealized a woman he hardly knew, and this came to expression in his poetry. He contributed to a more intuitive approach to the good life, and this in turn led humanism to generally adopt a skeptical attitude about knowing the good as a universal and instead to focus on individual cases of what it means to flourish.

The final humanist to be considered for this era, who lived as a transition between the Renaissance and Reformation, was Desiderius Erasmus (1466?–1536). His ethical theory combined the curiosity and exploration of humanist studies within the confines of received tradition. His breadth of learning places him at the forefront of the thinkers of his day. He was involved in both humanist studies and in theology. Martin Luther hoped that Erasmus would see the value in the Lutheran Reformation, and Erasmus did concede that many reforms were needed in the Church, but ultimately he did not believe that a break with the Roman Church was ethical. He upheld Roman Catholic doctrines such as transubstantiation (the substance of bread and wine was transformed into the substance of Jesus's body and blood at the moment of priestly consecration) and the seven sacraments. Consequently, this era of humanism ends without having demonstrated how knowledge of the good from general revelation is possible. The subsequent history of humanism will largely consist in skeptical critiques of Christian knowledge claims, culminating in David Hume (1711–1776).

—Owen Anderson

Bibliography

- Abelard, Peter. *Philosophy and Christianity in the Middle Ages*. Translated by Frederick and Christine Crowley. London: Allen and Unwin, 1970.
- Adams, Marilyn McCord. *William of Ockham*. South Bend, IN: Notre Dame University Press, 1987.
- MacIntyre, Alasdair. *A Short History of Ethics*. London: Routledge and Kegan Paul, 1967.
- Marenbon, John. *Medieval Philosophy: An Historical and Philosophical Introduction*. London: Routledge, 2007.

The West's Rediscovery of Plato—The Early Years

With the revival of the study of classical Greek in Quattrocento (1400s) Italy, a succession of scholars began to translate Plato's dialogues into Latin, a process that culminated in the printing of Marsilio Ficino's edition of the entire corpus in 1484. But in the hands of mid-fifteenth-century scholars, what emerged was a systematized and Christianized Plato. This was a conception of Plato that built upon the Neoplatonic tradition of Byzantium, which gave a new dignity to humanity and had the potential to reform the cultural and spiritual life of Latin Christendom.

It was the humanists of northern Italy who first became interested in the Platonic dialogues. Humanists loathed what they saw as the obscurantism of medieval scholasticism, with its supposed linguistic barbarisms, convoluted theology, and unhealthy fixation with Aristotle. Conversely, Plato was not just renowned as a master of linguistic eloquence; he was also reputed to be a better philosopher than Aristotle. Consequently, when the Italian humanists first looked to Plato, they did so hoping to find not just a powerful philosophical alternative to medieval Aristotelianism but a potential champion of humanist values as well.

This predisposition profoundly colored the approach of Leonardo Bruni when he began to translate Plato's dialogues in 1405. Bruni found it reassuring that Plato had a notion of creation *ex nihilo* (out of nothing), the immortality of the soul, and an afterlife. More worrying though was Plato's disparaging comments about rhetoric, an art central to the humanist program. Worse, Plato had little sympathy for the idea of the active citizen, which to a civic humanist of Bruni's ilk was deeply distressing. Worse still, Plato seemed to endorse some ideas that were flagrantly immoral to a fifteenth-century Christian. Plato argued, for instance, for all wives to be held in common, and he endorsed both homosexuality and pederasty. Initially Bruni dealt with these unsettling discoveries simply by omitting them from his Latin translations, but by 1429 Bruni had had enough of Plato and wrote a life of Aristotle instead.

Yet despite this failure to annex Plato to humanism, the Platonic corpus was slowly integrated into Latin thought under the influence of a succession of Byzantine scholars. In the Greek world, Neoplatonism had never died out. A philosophical school that had flourished in the third century CE, it highlighted the various strands of Plato's metaphysical thought, reworking them into a single coherent system. It was this incarnation of Platonism that fed the theology of the early Christian Church. Indeed, St. Augustine had gone so far as to describe Platonists as those pagans who had come closest to discovering the truths of Christian revelation by rational means alone. Western scholars got a renewed taste of this thoroughly different Platonism at the Council of Florence in 1438. There a Byzantine Neoplatonist named Gemistus Pletho gave a lecture on the differences between Plato and Aristotle. In the years following Pletho's lecture, Bessarion, a Byzantine monk turned Catholic cardinal, provided the West with a complete Neoplatonic interpretation of the Platonic corpus, showing how Plato's thought ought to be construed as a systematic theology wholly in accord with the truths of Christianity.

While Bessarion's work was very influential, it was Ficino who completed the assimilation of Plato. Cosimo de' Medici, patriarch of Florence's leading family, provided Ficino with Greek texts of all 36 of Plato's dialogues in 1462, commissioning him to render them into Latin. To Ficino, reading the corpus through the lens of Neoplatonism, the proximity of Plato's thought to Christian revelation suggested that Plato was no ordinary philosopher; he was the culmination of an ancient theology. Before the coming of Christ, Ficino argued, God had revealed his mysteries to a few inspired sages. Chief among these were Moses and the prophets of the Old Testament, but also included were Plato and a number of other pagan luminaries, such as Hermes Trismegistus. To Ficino, Platonism was an ancient form of wisdom that had been given to the Greeks to prepare them for the coming of Christ and thus stood in the same relationship as Moses did to the Israelites. Consequently, Platonism was an ideal tool for the reformation of the church. While Aristotelianism had led only to strife and

➤ LORENZO THE MAGNIFICENT



Lorenzo de' Medici, called "Lorenzo the Magnificent," was a brilliant fifteenth-century Italian art patron, as well as the *de facto* ruler of Florence. (Library of Congress)

In his *History of Florence*, the great Florentine historiographer Francesco Guicciardini described Lorenzo de' Medici, the Magnificent (1449–1492), as a tyrant but noted that "if Florence was to have a tyrant she could never have found a better or more delightful one." To be sure, for 22 years, from 1469 until 1492, Lorenzo dominated the Florentine state. But while Lorenzo was a tyrant, he was a popular tyrant. The

key to his success was twofold. On one hand he was an astute, gifted politician and diplomat. Guicciardini went so far as to argue that the whole balance of power between the city-states of northern Italy was a product and function of Lorenzo's personality. But on the other hand, Lorenzo continued his grandfather Cosimo's policy of using Medici coinage to consolidate Florence's position as the most important cultural center in Europe and, by extension, securing the position of the Medici within the state. A poet and humanist of some distinction in his own right, Lorenzo also supported humanists such as Marsilio Ficino and Pico della Mirandola. Lorenzo established the Medici library, refounded the University of Pisa, transformed the University of Florence into the most important center for the study of Greek in the West, and in the final years of his life was patron to the young Michelangelo. For Guicciardini, Lorenzo's premature death signaled the end of a golden age and paved the way for the calamitous French invasion of Italy in 1494.

—Richard Raiswell

factionalism, the pure wisdom of the divine Plato was a pious philosophy that could lead the willing philosopher back to Christ.

—*Richard Raiswell*

Bibliography

- Brown, Alison. "Platonism in Fifteenth-Century Florence and Its Contribution to Early Modern Political Thought." *Journal of Modern History* 58(2) (1986): 383–413.
- Guicciardini, Francesco. *Selected Writings*. Edited and translated by C. Grayson. London: Oxford University Press, 1965.
- Hankins, James. *Plato in the Renaissance*. 2 vols. Leiden: Brill, 1990.
- Hibbert, Christopher. *The Rise and Fall of the House of Medici*. Harmondsworth, UK: Penguin, 1974.
- Kristeller, Paul Oskar. *Renaissance Thought: The Classic, Scholastic and Humanist Strains*. New York: Harper and Row, 1961.
- Medici, Lorenzo de'. *Selected Poems and Prose*. Edited by Jon Thiem. Translated by Jon Thiem et al. University Park, PA: Penn State University Press, 1991.

Science and Technology

As previously noted in the introductory essay for the “Thought and Religion” theme, natural philosophy, or science, was intimately connected with philosophical thought and religion during the period 1000–1500, just as it had been for many centuries prior to this era and would be for at least a century after 1500. The same was not true for technology, which arguably saw greater and more significant developments than natural philosophy. Of all the areas of the world in which the most significant technological breakthroughs were made during this 500-year period, China was undoubtedly the leader, as it had been for the previous 500 years. To name but a few, such inventions included large textile machines that did the labor of many, blast furnaces for the production of steel, a hydraulic-powered astronomical clock, paddle-wheeled vessels and the fenestrated rudder and watertight compartments for these and other ships, gunpowder artillery, and new methods for large-scale iron casting. Many of these and other inventions undoubtedly made life easier and more rewarding for many Chinese, and they helped make China the most prosperous state in Afro-Eurasia and the engine that drove much of its economy. Yet neither individually nor collectively did they effect any fundamental changes in Chinese society. Several technological developments that sprang up in or were introduced to Western Europe prior to 1500, however—notably new forms of shipbuilding and naval navigation, printing by movable type, and firearms—proved, in the years immediately after 1500, to be revolutionary factors in the West. New ships, new modes of navigation, and firearms propelled Europeans along a path that would lead them by the early sixteenth century to dominance in those areas of the Americas that they had recently entered and, almost as significant, a place of importance for the first time along the coasts of Africa and South and East Asia. Printing would, as it had centuries earlier in China, prove to be a major stimulus for intellectual and religious activity in Europe. But printing in China (and Korea) was not a medium for significant social or intellectual change. In sixteenth-century Western Europe, however, it served as the means through which revolutionary religious and secular ideas were disseminated.

Although there is solid evidence that the technology of gunpowder and its military applications (as well as the crossbow and trebuchet) spread westward from China, as several entries for the “War and Diplomacy” theme demonstrate, there is no evidence that the use of the compass as a navigational device or the concept of printing through movable type made their way from the Far East to the Far West, although both were known in China and elsewhere in East Asia long before they appeared in Europe. They might have made the long trek westward, but it

is equally possible that they were invented independently in Europe. As is so often the case when we try to trace the possible spread of ideas that might have taken place in the distant past, we end up more with speculation than irrefutable fact.

The concept of printing through movable type quite possibly never made its way to Europe from Korea, which first developed the process and where it became the norm, or from China, which only experimented with movable type sporadically and eventually gave it up as ill-suited for the Chinese language's tens of thousands of characters. Traditional block printing was better suited to Chinese. That aside, there is abundant documentation for the westward spread of paper, probably a Chinese invention that went back at least to the early second century BCE. Without relatively cheap paper, mass printing would not have been possible in either China or Korea after 1000 or in Europe after 1450. Without paper, printing certainly would not have had the power to teach both the literate and illiterate alike in China and Korea the rules of proper behavior championed by the state. It certainly would also not have had the revolutionary impact on European thought and religion that it did, namely the spread of humanist scholarship and ideas and the rapid spread of the Protestant and Catholic Reformations.

Al-Jazari, who flourished during the late twelfth century and possibly into the first years of the thirteenth century, is illustrative of the genius and limitations of technology in Dar al-Islam.

The greater Islamic world did not lack for technological innovations during this age, but as in China and all other societies of Afro-Eurasia, except the Latin West, these devices were not factors for substantial social or intellectual change. Al-Jazari, who flourished during the late twelfth century and possibly into the first years of the thirteenth century, is illustrative of the

genius and limitations of technology in Dar al-Islam. He invented a number of engineering devices, including several hydrological wonders, but none of his inventions, which are carefully documented in his *The Book of Knowledge of Ingenious Mechanical Devices*, survived much beyond his death. Although several of them, especially hydraulic pumps, had undoubted practical application, most were novelties and devices for amusement.

There was another area in which the Islamic world exhibited antipathy to technological innovation. Whereas printing by movable type became a revolutionary tool in the European West by 1500, it failed to play a significant role within any Islamic society for about 400 years. Muslims were not ignorant of the technology. As early as 1493 Jewish refugees from Spain set up a press in Istanbul for the production of Bibles and similar religious literature. Yet, by and large, Muslims resisted adopting printing until the latter half of the nineteenth century. Apparently the major motive behind this resistance was that the mass production of cheap books ran counter to two embedded traditions. First, Islamic education, as promoted in its madrasas, was primarily oral. One recited from memory the suras of the Quran and other religious texts. Second, calligraphy, literally “beautiful writing,” was an Islamic art form that stretched back to the seventh century. The painfully careful pro-

duction of exquisite manuscript Qurans and other religious books was an act of piety, as well as a major industry.

In addition to beautiful, hand-written and hand-illustrated books, Muslim calligraphers also produced extraordinarily beautiful maps. Indeed, cartography and geography were areas in which Muslims, especially the Arabs, were the masters of Afro-Eurasia. However, the most significant Muslim advances in these allied fields largely took place before 1000. After that millennial turning point, Arab geographic and cartographic knowledge was disseminated throughout much of Asia and into certain areas of Africa and Europe. Such great world maps (world in the sense that they showed Afro-Eurasia) as the Korean *Kangnido* of 1402, which showed the correct shape of Africa and depicted the Mediterranean Sea and the Black Sea as well as Western Europe, and the *Catalan World Atlas*, which was drawn in Majorca in 1375 and depicted both the gold route from Mali across the Sahara and a Chinese vessel along India's Malabar Coast, depended greatly upon now-lost Muslim maps. Possibly the most important single piece of cartographic knowledge passed from Dar al-Islam to the Latin West was the notion of the shape of the world, which Muslim scientists had learned from Hellenistic treatises and Arab and Persian sailors from experience. The early-thirteenth-century *De sphaera mundi* (*On the Sphericity of the World*), a treatise that drew largely from the writings of the ninth-century geographer al-Farghani, was read as a text at the University of Paris. Such widely disseminated knowledge allowed even persons not trained in a university, such as Christopher Columbus, to imagine that the Far East could be reached by sailing west.

The one area where theory and practical experience and application met most fruitfully was medicine. Whether via Greco-Arab medicine, native Indian *ayurveda* (the science of longevity), Muslim-Indian *unani*, European medicine, Native American forms of herbal and surgical intervention, or traditional folk healing, including shamanistic intercession, human beings around the world probably had as good a level of medical care available to them as they ever had had or would have until the triumph of the germ theory and modern clinical training and practices that originated in Europe and America in the late nineteenth century.

—Alfred J. Andrea

■ Introduction: The Advances and Limits of Medieval Science

Human societies throughout the world had traditions of thought about nature. However, the modern conception of “science” as a secular, rational endeavor had not fully emerged. Science was treated as connected with religion or magic in many cultures. In many non-literate cultures, healing was connected with the powers of shamans or holy men and women.

Even in literate Christian Europe, the universities in which work in “natural philosophy” occurred were church institutions, and a goal of natural philosophy was illuminating the glory of God.

Medieval science had not fully severed its links with magic. Astronomy remained strongly associated with astrology. Astrology was also

linked with medicine, as it was believed that a responsible physician would schedule medical treatments for the astrologically correct moment. Chemistry in its form of “alchemy” often combined experimental procedures with magical rituals. Both Islamic and Christian religious authorities often looked dubiously on such procedures, but they remained widely practiced none the less.

The most secular and rational traditions of science existed in China and to a lesser extent in the Islamic and Christian worlds, where researchers in science and medicine were heirs to the traditions of classical Greece. Arab thinkers, the most active followers of the Greek tradition in the early Middle Ages, virtually invented optics and advanced mathematics, astronomy, and medicine as well as many other disciplines. Their work had impact not just on their own civilization, but on that of Latin Christendom, where Arabic and Greek works previously translated into Arabic were often translated into Latin, and India, where Unani medicine built on the Greco-Arab medical tradition. The Arab world also served to disseminate the Indian numeral system to Christian Europe, where it proved far more useful to scientists and technologists than was the previously dominant Roman numeral system.

Islamic, Byzantine, and Latin Christian science built on the Greek tradition, but did not usually go beyond it by challenging its fundamental assumptions. The authority of the ancients—Ptolemy in astronomy, Aristotle in physics, and Galen in medicine—remained paramount, even after their systems were substantially modified, as the physicists of late medieval Paris and Oxford introduced new ideas about motion, including mathematical treatments that would eventually influence Galileo. The geocentric universe of Ptolemaic astronomy and Aristotelian cosmology remained the template for medieval scientists. The ideas of the ancients were most likely to be challenged or denied in those areas where they were incompatible with monotheistic religion in the Abrahamic tradition. Aristotle’s doctrine of the eternity of the universe, for example, had to be decisively rejected as incompatible with the belief in the creation of earth and the universe by an omnipotent God. (Some religious leaders, such as Etienne Tempier, the bishop of

Paris, or the Sufi theologian al-Ghazali, went beyond attacks on specific doctrines to suggest that the scientific enterprise as a whole teetered close to impiety.) Religion also helped set the agenda for scientists, as Christians wrestled with astronomy to determine the correct date of Easter, or Muslims with trigonometry and cartography to establish the *qibla*, the direction of Mecca to which Muslims were required to orient themselves in prayer.

—William E. Burns

Astronomy and Astrology around the World

Between 1000 and 1500 CE astrology played a central role in the lives of untold millions around the world. Native peoples of North America organized their year around the movements of celestial bodies, while their neighbors to the south—principally the Maya and Aztec peoples—closely studied the heavens for insights into divine will. A conviction that terrestrial life was in some way dependant upon the stars and planets was so pervasive that it would be impossible to summarize in a manageable space. However, the attitudes and practices of three cultures—the Indians, Muslims, and Chinese—can tell us much about the way that learned people perceived and practiced astrology around the globe.

The ancient Indians saw nature as a manifestation of the divine. More specifically, the heavenly bodies were seen as deities, prompting an abiding curiosity that was inseparable from their conception of sacred duty (*dharmā*). Thus, the *Rig Veda* demonstrates knowledge of the five planets visible to the naked eye as well as a fairly sophisticated understanding of solar, lunar, and the diurnal motion of the earth that may date to as early as 3,000 BCE. Given this fascination with the heavens and the identification of celestial bodies with divinities, it is not surprising that there arose a belief in the affective influence of the heavens over terrestrial affairs, which in turn gave rise to a predictive science: *vyotisha*, commonly rendered as *vyotish* by Western scholars.

Vyotish rapidly attained a position of prominence in the celestial sciences. By the time that Sripati (1019–1066) wrote his *Jatakāpaddhati*, the work that would become the standard text-

book for generations of Indian astrologers, his hierarchy of disciplines was hardly contested. For this influential scholar, mathematical astronomy—meaning the study of celestial motion and the concomitant mathematics involved with understanding these motions—was important primarily as a tool for making astrological predictions more accurately. The astrological system of the *Jatakapaddhati* does betray some Greek influences, which is unsurprising given that by the seventh century works such as the *Romaka Siddhanta* were introducing Western concepts to the East. However, Indian mathematics was already far too advanced to allow slavish imitation or wholesale copying of Greek models. Rather, the introduction of Ptolemaic astrology and astronomy acted to promote innovative thought. For example, Indian scholars developed a theory of epicycles that was likely inspired by Ptolemy but involved a model of planetary motion based upon variable circumferences of these epicycles that allowed for more accurate predictions of the positions of planets.

There was no stigma attached to the practice of predictive astrology in India. In fact, the highest caste of society—the Brahmin—supplied the majority of astrologers. These men could be found at all noble courts holding well-paid positions and offering advice on subjects ranging from marriage to war. The most visible expression of the esteem enjoyed by these scholars is the massive collection of eighteenth-century astronomical instruments known as Jantar Mantar at Jaipur, India, built by the Maharaja Jai Singh II to ensure the greatest accuracy possible for his court astrologers. This compound represents a type that had been constructed for centuries, though never on this scale.

Other societies were less accepting of astrology. Within the Muslim world, opposition to this predictive art had originally centered on a presumed association with *kabhan* (diviner priests), whom tradition relates that Mohammad had denounced. In time, disapproval became focused on the idea that astrology's predictive element was incompatible with free will. However, by the eleventh century the rise of the Asharite school of theology, with its emphasis on Allah's control over every aspect of human life, undercut traditional Islamic belief in humankind's freedom of

➤ ASTRONOMIC INNOVATION IN AL-ANDALUS—AL-ZARQALI

Al-Andalus was one of the great intellectual loci of the Middle Ages. Perhaps the most important astronomer to emerge from this period was al-Zarqali (1029–1087), known in the Latin West as Azarchel. Working in Toledo, he built a number of precision instruments to aid in his work, which he used to make observations of the heavens that were astounding for their accuracy. For example, he measured the motion of the aphelion—the movement of the earth to its farthest point from the sun relative to the fixed stars—at 12.04 seconds per year, strikingly close to the modern measurement of 11.8 seconds. Al-Zarqali applied his skills in constructing tables showing the daily position of all the planets, allowing for the prediction of solar and lunar eclipses in addition to a wide variety of celestial motions and phenomena. Gerard of Cremona (ca. 1114–1187) translated al-Zarqali's works into Latin in the twelfth century, wherein they provided the basis for the *Toledan Tables*, the most accurate compilation of astronomical data available until they were revised as the *Alfonsine Tables* a century later. In this way the work of the great Andalusian astronomer al-Zarqali came to be the basis of astronomical and astrological work in the West until the sixteenth century.

—Scott Hendrix

choice. In spite of this, religious antagonism toward astrology not only deepened but became more organized. According to authorities, astrology promoted sinful pride by pretending to give humans access to God's mind.

While this opposition complicated the lives of astrologers, judicial astrology's promise was too great for it to be banished from noble courts and the lives of the moneyed classes. Under the caliphate, astrologers regularly provided advice on questions of war, succession, and even when the best time might be to conceive a male child. Wealthy merchants had no trouble finding a skilled student of *ilm abkam al-nujum* (the science of the decrees of the stars, namely astrology) who could provide advice on investments, when to begin a trade journey, or a variety of personal questions.

In contrast to the Arabic world, *tianwen* (portent astrology) enjoyed immense prestige in Chinese culture. Monarchs appointed court astrologers and tasked them with assiduously gathering information on celestial phenomena to ensure that the ruler's actions were in tune with the Mandate of Heaven that had placed him in power. Since deviance from this natural order could spell disaster for not only the ruler but for his realm as well, the grand astrologer—who functioned as the head of what was, in essence, a department of astrology—was one of the most important advisors at the imperial court.

However, astrology was restricted to the court. Viewed as essential to the well-being of the state, the knowledge and tools necessary to the astrologer were strictly controlled. As such, learned astrology was not accessible beyond the immediate circle of the emperor. From at least the time of the Tang Code, established in 624, practice of astrology beyond this exalted circle was punishable by death. In practice, this meant that there were three centers of astrological practice in China from the tenth century until the thirteenth century, with this number being reduced to one with the reconsolidation of China under the Mongols in 1279. With Khubilai Khan's promotion of traditional Chinese culture in order to promote himself as holder of the Mandate of Heaven, the importance of astrology to imperial control of China became more important than ever. However, by this time Chinese astrology had absorbed many Arabic and Indian influences, adopting the use of the horoscope, for example, in place of the traditional system based strictly upon an analysis of planetary position in relationship to the balance of the traditional elements: metal, wood, water, fire, and earth. The result was a system that was increasingly complex yet decreasingly open to modification based upon empirical observations. By the sixteenth century the resultant creation was more of a metaphysical structure, inviting reflection upon the spiritual characteristics of a subject of analysis rather than a scientific one requiring objective analysis of collected data.

—Scott Hendrix

Bibliography

Das, Sukumar Ranjan. "Scope and Development of Indian Astronomy." *Osiris* 2 (1936): 197–219.

Nakayama, Shigeru. "Characteristics of Chinese Astrology." *Isis* 57(4) (1966): 442–454.

Saliba, George. *A History of Arabic Astronomy: Planetary Theories during the Golden Age of Islam*. New York: New York University Press, 1994.

Abd al-Rahman al-Sufi's *Treatise on the Constellations (Kitab suwar al-kawakib al-thabita)*

Composed in the Iranian province of Shiraz in 964, Abd al-Rahman al-Sufi's illustrated handbook on the constellations became a major reference work for astronomers as a catalogue of star positions. Several renowned scientists owned copies that survive to this day: Nasir al-Din al-Tusi (1201–1274) in Maragha, Iran; Amir Ulugh Beg (1393–1449), the grandson of Timur i-Leng and ruler of Samarqand; and Taqi al-Din Misri (1526–1585), a scholar in Ottoman Istanbul. Written in Arabic, the treatise is a systematic account of all 48 classical constellations, ranging from the northernmost figures (starting with Ursa Minor) to the 12 Zodiac constellations and those of the Southern Hemisphere. Each constellation is illustrated separately as a line drawing with the stars painted in numbered circles laid across the figure. Al-Sufi's images are therefore legible not only as single figures but also as functional star maps, depicting localized parts of the celestial sphere. Given this, there is often a strong correlation between the constellation iconography in al-Sufi's treatise and that of the celestial globes produced in the Islamic world, and indeed several globes credit the treatise overtly.

Perhaps surprisingly, each of al-Sufi's constellations is illustrated twice, first as seen in the sky and then as seen on the globe. This double format was designed to assist the student and is a unique and innovative feature of al-Sufi's treatise. On a typical celestial globe made in the medieval Islamic world, the outlined constellation figure was depicted as a mirror image of the same constellation when actually perceived in the starry sky, so al-Sufi's double format shows both viewpoints together for clarity. Many copies of the treatise tend to show these two versions on either side of the same page, which is a perfect way to explain this tricky issue as explained by al-Sufi himself in his treatise. The connection between these two sky and globe

versions may thus be understood by simply lifting up the illustrated page to the light. By turning over the page, the same figure can be seen from either side, demonstrating globe and sky view alternately.

Although they derive from a late classical iconographic tradition, al-Sufi's images are usually drafted with reference to the stylistic conventions of then-contemporary Islamic art; thus, Orion and Sagittarius are often depicted wearing turbans. In translation, the classical constellation names were also subject to metamorphosis in the Islamic period. In this context, Greek mythological identities were practically meaningless, so proper names such as Perseus and Cassiopeia were often discarded for more descriptive versions of the posed figures: Cassiopeia became *dbatt al-kursi* (the seated woman), and Perseus became *hamil ra's al-ghul* (the holder of the demon's head).

Together, al-Sufi's text and illustrations combine a star catalogue modeled on Ptolemy's *Almagest* and a comparative discussion of the two different systems of star names used by scientific astronomers and by Bedouin Arabs. Typically, the illustration of a classical constellation (such as Perseus, Orion, or Hercules) is overlaid with small inscriptions noting corresponding star names in Bedouin astronomy. For the most part, these Bedouin star names refer to completely different associations of identity, such as the gazelles visualized over the stars associated with the classical Ursa Major. Other instances imply a shared heritage from ancient astronomy, such as the Bedouin identification of a lion, scorpion, and male figure close to or overlapping the classical constellations of Leo, Scorpio, and Orion. While the Bedouin star identities are normally indicated only by inscribed labels, at least three Bedouin constellations are directly illustrated in al-Sufi's treatise, usually overlapping a classical figure: the Horse, the Fish (overlapping Andromeda), and, less frequently, the female Camel (overlapping Cassiopeia).

The cultural contrast is not only between different identifications for stars and constellations but also between a written scientific heritage (the textual sources of classical astronomy, mobilized from Greek and Persian into Arabic during the period of intellectual activity known as the Translation Movement) and oral tradition (much of

➤ THE EARLIEST COPY OF AL-SUFI'S TREATISE

There are numerous manuscript copies of al-Sufi's treatise on the constellations, the finest of which is also the earliest known and dates to 400 AH (for the Latin *Anno Hegirae* meaning "in the year of the Hijrah") or 1009–1010 CE. Now held at the Oxford Bodleian Library (Marsh 144), this version of the manuscript was copied and illustrated by the astronomer's son Husayn, probably in the family's native Rayy in Iran. It is 213 pages long, an almost complete copy of the text; is beautifully copied in a clear Arabic script known as *naskh*; and features 77 exquisite illustrations of the classical constellation figures.

The quality of the Bodleian images proves that book illustration was already at a sophisticated level in the Islamic Middle East at this early period. Although written accounts describe formidable libraries and intellectual activity, surviving examples of illustrated books are rare until the late twelfth century. Although the constellations derive ultimately from a late classical tradition of scientific imagery, their long history of use in the Islamic world is apparent by the shift in iconography toward local costume details and figural types. Al-Sufi's constellation figures are drawn in an elegant style that strongly suggests a relationship with the pre-Islamic Sassanian art of Iran, particularly in the elaborate swirling costume folds. This archaism is probably deliberate. Al-Sufi served the Buyid dynasty, formidable patrons of science and culture who were keen to cite their Iranian heritage with reference to an imperial Sassanian ancestry both in their titles, reviving as they did the grandiose title *shahinshah* (king of kings), and in their art. The archaic style of the 1009–1010 manuscript may be part of that deliberate dynastic propaganda.

—Moya Carey

Bedouin star knowledge was preserved in rhyming verse for easier memorization). Al-Sufi's intercultural approach is typical of the intellectual syncretism of the scientific culture in the Islamic world. His patron, the Buyid emir Adud al-Dawla (d. 983), was a keen sponsor of intellectual activity and built several institutions in support of learning, including a large library accessible to scholars, hospitals, and an observatory.

—Moya Carey

Bibliography

- Carey, Moya. "Al-Sufi and Son: Ibn al-Sufi's Poem on the Stars and Its Prose Parent." *Muqarnas* 26 (2009): 181–204.
- Carey, Moya. "Mapping the Mnemonic: A Late Thirteenth-century Copy of al-Sufi's *Book of the Constellations*." In *Arab Painting: Text and Image in Illustrated Arabic Manuscripts*, edited by A. Contadini. Leiden: Brill, 2007.
- Kunitzsch, Paul. "The Astronomer Abu'l-Husayn al-Sufi and His Book on the Constellations." *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 3 (1986): 56–81.
- Savage-Smith, Emilie. "Celestial Mapping." In *Cartography in the Traditional Islamic and South Asian Societies: History of Cartography*, edited by J. B. Harley and D. Woodward. Chicago: University of Chicago Press, 1992.
- Savage-Smith, Emilie. "The Islamic Tradition of Celestial Mapping." *Asian Art* 5 (1992): 5–27.
- Wellesz, Emmy. "An Early Al-Sufi Manuscript in the Bodleian Library in Oxford: A Study in Islamic Constellation Images." *Ars Orientalis* 3 (1959): 1–26.
- Wellesz, Emmy. "Islamic Astronomical Imagery: Classical and Bedouin Tradition." *Oriental Art* 10 (Summer 1964): 84–91.

Science and Medicine in Byzantium—A Case of Cultural Interchange

Between 1025 and 1204, Byzantine scholars revived learned science and medicine as an integral part of an intellectual life grounded in classical philosophy and applied it to essential problems. Fundamental questions in the history of Byzantine science and medicine are still unanswered, but the stereotype of Byzantine science as passive copying of classical texts is gone. Scientists and physicians used Islamic discoveries and developed model medical institutions. Despite thirteenth-century setbacks in the study and application of medicine, the sciences, and mathematics, Byzantine scholars and practitioners revived interest in these pursuits after 1261, and this late Byzantine revival had a profound impact on the course of Renaissance and post-Renaissance scientific, medical, and mathematical advances in the European West.

As in other premodern societies, the boundaries between science and occult learning were indistinct and often controversial. Astronomy and

mathematics were essential to calculating astral movements for calendars, but they were also closely tied to astrology, the use of the stars to predict human activity. Similarly, alchemy flourished in late Byzantium and, like medicine, combined ancient theory with practical applications.

Science was integral to the eleventh- and twelfth-century Byzantine revival of learning. The leading intellectual of the eleventh century, the polymath Michael Psellus (1018–after 1081), and his circle emphasized the sciences in the academic curriculum. Psellus, who claimed that he alone revived the study of philosophy, defended his study of secular astronomy, physics, mathematics, geometry, geography, and medicine. His vast literary corpus includes treatises and letters on many of these subjects based on his reading of classical and late ancient texts. He argued that he studied astrology in order to refute its inappropriate uses but defended alchemy as a natural process.

While Psellus studied the sciences as philosophy, eleventh-century manuscripts demonstrate equal interest by others in applied science, especially in Arab learning. For example, Symeon Seth, who also wrote treatises on physics and medicine and translated fables from Arabic, referred to Arabic recipes in a treatise on diet, traveled to Egypt to view a solar eclipse, and was described as a mathematician and astrologer who was able to predict the death of Robert Guiscard in 1085 using a "new" method. Astronomical tables using the star calendars of Arab astronomers, astronomical compilations of Islamic origin, and even a surviving astrolabe all demonstrate Byzantine use of Arab advances. Byzantine scholars of the age traveled, used materials from Egypt, and were often themselves of Persian or Egyptian origin.

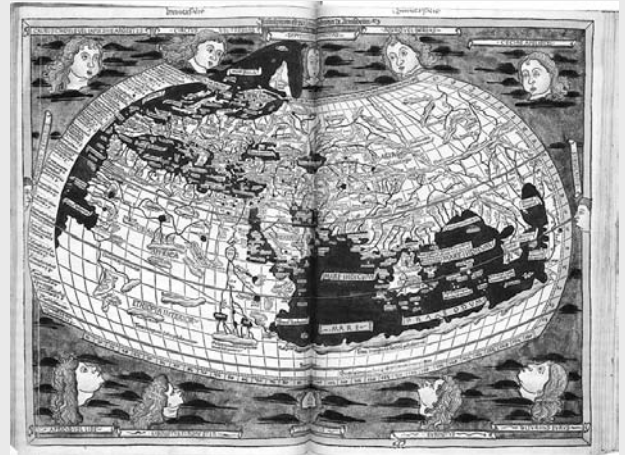
Controversy arose over astrology in the twelfth century. Byzantine rulers in this period frequently consulted astrologers, as did their Islamic and Latin counterparts, and scholars commonly differentiated mathematical astrology from less-acceptable occult practices. Emperor Manuel I Comnenus (r. 1143–1180), however, elicited strong condemnation from church leaders for his defense of astrology.

Geography and natural history were also revived in the eleventh and twelfth centuries

► PTOLEMY'S GEOGRAPHY

One of the most important Byzantine legacies to early modern Europe was its preservation of the *Geography* of Ptolemy (fl. ca. 130–175 CE), which provided the basis for the science of calculating geographical locations and representation on globes and maps of the earth and its regions.

Ptolemy's treatise, which included detailed descriptions of regional maps of Europe, Africa, and Asia, was translated into Arabic in the ninth century, but there is little evidence that it was used or studied in early Byzantium. The Greek manuscript was rediscovered by the Paleologan scholar Maximus Planudes (ca. 1255–1305), who had copies made, and although the manuscript that Planudes found is unknown, two copies of it survive. The Planudes manuscript, and apparently Ptolemy's original text, did not contain maps, but Planudes commissioned a conversion of Ptolemy's information into 26 maps. At least one manuscript arrived in Italy in the early fifteenth century and was translated into Latin, and the maps were copied in luxury editions. The *Geography* and the maps of Planudes became quite popular in fifteenth-century Europe and were copied in many manuscripts and appeared in early printed editions and atlases.



*Ptolemy's map of the world, printed at Ulm in 1482.
(Library of Congress)*

Ptolemy's calculations were incorrect, significantly underestimating the circumference of the Earth and overestimating the eastward expansion of Asia. Thus, it was Ptolemy's text and Planudes' maps that led Christopher Columbus and other early navigators to believe that the Indies were within reach by sailing west.

—Dorothy de F. Abrahamse

through commentaries on and quotations from classical writers. The twelfth century also saw significant developments in Byzantine medicine. Physicians appear in letters and other texts as professionals whose ability to diagnose disease and administer remedies was respected, in contrast to almost universally negative stereotypes in earlier centuries. Medical knowledge as an intellectual accomplishment is reflected in letter collections and in the writings of imperial figures, such as the princess and historian Anna Comnena (1083–after 1148). Medical and pharmacological manuscripts demonstrate a high degree of specialization in areas as specific as ophthalmology, diet, remedies for kidney stones, and pulse and urinary examination as well as in the incorporation of Arab medical knowledge and terminology. Specialized surgical instruments survive, and postmortem scientific dissection is also attested for this period.

The Byzantine hospital (*xenon*) flourished in the twelfth century as a sophisticated treatment institution. The imperial charter of Constantinople's Pantocrator Monastery describes its *xenon* in great detail as a 50-bed hospital with its own staff of salaried physicians whose specialties included ophthalmology, hernia repair, surgery, and pharmacology. They were instructed to wash their hands, keep patients warm, and provide separate beds for each patient. Women were treated in a special ward, and an outpatient clinic was attached to the hospital. Other hospitals existed in Constantinople and probably in provincial cities, although less is known about the latter. Compilations of medical writings, illustrated and used for training, and treatment lists developed by physicians survive from several hospitals. Leading *xenones* in Constantinople clearly offered sophisticated medical treatment to their patients far beyond the charitable institutions of late

antiquity or medieval Western Europe. The extent to which other Byzantine hospitals were comparable and the *xenon*'s relation to Islamic medicine and the development of hospitals in the Latin world are subjects for further research.

The concentration of learning in Constantinople heightened the disastrous impact of the Latin conquest of 1204 on science and medicine. Manuscripts were taken to the West or disappeared, and no hospitals survived the Latin occupation of Constantinople.

After the Palaeologean recovery of the capital in 1261, Byzantine scholars turned their energies to copying and annotating ancient texts. Most of the Greek classical texts in literature and science known today derive from these late medieval manuscripts. Significantly, however, these scholars emphasized the sciences, especially astronomy, mathematics, and medicine, in their revival of ancient learning. Theodore Metochites (1270–1332) and Nicephorus Gregoras (ca. 1290–1358–61) revived Ptolemaic astronomy; Gregoras also calculated eclipses and proposed calendar reform similar to the sixteenth-century Gregorian calendar. Persian astronomy reached Byzantium in the late thirteenth century through the translations of Gregory Chioniades (ca. 1240–ca. 1320), who studied in Tabriz, and for the next century astronomers concentrated on comparing and reconciling Persian and Ptolemaic calculations of longitude, eclipses, and calendars. Religious opposition to astrology continued, but most astronomical study was motivated by widespread interest in astrological predictions.

Medical study was also revived in the late empire. Hospitals were refounded on a smaller scale, although private practice was more common, and the treatment lists and medical treatises of earlier periods survive in copies used in the late empire. The tradition of scholarly medicine is represented by John Actuarius (ca. 1275–after 1328), chief court physician to Andronicus II Paleologus and the last great Byzantine medical writer, who wrote treatises on urine and the methods of medicine. Actuarius's letters describe his medical education and certification, visits to patients, and participation in a hospital. By the fifteenth century as the Byzantine state grew more precarious, scholars began to move to Italy, often with manuscript collections in hand.

By the fourteenth and fifteenth centuries, scientific and medical knowledge had become a transnational enterprise. Arab learning was transmitted to Byzantium by bilingual scholars who translated texts they had studied in Islamic centers. Although Europeans learned classical science primarily through Muslim Spain, multilingual settings such as southern Italy, Sicily, Byzantium, and the crusader states also served as centers of access to classical learning from the twelfth century on. The Dominican William of Moerbeke (ca. 1220–1286), for example, who spent much of his career in Frankish-held Greece, translated Aristotle, Archimedes, Proclus, and Galen and brought a large collection of Greek scientific manuscripts back to Rome.

Byzantine scholars made their greatest contribution to Western scientific and medical learning in the fifteenth and sixteenth centuries, as Greek classical texts, largely from Byzantine collections, became the source of Renaissance scientific discovery. Byzantine émigré scholars in Italy and their pupils taught Greek and oversaw the collection of manuscripts that became the core of the great Vatican, Marciana (Venice), and Nuremberg libraries. As Renaissance humanists sought and obtained original Greek texts, they were able to study, translate, and publish the works of Euclid, Archimedes, Apollonius, and Ptolemy, creating the basis for Western Europe's great mathematical and astronomical discoveries of the seventeenth century. Byzantine manuscripts of Aristotle, Hippocrates, Theophrastus, and Galen, translated and published in the sixteenth century, had a similar impetus on the natural sciences and medicine.

The Byzantine preservation of classical texts, so important for the history of Western science in the early modern period, was the result of successive scholarly revivals of secular learning beginning in the ninth century. But it is increasingly clear that in Byzantium, science and medicine also developed as empirical disciplines drawing on Islamic discoveries and participating in a Mediterranean exchange of learning.

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Bibliography

Kazhdan, Alexander, and Ann Wharton Epstein.
Change in Byzantine Culture in the Eleventh

and *Twelfth Centuries*: Berkeley: University of California Press, 1989.

Kazhdan, Alexander, and Alice-Mary Talbot. *Oxford Dictionary of Byzantium*. 3 vols. New York and Oxford: Oxford University Press, 1991.

Magdalino, Paul, and Maria Mavroudi, eds. *The Occult Sciences in Byzantium*. Geneva: la Pomme d'Or, 2006.

Miller, Timothy S. *The Birth of the Hospital in the Byzantine Empire*. 2nd ed. Baltimore: Johns Hopkins University Press, 1997.

The Oxford and Paris Physicists

Physics in the Latin West in the period 1000–1500 was largely dependent upon Aristotle's thought. In this Aristotelian scheme, the sublunar sphere (the realm beneath the moon, as opposed to the celestial realm of the moon and the planetary spheres) involved the study of optics and change but change of a particular character. Aristotle's system allowed for four types of change: change of place or position; change of substance, as when a fire converts a log to ash; change of quality, as when something changes color; and change of quantity. The type of change that medieval Latin physicists concerned themselves with was primarily (although not exclusively) the first, change of place, also called local motion. In Aristotle's view (which was therefore the common Greco-Roman and Arabic view), things in the sublunar sphere are composed of four elements: earth, water, air, and fire. Earth is the heaviest element, and fire is the lightest. Moreover, in the geocentric cosmos that he postulated, the earth is not only the center of the universe but is also immovable because the natural place of heavy bodies is at rest. Moreover, for heavy bodies smaller than the earth, their natural motion is to move downward until they are at rest. However, heavy bodies can also exert an upward (or violent) motion, called unnatural motion, as when a rock is thrown. On the opposite end of the scale, however, the natural motion of light bodies, such as smoke or fire, is upward. In addition, for Aristotle, since the natural state of a heavy body is at rest, anything that is moved is moved by an external force (such as the arm that throws the rock). The sole exception is animals, who have an internal means of motion (although Aristotle vacillated on this is-

➤ UNIFORM AND NONUNIFORM MOTION

In his *Rules for Solving Sophisms*, the logician William Heytesbury (before 1313–1372/1373), known as one of the Mertonian Calculators, applied his system of logical analysis to the issue of motion. Among his accomplishments was development of the Mean Speed Theorem, which postulates that a body moving at a uniformly accelerated speed (e.g., from 10 to 30 miles per hour) will cover the same distance in the same period of time as a body moving at a uniform speed equal to its mean speed (e.g., 20 miles per hour). Of course, this was purely theoretical because no medieval vehicle could hope to reach such speeds.

In the following selection from this work, he defined uniform and nonuniform motion.

"Although change of place is of diverse kinds, and is varied according to several essential as well as accidental differences, yet it will suffice for our purposes to distinguish uniform motion from nonuniform motion. Of local motions, then, that motion is called uniform in which an equal distance is continuously traversed with equal velocity in an equal part of time. Nonuniform motion can, on the other hand, be varied in an infinite number of ways, both with respect to magnitude, and with respect to time."

—Kimberly Georgedes

Source

Marshall Clagett, *The Science of Mechanics in the Middle Ages* (Madison: University of Wisconsin Press, 1959), 235.

sue). The natural philosophers of the Latin West saw problems with this Aristotelian concept of local motion long before Galileo and Newton and attempted to address some of the issues, and in the process they discovered new means of analyzing and describing motion.

By the end of the thirteenth century in the Latin West there were two ways of addressing the nature of motion, or how things moved. One, advocated by the Andalusian Muslim Ibn Rushd (in Latin, Averroes, d. 1198), the German Albert the Great (ca. 1206–1280), and the Englishman William of Ockham (ca. 1285–1347), was called

forma fluens (flowing form), which maintains that a moving body simply occupies successive places at successive times but that there is no specific thing (or quality) called “motion” in the body that causes it to move. The other theory, called *fluxus formae* (flux, or change, of form) maintains that there is a quality called motion within the body that causes it to move. This theory was defended by John Buridan (ca. 1295–ca. 1358) at Paris in the fourteenth century and was adopted by most natural philosophers of the time.

There was also a further division of physics into kinematics (i.e., describing motion mathematically) and dynamics (i.e., determining the causes of motion). Gerard of Brussels in his early-thirteenth-century *Book of Motion* implicitly made the distinction between the two, but the Oxford scholar-clerics at Merton College explicitly made the distinction and excelled in kinematics in the fourteenth century. The main Mertonians were William Heytesbury (fl. 1335), Thomas Bradwardine (d. 1349), John of Dumbleton (d. ca. 1349), and Richard Swineshead (fl. 1340–1355), and they developed a discussion of motion kinematically, using the language of “intension” (an increase) and “remission” (a decrease) of the strength or degree of the “form” or quality (which could be speed or another attribute of change, such as temperature). The Mertonians also developed such concepts as velocity and instantaneous velocity as well as uniform and non-uniform (or what we call accelerated) motion. Moreover, although many scholars were unaware of it until recently, the fourteenth-century Oxford philosophers defined uniformly accelerated motion as it is defined today: A motion is uniformly accelerated if its velocity increases by equal increments in equal units of time.

A geometric representation of what the Mertonians had accomplished, which began around 1351 with the Franciscan Giovanni di Casale, was continued at the University of Paris by Nicole Oresme (d. 1382), who excelled at it and whose geometric representations are (arguably) forms of early graphs. He used a horizontal line to represent the subject, or extension, line and used vertical lines to represent changes in intensity of any quality, such as speed and temperature. Although Galileo never gave credit to his prede-

cessors at Oxford and Paris, he was well aware of their work, for it shows up in his own.

Arguably the most important issue in dynamics, the analysis of the causes of motion, concerned the motion of projectiles, such as rocks or arrows, particularly once they left the projector (e.g., once the rock left the hand). Although it seems obvious enough to us, it was not obvious to those schooled in Aristotelian physics and familiar with Aristotle’s principle that “everything that moves is moved by an external force,” according to which once the rock left the hand it should simply fall to the ground, since there was no longer any visible external force acting upon it. Aristotle got around this by arguing that the agent of motion (the hand) also endows the air (the medium) through which the rock moves with the ability (energy) to cause motion in order to keep the rock moving. This argument did not satisfy some fourteenth-century natural philosophers. John Buridan postulated the theory of impetus (and coined the term) to describe this force behind the rock, which he also claimed as the cause of the acceleration of falling bodies, arguing that as a body falls its weight generates more impetus, which in turn generates greater velocity. The theory of impetus, particularly regarding projectile motion, remained dominant until the seventeenth century.

The study of optics was significant for many fields in addition to physics, including astronomy, medicine, theology, epistemology and cognition (how one acquires and processes knowledge), philosophy, and so on. Late-twelfth-century translations of the optical works of Euclid (ca. 325–ca. 265 BCE), Ptolemy (ca. 90–168 CE), and al-Kindi (in Latin, Alkindus, ca. 801–873) dealt with the more mathematical aspects of optics, while those of Aristotle, Ibn Sina (in Latin, Avicenna, d. 1037), and Ibn Rushd conveyed the physiological and psychological aspects of vision. Translations of works by Galen (second century CE) and the short treatise by the ninth-century polymath Hunayn ibn Ishaq (in Latin, Johannitius) on the eye dealt with its anatomy and physiology. However, the *Optics* of Ibn al-Haytham (in Latin, Alhacen, ca. 965–ca. 1040) had the most impact after it was translated around 1200. Al-Haytham approached the issue broadly: mathematically, physiologically,

anatomically, and from the point of view of physics. His work would be adopted and passed on by the Franciscan Roger Bacon (ca. 1220–ca. 1292). Bacon's theory was more complex, however, because he added a Neoplatonic idea to the mix by arguing that every object radiates a force or image of itself outward. In short, Bacon combined Aristotelian, Arabic, and Neoplatonic influences to produce not only an important theory of vision and light but also an influential new philosophy of nature.

Bacon's fellow Franciscan John Pecham (d. 1292) and Witelo (d. ca. 1281) also passed on Alhacen's theories, and Alhacen and Bacon greatly influenced discussions of light and vision in natural philosophy and the related field of cognition from the fourteenth century to the time of Johannes Kepler (ca. 1600).

—Kimberly Georgedes

Bibliography

- Grant, Edward. *A History of Natural Philosophy from the Ancient World to the Nineteenth Century*. Cambridge: Cambridge University Press, 2007.
- Grant, Edward. *Physical Science in the Middle Ages*. Cambridge: Cambridge University Press, 1977.
- Lindberg, David C. *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450*. 2nd ed. Chicago: University of Chicago Press, 2007.
- Lindberg, David C. "The Science of Optics." In *Science in the Middle Ages*, edited by David C. Lindberg. Chicago: University of Chicago Press, 1978.
- Murdoch, John E., and Edith D. Sylla. "The Science of Motion." In *Science in the Middle Ages*, edited by David C. Lindberg. Chicago: University of Chicago Press, 1978.

Arabic Medicine

Although Arabic medicine remained firmly based in its Greco-Roman foundations, there were many advances between 1000 and 1500 CE. From the School of Hippocrates of Cos (fifth century BCE and following) and from Galen (d. 216 CE), who represented the pinnacle of the Hippocratic tradition, the Arabs inherited the idea that the health of the body is based on the four humors: blood, phlegm, and yellow and black bile, which

had corresponding temperaments of sanguine, phlegmatic, choleric, and melancholic, respectively. Moreover, the Greeks also posited three major organs, the heart, liver, and brain, each housing a vital faculty and producing a vital spirit (*pneuma*). (The spleen was added later, bringing the number to four, because in the Greco-Roman tradition, symmetry was exceedingly important.) The heart, the seat of the animal (or vital) faculty, governs respiration and emotion and produces the vital spirit, which travels through the arteries. The liver, the seat of the natural faculty, governs growth and reproduction and produces the natural spirit, which is dispersed through the veins. The brain produces the psychic (or nervous) *pneuma*, which spreads throughout the nerves and is also the location of the psychic faculty controlling thought and sense perception.

The human body was viewed as a microcosm of the universe. For diagnostic purposes therefore, in addition to the corresponding temperament, one of the four cosmic elements (earth, air, water, and fire), two of the four primary qualities (wet, dry, cold, and warm) that were associated with the particular element, and one of the four seasons were likewise assigned to each humor. For example, blood (sanguine temperament) was associated with the element of air as well as with the primary qualities hot and wet and with spring. Moreover, the months of the year (distinct from those of the seasons), the signs of the zodiac, and the human ages (childhood, adolescence, adulthood, old age) figured into the system as well.

For the body to be healthy there had to be a balance among the humors, which could be affected by, or even restored by, manipulation of the six nonnatural environmental factors: surrounding air, diet, sleep, exercise, mental (emotional) state, and retention or evacuation of waste. These factors were discussed in detail by Ibn Ridwan (d. ca. 1068) in his treatise *On the Prevention of Bodily Ills in Egypt* as well as by al-Mukhtar ibn Abdun ibn Butlan (d. ca. 1068), a Christian practicing in Baghdad, in his *Almanac of Health (Taquim as-Sibbah)*. The latter even recommended music to soothe the patient and improve recovery. The balance was also

➤ IBN AL-NAFIS AND THE “LESSER PULMONARY CIRCULATION”

Ala al-Din Abu al-Hasan Ali ibn Abi al-Hazm al-Qarshi al-Damashqi, better known as Ibn al-Nafis (1213–1288), was born in Damascus and educated in Islamic law, literature, and theology as well as medicine, which he learned at the Nuri Hospital in Damascus. He moved to Egypt in 1236 to practice first at the al-Nassri Hospital and then at the al-Mansuri Hospital, eventually becoming chief physician as well as personal physician to the sultan. Ibn al-Nafis wrote, among other treatises, an original work on ophthalmology and began an encyclopedia designed to comprise 300 volumes, left incomplete at his death. His most famous work was a summary of Ibn Sina’s *Canon* titled *Mujaz al-Qanun* (*The Summary of the Canon*). In a discovery made in 1924 of a manuscript in which Ibn al-Nafis commented on the anatomy of the *Canon*, he contradicted the Galenic model that was accepted up to that point, that the blood flowing into the right cavity of the heart seeps through the septum to the left side of the heart, where it mixes with air and then disperses to the rest of the body. Ibn al-Nafis argued instead that the blood flows from the right ventricle to the lungs, where it mixes with air and then returns to the left ventricle of the heart via the pulmonary vein. His discovery, incorrectly termed the “lesser pulmonary circulation,” was virtually unknown in Islamic lands and passed to Europe apparently



Ibn al-Nafis discovers lesser pulmonary circulation in the fifteenth- or sixteenth-century, painting by Bihzad. (Musée d'Histoire de la Médecine, Paris, France/The Bridgeman Art Library)

when some of his works were translated into Latin in 1547 by Andre Alpago of Belluno. It is possible that this was the source for Michael Servetus and Andreas Vesalius (*De Fabrica*, or *On the Fabric [art or work] of the Human Body*, 2nd ed., 1555), who described pulmonary circulation in the sixteenth century. William Harvey confirmed Ibn al-Nafis’s description of pulmonary circulation in 1628.

—Kimberly Georgedes

maintained by phlebotomy (also called venesection, commonly known as bloodletting), and cupping (putting a heated cup over small cuts on the skin to draw blood).

The *Canon of Medicine* of Ibn Sina (known in the Latin West as Avicenna, 980–1037) became the most significant encyclopedic compendium that combined Greek medical knowledge and philosophy with Arabic commentaries and contributions. In five books, Ibn Sina covered various topics such as the methods of diagnosis, the six nonnaturals, hygiene, anatomy, tumors, fevers, fractures, pharmacology, and even a treatment for those in love. Ibn Sina’s work, although certainly the most significant, was one of many encyclopedic works common in Arabic medicine.

Arabic medicine excelled in many ways, not least of which was in the development of the hospital, which reached a peak in the twelfth and thirteenth centuries. The most prominent of the hospitals were the Nuri hospital in Damascus, named after its founder, the twelfth-century Turkish governor of Syria Nur al-Din ibn Zengi (1146–1174); the Mansuri in Cairo (completed ca. 1284 and founded by the Mamluk sultan al-Malik al Mansur Qalawun); and Baghdad’s Adudi, which was established in the late tenth century but destroyed by the Mongols in 1258. The earliest record of a hospital in Al-Andalus (Islamic Spain), however, dates to 1397 in Granada. These hospitals had separate wards for male and female patients, a pharmacy, often separate facilities for

surgery, ophthalmology, gastrointestinal afflictions, the mentally ill, a lecture hall, and occasionally a library (which indicates their importance for medical education), and accommodations for staff, which included not only doctors but pharmacists, orderlies, stewards, and both male and female attendants. Although hospitals were often managed by a political appointee without medical knowledge, the staff physicians and the chief physician were usually quite competent in their fields.

One field in which Arabic medicine excelled was ophthalmology, particularly in the twelfth and thirteenth centuries. Khalifah ibn Abi al-Mahasim al-Halabi (fl. 1256–1275 in Syria) wrote *The Sufficient Book on Ophthalmology* (*Al-Kitab al-Kafi fi al-al-Kuhl*), which encompassed both previous writings and new Arab developments as well as illustrations of instruments needed for surgical procedures on the eye and eyelids. Both trachoma (chronic inflammation) and cataracts were leading causes of blindness and were often treated surgically, although without much success. Although medieval Islamic doctors are often credited with being the first to remove cataracts, the primary method of treating them was called couching, by which the lens was pushed aside. Procedures on the eyes were very painful, and even the great physician al-Razi (Latin Rhazes, 865–925) preferred blindness to having his cataracts couched.

Surgery, although based on the ancients, also advanced in Muslim lands. Abu al-Qasim al-Zahrawi (Latin Albucasis or Abulcasis, ca. 940–1013, active in Cordoba, Spain), based his *Book of Concessions* (*Kitab al-Tasrif*, ca. 1000) on the work of the Alexandrian Paul of Aegina (seventh century CE) but nevertheless included much new practical information on anatomy, obstetrics, gynecology, pediatrics, and midwifery. His work also dealt with various aspects of surgery, including removal of tumors; cauterization; incisions; phlebotomy; fractures; methods for exploring both the chest cavity and the urinary tract, the latter to remove stones; and suturing methods and materials. He is also significant for devising and illustrating over 200 surgical instruments, including gynecological instruments. Ibn al-Quff (ca. 1233–1286), a Christian Arab,

wrote the first treatise devoted solely to surgery (excluding ophthalmology), titled *Basics in the Art of Surgery*. His work contains detailed descriptions of surgical procedures and treatments, particularly of wounds and tumors, and drug regimens. Al-Quff is also sometimes credited with the first description of the capillary system, although this is disputed. Muhammad al-Shafrah (d. 1360) also wrote a treatise devoted solely to surgical treatment of wounds and fractures but seemed more concerned with treatment by drug therapy. It should be noted that in many manuals the descriptions given are simply those from ancient sources, with no indication that they were actually performed, or as in the case of the tracheotomy, both Ibn Zahrawi and Ibn Zuhr (Latin Avenzoar, d. 1162) stated that they knew of no one who had performed it in their own day. There are other instances, however, when it is clear that descriptions are based on practice, such as the tonsillectomy and the treatment of wounds.

Advances in diagnosis and treatment are evident in the *Book of Simplification* (*Kitab al-Taisir*) by the Andalusian Abu Marwan ibn Zuhr (known in the Latin West as Avenzoar, d. 1162). He is credited with being the first to describe mediastinal tumors (those in the area between the lungs), and pericarditis (inflammation of the lining of the heart). Ibn Zuhr placed great emphasis on observation and practical medicine and thus was critical of Ibn Sina's *Canon* as being too theoretical.

Developments in pharmacology were a necessity. Originally pharmacology was based primarily on Dioscorides' first-century CE *De Materia Medica* (*On Medicinal Substances*) and Galen's *On the Powers of Simple Drugs*, but since many of the substances they described were not known to the Middle East, Islamic doctors learned to improvise with substances common to their climate. In addition to the earlier work of al-Kindi (ca. 800–870), al-Razi, and Ibn Sina's *Canon*, one of the important early texts of this period was that of Abu ar-Rayhan al-Biruni (943–1078), whose *Kitab as-Saydalah* (*Book of Pharmacology*) detailed the duties of the pharmacist. Two of the most important formularies (detailing the preparation of various drugs) were those of Ibn al-Tilmidh (d. 1165), used in Baghdad, and that of

the Jewish pharmacologist Ibn Abi al-Bayan (d. ca. 1240), which was used in hospitals in Egypt and Syria. Abu Jafar al-Ghafari, a twelfth-century Andalusian, was significant as well for updating drug properties and expanding knowledge of medicinal plants in his *al-Adwiya al-Mufrada* (*On Simple Drugs*). Ibn al-Baytar (ca. 1190–1248), another Andalusian who traveled widely, wrote the *Comprehensive Book on Simple Drugs and Foodstuffs*, which became the guide to all later Arabic pharmacopoeia. In it he not only clarified and corrected Arabic translations of Dioscorides' work but also detailed over 1,400 different drugs, using 260 different sources, in addition to observation. It was arguably the most important pharmacological work of the period. Developments in toxicology, the identification of poisons and their antidotes, were also made.

Physicians were generally highly esteemed in Islamic lands and were also generally well trained and well known in other disciplines such as law, philosophy, or theology, as in the cases of Ibn Sina, Ibn Rushd, and the Jewish polymath Moses Ben Maimon, known in Arabic as Ibn Maymun and to Latin students of his work as Maimonides. Many of their works were translated into Latin and had a substantial effect on Western medicine. Nevertheless, because there was no common education or licensing system for doctors in Islamic lands until the Ottoman period due in part to Islamic law, charlatanism was something of a problem about which many legitimate physicians complained.

—Kimberly Georgedes

Bibliography

- Browne, E. G. *Arabian Medicine*. 1921. Reprint, New York: Cambridge University Press, 1962.
- Conrad, Lawrence I. "The Arab-Islamic Medical Tradition." In *The Western Medical Tradition 800 BC to 1800 AD*, edited by Lawrence I. Conrad, Michael Neve, Vivian Nutton, Roy Porter, and Andrew Wear. Cambridge: Cambridge University Press, 1995.
- Hamarneh, Sami K. "The Life Sciences." In *The Genius of Arab Civilization: Source of Renaissance*, 2nd ed., edited by J. R. Hayes. Cambridge, MA: MIT Press, 1983.
- Pormann, Peter E., and Emilie Savage-Smith. *Medieval Islamic Medicine*. Washington, DC: Georgetown University Press, 2007.

Turner, Howard R. *Science in Medieval Islam*. Austin: University of Texas Press, 1995.

Development of Indian Medicine—Ayurveda

The period just before the end of the first millennium of the Common Era witnessed the first major intrusions of Arabs into the heart of the Indian subcontinent. These were followed by the Turco-Afghan invasions of the Ghaznavids and Ghurids, which finally led to the establishment of the first Muslim dynasty in Delhi under the Mamluks (1206–1290). Incidentally, this period is also seen as coinciding with the decline of the *ayurvedic* system of medicine, which by this time had established itself as a popular medical tradition in India. The argument proffered by historians supporting this line of thinking was that the Muslim rulers of India were opposed to ayurvedic medicine, which was of Hindu origin, as compared to *unani* medicine, which was Greco-Arab in character and origin. However, the results of current research clearly contradict these arguments.

The ayurvedic system, as is now accepted, was not discriminated against under the rule of the Muslim monarchs ruling in different regions of India. Indeed, ayurveda (the science of longevity) continued to flourish and coexist along with the unani medical tradition under the patronage and political support of different rulers between 1000 and 1500. Ayurvedic doctors (*vaid*s) ran private clinics that were open to people irrespective of caste or creed, and this was also a period that witnessed widespread interaction between unani and ayurveda. Both were based on the theory of humors (four according to unani and three for ayurveda) and saw the cause of disease in humoral imbalance. Similarities between the two extended to such areas as the methods of diagnosing ailments and medicines.

This era witnessed the production of important compilations of ayurvedic texts in the form of *nighantu* (glossaries of therapeutically useful medicines) and commentaries. The focus was on expansion through innovation. Ayurvedic scholars of the period enlarged the existing medical lexicon by including a number of drugs which

found no mention in the ayurvedic texts and treatises of earlier periods. Significant among the many ayurvedic texts compiled during the period were Sarangadhara's *Sarangadhara Samhita*, Lakshmanacharya's *Vaidyavallabha*, Chakrapani Datta's *Dravyaguna Samgraha*, Lolimbaraja's *Vaidyavatamsa Lagbunighantu*, and *Yogaratanakara* by an unknown author.

Sarangadhara Samhita (*The Book of Sarangadhara*) was a thirteenth-century treatise dealing with weights and measures vital for the accurate preparation of various medicines, decoctions (a medicinal entity that has been boiled down), pastes, powders, pills, and electuaries (drugs mixed with a sweetener). It also dealt with the effect of seasons on diseases and ailments and methodologies of diagnosis and prognosis, chiefly pulse-examination (*nadipariksa*) that it described exhaustively. Branches of medicine such as anatomy, physiology, and embryology also found special treatment in the *Sarangadhara Samhita*. However, Sarangadhara's important contributions to ayurvedic medicine were in the form of introducing unique medicinal and pharmaceutical formulations especially by bringing to light numerous new plants, which though indigenous were not popularly used for the preparation of drugs.

The *Vaidyavallabha* (named after the author's father, Vallabha) by Lakshmanacharya was a fifteenth-century work composed in South India that dealt with fevers of different types, bleeding piles, urinary diseases, tumors, gastric diseases, jaundice, and women's health and diseases. Chakrapani Datta's *Dravyaguna Samgraha* (*Collection of Medicinal Plants*), composed toward the end of the fifteenth century, contributed to a basic understanding of ayurvedic materia medica (its body of collected information regarding the healing properties of medications) by providing a detailed description of various drugs such as their types, forms, and structures; regional names; and habitats. Lolimbaraja, the author of *Vaidyavatamsa Lagbunighantu* (a short pharmaceutical collection), was a Hindu of Brahmin caste married to a Muslim lady, and his treatises reflect the composite culture that was developing in India due to the interface between the Islamic and Hindu cultures. He offered some innovative formulae for such ailments as cough,

➤ AYURVEDA TODAY

The two chief Indian systems of healing, namely ayurveda and unani, faced stiff competition from the Western medicine introduced by British colonial rulers, to the point that these systems of healing were relegated to the margins, if not erased altogether. However, these Indian systems of healing received renewed life in the postindependence period (i.e., from 1947 onward), when successive governments of free India promoted indigenous methods of medical care. They were given official recognition in various national health policies and programs and were accorded a status equal to that of the Western allopathic system in which medical doctors are trained.

In 1995, the government of India created the Department of Indian Systems of Medicine and Homeopathy. It was later renamed the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH) in 2003. This wing of the government not only provided funds and encouraged research in nonallopathic systems of medicine but also set up and supported various educational institutions imparting professional training in these systems of healing. The twenty-first century has seen Indian systems of healing, especially ayurveda, transformed into a brand to reckon with in the global health care market. From being labeled a charlatan to becoming a revenue earner with wide cultural acceptability, the ayurvedic physician has come a long way.

—Salil Kader

bronchitis, and jaundice. The *Yogaratanakara*, dated to 1676, tried to present a systematic development of Indian medicine by analyzing other books on the subject. It was basically a book of therapeutics. It also explained the importance of pulse examination as a means of diagnosis.

Use of metals in the preparation of drugs was an important achievement of scholars of this period. The calcination, or powdering, of mercury and other metallic processes, which make them fit for pharmaceutical application, do not appear in the works of the earlier periods. This period, however, witnessed the use of metallic and medicinal preparations using mercury, probably under the influence of Arab alchemy, in which mercury played a vital role. Mercury

was recommended for ailments such as fever, diarrhea, jaundice, diseases of the lungs, and syphilis. We come across more than 15 books on this therapeutic metal and its healing properties in this period.

Development of medicine during this period was also reflected in the various translations that took place from Sanskrit and Arabic to Persian, the language of the Muslim courts. These translations further facilitated the mutual understanding of ayurvedic and unani doctrines among their practitioners during this period. A notable example is Hakim Asseli's translation of around 1,473 extracts of Vagabhata's *Astangabridaya Sambhita* (The Book of Eight Ayurvedic Branches) at the court of Sultan Mahmud I of Delhi (r. 1489–1511).

—Salil Kader

Bibliography

- Filliozat, Jean. *The Classical Doctrine Of Indian Medicine: Its Origins and Its Greek Parallels*. New Delhi: Munshiram Manoharlal, 1964.
- Jolly, Julius. *Indian Medicine*. Translated by C. G. Kashikar. New Delhi: Munshiram Manoharlal, 1977.
- Wujastyk, Dominik. *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. New Delhi: Penguin, 2003.
- Zimmer, Henry R. *Hindu Medicine*. Baltimore: Johns Hopkins University Press, 1948.

Development of Indian Medicine—Unani

The *Unani* system of medicine, also known as *Unani Tibb*, traces its origin to Hellenistic Greece, as is clearly indicated by the Arabic words from which it derives: *al-Yunaan* (Ionia, the Greek coast of Anatolia) and *al-tibb* (medicine). Beginning in the eighth century, a number of Umayyad and Abbasid caliphs showed a keen interest in understanding and promoting Greek philosophy, science, and medicine by inviting scientists, researchers, and translators to their courts and commissioning translation of all the Greek sciences into Arabic. They paid special attention to the natural sciences, such as botany and medicine. In a matter of about a century, most of the important extant works of ancient Greek science and philosophy were translated into Arabic, with Baghdad, Damascus, Cairo, and Cordova emerg-

ing as the major centers of such scholastic activity. In the process, the Greek system of medicine, distinguished by the Hippocratic humors and Galenic emphasis on observation and investigation of illness, experienced a great deal of amendment, improvement, and systematization under Muslim physicians and medical scholars, especially in the field of anatomy and surgery.

The classical exposition of unani theory and practice was the massive *Canon of Medicine* (*Al-Qanun fi al-Tibb*), which Ibn Sina (ca. 980–1037), Avicenna in Latin, published in Persia around 1025. Physicians within this Greco-Arabic system accepted the principle that the human body is composed of four elements—earth, air, fire, and water—and these four elements result in four bodily fluids, or humors: blood, phlegm, yellow bile, and black bile. Unani physicians further assigned the four humors temperaments, called *mizaj*. Blood was seen as hot and moist (air), phlegm cold and moist (water), yellow bile hot and dry (fire), and black bile cold and dry (earth). Each individual was supposed to have a unique humoral constitution, and changes in this constitution brought about a change in the health of that particular individual.

This syncretic system of medicine eventually arrived in India and established itself as an effective system of healing alongside the indigenous ayurvedic medicine. Though historical data on how unani medicine came to India are scarce, historians have adduced that it entered India along with Arab traders and the invading Afghan armies around the twelfth century. Medicine in general and unani medicine in particular were patronized in India by the ruling class irrespective of region and religion. *Hakeems* (unani physicians) from different parts of the Islamic world and *vaids* (ayurvedic physicians) from various parts of India were invited to Muslim and Hindu royal courts and were given impressive titles and paid handsomely by the monarchs. The first unani physician in India who is known to us was Ziauddin Abdul Rafi Hirwi, court physician of the last Ghaznavid ruler, Sultan Khusrav Malik (r. 1160–1186) at Lahore. The first work on unani medicine written in India was a Persian translation of Abu Raihan al-Biruni's *Kitab al Saydla fi al-Tibb* (*The Book on Pharmacy and Materia Medica*), translated by Abu Bakr Asfar al-Kashani

sometime between 1211 and 1229. Unani medicine thereafter made steady progress under various dynasties of the Delhi sultanate (1206–1526), important among them being the Khiljis (1290–1321) and Tughlaqs (1321–1398).

Ziauddin Barani, a historian and contemporary of the Tughlaq ruler Sultan Muhammad bin Tughlaq (r. 1324–1351), while discussing the unani physicians of the time wrote in the *Tarikh-i-Feroze Shahi (The History of Sultan Firoze Shah)* that “*Atibba* (unani physicians) of the Alai period (Khilji) had complete skill in medicine and there can be no comparison between them and Hippocrates and Galen in treatment of diseases. Such distinguished physicians were neither seen before nor would be found in the coming times.” Prominent unani physicians, surgeons, and oculists (eye doctors) who practiced their art during the reign of Sultan Alauddin Khilji (r. 1296–1316) had no contemporary peers anywhere in India. According to the Persian historian Muhammad Qasim Ferishta (1552–1623), there were 45 *bakeems* in the court of Sultan Alauddin Khilji. Describing the prowess of the master-physician Badruddin Damishqi, Barani writes that “God had bestowed such skill and capability on him that he could judge the course of the disease just by feeling the pulse of the patient and predict whether he was curable.”

Patronage of unani medicine continued under the reign of the most important Tughlaq ruler, Sultan Muhammad bin Tughlaq. According to the *Masalik ul Absar fi Mamalik ul Amsar (Travels of the Eyes into the Kingdoms of Different Countries)* by Shahabuddin Abul Abbas Ahmad, a native of Damascus who traveled across India around the fourteenth century, there were about 70 hospitals (Darus Shifa, or House of Cures) and approximately 1,200 *bakeems* throughout the state in Delhi during this reign. Moreover, the exchange of ideas and practices between the ayurveda and unani systems of medicine was a common phenomenon during the period. The brightest illustration of the blend of ayurveda and unani can be seen in the form of the fourteenth-century text *Majmua-i-Ziai (Collections of Zia)* compiled by Hakim Zia Muhammad in 1336. Sultan Muhammad was succeeded by Sultan Firoz Shah Tughlaq (r. 1351–1388). The various medical works compiled during his reign,

➤ THE THEORY OF UNANI MEDICINE

The Unani system of medicine is rooted in the Hippocratic humoral theory postulated by the Greek philosopher-physician Hippocrates. This theory supposes the presence in the body of four humors, namely blood, phlegm, yellow bile, and black bile. The red portion of fresh blood is the blood humor (*dam*), the white material mixed with blood is the phlegm (*balgham*), the yellow-colored froth on top is the yellow bile (*saфра*), and the heavy part that settles down is the black bile (*sauda*). According to Hippocrates, these humors make up the nature of the human body, and it is through these that a person feels healthy or otherwise. A person enjoys the most perfect health when these elements are perfectly mingled and in equilibrium. Pain is felt when one of these elements is in defect or excess or is isolated in the body without being compounded with all the others.

According to Unani principles, the body has a power of self-preservation or adjustment called *Quwwat-e-Mudabbira* (Vital Force), which helps in maintaining the humoral balance. A weakening of this power causes an imbalance in the humoral composition, thus causing disease. Therefore, diagnosis of disease in Unani medicine is based on the study of humors in the human body, and administration of medicine was aimed at strengthening the Vital Force, which would in turn help restoration of the humoral balance.

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such as the *Tibb-i-Feroze Shahi (Medicine of Sultan Firoze Shah)*, *Tibb-i-Shihabi (Medicine of Shihab Abdul Karim Nagori)*, and *Rahat-al-Insaan (Relief of Man)* stand out as noteworthy examples of the royal patronage accorded unani medicine during the period.

Rulers of southern India also extended patronage to unani medicine. In the middle of the fourteenth century, Alauddin Hasan Bahman Shah (r. 1347–1358) established the Bahmani sultanate (1347–1538) in the Deccan region (southern India), independent of control from the Delhi sultanate. The Bahmani sultans promoted both the ayurveda and unani systems of medicine. Two physicians of repute who lived during the reign of Sultan Alauddin Hasan were Hakeem Nasiruddin

Shirazi and Hakeem Aleemuddin Tabrezi. Hakeem Shirazi was a philosopher-physician who had come to the Deccan from Persia and opened his dispensary in the Bahmani capital city of Gulbarga. He was also known to have taught medicine. Hakeem Tabrezi, another Persian physician, also taught and treated patients in Gulbarga. The fifth Bahmani ruler, Sultan Mahmud Shah (r. 1378–1396), encouraged the translation of certain ayurvedic texts into Persian. This work in Persian, called the *Tibb-i-Shifa-i-Mahmudi (Medicine of Sultan Mahmud Shah)*, was translated into three volumes.

Mahmud Gawan (1411–1481), a prime minister to the Bahmanis, was another important personality in the field of medicine in the Deccan. Gawan, also known as Khwaja Imaduddeen Mahmud Gilani, was also a scholar and man of letters. A much-traveled person who was educated in various countries, he ultimately reached the Deccan at the age of 42 and subsequently became the guiding light behind the famous *madrassa* (school) at Bidar, which was constructed in 1472. The madrasa was not only an architectural marvel but also a great center of learning. It is noteworthy that Khwaja Mahmud Gawan was himself well versed with the medical science of the period and encouraged studies in medicine at the madrasa.

Sultan Alauddin Ahmad II (1436–1458) was another Bahmani monarch who made a notable contribution to the field of medicine. The sultan constructed a hospital at the new capital city of Bidar that catered to the needs of the sick and indisposed. The hospital, which had both *vaid*s and hakeems to take care of the patients, was endowed with revenues from a number of villages. Unfortunately, this structure has fallen prey to the extremities of time and nature.

Despite having access to physicians who had a sophisticated understanding of the nature and course of various diseases and an advanced array of pharmacological aids, people continued to hold to traditional beliefs, especially when confronted with illnesses that were untreatable. “Evil spirits” were invariably the “cause” of such diseases, and amulets and talismans were seen as panaceas.

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Bibliography

- Ahmad, Jamil, and Hakim Ashhar Qadeer. *Unani: The Science of Graeco-Arabic Medicine*. New Delhi: Lustre, 1998.
- Elliot, H. M., and J. Dowson. *The History of India as Told by Its Own Historians*, Vol. 3. Allahabad: Kitab Mahal, n.d.
- Farooqui, Rehber. *Islamic Tibb*. Hyderabad: Azam, 1937.
- Sarton, George. *Introduction to the History of Science*, Vol. 1. Baltimore: Williams, 1953.
- Sherwani, H. K. *The Bahmanis of the Deccan*. New Delhi: Munshiram Manoharlal, 1985.
- Zubayr Siddiqi, Mohd. “The Unani Tibb (Greek Medicine) in India.” In *A Concise History of Science in India*, edited by D. M. Bose et al. New Delhi: INSA, 1971.

Chinese Medicine

Chinese medicine from 1000 to 1500 includes developments made in the Song dynasty (960–1279), the Yuan (Mongol) dynasty (1279–1368), and the early Ming dynasty (1368–1644). Medicine was still based on the *Huangdi Nei Jing (Yellow Emperor’s Classic of Internal Medicine)*, ascribed to the mythical Yellow emperor Huangdi (2698–2598 BCE) but probably composed or completed sometime in the Han era (202 BCE–220 CE). The work was conceptually based on the principles of *qi* (pronounced “chee” and meaning vital energy, something like the Greek *pneuma*), meridians (channels, or conduits, of fluids and energy), *yin* (representing the female principle, passivity, darkness, earth, dampness, cold, and interior factors), *yang* (representing the male principle, activity, light, heaven, fire, hot, dryness, and exterior factors), and the five elements of air, water, earth, fire, and metal. Health was based on the harmony of these factors within the body, somewhat like the balance of the humors within the Greek medical tradition. Buddhist, Daoist, and Confucian ideology each influenced medicine in various ways as well. Although reverence for tradition was significant, a great deal of progress in medicine was made beginning with the Song dynasty.

In 1076, the National Health Administration was reestablished, as well as the Imperial Medical College (and later provincial schools), which

taught the three medical branches—medicine, surgery, and acupuncture. In 1113, eight disciplines were established: general practice, internal medicine, obstetrics, ophthalmology, acupuncture, dermatology, dentistry, and surgery. Students took and were graded according to results of their examinations on various topics, including the principles of medicine and surgery as well as clinical medicine and surgery, diagnosis by pulse, and physiology and anatomy. Those of the first grade served in official positions, taught, or wrote textbooks. For example, a number of pharmacopoeia as well as the *The Imperial Encyclopedia of Medicine* (*Sheng Ji Zong Lu*, 1111) were written under government auspices. These positions were often assigned based on additional competitive examinations. Those of the second grade were licensed to practice throughout the empire. Those who scored lower than the second grade repeated their education, while those who failed outright changed occupations. The empire during the Song era also had laws governing medical practice, ethics, and liability. In addition, the state regulated the distribution of medicaments. Nevertheless, the effectiveness of the system depended on the emperors, and by the end of the Southern Song era (1127–1279) the system had degenerated, to be revived under the Yuan and Ming dynasties.

The study of acupuncture was a significant part of Chinese medicine. Although acupuncture was an ancient art, further advances were made in the Song period. In 1027 the emperor ordered Weng Wei Yi to cast two life-size bronze statues, complete with internal organs, meridians, and holes for acupuncture points. As a teaching tool, each statue was covered with wax and filled with water. Proper insertion of the needle caused water to leak out. Weng Wei Yi's *Xin Zhu Zhen Jiu Ton Ren Tu Jing* (*Classic Chart on the New Bronze Acupuncture Statues*) describes the points on the meridians and their functions. Subsequent significant works on acupuncture included Duo Mo's (1190–1280) *Poem to Illustrate the Deepest Secrets* (*Baio You Fu*), Hua Shou's *Elucidations of the Fourteen Acupuncture Tracts* (*Shisijing Fabui*, 1341), and Yang Jizhou's *Compendium of Acupuncture and Moxibustion* (*Zhenjiu daquan*, 1468). In 1443 the



Itinerant doctor visits a village, 1049–1130, by Li Tang.
(Photo12/The Image Works)

Ming government ordered the casting of acupuncture models similar to those of 1027.

The development of medicine was also affected by a school of thought called Li Xue (Theoretical Principle), founded by the neo-Confucian Zhu Xi (1130–1200). He maintained that there are two principles, *li* (pronounced “lee”) and *qi*, and that neither was found without the other. The *li* is something like the universal archetype, or pattern (cf. Platonic forms), and the *qi* is both that which produces and out of which things are produced (for example, the five elements). The *li* (also called the *taiji*, or “supreme ultimate”) when active produces *yang* and when passive produces *yin*, both manifestations of *qi*. The flow of energy is key to this theory. As a result of the application of this theory to medicine, the Song government issued a “calendar of Yun” detailing when epidemics might occur and what preventative measures to take.

Regarding the etiology (causes) of disease, in 1171 Chen Yan (also called Wu Ze) in his *San Yin Ji I Fang* classified causes into three types: internal (*yin*) factors, meaning emotional excesses; external (*yang*) factors, meaning environmental factors; and neutral, or miscellaneous, factors such as diet, accidents, animal bites, insect bites or stings, and so on (which are partly *yin* and partly *yang*). Chen Yan's work was based on the earlier work of Zhang Zhong Jing, also

THE GOVERNMENT AND PHARMACOLOGY

During the Song and Yuan dynasties the government became involved in regulating the disbursement of herbal medicines. The National Health Administration established the National Pharmacy in 1076, which patented herbal medicines and determined standard doses. Over the years, many national pharmacopoeias were published. A revised and enlarged edition of a tenth-century pharmacopoeia was published in 1057, with information on 1,082 herbal medicines under the title *Jiayou Ben Cao* (*The Jiayou Reign Period Pharmacopoeia*). The *Illustrated Pharmacopoeia* (*Tu Jin Ben Cao*) by Su Song (and others) was published in 20 volumes in 1061 and described 780 plants and 625 medicines. Although not itself sponsored by the government, Teng Shen Wei's (1056–1093) *Zhen Lei Ben Cao* (*Classified Pharmaceutical Natural History*, ca. 1082) included 476 new medicines in its total of 1,558 and became the basis for the government's new pharmacopoeia, the *Daguan Ben Cao* (*Daguan Reign-Period Pharmacopoeia*), which was revised in 1116, 1159, and 1249 with a new title each time. The *Tai Ping Hui Min He Ji Ju Fang* (*Formulas of the Bureau of People's Welfare Pharmacy*, 1107), by Chen Shi Wen (and others), is a formulary with 788 herbal medicines that also updated the manner of preparation, building upon the fifth-century CE work of Li Xiao. Proper preparation was necessary in order to detoxify, minimize side effects, and improve the effectiveness of various herbs. The *Formulas of the Bureau of People's Welfare Pharmacy* also made patent medicines both popular and more convenient.

—Kimberly Georgedes

known as Zhang Ji (150–219 CE), whose *Shanghan Zabinglun* (*Discourse on Fevers and Miscellaneous Illnesses*) was divided into two works during the Song period, the *Shanghanlun* (*Treatise on Febrile [Fever] Diseases*) and the *Jinkui yaolue* (*Essential Treasury of Medicine*).

Additionally, medical advances were ascribed to other schools of thought, including the *He Jian* School's Fire and Heat theory, the Zang Fu theory (Yi Shui School), the Tonify Earth School,

the Purgative School, and the theory of Primary Fire. Liu Wan Su (1120–1200) founded the He Jian school (named after He Jian, where he was born); initially called Fire and Heat, it was subsequently known as the Cold School or the Cool School. Su posited that *yin*, or cold-based, febrile (fever) diseases arising from excessive external factors (to which he added lack of care) were caused by and often transformed into (*yang*) fire and heat factors (hence, Fire and Heat theory). Thus, to treat such diseases, cold-property herbal medications should be used (hence, Cold, or Cool, School). The Zang Fu theory, set forth by Zhang Yuan Su, also known as Jie Gu (1151–1234), postulated that disease occurred with excessive or deficient cold or heat in the internal organs. He influenced pharmacology with his treatments, as he classified medicinal herbs into warm, cool, tonifying (rebuilding energy), and reducing (stagnant or excessive energy) and also discovered that one medicine could affect different organs in different ways. Moreover, he claimed that in each compound there is one herb that will direct the other components through a specific channel to a specific area or organ. Li Gao, also known as Li Kao or Li Tung Yuan (1180–1251), the founder of the Tonify Earth School, continued the development of the Zang Fu School but concentrated on the spleen (*yin*) and stomach (*yang*) organs as those wherein most disease originates through deficient Yuan Qi (original vital energy, which originates in the stomach and spleen) due to fatigue, diet, or intensive emotions. Treatment consisted of herbal methods that would increase the Yuan Qi by warming the stomach and spleen and protecting the spleen against excessive *yang* and the stomach against excessive *yin qi*.

Zhang Cong Zheng, also known as Zhang Zihe (1156–1228), founder of the Purgative School and coauthor of *Parental Care according to the Way of Confucius* (*Ru Men Shi Qun*), maintained that external factors, especially diet, caused disease. His treatments involved purgation via diaphoresis (sweating) for skin problems, vomiting for upper body problems, and colonic purgation for those of the lower body. For each type he outlined specific treatments that included herbal remedies, acupuncture, massage, and

moxibustion (applying cones of mugwort to the skin and lighting it to cause a blister).

Zhu Zhen Heng, also known as Chu Tan-chi or Chen Heng (1281–1358) followed the Li Xue philosophical school and created the theory of Primary Fire (Xiang Huo), which is located in the heart and is the primary life force and source of health. Excessive fire (*yang*) results from activity that, if unchecked, burns out the original *yin*. When the primary fire is at rest, the body is healthy. Successful treatment decreases the excessive *yang* and increases the *yin*, hence his Nourishing *Yin* theory.

Diagnosis using the pulse was improved upon in the Song and Yuan periods by Cui Jia Yan and Shi Fa, the latter of whom published a work in 1241 with 33 illustrations and also classified the 24 types of pulses and what they indicate in a new way (although ultimately 51 types of pulse would be distinguished). The first treatise devoted entirely to diagnosis by observing the tongue was that of Du Ben, who also included 36 charts.

Advances in surgery were made with the works of Li Xun (1196), Yang Shi Ying (1264), and Chen Zhi Ming, who wrote the first work concerned solely with surgery in 1266. The government published *Sheng Ji Zong Lu* (*Comprehensive Collection of Surviving Techniques*, 1111–1117), which advocated primarily drug therapies for treating surgical problems. Qi De Zhi (1335) summarized advances for the period. During the Yuan period, works appeared dealing with bone fractures and dislocations. Advances were also made in ophthalmology, obstetrics, and pediatrics.

The Chinese also produced possibly the earliest work in forensic medicine, the *Washing Away of Wrongs* (*Xiyuanlu*) by Song Ci in 1247 as well as possibly the first steroid. In addition, the Chinese became adept at diagnosing and treating smallpox—the first treatise devoted entirely to smallpox was the *Tou chen lun* (*Treatise on Smallpox*) by Wen-jen Kuei, published in 1223—and are credited with inoculating against it possibly as early as the tenth century, at about the same time as the practice is thought to have begun in India, but the earliest documentation is from the sixteenth century.

—Kimberly Georgedes

Bibliography

- Ho, Py, and F. P. Lisowski. *A Brief History of Chinese Medicine and Its Influence*. 2nd ed. Hackensack, NJ: World Scientific, 1998.
- Needham, Joseph. *Science and Civilization in China*, Vol. 6, *Biology and Biological Technology*; Part VI: *Medicine*. With Lu Gwei-Djen, edited and with an introduction by Nathan Sivin. New York: Cambridge University Press, 2000.
- Wong, K. Dhimin, and Wu Lien-The. *History of Chinese Medicine*. 2nd ed. Shanghai: National Quarantine Service, 1936.
- Zhao, Ruan Jin. *From Legend to Science: A History of Chinese Medicine*. New York: Vantage Press, 2004.

Western Medicine

The revival of Western medicine between 1000 and 1500 began at Salerno in southern Italy in the mid-900s and spread northward. Subsequently, with the eclipse of Salerno in the early thirteenth century, the medical schools at the universities of Montpellier in southern France, Bologna in the northern Italian region of Lombardy, and Paris became Europe's major centers for the study of medicine.

The Latin West retained some practical and theoretical knowledge of Hippocrates of Cos (fifth century BCE) and Galen (d. 216 CE) throughout the early Middle Ages, but it was the translation movement associated with the intellectual revival of the eleventh and twelfth centuries that most influenced the development of medicine as an academic discipline. This was due to the translation from Greek not only of additional works ascribed to Hippocrates and Galen but also of certain important medical works from the Muslim world.

Constantine the African (d. 1085/1087), a convert from Islam and a monk at Monte Cassino, was the first translator to affect the Western Latin medical world with his translations of short works on urine, diets, and fevers by Isaac Israeli (Ishaq ibn Sulayman al-Israili, d. ca. 932), an Egyptian Jew; the *Isagoge* (*Introduction*) of Johannitus (by which the *Introduction to Medicine* by the ninth-century Arab Christian Hunayn ibn Ishaq was known in the West); Hippocrates' *Aphorisms*, *Prognostics*, and *Regimen in Acute*

Diseases; and Galen's commentaries on the latter two. Moreover, Constantine translated three compendia, or encyclopedic works—Galen's *Megategni* (*The Great Art of Healing*), the *Pantegni* (*The Universal Art of Healing*) of Haly Abbas (Ali ibn al-Abbas al-Majusi, fl. ca. 983), and the *Viaticum* (*Handbook*)—as well as the *De Coitu* (*On Intercourse*) of Ibn al-Jazzar (d. 980). Gerard of Cremona (d. 1187), who moved to Toledo, Spain, to learn Arabic, translated many medical works from Arabic into Latin, including Ibn Sina's (Latin, Avicenna, 980–1037) *Canon of Medicine* and al-Razi's (Latin, Rhazes, d. 925) *Book for al-Mansur*. Translators in Toledo and Italy added numerous other medical works, including those of al-Kindi (d. after 870) and Abu al-Qasim al-Zahrawi (Latin Abulcasis or Albucasis, fl. ca. 1000), the latter of which were important for surgery. Latin translations of both Greek and Arabic works continued into the Italian Renaissance.

As might be expected, Salerno was the first significant center of medicine in the Latin West to use these translations. Before its eclipse as a major medical center, it was well known for its skilled medical practitioners, which included clergy and “the women of Salerno.” The most well-known of the latter was the twelfth-century Trota (or Trotula), to whom is attributed a famous work on gynecology, although this is disputed. During the eleventh and twelfth centuries, the Salernitans made progress in the areas of anatomy, surgery, and pharmacology. Anatomy was taught by dissecting pigs and the bodies of humans discovered drowned or dead by other causes. Such study led to developments in surgery as evidenced in Salerno's *Bamberg Surgery*, which dominated the field until the emergence of two master surgeons and their much-studied works: Roger Frugardi (fl. before 1180 in Parma, d. ca. 1195), who composed the *Practica Chirurgiae* (*The Practice of Surgery*), and Guy de Chauliac, who authored the *Great Surgery* in the late fourteenth century. The Salernitans incorporated Islamic pharmacological principles into their medical science and even surpassed them to some degree, as evidenced in the *Circa Instans* (*Concerning Instants*) of Platearius and the *Antidotarium* (*Antidotes*, ca. 1150) of Nicholas, among others, along with their commentaries.

Salernitan practitioners and teachers also compiled the *Articella* (*The Little Art of Medicine*), a collection of short treatises that formed the basic teaching curriculum in the late twelfth and early thirteenth centuries. It was composed of Hippocrates' *Aphorisms*, *Prognostics*, and *Regimen in Acute Diseases* and one or two Galenic commentaries on Hippocrates as well as Galen's *Ars Parva* (*Small Art [of Medicine]*), Johannitius's *Isagoge*, and two short Byzantine tracts on diagnosis by study of urine and pulses (supplemented in the fourteenth century with works by Avicenna, Rhazes, Haly Abbas, and more of Galen).

The Salernitans taught the *Articella* by commenting on the various works and were also the first to emphasize the importance of Aristotle's scientific works for medicine. The *Articella* quickly became the standard medical text throughout Latin Europe, especially after the legacy of Salerno passed to the north in the early thirteenth century.

Medicine was being taught at Montpellier from the mid-twelfth century, and medical masters and students incorporated themselves into a university there by 1220 in order to grant recognized degrees. Evidence exists for medicine emerging as a discipline at Paris at about the same time as Montpellier and the university's offering of a license (degree) in medicine between 1270 and 1274. Medicine emerged at Bologna between 1200 and 1220, thereby eclipsing Parma as a center of medical education, and the organization of medical students and masters into a university probably took place before 1260. Other less prominent centers of medical instruction included Oxford, Padua, and Ferrara. As an academic discipline, medicine was taught within an Aristotelian framework, which led to philosophical and theological discussions of medical questions and conflicts between Galenic and Aristotelian physiology, which were not readily resolved philosophically or theologically.

With the offering of university medical degrees by the late thirteenth and early fourteenth centuries, there developed an informal hierarchy of medical practitioners, with university graduates at the top, commanding the highest salaried positions. Below them were skilled practitioners and then skilled surgeons (surgery was often con-

sidered a technical craft rather than a science to be taught in the university), followed by barber-surgeons, herbalists, apothecaries (druggists), midwives, and others. The terminology concerning the medical profession was significant. A doctor (teacher) always meant a university graduate who was licensed to teach in the area of his expertise, namely the arts, theology, law, or medicine. The term “doctor” did not necessarily mean someone who practiced or taught medicine. The term “master” might mean a university graduate, although not necessarily. The term *medicus* referred to either a physician or skilled surgeon. The term *physicus* meant a physician but only implied a medical degree and an acquaintance with natural philosophy (that is, physics, or *physica*), but in the vernacular it meant a general practitioner of internal medicine (also called *physica*, or physic), as opposed to a surgeon. Finally, the term “empiric,” a derivative term, meant someone who had no formal education but acquired general medical knowledge by practice. Both university graduates and skilled practitioners would have a working knowledge of Latin, but the others generally would not. Nevertheless, there was quite a body of medical literature in the vernacular (even most midwives would be literate enough to read them), and many Latin works were translated into the vernacular as the period went on. Municipalities and rulers undertook to license those practitioners, even those with degrees, in order to ensure some degree of competency, and in some areas guilds of physicians developed. Interestingly, it was the elite physician who had a general practice, and the specialist was often of lower status.

Practitioners, in addition to Christian laymen, included women, Muslims, Jews, and clerics. Although the Church forbade clerics to enter medicine merely for the sake of temporal gain and also forbade absenteeism from monasteries or parishes for the sake of medical studies, the Church was not opposed to clerics studying medicine in itself. In 1215, however, the Fourth Lateran Council forbade clerics to practice surgery without a papal dispensation because it involved the shedding of blood. Although women were excluded from obtaining university degrees, many were nevertheless licensed to practice, but

➤ POPE JOHN XXI (R. 1276–1277) AS PHYSICIAN

Peter Juliani (also known as Peter of Spain), philosopher, theologian, physician, and cleric, was born in Lisbon circa 1215, the son of a physician named Julian. Juliani went to the University of Paris for advanced studies in philosophy and theology and possibly studied medicine at Montpellier or Salerno. Although more well known for his philosophical works, such as his textbook on logic, the *Summulae Logicales*, that became the major text on logic for centuries to come, he was also a physician who wrote more than 20 medical treatises and taught medicine at the University of Siena, circa 1244. While in Siena, he became concerned with such things as city sanitation, hygiene, living conditions, and diet and how they affected a person's health. It was also in Siena that he came to the attention of church prelates, which led to advancements in the Church and ultimately to his election to the papacy in 1276.

Two of his major medical works are the *Liber de oculo* (*Book on the Eye*, ca. 1250) and his *Thesaurus Pauperum* (*Poor Men's Treasury*). The *Book on the Eye* deals with the anatomy of the eye (as it was then understood) and its diseases as well as treatments. The *Poor Men's Treasury* is a collection of inexpensive, easily prepared remedies for common ailments. Written in simple Latin for a wide audience, it also included prescriptions to enhance fertility, aphrodisiacs, and even 26 prescriptions specifically for contraception. The *Thesaurus Pauperum* was available well into the fifteenth century, when it was translated into English. His work *On the Eye* was quoted and used by others, including Michelangelo and the surgeon Guy de Chauliac (d. ca. 1370). Juliani was one of two popes whom Dante allowed into Paradise.

Pope John met an untimely end in Viterbo, when the roof of the study he was adding to his papal residence collapsed on him. He died a few days later, on May 20, 1277.

—Kimberly Georgedes

by the fourteenth century the movement to exclude women from practice was under way.

Some advances in anatomy occurred as the result of the practice of the dissection of human bodies, which appears to have begun in northern Italy initially as autopsies to determine cause of death for legal purposes. Venice allowed for

an annual dissection beginning in 1308 (although possibly not until 1368, by decree of the Great Council). The first recorded dissection of an executed criminal was conducted in 1315 by Mondino dei Liuzzi (d. ca. 1326), who taught practical medicine at the University of Bologna. He also wrote the *Anatomy*, published in 1316, that served as a dissection manual for the next two centuries. Nevertheless, although some universities and municipalities mandated human dissection for instructional purposes in the fourteenth century, particularly in northern Italy, it was difficult to obtain the bodies of executed criminals. Moreover, dissections occurred only during the winter due to rapid decomposition. Another reason that human dissections were rare until the late fifteenth century is that they added little to existing knowledge of human anatomy or to solving debates between Galenic and Aristotelian models of human physiology. Nevertheless, by the mid-sixteenth century it was common to use human corpses in anatomical instruction.

Diagnosis and treatment often proceeded according to the “complexion” and humoral theories described in the Hippocratic and Galenic corpus but further developed by Latin western European philosophical discussions in this period and aided by Arabic discussions, such as those found in Avicenna’s *Canon*.

From the twelfth century, Latin physicians referred to one’s “complexion” (Latin *complexio*, meaning “temperament”), which in this context referred to the combination and balance of the four elements (air, water, earth, and fire) and their associated primary qualities (hot, cold, wet, and dry) within the body. Ideally the complexion would be balanced, or “temperate,” typically discerned by touch, the palm being the most temperate area of the human body. Complexion, however, was also perceived as a somewhat relative quality, differing among species (plant or animal), individuals within species, and the parts (or organs) under observation. Among humans, what was considered normal would differ among races, their geographical regions, and individuals. One’s individual complexion was innate from conception, differed between genders, and was affected by the passing of time and external con-

ditions and circumstances (both material and environmental). Moreover, each organ was believed to have its own complexion.

Additionally, the four humors, or bodily fluids, originally articulated by Hippocrates and further developed by Galen, along with the Greek conception of the faculties and spirits (*pneuma*) associated with the three major organs, were significant as well. The humors consisted of blood, phlegm, yellow bile, and black bile, with their corresponding temperaments (not necessarily related to the complexion): sanguine, phlegmatic, choleric, and melancholic, respectively. The humors were important for nourishing the body and for maintaining the balance of the body’s complexion. The vital organs were the heart, brain, and liver (to which was sometimes added the genitalia), with their corresponding faculties (the vital in the heart, the psychic in the brain, and the natural in the liver), as well as the vital spirits produced by each (the vital, psychic, and natural, respectively). Maintaining balance within the complexion and among the humors and spirits was vital to the health of the body. Diagnosis, in addition to touch to determine the complexion (which was not always successful, as medieval doctors noted), included general observation of the patient, examining bodily excretions such as urine (which was used to determine the status of the liver), taking the pulse (which was used to determine the status of the heart), taking the patient’s history, and examining the astronomical and astrological signs. (Medical astronomy and astrology were a significant part of Western medical practice particularly from the fourteenth to the sixteenth centuries, as they were also in Islamic and Chinese medical practice, but Western doctors nevertheless were constricted by theological prohibitions against astrology.) When imbalance occurred, the most common treatment was by drug therapy and diet, although various forms of purgation and phlebotomy (also called venesection, or bloodletting) were also used as well as manipulation of the six nonnaturals, or factors external to the body, such as the air one breathes, sleep or lack thereof, exercise or lack thereof, diet, and retention or excretion.

Western hospitals in the period began primarily as places wherein the elderly, the ill, the

poor, the homeless, and pilgrims might find food, shelter, religious comfort, and sometimes, but not always, medical care, unlike Islamic hospitals of the period. As cities became more prosperous and hired doctors as civil servants, however, some were required to offer regular medical care in municipal hospitals. One of the largest of these municipal hospitals, but quite atypical for the period, was Florence's Santa Maria Nuova, which engaged nine physicians and offered 300 beds by circa 1500.

—*Kimberly Georgedes*

Bibliography

- Nutton, Vivian. "Medicine in Medieval Western Europe." In *The Western Medical Tradition 800 B.C. to A.D. 1800*, edited by Lawrence I. Conrad, Michael Neve, Vivian Nutton, Roy Porter, Andrew Wear. Cambridge: Cambridge University Press, 1995.
- Ottosson, P. G. *Scholastic Medicine and Philosophy*. Naples: Bibliopolis, 1984.
- Park, K. "Medicine and Society in Medieval Europe, 500–1500." In *Medicine in Society*, edited by A. Wear. Cambridge: Cambridge University Press, 1992.
- Russell, A. W. *The Town and State Physician in Europe*. Wolfenbüttel: Herzog-August-Bibliothek, 1981.
- Siraisi, Nancy G. *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice*. Chicago: University of Chicago Press, 1990.

Guy de Chauliac—The “Father of Modern Western Surgery”

Surgeon and cleric, Guy de Chauliac (ca. 1295–ca. 1368) was born the son of poor French peasants around 1295 in Chauliac in southern France. Despite his origins, the Church recognized his talent, and under its patronage, he began and continued his studies. He eventually studied medicine and surgery at Toulouse and Montpellier, the latter where Henri de Mondeville taught and where Chauliac became a master of medicine and surgery around 1325. He pursued further studies in anatomy and surgery at the University of Bologna under Niccolò Betraccio (d. 1347), who was the protégé and successor of Mondino dei Liuzzi, the latter the author of the

THE CHIRURGIA MAGNA ON THE IDEAL SURGEON

The following statement demonstrates that Guy de Chauliac's vision of the ideal surgeon, written in 1363 in Latin, is as valid today as it was more than six centuries ago.

“The conditions necessary for the Surgeon are four: first, he should be learned; second, he should be expert; third, he must be ingenious; and fourth, he should be able to adapt himself. It is required for the first that the surgeon should know not only the principles of surgery, but also those of medicine in theory and practice; for the second, that he should have seen others operate; for the third, that he should be ingenious, of good judgement and memory to recognize conditions; and for the fourth, that he be adaptable and able to accommodate himself to circumstances. Let the Surgeon be bold in all sure things, and fearful in dangerous things; let him avoid all faulty treatments and practices. He ought to be gracious to the sick, considerate to his associates, cautious in his prognostications. Let him be modest, dignified, gentle, pitiful, and merciful; not covetous nor an extortionist of money; but rather let his reward be according to his work, to the means of the patient, to the quality of the issue, and to his own dignity.”

—*Kimberly Georgedes*

Source

- A. Earl Walker, *The Genesis of Neuroscience*, edited by Edward R. Laws Jr. and George B. Udvarhelyi (Park Ridge, IL: American Association of Neurological Surgeons, 1998), 66–67.

greatest manual of human anatomy and dissection until that of Andreas Vesalius in the sixteenth century. From Bologna, Chauliac traveled to the University of Paris for further studies, after which he began his practice in his home diocese of Mende. From there he moved his practice to Lyons, where he was also a canon, or ecclesiastical official, of the Church of St. Just.

His reputation as a physician and surgeon was such that he was invited to the papal court at Avignon, where he served as physician and chaplain to popes Clement VI (r. 1342–1352), Innocent VI (r. 1352–1362), and Urban V (r. 1362–1370).

He was in Avignon when the Black Death, otherwise known as the Bubonic Plague, struck Europe in the winter of 1347/1348. The plague wiped out a massive percentage of the population of Europe in its initial onslaught, which lasted until 1350. While other physicians, surgeons, and clerics fled from the plague, Chauillac remained with his patients, and carefully documented both the symptoms of the disease and his treatments. When Pope Clement VI refused to leave Avignon, Chauillac counseled him to remain in his rooms and keep large fires burning to stave off the plague. (Clement survived, although whether it was due to Chauillac's advice is impossible to know.) Chauillac himself contracted the plague in its second onslaught in 1360, but managed to survive. One of Chauillac's major contributions regarding the plague, however, is that he was arguably the first to distinguish clearly between the bubonic and the pneumonic forms of the plague, the latter of which affects the lungs and is passed through the air, has a much higher mortality rate, and a considerably shorter incubation period.

Chauillac is most famous for his *Chirurgia Magna* (*Great Surgery*), also called the *Inventarium* (*The List*), which he published in 1363, toward the end of his life. His work surpassed previous works as a compendium of medical and surgical knowledge up to this point. Indeed, Renaissance editors of his work noted over thirty-five hundred references and citations, not only of ancient and recent works but of works contemporary to Chauillac. More significantly, the work included Chauillac's own critical comments and conclusions based upon his own experience and observations. He was by no means a slave to tradition or authority, but as he wrote, "Socrates and Plato are my friends, but the truth is an even greater friend."

His work dealt with various aspects of medicine, including physiology, pathology and especially anatomy, in addition to surgery. As Chauillac noted, "A surgeon who does not know his anatomy is like a blind man carving on a log." Treatments recorded in his work include dealing with scalp wounds and skull fractures, and practicing trepanning (opening a hole in the skull to relieve pressure). He advocated removing foreign bodies from wounds (and various methods for

doing so) and disinfecting them using wine and spirits such as brandy, draining wounds to combat infection, closing chest wounds, and even operating for empyema (fluid in the pleural, or chest cavity), detailing where to make the incision, and resecting the ribs. He provides descriptions of different types of suturing, bandaging, and dressing the wounds, depending on the case. He recommended treating fractures of the femur by suspension and traction, and dealt with the trimming of open fractures, operating on hernias with sutures, rather than cauterizing them. (He also wrote a work dedicated specifically to the treatment of hernias.) Moreover, he was one of the first to tie off arteries and veins with sutures (again, rather than cauterizing them) to stop bleeding. He also discussed dentistry and dental instruments, and although he considered dentists specialists (*dentatores*), he nevertheless believed they should practice under the guidance of a physician.

Chauillac also produced works on astrology (closely tied to medicine in this period), and an apparently lost treatise on diseases of the eye, written ca. 1340. King John of Bohemia traveled to Avignon to have his remaining eye treated by Chauillac. John had already lost one eye to a disease (possibly a cataract), and drowned the physician as punishment. Chauillac also met with little success, but luckily escaped the punishment of his predecessor. King John was thenceforth known as "The Blind."

Chauillac died in Avignon sometime between 1368 and 1370. His *Chirurgia Magna* was influential in Europe until the seventeenth century, both in unabridged and in summary form in over a hundred editions, and was translated into several European languages. His description of the ideal surgeon is still quoted today by medical schools and associations.

—Kimberly Georgedes

Bibliography

- Haller, Jordan D. "Guy de Chauillac and his *Chirurgia Magna*." *Surgery* 55, no. 2 (1964): 337–343.
- Thevenet, André. "Guy de Chauillac (1300–1370): The 'Father of Surgery.'" *Annals of Vascular Surgery* 7, no. 2 (1993): 208–212.
- Zimmerman, Leo, and Ilza Veith. *Great Ideas in the History of Surgery*. 1961. Reprint, San Francisco: Norman Publishing, 1993.

The Medical Response to the Black Death

The response of physicians to the challenge posed by the 1348 disease outbreak known as the Black Death probably can be considered one of the most abject failures in the history of medicine. Admittedly, they did not have the technological and epidemiological tools that are taken for granted today, such as knowledge of such infectious microorganisms as bacteria and viruses and the application of vaccines and “wonder drugs” such as penicillin and other antibiotics. But this does not mean that they were entirely blameless for the mass deaths that took place under their care. Medieval doctors and their “cures” for the plague were not always harmless; quite often they made matters worse.

Hundreds of plague treatises penned in 1348 and for centuries thereafter by a variety of university physicians and other authors survive from nearly every country in Europe. No systematic survey of this impressive body of literature has yet been undertaken, but some preliminary conclusions can be offered. Judging from these treatises, the typical doctor was concerned with three issues: the cause of the plague, how to prevent the plague, and how to cure it. Surprisingly, doctors were little concerned with diagnosing the disease’s symptoms. When they did discuss symptoms, they usually did so in a theoretical way rather than from observation.

Causes of the plague were usually ascribed to bad air, following an explanation for disease known as the miasmatic theory. The notion of unhealthy miasma ultimately derived from ancient Greco-Roman medical authorities, such as Hippocrates and Galen, and persisted down to the nineteenth century. However, European physicians got most of their theory from Arabic mediators of ancient knowledge, particularly Ibn Sina (known in the West as Avicenna). Celestial disturbances and conjunctions of the planets were often seen as responsible for corrupting the air, although medical authorities also identified other sources, such as rotting corpses, fetid swamps, and earthquakes. Medieval doctors were also well aware that the disease could travel from person to person through breath or touch or, strange to modern sensibilities, by sight. It is im-

portant to realize that such theories of contagion did not preclude the miasmatic explanation. Indeed, the two went together in the medieval European mind, since an “aerial spirit,” the very breath of life within each person, could transmit infection from person to person.

Prevention of the plague revolved around the regimen of the six “non-naturals,” which were designed to block corrupt air coming into the body and ward off an imbalance or corruption of the four humors within the body. This theory also derived from the ancients and included prescriptions regarding how to avoid or “correct” bad air; which foods and drink to consume; how much exercise to take; how to sleep; how to purge the body of its excess humors, or waste matter; and even how to feel, on the grounds that violent emotion predisposed the body to infection.

The last section of most plague treatises, advice on how to cure the disease, was, not surprisingly, the shortest. By and large, doctors either prescribed bleeding the patient (also used as a preventative measure) in the hope of draining out the offending corruption or gave elaborate and numerous recipes for “theriacs,” syrupy concoctions designed to neutralize the plague poison. If bubonic swellings were present, physicians also advised first “ripening” them with a poultice and then drawing out the “poisonous matter” inside by cupping, cautery, or simply cutting them open. This was the closest that these medical practitioners ever came to performing surgery on plague patients.

Many questions remain regarding the medical response to the plague in 1348 and beyond. More detailed research into the surviving plague treatises will no doubt supply some answers, but this is still perhaps the last frontier in our knowledge about the Black Death, and its mysteries are tantalizing. One such mystery concerns some doctors’ claims to have successfully prevented or even cured the disease, even though a few physicians, such as Teobaldus Loneti, frankly admitted that the disease was “incurable.” Ibn Khatima, a Spanish Moorish physician, boasted in his treatise of 1349 that he kept “countless” people alive by bloodletting. How was this possible? It should be noted that he made this claim only for “therapy before the disease takes root”;

➤ ABU JAFAR AHMAD IBN KHATIMA, *DESCRIPTION AND REMEDY FOR ESCAPING THE PLAGUE*

A physician and poet from Almería on the coast of southern Spain, at that time part of the Muslim kingdom of Granada, Abu Jafar Ahmad Ibn Khatima wrote his plague treatise in February 1349, nine months after the plague arrived in Almería in June 1348. Although grounding himself in earlier theory, such as that of Hippocrates, Galen, and Avenzoar (Ibn Zuhr), Ibn Khatima also speaks from his own experience, even to the point of discussing specific cases, which was relatively rare in plague treatises. Khatima lived until at least 1369, when he is mentioned by his friend and fellow physician, Ibn al-Khatib.

“Therapy before the Disease Takes Root. . . .

Therefore, we found no easier and more successful treatment than bleeding, especially if it is performed immediately when there are signs of the disease, and before the fever takes hold and gruesome symptoms appear. As I’ve seen myself, I’ve had miraculous results by bleeding. The sooner it is done, the better chances the treatment has, and that is the main thing with this disease. . . . A fair amount of blood has to be drained, until the patient experiences a feeling of faintness, depending on strength and age. One mustn’t wait until the blood has a normal density or color; usually with this disease, it is thickened and black. Its characteristics won’t change, even if it were drained completely. Sometimes a thin, greenish liquid comes to the surface, or a grayish mass; that’s a very bad sign. If the patient faints before the proper amount is drained, sprinkle his face

and extremities with water until he comes back [to consciousness]; then finish the drainage. . . .

“A man from Homma Biggana, a village near Almería, came to me and told me that he and some twenty people from the village had fled from there for fear of the plague, which was ravaging the village. He complained about anxiety, depression, arterial cramps, which was his first indication of the disease. I prescribed an immediate bleeding, and twenty-two ounces of blood were drawn. He fully recovered, as if he hadn’t had anything. He went on his way, but only a block or two, and then he returned in an identical state as before the bleeding. I felt his pulse, observed him and saw the same symptoms. I ordered another bleeding, and this time eighteen ounces were drawn. This time he was fully free of fever, with only a little weakness, but he was able to walk home. He was rid of his pains and fully healed. I saw him later; he said he was the only one still alive from among those with whom he had fled. It all happened in one week. I don’t mention the story of this man as a rare triumph of bloodletting. My experiences in that field are countless. There are countless people, whose number God knows, who were kept alive by this measure. Thus is the might and will of God!”

—John Aberth

Source

Taha Dinanah, “Die Schrift von Abi G’far Ahmed ibn ‘Ali ibn Mohammed ibn ‘Ali ibn Hatimah aus Almeriah über die Pest,” *Archiv für Geschichte der Medizin*, 19 (1927): 60–63. Trans. J. Aberth.

once the disease had taken hold, treatment did not “make much sense.” Moreover, Ibn Khatima, as was true of his contemporary physicians, did no more than claim that he helped the body heal itself; any failures in treatment were put down to the patient’s own shortcomings, not the physician’s. It is also telling that he bled his patients—some of whom, incredibly, were alleged to have given up to eight pounds of blood—until they fainted. The lightheadedness that patients felt undoubtedly calmed them down, particularly those who hysterically (and mistakenly) anticipated coming down with the disease, and seemed to make them better.

Another mystery is why plague doctors continued to subscribe to outmoded theories of medicine when at least some, Ibn Khatima among them, pointedly noted that the morbidity and mortality rates of the disease were unheard of and unknown to the ancients. Raymond Chalin de Vinario went so far as to deride the ancients because they “plainly did not cure pestilential diseases, since they were ignorant of their causes.” Yet like so many of his colleagues, he cited Hippocrates, Galen, and Avicenna in his own discussion of the plague. Did medieval doctors feel that they had no other choice but to follow the line of what they had been taught? Were they

trapped by their own learning? Particularly maddening to a modern reader is the tendency of some plague treatise authors to go by the book even when the evidence before their eyes told them otherwise. An excellent example is the doctors' claim that the plague was most prevalent in the autumn, which made sense in theory since this was the cold and dry season that gave rise to melancholic humors. Yet almost all the surviving demographic evidence points to plague mortality peaking during the summer months. The Italian physician Gentile da Foligno provided an elaborate sixfold justification of this position for his students, yet he died of the disease on June 18, 1348, well before he could observe the plague's impact during the autumn. Whether later doctors ever learned from their predecessors' cumulative experience with the plague remains to be answered by further research.

Last, there is the intriguing role that magic might have played in plague medicine. This is perhaps the only original contribution that medieval doctors may have made to treatments of the plague, since magic ran directly counter to the rational tradition of most ancient authorities. Gentile da Foligno, despite his university training and grounding in the learned tradition, being particularly devoted to Avicenna, nonetheless flirted with magical remedies. One of his 11 medicines for treating the plague was a magic gold ring set with an amethyst inscribed with the image of a man holding a serpent, which he promised would "preserve you from any poison," including the "darts of pestilence." Yet Foligno cautioned that this remedy was "best kept in a book reserved for kingly persons," and he ascribed it to the heretic doctor Pietro d'Abano. Foligno also supplied detailed alchemical recipes for potable gold.

Concomitant with a willingness to use magic was the belief, championed by Foligno but not accepted by all his colleagues, that the plague was primarily caused inside the human body by a poisoning. A Spanish doctor teaching at the University of Montpellier in southern France, Alfonso de Córdoba, gives a detailed explanation of how an alchemical formula "prepared in a glass amphora" can be used to contaminate a whole city once it is broken and releases its vapor into a prevailing wind. One of the first Jews

to be accused in 1348 of poisoning wells in order to spread the plague to Christians, Balavigny of Thonon in Switzerland, also happened to be a surgeon. The twin themes of curing and causing disease through magical means, which fascinated some plague doctors, were to play a major role in the coming witch-hunt in early modern Europe.

In the popular imagination, the Black Death inevitably conjures up scenes of dead bodies lying in the streets. To this can now be added another gruesome image: rivers of blood running through the gutters, the result of nearly ubiquitous advice to purge patients by bloodletting. Bloodletting was not restricted to the wealthy or to residents of cities. The University of Paris masters of medicine recommended a phlebotomy most particularly for "the common folk and agricultural laborers, who do not lead delicate lives." Most writers of plague treatises assumed that people had access to a barber surgeon or, in a pinch, would perform their own bloodletting, as evidenced by Ibn Khatima's story of a "dissolute man" who decided to operate on his own boil on the groin, with disastrous results. In times of plague epidemic, doctors urged that the amount and frequency of bloodletting be stepped up. The typical advice was to double the number of phlebotomies that one normally received. Ibn Khatima even advised bloodletting two or three times a day, especially for caregivers of plague patients. Yet such extreme bloodletting undoubtedly weakened patients and made them more susceptible to the disease (even if it drained out some of the bacteria in the blood). Moreover, those who contracted plague symptoms were probably bled first; then all in the household who were healthy were bled as a precaution. Unfortunately, the surgeon or physician most likely used the same scalpel on everyone, even after having cut into plague boils. With no knowledge of germs, there was no perceived need for disinfection. When doctors advised washing the hands and face with water and vinegar, their intent was to ward off the bad air from the mouth and nostrils, not to disinfect. Thus, doctors, albeit unwittingly, helped spread the plague in the very act of trying to prevent or cure it, and they perhaps communicated the most deadly form of the disease, septicemic plague. Although rare in

modern times, it is commonly attested in medieval chronicles, and it seems to have been spread by a direct poisoning of the blood.

A full appreciation of the medical response to the Black Death may thus help elucidate the how and why of the plague's almost incredible virulence and mortality. The disease's epidemiological profile was shaped by humans' reaction to it.

—John Aberth

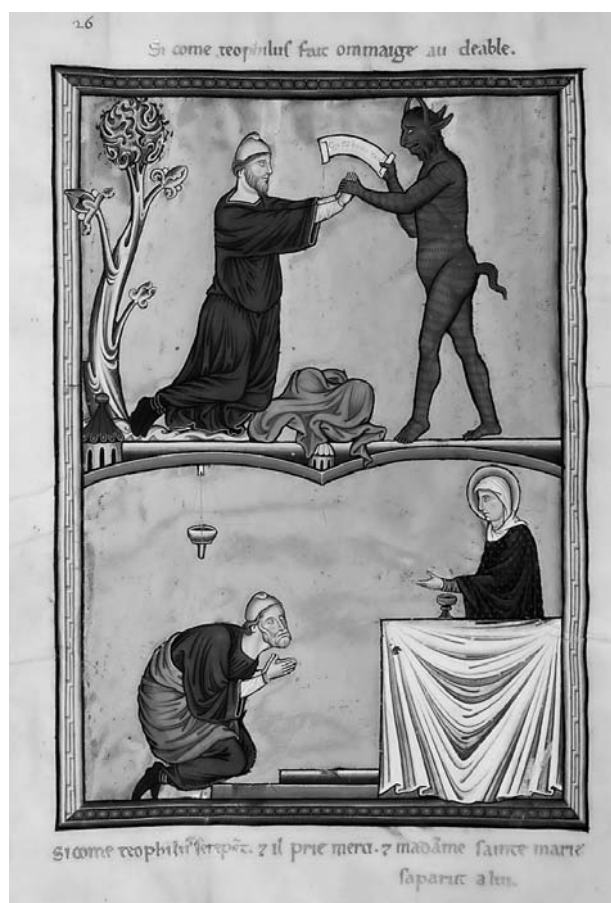
Bibliography

- Aberth, John. *The Black Death: The Great Mortality of 1348–1350; A Brief History with Documents*. Boston and New York: Bedford/St. Martin's, 2005.
- Arrizabalaga, Jon. "Facing the Black Death: Perceptions and Reactions of University Medical Practitioners." In *Practical Medicine from Salerno to the Black Death*, edited by L. García-Ballester, R. French, J. Arrizabalaga, and A. Cunningham. Cambridge: Cambridge University Press, 1994.
- Campbell, Anna Montgomery. *The Black Death and Men of Learning*. New York: Columbia University Press, 1931.
- Henderson, John. "The Black Death in Florence: Medical and Communal Responses." In *Death in Towns: Urban Responses to the Dying and the Dead, 100–1600*, edited by Steven Bassett. New York: Leicester University Press, 1992.

Magic in Europe

In the European Middle Ages, magic encompassed systems of practice and of belief. The magician sought to understand or to harness supernatural powers to do his or her bidding through an array of practices such as astrology, alchemy, sorcery, and the use of charms. Magic was practiced by ecclesiastical and laypersons from all social and educational levels.

Medieval magic could be folkloric in character, usually transmitted orally, or learned by reading magical texts. Furthermore, magic was divided into angelic (white) and demonic (black), depending on the magician's desired results. Demonic magic, sometimes called necromancy, often conjured demonic spirits to assist the magician and sought to cause harm or deformity in another person or to manipulate the emotions of others to induce love or hatred. Angelic magicians sought to obtain heavenly or special knowledge, effect cures or recoveries from illness or



Theophilus enters into a pact with the Devil and then repents before the Virgin Mary, from the Psalter of Queen Ingeborg, about 1210. (Réunion des Musées Nationaux/Art Resource)

injuries, or gain a beatific vision (a mystical vision of God). Such magicians often invoked heavenly spirits to assist them.

The Church usually condemned magical practice. Beginning in the twelfth century, two related currents of intellectual endeavor helped to shape the Church's denunciation of magic. First, scholastic theologians elaborated cosmological doctrines that articulated the relationships between the natural and the supernatural worlds, declaring that demons influenced human action and identifying the power of magic in the natural world. Anselm of Canterbury (ca. 1033–1109) developed theories of the fall of the Devil. Writing in the first half of the thirteenth century, William of Auvergne (ca. 1180–1249), the bishop of Paris, condemned magical practices since they necessarily depended on demons who could de-

ceive the practitioner and cause injury. The greatest doctor of the medieval Latin Church, Thomas Aquinas (ca. 1225–1274), placed the Devil at the top of a hierarchy of evil spirits who worked to produce suffering and evil, both eternal and temporal. The weight of Thomas's intellectual authority solidified a framework for the understanding of magic that endured throughout the Middle Ages by clarifying that although some magic operated in the world through the agency of heavenly bodies, most often magicians drew on demonic forces.

The second development in the Church's condemnation of magic was systematic articulation of canon, or church, law concerning magic that linked it with the crime of heresy, or unorthodox belief. Around 1140 the great canon law scholar Gratian ranked magicians as sinners but considered their sin to be relatively mild. By the 1230s the Church had established the Inquisition, a special legal procedure created to find and eradicate heresy. In 1258 and again in 1260, Pope Alexander IV issued a letter that allowed the prosecution of sorcery using inquisitorial procedure if the magical activity had the appearance of heresy. Ironically, a bill of heretical charges brought by the French Crown against Pope Boniface VIII in 1303 in the midst of a nasty conflict of wills contained the indictment that he practiced "the demonic art." Believing that he had been a target of sorcerers, Pope John XXII propagated a bull in 1317 that attacked magicians. The Faculty of Theology at the University of Paris published a treatise on demonology in 1398 that claimed to prove the existence of demons and linked the practice of magic categorically with heresy, thereby opening the door for prosecution of magicians in inquisitorial courts.

Nonetheless, despite the Church's formulation of juridical and doctrinal theories against magical practice, interest in magic did not abate. Renaissance philosophers became interested in a magical tradition called Hermetic, so-called because its origins were ascribed to Hermes Trismegistus (Hermes the Thrice Greatest), a Greco-Egyptian deity of Hellenistic antiquity. Marsilio Ficino (1433–1499) and others believed that Hermeticism held the key to understanding the magical arts of alchemy, astrology, and other sources of wisdom.

➤ THE BLACK MAGIC TRIAL OF ETIENNE PEPIN, 1347

A mid-fourteenth-century case that exemplifies the use of magic in the realm of politics and the Church's use of inquisitorial procedure to try cases of magic is that of Etienne Pepin. In 1347 Etienne Pepin fashioned six pounds of virgin wax into the image of a man intended to resemble the bishop of the south-central French diocese of Mende, inscribed the bishop's name on the image, and wrote the names of six or seven angels across the chest. Pepin then hid the image in the wall of the chateau of the lord Guerin Apecher VI of Chateaneuf, a bitter enemy of the bishop. This sequence of events brought Pepin before the ecclesiastical court in Mende on the charge that he had used black magic to cause injury or harm to the bishop of Mende. Pepin confessed to these deeds and was sentenced under inquisitorial procedure to 15 years' imprisonment, sustained by only bread and water, in the episcopal tower.

—Jan K. Bulman

From its folkloric beginnings that were as old as Europe itself to the emergence of learned magic and the Renaissance interest in magic, magic endured beyond the Middle Ages. In fact, in the seventeenth and eighteenth centuries those interested in magic began to undermine intellectual reliance on Aristotelian traditions that helped to bring about what many historians call the Scientific Revolution.

—Jan K. Bulman

Bibliography

- Ankarloo, Bengt, and Stuart Clark, eds. *Witchcraft and Magic in Europe*. Philadelphia: University of Pennsylvania Press, 2002.
- Grafton, Anthony, and Nancy Siraisi, eds. *Natural Particulars: Nature and the Disciplines in Renaissance Europe*. Cambridge, MA, and London: MIT Press, 1999.
- Kieckhefer, Richard. *Magic in the Middle Ages*. Cambridge: Cambridge University Press, 1989.
- Peters, Edward. *The Magician, the Witch, and the Law*. Philadelphia: University of Pennsylvania Press, 1978.
- Thorndyke, Lynn. *A History of Magic and Experimental Science*. 8 vols. New York: Macmillan and Columbia University Press, 1923–1958.

Leonardo of Pisa

Leonardo of Pisa (ca. 1170s–ca. 1250), who sometimes referred to himself as Leonardo Bigollo or Leonardo Bigollo Pisani (“Bigollo” meaning “traveler” in the Tuscan dialect, or “man of no importance” in the Venetian dialect

➤ RABBITS, RABBITS EVERYWHERE! THE FIBONACCI SEQUENCE

The problem for which Leonardo of Pisa was famous is the seemingly inconsequential problem concerning the propagation of rabbits, found in Book 12 of the *Book of the Abacus*:

A certain man put a pair of rabbits in a place surrounded on all sides by a Wall. How many pairs of rabbits can be produced from that pair in a year if it is supposed that every month each pair begets a new pair which from the second month one becomes productive?

—Quoted in Mario Livio, *The Golden Ratio* (New York: Broadway Books, 2002), 96.

There would be only one pair during the first and second months, while they are maturing, but at the end of the second month the pair reproduces, and in the third month there are two pairs. The next month the mature pair has another, while the second matures, making three pairs. In the fifth month the first pair has another; the second pair, now mature, has a pair; plus the third still maturing make five and so on. The resulting sequence is 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144 . . . , in which the sum of the last two numbers produces the next.

There are many fascinating aspects to this sequence, not least of which is that the further one progresses in the sequence, the ratio between successive numbers moves closer to the Golden Ratio (ϕ , 1.61803398875 . . .). Nature exhibits the Fibonacci sequence in many ways, such as in leaf arrangement, the scales of the pineapple, the counterwinding spirals of the sunflower head, and the chambers of the nautilus shell. Edouard Lucas (1842–1891) named this recursive sequence (in which the relationship between successive terms can be expressed by a mathematical equation) the Fibonacci Sequence, the mathematical notation that was developed in 1634 by Albert Girard.

—Kimberly Georgedes

of Italian), is also known as Leonardo Fibonacci (“son of Bonacci”). He was the son of Guglielmo Bonacci, a customs official and representative of Pisan merchants in Bugia, North Africa (present-day Bejaia, Algeria), where Fibonacci learned mathematics and accounting with the Hindu-Arabic numeral system from an Arab teacher. Subsequent travels throughout the Mediterranean gained for him familiarity with other reckoning systems. In 1200 he returned to Pisa.

The work for which he is chiefly known is the *Liber abaci* (*The Book of the Abacus*, 1202, revised 1228) in which he argued for the superiority of Hindu-Arabic numerals and the place-value (decimal) system, with a symbol for zero as a placeholder. The concept of zero was significant, as it opened the possibility of discussing the value of the void, or nothingness, something that Aristotelian natural philosophy (science), which had a strong hold on Latin Christian thought at this time, denied with its dictum “nature abhors a vacuum.”

Although Gerbert of Aurillac, who became Pope Sylvester II (r. 999–1003), had studied mathematics and logic in Islamic Spain in the tenth century and had written a treatise on Hindu-Arabic numerals, he did not include a discussion of zero. The *Treatise on Calculation with Hindu Numerals* (ca. 825) by the ninth-century mathematician al-Khwarizmi (known in the Latin West as Algorizmi) was eventually translated into Latin before 1143, thereby introducing a system known in Latin as algorismus (the source of the word “algorithm”). Moreover, his *Compendious Book on Calculation by Completion and Balancing* (the word “algebra” derives from part of its Arabic title, *al-jabr*) was likewise translated into Latin in Spain toward the mid-twelfth century. Nevertheless, neither the use of Hindu numerals for calculation nor the concept of zero had yet taken hold in the West nor would they for some time to come.

Fibonacci’s familiarity with al-Khwarizmi’s work as well as that of the lesser-known al-Karaji (d. ca. 1029), is evident in the later chapters of the *Liber abaci*, where he presents and solves a number of sophisticated problems, the most famous of which (though not necessarily original to him) concerns the propagation of rabbits and results in what is called the Fibonacci Sequence.



Statue of Leonardo Fibonacci in Camposanto, the ancient cemetery annexed to the cathedral at Piazza dei Miracoli in Pisa. (iStockPhoto)

Around 1220 Fibonacci's work came to the attention of Emperor Frederick II of Hohenstaufen (r. 1215–1250), whose court mathematician, Jordanus, presented Fibonacci with a number of difficult problems, which he solved in a number of different, sophisticated, and ingenious ways. Fibonacci subsequently wrote three more works, *Practica geometriae* (*Practical Geometry*), circa 1220, and *Flos* (*Flower*) and *Liber quadratorum* (*Book of Squares*), both circa 1225, in which he demonstrated not only admirable knowledge of Euclid, Archimedes, and algebra (the latter from both al-Khwarizmi and al-Khayyami's *Algebra*) but also his own originality as a mathematician.

Although merchants found the Hindu-Arabic numerals to be a superior system for calculating and accounting, nevertheless municipalities and rulers were suspicious of the zero, for by adding a simple stroke, the 0 could be turned into a 6 or 9. Hence, many cities and kings outlawed the system. Nevertheless, the Algorists, as they were known, continued to teach and advocate the

Hindu-Arabic system, and merchants continued to use the system, even using Hindu-Arabic numerals to send secret messages (hence “cipher,” meaning “secret code,” from *ciphra*, *cifra*, *ze-firo*, *cefiro*, and other words for “zero”). By the early fifteenth century Brunelleschi (fl. 1425) used the vanishing point (the zero dimensional object representing infinity) to create three-dimensional perspective in drawing and relief sculpture. The numbers themselves took their modern form with the establishment of printing in 1453. By the late fifteenth century, zero was treated as a quantity in mathematics, not merely a placeholder. Not until the sixteenth century, however, did the Algorists fully prevail over the so-called Abacists.

Although Fibonacci, who began the revolution, had admirers in his own time, his genius was appreciated by few until after 1500.

—Kimberly Georgedes

Bibliography

- Basin, S. L. “The Fibonacci Sequence as It Appears in Nature.” *Fibonacci Quarterly* 1 (1963): 53–64.
- Dunlap, R. A. *The Golden Ratio and Fibonacci Numbers*. Singapore: World Scientific, 1997.
- Gies, J., and F. Gies. *Leonard of Pisa and the New Mathematics of the Middle Ages*. New York: Crowell, 1969.
- Livio, Mario. *The Golden Ratio*. New York: Broadway Books, 2002.

Ritual and Shamanism in North America

Shamanism, from *shamán* and *hamán*, words borrowed from the Evenki and Eveny of Siberia, refers to a class of people who are able to diagnose and cure illness, control events such as the weather or movement of animal herds, and divine mysterious aspects of life and death through supernatural powers. Such powers are believed to derive from connections established between ritual specialists, helper spirits, and the Creator. A person with such gifts is alternatively called a medicine man or medicine woman, healer, doctor, or priest.

The powers of shamans derive from several sources including ancestry, dreams, visions, and places of power within natural landscapes such as mountains, caves, or canyons. Shamans also

► SHAMANISM AND PETROGLYPHS IN THE MOJAVE DESERT

Among indigenous New World religions, there is a frequent association of shamans, shamanic ritual practices, and the common mineral known as white quartz. At a small vision-quest site known as Sally's Rock Shelter located in the Mojave Desert of southern California, archaeologists conducted research that sheds light upon the nature of this association. Using a mixed-methods research approach that combined archaeological, ethnographic, and ethnohistoric data, researchers confirmed fascinating connections linking rock art, quartz rocks, shamans, and vision-questing activities. They found that certain rock art panels composed of petroglyphs (images created in stone by carving, pecking, or abrading rock surfaces) could be interpreted as the handiwork of shamans seeking supernatural powers.

In this quest, white quartz mineral played an important role. By comparing rock samples from diverse localities in North America, researchers learned that quartz is often found near quartz-free basalt rocks inscribed with petroglyphs. Further research revealed that when quartz is struck or abraded, it glows due to a quality called triboluminescence. When ritual specialists used quartz hammerstones to create petroglyphs depicting sacred experiences, including altered states of consciousness, the rocks would emit light. Shamans interpreted the glowing of quartz as a visible confirmation of supernatural powers.

—Alex K. Carroll

receive assistance through guardian spirits. These spirits may assume many forms including animals, reptiles, birds, insects, forces of nature such as the wind and the rain, and spirit beings that reside in the mountains, trees, rocks, or water such as the Little People and Water Babies. One Dakota chief explains that places in the landscape where the spirit of Wakan rested are considered very powerful. Such places are often selected for ritual activities and become increasingly powerful over time. Shamans are formally trained by more experienced shamans through dreams and visions. While shamans have principally worked alone in many North American tra-

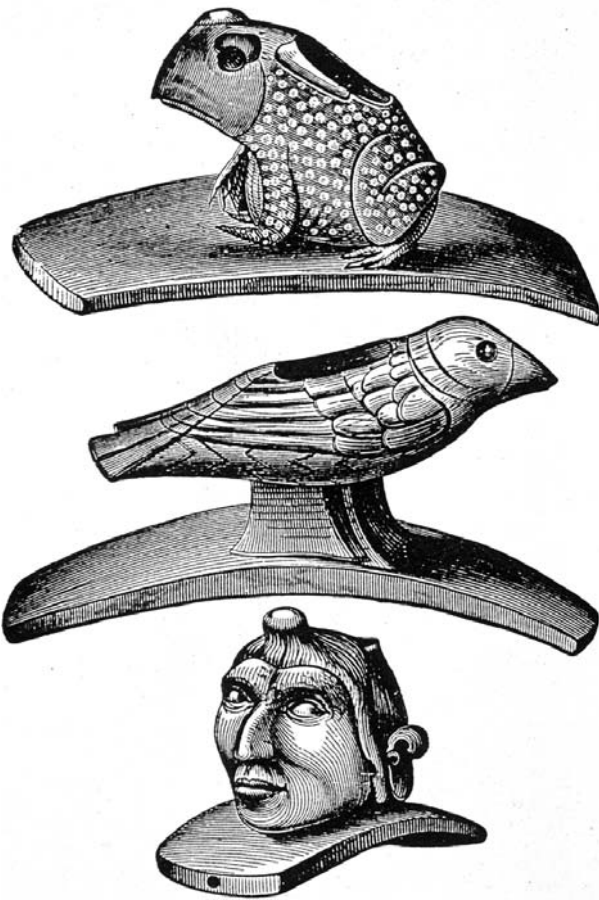
ditions, in others, shamans perform their roles within the context of religious societies.

In North America, there are long-standing shamanic traditions. Some of the earliest material cultural connections to shamanic traditions are evidenced in rock art petroglyphs and pictographs believed to represent the altered states of consciousness of shamans living at least 8,000 years ago. The widespread presence of North American prehistoric ritual activities also is supported by evidence of ancient tubular pipes used for smoking tobacco, willow bark, and other natural herbs. Ritual specialists of North America have been smoking sacred tobacco and other herbs for millennia.

Whereas some rituals were established to meet the unique needs of a particular group, others were shared among multiple indigenous communities. For example, the mound builders of the Late Archaic, Woodland, and Mississippian periods, who lived 1,000 to 500 years ago, established ceremonial and trade networks involving numerous indigenous communities. Today, the convergence of diverse indigenous communities is evidenced in ritual practices such as the Sweat Lodge, the Sun Dance, and Powwows.

Shamans frequently use a number of sacred tools in the performance of public and private rituals. Some of the most frequently used items include rattles, drums, medicine staffs representing lightning or snakes, prayer sticks, medicine bundles, masks, fetishes, small animals carved out of stone imbued with special powers, feathers, and offerings of minerals, shells, or particular herbs. Sacred tobacco, sweet grass, and sage are among the many plants associated with ritual practice.

Some of the primary ritual activities that shamans of North America use to evince changes include prayer, dance, singing, dreaming, and fasting. Some ritual practitioners, particularly in southern North America, have traditionally ingested hallucinogenic substances such as datura or red harvester ants to induce an altered state of consciousness. In turn, each of these activities has been used to bring about multiple outcomes ranging from healing a person or community to bringing the world and all of its life forms into balance. Other rituals are performed to help the plants grow, ensure a successful battle, mark



Carved effigy pipes created by the Hopewell culture, or mound builders, of North America. (MPI/Getty Images)

cyclical events of the natural world, prepare for food quests, celebrate the earth's abundance, seek knowledge or wisdom, prepare for pilgrimages, assist initiates in undergoing rite of passage rituals such as coming of age ceremonies, welcome warriors back into a community, publicly acknowledge the union of new mates, or assist the soul of a person to cross over into another reality after the death of the physical body. Among the Paiutes and Hualapais of the Great Basin and Colorado Plateau, the journey to the other world begins by retracing a path along a traditional route known as the Salt Song Trail. Only after revisiting places of import via a series of songs sung over the course of a mourning ceremony is the soul prepared to leap from the known world into the afterlife.

The role of shaman is infused with great powers as well as weighty responsibilities. Among

the Paviotsos and Shoshones, for example, a medicine man or woman was held accountable for the people who died under his or her care. As a result, if three patients died, it was considered acceptable to kill the person who had treated them. Due to the capacity of a medicine person to potentially assist others, however, the shaman was and is held in high esteem among many of the indigenous communities of North America.

—Alex K. Carroll

Bibliography

- Hall, R. L. "The Evolution of the Calumet-pipe." In *Prairie Archaeology: Papers in Honor of David A. Baerreis*, edited by G. E. Gibbon Publications in Anthropology No. 3. Minneapolis: University of Minnesota, 1983.
- Vitebsky, Piers. *The Reindeer People: Living with Animals and Spirits in Siberia*. Boston: Mariner Books, 2005.
- Whitley, David, Ronald I. Dorn, Joseph M. Simon, Robert Rechtman, and Tamara K. Whitley. "Sally's Rockshelter and the Archaeology of the Vision Quest." *Cambridge Archaeological Journal* 9 (1999): 221–247.

Health and Medicine in North America

At the time of European contact, each tribal group throughout the Americas had well-established indigenous health care delivery systems. Some had only one or two healers, whereas others had more complex systems, with an array of resources and specialists including midwives, bonesetters, herbalists, and so forth. Every family also had a family member who had extensive knowledge about home remedies, and each household maintained a formulary of herbs and other supplies for times of emergency. At the center of most tribal health delivery systems were healers whose knowledge and expertise enabled them to call upon both natural and supernatural resources to help restore health or to halt an individual's unusual bout of misfortune.

Tribal health care delivery systems were embedded in the sociocultural-religious fabric of each tribe. Consequently, most tribes shared a common set of cultural beliefs about health and illness, despite inherent intertribal cultural and

linguistic differences. The prevailing perception held by many tribes was that health is interconnected with morality and spirituality and that the well-being of an individual and of the community requires vigilant attention to maintaining harmonious relationships with nature and with other living beings. It was (and remains) believed that the disruption of this harmony can result not only in sickness but also in vulnerability to misfortune. To prevent illnesses and misfortune, tribal members strictly observed numerous tribal taboos and other moral codes. Other preventive measures included the use of talismans, medicine pouches, guardian spirits, and observance of certain important ceremonial activities.

Within the worldview of most tribes, nature was informed with spiritual significance. This spiritual significance was (and is) frequently embodied in certain landforms, such as sacred sites and sacred lands, as well as sacred objects, animals, and the like. For example, eagles, ravens, bowhead whales, buffalo, and salmon were (and

are) animals considered by some tribes as embodying not only spiritual significance but also the spirit itself. For that reason, certain animals served as guardian spirits or as a totemic sign for a particular societal group or clan. Members of the eagle clan, for example, might perform certain religious activities that call for help from the spirit of the eagle, which is their clan totem or guardian spirit. These relationships highlight tribal beliefs about the spiritual relationship binding humans, nature, and the spirit world. Such beliefs acknowledge that spirituality is transcendental in nature and can influence the manner by which one perceives, adjusts, or seeks remedies in times of ill health or misfortune.

—Jennie R. Joe

Bibliography

Trudelle-Schwarz, Maureen. *Molded in the Image of Changing Woman: Navajo Views on the Human Body and Personhood*. Tucson: University of Arizona Press, 1997.

■ Introduction: Expanding Knowledge of the World

The period between 1000 and 1500 was one in which a more certain knowledge of the physical and cultural face of Afro-Eurasia was disseminated by geographers and cartographers, as well as travelers who took care to give witness to their adventures.

Several phenomena spurred this expansion of geographic knowledge. First, there was the tradition of Arab descriptive geography and, to a lesser extent, cartography. Arab geographic writing had its roots in the eighth century, and a fair number of its most important works were written before the turn of the millennium. Arab geographers, however, continued to produce important texts well after 1000 CE, thanks largely to the expansion of Islam, in what has been termed the Afro-Asiatic Age of Discovery. Second, during the age of the Song, Yuan, and early Ming dynasties, approximately 960 to 1433, there was a substantial increase in Chinese long-distance mercantile activity, coupled with a shift

in focus away from Central Asian caravan routes to oceanic sea lanes. Third, an overall increase in long-distance commerce throughout the Levant (eastern Mediterranean), the Indian Ocean and its adjacent seas, and coastal China, to name only three of the most active areas, resulted in an increase in the number and size of diaspora merchant communities. Fourth, there was what has been termed the Medieval Expansion of Europe, in which, from approximately 1000 onward, Latin Europe extended its cultural, political, commercial, and imaginative range far beyond its earlier borders. Fifth, and most important of all, there was the thirteenth-century eruption out of eastern Central Asia that resulted in the Mongol empire and the consequent *Pax Mongolica*. Many previous entries and sidebars deal with aspects of these five phenomena in detail. Here, however, we must consider some of the more significant geographic texts and travel reports that circulated around Afro-Eurasia and several of the maps

that were crafted during this five-hundred-year period.

Arguably the greatest Islamic geographer was Abul-Hasan Ali al-Masudi (ca. 890–956), author of *Meadows of Gold and Mines of Gems*, a world history text that incorporated a large amount of geographic knowledge; it dealt in great and, more often than not, accurate detail with non-Islamic countries and peoples, as well as with Muslims and the lands of *Dar al-Islam*. In the eleventh century, the Andalusian geographer-historian (and both areas of inquiry were inextricably intertwined for most Muslim scholars who studied the cultural world) Abu Ubaydallah al-Bakri (ca. 1014–1094) confined his writing to Europe, Africa, and Southwest Asia, but what he wrote in his *Book of Routes and Realms* of circa 1067/1068 was first-rate. Although he stayed at home in Muslim Spain, he carefully collected eye-witness accounts from travelers, and his account of Ghana constitutes one of our most important sources of information for that West African trading kingdom.

Another Andalusian geographer, Abu Abdullah Muhammad al-Idrisi (1099–1165/1166), traveled throughout the Mediterranean and to portions of Christian Western Europe. He even served for eighteen years as scholar-in-residence at the court of the Christian king, Roger II of Sicily. His *Book of Pleasant Journeys into Far-away Lands* contained travel accounts of such distant lands as China that he garnered from the writings and reports of others. His map of Afro-Eurasia, which he produced in 1154 and which is known as the *Tabula Rogeriana* (*Roger's Map*), was accompanied by a detailed commentary known as the *Book of Roger*. In typical Islamic style, the map is oriented with south at the top and, as was also typical for Muslim maps, shows itself largely tied to the model established by the Greco-Roman geographer Claudius Ptolemy (ca. 90–ca. 168). Although a major improvement on earlier maps, it exaggerates the length and breadth of East Africa, extending it all the way to the Pacific by making it the southern coast of a greatly reduced Indian Ocean. It also shows an overlarge Arabian Peninsula dominating the northern reaches of the Indian Ocean, and it greatly reduces the size and, by implication, relative importance of the Indian sub-continent.

Its depictions of China and Southeast Asia, however, are quite good, considering their distance from Sicily. Apparently he had received not only detailed reports but maps from Muslim travelers to the Far East.

The *hajj* to Mecca gave birth to a specific genre of travelogue, *al-rihla fi talab al-ilm* (travel in search of knowledge). The greatest of all rihlas was, without a doubt, a work titled *A Gift to Those Who Contemplate the Wonders of Cities and the Marvels of Traveling*. The collaborative effort of a professional writer, Ibn Juzayy, and the greatest known traveler of his age, Ibn Battuta (1304–1369), the book details the latter's travels between 1325 and 1354, travels that stretched on a west-to-east axis from Islamic Spain and sub-Saharan West Africa to Southeast Asia and possibly southern China. (His muddy descriptions of China have raised doubts that he ever went that far east.) Inasmuch as a number of entries and sidebars deal with aspects of his travels, no more need be said here, except that rihlas such as this were copied and recopied many times over to feed the curiosity of a ready audience among literate Muslims.

Chinese descriptions of the world beyond the Middle Kingdom also proliferated after 1000 CE. Thanks to the availability of large amounts of cheap paper and a printing industry (unlike the Islamic and Christian cultures of the West, where manuscripts were laboriously copied by hand), Chinese geographers were able to disseminate their work to a fairly large reading clientele. Two of the more important descriptions of Afro-Eurasia were composed by Zhau Rugua in the mid-thirteenth century and Ma Huan in the early fifteenth century.

Zhau Rugua served as the Inspector of Foreign Trade at Quanzhou, China's most important port. Arab merchant-sailors knew the city as Zaitun, and Marco Polo, who characterized it as "one of the two greatest harbors in the world for commerce," called it Zayton. However it was known, Quanzhou was probably the busiest port in the world at this time, and it likely remained so through the early years of the Ming era. Very much a stay-at-home like al-Bakri, Zhau Rugua depended on the accounts of merchant-sailors who passed through his custom house and also was indebted to an earlier catalogue of

foreign lands, peoples, cultures, and products composed by Zhou Kufei in 1178. Regardless of Zhau's lack of first-hand knowledge, his *Description of Foreign Peoples* provided a growing reading public with accounts of life in such exotic lands as Arabia, Spain, and Borneo.

Ma Huan (ca. 1380–after 1451), author of *The Overall Survey of the Ocean's Shores*, was a Muslim Chinese who traveled into the Indian Ocean on the fourth (1413–1415), sixth (1421–1423), and seventh (1431–1433) voyages of Zheng He. His account of what he saw, experienced, and heard was printed as a book in 1451 (just about the same time that Gutenberg was printing his first Bible in Mainz) and served to bolster Chinese knowledge of this culturally complex oceanic ecumene, an area in which Chinese mariner-merchants had been quite active for several centuries before Admiral Zheng He's seven voyages.

In 1402, three years before Zheng He's first voyage into the Indian Ocean, a world map was produced in Korea. Officially known as the *Map of Integrated Regions and Terrains and of Historical Countries and Capitals* but more popularly called the *Kangnido*, it depicts Afro-Eurasia based on three apparent sources: earlier Chinese maps, Islamic maps, and information garnered as a consequence of the Mongol Peace. It is either the oldest or second oldest extant world map from East Asia, the other contender for the honor being the Chinese *Great Amalgamated Map (Da Ming Hun Yi Tu)*, which, although inferior, shares many features with the *Kangnido* and might date to as early as 1389. Whatever the case, the *Kangnido* correctly depicts the proper shape of Africa, unlike most Islamic maps that show the southern tip of Africa pointing east. China, Southeast Asia, and India are merged into one massive landmass that dominates most of the map, suggesting that, at this time, the Indo-Malay-Chinese nexus was the economic and cultural center of the world, so far as most East and South Asians were concerned. The map also, but in less dramatic fashion, exaggerates the size of the Arabian Peninsula, as well as that of the Korean Peninsula. The latter was a product of ethnic pride; the former was a consequence of Arab sources. Africa is under-sized, but that is not

surprising. What is surprising is its depiction of western Eurasia, including the Mediterranean and Black seas and Europe. They are not that clearly delineated, but they are there.

A quarter of a century earlier and half a world away, a Majorcan Jewish cartographer, Abraham Cresques, and probably at least one son, created for presentation to the king of France a map known today as the *Catalan World Atlas*. The map's accompanying text emphasizes the spherical nature of the world, a rather unexceptional position at the time inasmuch as John Holywood's *Regarding the Sphericity of the World*, which was based on a ninth-century astronomical text by al-Farghani, had been in wide circulation within Western Europe's learned circles since the early thirteenth century. Notes and pictures throughout the map also show that its makers were well acquainted with fourteenth-century Latin Europe's two most popular travel accounts, the real-life account of Marco Polo and the fictional, tongue-in-cheek account of "Sir John Mandeville" (which, however, was based on a number of real travelogues and scientific texts). What is more, its accurate depiction of the Mediterranean and Black seas and surrounding lands shows that the cartographer(s) used mariners' portolan charts, which showed in great detail the contours of coastlines and places of refuge and danger, that were being produced in Western Europe from at least the thirteenth century. As noted elsewhere, the map also provides an accurate depiction of Chinese mercantile traffic in India, and it delineates in gold color the Gold Road that crossed the Sahara. It even shows Mali's king, Mansa Musa, holding a huge golden nugget. Legendary and biblical characters also are there, such as Prester John, the Queen of Sheba, and the Three Magi, but it also delineates cities in China that Marco Polo and other Western adventurers described. It even has a picture of Emperor Khubilai Khan. Although it shows pygmies battling storks, a fiction that went back to Greek antiquity, it is devoid of any depictions of such fantastic humans as persons with eyes in their chests and dog-headed and two-headed people—all of which were soberly reported by Greco-Roman naturalists and passed on as supposed facts through Arab texts. Such

humans were still being described and depicted in various Western texts and drawings for more than a century after 1375, but they are not to be found here.

As with the *Kangnido* and the various geographies and travel accounts that grew in popularity over these five centuries, this map is a testament to a growing knowledge of the contours of Afro-Eurasia and its peoples.

—*Alfred J. Andrea*

Arab and Chinese Cartography

For many centuries prior to the rise of their empire in the seventh century, the Arabs had long participated in the widespread commercial activities in the Mediterranean and the Indian Ocean. Whereas the Parthians played the role of middleman along a number of the land routes of the great Silk Road that connected Han China and Rome, the Arabs traveled its sea routes along a commercial axis that ran from the northern reaches of the East African coast to coastal Southeast Asia. Given this wide-ranging commercial network, the Arabs accumulated a good deal of geographic knowledge regarding their expanding sphere. Together with the knowledge that they inherited from classical Greece and Rome, the Arabs possessed the most accurate information on Afro-Eurasian geography and made the best maps of that vast region by the twelfth century.

Commercial interests and war brought the Arabs into close contact with the Chinese, who had built their own empire on the eastern edge of Eurasia. After the Battle of the Talas River in 751, the Arabs curtailed Chinese influence in central Asia and became neighbors of the Tang empire, which by then was in decline. While Arab warriors craved glory, Arab merchants were attracted to China by profit. The southern Chinese city of Guangzhou was said to have thousands of Arab residents in the early tenth century, most of them merchants. Such contacts opened up channels for the dissemination of knowledge between these two cultures, including cartography.

The Chinese had developed an indigenous tradition of mapmaking based on a grid system,

which divided a geographic surface into different grids to allow location of a point on a map. The grid system not only reflected the particular (although misleading) Chinese worldview that China is the Middle Kingdom but also provided a tool to calculate distance and possibly a mathematical approach to mapmaking. From the tenth century onward, however, Arabic geographic knowledge began disseminating across the Chinese world and, in the process, greatly influenced Chinese cartography. Likewise, an increasing familiarity with the lands, waters, and peoples of East Asia aided Arab cartographers and geographers to craft better maps and geographic descriptions of this vast region.

Many individuals from the Arabic world contributed to Chinese cartography, but no one's contribution was greater than that of Rashid al-Din (1247–1318), a Persian of Jewish descent who, in 1295, served as vizier for Ghazan Khan of the Mongol Il-khanate. Taking advantage of his position, Rashid al-Din gained access to various government archives and ventured into the fields of calligraphy, translation, and historiography. His major work of history, *Collected Chronicles*, contains a geographic compendium titled “Suvar al-aqalim” (“Configuration of Climes”). The digest of this compendium, which is all that remains today, reveals that he had a fair understanding of the basic geography of East Asia, particularly China. For example, he mentioned 25 Chinese locations apparently previously unknown to outsiders and China's division into different provinces, and he confirmed that the Yuan court established a network of postal services that covered most of the empire. This in turn preserved important information regarding China's thirteenth-century road system. In compiling this work, Rashid al-Din took advantage of existing works commissioned by Mongol rulers up to that point. The Department of Foreign Envoys (*bui tong guan*) of Yuan China was established in 1277 to collect information about foreign geography, postal stations, pasturage, and regional products and to assemble vital strategic maps.

Chinese cartography in turn also benefited greatly from the transmission of geographical information from Western Asia. The Imperial Library Directorate of the Yuan government was

staffed in part by Muslim scholars and undertook the task of exchanging up-to-date scientific and scholarly information and ideas including geography and cartography. Jamal al-Din (1231–1316), a Persian astronomer, came to China during the reign of Mongke Khan. While Jamal al-Din's primary contribution was in the field of astronomy, he was also instrumental in the flow of geographic knowledge from the West to the East. One of the astronomical instruments that he brought to China, *kurab-i arz* (territorial globe), was a state-of-the-art illustration of the world. Made of wood, it was fashioned into a sphere, representing the globe; different colors were applied on various parts of this globe to show waters and lands. It was also marked with small squares used to calculate the breadth and length of countries and distances between places. Jamal al-Din was also responsible for preparing a massive geographic compendium at the court's order in 1285, which he completed in 1291 as the *Comprehensive Gazetteer of the Great (Yuan) (Da [Yuan] Yitong Zhi)*. Jamal al-Din, together with his Mongol supervisor and Chinese assistants, continued to work on the compendium in the decade that followed, and its final version came to about 1,000 chapters, with a scope that covered the entire Mongol empire.

While only fragments of this compendium are preserved today, its impact on Chinese cartography was tremendous. The next two centuries saw a blooming of cartographic works in China. Many Chinese geographers inherited information, ideas, perspective, and mapmaking methods from such Muslim scholars as Jamal al-Din and produced many volumes of cartographic books and illustrations of not only China and its neighbors but also of faraway lands.

—Yi Li

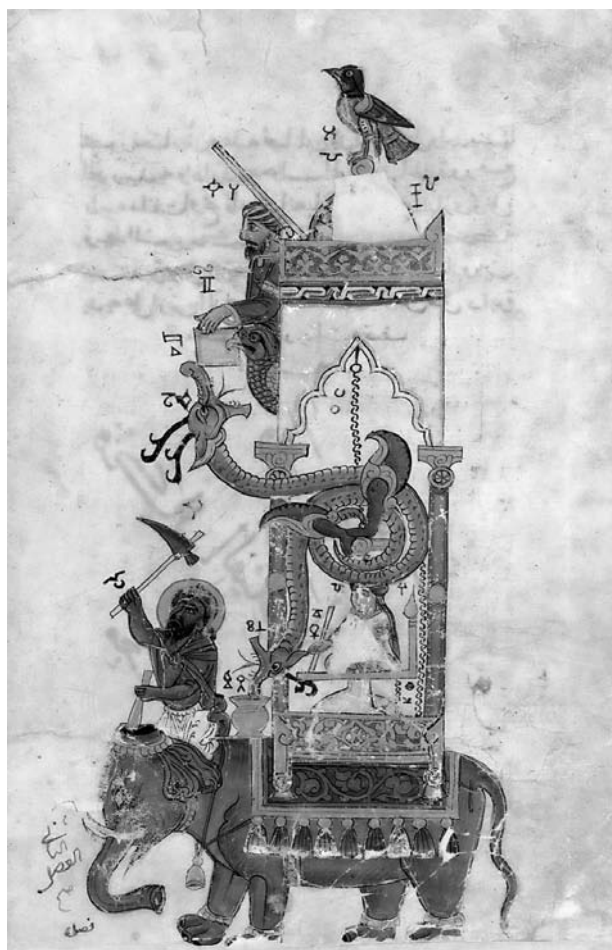
Bibliography

- Allsen, Thomas T. *Culture and Conquest in Mongol Eurasia*. Cambridge: Cambridge University Press, 2001.
- Leslie, Donald D. "The Identification of Chinese Cities in Arabic and Persian Sources." *Papers on Far Eastern History* 26 (1982): 4–17.
- Needham, Joseph. *Clerks and Craftsmen in China and the West*. Cambridge: Cambridge University Press, 1970.

Woodward, David, and G. Malcolm Lewis. *The History of Cartography*, Vol. 2, Book 3. Chicago: University of Chicago Press, 1998.

Al-Jazari's Compendium of Science and Useful Practices in the Making of Mechanical Devices

The birth date, early life, and education of mechanical engineer Ibn al-Razzaz al-Jazari are unknown. Al-Jazari completed his book *Kitab fi ma'rifat al-hiyal al-handasiyya* (The Book of Knowledge of Ingenious Mechanical Devices) on January 16, 1206. An annotation by Muhammad ibn Yusuf ibn Uthman al-Haskafi, who made a



The Elephant Clock, from The Book of Knowledge of Ingenious Mechanical Devices by al-Jazari, 1206. (The Metropolitan Museum of Art/Art Resource, NY)

copy of the manuscript now in the Topkapi Sarayi Library in Istanbul, indicates that al-Jazari was no longer alive on April 10, 1206. Like his father, al-Jazari became a court engineer at the Artuqid dynasty's main palace in Diyar-Bakr in eastern Anatolia. He served three kings from the Artuqid dynasty of Oghuz Turks who ruled eastern Anatolia and northern Iraq. The Artuquids, vassals of Saladin and his Ayyubid successors, provided al-Jazari with peace, stability, and adequate funding for his experiments. During al-Jazari's time, Seljuk control of trade routes increased the need for improvements in agriculture and manufacturing, and intellectual exchange was also enhanced with the development of libraries, observatories, and schools.

His peers gave him the title *Badi al-Zaman*, or "Prodigy of the Age." During his lifetime, along with public works engineering al-Jazari created water and candle clocks, water pumps, ornamental fountains, and automated toys. An example of his automata is a mechanical boat with drinking men and musicians.

Al-Jazari portrayed himself as an engineer, not as an inventor, who improved through careful design and experimentation the work of others. None of his devices survives, but his illustrated book written in Arabic describes 50 of his devices. The invention of the piston pump and refinements to segmental gears, floats, and conical valves for clocks and automata are his major contributions. Donald R. Hill, historian, engineer, and translator of al-Jazari's book, concludes that al-Jazari was a careful artisan. Al-Jazari's descriptions of his valves and palace door cast from locally mined copper in closed mold boxes with green sand indicate that he had greater control than his predecessors had over the casting of these items.

As an engineer, al-Jazari solved practical problems such as lifting irrigation water from local rivers that had steep banks. He invented a pump that lifted water to a height of about 33 feet (10 meters). Such pumps operate by using pistons that open a valve that then allows a liquid to flow into a chamber. When the valve closes, the liquid discharges from the chamber. Al-Jazari's pump is significant because it utilized a double-acting principle, the conversion of rotary into

➤ WHERE CAN WE FIND AL-JAZARI TODAY?

Hand-colored pages from Al-Jazari's illustrated engineering manuscript, the *Book of Knowledge of Ingenious Mechanical Devices*, are at the Museum of Fine Arts in Boston, the Metropolitan Museum of Art in New York City, and the Louvre in Paris. The Bodleian Library at Oxford, the Hagia Sophia, and the Topkapi Sarayi Libraries in Istanbul possess the most complete copies of the original manuscript. Al-Jazari was unable to use mathematics or geometry to describe the workings of his creations, but he did provide detailed discussion and drawings that explain the appearance, purpose, and functioning of his devices. He explains how to manufacture, assemble, and fit together the component parts. Al-Jazari's instructions and drawings were so carefully executed that it was possible to exhibit at the 1976 World of Islam Festival in London working reconstructions of one of his water clocks, a water pump, and a phlebotomy (bloodletting) device. Working replicas of al-Jazari's colorfully decorated elephant clock can be seen at the Ibn Battuta Mall in Dubai and Le Locle, Switzerland.

—Fran Hassencahl

reciprocating motion and a reliance on suction pipes. Such pumps were later incorporated into steam engines. Although his water-driven wheel, a *saqiya* with tipping buckets, served only to entertain, it also could have been rescaled to lift water from deep wells.

His water clocks included decorated figures such as falcons, peacocks, humans, and models of the sun, moon, and planets. The figures moved, simulated playing musical instruments, and were part of the clocks' timekeeping mechanisms. Water clocks were prayer-time reminders and billing systems. Recipients of irrigation water paid for it in time units rather than by the volume of water received.

—Fran Hassencahl

Bibliography

Al-Jazari, Ibn al-Razzaz. *The Book of Knowledge of Ingenious Mechanical Devices*. Translated and annotated by Donald R. Hill. Dordrecht, Holland: Reidel, 1974.

Hill, Donald R. *The Different Aspects of Islamic Culture*, Vol. 4, *Mechanical Technology*, edited by Ahmad Y. al-Hassan, Maqbul Ahmed, and Albert Z. Iskander. Paris: UNESCO, 2001.

Hill, Donald R. *Medieval Islamic Technology: From Philo to al-Jazarī, from Alexandria to Diyar-Bakr*. Edited by David A. King. Brookfield, VT: Ashgate, 1998.

Turner, Howard R. *Science in Medieval Islam: An Illustrated Introduction*. Austin: University of Texas Press, 1995.

The World of John Mandeville

John Mandeville is the pen name of an unknown author who, around 1356 or 1357, wrote what he said was a true travel narrative based upon 34 years of experience in the Holy Land and Asia. Like *The Voyages of Marco Polo*, which appeared 50 years earlier, *The Book of John Mandeville* was popular and widely read. Appearing originally in French, by 1400 it had been translated into English, Dutch, German, Czech, Italian, Spanish, and Latin. Following the invention of the European printing press circa 1450, it became one of the most successful books of its kind, reaching over 60 printings by 1600.

By then, thanks to the achievements of the Age of Exploration, more accurate information about the East had been made available, and some scholars began to suspect that the book was a forgery. We now know that it is a compilation and reworking of earlier travel narratives such as William of Bodensale's *Book of Certain Overseas Regions* (1336) and Friar Odoric of Pordenone's *Journey* (1330). Instead of characterizing the work as a case of plagiarism, however, historians have come to understand that copying and rewriting parts of earlier works was a standard practice in medieval literary culture. Most now see *The Book of John Mandeville* as a particularly inventive dialogue with earlier texts and with contemporary intellectual and religious culture. As such, it reveals a great deal about the ways in which the *Mandeville* author and his readers viewed the world around them.

What interested them most were Egypt and the Holy Land. Even in the late fourteenth century, there was still much talk of crusading. Whether as conqueror or pilgrim, Western elites dreamed of visiting the places where Jesus and

his apostles had lived and where the stories of the Old Testament had occurred. To that end, *The Book of John Mandeville* satisfied the curiosity of actual and armchair travelers alike. As it was based upon dozens of firsthand accounts and scholarly treatises, the information provided was as accurate as one was likely to find in the late Middle Ages. It contained a list of the holy sites, directions on how to get to Jerusalem, a description of the beliefs and habits of the Muslims, a brief history of the region, and practical advice on where to buy supplies and how to avoid being swindled by diamond merchants and balm sellers.

To our modern way of thinking, some of the stories seem fantastic, such as the one about the wells that the young Jesus made with his feet while playing with other children near Cairo. Another story is about the phoenix, a bird that burned itself once every 500 years upon the Temple of Jerusalem in Heliopolis only to be reborn from the ashes. Yet people thought differently in the past, and for the most part it was not so much “Mandeville’s” accounts of the Holy Land that they found unbelievable but his tales of exotic Farther (Central and East) Asia, which appeared to them a strange and frightening place but also one filled with wonders and opportunities for enrichment.

In *Mandeville*, as in similar narratives, including those that the Mandeville-author copied, the farther away from Europe one ventured, the more confused the geography became. Readers would have gathered that somewhere east of Jerusalem, Arabia, and Persia, lay the lands of legend that few had seen: India, Cathay (China), the kingdom of Prester John, the Terrestrial Paradise, and innumerable and diverse islands that were home to monstrous races of human beings, grotesque beasts, powerful kings, odd customs, and always, everywhere in the wondrous East, great cities and great riches.

There was, to be sure, some useful information. The reader could learn, for example, how pepper was grown and harvested and about the laws and customs of the Mongols should anyone need to travel through their territory on the way to the court of the Great Khan. Even Christopher Columbus owned a copy of *Mandeville*, which he used to prepare for the westward voy-

ages by which he hoped to reach the spices and gold of the “Indies.” Columbus was particularly interested in what *Mandeville* had to say about the sphericity of the earth. It was common knowledge at the time, at least among the educated, that the world was round, but *Mandeville* claimed that it could be circumnavigated, that the seas and heavens encompassed the globe, and that once a ship had sailed to the other side, it would be able to return.

For those who enjoyed marvels and adventure stories, the fictitious traveler described the Hindu temples he had seen, his encounters with devils in the Enchanted Valley, the cannibals of the Isle of Lamary, and crocodiles, elephants, giraffes, white lions, geese with two heads, and sheep as large as horses. He told of Amazons, pygmies, and giants; dog-headed people; a tribe who ate serpents; and another that survived on nothing but the smell of apples. There was even an island where everyone went naked and where men and women had sex with whomever they pleased.

Surely some readers had their doubts, but the *Mandeville* author convincingly portrayed his narrator as a honest, humble, and pious knight, thereby lending much credence to his claims. As suggested above, it was not until much later, not until an era when men really could circumnavigate the globe, that some began to see *The Book of John Mandeville* for what it really was.

True or not, the lengthy narrative reveals much about the world in which it was created and not just on the level of geography and ethnography. It is also a valuable indicator of faith and morals. In this context it served as a sort of moral compass, a mirror if you will, that reflected for Latin Christians both their virtues and their sins.

Although many likely glossed over the various subtleties of the author’s wit and message, none would have missed the point about a region near the lands of Prester John where kings were elected not on the basis of their wealth but for their good manners and their rightful judgments. Nor could they fail to nod their heads while reading about the Isle of Bragman. The author described a place where there was no theft, no murder, no injustice, and no poverty; where the inhabitants, though they be pagans, lived soberly, chastely, and moderately, worshipping God

and eschewing earthly things; and where, as a result, they were granted peace, security, good health, and plenty to eat.

Such moral stands were common enough in the European Middle Ages, and they mark *Mandeville* as a product of its times. (So too does the strain of anti-Semitism that runs throughout.) What is new and different, however, and what marks it equally as belonging to an age in transition and, in a certain sense, as a harbinger of things to come are its toleration (for the most part) of other cultures and faiths, the belief in both the scientific and the moral benefits of travel, the tendency toward cultural relativism, the message of (nearly) universal salvation, its use of a fictional narrator, and, most important of all, its enormous popularity.

—David Blanks

Bibliography

- Higgins, Iain Macleod. *Writing East: The “Travels” of Sir John Mandeville*. Philadelphia: University of Pennsylvania Press, 1997.
- Howard, Donald R. *Writers and Pilgrims: Medieval Pilgrimage Narratives and Their Posterity*. Berkeley: University of California Press, 1980.
- Seymour, M. C. *Sir John Mandeville*. Aldershot, UK: Variorum, 1993.
- Tzanaki, Rosemary. *Mandeville’s Medieval Audiences*. Aldershot, UK: Ashgate, 2003.

The World of Ibn Majid

Ahmed Ibn Majid was an accomplished fifteenth-century Indian Ocean pilot (*muallim*) and the author of perhaps 40 poetic and prose works on navigation, thus ensuring his reputation as Islam’s greatest maritime geographer-cartographer. Such writings, however, were already part of a venerable tradition in the Indian Ocean, and he sketches an outline of his antecedents in his most famous work, *The Book of Profitable Things Concerning the First Principles of Navigation* (in Arabic, *Kitab al-Fawaid fi Usul al-Bahr wal-Qawaid*). Ibn Majid’s oldest-named predecessor is a pilot named Khawashir b. Yusuf who sailed for an Indian ship owner around 1000 CE and wrote navigational treatises based on firsthand experience and observation. (Earlier, the tenth-century Arabic geographer al-Muqaddasi described “navigation instructions which they [Indian Ocean

➤ PILGRIMAGE AND NAVIGATION

Because of the obligation of Muslims to make a pilgrimage to Mecca at least once if it is in their power to do so, the Red Sea was a crucial if treacherous thoroughfare for people and goods alike. Here Ibn Majid discusses some of the difficulties.

“We have mentioned in our *rajaz* [‘the rhythm of the camel’] poem *al-Sabiya* all the measurements which are needed on this coast [al-Sabiya] and have not left out a thing. My father also mentioned them with five different routes: the open sea route, the Arab and Sudani coastal routes, and the routes among the islands and he did not omit an island or a reef. With all this he brought his poem to an end and said in it the following:

The paper and the ink have been expended,
And I have not reached some numbers of the ten.

For the Sea of Qulzum al-Arab is the most dangerous of all the seas of the world and yet people use it more than all the seas of the world because of the ‘Ancient House’ [the Kaaba at Mecca] and the pilgrimage of the Prophet and because of the means of subsistence and the going and coming of food.”

—Lincoln Paine

Source

Ibn Majid, *The Book of Profitable Things Concerning the First Principles of Navigation*, in G. R. Tibbetts, *Arab Navigation in the Indian Ocean before the Coming of the Portuguese* (London: Routledge, 2002), 264–265.

pilots] study carefully together and on which they rely completely proceeding according to what is in them.”) Khawashir b. Yusuf was apparently the source for a now-lost work that Ibn Majid attributed to the celebrated “Three Lions,” the twelfth-century geographers Muhammad b. Shadhan, Sahl b. Abban, and Layth b. Kahlan. Despite their fame, Ibn Majid disparaged the trio for being “only compilers and not genuine authors, [who] never rode the sea,” and he claims that “there is in a single sheet” of his work “more value as to language, accuracy, usefulness, guidance, and advice than in most of what they have

composed.” Yet their renown was such that he proudly refers to himself as the fourth lion, the “Lion of the Sea.” In addition, Ibn Majid drew on the work of his father and grandfather, both of whom were experienced Red Sea pilots.

The Book of Profitable Things is the product of a mature student of navigation, yet much of its information had appeared previously in Ibn Majid’s poetic works, notably “The Gathering of the Summarizing Concerning the First Principles of the Knowledge of the Seas,” known simply as the *Hawiya* and written about 1462. Completed in 1489–1490 and running to about 200 pages, *The Book of Profitable Things* covers a host of topics to be mastered by the *muallim*, together with specific directions about how to get from one place to another. The most technically demanding of these concerns celestial navigation: lunar mansions (the 28 areas of the sky through which the moon passes in the course of a month), measuring east-west distances, calculating the altitude of the Pole Star (*bashiyat*), determining latitude by measuring the altitude of stars (*qi-yas*), and the revolutions of the sun and the moon. Of a more general nature is direction-finding at sea: determining the 32 compass rhumbs; routes between ports; how to read the sea, wind currents, and presence of sea creatures and the like to find land (*isharat*); the nature of the monsoon winds; and the seasons of the sea. Final topics include the running of the ship and the subject of shipboard politics and crew management (*siyasat*).

Although he claimed that he would “write about all of [a ship’s possible] defects for few people have done so in the present time,” Ibn Majid referred only in passing to Indian Ocean ship construction and rigging, subjects about which modern researchers would like to know more, including the use of the compass and the shape of the sails. In his recommendations for how a shipmaster ought to conduct himself with his crew and passengers, he stressed that one must be firm but fair with the former while treating passengers with respect: “Listen to everything they say, accepting anything good and rejecting the bad. Be firm and strong when speaking to them but pleasant.” Never take sides in an argument, he cautions, and “Do not notice a disorder in the ship, and ignore it until a later date, except

when absolutely necessary, for it will only get out of hand.” The pilot must also be vigilant about the ship and its integrity, “especially the rudder.” Most important, because it affects everything else, the pilot must know when and how much to sleep. “When you are tired do not let it get the better of you, for it induces forgetfulness, but do not sleep except the amount required of you by old age or the extent of your tiredness, and when you sleep do not leave the helmsman alone.” Elsewhere he observed: “I have written this book only after 50 years have passed me by [as a navigator?] and during that time I never left the helmsman alone without standing over him or my deputy in my place.”

Ibn Majid’s primary geographic focus was on the western Indian Ocean, including the Red Sea below Jeddah (the port of Mecca to which Indian Ocean pilgrims sailed for the hajj); he did not discuss the Persian Gulf, where commerce had declined in the fifteenth century. He displayed vastly more familiarity with the southern coast of the Arabian Peninsula (from Aden to Oman), East Africa and Madagascar, and especially western India and the Laccadive and Maldiv Islands, which were important way stations for sailors sailing between Southeast Asia and Southwest Asia or East Africa. His calculations for the latitude of various ports on the east (Coromandel) coast of India and the Bay of Bengal coast of Southeast Asia are also accurate. Although Melaka (Malacca) was at the height of its prosperity in the fifteenth century—its decline would set in after the Portuguese captured the port in 1511—merchants from Gujarat in northwestern India dominated the trade there and beyond, and Ibn Majid, who was probably from Oman, is less familiar with the geography

of the archipelagos of Southeast Asia or the China Seas.

Ibn Majid is believed to have died sometime shortly after 1500, only a few years after Vasco da Gama opened the direct sea route from Atlantic Europe to the Indian Ocean. A mid-sixteenth-century Yemeni historian identified Ibn Majid (possibly out of spite) as the man who piloted Vasco da Gama’s ships from Malindi to Calicut, a passage with enormous repercussions for Eurasian and world trade. Recent historians dismiss the claim because Portuguese sources uniformly refer to Gama’s pilot as a Gujarati and because Ibn Majid would certainly have anticipated the profound implications of the Portuguese presence in the Indian Ocean, which he expounds on in his late poem *al-Sofaliya*.

—Lincoln Paine

Bibliography

- Ahmad, S. Maqbul. “Ibn Madjid, Shihāb al-Dīn Ahmad b. Madjid b. Muhammad b. ‘Amr b. Duwayk b. Yūsuf b. Hasan b. Husayn b. Abi Ma‘lak al-Sa‘di b. Abi ‘l-Raka‘ib al-Nadjdi.” In *Encyclopaedia of Islam*, Vol. 3, edited by H. A. R. Gibb et al. Leiden: Brill, 1960–.
- Al-Muqaddasi. *The Best Division for Knowledge of the Regions (Absan al-Taqasim fi Ma‘rifat al-Aqalim)*. Translated by Basil Collins. Reading, UK: Garnet, 2001.
- Tibbetts, G. R. *Arab Navigation in the Indian Ocean before the Coming of the Portuguese, Being a Translation of Kitab al-Fawa'id fi Usul al-Babr wa'l-Qawa'id*. London: Royal Asiatic Society of Great Britain and Ireland, 1981.
- Winius, George D. “The World of D. João II.” In *Portugal the Pathfinder: Journeys from the Medieval toward the Modern World, 1300–ca. 1600*, edited by George D. Winus. Madison, WI: Hispanic Seminary of Medieval Studies, 1995.

■ Introduction: Diffusion vis-à-vis Independent Invention

One of the longest-standing debates in the history of technology is between those historians who emphasize how technological innovations are rooted in the time and place in which they occur, arguing that the same devices and processes are “independently

invented” in different places, and “diffusionists” who see technical innovations as spread from culture to culture. The role of medieval Chinese technology in the Middle Ages is a classic area for debate. Medieval China was in many ways the most technologically advanced civilization

on earth. Chinese inventions include paper as well as the “big three” technologies that the seventeenth-century English philosopher Francis Bacon would later point to as the dividers between the ancient and the modern world: gunpowder, the magnetic compass, and the printing press. These inventions later emerged in other areas of Eurasia, leaving the question of whether they were independently invented or whether Chinese technology spread westward.

There are some cases where a technology’s diffusion from China can be clearly traced, as in paper’s spread to the Islamic world and eventually Christian Europe. Other cases of the diffusion of Chinese technology are more mysterious. The principle of using a magnetic needle to find direction was invented by the Chinese but was refined and improved by Mediterranean sailors to the point where some historians claim that it was an independent invention. Why did printing spread from China through eastern Asia to Korea and Japan and then jump thousands of miles to appear in Germany? It seems obvious that a Chinese printing press could not have traveled the long distance from China, nor is there any evidence of such a device, but could Gutenberg have been aware of East Asian printing and attempted to imitate it? There is no certain answer to this question.

Certain settings were particularly suited to technological diffusion, such as maritime trade. North European shipbuilders adopted the Mediterranean triangular, or lateen sail, although the lateen sail was independently invented by South Pacific shipbuilders. War was another area where different cultures came into contact and exchanged technologies. There is a long military tradition of learning from one’s enemies, and the diffusion of military techniques and devices can also sometimes be traced. (Military techniques could also be held tightly secret to ensure their possessor’s advantages. The exact formula of the Greek fire of the Byzantine empire, a devastating flame weapon used in naval battles, was a closely guarded state secret and remains unknown to this day.)

The creation of large areas of relative peace and open trade could also facilitate technological transfer. The Mongol empire seems to have

been the means by which Chinese knowledge of gunpowder arrived in Europe and the Middle East, although the exact steps remain unknown, and some have claimed that gunpowder was independently invented in Europe.

There are also different types of diffusion. Technological devices can spread as actual objects or as ideas, as papermaking skills enabled Chinese workers to establish paper mills in the Islamic world. The importance of maintaining control of lucrative or deadly technologies often led medieval and early modern states to forbid the emigration of artisans with knowledge of unique technologies.

—William E. Burns

The Spread of Paper to Europe after 1000 CE

After its first attested use in the Chinese Han empire around the late second century BCE, paper and papermaking gradually spread in a westward direction, following the routes of Buddhist monks and merchants traveling along the Silk Road. Contrary to a legend that ascribes the introduction of paper into western Asia to Chinese prisoners captured by Muslim armies at the Battle of Talas (751), by the seventh century and well before the expansion of the Islamic world paper was used throughout the Central Asian oasis cities for writing and other purposes. The unification of western Asia and later the integration of Central Asia under the Umayyad and Abbasid dynasties expedited and expanded the use of paper across the Islamic world. From its western reaches in the eastern Mediterranean and North Africa, paper and papermaking were introduced to the European continent from the tenth century onward. In the Islamic world and in Christian Europe the use of paper effected lasting changes in the transmission of knowledge and in record keeping, business, and daily life.

By the late eighth century the Abbasid government in Baghdad was making extensive use of paper for tax records and landholding and army registers. The various government offices in the city relied on paper produced locally. In 794–795 the first paper mill in Baghdad was established. During the next several centuries the

➤ FABRIANO PAPER

Even though paper was first introduced elsewhere in Europe, Fabriano today enjoys the reputation of the oldest paper-producing town in Europe. Papermaking started there as early as the 1260s, and paper is still today manufactured according to centuries-old procedures. The medieval commercial success of Fabriano paper can be attributed to its technical advantages as well as the acumen of medieval Italian merchants. In contrast to Chinese papermakers who initiated the use of vegetable starches to improve paper quality, the Fabriano papermakers used animal gelatin to make their products stronger. This technical improvement proved very significant in popularizing paper among European writers who were used to working with the stiff quill pen, which wrote well on parchment but often proved too sharp and hard for the softer paper. Also in the thirteenth century, Fabriano papermakers began to identify their papers through watermarks. The watermarks were the result of patterns woven into the screens that were made out of metal wires. Watermarks may have been a spillover from the dominant manufacturing sector in Fabriano: wool manufacturers impressed similar marks on their products as trademarks. Between the thirteenth and fourteenth centuries, Italian merchants carried Fabriano paper in large quantities across long distances, selling it



Fabriano paper mill, from Novum Italiae Theatrum, 1724. (Dard Hunter, The History and Technique of an Ancient Craft, 1974)

in different qualities and, in the case of the lower-quality products, at below-market prices. Such marketing strategies resulted in the decline of the competitiveness of Spanish and Syrian paper and led to the further development of paper manufacturing in Fabriano in subsequent centuries.

—Hilde De Weerd

papermaking industry expanded to such an extent that a special market, the Stationers' Market, hosted over 100 stalls selling paper products. Immediately afterward paper mills, processing rags from urban populations, appeared in other parts of the Abbasid empire, such as the Syrian cities of Tripoli, Manbij, and Damascus. Merchants sold Syrian paper in Egypt by the ninth century. Manufacturing took off on the Egyptian coast from the tenth century onward. In contrast to Egyptian consumers, North African scribes working in the region corresponding to present-day Tunisia continued to rely on parchment in the first centuries after the introduction of paper. The parchment was made from sheepskin that was widely available locally. To a lesser extent they wrote on paper imported from Egypt.

It was most likely that this same paper was first used in the Iberian Peninsula.

By the middle of the tenth century, paper was available in Muslim Spain. Early descriptions of the use of paper there refer to the scholarly use of paper. Even though religious, legal, literary, and scientific knowledge was commonly transmitted through oral traditions in the Islamic world, the arrival of paper resulted in the large-scale recording of knowledge in writing, although written records were still frequently considered as supplementary aids, secondary to and not as reliable as oral testimony. The use of paper for the preservation and transmission of knowledge easily crossed religious and cultural boundaries, as Iberian scribes began to copy Christian texts on paper from the tenth century onward. The

earliest known European Christian manuscript on paper, the Mozarabic Breviary and Missal preserved in the Benedictine Abbey of Santo Domingo de Silos in northern Spain, dates to the second half of the tenth century.

As in most Islamic lands, the importation of paper into Spain was soon followed by local production. Paper mills appeared in the eleventh century, and during the following centuries merchants traded Spanish paper throughout the Mediterranean.

Paper was first used in Sicilian official documents dating to the late eleventh century. After half a century it became a commonly used material in commercial and legal transactions in northern and central Italy. Notaries at the time used paper imported from Spain. Local production began in the early thirteenth century, first near Genoa and shortly afterward in Fabriano, a town in central Italy where paper is still manufactured today. Paper from Fabriano, whose similarities with Syrian paper suggest that the Italian papermakers' skills were influenced by direct contact with the eastern Mediterranean during the crusades, gained the upper hand in the international paper market by the fourteenth century due to the Italian merchants' superior marketing techniques. In the fourteenth and fifteenth centuries paper mills were established throughout Western Europe and thus laid the foundation for the revolutionary impact of the printing press after the mid-fifteenth century.

—Hilde De Weerd

Bibliography

- Bloom, Jonathan. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven, CT: Yale University Press, 2001.
- Hunter, Dard. *Papermaking: The History and Technique of an Ancient Craft*. 1943; reprint, New York: Dover, 1978.

Adapting the Technology of Warfare

Some of the most efficient and deadly technology used by medieval European armies originated in Asia. Middle Eastern peoples had long been aware of and made use of military innovations from the Far East, especially China. Consequently,

the transfer of such technology to the West was the result of European interaction with Eastern Christians, Arabs, Turks, and Mongols. While the transfer of military technology from east to west had begun at least as early as Greek antiquity, it continued throughout Europe's early Middle Ages (ca. 500–1000 CE) and reached its peak during the time of early European expansion (roughly 1100–1500). Among the most important Eastern military weapons to make their way to Europe were the crossbow, the trebuchet, and gunpowder.

The common crossbow originated in China and became a standard infantry weapon in its military forces at least as early as the fourth century BCE. There is some evidence that the ancient Greeks also used a primitive type of crossbow during the same period, but it did not experience the same type of widespread use and development that took place in China and beyond in the centuries that followed. Crossbows were not commonly used by west European armies until the beginning of the ninth century, at a time when they were much better developed both in function and accuracy. East-West interaction contributed to the development of better crossbows. One example is that during the crusades, Europeans adapted the much stronger materials of the so-called Saracen composite bow (wood, horn, and sinew that were glued and bound with animal tendon) to the construction of crossbows. This Saracen bow was itself a creation of the central Asian steppes and had been brought into the Middle East by various nomadic peoples, such as the Turks. The trigger of the crossbow also experienced considerable development in Europe. Although bronze triggers with safety notches had been in use in China since around 200 BCE, more sophisticated iron triggers were developed in late medieval Europe, where even Leonardo da Vinci took an interest in their development.

No siege weapon in medieval Europe was as destructive or as terrifying as the counterweight trebuchet. Its superior accuracy allowed for its use in targeting and wearing down a specific section of a defending city's wall. The trebuchet employed a sling action that was driven by a counterweight, either by human counterweight or heavy stones. Its superior power allowed for

hurling larger projectiles against or over city walls from great distances. In recent experiments, a trebuchet having a 441-pound (200-kilogram) counterweight threw a 33-pound (15-kilogram) ball 590 feet (180 meters) and a 104-pound (47-kilogram) ball 328 feet (100 meters), all within a target area of only 65 square feet (6 square meters). Because of their enormous size, trebuchets were usually built at the siege site using local materials.

The trebuchet was a product of ancient Chinese military innovation that was improved technologically and used extensively by early Islamic and Byzantine armies but was only brought to its fullest development in later medieval Europe (thirteenth to fifteenth centuries). In a sense, the later trebuchet was the collective achievement of Chinese, Islamic, Byzantine, and European societies and illustrates the transfer of technology that took place across Eurasia during the Middle Ages.

No technology contributed as much to the end of Europe's traditional forms of warfare as gunpowder. Gunpowder is a substance that burns rapidly, releasing gases that act as a propellant in firearms. Firearms and cannons ultimately made both the armored and mounted knight, as well as many castle fortifications, obsolete.

Although gunpowder appears in Chinese sources as early as the second century CE, the Chinese did not use it in warfare until the early tenth century (first as incendiary weapons and later as grenades). The first known use of gunpowder as a propellant came in the twelfth century when the Chinese developed mortars, first using bamboo tubes and then various types of metal tubes in the thirteenth century. Chinese advances with gunpowder came around the time that the Mongols were conquering China, ensuring that they were among the first to have access to the new technology. Consequently, the Mongols adopted and even improved upon the Chinese gunpowder-propelled artillery and mines for use during their westward expansion into Islamic lands. As a result, in the mid-thirteenth century Islamic peoples acquired knowledge of gunpowder and its use in fireworks and rockets and were likely responsible for the transmission of gunpowder-propelled weapons to the West during a period of extensive military and

➤ DUELING TREBUCHETS AT THE SIEGE OF ACRE, 1191

The following account of the crusaders' siege of Acre in the summer of 1191, from the contemporary Third Crusade account known as *Itinerarium Peregrinorum et Gesta Regis Ricardi* (*The Pilgrims' Journey and Deeds of King Richard*), details the destructive effects of 11 trebuchets deployed against a defensive site known as the Maledicta (Curse Word) Tower and its adjacent walls. Of particular interest is the duel that took place between a crusader crew manning a trebuchet named "Bad Neighbor" and a Muslim crew manning a trebuchet called "Bad Relation."

"The king of France [Philip II] . . . concentrated on constructing siege machines and placing trebuchets in suitable places. He arranged for these to shoot continually day and night. He had one excellent one which they called 'Bad Neighbor.' The Turks [more likely Arabs] in the city had another which they called 'Bad Relation' and often used to smash 'Bad Neighbor' with its violent shots. The king kept rebuilding it until its continual bombardment partly destroyed the main city wall. . . .

Besides these, there was a trebuchet that had been constructed at general expense, which they called 'God's Stone Thrower.' A priest, a man of great probity, always stood next to it preaching and collecting money for its continual repair and for hiring people to gather the stones for its ammunition. This machine at last demolished the wall next to the Cursed Tower. . . .

King Richard's [King Richard I of England] trebuchets hurled constantly by day and night. It can be firmly stated that one of them killed twelve men with a single stone. That stone was sent for Saladin to see, with messengers who said that the diabolical king of England had brought from Messina, a city he had captured, sea flint and the smoothest stones to punish the Saracens. Nothing could withstand their blows; everything was crushed or reduced to dust."

—Andrew Holt

Source

Paul E. Chevedden, "The Invention of the Counterweight Trebuchet: A Study in Cultural Diffusion," *Dumbarton Oaks Papers* 54 (2000): 97.

commercial interaction between the Islamic and European worlds in the thirteenth century.

—Andrew Holt

Bibliography

- Chevedden, Paul E. "The Invention of the Counterweight Trebuchet: A Study in Cultural Diffusion." *Dumbarton Oaks Papers* 54 (2000): 71–116.
- France, John. *Western Warfare in the Age of the Crusades: 1000–1300*. Ithaca, NY: Cornell University Press, 1999.
- Kelly, Jack. *Gunpowder: Alchemy, Bombards, & Pyrotechnics: The History of the Explosive That Changed the World*. New York: Basic Books, 2004.
- Needham, Joseph. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology*, Part 7, *Military Technology: The Gunpowder Epic*. Cambridge: Cambridge University Press, 1987.
- Needham, Joseph, and Robin D. S. Yates. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology*, Part 6, *Military Technology: Missiles and Sieges*. Cambridge: Cambridge University Press, 1994.

The Compass

Although evidence that the Chinese were aware of and used magnetism in geomancy (*feng shui*) at least as early as the Han dynasty (202 BCE–229 CE), the oldest unambiguous description of a magnetized needle is Chinese and dates only from 1088, and the first accounts of navigational

compasses appeared, also in China, in the twelfth century. By the 1300s the Chinese were producing "seaway compass charts" that included "terrestrial seaways" showing compass courses and distances. The earliest written evidence for the use of a magnetized needle for navigation comes from a late-twelfth-century work by the English scholar Alexander Neckham, who wrote that sailors touched a magnet with a needle "which is whirled round in a circle until, when its motion ceases, its point looks to the north."

Whether knowledge of the compass spread westward from China cannot be determined absolutely, but even if the rudiments of the compass originated elsewhere, the refinements that led to the practical navigational compass developed independently in the West. The Chinese wet compass consisted of a needle floating in a bowl. The so-called dry-card compass devised by navigators in the Mediterranean and western Europe in the thirteenth century was mounted on a pivot and calibrated to a compass card. This type of compass was adopted in Asia only after its introduction by European mariners in the sixteenth century. Another reason to consider the Western compass as an independent development is that the earliest reference to a compass in Arabic or Persian sources relating to navigation in the Indian Ocean dates to 1232, half a century after Neckham described it with such familiarity.

In the West, the needle and stone (lodestone, or magnetite) were used originally to locate the North Star, also called Polaris ("the Pole Star"), Stella Maris ("star of the sea"), and the Lodestar. In addition to helping with shipboard navigation, the compass revolutionized Mediterranean cartographers' development of sea charts, or Portolans. The Italian *portolano* originally referred to a collection of written sailing instructions, the oldest of which dates to 1296. Accompanying maps delineated the Mediterranean coast with remarkable fidelity and incorporated a bewildering array of compass roses, each with radiating rhumb lines showing sailing courses that extended to the edges of the map. How the use of the compass contributed to the accuracy of the earliest such charts is unclear.

Navigators had to overcome three major hurdles in particular with respect to the compass.

➤ FROM WIND ROSE TO COMPASS ROSE

Although people originally believed that the magnetic needle pointed to the North Star, the compass was developed not by astronomers but rather by mariners. Astronomers began dividing the circle into 360 degrees in antiquity, but medieval sailors sailed "by the wind" and thought in terms of 8 winds: north, northeast, east, southeast, and so on. The compass called for more discrete measurements, and these winds were divided into 8 "half winds" (north-northeast, east-northeast, etc.) and 16 "quarter winds" (north by east, northeast by north, etc.). This explains why the mariner's "compass rose" (named after the wind rose) is divided into 32 points of 11.25 degrees.

—Lincoln Paine

The first was an understanding of the magnetic north pole, which does not correspond with the geographic North Pole. The location of the magnetic pole varies over time, and its magnetic attraction varies in intensity from place to place. The angle of difference between the line to the geographic north and magnetic north is called magnetic variation. Between 1698 and 1700 English astronomer Edmund Halley spent 19 months at sea making observations intended “to improve the knowledge of the Longitude and the [magnetic] variations of the Compass.” The result was the first chart to show magnetic variation—shown as lines of equal deviation—published in 1701. These lines have to be updated continuously. A related problem was how to compensate for the magnetic attraction of iron fittings, guns, and eventually hull plating on the magnetic needle, which could be solved by the use of iron bars or other adjustable fittings or complex tables of deviation. The dry-card compass remained the standard type through the late 1800s, but it reacted too slowly to be practical in small fast vessels or in rough conditions. It was superseded by a compass suspended in a liquid solution beneath a glass dome. In such a design the compass card remains flat and properly oriented no matter the angle of heel, while the glass magnifies the compass card, which makes it easier to read.

—Lincoln Paine

Bibliography

- Bromehead, C. N. “Alexander Neckham on the Compass Needle.” *Geographical Journal* 104(1) (1944): 63–65.
- Campbell, Tony. “Portolan Charts from the Late Thirteenth Century to 1500.” In *The History of Cartography*, Vol. 1, *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, edited by J. B. Harley and David Woodward. Chicago: University of Chicago Press, 1987.
- Gurney, Alan. *Compass: A Story of Exploration and Innovation*. New York: Norton, 2004.
- Lane, Frederic C. “The Economic Meaning of the Invention of the Compass.” In *Venice and History: The Collected Papers of Frederic C. Lane*. Baltimore: Johns Hopkins University Press, 1966.
- Needham, Joseph, et al. *Science and Civilisation in China*. Vol. 4, pts. 1 and 3. Cambridge: Cambridge University Press, 1959–1971.
- Smith, Julian A. “Precursors to Peregrinus: The Early History of Magnetism and the Mariner’s Compass in Europe.” *Journal of Medieval History* 18 (1992): 21–74.

Chinese Printing—Technological Innovations and Their Cultural Implications

The printing of Chinese language texts dates back to the seventh or eighth century. In the first few centuries after its invention, printing was largely limited to government offices, Buddhist and Daoist temples, and religious practitioners. Scholars and officials continued to rely almost exclusively on hand-copied editions of the classics, histories, and the literary works of past and contemporary authors. This situation changed dramatically during the eleventh and twelfth centuries. These centuries were marked by the expansion of commercial printing, the diversification of the types of texts in print, the adoption of Chinese printing technology to publish in a variety of non-Chinese languages, and experimentation with new printing technologies.

Woodblock printing, which was the method used for the earliest printed texts, remained the dominant technology in the mechanical reproduction of Chinese language texts throughout the imperial period until the late nineteenth century. From the eleventh century onward, Chinese printers also used movable type, which became the dominant printing method in Europe from the mid-fifteenth century onward. The earliest account of movable-type printing dates to the late eleventh century, when Shen Gua (1031–1095) compiled a notebook with his observations on scientific, engineering, and technological topics. He wrote that in the early 1040s a commoner called Bi Sheng (ca. 990–1051) preferred to print with ceramic movable type because this method allowed for cleaner and crisper copies and proved especially efficient in the fast reproduction of large numbers of copies.

Bi Sheng designed types for individual characters in clay, baked them, and then arranged the finished types in wooden cases according to the rhyme group to which the characters belonged. This method of arrangement was also used in character dictionaries at the time. When

► COMMERCIAL ENCYCLOPEDIAS IN CHINA

The Chinese concept of the category book (*leishu*, commonly translated as “encyclopedia”) first emerged in the eleventh century even though Chinese scholars typically dated the first encyclopedias to the period between the third and the sixth centuries. The crystallization of the new concept and Chinese scholars’ adoption of it expressed the expanded production and distribution of encyclopedias starting during the Tang dynasty (618–907) and accelerating in Song times. The increase in encyclopedias coincided with a gradual shift from the court as the center of their compilation to commercial print shops in the provinces as the primary producers and distributors. According to Yue Ke (1183–1240), “Bookstores in Jianyang are compiling them every day and printing them every month. They keep changing them in the hope of selling them quickly. They are traded and studied everywhere.” The production of encyclopedias in Song times was therefore intertwined with the development of commercial printing.

Commercial printing and the production of encyclopedias developed within the context of the civil service examinations. One example of such printed matter is Lin Jiong’s *Ultimate Essays on Origins and Developments from the Past to the Present—Newly Annotated for Examination Success*, published in three series and completed by the late 1220s or early 1230s. Its major subject areas (military organization, financial and fiscal affairs, the civil service, and educational institutions) reflected the material covered in the compiler’s examination preparation classes. Each entry consisted of one full essay, with primary source texts quoted in small font in the main text.

—Hilde De Weerd

working on a print job, he covered an iron plate with pine resin, wax, and paper ashes; placed an iron grid onto the iron plate; and then pressed the ceramic types into the grid. After sufficient copies had been printed from the form, he heated the plate so that the wax mixture melted, loosening the types and the grid. After cleaning, the types were ready for reuse. In the ensuing centuries and up to the fifteenth century, Chinese

printers continued to experiment with movable type, designing types in wood, tin, and bronze.

Despite the advances made in movable type printing, the majority of the Chinese printers opted for woodblock technology, as it required less financial risk. Because the Chinese written language uses around 50,000 characters, the number of types needed to print characters in differing font sizes required a large initial investment. The cost for preparing movable type was also higher because movable type necessitated the employment of literate typesetters and investment in a sufficiently large run of printed copies. Woodblock printers used the relatively cheap labor of often illiterate engravers and produced smaller initial runs, printing copies according to market demand.

The dependence of the efficiency of woodblock and movable type on language is also evident from the varied uses of print technology among central Asian peoples. The Uighurs, living to the west of the Chinese empire, first adopted woodblock technology but by the twelfth and thirteenth centuries shifted to movable type, as the latter was particularly suited to their alphabetic written language.

Woodblock printing proved to be a highly efficient method for duplicating Chinese texts and was a flexible medium open to new techniques for producing expensive high-end or cheaper low-end books and images. Multicolor printing, for example, developed during the early twelfth century. It was first applied in the printing of New Year pictures that decorated the homes of elites and commoners alike. In the fourteenth and fifteenth centuries printers also applied multicolor printing techniques to the reproduction of texts, especially to distinguish original text from commentary.

The development of printing techniques was accompanied by drastic changes in the uses to which print technology was put. The tenth and eleventh centuries were marked by the expansion of government printing. The emperors of the Song dynasty (960–1279) continued and expanded support for court printing activities begun under the preceding Five Dynasties period (907–960). The Song Directorate of Education, the central agency in charge of educational policy,



A Chinese alchemist of the eleventh century, Bi Sheng, is credited with creating movable-type ceramic blocks. (Bettmann/Corbis)

produced the largest number of books printed by the central government. Its publication record exceeded, according to one conservative estimate, 200 titles. In addition to the classics and classical commentaries, the directorate printed large numbers of historical and medical books. Its repertoire also included smaller numbers of encyclopedias, literary anthologies, Daoist works, and titles on law, agriculture, astronomy, geomancy, mathematics, and the military arts. The directorate printed large sets, such as dynastic histories, and complete editions of the classics and thus produced authoritative editions of texts that were considered essential for effective government. Apart from publishing books, government offices also used print technology for the duplication of calendars, forms such as certificates and civil service examination questions, and the production of paper money. Since taxes were paid in paper money, the use of printed paper currency alone ensured that the vast majority of the population was exposed to print.

Directorate titles were either donated or sold to officials and local schools. The boundaries between government and commercial printers were blurry. Government offices and officials regularly used government resources to print works that were sold to increase revenue or for personal profit. The directorate was a dominant force in the book market throughout the eleventh century but was gradually overshadowed by local government printers and especially independent commercial printers in the twelfth century. The expansion of commercial printing is apparent when we compare the number of locations with printing workshops before and after the withdrawal of the Song court to South China in 1126/1127. According to one estimate, there were around 30 printing centers during the Northern Song period (960–1126) as opposed to 200 in the much smaller territory of the Southern Song period (1127–1279).

Commercial printers published the same types of books as the directorate and also marketed a variety of literary works such as the collected works of individual authors and stories. The printing of stories and, later during the Yuan dynasty (1279–1368), of illustrated fiction as well as of a large body of useful manuals reflects the growing commercialization of the Chinese printing industry, which sought to satisfy the tastes of urban elites during these centuries. Studies of two of the most prominent commercial printing centers, the Southern Song capital city of Hangzhou and Jianyang Prefecture in the southeast, demonstrate that commercial printers also capitalized on the expanding numbers of students preparing for the civil service examinations and the increasing competitiveness of the examination process.

The number of candidates attempting the qualifying prefectural examinations increased from an estimated 20,000 in the early eleventh century to 400,000 by the mid-thirteenth century. This trend put tremendous pressure on the network of official schools that had been rebuilt and expanded during the early Song period. The official schools were unable to absorb the vast majority of students. Students turned increasingly to private and clan schools and relied on relatively cheap examination manuals put out by the print shops.

The central government attempted to regulate the expanding output of commercial printers through the issuing of publishing prohibitions on materials deemed sensitive as well as through prepublication review. Commercial printers also sought to protect their investments through copyright certificates that were occasionally issued by local government offices. Like other sectors in the Chinese economy, commercial printing went through a general decline in the late fourteenth and early fifteenth centuries. It was not until the Chinese economy recovered in the sixteenth and seventeenth centuries that Chinese society was ready for a second printing boom.

—Hilde De Weerd

Bibliography

Chia, Lucille. *Printing for Profit: The Commercial Publishers of Jianyang, Fujian (11th–17th Centuries)*. Cambridge: Harvard University Asia Center, 2002.

Tsien, Tsuen-hsuei. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology*; Part 1: *Paper and Printing*. Cambridge: Cambridge University Press, 1985.

Korean Printing to 1500 CE

Just as the cultural unification of large parts of Asia under Islam facilitated the spread of paper between the seventh and tenth centuries, interactions among Chinese, Korean, and Japanese Buddhists in China's Tang empire (618–907), Korea's Silla kingdom (668–935), and Japan's Nara (710–794) and Heian (794–ca. 1180) eras ensured the smooth and fast transfer of printing technology in East Asia. The discovery of the earliest extant example in the world of a printed text in the Pulguk Temple (Kyongju, Korea) in 1966 illustrates both the importance of Korean printing in world history and the principal role of Buddhism in the early history of printing. The later history of Korean printing with earthenware, wooden, and metal movable type, several centuries before Gutenberg's mid-fifteenth century use of the movable-type printing press, underscores the role of successive Korean governments in promoting the use of movable type for the production of scholarly materials for literate elites.

Historians disagree on the question of whether Chinese or Koreans first mastered printing technology. Based on printed remnants of the *Vimala Nirbhava Sutra*, a Buddhist charm, or *dharani*, enclosed in the Sakyamuni Pagoda at the Pulguk Temple sometime between 705 and 751, Korean historians have argued that printing originated on the Korean Peninsula. According to Timothy Barrett, the sutra discovered in Korea may go back to an earlier edition of the same text printed at the Tang court and sent to the Korean court in 706, shortly after the death of Tang empress Wu (r. 690–705). Regardless of where one places the origins of printing, the order to print millions of copies of the same dharani by the Japanese empress Shotoku (r. 764–770) and the discovery of similar printed charms in Tang dynasty tombs suggest that printing spread across East Asia in the eighth and ninth centuries and was mainly used to reproduce Buddhist texts. Lay Buddhists invested in the printing of religious texts because they believed that their reproduction generated karma, or merit, for the individual producing and distributing them, which would ultimately ensure escape from the pain of rebirth.

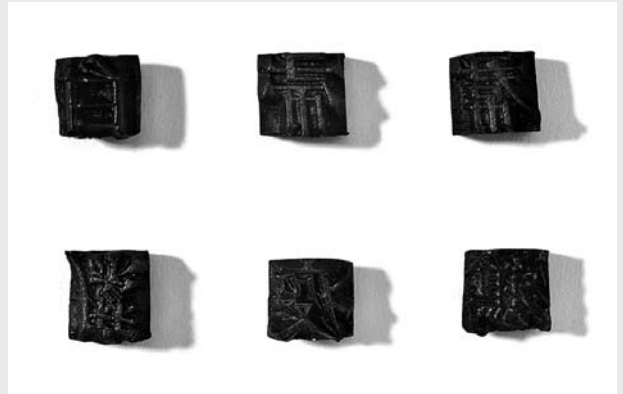
The Buddhist investment in printing grew in subsequent centuries. During the eighth and ninth centuries, printing projects were typically restricted to short texts and individual titles. Larger projects took shape in the tenth century. The entire Buddhist canon was printed between 971 and 983 in China, and the Song court granted a copy to the Korean court. Between 1011 and 1082 Korean artisans carved and printed a new edition. After the woodblocks were destroyed during the Mongol invasion of 1231, work began in 1237 on a new and expanded version, known today as the *Tripitaka Koreana*. This edition's 81,258 woodblocks were carved on both sides and were finished by 1251. They are still in storage, virtually intact, at the Haein Temple in Kyongsang-nam (South Korea).

The eighth-century dharani, the Buddhist canon, and other historical and literary titles produced in the first centuries after the introduction of printing were printed with woodblocks. Woodblock printing was the oldest and dominant method for printing in pre-nineteenth-century East Asia. From the thirteenth century onward,

► THE INVENTION OF METAL TYPE

The use of metal movable type for printing texts is apparently first attested in a thirteenth-century statement that a book on rituals was printed with “cast characters” around 1234 on Kanghwa, an island off the west coast of the Korean Peninsula, that served as a temporary abode for the Koryŏ (918–1392) court then fleeing from the invading Mongols. Not every historian accepts this reference as unambiguous evidence of metal movable type that early. Indeed, the first extant examples of books printed with metal type date to the early fifteenth century. However, the use of coin casting technology by the early twelfth century and apparent references to movable type in thirteenth- and fourteenth-century Korean sources suggest that metal movable type was invented between the twelfth and fourteenth centuries.

Early Korean type was cast by sand-mold casting. This technique was first developed in China for the casting of coins and was imported to the Korean Peninsula in 1102. Wooden types were first impressed in wet sand, creating a mold. Upon the removal of the wooden types, artisans poured hot molten metal into the mold. If the artisans took great care in removing the wooden types from the sand, the resulting metal types, made typically of copper alloys, were exact copies of the carved wooden originals. Wealthier East Asian printers working with movable type preferred metal types over their wooden equivalents be-



Casts of Korean bronze type, 1406. (SSPL/The Image Works)

cause wooden type tended to break more easily and often produced lower-quality images. Apart from the preexistence of this casting technique, the development of movable type printing in Korea also benefited from the existence of established paper and ink manufacturing. Already in Tang times (618–907), Korean paper was imported into China and from that time onward gained a reputation for its high quality. When the Yi court launched its large-scale type casting and printing activities in the early fifteenth century, it ensured its paper supply by establishing the Office for Papermaking.

—Hilde De Weerd

however, printing with movable type was practiced in Korea. In contrast to the first eleventh-century Chinese reference to earthenware movable type and the first extant Korean book printed in wooden movable type in 1377, thirteenth-century Korean titles were made with cast type. This suggests that these titles were the first in human history to be printed with metal movable type.

The first extant books printed with metal movable type date back to the early fifteenth century. In 1403 King Taejong (r. 1400–1418), the third king of the Yi dynasty (1392–1910), established the Type Casting Bureau, a government office charged with the production of bronze type. Within a few months the bureau cast a set

of about 200,000 characters. The king intended this type to be used for the printing of Confucian classics and scholarly texts. By then the court had adopted a civil service examination based on the model of the imperial Chinese civil service examinations. The king ordered the Office of Publications, which supervised the Type Casting Bureau, to print the classical, historical, and administrative texts necessary for the education of government officials. King Taejong's successors ordered at least eight other type sets between 1420 and 1777. The impact of the titles they produced was not limited to the literate Korean elite; Korean type also shaped Japanese cultural history. At the end of the sixteenth century, Japanese raiders took Korean type and typeset

books back to Japan. Their exploits heralded the beginning of the history of Japanese movable type printing.

—Hilde De Weerd

Bibliography

- Barrett, Timothy H. *The Rise and Spread of Printing: A New Account of Religious Factors*. SOAS Working Papers in the Study of Religions. London: School of Oriental and African Studies, 2001.
- Pak, Pyong-son. *Korean Printing: From Its Origins to 1910*. Seoul: Jimoondang, 2003.
- Son, Po-gi. *Han'guk Ui Ko Hwalcha/Early Korean Typography*. Seoul: Pojinjae, 1982.
- Tsien, Tsuen-hsui. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology*, Part 1, *Paper and Printing*. Cambridge: Cambridge University Press, 1985.

European Printing

Printing with movable type—a single block for each letter and punctuation mark—was introduced to Europe in the early 1450s by goldsmith Johannes Gutenberg of Mainz. Although movable type printing is known earlier from China and Korea, the extent of East Asian influence, if any, on Gutenberg is unknown. Gutenberg's printing drew on existing technologies. Early printing presses resembled wine presses, and the new metal types, made from a compound of lead, tin, and antimony, were produced by the same process that produced coins and medals. Some technical innovations were associated with printing, however. Gutenberg devised an oil-based ink that bonded more effectively with the types than did traditional water-based inks. The best-known work of Gutenberg's press, the Gutenberg Bible, was finished by 1454 or 1455. Most were printed on paper, although a few special copies were made on animal-skin vellum. The edition, possibly of about 180 copies, sold out quickly, most of its purchasers being institutions.

It took several years for printing to expand from Mainz, at first in Germany and the German cultural sphere. A printer's shop appeared in Cologne in 1465 and in the small Benedictine monastery of Subiaco outside Rome the same year. Subiaco was dominated by German monks, and this initial venture was overseen by a German cardinal, Nicolas of Cusa. After 1465 print-

ing began to take off, carried mostly by German printers and entrepreneurs who spread the new technology throughout Europe. Printers were found in Nuremberg, Basel in Switzerland, and Paris by 1470, and William Caxton, the first English printer, set up shop in London in 1476 after learning the trade as a worker in continental print shops. Northern and central Italy, the highly urbanized heartlands of European humanism, were particularly dense with printers, and in the first 50 years of printing Italy would produce nearly half the European output of books. Printing reached Venice, which became one of its major centers for centuries, in 1469, and reached Milan the next year and Florence the year after that. Rome had a press by 1467, and the papal city of Avignon in southern France had a press by 1497. In the Italian south, printing was found in Naples by 1470 and Messina in Sicily by 1474. In the smaller kingdoms on the outskirts of Europe, printing reached Stockholm by 1473 and Lisbon and Copenhagen by 1489, but the first Scottish book was not published until 1508. (Before that date, Scottish writers used French printers.) In less urbanized eastern Europe, printing reached Cracow in 1473 and Buda in Hungary the same year, although the first evidence of printing in Prague is not until 1487. Businesses supplying the new printing industry's needs, such as paper mills, also expanded, as did booksellers.

Printing enabled for the first time in Europe the mass production of books and other written texts. About 8 million books, representing about 40,000 texts, were printed in the first 50 years of European movable type printing. This vastly increased the number of texts available to European readers. Most published texts were not original and included the Bible—a perennial seller—and established Latin and vernacular classics. A low-print run might be as few as 100 copies, but by the end of the century Italian printers were printing editions of over 2,000 copies. In format, early printed books mostly imitated the traditional European hand-copied manuscript book. The production of manuscript books did not cease with the spread of printing.

Printing required a substantial outlay of capital both to set up the printing shop itself with its specialized equipment and to pay the ongoing expenses of paper, ink, and labor, particularly the

literate skilled labor essential to some parts of the printing process. The market for printed texts was unpredictable, and several times overproduction of books led to a temporary crash in the local market. Many printing operations were short-lived, going out of business after producing one or two editions. To protect their businesses, printers sought local and regional monopolies as well as subsidies from monarchs, city governments, church authorities, universities, booksellers, wealthy individuals, and writers themselves. Although printing originally spread through production for the market and printers appealed to private investors for start-up capital, governments too seized the new technology. France had a royal printer by 1488.

The threat of the circulation of the printed word to authorities in state and church was apparent from early on. Papal bulls in 1487, 1501, and 1515 called for submitting manuscripts to the Church for prepublication approval (an *imprimatur*, Latin for “It may be printed”). Conservative religious establishments limited the spread of printing outside the western Christian world. Sultan Bayezid II of the Ottoman empire issued a decree against printing in 1485 at the behest of Muslim leaders fearing inaccurately printed Qurans. This decree applied only to Muslim printers, not to the Greek and Christian printers who were operating in Turkey several decades later as of 1515.

—William E. Burns

Bibliography

- Eisenstein, Elizabeth. *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*. 2 vols. Cambridge: Cambridge University Press, 1979.
- Johns, Adrian. *The Nature of the Book: Print and Knowledge in the Making*. Chicago: University of Chicago Press, 1998.

➤ EAST ASIAN MOVABLE TYPE PRINTING AND THE MOGAO CAVES

China devised printing well ahead of anywhere else, but most Chinese printing was done on wooden blocks, on which an entire page was carved, rather than with movable type. The large number of characters worked against movable type, as thousands of different types would be required. However, the Chinese did use movable type on some occasions. The inventor of movable type in China was, according to tradition, the eleventh-century Bi Sheng. Bi Sheng's type was ceramic and not very durable; later Chinese and Korean printers developed wooden and metal movable type. The Mogao caves of Dunhuang, a network of about 1,000 hand-carved grottos, on the Silk Road was a meeting point for centuries. Before it was extensively looted by early-twentieth-century European archaeologists, it contained thousands of Chinese and Sanskrit Buddhist manuscripts and some Christian scriptures in Syriac as well as secular and religious texts in Tangut, Tibetan, Uighur, and Mongolian. The Mogao caves also contained some of the world's oldest movable type, 48 pieces of late-thirteenth-century and fourteenth-century wooden type used in printing in the language of the Turkic-speaking Uighur people in China's northwest. The Uighur language was written with an alphabet, thus making it more suitable for movable type than character-based Chinese. Cave 17 also contained the earliest known printed book, a ninth-century *Diamond Sutra* printed in Chinese by the wood-block technique.

—William E. Burns

- Richardson, Brian. *Printing, Reading and Writing in Renaissance Italy*. Cambridge: Cambridge University Press, 1999.

■ Introduction: Technologies of the Ocean and the Sea

Waterways have played a significant part in human history from earliest times. It was not only because the seas and rivers presented an abundance of food but also

because water offered the most efficient avenue for travel. Most roads were in poor condition, often not more than a trail. They often wound over hills and mountains and through deserts

and forests, making an overland journey full of hardships and dangers, especially when carrying a lot of supplies or merchandise. But above all, they usually took a long time to travel. In contrast, journeys up and down rivers or along-side shorelines were faster and safer as long as the ship or boat could avoid dangerous waters and bad weather. As trade developed, the demand for larger ships grew, and this in turn called for improvements regarding navigation and seaworthiness. This was much the case for the period 1000–1500 CE. There were seafarers all over the world who started to look beyond the known in search of new routes to distant countries. It was their ambitions, dreams, and curiosity that eventually came to have an enormous impact on future events.

Chinese shipwrights developed the junk in the second or third century CE, and during the Song dynasty (960–1279) it became the backbone of both the mercantile marine and the military marine. The size of the junk grew during the following centuries, and by the time of the early Ming dynasty (1368–1644) the Chinese navy was the largest in the world in both numbers and the size of its vessels. Chinese junks were equipped with stern-hung slung-rudders, which made them highly maneuverable. In addition, they used the compass to navigate and bamboo-slat sails with bamboo spars, which made them easy to handle. During the seven journeys of Zheng He (1405–1433), fleets, on some voyages of more than 300 ships and about 28,000 men, sailed along traditional trade routes in the Indian Ocean, traveling as far as eastern Africa. Although the size of the largest of these ships is highly debated and the evidence is scanty at best, it appears that some of the junks might have been anywhere from 300 to 400 feet (90 to 120 meters) long and equipped with more than three masts. However, these early Ming voyages came to an end due to their high cost as well as other factors, and after 1474 all the large ships were destroyed.

The ships used by Arabs, East Africans, Malays, and many others in the Indian Ocean were sewn in order to be able to disembark crew and cargo in shallow lagoons or on shores, as there were not too many good harbors available to them. The ships were equipped with lateen, or

triangular, sails, which made them exceedingly seaworthy, as they could sail both upwind and downwind—with and against monsoon winds—carrying bulk cargo all over the Indian Ocean.

In the Mediterranean, the merchant marines of the Italian city-states, primarily Pisa, Genoa, and Venice, had risen to prominence during the period of the early Latin Christian crusades of the late eleventh and twelfth centuries and seized control of the important trade routes between western Europe and the Levant. Light galleys were initially the primary warship, but by the end of the thirteenth century larger galleys for both war and trade were being constructed. Ship-building techniques changed, and ships were built upon frames with the use of better tools at large shipyards such as the Venetian Arsenal, which was established in 1320. Traditional round-ships, known as cogs, also became larger and could be equipped with up to three square masts erected upon multiple decks. These ships could sail to the northeast European markets in England and Flanders.

On the Iberian Peninsula, small open sailing ships known as caravels were developed. They were lateen-rigged, highly maneuverable, and used during the initial Portuguese expeditions along the West African shoreline in the early fifteenth century. As they could not convey sufficient supplies or men for longer voyages, however, the need for another vessel became imminent, as Portuguese mariners probed farther down the coast of Africa. The result was the *nau*, or carrack, a three- or four-masted combination of the north European cog and the caravel, which employed both square and lateen sails. This ship could carry men, supplies, and guns over the oceans, and its development greatly accelerated the European Age of Discovery during the late fifteenth century and beyond.

—Roine Wiklund

Technological Changes in Western Indian Ocean Shipping

The ships that carried the trade of the western Indian Ocean during the 500 years before the Portuguese arrived there were significantly different from the ships that were in regular use before 1000. They were typically bigger, faster,

safer, and better sailing vessels than those that had been used to pioneer the monsoon-based trade routes of the region. The ships of this era, while significantly improved compared to the vessels of earlier times, still shared some characteristics with them. These continuities made western Indian Ocean ships distinct from the vessels used in those parts of the ocean where Chinese ships predominated and from the vessels that were used in the Atlantic.

Oceangoing ships have been built in the western Indian Ocean since at least the fourth millennium BCE. Some of the earliest ships built in the region were made of bundles of reeds sealed with bitumen. Archaeologists recently found the remains of one such ship in Oman and are attempting to build a replica and sail it from Oman to India. By 900 CE, the standard features of the region's vessels had moved away from reeds to wooden planks that were joined to each other with wooden trenails (pegs). Craftsmen drilled rows of holes along the edges of the planks through which they passed cord to sew the planks together. The drill holes were then plugged with cotton soaked in shark oil. Once the planking had been finished, a frame was built inside the hull to stiffen it. It was lashed together rather than nailed. Thus, it was possible to build one of these ships entirely without the use of nails. Sewn ships have been used in other parts of the world—the Vikings built them as well—but nowhere have they been as widely used as in the western Indian Ocean. What is curious is that some of the people who seem to have favored these vessels did so despite having ready access to high-quality iron, so it is hard to believe that a shortage of iron explains the preference for sewn ships.

These ships were steered by means of a steering oar usually rigged to the right (starboard) side of the ship. Their sails were matting made of woven palm fronds rather than cloth, and the sails were simple square sails that hung from a horizontal yard. These vessels were capable of sailing the open sea in good conditions but probably were used more often in coast-hugging voyages that called frequently at local ports. Their steering oars were vulnerable to damage from heavy waves and did not give the steersman much control over his vessel, a critical point in rough seas.

➤ WHY SEWN SHIPS?

One of the things that historians of the western Indian Ocean have been wondering about for the last 50 years or so has been why sewn ships were so widely used in that region. The Italian traveler Marco Polo suggested that this was an adaptation to the presence of giant lodestones (magnetic rocks) on the seafloor that could draw the nails out of a ship that passed over them. This theory has not stood the test of time. It has since been suggested that iron may have been hard to come by in some places where people needed boats. This may have been the case in places such as the Maldives Islands, which are isolated coralline islands where boats were built entirely from coconut tree products. But in the continental ports of Asia and Africa, this explanation is less persuasive.

Another possibility is that sewn ships have some advantages in places where there are few good harbors. In much of the Indian Ocean, ships are taken into estuaries and lagoons to be loaded and unloaded. When the tide goes out they are left high and dry, with the hull resting directly on the bottom rather than being supported by the water. This places a great strain on the hull. In a nailed hull, the nails pull against the planking, eventually pulling through, and the planking has to be replaced. In a sewn boat it is the stitching that stretches and has to be replaced, but the planking is spared. In support of this theory, it has been noted that the last use to which sewn boats were put was the mangrove trade. Until the 1930s sewn ships were used to harvest mangrove wood, which required that boats sail into shallow channels at high tide where they were grounded as the tide went out. However, people now harvest mangrove wood using boats with nailed hulls and still allow them to be beached high and dry. So, no one knows for sure why Indian Ocean sailors were so fond of sewn ships.

—Erik Gilbert

The ships that emerged between 1000 and 1500 were significantly different. Perhaps most important, they used a new type of sail called a lateen sail. The name “lateen” is an anglicized form of the word “latina,” the word used by Iberian sailors to distinguish between the square sail and the triangular sail they associated with

the “Latin” ports of the Mediterranean. Lateen sails may have been in use as early as the sixth century CE in the Mediterranean Sea, but they did not filter into the Indian Ocean until roughly 1000. There they proved revolutionary.

The lateen sail uses a short mast that rakes slightly forward. To that mast is attached a long spar that sits at a roughly 45-degree angle to the hull. To the spar is attached a cloth sail that is almost triangular except that it has a small foot that hangs below the spar. The virtue of the lateen sail is that it can handle wind from just about any direction with ease. It sails downwind as well as a square sail but can also sail quite well into the wind. The only real drawback of the lateen sail is that the heavy spar it requires is difficult to handle.

The other new technology during this age was the stern post rudder. With a rudder hung off of hinges attached directly to the stern of the vessel, ships could dispense with their fragile steering oars, and helmsmen could use the larger size of the rudder and the greater leverage of the tiller to exert more control over their vessels.

These two technologies made the sewn boats of the Indian Ocean ships capable of open-water voyages over considerable distances. Direct voyages from India to Africa or from Arabia to India became commonplace. These more seaworthy ships played a central role in the growing commerce of the Indian Ocean, making it one of the most economically and culturally vibrant places in the world. They made the Indian Ocean the first ocean where bulky staples, in addition to the luxury goods that were a more normal feature of oceanic trade, were routinely transported over long sea routes.

—Erik Gilbert

Bibliography

- Chaudhuri, K. N. *Trade and Civilization in the Indian Ocean*. Cambridge: Cambridge University Press, 1985.
- Hourani, G. F. *Arab Seafaring in the Indian Ocean in Ancient and Medieval Times*. 1962; reprint, Princeton, NJ: Princeton University Press, 1995.
- Ray, Himanshu. *The Archaeology of Seafaring in Ancient South Asia*. Cambridge: Cambridge University Press, 2003.

Chinese Naval Technology

Early in Chinese history, most vessels were designed for use in rivers and canals. But as China developed, so too did its naval technology, with increasingly larger and more sophisticated ships including oceangoing craft. China witnessed a number of major developments in nautical technology in the years spanned by the Yuan (1279–1368) and Ming dynasties (1368–1644). Earlier, as China expanded its maritime trade during the Song era (960–1279), especially the time of Southern Song (1127–1279), the need for both a merchant fleet and a navy arose. Initially, this trade involved Japan, Korea, and the coastal areas of Southeast Asia, and seagoing ships were likely developed during this period. Indeed, the Southern Song empire was the first to establish an independent Chinese navy. This was primarily organized for coastal defense and went on to operate in the East China Sea. Later, the supremacy of the Song naval force was challenged by the Mongols, who had developed a fleet, largely comprised of Korean seamen and vessels, that enabled the hitherto steppe-based Mongols to wage war on the sea against both Song China and Japan. The culmination was the Mongol navy’s destruction of a Chinese fleet off the coast of present-day Hong Kong in 1279 and the drowning death of the last Song emperor, the seven-year-old Bing Di.

After the collapse of the Song dynasty, China’s new Mongol, or Yuan, rulers began an intensive program of ship construction at a series of different shipyards in China and in Korea. The new navy was engaged in unsuccessful naval warfare against Japan in 1274 and 1281 and Java in 1292–1293. Ships designed for coastal defense as well as maritime cargo produced in this period allowed Yuan China to dominate the East and South China seas.

In the following Ming period, the Chinese developed a main defensive fleet at Nanjing as well as a maritime transport fleet of several thousand ships. Chinese vessels now ventured into the Indian Ocean in greater numbers than ever before. Both naval combat and commercial ventures naturally inspired technological development. The Chinese created sea charts, discov-

ered new methods of navigation, and put together nautical treatises that included information on tides, currents, and cartography. The Chinese also experimented with paddle-driven craft; different kinds of rigging, including the use of cotton sails instead of bamboo matting; and ship armor. For naval warfare, the Chinese developed incendiary weapons, rockets, and ramming devices. Some of these innovations dated back to the Song era.

The vessel that served as the basic type for all Chinese navigation was the junk. Strength was an essential feature of Chinese ships, since the whole region of Southeast Asia suffers from violent storms known as typhoons (literally, “big wind” in Chinese). Chinese ships were some of the first in the world to feature a bulkhead, a partition inside the hull that makes the hull rigid even under extreme pressure. The bulkhead was related to the development of watertight compartments, a Chinese innovation from the Song period that prevented a ship from becoming completely flooded if part of the hull was damaged. Evidence suggests that the Chinese developed this idea from their familiarity with bamboo, which when split lengthwise reveals separate rectangular compartments called *septa*.

Archaeological evidence indicates that a fifteenth-century Chinese junk was much larger than European ships of the period. Chinese junks were flat-bottomed, allowing them to operate in shallow waters. A flat bottom, however, would normally render a vessel unstable in rough open seas.

Regardless of this inherent flaw, China’s advanced naval technology allowed the Chinese to carry out extensive missions of exploration and trade. Some of the most famous voyages were carried out by the Ming dynasty admiral Zheng He between 1405 and 1433; these voyages extended as far as East Africa. Zheng He’s fleet also carried out missions into Southeast Asia, India, and Arabia.

Western observers were quite interested in the sophistication of Chinese naval technology. Two late-medieval Venetian travelers, Marco Polo and Nicolo de Conti, spoke of various features of ship construction in China, such as the use of watertight compartments. The fourteenth-

➤ THE FIFTEENTH-CENTURY JUNK

The term “junk” is applied to a certain type of Chinese sailing vessel that had its origins in the Han dynasty (202 BCE–220 CE) and was further developed during the Song dynasty as overseas trade expanded. Different types of junks were constructed for inland waterways and for the open ocean. The word “junk” is from the Malay term *jong*.

One of the most distinguishing characteristics of the junk is the setup of the sails. The sails are rectangular but with elliptical edges and have bamboo inserts called battens. These provide the sails with stiffness and allow them to be quickly and easily furled and unfurled with relatively simple rigging. The sails of the junk have a shape much like an airfoil, and this allows the ship to sail relatively easily in a variety of wind conditions. Chinese sail configurations were different from those of Western ships of the period, with a staggered design that allowed agile steering as well as easier loading and unloading of cargo on the decks.

Junks also had a number of other distinctive features. Watertight compartments, which could be reached by way of separate hatches, prevented a ship from sinking even if part of the hull had been breached. The sternpost rudder was developed very early in China; this is a flat board that can be lowered on a post at the stern of a ship when the vessel enters deep waters and allows for precise steering. Traditionally, junks were constructed without a keel, allowing them to operate in shallow waters. Therefore, the sternpost rudder served as both a rudder and a keel in the open ocean. Junks also had multiple masts, allowing a great number of sails and thus greater speed. The Ming dynasty saw the construction of some of the largest junks, some 400 feet (122 meters) in length, with a range of types being assembled for the voyages of the famed admiral Zheng He.

—Benjamin B. Olshin

century Islamic traveler and writer Ibn Battuta commented on the complex sail configurations used on Chinese ships as well as the sheer size of the vessels. In the twelfth century, the Chinese also possessed certain sophisticated navigational techniques, including the ability to determine

position through observation of the stars and the use of the magnetic compass. Early Chinese maps reveal an advanced knowledge of the Indian Ocean and even the peninsular shape of Africa well before European explorers had rounded the Cape of Good Hope.

Despite the power and sophistication of the Chinese fleet in the Ming era, the Chinese did not carry out many extensive overseas voyages after those of Zheng He. The fifteenth century would see the beginnings of European sea power, as English, Dutch, Portuguese, and Spanish fleets began to venture to Africa, Asia, and the Americas.

—Benjamin B. Olshin

Bibliography

- Chang, Kuei-Sheng. "The Maritime Scene in China at the Dawn of the Great European Discoveries." *Journal of the American Oriental Society* 94(3) (July–September 1974): 347–359.
- Donnelly, Ivon A. *Chinese Junks and Other Native Craft*. 3rd ed. Shanghai: Kelly and Walsh, 1939.
- Dreyer, Edward L. *Early Ming China: A Political History, 1355–1435*. Stanford, CA: Stanford University Press, 1982.
- Lavathes, Louise. *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–1433*. New York: Simon and Schuster, 1994.
- Lo, Jung-Pang. "The Emergence of China as a Seapower during the Late Sung and Early Yuan Periods." *The Far Eastern Quarterly* 14(4) (August 1955): 489–503.
- Maitland, Derek. *Setting Sails: A Tribute to the Chinese Junk*. Hong Kong: Publications Division, South China Morning Post, 1981.
- Mote, F. W. "China in the Age of Columbus." In *Circa 1492: Art in the Age of Exploration*, edited by Jay A. Levenson. New Haven, CT: Yale University Press; Washington, DC: National Gallery of Art, 1991.
- Needham, Joseph. *Science and Civilization in China*, Vol. 4, Part 3, *Civil Engineering and Nautics*. London: Cambridge University Press, 1971.
- Worcester, G. R. G. *The Floating Population in China: An Illustrated Record of the Junkmen and Their Boats on Sea and River*. Hong Kong: Vetch and Lee, 1970.
- Worcester, G. R. G. *Sail and Sweep in China: The History and Development of the Chinese Junk as Illustrated by the Collection of Junk Models in the Science Museum*. London: HMSO, 1966.

Innovations in Mediterranean Shipping

Mediterranean shipping went through considerable changes during the period 1000–1500 that ultimately led to the development of the full-rigged ship that made European transoceanic exploration possible. The Christian crusades, beginning in the eleventh century, and the Latin Europeans' recapturing of Mediterranean islands depended upon powerful navies for support; as Muslim naval strength in the Mediterranean weakened, that of the northern Italian city-states grew powerful.

Even though information about ships for the period 1000–1250 is scarce, there are some archaeological findings, written sources, and illustrations that cast a bit of light on the issue. It appears that Muslim and Byzantine shipping did not differ to any great extent, even though they used a variety of ship types, all carvel-built (hull planks lying edge to edge rather than overlapping, as with clinker-built vessels). The Byzantine merchant ship was usually quite small and was driven by a single lateen sail. It had a characteristic round appearance due to its curved stem posts and sternposts (the principal vertical timbers at the bow and stern) and became the model for most sailing ships until the end of the thirteenth century. The Muslims probably introduced a few ship types from the Red Sea and the Indian Ocean. The *tarida* may at first have been a reed canoe, but *tarida* later became the name of a small Genoese coastal trader equipped with oars and a large lateen sail. Another ship commonly used was the *carabi*, or *qarib*, a small and often undecked ship probably built after Byzantine design.

Galleys were the primary warship of the Mediterranean since antiquity, even though they could be used for transport and trade as well. The light galley, *galee sottili*, became the main warship in the navies of the Christian West, especially those of the Italian maritime cities. These narrow galleys cut through the water in pursuit of their enemies. They were about 130 feet (40 meters) long and were equipped with more than 50 oars on each side. The oars were pivoted from tholepins on an outrigger, which made the deck extend over the hull of the ship. Galleys

were often equipped with a curved beak, the *calcar*, instead of the traditional ram, or *rostrum*, favored in antiquity. The beak was fixed at the bow but was above the water line, so it could be used as a bridge when boarding enemy ships or to immobilize them by shattering oars and the upper hull. The galley had one mast with a lateen sail that was used whenever possible to rest the oarsmen, who otherwise operated one oar each.

Generally, galleys did not cross open sea but instead hugged the coastline. There are numerous examples of whole fleets going under in bad weather. Another reason to stay near land was the low stowage capacity of galleys. The large crew required huge quantities of fresh water and food, which could not be stored onboard the narrow ship. Oarsmen were often paid volunteers (or sometimes drafted free citizens) on Western galleys, while Byzantium and the Muslim states normally used conscripts. When the cost of employing oarsmen increased at the end of the fourteenth century—for instance, due to population decrease after the bubonic plague—it became more usual that convicts and prisoners of war manned the oars. No significant improvements were made on the war galley until the end of the thirteenth century, when a second mast was added together with a third oarsman per bench; earlier one or two oarsmen were used.

Italian shipyards, like the arsenal in Venice, derived from the Arabic *dar al-sina* (dockyard), went through substantial changes from the end of the eleventh century. New shipbuilding techniques were introduced, and a number of tools and other technical aids were developed. The skeleton system was introduced from Byzantium, meaning that ships were built upon frames and that the hull planking was added later. Construction of the keel needed highly skilled carpenters, whereas the planking and maintenance could be done by workers with less expertise, which led to a division of labor. During the thirteenth century planks were produced in frame-saws, which decreased the amount of spoiled wood compared with the earlier way of splitting logs. Tools like the auger, ax, and handsaw improved as well and enabled carpenters to construct ships faster and cheaper.

THE ISLAND TRADE ROUTES OF THE MEDITERRANEAN



Portolan chart of the Balkan coast, undated.
(Jupiterimages)

Trade between Europe, Africa, and coastal Southwest Asia was vital to the economies of these regions, but shipping was limited between late March and early November in order to avoid winter storms. The trade routes at sea followed the northern coastline, if possible, for a number of reasons. The chain of islands there provided shelter in bad weather and protection from corsairs. The islands also offered trade opportunities and the possibility to replenish supplies and fresh water. In addition, deep water, together with good visible landmarks, made navigation near land easier and safer. Even the currents and the wind made the northern routes more favorable. The North African coastline, on the other hand, was treacherous, with its rocky cliffs and reefs stretching out to sea. Because of their strategic importance, the islands of the Mediterranean, from the Balearic Islands in the far west to the islands off the coasts of Greece and Southwest Asia in the Far East, were constant objects of conflict and conquest.

—Roine Wiklund

Italian ships became larger, and new types developed during the thirteenth century in response to the Italians' intensified activities in the eastern Mediterranean, especially in regard to the crusader states. One innovation was the great galley, a merchant galley with three masts,

usually lateen-rigged but sometimes set with a square sail on the mainmast. The great galley was designed to proceed under sail, while oars were mainly used to enter and exit harbors. The new design with a high bow and hull made it more seaworthy than its predecessors, and it could sail the high seas and travel over the Atlantic to the important marketplaces in England and Flanders. Even the traditional round-ships evolved and were built with two or three masts erected upon two, often three, decks. Castles were erected at either end to accommodate passengers. However, sailing ships were still difficult to handle and had rather poor upwind capabilities.

Navigation improved throughout the period. During the eleventh century it was common to sail close to the coast and use landmarks for guidance. Another means was to study the position of the sun during the day and the stars at night, either with bare eyes or with the help of an astrolabe (Arabic *asthar-lab*, “to take a star”). Portolan charts—detailed coastal charts with marked directions for winds and currents—appeared in the thirteenth century. With the introduction of the compass during the twelfth century, from possibly China by way of the Islamic world (but there is no clear evidence of transmission), mariners knew the direction even if they were at sea on a cloudy night. Other aids were the hourglass and the knotted rope, which were used to measure the speed of the ship. A log tied to a rope with knots at regular intervals was thrown overboard, and as the log drifted astern the knots could be counted and timed by an hourglass.

The Northern European cog was known in the Mediterranean since the thirteenth century. It was totally different from the round-ship and had a single mast rigged with a square sail, straight stem posts and sternposts, and a single sternpost rudder, probably a Chinese invention adopted by the Muslims before it spread to Europe. While the cog had some advantages, it could not sail into the wind as well as lateen-rigged ships.

The caravel, probably originated from Arab fishing boats, developed in Portugal from the mid-thirteenth century. Caravels were up to 100 feet (30 meters) long and equipped with two

masts rigged with lateen sails. The ship was highly maneuverable and was used by Prince Henry the Navigator during the exploration of the African coastline during the fifteenth century. However, the ship could not carry enough supplies for longer voyages.

The two ship types northern cog and southern caravel merged, probably by Iberian shipbuilders, during the fourteenth century. On Pizigani's portolan chart from 1367 a new ship type was depicted with a square sail at the main mast and a lateen sail at the mizzen mast. It also had a curved stem post and a straight sternpost, where the rudder was mounted. This ship, the carrack (in Spanish *nao* and in Portuguese *nau*, meaning “ship”), was a large cargo ship but also had military abilities. High castles fore and aft provided good defense, while cannons presented a lethal threat to all adversaries. A third mast rigged with another square sail was introduced during the fifteenth century, making the carrack a full-rigger. Combined fleets of carracks and caravels carried European explorers like Columbus to America in 1492 and Vasco da Gama to India in 1498, beginning the European Age of Discovery.

—Roine Wiklund

Bibliography

- Al-Hassan, A. Y., and D. R. Hill. *Islamic Technology: An Illustrated History*. Cambridge: Cambridge University Press, 1986.
- Lewis, Archibald R. “The Islamic World and the Latin West, 1350–1500.” *Speculum* 65 (1990): 833–844.
- Pryor, J. H. *Geography, Technology, and War: Studies in the Maritime History of the Mediterranean, 649–1571*. Cambridge: Cambridge University Press, 1988.
- Rose, Susan. “Islam versus Christendom: The Naval Dimension, 1000–1600.” *Journal of Military History* 63 (1999): 561–578.
- Unger, R. W. *The Ship in the Medieval Economy, 600–1600*. London: Croom Helm, 1980.

Innovations in Atlantic Ships—Caravels, Naus, and Carracks in the Age of Discovery

The need to design and build seaworthy ships was one of the greatest challenges confronting the Europeans in the quest for overseas expansion.

To complicate matters, European ships around 1400 were generally inferior in design and construction to vessels in most parts of Asia. During the next hundred years a minor revolution took place in shipbuilding theory and technique, especially in southwestern Europe. These developments yielded new types of hybrid sailing vessels called the caravel, the *nau*, the carrack, and finally the galleon. The necessities of exploration and expanding empires largely determined these changes. The caravel was the ideal vessel for exploration and discovery and was used by both Vasco da Gama and Christopher Columbus. The square-rigged naus and even larger full-rigged carracks became the preferred vessels for transporting the goods of Asia and the Americas during the initial decades of the sixteenth century. The more powerful galleon served to protect such fleets and would come to symbolize the imperial power of Portugal and Spain by 1550.

The caravel, nau, and carrack all combined elements of Atlantic and Mediterranean ships as well as elements of Arab vessels sailing in the Indian Ocean. These ships possessed three masts (Mediterranean), a square main sail (Atlantic), and a lateen (Arabic) or triangular mizzen, or rear, sail. Of the three, the Portuguese initially concentrated on the caravel. The flush planked hulls of these ships, built skeleton first, made them very durable, while a length to breadth ratio of about 5:1 made them very seaworthy. Caravels were not particularly large, perhaps 65–80 feet (19–25 meters) in length and with a shallow draft that displaced between 80 and 130 tons of water. Caravels were far from comfortable. They were generally open to the elements, with perhaps one small cabin aft, and they could not carry many men, supplies, or weapons. Yet these vessels were ideally suited to the main work that was required in the Age of Discovery: exploring unknown coastlines and handling close to the wind. From about 1420 onward, caravels were used to great effect by the Portuguese exploring the Atlantic islands. Nevertheless, the caravel was not well suited for the demands of maintaining and protecting an empire. As naus and the larger carracks began to carry increasing numbers of guns, especially below deck, the caravel found itself increasingly supplanted by these more powerful, if initially less seaworthy, ships.

➤ THE PINTLE-AND-GUDGEON RUDDER

The pintle-and-gudgeon (PG) rudder is composed of a rudder fastened on the sternpost with iron bolts vertically inserted in the rudder and attached to rings in the stern, like three or more pairs of hinges. This system was developed in northern Europe, most likely during the eleventh century. As trade increased, the development of larger ships demanded a new steering system with better performance, which made the traditional use of fixed quarter rudders obsolete.

Sternpost-mounted quarter rudders had been known and used in Europe since the Late Roman period on barges traveling the Rhine, but the technique probably originates from ancient Egypt. The slung rudder used in China from the first century CE is another independent invention with a different suspension and steering mechanism compared to both the European and Arab systems.

The earliest depictions of PG rudders in Europe are from Norman baptismal fonts made in the second half of the twelfth century and on town seals from the thirteenth century. Ships equipped with quarter rudders were by 1252 distinguished from those having a stern-mounted PG rudder according to the Port Books of Damme in Flanders.

—Roine Wiklund

Between 1450 and 1500, caravels and the larger naus coexisted on voyages of discovery. Columbus's fleet consisted of a nau, the *Santa Maria*, and two caravels, the *Niña* and *Pinta*, while many Portuguese fleets, including that of Vasco da Gama, consisted of both naus and caravels. On these voyages the caravels carried dispatches between ships and explored rivers and coastlines, while the naus hauled most of the fleet's manpower, firepower, and supplies. By the early 1500s, however, these voyages of discovery were giving way to the needs of the growing empires of the Europeans in Asia and the Americas. For ships this meant the need for more cargo space and artillery mounted below deck, which in turn mandated larger and broader ships. Despite the fact that artillery pieces had been mounted on caravels by the Portuguese since

the 1450s, there were serious problems with adapting the caravel to large-scale naval combat. Above all, their relatively small size placed definite limits on the effective firepower of such vessels. As the need for larger, heavier, and more powerful shipborne cannon became more acute, first the full-rigged naus and then the carracks had clear advantages. Naus could carry more cargo than the caravel, and for the Portuguese and Spaniards, the larger the cargoes the better. In the early sixteenth century naus became more seaworthy, and this development spelled the death knell for the caravel. At the same time, the allure of rich Iberian cargoes to pirates and European rivals created the need to combine cargo-carrying and military capabilities. The carrack developed to fulfill this task. Possessing huge storage capacity, these ships were designed to overawe any and all attackers by presenting a

formidable defensive front. Carracks were built with extremely high castles fore and, to a lesser degree, aft. These ships also were probably the first sailing ships to mount heavy guns low in the hull behind watertight gun ports, and weapons were also manned from the crow's nests at the tops of the masts. The carrack projected a menacing appearance to all approaching ships.

—Glenn Ames

Bibliography

- Cipolla, Carlo M. *Guns, Sails and Empire: Technological Innovation and the Early Phases of European Expansion, 1400–1700*. New York: Pantheon, 1965.
- Guilmartin, John F., Jr. *Galleons and Galleys*. London: Cassell, 2002.
- Hutchinson, Gillian. *Medieval Ships and Shipping*. Rutherford, NJ: Fairleigh Dickinson University Press, 1994.

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World History Encyclopedia

Era 6: The First Global Age, 1450–1770 ■ Volume 11

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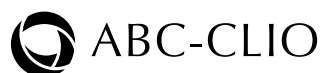
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 6 The First Global Age, 1450–1770

Introduction: Intensified Hemispheric Interactions

In March 1769 a merchant in a Boston coffeehouse in the British North American colony of Massachusetts could pick up a copy of *American Magazine* to read about the activities of French missionaries across the world in China. Sipping his Bohea tea plucked from the Blue Mountains above Canton, sniffing the aroma of coffee and chocolate carried from the Arabian port of Mocha, perhaps sprinkling cinnamon from India or nutmeg from the Spice Islands of the “great South Sea” over his beverage, he could ponder the “genius and customs of the inhabitants of China” described in the essay. He might consider how he was increasingly integrated into a global economy and a global culture, reflect on how this has emerged since Columbus’s accidental achievement, and wonder what connections the future would bring to the world.

How extensive were these encounters? *American Magazine*, read by our Boston reader in 1769, argued that the Chinese “have no opportunity of being acquainted with the different nations of Europe.” Although the report expressed a rough European admiration of China around 1800, the novelty of China diminished in Europe as a consequence of increased contact in Asia. As the subtitle for the volumes for this era suggests, the main theme of world history during this period was unprecedented patterns of contact and encounter among Asia, Africa, Europe, and the Americas. These contacts surely set the foundation for the imperialism of later eras, but historians debate the extent of the contacts as well as their effects on societal changes worldwide.

In 1450 the world was a very different place from today. There were no modern nation-states, and Europe did not hold any worldwide economic or political power, which was largely in the hands of Asian states, especially China and India. Asian political and economic activity was delineated by the four great trade corridors of the time, incorporating many specific routes that linked an Afro-Eurasian economy with the Mediterranean, central and east Asia, and south and southeast Asia. A northern caravan route led from the Black Sea through central Asian lands to China, although this route had diminished by about 1350. A central route connected the Mediterranean Sea and the Indian Ocean, with caravans crossing Baghdad and the Middle Eastern deserts and ships carrying trade across the Persian Gulf and the Indian Ocean. Southern caravans followed a route from Mamluk Cairo through the Red Sea to the Indian Ocean and points east, while the great trans-Saharan route connected North Africa with the savanna states of the south. Yet by the end of the era in 1770, vessels crisscrossed the world’s oceans regularly,

linking Asia, Africa, Europe, Oceania, and the Americas. The establishment and intensification of interregional trade connections among these world regions was one of the most important developments of this era. Equally important, in this period a modern political and social consciousness emerged that redefined the world politically, intellectually, and socially.

Socially, most human societies were divided into social classes and hierarchies characterized by unequal access to power, privilege, and other resources. These divisions often took the form of elaborate ideological systems based on shared religious beliefs. The medieval concept of dividing human society into three orders of those who pray, fight, and work (clergy, nobility, and the rest, respectively) experienced a major transformation. Although formation of social groups and classes bore peculiar marks of indigenous customs and traditions, some general observations can still be made. Whether in Africa, Asia, the Americas, or Europe, at the top of most social pyramids were emperors, kings, and sovereigns of various kinds. Their families, augmented by a large aristocracy, comprised a social group by themselves, and their internal struggles were frequently the source of much political (and social) conflict. Beneath them we can identify several groups that were common to most societies: religious officials and authorities, state officials and administrators, soldiers and servants, merchants and artisans, free peasants, and slaves and serfs. Naturally these were not rigid categories, and some often overlapped or blended together or were missing completely. Thus, in Europe successful merchants often bought titles and meshed with the aristocracy; in the Ottoman empire and Mughal India, state officials could also be religious leaders; in Ming China, landowning aristocrats were largely absent.

Most historians agree that the period between 1450 and 1500 marked a turning point in world history. The once-mighty Abbasid caliphate had passed away, as did the Mongol empire with its famous Pax Mongolica (Mongol Peace) that facilitated commerce and communication between East and West for about a century between roughly 1260 and 1360. They were replaced by a host of new powers, the most important being the Ottoman Turks, who conquered Anatolia (present-day Asiatic Turkey), established a large foothold in southeastern Europe, and finally destroyed the last vestiges of the Byzantine empire in 1453. Just 50 years later another major Muslim power rose in Iran, where the Safavid dynasty was established, and in 1526 the Mughals, descendants of Chinggis Khan and Tamerlane (Timur) out of present-day Afghanistan, seized power in northern India. In China, the Ming dynasty (1368–1644), which came to power following the expulsion of the Mongols, raised the Chinese state, commerce, and culture to new levels, probably best reflected in a series of major expeditions launched to various corners of Asia and East Africa starting in 1405. These expeditions were ended by imperial decree in 1433. Although this decision did not isolate China from the outside world, it nevertheless put an end to Chinese efforts to actively conduct maritime exploration and instead concentrated on eastern central Asia. Yet historians, mainly Western scholars trained at Western universities, traditionally have written the story of this era

as the “rise of the West.” Enamored of Western progress in technology and organization, scholars have often shaped the story to highlight European advancement and expansion. These assumptions about a narrative of European power stem from our location as well as our need to understand our history. However, utilizing a narrative of European dominance has influenced our criteria for choosing what is relevant to this history. It has helped us form a master narrative, a grand schema for organizing the interpretation and writing of history. Therefore, in order to better understand the entire world in the early modern era, we need to consider alternative narratives to historical development during this time, narratives that draw from regions outside of Europe.

Therefore, in order to better understand the entire world in the early modern era, we need to consider alternative narratives to historical development during this time, narratives that draw from regions outside of Europe.

Indeed, recent research has challenged the conventional story, and a new generation of historians has developed more sophisticated narratives. They have moved beyond the nation-state as the central actor in these narratives to embrace oceans. In addition, historical research illustrates how the assumption of a European exceptionalism during this time is inadequate and incorrect and that there were concurrent economic and political developments in Asia and Europe some 500 years ago.

Population and Land

Evaluating world population changes offers important insights into the early modern era. The world population doubled during the three centuries covered in this volume. But determining a precise number of people living in the world presents a difficult problem. Even today, despite modern census techniques and technological advances, estimates of the world population still have some margin of error, so one can only imagine the challenge of ascertaining population in the early modern era. Most scholars agree that around 1400 the world population was between 350 million and 400 million, and by 1800 it doubled to about 700 million to 750 million. China and Europe each contained about a quarter of the world population.

Human population changes were not uniform around the world. Looking at western Europe, three broad periods of population expansion can be established. Its population rose significantly between 1100 and 1300. The arrival of the bubonic plague in 1347–1348 reduced Europe’s population by 45 to 50 percent within a few years, but the population grew again by 1450 and continued its rapid increase until around 1650. However, other regions of the world experienced completely different demographic dynamics in this period. The population of the Americas was probably around 100 million by the late fifteenth century, but it experienced a catastrophic decline following Christopher Columbus’s voyage to America in 1492. The native population of central Mexico is estimated to have declined from over 25 million in the early sixteenth

century to about 1 million a century later. Similarly, sub-Saharan western Africa suffered a long drain on its population as a result of the European slave trade that began in earnest in the sixteenth century. These slaves were brought to both North and South America. Thus, by the end of the eighteenth century, Brazil had about 2 million blacks in a population of 3.25 million people, while the newly established United States of America's census of 1790 showed that blacks represented almost 20 percent of its population of 3.9 million people. Nevertheless, the introduction of new crops from the Americas helped offset Africa's population loss, and sub-Saharan Africa also experienced a population upsurge.

Between the fifteenth and eighteenth centuries the vast majority of humans worked in agriculture, with 80 to 90 percent of people living from the land. Therefore, human lives were subject to the rhythm and quality of harvests, which in turn depended on climatic changes. As a result, human population was influenced by climatic rhythms. In the fourteenth century there was a global cooling in the Northern Hemisphere, with winters becoming colder and more severe. As a result, the Viking colonization of Greenland ended. Another Little Ice Age, as this cooling down became known, occurred between the late seventeenth and early eighteenth centuries. In Europe this cooling meant that snow and ice remained in fields until late in the year, and grains and vegetables no longer had time to ripen. In the 1690s western Europe experienced the coldest decades in 700 years, which resulted in widespread famine, misery, and unrest as peasant uprisings shook some of France's provinces.

The Islamic World

Three significant Muslim empires emerged in the fifteenth and sixteenth centuries: the Ottomans centered in the heart of the former Byzantine empire, the Safavids in Persia (Iran), and the Mughals in India. These three so-called gunpowder empires employed advanced military technology and organization to rule lands that extended from Europe and North Africa to Southeast Asia. As a result, the empires combined to dominate most of Afro-Eurasian trade at that time. Thus, Europeans admired and feared the power of Muslim empires. After the fall of Constantinople (present-day Istanbul) in 1453 (and the reformulation of the city as the capital of the Ottoman empire), the Ottomans spread their reach to the gates of Vienna less than a century later. By 1600 the Safavid empire became a formidable opponent of the Ottomans, controlling a vast territory from Afghanistan to Iraq. Farther east, the Mughals controlled most of the Indian subcontinent and parts of Afghanistan, while small Islamic khanates controlled much of western and eastern central Asia.

In this major portion of Dar al-Islam (the Abode of Islam, namely lands under Muslim rule), we see many political, social, and intellectual developments. In addition to acquiring vast territories of the known world, these Muslim empires supported impressive artistic and cultural achievements, represented in literature, art, and architecture. For example, the Ottomans adopted and strengthened the rich historical tradition that had flourished since the early Muslim empires. In the fifteenth

century they commissioned historians to write official chronicles and, by the end of the seventeenth century, established an Imperial Historiographer. The distinctive Ottoman architectural style incorporated the Byzantine architectural tradition, as seen in such masterpieces as Sinan's Suleiman Mosque in Constantinople (Istanbul). In India, Mughal art and architecture blended Iranian and Indian styles, as most famously expressed in the Taj Mahal. And when we study the Ottomans and Mughals we learn about a remarkable level of tolerance, as non-Muslims were central to the economic success of these empires.

The expansion of Indian Ocean trade linked the Ottomans, Safavids, and Mughals to China and Southeast Asia. The fifteenth through seventeenth centuries were a particularly dynamic period of contact and encounter in Southeast Asia, the "land below the winds," as commercial engagement established the early contours of a global economy. South and Southeast Asia produced the cloves, nutmeg, pepper, and other spices that drove long-distance trade, essential to the commercial boom of the time, and the cities and seaports of the region were centers of economic and cultural vitality. Trafficking in the region's spices seems to have surged suddenly around 1400 and continued to expand with growing demand in Europe and China. This trade brought enormous wealth to India and China and also facilitated the spread of religion. Following earlier trade routes, Muslim traders brought goods as well as religion to Southeast Asian centers such as Malacca.

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The Ottomans

By the late sixteenth century the Ottoman empire was one of the most powerful empires in the world. It began as a small principality in western Anatolia (Turkey) that pursued aggressive expansionist policies in the fourteenth century. Claiming the title of *ghazi* (holy warrior), the Ottoman leaders turned the concept of the jihad (holy war) into one of the major components of their foreign policy and gradually absorbed neighboring peoples and states in Anatolia and the Balkans. Under the reign of Sultan Mehmed II (r. 1451–1481) the Ottomans rapidly expanded. With almost all of Anatolia under his control, Mehmed II besieged Constantinople, the capital of the once-mighty Byzantine empire, and captured it in May 1453. The six-week siege of Constantinople is one of the most dramatic and consequential events in world history. It marked the end of a 1,000-year-old eastern Roman, or Byzantine, empire and the beginning of the imperial phase of the Ottoman state. The loss of Constantinople also exposed eastern Europe to a new wave of Ottoman expansion.

Sultan Selim I (r. 1512–1520) led triumphant campaigns in the east, defeating the Iranians in 1514 and capturing Syria and Palestine in 1516

and Egypt in 1517. By the end of his rule the Ottoman state extended from Iraq to Serbia and from Anatolia to Tunisia. His son Suleiman (r. 1520–1566) only further enhanced Ottoman power as he led his armies on 13 major campaigns and numerous minor ones. In 1526 he crushed a Hungarian army at Mohacs; three years later he besieged (unsuccessfully) the Austrian capital of Vienna and secured Ottoman dominance in the eastern Mediterranean. Beside military achievements, Suleiman's reign saw major legal and administrative reforms, which earned him the Turkish title “Kanuni” (the Law-giver) throughout the empire. His reign also witnessed extraordinary literary, artistic, and architectural flowering. Thus, Piri Reis, the geographer and cartographer, produced maps of the world that had a level of accuracy unparalleled for their time. Sinan, a contemporary of Michelangelo whose architectural skills he rivaled, produced over 300 masterpieces—mosques, schools, hospitals, etc., that revitalized Islamic architecture. The grandeur of the Ottoman state so impressed Europeans that they called Suleiman “the Magnificent.”

Suleiman's reign proved to be the Golden Age for the Ottoman empire, as new challenges arose over the subsequent two centuries. The Ottoman empire saw a series of less able rulers who failed to maintain their predecessors' policies. The Janissaries, elite troops of male Christian children levied through the *devşirme* system (a tax also known as the child-collection tax, in which Christian boys from the Balkans and Anatolia were taken from their homes, enslaved, and converted to Islam), came to wield such prestige and influence that they dominated the government and blocked any reforms that threatened their status. More importantly, the European Age of Discovery had a profound effect on the Ottomans. As European merchants discovered direct sea routes to Asia, international trade, which previously passed over the Ottoman empire, shifted to oceanic routes. The Ottoman state lost vast revenues as a result. Ottoman guilds and craft industries failed to modernize and often resisted change, which led to their falling behind European competitors. Increasingly, Europeans turned to the Ottoman empire as a source for raw material, which Europeans used to manufacture goods and sell them back to the Ottomans, undermining Ottoman industries. The Ottoman government only facilitated this process by approving special commercial agreements, known as capitulations, with Europeans. Starting in the mid-sixteenth century, a series of capitulations exempted European merchants from Ottoman laws and taxes and eventually ensured their dominance over Ottoman trade and manufacturing.

In the seventeenth and eighteenth centuries the Ottomans did show occasional glimpses of past grandeur while responding to political and economic challenges. During the tenure of the capable grand viziers from the Koprulu family, major domestic reforms and vigorous foreign policies were attempted, but they ultimately failed to produce decisive results. The second Ottoman siege of Vienna in 1683 was the last time that the Ottomans seriously threatened central Europe. The subsequent Treaty of Karlowitz (1699) marked a turning point in Ottoman history, as Sultan Mustafa II (r. 1695–1703) was forced to surrender Hungary and Transylvania to Austria. This event is often considered to

be the beginning of the long decline of the Ottoman empire. In the eighteenth century the Ottomans were engaged in prolonged conflicts against European states—most importantly against the rising Russian empire which fought the Ottomans five times within that century—that exhausted Ottoman treasuries and contributed to internal turmoil.

Safavid Persia

In the early sixteenth century the Ottoman empire saw the rise of a powerful competitor in Persia (Iran). After a prolonged dominance by Arabs and Mongols, Iran emerged as a powerful state under the leadership of the Safavid dynasty. Founded by Ismail (r. 1501–1524), the Safavids embraced Shia Islam (as opposed to the Sunni Ottomans) and gradually united all of Iran under their rule. Yet this process was wrought with challenges. In 1514 Sultan

Selim I routed Ismail's army at Chaldiran, and in the mid-sixteenth century repeated Ottoman attacks kept Safavid power in check. The Safavids drastically changed with the accession of Shah Abbas to the throne in 1587. A brilliant statesman and commander, Shah Abbas presided over a rapid territorial expansion and a cultural and economic blossoming. To consolidate his rule, he began a systematic inclusion

of Georgians and Armenians in his newly established standing army of slave-soldiers known as ghulams, which he used to suppress domestic revolts and coerce disloyal provinces into submission. In 1598 he established contacts with England after an English trade delegation arrived seeking a commercial partnership. With these contacts Abbas greatly expanded and modernized his army, which he then used to expand his sphere of influence to Georgia, Armenia, Afghanistan, Kurdistan, and Azerbaijan. Iranian forces also crossed the Straits of Hormuz and occupied Oman. In 1623 as the Ottoman empire suffered internal turmoil, Abbas invaded Iraq and Anatolia, capturing Diyarbakir, Baghdad, and Mosul. By then the Safavid state was at its greatest territorial extent.

Shah Abbas facilitated the development of Iranian craft industries and trade. During his campaigns in the Caucasus he resettled tens of thousands of Georgians and Armenians in Iran, where they helped to develop agriculture, trade, and various industries. He transferred the capital from Qazvin to Isfahan, turning it into a thriving center of arts, craft-based industry, and commerce. Visiting this city, the European traveler John Fryer was dazzled by Isfahan's markets, noting that the city was "the surprisingest piece of Greatness in Honour of Commerce the whole World can boast of, our Burses [markets] being but Snaps of Buildings to these famous Buzzars."

Shah Abbas's death in 1629, however, was a watershed moment in Iran's history. Similar to the Ottomans, Abbas ended the practice of sending royal princes to govern provinces, and consequently most shahs

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after him lacked the necessary skills and experience. By the 1720s the country was torn by vicious civil strife, as various pretenders fought for the Crown. Nadir Khan of the Afshar tribe emerged the victor in this conflict, and in 1736 he proclaimed himself shah. Nadir was a brilliant military commander whose campaigns revived an Iranian empire. Despite his successes, Nadir came to be regarded as a cruel and capricious tyrant and faced a number of internal revolts and conspiracies, one of which resulted in his assassination in 1747. His death plunged Iran into a civil war once more that continued for three years and led to the rise of the Zand dynasty. Although its founder Karim Khan proved himself a capable commander who reclaimed all of Iran by 1760, his success was fleeting, and political disorder and economic decline again characterized Iranian life. His death in 1779 led to another round of violence that further weakened the Iranian state.

Mughal India

By 1450, there had been a long presence of Muslim communities in South Asia. One of the most influential Muslim kingdoms in the region was the Delhi Sultanate, an empire that ruled large parts of northern India from approximately 1206 until 1526. In 1526 a ruler from Kabul named Babur defeated the last sultan of Delhi and established what would become one of the most prominent, wealthy, and powerful empires in the early modern world, the Mughal empire. Babur only ruled the empire for a few years, but his descendants helped to build an empire that at its height ruled almost the entire Indian subcontinent with impressive political and cultural achievements.

The Mughals developed an empire with an advanced military, new administrative structures, and extensive cultural and artistic developments. Many of these achievements began during the rule of Akbar, who ascended to the throne as a teenager in 1556. He ruled until 1605 and became a defining leader of the empire. Akbar expanded the territory of the empire to include large parts of northern India. His father, Humayun, developed an interest in Persian art, literature, and culture when he was forced to flee to Persia (Iran) during part of his reign. This double connection between Persian and Indian cultures and Islam and Hinduism helped to define the empire, and Akbar and his descendants continued to support new systems of art, culture, and architecture. The Mughals encouraged an artistic and aesthetic courtly culture, patronizing music, court poets, and a new genre of painting. Architecture became an important legacy of the Mughals as well. The emperor Shah Jahan (r. 1628–1658) presided over many architectural accomplishments, including patronizing the building of the capital at Delhi and the famous Taj Mahal.

The Mughals ruled a territory that included a diverse group of people, and most were Hindu. As a result they developed a sophisticated approach to religious issues. The Mughals were realistic Muslim leaders who treated Hindus as *dhimmis* (protected groups). In addition, a substantial number of Hindus served in the Mughal administration,

including the imperial cabinet or as royal advisers. Under Akbar, special taxes on non-Muslims were repealed. In addition, Mughal rulers sought interfaith marriages in order to develop ties to different communities. Akbar's interest in interfaith dialogue became the basis for his *ibadat khana* ("house of worship"), a place where representatives of various religions, including Jesuit missionaries from Europe, were invited to engage in debates and discussion. As a result of these developments the Mughal empire encouraged a fusion of cultures, religions, and ideas. Even under Aurangzeb (1568–1707), a leader known for a more conservative approach to Islam, Hindus were still vital to the administration.

The Mughal empire eventually included most of South Asia under the rule of Aurangzeb by the late 1600s. Their political, military, and cultural success drew the interest of people worldwide, and European travelers were amazed at the wealth and power of the Mughals. After Aurangzeb's death, Mughal rulers increasingly relied upon regional leaders to maintain the empire. By the middle of the eighteenth century the British East India Company, a corporation that formed to take part in the spice trade, became the administrator in several areas under Mughal authority. Yet the empire lasted until 1858 and served as a model for various empires in the early modern era.

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East Asia

China

One of the defining moments in Chinese history took place in the thirteenth century when the Mongols penetrated China's defenses and conquered its vast territories, establishing the Yuan dynasty that ruled China until 1368. Mongol repression, economic difficulties, and social changes eventually combined to cause the Red Turban Rebellion, which overthrew Mongol rule and established the Ming dynasty (1368–1644). Begun by the Red Turban leader Zhu Yuanzhang, who became Emperor Hongwu (r. 1368–1398), the new dynasty remained in power for over 250 years and initially achieved a remarkable revival of the country. Before the Ming dynasty years of turmoil led to economic chaos in some regions of China, where irrigation systems were damaged, vast farmlands were abandoned, and commerce was interrupted. The Ming dynasty succeeded in reviving agriculture, in large part by pushing through improvements in rice cultivation. The dynasty promoted repopulation of devastated regions and practiced massive resettlements that moved tens of thousands of people to reclaim vast tracts of land. Reforestation was another component of the Ming agricultural reforms, and from the late fourteenth century through the fifteenth century millions of trees were planted throughout the empire; some scholars estimate that up to 1 billion trees were planted in Hongwu's reign alone. These policies had a

profound effect on the Chinese society. Increased food production led to population growth, which in turn led to the growth of Chinese cities. This increased urbanization promoted trade and commerce, as markets developed in these expanding towns and cities. The Ming rulers also promoted development of certain industries, and the manufacturing of silk, other textiles, and porcelains reached new heights. Periodic census and land surveys helped government officials to pursue more efficient governance and increased tax collection. Civil service examinations, which every civil official had to pass, ensured the existence of an efficient administration. Chinese society was divided into major social categories, and at birth every person was listed in a social group based on his or her father's occupation. To maintain their power, the Ming rulers also utilized a secret police that was dominated by eunuchs, some of whom—Wang Zhi (late fifteenth century), Liu Jin (sixteenth century), and Wei Zhongxian (early seventeenth century)—rose to the pinnacle of the Ming government.

Ming foreign policy sought to isolate China from the outside world, which the later Ming rulers perceived as a threat. Thus, the Great Wall was reinforced and expanded in the north, and free contacts with foreign merchants were prohibited in eastern and southern ports. One of the most dramatic episodes of the era took place in the early fifteenth century when the Ming rulers embarked on major maritime expansion. Led by Admiral Zheng He, the Chinese fleet, featuring some of the largest ships ever created (which were only fit for the relatively calm waters of the Indian Ocean), sailed throughout the Indian Ocean, extending the prestige of the Ming dynasty and reestablishing commercial contacts with Southeast Asian and African states. Remarkably, upon completion of the last voyage this unique fleet was scuttled and destroyed as the Ming rulers reverted to a policy of isolation. The start of the European Age of Expansion, however, meant that China became an active part of the emerging global economy. Europeans showed great demand for exquisite Chinese products and were willing to pay for them in silver. As some studies show, up to half of all silver mined in the Americas between 1527 and 1821 eventually ended up in China. In the late sixteenth century and the seventeenth century China's population almost doubled, the economy showed remarkable vibrancy, and certain

manufacturing—silk, porcelain, printing, steel, etc.—even showed signs of industrial development.

Yet despite such a thriving economy and growing mercantile society, the Ming dynasty faced economic, political, and military problems. Bitter power struggles undermined the dynasty from inside. Unlike Hongwu's fiscal restraint that had

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benefited the state, his successors pursued opulence and extravagance, probably best exemplified in the building of the famous Forbidden City in the fifteenth century. A massive complex of over 900 buildings that hosted thousands of people, its grandeur far surpassed that of any

European palace, but such profligacy also placed great financial burden on the treasury. The social categories that Hongwu established in the fourteenth century broke down. External threats mounted as the Manchus, a Tungusic people in Manchuria, harassed Chinese borders in the north, and the Japanese and Koreans did the same in the south-east. Maintenance of a large army to face these threats and maintain domestic order placed a heavy burden on the economy; many troops, with their pay in arrears, left the ranks and either became outlaws or joined the Manchus. Tax increases only fostered discontent, and anti-tax tumults occurred in major commercial centers of the kingdom. The nature of the Ming emperorship also posed a great problem, since the rulers tended to concentrate on performing and participating in time-honored imperial ceremonies rather than on actual governance. By the seventeenth century the actual political power was largely in the hands of high court officials whose policies only precipitated crisis. In 1644 the Manchus invaded China, overthrew the Ming dynasty, and gained control of all of China.

The Qing dynasty, which the Manchus established and which ruled until 1912, retained most of the Ming government's structure. The Manchus themselves maintained a privileged status and held some high positions but retained the earlier tradition of civil examinations for officials. The reigns of Kangxi (1662–1722) and Qianlong (1736–1795) marked the height of the Qing dynasty. The Chinese emperors controlled one of the largest empires in the world that stretched from Manchuria to Tibet and claimed tribute from many states in Southeast Asia. The emperors cultivated arts and literature, pursued new agriculture improvements, and successfully dealt with foreign threats.

Japan

By the fifteenth century Japan was controlled by the Ashikaga Shogunate, which was established in 1336. Although officially led by an emperor, real power lay in the hands of shoguns (generalissimos). This period saw increased fragmentation of Japan as various daimyos, or lords, sought greater independence. Around 1450, some 250 daimyos held power in various provinces of Japan. Their increased rivalry and a dispute over shogunal succession eventually caused the Onin War, a decade-long conflict that resulted in one of the most devastating eras in Japanese history. The era of the Warring States was a period of nearly continuous military conflict and profound social and political upheaval that lasted until the early seventeenth century. It greatly weakened the central authority of the shoguns and produced a major social change, known as *gekokujo*, when men from lower strata rose to high positions. The introduction of European firearms in the mid-sixteenth century proved to be a turning point in the Japanese civil strife. Oda Nabunaga, a samurai of the lesser daimyo ranks, used this new military technology to defeat neighboring lords and extend his power to a large part of Japan including the capital of Kyoto, which

he seized in 1568. Over the next 32 years Japan experienced rapid and dynamic change as several powerful lords struggled for control of the entire country. In 1575 Nobunaga again skillfully utilized firearms to crush his opponents in the decisive Battle of Nagashino, which gave him control of eastern and northern Japan. His campaigns against Buddhist temple-fortresses that rejected his authority led to the destruction of many temples and monasteries, whose wealth in turn financed further campaigns. Nobunaga also showed himself as a skilled statesman, as he developed government machinery, standardized currency, promoted construction especially of castles to exert his authority over the countryside, and fostered trade and commerce. He turned the small seaside village of Nagasaki into an important commercial center for trade with European merchants.

In 1582 Nobunaga was assassinated by one of his retainers and was succeeded by one of his generals, Toyotomi Hideyoshi. A talented military commander, Hideyoshi played an important role in the eventual unification of Japan. In 1582 he seized the Takamatsu fortress and the Mori province it controlled and later secured the island of Kyushu in southern Japan. He conducted a massive survey of all of Japan, which his officials used to establish taxes and military quotas. Although his two invasions of Korea between 1592 and 1598 proved to be disastrous for the Japanese, by the time he died Hideyoshi left a highly centralized state that ruled over Japan. His death provoked a power struggle among several pretenders that was won by Tokugawa Ieyasu in the decisive Battle of Sekigahara in 1600.

Tokugawa's victory marked the beginning of the Tokugawa shogunate that lasted until 1868. While the emperor retained sovereign authority, the real authority and power was in the hands of the Tokugawa shoguns who ruled the country from their capital at Edo (Tokyo). They established a highly centralized government that ruled over a strictly hierarchical society divided into four social groups (court nobles, samurai, merchants, and peasants). To safeguard their authority, the shoguns suppressed any domestic or foreign threats. The latter primarily came from Europeans, who pursued trade and missionary activity in Japan. The number of Roman Catholic converts rapidly increased, and many

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of them participated in revolts against the shogun's authority such as the 1637 revolt in northern Kyushu, which was heavily Catholic. The shoguns thus came to associate Christianity with a threat to their power and took actions to fight it. Christians, largely Catholic Japanese, were persecuted, and European priests were expelled. Starting around 1636, the shoguns

put in place the so-called *sakoku* policies that forbade foreigners from entering the country and virtually sealed off Japan to outside influence. Only the port of Nagasaki was left open to the Dutch but only for a short period of time. Over the next 200 years the Tokugawa regime brought peace, stability, and economic growth to Japan.

Sub-Saharan Africa

By the mid-fifteenth century sub-Saharan Africa was a vibrant region that included both large and powerful kingdoms and smaller but flourishing societies united by family or kinship ties. The African states spanned almost the entire continent, with the kingdoms of Mali in West Africa and Songhai, Kanem-Bornu, and Hausaland in central Africa, while Ethiopia and the famous Swahili city-states prospered along the eastern coastline of Africa.

West Africa

West Africa had long served as an important trade region where caravans from North Africa and the Middle East traded with local states. The region was initially dominated by the kingdoms of Ghana and Mali, but by the fifteenth century several new states emerged. Thus, the state of Wolof gained its independence from Mali in the north, while Kantora remained under Malian influence in the south. These states usually had a well-defined government hierarchy, with a king, often elected by nobility, presiding over the state. But not all sub-Saharan peoples had formed states, and many lived in stateless societies led by family or clan elders. These societies were agrarian in nature, and the cultivation of land was the primary occupation of its members. Families helped each other in clearing land from surrounding forest, cultivating it, and gathering harvest. In Senegambia, a region between the Senegal and Gambia rivers, millet, sorghum, and yams were the staple food, supplemented with plantains, beans, fish, and small game, while in the south, along the coast of Guinea, rice played an important part in daily life. As Robert W. July, a prominent scholar of precolonial Africa noted, “life was simple, government was largely limited to the settlement of disputes by family heads or elders, the basic economy scarcely more than the production and consumption of food, social life centered on the ceremony accompanying birth, death and family alliance.”

In the fifteenth century a new powerful state, the kingdom of Benin, emerged in present-day Nigeria. Ruled by an oba (divine king), the Benin kingdom came to prominence under the leadership of the Oba Ewuare (ca. 1440–1473), who overcame tribal and village chiefs (uzama) to centralize his authority and considerably expanded his realm's borders. His successors Ozolua (1481–1504) and Esigie (1504–1517) continued his policies. At its height in the sixteenth century the kingdom of Benin controlled a vast territory between the Niger River in the east and Yoruba country in the west. In 1485 the Portuguese reached this region, and the ensuing profitable trade in spices (primarily pepper) and slaves further strengthened Benin. Its capital, Benin City, became one of the great urban centers in Africa, a city of 25 miles in circumference protected by walls and intersected by numerous streets and avenues. The city was divided into two sections, the larger for the town's residents and the smaller for the elite and royalty. As trade flourished so did the arts, and the Benin craftsmen refined their skills with copper

and brass, producing elaborate pieces of art. These Benin bronzes, magnificent in their craftsmanship, vividly conveyed the oba's power and authority and also recorded tradition and folk tales. Sadly, nothing remains today of this glorious city. In 1897 a British expeditionary force led by Admiral Sir Harry Rawson conquered and destroyed the city and much of its famous buildings and treasured art.

To the north of Benin lay Songhai, a successor state of Ghana and Mali. Songhai was the last of the three great empires of the western Sudan. It was founded under the leadership of Sonni Ali (r. 1464–1492) when Songhai authority extended to almost the entire basin of the Niger River, including the famous Timbuktu. Sonni Ali showed himself as a talented military and political leader who divided his empire into provinces, established a navy (led by a commander known as the hi-koy), and promoted trade. Upon his death a power struggle between his successors ensued, which ended in the victory of Muhammad Ture, a devout Muslim of Soninke origin, who soon took the title “Askiya” (Great Leader). Askiya Muhammad I Ture (r. 1493–1538) completed the expansionist and administrative policies of his predecessor. He conducted wide-ranging campaigns that brought new regions under Songhai authority. A convert to Islam, he made a hajj (pilgrimage) to Mecca and used Islam to unite his far-flung empire. After his successful wars of expansion, Ture reorganized the administrative system set up by Sonni Ali. Ture divided the empire into four vice royalties, each under a viceroy or governor usually chosen from the royal family or a trusted servant. He established a council of ministers and replaced local Songhai officials with more efficient Arab ones. Under the leadership of Muhammad Ture, Songhai enjoyed an economic prosperity, and visitors remarked on its abundant food supplies and vibrant trade. European and North African commodities (clothes, perfumes, copperware, glass, etc.) were in high demand and were delivered by European and Muslim merchants. Following their expulsion from Spain in 1492 a large number of Jews came to Songhai, where they quickly became involved in trade. Muhammad Ture

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revived Timbuktu as an important educational and Islamic center, and its reputation soon drew many Muslim scholars and clerics for educational pursuits as well as for trade. In 1513 Leo Africanus visited the town and was struck by “a great store of doctors, judges, priests, and other learned men that are bountifully maintained at the King's court.” After a 35-year reign the

aged Muhammad Ture, known as Askiya the Great to later generations, was deposed by his children in 1528. His successors failed to live up to his legacy, and the Songhai state quickly declined amid internal dissent and political turmoil before being finally destroyed by the invasion of the Moroccan sultan al-Mansur in 1591. In the aftermath the once-great empire split into numerous small kingdoms.

To the east of Songhai prospered the kingdom of Kanem-Bornu. By the fifteenth century the state of Kanem, founded by the Kanuri, a mixture of people from south of the Sahara and Berbers from the north,

existed already for some 600 years. However, in the mid-1400s the weakened Kanem was absorbed by the rising power of the Bornu state, leading to the establishment of the powerful kingdom of Kanem-Bornu. Throughout the sixteenth century the kingdom rapidly expanded under a succession of able mais (kings), the greatest of whom was Idris Alawma (r. ca. 1571–1603). His victorious campaigns greatly expanded the kingdom's territory, while shrewd domestic policies resulted in a centralized state administration and profitable trade. A devout Muslim, Idris Alawma built mosques at his capital city of N'gazargamu and introduced Islamic law in place of African customary laws. However, as often happens, Alawma's successors proved to be less capable, and the kingdom gradually declined and was later absorbed into the French West African empire.

East Africa

In East Africa, the Christian kingdom of Ethiopia along the Horn of Africa enjoyed a revival under the ruling Solomonid dynasty, which controlled a vast territory from the Red Sea port city of Massawa in the north (in present-day Eritria) south to Shoa in the central highlands. Under the reign of Amda Seyon (r. 1312–1342) and his successors Ethiopia embarked on a major campaign of expansion, which brought it into a prolonged conflict with the neighboring Muslim states. The Solomonid rulers initially enjoyed a series of military successes that ensured the Christian state's dominance in the region. This period of political and economic stability led to a religious and literary revitalization as well. Ethiopian literature was enriched by numerous translations of religious texts, including the *Senkessar* (a compilation of the lives of Christian saints) and the *Metshafa Berhan* (*Book of Light*) as well as new royal chronicles, notably the *Kebra Nagast* (*Glory of the Kings*), which claimed that Ethiopian royal descent could be traced to King Solomon and the Queen of Sheba of the Old Testament.

The political situation, however, changed in the early sixteenth century. Ahmad ibn Ibrahim (otherwise known as Gran, “the left-handed”), the ruler of Adal, declared a full-scale war on Ethiopia and launched a series of campaigns that between 1529 and 1543 spread death and destruction in Ethiopia. Continued military setbacks forced King Galawdewos (r. 1540–1559) to seek help in Europe, especially from the Portuguese. With the help of a small but well-armed Portuguese contingent, the Ethiopian forces drove the Muslims out of the central highlands and later conducted successful campaigns throughout the 1550s, 1560s, and 1570s. Aside from immediate devastation, this long conflict also changed the dynamics in the southern highlands of Ethiopia, where the Oromo (also known as the Galla) tribes of pastoralists began to infiltrate from the grasslands of the south and to settle. The Oromo arrival altered the demographic picture of highland Ethiopia and later profoundly affected Ethiopian politics.

In the seventeenth and eighteenth centuries, Ethiopia was involved in continued warfare against the Muslim states in the south and the Ottoman expansion in the north as well as the neighboring pastoral

tribes. The ancient Ethiopian Orthodox Tewahedo Church also faced a number of challenges. Continued warfare devastated many churches and destroyed literary and artistic treasures. Close contacts with Portugal inevitably led to Jesuit missionary activity, which the Ethiopian Church perceived as a threat. Theological disputes between the Jesuits and Ethiopian clergy regarding whether Christ had one totally unified (Tewahedo) divine nature or two separate divine and human natures later led to the former's expulsion (and increased hostility to foreigners), but they also prompted emperors Fasiladas (r. 1632–1667) and Yo-hannes (r. 1667–1682) to organize several councils of church leaders to discuss theological doctrines. These debates resulted in protracted religious and political schism in the kingdom. The mid-eighteenth century, however, saw the rise of Mentewwab, one of the most remarkable women rulers of this age. Ruling as a *yetégé* (empress) during the reigns of emperors Iyasu (r. 1730–1755) and Iyoas (r. 1755–1769), Mentewwab provided firm guidance to the state and succeeded in reviving it. Arts and literature flourished, while Mentewwab's patronage of churches led to the construction of the magnificent Débré Séhay Qwesqwam (Church of Virgin Mary), which influenced church architecture for several generations. The year 1769, however, marked a turning point in Ethiopian history. After Mentewwab was forced into exile and Emperor Iyoas was assassinated, the kingdom fell into a long Era of the Judges (the *Zemene Mesafint*, 1769–1855, so-called because of its reference to the biblical Book of Judges that recorded the troubled political time of disunity for the early Israelites) when emperors changed in rapid succession as a result of bitter struggles between nobles, the most powerful of them being the Oromo nobles who dominated the Ethiopian kingdom until the 1850s.

Farther south in coastal eastern Africa existed the Swahili city-states that developed a reputation for commercial prosperity. The cities of Mogadishu, Mombasa, Kilwa, and Sofala maintained trade contacts throughout the Indian Ocean, the Middle East, and Africa and reached their peak of development in the fourteenth through the fifteenth centuries. Fiercely competitive, the cities vied for political and commercial hegemony, in the process creating a unique cultural legacy. They embraced religious syncretism, as represented in festivals and competitive celebrations that combined local and Islamic traditions. The Swahili ritual calendar combined the Persian solar calendar for local rituals, farming, and navigation with the Arabic lunar calendar for religious celebrations.

The Portuguese soon embarked on building their maritime empire in the Indian Ocean, and the Swahili city-states were ill-prepared to defend themselves.

The arrival of the Portuguese fleet led by Vasco da Gama in 1498 marked a turning point in the Swahili cities' history. The Portuguese soon embarked on building their maritime empire in the Indian Ocean, and the Swahili city-states

were ill-prepared to defend themselves. But the European occupation proved to be fleeting, as thousands of residents left their cities, as in the case of the city of Kilwa, which the Portuguese abandoned in 1512.

Furthermore, after their triumph over a Muslim and Indian coalition in a naval battle at Diu in 1509, the Portuguese accorded low priority to the East African coast and concentrated their efforts on India and Arabia. The initial Portuguese withdrawal from East Africa created a political vacuum, and many Swahili city-states were plunged into a period of turmoil as their overseas commerce collapsed. Some towns, such as Kilwa and Mombasa, turned inward and developed commercial ties with the hinterlands. By the end of the sixteenth century the Portuguese dominance in the Indian Ocean declined, following the kingdom's disastrous invasion of Morocco in 1578 and the Spanish takeover of Portugal in 1580.

As Portuguese garrisons in Africa were drawn down—at least for the time being—the Swahili cities saw the arrival of a new power. Following their conquest of Egypt in 1516–1519, the Ottoman Turks had gradually expanded their influence to Arabia and the Red Sea. Their struggle against the Portuguese posed them as potential allies to Swahili towns, which now supported Turkish efforts in the Indian Ocean. Throughout the 1580s the appearance of Ottoman forces caused a series of revolts in Swahili towns, which the Portuguese, again aware of the importance of East Africa, now subdued. Having reestablished their dominance on the East African coast, the Portuguese made Mombasa the center of their new and reinforced presence, which endured for almost four decades. By the mid-seventeenth century the Portuguese faced a new threat when the Omani Arabs became determined to drive them out of the northern Indian Ocean. In 1661 an Omani raid sacked Mombasa, ending Portuguese power on the coast north of Mozambique. While individual Swahili towns remained largely independent, Omani suzerainty, which persisted for the next 200 years, led to an upsurge in trade as well as a profound Arab influence in religion, law, commerce, architecture, dress, and vocabulary.

Southern Africa experienced a history that was distinct from West and East Africa. Until the arrival of the Portuguese in the fifteenth century, southern Africa developed outside of direct influence of the Mediterranean cultures and the Islamic world. Its political and religious life centered around several polities that developed well before 1450. The most important of these was the kingdom of Zimbabwe, which rose to prominence in the thirteenth century and flourished until the fifteenth century. Its capital was Great Zimbabwe, which extended over 60 acres and included a formidable edifice, known as the Great Enclosure, consisting of a fortified enclosure with walls as high as 36 feet. The state's wealth rested on the area's rich gold-bearing belt, resulting in a profitable gold trade with the eastern coast. In the mid-fifteenth century the kingdom of Zimbabwe rapidly declined, perhaps because of soil exhaustion and overpopulation. By the time the Portuguese reached East Africa, Great Zimbabwe and most of the kingdom had been abandoned. Instead two new states emerged, the kingdom of Mutapa, stretching between the Zambezi and Limpopo rivers in the north, and the kingdom of Butua in the south. Both states developed in the tradition of Zimbabwe until they were taken over by the Rozwi empire.

The Americas

At dawn on October 12, 1492, Rodrigo de Triana, a sailor on board the *Pinta*, sighted a land in the distance. Thus began European exploration of unknown land in the west. In 1501–1502 the Florentine explorer Amerigo Vespucci explored this new land and, convinced that it was a new world, published accounts of his voyage. Thereafter European cartographers labeled this new land as “Amerigo’s land,” or America. Initially applied only to South America, the term was later used to refer to the entire landmass located in the Western Hemisphere. Yet the “New World” was a European invention, since these lands had been long “discovered” by people who created several major civilizations here by the time Europeans arrived. America’s varied terrain and climate shaped these civilizations. The vast expanse of North America as well as the enormous Amazon basin, Mesoamerica (Mexico and Central America), and the western coastline of South America saw the rise of sophisticated sedentary societies and civilizations. The Hohokam was one of the major cultures in the present-day American Southwest, where Native Americans practiced agriculture in a series of small villages along the Salt and Gila rivers of present-day Phoenix, Arizona. Despite lacking advanced engineering tools, the Hohokam developed a remarkable irrigation system that allowed them to cultivate maize, beans, and squash in a desert environment. The Iroquois League of Nations, or “People of the Long House,” had developed a unique social and political structure that contributed to political thinking during the development of the U.S. government. The Mississippian culture flourished between the thirteenth and sixteenth centuries as the people practiced sophisticated agriculture and developed a complex social organization. The Mississippian culture created vibrant communities that featured the largest earthworks in North America north of Mexico, most notably at Cahokia outside present-day East St. Louis, Illinois, where the massive Monks Mound—some 100 feet high and over 770 feet wide—rivalled Egyptian pyramids and the great temples of the Aztecs. The Cahokia complex contains dozens of mounds whose location and alignment reveal a profound understanding of astronomy. Scholars estimate that at its peak Cahokia may have had a population up to 30,000–40,000 people, a number not matched by any city in the present-day United States until the late eighteenth century.

Major Colonial Conflicts	
1655	Dutch colonists from New Netherland conquer New Sweden
1664	British seize New Netherland
1675–1676	Bacon’s Rebellion in Virginia; King Philip’s War in New England
1689–1713	King William’s War
1702–1713	Queen Anne’s War
1740–1748	King George’s War
1756–1763	Seven Years’ War (French and Indian War)

Europeans explored North America starting with John Cabot's voyage in 1497. While the English and French explored in the present-day northeastern United States and Canada, the Spaniards claimed territories in the south, following Juan Ponce de Leon's landing in Florida in 1513. By the early seventeenth century the French had established the first permanent colony at Quebec (in present-day Canada), while the English built a colony at Jamestown (Virginia). In 1609 Henry Hudson claimed part of North America for the United Provinces (the future Netherlands), and Dutch outposts soon appeared, notably New Amsterdam in 1624. These colonies were established as private enterprises that employed European migrants fleeing from civil and religious disturbances that plagued seventeenth-century Europe. Despite failed early attempts, England rapidly gained ascendancy over most of eastern North America, where by the mid-eighteenth century the English created 13 colonies. France developed a vast colony, New France, in present-day Canada but was forced to cede it to the English following its disastrous performance in the Seven Years' War (1756-1763). The Native Americans played an integral part in this colonization. In many instances their collaboration and help ensured the survival and success of European colonies. The natives were also actively involved in colonial conflicts that developed among the English, the Dutch, and the French. Each side allied itself with native tribes (who often fought on both sides) and used them to conduct proxy wars against each other. But these wars and, most important, diseases that Europeans introduced struck heavily among the native tribes, drastically reducing their numbers and their ability to protect their lands.

The Aztecs, who founded their capital of Tenochtitlan around 1325, created a vast empire that exerted its influence over most of central Mexico. The Aztec state was geared for war, and a strong standing army lay at its heart. War was one of the major components of the Aztec religion, since the Aztecs believed that to sustain life on earth they had to appease the gods by providing them with human blood. Thus, mass sacrifices were routinely practiced and naturally required a constant supply of victims. The Aztecs conducted far-ranging campaigns to seize prisoners throughout the region and used human sacrifice as an instrument of state terror that kept dozens of local tribes in subjugation. This brutal practice proved to be of great consequence since these conquered tribes were willing to support the newly arrived Spanish conquistadors against their oppressors, a key factor in the fall of the Aztec empire in the sixteenth century. The Aztecs presided over a vibrant culture whose achievements often eclipsed those of Europe. Thus, the Aztec capital city of Tenochtitlan probably had at least 500,000 residents at a time when no European city even remotely approached this number. The Spaniards were stunned by Tenochtitlan's wide and clean streets, numerous parks, and sophisticated aqueduct networks that delivered fresh water and maintained fountains. The sewage drains, virtually unheard of in contemporary Europe, took human refuse out of a city that was maintained clean and safe by special cleaning and firefighting brigades. The city skyline was dominated by tall and impressive temples

built in the shape of pyramids, the likes of which no European had seen prior to that time.

The powerful Aztec empire collapsed following the arrival of the Spanish adventurer Hernando Cortés in 1519. In less than two years Cortés completely demolished the Aztec state and razed to the ground parts of its capital. His success can be explained by a combination of factors. In hindsight we know that the timing of the Spanish arrival was rather crucial to their eventual success. Europeans entered the Aztec empire when its inhabitants were preoccupied with harvesting and were not prepared for war. The highly hierarchical society, in which all authority was concentrated in the hands of the Aztec ruler, further played into Spanish hands since Cortés' bold act of taking Moctezuma (Montezuma), the Aztec ruler, had great influence over the Aztec society. The most decisive factors in the Aztec collapse, however, were Spanish success in securing alliances with local tribes, who were happy to see their oppressors gone, and the spread of European diseases, which devastated Aztec society. By the mid-sixteenth century the Spaniards exerted their influence over much of present-day Mexico and gradually expanded their influence to the neighboring regions.

Like the Aztec empire, the Inca empire, which rose to prominence in the fifteenth century on the west coast of South America, was also a highly centralized state where all power belonged to the supreme leader, the inca. Under the leadership of Pachacuti Inca (r. 1438?–1471?) and his son Topa Inca (r. 1471–1493), the Incas embarked on a rapid expansion that extended their realm from present-day Colombia in the north to the Maule River (in present-day Chile) in the south. By the mid-sixteenth century some 16 million people lived in this sprawling empire. Unlike the Aztecs who ruled by state terror, the Incas practiced imperial colonization and integration, best represented in the policy of forced resettlement, or *mitima*. The conquered people were often relocated to other parts of the empire to encourage their loyalty to the state, to compel acceptance of the Inca language (Quechua) and beliefs, and to practice better utilization of land resources. The Incas developed a sophisticated network of roads that facilitated trade and communications as well as allowed rapid army movements. The Inca architecture was characterized by highly skilled masonry that featured precisely cut and shaped stones closely fitted without mortar. Yet centralization of the society, in which the state regulated almost all aspects of life,

also meant that the majority of the people were denied choice and initiative, an important factor when considering the Inca collapse.

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pire was just emerging from a bitter dynastic struggle that led to civil strife. In 1527 Inca Huyana Capac died without naming his heir, and his sons Huascar and Atahualpa fought a destructive five-year-long civil

war that ended with Atahualpa's victory. Overconfident of his power, Atahualpa agreed to meet the Spaniards at the place of their choosing, where he was captured by Pizarro's men who knew that by controlling Atahualpa they would control the Inca state. Despite the Incan people's fulfilling of the Spanish ransom demand and filling three large rooms with gold and silver, the Spanish executed Atahualpa in July 1533 and embarked on a conquest of his empire, which was largely completed by the end of the sixteenth century. For the next 250 years South America remained part of the Spanish empire.

Europe

The period between 1450 and 1770 saw remarkable changes in Europe. The Age of Renaissance produced an intellectual movement known as humanism that asserted human dignity and individualism and sought to understand human nature. Renaissance writers such as Petrarch and Boccaccio and artists such as Donatello, Michelangelo, Brunelleschi, Bernini, and da Vinci revolutionized the arts and sciences and produced a bewildering wealth and diversity of European culture. Outside Italy, cultural change accelerated in France, the Netherlands, and Germany where an international Gothic style flourished, and artists such as Jan van Eyck, Hieronymus Bosch, Albrecht Durer, and Jean Clouet drew their inspiration from Italian Renaissance art. Gutenberg's printing press, perfected by 1455 but centuries after the Koreans and Chinese experimented with movable type printing presses, had a profound impact on the dissemination of ideas and proliferation of art.

The sixteenth century witnessed the start of the Reformation that shook the political and religious foundations of Europe. At the same time, as Europeans discovered new routes to Asia and learned about the Americas, we see the emergence of European commercial and political influence on a global scale. It was the wealth and power of Asia that inspired Europeans to travel during what we now call the Age of European Exploration. Starting with early Portuguese and Spanish maritime exploration for new routes to Asia, Europeans began to utilize new technological innovations to obtain wealth and influence. They sought to reduce their reliance upon Muslim traders (the people through whom they obtained the goods and spices of the East) and profit from new direct routes to Asia. After all, Columbus sought a new western route to India, not a new land that we now know as the Americas. Yet after the discovery of the Americas, Europeans fully employed its vast riches (primarily silver) to buy their way into Asian markets. By the eighteenth century the epicenter of the emergent global economy became the Atlantic world, where Europeans developed a triangular trade among Europe, Africa, and the Americas. In its simplest form, ships laden with European manufactures regularly sailed to West Africa, where they traded goods for slaves who were then transported and traded for colonial products in the Americas before the ships returned to their home port.

Several factors motivated the expansion of Europe. To some degree this process was an expression of curiosity and a desire to learn more

about the world. The desire to spread Christianity and “save the souls” also greatly contributed to this process. But economic and political considerations were the most important factors in the expansion, as the spice trade with Asia promised vast profits that a state could use to strengthen itself vis-à-vis its neighbors. The Spanish conquistador Bernal Díaz del Castillo probably summed it up best when he said that his motives for exploration were “to serve God and His Majesty, to give light to those who were in darkness and to grow rich as all men desire to do.” The European exploration proved to be successful because of remarkable technological developments achieved in this period. Firearms, stronger and sturdier ships capable of carrying cannons, and new military tactics helped Europeans as they encountered many indigenous cultures. In addition, Europeans successfully utilized technological advances of other cultures, such as the magnetic compass from China and astrolabe and portolan charts from the Islamic world.

These advances allowed Europeans to extend their authority to parts of the Americas, coastal Africa, and South and Southeast Asia. In the process they destroyed or severely weakened indigenous populations, set up colonial administrations, and developed seaborne trading empires that gradually ensured Europe’s emerging global preeminence. Spain dominated Central and South America, and the Portuguese controlled Brazil, the western coastline of Africa, and coastal parts of India and Indonesia. England and France extended their influence to North America and India, while the small Netherlands created one of the largest trading empires in India, Southeast Asia, and the Americas. The influx of gold and silver mined in the Americas had a profound impact on Europe as the Spanish empire, the primary benefactor of American

colonization, enjoyed the “Golden Century” of blossoming arts, architecture, and literature. Yet abundance of bullion also caused dramatic inflation and price increases that adversely affected Europe.

Religiously, Europe also experienced a major transformation. In 1500 Europe was largely Catholic, with only parts of southeastern Europe practicing Eastern Orthodox Christianity. By 1648 its religious map completely changed as Scandinavia, most of Germany, Switzerland, Scotland, and

In 1500 Europe was largely Catholic, with only parts of southeastern Europe practicing Eastern Orthodox Christianity.

By 1648 its religious map completely changed as Scandinavia, most of Germany, Switzerland, Scotland, and England embraced Protestantism.

England embraced Protestantism. The power of the Catholic Church declined, although the Counter-Reformation ensured Catholic dominance in France, Spain, Italy, and parts of the Holy Roman Empire. Concurrent with the Protestant Reformation, the Catholic Church underwent its own reform movement from within. The Council of Trent (1545–1563) sought to reform the Church but also encouraged orthodoxy enforced by a court of Inquisition. The Reformation had a profound impact on political life in Europe, and oftentimes religion was difficult to distinguish from politics. England’s break with the Catholic Church had much to do with both Protestant influence and King Henry VIII’s desire to ensure the stability of his dynasty. Subsequent religious strife in England led

to an acute political crisis as the country plunged into civil war in the mid-seventeenth century. Most of Europe experienced political turmoil caused by religious ferment. In France this religious conflict is most famously represented by the St. Bartholomew's Day Massacre (1572), a purge that claimed thousands of Protestant lives and began a 17-year-long conflict. Yet another manifestation of the rift between Catholics and Protestants was the Thirty Years' War (1618–1648) that devastated Germany, killing millions and fragmenting the region.

This same period also witnessed a profound social change as serfdom—a condition in which a tenant farmer was bound to a hereditary plot of land and to the will of his lord—was consolidated in much of central and eastern Europe. The bubonic plague of the fourteenth century had a great effect on western Europe's manorial system, and by the fifteenth century peasants there gained greater freedom and successfully resisted attempts to reimpose traditional manorial relationships on them. Their brethren in central and eastern Europe, however, shared a different situation, and most peasants in eastern and central Europe lost their freedom and became serfs by the mid-seventeenth century. In Poland nobles gained complete control over their peasants in 1574, while Russia enserfed its peasants by 1649, and Prussia did so in 1653. The consolidation of serfdom was further facilitated by a population growth that sharply increased prices for agricultural commodities, giving the nobles powerful economic incentives to strengthen their authority over peasants and increase the productivity of their estates.

The seventeenth and eighteenth centuries produced a remarkable change in the European worldview. The foremost cause of the change was the Scientific Revolution. Scholars refashioned long-held beliefs about the universe while new discoveries, many of them long anticipated by or even borrowed from Muslim scientists of an earlier age, revolutionized understanding of astronomy, physics, biology, medicine, and other fields. Eventually some Europeans began to change the way they viewed the natural world and humanity's place in it. The Enlightenment, as this eighteenth-century movement became known, embraced the idea that the methods of natural science could and should be applied to examine and understand all aspects of life. Emphasizing reason, rationalism, and skepticism, the philosophes sought to discover laws governing human society and embraced the notion of progress. They believed that through the scientific method, it was possible to create better societies and better people, a belief that underlay many of the improvements that took place in the late eighteenth century and the nineteenth century.

Politically, the sixteenth and seventeenth centuries saw an unprecedented spate of wars and revolutions in Europe. Looking at the seventeenth century alone, one is struck by the fact that only two years (1670 and 1682) in an entire century were without a war between the European states. Looking at individual states, we see that between 1618 and 1678 the Dutch Republic was at peace for only 14 years, France for 11 years, and Spain for only 3 years! These wars produced unparalleled political, social, and religious changes. The prolonged Hundred Years' War ended in 1453 with a victory for France, while the loss of most of

England's continental possessions profoundly affected the development of that country for the next 500 years. In 1494 France attempted to expand its power to rich Italian states but became embroiled in a long conflict with Spain. By the end of the Italian Wars in 1559, Habsburg Spain had been established as the premier power of Europe, while the Italian states, which had wielded so much power during the Renaissance, were from now on reduced to second- and third-rate powers. Defeated in this conflict, France was plunged into a long political and religious strife that came to an end in 1589. In the meantime, England successfully dealt with the Spanish threat in 1588 and supported the Dutch rebels, who in 1648 secured their independence from Spain after an 80-year-long struggle. These conflicts sapped Spanish resources, and by the late seventeenth century Spain had entered a long period of decline. In the mid-sixteenth century Germany saw the beginning of religious conflict that continued for almost a hundred years. The Thirty Years' War produced devastation on an unparalleled scale in Germany, which lost up to a quarter of its population and saw entire regions laid to waste. Yet this war also marked the rise of France as a great power on the continent, and European states spent subsequent decades seeking to contain the French hegemony.

These wars significantly differed from earlier conflicts. The arrival of gunpowder from Asia profoundly altered both the nature of war and popular attitudes toward it. Chivalric notions disappeared, as did medieval castles that could no longer resist artillery sieges. Military tactics favored infantry over cavalry, leading to the disappearance of armored knight cavalry that had dominated European battlefields for generations. The size of armies gradually increased and, by the early eighteenth century they routinely numbered 40,000 to 50,000 men. Because large armies, armed with cannon and firearms, were prohibitively expensive, they could be maintained only by strong states, forcing governments to reorganize their administrations to ensure more effective governance and tax collection.

The seventeenth century also witnessed the development of absolutism. This process was best exemplified in France, which developed a strong highly centralized monarchy as the result of the policies of kings Henry IV (r. 1589–1610), Louis XIII (r. 1610–1643), and Louis XIV (r. 1643–1715). Under the leadership of Cardinal Armand Jean du Plessis de Richelieu (r. 1624–1642), the French monarchy embarked on total subordination of all groups and institutions to its authority. By the late seventeenth century the administrative and political reforms created a massive state bureaucracy (presided over by a king), although its reach and actual ability to impose its will in the provinces was severely limited by logistics and tradition. Louis XIV weakened the power of the highest nobles by excluding them from his councils and restricting their role in the government. Instead, he promoted the men from the upper middle class or the recently ennobled who formed the new “nobility of the robe” (because of the long official robes many of them wore) who provided a balance to the power of the great nobles.

In the rest of Europe, Spain, after experiencing its golden age in the sixteenth century, then suffered a long decline. The lack of a strong

middle class, agricultural stagnation, and the failure to promote manufacturing enterprises and maintain commercial competitiveness, together with prolonged conflicts that drained treasure and increasing inflation, reduced Spain to a second-rate status by 1715. England fell into disarray soon after Queen Elizabeth's reign (r. 1558–1603), often described as a golden era in English history. Her successors, James I and then Charles I, struggled against Puritan-dominated Parliament. Ultimately Oliver Cromwell led the Puritans to victory in the English Civil War, overthrowing Charles and establishing a Puritan Commonwealth. By 1660, however, the monarchy was restored and, by 1688, was turned into a constitutional monarchy. In central Europe the Holy Roman Empire's power weakened following the religious conflicts of the sixteenth and seventeenth centuries as well as a prolonged struggle against the Ottoman empire. Yet these conflicts also facilitated the rise of a new power in central Europe. By the mid-eighteenth century under the capable leadership of several rulers, the small principality of Brandenburg, which was ravaged by foreign armies in the Thirty Years' War, turned into a premier power that changed the balance of power on the continent.

Simultaneously, Muscovite Russia rapidly expanded into eastern Eurasia, reaching the Pacific Ocean by 1648. The rise of Russia is one of the most important events in world history, but categorizing this process remains a challenge for world historians. Is Russia a civilization all its own or part of a slightly larger eastern European civilization? Should it be discussed, as is commonly the case in European history, as part of Europe even though for much of its history (until the seventeenth century) it played a trivial part in it? Between 1450 and 1750 the Russian state experienced a major transformation as it freed itself from Mongol overlordship and embarked on a steady process of expansion that brought it to the shores of the

Pacific Ocean in the 1650s. This process was unusual in the context of European history. At a time when some western European states were laying the foundation to their nation-states, Russian territorial expansion created a multinational empire that would be both its strength and its weakness in the subsequent centuries. In the seventeenth and eighteenth centuries Russian development was both similar

and atypical of European experience. Like many European states, Russia followed the path of centralization and absolutism as its tsars asserted the power of the central authority. During the reign of Peter the Great (r. 1682–1725), Russia underwent a profound social, political, and economic transformation that established it as one of the dominant powers in Europe. Petrine reforms established a Western-style regular army and navy, built an imperial infrastructure, and thoroughly reorganized the bureaucracy and government. In 1703 Peter transferred the Russian capital from Moscow to a new city, St. Petersburg, that was built from scratch on the swampy shores of the Baltic Sea. Peter's reforms created a conflict between the Westernization impetus that he introduced and

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the traditional way of life that preceded him, but they also transformed Russia, which by the mid-eighteenth century emerged as one of the leading powers in Europe.

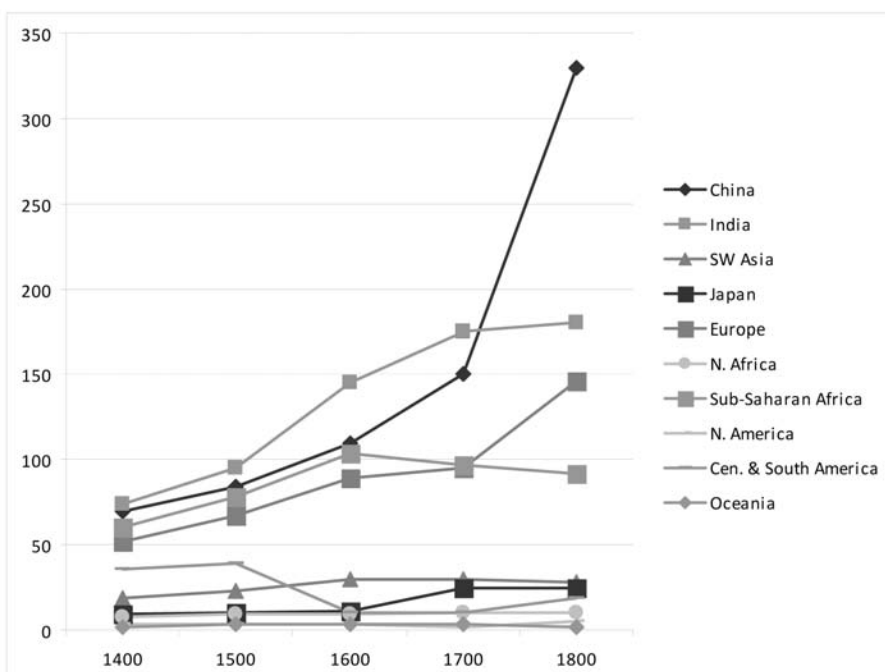
Thus, between 1450 and 1750 the world underwent profound transformations. The transoceanic voyages of exploration and trade had bridged the Western Hemisphere and the Eastern Hemisphere, launching the new phase of global interaction in humanity's history. In this new environment, traditional political, economic, and social philosophies and organizations became increasingly out of place. The world's regions had different experiences in adjusting to the new international system that was increasingly shaped by the Europeans. The new economic realities also produced important political, cultural, and social changes. A shift in international trade routes had adverse effects on much of the Islamic world. The globalized trade and transportation brought vast migrations. Millions of Europeans left the Old World in search of better economic opportunities or religious freedoms, carrying with them the seeds of "New Europes" that they planted on the shores of North and South America and Australia. Meanwhile, Asia was on the move, and the Ottoman, Safavid, Mughal, and Chinese conquests and subsequent government policies displaced millions of people. The rise of the middle class proved to be a decisive factor in Europe, where the struggle for political authority eventually resulted in major political transformations in England, the Netherlands, and France that advocated for new political philosophies and introduced new political bodies. Furthermore, in the early eighteenth century a combination of technological improvements, political circumstances, and innovations in economic organization produced a dramatic transformation in economic productivity, the Industrial Revolution. Although these political and economic revolutions began in Europe, they ultimately affected people all over the world.

—*Alexander Mikaberidze, Jeffrey M. Diamond,
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Environment and Population

The world population rapidly increased between 1450 and 1750, but a precise number of the people then living in the world is difficult to establish. The first authoritative statistics in Europe are available only from the early nineteenth century, with Britain holding the first real census in 1801. Although China had conducted censuses longer than any other country in the world, the resulting data are open to question. Yet despite such challenges, some general conclusions can be made. Most scholars agree that around 1400 the world's population was between 350 million and 400 million, and by 1800 it doubled to about 700 million to 750 million. Some areas saw major growth (e.g., China and Europe), while others saw spectacular declines, most notably the indigenous populations of the Americas. This was a remarkable increase considering that in the preceding centuries human population tended to double every 2,000 years.

Humans were not uniformly spread around the world, leading some scholars to identify 76 civilizations and cultures around the world in 1500, ranging from primitive gatherers and fishermen to sophisticated



World Population by Region (in millions), 1400–1800 (Based on R. Biraben, "Essai sur l'évolution du nombre des hommes," Population 34 (1979): 16)

societies that the great French historian Fernand Braudel described as “dense civilizations.” The 13 “dense civilizations” lived in densely populated areas around the world, notably Europe, the Near East, India, China, and Japan. By 1600 the population density (number of people living per unit area) averaged between 76 to 95 inhabitants per square mile (28 and 35 inhabitants per square kilometer). This figure has increased today to about 119 per square mile or 44 per square kilometer worldwide, but in 1600 some regions were more densely populated than others. Thus, in Germany population density varied depending on a region, with Württemberg being the most populous area in the early sixteenth century. Population density is an important factor in understanding the historical development of a given region or country. Higher populations pose greater challenges, as finite resources had to be shared by the members of society. In 1709 Daniel Defoe estimated that 3 acres (1.2 hectares) of good land or 4 acres (1.6 hectares) of average land were necessary to support one man. Yet there was only so much land to go around, so as the population swelled, social (and political) tensions increased as well. Thus, the populous Württemberg was one of the best places for recruitment of mercenary Landsknechte (country servants), mercenary soldiers who had no other prospects in their villages. In the sixteenth and seventeenth centuries there was a

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massive emigration from overpopulated France and Spain that played an important role in their colonial expansions. The problem of overpopulation also contributed to the deliberate birth control that became rather prominent in Europe by the late eighteenth century. Writing in 1771, Louis-Sébastien Mercier, a keen-eyed

observer of French society, noted that “the husbands themselves take care in their ruptures to keep from adding a child to the household.”

By the end of the eighteenth century several million Europeans had migrated to the Americas, Africa, and Asia. From the 1580s to 1800 some 750,000 Spaniards reached Spanish America. By 1700 the British Americas was the home to around 270,000 persons of British ancestry, while another quarter million would arrive between 1700 and 1775. Many of the early settlers were forced to leave Europe as a result of the “price revolution,” which was caused by the influx of New World silver. The availability of silver in European trade networks inflated prices while wages remained stagnant, which worsened the economic condition of many Europeans who were forced to live at the margins of society and thus looked for new opportunity in the newly discovered lands. They were usually enticed by specific incentives, such as large tracts of land offered to any who would come to North America and agree to become indentured laborers and work for a specific period in exchange for transoceanic passage. In the mid-seventeenth century a new group of settlers began to arrive from Europe to North America. The Puritans left their homeland for their own religious freedom, and many of them were wealthier and better educated than the first wave of European migrants.

Just as Europeans expanded into the Americas and other parts of the world, Asia also experienced major human migrations. Yet unlike European migration, Asian migration largely occurred overland and did not result in catastrophic demographic declines. This was because migrations took place within a larger Asian society that had developed immunity to each other's diseases. Also, much of Asian migration was caused by nomadic conquerors who had limited experience in sedentary life and were usually assimilated by the peoples they defeated. The Mughals, of mixed Mongol and Turkish background, rose to prominence in the early sixteenth century when they conquered northern India. Their conquests led to the Muslim migration from Afghanistan, Iran, and central Asia to the Mughal court, which eventually encouraged a cultural syncretism and the mixing of groups. In the early 1600s during the reign of the Mughal emperor Akbar, the population of India probably reached 150 million, far more than in all of the European states taken together. In Iran the rise of the Safavid dynasty in the early 1500s led to the establishment of a powerful state that rivaled both the Ottoman and Mughal empires. Culturally of Turkish background, the Safavids embraced Iranian culture and practiced a policy of forced migrations. Thus, under Shah Abbas I thousands of men and women from Georgia and Armenia were forcibly removed from their homes and resettled in Iran, where they helped develop agriculture and trade and also formed the core of the modernized Safavid armies.

In China, the Mongol invasions of the thirteenth century devastated the country and reduced its population. However, the Mongol Yuan dynasty, which ruled China for a century, and the Ming dynasty that replaced it also brought stability and order to the country. By 1600 China was flourishing and probably contained up to one-fifth of the world's population. In the mid-seventeenth century the Chinese throne fell once more to foreigners. The last Ming emperor, Zhu Youjian, committed suicide in 1644 after Chinese rebels captured Beijing. A Chinese general, Wu Sangui, invited Manchu forces in to liberate Beijing and put down the rebellion, perhaps not the wisest decision. The Manchus stayed to rule as the Qing dynasty. The earlier rebellions, followed by resistance to Qing rule, combined with epidemics and natural disasters to produce a temporary decline in China's population, which quickly rebounded under the new Qing dynasty. Pacification and expansion combined with a spate of good weather to allow an unsustainable surge in population, leading inevitably to overpopulation. This resulted in massive internal migrations to and colonization of Mongolia, eastern Turkestan (present-day Xinjiang), Tibet, and southeastern Siberia by the eighteenth century as well as acceptance of new crops (largely potatoes and maize from the Americas, introduced by Europeans) and more intensive exploitation of available land.

However, other regions of the world experienced completely different demographic dynamics in this period. Australia and New Zealand, whose Aboriginal population numbered several hundred thousand, were explored by the Europeans in the mid-seventeenth century. Yet unpromising descriptions of these lands that European explorers sent back home meant that these lands remained untouched by Europeans for over

a century. Only in the late eighteenth century did European states, primarily Britain, colonize them. What makes this pattern of immigration unique is the fact that the British government decided to use Australia as the penal colony where it transported its convicts. Men outnumbered women by a ratio of 6 to 1 in urban settlements, but the countryside saw this ratio go as high as 20 to 1. The arrival of Europeans had a profound impact on the fragile ecology in Australia and New Zealand, while European diseases killed off thousands of the indigenous population.

A similar demographic catastrophe occurred in the Western Hemisphere. The population of the Americas prior to 1492 remains a hotly disputed topic, with estimates ranging from fewer than 30 million to as high as some 100 million men by the late fifteenth century. Following the European discovery of the Americas, however, the Native American population experienced a catastrophic decline, and at its lowest point after the

Thus, the population of central Mexico is estimated to have declined from over 25 million in the early sixteenth century to about 1 million a century later.

coming of Europeans it may have dropped to fewer than 5 million. Thus, the population of central Mexico is estimated to have declined from over 25 million in the early sixteenth century to about 1 million a century later. The main causes of death in this demographic catastrophe were diseases

such as smallpox, measles, chicken pox, bubonic plague, and influenza. Similarly, sub-Saharan Africa suffered a long drain on its population as a result of the slave trade that began in earnest in the sixteenth century. In the Americas, Europeans introduced plantations that created an immense demand for labor. To satisfy this demand, Portugal brought the first slaves to Brazil, and by the early 1600s some 4,000 slaves were imported annually. The slave trade increased in volume in the seventeenth century when tens of thousands of Africans were transported into the Americas and the West Indies, where they completely transformed local demographics. In his landmark study *The Atlantic Slave Trade: A Census*, Philip Curtin concluded that between 1492 and 1770 “more Africans than Europeans arrived in the Americas,” and he estimated that over 9.5 million slaves were transported to the Americas. North America was only a marginal recipient of slaves, as a majority of them were moved to the Caribbean basin and Brazil. Thus, by the end of the eighteenth century Brazil had about 2 million blacks in a population of 3.25 million people, while the census of 1790 in the newly established United States of America showed that blacks represented almost 20 percent of its population of 3.9 million people. Other scholars, like Paul Lovejoy, found that of the 5.5 million slaves transported between 1701 and 1800, the largest sources were west-central Africa (approximately 2 million), the Bight of Biafra (over 800,000), and the Senegambia (over 200,000).

Between the fifteenth and eighteenth centuries the vast majority of humanity consisted of peasantry, with up to 90 percent of people living off the land. Only a small fraction of people lived in urban settings, but urbanization varied depending on a region. India was probably more urbanized than Europe in the seventeenth century, and probably some 15 percent of its population (approximately 16 million–17 million people) lived in urban settlements, which included such great cities

as Agra, Delhi, and Lahore (in northern India) that had populations of over 500,000 people. China also featured some of the largest cities in the world, and its capital, Beijing, probably was the world's largest city until the late eighteenth century, although its preeminence had been challenged by Agra, Constantinople, and Delphi in the seventeenth century. Europe lagged behind in terms of urbanization, and between 5 percent and 10 percent of its population lived in urban settlements by the sixteenth century. By 1500 over 150 European urban settlements were inhabited by 10,000 or more people, but only 4 contained over 100,000, and most of them were in Italy. In Russia, on the other hand, an urban network was still in its infancy, and even the capital, Moscow, had a population of only 35,000 to 36,000 in 1500. Despite political setbacks and population fluctuation, urbanization accelerated in Europe over the next 250 years. While the distribution of towns in Europe remained largely unchanged, a few new cities appeared as well. Thus, Madrid rose to prominence after 1561, and St. Petersburg was established in 1703. Antwerp, Rome, and Paris doubled in population by the late seventeenth century. London experienced an extraordinary population growth, from some 200,000 in 1600 to 400,000 in 1650 and 675,000 in 1750, becoming the largest city in Europe. As historian E. A. Wrigley estimated, about 8,000 people a year were migrating to London by the end of the seventeenth century. Considering that the entire population of England at this time was only 5 million and was growing at about 16,000 each year, London was drawing half of England's population growth into itself. In Iran, Shah Abbas made Isfahan his capital in 1598 and turned it into one of the most beautiful cities of its time. Containing perhaps as many as half a million people, the city featured one of the largest public squares in the world, which was lined by two tiers of shops, a royal palace, and mosques. Constantinople, the capital of the Ottoman empire, rapidly grew in size. By 1600 it had an estimated population of 700,000 living in the vast conurbation. Historian Fernand Braudel describes Constantinople as the prototype of the great modern European capitals that arose a century later.

The distribution of major climatic zones determined types of human habitation. A major belt of waterless land runs from the Sahara and Arabia to Mongolia. This environment was conducive to pastoral lifestyle, as people drove their herds over vast pastures. To the north of this belt extends the zone of forests that, if cleared, makes good farming ground, but most of northern Eurasia is covered by taiga, a zone of cold-weather coniferous woods, and is unsuitable for agriculture. To the south of the dry belt lies moist tropical and subtropical regions. Agriculture, with its dependence on irrigation, was possible only near permanent water sources. Thus, in northern Africa cultivation was present mainly along river valleys, the most famous of them being that of the Nile. The Iranian plateau, mostly covered by steppe and desert, restricted cultivation, while tropical and subtropical regions of Central America, northern India, Southeast Asia, southern China, and western Africa saw intensive agricultural practices. The horticulturalist communities flourished in the Amazon basin as well as along the Mississippi River. Everywhere in this world populations existed in

interconnections, as trade networks connected China to Europe and India to eastern Africa. Although initially isolated from the world, the Americas had vibrant regional trade and commerce prior to European discovery and later became a part of a global commercial exchange.

Most people farmed using methods in use for thousands of years, relying on mostly human and animal labor and simple tools to produce enough food for their own subsistence and to pay taxes. The “agricultural revolution,” which jump-started the Industrial Revolution, was just beginning at the end of the period under discussion here. The most important change in food production and consumption during this period was the result of the Columbian Exchange in which plants indigenous to the Americas were introduced to the rest of the world, while plants and animals from the Old World were transported to the Americas. The introduction of crops such as maize, potatoes, tomatoes, and peanuts made a profound impact on the quality of life, as it resulted in huge increases in food production, improvement in dietary consumption, and subsequent population increases.

Human lives were subject to the rhythm and quality of harvests, which in turn depended on climatic rhythms of the planet. In the medieval period a warmer climate, known as the Medieval Warm period, allowed humans to migrate to northern territories and produce bountiful crops, which led to increased population. However, this warm period was followed by a global cooling down in the Northern Hemisphere.

The Little Ice Age had a profound influence on humankind, although its effects were not uniform throughout the world. Thus, Viking colonization of Greenland was interrupted, and the existing colonies soon disappeared.

During the ensuing period, known as the Little Ice Age, winters became colder and more severe, while fluctuations in drought and rainy periods intensified. Scientists disagree about the precise dates when it began, but cooler temperatures prevailed between the fourteenth and eighteenth centuries, peaking in the late seventeenth century. The Little Ice Age had a profound influence on humankind, although its effects were not uniform throughout the

world. Thus, Viking colonization of Greenland was interrupted, and the existing colonies soon disappeared. In China, colder winters in Jiang-Xi province destroyed the orange orchards that had thrived there for centuries. We know less about the effect of global cooling on people in North America because of the lack of written records. Native American communities certainly would have experienced major hardships, as attested by experiences of European settlers on the East Coast of North America who suffered from severe drought, malnutrition, and lack of good drinking water between 1560 and 1612. Scholars also suggest that the Hohokam civilization, which flourished in Arizona, may have disappeared as a result of climate change in the fourteenth and fifteenth centuries.

In Europe, this cooling meant that snow and ice remained in fields until late in the year, and grains and vegetables no longer had time to ripen. The decline in agricultural output oftentimes meant starvation and disease, which in turn affected political structures and produced conflicts. In the 1690s western Europe experienced the coldest decades

in 700 years, which resulted in widespread famine, misery, and unrest as peasant uprisings shook some of France's provinces. The Little Ice Age also had a profound effect on the economic and demographic situation in Europe. During the winter months major rivers froze over for prolonged periods, seriously hampering trade and commerce. Smaller harvests produced lower employment and higher prices for food, thus reducing the overall standard of living. As the amount of harvest declined, the size of families shrunk as well. Poor nutrition meant that fewer children survived infancy, and adults became more prone to diseases.

Around 1450 the world included a vast array of political entities that contained most of human population. Most of these polities were small kingdoms, principalities, or city-states that were crowded throughout Central America, sub-Saharan Africa, Southeast Asia, and Europe. But beside them existed vast empires embracing millions of people, such as the Ottoman empire, Ming China, Mughal India, Safavid Persia, and Inca Peru. Human societies were divided into social classes and hierarchies characterized by unequal access to power, privilege, and other resources. These divisions often were shaped via elaborate ideological systems based on shared religious beliefs. The medieval concept of dividing human society into three orders of "those who pray, fight, and work" (clergy, nobility, and the rest, respectively) experienced a major transformation. Although the formation of social groups and classes bore peculiar marks of indigenous customs and traditions, some general observations can still be made. Whether in Europe, the Middle East, or China, at the top of the social pyramid were emperors, kings, and sovereigns of various kinds. Their families, augmented by larger aristocracy, comprised a social group by themselves, and their internal struggles were frequently the source of much political (and social) conflict. Beneath them we can identify several groups that were common to most societies: religious officials and authorities, state officials and administrators, merchants and traders, artisans, craftsmen and servants, peasants and farmers, and slaves and serfs. Naturally these were not rigid categories, and some often overlapped or blended together or were missing completely. Thus, in Europe successful merchants often bought titles and meshed with aristocracy; in the Ottoman empire and Mughal India, state officials could also be religious leaders; and in Ming China, landowning aristocrats were largely absent.

—Alexander Mikaberidze

■ Introduction: The Little Ice Age and Climate Change

Humanity has been at the mercy of the environment during its entire existence. Only recently have humans been able to shape some elements of the environment to their will, and yet despite mankind's modern techno-

logical advances, climate change continues to threaten. One can imagine how helpless humans felt in confronting nature centuries ago. For thousands of years human lives were subject to the rhythm and quality of harvests, which in turn

► RE-CREATING PAST CLIMATES

How do historians, archaeologists, and climatologists re-create temperatures and other climatic conditions during historical periods when no accurate records were kept? Scholars use a variety of methods to re-create past climates. The size of tree rings is dependent on climate, and dendrochronologists collect samples from around the world to compare them. Palynology deals with plant pollen that can survive for prolonged periods in very harsh conditions. Palynologists find plant pollen during archaeological excavations or purposeful studies in deep peat bogs and can determine which plants grew in a given area at a particular time. Since plants tend to flourish in a specific environment, this information allows scientists to make assumptions about climate as well. A closely related field of science, paleoethnobotany explores how plants were used in the past

and provides additional clues about climatic conditions. Scientists examine seabed deposits to measure the amount of oxygen contained in shells and skeletal remains, which varies depending on temperature conditions at the time. They also utilize the so-called obsidian hydration method to establish actual temperatures in the past. Obsidian is a type of volcanic glass whose surface absorbs water at various rates depending on temperature. Scholars investigate obsidian's outer layer, called the hydration layer, to measure its thickness and determine temperature conditions at the time the layer formed. Both in the Arctic and the Antarctic, scientists drill ice cores from glaciers that trap water, impurities, and air bubbles from hundreds of thousands of years ago and can provide a narrative of changing conditions over long periods of time.

—*Alexander Mikaberidze*

depended on climatic changes. Between roughly 900 and 1200 some parts of the world experienced what scholars often refer to as the Medieval War period, when warm climate produced favorable conditions for the growth of human societies. But such warm periods were usually punctuated by colder eras. Periodically climatic fluctuations caused enormous ice sheets to spread across the globe, bringing with them a cold climate. These glaciers have advanced and retreated several times in Earth's existence, although their precise number and nature are being bitterly debated. Conservative estimates suggest that earth has experienced six ice ages, and one of them is associated with a period of advances of glaciers between 1400 and 1850.

The term "Little Ice Age" was coined (unintentionally) by the famous French glacial geologist Francois Matthes in 1939. Matthes used this informal term to describe glaciations of the past 4,000 years, with no intention of distinguishing specific colder eras from warmer periods. However, the term stuck around, and historians usually use it to describe the colder climate of the fourteenth through nineteenth centuries. Scholars note that starting in the late fourteenth century temperatures fell by several degrees, ushering in a gradual cooling down in the

Northern Hemisphere, with winters becoming colder and more severe. An even greater cooling occurred during the late seventeenth century and the early eighteenth century when the number of sunspots decreased during the Little Ice Age, suggesting that the sun emitted less heat than it did in warm periods; another contributing factor may have been an increase in volcanic activity that contributes to the creation of sulfate aerosol that reflects solar radiation back into space, resulting in cooler global temperatures. This activity reached its height between 1645 and 1715, the coldest period of the Little Ice Age. This meant that snow and ice remained in fields until late in the year, and grains and vegetables no longer had time to ripen. Western Europe experienced the coldest decades in some 700 years, which resulted in widespread famine, misery, and unrest. Several successive cold winters and bad harvests in the 1780s directly contributed to the start of the French Revolution, which profoundly transformed Europe.

The concept of the Little Ice Age, however, has recently evolved from an idea of a continuous centuries-long period of lower temperatures to a more complex view of temporal climate variability. There were distinct periods of cold climate that occurred in many parts of the

globe, but they did not necessarily occur synchronously and were not widespread. For example, while glaciers advanced in the Alps in the 1650s and continental Europe suffered from cold temperatures, Iceland enjoyed a relatively mild period with infrequent sea ice. In Africa, the Sahel (territory just south of the Sahara desert) and the south African region experienced increased dryness, while the water level in Lake Malawi (between Tanzania, Malawi, and Mozambique) decreased between 1500 and 1850. At the same time, data also indicates that rainfall increased in eastern Africa as the water level in Lake Chad (Chad) and Lake Naivasha (Kenya) rose, and the Nile River flows were high. In North America, colder weather compelled the Inuit to abandon their whaling and hunting sites and migrate to southern regions.

—*Alexander Mikaberidze*

Food Production and Population Change in Central Africa

The reconstruction of central African population dynamics from 1450 to 1770 represents a significant challenge. There is little consensus on the region's population totals or distribution in 1450. Further, any attempt to reconstruct the population over the course of the period is complicated by two factors: the population loss and displacement fomented by the transatlantic slave trade, which hit the region of central Africa particularly hard, and the introduction of New World crops, which substantially enhanced the ability of the region's inhabitants to produce food.

In the mid-fifteenth century, the region of central Africa was likely very sparsely populated, with the total population for the region comprising only a few million people. Much of this region was covered by dense forest and rain forest, making extensive human habitation difficult. Agricultural populations did exist in the region, growing oil palm, yams, bananas, and plantains, but their settlements were generally small. Much smaller concentrations of foragers were also spread across the region, with the two groups often interacting through trade and marriage. A notable exception to this demographic distribution, however, was the kingdom of KiKongo, which had developed near the mouth

of the Congo River in the latter fourteenth and early fifteenth centuries. KiKongo is an example of how African populations during this period were increasingly carving out space for extensive population growth even in the continent's forest and rain forest regions. By 1450 KiKongo's capital of Luanda was among the first urban outposts in this challenging environment, with a population likely totaling several thousand.

The advent of Portuguese contact in the latter fifteenth century integrated KiKongo into the developing Atlantic economy and resulted in two contradictory demographic forces into the region: the demand for slave labor and the introduction of new crops. The Portuguese brought a demand for slaves, a demand that would grow significantly over the course of the next two centuries. It is estimated that central Africa would provide nearly a third of the total population exported to the Americas during this period, with as many as 4 million people being transported to the Americas from the region between 1500 and 1850. Notably, such figures do not include those who were killed in the violence engendered by the slave trade, numbers that may well total another 4 million. Given the low population of the region in 1450, the impact of such population losses over the next 300 years may well have led to shrinking, rather than growing, populations in the region.

Some scholars have argued that the loss of population to the slave trade may have been offset to some degree by the introduction of new food crops from the Americas. Corn (also known as maize) and cassava (also known as manioc) were the two most significant crops introduced into the region. Both significantly added to the region's potential to produce food. Because corn grows so quickly, it allowed local populations to get in two crops per season, whereas grains such as millet and sorghum could only produce one. Cassava was also significant in that it was a forest crop that could be grown without the necessity of clearing large tracks of land. Cassava is also drought resistant and can be left in the ground until needed, protecting it from pests such as locusts. Both crops were quickly adapted by central African populations and had become dietary staples in the region by the early 1700s.

The interplay of the populations lost to the Atlantic slave trade by central Africa and the increased potential for population growth facilitated by the introduction of New World crops into the region highlight the complexity of forces that acted upon central Africa during this period in world history.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Iliffe, John. *Africans: The History of a Continent*. Cambridge: Cambridge University Press, 1995.
- Manning, Patrick. *Slavery and African Life*. Cambridge: Cambridge University Press, 1990.

Climate Changes in Early Modern Southeast Asia

In the seventeenth century, a group of interrelated factors—demographic, agricultural, political, economic, and climatic—resulted in a general global crisis. Parts of the Northern Hemisphere underwent a significant warming period during the late Middle Ages that then led to a period of cooling during the early modern era in what scholars called the Little Ice Age. Prior to the last 30 years, debates about the Little Ice Age (which lasted from approximately the sixteenth century to the mid-nineteenth century) centered on Europe. Although scholars do not agree on the exact time period, current research indicates that climate change significantly impacted parts of the Southern Hemisphere as well, including Southeast Asia.

Climate change can broadly impact people's ability to produce crops and maintain healthy communities. The cooling period that led to the Little Ice Age resulted in a reduction of rainfall. This critical change in climate was disastrous for human communities, contributing to high food prices, disease, and high mortality. Unfavorable weather conditions also led to health epidemics, famine, harvest failures, and economic depression for people living in the region.

The climate in Southeast Asia was impacted by a variety of climate change patterns including volcanic activity, solar activity, increased ENSO

(El Niño–Southern Oscillation) cycles, and decreased monsoon rainfall. Researchers have recently uncovered evidence that the droughts in Java during the seventeenth century and El Niño activity were connected. Volcanic activity also impacted the climate as volcanic ash exploded into the atmosphere, covering the earth and blocking normal solar radiation, which led to a cooling of the earth's temperature. Unlike the amount of climate data available for Europe, data from Southeast Asia is sparse with less written documentation available. Therefore, our current understanding of the climate during the early modern period comes from piecing together evidence from various data sources.

Communities in India, Indonesia, and the Philippines depended on the cycle of wet and dry monsoons. Overflowing rivers provided resources for rice planting. A disruption in the growing season, such as the rice shortages in various parts of Indonesia (Makassar in 1624, Bali in 1633, and throughout other cities from 1673 to 1676), took a terrible toll on humans living in the area. Detailed records and tree-ring data show that the Chinese population dropped 40 percent between 1585 and 1645 due to severe drought conditions that caused the starvation of thousands and sparked a rebellion that marked the end of the Ming dynasty.

Indian records from the seventeenth century indicate that infrequent monsoons seriously depleted water supplies. Areas of India, Siam, Burma, and Thailand suffered harvest failures and famine in the late 1630s and 1640s due to drought. Analysis of tree-ring samples from Java's teak forests provides rainfall data for the period 1514–1929. The years from 1598 to 1679 showed the lowest levels of rainfall. As a result, several regions experienced drought during specific periods: 1605–1616, 1633–1638, and 1643–1671, the most critical period with the least amount of rainfall.

Climate changes also contributed to increased disease in areas. Drought leads to crop failure, malnourishment, and a lack of clean water. Between 1613 and 1659, several regions experienced epidemics that significantly reduced the population, including Maluku (1613) and Java (1625–1626) in Indonesia, Kedah in Malaysia (1614), and Siam in Thailand (1659). Smallpox

► HISTORICAL MOVEMENTS OF THE HIMALAYAN GLACIERS

The Himalayan mountain range in the Indian subcontinent is home to nine of the highest mountain peaks in the world, including Mount Everest. Today the Himalayas contain the largest area of glaciers outside of the polar caps. These particular glaciers are important to the earth's ecosystem because they contain 70 percent of the world's freshwater supply.

Glaciers go through periods of expansion and retreat, impacting the climate and subsequently human communities. Glaciers worldwide are currently retreating; those in the Himalayas are diminishing at an alarming rate. Although prior evidence had yielded various interpretations, current research indicates that most of

the Himalayan glaciers began to retreat in the mid-eighteenth century at the end of the Little Ice Age.

The lack of historical records prior to 1850 CE in the Himalayan region means that scientists had to identify other data to measure glacial change. Researchers gathered data by analyzing the growth rate of lichens (composite organisms) and dating moraines (unconsolidated glacial debris) with tree-ring records. These records indicate that the largest lichens date from between 250 and 315 years ago, therefore placing the maximum expansion and subsequent retreat of the glaciers within this period.

—Kim Kennedy White

was the most common epidemic during this time. The tree-ring samples from Java showed that 1664 and 1665 were the driest years in a 400-year period. During those same years, most of Indonesia was greatly impacted by the worst epidemic of the early modern period.

The available data show correlations between drought and population decline, as evidenced by records from the Philippines and Indonesia indicating significant decreases in population during the driest periods and increases in population during the more favorable climate conditions of the 1680s and 1690s. The impact of the Little Ice Age and climate change in Southeast Asia in the centuries preceding and following the early modern period is not well understood. Scholars continue to uncover and interpret climate change data for Southeast Asia not only to understand the impact of climate during the early modern period but also to understand the long-term and complex effects of climate change in today's world.

—Kim Kennedy White

Bibliography

- Boomgaard, Peter. *Southeast Asia: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2007.
- Chaujar, Ravinder Kumar. "Climate Change and Its Impact on the Himalayan Glaciers—A Case Study on the Chorabari Glacier, Garhwal Himalaya, India." *Current Science* 96(5) (2009): 703–708.

Lamb, Hubert H. *Climate, History and the Modern World*. London: Routledge, 1995.

Lieberman, Victor. *Strange Parallels: Southeast Asia in Global Context, c. 800–1830*, Vol. 1, *Integration on the Mainland*. Cambridge: Cambridge University Press, 2003.

Parker, Geoffrey, and Lesley M. Smith, eds. *The General Crisis of the Seventeenth Century*. London: Routledge, 1997.

Reid, Anthony. "The Seventeenth-Century Crisis in Southeast Asia." *Modern Asian Studies* 24(4) (1990): 639–659.

Cold Times—The Little Ice Age in Western Europe

From the early fourteenth century until the mid-nineteenth century, the Northern Hemisphere endured an extremely harsh climatic pattern known as the Little Ice Age. The harsh weather patterns—peaking in the mid-seventeenth and early eighteenth centuries—triggered massive social, political, and economic changes in its wake. The influence of climate on agriculture, disease, and political structures, already vulnerable due to endemic warfare and instability, was considerable. In the context of the resulting food shortages, famines, and rebellions, the Little Ice Age explains much of the social unrest and economic dislocations that characterized this period in European history.

CLIMATE AND THE PLAGUE

While there is a direct correlation between climate changes and the prevalence of disease in the wake of the Little Ice Age (1650–1700), it is only among diseases caused by malnutrition such as diarrhea and diphtheria, among others. The recurrence of the bubonic plague in Europe, making its presence known from time to time, was notably absent during the duration of the Little Ice Age. The bubonic plague existed in fleas that traveled throughout Europe on rats, which usually found ample transportation throughout Mediterranean trade routes to the Levant. In order for such fleas to reproduce in adequate numbers for spreading the bubonic plague, it was necessary for them to have sustainable environments to reproduce. The climatic fluctuations that Europe experienced during this period seriously hampered the ability of the flea eggs to develop, much less hatch. The resulting decline of the plague in some areas was a result of this phenomenon. However, after the ebb of the Little Ice Age and the stabilization of climate patterns, the debilitated state of many Europeans due to the poor harvests of the previous period made them susceptible to the increasing resurgence of the surviving flea populations. The result was an increased number of deaths now attributable to the plague in addition to diseases of malnutrition.

—*Abraham O. Mendoza*

The severe climatic conditions that characterized the Little Ice Age in Europe have been attributed to a host of reasons. The lack of sunspots, solar flare fluctuations in the sun that affect conditions on earth, is a probable cause. The reason for this dearth in sunspots is attributed to a series of major volcanic eruptions from 1638 to 1643 that unleashed a large amount of dust into the atmosphere that reduced the amount of solar energy capable of reaching the earth. Agricultural and church tithe records showed that during these years harvests decreased dramatically. During the winter months major rivers, such as the Thames in England, froze over for long periods, seriously hampering trade networks and commerce. The advance of glaciers in some Alpine regions claimed former arable farmland in addition to villages. This seriously affected the

livelihood, not to mention the survival, of local communities solely dependent on such harvests for their day-to-day existence.

The harshest weather of the Little Ice Age was during the late seventeenth and early eighteenth centuries, reversing existing demographic trends. From about 1000 to 1300, the population of western Europe is estimated to have nearly doubled, from about 40 million people to about 75 million. The economy expanded considerably as well, resulting in the improvement of the standard of living for many Europeans. People customarily married young and began reproducing immediately. The Little Ice Age reversed these trends. The smaller harvests following the climate change led to a drop in population as starvation elevated the already high infant mortality rates. This in turn led people to marry later. Since women were relegated to having children after marriage and before menopause, this resulted in smaller families. Extensive periods of hunger weakened the population, making it vulnerable to disease. Epidemics, such as the plague, typhus, dysentery, and typhoid, took a great many lives as a result. The reduction of harvests resulted in less need for labor and in higher prices for staple foods. The impact on the economy due to increased prices and lower employment resulted in more starvation and a lower standard of living for a large number of people.

The Little Ice Age contributed to the discontent that the economically displaced displayed toward the governing authorities but also mirrored other social and political strife occurring simultaneously. The relationship between the social and economic consequences of the Little Ice Age contributed to greater instability, which resulted in upsetting the political structures of the time through a series of multiple rebellions throughout Europe. The combination of war, disease, and famine devastated the population of Europe and increasingly resulted in immense political change. The existing unrest that already existed due to the Protestant Reformation and the centralizing tendencies of absolutist monarchs further exacerbated the tenuous situation. Among the large-scale conflagrations of this period are the English Civil War (1642–1651), the Thirty Years' War in the Holy Roman Empire (1618–1648), and the Catalan revolt in Spain

(1640–1653). The commercialization of England during this period is attributable to this disruptive climatic change. The decline of harvests in Britain and the onset of civil war, while destructive to society and the economy, were offset by the economic linkages created by Oliver Cromwell due to his wars with the Dutch to assert English naval supremacy (1653–1654). The end result was the wane of Dutch economic power relative to the emergence of England as a major player in European and Atlantic trade. Within Britain, the economic dislocations caused by poor harvests were more than made up by England's newfound role as a major global commercial power.

—*Abraham O. Mendoza*

Bibliography

- Appleby, Andrew B. "Epidemics and Famine in the Little Ice Age." *Journal of Interdisciplinary History* 4(10) (1980): 643–663.
- Fagan, Brian M. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2000.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. Malden, MA: Blackwell, 2001.
- Post, John D. "The Impact of Climate on Political, Social, and Economic Change: A Comment." *Journal of Interdisciplinary History* 4(10) (1980): 719–723.

Creeping Cold—From New England to Coastal Alaska

Diaries, letters, and other historical documents reveal that people all over the world experienced the effects of a deepening cold period known as the Little Ice Age beginning about 1250 CE. Scientists disagree about the precise dates that it began, but the world endured about 500 years of colder weather after this time. Earth's climate has gone through numerous cycles of global warming and cooling in the 10,000 years since the end of the last major ice age. Although far smaller than the temperature swings of the Pleistocene during which vast ice sheets expanded over large parts of continents and melted away several times, these oscillations nonetheless have left their marks on human cultures and natural ecosystems. The global cooling event affected different areas at different times, but in

general temperatures were one to two degrees cooler than they are today. Glaciers worldwide advanced considerably during the Little Ice Age.

During a warmer period prior to the Little Ice Age known as the Medieval Warm period, people migrated northward, establishing farms and growing crops even in subarctic areas. However, when the colder temperatures arrived, crop failures led to famine, diseases, and death. With each climate change, whether global or local, communities of plants and animals shifted north or south or were disrupted, leading to the creation of new groupings of species. Likewise, human cultures were uprooted and driven to more favorable locales, or people adapted by changing their technologies and behaviors.

Unlike many earlier climate swings, the Little Ice Age was abundantly documented by human observers throughout the literate world. Galileo invented the thermometer in the midst of the Little Ice Age, and in central England reliable monthly temperature records begin in 1659. Where written records are unavailable, more information about climate can be determined by geologists and botanists. Scientists have several methods for measuring climates of the past. "Dendrochronology" is the term used for examining tree rings, which are formed by the annual growth of wood in the trunk. During warm and moist years trees grow fast, adding thick rings; during cool or dry years, rings are thin. These patterns of thick and thin rings help researchers reconstruct changes in environment during the tree's lifetime.

A second very important scientific method uses cores of ice obtained by drilling into glacial ice at the North and South Poles and on high mountains to obtain records of snowfall, dust, and atmospheric chemicals contained in the ice. These cores provide information on temperature, precipitation, and even global wind patterns if the source of the dust can be determined. Paleobotanists examine layers of cores similarly drilled in lake sediments to analyze plant pollens and reconstruct the types of vegetation growing in the area. Vegetation responds quickly to temperature and rainfall changes.

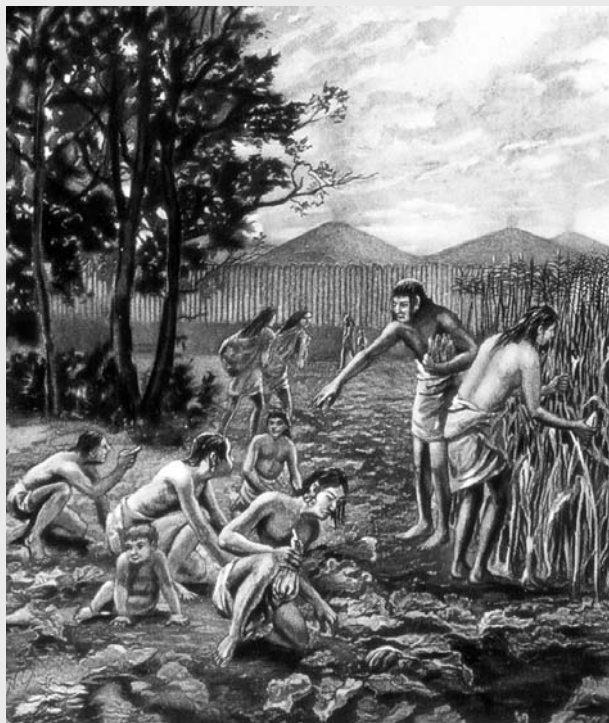
The effects of the Little Ice Age were anything but uniform throughout the world. Cold and erratic weather patterns produced numerous crop failures in northerly areas such as Scotland and

➤ COLD, CORN, AND CULTURE IN THE PREHISTORIC NORTHEAST

Maize, or Indian corn, first arrived in northeastern North America during the Medieval Warm period before the Little Ice Age. Archaeologists have dated maize in Ontario at 600 CE and in New York at 1000 CE, but larger caches of corn did not appear until 1,200 or 1,300 years ago. Central Americans developed corn agriculture for warmer climates more than 3,000 years ago, but it was not until the improvement of a type called Northern Flint that farmers could grow corn in more temperate climates. Even with this biological advance, corn still required 120 days of warmth in order to ripen.

Although American Indians practiced maize horticulture by 1000 CE, many tribes of the Northeast could not rely on it as their primary source of food. New England's Algonquian peoples, particularly, experienced difficulty in growing maize because of poor rocky soils and the cool rainy weather of the Little Ice Age, although in areas such as the Connecticut River valley large fields of corn could have been grown and supported larger villages. Early European visitors noted that these tribes left their maize under the care of the elderly and children while adults pursued other subsistence activities, and archaeological sites indicate a high degree of seasonal mobility. Europeans describe finding maize often stored in subterranean pits but in such small quantities that it would have served as a dietary supplement rather than the major staple food. When American Indians did eat corn, they mixed it with beans and called the dish *sagamite* (or succotash).

Hunting and gathering of a variety of plants and animals formed the core of the diet of aboriginal peoples in prehistoric New England. While we know that maize horticulture was practiced by the New England Indians from Maine (but only along the Saco and Kennebec rivers) to Connecticut, it may not have consumed much of their time or energy. After the planting of corn, Native American peoples would disperse for two to three months as the corn ripened to hunt and gather elsewhere. Thus, the Algonquians of the region may be seen as mobile farmers or as foraging horticulturalists. In 1634 the English observer William Wood reported that the people of Massachusetts Bay



Members of the Hopewell culture gather crops of maize and squash. The Hopewell were the first Native American people fully committed to agriculture. (North Wind Picture Archives)

relied on waterfowl, game and fish, roots, beans, and clams in winter and on shellfish and berries in summer, suggesting a very diverse diet.

Just 50 years later another witness, John Josselyn, noted that the people of the Maine coast relied upon fish, fowl, wild game, dried oysters, lobsters, eels, eggs, Indian corn, kidney beans, ground nuts, chestnuts, roots, and berries. For the Hudson Valley, another visitor agreed that Native American people supported themselves with hunting, fishing, maize, and beans. No doubt cold, wet weather, and poor soils prevented the development of large-scale agriculture and large communities in prehistoric New England, so New England peoples adapted to the numerous natural resources in their environment that actually provided a nutritious and varied diet.

—Pauleena MacDougall

Norway. Perhaps hardest hit were the Norse settlements in Iceland and Greenland. The population of famine-ridden Iceland dwindled during the Little Ice Age to half its previous number. Greenlanders fared even worse. Growing sea ice cut off communication with the outside world beginning about 1370, and when German ships landed in Greenland more than a century later, they found a single frozen corpse but no living colonists among the ruins. In 1645 glaciers in the Alps and Scandinavia grew farther down mountain slopes and valleys than they had in thousands of years. Sea ice choked much of the North Atlantic, causing havoc with fisheries in Iceland and Scandinavia. Eskimos paddled their kayaks as far south as Scotland. At the same time in China, severe winters in Jiang-Xi province killed the last of the orange groves that had thrived there for centuries.

In addition to a general cooling trend, greater fluctuations in climate alternating in drought and rainy periods occurred during the Little Ice Age. The extremes of rainfall and cold placed even greater stress on agriculture, health, and economics. The growing season changed by 15 to 20 percent between the warmest and coldest times of the millennium. That is enough to affect almost any type of food production, especially crops highly adapted to use the full-season warm climatic periods.

Cod fishing greatly decreased at the Faeroe Islands, but conversely the fertile fishing grounds of the present-day Newfoundland Banks were thought to have been found by fishermen in the late 1400s who were looking for the fish stocks that had deserted their former grounds as the result of the movement of colder waters from the north.

Storms that caused more than 100,000 deaths were also reported in 1421, 1446, and 1570. Additionally, large hailstorms that wiped out farmland and killed great numbers of livestock occurred over much of Europe due to the very cold air aloft during the warmer months. Due to severe coastline erosion and high winds, great sandstorms developed that destroyed farmlands and reshaped coastal land regions.

Many glaciers in Alaska, Canada, and the northwestern United States grew larger during the Little Ice Age. European explorers first sailing along the Alaska coastline in the 1790s noted

only a small embayment along the coastline. By the 1880s the glacier that filled what became known as Glacier Bay had retreated, leaving a bay that extended nearly 40 miles (64 kilometers). The glacier continues to retreat, and today Glacier Bay extends more than 60 miles (96 kilometers) into the Alaskan coastline.

In North America some hunter-gatherer communities may not have suffered as much as the new agricultural communities, but that does not mean there was no hardship. We know less about the effect of climate on population in North America than in Europe and Asia because written records do not exist. Smaller, more mobile Native American communities could easily adapt to changing climate. Few really large population centers developed during this period, with some notable exceptions. Cahokia, a large urban cluster of about 30,000 people, occupied a 6-mile (10-kilometer) stretch along the Mississippi River in present-day Louisiana. The Mississippian society grew fields of corn, beans, and pumpkins and built large earthworks upon which lived the city's chiefs and priests. The society had developed a new variety of maize called Northern Flint that matured in a shorter time and could be cultivated in temperate northern latitudes. Did the creeping cold lead to their demise in the 1300s? Scientists are uncertain. Certainly the alternating drought and rainy seasons had some effect. In the southwest, Anasazi communities such as the Chaco Valley system collapsed due to drought after about 1130. Likewise, the Hohokam civilization that relied on irrigated crops and flourished in what is now present-day Arizona collapsed in the fourteenth and fifteenth centuries, and its villages were abandoned. Increasing drought, floods, or salination may have caused crop failures.

The Little Ice Age also created difficult conditions for European settlers in North America. Severe drought occurred between 1560 and 1612 as English colonizers were settling along the Carolina and Virginia coasts. Roanoke Island, North Carolina, experienced two years of drought between 1587 and 1589. Jamestown also experienced severe drought in 1607, leading to crop failure and starvation. Only 38 people survived out of the original 104. Eighty percent of the 6,000 settlers who arrived between 1607

and 1625 perished from malnutrition and shortage of good drinking water.

Scientists have identified several possible causes of the Little Ice Age from outside the oceanic, atmospheric, and land systems: decreased solar activity, increased volcanic activity, and ocean currents. Some have also speculated that depopulation of Europe during the famine and plague and the resulting decrease in agricultural output may have prolonged the Little Ice Age. Other researchers have examined earthly causes. Volcanic eruptions are known to meddle with climate by injecting a veil of sun-blocking dust into the atmosphere. There were eruptions that are more frequent during the Little Ice Age than during the twentieth century. These eruptions are short-term events that may have exaggerated the effect of the Little Ice Age but probably were not a cause. Most prominent was the 1815 eruption of Tambora in Indonesia. It pumped into the atmosphere vast amounts of ash. The following year has been called the Year without a Summer. In June and July 1816, New England and northern Europe suffered frost and even snow.

One potential source of climate change also may be the North Atlantic currents. Warm water in the Gulf Stream moves north along the surface, cooling as it travels. By the time the surface water reaches the far northern portions of the North Atlantic basin, it has cooled and grown denser than the underlying layers of ocean and begins to sink. The water then travels south along the bottom, driving an aquatic conveyor belt that spans the globe. But researchers suspect that if enough fresh water, perhaps from melting ice, is injected into key spots in the North Atlantic, it can virtually shut down the

conveyor. Fresh water is more buoyant than salt water and can form a layer that blocks the circulation. The North Atlantic region would then cool. If the fresh water is reduced, researchers say, the reverse can happen, warming the North Atlantic region.

—Pauleena MacDougall

Bibliography

- Adams, Jonathan, Mark Maslin, and Ellen Thomas. "Sudden Climate Transitions during the Quaternary." *Progress in Physical Geography* 23(1) (1999): 1–36.
- Baron, W. R. "1816 in Perspective: The View from the Northeastern United States." In *The Year without a Summer? World Climate in 1816*, edited by C. R. Harington, 124–144. Ottawa: Canadian Museum of Nature, 1992.
- Cook, E. R., et al. "Long-term Aridity Changes in the Western United States." *Science* 306 (2004): 1015–1018.
- Cronin, T. M., et al. "Medieval Warm Period: Little Ice Age and 20th Century Temperature Variability from Chesapeake Bay." *Global and Planetary Change* 36 (2003): 17–29.
- Fagan, Brian M. *Chaco Canyon: Archeologists Explore the Lives of an Ancient Society*. Oxford and New York: Oxford University Press, 2005.
- Grove, Jean M. *The Little Ice Age*. London and New York: Methuen, 1988.
- Krech, Shepard, III. *The Ecological Indian*. New York: Norton, 1999.
- Laird, K. R., et al. "Lake Sediments Record Large-scale Shifts in Moisture Regimes across the Northern Prairies of North America during the Past Two Millennia." *Proceedings of the National Academy of Sciences USA* 100 (2003): 2483–2488.
- Ruddiman, William F. *Plows, Plagues, and Petroleum: How Humans Took Control of Climate*. Princeton, NJ: Princeton University Press, 2005.

■ Introduction: Natural Disasters and Population

Natural disasters, such as earthquakes, volcanic eruptions, and extremes of weather, have been the costliest events throughout history. The least predictable of disasters, they often produce human tragedies on

a vast scale. The early modern world experienced several such natural disasters that had profound effects on human demography as well as contemporary politics and culture. In 1556 one of the deadliest earthquakes in history

struck the northern Shaanxi region of China. The earthquake completely devastated some 11 provinces. Entire mountains and rivers changed as the earthquakes pushed the earth's surface dozens of feet up or down. Houses, temples, and fortifications were completely demolished, and the loss of life is estimated to have exceeded 800,000 people. Aftershocks continued to shake the region for weeks afterward. This devastating earthquake, although unique in its strength, was not an isolated incident. The northern Chinese provinces experienced earth trembles in 1303 and 1695, while powerful earthquakes struck the provinces of Fujian, Gansu, Taucheng, Hebei, and Yinchuan between 1604 and 1739.

Less than 40 years after the Shaanxi earthquake, on February 19, 1600, South America witnessed one of the biggest volcanic eruptions in all of recorded human history when the Huaynaputina Mountain close to Arequipa (southern Peru) erupted. Ranked sixth on the Volcanic Exclusivity Index, the explosion was as powerful as the famous Krakatau eruption in 1883. The Huaynaputina eruption sent thousands of tons of ash, smoke, and fragments of volcanic rock with terrific force high into the atmosphere. Most of the nearby area suffered complete devastation, while ash fall was reported hundreds of miles away in what is now northern Chile and western Bolivia. Lima, the capital and largest city of Peru, lay under a thick layer of ash that ruined regional agriculture, which took decades to fully recover. In the Pacific, offshore from Peru, British sailors, upon hearing explosions, thought they were about to be attacked by enemy warships. The Huaynaputina eruption had an effect on a global scale as well. Recent studies on tree rings indicate that the next two years after the eruption were the coldest in hundreds of years in Europe. Records in Switzerland, Estonia, Latvia, and Sweden show that the winters of 1601-1603 were among the coldest years, freezing rivers and harbors where crucial trade was conducted and causing record floods in the spring. In Russia this climate change resulted in the worst famine that realm had experienced in centuries, and tens of thousands of people died. Government's failure to alleviate the calamity produced a political turmoil that eventually led to the overthrow of Tsar Boris Godunov, a turning point in Russian

history. Elsewhere grape harvests failed or were late in France, Germany, and South America, while peach trees blossomed late in China.

In the mid-seventeenth century, London, one of the largest cities in Europe, became the scene of a different kind of disaster. The bubonic plague, which devastated most of Europe in the fourteenth century, made an unexpectedly strong comeback in England in 1665. The country had enjoyed an economic boom, and London was at the epicenter of this success. Its population rapidly increased, causing overcrowding and neglect of hygiene, which facilitated the spread of diseases. Thousands of people were horrified to see their bodies covered in black boils in the armpits, neck, and groin, the first signs of the deadly disease. Death came swiftly to these unfortunates, as the disease spread easily from person to person through the air. The first victims of the plague were diagnosed in late 1664, and by late spring the disease claimed over 7,000 lives every week. The king, his retinue, and wealthy residents fled the city, leaving behind the poor and wretched who could not afford to leave and whose malnourished bodies could hardly resist the disease. As many as 100,000 people died over the next six months. Physicians could provide no explanation for the sickness, nor could they provide any treatment. The few who braved staying in the city to care for the infected wore leather masks with glass eyes and a long beak filled with flowers and herbs that were thought to ward off the illness.

The English writer Daniel Defoe, author of the famous *Robinson Crusoe*, witnessed the devastating effect of the Black Death. He described London as an abandoned and despondent city, firmly in the grips of eerie silence that was broken by the occasional sound of the carts carrying the dead. Many buildings were quarantined, their residents forbidden from leaving the building. Every day hundreds of bodies were dumped unceremoniously in mass graves. At the time a young man was studying at Cambridge, and upon the news that the Black Death spread to this city, his mother took him home to northern England, where, in solitude and isolation, the young man concentrated on his mathematical studies. Eventually the world would know this man as Sir Isaac Newton, while his

Principia Mathematica would become one of the greatest scientific works of all time.

London had barely recovered from the Black Death when early at dawn on September 2, 1666, it suffered from another disaster. Some residents woke up that morning to find their rooms full of smoke. As they rushed outside, a shocking sight of numerous buildings consumed by flames appeared in front of them. As thousands of residents rushed to escape from the homes, fire quickly spread from one wooden structure to another. Before the end of the day the fire was out of control and burned for three days, leaving behind the desolate mass of ruined homes and stumps of chimneys. The fire consumed over 13,000 houses, 87 parish churches, St. Paul's Cathedral, and most of the municipal buildings. Social and economic consequences of this disaster were overwhelming, but London was rebuilt within years of the disaster, and its economy rebounded.

Across the Atlantic, a Caribbean port town was not as fortunate. On June 7, 1692, Port Royal (Jamaica), one of the busiest and wealthiest ports in the West Indies, experienced a powerful earthquake followed by a tsunami. Most of the town sank into the sea immediately after the main shock, while the few remaining buildings were swept by the huge oceanic waves that the tsunami brought onto the shores. By the end of the day most of Port Royal was destroyed and lay beneath the waters of present-day Kingston Harbor. About 2,000 people (out of some 6,000) died beneath the ruins or were swept into the sea, while another 2,000 to 3,000 perished from wounds, disease, or malnutrition in the days after the catastrophe. Looting and robbery spread rapidly as survivors fought over meager resources. Port Royal struggled to recover but never recovered its former glory. Devastated by fires in 1703 and 1750 and hurricanes in 1722 and 1774, Port Royal declined in importance as colonial government moved to Spanish Town, while trade shifted to Kingston. By the late eighteenth century the town was almost entirely abandoned, and today less than 2,000 people reside there.

Only eight years after the disaster at Port Royal, another catastrophic event shook the Western Hemisphere. Early on the morning of January 26, 1700, the undersea Cascadia thrust fault ruptured with an estimated magnitude of

9.2, shaking the ocean floor west of Seattle and producing a vast tsunami that swept over the coastal area and destroyed everything in its path. The Native Americans who resided in the region left no written evidence of this event, but scientists were able to reconstruct its events based on dendrochronology, soil studies, Native American oral traditions, and Japanese records that show the appearance of a tsunami in 1700. Japanese sources speak of flooded fields, shipwrecks, damaged houses, fires, and panic. But Japan was thousands of miles away from the epicenter, and one can only imagine the catastrophic effect that this event had on indigenous societies residing along the coastline. The oral tradition of the First Nations people tells of complete destruction of the houses of the Cowichan people on Vancouver Island and earth trembles so violent that people could not stand and so prolonged that it made them sick.

Arguably the most famous natural disaster of the eighteenth century took place on November 1, 1755, when a powerful earthquake struck near Lisbon, the capital of Portugal. As thousands of residents flocked to their churches, the magnitude 9 shockwave destroyed most of the city and produced a tsunami that swept ashore, killing thousands and inflicting further damage. Some 40,000 people died in the Portuguese capital, while several more thousands lost their lives in Spain and Morocco. Lisbon's magnificent Manueline architecture as represented in palaces, libraries, and churches was destroyed. People were stunned by the scale of destruction and the fact that it took place on All Saints Day, a sacred holiday in the Catholic realm. In a society that believed that everything on the earth was part of an orderly creation guided by its Creator for the benefit of humanity, some began to question how such a tragedy could occur on a holy day and why the Creator allowed the deaths of so many innocent people. The leading voices of the Enlightenment launched debates on religion, theodicy, and the nature of God. The sharp-witted French philosopher Voltaire used the earthquake to criticize the belief in "the best of all possible worlds," while Jean-Jacques Rousseau called for abandonment of urban life and the return to a more naturalistic way of life.

—Alexander Mikaberidze

Natural Disasters in Early Modern South Asia

Natural disasters are complex and difficult to define as the relationship between humans and the environment is as important as the natural event itself. The peoples of the early modern period in South Asia faced numerous challenges, as the area was particularly prone to monsoons, typhoons, coastal storm surges, tsunamis, and droughts. During this time, South Asia experienced extreme weather conditions resulting in floods and drought, devastating destruction, and significant loss of human life.

Human settlements often form around rivers for the natural benefits of water supply, food, and travel. While monsoons (heavy seasonal winds) provide ample water supplies for the growing season, they also present hazards for flooding, soil erosion, destruction of agriculture, damage to human communities, and loss of life. The Ganges River has long been a source of life to people in the region and is the subject of myth and legend. In the sixteenth century the Ganges River changed course, forming numerous islands at the mouth of the Ganges and the Gulf of Bengal. While the shift in streams proved beneficial for agricultural cultivation, the heavy rains caused floods and environmental imbalances, prompting the

people to build embankments to keep rising waters at bay.

The flooding of the Ganges River impacted military campaigns as well. The memoirs of Babur (the first Mughal emperor, r. 1526–1530) and Akbar (the third Mughal emperor, r. 1556–1603) provide modern readers with vivid descriptions of changes in the region's landscape. The unpredictable monsoon rainfall was of grave concern to Mughal emperors, as the environment proved difficult for military expeditions. Deploying troops, crossing rivers, transporting weapons and equipment, and planning attacks depended on the rise and fall of the waters. Other visitors to the region throughout the sixteenth to late eighteenth centuries describe numerous instances of flooding that wiped out entire cities, killing thousands, destroying needed food supplies, and prompting communities to invoke the gods and pray for divine intervention.

Severe weather conditions can also include typhoons, tsunamis, and coastal storm surges. A typhoon is a tropical cyclone in which a low-pressure center and thunderstorms produce torrential rain and powerful winds. In the Southern Hemisphere, these storms feed on heat released from rising moist air and can create storm surges (where storms cause large tidal waves on the coast) and cyclones, causing significant damage to humans, wildlife, and the environment.

STORM SURGES AND TSUNAMIS IN THE INDIAN OCEAN

The Indian Ocean is prone to storm surges and tsunamis. Storm surges occur when severe storms and strong winds push water toward the coast (often with large tidal waves), causing a surge of water and flooding. When the ocean floor experiences earthquakes, volcanic eruptions, landslides, or tectonic plate movements, the ocean's water is quickly displaced. This causes a series of long and extremely dangerous water waves (the tsunami wave train) to reach land. These waves can travel over 500 miles (805 kilometers) per hour and often occur with little warning.

The term "tsunami" comes from the Japanese word for "wave harbor." These catastrophic events have occurred throughout the history of South

Asia, although scientists continue to gather evidence and document major storm surges and tsunamis in the early modern period. A tsunami was said to hit Maharashtra, a state on the western coast of India, in 1524, but few details are known about the cause and impact. Another large earthquake and subsequent tsunami hit the coast of the Bengal-Burma region (present-day Bangladesh and Myanmar) on April 2, 1762, resulting in the deaths of more than 500 people and causing severe damage to the city of Chittagong and raising the Arakan coast. Much of what is known about this event is anecdotal and comes from eyewitness accounts.

—Kim Kennedy White

Most sources report that one of the worst natural disasters in history occurred in 1737, when a typhoon near Calcutta, India, at the Bay of Bengal caused 20,000 ships to sink along the Hoogly River and resulted in the deaths of 300,000 people. Evidence, however, is based on reports from the East India Company. Scientists continue to examine the event in order to determine the nature of the storm and the number of deaths, since the population of Calcutta at the time was fewer than 20,000 people.

The lack of rainfall can also become a natural disaster. South Asia experienced a series of droughts and crop failures that led to deadly droughts during the sixteenth, seventeenth, and eighteenth centuries. After three consecutive seasons of crop failure during 1630–1632, the Deccan region experienced a famine that resulted in approximately 2 million deaths.

Human response can add to the toll of natural disaster. A shortfall of crops and severe drought led to the Bengal famine of 1770, resulting in the deaths of more than 10 million people, or one-third of the population. This was the first Indian famine under British rule. The British East India Company's tax hikes coincided with this famine. Reports of distress were reportedly ignored, causing further damage to the human population in the region who were also battling smallpox and other diseases as a result of the famine.

—Kim Kennedy White

Bibliography

- Bhargava, Meena. "Changing River Courses in North India: Calamities, Bounties, Strategies, Sixteenth to Early Nineteenth Centuries." *Medieval History Journal* 10 (2007): 183–208.
- Fazl, Abdul. *The Akbar Nama*. Translated by H. Beveridge. Delhi: Ess Ess Publications, 1977.
- Hill, Christopher V., Ed. *South Asia: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2008.
- Hoffman, Susanna M., and Anthony Oliver-Smith, eds. *Catastrophe and Culture: The Anthropology of Disaster*. Santa Fe, NM: School of American Research Press, 2002.
- Richards, John F. "The Seventeenth-Century Crisis in South Asia." *Modern Asian Studies* 24(4) (1990): 625–638.
- Thackston, Wheeler M., ed. *Baburnama: Memoirs of Babur, Prince and Emperor*. New York: Modern Library, 2002.

Earthquakes in the Early Modern World

Natural disasters in the early modern period left a wake of destruction not only due to their own destructive capabilities but also due to the fact that fire, disease, and a dearth of preparation by states and polities in reacting to said occurrences extended the level of destruction and chaos. While the environmental implications of natural disasters were significant, the social, political, and economic consequences also made a considerable impact on the states and peoples of this period of world history. Cataclysms like earthquakes and the resulting floods that occurred from the tsunamis that often followed left a path of destruction that societies of this period were unable to contend with, especially in those regions that were experiencing significant urbanization.

Western Europe experienced a number of earthquakes from the fifteenth to the eighteenth centuries. In 1481 the island of Rhodes in Greece experienced an earthquake with an estimated magnitude of 7.2 and a casualty rate of 30,000. However, the majority of the damage was not caused by the initial shock but was instead caused by the ensuing tsunami and the aftershocks that lasted for ten months, into 1482. Italy saw several earthquakes in this period, but probably the biggest one was the earthquake in Sicily in 1693. The quake itself registered around 7.5 and was coupled with the eruption of Mount Etna. Forty-five cities and towns were destroyed, and the casualties numbered upwards of 60,000 people. The destruction of the cities required a major rebuilding effort, which inspired a new style of Baroque architecture called Earthquake Baroque. Portugal also had two major earthquakes, both centered in Lisbon: one in 1531 and one in 1755. The sixteenth-century earthquake gave King João III the excuse he needed to petition the church for an inquisition, as people became convinced that their tolerance of crypto-Jews had angered God. The eighteenth-century quake was devastating to the country mainly because it triggered an enormous tsunami that added to the damage and chaos already caused by the main quake.

A variety of earthquakes also struck the Americas, particularly Chile, during the early

► THE GREAT FIRE OF LONDON

In 1666 London experienced a fire that devastated the entire city. During the seventeenth century London was a hodgepodge of wooden buildings constructed in a haphazard manner, as it had grown unchecked since the medieval era. It was also severely crowded, conditions that caused John Evelyn to become alarmed at the danger posed were a fire to start. Indeed he was correct, as a fire that started on Pudding Lane on September 2 soon turned into a firestorm that raged for three more days. By the time the fire had finally run its course on September 5 most of the city and its homes were destroyed, the fire only missing the Westminster district and Whitehall Palace. Despite the severity of the fire, only eight deaths were recorded. Recent historiography has begun to challenge the official death toll, stating that it was probably higher because the deaths of the poor and the middle class were not recorded, and most of the bodies would have been incinerated by the flames.

The fire did not institute a major change in the construction of London. A special Fire Court was established to deal with disputes between landlords and tenants, and decide who should pay to rebuild, based on their ability to pay. Verdicts were usually given within one day, in an attempt to speed up the rebuilding. Plans to rebuild London on a grand Baroque scale were produced but never came to fruition, as there was a major labor shortage especially once Charles II encouraged the refugees to leave and settle outside the city in the hopes of avoiding rebellion. Finally, London was rebuilt on the ruins of the old city, the only difference being that the streets were wider, the river was not blocked by buildings, and the houses were now made of stone and brick, not wood. The fire saw the advent of fire insurance. The first fire insurance company was established in 1680, and ten years later one in ten houses carried fire insurance.

—Monique Vallance

modern period. Earthquakes hit Chile in 1575, 1604, 1730, and 1751. The worst of these was the 1751 earthquake in Concepción, which rated around 8.7 and triggered a tsunami that brought up to five waves to shore. Some residents had already evacuated prior to the main shock, as several tremors had preceded it, warning the population, already used to earthquakes, that one was about to occur. The consequences of this disaster were great: the continued aftershocks prevented the reconstruction effort and even destroyed the emergency shelters built for the homeless. Even nearby cities were affected. The city of Chillán was destroyed, and its river was redirected 15 blocks. Fourteen years later, the entire city of Concepción was relocated to Valle de La Mocha in order to protect against future quakes. Farther north in the Caribbean, Port Royal in Jamaica was also hit by a major earthquake in 1692. The results of this quake were severe, as two-thirds of the town (around 33 acres or 13 hectares) sunk below sea level. In addition, approximately 5,000 citizens were killed both in the initial quake and in the landslides and tsunamis that occurred in the days to follow. While

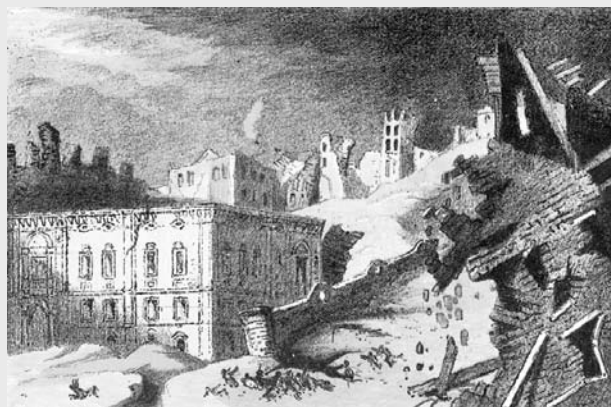
this casualty rate may not seem very high, it was devastating to Port Royal, as the town's population had been only 6,500.

Asia is a continent that was especially hard hit by earthquakes. The casualty rate here was higher than the rest of the world combined, mainly because of the earthquakes that occurred in the Shaanxi Province of China in 1556. It is known as the third-deadliest natural disaster in history based on the number of people who died, not on the magnitude of the earthquake (which registered over 8.0). This earthquake was so deadly because the population had built their homes in caves that consisted of loess, a soft clay that had collected over the centuries. The landslides that resulted from the earthquakes buried the caves as well as the people living inside them. It is estimated that between 820,000 and 830,000 people were killed, which made up 60 percent of the region's population. An earthquake of a similar magnitude occurred in Hoi, Japan, in 1707, making it the largest earthquake in Japanese history, although the death toll was not nearly as catastrophic. The magnitude 8.6 earthquake not only triggered one of the third-largest landslides

► LISBON EARTHQUAKE OF 1755

On November 1, 1755, at 9:20 a.m. a powerful earthquake struck Lisbon, Portugal; almost an hour later, a giant tsunami engulfed the city and its environs, followed by a conflagration that destroyed much of what remained. The catastrophe killed between 60,000 and 100,000 people. The shockwaves reached as far as Finland. Tsunamis reached the southern coasts of England and Ireland, and 10,000 people were killed in Morocco.

The royal family managed to escape harm because they were in Belém, a suburb of Lisbon. Had they been in Lisbon they would have surely died, as the Paço da Ribeira, the royal palace, was reduced to rubble. With the royal family was Sebastião de Carvalho e Melo (known today as the Marquis of Pombal), the prime minister of José I. Pombal's leadership enabled the city to rebuild and recover. When asked what should be done, Pombal is reported to have said, "Now? We bury the dead and feed the living." He sent firefighters into the city to put out the flames and had thousands of corpses buried at sea to avoid disease. Chaos was also minimized with the erection of gallows at various parts of the city, a warning to looters and would-be criminals inclined to take advantage of the confusion. Immediately following



Painting of the Lisbon earthquake of November 1, 1755.
(Jupiterimages)

the disaster, Pombal and Dom José began to hire architects to plan the rebuilding of the city. One year later the city was mostly empty of debris, and the only sign of destruction was the absence of so many important historical buildings and treasures destroyed in one of the worst earthquakes in recorded history.

—Monique Vallance

in Japanese history and tsunamis but also has been linked to the eruption of Mount Fuji. The resulting death toll reached 5,000, and 29,000 houses were destroyed. Western Asia was also no stranger to earthquakes. The 1509 earthquake in Istanbul, Turkey, had a magnitude of 7.2, had 10,000 casualties, and destroyed 109 mosques and over 1,000 houses.

—Abraham O. Mendoza
and Monique Vallance

Bibliography

- Horden, Peregrine, and Nicholas Purcell. *The Corrupting Sea: A Study of Mediterranean History*. Hoboken, NJ: Wiley-Blackwell, 2000.
- Johns, Alessia. *Dreadful Visitations: Confronting Natural Catastrophe in the Age of Enlightenment*. New York: Routledge, 1999.
- Kovach, Robert L. *Early Earthquakes of the Americas*. Cambridge: Cambridge University Press, 2004.

Sixteenth-Century Demographic Catastrophes in Peru

The Americas in the sixteenth century were the scene of some of the most devastating population crashes in human history. The population of the Americas in 1492, before European contact, has been estimated to have ranged from 50 million to 100 million; by 1600 the survivors of the massive sixteenth-century die-off numbered only an estimated 5 million to 10 million. During the sixteenth century, about 90 percent of the native population of the Americas were the victims of warfare with the invading Spanish and Portuguese conquerors, harsh and inhumane treatment, being worked to death in savage conditions, or especially European diseases to which they lacked all natural immunity.

To these general causes for the great population crash of the sixteenth century can be added

some special factors in Peru. Peru was cursed with riches in precious metals, gold and silver. The silver was most important because in Upper Peru (today Bolivia) the Spanish found in 1545 a mountain of silver, Potosi. The Spaniards quickly opened mines in this Cerro Rico (“rich mountain”) and conscripted Quechua and Aymara natives of the former Inca empire to dig and refine the ore. A new city, Potosi, grew up near the mountain. Potosi, at an elevation of 13,000 feet (nearly 4,000 meters), became the largest city in the Americas and one of the largest cities in the sixteenth-century world, with 200,000 people.

The Indian conscripts refined the silver ore by using the patio process, in which the crushed rock containing the ore is spread out on a patio and then mixed with mercury. The Indians mixed the mercury with the crushed rock by treading it with their bare feet. Since mercury is toxic and exposure to it causes dementia and then death, the Indian mortality rate was very great. Peru was doubly cursed, because in central Peru, near Lima, the Spaniards located one of the world’s greatest deposits of mercury, at Huancavelica. There the Spaniards discovered a rock mountain “soaked in quicksilver.” The rock was mined and crushed by forced Indian laborers, using hand tools. Mining the mercury, like refining the silver ore, was highly toxic, and mortality among the Indian miners was so dangerous that every morning before the Indians went down in the mines, they attended a requiem mass for the dead.

To obtain workers for the mercury mines at Huancavelica and the silver mines at Potosi, the Spanish relied on an old system inherited from the Inca empire whereby local Indian rulers (*caciques*) were responsible for drafting from the peasantry workers for public works. This system, called the *mita*, admirably suited the mine owner’s needs. Indians were drafted from agricultural villages located hundreds of miles from the mines. The drafted workers were expected to find their own transportation to the mines and to bring their own food. It is no surprise that service in the mines was the most hated imposition of the Spanish conquerors. To save their children from service in the mines, Indian mothers sometimes broke the children’s bones so that they grew up crippled.

➤ THE DESTRUCTION OF THE INDIES, A SPANISH ACCOUNT

The Spanish conquest of the Western Hemisphere led to the deaths of millions of indigenous Americans. Historians and demographers disagree on exact figures and specific causes, but they concur on the effects played by large massacres, harsh exploitation, and, most significantly, the effects of “virgin soil” epidemics, or diseases that devastated peoples who lacked immunity through prior exposure to them. The massive human toll of the Spanish invasion of the Americas was first denounced by the Dominican friar Bartolomé de las Casas, an advocate of the abolition of Indian slavery. Father Las Casas, who expressed an idealized and paternalistic view of the conquered people, was also aware of the vulnerability of the indigenous populations to the diseases that the Spanish brought with them. In his controversial polemic, *An Account, Much Abbreviated of the Destruction of the Indies* (1542), he denounced the exploitation of the native peoples.

“. . . of all the infinite universe of humanity, these people are the most guileless, the most devoid of wickedness and duplicity, the most obedient and faithful to their native masters and to the Spanish Christians whom they serve. . . . These people are the most devoid of rancor, hatreds, or desire for vengeance of any people in the world. And because they are so weak and complaisant, they are less able to endure heavy labor and soon die of no matter what malady. . . .”

—Ana María Kapelusz-Poppi

Source

Bartolomé de las Casas, *An Account, Much Abbreviated of the Destruction of the Indies* (Indianapolis: Hackett Publishing Company, 2003), 28.

As the population diminished in the sixteenth century, the pool of laborers grew smaller, and mine owners were forced to offer more humane conditions. Toward the end of the sixteenth century the laborers were furnished with food and were sometimes given meager pay. By 1606 the mine owners petitioned the

Crown for permission to import African slaves to supplement the Indian labor force in the mines.

Added to forced labor in the mines, the Indians were required to furnish food and textiles for their Spanish masters. Early in the Spanish regime the system that the Spaniards used to govern conquered Muslims in Spain was adopted for the Indians of Peru. The Indians were entrusted to a Spanish trustee (*encomendero*), who was responsible for governing and Christianizing his charges. In return, the Indians of the *encomienda* were required to pay tribute in produce, money, and labor. The Spanish *encomenderos* were commonly extortionate, requiring that the Indian peasants deliver large amounts of their food and textile produce as well as spend much time laboring on the *encomendero's* household and fields. The amount of food produced by the Indian farmers declined with the number the Indian farmers, but the demands of the *encomenderos* did not. Every generation less food was available for consumption by the Indian peasants, resulting in malnutrition and sometimes famine. Thus, the Indian population grew even smaller.

Toward the end of the century as the population shrank, many of the Indian villages became unpopulated or very scantily populated, and the government began to gather the survivors into new villages called *reducciones*. Although most of the *encomiendas* were terminated, their successors, the *repartimientos*, were also very exploitative. Nevertheless, because most of the surviving Indians had developed immunities to the diseases that had killed so many earlier in the sixteenth century, the fierce epidemics ceased to rage, and the Indian population began a slow increase.

—Wilfred J. Bisson

Bibliography

- Crosby, Alfred. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press, 1986.
- Demos, John. “The High Place: Potosi.” *Common-place* 3(4) (2003), <http://www.common-place.org/vol-03/no-04/potosi>.
- Diamond, Jared. *Guns, Germs and Steel: The Fates of Human Societies*. New York: Norton, 1997.
- McNeill, William. *Plagues and Peoples*. Garden City, NY: Anchor Press/Doubleday, 1976.

Whitaker, Arthur Preston. *The Huancavelica Mercury Mine*. Cambridge, MA: Harvard University Press, 1941.

Spread of Invasive Species

Invasive species are exotic species that cause damage of some type in their new locations. Thus, they are species that have overcome some geographic barrier (such as a mountain range, a desert, or an ocean) to get to a new place and have managed to survive there well enough to reproduce and spread beyond human control. To be invasive rather than just exotic, species must also cause damage of some kind, even if that is no more than damage to an ecosystem by replacing a native species and causing its decline. The term “invasive species” cannot include native species even if changed circumstances have made them problematic. Between 1450 and 1770 a great many species migrated as a result of humans traveling to new places, but not all such exotic species are considered invasive; only those that damage the health of humans, of other animals, of plants, or of their new environments are considered to be invasive.

Long before 1450, human movement across geographical barriers had led to the movement of species into areas in which they were not found naturally, but the increasing size and speed of ships being developed by Europeans from 1300 on greatly increased species exchange. More space on board ship greatly increased the number of passenger and stowaway species that could travel, and quicker trips meant that more species survived to reach their destinations. As a result, species exchange among Europe, Asia, and Africa increased.

The redistribution of species within the Old World was significant, but after 1492 the redistribution of species became a global phenomenon. Columbus's voyage across the Atlantic led to links being formed between parts of the world that had been biologically isolated and had developed a vast array of different species. The quickening ties between the New World and the Old World in the wake of Columbus led to a reshuffling of species now known as the Columbian Exchange.

Species exchanges began from the very first voyage made by Columbus, and among some of

the most significant invasive species were infectious diseases. It has recently been recognized that strains of syphilis originated in the Americas and traveled on Columbus's ships to Europe, where they quickly began having disastrous consequences for human health. Soon afterward the New World was devastated by invasive species of European diseases, which over time killed the majority of the population. Firm ties were established between Africa and the Americas as the transatlantic slave trade developed. As a result, diseases such as yellow fever and malaria, with their accompanying mosquito species, traveled from Africa to the New World and became established there.

Other species were deliberately introduced in the Americas by the Europeans. Thousands of feral horses were present on the Argentinean pampas by the late 1500s, and by the 1740s feral horses had spread to the tip of South America and to the Great Plains of North America. The effects of these early species introductions are difficult to unravel, but in the case of the horse it changed numerous American Indian societies as they took advantage of this new resource. Other species of livestock, particularly pigs and cattle, also ran wild soon after being brought to the Americas, and the presence of new species of livestock altered ecosystems across the two continents. The invasive species themselves altered in response to their environments to become distinctively American animals. They also opened the way for invasive species of pasture plants, brought deliberately or accidentally from the Old World. Less spectacular invasions also occurred as the planet's biological makeup was irrevocably altered even before the age of mechanized transportation.

Native species may have evolved to match their environment, but they were often displaced by invasive species. This is not because they were inferior to exotic species but because newly arrived species have a number of advantages. Introduced species are often benefited by leaving behind predators or parasites that keep them under control in their origin environment. They may also spread by making unsustainable use of resources in their new region, going through a boom and bust cycle that leaves their new environments impoverished.

➤ THE ARRIVAL OF THE BLUE MUSSEL

The Blue Mussel (*Mytilus galloprovincialis*), native to the Mediterranean, Black, and Adriatic seas in the Old World, has long been found elsewhere. It is unclear whether it is also native to the coasts of France, Britain, and Ireland or whether it invaded there so long ago that it has become part of the ecosystem.

Mussels travel by attaching themselves to ships or by being included in ballast. By treating a ship as a floating island, mussels have long been able to cross ocean barriers that would kill them on their own. Blue Mussels are often found in the communities of organisms that attach themselves to ships, and by hitching a ride on European ships the mussel had managed to invade the east coast of South America by the early 1500s. Traveling in the same way, mussels later invaded Australian, Californian, Russian, Chinese, Japanese, and New Zealand waters.

The Blue Mussel is typical of invasive species that have been present for a long time. It has become an important food source for humans and is so integrated into its new environment that it is generally perceived as native. Only its invasion of South African waters in the 1980s raised questions about its status in North American waters, where it has successfully replaced truly native species of mussels.

—Claire Brennan

But most importantly, invasive species tend to thrive on disruption. Weeds (which if nonnative are invasive species) are most successful on disturbed ground, and plants are often defined as weedy because they will quickly take over disturbed areas. Often species that are invasive in cleared areas could not survive in undisturbed native forest. The spread of invasive plant species in the Americas was helped by the changes being wrought by European people and animal species and by the increasing development that occurred as the food supplies created by the Columbian Exchange increased human numbers and economic activities around the world.

The Pacific Islands had already experienced the introduction of some invasive species in the period before 1450, brought by their original human settlers. At the very end of this period the

start of a new and overwhelming period of biological exchange also reached them. Long before settlement by European people in this region, the ships of explorers seeded the islands with exotic species, among them invasive species. As soon as European ships reached shore, the Pacific Islanders were exposed to new and invasive diseases. In addition, explorers were interested in creating supplies of food for shipwrecked sailors and in sharing the useful species of Europe. While their attempts to introduce species were often unsuccessful, some invasive species managed to establish themselves. Captain Cook is credited with introducing pigs to New Zealand in 1769.

Despite the significance of invasive species in this period, the process of remaking the biology of the planet was not complete. In this period the spread of invasive species was relatively slow. Ports and well-traveled routes tended to be home to species that had just hitched a ride there, but away from the coast and in places with large European settlements, native species predominated still.

—Claire Brennan

Bibliography

- Belich, James. *Making Peoples: A History of the New Zealanders from Polynesian Settlement to the End of the Nineteenth Century*. Auckland: Penguin, 1996.
- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press, 2004.
- Diamond, Jared. *Guns, Germs and Steel: The Fates of Human Societies*. New York: Norton, 2005.
- Gregson, Ronald E. “The Influence of the Horse on Indian Cultures of Lowland South America.” *Ethnohistory* 16(1) (1969): 30–50.
- McNeill, J. R., and William H. McNeill. *The Human Web: A Bird's-eye View of World History*. New York: Norton, 2003.

Ecological and Biological Exchanges in Oceania

Sustained contact between Europeans and the peoples of Oceania did not occur in the Pacific until after the 1770s. However, those foreigners who did venture into the Pacific prior to that

time brought with them many forms of biological and ecological exchange that would have an enduring impact on Pacific islanders. Indeed, every visitor to the Pacific Islands has brought some form of change. The very first migrants who came into and settled the islands of the Pacific and became the peoples of Oceania introduced new flora and fauna to the region. Archaeological evidence asserts that Oceania's first human inhabitants brought about rapid and significant ecological changes as they established themselves. They altered their environments and developed their complex societies to suit their needs, yet as island cultures they were aware of that environment, their dependence upon it, and the delicate balance that it demanded in order to maintain their resources and well-being. Over centuries of migration, settlement, and development, most Pacific island societies struck a balance with their environment that allowed them to maintain ecosystems and minimize disease experiences. Success required intelligent land management and strenuous labor, and their ecological relationship was established as they struggled against natural hazards and competed with one another over resources.

When Europeans first ventured into the Pacific at the end of the fifteenth century, they also brought new flora and fauna with them, but these foreigners and their foreign species were vastly different from what had evolved in the Pacific region. European ecological relationships differed from those of islanders, and when these two sets of human communities confronted one another the landscape of the Pacific Islands began to be transformed. These new introductions caused many disruptive and often dramatic changes to the physical and social environment, allowed opportunities for foreign microorganisms to find new hosts (animal or human), and initiated epidemics as well as ecological changes.

In 1509 the Portuguese explorer Diogo Lopes de Sequeira became the first European to view the Pacific, but it was the Portuguese voyager Ferdinand Magellan (sailing for the Spanish king, Holy Roman Emperor Charles V) and his Spanish crew on five ships who were the first Europeans to cross the Pacific, landing in Guam in 1521. The Chamorro of Guam thus became the first Pacific islanders to encounter Europeans. When

the Chamorro attempted to take a skiff from the Spaniards, a large landing party attacked and killed many of the islanders, burned nearly 50 houses, and destroyed several canoes.

Despite their role in opening up the Pacific, Spanish interest in Oceania remained relatively minor. However, the vast ocean did serve as a highway for the Spanish galleons, connecting the markets of Acapulco, Mexico, with those of the Philippines. Spanish explorers did come upon many island groups and by the late 1600s had visited several of the archipelagos of Micronesia. In the 1680s Spanish forces and Jesuit missionaries moved all Chamorro from their remote villages on Guam, Rota, and Saipan to settlements closer to the mission. Within a generation, the Chamorro population dropped from approximately 70,000 to 20,000, most having fallen to newly introduced foreign diseases for which these islanders had no immunity.

Micronesia remained under Spanish hegemony until the late 1800s, but the remainder of the Pacific experienced a variety of encounters with Portuguese, Dutch, British, and French explorers—the Portuguese dominating the sixteenth century, the Dutch dominating the seventeenth century, and the British dominating the eighteenth century—all largely pursuing commercial ventures. As with Micronesia, these early encounters between Europeans and communities in other parts of the Pacific brought previously unknown diseases into Oceania and resulted in dire consequences for Pacific islanders. For example, the Dutch navigator Jacob Roggeveen encountered Rapa Nui in 1722 and named it Easter Island to mark the day of his arrival. Roggeveen and his crew anchored off the island for a week. About 150 men went ashore for a day, introducing venereal diseases to the

islanders and accelerating rates of depopulation. By the early 1800s ships' captains rarely landed at Rapa Nui because syphilis was so prevalent.

The arrival of the British crew led by Samuel Wallis in Tahiti in June 1767 and the French reports that followed, thanks to the visit of Louis de Bougainville eight months later, captured European imaginations and led many others, including James Cook, to follow and center their attention on the Pacific. The "discovery" of Tahiti would open a new era in European explorations of the Pacific, but even these first visits brought new infections (venereal diseases) to these islands.

It is thought that over 400 European ships crossed the Pacific from 1520 to 1770, but their impact on the islands of Oceania was minimal as compared to the post-1770 era. Certainly when Europeans first ventured into the Pacific they brought with them many changes, including the introduction of diseases that were until that time foreign to the peoples of Oceania. While there were notable encounters between islanders and Europeans prior to 1770, it would not be until after that time that European ventures into the Pacific became much more sustained and the resulting biological and ecological (ex)changes increased dramatically.

—Kerri A. Inglis

Bibliography

- Fischer, Steven Roger. *A History of the Pacific Islands*. New York: Palgrave, 2002.
- Kirch, Patrick V., and Jean-Louis Rallu, eds. *The Growth and Collapse of Pacific Island Societies: Archaeological and Demographic Perspectives*. Honolulu: University of Hawaii Press, 2007.
- Miles, John. *Infectious Diseases: Colonising the Pacific?* Dunedin, New Zealand: University of Otago Press, 1997.

■ Introduction: Human Environmental Impact

The effect of climate and geography on human history is apparent, although details are widely debated. Nevertheless, human settlements and their development were shaped by geographic and climatic factors, including

soil type, rainfall, and presence of natural resources. Yet we must also keep in mind the capacity of human beings to impose themselves on their environment and to transform it to their needs in defiance of the natural world. They

drained swamps, cut down trees, dug canals, and leveled mountains. In the New World, Europeans, using slave labor, constructed vast plantations that cultivated monocrops (e.g., sugarcane, tobacco, etc.), transforming the natural environment in Brazil and the Caribbean islands. In Iran, irrigation systems allowed cultivation of land in what used to be arid regions of the Iranian plateau, while heavy dependence on rice caused the spread of flooded fields throughout Southeast Asia. At the same time, the profitable fur trade in Siberia and North America led to the rapid extinction of some species as humans hunted them for their furs. Increasing human populations also had a profound effect on fish populations.

—*Alexander Mikaberidze*

Cities and Gardens in the Muslim World

Urban landscapes in the Muslim world are versatile in form, function, and style. They differ in time and space but combine unique elements that make them Islamic. Although the typology offers a variety of terms, names, and definitions ranging from oriental and Arabic to Muslim and exotic, cities and their surroundings in Islamic countries share distinct common features. Looking at the Muslim world in a specific time period, 1450–1770, we are able to exclude some regional aspects and focus on other areas. During this time period, the Muslim world was dominated by large empires in the Middle East and Southeast Asia, the Ottomans, the Safavids, and the Moghuls. All were known for a strong and powerful central authority that ruled the land from their capitals and major urban centers. Cities like Istanbul, Cairo, Isfahan, and Agra are just a few samples for the expression of Muslim power and civilization through large sophisticated and developed urban landscapes. Islamic architecture is heavily influenced by religion, culture, and daily necessities. Local styles were further exposed to outside forces and impressions. The architecture of the Mughals has been affected by other, mostly Hindu, influences. North African buildings clearly depict Roman-Greek-Byzantine elements, while Turkish-Ottoman landscapes developed their own characteristic style.

While it is impossible to simply call a city Islamic, it makes more sense to highlight the influence of Islam on urban life. Islam was born as an urban religion with Mecca and Medina as the two holiest cities. At times an idealistic concept of a Muslim city was developed, and sample cities such as Medina or Baghdad were selected. But landscapes changed frequently over time: what once was considered a garrison town turned into a classical or oriental model. Fortifications were added, and rulers sought protection behind large citadel walls until they restored power or they realized how quickly gun power can penetrate even the thickest wall. With rising power and status, the ruling elite, which often was foreign to the urban population, was able to move beyond the city and wall limits into gardens and pavilions. This left the growing segments of the city in charge of their own protection and development. In reality the quarter of the city, the alley, and the single house became an imitation of the ruler's city as a whole.

Besides the residential quarters, medieval and premodern Islamic cities combined additional architectural features: religious buildings (mosques, Quran schools, endowments, and shrines), economical institutions (khan, markets, and factories), and administrative structures (palaces, courts, citadels, fortifications). They mirror the dualistic concept of Muslim urban structure, where the private and public domains are clearly separated. Residential quarters were then further divided along ethnic and sometimes religious lines.

Buildings and structures related to water supply of the cities have been impacted by Islam as well. Muslim rulers provided access to fresh water through cisterns, canals, and wells. Over time they were converted into private property mostly through legal regulations and inheritance. Water supply for gardens and fields was also highly regulated and regarded as a powerful tool in the hands of the owner. From an aesthetic perspective, one could argue that water was celebrated as a source of life and a symbol of the afterlife, with qualities that were based on poetry, a special genre of poetry, the *rawdīyat* or Garden Poetry. The architecture of gardens thus was considered an intersection of intellectual, religious, and functional design.

► ISFAHAN—THE CREATION OF THE SAFAVID CAPITAL

The city of Isfahan was not founded by the Safavids; it existed long before their dynasty came to power. But with the Safavid conquest in 1502, Isfahan became one of the largest and most beautiful urban landscapes in the Middle East. At its peak, the city had a population of over half a million and was the capital of an empire that stretched far beyond the borders of present-day Iran. The Safavids started an ambitious building program with bazaars, shops, mosques, libraries, and, most notably, gardens and parks. Shah Abbas brought skilled craftsmen and artists from all over the empire to the “middle of the world” (*nesf-e jahan*, Isfahan in Persian), among them Christian Armenians who constituted an important segment of the diverse population and cultural tradition of the city.

The city’s public landscape included large sacred buildings around the Imam Square with their typical three-walled vaulted halls (*Iwan*) as well as a network of gardens for both the public and the ruler. These gardens were built around the Zayandeh Rud River and connected the different quarters of the city. Wide and open boulevards, long bridges, caravanserais, baths, and markets as well as mosques and churches shaped the architectural layout of the city. Trade, manufacturing, and agriculture flourished during the golden age of the city that lasted for 200 years until 1722, when it fell to Sunni Afghans. However, the unique master plan, drafted by the Safavids, is still visible today.

—Sebastian Maisel

But gardens in general provided urban elites with a luxurious space to set up seasonal residence as well as an additional display of glory and power. The most common types included urban enclosures, larger suburban gardens, and more natural hunting resorts. Rulers of all dynasties, the Ottomans, Safavids, and Mughals, spent significant time in their gardens; some even took permanent residence there. This led to the creation of entire garden cities, where rulers sometimes sought refuge from internal power rivals.

Mughal emperors like Babur and Jahangir followed the tradition of building expansive garden cities that was started by Timur in Samarqand. One of the most intricate and impressive examples was the Taj Mahal in Agra built by Emperor Jahan. The Safavid shahs in Persia concurrently started an enormous building program in and around their capital of Isfahan. One can go as far as saying that the entire history of the Safavids, starting with Ismail and Abbas and ending with Sultan Hussain, passed through their gardens, where many contributed additional gardens spaces or expanded existing ones. Although the Ottoman sultans show similarities with European gardens, they still were mostly known as a place of retreat for mystical practices and exercise of power.

—Sebastian Maisel

Bibliography

- Bosworth, Clifford. *Historic Cities of the Islamic World*. Leiden: Brill, 2007.
- Conan, Michel. *Middle East Garden Traditions: Unity and Diversity; Questions, Methods and Resources in a Multicultural Perspective*. Washington, DC: Dumbarton Oaks Research Library and Collection, 2007.
- Tabaa, Yaser. “Towards an Interpretation of the Use of Water in Islamic Courtyards and Courtyard Gardens.” *Journal of Garden History* 7(3) (1987): 197–220.

China’s Fifteenth-Century Agricultural Plateau

Chinese civilization, as with all preindustrial civilizations, was predominantly agricultural. The vast majority of the population was farmers, living in rural villages. Since before the Han dynasty, Chinese agriculture was the most productive, supporting the largest population in the world. Chinese agriculture was so productive because the Chinese farmers invested a great amount of intensive labor, grew a wide variety of crops, and led the world in the development of agricultural technology until the eighteenth century.

In the warm and relatively wet climate of the Medieval Warm period (ca. eighth to fourteenth centuries), agricultural productivity continuously

increased, and the population grew. The pressure of the population on the available land increased. During the fourteenth century, with the beginning of the Little Ice Age (fourteenth to mid-nineteenth centuries), the weather turned colder, and droughts (perversely interspersed by massive floods) became more frequent and lasted longer. Chinese farmers reacted to these adverse circumstances by increasingly using drought- and cold-resistant technology, but by the mid-fifteenth century this development reached a plateau, and food production failed to keep up with the population increase. Few new food crops were introduced after that of Champa rice in the Song dynasty; crop failures increased, as did famines, infanticide, and occasional cannibalism. After the transition from the Ming to the Qing dynasties (1644), Chinese agriculture experienced a remarkable increase in productivity, partly because of the widespread adoption of food crops from the Americas.

Political and economic contingencies acted with the deteriorating climate to produce the agricultural crisis of the late Ming. As in other dynastic changes, the wars accompanying the fall of the Yuan (Mongol) and the rise of the Ming dynasties (1368) produced devastation and some depopulation of the countryside, especially in northern China. The Ming triumph resulted in a vigorous new dynasty free of the corruption of the departed power and able to take drastic action that long-established regimes, encumbered with a multitude of special interests, could not. The young Ming dynasty redistributed some of the land, reduced some of the burdens of the peasantry, established law and order, suppressed banditry, vigorously took measures to control floods, and improved the infrastructure of roads and canals. Under the early Ming the peasantry, and with it the nation, thrived, and the population is estimated to have nearly doubled from 100 million to 200 million. The urban population increased, placing large demands on the countryside not only for food but also for nonfood crops such as tea, silk, and cotton (which had been introduced into China in the Song dynasty).

While the cultivated land increased at a much slower pace than the population, the proportion of the cultivated area devoted to food production declined. The demand for cash crops, especially

cotton, expanded greatly. The most productive areas of China were becoming commercialized, and consequently by the middle of the Ming dynasty, food was becoming more expensive. In the wheat- and millet-growing northern plains, the land was often held in large estates, worked by wage labor or bond servants, whereas in the wetter and more mountainous south, more of the land was farmed in small plots by tenants whose landlords increasingly demanded their rent payments in money rather than in kind. The consequence of these kinds of land holding was a premium placed on the production of cash crops rather than subsistence.

The evolution of agricultural taxes also encouraged the production of nonfood cash crops, to the detriment of subsistence crops. The Ming dynasty, like all dynasties, was largely supported by agricultural taxes, which bore heavily on the peasants. Originally the peasants were taxed in crops and labor. The crops were often rice and wheat, but other crops were also taxed. The labor was used for flood-control and irrigation projects, the construction of canals, and especially the Great Wall of China. (There had been defensive walls before the Ming, but the Ming built the Great Wall, constructed of stone, as we know it.) The peasants hated the labor tax (*corvée*) and opted to pay in money for a substitute. By the middle of the dynasty, most of the *corvée* was commuted into cash. Increasingly, the tax in crops was also collected in cash. By 1581 under the terms of the Single Whip Reform, all taxes were collected in cash. To pay these taxes, the peasants had to devote more and more land and labor to cash crops and less to subsistence.

In spite of the deteriorating climate regime and the population to land ratio, Chinese farmers were able to feed the nation in good years. Chinese farmers conserved moisture by pit farming, that is, growing their plants in individual pits and carefully hand watering each plant. Increasingly, especially in northern China, crops would be planted between furrows, which protected the plants from frost as well as preserving moisture. But even these measures, which required backbreaking labor, proved insufficient in the mid-sixteenth century, when ice appeared in the Yangtze delta and snow dusted the rice paddies of southern China.

To add to the woes of the peasants, the flood-control and irrigation works that every Chinese government must make a high priority came to be neglected as the taxes paid for their maintenance were embezzled by venial officials. Normal flooding became disastrous, and famine again visited an already malnourished people. Deep poverty, starvation, voluntary enslavement, crime, and banditry emerged as justice and law were sacrificed to the increasingly frantic Ming government's search for cash.

The agricultural plateau, which had been reached in the late fifteenth century, affected the rest of the economy by the mid-sixteenth century and became a trough instead of a plateau by the economic crisis of the early seventeenth century.

—Wilfred J. Bisson

Bibliography

- Heijdra, Martin. "The Socio-economic Development of Rural China during the Ming." In *Cambridge History of China*, Vol. 8, *The Ming Dynasty, 1368-1644*, Part 2, edited by Denis Twitchett and Frederick W. Mote. Cambridge: Cambridge University Press, 1998.
- Huang, Ray. *1587, a Year of No Significance: The Ming Dynasty in Decline*. New Haven, CT: Yale University Press, 1981.
- Needham, Joseph, and Francesca Bray, eds. *Science and Civilization in China*, Part 2, *Agriculture*. Cambridge: Cambridge University Press, 1984.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1990.

Shaping the Land in Teahouse Japan

The Japanese teahouse in its relatively final shape emerged in the sixteenth century as a site for holding tea ceremonies incorporating the philosophy and aesthetics of Zen Buddhism. The tea ceremony itself was developed as a means of spiritual cultivation through the mastering of highly sophisticated etiquette. Fire and war constitute Japan's political history from the fourteenth century to the beginning of the seventeenth century; however, it was during this period that the arts, including the tea ceremony, progressed at a greater rate than at any other time. The architectural style of the Japanese teahouse is one of the two chief traditional

styles surviving, albeit in more refined forms, in Japanese residential architecture today.

Until the end of the nineteenth century, the tea ceremony was a pastime for men only. Its origins are traced to ancient China, where it was influenced by both Taoism and Confucianism. Tea is believed to have been first imported from China to Japan during the regency of Prince Shotoku (574-622). However, the cultivation of tea did not catch on very readily in Japan, and although tea was used for medicinal purposes by the nobility, after the tenth century, even this practice died out, and tea drinking disappeared from Japan.

In 1191 the priest Eisai (1141-1215) returned from China and introduced the Zen sect of the Rinzai lineage to Japan. He also brought tea seeds and attempted to use tea as a tool for propagating Zen. As the availability of tea increased, more and more court nobles and families of high rank began to drink it, primarily as a refreshment. By the fourteenth century tea drinking had spread from court nobles to the warrior class and even to some commoners. At this time tea gatherings centered around a contest in which stakes were wagered and participants vied with one another to distinguish different teas by taste.

Simultaneously, tea drinking was developing into a solemn ceremony at Buddhist temples. The process was becoming more and more systematized, although it never acquired any meaning other than as an auxiliary function for monastery life. The Buddhist tea ceremonies were characterized by exclusive use of utensils and decorations imported from China. The fascination with things Chinese spread to the upper classes of society, whose tea gatherings turned into luxurious entertainment.

The prototype for the Japanese teahouse as we know it today was designed by Murata Shuko (1423-1502) as a reaction to the lavish tea gatherings of the upper classes. It was the austerity and simplicity of Zen Buddhism that led Shuko to serve tea to a limited number of guests in a small room of only 9 square feet (.8 square meters), largely relying on Japanese utensils and settings that were intentionally made imperfect. Shuko also originated the idea of the host personally serving tea. In the period of incessant civil wars and unrest, Shuko's simple style gradually gained more and more popularity.

► SHOIN STYLE AND SUKIYA GARDENS

The *shoin*-style gardens were generally designed to be viewed from a seated position in the building interior and thus were directly correlated to the function and style of the architecture. There are no other known examples of this kind of correlation in other cultures.

In contrast, in the late sixteenth century when the tea ceremony and teahouse became accomplished, the small *sukiya* (teahouse) garden was designed for walking through and concentrating one's attention on the way to the site of the tea ceremony. The designers realized that a person's attention can be manipulated by controlling movement in garden interpretations.

Thus, a number of hide-and-reveal techniques (*miegakure*) were developed to configure garden scenes in sequence as visitors walk through a teahouse garden. Effects are created that provide a sense of depth and pique the viewer's expectations of the next scene by, for instance, interrupting lines of sight, concealing the depth of the site, and obscuring the overall view. In principle, no element of the walkway of a teahouse garden is shown in its entirety.

At the same time, teahouse gardens usually do not have spectacular views and bright colors. They are a means of escape, a transition between the distractions of daily life and the solitude of the tearoom.

—Anatoliy Anshin

Yet it was Sen-no Rikyu (1522–1591) who brought both the tea ceremony and its site, the teahouse, to the peak of refinement. Rikyu codified the rules of etiquette and the Zen-based aesthetic principles of the ceremony and its settings. The principles were harmony (*wa*), respect (*kei*), purity (*sei*), and tranquility (*jaku*). Harmony is the oneness of host and guest with the flowing rhythms of nature. Respect is the sincerity of heart that allows one to have an open relationship with the other participants, humbly recognizing their dignity. Purity is removing the dust of the world from one's heart and mind. Tranquility comes with the constant practice of harmony, respect, and purity in everyday life. It should be noted, however, that all

of this was achieved only through a discipline of body and mind.

Rikyu also introduced changes that served to level the social distinctions in the tea ceremony. He made the main entrance of the teahouse so small that one had to double up and crawl through. By this method Rikyu placed all participants on an equal footing, allowing no nobility, no commoner, to be distinguished in the manner of service.

Thus, the confined, austere teahouse, ornamented with only a hanging scroll and a single flower in a container beneath, was turned into a sanctuary where one could take solace in the tranquility of spirit. Its simple and natural design with a look of temporariness and subtle beauty was conducive to reflection and introspection. Its intent was to strip the individual of his worldly cares and transpose him into an environment where, through participation in a tea gathering, he could cleanse his thoughts of the mundane and unimportant.

It is essential to mention that no effort was made, until Rikyu's day, to free Japanese architecture from its limitations and to achieve a beauty of design independent of social and religious symbolism. Rikyu's teahouse style was the first to give free rein to creative energy and originality of design. It was the small and modest teahouse that gave Japanese architectural design its first opportunity to escape from its bondage to religion and a rigid social order. Rikyu's teahouse style itself, however, did not settle into a fixed pattern for a long time. It was not until about the middle of the eighteenth century that the idea of preserving teahouse forms with uncompromising strictness took hold.

After Tokugawa Ieyasu (1542–1616) completed the unification of Japan in 1603 and peace prevailed in the country, Rikyu's descendants continued to propagate his style of tea ceremony among the warrior and merchant classes alike. However, Rikyu's liberal spirit was pushed aside by the demands of the new era. The change from Buddhist to Confucian thought with its heavy emphasis on strict social hierarchy was effected by the first Tokugawa rulers, and the tea ceremony was influenced in the same way. The majority of tea ceremony gatherings of the Great Tokugawa Peace came to be characterized by

the explicit social discrimination of their participants and an unrestrained decoration of utensils and settings. This trend endured until the Meiji Restoration (1868), which eventually resulted in the abolishment of social classes and marked the beginning of Japan's modern age.

—*Anatoliy Anshin*

Bibliography

- Castile, Rand. *The Way of Tea*. New York and Tokyo: John Weatherhill, 1971.
- Inaji Toshirô. *The Garden as Architecture: Form and Spirit in the Gardens of Japan, China, and Korea*. Tokyo: Kodansha International, 1998.
- Itoh Teiji and Futagawa Yukio. *The Elegant Japanese House: Traditional Sukiya Architecture*. New York, Tokyo, and Kyoto: John Weatherhill and Tankosha, 1982.
- Keane, Marc. *Japanese Garden Design*. Boston and Tokyo: Tuttle, 1996.
- Kuck, Loraine. *The World of the Japanese Garden: From Chinese Origins to Modern Landscape Art*. New York and Tokyo: John Weatherhill, 1980.
- Sen, Sôshitsu. *Chadô: The Japanese Way of Tea*. New York, Tokyo, and Kyoto: John Weatherhill and Tankosha, 1979.
- Tanaka, Sen'ô and Tanaka Sendô. *The Tea Ceremony*. Tokyo: Kodansha International, 1998.

Driven to Extinction— The Siberian Fur Trade

Russian expansion into Siberia greatly expanded in the late sixteenth century and the seventeenth century. This expansion was prompted by the lure of various furs from animals native to Siberia. These furs provided income for the government and individuals through export to western Europe, but increasing Russian colonization of Siberia led to a decline among the native population. The desire for greater numbers of furs also caused the fur-bearing animal population to nearly disappear, with significant ecological consequences for Siberia.

Medieval Novgorod was a center of fur trade for much of Europe but lost its dominance in the fifteenth century to Moscow. As fur-bearing animals declined in western Russia, trappers and traders sought new sources to the east. By the last half of the sixteenth century, traders had crossed the Ural Mountains and establish trading

posts. Powerful commercial interests, particularly the Stroganov family, received charters to develop trading networks in Siberia. They were allowed to raise private armies with cannons and to build forts to protect their interests from the native people and the khanate of Siberia. In July 1580 a Cossack army invaded territory claimed by the khanate and captured the capital of Isker by 1582.

Although fighting against the khanate continued until 1598, the Cossacks' success encouraged the tsar's government and other groups to send more expeditions to exploit Siberia's riches. The Russian government quickly established control over the region, which was divided into regions ruled by military governors. These areas were divided into smaller units, and the native people living in each unit were ordered to pay an annual tax known as the *yasak*. The *yasak* was paid with pelts, consisting of 5 to 12 sable furs for each man. If sables were not available, pelts from lesser animals were substituted according to a rate established by the Russian government. Russian officials held hostages from local tribes, ensuring that the *yasak* would be paid.

Most furs collected in Siberia, however, were brought out by teams of hunters and trappers known as the *promyshlenniki*. The *promyshlenniki* were either groups of men connected by family ties or men hired by commercial interests to catch fur-bearing animals. By the early seventeenth century at least 1,000 *promyshlenniki* were active in Siberia each year. The number continued to increase annually through the remainder of the century. A typical hunting expedition took two years because of the extensive travel required. Customhouses were established by the Russian government along travel routes to check the furs collected by the *promyshlenniki* and being returned to European Russia. One of every 10 pelts was taken as taxes, and the remaining furs were divided among the hunters. If they received fewer than 20 sable pelts as their share, the expedition was generally considered a failure. During good years an individual might receive between 120 and 280 furs.

The fur most in demand in Russia and Europe was the sable. Sables were carnivores that lived in the Siberian forests. They were solitary animals that established their own territory.

Although the size of these territories varied according to the prey available, the sable rarely left. Gestation of young sables took up to 300 days. During the winter sables established a permanent burrow, making it easy for hunters to locate them. Other than humans, sables had few natural enemies.

Before the Russian occupation of Siberia, the natives hunted fur-bearing animals only for their own consumption and for limited trade. Demands of the yasak required them to obtain more pelts than they had previously obtained. Native hunting helped deplete the sable and other fur-bearing populations, but its effect was limited by their use of only bows and arrows. Russian hunting was much more devastating. The promyshlenniki also used bows and arrows with blunt tips that would not harm the fur. However, they used stationary traps as well. Individual hunters built up to 30 traps each and positioned them in areas that the sables were likely to frequent during the summer and fall. The trapline was checked each day, and dead animals were removed and processed. After heavy snow fell, the promyshlenniki located sable burrows by following footprints in the snow. The hunters surrounded the entrance with a net and waited until the animals emerged and became tangled up and then killed them. Hunts were aided by dogs that could sniff out sables and other animals.

Foreign demand and the desire for profits led to rapid depletion of the animal populations. Slow-reproducing animals disappeared from wide areas of Siberia. When sables became less common, hunters turned to foxes, squirrels, and beavers for their pelts. As a region became hunted out, the promyshlenniki moved farther to the east looking for new populations. Eventually Russian hunters and government officials reached the Pacific Ocean and crossed to North America in search of furs.

The extinction of sables and other fur-bearing animals led some Russians to establish agricultural settlements. The native population, on the other hand, was devastated by the destruction of their traditional way of life and declined. Although much of Siberia remained a wilderness, the hunt for furs had brought it firmly under Russian control.

—Timothy J. Watts

Bibliography

- Bychkov, Oleg V., and Mina A. Jacobs. "Russian Hunters in Eastern Siberia in the Seventeenth Century: Lifestyle and Economy." *Arctic Anthropology* 31(1) (1994): 72–85.
- Fisher, Raymond H. *The Russian Fur Trade, 1550–1700*. Berkeley: University of California Press, 1943.
- Richards, John F. *The Unending Frontier: An Environmental History of the Early Modern World*. Berkeley: University of California Press, 2003.

Canal Building in Europe

The mastery of water as a resource is a fundamental principle to the building of European states in early modern history, just as it was important to ancient civilizations. In every age of history, people have considered the role of water as important as mastery of the land itself, whether used for agricultural purposes, commerce and transportation, or military ends. One of the ways in which humans have demonstrated their mastery of water as both a resource and a tool for building societies is in the building of canals. Canals are artificial waterways that are engineered and built for drainage and irrigation of the land or for use as a means of navigation to serve a variety of social, political, military, and economic functions. The building of canals for agricultural irrigation and for drinking water is a practice that has ancient origins, as control of water was an essential part of the earliest known civilizations of Mesopotamia and Egypt in the Near East. However, the Chinese are generally credited with making the most significant early historical advancements in design engineering that made canal construction possible. The major canals of history have usually been constructed as open land excavations, done by manual labor long before the age of machinery. In the earliest canals, it was most common to use natural existing waterways, such as rivers, to augment the design.

A necessary requirement for canal construction, beyond the accessibility of a direct water source, is the means to maintain water levels. Therefore, before the industrial age, the regions of the world that constructed canals were those that had the advantage of level topography. This

was because the practice of building locks to equalize the flow and level of water had not yet been sufficiently developed, and the movement of water through different land levels made the transport of vessels impossible. The idea of the lock is believed to be the contribution of a Chinese engineer, Chiao Wei-yo, whose works date to the tenth century. The introduction of locks throughout Europe between 1400 and 1600 caused a proliferation of canal construction during that time period, primarily for economic and military purposes. Major shifts in water levels, once a hindrance to effective canal building, now became a conquered challenge with the invention of the Chinese flash lock, which operated with a single gate. This was generally considered unsafe, so the improved version that appeared in Renaissance Europe featured two gates. The result is what is known as the pound lock, which soon became standard on all canals built. The first of these to be used in Europe is believed to be in the Netherlands and probably dates to the fourteenth century.

At first these gates involved significant amounts of manual labor, as the barrier created by the first canal gates was simply raised and lowered to allow vessels through. Because engineers also faced the challenge of strong water pressure against these early gates, further advances were necessary to make their use more efficient.

The introduction of the miter lock gate solved many of these early difficulties. This design involves a system whereby each end of the lock contains wooden gates that remain slightly ajar but are held together by the work of the water pressure. When the level of the water reaches the same height on each side of the gate, the gate can then be opened easily without the laborious efforts required in earlier locks. The first such lock was used in Italy about 1500, in the city of Milan, and proved to effectively address the challenge of joining two previously constructed waterways with varying water levels. This became known as the San Marco lock, which many scholars believe to be from an original design by the noted Renaissance artist and engineer Leonardo da Vinci. At this time in history, da Vinci was in the service of the duke of Milan. Not surprisingly, these significant advances in water-control ability spurred various European nations

➤ CANAL BUILDING IN THE NETHERLANDS

Canal building found exemplary expression in the Netherlands, where such waterways were crucial to economic health. Following the collapse of the western Roman empire, canal building became a lost practice as Europe entered the Middle Ages until the Dutch revived it beginning in the thirteenth century. Because of the critical link between the use of water transport and the booming commercial trade of the late Middle Ages, the Dutch were leaders in advancing canal engineering design. There was a boom in canal construction in the Netherlands during the seventeenth century in what is known as the Dutch Golden Age. Unlike other European states at the same time, the Dutch concentrated the majority of canals within major cities, including the most striking examples in Amsterdam. The four major canals of Amsterdam include the Herengracht, Prinsengracht, and Keizersgracht, which are collectively known as the Grachtengordel and were developed primarily for residential purposes. The fourth major canal of Amsterdam is the Stadhouderskade, which served primarily defense functions for the city. All of these major canals played an important role in making the city and its trade traffic accessible, aiding the rise of the Netherlands to great economic status as the major commercial center of Europe.

—Cheryl H. White

to invest in further development. The peak of canal building in Europe coincided with the opening of the Age of Exploration and Discovery, when the nations of Europe began competing for control of new resources derived from new open markets.

Earlier examples of canal construction served as important model efforts to men working to perfect inland waterways. Two of the most important such contributions originated in the Middle Ages and included the Naviglio Grande Canale in Italy, constructed in the twelfth century, and the Stecknitz Canal in Germany of the fourteenth century. Over the next centuries France also perfected canal waterway expansion, completing the Briare Canal in 1642 that was built to join the Loire and Seine rivers. This was a particularly notable achievement in design, as it features a steep level change that

incorporated six consecutive locks. The Canal du Midi, finished in 1681, was constructed to join the Atlantic Ocean to the Mediterranean Sea and represents another engineering marvel for the age. The Canal du Midi employs three aqueducts and makes a steep descent, which would have been unthinkable two centuries before.

These significant engineering advancements on the continent of Europe stimulated Great Britain to pursue similar design and construction. There, the Bridgewater Canal of 1759 became the first in Britain to run independently of a river and proved highly useful in the transport of coal during the Industrial Age. By this time, the purpose of waterway canals was primarily economic and soon became an indispensable means of transporting raw materials and finished goods throughout Europe. In the commercial and industrial age, canal construction represented another means of economic competition among European states as efficient and rapid transport became an increasingly important factor in economic domination.

—Cheryl H. White

Bibliography

- Davies, Norman. *Europe: A History*. Oxford, UK: Oxford University Press, 1996.
- Hadfield, Charles, ed. *World Canals*. London: David and Charles, 1986.
- Roberts, John M. *A History of Europe*. New York: Alan Lane, 1997.

Advance of the Three Sisters— Agricultural Revolution in the Americas

Native American peoples, ranging from Mesoamerica to the eastern coast of North America, referred to corn, beans, and squash as the “three sisters.” James Adair, an Irish trader who published an astute description of the Indians of the Southeast in 1775, described how they planted the three crops together: “They plant the corn in straight rows, putting five or six grains in one hole about two inches [five centimeters] distant . . . [and] in the vacant ground [between the rows] they plant pumpkins . . . and sundry sorts of beans and peas.” These three crops were the mainstay of most tribes’ diet and were the source of much of their nutrition. Corn, beans, and

squash could be planted in the same field with good results, making it easier for farmers to raise them. They also provided abundant harvests with relatively small investments in land and labor, allowing Native American populations to grow larger and permitting permanent settlements.

The earliest examples of domesticated corn, beans, and squash date to around 7000 BCE. Maize was most likely domesticated from a type of wild corn. Early farmers recognized that they could plant seeds and produce dependable harvests on a regular basis. They also practiced careful seed selection to improve the yields of future crops. Native American farmers eventually developed over 700 varieties of corn, ranging from popcorn to sweet corn consumed as a vegetable. Other varieties were grown for their suitability for grinding into flour or their ability to adapt to climatic variations.

The first instances of cultivation were in the Tehuacan Valley in Mexico. From there, the cultivation of corn, beans, and squash spread north and south. The Maya may have been the most important people in spreading these crops, thanks to their extensive trading networks. Corn spread to the future U.S. Southwest, where the Hohokam Indians grew it. They developed varieties that could withstand the heat and dry weather better than the original versions. The Hohokam dug at least 600 miles (960 kilometers) of irrigation canals between circa 50 CE and 450 CE to bring water to their fields. The Anasazi used a flood method of irrigation as well as planting their crops in crevices and at the foot of cliffs, where water naturally tended to collect. Water drained into these low spots and soaked into the ground, where the plants’ roots could absorb it during dry weather.

Cultivation of the three-sisters complex spread eastward and north into those areas that had sufficient moisture and a growing season of at least 120 days. The development of an agricultural system changed the social and cultural patterns of the people, enabling those who adopted agriculture to shift from seminomadic hunting and gathering societies to relatively permanent settlements. Land had to be cleared for fields. Meat obtained through hunting remained important but was no longer central to the Native American diet. Because the harvest from these

crops was usually large, surplus food was often available. Populations grew with a more stable food supply. Corn, beans, and squash could all be dried to preserve them for long periods. Many tribes traded the vegetables with more nomadic tribes for products such as meats, hides, and furs. Washington Matthews, an American military officer during the 1860s, observed how the Dakota carried out trade with the Hidatsa, as they had for generations. The nomadic Dakota learned that when some wildflowers bloomed, corn would be ripe. They approached Hidatsa village with horses, bison meat, and furs for trade. The two groups maintained a truce until after the transactions were completed.

Many of the Native Americans used a system of growing the three crops together. Indians in the Southeast, along the Atlantic coast, and in the Ohio Valley learned from experience that yields were larger, while the labor required to tend the crops was less. Corn seeds were planted in small hills and allowed to germinate. Beans were then planted, and the bean vines used the corn stalks for support. Squash seeds were also planted, and their large leaves shaded the ground, keeping it moist and preventing the growth of many weeds. Although they did not realize it, beans draw nitrogen out of the air and fix it in the ground, where it could be used by the corn and squash. When corn, beans, and squash were consumed as parts of a balanced diet, they provided protein, amino acids such as lysine and tryptophan, and vitamin A and similar nutrients. By the time European settlers arrived in North America, they found large cultivated fields, tended by Indian women. The Europeans adopted the three sisters as central to their diet as well.

The complex took on a religious symbolism for many tribes. Agricultural peoples saw each of the crops as a gift from the gods but also as inseparable. In the creation stories of many tribes, maize in particular assumed prominence as a mother figure, but corn, beans, and squash were recognized, in fact, as three sisters, and festivals celebrated both the plantings and the harvests of the crops. The Iroquois dried the three crops together, and most tribes developed dishes in which corn, beans, and squash were all cooked together. The most famous example was succotash, which New England Indians shared with

early English settlers. Succotash became so common among New England settlers that it is still recognized as a regional culinary specialty.

—Timothy J. Watts

Bibliography

- Coe, Sophie. *America's First Cuisines*. Austin: University of Texas Press, 1994.
- Heiser, Charles B. *Seed to Civilization: The Story of Food*. Cambridge, MA: Harvard University Press, 1990.
- Hurt, R. Douglas. *American Indian Agriculture: Prehistory to Present*. Lawrence: University of Kansas Press, 1987.

Driven to Extinction—The North American Fur Trade

From the beginnings of European interest in the North American continent in the early 1500s, the trade in fur pelts motivated relations with the Native Americans, settlement patterns of the colonists, relations among continental powers, and war. By 1608 when Quebec was established as a trading center, French explorers had already begun to trade foreign goods for pelts acquired by the Indians. The Dutch, in founding New Amsterdam in 1625, viewed the potential of the fur trade within the Hudson River watershed as a reason for establishing its center on Manhattan Island. British settlers followed suit in New England and Virginia and through their alliance with the Iroquois federation expanded the trade as far south as Georgia. The wars between Britain and the Dutch (settled in 1674) and the French and Indian War (settled in 1763) were in part fought over which country was to benefit from the lucrative trade in fur.

With permanent settlement along the Atlantic seaboard by the time of the American Revolution, the trade shifted westward to the Ohio and Mississippi watersheds, the Pacific Northwest, and Alaska. The European rage for top hats fueled the beaver market. Following the death in 1779 of Captain James Cook during his third expedition to the Pacific, the crew sailed to Canton and discovered that the Chinese aristocracy coveted the sea otters acquired at Nootka on Vancouver Island.

With movement westward, the fur trade was still tied to diplomacy. Beavers, sea otters, and



Native Americans bring beaver skins to European traders, seventeenth century. (The Print Collector/StockphotoPro)

other animals became tools of foreign policy by Great Britain, Spain, Russia, and the United States as each vied for both the possession of the continent and its rich resources. The 1789 Nootka controversy, whereby Spain attempted to claim a trade monopoly along the Pacific coast and seized British ships, was emblematic of the competition. Between 1790 and 1794 Spain and Great Britain signed three Nootka Conventions that led to free trade in the region. Following the agreements, the run on otter and beaver pelts assumed gigantic proportions.

Exploration was also uniquely tied to the fur trade. British and Canadian fur concerns, notably the Hudson's Bay Company (established by Parliament in 1670), followed the beaver from the Atlantic Ocean to the Pacific Ocean and charted the river systems located within their domain. Spanish mountain men traveled north from Mexico and joined those from the United States working their way into the farthest reaches of the Rockies. Russian traders, whose colonies in Alaska were well established by the time of Cook's final voyage, chased the sea otter as far south as San Francisco Bay. From Boston, Captain Robert Gray, commanding the *Columbia* and the *Lady Washington* on a fur-trading venture to the northwest coast in 1789 and 1790, established the first U.S. claim to the region. After Lewis and Clark's Corps of Discovery publicized the results of its two-year overland journey (1804–1806), American trappers expanded their

domain into the Pacific Northwest. Astoria, John Jacob Astor's fur-trading post at the mouth of the Columbia, was one of the earliest attempts to establish a permanent settlement in what became Oregon Territory.

Native Americans supplied the beaver and otter pelts, and Euro-Americans sought trade alliances with the Indians living in those areas where furs were abundant. In some instances the associations produced strong cultural ties between Native Americans and Europeans as they met each other at the yearly rendezvous. French Canadians married Indian women, producing a new culture of Métis, for example, who settled throughout the fur-trading region. Other societies welcomed the trading items, and newer technologies provided in exchange for furs. Indians had already established continental trading routes in pre-Columbian times, and new traders adapted these routes as they trapped the beaver.

The partnership ultimately proved devastating to Native American tribes. The same trading routes that were used for the beaver trade had also, by the time of the American Revolution, brought smallpox along them. The disease destroyed entire Indian villages throughout the trading network. When British captain George Vancouver explored Puget Sound in 1792, for example, he witnessed both deserted villages and Indians exhibiting the telltale pockmarks left by the disease. Historian Elizabeth Fenn notes that the results observed by Vancouver were the product of an epidemic that began on the Atlantic coast during the American Revolution and moved westward along Native American trading routes. In addition, the influx of a trade that exchanged furs for weapons, alcohol, metals, and other goods escalated conflicts between tribes and further destabilized Native American culture. Indigenous village economies were eroded as native peoples abandoned traditional trading networks to trap fur in exchange for what the traders offered.

Exploitation and extinction of both the resource and Native American cultures followed in the wake of the fur traders. Britain's Hudson's Bay Company wanted to transform the Indians' cultures by both converting them to Christianity and making them dependent upon the company

for their livelihood and supplies. When realizing that portions of its corporate domain were to be ceded to the United States in 1846, the company launched a scorched-earth policy to eliminate all beaver south and east of the Columbia River.

By 1869 when the first railroad crossed the continent, both the beaver and the sea otter were near extinction. After trains began their journeys through the Great Plains, a trade in buffalo hides ensued. Unlike the Plains Indians, who made total use of the animal and killed only what was needed, the new traders killed every buffalo in sight, removed the hides, and left the carcasses behind. While this slaughter practically destroyed both animal herds and the Plains Indians who relied on the creature for survival, by 1883 William “Buffalo Bill” Cody through his Wild West performances was popularizing this destruction as entertainment.

Fashion changes saved the animals from total extinction. The Chinese tired of the otter, and Europeans traded in their beaver hats for silk. Even so, the assumption of resource abundance that had motivated the fur trader from the

beginning continued on in the minds of the fishermen, lumbermen, and miners who followed the fur traders into the American West.

—Caroline Gallacci

Bibliography

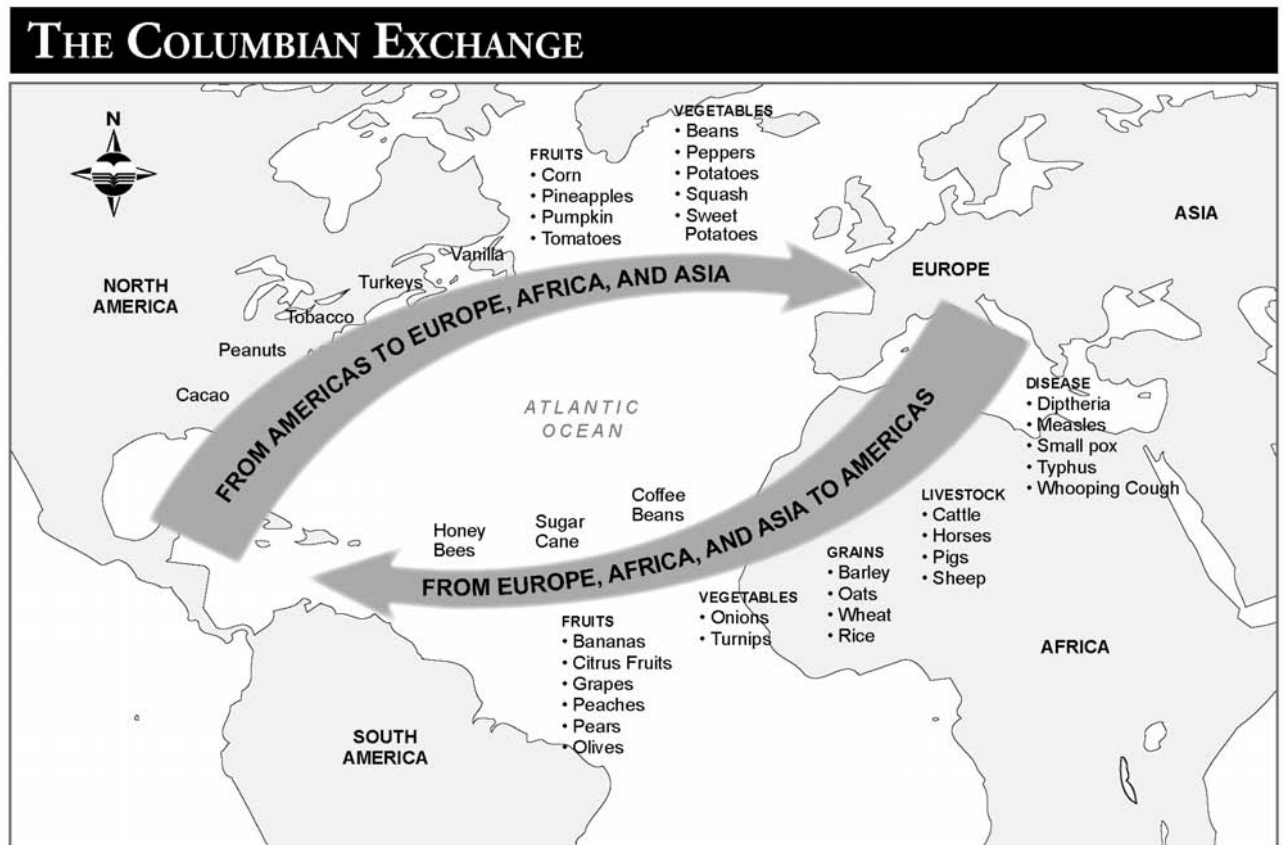
- Binnema, Theodore. *Common and Contested Ground: A Human and Environmental History of the Northwestern Plains*. Norman: University of Oklahoma Press, 2001.
- Fenn, Elizabeth. *Pox Americana: The Great Smallpox Epidemic of 1775–1782*. New York: Hill and Wang, 2001.
- Gibson, James R. *Otter Skins, Boston Ships, and China Goods: The Maritime Fur Trade of the Northwest Coast, 1785–1841*. Seattle: University of Washington Press, 1992.
- Phillips, Paul C. *The Fur Trade*. 2 vols. Norman: University of Oklahoma Press, 1961.
- Podruchny, Carolyn. *Making the Voyager World: Travelers and Traders in the North American Fur Trade*. Lincoln: University of Nebraska Press, 2006.
- Wishart, David J. *The Fur Trade of the American West, 1807–1840: A Geographical Synthesis*. Lincoln: University of Nebraska Press, 1979.

■ Introduction: The Columbian Exchange and Human Adaptation

For thousands of years, humans populating the Western Hemisphere and the Eastern Hemisphere had had no contact. The European Age of Discovery put an end to this mutual isolation and ushered in a new era of contact. An important part in the process was human adaptation to new environments, crops, and animals. Links between the New World and the Old World led to an exchange in food sources, a process known as the Columbian Exchange. The Eastern Hemisphere had wheat, grapes, horses, cows, sheep, and pigs, while the Western Hemisphere supplied potatoes, tomatoes, maize, and tobacco. The Columbian Exchange eventually affected almost every society on earth and improved the quality of life

throughout the globe. In some regions, particularly in China, the new crops, together with agricultural improvements, caused large population increases. Corn, first domesticated in the Americas, became a staple food in Africa, while the potato became widely popular in Europe. Food crops from the Western Hemisphere played a key role in shaping the early modern world, and about 30 percent of the foods consumed in the world today come from the plants indigenous to the Americas. However, not all aspects of the Columbian Exchange were positive. The process also caused the spread of weeds that soon became invasive pests in the new environment.

—Alexander Mikaberidze



	Old World to New World		New World to Old World	
Animals	bee cat camel chicken cow goat goose horse	pig rabbit (domestic) rock pigeon sheep silkworm water buffalo	alpaca guinea pig llama turkey	
Plants	almond apple apricot artichoke asparagus banana barley cabbage carrot coffee citrus (orange, lemon, etc.) cucumber garlic hemp	millet oat olive onion peach pear rice rye soybean sugarcane tea turnip wheat walnut watermelon	avocado bell pepper blueberry cashew chili peppers coca cocoa common beans cotton cranberries guava maize (corn) papaya	peanut pecan pineapple potato pumpkin rubber squash strawberry sunflower sweet potato tobacco tomato zucchini

The Columbian Exchange in Africa

Considerable scholarship has been dedicated to researching the scope and significance of the Columbian Exchange between the Old World and the New World after 1492. To date, however, much of this research has focused on the impact on the Americas and Eurasia, and relatively little focus has been aimed at the African component of this exchange. This is unfortunate, because what research has been undertaken points to both significant African contributions to the exchange and a significant impact of that exchange in Africa.

African rice appears to have been one of the most significant cultivars introduced from the Old World to the New World. While the vast majority of rice grown in the New World is now of the *Oryza sativa* variety, which comes from Asia, *Oryza glaberrima*, from West Africa, seems to have been the first type cultivated in the Americas. This variety of rice was initially developed in the inland delta of the Niger River and was later grown along the West African coast in the present-day regions of Senegambia, Guinea, Sierra Leone, and Liberia. Whether African rice was introduced to the Americas by enslaved Africans or by Portuguese sailors is still debated, though the weight of evidence seems to suggest that it was the former. Whatever the case, African rice became an important component of the economy first of Brazil and later of the tidal plantation region of the Carolinas in North America. Notably, this element of the Columbian Exchange was not only environmental but also technological, as it was African knowledge of rice cultivation that made rice farming in the Americas a success, since Europeans were initially ignorant of how to grow the crop.

Other crops introduced from Africa include okra, oil palms, coco yams, and water yams. The latter three became particularly important crops in South America. African varieties of pepper, including the Malagueta pepper, were also imported to the Americas. Guinea fowl were also introduced into South America, providing a popular alternative to chickens. In recent years, African millet and teff, a highland grain from Ethiopia, have become popular with whole-food advocates in the Americas.

Crops from the Americas were embraced by Africans across the continent. These included a number of crops that became popular around the world, including tomatoes and potatoes. Three crops in particular, however, would have a particularly significant impact in Africa south of the Sahara: manioc, maize, and peanuts.

Manioc, a root crop native to the Amazon, can grow in low-light forest conditions. Its fruit can grow to considerable size and can be left in the ground until it is needed. It is, however, poisonous in its raw unprocessed state. Once African populations learned to prepare it in a way that removed its poisons, manioc was well suited to providing an excellent source of food energy in the forest regions of West and Central Africa.

Maize, too, was energetically embraced by African populations. In particular, maize's high rate of growth could allow for multiple crops to be raised in a single growing season, particularly in the tropic regions of Africa. Together, manioc and maize helped fuel a food-production revolution that helped human growth rates in the challenging environment of the African forest region. In southern Africa, maize eventually became the staple food crop, and it also found popularity among North African populations as well.

Peanuts, which originated in the Andes region of South America, were introduced into the savannahs of West Africa, where they soon became a staple crop. Roasted as a snack or cooked into stews and sauces, they provided an excellent source of protein for the region's population of sedentary agriculturalists. Peanuts were also enthusiastically embraced in Egypt and parts of southern Africa.

—Jonathan T. Reynolds

Bibliography

- Carney, Judith A. *Black Rice: The African Origins of Rice Production in the Americas*. Cambridge, MA: Harvard University Press, 2001.
- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- McCann, James. *Maize and Grace: Africa's Encounter with a New World Crop, 1500–2000*. Cambridge, MA: Harvard University Press, 2006.

The Columbian Exchange in Africa and the Muslim World

The biological transfer of plants and diseases between the Western Hemisphere, Africa, and the Muslim world reflected the interconnections of Portuguese, Muslim, and other Indian Ocean traders by the beginning of the sixteenth century. Although the impact was likely negligible at first, eventually diets, nutrition, ecology, and lifestyles were profoundly affected by the introduction of new species. The cultivation of New World crops in Africa and Asia contributed to the processes of mercantile imperialism. The spread of African and Muslim commodities promoted new systems of plantation agriculture across the Western Hemisphere.

Competing systems of Portuguese and Muslim commerce met in the Indian Ocean after two key events: the capture of Constantinople in 1453 by the Ottoman Turks and the Portuguese capture of ports in Asia from Goa (1510) to Malacca (1511). While trade circuits changed hands and shifted partners, the list of exchanged items ranged from dreaded disease to desirable spices and intriguing new food crops, with sources continents away. Because of existing Iberian links on the Mediterranean and overland roads out of the reach of Portuguese ports, both continuity and change characterized the era of early global trade.

Known as the Columbian Exchange, the period of early hemispheric connections has typically been perceived as primarily involving temperate zones, especially as focused contacts across the Atlantic world between Europeans and the Americas. Seed transfers have emphasized the role of European agriculturalists. African and Asian participants, when considered, have sometimes been characterized as merely passive recipients of new crops. Recent scholarship has altered this view by adding African and Islamic world contributions to the list of key commodities, including coffee, melegueta pepper, rice, and cotton, whose transfers dramatically changed political economies around the world.

Black rice (*Oryza glaberrima*) was originally domesticated in West Africa by at least 300 CE, the documented date for grains recovered from the archaeological site of Jenne-Jeno on the inland Niger delta. Rice agriculture spread to three distinctive environments of West Africa (tidal floodplains, inland swamps, and uplands), as observed by North African merchants and early European visitors to the Guinea coast. Trade in rice reached offshore islands and thence across the Atlantic. Eventually *O. glaberrima* was grown in Virginia and the Carolinas alongside tobacco and flax. Key to its transplanted success in the Americas was the crop-specific technologies and knowledge systems transferred by enslaved

➤ MAIZE IN EGYPT—A NEW GIFT OF THE NILE

The early sixteenth-century introduction of maize (corn) from Venice to Egypt began a food revolution in Africa. Maize's journey from the Americas followed maritime and overland routes, connecting its Iberian entry point to northern Italy, North Africa, and West Asia via Mediterranean trade routes by the middle sixteenth century. After a successful introduction to the Nile Valley, maize spread to other regions, reaching East Africa via Arab and Banyan merchants and eventually conquering the continent and triggering a carbohydrate revolution.

It is likely that maize approached West Africa from at least two directions. As attested by the root word for the crop in several West African languages, *masa* (after *masar*, meaning Egypt) and

makka (Mecca) implied its arrival as a traded commodity and a souvenir that pilgrims brought home from the Islamic hajj to the holy city. The crop gathered popularity as a boiled or cooked foodstuff, supplanting other crops such as sorghum and millet and complementing rice agriculture. At nearly the same time European merchants brought Caribbean and Brazilian flint maize to coastal ports, where the crop settled into the savanna-forest mosaic horticulture of West Africa by the 1640s and led to population increases in the following two centuries. Ironically, the American crop returned across the Atlantic when African traders and rulers sold their maize crops to European slave ships bound for the Americas.

—Candice Goucher

African women by the 1690s. Captive African farmers and European merchants transported not only rice but also other crops (sesame, guinea corn, and okra) across the Atlantic during the era of the slave trade.

Maize (corn) was one of the most influential of the New World imports moving in the other direction. Early words for the crop in East African languages suggest its origins via coastal trade on dhows. Maize was grown in Portuguese garrisons. The cultivation of maize provided a key food that supported the growth of Arab and African caravan trade to the inland regions, which supplied ivory, slaves, and other goods in return. Eventually maize became a saleable commodity and was used as a staple crop for daily and local beer brewing in many regions of the continent. In West and Central Africa the introduction of maize supported local population increases and provisioned slave ships.

Another important food crop introduced by slave traders was cassava, which was well suited to the requirements of West and Central Africa's forest ecology. Thriving in nutrient-poor soils and less labor-intensive than other forest foods, cassava was especially critical in the changing environment between 1630 and 1860. The crop adapted well to recently cleared forests and supported local state expansion, the caravan trade, and population growth, changing the traditional ecology and practice of fallow cycles.

Not all of the crops introduced from the Americas were foods. Tobacco spread quickly through trade caravans. By 1664 it was observed being grown in great abundance in the Senegambia region of West Africa. By the end of the seventeenth century tobacco and other imports from the Americas had become substitutes for the Indian, Arab, and Persian products in the Indian Ocean trade.

African and Asian pathogens and parasites fought back against the European invaders and slowed settlement. The early Portuguese traders complained about the diseases, fevers, dysentery, and parasites they encountered in the tropics from the 1490s on. Venereal syphilis was exported from the Americas, creating epidemics in Europe in the 1490s and the early sixteenth century. The disease ravished the Azores, Madeira, and Canaries, but the impact on continental

demography seems to have been negligible. The spread of animal-borne diseases would affect a far greater impact in the nineteenth century.

—Candice Goucher

Bibliography

- Carney, Judith. *Black Rice: The African Origins of Rice Cultivation in the Americas*. Cambridge, MA, and London: Harvard University Press, 2001.
- Crosby, Alfred. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- McCann, James C. *Maize and Grace: Africa's Encounter with a New World Crop, 1500–2000*. Cambridge, MA, and London: Harvard University Press, 2005.

The Columbian Exchange in West Asia

The arrival of Portuguese explorer Vasco da Gama in 1498 inaugurated direct relations between India and Europe, culminating in the gradual imposition of English control over the Indian subcontinent in the eighteenth and nineteenth centuries. By the sixteenth century, a consequence of the contact between Europeans and India as well as more western areas of Asia was the exchange of goods, crops, animals, people, and diseases between the new European colonies in the Americas and Asia. This biological exchange between the Americas and Eurasia (and Africa) was coined the “Columbian Exchange” by historian Alfred Crosby in reference to Christopher Columbus, the Genoese explorer popularly credited with initiating contact between the Western Hemisphere and the Eastern Hemisphere.

Though this contact between previously isolated worlds was sometimes disastrous—due to the introduction of foreign fatal diseases, animals, and plants that could ruin native populations and ecosystems—it was generally beneficial to western and southern Asia. Indigenous Americans were more vulnerable to Asian, European, and African diseases than Africans and Eurasians were to American sicknesses, and though American peoples reaped the benefits of new crops and animals (such as the Plains Indians, who quickly embraced the horse), so did Eurasians and Africans.

➤ MAIZE COMES TO INDIA—A LIMITED HISTORICAL RECORD

Corn, or maize, was brought to India by the Portuguese in the early seventeenth century. Corn originated in Mexico and was brought to Europe along with other New World crops by Spanish explorers in the early sixteenth century. Soon adopted by farmers in Spain, Portugal, Italy, and Morocco, corn was then distributed by land and sea routes as far away as India and China by the end of the seventeenth century.

The importation of corn and other crops into India is not well documented. Abu-I Fazl's *Ain-i Akbari*, the most important source for the politics and economics of the early Mughal empire, provides a detailed description of agriculture in the empire around 1590 but does not include corn in any of its crop lists. Moreover, the Mughals were somewhat indifferent to the Portuguese and recorded little about them in other documents. There are also gaps in the Portuguese records due to the destruction of the archive in Lisbon's India House in the earthquake of 1775.

The evidence suggests that corn was introduced into the Portuguese colony of Goa as early

as 1620. By the 1640s, corn is listed in local revenue records in what is now the Indian state of Rajasthan. Corn is not mentioned much in Indian government records until the nineteenth century, when the British government conducted agricultural surveys of its newly conquered territories. By this time, farmers were replacing certain varieties of millet with corn in areas with relatively dry soils, as corn was more productive and required less labor.

—Eric Strahorn

Bibliography

- Habib, Irfan. *The Agrarian System of Mughal India, 1556–1707*. 2nd ed. New Delhi: Oxford University Press, 1999.
- Pearson, M. N. *The New Cambridge History of India*, Vol. 1, Part 1, *The Portuguese in India*. Cambridge: Cambridge University Press, 1987.
- Warman, Arturo. *Corn & Capitalism: How a Botanical Bastard Grew to Global Dominance*. Translated by Nancy L. Westrate. Chapel Hill: University of North Carolina Press, 2003.

The spread of native American crops allowed areas of Asia and Africa that were previously sparsely populated (due to poor soil or a lack of available foodstuffs compatible with the local climate) to grow exponentially, as diets became more healthy and varied and food was increasingly plentiful. In India, corn and chili peppers, both American crops, quickly became staples. Other domesticated American plants that became widely available in western Asia, often becoming key components of Asian cultures, were tobacco, potatoes, sweet potatoes, peanuts, manioc, cocoa, and beans.

Tobacco was brought into the Ottoman empire at the end of the sixteenth century, and it quickly became an integral part of daily life throughout Islamic lands. Though the potato was not popular in the Fertile Crescent, its relatively high amount of nutrition and its hardiness made it a key crop for the mountainous region stretching from eastern Europe to the Caspian Sea. Sweet potatoes were introduced wherever Portuguese or Spanish trading posts were set up.

Following their introduction, also by the Portuguese and Spanish, peanuts, cocoa, and manioc became widely consumed throughout the Sahel and the Near East. Though certain types of beans were long cultivated in the Near East, several new types were introduced as part of the Columbian Exchange, and they continue to be staples throughout North Africa, the Near East, Turkey, and Afghanistan.

By the seventh century, due to maritime technological advances, trade flourished between the Old World and the New World to the extent that the exchange of goods became essentially global. Spices, tea, saltpeter (used for making gunpowder), and other goods deemed essential were now traded by Europeans and Asians for American products such as tobacco, lumber, gold, and silver.

—Matthew DeFraga

Bibliography

- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. 1972; reprint, Westport, CT: Praeger, 2003.

- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. 1986; reprint, Cambridge: Cambridge University Press, 2004.
- Markovits, Claude, ed. *A History of Modern India, 1480–1950*. London: Anthem, 2002.
- Pilcher, Jeffrey. *Food in World History*. New York: Routledge, 2006.

Irrigation Systems in Early Modern South India

For centuries, Indian farmers have struggled with having either too much water or too little water. Some parts of India receive so much rainfall, unfortunately all at once, that farming is difficult due to flooding, erosion, thick jungle growth, or even changes in soil chemistry. Most of India in fact is arid, mainly receiving intense seasonal rains called monsoons once or twice a year for a few weeks at a time, and briefly yellow and red hues turn to green.

The construction of irrigation works played a role even in the oldest urban civilizations of India, but there were no large-scale irrigation systems until the thirteenth and fourteenth centuries. At that time, Turkish rulers brought irrigation techniques from the Islamic lands of Central Asia to the North Indian plains, while tank irrigation technologies in South India were spread by migrating Telugu-speaking warlords. When the Mughals developed irrigated tracts during the height of their rule over northern India (1526–1707), they mainly resuscitated and enlarged canal systems originally constructed by the rulers of the Delhi sultanate (1206–1526). In South India, the Telugu diaspora resulted in the colonization of irrigated strips in hitherto dry areas situated between major rivers, contributing to the rise and growth of the kingdom of Vijayanagar.

Portuguese and Persian visitors to Vijayanagar (encompassing large parts of South India) in the sixteenth century were astonished by the size and prosperity of the city, which was described as being equal in size to the largest cities of Europe. However, what really astonished these foreign observers was the location; the metropolis was situated on a high hot plateau country of open plains and rocky desiccated mountain ranges. Yet here among

startling enormous boulders visitors found massive temple complexes, sprawling palaces, and perhaps the largest marketplace in the early modern world, multistoried bazaars extending more than half a mile (.8 kilometers) and loaded with produce and merchandise from every part of the known world. Plantain groves, paddy fields, and gardens flourished along stone-lined channels that conducted water within the city walls, which enclosed over 20 square miles (52 square kilometers) of densely populated and developed land. Without the dams and irrigation works constructed along the Tungabhadra River, Vijayanagar could not have existed.

The irrigation system of Vijayanagar was hardly unique to South India. Farmers in the regions had occupied the narrow river valleys early on, and the expansion of agriculture had required the development of ingenious water storage and distribution technologies. Tried and true ancient methods continued to be used in the early modern period. Dams called *bands* (pronounced “bund”) were built across the outlets of natural watersheds to form reservoirs, or *cheruvus*, during the rainy season. Often these lakes were no larger than ponds, with small channels leading to a few acres of irrigated land nearby. In some places, however, the dams held back several square miles of water to a depth of 30 or 40 feet (9 to 12 meters). A cheruvu like this could irrigate miles of crops and fed a complicated system of canals, subcanals, and local channels. Cheruvus, or tanks, are still an important part of the South Indian environment, and they can be seen from the air, forming large and small fan-shaped patterns of water or alluvial dust, depending on the season, at intervals of 3 or 4 miles (4.8 to 6.4 kilometers), each with a string of fields and villages trailing downstream from its dam.

The Chola rulers of medieval Tamil Nadu had built enormous dams, tapping the waters of the Kauveri River to irrigate vast swaths of land for rice and other crops. Ruins of the massive anicuts, or diversion dams, constructed by the Cholas can still be found along the Kauveri between Trichinopoly and Thanjavur. By the early modern period many of these works had fallen into ruins, but some remained, albeit on a smaller scale. The prosperity of the Thanjavur country in the eighteenth century was due

► IRRIGATION FOR AN ARTIFICIAL PARADISE IN NORTH INDIA

Irrigation had less to do with agriculture in northern India than in South India, partly because the Yamuna-Ganga Plains were well watered by large rivers fed by the melting snows of the Himalayas. Only in eastern Punjab and Haryana did the Mughals build major irrigation works. In most parts of North India, the construction of canals merely led to waterlogging, and the seasonal flooding of low-lying areas remained a major problem in the Punjab until the late nineteenth century. Peasants who needed water during the dry season made use of wells or Persian waterwheels or else built small-scale local irrigation systems. The Mughal conquerors, however, loved running water. Splashing fountains reminded Babur of the rivers of mountainous Ferghana, and the stagnant waters of the North Indian plains depressed him. He and his successors therefore committed themselves to laying out royal gardens all over their expanding empire. Each garden foreshadowed the joys of the Islamic paradise, especially the promise of flowing clear water. Mughal palaces boasted, among other

wonders, channels carved into the marble floors and filled with rosewater to both cool and scent the air. Because of their Central Asian heritage, the Mughals were familiar with *qanats*, or underground tunnels and cisterns, used to collect runoff and groundwater in arid hilly country and transport it for miles to low-lying arable land, where it could be used to irrigate farmland and gardens. All Mughal building projects were paired with ambitious irrigation systems, with flowing water a crucial design element. The Mughals rarely made mistakes, but one of the biggest was Akbar's decision to build a beautiful sandstone palace-city at Fatehpur Sikri, southwest of Agra, a site that never became the ideal capital it was meant to be because there was not enough water to support a large population. It is hardly surprising that Shah Jahan, seeking a new capital, selected Delhi, laying out his new city alongside the Yamuna River, the waters of which were diverted to irrigate extensive royal gardens.

—James Hoover Frey

to the anicut at Trichinopoly. This large stone dam divided the Kauveri into the several channels that formed the rich deltaic lowlands of the kingdom of Thanjavur. With a perennial supply of water, the Thanjavur lowlands produced three crops of rice a year. Rice was cheap there and thus so was labor, and this was one of the reasons why weavers flocked to the kingdom's villages, in turn attracting European traders to the coast, where several foreign factories, or trading outposts, flew the flags of the competing East India companies. During the Carnatic Wars, fought for control of the Tamil Country in the mid-eighteenth century, it was not surprising that Trichinopoly was the sought-after prize. To control the city was to control its anicut and the water supply of Thanjavur, upon which much of the regional economy depended. The East India Company's ability to build a territorial empire in South India was due at least to some extent to its successful seizure and defense of Trichinopoly.

In South India, the maintenance of irrigation works was the responsibility of the king.

The *nayakas* and the Muslim *nawabs* who took over the Carnatic during the eighteenth century followed the administrative pattern set by the Cholas, assigning the revenue of whole villages to pay for the maintenance of dams and canals. Local officials were appointed to collect and administer these funds and oversee any necessary work. Village officials regulated the irrigation system, and farmers who received water contributed to the upkeep of their local reservoir. Usually, canal floodgates were opened at a farmer's field for a specified amount of time, thus rationing the flow of water. Wherever channels extended across the lands of several villages or from one district into another, a fair degree of political cohesion was required in order to keep villages upstream from taking more than their fair share of water. Needless to say, the slightest disruption of the political system plunged irrigation works into chaos, and the cutting of canals and channels by the inhabitants of rival villages was a common occurrence. It is not surprising that one of the East India Company's first and most urgent tasks upon assuming political

control in India was taking over the management of irrigation works.

—James Hoover Frey

Bibliography

- Krishnaswami, A. *The Tamil Country under Vijayanagar*. Annamalainagar: Annamalai University, 1964.
- Ludden, David. *Peasant History in South India*. Princeton, NJ: Princeton University Press, 1985.
- Mahalingam, T. V. *Economic Life in the Vijayanagar Empire*. Madras, India: University of Madras, 1951.
- Saletore, Bhasker Anand. *Social and Political Life in the Vijayanagara Empire*. Madras: B. G. Paul, 1934.
- Villiers-Stuart, Constance M. F. *Gardens of the Great Mughals*. London: A. and C. Black, 1913.

Digging Salt Earth— The Subtropical Environment and Saltpeter Production in Early Modern India

Saltpeter is a common name for potassium nitrate, a mineral compound vital for gunpowder production. Gunpowder was traditionally produced through mixing sulfur, charcoal, and potassium nitrate (saltpeter). Saltpeter is a naturally occurring compound, often extracted as a by-product of bird and bat droppings. However, it is relatively rare in its most basic and easy-to-obtain form found on the ground in certain climate zones in America, Egypt, and India.

The use of gunpowder was widespread in seventeenth-century India. It is unclear exactly when gunpowder was first used in India or how the invention arrived there, but it was certainly available by the fourteenth century. It is possible that the Mongols brought gunpowder from China or that it arrived directly from China through missionaries and traders. In any case, India became one of the world's leaders in gunpowder production and, by extension, gun making by the sixteenth century. One of the reasons why India was on the cutting edge of firearms manufacture was its relatively plentiful supply of native saltpeter.

In early modern India saltpeter was commonly found in the Ganges River valley, one of the few places on earth where the soil is saltpeter-rich. As historian Asitesh Bhattacharya

INDIA SALTPETER—KEY TO EUROPE'S “MILITARY REVOLUTION”

Europe's religious wars of the sixteenth and seventeenth centuries required a vast supply of gunpowder. At first, saltpeter, one of the key ingredients in gunpowder, was extracted from bird and bat droppings. To increase its availability, European saltpeter procurers (or saltpetermen) would scour dovecotes for dove droppings, much to the consternation of bird lovers, as the birds and their eggs were often destroyed in the process. Birds and bats were also raised specifically for the saltpeter produced from their droppings. Even so, it was difficult to gather saltpeter in quantities large enough to mass-produce gunpowder, and by the early 1600s European gunpowder manufacturers were growing desperate, as the increasingly large European armies, bolstered by thousands of conscripts (who could be relatively easily trained in the use of firearms), consumed vast supplies of gunpowder. The answer to the European saltpeter shortage was soon found in India.

India was one of the few places in the world where saltpeter was found in large quantities in its natural state. India saltpeter, gathered primarily from the Ganges River valley and exported from western India, was of a particularly high quality (and cheap) and thus was much prized by European traders. The British and Dutch East India companies, in particular, were well known for their saltpeter trading.

As European states were constantly at war with one another during the sixteenth to eighteenth centuries, the need for larger armies and modern bureaucracies to finance and control them quickly became apparent. Because it was difficult to effectively train large amounts of raw recruits in anything but firearm usage, European military tactics soon evolved to reflect the shift from close combat to ranged warfare with handguns and artillery (and, in response, larger fortifications). This shift in European warfare is commonly termed Europe's “Military Revolution” by historians. However, without the mass influx of India saltpeter, Europe would not have had enough gunpowder to support its increasingly large armies, and no such “revolution” would have been possible. As a result, Europe's military, technological, and economic dominance of the world from the seventeenth to the twentieth centuries would have been delayed or perhaps even prevented.

—Matthew DeFraga

points out, the “earth of the Gangetic India is richly impregnated with saltpetre in a natural state, which can be extracted by lixiviation, evaporation and crystallisation without the aid of fire,” making its gathering relatively safe. The subtropical environment of Bengal was ideally suited to the natural occurrence of saltpeter, as it coalesced on the ground immediately after the monsoon season. Digging through the soil produced large chunks of saltpeter that had filtered through the earth and bonded together. Though Europe was a leading consumer of gunpowder, particularly during its many religious wars of the sixteenth and seventeenth centuries, it lacked the ideal climate for saltpeter production, and the European demand for saltpeter soon exhausted Europe’s native supply. By the early seventeenth century, European traders were forced to turn to subtropical India for saltpeter.

—Matthew DeFraga

Bibliography

- Asher, Catherine B., and Cynthia Talbot. *India before Europe*. Cambridge: Cambridge University Press, 2006.
- Bhattacharya, Asitesh. “Gunpowder and Its Applications in Ancient India.” In *Gunpowder, Explosives and the State*, edited by Brenda J. Buchanan. Bodmin, Cornwall, UK: MPG Books, 2006.
- Kurlansky, Mark. *Salt: A World History*. New York: Penguin, 2003.
- Le Couteur, Penny, and Jay Burreson. *Napoleon's Buttons: 17 Molecules That Changed History*. New York: Penguin, 2003.

The Columbian Exchange in East Asia

The transcontinental biological exchanges ignited by Christopher Columbus’s initial encounter with the Americas in 1492 had a significant effect on foods available to East Asians. Specifically, the transfers introduced several crop varieties into East Asia that thereby encouraged the cultivation of new staples and drastically altered dietary habits. Through the sixteenth and seventeenth centuries, both China and Japan benefited from the adoption of a vast array of new crops from the Americas. East Asian agriculturalists eagerly adopted staple crops such as potatoes,

peanuts, and chilies, which allowed for the expansion of their respective populations. Crops such as the humble potato and peanuts allowed formerly nonarable land to be brought into cultivation, thus ensuring ample food supplies for burgeoning populations and lowering the incidence of famine. East Asian regional culinary styles and dishes changed as palates were exposed to interesting and appealing new flavors and spices.

After 1500, the diffusion of American crops to the Far East was facilitated first by the prevalence of Portuguese trade networks along the Indian Ocean and Southeast Asia. These networks had commercial ties to Spanish merchants in Iberia, who in turn had access to crops from the Americas. After the Spanish conquest of the Philippines in Southeast Asia in 1565, Spain established Manila as a major trade center, directly linking American products to Chinese merchant networks. Both the Spanish and the Portuguese introduced American crops to the Far East through these trading posts, situated conveniently amid the greater East Asian commercial networks. Chinese and, to a lesser degree, Japanese merchants eagerly traded their products with Iberian traders for these new food staples.

Before the introduction of American crops, Ming China relied on the intensive cultivation of rice to ensure the food supply of its burgeoning population. This ensured heavy population density along the lowlands of southern China, where the rice crop thrived and left much of the northern regions barren and uncultivated. During the late Ming dynasty and early Qing dynasty, American maize, along with peanuts and potatoes, allowed Chinese peasants to cultivate these barren highlands. These new crops allowed previously undeveloped land to be brought into cultivation and led to an increase in overall crop yields for the entire country, in addition to the already extensive rice yields to the south. Manioc from Brazil also entered China and Japan and became part of a more diverse diet.

Much like China, Japan had also relied on intensive rice cultivation to feed its population. Initially, potatoes were introduced in Japan by Russian merchants in the late 1600s. Japan also benefited from the introduction of American crops, but they were less popular until episodes

➤ MAIZE, PEANUTS, AND MANIOC

Maize, peanuts, and manioc, which were staples for the indigenous peoples of the Americas for centuries, entered the Eastern Hemisphere in the sixteenth and seventeenth centuries and allowed previously marginal lands in certain climates to be brought into cultivation. Typically cereals and grains, such as wheat, barley, and rice, were grown through much of Eurasia as main staples for subsistence. As these were limited to certain regions, climates, and growing seasons, the incidence of famine was increasingly high due to drought, a harsh winter, or widespread warfare that frequently disrupted distribution networks. However, after 1500 the introduction of New World

crops, particularly maize, peanuts, and manioc that would grow in what were deemed nonarable marginal land and inhospitable climatic conditions, allowed for a massive expansion of the foods available in the Eastern Hemisphere. Maize fed both livestock and the destitute, given its high yields. Peanuts thrived in hard marginal land, previously unsuited for much else. Manioc grew in tropical and subtropical regions, where not much else would provide a viable staple crop. From Europe to sub-Saharan Africa and to the reaches of East Asia, these crops provided a vast new supply of food for all the peoples of Eurasia.

—Abraham O. Mendoza

of famine forced a starving populace to appreciate the nourishment offered by potatoes and maize. Like early modern Europe, sporadic famines forced East Asian populations to adopt American crops previously seen as suspect or associated primarily with food of the poor. Some historians suggest that this expansion of the food supply is a considerable factor in the rapid growth of East Asian populations in the sixteenth and seventeenth centuries.

Regional cuisines in both early modern China and Japan were radically altered by the introduction of American crops. The infusion of red peppers, capsicums, peanuts, maize, manioc, and potatoes into Chinese culinary habits across various regions changed local food habits. Peanut oil, extracted from peanuts, became a pivotal part of Chinese food preparation, particularly in frying. As the Chinese were used to spicy foods due to their long-standing procurement of spices from Southeast Asia, American spices (specifically in the varieties of peppers) also became a regular condiment in many regional Chinese dishes. However, Japanese dishes were not noticeably affected by the infusion of American foods, outside of some isolated regions that depended on either maize or potatoes for subsistence. Fish and rice dishes remained the food of choice for most of the Japanese populace unless faced with dire economic situations. Nonetheless, both China and Japan adopted New World crops gradually over several centuries and

were but one example of the global sweep of the Columbian Exchange.

—Abraham O. Mendoza

Bibliography

- Crosby, Alfred W., Jr. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Praeger, 2003.
- Pilcher, Jeffery M. *Food in World History*. New York: Routledge, 2006.
- Reader, John. *Propitious Esculent: The Potato in World History*. London: William Heinemann, 2008.

The Columbian Exchange in Europe

The influx of novel foodstuffs from the New World to Europe took several centuries to have an impact on Old World agriculture and foodways and varied regionally. Initially, many foods from the New World were seen as repulsive, fit only for livestock or the lowly peasant, and were generally resisted by Europeans. However, due to endemic famines (which were common in this period) as a consequence of widespread bad harvests and climatic conditions between the fifteenth and sixteenth centuries, many Europeans began to consume New World produce, particularly beans, maize, and potatoes that were more resistant to disease and could be grown on less land far more productively. In addition, New World crops allowed the lower strata of European

► THE POTATO COMES TO IRELAND

The Irish are famous for their association with the humble potato, stemming back to the initial reception of the New World crop in the Emerald Isle. The potato was introduced in Ireland late in the sixteenth century, and within a century Ireland was already known for its proclivity for the tuber. The deep cold soils and cool climate of Ireland are ideal for potato cultivation. Under the exploitative and oppressive rule of the English, many Irish were condemned to live in dire poverty and deprivation. The potato allowed Irish peasants to sustain themselves on the small tracts of English land that made up the bulk of Ireland. On a mere acre (.4 hectares) of land, a typical Irish peasant could grow enough food to sustain a small family for approximately a year. The inclusion of potatoes in the Irish diet led to better health and a substantial growth in the overall population. It is estimated that the average Irish male consumed solely 10 pounds (4.5 kilograms) of potatoes a day for sustenance. However, with the coming of the potato blight and the resultant Irish Potato Famine in the 1840s, this overreliance on one crop ultimately proved to be catastrophic.

—*Abraham O. Mendoza*

society to cultivate and harvest life-sustaining crops on small plots of land, thereby increasing the life expectancy of the average person.

Beans were one New World food that initially did not find acceptance in Europe. Scholars believe that beans were first cultivated in Europe in the sixteenth century and only became widespread by the eighteenth century. Europeans took a long time acquiring a taste for beans, possibly because Europe entered a long period of cold weather in the mid-sixteenth century that lasted well into the eighteenth century, which did not allow for adequate growth of the crop. More important was the European perception of the bean as food fit only for lowly Indians and of little nourishment for themselves. However, over time Europeans developed a fondness for beans in their many varieties, in part because it thrived in regions with only a few months of hot weather, allowing farmers in the cooler latitudes to grow them successfully.

Maize, otherwise known as corn, also made little headway in early modern Europe and was not regarded as fit for human consumption. It was grown in various regions throughout Europe from the early sixteenth century as fodder for livestock but grew in importance in the latter half of the seventeenth century as a viable food source for people. It emerged as part of the French diet, which leads some historians to stipulate that it might help explain the population growth of that country in the late seventeenth century, particularly in rural areas. Maize became the staple of choice in much of southern Europe (Spain, Italy, and Portugal), particularly for the peasantry. Polenta, a cornmeal derivative of maize, became a staple dish for Italians. The widespread usage of maize in these regions is credited with contributing to a steady growth of population in the eighteenth century, helping these areas recover from earlier population decline. Taking up less land to grow and being resistant to extreme heat and cold made this humble crop less susceptible to climatic extremes that otherwise would typically lead to famine.

Potatoes also contributed substantially to European demographic expansion, as had beans and maize. From the outset, they were seen as exotic products and even as aphrodisiacs but not as a source of sustenance. In the sixteenth century, potatoes even were blamed for being a source of leprosy. They were also typically perceived as a food fit only for the lower social orders. However, over time, potatoes offered peasants and laborers a cheap and especially easily cultivated crop for human consumption. European farmers learned to grow potatoes on small plots of land and found them resistant to extreme cold, providing nourishment for peasants in dire need. It became a major staple in Ireland and Germany, contributing to the population growth and improved health of the peasantry.

Other crops, such as tomatoes and peppers, made little headway in Europe during the fifteenth and sixteenth centuries. Their impact would be felt much later, particularly in the southern European nations of Italy and Spain, where they are prevalent in the diet and recipes of those regions. While the Columbia Exchange did introduce these crops into Europe, they did not have the same level of impact as beans,

maize, and potatoes, which were resilient in the extreme climatic conditions of the Little Ice Age that could lead to large regional famines. While famines continued well into the eighteenth century, the growing prevalence of New World crops allowed some regions to survive and even experience substantial population growth.

—*Abraham O. Mendoza*

Bibliography

- Crosby, Alfred W., Jr. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport CT: Greenwood Press, 1972.
- McNeill, William H. *Plagues and Peoples*. New York: Anchor Books/Doubleday, 1976.
- Pilcher, Jeffrey M. *Food in World History*. New York: Routledge, 2006.

The Age of Buckwheat—Climate, Food, and Famine in Early Modern Europe

The relationship among climate, food (in the form of buckwheat), and famine characterized much of early modern Europe. Global climatic fluctuations known as the Little Ice Age (1500–1850) contributed to the frequency of bad harvests in early modern Europe, resulting in widespread famines throughout various regions. Overreliance on wheat, vulnerable to cold weather, as a staple crop resulted in the reoccurrence of famine for much of the European population. As the European economy shifted from subsistence farming to commercial farming, with larger yields and surpluses, and also began to include more New World crops (maize, beans, and potatoes) as staples for mass consumption, the frequency of widespread famines lessened by the end of the eighteenth century.

Famines occurred throughout much of this period locally, nationally, or occasionally across all of Europe. In particular, England suffered a series of food shortages during 1527–1528 (the “Great Hunger” of 1527 was responsible for the deaths of 10 percent of the English population), 1550–1552, 1557–1559, 1596–1598, and 1623–1624. Records show that in France, Paris alone suffered famines during 1520–1521, 1523, 1528–1534, 1548, 1556, 1560, 1565, 1572–1573, 1574, 1587, 1590, 1595–1598, 1621, 1625, 1629, and

1631–1632. Similarly to England, some of these famines lasted several years.

Climatic conditions, considerable population growth, the overreliance on subsistence farming, and the price revolution (1470–1650) contributed to the constant outbreak of famines in early modern Europe. The long-term cooling of the Little Ice Age had a significant effect on food production by decreasing the elevation at which crops could be grown. The gradual change in climate also decreased the land available for cultivation, thereby decreasing staple crop outputs, particularly for wheat. Steady population growth, which occurred during periods of good harvests, would deplete the grain supply available, making the mass of the populace vulnerable to famine. Much of the wheat crop was grown on small parcels of land by peasant proprietors or renters, who gained only enough to subsist on, while much of the grain, grown for commercial purposes, was exported to other regions for the profit of the major landowners. In times of famine the grain prices would go up as a consequence of the price revolution. The scarcity of grain allowed wheat speculators to increase the market price of wheat to ensure a sizable profit in times of dearth. Higher wheat prices affected those least able to afford food, resulting in widespread death among the lower strata of early modern European society.

Other factors that contributed to the outbreak of famine were endemic warfare, lack of government involvement, and the rapid depletion of food surpluses in urban areas to the detriment of the rural population. Many artificial famines were a result of the effects of warfare on civilian populations, in particular the Thirty Years’ War (1618–1648) during which marauding armies of mercenaries confiscated, consumed, and prevented the efficient transport of food to towns and cities. Local and regional governments were slow to respond to the famine. Although local governments often maintained surpluses, few held sufficient stocks for the ever-growing populations. On the outset of a famine, rural populations necessarily resorted to eating the seeds for the next year’s crop, triggering conditions for a future famine. As a famine continued, many peasants sought refuge in the nearest regional town or city. Yet here townspeople

horded their limited grain supplies, and many of the rural exiles starved.

Over time, new forces eased the incidence of widespread famine. One change was gradual inclusion of New World staple crops, which were less vulnerable to colder climatic conditions. Another was the shift from subsistence to commercial agriculture, which brought greater crop yields. As Europeans realized that maize (corn), beans, and potatoes could be cultivated in cold conditions, they slowly developed a taste for these American staples. Commercial agriculture put land into more productive usage, slowly ending the dominance of subsistence agriculture and the stranglehold of large aristocratic proprietors over much of the land. Greater variety and higher yields of wheat led to surpluses and lessened the chances for famines. However, famines recurred throughout much of Europe well into the eighteenth and nineteenth centuries but were due more to human agency than to the effects of climatic conditions.

—*Abraham O. Mendoza*

Bibliography

- Cunningham, Andrew, and Ole Peter Grell. *The Four Horsemen of the Apocalypse: Religion, War, Famine, and Death in Reformation Europe*. New York: Cambridge University Press, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. New York: Norton, 1979.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. Malden, MA: Blackwell, 2001.
- Pilcher, Jeffrey M. *Food in World History*. New York: Routledge, 2006.

Changes in the Land—Human Alterations in the Environment of British North America

All human groups change their environments, as historian William Cronon notes, and European settlers in British North America were no exception. From 1600 to 1800 the environment was dramatically transformed in British North America. The first successful English colony was established at Jamestown, Virginia, in 1607. Thirteen years later, settlers arrived in New England. Europeans, though, did not arrive alone. They brought with them disease, livestock, and vegetation. Together, these organisms revolutionized the North

American ecosystem by altering human and animal demographics and land use and by introducing numerous animal and plant species.

Changing population patterns were central to British North America's ecological transformations. The indigenous Indian populations of British North America were decimated by Eurasian diseases such as smallpox, influenza, plague, malaria, yellow fever, and tuberculosis. These diseases often developed into virgin soil epidemics, or new and deadly diseases that spread to nearly all members of a population. In the first 75 years of settlement in New England, the Native American population dropped from more than 70,000 to less than 12,000. American Indians had previously been isolated from Europe and its diseases. Moreover, Native Americans' pathogens were less developed and deadly in comparison to those of the European settlers. Therefore, when Native Americans came into contact with European settlers, their immune systems were defenseless. In contrast, the settler population grew rapidly. By the 1750s approximately 1 million Europeans lived in North America.

European settlers imported an economic system that combined late medieval manorialism with early modern capitalism. Prior to European settlement, Indian groups had utilized the environment in various ways. For instance, in southern New England, Native Americans farmed the land in addition to hunting and gathering. As part of this process, they moved homes every few months and fields after a few years. As the American Indians declined, the European economic system took over. Native Americans in southern New England lost most of their lands due to disease and sale. By the eighteenth century this area was dominated by European farmers, who settled on permanent plots that were divided by fences and raised domesticated animals.

Animal populations in British North America changed significantly from 1600 to 1800. European settlers brought animals unknown to the American continents, including horses, cattle, pigs, goats, sheep, chickens, cats, rats, and rabbits. European settlement also led to shifts in animal habitats. In 1600 deer, wolves, bears, turkeys, and beavers were all common in southern New England. Two hundred years later, the

► CREATIVE DESTRUCTION—SUGARCANE IN THE CARIBBEAN

Sugarcane was first introduced into the Caribbean in 1493, when Columbus visited Hispaniola. The Spanish replicated these sugar ventures, but they encountered technological obstacles and then labor issues as the local Arawak Indians died off. By the end of the century they had abandoned Caribbean sugarcane production. In the seventeenth century, though, the English and French revived the venture. They initially used their Caribbean colonies for settlement. The Caribbean sugar revolution did not begin until the 1640s, when French and English Caribbean colonies began producing sugarcane and importing African slaves. West Africans were a particularly attractive labor pool because they had been exposed both to Eurasian diseases and to tropical diseases such as yellow fever and malaria, which were common in the Caribbean. As a result,

newly arrived Europeans were four times more likely to die than their African slaves.

Throughout the seventeenth and eighteenth centuries the Caribbean became increasingly dominated by sugarcane, and food had to be imported. For instance, 80 percent of the land in Barbados was used for sugar production in 1767. Together, European settlement and sugarcane production revolutionized the Caribbean's demographics. For example, in the French colony of Saint Dominigue, 82 percent of its population was slave, 8 percent European, and 10 percent free (primarily of mixed African and European ancestry) in 1740. In the eighteenth-century Caribbean, Native Americans were nearly eliminated and replaced by Africans as the dominant group.

—Kassi Klinefelter

joint efforts of Native Americans and European colonists left this area devoid of nearly all these animals. Moose shared a similar fate. The hunting of moose with the Western musket resulted in their decimation in eastern Canada within 50 years of European settlement. As wild animal populations declined, Western domesticated animals filled the void.

The introduction of domesticated animals contributed to alterations in vegetation and soil erosion. Throughout the early 1600s Europeans imported domesticated grazing animals such as horses, sheep, swine, and cattle. Prior to European colonization, the dog had been the only domesticated animal in North America. North American grasses, with the exception of the gama grass and buffalo grass of the Great Plains, were unable to withstand heavy grazing. Grazing animals destroyed native eastern grasses, which were replaced by European varieties. In particular, Kentucky crabgrass, a combination of English grass and white clover, became a common British North American grass. It spread throughout the 13 colonies and along Canada's St. Lawrence River. Grazing animals also contributed to erosion. They compacted the soil, reducing its oxygen and curtailing the growth of tall plants, which prevented the ground from absorbing water and nutrients.



Thatch-roofed cabins line the single street of Plymouth Colony in 1622. Ill-prepared for fishing and not yet adept at cultivating corn, the Pilgrims struggled to survive for the first years of the colony. (Library of Congress)

The soil was also impacted by regional deforestation. When the first settlers arrived in New England, oaks, hickories, chestnuts, cedars, and pines were common. Trees near North American settlements were cut for firewood, fences, and houses as well as to sell and make room for fields. For example, the white pine that grew to more than 100 feet (30 meters) in height was used for ship masts. The widespread cutting of trees near settled areas created regional deforestation. In New England this deforestation warmed and dried the soil, making it hotter in

the summer and colder in the winter. Drying soil made the ground less able to absorb water, leading to increased floods and forest fires in addition to lowered water tables.

Thus, the British North American colonies were transformed by settlers and their plants, animals, and diseases. As the environment adapted to European livestock, vegetation, or people, increasingly it became more suitable for other organisms. Through this process, British North America was Europeanized from 1600 to 1800, although, as Alfred Crosby states, humans “were seldom masters of the biological changes” they triggered. North American settlers did not control the changing environment, but they did benefit from it.

—Kassi Klinefelter

Bibliography

- Cronon, William. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. New York: Hill and Wang, 1983.
- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press, 2004.
- Curtin, Philip D. *The Rise and Fall of the Plantation Complex: Essays in Atlantic History*. Cambridge: Cambridge University Press, 1990.
- Diamond, Jared. *Guns, Germs and Steel: The Fates of Human Societies*. New York: Norton, 2005.

Horse Cultures—European Influences on America’s Pampas

Covering nearly half of Argentina, all of Uruguay, and the south of the Brazilian state of Rio Grande do Sul, the Pampas are to southern South America what the Great Plains and the prairies are to North America. A region of rolling grasslands dotted by solitary *ombu* tress and crossed by meandering streams and two major rivers, the Paraná and the Uruguay, the Pampas offers ideal conditions for farming and livestock raising. Both activities have dominated the region’s recent history, although until the nineteenth century the Pampas hosted primarily feral herds of cattle and horses that were legacies of sixteenth-century Spanish settlement.

This was not the first appearance of the horse in the Americas. Today’s horse (*Equus caballus*) originated in the Western Hemisphere as

the rodent-sized *Eobippus*, which eventually migrated to other regions of the globe. For uncertain reasons, equids disappeared from the Americas some 8,000 to 10,000 years ago, but their distant descendants returned on Christopher Columbus’s second voyage in 1493. The first horses to live in the Pampas were animals that fled rudimentary Spanish settlements, particularly the first ill-fated Buenos Aires colony of the 1530s. These horses thrived on the extensive grasslands with few natural predators, and as more came with expeditions from Chile, Peru, and Paraguay, they were reported to number in the tens of thousands by the middle of the following century.

In the early colonial period, these horses were scarce. Those that were available were prized for their utility in war and for their role in ensuring land grants, especially for cattle ranching. As these animals adapted easily to the natural conditions of the Pampas, they were also a major technological introduction for Pampas Native Americans. These seminomadic peoples adopted the feral horses (*cimarrones* or *baguales*) as food sources and mounts. This enabled them to become powerful warrior-hunter societies, and they soon exerted control over other natives and resisted European expansion along the frontier of Spain’s American empire until the mid-nineteenth century. They incorporated the horse into their rituals, including horse sacrifices, while indigenous leather-covered three-stone *bolas* used for hunting rhea (American ostrich), wild horses, and cattle were adopted by the local mestizo cowboy, the *gaucho*. The horse played a similar role in some neighboring aboriginal societies in Paraguay and Brazil.

In the mid-seventeenth century the colonial mining economy of Peru and sugar production on the Brazilian coast stimulated the breeding of mules at Salta in northern Argentina and the Brazilian region of São Paulo. Annual mule fairs often transacted between 60,000 and 100,000 animals at a time. The horses used in these breeding programs were descendants of the original importations. At the same time, by the eighteenth century the horse of the Pampas had adapted to local conditions and essentially was a separate breed, the *criollo* (“creole”).

As Spanish settlement expanded over the late colonial period (ca. 1750s to 1810s) cattle

THE CRIOLLO—ADAPTATIONS OF IBERIAN HORSES TO THE AMERICAS

Though mostly a curiosity today, the *criollo* horse breed exists in small numbers throughout the Americas. The first horses brought to the Americas by the Spaniards were of “Berber” stock from southern Iberia, but after their introduction they took on particular characteristics that reflected the ecological conditions in which they thrived. Known widely as *criollo* in Spanish America, in Anglo America they were called *mustang*, from the Mexican *mesteño*, while in Brazil the name depended on the region: *mangalarga* in São Paulo and *pantaneiro* in Mato Grosso. There were only minor physical differences between these animals. They were not as large as most horses today, most standing 13 or 14 hands (under 5 feet or 1.5 meters) at the shoulder and weighing between 700 and 1,000 pounds (300–450 kilograms) while ranging in color from bay to chestnut. With time they tended to become slightly smaller although with increased stamina and agility due to their

adaptation to varied climates and environments. Those that inhabited swampy environments developed wider hooves; others in more wooded regions stood a little smaller than their relatives. The *pantaneiro* was a good swimmer, since over centuries it experienced the annual flooding of the Pantanal floodplain in Matto Grosso. Until the nineteenth century, Pampas animals were pastured free of corrals because wood was scarce and expensive, but feral *criollos* gained a reputation for attracting domesticated horses to their troops by approaching herds and audibly encouraging them to join. Their demise in the early nineteenth century came in large part through the use of firearms by ranchers to protect herds and pastures. By the twentieth century the *criollos* were on the verge of extinction, and societies were formed in various nations to protect and breed the remaining descendants of the colonial *criollo*.

—Robert W. Wilcox

ranching became more common in the Pampas. Horse raising was an integral part of the business, as *criollo* horses were used to herd and capture cattle. Beef cattle appeared at the same time as the horse and, like equids, became feral quickly, developing a reputation for ferociousness in the face of hunting by native peoples. Not as large as their corpulent descendants of today, these wide-horned animals were the Pampas equivalent of the famous Texas longhorn, weighing between 900 and 1,500 pounds (400–700 kilograms) and usually grazing freely on the plain. Early colonial settlers developed a cattle economy that involved hunting the animals on horseback for hides and tallow to be sold in Europe and the silver mines of Peru, not for the meat, which often was left for scavengers. The most important worker in this scenario was the *gaucho*.

Gauchos were the quintessential cowboys who virtually lived in the saddle. Sometimes sporting silver bits and spurs, they commonly rode barefoot with a toe-ring stirrup. They embodied a culture that was romanticized for its free spirit and wild character. Such freedom ended for humans and animals after independent nations were forged in the region in the



Guarani crossing a river in Paraguay, from the book of Father Florian Baucke, describing his missionary journeys in Latin America between 1748–1769. (Photo12/The Image Works)

1820s and the economy began to serve wider European demand for cattle products. As a result, the Pampas *criollo* horse was gradually absorbed into European and Middle Eastern importations to produce a larger and tamer breed. Native peoples, the *criollo*, and the original culture of

the gaucho all but disappeared, although ironically gauchos have become proud identifiers for Argentines today. As the gaucho became a wage laborer, his image was appropriated by Pampas cattle ranchers and horse breeders who dressed in gaucho clothing and frequently defined social status by the competitive quality and equine beauty of the thoroughbred horses they raised.

—Robert W. Wilcox

Bibliography

- Azara, Félix de. *The Natural History of the Quadrupeds of Paraguay and the River La Plata*. Translated by W. Perceval Hunter. 1838; reprint, Edinburgh, UK: A. & C. Black, 1967.
- Denhardt, Robert M. *The Horse of the Americas*. Rev. ed. Norman: University of Oklahoma Press, 1975.
- Hudson, W. H., and R. B. Cunningham Graham. *Gauchos of the Pampas and Their Horses*. Hanover, NH: Westholm Publications, 1963.
- Johnson, John J. "The Introduction of the Horse into the Western Hemisphere." *Hispanic American Historical Review* 23(4) (November 1943): 587–610.
- Rouse, John E. *The Criollo: Spanish Cattle in the Americas*. Norman: University of Oklahoma Press, 1977.
- Slatta, Richard W. *Gauchos and the Vanishing Frontier*. Lincoln: University of Nebraska Press, 1983.

Effects of European Agriculture on the American Environment

Early European colonists in the Americas attempted to farm the land following the traditional methods of their ancestors. However, the American landscape was not like that of Europe. Staple crops depleted the soil, and nonnative plants and animals disturbed fragile ecological balances.

The forest was quickly cleared for both lumber and agriculture. In order for crops to grow, all trees had to be removed. The most efficient way to clear the forest was through burning, which prevented regrowth of sprouts. Species such as white pine, hemlock, and white cedar did not grow back after clearing. When trees were cleared, this often allowed the seed release of pin cherry and red cedar, dormant species that thrive under full sunlight conditions.

Plowing also changed the land. By turning over soil much deeper than plowing by hand, the process damaged native species in favor of a new habitat with domesticated plants. Plowed soil lost nutrients more quickly than nonplowed soil because more soil was coming into contact with air and water. Plowing was extremely popular, however, because it allowed a farmer to plant more than seven times what he could plant by hand.

One of the greatest agents of change to the environment was European farmers' use of livestock. Pigs, cows, horses, and sheep were integral to European agriculture as resources for food, transportation, wool, and plowing. Farmers were constantly extending the boundaries of their land to accommodate quickly reproducing herd sizes and their food resources, which in turn required more forest clearing. They also caused massive depopulation of native wolves that preyed upon grazing livestock and covered the land with roads to transport their animals to and from regional markets. The native grasses were not adapted for heavy wear and grazing and often died out, being replaced by hardier European species that were brought to the Americas through animal dung. European grass species, such as bluegrass and white clover, quickly covered grazing pastures and replaced native species. Hardy European weeds also flourished, and American ragweed populations exploded.

Likewise, as Europeans burned forest for pasture, they also burned undergrowth, which often changed entire habitats. When tree species were injured by burning of undergrowth, thorny bush species, which were difficult to remove and which cattle could not eat, often flourished in the newly cleared pastures. Much of the new pasture often lay to waste, taken over by stubborn bushes. In addition, because animals were usually fenced into a relatively small area of land, their weight compacted and hardened the soil, squeezing out existing oxygen, which lowered the nutrient value of the land. This often prohibited the growth of plants needed to feed the animals and caused food shortages before the season ended.

Around one year after forest land was cleared, minerals and organic soil matter washed away by rain because there were no plants to

anchor them to the soil. These elements ended up in streambeds, and without plants and rich soil to soak up rain, streams and rivers filled to flooding five times faster than before the Europeans arrived in America. Soil nutrient loss was also hastened by Europeans' habit of farming one species in a field; corn was grown without another crop, such as beans, to provide contrasting nutrients. Also, grazing animals were allowed to clean the fields of corn husks and other organic plant matter. Crop rotation was not usually practiced, and as a field became less and less nutrient-rich, fewer crops grew, and eventually the land was given up for pasture. This, however, inhibited soil-quality restoration because new grasses and tree sprouts were consumed, and the soil remained barren. As crops failed them because of soil failure, farmers became more dependent on livestock for their economic stability.

Hay harvest was completed in late fall, and fields were left empty throughout winters, also causing a chance for significant erosion to occur. The use of fish as fertilizer also hurt soil quality because it brought significant sources of oil into the composition. Fish fertilizer became a valuable enterprise to the colonists and caused great depopulation of native fish species.

In this period, Western contact inaugurated the beginnings of a great environmental transformation as parts of the Americas became a mixture of invasive European flora and fauna in an indigenous habitat. These once exotic plants and animals thrived in their new niches and became the common agricultural plants and livestock of the twenty-first century, causing great change to forest, water, and soil composition.

—Melissa Halverson

Bibliography

- Anderson, Virginia DeJohn. *Creatures of Empire: How Domestic Animals Transformed Early America*. New York: Oxford University Press, 2006.
- Cronin, William. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. New York: Hill and Wang, 2003.
- Jackson, Wes, and Jon Piper. "The Necessary Marriage between Ecology and Agriculture." *Ecology* 70 (1989): 1591–1593.
- Kohlmeyer, Fred W., and Floyd L. Herum. "Science and Engineering in Agriculture: A Historical

THE PEACH—A EUROPEAN WEED?

When Europeans arrived in what was soon to be called Georgia, they found peach trees growing in both wilderness and Native American orchards. Native Americans thought them a native species, and they dried the fruit for their winter diets. Colonists found several varieties of peach used by the Native Americans, many more than those peaches found in Europe. These trees reproduce very easily, and Native Americans and European settlers had to weed their orchards regularly to maintain agricultural control over their fields. The settlers and Native Americans of Georgia would have been surprised to learn that peaches were actually brought from Europe and invaded North America a century before. The French explorers brought peaches with them to Florida in the 1500s, and these quickly sprouted trees and spread north, faster than the Europeans could follow. The Native Americans in Florida helped to spread the fruit northward to neighboring tribes, and peach tree populations exploded once the species started growing in the wilderness. By the time settlers reached Georgia, the peach had already established itself and made eastern North America its new home. The Europeans were probably comforted by this familiar taste of home.

—Melissa Halverson

Perspective." *Technology and Culture* 2 (1961): 368–380.

Shryock, Richard H. "British versus German Tradition in Colonial Agriculture." *Mississippi Valley Historical Review* 26 (1939): 39–54.

Surface, G. T. "Geographic Influence on the Economic History of Virginia." *Bulletin of the American Geographical Society* 39 (1907): 397–409.

Emergence of Horse Culture on America's Great Plains

In modern popular culture, the images of Native Americans and horses are so inextricably mixed that few people realize that the horse was a latecomer to the Plains culture. The impact of horses on Native American peoples was incredibly powerful and changed many things about their culture. Concepts such as property and measures of one's status and wealth were

THE HORSE COMES TO THE DAKOTA

The Dakota, or Sioux, became the archetypical horse culture on the American plains. Before horses came, the Dakota had been a sedentary people from the eastern woodlands. They lived in villages from Minnesota to the upper Missouri River. Their sustenance came from the maize, beans, and squash that they grew along with fruits, nuts, and wild plants that they gathered. Hunters on foot supplemented the agricultural diet with occasional bison meat. Women played an important role in the society since they owned the fields. Society changed when horses began to be obtained by trade and through raids with other tribes. In 1768 Jonathan Carver traveled through the region and noted that the Dakota had no horses. Within two years, however, they had enough horses to begin shifting to a nomadic lifestyle. About eight to ten horses were necessary for each family to move all their possessions, including tepees. Tribal groups followed the movements of the bison herds. By the 1830s the Dakota had displaced tribes such as the Blackfeet from the



Photograph by Edward Curtis of a Sioux war party, about 1900. (Library of Congress)

most desirable grazing grounds and forced them to the west. The Dakota were among the most accomplished equestrians in North America during the nineteenth century, a feat accomplished within only a few decades.

—Timothy J. Watts

transformed. Some authorities also believe that the role of women underwent a significant and negative change because of the horse. Although different tribes used horses to greater or lesser extents, the horse changed Native American culture forever. What is even more remarkable is that the change took place within a few decades.

The modern horse was brought to America by the Europeans, especially the Spanish. The most numerous were the barb horses, small and sturdy animals bred to survive in North Africa. The Spanish quickly found that these horses were well suited to the Southwest. By the mid-1600s, thousands of horses were being raised on Spanish rancheros. Native Americans were forbidden to own and ride horses, but even so, many learned how to ride and handle horses as a part of their work for Spanish overlords. When the Pueblo Rebellion of 1680 forced the Spanish out of New Mexico, thousands of horses were left behind. Many escaped, while others were taken by the Native Americans for their own uses. These horses quickly made their way northward into the grassy southern plains.

Tribes such as the Comanche adapted to the horse and helped spread them to other tribes. By the 1730s horses were being used by tribes on the Missouri River. Forty years later, tribes as far away as the Canadian prairies had horses.

Some tribes adapted to horses more than others. For all tribes on the Great Plains, however, the horse brought the end of an old way of life and a revolutionary new lifestyle. Tribes that had previously been nomadic had depended upon dogs and human carriers to move from place to place. Material goods were limited, as was the area over which they ranged. Women raised some crops and gathered other foods to supplement meat brought in by male hunters. Hunting was done on foot. Bison in particular were hunted by stealth or by large numbers of people driving them over cliffs or into confined spaces. Women and children as well as men were required to play an important role in these hunts.

The horse promoted a more mobile life. Using travois, horses could drag large loads, encouraging the accumulation of material goods. Groups of people were able to roam farther as well.

Tribes learned to follow the bison herds, which became the most important source of food and goods. When the bison gathered in large herds during the spring and summer, related groups gathered as well and staged massive hunts. During winter, the tribes broke into smaller groups that followed smaller herds of bison into sheltered valleys. Hunting was done from horseback and almost exclusively by men. A wider range of movement led to more conflicts with neighboring tribes for hunting grounds and grazing for horses. Warfare between Native Americans increased, as did more peaceful forms of contact. Trade increased, and most tribes on the plains adopted aspects of others' cultures, including religious practices such as the Sun Dance.

The dependence on horses changed Plains Native American society. Horses became the measure of a man's wealth and status. Horses were given as gifts or as a price for a bride. Obtaining horses from other tribes became a favored way of making war or of proving one's manhood. Successful warriors were those with many horses. Those who had to walk were looked down upon in more ways than one. As tribes adopted more nomadic lifestyles, those with more horses could move more material goods. They tended to accumulate more, trading their horses for such products as firearms, tobacco, liquor, tools, and other goods from white men.

Hunting changed radically with the horse as well. Nomadic tribes followed the rhythms of the bison, but hunting became a display of virility and sport as well as a necessary chore. A good horse allowed a hunter to ride next to a bison and kill it with an arrow or lance thrust. Women were relegated to a minor role since they did not kill the bison. Displays of prowess often led to hunters killing more bison than necessary.

Dependence on the horse had a significant ecological impact as well. As Native American horse herds increased in size, they came into direct competition with the bison herds. Both species depended on the grass that grew on the plains and had to locate it during winter in sheltered areas. Some authorities believe that the bison population was declining before 1840, when white hunters began to make inroads. Tribes also began to divide into smaller groups because large herds could not be supported in

one location. As a result, tribes on the plains tended to develop into smaller nomadic groups that depended more on raiding than previously.

—Timothy J. Watts

Bibliography

- Barrington, Linda. *The Other Side of the Frontier: Economic Explorations into Native American History*. Boulder, CO: Westview, 1999.
- Calloway, Colin G. *One Vast Winter Count: The Native American West before Lewis and Clark*. Lincoln: University of Nebraska Press, 2003.
- Carlson, Paul Howard. *The Plains Indians*. College Station: Texas A&M University Press, 1998.
- Ewers, John Canfield. *The Horse in Blackfoot Indian Culture: With Comparative Material from Other Western Tribes*. Washington, DC: Smithsonian Institution Press, 1980.
- Wilson, Gilbert Livingstone. *The Horse and the Dog in Hidatsa Culture*. New York: AMS Press, 1980.

The Chamorro and the Columbian Exchange in the Marianas

For two centuries (1668–1898), Spanish rule in the Mariana Islands (North Pacific Ocean) transformed the island society so thoroughly that by the nineteenth century its traditional Pacific culture was hardly discernible. The Marianas became the first island group in the Pacific to be colonized by Westerners and to lose most of its traditional culture. This pattern was imitated elsewhere in the Pacific as navigators charted the island groups of Micronesia, Polynesia, and Melanesia, all of which eventually became possessions of foreign governments half a world away. The peoples of Guam and the Northern Mariana Islands (Chamorros or Chamorus) are particularly striking examples of the Columbian Exchange in which indigenous peoples were overwhelmed by their European conquerors.

During his circumnavigation of the world in 1521, Ferdinand Magellan stopped briefly in the Mariana Islands, and in 1563 Admiral Miguel Lopez de Legaspi took possession of them in the name of the Spanish king. By 1600 the islands had become an important refreshment stop for Spanish trading ships plying the Pacific between Spanish-controlled Mexico and the Philippines. It was not until 1688, however, that a permanent

➤ GOVERNOR JOSÉ QUIROGA ON THE DEPOPULATION OF THE MARIANAS

The second Spanish governor of the Mariana Islands, José Quiroga, arrived in the islands in 1680 for the sole purpose of punishing the resisting Chamorro population and putting an end to the rebellions on Guam. He attacked and burned their houses. He pushed them into the mountains, where he captured and hanged them in the presence of their followers. In 1684 he forced the islanders of Saipan and Tinian into submission. For 16 years Quiroga served as governor or commander of the military forces. He retired on Guam and in 1720 complained in a letter to the Spanish Crown of the drastic reduction in population and the state of misery in which the Chamorros lived. Quiroga lay the blame squarely on the numerous epidemics brought by the annual trade ships and the forced labor imposed upon the islanders and not upon the casualties resulting from the Chamorro wars.

—Robert Craig

Spanish settlement was established. In that year, a group of Catholic missionaries headed by Father Diego Luis de Sanvitores (with the backing of a group of soldiers) landed on the island of Guam to bring Christianity to what they considered a backward and degenerate people. At first the islanders welcomed their guests warmly, but soon conflicts broke out between the two cultures. Father Sanvitores and several other missionaries were killed, and the soldiers took action. For the next 30 years, a Chamorro War ensued during which time revolts, sieges, the murder of missionaries, and the burning of churches were countered by the governor's armed forces. By 1700 the Spanish had subdued the population and had forcibly moved the Chamorros from the Northern Marianas to Guam so that the colony could be better controlled.

War and disease, however, had decimated the population. By 1710, only 3,539 Chamorros were living in the islands. Although some early visitors to the islands estimated the original population to have been about 100,000, contemporary scholars, using more informed

sources, place the population between 35,000 and 40,000. Even at 40,000, the loss of population between 1668 and 1710 is devastating, but to assume that the loss was a deliberate attempt by the Spanish to exterminate the Chamorros is not supported by a detailed study of the period. Indeed, wars contributed to a loss of lives—certainly more Chamorros than Spaniards—but the Spanish had come to convert and civilize, not to exterminate. Furthermore, the islanders provided food and labor not easily obtained in the middle of the Pacific. The culprit may have been Western diseases—measles, small pox, and scarlet fever—for which the islanders had developed no immunity. Untold hundreds if not thousands died each year after the Spanish galleons visited the islands.

By 1700 a forced peace had been established, but by now the Chamorros had lost pride in their traditional culture, and their whole world had been turned upside down. Once they lived in small tribal hamlets, organized in matrilineal (mother's ancestral) groups, where they performed subsistence farming and went deep-sea fishing in their fine outrigger canoes. Now, they lived in hamlets or small towns and tilled small plots of land on the outskirts. Land ownership had been completely changed, and the government claimed over half of it. Towns were laid out in Spanish fashion—a church and large plaza in the center—with narrow streets and thatched-roof houses. Their new tempo of life was determined by church bells that rang out the time for prayers and the time for work. Men were required to work two days in the fields growing corn (maize), melons, and root crops and to raise pigs and poultry for the support of the governor and the military. The women collected copra (coconut meat) to feed the pigs and wove mats and sails of pandanus to be sold in the Philippines. A full day's work might earn them two or three leaves of tobacco imported from the Philippines. At that rate, it took four to six months to purchase a simple pair of pants.

The Chamorros never seemed to recover from the Spanish impact. The colony languished in a tedious and monotonous way of life until 1898, when the United States seized Guam at

the beginning of the Spanish-American War and Germany purchased the Northern Mariana Islands. The Japanese seized all of them in 1941 and initiated a strict military regime. After World War II, the United Nations (UN) awarded the islands to the United States as a Trust Territory. Since then, Guam and the Northern Mariana Islands have both developed relatively free and democratic governments, but only remnants of their proud traditional way of life survive.

—Robert Craig

Bibliography

- Hezel, Francis X. "From Conversion to Conquest: The Early Spanish Mission in the Marianas." *Journal of Pacific History* 17(3) (1982): 115–137.
- Hezel, Francis X., and Marjorie C. Driver. "From Conquest to Colonisation: Spain in the Mariana Islands 1690–1740." *Journal of Pacific History* 23(2) (1988): 137–155.
- Oliver, Douglas L. *The Pacific Islands*. 3rd ed. Honolulu: University of Hawaii Press, 1989.
- Rogers, Robert F. *Destiny's Landfall: A History of Guam*. Honolulu: University of Hawaii Press, 1995.

■ Introduction: Demographic Changes

Between the fifteenth and eighteenth centuries, the world's population rose from between 350 and 400 million, to about 700 to 750 million. Some areas were subject to rapid growth (e.g., China and Europe), while others experienced spectacular declines, most notably the indigenous populations of the Americas. The overall increase was remarkable, considering that in the preceding centuries human population tended to double only every two thousand years. During this period there also were massive migrations on a global scale. Several million Europeans migrated to the Americas, Africa, and Asia during the European Age of Discovery and Expansion. In the seventeenth century, following the Mughal conquest of India, tens of thousands of Muslims migrated from Afghanistan, Iran, and central Asia to the Mughal court. In China, booming population as well political and economic problems led to massive internal migrations to and colonization of Mongolia, eastern Turkestan (present-day Xinjiang), Tibet, and southeastern Siberia.

Simultaneously there was an accelerated exchange of people, animals, plants, microbes, cultures, and ideas. Known today under the general rubric of "the Columbian Exchange," the process was stimulated by European desire for trade and the acquisition of territory. It began with Portuguese voyages along the coast of Africa in the

mid-fifteenth century and expanded with Christopher Columbus's encounter with the Americas in 1492 and the arrival of Vasco da Gama in India in 1498.

The exchange ensued from trade and European settlement in the Americas, coastal Africa, the Indian subcontinent, and Southeast Asia, African displacement to the Americas, and some Asian emigration to the Americas and Africa. While only a small number of original Americans left the Western Hemisphere, a wide variety of plants did. American crops like corn, beans, squash, potatoes, tomatoes, peanuts, chilies, cacao, manioc (cassava), sunflowers, and tobacco crossed the oceans, doubling the world's food supply within one hundred years. In return, such Old World staples as wheat and other grains, grapes, olives, okra, citrus fruits, sugar, palm oil, bananas, and rice traveled to the Americas, along with domesticated cattle, horses, sheep, goats, pigs, chickens, large dogs, cats, bees, and rats. With the exception of the turkey, the Americas contributed few animals to the rest of the world.

One of the most dramatic exchanges was disease. Beginning in the sixteenth century, smallpox, measles, influenza, yellow fever, malaria, cholera, and other Old World afflictions wreaked devastation on virgin soil (nonimmune) populations in the Americas and Oceania, producing

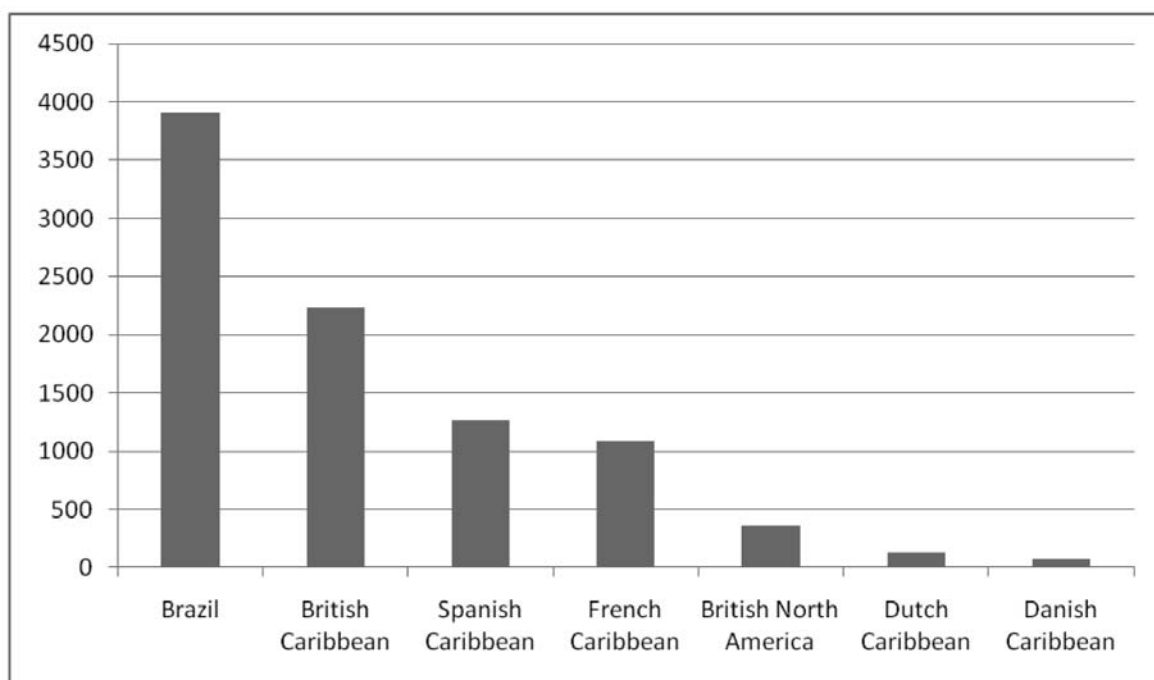
mortality rates of up to ninety percent in most regions. As far as researchers can tell, and this is still subject to debate, the only disease to reciprocate was a virulent strain of syphilis from the Americas, which cut a path across the world in the sixteenth and seventeenth centuries before becoming one of the best-known sexually transmitted diseases in history.

The impact of disease exchanges was profound. High human mortality facilitated the conquest and settlement of Europeans throughout the Americas and Oceania. And because European settlers required a steady supply of labor for their economic ventures, when indigenous sources became scarce millions of Africans were enslaved to replace them.

Recent studies reveal that between 1450 and 1850, about 12 million Africans were transported as slaves across the Atlantic. The Middle Passage, as this crossing became known, claimed the lives of some 10 to 20 percent on the slave ships, while about 10 to 11 million Africans eventually arrived in the New World. Yet, these numbers only convey a partial picture since they account for the Atlantic slave trade only. An estimated 3 million Africans were sold

and transported through trans-Saharan, Red Sea, and east African trade routes as well.

Africa suffered heavily as the slave trade depopulated many regions, fundamentally altering the economic and political makeup of much of the continent. The resulting intermixture of American, European, and African peoples transformed the ethnic makeup and cultures of the Americas dramatically. Ideas and religious beliefs also crossed the oceans, implanted in the Americas and coastal Africa and Asia by soldiers, traders, settlers, missionaries, and slaves. Today the peoples of the Americas and several areas of Africa and Oceania are considered predominantly Christian, though many ceremonies clearly exhibit indigenous or African characteristics. Christians are significant minorities in several regions of Asia. In the middle of the eighteenth century secular ideas generated in the European Enlightenment also made their way to the rest of the world, above all concepts of political liberties, separation of church and state, and nationalism. These had a profound impact on the entire world, stimulating the American Revolution of the 1770s and the subsequent Haitian and South American revolutions, and they



Estimated Slave Imports into the Americas, 1519–1866 (adapted from Paul Lovejoy, Transformations in Slavery: A History of Slavery in Africa [1983]). Numbers refer to millions of people; e.g., 4,500 = 4,500,000.

still influence international relations. In multiple ways the Columbian Exchange integrated the globe and set in motion forces that continue to challenge the world today.

—Robert W. Wilcox
and Alexander Mikaberidze

Bibliography

- Alchon, Suzanne Austin. *A Pest in the Land: New World Epidemics in a Global Perspective*. Albuquerque: University of New Mexico Press, 2003.
- Bauer, Arnold J. *Goods, Power, History: Latin America's Material Culture*. Cambridge: Cambridge University Press, 2001.
- Crosby, Alfred W., Jr. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood Press, 1972.
- Heywood, Linda M., ed. *Central Africans and Cultural Transformations in the Atlantic Diaspora*. New York: Cambridge University Press, 2001.
- Mendoza de Arce, Daniel. *Music in Ibero-America to 1850. A Historical Survey*. Lanham, MD: Scarecrow, 2001.
- Viola, Herman J., and Carolyn Margolis, eds. *Seeds of Change: A Quincentennial Commemoration*. Washington, DC: Smithsonian Institution Press, 1991.

West Africa's Tears—Population Movement and Loss

Over the past several decades, a consensus has emerged that around 12 million people were brought to the Americas from the African continent during the era of the Atlantic slave trade. This number, however, does not necessarily provide adequate insight into the demographic impact of the slave trade on West and Central Africa, the regions of the continent most heavily involved in the trade.

First, the estimate presented above only reflects those who arrived alive in the Americas and does not include those who died during the Middle Passage. Conservative estimates place this death toll at around 15 percent, or roughly 2 million people. Thus, some 14 million people left the continent bound for the Americas. Further, it is important to note that the estimates of this number do not reflect the people who were killed prior to being placed upon slave ships for transport. Estimates suggest that perhaps 10

percent of captives died while awaiting transport in coastal ports, where conditions were often crowded and disease could easily spread among captives. Thus, perhaps more than 1 million lives were lost even before the Middle Passage. Similarly, it is estimated that perhaps 25 percent more were lost during the continental passage to the coast. Here, captives were often forced to walk for weeks over difficult terrain while shackled and exposed to the elements. If this mortality rate is correct, then another 3 million or more lives were lost at this stage of the slave trade. Finally, given that violent warfare was the most common mode of capture and that people often fought to the death to protect themselves and their families from enslavement, estimates place the likely mortality rate from capture at around 40 percent. As such, it is likely that around another 6 million lives were lost at this stage of the trade. Altogether, it is possible that for every individual who was transported to the Americas, another was lost. This means that the total African population loss during the Atlantic slave trade was likely around 24 million. This number is all the more stark when placed in the context of an estimated total African population of around 70 million in 1800.

Notably, studies suggest that the African population did not necessarily decline during the era of the slave trade. Rather, it appears that the introduction of new crops from the Americas, such as maize and cassava, helped provide enough surplus food to allow population growth to offset the loss of millions to the slave trade. However, this also means that Africa did not benefit from the surge in population growth experienced by Europe and Asia during this same period. Historian Patrick Manning has estimated that the African population in 1900 was actually half what it might have been if there had been no Atlantic slave trade.

It is important to note that the slave trade also resulted in significant demographic shifts within West and Central Africa. In order to take refuge from the threat of enslavement, many populations moved into more defensible regions, including deep forests and highland regions. This, however, necessitated moving out of the more agriculturally and economically productive regions where people had long preferred to

live. This shows how the slave trade could have significant long-term effects on African economies. Unexpectedly, the slave trade also likely resulted in a shift in African populations away from the interior and toward concentrations near the coasts. This was in part because the demand of the Atlantic slave trade was focused on males, and female captives were often retained by slave-trading societies there. The addition of large numbers of women to these societies may have resulted not only in expanded populations but also in an increased practice of polygyny as well.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Lovejoy, Paul. *Transformation in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 1983.
- Manning, Patrick. *Slavery and African Life: Occidental, Oriental, and African Slave Trades*. Cambridge: Cambridge University Press, 1990.

Christian and Muslim Responses to Epidemics and Diseases in West Asia

From 1450 to 1770, Christian and Muslim societies of West Asia were troubled by a myriad of epidemic diseases. Among these diseases were leprosy, typhus, smallpox, and bubonic plague, and later diphtheria, measles, syphilis, and gonorrhea. However, social and communal responses to plague in particular are most significant because it spread fast and caused high mortality rates, and consequently had a more radical influence on West Asian societies' attitudes and practices. In the mid-fourteenth century, during the initial outbreak of plague known as the Black Death (1347–1352), at least a quarter of the population of West Asia was killed. Following the Black Death, a series of successive plague outbreaks continued to affect the region until the beginning of the modern era.

In the past, historians have tended to explain the attitudes of Christian and Muslim societies toward epidemic disease on the basis of assumed regional and religious differences. For example, they have stressed the important role

of quarantine practices in Christian Europe and the fatalistic attitudes of Muslim societies in this respect. Nowadays, however, scholarship addresses the problem by emphasizing commonalities in social behavior and communal responses. These ranged from frenzied flight, rioting, ostentatious religious behavior (communal processions and prayers), an intensification of apocalyptic fears, and perhaps most importantly, governmental efforts to establish regulations for the purpose of monitoring and fighting plague.

For the most part, Christians and Muslims alike saw flight as the first resort in case of a plague outbreak. One form of popular wisdom, sometimes reinforced by plague treatises, recommended that people flee early, go far, and return late. Since Christian teaching interpreted plague as an expression of divine wrath, Christian authorities denounced flight and preached the necessity of repentance, fortitude, and prayer. Similarly, although Muslim teaching also prohibited flight, there is some evidence that Muslims fled from the plague anyway. During and in the immediate aftermath of the Black Death, Muslim legal scholars wrote treatises that sought to legitimize the prohibition on flight by maintaining that plague was a blessing or mercy of God and a means of martyrdom for the believer. In contrast to the legal opinion of these earlier Muslim scholars, plague treatises written in the Ottoman empire from the fifteenth century onward recognized the notion of contagion and granted legitimacy to the need to exit a plague-infested city in search of clean air. Of course, flight was not an option for all. The urban lower classes, not owning summer residences in the countryside, were bound to stay in deserted cities where they suffered from severe hunger and often turned to crime for survival.

The difficulties governments encountered in their effort to reestablish law and order in the cities fostered many experimental measures for the purpose of monitoring, controlling, and fighting epidemic diseases. From the fifteenth century onward, West Asian governments adopted a series of solutions that included the implementation of quarantine regulations, the systematic recording of daily death tolls, the relocation of burial areas outside city walls, the enforced consistency of burial practices, sanitation improvements in

► LIVING WITH THE PLAGUE

Plague epidemics were particularly severe in the early modern Islamic world during the sixteenth and seventeenth centuries. There were several major outbreaks during the sixteenth century, the more important ones taking place in 1520–1522, 1534–1535, 1544–1545, 1553–1556, 1561, and 1565–1566. Yet the most terrible outbreak of the sixteenth century started in the 1570s and continued more or less until the end of the sixteenth century. Being particularly strong in Istanbul, Anatolia, the Balkans, Egypt, North Africa, and in Safavid and Mughal lands, this vast pandemic affected almost all parts of the Islamic world, as well as Europe. The seventeenth century also witnessed several major outbreaks: 1603, 1611–1613, 1620–1624, 1627, 1636–1637, 1647–1649,

1653–1656, 1659–1666, 1671–1680, 1685–1695, and from 1697 until the early years of the eighteenth century. The outbreaks of the eighteenth century were reported as mostly minor outbreaks; the major ones took place in 1713, 1719, 1728–1729, 1739–1743, 1759–1765, 1784–1786, and 1791–1792. Plague epidemics gradually disappeared during the course of the nineteenth century. The major outbreaks of the nineteenth century took place in 1812–1819 and 1835–1838. It is commonly held that the disappearance of plague epidemics in the nineteenth century in the Islamic world was the result of the adoption of quarantine measures and their implementation in the Ottoman empire from 1838 onward.

—Nükhet Varlık

urban areas, and the inspection of water sources. Becoming increasingly more structured and standardized over time, these early efforts may have provided a basis for the emergence of the public health systems of modern states.

During and immediately after the Black Death, medical theories rarely diverged from the precepts of both Greco-Roman and classical Islamic medical traditions. Both Christian and Muslim physicians stressed the importance of preserving health and restoring the balance of humors during plague outbreaks. Physicians continued to recommend eating a well-balanced diet, regular bleeding and purging, and moderation in physical exercise, sexual intercourse, sleep, and emotional dispositions. Concurrently, early modern plague literature offered a multitude of treatments and recipes for often ingenious and purportedly efficacious remedies. Allegedly preventive substances, such as theriacs, *terra sigillata*, and bezoar stone were in high demand in the markets of West Asia. Furthermore, people there also resorted to astrology, alchemy, and magic in a desperate search for protection and cure. Prayers, amulets, magical incantations and formulae, among others, acquired a rich significance in the plague literature and became profoundly integrated into the daily life of Christian and Muslim societies alike.

—Nükhet Varlık

Bibliography

- Biraben, Jean-Noël. *Les Hommes et la peste en France et dans les pays européens et méditerranéens*. Paris and La Haye, France: Mouton, 1975.
- Dols, Michael W. *The Black Death in the Middle East*. Princeton, NJ: Princeton University Press, 1977.
- McNeill, William H. *Plagues and Peoples*. Garden City, NY: Anchor Press, 1976.
- Panzac, Daniel. *La peste dans l'Empire Ottoman 1700–1850*. Leuven: Editions Peeters, 1985.
- Slack, Paul. "Introduction." In *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*, edited by Terence Ranger and Paul Slack. New York: Cambridge University Press, 1992.

Population Growth in Early Modern India

Between 1600 and 1800, the estimated population of India rose 33 percent, from 120 million to 160 million, an annual growth rate of .14 percent. The rise in India's population was due to several factors: improvements in medicine and technology; the introduction of new foodstuffs, such as maize, from the Americas; a period of relatively stable rule, first under the Mughals and later under the British and other European powers; and the dwindling effects of the Black Death.

Though European medicine was, by modern standards, primitive during this period, the

► THE BENGAL FAMINE OF 1769–1770

The Bengal Famine of 1769–1770, with the effects continuing until 1773, was one of the worst in Indian history; approximately one-third of the population (10 million people) of the province of Bengal died. The famine was caused initially by drought, but it emerged and was exacerbated by the policies of the British East India Company, a company that had begun to rule the region following the Battle of Plassey in 1757.

The main priority of the company was the raising of revenue; despite this, the company was unable to make its annual payment of £400,000 to the British government in 1767. These financial difficulties placed immense pressure on the company to maximize tax collections. However, efforts to increase revenue had a limited effect due to corruption among company employees. In 1769 Richard Becher, an adviser to the governor, warned that the increased demand on farmers was causing widespread poverty throughout the province, as the province's economy was already in poor shape when the drought hit.

As the famine began, the large death toll (and subsequent shortage of labor) meant that about

one-third of the farmland went out of production. The food supply shrank further, and many peasants were reduced to eating grass and tree leaves. The death toll worsened further as a smallpox epidemic broke out in the spring of 1770 in the provincial capital of Moorshedabad.

Through the use of military force, the company actually managed to increase the amount of revenue it collected during the famine, receiving more revenue in 1771 than before the famine in 1768. However, it took more than a generation for the population and economy to recover in the region.

—Eric Strahorn

Bibliography

- Bhatia, B. M. *Famines in India*. London: Asia Publishing House, 1967.
- Marshall, P. J. *The New Cambridge History of India*, Vol. 2, Part 2, *Bengal: The British Bridgehead*. Cambridge: Cambridge University Press, 1989.
- Randhawa, M. S. *A History of Agriculture in India*. 4 vols. New Delhi: Indian Council of Agricultural Research, 1980–1986.

introduction of European medicines and methods of treatment combined with indigenous Indian practices worked to increase the range of possible treatments for disease and injury. Technological advances that promoted population growth included maritime innovations that cut travel time and thus increased the availability of food over a wider area. With increased technology (and the resulting increased production of goods and extraction of natural resources) came increased trade. This in turn spurred population growth, as greater wealth meant greater access to food, medicine, and decent living accommodations. Maize and potatoes, introduced to India by the seventeenth century, proved to be readily adaptable to Indian soil, increasing the amount of calories and other nutrients that the average Indian consumed and thereby promoting a longer lifespan. Though warfare did periodically erupt throughout India during the early modern period, the massive cataclysmic invasions by outside peoples, so characteristic throughout

Eurasia during the ancient and medieval periods, largely ceased, partly due to the presence of a stable and relatively centralized government in India. Finally, the Black Death, which hit India with terrible effects in the fourteenth century, was largely gone from South Asia by the early modern period, and the Indian population, like its European and Chinese counterparts, began to undergo a natural recovery.

Nevertheless, this population increase, though significant, was considerably lower than similar population booms experienced in Europe and China during the same period. This discrepancy is primarily due to environmental factors. Much of India lies in a tropical or subtropical zone, where disease is more common (e.g., bacteria thrive in such wet conditions). In addition, fatal natural disasters, such as massive flooding caused by monsoons, are much more common in India than in Europe and China. Some historians also theorize that fertility declined in India during the early modern period due to cultural

factors (such as the lower frequency of widows remarrying), but this is unproven.

—Matthew DeFraga

Bibliography

Boomgaard, Peter. *Southeast Asia: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2007.
Richards, John F. *The Mughal Empire*. Cambridge: Cambridge University Press, 1995.

China's Population Boom

Since its formation as an empire in 221 BCE, China has always been the most populous country, but the growth in population during the period 1450–1770—during the Ming dynasty (1368–1644) and the first half of the Qing dynasty (1644–1911)—was more like an explosion. Up through 1770 China escaped periods of major upheaval, with the exception of the last 60 years of the Ming and the first 40 years of the Qing. This 100 years of peace helped the population rebound from the various wars and peasant rebellions that had consumed the Ming. But increased food production and bursts of commercialization leading to urbanization—both aided immensely by the Columbian Exchange—played the largest roles in the boom.

The Ming government and to an even greater extent the Qing government sponsored irrigation, canals, and flood-control projects at massive rates. The Qing alone essentially doubled the number of irrigation projects ever created throughout Chinese history. With the advent of new strains of rice from Vietnam, the far south of China was able to grow three crops a year and in most of the Yangzi River valley two crops a year. To allow for the planting and harvesting of more acreages of rice in the humid, hot, and productive south, peasants worked to terrace the steep hillsides of the region, creating myriad thin strips of farmland. To double the crop yields for rice, the Chinese turned to increased human care and better fertilization, which included soybean cake and nightsoil (human excrement). More peasants working to eliminate weeds from the rice fields meant a larger yield per acre, as did the increase in nightsoil available to the plants due to a larger family. But the lack of monsoon rains in most northern and western provinces meant that not all of China grew rice.

The Columbian Exchange provided crops to grow where traditional Chinese ones could not. Potatoes provided calories to those in the north to add to the traditional meals of wheat, sorghum, and millet, while in the south sweet potatoes enriched the rice diet. Both kinds of potatoes grew well in what the Chinese had previously considered unfit sandy soil. Both kinds of potatoes provided the peasants more calories per acre grown than did grain, something that Europeans quickly discovered as well. The Chinese planted maize (corn) where enough rain fell in areas otherwise too steep to terrace. Finally, peanuts came to provide protein, which, like soybeans, allowed peasants lacking the money to purchase or grow animals for slaughter to eat more healthily. All these crops, plus the new strains of rice and extra territory conquered by the Qing military, led to a doubling of acreages of food crops. More food meant larger families, which in the next generation created the need for more farms.

Population growth was also made possible by the cycle of urbanization and commercialization, although to a far lesser extent than food production. Silver mines in Europe funded extravagant purchases of silk and fine porcelain from China in the early Ming. With the advent of the Columbian

➤ PEASANT PROBLEMS WITH COMMERCIALIZATION

When silver flowed easily into China, the Ming government combined a large number of peasant taxes into the Single Whip taxation, a simple tax on land payable only in silver. The term for the tax was a pun on “combination in one item,” which sounded like “single whip” in Mandarin Chinese. Moving away from in-kind taxation made income for the central administration more predictable. It also made life difficult for peasants when severe weather destroyed crops or the price of grain fell so much that a high percentage of the harvest had to be sold for silver to pay taxes. People in some of the most fertile areas of the Yangzi River delta became so specialized at growing cash crops of indigo, cotton, or high-quality rice or working mainly on making silk or porcelain for sale that the people there had to import food! When these commodities dropped in value, peasants could starve.

—William Ashbaugh

Exchange, the silver became a flood, mainly due to its discovery in the Americas and the use of Manila in the Philippine Islands as a trading port to connect the Chinese and Spanish empires. Because the Chinese never coined silver, using it at first in weighed amounts to conduct trade, by the time of the late Ming and early Qing China was awash with Spanish pesos (also known as pieces of eight or Spanish dollars, later called the Mexican silver dollar). Silver was so easily obtained that the Chinese government combined a large number of peasant taxes into the Single Whip taxation, a simple tax on land payable only in silver. Merchants and the artisans who needed to satisfy their pleasures moved to ever larger cities (Greater Nanjing housed 2 million in its early Qing years, while Greater Beijing housed around 1 million) or helped build up trading cities along rivers or near the coast. Merchants sailed their ships from port to port or upriver to conduct trade within China, which was still far larger and more valuable than foreign trade.

Determining the growth rates for China's historic population boom requires educated guesses, as there were pressures on officials conducting the census to underreport and later to overreport. It appears likely that from a 1650s figure of approximately 100 million Chinese, the population grew in 1741 to 142 million and surged ahead to 243 million in 1778. By the nineteenth century, China's population finally overwhelmed the increased crop production, leading to large-scale peasant and religious uprisings by the hungry, weakening the Qing and allowing partial subjugation to the West.

—William Ashbaugh

Bibliography

- He Bingdi. *Studies on the Population of China, 1368–1853*. Cambridge, MA: Harvard University Press, 1959.
- Huang, Philip C. *The Peasant Family and Rural Development in the Yangzi Delta, 1350–1988*. Stanford, CA: Stanford University Press, 1990.
- Peterson, Willard J., ed. *The Cambridge History of China*, Vol. 9, *The Ch'ing Dynasty to 1800, Part 1*. New York: Cambridge University Press, 2002.
- Twitchett, Denis C., and Frederick W. Mote, eds. *The Cambridge History of China*, Vol. 8, *The Ming Dynasty, 1368–1644, Part 2*. New York: Cambridge University Press, 1998.

The Great Epidemics in China, 1586–1589 and 1639–1644

For centuries after the so-called Black Death swept across Eurasia and North Africa, China continued to be hit by widespread epidemics. Among them, two were especially grave: one took place in the 1580s and climaxed between 1586 and 1588, and the other lasted from 1640 to 1644. Both left behind trails of social devastation, particularly the second one that facilitated a violent dynastic shift.

Frequent and widespread epidemics were a phenomenon in the entire premodern world. Meteorologists suggest that the period from about 1300 to circa 1850 constituted the Little Ice Age, with the average temperature dropping by several degrees Celsius, which caused a shortening of the growing season and crop failures. Concurrently the changing climate also had a tremendous impact on nomadic societies in northern Eurasia. These nomads depended on livestock for their livelihood; as their livestock went hungry or died due to the shrinking grazing areas, many of the nomads were driven out of their home bases in search for alternative food supplies. As they reached out to agricultural societies in the south, contacts between different peoples in these two different societies became more frequent and intense. Such intensified contacts led to growing exchanges of commodities, ideas, and genes, but the most significant exchange was probably of germs and viruses. Thus, many epidemics and pandemics broke out across all of Eurasia. Living closely to livestock and on the steppe, the nomads developed at least partial immunities to many diseases originating in and common to their environment or at least developed coping devices by which they could avoid contamination, but agriculturalists to the south lacked both.

Available sources suggest that as was true of the great fourteenth-century pandemic, the Black Death, the epidemics that hit China during the 1580s and 1640s were both caused by the bacterium *Yersinia pestis*, the germ of bubonic plague. The bubonic organism is often carried by rats, mice, and other burrowing rodents and is common on the steppe; it is highly contagious and deadly to humans when no proper medical

care is available. In addition to their cultural taboos and possible partial immunity that protected them somewhat from the ravages of the plague, the nomads also enjoyed another advantage: their steppe land was sparsely populated, and the chance of an epidemic was greatly reduced. But the story for the Chinese was entirely different. Most cities and towns in northern China were crowded, and their hygiene was never as good as it should have been. As a result, the bacterium found a haven in which to thrive. It was not just a coincidence that the Chinese epidemic of the 1580s first occurred in Shanxi Province, and the epidemic of the 1640s hit Hebei Province. Both were located right next to Mongolia.

According to records by contemporaries, including Jesuit missionaries from Europe who witnessed these two epidemics, the victim usually developed the syndrome of a swollen neck, a classic bubonic plague symptom. Unaware of the cause, the Chinese then referred to the disease as “huge-neck plague.” It was indeed a killer. In 1582 when the huge-neck plague broke out in Shanxi, nine of every ten households in the city of Datong, the capital of the province and probably northern China’s most populated city, caught it, and 20 percent of these patients died. Between 1586 and 1589 the huge-neck plague spread to Beijing, the capital of the ruling Ming dynasty, and from there it further spread to the southern provinces all the way down to the Yangzi River basin. The plague was so contagious that an entire family might be wiped out. Once a person caught the plague, therefore, even the closest family often did not dare to attend the patient in fear of catching it as well. In some areas up to 40 percent of the population perished. The epidemic of the 1580s proved to be a turning point for the fortune of the Ming, for it accelerated the deterioration of the already rotten ruling dynasty.

But it was the epidemic of the 1640s that arguably had much more dramatic political and social consequences. The epidemic first started in the south of Hebei near Beijing, also a densely populated region. By late 1643 it spread to Beijing, a city with a population of probably close to 1 million. At that time the Ming dynasty was battling two enemies, rebels from the western

➤ HOW DO WE KNOW MING CHINA’S POPULATION?

It is difficult to accurately calculate the population size and fluctuations of a premodern society such as Ming China. So far as China is concerned, most historians first look at governmental household registrations. The Ming government kept a reasonably complete record, known as *huang ce* (“yellow volumes”) for tax purposes. But the *huang ce* reveals only part of the whole picture, for many factors might have affected these recorded numbers. Well-connected individuals might underreport their family members to evade higher taxes, and at times female members were left out. Beyond that, throughout the Ming period increasing global connections and changing social and environmental conditions had an impact on the population that was not always accurately reflected in official census records. The introduction of new crops from the Americas, such as sweet potatoes and peanuts, led to a steep growth of the population and set in motion widespread migrations, both internally and externally. Meanwhile, warfare and natural disasters decimated residents in affected areas. An epidemic swept across the Grand Canal area in 1641 and killed an estimated 90 percent of the residents in Zhejiang, for example. Those who survived often turned into “drifting people,” uprooted from the land. Conceivably, the Ming government lost count during such constant and rapid demographic modifications. As a result, historians must dig deeply into additional sources, such as reports from local officials, records concerning the effects of epidemics, local gazetteers, and even private records to piece together a more accurate picture about Ming China’s population at any particular time.

—Yi Li

provinces led by the Li Zicheng and the nomadic Manchus from the northeast. Even so, the situation did not initially seem at all that desperate for the Ming. Its troops had just decimated the rebels in the Ningwu Pass battle; the Manchu emperor, Hong Taiji, had just died; and the Ming emperor Chongzhen (r. 1628–1644), although by no means a gifted leader, was nonetheless diligent at his job. But in early 1644 all had changed. First, the rebels approached Beijing and seized it easily, and the 276-year-old Ming dynasty thus

died when its last emperor, Chongzhen, hanged himself. Then the victorious rebels launched an expedition on Wu Sangui, the Ming general who refused to surrender. In the Shanhai Pass battle the offense of the rebels suddenly collapsed, despite their superiority in numbers. All of these dazzling shifts of power were followed by the conquest of all of China by the nomadic Manchus, who had a much smaller force. Tipping the balance among all these contesting forces was, among many other things, the bubonic plague, which climaxed in early 1644 in Beijing, paralyzed the defense of the capital, and sent the Ming to a sudden death. Then it caught the rebels, who subsequently entered Beijing and delivered the Ming an equally deadly blow. All obstacles were thus cleared for the Manchus to enter China and claim the Mandate of Heaven by establishing the Qing (Pure) dynasty (1644–1911).

—Yi Li

Bibliography

- Hays, J. N. *Epidemics and Pandemics: Their Impacts on Human History*. Santa Barbara, CA: ABC-CLIO, 2005.
- Ho, Ping-ti. *Studies on the Population of China, 1368–1911*. Cambridge, MA: Harvard University Press, 1961.
- Ming Shi [History of Ming]*. Beijing: Zhonghua Shuju, 1975.
- Zhang, Lifan. "Debate on the Cause of Plague in North China under the Ming Dynasty." *Journal of Xinzhou Teacher's College* 6 (2005): 20–25.

Population Fluctuations in Europe

From the fifteenth to the eighteenth centuries, Europe's population experienced remarkable growth despite major fluctuations. An improved diet, the result of more land put into cultivation and the influx of New World foods, and more efficient agricultural techniques increased the life expectancies of many Europeans. Migration to urban areas in the wake of commercialization and the growing wealth and prosperity of towns also contributed to a long-term rise in population. However, other forces complicated this pattern of long-term demographic growth.

Periodic poor harvests punctuated a counter-trend in sporadic yet widespread famines. Large-scale warfare and outbreaks of disease also led to considerable declines. Moreover, new lands brought into cultivation and the extraction of natural resources displaced forests, marshlands, and wildlife, compromising fertility and biodiversity throughout Europe.

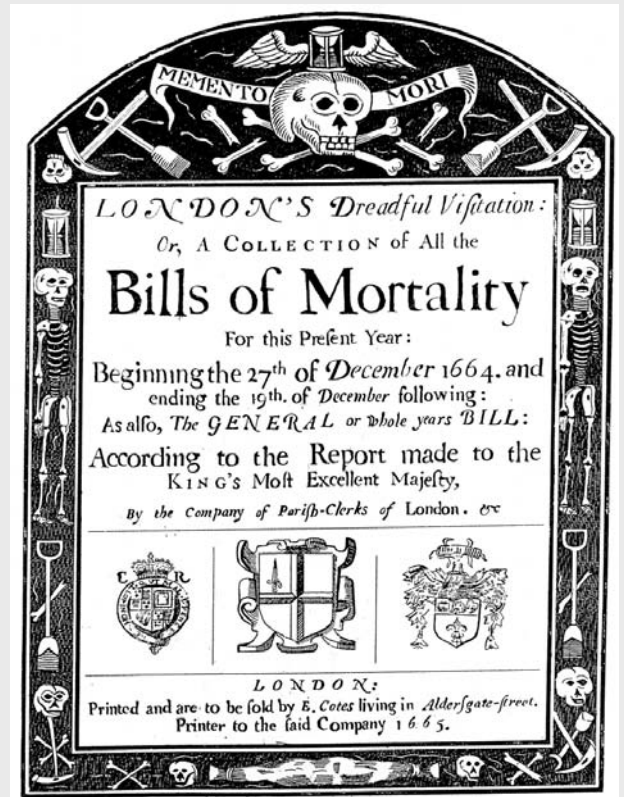
Long-term demographic growth from the fifteenth century to the eighteenth century was characterized by steady expansion since the ebbing of the Black Death (ca. 1400). By 1400 after a steady but long recovery over several decades, population had recovered to the point of preplague demographic estimates (between 60 million and 65 million people). Europe's population grew from approximately 84 million in 1500 to 146 million in 1750. This growth lasted well until the end of the sixteenth century, when the disastrous seventeenth century, with its Thirty Years' War (1618–1648), a new plague cycle, and a series of famines, led to the leveling off of the population. In the century that followed, Europe's population again experienced widespread growth due to the withering of the plague, migration to the Americas (which lessened the stress on domestic population), and increased food supplies as the result of more efficient agricultural methods.

Disease continued to disrupt the general trend of population increase, however. Outbreaks of the plague occurred from time to time, typically in isolated regions, and eruptions of typhus, syphilis, smallpox, and malaria further checked population growth, disproving conventional wisdom that these epidemics struck congested urban areas with greater severity and frequency. Poor harvests and flawed food-distribution networks sporadically triggered local and regional famines. Early modern warfare, with technologies and tactics that made conflict both more widespread and more deadly, also contributed to the decline and stagnation in population, especially during the leveling-off period of the early to mid-seventeenth century, with its Thirty Years' War and English Civil War (1642–1649). However, evidence shows population growth at a steady pace despite the obstacles mentioned, doubling the European population from 1500 to 1800.

THE GREAT PLAGUE OF LONDON, 1664–1666

The Great Plague was one of the more catastrophic outbreaks of the bubonic plague that swept through London and much of England in the early seventeenth century. The notorious Black Death, as it was known, was a recurrent epidemic throughout much of Europe since its first appearance in 1348, which decimated an estimated one-third of Europe's population. The Great Plague of London led to the deaths of approximately 100,000 people from 1664 to 1666. While the epidemic affected to a great extent the less prosperous outer areas of the capital, it eventually spread to the more affluent sections of central London. The Stuart monarch Charles II was forced to leave London for Oxford along with his court. Cases continued to occur through many parts of England for several years afterward, but this was the last major outbreak that occurred. The Great Plague of London is an example of the continuing threat of disease in the midst of steady population growth in Europe.

—Abraham O. Mendoza



Title page of a bill of mortality for London from the Great Plague of London, based upon the statistical analysis of John Graunt. (Jupiterimages)

The growth in the European population is also attributable to the increased settlement and cultivation of land. Since the early Middle Ages swaths of uninhabited and sparsely inhabited lands had been brought into production. During the fifteenth century more land was brought under European possession, either through warfare (the *reconquista* in Spain and German expansion in the Baltic and eastern Europe) or through reclamation (Dutch dam and dike systems, German and English draining of marshes), and deforestation. While much of this land had been in European possession for centuries, this period was one of increasing development of formerly virgin resources. This added productivity and led to an increased food supply, which in turn benefited the growing population of Europe through adequate nourishment. However,

these trends did take a tremendous ecological toll on the landscape of Europe, destroying forests and marshes, causing soil erosion through inadequate agricultural practices, and limiting the remaining range for European wildlife.

Early modern Europe underwent growing urbanization, fueled by economic prosperity in the towns and cities and increasingly dire conditions in the countryside. The expansive growth of towns and cities as major population centers, due to massive commercial expansion, also required land and the extraction of resources, thus further contributing to changes in the European landscape. Trade with the American and East Indian colonies fueled the further economic expansion of urban mercantile centers and ports and attracted people from the countryside into towns and cities. Push factors such as the

Enclosure Acts in England, which cut off communal lands from peasant use, freed former rural residents to migrate into towns and cities.

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Bibliography

- Bacci, Massimo Livi. *The Population of Europe*. Translated by Cynthia De Nardi and Carl Ipsen. Malden, MA: Blackwell, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. New York: Norton, 1979.
- Elliott, J. H. *Europe Divided: 1559–1598*. 2nd ed. Malden, MA: Blackwell, 2000.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. Malden, MA: Blackwell, 2001.

European Emigration— World and the Americas

Following the initial voyages of discovery, European countries developed distinct patterns of immigration to the Americas and the rest of the world. From the sixteenth to the eighteenth centuries, Spain, Portugal, the Netherlands, the British Isles (England, Scotland, and Ireland), and France developed distinct immigration patterns, shaped by their colonial possessions, their global economic investments, and domestic factors.

Imperial Spain (the kingdoms of Castile and Aragon) was able to send vast amounts of colonists into the Americas during their three centuries of colonial rule (1500–1800). An estimated 750,000 Spaniards immigrated during this period to the Americas and created a stable Spanish society that sustained itself through continued emigration from Spain and intermarriage between Spanish men and indigenous American women. The Spanish encountered native societies whose lower social orders could be utilized as a workforce to their benefit. They also settled in highly developed highland regions (Mexico, Peru, Argentina) free from health hazards for Europeans, in contrast with those found in southern tropic regions. Most of the Spanish migrants were skilled professional men seeking better opportunities abroad at a time when Spanish domestic economic stability was uncertain. Other migrants pursued better social and economic advancement in Spanish America that would not have been available in the Spanish realms.

Portugal had colonial possessions in the Americas (specifically Brazil) and along the coasts of Africa, South Asia, and Oceania. Similar to the Spanish dominions, Portugal's empire relied on trade and commerce and thus necessitated settlement. Portugal's commercial concerns in Brazil, Africa, and Asia necessitated fortified positions to maintain Portuguese control over trade in slaves and spices, which in turn created a demand for soldiers, merchants, and sailors. From 1500 to 1800, an estimated 3 million Portuguese settlers left Portugal for the empire. In contrast with the Spanish, Portuguese settlers had a shorter life span, given their preference for the disease-ridden tropics. They also did not intermarry at the same rate as the Spanish, failing to create a creole (mixed ancestry) society and having to rely solely on immigration to replenish their numbers throughout the Portuguese empire.

During the course of the seventeenth century, the Dutch expelled the Portuguese from some of their colonies in South Asia and Oceania and thereby established their own settlements. However, the native Dutch did not immigrate to their colonial possession on the same scale as that of the Spanish and the Portuguese; rather, the Netherlands served as a conduit for foreign settlement for other European peoples (especially Germans and Scandinavians). The commercial hub of Amsterdam attracted droves of people from other parts of Europe, and in the midst of Dutch imperial expansion abroad, many of these people found themselves settling as merchants and soldiers in the service of the United Provinces (the Netherlands). As in the Portuguese case, high mortality rates among Dutch settlers made it necessary to replenish colonial populations with further immigration from the Netherlands, leading the Dutch East India Company to bring approximately 1 million people overseas from the seventeenth to the nineteenth centuries. Dutch settlements in the Americas, particularly along the Caribbean and in North America (New Amsterdam), also suffered from hard-pressed populations unable to replenish themselves from natural birth rates. However, many of these settlements fell to the English in the seventeenth century.

Emigration from the British Isles (England, Scotland, and Ireland) focused primarily on

settlement in the New World. English settlement of the West Indies and North America was similar to Portuguese and Dutch strategies (settlement was characterized by little regard for individual human life). When settlers died off from illness, warfare, or hardships, more were sent. English colonization of the New World occurred in tandem with the colonization of Ireland, which triggered an outflow of emigration from the English Celtic dominions of Ireland and Scotland. The task of populating an expanding British America depended to a great degree on the Scots and the Irish. However, English settlement of British America also relied on domestic population growth, with immigration to the New World seen as a release valve, particularly through indentured servitude and convict exile. Emigration for many was seen as a way to advance socially and economically in the New World, when issues of inheritance and dwindling land made it impossible to do so at home in England. However, gradual economic improvement domestically in the late seventeenth century led to a decrease in English immigration and a steady rise in Scottish and Irish settlement in British America.

French immigration abroad was limited only to those who had royal permission, which prevented a substantial number of French Protestants (Huguenots) from doing so. Economic prosperity in France also deterred people, except in small numbers, from going to the desolate and inhospitable fur trading outposts and colonies in Louisiana, Canada, and the Caribbean. A small group of planters and plantation owners embarked on overseas settlement, but not to the same degree as that of the Spanish, Portuguese, Dutch, and British. However, similar to those European nations, when their efforts to utilize European labor failed them, French colonizers found other sources of labor through the purchase of African slaves.

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Bibliography

- Altman, Ida, and James Horn, eds. *"To Make America": European Emigration in the Early Modern Period*. Berkeley: University of California Press, 1991.
- Bailyn, Bernard. *The Peopling of British North America: An Introduction*. New York: Knopf, 1986.

ENGLISH COLONIAL MODEL

English colonization of Ireland occurred simultaneously with that of British North America in the mid-seventeenth century. The Stuart dynasty had encouraged the formation of plantations in Ireland, particularly in Ulster, to Anglicize the recently subjugated Irish populace. Throughout the seventeenth century, an estimated 180,000 English migrants went to Ireland, in contrast with 116,000 to the Chesapeake. The term "plantation" initially referred to the settlement of people into a region. Eventually, the term was applied specifically to large agricultural estates.

As settlement into British America continued, many planters who settled in the West Indies and southern British America found the land ideal for planting particular cash crops such as tobacco, which created a handsome profit for the British Isles. In adapting the plantation model from Ireland to their new environment, these planters began to seek a similar subjugated labor pool, first with European indentured servants and later with imported African slaves.

—Abraham O. Mendoza

Boyd-Bowman, Peter. *Patterns of Spanish Emigration to the New World (1493–1580)*. Buffalo, NY: Council on International Studies SUNY at Buffalo, 1973.

Canny, Nicholas, ed. *Europeans on the Move: Studies on European Migration, 1500–1800*. New York: Clarendon, 1994.

"The Indians . . . Are Its Riches" — Depopulation of the Caribbean and Mesoamerica after 1492

The Spanish who first came to the Americas were looking for gold, silver, and other material wealth as well as trading opportunities. When they realized they had not reached Asia, the Spanish decided to make the best of the situation. Although some regions had precious metals, the European conquerors realized that other products offered opportunities for wealth. Agricultural products, such as tobacco and sugar, became important exports. However, the mining of gold and the growing and processing of sugar

THE TAINO SUFFER SMALLPOX

The Taino were the first Native Americans to come into contact with Europeans. As a result, they were the first to suffer from the diseases brought by the newcomers. In 1492 Columbus described the Taino as handsome and well-built people who were friendly and offered him assistance. Historians have estimated the number of Taino in the Caribbean in 1492 as half a million people. Spanish settlers forced the Taino to work as slaves, causing food shortages and malnutrition. In addition, the Spanish brought diseases that weakened the Taino, who had no resistance to European diseases. Smallpox first appeared on the island of Hispaniola (modern Haiti and the Dominican Republic) in 1518 or 1519. Most Europeans had been exposed as children, giving them an immunity to the disease that the indigenous did not have.

However, the Taino population was already in decline even before the smallpox epidemic. The disease merely accelerated the rate of decimation. In 1508 the Taino population was estimated at around 60,000 people. The 1510 census showed 33,523 Taino, and by 1514 only 26,000 Taino were left. When the smallpox first hit the Taino, their population had already dwindled to 18,000. By 1542, Spanish authorities estimated that only 2,000 Taino remained. After that time, they became virtually extinct as a distinct tribe.

—*Timothy J. Watts*

took much labor. This labor was initially provided by the Indians who lived in the Americas.

When Columbus made landfall in the Caribbean, he found a large population of indigenous people prepared to welcome the Spanish. The Taino, also known as the Arawak, had relatively small amounts of gold ornaments. An original group of 30 settlers was left behind after Columbus's initial voyage, and his return in 1493 found the settlement destroyed, as the Spanish had attempted to enslave the Taino, causing the Taino to attack the Spanish settlement. Subsequent voyages brought around 1,500 settlers, all male, to the island of Hispaniola (present-day Haiti and the Dominican Republic). Spanish incursions into the interior of the island discovered gold mines, and the natives were quickly put to

work. In addition, the natives were put to work in an agricultural capacity, with the expectation that the product of their labor would feed the colony. Unfortunately, the Taino had previously worked a subsistence lifestyle, which meant that they had only worked hard enough to feed themselves. The added work proved too much of a hardship for some and resulted in death. For the rest many refused to work, which meant that often there was not enough food to feed everyone. Pre-Columbian estimates of the Caribbean population range from 50,000 to several million. Whatever the original number, we do know that by 1542 there were only 2,000 Taino remaining, and by 1570 that number had shrunk to only 200. Spanish observers like Bartolome de las Casas, writing in the 1520s, blamed Spanish mistreatment for the decline of the indigenous population.

While work certainly had a major effect on the Caribbean population, disease also played a large factor. Although some historians speculate that the voyage that Columbus took in 1493 brought swine flu, the first major epidemic did not appear until 1518, when smallpox hit the Caribbean. The introduction of this virulent disease proved to be devastating to all of the Americas, as waves of the disease continued to spread over the next few centuries. After the initial outbreak in Hispaniola, the disease spread to Mexico and from there traveled down to Mesoamerica by the mid-1520s. This was not the first time that smallpox had appeared in the area, as it had accompanied the different traders who had passed by the area. Smallpox was not the only disease to hit Central America, although it was certainly the deadliest. A measles outbreak appeared in the early 1530s, followed by a pestilence in the 1540s that caused bleeding in the nose and eyes. One Spanish settler in Guatemala wrote that this particular pestilence killed three out of four natives there. Thirty years later another disease hit Central America, although historians are unclear as to the exact nature of the disease (whether it was typhus or the plague). It killed tens of thousands of the natives, possibly more. By 1570 the population that had once been between 2.25 million and 5 million had fallen to only 500,000. Five more pandemics hit the area before 1750, reducing the population still further.

NATIVE AMERICAN NATIONS PRIOR TO COLONIZATION



Spanish forced labor practices also contributed to the Native American population decline. In the first instance, Spanish conquistadors were rewarded with *encomiendas*, or grants of authority over certain populations of Indians. Under the terms of the *encomiendas*, the Spanish nobles received tribute and taxes from the Indians under their control. The Spanish were also able to force the Indians to work for them on projects such as building churches and palaces or working in their fields. In return the Spanish noble was expected to provide a clergyman to train the Native Americans in Christianity and to destroy the traces of native religions. In Mexico, Fernando Cortes limited the amount of work required from each Indian and ordered his conquistadors not to demand tribute in gold.

The use of *encomiendas* in the Caribbean proved to be a disaster for the Native Americans. Thousands were forced into slavery and mistreated. Those who resisted were executed, while others who broke the rules were tortured or maimed. Both women and men were forced to work in the fields and mines under very unhealthy conditions. The mortality rate was very high. The disruption to the Indian way of life helped to decrease the birthrate as well. Depopulation on the Caribbean islands followed, with a decline in the pool of workers. A similar pattern followed in Mexico despite the Crown's effort to avoid depopulation.

The spread of European diseases, however, may have been more important than forced labor in causing a population decline. Because Native Americans had no resistance to viruses carried by the Spanish, they suffered massive epidemics. In 1521 Cortes was able to capture Tenochtitlan partially because of a smallpox epidemic among the Aztec defenders. Epidemics of smallpox, measles, and other diseases had already devastated the Caribbean populations. Many of the diseases spread faster than the Spanish conquest, thanks to contact between different Native American peoples.

Estimates of the population of the Americas in 1492 vary greatly and range from 8.4 million to 112.5 million. Observations by Europeans are seldom accurate because they often arrived in a region after many Native Americans had already died.

—Timothy J. Watts

Bibliography

- Cook, Noble David. *Born to Die: Disease and New World Conquest, 1492–1650*. Cambridge: Cambridge University Press, 1998.
- Cook, Sherburne F., and Woodrow Borah. *Essays in Population History: Mexico and the Caribbean*, Vol. 1. Berkeley: University of California Press, 1971.
- Mann, Charles C. *1491: New Revelations of the Americas before Columbus*. New York: Knopf, 2006.

Mississippian Mystery—Where Did the Moundbuilders Go?

The Mississippian Moundbuilders were the most advanced of North America's Native American societies. Between 600 and 1500 CE, different groups of Moundbuilders in the Mississippi River and Ohio River valleys built a large number of mounds. These structures apparently served ceremonial and political purposes as well as possibly serving as defensive centers. By the time French explorers came down the Mississippi in the 1600s, the Moundbuilders had disappeared. The reasons for their departure remain uncertain.

The Moundbuilders' society was based upon agriculture supplemented by hunting and gathering. In the early years, they domesticated plants native to eastern North America. Goosefoot, sunflower, and knotweed provided food and helped the peoples evolve into sedentary farmers. By 900, maize, beans, and squash had made their way from Mesoamerica into central and southeastern North America. The increased yields from these plants encouraged a population explosion and the creation of surplus food. Food surpluses allowed some individuals to devote their time to crafts and the creation of useful tools and exotic goods. Because these artisans no longer grew their own food, they depended on others for support. This situation helped lead to the creation of a hereditary chiefdom among the Moundbuilders. The chiefs were responsible for overseeing the distribution of food to all and the safe central storage of surplus supplies. The growing population led to the creation of cities that functioned as religious and political centers. The largest was Cahokia, with a population of about 15,000.

The growing power of chiefs apparently led to the creation of larger and more elaborate mounds. These consisted of packed earth and sand in a variety of shapes and sizes. The largest ones were topped with ceremonial buildings, either temples or homes for rulers. Most mounds were located around open plazas where the population could gather for religious or political ceremonies. These ceremonies included religious feasts, installations of new rulers, and funeral rites for important persons. Some mounds were used for the internment of important individuals. By 1200, rulers were buried with exotic goods, including copper tools and ornaments, carved stone and bone statues, pipes, and sea shells from as far away as the Gulf of Mexico.

Evidence indicates that Moundbuilder chiefs exerted great power over the individual groups or bands. They played important religious roles, controlled extensive trade networks, and decided upon alliances or war with neighboring groups. Although the Moundbuilders did not maintain long-distance trade routes, as did the Aztec and Maya, they did obtain status goods from great distances through hand-to-hand trade by neighboring bands. Their rulers used these exotic goods to ensure their favored position in Moundbuilder society. By remaining the exclusive consumer of exotic goods, the members of the elite made clear their favored status.

Archaeological evidence indicates that Moundbuilder culture began to decline by 1400. Fewer mounds were created, and the existing ones were less well maintained. The earlier practice of adding to existing mounds was discontinued. The populations of urban centers, such as Cahokia, declined. The small villages and hamlets that surrounded the cities also declined or disappeared. The reasons for this are unclear, but a number of theories have been suggested.

One possible reason is an increase in warfare after 1250. Many of the skeletons buried during this time period had embedded arrowheads or other marks of combat. Evidence indicates that new groups of hunter-gatherers were moving into the area from the north. These groups came into conflict with the sedentary Moundbuilders. Constant warfare may have driven Moundbuilders to migrate to new regions. Another source of warfare might have been conflict between different



Painting depicting the Cahokia Mounds settlement, built by the Moundbuilders in present-day Illinois, around 1150–1200 CE. (Cahokia Mounds State Historic Site, painting by William R. Iseminger)

groups of Moundbuilders themselves. The success of crops such as maize and beans in increasing the populations led to overpopulation. To support the additional people, Moundbuilders found it necessary to conquer new farmland, which they would have had to obtain from their neighbors. Or, internal disorder might have caused the decline. The gulf between rulers and ordinary people and the demands for labor and goods for the elites might have provoked uprisings.

Other theories about the decline of the Moundbuilders include ecological disasters. Deforestation and overuse of farmland may have led to erosion and declining harvests. With less food available, the population would have faced starvation or had to move to new regions.

One theory that seems to have been discredited is that disease might have caused the end of the Moundbuilders. Because Native Americans had little resistance to European diseases, many peoples were virtually wiped out by smallpox, measles, and other common diseases. Because archaeological evidence indicates that the Moundbuilders were in decline before 1492, disease apparently was not the primary reason for their disappearance. It may, however, have accelerated the process. A Spanish army led by Hernando De Soto marched through the Mississippi Valley between 1539 and 1543 and may well have spread diseases among the population.

Although Moundbuilder culture collapsed, many of the people probably migrated to other areas. Some archaeologists believe that Indian tribes such as the Osage and the Omaha may be descendants of the Moundbuilders.

—*Timothy J. Watts*

Bibliography

- Abrams, Elliot Marc, and AnnCorinne Freter. *The Emergence of the Moundbuilders: The Archaeology of Tribal Societies in Southeastern Ohio*. Athens: Ohio University Press, 2005.
- Gallagher, Ida Jane, and Warren W. Dexter. *Contact with Ancient America*. Mount Pleasant, SC: Sovereign Terrace Books, 2004.
- Milner, George R. *The Moundbuilders: Ancient Peoples of Eastern North America*. London: Thames and Hudson, 2004.

Virgin Soil Epidemics in North America

When Europeans arrived in North America, they soon observed Native American populations getting sick and dying in great numbers. As time went on, horrendous epidemics and steep population declines occurred among Native Americans. Epidemics moved across North America beginning at first contact on the east coast and ending in the west in the nineteenth century. Apparently the illnesses began when Europeans first arrived, traveling across the land with casual contact between the existing societies. European settlers and explorers often came upon decimated or destroyed villages. In New England, for instance, Puritans found a great deal of cleared and previously settled land abandoned when they arrived.

The illnesses that the Native Americans were suffering from came from Europe and were called virgin soil epidemics because the populations at risk had no previous contact with these pathogens and therefore had not developed sufficient immunity to withstand the attacks. The precise diseases that seem to be new to Native America include bubonic plague, smallpox, measles, and influenza. Before European contact, Native Americans had suffered from tuberculosis, pneumonia, and possibly herpes, chicken pox, syphilis, and other viruses.

Scholars debate the significance of these epidemics and the resulting population losses. What caused such high mortality rates—as much as 90 percent in some communities, much higher than that of Europeans in the Black Death epidemics (50 percent) or among Civil War soldiers who contracted smallpox (38 percent)? How important was disease to the conquest of the New World? Scholarly debate centers on two hypotheses, one in which historians do not see disease playing a significant role in early postcontact period and the other suggesting that disease was quite significant. If the first hypothesis is correct, then the Native American cultures that Europeans first met probably accurately reflected precontact cultures; if the second hypothesis is correct, then precontact cultures were more complex.

While not all scholars agree on the extent of population reduction caused by these epidemics or even the size of the original population, multiple factors seem to be responsible for Native American susceptibility to European pathogens. The physical, economic, social, and political environments as well as poverty, social stress, weather, and hunger all contributed to the overwhelming mortality in Indian communities. One of the strongest factors was the general lack of nourishment (malnutrition), especially when people became too ill to plant corn or go hunting. Archaeologists have shown that many groups were terribly malnourished even before Europeans arrived. Health conditions had worsened in the years just prior to contact. Perhaps climate change was a factor; cold rainy weather confined people to their lodges, where they came in close contact with the ill, weakening their resistance. That may be why so many died when epidemics struck during the winter.

Another factor was the simultaneous infection of people by several diseases, which weakened their ability to recover. Since nearly everyone living in a community became ill at once, no one was left to cook, gather firewood and water, or nurse the ill.

Social factors also increased mortality rates. Individuals and societies react to the threat of epidemic death in different ways. Native Americans did not practice quarantine of the sick in pre-Columbian times, so diseases rapidly moved

from one person to another. Sometimes the healthy abandoned the sick in fear and despair and fled to other villages, bringing the illness with them. Sometimes the despair even led to suicide. For example, faced with a severe epidemic in 1738, several Cherokees killed themselves, sometimes killing their own families in their hopelessness.

War, exploitation, slavery, migration, and disease all had an impact on Native American populations. But it was probably successive epidemics that contributed the most to population loss. The repeated occurrences of the epidemics made recuperation very difficult. The epidemics caused tremendous social and cultural disruptions, but colonial policies also contributed to higher mortality rates among Native Americans because colonial leaders provided native people with little or no health care.

Some of the deadliest epidemics recorded by historians include those in 1616 and 1619, when bubonic or pneumonic plague swept coastal New England from Cape Cod to Maine, killing nine of every ten persons infected. Likewise, in the 1630s and 1640s smallpox raged throughout the St. Lawrence-Great Lakes region, killing half the Hurons and Iroquois. In the southeast in 1738, smallpox wiped out half the Cherokees and in 1759 half of the Catawbias. As Europeans moved onto the Plains and then to Louisiana diseases followed, killing large segments of the population living between the Missouri River and New Mexico. In the 1820s fever devastated four out of five people along the Columbia River. In 1837 smallpox returned and destroyed half the people on the Plains. These epidemics followed European explorers, traders, and settlers as they gradually moved west across the continent. As a result, the epidemics lasted for several hundred years in America.

Native peoples turned to their spiritual beliefs to cope with the stresses brought by these terrible illnesses. Some, such as the Cherokees, created special rituals such as the Itohnv (Smallpox Dance) that was used to ward off the illness. Cherokees and other Native American people often believed that evil spirits had sent the smallpox to punish them for breaking tribal laws or for not fulfilling spiritual obligations properly.

Before the arrival of Europeans, Native Americans had developed a cosmology that relied on a supernatural explanation for diseases. Bad fortune could be created by witches or wizards who were angry, and part of the so-called cure for diseases was the propitiation of evil spirits. These bad spirits could transform themselves into animals and then pursue humans to try to kill them. Native peoples continued to believe that proper personal behavior and consistent devotion to village ceremonies would ensure good health.

Although suffering enormous losses, native populations eventually did recover. As time went on, natives acquired immunities to the pathogens, but their population recovery was slow due to other factors resulting from encounters with Europeans: famine, warfare, stress, alcohol, and general social upheaval.

Disease also aided conquest in Mexico. When Hernan Cortes arrived, he brought smallpox and cholera as well as soldiers. Within a generation, the Mexican indigenous population declined by 95 percent. Though epidemics brought rapid demise to many communities of Native Americans, they did not monopolize the mortality. There were other deadly factors involved. Europeans and Americans killed countless American Indians through war, starvation, and neglect. Native American populations reached their lowest numbers by the end of the nineteenth century, but populations have continued to recover ever since as the result of better treatment and better health care.

—Pauleena MacDougall

Bibliography

- Alcon, Suzanne Austin. *A Pest in the Land: New World Epidemics in a Global Perspective*. Dialogos. Albuquerque: University of New Mexico Press, 2003.
- Crosby, Alfred W. "Virgin-Soil Epidemics as a Factor in the Aboriginal Depopulation in America." *William and Mary Quarterly*, 3rd series, 33 (April 1976): 289–299.
- Jones, David S. "Virgin Soils Revisited." *William and Mary Quarterly* 60(4) (2003): 1–89.
- Ramenofsky, Ann R. *Vectors of Death: The Archaeology of European Contact*. Albuquerque: University of New Mexico Press, 1987.

Thornton, Russell. *American Indian Holocaust and Survival: A Population History since 1492*. Norman: University of Oklahoma Press, 1987.

Smallpox and Slavery— Demographic Catastrophe within the Americas

Historians agree that indigenous populations declined after the arrival of the Spanish in 1492. The exact amount of that decline is in question, thanks to the difficulty of estimating how many people lived in the Americas before 1491. Estimates range from 8.4 million to 112.5 million, although many of the higher estimates have been largely discounted. By 1650 the total had declined to around 5.6 million. The reasons for this decline center around Spanish mistreatment and slavery and the spread of European diseases.

When the first Spanish explorers arrived in the New World, their reasons for coming included economic exploitation. Columbus had expected to find an Asian civilization with which he could open trade relations. Instead he found stone-age peoples who apparently had little for trade. The Spanish were very interested, however, in the gold ornaments the native peoples wore. The Spanish quickly established themselves throughout the Caribbean, Mesoamerica, and South America as the ruling class, thanks to their superior weapons, tactics, and diseases.

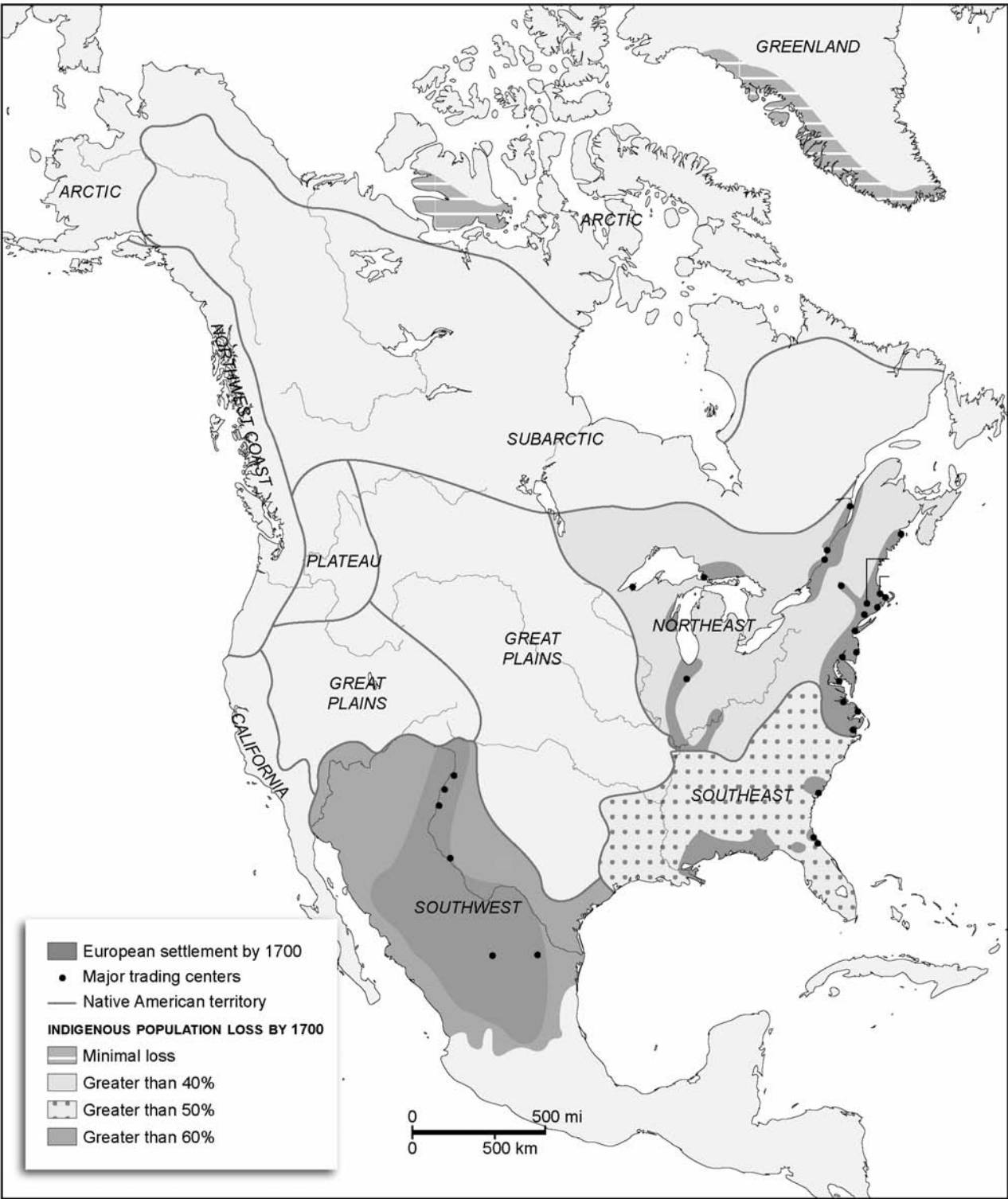
The economic exploitation of the Native Americans took the form of forced labor. In many ways the Spanish continued a process that had begun under the native elite classes. Spanish rulers gave their followers grants of *encomienda* over certain territories. These were based upon native city-states that already existed. The Spanish grantees replaced the existing native elites or even cooperated with them to demand labor from the peasants who lived in the region. This labor was performed locally and included the production of agricultural products to support the Spanish rulers as well as labor for construction projects such as churches, palaces, and administrative buildings for the Spanish. In return for the Indians' labor, the Spanish rulers were to ensure that

the natives were good Christians. In practice, the grantees often hired their peasants' labor to other Spanish or even native nobles to work in their fields or perform other duties.

Forced labor by the Spanish was accompanied by outright slavery. In these cases Native Americans were forced into slavery to go where labor was needed. In many cases this meant the gold and silver mines, which might be located some distance from their homes. Both forced labor and slavery could be accompanied by cruelty from Spanish overseers. Bartolome de las Casas was one of the few who protested the exploitation of the natives and wrote about it. Beginning in 1514, las Casas wrote about the declining number of Indians in the Caribbean islands and how mistreatment by the Spanish was responsible. The "Black Legend" of Spanish genocide was born. It is unquestioned, however, that declining Native American populations caused the Spanish to import African slaves to work their plantations and other economic ventures in the Caribbean and the Americas.

The other major cause of the catastrophic decline in Native American populations is disease brought to the New World by Europeans. Because of their isolation from the rest of the world, Native Americans had little or no resistance to diseases common among Europeans and later among Africans. These diseases included smallpox, measles, whooping cough, and influenza; however, smallpox was among the deadliest of those transferred from the Old World. By the 1520s smallpox had already reached the present-day continental United States and had traveled as far inland as the Mississippi Valley and as far north as the Great Lakes. The appearance of this disease was quite traumatic to the indigenous Americans. Those who took sick were struck with high fevers, enormous amounts of pain, and of course the grotesque pustules that marked the skin. Often when smallpox hit a village, many would flee to other villages in order to escape the disease. However, rather than evading the sickness, this strategy only served to spread it to others. The first recorded instance of smallpox in British America was in the early 1630s among the Algonkins in Massachusetts. The pandemic erased entire villages and spread

NATIVE AMERICAN POPULATION DECLINE, 1500–1700



throughout New England and the Great Lakes region of French America, often traveling back and forth and returning to areas several times for the next 20 years. As a result, the Huron and Iroquois had a population loss of as much as 50 percent. For the next two centuries smallpox continued to ravage the natives, destroying populations in its wake. While some colonists were sad to see such devastation, others, particularly the British, were glad that smallpox saved them the trouble of forcing the natives off their land. Once an area had experienced a smallpox epidemic, it was easy for the British to then move in and claim the territory.

Of course, smallpox was not the only disease to be transferred into the New World, and sometimes these pandemics were unknowingly exacerbated by the natives themselves. Contacts between native peoples were common through trade and warfare. Individuals could become infected with diseases such as smallpox before they showed any symptoms. As a result, they might easily spread the infection before becoming sick and dying. Warfare could help spread the disease as well, thanks to native curiosity about the Europeans. Captives were prized and came into close contact with many warriors and leaders. Native treatments for diseases were ineffectual at best, while some treatments, such as sweat baths, helped to break down the body's resistance even further.

The effects of mistreatment and disease resulted in rapid declines of population. For example, Hispaniola (modern Haiti and Dominican Republic) may have had as many as 7 million people in 1492. The figures are based upon census figures by the Spanish, used to assign tribute levels among the people. By the middle of the sixteenth century the native population had nearly completely disappeared. Figures from other islands and the Americas are less complete, partially because of the effects of disease before the Europeans arrived to take possession of the lands. From New England to the tip of South America, large numbers of death from disease disrupted Native American cultures and made them less able to withstand European invasions.

—Timothy J. Watts

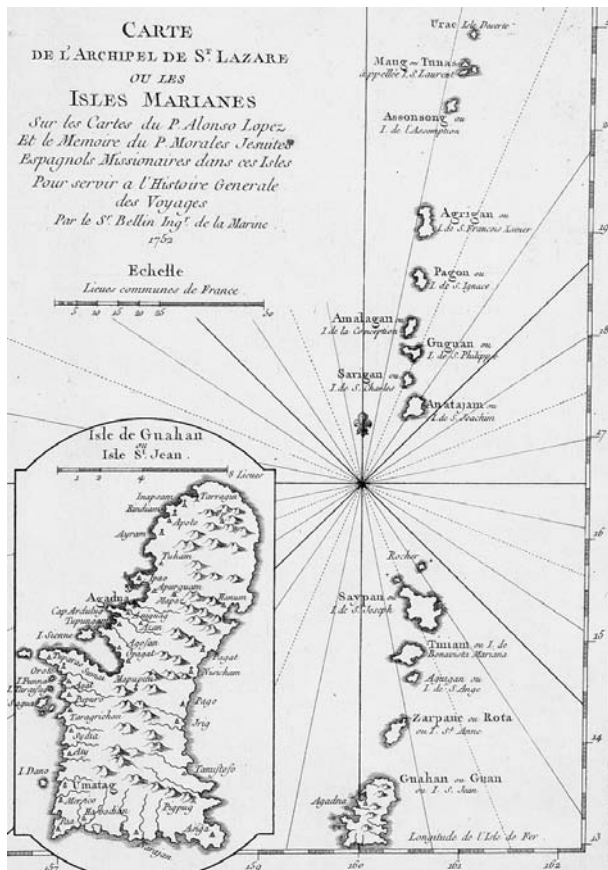
Bibliography

- Cook, Noble David. *Born to Die: Disease and New World Conquest, 1492–1650*. Cambridge: Cambridge University Press, 1998.
- Cook, Sherburne F., and Woodrow Borah. *Essays in Population History: Mexico and the Caribbean*, Vol. 1. Berkeley: University of California Press, 1971.
- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press, 1986.
- Mann, Charles C. *1491: New Revelations of the Americas before Columbus*. New York: Knopf, 2006.

Spanish Contact and Population Loss in the Marianas

The Mariana Islands consist of 15 Pacific islands located southeast of Japan and northeast of the Philippines. The island group forms an archipelago along a volcanic mountain range. The islands make up the most northern islands in Micronesia. Spanish contact in the Mariana Islands represents the first European encounter in the Pacific islands but is also exemplary of native mortality rates that would characterize many other populations throughout the Pacific and the Americas well through the nineteenth century. Spanish ships sailed throughout the Pacific exploring new lands in search of biblical islands and to Christianize the indigenous. Although the Spanish brought the Word of God, they also brought new diseases, wars, and misunderstandings that often reshaped every aspect of native life.

The early European explorers were sent to the Pacific with specific orders from King Charles II of Spain to spread Catholic faith and save the heathen souls of the natives. In 1668 half a dozen Jesuit missionaries founded the first Spanish mission at Agaña, Guam, escorted by their military platoon. Between the mission foundation and 1700, three disease epidemics were recorded by the governor, Jose Quiroga, in a letter to the Spanish authorities in 1720. The frequency of certain European diseases such as measles and influenza in Europe allowed those living there to gain considerable resistance to them. However, once these diseases were



One of the oldest known maps of the Mariana Islands, compiled from information provided by Jesuit missionaries, 1752. (Jupiterimages)

brought by ship to populations whose immune systems had never experienced them, the results were devastating. The Chomorro chief Hurao was quoted as saying, “If we had sicknesses we had remedies for them. But [Europeans] have brought us diseases but do not teach us the remedies.” Home repair, Spanish defensive work, and agriculture exacerbated the mortality rates with exhaustion.

The cultural reorganization caused by the mass mortality from disease as well as the mass migration of individuals to Guam caused a second wave of mass mortality. The islanders did not have any weapons comparable to those of the Spanish and could not defend themselves in battle. With many high-ranking people and family members dead, rituals, customs, and social structure changed. Often, the islanders were so opposed to Spanish and Catholic rule that

➤ SMALLPOX IN THE MARIANAS

The Europeans brought smallpox to the Marianas. Following infection through the respiratory tract, the diseased person experiences influenza-like symptoms. Smallpox lesions ulcerate, releasing virus down the throat and often suffocating the individual. Pustules form infectious scabs 8 to 14 days after the onset of symptoms. The disease plagued the Marianas in 1668. Two centuries later, smallpox killed 50 percent of Pohnpei in 1854 and Guam in 1856. By the end of the nineteenth century, diseases decimated the native population, and Spanish rulers brought in Carolinians to replace the lost population.

—Melissa Halverson

suicide and infanticide rates increased exponentially. The diseases lowered the number of fertile women and affected population rates for generations after. Estimations of population size in the Marianas at the time of the first mission were approximately 24,000 but declined to only 8,000 by 1700. Complications from the epidemic, changes to social structure, and military opposition lowered the population even more after this date. The Jesuit missionaries moved many islanders to centralized towns and converted many to abiding by Catholic family and religious structure. Many islanders were killed in attempts at protesting Spanish rule.

The natives of the Marianas suffered a common experience during Europe’s westward expansion. Through exploration and missionary undertakings, Europeans brought strange diseases and weapons with which the natives’ bodies and weapons could not compete. Although the total mortality caused by expanding European presence cannot be known, Native Americans throughout North and South America would endure many of the same hardships as the Mariana islanders.

—Melissa Halverson

Bibliography

Gschaedler, Andre. “Religious Aspects of the Spanish Voyages in the Pacific during the Sixteenth

- Century and the Early Part of the Seventeenth." *Americas* 4 (1948): 302–315.
- Hezel, Francis X. "From Conquest to Colonization: Spain in the Marianas 1690–1740." *Journal of Pacific History* 23 (1988): 137–155.
- Shell, Richard J. "The Marianas Population Decline: 17th Century Estimates." *Journal of Pacific History* 34 (1999): 291–305.
- Thornton, R., T. Miller, and J. Warren. "American Indian Population Recovery Following Smallpox Epidemics." *American Anthropologist* 93 (1991): 28–45.
- Underwood, Jane. "Population History of Guam: Context of Microevolution." *Micronesica* 9 (1973): 12–14.
- Wilson, Sam. *Hispaniola*. Tuscaloosa: University of Alabama Press, 1990.

■ Introduction: Envisioning the Environment

Environment affected not only how people lived but also how they thought or perceived themselves. Since times immemorial, humans enjoyed nature: vivid blue skies, broad horizons, fiery sunsets, deep canyons, and towering mountains. But human appreciation was limited to pristine nature and the natural world that was shaped by the human hand. In the Western world, societies embraced a tradition of viewing art as the mirror of nature. Thus, the great artists of the Renaissance sought to replicate the natural world in their paintings. Yet such inspirations were oftentimes restricted by religion that deemed nature an unworthy object of aesthetic appreciation and diverted art toward spiritual needs. In China, traditions portrayed nature as the manifestation of heaven's timeless pattern and order and described any natural imbalances (i.e., disasters) as humanity's fault. Thus, traditional Chinese views of nature called for respect for nature and finding balance with it. The Ming artists oftentimes portrayed nature as mystical landscapes with peaks shrouded in mist or clouds and serene valleys reflecting the natural balance of the world.

—Alexander Mikaberidze

Early European Studies of the Indian Environment

European accounts of the wonders of India date to the ancient world. Medieval travelers and missionaries added to the stock of information and legend, but European knowledge of the Indian environment grew after the establishment of

regular communication between Portugal and India following Vasco da Gama's voyage in 1498. Discussions of the Indian environment occur mainly in two genres of European works: travelers' accounts that include information about the natural environment to set the scene or establish India's geography, much of which was still legendary to Europeans, and collections dealing with Indian plants, usually in terms of their medicinal and economic value. Most of the early writings in the fifteenth and sixteenth centuries were the work of Italian and Portuguese travelers.

Most travelers focused on the human geography of India rather than the natural environment. What discussion there was focused on big features such as rivers and mountains. General comments about India's fertility and crops were also common. The traveler Lodovico Varthema of Bologna wrote an account of his journeys in the East while impersonating a Muslim in his *Itinerario* (1510). It became one of the most frequently printed and translated travel accounts of the sixteenth century, and it discusses some of the plant resources of India, including cinnamon and the sweet oranges of Ceylon, which he praised extravagantly. Like other travelers, Varthema focused on plants and animals of economic or medicinal value. (Plants that produced valuable commodities for Europeans, such as pepper, were appearing in the printed herbals, which were an expanding genre in the sixteenth century.) Varthema also describes the elephants and horses of India in a political context, as an element of the strength of Indian kings.

The earliest European studies of the environment of India from researchers based in India were physicians' investigations of Indian plants and their medical uses. The first scientific book printed in India was the Portuguese physician Garcia d'Orta's *Colloquies on the Herbs and Drugs of India* (1563). With a few scattered exceptions, the observations of European physicians on Indian botany and pharmacology before d'Orta had been unpublished and uncirculated, so his work marks the foundation of Indian botany as a European study. In addition to his own background in classical and Arabic medicine, d'Orta drew on the knowledge of Indian physicians and Persian and Chinese travelers he met while living in the Portuguese colony of Goa. His focus throughout is on medical use rather than botanical description. The Spanish court physician Juan Fragoso drew heavily but critically on d'Orta in his 1572 treatise on the fruits of the East Indies, but the principal vehicle for bringing d'Orta's work to Europe was the Portuguese physician Christavão da Costa's *Treatise on the Drugs and Medicines of the East Indies* (1578). Da Costa, who had traveled in the East himself and collected specimens, borrowed extensively from d'Orta's *Colloquies*, reorganized d'Orta's information, amplified his botanical descriptions, and added new material. Da Costa's work was widely circulated in Europe. More information on natural history was included in the unpublished correspondence of the Italian merchant Filippo Sassetti (1540–1588).

By the seventeenth century, a more diverse range of Europeans, including French, Dutch, and English travelers, was journeying to India, and accounts of their adventures and what they had seen became a popular genre in Europe. Although much of their focus was on the customs and buildings of the people of India, travelers such as Jan Huygen van Linschoten (1563–1611), a Dutchman in Portuguese service, also discussed the products, climate, and seasons of the country. Van Linschoten's *Itinerario* (1596) helped spark Dutch and English interest in India. The French physician to the court of the Mughal emperor Francois Bernier (1625–1688) concentrated on political and military analysis but also discussed the products of the country in his *Letter to Monsieur Colbert*. Bernier suggested that

➤ A SEVENTEENTH-CENTURY DUTCH CATALOG OF THE HORTICULTURE OF MALABAR

One of the largest works devoted to Indian botany was the 12-volume *Hortus Malabaricus* (*Malabar Garden*), 1678–1703, the fruit of a massive research project organized by the military commander of the Dutch East India Company (VOC) in Malabar on the southwestern coast of India. Hendrik Adriaan van Reede tot Drakenstein (1636–1691) organized hundreds of people from diverse cultures, including an Italian Catholic Carmelite missionary, Matthew of Saint Joseph, numerous Brahmins and Indian physicians, and members of the VOC with skill in medicine, chemistry, botany, and botanical illustration. Van Reede began the project with the hope of identifying profitable resources in the Malabar region for the company to exploit. The newly established Dutch station in Malabar was in a rivalry with the previously established station in Ceylon, and van Reede hoped to demonstrate the superiority of Malabar products over Ceylonese. The information on medical uses found in *Hortus Malabaricus* was mostly derived from local informants. The final work was the product of a complicated chain of linguistic tradition, from Indian languages through Portuguese and Dutch to the final product written in Latin for a Europe-wide audience, although few could afford the massive final product.

—William E. Burns

the country's combination of poverty with extreme fertility was caused by the Indian lack of the concept of private property.

The permanent establishment of European trading companies in India in the seventeenth century, preeminent among them England's East India Company, led to more systematic exploration of the Indian environment. The most voluminous study was the 12-volume *Hortus Malabaricus*, or *Malabar Garden*, a product of the Dutch East India Company. Nothing comparable was produced by the British East India Company in the seventeenth century; the major British contribution to the study of the Indian environment would not begin until the late eighteenth century.

—William E. Burns

Bibliography

- Cook, Harold. *Means of Exchange: Commerce, Medicine and Science in the Dutch Golden Age*. New Haven, CT: Yale University Press, 2007.
- Qaisar, Ahsan Jan. *The Indian Response to European Culture and Technology (A.D. 1498–1707)*. New Delhi: Oxford University Press, 1982.
- Rubiés, Joan-Pau. *Travel and Ethnography in the Renaissance: South India through European Eyes, 1250–1625*. Cambridge: Cambridge University Press, 2000.

The Tokugawa Garden

Japanese gardens derive their beauty from the combination and synthesis of various elements. There are no sculptured fountains, profusions of flowers, or even dynamic watercourses that are common in many European gardens. The compositional beauty of the Japanese garden is derived from a blending of several manifestations of material beauty that are met through various combinations of plants, rock, water, and sand.

The garden is also imparted significant symbolic beauty with a healthy mixture of Buddhist and Shinto elements that blend quietly with the natural art to establish the unique form of each setting.

Gardens have a long history in Japan. The custom originated in China and traveled to Japan around 1000 CE from China. In China, gardens were meant to be places of meditation and tranquility. However, Chinese gardens were not meant to have any order to them. They often had winding paths, man-made hills, and carefully placed locations of rocks, water, and bridges. The different natural elements were meant to inspire certain aesthetic sensations in the people who occupied them. When the Japanese began adopting gardens, they added order to their gardens and in some cases purpose. For example, the tea ceremony became important among the elite around the fourteenth century, and the garden became the site where the teahouses were built. In general, the goal of the garden was to appear natural but also aesthetically pleasing.

During the Edo period (1600–1868), there occurred a synthesis of garden art forms from previous periods. Compositional details were combined to create a synthetic whole that encompassed many different traditions. The Edo

garden often featured a large pond around which might be scattered a variety of different elements including miniature scenes from the 53 stages of the Tokaido highway that linked Edo (now Tokyo) with Kyoto and Osaka, views of Fuji, images of famous sites recounted in Japanese poetry, or other noted vistas. A winding stream was another common feature.

Edo gardens incorporated many Chinese elements. Often one found a pond in the shape of the Chinese character for heart (*kokoro*) accented by the sharp convolution of its shoreline. Other common elements included representations of the mythical Chinese island of Hōrai; *sanzonseki*, groupings of stones representing the three major Buddhas (Yakushi, Amida, and Shaka); Chinese-style embankments and bridges; Confucian-style towers; and representations of Chinese-style rice paddies and teahouses. All of these elements were merged into a harmonious design with natural scenes—greatly reduced in scale—of mountains, valleys, and rivers.



Kokoro ("Heart")

Many of these gardens were built for the homes of the daimyo (lord governors of provinces) not only in the administrative capital of Edo but also in their provincial seats. The use of a wide variety of motifs was common, especially in the larger gardens. Since the gardens were often constructed on low-lying flatland with very little topographical variation, the builders dug ponds, raised hills, and on many occasions employed the technique known as *shakkei* ("borrowed views"), whereby distant hills in the background would be integrated into the perspective of the garden, and introduced many other motifs into the design.

Some of the most famous of the Edo gardens, almost all of them originally designed as daimyo gardens, are found in Tokyo. They include the Korakuen, Hama Detached Palace, and Katsura Detached Palace gardens. Other famous Edo period gardens include the Korakuen in Okayama Prefecture, Ritsurin Park in Kagawa Prefecture, and the Shukkeien in Hiroshima Prefecture. The Korakuen garden is built around a large pond with a sharply indented shoreline surrounded by mounds representing mountains, small temples and shrines, ornamental bridges, miniature rice paddies, streams

➤ HOKUSAI AND UKIYO-E

Hokusai (1760–1849; given name Tokitaro) was an ukiyo-e painter, draftsman, illustrator, and print designer and one of the great masters of Japanese pictorial and landscape art. He is known for his highly individual idiosyncratic style combining Western and Chinese influences with elements drawn from a variety of native schools. As a child he showed a great interest in pictures and a talent for drawing. As a young man he eked out a living as a minor book illustrator, but his fame grew in the 1790s when he experimented with various new styles of ukiyo-e painting whereby he designed pictures that arose from his own vision rather than prevailing conventions.

By the early 1800s Hokusai had become a celebrity in the art world for his many styles of book illustrations. Among his greatest accomplishments were the *Hokusai manga* (Sketches by Hokusai), a series of picture books published in Nagoya during 1814–1834. His most famous series of landscape prints, *Fugaku sanjurokkei* (*Thirty-Six Views of Mount Fuji*), began to appear in the early 1830s. He published the equally famous *Fugaku*



A Shower Below the Summit, by Hokusai, from the series *Thirty-Six Views of Mount Fuji*, created between 1826 and 1833. (Library of Congress)

hyakkei (*100 Views of Mt. Fuji*) in 1834. His last major series of illustrations, *Hyakuninisshu uba ga etoki* (*Illustrations of the Hundred Poems*), appeared in the mid-1830s.

—Daniel A. Métraux

and waterfalls, and myriad cherry trees that bring thousands of visitors in April.

Since printing began to flourish early in the Edo period, texts with pictures of many of the more famous gardens were widely distributed. This phenomenon led in turn to the general popularization of the Edo garden throughout Japan and in the art of many of the leading artists of the eighteenth and early nineteenth centuries.

—Daniel A. Métraux

Bibliography

- Hayakawa, Masao. *The Garden Arts of Japan*. New York: Weatherhill/Heibonsha, 1973.
- Kuck, Loraine. *The World of the Japanese Garden: From Chinese Origins to Modern Landscape Art*. New York: Weatherhill, 1980.

Nature in the Ming Imagination

The imaginative visions of nature that emerged during the Ming dynasty in China appeared in a variety of cultural expressions and artistic mediums. Whether in an excursion into the

countryside or in a painting of the stretching landscape, nature for the Ming represented the tradition of balance and harmony in an often complex and disturbing world.

The concept of nature in traditional Chinese thought stemmed from early beliefs of the essential link between Heaven and Earth. Heaven (*tian*), or the cosmos, represented the power that gave life to and ordered the world, or Earth. Nature was considered not only an extension of Heaven but also the manifestation of its timeless pattern and order. The deliberate movement of Heaven from day to day and from season to season confirmed its constancy. However, the natural world could be unpredictable, and so it was also believed that when unfavorable conditions for people to live and thrive were present on Earth, then the greater cosmic harmony was out of balance. According to early Chinese philosophers, the reasons for these imbalances in nature, or on Earth, were the fault of humankind, which was not living in harmony with the natural order of Heaven. This idea, now commonly

➤ **THIEN KUNG KAI WU (EXPLOITATION OF THE WORKS OF NATURE), 1637**

In contrast to the imaginative, idyllic significance ascribed to nature during the Ming was the realistic or utilitarian perspective toward nature as the source for food, clothing, shelter, and the necessities that sustain life and livelihood. The fact that nature implied natural resources was one that emerged time and again throughout premodern Chinese records. However, it was in the latter part of the Ming dynasty, when the scholar-official class began to write more from personal experience and knowledge, that more detailed accounts of how natural resources could be identified and used began to appear.

The three-part 18-chapter text with 122 illustrations *Thien Kung Kai Wu* (*Exploitation of the Works of Nature*) is widely considered the best example of premodern scholarship on the techniques and technologies used to process many of China's notable natural resources. Song Yingxing (1587–1666), the author of this encyclopedic text, intended the book to be a reference guide for the general understanding of how things were made, from agricultural products to mineral- and timber-based goods and various metals and gems. Song hoped that scholar-officials like himself or even members of the royal family might enjoy the concise topical entries, many of which were paired with intricate illustrations. Among the most engaging descriptions and visual narratives offered in the



(Ying-Hsing, Sung. *T'ien-Kung K'ai-Wu: Chinese Technology in the Seventeenth Century*, 1966)

text is the process of sericulture, or the stages of producing silk from silkworms.

—William Christopher Dalton

referred to by scholars as correlative cosmology, is at the heart of traditional Chinese views of nature. For the Ming, the origins of respect for nature and finding balance with it began with this legacy of early Chinese thought and belief.

Traditional philosophies were not the only influence on ideas about nature during the Ming. Increased population and urbanization over the course of the dynasty also played a significant role in shaping such concepts. Relative political stability allowed for an unprecedented growth of the population. Estimates of the early Ming population fluctuate around the figure of 60 million, while the increase in less than 250 years, at the end of the dynasty, possibly reached as many as 200 million. Infrastructure followed this trend as cities grew and expanded to accommodate

the burgeoning populations. Some larger cities, according to available data, are thought to have witnessed tenfold population increases. As cities and populations expanded, the economic and social aspects of everyday life grew more demanding. In order to slow down the pace of life and find a sense of balance, city folk sought the refuge of natural landscapes.

Travel for pleasure, or tourism, became quite popular, even among the common classes of society. Destinations for recreational travel featured local mountains, hills, rivers, and lakes. Often, the tranquility and scenery of natural surroundings were complemented by the availability of the medicinal resources that nature could provide. In many travel accounts, the fame of certain locales arose from the reputation

of some therapeutic fruit, fungus, root, tea, or spring water. Eventually, this kind of ecological tourism became embellished among the public, and the idea of the journey itself began to take prominence over the actual benefits that nature might provide.

For the elite classes, recreational travel also symbolized an essential experience but with a higher level of sophistication. While their destinations included natural sites of peace and rejuvenation, another sense of purpose usually pervaded their travels. Elite travel implied a sense of meaning, which stemmed from the traveler's appreciation of the philosophy, history, and literature of China's classic culture. Mountains and cliffs where great battles were fought or riverbanks where celebrated literary figures once composed poetic verse were the imaginative landscapes that dominated the elites' visions of nature while they traveled.

Similarly, the elite aesthetic of classical painting, inspired by well over 1,000 years of tradition by the time of the Ming, prefigured the imagination of nature. With light and impressionistic vistas of clouded peaks that descended majestically into lushly forested valleys, landscape paintings epitomized a serene longing for the natural balance of the world. Paintings of this kind were meant to accentuate the spirit of nature, not its realistic proportions. In parallel, designs on Ming ceramics, or china, followed this trend, and the serenity of nature was represented in portrayals of children or servants playing in a garden, floral patterns, or dragons and phoenixes sprawling through winding branches in blossom.

The elite quest to celebrate nature also influenced patronage of the emblematic Chinese garden. In these lushly decorated parks, the literary and aesthetic imaginations of cultured society were freed from the conventions of reality as well. Here, the elite could design the topography of their gardens in the images of classic landscape paintings. Looking to masterpieces as inspiration, they contoured their gardens with rocky outcrops, limpid ponds, and winding paths, all shaded and adorned by the flora of literary symbolism: bamboo and pine, peony and chrysanthemum, lotus and lily. The finest gardens could evoke wistful emotions or desires for

a simpler life, as evidenced in many poems of the period.

Similarly, elite men of scholarly or literary character built simple studios or huts in the countryside as retreats, where they could enjoy the serenity of groves of trees atop hills and scenic lookouts. The natural beauty of rustic settings offered valuable respite from the pressing affairs of politics, commerce, or family. There they could find an order to their thoughts as they strove to compose reflections as timeless as their natural surroundings. It is perhaps in the records and accounts that these intellectuals left behind that the Ming understanding of nature reflected its most basic and lasting character, which was the idea of its perpetual balance.

—William Christopher Dalton

Bibliography

- Brook, Timothy. *The Confusions of Pleasure: Commerce and Culture in Ming China*. Berkeley: University of California Press, 1999.
- Cahill, James. *The Distant Mountains: Chinese Painting of the Late Ming*. New York: Weatherhill, 1982.
- Cahill, James. *The Restless Landscape: Chinese Painting of the Late Ming Period*. Berkeley: University of California Press, 1971.
- Clunas, Craig. *Empire of Great Brightness: Visual and Material Cultures of Ming China, 1368–1644*. Honolulu: University of Hawaii Press, 2007.
- Clunas, Craig. *Fruitful Sites: Garden Culture in Ming Dynasty China*. Durham, NC: Duke University Press, 1996.
- Strassberg, Richard E., trans. *Inscribed Landscapes: Travel Writing from Imperial China*. Berkeley: University of California Press, 1994.

Western Ideas of Nature

Early modern Westerners understood the natural world, its role in a supernaturally governed universe, and their own relation to it in a variety of ways. Some approaches had classical and Christian roots, while others, such as the metaphor of nature as a vast machine, emerged during the scientific revolution.

One of the oldest conceptions of nature, with roots in the classical tradition of Greece and Rome, was that of the goddess Natura. This image was associated with fecundity and

➤ GEORGE SANDYS ON NATURE AS A PROTEUS

The English poet and colonial promoter George Sandys translated the Roman poet Ovid's *Metamorphoses*, a poem that many early modern people viewed as a treasury of ideas about nature, into English. Sandys's translation included extensive commentary on each book, often discussing the allegorical meanings of Ovid's stories. In his commentary on book 8, Sandys discussed the meaning of Proteus and his relation to nature:

"Proteus physically is taken for the First Matter, converting into all diversity of forms; which again resolve into their own original: and said to be the son of Neptune, because the operation and dispensation of Matter is exercised chiefly in liquid bodies. So is he taken for air (and therefore said to rest in a Cave, which is under the celestial concave) which ariseth from extenuated water: by whose secret operation both plants and living creatures are produced from the self same Matter, and the matter it self converted into Elements; which the Ancient expressed by Proteus his multiplicity of changes."

—William E. Burns

Source

George Sandys, *Ovid's Metamorphosis Englished, Mythologiz'd and Represented in Figures* (Oxford, 1632), 297.

multiplicity and was connected to an image of the earth as a fertile womb from which living things and even minerals were formed and emerged. Natura was often represented as a nude woman, bearing signs of fertility such as supernumerary breasts or a basket full of ears of wheat. Users of this metaphor often utilized it to oppose what they saw as excessive exploitation of nature. Mining, for example, was sometimes viewed as an impious violation of the "womb of nature." Miners themselves claimed that the fertile earth would replenish that which they removed. However, Natura could also be described as decaying, growing old or senescent before the end of nature and the world together with the apocalypse. The birth of monsters or freaks was invoked as evidence of nature's decline.

This picture of decaying nature was opposed by those who emphasized intellectual and technological progress such as Francis Bacon, the English philosopher of the scientific revolution.

The natural universe could be treated as analogous to a human body and conversely the body as analogous to nature, the so-called microcosm/macrocosm theory. This idea also had ancient roots. The two levels of man and nature were linked as a network of correspondences so that the head or the heart in the body corresponded to the sun in the heavens. Naturally, this idea was easily adaptable to astrology, whereby each planet in the heavens could be seen as corresponding to a part of the body or organ that it governed. It was also used in medicine to indicate which plants corresponded to which ailments and thus could cure them.

The ultimate extension of the personification of nature was to treat the personification not merely as a metaphor but instead as actually existing. The idea of a Nature that actually performed tasks in the world could be traced to the medieval distinction between *natura naturans*, nature acting, and *natura naturata*, nature being acted upon. Natura naturata was the nature that people saw and perceived, while *natura naturans* was that which acted upon it to produce change. In the early modern period, those who believed in a self-acting natural universe, often influenced by alchemical or magical thinking, sometimes spoke of a "plastic spirit," intermediate between the created universe and God, that shaped the material universe as a potter shaped clay.

All of these views of nature as a deity or spirit, but particularly Natura, trailed a slightly suspect air of paganism. Natura naturans was sometimes described as God's subordinate or handmaid, but belief in such a powerful being lacking specifically Christian associations seemed idolatrous to many. Scientists like the Anglo-Irish chemist Robert Boyle, author of *A Free Enquiry into the Vulgarly Received Doctrine of Nature* (1686), thought that making nature an independent being derogated from God's omnipotence. The idea of a self-acting universe also seemed inconsistent with the mechanical philosophy of many early modern scientists such as Rene Descartes that reduced the workings of nature to matter and motion. Mechanical

philosophers defended themselves from charges of irreligion and asserted their superior piety by claiming that their systems took all agency from the material universe, vesting it solely in God. The overall tendency in the scientific revolution was away from metaphors that personified nature as a goddess or as a macrocosm to those that made it more mechanical, a vast machine or clock made by God, the “divine clockmaker.” Clockwork metaphors were advanced by the great interest that many early modern scientists had in clock making. Although the “clockwork universe” image is often associated with English scientist Isaac Newton and his system of mathematical physics, Newton himself never employed it because it seemed to leave too little room for divine action. Newton’s great rival the German philosopher Gottfried Wilhelm Leibniz, however, who had himself worked on creating a mechanical calculating engine, used clock metaphors often.

As the idea of investigating nature’s secrets grew more prominent in the scientific revolution, nature was often personified as the adversary of the natural investigator, someone whose secrets needed to be exposed, an image expressed most memorably, although not most typically, in Bacon’s call for “vexing” or tormenting nature by art to force her to reveal her secrets. Although this metaphor of conflict was often gendered as a conflict between a goddess and male investigators, it was not dependent on this gendering. Nature could also be portrayed as a male god, Pan, from the Greek word meaning “all.” Nature as Pan was represented as a being man above the waist and a goat below the waist, with a musical pipe with seven tubes representing the seven planets. The conflict between the investigator and nature was also expressed by the myth of the binding of the shape-changing sea god Proteus in ancient epics such as Homer’s *Odyssey*, whose heroes forced Proteus to reveal secrets. Pan and Proteus were linked, particularly in the alchemical literature, as embodiments of nature’s unity and multiplicity, respectively. Not only could conflicting metaphors for the relation of the investigator to the investigated be male, but metaphors gendering nature as female could also be used to advocate cooperation between nature and the scientific inquirer.

Another image of nature, which grew increasingly popular in the Enlightenment, was as a sovereign. Violation of the “laws of nature” was described as a rebellion against a sovereign. The idea of the “life according to nature” offered an alternative moral standard to the Christian idea of morality as a matter of divine commandment.

—William E. Burns

Bibliography

- Daston, Lorraine, and Katharine Park. *Wonders and the Order of Nature, 1150-1750*. New York: Zone Books, 1998.
- Merchant, Carolyn. *The Death of Nature: Women, Ecology and the Scientific Revolution*. San Francisco: Harper and Row, 1980.

Constructing Catastrophe— Western Ideas of Natural Disasters

From 1450 to 1770 early modern European society, fraught by endemic warfare, episodes of famine, rampant disease, and frequent episodes of social and political chaos, developed particular notions of natural disasters associated with the greater instability of the times. Natural disasters, such as earthquakes, floods, and fires, were associated with apocalyptic cataclysms and millenarian eschatological rhetoric, or the idea that the world was at the “end times.” Given the religious fervor that characterized many early modern European societies of this period in the context of the Protestant Reformation and the Catholic Counter-Reformation, many of these themes resonated with the attempts to create a more pious and observant society and expunge “heresy” from their respective realms. Nonetheless, given the advances in the context of the Scientific Revolution and the skepticism fostered by the Enlightenment, much of this religious rhetoric was challenged by a more rational approach grounded in science and philosophical approaches and paradigms.

With the European discovery of the Americas in 1492 and the fragmentation of Christendom into competing denominations of Christianity in the sixteenth century, a sense of uncertainty pervaded throughout Europe as a sense of the unknown entered the public consciousness. Both the Catholic and the Protestant regions of

➤ GREAT LONDON FIRE OF 1666

The Great Fire of London of 1666 was a major fire that destroyed most of central London. For three days in early September, having initially begun in a bakery on Pudding Lane, the fire ravaged through the medieval city of London. Through the failure of the lord mayor in ordering the demolition of structures in an effort to quell the conflagration, the fire spread amid the proximity of the structures and buildings, creating a firestorm due to winds. In the aftermath of the fire, rampant fears of Catholic plots stemming from Rome, rumors of the event symbolizing divine retribution for war in the Netherlands, and widespread xenophobia against Catholics and the Dutch swept throughout London, resulting in violence and lynchings. Millenarian prophecies that the year 1666 would mark the “end times” were heeded with the great fire, giving credence to the already ubiquitous belief that the world was coming to an end.

—Abraham O. Mendoza

Europe developed particular ideas of what the existence of heresy (internally and externally) presented to their respective denominational ideologies. As a result of climatic changes at the end of the Little Ice Age, fluctuations in weather increased the amount of precipitation and resulting natural phenomena. Pestilence, famine, and warfare were associated with divine retribution for failure to cleanse society of religious deviants (Protestants or Catholics depending on which regions they happened to reside in where the other constituted a majority), witches, and Jews, among other enemies of the faith (particularly the “hated” Turk on the peripheries of the Habsburg realms). Commentators of the time, such as theological writers and religious leaders, preached about the coming end of the world, relating to the educated public as well as the illiterate masses of things to come. Thus, natural disasters were assumed to be the proof of the unfolding eschatological process.

Eschatology is a major theme within theology and philosophy focused on how events in human history were to develop in the context of the coming “end times.” As such, early modern European eschatology, as referenced in sermons,

tracts, broadsides, and other theological literature, placed great natural disasters as examples, drawn from the New Testament book of Revelation, as tangible proof of the end of the world and the return of Jesus Christ. The advent of printing technologies popularized these ideas to the literate educated public, while the illiterate masses were exposed to these ideas through religious sermons and itinerant preachers. The Four Horsemen of the Apocalypse, personified as Pestilence, War, Famine, and Death, which were prevalent problems in European society between 1450 to 1770, were presented in images and illustrations accessible to the public as further evidence of the end of the world. Furthermore, natural occurrences such as earthquakes, floods, and urban fires were attributed and associated with divine punishment, related to heresy or witchcraft. Demonology, the theological study of demons and their activities in tandem with witches (*maleficium*), was also related to the advent of any natural disaster in occurrence by both Catholics and Protestants of all stripes. This association of witchcraft to natural disasters and catastrophic occurrences was a prevalent theme throughout much of early modern Europe. This further led to the outbreak of witch-hunts and witch-crazes (which were witch-hunts on a vaster scale) in the sixteenth and seventeenth centuries, particularly in the denominationally and politically fractured Holy Roman Empire (Germany).

However, growing skepticism in educated circles in urban centers in the context of the Scientific Revolution and the Enlightenment and the late seventeenth and early eighteenth centuries shunned the “superstitious” and religious explanations for natural occurrences. In light of the scientific developments occurring throughout Europe, scholars and scientists questioned the theological explanations regarding what could be interpreted as natural processes through empirical research. Growing recognition by empiricists and philosophers that the natural world operated according to scientific principles that could be deciphered through research ignited a gradual paradigm change. However, a considerable portion of the European population, much of it illiterate and fervently religious in the late seventeenth and early eighteenth centuries, still

regarded such events as “acts of God” or the work of the “devil” in the context of the coming end of the world.

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Bibliography

- Levack, Brian. *The Witch-Hunt in Early Modern Europe*. 3rd ed. New York: Longman, 2006.
- Munck, Thomas. *Seventeenth-century Europe: State, Conflict and the Social Order in Europe, 1598–1700*. 2nd ed. New York: Palgrave Macmillan, 2005.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. Malden, MA: Blackwell, 2001.
- Parker, Geoffrey, and Lesley M. Smith. *The General Crisis of the Seventeenth Century*. 2nd ed. New York: Routledge, 1997.

Representing Europe's Crisis of the Seventeenth Century

The crisis of the seventeenth century, popularized by English historian Hugh Trevor-Roper, remains a controversial point among scholars. For many historians, the period of instability and disorder was a paradox. Triggered by the economic and political decline of the Spanish Habsburgs and its effects on the rest of Europe, the crisis is represented in the art and culture most strikingly by its absence. The historiographical debate among historians, such as Theodore K. Rabb and Simon Schama, regarding whether in fact there was a crisis or if it was limited to certain countries continues. While there was no doubt in the minds of Spanish artists and intellectuals that imperial Spain was going through a protracted economic and political decline relative to the rise of France and England, Spanish culture nonetheless experienced a golden age characterized by exquisite paintings, inspired theater, and brilliant literature. Elsewhere in Europe in the midst of the Thirty Years' War (1618–1648), the English Civil War (1642–1646; 1648–1651), the Revolt of the Dutch Republic (1555–1648), and the Fronde revolts in France (1648–1653), the arts continued to flourish unhampered and perhaps motivated by such instability. The resurgence of the Catholic Church in the Counter-Reformation inspired the Baroque style in art and music. The small states in the Holy Roman Empire, while clashing with the Catholic Habsburgs in the midst of the

Thirty Years' War, still found the time to patronize and enjoy the fruits of seventeenth-century culture. The seventeenth-century crisis, while devastating for Europe, was a remarkable time for European cultural forms.

Habsburg Spain experienced a protracted decline from the death of Philip II (1598) to the end of the reign of Carlos II (1700) while simultaneously enjoying a veritable golden age in the arts. Spanish art flourished in terms of painting, theater, and literature. During the reign of Philip IV (1621–1640), Diego Rodríguez de Silva y Velázquez (1599–1660) was Spain's most important seventeenth-century painter, representative of the flourishing of Spanish artists of the period. The work *Las Meninas* (1656), regarded as Velázquez's masterpiece, is a group portrait scene and self-portrait. Many of these paintings emphasized the beauty and grace of the Spanish royal family and the aristocracy, celebrating them in spite of the ubiquitous decadence of their state and society. Spanish theater also contributed to the richness of the nation's culture during the seventeenth century. Among the main contributors to its glory is playwright Felix Lope de Vega (1562–1635). He wrote an estimated 1,800 plays and a large amount of poetry inspired by his many love affairs. Vega invested much time on his comedies (*comedia*), making it a notable national genre in drama. Many of his plays reflected the social and economic problems prevalent in Spanish society in its accelerated state of decline. Spanish author Miguel de Cervantes (1547–1616) published *Don Quixote* in 1605, among the great classics in world literature to this day. This work famously satirizes the anachronistic social values of the Spanish aristocracy in a rapidly changing world where such values have no function.

The Catholic Church experienced a vast revival in its influence against the advances made in the previous generation by Protestantism in its Lutheran and Calvinist forms. The artists and musicians of the Baroque movement, prevalent in Catholic Europe, attempted to trigger the devotion of Catholics through an intense display in ornate artistic and musical styles. In Catholic Spain, France, Austria, Italy, and southern Germany, the Baroque made significant inroads in painting, architecture, and music. Emphasizing

> LAS MENINAS, 1656

Diego Velazquez's *Las Meninas* is a masterpiece of the Golden Age of Spanish art. *Las Meninas*, meaning "maids of honor" in the Spanish court, refers to the ladies-in-waiting portrayed in the painting. Velazquez's study depicts the Infanta Margarita, the daughter of King Philip IV of Spain, surrounded by two ladies-in-waiting, a dwarf, a jester, a dog, and Velazquez himself painting. In the mirror above the head of the Infanta is the royal couple, and a chamberlain is in the doorway to the right of her. The point of view of the picture is approximately that of the royals, apparently having their portraits painted. This picture represents the artistic focus on the royal family, which sought to emphasize the glory of the monarchy in an age of decline in the midst of the crisis of the seventeenth century.

—Abraham O. Mendoza

Bibliography

Velazquez, Diego. *Las Meninas (The Maids of Honor) or the Royal Family*, 1656/1657. Oil on canvas. Museo del Prado, Madrid, Spain.



(The Gallery Collection/Corbis)

the ornate, the elaborate, and the passion of the Catholic faith, this genre also contrasted heavily with Renaissance Classicism, which had emphasized order and harmony. Notable Baroque artists, such as the Spanish painter El Greco (1541–1614) and the German composer Johann Sebastian Bach (1685–1750), utilized their skills in creating work that represented the rebirth of Catholic devotion in the pursuit of winning back adherents to the faith. The previous period, wracked by wars of religion and denominational schisms, had subsequently been followed by one in which high culture would play a significant role in inspiring the Catholic masses.

In Protestant Europe, particularly England, the Netherlands, and northern Germany, the arts flourished thanks to the newfound economic and political expansion of these regions. While they did experience widespread war and severe economic fluctuations in the midst of the crisis of the seventeenth century, they

nevertheless became renowned for their art and high culture. The Stuarts in England, the stadtholders in the Dutch Republic, and various German princes illustrated their appreciation of the arts, as was fashionable in other parts of Europe, by furnishing their palaces and courts with vast amounts of paintings. German painters Albrecht Dürer (1471–1528) and Hans Holbein the Younger (c. 1497–1543), and Flemish painter Pieter Brueghel the Elder (c. 1525–1569) all made their living painting for the northern Protestant courts. Many of these paintings exemplified the current themes of this era, namely the glory of political leaders and military victories and the defeat of their Catholic enemies. England and Dutch economic growth was reflected in an expansive investment in such luxuries that they could afford, while in small German principalities it taxed many an overburdened prince's finances.

—Abraham O. Mendoza

Bibliography

- Elliot, J. H. *Spain and Its World, 1500–1700*. New Haven, CT: Yale University Press, 1989.
- Munck, Thomas. *Seventeenth-Century Europe: State, Conflict and the Social Order in Europe, 1598–1700*. New York: Palgrave Macmillan, 2005.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. Malden, MA: Blackwell, 2001.
- Parker, Geoffrey, and Lesley M. Smith, eds. *The General Crisis of the Seventeenth Century*. New York: Routledge, 1997.
- Rabb, Theodore. *The Struggle for Stability in Europe*. Oxford, UK: Oxford University Press, 1975.
- Sturdy, David J. *Fractured Europe, 1600–1721*. Malden, MA: Blackwell, 2002.

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Society and Culture

Most of the world experienced a dramatic change in social apparatus during the early modern period. The advancement of agricultural and naval technologies made possible the subsequent rise in global trade, changing the way many societies interacted both domestically and internationally. Protoindustrial technologies grew. Centralization of power in Europe and Asia restructured social hierarchies across many cultures. Quite often new technological, economic, and political realities restructured societies, altering relationships among rulers, elites, and commoners. As one would expect, the impact of early modern technological and political changes varied widely. Some European societies entered into dynamic periods of rapid change, some stable societies such as China began a slow transition, and the introduction of unfamiliar pathogens devastated vulnerable societies such as those in the Americas. Although the indigenous populations of the Americas provide the most dramatic example, living conditions in rapidly expanding densely populated cities presented public health problems in many areas.

Urbanization accelerated in many areas but perhaps most dramatically in Europe. Towns were not new phenomena in the early modern period, but their size and importance as marketing and financial centers grew as the medieval period ended. Europeans began a slow transition to market-based economic organization. Europe gradually entered the world markets. By the end of the fifteenth century the Portuguese had discovered a sea route to India, finding a way to reach Asia without going over the Muslim-dominated land routes. As the spices and other products began to arrive from Asia and the gold and silver poured in from the Americas, the towns and cities in Europe grew in prominence as their populations rose in response to all of the new economic activity. Despite the growth in importance of these towns, they tended to be more specialized and remained dependent upon the countryside villages for necessities such as food. The close proximity of the villages to the towns facilitated this relationship, but as the market-based economic system developed further, it became more difficult for people in the countryside to survive on subsistence-level production.

In order to ensure sufficient food for their populations, many cities maintained fields and orchards. Inhabitants of cities in places such as Flanders, England, and Italy often left their urban jobs during the harvest and planting seasons in order to work in the fields. Many western European towns retained an agricultural identity despite their urban natures. Fields and orchards were in close proximity, pigs roamed the streets freely, and the streets were often muddy and filled with trash.

Many western European towns retained an agricultural identity despite their urban natures. Fields and orchards were in close proximity, pigs roamed the streets freely, and the streets were often muddy and filled with trash.

Streets in the city of Frankfurt had to be covered with wood shavings and hay before fairs could be held. In 1746 Venice finally prohibited keeping wine in the city. On the other hand, the countryside also had

its share of “urban” tradesmen, such as blacksmiths and artisans. Villages in less urbanized societies, such as in Russia, China, and India, tended to be much more self-sufficient out of sheer necessity. The Russian Law Code of 1649 that made serfdom a permanent status for millions of peasants ensured that the state would remain mostly agricultural in nature. This law restricted these serfs from moving to any other trade, keeping the balance of

the population rather stagnant. Russian cities and towns lost social mobility. These Russian urban areas were already small and few in number; even Moscow only had 40,000 houses in 1636. Thus, the manorial estates had to be self-sufficient and establish many of their industries for the benefit of the serfs and lords. The villages of China and India were not quite as self-sufficient. Peasants could produce most of their own products but did depend on the city for goods such as iron and silk.

Islamic towns tended to have unique characteristics, no matter their location. Most were large, and they were normally remote from one another. The Muslim prohibition against multistory houses (considered prideful) ensured that structures were generally low and clustered together. Mecca and Cairo were two exceptions to this rule. The streets were not paved even in the seventeenth century, which left them muddy in the winter and dusty in the summer. In addition, the streets were extremely narrow and winding, which often left them obstructed with traffic. Despite the disorderly streets, some planning was evident in the towns and cities. The mosque was the center of every town and was surrounded by markets and warehouses. From there the various industries were normally organized in concentric circles and were distanced from the mosque according to their perceived cleanliness or lack thereof. For instance, incense and perfume merchants were usually located closest to the mosque, while blacksmiths and those who managed livestock or beasts of burden established themselves at the outskirts. People from the countryside who sold meat, wood, and crops that they grew in their fields were located by the gates, even farther from the central mosque. Islamic towns also tended to be organized by religious adherence; nearly every town had Jewish and Christian districts.

Chinese cities shared similarities with those in Europe and the Islamic world, but some—Beijing, for instance—also had many unique, purely Chinese aspects. Beijing was surrounded by walls that had at one time been used for security but after 1644 enabled the dynasty to collect tolls and monitor the comings and goings of citizens. Before the mid-sixteenth century those walls had been made of clay, but the Ming had rebuilt them with brick during a campaign to strengthen defense. Beijing was surrounded by suburbs and was itself divided into two main sections: the old town and the new town. The Ming dynasty built the new

town to solve the problem of overcrowding in the old section. However, after the establishment of the Qing dynasty in 1644, Manchus resided in the old town, pushing the ethnically Chinese to the southern section.

The old and new towns shared many similarities. They were both built on a checkerboard plan and tended to be extremely congested. The houses were low, even those of the wealthy. The houses of the elite usually had five or six apartments spread apart on a single level and joined by a common courtyard. Public displays of wealth were considered poor form. Servants' quarters occupied the front, usually behind a gate. The homes of the wealthy shared the streets with artisans' booths and shops, which were intermingled with the gated living quarters. The Imperial Palace was at the center of the old town. Surrounded by layers of thick walls, the area of the palace compound measured over half a mile (.8 kilometers) long and 853 yards (780 meters) wide. The inner sanctum, known as the Forbidden City, housed the emperor, his wife, concubines, children, eunuchs, and guards. The Qing built this structure over the ruins of the old Ming palace as a formidable reminder of their new power.

As time passed, the political importance of the kings and emperors grew as they either centralized their power or, as in the case of China, one failing dynasty (the Ming) was replaced with another more dynamic one (the Qing). Rulers became the epicenter of society and commerce, driving the growth of cities. In Europe this was a significant change from the medieval era of itinerant monarchs moving throughout their kingdoms, dispensing justice, settling disputes, and in so doing limiting the power of regional lords. The new capital city, where the king resided, became a center of trade, creating national markets and drawing a large number of people. It was generally the largest city of the realm. As power centralized in the person of the king, there was less of a need for the king to appear in person. A monarch could remain in one city for most of the year. This phenomenon was not limited solely to Europe. In India the residence of the prince or sultan completely dominated the capital city. However, unlike Europe, in India the capitals tended to shift according to the whims of the monarch. For instance, the capital of Bengal changed from Rajinahal (1592) to Dacca (1608) and then to Murshihad (1704). The court remained the center of economic activity in the city where it was located. The members of the court depended on the prince for their livelihood, just as many city dwellers depended on supplying the court with food and other items as their own source of income. Every time the city lost its royal resident, most people would follow the prince, and the depleted city would lose its status as a major city.

The situation was similar in the Mughal empire. The city of Agra was the original capital city of the empire until Shah Jahan decided to move his court to

Delhi in 1638. The Mughal capital remained in Delhi as long as the sultan remained in the city. Aurangzeb traveled to Kashmir in 1663, and almost the entire city of Delhi followed after. A French doctor who

Every time the city lost its royal resident, most people would follow the prince, and the depleted city would lose its status as a major city.

witnessed the expedition estimated the number of the group to be several hundred thousand. This was not evident in Europe. When the king left the city the court followed, but the city remained functioning and populous. In Japan this system came into being with the advent of the Tokugawa Shogunate, imposed by the shogun himself. The daimyo, or the noble class, were required to establish a residence in the city of Edo (present-day Tokyo) and reside there at least six months a year. The other six months the daimyo were obligated to leave at least one family member in residence in order to prevent any rebellions. In this case proximity to the shogun was not optional, and the nobles were more itinerant than the ruler.

The cities of colonial America did not reach the size and importance of the older cities of Europe and Asia. Paris and Naples had roughly 300,000 citizens in the seventeenth century, but Rio de Janeiro only reached a population of 100,000 in 1800 and was one of the largest cities in the Americas. One reason for this may have been the absence of royalty from the colonies. Until 1807 when King João VI of Portugal sailed to Brazil in order to escape Napoleon's army, no European monarch had ever set foot in one of his or her overseas colonies. Therefore, people who depended on the monarch for favors and livelihood remained in the metropolis. Another reason for the small size of colonial cities arises from the very nature of the colonies themselves and the products they produced. The purpose of the colonies was not to become bustling centers of commerce but rather to provide raw goods to the mother country for manufacturing. Therefore, the plantations, mines, and wharves were the centers of economic activity in the Americas, not the cities themselves. The wealthy elite lived in the rural areas on or near the plantations and mines rather than in cities. Many of the haciendas and plantations actually took the role of villages, operating as autonomous entities not dependent on any cities or towns, as villages in Europe and Asia tended to be. Despite this, in many ways the cities of the Americas were miniature replicas of their European counterparts. Masons and other artisans arrived from Europe in order to replicate the stone buildings and other edifices of Lisbon, Madrid, Paris, or London. While they did not have the wealth or opulence of the European metropolitan cities, cities like Mexico City or Rio de Janeiro had characteristics that symbolized European distinction, reminding the indigenous people that a new power structure was present.

As is true in every society, alterations in the economic structures compelled changes in social organization. Each social class in medieval European society had its own place, resulting in extensive stratification. With the new overseas trade, many merchants became wealthy, achieving higher status at court even as the income from land, upon which the traditional nobility depended, became increasingly uncertain. Intermarriage between the nobility and bourgeoisie merchants became increasingly common. Taxes and the sale of monopolies to overseas traders were enriching kings, promoting centralization of monarchical power. The nobility became increasingly reliant on the goodwill of the monarch. With professionalization of the military, they were no longer the realm's warrior class, although most officers tended to be of aristocratic

birth. Nevertheless, the nobility needed the monarch's friendship and favor to prosper. Nobles did not easily surrender their medieval power, but the increasingly close relationship between monarchs and the merchant adventurers kept the power of the nobility in check.

Because the king and most of the nobles remained in the metropolis, the wealthy planters and merchants became the colonial elite. The lack of a substantial number of eligible Portuguese and Spanish bachelors meant that the normally strict social standards for marriage were relaxed. In Portuguese and Spanish America, even standards of color were sometimes relaxed. With enough money a person could purchase a Certificate of Whiteness, which established that the recipient would be considered white by all institutions no matter their skin color. This was especially advantageous for those elites whose children were mulatto or mestizo, who otherwise could not have been eligible to inherit all lands and titles. The British American colonies had no formal provisions for racial mobility; the colonists were more interested in pushing the natives away from their societies than in attempting integration.

In India many of the Mughals strove for social integration. Babur, the first Mughal emperor, invaded India from Central Asia in the early sixteenth century. A Muslim, he was both an ethnic and a religious minority. The only way he and his successors could rule a people where Hinduism was the religion of the majority was to find a way to ensure the population's loyalty while not infringing on their everyday lives. His grandson, Akbar, was able to achieve this

balance and solidified the sovereignty of the Mughals. Akbar picked all of his 800 wives from families who had served as local rulers and/or governors before the arrival of the Mughals. He ensured the loyalty of the local elites by raising their status in relation to their daughters' marriages. In addition, those daughters could serve as hostages to ensure their families' loyalty. Akbar also employed the system

Akbar picked all of his 800 wives from families who had served as local rulers and/or governors before the arrival of the Mughals. He ensured the loyalty of the local elites by raising their status in relation to their daughters' marriages.

of the *jizya*, or nonbeliever tax, that provided income for the government while allowing Hindus to retain their religions. As a result, he was able to centralize the Mughal power to the point that the entire city that housed the emperor became completely dependent on him and his favors.

In East Asia similar trends were occurring. The Qing dynasty was able to consolidate Manchu power in China and ensure their success for the next 250 years. The dynasty's founder, Nurhaci (1559–1626), prohibited intermarriage and too-close associations between Chinese and Manchus, although these proscriptions were sometimes breached. He also ordered that Chinese men signal their loyalty to the Manchu by adopting the Manchu hairstyle, shaving the hair on the front of their heads and wearing the back in a long braid. Chinese men resented the requirement and protested fiercely, but the Qing held firmly to the policy, suppressing resisters and enforcing the hairstyle requirement. Nevertheless the Manchu, never constituting more than 2 percent of

the Chinese population, remained in power more through collaboration than by force. The Qing adopted many of the Chinese customs and habits, supporting a very conservative Confucian worldview.

All considered, perhaps the greatest cultural impact of the European contact with East Asia was most evident in sixteenth-century Japan. In the fifteenth century Japan went through a period known as the Warring States Era. While the emperor was still the nominal head of the government, the true power lay with the regional lords, who were warring with each other. The arrival of the Portuguese (who introduced firearms) changed the situation. Oda Nobunaga, a territorial lord (called a daimyo), used firearms to defeat his neighbors. By the time he died in 1582, he had succeeded in conquering a third of the daimyo in Japan. Nobunaga's successor, Toyotomi Hideyoshi, completed the unification. While he never achieved the rank of shogun, he was named *kampaku* ("regent"). With this new power, he set about ensuring that he would be able to retain this power. Namely, he had to ensure that the samurai, or the warrior class, would maintain their monopoly on military matters by confiscating all weapons from the peasants in 1588 and having them melted down. He had also had all Christian missionaries exiled from Kyushu the year before. Christianity posed a threat to his power in the fact that it was the religion of the foreign kings and a foreign god, but it had also brought him the power to overtake his neighbors, and he was not anxious to see that occur again. His feelings toward the Christians continued into the Tokugawa dynasty, which started in 1603 and resulted in the banning of Christianity altogether as well as the closing of Japanese borders by the 1630s. In this case the European influence resulted in the centralization of power under the shogun, which brought peace to Japan after a century of war. However, it also guaranteed that their own influence would be almost nonexistent until the nineteenth century.

Innovations of the early modern period transformed societies all over the world. The advancement in both naval and military technology in this period allowed people to move about the world with more ease than ever but altered the balance of power. Empires like the Ottomans, Mughals, and Habsburgs benefited, changing societies not only in the lands they conquered but at home as well. In addition, the new economic forces that resulted from this movement pushed some societies even further into change.

—Monique Vallance

■ Introduction: Village and Town Life—Traditions and Innovations

Towns and villages existed for many reasons in the first global age. Some were agricultural, oriented toward food production for local consumption. Some were oriented toward the production of agricultural goods for export, as were the villages of the wine-growing districts in France. Food production for export also dominated coastal fishing villages. Others were dominated by mining or industry, such as porcelain in China and Japan or weaving in Lancashire in England. Some villages and towns were dominated by a single governmental, military, religious, or educational institution or by trading companies, like the Dutch East India Company's town of Batavia or Albany, the center of the Dutch fur trade in North America. Towns like Qom in Persia and Compostela in Spain were important pilgrimage sites due to their shrines. Some villages were even dependent on criminal activity, such as smuggling.

Expansion and technological and economic change in the first global era led to many changes in everyday life in town, village, and rural settings. The expansion of Western Christian and Islamic civilizations brought with it new institutions such as churches, mosques, and religious courts. The growth of global trade also affected urban development, with the creation of cities to serve as entrepôts. Boom towns were created by economic changes, while other towns languished when their chief industries became economically obsolescent.

Towns and villages were governed by custom and formal law. States were represented sometimes by magistrates from out of the district and sometimes by local elites. Lineage groups played an important role in Chinese communities, as did religious confraternities in the Spanish empire. The idea that cities were corporations with distinct legal personalities, a legacy of classical Greek and Roman civilization, vastly affected the development of urban life in Europe and its colonial empires. Western cities, towns, and even some villages retained a degree of legal independence unmatched by their

equivalents elsewhere in the world. This can be seen in the development of unique civic institutions, such as the town meetings of the self-governing communities of Puritan New England. The Spanish and Portuguese model of village and town life was also exported to their American possessions. Although Islamic cities lacked legal personality, the urban elite had a distinct identity sometimes in tension with that of the state as *ulama*, the learned Muslim scholars to whom many ordinary Muslims looked for guidance. The Ottomans more than other Muslim rulers tried to incorporate the *ulama* into the bureaucracy of the state, but they still remained independent sources of authority in many Ottoman cities.

Although the general tendency in the early modern era, as throughout human history, was for a greater proportion of people to live in towns, villages, and cities than to be nomads or live in isolated settings, not all changes in the early modern era were in the direction of greater urbanization and population concentration. The introduction of the horse to Native Americans actually resulted in deconcentration of Native American populations, as tribes abandoned agricultural villages in favor of a buffalo-hunting lifestyle enabled by horses.

—William E. Burns

Life in the Village and the State under the Great African Empires—Songhai and Kanem-Bornu

During the sixteenth century, the great African empires of Songhai and Kanem-Bornu reached their apex politically, socially, and economically. While the ruling classes of the two empires were privileged, the majority of inhabitants led hardscrabble lives unconcerned with the notions of conquering land and consolidating power that consumed their leaders. Although there were many similarities between life in the two imperial neighbors, there also were substantial differences.

➤ *TARIKH AL-SUDAN*

The *Tarikh al-sudan* (*History of the Sudan*) is the Arabic chronicle of the Songhai empire written by Abd al-Rahman al-Sadi (b. 1594), a bureaucrat and scholar living in seventeenth-century Timbuktu. Much of what we know about the history of the Songhai empire and its major cities of Gao (administrative capital), Timbuktu (scholarly center), and Jenne (trading hub) comes from this chronicle. The *Tarikh* was written more than a half century after the fall of Songhai to invading Moroccan forces in 1591. The 35-chapter work includes the history of several centuries of early Songhai dynasties as well as the Mali empire, biographies and obituaries of notable personalities, noteworthy events, descriptions of major Songhai cities and their environs, and, most importantly, a history of the rise and fall of the Songhai empire and the resultant internal and external difficulties that the Moroccans encountered in administering the conquered lands. While other chronicles such as the *Tarikh al-fattash* covered a similar subject matter, al-Sadi's work is the standard by which other early West African chronicles are measured. The *Tarikh al-sudan* was translated into French at the turn of the twentieth century and was translated into English a century later in 1999.

—Brent D. Singleton

Geographically, Songhai and Kanem-Bornu were centered in the Sahel (semiarid savanna) region of west and central Africa, respectively, and each extended north into the trade and salt-mining settlements of the Sahara. This region had long been fertile for the spread of Islam, and Songhai and Kanem-Bornu were both undergoing Islamization during this period. Many inhabitants of the empires were at least nominal Muslims, often blending Islam with traditional beliefs. Under these expanding empires, both Muslims and non-Muslims alike were being pressed to conform to the more orthodox beliefs and practices of Islam.

Both societies had centralized governments and were highly stratified socially. In Songhai, the *askiyas* (kings) and the Songhai elite benefited from all other elements of society who were in some form or fashion subjugated to the state. For instance, the Sorko, an indigenous

people of the Niger Bend region, were in a state of semienslavement to the *askiyas* and were required to provide transportation and services in the river-based economy. In Kanem-Bornu the *mai* (king) owned all of the lands, and these were divided into fiefdoms ruled over by the royal family and other nobles living in the capital. Using subordinates and local leaders to run daily affairs, each fief ruler was responsible for collecting taxes and raising troops in time of war. The society was broken down into royalty, nobles, and commoners, with each of these groups having several further levels of stratification.

Songhai was economically and politically dependent on the Middle Niger Valley river culture. Its major cities, Jenne, Gao, and Timbuktu, were in close proximity to the river, which favored commerce, communication, and agriculture. However, a large proportion of citizens in both empires lived in relatively small villages. In Kanem-Bornu the villages were made up of family compounds, which were groups of round structures constructed of mud brick supporting conical thatched roofs. Families usually engaged in a common trade and banded together with other families of the same trade group.

Ethnicity played a major factor in both empires. The Songhai conception of ethnicity was more or less delineated prior to the sixteenth century. All non-Songhai peoples were seen as foreign, yet they were incorporated into the empire based upon their value to the ruling classes. For instance, the nomadic Tuareg, Fulani, and desert tribes often provided livestock, while sedentary groups such as the Mande and Hausa farmed, fished, or traded. On the other hand, Kanem-Bornu was dominated by the Kanuri people, a distinction that was dynamic during this period. As groups were incorporated into Kanem-Bornu, they were pressed to become Kanuri through adopting the culture and language as well as Islam (if not already Muslim) and intermarrying with the Kanuri.

Slavery was ubiquitous in both Kanem-Bornu and Songhai whether in service to the state, villages, families, or individuals. Being a slave did not always preclude one from being born into or attaining a high social status or position. Slaves would be found in nearly every class of society in Kanem-Bornu and often owned slaves

themselves. However, the vast majority of slaves in Kanem-Bornu were engaged in menial farm or household work. In Songhai, captives from the nearly ceaseless military campaigns were often enslaved in the cities of the empire or on large agricultural farms, which produced rice and grains. Both trade in and work provided by slaves was integral to the empire's economy. Nonslave commoners who were not directly dominated by the Songhai state or elites were indirectly affected by high taxation on agriculture, trading, and salt mining as well as fear of enslavement, conscription into the military, or both.

—Brent D. Singleton

Bibliography

- Barkindo, B. M. "Kanem-Borno: Its Relations with the Mediterranean Sea, Bagirmi and Other States in the Chad Basin." In *General History of Africa*, Vol. 5, *Africa from the Sixteenth to the Eighteenth Century*, edited by B. A. Ogot. Berkeley: University of California Press, 1992.
- Connah, Graham. *Three Thousand Years in Africa: Man and His Environment in the Lake Chad Region of Nigeria*. Cambridge: Cambridge University Press, 2009.
- Gronenborn, Detlef. "Kanem-Borno: A Brief Summary of the History and Archaeology of an Empire of the Central *bilad al-sudan*." In *West Africa during the Atlantic Slave Trade: Archaeological Perspectives*, edited by Christopher R. DeCorse. London: Leicester University Press, 2001.
- Hunwick, John O. *Timbuktu and the Songhay Empire: Al-Sadi's Tarikh al-sudan Down to 1613 and Other Contemporary Documents*. Leiden: Brill, 1999.
- Kaba, Lansiné. "Power, Prosperity, and Social Inequality in Songhay (1464–1591)." In *Life before the Drought*, edited by Earl Scott. Boston: Allen and Unwin, 1984.

Ottoman Expansionism in North Africa during the First Global Age

Ottoman engagement in North Africa began in 1487, when the Ottoman sultan Bayezid sent ships into the western Mediterranean. He aimed to assist Muslim refugees who were fleeing from Granada (the last Islamic polity in the Iberian Peninsula) to the coast of northwestern Africa (which is the region known as the Maghreb).

Bayezid sent a fleet again in 1492, when the armies of Isabel and Fernando of Spain overthrew Granada and expelled its Muslims and Jews. Ottoman expansion into North Africa then accelerated during the early sixteenth century.

Two events, both in 1517, were critical to this expansion. First, the Ottoman sultan Selim invaded Egypt, which along with Syria had been ruled by the Mamluks, a dynasty of elite Muslim slave-soldiers (as the Arabic term "*mamluk*" suggests). This conquest reflected the Ottoman empire's belated movement into the predominantly Arabic-speaking and Muslim territories of what we now call the Middle East. The conquest also reflected the bid of the Ottoman sultans to fashion themselves as successors to the great empires of the early Islamic era, and notably the Abbasid empire (750–1258), that had once flourished in Baghdad. By expanding into Egypt too, the Ottoman empire was able to assert itself in the Red Sea and the Hejaz (the western coastal strip of Arabia), which contained the two holiest cities of Islam, Mecca and Medina.

The second stage of Ottoman expansion, into northwestern Africa, also began in 1517, when Aruj Reis, a Muslim Turkish-speaking corsair from the Aegean island of Lesbos, offered the city of Algiers to the Ottoman sultan in return for a grant of protection. His brother, known as Khayr al-Din (nicknamed Barbarossa, meaning "red-beard"), succeeded him and extended control to Tripoli so that the Ottoman empire was able to claim what is now Libya as well. Ottoman authorities in Istanbul agreed to regularly send to North Africa contingents of elite Janissary soldiers (whose members had been drawn as boy slaves from the Christian communities of the Balkans and converted to Islam). This Ottoman commitment came at a time when the Spanish empire was coveting the southern Mediterranean coastline and was asserting control over the North African enclaves of Ceuta and Melilla.

In 1574 three years after suffering defeat in a Mediterranean battle against the Holy League (which included Catholic Spain, Venice, and other Italian states), the Ottomans confirmed control over Tunis. By 1587 the Ottoman empire recognized three provinces in the Maghreb, centered on Algiers, Tunis, and Tripoli. The

Ottoman empire never absorbed the westernmost part of the Maghreb, namely Morocco, which instead hosted a series of independent Islamic dynasties.

The most important conduit for Ottoman influence in North Africa, including Egypt, remained its dispatch of military officers from Istanbul. However, direct Ottoman influence remained limited so that local Muslim dynasties, what one may call Ottoman subdynasties, emerged. Typical in this regard was the Karamanli dynasty, which ruled Tripoli from 1711 to 1835.

Ottoman rule over North Africa was highly decentralized and left the provinces considerable autonomy in the running of local affairs. Aside from Egypt (where the Nile River supported a densely settled population that was reliant on agriculture), Ottoman rule was generally limited to coastlines, where cities functioned as hubs connecting trans-Saharan and Mediterranean trade routes. The Ottomans did not control the Saharan interior. West of Egypt, the Muslim urban elites of Ottoman North Africa consisted of three groups: Janissaries sent from Istanbul, Mediterranean corsairs, and *ulama* (religious scholars) who functioned as local Muslim intellectual elite. These groups intermarried, producing hybrid elites like the Kouloughlis of Algiers, Tunis, and Tripoli, whose name, meaning “children of slaves,” reflected their partial descent from Janissary contingents. Ultimately Ottoman rule over North Africa was so decentralized and amenable to local autonomy that it may have amounted to virtual independence for the region. This was especially true after 1801 in Egypt, where an Ottoman officer named Muhammad Ali rose to power.

—Heather J. Sharkey

Bibliography

- Barkey, Karen. *Empire of Difference: The Ottomans in Comparative Perspective*. Cambridge: Cambridge University Press, 2008.
- Kia, Mehrdad. *The Ottoman Empire*. Westport, CT: Greenwood, 2008.
- Marsot, Afaf Lutfi al-Sayyid. *A History of Egypt: From the Arab Conquest to the Present*. 2nd ed. Cambridge: Cambridge University Press, 2007.
- Pitcher, Donald Edgar. *An Historical Geography of the Ottoman Empire*. Leiden: E. J. Brill, 1972.

Muslimization under Idris Alawma

Idris Alawma was the Sayfawa dynasty *mai* (“king”) of the west-central African kingdom of Bornu from roughly 1571 to 1603 and was responsible for consolidating power through military campaigns and strengthening Islamic practices and laws within his domains. Bornu, located in the Lake Chad region, encompassed parts of modern-day northeastern Nigeria, Chad, and Niger and was dominated by the Kanuri ethnic group. The Sayfawa dynasty had ruled over Bornu’s eastern neighbor, Kanem, since the eleventh century; however, the Sayfawas were ejected by the Bulala in the fourteenth century and retreated westward to establish their capital, Birnin Ngazargamu, in Bornu. Islam had gained a foothold in Kanem-Bornu several centuries earlier, yet in Africa, Islam was often accepted by the elites, while they governed non-Muslims or nominal Muslims who retained many elements of traditional beliefs and practices. This was the case in Bornu, which had an amalgamation of Islamic and traditional practices prior to Mai Idris’s rule.

The genesis of Idris Alawma’s Muslimization philosophy was his performance of the hajj (pilgrimage) to the Muslim holy city of Mecca around 1571. Just like several other significant rulers of African empires, the *mai* was changed politically, spiritually, and culturally by his experience in the east. He not only renewed his faith but was also introduced to the broader world, specifically to Ottoman political structures and their superior weaponry and military tactics. He recruited several hundred Turkish musketeers and brought them back to Bornu to train his military, assist in securing Bornu’s tenuous borders, and quell all threats to Kanuri economic and political domination. Accounts from the first 12 years of these campaigns has been preserved in the writings of Idris Alawma’s chief imam (prayer leader), Ahmad ibn Furtu, who wrote firsthand chronicles of these expeditions.

Many of Idris Alawma’s wars were fought against the So, indigenous non-Muslim peoples of various tribes in Bornu. Through Muslimization and introduction of Kanuri culture to the

So, the mai hoped to consolidate his internal power. Bornu used the superior Turkish firepower to overwhelm their poorly armed adversaries. Idris Alawma preferred negotiation and persuasion in subjugating his foes, but his war tactics were often swift and brutal. Recalcitrant enemies were enslaved and their villages and crops burned until they capitulated. In some cases, whole populations were forced out of their lands and replaced by settler groups allied to Bornu. These practices, along with intermarriage between the Kanuri and the subjugated or enslaved indigenous populations, further extended and strengthened Kanuri supremacy in greater Bornu. For over a decade, Idris Alawma led a series of campaigns against the Bulala of Kanem and their allies to pacify border raiders and return the state to the Sayfawa fold. The Bulala eventually agreed to a peace treaty and a vassal arrangement but remained independent of Bornu.

Idris Alawma had savvy diplomatic relations with both the Ottomans of North Africa and the Sadians in Morocco. For instance, in order to fend off a feared invasion by the Ottomans across Bornu's northern border, the mai convinced Al-Mansur, the Moroccan sultan, to supply him with weapons and troops ostensibly to campaign against non-Muslims in Bornu. In return the mai recognized Al-Mansur as the commander of the faithful (leader of the Muslims) as a counterbalance to the Ottoman sultan's claim in Africa. All the while Idris Alawma maintained relatively cordial contacts with the Ottomans.

Despite Idris Alawma's Muslimization policies, the government structure of Bornu remained largely traditional and unchanged, with the exception of his adding a *wazir* (prime minister) to the court. He did, however, strengthen the laws against un-Islamic behavior and more readily enforced them. In addition, the *ulama* (Islamic scholars) began playing a larger role in decision making and dispute resolution, and some mundane aspects of the legal system were placed under *qadis* (Islamic judges). The mai also funded construction of larger mosques made from more permanent mud brick. The Islamic, demographic, political, and military reform policies of Idris Alawma had the effect that

➤ A CURIOUS CUSTOM OF THE MAIS

Many aspects of court life in Bornu predated the introduction of Islam and were drawn from traditional central African customs of divine kingship. One remnant practice generally restricted *mais* from being gazed upon or spoken to directly in public except on rare occasions; instead, he resided in a *fanadir* or remained behind a curtain or veil. The fanadir was a large decorated wooden box with bars in the front, not unlike a cage, with a raised padded platform for him to sit upon as a throne. Similar communication practices employed by Muslim rulers in other parts of Africa have been recorded, including kings who would only speak through intermediaries and others who used the voice of *griots* ("praise singers") to communicate to the public. Despite the mai being behind a barrier, those in his presence still remained at a considerable distance and often with their backs to him. Accounts of the *mais'* appearances before their courts reveal that these were highly ritualized affairs that often included a musical procession and formulaic honorifics between the gathered audience and the ruler. Acts of humility by those at the gatherings such as prostration and applying dirt to the forehead were common.

—Brent D. Singleton

he intended. As his predecessors desired, Kanuri and Muslim domination was firmly established in Bornu, and strong economic centers developed in and around the heart of the kingdom. Idris Alawma's reign guided Bornu into an era of relative peace and prosperity.

—Brent D. Singleton

Bibliography

- Barkindo, B. M. "Kanem-Borno: Its Relations with the Mediterranean Sea, Bagirmi and Other States in the Chad Basin." In *General History of Africa*. Vol. 5, *Africa from the Sixteenth to the Eighteenth Century*, edited by B. A. Ogot. Berkeley: University of California Press, 1992.
- Gronenborn, Detlef. "Kanem-Borno: A Brief Summary of the History and Archaeology of an Empire of the Central *bilad al-sudan*." In *West Africa during the Atlantic Slave Trade: Archaeological Perspectives*, edited by Christopher R. DeCorse. London: Leicester University Press, 2001.

- Holl, Augustin F. C. *The Diwan Revisited: Literacy, State Formation and Rise of Kanuri Domination (AD 1200–1600)*. London: Keegan Paul, 2000.
- Hunwick, John O. “Songhay, Bornu and Hausaland in the Sixteenth Century.” In *History of West Africa*, edited by J. F. Ade Ajayi and Michael Crowder. New York: Columbia University Press, 1972.
- Lange, Dirk. *A Sudanic Chronicle: The Borno Expeditions of Idris Alauma (1564–1576) according to the Account of Ahmad b. Furtu*. Stuttgart: Steiner Verlag Wiesbaden, 1987.

Hindu Village Life in Early Modern Northern India—Zamindars, Caste, Varna, and Jajmani

Village life in early modern northern India revolved around *zamindars* (landlords), local factions, and a system of patron-client relationships called *jajmani*. Although caste (a system of social organization) was important, its influence was connected to other socioeconomic hierarchies and the prevailing system of land ownership and management.

The caste system essentially divided society into two classes: managers and doers, or those who work with their brains and those who work with their hands. The managerial groups in early modern northern India were the Brahmins (traditionally priests), Rajputs (traditionally warriors), and Banias, or merchants of the Vaisya castes, who handled business matters but often controlled land as well.

The word “caste” (from the Portuguese *casta*) first was applied to India’s social structure by Catholic missionaries in the sixteenth century in order to explain the organization of social class (*varna*) and Hindu law, called *varnashramadharma*. This Hindu customary law was not a mere list of rules but instead was a complicated interaction between ideas believed to be eternal truths, and a worldview that categorized all things depending on their ritual purity and inherent power. Powerful objects (such as blood, leather, and corpses) were seen as dangerous and undesirable. Essentially, everyone whose work meant getting their hands dirty was unclean, or ritually polluted, at least to some

extent. Ancient Hindu law books taught that varnas were necessary and needed to protect and support each other. However, these classes were remembered and enforced by a hereditary caste of Brahmin priests.

The varna system was a theoretical basis of village life, but for most villagers in the early modern period *jati*, or lineage, was more important. European travelers at the time often confused varna with jati although not the missionaries who originally coined the term “caste.” One’s jati was either exogamous or endogamous: people either married out of their birth group or extended family or else sought their spouse within it. Generally speaking, varnas were only theoretical categories of little practical use, and they were divided into hundreds or even thousands of jatis. While varna was unchanging and was defined by occupation and ritual purity, the status of a jati could rise or fall depending on the activities of its members. If members of a lineage group behaved badly, their jati might lose status and even fall from a high-ranking varna into a low-ranking one or out of the caste system altogether, becoming untouchables. Every jati therefore had local and regional councils that imposed sanctions on troublemakers, even expelling them entirely if necessary, but these councils also sometimes deliberately plotted collective social advancement by agreeing to adopt the customs of higher castes. In the early modern period, social mobility hinged on the issues of overall sexual morality, widow remarriage, consumption of spirits, commensality, and the type of work that members of a jati performed.

Indian society, however, was not a horizontally constructed layer cake of varnas and jatis. In all villages, the social order was vertically integrated by patron-client relationships, called *jajmani*, uniting high-caste landowners with an array of low-caste servants. Indeed, the term used for “work” in the sense of a job was *naukri*, which meant “service” but implied that one received patronage and protection as a fringe benefit of labor. In most villages, no single family controlled all of the land and labor. Usually village property was owned by several upper-caste families who might be divided along caste lines or some recent or ancient feud.

➤ ITINERANT TRADERS CONNECT THE VILLAGE AND THE WORLD

According to the Orientalist European point of view, early modern India consisted of self-sufficient village republics shaped by primordial institutions such as caste and religion. Above all, according to the early Orientalists, Indian villages did not interact with the outside world: people lived simply, produced what they needed themselves, eschewed trade, and solved their own problems in their *panchayats*, or village councils. This, of course, was simply not true: there were no isolated villages in early modern India. In fact, all over northern India itinerant traders called *beoparis* ensured that each village, district, and region was interconnected in an all-pervasive web of commerce. The term “beopari” means “load-bearer,” and that more or less describes what beoparis did: they hauled heavy commodities like grain from village producers to local and regional markets. Many beoparis were the younger sons of village *rayats*, or peasant

proprietors. Using an initial capital investment provided by their families or perhaps borrowed from village grain dealers, beoparis bought small loads of grain and sold them for a profit at district and regional markets. Few young men remained beoparis long-term. Hauling grain to market, however, was a short-term way to accumulate sufficient capital to begin buying landholding rights, which usually required the payment of a quit-rent to a *zamindar*. Not all beoparis were of the *rayat* class, however. People of almost any caste could become beoparis, and often the sons of laborers could borrow money from a *jajman*, or high-caste patron, in order to earn a nest egg by speculating in the local grain trade. This sort of work enabled young men to marry and settle down usually by becoming a tenant under their *jajman*, whose loan, of course, was repaid with interest.

—James Hoover Frey

Village political life was not as static as early European Orientalist scholars assumed but instead was dynamic and sometimes even exciting. In order to take over and control a village, landlords formed factions, often arrayed along caste lines, and of course each member of the faction was supported by his clients. If a faction controlled enough clients, it could exert a great deal of influence over the composition of *panchayats*. A *panchayat* represented the five *varnas*: the four groups within the caste system and the fifth *varna*, the *panchalas*, or outcastes. Low-caste villagers usually selected a *jati* representative who would support their landowner or his faction. Nor were these factions merely local. The factions into which landlords divided spread across entire districts and regions so that often one or two castes came to dominate land ownership throughout the area.

In northern India, as in most other parts of the early modern world, land ownership was not absolute. Different individuals and groups claimed different rights with respect to the same piece of land. The word for landowner, *zamindar*, was a Persian term used by Mughal revenue officials that literally meant “landholder.” A

zamindar held only the right to collect the ruler’s share of the land’s produce, a tributary tax that was payable in installments often in cash but sometimes in kind. One of the tasks of the *bania*, or village grain merchant, was the conversion of taxes and rents paid in kind into cash or credit that could be used to pay tribute. *Zamindari* grants were obtained from the Mughal emperor or sometimes from a local *raja*, or petty king, and entailed the upkeep of a staff of retainers who dealt with the villagers, measured fields, and assessed the value of different types of crops grown on parcels of land of differing soil quality. In return for managing the often intricate business of revenue collection, *zamindars* were permitted to keep a portion of the land tax for themselves, both as their profit and to cover the cost of collecting the king’s share. Sometimes a *zamindari* estate could be very small: one village or perhaps a part of one village. Often, however, a *zamindari* consisted of several villages or even an entire district. In Mughal political theory, *zamindari* rights could be revoked at will by the king and were not inheritable, but most *zamindars* over time succeeded in making their rights permanent and hereditary.

Meanwhile, those who paid taxes were referred to as *rayats*, a term sometimes translated as “peasant” although that European term can be misleading in an Indian context. Rayats were small-scale zamindars, or village landlords, members of the local landholding castes, who hired laborers to work the land and sometimes rented small plots to subsistence farmers. Rayats and those who worked for them possessed the ultimate right of occupation. A zamindar, according to customary law, could not eject a rayat who faithfully paid the king’s share, while a rayat could not push anyone off the land if they paid their rent. The pattern of rayat landholding was not uniform, however, and this added yet another dynamic to village life. In some places, each extended family of a rayat jati held its own land, but in others the entire jati shared the land’s produce as members of a *bhaiyacharya*, or brotherhood, managing their holdings and making important decisions collectively.

Zamindars and rayats were not the only people who made demands on the produce of the land. Local custom established the pay rates of village servants, which included the landholders’ assistants, Brahmin priests, craftsmen, and others who provided day-to-day services for villagers, and people employed by the panchayat, such as watchmen (*chowkidars*), deed recorders, grain measurers, and so on. The allowances of such people might be a percentage of the harvest or a customary payment in kind, usually measured in *seers*, a unit of weight roughly equivalent to a kilo, or two pounds. Villages were busy places whenever crops were being threshed, for it was at this time that everyone stepped forward to claim their share at the threshing floor.

—James Hoover Frey

Bibliography

- Chopra, Pran Nath. *Some Aspects of Social Life during the Mughal Age, 1526–1707*. Jaipur: Shiva Lal Agarwala, 1963.
- Fox, Richard. *Kin, Clan, Raja, and Rule*. Berkeley: University of California Press, 1971.
- Habib, Irfan. *Agrarian System of Mughal India*. New York: Oxford University Press, 1999.
- Lewis, Oscar. *Village Life in Northern India: Studies in a Delhi Village*. New York: Knopf, 1965.
- Ojha, P. N. *Some Aspects of North Indian Social Life, 1556–1707*. Calcutta: Punthi Pustak, 1973.

Yin Yu Tang—Life in the Qing Village

By the 1790s Salem, Massachusetts, then the sixth-largest city in the United States, had emerged as the leading seaport for the rapidly growing commerce with China and Asia. As trade with Asia accelerated, in 1799 Salem-based sea captains and merchants created the East India Marine Society with a founding charter that called for the development of a “cabinet of natural and artificial curiosities.” Such cross-cultural fascination continued into the twenty-first century. In 2003 the East India Marine Society’s descendent organization, the Peabody Essex Museum, transported to Massachusetts a representative eighteenth-century Chinese merchant’s house.

This house, Yin Yu Tang (Hall of Plentiful Shelter), had been originally built in the small rural village of Hongcun in Xiuning County in the hilly farming region of the Huizhou region of Anhui Province in southeastern China about 250 miles (400 kilometers) southwest of Shanghai. The 4,500-square-foot (418-square-meter) house, which was reassembled in Salem in 2003, is a representative model of the home of a wealthy rural merchant family in China at the start of the Qing dynasty (1644–1911). Eight generations of the merchant Huang family lived in the house from its construction in the early eighteenth century until the last family members left in 1982. The house stood empty until it was sold to the Peabody Essex Museum in 1996.

The Huang family constructed Yin Yu Tang following the basic principles of feng shui. The house is two floors high with a small courtyard in the center. Despite its relatively small size, the house could hold many members of the extended Huang family. Sixteen small bedrooms, two at each corner on each level, are connected by a narrow corridor overlooking the courtyard. There are very intricately carved wooden screens that provided the occupants of each room both privacy and ventilation.

The house is built with a timber-frame construction with a tile roof and exterior masonry walls of brick and sandstone. The inner courtyard, which the Chinese traditionally called a skywell, is the main source of light for the house because there were very few windows on the

outside walls. There are two small pools in the courtyard fed by an underground spring. The pools served as a source of water in case of fire and as a place to keep decorative fish.

Family life at Yin Yu Tang was very typical for Qing-era China. In traditional China it was considered normal for all men in a family to marry and bring their wives to live on the family estate and for all women born to a family to marry and go out to live with their husbands. The extended family, three and at times four generations, would live under the same roof at any one time. Life at Yin Yu Tang followed these social patterns very closely.

Residents of Hongcun Village referred to the house as Qi Fang, or “Seventh Branch,” probably indicating that the house was constructed by the seventh son of an earlier patriarch who thereby started his own new family line or branch. Family records indicate that routine Chinese societal patterns occurred here as well. Daughters left the house when they were married, and the newly wedded brides of Huang family sons moved into 1 of the 16 bedrooms of the house. As it was customary for Huang family men, most of whom were merchants, to be away sometimes for one or more years on business, they only came home for occasional visits. The permanent residents of the house were therefore their wives, children, and elderly relatives.

Since the Huizhou region is mountainous, it is not conducive to the growing of rice, southern China’s staple crop. To prosper, males in the Huang family as well as large numbers of the area’s men became merchants who would sell local products and resources elsewhere in exchange for rice and other goods. Other merchants would set up shops in larger urban areas and send their profits back home to their families. They would only make occasional visits to their village to marry, to continue the family line, and to pay respect to their elders.

The Huang family prospered during the eighteenth and nineteenth centuries but experienced decline in the late 1800s. The family sank into debt and around 1900 turned over several rooms in their home to creditors. After the creation of the People’s Republic of China in 1949, the communist government confiscated two rooms for use by peasant families. During the

Cultural Revolution of the late 1960s the building was attacked by the Red Guard, and many of its traditional artifacts were destroyed.

—Daniel A. Métraux

Bibliography

Berliner, Nancy. *Yin Yu Tang: The Architecture and Daily Life of a Chinese House*. Boston: Tuttle, 2003.

Knapp, Ronald G., Kai-Yin Lo, and China Institute of America. *House, Home, Family: Living and Being Chinese*. Honolulu: University of Hawaii Press, 2005.

The Double Structure of Japanese Life

Social boundaries in mid-fifteenth-century Japan were not rigid. A peasant might work occasionally as an artisan, merchant, or a part-time mercenary. This relative social mobility continued into the Warring States period (ca. 1450–1600), a time when even a peasant could become a victorious warlord, as was the case with Toyotomi Hideyoshi. Gradually, however, warlords, called “daimyo,” changed the organization of land and people in their domains to meet the demands



Screen depicting Nijo Castle and town, headquarters of the Tokugawa family in Kyoto, Japan, early seventeenth century. (Werner Forman/Corbis)

➤ DANZAEMON

Many individuals took advantage of the evolving status system that separated the samurai from commoners during the early formation of the Tokugawa regime in the sixteenth century. For example, Danzaemon was the hereditary name for a family of leather workers who asserted themselves as the leader of *eta* (outcasts who performed duties seen as polluting, including leather works and funeral arrangements) in Edo (now Tokyo) and the surrounding Kanto area. In 1725, the sixth-generation heir, Danzaemon Shuson (1709–1748), strengthened his family's claim by creating a fraudulent lineage that connected his family to luminaries of the past. Nevertheless, the Tokugawa shogunate recognized this Danzaemon and his family's authority, granting its head power and privileges typically reserved for daimyo, such as wearing certain types of clothing or traveling in a sedan chair, and awarded him a large estate and stipend. The shogunate even allowed Danzaemon to judge and punish *eta* and other outcasts in the area as well as demand tribute from them, making him a semi-independent ruling authority. In return, Danzaemon and his heirs supplied guards and executioners, ensuring smooth operation of the Edo penal system, and leather goods (an industry monopolized by the so-called polluted *eta*).

—Michael Wert

of an increasingly violent country. Daimyo gathered samurai in castle towns, attracting merchants and artisans in the process. This separation of people between urban and rural areas developed under Hideyoshi and became a defining feature of the Tokugawa period (1600–1868).

In the fifteenth century, much of Japan's population worked land under the estate (*shoen*) system. Major Buddhist temples, noble and powerful warrior families, and the leader of the warrior government, the shogun, controlled these estates. As long as the cultivators' estates ensured consistent payment of their tax to the absentee landlord (as many lived in the capital city of Kyoto), local people lived with a relative degree of autonomy. Although estates were divided into subunits, only some of these subunits could be described as villages. Villages possessed no legal definitions, such as a document from a lord

defining them. People living in villages might be called peasants or sometimes merchants, depending on their activity at the time. In general, Japan of this period experienced little division of people based on social status.

The entire geographical and social landscape of Japan changed following the Onin War (1466–1467). Years of succession disputes among several influential families, including the reigning shogun's Ashikaga family, destroyed Kyoto, Japan's largest city. Vassal families across Japan sent armies to Kyoto, leaving a power vacuum in the countryside. Daimyo branch families and individual warriors took the opportunity to assert themselves over their lords, a phenomenon known as *gekokujo* ("the bottom overturning the top"). For roughly a century after the Onin War, daimyo changed the organization of people and land in order to defend their domains. Local daimyo castle towns became the new centers of power.

Hideyoshi was the second of three warlords who succeeded in unifying the country and in doing so finalized the organization of land and people begun by many daimyo in the Warring States period. He removed warriors from the countryside, forcing them to live in castle towns. He disarmed commoners in the countryside by conducting sword hunts to confiscate weapons. Finally, he standardized the measurement of land into easily administrated units through cadastral (land ownership) surveys. The final unifier of Japan, Tokugawa Ieyasu, continued the policy of separating the warriors from the peasants.

During the Tokugawa period (1603–1867), the Tokugawa regime emphasized an idealized society composed of rigidly defined status groups. Under the typical Neo-Confucian (a blending of Confucianism and Buddhism) understanding of a hierarchical yet harmonious society, people were born into their status. The four status groups in order of importance to society were samurai, peasant, artisan, and merchant. In the relative peace of the Tokugawa era, samurai became government officials who possessed the requisite ethical and moral talents to rule. They comprised about 8 percent of Japan's total population and lived almost exclusively in castle towns. Peasants were the second most important group because they produced food, while artisans provided goods and services. Merchants were considered

the lowest class because they only desired profit for themselves. There were also marginal groups such as the *eta*, outcasts who monopolized jobs associated with death, including butchers, tanners, and even drum makers.

In reality, however, status distinctions were not so rigid. Instead, it is important to draw distinctions between occupation and livelihood in Tokugawa society. Occupation refers to the economic activity that fulfills one's obligation to governmental authority. For example, a peasant's duty is to pay his share of the village tax owed to the shogunate or daimyo. An *eta* might be required to remove dead animals or function as an executioner. Livelihood, how an individual makes a living, can include activities not necessarily associated with status. This accounts for *eta* who farmed or peasants who traded like merchants or engaged in by-employments such as raising silk worms. Although the status distinction between samurai and commoner was strict, the system was flexible enough to allow commoners to pursue a variety of activities.

From the late nineteenth century, the status system began to break down. Samurai gradually experienced financial difficulties, often going into debt with the despised merchants. Some samurai abandoned their hereditary occupation, in some cases selling their title to wealthy commoners. Domestic political pressures and foreign intrusion from Western countries hastened the collapse of the Tokugawa regime in 1867. Less than a decade later, the modern, centralized Meiji government abolished the samurai class, thereby destroying the last vestiges of the status system.

—Michael Wert

Bibliography

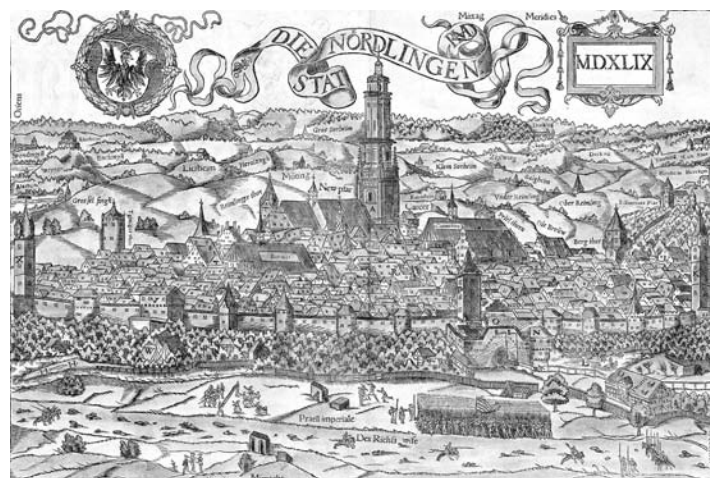
- Groemer, Gerald. "The Creation of the Edo Outcaste Order." In *Race, Ethnicity and Migration in Modern Japan, Volume II, Indigenous and Colonial Others*, edited by Michael Weiner. New York: RoutledgeCurzon, 2004.
- Howell, David L. *Geographies of Identity in Nineteenth-Century Japan*. Berkeley: University of California Press, 2005.
- McClain, James. *Kanazawa: A Seventeenth-Century Castle Town*. New Haven, CT: Yale University Press, 1982.
- Tonomura, Hitomi. *Community and Commerce in Late Medieval Japan: The Corporate Villages of*

Tokuchin-bo. Stanford, CA: Stanford University Press, 1992.

Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.

Village and Town Life in Europe

Everyday life among the common people of early modern Europe's villages and hamlets was marked by the nature of the relationships between these rural towns and developing—or declining—urban centers and regional capitals. Their continued ability to supply most of the agricultural needs of Europe's cities contributed to their enduring agricultural character and traditional culture. However, most villages also relied on local merchants, artisans, laborers, and small tradesmen to provide services for the residents, thus adding a commercial element to their economies. The rhythms of rural everyday life were punctuated by market days, fairs, religious festivals, and other cultural events sponsored by the church, local elites, guilds, or burgher organizations. In addition, local elites provided the town with political leadership and in some instances prestige. The threat of famine and outbreaks of disease posed an immediate threat to town life, exposed to the uncertainty of such phenomena. Witch-hunts, widespread during early modern Europe, were typically ways of coping with such matters by placing blame on supernatural causes and those unfortunate enough to be accused of practicing witchcraft.



Map of Nordlingen, Germany by Sebastian Münster, 1550. (Jupiterimages)

► THE EFFECTS OF ENCLOSURE ON ENGLISH VILLAGES

Land distribution practices during the Middle Ages in Europe parceled land in strips to serfs and peasants adjacent to those of the lord demesne. This communal open-field system led to overgrazing of crops by livestock, which were also shared in common. In contrast, the closed-field system was characterized by small fields surrounded by ditches, earthen walls, and hedges, cutting them off from communal lands for personal consumption and profit. The process known as enclosure, whereby communal lands were fenced in and parceled as private property to small owners, became widespread in England in the eighteenth and early nineteenth centuries. Enclosure limited land usage to the whim of one owner, depriving villages of communal rights to usage of such land. In some instances enclosure occurred due to a decline in population, which reduced the demand on the land and lessened the number of farmers in one region, resulting in the consolidation of holdings under one owner.

The growth of the woolen trades spurred a greater need for enclosure due to the large grazing area needed to feed flocks of sheep. This motivated landowners seeking to become more profit-

able to consolidate their landholdings through enclosure. Increased demand along with a scarcity of tillable land caused rents to rise dramatically in the 1520s to the midcentury. The English Civil War ignited a major surge of enclosures due to the parliamentary support of the rights of landlords and the loss of power of the king, who had been the main advocate against the enclosure process. Widespread enclosures throughout the English countryside resulted in the creation of a hierarchical rural social structure consisting of massive landed estates owned by the aristocracy and the gentry, smaller tenant farmers, and large amounts of laborers who did not own property. Local communities had to reshape their local economies to suit this new arrangement or go under. Towns that were solely dependant on agriculture lost many of their residents to larger urban areas that offered better economic opportunities, fueling the labor needs of the burgeoning Industrial Revolution beginning in England in the late eighteenth and early nineteenth centuries. Towns that already had established links to commercial and industrial enterprises survived the perils of the enclosure movement successfully.

—*Abraham O. Mendoza*

The growing economic vitality of commercial centers throughout England, France, Spain, and the German states of the Holy Roman Empire between the fifteenth and seventeenth centuries allowed adjacent towns and villages to partake in the economic opportunities they generated, albeit to a somewhat lesser degree. Proximity to the great ports, manufacturing centers, and administrative cities such as London, Paris, and the Hanseatic League provided a market and profits for the surplus produce of small agrarian towns and villages. However, the uncertain nature of the international economy could enrich as well as ruin small peasant farmers or even prosperous landed gentry. In towns and villages, dwellers would rely on local artisans, merchants, and craftsmen for finished goods. Small towns did not have the restrictions on manufacturing that guilds had in larger cities, so there was a greater degree of autonomy for small artisans. Doctors,

lawyers, and similar professionals practiced their craft at the local level as well, dependent on the well-to-do town denizens, but were also readily available to socially mobile peasants who lived in the town. The eventual development of the Commercial Revolution in this period would either enrich or impoverish towns and villages, contingent on regional, national, and international economic prosperity.

The cultural and social life of towns and villages differed according to their religious affiliations and their social structure. Following the Protestant Reformation, many towns in northern Europe remained considerably unaffected by changes in the religious denomination of their regional political centers, in contrast to more urban areas. If they changed religions, it was often not due to conviction but rather because of political persuasion coming from the regional capital. However, small towns and villages, both

Protestant and Catholic, continued to have religious festivals and market fairs resulting in communal celebrations involving games, drinking, and music. Local elites and well-to-do merchants helped sponsor such events to add to their luster and prestige among the populace. These elites had a huge impact on local cultural life, given that they represented urban tastes and sophistication to the provincials. Local organizations formed by burghers also subsidized cultural life in towns and villages by providing lending libraries, guild halls, and schools for enlightenment. Local political leadership stemmed from successful town burghers and elites, having already built their reputations on contributions to the town community. Many of these towns were able to purchase charters and rights from the national monarch, excusing them from taxation or granting them privileges such as a royal garrison or stockade in the town.

Famine, pestilence, and witch-hunts also characterized town life in early modern Europe, both in Protestant and Catholic areas. A bad harvest could readily lead to the death of many town residents, which still occurred periodically throughout Europe. Proximity to agriculture did not spare townsfolk from the privations caused by famine. The outbreak of disease, particularly the plague, decimated town dwellers who lived in close proximity to each other, sparing no one regardless of social standing. Typically, famine and outbreaks of disease were blamed on local witches, giving townspeople a ready scapegoat for their frustrations. The witch-hunts of early modern Europe were widespread in small towns, suffering from the hardships of economic peril, bad harvests, and outbreaks of disease.

—Abraham O. Mendoza

Bibliography

- Clark, Peter, ed. *Small Towns in Early Modern Europe*. New York: Cambridge University Press, 1995.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. New York: Norton, 1979.
- Elliott, J. H. *Europe Divided: 1559–1598*. Malden, MA: Blackwell, 2000.
- Munck, Thomas. *Seventeenth-Century Europe: State, Conflict and the Social Order in Europe, 1598–1700*. New York: Palgrave Macmillan, 2005.

Village and Town Life in Spanish America

The establishment of Spanish colonial power in Latin America during the second half of the sixteenth century heavily rested on and adjusted to preexisting patterns of urban, economic, and social life. While regions such as central and southern Mexico and the central and northern Andes were densely populated and had consequently developed an ancient urban tradition, the tropical areas of Colombia as well as the grasslands of modern-day Argentina, Chile, and Paraguay were mostly inhabited by nomadic people, with only sparse and temporary settlements.

In colonial Spanish America, the majority of the Spanish and Creole (Mexican-born Spanish) populations lived in cities founded after the invasion. The indigenous population, which still accounted for the vast majority of inhabitants in Spanish America through the eighteenth century, on the other hand, lived in both rural settlements and urban areas. A fundamental aspect of Spanish administration of indigenous territories was the congregation of dispersed indigenous settlements in nucleated centers, with the purpose of better controlling the local population and facilitating the conversion efforts and the economic exploitation of the labor force. These strategies of forced relocation are known with different names throughout the continent: *congregaciones* in New Spain and *reducciones* in Peru. While the rapid depopulation in indigenous territories was one factor that triggered the congregation of different hamlets into a single larger town, there was also a strong ideological component to this decision. As part of the larger colonizing project, the segregation of the indigenous population from Spanish, mestizos, Africans, and other people of nonindigenous descent was an attempt on the part of the Crown to convert and “civilize” the local population in a setting that was free from the corruption and temptation of Spanish city life. In other words, indigenous people were expected on the one hand to embrace European religion and customs while at the same time remaining different from the Spanish ruling class. Albeit uneven, this process of reduction gave rise to an important economic and administrative pattern in Indian villages. A larger town

SPANISH TOWN PLANNING AND BUILDING

Cities, towns, and even small villages in Spanish America have a distinct architectural and urban imprint. City life revolves around the main plaza, or square, delimited at the four sides by important civic or religious buildings. The city hall and the main church are typically found at one of the square's sides. Porticoes ensure a lively street life, where vendors are free to offer their merchandise to passing visitors. The plaza is the generating element for the surrounding city and its wards, organized according to a regular grid. Distributed among even blocks are the residences of different social classes, and usually the higher the status, the closer is the residence to the main plaza. This design is strikingly different from that of contemporaneous Spanish cities, which were designed according to defensive principles and organic growth. While the grid design became widespread thanks to a series of laws dated to 1571, which attested to the necessity of a clear urban design in connection with the tasks of colonial administration, its origin can be found in Amerindian urban design, which in large as well as small centers was based on the centrality of the plaza, the place where sociopolitical, economic, and religious activities took place.

—Alessia Frassani

was given the status of *cabecera* (“head town”), while smaller surrounding hamlets were designated as *sujetos* (“subject towns”). This hierarchical structure was most likely not in place in the pre-Hispanic period. Other institutions also corresponded to this hierarchical structure, such as the *doctrina*, a principal parish church with a priest in residence in charge of the administration of the sacraments in the main church and the other smaller settlements.

Indigenous villages were subject to paying taxes to the Crown. In the early colonial period the collection of tribute was most often carried out by an *encomendero*, a Spanish conquistador who had been granted privileges to extract tribute and labor because of his participation in the enterprise of the conquest. This institution, however, lasted only a generation, being eventually abolished by the Crown, which took direct control of the tribute payment.

Each town was granted autonomous administration, principally through a political institution known as the *República de Indios* (Republic of Indians), which was opposed to the *República de Españoles* (Republic of Spaniards) found in the large cities. The Republic of Indians was governed by a complex hierarchical structure, based on a rotational system of charges. Only males were allowed to serve in the *cabildo* (“town council”), in different capacities and according to their desire of gaining prestige and privileges in their own community.

Finally, another crucial aspect of rural life in Spanish America was the mission. The evangelical project of the Church was carried out by different orders. While the Franciscans were the first to begin the efforts in central Mexico, Dominicans established the largest number of missions in the southern part of Central America and in South America. Finally, the Jesuits took over more remote areas in northern New Spain and the South American pampas (grassland plains). Ideologically conceived in a similar manner to the Republic of Indians, these missionary establishments enjoyed a great degree of autonomy from the larger colonial system. The purpose was to convert the indigenous population to Christianity in a location removed from the corruption of Spanish society. Missionaries were pioneers in Latin America in the study of indigenous languages, which they first transcribed in Latin alphabet, compiling dictionaries and grammars of many local languages. They also involved hosting communities in the sponsorship of religious celebrations and devotional artworks, allowing for the creation of often unique forms of religious behavior and belief.

Despite the efforts on the part of both the Crown and the Church to maintain racial and cultural segregation, the mercantile economy of the Iberian empires, based on maritime port trades and land commercial routes, together with the high demand in urban centers for servant labor, made racial segregation in colonial Spanish America more an ideological abstraction than reality. Large cities, whether based on a pre-Hispanic foundation, such as Mexico City, or established anew by the Spaniards, such as Lima, possessed a substantial indigenous population and were tied to surrounding smaller

towns by a web of social, cultural, and economic ties.

—Alessia Frassani

Bibliography

- Bailey, Gauvin A. *The Art on the Jesuit Missions in Asia and Latin America, 1542–1773*. Toronto: University of Toronto Press, 1999.
- Lockhart, James. *The Nahuas after the Conquest: A Social and Cultural History of the Indians of Central Mexico, Sixteenth through Eighteenth Centuries*. Stanford, CA: Stanford University Press, 1994.
- Low, Setha M. “Indigenous Architecture and the Spanish American Plaza in Mesoamerica and the Caribbean.” *American Anthropologist* 97(4) (1995): 748–762.
- Spalding, Karen. *Huarochirí: An Andean Society under Inca and Spanish Rule*. Stanford, CA: Stanford University Press, 1984.

Village and Town Life in Colonial Brazil

As the Portuguese established colonies throughout Asia, the cities and towns were built on the Portuguese model and resembled the Portuguese cities and towns. However, when the Portuguese began colonizing Brazil, their cities and towns developed differently. Brazil was different from Spanish America in that there were no large indigenous empires to conquer. The number of indigenous people living there was small, and they were tribal and lived mostly in the interior. The only obvious import at first was the brazilwood tree, but eventually sugar plantations began cropping up. Brazil was an export-oriented colony from the beginning, and its settlements developed accordingly. Because of the high rate of ships that were going to Brazil in order to pick up the brazilwood and sugar, all of the cities were established on the coast, and all contained ports for trade. In addition, the plantations cropped fairly close to the coast as well; all were no more than a three- or four-day ride from any city. Although most settlements were fairly close to each other, their reliance on Portugal for their governmental and economic institutions meant that no network developed between the cities or the plantations until the mid-eighteenth century.

The cities of Brazil remained few and small throughout the colonial period. Most were established between 1580 and 1650, and by 1650 there were less than 40 cities and towns in the colony. In addition, the populations remained very small; Salvador, its largest city, only had 14,000 residents in 1585. Despite the importance of Brazil in producing sugar and eventually with the discovery of gold, Salvador only had grown to 25,000 residents by 1724. As mentioned above, all of the cities contained ports for trade; however, the residents usually preferred to separate themselves from that aspect. The residential neighborhoods were far from the wharves, especially for the benefit of their wealthier citizens, who did not want to be reminded of the activity while at home. However, the wealthiest colonists did not have a large presence in the cities throughout the year, as the plantation owners favored staying on their plantations, which provided many of the benefits of the cities. Despite the difference in size and composition, the cities did resemble the cities of Portugal in other ways. During the sixteenth century, a large amount of cut stone and tile was shipped to Brazil from Portugal in order to build many of the religious and civic buildings that were aspects of every Portuguese city. Most importantly churches were built, and these buildings became important centers of both religious and civic ceremonies while providing character for the neighborhoods in which they resided.

With the exponential growth of sugar exports in the seventeenth and eighteenth centuries, the plantations, or *engenho*, became important and large settlements. In fact, the existence of plantations meant that there was no need for villages, as the very makeup of the plantations resembled villages. Each plantation contained a manor house occupied by the owner, buildings to house the numerous slaves and employees, buildings for processing the sugar, a chapel, and sometimes even a resident priest. Because of the large number of residents at these plantations, many artisans also came to live there, drawing them away from the cities, which was where they traditionally lived and worked in Europe. The manor house was typically large, two stories, and furnished with many luxury goods imported from Europe. The slaves

were usually housed in barracks-style single-sex buildings, which prevented men and women from developing a family life, even when they shared children.

The final settlement developed to establish the colony was the *aldeia* system. The aldeias were missions established by the Jesuits for the purpose of converting the indigenous population to Christianity. The aldeias also served to resettle the peaceful natives from their own villages. Besides the obvious religious goals, the aldeias also served to help settle the interior, which was lacking in European colonies, and protect it from encroachers. The aldeias were originally meant to produce agricultural products to sell, but the realities were far different. Even though each aldeia had at least 2 resident Jesuits, there were many Jesuits who traveled among the aldeias, which usually spread disease. This was compounded by the fact that celebrations and processions were occasionally held at the aldeias and nearby settlers were invited, and some aldeias had as many as 5,000 residents. Disease killed many of the natives, and some managed to escape, which meant that the aldeias barely produced enough food to support themselves, and sometimes they did not. The Jesuits also managed to become entangled in disputes with nearby settlers, who were eager to use the indigenous people as slaves. In the end, the aldeias were only able to maintain their populations by bringing in more and more indigenous people. Unfortunately this only exacerbated the problem, as the new residents were particularly vulnerable to disease especially because of the forced resettlements and the new sedentary lifestyle.

The settlement of Brazil brought about a different style of colonization unseen anywhere else. For most of the colonial period, Brazil's social life coincided very closely with its economic life. Populations of cities grew and fell around the growth of the export products of different regions. Therefore, the cities remained small and relatively unimportant. The population of Brazil remained divided among the various plantations, whose importance drew people away from the cities. As for the indigenous population, their forced resettlement into the aldeias caused large amounts of deaths due to disease while enabling the Portuguese to settle the outer frontiers where

the natives had previously resided. The aldeia is another example of the economy becoming intertwined with society, as the aldeias were supposed to provide Brazil with a labor reserve. The failure of this system to do that brought the introduction of African slaves to the plantations and mines. This economic order dictated the social and political order, placing the wealthy plantation owners on the top and in the position to influence Brazil's path down to the twentieth century.

—Monique Vallance

Bibliography

- Bethell, Leslie, ed. *Colonial Brazil*. Cambridge: Cambridge University Press, 1987.
- Burkholder, Mark A., and Lyman L. Johnson. *Colonial Latin America*. Oxford, UK: Oxford University Press, 2004.
- Metcalf, Alida. *Family and Frontier in Colonial Brazil: Santana de Parnaíba, 1580–1822*. Austin: University of Texas Press, 2005.
- Russel-Wood, A. J. R. *Society and Government in Colonial Brazil, 1500–1822*. Austin: University of Texas Press, 1992.

Carib Slavery—Spanish Colonial Control over Caribbean Labor

Slave regimes made an early appearance in the Americas, starting with the Spanish who specifically targeted Caribs, especially after having decimated the Taino population on Hispaniola. Spanish colonizers employed slavery as one means of securing labor on the island of Trinidad, in eastern Venezuela, and from the Orinoco River delta to the south of Trinidad. Whether target populations were to be enslaved or not depended on whether the Spanish needed peaceful populations to mine gold and provide needed foodstuffs (through trade or tribute) or instead needed laborers to be shipped to other parts of the Caribbean as slaves.

Spaniards began to trade indigenous Trinidadian slaves to islands in 1503, sending them to the northern Venezuelan coast, where they were used in the pearl fisheries, and soon to Puerto Rico and Santo Domingo. Although Diego Columbus, Christopher Columbus's eldest son and viceroy of the Indies, began exporting Carib slaves from Trinidad to Margarita in 1509, by the following year a royal decree put a momentary

► WHEN DID THEY BECOME CARIB? THE POLITICAL ECONOMY OF A LABEL

The Caribbean Sea was named with reference to the Caribs. Spanish designation of certain groups as *Carib* was motivated by the desire to secure slave labor in ways consistent with the wishes of the Spanish Crown and with the drive for capital accumulation. *Carib* slaves taken from the north-eastern coast of Venezuela were actually branded with the letter “C” on their thighs. The “C” indicated either their destination—Cubagua or Castille—or their origin as Caribs. For the Spanish invaders, there were no concrete cultural traits that defined an indigenous American as *Carib*; instead, if natives responded to Spanish incursions with violent resistance then this so-called warlike act, by definition, merited application of the *Carib* label. As if to dramatize *Carib* savagery, a myth was developed suggesting that they feasted on human flesh as a matter of routine. Indeed, at one time the words “*Carib*” and “*cannibal*” were cognates, the latter a derivative from Columbus’s transcription of the word “*caniba*,” which later became “*canibal*” or alternately “*caribal*.” No actual incidents of cannibalism have ever been documented in the Caribbean. Indeed, the early tales of cannibalism consisted of beliefs masked as factual assertions. For example, Gonzalo Fernandez de Oviedo, a sixteenth-century colonial chronicler, wrote that “the

island of Trinidad . . . is populated by *Carib* Indians bearing arrows. . . . They are a very bellicose people, naked and idolatrous, and they eat human flesh, and beneath these vices one must believe that they have many others.” The myth was enough, however, to disqualify Caribs from Christian salvation and thus human freedom, the subject at the center of the famous debates between Bartolomé de Las Casas and Juan Ginés de Sepúlveda in 1550–1551. To determine where the Caribs were located was no easy proposition, given that Spanish economic needs and early colonial geopolitics shifted frequently. Trinidad’s natives were deemed *Carib* and then not *Carib* in a rapid succession of several edicts. Matters became so obscure that in 1518 the king appointed a judge, Rodrigo de Figueroa, to produce a definitive classification of indigenous groups throughout the territories known to the Spanish. Labels continued to shift until well into the 1700s, and the debate as to whether Trinidad’s natives were *Carib* continued into the 1940s. Many indigenous communities adopted the label for themselves by the 1600s to signify bravery and to signal their resistance to the Spanish. Self-designated *Carib* communities continue to exist today in Dominica, St. Vincent, and Trinidad.

—Maximilian C. Forte

stop to the trade in *Carib* slaves from Trinidad. The main justification was that the island was said to house gold deposits, requiring a peaceful population in place to mine it. Just over a year later, with no gold discovered and Trinidad’s natives engaged in resistance, the king issued a decree that once again legalized their enslavement. Yet another royal edict in 1512 reversed this decision, which was itself reversed in 1518, and reversed again in 1530. Given the assumed proximity of the mythical El Dorado in the land of Meta, presumed to be located in the Orinoco region, Trinidad’s strategic value for the Spanish was heightened in the 1530s. As a consequence, Spanish authorities deemed peaceful occupation of the island to be desirable, leading them to seek out indigenous peoples as partners rather than slaves.

One avenue for Spanish capital accumulation came through the appropriation of native

trade networks. It became convenient to mark as “*Carib*” those native polities that controlled the trade in tobacco and corn and resisted Spanish efforts to encroach upon local exchange networks. As a result, in 1547 the king of Spain officially permitted colonists in Puerto Rico to wage war on the Caribs and to enslave them, specifically targeting native populations in Guadeloupe, Dominica, Martinique, and Trinidad.

By 1642, King Philip II of Spain announced the cessation of military attacks on indigenous communities. Coerced labor was terminated in the Orinoco region in 1686 by Trinidad’s governor as a means of achieving more peaceful relations with aboriginal communities. In that same year, the Capuchin order was instructed by the king to establish missions there. By 1716, *encomiendas*, the Spanish estate system that operated with coerced labor, was abolished throughout the Spanish empire and replaced by

Catholic missions that appropriated indigenous labor for themselves. By 1756, the legal provision for the enslavement of rebel Caribs was finally terminated.

The Catholic Church itself became an economic power in the colony of Trinidad with the establishment of missions from the mid-1600s. The church appropriated almost all the native labor force and became a leading producer of cocoa, perhaps the most lucrative cash crop to be produced in the Caribbean at the time, destined for export to Europe. All natives in the missions were subject to the missionaries for a period of 20 years. At the end of this period of indenture and in keeping with their new status as freemen, a tax was imposed on each of them.

—Maximilian C. Forte

Bibliography

- Davis, Dave D., and R. Christopher Goodwin. "Island Carib Origins: Evidence and Non-evidence." *American Antiquity* 55(1) (1990): 37–48.
- Newson, Linda. *Aboriginal and Spanish Colonial Trinidad: A Study in Culture Contact*. London: British Academic Press, 1976.
- Whitehead, Neil L. *Lords of the Tiger Spirit: A History of the Caribs in Colonial Venezuela and Guyana, 1498–1820*. Koninklijk Instituut, Caribbean Series 10. Dordrecht, Holland: Foris Publications, 1988.

Town Meeting and General Court—New England's Representative Institutions

The General Court, which exercised legislative, administrative, and judicial powers, was the central governing body of Massachusetts Bay colony and the pattern for colonial government in such neighboring settlements as Connecticut, Rhode Island, and Plymouth. The town meeting, an assembly of all enfranchised townsmen, was the primary decision-making body of a town, which was the principal unit of local government in colonial New England.

In March 1629 Charles I issued a charter for creation of the Massachusetts Bay Company, a joint-stock trading enterprise formed by a largely Puritan group of investors to develop trade and settlement in the Massachusetts Bay region.

The charter empowered the company to hold quarterly "Great and General Courts" at which company shareholders or freemen conducted company business and framed such rules and regulations as seemed advisable, so long as they accorded with English law. Although most of the company's Puritan leadership opposed the religious policies of the king, only a minority were so dissatisfied as to contemplate moving themselves and their families to New England. However, in August 1629 a group of future immigrants led by John Winthrop convinced the company's General Court to authorize transfer of the company and its charter to New England, an unprecedented action that in effect transformed the company into a colony and its governing body, the General Court, into a colonial government. The government of Massachusetts Bay colony would thus not be in London but instead would be in America, where in the seventeenth century it was well beyond the effective control of king and bishops. In 1630 Winthrop, who had been chosen as governor, led an expedition of almost 1,000 families, mainly Puritans, to settle along Massachusetts Bay.

Because only Winthrop and a few other members of the 1630 expedition were company freemen and because only freemen could vote in the General Court and only the General Court could elect the governor and his 18 assistants, unrest over the narrow scope of political power in the colony grew quickly, and many settlers petitioned to be freemen. In 1631 the General Court admitted another 118 settlers to freeman status, and in 1632 all male heads of households who were church members of good standing were declared freemen. Because these decisions greatly expanded the size of the General Court, an act of 1634 provided for the election of two or three freemen from every town to represent the local communities in General Court meetings. In 1644 the General Court assumed a bicameral organization, with the governor and his assistants becoming the House of Assistants (today the Massachusetts State Senate) and the town representatives becoming the House of Deputies (today the Massachusetts State House of Representatives). All legislative proposals thereafter required majority support in both houses to become law.

The General Court was the supreme legislative and judicial authority of the colony, able to enact laws and levy taxes. It regulated the economy by setting wages and prices, promoted religion by requiring church attendance, and supported the social hierarchy by enacting sumptuary laws. Especially under Winthrop's governorship, when political power was restricted to church members, the government of the colony was conducted under Puritan principles. However, the government was not a theocracy, for ministers, while extremely influential, were forbidden from holding government office. Magistrates sought and followed the advice of clergymen but were independent from them.

Religion did, however, strongly influence many actions of government, particularly in regard to education. The need to train ministers led to the foundation of Harvard College in 1636, and the need to train children to read the Bible led to a 1647 General Court enactment requiring all towns with 50 or more families to fund a local public school. Puritan dominance also led to strict suppression of religious dissent. In 1635 Salem minister Roger Williams was brought before the General Court and ultimately banished from the colony for preaching separation of church and state. In 1637 the General Court also banished Anne Hutchinson for claiming direct revelation from God and banished John Wheelwright for challenging the religious authority of the government.

Within each of the towns that quickly sprang up in the colony, local government was conducted by town meeting, an assembly of all town freemen. Town meetings elected local magistrates, founded and funded local schools, provided relief to the poor, organized defenses against Indians, built roads and other improvements, and provided all necessary local services. In 1636 the General Court officially confirmed the self-government of colony towns. Over the course of the century, as towns grew in size and population, the powers of the full town meeting passed increasingly to a body of elected selectmen who oversaw the daily functioning of local government. Thus, over time both colonial and town government became less direct and more

➤ CAMBRIDGE AGREEMENT, 1629

At a meeting of the mainly Puritan shareholders of the Massachusetts Bay Company held in Cambridge, England, on August 26, 1629, a group of 12 shareholders led by John Winthrop signed an agreement pledging to immigrate with their families to New England. Because the company charter did not stipulate where company meetings were to be held, Winthrop's group demanded that they be allowed to carry the company charter with them to Massachusetts, thus in effect transforming a trading enterprise into a self-governing colony and the company management into a colonial government.

Although no other colony was without a governing board in London, the General Court of the Massachusetts Bay Company voted on August 29 to allow the transfer of the charter to America. All shareholders who were unwilling to resettle in Massachusetts agreed to sell their shares in the company to Winthrop's group, who then formed the General Court, or governing body, of the new colony when Winthrop's first colonists landed in America in June 1630. By this Cambridge Agreement, the Puritan settlers of Massachusetts, thousands of whom entered the colony during the Great Migration of the 1630s, ensured their ability to govern themselves, particularly in matters of religion, without direct interference from Crown or Church.

—John A. Wagner

representational, although the influence of direct democracy is still strong in modern New England.

—John A. Wagner

Bibliography

- Bremer, Francis J. *John Winthrop: America's Forgotten Founding Father*. New York: Oxford University Press, 2005.
- Dalton, Cornelius, John Wirkkala, and Anne Thomas. *Leading the Way: A History of the Massachusetts General Court, 1629–1980*. Boston: Office of the Massachusetts Secretary of State, 1984.
- Morgan, Edmund S. *The Puritan Dilemma: The Story of John Winthrop*. 3rd ed. London: Longman, 2006.

■ Introduction: City Life around the World

During the early modern period, cities all over the world changed, often due to the dispersal of Europeans and the opening of trade networks. Some new cities were built in previously unsettled locations, but the introduction of new trade routes had an impact on cities existing long before the age of European contact.

Colonial cities were unique in some aspects. They performed a dual function in that they were the social centers for the colonists, but also served as financial centers for both the colonist and the metropolitan (that is, the mother country). Colonial cities usually displayed a hybridization of the native and foreign cultures, and they depended on both the natives and the metropolitans for their existence. All of the major institutions provided by the metropolis, from civic to religious, were housed in the cities, and no matter how well agriculture or mining were developed, they would have had no value without the city because that was where the commercial exchanges occurred. Even though colonial cities all over the world had many similarities, they did show regional variations, reflecting the personalities of the indigenous people as well as that of the colonizers. While these cities were built on the models of European cities, they often took on their own characteristics, in an adjustment to the surrounding social and financial cultures.

Even those cities that were not directly colonized by Europeans were still affected by the increase in trade. Of course, the amount of change was relative to the amount of contact experienced in the various regions. For instance, the African cities that existed along the trans-Saharan trade routes flourished with the gold and salt carried north, and many luxuries that came in from Europe and China. After the Portuguese began interacting with the Africans, and the slave trade intensified throughout the sixteenth century, these cities diminished as the Europeans began depending on the sea routes for their trade with Africa and Asia, leaving the land routes insignificant. In India, there were many factors that led to its urbanization in the fifteenth century under the Mughal empire, but one of these was

the increased trade with the Europeans. As the popularity of Indian products grew in Europe, the cities of India also grew increasingly larger and wealthier. In contrast, the cities of East Asia were less affected by European influence, mostly because the foreigners were kept at arm's length. In Japan, first the Portuguese and then the Dutch were isolated to a small islet called Dejima (Nagasaki) by the mid-seventeenth century, limiting the influence they could have over Japanese society in Tokugawa Japan. China's case was a bit different, as they also tended to keep the Europeans at arm's length, but did not isolate themselves to the point that their neighbors did. However, the Chinese government largely ignored the coast and did not invest much into building up its defenses or cities because the scope for trade on the southern coast had been traditionally limited, and therefore it concentrated more on building up northern defenses and monitoring inter-provincial trade. Therefore, the coast in provinces like Guandong (Canton) were mostly left to their own devices, allowing private enterprise to flourish, and the trade with Europeans grew. While the coastal cities did not attain major importance until the nineteenth century when trade reached its full intensity, the beginnings can already be seen in the seventeenth century in cities such as Canton, Xiamen, and Ningbo.

—*Monique Vallance*

For Gold and Slaves—Africa's Coastal Cities

The emergence of African coastal cities (most importantly those of West Africa) has been partly traced to the European expansion of the fifteenth century. The expansion was economically motivated by the desire to get to the source of gold, which the Portuguese believed was in West Africa. The first area of the African coastline to be explored was Cape Bojador, in 1434. Subsequent voyages led to the exploration of Cape Blanco, the mouth of the Senegal River, and the Cape Verde Islands in 1434, 1442, and 1444, respectively. The Portuguese established trade relations with Africans along the coast, and items

➤ BENIN

Benin Kingdom (located in present-day Nigeria) is one of the centralized states of the West African forest region. Unlike some African coastal states such as Bonny that owed their rise and expansion to the European presence along the coast, Benin developed as a result of such factors as social organization, short- and long-distance trade, and the emergence of a dynasty of divine kingship. In the fifteenth century, the Portuguese were the first Europeans to establish contact with Benin Kingdom. Coincidentally, the Portuguese came to Benin at a time when the empire was involved in military expansion that led to the subjugation of its neighbors. Benin, like many African states, was thus able to sell its war captives to the Americas. Many of these slaves worked on Portuguese plantations in the Madeira Island of West Africa. Between the sixteenth and seventeenth centuries, Benin did not sell slaves to the Europeans but instead sold commodities such as pepper, ivory, cotton cloth, and gum. The Europeans then sold these commodities to the Akan of present-day

Ghana in exchange for gold. Benin's king exerted a monopoly on commodities such as firearms, pepper, and ivory. By monopolizing the trade in these items, the king was able to wield considerable power. Benin resumed the sale of human beings to the Atlantic slave trade in the eighteenth century.

Benin's relations with the Europeans were not only in the areas of commerce and trade. The kingdom was one of the first African states to welcome European missionaries. The missionaries were able to preach and convert some Africans to Christianity. In general, these first attempts at Christianizing Africans failed because the missionaries condemned African traditional religion and culture. Unlike most African states, such as Old Oyo empire that fell as a result of internal crises and war, the kingdom of Benin survived until 1892 when the British, during the so-called Scramble for Africa, attacked it and carted away numerous artifacts of enormous value.

—Saheed Aderinto

such as gold, ivory, copper, and human cargo were bought and sold. Fortresses were built as temporary trading and military posts. Elmina Castle, located in present-day Ghana, was the first permanent European trading post in Africa.

The discovery of the New World in the late fifteenth century, the near extermination of the indigenous Native American population, and the beginning of plantation agriculture and mining activities radically changed the pattern of Afro-European relations for more than three centuries. The transatlantic slave trade emerged because of the need for black labor to augment the dwindling indigenous population. Slaves for the transatlantic voyages were derived from a variety of sources, which included but were not limited to raids and wars. Debtors as well as convicts or people accused of crimes such as robbery and witchcraft also formed part of the human cargo sold to the Americas. A large percentage of African slaves sold to the Americas came from the hinterland of the Slave Coast (the heavily populated area that stretched from modern Togo to Cameroon and included the Bights of

Biafra) and the Gold Coast (parts of present-day Ghana and Liberia).

All coastal African states understood the need to protect their trade monopolies with the Europeans and their hinterland neighbors. The people of the hinterlands who were the major suppliers of slaves were not allowed to trade directly with the Europeans. It was also difficult for Europeans to break the monopoly of their coastal trading. Up until the opening decades of the nineteenth century, Africa's tropical environment was a major health threat to Europeans. Sailors recorded increasing mortality rates as trade intensified. Surviving along the coast was a major challenge, and venturing into the hinterland meant courting disease.

Also, the fact that the European was an unpopular figure was another factor that might have persuaded European traders to respect African chiefs and shun the idea of attempting to bypass them by venturing into the hinterland. The coastal city-states continued to monopolize trade until the late nineteenth century, when new economic and political factors combined

with medical and military revolution motivated the scramble for Africa and the demise of the sovereignty of both the coastal and hinterland Africans.

—*Sabeed Aderinto*

Bibliography

- Boahen, Adu. *Topics in West African History*. London: Longman, 1956.
- Davidson, Basil. *West Africa before the Colonial Era: A History to 1850*. London and New York: Longman, 1998.
- Jones, G. I. *The Trading States of the Oil Rivers: A Study of Political Development in Eastern Nigeria*. London: Oxford University Press, 1963.

Trade and Culture Flourish in Africa's Desert Cities

The trade routes that crisscrossed the Sahara spawned a large number of great cities. Saharan trade began several thousand years ago, but it was the arrival of the camel in the third century CE and the spread of Islam across the Sahara in the seventh and eighth centuries CE that accelerated the growth of an expansive network that united North Africa with West Africa through the “ocean” of the Sahara. Camels carried an abundance of material wealth, while Tuareg, Berber, and Arab merchants conveyed cultural and intellectual wealth in their encounters with local populations. The result was a series of trade relations and civilizations, heavily defined by Islam, stretching from North Africa through oasis cities to cities of the Sahel in West Africa and back again.

Long-distance trade stimulated urban growth, and powerful cities developed at the crossroads of trade. By the fifteenth century, gold and salt were in the greatest demand, as only certain goods were suitable for long-distance trade. Other raw materials included copper, iron, ivory, kola nuts, and spices such as cloves and pepper. Books and high-value manufactured goods were also traded regularly. The Songhai empire (1464–1591) that controlled a large portion of West Africa imported shoes from Morocco, cloth from Italy, and silk from China. Between the eleventh and fifteenth centuries, artisans in the city of Djenne (in present-day Mali) produced intricately

designed red-painted terra-cotta vases, and the kingdom of Benin (ca. 1170–1897, in present-day Nigeria) was widely known for its ivory carvings and bronze casts, compensating well for its lack of a gold supply. Slaves were also valuable commodities and were traded frequently. The trans-Saharan trade partially depended on slavery to produce many of the goods that it channeled. Although slavery in West Africa was far different than later manifestations associated with the transatlantic slave trade and slavery in the Americas, slaves during this time in West Africa mined minerals, harvested agricultural products, and wove cotton into cloth, serving a dual purpose as both labor and merchandise.

Across these regions of Africa, cities were chiefly organized around the mosque and marketplace. The spread of Islam and the cultures of African Muslims, including Arab and African cultures, went hand in hand with the growth of trade. Islam was the majority religion in North Africa and most of the Sahara by the eighth century and became the religion of most people in the region by the fifteenth century. Many of the world's greatest mosques developed in these cities, such as Al-Azhar in Cairo, Chinguetti Friday Mosque (in present-day Mauritania), and the Great Mosque of Djenné. Likewise, some of the most important centers of Islamic scholarship (*madrasas*, or universities) emerged here too, offering many areas of study, including Islamic law, algebra, poetry, history, theology, and philosophy. Many of the cities famed for their universities, such as Cairo, Fez, and Marrakesh (in present-day Morocco), Timbuktu (in present day Mali), Djenne, and Gao (capital of the Songhai empire, in present-day Mali), were also the largest in the region. By the fourteenth century the population of Marrakesh grew to 300,000, and the population of Cairo grew to 500,000. In the late sixteenth century the population of Gao climbed to 75,000. Other cities, such as Chinguetti and Sijilmasa (in present-day Morocco) were oasis cities much smaller in population but no less intellectually vibrant. Perhaps no city, however, could rival the intellectual vibrancy of Timbuktu and its mighty Sankoré Madrasah, as illustrated in a famous proverb, “Salt comes from the north, gold from the south, but the word of God and the treasures of wisdom come from Timbuktu.”

► TIMBUKTU

Timbuktu was, for centuries, a metaphor in the Western world for the distant and exotic. It was founded in the eleventh century by the nomadic Tuareg traders, and even the story of how it came to be named has its own mythology. The most common legend was that in the course of their travels, the Tuaregs established a permanent settlement near a well, *tin* in their language, and would entrust their possessions to an honest woman named Buktu. The story goes that ultimately, in order to describe the place, the Tuaregs simply combined the two words: Tin'Buktu, or the "Well of Buktu."

Mythology aside, the history of Timbuktu's rise and fall is quite dramatic. At first merely a camp situated strategically between the Niger Valley and the Sahara, it became a major trading post between West Africa and the world north of the Sahara, as western Saharan trade routes were disrupted by the Arab invasion and Berber aggression. Gold, salt, copper, and slaves were the commodities of choice. Timbuktu served as the

commercial and religious capital of the Songhai empire (in present-day Mali), rivaling the political capital of the empire, Gao, in influence. Travelers told stories of its infinite wealth, and its schools and libraries attracted Muslim scholars from around the world. Thousands of texts generated there still exist, and many are housed in libraries and archives like the University of Sankore and the Mamma Haïdara Library. The city enjoyed a prosperous golden age between approximately 1300 and 1600, followed by a slow decline after the demise of the Songhai empire and the redirection of trade to the Atlantic and Mediterranean coasts by the 1600s.

The city became one of UNESCO's World Heritage Sites in 1988. It has been threatened by the continuing desertification of West Africa, but there have been efforts to preserve the city. In 2005 it was removed from UNESCO's list of endangered sites.

—Allison Sellers and Joel E. Tishken

As empires rose and fell, trade networks ebbed and flowed along with the cities central to these networks. The fortune of many cities declined with the advent of Atlantic maritime trade with Europeans starting in the late 1400s. Trans-Saharan trade managed to survive, in a diminished form, and continued even after colonization. Many of the cities that were born at its termini remained important urban and intellectual centers long after the trade's peak, such as Cairo and Fez, while others, such as Chinguetti and Sijilmasa, are largely ruins.

—Allison Sellers and Joel E. Tishken

Bibliography

- Birmingham, David, ed. *Introductions to History: Trade and Empire in the Atlantic, 1400–1600*. London: Routledge, 2000.
- De Villers, Marq, and Sheila Hirtle. *Timbuktu: The Sahara's Fabled City of Gold*. New York: Walker, 2007.
- Gugler, Josef. "Urbanization in Africa South of the Sahara: New Identities in Conflict." In *The Urban Transformation of the Developing World*, edited by Josef Gugler. London: Oxford University Press, 1996.

Hodgson, Marshall G. S. *The Venture of Islam: Conscience and History in a World Civilization*, Vol. 2, *The Expansion of Islam in the Middle Periods*. Chicago: University of Chicago Press, 1974.

Hopkins, J. F. P., and N. Levtzion, eds. *Corpus of Early Arabic Sources for West African History*. Cambridge: Cambridge University Press, 1981.

Rodenbeck, Max. *Cairo: The City Victorious*. New York: Knopf, 1999.

Constantinople under the Ottomans

The prophet Muhammad is quoted as saying that the city of Constantinople would fall by the hands of a Muslim army. It was the Ottoman sultan Mehmet II, later known as Mehmet the Conqueror, who fulfilled this prophecy and seized the city in 1453. The city's name was changed to Istanbul, and the names of many former prominent buildings such as the basilica of the Haghia Sophia, which became a mosque directly after the conquest, were changed as well.

Ottoman Istanbul was a great and thriving city with a diverse and active population. In addition to the main Muslim population of Turks,

➤ SINAN AND BALYAN—OTTOMAN ARCHITECTS

Yusuf Sinan was born around 1490 near Kayseri and died in 1588 in Istanbul. Commonly known as Mimar Sinan or Architect Sinan, he was the most important architect of the Ottoman sultans in the sixteenth century. His works were considered the peak of classical Ottoman architecture, and his reputation as one of the most advanced builders, engineers, and architects of his time earned him comparisons to Euclid and Michelangelo. Sinan combined artistic expression with sound engineering and created several architectural masterpieces, such as the Sulaymaniye Mosque in Istanbul and the Selimiye Mosque in Edirne. His work has been catalogued, and of the 470 buildings attributed to him, 204 are still remaining.

The Balyans were an Armenian family who over five generations provided the Ottoman sultan and the city of Istanbul with some of their finest architects and builders. During the eighteenth and nineteenth centuries they planned and built many public, sacred, and private buildings, such as mosques, churches, schools, palaces, dams, factories, and residential buildings. Their contractors were primarily the royal family and other members of the elite circles. With their buildings they shaped the European image of Istanbul in the latter days of the Ottoman empire. As architects, they preferred Western-style design; however, they included Ottoman-Turkish styles too. Their largest and most renowned building complex is the Dolmabahçe Palace, residence of the sultan since the middle of the nineteenth century.

—Sebastian Maisel

Albanians, and Arabs, there were Greeks, who returned in large numbers after the fall of Constantinople, and Jews, who emigrated from other European countries in order to escape oppression and discrimination. In Istanbul they enjoyed protection and freedom as *dhimmi*, or people of the book, a special provision in Islam regarding other monotheistic beliefs. Starting in the seventeenth century, Armenians from all territories of the Ottoman empire moved to Istanbul.

European merchants came to Istanbul from Italy, Spain, and the Habsburg empire. Nevertheless, the main cause of constant growth and urbanization was an active Ottoman government

policy of relocating people from the countryside. During the conquest of the city only 36,000 people inhabited the area. Within a century, the number rose to over half a million. By the end of the nineteenth century it climaxed when the population of Istanbul reached over 1 million.

All of the different people contributed to the urban development of the city, and soon a distinct Ottoman architecture was recognized in the public and sacred buildings as well as the palaces. As is common in Islam, the purpose of those buildings was multifaceted. They included mosques as places of worship but also several places of learning and scholarship, the medrese, courtrooms, and mausoleums. The imperial status of Istanbul reached its peak during the reign of Sulayman the Magnificent and the tenure of his star architect Sinan. Sinan's life and career were exemplary for the time period. He was recruited and trained under the devshirme system and rose through the ranks of the Janissaries, where he received the best education possible at this time. The sultan made Sinan his chief architect, and it is said that Sinan built over 300 mosques, palaces, hospitals, schools, bridges, magazines, mausoleums, and baths. The Suleymaniya Mosque can be described as his masterpiece. Sinan modeled it to counter the Hagia Sophia, but although smaller in size, the mosque with its symmetrical and rational design, its four minarets, and the splendid courtyard complex surpassed the former role model and created its own unique style. Future sultans continued building mosques and palaces along the Bosphorus.

While sacred buildings were normally built of stone, those for the public, and even the palaces, were often made of wood. Such were the living quarters and markets, where each community and each guild was assigned a special restricted area. As such, public life and economic activities were highly regulated. Two groups of administrators stand out from a city that otherwise did not have a modern sense of citizenship. On one hand were the government officials, such as police force, fire brigades, and security guards, who were mostly concerned with upholding law and order. On the other hand we find religious leaders whose primary function was to apply the law. However, neither of the two was able to prevent occasional fires from

ravaging through the city and destroying much of the wooden structures.

The city was divided into four administrative units: the main city of Istanbul as well as the three suburbs of Galata (the Christian quarter), Eyyub, and Uskudar or Scutari on the Asian side of the Bosphorus. For over 450 years Istanbul was the center and capital of the Ottoman empire. The sultan governed the empire from the Topkapi Palace, a large complex of private and administrative buildings. After Selim II brought relics of the prophet Muhammad back to Istanbul, the city became the religious center of the empire too. The sultan adopted the title of caliph, thus reuniting political and religious authority in one person.

But soon began the decline. Corrupt officials, competing military leaders, the absence of reform, intrigues within the ruling family, and the partitioning from Western economical concepts led to the slow but constant loss of power, territory, finances, and authority. Although the facade of Istanbul remained decorative, people were referring to the sultan, his city, and the empire as the “sick man of the Bosphorus.”

—*Sebastian Maisel*

Bibliography

- Faroghi, Suraiyah. *Subjects of the Sultan: Culture and Daily Life in the Ottoman Empire*. London: I. B Tauris, 2005.
- Lewis, Bernard. *Istanbul and the Civilization of the Ottoman Empire*. Norman: University of Oklahoma Press, 1963.
- Ousterhout, Robert. *Studies on Istanbul and Beyond*. Philadelphia: University of Pennsylvania Museum of Archaeology, 2007.
- Pamuk, Orhan, and Maureen Freely. *Istanbul: Memories and the City*. New York: Random House, 2006.

Urbanization in Early Modern India

There has been a long history of urban centers in India, starting with the earliest Indus River societies. This heritage was strengthened by the Muslim arrival in India when they brought with them their own urban experiences and orientations. It has been argued that early Islamic society and culture essentially arose from within an urban

environment and depended on it to consolidate and demonstrate Muslim power. It was inevitable that the mingling of the indigenous and Islamic trends would find expression in the extensive urban centers of early modern India.

In seventeenth-century India almost 15 percent of the population (approximately 16 million to 17 million people) lived in urban settlements that ranged from the country town, known as a *qasbah*, to very large concentrations of the population in sprawling cities. It has been estimated that at different times in the seventeenth century, the three large urban cities of Agra, Delhi, and Lahore (in northern India) all had populations over 500,000, and the cities of Ahmedabad and Surat (in western India) as well as Patna and Dacca (in eastern India) each had populations over 200,000. It is interesting to note that both in the percentage of people living in the urban areas and in the number of cities with populations over 100,000, India was probably more urbanized than Europe in the seventeenth century.

Urbanization demonstrated a particularly rapid growth in the early modern period because of the relative stability provided by Mughal rule, the imperial penchant for grand architectural statements, the development of a communication infrastructure that facilitated economic exchange between town and country, and a buoyant economy made possible by agricultural productivity and the considerable international appetite for Indian products (particularly textiles).

Many scholars have emphasized essentially the symbolic role of cities in India as expressions of imperial power and spiritual authority. The administrative centers established in Delhi, Lahore, and Agra attracted religious leaders and new places of worship, and cities such as Benaras became centers of pilgrimage that fostered artisanal, commercial, and service classes. However, while it is undeniable that many cities originated as garrisons, provincial capitals, or sites of pilgrimage, this tendency of concentrating on military, administrative, and ecclesiastical functions as the primary reasons for the growth of cities in India ignores their economic roles. For example, predominantly mercantile and manufacturing centers became the locus of administrative and political authority in cities such as

► DELHI—FROM ANCIENT SETTLEMENT TO THE EARLY MODERN CAPITAL OF THE MUGHALS

Delhi, the long-standing political capital of India, has its origins in ancient myth and lore. It became a prominent center under the Rajputs in the eleventh century. Since that time successive Muslim dynasties (the Khiljis, Tughluks, and Lodhis) in the fourteenth and fifteenth centuries had sporadically used it as a seat of imperial power and added extensions and encampments to it depending on their needs and interests. But it was under the Mughals, especially under Emperor Shahjahan in the seventeenth century, that it became a relatively unified city and (except for brief periods) the unquestioned center of royal authority.

Starting in 1638, Shahjahan built the inner core of the city (then called Shahjahanabad, now Old Delhi) with its walled semicircular area interspersed by several gates. In this area, the Mu-

ghals built the imposing and lavish architecture expressed in the Red Fort, the Jama Masjid, many tombs and mausoleums (several listed as World Heritage sites), and elaborate and splendid gardens. Mughal rulers also presided over an exquisitely refined courtly culture. Most of them were enthusiastic patrons of the arts and culture, and poetry readings, musical soirees, and sumptuous festivals marked their rule over Delhi and made it a glittering showcase of Mughal glory and enlightenment. Unfortunately, Delhi was sacked by the Persian invader Nadir Shah in 1739 and was badly damaged during the British conquest of the city during the Revolt of 1857. Today, Delhi, comprising both Old and New Delhi (the latter built by the British), remains the capital of India and its third-largest city.

—Ahrar Ahmad

Patna, Ahmedabad, and Dacca. In addition, cities that specialized in a particular manufacturing technique, craft skill, or local commodity, such as the port cities of Surat, Masulipatam, and Hoogly, gradually became economically significant centers as well. Thus, Indian cities served as central places or hinges in the complex network of economic, political, and cultural forces operating at the time.

There was an ambiguous relationship between the imperial state and the city. In many cities, especially provincial capitals, imperial authorities would have officers and functionaries (e.g., chief of police, judges, etc.) who helped to establish some degree of control and authority. However, many of the services such as water, garbage disposal, maintenance of religious centers, and other public works mostly remained under private control and initiative. Moreover, the resources and power of commercial groups allowed them to take independent decisions on most economic matters (as long as they did not specifically defy the emperor) and thus served to jeopardize the growth of administrative autonomy, continuity, or commitment.

—Ahrar Ahmad

Bibliography

- Chaudhuri, K. N. "Town and Country in Mughal India." *Modern Asian Studies* 12(1) (1978): 77–96.
- Habib, Irfan, and Tapan Raychaudhuri, eds. *The Cambridge Economic History of India*, Vol. 1, c1200–1750. Cambridge: Cambridge University Press, 1982.
- Naqvi, Hamida K. *Urban Centers and Industries in Upper India, 1556–1803*. New York: Asia Publishing House, 1968.
- Pandey, Gyan. "Encounters and Calamities: The History of a North Indian Qasba in the 19th Century." In *Subaltern Studies*, Vol. 3, edited by R. Guha. New Delhi: Oxford University Press, 1983.
- Ramachandran, R. *Urbanization and Urban Systems in India*. New Delhi: Oxford University Press, 1997.

Macao and Nagasaki—Containing the Outer Barbarians in East Asia

The Age of Exploration led to an explosion of trade and commerce between Europe and all parts of Asia. While the Europeans were able to colonize parts of southern and Southeast Asia, they were never able to properly colonize eastern Asia. As the Europeans dealt with China

and Japan, they found themselves subject to the whims of the individual governments and were never able to gain the supremacy they had gained in the other parts of Asia due to the restrictions placed upon them. They quickly learned that if they wanted to maintain trade in eastern Asia, they would have to follow without complaint the restrictions placed upon them.

When the Portuguese settled Macao in 1557, it was at the invitation of the Chinese government. The reason the Chinese government allowed the Portuguese to have a settlement in the Cantonese peninsula is not certain, but what is known is that the Chinese retained ownership of Macao, while the Portuguese paid a tribute or rent to the government every year. The Chinese had no interest in mixing with the “outer barbarians” and took steps to ensure that the Portuguese would remain separate from the Chinese population. In 1573 a wall and gate, the Porta do Cerco (Circle Gate), were erected by the Chinese. The Chinese built this gate in order to prevent any of the Portuguese from crossing

into China. Inside the gate there was little agricultural land, meaning that the Portuguese had to be dependent on the Chinese and their regular shipments of food in order to eat. The Portuguese did set up their own colonial government, but this was only for administration purposes, as Macao remained under Chinese sovereignty. Despite their attempts to establish their own colonial government in Macao, the Portuguese were never left to forget that they were at the mercy of the Chinese government at all times. Anytime they angered the Chinese officials the gate was left closed for a few weeks, which halted their food shipments, in order to remind the Portuguese of their dependent status. The Chinese were also apt to interfere in Portuguese affairs as they saw fit, and while it angered the Portuguese, their trade base at Macao was too important to risk angering their hosts.

The settlement in Nagasaki began in a different way. Portuguese sailors “discovered” Japan by accident after being shipwrecked on the shores of Kyushu in 1542 or 1543. By the

➤ A FIRSTHAND DESCRIPTION OF DEJIMA

Engelbert Kaempfer (1651–1716) was a German physician in the employ of the Dutch East India Company. He wrote a three-volume book titled *The History of Japan, Together with a Description of the Kingdom of Siam, 1690–1692*. This book serves as a memoir of his time in Asia with the Dutch and gives historians a descriptive insight into how restrictive the Japanese were toward the Dutch living on Dejima:

“But I proceed to a more particular description of the Dutch prison in Japan, for so I may deservedly call their habitation and factory at Nagasaki. . . . [W]e live all the year round little better than prisoners, confin’d within the compass of a small Island, under the perpetual and narrow inspection of our keepers. ‘Tis true indeed, we are now and then allow’d a small escape . . . forasmuch as it is never granted to us unless it be to pay our respects to some great men, or for some other business, necessary on our side, and advantageous for the natives. Nor doth the coming out even upon those

occasions give us any greater liberty, than we enjoy at home, as will appear by the great expences of our journies and visits, great or small, by the number of guards and inspectors who constantly attend us, as if we were traitors and profess’d enemies of the Empire.”

He also describes the yearly trip to Edo that the Dutch were required to take to pay tribute to the shogun. “Upon the journey it self we are not allow’d any more liberty than even close prisoners could reasonably claim. We are not suffer’d to speak to any body, not even without special leave to the domesticks and servants of the Inns we lodge at.”

—Monique Vallance

Source

Engelbert Kaempfer, *The History of Japan, Together with a Description of the Kingdom of Siam, 1690–1692*, trans. J. G. Scheuchzer (New York: Macmillan, 1906), 2:174, 191, 192.

late 1540s Portuguese ships began arriving into Kyushu in order to trade, and a trading center quickly grew, with Nagasaki at its center. With the merchants also came Jesuit missionaries. Priests such as Francis Xavier set up missions in Nagasaki, and the Christian religion began spreading rapidly. By the 1580s there were more than 200,000 Japanese converts, most of whom were among the poorer peasants, but Christianity also reached the higher strata of society. The Tokugawa dynasty began in 1600, and as the century wore on, the shoguns progressively became more isolationist. This was mainly due to the arrival of both the Spanish and the Dutch, who were attempting to usurp the Portuguese monopoly in Asia. The bickering among the Europeans caused the Japanese to mistrust the Europeans' intentions toward Japan and especially their religion.

The fear of the Europeans' religion was substantiated as more and more people converted to Christianity. The concern did not come from the religion itself but rather from what Christianity represented: the worship of a foreign god and the tool of foreign kings.

A subject who worships a foreign god may not be as obedient, and this was a threat to their power. This combined with several clashes between European and Japanese ships prompted the shogun Tokugawa Iemitsu (1604–1651) to issue several antiforeign edicts. In 1633 he decreed that Japanese subjects could no longer travel abroad. Then, edicts in 1634 and 1635 restricted the number of Portuguese in Japan and their movements. In 1636 he converted a strip of sandbar in Nagasaki into an artificial islet of 29,900 square yards (25,000 square meters) called Dejima and decreed that this was the only area in which the Portuguese could reside and conduct their trade. This situation did not last long, as the Shimbara Rebellion, a local rebellion that was politically motivated, took on religious connotations after flying Christian banners. This convinced Iemitsu that he needed to rid Japan of the Christian problem, and he expelled the Portuguese traders.

By 1640 the Dutch were the only Europeans left in Japan, and Iemitsu ordered that they move from their base in Hirado to Dejima. The Dutch were very closely monitored by the Japanese by

a variety of officials, all of whom were paid by the Dutch East India Company. They could not leave the island except for their annual trip to Osaka to pay tribute to the shogun (again, at their own expense). The Dutch were expected to file a report once a year, and all ships arriving from Holland were inspected for weapons and books containing religious material. They were also forbidden from holding religious services on the island. Despite this the Dutch did have a bit of a cultural influence, as Dejima became known as a scientific learning center because many of the books imported from Europe were sold in Japan. This was known as Raganku (Dutch Studies), and many samurai traveled to Dejima to partake in them. Relations continued in this very limited fashion until 1857, when the Dutch trading post was closed.

Both Macao and Nagasaki had dual purposes: to serve as trading centers with the foreign merchants as well as to control how much influence they were able to exert over the native population. Macao and Nagasaki also worked to keep the colonial ambitions of the Dutch and Portuguese at bay while giving the Chinese and Japanese governments the upper hand concerning trade and policy.

—Monique Vallance

Bibliography

- Brockey, Liam Matthew. *Portuguese Colonial Cities in the Early Modern World*. Surrey, UK: Ashgate, 2008.
- Fairbank, John King. *The Cambridge History of China*. Cambridge: Cambridge University Press, 1978.
- Goodman, Grant Kohn. *Japan and the Dutch, 1600–1853*. New York: Routledge, 2000.
- Russell-Wood, A. J. *The Portuguese Empire, 1415–1808: A World on the Move*. Baltimore: Johns Hopkins University Press, 1998.

Ayutthaya as a Cosmopolitan Center

Phra Nakhon Si Ayutthaya, or the Kingdom of Ayutthaya (1350–1767), with its eponymous capital, was officially proclaimed by a prince of the U-Thong dynasty who reigned as King Ramathibodi I (1350–1369) over a loose collection of frequently warring self-governing principalities.

➤ AYUTTHAYA'S PALACES

The kingdom of Ayutthaya was renowned for its architecture, especially for the splendor of its many royal palaces and 400 temples (Wats). Its eponymous capital featured three impressive royal structures: the Grand, or Ancient, Palace; Chantharakasem Palace (Front Palace); and Wang Lang (Rear Palace). Ramathibodi I, the founder of the kingdom, oversaw the construction of the Grand Palace with its five royal halls (Aisawan Mahaprasat, Mangkhalaphisek Mahaprasat, Phaichayon Mahaprasat, Phaitun Mahaprasat, and Trimuk Hall), where he and his successors ruled for 98 years. In 1448 the Grand Palace was rededicated as Wat Phra Si Sanphet, becoming Ayutthaya's most revered religious temple and extending the boundaries of the royal compound.

In 1569 Chantharakasem Palace was constructed by Maha Thammaraja (r. 1569–1590) as a residence for his son, the crown prince and future king Naresaun (r. 1590–1605). Wang Lang was originally used as royal gardens and became a royal residence for Naresaun's brother, Ekathotsarot (r. 1605–1610). The palace was built by his father King Maha Thammaracha and became the preferred residence of royal family members during the later years of the kingdom's rule. Much of the splendor of Ayutthaya has been lost, its palaces and temples razed by the Burmese in their conquest of 1767 and left to decay in the jungle.

—Shelley G. Allsop and
Samaya L. S. Chanthaphavong



Ruins of Wat Phra Sri Sanphet at Ayutthaya, the most dominant state in what is now Thailand from the middle of the fourteenth century until the eighteenth century. (Dreamstime)

Known to Westerners as Siam, the kingdom grew by absorbing its neighbors, including the kingdoms of Lopburi and Sukhothai, and extending its boundaries as far as Angkor. In time the kingdom encompassed an area that covered all but the northernmost and easternmost provinces of present-day Thailand as well as parts of the Bilauktang and Dawna mountainous regions of Myanmar. Hosting diplomatic envoys and commercial agents from China, Britain, Portugal, and Spain, Ayutthaya's strategic location made it a center of domestic and international trade and the region's major cosmopolitan center.

Historians believe that Prince U-Thong originally migrated to the rich plains of the Chao Phraya basin from the northern provinces in a bid to escape a cholera epidemic. He chose an agriculturally and economically strategic site at the convergence of three major rivers: the Chao Phraya, Lopburi, and Pa Sak (north of present-day Bangkok). The city of Ayutthaya was located on an island, with the three rivers surrounding it forming a defensive moat. Additional access to the sea supported overseas trading, and the busy port of Mengui (Bay of Bengal) ensured that Ayutthaya became one of the richest economies in Southeast Asia.

The kingdom arose as a commercial and cultural center, particularly during the guidance of Ramathibodi II (r. 1491–1529), by taking advantage of its strategic geographical location. Merchandise flowed in from the Malay Peninsula, India, Japan, and China from Arabian and Persian cities and, with the establishment of Europe's East India companies, Spain, Portugal, France, and the Netherlands.

From the fourteenth to the eighteenth centuries China was a major trading partner of the kingdom. This was frequently a tumultuous relationship, requiring Ayutthaya to pay tribute to the Celestial Empire. Under the Ming, China came to reassess the importance of private trade and awarded the kingdom favored trading status. Chinese merchants who settled within the kingdom established a commercial network, and Ayutthaya came to specialize in trading Chinese luxury goods, especially silk and ceramics, throughout the region. Japanese merchants also established quarters within Ayutthaya, directly opposite the Portuguese settlement, providing a direct trading route between Southeast and East Asia. Ayutthaya welcomed European merchants and diplomats as early as 1511, when Portuguese diplomats arrived by way of Malacca (Malaysia). Ayutthaya and Portugal signed a treaty in 1516 that allowed for Portuguese settlement, trade, and religion in exchange for Western firearms.

Ayutthaya became a pawn for competing European interests, but for a period its rulers succeeded in maintaining the kingdom's independence and stability. The Dutch East India Company (Verenigde Oostindische Compagnie) and the British East India Company vied for strategic advantage within Ayutthaya, and by the seventeenth century the Dutch East India Company was able to plant a commercial base in the capital. Both companies invested heavily in Siam, establishing manufacturing centers in Patani and Ayutthaya that employed both local and foreign workers, while the French invested in education and medicine. Codifying civil and criminal laws, Ayutthaya's rulers centralized their power over the kingdom's political, economic, and religious structures, making Ayutthaya an international power. In 1609 the first Siamese embassy was received at the Hague, a testament to both its commercial and political

strength. Ambassadorial delegations were sent to the major trading partners of France, Portugal, and England. Ayutthaya welcomed French ambassadors in 1685, 1686, and 1688, and Western visitors lauded the splendor and glory of the city evidenced by the three palaces, almost 400 temples, and fortresses. The capital grew to have a population of more than a million people before it was sacked by the Burmese in 1767.

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Bibliography

- Dumarcay, J., and M. Smithies. *Cultural Sites of Burma, Thailand and Cambodia*. London: Oxford University Press, 1995.
- Hall, D. G. E. *A History of South-East Asia*. London: Macmillan, 1968.
- Kasetsiri, C. *The Rise of Ayudhya: A History of Siam in the Fourteenth and Fifteenth Centuries*. Ithaca, NY: Cornell University Press, 1973.
- Smith, G. V. *The Dutch in Seventeenth Century Thailand*. DeKalb: Northern Illinois University Press, 1977.
- Tarling, N. *The Cambridge History of South-East Asia*, Vol. 1, *From Early Times to c. 1800*. London: Cambridge University Press, 1992.

Portugal's Colonial Cities

The Portuguese empire was one that encompassed four continents and thousands of miles. It spread across many cultures, but despite this they were able to leave a permanent mark wherever they went. Cities in Africa, Asia, and South America all bore similar Portuguese characteristics in architecture and government, unifying them with the mother country.

The establishment of trading posts and forts along the western coast of Africa was the beginning stages of what would become the Portuguese empire. Eventually, the Portuguese transitioned to building cities in the major ports where they traded, such as Macao, Goa, Luanda, and Bahia. Unlike the Spanish who built their cities atop previously existing ones, the Portuguese built their cities in areas where no city had existed before. This accounts for the nature of the cities, built in the same manner as cities in Portugal. Until the mid-eighteenth century the Portuguese constructed their colonial cities

with narrow, winding streets, and the houses were built extremely close together. This does not mean that the Portuguese were poor urban planners, but oftentimes the cities grew larger than had originally been planned, causing the outskirts to grow in an erratic manner. The proximity of the housing was often the culprit in the spread of disease and fire. In addition, the buildings were built in the Portuguese Manueline style, making them the most obvious reminder of the city's colonial status. However, there was not a total loss of the local culture, as many of the Portuguese immigrants were known to decorate their homes, both inside and out, with local stones and art. Finally, many of the cities were planned in a similar manner to Lisbon and Porto in that the important government and religious buildings were built high up in the hills in a defense position, while the commercial buildings were built below, or in the *baixa*.

Another major similarity among the cities of the Portuguese overseas empire was the establishment of Municipal Councils (*senado da camara*) and Holy Houses of Mercy (*Santa Casa de Misericórdia*). These two institutions had their foundations in the cities of Portugal and were thus transferred to the colonies as well. The purpose of the Municipal Councils was to administer the business of the colonies. Unlike the governors that came and went, the councils were a permanent fixture in the colonists' lives. It also gave wealthier city members a chance to gain elite status, as the core of the councils consisted of anywhere from two to six *homens bons*, or "worthy men," depending on the size and importance of the city. The councils also decided on important matters, such as the regulation of commerce. Superiors could not overturn the decisions of the councils, unless it came into conflict with a royal law. In addition, the councils also consisted of four councilors who were representatives of the professional guilds (masons, tailors, cobblers, etc.). Although from the artisan class, these men had the same voting rights as the other councilors in matters pertaining to the guilds, and they advised the council on matters such as the prices set by the various journeymen and master craftsmen.

While the Municipal Council was the administrative arm of the colony, the Holy House

of Mercy was the religious branch. Like the governors, the bishops were transitory, and so the Misericórdia, as well as the local church, were the stable religious figures in the colonial cities. However, many laymen served in this organization, usually from the elite. The Misericórdia was responsible for the charitable functions of the city. They ran hospitals, orphanages, and gave charity to the poor. Because of the impractical nature of giving these services to the entire populace, especially in regions with slaves, these services were normally reserved for the Christian population. In the beginning, the leadership was also determined to maintain "racial purity" among its members. However, this became impossible as miscegenation became more pronounced and the *mestiços* became more numerous. Also, members of the Misericórdia were not supposed to be members of the Municipal Council and vice-versa. By the eighteenth century this rule began to be overlooked and corruption grew along with the wealth in the empire. However, despite these shortcomings, this uniquely Portuguese institution aided colonists and provided a safe haven for many whose lives had fallen on disastrous times.

One thing that was not consistent throughout the empire was the treatment of the natives by the colonial government. In some instances, the natives were left relatively alone, in others, they were given strict European standards by which to live, and still others were somewhere in between. One example of an in-between model is that of Goa, India. The first governor of Goa, Afonso de Albuquerque, was careful not to interfere too much with the local Hindu customs and practices. However, he did highly encourage marriage between Portuguese men and Muslim widows. All of these couples received a house, land, a horse, and money. However, once the Inquisition was established in 1560, all converts were thereafter forbidden from participating in any Hindu ceremonies or rituals. Because of these actions, a unique Indo-Portuguese culture grew within Goa because the two cultures were allowed to flourish simultaneously. Indeed, the lack of Portuguese women in Asia caused the men to intermarry with local women, which created hybrid cultures in many of the cities. However, in many cases the colonial elites still

attempted to keep their families “white” by ensuring their daughters married white men, whose families were “pure of blood,” meaning lacking any Jewish ancestry.

The nature of Portuguese colonization meant that their imprint would last centuries. In fact, most of the cities that were once part of the Portuguese empire still retain their undeniable Portuguese character among the edifices of the city, as well as in the people themselves.

—*Monique Vallance*

Bibliography

- Boxer, C. R. *The Portuguese Seaborne Empire: 1415–1825*. New York: Knopf, 1969.
- Boxer, C.R. *Portuguese Society in the Tropics*. Madison: University of Wisconsin Press, 1965.
- Brockey, Liam Matthew. *Portuguese Colonial Cities in the Early Modern World*. Burlington, VT: Ashgate, 2008.
- Russel-Wood, A. J. R. *A World on the Move: The Portuguese in Africa, Asia and America, 1415–1808*. Baltimore: Johns Hopkins University Press, 1992.

Islamic Centers in Southeast Asia

Although located on the far eastern end of the Indian Ocean zone, maritime Southeast Asia, consisting of present-day Indonesia, Malaysia, the sultanate of Brunei, and the southern provinces of Thailand and the Philippines, has been a part of the Muslim world for centuries.

Although little is known with certainty about the beginnings of the Islamization of this region, Southeast Asia’s contacts with the Middle East and India go back to pre-Islamic times. It is highly probable that Muslims from Arabia, Persia, and the Indian subcontinent all played a role in introducing Islam to Southeast Asia. The first indications of a political entity with a Muslim ruler were found in Samudra-Pasai, on the island of Sumatra, and can be dated to the late thirteenth century. But it is not until the fifteenth century that we have more conclusive evidence of an established Muslim state in Southeast Asia. Malay, Chinese, and Portuguese sources confirm that the ruler of the trading emporium of Malacca (Melaka) had converted to Islam before the 1420s.

From Malacca, Islamic influence spread throughout the Malay Peninsula, and by 1457 it had reached as far north as Patani. By the 1470s

there were Muslim rulers in Pahang, Trengganu, Kelantan, and Kedah as well. When the Portuguese conquered Malacca in 1511, Patani became the most important center of Islamic learning and political power on the Malay Peninsula. Between the 1580s and early 1600s Patani had the distinction of being a Muslim state ruled by a series of female sultans.

Scholars have suggested that in regard to the beginning of the region’s Islamization it is more appropriate to speak of adherence, whereby Islam is accepted alongside other religious practices rather than conversion in the full sense of the word. It is also important to be aware that the Islamization of Southeast Asia was not a uniform process but instead followed multiple trajectories.

On Java, the arrival of Islam is connected with the so-called Wali Songo, nine semilegendary holy men or saints probably of Middle Eastern or Indian origin. Their shrines have remained centers of pilgrimage until the present. The emergence of a string of Muslim sultanates along Java’s northern coast was to a large extent the work of these saints, who either associated themselves with established royal houses or became rulers in their own right. Demak, founded by a descendant of the Central Javanese Majapahit dynasty, was the first Muslim power of consequence on Java. Its main mosque functioned as the center of Islamic learning for Central Java from the early 1500s onward. Among the other Islamic centers along the northern coast were Japara and Kudus.

One of the Wali Songo, Sunan Gunung Jati, who is said to have come from Pasai, is associated with two Islamic centers in West Java: the sultanate of Banten and the town of Cirebon, where he is buried. In eastern Java, Islam spread from places such as Gresik, Tuban, and Surabaya. The latter two are also home to the shrines of two saints, Sunan Bonang and Sunan Ampel.

When Malacca fell in 1511, many Muslim traders moved to Aceh in northern Sumatra. This important trading place, where the main commodity was pepper, soon became the new Islamic power center of Southeast Asia. The sultans of Aceh quickly positioned themselves as the leaders of Malay opposition to Portuguese and, later, Dutch incursions. In addition, they

► MALACCA—MALAYSIA'S ISLAMIC STRONGHOLD

Strategically located on the Malacca Straits, which connects the Indian Ocean with the South China Sea, Malacca became the first Islamic power center in Southeast Asia. According to the *Sejarah Melayu* (*Malay Annals*) it was founded by Paramesvara, a descendant of the Sailendra dynasty of Palembang, and it was his son who embraced Islam around 1414, ruling as Sultan Iskandar Shah.

The significance of this event is considerable, because as Malacca's economic and political power grew, its distinct court culture, merging indigenous Malay features and Islamic elements of Arabic, Indian, and Persian origins, spread throughout the archipelago. One such element was

the replacement of the ruler's Sanskrit title of raja with the Arabic title of sultan. The Malaccan Malay dialect became Southeast Asia's lingua franca, used by local and foreign traders as their means of communication.

Malacca's political fortunes were short-lived; within a century from its emergence as the Muslim trading center in Southeast Asia, it fell in 1511 to the Portuguese. They were ousted in 1641 by the Dutch, who controlled Malacca until 1824 when it became part of British Malaya. Now one of the states in the Federation of Malaysia, it banks on its legacy of former Malay grandeur.

—Carool Kersten

became patrons of Islamic learning, establishing contacts with the main centers of the Islamic world: Mecca, Medina, and Istanbul. Aceh became known as the Serambi Mekkah (the Porch of Mecca), hosting a number of Muslim scholars of Sumatran and Indian origin who made seminal contributions to the development of a Malay Muslim literature. Proficient in both Arabic and Malay, figures such as Hamzah Fansuri (d. ca. 1600), Shams al-Din al-Sumatrani (d. 1630), and Nur al-Din al-Raniri (d. 1658) were instrumental in the introduction of mysticism and Islamic sciences, including Islamic law (Sharia). Another Acehese scholar, Abd al-Rauf al-Singkili (d. 1693), provided the first Quran exegesis in Malay as well as a host of other religious writings.

With the appearance of Muhammad Yusuf al-Maqassari (d. 1699) another line of scholar networks, connecting the Malay-Indonesian archipelago with the Middle East, emerged. After his studies in Arabia and Syria, he returned to Southeast Asia, dividing his time between his native Sulawesi (Celebes) and the sultanate of Banten. There he became involved in an anti-Dutch uprising led by Sultan Ageng that resulted in al-Maqassari's banishment to Sri Lanka and then South Africa, where he died. In the eighteenth century these networks were also sustained by other centers in Palembang, southern Kalimantan, and Patani, serving as conduits for the introduction of Islamic reformism.

—Carool Kersten

Bibliography

- Federspiel, Howard M. *Sultans, Shamans & Saints: Islam and Muslims in Southeast Asia*. Honolulu: University of Hawaii Press, 2007.
- Hooker, Virginia Matheson. *A Short History of Malaysia: Linking East and West*. Sydney: Allen and Unwin, 2003.
- Riddell, Peter. *Islam and the Malay-Indonesian World: Transmissions and Responses*. Honolulu: University of Hawaii Press, 2001.

Cross-cultural Contact and Trade Networks in Islamic Central Asia

The late classical era in world history witnessed the fragmenting of the Mongol empire, the fading of its last revived remnants in the fall of the domains of Timur Khan (Tamerlane), and the shift in global trade away from overland routes to sea routes that roughly paralleled (though was not necessarily linked to) the Mongol-Timurid collapse. But none of these factors, independently or combined, was sufficient to deter the vigorous overland trade and, with it, cross-cultural exchange within the Central Eurasian heartland. That heartland consisted of the area roughly east to west from northwestern China to the Caucasus and north to south from southwestern Siberia to northern Iran, with its trade network roots reaching down more than three millennia into the region's history. The shift to sea routes affected most immediately those states with ports of access to the world's

➤ ASTRAKHAN

The city of Astrakhan spreads over 11 islands amid the Volga River delta, which tapers off into the northern rim of the Caspian Sea. At this strategic juncture, it has long been situated at an important crossroads on the east-west trade routes connecting Europe and Asia. It has likewise functioned historically as a central point of contact between Russia to the north and Central Asia and the Middle East to the south. Astrakhan has long attracted visitors from far and wide, including the Moroccan Muslim traveler Ibn Batutta, who made mention of it in 1333 as a “duty-free” settlement. Merchants and missionaries from Greece, Persia, India, China, and elsewhere throughout Eurasia settled there to conduct their business.

Astrakhan’s multicultural makeup was a result of not only a significant decline in cross-cultural exchange via the overland routes in the post-Mongol period but also the fact that the rule of Astrakhan and its surrounding territory passed through the hands of various dynasties across the centuries. These dynasties included the Khazars (sixth to thirteenth centuries); Chingis Khan and the Mongols (thirteenth century); the Golden Horde (1227–1459), under whom it was destroyed by Tamerlane in 1395; the Tatars (1459–1556); the Russians via the conquest of Ivan IV (Ivan the Terrible) in 1556; the Torgkut branch of the Kalmucks, also known as Oirats, who took control over the city and its regions in 1630 after being forced from their Mongolian homeland; and finally full Russian control from the turn of the eighteenth century onward under Peter I (Peter the Great). The Ottomans as well as the Cossacks sought to take over its reigns in 1569 and 1670–1671, respectively, though without success.

Astrakhan’s predominant ethnocultural and linguistic base has been Turkic, Mongolian, and



Illustration of Astrakhan in the seventeenth century. (Rambaud, Alfred. The History Of Russia, 1897)

Euroslavic, while its religious foundations have largely been Muslim, Russian Orthodox, and Catholic. But its geographical and political significance helped create a much more varied linguistic, ethnocultural, and religious atmosphere. Early on, the Turkic Khazars had favored Judaism and Christianity, with strong ties to the Byzantine Christian world. The Mongols were mainly Tengrist and shamanist in orientation but maintained a policy of strong religious tolerance and hosted Buddhists, the Church of the East, Byzantine Christians, Muslims, Catholics, and others. The Golden Horde and the Tatars were Turkic Muslim, the Kalmucks were Mongolian Buddhists, and the Russians were Slavonic Orthodox Christians with strong roots in the Byzantine Greek tradition. Astrakhan’s ethnocultural, linguistic, and religious diversity has contributed to both healthy and vigorous cross-cultural exchange as well as periodic tension and conflict.

—R. Charles Weller

waterways. While it may have meant a decrease in the volume of certain exotic merchandise transported across Central Eurasia from outlying regions, such as China, India, Europe, and elsewhere, Central Eurasia itself remained, for the most part, landlocked. Therefore, the overland trade networks and, with them, the trade goods that had for long centuries and even millennia served to interconnect the region as a whole not

only remained intact but also continued flourishing, notwithstanding the usual ebbs and flows affected by as well as in turn affecting the shifting political, religious, and/or ethnic-cultural relations and balances of power.

Most notably among the political powers affecting the Central Eurasian trade networks within the late classical and early modern eras of world history would be the interplay of Ottoman

(1517–1914) and tsarist Russian (1552–1914) ambitions, with the Safavids of Persia (1501–1736), the Mughals of India (1526–1707), the Ming (1368–1644) and Ch'ing (1644–1911) of China as well as the three smaller kingdoms at the heart of the Central Eurasian web—Khiva (1515–1919), Khokand (1710–1876), and Bukhara (1785–1920)—also affecting the mix. Indeed, much of the trade was conducted by merchants in the hire of the various official courts, though plenty of private commercial exchange took place within these economic and political frameworks as well.

Attestations of vigorous ongoing trade and with it cross-cultural exchange across the region remained plentiful, such as that of the annual pilgrimage of Nogai herdsmen, with their synthesis of Islamic faith and seminomadic lifeways, delivering thousands of horses to the predominantly sedentary Russian Orthodox powers in Moscow in supply of the latter's military and other pragmatic needs. At the opposite end of the Central Eurasian trade networks, many of the horses that filled the stables of the Turkic Muslim Mughal rulers in India—surpassing quantities at times of 25,000 or more—were supplied by their Turko-Mongolian and Turko-Persian Muslim kin from their Central Asian motherland, with horses from the Kazakh steppe and Turkmenistan, together with those of the Nogai, being in large demand.

Other commodities exchanged across the post-Mongol Silk Roads network included lambs, goats, camels, various hides, furs, silk and other material, ready-made clothing, silver, gold, precious stones, cotton, honey, dishware and vessels, decorations, slaves (both adult and children), tools, weapons, and much more.

The trade networks involved merchants, moneylenders, border guards and customs agents, court and private treasurers, innkeepers, eateries, markets, craftsmen, herders, trappers, farmers, and many others representing a wide variety of ethnic, cultural, and political groupings, including Siberians, Russians, Bulgarians, Turks, Armenians, Tatars, Nogais, Kalmuks, Kazakhs, Kirgiz, Uighurs, Uzbeks, Turkmen, Tajiks, Altai peoples, Mongols, Chinese, Tibetans, Indians, Iranians, Khwarazmians, Bukharans, Cosacks, and many more.

While cross-cultural exchange flourished along the Central Eurasian trade networks in

the late classical and early modern eras, it would be a distortion of images to depict it all as harmonious and mutually beneficial. Religious, ethnic-cultural, and political tensions as well as economic competition were all part of the exchange or, as the case might be due to those tensions, the nonexchange. One can note here, for example, the way in which the Russian powers played the Buddhist Kalmuks against various Muslim Turkic peoples in the Ural-Volga region in the seventeenth century or the competition between the Bukharan and Khwarazmian neighbors to conduct trade with Russia, Siberia, and other areas.

Predominant or exclusive trade networks also tended to develop between differing ethnic-cultural and political entities, such as the Nogais monopolizing nearly all trade with Siberia in the sixteenth century or, conversely, the lack of any direct trade by Khwarazmian merchants with India or China in the sixteenth and seventeenth centuries. While the overall Central Eurasian trade network remained intact across the centuries, these kinds of various subnetworks continued shifting and changing in connection with the political, religious, and ethnic-cultural contexts in which they functioned and that they, in turn, reflexively affected and shaped. In this, the Central Eurasian trade networks continued serving as the primary vehicle for cross-cultural contact and exchange across the region in the late classical and early modern eras of world history.

—R. Charles Weller

Bibliography

- Abazov, Rafis. *The Palgrave Concise Historical Atlas of Central Asia*. New York: Palgrave Macmillan, 2008.
- Burton, A. "Trade." In *History of Civilizations of Central Asia*, Vol. 5, *Development in Contrast: From the Sixteenth to the Mid-Nineteenth Centuries*, edited by Chahryar Adle, Irfan Habib, and Karl M. Baipakov. Paris: UNESCO, 2004.
- Khodarkovsky, Michael. "Kalmyk-Russian Relations, 1670–1697." *Central Asian Survey* 2(3) (1983): 5–36.
- Martin, Janet. "Muscovite Travelling Merchants: The Trade with the Muslim East (15th and 16th Centuries)." *Central Asian Survey* 4(3) (1985): 21–38.

Nobles and Commoners in Early Modern Europe

Throughout the early modern era, custom, lifestyle, and law in Europe distinguished nobles from commoners. Despite major alterations in the nature of the social structure, Europe remained rigidly hierarchical until the modern era. There was a general movement from a system of medieval orders based on function to a class system based on economic and social status, but an aristocracy based primarily on birth continued to remain at the top of society.

Medieval French society was divided into three estates, or orders of descending status: those who prayed, those who fought, and those who worked. The first estate was the clergy, the second was the nobility, and the third was the commons. Birth determined whether one belonged to the first two orders, as members of the nobility filled the most important offices in the Church. Because the social order rested on theological foundations, individuals rarely questioned the system or their situation within it. However, with the rise of commerce in the High Middle Ages, a new group within the third order, the rich merchants, began to complicate a social order based on function. Significantly, they did not appear to work with their hands. In addition, by the early sixteenth century the offspring of merchants (or even rich peasants) could afford a legal education. Degrees in civil and canon law became the passports to high offices in the Church or the government, and many of the latter carried with them noble status. Although these new nobles, called nobles of the robe, never attained the social status of the old warrior nobility, the nobles of the sword, the very existence of social mobility undermined the system of the three orders. Paradoxically, as members of society moved from one estate to the other, social distinctions within the estates solidified. This can clearly be seen in the middle classes consisting of merchants and craftsmen living in cities and towns. Their status was increasingly arranged into ranks determined by political authorities or guilds. For example, craftsmen were separated into a rigid hierarchy of masters, journeymen, and apprentices.

By the sixteenth century, European society moved from a system of orders defined by function toward a society defined according to social status. However, throughout the early modern era nobles and commoners were still defined by birth and legal privileges. Usually nobles were allowed exemption from certain taxes and were allowed privileges such as hunting rights or the right to bear arms and more lenient sentences for the same crimes. There were wide geographical variations, however, in the nature of the nobility throughout Europe. In particular, the size of the nobility varied widely. The nobility as a legal order made up between .5 and 2 percent of the population in western Europe and perhaps up to 10 percent of the population in parts of eastern Europe.

Nobility could be established by the recognition of peers as well as the law. This was the quality of honor, so cherished by the nobility. Whether legally noble or not, a noble had to live a noble lifestyle. For example, members of the English gentry, though not legally noble, were considered gentlemen if they owned a country estate and if their ancestors had refrained from trade for several generations. Land and leisure were considered essential attributes of nobility.

Noble self-definition did not remain static throughout the early modern era. Originally a warrior elite, the European aristocracy adopted the courtly values of etiquette and education in the seventeenth century. The centralization of the nation-state and the increasing use of professional armies rendered the warrior function of the feudal nobility obsolete. Kings such as Louis XIV at Versailles invited nobles to live with them in grand palaces, where they could compete with each other at court, not on the battlefield. At court the nobility sought honor and prestige, now seen as emanating from the king. The key to social success at court was self-control of both the body and the mind. The adoption of education and good manners by the nobility has been described by Norbert Elias as the “civilizing process.” Whereas before the seventeenth century the nobility partook of elements of popular culture, especially festivals and blood sports, the nobility began to set itself apart from the common people.

Commoners made up about 95 percent of the population. The commons was a varied group, containing from bottom to top vagrants, beggars, serfs, peasants, craftsmen, merchants, and professionals. With the exception of the very poor, most members of the third estate claimed privileges as ardently as the nobility. For example, the criteria for membership in guilds, confraternities, and city councils were as inflexible and stringent as for the nobility. The system of privilege, in which members claimed certain rights according to membership in a group, went largely unquestioned until the end of the eighteenth century.

In the social system of early modern Europe, one's place in society had to be displayed in the community. Sumptuary laws that indicated who could wear what were very common throughout Europe. Certain fabrics, such as silk, were reserved for the nobility by law. A noble who could not afford the outfit of a nobleman could honestly not call himself one. Lavish displays were not only expected but also necessary to preserve the social status of the family. Only at certain festivals such as carnivals could these social rules be relaxed. Here peasants might act like kings and men might dress like women, but it is unclear whether these actions confirmed or undermined the social order.

Nobles and commoners were also distinguished by diet. In general, peasants ate whole-grain bread, while nobles ate bread made from refined white flour. Also, the peasant diet revolved around grains and vegetables, whereas the noble diet included meat (the larger the animal, the higher the status). Nobles tended to drink wine, while commoners drank beer or cider. However, by the eighteenth century commoners gained access to many food items that were reserved for the nobility in the sixteenth and seventeenth centuries such as coffee, tea, and chocolate. In fact, coffeehouses served as public spaces where nobles and high-status commoners, or notables, could discuss philosophy and politics. This new domain where noble status mattered less than ideas would prove revolutionary.

By the eighteenth century, members of the commons had acquired almost everything that had originally distinguished the nobility. The

development of overseas commerce and the stock market in the seventeenth century blurred the line between income from land and income from investments, for both enabled one to live in leisure. The ability of individuals to invest in stocks enabled many to buy landed estates. Government offices were available to talented individuals, as education and good manners became widespread among the middle class. As these social distinctions faded in the eighteenth century, the nobility tried to make true ennoblement, granted by the king, less common. This in turn led to tensions that would surface in the French Revolution. The Industrial Revolution further rendered the social structure of the Old Regime obsolete as commoners gained the opportunity to become captains of industry. A system of classes replaced the system of legal privilege, but an aristocracy remains in the most democratic Western societies, where an elite few are often endowed by birth with substantial social and educational privileges.

—Rebecca Boone

Bibliography

- Braudel, F. *Civilization and Capitalism, 15th-18th Century*. 2 vols. Translated by Sian Reynolds. New York: Harper and Row, 1981.
- Chartier, R., ed. *A History of Private Life*, Vol. 3, *Pas-sions of the Renaissance*. Translated by Arthur Goldhammer. Cambridge, MA: Harvard University Press, 1989.
- Dewald, J. *The European Nobility, 1400-1800*. Cambridge: Cambridge University Press, 1996.
- Duby, George. *The Three Orders: Feudal Society Imagined*. Translated by Arthur Goldhammer. Chicago: University of Chicago Press, 1980.
- Elias, N. *The Civilizing Process*. Translated by E. Jephcott. Oxford, UK: Oxford University Press, 2000.

Urban Growth in Europe

Europe's growing and dynamic cities were at the center of many processes that collectively brought about the modern world. In the early modern period, circa 1450-1770, cities contributed in crucial ways to the growth of state power and centralized administration, the expansion of overseas trade and empire, improving

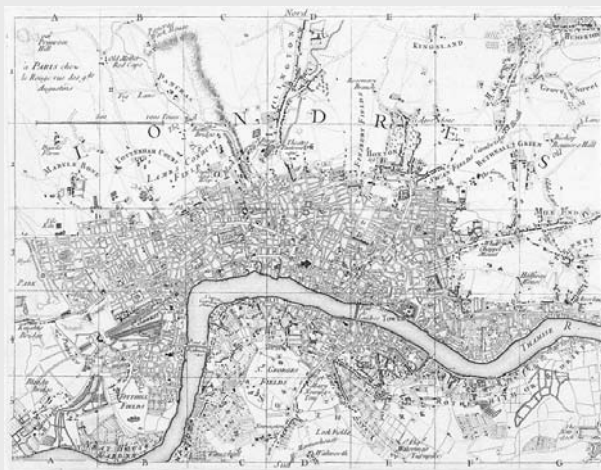
► SAMUEL JOHNSON'S LONDON

Samuel Johnson (1709–1784) was one of eighteenth-century England's greatest literary minds—a critic, biographer, philosopher, essayist, poet, and lexicographer—and was likewise known for his keen observations of urban life in his beloved London. Though born in Staffordshire, Johnson spent most of his adult life in London, residing there from his arrival as a penniless writer in 1737 to his death in 1784. His experiences spanned the social spectrum and a wide range of literary, political, commercial, and professional circles, thus leaving him uniquely placed as an observer in a period that saw great urban growth and transformation.

Eighteenth-century London was admittedly smoky, filthy, crowded, germ-infested, and rank by modern standards. Yet the capital also continued to be the vigorous hub of social, political, and intellectual life and the wellspring of finance, trade, and fashion in early modern Britain. Historians believe that London's population at the beginning of the eighteenth century was about 650,000, and by the first census in 1801, London's population numbered some 900,000 people. Johnson himself witnessed urban growth firsthand, attesting to “a great number of new buildings in London of late.” Likewise, he was not unaware of concerns such as poverty, disease, and lack of work that affected the populace. While Johnson admittedly underestimated (at over 1,000) the number of Londoners who died each year of hunger, wasting, and other diseases, he was fully cognizant that they existed. He believed that the success of begging was overrated and sympathized with those who simply could not find work despite their best efforts.

Indeed, Johnson was an observant man with a keen eye for popular welfare and supported social reforms in many areas: charity, poor relief, the campaign to eliminate capital punishment, the abolition of slavery, and, lastly, debtor's prisons, as he believed that they led to idleness and waste. His peers remarked on Johnson's own frequent and generous charitable giving. James Boswell, his biographer and friend, recalled that Johnson “frequently gave all the silver in his pocket to the poor, who watched him, between his house and the tavern where he dined.”

Though often associated primarily with the tony neighborhood of Fleet Street and the elevated



Map of London, 1767. (Jupiterimages)

intellectual and social circles he frequented later in life, Johnson was an impoverished writer before attaining respectability and was still well acquainted with the London of the masses. He famously said of London: “You find no man, at all intellectual, who is willing to leave London. No, Sir, when a man is tired of London, he is tired of life; for there is in London all that life can afford.” Indeed, one of his first published works was the poem *London* (1738). He loved especially the vastness, endless variety, and intellectual opportunities that it offered. Boswell remarked that Johnson's “love of a London life was so strong, that he would have thought himself an exile in any other place.”

—Katharine Olson

Bibliography

- Boswell, James. *The Life of Samuel Johnson*. 2 vols. Edited by Rodney Shewan. London: Folio Society, 1968. Reissued 1990.
- Hudson, Nicholas. *Samuel Johnson and Eighteenth-Century Thought*. Oxford English Monographs Series. Oxford, UK: Clarendon, 1988.
- Picard, Lisa. *Dr. Johnson's London: Life in London, 1740–1770*. London: Weidenfeld and Nicolson, 2000.
- Schwartz, Richard B. *Daily Life in Johnson's London*. Madison: University of Wisconsin Press, 1983.

transportation networks and more integrated national economies, and the creation and distribution of new ideas. Despite the enduring importance of agriculture and rural life in 1770 and beyond, Europe's cities were vital motors of widespread social, political, and cultural change.

Most European urban areas were founded by the ancient Romans or during the subsequent medieval centuries; by 1500 Europe already contained over 150 cities of over 10,000 inhabitants and thousands of smaller towns. Such minor centers were usually encircled with defensive walls and served as service centers and markets for their rural hinterlands. After 1500, however, the number of European cities over 10,000 people more than doubled, reaching over 350 by 1800. Mediterranean Europe, especially central and northern Italy, was the most urbanized region in 1500, but by the eighteenth century northern and western Europe—especially Britain, the Netherlands, and Germany—contained as many large cities as or more large cities than Italy or Spain. About 5 percent of all Europeans lived in cities in 1500, but by 1750 over 12 percent of Britons lived in cities, and in Europe's most urbanized region, the Low Countries (modern Belgium and the Netherlands), almost 25 percent of the population was urban. Cities were unhealthy, beset by pollution, overcrowding, and frequent outbreaks of contagious disease, so urban growth depended on constant immigration from rural areas. City dwellers died sooner than Europe's rural population, but migrants were nevertheless continually attracted to cities by prospects of work and the hope of social mobility.

Urban growth during these centuries was not uniform; the most rapidly growing urban centers were those that served as capitals to strong and centralizing states. London and Paris, both important capitals, grew from under 100,000 people in the sixteenth century to over 500,000 during the eighteenth century; Madrid was transformed from a small town into a major metropolis when Philip II moved the Spanish court there in the 1560s; Vienna and Prague grew as centers of Habsburg administration in the Holy Roman Empire; Rome, Berlin, Stockholm, and Naples all grew as centers of administration; and most dramatically of all at St.

Petersburg, swampland on the Baltic was transformed into the Baroque capital of the Russian empire. Exceptions that prove this rule existed in the decentralized states of Poland and the Netherlands, whose capitals of Warsaw and The Hague, respectively, grew very little. Other cities prospered as centers of overseas trade and imperial expansion. Lisbon, Seville, and Antwerp grew through the profits of Spain's American empire in the early sixteenth century, and Amsterdam became the center of Dutch global trade in the seventeenth century. Capitals such as London and St. Petersburg that also served as centers of shipping and trade grew more dramatically than capitals such as Madrid or Rome that lacked ports.

Such large and growing urban centers had to be fed, clothed, and supplied with fuel, building materials, and the vast variety of luxury goods required by their royal courts and prosperous merchants. Provisioning large and growing cities thus promoted increasingly market-oriented agriculture and small-scale industry in their rural hinterlands. Urban merchants sold cloth produced on rural looms, ate food imported through gradually improving networks of roads and shipping canals, and burned fuel (coal in much of Britain, peat in the Netherlands, and wood elsewhere) imported from immediate or distant forests, peat beds, and mines. Europe's cities were markets that drew producers, merchants, and shoppers near and far into their orbits, connecting them to interurban and even transoceanic trade networks. Cities imported goods from America, the Middle East, Asia, and Africa and exported manufactures to overseas markets, especially the expanding European empires in America and Asia.

This demographic and economic growth made Europe's cities dynamic and innovative intellectual centers. From 1450 printing was centered in cities, where printers and booksellers determined what books were available to urban and rural readers alike. New forms of commercial theater in seventeenth-century London, Paris, and Madrid made possible the enduringly popular works of Shakespeare, Moliere, and Lope de Vega, while in Venice Monteverdi developed opera. From about 1650 coffeehouses flourished in London, Paris, and Amsterdam as spaces

in which the consumption of imported foreign goods facilitated the consumption of the new printed newspapers. By 1770 Europe's growing cities were cosmopolitan centers of trade, culture, ideas, and politics, the places in which one was most connected both to the outside world and to his own government. Early modern cities therefore prepared Europe for the nationalism, industrialization, and expanding imperialism of the nineteenth century.

—William Cavert

Bibliography

- Calabi, Donatella, and Stephen Turk Christensen, eds. *Cities and Cultural Exchange in Europe, 1400–1700*. Cambridge: Cambridge University Press, 2007.
- Clark, Peter, and Bernard Lepetit, eds. *Capital Cities and Their Hinterlands in Early Modern Europe*. Aldershot, UK: Ashgate, 1996.
- De Vries, Jan. *European Urbanization, 1500–1800*. Cambridge, MA: Harvard University Press, 1984.
- Friedrichs, Christopher. *The Early Modern City, 1450–1750*. New York: Longman, 1995.
- Hohenberg, Paul, and Lynn Hollen Lees. *The Making of Urban Europe, 1000–1995*. Cambridge, MA: Harvard University Press, 1995.

New Cities—St. Petersburg

St. Petersburg, called by Fedor Dostoevsky (“the most artificial city in the world”), was built during the eighteenth century, starting in 1703, at the behest of Tsar Peter the Great, who wanted his new capital to be a “window on the west” for the Russian state. Peter also intended for his new city, located in the northwest of Russia on the delta of the Neva River and providing access through the Gulf of Finland to the Baltic Sea, to provide the base for a new modernized navy and to become Russia's most important trading port. In 1709 engineers completed the Upper Volga Canal, designed to link St. Petersburg with the interior of Russia as part of a wider network of water and roadways. In the nineteenth century railroad lines would provide additional transportation links.

Soon to be the northernmost city of its size in the world and constructed upon a marshy and inhospitable terrain, St. Petersburg was a difficult place to build in and to live in from the

start, and Peter had to command his *boyars* and merchants to do so under enormous duress. In 1712 he directly ordered 1,000 boyars and 1,000 merchants to build permanent homes in St. Petersburg. Owners of more than 3,500 “souls” were required to build not in wood but rather in stone. Forty thousand serfs were requisitioned each year to provide the labor. Many of them perished on the forced march to the distant site, and still more perished while working under the unhealthy and demanding conditions that prevailed. St. Petersburg began indeed as the imposition of Peter's will on the people and on the environment. Yet the commitment of the autocrat and his successors to St. Petersburg, especially Elizabeth and Catherine II, ultimately fulfilled Peter's vision: a universally admired European-style city, a “Venice on the Baltic,” famous for its canals and bridges, that became Russia's cultural, political, and economic center until the Bolsheviks moved the capital back to Moscow after the 1917 revolution. It has been said that Kiev is the soul of Russia, Moscow its heart, and St. Petersburg its mind, a nod to its premeditated origins and a tribute to its achievements. Throughout the eighteenth century, St. Petersburg became a lively cosmopolitan commercial and cultural urban environment.

Foreign trade with St. Petersburg began slowly due to the ongoing Great Northern War with Sweden (1701–1725) and Sweden's control of the Baltic. For some years, British and Dutch merchants preferred to continue to send their commercial ships farther north and around Scandinavia to the long-established port of Archangel, the port of choice of the England-based Muscovy Company since the sixteenth century. Peter used every means he could think of to reroute trade to St. Petersburg, including prize money, tax breaks, and outright decrees that increasing proportions of Russian trade had to pass through St. Petersburg and not Archangel. While at first control of shipping was in the hands of the foreigners, in 1716 Peter established the College of Commerce to develop and manage the Baltic trade, and gradually the Russians asserted their authority. St. Petersburg also became the site of one of the world's first commodity exchanges. In 1720 most British merchants and the Muscovy Company itself, soon to be renamed

➤ ALEXANDER PUSHKIN, *THE BRONZE HORSEMAN*

In 1833 Russia's beloved poet Alexander Pushkin published this paean, subtitled *A Petersburg Tale*, to Peter the Great and his vision for what would become St. Petersburg.

INTRODUCTION

There, by the billows desolate,
He stood, with mighty thoughts elate,
And gazed; but in the distance only
A sorry skiff on the broad spate
Of Neva drifted seaward, lonely.
The moss-grown miry banks with rare
Hovels were dotted here and there
Where wretched Finns for shelter crowded;
The murmuring woodlands had no share
Of sunshine, all in mist beshrouded.

And thus He mused: "From here, indeed
Shall we strike terror in the Swede;
And here a city by our labor

Founded, shall gall our haughty neighbor;
'Here cut'—so Nature gives command—
'Your window through on Europe; stand
Firm-footed by the sea, unchanging!'
Ay, ships of every flag shall come
By waters they had never swum,
And we shall revel, freely ranging."

A century—and that city young,
Gem of the Northern world, amazing,
From gloomy wood and swamp upsprung,
Had risen, in pride and splendor blazing.

—Anita Shelton

Source

Translation of *The Bronze Horseman* is by Waclaw Lednicki and published in Waclaw Lednicki, *Pushkin's Bronze Horseman* (Berkeley: University of California Press, 1955), 140.

the Russia Company, relocated to St. Petersburg. By 1722 with the end of the war, the majority of trade (exports of hemp, lard, tallow, pitch, leather, iron, linens, and sailcloth and imports of silk, wool, coffee, sugar, and wine) took place at St. Petersburg. In 1734 the Anglo-Russian Commercial Treaty confirmed Russia and its port at St. Petersburg as England's primary Baltic trading partner. Although subsequent trade treaties (1766, 1793, and 1797) were never quite as lucrative for Britain, St. Petersburg remained one of Russia's most important commercial partners overall for the remainder of the century. By the end of the eighteenth century, Germans were rivaling the British as the main trade partners of the Russians in St. Petersburg.

During the eighteenth century the Bolshoi Gostinny Dvor became the commercial center of St. Petersburg, boasting warehouses, shops, stalls, and eventually department stores. Bolshoi Gostinny Dvor continues as a major commercial venue to the present day. The Academic Printing House founded in 1727 was for many years the primary publisher in Russia of secular texts and one of the main publishers of scientific and scholarly works. It is now known as the Science



St. Petersburg, the economic, cultural, and political center of eighteenth-century Russia. (Library of Congress)

Printing House. The Admiralty dockyards early became a center for shipbuilding, starting with small craft, but by the end of the eighteenth century expanded to be able to produce large craft for both military and merchant purposes. Watercraft production at the Admiralty dockyards was crucial during the Crimean War (1854–1856) as well as during both world wars. In more recent times the dockyards have been important as a producer of icebreakers and submarines as well

as civil craft. In general, the dockyards helped to stimulate science, industry, and technology in St. Petersburg. Today it is known as the Admiralty Union.

—Anita Shelton

Bibliography

George, Arthur L. *St. Petersburg: Russia's Window to the Future, the First Three Centuries*. London: Taylor, 2003.

Thompson, Stuart. "On the Banks of the Neva." *History Today* 53(12) (December 2003): 29–35.

From Tenochtitlan to Mexico City

When the Spanish conquistadors under Hernando Cortes first saw the capital of the Aztecs in 1519, they were suitably impressed. Tenochtitlan had about a quarter of a million inhabitants, probably four times as many as the largest Spanish city of the time. It appeared to float on a lake but was connected by three causeways to the shore. Suburbs ringed the shores of the lake and were home to many of the more offensive crafts, such as metalworking that produced smoke and odors. The city itself was scrupulously clean and carefully planned. The streets and canals were straight and converged on a central plaza where palaces and temples stood.

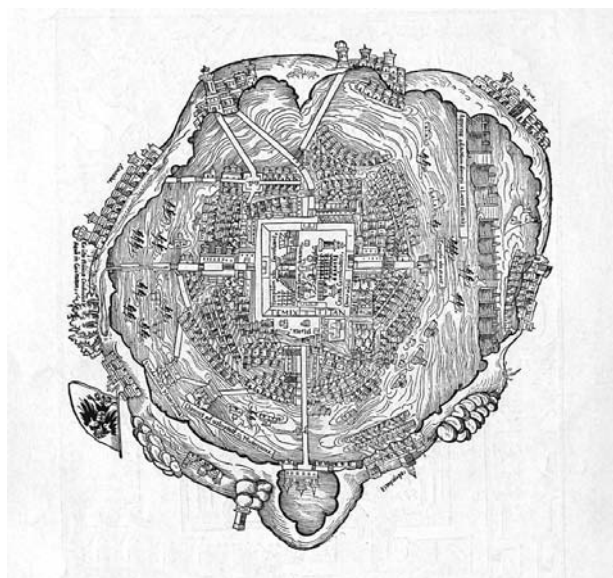
Tenochtitlan was dedicated to the god Huitzilopochtli. According to Aztec legend, a sacred

eagle had indicated where they should build their city around 1325. The original swamp was filled in with tremendous human labor. A lake surrounded the settlement, and the only way of entering was through causeways. Floating gardens provided space for growing corn, beans, and luxury items such as fruit and flowers. Because the city was dedicated to Huitzilopochtli, cleanliness was required as an expression of devotion. Neighborhoods were carefully and logically planned. Oftentimes, most people in a neighborhood were related and practiced the same trade. Control was through local lords who ensured that social order was kept. Neighborhoods were grouped into larger quarters, with local councils to govern them.

After the Spanish were forced to flee Tenochtitlan because of an Aztec uprising following Moctezuma's murder, Cortes enlisted the assistance of many Indian peoples who hated the Aztecs. He returned with an army and built a fleet of gunboats to control the lake in May 1521. After a ferocious siege that saw most of Tenochtitlan destroyed, Cortes took the city on August 13, 1521. At least 100,000 inhabitants had died from battle, famine, and diseases brought by the Spanish. Cortes proclaimed a new capital in Coyoacan, a few miles south. Soon, however, both Indians and Spaniards returned to Tenochtitlan's site to build new homes. In 1524, Cortes declared that the city would be the capital, with the name Mexico-Tenochtitlan.

The rebuilt city largely followed the plan of the old one. A grid pattern of streets radiated off the central plaza, known as the Zocalo. A cathedral, a royal palace, and governmental offices were located around the plaza. The conquistadors were especially interested in converting the Native Americans to Christianity and tried to wipe out anything that reminded them of their former religious practices. Consequently, they destroyed the pyramids and temples of the gods and dismantled any mosaics that had survived the siege.

Each ethnic group had its own segregated neighbors. The Spanish lived in an area completely encircling the Zocalo for ten blocks in all directions. The Spanish neighborhood was known as the *traza*. Aztec homes were located in the surrounding streets. Their neighborhoods



Map of Tenochtitlan, prepared for Cortes about 1524. (Bettmann/Corbis)

legally had equal status with the Spanish and were self-governing, under Spanish royal law. While the Aztecs had to provide service to the Spanish, they were free to follow most of the same trades as they had previously. Spanish authorities continued to fill in the lake, resulting in increased seasonal flooding. In the early seventeenth century, a drainage canal was constructed to channel the remaining waters from the lake.

Mexico City, as it became known, was the cultural, religious, and political capital of the colony of New Spain. Wealthy Spaniards and religious orders constructed magnificent palaces. The archbishop who controlled religious life in the colony had his home in Mexico City. Civil organizations, such as the Pontifical and Royal University, established their headquarters in the city. As the Spanish population grew, the traza could no longer hold them. They began to displace the Indian population, who were forced to move to the suburbs on the lake shores. A large public garden, known as the Alameda, was created in the early seventeenth century, further displacing Indian families. The equality between the ethnic groups began to diminish, and the natives were relegated to the less desirable locations as time went by. Even as slum neighborhoods grew, the city became more spectacular. Riches from mining and commerce poured into the city. Wealthy merchants and nobles built new palaces. By the end of the seventeenth century, Mexico City was the wealthiest and most important city in New Spain and probably in the entire Spanish empire.

—Timothy J. Watts

Bibliography

- Kandell, Jonathan. *La Capital: The Biography of Mexico City*. New York: Random House, 1988.
- Kicza, John E. *Colonial Entrepreneurs, Families, and Business in Bourbon Mexico City*. Albuquerque: University of New Mexico Press, 1983.
- Levy, Buddy. *Conquistador: Hernan Cortes, King Montezuma, and the Last Stand of the Aztecs*. New York: Bantam Books, 2008.
- Meyer, Michael C., William L. Sherman, and Susan M. Deeds. *The Course of Mexican History*. New York: Oxford University Press, 2003.
- Payne, Robert, and Dick Davis. *Mexico City*. New York: Harcourt, Brace and World, 1968.

British Colonial Cities in America

American colonial cities were conceived as physical manifestations of the transfer of civilization from the Old World to the New World. Cities were the counterpart to the exploitation of the natural resources of the New World and facilitated the export of wealth to Britain. Although modeled on British cities, the conditions unique to colonial life ensured that the new cities would be different. Whereas European cities had developed slowly over many centuries, colonial cities quickly assumed important political and economic functions. However, regional differences fostered varying urban cultures.

British American cities were exceptions within a landscape that was predominantly rural and agricultural. By 1770 only about 8 percent of the population lived in urban environments of more than 2,000 inhabitants, and five years later estimated populations for leading British American cities were Philadelphia, 40,000; New York, 25,000; Boston, 16,000; Charleston, 12,000; and Newport, 11,000.

In contrast, before its conquest by Cortes's army, the Aztec center of Tenochtitlan held an estimated 500,000 inhabitants. Yet the small size of British American cities belies their political, economic, and cultural importance in colonial life. As cities were the transfer points of goods and ideas going both ways across the Atlantic, they naturally had a leading role in fostering standards of culture.



New Amsterdam, originally a Dutch settlement, became the English colony of New York City in 1667. (Bettmann/Corbis)

➤ GENTEEL CULTURE AND THE CITY

Across the North American colonies, cities were bastions of transplanted European ideas, fostering genteel culture. Gentility meant the cultivation of refined taste and often implied an elevated moral stature. It was originally a term of praise and was limited to describing wealthy landowners—the gentry—and the provincial elite, suggesting the authority that came with high social class. Gentility was associated through elite education with emphasis on Greco-Roman languages, literature, and history. The middling class participated in genteel endeavors by the time of the American Revolution.

In the eyes of Europeans and some Americans, colonial culture was deficient. The adoption of British taste was a way for elite colonists to establish their authority and attempt to create a civilization on par with that of the British. Although not an exclusively urban phenomenon, genteel culture was eventually pursued vigorously by city merchants. Genteel taste was manifest in the demand for many types of material goods supplied by urban artisans and builders who were valued for their elegant adaptations of British styles.

Architecture and decoration in the commercial cities were among the most tangible manifestations of imported British taste. The construction and furnishing of an elegant home was a significant marker of gentility. Wealthy merchants employed builders to erect mansions and townhouses in cities up and down the Atlantic seaboard as physical expressions of their cultivated sensibilities. Owners furnished these homes with expensive items imported from Britain or handcrafted colonial works imitative of British styles. The commercial nature of colonial cities facilitated the dissemination of British taste through the importing and selling of books, pamphlets, and every variety of material good. In this way, material objects helped create a relatively unified Anglo-American identity.

—Paul Ranogajec

Colonial cities provided plots of cultivable land for the settlers. They were low scale and relatively homogenous socially and economically compared to European cities. This is also true relative to many Iberian cities in the Americas, where there were sometimes large gulfs

between classes. Spanish city building was controlled by the Laws of the Indies that standardized construction and settlement. The British colonies had no such overarching organization. Still, for the sake of expediency, many British cities, including New Haven, Philadelphia, and Savannah, adopted a grid plan similar to the Spanish cities.

Commercial activity and centralized imperial administration were the primary functions fulfilled by colonial cities. They were nexus points in a transatlantic economy connecting North America, the Caribbean, western Africa, and Britain. Cities, however, had other important functions. They provided the rural population with specialized crafts and other services that could only thrive in an urban economy. Some cities were founded with a specifically religious intent. The Massachusetts Bay Colony, led by Puritan reformer John Winthrop, established Boston in 1630 as a religiously sanctioned “City upon a Hill.” Newport, Rhode Island, was founded in 1639 by religious dissenters as a safe haven from the Anglican Church and Puritan orthodoxy. Philadelphia (1682), planned on the largest scale of any new city since ancient Roman times, was dedicated to religious tolerance by the Quakers.

Cities were most prosperous and numerous in the New England colonies, where intensive commercial activity reigned. The Puritans who settled this region sought religious reforms and economic advantages. They instituted rigid social structures to promote stable urban life. Previously divided plots of city land were sold to newcomers, and space was set aside for the town’s meetinghouse, which served religious, social, and administrative purposes. Northern cities were populated by merchants, traders, and craftsmen, resulting in a relatively affluent society. Goods from across the colonies and from the West Indies and Britain passed through the hands of New England merchants, making them an essential part of the colonial economy.

In the Middle Colonies, cities were more socially diverse as a result of the competing land claims by various colonizers, including the Dutch and Swedes. New Amsterdam, claimed for the Dutch in 1626 and renamed New York by the British in 1664, was originally a fortified military outpost and developed without formal

plans. Small canals were created in Manhattan so that New Amsterdam physically recalled its European predecessor. New York soon grew into a major port city and flourished under British control. Nearby Philadelphia was a generously scaled religious utopia, a holy experiment for the benefit of Quaker reformers and religious dissenters under the direction of William Penn. Penn's city boasted a grid plan 2 miles (3.2 kilometers) wide with broad avenues and large squares to enhance the beauty and healthiness of the city. It developed a prosperous merchant class and established a cultural importance rivaling Boston's.

The Chesapeake region of the South, encompassing Virginia and Maryland, was the first to be permanently settled by the British. Unlike Puritan New England, social mores were less rigid, and the population was less urban. The geography accommodated larger plantations than were possible farther north. Jamestown, Virginia, was the first permanent British settlement, although its swampy, isolated geography could not sustain urbanism. Williamsburg (1698), on more conducive ground, was eventually established as Virginia's colonial capital, while Maryland developed several important commercial cities, including Baltimore and Annapolis.

Southern colonists lacked the religious zeal found in the North. Few cities of prominence

developed there. Social and economic organization in the South hinged on the rural plantation system, which was virtually unknown in the North. Instead of urban centers, southern planters developed private shipping networks along the rivers that fed their plantations. In contrast to the North, the region developed a strong export economy based on staple products. Charleston (1690) was for a long time the major urban exception, prospering because of its excellent harbor location.

—Paul Ranogajec

Bibliography

- Bushman, Richard L. *The Refinement of America: Persons, Houses, Cities*. New York: Knopf, 1992.
- Greene, Jack P., and J. R. Pole. *Colonial British America: Essays in the New History of the Early Modern Era*. Baltimore: Johns Hopkins University Press, 1984.
- Kennedy, Roger G. *Architecture, Men, Women and Money in America, 1600-1860*. New York: Random House, 1985.
- Knight, Franklin W. *Atlantic Port Cities: Economy, Culture, and Society in the Atlantic World, 1650-1850*. Knoxville: University of Tennessee Press, 1991.
- Reps, John W. *The Making of Urban America: A History of City Planning in the United States*. Princeton, NJ: Princeton University Press, 1965.
- Russo, David J. *American Towns: An Interpretive History*. Chicago: Ivan R. Dee, 2001.

■ Introduction: Hierarchies and Colonial Relationships

The political and economic transitions of the early modern age necessitated wide-scale social reorganization. Centers of power and hierarchical organization within societies around the world shifted due to political or economic reorganization. In Europe and North America the realignment of power grew from political reorganization, often coupled with revolution or rebellion. Nevertheless, one could argue that the most dramatic reorganizations happened in the context of conquest and colonization. The Ottoman empire, for instance, established a new ruling elite as it spread across Anatolia (modern Turkey) and the Balkans after

the conquest of Constantinople in 1453. Not only did the conquest change the social structure as it instituted political dominance in the areas absorbed into the empire, but it also changed the balance of power in western Asia and eastern Europe. In a similar fashion, as the British East India Company gradually conquered or otherwise absorbed much of South Asia, the company irrevocably altered the indigenous power structures, notwithstanding its practice of ruling through indigenous intermediaries. Other conquerors, notably the Manchu who founded the Qing dynasty, gained the allegiance of many of the Chinese intellectual elite when

they actively perpetuated the traditional bureaucratic meritocracy present in China for centuries before their conquest. On the other hand, internal conquest also alters internal relationships, as when the Tokugawa unified Japan in the late sixteenth century, entering into a new and sometimes fragile relationship with Japanese peasants. Just as the indigenous people above were reorganized hierarchically after conquest or colonization, sometimes new (or creole) classifications of people emerged. An instance of this occurred when the Dutch relocated a group they called *Mardijker* to Batavia, thus incorporating them into a new social organization. Indeed sometimes, as shown in the entry about race and class in Latin America, the new classifications of people came from genetic blending rather than relocation, although the forced relocation of Africans gave rise to new communities in areas such as Belize. In these instances, revised hierarchical organization was literally born. And of course, the destabilization of culture did not depend entirely on armed takeover, as we see in the entry of the cultural impact of the Portuguese in Asia, but the disparity in power did cause destabilization of the existing hierarchies. Many factors influence status in societies, and all of these factors can have a destabilizing impact on the existing power structure.

—Carolyn Neel

The Ruling Institution in the Ottoman Empire

A visitor to the Ottoman palace in the sixteenth century would be entering the administrative center and the imperial household of a major power of the early modern world. By this time, the Ottoman state had transformed from a small seminomadic frontier principality in Anatolia (modern-day Turkey) into a multiethnic and multireligious empire controlling territories in North Africa, the eastern Mediterranean, the Arabian Peninsula, Anatolia, southeastern and central Europe, and the Black Sea region. This visitor, perhaps a diplomatic representative like the Habsburg ambassador Ogier Ghiselin de Busbecq, would be taken to the imperial council hall presided over by the grand vizier. Here the

visitor would meet the viziers who were responsible for military and political matters, the chief judges in charge of judicial matters, the treasurers who directed the finances, and the chancellor. Apart from this highest executive body of the empire, the palace also had the residential quarters of the sultan, where he lived with his household “like a pearl hidden in an oyster shell,” as described by a sixteenth-century Ottoman historian. Our visitor could not visit there because it was restricted to outsiders, even to the grand vizier. Seclusion played an important role in defining the power relationship between the sultan and his ruling elite.

This particular organization of the Ottoman ruling establishment was a part of the imperial project of Sultan Mehmed II (r. 1444–1446 and 1451–1481). Through his military campaigns in Anatolia and the Balkans, including the conquest of the Byzantine capital of Constantinople in 1453, Mehmed II tried to establish unified rule in a region that had been politically fragmented for centuries. He was also determined to establish a more centralized authoritarian rule vis-à-vis powerful groups among the Ottoman ruling circles. To increase his power against prominent Anatolian families, Mehmed II created a new elite that did not have a significant power base of its own and thus had less possibility to challenge his authority.

This new elite consisted of male and female members of the sultan’s household. A majority of the male members (*kul*) were recruited to the palace by being subject to a tax levy known as the *devshirme* (“gathering”). These were mostly the sons of Christian peasants from the Balkan provinces who were taken from their families when they were 8 to 19 years old. They were converted to Islam, learned Turkish, and trained for military or bureaucratic posts in Istanbul. This system must have been painful for many children and their parents, but it also allowed for high social mobility. After having completed their education, these young men could rise to some of the highest positions in the empire, including the grand vizierate. Ottomanization did not erase earlier memories, but ethnic solidarity played an important role in palace life. This was an elite whose members were united through their loyalty to the sultan while keeping their

➤ BUSBECQ, *TURKISH LETTERS*

Ogier Ghislen Busbecq (1522–1591) visited the Ottoman empire as a Habsburg ambassador from 1555 to 1560 and published his observations as a series of letters. Here Busbecq praises the *devshirme* system and what he perceives as meritocracy in the Ottoman system of appointments. We must note that although soldiers and officials with a *devshirme* background held important posts in the empire, there were also other members of the ruling circles who were from families of hereditary landowners and religio-administrative cadres.

“In all that great assembly no single man owed his dignity to anything but his personal merits and bravery, no one is distinguished from the rest by his birth, and honor is paid to each man according to the nature of the duty and offices which he discharges. . . . The Sultan himself assigns to all their duties and offices, and in doing so pays no attention to wealth or the empty claims of rank, and takes no account of any influence or popularity which a candidate may possess. . . . Those who hold the highest posts under the Sultan are very often the sons of shepherds and herdsmen, and so far from being ashamed of their birth, they make it a subject of boasting.”

In the following excerpt, Busbecq praises the janissary standing army and appreciates their discipline. Ottomans displayed their army to ambassadors in order to impress them with their military power, especially their command of highly disciplined centrally trained soldiers in good order.

“What struck me as particularly praiseworthy in that great multitude was the silence and good discipline. There were none of the cries and murmurs which usually proceed from a motley concourse, and there was no crowding. Each man kept his appointed place in the quietest manner possible. . . . The most remarkable body of men were several thousand Janissaries, who stood in a long line apart from the rest and so motionless that, as they were at some distance from me, I was for a while doubtful whether they were living men or statues, until, being advised to follow the usual custom of saluting them, I saw them all bow their heads in answer to my salutation.”

—Asli Niyazioglu

Source

Ogier de Busbecq, *Turkish Letters*, translated by Edward Seymour Forster (London: Sickle Moon Books, 2001), 39–41.

diverse backgrounds as Albanians, Bosnians, Serbs, or Circassians. The female counterpart of the *kul* was the institution of the harem. Young female slaves, mostly captured from the Mediterranean and Black Sea regions, were brought to the palace, where they were also converted, learned Turkish, and received palace education. Some of these women stayed at the harem as servants or concubines of the sultan. Others were married off to high-ranking officials, mostly those with *devshirme* origin, and thus took part in the making of the Ottoman elite.

The Ottoman provincial administration was also shaped by the sultan’s centralizing power. Provincial elite mostly consisted of officials who received the right to collect taxes in return for military service (*timar*). They exercised executive power over their lands, but compared to the medieval European feudalism there were significant checks to their power: the lands were

state-owned, their posts were not automatically inheritable, and they were subject to rotation. Moreover, they lacked judicial power. The state assigned judges (*kadis*) to its provinces, who along with the professors of law were members of the religio-administrative cadre (*ilmiyye*). This separation of legal and executive powers gave the state more control over the ruling circles. The separation of powers also aimed to protect the subjects of the empire against the abuses of state officials. An injured peasant could complain about a judge to a timar-holder or about a timar-holder to a judge or could take his case to the attention of the sultan. Such complaints as well as many other provincial affairs were meticulously recorded and preserved in the archives. They give us a rich portrait of the complex relationship involving the central state, provincial ruling circles, and subjects of the Ottoman empire.

Ottoman ruling institution, especially the provincial administration, experienced significant changes in the late sixteenth and early seventeenth centuries. A major change took place in the composition of its army and methods of tax collecting. The Ottoman army consisted mainly of the central army of salaried soldiers, including the janissary infantry and the provincial cavalry of the timar-holders. In the late sixteenth century changes in military technology required more standing soldiers centrally trained to use firearms. As the need for the provincial cavalry decreased, the Ottoman state increased the number of janissaries and transformed the provincial administration from timar to the tax-farming system. Officials were appointed to collect taxes and provide the state with cash for the salaries of the soldiers. Thus, by the end of the eighteenth century an important group among the Ottoman elite, the timar-holding cavalry, had almost disappeared. This transformation is an example of how the Ottoman ruling establishment was able to transform itself drastically in response to changing times from the mid-fifteenth century to the mid-eighteenth century.

—Asli Niyazioğlu

Bibliography

- Faroghi, Suraiya. *The Ottoman Empire and the World around It*. London and New York: I. B. Tauris, 2004.
- Goffman, Daniel. *The Ottoman Empire and Early Modern Europe*. Cambridge: Cambridge University Press, 2002.
- Imber, Colin. *The Ottoman Empire, 1300–1650: The Structure of Power*. New York: Palgrave, 2002.
- Inalcik, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. Translated by Norman Itzkowitz and Colin Imber. New York: Praeger, 1973.
- Kafadar, C. “The Ottomans and Europe.” In *Handbook of European History, 1400–1600*, edited by T. A. Brady et al. Leiden: E. J. Brill, 1994.

White Town and Black Town— Madras and the Coromandel in South India

In the early 1600s, the British East India Company began to relocate the center of its commercial operations from Southeast Asia to the southeastern coast of India (known as the Coromandel). In

Masulipatam, the chief port of the diamond-rich kingdom of Golkonda, the British first attempted to establish a factory, or trading post. Masulipatam was not only a major market for diamonds, but the nearby villages of the Krishna-Godavari Delta were filled with weavers specializing in the production of high-quality cotton textiles. Unfortunately for the English, their commercial tryst with Masulipatam did not work out. The Dutch were hot on the heels of the English, also interested in the Coromandel Coast, and they bribed the local Mughal governor to cause trouble for the English, whose warehouses were ransacked and merchants chased away.

Thomas Day, a British East India Company merchant, took the initiative during the next few years to obtain a land grant farther down the coast, where the English began to build a fortified base of their own in 1639. Rather defiantly, Day and his colleagues named the place Fort Saint George, but very early on in their exchange of correspondence with their superiors in London, they referred to the fort as White Town and the neighboring Indian village of Chennaipattanam as Black Town. The entire settlement eventually became known as Madras. During the latter half of the seventeenth century, Fort Saint George developed into a massive, state-of-the-art fortification, while Black Town quickly grew into a burgeoning city almost as large as London, with a garland of bustling suburbs.

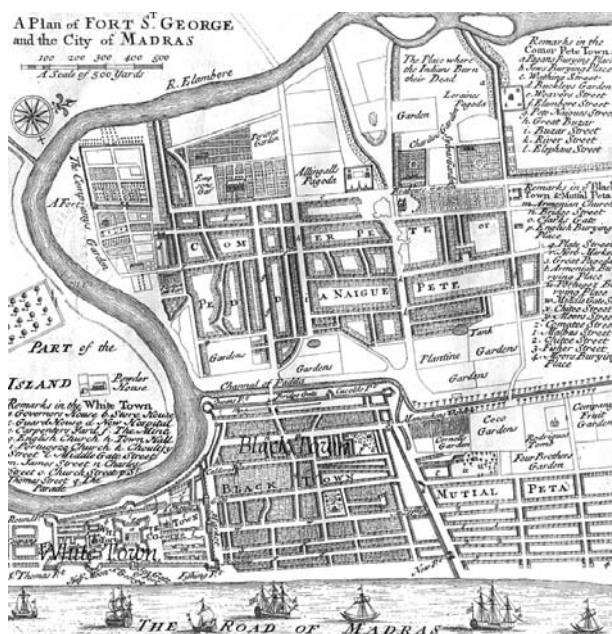
When the English first began to develop Madras in the 1640s, they were still concerned by their experiences at Masulipatam, and their attitude was decidedly defensive: they wanted to trade with India, but they craved the idea of security represented by high stone walls and segregated spaces. All of the Portuguese settlements in India, the English may have reflected, were both fortified and segregated. The fort-town arrangement was a common feature of early modern commercial outposts, but it was not without precedent in the Indian cultural context. Dividing cities into ethnic neighborhoods was a longstanding practice in South Asia, and in southern India many cities had long been divided into a fortified sector and an adjoining *pettah*, or bazaar.

Madras was much bigger than White Town and Black Town. For more than a century before the arrival of the English, there had been

a substantial renegade Portuguese town, São Thomé, situated 6 miles (10 kilometers) south of where Fort Saint George would be built. This settlement had long been divided into an Indian Christian quarter along the shore, a fortified Portuguese neighborhood, and an Indian quarter lying slightly inland and arranged around a large temple complex. Over the course of the eighteenth century, São Thomé was incorporated into the ever-expanding metropolis of Madras, as were several suburbs along the Coum River, settled by Telugu-speaking weavers who had migrated to the coast to work for the East India Company. Still another quarter of the city was built up by the Muslim rulers of the Wallajah dynasty, staunch allies of the English, who moved their court from Arcot to Triplicane, well within range of the protective guns of Fort Saint George. Some of the city's suburbs, however, were developed by the English, who sought an escape from the hot sun and brackish water of the fort and the crowds of Black Town. European residential areas sprang up in Egmore, Choultry Plain, and also at Saint Thomas Mount, an ancient Christian pilgrimage center located several miles inland near a low range of hills.

The fort-town format of White Town and Black Town was repeated at other European enclaves that grew up along the Coromandel Coast after the English founded Madras. At Pondicherry, the French quarter—the Ville Blanc—was surrounded by the sprawling Ville Noire, itself divided by religion and ethnicity. A canal divided European Pondicherry from the Indian city, while the houses of the French residents clustered under the guns of Fort Louis. A similar arrangement, on a smaller scale (without canals), existed at the Danish colony of Tranquebar and at the Dutch outposts of Sadras and Negapatam.

Wherever the new style of colonial city emerged, Europeans and Indians struggled with the problem of adapting to each other's civic institutions. The English at Madras, for instance, quickly learned that Black Town could not be managed like an English village but at the same time could not be run like a typical southern Indian village. In the seventeenth century, the administration of Black Town was carried out through the *dubashes*, or official Indian interpreters, attached to the governor's staff. These



A Plan of Fort St. George and the City of Madras, by Herman Moll. (Salmon, Thomas. *Modern History: or, the Present State of all Nations*, 1739)

individuals worked through the Heads of Castes, a body representing all of the different ethnic minorities and occupational classes of Madras, most of whom had their own streets and neighborhoods. The imposition of taxes, local laws, and town management were worked out, for the most part, through negotiations among the caste leaders, although sometimes disagreements led to bitter conflicts, thus forcing the English to intervene in Black Town's affairs. For the most part, however, the English preferred to let Black Town's leaders bear the burden of administering and policing the city.

White Town was never entirely European, for a few Indian merchants always lived there along with hundreds of servants working for English households. Nor was Black Town ever entirely Indian, for there were always at least as many Europeans living there as in White Town. By the early eighteenth century, 100 Black Town houses were listed as European-owned, and a large number of discharged English soldiers opened taverns and shops in the Indian quarter. Over time, the European residents of Black Town demanded and received more of a say in how the city was run; all of the traditional Indian ways of doing things were retained but augmented by

new practices, such as a municipal water supply, a scavenger to clean the streets, an English-style mayor, a town council, a municipal court, and eventually a Crown-appointed sheriff to make arrests and prosecute criminal cases. Some of these changes were an attempt to impose order on the Indian inhabitants, but many reflected the need to make the English residents answerable to the same laws that governed those who lived inside the walls of Fort Saint George.

—James Hoover Frey

Bibliography

- Ahuja, Ravi. "Labour Relations in an Early Colonial Context: Madras, c. 1750–1800." *Modern Asian Studies* 36(4) (October 2002): 793–826.
- Arasaratnam, S. *Merchants, Companies and Commerce on the Coromandel Coast, 1650–1740*. New Delhi: Oxford University Press, 1986.
- Love, Henry Davison. *Vestiges of Old Madras, 1640–1800*. 4 vols. London: John Murray, 1913.
- Neild, Susan M. "Colonial Urbanism: The Development of Madras City in the Eighteenth and Nineteenth Centuries." *Modern Asian Studies* 13(2) (1979): 217–246.
- Neild-Basu, Susan. "The Dubashes of Madras." *Modern Asian Studies* 18(1) (1984): 1–31.
- Subrahmanyam, Sanjay. *Improvising Empire: Portuguese Trade and Settlement in the Bay of Bengal, 1500–1700*. New Delhi: Oxford University Press, 1990.

The Chinese Examination System—Progress and Abolition

In the course of the 200 years that followed the Manchu conquest of China in 1644, the Qing dynasty (1644–1911) gradually built up a bureaucratic meritocracy by imitating the institutions and practices of the Ming dynasty (1368–1644) that the Qings had recently ousted. This bureaucracy, with its formal civil service examination system, represented the apex of China's state-sponsored education. During these two centuries the Chinese meritocracy also became a part of an "oriental mystery" observed and admired by European travelers and missionaries and that, through their reports, influenced Enlightenment thinkers. Ironically, however, while Europe and the United States subsequently adopted the practice of examinations in constructing their modern civil service bureaucracies during

the nineteenth century, the Qing dynasty was forced to abolish the traditional examination system in 1905 because Chinese critics believed that it had contributed to the collapse of the Chinese empire in the face of Western assaults and humiliation.

In order to consolidate Manchu power over China, the first Qing emperor, the underage Shunzhi (r. 1644–1661), followed the advice of Dorgon, his uncle and regent, to continue the policy of "using the Chinese to rule the Chinese." This strategy had been effectively established by Nurhaci, the founder of the Manchu dynasty, who had initially employed it to impose a strong Manchu state in northern China. In 1644 the young emperor rededicated the Temple of Confucius by bestowing the honorary title of duke on Kong Yunzhi, the sixty-fifth direct male descendant of Confucius, thereby showing his reverence for China's greatest sage. In 1645 while granting the posthumous honor of "Most Accomplished and Sacred Ancestor of Literary Education" on Confucius, as previous emperors had often done, Shunzhi ordered his dynasty's first set of provincial examinations to be held throughout the empire and according to rules that had prevailed during Ming times.

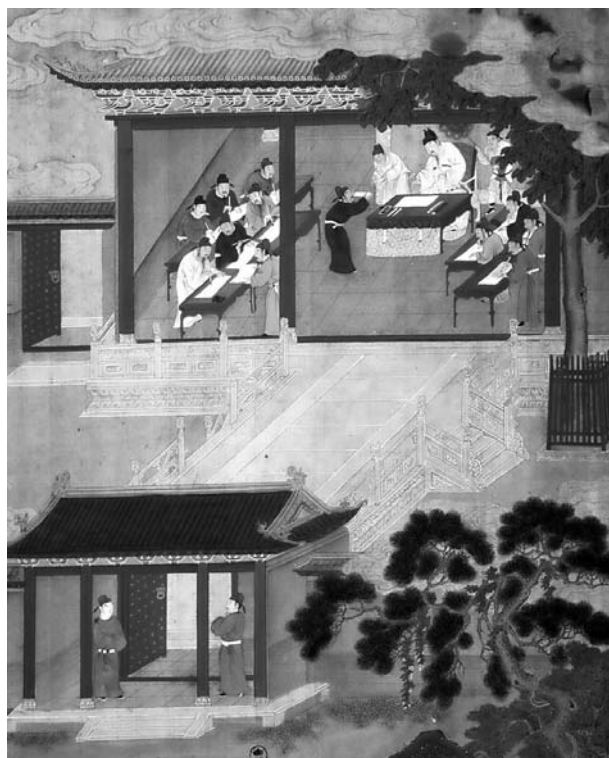
From the examinees 1,428 qualified candidates were selected, and the following spring they gathered in Beijing, the new Manchu capital, to participate in the first national examination. Subsequently the emperor awarded the degree of advanced scholar to 400 competitors. The positive response of the newly conquered Chinese people to the examinations encouraged the emperor to reorganize the imperial academies and restore government-sponsored schools in most of the provinces and counties throughout the 1650s.

The success of Emperor Shunzhi encouraged his successors Kangxi (r. 1661–1722), Yongzheng (r. 1723–1735), and Qianlong (r. 1736–1795) to gradually transform the Manchu militaristic court into a Chinese-style meritocracy. On the one hand, these Manchu rulers allied themselves with Mongol tribal chiefs in order to secure the empire's borders and to suppress the regional resistance of various claimants to the imperial throne of the deposed Ming dynasty. On the other hand, they gradually attracted increasing

numbers of Chinese scholar-officials to serve the imperial bureaucracy. Although initially unable to share real power with their Manchu counterparts, Chinese scholar-officials introduced literacy to their Manchu superiors and, to some extent, enabled the central government to counterbalance the warlordism of the Manchu and Mongol military commanders stationed along the empire's borders. The three emperors consistently demonstrated to their Chinese subjects a propensity for befriending and respecting Confucian scholars and an aptitude for traditional Chinese arts, especially calligraphy and poetry. Responding to the emperors' sincere adaptation to Chinese culture, Chinese intellectuals quickly accepted the Manchu emperors as legitimate rulers who had obtained the Mandate of Heaven.

During the eighteenth century the Qing dynasty masterfully operated a meritocracy system that required provinces and counties to allocate tax revenues to government-sponsored schools. The Qing assigned education commissioners to the provinces to supervise the recommendation process, in which the commissioners worked with provincial governors to nominate students to the expanded Imperial Academy. Some were selected by reason of their being awarded the degree of qualified candidate from a provincial examination, some were recommended because of their descent from 13 historically renowned Confucian scholars, and some were simply allowed to move up because they had become aged or sick after failing to pass the local examinations for a period of more than ten years. After studying in the academy for a certain period of time, often three years, graduates were either assigned to specific civil service positions or allowed to enjoy honorary titles without any specific responsibilities. Government-sponsored education therefore significantly broadened the social basis of Chinese support for and obedience to the Manchu rulers.

The Qing civil service examination followed closely the mechanism and procedures of the Ming system. It became routine for a county to offer an annual examination and award the degree of talented scholar and for a province to offer a triennial examination and award the degree of qualified candidate. The national examination in the imperial palace at the Forbidden City was



Civil service exam under Emperor Jen-Tsung, from The Lives of the Emperors of China, Qing dynasty, seventeenth–eighteenth century. (Bridgeman-Giraudon/ Art Resource, NY)

regularly held in the fall of the year after the provincial examination, and the emperor himself conferred the degree of advanced scholar on the most successful competitors. A total number of 406 advanced scholars were recognized in 1730, the highest number on record, and 96 were named in 1789, the lowest on record. Thereafter the degree was offered to 1 out of about 20 competitors. The Eight-Legged Essays, which demonstrated an examinee's knowledge of Neo-Confucian interpretations of the Four Books and Five Classics, remained the major component of the written examination; however, a standardized multisection examination also tested a candidate's ability to draft official documents, analyze policy issues, formulate legal opinions, and compose poems. The Qing examination system also adopted most of the Ming regulations that had been drafted to keep the examinations honest and fair. Some examinees complained that they were treated like criminal suspects when going through the strip search and other harsh procedures during examinations.

➤ CRITICS OF THE EXAMINATION SYSTEM

Gu Yanwu (1613–1682), a scholar who lived during the period of Ming decline and the ascension of the Qing, was one of the most outspoken critics of the Ming examination system. He criticized the system because it disallowed inclusion of any reference to historical events after the Qin dynasty (221–206 BCE) in the educational curriculum and the examinations. The following is an excerpt from Yanwu's *Diary of Learning*:

“[In the golden years of the early Ming dynasty,] when the Song’s dynastic glory was still the recent memory, Scholar Qiu Wenzhuang pointed out that some Advanced Scholars, ranked on the top of the Public Bulletin of Examination Results, knew nothing about the catalogue of the Official History, about the timetable of the past dynastic successions, and about correct formation of Chinese characters. They studied only the materials published by the Eighteen Houses, [from which the examination materials were officially published authorized by the imperial examination board]. After reading them for three to five years, they got lucky and climbed to the very top of the Bulletin, and, overnight, became the peers of the estab-

lished scholar-officials. As to literary elegance and military skills, they had abandoned them just like a horseman throwing away his whip. Alas. Today, the Eight-Legged Essays are flourishing, but the Six [Confucian] Classics are being neglected; the Eighteen Houses are glorified, but the twenty-one Histories are abandoned.

. . . I knew one or two gifted young students, when I was myself young, who were willing to study the unauthorized classics and to contemplate history. For doing so, they caused clashes with their fathers and teachers, who blamed them for not focusing on studying the correct textbooks, and cursed them for their not being able to have successful careers in the future. This is what I mean by saying that an adult pursuing only immediate profit is a stupid person.”

—Wenxi Liu

Source

Ku Yanwu, *Ri Zhi Lu Ji Shi*, edited by Lan Baoqun and Lu Zongli (Shanghai: Shanghai Gu Ji Chi Pan She, 2006), vol. 2, p. 936. Excerpt translated by Wenxi Liu.

However degrading, the examination system was well received by most Chinese commoners, especially struggling examinees from humble backgrounds who intended to move up socially by the only ladder available.

Some of the holders of the advanced scholar degree were designated to serve in a county magistracy or an equivalent office. However, most were assigned to be senior editors of Hanlingyuan, the Academy of Literary Excellence, responsible for collecting, compiling, and collating the Confucian Classics, the official histories, and the literatures of renowned writers throughout Chinese history, or to be ranked educators, teaching in the Imperial Academy. The Manchu emperors did not entrust real governmental powers to Chinese scholar-officials until the mid-nineteenth century, when the Manchu elite military, the Eight Banners, appeared unable to stop Western intrusions or to crush the Taiping Rebellion (1850–1864). Therefore, while

an increasing number of degree holders were produced by means of the provincial and capital examinations during the eighteenth century, most of them eventually lived in local communities, devoid of official power but respected by the people for their knowledge and wisdom and trusted by the residents for their leadership in arbitrating or mediating local disputes. Although largely lacking true governmental authority, they played indispensable roles in constructing social order and harmony for the Manchu authority.

The Chinese meritocracy, especially the examination system, impressed European travelers, Christian missionaries, and Enlightenment philosophers throughout the early modern period. Though disagreeing with one another on the nature and meaning of Chinese absolutism, they admired what they thought to be a meritocracy in which honorable literati were able to rule an immense Chinese empire. To English gentlemen, Chinese scholars and scholar-officials actually

possessed the highest dignity in the state by reason of their effective administration of justice and ability to maintain social tranquility. They therefore respectfully termed these Chinese scholar-officials “gentry,” seeing in them oriental counterparts to the backbone of the English legal, social, and parliamentary systems. The Chinese practice of competitive examination, through the consistent advocacy of Western writers in the seventeenth and eighteenth centuries, was gradually translated into a component embodied in the European and American civil service systems during the nineteenth century.

While Western observers were praising the Chinese meritocracy, however, some Chinese intellectuals of the early Qing period began to question the validity of the examination system. Reflecting on the fall of the Ming dynasty to the alien Manchus, they criticized the disgraceful roles that the scholar-officials had been playing in sustaining Manchu imperial despotism. In the minds of radical critics, state-sponsored education overemphasized Neo-Confucian dogmas centered on the concept of “li,” or the patterns of the natural world. Not only did they deviate from the original and authentic teachings of the Confucian classics, but this aberration was also undermining the values of applied science and technology that could be used to counter Western intrusion. The standardized examinations were increasingly being reduced to a lifeless rhetorical puzzle, as witnessed in the Eight-Legged Essay format. And the meritocracy in operation was producing domestic slaves for the private households of the emperors while failing to criticize and thus balance the imperial authorities.

These criticisms did not get a warm response from Chinese intellectuals until the mid-nineteenth century, when a series of Chinese defeats at the hands of European powers within the period of a half century weakened both the Manchu rulers and the Chinese cultural elites. While most scholar-officials in power dreamed of reforming China by revitalizing Confucianism and consolidating it as the foundation of the state, the combined effort of struggling scholars within the traditional Chinese educational system, with their counterparts educated by missionary schools in China and in overseas colleges and universities, finally forced the Qing

authority to abolish the examination system in 1905. However, the people’s faith in meritocracy, especially their trust in fairness and equal opportunities represented by a reformed examination system, remained and has continued to be a crucial aspect of the sociopolitical life of Chinese all over the world.

—Wenxi Liu

Bibliography

- Elman, Benjamin. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.
- Franke, Wolfgang. *The Reform and Abolition of the Traditional Chinese Examination System*. Cambridge, MA: Harvard University Press, 1960.
- Maverich, Lewis Adams. *China, a Model for Europe*. San Antonio, TX: Paul Anderson, 1946.
- Meskill, Johanna M. M. *The Chinese Civil Service, Career Open to Talent?* Boston: Heath, 1963.
- Miyazaki, Ichisada. *China’s Examination Hell: The Civil Service Examinations of Imperial China*. Translated by Conrad Schirokauer. New York: Weatherhill, 1976.
- Teng, Ssu-yu. “Chinese Influence on the Western Examination System.” In *Studies of the Governmental Institutions in Chinese History*, edited by John L. Bishop. Cambridge, MA: Harvard University Press, 1968.

Subjugating Japanese Peasants—The Tokugawa Period

Most scholars regard the Edo, or Tokugawa, period (1603–1867) to have been a time of remarkable peace and stability. The Tokugawa shogunate had effectively cut Japan off from any contact with the outside world and had instituted a set of controls that provided the nation with a strong central government. The peace and stability led to a rapid expansion of Japan’s economy, rapid urbanization, and real increases in the fortunes of many Japanese. Yet despite these many gains, there were frequent peasant protests and popular uprisings, the frequency increasing with time.

One Japanese scholar, Aoki Koji, has determined that there were a total of 7,664 incidents of social violence and political protest between 1590 and 1877. Another scholar, James White, when examining Aoki’s research, found peasant, manorial, and other protests more frequent

> SAKURA SOGORO

Sakura Sogoro (also known as Sakura Sogo) was a farmer and a folk hero of the early Edo period (1600–1868). His real name was Kiuchi Sogoro. Sogoro was the headman of a small farming village in the Sakura domain in Shimosa Province (now a part of Chiba Prefecture near Tokyo). According to legend, in the 1640s or 1650s the governor (daimyo) of the province caused considerable suffering among the peasants by levying very heavy taxes and imposing harsh forced labor; Sogoro petitioned the governor for a reduction in taxes. When the governor refused to act on his plea, Sogoro went alone to Edo (now Tokyo) to submit an appeal directly on behalf of the peasants to the shogun himself. By directly appealing to the shogun, Sogoro was risking his life, as this was an act punishable by death. However, the shogun accepted Sogoro's formal plea and ordered a complete investigation of the taxation and labor practices in the Sakura domain. Despite his success, however, Sogoro and his entire family were executed for his actions by local authorities, who resented Sogoro's audacity in going over their heads directly to the shogun.

Sogoro's defiant action has become a part of the legendary history of peasant protest in Japan, and it is difficult for historians to separate fact from fiction. A 1652 village register lists a farmer named Sogo, and an early-eighteenth-century gazetteer lists the execution of a certain Sogoro, but it is difficult to determine the accuracy of the many stories and kabuki plays subsequently written about Sogoro.

—Daniel A. Métraux

and contentious in Europe than in Japan for the same period. The three peak periods of popular uprisings (*ikki* or *hyakusho ikki*) were the 1780s, 1830s and 1860s, corresponding roughly with periods of famine and political change.

Most Tokugawa uprisings were nonviolent. Peasants would leave their land to avoid paying taxes or would petition authorities directly or indirectly against high land taxes, forced labor, and other burdens placed on them by ranking officials. The uprisings lacked any revolutionary zeal; there were no demands for enhanced rights or for changes in the way that Japan was governed,

but there were concerns about fairness, reciprocity, and the compassion of authorities.

Many protests came as a result of efforts by authorities to extract more than they were getting from those they governed. Land taxes remained stable and relatively fair throughout the Tokugawa period, but the peasant also faced a vast array of other taxes and fees that could become a major drain on his income. Disputes could develop from unfairness exhibited by village officials or could represent a communal protest against excessive demands for additional taxes or *corvée* labor.

During the first half of the Tokugawa period many protests were initiated by influential villagers, such as the village head who acted as the liaison between villagers and samurai officials. The Tokugawa village was generally autonomous. Higher authorities generally let local officials rule undisturbed as long as the villagers paid taxes, kept protest to a minimum, and followed the law, but when protests occurred, the first concern of authorities was to get the farmers back to work. Authorities often received petitions or heard grievances, promised to study the matter, and quite often made changes to satisfy the protesters. But authorities also often sought out those who had started the protests and punished them harshly.

Peasant protests after 1750 were generally more violent, larger in scale, and more defiant against authority. Uprisings involving thousands of peasants from several adjoining jurisdictions were common. The protests tended to be well organized and planned and were thus more effective in resisting the authorities. Unlike the past, when protests were frequently led by village headmen and other local officials, the post-1750 uprisings often were organized by the peasants themselves. A 1771 peasant revolt in Tamba province (now a part of Kyoto and Hyogo prefectures) broke out when the provincial government attempted to establish a monopoly over the distribution of cash crops in the markets of this agriculturally rich region. More than 5,000 peasants attacked many government offices and destroyed several establishments of rich merchants. It took several months and military forces from other regions to put down the rebellion.

Some protests after 1830 had a more political nature. Peasants on several occasions started the uprising to achieve political reform within their village organizations. An ikki in Choshu domain (now Yamaguchi prefecture) centered on a strong effort to remove the current village headman and more democratic procedures for selecting future leaders. There were numerous campaigns for the dismissal of allegedly corrupt or unscrupulous village officials, including times when protesters openly burned land registers and other tax-related documents. Worried by the changing nature of these protests, the shogunate and domainal governments adopted stronger measures including firm military force in their suppression.

Occasional uprisings continued through the early part of the Meiji period (1868–1912) when the new government employed heavy land taxes to fund its expensive modernization and Westernization campaigns.

—Daniel A. Métraux

Bibliography

- Borton, Hugh. *Peasant Uprisings of the Tokugawa Period*. New York: Paragon, 1968.
- Sansom, George. *A History of Japan, 1615–1867*. Stanford, CA: Stanford University Press, 1961.
- White, James W. *Ikki: Social Conflict and Political Protest in Early Modern Japan*. Ithaca, NY: Cornell University Press, 1995.

Mardijker—Creoles in Batavia

At the beginning of the seventeenth century, the Dutch took prisoners of war in what had previously been the Portuguese-occupied territories of Malacca, India, and Ceylon and brought many of them to Batavia. These prisoners included many people who, in the course of Portuguese Christianization, had adopted the Portuguese names of their respective masters and had been released from slavery, which in turn led to their later designation as “Mardijker,” a Dutch corruption of the Sanskrit term “Maharddhika” (meaning a respectable and influential person), which acquired the meaning of a freed slave and his descendants in the Malay archipelago.

In Batavia, many of those who had been captured were initially reenslaved but were freed as soon as they became members of the Dutch Reformed Church. Since the practice of

Catholicism was prohibited, believers converted in large numbers, but those conversions tended to have a merely formal character. Catholic and syncretic rituals continued to be practiced. The Mardijker spoke a creolized Portuguese that up until the second half of the eighteenth century served as the lingua franca among those who were neither colonialists nor slaves but who lived as free citizens (*vrijburghers*) in Batavia and its environments, the so-called Ommelanden.

The Mardijker have never been a distinct ethnic group but instead are a category of people that included different free populations of southern and Southeast Asian origins who did not maintain an exclusive identity of origin. Among them existed several subcategories as well as overlappings with other groups of people. During the seventeenth and eighteenth centuries the Mardijker formed one of the largest populations among the free inhabitants of Batavia and were also referred to as “Black Portuguese,” “Black” designating them as Asian and “Portuguese” referring to their (colonial) background and to the language they spoke.

The Mardijker worked as soldiers, merchants, watchmen, and poultry and vegetable retailers. Many of them became part of the emerging Eurasian or Mestizo social stratum, consisting mainly of the descendants of European men and Indonesian women. This category of people was socially and culturally positioned between Europeans and natives but never became established as a separate group in Indonesia. The daughters from such Eurasian families often married Europeans and thus perpetuated the European line, whereas boys were often trained as soldiers and usually married Christian natives or women belonging to the Eurasian and Mardijker categories. Children born out of wedlock between Indonesian women and European men were often included in the Mardijker category. Some Mardijker became renowned and wealthy and, on account of their closeness to the colonial rulers, worked in influential positions for the Vereenigde Oostindische Compagnie (VOC, or Dutch East India Company). They established themselves as merchants and thus enjoyed a comparatively high social status within colonial society.

Another group among the Mardijker were the Papanger, a group whose name derives from

THE BETAWI

The Betawi (Malay for “Batavia”) came into being through the processes of creolization during the time of Dutch colonialism. From the seventeenth century onward a small proportion of their ancestors had been exiled to Batavia from different southern and Southeast Asian regions, areas that had been conquered by the Dutch from the Portuguese. Others were brought to Batavia from Bali and other islands of the Indonesian peninsula to serve as slaves and soldiers for the Dutch colonizers and as servants for other influential foreign populations like the Chinese. Due to the fact that the Dutch expelled the indigenous Javanese population from Batavia for fear of rebellions during this period, it was the Betawi who came to be considered the *orang asli* (natives) of Jakarta. In time, many people who used to identify themselves as Sundanese, Ambonese, Chinese, Mardijker, etc., came to identify themselves as Betawi. As slaves and servants, the Betawi had had little access to modern education during colonial times and stuck to their traditions and their Muslim faith more than those in closer contact with the colonial elite and their educational system. Consequently, the Betawi—with few exceptions—were not among the Indonesian elite after independence was achieved in 1949. Today around 2.5 million people in Jakarta consider themselves Betawi, together with another 2.5 million in the neighboring communities. In the 1960s and 1970s the Betawi were (re-)discovered by the state and the public as symbolizing both traditional and indigenous identity while at the same time transcending ethnic boundaries.

—Jacqueline Knörr

Papango, a region (and ethnic group) on Luzon, or the Philippines, from where they were brought to Batavia in the middle of the seventeenth century. They were accorded the status of free citizens after spending many years serving as soldiers for the VOC.

In 1661 23 Mardijker families originating from Bengal and Coromandel were settled in Tugu, an area in northeastern Jakarta. They differentiated themselves from the natives in many ways: through their Christian religion but also through their language, clothing (wearing black

clothes and Portuguese hats until the end of the nineteenth century), and socioeconomic status. They often owned rice fields in which members of the indigenous population worked. As a result the Tugu were considered collaborators of the Dutch, and during World War II many of them were murdered or put in labor camps during the Japanese occupation (1942–1945). When independence was achieved in 1949 many Tugu fled to the Netherlands, where their descendants still refer to themselves as Tugu today.

However, as increasing numbers of slaves arrived from eastern Indonesia and other parts of the Indonesian archipelago, most Mardijker—like most other non-European inhabitants of Batavia—became part of a process of creolization that took place from the middle of the seventeenth century onward and in the course of which the Betawi emerged. Toward the end of the eighteenth century only a few descendants of the original Mardijker remained. Apart from those who had become Betawi, some continued to belong to the Eurasian sphere of Batavian society and, for the most part, left Indonesia for the Netherlands after independence had been achieved. A few subgroups of the Mardijker—all of them Christians like the Tugu—continue to live in Jakarta in small numbers.

—Jacqueline Knörr

Bibliography

- Daus, Ronald. *Portuguese Eurasian Communities in Southeast Asia*. Singapore: Institute of Southeast Asian Studies, 1989.
- Daus, Ronald. *Oud Batavia*, Vol. 1. Bandung: A. C. Nix, 1935.
- França, Antonio P. da. *Portuguese Influence in Indonesia*. Jakarta: Gunung Agung, 1970.
- Haan, Frederik de. “De laatste der Mardijkers.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 73 (1935): 219–254.
- Heuken, Adolf. *Historical Sites of Jakarta*. Jakarta: Cipta Loka Caraka, 2000.
- Knörr, Jacqueline. “Creole Identity and Postcolonial Nation-Building: Examples from Indonesia and Sierra Leone.” *Serie Antropologia* 416 (2007): 6–17.
- Lohanda, Mona. *The Kapitan Cina of Batavia, 1837–1942*. 2nd ed. Jakarta: Djambatan, 2001.
- Niemeijer, Hendrik E. “The Free Asian Christian Community and Poverty in Pre-modern Batavia.” In *Jakarta-Batavia. Socio-Cultural Essays*,

edited by Kees Grijns and Peter J. M. Nas. Leiden: KITLV Press, 2000.

Shahab, Yasmine Z., ed. *Betawi dalam Perspektif Kontemporer: Perkembangan, Potensi, dan Tantangannya*. Jakarta: LKB, 1997.

Taylor, Jean G. *The Social World of Batavia: European and Eurasian in Dutch Asia*. Madison: University of Wisconsin Press, 1983.

Crossing Over— Cultural Transformation in Portuguese India

Although a fair number of European travelers, missionaries, and explorers had been to eastern and southern Asia previously, especially from the mid-thirteenth century onward, direct and regular contact between Europeans and the peoples of the so-called Indies really began when the Portuguese sailed into the Indian Ocean and reached southern India in May 1498. It could be argued that the network of fortresses and trading posts of the Portuguese seaborne empire also functioned as cultural intermediaries. The Portuguese were cultural brokers, introducing Western values and customs to the East. Beginning as an expedition in search of oriental spices and establishing trading contacts, the Portuguese made a lasting impression on the Asian societies with which they came into contact. The Portuguese employed a variety of methods to entrench themselves in the Asian trade, exploiting regional conflicts and mistrust within ruling families and entering into marriages with Asian elites and partnerships with local traders.

In India, cross-cultural contact widened the horizons of both the Portuguese and the Indians, where the Portuguese presence was spread out in various locations such as Daman, Diu, Bassein, Chaul, Bombay, Korlai, Delhi, Bijapur, Golconda, Madurai, Goa, Cochin, Mangalore, Negapatnam, São Tomé, Chittagong, Calcutta, Nagar Haveli, and Dodra.

The Portuguese presence throughout southern and eastern Asia was characterized by two major concerns, trade and proselytizing, and in India they sought “Christians and Spices.” Those Indians who became “Lusitanised” by converting to Roman Catholicism and speaking Portuguese became identified with the Portuguese.

The Portuguese impact in India is immediately visible in architecture, both religious and secular. Goa’s position as “the Rome of the Orient” and 450 years of Portuguese control of part of Goa have left buildings that are a testimony to cross-cultural exchange. In Sri Lanka (Ceylon) as well as in India, a new style of furniture, Indo-Portuguese, resulted, incorporating local wood with European designs and motifs. The Portuguese also introduced Western Renaissance art to Asia, as seen in a number of Mughal paintings. Western motifs and designs were also introduced to Asian jewelry.

European clothing, which involved tailoring to Western styles, was introduced, and men began to wear trousers and shirts, while women wore skirts and dresses. The Portuguese also introduced European types of liquor and Portuguese food, such as bread and cakes.

The first writings based on European models—biographies, histories, and grammars—emerged from Goa. Although the Portuguese had extended their network to other regions in Asia—Sri Lanka, Malaysia, Indonesia, China, and Japan—evidence suggests that the Goans were the first Easterners to write in Western languages (Portuguese, Latin, French, and English). By learning Portuguese and other European languages, Asians also had access to Western literature.

Though Portuguese rule was short-lived in many parts of India, such as Kerala and Bengal, cultural transformation left its imprints on the



Se Cathedral Church in Goa, commissioned by the Portuguese viceroy Redondo and consecrated in 1640. (Mikhail Nekrasov)

▶ INDO-PORTUGUESE

One of the most important outcomes of cross-cultural contact between the Portuguese and South Asians was the evolution of Portuguese-Creole languages. Although interpreters were engaged in the initial phase of the Portuguese presence in the Indian Ocean and beyond, the nature and extent of contact necessitated a direct means of communication. Portuguese-based creoles were spoken in the areas of the Portuguese official and unofficial empire, bridging the communication gap between Westerners and Easterners. Generations of *mestiços* and *mestiças* born out of unions between the Portuguese and Asians enhanced the longevity of these languages.

Portuguese-based contact languages were not limited to the periods of Portuguese dominance in

portions of Asia. In Sri Lanka (Ceylon), the local Indo-Portuguese (nowadays called Sri Lankan Portuguese Creole) was spoken during the Dutch (1656–1796) and British eras (1796–1948) and has survived to date among the Portuguese descendants in the Eastern Province (Batticaloa and Trincomalee) and among the African descendants in the Northwestern Province (Puttalama).

Indo-Portuguese was a valuable tool for those Portuguese who moved from one enclave to another. Being related to other Asian Portuguese Creoles, such as Malacca Creole Portuguese (Papia Kristang) and Macau Portuguese Creole, Indo-Portuguese speakers had a linguistic advantage when moving within those regions of South and East Asia touched by the Estado da Índia.

—Shihan de Silva Jayasuriya

local Indian languages. A new language, Indo-Portuguese, became a language of discourse among peoples of various cultures. Dialects of Indo-Portuguese were spoken in Negapatnam, Mangalore, Cochin, Korlai, Bassein, Bombay, Daman, Diu, and Sri Lanka. Those who were bilingual or multilingual in Portuguese and in the local languages facilitated the transmission of Portuguese words into such languages as Konkani, Bengali, Gujarati, Malayālam, Sinhala, and Malay. Konkani, the language of Goa, borrowed such basic Portuguese words as *advogado* (*advogād*, meaning “advocate”), *Agosto* (*āgôsto*, “August”), *Amêndoa* (*āmend*, “almond”), *prancha* (*parānc*, “dagger”), and *semana* (*sumān*, “week”). Gujarati, spoken in Daman and Diu, also borrowed Portuguese words such as *compasso* (*kampās*, “compass”), *mármore* (*mar-mar*, “marble”), *prancha* (*parāncb*, “plank/board”), *sapato* (*sapát*, “shoe”), and *toalha* (*tu-val*, “towel”).

European music was also introduced to the East by the Portuguese. Through the Catholic Church, the Portuguese introduced a Western style of music and song that included new concepts such as harmony. Not only did the Goans learn Western choral music, they mastered it to such a high standard that in 1663 when they sang an oratorio of the Baroque master Giacomo

Carissimi in Bom Jesus at Velha Goa, the pope’s legate, who was at the performance, noted that he felt that he was in Rome. Goan folk songs were also affected due to Portuguese contact. In Sri Lanka, Chorus Baila has evolved from musical forms brought by the Portuguese and has become the most popular form of song.

The distance and resources involved in sailing to the Indies meant that many Portuguese did not return to their country. This inevitably led to a Portuguese diaspora.

As very few Portuguese women went on the voyages to India, at least in the initial stages, inevitably marriage and concubinage with local women resulted. Indeed, intermarriage was officially encouraged by Portuguese viceroys such as Affonso Albuquerque. Married Portuguese soldiers (*casados*) were allowed to settle down, whereas unmarried soldiers (*soldados*) were transferred from one fortress to another. Moreover, many Portuguese who left the official empire, or Estado da Índia, entered into unofficial trading networks and settled down in southern and eastern Asia.

—Shihan de Silva Jayasuriya

Bibliography

Cabral e Sa, M. *The Winds of Fire: Music and Musicians of Goa*. New Delhi: Promilla, 1997.

- De Silva Jayasuriya, S. *An Anthology of Indo-Portuguese Verse*. Ceredigion, UK: Edwin Mellen, 2001.
- De Silva Jayasuriya, S. *The Portuguese in the East: A Cultural History of a Maritime Empire*. London: I. B. Tauris, 2008.
- Pereira, J., and P. Pal. *India and Portugal: Cultural Interactions*. Mumbai: Marg, 2001.

Serfdom in Eastern Europe and Russia

In the 1980s at a conference on the causes of economic backwardness in eastern Europe, prominent British historian Eric Hobsbawm asked a seemingly simple question: Why was Albania not as rich as Switzerland? Backwaters for much of their histories, both countries were after all mountainous, thinly populated but fiercely independent, and poor in resources except for mercenary soldiers whom they supplied for generations. Yet this seemingly incongruous question of comparing the societies that became Europe's richest and poorest points to one of the most complex historical dynamics that shaped the entire continent. Albania and Switzerland developed in completely different contexts, and serfdom played a crucial role.

Serfdom refers to the condition of a peasant who does not enjoy the rights of a free person but is not a slave. The history of serfdom in Europe is not a monolithic one. The institution developed throughout the continent as a relationship of dependence; peasants depended on the protection of their manorial lord in exchange for working the land and paying rent. However, this practice has been likened to slavery, as the peasants did not have freedom of movement. They could not leave the estate without the permission of their lord, and the lord had the right to demand labor, money, or goods from the serf, who did not have any recourse for negotiating the terms.

Between the fifteenth and eighteenth centuries, western and eastern Europe embarked on contrasting paths of socioeconomical development. Serfdom waned in western Europe, which became a center of the capitalist world system of trade; this economic system shifted the world's major trade routes away from the Mediterranean and the Baltic toward Europe's

Atlantic seaboard. At the same time, eastern Europe experienced the erosion of peasant rights and landholdings and the extension of manorial cultivation and the intensification of serfdom; by the eighteenth century the region was relegated to the role of a periphery that exported natural resources or produced semiprocessed primary commodities for its western counterpart. Some scholars argue that such economic regression played a decisive role in the strengthening of serfdom in eastern Europe. For example, lower grain prices compelled owners to produce more grain to maintain their former revenues by demanding more dues and services from peasants. These scholars point to Russia during the fourteenth and fifteenth centuries and to Hungary and eastern Germany in the seventeenth century as prime examples of this process. Other historians, citing Russia's experiences in the sixteenth and seventeenth centuries, eastern Germany after the Thirty Years' War, and eastern Prussia after the plague epidemic in the early eighteenth century, highlight the role of wars and epidemics that caused serious depopulation and labor shortages, which obliged the landowners to increase their demands for the surviving peasants.

Once entrapped by serfdom, the peasants became little better than the slaves of their landlords. They were not allowed freedom of movement; any serf who left his or her landlord's estate without permission could be retrieved and punished. While the serfs were allowed to administer their villages on their own terms, they remained obligated to pay dues and serve the lord. They were compelled to render services (plowing, sowing, harvesting, haymaking, etc.) to the lord on three or five days and sometimes even six days a week. In the Danish province of Holstein (which was primarily populated by German-speaking people), some serfs were required to produce crops such as grain and wool in addition to taking their masters' ships to sea in order to catch fish to be sold at market. In eastern Germany, the practice of *Gesindezwangsdienst*, first mentioned in 1534, required all serf children to work as domestic servants in the house of the lord for up to four years.

Several factors contributed to the development of serfdom in the east. Eastern Europe is largely landlocked and lacks the navigable rivers

► BURDEN OF SERFDOM

Exploring the experiences of the serfs posed a considerable challenge because the overwhelming majority of them were illiterate and could not produce written records about their lives. But indirect evidence about their conditions can be found in the writings of travelers, who, although belonging to the elites, oftentimes recorded the wretched conditions of the rural masses. One such writer was Alexander Radishchev (1749–1802), whose criticism of Russian political and social conditions resulted in his exile to Siberia. The following excerpt is Radishchev's description of his meeting with a serf, whose heavy burden of labor would have been common to other serfs:

The corduroy road tortured my body; I climbed out of the carriage and (walked). A few steps from the road I saw a peasant ploughing a field. The weather was hot. . . . It was now Sunday. . . . The peasant was ploughing very carefully. The field, of course, was not part of his master's land. He turned the plow with astonishing ease.

"God help you," I said, walking up to the ploughman. . . .

"Thank you sir," the ploughman said to me, shaking the earth off the ploughshare. . . .

"You must be a Dissenter, since you plough on a Sunday."

"No, sir, I make the true sign of the cross," he said, showing me the three fingers together. "And God is merciful and does not bid us starve to death, so long as we have strength and a family."

"Have you no time to work during the week, then, and can you not have any rest on Sundays, in the hottest part of the day, at that?"

"In a week, sir, there are six days, and we go six times a week to work on the master's fields; in the evening, if the weather is good, we haul to the master's house the hay that is left in the woods. . . . God grant that it rains this evening. If you have peasants of your own, sir, they are praying to God for the same thing."

". . . But how do you manage to get food enough, if you have only the holidays free?"

"Not only the holidays: the nights are ours, too. If a fellow isn't lazy, he won't starve to death."

—Alexander Mikaberidze

Source

Alexander Radishchev, *A Journey from St. Petersburg to Moscow* (Cambridge, MA: Harvard University Press, 1958), 46–47.

and coastal waters that made it easier for west European centers of trade and manufacturing to interlink. In the Balkans, Ottoman monopolistic policies, often designed to provision Constantinople at artificially low prices, played an important role in smothering the development of bulk trade. Well into the eighteenth century eastern Europe suffered from low population densities and a comparative scarcity of large towns, which further limited commercial opportunities. Most of the existing towns in eastern Europe were small, and they never developed a real urban middle class. In Hungary and Poland, for example, this meant increasing stagnation in economic life and the decline of the towns to the level of rural communities.

In the sixteenth to seventeenth centuries, eastern Central Europe also suffered from profound socioeconomic crises manifested in natural disasters, famines, urban and rural unrest,

and recurrent warfare (e.g., Ottoman invasions, the Thirty Years' War, and the Polish-Swedish wars). The religious warfare of the seventeenth century led to the persecution and emigration of Protestants, Jews, and freethinkers, who played an important role in economic activities. These crises also contributed to the development of reactionary alliances between monarchs and big landowners, who made concerted efforts to restrict the rights and mobility of the peasantry to extract increased dues and labor obligations. Thus, in Moravia and Bohemia the Thirty Years' War stunted the growth of the local cities and ensured the political supremacy of the nobility over the towns. As argued by the eminent Czech historian Josef Polisensky, these developments were "incalculably deleterious, setting back the development of communities by nearly a century and burdening them with a shortsighted, incompetent upstart nobility which could only

prosper at the expense of the peasantry.” Thus, the economies in central and eastern Europe remained largely traditional, allowing the landlords to consolidate their powers over greater tracts of land and in the process subjugating peasants to serfdom, in many cases for the first time. As the noble estate owners became more powerful and increased their demands for dues in cash, kind, and labor, the peasantry was increasingly subjugated. But serfdom was not uniformly enforced throughout eastern Europe, and allowance must be made for varying political circumstances. Serfdom in Bohemia or Hungary was not the same as in Austria, Poland, or Russia. For example, serfdom did not determine political outcomes. Prussia to the west and Russia in the east used serfdom to increase revenue extraction, which then served as the base for the construction of absolutist monarchies. By contrast, Polish aristocratic magnates dispensed with a strong monarchy. While a full-blown “second serfdom” emerged in east-central Europe and in Russia, some Ottoman-dominated territories (e.g., Wallachia, Moldavia, Bulgaria) saw the development of the *çiftlik* system that was composed of estates and property that were not directly farmed by the owners but instead served as a source of rents and dues from various types of tenants and sharecroppers. Although repressive, the *çiftlik* system never developed into serfdom because of the continuing high level of peasant mobility (i.e., fleeing from estate to neighboring territories), which made it difficult to enforce the serf laws binding peasants to the land. Between 1741 and 1746, for example, Wallachia saw half of its peasant families emigrate, while the Romanian peasantry did not experience full juridical enserfment until the late eighteenth century.

Russia, which maintained serfdom until the 1860s, presents the most well-known case of serfdom. In his classic *Lord and Peasant in Russia*, Jerome Blum observed that there could be three categories of serfs. In the first category, a serf was bound to the land and could not be moved by any lord since the serf was first and foremost attached to the land, not a person. The second category included serfs who were bound to the person of a lord and whose condition closely resembled a slave. The lord was essentially the owner of the serf and could move him

or her anywhere and even sell the serf to a third party. In the third and most complex group, a serf was not directly subject to the state but was subject to a lord who in turn was subject to the state. Russia did not experience a formal serfdom until the fifteenth century, when the civil war of 1425–1453 devastated much of Russia. Some Russian monasteries forbade their peasant debtors to move at any time except around St. George’s Day, the day in the pagan calendar when the harvest was completed and thus debts could be collected. By the end of the fifteenth century the Russian authorities, rationalizing that not paying a debt was a crime and forbidding peasant debtors from moving as a crime-prevention measure, extended the St. George’s Day limitation to all peasants, thus binding them to the land. Lords, however, had no authority over the peasants and were limited to collecting rent.

The turning point in the development of Russian serfdom occurred during the reign of Tsar Ivan IV, whose Oprichnina policy (1565–1572) changed the status of Russian peasantry. The tsar granted his loyal Oprichniks personal control over the peasants living on the lands they possessed, allowing them “to collect as much rent in one year as formerly they had collected in ten” and ordering peasants “to obey their lords in everything.” The continued persecutions and Oprichniks’ demand for ever-increasing rents and taxes led to the depopulation of much of the Muscovy, with peasants fleeing on St. George’s Day. Russian landholders, finding their estates being depopulated, then petitioned the tsar to altogether abolish the right of peasants to move on St. George’s Day. The tsar initially partially satisfied their demands by proclaiming certain years as “forbidden years” when peasants could not move but also setting a five-year statute of limitations on the recovery of fugitive serfs.

The Time of Troubles (1598–1613), when the Muscovite Rus plunged into political turmoil, temporarily halted the enserfment process. Thousands of peasants fled from chaos and destruction, leaving entire communities depopulated. The new Romanov dynasty, which came to power at the end of this civil strife in 1613, supported the nobility’s demands for the repeal of the limitations on the recovery of fugitive peasants. In 1649 the new Law Code (*Ulozhenie*)

marked the official establishment of serfdom in Russia and confirmed a legal social-economic framework for Russian society as a whole that reinforced stratification, preserved privileges for the few, and prescribed harsh servitude for the many. Noble landowners benefited from the following measures against the peasantry: all peasants belonging to the nobility listed in census books were placed into legal bondage; the previously existing time limits on search and recovery of escaped serfs, which had been repeatedly extended during earlier decades, were abolished; freedom of movement for serf family members was terminated; harboring runaway serfs was prohibited; peasants were deprived of personal property; and the power of the nobles over their serfs was strengthened.

—Anita Shelton and Alexander Mikaberidze

Bibliography

- Bideleux, Robert, and Ian Jeffries. *A History of Eastern Europe: Crisis and Change*. New York: Routledge: 2007.
- Chiot, Daniel. *The Origins of Backwardness in Eastern Europe: Economics and Politics from the Middle Ages until the Early Twentieth Century*. Berkeley: University of California Press, 1991.
- Dukes, Paul. *The Making of Russian Absolutism*. New York: Longman, 1990.
- Hellie, Richard. *Enserfment and Military Change in Russia*. Chicago: University of Chicago Press, 1971.
- Polisensky, J. *The Thirty Years' War*. London: New English Library, 1974.
- Sugar, P. *Southeastern Europe under Ottoman Rule, 1354–1804*. Seattle: University of Washington Press, 1977.

Race and Class in Colonial Latin America

The ethnic and cultural foundations of Latin America draw upon a mixed heritage of European, African, and indigenous elements. In this regard, the region's history is part of a much larger story about race and class in the early Americas. Unlike English pilgrims in North America, Iberian conquistadors were heirs to a military tradition and came to the New World seeking power and wealth. Leaving behind wives

and children in Europe, early settlers freely mixed with indigenous and, later, African peoples. In the process, new ethnic types were born. In the case of colonial Mexico, the story of Don Martín Cortés is illustrative. The son of Hernán Cortés and his indigenous interpreter and concubine, Doña Marina, young Martín would travel at the age of five to Spain, where he would be awarded a prestigious knighthood and become a page to a future king. Although the young man would never inherit his father's title or estate (because of his illegitimacy), today he is viewed as the forebear of a new Mexican race: the mestizo. Similarly, in Brazil early *mamelucos*—the children of Portuguese fathers and Tupinambá mothers—became cultural intermediaries and are now romanticized as the forerunners of a new hybrid cultural type: the first Brazilians.

In Spanish America, the intermixing of European, Indian, and African peoples led to a myriad of racially mixed groups that were collectively known as *castas*. The individual terms that defined different ethnicities within the *casta* system varied by region. Generally speaking, the child of a Spaniard and an Indian was called a mestizo, from a mestizo and Spaniard came a *castizo*, from a Spaniard and African came a *mulato*, from an Indian and African came a *zambo*, and so forth. The *casta* system was discriminatory in both theory and practice, with European-born whites at the top of the racial hierarchy and Indians and Africans at the bottom. In the middle of the hierarchy, mestizos and other in-between groups frequently sought to “whiten” themselves and their children. In this regard, the child of a castizo and a Spaniard was legally considered a Spaniard. In the case of unions between Spaniards and Africans the principle was the same, but African blood was considered darker than its indigenous counterpart and was thought to be distinguishable through the third and fourth generations. In addition to the general categories above, a host of designations were employed to describe additional *casta* variations, including *moriscos*, *albinos*, *cambujos*, *albarazados*, *barcinós*, *chamisos*, and so forth. By the middle of the eighteenth century, Spanish preoccupation with race would go so far as to become an art in the form of *casta* paintings: multipanel works that depicted the ethnic characteristics of 16

SPAIN AND PORTUGAL IN THE AMERICAS, 1750



> JOSÉ DA SILVA TERRA

The story of José da Silva Terra, a merchant and miner in late-eighteenth-century Brazil, illustrates how notions of race and ethnicity underpinned legal discrimination in the Iberian world. A middle-aged military captain living on the edge of Portuguese America in the captaincy of Mato Grosso, Terra was a respected member of local society and was responsible for a large household, including a *mulata* wife, various children, and numerous elderly slaves who were too old to work. Additionally, he owned more than 80 slaves who were actively employed in the region's gold mines. Writing to the Portuguese Crown in 1792, the faraway merchant asked that one of his sons be granted an office in the local colonial bureaucracy. Significantly, his high standing in the distant town would hold little sway in the Portuguese court. Shortly after his son personally made the 12-month journey to Lisbon to deliver the petition, Queen Maria I declined the request. Her decision was based on a written recommendation from one of the region's former governors and reflected the man's personal knowledge of the son's ethnicity: "I

know the supplicant [the son] perfectly well and do not consider that he has the necessary capacity for this office, principally being as he is the son of a *mulata* . . . and by consequence, belonging to that class which in Brazil are called men of color. And under no condition whatsoever is there any way in which he could serve, . . . for even supposing that he is married as he himself claims, there are still many white men in that remote colony who also have children and who are equally poor and in need."

—Erik Lars Myrup

Sources

José da Silva Terra to Dona Maria I, Vila Bela (Mato Grosso), [ca. 1792]. Lata: João de Albuquerque e Cáceres, 1792A. Publico Archive of Mato Grosso, Cuiabá, Mato Grosso, Brazil.
Overseas Council to Dona Maria I, Lisbon, November 20, 1793. Collection: Overseas Council, Series: Brasil-Mato Grosso, Box: 30, Document: 1679. Historic Overseas Archive, Lisbon, Portugal.

different racially mixed groups. Although surviving paintings often portray idyllic and exotic scenes, they were not intended to reflect a peaceful coexistence between different ethnicities but rather to reinforce the existing racial hierarchy and the notion that each ethnic group had a specific place in an orderly society.

In the case of Brazil and the Caribbean, African slaves and their descendants were much more prominent than elsewhere in the Americas. By implication, Africa would play a much more important role in the ethnic and cultural makeup of these regions. As was the case in Spanish America, the Portuguese and French employed a series of race-related terms to describe how blacks and their multiethnic descendants fit into society. Additionally, they also employed particular terms to describe cultural differences among different slave groups. In the case of Brazil, for example, a recently arrived uneducated and unchristian slave was called a *boçal*. A *ladino*, on the other hand, was an acculturated Christian slave born in Africa, and a *crioulo* was a

Brazilian-born slave. Similar to mestizos in Spanish America, mulatos in Brazil and the Caribbean were considered an in-between group. Accordingly, they enjoyed a measure of social mobility that was denied blacks. Although demographic information is imprecise, scholars estimate that 80 to 90 percent of slaves in Brazil were black as opposed to mulato. Writing in the early eighteenth century, the Jesuit father Antonil reflected on this differing status. Acknowledging the horrors of African slavery and the difficulties of Portuguese settlers, Antonil's comments about mulatos are particularly intriguing: "They are usually luckier than anyone else in Brazil . . . thus verifying the proverb which says that Brazil is a hell for blacks, a purgatory for whites, and a paradise for *mulatos*, both male and female."

Notions of race and ethnicity frequently played a role in legal and economic discrimination. Town councilors in Spanish America, for example, could only be elected to office if they were white male property holders. Similarly, laws in colonial Brazil allowed a husband to kill

both his wife and her lover on suspicion of adultery unless the husband was from a poor racially mixed group and the adulterer was someone of high standing. In Spanish America, forced labor in the form of the *repartimiento* and *mita* was reserved for indigenous society. Similarly, chattel slavery was the domain of Africans and their descendants across the Americas.

Notwithstanding these examples, early Iberian conceptions of race should not be understood as completely fixed. Depending upon circumstances, individuals from racially mixed groups could sometimes create favorable places for themselves in the racial hierarchy. A mestizo in a peripheral region of Spanish America, such as the highlands of Peru, might very well be considered white in local society, effectively enabling him to control property and to serve in municipal offices. Similarly, mulatos who rose through the ranks of Brazilian society did so in spite of the color prejudices against them and in the process frequently came to be considered white. The story of João Fernandes Vieira is illustrative. The mulato son of a female slave, Vieira was born on the island of Madeira in 1613. In later years he would migrate to Pernambuco, where he would accumulate significant capital. The owner of at least five sugar plantations, this well-to-do mulato would subsequently play a decisive role in driving the Dutch from northeastern Brazil. Thereafter, contemporaries glossed over his humble beginnings. Later authors would even go so far as to claim that Vieira was the legitimate son of an important Portuguese nobleman. If these circumstances did not exist, individuals of mixed blood could also obtain something from the Crown called a "Certificate of Whiteness." Purchase of such a document guaranteed that the owner would be treated as a person of Spanish or Portuguese descent regardless of heritage. This was especially useful for noblemen who did not have any European children to leave their titles to or for those sons of rich men who aspired to enter the Church or university or receive privileges from the Crown. By implication, race in colonial Latin America can best be understood as a social rather than biological designation, interweaving notions of ethnicity with early modern conceptions of power, wealth, gender, and class.

—Erik Lars Myrup

Bibliography

- Antonil, André João. *Cultura e opulencia do Brasil por suas drogas e minas*. Lisbon: na officina real Deslandesiana, 1711.
- Boxer, C. R. *Race Relations in the Portuguese Colonial Empire*. Oxford, UK: Clarendon, 1963.
- Burkholder, Mark A., and Lyman L. Johnson. *Colonial Latin America*. 6th ed. New York: Oxford University Press, 2008.
- Lockhart, James, and Stuart B. Schwartz. *Early Latin America*. New York: Cambridge University Press, 1983.
- Meyer, Michael C., William L. Sherman, and Susan M. Deeds. *The Course of Mexican History*. 8th ed. New York: Oxford University Press, 2007.
- Skidmore, Thomas E. *Brazil: Five Centuries of Change*. New York: Oxford University Press, 1999.

African Communities in Belize

Located in Central America and nestled between Mexico, Guatemala, and the Caribbean Sea, Belize is home to two Afro-Caribbean cultures, the Creoles and the Garinagu. The Creole and the Garinagu are descendants of African people who were introduced to this region by slavers and colonizers beginning in the fifteenth century. Both groups share an African heritage, but their experiences with slavery and resistance against slavery and colonization have shaped their culture, religion, and language in distinct ways.

In Belize, the term "Creole" denotes an ethnic group whose members share an African and European ancestry but who may be mixed with any number of other racial and ethnic backgrounds. Creole, the ethnic group, is distinguished from Kriol, a language that most Belizeans, regardless of ethnicity, speak. The designation Creole was used in the early 1700s after the British baymen brought African slaves via Jamaica to British Honduras, the former name of Belize, to cut logwood, which was used as a dye in Europe, and mahogany, valued in England for furniture construction.

From the inception of British settlement of Belize, the population of Creoles was greater than that of whites. This continued even after the abolition of slavery in 1838 and the conversion of British Honduras into a formal colony in 1871, but the British cultivated a relationship between themselves and the Creoles through

work, education, religion, and language. Therefore, the British maintained social, political and economic dominance. The Creoles' majority status, as well as the Creole elite's associations with the British, led to their dominance in civil service and politics. However, for the vast majority of Belizeans, British slavery and colonization used law to censor and disband African languages and traditions—such as songs, dance, drumming, waking the gone—and used education to teach that England, the Anglican Church, and English traditions were the epitome of civilization. The history and sociology of the formation of Creole identity away from Africa toward Britain encouraged ethnic tensions that worked to keep the Creoles and the Garinagu peoples, two black cultures, apart.

The Garinagu throughout Central America and Belize are descendants of shipwrecked and runaway African slaves and Arawak and Carib Indians who lived on the island of Saint Vincent. Referred to as Garifuna in Belize, the term “Garinagu” signifies the nation of people who speak Garifuna. Persecuted by the British, French, and Spanish, the Carib Indians and escaped African slaves joined forces—through marriage and through militaristic arts—to fight the British and enslavement in the 1600s and 1700s. Resistance against the British continued into the late 1700s, when the British exiled the Garinagu to the island of Roatan off the coast of Honduras.

In the early 1800s, Garifuna people migrated to the southeastern shores of British Honduras. Here, they began to settle in increasing numbers, despite British Honduran settlers' attempts to hinder and then limit their migration for fear

they would incite slave rebellion. While the British settlers eventually allowed the Garinagu to settle permanently because they provided the settlement with workers for the logging camps and with needed agricultural products, they were successful in keeping the Creoles and Garinagu apart by labeling the latter as cannibals and dangerous. Attempts were even made through legal means to fine parties that associated with any Garifuna. Isolated from the main settlement in Belize City, Garinagu culture and the Garifuna language flourished. Ethnic tensions between the Creoles and Garinagu, created by the British during slavery, continued in Belizean society and worked to prevent intermarriage and to encourage discrimination.

—Julie E. Moody-Freeman

Bibliography

- Bolland, O. Nigel. *Colonialism and Resistance in Belize: Essays in Historical Sociology*. 2nd rev. ed. Benque Viejo del Carmen, Belize: Cubola Productions; Barbados, Jamaica, Trinidad and Tobago: University of West Indies Press, 2003.
- Cayetano, Sebastian, and Fabian Cayetano. *Garifuna History, Language, and Culture of Belize, Central America, and the Caribbean*. Belize City, Belize: Cayetano Publishers, 1997.
- McClaurin, Irma. *Women of Belize. Gender and Change in Central America*. New Brunswick, NJ: Rutgers University Press, 1996.
- Moody-Freeman, Julie. “Belize: African Communities.” In *Encyclopedia of the African Diaspora: Origins, Experiences, and Culture*, edited by Carole Boyce Davies. Santa Barbara, CA: ABC-CLIO, 2008.
- Shoman, Assad. *Thirteen Chapters of a History of Belize*. Belize City, Belize: Angelus Press, 1994.

■ Introduction: Gender and Social Hierarchies

Gender roles in any society usually consist of idealized behaviors to which the members of each sex are expected to adhere or, conversely, expected to avoid. While variations in the early modern period existed across ethnic and regional boundaries, certain similarities existed. Women across the globe

were expected to care for their homes and families. This did not necessarily mean that they were to be isolated at home. Some had a high degree of freedom, as was the case with Mohawk women in North America. Although the women of the Mohawk tribe were the ones to care for the children and provide domestic du-

ties, they also seemed to share an almost equal rank with men in the governance of the tribe. In fact, their role in providing food for the tribe brought with it status as the owners of Mohawk lands. In societies where it was the ideal for women to remain socially isolated, typically gender role norms were applied more strictly to the highest strata of society. While women of all classes were expected to strive to achieve these ideals, the reality of life for those women on the lowest rungs of society prevented them from being able to meet such standards. A woman of elite status could more easily remain isolated from the outside world because it was not necessary for her to work outside of the home. An elite woman's movements were strictly monitored, and any misstep could lead to social disaster for the family. No matter how harsh the social restrictions, women usually managed to find ways to assert power, even if it was only in their own households. Elite women in China lived an existence of extreme restriction, exhibited in both their gender roles and bound feet, but they were still powerful as mothers-in-law and first wives.

Even though female gender roles have typically been examined most often by historians, males also have a prescribed gender role in any given society. To add to the complexity of the issue, masculine gender roles are harder to pinpoint than female roles. Again, there are similarities in these gender roles that can be seen across cultures. Male ideals encompassed the counterpart to the feminine roles: the protector of the family and a warrior. Interestingly, the early modern period in both China and Europe saw a new facet added to the masculine ideal: that of a rational, intelligent being. There was also a wide variance in the acceptance of homosexuality in the world, particularly among males. The practice exists in all areas of the world, but was criminalized primarily in Europe, particularly after the Reformation as Protestants and Catholics exerted themselves to prove their piety. This attitude was unmatched anywhere else in the world, and places like Japan not only accepted homosexuality, but transgenderism had an institutionalized place in the Kabuki and Noh theater traditions.

—*Monique Vallance*

Women in China

The period under consideration, 1450–1770, includes the last years of the relatively lax Ming dynasty (1368–1644) and the early years of the more moralistic Qing dynasty (1644–1911). Chinese women, like most women of the age, were largely confined to the private sphere, the realm of home and hearth. Most Chinese women occupied roles that were dependent on their relationship to males: they were mothers, wives, concubines, and servants. A few others made their way through life as courtesans. Both dynasties officially supported a strict Confucian ideology, supporting the notion that keeping the world in balance requires women to focus on family and the “inner court,” the immediate household, insisting that strict separation of the genders is necessary to maintain an orderly society. The Qing were more conservative and tended to take an active role in enforcing their version of family piety more rigorously.

Ideally, the women of the household were organized in a multigenerational pyramid of power. In families with sufficient resources to maintain multigenerational households, mothers-in-law, or the mother of the ranking male in the family, had authority over all other women. Beyond that, wives ranked above concubines and maids, who were sexually accessible to the man to whom they were attached. Concubines and servants in a household incurred the same legal obligation of fidelity as wives. Senior women of a household were responsible for ensuring the good behavior of subordinate women. When children were born to concubines or servants, their father's senior wife was considered their true mother. The death of the ranking male sometimes threw families into disarray; ranking women had full authority over the rest and could protect the status of their own children or take retribution for any past insolence, real or imagined, if they so desired. At times, the subordinate women's birth families or clans could intervene on their behalf, although this brought with it additional expense. In both Ming and Qing times, there were legal restrictions on married women's control of their dowries, particularly their right to take their dowries with them if they were widowed or divorced.

In the Chinese worldview, children are a lifelong responsibility, and the expense of providing a dowry for daughters can be prohibitive. Rural peasant families were less likely to include as many women, but basic organization was similar. Women were part of the economic unit, working in the fields and spinning cloth for sale. There was a shortage of females among poorer families due to female infanticide as well as the migration of daughters into the multifemale upper economic strata as wives, concubines, or servants.

By the mid-fifteenth century the Ming had gone into a long, slow decline, and Ming emperors made few decisions, leaving governance to the bureaucracy. As is often the case, official inattention allowed for (or actually inspired) an effervescence in art and literature. The high rate of literacy, especially among elite women and the more prosperous urban women, gave rise to an explosion in the publishing industry. Women also began taking more prominent roles in the family's economic activities, performing religious rites and participating in public functions. Gentry families internalized the practice of female education, and female literacy remained relatively high after the fall of the Ming.

The notion of the passive victimized Chinese woman has never been the whole story. A society's ideals are rarely a neat reflection of its reality. Shrews, bandits, and prostitutes gained a measure of freedom for themselves, as in truth most women did albeit in a more subtle manner. For centuries the abusive woman, the shrew, has sometimes appeared in cautionary tales and literature. The trend intensified dramatically as the Ming dynasty lost vitality, and the shrew became a frequent cause for lawsuits as well as a stock character in romantic dramas and comic satires. From this distance, it is not really possible to tell whether women were actually "getting out of control" or if these stories grew from the general anxieties of living in a period of dynastic decline.

Whatever the cause of the intensified concern about out-of-control women, the Ming's successors, the Qing, were diligent in their efforts to restore Confucian order. They were a foreign dynasty originating in Manchuria and seem to have tried to offset their foreign origins by demonstrating their dedication to Confucian principles. Qing emperors often involved themselves

in what would normally be private family matters. Illicit sex was a serious matter because it could thwart a male's ability to fulfill his duty to provide sons to continue his own ancestors' line. Female chastity was a matter of intense official concern. By the eighteenth century, the Qing had established stringent standards for female virtue.

The virtuous widow—a woman so chaste that she would remain faithful to her husband even after his death—became an increasingly celebrated figure. The Qing extended the ideal of the virtuous widow to include even young girls who remained faithful to fiancés who died prior to marriage. They made romantic martyrs of those who committed suicide in order to follow a fiancé (sometimes a man whom they had never met) to the grave. There were high honors awarded those who took upon themselves the responsibility of serving a deceased fiancé's parents as a chaste caretaker. It should be noted that marriages were the result of agreement between fathers or those acting in the position. There was no requirement that bride or groom consent.

There were few protections for women. A husband could legally kill a wife guilty of adultery. Both law and custom allowed husbands to beat their wives, but as Matthew Sommer noted in *Sex, Law, and Society in Late Imperial China*, the Qing prohibited "breaking injuries," those involving broken bones or teeth. Nevertheless, Qing courts would be lenient if it appeared that the wife deserved the beating. The Qing Qianlong emperor (r. 1736–1795) excused one man for murdering his wife after she insulted the man's mother, a clear violation of the hierarchy of the hearth.

Qianlong's rule was the apex of Chinese power and wealth as well as the period of the greatest extent to which imperial rulers involved themselves in the private lives of their subjects. During this era, known as the High Qing period, there remained the fond belief that the hierarchy of the home, the eldest male presiding over grateful subjects, would be replicated in the hierarchy of the state, the emperor presiding over grateful subjects. The emperors of the Qing dynasty took their responsibilities seriously and worked arduously to keep the Chinese family in patriarchal balance. By the end of

the dynasty, Chinese intellectuals were speculating that suppressing women was a root cause of Chinese weakness and ineffectiveness, but that was a century and a half in the future.

—Carolyn Neel

Bibliography

- Brownell, Susan, and Jeffrey N. Wasserstrom. *Chinese Femininities, Chinese Masculinities: A Reader*. Berkeley: University of California Press, 2002.
- Ko, Dorothy. *Teachers of the Inner Chambers: Women and Culture in Seventeenth-Century China*. Stanford, CA: Stanford University Press, 1994.
- Mann, Susan. *Precious Records: Women in China's Long Eighteenth Century*. Stanford, CA: Stanford University Press, 1997.
- Sommer, Matthew Harvey. *Sex, Law, and Society in Late Imperial China*. Stanford, CA: Stanford University Press, 2000.
- Wu, Yenna. "The Inversion of Marital Hierarchy: Shrewish Wives and Henpecked Husbands in Seventeenth Century China." *Harvard Journal of Asiatic Studies* 48(2) (1988): 363–382.

Concepts of Masculinity in China, 1450–1750

Male and female behavior is largely based on societal conditioning. No one can deny that hormones play an important part in human life, but gender roles evolve under the influence of a complex set of agents, including political expectations, philosophy, ideology, and very real needs for organization and security. Cultures dominated by the European intellectual tradition generally base their perception of proper gender roles on a strict dichotomy, albeit with some blurring around the edges. Whereas the virtues of the stalwart European knight dominated European notions of proper masculinity, Chinese standards were much more complex.

Confucian literature generally presents gender and class distinctions as harmonious aspects of a unified society. The Chinese concept of proper conduct is based on societal role rather than a generic sexual identity. There is a romanticized notion—born from the overly enthusiastic reports from Sinophilic Jesuits—that the dynastic Chinese hierarchy placed peasants in the highest slot, well above merchants and

warriors. It is doubtful if such a hierarchy ever existed outside the minds of hopeful Chinese scholar-philosophers. Dynastic founding fathers generally arrive at the head of an army, even in China. If we put those idealistic notions aside and acknowledge the role of the warrior/soldier figure as well as that of the Confucian bureaucrats, we get a clearer picture of Chinese concepts of masculinity.

The gentlemen scholars of the Confucian classics were depicted as morally superior men, without any evidence of their physical existence, let alone implications of sexuality. The legendary warrior defenders of China, having many of the attributes considered manly in the European tradition, are usually portrayed as chaste, having renounced sexual activity in their pursuit of a moral use of force. The emphasis on restraint serves to underscore the Confucian principle that life runs smoothly when people renounce self-indulgence in favor of strict self-discipline. Still, one could argue that the importance of masculine sexuality in Chinese cultural perceptions was based on two essential considerations: one a positive requirement that men fulfill the specific function of reproduction and the other a negative based on what men were not. It was clearly a male responsibility to ensure that there would be future generations to take over the task of honoring and appeasing his ancestors, thereby keeping heaven and earth in a proper relationship. The other issue was the importance of not being a woman. Women were limited to roles defined by their relationship to men, as mother, wife, daughter, concubine, or maid. Male roles were either gifts from their ancestors (following their father's footsteps) or assumed as an obligation to their family or lineage.

Proper manly attributes for one path might be very inappropriate for another. Many forces, including the tension between Confucian ideology and the need to contain the dangerous forces on the Chinese borderlands, shaped Chinese standards for gender roles. The model of the Confucian gentleman devoted to ethics, philosophy, and art lay at one pole; the noble, selfless warrior lay at the other pole. The balance was never stable for any extended period, but the destabilization arising from the Manchurian Qing conquest of 1644 and the increasing European

THE CHINESE WARRIOR AND THE TEMPTATIONS OF SEX

The notion that women present an unacceptable temptation to warriors may have had roots in earlier dynasties but seems to have reached its romantic apex during the late Ming dynasty. Although there were many novels and dramas during the late Ming and early Qing dynasties, some nearly pornographic in detail, centering on romances between women of varying experience and position and the delicate scholars, the tales of warrior heroes centered on relationships between men, treating women as unwelcome diversions. Of the warrior epics, *The Romance of the Three Kingdoms* was one of the most popular legends, repeated in various novels, poems, and dramas. Two of the central characters are General Guan Yu, later memorialized as the god of war, and Liu Bei, a powerful warlord. In the Ming era two vignettes were added, illustrating the perception of the Ming audiences about the proper relationship between warriors and women. In one of the popular versions of the story, Guan Yu suggests that Liu Bei's sons kill their own wives and children so that there would be no interference with their devotion to Liu Bei. In another version of the tale a beautiful, desirable woman named Diao Chan was presented to Guan Yu after the death of her husband. Rather than accepting her as his just reward, Guan Yu pulled his sword and decapitated her in order to spare himself temptation. It is difficult to reconcile the idea that women presented a greater threat to warriors than to scholars, but it may arise from a tacit recognition that a diverted scholar loses only time and prestige whereas negligent warriors may result in the loss of entire villages. This explanation, however, does much violence to the idea that scholars occupied a very high position in the social hierarchy, with warriors far below them. Of course, the explanation may simply be recognition that a society's ideals may not always represent its reality.

—Carolyn Neel

presence during the early modern era combined to make sanctioned male roles particularly unstable during the period under consideration. Even during the most stable periods, interpretations varied along class boundaries; merchants, craftsmen, soldiers, and lower-level bureaucrats

had visions of the perfect male that were very different from that of the scholarly elite.

The honorable execution of one's legitimate duties was the highest responsibility and was clearly more important than an arbitrary set of gender-based expectations. In *The Fragile Scholar*, Song Geng notes that dichotomies of "mind/body," "masculinity/femininity," or "heterosexual/homosexual" were absent from Chinese literary discourse prior to the traumatic conflicts of the nineteenth and twentieth centuries. The concept of a yin/yang binary did play a role, yet these are flexible properties less directly representative of "female/male" attributes than often thought, having more to do with political and hierarchal considerations than gender. Nothing can exist without a measure of each. The same concept applies to the *wen/wu* balance: *wu* representing the fierce warrior and *wen* the artist/scholar. The *wu* attribute is most frequently associated with Guan Yu, a war god generally depicted with a ferocious red face and bushy beard. Although seemingly testosterone driven, Guan and other *wu*-based characters in popular novels and legends remain celibate, never succumbing to womanly wiles or enticements. The more prototypical *wen* male, the fragile scholar, is traditionally the more seductive or, at least, the more easily tempted. Like yin/yang, however, the Chinese perceive the presence of both *wen* and *wu* characteristics in all males, although rarely in perfect balance.

Gender identity is always fluid but becomes more so during times of stress. In the early Ming dynasty, love poems and romantic fiction portrayed the hero as a sensitive young artist/poet/scholar, physically pale and thin with a slender waist and pale skin and often having sensuous red lips. His delicate sensitivities are of the sort that Europeans would traditionally associate with femininity. If one were to search for a cultural meaning in this, one might well conclude that the highly refined romantic heroes of the early Ming were envisioned as a means of distinguishing the cultured Chinese from the uncouth, violent Mongol Yuan dynasty. As time passed and the nomadic pressures on China's northern borders caused security to be a concern, the men of Chinese romantic literature began to be described as more athletic, with

broad shoulders and muscular arms. The fragile scholar retreated in favor of the protector. The steppe warriors who formed the Qing dynasty (1644–1911) brought with them conceptions of masculinity that were similar to their Mongol predecessors. During this time, when the invading Manchus dominated the military leadership as well as the martial arts, once again the Chinese ideal male reverted to the very refined (and sexual) wen scholar, in direct opposition to the barbarian warrior wu Manchus.

Europeans became infatuated with all things Chinese, but their fascination (sometimes described as Chinese “madness”) reached its apex in 1750, coincidentally near the end of the period under consideration. By 1750, some Europeans were beginning to objectify the Chinese as “effeminate” or “decadent.” Their impact on Chinese concepts of masculinity was a shadow on the horizon. After the traumas of the twentieth century, the ideal of the delicate scholar was marginalized in favor of that of the Europeanized warrior gentleman. However, Chinese history continues to unfold.

—Carolyn Neel

Bibliography

- Brownell, Susan, and Jeffrey N. Wasserstrom. *Chinese Femininities, Chinese Masculinities: A Reader*. Berkeley: University of California Press, 2002.
- Louie, Kam. *Theorising Chinese Masculinity: Society and Gender in China*. Cambridge: Cambridge University Press, 2002.
- Louie, Kam, and Morris Low. *Asian Masculinities: The Meaning and Practice of Manhood in China and Japan*. New York: Routledge, 2003.
- Sommer, Matthew Harvey. *Sex, Law, and Society in Late Imperial China: Law, Society, and Culture in China*. Stanford, CA: Stanford University Press, 2000.
- Song, Geng. *The Fragile Scholar: Power and Masculinity in Chinese Culture*. Hong Kong: Hong Kong University Press, 2004.

Women and Family in Sub-Saharan Africa

African women were central to the process of state building and commercial growth in the era between 1450 and 1750, forging cultural and lineage connections that extended territorial

belonging through family alliances. From the Swahili city-states of the East African coast to the trade entrepôts, kingdoms, and empires of West and Central Africa, women rulers and concubines used sexuality and family to create allegiances. Female associations negotiated the cultural complexity of the era, which saw the expansion of both Islam and Christianity and helped expand sub-Saharan political economies.

From the Iron Age on, African women supported their families through agricultural activities, with a near monopoly over the technology and production of critical crops such as rice in the Senegambia. While restricted from the lucrative production of metals, some women became craft specialists, typically inheriting the knowledge from their mothers, who practiced weaving, pottery making, and basketry with babies on their backs and small children at their sides. In addition to child rearing, women had primary responsibility over cooking activities, which included the gathering of firewood and water. The transfer of women from the households of their fathers to marriage households controlled by husbands was the most important expression of patriarchy experienced in a woman's life.

Intermarriage of European or Arab men and African women served as an avenue for the accumulation of wealth and power for a few individuals. Influential Portuguese African women in the Gambia are described by seventeenth-century European visitors both as transfrontier mediators between cultures and as entrepreneurs in their own right. Since African women often acted on behalf of their husbands in their absence, they were positioned to seize property and broker responsibilities in widowhood. More commonly, however, women themselves were a form of wealth and found themselves subordinated to men's desires and control.

In the Cape Colony of Southern Africa, local Khoikhoi interactions with Dutch settlers produced opportunities for African women to transform their lives. A woman named Krotoa, also known as Eva, appears in the early-seventeenth-century Dutch records of the settlement. Krotoa was a remarkable participant in the multilingual and interactive environment, serving as an interpreter and negotiator in transactions among the Dutch, Portuguese, and Cochoqua Khoikhoi.

➤ OLFERT DAPPER'S 1668 DESCRIPTION OF PUBLIC WOMEN

The Dutch geographer Olfert Dapper published one of the most objective and detailed works on Africa in 1668, *Description of Africa*. Compiled from many published and unpublished accounts of travelers, traders, pilgrims, and diplomats, the volume reflected Dapper's own cultural biases and the intensification of Dutch mercantile interest in the Atlantic trade after supplanting the Portuguese in the Indian Ocean and capturing Brazil and key West African forts. For the Upper Guinea coast to the Cape of Good Hope, Dapper provides a remarkable breadth of precolonial descriptions of African agriculture, enterprise, architecture, rulers, and women. Some accounts are so detailed and specific that they allow scholars to monitor change over time in community rituals that have persisted into the colonial era.

Dapper's detailed description of Akan public women at Axim on the Gold Coast during the

1660s remains a valuable historical source on pre-European strategies employed by West African men in order to regulate female sexuality. As distinct from forms of prostitution later introduced, public women provided sexual services to unmarried males. Their institutionalized roles were as conscripted public servants under the control of male elders. Often originating as slaves, the women were given the ability to take food and other goods from the market or any home in compensation. They were ritually sanctioned and did not accumulate wealth from the sale of sex. Yet the public women's role reinforced patriarchal control and furthered the existing social order by reducing intergenerational and other potential conflicts. Wealth and power would remain male prerogatives into colonial times.

—Candice Goucher

Converting to Christianity, Eva moved between the cultural worlds of the European African frontier, adopting dress and diet appropriate to each encounter. She eventually married a European surgeon with whom she had three children. After her husband's death, Eva was unable to preserve her precarious position between cultures. She succumbed to alcoholism and eventually died in the Robben Island prison in 1674.

The period between 1450 and 1750 brought African women in the hinterland few opportunities for contact with the wider world. For most African women, the lineage head or state remained the mediator in sexual and gender relationships. Marriage and motherhood provided the critical components toward female identity, although women were perceived to perform both reproductive and productive roles critical to society. While barren women could occasionally perform ritual roles, bearing children ensured a woman's ability to manipulate her role as wife and mother in family and community politics. Women were seldom traded as slaves because of their valued labor, and even concubines, women assimilated into households and retained primarily for their sexual services, could provide sons who would be kings, as

in the large West African empire of Songhay, where the askias were children of concubines. Elsewhere in West Africa some female slaves became warriors, as in the example of the royal guard of the Dahomean king, women soldiers known to Europeans as "Amazons."

The Akan proverb that exhorts that even if a woman possesses a talking drum (the privilege of those in authority) she must keep it in a room belonging to a man expresses the conundrum of female advantage and subordination even in a matrilineal society. Elite women such as queen mothers could wield considerable political authority over nonroyal women and men. For example, the Asante queen mother helped depose and install rulers, although she was not eligible for the highest office. Ritual scorn and ridicule also were available collectively to women, who actively challenged patriarchal decision making across sub-Saharan Africa.

Although rare, some examples of female rulers are recorded in oral traditions and written records. In the early seventeenth century a royal woman seized the throne of Matamba, a central African territory. Queen Nzinga ruled between 1624 and 1663, an era during which her people actively engaged in slave raiding and cyclical

warfare that spread from Portuguese-conquered lands. The seventeenth and eighteenth centuries began an era of increasing insecurity and violence, which increased female vulnerability and destabilized social structures for generations to come. Colonial systems would provide new ideologies of domesticity and subordination and new reasons for resistance.

—Candice Goucher

Bibliography

- Akyeampong, Emmanuel. "Sexuality and Prostitution among the Akan of the Gold Coast, c. 1650–1950." *Past and Present* 156 (1):144–173.
- Goucher, Candice, and Linda Walton. *World History: Journeys from Past to Present*. London: Routledge, 2008.
- Johnson-Odim, Cheryl. "Women and Gender in the History of Sub-Saharan Africa." In *Women's History in Global Perspective*, Vol. 1, edited by Bonnie G. Smith. Urbana: University of Illinois Press, 2005.

Ottoman Wives and Concubines

As is true of most Muslim societies, custom and tradition expected every Ottoman Turk to marry. Celibacy was considered an unnatural state that no reasonable person would freely enter into and one that if forced might have disastrous consequences. The Turkish concept of sexual desire was practical; if the young remained unmarried, it was likely that their sexual desires would find an outlet outside of marriage. Since promiscuity was viewed as socially and morally dangerous, in most cases both men and women were married at an early age, often soon after puberty.

Traditionally, the parents of the couple arranged marriages for their children. Although the Turkish family structure was patriarchal, it was generally the boy's mother who was responsible for choosing her son's bride. If the girl's family agreed, the matter would be settled by the parents, and a marriage contract would be drawn up that outlined the financial obligations and personal responsibilities of the bride and groom as well as of their respective families. The primary consideration in most marriages was economic. Thus, a "good marriage" was one in which parents arranged for a mate of equal or higher social or economic status. A woman's

skill as a housekeeper and a man's ability to provide a comfortable and secure life for his wife and family were likewise carefully considered by parents hoping to make a good match for their children.

The Ottoman empire did not show the same enthusiasm for first-cousin marriages as did most other Muslim societies. Nevertheless, there were many practical reasons to promote endogamy (marrying within the tribe or family). Chief among these was that endogamy cemented the patriarchy and kept the wealth of the family intact, since inheritance and property are not dissipated among too many people. Endogamy also increased opportunities for the couple to know one another before contracting a marriage. Exogamy (marrying outside the family or tribe) had its own advantages, however, including creating or strengthening alliances and/or networks of contracts, enlarging the choice of marriage partners, and introducing new genetic information to a bloodline.

While such practical considerations weighed heavily, the happiness of the couple, including physical attractiveness, was not ignored. While in some cases the young couple might be complete strangers to one another, occasionally the match was as much about existing romantic feelings as it was about the practical economics of the union. If for whatever reason the families did not approve of their children's personal choice, a young couple might consider *kiz kacirma* ("stealing a bride"), which was essentially a form of elopement. The boy would come to the girl's house at night, and they would sneak away to the house of a friend or relative. As long as a boy and girl spent the night together they had to marry, regardless of whether or not the couple had actually engaged in any sexual activity.

Islamic law allows a man to marry up to four wives as long as certain conditions are met, the main concern being equality of treatment. For most of Ottoman history, it has been estimated that only 5 percent of women were polygamous wives. Among the common people, polygamy was primarily a form of social welfare by which men would take responsibility for women who might otherwise have no opportunities. For example, a man might marry and provide for the wife of a dead brother or take a second wife if

THE SULTANATE OF WOMEN

The rise of the imperial harem and the so-called Sultanate of Women in the sixteenth and seventeenth centuries was one of the most dramatic developments in Ottoman history. During this period the mothers, wives, and concubines of sultans enjoyed unprecedented political power and public prominence. Of particular importance were the Valide Sultan, the mother of the reigning sultan, and the Haseki, the favorite concubine, who ruled alongside or manipulated capable sultans and ruled in place of young or incompetent ones. These were highly intelligent women who were responsible for creating and successfully maneuvering political factions at home and abroad. As the richest and most powerful of the imperial women, the Haseki and particularly the Valide Sultan also played important cultural roles. They were royal patrons and philanthropists and participated in public rituals that legitimized the continued rule of the Ottomans.

The first of the Sultanate of Women was Hurrem Sultan (1521–1558), who broke several imperial traditions during the reign of Suleiman I, “the Magnificent.” She bore him five sons rather than only one, stayed in Istanbul with the sultan instead of accompanying her sons into provincial governorships, and eventually enjoyed a change in status from that of a slave concubine to a wife. Succeeded by her daughter-in-law, Nurbanu (1574–1583), another concubine turned wife, this second powerful imperial woman firmly established a paradigm for the political and personal careers of later Valide Sultans, including Safiye (1595–1603), Kosem (1623–1651), and Turhan (1651–1683).

—Julie T. Abouzelof

his first wife proved sterile. Periods of intense warfare seriously depleted the amount of single men, and thus polygamy allowed every woman a chance to marry. Of course, among the rich and powerful, polygamy was often simply a matter of a man wanting more than one woman.

Islamic law also allows a man to have an unlimited number of concubines. Concubines were almost always of a lower social status than wives and did not enjoy the same legal protection and social respect of a wife. But because the

relationship was public and quasi matrimonial and any children conceived were considered legitimate, concubines had a higher legal and social status than that of a mistress. The marriage and succession policies of the Ottoman ruling family changed significantly over the course of the dynasty's rule. The first two sultans, Osman (r. ca. 1299–1324) and Orhan (r. ca. 1324–1361), married women from other important families and were succeeded by their sons. Under the leadership of the third sultan, Murad I (r. 1361–1389), marriage and succession policies began to change. The practice of slave concubinage became a reproductive principle for the dynasty in the fourteenth and fifteenth centuries, meaning that virtually all offspring of the sultan were born to concubine mothers. This served to emphasize the patriarchal nature of Ottoman political power, because slave concubines, unlike wives, have no formal lineage. Thus, the Ottoman Royal House was not beholden to or allied with any other strong dynastic family, since no women with important family connections married into the Ottoman dynasty. During the mid-sixteenth century, however, the imperial sexual policies reverted back to marriage, although concubines continued to fill the imperial harem to provide for the sexual needs of the sultan and display the opulence of the dynasty.

—Julie T. Abouzelof

Bibliography

- Coco, Carla. *Secrets of the Harem*. New York: Vendome, 1997.
- Croutier, Alev Lytle. *Harem: The World Behind the Veil*. New York: Abbeville, 1989.
- Imber, Colin. *The Ottoman Empire*. New York: Palgrave Macmillan, 2002.
- McCarthy, Justin. *The Ottoman Turks: An Introductory History to 1923*. New York: Addison Wesley Longman, 1997.
- Pierce, Leslie P. *The Imperial Harem: Women and Sovereignty in the Ottoman Empire*. New York: Oxford University Press, 1993.

Private Sphere, Public Sphere in China

Scholars have long debated the relationship between the private sphere and the public sphere in Chinese history. Whether or not academics

find the term appropriate to Chinese history depends largely on the definition of “spheres.” It can be argued convincingly, nonetheless, that China’s “public sphere” has been in existence since at least the sixteenth century, when both merchants and gentry actively sought to influence public policy and activities.

According to German philosopher Jürgen Habermas, the private sphere entails an individual’s home life and personal financial pursuits. Free markets, therefore, are integral to the private sphere, enabling the individual to pursue financial goals for personal benefit. In the case of sixteenth-century China, merchants are the most obvious examples of individuals functioning with the private sphere. At this time China’s merchant class flourished, especially in the Hui-zhou region, where traders developed thriving businesses and represented the majority of the population.

By contrast, Habermas explains that the public sphere is an arena in which private individuals voluntarily form public but nongovernmental associations. In other words, the public sphere possesses a high degree of autonomy from the state and uses that autonomy to influence, perpetuate, or reform the state. Some scholars, such as Frederic Wakeman, claim that the concept of a public sphere is uniquely Western and therefore incongruous with China’s situation. Others, including Timothy Brook and B. Michael Frolic, contend that while the public sphere paradigm creates a challenge for understanding China, it is nonetheless instructive and useful in making cross-cultural comparisons. Still others, such as Bryna Goodman and Philip Huang, choose to avoid the term altogether, using less precise and value-laden terms such as “middle realm,” “third realm,” or “civic ground” when discussing China.

Regardless of whether we call it a civic ground, a middle realm, or some other such term, there was a burgeoning public sphere during the late Ming period (1368–1644). By looking at the roles of the merchants and the gentry of this period, it is possible to understand better the complex relationship between the public and private spheres in China.

During the Ming, scholars occupied the most elite levels in society (followed, theoretically, by

➤ WANG DAOKUN, LIVES OF EMINENT MERCHANTS

Wang Daokun (1525–1593), one of the most well-known merchants of the sixteenth century, exemplifies the role of the merchant-gentry within China’s public sphere. Wang’s grandfather was a relatively poor peasant who worked the land. According to Confucian tradition, peasants—regardless how poor—were higher on the social ladder than merchants. Nevertheless, Wang’s grandfather turned from farming and started a career in commerce. Within a few years he had gained enough wealth to acquire the trappings of the gentry elite, thereby raising the family’s status. At the same time, the family pursued the more traditional route to status, with Wang studying for the civil service exams.

Rather than hiding his merchant background, Wang relished in it. In his writings he valorized the process of obtaining wealth through commerce, portraying it as the ultimate act of Confucian honor and loyalty. By the end of the sixteenth century, mercantilism was no longer considered a distasteful pursuit but was seen as one method (and perhaps the preferred method) for maintaining a family’s status and exerting influence within the public sphere.

—David Kenley

peasants, artisans, and finally merchants). Accordingly, to become a government official, an individual needed to pass a rigorous series of civil service examinations. The curriculum for the examinations consisted of the Confucian classics, official dynastic histories, and philosophical commentaries. Many viewed the exam candidates as defenders of China’s cultural heritage. Once you passed the highest levels of the exam, the imperial court would reward you with a government position. Competition was severe. Because of strict government quotas, only about 1 out of every 6,000 individuals who took the first exam eventually earned a government position. This helped ensure continuing prestige for those who succeeded, but it also led to crucial understaffing for the bureaucracy. Usually the lowest-level bureaucrat, the district magistrate, was responsible for governing over 100,000 individuals.

Not surprisingly, thousands of individuals invested years studying for the exams but never passed them. Rather than becoming government officials, these individuals joined the gentry class, functioning as unofficial mediators between private individuals and the state's official representatives. Because the bureaucracy was understaffed, the gentry provided crucial services within the public sphere, helping to organize groups and projects for the betterment of private individuals. Members of the gentry class would often adjudicate disputes, organize flood control, establish famine relief projects, and enlist individuals for village defense. Like their bureaucratic counterparts, they also served as defenders of the Chinese tradition. In addition to their education, the symbols of their power included large libraries, impressive gardens, and collections of rare art.

China's amorphous public sphere was further complicated by the existence of powerful and wealthy merchants. According to Confucian tradition, merchants were the lowest level on the Chinese social ladder because pursuit of profit was considered adversarial and unseemly. However, as is true in all philosophical traditions, reality and theory did not always coincide. During the Ming period, many merchants prospered. In the Huizhou region (situated between Jiangsu and Zhejiang provinces), salt merchants and pawn brokers became legendary. Traveling long distances in the pursuit of trade, Huizhou merchants epitomized the individual freedom of the private sphere. Nevertheless, these merchants also played a pivotal role in China's public sphere as well. To supplement their power, many merchants acquired the trappings of the gentry elite, including libraries of rare books, collections of famous Tang dynasty paintings, and fine porcelain. They would also use their accumulated wealth to send their sons to the best schools, hoping that they would be able to pass the civil service exams and bring added respect to the family. Such merchants served dual functions as both private merchants and semipublic gentry.

For all these reasons, the division between the state and the private individual remained fluid and imprecise in Ming dynasty China. Instead, there was a public sphere—an area of autonomous organization beyond the control

of the imperial household—dominated by members of the gentry and aspiring gentry of the merchant class.

—David Kenley

Bibliography

- Brødsgaard, Kjeld Erik, and David Strand, eds. *Reconstructing Twentieth-Century China: State Control, Civil Society, and National Identity*. Oxford, UK: Oxford University Press, 1998.
- Brook, Timothy. "Communications and Commerce." In *Cambridge History of China*, Vol. 8, Pt. 2, *The Ming Dynasty, 1468–1644*, edited by Frederick W. Mote and Dennis Twitchett. Cambridge: Cambridge University Press, 1998.
- Brook, Timothy, and B. Michael Frolic. "The Ambiguous Challenge of Civil Society." In *Civil Society in China*, edited by Timothy Brook and B. Michael Frolic. Armonk, NY: M. E. Sharpe, 1997.
- Goodman, Bryna. "Creating Civic Ground: Public Maneuverings and the State in the Nanjing Decade." In *Remapping China: Fissures in Historical Terrain*, edited by Gail Hershatter et al. Stanford, CA: Stanford University Press, 1996.
- Habermas, Jürgen. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Translated by Thomas Burger. Cambridge, MA: MIT Press, 1989.
- Huang, Philip. "'Public Sphere'/'Civil Society' in China? The Third Realm between State and Society." *Modern China* 19(2) (April 1993): 216–240.
- Rankin, Mary. "Some Observations on a Chinese Public Sphere." *Modern China* 19(2) (April 1993): 158–182.
- Smith, Richard. *China's Cultural Heritage*. Boulder, CO: Westview, 1994.
- Wakeman, Frederic, Jr. "The Civil Society and Public Sphere Debate." *Modern China* 19(2) (April 1993): 108.

Ladies of Quality—Ideals of Womanhood in the Early Modern West

Chastity and obedience characterized ideal womanhood in Europe's early modern period. A proper woman was submissive, her speech was restrained, and her appearance was modest. As the weaker sex, women were considered vulnerable. They therefore yielded to their husbands and fathers who, as men, were more experienced with the world and could provide protection from it. In short, in all of their actions, from

the home to the marketplace, women were to comport themselves with modesty and meekness. While these ideals characterized women throughout the period, by the end of the eighteenth century a significant shift in their perception was beginning. For women in the early part of the period, maintaining feminine virtues was considered a daily struggle, as women were thought to be inherently weak with a penchant for wickedness. Virtue had to be cultivated and did not come naturally to women. As the divide between public and private became more pronounced, though, feminine ideals took on an increasingly moral tone, and women began to be seen as naturally inclined toward chastity and morality. Femininity had increasingly positive connotations as womanhood became synonymous with virtue and domesticity.

These social ideals were best expressed in prescriptive literature from the period. Aimed at the elite, prescriptive literature provided women and men with guidance for ordering their daily lives and achieving the ideals of their sex. For men, these works centered on how best to order a household and conduct business. The works designed for women, though, instructed them to be deferential to their husbands and offered advice on how to dress modestly and choose appropriate topics for conversation. Richard Braithwaite, who penned the handbook *The English Gentlewoman* in 1631, instructed women always to keep thoughts of virtue and modesty in their minds and to dress and speak in a like manner. To reinforce these feminine virtues, works such as Braithwaite's advocated education in feminine skills such as needlecraft, painting, and dancing. Elite women commonly learned to read and write, but their education was usually not extended much beyond a basic knowledge. Other subjects were considered not only too difficult but also inappropriate, as too much education could hinder a woman's chastity.

Women's real lives, of course, contradicted these ideals at every turn. Contemporary to Braithwaite's handbook were works by Aphra Behn (1640–1689), regarded by many scholars as an early feminist, who wrote treatises defending the female sex. Contemporary letters between husbands and wives also demonstrated that women frequently did not conform to the

> A GUIDE FOR GENTLEWOMEN

The English Gentlewoman, published in 1631, was a popular conduct book for aristocratic and upper-class women that gave women instructions and advice for ordering their lives. Written by Richard Braithwaite (1587/1588–1673), an Oxford- and Cambridge-educated writer, the book was quite popular in its time, as was its earlier companion piece, *The English Gentleman*. Both works went through several reprints and editions. For *The English Gentlewoman*, Braithwaite listed his prime subjects as “Apparell,” “Behaviour,” “Complement” (“What Complement gives best accomplishment”), “Decency,” “Estimation” (“My prize, is her owne praise”), “Fancie” (“How it may be checked, if too wilde”), “Gentilitie,” and “Honour.”

—Katherine E. Worley



(Folger Shakespeare Library)

notions of submission and silence laid out in prescriptive literature. In letters to her husband Robert, for example, Lady Brilliana Harley frequently gave her opinion regarding local and national politics. Also, it was not uncommon for elite women to be highly educated. In the sixteenth century, Lady Jane Grey (1537–1554) was renowned for her knowledge of languages, and Queen Elizabeth I (1533–1603), while indeed quite skilled at playing the virginals, was also well versed in Latin and Greek. By the eighteenth century, instruction in these classical languages was more commonplace, as schools for girls sprang up throughout cities such as London and education became more accessible for the daughters of middling-class families.

—Katherine E. Worley

Bibliography

- Braithwaite, Richard. *The English Gentlewoman*. London, 1631.
- Fletcher, Anthony. *Gender, Sex, and Subordination in England, 1500–1800*. New Haven, CT: Yale University Press, 1995.
- Whitehead, Barbara J., ed. *Women's Education in Early Modern Europe*. New York: Garland, 1999.

Western Concepts of Masculinity

In Europe's early modern period, the concept of masculinity evolved from its medieval roots, in which martial violence was cast as a characteristic of maleness, to a new model that emphasized men's intellectual capabilities. This shift did not, however, completely overturn traditional patriarchal beliefs. Although the reforms of Protestantism restrained the culture of male dominance to a limited extent, the subsequent rise of colonial empires, capitalism, and centralized nation-states created countless opportunities for the consolidation of masculine authority. The model of masculinity that developed during the period from 1500 to 1800 endured with little alteration until the twentieth century, when the women's rights movement fostered more egalitarian notions of gender.

Issues of gender and sexuality were hotly contested during the sixteenth and seventeenth centuries, the era of the Protestant Reformation and Catholic Counter-Reformation. Martin Luther (1483–1546), John Calvin (1509–1564), and

other Protestant leaders challenged traditional notions of gender, including the Church's doctrine that sex within marriage was a necessary evil. Instead, reformist thinkers asserted the novel view that marital sex could be a joy and a blessing for couples to share. This new attitude, together with Protestant advocacy for the right to divorce, helped to soften some of the misogynous elements of Christianity. Scholars such as James Brundage observe that although they certainly did not see women as men's equals, most Protestant leaders believed women to be sacred to God and eschewed the medieval conception of women as inherently wicked creatures who were mired in sensuality and materialism.

During the Reformation, however, the Catholic Church remained firmly entrenched in its male-dominant worldview. At the long-running Council of Trent, which began in 1545, Church leaders reiterated their prohibition of divorce. Clerical marriage, another Protestant cause, was rejected, and after the council closed in December 1563, the Church decreed that men of the cloth would face severe penalties for violating their vows of celibacy.

Protestants and Catholics did maintain a consensus on some issues of gender and sexuality during this period. Both groups, for example, prosecuted prostitution and homosexuality more fervently than had been customary during the Middle Ages. These prosecutions accelerated as both Protestants and Catholics strove to prove that they upheld higher moral standards than their opponents. And although the Reformation-era religious upheavals spawned such terrible conflicts as the horrific Thirty Years' War (1618–1648), in general the various denominations of Christianity acknowledged and strove to reduce the problem of the masculine impulse toward violence during this period.

From the end of the Middle Ages there was a steady erosion of the belief that prowess, or skill and valor in battle, was the quintessential masculine trait. As early as the fourteenth century, writers such as Geoffrey Chaucer and John Gower were expressing grave concerns about the ethos of warrior masculinity and its deleterious effects upon society. Historians such as David Rosen have traced this shift by examining literary works spanning from the Middle Ages to

► SIMPLICIUS SIMPLICISSIMUS AND EARLY MODERN MASCULINITY

One product of the Thirty Years' War that indicated the rejection of an older vision of masculinity grounded in military prowess was the picaresque novel *The Adventures of Simplicius Simplicissimus* (1668). The author, Hans Jakob Christoffel von Grimmelshausen (1621–1676), provided a graphic yet satirical portrayal of the war in which he had served as a common soldier. The novel is a fascinating study in early modern masculinity, as it recounts how a naive young boy evolves into a wise, devout Christian. In the following passage, the hero describes how his participation in the war corrupted him and transformed him into a kind of monster:

“Eventually I began to lead an Epicurean life, eating and swilling, for there was no one who would tell me off or whom I'd have to mind. The

officers joined me in malfeasance by enjoying my payoffs, and those who should have punished and corrected me encouraged me in further vices. Finally I became so godless, bold, and despicable that there wasn't a piece of roguery I wouldn't have tackled.”

By the end of the tale, shipwrecked on a deserted island, Simplicius, after renouncing his worldly ways, finds inner peace and the hope of salvation as a man of God.

—John William Sutton

Source

Hans Jakob Christoph von Grimmelshausen and George Schulz-Behrend, *The Adventures of Simplicius Simplicissimus*, 2nd rev. ed. (Columbia, SC: Camden House, 1993).

the seventeenth century and noting how a masculinity rooted in physical strength and violent action found in texts such as *Beowulf* (ca. 1000) gave way in *Hamlet* (1600) and then in Milton's *Paradise Lost* (1674) to a masculinity based upon a different kind of prowess, the capacity for reason.

As men of reason from the Renaissance through the Enlightenment expanded the frontiers of human achievement, they concomitantly expanded the frontiers of masculine authority. The foundation of colonial empires, for instance, was oriented around such traditionally male domains as war and sea-based trade. Similarly, R. W. Connell and other scholars see in the seventeenth and eighteenth centuries the rise of market-based capitalism and centralized national governments, both of which created a vast array of new careers and social roles but only for men, who used their privileged place atop the gender hierarchy to seize these opportunities.

With the end of the Enlightenment came a gradual but sweeping change in how people perceived male and female bodies. The one-sex theory—the idea popularized by the late classical physician Galen that women's sex organs were simply an inverted version of male

anatomy—gave way to the modern understanding of two essentially different sexes (sexual dimorphism). The one-sex theory had survived the rise of empiricism in the Renaissance, as Thomas Laqueur describes, because even though medical scholars could see that men and women were anatomically distinct, the notion that women were defective men was so ingrained in the culture that ideology trumped observation. By circa 1800, though, most scholars had come to accept the theory of sexual dimorphism. Men still believed in the superiority of the male, but now their justification was biological rather than cosmic or spiritual. Women were held as inferior because of sex-determined characteristics such as the menstrual cycle, which was said to make women too unstable for participation in politics or other aspects of the public sphere.

—John William Sutton

Bibliography

- Brundage, James A. *Law, Sex, and Christian Society in Medieval Europe*. Chicago: University of Chicago Press, 1987.
- Connell, R. W. *Masculinities*. Berkeley: University of California Press, 1995.
- Laqueur, Thomas. *Making Sex: Body and Gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press, 1990.

Rosen, David. *The Changing Fictions of Masculinity*. Urbana: University of Illinois Press, 1993.

von Grimmelshausen, Hans Jakob Christoffel. *The Adventures of Simplicius Simplicissimus*. 2nd ed. Translated by George Schulz-Behrend. Columbia, SC: Camden House, 1993.

Eunuchs in the Political Sphere

Eunuchs (castrated men) have played a role in politics, religion, and society in much of the Eurasian ecumene since antiquity, particularly in the late Byzantine empire and China. From 1450 to 1770 they were an integral part of the Ottoman, Mughal, and Chinese (in both the Ming and Qing ruling dynasties) administrative institutions and military apparatuses. While castration was generally frowned upon by these myriad societies due to strict religious beliefs on genital mutilation, eunuchs were able to acquire an immense amount of power as high officials working for the imperial ruling elites, and working in harems in close interaction with the royal

household. Culturally based gendered assumptions of eunuchs (amenability due to their lack of “manhood” and their “effeminate” nature) as well as their inability to procreate supposedly made them reliable political administrators and trustworthy military officials in these realms. However, these supposed qualities were not often grounded in actual reality, as many eunuchs were ambitious and in some instances the actual locus of power.

Eunuchs in early modern societies were either slaves or the young sons of poor peasants who had their testicles smashed or removed, with the intention of ending their ability to procreate for the purpose of entering into government office. There were instances where the penis was also removed and thereby ended all sexual functions, but in cases where only the testicles were removed the eunuch was still able to function sexually. However, due to the nature of the wounds and the high rate of infections, particularly in regard to the severed urinary tract when the penis was removed, some eunuchs did not survive the procedure. Prepubescent eunuchs would tend to have a different physical development (e.g., high-pitched voices, physiognomy, and body hair growth) into adulthood in relation to normal men due to their lowered testosterone levels, giving them what was assumed to be less masculine characteristics in terms of personality by their respective societies. Adult eunuchs, or those who would be castrated after puberty, would not exhibit the same level of physical developmental difference in growth. However, they did age faster and experienced declined health due to loss of testosterone.

The fall of Constantinople in 1453 to the Ottoman Turks effectively ended the Byzantine empire that had existed since Late Antiquity and was centered on the Bosphorus and Asia Minor. Some historians suggest that the Ottomans adopted the use of eunuchs as political administrators from the renowned Byzantine practice, given their alleged reliability and inability to impregnate members of the royal family. Eunuchs were divided into two types, the black and white eunuchs, who served different political functions. Black eunuchs, purchased as slaves from sub-Saharan Africa, served in the Ottoman imperial harem (seraglio) in the Topkapı Palace

► THE CASTRATI IN EARLY MODERN EUROPE—GENDER AND CULTURE

The use of castrated choir boys in the early modern Catholic Church of the sixteenth century, particularly in Italy, established the precedent for their use as opera singers in the baroque period. While European society generally frowned on eunuchs and male castration, an exception was made for the castrati. Regardless of societal conceptions of castrated men as “lesser men,” the castrati were a pivotal part of Western music in early modern Europe. These singers were castrated in their prepubescent years in order to prevent the development of their larynx and thus allow them to sing at high pitches for a prolonged period of time in church choirs or as accompanists in operas. While this was a risky procedure given the potential of infection and eminent death, the castrati were highly valued after rigorous training and with the growing popularity of Italian opera. Many famous castrati, such as Senesino, became celebrities within their lifetime, living in ostentation and having multiple affairs with aristocratic women.

—Abraham O. Mendoza

at the service of high government officials and the household concubines, all under the charge of the chief black eunuch. In the late sixteenth century the chief black eunuch was able to exert a great amount of influence over administrative functions of the realm, given the amount of time Ottoman princes and elites spent in the harem. Ottoman princes would only leave the palace harem when assuming the throne, so they were often under the guidance of the chief black eunuch. White eunuchs typically acquired from the Balkan and Caucasus provinces of the Ottoman empire were used to fill administrative positions mostly outside of the harem but were still highly valued by the ruling elites. In general, given their access to direct political power, some Ottoman eunuchs were nonetheless able to garner power and intrigue against the sultan or the grand vizier by allying themselves with rival factions actively plotting against high hereditary officials.

In China eunuchs also operated at the highest levels of government, serving the ruling dynasty as high administrators and officials. While this institution had preexisted this period in East Asia, eunuchs in China became an integral part of Ming governance, as they were initially exchanged with provinces and neighbors as forms of tribute upon the foundation of the Ming state. Over time, as in the Ottoman empire, castration became a way for people to enter government service without having to take civil service examinations. Young boys were castrated and taken into the Ming court in the Forbidden City to serve the emperor and his family in close quarters and thus became an integral part of the household. Upon gaining the confidence of the emperor and his close associates, court eunuchs served as direct representatives of the emperor, often serving as foreign envoys, administrative adjuncts, and even military officials (most notably Chinese admiral Zheng He). For instance, Ming court eunuchs served as diplomatic envoys to Korea. Due to their prevalence in Ming imperial governance, they were resented by the civil service bureaucracy (mandarins), which had to go through years of training and rigorous examinations to attain their own positions. As a result, there was much intriguing and competition between the official bureaucracy and Ming

court eunuchs, which affected the political dynamics of the court often at the expense of the emperor, who was assumed to be under the nefarious influence of the eunuchs. The position of eunuch was such a lucrative one that the imperial government declared an edict against self-castration, as sometimes over 1,000 castrated young men would present themselves to the emperor in the hopes of being selected to serve at court. The subsequent Qing (Manchu) dynasty (1644–1911), while retaining the service of court eunuchs, diminished the role of court eunuchs from involvement in politics. Nonetheless, they were still able to contribute to the administration of Qing China as part of the political milieu of court society.

Mughal India (1526–1707), much like the Ottomans and the Chinese, also relied on court eunuchs as administrators. Mughal sultans, with access to central Asian trade networks, would purchase eunuchs to serve in their courts. Many of these eunuchs served the Mughal emperors loyally but were also often in the middle of court conspiracies and political intrigue and were despised by high officials and bureaucrats as meddlers. As part of the court, they were able to influence the royal household and attain increasing levels of power while being theoretically politically (as well as sexually) impotent. The reality was that they oftentimes served in high positions under the sultan or the vizier and thus were an integral element in Mughal governance.

—Abraham O. Mendoza

Bibliography

- Marmon, Shaun Elizabeth. *Eunuchs and Sacred Boundaries in Islamic Society*. New York: Oxford University Press, 1995.
- Scholz, Piotr O. *Eunuchs and Castrati: A Cultural History*. Princeton, NJ: Markus Wiener, 2001.
- Shih-shan, Henry Tsai. *The Eunuchs in the Ming Dynasty*. Albany, NY: SUNY Press, 1996.

Homosexuality in the Early Modern World

Although the word “homosexuality” was not coined until the nineteenth century, same-sex erotic and romantic practices existed in many early modern cultures. As was the case in many other areas of life, male practices and customs

► THE MOLLY HOUSES OF EARLY EIGHTEENTH-CENTURY LONDON

Early-eighteenth-century London had a network of clubs and gathering places for gay men known as “molly houses.” “Molly” was a slang term that originally meant a female prostitute and came to mean an effeminate man. One of the largest was the house of Margaret Clap, “Mother Clap’s,” on Field Lane in the Holborn district of London. An informer’s account of an evening there suggests that 40 or 50 men gathered, many wearing women’s clothing and mimicking female behavior by curtsying and addressing each other with women’s names. Men danced together, and some molly houses had smaller rooms for intimate encounters. Mother Clap’s was a private house, but many molly houses were connected to taverns, and the sale of alcohol provided their economic foundation. Many of these men were married to women and maintained masculine personas outside the molly house.

Molly houses were targets of periodic crack-downs organized and encouraged by the Society for the Reformation of Manners, a private group protecting England from God’s wrath by rooting out sin. In the purge of 1726 three “mollies” were executed, and many more imprisoned, fined, or made to stand in a pillory while London citizens threw things at them.

—William E. Burns

are far better documented than female ones. The male literacy rate was higher, and men were more likely to find themselves in legal trouble that led to the creation of court records.

Both male and female homosexuality were frequently marked by the adoption of cross-gender behavior. Some societies institutionalized mixed gender roles, although transvestism or transgenderism did not always lead to homosexuality. One such instance can be found in the *hijra* of India, a group of people who are mostly biologically male and usually dress as females but are considered a third gender, neither male or female. Unlike transgenders in the modern Western world, the *hijra* do not attempt to pass themselves off as the opposite sex, but many do have relationships with other males. Another example exists in many Native American and Canadian First

National societies; a generic term for this is *berdache*. These individuals are considered to be living as people with two souls inside of them, one female and one male. The possession of these two spirits allowed for berdache to perform societal roles of both genders, although female-bodied berdaches normally had relations only with other females. European societies did not have similar socially sanctioned roles. However, evidence of transvestite behavior among males was found in underground homosexual societies such as the London molly houses, private rooms or taverns where homosexual males and transvestites could meet in order to find sexual partners. Many African societies show evidence of fluid marital relationships involving women. Some women, although already married to men, were powerful and wealthy enough to buy “wives,” whose roles seem to be those of mere servants. However, any children born to these wives were the legal right of the woman who had paid the bride price for them, not the biological father. Other women obtained husbands who were biologically female, or “female husbands,” for a variety of reasons, some of which seem to be greater companionship, in order to avoid domestic violence, or to obtain a higher bride price often paid by female husbands. In addition, it was not unusual to find “male daughters,” especially in families where no sons survived. A ritual was performed in which the gender of the female was changed to male, thereby permitting the new male to inherit the family estate. However, once a female was identified as a male either by being a female husband or a male daughter, she was then expected to participate in the society as a male.

In the absence of social role models for lesbian relationships in Europe, some women, such as the abbess Bendetta Carlini (1591–1661), seem to have found it necessary to think of themselves as men in order to love women, although in retrospect it is often difficult to distinguish between a masculine-appearing lesbian taking a male role and a female-to-male transgendered person such as the seventeenth-century Spanish American soldier and muledriver Catalina d’Erauso. Female-to-male roles were usually not institutionalized the way male-to-female ones were, although there is evidence of a “manlike woman” social role among some Native American groups.

An alternative to transgenderism as a way of organizing male-male relationships was by difference in age, with the older partner usually viewed as the “active,” penetrating partner and the younger as the “passive,” penetrated partner. In Europe, these relationships were associated with the humanist tradition and the revival of ancient Greek literature, including homoerotic literature, in the Renaissance. The image of Ganymede, the beautiful young boy carried off to Olympus by Zeus, chief of the Greek gods, was particularly strongly associated with pederasty and was frequently referred to in literature and art. Notable paintings of Ganymede’s kidnapping include those by Correggio and Rembrandt. Humanistic schoolmasters, trained in Greek and with the responsibility for teaching boys and young men, were often suspected of sodomy. The love of an adult male for a beautiful youth frequently appears in literature, with perhaps the best-known example in the early modern period being the sonnets of William Shakespeare. The legendary love between Sultan Mahmud of Ghazni and his young male slave Ayaz was frequently referred to in Persian literature.

All European countries strictly forbade same-gender sex, or sodomy. The degree to which the prohibition was enforced, however, varied greatly, although the state was always more concerned with male homosexuality than with female homosexuality. Although lesbianism was subject to the death penalty in the *Constitutio Criminalis Carolina* of the Holy Roman Empire, promulgated in 1532, the few cases where the penalty was actually applied usually involved aggravating circumstances, such as cross-dressing or the use of a dildo or other instrument to counterfeit the penis. The Protestant and Catholic reformations, with their emphasis on building godly societies, led to increased hostility to homosexuality. Sodomy, Italy, and Catholicism were often linked in Protestant propaganda, which also charged that single-sex convents and monasteries were hotbeds of homosexuality. This hostility to monogendered religious environments would be taken up by the European Enlightenment in such works as Denis Diderot’s *The Nun*. Certain religious orders, such as the Jesuits, would acquire particularly strong reputations as predatory homosexuals. As the Jesuits combined the

culture of a celibate religious order with school mastering, this was unsurprising. Crackdowns on male homosexuality, like the anti-molly house campaign in England in 1726 and the Dutch Republic’s campaign from 1730 to 1732 that led to dozens of executions, were often placed in the context of appeasing an angry God. However, there were long periods when society turned a blind eye to same-sex relationships. Despite the obloquy targeting homosexuality, several European monarchs during this period, including Henri III of France, James VI and I of Great Britain, and Christina of Sweden, engaged in more or less open homosexual affairs.

Homosexual sex was also forbidden by Jewish law and by the Sharia law of Islam, although interpretations and punishments differed between the major Sunni schools of Islamic legal interpretation and between Sunni and Shia. Some schools distinguished between the penalties due to the active and the passive partner.

Although Chinese law had previously been indifferent to homosexuality, in 1740 an imperial decree criminalized consensual sex between men as part of a general movement under the early Qing dynasty toward enforcing the norms of the Confucian family after what was viewed as the laxness of the late Ming. (Ironically, the Qianlong Emperor [r. 1736–1795] would later be attacked for his intimacy with his male favorite, Heshen.) The extent to which the law was enforced, however, is unknown. The Confucian rulers of Vietnam, whose legal codes were greatly influenced by China’s, did not follow the Chinese example and have never outlawed homosexuality. Japan had a vigorous male homosexual culture in this period. Like Europeans, Japanese associated monasteries with homosexuality, although Japanese monastic homosexuality was far more open. Homosexuality was also found in the warrior culture of the samurai and the theatrical world of the Kabuki, as shown in the works of the “floating world” novelist Ihara Saikaku (1642–1693), including *The Great Mirror of Male Love*.

European expansion in this period led to contact with many societies that were less antihomosexual than Europe itself and had a sanctioned and even public role for same-sex relationships. European Christians reacted by

claiming that open sodomy was evidence of the power of the devil over Native American and other homosexuality-accepting societies, and the suppression of deviant practices was a justification for European conquest and forcible suppression of indigenous cultures. However, marginal and frontier societies with a premium on male violence often led to the formation of homosexual subcultures among European men, such as the pirates of the Caribbean.

—William E. Burns

Bibliography

- Brown, Judith C. *Immodest Acts: The Life of a Lesbian Nun in Renaissance Italy*. New York: Oxford University Press, 1986.
- Crompton, Louis. *Homosexuality and Civilization*. Cambridge, MA: Belknap, 2003.
- Trumbach, Randolph. *Sex and the Gender Revolution*. Chicago: University of Chicago Press, 1998.

A Pirate's Life for Me—Sixteenth-Century Shipboard Conditions

While there was a great deal of disparity, shipboard conditions in the sixteenth century were generally appalling by modern standards. Ships, especially the larger ones, were crowded, and manning rates were high compared to later periods, in part because sailing ships required a great deal of manpower but also because mortality and morbidity were elevated on long-distance voyages.

Only the highest-ranking officers could be guaranteed their own cabins. On larger vessels common seamen were usually well below decks, where ventilation and conditions were extremely poor. Hammocks were introduced during the course of the sixteenth century in European ships, and this improved sleeping arrangements somewhat.

Because fresh water was a treasured commodity on shipboard, few washed their bodies or clothing. Levels of cleanliness were low among populations on the land as well as at sea, and they varied from ship to ship and person to person.

Officers would have had the means to buy more clothes than the common seamen. Wills demonstrate that many officers carried sizable wardrobes with them, while the rank and file had little more than the clothes on their backs. There

were many complaints that seamen's clothing was worn to tatters quickly, and it was not the norm to receive a uniform or clothing allotment.

Lack of cleanliness and inadequate clothing were only two factors that made shipboard life difficult. Increasing levels of morbidity and mortality were an unhappy by-product of European expansion. Some routes were known to be more hazardous to the health of the crew due to that duration spent at sea and hostile climates. The majority of deaths resulted from fevers such as yellow fever and malaria as well as scurvy, smallpox, and "fluxes" (dysentery mainly). A small number of seafarers were shipwrecked or drowned or suffered injury on board. Even among those engaged in maritime warfare (pirates, privateers, and naval seamen, for instance), disease was the greatest killer.

Anecdotal evidence suggests that the most lethal disease was scurvy ("the plague of the sea"). Most seamen's diets were woefully inadequate in vitamin C; this could lead to painful symptoms and death. Some astute seamen noted that citrus fruit cured scurvy in the sixteenth century, but the remedy did not gain widespread acceptance for centuries.

Men on coasters that sailed close to land would have had better access to fresh provisions than those on long-distance voyages (which were provisioned for months or years). Part of the problem was the inadequacies of that age's systems to preserve food and drink. Furthermore, the modern notion of a balanced diet did not exist yet. There were variations in diet according to region, but items such as salted meat or fish, biscuit, and beer figured prominently in seafarers' diets. Fresh fruit and vegetables were rare.

In theory, the quantity of victuals was usually adequate to the high-caloric needs of these laborers of the sea (at least early in the voyage); the quality, however, often left something to be desired. Rotting food and putrid drink were common. As the voyage continued, difficulties with reprovisioning could mean that rations would be cut back. Not surprisingly, officers (and possibly other seamen) brought their own supplies to supplement their meals. Even when seamen were given their full allotment of victuals, meals were normally monotonous and lacking in many essential vitamins.

Provisioning large numbers of men in a fleet was especially complicated in terms of not only preservation but also acquisition and monitoring of quality. One had to worry about the natural hazards such as rats and leaks aboard as well as other hungry seafarers stealing provisions. The duration of voyages were frequently unknown (especially for voyages of exploration), which caused additional problems. In extreme cases, seamen ate rats and drank their own urine.

Only a few ships carried surgeons, and sixteenth-century medical care was rudimentary at best. Surgeons were best suited to treating external injuries and battle wounds (often with amputation and without anesthesia). However, disease continued to be an overwhelming problem for several centuries, and surgeons were perplexed about the cause and treatment. Nursing the sick generally fell to fellow crewmates, or if possible the sick and injured were taken ashore for care.

Seafaring was generally a young man's occupation, and life expectancy was low on long-distance voyages. The most risky journeys were generally the most lucrative. Long-distance merchant voyages frequently offered high wages. On privateering voyages, seamen sailed for shares of prizes. Remuneration varied widely, but such voyages remained immensely popular, as seamen favored loose discipline and the possibility of lucrative prizes. This is also true of piracy. Naval service was the least popular form of seafaring employment due largely to low wages and rigorous discipline. Impressment was used to compel men to serve in the navy.

Some efforts were made to improve shipboard conditions during the sixteenth century because seamen deprived of their basic needs might resort to mutiny, and sick and hungry men usually failed to accomplish naval and mercantile goals. Efforts to improve shipboard hygiene and seamen's welfare were usually a result of individual commanders or companies. Many states resorted to impressment to force men to serve in the navy regardless of conditions. This deprived seamen of their traditional freedom to assess shipboard conditions before entering into an employment agreement and was thus deeply resented.

—Cheryl A. Fury

Bibliography

- Fury, Cheryl A. *Tides in the Affairs of Men: The Social History of Elizabethan Seamen, 1580-1603*. Westport, CT: Greenwood Press, 2002.
- Hale, J. R. *Renaissance Exploration*. New York: Norton, 1968.
- Pérez-Mallaina, Pablo E. *Spain's Men of the Sea: The Daily Life of Crews on the Indies Fleets in the Sixteenth Century*. Translated by Carla Rahn-Phillips. Baltimore: Johns Hopkins University Press, 1998.
- Scammell, G. V. *Seafaring, Sailors and Trade, 1450-1750*. Aldershot, UK: Variorum, 2003.

Gender and Morality— Eastern Europe

From the fifteenth century to the seventeenth century, gender roles in eastern Europe, both Slavic and Ottoman, were highly bifurcated and became increasingly restrictive for women in particular. Women in early modern Slavic (particularly Russian) and Ottoman societies, while retaining a semblance of agency over social and political affairs, were nonetheless relegated to the confines of the family household. Orthodox Christianity and Islam as practiced in eastern Europe stressed the necessity to remove women from the social world of men to preserve their morality and dignity, which prevented them from attaining any direct political or social power. However, within their respective households both Ottoman and Slavic women maintained considerable amounts of influence and agency. Elite women, particularly the nobility, had significant influence in the political sphere through their husbands, sons, and fathers.

Women in early modern Muscovy (state preceding Russia) were not allowed the same political, social, and economic agency as that of men and were subordinated to a lower status. However, this was to some degree contingent on social class. Serf women were subject to the drudgery of everyday life to the same degree as that of their husbands while simultaneously having to maintain their households. As lower-class women, they were not expected to escape the duties of work and were in the company of men on a daily basis. On the other hand, women in the ranks of the nobility were expected by both Russian society and the Orthodox Church to live

► CONCUBINES IN EASTERN EUROPE

Polygamy was an expensive familial arrangement for Muslim men, many of whom were reluctant to have multiple wives due to the financial obligations involved in providing for them. However, the institution of concubinage allowed Muslim men in the early modern Ottoman empire to secure the affections of another woman within his household who could give him children but was not bound to him in the same way as a wife. Concubines were not as costly as wives in that they did not expect the financial benefits of marriage, such as dowry and bride price. Some Muslim wives were not opposed to having their husbands acquire concubines, as they held a position of authority over all women in the harem as the legitimate wife. Many concubines in the Ottoman empire came as

slaves from the Black Sea provinces, either taken or sold by their parents. As European women, they were prized for their light complexions and exotic phenotype. There is evidence to suggest that many young women from the Black Sea region actually looked at their bondage as an opportunity to escape the drudgery of life in poverty-stricken regions and marry a rich Turkish pasha in Istanbul. However, as concubines they were restricted to only being servants of the household and to bear children for the Muslim man of the household. The rise of the secularizing Young Turks at the end of the nineteenth century eventually put a stop to this peculiar practice that had survived since antiquity.

—*Abraham O. Mendoza*

in a particularly stringent subservient role. They were expected to dress modestly, cover their heads, and never leave the home, especially after marriage. Married women were expected to refrain from having outside contact due to fears of infidelity and immorality. They were relegated to a section of the house known as the *tehem* in which they were expected to perform household duties such as knitting and preparing food while slaves did the heavy lifting. This did not prevent men from frequenting brothels and having mistresses, as they were not expected to live up to the same moral standards as that of women. Young Russian women were usually expected to marry early, between the ages of 12 and 16, through prearranged marriages to men considerably older than them. Passing from a position of subservience from their fathers to their husbands restricted their access to any sort of direct political and social influence.

Ottoman women in eastern Europe were also subjected to similar roles as that of their Russian counterparts. They too were married off early to men older than them. They were subject to stringent Islamic regulations regarding their public lives, meaning they were forbidden to have one. Once married, they were expected to remain confined to the harem. While men could have multiple wives based on their economic capacity to afford more than one

in addition to concubines and slaves, women could not have more than one husband. Further religious and societal restrictions on women prohibited them from showing their faces, engaging in social functions without male supervision, and leading what were deemed immoral lives. Men were not subject to such regulations but were expected to support their wives and maintain the harmony of their households. Nonetheless, the primary wife of the household did have considerable power within the harem. All of the other women of the household—other wives, concubines, slaves, and daughters—were subservient to her.

Both elite Russian and Ottoman women, while socially and politically subservient to men, did have indirect power over men in their family. While they were expected to confine themselves within the household to ensure proper moral behavior expected by their respective societies and religions, their control over their households in the absence of their spouses allowed them access to considerable legal rights, property, and divorce. While divorce was frowned upon by both the Orthodox Church and Islam as immoral, women were able to end their marriages with the help of their families if it was deemed necessary in cases of abuse or neglect or if either party failed to live up to contractual obligations stipulated in the marriage

contract. Moral conduct aside, women still retained considerable control over their daily lives.

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Bibliography

- Davis, Fanny. *The Ottoman Lady: A Social History from 1718 to 1918*. New York: Greenwood, 1986.
- Hartman, Joan E., and Adele Seeff, eds. *Structures and Subjectivities: Attending to Early Modern Women*. Newark: University of Delaware Press, 2007.
- Pushkareva, Natalia. *Women in Russian History: From the Tenth to the Twentieth Century*. London: Sharpe, 1997.

Family and Gender in Early Modern Russia

Most Russian families during the period of the first global era were structured around a strict hierarchy within which men played a central role. Men controlled female household members, and the younger men submitted to the oldest male member of the family. All households within a community strictly observed these principles since individualist attitudes were considered inferior to collectivist ones. Moreover, the tsarist regime and the Orthodox Church supported these patriarchal attitudes since they fashioned a society that was conditioned to support both the church's and state's absolute authority. This situation was particularly evident in Russian villages, where 90 percent of the population lived. Though rural communities varied among each other, they were essentially guided by the same patriarchal principles and can best be examined through a woman's typical life cycle.

Two factors affected a woman's existence in villages: her ability to work and her ability to produce and raise offspring. During early childhood it was not uncommon that female children looked after their youngest siblings and took care of minor household chores. By the age of 12, a young peasant girl would begin her preparation to enter marriage by becoming skilled in all the household and farm work expected of an able-bodied woman. Unlike women in agriculturally advanced areas of Europe during the seventeenth and eighteenth centuries who married in their early to midtwenties, Russian women generally married between the ages of 17 and

20. Early marriages were not uncommon since women were considered both an economic and a demographic resource. Though the bride's family reluctantly parted with the extra pair of hands, both the families of potential grooms and local administrators preferred, and sometimes coerced, women to enter into marriage early. Noble serf owners benefited from marriages since they created an additional taxable unit, while the groom's household was eager to acquire a new workforce for the arduous fieldwork. Once married, the young bride would join the husband's household, where her status was nominal and her situation grim.

The peasant wife and her husband would live under the same roof with three-generational multiple families. The bride would be expected to be subservient to not only her father-in-law but also to her mother-in-law and sisters-in-law. She was to also unconditionally obey her spouse; it was peasant custom that permitted husbands to instruct their wives using fists. To make matters worse, if the husband was absent or underage, the wife could face her father-in-law's sexual advances. A woman's status improved over time as she gave birth, especially to sons. Childbearing and child rearing, however, came only after household and farm work. It was not uncommon that women gave birth to up to ten children and had only three survive. The only available method of birth control was infanticide, but if a mother was caught the local authorities would subject her to a long and



Russian merchant's family of the seventeenth century, by Andrej Riabushkin, 1896. (Scala/Art Resource, NY)

➤ SOLDATKI

The universal military draft that Peter I instituted in 1705 had a profound effect on village life in general and the lives of women in particular. Peter the Great's national draft conscripted millions of able-bodied village men into army service for life. The wives of men who were enlisted were known as *soldatki* (soldiers' wives). As their husbands were performing a state service, *soldatki* became legally free, emancipated serfs. As such, however, they often lost their husbands' share of communal lands. The fates of soldiers' wives varied. Some remained in the villages and, if they were not reduced to begging for alms from other villagers, were supported by the husbands' families or their own relatives. Often, however, as *soldatki* were seen as simply additional mouths to feed, they were driven away from the village. Many *soldatki* migrated to cities and there engaged in either petty

trade or became domestic servants. Quite a number of soldiers' wives turned to prostitution to alleviate their challenging situation. During the eighteenth century, illegitimacy and infanticide rose significantly enough to become commonplace, and Russian authorities often identified *soldatki* as one of the sources for these two phenomena. To remedy the problem, both Peter I and Catherine II established homes and hospitals to preserve the lives of their illegitimate subjects. Mothers of illegitimate children, on the other hand, received no charitable assistance from the state, as the authorities condemned and repressed any woman suspected of engaging in vice. Thus, though the state was directly responsible for causing the problematic situation that confronted millions of Russian women, it did little to alleviate their predicament.

—Marko Dumancic

painful execution. Eventually, though, usually at the death of the father-in-law, a woman could establish a household together with her husband. She would then be able to distribute work duties to the female half of the household. But again, the wife's role and status in the village depended on her spouse. If she became a widow, her husband's lands would either be repossessed by the community or taken by her sons. Consequently, a widow's usual option was to remarry as a means of keeping the household she waited a lifetime to earn.

The *Domostroi* (Household Order)—a sixteenth-century household primer—and the Law Code of 1649 were the two basic documents that enumerated the fundamental rules within the urban family. According to the *Domostroi*, the father was supposed to take complete responsibility over his wife and children, instructing them in all matters moral and worldly. The family members, in turn, were to submit to him in blind obedience. While the father was only morally obligated to his family members, the children were legally bound to obey both parents. Not only could children not raise grievances against their parents, but they were also officially subject to flogging for striking their parents, swearing at them, stealing

their property, or refusing to take care of them in old age. Parents, on the other hand, were thought to have exceeded parental privileges only when they murdered their children and even then received only a sentence of one year in prison. If a wife killed her husband for whatever reason she was to be buried alive, while a husband who killed his wife without justification was sentenced to death by decapitation. And even though there were changes in the law code that restricted the absolute power of the patriarch over other household members, the supremacy of the household head was not substantively undermined throughout this period.

—Marko Dumancic

Bibliography

- Alpern Engel, Barbara. *Women in Russia, 1700–2000*. Cambridge: Cambridge University Press, 2004.
- Mironov, Boris N. *The Social History of Imperial Russia, 1700–1917*. Boulder, CO: Westview, 2000.

Print Culture in the Early Modern West, 1400–1800

Historians continue to debate the ways in which printing influenced the development of Western culture, but the centrality of print in the history of

the West is beyond doubt. As an invention, printing is perhaps unrivaled in its cultural impact. From its creation in the mid-fifteenth century, printing remained the most important method of reaching a mass audience for 500 years.

The development of printing is unique in premodern Western history in that we actually know where and when it happened. Historians credit Johann Gutenberg (ca. 1397–1468 CE) with inventing printing in the German city of Mainz around 1450. The term “invention” can be somewhat misleading, however, as Gutenberg’s mid-fifteenth-century creation of a press with movable metal type hardly sprang fully formed from his brow. Not only did the printing press and metal type have earlier Asian antecedents, but printing from woodblocks seems to have emerged in the Germanic lands around the start of the fifteenth century.

Gutenberg’s place in history therefore should rest rather on his foresight in anticipating the popularity and profits of the mechanical multiplication of texts and on his efforts to bring together all the constituent elements necessary to do so. The printing press allowed for the spread of texts and images to anyone with disposable income, a fundamental difference from an earlier age in which only the very wealthy could afford to hire a copyist for the year necessary to write out a copy of the entire Bible.

Historians employ the somewhat arbitrary date of 1500 as the turning point in printing. More accurately, between 1480 and 1490 Western readers no longer demanded that their printed books look exactly like manuscript (handwritten) ones. They used the term “incunabula” (from the Latin *cunabula*, meaning “cradle”) to refer to printed books before the year 1500. That readers before this period preferred their books to look like the ones with which they were already familiar should not surprise us. Around 1490 the Florentine bookseller Vespasiano famously commented that within his patron Duke Federigo of Urbino’s splendid library a book produced by mechanical means would have been embarrassed to keep company with his fine manuscripts. But the preferences of the Duke 40 years after the creation of textual printing was becoming anachronistic. Printing was wildly successful, and most contemporaries

recognized its importance, including one who rhapsodized that the invention of printing was as significant for mankind as the birth of Christ.

The 1462 sacking of Mainz by warring prince-bishops was the immediate impetus for the spread of printing to other parts of Europe. Refugee German printers fled to the places where they could most profitably—and safely—set up shop. Printing presses were soon producing works in Europe’s great commercial and administrative centers: Subiaco/Rome (1463), Venice (1469), Paris (1470), Naples (1471), Valencia (1473), Bruges (1474), Lübeck (1475), and Westminster/London (1476). The London press was distinct because here a native, William Caxton, rather than a German immigrant, imported printing. Until 1470, 14 European cities possessed printing presses; by 1480, that number would jump to more than 100. Nor would printing remain limited to Europe. Presses could be found wherever Western merchants traded and settled, such as in Turkey (1503), Mexico (1534), India (1556), and Palestine (1563). This rapid proliferation of print does not imply that presses eradicated manuscript culture in the fifteenth century or indeed even centuries after. Printed and manuscript books continued to be found side by side in the same libraries. Recent research indicates that books circulated in manuscript into the eighteenth century, especially texts that secular and religious authorities found objectionable.

Political and religious authorities came to realize that print could reach mass audiences not long after merchants did but with a greater sense of alarm than opportunity. Censorship was the inevitable twin of this new mass medium, and events soon proved authorities’ concerns with censorship to be well placed. As early as 1479 Pope Sixtus IV authorized the Theological Faculty of the University of Cologne to examine printed works for examples of heresy or blasphemy. When Martin Luther sparked protests against the perceived corruption of the Catholic Church and calls for reform, print was the medium that disseminated the ideas of the resulting Protestant Reformation.

Yet early modern censorship was never as effective or efficient as the modern definition of the word implies. Contemporary authorities lacked the extensive means of surveillance and

control necessary to regulate printed materials. They usually reacted only once something offensive had been printed rather than preventing objectionable material from reaching print in the first place. These inefficiencies were exacerbated by the existence of separate bodies—secular, ecclesiastic, and economic—that were empowered to censor but only did so when it suited their interests. Last, the existence of so many polities in the relatively small area of western Europe meant that even if a local authority was successful in censoring a work printed in their domain, they were often unable to prevent banned materials being imported from other parts of Europe.

The religious disputes of the Protestant and Catholic Reformations proved especially fertile in encouraging a trade in printed contraband, such as the importing of Catholic works from the Spanish Netherlands into England or the spread of Calvinist works from francophone Switzerland into France demonstrates. Historians continue to debate the relationship between the advent of the printing press and the emergence of the Protestant Reformation. Nevertheless, it is clear that the Reformation ignited an explosion in publishing, particularly in the printing of texts in the vernacular languages of Europe. In 1517, the year that Luther published his *95 Theses*, about 40 titles were published in German. By 1519 the total increased to 111 titles, by 1521 it reached 211, the following year it exploded to 347, and in 1525 it topped out at 498 titles.

As the only effective medium for reaching a massive number of readers over a wide geographical area, print was employed extensively by both sides in the Reformation debate. The use of print in theological debate was controversial itself and helped fuel and spread the disagreements from cathedrals and university lecture halls to taverns, homes, and street corners. Furthermore, in the effort to reach as many readers as possible, reformers began to publish their works in the vernacular. These innovations shocked conservatives for whom Latin was the proper language of law and theology. Before 1500, more than 75 percent of printed material was in Latin. The publication of theological treatises in vernacular languages steadily eroded

Latin's predominance in print so that by 1600 the majority of books were printed in various forms of the vernacular.

Over the course of the sixteenth century, the German lands lost their predominance in printing as well. It is no coincidence that the rising new centers of print were also the centers of trade and prosperity, able to reach wider markets of readers who could afford printed texts. Venice, Antwerp, and Paris became the new centers of printing, and works from the presses in these cities crossed borders and spread throughout Europe on the backs of porters and in the hulls of ships.

Historians of early modern Europe disagree over the relationship between literacy and print. Did rising literacy stimulate the dissemination of print, or did spreading print boost literacy rates? The truth seems to lie somewhere in the middle, and as printing became more common, so did literacy (and vice versa) through the sixteenth century. Literacy grew at various rates and fluctuated in different parts of Europe at different times, and occasionally it also regressed. Sixteenth-century Castile provides an interesting case study, with literacy rates that rivaled or surpassed those in Northern Europe at the same time. Unlike North Europeans, however, literacy rates regressed in Castile over the following centuries, and literacy rates were probably higher in the sixteenth century than they were in the eighteenth century. The history of literacy is not always one of sustained progress but rather one of occasional stagnation and regression, even as the printed material continued to become more ubiquitous.

Most historians do agree that printing stimulated and made possible the explosion in knowledge of the early modern period, although the degree to which this knowledge was standardized and fixed is still open to debate. Regardless, learning could now spread quickly throughout Europe in a matter of months instead of years, allowing scholars to argue with and learn from contemporaries hundreds or thousands of miles away. The early modern period was a time of great upheaval in the sciences, and print helped foster this revolution. While books on science never enjoyed a wide readership and their

success was commercially ambiguous, printed materials on medicinal matters were much more popular. No doubt much of this reflects the everyday pain and health concerns that our early modern predecessors must have suffered in an age before painkillers. But the wide variety of popular and learned treatises on various topics of health and medicine suggests that there was a vigorous early modern medical culture quite distinct from the concerns of scientists and scholars.

This helps to remind us that printed books and materials were never the sole preserve of the elite and wealthy. Even day laborers could afford a single-sheet broadside or ballad every now and again. Recent research indicates that printed materials were increasingly purchased by even the poor and illiterate, who could enjoy the illustrations or have a literate friend read the contents out loud for a gathered group to enjoy. These printed images and ballads also blurred the boundaries between oral and written culture, which historians have demonstrated lived side by side for centuries.

Such findings have largely erased the distinctions between popular and elite print, as the same ballad or broadside could find a home in the seediest drinking den as well as the most refined household. This emerging market for cheap print was a boost for printers because such works could be produced quickly and inexpensively to guarantee a steady flow of income. Books, especially sizable books, largely remained the domain of the wealthy because of the high prices they commanded, however. The cost of a book was directly proportional to its size, as paper alone accounted for an astounding 75 percent of the cost of book production. High resource costs also meant that printers realized little benefit from economies of scale (reducing overall costs by producing a greater volume of books).

In understanding the importance of print in early modern culture, there is another problem that historians confront. Almost all of what was purchased by nonelite sixteenth- and seventeenth-century consumers has been lost to historians. Curiously, the survival of printed works appears to be inversely proportional to the numbers of a given work that were produced. During the incunabular period, nearly a million

single-sheet woodblock prints were probably produced, yet only about 5,000 of them survive today. Such a loss rate is staggering, as the historical record of this evidence of cheap print has been largely obliterated. Even the famous Gutenberg Bible, obviously a singular work, has only about a 30 percent survival rate.

The year 1800 serves well as a closing date for the handpress era. Beginning in England, the Industrial Revolution fueled a series of mechanical improvements that radically changed the technologies of printing. First was the perfection of machine-made paper between 1798 and 1803. The innovation was significant, reducing the cost of paper production while increasing output, and the abundance of inexpensive paper enabled printers to reap economies of scale. Coupled with changes to the printing press itself, cheap paper ushered in the true era of mass print. By 1804 the 3rd Earl Stanhope had made the first significant improvement on Gutenberg's creation by creating an iron press, which proved to be more durable and precise but not significantly faster than the wooden press. Stanhope's press did, however, allow for the automation of printing itself, significantly increasing output. After years of experimentation, a German immigrant in London, Friedrich Koenig, harnessed a press to steam power, and in 1814 the *London Times* was printed by a steam-driven press for the first time, quadrupling the daily output of a handpress. These three advances, developed together within a short time, significantly changed print culture and made the printed word an indispensable part of everyday life in the West.

—Jason E. Eldred

Bibliography

- Chappell, Warren. *A Short History of the Printed Word*. Revised and updated by Robert Bringhurst. Vancouver, BC: Hartley and Marks, 1999.
- Eisenstein, Elizabeth. *The Printing Press as an Agent of Change*. Cambridge: Cambridge University Press, 1979.
- Flood, John. "The Printed Book as a Commercial Commodity in the Fifteenth and Early Sixteenth Centuries." *Gutenberg Jahrbuch* 76 (2001): 172–182.
- Gaskell, Philip. *A New Introduction to Bibliography*. New Castle, DE: Oak Knoll, 1995.

Parshall, Peter, and Rainer Schoch. *Origins of European Printmaking*. Washington, DC: National Gallery of Art, 2005.

Steinberg, S. H. *Five Hundred Years of Printing*. Edited and revised by John Trevitt. New Castle, DE: Oak Knoll, 1996.

Watt, Tessa. *Cheap Print and Popular Piety, 1550–1640*. Cambridge: Cambridge University Press, 1993.

Mohawk Womanhood

Mohawk society, like that of other Iroquois tribes, was organized matrilineally. Women fulfilled very specific roles that were complementary to those of men in the tribe. Each gender had its own duties, and society could not function without their cooperation. As a result, Mohawk women were raised to be confident and strong individuals.

During the seventeenth century, European observers were surprised to see the power wielded by Mohawk women. Some were confused by Mohawk government and believed that the genders

alternated governing their tribe. Europeans soon realized that in many ways, the women gave legitimacy to the men who waged wars and conducted diplomacy with other tribes and Europeans. The Jesuits who dominated the French colonial ventures during this time achieved greater influence through converting women, instead of men, to Christianity. The Jesuit practice of encouraging women like Kateri Tekakwitha to leave their villages for Christian settlements like St. Francis Xavier helped to weaken the traditional Mohawk social structure, already in decline from continuous warfare and disease.

Mohawks were born into the family of their mothers and traced their heritage through the mother's family. The matron, or head, of an extended family was usually an older woman who had proven that she could handle responsibilities. She would often be succeeded by her eldest daughter. Mohawk families belonged to different clans, and clans had branches in different villages. Husbands were selected from different clans, since members of the clans were considered brothers and sisters. Children belonged to

► KATERI TEKAKWITHA—LILY OF THE MOHAWKS

In 1980 Kateri Tekakwitha was the first Native American to be beatified by the Catholic Church, an important step on the road to being declared a saint. Tekakwitha was born in 1656 in a Mohawk settlement near present-day Auriesville, New York. Her parents died when she was four years old. The smallpox that killed her family left Tekakwitha with a deeply scarred face and poor eyesight. Her uncle's family raised her in the nearby settlement of Gandawague.

In 1667 the Mohawks allowed a small group of French Jesuit missionaries into Gandawague. Tekakwitha was assigned to take care of their needs. The priests made a special effort to instruct her in the faith. In 1669 Tekakwitha's aunts tried to arrange a marriage for her. She refused, which was very unusual for a Mohawk woman. Because Tekakwitha's husband would have become a part of her family, he would have been expected to take care of her older relatives. Tekakwitha's refusal not only went against Mohawk society's traditions but also went against the economic needs of her family. Her refusal was

apparently because of her growing interest in devoting herself to the Catholic faith.

In 1676 Tekakwitha was baptized by Father Jacques de Lamberville. Her relatives and the other Mohawks in her settlement tried to get her to renounce her faith. Tekakwitha fled for St. Francois Xavier, a settlement of Catholic Indians near Montreal. Her uncle pursued her, threatening to kill her, but she arrived safely in the fall of 1677. Tekakwitha stayed with Anastasia Tegonhatsihongo, a friend of her mother's. The two women were often in need because they had no man to hunt for them or to do heavy work. Tekakwitha still refused to marry, despite Tegonhatsihongo's pleas. Instead, Tekakwitha hoped to found an order of Native American nuns. When Church authorities would not allow her to do so, she adopted a lifestyle similar to that of a nun. She often fasted and whipped herself. Her self-penances broke Tekakwitha's health. She died on April 17, 1680. Her life and holiness were recorded by her Jesuit patrons to inspire other Native Americans.

—Timothy J. Watts

their mother's clan. Women could select when to have children and were in charge of training them. Traditional clan names were assigned by the matron of the clan. She made sure that no two living persons had the same name. The matron could assign certain names that had political and religious responsibilities.

The duties of a Mohawk woman included providing the food supply. Women and children worked the fields that provided most of the tribe's food. They planted the seeds, weeded the fields, and harvested the crops. Women were responsible for storing the food and trading any surplus for goods not grown by them. The most important food products were corn, beans, and squash, known as the "Three Sisters" in Iroquois culture. Women also gathered maple sap and cooked it into sugar. They supplemented their families' diets with wild crops like berries and nuts. Men's role in producing food was limited only to clearing the fields and hunting for meat.

Because women were responsible for growing the food, they were considered to own the land. All fields were held jointly by the tribe, but clan matrons assigned specific fields to each woman. The right to the use of a certain field was passed down from a woman to her daughters. Women also owned the houses in which their families lived, along with the household goods and food supplies. Married men and women did not share ownership of property. A man's property was limited to his clothing, tools, and weapons.

When the fields around a village were exhausted and the supplies of wood and wildlife

were limited, the tribe would move its settlement. The men were responsible for the heavy work of building new houses and clearing new fields. The women were responsible for the living arrangements. Each extended family lived in its own longhouse, with rooms separated by sheets of bark.

Politically, women were the ultimate authority. Matrons selected the men who served as chiefs and had the right to remove a chief who did not follow the will of the people. Although women did not speak at councils, they could designate men to speak for them so that their will would be known. Women also kept the ceremonial regalia used by the men. They had the right to ask for a raid on another tribe to obtain captives for torture or adoption by the tribe. Women could also stop raids by refusing to provide food supplies for the men. The ultimate fate of a captive was decided by a clan's women.

Women were responsible for religious ceremonies among the Mohawks. They selected the times for festivals and kept the costumes used for celebrating. They also were members of secret medicine societies that provided medical care.

—Timothy J. Watts

Bibliography

- Graymont, Barbara. *The Iroquois*. New York: Chelsea House, 1988.
- Klein, Laura F., and Lillian A. Ackerman, eds. *Women and Power in Native North America*. Norman: University of Oklahoma Press, 1995.
- Snow, Dean R. *The Iroquois*. Cambridge, UK: Blackwell, 1990.

■ Introduction: Society and Culture in the Age of Accelerating Contact

The disruptions of the early modern world changed the perceptions of the humans living in and through them. Definitions of "art" are generally convoluted and contested, yet for our purposes, we can simply accept that art is a creative expression that generally either supports or contests a prevailing world-

view. Political and economic upheavals had an impact on artistic vision, as did exposure to new intellectual stimuli, such as the art and literature of other lands, the Scientific Revolution, and the migrations of various interpretations of Hinduism, Confucianism, and Christianity, as well as exposure to new forms of architecture,

music, sculpture, pottery, and so forth, from distant lands.

The era's upheavals arguably had the mildest impact on China after the Manchu conquest. The founders of the Qing dynasty had long studied and admired Chinese culture. Conversely, Japan, consolidated by Japanese territorial lords, underwent a transformation in art and poetry during the Tokugawa era as urbanization and advances in print technology made literary works more widely available and more lyrically expressive. Europeans responded to intellectual and geographic expansions with a dazzling explosion of literature and art, but Persian literature entered into a decline after religious fundamentalists limited the range available to artists. Persian gardens and architecture reached new heights, arguably because artists and consumers redirected their emphasis. India achieved exciting heights of creativity from a syncretic blending of Turkic Islamic and indigenous traditions. The Ottomans, settled in Anatolia and in contact with multiple influences, also developed impressive art and architecture.

Europe itself underwent an explosion of artistic achievement. Humanism reshaped all aspects of European artistic expression. Baroque symphonies and operas remain exciting and fresh, as do late Renaissance paintings and sculptures. Literature from the pens of social commentators such as Voltaire, Jonathan Swift, and Alexander Pope (to name but a few among hundreds) was vital, sometimes with a biting, shocking wit (as in Swift's satirical suggestion, in "A Modest Proposal," that the Irish sell their babies for sweet, tender meat). Europeans, like societies everywhere, peered at themselves from a new perspective after launching suddenly into an international arena, and as they prepared their bid for international dominance.

—Carolyn Neel

Literature in East Asia

Even though Asia's literary traditions predate those of Europe and the Judeo-Christian world, the literature did not remain in a static state. The drastic political upheavals that occurred in the early modern era in both China and Japan caused a shift in their literature that saw both revival

and innovation. In China the rise of the Ming dynasty in 1368 led to the revival of Chinese literature, which gradually moved toward cultural convention, particularly the "eight-legged essay" genre that was used in grading candidates in the famous civil service examinations. In Japan a new poetic form, *renga*, in which multiple authors participated in literary creation, emerged in the fifteenth century, although the traditional *tanka* genre endured throughout the era.

China possesses one of the greatest literary traditions in the world, and the roots of its literature stretch back some 3,500 years. Throughout this long history, Chinese literature experienced its ups and downs. Under the Ming dynasty, it was dominated by the southern literary traditions and a tendency to establish cultural orthodoxy, which eventually resulted in the development of the eight-legged essay style used to test candidates in competitive literary examinations. The Ming era poets produced a vast amount of poetry, although most of it imitated past masters. The leading voices of the era, as represented by the Qing-Han school, even declared that post-Han (206 BCE–220 CE) era writings were not even worth reading. Yet such sentiments were challenged occasionally, and one of the first voices of protest came from the three Yuan brothers. Yuan Hung-Tao (1568–1610), probably the greatest of the Yuan brothers, argued that poetry should evolve with each age and should convey strong emotions and personal experience. His contemporary playwright Tu Long (1542–1605) also eschewed the formalism of the past and sought a more emotive expression. Two other masters, Chung Hsing and Tan Yüan-chun, tried to break the traditional mold of writing by exploring the possibilities of writing intelligibly without observing Chinese grammatical usages. This period also saw the revival of southern dramatic traditions that employed frequent changes of rhymes and singing as well as plots taken from contemporary life. Chinese prose fiction was revitalized as well. Among numerous works produced in this era, two are particularly important. One, Wu Cheng-en's *Journey to the West*, was an imaginary account of the pilgrimage of the Chinese monk to India, a traditional subject presented in a new and lively manner and, most importantly,

in vernacular language. The second novel, titled *The Plum in the Golden Vase* and also written in vernacular, provided a fascinating yet lurid account of the life of the rogue Ching Hsi-men. Its publication caused a major outcry from the Chinese authorities, who banned the novel and had its first edition, printed in 1610, destroyed.

In 1644 the Ming dynasty was overthrown by the Qing, but this political tumult did not disrupt the development of major trends in Chinese literature. In prose, Chin Jen-jui style remained the common essay form, while most poets imitated the southern Tang style of writing. The Manchu poet Nalan Hsing-te (Nara Singde), one of the best poets of seventeenth-century China, was outstanding. Pu Sung-ling produced a delightful collection, written in classical language (*ku-wen*), of over 400 stories featuring eerie and supernatural events and characters. His other major work was *A Marriage to Awaken the World*, one of the longest novels in any language and produced by the author in vernacular. Pu Sung-ling was, however, soon outshone by other writers. Wu Ching-tzu created *Julin wai-shih* (*The Scholars*, ca. 1750), one of the masterpieces of the eighteenth century, soon joined by another great work, *Dream of the Red Chamber*, a tragic story of the fall of a great family.

Japan already had a long and rich literary tradition by the late fourteenth century. Its poetry was dominated by the *waka* genre that took a variety of forms, most notable of them being *tanka* ("short poem") and *choka* ("long poem"). Yet the fifteenth century saw a gradual replacement of the classic *tanka* by a poetic form that was based on multiple authorship. Known as the *renga* ("linked verse"), it usually featured the *tanka* written by two (or more) people, with one author composing opening lines of a *tanka* and his collaborators completing it. The *renga* genre became quite popular in Japan and later developed rigid rules of composition that, in effect, gradually dampened its freshness. This period also saw the flourishing of short stories that incorporated folk tales and myths as well as historical traditions from the previous eras. A majority of these stories were written anonymously, but scholars suggest that their authors probably were Buddhist monks or court officials. Of great literary value, however, are the Noh dramas, musical

poetic performances in which masked characters performed plays that featured both philosophical and humorous elements. The height of the Noh dramas was reached with Kan'ami and his son Zeami in the mid-fifteenth century, but the genre, with its magnificent poetry and subtle structure, remained vibrant and popular throughout the Muromachi and Tokugawa eras.

The late fifteenth century saw Japan descending into chaos and the anarchy of factional wars that lasted for decades and affected the development of Japanese literature. Yet amity and political unity were restored by the Tokugawas in the early seventeenth century, and Japanese literature thrived once more. Although the Japanese had the printing technology for centuries prior, it was largely limited to the production of religious texts, while literary classics remained in handwritten manuscript forms that highlighted the Japanese art of calligraphy. This changed in the seventeenth century when the introduction of a printing press with movable type (which was actually first brought to Japan following the disastrous invasion of Korea in the 1590s) led to the rise of popular literature as many classical works and eventually works of lesser literary value were produced in print.

The Tokugawa era saw many transformations in Japanese poetry, where the dominance of the *tanka* genre was challenged by the new writers known as *kokugakusha* ("scholars of national learning") who sought to refocus Japanese literature away from Chinese, Confucian, and Buddhist subjects and toward more peculiarly Japanese themes. In this respect, one of the most important literary developments was the emergence of the *haiku*, a new poetic genre that utilized a rather brief form (some 17 syllables arranged in lines of 5-7-5 syllables) to capture moments, sentiments, or images rather than ponder on some lofty ideals. The *haiku* developed from the *renga* poems, whose opening verse of three lines usually contained discussion of landscape, time, or season. Another important literary innovation was the rise of *haikai no renga* (humorous *renga*) that sought to contest the stale set forms of the *renga* and embraced more humorous and vulgar language. Thus, the Danrin school of *haikai no renga* poets preferred impromptu composition that was more appealing

to the fast-paced lifestyle of the *ukiyo* (“floating world”) that developed in the licensed red-light districts of major Japanese cities during the Tokugawa era. In fact, this emphasis on the rapid nature of composition led to the development of a rather peculiar competition, *yakazu* (arrow counting), of one-man composition of extended verses. The first 24-hour competition took place in 1677, with one poet producing 1,600 verses. Yet his prolific output was dwarfed by one of the greatest poets of this genre, Ihara Saikaku (d. 1693), who wrote a 4,000-verse sequence in 1680 and a staggering 23,500 verses in a single day in 1684; all but the very last verses were recorded and published.

The credit for turning haiku into a literary art of the highest quality belongs to Matsuo Basho (d. 1694), the most famous haiku poet of the Tokugawa period in Japan. A master of concise and clear haiku, he emphasized the need for a haiku to reflect real environments and emotions. His verses reflected his rejection of urban life and prolonged travels throughout the country. His *Oku no hosomichi* (*The Narrow Road through the Deep North*, 1694) is usually acknowledged as the most popular and admired work of Tokugawa literature.

The Tokugawa era prose, known as *kanazoshi* (“kana books”) was rather multifaceted and embraced both works of fiction and non-fiction of a wide variety of themes and topics. The spread of printing technology allowed for cheap production of books and a considerable increase in the reading audience. One of the most important writers was Saikaku (discussed above), whose novel *The Life of an Amorous Man* (1682), and *Five Women Who Loved Love* (1686), proved to be highly influential in Japanese literature. The former is a rather licentious work of fiction that focused on the *ukiyo* lifestyle and turned its hero, Yonosuke, into one of the symbolic figures of the era. The latter, however, concentrated on the experiences of common women from the merchants class, the first time that such a “lowly” theme was given a literary treatment. Like Saikaku, Chikamatsu Monzaemon (d. 1725) also chose to write on experiences of ordinary people, particularly the desperate lives of women driven to prostitution.

—Alexander Mikaberidze

Bibliography

- Johnson, David, and Andrew James Nathan. *Popular Culture in Late Imperial China*. Los Angeles: University of California Press, 1985.
- Kato, Shuichi, and Don Sanderson. *A History of Japanese Literature: From the Man'yōshū to Modern Times*. Richmond, UK: Japan Library, 1997.
- Mair, Victor H. *The Columbia History of Chinese Literature*. New York: Columbia University Press, 2001.

Literature in Europe and West Asia

Literary practices experienced major transformation throughout the world between the fifteenth and eighteenth centuries. In Europe, Renaissance humanism, the skepticism of the Scientific Revolution, and the rationalism of the Enlightenment all left their marks on the literary legacy. Even though the Islamic Golden Age had already passed by 1500, the Safavid dynasty provided the Islamic world with a new type of literature, one that was more influenced by religion, thereby reviving the literature of western Asia and providing a new forum for religious expression.

One of the most vibrant literary traditions, Iranian literature experienced a major transformation in the sixteenth century. In 1501 the new Safavid dynasty came to power in Iran, dominating it for the next 220 years. The Safavids, devout followers of Shiite Islam, spread Shia creed to the various corners of Iran, affecting Iranian literary traditions. Increasingly Iranian writers and poets devoted their time to religious topics, and the lives and martyrdom of the Shiite imams started to play a focal point in their narratives. Such emphasis on religious use of literature produced the *ta'ziyyah* (“consolation”) writings, the only form of Iranian drama prior to modern times that emphasized religious mourning. The Iranian poetry was dominated by the so-called harmony of images principle that required poets to use in their rhymes only images that belonged to harmonious spheres. Yet one of the greatest poets of the Safavid era, Šā'ib of Tabrīz, broke with this tradition, and his *ghazals* (a poetic form consisting of rhyming couplets and a refrain) introduced Indian artistic flourishes to

Iran. The decline of Safavid power in the late seventeenth and early eighteenth centuries caused an exodus of many literary authors to India, where they enjoyed the patronage of the Mughal rulers.

In Europe, the era of the Renaissance produced a flurry of literary works of wide variety. The introduction of the printing press, credited to Johannes Gutenberg but in use in China for centuries before, only contributed to this process, as it greatly facilitated the production and distribution of written literary works. The number of literary publications in circulation rapidly increased in Europe, starting with first printing a version of the Bible in 1455. The Gutenberg Bible, as it became known, used the Latin Vulgate text in use by the Catholic Church. However, by 1611 after a major scholarly undertaking on the orders of King James I of England, the famous King James Version was finalized and printed. At the same time, published editions of the Bible included the 1516 translation by the Dutch theologian Desiderius Erasmus of Rotterdam; Martin Luther's German translation, which was instrumental in shaping the modern German language; and John Eliot's 1663 Algonquin translation, which played an important role in spreading Christianity and written literary tradition among the Native Americans in North America. At the same time, John Calvin's *Institutes of the Christian Religion* (1536) greatly contributed to the spread of Protestant beliefs in Europe.

Yet Renaissance scholars were not limited to Bible translations. This period also saw a proliferation of pamphlets and tracts, a considerable increase in the translating and publishing of contemporary European authors, as opposed to the classical and medieval works and the appearance of works of moral and philosophical reflection. Sir Thomas More's *Utopia* (1516) dreamt of a "perfect society" where religious tolerance is the norm and women enjoy certain equality with men. Erasmus of Rotterdam had written *The Praise of Folly* (1509), a satire of the corrupt practices of the Roman Catholic Church that, contrary to its author's wishes, soon became part of the Protestant Reformation. The year 1543 saw the publication of Andreas Vesalius's *On the Fabric of the Human Body*, which completely changed understanding of human

anatomy, as well as of Nicolaus Copernicus's *On the Revolution of the Heavenly Spheres* that ushered in the era of the Scientific Revolution. In 1597 Francis Bacon's *Essays* introduced readers to a wide range of philosophical issues.

The popularity of vernacular languages in Europe also greatly increased in this period. In eastern Europe, Cretan literature experienced a revival as it merged vernacular Greek with Latin and Italian, best expressed in Vincenzo Cornaro's *Erotokritos*. In Italy, Niccolò Machiavelli's *The Prince* (1513) provided a sweeping textbook on diplomacy and political machinations, firmly cementing its author's reputation as one of the premier political theorists. Baltissare Castiglione's *The Book of the Courtier* (1528) emerged as one of the most important books of the Renaissance, as it set a new ideal of a well-rounded man skilled not only in war but also in the humanities and fine arts.

In England, the anonymously written *A Gest of Robyn Hode* (ca. 1475) gathered numerous traditions about the English bandit hero and weaved them into one story that fascinated numerous generations. Thomas Malory's *Le Morte d'Arthur* (1485) played a major role in popularizing the Arthurian legend, as it compiled French and English legends about King Arthur and his supporting characters, including Lancelot (and his romance with Guinevere), the Knights of the Round Table, and the quest for the Holy Grail. The works of William Shakespeare became quite well known in the poet's lifetime and in later centuries had a profound effect on Western literature. But Shakespeare's work has been shaped by many other artists. Among his close friends we find the satirist Ben Jonson; the poet Edmund Spenser, famous for his *Faerie Queene*; the dramatist Christopher Marlowe, whose *Tragical History of Dr. Faustus* (1603) was the first dramatic adaptation of the Faust legend; and Thomas North, whose translation of Plutarch's *Parallel Lives* includes many motives and themes that influenced Shakespeare's work. They were followed by Jonathan Swift, the author of one of the greatest English-language satires, *Gulliver's Travels*, and Daniel Defoe, whose *Robinson Crusoe*, a tale of a shipwreck on a deserted island, interests readers to the present day, while Moll Flanders vividly portrayed the dark underbelly of English

society. John Milton's epic poem *Paradise Lost* (1667) inadvertently cast Satan as the passionate protagonist in a struggle against a tyrannical god. In Spain, Miguel Cervantes composed one of the great literary pieces of all time, *Don Quixote*, whose influence on the Spanish language and literature is hard to measure. In France, Molière, Jean Racine, and Pierre Corneille laid the foundations for Western traditions of comedy and tragedy, bringing unmatched mastery to the stage. Francois Rabelais wrote a phantasmagorical series of novels, *The Life of Gargantua and of Pantagruel*, that entertained readers with their extravagant but crude humor and satire.

—Alexander Mikaberidze

Bibliography

Benoit-Dusauroy, Annick, and Guy Fontaine. *History of European Literature*. New York: Routledge, 2000.

Bolton, W. F., and Christopher Ricks. *Penguin History of Literature*, Vols. 1–3. London: Penguin, 1993.

The Arts in Early Modern India

India's art is famously neither religious nor sacred. Indians do not neatly divide the universe into mutually exclusive sacred and secular realms. Hindu temples often include nonsacred images. These remind worshippers that life's secular purposes of duty, action, and experience are equal to the religious purpose of salvation.

Yet much Indian art has been produced in the context of religious use. In a Hindu temple, for instance, the same image that might be open to the gaze in an art museum is hidden underneath a mound of garlands, jewelry, outfits, silver and gold foil, ghee, and red paste. Some images lead elaborately choreographed lives. The deity awakens in the morning, bathes, dresses, breakfasts, receives guests, enjoys entertainments, and is put to bed at night. All day the temple bustles with the comings and goings of worshippers. Worshippers hold or touch images during some points in ritual. Worshippers do not just look at an image; the image looks back.

Artists often emphasize eyes, such as the almond-eyed beauties of Mughal and Rajput miniature painting or a deity's huge saucer-shaped eyes. The finishing touch on an image destined

for sacred use is that its eyes are "opened" to waken the deity.

Symbols of royalty include the lion, elephant, horse, bull, and fly whisk. Hindu iconography features creatures that are part human and part animal. Fertility and good luck symbols include the woman and tree motif, an embracing man and woman, and mango trees. Hand gestures convey meanings. The uplifted hand, palm facing forward and fingers slightly bent toward the viewer, is the symbol of benediction. Westerners will also recognize the prayer gesture, which originated here.

Buddhists regard the Bodhi tree as a symbol of enlightenment and the wheel as a representation of the law. Jain iconography features holy men. Many Jain symbols resemble those of Hindu figures: the same folk images inspired both. Elongated arms and legs symbolize Jain figures' supernatural nature. Holy men stand or sit in a lotus position. They never lie prone. Saucy female figures and fertility symbols enliven Jain art. And unlike Hindu art, Jain art possesses no violent images, no bloodthirsty demons.

Indo-Islamic traditions elaborate geometric, floral, and calligraphic motifs. Sculptors did not model the human form. Perhaps the most celebrated achievement of Indo-Islamic art was the development of wonderfully detailed miniature painting.

Mughal emperor Humayun recruited Persian artists for a workshop at his court. Humayun's successor, Emperor Akbar, collected European, Chinese, and Southeast Asian art. He encouraged his artists to develop a highly realistic style of miniature painting. Its subject matter was vast: historical events, city scenes, rural landscapes, portraits, animals, incidents from the lives of saints, and even replicas of European works.

Rajasthan and the Punjab Hills also emerged as important centers of miniature painting. The Rajasthani courts at Mewar, Kishangarh, and Kota developed distinctive styles. Kota's Sheikh Taju, the late-eighteenth-century master of animal portraits, used an almost modern style of swift, fluid brush strokes such as in his famed painting *Tiger Hunt*.

European art influences were most intense in the colonies. In Goa, Indian artists reinterpreted madonnas and saints, softening Baroque

sculpture to suit local taste. British-dominated areas produced a hybrid style termed “Company Art.” Subjects include British depictions of Indian painters at work and Indian paintings of British artists at work! Patrons included Mary, Lady Impey, wife of the first chief justice of Calcutta’s Supreme Court. She commissioned many realistic nature studies by painter Shaikh Zayn al-Din. The Nawab of Arcot, for his part, had Francis Swain Ward (1734–1794) paint portraits for his collection.

—Carol E. Henderson

Bibliography

- Craven, Roy C. *Indian Art: A Concise History*. New York: Thames and Hudson, 1997.
- Dehejia, Vidya. *Indian Art*. London: Phaidon, 1997.
- Kramrisch, Stella. *The Art of India: Indian Sculpture, Painting, and Architecture*. 3rd ed. London: Phaidon, 1965.
- Kramrisch, Stella. *The Art of India through the Ages*. London: Phaidon, 1954.
- Pal, Pratapaditya. *Peaceful Liberators: Jain Art from India*. New York: Thames and Hudson, 1994.
- Williams, Joanna G. *The Art of Gupta India: Empire and Province*. Princeton, NJ: Princeton University Press, 1982.

In a Persian Garden

Beginning with Islam’s origins in Arabia, Muslims have more often than not inhabited harsh environments. Therefore, a garden with trees, flowers, and running water came to represent for them, paradoxically, both a necessity and a luxury. Fresh water has been, of course, a necessity of life over which countless wars have been fought. City dwellers in such places as Delhi, Agra, and Isfahan needed ponds or gardens with water to cool the air. For nomadic peoples who dwelt in deserts and semiarid regions especially, water cooled the air and sustained life. Moreover, because Muslims are obliged to purify themselves through ritual bathing before prayer, water has been indispensable for the rituals of religious practice. Indeed, the cool, shaded, water-rich garden figured in Islamic thought as a metaphor for Paradise. Thus, formal gardens, with their large open spaces suitable to accommodate public gatherings, ceremonies, and festivities, became one of the most characteristic aspects of the Islamic-built environment

wherever Muslim rulers held sway. Practiced as an art throughout the Islamic world, garden design was especially highly developed in Persia and the Indian subcontinent.

The Muslim garden attained a place of privilege as an artistic expression under Babur, the founder of the Mughal dynasty in India (r. 1526–1530). Babur had been born in Central Asia, where gardens were highly developed, and his conquests carried this aesthetic to the subcontinent. Following his capture of Delhi in 1526, Babur commissioned the construction of the *chahar-bagh* design at sites throughout northern India. The *chahar-bagh* style (literally “four gardens,” meaning a garden divided into quadrants) imported into the Indian landscape gardens divided into four symmetrical parts by canals or walkways.

Humayun (r. 1530–1540 and 1555–1556), a son of Babur, was not able to sustain his father’s empire and in 1544 fled to the court of Shah Tahmasp (r. 1524–1576) of Iran. During his exile, Humayun had an opportunity to study the rich complex of Persian art and architecture, with its Il-Khanid, Timurid, and early Safavid influences. It was no coincidence that following his return to India in 1555, Mughal art displayed pronounced Iranian, or Persian, influences.



Humayun’s Tomb in Delhi, India, was one of the earliest Persian-inspired gardens and buildings constructed by the Mughals in India, and it influenced later gardens and buildings in the region. The Persian influence was due to Emperor Humayun’s interest in Persian culture and his Persian wife, who supervised the construction of the garden and tomb; she also employed a Persian architect. (Lian Chang)

► PERSIAN ARTISTIC INFLUENCES ON EARLY MUGHAL ART

When Humayun was driven from India by Sher Shah, an Afghan chieftain, he found refuge in Tabriz, at the Safavid court of Shah Tahmasp, where some of the finest Islamic artists of the day were working. Tahmasp's court studio, or atelier, produced a number of sumptuously illustrated manuscripts such as the *Shahnama* (*The Book of Kings*), an Iranian epic.

Although the Safavids were a Turcoman tribe, their princes took art lessons, following the example of Iran's earlier Persianized dynasties, such as the Timurids. Tahmasp, a connoisseur and patron of miniature painting, actually practiced the art under Bihzad in Herat and Sultan Muhammad in Tabriz, both renowned painter-artists of their time.

Humayun, who had learned to appreciate Persian art during his stay with Shah Tahmasp, brought back to India two of Iran's leading artists, Abd al-Samad (ca. 1514–1599) and Mir Sayyid Ali (dates unknown). Their influence on Mughal art was profound. Under Emperor Akbar, they directed the imperial atelier, where artists produced numerous manuscripts, all noted for their rich Persian-inspired decoration.

—Kumi S. Martin

The most renowned examples of these influences on Mughal garden architecture are the Tomb of Humayun in Delhi and the Taj Mahal in Agra. Both feature a mausoleum as the central building, surrounded by Persian-style gardens. Their scale is massive, an element inherited from Timurid models.

The Tomb of Humayun, built between 1562 and 1572 of red sandstone and white marble by his son Akbar (r. 1556–1605), became a model for Mughal garden-tomb architecture. The complex featured a spectacular chahar-bagh encompassing a dome-mounted square chamber. Although dedicated to Humayun, the mausoleum served as a family tomb, a use that also became a characteristic feature of Mughal garden-funerary architecture.

Similarly, the Taj Mahal, built between 1632 and 1647 by Shah Jahan (r. 1628–1658), was located at the northern end of a chahar-bagh,

which measured approximately 333 yards by 600 yards (308 meters by 554 meters). The Taj Mahal is a monument that commemorates both deep faith and romantic love. Dedicated to Shah Jahan's favorite wife, Mumtaz Mahal, who died in 1631, the site incorporated gleaming white marble and centered the viewer's gaze on a graceful mausoleum that rests on a 22-foot-high (6.7-meter) platform.

The two mausoleums were decorated with both traditional inscriptions from the Quran and elegant Chinese-inspired floral motifs, a form that had developed in Persia, especially during the Timurid era.

—Kumi S. Martin

Bibliography

- Blair, Sheila, and Jonathan Bloom. *The Art and Architecture of Islam, 1250–1800*. New Haven, CT: Yale University Press, 1994.
- Hattstein, Markus, and Peter Delius. *Islam: Art and Architecture*. Cologne: Konemann, 2000.
- Michell, George, ed. *Architecture of the Islamic World: Its History and Social Meaning*. London: Thames and Hudson, 1978.
- Roger, J. Michael. *Mughal Miniatures*. London: British Museum, 1993.

The Three Perfections (Sanjue)

One of the most distinctive art forms of medieval China is known as the Three Perfections, or *sanjue*. This art involves a distinct integration of art that combines text and image. At the start of the eleventh century at the height of the Song dynasty (960–1279 CE), it became fashionable among a group of leading Chinese scholars, poets, and artists to seek equal perfection in three areas of their work: poetry, painting, and calligraphy. These skills combined the work of writing brilliant poetry, painting a beautiful scene, and inscribing the poem using excellent Chinese characters. The Chinese literary elite by the start of the Ming dynasty (1368–1644) combined these three skills—painting, poetry, and calligraphy—into a unique art form known as the Three Perfections. They evolved a distinctive aesthetic standard of art involving painting that incorporated poetic inscriptions executed on the work itself using calligraphic styles that were designed to correspond to the aesthetic and intellectual

contents of the painting itself. This highly skilled combination of the three arts over time had a deeply profound influence not only on later Chinese painting but on poetry as well.

Chinese painting traditionally incorporates calligraphy directly on the picture itself. Oftentimes when artists have finished with their painting, they will add an inscription of some sort. The simplest form of this art is when the artists inscribe their names followed by their seal or seals. They may add a date, some reference about the person for whom the picture was painted, or even a note on the occasion or style in which they have chosen to paint. A more complex form of this art occurs when the artist includes a poem or some brief prose that can explore virtually any topic from literature or poetry to metaphysics or philosophy. The ideal of artistic achievement in China is to reach near perfection in all three of the creative processes of poetry, painting, and calligraphy.

The exact origins of the Three Perfections concept is lost in time, but there is a famous story in which the eighth-century Chinese poet, painter, and calligrapher Zheng Qian (d. 764) presented the emperor with an example of his work. The emperor was so impressed with the work that he inscribed the words “*Zheng Qian sanjue*” (*Zheng Qian’s Three Perfections*). The result was that these three art forms—painting, poetry, and calligraphy—became connected and were very highly valued in the visual arts.

One of the most honored avocations of cultivated gentlemen during the Song, Yuan, and Ming periods was painting. During these years the life of a scholar-gentleman, living in the quiet retreat in the garden of his grandiose mansion, could become a poet, painter, and calligrapher or, failing that, a great patron of the arts who collected the works of others. The work of many of these gentlemen was highly prized and respected, and many of the Ming emperors patronized artists. Indeed, the Xuande Emperor, who ruled from 1426 to 1435, was a talented artist in his own right, especially famous for his painting of a variety of animals.

Today scholars have a list of over 1,000 cultivated scholars who became remarkable artists. The amateur ideal of these scholar-gentlemen-artists found expression in the work of Dong

Qichang (Tung Ch’i-ch’ang, 1555–1636), one of the great Chinese painters, scholars, calligraphers, and art theorists of the Ming dynasty. Dong wrote that painting together with poetry and calligraphy was in fact the highest expression of the human spirit. He is famous for his advocacy of approaching painting as though it were calligraphy. Dong epitomized the Three Perfections concept and influenced Chinese art in later periods by rejecting realism in painting and instead advocating a subjective style based on the work of fourteenth-century masters. Dong believed that painting should avoid purely imitative representation and be approached like calligraphy.

Throughout Chinese history scholars have discussed the aesthetics of calligraphy and painting, often noting that the processes of painting and calligraphy are inseparably linked together. The poem reflects the scenery in the picture, the picture forms a backdrop for the poem, and the calligraphy adds to the beauty of the art. It was said that painting could also be called silent poetry (*wusheng shi*), as a painter supposedly wrote out his feelings in silent words. Thus, the appreciation of painting reached its highest fulfillment in the Three Perfections.

—Daniel A. Métraux

Bibliography

- Edwards, R. *The Art of Wen Cheng-ming*. Ann Arbor: University of Michigan Press, 1976.
- Sullivan, Michael. *The Three Perfections: Chinese Painting, Poetry, and Calligraphy*. London: Thames and Hudson, 1974.
- Wai-lim Yip. *Chinese Poetry*. Durham, NC: Duke University Press, 1997.

Haikai and Kabuki

Japanese culture of the fifteenth and sixteenth centuries was dominated by samurai and powerful local warlords preoccupied with territorial defense, castle building, and pastimes extending from the tea ceremony to verse linking. In the wake of the Battle of Sekigahara of 1600, the Tokugawa clan established itself as the authority of the land and brought a sense of political and economic stability that would last for the next two and a half centuries. This period of great peace allowed the three principal cities of

➤ HAIKU—THE POWER OF SUGGESTION

shizukasa ya
iwa ni shimiiru
semi no koe

stillness—
sinking deep into the rocks
cries of the cicada

The prose introduction to this poem tells us that the author, Matsuo Basho (1644–1694), a pioneer of haikai composition, was visiting a temple in Yamagata named Ryushakuji, known for its tranquility. Everything about the temple reminded him of its age: its remote location, the surrounding boulders overgrown with moss, and the trees. When he reached the temple after a steep climb, he found that the buildings were all closed. This location provides the backdrop for Basho's verse, which develops the sense of silence that enveloped the traveler's destination. Note the characteristic juxtaposition of silence and sound in the poem: the silence referred to in the first line is enhanced by the sound of the cicadas mentioned in the third. A second characteristic is the combination of the momentary and the eternal (*fueki ryuko*). The on-again, off-again trill of the cicadas suggests a kind of sonic cascade that highlights the seemingly unchanging quality of silence for which the temple was so well known. Deliberately ambiguous, Basho suggests the scene using specific details, leaving the reader to appreciate the overtones created by imagining both the sights and sounds.

—Charles Exley

Source

Translation from Haruo Shirane, *Traces of Dreams: Landscape, Cultural Memory, and the Poetry of Bashō* (Stanford, CA: Stanford University Press, 1998), 228.

Kyoto, Osaka, and Edo to flourish, and by 1750 Edo (present-day Tokyo), which had witnessed a dramatic population increase, became the cultural capital of the country. The rapid rise in urban population and the developing merchant-centered economy helped to support a number of popular pastimes, such as *haikai* and *kabuki*.

The composition of poetry had always been a highly social yet primarily elite activity. Like its close relative, linked verse, haikai composition was primarily an exercise in linking. The first verse, called the *hokku*, set out in the first 17 syllables the time, place, and poetic atmosphere for subsequent verses to develop. The responsibility for this important first verse was usually given to the most senior poet present, who would be most apt to start the session on an appropriate note. But poets were more likely to reveal their wit, cleverness, or sensitivity in the link verses that followed, as they surprised by recasting an ambiguous image or amused by playing with words.

Modern readers may naturally associate haikai with the concise and witty independent verses known as haiku, but this more familiar term and form of versification was coined and created by Masaoka Shiki (1867–1902) in the Meiji (1868–1912) period in reaction to what he considered to be the unnecessarily social aspects of haikai and in order to promote the notion of sketching derived from Western-style painting. Haiku in its modern form has become popular around the world today for its economy of language, its appreciation of the natural world, and its juxtaposition of unusual images.

The “hai” of haikai denotes vulgar, coarse, or humorous material and refers to the use of words in poems that fall outside the strictly maintained codes of composition used in the more serious poetry (*waka*) or linked verse (*renga*) traditions. Humorous poems had been preserved in poetry collections as early as the tenth century, and although collections from the beginning of the sixteenth century were devoted exclusively to such humorous fare, the literati considered the composition of haikai to be more of a pastime, a whimsical break from more serious poetic pursuits.

It was in the Tokugawa period that haikai was transformed from a vulgar art into a serious art form on par with *renga*. Early pioneers exploited its potential for word play, and a new range of hitherto disallowed associations, but it was Matsuo Basho (1644–1694) who brought haikai to a new level of artistic maturity. His travelogues, like *The Narrow Road to Oku* (1689),

combined prose introductions with poems using traditional linking principles from the world of linked verse.

Like haikai verse, the kabuki theater has popular roots. Kabuki was one of the art forms of the urban residents of the big-three cities. Despite its humble origins in the early seventeenth century, kabuki theater rose rapidly to become a staple of urban life in Tokugawa Japan.

The word “kabuki” derives from words used to describe unusual, sometimes bizarre, or even cutting-edge artistic activity. Kabuki’s origins date to 1603, when a former shrine maiden named Okuni began performing with other female actors in a dry riverbed in Kyoto. The wildly popular spectacles were often salacious both in content and in manner of performance, and the women performing were often also prostitutes. Dismayed by the public disturbances that these performances created, government authorities banned women’s kabuki in 1623, only to find that the young men who replaced them were just as popular and capable of causing similar disturbances. Young men were then banned from the stage in 1652, to be replaced exclusively by mature men. The tradition of male actors performing as women (known as *onnagata*) is one of the legacies of banning women from the stage.

Government officials were never comfortable with the moral danger posed by the theater, but in spite of the watchful governmental eye, kabuki was flourishing as an art form by the Genroku period (1688–1704). In the print culture of the day, actors rivaled geisha as the most popular subject for colorful woodblock print illustrations that were widely distributed.

The kabuki repertory today continues to draw on famous legends, episodes of cunning bravery from classical literature, stories of lovers cursed by being from different classes, and other vignettes of both the high class and the commoner, grounded in the urban life of the Tokugawa period. Spectators still marvel at the bustling activity on stage and the eye-catching costumes and makeup, and they still roar with applause when actors strike a familiar pose and pause, deliberately, for dramatic effect.

—Charles Exley



Japanese poet Matsuo Basho. (Snark/Art Resource, NY)

Bibliography

- Ernst, Earle. *The Kabuki Theatre*. Honolulu: University of Hawai'i Press, 1974.
- Makoto Ueda. *Bashō and His Interpreters: Selected Hokku with Commentary*. Stanford, CA: Stanford University Press, 1991.
- Yuasa, Nobuyuki, trans. *The Narrow Road to the Deep North and Other Travel Sketches*. Middlesex, UK: Penguin, 1966.

Mughal Aesthetics

Over the long period of Mughal rule (ca. 1526–1857), Mughal architecture and art revealed an evolving artistic aesthetic. The term “aesthetic” refers to a prevailing philosophy of “the beautiful” that underpins taste and determines the style and range of artistic productions. While the Mughal aesthetic evolved over time, the purpose and function of this art and architecture remained relatively constant. The common will to commission and create monuments with distinct purposes—whether to promote religious ritual or to represent the government, embodying its power, dignity, and splendor—is recognizable in the art. Nevertheless, Mughal architecture changed and evolved; indeed, it was constantly renewing shapes and decorative details, enriched by the combining of elements inherited from different traditions, particularly as the Mughal's Persian heritage blended with Indian culture and tastes over the centuries. The resulting blend of once-distinct cultures and forms is an example of syncretism.



Emperor Akbar's Mughal pavilion known as Diwan-i-Khas at Fatehpur Sikri, India. (Dennis Richardson)

In Mughal artistic production there is a clear preliminary line of demarcation of style, approximately identifiable with the midpoint of the sixteenth century. The previous need felt by the sovereigns to extend and fortify the new kingdom did not allow them to dedicate and concentrate efforts in the definition of an aesthetic taste. Current research suggests a general division, usually unanimously recognized and accepted, of two main phases of Mughal architectural and artistic production, each marked by a different general aesthetic. The first period is identified with Akbar (1556–1605), the third ruler of the Mughal empire and an influential patron of cultural and artistic development. Akbar founded a royal atelier and became the first great patron of the empire. Akbar's patronage culminated in the construction of the city of Fatehpur Sikri (1571–1585). This new fortified residence for the court embodied all the features that characterized this period, constituting a perfect example of Akbar's taste. The predominance of red sandstone and the shapes' affinity with wood from a construction point of view aided its deep integration with indigenous elements that came from Hindu and Jain architecture and from the dominant influence of the Indian region of Gujarat. This structure offered a new syncretism (or fusion of distinct styles) evident in the truss supported by pillars, heavy brackets, capitals, and the symmetrical frameworks that enriched the Timurid tradition inherited from Central Asia and accompanied the structural rhythm. The building combined rationality with vigor, solidity, and power, balancing and harmonizing its masses. In painting, Akbar created a studio in his court and promoted the Persian miniature painting that utilized Indian, Hindu, and even European elements.

The second phase in Mughal aesthetics, begun during the rule of Jahangir (1605–1627), became pronounced with the accession to the throne of Shah Jahan (1628–1657). The new architecture showed a preference for white marble over red sandstone, which required a change in construction techniques and even of the decorative patterns. The decoration schemes became lighter and more delicate, but at the same time these were embellished with the introduction of semiprecious stones in exquisite inlaid work;

the new style perfectly expressed a new hierarchical conception in which specific decorative motifs were used to emphasize salient structural elements, creating a return to an equilibrium and an elegance closer to the Western conception. Styles of painting also became refined: realistic portraits of courtly scenes were the favorite subjects of painters, who emerged now as individual talented personalities. Even the reversion to Islamic religious orthodoxy helped consolidate the new artistic purposes. This transition culminated undoubtedly in the Taj Mahal (1632–1647), whose elegance and refinement is the highest result of Shah Jahan's strenuous insistence on artistic and architectural perfection. The Taj Mahal represents the perfect incarnation of the imperial splendor and magnificence of the Islamic court.

From the beginning of their empire, the Mughals' art was strongly characterized by very complicated cultural and artistic backgrounds. Many elements contributed to the formation of these aesthetic canons and, in time, evolved with the manifestation of the power. A primary role in the formation of the new taste for beauty was certainly held by the whole artistic production of the many previous Islamic dynasties that reigned mainly in northern India. They perhaps provided the first models, but these antecedents could not entirely define the new style that had deeply drawn from the Islamic world, from India's background, and from Islamic regional styles.

These early factors were soon transformed by the personal tastes of the many emperors who succeeded to the Mughal throne. Their interest in construction and patronage, often associated with their charismatic personalities and active supervision of artistic production, was able to impress their own personalities on each monument. The typology of the buildings, the plan, and the choice of materials, decorative elements, and schemes were all aspects that contributed to the formation of aesthetic canons.

Nevertheless, a crucial factor enabling the Mughals to reach such a high level in artistic and architectural production was the dependence on local workers and craftsmen. Unconsciously but inevitably, in the realization even of new shapes and in construction techniques, they constantly transmitted and transposed to the

SHAH JAHAN AND THE TAJ MAHAL

Commissioned by the Mughal emperor Shah Jahan (r. 1628–1657) to commemorate his favorite wife, Arjumand Banu Begum (also known as Mumtaz Mahal), construction of the Taj Mahal began at Agra in 1632 and was completed, according to historical records, in 1647. The mausoleum, perhaps the most beautiful and famous monument in the world, perfectly epitomizes Mughal aesthetics and represents the syncretism of the Mughals.

The mausoleum is the heart of an extensive architectural complex along the Yamun River. Carefully planned, the Taj Mahal overlooks an enormous *chaharbagh*, or garden complex, and includes many different structures: a residential court for the tomb attendants, a bazaar, subsidiary tombs, and a mosque. The mausoleum was built in white marble, carved and decorated with refined inlaid stones that depict images of flowers. The structure perfectly assimilated Islamic and Persian motifs as well as Hindu elements as part of its larger synthesis.

Although art historians for many years studied the Taj Mahal as a poignant and romantic symbol of eternal love, it reveals an unexpectedly complex cosmological conception. According to a more recent interpretation, the general plan, the garden, the decorative scheme, and the accurate choice of the inscriptions—Quranic verses relating to the Day of Judgment—all clearly refer to the Garden of Eden. In this interpretation, the Taj Mahal may represent the Throne of God and implies Shah Jahan's celebration of himself as a semidivine ruler.

—Sara Mondini

Mughal monuments the traditional aesthetic canons unique to indigenous Hindu or Jain architecture. Thus, this syncretism, the confluence of all these elements, was the basis for the remarkable aesthetic results reached in this period perfectly expressed in the most famous of Mughal monuments, the Taj Mahal.

—Sara Mondini

Bibliography

- Alfieri, B. M. *Islamic Architecture of the Indian Subcontinent*. London: Laurence King, 2000.
- Asher, C. B. *Architecture of Mughal India*. New York: Cambridge University Press, 1992.

Fergusson, J. *History of Indian and Eastern Architecture*. 2 Vols. Revised and edited with additions. *Indian Architecture* by Burgess J. and *Eastern Architecture* by R. Phené S., F.S.A., F.R.I.B.A. New Delhi: Munshiram Manoharlal Publisher, 1998.

Koch, Ebba. *Mughal Architecture*. New Delhi: Oxford University Press, 2002.

Koch, Ebba. *Mughal Art and Imperial Ideology: Collected Essays*. New Delhi: Oxford University Press, 2001.

Nath, R. *Some Aspects of Mughal Architecture*. New Delhi: Abhinav Publications, 1976.

Ottoman Religious Architecture

During the long history of the Ottoman empire, architecture proved to be one of the most dynamic and major fields of Ottoman cultural activity. It developed in a unique environment whereby the Byzantine and eastern European traditions merged with Seljuk, Iranian, and central Asian building techniques and customs to produce a distinctly Ottoman character. The architectural legacy of the Ottoman empire is remarkably multifaceted and includes military buildings (fortresses, barracks, arsenals), religious buildings (mosques, minarets), schools (madrasas, primary schools [mektebs]), commercial buildings (caravansaries, bazaars [bedestens], arastas [street of shops whose income was devoted to a charitable endowment]), bathhouses (hammams), public fountains (sebils), bridges, and graves. The Ottomans' architectural policy was set and controlled by a chief architect who was charged with controlling major projects throughout the empire. This centralized system of construction meant that the Ottoman architectural style was relatively uniform across the vast imperial territory that stretched from Tunis and Libya to Hungary and Iraq. An important and unique element of the Ottoman architecture is the fact that many buildings—fountains, hospitals, schools, caravansaries—were designed and built to provide free service to the people. These vast and prolific architectural pursuits were funded by revenue assignments (*dirlik*, *temlik*) and tax farms (*mukata'a*, *malikane*) as well as donations from the sultan, his relatives, and prominent officials. Viziers and provincial governors often patronized various

architects and channeled a considerable share of their revenues into architectural projects, which in turn were supervised by chief architects.

Religious architecture represented the most vibrant and flexible element in Ottoman architecture. This is partly due to the very nature of Islam, which lacks sacraments and formal ceremonies and therefore limited ritual requirements for a structure. In addition, the early Ottomans lacked an architectural tradition and were open to adopting the traditions of more sophisticated cultures. The most ubiquitous example of the Ottoman religious architecture is a domed mosque, surrounded by one or more minarets and other buildings and forming a complex (*kulliye*) that incorporated religious, educational, and other facilities. The early mosques were usually medium-sized single-domed structures that often included hospices, styles that were largely influenced by the Byzantines. As the imperial power grew, the mosques experienced a dramatic transformation, and their size and design increased and became more sophisticated. The Ottomans gradually mastered the technique of building vast inner spaces with seemingly weightless yet expansive domes. In later years, the mosque interior was covered with intricately designed Iznik ceramic tiles; due to Islamic prohibition on figural decoration, Ottoman artists focused on abstract (floral, geometric, epigraphic) ornaments by experimenting with numerous textures and motifs. Among the early religious structures, the most notable are the mosque of Orhan Bey (erected in the early fourteenth century in Bursa) and the Ulu Cami (the Great Mosque, built by Sultan Bayezid I in 1396–1399 in Bursa), which eventually included a large commercial complex. The Uch Sherefeli Mosque, built by Sultan Murad II in 1438–1447 in Edirne, is an important benchmark in the development of Ottoman architecture. It is a structure with a 72-foot (22-meter)-diameter dome on a hexagonal based flanked on either side by smaller domes and unusual three-balconied minarets.

Following the conquest of Constantinople in 1453, a new period of development began in Ottoman architecture. Ottoman architects were inspired by the Hagia Sophia, the famous sixth-century Byzantine church, and sought to match (and exceed) its beauty and scale. Immediately

after the conquest, Sultan Mehmed II the Fatih (Conqueror) embarked on reviving and reconstructing the former Byzantine capital, often-times using the Byzantine buildings as the basis for new structures. Under Mehmed's watchful planning and guidance, the Ottomans completed several grand projects. One of them was the Fatih Mosque, built on the site of the Byzantine Church of the Holy Apostles and incorporating a vast complex of eight colleges as well as a library, hospital, hospice, caravanserai, market, bath, and primary school and a public kitchen for the poor. The Fatih Mosque, with its combination of a dome with a number of semidomes, set a model for many subsequent mosques. The Ottomans also built the famous Seven Towers (Yedikule) fort, the Eyup complex of bazaars, the Imperial Cannon Foundry (Tophane), and the renowned Topkapi Palace that features three consecutive inner courtyards and dozens of administrative and court structures.

The classical age of Ottoman architecture was during its height of leadership in the sixteenth century under sultans Selim I and Suleyman the Magnificent. Yet Koca Mimar Sinan Ağ (1489–1588), known as Sinan, reigned supreme. As the chief Ottoman architect for nearly 50 years (1539–1588), he supervised the construction of every major building in the empire and is credited with at least 334 structures erected during his lifetime. Sinan built some of the finest examples of Ottoman architecture, including the Suleymaniye Mosque and Atik Valide Sultan mosque in Istanbul and the Selimiye Mosque in Edirne. For Sinan, the Suleymaniye Mosque was an architectural counterpoint to the Hagia Sophia. The mosque is preceded by a vast courtyard with a colonnaded peristyle and four tall minarets, while its main structure consists of a vast 173-foot-high and 85-foot-wide (53-meter-high and 26-meter-wide) dome and a series of semidomes billowing out from the main dome. The remarkable height and breadth of these domes, which are dotted with small windows, made the inside of the mosque seem spacious and light as opposed to the dim chambers of the Hagia Sophia. The Selimiye Mosque is sometimes described as the climax of Ottoman architecture, as it features the largest Ottoman central domes (105 feet or 32 meters wide) and



Yeni Camii (New Mosque) in Istanbul. The mosque was started in 1597 by Safiye, mother of Sultan Mehmed III but was not completed until 1663, after Turhan Hatice, mother of Sultan Mehmed IV, had taken up the project. (Anna Kankia)

the tallest minarets (232 feet or 70.7 meters). Besides mosques, Sinan also built a series of aqueducts, which brought much-needed fresh water to the growing city of Istanbul, and numerous bridges throughout the empire, the most famous being the Buyukchekmece bridge near Istanbul, the Sokollu Mehmed Pasha bridge in Visegrad (Bosnia), and the Uzunkopru bridge over the Ergene River.

Sinan died at a very advanced age, and Davud Agha, with whom Sinan collaborated on many projects, was appointed successor to the dead master. While completing Sinan's unfinished projects, Agha also embarked on new ones, including two kiosks in the palace gardens for Sultan Murad III and the famous mosque for Safiye Sultan, mother of Mehmed III. Around 1650, Sultan Ahmed changed the former tradition of appointing the chief architects for life. He dismissed his chief architect and appointed men who excelled not only in arts but also in bureaucratic and military service. The seventeenth century saw the completion of several grand projects, including the renowned Sultan Ahmed Mosque, also known as the Blue Mosque, that incorporates Byzantine elements with traditional Islamic architecture and is considered to be the last great mosque of the classical age. It features a vast complex of a school of law and divinity, a public kitchen, shops, and hospices and is the first mosque to have a royal apartment. The Blue

Mosque served as a model for another major mosque constructed by Turhan Valide Sultan in the late seventeenth century. In the late seventeenth and early eighteenth centuries, Ottoman architecture entered the so-called Tulip period when it was greatly influenced by rococo and Baroque styles from Europe. The Nuryosmaniye Mosque, built in 1749–1755, became the first mosque constructed in the Baroque style, and its complex includes a school, library, kitchen, and public fountains enclosed in an irregular walled-in courtyard.

The Ottoman funerary tradition represents a unique element of Ottoman religious architecture. Mosque complexes often featured the tombs of sultans and their relatives in addition to cemeteries. The simplest and most prevalent form of Ottoman burial was a grave with two vertical stones marking the head and the foot. Men's headstones often incorporated their headgear, which indicated their rank or affiliation, while women's graves usually featured floral motifs. In some cases, modest tombs—often octagonal with a dome—were built for prominent individuals, such as the tomb of Hurrem Sultan (Roxelana), the wife of Suleyman the Magnificent. Another important feature of the Ottoman religious architecture is the presence of bathhouses and public fountains. To maintain personal hygiene for ritual prayers is a religious requirement in Islam, and thus access to bathhouses and fountains was of paramount importance. Therefore, mosque complexes usually incorporated one or more public fountains to allow the faithful to prepare for prayers, while the famed Ottoman bathhouses featured tepidariums, steam sections, and pools.

—Alexander Mikaberidze

Bibliography

- Blair, Sheila, and Jonathan Bloom. *The Art and Architecture of Islam, 1250–1800*. New Haven, CT: Yale University Press, 1995.
- Goodwin, Godfrey. *A History of Ottoman Architecture*. London: Thames and Hudson, 1971.
- Kuran, Aptullah. *Sinan: The Grand Old Master of Ottoman Architecture*. Washington, DC: Institute of Turkish Studies, 1987.
- Necipoglu, Culru. *The Age of Sinan: Architectural Culture in the Ottoman Empire*. Princeton, NJ: Princeton University Press, 2005.

European Architecture—Palace and Cathedral

While the roots of the Italian Renaissance may lie within the fourteenth century and earlier, it did not fully impact architecture until the late fifteenth and early sixteenth centuries. Reflecting the rebirth of ancient classical taste, architects favored the structural features of the Roman column, with its balance of vertical and horizontal forces. Thus, Filippo Brunelleschi (1377–1446), guided by his intense study of ancient Roman buildings, designed two churches in Florence—San Lorenzo and Santo Spirito—with the early basilica form and classical columns. Moreover, he designed Florence's Santa Maria del Fiore Cathedral dome (the familiar church dome of the city's skyline), innovatively utilizing an octagonal shape for its base. Brunelleschi also holds the distinction as the first architect to delineate the mathematical rules of perspective. Equally inspired by the ancient Roman style was his colleague Leon Battista Alberti (1404–1472), whose use of flat roofs, overhanging cornices, and stress on horizontal lines is representative of Renaissance architecture in Italy. With his San Andrea Church in Mantua, Alberti "Latinized" his architectural vocabulary by harkening back to the ancient brick architecture of late Roman times.

Following this humanist revival, there arose a sixteenth-century period of tremendous artistic experimentation known as Mannerism, aiming for the creation of optical pleasure and intensity through exaggeration and eclecticism. Mannerist architecture enforced movement through rhythmic lines within limited spatial confines, thereby generating greater visual complexity than the classical norm. The career of Andrea Palladio (1508–1580) furnishes a case study of the ways in which Mannerism gradually altered Renaissance ideals. During his lengthy career, Palladio earned many commissions for palaces and churches. Typifying Palladio's early work is the Palazzo Chiericati (1550), its facade employs Doric columns on the bottom stage of the building and Ionic columns above, and on the roof cornice statues appear above each column. More progressive is his Villa Barbaro, built near Treviso in 1557, on which Palladio collaborated with painter Paolo Veronese (1528–1588)

on the Mannerist interior decor encompassing many *trompe l'oeil* (fool-the-eye) effects. These included spaces where human figures were painted life-size to give the illusion of reality. Palladio amplified Mannerist techniques in his Church of San Maggiore (1565) in Venice, just across the canal from St. Mark's Square, as the sanctuary breaks up classical lines in the ceiling cornices and elsewhere. Palladio's artistic pendulum swung fully in the direction of Mannerism with his Palazzo Thiene (1572), on which he collaborated with Bartolomeo Ridolfi (1510–1574) to craft fantastic fireplaces in a grotesque style; the most famous depicts the one-eyed Colossus from Homer's *Odyssey*.

Around the turn of the seventeenth century, Mannerism gave rise to Baroque architecture, which combined the earlier experimentation with curved surfaces, sculpture, richly decorated walls and ceilings, and expansion of horizons. This final characteristic led to the renovation of old buildings and the erection of new buildings in many parts of Europe. Exemplifying renovations was Louis XIV's (1638–1715) Versailles expansion project, which manipulated line and color to create dramatic movement and tension. Desiring to evoke infinity, the Hall of Mirrors, designed by architect Jules Hardouin-Mansart (1646–1708) and painter Charles Le Brun (1619–1690), contains mirrors placed opposite the 17 large windows for reflecting the light and garden outside. The resulting depth and atmosphere are enhanced by the historical ceiling paintings, which portray the king's military victories and exalt the royal family. Outdoors, a feeling of infinite spaciousness was achieved by fountains and reflecting pools, strategically placed to yield reflections of the building facade, the sky, and vegetation. Exemplifying new buildings were the new churches necessitated by the growth of the city of Amsterdam. In 1614 Hendrick de Keyser (1565–1621) designed the Zuiderkerk (South Church), replete with oval-shaped openings and bulbous ornamental shapes. De Keyser's so-called *architectura moderna* continued with his 1620 Westerkerk (West Church), the Reformed temple where the painter Rembrandt (1609–1669) would later be buried. The temple is in the unusual form of a basilica, with arched recesses and oval openings at the gable ends of



Built by Brunelleschi between 1420 and 1428, this Renaissance chapel exhibits symmetry and geometrical unification through circles, semicircles, and rectangles. The tripartite apse represents the three persons comprising the one God. Both doors are cast in pure bronze; the left door is the Door of the Apostles and the right door is the Door of the Martyrs. (Erich Lessing/Art Resource, NY)

two short transepts. Both churches manifested *trompe l'oeil* through colored marbles, precious stones, stucco, and metals.

Baroque ideals came to their fullest architectural expression in eighteenth-century Germany and Austria. A designer of palaces and churches, the German architect Johann Balthasar Neumann (1687–1753) perfected the techniques of illusionism: richness of texture, color, and shape; curvature and other linear irregularities; motion and rhythm; and dramatic depth and perspective. Among his masterpieces is the Würzburg Residenz (built 1720–1744), the palace of the bishops of Würzburg. The collaboration of Neumann and Italian painter Giovanni Battista Tiepolo (1696–1770), the palace's Kaisersaal (emperor's room) featured such ceiling paintings as the *Marriage Ceremony of Barbarossi* coupled with the *trompe l'oeil* depiction of large groups of figures positioned on the balcony above the wedding party and spilling over the ceiling cornice in a lifelike fashion. Within the Brühl Palace, Neumann was asked by the elector of Cologne in 1745 to create a magnificent staircase, where colored stucco marble combines with frescoes and stucco sculpture to form an awe-inspiring composition of Baroque decor. Among Neumann's churches is the Vierzehnheiligen (Fourteen Helper Saints) Pilgrimage Church (1750) near Bamberg, containing a complex system of ribs and domes that produces rhythmic spatial effects. With his trademark stucco decor, in 1752 Neumann completed the Abbey Church at Ottobeuren, begun by Austrian architect Johann Bernhard Fischer von Erlach (1656–1723). Erlach had designed such Viennese buildings as the Library of the Hofburg

Palace (1722), Karlskirche (built 1716–1723), and Schonbrunn Palace (built 1693–1723) as well as the Collegiate Church in Salzburg (built 1696–1707). Arguably the leading representative of Austrian Baroque style was Johann Lukas von Hildebrandt (1668–1745), who drew upon his Italian training to design Vienna's Belvedere Palace (built 1721–1742) and St. Peter's Church (built 1702–1753).

Eighteenth-century France saw the blending of Baroque with the brief Rococo style (1715–1770), which exploited decoration imitative of small rocks, shells, leaves, flowers, scrolls, and tendrils to adorn wall panels and borders. Rococo typically exhibited a light miniature style and pastel colors, as displayed in Paris's Hotel de Soubise (built 1737–1740) and a myriad of French salons.

—Kirk R. MacGregor

Bibliography

- Kalnein, Wend Graf, and Michael Levey. *Art and Architecture of the 18th Century in France*. New York: Penguin, 1972.
- Moniteur, Electa. *Architectures Capitales*. Paris: Electa France, 1987.
- Murray, Peter. *The Architecture of the Italian Renaissance*. 2nd ed. New York: Schocken, 1986.
- Pevsner, Nikolaus. *An Outline of European Architecture*. Rev. ed. New York: Penguin, 1991.
- Stanley, Jerome. *Historic Parallels in the Arts: Selected Studies (A.D. 800–1985)*. Dubuque, IA: Brown and Benchmark, 1995.

European Religious Art from Renaissance to Baroque

In the Renaissance and High Renaissance periods, roughly from the mid-fifteenth century to the early sixteenth century, Europe experienced a cultural revolution. The term “Renaissance” means “rebirth,” and the artists of the time were inspired by Classical culture. Religious art, as in the Middle Ages, continued to be popular in the Renaissance period, but artists' techniques and styles changed. Natural beauty and human creativity were seen as reflections of God's power, as religious figures were portrayed more realistically. The art of the Baroque period in the seventeenth and eighteenth centuries added drama, flourish, and emotion to Christian subjects and imagery.

Renaissance painters were inspired by Classical Greek and Roman cultures and their emphasis on realism and the beauty of the human form. Artists began playing with color, light, and perspective to create lifelike figures. Religious subjects were typical, as most of the art was commissioned by patrons and specific churches. But unlike the religious art of the Middle Ages, biblical figures were painted and sculpted with a great deal of three-dimensional detail, and stories appeared in contemporary landscapes and natural settings. Artists, first in the Netherlands and later in Italy, began to mix oil with pigments, which created slow-drying paint and allowed artists to create more detailed paintings. Popular religious subjects included the Annunciation (Mary's visitation by the angel Gabriel, who tells her that she will be the mother of Jesus Christ), the Adoration of the Magi (the Nativity of Jesus and his visitation by the three wise men), the Madonna and Child (the Virgin Mary with the infant Jesus), the baptism of Christ, stories from the Old Testament, the Saints, and pietàs. The term “pietà,” from the Italian word for “pity,” is a painting, sculpture, or drawing depicting the Virgin Mary mourning over and holding the dead body of Jesus.

Religious art during the Renaissance period was rich with Christian symbolism and reflected the world in which the artists lived. Everyday objects were frequently found in artistic portrayals of biblical scenes such as flora and fauna, animals, earth and sky, colors, clothing, objects, and human bodies, and these items symbolize religious concepts. For example, thorns might allude to Christ's crucifixion and death, a dove might symbolize peace and purity, and a lamb could represent Christ himself. Artists like Italian Venetian painter Giovanni Bellini (1430–1516) specialized in detailed landscapes, and many of his paintings portrayed biblical subjects in contemporary Italian settings. Sandro Botticelli (ca. 1444–1510), an important Italian Florentine painter during the Early Renaissance, included members of the House of Medici (a powerful political banking family who were passionate patrons of the arts) in his *Adoration of the Magi*, demonstrating that politics, contemporary figures, and popular issues found their way into the religious art of the period.

➤ MICHELANGELO AND THE CEILING OF THE SISTINE CHAPEL

Michelangelo Buonarroti (1475–1564) began work on the ceiling of the Sistine Chapel, located in Vatican City, Rome, in 1508 at the commission of Pope Julius II. Michelangelo was unhappy about the task, as he considered himself primarily a sculptor and did not want to leave his current work on the pope's tomb. But Michelangelo undertook the work and spent four years painting the nearly 12,000-square-foot (1,115-square-meter) ceiling. The result was over 300 life-size biblical figures and scenes from the Old Testament. The ceiling is not only one of Michelangelo's most famous works but is perhaps one of the most well-known pieces of art in the world.

Michelangelo painted in fresco, a technique in which paint is applied to wet plaster. To reach the ceiling, he built his own special scaffolds and labored through incredibly cramped conditions,

both standing and lying down on the scaffolds to complete the painting. Initially, he was asked to paint the Twelve Apostles, but he had grander plans. Paintings on the ceiling include the ancestors of Jesus, several major and minor prophets, nine scenes from the book of Genesis, and various other figures.

The ceiling demonstrates the remarkable detail, realism, and ideals of the Renaissance period, as the scenes depict the dramatic stories from Genesis and the creation of the world to the last judgment. The hand of God reaching out to Adam in his *Creation of Adam* (ca. 1511) is one of the most well-known and recognizable paintings on the ceiling. Although Michelangelo painted this piece nearly 500 years ago, it continues to be an iconic work.

—Kim Kennedy White

The High Renaissance period, roughly the first two decades of the sixteenth century, produced perhaps the greatest artists of the past 500 years. Leonardo da Vinci (1452–1519) is not only one of the most well-known painters of all time but was also an inventor, sculptor, and architect. He was a master of mathematical perspective, composition, and space. One of his most well-known pieces is the painting *The Last Supper* (1497) that portrays the final days of Jesus with his disciples. Michelangelo Buonarroti (1475–1564) was the most important sculptor of the High Renaissance period who drew the attention of the Catholic Church with his *Pietà*, sculpted in 1500. During his career, he served six popes and is perhaps best known for his sculpture of the Old Testament figure David (1504) and painting the ceiling of the Sistine Chapel (1511–1512). Raphael (1483–1520) was another gifted painter who was commissioned to paint religious subjects on church altarpieces and cabinets and, later, rooms in the Vatican and several papal portraits. He was known for his idealistic and ultrarealistic figures.

Although the High Renaissance was primarily an Italian phenomenon, Northern Europe also produced master artists who later influenced the Renaissance movement. Early

Renaissance painters from the Netherlands, such as Jan van Eyck (ca. 1395–1441), introduced an almost superhuman realism to artwork. Van Eyck's oil paintings on panels and altarpieces brought to life saints and angels of heaven. Another influential artist from Germany, Albrecht Dürer (1471–1528), was renowned for his meticulously detailed engravings and woodcuts, most notably his *Four Horseman of the Apocalypse* series (1498) that depicted the end of the world, as described in Revelation, in fantastic and horrific detail.

In the Baroque period from the late sixteenth century to the early eighteenth century, the arts underwent a dramatic shift from the symbolic imagery of the Renaissance to a more direct and emotionally realistic depiction of religious themes in art. During the Council of Trent (1545–1563), the Roman Catholic Church demanded clear religious meanings in art in order to reach not only the noble people but the illiterate masses as well. Paintings and sculptures in the Baroque style brought the subject matter directly to the viewer through light, color, space, and dramatic flourishes. Some of the most well-known artists include Italian portrait painter Caravaggio (1571–1610), Flemish painter Rubens (1577–1640), and the Netherlands artist

Rembrandt (1606–1669). While Renaissance art demonstrated restrained realism, Baroque art showed exuberant feeling and extravagant style. A major artistic technique that artists used during the Baroque period to bring that energy to life on the canvas was *chiaroscuro*, or the contrast between light and dark. These extreme contrasts brought the grandiose movement, spiritual conviction, and fervent emotion of religious subjects to life.

—Kim Kennedy White

Bibliography

- Cohen, Simona. *Animals as Disguised Symbols in Renaissance Art*. Leiden: Brill, 2008.
- D'Elia, Una. *Painting in the Renaissance*. New York: Crabtree, 2009.
- Ferguson, George. *Signs & Symbols in Christian Art*. Oxford, UK: Oxford University Press, 1961.
- Moffit, John F. *Painterly Perspective and Piety: Religious Uses of the Vanishing Point, from the 15th to the 18th Century*. Jefferson, NC: McFarland, 2008.
- Seasoltz, R. Kevin. *A Sense of the Sacred: Theological Foundations of Christian Architecture and Art*. New York: Continuum, 2005.
- Snodin, Michael, and Nigel Llewellyn, eds. *Baroque, 1620–1800: Style in the Age of Magnificence*. London: V & A, 2009.
- Turner, Jane, ed. *The Grove Dictionary of Art: From Renaissance to Impressionism*. New York: St. Martin's, 2000.
- Wind, Edgar. *The Religious Symbolism of Michelangelo: The Sistine Ceiling*. Oxford, UK: Oxford University Press, 2000.

European Drama—Shakespeare, Marlowe, Lope de Vega, Calderon, Moliere, and Gil Vicente

Between 1440 and 1770 European theater evolved from the religious to the secular, providing the framework for contemporary dramatic structure and practice. Critical events contributing to the Pan-European transformation include the Protestant Reformation, which banned religious drama, and the humanist philosophies of the Italian Renaissance. In becoming increasingly secular, drama became increasingly complex both structurally and thematically, necessitating developments in theater architecture, playwriting, acting technique, and production design.

European theater in 1440 was inseparable from Catholic religious practice. The most prevalent form, Mystery Plays, presented religious teachings through the combination of farce, moralism, and ritual in the depiction of biblical stories. Performed by craft guilds in town centers and in England upon mobile carts, the plays often accompanied religious festivals. Pageant-like and in the vernacular, they featured elaborate sets and costumes, realistic effects, and technological inventions such as the hell mouth. Famous Mystery Plays include England's *York Cycle* and Spain's *Misteri d'Elx*.

Religious drama also included Miracle Plays, depicting the lives of saints, and Morality Plays, teaching Christian values through the personification of abstract figures such as Vice and Virtue, the most famous of which is *Everyman*. The Protestant Reformation banned religious drama due to its strong historical connection with Catholic rituals, resulting in the secularization of drama. Combined with the development of itinerant acting troupes, secularization caused differentiation of national dramatic styles and the birth of modern narrative drama.

The Italian Renaissance featured a resurgence of classical Greek drama and with it construction of theaters based on ancient amphitheaters. In 1545 the architect Sebastiano Serlio published three perspective drawings depicting the Comic, Tragic, and Satyric (or Pastoral) scenes, resulting in painted backdrops that led to the development of the proscenium arch, or the arch at the front of the stage that separates the performers from the audience. In Western theater the proscenium stage became the dominant architectural form, yet the greatest impact of Italian drama came from Renaissance humanist philosophy and the techniques of touring *Commedia dell'Arte* troupes, which would thematically and structurally impact European secular drama.

Elizabethan English drama featured governmental censorship, a patronage and shareholder system, and a ban on actresses. In 1576 James Burbage built the first permanent English theatre, The Theatre, outside of the London city limits due to the anti-theatrical prejudice of city officials, a practice that continued until the Restoration. Theaters utilized the thrust stage that

► COMMEDIA DELL'ARTE

Commedia dell'Arte, a theatrical form employing masked actors and improvisation, emerged in Italy in the mid-sixteenth century. With many elements stemming from Roman Comedy, the plays featured a preestablished plot, most often a romance, upon which the actors improvised. This allowed performances to reference and mock current events, marking the first time that drama actively engaged with contemporary life. The farcical slapstick style emphasized the actor's physicality and consisted of lazzi (rehearsed comic gags) and burle (long improvisational practical jokes).

Except for the innamorati (the young lovers), the actors performed in masks, each unique to a specific character type. These same characters appear throughout Commedia, and each in addition to their mask has a specific physicality. The most famous and influential Commedia characters are the clown figures, the zanni. Often a servant, they control the plot and possess the greatest freedom of improvisation. The zanni included Arlechino, Pierrot, Brighella, and Grattiano, with most plays featuring at least two zanni

figures, one quick-witted and one slow. Additional Commedia figures include Il Capitano, the Spanish soldier who brags of his conquests but is ultimately a coward; Colombina, the saucy maid-servant; and the old man characters of Il Dottore, the doddering pedant, and the avaricious and unintelligent Pantalone, often guardian of the female innamorata.

Traveling Commedia troupes spread the form throughout Europe, and the plays of Shakespeare and his contemporaries provide clear evidence of Commedia's impact. Many of Shakespeare's characters, including Malvolio (Grattiano), Puck (Zanni), and Polonius (Il Dottore), and plots, such as in *Romeo and Juliet*, *Twelfth Night*, and *Two Gentlemen of Verona*, can be directly traced to Commedia. In addition to its literary impact, the introduction of improvisation led to spontaneity and immediacy in performance, two concepts that still influence acting technique. In the twenty-first century, Commedia continues to be developed and performed.

—Kellyn Johnson

protrudes into the audience, a feature unique to English drama at the time.

The stage architecture and lack of painted scenery led to a primarily aural theater. Audiences went to hear a play, causing the linguistic emphasis exhibited by William Shakespeare and his contemporaries Ben Jonson and Christopher Marlowe. Shakespeare, an actor and playwright, has come to define the period for modern audiences. His plays, primarily in verse, present emotionally developed characters in complex plots. He was a shareholder in the King's Men, a royally chartered company, along with Richard Burbage, the period's leading actor. Marlowe, who heavily influenced Shakespeare, implemented the use of blank verse in drama, and his *Doctor Faustus* remains one of the most highly regarded texts in English drama.

Ben Jonson, a highly successful comedic playwright who employed biting satire in plays such as *Volpone*, also wrote the elaborately designed *Court Masques of Inigo Jones*. They featured intricate sets, costumes, and special effects

that furthered theatrical technology and design. These included the introduction of backdrops and wings, or side partitions through which actors could enter, to the English stage, leading to the prominence of the proscenium stage.

Following the Elizabethans, Jacobean playwrights include John Fletcher and Francis Beaumont, who explored extremes of High Tragedy and Low Comedy, and John Webster, who wrote Italian-influenced dark plays of political intrigue. The civil war interrupted theatrical development in England as the Puritans closed the theaters until the Restoration of Charles II in 1660. The diaries of the afficianado Samuel Pepys provide detailed information regarding Restoration theatrical culture and practice, including the French theatrical influence on Charles II in his exile, which led to the introduction of the actress, most famously his mistress Nell Gwynn and Mrs. Betterton, to the London stage.

Restoration Comedy, featuring plots of intrigue and adultery, was the dominant form until the 1680s, when it was replaced by Sentimental

Drama, represented by Colley Cibber and Sir Richard Steele, and Satire, represented by John Gay and Henry Fielding. Other key playwrights of the period include William Congreve, William Wycherley, George Farquhar, and the first professional woman playwright, Aphra Behn. The Licensing Act of 1737 gave Lord Chamberlain absolute power of censorship, reducing the number of new plays, causing performers to gain greater fame and importance, and culminating in the star status of actor David Garrick who introduced the naturalistic style of acting throughout Europe.

Portuguese playwright Gil Vicente provides the link from medieval to Renaissance drama in the Iberian Peninsula. He wrote religious dramas, most famously *Trilogia das Barcas* (*Trilogy of the Ships*), as well as satirical comedies in both Portuguese and Spanish. His work provided a foundation for future Portuguese and Spanish playwrights by inventing the farce. These playwrights included Félix Lope de Vega, who wrote over 1,200 plays. Referred to by his contemporaries as a “monster of nature,” Lope de Vega worked within a strict three-act structure in which the conflict leads toward the development of a more perfect social order. Additional Golden Age playwrights include Tirso de Molina, who wrote the first Don Juan play, and Pedro Calderon de la Barca, who wrote comedies of intrigue, court spectacles, and religious essays. Their plays, which were performed in impermanent open-air theaters called corrales, were purchased by companies that hired performers, including actresses, on salary.

In his 1637 play *Le Cid*, Pierre Corneille introduced Spanish tropes to French drama, which primarily utilized a classical model based upon Aristotelian unities, featuring a rigid divide between comedy and tragedy. Jean Racine was the master of tragedy in the period, while Moliere, an actor and a director, designer, and playwright, remains the master of comedy. He introduced the single all-purpose set for the production of his plays, which combine elements of farce and comedy of manners. Later in the French Enlightenment, the writer Voltaire wrote several tragedies influenced by Shakespeare and the Greeks and also experimented with tragicomedy.

German drama developed slowly due to the fragmented governmental, religious, and cultural

nature of German-speaking Europe and was heavily influenced by touring European troupes. The most singular element of the drama was the Narr, or Fool character, who permeated their plays. In 1741 the critic Johann Christoph Gottsched, who encouraged German drama to follow the French model, initiated authentic costuming and design in the production of a Roman tragedy. Rejecting Gottsched, Gotthold Ephraim Lessing, Europe’s first dramaturge and author of the *Hamburg Dramaturgy*, encouraged the development of a distinctly German drama.

As the eighteenth century drew to a close, European drama could no longer be discussed as a singular unit. The culturally specific diversifying of theatrical styles meant that countries could claim a unique theatrical heritage while acknowledging the impact of foreign innovations, trends, and celebrities. Touring would continue to be an important element of European theatrical tradition, continuing the rise of the star system and encouraging the interplay of differing cultural styles and values.

—Kellyn Johnson

Bibliography

- Fischer-Lichte, Erika. *History of European Drama and Theatre*. Translated by Jo Riley. New York: Routledge, 2002.
- Lach, Donald Frederick. *Asia in the Making of Europe*, Vol. 2, *A Century of Wonder*. The Literary Arts, Book 2. Chicago: University of Chicago Press, 1994.
- West, William N. *Theatres and Encyclopedias in Early Modern Europe*. London: Cambridge University Press, 2006.

The Baroque and Classical Revolutions in Western Music

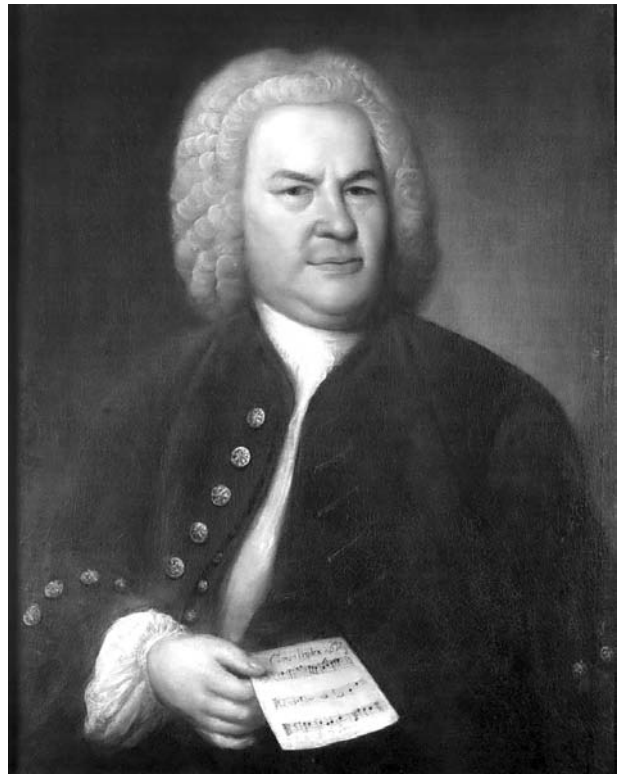
The formal music of the early modern West was neither static nor gradual in its progression. Rather, a series of revolutions in style and form characterized Europe’s musical development. As the hegemony of the medieval church began to fragment during the Reformation, kings, noblemen, and church authorities all commissioned music that reflected their interests. Far from discouraging the composition of church music, the Reformation, in establishing several variants of Christianity, multiplied the number of patrons

of church music. Some composers were satisfied merely to fulfill their commissions, but others sought to deepen the emotional content of music. This desire for emotionality ushered in the Baroque era around 1600.

Heirs to the Reformation, Baroque composers excelled in all forms of church music. Those in Catholic lands composed innumerable masses, although perhaps none equaled the *Mass in B minor* (1733–1749) by Johann Sebastian Bach, a Lutheran. Catholic composers, aware of the Church's devotion to Mary, wrote choral music to her, Claudio Monteverdi's *Vespers to the Blessed Virgin* (1610) being one famous example. In Catholic and Protestant lands composers set the events leading to Jesus's death (the Passion) to music. At the apex of this genre are Bach's *St. John Passion* (1723) and *St. Matthew Passion* (1729). Although not necessarily a religious form, the oratorio was in the hands of George Frideric Handel, a vehicle for narrating events in the Bible. *Messiah* (1741) remains Handel's most popular oratorio. In Protestant lands composers used the cantata to set passages in the Bible to music. Bach wrote more than 200 cantatas, most of them while he was cantor at St. Thomas's in Leipzig.

The Reformation was one stream that nourished the Baroque; the other was the Renaissance, whose secular spirit translated into the composition of secular music. The first years of the Baroque witnessed the rise of the opera. In 1597 poet Ottavio Rinuccini composed *Dafne*, the first opera. Early opera lacked dynamism and emotional intensity, qualities that Monteverdi infused into *Orfeo* (1607) and his later operas. Baroque opera included dances, which were the origin of ballet. Composers further added comic vignettes between acts to the score, and these grew into comic opera.

In addition to vocal music, the Baroque witnessed an outpouring of instrumental music. The dance suite was not, contrary to its name, suitable for dance but instead gave composers a vehicle for virtuoso display. The number and arrangement of suites varied. In the *Partitas* (1720) for violin and the *French Suites* (1722) for harpsichord, for example, Bach used virtuosity to heighten the emotional content of the dance suite. The concerto, another form new to the



German Baroque composer Johann Sebastian Bach, portrait by Elias Gottlieb Haussman, 1764. (Jupiterimages)

Baroque, pitted a single instrument against the orchestra. Pioneers in this type of music, composers in Italy allotted three movements to a concerto, the first and third being fast and the second slow. Antonio Vivaldi's *Four Seasons* (1725) are perhaps the most popular concertos of the Baroque era. A variant of the concerto for solo instrument and orchestra, the concerto grosso pitted two or three instruments against the orchestra. Bach's *Brandenburg Concertos* (1721) are surely the most popular concerto grosso. At the other extreme are Arcangelo Corelli's concerto grosso (1713). Popular during the Baroque, they are seldom heard in concert today.

Musicologists mark the end of the Baroque with Bach's death in 1750. Thereafter a period of experimentation gave rise to the Classical era. While seeking to preserve emotional intensity, composers in the second half of the eighteenth century turned away from what they felt was the artificial style of Baroque music. In emphasizing clarity and simplicity, these composers replaced the Baroque with the Classical era.

➤ BACH'S GOLDBERG VARIATIONS

The story of the genesis of Bach's Goldberg Variations comes from an early biography. Scholars think the story fanciful. Bach did not, for example, dedicate the variations to the Keyserling, as was his custom when dealing with an aristocratic patron. Rather, Bach gave the Goldberg Variations to his wife.

"The Count (Keyserling) was often sickly, and then had sleepless nights. At these times Goldberg, who lived in the house with him, had to pass the night in an adjoining room to play something to him when he could not sleep. The Count once said to Bach that he should like to have some clavier pieces for his Goldberg, which should be of such a soft and somewhat lively character that he might be a little cheered up by them in his sleepless nights. Bach thought he could best fulfill this wish by variations, which, on account of the constant sameness of the fundamental harmony, he had hitherto considered as an ungrateful task. But as at this time all his works were models of art, these variations also became such under his hand. This is, indeed, the only model of the kind that he has left us. The Count thereafter called them nothing but 'his' variations. He was never weary of hearing them; and for a long time, when the sleepless nights came, he used to say: 'Dear Goldberg, do play me one of my variations.' Bach was, perhaps, never so well rewarded for any work as for this: the Count made him a present of a golden goblet filled with a hundred Louis d'ors. But their worth as a work of art would not have been paid if the present had been a thousand times as great."

—Christopher Cumo

Source

Johann Nikolaus Forkel, *Johann Sebastian Bach: His Life, Art, and Work* (New York: Vienna House, 1974).

Although religious music did not disappear, it was now subordinate to secular music. Classical composers insisted on writing absolute music, music that had no association with an idea or object. Ludwig van Beethoven, however, departed from this ideal with his *6th Symphony* (1808) in which he aimed to evoke nature. Gone was the

dance suite of the Baroque and in its place was the sonata cycle of three or four movements. The first and fourth movements were fast, the second movement was slow, and the third movement was a minuet. Classical composers exploited the sonata cycle in fashioning symphonies. Franz Joseph Haydn wrote more than 100 symphonies, Mozart wrote 41, and Beethoven wrote 9. Classical composers retained the concerto while introducing new instruments as the solo. In place of the harpsichord, Classical composers wrote concertos for the piano, an instrument that, although invented in 1709, had been neglected during the Baroque period. In his 27 piano concertos, Wolfgang Amadeus Mozart enlarged the orchestra, lengthened the movements, and deepened the emotional content of music. Notable for their emotionality are his two concertos in a minor key, the D minor (piano concerto 20) and the C minor (piano concerto 24 in 1786). Beethoven wrote five concertos, the last being the *Emperor Concerto* (1809). Classical composers also retained opera. As he did to so many other forms, Mozart deepened the emotional intensity of opera. *The Marriage of Figaro* (1786), *Don Giovanni* (1787), and the *Magic Flute* (1791) mark the apex of Classical opera.

In the short term Classicism gave rise to Romanticism. In the coupling of a large orchestra with a chorus in his *9th Symphony* (1824), Beethoven anticipated the grandiose scale of music that was a signature of Romanticism. In this sense he bridged Classicism and Romanticism. In the long term the Baroque and Classical eras have won an audience larger than their composers could have imagined. The concert hall is merely one venue for the enjoyment of Baroque and Classical music. In the nineteenth century enthusiasts could listen to Baroque and Classical music on phonograph records and in the twentieth century on cassette tape and compact disc (CD). Manufacturers have priced the CD within the means of most consumers and have recorded an encyclopedic variety of music. It is possible, for example, to choose among dozens of recordings of Bach's *Goldberg Variations* (1741). Judging by CD sales, Baroque and Classical music are more popular than at any time in the past.

—Christopher Cumo

Bibliography

Kallen, Stuart A. *The History of Classical Music*. Farmington Hills, MI: Lucent, 2003.

Miller, Hugh M., and Dale Cockrell. *History of Western Music*. New York: HarperCollins, 1991.

The Highest Form of Flattery— The Influence of European Art on Mughal India

European art played a primary role in the development of Mughal artistic production together with Indian and Persian influences. It was one of the major sources of inspiration for the definition of the Mughal aesthetic canons, providing to the Mughal artists models, subjects, and techniques.

From the sixteenth to the seventeenth centuries the Mughal empire developed not only as a strong political center but also as a highly defined cultural and artistic entity. In order to foster contact with the West, diplomatic relations were established first between the Ottoman empire, the Safavid power in Central Asia, and then Europe. This was further cemented with a consequent important circulation of gifts and embassies among all these regions. By that time the Indian Ocean was a major conduit for the global market, even for the exchange of artwork. Scholars know from various sources that

the ocean represented one of the main channels for the circulation of models. In addition to the aforementioned diplomatic relations and the circulation of models, the arrival of the first Portuguese delegation through the Indian Ocean and its consequent settlement along the Indian coasts was probably one of the strongest vehicles for the European influence.

Retracing the steps of the Mughal domination and the character and taste of the main sovereigns who succeeded to the throne, it is quite easy to recognize the entity and peculiarity of the European influence in the different artistic fields.

In architecture, the European models seem to have arrived a little later. Until the production patronized by Akbar (1556–1605) a strong Hindu connotation of structures appears as predominant, leaving only a minimal space for European influences in both decorative schemes and elements. It was only under Jahangir (1605–1627), triumphing then under Shah Jahan (1628–1657), that the Mughal monuments began to show a clearer presence of decorative schemes and motifs ascribable mainly to European influences. The use of flowers in decoration, their shapes and arrangement, could be an emblematic example. Their use, common in both the Mughal imperial production and in the Ottoman architecture, seems to be ascribable to a frequent provenance from the European herbals, identified as main

► COPIES AND ALLEGORY IN JAHANGIR'S PICTURES

Prince Jahangir was undoubtedly the first Mughal to manifest a strong and unusual interest in Europe and its art. Close contact with traders and missionaries increased his collection of Western pictures, engravings, and prints with both secular themes and religious subjects, while the documented presence at court of foreign artists contributed to consolidating the appreciation of Western production in Mughal India. Portraits of the emperor, painted under commission, are examples of the imitation of European models and also illustrate the assimilation of symbols and elements that enriched the representation of sovereignty and authority.

The motif of the round halo, a symbol of the sun, originating in Persia and already applied in the Gandhara sculptures, probably reached the

Mughal's ateliers through European objects of art. Elements such as angels and cherubs were also assimilated from Renaissance Europe. Moreover, the sovereign is often depicted standing on or holding a globe, again a symbol derived from Europe and associated with a lion, representing his universal power and majesty. Some Western religious themes, like the Crucifixion or the Ascension, are depicted in the context of Mughal pictures. Together with Western people, representatives of European states, or monarchs, these scenes were painted at the court of the great sovereign, copied from the European originals, or, as in the case of many engravings, directly included in Jahangir's albums.

—Sara Mondini

sources of inspiration. Also, the *parchin kari*, or inlaid marble technique, largely used even in the Taj Mahal to represent flowers, corresponds to the Italian technique known as *commesso di pietra dure* (composition of hard stones). The real origin of the technique is still debated among scholars. However, it could have found application in India perhaps due to the presence of Italian craftsmen at the Mughal court.

It was in painting, however, that the influence of European art illustrates the greatest impact, in some cases even through the actual imitation of certain subjects. The study of the Indian miniature is usually regarded as a fundamental source to reconstruct the development of painting, and these types of illustrations, which often decorated Buddhist manuscripts, represent a source of evidence to trace the development of Indo-Islamic paintings.

Already with the beginning of the reign of Akbar (1556–1605), Hindu artists under Persian influence developed a new and realistic style of painting in which the impact of European art played a certain part. Subsequently, in later decades it grew in prevalence. The assimilated European elements are distinct from the Persian and the Chinese characteristics that also enriched the development of Mughal style and technique.

The European works of art brought to the Mughal court, often as embassy gifts or through the mediation of Jesuit missionaries, were

studied and regularly imitated by Indian artists and were the subject through which techniques were rendered according to their aesthetic norms. Under Jahangir (1605–1627) the characterization, the study of anatomy, and physiognomy were increasingly emphasized, and the realism of the result did not exclude the proper use of symbolism and allegory in painting. The painters of Shah Jahan's atelier are examples of this development. While the Dutch influence was notable, the role of Italian Mannerism also had a primary role. The artists of the Mughal atelier through the consolidation of *chiaroscuro* try to depict night scenes inspired also by European Baroque pictures.

—Sara Mondini

Bibliography

- Clarke, C. S. *Mughal Painting: The School of Jahangir*. New Delhi: Cosmo Publication, 1983.
- Creill, R., S. Stronge, and A. Topsfield. *Arts of Mughal India: Studies in Honour of Robert Skelton*. Ahmedabad, London: V & A Publications, 2004.
- Koch, E. *Mughal Architecture: An Outline of Its History and Development, 1526–1858*. New Delhi: Oxford University Press, 2002.
- Srivastava, A. K. *Mughal Painting: An Interplay of Indigenous and Foreign Traditions*. New Delhi: Munshiram Manoharlal, 2000.
- Stronge, S. *Painting for the Mughal Emperor: The Art of the Book, 1560–1660*. London: V & A Publications, 1999.

■ Introduction: Global Cultural Exchange

The biological exchanges triggered by the contact between the Old World and the New World had profound consequences on world history, far more than similar preexisting processes within the Afro-Eurasian ecumene. The term “Columbian Exchange,” coined by notable historian Alfred W. Crosby in his book of the same name (1972), denotes this process of diffusion of plants, crops, diseases, and human migration that began with Christopher Columbus's voyages of exploration, which subsequently extended globally. Staple crops from the Ameri-

cas (e.g., potatoes, manioc, tomatoes, and peppers) spread to Europe and from there to the Middle East, India, and China, thereby influencing culinary tastes and dietary habits. Moreover, European crops and livestock (e.g., wheat, vines, chickens, horses, cattle, and sheep) were sent to the Americas, drastically increasing food supplies. However, the Columbian Exchange also brought disease to the Americas, most notably smallpox, which annihilated tens of millions of indigenous peoples who never developed immunity to such pathogens. Many of these people

died of European diseases carried through indigenous networks, while having never personally met a European. Nonetheless, the Columbian Exchange was a significant historical process in world history that radically increased the wealth of Europe, fueled global commerce, and had significant effects in the dietary habits of peoples the world over, triggering population growth throughout much of the globe.

The cultural implications of the Columbian Exchange were also significant in terms of altering Old World paradigms and triggering global labor migrations, shifting the centers of trade to the Atlantic world from the Mediterranean littoral and the Middle East as a result of human migration exchanges. The establishment of European colonies in the Americas also led to the development of the Atlantic slave trade for the purposes of creating cash crop plantations in the Caribbean, southeastern North America, and Brazil. European immigration from Britain and Spain drastically altered the demographic characteristics of the Americas, as swaths of indigenous Americans died due to disease. Christianity, in both its Protestant and Catholic varieties, entered the Americas, influencing and syncretizing with indigenous American religions and folkways. The notion that older scientific and religious worldviews had not accounted for the New World also fueled intellectual change as Aristotelian and medieval paradigms were questioned by European scholars (i.e., Montaigne). The Old World also experienced the infusion of wealth from the Americas, allowing major European powers with newfound wealth to engage the Ottoman empire and further expand their influence in southern Asia and the peripheries of China, Africa, and Oceania. Global commerce gradually shifted from the center of Afro-Eurasia, characterized by Asian land routes and Indian Ocean and Mediterranean trade networks, and shifted it to the Atlantic as Spain, the Low Countries, and England emerged as new entrepôts of world trade. While this process had preceded the Columbian Exchange as a result of Portugal's forays into Africa and southern Asia, it was rapidly accelerated with the entry of the Americas into this new economic world system. This newfound wealth from the New World allowed Europe to develop into an economic powerhouse

vis-à-vis India, China, and the Ottoman empire, shaping the destinies of Spain, Portugal, the Netherlands, England (Britain after 1707), and France as world powers. While Asia remained an integral center of the world's wealth and trade during this period, the infusion of American goods and wealth set the stage for the emergence of European power in later centuries.

—*Abraham O. Mendoza*

Columbian Exchange and Disease

The incidence of epidemics in world history leading to the deaths of millions of people is not unique to this period. The Justinian Plague (named after the Byzantine emperor) of late antiquity and the Black Death (in its various manifestations of bubonic plague, pneumonic plague, and septicemic plague) of the late medieval period led to the destruction of large swaths of the population of the Afro-Eurasian ecumene, with recurrences of the plague lasting well until the eighteenth century. However, increasing contact between the Old World and the New World following Christopher Columbus's "discovery" of 1492 led to the greatest incidence in demographic change in the New World that was due not only to the migration of peoples but also to the related migration of pathogens. The Columbian Exchange of disease, mostly in the form of smallpox, measles, malaria, and the plague, among other pathogens, and along with other contributing factors, led to the deaths of an estimated 100 million people in the Americas. These catastrophic losses of the indigenous population of the Americas, over approximately 400 years, had political, economic, and social consequences for this period.

While contact with Old World diseases is a factor for the demographic depletion after 1492 in the Americas, other factors also contributed to the mass death of millions of indigenous Americans. Incidences of warfare, dispossession of property, interbreeding, and mass killings perpetrated by Europeans against indigenous Americans also contributed to the massive demographic loss in the Americas. The introduction of pathogens into societies with no immunity in tandem with European incursions (and Africans

► HISTORICAL DEBATE OVER THE IMPACT OF DISEASE ON POST-COLUMBIAN INDIGENOUS SOCIETIES

While historians do not disagree that the introduction of diseases contributed to the extermination of millions of indigenous Americans and the collapse of their civilizations, there are disagreements as to the level of complicity of other factors. It is argued that placing the onus of the collapse and conquest of the Americas on the spread of diseases minimizes the level of agency on the part of European conquest and warfare. This narrative, purported by many environmental historians, proposes that it was biological immunity that doomed indigenous populations to their collapse. However, other historians, such as Alfred W. Crosby, suggest that while “virgin soil epidemics” caused the destruction of millions of Americans after 1492, other factors also contributed to the collapse of these societies. As such, all these factors have to be taken into account when discussing the history of the mass death of indigenous Americans after contact with Europeans and Africans, lest it not offer a fuller perspective of the multicausal confluence of historical processes.

—*Abraham O. Mendoza*

brought as slaves) and conquest contributed to the deaths of millions. Outbreaks continued as diseases new to the Americas were introduced and subsequently spread through trade routes with other indigenous groups. Some scholars suggest that some indigenous American societies never actually came into contact with Europeans or Africans and yet suffered tremendous losses after the introduction of diseases into their communities.

Historians speculate that the lack of immunity to these diseases given the lack of contact that existed led to the introduction of such pathogens into long-established societies with little to no understanding of the occurrence of such diseases. Known as virgin soil epidemics, meaning that the populations exposed to them had no immunity to them, these diseases did have historical precedents in terms of their impact on existing societies. Much like in Europe and Asia during outbreaks of the Black

Death, entire communities suffered outbreaks en masse, with large swaths of the population dying. Severely weakened by disease and with segments of the productive population (such as those who procure food and forage) dead or weakened, the pandemics along with other factors illustrate how these American societies were depleted over time. This contributed to the collapse of the local and regional economies, political structures, and societies as a whole.

Scientists and historians have meticulously compiled lists of diseases and epidemics that were introduced in the Americas by Europeans and Africans after 1492. While some of these are based on speculation and hypotheses, others are based on empirical archaeological and historical research and data. The major diseases that afflicted the New World that originated from the Old World are the following: smallpox, diphtheria, measles, whooping cough, bubonic plague, malaria, trachoma, cholera, typhoid fever, scarlet fever, yellow fever, dengue fever, influenza, and dysentery. The overwhelming amount of diseases that arrived in waves and the lack of immunity on the part of indigenous Americans illustrate the level of the impact that Columbian exchanges of pathogens had on New World populations over the next 400 years. Pockets of isolated communities, once in contact with Europeans, Africans, or other Americans, were also prone to outbreaks as recently as the mid-twentieth century.

According to some, the Europeans not only brought diseases to the New World but also brought one very virulent disease back with them: syphilis. The debate over the origins of syphilis has mostly been divided into two camps: those who believe that syphilis did not exist in Europe before Columbus's first voyage to the New World and those who believe that it did. In recent years another side has popped up, one that believes that while syphilis did exist in Europe before 1492 it was a different strain of the disease and that the American strain was much more virulent. Although neither side has been able to prove its theory conclusively, it is evident, based on the documents, that the venereal form of syphilis did not appear in Europe until the sixteenth century. There is no mention of a disease with symptoms similar to that of syphilis before

1492, and Europeans of the time found evidence of syphilis among the indigenous populations. In addition, forensic anthropologists have found evidence of syphilis in pre-Columbian skeletons.

The relationship between the depletion of indigenous Americans and the onset of the transatlantic slave trade is also illustrative of the impact of Old World diseases on the Americas. The inability to procure sufficient amounts of labor from the Americas by Europeans, as these societies collapsed as a result of conquest and disease, was offset by the influx of millions of black African slaves forcibly brought to the New World. Black Africans further introduced more diseases, which exacerbated the already catastrophic situation of the indigenous Americans. As African slaves were seen as amenable and resistant to tropical conditions and diseases by their European oppressors, they were coerced to work for the cultivation and production of cash crops.

—*Abraham O. Mendoza*

Bibliography

- Crosby, Alfred W., Jr. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. New York: Cambridge University Press, 2004.
- Crosby, Alfred W., Jr. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- McNeill, William H., *Plagues and Peoples*. New York: Anchor Books/Doubleday, 1998.

Cultural Exchange between Europe and the Islamic Middle East

Although the image of relations between the Islamic states of the Balkans, the Middle East, and North Africa and the Christian states of Europe in the early modern period is often one of hostility, there was also a great deal of social and cultural exchange.

There were numerous avenues for contact and exchange. European and Islamic rulers sent embassies to each other that often attracted a great deal of popular interest. There was a constant interchange of population through the pirate vessels and slave markets of the Mediterranean. The numerous Christian converts to Islam and the much smaller number of Muslim

converts to Christianity brought the knowledge of their old societies to their new. Converts from Christianity, or “renegades,” were a major segment of the population and the ruling elite in the semi-independent North African cities such as Tripoli and Algiers and also supplied some of the most famous captains of the “Barbary corsairs.” Christian subjects of Muslim rulers retained contacts with their coreligionists outside the Islamic world. The religious divisions of Western Christians helped foster interest in the Eastern churches under Muslim rule and in the greater degree of religious toleration practiced in Islamic empires. Christian merchants and scholars sought profit and knowledge in the lands of Islam. Although Muslims were less likely to enter Europe for trade, there was a long-standing community of Ottoman Muslim merchants in Venice as well as communities of Christian Ottoman subjects, including Greeks and Armenians. Jews, marginal in both Christian and Islamic societies, traveled between them.

Cultural contact broadened Christian knowledge of the Islamic world and its customs. The Quran and other Islamic texts became available in numerous editions in European languages. The Ottoman Turks, on the advance against European Christendom in southeastern Europe and the Mediterranean until the late seventeenth century, were the object of great interest. Numerous accounts of the lands of the “Grand Turk” from Christian travelers, diplomats, and captives poured from European presses. The “Sophy” or Safavid ruler of Persia—viewed as a possible ally against the Turks—also attracted much attention, as did the “Mogul” of India. There were far fewer Islamic travelers in the Christian world than vice versa, and the few accounts of Christendom written by Muslims could not be as widely distributed, given the Islamic world’s rejection of the printing press. The Muslim interested in the Christian world had far less available information than his or her Christian counterpart.

Numerous Middle Eastern cultural practices were transmitted to the West. Prominent among them was coffee drinking and the institution of the coffeehouse, introduced by the seventeenth century. Early coffeehouses were frequently identified with the Middle East and its peoples. The first English coffeehouse, the

THE RENEGADE JOHN WARD

Some of the renegades, converts from Christianity to Islam, who became corsairs in North Africa became almost legendary figures to the Christian societies they left behind. John Ward (ca. 1553–1622), a poor English sailor and fisherman, became a Muslim, taking the name Yusuf Reis, and a renowned pirate in Tunis, operating under an agreement to share his loot with the ruler of Tunis, Uthman Bey. Ballads were sung in England of Ward's battles and the luxuries of his palace, with one registered as late as 1680. The ballads skipped over Ward's conversion, presenting him as a successful pirate. The English playwright Robert Daborne, by contrast, emphasized Ward's conversion in his 1612 play *A Christian Turn'd Turke*. Daborne painted Ward not as a dashing hero but as a corrupt villain and ended his play with the renegade being torn in pieces, although Ward was still alive at the time.

—William E. Burns

Angel, founded in Oxford in 1650, was owned and operated by a Lebanese Jew. The Middle East also had a long-lasting influence on Western male dress, including the introduction of the vest. Smallpox inoculation was an Eastern practice that became very popular in Europe in the eighteenth century.

Western cultural practices were also adopted in the Middle East. Some of these, such as tobacco smoking, had to do with the new American crops that entered the Middle East through Europe. By contrast with the popularity that tobacco attained despite the fierce opposition of many Muslim religious scholars, the fifteenth-century Ottoman interest in Italian Renaissance painting and architecture fizzled out with the increasing cultural Islamization of the empire in the sixteenth century. However, there was also interest in European technology, particularly military technology. Westerners helped cast the guns with which Sultan Mehmed II took Constantinople in 1453. The French convert Claude Alexandre de Bonneval (1675–1747), a former officer in the French and Austrian armies, helped reorganize the Ottoman artillery. Barbary corsairs of northern European origin were often

credited with introducing northern naval technology to the Islamic world.

Non-Muslim Middle Eastern minorities were the most exposed to cultural change from the West. The Jews exiled from Spain in 1492 entered the Islamic world in great numbers and brought many of their own distinctive cultural traits with them, such as the languages of Ladino and Haketia and the mystical Kabbalah. The Catholic Church was a growing presence among Christian communities in the Middle East. Maronite and Greek colleges, to train priests in those churches who would acknowledge the supremacy of the papacy, were founded in Rome in 1684. In the eighteenth century a Maronite Arab from Lebanon, Yusuf al-Simani (1687–1768), became a Vatican librarian.

—William E. Burns

Bibliography

- Lewis, Bernard. *The Muslim Discovery of Europe*. New York: Norton, 2001.
- Matar, Nabil. *Europe through Arab Eyes, 1578–1727*. New York: Columbia University Press, 2009.
- Matar, Nabil. *Islam in Britain: 1558–1685*. Cambridge: Cambridge University Press, 1998.

Early European Cultural Influences in India

The development of the East India trade opened a direct connection between India and Europe for the first time since the seventh century CE. Some Western influences had entered India in ancient and classical times, including Greek art and astronomy. Different Muslim empires also provided important links between India, Asia, and Europe. However, the most important influx of European ideas into India began during the sixteenth century.

In the sixteenth century, individual Portuguese merchants and mercenaries traveled all over South Asia serving as foreign advisers at Indian courts or establishing renegade settlements such as Hooghly in eastern India. These foreigners posed no political threat at the time and were mainly seen as useful conduits for the transmission of the outside world's knowledge, especially military expertise. In addition to the military knowledge brought by European soldiers and merchants, a wide range of Western

► THE TOPAZES—PORTUGUESE NAMES, CHRISTIAN IDENTITIES, AND INDIAN CUSTOMS

Like other parts of the early modern world that felt the effects of European expansion, India mainly attracted male adventurers. European women really did not begin to travel to India in significant numbers until the eighteenth century, and even so the culture of the East India trade was overwhelmingly masculine. As in the New World, concubinage and interracial marriages were accepted as a matter of course, especially in the Portuguese settlements during the sixteenth century. The inevitable result was the formation of a class of Indo-Portuguese descendants of cross-cultural unions. Such people usually sported Portuguese names and practiced Roman Catholicism but for the most part looked and lived like other Indians. Their collective name, Topazes, referred to their use of hats rather than turbans, the hat being the quintessential mark of the European, who often was called a *topi-wallah*, or “hat-man.”

There were flourishing Topaz communities in every port town in South India in the eighteenth century, and as the power of the Portuguese crumbled, these people found a new niche for themselves as local guides and interpreters for the Dutch, French, and English. All of the East India companies employed Topazes as soldiers, sailors, and often low-level bureaucrats. The daughters of Indo-Portuguese families, meanwhile, often married Dutch, French, and English military officers and merchants, thus securing the community’s place in the emerging colonial social order. Indeed, in most European settlements, the Topazes outnumbered the foreign population by five or ten to one, and it is unlikely that the East India companies would have been nearly as successful without their contributions.

—James Hoover Frey

cultural influences also followed in the wake of their activities.

The conversion of hundreds of thousands of primarily low-caste and outcaste people in South India to Roman Catholicism stands out as one of the most enduring legacies of Portuguese and later French influence. Missionaries, however, often preferred to work far from the main European enclaves and the meddling influence of officials, pursuing a plan of proselytization that had nothing to do with colonial policies. In southern Tamil Nadu, Jesuits working in and around the court of Tirumala Nayaka of Madurai in the late seventeenth century had a major enduring impact on Tamil culture by developing a type font to enable the Tamil script to be used in printing presses. Their work was carried further in the early eighteenth century by Danish Lutheran missionaries working from the Danish East India Company’s settlement at Tranquebar.

For the most part, the spread of European cultural influence was haphazard and subject to the passing fancies of individual Indian borrowers. Indigenous sources often refer to *farangi* (foreign) objects, clothing, instruments, music, and people, especially in the context of royal courts, and we know that different East India

companies sent Indian rulers a steady stream of gifts throughout the seventeenth and eighteenth centuries in an effort to impress potential business partners and to showcase European wares. Elements of European material culture, however, usually were assimilated according to existing Indian tastes. One ruler in South India, Marthanda Varma, amassed a stunning collection of French and Dutch mirrors at his palace in Travancore; these mirrors were used not to reflect people’s images but instead to cover and decorate entire walls, to enlarge rooms, and to bring sunlight into dark interiors. Miniature painters for the Mughals adapted European ideas to some extent, and European missionaries debated religion at the court of the Mughal emperors at Delhi as well.

Beyond the royal courts of early modern India, perhaps the most profound European cultural influences were not really European at all but rather products of the global system of cross-cultural exchange through which European shipping tied together the world’s economic and cultural zones. During the sixteenth century Indian spices, such as black pepper, transformed European kitchens. Yet at the same time, European traders were bringing American plants and

spices, such as the tomato and the red chili, to India, transforming Indian cooking. Curried dishes and *chai* (hot milk-tea) are symbols of Indian culture today, but both curries and *chai* were influenced by European trade in India.

European cultural influence in India, however, was never fully respectable, which to some extent explains the fleeting, faddish manner in which Indians adopted European cultural practices and material culture. There is abundant evidence that the popular conception of the *farangi* was strongly negative. Hindus considered most Europeans ritually polluted outcasts because, like untouchables in Indian culture, they ate meat and consumed liquor. However, popular condemnation went further than that: Europeans were violent and licentious. They wore wigs powdered with rotting flour and made of other people's hair (extremely problematic for many Indians), they wore leather boots and hired servants who were outcasts, and they did not clean themselves properly after bodily functions. In order to interact intimately with Indians, Europeans had to adopt indigenous ways, for the Indian elite refused to come down to their level.

Given that most Europeans, being polluted, could not even share a meal with caste-conscious Hindus or even stand in close proximity to them, the opportunities for significant cross-cultural exchange were extremely limited. It is not surprising, therefore, that Europeans had much more contact with Indian Muslims during the early modern period. Rules governing ritual purity did not stand as a bar to social contact in an Islamic context. Among Hindus, meanwhile, most cross-cultural experiences with Europeans were limited to members of the lowest castes of the social order, especially those who lived in coastal cities and worked as personal servants or employees of the East India companies. Even in these cases, however, European culture tended to be mocked rather than adopted. While stationed with his regiment at Madras in the 1780s, Innes Munro chanced to walk into an Indian theater in a narrow lane of the Black Town, the city's Indian quarter, where he discovered, to his astonishment, that the people were watching a Tamil play in which the actors dressed as

Europeans and ridiculed the East India Company's policies and foreign ways in general.

Derision, however, was not the only response that ordinary Indians displayed toward European culture. Sepoys, or Indian mercenary soldiers, and the literate indigenous bureaucrats who worked for the East India companies often admired what they perceived to be the manliness of European military culture, the European talent for organization and order, and military technology, including huge warships and star-shaped forts bristling with cannon. When we bring all of these Indian perceptions of Europeans together into a single focus, we find ourselves looking at a bundle of contradictions: Europeans were powerful but ignorant and inept; they often came from a ruling class but at the same time lacked social status or appropriate manners. Above all, it seemed to most Indians that Europeans were people without religion, history, or connections. In short, Europeans in the context of early modern India represented complex and contradictory identities.

—James Hoover Frey

Bibliography

- Bayly, Susan. *Saints, Goddesses and Kings: Muslims and Christians in South Indian Society, 1700–1900*. Cambridge: Cambridge University Press, 1989.
- Bernier, Francois. *Travels in the Mogul Empire, A.D. 1656–68*. Translated by Archibald Constable. 2nd ed. New Delhi: S. Chand, 1968.
- Cruz, Maria Augusta Lima. "Exiles and Renegades in Early Sixteenth Century Portuguese India." *Indian Economic and Social History Review* 23(3) (1986): 249–262.
- Fisher, Michael H. *The First Indian Author in English: Dean Mahomed (1759–1851) in India, Ireland and England*. New Delhi: Oxford University Press, 1996.
- Qaisar, Ahsan Jan. *The Indian Response to European Technology and Culture, A.D. 1498–1707*. New Delhi: Oxford University Press, 1998.
- Rao, Velcheru Narayana, David Shulman, and Sanjay Subrahmanyam. *Symbols of Substance: Court and State in Nayaka Period Tamilnadu*. New Delhi: Oxford University Press, 1992.
- Subrahmanyam, Sanjay. *Mughals and Franks: Explorations in Connected History*. New Delhi: Oxford University Press, 2005.

Early Modern European Cultural Understandings of Hindu India

Although Europeans had limited cultural contact with India since the ancient world, the circumnavigation of Africa by the Portuguese sailor Vasco da Gama (ca.1460–1524) in 1498 enabled direct European contact with India without the traditional intermediary of the Middle East. Ideas about the wealth of India handed down from medieval travelers such as Marco Polo continued and helped motivate the voyages of da Gama, Christopher Columbus, and other European explorers.

European knowledge of India came from many sources in different parts of India, which added to the overall impression of Indian cultural diversity. It proved far harder for Europeans to form a unified image of South Asia (a large and diverse region) than it was for them to form images of China and Japan (which Europeans saw as more culturally unified). The Portuguese outpost at Goa was particularly significant in contacts between India and the West. Catholic missions were another important intermediary, particularly the Jesuit mission to the Delhi court of the “Great Mogul [Mughal],” the Muslim ruler of most of India. The Mughal ruler Akbar (r. 1556–1605), whom the Jesuits hoped in vain to convert, acquired a European reputation as a philosopher-prince. Continued European interest in Mughal rulers can be seen in the English poet John Dryden’s play *Aurangzebe* (1676) based on the life of Dryden’s contemporary, the Emperor Aurangzeb (r. 1658–1707). The Muslim Aurangzeb, like the Hindu ruler of the south Indian state of Vijayanagar, was often treated by Europeans as a prototypical “Oriental despot.”

Jesuit writers were particularly interested in Indian religions but also wrote on politics and culture. They were divided on whether Indians could, like the Chinese and Japanese, be regarded as “civil” peoples who, despite their religious errors, followed reason or whether they were barbarians like the indigenous people of Africa and North America. Religiously, Hindu India was viewed as presenting the principal opportunity for Christian conversions, as few hoped to convert the Muslim population in the region. Hinduism posed the problem for Europeans of a

society that was highly developed but continued the “primitive” practices of polytheism and idolatry. Indian paganism was the subject of a debate between the Jesuit missionaries Robert de Nobili (1577–1656), who dressed and acted like a Brahmin and accepted many aspects of Hindu tradition in hopes of winning converts, and Goncalo Fernandes, who viewed Hindu tradition as suffused with paganism and claimed that true Christian conversion would involve adopting European customs. The German Jesuit Athanasius Kircher (1601–1680) attempted to incorporate the religion of the Brahmins into a world history of idolatry influenced by Neoplatonism in his *China Illustrata* (1667). Jesuits also pioneered the study of Indian languages among Europeans. The Jesuits Heinrich Roth (1620–1668) and Johann Ernst Hanxleden (1681–1732) were the earliest Sanskrit grammarians among Western scholars. The ideal of the wise, philosophical, and fundamentally secular Brahmin can be traced to ancient Greek and Roman accounts of India, and European enlightenment writers such as Voltaire continued to use it as a literary convention. However, greater western knowledge of Indian religions led to a less idealized version of the Brahmin.

Although there was little direct translation from Indian languages until the eighteenth century, one influential work had followed a complicated route from Sanskrit through Middle Eastern languages to European ones. The *Panchatantra*, a collection of fables and tales, had been translated into Persian, Syriac, and Arabic in the Middle Ages and eventually reached Christian Europe as the *Fables of Bidpai* (or “Pilpay”). Francesco Doni (1513–1574) published an Italian translation from the Latin in Venice in 1552 that became the source of the earliest English version, the prolific translator Sir Thomas North’s *Morall Philosophy of Doni* (1570). Like other translators, Doni and North presented the collection both as entertaining stories and as wise moral counsel. The fabulist Jean de La Fontaine (1621–1695), one of the most popular French writers of the seventeenth century, credited Pilpay as a principal source of his *Fables*.

It was also through the Islamic world that India had made perhaps its most important

contribution to European civilization, the numeral system known in the west as Arabic numerals whose use was increasing in the early modern period. Direct contact with India broadened India's impact on European science. As elsewhere in the world, Europeans were interested in natural history and the medical applications of native plants. Goa was the base of the Portuguese physicians Garcia d'Orta (ca.1500–ca.1568) and Christovao da Costa (ca.1515–1580), who published on the drugs and remedies of India. Their works relied on discussions with native informants, particularly the Ayurvedic physicians of Goa. An Italian visitor to Goa, Filippo Sassetti (1540–1588), translated an Ayurvedic compendium, the *Nighantu*, from Sanskrit to Italian. A Dutch governor of Malabar, Henricus Van Rheede Van Draakenstein (ca.1637–1691), employed Indian physicians to help prepare a 12-volume botanical compilation, *The Garden of Malabar in India*, published in Amsterdam from 1678 to 1703.

—William E. Burns

Bibliography

- De Figuerido, John M. "Ayurvedic Medicine in Goa According to the European Sources in the Sixteenth and Seventeenth Centuries." *Bulletin of the History of Medicine* 58 (1984): 225–235.
- de Souza, Teotónio R., and Charles J. Borges. *Jesuits in India: In Historical Perspective*. Macao: Instituto Cultural de Macau; Panaji, Goa: Xavier Center of Historical Research, 1992.
- Rubies, Joan-Pau. *Travel and Ethnography in the Renaissance: South India through European Eyes, 1250–1625*. Cambridge: Cambridge University Press, 2000.

The Making of an Islamic Peasant Culture in Bengal

One of the most intriguing questions in Indian history concerns the demographics of conversion to Islam. Why did mass conversion to Islam occur only in the far western and far eastern regions of India? The question is all the more interesting because all of these areas of intensive Islamization lie outside the heartlands of the major Islamic empires established in South Asia during the medieval and early modern periods. Throughout most of India during the early

modern period, Islam was the religion of a small elite minority and of a few communities of immigrant minorities or low-caste converts from Hinduism. Indian Islam was primarily an urban faith, the religion of men in power: rulers, administrators, soldiers, and their clients. Only in Sind, western Punjab, Kashmir, and Bengal did the spread of Islam penetrate village culture and result in the mass conversion of peasants and even laborers. Sind, of course, was the first part of India encountered by Muslim armies, while Punjab and Kashmir were situated close to central Asian trade routes and subjected to Islamic influences for centuries. The mass conversion that occurred in Bengal, however, is harder to explain, for the swampy lowlands of Bengal—what is now the populous country of Bangladesh—were one of the last areas to be subject to the rule of expanding Muslim empires.

The spread of Islam in the area during the late medieval and early modern periods was connected with the formation of the Ganges delta and the eastward spread of Muslim agricultural pioneers. Turkish raiders reached the western borders of Bengal in the twelfth century, but permanent conquest did not occur until the thirteenth century and tended to be limited to a few cities and towns in the western part of the region. While Muslim soldiers controlled the cities, the countryside (similar to other areas in India) remained under Hindu rajas, local landlords who essentially acted and were treated like petty local kings. This political situation changed little during the early phases of Mughal rule, although other factors were significantly altered, especially in the eastern districts.

The areas of mass conversion to Islam in South Asia all have one element in common: they were all places where Hinduism was not well established and where urban life was strongly influenced by Buddhism and rural life was strongly influenced by local animistic cults. Buddhism already was in decline by the time of the Islamic conquests, and doctrinally there were few obstacles preventing Buddhists from embracing Islam. Bengal had been one of the last holdouts of royally sponsored Buddhism in India, and even where the population had adopted Hinduism, caste divisions were fairly rudimentary and rules concerning ritual purity and pollution nowhere

near as strictly enforced as in northern India. Bengali religious life was relatively unorganized, earthy, personal, and emotional, all elements that tended to promote conversion to Islam especially since Islam was brought to Bengal not by central Asian warriors interested in tax collection but instead by charismatic Sufi mystics who wanted to develop agricultural lands to support their religious communities. Local groups found it difficult to resist Islam, which on the one hand was associated with powerful new political forces and international commerce and on the other hand possessed a syncretistic side that allowed local deities to be reinterpreted, in an Islamic context, as a *jinn* (spirit).

In many ways, the process of conversion to Islam in Bengal was not unlike similar processes that had occurred earlier in the Punjab and Kashmir, but whereas the latter places were strongly influenced by central Asian culture, Bengal retained its own peculiar traditions and Islamized them in its own way. One of the most common methods of Islamization, one found not only throughout South Asia but, in fact, all over the Islamic world, was the simple identification of Allah with existing locally revered supernatural powers. In Bengal, for instance, Allah often was equated with Prabhu, the Supreme Deity, and over time these pre-Islamic entities came to be redefined on Islamic lines. When it came to assimilating local goddesses, the divine feminine represented by Isamati, Sita, or Radha—all forms of the Earth Goddess—were equated with prominent women of the prophet Muhammad's life, such as Amina or Fatima. Bengali Muslims, for instance, often referred to Fatima as the “mother of all” except her own husband, 'Ali.

Islam thus spread not by destroying Hinduism or animist religions but by taking them over, one element at a time, through a simple process of equating Islamic beliefs and practices with things that local people already believed or did. The result was the formation of a uniquely Bengali form of Islamic life, rooted in peasant ways and concerns.

As Islam took root in the hearts of people in the eastern districts of Bengal, around Dakha, especially in the seventeenth century, Mughal administrators did their best to extend royal patronage (and thus control) to the hundreds

➤ THE EASTWARD SHIFT OF THE GANGES, FRONTIER SUFISM, AND CONVERSION TO ISLAM

In the thirteenth and fourteenth centuries, the main channel of the Ganges flowed into the Bay of Bengal near what is now the town of Hooghly, near Calcutta, and the coastline lay much farther inland than it does today. The landscape extending eastward was a thinly populated semiwilderness of mud banks, marshes, mangrove swamps, and jungles. Here tribal societies only barely removed from a Neolithic level of technology supported themselves as fishermen, hunter-gatherers, cultivators, and itinerant traders. Throughout the early modern period, however, the main channel of the Ganges shifted eastward, leaving a network of narrow creeks, oxbow lakes, and low-lying marshy alluvial islands in its wake. Today a small portion of this landscape, the Sundarbans, remains, reminding us of the mangrove jungle that quickly grew up as the Ganges moved year by year, creating what has been called the Bengal “frontier.” The river also created rich new lands for farming, of course, and naturally attracted agrarian colonists. Tribal peoples furthermore were persuaded by these ecological changes to settle down as farmers, a choice further stimulated by the activities of Muslim missionaries. As a “frontier,” eastern Bengal was attractive to Sufis, or Muslim mystics, whose spiritual practices often brought them into collision with orthodox Muslims. Many mystics therefore deliberately sought out politically unorganized or marginally Islamic areas where they could experiment with different paths of personal spiritual development without risking censure or persecution.

—James Hoover Frey

of village mosques that Sufi pioneers had established during the preceding centuries. It was clear to all outsiders, however, that Islam in Bengal was very much a folk religion, much like Islam in sub-Saharan Africa, for few Bengalis were conversant in Arabic or Persian, the languages of “classical Islam,” or even in the Turkic languages. Muslim intellectuals usually preferred to express themselves in the medium of Arabic or other “learned” languages, as doing so allowed them to lay claim to *ashraf*, or gentleman status. However, many poets in Bengal, such as Abd al-Nabi,

opted to use the less acclaimed but more direct language of the masses. Nabi wrote that “I am afraid in my heart lest God should be annoyed with me for having rendered Islamic scriptures in Bengali. But I put aside my fear and firmly resolve to write for the good of the common people.” Significantly, however, Bengalis themselves did not view Islam as a foreign cultural force, for through the process of identifying Arab spiritual ideas with local equivalents, they had made Islam their own and had rooted this faith from the desert in their own watery world.

—James Hoover Frey

Bibliography

- Datt, Kalikinkal. *Studies in the History of the Bengal Subah, 1740–70*, Vol. 1, *Society and Economy*. Calcutta: University of Calcutta, 1936.
- Eaton, Richard M. *The Rise of Islam and the Bengal Frontier, 1204–1760*. New Delhi: Oxford University Press, 1994. [Abd al-Nabi quoted on p. 278.]
- Sarkar, Jadunath, ed. *History of Bengal*, Vol. 2, *Muslim Period, 1200–1757*. 1947; reprint, Patna: Janaki Prakashan, 1977.

The Columbian Exchange in Southeast Asia

Unlike other world regions in the emerging post-1500s economic world system, Southeast Asia did not immediately absorb plants and animals from the Americas at the same level as Europe, East Asia, and the Middle East. The biological influence of the global Columbian Exchange did eventually have a significant impact on Southeast Asian economies and societies, albeit at a gradual rate given the increased cultural contact by Portuguese and eventually Dutch, French, and English merchants penetrating along the southern coast of the Indian subcontinent. Over the next several centuries, Southeast Asian dietary habits and agriculture did benefit from the influx of peppers, manioc, and other New World crops. However, this occurred at the expense of the gradual loss of sovereignty of the various states of the subcontinent to the encroachments of European commercial expansion.

As part of the trade networks of early modern East Asia, contact with the adjacent Chinese realms before 1500 determined the trade and commerce of the kingdoms of early modern

Southeast Asia. These realms also maintained considerable commercial contact with the Indian subcontinent. While both the Chinese and Indians were able to maintain trade and a high level of cultural influence in Southeast Asia, they were kept at arm's length militarily by regional states, such as Annam (Vietnam) and Thailand. The tropical and subtropical climatic and geographical characteristics of Southeast Asia made it a lucrative region for rice production, which became important for domestic consumption and for Indian Ocean trade. Many of the local dishes in Southeast Asia reflected regional influences from both China and India, respectively, consisting of rice dishes infused with spices.

As the Portuguese penetrated into Indian Ocean trade networks in the late 1500s, they brought crops from the Americas that they traded with Chinese and Indian merchants along their newly established trade posts in the region. Many of these merchants plied these new products into their markets in Southeast Asia, thereby introducing many of them to the palates of locals. Also, multiple varieties of chili peppers from South America were introduced in Southeast Asia by the Portuguese and incorporated into spicy dishes. Traditionally, such local dishes were made with regionally available spices attained through trade with the Indian subcontinent. After the initial introduction of peppers, over several centuries curry gradually incorporated chili peppers and thus made local regional dishes more flavorful to local palettes. However, staple crops such as maize, manioc, and peanuts did not gain prevalence in the region until well into the nineteenth century. Similar to the incorporation of these crops in China, these crops were put into marginal soils that had initially been left uncultivated. However, in South Asia the incorporation of these crops took several centuries, remaining marginal or nonexistent in the diet of locals, as they were not accepted by regional populations as staple crops, given the long-established reliance on rice.

Southeast Asian staple crops were introduced by the Dutch in the mid to late seventeenth century as they gradually displaced Portuguese political and economic influence in the region. However, most of these spices were not from the New World but instead were local

➤ CHANGES IN EAST ASIAN CUISINE

As a result of their contact with the trade networks centered on Southeast Asia, the Columbian Exchange contributed to changes in early modern east Asian cuisines in China, Japan, and Korea. While they had little to no direct contact with European traders (mostly Dutch and Portuguese merchants) during this period, they were still exposed to New World crops, which were gradually included in their myriad regional cuisines. In China, the sweet potato effectively became a major staple crop after its introduction in the mid-1500s. Spices, most notably peppers from the Americas, also found their way into east Asian dishes. Other items like potatoes, tomatoes, and peanuts were incorpo-

rated into regional cuisines over a longer period of time. Cultural exchanges with Southeast Asia and South Asia and greater demand for products from these regions that had been established in prior centuries ensured that exposure to new crops and new dishes would have long-term developments in cuisines, much like the potato in Europe that was slowly adapted in relation to economic needs of the populace. For example, while rice remained a major source of protein as an East Asian staple during this period, maize and sweet potatoes gained in popularity, as they were seen to be amenable to regional soils in times of hardship and famine.

—Abraham O. Mendoza

spices produced en masse. As the Dutch East India Company (VOC) penetrated Southeast Asia in the late seventeenth and early eighteenth centuries, particularly Indonesia, it also contributed to the establishment of cash crop plantations, finding the climate and soil of various tropical regions ideal for their cultivation. Mainland Southeast Asia found itself mostly free from European incursions and political domination until the nineteenth century but was still subjected to commercial transactions by European traders, who continued to introduce New World crops over the centuries.

Much of the biological exchange that Southeast Asia experienced, given the widespread diffusion of American crops after European settlement known as the Columbian Exchange, did in fact occur over a long period of time spanning several centuries rather than in the short term. Similar to developments in Europe and China, the Southeast Asian region was slow to acculturate to American crops unless severe climatic or drought conditions necessitated doing so. Moreover, European trade and colonialism played a larger role in the infusion of American crops than local innovations perhaps with the exception of American spices, which were incorporated into Southeast Asian cuisines. However, in the long term, as a world region Southeast Asia developed intense cultivation of American staple crops such as peanuts, manioc,

and maize in regions where soil and climatic conditions permitted.

—Abraham O. Mendoza

Bibliography

- Crosby, Alfred W., Jr. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Praeger, 2003.
- Pilcher, Jeffery M. *Food in World History*. New York: Routledge, 2006.

The Columbian Exchange and the Mediterranean

Humans have been intentionally dispersing plants and animals from their native habitats at least since the advent of agriculture and domestication about 10,000 years ago. In prehistoric times, cereal crops like barley traveled with human populations westward from the Fertile Crescent to Europe. Throughout history, broad exchanges of species used for food or labor, along with attendant microorganisms, have followed the movement of peoples and empires. One might speak of an Alexandrian Exchange when spices from Asia were introduced to the West and an Islamic Exchange when foods such as rice, lemons, spinach, artichokes, and eggplant could be found cultivated from Spain to India. Such plants were especially easy to grow in regions at a comparable latitude and similar topography and climate.

➤ MEDITERRANEAN CUISINE

Imagine Italian cuisine without tomatoes and peppers or Spanish cooking without dried chili powder and tortillas. This was the case long after direct contact with the New World. In fact, most American species of plants and animals did not find a place in European kitchens until well over a century or two after 1492. At least they are not recorded in cookbooks, which were mostly meant for the wealthiest people in society. There is some evidence, however, that poorer people made use of the new plants shortly after their arrival. Botanical and dietary sources sometimes suggest that only out of dire necessity would one consume tomatoes or corn, which eventually served as cattle fodder throughout southern Europe but was also dried and ground and eaten as polenta. In some regions where corn became a staple, the nutritional deficiency called pellagra resulted because the grains were not soaked in lye or ashes, a process called nixtamalization, common in Mexico and important for making vitamins digestible. In any case, the

association of maize with poverty remained a strong one.

The first recipes including tomatoes and chili peppers appear in Spanish-ruled Naples at the very end of the seventeenth century in the cookbook of Antonio Latini, who offers what is essentially a tomato salsa. They also appear in various stews as a flavoring agent. Cooked tomato sauces did not appear in cookbooks, such as Vincenzo Corrado's, until the eighteenth century and were not paired with pasta until the nineteenth century.

Potatoes, New World beans, and squash also had a major impact on Mediterranean cuisine. The former were cooked into casseroles or dumplings called gnocchi; the latter were cooked in countless ways, exactly as Old World beans and gourds had been.

Despite these new ingredients, the foundations of Mediterranean cuisine remain the same as they were in ancient times: bread made of wheat, olive oil, wine, cheese, and native species of fish and cattle.

—Ken Albala

There was no exchange quite so momentous, however, as that occurring after 1492 when the Eurasian and African continents were for the first time in history linked to the Americas. Not only were European crops such as wheat and animals like pigs and cattle transported to the New World, but many New World species were brought to the Old World.

These new species first arrived in Spain and southern Europe on the boats of the earliest explorers. Initially, foods such as tomatoes, corn, yucca, and chili peppers gained interest only as botanical curiosities. Most Europeans avoided them as food, especially those plants with well-known poisonous relatives, like tomatoes in the *Solanaceae* family. Only those plants and animals that resembled familiar European species and could be used in a familiar culinary context were readily adopted. New World species of beans, those now classified as *Phaseolus*, were planted in the mid-sixteenth century as were squashes, which reminded people of Old World gourds in the *Lagenaria* family. These older foods were almost completely displaced

by zucchini and pumpkins. Turkeys, resembling familiar birds such as peacocks and pheasants, were also enthusiastically eaten by sixteenth-century diners. Guinea pigs also enjoyed a fleeting popularity. Corn gradually replaced the millet-based polenta or porridge common in Spain and northern Italy and elsewhere in the former Roman empire, such as Romania. It took many more years for tomatoes and, later, potatoes to become common foods in Europe.

The long-range consequences of these foods include increased food production, particularly on what was marginal land, and consequently dramatic growth of the European population. While many factors were ultimately responsible for the steady demographic increase after the sixteenth century, the new easily grown crops from the New World, which yielded a dependable supply of food, certainly played a role.

Explorers were also interested in finding spices and drugs, and they long believed that the New World would provide a direct passage to Asia and the profitable spice trade. Eventually they did find plants that they believed would be

useful in pharmacy, among them sassafras, sarsaparilla, and guaiac or Jesuits bark. Many of these were later adopted for purely recreational purposes or found a place as flavoring agents rather than medicines. Chocolate is the best known of these plants, but even tobacco was first used both medicinally and for pleasure. Among spices, only vanilla, and to a lesser extent allspice, became widely used in the Mediterranean.

While New World foods gained a mixed reputation in the Christian western Mediterranean, the predominantly Muslim eastern Mediterranean adopted them much quicker and more enthusiastically. This may have had something to do with a hotter and more arid climate, closer to that of Mexico. But this cannot explain why some items spread rapidly outside the Mediterranean basin. Chili peppers, for example, were grown and widely used in Hungary long before they were in western Europe. Asians adopted them even quicker.

Plants and animals were not the only creatures involved in the transatlantic exchange. Germs—viruses and bacteria—also made the trip, usually within the bodies of explorers themselves. While there is little doubt that diseases such as smallpox and measles, exported from Europe, devastated American populations, there is still considerable debate over which diseases were imported from America. In the sixteenth century syphilis appeared to be a new disease spread by sailors who had been to the West Indies. Its virulence suggested that it was relatively uncommon, though its exact origin is still in doubt.

The exchange of species from the New World to the Mediterranean would be merely one link in the chain of what would eventually become a truly global economy in which plants and animals are regularly exchanged from every continent.

—Ken Albala

Bibliography

- Capatti, Alberto, and Massimo Montanari. *Italian Cuisine: A Cultural History*. New York: Columbia University Press, 2003.
- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- Freedman, Paul, ed. *Food: The History of Taste*. Berkeley: University of California Press, 2007.

Kiple, Kenneth F. *A Movable Feast: Ten Millennia of Food Globalization*. Cambridge: Cambridge University Press, 2007.

The Columbian Exchange and Northern Europe

The pattern of exchange between the Americas and Northern Europe following 1492 was somewhat different than that experienced by the Mediterranean. There were early voyages to North America sponsored by the English and French beginning only a few years after Columbus, led by John Cabot and later Jacques Cartier. The majority of expeditions, however, took place long after Spanish settlement. Northern Europeans also focused more on what is today Canada, the United States, and the Caribbean, and successful settlements were not founded until the early seventeenth century in places such as Jamestown, Quebec, and New Amsterdam. By then, it is true that beaver pelts were regularly shipped to France to make fashionable hats, cod was being fished from the grand banks of Newfoundland down the coast of New England, and tobacco plantations would soon be exporting large quantities back to northern Europe, but these remained items of export and had no significant impact on the ecology of Northern Europe, though they naturally had a great impact on the Atlantic economy and on North American ecosystems.

Of equal importance is the fact that few colonists returned to Europe with the intention of transplanting native species. Normally they were more interested in exploiting local resources and exporting them or even importing Old World plants to be grown on colonial plantations using slave labor, as was the case with cotton and sugar.

The exchange of plants and animals indigenous to the Americas was thus far less dramatic than with southern Europe. This is partly because North America offered fewer species and few that could be viably grown in northern Europe, but it may also be related to a greater culinary conservatism among northern Europeans. Though corn, squashes, and beans were cultivated extensively by American Indians and colonists, few of these were grown in

➤ NEW WORLD FOODS IN EUROPE— TOMATO AND POTATO

The development of cuisine in northern Europe betrays little evidence of the Columbian Exchange immediately after 1492. It was not until a century later that Shakespeare mentioned potatoes (in *The Merry Wives of Windsor*), by which he meant sweet potatoes. These sweet potatoes made their way into English cookbooks in the course of the seventeenth century but never became a major article of food. It was only the regular potato, from Peru, in the course of the eighteenth century that had a dramatic impact on the European diet, after conscious promotion by figures such as Parmentier in France and Frederick the Great in Prussia. In the long term, potatoes found a prominent place in every northern European cuisine, from the Irish stew to Scandinavian potato salads to soups in eastern Europe, not to forget the french fry. Most other New World plants were scarcely noticed in northern Europe, at least until the twentieth century and with the advent of refrigerated transport. The only New World plant that Europeans have adopted with enthusiasm perhaps even rivaling that of its place of origin is chocolate. But this is not, of course, grown in Europe.

—Ken Albala

northern Europe. Interestingly, it was only the green bean that became so acclimated as to be called the French bean. Sweet potatoes, called potatoes of Virginia, were known in England in the sixteenth century and, interestingly, had a reputation as an aphrodisiac. It was not until much later, though, that regular potatoes were grown there and particularly in Ireland. Only in the eighteenth century were potatoes grown in France and Germany, but their impact thereafter was stupendous, particularly among the poverty stricken, who came to depend on them for the bulk of their calories. This would have disastrous results in the mid-nineteenth century in Ireland, Belgium, and elsewhere when blight hit the potato crop and caused widespread famine. This led to a massive migration of people from Ireland to North America.

Other New World plants were less enthusiastically adopted. Tomatoes and peppers, which

do not grow very well in colder climates, found practically no place in the northern European diet until the twentieth century. The same is true of corn, which was normally used to feed animals. The sunflower, native to North America, had some impact. The roots of one species, the Jerusalem artichoke or topinambour, enjoyed a brief vogue, and much later the seeds and oil became an important crop. American species of strawberries replaced smaller European varieties. Other indigenous North American products such as pecans, maple syrup, and cranberries were consumed only in the colonies.

By and large and with the exception of the potato, which is now universally consumed as a basic staple ranking only behind bread, it is safe to say that northern Europe was one of the places on earth least affected by the Columbian Exchange. There were no comparable large-scale invasions of livestock, pathogens, weeds, or people for that matter, certainly nothing like what traveled in the other direction. The exchange, although certainly not one-sided, was nonetheless unequal. Regarding human populations, the first Native Americans brought to Europe for display quickly succumbed to disease. Today there is practically no Native American population in northern Europe.

—Ken Albala

Bibliography

Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 2003.

Pilcher, Jeffrey. *Food in World History*. New York: Routledge, 2006.

The Columbian Exchange and North America

Separated for millennia from the Eurasian continent, the flora and fauna of the Americas evolved in accord with prevailing local conditions. The mammals, birds, lizards, snakes, trees, bushes, and grasses that took root corresponded to similar plants and animals in Europe but nevertheless remained distinct species. It was this unique ecosystem that Europeans confronted when they first began exploring North America in the fifteenth century.

European impact on North American ecology was profound. Diseases brought from the Old World to the Americas devastated local human populations. Waves of European settlers and the economic exploitation of the New World's resources also slowly reshaped the land, as well as its flora, and fauna. Thus, to give one example, wealthy, urban Europeans liked hats and beaver fur—smooth, water repellent, and consisting of hundreds of small barbs—suited the hatmakers' needs perfectly. By 1600, beaver skins had become the hatmakers' preferred material. Correctly assuming that Native Americans knew how to locate and capture beavers, the Europeans began offering to trade for beaver hides. This link to the European market had disastrous consequences for the beavers who quickly disappeared from the coastal regions from the St. Lawrence River south. The ecological diversity the beaver ponds created and their role in holding back floodwater was lost along with the beavers.

While Europe was a land of settled agriculture and land ownership, where the Pilgrims came ashore—far from their land grant—land abounded and had no owners, at least not in the European sense. The Pilgrims' first official act was to draw up a "compact" to create a government, which then proceeded to allocate land to the settlers. Once on land designated as theirs, families built homes, cleared fields, and put in vegetable gardens. Within a few years, more animals began to arrive—cows (it took three years before the first bull and three heifers arrived), oxen, pigs, sheep, goats, chickens, and horses. With land aplenty and little time to gather food for themselves, let alone for their animals, these early settlers let their livestock roam free. The pigs flourished the most in this new environment. Left on their own, they roamed the forests, feasting on acorns, wild tubers, and other roots. Cows and horses were also left to wander and scavenge food where they could. As they were more vulnerable to predators, sheep and goats were kept closer to home. To keep the cows, horses, and pigs from tramping down or digging up plantings, fields were fenced. Pigs dug up the forest, while cows and horses trampled the ground, compacting it in the process. As herding animals from a wet climate, they gathered,

usually by streambeds, eating the native grasses until nothing was left but bare ground, compacted but still subject to erosion.

As their animals began to change the land, the settlers began to alter the landscape by importing flora from home; other plant species arrived on their own. The colonists wanted flour, particularly wheat or rye flour, for their bread and for market. Wheat and rye flour sold in the markets of Europe, so that is what the early settlers assumed they would have to grow to be commercially successful in this new world. Wheat grew in cleared fields. Granted land possession by their new government, the early settlers imported oxen to pull tree stumps from their new fields. They also built wooden flats or sleds on which they loaded the stones that littered the ground. With the aid of oxen, they transported these stones to the fields' edges and used them to construct what would become the classic New England stone walls. With the fields cleared, the colonists planted wheat and rye.

Closer to their homes they planted vegetables, and in the lowlands they cut down the maples and birches and planted fruit trees brought from home—first apple trees of many varieties, then pear, oranges, peaches, plums, and cherries. But as they planted the seeds they painstakingly brought or had sent from home, they also planted what they had not intended. Weeds also arrived as stowaways in the bags of seeds, in animal feed, and clinging to clothing, buckets, and barrels. Soon, around each English settlement, there were not only fields of wheat and rye, but also patches of dandelions, chickweeds, bloodworts, and nightshades. Noticing the prevalence of these new and exotic plants where the Europeans settled, the Native Americans labeled them "Englishman's Foot." These invading plants were well adapted to surviving in disturbed ecosystems. Broadleaves, like dandelions, thrived in open, plowed fields and overgrazed pastures. As European animals ate the existing native grasses such as broomstraw, wild rye, or marsh grass (spartinas), the invading weeds moved in. Ragweed, an indigenous plant held in check by forest cover, took advantage of the opening of fields and spread rapidly. Other native grasses and plants fared poorly under the impact of European animals.

As the native flora were eaten and trampled, Old World grasses, having evolved along with domesticated animals and capable of quick rooting and seeding in tough, trampled ground, spread in their stead. When the Europeans first built their settlements, open ground was scarce and confined mostly to abandoned Indian fields and meadows. When domestic animals began arriving, they were turned out onto these fields and meadows. The settlers considered the indigenous grasses inferior to those back home. As the animals overgrazed these spaces, newly imported grasses, such as bluegrass and white clover, grew up. Initially these plants arose as volunteers, having come over in animal fodder. Although the appearance of the “better” haying and grazing grasses pleased the European settlers, their animals’ ever-increasing demand for food could not be satisfied by these “volunteers.” As a result, farmers were soon clearing more pastureland to sow fields with “English hay.” But the demand for animal food increased too rapidly for the farmers to keep pace by clearing land for pasture and haying. This forced most settlements to remain close to areas with large tidal marshes or extensive meadow wetlands where fodder could be harvested, even if by necessity from “inferior” native grasses.

Roaming domesticated animals deprived farmers’ fields of precious nutrients. As Europeans cleared stones and stumps from their fields and began planting, they faced the problem of declining productivity as each year more nutrients were taken up in the planted grain and then removed from the field. Some early colonists solved this problem by abandoning fields and letting them lie fallow for several years before returning the fields to crop production. Practicing a bush fallow strategy of letting their fields lie fallow for six or seven years, farmers were virtually guaranteed to face a field rife with bushes, brambles, and a tangle of roots at the end of the fallow period. These fields could not be plowed or dug by hand. Animal power was necessary to pull through the entangled roots. To abandon a field and let it sit idle for six or seven years required that a farmer own a large parcel of land. But because farmers ultimately passed property on to their children, there was soon too little land to let so much of it sit fallow.

Animal manure offered a way out of the land scarcity dilemma. Loaded with nitrates, animal wastes could restore fields. But as long as the animals wandered freely, grazing wherever they found food, their wastes were scattered throughout the countryside. Because edible grasses flourished by waterways, meandering livestock often deposited their wastes alongside rivers and streams. The wastes and the nutrients contained within them would then typically be washed downstream with the next rain. And even if the wastes were not washed away, the farmer could scarcely tramp around the countryside collecting cow, horse, or oxen dung.

Containing animals in fenced pastures more successfully contained their wastes. After harvesting the grain from fields with declining productivity, farmers would seed them with “English hay,” bluegrass, or white clover. Once the grasses came in, animals could be turned out on the fields, and their manure would add nutrients to the soil. With such a plan, rather than having to wait six or seven years, farmers could replant their fields with grain crops after just two or three years. But this strategy also involved more work. Fences had to be well built to make sure the animals did not wander off. Animals confined to pasture fields ate away grass cover. They also trampled and compacted the earth, which made it more difficult for grasses to reseed or resprout. Thus, farmers increasingly needed to plow and reseed or face the problem of open dirt subject to erosion. The compacted ground was also more difficult to plow and demanded the aid of draft animals.

An imported economy that included ranching in the south and southwest introduced other problems. Spanish settlements along the Rio Grande imported cattle into what is now Texas sometime after 1659, including herds of Longhorns that would spread slowly eastward across the state. It was in Florida that the range animal had its greatest impact on the southern environment, however, as not all lands of the interior were savannas or treeless plains as was the case in many parts of Texas and Oklahoma. In Florida, fire was also likely used by ranchers to produce larger areas of grassy vegetation, although reputable historical evidence for the practice during the early colonial period is relatively

sparse. Even if fire was not used regularly by ranchers, the cattle would have themselves created greater expanses of treeless territory as well as helped maintain that which had already been deforested earlier by Spanish colonists or native Indians. When herds of cattle were ranged in forested areas, they would have eaten saplings and shrubs, creating a more park-like effect than had ever existed before in those areas. Thus, over time, Spanish herding practices—which also employed Indian and African labor—would have most likely created “a decrease in the diversity of hardwood forests,” and at the same time caused a noticeable increase “in the area of natural or artificial grasslands.”

Domesticated animals provided the family with an important source of protein but in the early years of settlement, when domesticated animals were in short supply, European settlers obtained protein the same way Native Americans did—they hunted. And they hunted the same animals: deer, moose, ducks, geese, pigeons, and ground fowl such as turkey and grouse. They hunted with such intensity that within two generations deer and moose disappeared from settled areas. Turkey and other ground fowl soon followed. Passenger pigeons were so prolific that they persisted for another hundred years before being eliminated from the area. The passenger pigeon population may have increased in the early seventeenth century as the deaths of Native Americans that had set up their villages in river valleys opened up new areas for the pigeons to roost. The appearance of huge flocks of passenger pigeons that darkened the skies of the Northeast for days were not yearly occurrences. The massive flocks would arrive irregularly, usually once every seven or eight years, in what were known as “pigeon years.” Pigeon populations may have held out longer than those of deer and moose, but declining numbers of game soon became a reality, forcing families to depend even more upon animals they raised.

European settlers had a lasting impact on the interaction between humans and nature. In northern Florida this meant that by the mid-seventeenth century, Apalachee and Timucuan Indians would be routinely cultivating European fruits and vegetables and even herding Spanish cattle. And even for those Indians who would

➤ EUROPEAN FOOD IN THE AMERICAS

American cuisine provides the most tangible evidence of the global transfer of foods after 1492. Each wave of European settlers carried over the plants and animals they knew and favored, but they also integrated native species into traditional foodways in ways unique to North America. In Canada, French settlers introduced pigs, which they cured into hams, and yellow peas and wheat, which they used for bread and pancakes. But they flavored customary foods with local maple syrup and added native wild rice as a sidedish. The Spanish settlers brought cattle for familiar beef dishes but combined local tomatoes and chilies and wrapped them in Eurasian wheat flour tortillas. Africans brought rice to the Carolinas along with crops such as okra. Consequently, regional cuisines in North America contain both New World and Old World ingredients. For example, in Virginia, Brunswick stew traditionally contained local squirrel or chicken along with tomatoes and corn but also European onions and a slab of salt pork. In New England, a simmering pot may have contained Old World beef pot roast, carrots, and onions as well as New World potatoes. The combination of species from different continents became second nature across North America. There is perhaps no better example of this tendency than the Creole and Cajun cooking of Louisiana. One will find French andouille sausages and boudins, French techniques such as a roux of flour and oil or butter, and celery and onions combined with African okra or native file powder (ground sassafras leaves), Asian rice or chicken, and chili peppers and tomatoes from Mexico.

—Ken Albala

continue growing traditional crops alongside the new arrivals, increased demands on the local ecosystem required adopting a much more intensive slash-and-burn agriculture. To more rapidly create fertile fields for cultivation, missionized Indians would first girdle large trees on forested tracts, burn them to release important nutrients, and then repeat the process again elsewhere after the soil was exhausted. According to environmental historian James Miller, the practice made it necessary for entire mission villages to relocate to areas that had not been

cleared, producing, over time, a pattern of “old fields” recognizable to British surveyors a century later.

By the mid-seventeenth century, the greatest landscape change occurred as the direct result of tobacco growing, which started on a grand scale after 1620, the year more than 60,000 pounds (27,000 kilograms) of the cured leaf were shipped directly to London. Just seven years later, 500,000 pounds (227,000 kilograms) of the cured weed were exported from Virginia, to ports in both Europe and the West Indies. The lure of growing tobacco remained irresistible to the colonists even though growing the plant ultimately proved detrimental to the thin topsoils of the Atlantic Coast, wearing them out in four or five years. Even when corn was grown on worn-out tobacco fields, the yields were not generally sufficient to stop the forest clearance process and the constant movement of settlers from old to new ground. Although not all of the timber cutting can be directly attributed to tobacco cultivation, by the end of the seventeenth century, nearly a half-million acres (over 200,000 hectares) were deforested in the Virginia colonies alone, and historian Kirkpatrick Sale noted that such species as “white oak, black walnut, and white cedar ... were effectively exterminated.” The residual ecological effects of timber cutting were no less severe, including the deterioration of beaver dams and ponds, the lowering of water tables, increased floods and topsoil runoff, siltation, and stream bank erosion. Tobacco cultivation also pushed the English even farther inland, where they could engage in other economic pursuits, including trapping fur animals for peltry. Having exhausted the supply of beaver in New England by the mid-1620s, enterprising fur-trappers now had their sights on the streams and forests west of the Chesapeake Bay, habitat that still contained large numbers of beaver, mink, and muskrat.

—John T. Cumbler and Donald E. Davis

Bibliography

Bennett, Deb, and Robert Hoffman. “Ranching in the New World.” In *Seeds of Change: Five Hundred Years Since Columbus*, edited by Herman J. Viola and Carolyn Margolis. Washington, DC: Smithsonian Institution, 1991.

Cumbler, John T. *Northeast and Midwest United States: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2005.

Davis, Donald E. *Southern United States: An Environmental History*. Santa Barbara, CA: ABC-CLIO, 2006.

Miller, James J. *An Environmental History of Northeast Florida*. Gainesville: University of Florida Press, 1998.

Sale, Kirkpatrick. *The Conquest of Paradise: Christopher Columbus and the Columbian Legacy*. New York: Knopf, 1990.

Captivity Narratives—German Settlers among American Indians

Throughout the colonial period of North American history, white settlers’ encroachments on American Indian lands brought frequent conflicts. For European settlers, the possibility of kidnapping and captivity was an intensely feared possibility. Those who experienced captivity contributed to the emergence of a literary genre that typified colonial American history: the captivity narrative.

Taking captives had long been a customary technique of Native American warfare. Indians seized captives for various reasons: to seek revenge, to obtain ransom, or to replace relatives killed in intertribal or colonial wars or who had died of European diseases. The actual number of Indian captives is speculative because most individual fates remained unknown. Hundreds are known to have died en route or in captivity, many were sold or ransomed to the French or English, some converted to Catholicism and stayed in French Canada, and some were adopted, assimilated into their captors’ culture, and refused to return. Only a few of those who came back left accounts of their captivity.

Those ex-captives who either penned their experiences themselves or, more frequently, dictated them to others created the genre of the American Indian captivity narrative in American literature. Mary Rowlandson’s *Sovereignty and Goodness of God* (1682) is considered the first captivity narrative and a landmark in early American literature. Tales of bloody encounters with Indians enjoyed enormous popularity and were widely read on both sides of the Atlantic.

Most captives were of Anglo-Saxon origin, and most narratives were recorded and published in English. However, Indians abducted non-English speakers as well, and there are many captivity texts in languages other than English. Several narratives in German and English as well as many historical documents reveal that German settlers were among those snatched by Indians.

The first German in Indian captivity was presumably Hans Staden from Homberg in Hesse. In the mid-sixteenth century he sailed to the coast of Brazil, where he was caught by the Tuppin Imba, a tribe supposedly practicing cannibalism. Staden managed to survive for months among his captors before escaping to freedom. His account—*Wahrhaftige Historia und Beschreibung einer Landschaft der wilden nacketen grimigen Menschenfresserleuten, in der Neuen Welt Amerika gelegen (True History and Description of a Country of Wild, Naked, Terrible Man-eaters Who Dwell in the New World Called America)*—was first published in 1557 in Marburg, Germany. It became a best-seller and was reissued in many languages, including English, French, Portuguese, and Dutch. *Wahrhaftige Historia* probably represents the earliest Indian captivity narrative, appearing 125 years before Rowlandson's and anticipating many of the features of the captivity genre. It also bears similarities to John Smith's account of his rescue by Pocahontas in his *General History of Virginia, New England, and the Summer Isles* (1624), the most famous captive story of an English man. Like Smith, Staden presents himself in the heroic mode, adventuresome and full of bravado.

Tales by or about Germans in Indian captivity became more frequent during the eighteenth century. A famous story is that of the Leininger family, who had migrated from Reutlingen in Württemberg in the 1740s and settled in Pennsylvania. During the Penn's Creek Massacre of 1755, Allegheny Indians raided the family homestead and murdered the father and one son. While the mother and another son were absent at the time of the attack, the daughters, Barbara and Regina, 10 and 12 years old, were carried away into the wilderness. Barbara and another captive, Maria Le Roy, escaped in 1759. The account of their captivity and daring getaway was



New England colonist Mary Rowlandson was taken captive by Native Americans in 1676, during King Phillip's War. She was the first to publish an account of her experience, in 1682. The genre soon became known as "captivity narrative." (North Wind Picture Archives)

published, simultaneously in German and English, in the year of their escape (*Die Erzählungen von Maria le Roy und Barbara Leininger, Welche vierthalb Jahr unter den Indianern gefangen gewesen, und am 6ten May in dieser Stadt glücklich angekommen*, or *The Narrative of Marie Le Roy and Barbara Leininger, for Three Years Captives among the Indians*). Regina, separated from Barbara, remained with the Indians for nine years. She was among the redeemed captives whom Colonel Henry Bouquet forced the Indians to relinquish in 1764. By the time she gained release, Regina was an adult who had forgotten her mother tongue and abandoned European ways, and so it was likely that her own relatives would not recognize her. But mother and daughter recognized each other through the words of a German hymn. Evolving from an eighteenth-century German exemplum of Lutheran devotion in times of affliction, Regina's story has been told and retold, many versions mingling fact with fiction. From Heinrich Melchior Mühlentberg's initial account, recorded in his diary of 1765 and published in *Hallesche Nachrichten* in 1769 to a nineteenth-century American tract for Lutheran Sunday schools (Reuben Weiser, *Regina, the German Captive*, 1860) to a twentieth-century

► HERMAN LEHMANN'S STORY

Like many other ex-captives, Herman Lehmann had considerable difficulty reintegrating into white society. The following incident from Herman's life, narrated in *Nine Years among the Indians*, is symptomatic of the emotional turmoil many so-called white Indians faced after being returned to their culture of origin:

"He had forgotten his mother tongue, and could not speak English. He sought every occasion to shun the company of others, and when assigned to a clean feather bed in which to sleep, he refused, preferring to sleep on the ground with only a blanket for a covering. . . . It was a difficult matter to induce him to wear clothing, and oftentimes he would doff the suit furnished him, paint himself, and with leggings, breech-clout and feathers, appear among the hotel guests in all the barbaric panoply of a Comanche warrior.

A few weeks after his return, a protracted meeting was being held under a brush arbor in Loyal Valley. Herman viewed the proceedings from a respectable distance, and his amazement was extreme. He finally concluded the whites were having a rain dance, and one day at the 11 o'clock service, when religious feeling became intense and singing and shouting was at its height, Herman dashed into the altar with his war club, and engaged in a war dance that had a startling effect. His brothers seized him and led him away, and the service closed without the benediction."

—Katrin Fischer

Source

Herman Lehmann and J. Marvin Hunter, *Nine Years among the Indians, 1870–1879* (Austin, TX: Von Boeckmann-Jones, 1927).

novel for adolescents about cultures in conflict (Sally Keehn, *I Am Regina*, 1991), the story has crossed the Atlantic back and forth.

Another example of the colonial American captivity narrative was "Erzählung Eines unter den Indianern gewesener Gefangenen" ("Narrative of an Indian Captive"), published in the *Neu-eingerichteter Americanischer Geschichts- und Haus-Calender (New American Historical and Domestic Almanac)* in 1762. The narrative depicts the story of Abraham Urssenbacher, who had migrated to Heidelberg Township, Pennsylvania, in 1759 and was serving as a soldier when Heidelberg was attacked. He was captured but managed to escape; his wife, infant daughter, and other relatives were slaughtered in the attack, however. His narrative, written in the first person, focuses on the appalling details of his survival alone in the wilderness.

In 1809 *Merkwürdige und interessante Lebensgeschichte der Frau von Wallville, welche vier Jahre lang an einen Irokesen verheyrathet war (The Remarkable and Interesting Life Story of Mrs. von Wallville, Who Was Married to an Iroquois for Four Years)* was published. The book supposedly presents the first-person

narrative of a certain Maria von Walwille, who recounts her captivity among the Iroquois, escape to freedom, and later marriage to Count Wallville. And although widely published and retold, it is probably fictitious, based on a tale that had appeared in 1799.

Among the many children who were captured on the Texas frontier during the nineteenth century, three German Texans stand out: Rudolph Fischer (1852–1941), Adolph Korn (1859–1900), and Herman Lehmann (1859–1932), all remaining to live with their American Indian captors. Fischer, captured in 1865, spent his entire adult life with the Indians. He became a full-fledged Comanche and was renamed Asewaynah. Korn was captured in 1870 near Castell and recovered in 1872. Not being able to readapt, he spent the rest of his life as an outcast. Lehmann was nabbed by Mescalero Apaches when he was 11 years old. He gained warrior status and lived with the Plains Indians until Quannah Parker (Comanche chief and son of Cynthia Ann Parker, herself captured by Indians in 1835 and later married to an Indian) convinced him to return to his white relatives. He did so grudgingly in 1878 and readapted with much difficulty

to white society. Two different versions of his narrative were published in 1899 (*Indianology*, written down by Jonathan H. Jones) and 1927 (*Nine Years among the Indians*, written down by J. Marvin Hunter).

—Katrin Fischer

Bibliography

- Derounian-Stodola, Kathryn Zabelle, and James Arthur Levernier. *The Indian Captivity Narrative, 1550–1900*. New York: Twayne, 1993.
- Lehmann, Herman. *Nine Years among the Indians*. Edited by J. Marvin Hunter. Albuquerque: University of New Mexico Press, 2004.
- Namias, June. *White Captives: Gender and Ethnicity on the American Frontier*. Chapel Hill: University of North Carolina Press, 1993.
- Sayre, Gordon M., ed. *American Captivity Narratives: Selected Narratives with Introduction*. Boston: Houghton Mifflin, 2000.
- Zesch, Scott. *The Captured*. New York: St. Martin's, 2004.

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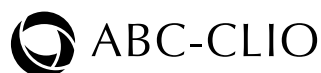
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Migration and Travel

If one were forced to choose a catchphrase that would express the defining characteristics of this era, the period 1450 through 1770, it would be “the world that travel and migration built.” For the first time in history, the people of every continent came into contact with each other. Explorers, traders, missionaries, imperialists, and refugees built webs across oceans, setting into motion forces that culminated in widespread social, economic, and political reorganization. The laws of unintended consequences were in full operation: millions died from exposure to new pathogens, but millions of other people survived because of new highly nutritious food sources becoming available. One side of the Eurasian landmass gained unimaginable wealth in silver and gold, managing to send itself into a spiral of inflation and economic instability. Wily African traders found a means through which to gain wealth while depleting the resources of their competitors and sent their lands into spirals of exploitation and devastation. The escalating consequences of travel and migrations forced societies around the world to adjust to a new reality.

All of the travel and migration of the time had an aim, whether voyagers were pursuing personal fortune, serving a monarch, serving God, trying to escape persecution, or had been banished by courts or monarchs. A push-pull dynamic motivates changes in human travel and migratory patterns; that is, travel and migration generally have an aim. In order to understand this dynamic, the essential questions of what happened and why it happened require some rather arbitrary decisions. One is always tempted to start with the “Big Bang” and work forward. That would assuredly lose many readers, so we will begin with a brief glance at the Black Death and the adverse weather conditions known as the Little Ice Age, both key events that pushed desperate people into motion.

These massive folk movements began in the mid-fourteenth century as the Black Death spread along trade routes protected by the Mongol empires of the thirteenth and fourteenth centuries. The high death rates, sometimes as great as 60 to 70 percent of affected populations, disrupted the economic and political organization of societies across the Eurasian landmass from China to the British Isles. By 1500 in England alone, the plague had destroyed about 1,300 villages, their populations either dead or disbursed. The migrations set in motion by the plague were often internal migrations wherein people tried to relocate to areas not stricken, but many also drifted into hitherto sparsely populated frontier zones. The existing economic system of Europe, based on agricultural peasants affiliated with a feudal lord, eroded as peasants took their chances and moved or negotiated for better terms. The plague reappeared periodically until the late seventeenth century. Before the

demographic recovery was under way, the Northern Hemisphere experienced an extended period of unstable and abnormally cold weather known as the Little Ice Age, which began about 1300, intensified around 1600, and ended by 1850 but not before making George Washington and his troops miserable at Valley Forge in the winter of 1777–1778. The Little Ice Age was not a gradual or consistent pattern of weather change, but extremely cold winters and dry springs were frequent. In many of these years, subsistence farming was impossible across the northern reaches of Europe and Asia, destabilizing political and economic organization across the zone and inspiring people to migrate to new lands and even into hitherto unknown territories, such as the Americas. The harsh winters were also evident in the records of the European immigrants to North America, where the combination of adverse weather and the introduction of new pathogens killed millions of Native Americans. In *The Little Ice Age* (2000), Brian Fagan writes of cypress tree rings that attest to severe droughts in Virginia during 1587–1589 and of the hardships faced by settlements in Spanish Florida as well as along the eastern seaboard of New England. At Jamestown, for instance, the colonists faced the driest period in more than seven centuries. Of the 104 colonists who arrived in 1607, only 38 survived a year.

The harsh winters and dry summers lowered production and drove people of all stations to seek critical resources elsewhere. The winters in the 1590s, the 1620s through the 1650s, and the 1690s were particularly harsh. A mere 1 degree Centigrade decrease in average summer temperature shortens the growing season for crops by three or four weeks, a disastrous drop for economies based on subsistence agriculture.

In some areas the decline in agriculture was catastrophic; for instance, tithe records for Hungary indicate that yields fell by 72 percent between 1570 and 1770. Famines occurred throughout Eurasia. Competition for resources frequently led to invasions, civil wars, and rebellions during the seventeenth century across Eurasia from Japan and China through Russia,

Bohemia, Germany, France, Italy, Portugal, Sweden, Holland, Scotland, Ireland, and England. Existing social, cultural, and economic structures were not equipped to deal with the ongoing crises. The Ming dynasty began facing intensified rebellions and sorties by northern nomads by the late sixteenth century, beginning the slow decline that led to the end of the Ming, the last native Chinese dynasty. The harsh weather pushed the northern nomads into traditional Chinese territories even as the Han Chinese farmers pressed into the regions of Mongolia, Turkistan, Tibet, and southeastern Siberia.

East Asian societies, particularly China, searched inward for resources, but these economic crises propelled Europeans into a search for access to new sources of material wealth, including both necessities and luxuries. The quest for entry into thriving Asian markets led to the discovery of the New World, bringing both unimaginable wealth and incomprehensible misery. Pathogens, belief systems, technology,

In some areas the decline in agriculture was catastrophic; for instance, tithe records for Hungary indicate that yields fell by 72 percent between 1570 and 1770. Famines occurred throughout Eurasia.

wealth, and resources crossed landmasses and oceans. Explorers and soldiers led the way, with missionaries and traders in their wake. Sub-Saharan Africa and the Americas did not suffer the direct impact of the plague, but the movements that were set into motion eventually disrupted them as much as (and perhaps more than) the areas that had been set into motion by plague and weather.

China and western Europe recovered first from the social and economic upheavals of the Black Death, and both set about attempting to develop or reinstate trade networks. China launched a large naval presence into the seas around East and South Asia in 1405 but abandoned its naval initiatives in 1433 for reasons that are not entirely clear. One suspects that the northern pastoralists set into motion by the deteriorating weather conditions inspired the Chinese to focus their treasure and attention on protecting their northern border. Throughout its existence China had experienced raids and even conquering armies from the north. The Chinese had never had reason to be unduly concerned about attacks from the seas. When one of the northern peoples, the Manchus, established the Qing dynasty in 1644, Ming sympathizers and supporters fled to the south. Throughout their two and a half centuries of rule, the Qing remained suspicious that strangers attempting to enter China from the south were associated somehow with the Ming. Among European observers, China's attention to securing borders caused a wide and erroneous perception of a static land. The Chinese were in fact as expansionistic as the Europeans; this has been largely overlooked because China embarked on a land-based expansion rather than the sea-based empires of the European maritime states. The Qianlong emperor (1711–1799) doubled the size of China, creating room for massive internal migrations.

By the time the Chinese abandoned their maritime explorations in 1433, Europeans had already embarked on their own maritime adventures. We historians sometimes present the period as the “European Age of Exploration and Discovery,” inadvertently implying that it was a sudden series of events. Actually, fishermen along the edges of both the Atlantic and the Mediterranean had been exploring the seas around them for centuries, developing sturdy little ships and a cadre of experienced sailors. In the fifteenth century a Portuguese prince, Henrique (often called Henry the Navigator), sponsored efforts to improve the naval technology and encouraged an aggressive naval presence. Portuguese forces seized the Moroccan city of Ceuta, which guarded the Strait of Gibraltar, soon conquering islands off the African coast, where they joined with Italian investors to develop extremely profitable sugar plantations, setting a precedent of colonization emulated by the other west Europeans who followed. Success breeds success, and further voyages followed. The Portuguese were also the first to fight their way into the Indian Ocean trade. During these travels they saw opportunities for both economic and spiritual ventures, transporting merchants as well as missionaries. They also launched the first large-scale forced migration of the early modern world. By the mid-fifteenth century the Portuguese had transported thousands of African slaves to work on the sugar plantations, setting into motion the globe's most tragic forced

migrations. Asia's wealth also drew the Portuguese, who dominated the sea trade during the sixteenth century. Bartolomeu Diaz rounded the Horn of Africa. Portuguese monarchs also funded the explorations of a Genoese mariner, Christopher Columbus, who inadvertently brought the Americas into the global network. The explorer Vasco da Gama sailed southward around Africa, learned to handle monsoon winds, and made his way to India. Their successes drew the northwestern Europeans. Spanish, Dutch, English, and French adventurers followed, inaugurating the first era of sustained contact involving the Americas, Asia, Africa, and Europe. The mapping of the world's oceans was essentially completed when Captain James Cook explored the shores of Australia in 1770. These explorers paved the way for merchants and colonists and for the efforts of missionaries to save the souls of pagans.

The missionaries who traveled to new lands were arguably the most prominent observers and cultural transmitters between societies. Like Buddhism and Islam, Christianity is a missionary religion, and this was an age of dramatic and dynamic Christian expansion. Others were also proselytizing throughout the age, although their activities were not as intense during this time. Sufi missionaries continued their efforts in lands of the Ottoman empire and eastward, and Buddhist missionaries continued circulating throughout Asia. The misfortunes of the plague and weather caused many societies to search for meaning,

The missionaries who traveled to new lands were arguably the most prominent observers and cultural transmitters between societies. Like Buddhism and Islam, Christianity is a missionary religion, and this was an age of dramatic and dynamic Christian expansion.

a divine hand perhaps sending a message. Many Chinese began to suspect that the Ming dynasty had lost the Mandate of Heaven.

In Christian Europe people searched for meaning, suspecting punishment for unnamed sins and questioning the efficacy of their religion's hierarchy. As he searched his own soul for sin, the priest Martin Luther suspected that others shared his guilt, and he released his 95 "theses" that announced his protest against the established church on October 31, 1517. Witchcraft accusations soared, reaching their height in England and France in 1587 and 1588. The resulting religious wars and intrastate violence not only acted as an impetus for proselytizing but also drove many dissenters to migrate. Dedicated Roman Catholics were as aware of problems in the Church as Luther had been. The efforts to reform the Church led to the formation of an assembly of high Church officials, called the Council of Trent, that met between 1543 and 1563. During this period the Society of Jesus (the Jesuits), led by Ignatius of Loyola, was formed. Ignatius was a military man, and the Jesuits practiced a military-type discipline. Their focus was twofold: education in Europe and missionary work in foreign lands. Most were remarkably intelligent, and many were great creative thinkers. They were by far the most highly educated men in Europe. Fourteen years of advanced education, spiritual development, and teaching experience were required before final vows. Rather than waiting passively for merchant transport, Jesuits launched Missions to India, Japan, China, any

place, in fact, where they could bring “salvation” to the troubled souls of the world. Although these dedicated priests went to China to “save” pagans, after associating with the court these proselytizers wound up becoming very Confucian in their own outlook. They were in constant contact with their brothers in Europe, the homebound Jesuits, who became the educators of aristocratic Europe. These Jesuit educators certainly played an active role in stimulating the vivid dialogue of the philosophes. By 1600 there were over 100 Jesuit schools including La Flèche, where Descartes was educated, and Louis le Grand, attended by Voltaire, Diderot, Helvetius, Malesherbes, and Choiseul, to name a few. Even Protestants such as John Locke avidly collected the letters and pamphlets sent home by the Jesuits in China. It can be argued that these Jesuit travelers to Asia, Africa, and the Americas forged the most powerful intelligence network in existence.

Nonetheless, the Jesuits were not alone in disseminating Christianity. The expansion of Christianity was not always peaceful. Two other orders of Catholics—the Franciscans and the Dominicans—were especially active. European conquerors in the Americas brought priests with them. Dominican priests arrived in Mexico by 1524; in fact, much of our current knowledge of Aztec, Mayan, and other indigenous societies comes from the priests’ records. And yet they destroyed temples and libraries, making it much more difficult to understand pre-Columbian peoples. The first bishop of Mexico claimed that the Franciscans had converted more than 1 million souls, yet the depth of the original indigenous converts’ commitment is very questionable, as was the means of conversion. The Spanish Requirement of 1513 required (hence the name) that failure of the Native Americans to convert was an act of war against both Spain and Christianity. When the Spanish arrived in the Philippines in 1565, they set about conquering coastal regions for use as a base. Despite strong resistance from Muslim communities, within a decade the Spanish controlled most of the region, pressuring prominent Filipinos to convert. By 1770, the end of this era, the Filipinos had become zealous Roman Catholics.

The Protestant Dutch and British were somewhat less diligent. In fact, the British East India Company, chartered in 1600 and ruling Bengal by the end of the era, actively prohibited missionary activity in areas under their control, believing (correctly it seems) that the presence of missionaries complicated business dealings. Russia also supported the activities of Eastern Orthodox missionaries in Siberia in the hopes of integrating Siberian and Arctic people into Russian society, but they were never as zealous as Roman Catholics or the Protestants who followed later.

In Russia, the emergence of the powerful Muscovite Rus led to the spread of eastern Slavs across the Eurasian plains. Grand Duke Ivan III (1462–1505) pushed Russian expansion south and west, Tsar Ivan IV (1530–1584) supported Russian expansion to the east, and Tsar Alexis (1645–1676) established Russian outposts on the Pacific Ocean littoral. This expansion was accompanied by the gradual migration of Russian traders to the vast expanse of Siberia. More important was the Russian government’s efforts to encourage southward movement of the Russian population (most of whom were serfs owned by noble

landlords), which displaced local nomadic tribes. Domestically, however, the Russian tsars pursued a different policy as they tried to restrict peasant mobility. Still, many Russian peasants risked their lives to flee from their masters to the southern borderlands and Siberia. This process particularly accelerated during the Time of Troubles (1598–1613), when natural disasters, political turmoil, and war forced tens of thousands to migrate. Once the stability was restored under the new Romanov dynasty, the Russian authorities restricted internal mobility. The legal code of 1649 put an end to legal migration by tying peasants to the land. Re-

stricted mobility had a profound impact on Russia, as it hindered the development of urban labor forces needed for industrialization and economic development.

The first European interaction in the Americas was between the Spanish and the peoples of the Caribbean. Their most deadly interaction was the spread of smallpox and other diseases. There was a dramatic reduction in population after 1518. Demographers have not firmly established the exact numbers, but there is some evi-

dence that as many as 90 percent of the peoples of the Americas died within the next century. When Europeans landed in the Americas, the pathogens they carried were more deadly than their military expertise. Disease raced ahead across the trade networks that existed throughout the Americas, devastating populations before the first European set foot on the land. One can only really understand the conquest of the Americas by the Spaniards, the Portuguese, and later the British and French by examining their activities in the context of the destabilization and depopulation that preceded the actual European settlers. This depopulation sent entrepreneurs in the New World on a search for inexpensive labor sources.

At the opening of this era in the year 1500, slavery existed throughout the world but was on a comparatively small scale. Africans constituted a minority in slave populations. By 1700, the largest slave populations were primarily African and located in the Americas. Portuguese, Spanish, Dutch, English, and French investors sought them in order to minimize the costs of production in the mines, plantations, and fields of colonies. Before the trade ended, approximately 12 million African people were forcibly transported; as many as 13.2 percent of slaves transported died during the crossing of the Atlantic. While nearly as many slaves were taken from Africa through the Indian Ocean littoral in the longer period from 800 to 1800, the transatlantic trade was much more intensive and devastating. As devastating to Africa and Africans as it was, the Africans fared better than the Native American slaves, who had no immunities to Old World pathogens. African's darker skins made it much more difficult for them to escape and blend into existing populations; some argue that it was here that modern racism was born. Many Europeans profited from the slave trade, but the escalating violence and competition for African slaves had scarred the countryside. The labor

The legal code of 1649 put an end to legal migration by tying peasants to the land. Restricted mobility had a profound impact on Russia, as it hindered the development of urban labor forces needed for industrialization and economic development.

imbalance (primarily young males were captured and sold) had a far-reaching impact, and the cross-societal animosity endured for centuries.

The ripple effect of these contacts and migrations continued; it is likely they are still shaping international relationships. At the opening of this era in the year 1500, Europeans were struggling to reform their economic and political structures. At the end of the era, the mid-eighteenth century, China was still the most powerful state on earth, but its decline was in progress. After Qianlong's death in 1799, it is doubtful that there was anything the Chinese could have done to maintain regional hegemony. By 1770, European investors and colonists had left a mark on every continent. Restive North American British colonists were preparing to rebel. The British were pushing the French out of the South Asian markets, and the British East India Company clearly dominated the South Asian and Chinese European trade. Restless Europeans had changed the world, and the world had also changed Europeans.

—Carolyn Neel and Monique Vallance

■ Introduction: First Encounters

From the late fifteenth century to the seventeenth century, the world was brought into an unprecedented unity. The advance guard of this process was the mostly European explorers who “discovered” new continents, societies, and oceanic trade routes. Although these explorers came from many European backgrounds—some of the most prominent in the first wave were Italians, like the Cabots who sailed for England and Columbus and Vespucci who sailed for Spain—five western European nations dominated exploration: Portugal and Spain in the first wave followed by France, England, and the Dutch Republic.

The motivations of the explorers were various, and the encounters between them and the peoples they encountered took many forms. Many of the Spanish explorers of the Americas are referred to as conquistadors (conquerors), and their encounters were driven by the desire to acquire wealth and territories for themselves and the Spanish Crown. Precious metals (gold and silver) were a particularly powerful motivation for many of the early explorers, and violence and even torture of natives continued as an appropriate way to acquire the metals. Native Americans were also kidnapped and brought back to Europe by explorers beginning with Columbus,

providing evidence of the strangeness of the new societies of the Americas, but they seldom lived long in Europe's hostile environment.

Outside the Americas, whose indigenous peoples possessed a number of disadvantages in relation to their invaders, explorers had to treat people with more respect, and conquest was only infrequently a possibility. (Even in the Americas, some societies were far more capable of resistance than others.) From the first Portuguese voyages down the coast of Africa that began the Age of Exploration, European explorers in Africa and Asia were often more concerned with establishing trade relations than with conquest. This required not the arrogance of the conquistador but a more deferential attitude, although violence, whether directed against indigenous people or European rivals, was always an available tool. Other explorations, such as the early English voyages in the North Atlantic, were about direct access to natural resources (cod in the English case). Much of the French exploration of Canada and the Russian exploration of Siberia was driven by the needs of the fur trade, and the natives were principally of interest for their knowledge of and access to fur-bearing animals. The Dutch in Indonesia were looking for access and control over spices, and

when they could they would coerce natives into growing and harvesting spices for Europe's ever-expanding appetite.

Contact with different cultures produced varying reactions in the explorers. Much of their response was conditioned by Christianity, which gave them a hostile attitude to all other religions, whether the "idolatry" of the Aztecs or the Islam practiced through much of the Indian Ocean. The crusader legacy made Islam particularly problematic, and the rivalry between the Muslim merchants who had previously controlled Indian Ocean trade and the Christian newcomers became particularly bitter. However, this did not preclude a more respectful attitude to powerful Muslim sovereigns such as the Safavid shah of Persia or the Great Mughals of India.

The contacted peoples in turn had different attitudes toward the Europeans. Many Native Americans were initially impressed with the advanced technology, including the large ocean-crossing ships, horses, and effective weapons of many of the explorers, and may have viewed them as divine emissaries, a belief overcome by further contacts that revealed the merely human, although sometimes terrifying, nature of the newcomers. Indeed, the spread of European diseases sometimes caused Native Americans to believe that the bringers of these illnesses, of which they had no previous knowledge or effective means of treatment, were evil wizards or demons. For many, including the advanced civilizations of East Asia and the Islamic world, Europeans were foreign barbarians, particularly for those who had to deal with the violence of many early explorers.

—William E. Burns

Christopher Columbus after 1493

The famed Genoese explorer Christopher Columbus (1451–1506) is mostly remembered for his discovery of Hispaniola in the Caribbean Sea in 1492, assumed by many to be the initial discovery of the Americas by Europeans. Under the auspices of the Spanish Crown, Columbus continued to voyage to the Caribbean and onto the mainland for nearly another decade. Through his efforts, the multiple islands in the Caribbean Sea were claimed for Spain, as were territories

on the American mainland along the Orinoco River in present-day Venezuela. Oddly enough, he never realized that he never actually reached the New World but instead assumed that he had encountered the Far East up to his dying days. However, his voyages of discovery in the Caribbean resulted in the expansion of Spanish dominion into the Lesser Antilles, the Greater Antilles, and Central and South America.

For his second voyage to the New World, Columbus left Cádiz, Spain, on September 24, 1493, intent on exploring new territories in what he called the Indies, which he had discovered on his first journey of 1492. He embarked on this venture with approximately 1,200 men and 17 ships. By October 13, the ships left the Canary Islands as they had on the first voyage along a more southerly course. Upon arrival in the

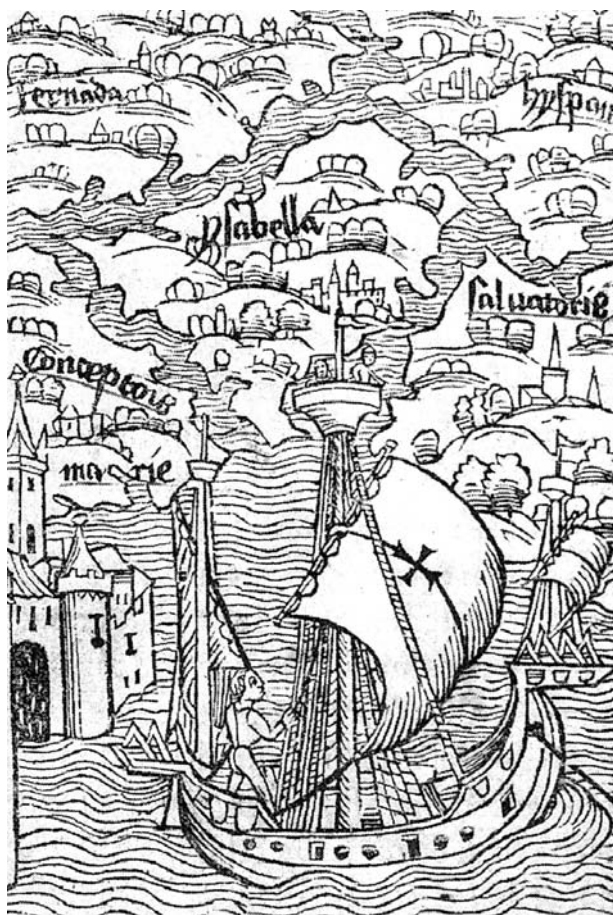
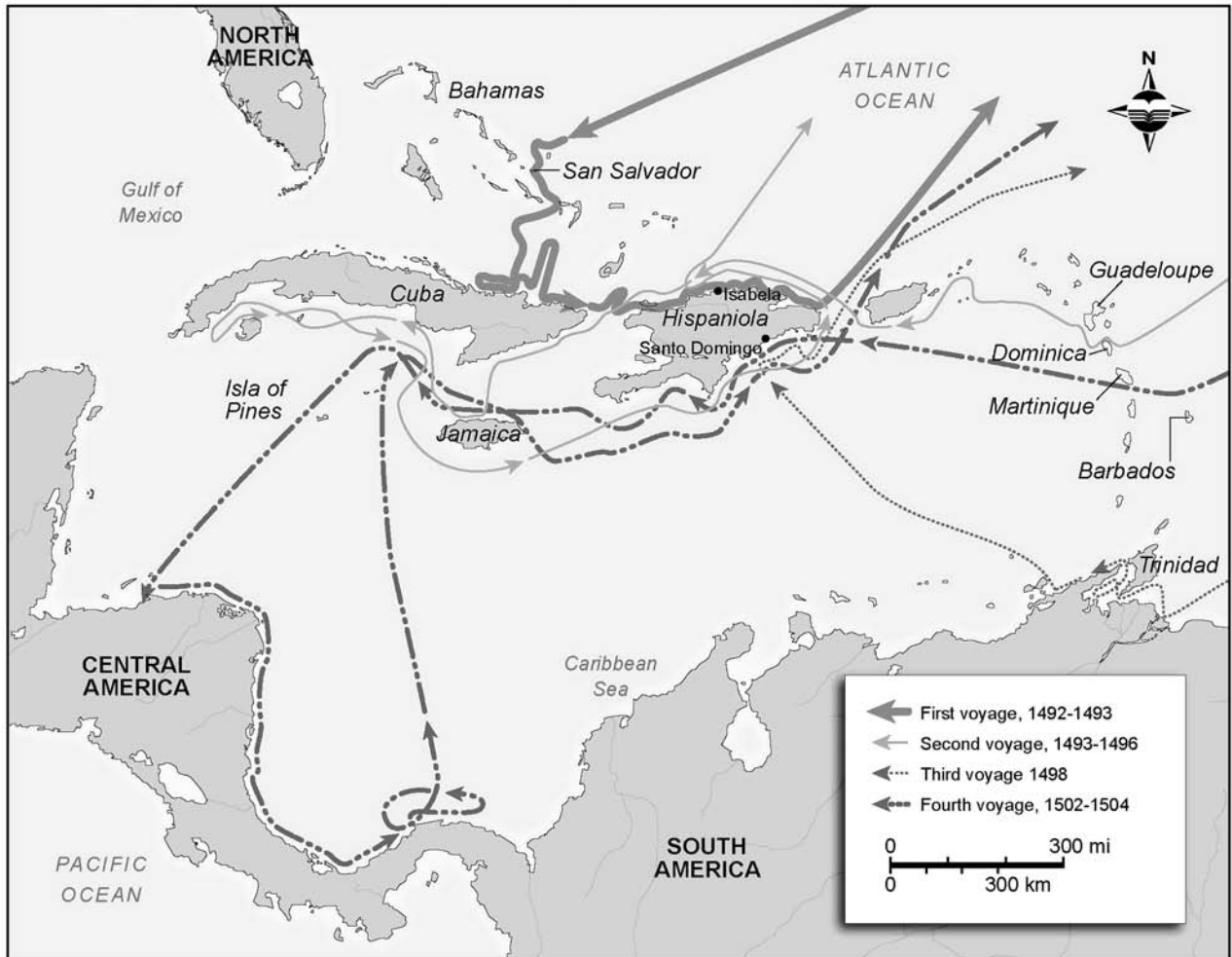


Illustration of the voyage of Christopher Columbus that accompanied the 1494 published version of his letter to the world at large. The image was created by the publisher and not based on a true observation. (Library of Congress)

COLUMBUS'S VOYAGES, 1492–1504



Caribbean region, Columbus sighted various islands, naming them as they went along. Among these were the Lesser Antilles of Dominica, Les Saintes, Guadeloupe, Montserrat, Antigua, Redonda, Nevis, Saint Kitts, Saint Martin, Saint Croix, and the Virgin Islands. Columbus and his crews also charted the Greater Antilles of western Hispaniola (Haiti) and Puerto Rico. He left Hispaniola on April 24, 1494, and arrived at Cuba on April 30 and at Jamaica on May 5.

In his third voyage to the Americas, Columbus left with six ships from Sanlúcar in Spain on May 30, 1498. Bartolomé de Las Casas, a notable chronicler of Columbus, went along on this voyage. Columbus led this fleet to the Portuguese island of Porto Santo in the Atlantic Ocean. He then sailed from Porto Santo in Madeira to the

Canary Islands and Cape Verde. He landed on the southern coast of the island of Trinidad on July 31, 1498. In early August, he explored the Gulf of Paria between the present-day states of Trinidad and Venezuela. He explored the mainland of South America, including the Orinoco River; this was the first time Europeans had penetrated mainland America. Columbus also sailed to Chacachacare and the Margarita islands and sighted and named Tobago and Grenada.

Columbus's fourth and last voyage was pursued with the intent of finding the Strait of Malacca in the Indian Ocean. Leaving Cadiz on May 11, 1502, with four ships, he went to Morocco, Martinique, and then on to Hispaniola. Arriving in Santo Domingo on June 29 but denied port, his ships were quartered on the entry to the Rio

➤ ALVISE DA CA' DA MOSTO

Alvise da Ca' da Mosto, (ca. 1432–1488) was a Venetian maritime explorer hired by Portugal and associated with the policies of expansion of Prince Henry the Navigator (1394–1460). Born at the Ca' da Mosto, a palace on the Grand Canal in Venice to which he gave his name, he was acquainted with and reared in the maritime trades of sailing and shipping. He was hired by Prince Henry during a stay in Portuguese territory while on a voyage from Venice to Flanders in 1454. Much like Columbus, Ca' da Mosto was an Italian free agent with no significant ties to his city-state of origin and willing to work for the expansion of Iberian interests. In the service of the Portuguese Crown, Ca' da Mosto explored the Atlantic coast of Africa and discov-

ered several islands off Cape Verde between 1455 and 1456. In his first voyage, he visited the Madeira Islands and the Canary Islands. On the second voyage, in 1456, he became the first European to reach the Cape Verde Islands. He also explored the Gambia River but returned to Portugal after finding hostility in the inland region (present-day Guinea-Bissau) toward interlopers. His discoveries led to increased Portuguese interest and trade in the West African littoral region, later developing into the large-scale Atlantic slave trading system that linked West Africa (with hundreds of thousands of potential African slaves) with the plantation systems of the Americas.

—Abraham O. Mendoza

Jaina. Subsequently, he stopped briefly in Jamaica and sailed on to Central America, arriving at the Bay Islands off the coast of Honduras on July 30, 1502. By August 14, Columbus had landed on the American mainland near Honduras. He spent two months exploring the coasts of the present-day states of Honduras, Nicaragua, and Costa Rica before arriving in Almirante Bay in present-day Panama on October 16. In Panama, Columbus learned from the local people of gold and a strait to another ocean. In January 1503, he and his men established a military garrison at the entry of Rio Belen. By April, the garrison was attacked by indigenous Americans, and the ships were damaged in the midst of the attack. Columbus escaped for Hispaniola on April 16. By May 10 he sighted the Cayman Islands, which he named Las Tortugas after the local sea turtles. In the midst of a storm off the coast of Cuba, his ships suffered more damage. On June 25, 1503, Columbus and his crew stopped in St. Ann's Bay, Jamaica, unable to go farther. For approximately a year, they remained stranded on Jamaica until help arrived in June 1504, allowing them to return to Spain by November.

In these later voyages, Columbus had served as a governor of various colonial enterprises in the Caribbean but was disliked for his harsh measures in regard to both natives and Spanish settlers. Complaints regarding such excesses led to his removal from office and subsequent return

to Spain in 1500. However, given his record of service to the Spanish Crown, he was absolved of wrongdoing and returned to his respective offices. On May 20, 1506, at approximately the age of 55, Columbus died in Valladolid in Spain with the belief that he had found a westerly route to the Far East. Regardless of his geographic oversight, he proved to be a significant figure in this period of world history in the establishment of European hegemony in the Americas.

—Abraham O. Mendoza

Bibliography

- Davidson, Miles H. *Columbus Then and Now: A Life Reexamined*. Norman: University of Oklahoma Press, 1997.
- Fernández-Armesto, Felipe. *Columbus*. New York: Oxford University Press, 1991.
- Traboulay, David M. *Columbus and Las Casas: The Conquest and Christianization of America, 1492–1566*. Lanham, MD: University Press of America, 1994.

Spanish Exploration of North America

From the Spanish voyages of exploration beginning with Christopher Columbus in 1492, Spain's interest in the New World eventually expanded to focus on North America and exploring the seemingly endless lands north of the Gulf of Mexico. The West Indies, Central America, and

much of South America belonged to Spain by conquest by the first decades of the sixteenth century and had brought the European nation great wealth, so the vast lands north of those possessions also held great interest and potential. A succession of Spanish expeditions focused on exploring North America and claiming more territory and resources for an expanding empire, but Spain was never able to successfully establish a stronghold there.

The first of the Spanish explorers to come to North America was Juan Ponce de Leon, a traveler on Columbus's second voyage and noted for his conquest of Puerto Rico. Rumors of unexplored lands to the north of Hispaniola reached many Spaniards in the West Indies, and Ponce de Leon sought and received the approval of King Fernando of Spain to take an expedition northward. In April 1513 Ponce de Leon sighted land that he believed to be another vast island and named it Florida (after the Spanish *Pascua Florida*, or Festival of Flowers).

This first expedition explored several coastal areas of the peninsula, and the Spanish made important observations of the diverse plant and marine life before returning to Puerto Rico. A popular and often-repeated legend cites Ponce de Leon's interest in a "Fountain of Youth," restorative waters that many Europeans likely believed existed in the New World; however, this legend was not attached to Ponce de Leon's expedition until after his death. In 1521 Ponce de Leon organized a second expedition to Florida, landing on the southwest coast near the Caloosahatchee River. Ponce de Leon received an arrow wound in a native attack and died shortly thereafter in Cuba.

In 1528 a group of over 300 Spaniards left Florida and set out westward to explore the coastline of the Gulf of Mexico (called the Spanish Sea). This expedition also suffered from repeated native attacks that reduced their numbers significantly and forced them to kill and eat their horses. The remaining 80 survivors were able to take refuge near Galveston Bay in modern-day Texas. Under the leadership of Álvaro Núñez Cabeza de Vaca, this group explored part of Texas, New Mexico, and Arizona for the next eight years. After suffering years of hardship that included some time enslaved by the

THE PUEBLO INDIANS

The Pueblo Indians of New Mexico take their collective name from the first Spanish explorers to arrive in the American Southwest, who noted with interest that these natives lived in villages (*pueblos* in Spanish). While the Pueblos at times found alliances with their Spanish colonizers helpful in their ongoing resistance against their often warlike and aggressive Apache neighbors, they also struggled to maintain their own cultural identity. Spanish missionaries forced the conversion of the Pueblos to Christianity, but many of their ritualistic observances remained. The Pueblo Revolt of 1680 was successful in expelling the Spanish for 12 years, something that no other native culture of the New World was ever able to accomplish. When the Spanish reestablished control of the region in 1692, the Pueblos maintained many of their unique cultural and social distinctions that are preserved even to the present day. The Pueblos remained under Spanish and then Mexican authority until the end of the Mexican War in 1848, when ownership of their ancient lands passed to the U.S. government. The Pueblo economy today still bears the imprint of Spanish influence, thriving on agriculture and the raising of livestock, unknown to them before European contact.

—Cheryl H. White

natives, only 4 men survived from the original group and reached the relative safety of Spanish settlements in Mexico in 1536. Because of the conditions surrounding this expedition, Cabeza de Vaca's accounts of this exploration, published under the title *La Relación*, are uncertain and incomplete.

In 1539 Spanish explorer Hernando de Soto landed near present-day Bradenton, Florida (Espiritu Santo) with an expedition of approximately 600 men. The group traveled north, encountering the hostility of natives, and continued northeast through Georgia and into South Carolina. The evidence is that de Soto passed through North Carolina and turned westward into Tennessee and then southward again. De Soto's men engaged in a skirmish with natives of southern Alabama at a fortification known as Mabila that resulted in the deaths of thousands

of natives and great damage to the Spanish expedition. By 1549 de Soto marched through Mississippi, Arkansas, Oklahoma, Louisiana, and Texas, and his was the first expedition to document the Mississippi River. His death in 1542 scattered the remaining members of his crew, and most settled in Mexico or South America. Although no direct colonization efforts resulted, de Soto's expedition contributed greatly to general knowledge about the geography of North America and led the Spanish to decide against an overt presence there, with the exception of the Florida peninsula and isolated outposts in the American Southwest.

The Spanish did not easily give up on the idea of gold to be found in North America, evidenced by the expedition of Francisco Coronado during 1540–1542. Coronado left Mexico and traveled into the American Southwest in a futile search for gold, which had been found in such abundance throughout Mexico and South America. In the process, Coronado helped open up that region to eventual Spanish settlement and colonization. To the east the Spanish fort at St. Augustine established in 1565 in present-day Florida was the first permanent European settlement in what would become the United States. The settlement served a minimal purpose as a military outpost and did not represent a significant step toward Spanish colonization. A much more substantial effort at colonization of North America began in the Southwest in 1598, when Don Juan de Onate went north from Mexico to claim lands of the Pueblo Indians, previously visited and recorded by Coronado.

Spanish colonists established Santa Fe in 1609 and began demanding monetary tribute and labor from the local natives. The treatment of the natives under the administration of Onate caused troubles for the new colony, leading Spain to remove Onate as governor. Many of the Pueblos converted to Christianity due to the great missionary efforts of the Spanish, and stable and profitable trading relationships also resulted. Because of the threat of neighboring natives (the Apaches), the tiny new Spanish colony exercised great care but steadily grew in size. Interestingly, the Spanish discovered that the great profitable resource of the American Southwest was not the gold or jewels they had

hoped to find but rather the livestock on the expansive ranches of the region.

The missionary efforts of the Spanish, while overall successful in winning converts among the natives, were relentless in attempting to eliminate the old religious rituals that were still culturally pervasive. This led to a Pueblo revolt in 1680 and drove the Spanish temporarily from the colony. The colony was restored by 1696 when the Spanish crushed a final revolt and seized all the lands of the Pueblo. Over time, the Spanish approach evolved to include efforts at assimilation, religious tolerance, and land ownership among the natives. These policies eventually brought about greater cooperation between the Spanish and the natives of the American Southwest, but by the eighteenth century New Mexico was but an isolated colonial outpost with only minor significance to Spain. However, the presence of Spanish influence ensured that future struggles for imperial hegemony among the European powers would involve the lands of North America.

—Cheryl H. White

Bibliography

- Koch, Peter O. *Imaginary Cities of Gold: The Spanish Quest for Treasure in North America*. Jefferson, NC: McFarland, 2009.
- Resendez, Andres. *A Land So Strange: The Epic Journey of Cabeza de Vaca*. New York: Basic Books, 2007.
- Weber, David J. *The Spanish Frontier in North America*. New Haven, CT: Yale University Press, 1994.

Spanish Exploration of Central and South America

The opening of the European Ages of Exploration and Discovery in the late fifteenth century became possible because of the shift in Europe's political and religious structures, particularly in the Iberian Peninsula. Previously, Europe had been politically fragmented as nobles fought against their kings for power. In the fifteenth century, monarchs began to gain ground in their struggle to centralize power over both the nobles and commoners. In Portugal, the king was the largest landowner in the kingdom, which allowed for more political stability and the freedom to begin

ocean explorations earlier than any other Europeans. Their travels down the western coast of Africa were motivated by the desire for African gold, and eventually by the end of the century their desire became one of finding a sea route to India.

By 1485 a new entrepreneurial explorer appeared on the scene, a man named Christopher Columbus (Cristoforo Colombo as he was known in his native Genoa). Columbus developed a plan to reach India by sea. Instead of rounding the southern tip of Africa as the Portuguese were attempting, Columbus proposed that he could reach India by sailing westward from Portugal into the open ocean. This feat had never been attempted for two reasons: medieval scholars correctly estimated that the distance from Portugal to Asia was roughly 12,000 miles (19,000 kilometers) but incorrectly supposed that there existed no landmass in between. Therefore, any ship that attempted such a massive journey would most likely be left stranded in the middle of the ocean before reaching any sort of land. In addition, the winds also presented a problem. The easterly wind blew toward the west, making it an easy task to sail westward.

Columbus first presented his plan to the Portuguese king, João II, who believed that it was a nearly impossible task to fight against this wind to sail east in order to return to Portugal. The Portuguese king had little faith that the venture could be successfully completed. After being turned down by the Portuguese, over the next few years Columbus unsuccessfully presented his plans to Genoa, Venice, Fernando and Isabel of Spain, and Henry VII of England. None of the initial proposals met with any success, but a second visit with Fernando and Isabel had a more satisfactory outcome. The marriage of Fernando and Isabel in 1469 led to the eventual unification of the Spanish kingdoms in the sixteenth century. In 1492 they gained control of Granada, the last vestige of Muslim territory in the Iberian Peninsula. These two events afforded them the political control and freedom to support exploration. With the help of Italian financiers, the monarchs were able to fund Columbus's first expedition.

On August 3, 1492, Columbus sailed with three ships, the *Santa Maria*, the *Pinta*, and the *Nina*. On October 12, 1492, he sighted land in

➤ THE DEATH OF MOCTEZUMA

The Spanish exploration and conquest of the lands of the New World produced a rich legacy of mystery and legend surrounding encounters with the natives. Of these encounters, perhaps none has inspired the imagination more than the life of Moctezuma II, the Aztec emperor at the time of the arrival of Hernando Cortes. The exploration of Mexico rapidly became a mission of conquest for the Spanish, resulting in a tragic fate for Moctezuma, who died while in Spanish captivity. The details of Moctezuma's capture, imprisonment, and death are unclear, but early Spanish accounts attempted to place the responsibility on Moctezuma himself, claiming that his acquiescence to Spanish domination incurred the ire of his own people. These accounts, including that of Cortes himself, claim that Moctezuma was stoned to death by his own people. Indeed, Cortes quickly accounted for the death of the Aztec emperor in reports to the Crown of Spain. Later native accounts blame Cortes and his men for Moctezuma's demise. While the true events involving Moctezuma remain unclear, it is a certain illustration that the encounters of the Europeans with the indigenous peoples of the New World provoked conflict and an inevitable struggle for control of the land and its resources.

—Cheryl H. White

what is today the Bahamas and named the island San Salvador. Believing that he was in the Indies, Columbus also explored the coast of Hispaniola (today Haiti and the Dominican Republic) and the coast of Cuba. Columbus returned to Spain with several natives, to whom he ascribed the geographic misnomer of "Indian." Columbus did not know that he had discovered a previously unknown world but in fact believed that he had reached some of the barrier islands of Asia. Upon his return to Spain, Columbus stopped in Portugal to inform King João II of his victory. Upon learning that Columbus had landed in India, the king was quick to inform the sailor that a previous bull signed by Pope Sixtus IV in 1481 granted all land south of the Canary Islands to Portugal. Therefore, according to João, India belonged to Portugal, not Spain. This argument resulted in the Treaty of Tordesillas, signed

in 1494, that drew a line of demarcation 370 leagues west of the Cape Verde Islands.

Columbus later organized three more voyages (in 1493, 1498, and 1502), which are often unfairly ignored. Yet they were in many respects greater undertakings. Thus, the second voyage was the largest of Columbus's enterprises and was conceived as a colonizing venture involving some 1,200 men on 17 ships. On that journey, Columbus explored the Caribbean islands, including Puerto Rico and Hispaniola. These islands of the Caribbean were initially a disappointment to Spain, as they seemed to lack the rich and valuable commercial resources of Africa and Asia. The beginning of colonization efforts in these islands led Spain to further exploration, which eventually took them to the continents of the Americas. Future expeditions established a vast new empire for Spain in the New World.

After the initial burst of exploration in the 1490s, Spanish activity lagged for almost a decade. On Hispaniola, Spanish presence was limited to Navidad for 16 years after Columbus's first voyage, although the smaller settlements of Isabela and Santo Domingo were founded in the late 1490s. The turning point in the Spanish colonization of Hispaniola took place in 1502 when some 2,500 colonists reached the island. The island soon became the center of Spanish exploration in the New World. Thus, the northern coasts of the Caribbean were slowly explored, and Juan Ponce de León, who later discovered the Flowery (Florida) Isle, discovered gold in Puerto Rico and brutally suppressed a revolt of the native Taino people. In 1509 Juan de Esquivel led an expedition to Jamaica, but lack of gold or other tradable commodities on the island meant that the Spanish soon lost interest in it. That same year, however, Alonso de Hojeda and Diego de Nicuesa launched two major expeditions to modern-day Colombia, Venezuela, and Panama. While Nicuesa's expedition to Panama proved to be a disaster, Hojeda's expedition proved to be more successful, and despite fierce local resistance and difficult terrain, its survivors established the first European colony in South America, Santa Maria la Antigua del Darién. This colony, together with the founding of the city of Panama in 1519, provided the Spaniards with a new base, outside Hispaniola, for launching exploratory expeditions

throughout South America. Meanwhile, in 1511–1512 the Spaniards, led by Diego Velázquez and Panfilo de Narváez, explored the Greater Antilles and colonized Cuba. Accompanying Velázquez was a minor treasury clerk, Hernán Cortés, who would earn fame for his conquest of Mexico, while Narváez's expedition included a recently ordained priest, Bartolomé de las Casas, who was so stunned by the vicious destruction of the native population of Cuba that he turned into one of the greatest advocates of the rights and protections for the natives.

The Mexican coast was initially reconnoitered by Columbus himself and was scouted by a subsequent expedition in 1508. In 1517 Francisco Hernández de Córdoba led a small expedition to the Yucatan Peninsula, while a follow-up expedition (in 1518) of Juan de Grijalva pushed farther inland on the east coast of Mexico, marking the first recorded contact between Europeans and Aztecs. The news of this encounter caused Spain to organize a third expedition the following year. In 1519 the Spanish conquistador Hernán Cortés landed on the coast of Mexico and began the conquest of the ancient Aztec civilization there. Cortés and a group of approximately 600 armed men on horseback easily intimidated the Aztecs, who had never before seen a European or a horse. Cortés imprisoned the Aztec chief Moctezuma, and many of the Aztec natives died from either conflict or disease. The conquest of that region of Mexico was complete by 1521, and Cortés renamed it New Spain. Cortés continued explorations of the region and launched several expeditions to the west coast of Mexico. He himself crossed the mainland to the southern tip of California in 1535, and the Spanish name for the Gulf of California—the Sea of Cortés—bears testimony to this. Under Cortés' guidance, the Spanish established several ports in western Mexico, which now served as bases for Spanish ships sailing to the Orient. At the same time, Córdoba explored the land of the Chorotegas, Nicaraguas, and Maribios in the mid-1520s, while the task of exploring the northern Caribbean between Mexico and Florida was completed by Alonso Alvarez de Pineda, who traveled the region in 1518–1519.

Meanwhile, in late 1515 Juan Diaz de Solis, who had already gained experience exploring

Yucatan (1506–1507) and Brazil (1508), organized an expedition to find a passage to Asia through South America. He did explore the coastline of present-day Argentina and discovered the mouth of the Rio de la Plata but was killed in a skirmish with the local Charrúa people. His discovery, however, helped another Spanish explorer. Fernando Magellan, or Fernão de Magalhães as he was called in his native Portugal, who began in the employ of Portugal, petitioned the Spanish to finance his expedition to find a passage through or around the Americas to the Indies. Carlos I of Spain, more commonly known as Holy Roman Emperor Charles V, gave his funding and assent to Magellan, who sailed from Seville in August 1519. Magellan first traveled in the wake of Solis and then navigated the horn of South America through the straits that now bear his name, crossed the Pacific Ocean (the first documented crossing of this ocean), and reached the Spice Islands in 1521. This made Magellan the first to circumnavigate the world; however, his discovery had little practical use for the contemporary mariners, since rounding the tip of South America was a truly daunting venture and was largely avoided until the eighteenth century. Thus, much of Spanish exploration of the western shores of the Americas was done from ports that the Spanish established along the coastline. In 1513 Vasco de Balboa made his famous march to the Pacific Ocean from Santa Maria la Antigua del Darién. As he reached the coastline, Balboa waded out into the waters of this “Southern Sea,” as he proclaimed it, and claimed it and its shores for the Spanish Crown. The act was notarized, with the members of Balboa’s party acting as witnesses. The second man, after Balboa himself, to put his name on the document was Francisco Pizarro.

By 1520 Pizarro had already established a reputation as a dedicated and fierce conquistador. He participated in the early expeditions to the Isthmus of Panama, and as he accumulated wealth at the newly founded City of Panama, he pursued new ventures in South America in the 1520s. As a result of these scouting missions, he soon learned of rumors of fabulously rich lands far to the south. After years of trying, in 1528 he finally managed to establish contact, at Tímbez, with the Inca state under the rule of

their chief, Atahualpa. Two years later Pizarro embarked on a larger expedition to the Inca realm, conquering it by 1538. The arrival of the Europeans in the new lands also meant the arrival of European diseases such as smallpox and measles, to which the natives had no previously acquired immunity. As a result, the Spanish conquest of the New World of Mexico and South America was made significantly easier at the expense of the native populations.

—Cheryl H. White, Alexander Mikaberidze,
and Monique Vallance

Bibliography

- Columbus, Christopher, and John Cummins. *The Voyage of Christopher Columbus: Columbus' Own Journal of Discovery*. New York: St. Martin's, 1992.
- Elliott, John Huxtable. *Empires of the Atlantic World: Britain and Spain in the Americas, 1492–1830*. New Haven, CT: Yale University Press, 2006.
- Kamen, Henry. *Empire: How Spain Became a World Empire, 1492–1763*. New York: Penguin, 2003.
- Morison, Samuel Eliot. *The European Discovery of America: The Southern Voyages, 1492–1616*. Oxford, UK: Oxford University Press, 1993.

Spanish Enter the Philippines

Ferdinand Magellan (1480–1521), a Portuguese mariner, was one of the first Europeans to encounter the Philippine archipelago. After the Portuguese king Manuel I rejected his plan to locate the Spice Islands and establish commercial trading, Magellan took Spanish nationality so that he could undertake exploratory voyages for the Spanish Crown. This had been one of the objectives of the earlier explorer Christopher Columbus, whose journey westward from Europe led to the discovery of the Americas in 1492. Within a few years rivalry between Spain and Portugal for the control of lands and trade routes beyond Europe caused political storms that resulted in several Papal Bulls (decrees). By 1494 the Treaty of Tordesillas established a north-south meridian line 370 leagues west of the Cape Verde Islands and allocated all lands east to the Portuguese and all lands west to the Spanish.

In effect this closed routes to the Pacific Ocean via India to the Spanish, and Magellan set

THE GALLEON TRADE

Manila became a thriving port as well as the seat of government in 1565. Of particular importance was the trade with Spanish America, especially with Acapulco in Mexico. This transpacific trade lasted until 1815 when the Mexican War of Independence began. Galleons brought not only goods but also Philippine natives known as Luzon Men, those exiled for troublemaking and servants, to the west coast of Mexico and North America. This trade began when Andrés de Urdaneta, sailing in a convoy led by Miguel López de Legazpi, discovered a return route from the Philippines to Acapulco. Overall 110 galleons plied the Pacific, with at least three ships sailing each year in each direction. The galleons themselves were among the largest ships of the time and were constructed in the Philippines. Their cargoes were varied but were composed of mainly spices, porcelain, ivory, silk, and lacquerware produced in various islands and parts of mainland Southeast Asia. From Mexico's west coast the goods were taken east overland to the Gulf of Mexico and then to Europe. The Mexican (New Spain) connection was important because it kept the trade in Spanish-controlled land and waters and the goods were paid with silver produced in Mexico.

—A. M. Mannion

out to find a route to the west. On September 20, 1519, with five ships and a crew of 270 men, Magellan set out from Sanlúcar de Barrameda in Andalusia and traveled west. On October 21, 1520, the fleet reached the channel now named the Strait of Magellan and began the passage between the Atlantic and Pacific oceans. By March 16, 1521, Magellan and his remaining crew of 150 became the first Europeans to reach the Philippines when an initial landing was made on the island of Homonhon. On April 7 Magellan sailed to the island of Cebu, where conversions to Christianity took place. Hostility to Christianity of some indigenous people led by Rajah Lapu Lapu resulted in Magellan sailing to Mactan, where he and his army engaged in battle and he was killed. Subsequently, two of the original fleet visited the Maluku Islands (the Spice Islands or the Moluccas, which are part of Indonesia), took on valuable cargo that included cloves, and

set sail for Spain although only one ship, the *Victoria*, under the leadership of Sebastián Elcano, arrived home in September 1522, having circumnavigated the world and brought spices of the East directly to Europe. Four further expeditions were undertaken from Spain between 1525 and 1542, and it was Ruy Lopez de Villalobos, commander of the fourth expedition, who named the islands after Philip II, the Spanish heir who became king in 1556.

It was more than 40 years after Magellan landed that Spanish settlement began in an archipelago comprising more than 7,000 islands located between the South China Sea and the Philippine Sea. The first wave of immigrants was led by the conquistador Miguel López de Legazpi, who arrived from Mexico in 1565 and established settlements in Cebu. Legazpi defeated local resistance from the Muslim leader Rajah Sulayman, and in 1571 Legazpi's company established a base at Manila on the island of Luzon. Manila became the capital, whose initial design is attributed to Jesuit missionaries. The city was the seat of government during the entire period of Spanish rule, first as the viceroyalty of New Spain from 1565 to 1821, when it was administered from Mexico City, and then administered directly from Madrid between 1821 and 1898. For a short time from 1762 to 1764 the Philippines were ruled by Britain. Overall, a number of disparate island communities became united to create a nation. Trade was the major enterprise not only with Spain and greater Europe but also with the Americas; the most important goods were spices, ceramics, and silk. Spanish warfare with indigenous groups, including Muslims of the islands of Mindanao and the Sulu Archipelago, was endemic. Furthermore, the Spanish also fought the Portuguese to maintain Spanish control of the archipelago. The Spanish introduced a number of customs including a social hierarchy and the advocacy of land ownership by individuals and families rather than communal use. Educational and health systems were established, and processes such as printing were introduced often under the auspices of the Catholic Church, which undertook to convert the indigenous population and continues to be a major influence today. Spanish immigrants produced new ethnic groups including the creoles, who were

Spaniards born in the Philippines, and mestizo, who were mixed Spaniards and Malaysians.

—A. M. Mannion

Bibliography

- Schrimer, Daniel B., and Stephen Rosskamm Shalom, eds. *The Philippines Reader: A History of Colonialism, Neocolonialism, Dictatorship, and Resistance*. Boston: South End, 1987.
- Woods, D. L. *The Philippines: A Global Studies Handbook*. Santa Barbara, CA: ABC-CLIO, 2006.

Portuguese Exploration of the West African Coastline

The period famously known as the Age of Exploration began with the Portuguese and their voyages west into the Atlantic Ocean and down the western coast of Africa. The person most directly responsible for these voyages is Prince Henry, “the Navigator” (1394–1460). Despite the moniker “Navigator,” Henry in fact never actually participated in the navigations or the education that led to these explorations. Rather, Henry was the financier of these discoveries. As the third son of King João I, Henry would not be given wealth, so he would need to acquire it for himself. He began this quest by obtaining monopolies on things like tuna, soap, and coral.

In the fifteenth century, the Portuguese were in a better position to begin the explorations than any other country in Europe. Unlike countries such as England, France, and the Spanish kingdoms, Portugal had the political stability that afforded it the opportunity to concentrate on other matters. In addition, the desire for African gold and for crusades against the African Muslims drove them to send their ships south. Also, the legend of Prester John and eventually the search for a sea route to India would propel more and more explorers through the dangerous Atlantic.

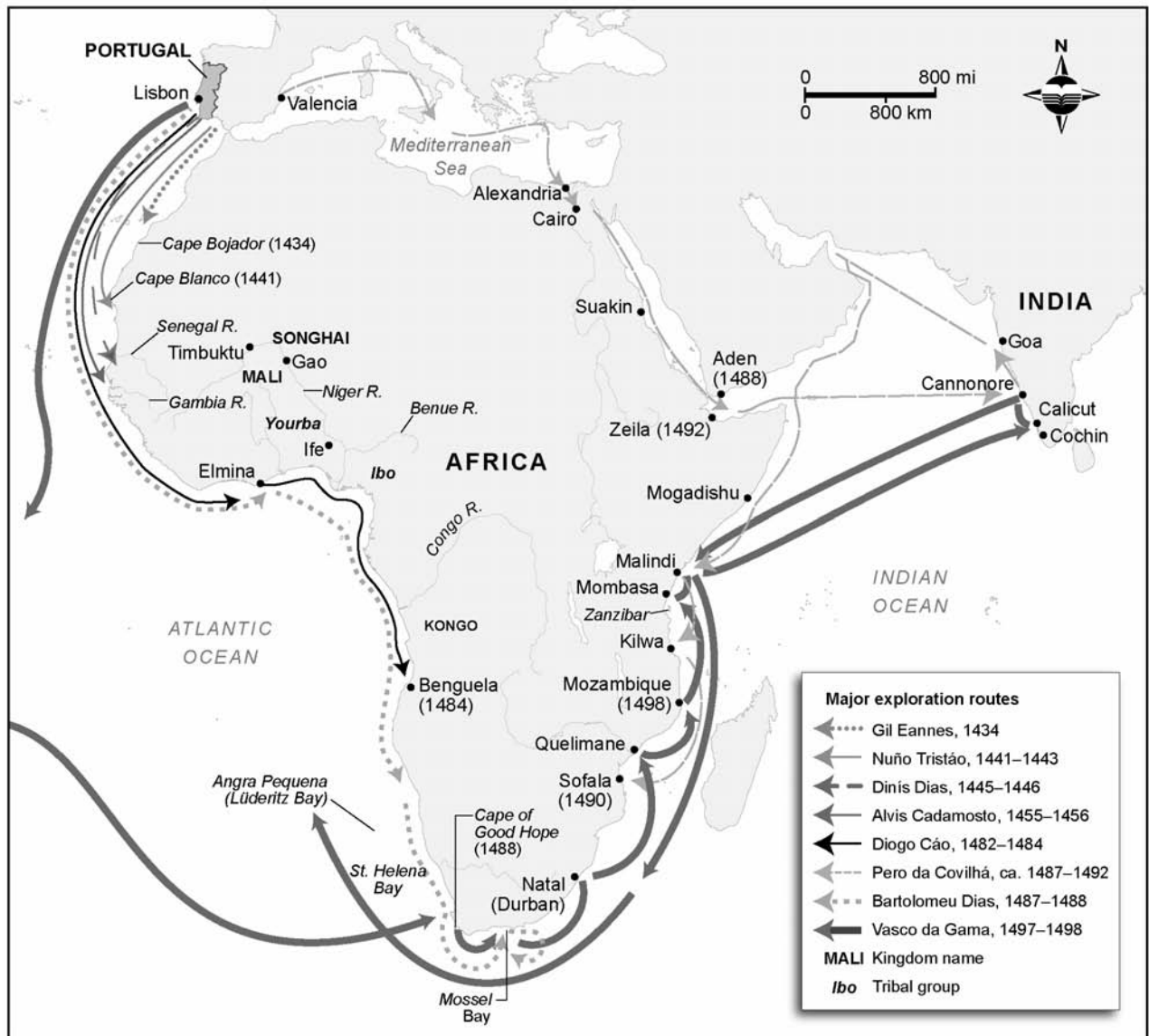
Until the fifteenth century, European knowledge of Africa was limited to the Sahara as the southernmost area, and this knowledge was only obtained by secondhand knowledge from Jewish merchants who had traded in northern Africa. The capture of the fortress of Ceuta in 1415 was the beginning of Portuguese dreams of becoming an important cornerstone in the global market of gold. While certainly religious

reasons existed behind their motivations to capture Ceuta, it cannot be denied that Ceuta was also strategically important both militarily and economically for the Berbers in northern Africa. With the capture of this city, they hoped to capture an important link in the trans-Saharan trade. Gold had become extremely important to Europe during the late Middle Ages, as more and more countries and cities were using it for their coinage. They soon realized that it would be far easier to access these areas by sea rather than by land. In addition, Prince Henry’s financing brought about the development of the caravel, a boat that was lighter, easier to navigate, and faster than previous vessels used.

In funding these voyages, Prince Henry was mostly looking to enrich his own fortunes, but he became instrumental to advancements in shipbuilding, cartography, and navigational science, as he funded the work of scientists from all over Europe. These progressions led to the discovery of the Madeira Islands (1419) and the Azores Islands (1427). These discoveries encouraged Prince Henry and his entourage of explorers and scientists to continue navigating south along the coast of Africa. Despite the invention of the caravel, exploration was mainly limited to the coast, as the knowledge of the time still did not understand the prevailing winds and how they operated. Straying too far from the coast could spell disaster for a ship and its crew and leave them stranded in the middle of the Atlantic Ocean.

At this time, the southernmost area of Africa known to Europeans was Cape Bojador, on the northern coast of the Sahara. The seas around the cape are extremely rough, plagued by fog, and surrounded by prevailing waves that made it almost impossible to return north, which is why “Bojador” is derived from the Arabic name for the place Abu Khatar, which means “the father of danger.” According to the chronicles, at least 15 voyages had failed to go around the cape before one of Prince Henry’s ships, captained by Gil Eanes, finally made a successful return voyage in 1434. This success broke the psychological barrier that had existed against voyages around the cape and farther south. Two voyages and two years later, voyagers reached Cape Blanco in 1436, and the Sahara had finally been passed. The next voyage did not occur

PORTUGUESE EXPLORATIONS OF THE AFRICAN COAST



until 1441. This voyage was undertaken by Antão Gonçalves and Nuno Tristão to Rio de Oro, where the first Moorish slaves were taken captive. This was the beginning of what would become the African slave trade. While these first slaves taken from Africa mainly went back to Portugal and were used as luxury items by the nobility, shortly after the slaves were sent to the Madeiras to work the sugar plantations that began springing up there.

The beginnings of the slave trade helped finance the explorations down the rest of the coastline. While slaves were at first obtained by

raiding, the Portuguese soon realized that many Africans were more than willing to barter slaves in a peaceful manner. Besides money, the slave trade also provided a psychological boon for the Portuguese, as they were finally provided with a visual benefit to all of the risk being taken. Two years later, Tristão sailed from Cape Blanco to the islands of Arguim Bay. That decade saw the Portuguese vessels going down the coast of Senegal, Guinea, and Gambia. By this time, Henry had obtained sole rights to make war, carry merchandise, or bring back any people or goods from any region south of Bojador without

► SECRECY DURING THE AGE OF DISCOVERY

There has been historical debate over the final years of João II's rule, mainly the years 1487 until his death in 1495. These years showed a halt in exploration, which seems mysterious considering the level of involvement João had shown since he ascended the throne. Jaime Cortesão and his brother Armando posited some very controversial theories in the 1970s in order to explain the reason for this supposed halt in activity. According to them, because João's reign was plagued by the threat of possible rivals, he was forced to conduct many expeditions either in secret or at least with some misinformation involved. Secrecy was very important; if any rivals were to discover the information that the Portuguese had on the route to India, they could have used it to further their own explorations and possibly reach India first. Evidence can be found for several secretive expeditions that were conducted through Ethiopia in João's search for a sea route to India, which supports the idea that he was concerned about the security of the information his men were acquiring. However, the Cortesão brothers, particularly Armando, took the theory a step further by claiming that the lack of documents during this period was proof that João was conducting secret voyages around the Cape of

Good Hope so as not to alert his Castilian rivals to his plans, especially after Columbus's "discovery" of a western route to Asia in 1492. In addition, several other occurrences could possibly lend weight to their theory, including the fact that Vasco da Gama, a minor noble who did not have much experience in seafaring, was given charge of such an important expedition as the one that went to India in 1497. Armando Cortesão claimed that João had already sent a voyage to India in 1495 shortly before his death, but the information was never released because his successor and cousin, Manuel I, wanted to retain the credit of the discovery for himself. Unfortunately for him, there is no evidence that this happened. In addition, the Treaty of Tordesillas, which was signed in 1494, set the line of demarcation as 370 leagues west of the Cape Verde Islands, which goes down the eastern part of modern-day Brazil, six years before the discovery of Brazil by Pedro Alvares Cabral. This theory has been vehemently denounced by other Portuguese historians, who have provided other theories as to why João halted his expeditions. No concrete evidence has been shown to prove either side of the debate; therefore, the mystery remains.

—Monique Vallance

paying the *Quinto*, or the one-fifth tax. This was granted to him by his nephew, Afonso V, and these rights were guaranteed by Pope Nicholas V in 1455 in the bull *Romanus Pontifex*. This quickly stopped any non-Portuguese vessels from encroaching on Africa, as they were now threatened with excommunication. This bull guaranteed that Portugal would retain a monopoly on Africa for the next two centuries. The last discovery made before Henry's death in 1460 was that of the Cape Verde Islands in 1456.

The death of Henry slowed down the explorations for the next 20 years, as Afonso V was more interested in his designs to overtake Castile than he was in following the coast of Africa. Despite this, ships continued to make their way south, reaching the Bisseau Islands and Sierra Leoa, or present-day Sierra Leon and Cameroon (derived from the Portuguese word *camarão*, or shrimp). Perhaps one of the best discoveries was

the discovery of the Gold Coast, in present-day Ghana. This finally brought the Portuguese the source of the African gold that was so coveted in Europe. The Crown finally took control of these expeditions when King João II took the throne in 1481. He ordered a fort built in the Gold Coast area in 1482, moved the headquarters of the Portuguese voyages from Lagos to Lisbon, and invited foreign businessmen to invest, although he made it clear that any pirate activity would be punishable by death. During this same year Diogo Cão began his exploration of the Kongo region and river.

It was soon after Henry's death that the concept of reaching the Indies via the ocean emerged, although in the 1460s this was still a vague idea, as the Portuguese were not sure how that could be achieved. By the 1480s, however, King João was determined to turn this vague idea into a concrete one. After the death of

Diogo Cão, it was now the charge of Bartolomeu Dias to lead the way to India. In 1487 Dias departed from Lisbon and made his way down the coast of Africa, going farther than any explorer before him. He finally made it around the tip of Africa, reaching Kwaaihoek, on the eastern coast of South Africa, in March 1488. He originally intended to travel all the way to India, but his crew mutinied and refused to go any farther. Therefore, Dias discovered what he dubbed the “Cape of Storms” on his return voyage to Portugal. João II would name this cape the Cape of Good Hope, as it represented the possibility of finally reaching India by sea. While the Cape of Good Hope is not the southernmost tip of Africa, it is the point where ships began sailing more east than south.

All of the explorations down the western coastline of Africa would finally culminate in the voyage of Vasco da Gama in July 1497. Dias joined da Gama on this voyage by captaining one of the ships until reaching the Cape Verde Islands. Da Gama’s voyage reached India in 1498, thus achieving the dream set forth by João II, although this occurred after his death. It was the discovery of this route that catapulted Portugal to being among the richest countries in Europe and labeled João’s successor, Manuel I, as “the Fortunate.”

—Monique Vallance

Bibliography

- Boxer, C. R. *The Portuguese Seaborne Empire, 1415–1825*. New York: Knopf, 1969.
- Diffie, Bailey, Boyd C. Shafer, and George D. Winius. *Foundations of the Portuguese Empire, 1415–1580*. Minneapolis: University of Minnesota Press, 1977.
- Russell-Wood, A. J. R. *The Portuguese Empire, 1415–1808: A World on the Move*. Baltimore: Johns Hopkins University Press, 1992.
- Winius, George D., ed. *Portugal, the Pathfinder: Journeys from the Medieval toward the Modern World, 1300–ca. 1600*. Madison: University of Wisconsin Press, 1995.

Portuguese Exploration of Amazonia

The late fifteenth century saw an increase in maritime activity leaving Europe and exploring what had previously been a mystery to the

Europeans. The Portuguese had led the way in these expeditions as they voyaged their way down the western coast of Africa in search of a sea route to Asia and its wealth of spices. When Vasco da Gama reached India in 1498, he returned to Portugal triumphant with a shipment of cinnamon and pepper, proof that the Iberian kingdom was on the verge of becoming wealthy beyond belief. It was the return of Vasco da Gama that prompted King Manuel I to immediately send out another ship bound for India. This time Pedro Alvares Cabral captained the ship. Cabral spoke to da Gama and received instructions on how to use the prevailing winds to swing around the southernmost tip of Africa.

Cabral’s expedition consisted of 13 ships and 1,500 men, including Bartolomeu Dias, the first man to sail around the Cape of Good Hope. They left on March 9, 1500, and the ships sailed away from Portugal pointed in a southwestern direction. However, those prevailing winds proved to be tricky, blowing the ships away from Africa rather than toward it. Finally land was sighted on April 22, a land that would later be dubbed “Brasil.” However, Cabral’s main purpose was not to discover new territory but instead to sail to India, so he could not stay long in this new land. The ten days during which he stayed in Brazil were spent attempting to chart its location, exploring the topography, and attempting to communicate with the people. The next day one ship was sent to Portugal to alert the king of the news, along with a sample of a tree that would later be called brazilwood, a tree that became high in demand for its dye. Some convicts, or *degradados*, were left behind with instructions to learn about the area and the people and their language. The Treaty of Tordesillas provided that the line of demarcation would fall 370 leagues (1,280 miles or 2,056 kilometers) west of the Cape Verde Islands, which falls just west of present-day São Paulo.

The ship headed for Portugal reached its destination in 1501, and King Manuel immediately sent a small expedition to explore Brazil. At least one of the convicts was able to serve as an interpreter and intermediary between the Portuguese and the natives. Exploring the land would prove to be a dangerous venture, as some of the indigenous people were cannibals. By 1511 news

was circulating throughout Europe about Brazil, glorified as a tropical paradise. Many believed Brazil to be a large island, and if it was, then Asia could still be reached from the other side. The goal of another expedition in 1511 was to see if there was a way to reach Asia from Brazil, but instead they found the La Plata estuary. The Portuguese continued to build settlements along the coast of Brazil but did not stray too far into the interior because of the dangerous natives and jungles. Two Spanish explorers managed to navigate some distance down the Amazon River, but the Portuguese would not attempt the same venture for a century.

The search for a shorter route to Asia was always on the mind of the Portuguese king, and Columbus's discovery of a "new world" made that dream seem much closer. Another possible direction that had not been given much attention by 1500 was a northwestern one. As of yet it was not possible to know the extent of the North American continent, and it was hoped that if an expedition could sail far enough, it could go over the Americas and reach Asia faster than around the Horn of Africa. It was with this aim that an expedition of two caravels departed from Lisbon in 1500 under the leadership of João Vaz Corte-Real (ca. 1450–1501). Very little is known about the actual voyage taken, but it is probable that Corte-Real sailed as far north as Greenland, as an Italian map commissioned in 1502 shows the southern tip of Greenland as "A ponta d'Asia." It is unknown what else he saw during this voyage, but we do know that he was unable to land and was forced to return to Lisbon. The following year Corte-Real set sail again, this time with three caravels, on May 15, 1501. He once again sailed toward Greenland and went farther north than he had the first time. However, he encountered icebergs and pack ice, making it impossible to land. He then crossed the Davis Strait and encountered a coast that he described as having pine trees and many rivers. Modern historians surmise that this area is present-day Newfoundland, as the Italian map mentioned above does not show any land farther north than the east coast of Newfoundland. Unfortunately the expedition encountered a storm, and Corte-Real's ship was lost at sea.

When João did not return, his brother Miguel set sail to locate him. If one considers Greenland

➤ MANUEL I

Manuel I of Portugal (1469–1521) oversaw the age of Portuguese exploration and expansion at its apex. In 1495 he inherited the throne from João II, who was both his cousin and his brother-in-law. When Manuel assumed the throne, explorations of the African coast were already under way. Under his patronage, Portuguese explorers reached Greenland in 1495, India in 1498, and Brazil in 1500. In addition, the Portuguese were exploring the African coastline as well as the Indian Ocean. These expeditions as well as Portuguese entrance into the slave trade did much to increase the wealth and fame of Portugal, and Manuel was acclaimed the richest monarch in Europe. After 1500, following numerous naval victories, Portuguese monopoly of the spice trade was firmly established.

—Monique Vallance

an arctic region, then this can be considered the first polar relief expedition. After an exploration of Newfoundland and Labrador, the ships agreed to separate in order to cover a wider search area. The agreement was to reconnoiter on August 20, but Miguel's ship was never seen again. When this second brother failed to return, the remaining Corte-Real brother, Vasco Anes, planned a second relief expedition; however, King Manuel refused to give him permission to leave, fearing that he too would be lost. This ended any other Crown-sponsored expeditions of North America by the Portuguese.

Throughout the sixteenth century, Brazil's main exports were brazilwood and sugar. Other than that, there did not seem to be any other wealth that could be attained; therefore, they concentrated more on their Asian empire. The combination of the Dutch Rebellion against the Spanish and the union of the Spanish and Portuguese Crowns at the end of the sixteenth century made the one-time allies instant enemies. Increased Dutch pirate activity caused the Portuguese to begin losing their Asian possessions until 1609, when the Spanish king Philip III signed a 12-year treaty with the Dutch that allowed them to trade in Brazil. Once the treaty expired in 1621, the Dutch began to concentrate

more on exploring Brazil, which led to the next expedition to South America. Although the Treaty of Tordesillas had given Brazil to Portugal, the Amazon River was firmly on the Spanish side. However, the Spanish were more concerned with the wealth of Peru to be too bothered with the Amazon. The French began appearing at the northern part of the Amazon, which prompted the Portuguese to build Fort Presépio in what is today's Belém in order to defend the region. This fort became the starting point for another expedition in 1621. Against the danger faced by the French and the Dutch, the Spanish king, who for the time being was also the Portuguese king, decided to allow the Portuguese to explore the lower part of the Amazon. This expedition set sail on June 21, 1621, and was led by Luis Aranha de Vasconcelos. He sailed 400 leagues (1,400 miles or 2,200 kilometers) up river and was the first to map it. His voyage laid the foundation for Portuguese authority in the lower Amazon region.

The person responsible for establishing Portuguese authority throughout the entire Amazon region was Captain Pedro Teixeira. He attacked several English and Dutch units along the Amazon. In addition, he captained another expedition in 1637. This expedition was the biggest ever, with 80 Portuguese and over 1,200 aborigines and Africans. One year later the group reached Quito, in present-day Ecuador, without much incidence. This journey encompassed almost the entirety of the Amazon and was the first of its kind. Upon their arrival in Quito, the Spanish viceroy in Peru became concerned at the Portuguese activity on the Amazon and insisted that they allow two Spaniards to accompany them on their return journey so that the river could be thoroughly mapped and documented.

As the century wore on, the Portuguese continued their push through the upper Amazon despite the fact that the Treaty of Tordesillas directed that the area was Spanish. However, the Spanish empire was stretched too thin and could not afford the time, men, or money to fend off the Portuguese. By the end of the seventeenth century gold was discovered in Brazil, and the ensuing rush of immigration from Portugal permanently decided that the entirety of

the Amazon region would be in the hands of the Portuguese.

—Monique Vallance

Bibliography

- Bethell, Leslie. *Colonial Brazil*. Cambridge: Cambridge University Press, 1987.
- Diffie, Ballie Wallys, Boyd C. Shafer, and George Davison Winius. *Foundations of the Portuguese Empire, 1415–1580*. Minneapolis: University of Minnesota Press, 1977.
- Goodman, Edward J. *The Explorers of South America*. Tulsa: University of Oklahoma Press, 1992.
- Smith, Anthony. *Explorers of the Amazon*. Chicago: University of Chicago Press, 1990.

Portuguese Expansion in the Indian Ocean

The Indian Ocean was a historic center for trade and empires in world history throughout much of human history. Portuguese expansion into the Indian Ocean began with Vasco da Gama's voyage to Goa (in western India) in 1498. At this time, Muslim rulers and traders had dominated the Indian Ocean for several centuries, as it connected several major empires in Asia and the Middle East. As a result, the Indian Ocean trade brought enormous wealth and opportunities, opportunities that Europeans sought in their quest to locate new trade routes to Asia.

Da Gama succeeded in locating a sea route to India by traveling around Africa and the Cape of Good Hope. However, da Gama's trip to India was one of frustration, as he found Muslim merchants dominating the trade in every port in east Africa and India. Furthermore, da Gama's aspiration to convert Indians was unsuccessful. In addition, he found few buyers for the goods he sought to trade and thus returned to Portugal only after purchasing spices and luxury goods with silver rather than profits from trade. Indeed, in Calicut his offerings of European-made goods offended the local ruler. Da Gama further exacerbated the situation by kidnapping some residents to display to the court in Lisbon.

In 1502 da Gama returned to the Indian Ocean with 20 ships. Using force and intimidation, he was able to quickly secure the shoreline of much of east Africa due to lack of unity

among the various small city-states that dotted the coast. He carried out acts of piracy against any Muslim ship he found in the waters, killing all aboard and plundering the ships before leaving their burning hulls behind. Villagers and fishermen were not spared from da Gama's terror as he attacked them indiscriminately, bombarding them from the safety of his ships. Da Gama justified his actions in the name of Christ, as he was filled with a crusading zeal following the Iberian Reconquista.

Part of the Portuguese expansion into the Indian Ocean revolved around the quest for the legendary Prester John, whom they ultimately concluded was the Negus of Ethiopia. However, before they came to this realization, it was thought that with the power and wealth of Prester John, the forces of Christianity would destroy dominance in the region by undermining the wealth of the Muslim trade. Ultimately the Portuguese did not need Prester John's assistance for this, as they attacked any non-Portuguese ship. Nonetheless, the Portuguese-Ethiopian alliance proved useful in preventing Ottoman influence from solidifying in east Africa. The alliance prevented the Ottomans from penetrating the interior of east Africa in 1543. The Ottomans remained the dominant force in the Red Sea and the Gulf of Aden, but the Portuguese attempted to establish bases around the perimeter of the Indian Ocean to monopolize trade and control choke points like the straits of Malacca and Hormuz. Indeed, their superior firepower allowed them to succeed at all points except the Ottoman-controlled Aden.

It is astonishing that Portugal, whose population was less than most of the Indian Ocean kingdoms they terrorized, succeeded at all. A key reason for their success was their ships and cannons, but another reason was the nature of the kingdoms. Although the Ottomans succeeded in preventing Portuguese dominance in the Red Sea, they were too busy on other fronts to make a concerted effort elsewhere against the Portuguese. Meanwhile, the Safavids and the Mughals were less concerned about the naval power of the Portuguese. Most of the ships that the Portuguese attacked were merchant ships rather than warships. Yet for all of their naval

➤ PORTUGUESE SHIPS AND THE INDIAN OCEAN

In addition to using terror and piracy to help establish power, the Portuguese also relied on ships and guns in order to assert influence in the Indian Ocean.

Most of the Muslim naval vessels in the region were galleys, whose primary method of attack was ramming. They also carried a few cannons but at the fore and aft and thus were not able to provide broadside attacks. Furthermore, the cannons could damage ships but were not extremely powerful due to the limited amount of deck space, as the recoil of a heavy cannon could send it off the deck and onto the rowers.

The Portuguese, however, brought their caravels with two to four masts, including lateen sails, and loaded them with cannons. Although the caravel rarely exceeded 164 feet (50 meters), it was wider than the galleys used along the coasts of the Indian Ocean, thus allowing more space for the recoil of the cannon. Furthermore, with no oarsmen, the Portuguese could place cannons on the deck and also below deck. Beginning in the 1500s, gun ports below deck increased the amount of cannons in use, and heavier cannons usually were used below deck. Their shots could open huge holes into the hull of the enemy galleys and from a safe distance, unlike a ram on a galley.

—*Timothy May*

dominance, the Portuguese could only hold the coastline, as any army in India was larger and well organized. Only by acting in concert with other rulers did the Portuguese find success in the interior. As long as they did not cause trouble inland, most rulers did not trouble themselves with ridding themselves of the Portuguese and viewed them as simply replacing one set of merchants with another. Indeed, when Muslim minorities in Hindu-majority kingdoms in southern India armed and organized themselves against the Portuguese, the Hindu princes often allied themselves with the Portuguese out of fear of a Muslim rebellion.

Despite the dominance and rapacious activities involved in the Portuguese expansion, they did suffer setbacks. By 1580 the indiscriminate Portuguese attacks on local shipping

in east Africa finally resulted in coordinated attacks on their own ships and bases. Ultimately the Portuguese also experienced a retreat from the Indian Ocean. The threat they faced, however, came not from the victims of their expansion but rather from English and Dutch trading companies, which were initially welcomed by the Muslims. Indeed, the only Muslim power to successfully resist and counter the Portuguese expansion was the nascent seaborne empire of Oman, which stripped away Portugal's east African possessions north of Madagascar. By the mid-eighteenth century, only a few Portuguese possessions remained in the Indian Ocean.

—*Timothy May*

Bibliography

- Boxer, C. R. *The Portuguese Seaborne Empire, 1415–1825*. London: Hutchinson, 1969.
- Chase, Kenneth. *Firearms: A Global History to 1700*. New York: Cambridge University Press, 2003.
- Dale, Stephen Frederic. *Islamic Society on the South Asian Frontier: The Mappilas of Malbar, 1498–1922*. New York: Oxford University Press, 1980.
- Kearny, Milo. *The Indian Ocean in World History*. New York: Routledge, 2004.
- Pearson, Michael N. *Port Cities and Intruders: The Swahili Coast, India, and Portugal in the Early Modern Era*. Baltimore: Johns Hopkins University Press, 1998.

Vasco da Gama, Renaissance Crusader

Vasco da Gama (ca. 1469–1524), Portuguese explorer, first count of Vidigueira, and discoverer of the sea route to India, was born in the coastal town of Sines about 1469. His family had long-standing service ties to the Crown in its struggles against Castile and Islam, and Vasco's father, Estevão, had won grants, including the post of *alcaide-mor* (governor-major) of Sines, for these services. He also became a *commandery* holder, or possessor of a revenue-generating land grant, in the powerful crusading Order of Santiago, thus elevating the family's status, a process that would culminate with his son's career.

Not much is known about the early years of Vasco da Gama's life. He received a solid education in nautical matters and also demonstrated

martial skills in campaigns against Castile. In 1492 King João II (r. 1481–1495) selected da Gama to confiscate French shipping in the ports of the Algarve in retaliation for the French seizure of a Portuguese ship returning from Africa loaded with gold. He accomplished this task with great brevity.

In 1497 King Manuel (r. 1495–1521) selected da Gama to command the epic expedition to India that successfully ended the search for a sea route to Asian spices begun during the days of Prince Henry (1394–1460). The four-ship fleet (*São Gabriel*, *São Rafael*, *Berrio*, and a store ship) departed Lisbon on July 8, 1497, with 170 men aboard. After stopping at São Tiago (July 27–August 3) in the Cape Verde Islands, da Gama and his fleet headed out into the Atlantic to exploit the prevailing winds. On November 8 the fleet reached Santa Helena Bay and on



Portuguese navigator Vasco da Gama was the first to sail from Portugal to India, opening up new routes for the spice trade. Illustration from Pedro Barretto de Resende's historical and topographical account of the Portuguese settlements in the East Indies, 1646. (The British Library/StockphotoPro)

➤ CALICUT

The following appears in the *Logbook (Roteiro) of the First Voyage of Vasco da Gama*. The journal was kept by an anonymous crew member aboard Vasco da Gama's ship, the *San Rafael*. This account of the long and costly journey of spices from Calicut to the Mediterranean clearly indicates why the Portuguese desired direct access to the markets of the Indies.

"From this country of Calicut . . . come the spices that are consumed in the East and the West, in Portugal, as in all other countries of the world, as also [are] precious stones of every description. The following spices are to be found in this city of Calicut, being its own produce: much ginger and pepper and cinnamon. . . . Cloves are brought to this city from an island called Melqua [Malacca]. The Mecca vessels carry these spices from there to a city in Mecca [in Arabia] called Judea [Jeddah], and from the said island to Judea is a voyage of 50 days sailing before the wind. . . . At Judea they discharge their cargoes, paying customs duties to the [Mamluk] Grand Sultan. The merchandise is then transshipped to smaller vessels,

which carry it through the Red Sea to a place close to Santa Catarina [Monastery] of Mount Sinai, called Tuuz [El Tur] where customs dues are paid once more. From that place the merchants carry the spices on the backs of camels . . . to Quayro [Cairo], a journey occupying ten days. At Quayro duties are paid again. On this road to Cairo they are frequently robbed by thieves. . . .

At Cairo the spices are embarked on the river Nile . . . and descending that river for two days they reach a place called Roxette [Rosetta], where duties have to be paid once more. There they are placed on camels, and are conveyed in one day to a city called Alexandria, which is a sea-port. This city is visited by the galleys of Venice and Genoa, in search of these spices, which yield the Grand Sultan [an annual] revenue of 600,000 cruzados."

—Alfred J. Andrea

Source

Roteiro, E. G. Ravenstein, ed. and trans., *A Journal of the First Voyage of Vasco da Gama, 1497–1499* (Hakluyt Society, 1898), First Series, No. 99 (reproduced by Burt Franklin [1963?], pp. 77–8. Modernized by A. J. Andrea.

November 22 rounded the Cape of Good Hope. Once in the Indian Ocean, da Gama confronted the entrenched economic power of Muslim Arab merchants. This religious and economic hostility complicated his task along the East African coast during a stay at Mozambique Island (March 1498) and especially at Mombasa (April 1498), where the local sultan sought to storm the fleet in a midnight raid. Da Gama received a more favorable reception at Malindi, where he hired a skilled pilot to guide the Portuguese fleet across the Arabian Sea to the pepper-rich Malabar coast of India by May 1498. His mission of arranging both a treaty and the purchase of pepper in the key port city of Calicut was complicated by the intrigues of Arab merchants with the local Hindu ruler, the Zamorin (*Samudri raja*), and da Gama's rather paltry gifts. Nevertheless, his resolve overcame these problems, and da Gama departed in August with a respectable cargo of spices. Although the return trip to Portugal was

complicated by fickle winds, the *Berrio* and *São Gabriel* reached Lisbon in July and August 1499, respectively. After burying his brother Paulo on Terceira in the Azores, da Gama reached home in September. He received the right to use the prestigious title "Dom," a hefty annual pension, and other rewards, including the title "Admiral of the Indian Seas."

In 1502, to avenge the massacre of Portuguese factors, or merchants, left at Calicut by the fleet of Pedro Álvares Cabral (1500–1501), King Manuel dispatched 20 well-armed ships under da Gama. He used this formidable force to intimidate the sultan of Kilwa on the East African coast into fealty (July 1502), to intercept Muslim shipping arriving on the Indian coast, and to inflict a decisive defeat on an Arab fleet in the service of the Zamorin (February 1503). His ruthless nature was revealed on this voyage when he burned several hundred Muslim pilgrims alive aboard a captured ship in September 1502. Da Gama

returned to Lisbon in October 1503 and received additional rewards. During the following two decades he labored in Portugal to consolidate his social and economic position. His marriage to Dona Catarina de Ataíde produced seven children. Despite problems with the mercurial King Manuel, da Gama at last entered the ranks of the senhorial elite in 1519 when he was created the first count of Vidigueira.

By 1524, although the Portuguese empire in Asia stretched from Mozambique to Indonesia, corruption had begun to infiltrate this impressive imperial edifice. The young king John III (r. 1521–1557) appointed da Gama viceroy in that year to address these problems. Sailing with 14 ships in April 1524, da Gama reached India in September and undertook an impressive reform campaign that was tragically cut short by his death at Calicut on Christmas Eve 1524.

Da Gama's life and career mirrored the rise of Portugal. Nautical expertise, military prowess, ruthlessness, and religious conviction entrenched his personal and familial fortune while Portugal, at the same time, achieved its Golden Age.

—Glenn J. Ames

Bibliography

- Ames, Glenn J. *Vasco da Gama: Renaissance Crusader*. New York: Longman, 2005.
- Subrahmanyam, Sanjay. *The Career and Legend of Vasco da Gama*. Cambridge: Cambridge University Press, 1997.
- Teixeira de Aragão, A. C. *Vasco da Gama e a Vidigueira*. Lisbon: Typographia universal de T. Q. Antunes, 1871.
- Velho, Alvaro. *A Journal of the First Voyage of Vasco da Gama, 1497–1499*. Translated and edited by E. G. Ravenstein. London, printed for the Hakluyt Society, 1898.

The First Englishmen in India

Unlike their Portuguese or Dutch rivals who had been trading with India since the early sixteenth century or 1595, respectively, early English attempts to reach the subcontinent ended badly. The merchant-soldier James Lancaster (1554/1555–1618) and the crew from his 1591–1594 voyage returned to England aboard French ships. Commercial interests generally drove Elizabethan-Jacobean policy, but Lancaster,

the first Englishman to sail into the Indian Ocean, was, like Francis Drake (1540–1596) and the other Elizabethan Sea Dogs, far more interested in capturing prizes than in trade. The failure of repeated expeditions in the last quarter of the sixteenth century is reflective of both deficiencies in English maritime practices and a lack of interest in long-distance trading with the East Indies. Raiding Spanish possessions in the Atlantic basin offered privateers far richer prospects. However, Dutch success inspired 101 London merchants in September 1599 to pledge £30,000 for another voyage. The prospect of peace with Spain nixed their plans almost immediately, but planning resumed in September 1600 following the collapse of peace talks. A royal charter creating the East India Company (EIC), with a 15-year monopoly on trade east of the Cape of Good Hope, was issued on New Year's Eve that same year. The company's first fleet of five ships was dispatched in early 1601 under the command of Lancaster, who was also a director of the EIC, and returned to England roughly 22 months later. Although profits were less than expected, the expedition did establish an English presence—albeit tenuous—in the coastal trading posts of the Indian Ocean.

Hundreds more largely anonymous English mariners, soldiers, and company officials would follow in the decades ahead as the EIC sought to expand its trade. It is possible that Englishmen could have arrived any time in the sixteenth century through service with the Portuguese. There is some evidence to suggest that two men, Lançarote Barbudo and Estevam Lopez, wounded in the siege of Diu in 1546, were English. However, the first Englishman known conclusively to have to set foot on Indian soil was Thomas Stephens (1549–1619). The son of a merchant, Stephens was born in Wiltshire and studied at Winchester College and later Oxford. In 1575 he traveled to Rome to enter a Jesuit order and four years later would sail on a Portuguese ship for Goa via the Cape of Good Hope. Outside of one year spent at the Vasai Fort, north of Bombay (Mumbai), Stephens spent the remainder of his life proselytizing in Goa, eventually mastering the local language, Konkani, as well as Sanskrit and the more literary Marathi. First published in 1616, his most lasting accomplishment is the *Purana Christã* q an epic tale written in the local vernacular that

► SIR THOMAS ROE

The only son of a prosperous landowning clothier from a village in Essex, Thomas Roe (1581–1644) was educated at Magdalen College, Oxford, and enrolled in the Middle Temple, one of the four Inns of Court, in 1597. Ostensibly designed to train barristers, the Inns of Court were the intellectual heart of London and generally the reserve of gentlemen. A quick wit, private income, and family connections enabled Roe to overcome his common birth and obtain a position in the late Elizabethan court. Knighted early in the reign of James I (r. 1603–1625), Roe accompanied the delegation dispatched to Spain to witness the ratification of the 1604 Treaty of London. It was an auspicious beginning, but to achieve high office Roe needed to demonstrate his competency in matters of exploration, politics, and soldiering.

In 1607 Roe began promoting the colonization of Virginia and commanded the 1610–1611 expedition to Guiana—the 1,000 miles (1,600 kilometers) of largely unexplored coastline between the Orinoco and Amazon rivers—in the futile search for the treasures of El Dorado. Conflicts between

James I and the House of Commons led to the dissolution of Parliament only a few months after Roe's election in 1614. Roe returned to soldiering in the Low Countries, but in November 1614 James I named Roe ambassador to the Mughal empire. Returning in September 1619, Roe resumed promoting tobacco cultivation in Virginia and on the Amazon, but the outbreak of the Thirty Years' War ended his political career. His anti-Catholic Spanish sentiments saw him banished to Constantinople as English ambassador (1621–1629). Roe spent the next two years traveling the Baltic and trying to forge an anti-Habsburg coalition. Appointed to the Privy Council in 1640, Roe spent the last years of his life futilely trying to mediate the growing rift between Charles I (r. 1625–1649) and Parliament and also worked on occasional diplomatic efforts to end the Thirty Years' War. Public acknowledgment of Roe's accomplishments would not come until the twentieth century, by which point even the location of his tomb had receded into the mists of history.

—Sean Kelly

combined aspects of the Hindu religion with the narrative of the Old and New Testaments. Its popularity among Indian Christians continued into the early years of the twentieth century. Stephens's letters to his father about life in Goa encouraged English merchants to consider the trade possibilities of India. Although a Jesuit missionary, Stephens never forgot that he was also an Englishman. When four English merchants, accused of infringing upon Portugal's trade interests in the Persian Gulf, arrived in Goa for interrogation in December 1583, it was Stephens who helped secure their release, having previously been introduced to one of them by an acquaintance from his days at Oxford.

In the early decades of the seventeenth century, the EIC played an insignificant role in Indian commerce. Real power lay in Delhi, permanent seat of the Mughal emperor. Trade occurred at the discretion of the emperor, Jahangir (r. 1605–1627). The EIC also needed the cooperation of local officials. Henry Middleton (d. 1613), who commanded the EIC's sixth voyage, for example,

frustrated at the reception he received at Surat in the fall of 1611, seized Indian ships in the Red Sea in retaliation and conducted trade on his own terms. Months later Thomas Best (1570–1639) established a factory or trading station at Surat. Thanks to the ineptitude of the Portuguese, who seized a ship belonging to the emperor's mother in 1613 and two years later sent a fleet to attack Surat and the English, Jahangir henceforth was less willing to heed Portuguese demands to expel the English. The broadside of an East India-man was at worst equal to the Portuguese ships, and Jahangir feared both. At the urging of the EIC, James I (r. 1603–1625) dispatched the first English ambassador to the Mughal empire, Sir Thomas Roe, who arrived less than a year after the defeat of the Portuguese attack on Surat. It took several months for Roe to reach the city of Ajmer, but in January 1616 he formally presented his credentials to Jahangir. The language of the Mughal court was Persian, so Roe relied on interpreters throughout his ambassadorship. He spent over three years trying to persuade—or more

accurately bribe—Jahangir and his senior courtiers to sign a formal treaty that guaranteed the trading rights of the EIC throughout the Mughal empire. Roe never succeeded. However, thanks to the favorable impression that he and his gifts made on Jahangir, Roe did win the right for the EIC to trade freely and govern its officials according to English political and religious customs. He also suggested changes to trade practices of the EIC, including initiating trade between Surat and the Red Sea port of Mokha (present-day Al Mukna). Company directors in London were pleased with Roe, awarding him a £1,500 bonus. Nevertheless, the mural in St. Stephen's Hall, Westminster, depicting Roe's embassy as one of the eight seminal events in English history between the time of Alfred the Great (d. 899) and the 1707 Act of Union with Scotland would never have occurred had the EIC not gone on to replace the Mughals as the paramount power in India in the ensuing two centuries.

—Sean Kelly

Bibliography

- Andrews, Kenneth. *Trade, Plunder and Settlement: Maritime Enterprise and the Genesis of the British Empire, 1480–1630*. Cambridge: Cambridge University Press, 1984.
- Falcao, Nelson. *Kristapurā na: A Christian-Hindu Encounter; A Study of Inculturation in the Kristapurā na of Thomas Stephens, S.J., 1549–1619*. Gujarat: Gujarat Sahitya Prakash, 2003.
- Ferguson, Niall. *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books, 2004.
- Matthew, H. C. G., and Brian Harrison, eds. *Oxford Dictionary of National Biography, in Association with the British Academy: From the Earliest Times to the Year 2000*. Oxford, UK: Oxford University Press, 2004.
- Schurhammer, Georg. "Thomas Stephens, 1549–1619." *Month* 13 (1955): 197–210.
- Strachan, Michael. *Sir Thomas Roe, 1581–1644*. Salisbury, UK: Michael Russell, 1989.
- the northeastern coast as the leader of an expedition financed by King Henry VII, the first European expedition to the North American continent since Leif Ericson's voyage in the eleventh century. Henry VII of England (r. 1485–1509) issued letters patent to Italian explorer John Cabot in 1496 expressly authorizing him to explore the region of North America, at least partly motivated by the growing power of Spain but also in the hope of discovering the Northwest Passage. Cabot's idea was that by traveling westward from Europe on a more northerly track at higher latitudes, the distance to Asia would be shorter. After an aborted first attempt at sailing from Bristol in 1496, Cabot successfully reached the "land of America" in June 1497. The precise location where Cabot's expedition made landfall is the subject of considerable controversy among historians, but Newfoundland is the most likely site. During this voyage Cabot made landfall long enough to claim the land for England but made no extensive efforts at inland exploration. Although Cabot's expedition failed to find the Northwest Passage he was searching for, it served to launch a series of further explorations and led to English claims to have dominion over the territories they visited. Those land claims notwithstanding, nearly a century more passed before England pressed any serious efforts at further exploration or colonization. The prevailing foreign and domestic concerns of England in the sixteenth century postponed further efforts to exert any English influence in the New World.

Much of the interest that the English had in the New World was its novelty as well as its commercial potential. The idea of new untouched lands offered a vision of hope for those disillusioned by the Old World of Europe, and this notion found expression in the literature of the sixteenth century. Thomas More's *Utopia*, published in England in 1516, described a perfectly ordered civilization that developed on a remote island discovered in the New World by associates of Amerigo Vespucci. In many ways, More's *Utopia* was a revealing portrait of the disillusionment that many had with the social ills of the age. Also, rapid economic changes in England led to an English dominance in the production of raw wool. This was a development that meant the enclosure of common lands, once worked

English Exploration of North America

The first recorded contact of the English with North America dates to 1497, when John Cabot (Giovanni Caboto), an Italian explorer, came to

communally by feudal populations and now needed for grazing sheep. A state of social upheaval resulted.

One significant effect of the enclosure movement was a decline in agricultural production and high rates of unemployment. A rising merchant class emerged as a result of the increased wool production, however, and this trade rapidly expanded to include not only raw wool but also finished cloth products. Merchants formed companies for the expansion of foreign trade, and this development pushed the need for more and more markets for English goods. Once again, the New World seemed an intriguing possibility.

In addition to the obvious economic and commercial motives behind English exploration of North America as having potential for expanding the nation's global market reach, there was also a religious incentive brewing. The European and English Reformations created a general state of religious upheaval by the mid-sixteenth century. The decision of Henry VIII to break with Rome in 1534 created a truly nationalized church in the Church of England. Following his death, England experienced varying degrees of religious turmoil during the reigns of Edward VI (r. 1547–1553) and Mary I (r. 1553–1558). The overtly Protestant influence of Edward's government followed by the sudden restoration of Roman Catholicism under the reign of Mary created tensions and forced exiles to the continent of Europe for religious convictions. The reign of Elizabeth I (r. 1558–1603) sought a comprehensive religious settlement that eventually restored religious stability in England for all but the most extreme faction of Protestants, known as the Puritans. Among these religious discontents would come some of the first to settle in the English claims of the New World.

The first attempt at English colonization in North America failed. The pioneers of English exploration during the reign of Elizabeth I were Humphrey Gilbert and Sir Walter Raleigh. The queen granted these men exclusive rights to explore and possess the lands of the New World, and the first expedition to result from this royal commission was to Newfoundland in 1583. The following year, Raleigh took a small expedition to North America and returned to London with two natives. Queen Elizabeth gave Raleigh

➤ HENRY VII AND OVERSEAS EXPANSION

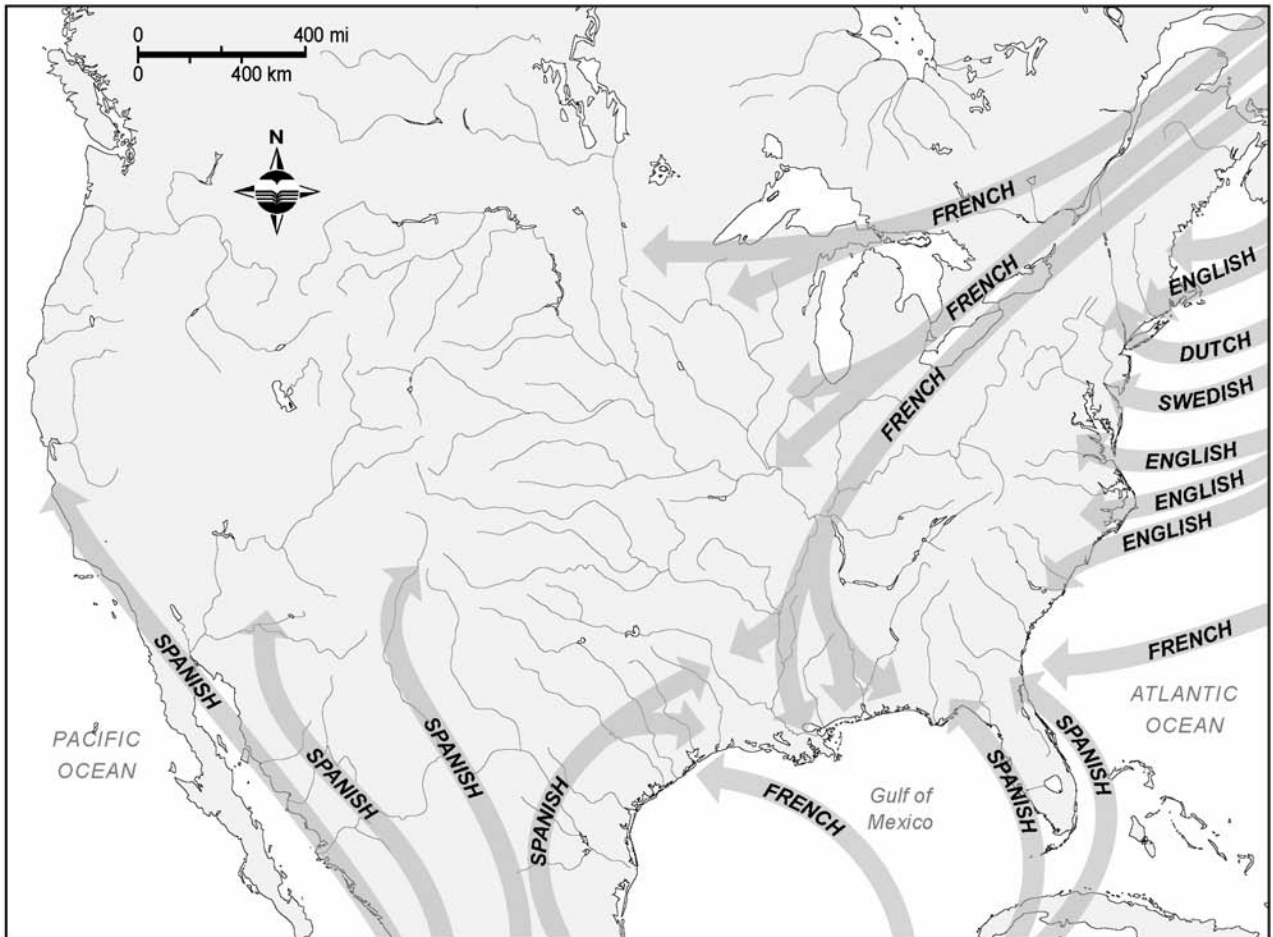
At the time of the first English contact with the new lands of North America, Henry VII occupied the throne. Because England had only recently emerged from a series of dynastic civil wars known as the Wars of the Roses and because Henry VII's own Lancastrian claim to the Crown was tenuous, he perhaps saw New World exploration as a means of advancing his prestige among other European nations. A successful policy of expansion in the New World would have meant increased wealth for England. However, the overseas exploration policy of Henry VII appears to have been less primary to him than the role of securing domestic control and building a healthy treasury. Henry's fiscal policies, known to represent his personal frugality, explain his limited endorsement and interest in large seagoing voyages of exploration. His government rejected the proposal of Christopher Columbus as the Italian sought financing for his first voyage before approaching Spain. The interest generated from the voyages of Columbus likely contributed to Henry VII's agreement to sponsor John Cabot's venture in 1497, representing the only such major effort of his reign.

—Cheryl H. White

permission to name the region he explored Virginia, in honor of his Virgin Queen. The English government did not finance the expedition, however, so Raleigh was left to find his own investors for the colonial effort at Roanoke Island. However, two separate efforts to settle Roanoke Island failed, and what became of the English settlers there still remains a mystery. This served to lessen English enthusiasm for colonization efforts, and the Elizabethan government undertook no more such expeditions. However, when Philip II launched his Spanish Armada against England in 1588, the decisive English victory in that sea battle effectively supplanted Spain's maritime dominance with that of England.

In 1606 King James I issued a charter to divide colonization efforts in North America between two companies. The London Company received the rights to colonize the southern regions, while the Plymouth Company received the rights to the northern regions for settlement. Because of these

EARLY EUROPEAN PENETRATION OF NORTH AMERICA



two companies, the first lasting English settlements in North America developed. However, money and financing remained an obstacle, and the London Company was able to evolve much more quickly than the Plymouth Company because of the readiness of investors. Only a few months after being chartered, the London Company was sufficiently organized to launch a party of 144 men bound for Virginia aboard the *Susan Constant*, the *Discovery*, and the *Godspeed*. In 1607 the English established its first permanent settlement in Virginia at Jamestown.

In 1620 the first wave of religious immigration to the New World of North America began. The king granted permission for the Virginia Company to take a group of Pilgrim separatists from Plymouth, England, to what would become Massachusetts. The decision of the king to allow the migration of these religious dissidents is

important in that it began a period known as the Great Migration, which lasted until 1649. The original destination of this group was likely the area of the Hudson River near what is present-day New York, but approaching winter and harsh coastal weather conditions led them to an area just north of Cape Cod. The English who settled these early colonies essentially transplanted the society of the Old World into the New World, yet at the same time the isolation and distance from England gradually contributed to the emergence of new American identities and societies.

—Cheryl H. White

Bibliography

Canny, Nicholas, and Alaine Low. *The Origins of Empire: The British Overseas Empire to the Close of the Seventeenth Century*. Oxford, UK: Oxford University Press, 2001.

Horowitz, Tony. *A Voyage Long and Strange*. New York: Henry Holt, 2006.

Pope, Edward Peter. *The Many Landfalls of John Cabot*. Toronto: University of Toronto Press, 1997.

French Exploration of North America

The French exploration of North America came decades after the first Spanish and English journeys to the New World. The reasons for the French delay in turning its attention to the newly discovered lands lay with a struggle for the balance of power in Europe. The Habsburg-Valois rivalry and the Italian Wars of the late fifteenth and early sixteenth centuries concentrated the French focus on European affairs, and it was not until the reign of Francis I that France turned its attention across the Atlantic Ocean. Like England, the initial efforts of France likely centered on finding the rumored “Northwest Passage” to the lucrative trading markets of the Orient. However, French intentions quickly turned from exploration to colonization. As a result of the French exploration of North America, they established forts, outposts, and trading settlements that would become cities. These include such places as Quebec, Detroit, St. Louis, Mobile, Biloxi and New Orleans.

In 1524 King Francis I sent an Italian seaman named Giovanni Verrazano to explore the Atlantic coast of North America. Verrazano explored the Chesapeake Bay region. His expedition reached North Carolina, and Verrazano wrote to Francis I that he believed that the Pamlico Sound was the beginning of the Pacific Ocean. This belief led to the inaccurate mapping of North America for centuries. Ten years later in 1534, Frenchman Jacques Cartier sailed into the St. Lawrence River and believed that he had discovered a route through America that would lead to China. Cartier’s expedition passed the area of Quebec and was finally stopped at a series of fierce rapids at Montreal. For this reason, the French named these rapids “Lachine Rapids” or “the China Rapids.” Because of Cartier’s failure to locate a passage through to the Orient, the French lost interest in North America for many years. A few small and disorganized French settlement efforts followed in the 1540s and beyond but failed.

> JACQUES MARQUETTE AND LOUIS JOLIET

The earliest Europeans to arrive in North America knew that a great inland waterway flowed through the continent, but it remained unexplored until the arrival of the French. The first Europeans to follow the course of the great Mississippi River were Jacques Marquette and Louis Joliet, explorers from France who came to Quebec for vastly different reasons in the seventeenth century. Marquette was a Jesuit priest whose missionary role led him to New France to learn native languages. Beginning in 1669, Marquette worked in missions near what is today Wisconsin, and it is believed that there he first made the acquaintance of Joliet, who had a successful fur trading business with the natives. In addition, Joliet was an amateur cartographer, and his interest in maps and mapmaking led him to want to explore the regions to the south. In 1672 the French government asked Joliet to take an expedition to explore the northern part of the great river that the natives claimed flowed into a vast body of water (the Gulf of Mexico). Joliet asked Marquette to accompany him as chaplain for the crew. Together these men traveled the Mississippi River as far south as Arkansas before turning northward again. Joliet’s maps were lost in a canoe accident on his return journey to Quebec.

—Cheryl H. White

In Florida, the French settlement of Fort Caroline (near Jacksonville) was established in 1564. This lasted only a year before the Spanish attacked the settlement and killed its inhabitants. Likewise, an effort to settle Sable Island near Nova Scotia as a prison colony failed in 1598, as did a trading outpost near Quebec in 1599. In 1604 the French explorer Samuel Champlain settled a group of men on Port Royal, Nova Scotia. Still, the French efforts in North America had not successfully yielded any of the rich resources that Spain enjoyed in their New World empire, but the French did manage to establish profitable fur trading relationships with many of the natives. This is why Champlain returned to North America in 1608 and established a fur trading outpost at Quebec, which eventually succeeded due to alliances with the natives of

the region. Lake Champlain bears his name, as he made this discovery at the same time he explored the eastern Great Lakes. Champlain was therefore the founder of what would become a prosperous French empire in Canada.

In 1673 a Jesuit named Jacques Marquette and the fur trader Louis Joliet explored the Mississippi River and were followed nine years later by Robert Cavalier, Sieur de La Salle, who is credited with opening up the Mississippi River valley for French claims and settlement. La Salle made several expeditions to the Great Lakes region under the commission of Minister of Finance Jean-Baptiste Colbert and Louis XIV in repeated efforts to locate the passage through to the great ocean of the west and find the gateway to China. These expeditions left behind a network of fortresses that later French settlers would employ in conflicts with the natives and the English. As a result of his exploration southward of the Great Lakes, La Salle claimed all the lands drained by the great river for France, calling it Louisiana, in April 1682 at a great ceremony held in the delta of the Mississippi River. La Salle returned home to great laud and a new commission from the king to serve as governor of the Louisiana colony.

Upon returning to Louisiana in 1684, La Salle's fleet of ships bypassed the mouth of the Mississippi River and ended up in Spanish territory near modern-day Galveston, Texas. La Salle attempted to find his way back to the mouth of the great river but failed. His crew mutinied because of poor conditions and morale, complicated by famine and starvation, and killed La Salle in March 1687. Although tragedy marked the beginning of serious French attempts to successfully plant a thriving colony in southern North America, Louisiana grew because of its strategic control of the main inland waterway of the continent and a great port city that was established at New Orleans. However, the French presence in North America awakened and strengthened old rivalries with the English and led to a series of wars in the eighteenth century. These wars would lead to the temporary transfer of French possessions in North America to the rival colonial powers of the Spanish and the English.

The French approach to colonization has often been cited as a potential reason for the

protracted struggle to make the colonies of North America profitable. The French monarchs of the late sixteenth and early seventeenth centuries had no compelling interest in exploration, and of all the French kings of the era, Louis XIV was the first to take up the active promotion of a New World empire. The ideals were expressed first by the government of Louis XIII and Cardinal Richelieu and further by the rule of Louis XIV to prohibit anyone but Roman Catholics from settling in New France. Further, the colonies of New France in North America did not enjoy the same autonomy and limited self-rule from the Crown as did the English colonies of the Atlantic coast. France transplanted old-style European economic institutions and ideas in the colonies of the New World, a tactic that seldom succeeded. The French colonial model therefore placed the economic control of the territories in the hands of a few proprietors, who often mismanaged land, resources, and relationships for personal gain. The proprietary model made it difficult for the French government to consistently reap financial benefits from its North American colonies.

—Cheryl H. White

Bibliography

- Abodaher, David. *French Explorers of North America*. New York: Messner, 1970.
- Eccles, W. J. *The Canadian Frontier, 1534–1760*. Albuquerque: University of New Mexico Press, 1983.
- Fischer, David Hackett. *Champlain's Dream*. New York: Simon and Schuster, 2008.

Dutch Exploration of the New World and Oceania

Since the late Middle Ages, the Dutch were among the commercial and trading leaders of Europe. Because of that distinction, the Dutch were quick to follow the Portuguese and the Spanish in voyages of exploration that held out the promise of new trade markets. Accompanying the Dutch commercial dominance was a corresponding maritime superiority that augmented exploration. This superiority had been gained after years of Dutch seafarers who had sailed with the Portuguese on their voyages to the East and had learned their techniques in navigation and mapmaking. As a result, by the late seventeenth century, which is

often called the Dutch Golden Age, they were unrivaled in sea navigation and commerce and had created new types of sea vessels that required fewer crew. Their first interest overseas was sharing in the spice trade with the Orient, which led to significant Dutch exploration of Oceania and crossing the Pacific beginning in 1598. That year, Olivier van Noort departed from the Netherlands with four ships. By 1600 he crossed the Pacific Ocean to Guam and returned to Rotterdam in 1601 with only one ship remaining and a reduced crew, thus completing the first Dutch circumnavigation of the world.

The Greek philosopher Aristotle postulated that a great southern continent had to exist in order to balance the lands in the north. European expeditions throughout the sixteenth century attempted to discover this continent, but it was never found. In these attempts, the Dutch explorer Willem Janszoon became the first European to explore the coast of Australia in 1606. These expeditions were the result of a growing nationalism that was fueled by the ongoing Dutch rebellion against the Spanish. Coupled with this was the growing weakness of the Portuguese empire, mainly as a result of its incorporation into the Spanish kingdom in 1580. This aggression resulted in the Dutch-Portuguese War in 1602 in which the Dutch hoped to gain control of the lucrative and well-established Portuguese spice trade. Although technically an extension of the Eighty Years' War between Spain and the Dutch, the conflict provided an opportunity for the Dutch to gain a foothold in the overseas imperial work already under way as they attacked Portuguese possessions in South America, Africa, and the Pacific. The war is evidence of the strong global designs of the Dutch as they sought to expand to new markets for popularly traded goods in the new age of mercantilism. Although eventually ousted from Portuguese Africa and Brazil in the 1620s, the Dutch were able to permanently establish their presence in the Pacific by the 1640s. All of this culminated in 1642 with the voyages of Abel Tasman, whose exploration of Australia proved that it was in fact not a part of the mythical Southern Continent. His efforts led to the discovery of New Zealand and Tasmania. He later visited Tonga, Fiji, and the Bismarck Archipelago.

➤ THE DUTCH INFLUENCE ON THE AMERICAS

Even though the Dutch did not successfully realize the promise of an empire in North America, the exploration and colonization efforts as well as the commercial relationships they emphasized did leave a permanent imprint on areas of the North Atlantic and New York. Because the Dutch settlers often used names from their native country to describe settlements, forts, and trading posts, many areas still bear the lasting legacy of the presence of those people. Places in New York such as the Bronx, the Bowery, and Coney Island all reflect the Dutch settlers of the seventeenth century. An interesting example is Hells Gate, New York, the name that now commonly describes a rather treacherous set of rapids in the East River. On a 1639 Dutch map of the river, this region was noted to be “Helle Gadt.” Staten Island has a Dutch name origin, derived from “Staten Eylandt,” so-named in honor of the States General in the Netherlands. The state of Rhode Island also testifies to this influence, as the Dutch named it “Roode Eylante” for the red color of its shoreline. While the Dutch were limited by the outcome of commercial and imperial rivalries with other European nations, there remains proof that the Dutch certainly once shared the same New World hopes.

—Cheryl H. White

Dutch involvement in the direct exploration of North America came about because of an English navigator named Henry Hudson, hired by the Dutch East India Company to find a Northwest Passage to the Orient. He had previously been hired by the Muscovy Company of the Kingdom of England to find a northern route to Asia through the Arctic Circle but had little success. The Dutch hoped that Hudson would be able to succeed in this voyage by going through the Arctic Circle via Russia and reaching Asia that way. Many mariners of the age, Hudson included, believed that by sailing north near the Arctic Circle, they would be able to identify a route to Asia that would avoid the long and difficult sea voyage around the Cape of Good Hope. Hudson left Amsterdam in April 1609 aboard the *Half Moon*, a small vessel with few crew. In the middle of his journey, Hudson made a decision to make a course for North America.

Hudson entered Chesapeake Bay and explored the Delaware River before heading northward and sailing into modern-day New York Harbor and the river that now bears his name. Frustrated and disappointed by the apparent lack of a through waterway, Hudson turned back but recorded the resources and wildlife that he observed. He noted the native populations he observed, their active fur trade, and successful agriculture. His reports circulated throughout the Netherlands when he returned, capturing at least the attention of a few ambitious merchants if not immediately that of the Dutch East India Company.

The report of a thriving fur trade in North America led a series of Dutch merchants to cross the Atlantic to engage the natives. One of the first to follow Hudson to the New World was Adrian Block, who explored the area of the coast of New York in a series of expeditions between 1611 and 1614. An island off the coast that he first charted on a map he drew of the region now bears the name “Block Island,” commemorating this Dutchman’s voyage of exploration. In addition, the map he compiled of the area was the first to name the territory “New Netherland” as well as the first to show Long Island. Following Block’s expedition, he along with his fellow captain Hendrick Christiaensen and 12 other merchants petitioned the States General to obtain exclusive trading rights to New Netherland. Their petition was granted for three years to trade between the 40th and 45th parallels north, and they called their new company the New Netherland Company.

The New Netherland Company was immediately profitable, and many of the merchants excluded from the trading opportunities in North America protested. When it came time for the renewal of the company’s charter in 1618, the exclusive monopoly on trading for a select few Amsterdam merchants ended. An influx of Dutch traders and merchants resulted: men who all pinned their hopes for personal fortune on crossing the Atlantic to New Netherland. These men pushed for the formation of a new company, the Dutch West India Company, to develop and foster trade in the New World. The company received its first charter in 1621 for the express purpose of trade in the Americas and the Caribbean, while

the East India Company continued to operate with its trading privileges restricted to East Asia.

It was through this process that a unique Dutch imprint on North America occurred. Although the primary interest of these men was always trade and commerce, the West India Company decided to establish a colony in North America. In 1624, 30 families left the Dutch Republic and sailed for the new colony aboard a ship aptly named the *New Netherland*. The location of this early Dutch settlement was near modern-day Albany, but others of the group also settled on the island of Manhattan (Fort Amsterdam). Reports of early success in the colony caused others to migrate over the next several years.

Leaders of the Dutch West India Company disagreed about the future of New Netherland, as relations with the natives were often strained and living conditions were difficult for the Dutch settlers. The primary desire had always been to establish profitable commercial relationships in the fur trade over and above the interest in establishing permanent colonies. Many in the company felt that there should be no more Dutch settlement permitted beyond what was necessary to sustain the trade activities with the natives. When missionaries of the Dutch Reformed Church began to arrive in the colony for church planting in New Amsterdam, reports back to the Netherlands provided details about the grim reality of life in the colony.

By the end of the 1630s, the growth of English settlements nearby and the continued hostilities with the natives combined to eclipse the small colony of New Netherland. The outbreaks of the Anglo-Dutch Wars beginning in 1650 led to the eventual surrender of New Amsterdam to the English in 1667. Shortly thereafter, the English renamed the colony New York. These wars effectively ended the colonial presence of the Dutch in North America.

—Cheryl H. White

Bibliography

Library of Congress Global Gateway. *The Atlantic World: America and the Netherlands*, <http://international.loc.gov/intldl/awkbhtml/awkbhome.html>.

Pomeranz, Kenneth. *The World That Trade Created: Society, Culture and the World Economy, 1400 to the Present*. Armonk, NY: M. E. Sharpe, 2006.

Quanchi, Max. *Historical Dictionary of the Discovery and Exploration of the Pacific Islands*. New York: Rowman and Littlefield, 2005.

Shepherd, William Robert. *The Story of New Amsterdam*. New York: Columbia University Press, 1917.

Muslim Explorations

Following the so-called Islamic Golden Age (750–1258), the number of prominent Muslim explorers significantly declined due to the fracturing of the centralized sovereign Abbasid caliphate into a host of decentralized sultanates (e.g., Ottoman, Safavid, and Mughal) with limited authority. Nevertheless, it would be inaccurate to conclude that Muslim exploration ceased at the close of the medieval period. Three early modern Muslim explorers made significant contributions to geographical knowledge: Hadji Muhiddin Piri ibn Hadji Mehmed, better known by the shortened Piri Reis (1470–1555); al-Hasan ibn Muhammad al-Wazzan al-Fasi, typically designated by the Latinized monicker Joannes Leo Africanus (1494–1554); and Evliya Çelebi (1611–1682).

Piri Reis (*reis* is Arabic for “captain”) was an Ottoman Turkish explorer and cartographer whose travels were made possible by military expeditions. Joining the Ottoman navy at age 11, he took part in many battles against the navies of Spain, Genoa, and Venice and accompanied his uncle Kemal Reis, a notable seafarer, on several voyages. The destinations of these voyages were unknown until 1929, when historians discovered a remarkable map that Piri drew in 1513 showing the western coast of Africa, the eastern coast of South America, and the northern coast of Antarctica. The map’s level of accuracy in the positioning and the proportions of these continents would remain unparalleled for centuries to come. But most stunning about this map is that on the traditional dating, Antarctica was not discovered until 1820; nonetheless, the depiction of its coastline with nearly perfect accuracy permits little doubt that Piri observed it firsthand and hence was in fact the true discoverer of Antarctica. Moreover, his virtually flawless rendering of the South American coastline displaying features absent from all previous maps, including those of Columbus, render it highly

▶ JOANNES LEO AFRICANUS AND HIS HISTORY OF AFRICA

In 1600, Cambridge linguist John Pory teamed with London publisher George Bishop to produce the first English translation of Joannes Leo Africanus’s *Della descrittione dell’Africa et delle cose notabili cheiui sono*. The following quotation gives the flavor of Joannes’s work:

“The Arabians which inhabite in Barbarie or vpon the coast of the Mediterran sea, are greatly addicted vnto the studie of good artes and sciences: and those things which concerne their law and religion are esteemed by them in the first place. Moreouer they haue beene heretofore most studious of the Mathematiques, of Philosophie, and of Astrologie: but these artes (as it is aforesaid) were fower hundred yeeres agoe, vtterly destroyed and taken away by the chiefe professors of their lawe. The inhabitants of the cities doe most religiously obserue and reuerence those things which appertaine vnto their religion: yea they honour those doctours and priests, of whom

they learne their law, as if they were petie-gods. Their Churches they frequent verie diligently, to the ende they may repeat certaine prescript and formal prayers; most superstitiously perswading theselues that the same day wherein they make their praiers, it is not lawfull for them to wash certaine of their members, when as at other times they will wash their whole bodies. Whereof we will (by Gods helpe) discourse more at large in the second Booke of this present treatise, when we shall fall into the mentioning of Mahumet and his religion. Moreouer those which inhabite Barbarie are of great cunning & dexteritie for building & for mathematicall inuentions, which a man may easily coniecture by their artificiall workes.”

—Kirk R. MacGregor

Source

John O. Hunwick, *Timbuktu and the Songhay Empire* (Leiden: Brill, 1999), 272.

probable that Piri explored the eastern edge of South America decades after it was first discovered. Substantiating these hypotheses are Piri's descriptions of the three continents in his 1521 *Kitab-i Babriye (Book of Navigation)*, which bear all the traces of eyewitness reminiscence. The *Kitab* includes not only detailed information on the key ports, bays, gulfs, capes, peninsulas, islands, and straits of these regions but also data on the natives of each South American culture along that continent's eastern coast.

Born in Granada and educated at the University of Al Karaouine in Fez, Joannes Leo Africanus was a Moorish explorer and diplomat. In 1510 he traveled to Timbuktu on a diplomatic mission to the Maghreb, then part of the Songhai empire. After being captured by Spanish corsairs and presented to Pope Leo X in 1520, Joannes received the papal blessing and was released due to the curia's fear that the Turkish forces might otherwise invade Sicily and southern Italy. He then left Rome and extensively explored northern Africa for the next six years, at the end of those journeys composing his magnum opus, *Della descrizione dell'Africa et delle cose notabili cheui sono (History and Description of Africa and of the Notable Things Contained Therein)*. Foremost among its accounts are those of Hausaland, Bornu, the Sahara, and Timbuktu, the latter of which was a thriving metropolis vitalized by traders in African products, gold, printed cottons, slaves, and books. Of historical worth is Joannes's rare portrait of mountain culture and Berber culture as the two competed for power in Morocco.

The Turkish traveler Evliya Çelebi was an adherent of Sufism who journeyed from his native Istanbul throughout eastern Europe, the Mediterranean basin, Eurasia, and the Middle East. His extensive notes on the buildings, markets, customs, and cultures from each locale visited from 1640 to 1672 formed a ten-volume collection called the *Seyahatname (Book of Travels)*. The enduring legacy of this collection is its value as the best guide to the languages, cultural distinctions, and lifestyle of the Ottoman empire during the early modern period. Having collected specimens of over 30 Turkish dialects and numerous languages from the places he traveled, Çelebi foreshadowed the theories of modern linguists by pointing out

the similarities between several German and Persian words, thus suggesting their common Indo-European heritage. Extremely significant are Çelebi's notes on Kurdish in eastern Anatolia and the only extant samples of written Ubykh before modern times. The ten volumes of the *Seyahatname* narrate the following explorations: (1) Istanbul and the surrounding areas (1630); (2) Anatolia, the Caucasus, Crete, and Azerbaijan (1640); (3) Syria, Palestine, Kurdistan, Armenia, and Rumelia (1648); (4) eastern Anatolia, Iraq, and Iran (1655); (5) Russia and the Balkans (1656); (6) Hungary (1663–1664); (7) Austria, the Crimea, and the Caucasus (1664); (8) Greece, the Crimea, and Rumelia (1667–1670); (9) Mecca (1671); and (10) Egypt and the Sudan (1672).

—Kirk R. MacGregor

Bibliography

- Dankoff, Robert. *An Ottoman Mentality: The World of Evliya Çelebi*. Leiden: E. J. Brill, 2004.
- Kahle, Paul E. "Piri Re'is: The Turkish Sailor and Cartographer." *Journal of the Pakistan Historical Society* 4(1) (1956): 101–111.
- Rauchenberger, Dietrich. *Johannes Leo der Afrikaner: seine Beschreibung des Raumes zwischen Nil und Niger nach dem Urtext*. Wiesbaden: Harrassowitz, 1999.
- Yerci, Mehmet. "The Accuracy of the First World Map Drawn by Piri Reis." *Cartographic Journal* 26(2) (1989): 154–155.

Russian Exploration of Siberia and Asia

The first Russians to expand into regions east of what later became known as the European Russian heartland were Novgorodian merchant-princes, who in the late eleventh century pushed into the northern lands on both sides of the Urals in search of lucrative furs. As these merchants encountered opposition from the indigenous inhabitants, they inevitably called in Novgorodian troops to pacify hostile semisedentary tribes. Though the Novgorodians were often defeated (as by the Yugra in 1193), by 1264 Novgorodian chroniclers were listing Yugara lands west of the Urals as Novgorodian territory. Accordingly, even from the beginning, it becomes impossible to separate the Russian exploration of Siberia and Asia from the process of conquest.

► EARLY RUSSIAN CONTACTS WITH CHINA AND JAPAN

Russian Cossacks led by Yerofey Khabarov first encountered serious opposition to Russian eastern expansion in 1650 when they ventured south into the Amur delta and ran into forces dispatched by the Qing empire of China. The Russian government responded to Chinese invitations to clearly define the border, and on August 27, 1689, representatives of the two governments concluded a treaty at the Siberian town of Nerchinsk. This treaty gave up Russian claims to any Amur territory but established official trade between the two countries. This trade, eventually consisting primarily of tea, remained extremely lucrative for the Russian government well into the nineteenth century.

Russia was the western country closest to Japan and consistently tried to open trade and establish diplomatic relations with the Tokugawa government. By the early 1700s, Russian expeditions, commissioned by tsars, began to reach Japanese waters. Increasing numbers of Japanese castaways began washing up on Russian shores, and their enthusiastic descriptions of Japanese economic life made trade seem very attractive to Russian officials, especially as it could feed eastern Siberia and Alaska. However, though an expedition led by Adam Laxman (1792–1793) was favorably received, it failed in getting the Tokugawa government of Edo to establish diplomatic relations.

—Viktor Shmagin

The Mongol subjugation of most of Kievan Rus in 1237–1240 and the establishment of the Golden Horde as a tribute-collecting successor state halted full-scale Russian expansion into Siberia for three centuries. However, the process was dramatically restarted following the conquest by Ivan IV (Ivan the Terrible, r. 1533–1584) of the Mongol successor states of Kazan (1552) and Astrakhan (1556). Muscovite tsars, the new overlords of Russia, had opened the whole of Siberia to Russian penetration by absorbing the competing Mongol successor states of the Volga. As no other power was strong enough to stop their drive eastward, Russian explorers and trappers quickly reached the Pacific Ocean by 1649.

Initial Russian expeditions east could be organized by the state but were most often put together on the private initiative of Cossacks, fur trappers, criminals, and other adventurers, which gave them a heavy mercenary character. They were heavily armed and moved quickly over the extensive Siberian river network, carrying their light boats across portages when necessary. Typical of such expeditions was that of Yermak Timofeevich, a Cossack who conquered the Sibir khanate in the 1580s with 1,000 mercenaries (composed of Cossacks, Tatars, even some Germans) and, with the financial backing of the wealthy Stroganoff family, went on to monopolize the fur trade in the region.

The remoteness of the Russian state and its preoccupation with European affairs ensured a great degree of latitude in decision making for these expeditions and encouraged their restless members to settle in Siberia. This prospect was immensely attractive for people on the margins of Russian society, especially for semi-independent, culturally distinct groups like the Cossacks, who practiced a form of frontier warrior-democracy. To be sure, the state eventually followed in the wake of Russian conquest. The Department of Siberian Affairs was established in 1637, and until the mid-eighteenth century it was chiefly concerned with the details of the fur trade. Ironically, this government presence, although weak, was brought to Siberia by the very people who sought to escape it in the first place.

The official government policy toward conquered peoples was to demand tribute in the form of beaver pelts, known as the *yesak*. Upon paying, Kamchagals, Chukchi, and other Siberian peoples were regarded as Russian subjects, entitled to Russian protection. Conversion to Russian Orthodoxy was only required upon marriage, which happened often, as the great majority of Russians who participated in the initial conquests were men. This relatively relaxed official policy should not lead us to assume that relations between Russians and Siberians were entirely amicable following the conquest. Though the official *yesak* was light, corrupt officials and even

armed settlers often turned to extortion, causing many indigenous populations to flee. Ambushes and raids were also common, and several organized rebellions also took place, including a major one by the Kamchagals in 1730.

Large peasant migrations from European Russia often followed times of famine or dislocation, as during the Time of Troubles (1598–1613). A further impetus for peasants to flee came with the gradual introduction of serfdom, complete by 1658. Though western and southern Siberia contained some land suitable for cultivation, the Russian Far Eastern settlements lacked an agricultural heartland. The settlements thus depended on foodstuffs imported overland from European Russia and long remained sparsely settled. During the 1850s, the governor-general of eastern Siberia, Nikolay Muraviev, changed the situation by occupying the rich Amur basin and forced a weakened China to cede this territory via the Treaty of Aigun (1858).

The Russian government became increasingly interested in reinforcing Siberia militarily and systematically exploiting Siberian resources other than fur. These two objectives were

made possible by the construction of the Trans-Siberian Railroad, which became operational by 1905. The Russian government was also greatly interested in obtaining an ice-free Pacific port. Vladivostok, founded in 1860, became the primary Russian port in the region, but the fact that it still froze over in the winter forced future Russian leaders to look south, which eventually brought about war with Japan in 1904–1905.

—Viktor Shmagin

Bibliography

- Lensen, George. *The Russian Push towards Japan: Russo-Japanese Relations, 1697–1875*. Princeton, NJ: Princeton University Press, 1959.
- Lensen, George, ed. *Russia's Eastward Expansion*. Englewood Cliffs, NJ: Prentice Hall, 1964.
- Naumov, I. V., and David Norman Collins. *The History of Siberia*, Vol. 6. Routledge Studies in the History of Russia and Eastern Europe. London: Routledge, 2006.
- Stephan, John. *The Russian Far East: A History*. Stanford, CA: Stanford University Press, 1994.
- Wood, Alan. *The History of Siberia: From Russian Conquest to Revolution*. London: Routledge, 1991.

■ Introduction: New Channels for Cultural Contact and Exchange

The early modern period was a time of unprecedented cultural contact. The conquests of the burgeoning empires of the period, including western European, Russian, Islamic, and East Asian states, the opening of trans-oceanic trade and migration, the expansion of Islam and Christianity, and the hostility of many societies to religious minorities all resulted in the movement of individuals and populations on a global scale. Europeans became a presence in the Indian Ocean and even as far as Japan, while Eurasian and African peoples established themselves in the Americas, not only the European invaders and their African slaves but also the Chinese commercial diaspora, which established itself as far away from China as Mexico City. (The converse was not the case, and Native Americans

did not form any successful communities outside the Americas.) Even the simple awareness of the size and diversity of the world and its peoples could have profound cultural effects.

Not all societies opened themselves to the new cultural contacts. After a period of great cultural openness in the sixteenth century, Japan became the most famous example of a country that closed itself in the seventeenth century, although Korea, the “Hermit Kingdom,” was even more successful. China also turned away from much cultural contact, although its continental position did not allow it to isolate itself as successfully as the smaller states of East Asia. Persia’s unique brand of Shia Islamic government also worked to isolate the country, while the Sunni Ottoman empire, with its numerous

religious minorities and the welcome it extended to Jewish refugees from Europe, was a relatively open Islamic society.

Cultural contact and exchange could take many forms. Some cases often resulted in the mere imposition of one culture on another, often accompanied by the replacement of one population by another. European-based cultures and European-descended peoples simply displaced Native American cultures through much of North America through violence. Native languages were replaced by European ones, and native religion was replaced by Christianity. In other areas new and old cultures coexisted although deeply affected by the societies in which they lived. Jews also preserved their own unique customs, languages, and religion as they traveled between the Islamic and Christian worlds. Sometimes cultural contact resulted in the creation of new syncretic cultures. For example, Native American cultures in the Spanish-American empire and French Canada were deeply shaped by Christianity while retaining many indigenous characteristics.

Short-distance migration as well as long-distance migration could shape culture, and many migrants merely moved to the next country or the next island over rather than crossing the globe. Cities in particular were cultural melting pots, attracting migrants from near and far and often putting them in close juxtaposition. Commodities as well as people spread new cultures. European culture was fundamentally changed by the great availability of East Asian luxury products including spices, silks, and porcelains brought by Portuguese and Dutch traders as well as American products such as chocolate and tobacco. European and colonial manufactured goods such as copper pots, blankets, and metal needles greatly altered the culture of Native Americans.

—William E. Burns

Dhimmis, “People of the Book”—Christian and Jewish Traders in the Ottoman Empire

The Ottoman empire is considered by some historians to have been the most religiously tolerant state in the world throughout its history. This was due to legal and practical necessity in contrast with the ideals of the Enlightenment that finally

awakened a sense of tolerance in Europe after centuries of religious strife. In addition, non-Muslims were considered by state authorities to be crucial to the economic prosperity of the empire.

From the practical perspective, the Ottoman empire stretched across three continents and contained large numbers of Jews and Christians in addition to Muslims. Yet the divisions in the population into three religious categories were far more complex, as among the Christians there were various subdivisions in the rite and ritual that viewed each other with some suspicion. These included, in no particular order, Coptic Christians in Egypt, the Greek Orthodox in Europe and Anatolia, Armenian Christians, the Syrian Orthodox, Maronites, and some Catholics, among others. Divisions also existed among the Jewish population particularly as Sephardic Jews emigrated from Spain to escape the Spanish Inquisition. With this wide range of ethnic and religious diversity in the Ottoman domains, one could not hope to maintain stability by oppressing differing religious beliefs.

From a legal perspective, an Islamic ruler was compelled by Sharia, or Islamic law, to protect the religious rights of the *ahl al-dhimmi*, or People of the Book, meaning a religion that had received the revelations of God but who had not accepted the teachings of Muhammad. Muslim rulers historically have considered Jews and Christians as People of the Book. They were allowed to practice their own faith as long as they accepted Muslim rule and paid an additional head tax known as the *jizya*. Furthermore, they were not allowed to serve in the military or hold positions in the government, although exceptions did occur. Their rights did fluctuate depending on the ruler and region of the empire. The non-Muslims were then governed through a semiautonomous millet system.

Of particular importance were the Jewish, Greek, and Armenian merchants. Although the Jews, both Ashkenazim and Sephardim, belonged to their own millets, as did the Armenians, both were spread throughout the empire and thus allowed trade networks across the empire and even beyond. Indeed, the Jewish and Armenian Christian trade networks extended not only into both western and eastern Europe but also eastward into Persia, India, and even

THE MILLET SYSTEM

To better govern the various religious groups within the empire, the Ottomans devised the *millet* (nation) system. The millets continued many preexisting practices but also formalized them within the Ottoman system of governance. Each religious denomination was a millet. The millets supervised the education, welfare, and legal system of their respective group. The leaders of the millet, usually the highest-ranking religious official along with other notables, represented the people in interactions with the Ottoman government. Thus, they were more or less left to their own devices as long as they paid their taxes and did not cause trouble for the state. Indeed, each group was governed by its own personal law rather than *sharia*, or Islamic law, although the latter was used in interreligious disputes involving Muslims.

The millets varied considerably in terms of size and composition. Although the millet system did not consist of a series of cantons, many people of the same faith did tend to live in the same area. A millet, however, could be spread throughout the empire. For instance, the Greek Orthodox millet, led by the patriarch in Istanbul, consisted of all who followed the Greek Orthodox rite. This included not only Greeks but also various Slavic groups and even Arabs who practiced the Greek-Orthodox religion. Thus, on the census roles all of these groups were listed as Greeks. For the Ottomans, as it had been in much of the Middle East for centuries, religious identity trumped ethnicity.

—Timothy May

China. The Ottoman government encouraged the development of these trade networks. By 1484 they excluded foreigners from the Black Sea and thus allowed Ottoman subjects surrounding the sea (mostly Jews and Christians) to fill the vacuum caused by the expulsion of the Italian merchants. By the seventeenth century, the roles of *dhimmis* who were engaged in commerce became a bit more regular. Jews dominated tax-farming opportunities, while Greeks controlled much of the trade within the empire and Armenians handled most of the international trade for the empire, including the lucrative silk trade through Persia. Although these categories existed, exactly who dominated what

aspect of trade fluctuated over the centuries. For instance, by the eighteenth century Greeks dominated most of the European international trade. Although Muslims also participated in the trade and the economy at all levels, an increasing portion of it fell into the hands of the *dhimmis*, who because of their religious affiliations often developed better relations with European powers, particularly since the seventeenth century.

Indeed, in most of the port cities, local Armenians, Greeks, and Jews handled most of the commerce coming from Europe. The amount of trade that they controlled also began to alter their relations with the empire as the millet system broke down during the nineteenth century, largely due to European intervention. As the Ottoman military became less dominant in the region, European powers gradually gained concessions in trade, territory, and sometimes authority within the empire by the nineteenth century. For assisting the Ottomans against internal rebellion, the Russians gained the right to intervene on behalf of the Greek Orthodox millet, whereas the French gained the right to intervene on behalf of Catholics and the Maronites (who recognized the pope) in Lebanon. Their intervention, while not the sole cause, also caused an increase in religious strife as the traditional system began to fray.

—Timothy May

Bibliography

- Eldem, Edhem, Daniel Goffman, and Bruce Masters. *The Ottoman City between East and West*. Cambridge Studies in Islamic Civilization. Cambridge: Cambridge University Press, 2004.
- Finkel, Caroline. *Osman's Dream: The History of the Ottoman Empire*. New York: Perseus, 2006.
- Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.
- McCarthy, Justin. *The Ottoman Turk: An Introductory History to 1925*. New York: Longman, 1997.
- Quartaert, Donald. *The Ottoman Empire, 1700–1922*. 2nd ed. New York: Cambridge University Press, 2005.

Island Migration—Southwestern Indian Ocean Patterns

When the Portuguese sailed into the Indian Ocean at the end of the fifteenth century, they encountered islands both inhabited and

uninhabited. Madagascar and the four Comoros Islands, which lie about midway between northern Madagascar and the coast of Africa, had already been inhabited by Malayo-Polynesian and African settlers for about 1,000 years. The other major archipelagoes of the southwestern Indian Ocean would remain uninhabited for some time: the Mascarenes—including Mauritius and La Réunion, due east of Madagascar—until the seventeenth century and the Seychelles, to the northeast, until the late eighteenth century.

The Merina descendants of the original Malayo-Polynesian settlers of Madagascar had retreated to the interior highlands, while the coasts were occupied by Africans with strong ties to the Swahili coast of East Africa (modern Tanzania and Kenya). In the Comoros there was a comparable differentiation between Africans, who lived in the interior, and Arab traders, who dominated the coasts and were also in regular contact with East Africa as well as Arabia and the Persian Gulf. The European penetration of the Indian Ocean at the end of the fifteenth century signaled the start of a new phase in the history of the islands, although the transformation was gradual. As the *Estado da India* spread its monopolistic practices over the trade between East Africa and India, many Muslim merchants and their families fled East Africa for the Comoros and Madagascar. According to tradition, Persian immigrants from Shiraz reached the islands at about the same time and established a collection of sultanates on the islands that became the focus of increasing attention for merchants, especially slave traders, from Arabia, the Persian Gulf, and western India. Only on Mayotte were Malayo-Polynesians in the majority. This remained true through the periods of colonization and decolonization, and when the Union of Comoros Islands achieved independence in 1975, the people of Mayotte elected to remain a territorial collectivity of France.

Madagascar played only a marginal role in the trade of the Indian Ocean. It was too far north for European ships bound for India or Batavia, and the Comoros were on the way from East Africa to the Arabian Peninsula or the Persian Gulf. The Portuguese brought Malagasy captives to Lisbon in 1506, but apart from three desultory expeditions to the island between 1506 and

1521, few Portuguese visited the island except for castaways and their would-be rescuers. Despite the lack of official Portuguese interest in trading with the islands, the extortionate policies of Portuguese Crown officials in East Africa drove many ordinary Portuguese into unofficial trade with the islands, and they were serving as middlemen in the Comorian slave trade by mid-century. When Goa dispatched a survey expedition to the island in 1613, the authorities knew enough to embark with the expedition interpreters who were competent in Arabic, Kiswahili, and its Madagascar variant, and Malagasy. As elsewhere in the Indian Ocean, they seized a local prince to teach him Portuguese and the Christian faith in Goa so that he could proselytize among his own people, a plan that met with only slight success.

The English, Dutch, and French all became interested in Madagascar at the start of the seventeenth century, but their efforts to colonize the island in the 1640s met with failure. The English and Dutch settlements lasted only two or three years, but the French held on at Fort Dauphin in the southeast from 1642 to 1674, after which they turned their attention to the Mascarenes and the Indian subcontinent. Although the European India companies lost interest in Madagascar, at the end of the century it became a major rendezvous for pirates and slave traders from the Americas. The island was well positioned for attacks on shipping in the western Indian Ocean from the Red Sea to India. Despite the great distances involved, the growing demand for slaves in Brazil and British America made it worthwhile for traders to purchase slaves in Madagascar and the Comoros, where they cost one-sixth to one-eighth what they did in West Africa.

The Indian Ocean slave trade received a further boost following the French development of the Mascarene Islands, principally La Réunion, 435 miles (700 kilometers) east of Madagascar, and Mauritius, about 120 miles (200 kilometers) northeast of La Réunion. Visited by Muslim sailors in the tenth century and the Portuguese at the start of the sixteenth century, the Mascarenes remained uninhabited until 1638, when the Dutch deemed it expedient to establish a presence on Mauritius to prevent the English or French from doing so. Dutch attempts to farm the island using

European crops and techniques failed, although their Malagasy slaves were more successful. Nonetheless, they abandoned Mauritius from 1658 to 1664 and again for good in 1710. Their most significant accomplishment during their occupation was to make the dodo extinct.

Having settled La Réunion (which they originally called Ile de Bourbon) from Madagascar in 1665, the French were poised to replace the Dutch on Mauritius, which they occupied in 1721 and renamed Ile de France. Following the establishment of plantations for coffee, sugar, spices, vanilla, and coconut on Ile de France, the slave population grew from 600 to 3,000 between 1734 and 1739. By the end of the eighteenth century the population of Ile de France alone was nearly 60,000, of which about 50,000 were slaves, 6,000 were Europeans, and fewer than 4,000 were free Indians. (After the British seized the island during the Napoleonic Wars in the early nineteenth century, they introduced nearly 500,000 Indian indentured workers, which is what gives the island its pronounced Indian influence today.)

The last significant archipelago in the southwestern Indian Ocean is that of the Seychelles, a group of about 115 islands centered about 680 miles (1,100 kilometers) northeast of Madagascar. It is more than likely that Malay, Arab, and Indian navigators came across the Seychelles in traversing the Indian Ocean, but the islands were inhospitable, and the presence of reefs discouraged interest in them. The French finally claimed them during the Seven Years' War with Britain (1756–1763), and the first settlers arrived from Mauritius, with slaves, in 1770.

—Lincoln P. Paine

Bibliography

- Bialuschewski, Arne. "Pirates, Slavers, and the Indigenous Population in Madagascar, c. 1690–1715." *International Journal of African Historical Studies* 38(3) (2005): 401–425.
- McPherson, Kenneth. *The Indian Ocean: A History of People and the Sea*. New Delhi: Oxford University Press, 1993.
- Pearson, Michael. *The Indian Ocean*. London: Routledge, 2003.
- Pouwels, Randall L. "Eastern Africa and the Indian Ocean to 1800: Reviewing Relations in Historical Perspective." *International Journal of African Historical Studies* 35(2/3) (2002): 385–425.

Toussaint, Auguste. *History of the Indian Ocean*. Translated by June Guicharnaud. London: Routledge and Kegan Paul, 1966.

Population Movements in Dar-es-Salaam—Islamic Migrations

One of the remarkable features of the age of first global contact was the spread of Islam through the *umma*, or community of practitioners—merchants, missionaries, soldiers, military leaders, royalty, slaves, artisans, and scholars—expanding the boundaries of Dar-es-Salaam. The migration of Muslims, which began with the outreach of Islam beyond the Arabian Peninsula during the seventh century, took on global proportions with the opening of the New World in the late fifteenth century. By the early seventh century, Muslims had already established settled communities from the Iberian Peninsula to the Indian subcontinent that included millions of adherents. However, the three centuries following European colonialism in the Western Hemisphere also saw hundreds of thousands of Muslims enslaved in West Africa and forcibly transported to South America, the Caribbean, and North America, where they worked on plantations, in mines, as domestic servants, and as artisans. Tens of thousands of Muslims in the Americas gained their freedom through force of arms, manumission, and flight, forming elements of the first free black communities in the West, but the vast majority of Muslims in the world were free subjects under one or another imperial rule.

Traveling by sea via the southwestern monsoon wind currents and predating the spread of Islam to the New World via the Atlantic slave trade was the Indian Ocean slave trade of both Muslims and non-Muslims alike. The trade fueled the migration of war captives and indebted persons to central and southern India and Sri Lanka and farther to the East. Extensive trade networks established by North African and Middle Eastern Muslim merchants in the Eastern Hemisphere further developed overland routes westward and to the East, bringing Islamic scholars, Sufi teachers, and skilled workers to the farthest reaches of Eurasia and Africa. As a result, between the tenth and eighteenth centuries Islamic communities, composed of old and

new converts, nearly doubled in size. The Chinese admiral Zheng (1371–1433) exemplified the important role of Muslims in Eastern imperial realms. During the early fifteenth century, the Muslim admiral led seven seafaring expeditions from Ming China, one of which reached the East African coast.

As they spread, Muslim populations absorbed traditions of the two other major monotheistic religions of the Old World, Judaism and Christianity, as well as assimilating practices and beliefs from Buddhist, Hindu, and other polytheistic and animistic faiths. The cultural synthesis produced by the resulting mixture of people and their traditions was reflected in the increasingly multicultural and multiracial communities from Europe to China. By the sixteenth century, several Islamic empires—the Songhai, Ottoman, Safavid, and Mughal empires—would come to command far-reaching influence in North and West Africa, the Middle East, and South Asia.

In the eastern Mediterranean, the Muslim-based Ottoman empire took over Constantinople (located in present-day Turkey) in 1453, renaming the city Istanbul and ending the reign of the Christian-based Byzantine empire; by the eighteenth century Ottoman rulers controlled much of the Balkan Peninsula, the Arabian world, and North Africa. Beginning 500 years earlier in sub-Saharan western Africa, the Islamized state of Mali ruled over populations that practiced essentially indigenous forms of religion but were nevertheless tied to the wider Muslim world through culture and commerce, driven by the trade in gold and salt. The Mali king Mansa Musa, known for his extraordinary wealth in gold, made a pilgrimage to Mecca in 1324 and returned with hundreds of architects, scholars, and artists to western Africa. Consequently, a flourishing of Muslim culture in West Africa centered at Timbuktu soon followed. During the sixteenth century, Mali would be overtaken by the distinctly Muslim Songhai empire, which established itself as the dominant political and economic force in the region, converting ever-larger numbers of West and central West Africans to Islam.

Several centuries earlier, Mongols from across the Asian steppe swept into the Middle

East, destroying Muslim societies while in the process introducing their own traditions into the region. Mongols would rule the area from the Sinai desert to northeastern India through the early fourteenth century. However, they too eventually converted to Islam, becoming known as the Il-Khanids, one of four subdivisions of the Mongol empire. Muslims initially entered South Asia (present-day Pakistan and India) through the Indus River valley and began to gain political power in the early thirteenth century. Islamic sultanates of the era were in turn supplanted by the Mughal empire beginning in 1526, which dominated much of northern and central India into the eighteenth century, mixing Hindu and Jain traditions into their architecture and arts. In Agra, the Taj Mahal, completed in 1648, stood as one of hundreds of monuments exemplifying the splendor of Muslim imperial rule across Eurasia and North Africa, with meticulously built mosques, mausoleums, palaces, and commercial centers. Farther to the east beginning in the twelfth century, Islam would also spread to the Malay world. Starting in northern Sumatra, Muslim kingdoms were established in Java and mainland Malaysia, making Islam the majority religion in many of these areas as well.

In 1502 Persia (present-day Iran), long an important part of the Sunni world with a Shia minority, was overtaken by a popular group called the Safavids. The Safavid empire attracted Shia scholars from the Arab world, creating a lasting Shia influence in this part of the Middle East. Persia became a predominantly Shia region in this period and has remained so to the present day. The Safavids would establish a powerful state for over two centuries and ushered in a flowering of the arts and sciences in the region. Their capital, Isfahan, became one of the most exquisite cities in the world, known for its blue-tiled mosques. In 1736 an invasion by the Afghani put an end to Safavid rule; Islam, as in other parts, nevertheless continued as the primary religious and cultural influence in the region.

Muslims entered East Africa in the eighth century, but their social and economic influence remained largely confined to coastal communities, where trading ships traveled back and forth from the Arabian Peninsula. Over the course of several centuries, the Sudan and Somaliland

became Islamized in eastern Africa, with Harar becoming a seat of Muslim scholarship. Gradually Islam as a cultural, economic, and political force made its way farther inland and southward, with conversion to Islam being led by those who communicated with local rulers; many who converted were also family members of Arab and Swahili merchants. In some parts of eastern Africa matrilineal social principles—for instance, among the Yao and Makuea—created tensions with Islam’s patrilineal order. But whether in West, central West, or East Africa, pre-Islamic religious elements would persist as Islam was largely incorporated into existing societies.

To the west and across the Atlantic, by the eighteenth century there were many thousands of African Muslims from Senegambia, Sierra Leone, the Gold Coast, and coastal Benin working as slaves on plantations in the Americas. Distanced from their multiple heritage and places of origin, most enslaved Muslims in the New World lost a great deal of their Islamic identity. Many were forced to assimilate the dominant religious and social practices of Protestant Christian British North America and Catholic Spanish and Portuguese South America. Yet many Muslims were able to maintain ties to their faith. One of several extraordinary cases is that of Ayuba Suleiman Diallo, also known as Job Ben Solomon (1701–1773). Ayuba, who arrived in Annapolis, Maryland, as a slave in 1731, turns out to have been the son of a king in the Senegal River region. His Arabic writing abilities so impressed a lawyer that he purchased the princely slave’s freedom. The now freedman would go on to write all 6,321 verses of the Quran three times from memory. He traveled to England, where he became a renowned linguist before returning to his native West Africa.

The degree to which Muslims were able to practice their religion varied from place to place, creating a range of cultures in the process. By the late eighteenth century, settled and migrant communities of the Islamic faith formed vibrant parts of virtually every major urban community in the world outside of Christian-dominated Europe, including large swaths of rural areas in Africa and Asia.

—Omar H. Ali

Bibliography

- Diouf, Sylviane A. *Servants of Allah: African Muslims Enslaved in the Americas*. New York: New York University Press, 1998.
- Esposito, John L. *Islam: The Straight Path*. New York: Oxford University Press, 1988.
- Hourani, Albert. *A History of the Arab Peoples*. New York: Warner Books, 1991.
- Levtzion, Nehemia, and Randall L. Pouwels, eds. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.
- Weekes, Richard V., ed. *Muslim Peoples: A World Ethnographic Survey*. Westport, CT: Greenwood, 1978.

Island Migration— Caribbean Ocean Patterns

Migration—both free and forced—has strongly influenced the making of Caribbean history. The first inhabitants of the region were three indigenous groups: the Guanahatabeys, the Tainos, and the Caribs. The Guanahatabeys were perhaps the first indigenous people to arrive in the Caribbean, migrating from South America. They were forced back to western Cuba by the Tainos, who settled mainly in the Greater Antilles. The Caribs, also from South America, were the final group to migrate to the Caribbean and established their residence in the Lesser Antilles. The population of the Caribbean on the eve of European contact in 1492 is estimated at 775,000 inhabitants.

Since prehistoric times, indigenous populations of the Caribbean had migrated over short and long distances to conduct trade. Archaeological studies demonstrate that semiprecious stones, which were not native to a particular island, were found there as a result of commodity exchange. An example of long-distance trade is the discovery of turquoise beads in Montserrat. Turquoise is not native to the Caribbean islands but is found in South America, which shows that native Caribbean peoples may have traveled long distances to collect the stone. Moreover, according to anthropologist David R. Watters, this evidence of long-distance trade may demonstrate that the indigenous peoples who came from South America and later moved to the Lesser Antilles traveled back to their native land instead of abandoning it completely.

Europeans began their colonization of the Americas in the late fifteenth century. Approximately 1.4 million Europeans journeyed to the New World during 1500–1783. The British represented the largest group of European migrants, totaling 722,000 between 1607 and 1780. Relatively few Europeans settled in the Caribbean, however. With respect to the Spanish Antilles, some 12,000 Spaniards immigrated to Hispaniola alone by the early sixteenth century. Nonetheless, as of 1570 there were only about 7,500 Spaniards in the Caribbean due to Spanish immigration to other parts of the empire and rapid indigenous depopulation. The French, British, and Dutch Antilles also received few European colonists. In 1789 the French formed only 8 percent of the population in Saint Domingue and 12 percent of the population in Guadeloupe. By the nineteenth century, Europeans in Barbados and Surinam totaled 15 percent and 4 percent of their respective populations.

Forced migration of indigenous and African slaves to the Caribbean occurred on a large scale in the early modern era. As the numbers of Tainos in Hispaniola, Cuba, and Puerto Rico dropped rapidly in the sixteenth century due to the spread of European and African diseases, malnutrition, and overwork in the gold mines and on agricultural estates, Spaniards began to conduct indigenous slave raids in other areas of the Caribbean and Central America to replace the dwindling workforce in the Greater Antilles. These slave raids only increased indigenous depopulation in the Americas, particularly in the Caribbean.

The decline of the aboriginal population and the rise of the plantation complex in the West Indies served as the impetus for the large-scale importation of African slaves. Of the 11 million slaves who were forced to migrate to the Americas from the fifteenth to the nineteenth centuries, approximately half of them were destined for the Caribbean, which made Africans the largest group of migrants to the region in the early modern era. The importation of slaves to the Caribbean rose significantly from the mid-seventeenth through the eighteenth centuries due to the increased demand for labor for the production of cash crops, particularly sugar. Some 325,000 African slaves migrated to the Americas

THE TAINOS

The ancestors of the Tainos originated from South America. At the time of the Spanish arrival to the Caribbean in the late fifteenth century, the Tainos resided in the Virgin Islands, the Leeward Islands, the Greater Antilles, and the Bahamas. They had local and regional chiefdoms, and their society included classes of nobility and commoners. In addition to fishing and hunting, the Tainos cultivated cassava, maize, sweet potatoes, legumes, peppers, tropical fruits, and tobacco. They also engaged in regional maritime trade and produced pottery, cotton cloth, and objects carved from stone and wood. The Spanish conquest led some Tainos to escape to the Lesser Antilles, which Europeans did not occupy until the seventeenth century. Although this indigenous group has vanished from the Caribbean, people of partial Taino heritage continue to inhabit the Greater Antilles due to the intermarriage between Tainos and Spaniards in the sixteenth century.

—Vanessa M. Ziegler

in the sixteenth century, headed primarily for the Spanish American colonies and Brazil. By the advent of the eighteenth century, British Caribbean planters had purchased 263,000 slaves, while French Antillean producers had bought 156,000 slaves. Finally, by 1700 the Dutch Caribbean had imported 40,000 slaves.

African slaves established maroon communities to escape the brutal conditions of forced labor on Caribbean plantations. The flight of slaves to maroon villages served as a form of internal migration. The longevity of runaway communities rested on effective leadership and military defense. Maroons in Jamaica made two peace pacts with British forces in the eighteenth century. In addition, the resilience of maroon communities depended on the remoteness of a community's location. Thus, maroon villages were usually established in the mountains and forested regions of the Caribbean. Afro-Caribbean migration away from the islands seldom occurred until the abolition of slavery in the nineteenth century.

—Vanessa M. Ziegler

Bibliography

- Curtin, Philip D. *Migration and Mortality in Africa and the Atlantic World, 1700–1900*. Aldershot, UK: Ashgate Variorum, 2001.
- Games, Alison. "Migrations and Frontiers." In *The Atlantic World, 1450–2000*, edited by Toyin Falola and Kevin D. Roberts. Bloomington: Indiana University Press, 2008.
- Knight, Franklin W. *The Caribbean: The Genesis of a Fragmented Nationalism*. 2nd ed. New York: Oxford University Press, 1990.
- Richardson, Bonham C. "Caribbean Migrations, 1838–1985." In *The Modern Caribbean*, edited by Franklin W. Knight and Colin A. Palmer. Chapel Hill: University of North Carolina Press, 1989.
- Rouse, Irving. *The Tainos: Rise & Decline of the People Who Greeted Columbus*. New Haven, CT: Yale University Press, 1992.
- Watters, David R. "Maritime Trade in the Prehistoric Eastern Caribbean." In *The Indigenous People of the Caribbean*, edited by Samuel M. Wilson. Gainesville: University of Florida Press, 1997.

Jewish Expulsions and Migrations

The incidence of expulsions and migrations of European Jewry into central Europe and the Mediterranean littoral in the period from 1450 to 1770, most notably the Spanish expulsion of 1492, followed the trajectory of centuries of religious anti-Semitism that characterized medieval Europe. However, the expulsions of Jews during this period were shaped more by either Catholic and Protestant attempts to control the confessional preferences of their respective realms amid the social tumults of the Protestant Reformation, the Catholic Counter-Reformation, and the Wars of Religion (particularly the Thirty Years' War). Despite these episodes of widespread persecution and expulsions, Jewish migrants were able to find refuge outside their former homelands in relatively more tolerant host countries. Moreover, regardless of the large numbers of Jewish expellees and resultant migration patterns, much more effort was spent persecuting heretics, witches, or recent converts (such as *conversos* in Spain) by ecclesiastical and state authorities.

Prior Jewish expulsions prompted by European monarchs, particularly by Edward I of England (1290) and Louis X of France (1306), were

part of their efforts in centralizing their power. These removals of Jewish populations, while related to eschatological Christian worldviews that regarded Jews as a manifestation of evil guilty of corrupting Gentile society, were more of an assertion of royal control over what were deemed vulnerable scapegoat populations. Moreover, accusations against Jewish populations of blood libel (human sacrifice, typically children, for the use of their blood for religious rituals), the poisoning of wells, and *maleficium* (malevolent sorcery), particularly amid outbreaks of the Black Death, also prompted Jewish migration in the late Middle Ages. However, conversion to Christianity was also seen by a large number of Jews as a means of stemming violence and social discrimination by Christians.

Expulsions of Jews from various realms of the Holy Roman Empire occurred early in this period, organized and coordinated at top and local levels of government. Expulsions proceeded in Upper Bavaria (1442), Lower Bavaria (1450), Mecklenburg (1492), Pomerania (1493), Lower Austria, Carinthia, and Styria (1496), and these were typically decreed by representative institutions at the regional level. Major cities, such as Vienna (1421), Cologne (1424), Dresden (1430), Augsburg (1440), Erfurt (1458), Mainz (1470), Salzburg (1498), Nuremberg (1499), and Ulm (1499), also expelled their Jewish populations at the bequest of local authorities, often to the displeasure of the local prince and the Holy Roman emperor. The Habsburg dynasty and other high-ranking aristocratic families relied on Jewish communities for financial assistance. Therefore, Jewish expulsions were not in their best interests but were nonetheless within the rights and privileges of the individual polities of the empire. Many of these Jewish migrants went to other German cities and elsewhere in eastern Europe into relatively more tolerant regions. Moreover, while these expulsions tapered off, they resumed later in the sixteenth century with the religious fervor unleashed by the Protestant Reformation by both religious dissidents and Catholics attempting to demarcate their ecclesiastical and political divisions within the Holy Roman Empire.

As the Spanish Reconquista destroyed the remaining Muslim enclave in the Iberian Peninsula in the late fifteenth century, Spanish Jewish

(Sephardic) populations had been allowed to convert to Christianity to avoid persecution by royal and Catholic Church authorities, which a significant number of Jews eventually did. With the fall of Granada in 1492, the official expulsion of the remainder of Spain's unconverted Jews was enacted by royal decree at the behest of Ferdinand of Aragon. However, given that a large number of Jews had already converted to Christianity (known as conversos), the actual numbers of expellees is not as sizable as past historians had assumed. Nonetheless, Spanish royal and Inquisition authorities had found it necessary to remove Jews from Spain to ensure the "purity" of the realm from the corrupting influence of Jews (particularly the converso population) and thereby guarantee the ecclesiastical uniformity of the Catholic realms. Moreover, widespread accusations against conversos clandestinely practicing Judaism (Crypto-Jews known as Marranos) also prompted investigations by Spanish Inquisition authorities, which often turned Jews and conversos against each other. As a result of these episodes, many Spanish Jews migrated to Portugal, Italy, and the Ottoman empire, which while relatively more tolerant to Jews than Spain were not free of anti-Semitic prejudices of their own. Portugal expelled its own Jews in 1498 due to a scheme by King Manuel I to marry Isabel, daughter of Fernando and Isabel. However, fewer Jews actually left Portugal than Spain, as many were forcibly converted to Christianity in the year leading up to the expulsion because the king recognized their value to the economy.

The Protestant Reformation of the sixteenth century and the Wars of Religion of the seventeenth century also contributed to further Jewish expulsions that scattered their communities mostly within Europe. The Portuguese expulsion of Jewish communities led to an influx of Portuguese Jews into the Netherlands and the Ottoman empire. Many of these Portuguese Jews contributed heavily to the development of Dutch mercantile and financial industries amid the Netherlands' growing conflict with Habsburg Spain in the sixteenth century. Those who immigrated to the Ottoman realms also contributed to the financial and cultural wealth of their new host country. Moreover, many Portuguese Jews also migrated into German cities, primarily

in the Protestant states of the Holy Roman Empire. However, with the vitriolic anti-Semitic rhetoric espoused by Martin Luther, Lutheran cities expelled their existing Jewish populations, many of which moved to the Catholic south under the protection of Habsburg Charles V. Despite his Catholicism, Charles V protected Jewish communities in his German realms, as they contributed to his fiscal needs in the form of loans. Habsburg protection of Jewish communities continued well through the Thirty Years' War, in which Jewish communities contributed heavily to the Habsburg cause. However, Jews in other Habsburg realms, such as in Italy, were still expelled. In some cases, other regions that had expelled Jews in prior centuries became more amenable to allowing their return, such as England and, to a lesser extent, France. Under Oliver Cromwell's Protectorate, Jews were allowed to enter England in 1656, primarily wealthy Jews from the Netherlands. French expulsion of Jews continued unabated in the southern regions, forcing many to migrate north or into German cities. French Jewish communities in Alsace, who were crucial to Bourbon finances, were protected from expulsion. While anti-Semitism remained prevalent and outbreaks of violence against Jewish communities continued throughout much of Europe, outright expulsions decreased toward the end of the eighteenth century, with the exception of Russia and its establishment of the Jewish Pale of Settlement in its western regions.

—Abraham O. Mendoza

Bibliography

- Dequeker, Luc, and Werner Verbeke, eds. *The Expulsion of the Jews and Their Emigration to the Southern Low Countries: 15th–16th c.* Leuven, Belgium: Leuven University Press, 1998.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715.* 2nd ed. New York: Norton, 1979.
- Hundert, Gershon David. *Jews in Poland-Lithuania in the Eighteenth Century: A Genealogy of Modernity.* Berkeley: University of California Press, 2006.
- Israel, Jonathan I. "Central European Jewry during the Thirty Years' War." *Central European History* 16(1) (1983): 3–30.
- Roth, Norman. *Conversos, Inquisition, and the Expulsion of the Jews from Spain.* Madison: University of Wisconsin Press, 2002.

Overland Trade Continues and Increases

In spite of the development of transoceanic trade networks out of Europe to the rest of the world from the fifteenth to sixteenth centuries, much to the benefit of countries such as Portugal, Spain, England, France, and the Netherlands, Eurasian trade networks continued to thrive and expand. While Europeans sought to find the best maritime routes to the sources of spices in Southeast Asia, the old overland trade networks continued unabated and, in fact, were further stimulated by these new entrepôts that developed from the Horn of Africa to the Philippines. The so-called gunpowder empires of Central Eurasia (Ottoman empire, Sassanid Persia, and Mughal India) managed to develop and maintain the older overland trade routes regardless of the expansion of European maritime trade networks. Moreover, these two overarching trade networks became complementary rather than competing in this period of global economic consolidation. However, this development led to the long-term decline of Eurasian predominance

in the global economy as European hegemony gradually exerted its influence on regional commercial and political autonomy.

The overland trade routes that carried the majority of goods from the eastern Mediterranean over the steppes and into the Far East were maintained primarily by the Islamic gunpowder empires during much of this period. The Islamic empires ruled over territories that had been pivotal to transcontinental trade in prior centuries. As such, these maintained their position and figured prominently as crucial links in the development of a global commercial network. Regardless of endemic warfare between the Ottoman empire and Sassanid Persia, trade between these two realms was crucial to their economic stability and thus that of the entire region. While initially resistant to European (primarily Portuguese and Dutch) encroachments on their territorial peripheries, the gunpowder empires gradually grew amenable to trade with the West as international trade became a viable means to ensure economic stability and diplomatic maneuvering against other European powers.

The growing prominence of European trade in the economies of the gunpowder empires became evident in the form of trading stations on their peripheries, which further stimulated internal trade within these realms. The Ottoman city of Bursa was the main entrepôt of silk from Persia to be sold to Italian traders, in essence a link between the Mediterranean and Central Asia. Diplomacy also figured into the gradual extension of trade privileges to Europeans. Special trading concessions were granted to England and France by the Ottomans in exchange for support against Spain. The Ottoman city of Aleppo served as a major hub for overland trade and European subsidiaries of joint stock companies, such as the English Levant Company. The Safavids also extended commercial privileges to Europeans, creating Isfahan as a major hub for transnational trade. European merchants purchased Safavid silk, ceramics, and crafts, among other regional goods. The Safavids granted concessions to the English East India Company, the French East India Company, and the Dutch VOC (Vereenigde Oost-Indische Compagnie, or Dutch East India Company). Goods from Eurasia flowed down to these European outposts, further

► HINDU MERCHANTS OF MULTAN

The Indian city of Multan served as an important hub for international trade for the Mughal empire in the seventeenth and eighteenth centuries. Its mostly Hindu merchants were spread far and wide in the expansive search for new markets and sources of goods by the Mughals. Multan was at the crossroads of both the sea and overland routes that connected India with Iran, Afghanistan, and the Arabian Sea. As a result, a Multani trade diaspora developed along Central Asia, Sassanid Persia, and southern Russia, becoming an integral component of the overland trade routes and their expansion in Eurasian commerce. These Multani merchants traded goods from Central Asia to English merchants along the Mughal concessions. Many Multani merchants and bankers settled in places like Bukhara and Samarkand. Furthermore, they had established their own trading stations and settlements in Russia, Afghanistan, and Persia, akin to those of the Europeans in India.

—Abraham O. Mendoza

stimulating internal Eurasian trade along the old overland routes as merchants sought to sell their goods to the international market. Military goods and assistance were provided by the English in exchange for further economic concessions. The Mughals also granted concessions to European merchants despite their already thriving domestic economy. Due to the tremendous influx of income derived from foreign trade, the Mughals encouraged the development of trading stations by Portuguese, Dutch, English, and French merchants. Moreover, Indian merchants also created their own trading companies to further internal Eurasian trade, ranging from as far as Russia to Indonesia. This further cemented the reliance of the overland trade networks on the expansive European transoceanic routes.

In spite of these developments, the Islamic gunpowder empires gradually became dependent on European goods and investment for their economic well-being. Growing European influence and internal problems led to the gradual loss of power on the part of these empires. While the Ottomans and the Safavids were able to keep the Europeans at arm's length for a few more centuries, the Mughals became increasingly vulnerable to growing English power in South Asia. The Mughals were only able to maintain regional power by assuring the English East India Company of their compliance with their commercial demands. In due time, they would succumb to English military and then political control. The Ottomans and Safavids, despite their nominal political independence, were reliant on European trade for many of their goods. By the eighteenth century, these Islamic realms had gradually evolved to mere peripheries to the Europe-centered world economy, with the overland trade routes evolving into another crucial component to the transcontinental and greater transoceanic trade network developed by the Europeans.

—Abraham O. Mendoza

Bibliography

- Dale, Stephen Frederic. *Indian Merchants and Eurasian Trade, 1600–1750*. New York: Cambridge University Press, 1994.
- Esposito, John, ed. *The Oxford History of Islam*. New York: Oxford University Press, 1999.
- Findley, Carter Vaughn. *The Turks in World History*. New York: Oxford University Press, 2005.

The East Indiamen Ships and Their Voyages to and from India

One of the most enduring images of the East India trade is the Indiamen, the huge wooden sailing ships employed to bring Asian goods to European markets during the early modern age. However, very little has been written about these vessels despite their important role in linking the premodern world's economies. Indiamen evolved, over three centuries, into the specialized vessels of the late eighteenth and early nineteenth centuries. Yet there was never one type of ship called an Indiaman. The name referred to the ship's function as an Indian Ocean trader, not to its construction.

The Portuguese, who dominated long-distance maritime trade between Europe and Asia throughout the sixteenth century, originally used caravels. The ships that sailed under Vasco da Gama's journey to India in 1497 averaged only 150 tons, a ton being a measure of cargo volume rather than weight, each ton the equivalent of a large Burgundy wine cask. However, the average size of the ships increased dramatically, first to around 300 tons and finally to around 400 tons during the period 1511–1520. Even as these ships increased in weight, many ships were wrecked due to the poor navigational technology and the fact that the Portuguese mariners were braving seas more or less unknown to Europeans. Additional ships were destroyed in battle, and others were taken by pirates during the sixteenth century.

The Portuguese realized that at least two fleets were needed for the East India trade: a "Europe" fleet to carry cargo to Lisbon from a few assembly points in Asia, its departure timed to coincide with favorable monsoon winds, and a fleet of interregional traders, operating year-round, to supply the assembly points. These latter ships, far more numerous and often much smaller than the ships of the "Europe" fleet, were later on called "Country" traders and were owned and operated by Indian or private European merchants. The Dutch, English, French, Danes, and Swedes all entered the East India trade during the late sixteenth century and the seventeenth century, and they all developed Indian shipyards, if possible, and adopted a two-fleet system. Meanwhile,

➤ MANNING THE EAST INDIA FLEETS

Sustaining the large crews of Indiamen was extremely difficult, especially during the seventeenth and early eighteenth centuries when so little was known about diseases such as scurvy and the fevers that struck down European mariners on long voyages and killed them by the dozens in the tropics. In order to entice European sailors to join the East India fleets, despite notoriously high casualty rates, seamen were offered high pay (if they survived) and a small amount of cargo space for their own trade goods. The same incentives, on rather more generous terms, inspired the ship's officers. Ship owners were not especially choosy either, and men were hired regardless of nationality. Dutch and Italian sailors often were thus found on English vessels, while Dutch ships sailed with Englishmen, Danes, and Germans on their rosters. Even so, as men died along the way, all Indiamen took on sailors wherever they could find them. The Azores and Madeira provided many Portuguese mariners for English and Dutch vessels, and all ships signed on Indian, Malay, and Chinese seamen by the score during the course of a two- or three-year voyage across the Indian Ocean and back. Indian sailors, called Lascars, were a permanent presence aboard East India Company ships, serving under *syrangs* ("captains"), who acted as bo'sun's mates. After the 1750s, improve-



The Return to Amsterdam of the Fleet of the Dutch East India Company in 1599, by Andries van Eertvelt, early seventeenth century. (The Gallery Collection/Corbis)

ments in ship architecture made vessels healthier by increasing ventilation below decks and making rigging and sails somewhat easier to manage. The East India traders also learned how to manage their sailors' diets better in order to preserve their health. Thus, by the end of the eighteenth century most Indiamen sailed with a compliment of about 100 men, but the multicultural composition of the crews did not change.

—James Hoover Frey

demand for Asian goods increased, and "Europe" ships grew in size to accommodate the expansion of trade, becoming slow, vulnerable, and the richest prizes afloat, hunted by pirates, commercial rivals, and enemy navies alike.

During the seventeenth century, the East India trade was a military-commercial venture, with systematic naval campaigns paving the way for the hostile takeover of sources of production, markets, and sea routes. Blockades and regular patrols were maintained to stifle rivals or cajole Asian sailors into buying passes or trading at particular ports. East Indiamen changed to reflect this aggressive mood, becoming sturdier vessels designed to carry up to 36 cannon. The early fleets of the Dutch Vereenigde Oost-Indische Compagnie (VOC) were essentially flotillas of warships combining piracy and raiding

with trade. Ships sailing on the "Cape route" to Europe, however, had to be both heavily armed and large enough to carry their share of the annual Amsterdam-bound cargo. For the most part everyone else copied Dutch methods and ship designs, because the Netherlands was viewed as an advanced maritime power throughout the seventeenth century.

During the eighteenth century Indiamen changed yet again, this time in response to the pressure of competition as the number of European vessels sailing to Asia increased to keep pace with rapidly expanding Asian economies and the ever-increasing demand for Asian commodities in Europe. By this time, most "Europe" ships ranged in size from 500 tons to about 800 tons. Their impressive size and weight required an enormous expanse of sails—as much

as 13,000 square feet or 1,208 square meters—suspended from masts that had to be large and sturdy enough to hold up such a mass of canvass. Large skilled crews were needed, since every maneuver and change of wind required men to climb aloft, sometimes over 90 feet (27 meters) above the decks, to take in, let out, and adjust the sails. Still, the ships were slow and, sailing at five to seven knots an hour, were slower than most warships of the time.

As royally licensed monopolies, all East India companies owned a core fleet of their own ships but hired other vessels, usually owned by groups of merchants, to sail to the Indian Ocean and carry their trade goods. One of the perquisites they offered to private carriers was a chance to engage in “private trade” in certain goods within the East Indian monopoly zone. In 1708 the British East India Company absorbed the older Company of London Merchants Trading to the East Indies and thus controlled a fleet of 5 “Company” ships and 46 hired vessels. During most of the eighteenth century in fact, approximately 150 European ships were involved in the East India trade. By the middle of the eighteenth century many Asian kingdoms also were building European-style ships of their own, and the Indian state of Mysore, under Tipu Sultan, even set up its own trading company, with a small fleet of ships based at Mangalore. Ships built by Asian yards often were just as large as European vessels and sometimes bigger. The wreck of a massive merchantman of Asian origin has been discovered in the Red Sea off the coast of Egypt, heavily laden with goods from the East Indies.

Like the Dutch, the British and French soon developed shipyards specializing in the construction of Indiamen. In Britain in order to protect these yards, laws were enacted preventing Indian-built ships from sailing to Europe. Consequently there was a trend toward the standardization of Indiamen, their equipment, and their operating procedures. Most captains of British Indiamen, for instance, carried printed instructions, about 35 pages long, called a charter-party, with ship’s officers held liable for damage both to the ship and its cargo as well as for the cost of unnecessary halts at foreign ports.

After the 1750s as the British and French began to acquire territorial possessions in India to

match the Dutch empire in Southeast Asia, Indiamen had to adapt yet again to accommodate the needs of a growing number of passengers. Crews’ quarters were sacrificed in order to make room for parties of soldiers and compartments and cabins installed for “the quality” (officials, military officers, and often their wives and children). Aristocratic and wealthy passengers, accustomed only to the best, enjoyed fairly spacious roundhouse cabins in the highly ornamented stern of the ship, with large windows and many homely comforts, such as sofas, musical instruments, and mirrors. However, most of the passengers were young men, often teenagers, who signed on to work for the East India Company as junior army officers or clerks, or “writers,” and they slept in hammocks in the main deck steerage compartment, their fare paid for by the company at a fixed rate.

During the 1780s the size of Indiamen increased again, this time to keep pace with imperial expansion as the British conquest of India accelerated. The East India Company’s yards began to turn out a new class of multipurpose vessels of 1,200 to 1,300 tons, designed to serve as warships, cargo carriers, troopships, and luxury yachts all in one. Two or three “India” fleets, consisting of an average of 15 to 20 ships each, sailed from Britain every year, carrying at least 3,000 troops and some 500–600 other passengers in addition to their crews.

At the end of the eighteenth century the range of people aboard an Indiaman included not only company officials but also other Europeans bound for Asia to seek their fortunes: naturalists, painters, scientists, hairdressers, tailors, and even middle-class women angling for rich husbands. The ship was a floating microcosm of Georgian society; everyone was ranked according to a rigid hierarchy, with only the most exalted dining with the captain. Everyone else dined with the lower-ranking mates, sitting at hanging tables suspended in the main deck steerage compartment. Captains did their best to maintain decorum aboard their vessels, but with so many young passengers high spirits often prevailed, and no voyage was complete without at least a few romances developing between young men and women, although the latter were supposed to be closely chaperoned.

Shipwreck, war, day-to-day hardship, difficult work, and the dangers of disease and uncharted waters remained part of the Indiamen's milieu until their heyday suddenly ended in the 1830s with the termination of the East India Company's monopoly and the appearance of steamships in Asian waters. But the inspiration that created the Indiamen and kept them sailing was never eclipsed. The forward momentum of the East India trade was maintained by the unending lure of exotic faraway lands, picturesque scenes, adventure, strange new discoveries, empire building, and most of all the opportunity to make prodigious profits transporting a wide range of high-status luxuries and valuable commodities, ranging from bone china and tea to opium, printed cottons, and saltpeter.

—James Hoover Frey

Bibliography

- Boxer, Charles R. *The Dutch Seaborne Empire, 1600–1800*. New York: Knopf, 1965.
- Cotton, Sir Evan. *East Indiamen*. Edited by Sir Charles Fawcett. London: Batchworth, 1949.
- Furber, Holden. *Rival Empires of Trade in the Orient, 1600–1800*. Vol. 2, *Europe and the World in the Age of Expansion*. Minneapolis: University of Minnesota Press, 1976.
- Glamann, Kristof. *Dutch Asiatic Trade, 1620–1740*. The Hague: Nijhoff, 1958.
- Miller, Russell. *The East Indiamen*. Alexandria, VA: Time-Life Books, 1980.
- Philips, C. H. *The East India Company, 1784–1834*. New York: Barnes and Noble, 1961.
- Steensgaard, Niels. *Carracks, Caravans, and Companies: Structural Crisis in the European-Asian Trade in the Early 17th Century*. Scandinavian Institute of Asian Studies Monograph Series, No. 17. Copenhagen: Studentlitteratur, 1973.

Russian Expansion and Indigenous Population Decline

Beginning in the 1530s, the Russian tsars embarked on a massive program of expansion into eastern Europe and across Asia. By the late seventeenth century the Russian empire stretched from Finland and Ukraine in the west to the Bering Sea and the Sea of Okhotsk in the east and from the Arctic Ocean in the north to China in the south. The reasons for this expansion are

manifold: population pressures, enticements for Russian settlers to migrate, the exploration for and exploitation of natural resources, geopolitical strategy, and military glory. The regions that Russia incorporated were not empty wastelands but rather the homelands of numerous indigenous peoples with their own cultures and ways of life. When and where Russians and indigenous peoples met, changes to traditional indigenous life were bound to occur. Often, these changes were marked by the decline of indigenous populations in the interests of Russian imperial power.

The decline of indigenous populations took various forms. As historian Andreas Kappeler notes in *The Russian Empire: A Multi-Ethnic History*, Russia's imperial expansion was flexible in its approach. The Russian tsars used a range of strategies, which included conventional diplomacy, the creation of protectorates that the tsars later annexed completely, purchasing smaller territories, and the overt use of military suppression, among other tactics. The nature of indigenous population decline often corresponded to the particular form of expansion used by Russia in a specific case. For example, many Yakuts were assimilated, forced to flee Russian territory, or simply killed as Russian forces conquered their territory. Other populations, such as certain Finnish- and Turkic-speaking peoples, were simply absorbed into Russia's dominant culture. As Russian settlers gradually expropriated their lands, Russian Orthodox missionaries converted them to Christianity, and Russian traders forced them to learn Russian to survive economically.

Frequently, the decline of indigenous populations in the expanding Russian empire was simply due to competition for scarce resources. Much of central Asia was already partly depopulated as a result of Mongol conquests from the thirteenth to the sixteenth centuries and the impact of the Black Death from the fourteenth to the seventeenth centuries. Indigenous peoples throughout much of Siberia and other parts of what would become the Russian empire subsisted on hunting, fishing, and herding, as agriculture was limited due to the frequently harsh weather conditions. To survive on the relatively scarce natural resources, indigenous populations

THE YAKUT REBELLION

One example of Russian expansion's high cost to indigenous peoples is seen in the events surrounding the series of Yakut revolts occurring between 1634 and 1642. During this period the Yakut were a Turkic-speaking and often migratory people who subsisted on domesticated cattle, wild game, and fish in Yakutia (now a region of northern Russia). In the early seventeenth century ethnic Russian settlers moved to the region, prompting Russia to annex Yakutia, harshly tax the Yakuts, and exploit the natural resources of the region (particularly furs).

The Yakuts, heavily burdened by the taxes and alarmed at the construction of Russian forts in the region, began a series of rebellions in 1634. These revolts took the form of attacks on isolated Russian settlements and several (unsuccessful)

attempts to capture and destroy the forts. The biggest revolt broke out in 1641 when Russia's attempt to conduct a census of the population and a count of the Yakuts' cattle for the purpose of increasing taxes incited several Yakut clans to go on a killing spree and besiege Yakutsk, the regional capital. However, interclan bickering and vicious punitive raids by Cossack cavalry on Yakut villages soon ended the revolts for good.

Over the next three centuries, the Yakuts and their culture were gradually either assimilated or marginalized. They were converted to Eastern Orthodox Christianity, and many Yakuts were forced out of Yakutia after gold was discovered in the region.

—Matthew DeFraga

tended to be nomadic. However, as Russian settlers moved into an area, they appropriated as much land as they could to eke out an existence, competing for other resources, such as furs, with the indigenous population and severely limiting the area available for indigenous nomadic subsistence. The more numerous Russians, backed by the military might of the Russian state, invariably won this competition, forcing the indigenous inhabitants to flee, assimilate, or face starvation. As a result, the Russian empire became increasingly "Russian" in both culture and ethnicity despite its incorporation of more and more previously diverse lands. Though many ethnic minorities did not completely die out in the face of Russian imperial expansion, their numbers dwindled, and their survival was increasingly dependent on the will of the Russian state.

—Matthew DeFraga

Bibliography

- Forsyth, James. *A History of the Peoples of Siberia: Russia's North Asian Colony, 1581-1990*. Cambridge: Cambridge University Press, 1994.
- Hosking, Geoffrey. *Russia: People and Empire, 1552-1917*. Cambridge, MA: Harvard University Press, 1998.
- Kappeler, Andreas. *The Russian Empire: A Multi-Ethnic History*. Harlow, UK: Pearson Education, 2001.

Safavid Shia as Isolationist Force in Central Asia (Shia as the Majority in the Empire)

A generalization that occurred early on in the study of world history is that after the Portuguese established themselves in the Indian Ocean and other Europeans followed, the great caravan cities of the Silk Roads became irrelevant. As a result, central Asia became stagnated and isolated. This, however, is not quite the case. Indeed, the markets of Samarqand, Bukhara, and other cities continued to thrive. Indeed, the east-west trade still flourished, and the north-south trade may have increased as Russians coveted the markets and territories of central Asia and Indian merchants prospered. Indeed, the only significant change in trade may have simply been the types of goods as European manufactured goods entered central Asia. In this sense central Asia was no longer a thriving hub of luxury goods. Yet central Asia did become isolated in another sense as it became isolated from the larger Islamic world. The reason can be traced to the rise of a militant Shia state in the Safavid empire.

The Safavids traced their origins back to a Sufi named Safi al-Din (1252-1334) whose order, the Safaviya, enjoyed the patronage of the Mongol khans of the ilkhate (1260-1335). Based around

➤ INDIAN MERCHANTS IN CENTRAL ASIA

Indian merchants played a crucial role in the commercial activities of central Asia. While the arrival of the Portuguese and the opening of new trade routes have often been interpreted as the death knell for the caravan trade of central Asia, this is not quite accurate. Indian merchants from the Mughal empire and later serving various European companies continued to ply the caravan routes of central Asia long after the arrival of the Portuguese at Goa.

Indeed, Indian merchants not only traded in the Uzbek khanates but also traded into Xinjiang before and after the Qing conquest in 1757. Among the goods that traversed central Asia were shawls from Kashmir but also cotton, particularly as Russian demand began to exceed the production in central Asia. The economic growth in the eighteenth century appeared not only in the number of goods but also in the migration of Indian merchants to the Ferghana Valley and beyond. Indeed, the Indian merchants became a diaspora in ways similar to Armenian merchants in Europe and the Ottoman empire. Their involvement was more than simple commerce, as they assisted in building and maintaining the trade infrastructure by financing the digging of wells, the repairing of roads, and the building of caravanserais. Furthermore, as most of the Indian merchants were Hindus, they became a neutral party that fostered trade between central Asia and Iran even during periods of war.

—*Timothy May*

Ardabil, the Safaviya order endured the turbulent period following the collapse of the ilkhate in 1335; the invasion of Emir Timur (1336–1405), also known as Tamerlane; and the rule of the Kara Qoyunlu and Aq Qoyunlu Turkic confederations (Black and White Sheep, respectively).

In the meantime, the Safaviya Sufis proselytized and remained an active influence in the region. In 1447 the order gravitated toward a more militant and millenarian interpretation of their faith that incorporated messianism. In this they expected the return of the Mahdi, a messiah figure in Islam, usually associated with the Imam, or heir of Ali, who could rightly interpret the religion. The leader of the Safaviya gradually was viewed as an emissary of God, chosen to lead

them. During this time the Safaviya alternately allied and fought the Aq Qoyunlu, and the Safavid warriors became known as *kizilbash* (Red-heads) due to the distinctive red hats they wore. In 1488, however, the Aq Qoyunlu crushed them, killed their leader Haydar, and imprisoned his sons, leaving the *kizilbash* and the Safaviya order leaderless.

In 1499 Ismail, the youngest son of Haydar, escaped his imprisonment in Gilan, south of the Caspian Sea. He returned to Ardabil and became the leader of the Safaviya and their *kizilbash* supporters. He quickly avenged his father and expanded Safavid power by taking the important commercial hub of Tabriz in 1501. There he proclaimed himself shah (king). All of this he accomplished before his fifteenth birthday.

He then proceeded to conquer Iran, a portion of Iraq, and Afghanistan. It is during this time that Ismail's leadership and the Safavid Sufi order transformed into a particularly militant form of Twelver Shia Islam. As part of the process in making Twelver Shia the state religion, Ismail required everyone to curse the names of the first three caliphs, thus implying that 'Ali, Muhammad's cousin, was the only legitimate caliph. While considerable resistance to conversion existed prior to the Safavids, Iran was predominantly Sunni. Ismail, however, was not above using force, which persuaded many if only to be spared from further devastation. Ismail also needed the talent of Iranian administrators for his newly won empire. The Iranian bureaucrats, while not usually Shia, converted, but their influence and also the repulsion of the more militant aspects of the *kizilbash*'s religious practices helped mitigate some aspects. Nonetheless, Twelver Shia spread slowly through Iran, despite the ardor of Ismail. Much of it had to do with the dichotomy of the *kizilbash* form, which easily accepted Ismail as the Hidden Imam and also accepted that he knew the will of God. Meanwhile, the *ulema*, or urban religious notables, quietly ignored many of these aspects and generally considered Ismail and his successors as rulers but not necessarily knowing the will of God. At the same time they tended not to voice their disagreement too loudly. Still, by the eighteenth century Iran could be considered a Shia state.

The process of adopting Twelver Shia was more than simply out of faith. It also provided a political ideology that set the Safavids apart from their neighbors, the largely Sunni Ottoman empire and the Uzbeks. By establishing Twelver Shia as the state religion, Ismail attracted the attention of Shia scholars throughout the Islamic world who had long been minorities in their respective realms and were often persecuted. Furthermore, the meteoric rise of Ismail and his liberal practice of distributing plunder also attracted the support of Turkic pastoral nomads throughout the Middle East who often chafed at the increasing centralization of the state and power by the Ottomans, the Mamluk sultanate, and even the Uzbeks, which limited their movements and also placed standardized taxes and services on the nomads. Twelver Shia also allowed the Safavids to cast their wars against their neighbors as holy wars against heretical Muslims. This also assisted in galvanizing the mind-set of the empire's population.

From the onset of their rule the Safavids tended to be the antithesis of the Ottoman state, and this ultimately resulted in a confrontation. The Safavids had already disrupted an Ottoman attempt to invade the Safavids on two fronts as Ismail defeated Muhammad Shaybani, the Uzbek khan, at Merv in 1510. The major battle occurred at Chaldiran, near Lake Van, in 1514. Selim "the Grim" I's use of artillery devastated the kizilbash nomadic cavalry. Only the janissaries' refusal to march against Tabriz spared the Safavids from further humiliation. As Ismail had claimed to be the Hidden Imam, he was not supposed to lose battles. War continued periodically between the two states until the fall of the Safavids in 1736, but the emergence of the Safavids tremendously altered the Middle East and central Asia.

Because of the rise of an empire based on a religious ideology that was diametrically opposed to that of its neighbors, a regional rift occurred. Combined with the fact that the Safavids also courted the nomads of the region, a substantial military force for all of the empires, the Ottomans and Uzbeks looked at the Safavids with suspicion. Pilgrims from Iran to holy sites in Arabia or Iraq could easily be proselytizing missionaries or spies. Furthermore, although the Safavids' origins were based in Sufism, they began

to persecute Sufi orders in the seventeenth century, which also helped the Shia ulema to embrace the Safavids. In the minds of the Safavids, the Sufis undermined the authority of the Hidden Imam. Other religious minorities also faced persecution, a quite different situation from traditional Islamic empires. In effect, as the Safavid empire transformed into an almost exclusively Shia state, it also became a buffer between the Sunni Middle East and central Asia.

Although trade with the Ottoman empire and the Uzbeks did continue, the constant warfare on the borders disrupted the caravan trade and all other forms of travel. Hence, commerce became more regional. This also affected education and the spread of ideas. Whereas scholars might travel from Timbuktu to Samarqand or Bukhara to Cairo, the existence of the Safavid empire halted this transfer of knowledge. Sunni scholars risked death to pass through the Safavid territories. The Ottomans remained very much the center of Dar al-Islam by virtue of not only its military strength and vast empire but also its control of the Holy Cities of Mecca and Medina as well as the al-Azhar University. Thus, the Ottoman empire attracted scholars from throughout the Muslim world. But reaching central Asia was much more difficult. Two other routes existed to reach central Asia. The northern route through the Pontic and Caspian steppes was fraught with peril. Indeed, the safest route was from India and through Afghanistan.

As a result, the Islam of the Uzbek khanates and scientific development stagnated without the infusion of new ideas and the debate that surrounded it. Even militarily central Asia's growth was stunted. The Safavids did their best to prevent improved artillery from falling in the hands of the Uzbeks. To be sure, the Uzbeks did receive new knowledge in all fields but usually much later than other regions. What is most important is that the direction of the contact changed. Although central Asia was still part of Dar al-Islam, it increasingly had contact with Russians who desired central Asian cotton and other goods or with Mughal India but primarily through Hindu merchants. Thus, while commercial goods continued to flow, the intellectual world of central Asia became more limited. Scholars and others purchased books, but these were still produced

by copyists rather than printing presses, so their circulation remained limited. Then combined with the fragmentation of the Uzbek khanate, partially due to the wars with the Safavids that devastated the frontiers agriculturally and economically and the expansion of Russia, the resulting political and military instability further isolated central Asia from a larger involvement in the wider Islamic world.

—*Timothy May*

Bibliography

- Adshhead, S. A. M. *Central Asia in World History*. New York: St. Martin's, 1993.
- Allworth, Edward A. *The Modern Uzbeks: From the Fourteenth Century to the Present; A Cultural History*. Stanford, CA: Hoover Institution Press, Stanford University, 1990.
- Levi, Scott C. *The Indian Diaspora in Central Asia and Its Trade, 1550–1900*. Brill's Inner Asian Library No. 3. Leiden: Brill, 2001.
- Mazzaoui, Michel M., ed. *Safavid Iran and Her Neighbors*. Salt Lake City: University of Utah Press, 2003.
- Melville, Charles, ed. *Safavid Persia: The History and Politics of an Islamic Society*. London: I. B. Tauris, 1996.

From the Manor to the City—Continued Urbanization in Europe

Europe underwent a period of rapid urbanization beginning in the fourteenth century and lasting well into the twentieth century. Though cities existed throughout the Middle Ages as centers of trade and defense, they were, by modern standards, relatively small. The mass migration of agricultural workers from the countryside to the city from the fourteenth to the eighteenth centuries provided an ample workforce for Europe's Industrial Revolution that followed. Pull factors, such as employment opportunities and the desire for personal and familial betterment, and push factors, such as the enclosure movement, both contributed to the mass migration of European peasants and the corresponding urbanization of Europe.

Broadly speaking, the medieval manor was a settlement ruled over by a lord and populated primarily with free peasants and serfs, who

worked strips of land overseen by the lord in exchange for protection and a portion of the goods produced from that land. Often, these workers would have their own plots of land as well and had access to communal grazing land for livestock, such as sheep. This system is often termed "open field," as the lands were, in a sense, communal, and peasants jointly worked the land strips. Though manorial systems widely varied throughout Europe, peasants were usually required to work on their lord's land for a certain number of days per month, and serfs, though holding various rights, had to ask permission to leave the land and to do certain other things, such as marry.

Though payments to the lord were initially made in kind (meaning a portion of the goods produced or of livestock or other manufactured items, such as cloth), the rise of the monetary system throughout Europe meant that late medieval peasants often paid their taxes in coin, which they obtained through the sale of their produce at markets in nearby towns. As agriculture became more efficient fewer peasants were needed to work in the fields, which freed up more time for commoners to earn money through the sale of excess produce or through the home manufacture of goods that they could sell at market. This increased revenue meant increased savings, and agricultural workers became intertwined in the trade centered on Europe's growing cities. In addition, the Black Death, which hit Europe in the mid-fourteenth century and continued to strike well into the seventeenth century, drastically reduced the number of peasants available to work on the manors.

Though obviously traumatic in the short term, in the long term the workforce shortage caused by the Black Death meant that the demand for peasant labor grew, and correspondingly so did the wages paid to workers. To lure peasants to their lands, lords granted greater rights to peasants. The increasing freedom and income enabled enterprising peasants to significantly improve their family's situation, allowing family members time for education and prompting them to move into other trades, often in the cities.

By the fifteenth and sixteenth centuries the open-field system was beginning to die out, mainly because the raising of livestock became

THE ENCLOSURE MOVEMENT

Involving both legal and physical changes over the course of several centuries, the enclosure movement wrought fundamental changes in both land use and agricultural practice for much of rural England, with particularly serious consequences for peasant society. In practical terms, the enclosure movement was the process in which a modern system of private land management replaced medieval traditions of communal land use. In 1700 half of the arable land in England was held and farmed according to traditional practices guaranteed by local custom rather than by law. Between 1750 and 1800 about half a million acres (over 200,000 hectares) of land were enclosed by successive parliamentary enactments, culminating in the General Enclosure Act of 1801. Although methods differed regionally and over time, the enclosure movement proceeded rapidly from 1450 to 1750 and was largely complete by 1850.

Some historians have argued that rates of enclosure were closely linked to rising grain prices after 1750, which spurred landowners to enclose their lands and cultivate them more effectively in

order to maximize profits. However, enclosure threatened the existence of traditional peasant society and undercut the paternal relationship that had connected landowner and tenant since the Middle Ages. Because use of common lands by peasants was central to their survival, enclosure led to widespread resistance in the countryside. Opposition to enclosure focused largely upon the perceived injustice associated with the process. The conversion of common lands to private management has often been considered a critical stage in the emergence of agrarian capitalism.

—Brian Refford

Bibliography

- Allen, Robert C. *Enclosure and the Yeoman: Agricultural Development of the South Midlands, 1450–1850*. Oxford, UK: Oxford University Press, 1992.
- Neeson, J. M. *Commoners: Common Right, Enclosure and Social Change in England, 1700–1820*. New York: Cambridge University Press, 1993.

increasingly profitable. As livestock needed to be contained, many open fields were enclosed and made the private property of the manor lords (this long-term trend is called the enclosure movement). Those peasants who were not fortunate enough to move to the cities voluntarily due to a financial windfall were now often forced to vacate their lands to make way for greater pasturage. The only place for these landless and jobless peasants to go was to the growing cities.

By the eighteenth century the beginnings of an industrial economy, fueled by the mass production of goods such as cloth, were seen in western Europe, particularly in England. As the new manufacturing centers for mass production, initially powered by water, were located in towns, agricultural workers flocked to urban areas to find work. The effect of all of these migratory factors was the beginning of a large-scale transformation of western Europe (though not fully realized until the twentieth century) from an agricultural world to one centered on the city.

—Matthew DeFraga

Bibliography

- de Vries, Jan. *European Urbanization, 1500–1800*. Cambridge, MA: Harvard University Press, 1984.
- Hohenberg, Paul M., and Lynn Hollen Lees. *The Making of Urban Europe, 1000–1994*. Cambridge, MA: Harvard University Press, 1995.
- Neeson, J. M. *Commoners: Common Right, Enclosure and Social Change in England, 1700–1820*. Cambridge: Cambridge University Press, 1996.
- Nicholas, David. *Urban Europe, 1000–1700*. New York: Palgrave Macmillan, 2003.
- Overton, Mark. *Agricultural Revolution in England: The Transformation of the Agrarian Economy, 1500–1850*. Cambridge: Cambridge University Press, 1996.

European Immigration to North America

After the initial period of the voyages of discovery in the fifteenth century, the sixteenth and seventeenth centuries saw a vast influx of European immigrants settling in North America,

particularly along the Atlantic and Pacific peripheries. The colonization of North America along the Atlantic seaboard was characterized by English, Scottish, Scots-Irish, Irish, German (from the various German states of the Holy Roman Empire), French, and, to a lesser extent, Spanish, Dutch, and Swedish settlements from Nova Scotia to Florida and Louisiana. Along the Pacific Northwest, Russian fur traders migrated into Alaska, entering from the Bering Strait into Vancouver and into California. Spanish settlers, mostly soldiers and clergy, also migrated into California to counter both English and Russian excursions in that area and to create a buffer zone for their more valuable colonies in Mesoamerica.

In the early sixteenth century, most of North America was unclaimed by either the Spanish or the Portuguese, who were focused on establishing colonial dominance in Mesoamerica and South America. Early English (Giovanni “John” Cabot in 1497) and French (Jacques Cartier in 1535) efforts to discover a direct Northwest Passage to Asia to circumvent Spanish and Portuguese southerly routes inadvertently resulted in the charting of the vast lands of North America along what is now the eastern seaboard of Canada and the United States. The fisheries of Newfoundland, the fur trade along Hudson’s Bay and the St. Lawrence River, and the plentiful lands along the Chesapeake and Massachusetts Bay would eventually draw hordes of Europeans. Subsequently, English, French, and Dutch ambitions to counter Iberian domination of the New World encouraged state and private investment in colonization of Atlantic North America.

Early attempts at settlement were characterized by hardship, given the lack of familiarity with local resources, climate, and the harsh environment of North America. The earliest English settlement of Roanoke (North Carolina) in 1585 was a complete failure due to the hardships endured by the settlers in the midst of an inhospitable environment and the outbreak of disease. In 1607, the Jamestown settlement (Virginia) was also nearly wiped out for reasons similar to that of Roanoke but was saved due to the assistance of local indigenous Americans. In 1620, religious dissidents from England (Puritans) settled along Massachusetts Bay, establishing colonies along Plymouth. French claims in Canada

included the province of Quebec and Nova Scotia. Dutch excursions under explorer Henry Hudson charted Hudson’s Bay (Canada) and New Netherland (Peter in 1614, later New York, New Jersey, and Connecticut), claiming them as colonies for settlement for the United Provinces (Netherlands). Contemporary New York City was initially founded as New Amsterdam as a Dutch settlement. In 1638, Sweden claimed New Sweden (Delaware and parts of New York and Pennsylvania). These early colonial ventures established bridgeheads for growing numbers of later immigrants from the mother countries.

British North America was settled primarily by immigrants from the British Isles (English, Irish, Scots, Scots-Irish, and Welsh) but also by German, Dutch, and Swedish settlers. British colonial ventures were characterized by their development under the auspices of investment strategies on the part of the English Crown, joint stock companies, and individuals. However, the northern and southern colonies developed along different trajectories given their settlement strategies based on labor recruitment.

British colonies in southern North America, much like those in the British Caribbean, developed as cash crop economies based on plantations, which initially depended on indentured servants from the British Isles. Many Scots-Irish (Scots who initially settled in Ireland as plantation owners) transplanted their plantation agricultural strategies in mid-Atlantic and Chesapeake Bay colonies, utilizing indentured servants from England and Ireland. Indentured servitude was a form of contract labor in which an individual would work for a proprietor of a plantation, during a range of three to seven years, in exchange for transit costs. British convicts were also shipped to North American southern colonies in an effort to rid England and the British Isles of “undesirables,” many of them working under contractual obligations similar to that of indentured servants. The perceived unruliness of indentured servants led to their gradual replacement by African slaves from the Caribbean and West Africa following the 1676 rebellion in the Virginia colony (Bacon’s Rebellion).

British North America’s northern colonies, such as the Massachusetts Bay Colony, developed as colonial ventures of individual proprietors,

small farmers, and small-scale manufacturers in addition to the development of shipping and maritime trade. While many of these colonies were purportedly established as religious havens, they were essentially under English royal control. Many religious dissidents (Quakers, Baptists, and Puritans) from the British Isles sought refuge in these northern colonies due to Anglican discrimination and limited opportunities back home. (Ironically, once in America, Quakers and Baptists suffered discrimination at the hands of Puritans in Massachusetts Bay.) As subjects of the English Crown (British Crown in 1707), many Scots, Irish, and Welsh immigrants flowed into British North America, as did Germans from various German states. William Penn's colony of Pennsylvania ("Penn's woods") became a magnet for German settlement from various southwestern German states, German-Swiss cantons, Rhenish districts, Alsatia, and Westphalia. In the late seventeenth century, the Dutch and Swedish settlements were consolidated under English authority, becoming destinations for further emigration from the British Isles. Immigration to colonial British North America peaked between 1760 and 1775, with an annual influx of an estimated 15,000 annually. Approximately a quarter million immigrants entered in 1775 (55,000 Protestant Irish, 40,000 Scots, 30,000 English, and 12,000 German speakers), many of them still under indentured servitude (65,000).

French North America, mostly established as a royal colonial venture and limited to French Catholics and fur traders, stretched along vast tracts of Canada from Quebec and Nova Scotia (New France) to Louisiana in the Gulf of Mexico. From 1664 to 1680, French settlements along the St. Lawrence received 2,000 indentured servants, 1,000 settler-soldiers, and 1,000 women (for the purpose of establishing families). Some of these settler-soldiers were initially German and Swiss. Louisiana attracted an estimated 7,000 settlers between 1717 and 1721. Unlike the English colonies, French colonial recruitment was undertaken by large proprietary owners (seigneurs) who were limited to recruiting French Catholics, as Protestants were barred from immigrating to French America. Furthermore, immigration to New France remained low throughout the seventeenth and eighteenth centuries, with the bulk of

THE GERMAN EXPERIENCE IN COLONIAL NORTH AMERICA

Despite the common cultural and linguistic commonalities that existed among the German peoples of central Europe in the seventeenth and eighteenth centuries, the lack of political consolidation and religious differences accounted for the divisions in people's sense of what it meant to be German. The Holy Roman Empire of the German nation, which in the seventeenth and eighteenth centuries was a politically fragmented political entity composed of dozens of principalities, kingdoms, imperial cities, and duchies in addition to ethnic groups that while not nominally German were German speakers (Czechs), further complicated what it meant to be German. Thus, German colonists in North America came as Rheinlanders, Hessians, Westphalians, Brandenburgians, and Prussians but also as Protestants and Catholics. In spite of these differences, Germans immigrated to specific colonies (most notably Pennsylvania) in British North America and were identified as Germans by their hosts.

William Penn's colony of Pennsylvania, which means "Penn's woods," became a haven for German immigrants to British North America. A proprietary colony developed by Penn to serve as a model utopia of settlement, it was heavily populated by Germans due to recruitment efforts geared directly toward them. The heavy German influx into Pennsylvania created a distinct German cultural region (frequently and incorrectly called Pennsylvania Dutch), contrasting with the adjacent English colonies. High rates of German immigration well into the period of the American Revolutionary War led to debates over what the national language of the early republic should be.

—Abraham O. Mendoza

French emigrants going to the French Caribbean. By the mid-eighteenth century, New France's population was an estimated 55,000 and Louisiana's was approximately 4,000, more due to natural birth rates than immigration from France.

From the sixteenth century to the eighteenth century, Spanish settlement in the Atlantic and the Pacific regions of North America was in reaction to Protestant North European emigration in an effort to create buffer colonies

to prevent incursions from the north. The colony of St. Augustine in Florida was established in 1565, and Santa Fe (New Mexico) followed in 1598. Russian and English interest (most notably that of Sir Francis Drake's charting of the California coast in 1579) in California in the eighteenth century led the Spanish to settle their claims in the region. Spanish military expeditions and Catholic missions into New Mexico and California led to the establishment of Spanish authority and settlement in the region. The Spanish military established forts (presidios) in San Francisco, Monterey, and Santa Barbara to spearhead migration from New Spain (Mexico). Ecclesiastical settlements, through the efforts of Franciscan friar Junipero Serra, led to the development of various missions in California, which were institutions geared toward acculturating the local indigenous peoples to Spanish culture. Spanish towns (pueblos), such as San Jose and Los Angeles, were also established as secular settlements of immigrants from New Spain, mostly of mestizo (mixed European and indigenous) descent.

Russian expansion into North America followed their settlement of vast tracts of Siberia and Central Asia in the seventeenth and eighteenth centuries. Russian explorer Ivan Fedorov entered northern Alaska in 1732. In 1741 the Aleutian Islands, southern Alaska, and northwestern North America were discovered during the Russian exploration by Vitus Bering and Aleksei Chirikov. In 1784 Grigory Shelikhov was responsible for establishing the first Russian settlement in Alaska. In 1799 Nicolai Rezanov established the Russian-American Company for hunting otter for the Russian fur trade. The Russian population in its North American settlements was minimal when compared with other European settlements, as these were composed primarily of fur trappers, and most of these were Russified indigenous peoples.

—Abraham O. Mendoza

Bibliography

- Bailyn, Bernard. *The Peopling of British North America: An Introduction*. New York: Vintage, 1988.
- Bailyn, Bernard, and Barbara DeWolfe. *Voyagers to the West: A Passage in the Peopling of America on the Eve of the Revolution*. New York: Knopf, 1986.

Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.

German Immigration to North America

Although Germany has never possessed colonies in North America, Germans have played a prominent role in the exploration, settlement, and subsequent formation of the United States. In 1507 the cartographer Martin Waldseemüller published his *Cosmographiae Introductio* with a world map suggesting, for the first time, the name "America" for the newly discovered continent, in honor of Amerigo Vespucci. Since then, German-speaking peoples have flocked to the Americas to form one of the major ethnic groups in the present-day United States.

German immigrants originated from many territorial states, each with its distinct dialect and culture. They tended to identify themselves by region or religion rather than nationality. This remained the case even after 1871, when Chancellor Otto von Bismarck unified the numerous German kingdoms, duchies, and principalities into one empire. In the United States, such German-speaking "ethnics" as the Saxons, Palatines, Bavarians, Franconians, Hessians, Swabians, and Prussians (to name a few) became "Germans" only to "non-German" ethnic groups, to whom language served as the paramount marker of belonging.

Most German immigrants in the early colonial period were agricultural settlers, peasant farmers, and craftsmen. Some were attorneys, clergymen, or merchants, while others were adventurers, explorers, and fortune hunters. In 1552 Hans Staden from Homberg in Hesse signed on with a Spanish expedition to Brazil, where he was allegedly captured by a cannibalistic tribe. In 1614 Henrik Christiansen from Wesel in Kleve explored the Hudson River. Peter Minuit (Minnewit), also from Wesel, is most remembered for his purchase of Manhattan Island from Native Americans for only 60 Dutch guilders. In the wake of England's Glorious Revolution (1688) that led to the deposition of King James II, Jakob Leisler from Frankfurt, one of New Netherland's (present-day New York state)

wealthiest merchants, led a revolt and took over the government of the colony. Nikolaus de Meyer from Hamburg—owner of a brewery, a mill, and vast tracts of land—became mayor of New York in 1676. Johann Lederer, also from Hamburg, explored west of Virginia. Augustin Hermann, born in Prague, surveyed Virginia, New Amsterdam, and Maryland. From John Smith we learn that some Germans had been among the settlers of Jamestown.

German group migration, however, did not begin until 1683, when 13 Mennonite and Quaker families from Krefeld arrived in Philadelphia aboard the *Concord*, the “Mayflower of German immigration.” Led by Francis Daniel Pastorius (1651–1720), a Franconian, they purchased 15,000 acres (6,070 hectares) of land from William Penn and founded Germantown, the first permanent settlement of German immigrants. Germantown did not remain the only religious German settlement. Germans were, for instance, among the hundreds of Labadists (followers of the French mystic Jean de Labadie), who lived secluded in a monastery founded in Maryland in 1684.

Whereas only a few Germans settled in Puritan New England, many went to New York, Virginia, Maryland, Delaware, and South Carolina. Pennsylvania, however, had always been a focal point for Germans, attracted by the liberalism of its government. Quakers, Mennonites, Dunkards, Schwenckfelders, and Amish were among the German-speaking dissident groups who sought religious freedom there. The Dunkards (Dunkers, Tunkers) came from Westphalia in the 1720s and founded communities in Pennsylvania, Maryland, Virginia, Indiana, Kansas, Ohio, Missouri, and Texas. Conrad Beissel, who had migrated in 1720 and joined the Pennsylvania Dunkards, later founded the Seventh Day Baptists. In 1732 he also founded Ephrata Cloister, a religious community in Lancaster County, Pennsylvania. Ephrata Cloister thrived in the mid-eighteenth century, and two small congregations continued until the late 1970s. The Schwenckfelders (followers of the German theologian Kaspar Schwenckfeld, leader of the Protestant Reformation in Silesia) moved to Montgomery County, Pennsylvania, in 1734. The Moravians (Herrnhuters), who trace their

origin to the *Unitas Fratrum* (Unity of Brethren), inspired by the fifteenth-century Hussite movement (followers of the religious reformer Jan Hus) in Bohemia and Moravia, came to North America as missionaries.

Most German immigrants, however, were Lutherans, Calvinists, or Catholics. Often wavering in their beliefs, they organized themselves in congregations hesitatingly. Heinrich Melchior Mühlenberg, a Lutheran clergyman sent to Pennsylvania in 1742, supervised all Lutheran churches from New York to Maryland and organized the first Lutheran synod in North America in 1748. Michael Schlatter oversaw the German Reformed Church. Both churches have played an important part in the lives of German Americans.

A first mass migration of Germans to North America occurred in 1709–1710, followed by a second wave in 1717. The military campaigns of Louis XIV, the restoration of Catholicism as the official religion in the palatinate, and the stress of harsh winters variously propelled about 13,000 people from the palatinate and upper Rhine region to London. Only a fraction of them, however, arrived in North America. Many went to Ireland, northern England, or Holland, while many others perished.

Until the early nineteenth century, German immigration to North America was facilitated through the “redemptioner” system. Poor Germans received free passage to America in exchange for several years of indentured servitude. An estimated one-half to two-thirds of all white immigrants before 1776 came under this system. Between 1776 and 1782, German princes leased 30,000 German mercenaries to the British Hanoverian ruler to suppress North American rebels. A considerable number of these Hessians (the majority of them came from the principality of Hesse-Cassel) remained in America after the War of Independence and induced friends and relatives to emigrate as well.

German Americans have contributed significantly to American life and culture, including business, politics, philosophy, science, literature, music, and architecture. Among them are such prominent figures as Hannah Arendt, Albert Einstein, Walter Gropius, Henry Kissinger, John Davison Rockefeller, John Augustus Roebling,

Arnold Schönberg, Paul Tillich, and Franz Werfel, to name but a few. Today, more Americans of European descent trace their origin back to German roots than to any other national origin. In the U.S. census of 2000, nearly 42.8 million listed “German” as their primary ancestry, equaling 15.2 percent of the total population. German-American Day, established by congressional resolution and first proclaimed by President Ronald Reagan in 1987, is celebrated on October 6 each year to honor the accomplishments of German immigrants and their descendants.

—Katrin Fischer

Bibliography

- Adam, Thomas, ed. *Germany and the Americas: Culture, Politics and History*. Santa Barbara, CA: ABC-CLIO, 2005.
- Hoerder, Dirk. “North America.” In *Germany and the Americas*, edited by Thomas Adam. Santa Barbara, CA: ABC-CLIO, 2005.
- Luebke, Frederick C. *Germans in the New World: Essays in the History of Immigration*. Urbana: University of Illinois Press, 1990.
- Moltmann, Günter, ed. *Germans to America: 300 Years of Immigration, 1683–1983*. Stuttgart: Institute for Foreign Cultural Relations in cooperation with Inter Nationes, 1982.
- Totten, Christine M. *Roots in the Rhineland: America’s German Heritage in Three Hundred Years of German Immigration, 1683–1983*. New York: German Information Center, 1988.

The Portuguese Discovery of Australia?

The question of which European nation first discovered Australia has intrigued generations of historians. Claims that the Portuguese discovered the continent in the first half of the sixteenth century, decades before Dutch contact in 1606, are among the most contentious. The debate stems from a series of French maps, apparently of Portuguese origin, that depict a landmass remarkably similar in shape to Australia. Aristotle had argued that an unknown southern landmass must exist in order to balance the large landmass in the Northern Hemisphere. Despite the lack of proof, Europeans accepted his theory as factual. Aristotle appeared to be vindicated in

the twelfth century when Marco Polo described a great southern land to the south of Sumatra, ruled by rich and secretive kings.

Supporters of Portugal’s claim argue that Portuguese traders in Sumatra explored the Australian coastline in the 1520s. No Portuguese maps depict this “discovery,” but proponents argue that it remained a secret to maintain a strategic advantage over European rivals. Historians added weight to the claim by pointing to the wreck of “the Mahogany Ship” in Victoria. Last seen in the nineteenth century and never scientifically verified, proponents claimed that the remnants were a Portuguese vessel charting the southern Australian coastline.

French maps, depicting a large southern landmass termed “Java la Grande,” form the crux of the Portuguese claim. They were produced in the thriving French port of Dieppe in the sixteenth century and purport to show the northern and eastern coastline of a vast continent. The maps were produced after a French visit to Sumatra in 1529, and many of the images, depicting flora and fauna, are accurate. Many regions are based on conjecture, however, and are a consolidation of preexisting maps that depict places that the cartographer had not viewed personally. As place-names on Java la Grande are of Portuguese origin, historians have claimed that the French cartographers must have viewed a Portuguese original.

Skeptics have pointed to serious anomalies in the French maps, particularly a large promontory on the east coast of Java la Grande. The historian W. A. R. Richardson has demonstrated convincingly that the cartographers’ error derived from the consolidation of multiple maps. The northern coast of Java la Grande correctly depicts Java’s north coast, but the eastern seaboard was never charted. Instead, without any scale or orientation to locate the chart, mapmakers unwittingly appended a section of Vietnam’s Mekong Delta. Such a practice of filling in the gaps was not unusual in attempts to provide wealthy patrons with seemingly complete and impressive purchases.

Although the Portuguese claim is, at best, highly disputed, the Dutch claim is far stronger. Dutch explorers accidentally made contact with Australia on a number of occasions, having misjudged the route from Africa to the East Indies.

► THE SPANISH CLAIM?

Dutch and Portuguese explorers reached the Asia-Pacific region from the Indian Ocean, but Spanish explorers sailed west from their territories in South America. Under the command of Pedro Fernandez de Quiros in 1606, Spanish ships landed on what is now the island of Vanuatu. Convinced that he had discovered the fabled great southern landmass, Quiros claimed the land for Spain and for the Catholic religion. Although the men founded a colony, New Jerusalem, the isolated outpost struggled to survive and soon collapsed.

Quiros returned home disappointed, but his second-in-command, Luis Vaez de Torres, remained and resolved to continue and find the vital

route from South America to the Spanish port of Manila in the Philippines. Torres' route took him east to the southern coast of New Guinea, where he became the first European to navigate a route through the straits that now bear his name. In the process he proved that New Guinea was an island and probably sighted the Australian mainland. Despite far-fetched claims that the ship sailed south to explore the new continent, it is almost certain that Torres turned north to reach the Philippines. Thus, Spain's claim to having discovered anything more than the northern tip of Australia was left unpursued.

—Robert Mason

The first planned Dutch expedition to Australia occurred in 1606, when Cape York was charted in an attempt to find gold and a possible route between New Guinea and Australia. With no discernable trade opportunities, Dutch interest proved fleeting and declined sharply from the 1640s. English explorers were the first to sight the eastern seaboard in the late eighteenth century as part of Captain James Cook's Pacific voyage. This period of scientific exploration was marked by more detailed cartography on the part of the French and British sailors who pioneered the exploration of Australia's coastline.

—Robert Mason

Bibliography

- MacIntyre, K. G. *The Secret Discovery of Australia: Portuguese Ventures 250 Years before Captain Cook*. Sydney: Pan Books, 1982.
- Richardson, W. A. R. *Was Australia Charted before 1606? The Java la Grande Inscriptions*. Canberra: National Library of Australia, 2006.

A Great Wave—Chinese Migration to Manchuria, Szechuan (Sichuan), Taiwan, and the Southwest

Migration movements have a long history in China, starting with the spread of agriculture from the Yangtze and Yellow river basins about 7000 BCE. Migrations of Chinese into non-Chinese

areas have been recorded since the times of the Han dynasty (206 BCE–220 CE). Of particular significance was the thrust of Chinese migrants to the peripheries of the Middle Kingdom, to the southern and eastern regions during the late Middle Ages and at the beginning of the new era.

The conquest of China by the Mongols and the establishment of their rule in eastern Asia (under the Yuan dynasty, 1280–1368) left deep traces in the Chinese psyche. The fact that “barbarians” had succeeded in dominating the land of great civilization effected long-lasting repercussions in the ways the Chinese organized their state and society in the periods that followed the decline of Mongol occupation.

The Ming rulers set priorities for an effective military strategy to ward off the barbarians of the north and also furthered the migration of Chinese farmers to areas with non-Chinese populations as a means to strengthen political control on the periphery. Under Ming rule, a system of military garrisons (*wei-so* [“guard post”]) was established in the provinces. The presence of imperial army units spurred the movement of Chinese farmers to more distant areas with non-Chinese populations. Once *wei-so* had been established in non-Chinese areas, local leaders (*t'u-ssu*) were selected as agents to serve the interests of the Chinese administration. The lineages of the hereditary *t'u-ssu* acted as intermediaries between the local non-Chinese people and Chinese immigrants.

➤ CHINESE IMMIGRATION TO THE LAND OF THE MATRIARCHAL NAXI (YUNNAN)

Among the non-Chinese groups with which the Chinese migrants came into contact was one with social structures that deviated markedly from the patriarchal clan system of the Chinese, and these are the Naxi (also called Moso) in the southern province of Yunnan. Anthropologists agree that the historical Naxi society was a true matriarchy. The earliest documentation of matriarchal society among the Naxi are Chinese sources dating to the period between the sixth to ninth centuries. In these sources, the kingdom of Qiang in southern China is described as Nü Guo (“land of women”) where only female rulers were in power who nominated only female ministers for their council. The capital of the southern state was Lijiang, founded at the end of the twelfth century on the southern Silk Roads that connected Yunnan with Tibet.

The Queendom of the South was conquered by the Qing (Manchu dynasty) in 1724 and was ruled since then by vassal kings, loyal to the Manchu emperors. Under the influence of Chinese immigrants to the Naxi land, the matriarchal order (with the mother as head of the household and key figure of kinship relations) dissolved among most of the Naxi. Traces of the historical matriarchy

have been preserved up to the present among regionally isolated communities of circa 8,000 Naxi scattered around the Lugu Lake, about 185 miles (300 kilometers) from Lijiang. The matriarchal Naxi form the Eastern group within the wider Naxi population, which is predominantly patriarchal.

In the heritage of local traditions and folklore, the cultural memory of the matriarchal past has been preserved. A goddess, with the name of Pancisamei, is revered as the patron of Naxi writing, the only system of a purely pictographic script still in use today. Naxi writing is used for religious purposes, for reading and writing sacred texts. Also in architecture, the memory of the once-mighty queendom lives on in key elements of ornamentation. Public historical buildings in China are ornamented with two prominent symbols of Chinese mythology, the phoenix bird (symbolizing the female principle) and the dragon (symbolizing the male principle), with the dragon on top of the phoenix, thus symbolizing male dominance. There is only one exception, and this is the local palace of Lijiang where the phoenix is positioned above the dragon as a symbolic reminder of the once-powerful women rulers in the land of the Naxi.

—Harald Haarmann

When they settled in areas with a non-Chinese population, Chinese farmers and members of the social elite did not rely on segregated patterns or on observances of ethnic boundary markings. The Chinese mingled with the local people and established social relationships to form new lineages. The situation was different in Szechuan. This region had been vastly depopulated during the later period of Mongol occupation due to repeated droughts, poor harvests, and epidemics that decimated a large portion of the indigenous population. To a large extent, the Chinese immigration to Szechuan during the Ming era was equal to a re-peopling of the region.

Where Chinese and non-Chinese people engaged in long-term contacts, the situational pressure exerted by Chinese on the minority languages caused processes of gradual assimilation, eventually resulting in the adoption of Chinese

by speakers of non-Chinese languages. The shift from a local language to Chinese unfolded over a prolonged stage of bilingualism, with the local language as the mother tongue and Chinese as a second language. This status of languages is typical also of modern varieties of bilingualism in China.

The majority of the settlers who migrated from the plains of northern China belong to the ethnic group of the Han Chinese. The Han have the status of an independent nationality in the modern state. Also numerous were the Hakka Chinese, whose destinations in the migration movements were mostly areas in the southeast. Hakka Chinese whose region of origin was Meixian (“Plum County”) in Guangdong settled in areas from Szechuan to Taiwan. The name “Hakka” was given to this Chinese group by the Yue (Cantonese), and means “guest” or “stranger” thus pointing to their foreign origin.

The political elite of the Qing dynasty were Manchu (i.e., of non-Chinese descent). The Manchu are of Tungus ethnic stock, and their language, of Altaic affiliation, is distantly related to Mongolian and Turkic languages. As a means of safeguarding the ethnic and cultural identity of their people, the Manchu rulers favored rigid restrictions in social contact. Marriages between Manchu and Chinese were forbidden. Such demands for ethnic segregation notwithstanding, the migration of Chinese to Manchuria was promoted. The Chinese element was perceived as a factor to increase the agricultural workforce and to enhance handicraft and professional skills in the region. The Chinese immigrants contributed decisively to the urbanization of Manchuria.

In the course of the eighteenth century, the Manchu rulers waged numerous wars with their neighbors. As a consequence of the military

expansion of the Middle Kingdom, Chinese migrants settled in areas far away from the Chinese heartland, namely in Turkestan, Mongolia, and Tibet and as far south as Yunnan and as far east as Taiwan, where the local Formosan tribes were driven to the mountainous region in the southeast of the island.

—Harald Haarmann

Bibliography

- Hook, Brian, ed. *The Cambridge Encyclopedia of China*. Cambridge: Cambridge University Press, 1991.
- Namu, Yang Erche, and Christine Mathieu. *Leaving Mother Lake: A Girlhood at the Edge of the World*. New York: Little, Brown, 2003.
- Ramsey, S. Robert. *The Languages of China*. Princeton, NJ: Princeton University Press, 1987.
- Rock, Joseph F. *The Ancient Na-khi Kingdom of Southwest China*. Kunming: Yunnan Fine Arts Publishing House, 1999.

■ Introduction: Agents of Contact

When we think of the acceleration of travel and contact during the early modern period, we tend to think of improvements in nautical technology and mapping. Nevertheless, people—explorers, adventurers, everyday sailors, and missionaries—forged the foundations of the modern world. Europeans and to a lesser extent Asians were trying to reestablish the trade routes that had bound the Afro-Eurasian landmass during the height of the Mongol empires that had offered safe passage for overland travel from Europe to East Asia. The onslaught of the bubonic plague (the Black Death) beginning in the mid-fourteenth century devastated these routes. Nevertheless, throughout the period stalwart Sufi missionaries still circulated through India, western Asia, Southeast Asia, and sub-Saharan Africa. Christian missionaries continued to proselytize across the region. By the late fifteenth century, far-flung societies were beginning to reconnect across the Afro-Eurasian landmass. An unfortunate combination of disease and abnormally cold winters in the late sixteenth and early seventeenth centuries disrupted

economic systems across the northern reaches, probably nowhere to as great a degree as in Europe. Tales of the wealth of Asia were particularly compelling to Europeans. Although at the end of the fifteenth century the Chinese and Muslims were in a period of increased contact with other societies, Europeans led in the urgent efforts of the sixteenth century to expand their reach over the seas. There were many reasons behind the European expansion; economic recovery was no doubt high on the list, as was the imperative to expand Christendom. The networks forged by Europeans during the sixteenth and seventeenth centuries formed the basis for global empires and led to today's interconnected global economies. During one daring venture aimed at finding a shortcut to India, two new continents—the Americas—along with their peoples and their wealth came into the global network. During the period, the most pervasive agents of contact, colonial settlers, established themselves. Contact was often deadly for indigenous peoples, but the new crops, metals, and other resources contributed to demographic

explosions in many areas. The missionaries, soldiers, merchants, adventurers, and settlers traveling to the New World changed the power structures and trading connections of the globe.

—Carolyn Neel

Plano da India

The Portuguese developed the Plano da India (Plan of India) in order to fulfill their ambitions to establish direct links with the spice trade in South Asia after warfare closed trade on the overland Silk Roads of central Asia. While the initial planning of the Plan of India can be mostly attributed to Prince Henry (1394–1460) “the Navigator” (who was incidentally never king of Portugal), the credit of carrying it out can be primarily designated to King João II of Portugal (r. 1481–1495). As king, João II encouraged ambitious Portuguese

maritime commercial projects and plans of expansion in Africa and South Asia, and he made Atlantic exploration his top priority. Ultimately, the Plan of India resulted in the establishment of Portuguese commercial expansion and settlement (Estado da India, or state of India) into South Asia in the early sixteenth century.

Prince Henry was an early proponent and advocate of developing newer naval technologies to further Portugal’s establishment as a formidable economic power to increase his own personal wealth. He financed early Portuguese voyages of exploration into the Atlantic as well as western and southern Africa in the mid-fifteenth century. As both a Mediterranean and Atlantic maritime nation, Portugal’s trade was tied to that of the Islamic sultanates of North Africa. However, after the disruption of direct trade with China and India, the Portuguese sought new methods to expand the Asian spice trade. In addition, Marco Polo’s tales of the exotic East also influenced Henry the Navigator. Yet Portuguese efforts were limited to the settlement of the uninhabited islands of the Azores and Madeira, a failed attempt to conquer the Canary Islands, and incursions and trade settlements in African domains, where they established trade in slaves, gold, and ivory.

It was not until the reign of King João II of Portugal that efforts at establishing commercial links and settlements in India were successful. In 1488, Bartolomeu Dias’ discovery of the African Cape of Good Hope in southern Africa provided a new sea route to the Indian Ocean. The discovery of the passage around Africa was significant because it signaled the potential of direct trade with India, bypassing the overland route (the Silk Roads) through the Near East and Central Asia. By 1498, during the reign of Manuel I, Vasco da Gama successfully sailed around the Cape and then around eastern Africa (Kenya) and finally landed in India. In establishing this direct link with India, Portuguese explorers and merchants began the process of establishing trade settlements and enticing local Muslim rulers to establish trade relations.

The state of India was established in the early sixteenth century under Portuguese authority and was created with the purpose of extending political and legal control of Portuguese colonies

➤ PORTUGAL—CONNECTING EUROPE AND AFRICA

In spite of the widespread use of disparaging remarks and crusader rhetoric made against the Muslim world, many Portuguese explorers, merchants, and elites were able to move freely in North and western Africa in the late fifteenth and early sixteenth centuries. Portugal’s existence as a crusader state was characterized by its struggle against Muslim rule in the Iberian peninsula (completed prior to the *reconquista*). Yet Portugal also established trade relationships with adjacent Muslim sultanates in North Africa and along the western African coast early in its history. Jewish merchant networks in both Portugal and North Africa facilitated this trade for both sides in spite of the religious divide between Christendom and Islam.

As a Mediterranean and western Atlantic European kingdom, Portugal relied on trade with the Muslim world to a greater extent than with the rest of Europe. During Portugal’s age of discovery, Portugal relied on previous trade networks established with Muslims and on familiarity with commerce in the easternmost lands of Islam. In essence, Portugal’s proximity to the Muslim world of North Africa had a considerable influence on its imperial growth in the fifteenth and sixteenth centuries from Africa to the Indian Ocean.

—Abraham O. Mendoza

in India, under the auspices of a European Christian monarch. In a mere century, Portugal managed to extend its commercial and colonial interests in regions of coastal Africa (scattered northern, western, southern, and eastern settlements) and South Asia, eventually including the Spice Islands. During this period, Portugal established various trading ports such as Goa (India), Ormuz (Persia), Malacca (Malaysia), Kochi (India), the Maluku Islands (Indonesia), Macao (China), and Nagasaki (Japan). While protecting its economic network from European, Arab, and Asian would-be competitors, Portugal dominated the trade between Asia and Europe and participated in intraregional commerce within Asia.

—*Abraham O. Mendoza*

Bibliography

- Bethencourt, Francisco, and Diogo Ramada Curto, eds. *Portuguese Oceanic Expansion, 1400–1800*. New York: Cambridge University Press, 2007.
- Hanson, Carl A. *Atlantic Emporium: Portugal and the Wider World, 1147–1497*. New Orleans, LA: University Press of the South, 2001.
- Newitt, Malyn. *A History of Portuguese Overseas Expansion, 1400–1668*. New York: Routledge, 2005.

Michele Ruggieri—The First Jesuit in China

The Jesuit entrance into China is a story often studied through the person of Matteo Ricci. Ricci's position and role in the Jesuit movement, however, would not have been possible without the work of his predecessor, Michele Ruggieri (Luo Mingjian). Ruggieri and his efforts laid the groundwork for the later Jesuits through his focus on establishing relations with the upper classes in Chinese society.

Michele Ruggieri was born in Spinazzola, Italy, in 1543. Following in the Jesuit tradition, Ruggieri was an accomplished scholar. In Naples, he studied law and eventually earned doctorates in civil and ecclesiastical law. He also studied philosophy at the Collegio Romano. Following his studies, he entered the novitiate at St. Andrea in Rome and left for India in 1577.

In 1579, Michele Ruggieri arrived in Macao after Alessandro Valignano, the visitor to Asian

missions, requested a new missionary. Influenced by Valignano's belief that the Jesuits needed to abandon European civilization and thoroughly adapt themselves to Chinese society, Ruggieri quickly turned to the task of studying Mandarin and written Chinese. Ruggieri's commitment to language study was rewarded in 1580 on his first visit to Canton (modern Guangzhou). As in previous attempts to enter China, Ruggieri sailed to Canton with Portuguese merchants to conduct trade there. His attention to the subtleties of Chinese etiquette and his linguistic ability so impressed the local officials that he was given lodging in a small house normally reserved for tribute missions to the emperor. Ruggieri was also able to win over members of the upper class with European clocks and prisms. Through these efforts, he was able to become friends with the governor of Guangdong and other top active and retired officials. The important work at this time allowed the Jesuit to reside in Canton at various times between 1580 and 1582.

In 1583, Ruggieri was granted permission for himself and Matteo Ricci to permanently reside in Zhaoqing, 60 miles (100 kilometers) upriver from Canton and then the provincial capital, by Wang Pan, the governor of Guangdong. In the tradition of adapting to local customs, Ruggieri decided to adopt the robes of a Buddhist monk and tried to maintain a low profile. Although Ruggieri was able to attain a level of good relations with influential members of the society, others in Zhaoqing were not well disposed to accepting the new position of the missionaries. Rumors of the missionaries' work to erect a large Christian building spread throughout the society. Nevertheless, the missionaries were able to use their connections to Wang and his successor, Zheng Yilin, to retain their position in the city. Ruggieri's work to win over the upper class also allowed him the first opportunity to travel outside the Canton region to Shaoxing, Zhejiang Province, in 1586 with Zheng Yilin.

During his time in China, Ruggieri and Ricci compiled the first Portuguese-Chinese dictionary. In addition to this work and establishing the general traditions of the China mission, Ruggieri also embarked on various attempts at producing religious writings and poetry. However, this was

not only for pleasure; Ruggieri was engaging in the activities of other literati in China. Ruggieri published his first catechism in Chinese, the *Tianzhu Shilu*, in 1584. In addition to writing religious texts, Ruggieri engaged his time reading the Four Books (the Great Learning, the Doctrine of the Mean, the Analects, and the Mencius), elevated by Neo-Confucian scholars during the Song dynasty (960–1279) as the orthodox interpretations of Confucius's writings. Ruggieri also read Chinese poetry and learned the eight-legged essay form that was required for students taking the civil service examinations. In 1585, he published a new compilation of his first catechism in the *Xinbian Xitianzbuguo Tianzhu Shilu*. While his achievements here were remarkable and groundbreaking, many agree that this work was done with the close cooperation of a convert or other local scholar. His catechisms were also negated by the later work of Ricci, which is considered to be of higher quality.

In 1588, Ruggieri left China on a mission to obtain an official papal mission to the Chinese emperor. This was in response to Alonso Sanchez, a Spanish Jesuit, who had circulated the idea of an official Spanish mission to Peking. At one point, Sanchez went so far as to suggest using force to open China to Christianity, a plan

that never came to fruition. Although he never returned to China, Ruggieri left behind the roots of the Jesuit mission in Ricci, who used his predecessor's strategies to cement the position of the China mission and begin the process of spreading Christianity throughout the empire.

—John Stanley

Bibliography

- Brockey, Liam M. *Journey to the East: The Jesuit Mission to China, 1579–1724*. Cambridge, MA: Belknap Press of Harvard University Press, 2007.
- Chan, Albert. "Michele Ruggieri, S.J. (1543–1607) and His Chinese Poems." *Momenta Serica* 41 (1993): 129–176.
- Charbonnier, Jean-Pierre. *Christians in China: AD 600–2000*. Translated by M. N. L. Couve de Murville. San Francisco: Ignatius, 2007.
- Dunne, George H. *Generation of Giants: The Story of the Jesuits in China in the Last Decades of the Ming Dynasty*. Notre Dame, IN: University of Notre Dame Press, 1962.
- Golvers, Noel. "Jesuit Cartographers in China: Francesco Brancati, S. J., and the Map (1661?) of Sung-chiang Prefecture (Shanghai)." *Imago Mundi* 52 (2000): 30–42.
- Headley, John M. "Spain's Asian Presence, 1565–1590: Structures and Aspirations." *Hispanic American Historical Review* 75(4) (November 1995): 623–646.

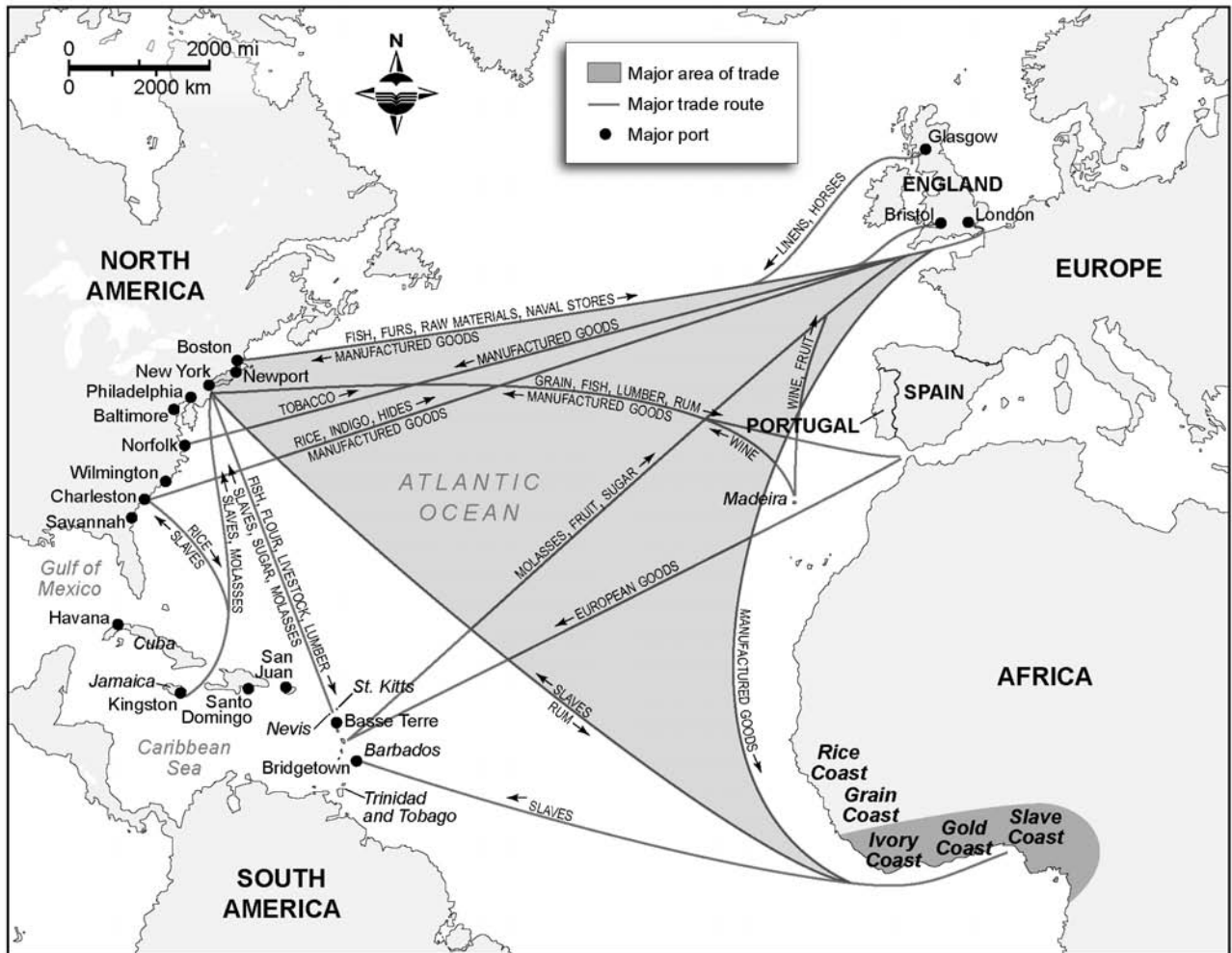
■ Introduction: Traditions and Adaptation in Slavery

The development of plantation colonies in the Americas, rise of African slavery, and the establishment and growth of the transatlantic slave trade were the most important trends in the history of slavery between 1450 and 1770. In a separate development, moreover, slavery significantly expanded in the Mediterranean during the first 250 years of this era. Although slave labor was used in all parts of the colonial economies in the Americas, the sugar plantation emerged as the most distinctive feature of New World slavery in the preindustrial period. Plantations are profit-oriented large-scale agricultural estates producing tropical staples for distant markets. Many of the features characterizing plantations were already exhibited by

sugar-producing estates in the medieval Mediterranean, where Europeans had first begun to cultivate the staple. The classic sugar plantation, however, only emerged in the Caribbean in the mid-seventeenth century. These plantations relied almost exclusively on African slave labor and introduced a new and particularly strict work discipline anticipating industrial patterns.

Slaves had not predominated in the workforce of sugar estates in the medieval Mediterranean, nor did unfree Africans constitute the sole source of labor in most early Atlantic and American colonies. Based on economic considerations as well as cultural values, however, American planters eventually came to prefer slaves imported from Africa to other forms of labor.

TRIANGLE TRADE



When the transatlantic slave trade finally ended in 1867, more than 10 million African slaves had been brought to the Americas. But the transatlantic trade is not remarkable just for its sheer scale. It is also set apart by its integration into an intercontinental commerce that linked Europe with Africa and the Americas and led to a degree of rational organization unprecedented in the trafficking of enslaved labor. Finally, the transatlantic slave trade stands out because it has left a particularly visible and significant legacy. The trade created distinctive populations of African descent in the Americas, which have defied the degradations of slavery and not only continue to shape much of the continent but have also made major contributions to today's global culture. At the same time, the

trade is inextricably linked with the rise of modern racism. It is an open question whether the slave trade itself gave rise to racism or whether, conversely, Europeans held racist attitudes toward Africans that only made the trade possible. Once in place, however, the trade and plantation slavery, on the one hand, and racism, on the other, undoubtedly reinforced one another.

Just as Europeans established their first sugar colonies in the Atlantic, another major development in the history of slavery began in the Mediterranean. As long-standing conflicts between Christians and Muslims entered a new phase in the second half of the fifteenth century, the enslavement of captives increased significantly on both sides and made slavery a defining aspect of life in the region. Slaving peaked in the

Mediterranean between 1530 and 1680, but the powers most actively engaged in slaving—the Muslim polities on the Barbary Coast of northern Africa—carried out their last raids as late as the early nineteenth century. Barbary slavers alone may have captured over one million Christian Europeans between 1530 and 1800. Perhaps not all of these captives can indeed be considered slaves, but it is certain that at least through the end of the seventeenth century the term “slave” evoked in Europe the image of a Christian who was rowing a Mediterranean galley to the drum of a Muslim master.

—Claus K. Meyer

Bibliography

- Curtin, Philip D. *The Rise and Fall of the Plantation Complex*. 2nd ed. Essays in Atlantic History. Studies in Comparative World History. New York: Cambridge University Press, 1998.
- Davis, Robert C. *Christian Slaves, Muslim Masters: White Slavery in the Mediterranean, the Barbary Coast and Italy, 1500–1800*. New York: Palgrave Macmillan, 2003.
- Northrup, David, ed. *The Atlantic Slave Trade*. 2nd ed. Problems in World History. Boston: Houghton Mifflin, 2002.
- Schwartz, Stuart B., ed. *Tropical Babels: Sugar and the Making of the Atlantic World, 1450–1680*. Chapel Hill: University of North Carolina Press, 2004.

Ten Million Africans— The Demographics of Slavery

One of the most hotly debated questions among scholars of African history and diaspora studies is the exact number of Africans who were captured and sold into slavery in the Americas between the sixteenth and nineteenth centuries. Figures ranging from 10 million to 25 million have been suggested.

Regarding the debate about the number of slaves who were taken from Africa, John D. Fage, a scholar in African history who conducted his research between the 1950s and the 1960s, believed that about 14.65 million Africans were exported throughout the Americas after slavery was officially outlawed in 1833 in the British Empire. Fage believed that there was a mutual agreement between African merchants and

European traders over how to increase the scale of trading. In other words, there was a high demand for both European goods and human labor from Africa. Fage’s conclusion was not received well by many historians and intellectuals, who challenged not only his numbers but also how they were deduced. Notably, Fage’s estimate was challenged by another historian, Phillip D. Curtin, who disputed the numbers, including the mortality rate. Curtin maintains that about 9.566 million Africans were dispersed outside Africa between 1451 and 1870. Curtin’s analysis, which was mainly based on the dispersals of slaves into Europe, North America, and the Caribbean, did not seriously consider the number of slaves who were transported by Portuguese merchants and traders. Also, Curtin’s estimate, which reduced Fage’s estimate by almost 5 million, could not properly explain the unaccounted-for number of slaves who perished during the Middle Passage, those whose records were either not included in existing archival collections, or those whose numbers were calculated incorrectly.

Curtin’s estimate has also been disputed by other researchers who have made unsuccessful attempts to explain the disparity of 5 million slaves between the two researches conducted by Fage and Curtin. Joseph Inikori’s research group increased the figures. Inikori’s estimate of 15.4 million has also been challenged by scholars, including Patrick Manning and Herbert Klein. In 1982 Paul Lovejoy revised the figures provided by Curtin and Inikori and suggested 11.689 million as a more accurate number. In 1991 Barbara L. Solow developed a new estimate lower than the numbers provided by Fage, Curtin, Lovejoy, and Inikori. She argues that about 8 million Africans were forced out of their communities into the Americas. Solow’s model of analysis has not been questioned by many researchers because its scope is limited mainly to British trading patterns in Africa as well as to labor and colonial issues.

Another critic of Fage’s model went beyond Curtin’s interest in the number of slaves and developed a different thesis to explain other components of slavery. According to Walter Rodney, slavery in Africa was partially influenced by the Africans’ long tradition of domestic and regional slavery between African communities. Rodney’s argument is that European capitalism

THE BENEFITS FROM SLAVERY—THE CHALLENGES CONFRONTING RESEARCHERS

The actual number of slaves who were taken from Africa to the Americas has been difficult to estimate for a variety of reasons. Beside the inconsistency in statistics, other debates have focused on the social and economic impacts of slavery on African societies and how African economic production has been affected by the population loss. Whether or not scholars agree that Africans benefited economically from the slave trade, there is ample evidence showing that African slave labor facilitated the development of the Americas and Europe as well.

Discussions and conclusions about African slaves in the New World are largely derived from empirical data, which include archival materials, court records, newspaper articles, shipment entries, and port registers. Researchers are limited to slave records that are largely housed in European and North American archives because African institutions did not have most of the

resources needed to generate these archival materials between 1400 and the 1800s.

Paul E. Lovejoy argues that slavery was more deeply embedded in African institutions than past scholarships have emphasized. Although various scholars have developed new theories and adopted complex quantitative approaches to explain the mass movements of Africans during the Middle Passage, their conclusions are limited to specific countries such as Brazil, various locations in the Caribbean, and some parts of Europe. According to Lovejoy, scholars have not been given the space they deserve to examine slavery in Africa because of the way slavery in Africa in general is romanticized. Lovejoy believes that because of censorship by politicians and some African leaders, researchers are limited in terms of their access to archival materials that speak to the role that Africans played in transatlantic slavery.

—Kwame Essien

elevated slavery to a higher level by using its influences on Africans to fuel the rate at which slavery evolved from a domestic scene to an international level. As Rodney has stated, historian Paul Lovejoy in his recent work also shows that European demand for labor was the main driving force in the transportation of Africans. John Thornton's view differs from both Rodney and Lovejoy over the expansion of slavery in Africa. Thornton supports Fage's line of thinking and argues that the slave trade was a crucial part of war and conquest within Africa. Thornton believes that Europeans served as alternative trading partners who maintained their old trading traditions with Africans and who later decided to join the trading of Africans to the New World voluntarily. In other words, Thornton claims that Africans were not in any way forced into the transatlantic slave trade by Europeans. Regarding the conditions of slaves in Africa and the Americas, Lovejoy believes that slaves in Africa were also subjected to strenuous working conditions with little or no freedom. Lovejoy claims that slavery within Africa was as brutal as it was in the New World.

Another major problem facing researchers is their inability to agree on the extent to which the transatlantic slave trade affected Africa's development process. Rodney believes that the slave trade affected African economic systems. He argues that to understand the problems of African economic crises, we have to turn our searchlights to the period of transatlantic slave trade when Africa lost its manpower to the outside world. Inikori holds the same view as Rodney. Fage, on the other hand, does not agree that the transatlantic slave trade is one of the causes of African economic stagnation.

There are contradictions in the number of slaves taken from Africa to the Americas, how many Africans lost their lives within Africa during this period, and how many Africans perished during the Middle Passage. Researchers have argued and shown that the enduring legacy of slavery has influenced sociopolitical and economic conditions in many African societies. Lovejoy claims that slavery in Africa was transformed largely by external forces such as capitalism, but at the same time its growth was weakened on the local level by abolitionist projects in the

nineteenth century. The fact remains that the transatlantic slave trade led to the forceful migration of millions of people out of Africa and the depopulation of some parts of Africa, including, for example, Great Popo, located in the modern Republic of Benin.

—Kwame Essien

Bibliography

- Falola, Toyin, ed. *Africa: Africa History before 1885*, Vol. 1. Durham, NC: Carolina Academic Press, 2000.
- Inikori, Joseph E., and Stanley L. Engerman, eds. *The Atlantic Slave Trade: Effects on Economies, Societies, and Peoples in Africa, the Americas, and Europe*. Durham, NC: Duke University Press, 1992.
- Lovejoy, Paul. *Transformations in Slavery: A History of Slavery in Africa*. 2nd ed. Cambridge: Cambridge University Press, 2000.
- Solow, Barbara L., ed. *Slavery and the Rise of the Atlantic System*. Cambridge: Cambridge University Press, 1991.
- Thornton, John. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. 2nd ed. Cambridge: Cambridge University Press, 1998.

The Experience of Enslavement—African Views

African views on the experience of enslavement between 1450 and 1770 offer a variety of perspectives and provide evidence for the fact of local institutional and individual adaptations to changing global conditions. Since for many participants in the slave trade enslaved Africans were perceived as commodities, these perspectives contrast sharply with the views afforded by the world historian's reliance on economic records alone. Instead, enslavement was perceived as a ritual or judicial consequence, a transformational social status, a response to environmental crisis, and an avenue to the political and economic empowerment of others.

Enslaved Africans were not uniform groups. Their diverse status, gender, religion, age, and peculiar individual circumstances of enslavement reveal the diversity of historical contexts. Many of the views of enslavement differed according to the origins of the condition of enslavement. Some enslavement occurred as a consequence of

kidnapping or capture in warfare. Other experiences of enslavement were imposed by social or political elites as judicial punishment or the exercise of harsh forms of political control under oppressive regimes. In order to remove undesirable political or social elements from the protection of kin groups, enslavement was viewed as a kind of judicial separation from the rights and obligations of the social fabric.

The views of African elites generally provide justification for the sale of war captives. Because enslavement was frequently state policy, the perspectives of African elites relied on institutions of slave acquisition and distribution to shore up political power. Annual slave raids and customary payment of tribute in slaves helped to legitimate the political power of rulers as measured in control over people. Religious institutions such as ancestral sanction through divination and oracle pronouncement also helped some elites consolidate power and eliminated potential threats from subversive elements from within society.

Viewed from the perspective of African families, the rationale for enslavement differed according to the prevalent social organization. In patrilineal societies, men wanted slaves as dependents precisely because they would have no kinship affiliation and no competing labor obligations. In matrilineal societies, slaves could be incorporated into the social network and provide an alternative means to accumulate and inherit wealth, avoiding obligations to sisters and maternal uncles. On the other hand, the enslaved could be assimilated into a family or household through marriage for protection. From Mali to Mozambique, the practice of self-enslavement reveals African views that enslavement could also be temporarily adopted as a survival strategy in times of crisis. For example, during the severe drought of 1738–1756, a significant percentage of the population of Timbuktu initiated self-enslavement to avoid starvation. Among the Sena, a ritual breaking of a pot initiated a form of dependency between the self-enslaved and a wealthy household, whose father became the father of the enslaved person, who was most often a young child.

African views on the experience of enslavement also depended on religious perspective. For many African Muslims, enslavement was a

proper method of conversion of unbelievers to the faith. Between 1500 and 1800 the Muslim trade (combining the Saharan, Red Sea, and Indian Ocean routes) accounted for between 25 and 40 percent of the slave trade. The legacy of enslaved Ethiopians in Deccan, India, produced a widespread perception that the enslaved could expect to find opportunity in the Muslim world, where slaves might become kings despite slave status. African poets and scholars alike celebrated war (jihad) as protecting future generations through triumph over the infidels. However, Ahmed Baba's treatise on slavery (1614) suggests that not all enslavement was considered legitimate. Baba condemned the Hausa states for selling Muslim war captives from another rival Muslim state.

By the eighteenth century the political economy of many states relied on official slave raids, and enslavement was perceived to be a function of the state. For example, in the eighteenth-century Oyo state, royal slaves resided in the palace. They served as administrative officials collecting taxes, and enslaved women might be members of a harem, while enslaved men might be members of the cavalry. Often originating from North Africa, the enslaved outsiders were afforded higher status because they were also Muslim.

Enslaved soldiers were commonplace in many African states. Their expected roles were predatory, and they sometimes even owned slaves themselves. War and plunder produced massive enslavement in the power vacuum left behind after the disintegration of the Kongo in the second half of the seventeenth century. The creation of Imbangala war bands enhanced the region's political instability and produced massive waves of enslavement. Invented rituals of sacrifice and cannibalism of the enslaved caused central Africans to fear capture and offer their own slaves in tributary payment to the Imbangala warlords.

The threat of violence was inherent in systems of enslavement in Africa and the African diaspora. An early eighteenth-century drum praise title of the ruler Mingi warned that if a slave runs, he is as good as executed. Leaders showed little mercy, so resistance was perceived as a desperate attempt to alter one's circumstances. Although the enslaved African Olaudah

Equiano, an Ibo kidnapped in the Bight of Benin in 1755, claimed that there was little difference between the appearance and labor of enslaved and enslaver in African societies, there is evidence to the contrary. The enslaved status could be broadcast by marking a victim, with scarification, hairstyle, and dress, rather than skin color distinguishing their different status and lack of kin group rights. In Caribbean and North American plantation societies, the practice of punishments in the form of torture, dismemberment, or death did not completely quell rebellions and resistance, ultimately suggesting the deafening desire of the enslaved to escape his or her fate.

Other early African views of the experience of enslavement may also be found in undated oral traditions, proverbs, and place-names. For example, a Nembe proverb warned that "one who buys a slave does not buy his mind." As the eventual slave narratives of the late-eighteenth-century abolition era would confirm, the enslaved Africans were not only commodities but were also people whose loyalty, status, and productivity proved invaluable to the foundations of the modern world.

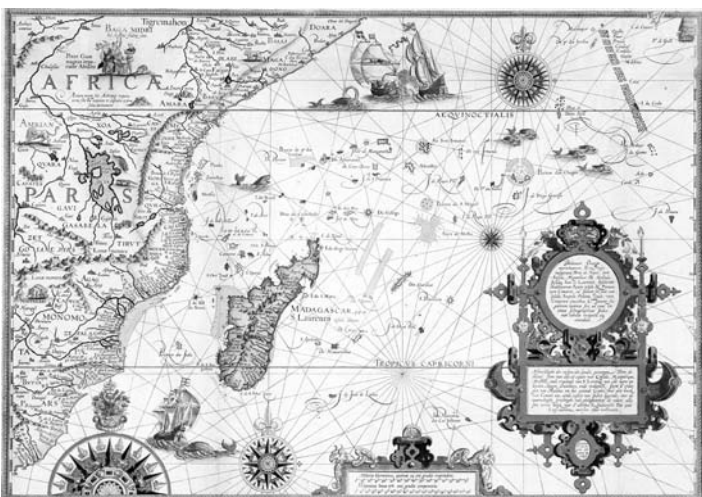
—Candice Goucher

Bibliography

- Allison, Robert J., ed. *The Interesting Narrative of the Life of Olaudah Equiano Written by Himself*. Boston and New York: Bedford Books of St. Martin's, 1995.
- Irwin, Graham W. *Africans Abroad: A Documentary History of the Black Diaspora in Asia, Latin America, and the Caribbean during the Age of Slavery*. New York: Columbia University Press, 1977.
- Lovejoy, Paul. *Transformations in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 1983.

The Indian Ocean Slave Trade

While the Atlantic slave trade of the early modern period is well known, historians have given less attention to the slave trade of the Indian Ocean. Trafficking in human chattel had taken place across the Indian Ocean since ancient times, although the sheer numbers of people enslaved never approached the totals attained in the Atlantic slave trade at its height in the eighteenth



Map of East Africa, Madagascar, and the Indian Ocean, after Jan Huyghen Van Linschoten, 1596. (Stapleton Collection/Corbis)

century. Yet, Indian Ocean slaving was often more complex, involving multiple sources and methods of supply, intricate international financing, and many different types of slave markets.

There are reports from ancient Rome of slaves taken from India, specialized entertainers, being sold or given away as diplomatic gifts, but the origins of the Indian Ocean slave trade really lie with the extension of Arab maritime trade from southern Arabia and the Persian Gulf ports to East Africa, India, and the islands of Southeast Asia. Slavery played a key role in the rise and growth of the Swahili trading posts, which dispatched thousands of African slaves to the Middle East and western India during the medieval period. At roughly the same time, a brisk overland trade in Indian slaves developed during the Turkish conquest of India in the eleventh through thirteenth centuries. Patterns of slave taking and long-distance slave trading thus were well developed by the time the Portuguese reached the Indian Ocean in 1498.

Portuguese navigators discovered the maritime route to the Indian Ocean as a result of their explorations along the coast of West Africa after 1415, at the same time developing a small but important slave trade between Africa and southern Europe. Thus, when these sailors reached the Indian Ocean, they were no strangers to the procedures and potential profits of slaving. Portuguese conquests along the Swahili

Coast of East Africa during the 1500s, especially their early victories, resulted in the enslavement of thousands of captives. Captured Muslims who could not ransom themselves were sold into slavery by the Portuguese. When Tristão da Cunha, one of Afonso de Albuquerque's officers, sacked the Somali town of Barva in 1518, for instance, the Portuguese chronicler Duarte Barbosa noted that he "carried many into captivity."

After the initial spate of conquests, the influx of war captives was replaced by a more permanent system of slaving. Extending a network of trading posts into the interior of Africa along the Zambezi River, Portuguese and Indian merchants traded for both gold and slaves, the latter mainly captives taken in local wars according to Jan Huyghen Van Linschoten, a Dutch priest who worked as an official of the Estado da India in the late sixteenth century. Portuguese traders also purchased slaves at Mombasa and Sofala and at smaller ports, usually operating under a special license from the Portuguese Crown. Slaving in East Africa under Portuguese domination, however, was never entirely dominated by European interests. Arab slavers and their African Muslim kinsmen continued to control the inland slave trade routes, while merchants from the region of Gujarat, in India, financed slaving expeditions into the interior. Long-distance slave raiders collected captives among the stateless peoples of the Great Lakes region of Africa and beyond, transporting them to the coast through grasslands belonging to Bantu groups such as the Nyamwezi, who demanded and received tribute from passing slave convoys. Before leaving the Swahili coast, slaves were sold to the Portuguese, branded as royal property, and baptized by Roman Catholic missionaries.

The destination of most African slaves purchased by the Portuguese was the Rua Direita, the slave auction yard at Goa, the Estado da India's headquarters on the west coast of India. There are several contemporary descriptions of slave sales at Goa during the sixteenth and seventeenth centuries, and these depict many of the slaves who arrived at Goa as malnourished, sick, and scarcely alive. Buyers examined captives carefully before purchasing. Somali traders from Mogadishu often purchased slaves from Mozambique for sale at Aden, doubtless

► THE FULL SCOPE OF THE INDIAN OCEAN SLAVE TRADE

The Portuguese took African slaves with them wherever they traveled in Asia, to the Spice Islands of what is now Indonesia and even to Macau on the coast of China. When the Dutch and French entered the Indian Ocean in the late sixteenth and early seventeenth centuries, they took over existing slaving routes as they assimilated the Estado da India's seaborne empire piecemeal. The Dutch diversified slave trading in the Indian Ocean, transporting Malay slaves—usually exiled prisoners—from Southeast Asia to Ceylon, India, and the Cape of Good Hope. At the same time, the Dutch East India Company sold Indian slaves—famine refugees from Bengal and Tamil Nadu who sold themselves or their children for food—at Batavia and other places in the East Indies. The French, for their part, focused on shipping African slaves from Mozambique and Madagascar to the island planta-

tion colonies of Mauritius and Bourbon and also to Pondicherry, the Compagnie des Indes's headquarters in India, where slaves were employed as domestic servants. The British also transported African slaves to India, especially to their outposts on the west coast of Sumatra, and although slavery was never a major component of the company's business, company-owned gangs of slaves are referred to in British records well into the 1770s. Indeed, during the Anglo-French Wars of the 1750s and 1760s, both the British and French employed hundreds of African slave-soldiers in India alongside their own European troops and Indian mercenaries. Malay slaves sent to Cape Town by the Dutch meanwhile played a significant role in the development of Cape Colony, forming a small but cohesive, primarily Muslim, community of Asian freedmen.

—James Hoover Frey

attracted by low prices. Van Linschoten informs us that “Caffres” (Kaffir, the Arabic term used to describe pagan Africans) could be had for only two or three ducats.

African slaves played a key role in Indo-Portuguese colonial society. By the late 1600s nearly 20,000 slaves lived in Goa, outnumbering the European residents and forming a substantial part of the city's entire population. Almost every Portuguese or Indo-Portuguese family owned a retinue of slaves, sometimes as many as 30 or 40, and intermarriage, or at least biracial sexual liaisons, seem to have been common. African women employed as nurses in Portuguese homes often became the mistresses of their owners either by choice or by force. However, Goa shared the tradition, established in other Portuguese slave-holding colonies, of granting freedom to pregnant slaves and their offspring. African men, meanwhile, found a niche for themselves as the attendants of *fidalgos*, or colonial aristocrats. A great many slaves, in fact, were employed by the Portuguese as personal bodyguards, soldiers, and occasionally hit men in gang-style faction fights between European officials. Other African slaves at Goa acquired new skills, becoming secretaries, musicians,

and craftsmen. One slave, Miguel, took Holy Orders and eventually rose to the position of vicar of the Convent of Santa Barbara in Chimbél, earning an advanced degree in theology in 1670. In fact, the Convent of Santa Barbara became a sort of center for African clerics within the Portuguese ecclesiastical hierarchy, although most of these individuals were not slaves but instead were the sons of the rulers of Mwenemutapa. Finally, the Estado da India itself also owned slaves, employing them to row galleys and work in gunpowder mills.

Most of the forms of oppression and cruelty that flourished in other slave-holding societies, such as Brazil, also were present in the Estado da India's enclaves. The movement of slaves and their activities were closely monitored. Infractions were punished in various ways, from the imposition of stiff fines to flogging, exile to the galleys, or even death. Most of the violence directed at slaves, however, was casual and unofficial, involving privately administered beatings that led to death and injury so frequently that the Church complained on several occasions. Slave revolts were rare but not unknown, and on a small scale African runaways were able to set up maroonlike renegade settlements, especially

in the rugged jungle-covered terrain of northern Kanara, not far from Goa, where some of their descendants still live today.

—James Hoover Frey

Bibliography

- Ali, Shanti Sadiq. *The African Dispersal in the Decan from Medieval to Modern Times*. New Delhi: South Asia Books, 1995.
- Axelson, Eric. *The Portuguese in South-East Africa, 1600–1700*. Johannesburg: Textbook Publishers, 1960.
- Bailey, W. Diffie, and George L. Winus, eds. *Foundation of the Portuguese Empire*. New York: Oxford University Press, 1977.
- Subrahmanyam, Sanjay. *The Portuguese Empire in Asia, 1500–1700: A Political and Economic History*. London: Addison-Wesley, 1993.
- Van Linschoten, John Huyghen. *Voyages to the East Indies*. 3 vols. London, printed for the Hakluyt Society, 1885.

Maroon Societies—Colonial Mauritius

Located in the middle of the Indian Ocean, the island of Mauritius was first colonized by the Dutch in the seventeenth century. During their brief control, the Dutch imported slaves from Madagascar, creating a slave colony on the island. When the French took control of Mauritius at the beginning of the eighteenth century, they continued to use slave labor and imported a massive number of slaves to work on sugar plantations. Slavery would not end on the island until the British (who ruled there from 1810 to 1968) abolished the practice in 1835 and turned to indentured Indian laborers

as a workforce. Yet throughout Mauritius's status as a slave colony, slaves escaped to avoid harsh working conditions and abuse, visit family on other plantations, live in freedom, or travel home. These fugitive slaves were known as maroons.

Colonial authorities, from the Dutch to the French to the British, never were able to completely stop slaves from escaping, and maroons were a permanent presence on Mauritius during these years. Maroons not only deprived plantations of labor and money but also jeopardized the stability of a slave society. Fugitive slaves acted as symbols of resistance and created fear among slaveholders. Colonial authorities saw marronage as not just an individual act of resistance but also as the potential catalyst for a colony-wide rebellion that could lead to the overthrow of colonial control of Mauritius. Acts of arson and pillaging augmented these fears. In addition, most maroons were adult males, which added to a racial fear of white women being kidnapped and raped. In the early 1700s, authorities estimated that 3 percent of slaves had become maroons. But by the 1770s that number swelled. Slaves accounted for 75 to 85 percent of the population of the island, and with a desertion rate of now nearly 5 percent a year, this meant that there were thousands of maroons beyond colonial control. By the 1820s, 11 to 12 percent of the slave population were deserting every year. To deal with this threat, Mauritian authorities designed harsh, repressive measures. Slaves were at times shackled in chains, and armed parties hunted down fugitives. Captured maroons lost ears and were branded, while repeat offenders were executed.

Still, despite these methods, maroons continued to exist on Mauritius. While many maroons wanted to escape slavery, others ran away to maintain personal contacts with friends and family. Maroons often fled to remote areas, particularly to the center and eastern parts of the island, taking refuge in the tropical forests. Usually maroons remained mobile, traveling in small groups to avoid detection. As slave plantations expanded and cultivated more land in the center of the island, tropical forests shrank, forcing maroons to flee into the mountains and the volcanic caves and tunnel systems on Mauritius. While some avoided capture for only a few days, others lived for years in freedom. However, since most



Le Morne, Mauritius. (Lawrence Banahan/StockphotoPro)

► THE FUGITIVE SLAVES OF TROIS CAVERNES

The use of regularly armed hunting parties meant that Maroons could no longer hide in the forests of Mauritius. Instead they retreated into inaccessible and remote places such as the cave system at Trois Cavernes and the massive extinct volcano of LeMorne. In these areas, Maroons established small communities. Recent archaeological evidence, such as shackles and food pits, reveal that the lava caves of Trois Cavernes housed 54 Maroons before they were captured and executed in the 1780s. Even more slaves took refuge in

the rugged mountains of Le Morne throughout much of the eighteenth century. Long after slavery and Maroon communities ended, oral traditions on Mauritius have helped to fix Le Morne as a place of slave resistance. In 2008 it was made a UNESCO World Heritage site as a “symbol of the slaves’ fight for freedom, their suffering, and their sacrifice,” to the peoples who were enslaved on Mauritius from across the Indian Ocean.

—Thomas Anderson

maroons escaped alone or in pairs, and given the small size of Mauritius and expanding plantations, few viable maroon communities were established. An exception was the mountain refuge of Le Morne, where the inaccessibility of the rugged mountain helped protect maroons.

With the end of slavery in 1835 and the turn to indentured Indian labor, a new Mauritius emerged. Mauritius became a creole community with an identity drawn from a mixture of the legacy of slaves, free Africans, Indian laborers, white landowners, and maroons. Today maroons have become a proud symbol of freedom and resistance to slavery on Mauritius.

—Thomas Anderson

Bibliography

- Allen, Richard Blair. *Slaves, Freedmen, and Indentured Laborers in Colonial Mauritius*. Cambridge: Cambridge University Press, 1999.
- Chowdhury, Amitava. “Theoretical Reflections on Maroon Archaeology in Mauritius.” *Revi Kilitir Kreol* 3 (2003): 55–59.
- Vaughan, Megan. *Creating the Creole Island: Slavery in Eighteenth-Century Mauritius*. Durham, NC: Duke University Press, 2005.

Maroon Communities in the Americas and Caribbean

While millions of Africans were introduced into the Americas via the slave trade, not all of them remained in the institution of slavery. Some were manumitted by their masters, but others chose to gain freedom on their own terms by escaping

the plantations and forming their own communities. These refugees were known as maroons in English, Marron in French, Cimarrón in Spanish, and Quilombos in Portuguese. They formed communities that existed outside of mainstream society and were autonomous from their former masters. The size of these societies ranged from as small as a few people to others that contained thousands. These communities spanned the entirety of the Americas, crossing culture and language barriers. While this makes it difficult to create generalities about life in these communities, some common aspects can be found among all of these groups.

In 1502 Governor Ovando sailed to Cuba in the hopes of reviving the flagging colony. On that ship he carried a few African slaves, one of which “escaped to the Indians” as soon as the ship docked. This refugee became the first maroon, or escaped slave, to attempt to live outside the institution of slavery in the Americas. The maroons were the main source of resistance against slavery and the slave owners as well as the most visible one. Those maroons who were apprehended by the authorities were usually punished with torture or even death. However, certain communities posed such a strong threat to slave owners and cities that treaties were negotiated whereby the maroons were allowed autonomy in exchange for the end of hostilities. These cases were few and far between. Normally the maroons were crushed by the plantation owners, but a new community would quickly spring up in the old one’s place.

► CONTEMPORARY DESCENDANTS OF MAROONS

In Mexico, the maroons of the Costa Chica, located in the states of Guerrero and Oaxaca, are descendants of Africans who began escaping in the late sixteenth century from Spanish cattle plantations on the Pacific coast. Currently in this area of Mexico the Afro-Mexican culture is still alive and vibrant. Likewise, Colombia is home to a vibrant ex-Maroon community called Palenque de San Basilio, located near the Spanish port city of Cartagena de Indias, once the center of the Spanish slave trade in South America. The residents of Palenque San de Basilio are descended from slaves who escaped Spanish plantations. Today in Palenque the residents speak *palenquero*, a Spanish-fused Creole rooted in elements of the Kikongo languages from the Congo and Angola.

—Kwame Dixon

In order to be viable, maroon communities required certain conditions to be met. The first and most important was remoteness. The communities that survived were the ones that existed in highly inaccessible areas such as jungles, swamps, and canyons. Just as important as the location was the ability for the residents to conceal themselves. Often, they were able to use their surrounding environment to either disguise the paths leading to their encampment or to create booby traps to entrap any intruders. In addition to protecting their home encampment, maroons also honed their skills in guerrilla warfare. Their use of the environment in fighting off the colonists was advantageous, as the colonials were trained in the traditional European style of fighting, which only worked well in the open battlefields, not in the jungles of South America. Finally, a viable community needed some sort of means to feed its people. Many relied on swidden agriculture, although most stole directly from the nearby plantations. In addition, they again used the environment around them for sustenance by hunting, fishing, and eating wild nuts and berries.

Many of these techniques that the maroons used for survival were learned from the indigenous population and were perfected on the plantation before their escape. However, despite all of their achievements, the maroons remained

reliant on the plantations to some extent because of their inability to manufacture guns, tools, pots, and cloth. This meant that they were forced to either steal these commodities from plantations and cities or had to engage in clandestine trading relationships with people living on the plantations. The maroons also participated in relationships with local indigenous tribes. Sometimes, the proximity of the two groups resulted in disputes and evolved into all-out wars, but there were also cases of the two groups fusing into one. Examples of this fusion can be seen in the Miskito people of Honduras, who began using maroons as domestic servants in the seventeenth century. This relationship resulted in intermarriage between the Miskito and the maroons, but the Miskito remained the genetically dominant of the two. Conversely, the Island Carib also began by using the maroons as domestic servants, but the Afro-Americans became the genetically dominant of the two. While these fusions were not the norm, there were cases of maroons taking indigenous wives in cases where their societies had shortages of women.

It was important for maroon communities to ensure that new recruits did not pose any kind of a security threat. There was a real danger that someone posing as a runaway slave could actually be serving as a spy for the local slave owners or that new recruits might decide to return to their masters and reveal the location of the maroon community. Therefore, communities took precautions to ensure that their security was not breached. Some took their new members through meandering paths so that any who left would not be able to find their way back. Some, such as the Palmares in Brazil, required new members to serve as domestic servants until they were able to capture a replacement. In others, new members were required to undergo a probationary period in which they could not leave the village for a certain amount of time. It seems that most communities punished desertion with death. In addition, any internal strife was dealt with harshly, many times with death.

As for social structures, men greatly outnumbered women in most maroon communities. The first slaves brought to the Americas were mostly male, as they were physically stronger and better able to do the work expected of

them. In addition, it was easier for men to escape than women, which created a shortage of women among maroons. Finally, polygamy was practiced among the more important men, making the shortage of wives even greater. In some cases, maroon men tried to ameliorate the problem by capturing indigenous women for brides, but it was not enough to increase the supply of available wives. As a result, strife was sometimes high as men vied for the small number of available women. The penalty for adultery was usually death; however, there were other solutions to these issues. One example of this can be found in the Leeward maroons of Jamaica. They allowed men to share women, although there were strict rules concerning these practices, even regulating the number of nights each man was allowed to spend with a woman.

Even though most maroon communities were smashed by the plantation owners that surrounded them, some still managed to survive. In fact, some of these communities have survived into the present day.

—*Monique Vallance*

Bibliography

- Bilby, Kenneth, and Diane Baird N'Diaye. "Creativity and Resistance in Maroon Culture in the Americas." In *Festival of American Folk-Life and Cultural Heritage of the Smithsonian Institution*. Washington, DC: Smithsonian Institution Press, 1992.
- Lockley, Timothy James. *Maroon Communities in South Carolina: A Documentary Record*. Columbia: University of South Carolina Press, 2006.
- Price, Sally, and Richard Price. *Maroon Arts: Cultural Vitality in the American Diaspora*. Boston: Beacon, 1999.
- Price, Richard, ed. *Maroon Societies: Rebel Slave Communities in the Americas*. Baltimore: Johns Hopkins University Press, 1996.

Forced Resettlement in Gunpowder Empires

The gradual expansion of the Ottoman empire and Safavid Iran was accompanied by a process of forced resettlement through which populations were displaced from their habitat and/or economic activities and relocated to another site to reestablish their productive activities and community life. The Ottomans sought this

state-organized mass resettlement policy, known as *sürgün*, in almost all newly conquered territories and applied it to an individual, a group, a tribe, or even whole populations. This policy had three main purposes: removal of recalcitrant groups or communities of questionable loyalty, securing authority in a given region, and promoting economic life in regions and cities. Thus, nomadic Turkomans were periodically resettled from eastern Anatolia into the Balkans, where they protected Ottoman authority and raided Hungarian and Habsburg territories. At the same time, European technicians, captured in wars and raids, were forcibly relocated to the Ottoman empire, where their skills were used for the benefit of the sultans.

Forced resettlement of civilian populations played an important role in populating Ottoman cities with the talents needed to make them develop and prosper. Following his conquest of Istanbul (Constantinople) in 1453, Sultan Mehmed II the Conqueror (el-Fatih) sought to restore Istanbul to its former greatness and encouraged and often forced Armenian and Greek Christians and Jews to resettle in Istanbul; by the end of his reign, the city was again a thriving metropolis of over 100,000 people. His successors continued this policy and, in 1514, following his decisive victory over the Safavids, Selim I resettled approximately 2,000 craftsmen from the Safavid capital of Tabriz to Istanbul. After the Ottoman conquests of Belgrade in 1521 and of Buda in 1524, thousands of Christians and Jews were transported for settlement in the Ottoman cities of Edirne, Izmir, Salonika, and Istanbul. Similarly, the Ottoman conquests of Rhodes in 1523 and of Cyprus in 1571 were followed by orders to resettle hundreds of Jewish families from Palestine and Syria to revive the newly acquired provinces, while Turkish nomadic tribes from Anatolia (up to 20,000 people) were transported with their cattle and their implements to maintain Ottoman authority on the islands.

The Safavids also regularly practiced forced resettlement, but the scale of their endeavors often dwarfed those of the Ottomans. The rulers of Iran actively pursued resettlement policies in northern and western Kurdistan, where tens of thousands of Kurds were removed and dispersed throughout the empire. This policy was

implemented in earnest by Shah Tahmasp (1524–1576), who during his conflict with the Ottomans began systematic destruction of Kurdish communities and resettlement of Kurdish tribes to eastern Iran, even as far as the Hindu Kush mountains of present-day Afghanistan. These isolated Kurdish communities, surrounded by hostile local tribes, eventually became bulwarks of the Safavid authority in the region. The resettlement policy arguably reached its height during the reign of Shah Abbas (1588–1629), who practiced it on a vast scale. Iskandar Bayg Munshi, the shah's court historian, in *Alam-ara yi Abbasi* described how the shah commanded Kurdistan to be laid waste and the population rounded up. Those who resisted were massacred, property was destroyed, and the prisoners were driven southeast.

Shah Abbas also targeted the Christian communities of Georgia and Armenia. In 1614–1617 he launched several expeditions against eastern Georgian kingdoms, razing numerous towns and resettling up to 150,000 Georgians and 150,000 to 200,000 Armenians into south-central Iran, where they helped to develop the local agriculture and industry; their descendants still reside in various Iranian provinces, mainly in Fereydan.

Similarly, in Armenia, Abbas removed between 250,000 and 300,000 Armenians for settlement in Iran. Thousands died during the harsh forced move, and survivors were settled in Iranian Azerbaijan, where other Armenians had settled earlier; some ended up in the Mazandaran region and in the cities of Qazvin, Mashhad, Hamadan, and Shiraz. The wealthy Armenians of Julfa in Armenia were brought to the Safavid capital of Isfahan, where they were treated better and were granted relative autonomy and privileges. Many Georgians and Armenians enjoyed a high status in society and at the court, playing an important role in the revival and development of the Iranian economy, agriculture, and commerce. Abbas also used the resettled population to develop a corps of royal troops known as *ghulamani khassa* (also known as *qullar*), which he used to create a power base internally independent from the Qizilbash tribes. Yet although the subsequent shahs relied on these ghulam troops, they were not always successful in containing them. Thus, Shah Ismail II spent almost 20 years under virtual

house arrest due to power gained by Georgians at the court and in the harem.

Shah Abbas's successors did not continue his policy of forced resettling of the tribes, and the distribution of tribes remained relatively unchanged for the next century. The policy, however, resurfaced during the reign of Nadir Shah (1736–1747), who pursued it with great vigor. To deal with the rebels and undermine Ottoman influence, he depopulated the provinces of Azerbaijan, Iraq, and Kurdistan, transporting many tribes to northeastern Iran, particularly in Khurasan. The resettlement and concentration of tribesmen in Khurasan served a variety of purposes. It divided and weakened tribes that might otherwise have opposed Iranian authority or supported the Ottomans. It also defended Khurasan, Nadir's power base, against any foreign threats, while the selection of young men from among the settlers to serve in Nadir's army not only provided him with superb cavalry but also made them hostages for the good behavior of their relatives elsewhere.

—Alexander Mikaberidze

Bibliography

- Faroghi, Suraiya, and Resat Kasab. *The Cambridge History of Turkey*, Vols. 1–3. Cambridge: Cambridge University Press, 2006–2008.
- Fisher, William B., Peter Jackson, and Laurence Lockhart. *The Cambridge History of Iran*. Vol. 6, *The Timurid and Safavid Periods*. Cambridge: Cambridge University Press, 1986.
- Hacker, Joseph R. "The Sürgün System and Jewish Society in the Ottoman Empire during the Fifteenth to Seventeenth Centuries." In *Ottoman and Turkish Jewry: Community and Leadership*, edited by Aron Rodrigue. Bloomington: University of Indiana Press, 1992.
- Perry, John. "Forced Migration in Iran during the Seventeenth and Eighteenth Centuries." *Iranian Studies* 8(4) (1975): 199–215.

Forced Migrations—The British Transatlantic Slave Trade

English participation in the transatlantic slave trade went back to the voyages of Sir John Hawkins (1532–1595). However, in the sixteenth century and the first half of the seventeenth century, the English played a relatively minor role compared to the Portuguese, Dutch, and French.

English participation grew after about 1660, and in the eighteenth century the British dominated the trade, shipping more slaves than all competing European nations combined until Parliament abolished the slave trade in 1807. Although total figures will always remain speculative, some scholars have estimated that in the period of British dominance slightly over 3.4 million slaves were shipped from Africa in British and British colonial vessels. Colonial vessels only shipped about 5 percent of the total.

British slave traders worked the so-called triangle trade. Although the reality was often more complicated, the triangle trade referred to the export of British-manufactured goods to Africa for slaves, the importation of slaves to the Caribbean for sugar and other agricultural goods, and the return of these colonial products to Britain.

The areas on the Atlantic coast of Africa from which traders obtained slaves varied. A consistently major source of British slaves was the Bight of Biafra, where the British managed to virtually exclude European competitors. Over the course of the slave trade, the Bight of Biafra supplied about a third of British slaves. Other areas where the British obtained slaves included the Bight of Benin, the Gold Coast, Senegambia, and Sierra Leone. Britain maintained coastal bases for the slave trade where slaves were assembled before being boarded. Bases could only be held by agreement with local rulers, sometimes drawing British slavers into African politics. Competition between European slave-trading nations for bases could be fierce, particularly in time of war. (War generally saw diminished slaving activity, as the seas grew less safe and the Royal Navy's demand for sailors increased.) Like other slavers, British traders bought a majority of male slaves, who would fetch a higher price in American slave markets, although the ratio of male to female slaves varied according to period and region of Africa. On average, about two-thirds of the African slaves carried on British ships were male. Young adult slaves were more valuable than older people or children, and most slaves were between the ages of 15 and 30.

Conditions on slave ships were notoriously overcrowded and disease-prone, with Africans exposed to European diseases like smallpox and even the common cold to which they had little

➤ THE ROYAL AFRICAN COMPANY

Although English slave trading began with individual captains, the state sought to regulate it, and trade with Africa in general, through a series of chartered companies. The most powerful and long-lasting of these was the Royal African Company, chartered in 1672 with the grant of a 1,000-year monopoly over trade with Africa not limited to slaving, although this quickly became the company's chief business. However, the lure of high profits drew illegal competitors. Authorities in the Caribbean British colonies, desperate for slaves, supported the interlopers against the company's monopoly, making it virtually impossible to enforce in America. In 1698 Parliament abolished the monopoly, requiring only that independent traders pay a 10 percent fee to the company on goods exported to Africa. Even this requirement was set to expire in 1712.

The independent traders proved more efficient than the Royal African Company and quickly dominated the trade while greatly expanding it. The company continued to control the bases on the West African coast from its main base at Cape Coast Castle in modern Ghana but carried on little of the actual trading. By 1730 the company had virtually abandoned slave trading and was dissolved in 1752.

—William E. Burns

immunity. Since slave groups were often assembled from widely distant places in Africa, they could also spread local African diseases among themselves. In addition to dying from disease, slaves committed suicide by starving themselves or jumping overboard if they were freed of their shackles, and on a few occasions they rebelled and attempted to seize control of the ships. Mortality on the Middle Passage from Africa to America varied tremendously between voyages, but the overall tendency across the decades of the slave trade was to decline. In the history of British dominance of the trade, approximately 13.2 percent of slaves died in the Middle Passage.

The principal market for slaves carried in British vessels was the British colonies in the Caribbean, particularly Barbados, Jamaica, and the Leeward Islands. British victory in the Seven Years' War (1756–1763), which led to the

acquisition from France of Dominica, Grenada, St. Vincent, and Tobago, made those areas major markets for British slavers. The harsh demands of sugar cultivation meant that few slaves lived long lives and that enslaved women were often infertile, maintaining a constant demand for slaves in the sugar islands. Another major group of markets was the British colonies in North America, particularly South Carolina after plantation society was established there from Barbados in the late seventeenth century. The tobacco colonies of the Chesapeake, although dominated by slave-worked plantations, did not make as many physical demands on their slaves as did the sugar islands or rice-dominated South Carolina and had a more self-sustaining population with less demand for new slaves from Africa. Georgia was a major slaving market after about 1750. A third group of markets was the colonies of other European nations. After the gaining of the *asiento*, the right to trade with Spanish America, in 1713 following the War of the Spanish Succession, the British shipped thousands of slaves to Spanish colonies. Even the Caribbean colonies of Britain's great eighteenth-century rival France, unable to satisfy their demand from French traders alone, bought slaves from British shippers.

—William E. Burns

Bibliography

- Craton, Michael. *Sinews of Empire: A Short History of British Slavery*. Garden City, NY: Anchor Books, 1974.
- Davies, K. G. *The Royal African Company*. 1957; reprint, New York: Atheneum, 1970.
- Richardson, David. "The British Empire and the Atlantic Slave Trade, 1660–1807." In *The Oxford History of the British Empire*, Vol. 2, *The Eighteenth Century*, edited by P. J. Marshall. Oxford and New York: Oxford University Press, 1998.
- Sparks, Randy J. *The Two Princes of Calabar: An Eighteenth-Century Atlantic Odyssey*. Cambridge, MA: Harvard University Press, 2004.

African Muslims in the Americas

The transatlantic slave trade, which led to the forced migration of millions of Africans to the Americas, depended on an extensive supply of slaves typically from western and central Africa. The extraction of Africans from these regions,

which through trade networks established in prior centuries had developed connections with the Islamic world, suggests that Muslim Africans entered the Americas in the tens of thousands from the sixteenth to the eighteenth centuries. Historical evidence suggests that African Muslims who were brought as chattel slaves to the Americas retained their religion, thus making them the first Muslims to enter the New World. Moreover, historical evidence illustrates that Muslims were chosen as slaves by slaveholders for particular tasks, given their levels of education, piety, and appearance, and that they were not used for heavy labor but rather for more managerial and domestic responsibilities.

As early as the ninth century, Islam had expanded south of the Sahara into sub-Saharan Africa through the efforts of Arab and Berber merchants. The association of Islam with trade made many African leaders and elites more amenable to conversion, although they retained many aspects of local religions syncretized with Islamic characteristics and practices. By the sixteenth century, Islam had made considerable inroads into west African societies as the transatlantic slave trade was developing into a mainstay part of the regional economy. Most of the slave supply areas in western Africa, from Senegambia to the Gulf of Guinea, relied on the constant supply of slaves from adjacent regions that had experienced differing levels of Islamic influence. Senegambia in particular had a considerable population of Muslims, which while not a majority was still substantial in relation to the non-Muslim community. Many of these regions, such as the Gold Coast (modern-day Ghana), actually experienced an expansion of Islam during the development of the transatlantic slave trade.

The British, Spanish, and French purchased many of their slaves in western Africa and brought them in substantial numbers to their American empires. The Spanish and French imported Muslims to their colonies in Florida and Louisiana, respectively. Based on newspaper accounts in which their regions of origin and Islamic names are recorded, evidence suggests a Muslim background. In British North America, substantial numbers of African Muslims were purchased by slave owners. Slaves from Senegambia and Sierra Leone, known collectively as Mandingoes by

➤ AFRICAN MUSLIMS IN BRAZIL

African Muslims, while few in number given the substantial amount of black African slaves imported into Brazil by the Portuguese during the sixteenth through the eighteenth centuries, were nonetheless the first Muslims in Latin America. Sugarcane cultivation on large plantations created the need for the Portuguese to bring in increasing numbers of slaves to work what was an extensive harvest and processing industry. While most of the slaves brought were from Angola and the Congo, which were not particularly Muslim areas, Muslims from the Swahili coast and the Gold Coast regions were part of this forced migration. Much like African Muslim slaves in North America, Muslim slaves in

Brazil were treated differently than non-Muslims and were given not only relatively less strenuous employment but also religious privileges, given their literacy. Moreover, while African Muslims came from various parts of sub-Saharan Africa, mainly to the Bahia region of Brazil, they were seen as a single group by the slaveholders and thus were treated as such, creating a sense of cohesiveness over time. Though they were treated relatively better than non-Muslim slaves, African Muslims were nonetheless part of the transatlantic slave trade, which coerced millions of black Africans into forced labor in the Americas.

—Abraham O. Mendoza

slave holders, were preferred to other slaves from other regions, particularly in the Carolinas and Georgia. These slaves were preferred for their assumed subservience, work ethic, and skills. Advertisements for runaways also give a hint as to information related to ethnic and religious aspects of slaves. Muslim names, such as Mustapha, Sambo (which means Samba or second son), and Ibrahim, suggest to some historians the presence of Muslims in colonial America.

Many African Muslims were able to preserve aspects of their faith, such as being able to write in Arabic, maintaining their religious observances, and successfully passing aspects of their faith on to their offspring or converting other African slaves. Evidence suggests that slave owners held their Muslim slaves in high regard, often imparting them with oversight duties over other slaves and relying on their specialized agricultural skills (particularly in rice and indigo cultivation). As a result, some Muslim Africans, aware of their elevated position in slave society, looked down on their fellow slaves. As some Muslim Africans had distinctively different phenotypes than other black Africans, given differing levels of intermarriage with Arabs and Berbers, this provided another level of ranking within slave society whereby Muslims were associated with lighter complexions. However, over time the retention of Islam ebbed as slaveholders found it expedient to convert all their slaves to

Christianity en masse given the assumption that this would make them more accepting of their social condition. Nonetheless, some slaves were able to preserve elements of Muslim religious practices in their syncretized versions of African American Christianity. In spite of the development of a cohesive African American identity under slavery from multiple African identities, aspects of Islam were preserved in the cases of families and regions throughout the southern United States such as family names and diet.

—Abraham O. Mendoza

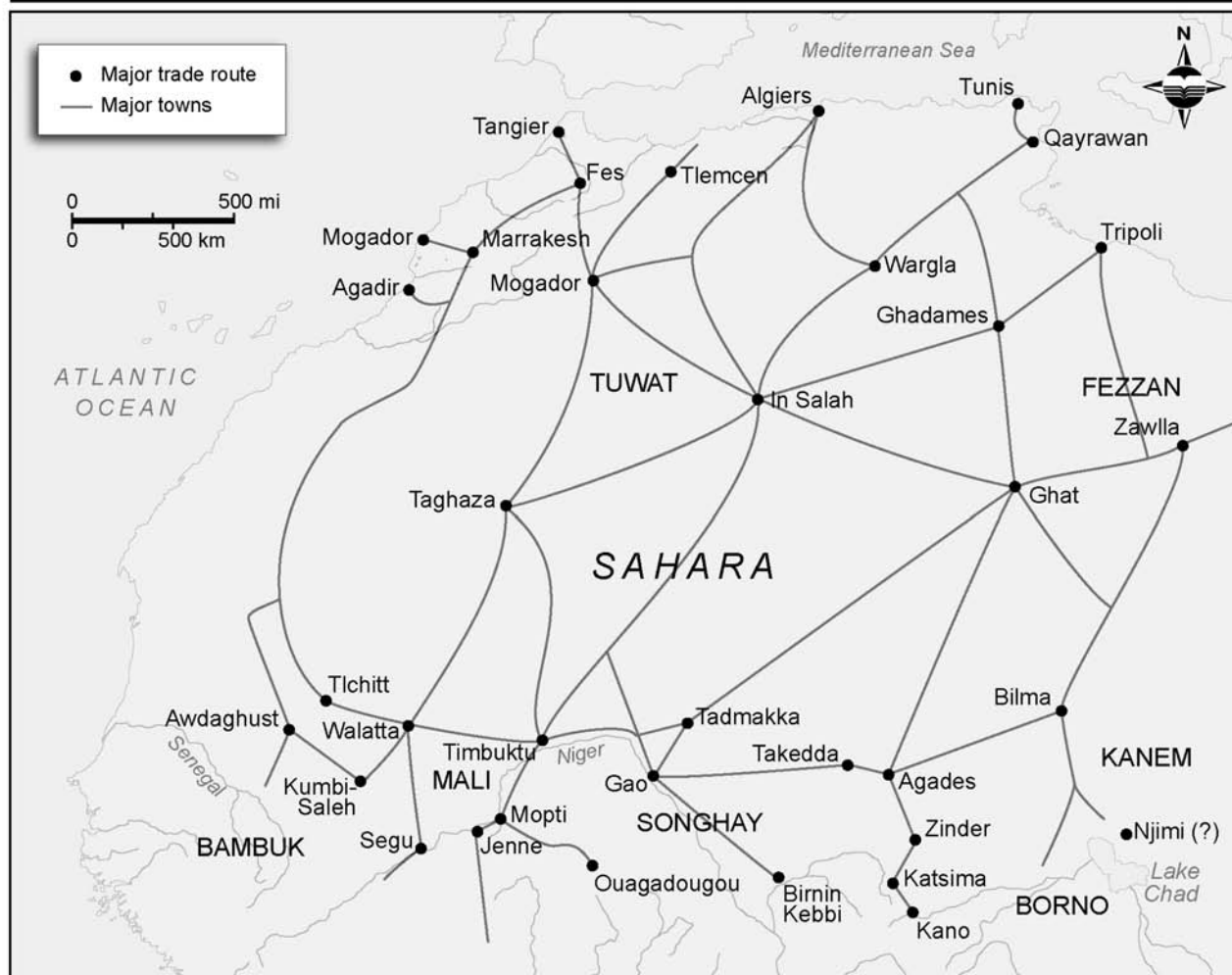
Bibliography

- Austin, Allan D. *African Muslims in Antebellum America: Transatlantic Stories and Spiritual Struggles*. New York: Routledge, 1997.
- Diouf, Sylviane Anna. *Servants of Allah: African Muslims Enslaved in the Americas*. New York: New York University Press, 1998.
- Gomez, Michael A. *Exchanging Our Country Marks: The Transformation of African Identities in the Colonial and Antebellum South*. Chapel Hill: University of North Carolina Press, 1998.
- Gomez, Michael A. "Muslims in Early America." *Journal of Southern History* 60(4) (1994): 671-710.

Indian Ocean and Trans-Sahara Slave Trade

The movement of slaves across the Sahara, the Red Sea, and the Indian Ocean to the East is less

TRANS-SAHARAN TRADE, 9TH–19TH CENTURIES



well known than the transatlantic slave trade. The main requirement of slaves for the Americas was to produce sugar, coffee, tobacco, rice, cotton, gold, and silver for global markets. The drivers for the Indian Ocean slave trade, however, were more diverse. There are crucial differences between the dispersal of African slaves in the Atlantic Ocean and Indian Ocean worlds in terms of the time span, the demands being met, and perhaps most importantly the nature of interactions with the host cultures.

First, the African slave trade in the Indian Ocean has taken place over a much longer period of time. From the first century records of the *Periplus Maris Erythraei* (Periplus of the Red Sea), Arabs trading across the East African coast, indicate exported slaves from Somaliland

to Egypt. International trade, commercial enterprises, religious beliefs, and colonization were important forces behind this involuntary migration.

Second, the demand for slaves in the East was not driven simply by economic motives. African concubines and eunuchs, for example, did not yield monetary returns. The demand for soldiers and workers also propelled migration where bravery and loyalty of Africans was highly valued. In Asia, African slaves filled particular niches where they had earned a reputation as able soldiers, bodyguards, divers, jockeys, musicians, dancers, and entertainers, for example.

Third, African slaves moving eastward encountered older and more diverse cultures. These societies were colored by ancient philosophies and religious affiliations and had varied systems

of social organization and hierarchy. Out-marriage was encouraged, and many slave descendants were absorbed into existing kinship networks, though assimilation was always imperfect. Hidden habitats of the descendants of African slaves have contributed to their invisibility. While some descendants of African slaves are part of Afro-Asian communities, particularly in rural areas, others are blending into the multiethnic landscape of Asian cities. Today descendants of African slaves live in Turkey, Iraq, Iran, Dubai, Oman, Pakistan, India, Sri Lanka, Maldives, and Indonesia. African slaves were also taken to Afghanistan, China, Japan, and Malaysia. Slaves taken from the African continent to islands in the western Indian Ocean (Madagascar, Mauritius, Réunion, Seychelles, Rodrigues, Chagos, Diego Garcia) became creolized. Many of these islands were populated during the struggle between European powers for hegemony over the region and trade monopolies in the East.

In archival documents, Africans are referred to by several names, both ethnonyms and exonyms, such as *Habshi*, *Kaffir*, *Sidi*, *Zanj*, *Ghulam*, *Abd*, and *Barbaru* that conceal their ethnic origins. But if you take into account the duration of the movement, the various slavers involved, and the lands and people among whom the forced migrants settled, this is not surprising. Given that the continent was not called Africa throughout history, in Asia slaves or freemen from the continent were called by other names. For example, many slaves were perceived as arriving from Abyssinia (present-day Ethiopia, Eritrea, and Sudan). Therefore, many Africans were called *Habshi* (from *habashat*, a Semitic people in northern Tegray, Ethiopia).

Despite the circumstances of forced migration, the heights that some first-generation African slaves reached in the East are remarkable. This is epitomized by Malik Ambar, who ruled Ahmednagar (India) for the first quarter of the seventeenth century (1600–1626). Ambar, an Ethiopian slave, rose to prominence by defeating and invading the Mughal army. His tomb in Kuldabad (Maharashtra State) commemorates his gallantry and achievements both politically and socially. Ambar was not a one-off. There were other forced African migrants who reached the corridors of power in Asia.

For migrants, and particularly for those who move involuntarily, it is difficult to maintain their ancestral traditions and customs. Understandably, it has not been possible for African slaves to hold on to their languages, but their sense of rhythm and their musical traditions have not been erased. They remain embedded in the cultural memories of the descendants of African slaves.

Legislation passed by Britain in 1807 abolishing the slave trade in the Atlantic was not necessarily effective in the Indian Ocean. Nevertheless, the impetus from the Atlantic speeded up the process of abolition in the Indian Ocean. Abolition of slavery occurred at various times in different Asian countries and generally followed the British Emancipation Act of 1833. In terms of numbers involved, the easterly slave trade was not very different from the westerly movement. While estimates reveal that 13 million Africans crossed the Atlantic due to the slave trade between the sixteenth and nineteenth centuries, the estimates for the eastward trade are not very different. About 12.5 million Africans are estimated to have crossed the Sahara, the Red Sea, and the Indian Ocean between 800 and 1900 CE. The difference of the two migrations lies in the period over which the trade occurred. While the Atlantic slave trade was concentrated over four centuries, the easterly slave trade continued for millennia. We should question why such a significant movement of peoples has received so little attention. The economic unimportance of this trade and the extent of assimilation might partly explain this anomaly. But it is necessary to break this silence and try to unravel what happened on the other side of Africa. This will involve consulting material in archives and also conducting fieldwork among Afro-Asians.

—*Shiban de Silva Jayasuriya*

Bibliography

- Collins, R. "The African Slave Trade to Asia and the Indian Ocean Islands." *African & Asian Studies* 3–4 (2006): 325–347.
- De Silva Jayasuriya, S. *African Identity in Asia: Cultural Effects of Forced Migration*. Princeton, NJ: Markus Wiener, 2008.
- De Silva Jayasuriya, S., and R. Pankhurst, eds. *The African Diaspora in the Indian Ocean*. Trenton, NJ: Africa World Press, 2003.

Harris, J. *The African Presence in Asia: Consequences of the East African Slave Trade*. Evanston, IL: Northwestern University Press, 1971.

Robbins, K. X., and J. McLeod. *Habsbi Amarat: African Elites in India*. Hyderabad: Mapin, 2005.

Enslavement and Forced Migration in the Inca Empire

The Inca empire, known as *Tawantinsuyu* (or the “land of the four quarters”) to its inhabitants, was one of the largest empires of the ancient world. Originating in the central Andes, by the time of the Spanish conquest, only 150 years since its foundation, it stretched to include territories in the Pacific coastal region, Lake Titicaca in the Bolivian Highlands, the region of Quito in Ecuador to the north, the Argentinean pampas (grasslands) to the south, and parts of the Brazilian Amazon. The organization of the Tawantinsuyu rested on a very efficient system of production and redistribution of goods produced in the vastly different ecological niches of the empire.

The Inca empire took over the markets and preexisting trade networks, replacing them with a tight system of centralized redistribution. Land was allotted to family units depending on their specific needs. Agricultural goods as well as wool, used for clothing, were amassed in government storehouses and efficiently found their way to the different provinces. This way, every subject contributed to the economic life of the empire. There were exceptions, however, constituted by different categories of people (although the sources are not always consistent about this) who were serving the state directly, producing specific luxury goods, or attending to royal courts, kings, and temples. Although they are sometimes referred to as servants, their status as “royal employees” granted them a number of privileges, among which was the exemption from tribute. On the other hand, they were often taken away from their communities, losing any tie with their place of origin. As such, their role has been considered pivotal in the ideological creation of the Inca empire itself, which included a myriad of different ethnic groups.

A specialized class among these nonethnic members of the Inca empire was constituted by

the *camayo*. They played a major role in the production of pottery, but most importantly they were dedicated to supplying the emperor with luxury goods, such as fine textiles and gold and silver jewelry. The goods thus produced were exclusively owned and redistributed by imperial officials in order to create alliances among elite members in the provinces.

The most significant group was constituted by the *yanacona* (meaning “black” or “servant”), a male class who worked directly for the emperor. Duties included caring for the emperor’s living quarters as cooks, gardeners, and maids and even serving as litter porters. Some worked in royal private estates as farmers or cattle herders. Yanacona were loyal to the king even after his death. Some could be sacrificed and buried with him, while others remained to serve the cult of the deceased king. Yanacona could be given by the emperor to members of the lesser nobility, such as the ethnic provincial *kurakas*, as a gift and reward for their allegiance. Finally, yanacona were given to *huacas* (holy sites and temples) to perpetually serve the cult, prepare for celebrations, and receive pilgrims. In order to better attend to the cult, huacas often owned lands, used for agricultural or cattle purposes, that also were maintained by the yanacona. The large pilgrimage center in the Lake Titicaca region in modern-day Bolivia, where the Inca claimed to have originated, was allegedly served by 2,000 yanacona.

The female equivalent to the yanacona were the *aclla* (meaning “the chosen ones”), women who especially devoted their lives to serving the emperor or an imperial cult. They were in fact chosen from different parts of the empire because of their beauty and high-ranking position. Although they could perform some of the same duties as their male counterparts, such as working as maids in the palace or as farmers on the estates, they devoted most of their time to female activities, such as weaving and preparing beverages. The ones deemed to be more beautiful would dedicate their lives to the cult of the Sun, the most important deity in the Inca empire, and would not marry, maintaining a vow of chastity for the rest of their lives. Others would become wives of the emperor.

Finally, another fundamental aspect in the sociopolitical construction of the Inca empire

was the so-called *mitimae*, colonists forcefully replaced from distant provinces into newly conquered territories. Such displacements served a twofold function: they made a pragmatic use of human resources, employing labor where it was most needed, while at the same time reducing the risk of revolt. A newly conquered population was resettled in an area that had been under Inca rule for some time. The people would “swap” with already-integrated Inca subjects. While the new settlers always maintained their distinguishing dresses and customs, they assimilated into the imperial system by learning from other subjects. Yanacona and aclla, who as we have seen served important religious and economic functions, were themselves often times *mitimae*. This is an indication that the incorporation of foreign people into the larger imperial system was a central aspect of Inca conception of rulership.

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Bibliography

- D'Altroy, Terence. *Provincial Power in the Inka Empire*. Washington, DC: Smithsonian Institution Press, 1992.
- Murra, John V. *The Economic Organization of the Inca State*. Greenwich, CT: JAI, 1980.
- Pease Franklin, G. Y. “The Formation of Tawantinsuyu: Mechanisms of Colonization and Relationship with Ethnic Groups.” In *The Inca and Aztec States, 1400–1800*, edited by G. Collier, R. Rosaldo, and J. Wirth. New York: Academic Press, 1982.
- Rowe, John H. “Inca Culture at the Time of the Spanish Conquest.” In *Handbook of South American Indians*, Vol. 2, edited by Julian H. Steward. Washington, DC: Smithsonian Institution Press, 1946.
- Rowe, John H. “Inca Policies and Institutions Relating to the Cultural Unification of the Empire.” In *The Inca and Aztec States, 1400–1800*, edited by G. Collier, R. Rosaldo, and J. Wirth. New York: Academic Press, 1982.

Enslavement in the Aztec Empire

Information on slavery in Aztec society is fragmentary and often contradictory. While Spanish observers remarked numerous times on the existence of people sold in the market and coerced into working for a master, their status as

a separate social class is debatable; different circumstances, social or economic, could lead to a person's enslavement. Slavery among the Aztecs was not hereditary but instead was the result of punishment or even voluntary, and it was in some cases reversible. In Aztec society, these people were referred to as *tlacohtin*. Although their labor was forced, slaves maintained rights to get married (with another slave or a free person), maintain a household, and conduct business in the market. Their offspring were born free. Most commonly, the duties involved as slaves were related to maintaining the owner's house, although rarely would slaves be employed as farmers. Enslaved women performed characteristic female activities such as weaving and cooking. Female slaves were often exchanged as gifts and lived as concubines in the owner's household. *Tlacohtin* were mostly employed in the cities, where the commerce of slaves also occurred. The transaction into slavery occurred in the market and was supervised by a group of elderly people.

A common reason for becoming a slave was theft. Being caught in the act of stealing resulted in becoming a slave, most of the time to the person against whom the crime was perpetrated. If stealing involved destruction of property or if the robbery was conducted in a temple or in the house of a noble person, the perpetrator would become a slave to serve in the temple or in the noble house. According to some sources, however, if the stolen goods were returned or if the thief was somehow able to repay the stolen goods, then the thief could avoid being enslaved. On the other hand, in case of a repeated offense the perpetrator could be sentenced to death. Other crimes such as homicide and rape, usually punished with death, could sometimes lead to enslavement.

The most common reason for enslavement, however, was economic necessity. People who found themselves overwhelmed with debts could voluntarily sell themselves or their children on the market in order to repay their dues. This would most commonly occur with people addicted to gambling, such as the Aztec board game *patolli*, or the ballgame. Debt usually had to be paid with cloth. In the event that a person did not have means to give cloths, then he

or she would become available in the market for purchase. Merchants took advantage of famine during seasons of extreme droughts to enrich themselves with the trade of members of impoverished families. This was the case, for example, with the great drought that occurred in 1450–1454, when large quantities of people were sold in Tenochtitlan to the neighboring southern cities of Cuitlahuac, Mixquic, and Chalco, whose fertile *chinampas* (raised fields) provided the necessary food for all.

Unruly slaves had to wear heavy wooden collars not only to publicly ridicule their bad behavior but also to prevent them from escaping. If a slave repeatedly showed bad behavior, such as laziness or insubordination, then he or she could be sold as a sacrificial victim. Slaves condemned to death by human sacrifice were specifically sold on the market for this purpose. Finally, war captives could also be taken and sold as slaves. Their fate was, however, almost always that of serving as sacrificial victims during religious ceremonies.

A special form of slavery was constituted by the *buehuetlatlacolli* (which can be translated as “ancient fault”), a system by which a family was perpetually obliged to give one or more of its members as servants or maids to serve another family. Huehuetlatlacolli was abolished by the king of Tezcoco Nezahualpilli in 1505 in order to avoid excessive exploitation during a time of famine in central Mexico. The Aztec emperor Motecuhzoma II also abolished perpetual slavery in the following years.

Slaves could gain freedom by repaying the debt that brought them to slavery in the first

place. This instance was not that rare, given the fact that slaves were allowed personal properties, could have families, and could engage in trading or other economic activities. Female slaves could achieve freedom by marrying their owner. Alternatively, a male slave could become free by marriage if he was able to replace himself with another member of his family. Another way by which one could end enslavement was running away from the master in the market. If in so doing the slave accidentally stepped into human excrement, this would result in the end of captivity. Similarly, a slave could be free by escaping the master and finding refuge in the royal palace in Tenochtitlan. In both instances, no one could stop a slave from running. This was a crime that was in turn punished with slavery.

—Alessia Frassani

Bibliography

- Berdan, Frances F. *The Aztecs of Central Mexico: An Imperial Society*. 2nd ed. Belmont, CA: Wadsworth, 2005.
- Carrasco, Pedro. “Social Organization of Ancient Mexico.” In *Handbook of Middle American Indians*, Vol. 10, edited by Gordon F. Ekholm and Ignacio Bernal. Austin: University of Texas Press, 1971.
- Hicks, Frederick. “Dependent Labor in Prehispanic Mexico.” *Estudios de Cultura Nahuatl* 11 (1974): 243–266.
- Shadow, Robert D., and María J. Rodríguez-Shadow. “Historical Panorama of Anthropological Perspectives on Aztec Slavery.” In *Arqueología del norte y del occidente de México*, edited by Barbro Dahlgren and Ma. de los Dolores Soto de Arechavaleta. Mexico City: Universidad Nacional Autónoma de México, 1995.

Politics and Statecraft

During the 300 years covered in this volume, while some of the world's political systems remained unchanged, in other regions there were major transformations as a result of political rivalries as well as religious and social upheavals. In Europe in particular, the existing political and economic order came under increasing challenges and led to the rise of new political systems. Yet political change was a long and complicated process and did not necessarily develop in the same direction. England and Holland, for example, made a gradual turn to constitutional monarchy, while at the very same time France embarked in the opposite direction as King Louis XIII and King Louis XIV laid the foundation for French absolutism.

By the late seventeenth century the first nation-states were formed in Europe. Unlike the rest of the world, which was dominated by the great empires (e.g., Ming China, the Ottoman empire, and the Safavid empire), in Europe empires dissolved with the rise of sovereign states composed of socially cohesive populations that shared a common language, religion, history, or ethnicity. Each state's emergence and development was greatly shaped by its relationships with neighboring states. These nation-states were characterized by their centralization of power maintained by efficient bureaucracies and protected by large modern armies. The nature of supreme authority, however, differed depending on the country. Although the majority of European states were monarchies (e.g., England, France, Spain, etc.), some such as Holland and the Italian city-states (e.g., Venice) were oligarchies controlled by merchants. The nation-states proved to be very resilient, flexible, and powerful political entities. Their rise was one of the leading factors in Europe's emergence as a global power. Other states either emulated them—thus Russia's rapid modernization under Peter the Great in the 1700s—or kept them at arm's length, as did China and Japan, both attempting to close their borders to European influence.

Throughout the sixteenth and seventeenth centuries, the majority of states around the world were monarchies. This form of government, in which political power is lodged with an individual (a king, sultan, shah, emperor, etc.) could be found in the Americas, where the Aztecs and Incas established strong monarchies; in Africa, where numerous kingships and principalities were spread throughout the continent; and in Asia, which included some of the greatest empires such as Qing China, the Ottoman empire, and Safavid Iran. Many monarchies retained the feudal basis of political balance between king and nobles but also experienced important changes throughout the sixteenth and seventeenth centuries. Thus, in Japan the emperor's authority was all but relegated to the great lords (daimyos) and the shogun, and their factional struggles eventually

produced a prolonged political upheaval that, in conjunction with a rising merchant class and an encounter with Europe, made pure feudalism no longer sustainable in the country. By the 1600s Japan emerged as a highly centralized state where daimyos still existed and were given social prestige but where true power resided with the shogun and an efficient bureaucracy, while the emperor was consigned to a nominal leadership position. In China the Manchu (Qing) dynasty, which came to power in the mid-seventeenth century, produced a successful combination of the Manchu military capability and the Chinese administrative expertise. Emperor Kangzuo (1662–1722) contributed to greater government centralization, and by the eighteenth century China probably was the most centralized and closely regulated state in the world.

The most profound change in the nature of monarchical rule occurred in Europe. In the early 1500s Europe consisted of hundreds of independent or semi-independent states. Over the next 200 years, however, there was a rapid consolidation of power in some of these states. In France, King Louis XIII (assisted by Cardinal Armand Jean du Plessis de Richelieu) and King Louis XIV steadily expanded their authority at the expense of the nobility. They stopped convening the Estates General, France's medieval assembly, and passed laws as they saw fit, suppressing noble dissent while expanding a bureaucracy drawn from the gentry and merchant classes. By the late seventeenth century the French monarchy exercised such great power that the political system it created became known as an absolute monarchy. "Absolutism" is the term by which we describe the political organization that results from

Royal authority was not subject to any challenge or check by judicial, legislative, or electoral bodies. A succinct summary of these principles is Louis XIV's famous expression "I am the state."

the theory that absolute sovereignty vests in a monarch. Royal authority was not subject to any challenge or check by judicial, legislative, or electoral bodies. A succinct summary of these principles is Louis XIV's famous expression "I am the state." Yet although this power was theoretically absolute, in practice it was exercised by royal officials who were given consider-

able latitude in interpreting and carrying out royal orders.

However, absolutism was not the only path of monarchical development; there were several alternatives. Some monarchies were theocracies, a form of government in which a deity is recognized as the state's supreme ruler, with the state governed by persons who are regarded as divinely guided. Louis XIV's belief that he personified the state probably could have been easily shared by the Aztec rulers in Mexico who served as a representative of the gods on earth. The Inca empire in South America was ruled by the Inca, who was considered semidivine. Yet the Aztec and Inca states were not as highly centralized or integrated as France and consisted of dozens of conquered polities whose governments were often left unchanged if they recognized Aztec and Inca authority and met their obligations. In Iran, Shah Ismail, who founded the Safavid dynasty in 1502, was a devout Shia who claimed divinity and descent from the prophet Muhammed himself, notwithstanding his Turkic background. Although the later Safavid rulers downplayed such assertions of divinity, they still emphasized their ancestry. In Europe, John Calvin's reforms

in Geneva led to the creation of a theocratic government that tightly controlled the society. In Oceania, the islands of Polynesia and Hawaii developed hierarchical societies led by chiefs whose power and status were inherited, but unlike European or Asian monarchs, downplayed the importance of bloodlines in favor of historical ties to the land.

Even in Europe, absolutism was far from a universal trend. The European Age of Discovery resulted in a revolution in commerce and trade in turn resulted in the rise of a strong merchant class whose interests often clashed with those of the existing political elite. Thus England and Holland, the most successful commercial powers, were pulled in the opposite direction from the prevailing trend toward absolutism, moving toward limited monarchy. In seventeenth-century England, with its long parliamentary tradition, a growing political struggle erupted between the Crown and Parliament. This along with the religious turbulence of the Reformation, led to a brutal Civil War (1642–1649), the execution of the king, and an interruption in monarchical rule. This period produced important theoretical discussions on the nature of the state. Shocked by the chaos and destruction of the civil war, Thomas Hobbes, in his influential work *Leviathan* (1651), championed the idea of a strong government capable of protecting its subjects. Hobbes argued that the royal power came not from a divine right but rather from a “social contract,” a mythical unwritten agreement among the people to established government. Early humans lived in a state of nature, Hobbes argued, when the government did not exist and each person was free to do exactly as he or she pleased without any legal restrictions but also without the protection that laws afford. Uncontrolled by law and government, Hobbes famously wrote in Chapter III of *Leviathan*, “the life of man [was] solitary, poor, nasty, brutish, and short. . . . They [were] in that condition which is called war; and such a war, as is of every man against every man.” To put an end to such lawlessness, people entered into a social contract whereby they gave up their individual liberties for the political order and stability delivered by a king. Hobbes believed in the absolute power of the monarch, declaring that “nothing the sovereign representative can do to a subject, on what pretence soever, can properly be called injustice or injury.”

Hobbes’s ideas inspired another English philosopher, John Locke, to write his famous *Second Treatise on Government* in 1690. By then England had experienced a major transformation. Although monarchy was restored in 1660, continued conflict between the monarch and Parliament led to another confrontation during 1688–1689. In what became known as the Glorious Revolution, Parliament asserted power over the monarchy, largely through control of the purse strings. Locke’s philosophy reflected this political change. He shared Hobbes’s belief in a “social contract” but also contended that the king’s authority should be limited by this very contract that carried the people’s consent to be ruled. If the government misused or overreached its authority, then the people had the right to withdraw their consent and terminate the agreement. In his treatises on government Locke explicitly stated the people’s right of revolution to oppose unjust rule and overthrow authority.

In the eighteenth century, European states developed diverse political forms. Some states tried to imitate Enlightenment principles. Centralized states with strong armies and bureaucracies successfully

developed in Prussia and Russia, while the Habsburg dynasty made similar (but less efficacious) efforts in the Austrian empire. Austrian absolutism was based on asserting the dominance of Habsburg authority over national affairs while allowing for some level of autonomy in local affairs, particularly in Bohemia and Hungary. Other states, such as Sweden and Poland, joined the English in rejecting an absolutist government. Thus, by the seventeenth century Poland's monarchy was elective and subject to the Assembly of Nobility (Sejm), which exercised the liberum veto (in which any deputy could put an end to the current legislative session and nullify all legislation passed). A few states even rejected monarchy altogether in favor of a republican form of government. In its early years the Republic of Venice was ruled autocratically by a doge, but his powers were later greatly curtailed by several councils (the Maggior Consiglio, the Council of Ten, and the Signoria) that represented the aristocratic families of this city-state and functioned as an oligarchic government. By the early seventeenth century the Dutch Republic emerged as a decentralized confederation of seven provinces that broke away from Spain. Each state had its own government led by a stadtholder but was also governed directly by the States General (Staten-Generaal), the federal government, that had a limited authority. A similar form of government existed in Switzerland, a confederation of 13 cantons each with its own government and traditions.

Religion played a very important role in the political life of a state. Medieval European theologians often compared a state to a divinely created organism where the king was the head, the aristocracy the arms bearing weapons, and the rest of people, the commoners, the torso. A more comprehensive metaphor, which took into consideration Divine power, became known as “the Great Chain of Being,” which presented the universe in terms of a great hierarchy (God, angels, humans, animals, etc.) and sanctioned stratification of human society with the king at the top, followed by aristocrats and other social groups. This belief reinforced the notions of paternalism (that those at the upper end of the chain had a responsibility to look after those below them) and of deference (the homage that the lower orders were supposed to offer to those above them

on the chain). In China, Confucianism promoted a set of key virtues such as *ren* (compassion, benevolence), *li* (courtesy and civility), and *xiao* (devotion and deference) that facilitated and protected the hierarchical society in which every member knew his or her place and responsibilities. Steeped in the values of the past, Confucianism ostensibly discouraged innovation and commercial enterprise, although such enterprises often did quite well in China.

Chinese civil officials, who had to pass rigid examinations on Confucianism, might openly disdain the greed and materialism associated with trade and commerce, but in the interest of the state's well-being bureaucrats and merchants often formed beneficial alliances. In fact, a great number of people holding bureaucratic positions were born into commercial families. In the Islamic world the very titles

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of Muslim rulers were directly connected to religion. A caliph (khalifah rasūl Allāh, or “successor of the Messenger of God,”) was perceived as prophet Muhammed’s successor in political and administrative functions, while a sultan, according to the Quran, was a person of moral or spiritual authority, although the term later came to carry political power as well. By 1517 after conquering Syria, Egypt, and Arabia, the Ottoman rulers combined both titles in their persona and held them until the early twentieth century. The Ottoman sultans, although possessing unlimited authority in theory, had to conduct themselves in accordance with the Quran, Islamic religious law (Sharia), and Islamic customs.

In the New World, religion was at the very heart of state formation. The Aztecs established their state on an island in Lake Texcoco, as it fulfilled the teaching of their most important god Huitzilopochtli that at the location of their new home they would find an eagle perched on a cactus and devouring a snake. Religion also provided a mechanism of social control due to a cosmic mission that Aztec religious beliefs propagated. The Aztecs believed that the sun, the source of all life, must be sustained by a divine elixir found only in beating human hearts. For this purpose human sacrifice had to be offered regularly, since a failure to do so would doom the world to destruction. These views allowed the Aztec elite to maintain commoners in subservience, justify state expansion, and terrorize conquered peoples. In the Inca state the authority of the supreme leader (Inca) was based on his divine descent from the sun god Inti. Worshipped in his lifetime, the ruler was embalmed after his death and revered as a god. On special occasions all the Inca mummies would be assembled to ask them for advice on affairs of state.

While all religions ostensibly seek peace and tranquility, dogma is oftentimes used to justify political intrigue and conquest. Thus, the relationship between the Ottoman empire and Iran was mired in a deep-seated hostility between the Sunnis and Shiites that sustained prolonged conflicts between two states. In the Iberian Peninsula religion played a key role in the centuries-long Reconquista, the struggle of local Christian kingdoms against Muslims who also conducted war in God’s name (jihad). Similarly, religious differences played a role in European attempts to organize Crusades against the Ottoman empire in the mid-fifteenth century. At the same time, religion became one of the key factors in the European Age of Expansion since, aside from economic motives and personal glory, the Spanish, Portuguese, and other explorers were clearly driven by the desire to spread the message of Christ to the newly discovered territories. This, however, oftentimes posed major challenges to Europeans. In Japan, for example, the spread of Christianity caused the Tokugawa shoguns to restrict European activities, eventually expelling all Europeans (except the Dutch) and closing down Japan’s borders. Yet in India, the Mughal rulers became known for their tolerant approach to religious issues and actively sought to incorporate non-Muslim (primarily Hindu) groups into the framework of the empire. The Mughals repealed laws that imposed special taxes on non-Muslims and encouraged interfaith marriages. Emperor Akbar exemplified this policy as he opened the *ibadat khana* (“house of worship”) where representatives of various religions (including Christian missionaries) were invited to engage in spirited debate and discussion.

Such tolerance, though, was lacking in Europe. Jews were forbidden to own land in many countries, and their involvement in trade and commerce often drew abuses from their Christian competitors. Jewish communities were oftentimes the target of violent attacks and were occasionally entirely expelled from the country. Thus, in 1492 tens of thousands of Jews were expelled from Spain, followed by expulsion in Portugal during 1496–1497, Brandenburg in 1510, Muscovite Rus in 1547, Genoa in 1567, the Austrian empire in 1670, the French West Indies in 1683, and Sweden in 1685. In 1516 Venice established the first ghetto in Europe, where Jews were forced to live and could not leave after sunset. The start of the Reformation in the early sixteenth century only further complicated religious and political dynamics in Europe. In

Thus, in 1492 tens of thousands of Jews were expelled from Spain, followed by expulsion in Portugal during 1496–1497, Brandenburg in 1510, Muscovite Rus in 1547, Genoa in 1567, the Austrian empire in 1670, the French West Indies in 1683, and Sweden in 1685.

1500 Europe was largely Catholic, with only parts of southeastern Europe practicing Eastern Orthodox Christianity. By the mid-seventeenth century, as a result of ideas of Martin Luther, Ulrich Zwingli, Jean Calvin, and other reformers, the religious map of Europe completely changed, and Scandinavia, most of Germany, Switzerland, Scotland, and England embraced Protestantism. The Reformation had a profound impact on political life in Europe.

Oftentimes religion was difficult to distinguish from politics. England's break with the Catholic Church had much to do with both Protestant influence and King Henry VIII's desire to ensure the stability of his dynasty. Subsequent religious strife in England led to an acute political crisis as the country plunged into civil war in the mid-seventeenth century. Most of Europe experienced political turmoil caused by religious foment. In France this religious conflict is most famously represented by the St. Bartholomew's Day Massacre (1572), a purge that claimed thousands of Protestant lives and began a 17-year-long conflict. Yet another manifestation of the rift between Catholics and Protestants was the Thirty Years' War that devastated Germany, killing millions and fragmenting the region.

Despite differences in forms of government or religion, states oftentimes shared a common goal of conquest and dominance. Rivalry for prestige, territory, or natural resources produced an unprecedented spate of wars, revolts, and revolutions throughout the world between 1450 and 1750. Analyzing these events, several important patterns can be discerned. The Italian Wars that involved France, Spain, the Holy Roman Empire, and the Italian states in the early sixteenth century not only contributed to the spread of Italian Renaissance culture throughout Europe but also influenced the theory and practice of conquest. This conflict further accelerated Europe's "military revolution," which in turn laid the foundation for the modern bureaucratic state. The skills, experience, and technology that Europeans gained in Italy were later successfully utilized in conquering lands around the world. In the New World the depletion of local populations due to the introduction of new diseases as well as Spanish and Portuguese mistreatment and

enslavement resulted in the importation of African slaves to work the cash crop economies developing in the Caribbean colonies. The shift from indigenous to African coerced labor had profound consequences for the subsequent history of the New World.

This period also marked a gradual global shift in wealth and power from Asia to Europe, which established some of the largest and most powerful states in the world. Southern and eastern Asia, the home of Mughal India, Safavid Iran, and the Ottoman empire, was one of the wealthiest regions in the world in the early sixteenth century. Yet by the mid-eighteenth century European trading companies shifted international trade routes and created a global trading network that they continued to dominate. The focus of the global economy soon shifted away from the Indian Ocean, greatly affecting Asian powers. The European discovery and conquest of the New World was followed by the rise of the Atlantic triangular trade that involved slaves from Africa and colonial products from the Americas. The mercantile system that Europeans developed defined the relations between newly colonized regions, which supplied raw material, and mother countries, which fabricated finished goods for consumption in the colonies and elsewhere, adding to profits. Thus, by the seventeenth century Islamic states, which previously enjoyed the status of dominant commercial powers, were eclipsed by the much smaller states of England and Holland that controlled the main commercial lanes in the Atlantic and Indian oceans.

—Alexander Mikaberidze

■ Introduction: Control, Coercion, and Crime in State and Empire

The power of a state, by its very nature, is based on control and coercion. Scholars agree that one of the essential characteristics of the state is that it claims “the monopoly of the legitimate use of physical force in the enforcement of its order,” as Max Weber stated in *The Theory of Social and Economic Organization*, or “the principal means of coercion within a given territory,” as Charles Tilly argued in *The Formation of National States in Western Europe*. In Europe as a whole, state control and coercion mechanisms followed parallel paths of evolution since the Middle Ages. At first, European monarchs pursued a patrimonial system—extracting whatever capital they needed as tribute or rent from lands and populations under their control. They provided a legal framework and justice while their coercion apparatus, as a

rule, consisted of various vassals or retainers that provided service within certain contractual limits. However, starting in the fifteenth century, the sovereigns became increasingly dependent on a brokerage system, in which they relied on independent capitalists for loans, tax collection, or the management of various enterprises. These greater financial means allowed many rulers to change their system of coercion, which increasingly featured mercenary forces that were either hired directly or provided by contractors on certain conditions. This system eventually facilitated the development of nation-states, where rulers, while centralizing their authority, subordinated fiscal mechanisms directly to the state and restricted independent contractors. The sovereigns established national armies and navies (through conscripting their own

citizenries) that were controlled and maintained by the state's expanding administrative and financial structures. As was true elsewhere, states were also involved in maintaining religious conformity, although gradually their power became more tenuous after the Protestant Revolution.

Outside Europe, some states established stricter control and coercion systems. The Aztec and Inca civilizations developed in distinctive, rather isolated environments, yet both civilizations were based on political hierarchies that effectively used control and coercion mechanisms. The Aztec state was probably much more coercive than the Incas, turning a human sacrifice into a divine obligation which it implemented with remarkable efficiency. The Aztecs subjugated other Amerindian cultures to harsh domination which caused many of them to welcome the Spanish arrival. The Inca state developed a peculiar coercion policy to secure the loyalty of the conquered peoples. Once defeated, a conquered population was subjected to a process known as *mitima* or resettlement and integration. The people were resettled to various corners of the empire where, within a generation or two, they were gradually assimilated.

In China, the Ming dynasty's code gave it authority over all aspects of life, even specifying that the occupations of all Chinese subjects were hereditary and could not be changed at will, yet the Ming governmental structure was never of sufficient strength to exert effective control, even if it so desired, if subjects were intent on resistance. The Chinese system was subject to the pervasive *lijia* system of collective societal organization, by means of which the society was able to maintain order and control through all levels. The *lijia* system (which located every person in a hierarchy of command reaching as high as the emperor) was based on the traditional *baojia* organization (neighborhood mutual responsibility structure), which organized the society for more effective control. During the Ming (1368–1644) and its successor Qing (1644–1911) dynasties, each household was integrated into this system. A variety of lineage or village authorities maintained order, supervised tax collection, and oversaw the moral conduct of the community. Chinese authorities attempted to control the movement within the

country. Commoners exiting or entering a village were required to notify authorities while anyone traveling farther than 100 li (30 miles; 50 kilometers) were supposed to obtain a special pass (*yin*). In theory, commerce was subject to supervision; overseas commerce, trade in salt and tea, and mining of precious metals were either forbidden or tightly regulated. To legally trade, Chinese merchants had to be licensed under the legal threat of banishment or even death; enforcement, however, was uneven, and there was a thriving coastal trade. The Ming dynasty attempted strict control over religion as well, closing all temples and monasteries except one in each county (*zhou*) and requiring government approval for construction of new temples. The activity of monks was supervised by specially established bureaus locally and by the Ministry of Rites on a national level. In Japan, the long civil strife ended in the establishment of the Tokugawa *bakuban* system that centralized government and created a strict hierarchical society to preempt social chaos and rebellion. The basis of Tokugawa power was control of the land which the shogun granted to *daimyo* or feudal lords for governances.

The Islamic world was no exception to the prevailing types of control and coercion. The Ottoman state was based on a patrimonial system in which it controlled the collection and distribution of resources and claimed monopoly over the means of coercion, but also granted rural revenues in exchange for services rendered to the state. Combining practices from the ancient Near East, the Byzantine empire and the precepts of Islam, the Ottomans developed a rather efficient control mechanism that, through a combination of direct and indirect rule, maintained order over a vast empire. A key institution of central control—the Janissaries—was maintained through the coercive *devşirme* levy of Christian children (primarily from the Balkans) that allowed the state to maintain political control. Yet, starting in the sixteenth century, the Ottoman state experienced a fiscal crisis, worsened by inflationary trends, rebellions, and increasing military expenditures, that weakened its control over parts of its territory as well as its economy. The Ottoman sultan pursued various policies to meet these challenges, including

contracting out to private groups (families, kinship groups) some aspects of control mechanism, for example, the recruitment and provisioning of fighting forces to support main Ottoman armies. Such compromises, however, eventually contributed to the weakening of the Ottoman central authority.

Safavid Iran, although exhibiting some characteristics of the early modern Western state (e.g., use of gunpowder technology, concept of absolutist monarchy supported by institutionalized religion), remained in essence a premodern state based on the patrimonial system. Iran's constrained production capacity and weak economy meant that the Safavid rulers, while claiming absolute power, were in reality quite limited in their authority and oftentimes sought tribute more than stable control over a population or region. Financial constraints prevented the Safavids from establishing a large bureaucracy that could have ensured tighter control over the country. Furthermore, the Safavid central control remained, except for the reign of Shah Abbas I (1587–1629), rather tenuous in parts of the states, and particularly on the periphery, where the Qizilbash tribes remained the mainstay of the Safavid military and administrative order. Abbas' reforms, which aimed at remedying this predicament, included expansion of the ghulam corps of military slaves as the key institution of central control and coercion.

—*Alexander Mikaberidze*

Slave Power Empires

Powerful slave trading empires were mostly located along Africa's coastline. The emergence of coastal states as powerful slave trading empires was accidental. Long before the arrival of Portuguese explorers and traders, African pastoralists living in central and western Sudan engaged slaves to increase the cultivation of crops and to provide domestic service. In West Africa, slaves represented a large section of the population and slaves could attain positions of importance in the royal household or could serve as advisers to African rulers. By the time the first European appeared in West Africa, slavery had become fully integrated into local society but its definition varied across the multiple societies. Unlike

European societies, which tended to view slaves as property that could be bought and sold, African societies practiced socially and politically more complex slavery, usually absorbing slaves through manumission, marriage, or service.

Some African states possessed vast numbers of slaves and depended on slavery for their economic output. In the central Sudan region, Kutumbi, the leader of the Kano in the first half of the seventeenth century, developed his well-known reputation as a slaver by capturing thousands of slaves. Kutumbi settled several hundred of his own slaves near Kano. Relying on captives, one of Kutumbi's generals built his headquarters and sent another 2,000 slaves to Kano. In some cases, slaves were used by African rulers as militia for defensive purposes. Farther east, captives were settled around the capital of the Sultanate of Sennar by Badi II as farmers; these slaves also provided military support in case of foreign invasion. These slave-farmers provided little military opposition to the well-armed and well-trained armies of the other states in the Sudan. Although they were not of great value militarily, Badi II valued the slaves for their agricultural production that would feed his armies. During the eighteenth century, the sultans of Dar Fur employed slaves on agricultural settlements adjacent to their capital. In addition to producing food, slaves could be employed to produce other manufactured goods. Some Dar Fur aristocrats could have as many as 600 slaves working within their domain.

West and East African states developed an extensive trade in ivory and slaves. Slaves were purchased by Muslim merchants and sent to India, Arabia, and the Persian Gulf. Muslim merchants were sometimes supported by African leaders—for example, Mirambo of Nyamwezi—in opening trade routes, establishing states, and returning large quantities of ivory and slaves. Mirambo began by hiring Ngoni mercenaries and later adding war captives, escaped slaves, and deserters, forming them into an armed militia. Mirambo and his army successfully operated during the age of the slave trade, and his mercenary armies were linked with other chiefs to form a single state in southern Tanzania, eastern Zambia, and Malawi.

With the arrival of Europeans, particularly the Portuguese, the internal slave trade changed

THE KINGDOM OF DAHOMEY

Located in one of the poorer regions of the West African coastal region, Dahomey emerged as a powerful principality under the leadership of the Aja dynasty in the early seventeenth century. During the reigns of King Wegbaja (1650–1685) and King Akaba II (1685–1708), Dahomey embarked on wars of expansion and conquered areas south and southeast of Abomey, followed by expansion into Allada and Ouidah to control trade with Europeans in the early eighteenth century. The Dahomey rulers established a strong monarchy based on the principles of primogeniture and divine worship of kingship. Yet, Dahomean kings were not absolute monarchs and consulted frequently with the council of ministers, as well as prominent merchants and military leaders.

In the process known as Dahomeanization, the Dahomean kings turned conquered states into fully integrated provinces within the kingdom, where no separate leadership or laws were recognized. Instead, the conquered regions were controlled by a Dahomean governor who was assisted by village heads in the execution of duties. In order to achieve homogenization of laws, customs, and institutions in conquered states, the laws and customs of Dahomey took precedence. The state also introduced standardized weights and measures and traded in a standard currency of cowry

shells. Efficient administration developed around a system of messengers known as the half-heads, who were stationed at relay stations throughout the kingdom, maintaining communications between the central government and the provinces. An annual census counted all livestock and the state collected income tax, custom duties, and road tolls. Dahomey's rulers used an increasing number of slaves for agricultural production which supported the urban population. Dahomey also played a leading role in the transatlantic slave trade, gathering vast numbers of slaves at special coastal stations, where they were sold to European slave ships that visited every month or so. In fact, slave exports became a state monopoly and profits of slave dealers were taxed by the state.

The tax and slave trade revenues, together with guns and ammunition gained in trade with Europeans, became the foundation for Dahomey's power. Its kings maintained a well-trained army, which increased in size and efficiency until the mid-nineteenth century, and the Dahomey conducted wars of expansion along the southeast and southwest borders. Rivalry between Dahomey and Oyo in the eighteenth century was instrumental in generating a large number of captives who were sold into the Atlantic slave trade.

—Alexander Mikaberidze

as the external slave trade developed. Local African laws required the payment of a fine for legal transgressions, but as the external demand for slaves increased, African rulers imprisoned convicted criminals who would later be sold as slaves to Europeans. Although the sources of slaves varied, many of the slaves sold on the coast were prisoners, the result of local wars fought to establish new African states or to expand states in the African interior.

The Muslim Fulbe of Futa Jalon created a new state by waging war against neighbors, creating an abundant supply of war captives who could be sold into slavery. The rulers of Oyo, Dahomey, and Asante engaged in political wars of expansion, becoming powerful African states. As a rule, African leaders infrequently sold their own subjects into slavery, but they also knew the handsome price that European slavers offered

could make them quite wealthy. Local territorial conflicts produced a steady and abundant supply of human commodities.

Located west of where the Niger River empties into the Atlantic Ocean, the Bight of Benin became one of the major slave-exporting regions of West Africa. Beginning slowly, the export of slaves grew to enormous heights surpassing the Portuguese-controlled region around Luanda, earning the Bight of Benin the moniker the Slave Coast. The export slave trade became the first state monopoly controlled by the Oyo. Increased hostile conflict, which led to many new war captives, accounts for the major upsurge in the enslavement of numerous people from the interior of Africa. Several wars instigated by the Yoruba kingdom of Oyo against the coastal towns of Ardrah, Whydah, Porto Novo, and Lagos resulted in increased numbers of people indentured for

the slave trade. Also located inland, the Dahomey raided farther north, obtaining captives for sale in the coastal trade, and challenged Oyo and the coastal towns for dominance of the trade with the Europeans. Oyo eventually forced Dahomey to pay tribute, but hostilities between Oyo, Dahomey, and the coastal towns continued producing combat prisoners who served as human commodities fueling the slave export business.

Examining various regions of Africa suggests that African rulers conducted trade based on local conditions. The Slave Coast experienced minimal European contact depending on the closeness of European ships to the coastal towns and the activities of Muslim traders. African leaders dealt with Muslim traders who brought slaves and other trade goods from the interior to the coast through an interregional trading system. Developments within the Slave Coast trading system hinged on political centralization. The rulers of the Oyo and Dahomey kingdoms created stronger centralized governments because of their dealings with other nations to the north and the necessity to maintain control over their own territory. African rulers understood that maintaining the military readiness necessary to acquire new captives and to defend itself required an organization and a bureaucracy to regulate European trade.

Traveling west from the Slave Coast, seventeenth- and eighteenth-century traders would land in the towns of Accra, Winneba, Cape Coast, or Elmina along an area that Europeans called the "Gold Coast." In terms of the slave trade, the Gold Coast never reached the significance of the Slave Coast, but Europeans still landed there because of the area's reputation as a source of gold. Although not a major source of slaves, political strife among the Akan resulted in a supply of captives. The Asante rulers and their armies successfully subdued several smaller states and took control of the Gold Coast. In the second half of the eighteenth century, the Akan wars resulted in approximately 150,000 slaves. Taken as a whole, the Gold Coast mirrored the Slave Coast. Few European traders traveled inland, and African leaders and the newly formed centralized African states restricted European trade to a few coastal towns. To the east of the Niger Delta, in the Bight of

Biafra, another area emerged where African leaders participated in the slave trade. Because of its mangrove swamps, the coast along the Bight of Biafra developed later than the Gold Coast or Slave Coast as a source of slaves. By the late 1670s, the towns of Aboh, Bonny, and Elem Kalabari were noted depots of the slave trade, but the major economic expansion in the Bight of Biafra occurred later in the eighteenth century. The coastline proved to be inhospitable even to the heartiest slavers, leading to a sparse presence of Europeans. The minimal Muslim influence demonstrates the difficulty in conducting trade on the swampy coast. Because of the harsh terrain, the strong centralized governments that emerged within the areas around the Slave Coast and Gold Coast rarely materialized along the Bight of Biafra. As a result, the slave trade developed a different character. Instead of prolonged warfare, including punitive reprisals, raids, and tribute payments, local village leaders organized and conducted slave raids and kidnapping expeditions against neighboring villages, bringing captives to the coast in canoes down the winding delta tributaries. Although the Bight of Biafra never reached the same level of slave exports in the eighteenth century as the Slave Coast, it has the distinction of surpassing all other West African regions.

The Fulbe of Futa Jalon and along the coast in the Gulf of Guinea, the centralized monarchies of the Asante, Dahomey, and Oyo all accumulated large amounts of state-owned slaves through repeated, extended wars. Because these confrontations between kingdoms vying for control of the slave trade often decided the economic and political stability of the region, African leaders often chose to execute their enemies and turncoats as part of their victory. Although African leaders transported large amounts of captives to the coast, African rulers curtailed the removal of people within their own kingdoms. The Asante on the Gold Coast ended the mass removal of local people to the coast, and once the Oyo became dominant along the Bight of Benin, they prevented the export of slaves from within their own borders. Once the Oyo empire lost its strong grip, exports of Yoruba slaves increased.

Slavery and the slave trade needed the support and protection of the centralized government to

survive, expand, and produce immediate short-term wealth. The political authorities ensured property rights for slave owners and traders. Governments protected the transportation of slaves and the slave markets, making escape or rescue difficult. Government regulation and involvement in the trade, however, did not translate into ownership of all slaves. For example, the kings of Asante and Dahomey exercised rights over all slaves within their kingdoms, but they did not own all slaves. Government interest in the capture, transportation, and sale of slaves resulted in the establishment of laws and regulations governing the trade. Regulations required the payment of a variety of fees, duties, and other charges. African states imposed monetary charges on traders for anchorage, wood, and water. Depending on the level of control African rulers exercised over commercial activities, traders may have been required to pay for brokers, interpreters, and other services. Beginning with the Portuguese, traders built several forts along the coast of Africa, with Elmina on the Gold Coast being the most notable. These forts served as trading depots during the slave trade while others doubled as protection against interlopers. None of these forts would have lasted without the permission of the local African ruler or community. The occupier of the fort paid taxes and obtained provisions from the surrounding villages. These forts were useful in making available the interior trading routes and contact with slavers and merchants.

Moving from codifying slavery and the slave trade into law, it was a short step to making slavery a social institution that could be passed to future generations as part of African social tradition. Many African states grew and prospered from their capability to control the slave trade. With government involvement, the law, a new social tradition, and the increased external demand for slaves, African rulers appeared more than willing to exchange their greatest asset, young men and women, for money.

—Michael Bonislowski

Bibliography

- Curtin, Philip, et al. *African History*. Boston: Little, Brown, 1978.
- Davidson, Basil. *The African Slave Trade*. Rev. ed. Boston: Little, Brown, 1980.

- July, Robert W. *A History of the African People*. 5th ed. Prospect Heights, IL: Waveland Press, 1998.
- Klein, Herbert S. *The Atlantic Slave Trade*. New York and Cambridge: Cambridge University Press, 1999.
- Lovejoy, Paul E. *Transformations in Slavery: A History of Slavery in Africa*. New York and Cambridge: Cambridge University Press, 1993.
- Manning, Patrick. *Slavery and African Life: Occidental, Oriental, and African Slave Trades*. African Studies Series, ed. J. M. Lonsdale. Cambridge: Cambridge University Press, 2000.
- Shillington, Kevin. *History of Africa*. 2nd ed. New York: Palgrave Macmillan, 2005.

African Political Organization

By the mid-fifteenth century African states spanned almost the entire continent, with the kingdoms of Mali in west Africa and Songhai, Kanem-Bornu, and Hausaland in central Africa, while Ethiopia and the famous Swahili city-states prospered along the eastern coastline of Africa. Sub-Saharan Africa was a vibrant region that included both large and powerful kingdoms and smaller but flourishing societies united by family or kinship ties.

In eastern Africa, the Christian kingdom of Ethiopia enjoyed a revival under the ruling Solomonid dynasty, which controlled a vast territory from the Red Sea port city of Massawa in the north (in present-day Eritrea) south to Shoa in the central highlands. In the fourteenth century Ethiopia embarked on a campaign of expansion, which brought it into a prolonged conflict with the neighboring Muslim states. The Solomonid rulers initially enjoyed a series of military successes that ensured Christian dominance in the region. This period of political and economic stability led to Ethiopia's religious and literary revitalization as well. The political situation, however, changed in the early sixteenth century. Ahmad ibn Ibrahim (otherwise known as Gran, "the left-handed"), the ruler of Adal, declared a religious war on Ethiopia and launched a series of campaigns that between 1529 and 1543 spread death and destruction in Ethiopia. Continued military setbacks forced King Galawdewos (r. 1540–1559) to seek help in Europe, especially from the Portuguese. With the help of a small but well-armed Portuguese contingent,

the Ethiopians drove the Muslims out of the central highlands and later conducted successful campaigns throughout the 1550s, 1560s, and 1570s. Aside from immediate devastation, this long conflict also changed the dynamics in the southern highlands of Ethiopia, where the Oromo (also known as the Galla) tribes of pastoralists from the grasslands of the south began to infiltrate and to settle. The Oromo arrival altered the demographic picture of highland Ethiopia and later profoundly affected Ethiopian politics. Continued warfare devastated many Ethiopian churches and destroyed literary and artistic treasures. Close contacts with Portugal inevitably led to Jesuit missionary activity, which the Ethiopian Church perceived as a threat, and theological disputes between the Jesuits and the Ethiopian clergy created a protracted religious and political schism in the kingdom. Although revived under the leadership of the *yetégé* ("empress") Mentewwab, one of the most remarkable women rulers of this age, the Ethiopian kingdom fell into the long Era of the Judges (1769–1855) when emperors changed in rapid succession as a result of bitter struggles between nobles, the most powerful of them being the Oromo nobles who dominated the Ethiopian kingdom until the 1850s.

Farther south in coastal eastern Africa existed the Swahili city-states that developed a reputation for commercial prosperity. The cities of Mogadishu, Mombasa, Kilwa, and Sofala maintained trade contacts throughout the Indian Ocean, the Middle East, and Africa and reached their peak of development in the fourteenth through the fifteenth centuries. Fiercely competitive, the cities vied for political and commercial hegemony, in the process creating a unique cultural legacy. They embraced religious syncretism as represented in festivals and competitive celebrations that combined local and Islamic traditions. The Swahili ritual calendar combined the Persian solar calendar for local rituals, farming, and navigation with the Arabic lunar calendar for religious celebrations. The arrival of the Portuguese fleet led by Vasco da Gama in 1498 marked a turning point in the Swahili cities' history. The Portuguese soon embarked on building their maritime empire in the Indian Ocean, and the Swahili city-states were ill-prepared to defend themselves. But the European occupation of the

city-states proved to be fleeting, as thousands of residents left their cities such as occurred in the city of Kilwa, which the Portuguese abandoned in 1512. Furthermore, after their triumph over a Muslim and Indian coalition in a naval battle at Diu in 1509, the Portuguese accorded low priority to the east African coast and concentrated their efforts on India and Arabia. The initial Portuguese withdrawal from eastern Africa created a political vacuum, and many Swahili city-states were plunged into periods of turmoil as their overseas commerce collapsed. Some towns, such as Kilwa and Mombasa, turned inward and developed commercial ties with the hinterlands. By the end of the sixteenth century the Portuguese dominance in the Indian Ocean declined, following the kingdom's disastrous invasion of Morocco in 1578 and the Spanish takeover of Portugal in 1580.

As Portuguese garrisons in Africa were drawn down, at least for the time being, the Swahili cities saw the arrival of a new power. Following their conquest of Egypt during 1516–1519, the Ottoman Turks had gradually expanded their influence to Arabia and the Red Sea. Their struggle against the Portuguese posed them as potential allies to Swahili towns, which now supported Turkish efforts in the Indian Ocean. Throughout the 1580s the appearance of Ottoman forces caused a series of revolts of Swahili towns, which the Portuguese, again aware of the importance of eastern Africa, now subdued. Having reestablished their dominance on the coast, the Portuguese made Mombasa the center of their new and reinforced presence, which endured for almost four decades. By the mid-seventeenth century the Portuguese faced a new threat when the Omani Arabs became determined to drive them out of the northern Indian Ocean. In 1661 an Omani raid sacked Mombasa, ending Portuguese power on the coast north of Mozambique. While individual Swahili towns remained largely independent, Omani suzerainty, which persisted for the next 200 years, led to an upsurge in trade as well as a profound Arab influence in religion, law, commerce, architecture, dress, and vocabulary.

Southern Africa experienced a history that was distinct from western and eastern Africa. Until the arrival of the Portuguese in the fifteenth

century, southern Africa developed outside of direct influence of the Mediterranean cultures and the Islamic world. Southern Africa's political and religious life centered around several polities that developed well before 1450. The most important of these was the kingdom of Zimbabwe, which rose to prominence in the thirteenth century and flourished until the fifteenth century. Its capital, Great Zimbabwe, extended over 60 acres (24 hectares) and included a formidable edifice, known as the Great Enclosure, consisting of a fortified enclosure with walls as high as 36 feet (11 meters). The state's wealth rested on the area's rich gold-bearing belt, resulting in a profitable gold trade with the eastern coast. In the mid-fifteenth century the kingdom of Zimbabwe rapidly declined, perhaps because of soil exhaustion and overpopulation. By the time the Portuguese reached eastern Africa, Great Zimbabwe and most of the kingdom had been abandoned. Instead two new states emerged, the kingdom of Mutapa, stretching between the Zambezi and Limpopo rivers in the north, and the kingdom of Butua in the south. Both states developed in the tradition of Zimbabwe until they were taken over by the Rozwi empire.

Western Africa had long served as an important trade region where caravans from northern Africa and the Middle East traded with local states. The region was initially dominated by the kingdoms of Ghana and Mali, but by the fifteenth century several new states emerged. Thus, the state of Wolof gained its independence from Mali in the north, while Kantora remained under Malian influence in the south. These states usually had a well-defined government hierarchy, with a king, often elected by nobility, presiding over the state. But not all sub-Saharan peoples had formed states, and many lived in stateless societies led by family or clan elders. These societies were agrarian in nature, and the cultivation of land was the primary occupation of its members. Families helped each other in clearing land from surrounding forest, cultivating it, and gathering the harvest. In Senegambia, a region between the Senegal and Gambia rivers, millet, sorghum, and yams were the staple food, supplemented with plantains, beans, fish, and small game, while in the south along the coast of Guinea rice played an important part in daily life. As Robert W. July,

a prominent scholar of precolonial Africa noted, "life was simple, government was largely limited to the settlement of disputes by family heads or elders, the basic economy scarcely more than the production and consumption of food, social life centered on the ceremony accompanying birth, death and family alliance."

In the fifteenth century a new powerful state, the kingdom of Benin, emerged in present-day Nigeria. Ruled by an *oba* (divine king), the Benin kingdom came to prominence under the leadership of Oba Ewuare (r. ca. 1440–1473), who overcame tribal and village chiefs (*uzama*) to centralize his authority and considerably expanded his realm's borders. His successors Ozolua (r. 1481–1504) and Esigie (r. 1504–1517) continued his policies. At its height in the sixteenth century, the kingdom of Benin controlled a vast territory between the Niger River in the east and Yoruba country in the west. In 1485 the Portuguese reached this region, and the ensuing profitable trade in spices (primarily pepper) and slaves further strengthened Benin. Its capital, Benin City, became one of the great urban centers in Africa, a city of 25 miles (40 kilometers) in circumference protected by walls and intersected by numerous streets and avenues. The city was divided into two sections, the larger for the town's residents and the smaller for the elite and royalty. As trade flourished so did the arts, and the Benin craftsmen refined their skills with copper and brass, producing elaborate pieces of art. These Benin bronzes, magnificent in their craftsmanship, vividly conveyed the oba's power and authority as well as recorded tradition and folk tales. Sadly, nothing remains today of this glorious city; in 1897 a British expeditionary force led by Admiral Sir Harry Rawson conquered and destroyed the city and much of its famous buildings and treasured art.

To the north of Benin lay Songhai, a successor state of Ghana and Mali. Songhai was the last of the three great empires of the western Sudan. The Songhai state was founded under the leadership of Sonni Ali (r. 1464–1492) when Songhai authority extended to almost the entire basin of the Niger River, including the famous Timbuktu. Sonni Ali showed himself to be a talented military and political leader who divided his empire into provinces, established a navy (led by

a commander known as the *bi-koy*), and promoted trade. Upon his death a power struggle between his successors ensued, which ended in the victory of Muhammad Ture, a devout Muslim of Soninke origin who soon took the title *askiya* ("great leader"). Askiya Muhammad I Ture (r. 1493–1538) completed the expansionist and administrative policies of his predecessor Sonni Ali. He conducted wide-ranging campaigns that brought new regions under Songhai authority. A convert to Islam, he made a hajj (pilgrimage) to Mecca and used Islam to unite his far-flung empire. After his successful wars of expansion, Ture reorganized the administrative system set up by Sonni Ali. Ture divided the empire into four viceroyalties, each under a viceroy or governor, usually chosen from the royal family or a trusted servant. He established a council of ministers and replaced local Songhai officials with more efficient Arab ones. Under the leadership of Ture, Songhai enjoyed economic prosperity, and visitors remarked on its abundant food supplies and vibrant trade. European and north African commodities (clothes, perfumes, copperware, glass, etc.) were in high demand and were delivered by European and Muslim merchants. Following their expulsion from Spain in 1492, a large number of Jews came to Songhai, where they quickly became involved in trade. Ture revived Timbuktu as an important educational and Islamic center, and its reputation soon drew many Muslim scholars and clerics for educational pursuits as well as for trade. In 1513 Leo Africanus visited the town and was struck by "a great store of doctors, judges, priests, and other learned men that are bountifully maintained at the King's court." After a 35-year reign, the aged Ture, known as Askiya the Great to later generations, was deposed by his children in 1528. His successors failed to live up to his legacy, and the Songhai state quickly declined amid internal dissent and political turmoil before being finally destroyed by the invasion of the Moroccan sultan al-Mansur in 1591. In the aftermath, the once-great empire split into numerous small kingdoms.

To the east of Songhai the kingdom of Kanem-Bornu prospered. By the fifteenth century the state of Kanem, founded by the Kanuri, a mixture of people from south of the Sahara and

Berbers from the north, already had existed for some 600 years. However, in the mid-1400s the weakened Kanem was absorbed by the rising power of the Bornu state, leading to the establishment of the powerful kingdom of Kanem-Bornu. Throughout the sixteenth century the kingdom rapidly expanded under a succession of able *mais* ("kings"), the greatest of whom was Idris Alawma (r. ca. 1571–1603). His victorious campaigns greatly expanded the kingdom's territory, while shrewd domestic policies resulted in a centralized state administration and a profitable trade. A devout Muslim, Idris Alawma built mosques at his capital city of N'gazargamu and introduced Islamic law in place of African customary laws. However, as often happens, Alawma's successors proved to be less capable, and the kingdom gradually declined and was later absorbed into the French West African empire.

—Alexander Mikaberidze

Bibliography

- Ade Ajayi, J. F., and Michael Crowder. *History of West Africa*. New York: Columbia University Press, 1972.
- Birmingham, David, and Phyllis Martin. *History of Central Africa*, Vol. 2. London: Longman, 1983.
- Fage, J. D., and Roland Anthony Oliver. *The Cambridge History of Africa*, Vols. 3 and 4. Cambridge: Cambridge University Press, 1975 and 1986.
- Thornton, John K. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. Cambridge: Cambridge University Press, 1998.

The Ottomans as a Gunpowder Empire

Hodgson's "gunpowder empires" theory is an important contribution but prone to oversimplistic interpretations. The Ottoman sultanate's successful introduction of firearms into the military system was instrumental in its rise to empire. However, the real reason behind its success lies not with firearms but with skillful military organization backed by an efficient financial-administrative system that proved more adaptable to conditions than its rivals. In opposition to earlier theories, recent academic research is increasingly showing that the successful introduction of firearms became possible because of

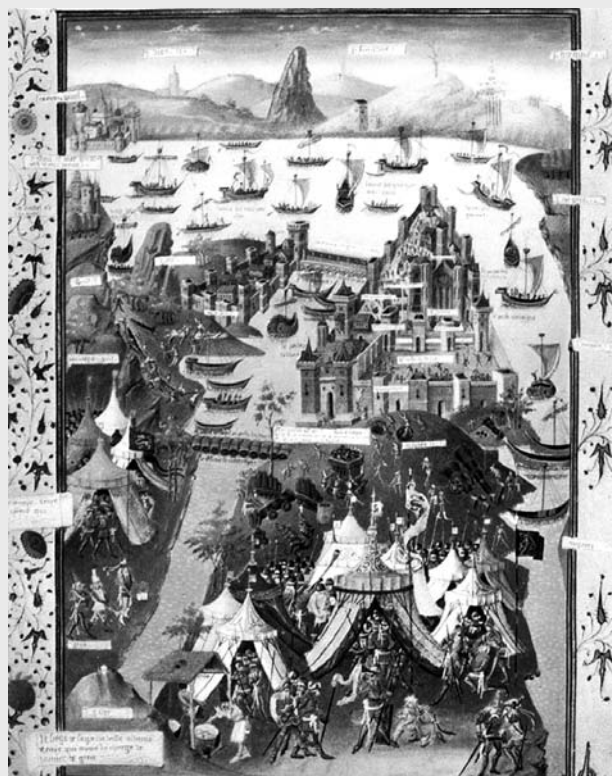
➤ CONSTANTINOPLE IN 1453

Gunpowder weapons, as well as the strategic and tactical skills of the 21-year-old sultan Mehmed II (r. 1444–1446 and 1451–1481), were equally important factors in the successful siege and conquest of Constantinople in 1453.

Mehmed II the Conqueror (Fatih) carefully secured his empire's borders by diplomatic and military means. By taking into account the experiences of four failed sieges of his ancestors, he mobilized all the resources of the state. He raised units and collected volunteers from all corners of the Ottoman world who were not only Turk but also included Bulgarian, Serb, Albanian, Greek, and even some Latin warriors. In order to achieve an effective blockade, he constructed a naval fleet and a coastal fortress, which would be located on the opposite shore of the existing one in Asia, whose cannons cut off Constantinople from the Black Sea. Above all, a strong siege train including huge bombards was assembled, using European and local expertise.

After two long years of preparation, the siege began on April 5, 1453, with artillery fire and continued with mining and occasional frontal attacks. The exceedingly small Byzantine army, which was vastly outnumbered, was reinforced by the city's greatly reduced civilian population, several thousand foreign mercenaries, and some volunteers and successfully withstood these early attacks by using an elaborate defensive system. The Ottoman navy failed to breach the boom closing the entrance of the Golden Horn and was unable to enforce its blockade. Four large Christian supply ships ran the blockade after a day-long naval skirmish on April 20.

Sultan Mehmed overcame some of the tactical difficulties presented by the city's fortifications, which had repulsed numerous attacks over the past 1,100 years, by ingenious methods, such as moving ships across land into the protected harbor known as the Golden Horn and designing cannons to hit specific targets. Even though the Byzantine defenses and morale were increasingly weakened (particularly after seeing Ottoman vessels in the Golden Horn), the Ottoman side also suffered significant problems. The conservative governing elite under the leadership of Chandarli Halil Pasha was increasingly unhappy and vocal with each passing day. They were certain about the impossibility of the fall of Constantinople and were uneasy about the increasing risk of a European



The Siege of Constantinople in 1453, from Le Voyage d'Outremer by Bertrandon de la Broquiere, fifteenth century. (Library of Congress)

army of relief coming to the aid of the city. Mehmed, however, convinced respected religious figures and ulema to support the siege and encouraged his soldiers by talking about divine omens and signs. He also made use of the financial expectations and greed of the soldiers by promising three days of looting and plunder.

All of his available units were organized into three waves and positioned mainly against three breaches, which had finally been created in the walls. The final assault started before dawn on May 29, 1453. The first wave consisted of mercenaries and volunteers who bore the brunt of the attack and were virtually annihilated but at the same time wore out the defense further. Azabs (Anatolian infantry) attacked as a second wave and nearly scaled the walls. At this critical moment Mehmed ordered the final wave of Janissaries to attack. The defense collapsed after a last stand, and Ottoman soldiers poured into the city.

—Mesut Uyar

centralized administration. Consequently, the financial and administrative demands of firearms encouraged the centralization process.

The Ottoman empire inherited Central Asian steppe-nomadic, Islamic, and Byzantine traditions. By blending this heritage into a unique form, the Ottomans were able to overcome their rivals and occupy the eastern Balkans and western Anatolia without using firearms. But when increasingly faced with firearms in the western Balkans, they were quick to introduce and make use of them at the beginning of the fifteenth century. Slowly but steadily, special units were raised and equipped with firearms, and cannons became indispensable parts of siege trains. The Ottomans proved very adaptable, borrowing not only new technology but also the tactics and techniques to use this technology effectively. After suffering difficulties against Hungarian war carts (*wagenburgen*) armed with light cannon and arquebuses, the Ottomans copied these weapons and employed them successfully against these same Hungarians in less than five years. Even a special military corps was founded to use war carts.

Obviously, firearms proved to be an important element in the Ottoman military victories after the fall of Constantinople in 1453. Ottoman siege trains captured many fortresses, including modern ones in the Balkans and Hungary. The Ottomans also defeated their Asian rivals in a series of pitched battles—Otlukbeli (1473), Chaldiran (1514), Mercidabik (1516), and Ridaniye (1517)—though not always easily. But when analyzed closely, each of these sieges and battles shows clearly that the main factor behind the victories was an efficient military organization with its complex logistics. The enormous task of transportation of guns to the battlefield became possible with a centralized administration and its mobilization of resources. However, firearms were not numerous in the combat units. Due to the drawbacks of arquebuses, which were slow, inaccurate, and often faulty, the Ottomans preferred to keep traditional composite bows as the main weapon in their timarait, or feudal, cavalry and also as an alternative weapon within the Janissary corps until the end of the sixteenth century.

The growth and development of a bureaucracy and increased scrutiny of untapped

sources for taxation and mobilization went hand in hand with the ever-increasing size of the army. In order to supply an army conducting continuous campaigns in the east and the west, the Ottomans built state-owned cannon foundries and munitions and gunpowder factories in both the big cities and frontier centers. Additionally, a complex administrative and socioeconomic system was devised in order to produce the necessary amounts of modern weapons and good-quality gunpowder. At the same time, great care was given to following the developments taking place in Europe, and special measures were regularly taken to acquire new firearms technology. During the sixteenth and seventeenth centuries, the Ottoman military-industrial complex remained the largest in Europe and West Asia.

The Ottoman empire also played a crucial role in the diffusion of firearms and firearm technology, though not always intentionally. Persia acquired firearms from the Ottomans, initially as war booty but mainly with the help of deserters and mercenaries and also through illicit trade. Ottoman-trained mercenary musketeers became sought-after elements not only in Persia but also in Central Asia, Afghanistan, and India. These so-called Rumis ("Romans," so-named because Ottoman Anatolia had been the land of the eastern Roman empire) altered local power balances by providing services to the different conflicting sides.

After the uncontrolled diffusion of firearms to the east, the Ottoman sultans began to send parties of guns, technicians, and soldiers to various Islamic states. Even though none of these parties was big, they were still effective. Ottoman aid improved the capabilities of the Uzbeks against Persia and the Aceh sultanate in Sumatra against Portugal. Official Ottoman military advisory teams and profit-oriented mercenaries played an even more important role in North Africa. Their aid to Morocco proved to be a crucial factor in Morocco resisting a Portuguese invasion. More importantly, Ottoman corsairs and mercenaries independently conquered Algeria and Tripoli (Libya) by making use of their expertise of firearms. These conquests were incorporated into the empire later on. In some cases, however, Ottoman military help turned out to be counterproductive, as was true in the case of

Morocco. With Ottoman technology and know-how, Moroccans were able to defeat the Portuguese and extend their influence deep into the Sahara. But they also successfully blocked Ottoman expansion into the far-western regions of North Africa.

In addition to these Islamic lands, some non-Muslim countries, such as China, received Ottoman firearms through indirect means.

The diffusion of firearms and firearm-bearing mercenaries also affected Ottoman society. The increased reliance on mercenaries and militia created a volatile atmosphere inside the empire. Raised from essentially urban unemployed youths armed with firearms and organized into free companies, mercenaries were willing to work for whoever could afford to pay them. They were also well accustomed to banditry and extortion of money from the civilian public. Even large punitive expeditions did not solve the problem. Internal brigandage affiliated with mercenaries continued on until the nineteenth century.

Being a traditional agrarian empire, the Ottoman empire also increasingly suffered problems coping with West European military technology after the Industrial Revolution. The Ottoman economy was no match for the Western nations' enormous production capacities. Thus, the empire was unable to protect itself against the destructive effects of Western economic imperialism. The effects of continuous wars on both fronts—Asia to the east and Europe/North Africa to the west—which exhausted financial reserves and destroyed local economies, must also be taken into account.

Contrary to common belief, the vested interests of the governing elite and established army corps did not create additional barriers to the reception of new technology, but they did hinder the acceptance of new military drills, tactics, and techniques.

Regardless, the conservative formation of the military worked well for several centuries but not after the end of the eighteenth century. Even before then, however, the Ottoman military had difficulty creating its own new weapons and adapting effective tactics and techniques to use whatever firearms they had. Quite simply, the Ottomans were never able to found academic and technical institutions to deal with

military education, training, research, and development. The lack of academically trained officers, printing presses, and military literature effectively blocked the dissemination of military knowledge and discussion. This deficiency was also instrumental in maintaining traditional on-the-job training as the backbone of the Ottoman military education. The first printing press was opened in 1727 and closed after 16 years without making any important contribution to the military. The first military manual/drill book was printed a century later in 1828. After many failures, the first modern military engineering school was founded in 1795 with limited enrollment, and a modern military academy for infantry and cavalry corps was founded in 1834.

—Mesut Uyar

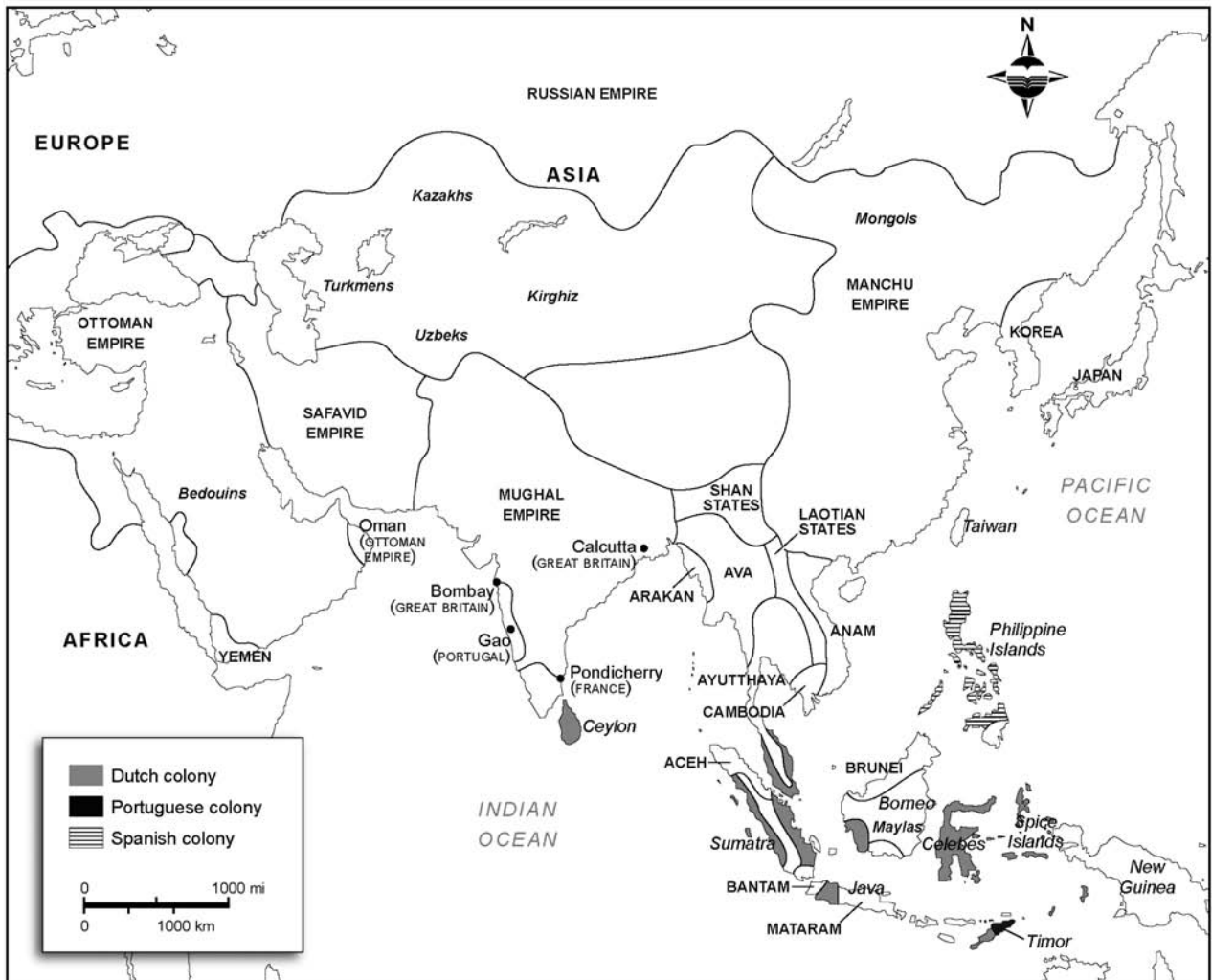
Bibliography

- Agoston, Gabor. *Guns for the Sultan: Military Power and the Weapons Industry in the Ottoman Empire*. Cambridge: Cambridge University Press, 2005.
- Chase, Kenneth. *Firearms: A Global History to 1700*. Cambridge: Cambridge University Press, 2003.
- Hodgson, Marshall G. S. *The Venture of Islam: Conscience and History in a World Civilization*, Vol. 3. Chicago: University of Chicago Press, 1974.
- Inalcık, Halil. "The Socio-political Effects of the Diffusion of Firearms in the Middle East." In *War, Technology and Society in the Middle East*, edited by V. J. Parry and M. E. Yapp. London: Oxford University Press, 1975.

Crime, Policing, Legal Systems, and Punishment in Early Modern India

Political and social developments in early modern India led to a diverse, overlapping, and at times innovative legal system that was often tolerant in its ability to adjudicate among various religious groups and within diverse jurisdictions. Though *dharmasastra*, or dharma, existed as a system of Hindu written law, it did not serve to unify the Indian legal system and deferred to varying and changing local customs. The Mughals, who were Muslim rulers, applied Sharia, or orthodox Muslim law, though Hindus were allowed to appeal to Hindu law. The close

ASIA IN 1700



of the early modern period revealed a powerful and profitable British East India Company eventually recognizing Muslim and Hindu law.

Hindu judicial administration relied on local customs and on strong public belief in justice, all under the authority of the monarch. Social control and change relied on this sense rather than on an emphasis on statute, case precedence, or a professional class of advocates. Defendants and plaintiffs could be represented by close friends or relatives in minor cases. Increasingly competence in dharma seemed to play a role and even representation was required, but the relationship to the party concerned was paramount. In civil matters Hindus were allowed their own tribunals. In Hindu law when there was a conflict

between Hindu commentaries and local custom, the latter usually prevailed. Indigenous minority Christian populations were often assimilated into Hindu society and as such were afforded the protection of Hindu law.

In Islam sovereignty belonged to Allah, and it was the duty of the king to rule in his name and to see that his decrees were followed. Here royal courts had jurisdiction over Muslim commercial, civil, and family concerns. However Sharia was qualified by royal decrees, customs, or, at times, corruption. Rulers such as Akbar (r. 1556–1605), Jahangir (r. 1605–1627), and Shah Jahan (r. 1628–1658) considered administration as part of their devotion to God, whether punishing offenses against religion, focusing on

daily administration of government, or in ensuring new reforms. Mughal rulers, on the whole, afforded legal toleration to Hindus.

The pinnacle of Muslim legal toleration and justice was under Akbar, who achieved a solid administration over northern and central India. His empire was divided into 12 provinces, each under a governor. These were subdivided into districts. Cities had their own governors who oversaw various boards. They also had their own police force, though the countryside was secured by district military commanders. Though each had their procedural traditions, much depended upon the will of the sultan, who had power of remission or enhancement of sentences. Sharia was interpreted by the highly respected scholars called *ulama*. The *kazi*, or judges, enforced this law, though appeals could be made to the emperor. At the village level, Hindus often appealed to the *dharmasastra* in court cases. Judgment was issued either through the opinions of a Brahmin knowledgeable in the law or through the *panchayat*, which was a council of five ruling a Hindu village. If witnesses for the plaintiff were competent and consistent, testimony for the defendant usually held little weight. Unless there was an appeal to the emperor, the decision was final. Usual punishments varied in range and included fines, whipping, public humiliation, banishment, and even death. Mughal India contained very few prisons.

However, under Aurangzeb (r. 1658–1707) toleration was abandoned. He appointed censors in large cities to enforce Sharia. Proper prayers were to be performed, Hindus were to build or repair their temples, and their religious fairs were outlawed. Aurangzeb even tried to abolish gaming and illicit sex. When crowds gathered to protest his rule of ruthless power and terror, he responded by ordering imperial elephants to crush them.

Premodern India had witnessed an increased level of laws governing associations. These included laws for merchants, traders, soldiers, religious specialists, agriculturalists, and even castes. This even allowed for progressive change in that intermediate-level associations were involved in the creation and administration of law.

Though the East India Company was certainly not interested in progressive change and

in fact engaged in increasing brutality, it did eventually affirm Hindu and Muslim law. Charters of 1600 and 1609 gave the company authority to make laws and to enforce and police them within the domain of English factories. Officially by 1753 Indians could be granted exemptions in the mayor's courts and have their cases decided based on their own religious laws. However, in 1757 the company gained military power in Bengal under the brutal and brash leadership of Robert Clive (1725–1774). He left the *nawab* with no money and little power to oversee the criminal justice system and the military administration. Police, soldiers, and legal officials were left unpaid, and lawlessness, corruption, and even starvation of the native population ensued. Clive left for England in disgrace and there committed suicide. The scholarly and methodical Warren Hastings (1732–1818) superseded him as governor, and Hastings's Mufassal Regulation of 1772 officially affirmed Hindu and Islamic legal toleration. However, another body of law, now English Common Law, would add to the diversity (and complexity) of laws governing the subcontinent.

—M. M. Norris

Bibliography

- Davis, Donald R., Jr. "Intermediate Realms of Law: Corporate Groups and Rulers in Medieval India." *Journal of the Economic & Social History of the Orient* 48(1) (2005): 92–117.
- Fyzee, Asaf A. A. "Muhammadan Law in India." *Comparative Studies in Society and History* 5(4) (July 1963): 401–415.
- Galanter, Marc. "The Displacement of Traditional Law in Modern India." *Journal of Social Issues* 205(4) (1968): 65–91.
- Rocher, Ludo. "'Lawyers' in Classical Hindu Law." *Law & Society Review* 3(2/3) (November 1968–February 1969): 383–402.
- Spear, Percival. *A History of India*, Vol. 2. London: Penguin, 1978.
- Wolpert, Stanley. *A New History of India*. 7th ed. Oxford, UK: Oxford University Press, 2004.

Exerting Imperial Control under the Ming (1368–1644) and Qing (1644–1911) Dynasties

The general drift of imperial control during the Ming and Qing dynasties was toward an increased level of autocracy and a strong

centralization of power in the hands of the emperor. The position of the educated classes who filled the role of bureaucracy was on the whole lowered, while government management of society in general increased. Religious organizations and individuals were also more closely monitored than they had been in the past. The Qing government also supervised and censored all written texts in the empire. Nevertheless, the degree to which government controlled the state or the people was far less than that experienced by people in the twentieth century.

During the preceding Yuan dynasty (1279–1368), the Mongol rulers had turned the Chinese world upside down by their thorough disdain of the scholarly class. They had cancelled the examination system and lowered the legal status of Confucian scholars. The Yuan emperor was theoretically all-powerful and in practice maintained a great distance between himself and his ministers. One particular matter was the practice of having offending ministers beaten, which continued under the Ming. Although the system was partially revised during the latter half of the dynasty, with the reinstitution of the exam system in 1313, the Yuan set the tone for the imperial period.

The founder of the Ming, Zhu Yuanzhang (1328–1398), had a long reign and was important in establishing the Ming state and government. He established a thoroughly reworked law code, the Ming Code. During the 1370s and 1380s he also wrote many books of rules for the empire, its people, and his own family.

One way in which Zhu increased the power of the position of emperor was in the permanent abolition of the office of prime minister. Another was in his periodic purges of the bureaucracy, which created a distinct element of fear among the officials who would serve in the government.

Zhu also implemented rules to control both the Buddhists and Daoists and to limit their numbers. These laws provided that both would ultimately be under civil authority, and in many cases those who became monks or nuns needed to pass exams set by the state. Nevertheless, in practice, state control over religion was limited.

The third emperor of the Ming, Zhu Di (r. 1402–1424), who usurped the throne from his

ON COMBATING THE MONGOL THREAT— MING-QING RESPONSES

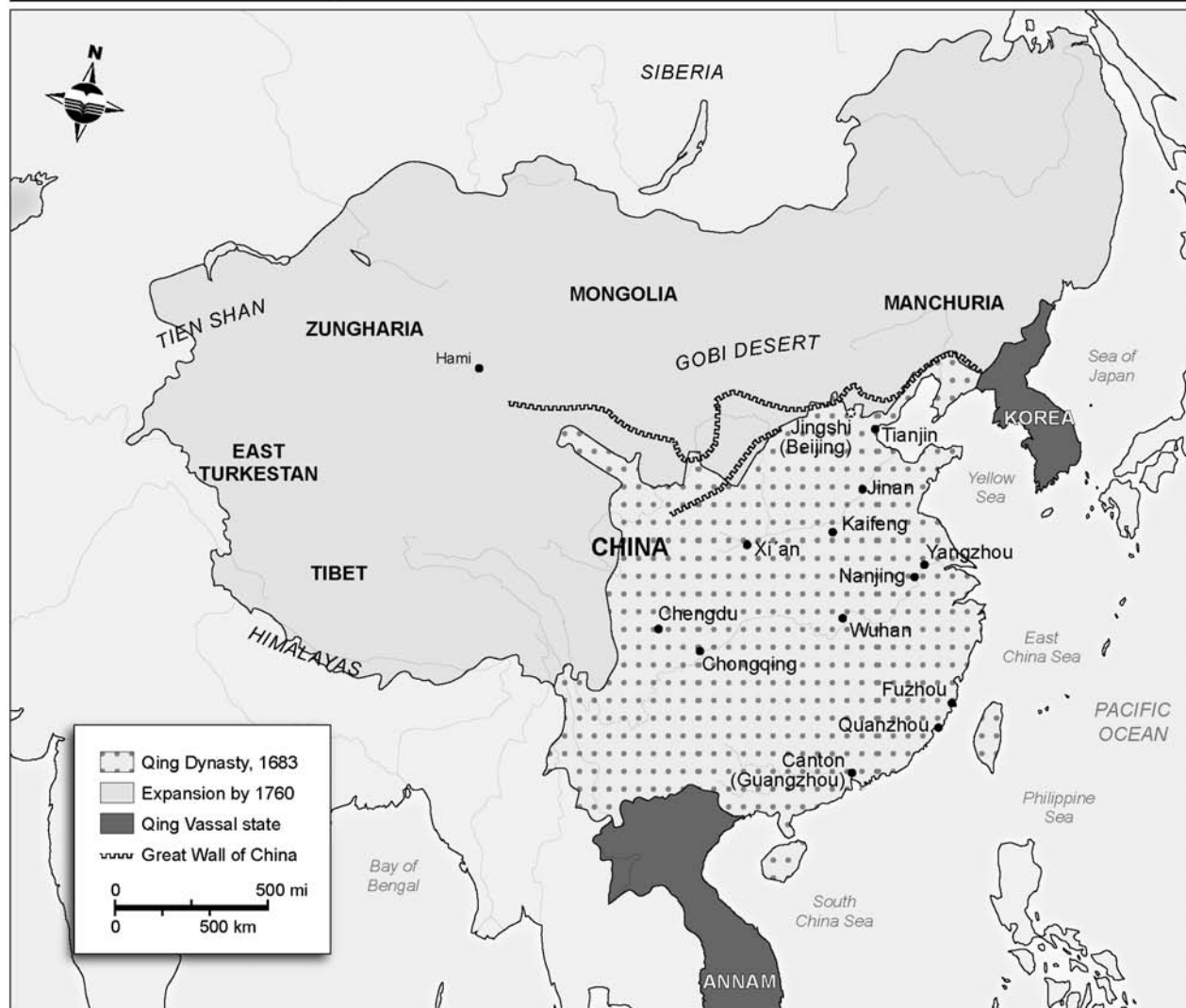
Although the emperors of the Ming and Qing dynasties took the Mongol threat very seriously, their approaches differed. The Mongols, who were composed of many tribes, differed in their attitudes toward the Ming dynasty. After the fall of the Yuan dynasty, some of the Mongol tribes accepted the Ming and became part of their tributary system. Other Mongol tribes, however, particularly those in the far north, never recognized the Ming. The Yongle emperor (Zhu Di) responded to the threat posed by the Oirat Mongols with a series of five campaigns between 1410 and 1424. These campaigns did not resolve the Mongol threat. The Zhengtong emperor (Zhu Qizhen) also resorted to a military campaign. However, he was not only defeated but was also captured at the Battle of Tumu in 1450. For the remainder of the Ming dynasty, the Mongols remained a threat. This threat was resolved by the Manchu rulers of the Qing dynasty, who combined a policy of military suppression and religious activity. Kangxi defeated Galdan, leader of the Zunghars (a Western Mongol tribe), in 1696, and Qianlong's armies completely destroyed them by 1760. The Manchus also held important influence with the Dalai Lama, who was highly esteemed by the Mongols. This combination was successful in resolving the Mongol threat.

—Ihor Pidhainy

nephew, was also responsible for many of the practices during the Ming dynasty. He increased opportunities for scholars to serve and contribute at court but at the same time had them carefully observed. He established the Eastern Depot, a secret police force that was run by the eunuchs (who also played a more important role under him). In addition, he also expanded the powers of the Embroidered Uniform Guard, a unit of military men who served as military police. The Eastern Depot and the Embroidered Uniform Guard worked in tandem in many extralegal ways.

These powers were increased during the opening of the Qing dynasty. The Qing ruling house was Manchu, a northeast Asian people who had managed to take over after the Ming fell. The Manchus spoke a different language,

EXPANSION OF QING CHINA, 1683–1760



practiced different religions, and had different customs and habits than the Han Chinese, and in establishing their rule the Manchus were obliged to ensure the loyalty of their Han citizens. The rulers carefully controlled and watched for any seditious elements.

They did this by instituting a number of measures. They reorganized the government so that each department was headed by a Manchu, and they created a double bureaucracy so that for each position there was one Manchu and one Han member. The rulers also carefully monitored all literature for any signs of political disloyalty or ethnic slurs. Of the several purges

of literature, the most infamous was under the Qianlong emperor during 1772–1788, a period in which numerous works were destroyed. Many scholars were executed, and their families were made slaves. The early Qing emperors also instituted various methods of spying upon their government officials whether they were Han or Manchu. This secret service is well documented in state archives.

The Qing rulers increased the role that government played in the lives of common people. The rulers required all men (except for Buddhist and Daoist monks) to dress and wear their hair in the Manchu manner. Those who went against

the requirement were severely punished. The rulers were unsuccessful, however, in imposing a ban on foot binding among the Han women.

The general drift of the latter two dynasties was one of further involvement and control of both the bureaucrats and the local people. Nevertheless, the reach of the government through its officials was miniscule compared to society today.

—*Ihor Pidbainy*

Bibliography

- Qian, Mu. *Traditional Government in Imperial China: A Critical Analysis*. Hong Kong: Chinese University Press of Hong Kong, 1982.
- Rawski, Evelyn S. *The Last Emperors: A Social History of Qing Imperial Institutions*. Los Angeles: University of California Press, 2001.
- Wakeman, Frederic, and Carolyn Grant. *Conflict and Control in Late Imperial China*. Los Angeles: University of California Press, 1975.

Sengoku Jidai—The Warring States Era in Japan, 1467–1600

The Sengoku period, or Warring States Era, in Japanese history was a time of great social upheaval, political instability, and frequent military conflict between rival contending factions within Japan. The age was one of the darkest and most troubled in Japanese history as fighting raged throughout the country. The third Ashikaga shogun, Yoshimitsu (1358–1408), had asserted shogunal power over most of Japan, but after his death the shogunate declined so much that for more than a century it was almost completely powerless as a central government. (The Shogun was the dominant military figure in the country whose army controlled the government and who ruled through regional military figures known as daimyo or lords, who in turn ruled their domains in the name of the shogun.) The domains of many daimyo were ravished by the internecine battles among vassals or frequent peasant uprisings.

Historians interpret the Warring States Era as a period both significant and filled with ambiguities. In some scholars' interpretations, this era of conflict and instability extends from the onset of the Onin War (1467–1477) until 1568, when Oda Nobunaga (1534–1582) marched his

army into Kyoto to impose national hegemony upon regional warlords. Other historians emphasize its beginnings in 1490, when Hosokawa Masamoto (1466–1507), the *kanrei* (shogunal deputy) seized actual control of the Muromachi shogunate. Still others trace the beginnings of instability to 1491, when Hojo Soun (1432–1519), formerly a minor samurai, conquered Izu Province and began his rise in the Kanto (now Tokyo) region and end the period in the very early 1600s with the rise of the Tokugawa shogunate (1600–1867).

The term *gekokujo* (the overthrow of those on top by those below) is often employed to

➤ BUSHIDO

The term “Bushido” (“the way of the warrior”) originated in Japan during the Edo period (1600–1867) and describes the ethical code of the ruling samurai (warrior) class. Bushido implies not only a high degree of martial zeal and skill with weapons but also absolute loyalty to one's lord, a strong sense of personal honor, devotion to duty, and the courage and conviction to sacrifice one's life in battle.

Bushido developed in Japan's medieval period when bands of warriors serving their lords became engaged in frequent battles. The relationship involved the warriors deriving favors from their lord in exchange for their service. Modern historian Watsuji Tetsuro wrote that the core of the medieval lord-vassal relationship was a “total, unconditional self-renunciation on the part of the follower to his lord.” On the other hand, historian Ienaga Saburo argued that the relationship was basically economic and contractual: the follower's loyalty could be held only as long as the lord was able to bestow favors. Other historians argue that the truth lies somewhere in the middle: some samurai gave unconditional service to their lords, while for others it was conditional.

The famous kabuki and bunraku puppet play *Choshingura* dramatized the Bushido philosophy. The production recounts a 1701 incident in which the 46 samurai of a lord, forced to commit suicide due to his violent response to an insult by a higher official, assassinate the official and then commit mass suicide.

—*Daniel A. Métraux*

characterize this era. A rapid decline in the power of shogunal leadership and the impotency of the imperial court in Kyoto had left a power vacuum that was filled by the rise of regional military figures. Because none of these local leaders was able to overpower his rivals, there was constant fighting and an endless series of alliances and counteralliances until Oda Nobunaga was able to overpower his rivals in 1582.

Ironically, the turbulent political atmosphere of the Sengoku period stimulated considerable economic growth, technological innovation, commercial expansion, and urbanization. Sengoku daimyo worked to empower and enrich their own domains by carrying out flood control and land reclamation projects. Rice harvests and cotton cultivation grew substantially, as did the production of other raw materials for the handicraft industries. These developments led in turn to the rapid growth of the cotton industry and the widespread production of domestic yarn and cloth. The mining industry also grew rapidly, furthering the development of gold, silver, iron, and copper and leading to the expansion of foundries and smiths. There was also a major expansion of commerce with the opening of many new stores and the improvement of roads and boat transportation.

Increased trade even stimulated the formation and growth of commercial cities and market towns such as Sakai, Hyogo (now Kobe), Kuwana, and Hakata. Kyoto revived as a cultural and industrial center. During the latter part of the Sengoku period, castle towns such as Inuyama grew up around the fortresses of prominent daimyo and became important commercial and political centers.

The Sengoku period also saw the popular diffusion of culture that formerly had been the domain of the elite nobility and clergy of Nara and Kyoto. Zen priests and *rengashi* (popular linked-verse poets invited to the provinces by Sengoku daimyo) played a major role in the popularization of cultural activities. Wealthy merchants patronized the tea ceremony, the Noh theater, new forms of music, and other traditional arts. Books aimed at the general public found many customers. Zen Buddhism flourished, and Christianity gained a foothold as the first Europeans began visiting Japan in the early to mid-1500s.

The political instability of the period ended with the conquests of Oda Nobunaga, whose rise from obscurity to power was typical of *gekokujo*. Oda built an army that dominated central Japan from 1568 through his assassination in 1582. His death provided the opportunity for Toyotomi Hideyoshi (ca. 1536–1598), one of Oda's own generals who had risen through the ranks from foot soldier (*ashigaru*), to seize power and consolidate his control over much of the rest of Japan. Hideyoshi's death in turn led to the rise of a daimyo Tokugawa Ieyasu (1543–1616), whose powerful peasant army, equipped with modern guns and cannon, defeated rival forces at the Battle of Sekigahara in 1600. Ieyasu then established the Tokugawa shogunate, which ruled a highly unified Japan throughout the Edo period (1600–1867).

—Daniel A. Métraux

Bibliography

- Hall, John W., and Toyoda Takeshi, eds. *Japan in the Muromachi Age*. Berkeley: University of California Press, 1977.
- Keene, Donald, ed. *Anthology of Japanese Literature: From the Earliest Era to the Mid-Nineteenth Century*. North Clarendon, VT: Tuttle, 1955.
- Parker, Joseph D. *Zen Buddhist Landscape Arts of Early Muromachi Japan (1336–1573)*. Albany: State University of New York Press, 1999.
- Tsang, Carol Richmond. *War and Faith: Ikko Ikki in Late Muromachi Japan*. Cambridge, MA: Harvard University Press, 2007.
- Varley, H. Paul. *Japanese Culture*. New York: Henry Holt, 1984.
- Varley, H. Paul, et al., eds. *The Onin War*. New York: Columbia University Press, 1967.

The Tokugawa Shogunate

The military hierarchy that formed the Tokugawa shogunate was based on alliances and loyalties. These associations were solidified in 1600 in the Battle of Sekigahara. In this pivotal clash, Tokugawa Ieyasu defeated his opposition, formed at least nominally of those loyal to his predecessor, Toyotomi Hideyoshi. After 100 years of civil war, one of the key issues for the victorious new regime was to ensure continuity and stability. In order to negate any threat to

THE FORTY-SEVEN RONIN

The vendetta of the forty-seven ronin, also widely known as Chushingura ("Treasury of Loyal Retainers") or the Akô Incident (the retainers' home domain), is one of the most widely dramatized events in Japanese history. From the first version as a kabuki play in 1703, just two weeks after the vendetta had concluded, the story has been retold in theater, fiction, television, and film. The actions of the ronin are said to exemplify samurai traditions, especially the value of loyalty.

In 1701, the fifth Tokugawa shogun Tsunayoshi (1646–1709) assigned responsibility for escorting an imperial envoy from Kyoto to two shogunal officials. Directly responsible was Asano Takumi no Kami Naganori (1667–1701), while the older Kira Kozunosuke Yoshinaka (1641–1702) was to super-

vise Asano. Tensions erupted between the two, supposedly because Asano did not give sufficient deference or provide monetary gifts to Kira. One day, taunted by Kira, Asano committed the grave crime of drawing his sword within Edo Castle. Even though Kira was only wounded, for his offense Asano was sentenced to commit *seppuku* (ritual suicide). His retainers went underground for almost two years. On a snowy night in December 1702, led by Ôishi Kuranosuke (Yoshio) (1659–1703), they attacked and decapitated Kira. They then took his head to Senkakuji Temple to lay on the grave of Asano and awaited arrest. In recognition of their devotion, they were allowed to commit seppuku rather than be executed like common criminals.

—Martha Chaiklin

the new government, those warlords who had opposed Ieyasu at Sekigahara or who were simply too powerful were relocated to the edges of the country and designated *tozama*, or outsider daimyo, that is, great lords who had supported Tokugawa Ieyasu. Those daimyo who were perceived as loyal (*fudai*) and those of their collateral houses (*shinpan*) were placed in strategically important locations. Any daimyo who did not comply with this arrangement had their lands confiscated, often absorbed into the Tokugawa domain, which increased significantly in size in the early years. For the most part the highest positions in the shogunate did not go to *tozama* daimyo but instead were reserved for those considered more loyal.

A set of laws aimed specifically at the warrior class (*Buke shobatto*), which was first issued in 1615 and revised several times thereafter, demanded clean and frugal living, adherence to the demands of status, and loyalty to the shogunate; prohibited the formation of alliances; and commanded service to the shogunate.

As soon as he received the title of shogun in 1603, Ieyasu similarly asserted authority over the imperial court in Kyoto, potentially a challenge to his legitimacy, by issuing a number of regulations directed toward controlling the court. Ieyasu also consolidated his rule through an ideology that placed heaven, rather than



Hanging scroll of Tokugawa Ieyasu, seventeenth century. Tokugawa-Ieyasu inherited the remains of his father's domain and became the most powerful lord in Japan. He founded the Tokugawa, or Edo, shogunate, which effectively ruled Japan from 1600 to the Meiji Restoration of 1868. (Topham/The Image Works)

the emperor, as the ultimate source of authority. Thus, by extension those who were disloyal would receive punishment from heaven. By the mid-seventeenth century Neo-Confucianism was also being promoted as official orthodoxy by the adviser to the first four shoguns, Hayashi Razan (1583–1657), and his family. Because Neo-Confucianism was essentially secular and focused on empirical understanding of the physical world and yet emphasized loyalty and harmony based in a natural, immutable order, it could integrate disparate elements into the service of the shogun.

Ieyasu established a Magistrate of Shrines and Temples (*jisha bugyō*) because armed Buddhist temples had been a serious problem in the past, and he wanted to ensure that they did not present a political challenge. Nevertheless, Buddhism as well as Shinto played important roles in the regime. Shinto had already been fused with Neo-Confucian ideas by some Muromachi period (1333–1573) thinkers, and later in life Hayashi Razan also adopted some of these syncretic ideas. Tokugawa Ieyasu claimed to be the “Sun God of the East.” This appellation gave legitimacy to his regime and at the same time was another way to remove power from the Imperial House, which claimed descent from the sun goddess Amaterasu. On its part Buddhism, although reduced in influence from former times, was still patronized by all ranks of society. Consequently, as part of the shogunal campaign against Christianity, everyone was required to register affiliation with a Buddhist temple.

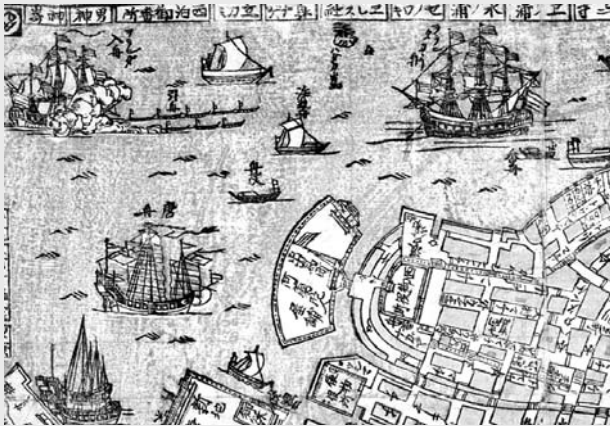
When the process of unification had begun under Oda Nobunaga around 1560, there had been no aversion to the outside world. It was in fact the successful adoption of firearms, first brought by the Portuguese, that aided Nobunaga in his quest to conquer. The first step toward insularism came in 1587 when Nobunaga’s successor, Toyotomi Hideyoshi, suddenly ordered all Christian missionaries out of the country and placed bans on Christianity. Until that time official policy toward the Jesuit Mission, which had been established in Japan in 1549 by Francis Xavier, had ranged from welcoming to neutral. The Jesuits were shocked and puzzled by the decree, and even today the motivations for the sudden policy shift are unclear. Although

the immediate effects were small and only three missionaries left, the decree marks the beginning of anti-Christian political policy. The Jesuits responded by keeping a low profile, but in 1592 Spanish Franciscans arrived in Nagasaki in contravention of the Papal Bull of 1493, which had divided the world between Portugal and Spain. These newly arrived missionaries openly flouted shogunal rules. The catalyst for action, however, was the *San Felipe* Incident of 1596, which highlighted the friction between the Jesuits and the Franciscans and exacerbated Japanese suspicions about Christianity. The captain of the *San Felipe*, angered that his cargo had been confiscated and hoping to influence its return, warned that the missionaries only preceded conquistadors and crystallized Japanese fears of its political menace. The following year twenty six Christians, the so-called Nagasaki Martyrs, were executed for violating the bans.

After Hideyoshi’s death in 1598, Ieyasu was initially tolerant of Christians because their presence was seen as a corollary to having foreign trade. Foreign relations were seen as another way to legitimate his rule. Relations with Korea, which had been rocky since the attacks on Korea under Hideyoshi in 1592 and 1597, were regularized in 1606, and an ambassador was received the following year. Limited trade, conducted through Tsushima, occurred throughout the Tokugawa period.

However, many of the daimyo remained loyal to Hideyoshi’s son Hideyori, and thus Christianity took on internal political implications because many southern tozama daimyo had converted to Christianity. When Ieyasu (although no longer shogun but still in power) mounted an assault on Hideyori in 1614, he combined it with renewed persecution of Christianity. Missionaries were expelled, and followers were punished. Some priests remained but went underground, while others were smuggled in. Evidence obtained from the papers on a ship found that smuggling missionaries convinced the Japanese authorities that the Spaniards would never abandon missionary activities, and thus all Spanish ships were barred from coming to Japan. The economic necessity of trade through Macao prevented the same from happening to the Portuguese, but Japanese attitudes

THE SAKOKU EDICTS



Harbor of Nagasaki showing Deshima, about 1800. (Library of Congress)

Although Japan was once connected to the Asian continent and contact with the world beyond its borders has been frequent, Japan has fostered a sense of isolation known as *shimaguni* (“island nation”) mentality. In the early modern period, isolation was legally enforced through the *sakoku* (“closed country”) edicts.

Based to some extent on earlier bans on Christianity and trade regulation that had confined foreign trade to Hirado and Nagasaki, the third Tokugawa shogun, Iemitsu (r. 1623–1651), issued a

series of five edicts. The first, in 1633, tightened restrictions on Christianity and trade, forbidding Japanese who had lived overseas from returning and restricting the movements of Japanese ships. The second edict the following year merely reiterated the first, but the third in 1635 also forbade any Japanese from leaving. The edict of 1636 required that the Portuguese move out of the city of Nagasaki and onto a small fan-shaped artificial island called Deshima, and any children of Iberian parentage were required to leave the country. The final edict in 1639 expelled the Portuguese and required the children of other nationalities to leave. In 1641 the Dutch were required to move to Deshima, and all foreign trade except Korea (Tsushima) and the Kingdom of Ryukyu (through Satsuma) was conducted in Nagasaki.

The intent and effect of these measures is still widely debated, and most scholars no longer think of Japan as having been totally closed. The origin of the term “*sakoku*” is indicative of this because it was coined by the western-oriented Rangaku (“Dutch learning”) scholar Shizuki Tadao (1760–1806) in his 1801 translation of an essay by the German natural scientist and physician Engelbert Kaempfer (1651–1716), who had spent two years in Japan and advocated the notion that it was in Japan’s best interest to remain “shut up.”

—Martha Chaiklin

had shifted. A series of regulations known as *sakoku*, or “closed country” edicts, restricted access to Japan for natives and foreigners alike. The Shimabara Rebellion, a Christian-led uprising in 1637, gave the Japanese authorities reason to expel the Portuguese. Japanese foreign trade was more or less limited to the Netherlands and China and was conducted in Nagasaki until commercial treaties were enacted in the late 1850s.

Over this time period, interaction with foreigners was restricted. The Dutch, although restricted to trade from the small artificial island known as Deshima, were given daimyo status and were required to visit the shogun every year. Chinese trade, established after the founding of the Qing dynasty in 1644, surged until restrictions were put in place in the early eighteenth century and then leveled off. The Ryuku

Islands (present-day Okinawa Islands), which maintained their own king, sent embassies on occasion, but the Ryukyus had been officially annexed by the daimyo of Satsuma (located on the Japanese island of Kyushu) in 1609. Once these policies were in place they gained the legitimacy of tradition, whether that had been the original intent or not.

As the Tokugawa period progressed, insular thinking resulted in the development of a school of intellectuals known as *kokugakusha*, or nativists, who believed that Japan had been polluted by contact with the outside world, especially Chinese, Buddhist, and Confucian influences. They sought to purify Japan from these outside influences. These ideas would ironically be significant in bringing about the end of the shogunate in 1868, by virtue of the belief that

true loyalty should be directed at the emperor rather than the shogun.

—*Martha Chaiklin*

Bibliography

- Berry, Mary Elizabeth. *Hideyoshi*. Cambridge, MA: Harvard University Asia Center, 1989.
- Blussé, Leonard, Willem van Remmelink, and Ivo Smits. *Bridging the Divide: 400 Years, The Netherlands-Japan*. Leiden: Hotei, 2000.
- Boxer, Charles. *The Christian Century in Japan, 1549–1650*. Manchester, UK: Carcanet, 1993.
- Burns, Susan. *Before the Nation: Kokugaku and the Imagining of Community in Early Modern Japan*. Durham, NC: Duke University Press, 2003.
- Ooms, Herman. *Tokugawa Ideology: Early Constructs, 1570–1680*. Princeton, NJ: Princeton University Press, 1989.
- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1995.

Vietnam—The Nguyen Lords

At the beginning of the fifteenth century there was a dramatic change in Vietnamese history as the Ming dynasty occupied Dai Ngu/Viet and ruled it as Ming China's 14th province from 1407. Le Loi's decade-long rebellion ended Ming Chinese rule in 1428, and his coronation inaugurated Vietnam's longest-ruling dynasty. Yet less than 100 years after its founding, the Le dynasty was riddled with trouble and owed its nominal restoration to two increasingly powerful but competing families: the northern-based Trinh, who essentially held the Le emperors hostage, and the Nguyen, who were carving out an ever-expanding autonomous domain in the south.

The rise of the Nguyen and the Trinh families, both with origins in Thanh Hoa province (in present-day central North Vietnam), began with the usurpation of the fledgling Le throne by Mac Dang Dung (r. 1527–1530). Nguyen Kim (1467–1545), a notable court official related to the Le dynasty through marriage, decided to help restore Le rule; in this he was aided by Trinh Kiem (d. 1570), his ambitious son-in-law. By the time of Nguyen Kim's death in 1545 (allegedly poisoned by the Mac), the Le dynasty had set up court at Thanh Hoa, but it was the Trinh family who had begun to establish themselves as the power behind the throne.

Kim's son Nguyen Hoang (1524–1613) nevertheless continued to cooperate fully in the campaigns to restore the Le but was acutely aware of his increasingly powerful brother-in-law who was suspected of killing his older brother. In 1558 Nguyen Hoang thus requested the position of governor of two southern frontier provinces, Thuan Hoa and Quang Nam, with the aim of being at a safe distance from Trinh Kiem with an opportunity to build up an alternative power base. After Trinh Tung (r. 1570–1623) and Nguyen Hoang had dislodged the Mac from Thang Long (present-day Hanoi) in 1592, the Le dynasty was formally restored, but effective power remained with the Trinh. In recognition of his services, Trinh Tung was even given the title of king (*vuong* in Sino-Vietnamese; *chua* in Vietnamese), a privilege that his descendants, the Trinh Lords (Chua Trinh), conveniently retained.

In the face of such ambitions, and having satisfied his filial duties to restore the Le, Nguyen Hoang retreated to his southern fiefdom. From their capital near present-day Hue he and his descendants, the Nguyen Lords, would consolidate and enlarge their power base. The southward thrust of the Nguyen armies integrated the remaining Cham territories and also wrested most of the Mekong Delta from Cambodia, in the process creating a new southern Vietnamese space that extended to the Gulf of Siam. Although the Nguyen Lords still recognized the nominal overlordship of the Le emperors, the Trinh Lords in the north (Dang Ngoai) could not accept that their former allies were essentially carving out a new autonomous kingdom, called Dang Trong, in the south. In 1627 the bitter rivalry between the two families came to a head when Nguyen Phuc Nguyen (r. 1613–1635) opposed Trinh attempts at domestic interference and demands for tribute. During the next half century the Trinh and Nguyen fought over their differences, until a truce recognizing the status quo power balance was eventually reached in 1672.

The Nguyen Lords used the ensuing 100 years of peace to further consolidate power in their realm, and in 1744 Nguyen Phuc Khoat (r. 1738–1765) proclaimed himself king. Yet a sociopolitical crisis was triggered with the ascension to the throne of a minor, Nguyen Phuc Thuan (r. 1765–1777), as power actually resided

➤ NGUYEN BINH KHIEM

Nguyen Hoang's decision not to contest the Trinh Lords and instead carve out a fiefdom of his own in the south appears to have been suggested to him by the famous scholar-official and soothsayer Nguyen Binh Khiem (1491–1585). The son of a mandarin, he topped the official government examination in 1535 but resigned his position seven years later in protest against widespread corruption in the Mac dynasty's bureaucracy and court. From the base of his White Cloud Hermitage in Hai Duong, Nguyen Binh Khiem became an educator, poet, and much sought after adviser with purported prophetic skills. Thus, apart from Nguyen Hoang, he is also alleged to have advised the ambitious Trinh Kiem to become the power behind the throne of the restored Le dynasty rather than to claim it himself.

If true, Nguyen Binh Khiem's advice arguably changed the course of early modern Vietnamese history. By masterminding new political configurations and dynamics, the highly volatile atmosphere of sixteenth-century Vietnamese elite politics was defused, and at least intermittently, regicide and further fratricidal were prevented. Instead, the Le nominally preserved imperial hegemony, whereas the ambitions of the more dynamic Trinh and Nguyen families were directed onto two separate but occasionally colliding paths: actual exercise of Trinh power in the north, Dang Ngoai, and the building of an independent Nguyen domain, Dang Trong, through southward expansion. This essentially bipolar order would last for two centuries, only to quickly disintegrate when challenged by the Tay Són Rebellion.

—Tobias Rettig

with his dominant regent. By then, if not earlier, military complacency seems to have set in; moreover, the central regions of the Nguyen kingdom were largely uncovered because the dynasty's military forces were concentrated at the northern border to the Trinh domain, while their militia forces were based in the Gia Dinh area (which contains present-day Ho Chi Minh City). These circumstances provided fertile ground for three brothers from Tay Son village to start a local uprising. They claimed to restore power to Nguyen Phuc Thuan, but the Tay Son Rebellion soon embroiled the eastern part of the Indochinese peninsula into a three-pronged 30-year contest over political supremacy between the Nguyen, the Tay Son, and the Trinh/Le, which included foreign interference.

In 1777 the Tay Son pushed the Nguyen southward into the marshy Mekong Delta and wiped out almost the entire Nguyen family. In 1785 the Tay Son inflicted a severe defeat on Prince Nguyen Anh (1762–1820), the only survivor. Although Nguyen Anh, who initially had sought refuge in Bangkok and in the Gulf of Siam, eventually managed to establish a fairly secure operational base in Gia Dinh in late 1788, his overall prospects still looked extremely bleak.

Hence, the most capable of the Tay Son, Nguyen Hue (1753–1792), who had declared himself emperor in 1788, unified Dang Ngoai and Dang Trong in 1789 by driving out the Chinese forces called in by the last Le emperor for protection. Yet Nguyen Hue's premature death in 1792 left in place as emperor a ten-year old boy incapable of holding the newly created realm together. Within ten years, well-planned seasonal campaigns and arguably also the military support organized by French bishop Pigneau de Béhaine (1741–1799) allowed Nguyen Anh to take Thang Long on July 20, 1802, and to establish Vietnam's last dynasty.

—Tobias Rettig

Bibliography

- Dutton, George. *The Tây Són Uprising: Society and Rebellion in Eighteenth-Century Vietnam*. Honolulu: University of Hawaii Press, 2006.
- Li Tana. "An Alternative Vietnam? The Nguyen Kingdom in the Seventeenth and Eighteenth Centuries." *Journal of Southeast Asian Studies* 29(1) (March 1998): 111–121.
- Li Tana. *Nguyễn n Cochinchina: Southern Vietnam in the Seventeenth and Eighteenth Centuries*. Ithaca, NY: Cornell University Southeast Asia Program, 1998.

Taylor, Keith. "Surface Orientations in Vietnam: Beyond Histories of Nation and Region." *Journal of Asian Studies* 57(4) (November 1998): 949–978.

Yao Baoyun. *Contribution à l'histoire de la principauté des Nguyễn au Vietnam méridional, 1600–1775*. Geneva: Éditions Olizane, 1992.

From the Prince to the Sun King—The Absolutist State in Early Modern Europe

The concept of absolutism in the early modern era developed from a secular theory of authoritative statecraft into the rule of an individual invested with both divine authority and unchecked power. Political theories of state, monarchy, and constitutionalism varied between regions. Most importantly, the rise of absolutist theory denoted the rise of centralized government in western Europe and the perpetuation of the *ancien régime*.

In Italy, Niccoló Machiavelli and his political theories were fostered by the attitudes of the Renaissance. His work *The Prince* (written in 1513 and published in 1532) stated that princes could maintain control of their realm by establishing authority over the people and by not deviating from the accepted and functional political institution. His theories were used by rulers such as Catherine de Medici to justify violence and to defend their self-interested governance. Others, such as the Huguenot Innocent Gentillet and Frederick the Great, widely condemned

Machiavelli's work. By separating politics and religion, he removed the mystical elements associated with true absolutist theory.

The people of France did not debate the existence of the monarchy itself. Rather, the Wars of Religion produced works by Catholics, Protestants, and moderates who attempted to impose constitutional limitations on the monarch, largely for personal gain. Jean Bodin was a leading member of the *politiques*, the conservative group that sought to preserve the state above all else. His *Six Books of the Republic* (1576) stated that sovereignty ought to be indivisible and that authority must be completely and unconditionally invested in a single individual. Cardinal Richelieu's *Political Testament* (1688) voiced similar ideas about the need for an absolute monarchy in the French kingdom.

In England, Thomas Hobbes was one of the most prominent supporters of absolute authority. His most famous work, *Leviathan* (1651), held that man needed a strong government to curb his corrupt impulses. Hobbes advised the ruler to heed the natural laws in order to keep the peace. His dismal view of humanity and his justification for absolutism are often contrasted with John Locke, who was an advocate for an ultimate legislative authority. Yet England during the sixteenth century was a mixed monarchy. Power was shared between the Parliament and the sovereign monarch. In the Glorious Revolution of 1688, the Anglican representative body installed William of Orange and Mary as the sovereign monarchs of England. The Bill of Rights made Parliament a permanent part of the English government and reaffirmed its tradition of constitutionalism.

The seventeenth century was the Golden Age for the Netherlands. The Dutch Declaration of Independence (1581) was the first document of its kind in the early modern era. The absolute rulers of Spain had aggressively persecuted the Protestants of the Low Countries. After Charles V and Philip II rejected the early charters of freedom, the Dutch revolted and lawfully declared themselves a republic. Constitutional theories continued to spread throughout western Europe, but the *ancien régime* in France, England, and Spain clung to absolutism through the eighteenth century.



The formal gardens of Versailles, once the lavish palace of King Louis XIV. (Corel)

Spain was a traditional absolutist monarchy and remained as such throughout the early modern era. During the sixteenth century, Spain was considered to be more absolute than France and spent a considerable effort attempting to suppress the rise of Protestantism by trying to install Orthodox Catholic rulers. The defeat of the Armada in 1588 removed Spain as a maritime threat and opened the door for England and the Netherlands to dominate the seas. Portugal operated under the yoke of Spain for many years and was forced to participate in Spanish wars until the revolt of 1640. Absolutism was not fully realized in Portugal until the reign of John V during the early eighteenth century.

There is no more definitive example of true, divine right absolutism than Louis XIV. His greatest contribution as ruler was the unification and centralization of France, but his series of wars devastated the French people and the economy. Louis followed the guidance of Bishop Jacques Bossuet, who firmly stated that God invested the monarchs of France with divine authority. The Sun King moved the administrative center from the Louvre palace in Paris to Versailles, where he tamed the rebellious nobility and kept them fighting among themselves to prevent them from uniting against the Crown on their common grievances. Louis XIV installed brilliant and capable ministers to monitor and regulate the kingdom, but he was also personally involved in the administration of the kingdom. Under the absolute rule of Louis XIV, France reached new cultural heights and became a strong military and diplomatic force. The reign of the Sun King stood as a model for other monarchs of the seventeenth and eighteenth centuries.

—Breanna S. Griego

Bibliography

- Bodin, Jean. *On Sovereignty*. Cambridge: Cambridge University Press, 1992.
- Elliott, J. H. *Imperial Spain, 1469-1716*. London: Penguin, 1990.
- Hobbes, Thomas. *Leviathan*. London: Penguin Classics, 1982.
- Isreal, Jonathan. *The Dutch Republic: Its Rise, Greatness, and Fall 1477-1806*. New York: Oxford University Press, 1998.

➤ CHÂTEAU DE VERSAILLES

Formerly a hunting lodge in the small village of Versailles, Château de Versailles was transformed by Louis XIV and the most skilled architects and artists of the era into a splendid and sprawling Baroque palace. The Château de Versailles not only embodied absolutist materialism but was also used by the Sun King to centralize the French administration and effectively ended the noble uprisings that had plagued the French kingdom.

When it was complete, Versailles could hold up to 5,000 people. The grounds contained 1,400 fountains and 400 pieces of new sculpture. The roof of the chateau spanned 26 acres (10.5 hectares). The interior contained 67 staircases, 700 rooms, 2,153 windows, 5,000 items of furniture and objets d'art, and 6,000 paintings.

Louis XIV was determined to create a palace different in every conceivable manner from his place of childhood imprisonment, the Louvre. Only the finest and most accomplished craftsmen were allowed to shape the new face of the palace, including Louis Le Vau, André Le Notre, Charles Le Brun, and Jules Hardouin-Mansart. The Château de Versailles represented the pinnacle of French absolutism as the seat of the newly centralized French monarchy. It became the center of social and cultural life as well as a model for other European palaces.

—Breanna S. Griego

Locke, John. *Political Essays*. Cambridge: Cambridge University Press, 1997.

Machiavelli, Niccoló. *The Prince*. Edited by Quentin Skinner and Russell Price. Cambridge: Cambridge University Press, 2000.

Sonnino, Paul, et al., eds. *The Reign of Louis XIV: Essays in Celebration of Andrew Lossky*. Atlantic Highlands: Humanities Press International, 1990.

Absolutism in Eastern Europe

The political concept of absolutism influenced the structure of government in early modern eastern Europe in the late seventeenth and early eighteenth centuries. While some of these regimes were not as regimented and centralized



Peter I, also known as Peter the Great, ruled the Russian empire from 1682 until his death in 1725. (Library of Congress)

as that crafted by Cardinal Richelieu, Cardinal Mazarin, and Louis XIV in France, they did share some similarities with the French absolutist state. The emergence of Brandenburg-Prussia and Habsburg Austria out of the ruins of the old Holy Roman Empire and the rise of Russia as a powerful contender in European affairs are examples of this surge in absolutist authority in their respective governing monarchies. In contrast, the inability of Poland, Sweden, and other eastern European states to assert themselves in this same capacity doomed them to the position of second-rate powers in the lands of eastern Europe.

Brandenburg-Prussia's entrance onto the stage of the great powers of Europe was a result of the initiatives of the Hohenzollern monarchy to create both a powerful military and a centralized bureaucracy to rule the scattered lands of the German kingdom. Prussian kings Frederick William I (1688–1740) and Frederick William II (1744–1797) were able to muster a sizable military force by centralizing the resources of the Prussian lands and the establishment of a large bureaucracy, thereby creating a strong absolutist

state. In this way, Brandenburg-Prussia was able to engage successfully against other larger European powers in the War of the Spanish Succession (1701–1714) and the War of the Austrian Succession (1740–1748). To quell the potential of aristocratic resentment against growing monarchical power, the Hohenzollerns incorporated them into the military officer corps and the high bureaucracy, making them accountable to the success of the state and the military.

Unlike Prussia, Habsburg Austria was a composite kingdom made up of various non-German national groups. Habsburg government centralization during the late seventeenth and early eighteenth centuries relied on playing one national group against the other while maintaining the supremacy of the Crown. Given the threats to Austria by Prussia, France, and the Ottoman empire, it was crucial for the Habsburgs to maintain large armies and garrisons on two fronts, thereby necessitating a centralized bureaucracy and an efficient system of taxation and raising of troops. Habsburg absolutism, particularly under Maria Theresa (1717–1780), continued to rely on the loyalty of mostly Austrian high officials in asserting the dominance of Habsburg authority over national affairs while allowing for some level of autonomy for the various national groups (particularly that of Hungary and Bohemia) in local affairs. Resistance to the Austrian Pragmatic Sanction by Prussia made Empress Maria Theresa aware of the need to placate the composite kingdoms by allowing for some level of autonomy.

Tsarist Russia under the rule of Peter I (1672–1725), also known as Peter the Great, emulated the absolutist regimes in the West to some extent. Tsar Peter sought to modernize Russia to the level of the rest of Europe by promoting armament works, manufacturing, and shipping industries. Much like the Hohenzollern Prussian monarchs, he leveled the power of the aristocracy, incorporating them into the machinery of the state and the military, and effectively created a centralized bureaucracy to expand the personal power of the tsar. He expanded the capacity of the Russian military and was able to confront both the Swedes and the Turks successfully in various encounters, thereby attaining territories at their expense. Catherine II

► REBELS AND REVOLUTIONARIES—RAKOCZI AND MAZEPPA

Amid the centralizing authority of the absolutist regimes in eastern Europe, certain leaders emerged to resist the encroachments of the centralizing monarchy at the expense of their respective national groups within these larger composite kingdoms. Hungarian Francis Rakoczi (1676–1735) and Ukrainian Ivan Mazeppa (1639–1709) led armed resistance against their respective imperial overlords (Habsburg Austria and tsarist Russia). Rakoczi sought foreign assistance from France and Turkey against the Austrian Habsburgs on multiple occasions, refusing to acknowledge the supremacy of the Habsburg Crown in Hungary. When Austrian occupation troops were removed to fight in the War of the Spanish Succession (1701–1714) in the West, Rakoczi took full advantage to attack positions in the rear. Ultimately Rakoczi's

forces were defeated, and he lived in exile in the Ottoman empire along with his loyal entourage. Mazeppa, having worked as a Cossack officer within the Russian military in the past, chose to defend his homeland when Russian troops attacked his fellow Ukrainians in acts of retribution for treason against the tsar. Like Rakoczi, Mazeppa rallied his fellow Ukrainians against the encroaching power of the absolutist monarchy and fought against overwhelming odds for autonomy from the Russian state. He actively sought an alliance with the Swedes during the Great Northern War (1700–1721) but, like Rakoczi, was ultimately defeated at the Battle of Poltava (1709). Both men died in exile, revered as heroes by their respective peoples.

—Abraham O. Mendoza

(also known as Catherine the Great) continued the expansion of the tsarist state, extending it at the expense of Poland and the Ottoman empire. While she was an avid patron of the arts and an Enlightened despot, even exchanging correspondence with Voltaire, she was also responsible for repressive measures against rebels and maintaining serfdom.

In contrast to Brandenburg-Prussia, Habsburg Austria, and tsarist Russia, Sweden and Poland were powers on the wane that did not adopt absolutist governments but instead grew increasingly vulnerable to foreign aggression. Sweden, a small kingdom that had been successful in engaging larger powers with its highly efficient professional army, was eventually crushed by Prussian and Russian forces. After nearly a half century of the Baltic being a Swedish lake, Sweden's power was permanently removed from the region by the territorial ambitions of Brandenburg-Prussia and tsarist Russia. Poland, subject to the waning power of the monarch and the growing power of a contentious aristocracy, became more vulnerable to the encroachments of its more powerful neighbors. The titular and impotent nature of the Polish monarchy, which was subject to election by the aristocracy, and the *liberum veto* (in which any deputy in the Polish Diet could put an end to the current legislative session and nullify

all legislation passed) further contributed to the weakness of the Polish state. Eventually the partitions of Poland (1772, 1793, and 1795) by Prussia, Austria, and Russia would end its sovereignty, which was not restored until 1919.

—Abraham O. Mendoza

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century, 1713–1789*. 4th ed. New York: Longman, 2000.
 Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
 Hufton, Olwen. *Europe: Privilege and Protest 1730–1789*. 2nd ed. Malden, MA: Blackwell, 2000.

Pirates and Privateers

Although frequently used interchangeably, the terms “piracy” and “privateering” represent two distinct applications of violence at sea, with piracy involving illegal activities including theft, kidnap, and sometimes murder and privateering being sanctioned in law. The origins of privateering are twofold. In medieval Europe, state navies were a rarity, and sovereigns requisitioned privately owned ships to augment their forces in time of war. Because piracy was commonplace and most merchant ships and their crews were armed, this was a sensible measure. The practice of licensing these auxiliaries began in the

► PIRACY AND CROWN SPONSORSHIP

However clear-cut the distinction between piracy and privateering may have been, sovereigns could blur the lines between them by authorizing their subjects to operate covertly against their enemies. Such was the case when Queen Elizabeth approved a mission by Francis Drake to reconnoiter the Pacific coast of Spanish America and plunder Spanish shipping in 1577. England and Spain were not at war, but so far as the Spanish were concerned the Strait of Magellan and the Pacific coast of South America were Spanish territory to which foreigners could not sail without authorization, which Drake neither sought nor desired. Elizabeth could have issued a letter of marque, but had she done so and the fact become public, she risked war with Philip. At the same time, Drake was not a common criminal or pirate seizing property indiscriminately, nor was he sailing in flagrant disregard of Elizabeth's wishes or interests. Even before Drake's return, news of his exploits had inflamed Spanish opinion, elicited a variety of reactions in England, and forced Elizabeth to keep Drake at arm's length. Portuguese protests forced one of Drake's captains, John Winter, to surrender his share of the spoils taken from a Portuguese pilot, goods that the lord admiral (who happened to be one of Drake's chief investors) said were taken by Francis Drake and his accomplices "piratically." For good measure, Winter was imprisoned for piracy and was only released upon Drake's return. Elizabeth's eventual embrace of Drake was due largely to the phenomenal success of the voyage, which netted the Crown £264,000, about half the government's annual revenues for a year.

—Lincoln P. Paine

thirteenth century, when merchant ships were commissioned to seize enemy shipping with the stipulation that half the value of their prize be shared with the king. Properly administered, this could prove a lucrative source of revenue, but privateers often overstepped their bounds and acted much like pirates.

Piracy flourishes in a variety of conditions. China's Ming dynasty banned private sea trade from 1374 to 1567 and regarded anyone violating the ban as pirates. Denied opportunities for legitimate commerce, many Chinese merchants

engaged in illicit trade, and by the sixteenth century a large number of them were operating out of Japanese ports. Although most of these smugglers were Chinese, the authorities called them *wokou* ("Japanese pirates"). Their activities became particularly bad from the 1520s, when the government suspended trade with Japan following a riot between rival Japanese merchants at Ningbo. China's demand for silver and Japan's appetite for silk, coupled with the lack of profitable employment among Chinese traders, led to an increase in smuggling and piracy on the coast between Jiangsu and Fujian. Their activities peaked in 1552, when Xu Hai raided Jiangsu and Zhejiang with a force of some 20,000 men. Five years later the government legalized overseas trade (except with Japan), which diminished the allure of piracy.

Between 1570 and 1670, Cossack piracy flourished on the Black and Caspian seas and their tributaries, which constituted a lawless frontier zone between Russian Muscovy, the Polish-Lithuanian Commonwealth, the Ottoman empire, and Safavid Persia. Though occasionally recruited by the Christian powers to attack Muslim fleets, they never had the status of privateers, and their conduct was not determined by religious scruples. The last and most notorious of the Cossack pirates was Stepan Razin, who in 1667 seized a wealthy Russian convoy on the Volga, attacked a Persian ship bearing gifts for the tsar, and raided Astrakhan before embarking on a nearly two-year expedition on the Caspian. Razin's actions compelled the Russians to station a ship at Astrakhan in 1670, and the following year he was captured and executed.

Piracy could also result from more personal misfortune, as was the case of a sixteenth-century Dutch merchant whose insurers refused to pay for the loss of his ship and who began operations in the Baltic. His operations received the cover of legitimacy when the Duke of Mecklenburg licensed him as a privateer to operate against his insurers or their interests. Piracy in Europe grew rapidly thanks especially to hostilities surrounding the Eighty Years' War for Dutch independence. Habsburg officials encouraged freebooters from Dunkirk and Ostend to sail against the Dutch merchant and fishing fleets as far afield as the Shetland Islands and Iceland.

By midcentury, the ports of England, the Dutch Republic, the Spanish Netherlands, France, and Spain were thick with corsairs and privateers. These were most active during the incessant naval wars between 1652 and 1697, when the English seized between 3,600 and 4,300 enemy merchantmen and lost between 5,500 and 6,300 ships to the Dutch, French, and others.

European pirates followed European trade overseas especially to the Caribbean, where the Dutch, English, and French sought to wrest control of the islands from the Spanish. After the British took Jamaica from Spain in 1670, Port Royal became the fastest-growing English settlement in the Americas and the undisputed center of English piracy in the Caribbean until a massive earthquake destroyed the city in 1692. Even before this, however, government efforts to reign in piracy and privateering had forced west Indian buccaneers to turn to the low-lying fruit of the Indian Ocean, where indigenous and foreign piracy was a long-standing problem. In 1632 the Mughal Shah Jahan expelled the Portuguese from Hughli because so many Portuguese had turned pirate in the Bay of Bengal. In 1686 English pirates plundered Surat shipping in the Red Sea, which led to Mughal reprisals against the English. The East India Company retaliated against Mughal maritime interests from Gujarat to Bengal and blockaded Basra and Mocha before the two sides came to terms in 1690. A more long-standing problem was that of Omani piracy, which had grown out of Oman's challenge to the Portuguese in East Africa and India. As the Omanis' theater of operations expanded, the imams' control over their activities diminished, and until the end of the century the Omanis were infamous for their depredation of European, Persian, Indian, and Arab shipping.

The assertion of European state control over warfare at sea, a decline in privateering, and efforts to eliminate piracy led to increased efficiencies in shipping. Extra hands to man the guns were no longer needed, which increased the tonnage-to-crew ratio, a standard measure of economic efficiency. Fewer guns also left more space available for paying cargo; Jamaica ships carried one gun per 18 tons in 1730 and one gun per 162 tons 40 years later; for Virginia vessels, the ratio rose from one gun per 29 tons to less

than one gun per 1,000 tons. The decline in violence against ships was also reflected in falling insurance rates.

—Lincoln P. Paine

Bibliography

- Arasaratnam, S. "India and the Indian Ocean in the Seventeenth Century." In *India and the Indian Ocean, 1500-1800*, edited by Ashin Das Gupta and M. N. Pearson. Calcutta: Oxford University Press, 1987.
- Davis, Ralph. *The Rise of the English Shipping Industry in the Seventeenth and Eighteenth Centuries*. London: Macmillan, 1962.
- Kirby, David, and Merja-Liisa Hinkkanen. *The Baltic and the North Seas*. London: Routledge, 2000.
- Lane, Kris E. *Pillaging the Empire: Piracy in the Americas, 1500-1750*. Armonk, NY: M.E. Sharpe, 1998.
- Longworth, Philip. *The Cossacks*. New York: Holt, Rinehart and Winston, 1969.
- Verschuer, Charlotte von. *Across the Perilous Ocean: Japanese Trade with China and Korea from the Seventh to the Sixteenth Centuries*. Ithaca, NY: Cornell University East Asia Study Program, 2006.

Runaway Slaves in Colonial Virginia

From the onset of slavery in colonial America, African slaves resisted what commonly was known in the United States as the "peculiar institution" by running away. As runaways, they simultaneously removed a source of labor and threatened the master's dominance. Because of this twofold frustration, Virginia slave owners enlisted many means, legal and otherwise, to regain fugitive slaves.

Historians such as Edmund Morgan have noted the paradox that both African slavery and American ideas of political liberty emerged side by side in colonial Virginia. After Virginia was established as a British colony, small-scale slavery soon emerged. Records indicate that as early as 1619 a Dutch ship deposited 20 African slaves in Jamestown. For the first few decades Africans and white indentured servants often worked side by side. In 1661 of Virginia's population of 25,600 colonists, 6,000 were white servants and 2,000 were African. But by the 1670s planters grew more and more reliant on an enslaved

➤ ADVERTISING FOR RUNAWAYS

In the eighteenth century, Virginia planters utilized newspapers as a key means of locating runaway slaves and indentured servants. Between 1736 and 1780, 961 fugitive ads appeared in the *Virginia Gazette*. A typical advertisement included information about a runaway's sex, age, color, and skills as well as information about where he or she might be hiding and any distinguishing marks (many from punishment for previous flights). Other ads provided information about supposed runaways who had been captured, providing similar information.

One such advertisement ran in the *Virginia Gazette* in August 1766:

“RUN away from the subscriber in Prince Edward county, some time in March last, a Virginia born Negro fellow named SAMPSON, near 6 feet [1.8 meters] high, has small legs, two of his fore fingers (I believe on his right hand) were burned when he was small, and are now much crooked; had on when he went away an old German serge coat, fine linen shirt, and osnabrug trousers. Whoever

brings the said Negro to me shall have two pistoles reward, beside what the law allows.

—RICHARD WOODSON.
—(*Virginia Gazette* (Williamsburg),
August 22, 1766.)”

As was typical, this ad identified the runaway's physical features for easier identification and offered a reward for his return.

Of the 961 ads in the *Virginia Gazette* between 1736 and 1780, only 84 involved female runaways, and the typical ages given were between ages 17 and 30. Using ads like these, historians have been able to establish some patterns about who typical runaways were: young males.

—Bonnie Laughlin-Schultz

Source

Virginia Runaways: Runaway Slave Advertisements from 18th-century Virginia Newspapers, ed. Thomas Costa, <http://etext.lib.virginia.edu/etcbin/costa-browse?id=r66080192>.

African workforce. Laws discouraged manumission, limited the rights of free blacks, and established that children of slave women would be enslaved for life. By the eve of the American Revolution, slaves were two-fifths of the population of Virginia and were particularly numerous in the tobacco-growing Chesapeake region.

In addition to other subtle forms of resistance such as feigned illness, work slowdowns, or breaking objects, Virginia slaves (as well as some white indentured servants) resorted to a more radical form of resistance: running away. Scholars have found that while there was no typical runaway, demographic patterns among runaways are apparent. Most who ran did so individually or in small groups. The larger groups that Harriet Tubman later accompanied in the nineteenth century were uncommon in colonial Virginia because the larger the party, the greater the danger of discovery. Most runaways were young male field slaves in their teens or twenties. Several issues served as typical triggers for escape: the uncertainty that surrounded the death of an owner, threat of the sale of family

or oneself, or violent abuse. Runaways in colonial Virginia took refuge in the woods with relatives, Native American tribes, Quakers, or other sympathetic people or in cities such as Williamsburg, Norfolk, and Richmond, where they hoped to pass as free African Americans. One famous maroon settlement (an integrated community of African and Native Americans) flourished in the Great Dismal Swamp of southern Virginia. As northern states gradually abolished slavery following the American Revolution, runaways sought freedom north of the Mason-Dixon Line.

Slave owners employed many methods to recapture a runaway. Sensing that runaway slaves were an especially “troublesome property,” the Virginia legislature, beginning in the late seventeenth century, tightened restrictions on free African Americans and fines for those helping runaways. A national fugitive slave clause was later instituted in the Constitution; by this time, Virginia was home to close to 300,000 slaves. In addition to these legal measures, planters turned to other resources to regain their slaves.

In colonial times, slave patrols were called up throughout the southern states. Numbering from a handful to a dozen people, patrols were organized in military fashion with the legal authority to search almost anywhere for runaway slaves. Planters also employed slave catchers and dogs in the hunt, and rewards were offered for information or the return of runaways. Once newspapers emerged as a prominent medium of communication in the eighteenth century, planters posted advertisements for runaways (both slaves and servants).

The diaries of prominent planters like William Byrd and Landon Carter demonstrate that a range of violent punishment was meted out to any slaves who were recaptured to discourage others from running away. Whippings, bodily mutilation, and other punishments were used to quell all resistance, and runaways drew some of the worst physical abuse. Virginia legislative statutes of 1723 and 1746 even allowed for dismemberment of repeat offenders. Whenever rumors of larger slave revolts abounded, such as in the 1730s when rumors reported impending slave uprisings in Queen Anne and Norfolk counties, planters clamped down on African Americans, both enslaved and free, and on any runaways. In the upheaval of the American Revolution, when prominent Virginians such as Landon Carter, George Washington, and Thomas Jefferson lost dozens of slaves to flight, Virginia slave owners and legislators tightened laws to prevent and deal with fugitive slaves. With this as well as the development of the northern United States as a place for runaways to find freedom, the Haitian Slave Revolt (which began in 1791), and the Gabriel's Rebellion (1800) in Virginia in mind, during the late eighteenth and early nineteenth centuries every southern state passed laws about runaways, defining who they were, how they were to be apprehended, and what was to happen after capture.

—Bonnie Laughlin-Schultz

Bibliography

- Franklin, John Hope, and Loren Schweninger. *Runaway Slaves: Rebels on the Plantation*. New York: Oxford University Press, 1999.
- Kolchin, Peter. *American Slavery, 1619–1877*. Rev. ed. New York: Hill and Wang, 2003.

Meaders, Daniel. *Dead or Alive: Fugitive Slaves and White Indentured Servants before 1830*. New York: Garland, 1993.

Morgan, Edmund. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: Norton, 1975.

Mullin, Gerald. *Flight and Rebellion: Slave Resistance in Eighteenth-Century Virginia*. New York: Oxford University Press, 1972.

Stampp, Kenneth. *The Peculiar Institution: Slavery in the Ante-Bellum South*. 1956; reprint, New York: Vintage, 1989.

Windley, Lathan. *A Profile of Runaway Slaves in Virginia and South Carolina from 1730 through 1787*. New York: Garland, 1995.

Centralizing Forces in Polynesia before Contact

The term “Polynesia” refers to a region including the islands in the triangle outlined by New Zealand in the southwest, Hawaii in the north, and Rapa Nui or Easter Island in the southeast along with the outliers of Tonga and Samoa. In the second millennium CE societies in this region developed into what is generally known as chiefdoms in historical, anthropological, and archaeological literature. The development of these chiefdoms occurred within a broad Polynesian pattern while resulting in a remarkable array of cultural forms on different islands and island groups. By the end of the fifteenth century Polynesian people had colonized most of the major landmasses in the region, including the remote archipelagoes of Hawaii and New Zealand. Colonization of the islands and island groups of Polynesia was typically followed by population growth, agricultural intensification, and the development of complex religious and political institutions.

Polynesian populations often went through cycles of intense growth, eventually reaching a state of equilibrium as fertility rates decreased because of resource stress or increased emphasis on surplus production and trade. The production of agricultural surplus typically focused on starchy tubers such as taro and sweet potato. Polynesian people invested large amounts of time in developing agricultural field systems with irrigation ditches, boundary walls to protect crops from wind and animals, and mounds of various kinds to raise tubers. Agricultural

► COLLAPSE? HISTORICAL DEVELOPMENTS ON RAPA NUI

The landscape of Rapa Nui, also called Easter Island, with its famous stone heads, is a synthesis of natural setting and human agency created over centuries. Intensive agriculture and hunting on Rapa Nui resulted in deforestation, soil erosion, and extinction or extirpation (death of a local population) for many bird species on the island. These results of human occupation were common in Polynesia. On Rapa Nui, people engaged in spiraling cycles of political and architectural aggrandizement, environmental stress, and warfare. As a result, many of the monumental centers were abandoned, and the island was largely depopulated by the time of European contact.

—James L. Flexner

intensification sometimes resulted in deforestation and increasing erosion. Environmental stresses such as these are closely associated with population decline and abandonment on some islands. In addition to agricultural production, Polynesian economics developed around extensive interisland trade networks, even on remote island groups such as Mangareva.

Economics, social stratification, and religion were closely associated in Polynesian chiefdoms. In Hawaii a rigidly hierarchical society emerged in which absentee lords controlled the development of crops and prestige items through a series of lesser chiefs and administrators. Commoners in Hawaii suffered from a unique historical development in Polynesia in which claims to land were forged through labor and tribute to the chief, as with peasants in medieval Europe. Typically, Polynesian ties to the land were established

through kinship. Kinship structures in these chiefdoms were based upon a ranked system in which individuals were placed within a stratified social hierarchy based on birth order and the rank of their lineage. Power and status were inherited, but unlike the more recent European monarchies, the power of chiefly lineages was symbolically as well as materially linked to historical ties to the land rather than to the power of the bloodlines themselves. In New Zealand, cycles of warfare between lineages competing over land led to the widespread establishment of *pa* (hill forts), one of several examples of defensive architecture in Polynesia. Archaeologically, the remains of Polynesian sacred sites, especially temples of stacked stone, found in Hawaii, Rapa Nui, the Marquesas, and elsewhere, have been important markers of the development of hierarchical political structures in societies where chiefly power and religion were closely linked.

The development of chiefdoms in Polynesia created different histories for different island groups. On the eve of European contact, islands such as New Zealand and Hawaii sustained large populations with burgeoning economies and flourishing cultural developments, while islands such as Mangaia and Rapa Nui suffered from deforestation and population decline. The variability of cultural forms in Polynesia resulted from a combination of the biogeography of islands and island groups and the cultural choices of Polynesian people who settled the islands.

—James L. Flexner

Bibliography

Kirch, P. V. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley: University of California Press, 2000.

■ Introduction: Early Modern Political Systems

Early modern political systems were diverse, although one thing that most had in common was a form of hereditary one-person rule known as monarchy. Republican regimes were rare, and even those often had a

figure occupying a role resembling that of a monarch, like the Doge of Venice or the stadtholder of the Dutch Republic. Single individuals stood as both final authorities and foci of loyalty in a world where national and institutional loyalty

RISE OF EUROPEAN NATION STATES



were weaker than they later became. Monarchs often occupied multiple roles. In Europe multiple monarchy was common; from 1603 to 1707 the king or queen of Great Britain was actually the ruler of England, the ruler of the separate kingdom of Scotland, and the ruler of Ireland, which was also subordinated to England. The king of Spain was actually the king of Aragon, itself a monarchy with strong multiple elements, and the king of Castile as well as duke of Burgundy, the duke of Milan, and numerous other titles in the Old World and the New World alike. Although their positions were less formalized, the Qing emperors of China were also leaders of the non-Han Manchu people and Mongol khans as well as Confucian emperors of China. Monarchs also frequently enhanced their status by occupying religious roles, as protectors of a particular

religion such as the Songhai monarchs worked to advance Islam or as sacred figures themselves, like the Chinese “Son of Heaven.” Where faraway monarchs could not directly wield power, they could be represented by viceroys, people who stood in the place of the monarch, like the Spanish viceroys of Mexico and Peru.

Generally, political systems were becoming more centralized, along with the rise of standing armies equipped with guns. The term “gunpowder empire” refers to the necessity of a centralized state controlling the powder, ammunition, and guns that were central to a modern army, as the gunless Songhai found out when invaded and crushed by the gun-wielding Moroccans in 1591. The principal domestic obstacle to centralization for many rulers was the landowning aristocracy. Absolutist European rulers such as Louis XIV of

France (r. 1643–1715) tried to reduce the political independence of their aristocracy while harnessing their talents and wealth for state use. Peter the Great of Russia (r. 1689–1725) tightly bound the aristocracy to the civil and military service of the tsar. England, Sweden, Poland, and a few other countries in Europe institutionalized the relationship of landowners and other economically and socially powerful elites to the monarchy through parliaments, although these institutions were declining from their late medieval height and eventually disappeared in other absolutist European countries like France and Spain.

Control of wealth from the increase in world trade was another concern of rulers. Indeed, some trading companies like the Dutch East India Company and the English East India Company were practically sovereigns themselves. Port cities connected to the New World economy became ever more valuable possessions, as can be seen in the rise of port states in Southeast Asia at the expense of inland states with the growth of first Chinese and then European trade or Peter the Great's building of St. Petersburg on the Baltic to replace inland Moscow as Russia's capital.

—*William E. Burns*

African Politics

The picture of sub-Saharan Africa as a complex political mosaic emerged in the European imagination and in reality between 1450 and 1770. Through Muslim and European travel accounts, an integrated view of Africa began to take shape outside the continent. Mapping known coastal states and piecing together information about kingdoms in the hinterland from compilations of hearsay, anecdotes, and merchant tales translated from a variety of sources, scholars, and compilers produced printed and illustrated cosmographies and geographies of faraway lands. They worked on behalf of sultans, popes, and kings, recognizing the commercial value of a more intimate knowledge of the globe's regions. The geography and political economy of previously inaccessible parts of Africa south of the Sahara gradually came into focus.

Not only images of the continent but also political entities themselves competed. Notably during this era, the ideologies of Christianity

and Islam were grafted onto preexisting state systems. Political rulers converted to new religions to gain access to diplomatic and commercial networks otherwise beyond their grasp. The Muslim mansas of Mali or Sonni Ali (1464–1492) of the successor state of Songhay, the Christian kings of the Kongo, and the sultans of Zanzibar all became players in the globalized trade in people and their products. Of the small states and larger political orders in place between 1450 and 1750, virtually all relied on long-distance trade, and many relied on slave labor and other systems of inequality.

From the Guinea Coast to the savannas and forests, small states controlled a myriad of West African microenvironments and their resources. The extent of Islam's spread was largely limited to regions where horse-mounted cavalry could be successful. The army of Islamic Songhay captured Timbuktu on the Niger in 1468 and protected a far-flung empire and its trade routes until the eighteenth century, when the empire dissolved into smaller states. One of these was the kingdom of Segu, which Scotsman Mungo Park proclaimed an unexpectedly magnificent place when he visited in 1796.

Among the interior tributary and city-states of the Bornu and Hausa, the spread of Islam beyond the elites to the masses set the stage for conflict and revolution in the nineteenth century. And an even more ominous presence to the south heralded the reorientation of the trade in slaves and other commodities. The arrival of European merchants on the coast beginning after the 1430s attracted established trade and migration to new coastal points of interaction, giving a boost to the political economies of forest states like Benin, Dahomey, and the Asante. African women sometimes married European merchants on the coast and found that the avenues of wealth accumulation and cultural negotiation could be frontiers of autonomy.

In Central Africa, the foundations of large states like the Luba, Lunda, and those of Mbundu-speaking peoples also predated the arrival of European traders. King Afonso I (r. 1506–1543) of the Kongo was a Christian convert who opened communications with the king of Portugal and the pope in Rome. Afonso used access to European mercenaries and weapons to expand his

➤ BETWEEN TWO WORLDS—LEO AFRICANUS

The man whom the world would come to know as Leo Africanus straddled the realms of Islam and Christianity, and Africa and Europe, when he found himself in the possession of Pope Leo X in 1518, who quickly released him from slavery. Born al-Hassan al-Wazzan, the diplomat of the Sultan of Fez became entangled in two worlds after his kidnapping by pirates in the Mediterranean. Al-Wazzan converted to Christianity and was baptized as “Joannes Leo” by the pope himself. Al-Wazzan lived in Rome as a scholar for the next nine years, writing for a European audience about Islam and Africa south of the Sudan. It is thought

that he eventually returned to North Africa, but nothing is known of his final years.

Once published in 1550, al-Hassan al-Wazzan’s description of Africa became one of the most influential works on Africa for the next 300 years. The book was a compilation of hearsay, anecdotes, research, and the author’s memories of his own youthful travels as far as Timbuktu. The work is now thought by some scholars to have been composed with thoughtful ambiguity, reflecting the warring worlds in conflict around its author.

—Candice Goucher

territory through conquest. East of Lake Victoria, Bunyoro and Buganda were expanding centralized kingdoms between the sixteenth and eighteenth centuries, an era during which political power relied increasingly on the control over and productivity of labor and land. A significant continuity of political power would be the elite reliance on the sanctions of religious and spiritual authority, whether inherited or imported.

European settlement was on a very small-scale basis and was confined to the trading outposts, with a few important exceptions. The Dutch East India Company’s arrival in the temperate zone of Southern Africa in the mid-seventeenth century led to a larger European presence and expansion at the expense of Khoisan societies between 1650 and 1750. In East Africa, the Portuguese occupation and destruction of coastal ports was followed by settlement. Prazeros were the descendants of Portuguese and Afro-Portuguese traders and hunters who settled in the Zambezi Valley, farming large estates with African labor and promoting trading caravans of slaves and ivory. Territories undefeated by Portuguese armies were defeated by famine and drought.

The inroads made by the globalization of the slave trade in the Atlantic and Indian oceans deepened inequalities in African societies. The introduction of firearms escalated the conflict between small states and furthered new forms of exploitation across the continent. The stage was set for increasing dependence on foreign

trade, with even greater misery and violent conquest in the centuries to follow.

—Candice Goucher

Bibliography

- Oliver, Roland, and Anthony Atmore. *Medieval Africa: 1250–1800*. Cambridge: Cambridge University Press, 2001.
- Thornton, John. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. Cambridge: Cambridge University Press, 1998.
- Zemon Davies, Natalie. *Trickster Travels: A Sixteenth-Century Muslim between Worlds*. New York: Hill and Wang, 2006.

East Africa—Omani Rule and Portuguese Retreat

The first Europeans to appear in India were the Portuguese with the voyage of Vasco da Gama in 1498. Soon after, more ships arrived as the Portuguese sought to create treaties with the locals in order to trade goods. Matters became complicated when the local Muslim merchants, who resented the interference of the Portuguese in a trade that was already well established in the area, began to resist the intruders with force. Intent on establishing their trade there, the Portuguese king Manuel I sent Francisco de Almeida to Cochin in 1505 as the first viceroy of India, with the intention of establishing forts in order to protect their interests. The establishment of a military presence in India brought more

➤ ZANZIBAR, ISLAND OF SLAVES

The first visitors to Zanzibar, Arab merchants during the eighth century, called the island *bar iz-zanj*, or “coast of the black man.” They also brought Islam and a new language that combined the idiom of the local coastal (*sahil* in Arabic) population with Arabic and Swahili. The Arabs built many trading posts and established brisk business relations with India. In 1503 the Portuguese landed on the main island of Unguja and soon controlled the entire trade in the Indian Ocean.

Toward the end of the seventeenth century, Portugal lost all East African territories north of Mozambique to the imam and sultan of Oman. Over the next 200 years, this dynasty developed the islands into the center of the slave and spice trades in the East African hemisphere. The trade involving slaves and ivory and the cultivation of cloves made the islands both prosperous and infamous. Annually between 6,000 and 10,000 slaves were traded, amounting to an estimated 75 percent of the total population.

In return, the Omani masters of Zanzibar developed close relations with Western powers and remained independent for a long period of time. They were, however, dependent on the purchase of weapons in order to maintain the slave trade in East Africa. When European countries promoted the abolishment of slavery in the nineteenth century, they pressured the sultan of Zanzibar to end the slave trade. British ships chased local dhows, traditional Arab sailing vessels, that carried the human cargo. For several decades, however, the slave trade continued illegally, with shipments going from Somalia to Arabia.

—Sebastian Maisel

Portuguese, and they began to explore the land, reaching the Omani Gulf area in 1507. They conquered Zanzibar in 1503, Socotra in 1506, and finally the Omani coast in 1507. Their objective was to block the Strait of Hormuz and the Bab al-Mandab so that they could better control the trade routes to Asia. In the course of this expedition, almost all Omani port cities (Muscat, Sur, Sohar) were conquered, plundered, and destroyed. Resisting groups were killed, and ships were sunk. Military success is attributed to the use of artillery and gunpowder, which easily

penetrated the adobe walls and wooden ship planks of the Omanis. As a visible sign of Portuguese power and dominance, they built large fortresses along the coastline.

This dominance would not last for long. Although there were certain parts of India that the Portuguese would always control, other powers soon became involved in the area and sought their own control. The Ottomans were able to control the area during 1550–1551 and 1581–1588. By the end of the sixteenth century, the English, Dutch, and French were beginning their own maritime expeditions, and by the early seventeenth century all three appeared in India, eager to establish their own trading centers. In addition, back in Europe, Portugal had been appropriated into the Spanish empire in 1580 and would remain so until its independence in 1640. This caused problems for its overseas empire, as men and money normally used for their defense of the empire were slowly moved to fight the various wars that the Habsburg kings were involved in. In addition, the Dutch, English, and French could now treat their former ally as the enemy, since Portugal was now a part of Spain, their enemy.

The Portuguese soon felt the consequences. After a Persian attack supported by England, they had to evacuate the island of Hormuz in 1622. At the same time, Nasir bin Murshid from the Al Yaruba dynasty started to unite the Omani tribes of the interior in order to expel the Portuguese from Oman. He was chosen imam, a position that became hereditary in his family. Step by step the Portuguese had to give up the coastal towns of Sohar and then Sur in 1634 and finally, under Nasir's successor Sultan bin Saif, Muscat in 1650. Sultan bin Saif also expelled them from the many formerly Arabic trade posts along the East African coast. In 1652 he conquered Zanzibar and in 1655 Bombay in India. Under the sultan's rule a large armada of battleships and merchant vessels was built, which secured the trade with India and Africa. Imam Saif bin Sultan, son of Sultan bin Saif, finally expelled the Portuguese from all of their East African territories except for Mozambique, and the country developed into a maritime powerhouse in the Indian Ocean.

Controlling the intermediate trade between India and Africa, Oman experienced economic growth. From their bases in East Africa, Omani

merchants operated a thriving slave trade with the Islamic world. In addition, agriculture was promoted through the expansion of a large net of irrigation projects. Economic prosperity enabled a large-scale building boom whereby palaces, fortresses, and residences were built in Muscat, Nizwa, and other towns.

A sharp decline started during the rule of Imam Sayf bin Sultan, who had to compete against several rivals due to his young age. Civil war erupted and led to the polarization of the society. Imam Sayf bin Sultan invited Persian troops but was eventually toppled, and the Iranians took control of most of the country. Ahmad bin Said, since 1744 leader of the Albu Said tribe, was elected imam and replaced the Yaruba dynasty. The Omani tribes were again united against the Persian invaders and expelled them; in 1746 the Albu Said dynasty was founded, and its rule has lasted until the present day.

After addressing internal political problems, Sultan Ahmad bin Said joined an agreement with Portugal over spheres of interest in East Africa. Thus, the way was clear for the expansion of Omani rule. The focus of the country shifted to the prosperous coast of eastern Africa, where the trade of slaves for the plantations in America and the Caribbean and of spices, especially cloves, flourished. Omani merchants operated deep into sub-Saharan Africa. Zanzibar became the new residence of the sultan; the country's name was changed to the Sultanate of Muscat and Zanzibar. The Portuguese retained a presence in India until the twentieth century, but it was a minor one.

The empire, however, began to fall apart after the death of Imam Said bin Sultan in 1856 due to the power struggles over succession among his sons. In 1861 a treaty was brokered with the help of the British that formalized the official separation of the country into the Sultanate of Muscat and Oman and the Sultanate of Zanzibar. The decline was furthered by three additional aspects: the opening of the Suez Canal in 1869, which left the ports of Oman useless; the development of steamships, which reached the Indian Ocean in 1865 and were far superior to the sailing dhows of the Omanis; and finally the abolishment of slavery and the concurrent crash of the market. Government revenues collapsed,

and within a few years the once-mighty Oman lost its importance, and the Albu Said lost their power. Finally, in 1893, the sultanate became a British protectorate.

—Sebastian Maisel

Bibliography

- Al Maamiry, Ahmed Hamoud. *Omani: Portuguese History*. New Dehli: Lancers Publications, 1982.
- Boxer, C. R. *Portuguese Conquest and Commerce in Southern Asia, 1500-1750*. London: Ashgate, 1985.
- Floor, Willem. *The Persian Gulf: A Political and Economic History of Five Port Cities, 1500-1730*. Washington, DC: Mage Publications, 2006.
- Russell-Wood, Anthony. *The Portuguese Empire, 1415-1808: A World on the Move*. Baltimore: Johns Hopkins University Press, 1998.

Songhai—Last of the Savanna Empires

The origins of the Songhai empire date back to the ninth century CE, when the inhabitants of the city of Gao, located near the Niger Bend region of what is today eastern Mali, began to expand their power over the surrounding region. Drawing upon floodplain and rain-fed agriculture as well as river resources (including fish and hippopotamus), the region provided a solid surplus of food to help develop a thriving urban and economically diverse society.

In the later thirteenth century, the city was incorporated into the expanding Mali empire as a subject region. However, as Mali fell into decline in the fifteenth century, Gao reasserted its independence, first as a powerful city-state and eventually as an empire in its own right. It was under the rule of Sonni Ali that the Songhai empire began to take shape, seizing control over Timbuktu in 1468 and Jenne in 1473. By the latter 1480s, Songhai had grown to control a huge swath of the West African savannas and Sahel (the so-called coast between the desert and grasslands), extending from present-day Niger westward to the Atlantic coastline of the Senegambia. As with earlier Ghana and Mali, this east-west orientation allowed Songhai to control the flow of gold out of the forest regions of the south and the salt that was transported from the northern Sahara into the savannas.

➤ TWO VIEWS OF SONNI ALI

Sonni Ali (sometimes identified as Sunni Ali Ber), is generally credited with the founding of the empire of Songhai. As the empire of Mali fell into decline, the Sonni dynasty, based in Gao on the Niger River, expanded its military and economic reach to fill this power vacuum. Sonni Ali came to power around 1464. Utilizing cavalry-based land forces and naval forces based on the Niger River, he expanded the regions under Gao's control extensively, capturing Timbuktu in 1468 and Djenne in 1473. The region under Sonni Ali's control became so great that it was later dubbed the "Songhai empire." Despite his military victories, he eventually came into conflict with the region's urban Muslim populace, who accused him of being a poor Muslim. After Sonni Ali drowned in the Niger in 1492, his son and successor, Sonni Baru, was overthrown by Muhammad Ture, who founded a new dynasty, which ruled until 1591.

Interestingly, Sonni Ali's historical legacy is contested. Having run afoul of the region's Islamic scholars, Sonni Ali was derided as a harsh and illegitimate ruler in such important sources as Abd al-Sadi's *Tarikh al-Sudan (History of the Sudan)*. Sonni Ali, however, eventually found modern defenders in what is often termed Afrocentric scholarship. In this twentieth-century literature, such as in works by Chancellor Williams, Ali is represented as a great hero of African tradition who fought against the "foreign" influence of Islam and Arab culture. Such a contrast offers excellent insight into the importance of identity in the writing of history.

—Jonathan T. Reynolds

Although a gifted military commander, Sonni Ali found himself challenged on religious and political grounds. As had been common for many of the region's rulers over the previous three centuries, he appears to have sought to strike a balance between the practices of Islam and indigenous local religions. However, by the late fifteenth century the expanding practice of orthodox Islam among the region's increasingly powerful merchant and scholarly classes had created an environment that was unfriendly to such overt blending of religious practices. Sonni Ali found himself attacked for his lack of

Islamic piety. In 1492 the region's Islamic scholars announced that Sonni Ali could not legitimately rule over the region's Muslim populace, and shortly afterward he drowned in the Niger River. His son, Sonni Baru, sought to maintain power but was soon overthrown by Muhammad Ture. Taking the name Askiya Muhammad, Ture announced his desire to rule the region according to Islamic precepts and offered expanded state support for the region's *ulama* (Islamic scholars).

Askiya Muhammad's rule expanded Songhai's power as the empire extended its authority northward to some of the Sahara's richest salt deposits and southward to the edge of the West African forest region. To bolster his legitimacy, he also undertook a pilgrimage to Mecca in 1495. A dynastic crisis in 1528, however, led to his overthrow by his son Askiya Musa, who was himself unseated by his brother Ismail in 1537. A long period of peace prevailed under the rule of Askiya Dawud from 1549 to 1582. In particular, this time saw the ongoing expansion of Islamic scholarship in the region.

By the late sixteenth century, however, a major economic shift was under way in the West African savannas. Portuguese access to the West African coastline, particularly at El Mina in what is now southern Ghana, meant that new markets for West African gold were undercutting this important component of the trans-Saharan trade. Certainly Songhai still profited from many other forms of trade, but the significant decline in the quantity of gold moving across the region was a major blow. In 1591 the Moroccans sent an army across the Sahara to invade Songhai. Equipped with firearms, the small Moroccan force defeated the Songhai army and was able to unseat Askiya Ishaq II from the Songhai throne. Notably, the Moroccans profited little from their conquest, in no small part because the trade in gold had already declined to a trickle. The invasion and subsequent collapse of the Songhai empire did, however, set off what is often referred to as the Dyula diaspora, a movement of Muslim merchants and scholars out of the region and into other parts of West Africa, an event that did much to lay the groundwork for the ongoing expansion of Islam in the region.

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Levtzion, Nehemia. *Ancient Ghana and Mali*. London: Methuen, 1973.
- Levtzion, Nehemia, and Randall L. Pouwels. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.
- McKissack, Patricia, and Frederick McKissack. *The Royal Kingdoms of Ghana, Mali, and Songhay: Life in Medieval Africa*. New York: Holt, 1995.
- Williams, Chancellor. *The Destruction of Black Civilization: Great Issues of a Race from 4500 BC to 2000 AD*. Chicago: Third World Press, 1987.

The White Man's Grave—How Extensive Was Early Contact?

As Europeans ventured forth by sea to new worlds in the Americas, Africa, and Asia, they encountered new disease pools that limited their interactions. Tropical diseases killed Europeans in large numbers, often at rates five to ten times higher than if they had remained in Europe. Consequently, for centuries after 1492 Europeans did not dominate the world, particularly in tropical areas, but instead worked within existing political and economic systems. Vastly outnumbered, they had to rely on local help and contacts to trade and establish colonies. It was not until the nineteenth century that medical practices and vaccines sharply reduced European deaths in tropical regions and allowed them to expand their presence.

Africa was the first new landmass that Europeans explored as sailors ventured south in search of gold and later slaves during the late fifteenth and early sixteenth centuries. And because of disease, it was Africa that proved most difficult for Europeans in establishing permanent settlements. With no natural immunities and without effective medical practices, Europeans who traveled to tropical Africa died at enormous rates, particularly from malaria and yellow fever. Soldiers stationed in Africa died at rates sometimes in excess of 50–60 percent in a single year. This required a constant supply of new troops from Europe who were just as susceptible to disease. The west coast of Africa developed such a notorious reputation in

Europe that it became known as “The White Man's Grave.”

Disease was so lethal that Europeans were relegated to the African coastline, establishing a few forts and settlements and hoping to keep their contact with disease to a minimum. Except in the Cape Colony with its more temperate climate, Europeans were unable to penetrate the interior of the continent or establish colonies until medical advancements in the mid-nineteenth century. Due to their limited numbers, the colonizers relied on local peoples for inland trade and contact. In Africa, this meant that the slave trade was conducted through African intermediaries who brought slaves to the coast, where they were then sold to European traders who shipped them across the Atlantic.

Yet Africa was not the only place where disease limited European numbers. In the New World, European colonists suffered too. In addition to bringing a disease pool that decimated the Native American population of the Americas, contact with Africa introduced the same lethal diseases of yellow fever and malaria to the Americas. In the Caribbean, disease contributed to the short life span of Europeans and African slaves and to the need for a constant supply of new slaves from Africa. Caribbean plantations remained overwhelmingly African, and white landowners often managed them in absentia, in part due to disease. When French troops entered the colony of St. Domingue to put down a rebellion in 1792, over half of the 10,000 troops died from disease. In the North American colonies during the early seventeenth century, 40 percent of new arrivals perished within a few years, with higher death rates in the colonies of Virginia, Maryland, and South Carolina.

In some areas of the Indian Ocean, such as Southeast Asia, European colonies relied upon slave labor as well as local workers to function because disease reduced the already small number of Europeans in the region. In these places, high mortality and few European women meant that local women often entered into business relationships with European men, often through marriage. These women not only had local business connections and understood the culture but also often survived their husbands and inherited their businesses. Partly because of disease,

BRITISH ARMY DEATHS IN THE TROPICS

Location	Average Annual Death Rate per 1,000 troops
Great Britain	15
India	30–75
West Indies	85–138
Western Africa	483–668

This table gives an example of the high death toll for Europeans in tropical areas by looking at British troop deaths during 1680–1834. While the high death rate for western Africa underscores why it earned the name “White Man’s Grave,” the comparatively lower death rate in India offers a reason why Europeans believed India to be a temperate climate suitable to European colonization during this period.

—Thomas Anderson

Source

Mark Harrison, *Disease and the Modern World: 1500 to the Present Day* (Cambridge, UK: Polity, 2004).

European colonies in Asia were dependent on local troops, sailors, traders, and bureaucrats to run the emerging imperial networks, which fostered a need for dialogue and negotiation. These close connections led to an exchange of knowledge ranging from shipbuilding techniques to medical practices.

By the nineteenth century a variety of factors including better hygiene, sanitation, water supplies, and medicine, such as the use of the drug quinine to protect against malaria, began to sharply reduce European deaths. Indeed, the age of European imperialism that began during the nineteenth century stemmed not only from economics and technology but also relied in large part on the lower death rates of Europeans. It was during this period when Europeans gained economic, political, and territorial control over large swaths of the world. Until this period, however, Europeans operated in a world where they were outnumbered and often worked in tandem with local peoples.

—Thomas Anderson

Bibliography

Curtin, Philip D. “The White Man’s Grave’: Image and Reality, 1780–1850.” *Journal of British Studies* 1 (1961): 94–110.

Curtin, Philip D. *Migration and Mortality in Africa and the Atlantic World, 1700–1900*. Aldershot, Hampshire, UK: Ashgate, 2001.

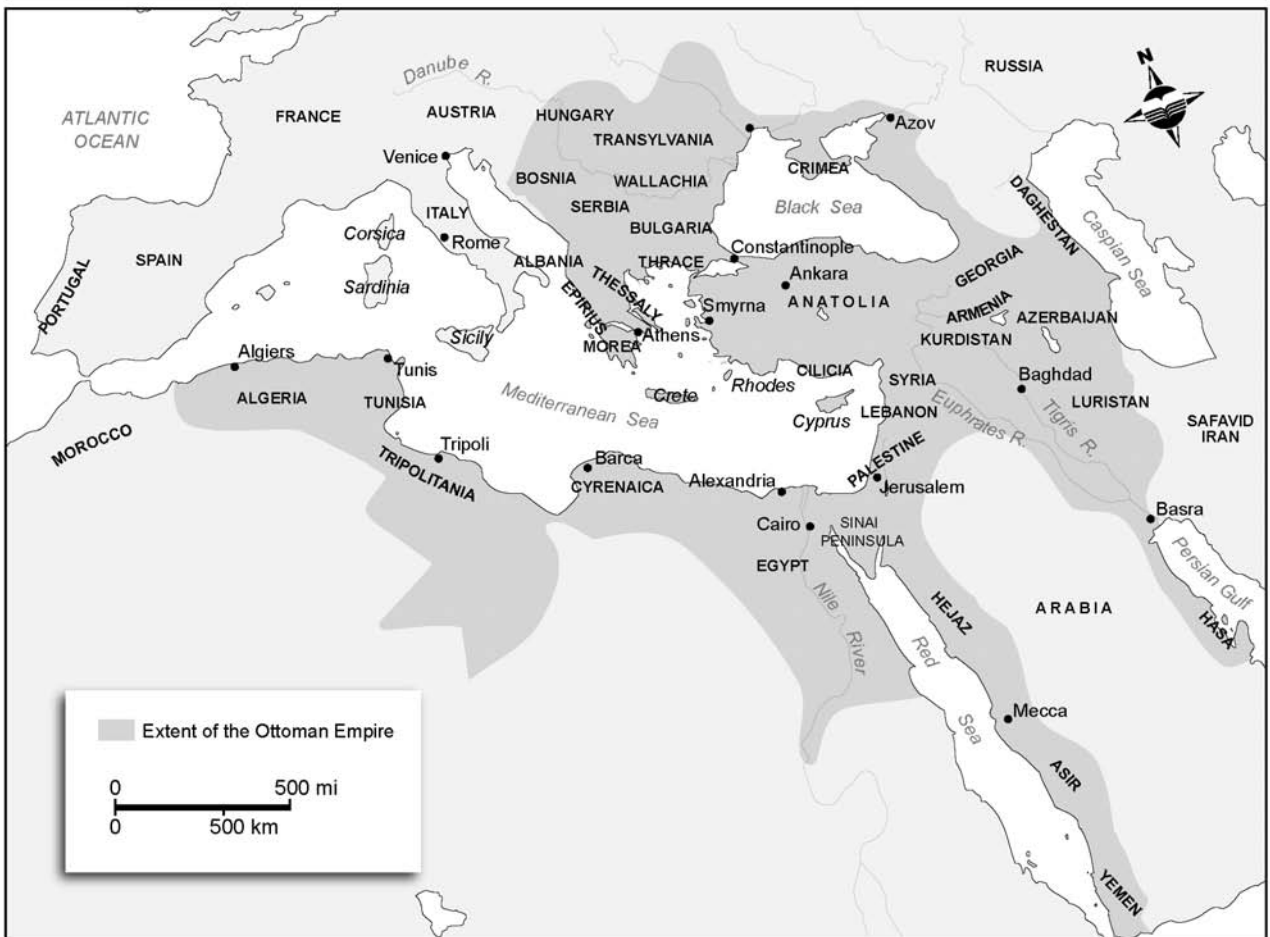
Harrison, Mark. *Disease and the Modern World: 1500 to the Present Day*. Cambridge, UK: Polity, 2004.

The Ottoman Empire as a Superpower

Between circa 1450 and 1770 the Ottoman empire became a formidable superpower in Europe, West Asia, and, after 1517, North Africa. During this period the Ottomans twice besieged the central European city of Vienna; conquered Constantinople, which had stood as the capital of the Byzantine empire (or eastern Roman empire) since circa 330 CE; and brought much of the Arab Middle East under their control. In the process of acquiring this empire, the Ottomans came into contact with many different peoples. Although the ruling family was a Muslim dynasty, the Ottoman empire had a significant minority of non-Muslim subjects, most of whom were Christians although there were many Jews as well. Unlike late medieval and early modern Europeans, the Ottomans were a tolerant empire that benefited from the abilities of their diverse subjects, although non-Muslims were not technically equal to Muslims.

It is difficult to point to any one move that led to the Ottoman ascendance, although there are several key elements of Ottoman success that cannot be overlooked. First, the Ottomans emerged as gunpowder empire, utilizing gunpowder-related weapons into their mobile armed forces much earlier than the emerging European powers. Thus, the Ottomans often employed siege cannons on their campaigns, perhaps the most famous instance being their capture of Constantinople in 1453. The Ottomans were also willing to integrate individuals from their Christian populations into their ruling class through the *devsirme* system. Under this system Ottoman authorities visited Christian villages in order to identify boys they believed to show both

OTTOMAN EMPIRE IN LATE 17TH CENTURY



great physical and mental potential. These boys were brought to the imperial centers, where they were trained for future government service. The boys received an excellent Ottoman education, and the highest-achieving individuals became advisers to the sultan's household, while the others became lifelong members of the Janissaries, the sultan's elite military force. Finally, the Ottomans were also able to further tap into their Jewish and Christian populations by allowing these groups to live, work, and worship freely as long as they paid a special tax. While these groups were not granted full equality with Muslims at this point in Ottoman history, they were active in the empire. They were encouraged to become productive members of society and were treated far better than minority groups in European states at this time.

The reign of Suleyman the Magnificent (r. 1520–1566) was arguably the high point of the Ottoman empire. At this time, the Ottomans were the single strongest military power in West Asia or Europe. They had recently added to their territory large swaths of North Africa along with the majority of the Arabian Peninsula and areas west of Iran along the Persian Gulf. Despite this, a significant reason later writers associated Suleyman's reign with the Golden Age of Ottoman history is that this is the way he portrayed his own rule. Similar to the Roman emperor Augustus, Suleyman commissioned artists, writers, and the development of buildings in order to bolster the empire and its culture. He also became famous for the promotion of Ottoman law and was known as the *Kanuni* (law giver). During the rule of his successors, the Ottomans carved out

a large empire in West Asia and Europe and established strong centralized rule, at least for this time period, centered around the sultan and his household.

Like all empires in this period, the Ottoman empire operated in an international environment. Yet because of his power relative to neighboring rulers in Europe and the Middle East, the Ottoman sultan considered himself and his state above other kingdoms. The Ottoman sultan could act unilaterally in proclaiming peace and war or giving gifts to other states. Yet there were instances when the Ottoman ruler did view a foreigner as an equal. In the sixteenth century Suleyman forged an alliance with King Francis I of France in which Suleyman apparently recognized Francis as his equal. Both of these men viewed the Holy Roman Empire as a chief rival. This alliance also highlights the fact that the Ottomans could and did ally with Christian states in Europe. Thus, the Ottomans acted like most successful empires; they fought, negotiated, and coexisted with the states around them regardless of religion.

The Ottoman sultanic concept of unilateral concessions also extended to the economic realm. Like China, the Ottomans believed that only Ottoman subjects deserved the full protection of Ottoman laws within the empire. Therefore, foreign merchants and residents within the Ottoman empire were often without legal protection and were subject to customs duties and taxes. Yet the sultan occasionally granted capitulations to foreigners to gain access to certain commodities or skills. This meant that these foreigners were able to operate in the Ottoman empire under their own government's laws and were exempt from Ottoman laws and taxes. During the sixteenth century when these capitulations began, they were mainly beneficial to the empire, but by the eighteenth century this system had become detrimental to the Ottoman economy.

Although the Ottomans did not acquire overseas colonies, they had a significant impact on global affairs in this period. It is generally agreed that a significant reason behind western European countries looking to transoceanic voyages to find routes to East Asian and Indian markets was that the Ottomans controlled the overland routes. The Ottomans also allied with various

cities and peoples along the Asiatic coast of the Indian Ocean in order to prevent Portuguese naval domination of the area. Furthermore, during the fifteenth, sixteenth, and seventeenth centuries the Ottomans often found themselves at war with their neighbors. These conflicts included an Ottoman-Hungarian war, Ottoman-Habsburg wars, the Ottoman-Mamluk war, and Ottoman-Safavid wars. Thus, the Ottomans fought Catholic and Orthodox Christians as well as Sunni and Shia Muslims.

Although the Ottomans remained a major power, during the seventeenth century their empire had begun to change. During the fifteenth and sixteenth centuries the sultan had been the empire's chief political and military leader. Although the imperial center remained powerful, the political and military roles of the sultan changed as his advisers and household members rose to prominent positions. By the eighteenth century power had devolved even further to provincial leaders, often Janissaries, members of a group that had begun as the sultan's personal army but had grown into a quasi-hereditary group that had spread throughout the empire and forged local alliances with merchants and provincial notables. Although still a major power, the Ottomans had to also begin dealing with the emerging powers in western Europe and the new Russian state.

—Jonathan Sciarcon

Bibliography

- Faroghi, Suraiya. *The Ottoman Empire and the World around It*. London: I. B. Tauris, 2004.
- Finkel, Caroline. *Osman's Dream: The Story of the Ottoman Empire, 1300–1923*. New York: Basic Books, 2006.
- Goffman, Daniel. *The Ottoman Empire and Early Modern Europe*. Cambridge: Cambridge University Press, 2002.
- Quataert, Donald. *The Ottoman Empire, 1700–1922*. 2nd ed. Cambridge: Cambridge University Press, 2005.

The Mughals in India

The Mughal empire was founded in 1526 by Zahiruddin Ahmed Babur, a ruler from Central Asia. After entering India and defeating the ruler of the Delhi sultanate, Sultan Ibrahim Lodi, Babur

helped to establish the Mughals as one of the most powerful and wealthy empires of the early modern era. However, Babur's descendants became central to the establishment of the empire.

Babur's son, Humayun, became emperor in 1530, although he was forced to flee to Persia (Iran) during part of his reign. It was during his time in Persia that Humayun developed an interest in Persian art, literature, and culture, forming a connection between Persian and Indian cultures and Islam and Hinduism that defined the empire. When Humayun died unexpectedly in 1556 as he slipped and fell while hastening toward his prayers, his son Akbar ascended the throne when he was a young teenager. Akbar ruled until 1605 and became a defining leader of the empire. During his rule, the Mughals developed a fiscal and administrative structure that was extensive, efficient, and relatively fair. The economy relied upon agricultural productivity and complex trade networks (in India and in the Indian Ocean). Agricultural taxes, which were the main sources of imperial revenues, took into account crop rotation, productivity of soil, and other extenuating circumstances. Akbar and later emperors also developed a judicial system that was accessible and reasonable, with village representative bodies to adjudicate most minor cases according to local traditions and customs.

Beginning with Babur, the Mughals had a well-organized and intimidating military. The emperor controlled extensive forces, including the cavalry, infantry, and artillery divisions; an infrastructure of logistical support; and large numbers of horses and elephants. Moreover, the emperor also had access to the forces under the *Mansabdars* (state functionaries who commanded their own troops, had to swear allegiance to the emperor, and were assigned territories [*jagirs*] from which they collected land revenues that they shared with the emperor according to established rules). Along with a large army, the Mughals also utilized advanced weapons for their time, and they became known as a gunpowder empire due to their use of artillery. This military facilitated the expansion of the Mughal empire, an empire that encompassed most of northern India by 1605 (under Akbar) and controlled nearly all of South Asia by 1707 (under Aurangzeb).

➤ AURANGZEB AND DARASHIKOH, 1658

One of the defining events in Mughal history concerns the crisis of succession following Emperor Shah Jahan's illness in 1658. In the contest for the throne, Dara Shikoh, Shah Jahan's eldest son and the favored and popular heir apparent, was outmaneuvered and eventually killed by his brother Aurangzeb (r. 1658–1707). The contrasts between the two brothers were vivid and substantive. Dara Shikoh was enlightened, scholarly, and a sensitive patron of art and culture. He was a devotee of Sufi saints and wrote extensively on religious issues from a mystical perspective. He also translated Hindu texts, reached out to the Sikhs, and followed his great-grandfather (Akbar) in his pursuit of religious understanding and humanistic ideals. Aurangzeb, while not a hateful zealot, was nonetheless a devout Muslim whose faith informed and inspired his personal life and public policies. He sought to impose an Islamic stamp on the empire by undoing some of Akbar's tolerant traditions (e.g., by reimposing the *jizya*, a tax on non-Muslims). He also was a talented military leader who spent the last 26 years of his life fighting against Hindu kingdoms in southern India to expand the empire. Yet as he increased taxes on the peasantry to finance his military campaigns while he also alienated regional Mughal allies, Aurangzeb contributed to the process that led to the splintering of Mughal authority after his rule. What if Dara Shikoh had prevailed in 1658?

—Ahrar Ahmad

In addition to their military, the Mughals became famous for their support of art and culture. Following the interest in Persian culture starting with Humayun, Akbar and his descendants patronized new systems of art, culture, and architecture. The Mughals encouraged an artistic and aesthetic courtly culture that was exceptional and eclectic. Emperors patronized musical talents that devised a new vernacular of Indian classical music, and they also supported court poets and a new genre of miniature painting. In addition, the Mughals sponsored an architectural creativity that was ingenuous and imaginative. For example, Shah Jahan (r. 1628–1658) the grandson of Akbar, presided over an era of architectural achievements. Jahan developed the

capital, Delhi, and patronized the building of the famous Taj Mahal.

The Mughals were also known for their enlightened approach to religious issues. While some examples of intolerance may be found, Mughal rulers were essentially practical Muslims who found it easier to treat the Hindus as *dhimmis* (protected groups) and incorporate them into the framework of the empire. A substantial number of Hindus functioned in the upper echelons of the Mughal administration, including some who served in the imperial cabinet or as royal advisers. Under Akbar, laws that imposed special taxes on non-Muslims were repealed. In addition, many Mughal rulers personally exemplified the practice of interfaith marriage. Akbar personally illustrated this environment of openness when he inaugurated the *ibadat khana* (house of worship), a place where representatives of various religions (including Christian missionaries) were invited to engage in spirited debate and discussion.

As a result of these developments, the Mughal empire encouraged a fusion of cultures, religions, and ideas. This fusion continued even under Aurangzeb (r. 1658–1707), a leader known for a more conservative approach to Islam. Although he had a complex relationship with Hindus (especially regional Hindu leaders), Aurangzeb continued to employ Hindus in his administration. His main focus, however, was the expansion of the empire, and he exerted much of his efforts to ruling the entire Indian subcontinent. After Aurangzeb's death, Mughal rulers increasingly relied upon regional leaders to maintain the empire. Emperors also faced growing challenges from internal groups including the Marathas, Sikhs, and Pathans. By the middle of the eighteenth century, the British East India Company, a corporation that began as traders, became collectors and administrators in various areas under Mughal authority. The British eventually abolished the Mughal empire and deposed the "last Mughal," Bahadur Shah Zafar, in 1858; India passed under the direct jurisdiction of the British Crown at that time. However, Mughal contributions to art, culture, literature, and the global economy helped mark one of the most successful empires in the early modern era.

—*Abrar Ahmad and Jeffrey M. Diamond*

Bibliography

- Habib, Irfan. *Atlas of the Mughal Empire*. New Delhi: Oxford University Press, 1982.
- Khan, Iqtidar Alam. *Gunpowder and Firearms: Warfare in Medieval India*. New Delhi: Oxford University Press, 2004.
- Mukhia, Harbans. *The Mughals of India: A Framework for Understanding*. Oxford, UK: Blackwell, 2004.
- Richards, John F. *The Mughal Empire: New Cambridge History of India*, Vol. 1, Part 5. Cambridge: Cambridge University Press, 1993.

The Safavids in Persia

The Safavid dynasty, which ruled Persia and its dominions from 1501 to 1736 CE, established itself as a Persian ruling family despite its background as the leaders of a largely militaristic Turkic nomadic group. Much like the other two contemporary Muslim regimes, the Ottomans in the Near East and the Mughals in southern Asia, the Safavids were Turkic nomadic invaders who successfully conquered large urbanized and economically developed empires, supplanted the native ruling elites, and adopted aspects of their culture and lifestyles. Furthermore, the Safavids installed Twelver Shiism (Shia branch that believes that Twelve Imams were the legitimate successors of Ali) over a largely Sunni Muslim population as an aspect of centralizing theological and social control over their conquests. The early Safavid state was characterized by constant wars of expansion, directed toward Anatolia, Mesopotamia, central Asia, and the Caucasus, for the purposes of acquiring wealth and lands for the military.

The first Safavid shah, Ismail (r. 1501–1524), installed himself as the ruler of Persia, thereby displacing the Timurid dynasty from power. In order to consolidate his gains, Ismail imposed Twelver Shiism over his dominions. By tracing the ancestry of the Safavid dynasty to Sufi leader Safi al-Din (1252–1334), Ismail sought to appeal to the religious proclivities of Turkic nomads settling within his dominions. However, this led to the forced imposition of this form of Shiism over the mostly Sunni Persians. Moreover, the Turkish military elite, known as the *quzurbash*, wore red hats with 12 pleats in commemoration of the 12 Shiite imams. As the main advocates of expansion, the quzurbash were the crack troops of the Safavids

in their wars of expansion. For their service, they were awarded newly conquered lands and governing roles in the provinces, replete with levied troops and access to wealth through taxation.

The zenith of Safavid power occurred during the reign of Shah Abbas the Great (r. 1588–1629), who instituted a great deal of administrative reforms to consolidate his power and spurred economic growth by encouraging international trade. Among his reforms was the modernization of the military by incorporating European weapons and the establishment of a standing army, made up of former slaves (*ghulams*) and Persian peasant recruits who swore loyalty to the shah. Furthermore, he expanded the central government bureaucracy, staffed mostly by Persians, to assume many administrative duties across his dominions. However, both of these reforms struck at the privileges of the *qizilbash*. Abbas found these reforms to be necessary in order to provide stability, as economic prosperity had previously been derived from military expansion, which was no longer possible. Moreover, the *qizilbash*, which had been originally designated as the provincial aristocracy and military elite, were becoming a threat to the power of the dynasty itself.

Both long-term and short-term developments led to the fall of the Safavid dynasty by 1736 CE. The administrative reforms imposed by Abbas, while stimulating economic growth, were matched by increased taxation on much of the populace. The expansion of the state and the military at the expense of the regional *qizilbash* aristocracy exacerbated political rivalries and did little to alleviate external pressures by outside forces. The forced imposition of religion on newly conquered peoples and peripheral regions created a great deal of resentment directed at Safavid rule. While high taxes went to pay for lucrative palaces and amassed wealth, Persian peasants became destitute, as rampant inflation drove many of them into dire straits. This inflation occurred due to the entry of specie, particularly silver, into Persia as a result of increased trade with Europe and Mughal India. Incompetent governance on the part of Shah Abbas II and his incapable subalterns further led to the growing unpopularity of the Safavids throughout their realm. Afghan insurgency and popular discontent against the dynasty was rampant in

➤ ABBAS I

Safavid shah Abbas I “the Great” (1588–1629) entered power during a time of great discord in the Persian realm. Internally, the *qizilbash* military elite were actively threatening the power of the shah by conspiring against the royal family as well as expanding their own power within their dominions through their administrative capacities as subordinates of the shah. Externally, the Ottoman empire and the Uzbeks were actively expanding their territories at Safavid expense. Abbas sought to resolve these centripetal and centrifugal forces threatening his power by instituting a loyal standing army, composed of former slaves and Persian conscripts, to counter both *qizilbash* rival power and the external threat posed by the Ottoman Turks and Uzbeks. He further eliminated dynastical conspiracies by isolating Safavid princes in the harem and abandoning their use as administrators elsewhere in the empire. This had the unintended consequence of creating inept rulers among his successors, as they failed to have any sort of political or military training during their time in the harem, being surrounded by drink and women and engaging purely in debauchery.

—Abraham O. Mendoza

the last decade of Safavid rule. Ultimately, the last shah was deposed by his subaltern Turkmen military leader Nader Afshar in 1736, as Persia was immediately threatened by Afghan invasion.

—Abraham O. Mendoza

Bibliography

- Abisaab, Rula Jurdi. *Converting Persia: Religion and Power in the Safavid Empire*. New York: I. B. Tauris, 2004.
- Hodgson, Marshall G. S. *The Venture of Islam: Conscience and History in a World Civilization*. Chicago: University of Chicago Press, 1974.
- Lockhart, Laurence. *The Fall of the Safavi Dynasty and the Afghan Occupation of Persia*. Cambridge: Cambridge University Press, 1958.
- Savory, Roger M. *Iran under the Safavids*. New York: Cambridge University Press, 1980.
- Savory, Roger M. “The Safavid Administrative System.” In *The Cambridge History of Iran*, Vol. 6, edited by Peter Jackson and Laurence Lockhart. Cambridge: Cambridge University Press, 1986.

The Estado da India, Portugal's Seaborne Empire

The Portuguese maritime empire was a constellation of trading posts and fortresses. A small nation on the Atlantic Ocean with limited maritime resources was able to pave the way for sustained contact between East and West. By reaching the source of the spices and purchasing direct from the producers, the Portuguese undercut the previously established markets in Venice and Antwerp that relied on Asian intermediation. Breaking into the intra-Asian trade required such tactics and strategies as intermarriage with the local elite and entering into trade contracts with Asian monarchs.

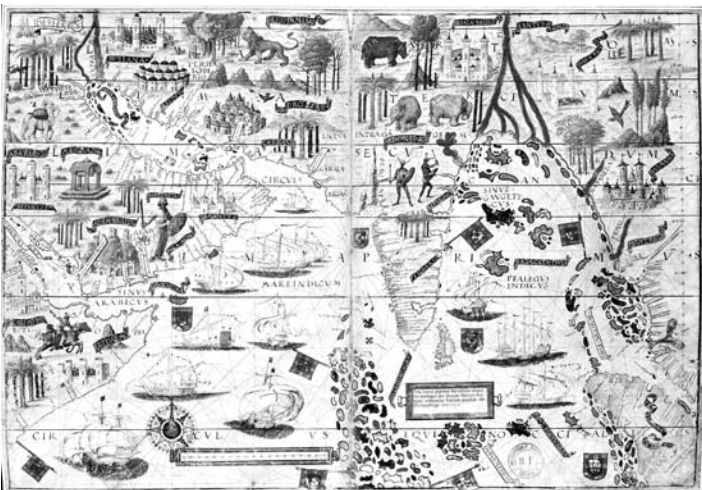
The term “Estado da India” (State of India) covers the Portuguese empire in the East, ranging from the Cape of Good Hope to China. Although the term defined the official remit of Portuguese power, unofficial trading by the Portuguese extended its influence far beyond these geographic confines. This, however, does not imply that the Portuguese ruled the entire coastline within these boundaries. The geographic limits of the viceroy of India's jurisdiction was over all Portuguese settlements and interests between the southern tip of Africa and the lower Yangzi River, which meant both official and unofficial Portuguese settlements within these boundaries

but nothing else. The majority of the coastal lands and cities remained outside of Portuguese control and interests.

Thus, the Estado could be considered a network linking a series of nodes, each with a formal Portuguese administration, conforming to an approximately common pattern. While the narrow and formal definition of the Estado applied to legal and bureaucratic matters, the broader definition was assumed in practice. The viceroy, or governor, resident first in Cochin and later in Goa on India's west coast and complemented by officials and a fortress stood at the pinnacle of this imperial mercantile machinery. Among other duties, he entered into commercial contracts with local rulers on behalf of the Portuguese king. The Estado, however, with the viceroy's centralized directives, was unwieldy. Its jurisdiction was too wide and not effective in some parts, particularly in Southeast Asia.

Within the Estado, royal monopolies and taxes curtailed the fortunes, and some Portuguese abandoned the Estado to seek larger fortunes. The Portuguese king had a monopoly on certain commodities, but there were leakages, for in reality there were other ready buyers. Pepper, cloves, ginger, cinnamon, nutmeg, sealing wax, silk, and tincal (borax) were taken to Lisbon by clandestine traders, who stored these goods in their houses and avoided entering them in the Casa da India (House of India). The Casa da India was a large warehouse that stored commodities openly and officially brought to Lisbon by Portuguese officials and private traders. It was also an emporium, or marketplace, where these commodities could be bought and sold.

Portuguese diplomatic relations with local rulers ensured that the commodities were sold only to the Portuguese Crown. A monopoly, with one buyer for a commodity, is not profitable to the producer or seller of the goods, as the monopolist fixes the price. There are no free market conditions where demand and supply meet, allowing for the market to determine the price of the commodity. In this restrictive situation, it is understandable that the producers sold their goods to other buyers. On September 8, 1520, the *Ordenações da India* (Acts of India) at Evora listed the commodities that were reserved for the Crown. In 1570, however, the Portuguese



Map showing Arabia and India from the Portuguese Miller Atlas, about 1519. The atlas shows the Indian Ocean, the Persian Gulf, India, and North Africa, and was produced shortly after early Portuguese expeditions by da Gama, Cabral, Coelho, and Albuquerque. (Jupiterimages)

king realized the impracticality of the royal monopoly and opened up the trade to all.

The Portuguese trade on the Malabar Coast in southwestern India began a new phase in international relations beginning in the early sixteenth century. A treaty of commerce and peace was signed with the Zamorin (*Samudri raja*) of Calicut, in 1500. A new trading organization, a *feitoria* (“factory”), was established by the Portuguese on the Calicut Coast and was announced to the mercantile world. A factory was a commercial organization having an autonomous existence set up in the Portuguese empire or in a protectorate through a concession granted by the local rulers. It was also a storehouse for both Eastern commodities awaiting transshipment to Lisbon and for goods brought from Lisbon to be bartered in the East. A *feitoria* also accommodated the special needs of the Portuguese commercial community, providing this separate entity in a foreign land with a Roman Catholic church and its consecrated burial ground, for example. A *feitor* (“factor”) was in charge of all economic, financial, and administrative activities, being the appointed agent of the Portuguese Crown. He regulated Portuguese traders, presided over the courts that meted out justice according to Portuguese law for these Portuguese expatriates, and dealt with the local authorities.

Early in the sixteenth century, the Portuguese were able to capture the trade on the Malabar Coast and set up several fortresses along the coast. As a result, Cochin became the initial seat of the overseas government of the Estado until 1530. Then the administrative headquarters was moved north to Goa, due to the trade available north of Cannanore and the Canara Coast, Goa, and Gujarat. On the Coromandel Coast in the southeast they only had unofficial Portuguese settlements in Pulicat and São Tome and farther north in Chitragong and Hugli. Portuguese supremacy gave way to the Dutch in the Indian Ocean at the end of the sixteenth century and in the early seventeenth century, but their dominance continued in Goa, Daman, Diu, Macau, Timor, and Mozambique well into the twentieth century.

Mercantile networks across northern Europe, the Mediterranean, and southwestern Asia had been built up centuries earlier by a variety of European trading families and cities.

➤ PERO DE COVILHÃ

Whereas the Portuguese voyage spearheaded by Vasco da Gama reached southern India in 1498, Pero de Covilhã who was sent overland reached the west coast before that, in 1488. The reigning Portuguese king, Dom João II, had sponsored several such expeditions, but none had reached the source of spices. Covilhã left Lisbon and traveled overland in the same year that Bartholomeu Dias sailed from Lisbon and rounded the Cape of Good Hope, gaining a glimpse of the Indian Ocean.

In a journey that lasted over two years, Covilhã visited the Persian Gulf and the Swahili coast. Unlike da Gama, Covilhã did not return to Lisbon. On reaching Cairo, he received instruction from his king to proceed to the land of Prester John, the mythical Christian ally somewhere in the East. It is not known if Covilhã's detailed report of his findings and insight into India, the spice trade, and Indian Ocean commerce reached Lisbon. The report would have been a valuable guide for Vasco da Gama. Judging by the petty gifts that da Gama took to barter for oriental spices, it appears that Covilhã's report was not available to da Gama. Covilhã's success illustrates how the Portuguese, who set their minds on reaching the source of spice production, resorted to charting both overland and sea routes.

—Shihan de Silva Jayasuriya

However, a true global market was first created by the Portuguese and the Spaniards, whose trade networks crisscrossed three oceans—the Indian Ocean, the Pacific Ocean, and the Atlantic Ocean—straddling the Old World and the New World. Operating through a constellation of trading posts and fortresses, which were in effect fortified commercial intermediaries, the Portuguese were generally confined to enclaves along coastal areas. In Asia, for example, Portuguese fortresses were erected from 1505, starting from the Malabar Coast. In Africa the foundations of the fortress of São Sebastião was laid in 1506, at Mozambique, to defend eastern Africa from the Turks. Over the years this fort was able to resist Dutch, British, and Omani intrusions and entrenched Portuguese power in eastern Africa until 1975.

Whatever the limitations of their fragile Estado da Índia, the Portuguese paved the way for other Europeans—Dutch, French, and British—to enter the Indian Ocean trade.

Portuguese words that have been adopted by languages in the Indian subcontinent and in Southeast Asia remind us of cross-cultural contact. Liaisons with local women and the generations of Luso Asians enhanced the process of transmitting Portuguese words into the vernacular languages. Largely autonomous groups of Portuguese mercenaries offered their services to Asian rulers and through intermarriage spread Portuguese identity by integrating with the local communities.

—*Shiban de Silva Jayasuriya*

Bibliography

- Bethencourt, F. and D. R. Couto. *Portuguese Oceanic Expansion, 1400–1800*. Cambridge: Cambridge University Press, 2007.
- Boxer, C. R. *The Portuguese Seaborne Empire, 1415–1825*. London: Pelican Books, 1969.
- De Silva Jayasuriya, S. *The Portuguese in the East: Cultural History of a Maritime Empire*. London: I. B. Tauris, 2008.
- Newitt, M. *A History of Portuguese Expansion, 1400–1668*. Oxford, UK: Routledge, 2005.

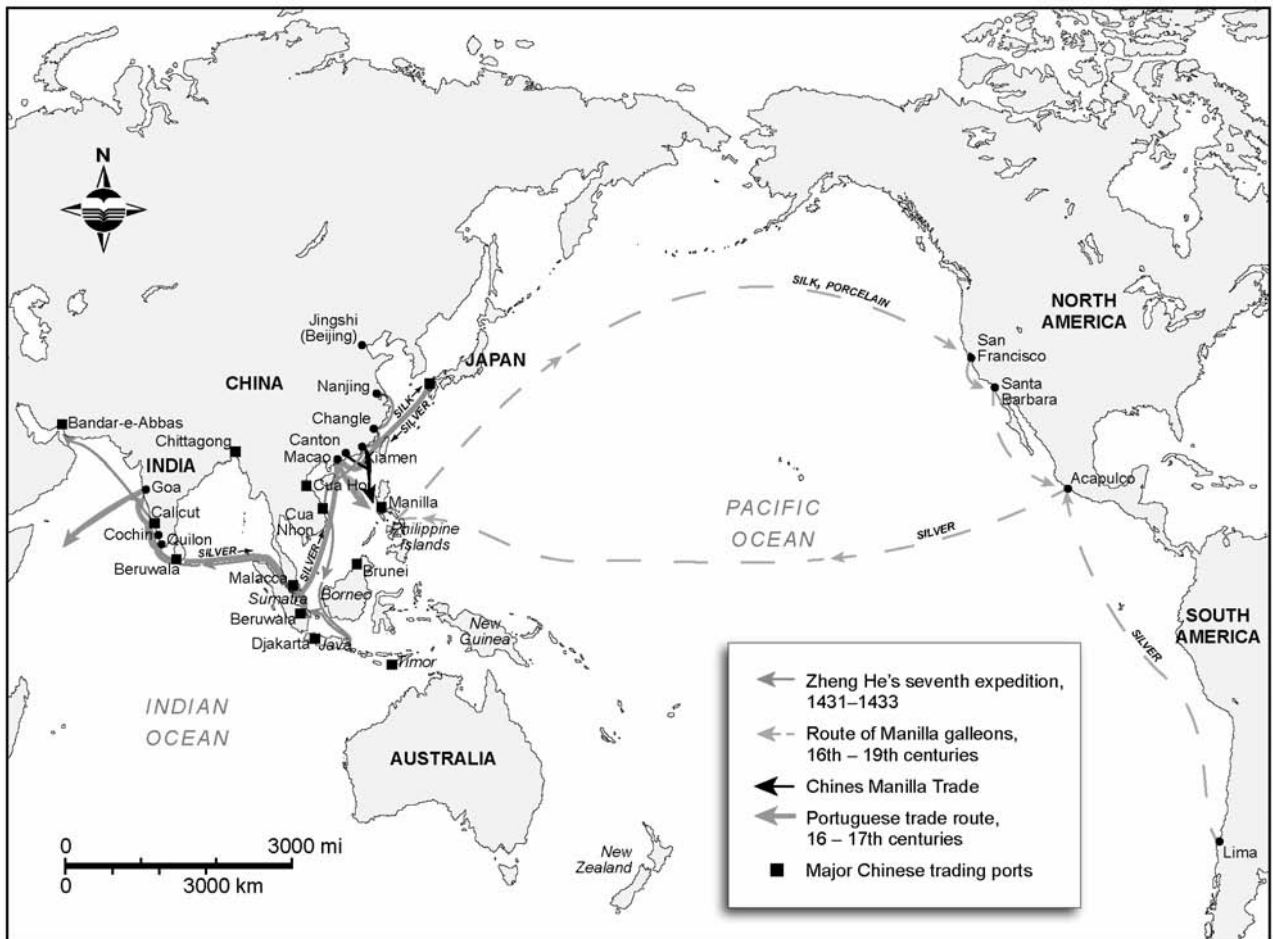
China's Turn Inward—Did the Middle Kingdom Isolate Itself?

China during the period 1450–1770 is usually remembered as a time when the country turned inward. Contrary to earlier times, such as the Han (206 BCE–220 CE) and Tang (618–907 CE) when China was in expansion, in this period the Chinese leaders seem to have been preoccupied with internal concerns. The image of China's inward turning became further sharpened by another contrast, one with the West that, during the same period of time, was going through some explosive growth, particularly in the areas of foreign expansion. Such an image appears to fit well with the Chinese experience in the nineteenth century, when it became prey to European imperialism. An inward-turning China from 1450 to 1770 seems to provide a perfect explanation for a fallen China in the nineteenth century. The legend was thus made.

Undoubtedly, there are many signs that show that China in that period was indeed turning inward. The inward turning was reflected in two areas: domestic and international. Domestically, the continuous rivalries between the imperial power on the one hand and the regional and aristocratic powers on the other led to the implementation of a series of institutional reforms. These reforms, which were aimed at strengthening the imperial power, began to bring fruition since the Song times in the tenth century. The trend was that power became increasingly concentrated in the hands of the emperor. The Mongol conquest briefly interrupted this trend, but the founding of the Ming dynasty in 1368 quickly resumed the momentum. Zhu Yuanzhang, the founder of the Ming dynasty, institutionalized one reform that significantly propelled the trend: he abolished permanently the position of chancellor so that the imperial power would have one less potential challenger. The room for individuals to initiate any kind of innovations became increasingly narrow, as the emperor was more concerned about stability than excitement. For example, the emperor often worried more about the potential challenges from his own generals who commanded troops in the frontiers than the threats from outside enemies. The best troops were kept in and around the capital under the emperor's direct watch rather than being deployed in areas where they were most needed.

These domestic institutional changes left a bearing on China's foreign policy. Expansions were no longer the priority, and the drive of exploring land afar was dampened. This was particularly true for the period starting around 1450. It was right after maritime adventures by Zheng He, under the sponsorship of the emperor Zhu Di, from 1403 to 1433, had opened a whole new world to China and brought back tremendous benefits: honor, profit, and a large number of things exotic. As the threat from the Mongols in the north gradually mounted, however, the government shifted its focus away from the maritime exploration to defense in the north. Before the Mongol threat was ever removed, piracy along the southeastern coast increased drastically in the sixteenth century, perhaps as a

CHINA FOREIGN RELATIONS, 15TH–17TH CENTURIES



by-product of the rapid expansion of commerce in southeastern Asia. Together, the Mongols and the pirates constantly kept the Ming rulers busy with defense and redirected their attention, priority, and resources. As a result, China's inward turning became one of the most favored topics for historians as well as the general public.

There was another side of the same story though, one that is less known but is an integral part of the whole picture. First, it might be true that the Ming were often on defense facing the Mongols and later the Manchus in the northern frontiers but were not always so in the south and southwest. The Chinese frontiers in these areas had been a haven for many tribal societies, who since the Han and Tang had maintained a semi-independent status toward the emperor in China. The Mongols took a big step toward

incorporating the regions in their China-based empire by converting the regional leaders from hereditary tribal headmen to regular government bureaucrats. For example, the kingdom of Dali, founded by a Thai-speaking people and located in today's southwestern Yunnan Province, was crushed by the Mongols. This was the movement known as *gaitu guiliu*. While the Mongol Yuan jump-started the movement, it was the Ming who had carried on the expansion in the hinterlands. It took the work of the Qing (1644–1911), the republic government (1911–1949), and the communist government to eventually complete the annexation of the tribes, but the Ming had certainly contributed greatly to the process.

In addition, while taking domestic matters as their priority, the Ming rulers never turned a blind eye to Europe. Beginning from the late

➤ ZHU DI AND THE GREAT FIRE AT THE FORBIDDEN CITY

In 1421, the Forbidden City of Beijing, then the capital of the ruling Ming dynasty, was struck by lightning and caught on fire. By the time the fire was out, the once-magnificent Forbidden City was left in ruins. The fire of 1421 was just one of a series of fires that had hit the Forbidden City ever since Beijing was made the capital. But unlike the other fires, the 1421 fire is believed to have left a profound legacy, affecting orientation of its subsequent policy making. Zhu Di was the emperor at the time of the fire; he came to power in an extraordinary way and in an extraordinary time. The legitimacy of his ascendance to the throne was open to question, as he wrested the throne from his own nephew. He moved the capital from its original site in Nanjing to shift the empire's gravity to his power base in Beijing, and he rebuilt the Forbidden City so that it would better symbolize his legitimacy, power, and influence, a move consistent with his foreign policy, characterized by aggressive maritime exploration. The fire reversed this orientation, however, and maritime exploration was halted in 1433. China turned inward and defensive. The fire of 1421 not only burned down the Forbidden City but also was an omen of the decline of the Celestial Kingdom of China.

—Yi Li

sixteenth century, the Jesuits showed up on the Chinese coast. While their mission to China was evangelical, the Jesuits sweetened the Christian pill with Europe's recent scientific and technological achievements. Matteo Ricci, the Italian Jesuit, came to China in 1583. He stayed for almost two decades and introduced his Chinese hosts to the great things that the Europeans developed, such as the sextant that still stands today in Beijing. Many high-ranking government officials showed tremendous interest and became close friends of Ricci, even though these things were not always familiar and were not always in harmony with their traditional terms. Meanwhile, other exchanges with the Western world also grew rapidly. Sweet potatoes, peanuts, and silver flowed into China as Chinese porcelain, tea, and other commodities flowed out.

Successive Qing rulers not only inherited this legacy of the Ming but also demonstrated a stronger interest in Western learning. The Kangxi emperor (1661–1721) maintained a good-sized advisory board that included many Jesuits; the Jesuits also helped him negotiate the first European-style international treaty with Russia, the Treaty of Nerchinsk, in 1689. The Jesuit presence in China was abruptly terminated soon after that, but the legacy that the Jesuits left behind was tremendous. While Chinese expansion and outreach at that time were dwarfed by their European counterparts, the Chinese had had an “open empire” even during the most inward-turning period.

—Yi Li

Bibliography

- Fairbank, John King, and Merle Goldman. *China: A New History*. Cambridge, MA: Harvard University Press, 2006.
- Giersch, Patterson C. *Asian Borderlands: The Transformation of Qing China's Yunnan's Frontier*. Cambridge, MA: Harvard University Press, 2006.
- Hansen, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.
- Levathes, Louise. *When China Ruled the Sea: The Treasure Fleet of the Dragon Throne, 1405–1433*. New York: Oxford University Press, 1994.

Muslim Sultanates Replace Hindu States in Sumatra and Java, 1500s

The conversion of most of the population of Indonesia to Islam was connected to the rise of Islamic states in Sumatra and Java. Although Muslims may have been visiting Southeast Asia since the seventh century, it was only in the thirteenth century that Muslim states emerged in northern Sumatra. Before then Muslim traders lived in separate areas apart from the general population. Over time these traders married into and made political alliances with local rulers. Evidence for the presence of Muslim states and local converts consists of travelers' accounts and tombstones with Islamic names and dates from the Islamic calendar. The tombstone of Sultan Malik al-Salih, the ruler of Samudra, dates to 1297. Marco Polo, visiting the region in 1292, noted that while the

interior of Sumatra was populated by groups practicing traditional religions, the coast was inhabited by Muslim converts. He attributes the Islamic presence in the area to the activities of merchants from the Middle East. The Arab traveler Ibn Battuta, who passed through the Straits of Malacca in 1345, identified in many ways a typical Islamic society in northern Sumatra, complete with judges well versed in Islamic law.

Southeast Asia was long involved in international trade. During the fifteenth century such activities became more intensive. Southeast Asia became part of a trade network that encompassed China, India, the Middle East, Europe, the Americas, and Africa. Many of the rulers of the new trade-oriented states embraced Islam. The most important of the new Muslim states was Malacca, located in present-day Malaysia. A Muslim sultan ruled over a cosmopolitan society where people from diverse religious backgrounds came to buy and sell commodities, particularly spices. Its capture in 1511 by the Portuguese marked a turning point in the history of the region. While the Portuguese were ultimately unsuccessful in their plan to dominate the spice trade, their capture of the port marks the start of direct European influence in the region. Ironically, the fall of Malacca also facilitated the spread of Islamic states. New trade centers like Aceh and Penang grew in influence, and Islam was seen by some local people as an attractive counterpoint to the religion of the Portuguese, Christianity.

The fifteenth century saw Muslim states emerging in northern Java in the wake of the eclipse of the last great Hindu empire in Indonesia, Majapahit. According to the Chinese sailor Ma Huan (the secretary to the Chinese admiral Cheng Ho, whose fleet made several voyages in the Indian Ocean region during the early 1400s), much of the coast had been either converted to Islam or settled by foreign Muslims. Demak was the first important Islamic power in Java and by 1550 controlled much of the island, at least in theory. Its leaders were proud of their connections to the *wali songo* (a group of early Islamic missionaries) and to the royal house of Majapahit. The power of the coast was short-lived, as influence shifted to the interior of Java with the

rise of Mataram. Sultan Agung (r. 1613–1646) systematically brought most of central and eastern Java under his control, although he failed to destroy the new Dutch settlement of Batavia (present-day Jakarta).

During the sixteenth century Aceh became the dominant Muslim power in northern Sumatra. Aceh derived its wealth and power through the trade in pepper. The Achenese sultan Iskandar Muda (r. 1607–1636) headed an impressive court given to flamboyant display; he even possessed 600 elephants. His court was a center of scholarship but also a center of intrigue; Iskandar Muda had his own son killed. Aceh was a regional if not a world power. Iskandar Muda corresponded with foreign monarchs like Elizabeth I of England as an equal. However, Achenese attempts to recapture Malacca were unsuccessful.

The Islamic states of Sumatra and Java had to deal with the growing power of the Europeans. The Portuguese and later (more successfully) the Dutch tried to dominate the region economically and then politically. Eventually Europeans would colonize the region, and Muslim sultanates would be absorbed into the Dutch East Indies and the British colonies of Malaysia. But there was nothing inevitable about this process. In fact, rivalries between Islamic states were often just as important, at least in the short term. Thus, the great rivalry in the sixteenth century over control of the Straits of Malacca involved Aceh on one side, with Muslim Penang and the Christian Portuguese on the other. When Portuguese Malacca fell to the Dutch forces supported by Penang in 1641, Portugal had vainly turned to its old rival Aceh for help.

—Michael Wood

Bibliography

- Andaya, Barbara Watson, and Yoneo Ishii. "Religious Developments in Southeast Asia, c. 1500–1800." In *The Cambridge History of Southeast Asia*, Vol. 1, *From Early Times to c. 1800*, edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1992.
- Casparis, J. G. de, and I. W. Mabbett. "Religion and Popular Beliefs of Southeast Asia before c. 1500." In *The Cambridge History of Southeast Asia*, Vol. 1, *From Early Times to c. 1800*, edited by

Nicholas Tarling. Cambridge: Cambridge University Press, 1992.

Lapidus, Ira. *A History of Islamic Societies*. 2nd ed. Cambridge: Cambridge University Press, 2002.

Reid, Anthony. *Charting the Shape of Early Modern Southeast Asia*. Bangkok: Silkworm Books, 1999.

Ricklefs, M. C. *A History of Modern Indonesia since c. 1200*. 3rd ed. Stanford, CA: Stanford University Press, 2001.

Tjandrasmita, Uka. "The Introduction of Islam and the Growth of Moslem Coastal Cities in the Archipelago." In *Dynamics of Indonesian History*, edited by Haryati Soebadio and Carine A. Du Marchie Sarvaas. New York: North Holland, 1978.

Lan Xang (The Land of a Million Elephants)—The Lao State in Southeast Asia

The Kingdom of Lan Xang (Land of a Million Elephants), established by Fa Ngum in 1353, ruled over the area that took in all of modern Laos, the northeast region of Thailand, and extended into parts of Vietnam and Cambodia. By 1707, extensive Vietnamese and Siamese intervention had forced an end to the united Kingdom of Lan Xang. The kingdom split into three competing kingdoms of Champasak, Luang Prabang, and Vientiane. The split, coupled with Siamese control over the kingdom toward the latter half of the eighteenth century and into the nineteenth century, effectively heralded the end of Lan Xang, whose descendants had enjoyed over 600 years on the throne. In its prime, the Kingdom of Lan Xang was considered to be one of Southeast Asia's largest kingdoms, whose army and military prowess were known throughout the region. The Kingdom of Lan Xang is believed to have been responsible for the flourishing of Lao culture and civilization, which up to this point had been theorized as being fragmented at best.

Fa Ngum (r. 1353–1373), the first ruler of the Kingdom of Lan Xang, established his capital in 1353 in Luang Prabang, which was well positioned with established trade routes passing directly through the city and created ongoing sources of revenue. Other sources of revenue came from the kingdom's taxation system whereby tribute was paid from the local rulers to the king. Volunteer labor was also used

at certain times for civic projects, such as the building of wats (Buddhist temples), walls, palace works, and other buildings; such payment in kind was popular and enabled the kingdom to expand without creating excess pressure on civic funding. Lan Xang's king enacted laws so as to unify the kingdom and provide socioeconomic and political stability and cohesiveness. Laws and their requisite punishments covered such things as murder, theft, and property damage; however, laws were not able to stem the frequent military incursions by rival kingdoms to the west (Burma and Thailand), to the south (Cambodia), and to the east (Vietnam), which occurred from the mid-sixteenth century.

Despite Lan Xang's reputation for being large and powerful, it was subject to enormous external and internal pressure. The constant threat of war placed excessive pressure on the military and affected the relative stability of the economic and social structure of the kingdom. The city of Viang Chan (made the capital of Lan Xang in 1560) fell under Burmese rule in 1574, and the kingdom became a vassal state from 1574 to 1587.

Internally, there had been mounting dissatisfaction with an authoritative monarchy. Religious rivalry was evident in Fa Ngum's first decade of rule, with trouble between different Buddhist sects (Mahayana, and Theravada worship) and animists during 1362–1368, overshadowing his expansionist ambitions. These problems persisted throughout the kingdom's history and contributed to a somewhat unstable monarchy. A particularly tumultuous period in 1428 saw no less than six kings losing their lives. The ongoing uncertain political stability decreased popular support for the apparently unstable monarchy. By the sixteenth century, Lao civilization had undergone a dramatic revision, and calls for a unified Lao identity became the norm, as did support for a stronger monarchy that increased particularly under the tutelage of King Phothisarath (r. 1520–1547) and King Setthathirath I.

The Kingdom of Lan Xang was primarily Theravada Buddhist; however, it also ascribed to animist beliefs prevalent due to the enormous amount of incorporated ethnic identities. Mahayana Buddhist practice surfaced during the

➤ WAT THAT LUANG (THE GREAT STUPA)

That Luang (the Great Stupa) was built by King Settathirat I in Vieng Chan in 1560–1566 when it became the capital of the kingdom. The Lao, many of whom are devout Buddhists, consider That Luang to be one of the country's most revered Buddhist sites. Many believe that That Luang was built on a religious site, as King Asoka, the great Indian king who converted to Buddhism, may have brought a Buddhist relic to the country during the third century and placed it in a stupa on the same site. Since its founding, That Luang remains a focal point of Lao religion, despite various unfortunate events throughout its lifespan.

That Luang is often viewed as a physical representation of Lan Xang's once-powerful status. It symbolizes a time when Laos was a united kingdom and provides a glimpse into its richly detailed past, as the Wat is over 147 feet (45 meters) tall and was originally covered in 24 karat gold leaf. Set out with three different levels, representing aspects of complex Buddhist philosophy, That Luang encouraged both contemplation and learning, and its religious and sociocultural importance was solidified through its use by royal families for official functions, festivals, and religious observance.

Following its construction, That Luang was the victim of rival aggressors who completely destroyed the Wat. The Burmese military and Chinese bandits also destroyed the complex, especially during the later half of the nineteenth century when Chinese Hui invaded Vientiane and overran the entire city. Much of what is standing today is the result of an intensive restoration effort led by a



Wat That Luang, a Buddhist temple in Vientiane, capital of Laos, built in 1566. (Mike Thomas)

French team who worked off detailed drawings by explorers from the early twentieth century.

—Samaya L.S. Chanthaphavong

earlier years of Lan Xang; however, Theravada became the prominent practice due to its affiliation with the monarchy. Animist beliefs such as *Phi* (spirits) and shamanist rites were commonly associated with village level religion. Buddhism provided social cohesion in the form of schooling (at wats by monks), at annual festivals, and in the form of hierarchical rule whereby people at the immediate village level were first able to consult directly with monks about their problems and, should the issue not be resolved, move to higher forms of justice. When animist beliefs

were coupled with Buddhist practices (such as spirit conversing, rites, etc.), the rulers of Lan Xang were able to appeal to a wide populace.

Contesting royal families and their ongoing sociopolitical and religious quarrels during the seventeenth century resulted in Lao civilization experiencing further restructuring. The years 1621 to 1633 witnessed succession disputes over the throne of Lan Xang, which signaled the beginning of the end. Despite an intense period of peace under King Surinyavongsa (r. 1633–1690), the once-strong kingdom, weakened by

persistent infighting and political stress, was divided into three kingdoms upon his death. The new kingdoms of Champasak (established in 1713 in southern Laos) and Luang Prabang (in northern Laos) claimed legitimacy of rule with the installation of their own monarchies and asserted their independence from Viang Chan. The kingdom of Lan Xang was now divided into three distinct ruling factions, microcosms of rule. The split resulted in weakened military structures so that in 1765 Luang Prabang was invaded by the Burmese army, which in addition to looting the city succeeded in bringing the area under its control. It is believed that tens of thousands of Lao people lost their lives until Siamese forces, under the military command of Taksin, were eventually able to drive out the Burmese at the cost of placing Luang Prabang under Siamese suzerainty.

—*Samaya L.S Chanthaphavong*

Bibliography

- Evans, G. *A Short History of Laos: The Land In Between*, Australia: Allen and Unwin, 2002.
- Hall, D. G. E. "The Kingdom of Laos." In *A History of South-East Asia*, edited by D. G. E. Hall. London: Macmillan, 1968.
- Simms, P., and S. Simms. *The Kingdom of Laos: Six Hundred Years of History*. New York: Routledge, 2001.
- Stuart-Fox, M. *A History of Laos*. Cambridge: Cambridge University Press, 1997.

Early British Empire Building in Asia

Elizabethan efforts to found an overseas empire largely came to naught. Twenty years after its creation by royal charter on New Year's Eve 1600, contemporaries would still have found it incredulous that the East India Company (EIC) would less than a century and a half later conquer a significant province of the Mughal empire. Such, however, was the demand for Eastern luxury goods—including spices, textiles, and latter tea—that had traditionally reached English markets via Portuguese ships that rounded the Cape of Good Hope or overland routes through the Levant, or eastern Mediterranean. Early English empire building, which centered

on the Muscovy, Levant, and East India companies, sought direct trade with the East in order to maximize commercial profits.

As early as 1553, some 200 English investors financed a voyage to Cathay via the Norwegian cape and the Barents Sea. Two years later, a royal charter granted the Muscovy Company a monopoly on all trade with Russia and all lands northward. When the Northeast Passage proved impassable, attention shifted toward reaching Cathay via Moscow, the Caspian Sea, and Central Asia. Warfare east of Bukhara in the late 1570s rendered this route impractical as well. Attention then turned to Persia, but the bulk of that country's trade flowed westward into the Levant, and developments in England rendered irrelevant the repeated efforts of the Muscovy Company to develop trade with Persia via Russia.

English merchants had abandoned trade in the eastern Mediterranean for several decades after 1550 because of the strength of the Ottoman Navy. However, developments in European international relations during the 1570s increasingly favored England and eventually led to the incorporation of another chartered trading company in 1581. The Levant Company would remain the most lucrative component of England's overseas trade until the 1620s but ultimately would not be able to compete with the EIC, as the latter eliminated all intermediaries by sailing around the Cape of Good Hope.

Although the embassy of Thomas Roe (1615–1619) secured the position of the EIC within the Mughal empire, the 1620s were a difficult period that dashed much of the hope that had surrounded the company at its founding. The Dutch fiercely resisted all attempts to break their control of the Indonesian pepper and spice trade. However, the focus of the EIC was slowly shifting toward Mughal India, specifically Surat in western India, Madras on the Coromandel Coast, and Bengal. It was not until the late eighteenth century that European textiles would rival Indian calicoes, which were popular with Europeans on both sides of the Atlantic. Nevertheless, the future of the EIC reminded shaky well into the 1660s. In the last decades of the seventeenth century, the calico trade expanded dramatically, as did the company's profits.

► THE BRITISH IN ORISSA, FROM THE MUGHALS THROUGH THE BATTLE OF BUXOR, 1764

Prior to 1765, when authority over the eastern wing of the Mughal empire was transferred to the East India Company (EIC), a single Mughal governor, or nawab, administered Bengal, Bihar, and Orissa. Successive nawabs increasingly ruled independent of the imperial center. Their usurpation encouraged others. The result was a decade-long war in the 1740s that saw Orissa lost to the Marathas; the British retook the province in 1803. In 1756, unlike the French, Dutch, and most Indian elites, the English balked at the traditional demands of the new nawab of Bengal, Siraj-ud-daula, for money. Siraj-ud-daula ordered Calcutta sacked in retaliation, though his exact objectives are unclear. British reinforcements sailed from

Madras under the command of Robert Clive, who at the 1757 Battle of Plassey defeated Siraj-ud-daula primarily by bribing his army to stand aside. Successive nawabs of Bengal, who were now clients of the EIC, were dismissed in 1760 and in 1763. In the case of the latter, Mir Kasim, the deposed nawab, rallied the Mughal emperor and the wazir of Oudh to his cause, but all three were decisively defeated at the Battle of Buxar. In addition to gaining the right to collect taxes, the EIC gained a new “ally,” the wazir of Oudh, who also was forced to accept a British garrison and most significantly established a bridgehead.

—Sean Kelly

In 1664 and 1670 the Marathas, a Hindu warrior caste from the Deccan plateau, sacked Surat. As cracks in Mughal authority spread, the Dutch, French, and English East India companies filled the gap. The EIC increasingly focused on Madras and Bengal. Both Fort St. George and Fort William, at Madras and Calcutta, respectively, were fortified, and over time European communities, along with segregated towns of Indian merchants and artisans under English protection, developed. By 1689, the EIC felt strong enough to challenge Mughal authority outright, though the war ended with the English paying reparations. Distracted by the Maratha insurgency throughout the 1690s, by the early 1700s the Mughals lacked the military resources to stem rising European influence.

At the outset of the eighteenth century, Europe's relationship with Asia remained largely unchanged from that of Roman times. It was a purely commercial enterprise, though the scale had increased dramatically. Historians continue to have a hard time explaining why, but the latter half of the eighteenth century proved transformative for the EIC. By 1744, the War of Austrian Succession had spread to the Indian Ocean. Two years later on behalf of autonomous regional allies, who pledged nominal loyalty to the Mughal emperor, the British and French East India companies were fighting over disputed territory in

southeastern India. Fighting continued until the British won a decisive victory in 1761. It was developments in Bengal, however, that led to the EIC obtaining the right under the Treaty of Alahabad (1765) to collect taxes in Bengal, Bihar, and Orissa on behalf of the Mughal emperor. Governing some 20 million Bengalis raised EIC revenues by several million pounds per annum, the annual tribute to the emperor being largely symbolic. In addition to tying the EIC closer to the British state, which itself would have profound consequences in the ensuing decades, Calcutta now rivaled Delhi, seat of the Mughal emperor, in influence. Dominance over all of India was still unimaginable, but by becoming a regional Indian power, the EIC assured itself of a future role in Indian politics.

—Sean Kelly

Bibliography

- Andrews, Kenneth. *Trade, Plunder and Settlement: Maritime Enterprise and the Genesis of the British Empire, 1480-1630*. Cambridge: Cambridge University Press, 1984.
- Ferguson, Niall. *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books, 2004.
- Marshall, P. J. *Bengal: The British Bridgehead, Eastern India 1740-1828*. Cambridge: Cambridge University Press, 1987.

Marshall, P. J. “The British in Asia: Trade to Dominion, 1700–1765.” In *The Oxford History of the British Empire*, Vol. 2, *The Eighteenth Century*, edited by P. J. Marshall. Oxford, UK: Oxford University Press, 2001.

Marshall, P. J. “The English in Asia to 1700.” In *The Oxford History of the British Empire*, Vol. 1, *The Origins of Empire*, edited by Nicholas Canny. Oxford, UK: Oxford University Press, 2001.

Richards, John. *The Mughal Empire*. Cambridge: Cambridge University Press, 1993.

Absolutism in Practice

The development of absolutism in western Europe in the seventeenth century, particularly in Bourbon France, was characterized by the gradual absorption of all political and economic power by the centralizing monarchy at the expense of the aristocracy. As the wars of religion ravaged much of Europe, monarchs in France, England, Spain, and the Holy Roman Empire sought to consolidate their power amid the religious civil wars (i.e., Thirty Years’ War and English Civil War) being fought against their respective subaltern aristocracies. While France was able to successfully consolidate the power of the Bourbon monarchy (particularly that of Louis XIV who reigned from 1661 to 1715), the monarchs of England, Spain, and the Holy Roman Empire found themselves either sharing power with their respective aristocracies or experiencing further political fragmentation.

In practice, absolutism was based on the centralizing authority of the monarchy, which claimed to derive its authority from God. The concept of the “divine right” of kings that was expressed forcefully by James I of England in 1609 was based not only on examples from the Christian Bible but also on legal and historical precedents. Nonetheless, the idea that the monarch reigned through divine legitimacy was motivated by the religious climate in post-Reformation Europe. Due to the endemic warfare and religious upheavals that had characterized the wars of religion of the late sixteenth and early seventeenth centuries, the centralizing monarchies of Europe found an opportunity to expand their authority at the expense of the quarrelsome aristocracy. For

example, Habsburg emperor Ferdinand II instigated the Thirty Years’ War (1618–1648) under the pretense of ousting Protestantism from his realms to expand royal authority throughout the politically fragile Holy Roman Empire that spanned Central Europe. The Stuart monarchy in England, represented by James I and his son Charles I, also sought to centralize the authority of the English Crown by ignoring the authority of Parliament, eventually prompting the English Civil War (1642–1649). In contrast, Louis XIV (1643–1715), the Sun king of France, was successful at displaying his grandeur as the divine representative of God on earth not only through his lavish displays of wealth and his ostentatious lifestyle but also through his royal authority, ensured throughout the French realm by his royal intendants (royal officials) and an extensive royal bureaucracy.



The first king of Great Britain (England and Scotland) and Ireland, King James I founded the ill-fated Stuart royal dynasty in the early seventeenth century. (Library of Congress)

The most successful example of absolutist regimes is that of Bourbon France, established over the course of a century through the work of the politically savvy Cardinal Armand Jean du Plessis de Richelieu (who served Louis XIII) and Cardinal Jules Mazarin and royal ministers Nicolas Fouquet and Jean-Baptiste Colbert (who all served Louis XIV). While the monarchies of England, Spain, and the Holy Roman Empire were unsuccessful in asserting their power vis-à-vis their aristocracies, the French Bourbons were particularly effective in restraining and limiting the power of their nobles. The use of intendants, who were responsible only to the monarch, served to infringe on aristocratic autonomy in France's many regions. Intendants, many of whom came from wealthy middle-class backgrounds, created a nobility of the robe loyal to the monarch but also paid for the privilege to serve as such, further adding to the state coffers. Cardinals Richelieu and Mazarin and royal ministers Fouquet and Colbert served their respective monarchs by asserting royal control through intendants but also by intriguing against potential power plays by the high nobility against the current king. In particular, Richelieu and Mazarin had to contend with the quarrelsome queen regents they served, who were often allied with high aristocracy against their own sons. Furthermore, these high officials also found ways to ensure revenue for the monarchy by encouraging the development of commerce, increased taxation, and efficient fiscal policies, utilizing the instruments of the state to these ends.

The fiscal instruments created by French absolutism fostered the expansion of the French economy through the stimulation of industry and the practice of mercantilism, which was tied to French foreign policy aims. By encouraging the development of trade within France and its American possessions, the monarchy was able to tap more sources of revenues to fund France's many wars against the Habsburgs. The expansion of French commercial strength in Europe and North America ensured rivalry with upstart England and the United Provinces (the Netherlands) while financing the many wars that Louis XIV fought against most of the European powers through much of the late seventeenth and early eighteenth centuries.

➤ KING JAMES I ON THE DIVINE RIGHT OF KINGS

In a speech before Parliament on March 21, 1609, James I expressed the clearest and perhaps most forceful assertion of the concept of kings' absolutist authority from God.

"The state of monarchy is the supremest thing upon earth. . . . Kings are justly called Gods, for that they exercise a manner or resemblance of divine power upon earth. For if you will consider the attributes to God, you shall see how they agree in the person of a king. God has power to create, or destroy, make, or unmake at his pleasure, to give life, or send death, to judge all, and to be judged nor accountable to none: to raise low things, and to make high things low at his pleasure, and to God are both soul and body due. And the like power have Kings; they make and unmake their subjects: they have power of raising, and casting down: of life, and of death: judges over all their subjects, and in all causes, and yet accountable to none but God only."

—Abraham O. Mendoza

Source

James Harvey Robinson, *Readings in European History* (Boston: Ginn, 1906), 2:219–220.

The lavish and ostentatious lifestyles of the monarchs in seventeenth-century Europe served as a symbol of their authority and divine right to rule their respective realms. The luxurious courts that were established also served to circumscribe the power of their aristocracies by keeping friends close and enemies closer. The palace of Versailles, established by Louis XIV of France, was characterized by rituals in which high nobility would serve the king on a daily basis in routines such as handing him a piece of clothing to ensuring that he had washed himself after using the bathroom. The Stuart court at St. James, while less extravagant than that of Versailles, was also an example of English monarchical wealth and exuberance. Both James I and Charles I surrounded themselves with court favorites and paramours to enjoy feasts, hunts, and outright debauchery, often causing outrage among their subjects. In Spain, the Habsburg

royal court in Madrid of Philip III, which was characterized by ongoing festivities, contrasted with that of his father Philip II's Escorial, a somber monastery outside of Madrid representative of that monarch's pious nature and fervent Catholicism.

—*Abraham O. Mendoza*

Bibliography

- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. Malden MA: Blackwell, 2001.
- Stoye, John. *Europe Unfolding, 1648–1688*. 2nd ed. Malden MA: Blackwell, 2000.

Composite Kingdoms in Early Modern Europe

Early modern Europe was characterized by the ubiquitous existence of composite states or kingdoms that included more than one state under one ruler. Historian H. G. Koenigsberger put composite states into two major categories: those separated geographically (i.e., Spanish Habsburg realms) and those contiguous to each other (i.e., England, Scotland, and Wales). From 1450 to 1770 European composite kingdoms constituted the bulk of the political entities from the British Isles to the Polish plains. Composite states usually retained their distinctive linguistic, cultural, and ethnic characteristics that formed an integral part of their regional identity, which often put them at odds with what was interpreted as foreign rule, particularly when the ruling sovereign did not reside there or attempted to remove or constrict local privileges. While under the direct yet at times nominal rule of the sovereign, many of these composite kingdoms maintained differing levels of autonomy and regional representation. Moreover, in the late sixteenth century to the early eighteenth century, despite the attempts of many European monarchs to establish absolutist monarchies, many of their composite kingdoms managed to retain their historical rights and privileges vis-à-vis the sovereign.

In the early sixteenth century the Habsburg realms reached their greatest territorial expanse under the reign of Charles V as heir of the

Habsburgs of Austria, the Valois of Burgundy, the Trastámara of Castile, and the House of Aragon. As heir to the lands of Castile, Charles also possessed territories in the Americas, thereby illustrating the global dimensions of Habsburg rule. However, in spite of the accumulation of states and territories and his position of Holy Roman emperor, Charles had to contend with the myriad issues of ruling each state individually. The crown jewel of the Habsburg dominions, Spain, was divided into the kingdoms of Castile and Aragon with their own bureaucratic and representative institutions. In particular, Aragon's representative institution, the Cortes, retained a high level of control over the taxation and administration of the realm, over which the regional aristocracy held a tight rein to defend against possible intrusions of the monarch. Moreover, the Revolt of the Comuneros (1520–1521) in Castile was a rebellion by the “commons” against what was perceived regionally as foreign rule, as well as against increased taxation by the Crown. Given these and various other challenges, Charles divided his realms in 1556 between his brother Ferdinand I and his son Philip II, thus dividing the Habsburgs into the Austrian and Spanish ruling branches. Nonetheless, the wars of religion (the Habsburg-Dutch War and the Thirty Years' War) illustrated the complexity of ruling composite kingdoms for later Habsburgs in light of the effects of the Protestant Reformation and their attempts to create absolutist monarchies to replace composite rule. These religious and financial pressures caused the Dutch to revolt against Philip II in the late sixteenth century. The combination of the Dutch Revolt and the Thirty Years' War forced Philip III and Philip IV to begin levying taxes on all the kingdoms under their rule to Castile in order to help mitigate the cost of the wars. These perceived intrusions on historical rights and privileges caused the revolts of Catalonia and Portugal in 1640.

English acquisition of the kingdom of Wales in the eleventh century and its attempts to establish its hegemony over Scotland and Ireland in subsequent periods led to the development of a relationship with these realms as composite states. In this arrangement, Wales was

directly under the control of the English Crown, while Scotland and Ireland were able to maintain their sovereignty. However, Scotland and Ireland recognized their subservience to the English Crown while retaining their administrative structures largely untouched well into the fifteenth century. However, when James VI of Scotland inherited the throne of England in 1603 (becoming James I of England), both the Scottish and English realms came under the direct control of the Stuart dynasty. In spite of this development Scotland and England remained different, with their own representative institutions for the landed aristocracy, gentry, and burghers. James I's espousal of the concept of the divine right of monarchs put him at odds with both his Scottish and English subjects. His son Charles I would trigger the English Civil War in his attempts to circumvent the religious and political rights of his composite kingdoms. It was not until the Acts of Union of 1707 that the kingdoms of Scotland and England joined to form the United Kingdom of Great Britain, a unitary state, by virtue of uniting their parliaments and royal privy councils, thereby ceasing to be composite states.

The fragmented nature of the Holy Roman Empire created a patchwork of composite kingdoms, with sovereigns possessing multiple principalities, duchies, and kingdoms, among other polities, while remaining under the nominal, largely figurehead, rule of the Holy Roman emperor. In this arrangement, the emergence of the Kingdom of Austria (ruled by the Austrian Habsburgs after 1556) and the state of Brandenburg-Prussia (ruled by the Hohenzollern dynasty) illustrated the growth of these states amid the complexities of ruling composite realms. The Austrian Habsburgs held lands in Bohemia, Moravia, and Hungary, by virtue of possessing the crowns of those states, while having smaller holdings elsewhere. The Austrian attempts to centralize their control over the Holy Roman Empire culminated in the Thirty Years' War (1618–1648). After this dismal failure, the Austrian Habsburgs focused their attention on centralizing their control over their familial holdings in eastern and central Europe, through myriad arrangements with aristocrats

➤ CHARLES V AND HABSBURG COMPOSITE STATES

While Charles V ruled a multitude of composite kingdoms in Europe and territories in the Americas, these various political entities held differing levels of autonomy and regional representation, illustrating the limitations to power posed by composite states to the institution of monarchy. The following are Charles V's individual titles as ruler of each territory.

Holy Roman Emperor
 King of the Romans
 Archduke of Austria
 King of Castile and Leon (and its possessions in the Americas)
 King of Aragon and Sicily
 King of Naples
 Duke of Burgundy
 Duke of Brabant
 Duke of Limberg
 Duke of Lothier
 Duke of Luxemburg
 Duke of Guelders
 Margrave of Namur
 Count Palatine of Burgundy
 Count of Artois
 Count of Charolais
 Count of Flanders
 Count of Hainault
 Count of Holland
 Count of Zeeland
 Count of Zutphen

—Abraham O. Mendoza

in Hungary, Bohemia, and Moravia, while making Vienna the center of power. In spite of these attempts, these kingdoms retained various levels of administrative and aristocratic privileges and political autonomy while holding mutual allegiance to the Habsburg Crown. In contrast, Brandenburg-Prussia, particularly after the Thirty Years' War, exerted greater control over its disparate and contiguous territories, following an absolutist model of royal centralization of power at the expense of local autonomy, much like the Bourbons in France.

—Abraham O. Mendoza

Bibliography

- Dunn, Richard S. *The Age of Religious Wars: 1559–1715*. 2nd ed. New York: Norton, 1979.
- Elliot, J. H. “A Europe of Composite Monarchies.” *Past & Present* 137 (1992): 48–71.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Koenigsberger, H. G. “Monarchies and Parliaments in Early Modern Europe *Dominium Regale* or *Dominium Politicum et Regale*.” *Theory and Society* 5(2) (1978): 191–217.

Russian Autocracy—Rise of the Tsars

One of the great success stories of the period 1450–1750 was the rise of a powerful Russian state. Prior to the fifteenth century, Russia had little political cohesion and was fragmented into dozens of small principalities that often feuded with each other. The Mongol conquest in the thirteenth century proved to be a turning point in Russian history. Besides the cultural and demographic catastrophe it produced, the some 250-year-long Mongol yoke also contributed to the birth of a stronger Russian state. The Duchy of Moscow played a central role in the Russian liberation efforts. Its rulers gained political experience and clout as tax collectors for the Mongols, gradually reduced the authority of other Russian princes, and expanded their own realm. Duke Ivan III (r. 1462–1505) of the Muscovite Rus, as this nucleus of the future Russian empire was known, did more than any other ruler (prior to the eighteenth century) to consolidate and strengthen the authority of Moscow’s rulers and lay the foundations for a centralized state. A shrewd and cunning statesman, he cultivated a friendly relationship with the Mongols as long as it suited his political interest. He overthrew Mongol domination in 1480; made Moscow’s last Russian rivals, Tver and Novgorod, bow to its overlordship; and set in motion the reconquest of the Ukrainian lands from Poland and Lithuania. His marriage to Sophia-Zoe Paleologue, the niece of the last Byzantine emperor, allowed him to claim the Byzantine empire’s legacy, be it in state imagery (e.g., two-headed eagle) or title (“tsar” derived from “caesar”).

Ivan’s policies of consolidation and expansion were continued by his successors. His grandson Ivan IV (r. 1533–1584), justly called the “Terrible” (although in this case “terrible” is used to describe power and might, not horror and cruelty), was instrumental in developing the Russian autocracy and expanding the boundaries of Muscovite Russia even farther. His conquest of Kazan and Astrakhan brought the Volga River under Russia’s control, gave Moscow access to foreign trade in the east, and opened eastern Eurasia to Russian exploration and empire building. But his most important legacy is in his domestic policies and the extended Livonian War (1558–1583). Historians still debate Ivan’s personality, some believing that he was mentally unbalanced and others arguing that he was a shrewd and pragmatic statesman. The first half of his reign saw a series of important reforms. In 1550 he adopted a new law code (*Sudebnik*) that curbed corruption and strengthened central authority. A year later he convened a church council (*Stoglavyy sobor*), which curbed clerical abuses and increased the tsar’s control over the church. He created the first permanent forces of musketeers (*streltsy*) and reorganized military obligations for nobles. Ivan then reformed the central government by creating chanceries (*prīkazny*), each dealing with a single area of government concern. In 1558 he launched one of the longest conflicts in Russian history by challenging Poland and Sweden in Livonia (the Baltic region). Despite some Russian victories, the war ultimately proved to be unsuccessful for Russia, and military setbacks had a profound impact on Ivan’s domestic policies. Indeed, throughout the war Ivan displayed progressively violent and suspicious behavior, suspecting the nobles (boyars) of plotting against him. Military failures during the Livonian War only increased his anger, and he blamed them on boyars and other officials. In the early 1560s he turned unforgiving toward his perceived enemies and resorted to arrests, banishments, and executions. By 1565 he created the infamous institution of secret police, the *Oprichnina*, to seek out “traitors” in Russian society. Dressed in black, riding black horses, and carrying their symbols of dog’s head and a broom (signifying the hounding and sweeping

of treason from Russia), these 6,000 strong “dark riders” spread terror throughout the state, killing thousands and brutally enforcing the tsar’s will. The Oprichnina also created a separate royal court and administration that ruled over half of Russia and drove the great nobles to the periphery known as *zemshchina*.

This state terrorism remains a difficult political phenomenon to explain. It certainly was the result of Ivan’s paranoid nature but also served his political goal of reducing the authority of the powerful hereditary nobility and strengthening the tsar’s rule. The Oprichnina carried on for eight long years and saw numerous abuses and atrocities. In 1570 Ivan, suspicious of the city of Novgorod’s loyalty, let his Oprichniki sack the city for days, killing 10,000–15,000 people and plundering this once wealthiest of the Russian cities. Ivan ended the Oprichnina in 1572, but its effects proved to be long-lasting. Besides the deserted villages and sacked towns, this policy greatly weakened the aristocracy who opposed the centralization of power in Russia.

But Russia’s aristocracy was not destroyed, and 20 years after Ivan’s death it tried to reassert itself. In 1598 Russia descended into the chaos of civil war following the death of the childless Tsar Fedor (r. 1584–1598) and his successor Boris Godunov (r. 1598–1605). For the next 15 years the country was in the midst of the Time of Troubles as various pretenders, supported by noble factions and foreign states, tried to ascend to the throne. At the same time, the volcanic explosion in South America affected climate throughout the world and resulted in the worst famine that Russia had experienced in centuries, killing tens of thousands of people during 1601–1604 and exacerbating political turmoil. Sweden and Poland exploited this tumult to attack Russian territory, while outlying Russian provinces broke away from the central government. But foreign intervention also incited a national liberation movement that drove the foreigners out of Russia. In 1613 the Assembly of the Land, which included representatives of social estates, chose a member of the Romanov family as the new tsar. This was the beginning of the Romanov dynasty that was to rule Russia for the next 300 years.

—Alexander Mikaberidze

➤ LETTER FROM IVAN THE TERRIBLE TO QUEEN ELIZABETH I

In 1570 Ivan the Terrible wrote a letter to Queen Elizabeth I of England that clearly illustrates his autocratic personality.

“And how many letters have been brought to us here [from England] . . . but every letter had had a contrary seal, which is inappropriate, and such letters in all places are not credited, but every prince in his realm has one proper seal; but we acknowledged these letters [nevertheless]. . . . And after that we had news that a subject of yours had come to [Russia] by name Edward Goodman . . . and [we] commanded him to be searched for letters and we found many letters; and in those letters were written words not allowable against our princely state and empire, how that in our empire were many unlawful things done. . . .

And we had thought that you are the sovereign in your domain, and rule alone, and seek your sovereign honor and your country’s profit, and therefore we wished to deal with you. But now we perceived that beside you there are men who rile, and not men but low class traders, who look not to our sovereign heads, honor, and profits, but seek their own trading profits. And you abide in your maidenly state like a commoner.”

—Alexander Mikaberidze

Source

George Tolstoy, ed., *The First Forty Years of Intercourse between England and Russia, 1553–1593* (St. Petersburg: Tranzschel, 1875), 107–109.

Bibliography

- Crummey, Robert. *The Formation of Muscovy, 1304–1613*. London and New York: Longman, 1987.
- Martin, Janet. *Medieval Russia, 980–1584*. Cambridge: Cambridge University Press, 1995.
- Skrynnikov, Ruslan. *Ivan the Terrible*. Gulf Breeze, FL: Academic International, 1981.
- Skrynnikov, Ruslan. *The Time of Troubles: Russia in Crisis, 1604–1618*. Gulf Breeze, FL: Academic International, 1988.
- Vernadsky, George. *Tsardom of Muscovy, 1549–1682*. New Haven, CT: Yale University Press, 1969.

Yanov, Alexander. *The Origins of Autocracy: Ivan the Terrible in Russian History*. Berkeley: University of California Press, 1981.

Council of the Indies, Viceroy, and *Audiencias*

The exploration and conquest of the vast territory ruled by the Spanish Empire after Columbus's voyages was achieved primarily through individual enterprise with little help from the Crown. Monarchs had initially promised the conquistadors extraordinary financial and political rewards. However, by the early sixteenth century Queen Isabella and her successors sought to regain control of the newly discovered territories. The Council of Indies, the *audiencias*, and the viceroyalties were key institutions aimed at establishing the Crown's political power in the New World. The Consejo de Indias was an advisory council endowed with legislative, administrative, and judicial powers over the colonies in America and the Philippines as well. From its seat in Spain, the Consejo also ruled on military and religious matters. This powerful

agency, however, emerged only gradually and in a rather unplanned manner. In 1493 following Columbus's first voyage, Isabella entrusted the administration of the newly discovered territories to her trusted aide, Bishop Juan Rodríguez de Fonseca. Over the years, other advisers and civil servants came to assist Fonseca in what became an informal agency managing Spain's colonial empire. The first references to the council as a separate agency appeared only after Fonseca's death in 1524, and its statutes were not put into writing until 1542 as part of the New Laws of Charles V. By then, the Consejo de Indias was one of the highest-ranking institutions in Spain, second only to the Council of Castile and reporting directly to the king. It included more than 20 members and was presided over by a chancellor and his deputy.

During the seventeenth century membership in the Consejo was used as a form of patronage and political reward, turning it into a large and expensive body. The attempts undertaken in the eighteenth century to make the council smaller and more nimble failed.

The *audiencia* was another agency developed early on as part of the Spanish Crown's attempt to curb political autonomy in the colonial world. *Audiencias* existed in Spain but only as judicial courts. In America, however, they had broader powers, including administrative responsibilities that coexisted with and even limited the political power enjoyed by local executive officials. As such, the *audiencias* were also entrusted with keeping governors from overstepping their bounds as well as maintaining the rule of law in the colonial world.

Ferdinand I ordered the establishment of the first *audiencia* in Santo Domingo in 1511, and the Spaniards then set up one of these courts in each important city. While the *audiencias* in larger colonial cities and towns included numerous members, usually up to a dozen or more, smaller ones had only a few members and struggled to keep up to date with their business. Nonetheless, as a key institution of colonial America, the *audiencias* created long-lasting institutional customs that shaped the political world of the continent after the independence of Spanish America.



Antonio de Mendoza was the first viceroy of New Spain, serving during 1535–1550. (Scala/Art Resource, NY)

GOVERNMENT IN COLONIAL SPANISH AMERICA

Instrucción para . . . contestar el Juicio de Residencia que debo dar de los empleos de Gobernador y Capitán General . . . by Juan Manuel Fernández Campero.

The representatives of the king in the New World, the viceroys enjoyed great power but also demanding responsibilities. A complex political and administrative system limited their influence and authority, forcing them to engage in constant political maneuvering and negotiation. Complaints against their rule could be brought forward during the *juicio de residencia*, the hearing that regulated the offices of all royal administrators in Colonial Spanish America.

“Not even the best governor can keep everybody happy and he would be very good if he could please half of his subjects. I took office in this city [Cordoba] in 1764. . . . In time of plague, the year 1766 I alleviated what I could of the people’s needs, providing them a physician, which they lacked, calling on the most miserable in their homes, bringing them food from my own table, and contributing to their shrouds and funerals. . . .

My efforts were public and notorious and nobody can deny that I administered for everybody in a disinterested manner. . . . I visited all the forts and frontiers in my province in a conspicuous manner. I maintained good relations with the people in the city and checked on public prisons several times. I cared for the widows and minors as much as I could as can be testified by Doña Lorenza de la Camara and Doña Juana Gallo. I strove for ecclesiastical judges and priests to be treated with respect. I bequeathed a red and yellow silk drapery to the presbytery in the Cathedral’s main chapel from my own assets. In this city dominates the party spirit and stubbornness of a few Europeans . . . who, resenting some of my government’s decisions . . . started . . . to making parties, ties and alliances to get revenge and make me disliked by the Viceroy and the Royal Audiencia.”

—Ana Maria Kapelusz-Poppi

Source

Graciela Meronoi, *La Historia en Mis Documentos* (Buenos Aires: Editorial Huemul, 1979).

The first half of the sixteenth century saw the emergence of the viceroyalty, another political institution that was to persist as a key element of the Spanish empire in the Americas. The viceroy was considered the direct agent of the king in the colony and thus enjoyed the highest administrative, military, and juridical authority. Yet because viceroys were compelled to work in concert with *audiencias*, their power was not absolute. The viceroy also served as the president of the royal *audiencia* in the capital city. He appointed other officers in the jurisdiction, and among his main duties was the defense of the territory. He was also to improve the viceroyalty’s economy and look after the indigenous people. To this end, the Crown ordered the viceroys to dedicate much of their time and efforts to address the Indians’ needs.

The first viceroy appointed to the mainland was Antonio de Mendoza, an experienced administrator who set the mold for future viceroys

during his reign over New Spain between 1536 and 1550. This viceroyalty included all territories in the Western Hemisphere north of Panama. The second in the Americas, the viceroyalty of Peru, was established in 1544. It covered all of South America with the sole exception of the northern Caribbean coast and Brazil, a Portuguese colony. The capitals were the cities of Mexico and Lima, respectively. To make their administration more manageable, the two viceroyalties were divided into smaller units ruled by a president, a captain-general, or a governor. The viceroyalties of New Spain and Peru were the largest political entities in the Americas until the eighteenth century, when the viceroyalties of New Granada (incorporating Colombia, Ecuador, Panama, and Venezuela) and Rio de la Plata (including Argentina, Bolivia, Paraguay, and Uruguay) were created under the rule of Bourbon kings, who introduced deep reforms.

—Ana Maria Kapelusz-Poppi

Bibliography

- Burkholder, Mark A., and D. S. Chandler. *From Impotence to Authority: The Spanish Crown and the American Audiencias, 1867–1808*. Columbia: University of Missouri Press, 1977.
- Elliot, J. H. *Imperial Spain, 1469–1716*. New York: St. Martin's, 1963.
- Haring, Clarence H. *The Spanish Empire in America*. New York: Harcourt, Brace and World, 1963.
- Lynch, John. *Spain under the Habsburgs*, Vol. 2, *Spain and America, 1598–1700*. New York: New York University Press, 1981.

Corregidor Rule and Native Response

In the sixteenth century, the Spanish instituted a system of rule by local magistrates (public officials) to govern their far-flung empire. Three terms were used to describe the magistrates: *corregidor*, *alcalde mayor*, and *gobernador*. The *gobernador* and the *alcalde mayor* were governors of a province and could have other local magistrates under them. The term “*alcalde mayor*” (major judge) stood in contrast to the *alcaldes ordinarios* (ordinary judges) of cities and towns. The *corregidor* (one who corrects), originally began as an office used by Ferdinand and Isabella (the monarchs who were patrons of Christopher Columbus) in order to gain more royal control over the Castilian municipalities in Spain. When extended to the Americas, *corregidores* exercised roughly the same powers as the other types of local magistrate but might be

subject to the authority of a *gobernador* or *alcalde mayor*.

The *corregidor* collected royal taxes in the district, dealt with criminal law, maintained order, and supervised various labor drafts and other programs organizing native labor. They were in part judicial positions, but since they were seldom lawyers, all decisions were subject to approval by the court of appeals, the *audiencia*. The magistrate had a large degree of coercive power. The *corregidor* also provided some royal supervision over the *encomienda* and later over the regulation of the supply of native labor, the *repartimiento*. As the *encomienda* grants eventually passed to the Crown, those districts too fell under the jurisdiction of the *corregidor*. The districts of the *corregidores* frequently corresponded to native territorial boundaries. Beyond this, the institution was imported fairly faithfully from Spain with few modifications.

All local magistrates, regardless of their title, served at the pleasure of the Crown. Magistrates in the important towns and provinces of the empire usually received their appointments directly from the Crown. All others were appointed by local officials, either the viceroy or the local royal tribunal, the *audiencia*. While early in the colonial era nearly all of the magistrates were Spaniards born in Spain, called *peninsulares*, by the end of the sixteenth century nearly all were Spaniards born in the New World, called *criollos*. The magistrates served fixed terms of office, usually two to five years, and would frequently

➤ BUYING AND SELLING OFFICE—IMPERIAL SPAIN

In the fifteenth century, Juan II of Spain (1405–1454) began a program of selling municipal offices in order to gain funds for the royal treasury. This practice declined during the reign of Ferdinand and Isabella as they attempted to gain more royal control but gained momentum again during the reign of Philip III (1578–1621) when the Crown was in serious need of money. Originally, the offices included only secretarial positions, such as scribes and notaries. Since the minimum qualification was knowledge of how to read and write, many people qualified. In order to determine who might best

serve the office, the Crown accepted bids, in part based on the revenues of the office. Later this practice was expanded to include seats on town councils where the prestige of office was high, the power limited, and the income nominal. Later, local magistrates were included, and finally in the mid-seventeenth century, seats on the royal courts of law, the *audiencia*, were sold. Scholars have suggested that except for ecclesiastical offices, every position in the colonial bureaucracy had been sold at least once, including that of viceroy.

—John Schwaller

be assigned to a new district at the end of their term. They were subject to a review of their government at the end of their appointment, called a *residencia*, a period during which they resided in the district and were investigated by their successor for malfeasance and other illegal acts.

By the seventeenth century, the Crown began to sell the offices at public auction. In order to win the office at auction, the magistrates made contracts to borrow money from merchants. Once in office, they then needed to pursue tactics to gain enough money to repay the loan. Through this, abuses such as the forced sale of goods became endemic to the system. A forced sale meant that a magistrate acquired goods from a merchant. The magistrate in turn forced the natives of his district to purchase the goods at inflated prices or face imprisonment. Magistrates might also coerce natives into labor contracts with local landowners.

The natives nevertheless had some recourse to justice in spite of the magistrates. Special courts were established in the important capitals just to hear cases coming from Indians. The *residencia* was also a time when complaints could be lodged against magistrates. Natives could also enlist the assistance of local priests and missionaries to oppose a magistrate, since in many regions the magistrate and the priest were the only Spaniards. Even if a rebellion occurred in which a corregidor might be killed, the priest would only be threatened or, at most, roughed up.

—John Schwaller

Bibliography

- Gibson, Charles, *The Aztecs under Spanish Rule*. Stanford, CA: Stanford University Press, 1964.
 Taylor, William B. *Drinking Homicide and Rebellion in Colonial Mexican Villages*. Stanford, CA: Stanford University Press, 1979.

■ Introduction: Innovations in Political Thought

To understand the foundations of modern political thought we must venture back to twelfth-century Italy, where the Italian city-republics experimented with self-government. These practices provided numerous juridical, rhetorical, and philosophical reflections that eventually contributed to the emergence of modern political thought. Chief among these was the idea of liberty that centered on the independence of a given city and its republican self-government. Such ideas were elaborated and defended in the works of the first civic humanists of the early Renaissance, such as in the writings of Brunetto Latini and Albertino Mussato. Yet one scholar holds particular place in this long line of humanists. Niccolò Machiavelli (1469–1527), a Florentine diplomat and political philosopher, authored one of the most famous and influential political treatises, *The Prince*, in 1513, although it was not published until five years after Machiavelli's death. Infamous for its embrace of expediency in politics, the treatise attracted generations of statesmen, laying a foundation for political realism and sec-

ular power politics and turning its author's surname into a political term (Machiavellianism) for deceitful politics. Yet, Machiavelli's other works are no less interesting, chief among them his *Discourses on Livy* which, by analyzing the early history of Rome, also enumerated the elements of a republican state, including the concept of checks and balances.

Machiavelli's contemporary, Thomas More (1478–1535), in his famous *Utopia* (which means “nowhere”) described an ideal society and government as its author envisioned it. More's political vision blended Christian beliefs with traditional hierarchies and ideas of social equality and freedom. Yet, More believed that spiritual authority, based on Scripture, always superseded the temporal. Meanwhile, in France, the writings of Jean Bodin (1529–1596) supported the absolutist authority of French kings. In his influential book *The Six Books of a Commonwealth* (1576), he argued that the monarchy had absolute sovereignty within a state. Acknowledging different forms of government, Bodin observed that a “just” government of any form was acceptable

as long as it served the common good; yet, suspicious of the common peoples' motivations, he denounced democratic governments. In Spain, Francisco Suárez (1548–1617) drew heavily on Christian political thought, especially that of St. Thomas Aquinas, while writing his book *A Treatise on the Laws and God the Lawgiver* (1612). Suárez sought to integrate Christian beliefs into political theory. According to him, a monarch possessed the absolute sovereignty to make laws in conformity with divine and natural law. Like Bodin, he believed that a sovereign is not subject to the law, but rather is the law itself; while he ruled in the interest of the people, the sovereign did not require their consent and the people did not have a right to replace their rulers (unless the ruler was a Protestant or sought to destroy a Christian community).

The seventeenth century included a number of important political theorists. Court preceptor to Louis XIV of France, Bishop Jacques-Bénigne Bossuet was a strong advocate of political absolutism. He used Scriptures to support his arguments in favor of the divine authority of kings, arguing that a royal government expressed the will of God, was therefore divinely blessed and sacred, and that any rebellion against it was criminal and aberrant. A sovereign, Bossuet believed, was to behave as God's image, and govern his subjects as a good father. In England, Bossuet's ideas were shared by Sir Robert Filmer who, in his major work *Patriarcha* (1680), proposed that the state was a family and the king a patriarch. Adam was the first king, Filmer argued, and the English kings ruled the country as Adam's eldest heirs.

Unlike Suárez and Bossuet, the Dutch jurist and political philosopher Hugo Grotius (1583–1645) embraced the idea of natural rights and laid the foundation for liberal civil society and a government based on social contract. These concepts, however, were better elaborated in the works of English political theorists. Sir Francis Bacon (1561–1626) sought to incorporate science into government. In his book *New Atlantis* (1627), he made a case that government's reliance on science and technology would lead to political and military power and prestige, coining the famous phrase "Knowledge is Power." In his treatise *The Commonwealth of Oceana*

(1656), James Harrington (1611–1677) agreed with Aristotle's notion of economically independent citizens as virtuous rulers and categorized governments based on economic factors. A supporter of republicanism, he believed that a republican system was dependent on the existence of a strong middle class while the separation of economic and political power inevitably led to a political revolution. Unlike Harrington, Thomas Hobbes, in his influential work *Leviathan* (1651), championed the idea of a strong government capable of maintaining strict order and protecting its subjects. Hobbes maintained a dark view of human nature and mankind's selfish appetites which the government had to control. He argued that royal power came not from a divine right but rather from a 'social contract,' an unwritten agreement among the early people by which they agreed to give up their individual liberties for political order and stability delivered by a ruler. Hobbes believed in the absolute power of the monarch, declaring "nothing the sovereign representative can do to a subject, on what pretence soever, can properly be called injustice or injury." Hobbes's ideas inspired another English philosopher John Locke to write his famous *Second Treatise on Government* in 1690. Locke shared Hobbes's belief in a 'social contract' but he also contended that the king's authority should be limited by the very contract that carried the people's consent to be ruled. If the government misused or overreached its authority, then the people had the right to withdraw their consent and terminate the agreement. In his *Treaties on Government*, Locke explicitly stated the people's right of revolution to oppose unjust rule and overthrow authority.

In Germany, Samuel Pufendorf (1632–1694) tried to reconcile both Hobbesian and Lockian views. He agreed with Hobbes about the nature of humans being characterized by weakness, self-interest, and self-preservation which led to the conclusion of a social contract. Pufendorf, however, also believed that all individuals were entitled to rights of equality and freedom, while governments were responsible for maintaining safety by enforcing civil laws and protecting natural rights.

During the Enlightenment period, new political theories emerged as *philosophes* such

as Jean-Jacques Rousseau, and Charles-Louis de Secondat, baron de Montesquieu joined the political debate initiated by Locke and Hobbes. These theorists pondered fundamental questions on the origins of state and the relations between the state and the people. Montesquieu, most famous for his book *The Spirit of the Laws* (1748), admired the British constitution of a limited monarchy and called for the separation of governmental powers and adoption of the system of checks and balances. He favored a republican government which, he believed, encouraged the virtues of equality, democracy, and patriotism in its citizens but he also claimed that a republic could not exist in a territorially vast country. He took an anthropological approach to politics noting that a country's customs, religion, climate, and economy greatly affect its politics. Arguably the most influential of the *philosophes*, Jean-Jacques Rousseau (1712–1778) accepted John Locke's view of human nature but specified that humans were kind, caring, and sympathetic only in their natural state while civil society corrupted them by instilling vanity, pride, and other vices. He championed a republican government with popular sovereignty, insisting that every citizen must participate in governance and each must give up his/her rights to the whole community. He famously declared that “freedom is obedience to laws one has prescribed to oneself,” arguing that individuals should be subsumed by the “general will” or common good. Any civil disobedience to the general will would be considered a subversion of the common good and the dissenter could justly be punished or executed. Thus, to many political observers, this notion of a general will underlay much of the violence of the terror during the French Revolution and, in later years, the totalitarian regimes of the twentieth century.

—Alexander Mikaberidze

Niccolò Machiavelli

Niccolò Machiavelli (1469–1527) was an Italian historian, statesman, and political philosopher. His political theory, as presented in his works *The Prince* (1532) and *The Discourses* (1534), has turned his name into a synonym

for amoral deception and cunning in pursuing one's goals.

Machiavelli was born in Florence on May 3, 1469. He began his influential career in politics when he became a clerk for the newly proclaimed Florentine Republic in 1498. In the new republic Machiavelli served as secretary of the ten-man council that conducted diplomatic negotiations and supervised the military operations of the republic. Machiavelli's duties included, among other things, missions to the French king (1504, 1510–1511), the Holy See (1506), and the German emperor (1507–1508). While Machiavelli was involved with these diplomatic missions, he became acquainted with many rulers and was able to study the methods they used in governing. The most significant such ruler whom Machiavelli studied was Cesare Borgia.

In 1512 when the Medici, a Florentine family, regained power in Florence and the republic was dissolved, Machiavelli was removed from office, and the Medicis temporarily arrested him for allegedly conspiring against them. Once he was released from prison, Machiavelli spent much of the rest of his life on his estate near Florence. It was during this period that he wrote his most important works, including *The Prince* (published in 1532) and *The Discourses* (published in 1534). Machiavelli was never able to curry political favor with the Medicis, and consequently he never regained his former prominent place in the political life of Florence. To make matters worse, when the Florentine Republic was temporarily reinstated in 1527, Machiavelli was suspected of being too closely allied with the Medicis to regain his former post. On June 21 of the same year, Machiavelli died in Florence.

Machiavelli is considered by many to be the father of modern political theory. In his book *The Prince* he argued that a ruler is justified in using whatever means necessary to secure power. A ruler should not be too tyrannical, for this might enflame the hatred of the governed. Yet the ruler should not seek to be too kind or beneficent, for without fearing the prince, the governed may pursue selfish ends that are ultimately to the detriment of the state and the prince. Within these parameters, however, Machiavelli claimed that the most successful rulers

(rulers he studied while on diplomatic missions) were those who could, through deception and cunning, foster the love, respect, and fear of the citizens. Some have interpreted *The Prince* to be a satire that should be read as a critique of absolutist rulers such as the Borgias. This reading would emphasize the importance of liberty and the role of government in protecting the liberties and rights of its citizens, hence the reason that Machiavelli is often cited as the initiator of modern political theory, for much of modern political theory is concerned precisely with detailing the manner in which a government or ruler is legitimate only if the government or ruler protects the rights and liberties of the governed. However, this reading of Machiavelli fell largely into doubt in 1810 when a letter by Machiavelli was discovered in which he reveals that he wrote *The Prince* to endear himself to the ruling Medici family of Florence. Read in light of this letter, *The Prince* emerges as a justification for strong governments, even absolutist if necessary, as a means of reducing the influence and threat of foreign powers.

Although Machiavelli's name has become a pejorative term, these associations should not lead one to minimize the importance of Machiavelli as a political theorist. Regardless of the motives that led him to write *The Prince*, many of Machiavelli's observations and analyses of political tactics, the role that chance plays in restricting political policy, and many other points stand on their own as important contributions to the theoretical study of political strategy and tactics. Machiavelli is also an important figure in the resurgence of humanism and the Italian Renaissance. Since Machiavelli's time, political theorists have turned their attention to the human condition, to human nature, and to structuring a government that is based on conclusions regarding these issues; Hobbes is a case in point. This is in direct contrast to the ancient and medieval tradition of imposing an ideal form on human beings and molding and raising people who are best accommodated to this form. It is this turn to humanism in political theory that is perhaps Machiavelli's greatest contribution to Western culture.

—Jeffrey A. Bell

Bibliography

- de Grazia, Sebastian. *Machiavelli in Hell*. Princeton, NJ: Princeton University Press, 1990.
- King, Ross. *Machiavelli: Philosopher of Power*. New York: HarperCollins, 2009.
- Pocock, J. G. A. *The Machiavellian Moment: Florentine Political Thought and the Atlantic Republican Tradition*. Princeton, NJ: Princeton University Press, 1975.
- Ridolfi, R. *The Life of Niccolo Machiavelli*. London: Routledge and Kegan Paul, 1963.

Thomas Hobbes and Political Thought

The English philosopher and mechanist scientist Thomas Hobbes (1588–1679) is considered to be one of the forerunners of modern political theory because he was both the first to focus on the role of the individual and the first to espouse the idea of the social contract. Hobbes's profound conservatism, and in particular his espousal in the *Leviathan* of an all-powerful government, inspired John Locke to produce his own works of political theory in opposition to Hobbes. Hobbes can rightly be said to be the first philosopher to focus on the role of the individual vis-à-vis the state. Ancient philosophers typically focused on the role of the state (or polis), the church, royalty, or the rule of law. Hobbes's unit of analysis, though, is the individual citizen. This is often used as the demarcation point between ancient and modern political philosophy. Whereas ancient political thinkers viewed governments as divinely ordained or, in the Greek tradition, the ultimate good that people must serve, Hobbes defined government as existing to serve the people. He believed that the existence of government rested on the social contract: the tacit consent among the people to trade the freedom of the "state of nature" for the security ensured by government.

Although the social contract is widely seen as the theoretical underpinning of democracy, as in the U.S. constitutional notion of a government of the people, by the people, and for the people, Hobbes never envisioned a democracy. Rather, he called for an authoritarian monarchy to control the very people whom the government sought to protect. Because Hobbes

believed man to be inherently evil, he believed that in the absence of a powerful government, society would degenerate into “war of every one against every one.”

This is where Hobbesian conservatism really began to show. Hobbes believed that rational men would sacrifice liberty in order to secure the protection that a strong government would afford. Conversely, Locke believed that government could be limited to that which is necessary to secure life, liberty, and property. Locke would later add to the social contract a key component: the right of the people to resist the government, its ultimate exposition being the right to revolution. This would ensure that the people were always stronger than the government and was based upon a notion of the inherent goodness of man. Yet Hobbes could surprise the reader. In fact, his conservatism was based on an underlying egalitarianism that was rare for his time period. He believed that the strong government was necessitated by the inherent equality of all men, as seen in the following passage: “From this equality of ability, ariseth equality of hope in the attaining of our ends. And therefore if any two men desire the same thing, which nevertheless they cannot both enjoy, they become enemies.”

Just how strong the government was to be is made clear by the title of Hobbes’s seminal work, *Leviathan*. A leviathan is a biblical sea monster of mythical proportions. Of course, Hobbes’s leviathan was the government. In other words, it is better that one suffer under an authoritarian monster than be subject to the terrible freedom of being left to fend for oneself. Nevertheless, despite the overwhelming strength of the leviathan, there was one thing that it could not require of a citizen. It could not unjustly require of a man his life, because this would be a violation of self-preservation and would be placing the individual essentially right back into the feared chaotic state of nature. Just causes, though, such as military service and a trial and sentencing were allowed because they served the betterment of the leviathan. This, then, would help the self-preservation of many others.

Subsequent critics have challenged various aspects of Hobbesian thought. Of course,

scholars now question his use of American Indians as his primary example of the chaotic state of nature, as it is based on dubious assumptions. Other scholars have challenged his definition of the social contract. David Gauthier, for instance, notes that individuals who are wholly focused on self-preservation would not give up their rights to a completely sovereign king who might require them to die in combat. He proposes the notion of an “alienation social contract” whereby there is either limited sovereignty or the “citizens merely loan their rights to the sovereign” but can take them back. This allows for the right to revolution if self-preservation is being violated but still allows for an authoritarian government if the citizens remain motivated, as in Hobbes’s view, by fear of the state of nature, where life will be “nasty, brutish, and short.”

In conclusion, Hobbes had the honor of accomplishing many firsts in political philosophy. He was one of the first authors to focus on the role of the individual, thus making him one of the very first authors of modern political theory. He was the first author to create and define the notion of a social contract, something that we take for granted today. He was far ahead of his time in thinking that all men were inherently equal. And yet from these egalitarian beginnings he is now known as one of the fathers of conservatism because he believed that men were inherently evil and that they must be controlled by an authoritarian government. He documents this necessity in his most famous work, the *Leviathan*.

—Lori Maxwell

Bibliography

- Cohen, Mitchell, and Nicole Fermon, eds. *Princeton Readings in Political Thought*. Princeton, NJ: Princeton University Press, 1996.
- Ebenstein, William, and Alan Ebenstein. *Great Political Thinkers from Plato to the Present*. 6th ed. Fort Worth, TX: Harcourt, 2000.
- Gauthier, David P. *The Logic of Leviathan: The Moral and Political Theory of Thomas Hobbes*. Oxford, UK: Clarendon, 1969.
- Maxwell, Lori. “Hobbes, Thomas (1588–1679).” In *Encyclopedia of American Civil Rights and Liberties*, Vol. 2, H–R, edited by Otis H. Stephens,

John M. Scheb, and Kara Stooksbury. Westport, CT: Greenwood, 2006.

Morris, Christopher W., ed. *The Social Contract Theorists*. Lanham, MD: Rowman and Littlefield, 1999.

John Locke and Enlightenment Political Thought

John Locke (1632–1704) was one of the figureheads of the Enlightenment and is widely considered to be the founding theorist of liberalism. Like many other Enlightenment thinkers, Locke's scholarly interests spanned considerable breadth. He was an active contributor to Enlightenment philosophy, education, and medicine, and the impact of his political thought was immense and far reaching. Locke's ideas about political liberty and the right of revolution were at the core of much European and British eighteenth-century political philosophy, especially as the field was developed by writers of the Scottish Enlightenment. In addition, Locke's political thought was demonstrably influential in America, particularly in the decades leading up to the American Revolution. But even more than this, one might say that Locke's writings and the consequences to be drawn from them became synthesized and deeply imbedded in Enlightenment political thought.

Locke was born in Wrington, England, and educated at Westminster School and Christ Church, Oxford, graduating with a BA in 1656 and an MA in 1658. He would later enter medical school and was elected a member of the Royal Society in 1668. For several years he served as both medical adviser and private secretary to the prominent political leader Anthony Ashley Cooper (later the 1st Earl of Shaftesbury), but Locke's true vocation was writing. Locke addressed topics in a wide variety of fields, including economics, education, medicine, and religion in addition to philosophy and politics. His most important books related to political theory were *An Essay Concerning Human Understanding* (1690), *Two Treatises of Government* (1690), and *A Letter Concerning Toleration* (1698). All three were published in the aftermath of England's Glorious Revolution of 1688–1689, a revolution that aimed to limit the power of the Crown and resulted in

the fall of King James II and the succession of the co-monarchs William III and Mary II.

Locke's *An Essay Concerning Human Understanding* aimed to delineate the extent and limits of human knowledge. He argued, in opposition to the French philosopher René Descartes, that ideas were not innate to the human mind but that the mind was a blank slate that acquired ideas as the product of sensory experience, which was not always accurate. Locke's *Essay* quickly became standard reading and a commonplace staple of English thought, and it is difficult to overemphasize the impact of Lockean empiricism on the Anglo-American intellectual world by the middle of the eighteenth century.

Locke's epistemological foundation helps to explain his *Two Treatises of Government*. Published anonymously, *Two Treatises* appears largely to have been overlooked for the first ten years after its publication. Its slowly rising reputation might be dated to the early eighteenth century in the hands of popular British authors, such as Daniel Defoe, who wrote against parliamentary supremacy. Arguing against the divine right of kings espoused by the seventeenth-century royalist author Sir Robert Filmer, Locke maintained that in the precivil state, or the "state of nature" as he called it, men had certain natural rights. Among these natural rights were life, liberty, and property. While Thomas Hobbes had argued in *Leviathan* (1651) that the state of nature was a perpetual "war of all against all," Locke reasoned that in the state of nature all men would instead aim "to preserve the rest of mankind." Moreover, on entering a civil state, man's natural rights were not rescinded. Locke reasoned that if the rulers of any state made it impossible for its citizens to enjoy their natural rights, the people had a right to revolt against their leaders.

As such, Locke's *Second Treatise* became an important intellectual foundation for American colonists seeking to justify and encourage revolution. Locke's *Second Treatise* was not published in America until 1773, but it had been widely available to American readers decades earlier, as its presence in surviving book catalogues and other references in print shows clearly. James Otis famously quoted from Locke in his *The Rights of the British Colonies Asserted and*

Proved (1764), as did Nathaniel Ames in 1765. Locke was also cited in some of the most important political pamphlets of the day, such as Richard Bland's *An Inquiry into the Rights of the British Colonies* (1766) and Samuel Adams's *A State of the Rights of the Colonists* (1772). And as numerous scholars have shown, when in 1776 Thomas Jefferson spoke of "inalienable rights" in the preamble to the Declaration of Independence, he clearly owed a considerable debt to Locke, as Jefferson did on the topic of religious freedom. In his *Letter Concerning Toleration* (1698), Locke had argued that religion was a matter to be decided by individuals (although for this English Protestant, full toleration did not include Roman Catholics or atheists). Locke argued that churches ought to be voluntary associations, thereby partially setting the stage for the doctrine of the separation of church and state later incorporated into the U.S. Constitution and a mainstay of the modern liberal democratic thought. For instance, Locke's impact might be traced in the development of political thought in eighteenth-century France. There thinkers of the French Enlightenment, such as Voltaire and Montesquieu, championed English government and notions of religious toleration, in part as they understood these through their reading of Locke's *Two Treatises of Government*.

—Mark G. Spencer

Bibliography

- Ashcraft, Richard. *Revolutionary Politics and Locke's Two Treatises on Government*. Princeton, NJ: Princeton University Press, 1986.
- Bailyn, Bernard. *The Ideological Origins of the American Revolution*. 1967; reprint, Cambridge, MA: Harvard University Press, 1992.
- Chappell, V., ed. *The Cambridge Companion to Locke*. Cambridge: Cambridge University Press, 1994.
- Dunn, John. *The Political Thought of John Locke*. Cambridge: Cambridge University Press, 1969.
- Dunn, John. "The Politics of Locke in England and America in the Eighteenth Century." In *John Locke: Problems and Perspectives*, edited by J. W. Yolton. Cambridge: Cambridge University Press, 1969.
- Goldie, Mark, ed. *The Reception of Locke's Politics*. 6 vols. London: Pickering and Chatto, 1999.
- Lutz, Donald S. "The Relative Influence of European Writers in Late Eighteenth-Century American Political Thought." *American Political Science Review* 78 (1984): 189–197.
- Pangle, Thomas L. *The Spirit of Modern Republicanism: The Moral Vision of the American Founders and the Philosophy of Locke*. Chicago: University of Chicago Press, 1988.
- Porter, Roy. *Enlightenment: Britain and the Creation of the Modern World*. London: Allen Lane and Penguin, 2000.
- Rogers, G. A. J. *Locke's Enlightenment*. Hildesheim, Germany: Georg Olms Verlag, 1998.
- Yolton, John W., and Jean S. Yolton. *John Locke: A Reference Guide*. Boston: G. K. Hall, 1985.

The Enlightenment and Political Philosophy

Ideas associated with the Enlightenment—secularism and anticlericalism, turning a skeptical eye toward tradition and custom in favor of the application of reason and expertise to public affairs and to a lesser extent democracy—played a prominent role in the history of political thought in the eighteenth century and later.

The Enlightenment completed the secularization of European political philosophy. For Enlightenment philosophers, rulers did not get their authority from God, as Christian political thinkers had asserted. Authority had to be justified in other ways, such as the consent of the people or the ruler's capacity to rule for the benefit of all, a benefit defined in terms of earthly prosperity rather than eternal salvation. Much of this theory derived from the English Revolution of the mid-seventeenth century and the "contractual" political thought of Thomas Hobbes and John Locke, who probably had more influence on mainstream Enlightenment political thinking than any other philosophers. The theory of a social contract was most fully developed in the Enlightenment by Genevan philosopher Jean-Jacques Rousseau. Rousseau's *The Social Contract* (1762) put forth a democratic theory of authority. Rousseau's contract was between equal individuals, not, like Hobbes's and Locke's, between the people and a sovereign. Rousseau's ideal society was based on equality of rights among its citizens (although Rousseau strongly distinguished between the rights and functions of men and women) and obedience to "the general will," which was not always the will of the majority.

► HENRY LLOYD ON TOLERATION AND THE ENGLISH CONSTITUTION

The English political and military writer Henry Lloyd considered England's free constitution indissolubly linked to its practice of religious toleration. In *An Essay on the English Constitution* (1870), he explains that tolerating a diverse range of opinions was not merely a necessary evil to avoid persecutions and civil wars but instead was a positive good.

"Toleration is a necessary consequence of civil liberty, and I shall always consider it as one of the greatest advantages of the English government; freedom of opinion is inseparable from civil liberty, inasmuch that when I see a prince endeavour to establish a unity in religion, I conclude he means to enslave his subjects, because the one leads to the other. It is on this principle that all Roman Catholic princes, who are more or less despotic, have proscribed all other species of religion, as much as in them lays. In a free government, the legislative power must never interfere with men's opinions, philosophical or religious. Their actions alone are subject to the laws. It is useful there should be a variety of opinions, and none should be excluded, but such as embrace tenets contrary to the principles of a free government. Even these must be treated with lenity. A variety of opinions always produces an emulation favorable to good morals."

—William E. Burns

Source

Patrick J. Speelman, ed., *War, Society and Enlightenment: The Works of General Lloyd* (Leiden: Brill, 2005), 225–226.

The secularization of political philosophy went along with a suspicion of any involvement of church and state. Although not all Enlightenment philosophers went all the way to advocate a fully secular state, all distrusted the political power of the clergy. China, idealized as a place governed by wise magistrates who had marginalized the priesthood, was often put forth as a model in this regard. Religious domination was not only wrong and unjustified in that it stifled human freedom, but it also held back economic development. A favorite example of many French

Enlightenment philosophers was Louis XIV's expulsion of the Huguenots (French Protestants) from France in 1685, which some argued had been an economic catastrophe, depriving the country of many skilled workers.

The idea of political and social power as justified by tradition also found little favor among the Enlightened. Eighteenth-century Europe was a complex structure of groups and classes claiming privileges on the basis of custom and tradition. The nobility possessed many social and legal privileges, and even the vaunted British Parliament was elected on a crazy quilt of franchises based on historic traditions rather than on abstract political logic. Enlightenment philosophers, many of whom came from the middle class, attacked local traditions and privileges in the name of the universal values of reason and justice. They pointed out the fundamental irrationality of a system that distributed essential responsibilities on the basis of birth rather than ability. Enlightenment philosophers even approved of some revolutions, including the English Revolution of 1688, the failed Genevan Revolution of 1770, and the American and French revolutions. However, Enlightenment philosophers did not value revolution for its own sake or think it preferable to other methods for social reform. They condemned revolutionary movements driven by traditionalism and religion like Pugachev's rebellion in Russia.

Monarchy itself was the most obvious example of traditional privilege, and Enlightenment opinion was split on the subject. More radical philosophers opposed it, but moderates often found it pragmatically best to accept kingship as an institution and work with monarchical reformers. The ability of a strong monarch to defy the church and overcome vested interests and traditions was appealing to many philosophers. The Enlightenment conceived of monarchy as the calling of an individual to work for the good of the people. Monarchy must be subordinated to laws, and moderate Enlightenment thinkers sharply distinguished between lawful monarchy and despotism. To live under a despotism was to be no better than a slave. There was also, however, a strong republican strain in the Enlightenment, particularly marked in the works of Rousseau. Philosophers admired the ancient

republics of Greece and Rome and viewed the overthrow of the Roman republic in favor of the empire as a political tragedy. However, only a few radicals went fully in the direction of supporting democracy. Many others, including Voltaire, were suspicious of the uneducated and religious common people.

Philosophers supported radical reform of the judicial system, which in addition to upholding aristocratic privilege still admitted—and in some cases relied on—evidence obtained by torture. Enlightenment philosophers pressed with some success for the abolition of torture and moderation in the use of the death penalty. The protracted nature of legal proceedings was another favorite target. Voltaire and other French Enlightenment philosophers attacked France's hereditary magistrate class, the so-called Nobles of the Robe, for being more concerned with its own privileges than with the administration of justice. Despite their skepticism over the ability of the judiciary to produce justice, philosophes still preferred due process of law to arbitrary actions, such as the French king's power to arbitrarily imprison subjects. Persons living under such arbitrary rule, whether or not they were personally affected by it, could not be free.

Much of Enlightenment political philosophy was subordinated to the promotion of the Enlightenment agenda of practical reform. Political reforms that found broad support among the Enlightened included religious tolerance and the abolition of laws that infringed on personal liberty for religious reasons. Away from religion, Enlightenment philosophers usually favored a more equitable legal system, penal reform, the abolition of "unreasonable" privileges, the creation of a freer economic market, a reorientation of monarchical culture toward care for the people rather than military glory or conspicuous piety, and the abolition of slavery. Rulers who enacted such reforms could always count on support from some Enlightenment thinkers no matter how despotic they were as sovereigns. Frederick the Great of Prussia was particularly prominent among the absolutist rulers who won some Enlightenment support. However, the nondespotic religiously tolerant parliamentary government of Great Britain was often put forth as an ideal for emulation.

—William E. Burns

Bibliography

- Gay, Peter. *The Enlightenment: An Interpretation*. 2 vols. New York: Knopf, 1969.
- Gay, Peter. *Voltaire's Politics: The Poet as Realist*. Princeton, NJ: Princeton University Press, 1959.
- Israel, Jonathan. *Radical Enlightenment: Philosophy and the Making of Modernity, 1650–1750*. Oxford and New York: Oxford University Press, 2001.
- Outram, Dorinda. *The Enlightenment*. 2nd ed. Cambridge: Cambridge University Press, 2005.

The Reign of Absolutism in Western Thought

Absolutism was the dominant form of government in Europe during the seventeenth and eighteenth centuries and occupied a central place in the political thought of the time. Theoretically, an absolute monarch had limitless and uncontested power; in practice, absolutist rule had many limitations. Political theorists of the period, particularly in France, generally agreed on the divine origins of the king's boundless power and were cautious to differentiate between absolutism and despotism. Although the monarch's power was theoretically unchallenged, it was expected to be contained within certain bounds.

Monarchs had to answer directly to God for their actions and were limited by the corporative nature of society. They were also bound by the fundamental laws of the realm (the Salic Law in France, for example, that determined succession to the throne) and by natural law, which meant that they were expected to respect the rights, freedoms, privileges, and property of their subjects. These limitations helped ensure that the kingdom would not be at the arbitrary mercy of the monarch.

Jean Bodin's (1529/1530–1596) *Six Books of the Republic* (1576) was one of the major works of political writing of the sixteenth century. Bodin's theory of sovereignty was at the core of this piece. Written during the French Wars of Religion (1562–1629), this treatise sought to vindicate the absolutist claims of divine-right monarchs by arguing that sovereignty had always belonged exclusively to the king. Sovereignty, being indivisible and absolute, must not be disputed by anyone. Nor could subjects attempt to depose their king no matter how bad he may have been,

➤ J. B. BOSSUET, *POLITICS DRAWN FROM THE VERY WORDS OF HOLY SCRIPTURE*, 1709

Politique tirée des propres paroles de l'Écriture sainte was written by the bishop Jacques-Bénigne Bossuet (1627–1704). Books I–VI were written in 1677–1679 for the Dauphin (Louis XIV's eldest son), whom he tutored during 1670–1680. Books VII–X were written in 1700–1704. The *Politique* was posthumously published in 1709. This is Bossuet's major political work and the one that established his reputation as a great theorist of royal absolutism. While the *Politique* was a means for instructing the Dauphin in his future obligations as king of France, it primarily served as a defense of the theory of divine-right absolute monarchy. Bossuet used the Bible as evidence for his thesis that the power of kings is directly derived from divine authority and is hence natural. Although Bossuet argued that the king's person was sacred and should not be subject to earthly scrutiny, he drew a clear line between absolutism and arbitrariness. Although all-powerful, an absolute monarch had to respect his realm's ancient rights and privileges and natural and fundamental laws. Having witnessed the horrors of the Fronde (1648–1653)—a series of unsuccessful civil wars during Louis XIV's minority—Bossuet knew how lethal the weakening of monarchical authority could be and understood how necessary it was for Louis XIV and his successors to promote the idea of an undisputed absolute divine-right monarchy.

—Joan G. Gonzalez

as it was prohibited by divine law. These ideas would later be echoed by Thomas Hobbes (1588–1679) who supported absolute government, arguing in *Leviathan* (1651) that sovereignty was absolute and that rebellion against it would be disastrous because it would lead humanity back to the bellicose state of nature.

Bodin's thought was further elaborated by Jacques-Bénigne Bossuet (1627–1704), who in his *Politique tirée des propres paroles de l'Écriture sainte* (1709) affirmed that the king's power was sacred, paternal, and absolute. As such, kings were representatives of God on earth and possessed quasi-divine powers. Bossuet also declared that civil disobedience should be unthinkable no matter how unjust a ruler was.

He did not, however, promote despotism, as he clearly urged kings to respect the *lois fondamentales* (fundamental laws) and their subjects' property.

Yet many early modern states were complex and decentralized and were composed of many groups, provinces, and cities with their own sets of privileges and laws, which the king was expected to respect and abide by. The absolutism of Louis XIV (r. 1643–1715), for example, was accomplished through a series of compromises with these various entities and was part of a process of constant negotiation that began during the period of the French Wars of Religion. In Spain there were actually more limitations than absolute powers because the king did not have jurisdiction in all parts of his kingdom. Furthermore, Spanish sovereigns were too dependent on the Cortes (the Castilian parliament), the pope, and royal officials such as the *corregidores*.

France and Spain also had distinct types of absolutism. In France, exemplified by the absolute monarch Louis XIV, everything was centered on the person of the king and revolved around a cult of personality. In Spain, especially during the reigns of Philip II (r. 1556–1598), Philip IV (r. 1621–1665), and Philip V (r. 1700–1746), there was a focus on kingship as a depersonalized institution. While French kings possessed more-than-human attributes, such as the royal touch that could cure scrofula, Spanish kings did not rule by divine right and were simply seen as administrators of the realm.

Not all thinkers, however, supported absolutism. John Locke (1632–1704) and Jean-Jacques Rousseau (1712–1778) were prominent critics of absolutism. As a supporter of the Glorious Revolution (1688–1689) and a key contributor to the English political debate between absolutism and constitutionalism, Locke argued in his *Two Treatises on Government* (1690) that the people have a natural right to replace tyrannical monarchs. For Locke, absolute power was by nature arbitrary and should be suspect. Rousseau likewise advocated in *The Social Contract* (1762) the possibility of overthrowing and replacing repressive rulers. Rousseau did not consider kingship sacrosanct and believed that the general will was sovereign, thereby

dismissing the whole concept of divine-right absolute monarchy.

These new theories about kingship were central to the Enlightenment and led to a new kind of rule: enlightened absolutism. Enlightened monarchs, such as Frederick the Great (r. 1740–1786) of Prussia, Catherine the Great (r. 1762–1796) of Russia, and Joseph II (r. 1780–1790) of Austria, tried to combine Enlightenment ideals with absolutist powers. These monarchs desacralized their persons and proposed reform programs designed to improve society, modernize the state, and increase their economic and military power. This essentially consisted of a political shift from “*L’état c’est moi*” (“I am the state”)—a saying wrongly attributed to Louis XIV—to Frederick the Great’s motto, “I am the first servant of the state.”

—Joan G. Gonzalez

Bibliography

- Beik, William. *Louis XIV and Absolutism: A Brief Study with Documents*. Boston and New York: Bedford and St. Martin’s, 2000.
- Birn, Raymond. *Crisis, Absolutism, Revolution: Europe and the World, 1648–1789*. 3rd ed. Peterborough, Ontario, and Orchard Park, NY: Broadview, 2005.
- Miller, John, ed. *Absolutism in Seventeenth-Century Europe*. London: Macmillan Education, 1990.

From Divine Right to Rational Foundations in Political Thought

The evolution of political structures in Europe from absolutist monarchies to constitutional representative institutions followed various courses in different states. The concept of divine right, which asserted that the monarch has absolute authority over the realm as a result of his power and legitimacy anointed by God’s will, was increasingly questioned by political thinkers in the wake of the Wars of Religion and the rise of the Enlightenment. The English Crown, which had shared some degree of political power with the representative institution of Parliament for centuries, offered a glaring example to be followed to devotees of the Enlightenment. In contrast, the increasing power of absolutist regimes in France, Prussia, Russia, and Habsburg Austria offered examples of the divine right of kings

infringed on aristocratic privilege, the rights of the emergent burghers, and the destitution and bondage of both the peasantry and serfs.

The political conception of the divine right of kings was not by definition a political theory but rather the amalgamation of different ideas in support of the absolute rule of the monarchy in early modern Europe. According to this concept, the monarch was granted the authority to rule over his designated realm through the will of God, who alone has the right to grant such power. This was partly based on the biblical tale describing the anointing of King Saul by Samuel by the authority of God in his designation of Saul as king of Israel. In the years following the Protestant Reformation, German rulers within the Holy Roman Empire sought to impose the concept of *cuius regio, eius religio* (“whose region, his religion”) on their subjects in the Peace of Augsburg (1555), at least for Catholics and Lutherans. It was not extended to Calvinists until the Treaty of Westphalia in 1648, which ended the Thirty Years’ War. These instances set a precedent in which a hereditary ruler had both absolute spiritual and secular authority over his subjects.

Nonetheless, in the quest for advocates of divine right to curtail the rights and privileges of the nobility, the peasantry, and the commoners, a surge of resistance emerged throughout Europe based on Enlightenment ideals and rationalist political discourse in the eighteenth century. In France, where Cardinal Richelieu, Cardinal Mazarin, and Louis XIV had created an absolutist monarchy that centralized all authority under the Crown, the nobility in the provinces countered by centering their own power in *parlements* (royal courts). Furthermore, the onset of the Jansenist movement, a fringe Catholic group in France that advocated predestination and was opposed to the influence of the Jesuits, also served as a spearhead in opposition to the growing power of the French monarchy. In their quest to reclaim and defend the privileges and rights of the nobility, many of these French aristocrats referenced old medieval laws that gave the nobility legal jurisdiction and right to representation. Using the *parlements* as their pulpit, these nobles resisted French royal encroachments, resorting to flight when disbanded under royal decree but nonetheless influencing

► FROM HOBBS TO MACHIAVELLI—LEVIATHANS, PATRIARCHS, AND PRINCES

Early modern European political theorists, while recognizing the political interests of the masses, were also aware of the differing interests of various sectors of society. The ideas of Niccolò Machiavelli (1469–1527) and Thomas Hobbes (1588–1679) have been regarded by scholars to be either cynical or utilitarian, given the context of the era. In his book *The Prince* (1532), Machiavelli viewed a strong prince, in the context of the chaotic and anarchic Italian city-states of the Renaissance, as one who could exert his legitimate authority through his willingness to resort to force. Writing from a later period and in the context of the English Civil War and the Cromwellian Protectorate, Thomas Hobbes in his work *Leviathan* (1651) also advocated a strong central authority in order to represent the interests of the realm and end the factionalism created by civil war and domestic discords. Both of these works advocated strong initiative (or brutal repression) by the ruler to impose order and maintain stability given the alleged flaws in human nature and behavior, which were not conducive for an orderly society.

—Abraham O. Mendoza

the discussions taking place in the salons of the wealthy back in Paris. The Fronde (1648–1653), which was a series of rebellions by the nobility against Mazarin's rule, was also triggered by absolutist centralization.

Enlightenment political theorists, such as Thomas Hobbes, John Locke, Baron de Montesquieu, Voltaire (François-Marie Arouet), and Jean-Jacques Rousseau, critical of the existing paradigm, proposed new ways to formulate government according to rational principles that advocated for representation of various social group interests, institutionalized checks in the power of the executive, and fixed laws that the monarch abide by in governing. England was a special case because during Henry VIII's reign, he granted Parliament more power in return for their acceptance of him as the head of the Anglican Church. Furthermore, since English nobles paid taxes, they felt that they had more of a stake to play in the English Parliament. In

spite of the absolutist tendencies of the House of Stuart under James I and Charles I, the English Crown devolved much of its political authority to Parliament following the English Civil War (1642–1651) and the Glorious Revolution (1688–1689), in effect illustrating the potential effectiveness of representative institutions. The English political philosophers Hobbes and Locke both purported that the Crown had to rule within the established law and adhere to the interests of the people, which composed the body politic of the realm. However, they differed on the degree of power that such a representative institution should carry, with Locke advocating for more representation. In spite of living in absolutist France, French intellectuals such as Montesquieu, Voltaire, and Rousseau were critical of the Old Regime and suggested a new course for France. In France, the Baron de Montesquieu, while sustaining the argument for the monarchy, recognized that its power should be checked and balanced by that of a legislature, such as that of Parliament in England, and a fixed body of law through the courts. Voltaire, critical of the trappings of the Old Regime, attacked the monarchy, the nobility, and the Church, advocating radical positions regarding human liberty for the commons while retaining conservative positions regarding the masses. Rousseau, who much like Hobbes believed in the interests of the masses (conceptualized in his idea of the General Will), recognized that while it must be acknowledged by the monarch, said monarch as a representative of it had the right to do what he felt was right for the interests of the masses.

—Abraham O. Mendoza

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century, 1713–1789*. 4th ed. New York: Longman, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Stoye, John. *Europe Unfolding, 1648–1688*. 2nd ed. Malden, MA: Blackwell, 2000.

Anglo-Portuguese Relations

The beginning of Anglo-Portuguese relations is traditionally dated to the twelfth century. In 1147 a group of English crusaders journeying to the Holy Land helped King Afonso Henriques

(the first king of Portugal) capture Lisbon from the Moors. Their alliance was formalized in 1387 with the Treaty of Windsor. Most of the time, the two countries were able to find friendship in their common enmity for the Spanish. However, outside political forces did not always allow for the two countries to honor their allegiance.

In 1580 Philip II of Spain was able to use his claim to the Portuguese throne in order to invade Portugal. Due to the alliance with the English, many Portuguese people expected Elizabeth I to provide assistance, especially because Spain's annexation of Portugal was a threat to England since it would double the size of the Spanish empire. Despite this, she did not help because she was trying to avoid war with Spain. Instead of direct help she used subtle measures against the Spanish, namely allowing privateers like Sir Francis Drake to attack Spanish silver fleets returning from the Americas while claiming no knowledge of the attacks and sending aid to the Protestant Dutch who were rebelling against Spain. The situation changed after 1588, however. The English navy defeated the Spanish Armada, and Elizabeth saw this as an opportunity to use Portugal against Spain. The plan was to send troops into Portugal and attempt to incite a nativist revolt against the Spanish. However, the goal of this plan was to hurt the Spanish and destroy the remnants of the Armada, not to help the Portuguese. By the time the English army reached Lisbon, a majority of the soldiers had succumbed to illness, which was exasperated by their indulgence in Portuguese wine. Once they reached the capital, they were disappointed to find that the Portuguese were not as ready to revolt as they had been eight years previously, and the plan was a complete failure.

When the Portuguese finally did revolt in 1640, the new king João IV faced many diplomatic and economic problems. Other European countries were reluctant to recognize Portugal's independence at the risk of starting war with Spain, especially since the Thirty Years' War had just ended. King Charles I of England was one of the few monarchs willing to receive Portuguese ambassadors and negotiate a treaty. He himself was having his own problems, as England was on the verge of a civil war. In 1642 Charles and João signed a treaty whereby English merchants

THE MARRIAGE OF CATHERINE OF BRAGANZA TO CHARLES II OF ENGLAND

When Catherine of Braganza set sail for Portsmouth on April 25, 1662, she had no idea what to expect out of Charles II as a husband. The marriage treaty had been advantageous for both countries: Portugal had acquired the military assistance necessary to win a war against Spain, and Catherine brought the largest dowry ever brought by an English queen consort, £1 million sterling. While the marriage looked good on paper, the actual relationship would turn out quite differently. Prior to his marriage, Charles was already having an affair with Barbara Palmer, who was pregnant with their second child. Palmer was just one of many mistresses whom Charles kept throughout their marriage, producing 12 illegitimate children (6 with Barbara Palmer alone), two of whom are ancestors to Princes William and Henry of England on their maternal side. Charles's relationships caused quite the scandal at court, as he paraded his mistresses along behind him, buying them expensive pieces of jewelry and providing lodgings for them at Whitehall Palace.

Despite the amount of women who passed through Charles's bedroom, he remained loyal to Catherine throughout their marriage. As the years went on, many members of Parliament became concerned at Catherine's lack of ability to produce a live heir (she had several miscarriages and stillbirths). They knew that if Charles died without legitimate issue, his brother James would be next in line for the throne. This was worrisome because many suspected James of being a crypto-Catholic, and they did not want to see a Catholic on the throne. Many suggested to Charles that he divorce Catherine in favor of someone who could produce him a child. He always refused this adamantly (possibly because he was a secret Catholic). Other suggestions included allowing him to commit bigamy, sending Catherine to a convent, and legitimizing the Duke of Monmouth, his eldest son. Charles refused all of these requests. Desperate, a "Popish plot" was fabricated in 1678 in which Catherine was accused of plotting to poison the king. He never did believe the charges, and Charles even defended her after Parliament voted to have her banned from the palace in 1679. Charles remained married to Catherine until his death in 1685, hours after converting to Catholicism.

—Monique Vallance

were given easier access to the Portuguese colonies, and English merchants residing in Portugal were given freedom of conscience and allowed to hold Anglican religious services. In return, Portugal received the friendship and recognition of the English, the first step toward being recognized by the rest of Europe.

When rebellious Parliament members executed Charles I in 1649, João found himself in a new realm of diplomacy. He was caught in a difficult position: although he had supported Charles as a fellow monarch, he did not want to incur the odium of Oliver Cromwell. While João attempted to remain neutral, circumstances dictated otherwise. Prince Rupert, the Count of Palatine of the Rhine and nephew of Charles I, had been appointed the commander of the royalist fleet. After several battles with the parliamentarians, he was eventually forced to take refuge in Ireland. Shortly thereafter Cromwell invaded Ireland, and Rupert asked João's permission to flee to Portugal in November 1649. João granted him permission but withdrew it when Rupert began using Lisbon's port as a base of operation for attacking English merchant ships. While João was obviously a royalist sympathizer, Rupert's actions were both harming trade and angering the English Commonwealth. Ten months passed before the Portuguese were able to finally oust Rupert from Lisbon in 1650, but relations with England had significantly soured by then. The English were on the verge of declaring war on Portugal. It took Portuguese diplomats four years before a treaty could be negotiated with the new government. In this new treaty of 1654, the Portuguese were forced to grant several concessions to the English concerning trade while only receiving the promise of peace and mutual friendship in return.

Although Portugal paid dearly for assisting the Stuarts in 1649, this effort would be rewarded in 1660 when Charles II returned to England and assumed the throne. Charles's first order of business in England was finding a bride. His financial woes were great, as he was left with enormous debts accumulated from both his father and his own court-in-exile. Although the Spanish ambassador did his best to obstruct the marriage negotiations, Charles agreed to marry João's daughter Catherine of Braganza

in 1661. This alliance would provide England the largest dowry ever brought by any queen: £1 million. Portugal would also reconfirm the treaty of 1654 as well as cede the territories of Bombay and Tangier to England. However, this time Portugal actually received something tangible in return. Charles promised English ships to be used in the defense of the Portuguese coast against Spain as well as the use of English troops for land campaigns on the Portuguese frontier. While this treaty was widely criticized in Portugal due to the loss of territories, it was the main reason that Spain abandoned the hope of reacquiring Portugal in 1668. Once they had the promise of English defense, the Portuguese were safe from the Spanish armies, and peace was finally declared.

England and Portugal's relationship partly consisted of economic ties, and these influenced their mutual political interests as well. After the beginning of the eighteenth century Portugal would come to England's aid, even to its own detriment. For instance, the Portuguese fought alongside the English troops during the War of the Spanish Succession (1701–1714), and even though it cost them dearly, they made no gains from the outcome.

—Monique Vallance

Bibliography

- Duncan, T. Bentley. *Uneasy Allies: Anglo-Portuguese Relations, 1642–1662*. New York: Vantage, 2001.
- Prestage, Edgar, ed. *Chapters in Anglo-Portuguese Relations*. Watford, UK: Voss and Micheal, 1935.
- Prestage, Edgar, ed. *The Diplomatic Relations of Portugal with France, England, and Holland from 1640 to 1668*. Watford, UK: Voss and Michael, 1941.

Development of Habsburg Policy

From the late fifteenth century well into the eighteenth century, the Habsburg royal family played a significant role in the power politics and international relations of the major European powers. Through key marriage alliances with Spain, Austria, and France, the Habsburgs were able to create composite kingdoms that included not only vast areas of Europe but also overseas possessions in the Americas, Asia, and Oceania. However, over the centuries major conflicts with

rebellious Lutheran princes within the Holy Roman Empire and the Dutch provinces amid the religious schisms caused by the Protestant Reformation, various wars with the French Bourbons, and border skirmishes with the Ottoman Turks preoccupied the Habsburgs and limited their ability to centralize their control over Central Europe.

In the mid-fifteenth century the Habsburg family was able to acquire a substantial amount of land through marriage in the southeastern portion of the Holy Roman Empire as well as ensure the continual election of their family scion as Holy Roman emperor. In 1477 Archduke Maximilian I of Austria married Mary of Burgundy, thereby securing control of the Netherlands. His son Phillip married Juana in 1496 (daughter of Catholic king Fernando of Aragon and Isabel of Castile), thereby acquiring the Spanish dominions and American colonies for the Habsburgs. Their son Carlos I of Spain, when elected Holy Roman emperor (1519), became the famous Charles V, who ruled Spain, Spanish holdings in the Netherlands and Italy, Spanish America, and Austrian holdings in the Holy Roman Empire. Under Charles V, the Habsburgs ruled the largest land empire held by Europeans up to that time.

In 1521, possession of the Austrian lands was delegated to Ferdinand I by his brother Emperor Charles V, thereby effectively splitting the Habsburg domains between two family branches. This was due to the fact that Charles found it nearly impossible to rule over so many kingdoms effectively amid the rebellions in Castile and the schisms caused by the Protestant Reformation in the German realms. After 1556 the Austrian Habsburgs held the title of Holy Roman emperor and the Habsburg hereditary lands (both kingdoms of Bohemia and Hungary). The Spanish Habsburgs ruled over the Spanish kingdoms (Castile, Aragon, and Portugal), the Netherlands, the Habsburgs' Italian possessions, and the American colonial empire. Revolts in the Netherlands and in Catalonia and Portugal in 1640, along with the piracy and maritime competition ignited by Tudor England in the sixteenth century, distracted the attention of the Spanish Habsburgs. Portugal was only held from 1580 to 1640. The Austrian Habsburgs fought the Thirty Years' War (1618–1648) against the

➤ THE *EINRICHTUNGSWERK* OF CARDINAL KOLLONICH, 1683–1690

In the 1680s, Cardinal Kollonich was put in charge of Hungary's finances by Austrian emperor Leopold I amid efforts by Magyars to resist centralization of their affairs by Habsburg authorities. Kollonich, serving his Catholic sovereign, managed to anger many a Protestant Magyar by appointing and favoring Catholics and persecuting dissenting Hungarians. Nonetheless, Magyars continued to struggle against these pressures, often with external support from Bourbon France or the Ottoman empire. From 1683 to 1690 the Austrian policy of centralizing its control over the Kingdom of Hungary proved unpopular as it emulated absolutist practices already common throughout Europe, most notably in France.

—Abraham O. Mendoza

Protestant electors in an effort to centralize the power of the Catholic Habsburg emperor amid revolts in Bohemia and northern Germany. Farther east, the Kingdom of Hungary, under de jure Habsburg suzerainty from 1526 but under de facto Ottoman occupation for 150 years, was finally recovered at the end of the seventeenth century by the Austrian Habsburgs and their Polish allies, which were responding to Ottoman threats to Vienna.

The Spanish Habsburgs died out in 1700 with the passing of Carlos II, who was unable to procreate due to impotence, and prompted the War of the Spanish Succession after Carlos willed the Spanish throne to Louis XIV's grandson, Philip. This was contested by the Austrians, who feared a pro-Bourbon power block in western Europe. The war ended with the acceptance that while Spain would have a Bourbon monarch, the French Bourbons would not be allowed to seek the throne for its own heirs. When the last male heir of Austrian Habsburgs died out in 1740, the situation also prompted a major intra-European war (War of the Austrian Succession, otherwise known as the Seven Years' War). The emergent Kingdom of Prussia refused to acknowledge the legitimacy of the female heir, which was enacted through the Pragmatic Sanction signed by most of the electors.

Maria Theresa, the heiress of the last Austrian Habsburg, married Francis Stephan Duke of Lorraine in 1736, and their descendants carried on the Habsburg line from Vienna under the dynastic name Habsburg-Lorraine. At this point, the Habsburg royal family was relegated to retaining the position of Holy Roman emperor by a male heir until the abolition of that political entity by Napoleon Bonaparte in 1806. Nonetheless, the emperors of Austria, along with the kingships

of Bohemia and Hungary, were always inherited by Habsburgs until 1918.

—*Abraham O. Mendoza*

Bibliography

- Elliot, J. H. *Europe Divided, 1559–1598*. 2nd ed. New York: Blackwell, 2000.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. New York: Blackwell, 2001.
- Stoye, John. *Europe Unfolding, 1648–1688*. 2nd ed. New York: Blackwell, 2000.

■ Introduction: Politics and Religion

The religious changes of early modern times were intimately bound with politics, and if anything politics and religion moved closer in this period. Political authority was also religious authority, whether it was the Protestant English monarch, the “Defender of the Faith”; the Ottoman sultan, the inheritor of the caliph’s power over Sunni Islam; or China’s “Son of Heaven.” However, religopolitical authority could take a variety of forms both domestically and internationally. One extreme was marked by the Spanish monarchy, which boasted of the rigidity with which Catholicism was enforced throughout its worldwide dominions. The legendary Spanish Inquisition was a powerful tool for enforcing internal conformity, one on which the papacy consciously modeled the Roman Inquisition, a key institution of the Catholic Reformation. However, even the king of Spain, “His Catholic Majesty,” on occasion was known to hire Muslim or Protestant soldiers or ally with non-Catholics. Tokugawa Japan, after the suppression of Christianity in the early seventeenth century, was also an officially intolerant state, with every Japanese required to be affiliated with a Buddhist temple. Some rulers, such as England’s Henry VIII or Akbar of the Mughal dynasty of India, even fundamentally reshaped religion in the hope of better serving state or personal needs. Henry had more success than Akbar, whose new religion never spread far from his court.

Some states were strongly affiliated with a particular religion but tolerated others. Drawing on a legacy of Islamic tolerance, the great

Muslim empires of the Ottomans, Safavids, and Mughals tolerated to varying degrees Jewish, Christian, Zoroastrian, and Hindu communities that were allowed self-government in many areas. The Dutch Republic, while maintaining an official religion of Reformed Protestantism, also tolerated all Christian sects, including Catholicism, and Judaism as well. Generally, Protestant states were more tolerant than Catholic ones, particularly after Catholic Poland and France became more intolerant in the late seventeenth century and Protestant England became more tolerant. Religious toleration was not religious equality and throughout much of the world was seen as a necessary evil for civil peace and economic prosperity rather than a positive good. European Jews in particular benefited from the widespread belief that tolerating a Jewish community was economically advantageous, an argument for which the Dutch example was particularly powerful.

Generally, rulers sought to control the religious organizations within their realms. This was particularly the case with European Protestantism in which the international organization of Catholicism was replaced by a series of national Protestant churches. Control over religion could be something more of a challenge for Catholic rulers, as the pope always retained a degree of independence regardless of the influence that powerful secular rulers could bring to bear. Buddhist and Muslim rulers, faced with religions with less central organization than Christian denominations, could also face internal challenges.

Japan was challenged by powerful Buddhist monasteries or Islamic states by the ulama of the great cities. Religious differences could lead to dangerous internal divisions, as could be seen in the British Civil Wars of the mid-seventeenth century or the Christian Shimabara uprising in Tokugawa Japan.

—William E. Burns

Reformation Germany

The Protestant Reformation had its beginnings in Germany (the Holy Roman Empire). As an intellectual movement that began among clergy, the movement experienced a swell of popular support that spread rapidly throughout various social classes, influencing other reformers all over Europe. The lack of national unity that characterized the German states at the time contributed to an environment that was naturally conducive to new and innovative thinking, as Germany lacked the anchor of strong monarchy found in other places in Europe at the time. Since the time of the collapse of the western Roman empire, the German states were loosely constituted into the Holy Roman Empire, governed by central institutions that lacked consistent authority. These institutions included the office of Holy Roman emperor, elected by an electoral college, and the Imperial Diet, a legislative body that met to formulate policies but lacked true enforcement ability, given the independence of various German states. Germany also lacked consistent and cohesive systems of taxation, resulting in further decentralization of power. These unique political conditions combined with the religious innovations of Protestantism to bring about dramatic social and political consequences in the sixteenth century, eventually contributing to a series of religious wars that devastated Europe.

The traditional dating for the beginning of the Protestant Reformation in Germany is October 31, 1517, and the “protest” first registered by Martin Luther in his *Ninety Five Theses against the Sale of Indulgences* at his parish church in Wittenberg. The initial reaction to Luther’s ideas produced chaos and division and eventually contributed to political rebellion. Holy Roman emperor Charles V summoned Luther to a meeting of the Imperial Diet held at Worms in April 1521.

At that meeting Luther defended his views before an assembled body of nobles of Germany, at least some of whom agreed with Luther. When asked by the emperor if he was willing to continue to stand by what he had written, Luther was firm in his resolve. He left Worms under the protection of Frederick (the Wise), the elector of Saxony, and lived under the elector’s protection at a privately owned castle in Warburg. After Luther’s departure, the Imperial Diet issued the Edict of Worms, which condemned Luther and declared him an outlaw, prohibiting any innovations that might result from Luther’s ideas. However, the protection of powerful German nobles made the Edict of Worms impossible to enforce.

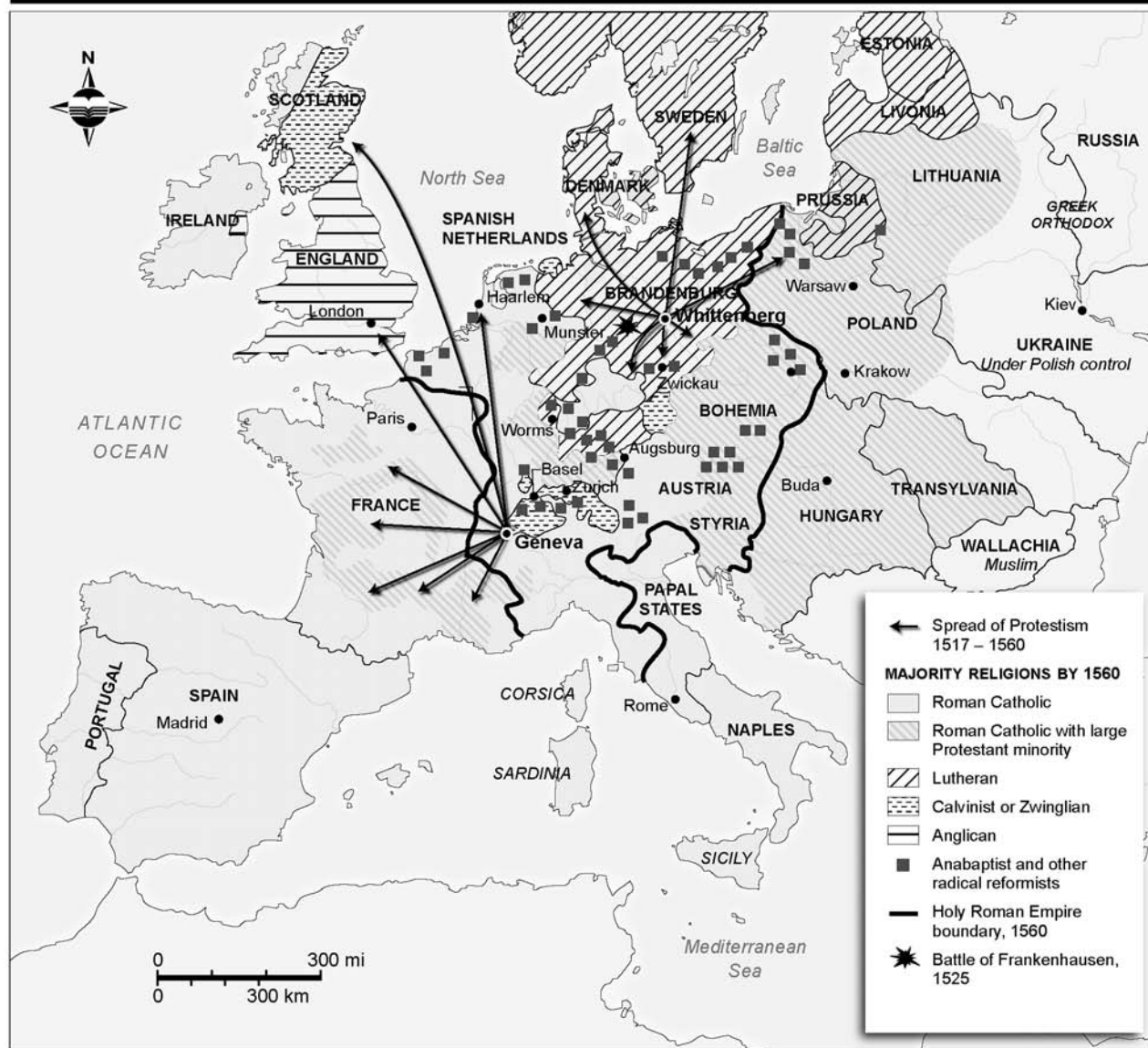
Reformation thought ignited discontent among various groups of the German population.

➤ VIOLENCE AND THE REFORMATION

Violence characterized the Reformation in Germany as radical ideology took shape among various factions that diverged from Luther’s original protest movement. One of the most significant among the rebel leaders of the Peasants’ Revolt, Thomas Muntzer, radicalized the Reformation thought of Luther and incited approximately 8,000 peasants into battle against a heavily armed Philip of Hesse at the Battle of Frankenhausen in May 1525. The superior training of artillery of Philip’s forces meant a slaughter of thousands of peasants, and Muntzer surrendered and was executed. Another dramatic incident of religious violence resulted from the fanaticism of an Anabaptist named John of Leiden, who claimed to have established the “New Jerusalem” in Munster, Westphalia, in 1532. In an effort to establish a cultlike theocracy, Leiden claimed to be the descendant of King David and took multiple wives, legalizing polygamy for the entire community. Leiden forced his followers to live communally and allowed no holding of private property. Franz von Waldeck, the bishop and prince of Munster, besieged the city in June 1535, killing many of Leiden’s followers before capturing and executing Leiden. The turbulent religious atmosphere of Reformation Germany produced reaction and radicalism, which unfortunately often resulted in brutal violence.

—Cheryl H. White

THE REFORMATION, 1517–1560



A revolt in the Rhineland among petty German nobility in 1522 erupted amid the religious and political dissent that Lutheranism produced. While imperial troops quickly suppressed this revolt, a second and potentially more serious rebellion, known as the Peasant's Revolt, broke out among lower classes in southern Germany during 1524–1525. Luther's message in many ways represented a challenge to old institutions, and again many of the rebels cited Lutheran sympathies and inspiration. The abuses of the feudal structure in Germany were probably the

main reason behind the unrest and violence, but peasants were quick to invoke Luther's teaching about Christian freedom. Religion quickly became a framework for expressing social and political discontent in the German states.

At the same time as the Reformation in Germany, there was the rise of the burghers, a new emerging business and commercial class. The individualism seemingly expressed in Reformation thought found a following among this class, who wanted the freedom to pursue their business interests without the medieval barriers linked to

the Church's teachings on usury and profits. An intellectual attack on these traditional Church teachings naturally had broad appeal in this environment, and this population began to demand economic changes.

The prospect of religious change touched upon the political realm in a profound way. Many of the German princes embraced the new Reformation ideas, forging the Alliance of Torgau in 1526 to provide for their mutual defense against rival German states that did not agree. This alliance succeeded in securing a resolution at the Diet of Speyer in 1526 that permitted territorial princes to make decisions regarding the religious condition of their provinces. This only served to increase division and tension among the German states. The Diet of Augsburg that met in 1530 formalized a confessional statement that expressed the theology of Lutheranism and further distanced the Catholic states from those claiming Reformation.

By 1531 the major Protestant cities and provinces of Germany united in the Schmalkaldic League, an alliance based on strengthening religious reform and providing for mutual defense. In effect, a military attack launched against any of the signatories resulted in the interpretation that it was an attack on all. The principal parties to this agreement included some of the most powerful of the German princes: Philip of Hesse, John of Saxony, and Philip and Otto of Brunswick, among others. Saxony and Hesse took on the role of a military command structure should the need arise. The league secured the cooperation of Denmark in 1538. Certain that the league could now forcefully impose the Reformation in the resistant territories of Germany, they began confiscating church property and seizing bishoprics in several areas. Roman Catholics responded with the formation of the Catholic League in Nuremberg in 1538. The Holy Roman emperor gave his backing to the Catholic League and pledged imperial troops if armed conflict resulted.

With war a real possibility, the Holy Roman emperor attempted compromise and concessions. At the Diet of Regensburg in 1541, Charles V attempted in vain to achieve a reduction in tension among the German states, but the Reformation had splintered into various factions that were irreconcilable. The Roman Catholic

Church called the Council of Trent in 1545, just a year before Luther died, in an attempt to formulate a response to the Protestant Reformation. In 1547 Charles V won a victory over the Schmalkaldic League at Muhlberg and captured Duke John Frederick of Saxony. Philip of Hesse also surrendered. The idea of a united Germany startled France into launching an invasion of Germany in 1552, contributing to resurgence of Protestant strength. The Peace of Augsburg in 1555 permitted every principality in Germany to follow the faith of its prince, a result that amounted to little more than a lengthy truce but not an end to religious war.

—Cheryl H. White

Bibliography

- Bellitto, Christopher M. *Renewing Christianity: A History of Church Reform from Day One to Vatican II*. New York: Paulist Press, 2001.
- Jensen, De Lamar. *Reformation Europe: Age of Reform and Revolution*. Boston: D. C. Heath, 1992.
- MacCulloch, Diarmaid. *The Reformation*. New York: Viking, 2003.

Reformation in Switzerland

At the time that the Protestant Reformation broke out in Germany in the early sixteenth century, Switzerland was a loose confederation of 13 independent cantons, or states. Just like other regions of Europe, Switzerland experienced the same disenchantment with the late medieval Roman Catholic Church. A large portion of the Swiss population spoke German; therefore, the publications of Martin Luther were widely read there. The immediate impact of Reformation ideas in Switzerland was subtle, with reformative ideas initially appearing in Sunday sermons and resulting in a general questioning mood among the clergy. By 1525 the new thinking of the Reformation era shaped Switzerland through men who took the ideas of Martin Luther and modified and adapted them to uniquely Swiss ends.

The main promoter of Reformation in Switzerland was Ulrich Zwingli from Basel. Drawing inspiration from Martin Luther, Zwingli was a priest in Zurich when he chose to marry in 1523, deliberately challenging the Church's historical position on clerical celibacy. This led to a public hearing in Zurich before the City Council

in January 1523 known as the Public Disputation of Zurich, where Zwingli defended his opinions on reform thinking. Zwingli offered arguments based on the ultimate authority of Holy Scripture, citing specific doctrines of the Church unsupported by biblical foundations. Because of Zwingli's persuasion and leadership, the Church in Zurich underwent significant changes, including greater secular control over the functions of the Church and its clergy. By 1528 many of the major cities of other Swiss cantons had all accepted Protestantism.

Many considered Zwingli's personal theology to be more radical than that of Luther, particularly with regard to his understanding of the nature of Christ's presence at the Eucharist. While Luther held to a theology based on the mystery of Christ's "Real Presence" in the bread and the wine, Zwingli held that the elements were merely symbolic and that the Eucharist was a simple commemoration of the Last Supper. Because of the potential for this disagreement to rupture Protestantism in its infancy, the two men met at Marburg in 1529 and engaged in a public debate to attempt to reconcile their theological differences but failed. This resulted in a distinct separation within the Protestant movement surrounding key points of theology.

While many of the Swiss cantons followed some form of reformed theology, the cantons of Uri, Schwyz, Unterwalden, Lucerne, and Zug remained Roman Catholic. This inevitably led to discord and a deepening divide that erupted into a violent series of religious wars between Protestants and Catholics, waged not only for religious reasons but also for economic ones. In 1531 Zwingli died fighting in the Second War of Kappel, which was a victory for the Catholic cantons. Because of these conflicts, Zurich allied itself with the Schmalkaldic League, an alliance of Lutheran princes in Germany, but endeavored to remain neutral during the German religious wars of the next decade. Following Zwingli's death, Heinrich Bullinger took over the reform efforts in Zurich and was instrumental in the development of the Helvetic Confessions, which were a summation of common beliefs among reformed thinkers of Switzerland in this era.

Due to the potential for economic, religious, or political conflict erupting into violence

throughout the Swiss cantons, there was little room for tolerance of radically divergent views such as those held by a group known as the Anabaptists. Zurich banned this faction from the city in 1525 for its unpopular views on the rebaptism of adults, and the Anabaptists soon found themselves persecuted throughout Switzerland and Germany by other Protestants and Catholics alike. The Anabaptists did not believe in infant baptism and separated themselves from mainstream society. This faction is the forerunner of groups such as the Amish and the Mennonites, who fled Europe for the New World beginning in the seventeenth century to escape religious persecution.

The city of Geneva in Switzerland accepted John Calvin's teachings and organization of an established reformed church. Calvin was a lawyer from Paris who fled France in response to Francis I's opposition to Protestant teachings. Geneva did not receive Calvin well on his first visit, and the city banished him in 1538, but the City Council invited him to return in 1541. By that time Calvin had already published his signature work, *The Institutes of the Christian Religion*, in 1536. Calvin clearly articulated a theology of Divine Predestination, based on his understanding of God's supreme sovereignty and providence for His creation. According to Calvin, there are human beings who are predestined for salvation; therefore, there are also those predestined for damnation. Accordingly, God's elect behave according to rigid moral guides, so the city of Geneva became a theocracy guided by strict Calvinist principles.

Calvin worked to reform the organization of the Church by seeking a model like that of the "primitive" Church, that of the earliest Christians. He therefore rejected a model that required ordained priests and consecrated bishops and instead relied upon a model of governance known as a presbytery. In supporting Calvin's call for staunch reform, the City Council of Geneva adopted his *Ecclesiastical Ordinances*, establishing a Consistory, which was a ruling council of elders who could punish citizens in violation of moral laws such as usury, gambling, or participating in traditional Catholic religious behaviors. The Consistory operated as the primary means of regulating private morality within the city of

Geneva, an aspect of Calvin's Reformation that was particularly important to his theology of God's elect.

Although the Zwinglian and Calvinist branches of Reformation remained separate influences throughout Switzerland and the rest of Europe, under the leadership of Bullinger and Calvin in 1549 the two factions agreed upon the Zurich Consent. This accord consolidated the variant Protestant opinions against the Roman Catholic doctrine of transubstantiation and the Lutheran teaching on Real Presence. Calvin's influence extended far beyond Switzerland and into the New World, England, and Scotland, where the theology of Calvinism became foundational to many Protestant groups. At the time of Calvin's death in 1564, his movement had surpassed Lutheranism as the dominant intellectual force in Europe.

—Cheryl H. White

Bibliography

- Chadwick, Owen. *The Reformation*. London: Penguin, 1972.
- Collinson, Patrick. *The Reformation: A History*. New York: Modern Library, 2006.
- McCulloch, Diarmaid. *The Reformation*. New York: Viking, 2003.
- Potter, G. R. *Zwingli*. Cambridge: Cambridge University Press, 1976.

The English Reformation

The religious movement that swept through Europe in the early sixteenth century, known as the Protestant Reformation, took a different turn when it reached England. A movement that was embraced by some peasants and German princes caused a firestorm that would rage throughout the European continent during the sixteenth century. In England, the nature of and reaction to the Reformation took a much different form, causing less turmoil. The reason for this is probably because the English Reformation was rooted in political causes rather than necessarily religious ones.

King Henry VIII (r. 1509–1547) led the way for England's separation from the Roman Catholic Church. However, when the Reformation started in 1517, he did not agree with Martin Luther's theological arguments against the Church. In fact, Henry was awarded the title “Defender

of the Faith” by Pope Leo X in 1521 for his pamphlet titled *Assertio septem sacramentorum adversus Martinum Lutherum* (*Declaration of the Seven Sacraments against Martin Luther*). However, events in his life would cause Henry's loyalty to the Church to change.

Henry's elder brother, Arthur, died in 1502, leaving behind a widow, Catherine of Aragon. Henry VII was not keen to return the dowry he had received from King Fernando and Queen Isabella and therefore kept Catherine in a state of limbo at the English court while he decided what to do. In the end, he decided to marry Catherine to his son Henry, and a special papal dispensation was granted in order to allow the marriage. However, the marriage still did not take place until 1509, just before his coronation as Henry VIII. Despite the bride being six years older, Henry and Catherine's marriage seemed to be a relatively happy one for the first few years. Unfortunately, Catherine was plagued with reproductive issues, and by the 1520s she had only produced one living child, a daughter named Mary. The Tudor Dynasty was still a new one, and the lack of a male heir began to worry Henry. The last time England had been ruled by a female was during the reign of Empress Matilda in 1141. During this time, Henry managed to produce an illegitimate son named Henry Fitzroy, which proved to him that he was able to produce a male heir and that something must be inherently wrong with either Catherine or his marriage. It was this belief that led him to begin seeking an annulment for his marriage in 1527, based on a passage in the Bible (Leviticus 20:21) that forbids a man from marrying his brother's widow. The Catholic Church does not allow divorce; the only way a person is allowed to remarry is if he or she is widowed or obtains an annulment (a document stating that the marriage never occurred). Another reason he began to seek an annulment was his relationship with Anne Boleyn, who refused to have a sexual relationship with the king without marriage. At 42, it looked as though Catherine was beyond her child-bearing years, and the young Anne Boleyn seemed to be Henry's only chance of producing a male heir.

His annulment was to be based on the premise that Pope Julius II was wrong to grant the papal dispensation that allowed Henry and

➤ QUEEN FOR NINE DAYS

Born in 1537, Lady Jane Grey, a great-niece of Henry VIII, was thrown into a political whirlwind when she married Lord Guilford Dudley, son of the first Duke of Northumberland. The young king was ill and without heirs, causing Northumberland and his supporters to worry as the Third Succession Act, passed in Parliament before Henry VIII's death, had established Edward's sister Mary as his successor. This posed problems. A Catholic Mary would be likely to return England to the Roman Catholic Church, and the Protestants wished to avoid this fate. As a result, Edward changed the succession as he lay on his deathbed in 1553 to pass over his sisters and instead fall to the Protestant heirs of Edward's great-aunt Mary. This change placed Jane as the heir presumptive, something her father-in-law was quick to take advantage of once the king died on July 6, 1553. By July 10 Northumberland had her proclaimed queen, and she went to the Tower of London to await her coronation. Meanwhile, attempts were made to seize the Lady Mary before she could gain any supporters, but she was able to escape to Suffolk.

By July 19 Mary rode into London to reclaim her throne. Many of Jane's supporters quickly switched their allegiance back to Mary, and both Jane and Dudley were imprisoned in the Tower of

London. Initially Mary was inclined to spare Jane's life because Mary recognized that her cousin had been only a pawn in her father-in-law's political machinations. The Duke of Northumberland was convicted of treason and executed on August 21, 1553. The couple was charged with high treason and found guilty in November 1553, but their death sentences were not carried out.

Unfortunately for Jane, Wyatt's Rebellion erupted in January 1554. The rebellion protested the queen's impending marriage to her cousin, Philip II of Spain, and its supporters included Jane's father, the Duke of Suffolk, and others who had supported Jane's brief ascension to the throne. The rebels also called for Jane's reinstatement as queen. Philip's ministers began pressuring Mary to have Jane and Guilford executed, and the queen realized that Jane's continued existence would remain a rallying point for rebels. On February 12, 1554, Guilford Dudley was taken to Tower Hill and beheaded in public. Jane was then taken to Tower Green and beheaded in private, a privilege usually only extended to members of royalty. Her actions show that Mary probably regretted the execution of 16-year-old Jane. Queen Mary died four years later, and the fears of those who initially supported Jane's coronation were put to rest.

—*Monique Vallance*

Catherine to marry in the first place. Catherine defended herself using Deuteronomy 25:5, a passage that directs men to marry their brother's widow if they are childless. Catherine also claimed that her marriage to Arthur was never consummated. Unfortunately for Henry, the current pope Clement VII was in a position whereby he could not grant the annulment. The Holy Roman emperor and Catherine's nephew, Charles V, had only recently sacked Rome and taken the pope prisoner. This left Clement in a tough political position. He could not risk angering Charles by allowing Henry to put his aunt aside, but he did not want to lose England to the reformers either.

Meanwhile, Henry's attempts at obtaining the divorce assured Anne that she would eventually marry the king, and she finally submitted to a sexual relationship with him. This resulted in

a pregnancy, and the couple married secretly in January 1533, which made Henry frantic to obtain the divorce so he could marry Anne before the birth in order to guarantee its legitimacy. The pope, in an impossible situation, attempted to negotiate with Henry, even offering to legitimize any children born to Anne, but Henry would have none of it. By this point, he wanted only divorce. Between 1529 and 1553, several laws were passed that effectively solidified England's break with the Catholic Church and confirmed Henry's role as supreme head of the Church of England. He used this role to confirm his marriage to Catherine as null and void and his marriage to Anne legitimate. Unfortunately for Henry, Anne's pregnancy resulted in another female offspring named Elizabeth in September 1533.

Throughout Henry's rule, his Reformation remained a political one. While he did not return

England to the Catholic Church, he never made any radical changes to the rituals, and the new Church of England remained liturgically close to the Catholic Church. This would change after his death in 1547 when his nine-year-old son Edward VI would ascend the throne. The son of Protestant Jane Seymour, Edward was more adherent to the reforming ideas than his father ever was, and what had been a political reformation now became a radical religious reformation. During Edward's reign, the Church of England changed in ritual and procedure. All images, bells, silver, and any other adornments were ordered removed from all churches. Clergy were forbidden from wearing vestments and were allowed to marry. Finally, the Book of Common Prayer was introduced in 1549, the first prayer book written for the Church of England. A revision was written in 1553 but would not come into use because of Edward's death that same year.

Henry's first daughter, Mary, was the next to come to the throne. Raised as a devout Catholic, Mary was intent on bringing England back into communion with the Church. Those whose fortunes were invested in keeping Protestantism became nervous; many members of Parliament had bought church lands nationalized by Henry in the 1530s, something they were not eager to return. Another event to make them nervous was the marriage of Mary to her cousin Philip in 1554. Even though the marriage contract provided that he would not be crowned and would receive no inheritance without an heir, the ties to Catholic Spain were still not desirable. Mary also began to persecute Protestants. John Foxe estimated in his *Book of Martyrs* that 284 people were burned at the stake, although there are no concrete figures to confirm this. These executions earned her the name Bloody Mary. Approximately 800 Protestants left the kingdom during the reign. Mary's short but turbulent reign was ended in 1558 when what she thought was a pregnancy turned out to be stomach cancer.

Elizabeth, the last of the Tudor monarchs, would be the one to finally settle the question of religion in England with the Elizabethan Settlement. Although raised as a Protestant, Elizabeth was anxious to settle the religious problem in her kingdom and found a middle way. Upon her ascension to the throne, she repealed the

acts instituted by Mary and brought England away from the Catholic Church once again. Part of this settlement was the Act of Uniformity in 1559 that required that all subjects attend Anglican services on Sundays or else pay fines. The Elizabethan government did not care what its subjects believed personally but only cared that they adhere to the Anglican Church outwardly. Included in this was a new Book of Common Prayer, which was a revision of the one published during the reign of Edward VI but with all derogatory remarks aimed at the pope removed. It also allowed for participants to either stand or kneel and to participate in Communion as a remembrance or transubstantiation, the belief that the Eucharist was transformed into the body and blood of Jesus Christ. The Church of England now offered enough flexibility so that both sides of the religious conflict could participate in the Church. However, it was during this time that the group known as the Puritans began to emerge. These Puritans, as they were called by their detractors, were interested in "purifying" the Anglican Church from all of its Catholic vestiges and returning it to what it was under Edward. Although not too much of a problem for Elizabeth, the Puritans caused many problems for her successors, the Stuarts.

—Monique Vallance

Bibliography

- Dickens, A. G. *The English Reformation*. University Park: Pennsylvania State University Press, 1991.
- Duffy, Eamon. *The Stripping of the Altars: Traditional Religion in England, 1400–1580*. New Haven, CT: Yale University Press, 2005.
- Haigh, Christopher. *English Reformations: Religion, Politics and Society under the Tudors*. Oxford, UK: Clarendon, 1993.
- Shagan, Ethan H. *Popular Politics and the English Reformation*. Cambridge: Cambridge University Press, 2003.

Catholic Reformation

In the wake of the Protestant Reformation, the Roman Catholic Church responded intellectually with an examination of its doctrines and practices. While the Church had been battling heresy and criticism of its practices for the preceding centuries, the far-reaching force and

➤ IGNATIUS OF LOYOLA, FOUNDER OF THE JESUIT ORDER

Ignatius of Loyola was born in northern Spain in 1491 and began the process of progressive but dramatic conversion experience to Christianity when, in 1521, he was wounded in battle fighting against the French at the Spanish town of Pamplona. During the battle he was struck by a cannonball in the thigh, and his leg was severely broken. Because the French physicians attending him did not set the leg properly, it was necessary to break the limb a second time and reset it, without anesthesia. Loyola's condition deteriorated, and he suffered for many days with fever and pain. At one point, physicians told him that he should prepare for his imminent death. Yet his condition abruptly improved, and Loyola began passing the time reading about the life of Christ and the lives of the saints of the Church. It was the beginning of a process of deep spiritual discernment, something he described later in his work *Spiritual Exercises*. In 1522 while traveling in Spain, he experienced a profoundly moving vision on the banks of the Cardoner River. Although Ignatius of Loyola never revealed the specifics of this vision, he said that it was a significant and life-changing event that compelled him to found his new order, the Society of Jesus.

—Cheryl H. White

impact of Reformation thought took the institution by surprise. The intellectual foundation for the Protestant movement was laid before the movements of Martin Luther and John Calvin. Indeed, much of the opposition against the practices and teaching of the Church throughout the fourteenth and fifteenth centuries involved issues that served as the springboard for the Protestant movement of the sixteenth century. The Church attempted to institute its own reforms in a way that balanced some real change with a strong and conservative reaction to the teachings of Protestantism. This process of self-examination and calculated response to Protestantism is called the Catholic Reformation, or the Counter-Reformation, and refers to the rise of the Jesuit order (the Society of Jesus) and the convening of the nineteenth Ecumenical Council of the Church, the Council of Trent.

One of the important conservative reactions to the opposition against the Church was a movement known as the Society of Jesus, or the Jesuits, founded by Ignatius of Loyola. This order, recognized by Rome in 1540, was based on the reactionary idea that clergy should return to a model of strict obedience to the Church and its structures of authority. Loyola's own personal conversion experience in 1521 was a significant motivator for his movement, and he required absolute obedience from those men within the order. This began as a small movement, but by the middle of the next century it had over 15,000 members as it sought to renew universal Christianity in a way that would bypass local and regional politics that historically had interfered with the function of the Church. Because of its commitment to traditional teachings and the hierarchical structures of the Roman Church, the Society of Jesus was a significant manifestation of reaction within the Catholic Reformation.

From a theological perspective, the Jesuits highlighted what they believed to be a fundamental flaw within Protestantism—the teaching of predestination—and used this as a point of Catholic renewal. The Jesuits attempted to hold out the hope of salvation for all and in this way tried to strengthen the universal appeal of the Christian message. In order to reinforce and expand this message, the Jesuits helped to build universities and schools throughout Europe and undertook great missionary efforts in the New World. Because of their rapid expansion and influence, the Jesuits also became one of the most controversial groups of the age.

The Catholic Reformation is also characterized by aggressive measures against the followers of reformers like Luther and Calvin. The Holy Office of the Inquisition, established in the thirteenth century, expanded its control and jurisdiction in areas where the Church was still firmly rooted, such as Spain and France. The Church also used censorship as a means of suppressing Protestant teachings and writings, including the ongoing use of its Index of Forbidden Texts. In some areas, local bishops and prelates openly burned works by Protestant reformers.

The ongoing religious and political gains of Protestants in Europe resulted in the calling of the Council of Trent in 1545 by Pope Paul III. The

purpose of the council was to examine Protestantism and define Church teachings in response. The council met in three separate sessions that convened over an 18-year period (1545–1563). In the end, the Council of Trent advised some tangible and meaningful reforms of abuses, such as the sale of indulgences. The abuses widely apparent within the episcopacy (the office of bishop) were also reformed as a result of deliberations at Trent. For example, following this council, bishops would be required to live in the dioceses they presided over, and the practice of simony was also abolished. These reforms were needed to restore the Church's legitimacy as a spiritual authority within the secular world.

The Council of Trent was not without its own controversy. Although Pope Paul III endorsed the idea of a council to respond to Protestantism, not all of his successors shared his enthusiasm. This is one reason why the council spanned three separate sessions over 18 years but actually only met in session for less than 5 years. Francis I of France opposed the calling of the Council of Trent for fear that it would have political implications for the balance of power in Europe, and a succession of popes opposed it because they feared that it might symbolize a weakening of papal power in favor of the authority of a Church Council. Attendance at the sessions of the council was often small in number, and records indicate that Italian and Spanish bishops and prelates dominated the debate and discussion sessions. Nevertheless, the reforms that did result from Trent were significant for correcting abuses of practice that had once been the target of Protestantism, and Pope Pius IV finalized the council's decrees in 1564.

The Council of Trent failed to change official Church teachings on issues such as the Seven Sacraments, the literal interpretation of the Bible, and the authority of the pope. In the end, the Church reformed abuses but reinforced its own doctrines and theology in a way that offered little compromise with Protestants. The Catholic Reformation may have served in many ways to deepen the divide between Catholics and Protestants, for it reinforced the universality of its own tradition and scriptural interpretation and yielded little to Protestant thought on those divisive issues. Because the rapid and intense rise of

Protestantism in Europe forced the Roman Catholic Church into a position of self-examination and calculated response, it can be summarized that the Church's response manifested itself in both reasonable and reactionary ways. While meaningful reforms resulted from this process and the bold new Jesuit order emerged as a new Roman Catholic intellectual and scholastic force, many believed that the reforms came too late. Protestantism was already an unstoppable movement by the time of the Catholic Reformation.

—Cheryl H. White

Bibliography

- Bellitto, Christopher M. *Renewing Christianity: A History of Church Reform from Day One to Vatican II*. New York: Paulist Press, 2001.
- Mullett, Michael. *The Catholic Reformation*. London: Routledge, 1999.
- Olin, John C. *The Catholic Reformation: Savonarola to Ignatius Loyola*. New York: Harper and Row, 1969.

Spanish and Portuguese Inquisitions

During the early modern era, European monarchs began making moves to centralize their power away from the nobles who had previously held much regional power during the medieval era. In the Iberian Peninsula, this was achieved by unifying people around their identities as Christians, and later as Roman Catholics, and by persecuting those who did not fit that image. The main institution that enforced these norms was the Inquisition, first established in Spain and later in Portugal. Popular culture has portrayed the Inquisition as a tool of the Counter-Reformation, a method of eradicating Protestants from the Iberian Peninsula. Rather, the Inquisition was a tool of the Crown to ensure royal hegemony over the noble class and the respective national churches.

The official history of the Inquisition in Spain begins with the Jewish population, or Sephardic Jews. The Jewish population of the Spanish kingdoms (Spain was not a unified entity until after the sixteenth century) had experienced persecution and discrimination throughout the medieval period. A forced conversion took place in 1381 in which thousands of Jews were converted to Christianity. However, despite their conversion,

► TORTURE AND THE SPANISH INQUISITION

Although the Inquisition is infamous for its methods of torture in order to extract confessions from the accused, in reality torture was used infrequently and was used only as a last resort. The instructions of 1484 sent to Spain permitted the use of torture on the accused, but the use of torture and the acceptance of confessions gathered after the use of torture were severely restricted. For instance, if the inquisitors decided to use torture, it could only be applied to the accused once. However, this was seldom told to the accused, and it was instead implied that the torture was only being suspended and would continue later if a confession was not obtained. In addition, a confession taken during torture was not

considered valid. Rather, the inquisitors were required to wait one day after the torture was applied for the confession to be ratified before it could be considered valid. Often, the inquisitors showed the accused their instruments of torture, which was usually enough to extract a confession. Before 1530 torture was very rarely used. After 1530 the numbers rose but stayed limited to cases of heresy, which was the minority of cases tried by the Inquisition. The amount of torture used by the Inquisition was not any more frequent than the amount of torture used by many other European courts of the time. Finally, in 1816, Pope Pius VII forbade the use of torture in any of its tribunals.

—Monique Vallance

they and their descendants were still not seen as true Christians, and they were therefore still worthy of suspicions as secret “Judiazers.” This matter was not helped by the fact that many of the more affluent *conversos* (as the converts were known) made use of their substantial resources to buy public offices and gain political power, something they were eligible for once they became Christians. This suspicion continued into the fifteenth century, and in response Fernando and Isabel applied to Pope Sixtus IV for an inquisition, which was granted to them on November 1, 1478. This was not unusual, as instances of heretical outbreaks often prompted requests for temporary inquisitions from Rome. What was different about this instance was that this Inquisition was a permanent one.

The Crown was given the control to appoint the inquisitors, something that was not done for two years. Finally, on September 27, 1480, Juan de San Martín and Miguel de Morillo, two Dominican monks, were appointed, and Juan Ruiz de Medina was appointed as their adviser. The Consejo de la Suprema y General Inquisición was then created in 1483. That same year, Tomás de Torquemada was appointed Inquisitor General of Aragon, Valencia, and Catalonia by papal bull. Tribunals were established across Spain in which torture was used in order to encourage the accused to confess their sins. Those who

confessed were allowed to do penance and released. Those who maintained their innocence and were found guilty were executed at ceremonies called autos-de-fé in which the people were burned at the stake. In the case of those accused who managed to escape the Inquisition, their effigy was burned instead. The Spanish Inquisition was most active until 1530 but would not be abolished until 1833.

In Portugal the situation was different. The persecution of Jews was not as blatant as it was in Spain; however, there also existed a community of *Cristãos-novos* (“New-Christians”), as conversos were called in Portugal, who were viewed with suspicion by the mainstream Christian community, especially since many had substantial financial resources and as the population had increased after the expulsion of the Jews from Castile and Aragon in 1492. King João III ascended to the throne in 1521 and set about reversing the policies of tolerance that his father, Manuel I, had established toward the New Christians. The situation finally came to a head after a significant earthquake hit Portugal in 1531, convincing many that the existence and tolerance of crypto-Jews in Portugal had incurred the wrath of God, thus causing the earthquake. Shortly after, King João III applied to Rome for an inquisition, to be set up in a similar manner to the one in Spain. This was not granted until 1536, as the

New Christian community had managed to send lobbyists to block the application, but it was only delayed. The king's brother, the Cardinal Henrique, was named the Grand Inquisitor, and tribunals were set up in Portugal as well as in Goa.

Both inquisitions had religious motives at the core: besides crypto-Jews, the inquisitions also had the authority to try those suspected of being witches, heretics, bigamists, blasphemers, and sodomites. In addition, the inquisitions used their religious authority to censure books that might contain any blasphemous materials, especially the works of people like Erasmus and Luther. Despite popular thought, neither inquisition prosecuted many Protestants, as the movement was not very large in the Iberian Peninsula. As far as the Crown was concerned, the inquisition also served as a tool to control the noble class. In addition, if the king was aware that a noble was to be apprehended by the Inquisition, he could either stop the arrest or give the accused sufficient warning so that he might escape. Those found guilty by the Inquisition were subjected to confiscation of their lands and fortunes by the Crown, creating an avenue of much-needed revenue that was especially important during the sixteenth century when both the Portuguese and Spanish empires were growing.

Despite the fact that both inquisitions were to be based on the same model, differences between the two became apparent after 1640. The Spanish ruled Portugal during 1580–1640, and when the Portuguese gained their independence, the inquisition worked against King João IV, as the Portuguese were Spanish and wanted to see Philip IV return to the Portuguese throne. This created a division between the inquisition and the Crown, and this, in addition to the work of Antonio Vieira, a Portuguese Jesuit who had sympathies toward the New Christians and disapproved of the Inquisition, resulted in the Inquisition being suspended in Portugal during 1676–1681 by Pope Innocent XI. The arrival of the Enlightenment slowed the inquisitions in both countries: the auto-da-fé was abolished altogether in the eighteenth century under the Marquis of Pombal in Portugal. However, neither inquisition would officially end, in either country, until the nineteenth century.

—Monique Vallance

Bibliography

- Herculano, Alexandre. *History of the Origin and Establishment of the Portuguese Inquisition*. Translated by John C. Branner. Whitefish, MT: Kessinger, 2003.
- Homza, Lu Ann. *The Spanish Inquisition, 1478–1614: An Anthology of Sources*. Indianapolis: Hackett, 2006.
- Kamen, Henry. *The Spanish Inquisition: A Historical Revision*. New Haven, CT: Yale University Press, 1997.
- Saraiva, Antonio Jose. *The Marrano Factory: The Portuguese Inquisition and Its New Christians, 1536–1765*. Translated by Herman Prins Saloman. Leiden: Brill, 2001.

Ottoman Millet System and Religious Tolerance

Contrary to popular belief, the early Ottomans were not all Turkish Muslims. Rather, they were Turks and Greeks as well as Muslims and Christians. Like all early modern empires, they ruled over a religiously diverse population. In 1453 the Ottomans conquered Constantinople, the capital of the Byzantine empire and the seat of the Eastern Orthodox Christian Church. As part of their grand plan to refashion the conquered city into the Ottoman imperial capital, the sultan ordered the settlement in the city of Muslims, Christians, and Jews from different parts of the empire. This vision reserved a prominent place for non-Muslim communities, but the question was how to rule them. The Ottoman answer was to organize each into a largely autonomous communal group known as a *millet*.

Each millet consisted of the followers of an independent religious sect, such as Greek Orthodox Christianity or Rabbanite Judaism. The Ottomans recognized the top religious figure of each of these religious communities as the representative of his millet and held him responsible for the millet's obligations toward the government. For example, after establishing the number of Orthodox Christians in a town in Anatolia and surveying their land, the Ottoman officials would ask the head of the Orthodox Church to raise the required amount of tax from his millet. Each millet also maintained its own court system, in which it applied its own religious and communal laws without intervention from the

DEVSHIRME

The *devshirme* was the levy of slaves to serve as part of the Ottoman sultan's Janissary forces or the staff of the Imperial Palace. The exact start and end dates of the *devshirme* are unknown, but it is generally accepted among historians that it was most active between the mid-fourteenth and mid-seventeenth centuries.

The *devshirme* operated through conscripting young males from the empire's Christian populations, converting them to Islam, and subjecting them to a scrupulous program of physical and cultural training in Istanbul to prepare them for imperial service. Upon completing this program, some conscripts would join the ranks of the Janissaries as soldiers with the prospect of advancing to military leadership positions. Others would join the palace as administrators or as aides to the sultan. Here too they were groomed to occupy leading government positions including that of grand vizier.

Devshirme recruits were legally slaves of the sultan. However, they had the chance to amass immense power and authority because of their leading positions in the army and the palace and their special association with the sultan. In fact, until the mid-seventeenth century freeborn Muslims were in no position to match their influence, except those who rose in the ranks of the religious establishment.

—Omar Cheta

Ottoman imperial government. However, these courts were only permitted to rule on disputes between members of the same millet. For example, if two Rabbanite Jews disagreed over how much one of them owed the other, they were allowed to appear before a Rabbanite Jewish court. On the other hand, if the dispute was between a Jew and a Muslim, the Jew would have had no other choice but to appear before an Islamic court.

Interestingly, many non-Muslims preferred to go to an Islamic court even when their dispute was with a coreligionist. Their decisions were not necessarily deliberate acts of religious disobedience. More often, they were the result of practical concerns. By going to an Islamic court, a non-Muslim litigant was pursuing a court

ruling that was more likely to be enforced. Unlike millet-specific courts, Islamic court rulings were enforced through the mighty apparatus of the state. In addition, Islamic laws were often more lenient than those applied in non-Muslim courts. A prominent example is that of divorce. The Orthodox Christian tradition viewed marriage as a sacred matter and set very harsh conditions for divorce that made it practically impossible. Islamic laws, alternatively, viewed marriage as a contractual relationship that could be annulled at the request of either the husband or the wife as long as they fulfilled their contractual obligations (paying alimony by the man or giving up on financial rights by the woman).

Judging by the standards of the fifteenth century, the Ottoman millet system was remarkably tolerant toward religious minorities, especially when compared to the atrocities that Europe witnessed during the same time, such as the mass expulsion of Iberian Jews and Muslims. Nevertheless, the status of religious minorities was not ideal by modern standards. All was not equal before the law. Religion was the primary social marker in early modern Ottoman society. Social and legal hierarchies that favored Muslims over non-Muslims were in place. Significantly, some religious experiences, like conversion, could not be located within the generally tolerant model of the millet.

With the exception of the *devshirme*, the Ottoman empire did not force its non-Muslim subjects to convert to Islam en masse. However, for a variety of reasons, many Christians and Jews chose to convert to Islam. Some converted in order to escape the extra taxes that were levied exclusively from non-Muslims. Others converted in hope of career advancements. Since Islamic law prohibited the enslavement of Muslims, slaves occasionally chose to embrace Islam in order to free themselves. Likewise, because Islamic law forbade Muslim women from marrying non-Muslim men, women often converted in order to escape unhappy marriages.

While far and few between, instances of religious intolerance existed in Ottoman history. Interestingly, one of the most severe episodes did not primarily hurt non-Muslims. For most of the seventeenth century, a group of zealous Muslim preachers, known as the Kadizadelis,

spearheaded a popular puritan movement that tried to enforce strict codes of public conduct in Istanbul based on literal readings of Islamic texts. Significantly, their main targets were Muslim followers of Sufism, the mystical tradition of Islam. At the height of their influence and for a very short period, the Kadizadelis colored Ottoman policy toward non-Muslims. In the aftermath of the major fire that hit Istanbul in 1660, the Ottoman government refused to let the Jewish community rebuild its affected synagogues on their original sites.

—Omar Cheta

Bibliography

- Baer, Marc. "The Great Fire of 1660 and the Islamization of Christian and Jewish Space in Istanbul." *International Journal of Middle East Studies* 36 (2004): 159–181.
- Baer, Marc. "Islamic Conversion Narratives of Women: Social Change and Gendered Religious Hierarchy in Early Modern Ottoman Istanbul." *Gender & History* 16 (2004): 425–458.
- Gradeva, Rositsa. *Rumeli under the Ottomans, 15th–18th Centuries: Institutions and Communities*. Istanbul: Isis, 2004.
- Imber, Colin. *The Ottoman Empire, 1300–1650: The Structure of Power*. New York: Palgrave Macmillan, 2002.
- Provincial Elites in the Ottoman Empire: Halcyon Days in Crete V, a Symposium Held in Rethymnon, 10–12 January 2003*. Rethymnon: Crete University Press, 2005.
- Zilfi, Madeline C. "The Kadizadelis: Discordant Revivalism in Seventeenth-Century Istanbul." *Journal of Near Eastern Studies* 45 (1986): 251–269.

Religious Fringe and Politics

With the onset of the Protestant Reformation and the reactionary Catholic Counter-Reformation in the sixteenth century, political and religious movements overlapped across much of Europe well into the late eighteenth century. At the international level, Catholic states such as Habsburg Spain fought to ensure the religious uniformity within their realms against the spread of Lutheranism and Calvinism. However, within the Protestant realms from England to northern Germany, Anglicans, Lutherans, and Calvinists fought to stamp out smaller fringe religious groups in tandem with their efforts

to eliminate Catholicism. Often these smaller groups would align themselves in political and intellectual institutions that advocated greater religious liberty in their efforts to dissuade persecution. Moreover, fringe movements within Catholicism, notably Jansenism, also contributed to political reaction against the French monarchy and its interpretations of Catholicism. In both instances, Protestant and Catholic states sought to impose both ecclesiastical and absolutist uniformity against religious fringe movements, which sought to maintain their political and religious autonomy.

Schisms between the Catholic Church and secular authorities had occurred since late antiquity, most notably over the issue of investiture (the appointment of bishops). The level of contention between Church and secular factions, especially in the context of the Babylonian Captivity and the Avignon Papacy, illustrated the level of division regarding the political authority of the Catholic Church over Christendom. However, with the onset of the Protestant Reformation in the fifteenth century, Catholicism developed a more reformist tone in regard to maintaining the ecclesiastical unity of its realms. Counter-Reformation Catholic institutions, such as the Inquisition, and orders, such as the Jesuits, were used to ensure ecclesiastic homogeneity and eradicate Protestantism. Institutionalized Protestantism, such as the state churches in England (Anglican), Scandinavia, and the northern Holy Roman Empire (Lutheran), as well as Swiss city-states such as Geneva (Calvinist) devised similar secular-ecclesiastical authorities to deal with their own Protestant fringe groups.

Fringe religious groups in Civil War England were mostly in the Parliamentary factions fighting against the Anglican Stuarts. Groups such as the Levellers, Diggers, Ranters, Fifth Monarchists, and Quakers, among others, dispersed their social and religious ideas among the Puritan ranks of Parliamentary forces. During the war they were able to gain adherents from English Puritans and Anglicans, as they all jointly faced the Stuart royalist forces. Parliamentary leaders, such as Oliver Cromwell, allowed for the existence of these factions amid the war, regardless of their demands in Parliament. Since they were integral to military forces, such as

➤ MUNSTER REBELLION (1534–1535)— ANABAPTIST THEOCRACY

After the Peasants' War in the Holy Roman Empire, the city of Munster became an Anabaptist stronghold amid persecution by Lutherans and Catholics alike. In 1534 several prominent Anabaptist leaders sought to establish theocratic rule over the city. The Dutch Jan Matthys deposed the city magistrates and designated himself as leader. Many citizens were rebaptized into the Anabaptist faith. Matthys was eventually deposed by John of Leiden (John Bockelson), who proclaimed himself king in the new "Zion." However, infighting among Anabaptists and siege by its expelled bishop led to the end of the short rule of Anabaptists over a major German city. Many of the leaders and adherents of the rebellions were subsequently tortured and executed by the returning authorities.

—Abraham O. Mendoza

Cromwell's crack troops in the New Model Army, they were mostly left alone. This allowed some of these groups, such as the Levellers and Diggers, to advocate greater religious and political freedom, through pamphlets and public engagements, than had been granted by the Anglican Stuarts. With Colonel Thomas Pride's expulsion of those who did not support the Grandees of the New Model Army from Parliament in 1648, an event known as Pride's Purge, the political agency of these groups, especially that of the Levellers, was effectively removed. In this manner, the Puritan leadership under Cromwell was able to seize power and impose religious uniformity throughout the English realm.

In the northern Holy Roman Empire, Protestant state persecution of non-Lutheran and non-Calvinist religious fringe groups, mostly the Anabaptists (those who practiced adult baptism), continued alongside the struggle against Catholicism, as these were viewed as heretical within their respective worldviews. In these circumstances, it was nearly impossible for the Anabaptists to acquire political power, as the secular authority in place was the only one granted legal right to do so for the populace as decreed in the Peace of Augsburg of 1555 (with Calvinists added in the Peace of

Westphalia). Lutheran and Calvinist princes and electors were as keen in stamping out Anabaptist movements as were their Catholic enemies. A short-lived victory for the Anabaptists was the establishment of a theocratic government in Munster in 1534 that was crushed the following year. During the Thirty Years' War (1618–1648), the persecution of fringe groups occurred on both the Protestant and Habsburg areas of control, as both sought to enforce religious uniformity in their lands.

In France, absolutist secular authorities were confronted by both Calvinist Huguenots and Jansenist Catholics for much of the period following the Reformation. Ecclesiastic uniformity, as enforced during the French Wars of Religion, eliminated Huguenot political authority to a significant degree. The Edict of Nantes of 1598 allowed the Huguenots some political rights, such as the right to fortify cities and to practice their faith in these urban centers. However, these rights were ultimately revoked with the Edict of Fontainebleau in 1685. This act led to many Huguenots migrating to Protestant regions in northern Europe and settler colonies in North America and South Africa. Jansenist Catholics, who were mostly aristocrats resentful of absolutist power gained at their expense, also flourished in France. Jansenists, who emerged as a consequence of theological deliberations in the early Counter-Reformation, believed in the concept of the elect, much like Calvinists, albeit within the confines of Catholic beliefs. Moreover, they were strongly represented in local courts, or parlements, that served as a means of resistance against Bourbon absolutism. Jansenist aristocrats, in their efforts to resist Bourbon encroachments on their withering power at the provincial level, developed ideas that would transcend well until the French Revolution.

—Abraham O. Mendoza

Bibliography

- Cunningham, Andrew, and Ole Peter Grell. *The Four Horsemen of the Apocalypse: Religion, War, Famine, and Death in Reformation Europe*. New York: Cambridge University Press, 2000.
- Elton, G. R. *Reformation Europe, 1517–1559*. 2nd ed. Malden, MA: Blackwell, 1999.
- Pettegree, Andrew. *Europe in the Sixteenth Century*. Malden, MA: Blackwell, 2002.

Shia Islam under the Safavids

Safavid religious policy set Iran off from its powerful Sunni neighbors; at the same time, it began to shed its extremist *qizilbash* (literally “red head” in reference to the militant group’s red head gear) trappings. Immediately after entering Tabriz in 1501, Shah Esmail had announced that the official religion of his kingdom would be Shia—not the *gholat* (militant) Shia of the *qizilbash* but a more or less conventional Twelver Shia, to which he had probably been exposed while under the protection of Kar Kia Mirza Ali in Gilan. As indications of this, the names of the Imams were invoked in the Friday sermons and coins were stamped with Shia slogans. This promulgation of Twelver Shia in Iran was undoubtedly the most important and enduring of the Safavid accomplishments, but the problem of how and why it was done needs much additional study before it can be satisfactorily resolved.

It is often thought that Iran in 1500 was a predominantly Sunni country and that the transformation to Shia was accomplished by the threat—and at times definitely the application—of force. The change may actually have been not quite so dramatic as this implies. It should be remembered that the real bastions of Sunni Islam in central Asia were and remained outside the Safavid domain. Heterodoxy had long been common in western Iran, and many Shia communities and principalities are known to have existed there. Moreover, Shia, in the general sense of special affection for the family of the Prophet, had been deeply embedded in popular religion for centuries. There were aspects of Shia, notably its emphasis on legitimacy, that appealed strongly to Iranian sensibilities. The Safavids, for example, skillfully exploited the belief that the Imam Hosayn had married the daughter of the last shah of Iran, and that the later Imams—and the Safavid family—descended from this line. Ultimately, the application of this policy came down not so much to transforming the religious orientation of the Iranian population as to replacing Sunni ulama (religious authorities and jurists) with Shia ones, whom the populace would then follow. To do this, some were co-opted by the offer of material support, while others were imported from other Shia

communities (especially Bahrain and the Jabal Amil region of Lebanon); and those who resisted were either executed or, again in the words of Hasan-e Roumlu, compelled “to creep into corners to conceal themselves.”

In any case, the benefits to the Safavids of promoting Shia are fairly apparent. The appeal to Twelver Shia broadened the constituency of support for the Safavids; provided the Safavid ruler with an additional element of legitimacy as a descendant of the Imams; diluted the specifically Turkoman-*qizilbash* orientation of the state; created a juridical institution that owed its position, at least initially, to the will of the shah; and gave an ideological basis to the struggle with the Ottomans and Ozbeks. The costs are also clear. First, the injection of the Sunni-Shia schism into the wars and political struggles of the time thoroughly embittered relations between the two branches of Islam and led to bloody persecutions on both sides. Second, the Shia ulama soon consolidated an autonomous position and became potentially a threat as well as a prop to Safavid power, a situation remarkably similar to that of the Zoroastrian clergy in Sasanian times. This point is of such importance to all of subsequent Iranian history that it needs some special consideration.

It is a truism that there is no priesthood or church in Islam, but the Shia that developed in Safavid Iran can be said to have acquired the equivalent of both a powerful clerical class and a clerical institution. Many factors contributed to this. The Safavid rulers themselves gave a special recognition and hierarchical organization to the Shia ulama by establishing offices such as that of the *sadr* to oversee religious activities (even though the original purpose was undoubtedly to exercise control over the clerics). Involvement in the administration of charitable endowments (*waqf*), including substantial properties donated by Safavid aristocrats, and the collection of certain religious tithes and fees provided the ulama with a largely independent source of funding. The juridical tasks performed by the ulama required an advanced education and knowledge of Arabic that would of necessity distinguish them from the ordinary Persian- and Turkish-speaking masses. Since the Safavids were suspicious of other Sufi orders, Sufism in

➤ CURSING THE CALIPH

It is common practice among many Shiites to ritually curse and defame some companions and relatives of the prophet Muhammad. They are those who pushed aside the claims of the only legitimate successor of the prophet Muhammad, Ali Ibn Abi Talib, or even raised arms against him. In particular, they are the first three caliphs: Abu Bakr, Umar, and Uthman, but also Aisha and Ali's enemies in the battle of the camel (656) and, finally, his adversaries Muawiya (governor of Syria) and Amr ibn al-As, who voted against Ali in the famous arbitration of Adhruh, are openly denounced. However, all of those are venerated by pious Sunnis, while Shiites consider them enemies of Muhammad. As such, they are cursed on ceremonial occasions and prayers. The act is called *tabarra* (to reject or abandon) and was introduced by the Fatimid caliph al-Hakim (985–1021). The Safavid ruler Shah Ismail (1487–1524) made the cursing of the first three

caliphs mandatory during Friday sermons and rigorously enforced it, threatening to kill anyone who did not oblige. At times, effigies of Umar or Yazid bin Muawiya, who is seen as the murderer of Hussain bin Ali and his family, were burned during institutionalized ritual cursings. Today it is customary to disassociate with the enemies of Muhammad, but the cursing is not mandatory. Sunnis, however, still consider this a sacrilege, and it is a major obstacle for improving inner-Islamic relations.

—Sebastian Maisel

Bibliography

- Halm, Heinz. *Shi'ism*. New York: Columbia University Press, 2004.
- Newman, Andrew. *Safavid Iran: Rebirth of a Persian Empire*. London: I. B. Tauris, 2006.
- Savory, Roger. *Iran under the Safavids*. Cambridge: Cambridge University Press, 2008.

Iran provided neither the alternative to Shia nor the focus of popular religion that it did in Sunni states. Great clerical families tended to monopolize religious positions for generations, and their position was further buttressed by marriage and kinship ties among them. Many claimed to be descendants of Imams themselves and thus to have a special status and legitimacy of their own.

Their authority ultimately derived from their knowledge of Shia law, and they had no particular reason to attach special importance to the role of the Safavid shah as either the spiritual guide of a Sufi order or the charismatic leader of the qizilbash. Finally, they developed an ideological basis for their authority that owed nothing to the Safavid ruler: In the absence of the “hidden” Twelfth Imam, questions about religious conduct must be decided on a continuing basis by scholars (*mojtaheds*) trained in jurisprudence and juridical methods (*feqh* and *osul-al-feqh*) and sufficiently advanced to exercise independent judgment (*ejtebad*). Ordinary believers were obliged to consult a mojtahed and “imitate” his example, a practice known as *taqlid*. This idea did not develop at once, and there was considerable opposition to

it within Shia, but once it was established it conferred great influence and authority on the top members of the clerical establishment. Mojtaheds typically came to control a patronage system with considerable financial resources and to extend their influence over whole sections of the country through a network of lower-ranking *mollas* orakhounds.

The trend toward greater clerical influence was noticeable as early as the reign of Shah Tahmasp, when there are reports of religious dignitaries who consorted on familiar terms with the shah, who interfered in the running of the government, and whose requests, whether for material benefits or specific actions, were inevitably granted. According to one famous story, the Imam Ali appeared to Tahmasp in a dream in 1532, after which Tahmasp “repented” of drinking wine and his other vices, and he issued a number of puritanical regulations on public conduct. This was almost certainly evidence of the influence the Shia mojtaheds were beginning to have on the court and a tacit recognition that the shah was no longer a spiritual guide beyond reproach, but was bound by traditional religious law and convention.

The late Safavid era was also the period when the problem of excessive clerical influence became most severe. It is said that Shah Abbas had allowed one mojtahed to address him as “founder of a borrowed empire” and as a sign of humility walked on foot in front of another mojtahed riding through the main square of Isfahan. He had certainly spent lavishly to refurbish Shia shrines and create charitable endowments, and he made a great show of visiting religious centers like the tomb of Imam Reza, on one occasion traveling the whole way from Isfahan to Mashhad on foot and carrying out such menial tasks as cleaning the mosque and trimming the candles. In the case of Shah Abbas, such actions were probably intended only to cultivate the mojtaheds through the use of flattery and financial rewards and to create the impression of piety on his part. Later Safavids, however, were quite clearly subservient to clerical interests. The notoriously timid and superstitious Shah Soltan Hosayn (1694–1722), for example, was thoroughly dominated by the ulama. The great Shia jurist Mohammad Baqer Majlesi (d. 1699) held the top clerical post (then called *mollabashi*) and encouraged the shah to persecute both non-Muslims and Muslims he considered heretical. Ironically, one of the chief targets of this new intolerance was what Majlesi called the “foul and hellish growth” of Sufism, the very form of religion the Safavids had originally championed, and which constituted the bedrock of their movement. Implicit in these developments was the notion that the mojtaheds, not the shah, acted as representatives of the Hidden Imam, and that the shah was at best an executive agent on their behalf.

—Elton L. Daniel

Bibliography

- Daniel, Elton. *The History of Iran*. Westport, CT: Greenwood, 2001.
- Halm, Heinz. *Sbiism*. Edinburgh, UK: Edinburgh University Press, 1991.
- Madelung, Wilferd. *Religious Trends in Early Islamic Iran*. Albany, NY: Bibliotheca Persica, 1988.
- Mazzaoui, Michel. *The Origins of the Safavids*. Wiesbaden, Germany: F. Steiner, 1972.
- Savory, Roger. *Iran under the Safavids*. Cambridge: Cambridge University Press, 1980.

Mughal Religious Policy—Akbar and Jahangir

No aspect of Mughal history has received as much attention or generated as much controversy as religious policy. Indian nationalist historians like A. L. Srivastava and S. R. Sharma praise Akbar's policy of religious pluralism and regard it as a precedent for the contemporary secular state of India. Orthodox Muslim historians like I. H. Qureshi and K. A. Nizami condemn Akbar as an apostate and persecutor of Muslims and regard his policies as fatal to the empire in the long run. This disagreement echoes the chroniclers of Akbar's time. Akbar's official biographer Abu'l Fazl regarded his master's religious initiatives “as the foundation of the arrangement of mankind,” while a critic at that time, `Abd al-Qadir Bada'uni, considered Akbar a false messiah. This bitter rhetoric inevitably masks a complex and nuanced reality that matches neither of these opposing narratives.

The legitimacy of traditional monarchs depended in part on their status as the champions, or at least supporters and guardians, of a specific faith. Akbar's Timuri predecessors were Sunni Muslims and ruled as Sunnis. Akbar promulgated the concept of *sulh-i kull* (literally “peace with all,” meaning religious pluralism) as the ruling religious principle of the empire. Akbar's elimination of the *jizya*, the capitation tax paid by non-Muslims to Muslim regimes to indicate their subordinate status, in 1579 fundamentally altered the constitutive principles of the empire. Loyalty and subordination to the ruler, not sectarian affiliation, defined a person's status. Akbar settled on this concept after more than two decades of experimentation. The concept reflected three main considerations: Akbar's inability to win the support of the Indo-Muslim intellectual and cultural elite; the need to secure the active, or at least passive, support of the numerous local potentates and their military followers; and Akbar's personal disdain for religious particularism.

The leading ulama (Muslim religious scholars), Sufi sheikhs (leaders of Sufi orders), and men of letters of Indo-Muslim society had developed close ties to the Afghan dynasties that had ruled the northern subcontinent for most of the

THE DIN-I ILLAHI

The Din-i Illahi, literally the divine faith, was a religious order founded by and focused upon Akbar. It was not, as historians hostile to Akbar have claimed, an attempt to found a new religion that would supplant Islam. It was not a mass movement; Akbar never attempted to propagate the Din-i Illahi beyond a small circle of high-ranking officers. There may have been no more than 11 members.

The Sufi term *muridi* (“discipleship”) defined the relationship of the adherents of the Din-i Illahi to Akbar. Their sovereign was also their spiritual guide. Akbar’s biographer and ideologue Abu al-Fazl asserted that spiritual guidance is an inherent part of kingship. The ritual of initiation resembled similar rituals in Sufi orders. The initiates—all but one of them were Muslims—swore an oath to abjure “traditional and imitative Islam” and devote their “property, life, honor and religion” to Akbar. They wore a token bearing the inscription “Allahu Akbar” (“God is great” or “God is Akbar”) and greeted each other by saying “Allahu Akbar” and responding “Jalala Jalahu” (“may his glory be glorified”; Jalal al-Din was another component of Akbar’s name). These practices offended pious Muslims but did not constitute public apostasy from Islam. Ultimately the purpose of the order was to ensure political loyalty, not to alter religious faith.

Although most historians associate the Din-i Illahi with Akbar exclusively, Jahangir continued to act as a spiritual guide for some of his officers. Shah Jahan ended the practice.

—Douglas Streusand

previous century and a half. With the exception of the leaders of the Chishti Sufi order, the Indo-Muslim cultural elite rejected Akbar’s efforts to establish connections with it in the early 1560s. As a result, Akbar turned away from the Muslim establishment as a source of political legitimacy. He abandoned the traditional capital of Delhi at this time as well.

Even before his break with Delhi, Akbar had developed a connection to the Chishti Sufi order. The Chishtis were among the most prominent Sufi orders in southern Asia but their universalist approach separated them from the Muslim

mainstream. Chishtis studied under Hindu masters and accepted Hindu students. Akbar made his first pilgrimage to the shrine of Mu`in al-Din Chishti at Ajmer in 1562 and traveled there ten times in the next 15 years. He also attended the living Sheikh Salim Chishti at Sikri in 1569 seeking intercession for the birth of a son. Two sons were born there during the next two years, and Akbar began construction of new capital complex, Fatehpur (City of Victory) at Sikri. The association with the Chishtis reflected Akbar’s universalist instincts and rejection of the mainstream Muslim establishment.

Northern India held an enormous pool of military manpower, much of it in the form of peasant soldiers. Most of them gave allegiance to local or regional potentates, who varied from small landlords with armed bands to rulers of substantial principalities. The majority of them were Hindu. The expansion and governance of the empire required the absorption, or at least the neutralization, of this military potential. Previous Muslim rulers had frequently accepted Hindu lords as subordinate allies but had rarely been able to establish durable relationships, at least in part because of Muslim objections. Akbar’s Rajput alliances, beginning with Rajah Biharh Mal Kachwaha of Amber in 1562, thus did not establish a new pattern, but their durability did. Akbar’s disregard for Muslim sensibilities facilitated his incorporation of Rajputs and other non-Muslims into the Mughal ruling class. Akbar’s promulgation of *sulh-i kull* made this policy official.

In 1578 Akbar began a series of discussions with Sunni and Shia Muslim, Hindu, and Christian intellectuals in the Ibadat-Khana (literally “house of worship”) at Fatehpur Sikri. He found the Muslim ulama who participated in these discussions dogmatic and petty and resented both their ideas and their control of much of the revenue of the empire in the form of land revenue grants. His response to this situation began the articulation of his mature religious policy. At the suggestion of Sheikh Mubarak Nagawri, a close adviser and the father of Abu al-Fazl, Akbar ordered the promulgation of the *mahzar* (“decree”) frequently but inaccurately called the Infallibility Decree. The *mahzar* designates Akbar as a *muftabid* (one qualified to issue

independent legal rulings) and, with various titles, the divinely mandated ruler of the Muslim community. Its words imply that he intended to act as the ruler and lawgiver for the Muslim community. He and his close advisers, however, apparently intended it to establish his position above and independent of the traditional ulama and thus free him to articulate *sulh-i kull* as the basis of his religious policy as well as to justify Akbar in asserting control of revenue grants to ulama. At roughly the same time, Akbar stopped participating in Muslim public rituals.

Akbar thus used the *mahzar*, which declared his status as the highest Muslim authority, as a step toward removing himself from the public category of "Muslim." Abu al-Fazl explains that "Among monarchs, divine worship is expressed by their justice and good administration." But Akbar moved only as far as ambiguity. He never explicitly apostatized from Islam, never presented himself as a prophet or messiah, and never attempted to start a new religion, contrary to the charges of many of his critics. His use of such phrases as "Allahu Akbar" (meaning "God is Great" or "God is Akbar") on coins and elsewhere hinted at messianic or prophetic claims but did not state them. Bada'uni asserted that Akbar wanted to substitute that phrase for the Muslim profession of faith, but he never tried.

Akbar's critics contend that he oppressed traditional Muslims and sought to replace Islam with a new religion and that his policies led to the major revolts in Bihar and Bengal during 1580–1582. The oppression consisted of no more than depriving Sunni ulama of land revenue grants, which was a matter of administrative centralization, not persecution.

The concept of *sulh-i kull* and the elimination of the privileged status of Muslims that it implied altered legal and governmental practices in the provinces as well as at court but did not provoke widespread resentment. Religious issues had little to do with the revolts in the eastern provinces; the rebels resented not Akbar's religious policy but his efforts to reduce the autonomy and increase the accountability of his officers. Later in Akbar's reign, Sheikh Ahmad Sirhindi (1564–1624), known as the Mujadid-i Alf-i Sani (the reviver of Islam in the second millennium), vigorously opposed Akbar's religious

policy, especially the elimination of the *jizya*. The critics also argue that the accession of Jahangir represented a return to orthodoxy and that he won the support of the majority of officers for this reason. Historians such as Sayyid Athar Abbas Rizvi and J. F. Richards have convincingly refuted this interpretation, showing that Jahangir continued Akbar's religious policy with little change.

—Douglas Streusand

Bibliography

- Nizami, Khaliq Ahmad. *Akbar and Religion*. Delhi: Idarah-Adabiyat-i-Delli, 1989.
- Richards, J. F. "The Formation of Imperial Authority under Akbar and Jahangir." In *The Mughal State, 1526–1750*, edited by Muzaffar Alam and Sanjay Subramanyam. Oxford India Readings, Themes in Indian History. New Delhi: Oxford University Press, 2001.
- Rizvi, Saiyid Athar Abbas. *Religious and Intellectual History of the Muslims in Akbar's Reign*. New Delhi: Munshiram Manoharlal, 1975.
- Streusand, Douglas E. *The Formation of the Mughal Empire*. New Delhi: Oxford University Press, 1989.

Mughal Religious Policy— Shah Jahan and Aurangzeb

Akbar and his great-grandson Aurangzeb can appear as polar opposites, representing the two extremes of Islam in South Asia. Just as Akbar is a hero to secular Indian nationalists, Aurangzeb is a villain whose bigoted policies caused the decline of the empire. Just as Muslim historians condemn Akbar, they praise Aurangzeb for his piety and argue that he did his best to save an empire that Akbar had doomed. There is little doubt that, personally, Aurangzeb was a pious Muslim with no sympathy for Akbar's religious universalism. But his religious policy was neither as extreme nor as politically significant as most historiography suggests.

The movement away from Akbar's policy of religious pluralism actually began with Aurangzeb's father, Shah Jahan. Although he made no explicit announcement, Shah Jahan altered religious policy in four significant ways. He adjusted court rituals in accord with Muslim sensibilities and took measures to prevent the marriage of

Muslim women to Hindu men, an issue that had concerned most Muslim rulers in India before Akbar. For a time Shah Jahan enforced the Mughal Shari`a prohibition on the construction of new non-Muslim places of worship and ordered the demolition of Hindu temples built in defiance of the ban. Shah Jahan also ended the practice of acting as a spiritual guide to some of his officers. Shah Jahan was thus much more sympathetic to the attitudes and concerns of orthodox Muslims and presented himself personally as a pious Muslim, but he did not abandon his grandfather's (Akbar's) concept of *sulh-i kull* ("peace with all") entirely. The ban on temple construction did not last long.

In their personal religious views and conduct, Dara Shukuh and Aurangzeb, Shah Jahan's eldest and third sons, symbolize the universalist and particularist extremes among South Asian Muslims. Thus, historians traditionally have construed the struggle between them to succeed Shah Jahan on the throne as a struggle between universalism and particularism. This image is not accurate. Although Aurangzeb did emphasize his Sunni piety against Dara's universalism (and the Shia allegiance of the second son, Shah Shuja), he did not lead a particularist party. The struggle for the throne was personal, not ideological, and the supporters of both participants included officers of all ethnics and backgrounds. There is no indication that Hindus or Shias regarded Aurangzeb's Sunni rigor as a threat.

During the first ten years of his reign, Aurangzeb made a number of adjustments in court and governmental practices in accord with his Muslim sensibilities. This process included the elimination of the Muslim profession of faith on coins on the grounds that they would be defiled by the touch of non-Muslims. He also ended the Mughal celebration of the Iranian spring holiday of Nauruz, which Muslim rulers had observed since Abbasid times. He ended musical performances at court, the patronage of musicians, and several syncretic court rituals established by Akbar. None of these measures addressed *sulh-i kull*, and all of them except the last addressed what had been standard practices among Muslim rulers long before Mughal times. More substantively, Aurangzeb decreed in 1665 that Hindus pay internal customs dues at twice

the rate of Muslims and ordered the dismissal of Hindus in provincial government services (Hindu officers continued to serve in imperial service). These measures inevitably provoked resentment, although most Mughal officers did not enforce them rigorously. Some did, but in at least one case Aurangzeb dismissed a judge for oppressing Hindus in his jurisdiction. He clearly did, however, provide positive incentives, such as promotions, robes of honor, and cash awards for conversion to Islam.

The image of Aurangzeb as a persecutor of Hindus as well as a pious Muslim rests on two measures: the destruction and desecration of Hindu temples and the reimposition of the *jizya*. The latter measure was a tax imposed on all non-Muslims who were male, who were of age to serve in the military, and who earned an income. Richard M. Eaton's recent study of temple desecration reveals that Aurangzeb did not deviate from the pattern of earlier rulers. There was no wholesale destruction of temples; Mughal forces destroyed temples only in newly conquered areas or where rebellions had taken place and targeted only those temples that represented the hostile rulers or rebels. The intent was political, not religious; the temples were destroyed as political symbols, not places of worship. The reimposition of the *jizya* in 1679 reflected Aurangzeb's convictions and served no positive political purpose; it is unclear whether the tax even added significant new revenue. One source indicates that he took this action against the advice of many of his leading officers. The announcement of the decree caused riots in Delhi, and the collectors of the tax, at least in the first years, encountered widespread passive resistance.

Aurangzeb made Islam the sovereign faith of the empire and made the subordinate position of Hindus clear. These measures and his support for conversion to Islam attested to his desire to establish a thoroughly Muslim polity. There was not, however, systematic persecution of Hindus or any systematic or deliberate effort at mass conversion. Aurangzeb's policies essentially returned to the situation that had existed in Muslim principalities in South Asia before Akbar's innovations, with one important exception: Hindu officers remained in Mughal service and continued to hold high ranks. There was neither

► TEMPLE DESECRATION

The image of the destruction of Hindu temples by Muslim armies has had enormous effects, cultural as well as political. Such destruction provided the basis for one of the great early mystery novels, Wilkie Collins's *The Moonstone*, and affects the contemporary politics of South Asia, as illustrated by the destruction of the Babri Mosque at Ayodhya by Hindu nationalists in 1992 on the grounds that Muslims had built it on the site of a temple that they had demolished. Recent scholarship, however, has demonstrated that the popular notion that Muslim rulers systematically desecrated and destroyed Hindu temples because their iconoclasm demanded the destruction of idols is a myth.

Muslim rulers did destroy Hindu temples but not systematically, not out of iconoclasm, and only in specific political contexts. Hindu rulers destroyed temples in some cases as well. Temple destruction was a matter of politics, not of iconoclasm or religious persecution.

With the establishment of the Delhi sultanate, Muslim rulers moved into a region in which temple destruction was a normal part of warfare. From the sixth century onward, Hindu rulers built and maintained monumental temples with icons that articulated their sovereignty. The looting or de-

struction of such temples became a regular element of warfare between Hindu regional rulers of such dynasties as the Chalukyas, Chandellas, Rashtrakutas, Cholas, and Pratiharas. The Delhi sultans and later Muslim rulers (including the Mughals) continued this pattern; their behavior did not differ markedly from their Hindu predecessors and contemporaries.

As a general rule, Mughal rulers destroyed temples associated with leaders of conquered Hindu principalities or rebellious Hindu officers. Shah Jahan and Aurangzeb continued this practice and did not fundamentally alter it. Shah Jahan, for example, ordered the destruction of the great temple at Orchha, which the family of the rebel Raja Jujhar Singh had patronized, during the suppression of Jujhar Singh's rebellion in 1635. Aurangzeb ordered the destruction of the Vishvanath Temple in Varanasi in 1669 in response to a local uprising in that region and because he suspected one of its chief patrons, Raja Jai Singh, of complicity in the escape of the Maratha leader Shivaji earlier in that year. The next year Aurangzeb ordered the destruction of another major temple, the Keshava Deva temple at Matura, during the suppression of a Jat rebellion in that region.

—Douglas Streusand

a systematic effort to remove them nor a general exodus of Hindu officers.

The greatest historiographical controversy concerns not Aurangzeb's actions and intentions but their effects on the empire. Both British and Hindu nationalist historians, most notably Jadunath Sarkar, have argued that Aurangzeb's religious policies facilitated the empire's downfall. Sarkar argued that Aurangzeb's policies provoked a series of revolts that exhausted the imperial finances. Although Sarkar's classification of the Maratha Wars as a revolt is open to question, the conflicts that Sarkar references did take place and did lead to the collapse of the Mughal political and financial structure. What is not clear is that Aurangzeb's religious policies caused them. The most important, the struggle against the Marathas, took an ideological color in 1674 when the Maratha leader

Shivaji proclaimed himself a Hindu sovereign. Yet the best current authority on the Marathas, Steward Gordon, argued that Shivaji sought primarily to strengthen his position as Maratha ruler. The war continued because of Aurangzeb's determination to force the Marathas to accept a subordinate position in the Mughal system, not for a religious or ideological purpose. Thus, Aurangzeb's religious policy cannot be blamed for the challenges and problems faced by the Mughals.

—Douglas Streusand

Bibliography

- Chandra, Satish. *Essays on Medieval Indian History*. New Delhi: Oxford University Press, 2003.
- Eaton, Richard M. "Temple Desecration and Indo-Muslim States." In *Beyond Turk and Hindu: Rethinking Religious Identities in Islamicate South Asia*, edited by David Gilmartin and Bruce

B. Lawrence. Gainesville: University Press of Florida, 2000.

Eaton, Richard M. *Temple Desecration and Muslim States in Medieval India*. Gurgaon: Hope India Publications, 2004.

Richards, John F. *The Mughal Empire*. New York: Cambridge University Press, 1993.

Trading Guns for Religion— Anti-Christian Policies in Tokugawa Japan

Because it perceived Christianity as a threat to its control of the state, in the seventeenth century the Tokugawa Shogunate adopted a series of anti-Christian policies, which in 1639 largely cut Japan off from the outside world. Theoretically, Christian ideology challenged supreme loyalty to the shogun, and there was concern that ambitious regional leaders might use religious connections to gain foreign support against the central government. Anti-Christian edicts passed between 1612 and 1616 called for the expulsion of foreign missionaries and required that Japanese register with local Buddhist temples. This was followed by a period of violent persecution of Japanese and European Christians. Between 1633 and 1639 a series of exclusion acts forbade Japanese to travel abroad and ordered regional governors to seek out Japanese converts and European missionaries in hiding. The last of these edicts forbade Portuguese traders from entering Japan. Although Dutch traders, who were

interested only in commerce and not conversion, were allowed to continue a strictly controlled trade with Japan following the 1639 edict, policies aimed at wiping out Christian influence almost completely closed the country to the West.

The Tokugawa Shogunate inherited the anti-Christian policies of the previous political system when it consolidated power in 1603. The sixteenth century had seen increasing Portuguese trade in Japan, accompanied by the missionary activity of Portuguese Roman Catholic priests. In the years immediately preceding the Tokugawa period, as much as 2 percent of the population of Japan had been converted. The previous regime had restricted the practice of Christianity and ordered the expulsion of missionaries in 1587, and the first violent persecution of Japanese converts took place in 1597. Although the Tokugawa Shogunate was eager to encourage lucrative foreign trade, concern about Christianity remained. During the early Tokugawa period, Protestant Dutch and English traders reinforced Japanese fears about Catholic missionaries and offered trade without ideology. This led to more aggressive policies against Catholic Christians.

The first series of anti-Christian edicts called for trade restrictions and the expulsion of foreign missionaries. The first decree prohibited Christianity and was followed in 1614 by an order for the expulsion of Japanese and foreign Christian missionaries from the country. The 1614 edict made Buddhist temples part of the official

► THE SHIMABARA REBELLION

The Shimabara Rebellion, a peasant uprising that lasted from the winter of 1637 to the spring of 1638, was the catalyst for a policy that effectively cut off Japan from the West. The immediate cause of the rebellion was probably the harsh tax-collection practices of the local government. Once started, the insurgency took on a religious character, with peasants carrying banners praising the Holy Sacrament of the Eucharist. In January 1638 an estimated 20,000 to 38,000 peasants took control of Hara Castle. The rebels successfully repelled the attacks of as many as 100,000 men mobilized by order of the shogunate. Dutch traders demonstrated their

support for the shogunate by firing on the castle from the sea. The insurgency was finally crushed in April when the surrounded rebels ran out of food and gunpowder. All of the peasants, including women and children, were massacred by government forces after the castle was stormed. Tokugawa officials believed that the uprising had been religiously motivated and suspected foreign missionaries of stirring up and supporting the rebellion. This confirmed long-held fears about Christian subversion, especially that of the Catholic Portuguese, and led to the “closed country” edict of 1639.

—D. L. Barnes

anti-Christian movement by requiring that all Japanese in Tokugawa's immediate domains register with their local Buddhist temple, which would keep records for the central government. In 1616 the shogunate restricted foreign trade to the port cities of Nagasaki and Hirado.

These edicts were followed by a period of religious persecution in Japan. It has been estimated that 750 Japanese Christians were executed in the period between 1613 and 1626 and that thousands more died in prisons or in exile. Foreign Christians were executed for the first time in 1622. By 1625, Christian practices had largely been wiped out or driven underground.

The second series of anti-Christian policies, announced between 1633 and 1639, aimed at cutting off Christian influence by forbidding travel abroad and closed the country to most trade from the West. These *sakoku* ("closed country") edicts also instructed the governors of Nagasaki to intensify the search for Christian converts and foreign missionaries who were in hiding or were being smuggled into Japan on trade ships. A peasant uprising in Shimabara, believed by the shogunate to have been fomented by foreign Christians, stoked long-held fears of foreign intervention and religious subversion. In an attempt to shut out all Christian influence to Japan, the final *sakoku* edict ended nearly a century of trade with the Portuguese and banned Portuguese ships from the country.

In 1640 the Portuguese sent a ship to request a repeal of the ban. In response, 57 members of the crew were beheaded, and the ship was burned for violating the edict. Thirteen of the crew members were spared to report on the fate of their shipmates. In the same year, the Office of the Inquisitor was established to centralize the search for underground Christians throughout Japan. Suspected Christians were tested, often by being made to trample on a religious image, and tortured. After 1639, only Dutch and Chinese traders were allowed to remain in Japan. Even the Calvinist nonproselytizing Dutch inherited the suspicion, which had been initially directed at the Roman Catholic Portuguese and were confined to the man-made island of Deshima. These traders remained Japan's sole contact with the West for more than 200 years.

—D. L. Barnes

Bibliography

- Boxer, C. R. *The Christian Century in Japan, 1549–1650*. Berkeley: University of California Press, 1951.
- Elison, George. *Deus Destroyed: The Image of Christianity in Early Modern Japan*. Cambridge, MA: Harvard University Press, 1991.
- Jansen, Marius B. *The Making of Modern Japan*. Cambridge, MA: Harvard University Press, 2000.
- Sansom, George Bailey. *A History of Japan, 1615–1867*. Stanford, CA: Stanford University Press, 1963.

Toleration, the Career of a Concept

When the United States ratified the Bill of Rights to the nation's Constitution in 1791, supporters hailed it as one of the great marks of the Enlightenment's push for greater toleration. After all, the First Amendment provided freedom of religion, speech, press, assembly, and petition to American citizens. By the time of the Bill of Rights, serious debate in Europe over notions of religious toleration had been circulating for several centuries, since the time when the Protestant Reformers, such as Martin Luther, John Calvin, and Ulrich Zwingli, and their forerunners John Hus and John Wycliffe first leveled their charges and mounted their attacks against the Catholic Church, an institution that had enjoyed a near-monolithic hold on the religious values and practices of Europe for a millennium. During the intervening years, critics and supporters of toleration arose based on varying factors.

One of the major issues concerning toleration involved the very connotations of the term, which can be defined as acknowledgment, if not acceptance, of cultural, social, and religious differences by a society's dominant or majority group of that society's minority group or groups. Some people criticized the idea of toleration because they considered it a negative move away from a faith in moral absolutes. Others did not like the concept of toleration because they believed that it would provide either an implicit or explicit provision that some groups are able to determine what other groups are allowed to believe and how those groups are allowed to act. In contrast, some people supported notions of toleration because they believed it to be positive, allowing for a more

➤ EDICT OF NANTES

Issued under Henry IV in 1598, the Edict of Nantes was an attempt to bring religious settlement to France after the French Wars of Religion wracked the country with intermittent warfare between Catholics and Huguenots (French Calvinists). Beginning in 1562, these wars were predicated on two major factors: the number of Huguenots, who had strong support from some members of the French nobility, and the lack of strong leadership after the death of Henry II, leading to dynastic struggles of the Valois dynasty. The Wars of Religion came to a close with Henry IV's ascension to the throne, after which he renounced his Protestant faith and attended mass, despite having served as the leader of the Huguenots. He then gained back Huguenot support with the Edict of Nantes, which provided them with liberty of conscience and certain political concessions. Neither Catholics nor Huguenots were particularly pleased with the terms of the edict, but the competing factions realized that it was a matter of practical reality rather than what either group wanted. Wary of the political challenges that Huguenots could pose to his absolutist policies, Louis XIV revoked the Edict of Nantes with the Edict of Fontainebleau in 1685, leading to some 200,000 Huguenots illegally fleeing the country.

—Christopher C. Strangeman

open approach to diversity, while others accepted toleration because it did not mean acceptance of other beliefs or actions, just acknowledgment those beliefs or actions existed.

Historians almost all agree that it was probably the period of the Reformation—because of the competing claims for toleration, or lack thereof—that was the most virulent time of European history for intolerance and bigotry. For instance, Michael Servetus was put to death in Geneva in 1553 solely for his religious beliefs, considered by John Calvin to be dangerous heresy. Nevertheless, the issues of toleration were present before that in such events as the Crusades, with the wanton actions of some Crusaders against European Jews and Muslims and the Catholic Church's actions to eliminate the heresy of the Albigensians (Cathars); the varying forms of the medieval Inquisition; and the

Reconquista in Spain, with the forced expulsion of Jews and Muslims.

Following the Reformation, issues of toleration broadened to follow the state-building process of the various European nations, usually along either an absolutist or constitutionalist model. In these models, historians typically take either France or England as the leading examples. For instance, in France, Louis XIV's drive for absolutism erased the modest (though politically and practically inspired) gains following the French Wars of Religion as he revoked the Edict of Nantes, wary of the possible political power of the Huguenots. In contrast, after the Glorious Revolution in England, which ousted the Catholic James II for the Protestant William III, Parliament issued a Bill of Rights and a Toleration Act. In addition, John Locke published two works that would help lay the foundation for theories of toleration under constitutionalist governments with his *Letter Concerning Toleration* and his *Two Treatises of Civil Government* (particularly the Second Treatise, originally thought to be written in justification of the Glorious Revolution). Even in the case of the more constitutionalist England, however, Roman Catholics were excluded from holding state office and did not gain official emancipation until 1829. Though England and France are usually taken as the models for the issues of toleration following state building, it was almost certainly the Netherlands that enjoyed the greatest degree of toleration in early modern Europe. In addition, Poland, long harboring a large Jewish population, issued an early toleration act with the Warsaw Confederation in the later sixteenth century.

Largely as a reaction to the absolutist policies of Louis XIV and his heirs, the proponents of the eighteenth-century Enlightenment, including the French philosophers Voltaire and Denis Diderot, championed the cause of religious toleration. They held out the abuses and absolutist attitudes of the Catholic Church as their avowed enemy, perhaps best evidenced by Voltaire's defense of Jean Calas in the infamous Calas Case. The Enlightenment's push for increased toleration reached across Europe and to the United States, where the founding fathers may have seen the greatest expression of the movement with the addition of the Bill of Rights to the U.S. Constitution

and where Thomas Jefferson produced the Virginia Statute of Religious Freedom. Often seen as climaxing with the French Revolution, the Enlightenment helped widen the cause of toleration from more narrowly focusing on religious concerns to focusing more on broad-based notions of intellectual freedom in Western society.

—*Christopher C. Strangeman*

Bibliography

- Grell, Ole Peter, and Roy Porter. *Toleration in Enlightenment Europe*. Cambridge: Cambridge University Press, 2006.
- Kamen, Henry. *The Rise of Toleration*. New York: McGraw-Hill, 1967.
- Shiels, W. J. *Persecution and Toleration*. Oxford, UK: Blackwell, 1984.
- Zagorin, Perez. *How the Idea of Religious Toleration Came to the West*. Princeton, NJ: Princeton University Press, 2003.

Sacred and Secular Authority in the West, 1500–1789

On the eve of the Reformation, Church and state relations were worked out within the context of a unified theory of Christendom. The papacy's claim to direct the affairs of the West through priestly power exercised "by reason of sin" was disputed but not ignored. Rulers paid the papacy lip service as long as they controlled ecclesiastical patronage. Conciliarist sentiment, especially in the form of French Gallican criticism of papal pretensions and calls for a general council to restrict the powers of the Roman Curia (the papal court), also weakened Rome's power on the European stage. These factors made the popes increasingly focus their energies on building up a state in central Italy from which revenues could be drawn to support the Curia. The wars fought by Pope Julius II (r. 1503–1513) to expand this state were criticized by Erasmus as anti-Christian, and the pope's exactions through the sale of indulgences to pay for rebuilding St. Peter's were resented in Germany and elsewhere. His maneuvers also led Louis XII of France to support a rebel council at Pisa (1511). Julius convoked the Fifth Lateran Council (1512–1517) in reply, but no substantial changes in the status quo were effected. Local issues, like lay resentment of clerical immunities from taxation

and the jurisdiction of lay courts, also contributed to resentment of ecclesiastical power.

The outbreak of the Reformation, beginning in 1517, led to a fracturing of Western Christendom. Mainstream reformers like Martin Luther, whether dealing with princes or cities, emphasized the power of lay rulers over the clergy. The magistrate was seen as able to impose reform and maintain discipline. In many cases, even in Calvin's Geneva, reformed clergy had to give way to lay opinions in disputed matters. The papacy lost its role in England, Scandinavia, and much of the Holy Roman Empire. Even Catholic rulers claimed control over ecclesiastical affairs. Most notably, the clergy in Spain and its colonies were controlled by the Crown and its bureaucrats. Even the enforcement of orthodoxy through the Spanish Inquisition was in the hands of royal servants. The French Crown governed its relations with Rome through a concordat, or diplomatic pact, negotiated by Francis I in 1516. This gave the Crown a great deal of local power until the kingdom fractured along partisan lines. Huguenot Protestants, whose theological impetus came from Geneva, became political players, frequently resisting royal authority. Their power was contested not so much by the Crown, which was weakened by a series of feeble kings, but rather by the Catholic League, conservatives led by the House of Guise. The internal struggles between Catholics and Protestants were exploited by other powers, especially Spain, to weaken France. Whichever faction was in power inspired the other group to write works justifying resistance to royal authority. In reaction, certain political theorists, called "politiques," argued for strengthening the Crown as a means of overcoming factional conflict.

The revolt of the Netherlands against the Spanish Crown created a Dutch polity that strove to resist Habsburg arms while protecting Protestant interests. This Dutch milieu eventually became a locus of religious tolerance, which extended even to Jewish populations expelled from the Iberian kingdoms. In contrast, Spain expelled religious minorities, beginning with the Jews in 1492. *Conversos*, or converts from Judaism, were scrutinized closely out of fear that they retained their old religious loyalties. So too were converts from Islam. In Spain's

► PEACE OF WESTPHALIA AND RELIGIOUS TOLERANCE

The Thirty Years' War (1618–1648), which was the culmination of the religious wars that followed the Protestant Reformation in Europe, concluded in the Peace of Westphalia of 1648, which among its articles addressed the rights of subjects to practice a religion that may have differed from that of the “lord of the territory”:

“It has been decided that those adherents to the Confession of Augsburg who are subjects of Catholics, as also Catholics who are subjects of Estates of the Confession of Augsburg, who did not enjoy before 1624 at any time the public or private practice of their religion, or who after the publication of peace at any time in the future shall profess and embrace a different religion from the lord of their territory, shall be allowed patiently and with a free conscience to frequent privately their place of worship without being subjected to enquiry or disturbed; and they shall not be prevented from taking part in the public exercise of their religion in their neighborhood where and as many times as they wish, or to send their children for education in schools belonging to their religion or to private tutors at home.”

—Thomas M. Izbicki



The conference at Münster on October 14, 1648, where the Peace of Westphalia ended the Thirty Years' War, painting by Gerard Terborch. (Art Media/StockphotoPro)

Source

Art. V, sect. 34, of Peace of Westphalia, in Sidney Z. Ehler and John B. Morrall, eds. and trans., *Church and State through the Centuries* (London: Burns and Oates, 1954), 191.

colonies indigenous populations were expected to adopt Christianity, but the Inquisition's jurisdiction over them ended early in the colonial period. Missionaries on the frontiers, however, frequently were partners with royal officials and their soldiers in the gathering of converts into mission compounds.

The French Crown, after the Wars of Religion had ended with the ascension of the House of Bourbon, faced the same issue of religious conformity. Henry IV granted toleration to the Huguenots in the Edict of Nantes (1589). Despite Cardinal Richelieu's efforts to limit Huguenot political autonomy, this toleration lasted until Louis XIV revoked the Edict of Nantes in 1685. A Huguenot exodus to the Netherlands, England, Germany, and the Americas followed. As in the case of Spain, imposition of religious conformity strengthened royal authority at a high cost in lost talent and labor. This move did not place the Sun

King (Louis XIV) firmly in the papacy's camp, as he continued to fight Rome over control of episcopal elections and other issues.

In England, the Tudors established royal supremacy through the declarations of a compliant Parliament. Religious policies varied according to the monarch. Henry VIII was quick to seize monastic lands but slow to impose clerical celibacy. Edward VI's advisers tried to impose Reformed Protestantism, while Mary, his half sister, attempted to restore Catholicism. Elizabeth I and her Parliaments arrived at a compromise called “latitudinarianism” that left Protestantism favored by the Crown without forcing religious unity. Under James I, the first Stuart monarch, an oath of allegiance to the Crown, including the royal supremacy, was imposed on all English subjects. This left Catholics unable to openly participate in government but did not unite Protestants. The internal stresses of the English church,

“Laudians,” supporters of Archbishop William Laud’s efforts to impose a decorous liturgy, versus Puritan partisans of plain services, helped bring about the English Civil War in 1642. The triumph of the Puritans in the Commonwealth was short-lived. An Anglican regime, established after the Restoration, was grudgingly tolerant of dissenters. The efforts of James II to favor Catholicism only ended in his flight to the continent, the so-called Glorious Revolution (1688–1689).

Germany became divided among Catholics, Lutherans, and Reformed. The Thirty Years’ War threatened to upset local arrangements. A Protestant revolt in Bohemia was followed by Catholic triumphs and a threat of extended Habsburg power. This threat to the status quo led to interventions by Denmark and Sweden funded by Catholic but anti-Habsburg France. Eventually division along confessional lines became the norm following the Peace of Westphalia (1648). (The Treaty did allow a certain degree of religious tolerance to Catholic or mainline Protestant minorities within the boundaries of individual states adhering to a different church.) Throughout western Europe, division by Christian affiliation became the norm. Even the papacy grudgingly dealt with the prospect of long-term division. Western Christendom would no longer be a unified entity. In curial circles, the Jesuit Robert Bellarmine adopted a theory of indirect papal power in temporal affairs. The pope could intervene “by reason of sin,” but he could not claim sovereign power outside the Papal States in central Italy. Ironically, one of the few principles on which all these powers agreed was the persecution of sectaries. All European powers suppressed the Anabaptists and others who refused to take oaths of allegiance to Christian

rulers. Some groups vanished, while others, like the Quakers, endured a long wait before toleration was extended to them.

The religious map of the seventeenth and eighteenth centuries saw little change. Catholicism was the predominant religion of the Iberian Peninsula, Italy, France, and the Habsburg lands in the Holy Roman Empire. Protestantism prevailed in much of the north, including England, Scotland, Scandinavia, and many of the German territories. Austria drove the Turks back from Hungary and parts of the Balkans, but the Habsburgs had given up efforts to redraw the religious map of the empire. Even the wars of Protestant Prussia and Catholic Austria in the eighteenth century did little to upset confessional balances. France, Spain, and Portugal would extend Catholicism into Asia and the Americas. Some of the Catholic clergy in the New World were critical of conquerors and of royal policies, but they rarely were seen as threatening the obedience of the American colonies to the authorities in Europe. English Protestant settlements in North America transplanted the religious divisions of Stuart England to a new continent. Even the Quakers would find a home in Pennsylvania, although they had faced persecution in Puritan New England.

—Thomas M. Izbicki

Bibliography

- Ehler, Sidney Z., and John B. Morrall, eds. and trans. *Church and State through the Centuries*. Westminster, MD: Newman, 1954.
- Parker, Thomas M. *Christianity & the State in the Light of History*. London: A. & C. Black, 1955.
- Ward, W. R. *Christianity under the Ancien Régime, 1648–1789*. Cambridge: Cambridge University Press, 1999.

■ Introduction: Politics and Gender

Women in patriarchal societies did not have an established or official role in politics. However, this did not preclude them from wielding power on many levels. Even though most of the experts in these societies deemed women unfit to rule or hold

political power in any capacity, there still remained avenues for women to influence both international and domestic politics.

The most common method by which women were able to establish an influence over state politics was as either queen consort

or queen regent. As a consort to the monarch, a woman was theoretically in a position to influence policy if her husband were inclined to seek her advice on matters. In the case where a monarch neglected his duties, his queen consort could be useful in governing. This was seen in the case of Nur Jahan, wife of the Mughal emperor Jahangir. Nur Jahan took control and governed to compensate for her husband's substance abuse issues. This was the one of the only avenues in which women in Asia could gain power, as women did not officially serve as regents. In Europe, the situation was different, as it was normal for a queen consort to officially be given control over the government during times where her husband was either physically absent from the court, or incapacitated. In addition, it was accepted that if a king died while the heir was still a minor, the dowager queen would serve as regent. This position was not only the most powerful one that a queen consort could obtain, but also the most precarious. A foreign queen was often suspect, and she often had to battle the nobles at court who looked to advance their own positions. Those who could not help the nobles achieve their ambitions often found themselves replaced by either a male relative of the king, or the young king himself if he were crowned before the appointed age of fourteen. Regents such as Catherine de Medici understood the limits placed upon their positions by their gender and circumstances, and worked within those restrictions in order to govern the realm and protect the throne for their son.

During the early modern period in Europe females ruled in their own right for the first time. Writers of the time questioned a woman's ability to rule, as it was a role that reached far beyond the established gender norms for elite females. Despite this, monarchs such as Elizabeth of England and Catherine of Russia were able to not only govern their realms effectively, but also to leave behind great legacies to commemorate their reigns. Marriage was probably one of the biggest issues a queen regnant would be forced to face: a queen would be expected to marry someone in her own social standing; however, the only men that would fit in this category would have to be another king. This posed a problem, as Mary I of England discovered when

she married her cousin Philip II of Spain. Even though strict rules had been set in place in order to prevent Philip from inheriting the English throne, Mary's subjects still felt uneasy about the Spanish king being her consort. Another choice for husband could be a noble of the realm, but this would then advance his family's fortunes well beyond those of the other nobles and cause unrest in that circle, as Mary Stuart, queen of Scotland discovered when she married James Hepburn, the fourth earl of Bothwell, a move that led to her abdication of the throne and exile to England. Maria I of Portugal avoided these issues by marrying her father's brother, Pedro, and Elizabeth I of England avoided the issue altogether by remaining unmarried. It was Elizabeth herself that stated that being queen meant that even though one's body might be weak, she needed the "heart and stomach of a king." Therefore, it was necessary to rule like a man, while portraying herself as behaving as a woman in all other matters. Gender did not expressly prohibit women from attaining power, but it created special circumstances that made it more difficult for them to maneuver through court.

—*Monique Vallance*

African Matriarchy?

Scholars have long debated the legitimacy of claims that truly matriarchal societies have existed in Africa. Often matriarchy, or rule by women, has been confused with matriliney, or the tracing of one's familial heritage through maternal bloodlines. While a matrilineal system makes female kinship ties significant, it does not necessarily imply that women hold political power. Also, while many women across class lines have participated in politics throughout Africa, generally they have been less visible political actors, or their sphere of influence has been limited to issues that only concern women or the private domain. These facts, however, do not preclude the existence of legitimate and powerful female leaders. The question then becomes, were true female authority figures anomalous in Africa's history, occurring primarily in the absence of a suitable male figure, or were they merely less numerous, occurring regularly in certain societies

in which having a female leader is as acceptable as having a male or even preferable to it?

There are many examples of female leadership in Africa. Females assumed full monarchical power in ancient Egypt and Nubia and could be found in some empires in central Africa, such as Ndongo and Matamba. A far more common role for female leaders was the institution of the queen mother, which existed throughout West Africa. For instance, within the Asante empire (1701–1896), the queen mother was called the *obemmaa* (“female who rules”), and the office carried considerable political power. The *ohemmaa* had seniority in royal matrilineage and was chosen by her lineage mates. She headed the system of female chiefs that existed within Asante society and had the most influence over matters that pertained to the female population. Her opinion in selecting a new king carried the greatest weight of anyone in the empire.

In many societies, women were the ultimate authorities over female affairs. Within the Oyo empire (ca. 1400–1850) of the Yorùbá, for example, the Iyalode was a female chief with a council of subchiefs, was head of the market, and was administrator of all women’s affairs. She was an appointed figure, selected based on her leadership skills and her economic resources, and thus her position did not depend on her membership in any social class. She ascertained the women’s stance on societal matters and represented them at the council of kingmakers, although as the sole female representative she suffered from the disadvantage of being outnumbered by her male counterparts. In still other cases, women might hold offices with considerable symbolic power. Among the Pabir of Nigeria, the *maigira* (female monarch) was a princess chosen by the king and his counselors. Her primary function was as guardian of the sacred royal objects, which bestowed power to the king and his office. Because any man who used the sacred royal objects could assume the kingship, the *maigira* had to remain celibate to avoid coming under the influence of a man who might take advantage of her position.

As the above examples illustrate, powerful female leadership roles were a regular feature of the political structures of many African societies. Nonetheless, these societies do not constitute matriarchal ones. While women enjoyed

➤ WOMEN IN THE AFRICAN ORAL TRADITION

Positions of leadership for women still exist in many African societies although in an altered form, due largely to the changes brought by colonialism. Europeans brought their preconceived notions about women and their proper place in society with them and therefore overlooked women’s traditional roles when administering their African colonies. The place of women in African oral traditions, however, has in many cases remained unadulterated. In a number of African societies, women held a prominent historical place as the founders of cities, as leaders of migrations, and as conquerors. Hausa oral tradition enshrines Queen Amina of Katsina, who famously conquered a great deal of territory in the fifteenth century, going as far as Nupe and ultimately collecting tribute from many chiefs. She is even credited with introducing the kola nut to the region. In the myths about the establishment of So (ca. sixth–fifteenth centuries) in Cameroon, women are said to have chosen the sites for cities, carried royal insignia, and governed districts. The Lunda (ca. 1670s–1870s) in Kasai trace their heritage to the daughter of a chief named Lueji who married a hunter from the north named Ilunga Kibinda and promised him that he would rule the region. While colonialism often reduced the roles of women in many African societies, it has not reduced the important role of women in the memories transmitted in many oral traditions.

—Allison Sellers and Joel E. Tishken

significant participation in politics in most African societies, they were generally not seated in positions of absolute authority, nor did their communities inherently prefer female leadership. As elsewhere around the world, there were certainly exceptions: women who came to power and ruled states independently of men, such as in Nubia. They remain, however, exceptions to the norm. Most African societies could be more accurately categorized as dual-sex political systems in which positions of authority had male and female counterparts who operated on nearly equal footing with one another. In this fashion, African political structures mirrored African notions of gender whereby male and female were seen as a complementary pairing.

While generally unequal in their authority and domains, most African societies possessed political structures for both males and females.

—Allison Sellers and Joel E. Tishken

Bibliography

- Becker, Heike. "The Least Sexist Society? Perspectives on Gender, Change and Violence among southern African San." *Journal of South African Studies* 29(1) (March 2003): 5–23.
- Cohen, Ronald. "Oedipus Rex and Regina: The Queen Mother in Africa." *Africa: Journal of the International African Institute* 47(1) (1977): 14–30.
- Farrar, Tarikh. "The Queenmother, Matriarchy, and the Question of Female Political Authority in Precolonial West African Monarchy." *Journal of Black Studies* 27(5) (May 1997): 579–597.
- Pauline, Denise, ed. *Women of Tropical Africa*. Berkeley: University of California Press, 1963.
- Sudarkasa, Niara. "The Status of Women in Indigenous African Societies." *Feminist Studies* 12(1) (Spring 1986): 91–103.
- Van Sertima, Ivan. *Black Women in Antiquity*. New Brunswick, NJ: Transaction Books, 1988.

Queen Regents in Early Modern India

The terms "women" and "power" were rarely linked before modern times, especially in Asia, but this separation was sometimes more apparent than real. The "harem influence" could be most persuasive when skillfully applied, and there are instances in which women took control, either in name or in fact, and provided expert leadership.

India in early modern times was mostly under Muslim control, and Muslim societies tried to shape their lives according to the Quran and other Islamic authorities. These borrowed heavily from the social and cultural patterns of pre-Islamic Arabia, a land rife with warring and feuding tribes. The women were needed to bear sturdy sons who could defend the tribe and its holdings. Their marriages were usually arranged, and their purity had to be ensured. In Islamic societies, as in many others, the boys might have their little amours, but respectable girls did not.

In India, Muslim rule was established by Turkish and Afghan warriors with proud tribal lineages, abetted by Persian and occasionally

Arab nobles. They formed an elite, called ashrafis, with a status higher than that of Indian converts to Islam. Their women were treasures whom they safeguarded, never letting them show their faces or forms outside the harems (or women's quarters) of their houses. Those who aspired to this aloof respectability, Hindus as well as Muslims, followed this practice of *pardah*. No doubt many girls wished for a fuller, less confined life; the tales of the *Thousand and One Nights* are essentially such fancies.

Aspiring to political power and influence was rare in early modern India, obtaining it rarer still, but several such extraordinary women are known to history. Most conspicuous was Nur Jahan, wife of the Mughal emperor Jahangir and virtual ruler of the empire for most of his reign. Jahangir, born Prince Salim, succeeded his father, the great Akbar, on the Mughal throne in 1605. By 1611 he had been captivated by the beauty, grace, and sense of a court lady, a 30-year-old Persian widow named Mehrunissa (or Mihr-un-Nisa).

Mehrunissa was the daughter of an expatriate Persian noble, Itimad-ud-daulah. She was married to a provincial official who was killed in a political dispute. She then joined the court as a lady in waiting, where she captivated the emperor. He dubbed her Nur Jahan ("Light of the World"). As Jahangir sank more deeply into the frequent use of alcohol and other drugs, Nur Jahan took more control of the court and, by extension, the empire. Her father became the imperial revenue minister, and her brother, Asaf Khan, became a high court minister. Together they have been called "the Nur Jahan junta."

Nur Jahan's power peaked in 1620. She had had an uneasy alliance with the strong-willed heir-apparent, Prince Khurram; she had even arranged Khurram's marriage to her niece, Arjuman Begum, called "Mumtaz Mahal," the lady later entombed in the Taj Mahal. But in 1620 she married her own daughter to Prince Shahriyar, youngest son of Shah Jahan, intending to continue her power through his succession. The wary Khurram gathered his forces and allies. When Jahangir died in 1627, Asaf Khan unexpectedly intruded and blocked his sister's plans, opening the way for Khurram to mount the throne as Shah Jahan. This of course meant the end of Nur Jahan's career. Losers in Mughal

politics rarely survived, but she was allowed a dignified retirement.

In traditional Hindu society, as in Muslim society, there were no career openings for women in politics. Those few who achieved power succeeded fathers or husbands, and their talents glittered. Such a one was Tarabai, Maratha queen during a critical decade (1701–1708), whose leadership and shrewdness probably rescued the Maratha nation. J. N. Chaudhuri, an expert in the field, has described her as possessing organizational power and astounding bravery, poise, and administrative capacity, all characteristics that helped to save Maratha from a turbulent period.

That turbulent period was the determined drive of Aurangzeb, the Mughal emperor, to conquer and rule the Marathas after the death of their founder-hero, Shivaji, in 1680. The powerful Mughal armies overran the Maratha strongholds, smashed their state, and chased the fleeing warriors through the hills and valleys of western and central India and into southern India. In 1688 Mughal forces captured and killed Shambuji, son and successor of Shivaji, and took his young son Shahu to the imperial court as a “guest.”

The Maratha leadership was then taken by Rajaram, younger son of Shivaji, and upon his death in 1700 by his senior widow, Tarabai, 25 years old, in the name of their 4-year-old son Shivaji III. Tarabai, a child bride, had been the daughter of Shivaji’s army commander, Hambir Rao Mohite. In the emergency she surmounted factional politics and personal jealousies to command. With her officials she fled from one hilltop fortress to another, always eluding the ponderous, slow-moving Mughal forces. By 1702 the Marathas’ harassing guerrilla tactics had turned the tide, and their counterattacks swept through central India against the exhausted and bloodied Mughals. Finally, the frustrated Aurangzeb withdrew his forces and then died in 1707.

The new emperor, Bahadur Shah I, had a better plan than invasion: he freed Shahu, now mature, and sent him back to Maharashtra to undercut support for Tarabai and bring Maharashtra into the empire. The latter part never worked, but the former did, brilliantly. The Marathas were absorbed in a spasmodic civil war for the next decade. Most of Tarabai’s

chieftains and army commanders promised support, but popular backing grew for Shahu as the legitimate heir. In 1713 Shahu appointed as his peshwa (prime minister) an astute and skillful Brahman, Balaji Vishvanath Bhat. The peshwa steadily reconciled Maratha stalwarts to Shahu until Tarabai and her loyalists were reduced to the mountainous state of Kolhapur.

Then, in the dizzying kaleidoscope of Maratha politics, Tarabai was overthrown and imprisoned in Kolhapur; in 1730 after the death of her son, she rejoined Shahu at his capital of Satara and persuaded him to name her grandson Ram Rajya as his heir. After Ram Rajya succeeded Shahu in 1748, she denounced the relationship, claiming that he was not really her grandson, and had him imprisoned, becoming queen. She died in 1761, her ambition not totally eclipsing her heroic history.

Another widow who stepped into a breach was Chand Sultan, also known as Chand Bibi. The daughter of a sultan of Ahmadnagar, in the western Deccan, she married the neighboring sultan of Bijapur. After his death she returned to Ahmadnagar in 1595, where she protected the infant heir to the throne against would-be usurpers. Then the Mughals, invited by a frustrated contender for the throne, invaded and besieged Ahmadnagar. Chand Sultan took control, borrowed troops from Bijapur and Golconda, and organized such an effective defense that the Mughals withdrew. However, in 1600 the Mughals invaded again, and when Chand Sultan tried to negotiate with them, she was accused of treachery and was attacked and killed by a local mob.

—Edwin Hirschmann

Bibliography

- Eaton, Richard M. *A Social History of the Deccan, 1300–1761: Eight Indian Lives*, Vol. 1.8. The New Cambridge History of India Series. Cambridge: Cambridge University Press, 2005.
- Gordon, Stewart. *The Maratha, 1600–1818*, Vol. 2.4. The New Cambridge History of India Series. Cambridge: Cambridge University Press, 1993.
- Majumdar, R. C., ed. *The History and Culture of the Indian People*, Vol. 7, *The Mughal Empire*. Bombay: Bharatiya Vidhya Bhavan, 1974.
- Majumdar, R. C., ed. *The History and Culture of the Indian People*, Vol. 8, *The Maratha Supremacy*. Bombay: Bharatiya Vidhya Bhavan, 1977.

Richards, John F. *The Mughal Empire*, Vol. 1.5. The New Cambridge History of India Series. Cambridge: Cambridge University Press, 1993.

Sarkar, Sir Jadunath. *A Short History of Aurangzeb, 1618–1707*. Calcutta: S. C. Sarkar, 1930.

Female Rulers of Early Modern Europe

In early modern Europe (1500–1789) there was a dramatic increase in the phenomenon of female rule in comparison to the medieval period. Female rule appeared in two major forms: queens regnant, women who inherited the office of king due to a temporary lack of legitimate male heirs, and dowager queens, who ruled as regents on behalf of their underage sons or daughters.

At the beginning of this period, the first and perhaps the most remarkable of regnant queens was Isabel of Castile (r. 1474–1504). Before her accession Isabel married Fernando of Aragon, which ultimately facilitated the political unification of

Spain. While royal heiresses in medieval Europe often found their political prerogatives usurped by their husbands, Isabel and Fernando ruled their respective kingdoms as equal political partners, a unique arrangement in early modern Europe. This was not the case with Isabel's heir, Juana "the Mad" (r. 1504–1509), whose rights to the Castilian throne were appropriated first by her husband, Philip of Burgundy, and later by her eldest son, Holy Roman Emperor Charles V.

In England, the first regnant queens, Mary I (r. 1553–1558) and Elizabeth I (r. 1558–1603), came to their thrones unmarried. Both were daughters of Henry VIII (r. 1509–1547), whose rights to the throne were enshrined in parliamentary statutes. During her short reign Mary attempted to reverse the course of the Protestant Reformation by reimposing Catholicism in England (earning her the enduring epithet "Bloody Mary"). Her marriage to her Catholic cousin, Philip of Spain, was highly unpopular throughout England and sparked a serious revolt against the queen in early 1554. In contrast, Elizabeth I defied conventional expectations by not marrying, which allowed her to avoid the problems that had plagued her sister and rule unaided as an autonomous female ruler. Often considered the greatest ruling queen in European history, Elizabeth presided over the final phase of the English Reformation, facilitating the development of the Anglican Church and England's emergence as a major European power. Her naval forces defeated the Spanish Armada of 1588. In the final years of her reign, the arts, literature, and theater flourished in England, which is justly called the Elizabethan Age.

In the late seventeenth century, the English experienced two more female rulers. Mary II (r. 1689–1694) reigned jointly with her husband, William III, following the Glorious Revolution of 1688–1689, a watershed event in English constitutional development. Lacking direct heirs of their own, William and Mary were succeeded by Queen Anne (r. 1702–1714). Anne's reign is often referred to as the Augustan Age, an outpouring of literature, science, and philosophy that formed a major component of the European Enlightenment. England emerged as a global imperial power during Anne's reign as England emerged victorious from the War of the Spanish



Mary I was queen of England from 1553 to 1558. She restored Catholicism to England, and after the subsequent burning of hundreds of heretics, she became known as "Bloody Mary." (Library of Congress)

Succession (1702–1713). Elsewhere in Europe, Christina of Sweden (r. 1632–1654) shocked convention by converting to Roman Catholicism and abdicating her throne, and Maria I (r. 1777–1816) became Portugal's first regnant queen. A procession of female tsars ruled Russia over the course of the eighteenth century, including Anne (r. 1730–1740), Elizabeth (r. 1741–1762), and, most famous at all, Catherine the Great (r. 1762–1796), a ruthless ruler who introduced the western European Enlightenment to Russia.

Dowager queens who ruled as regents were another form of female rule. Mary of Guise ruled as regent in Scotland on behalf of her daughter, Mary, Queen of Scots, during 1554–1560. In France, a procession of dowager queens wielded significant power over the course of the sixteenth and seventeenth centuries. Catherine de Medici, the widow of Henry II (r. 1547–1559), served briefly as regent for her husband in 1552 while he was away in Italy as well as for her son Charles X during 1560–1563 after the death of Henry. However, until her death in 1589, Catherine informally wielded great power as France experienced successive and bloody wars of religion between Protestants and Catholics. In the seventeenth century, both Marie de Medici, the widow of Henry IV, and Anne of Austria, the widow of Louis XIII, served formally as regents and informally as *de facto* rulers on behalf of their underage sons, Louis XIII and Louis XIV, respectively. The status of dowager queen was the main outlet of political power for women in France because the Salic Law expressly decreed that women could not officially inherit the throne.

While female rulers were often successful in gaining access to political power due to their kinship relations to male politicians, they nevertheless suffered difficulties imposing their authority over male-dominant political structures. In early modern European societies, women of all social classes were commonly held to be inferior to men physically, intellectually, and emotionally. As such, female rulers often faced formidable challenges to their rights to rule. Mary, Queen of Scots, regnant queen of Scotland from 1561 to 1568, endured a series of aristocratic attempts to control her authority until she was deposed in 1568. Writers such as John Knox, the author of *The First Blast of the Trumpet against the*

Monstrous Regiment of Women (1558), cited both Scripture and Roman law as a justification for their opposition to female rule. Female rulers were also hampered by either the difficulty of or inability to perform such kingly roles as leading armies and exercising control over national churches, which were among the fundamental powers exercised by male kings. The major part of this difficulty was that female rulers were expected to conform to conventional female roles, although they held the reins of political power. Historians of the early modern period generally view Isabel of Castile, Elizabeth I of England, and Catherine the Great of Russia as the only sovereigns to successfully overcome the formidable gendered challenges to successful female rule.

—Charles Beem

Bibliography

- Beem, Charles. *The Lioness Roared: The Problems of Female Rule in English History*. New York: Palgrave Macmillan, 2009.
- Jansen, Sharon. *The Monstrous Regiment of Women: Female Rulers in Early Modern Europe*. New York: Palgrave Macmillan, 2002.
- Levin, Carole, and Robert Bucholz. *Queens and Power in Medieval and Early Modern England*. Lincoln: University of Nebraska Press, 2009.
- Orr, Clarissa Campbell, ed. *Queenship in Europe, 1660–1815: The Role of the Consort*. Cambridge: Cambridge University Press, 2004.

Queen Regents in Early Modern Europe

When a king became incapacitated or died while his son was still a minor, it was necessary to institute a regency in order to rule the country. Most of the time the dowager queen was appointed as the regent and usually had a council of nobles to assist her. This office was one of the ways that women could take direct control of the kingdom during a time when female monarchs were few and far between, especially in countries where female monarchs were expressly forbidden by law.

Early modern Europe experienced a succession of crowned princes either incapable of ruling or unwilling to rule after the age of majority, which was fourteen in most countries. One of the most famous cases of this was Charles IX of

► QUEEN LOUISE OF SAVOY

Louise of Savoy, mother of François I of France, is probably most well known for the international diplomacy she enacted as regent for her son. The first time she acted as regent was in 1515 while François was fighting war in the Italian Wars. She served a second time in 1525 when François left again for Italy, but her regency lasted longer than anticipated after the king was captured and made a prisoner of Holy Roman Emperor Charles V. Even though the Salic law forbade women from ruling France, this was indeed what Louise was forced to do. Determined to free her son from captivity, she sent an envoy to the Ottoman sultan Suleiman I. In an agreement that served to be the first of its kind, Louise was able to begin the first steps toward a Franco-Ottoman alliance what would later become known as the “sacriligious union of the Lily and the Crescent.” Louise’s attempts at peace with the

Ottomans gave Suleiman the excuse he needed to attack Hungary in 1526 and began a period of Ottoman interference in European affairs.

Louise’s services were required by the king again in 1528. François was anxious to make peace with the emperor once more; therefore, he sent his mother to negotiate the treaty with another regent, the emperor’s Aunt Margaret, duchess of Mantua, and the regent of the Netherlands. While hesitant at first, Margaret agreed to meet Louise in Cambrai to begin peace negotiations while the French king spent his time hunting. Finally, the terms of the peace were settled between the two women on August 3, 1529, and the Peace of Cambrai became known as “The Ladies’ Peace,” as it was conducted between two women. This peace is symbolic of the potential political power held by queen regents.

—*Monique Vallance*

France. His brother, Francis II, died in 1560, leaving a nine-year-old Charles on the throne. Unfortunately, this was one of the most desperate eras in French history, as Catholics and Protestants fought over doctrinal differences. His mother, Catherine de Medici, served as regent until 1563 when he reached his age of majority. However, until his death in 1574, he showed no interest in ruling and depended completely on his mother. Although she desperately attempted to make peace between the warring parties, she only made things worse as she attempted to assert her control over her son, keeping him from being too influenced by either of the parties. In fact, it was the Protestant admiral Coligny’s influence over the young king that prompted Catherine to order his assassination, the bungling of which sparked the St. Bartholomew’s Massacre in 1572. Portugal experienced a similar situation in 1656 when the 13-year-old Afonso VI ascended to the throne. Even though he achieved his majority ten months later, he also showed no interest in ruling. He had suffered an illness at the age of three that paralyzed the left side of his body. Contemporaries refer to him as mentally deficient, and his favorite pastime was riding around Lisbon in search of citizens to assault. His mother, Dona Luisa de Gusmão, extended her regency until

1662. She also handled a very important situation in Portuguese history; it was her alliance with England that guaranteed a peace settlement between Portugal and Spain in 1668.

Other queen regents ruled in the place of more capable children but still handled very challenging civil wars in their countries. For instance, Louis XIV’s mother, Anne of Austria, had to deal with the Fronde, a rebellion of the nobles against the centralization of royal power during 1648–1653. Mary of Guise, a French woman who was queen of Scotland, served as regent for her daughter Mary I, or as she is more famously known, Mary Queen of Scots, during 1542–1560. Mary was only six days old when James V died, and then she left for France in 1548 after the marriage arrangement between herself and the future Francis II was complete. She stayed in France for the next thirteen years while Mary of Guise ruled as her regent. During her years as regent, Mary of Guise had to contend with the growing Protestant faction in the country, who mistrusted her because of her religion and her French heritage, especially after she called on her family to help her quell their activity. Mary of Guise died in July 1560, and Francis II died the following December. After this double loss, Mary Stuart returned to Scotland to find the

country on the brink of civil war, and her own reign ended tragically as a result.

Even though the position of regent could be a powerful one, it was nevertheless an acceptable one for women in early modern Europe. This is because a woman who acted as regent for her son or daughter was fulfilling the most acceptable role designated for women: that of a mother. As long as the queen portrayed herself as someone who was acting in the best interests of her son and the country, her position could remain stable. Also, as a member of the royal family, she was outside the political warring that often happened at court among members of the other noble families. A king, even a child, who sided with one faction or the other could be putting himself in danger of being overthrown. The queen regent had the job of protecting the throne for her child from both domestic and foreign threats. Often seen as times of weakness in royal power, regencies were times in which either nobles or foreign powers took the opportunity to attack the king. Those queens who had some government experience during their husband's life usually fared better than those who had none. More often than not, success entailed an understanding of the dynamics of the delicate political situations at court, and those who ignored these things saw failure in one form or another.

—Monique Vallance

Bibliography

- Earenfight, Theresa. *Queenship and Political Power in Medieval and Early Modern Spain*. Burlington, VT: Ashgate, 2005.
- Jansen, Sharon L. *The Monstrous Regiment of Women: Female Rulers in Early Modern Europe*. New York: Palgrave Macmillan, 2002.
- Orr, Clarissa Campbell, ed. *Queenship in Europe, 1660–1815: The Role of the Consort*. Cambridge: Cambridge University Press, 2004.
- Weisner, Merry E. *Women and Gender in Early Modern Europe*. Cambridge: Cambridge University Press, 2000.

Female Rulers in Early Modern Eastern Europe

Three main patterns characterize the political roles that East European female rulers played during the Early Modern period. Female rulers

in Poland boasted a prominent position in their kingdom's political life and thus were comparable to their royal counterparts in western Europe. In contrast to Poland, other contemporary East European nation-states were ruled by either the Habsburg empire or the Ottoman empire from approximately the fifteenth century to the nineteenth century. Non-Germanic female noblewomen who found themselves under Habsburg control could not rule their dominions directly but did affect the politics of the empire nonetheless by playing active roles in resistance struggles alongside their husbands. The areas occupied by the Ottoman empire witnessed few examples of indigenous female rule but were exceptional in that the sultan's wives and Ottoman princesses shaped the region's fate for approximately two centuries.

Among all the East European realms, Poland's female rulers participated most actively not only in the politics of their dominions but also in western European affairs. Although traditional Polish custom opposed female involvement in politics, these attitudes changed by the second half of the seventeenth century when Polish queens took an increasing interest in the activities of the parliament. By the eighteenth century women in power became increasingly visible in the public realm; they affected both domestic and foreign affairs as instigators or advocates of particular political ventures. Seventeenth-century queen consort Ludwika Maria Gonzaga aptly illustrates the growing influence of women in Polish royal politics. She founded Poland's first newspaper, *Merkuriusz Polski*, in which she promoted strengthening the position of the monarch and weakening the nobility. Even when Polish female rulers could not exercise their power as proactively as Ludwika Maria Gonzaga, they could shrewdly use dynastic politics and their family linkages to advance themselves in the hierarchy of European powers. Once in a position of influence, Polish monarchs created networks with other European female rulers, thus advancing their informal powers and their ability to affect the political, cultural, and religious life of their realms.

There is little research indicating that countries under the rule of the Ottoman empire, including present-day Bosnia, Serbia, Bulgaria,

► MARIA THERESA

Maria Theresa, the queen of Hungary and Bohemia and the archduchess of Austria, was the first and only female ruler of the six-century-old Habsburg dynasty. She did not merely inherit the Habsburg lands from her father Charles VI in 1740; she saved them from disintegration by remedying the empire's domestic and international standing. Maria Theresa began her reign in an unenviable position. A number of European powers aimed to divide the Habsburg lands among themselves, not recognizing Maria Theresa's claim to the throne. The new dynast, determined to preserve the unity of her lands, fought the War of Austrian Succession (1740–1748) and emerged victorious. After the victory, Maria Theresa instituted tax reforms that at once improved the empire's economy and allowed her to fund an impressive army capable of defending Habsburg interests in the future. She also instituted a whole range of well-coordinated internal policies. In 1774 Maria Theresa's general school ordinance made elementary education compulsory for all children between the ages of 6 and 13. Austria thereby became one of the first states in Europe to establish a system of public elementary education. Legally, the queen centralized the empire's bureaucracy, making administrative affairs of an overextended realm more efficient. She also created a Supreme Court, securing and affirming the rule of law in her territories. However, this female monarch, who reigned for 40 years, had not devised a long-term solution to increasingly complex religious and ethnic predicaments that were progressively weakening the empire.

—Marko Dumancic



Maria Theresa, Holy Roman Empress, presents the crowns of Bohemia, Hungary, and the Imperial crown in this painting by Anton von Maron, about 1772. (Réunion des Musées Nationaux/Art Resource, NY)

Albania, Romania, and Greece, possessed female rulers who fought back against the dominance of the Turks. However, this part of eastern Europe was in large part affected by female rule in Istanbul. Between the sixteenth and seventeenth centuries the dominance of women in both internal and external affairs of the empire was so marked that it is often termed “the sultanate of women.” The rise of female power during this period was linked to the gradual transformation of the Ottoman empire from a military expansionary state to one dedicated to diplomacy. Consequently, the sixteenth-century

focus on political stability outlawed the custom in which brothers competed to death for the sultan's title. Instead, the eldest brother succeeded to the throne. In the new system, harem marriages affected the policies of the government; consequently, the sultan's mother had influence, and sometimes a decisive voice, on matters of succession. In addition to domestic affairs, the royal mother also played a diplomatic function as the Ottoman empire sought a *modus vivendi* with Christian kingdoms in Europe. Not to be overlooked are these rulers' charitable works: the construction of various public institutions

such as mosques, saunas, and public wells and fountains. Women of the Ottoman royal harem, such as Hurrem and Nurbanu, were equal in power and status to other formidable female European monarchs of the period, including Mary, Queen of Scots, or Catherine de Medicis as well as female sovereigns in both Persia and India.

East European female nobles who were under the rule of the Habsburg Dynasty could not exert the kind of political influence available to Polish queens and sultans' mothers. There are examples, however, of female rulers who valiantly fought to liberate themselves from foreign domination and establish themselves as independent sovereigns. Hungarian duchess Ilona Zrinyi, for example, was an active participant in the late seventeenth-century kuruc uprising. Together with her husband, Imre Thokoly, and supported by Sultan Mehmed IV, Ilona Zrinyi fought against Holy Roman Emperor Leopold I. The

goal of her struggle was to not only wrest away Hungarian lands from Habsburg dominance but also to provide religious freedom to Protestants occupying Habsburg dominions. Although defeated by Austrian forces and largely unsuccessful in achieving her goals, Ilona Zrinyi's son, Francis II Rakoczi, continued her struggle, and she became a Hungarian national hero in subsequent centuries.

—Marko Dumancic

Bibliography

- Bogucka, Maria. *Women in Early Modern Polish Society: Against the European Background*. Burlington, VT: Ashgate, 2004.
- Orr, Clarissa Campbell, ed. *Queenship in Europe, 1660–1815: The Role of the Consort*. Cambridge: Cambridge University Press, 2004.
- Peirce, Leslie P. *The Imperial Harem: Women and Sovereignty in the Ottoman Empire*. Oxford, UK: Oxford University Press, 1993.

■ Introduction: Patterns of Conquest and Rebellion

The period between the fifteenth and eighteenth centuries involved remarkable political and military transformations around the world. The centuries-old Byzantine empire collapsed under the onslaught of the dynamic Ottoman state. The Mongol khanates declined and a powerful Safavid state emerged amidst the ruins of the Iranian polities while the Ming dynasty, followed by the Manchu dynasty, restored China's prominence in the Far East. In India, the campaigns of Babur and his successors laid the foundation for the glorious Mughal empire as the European conquistadors embarked on their remarkable conquests in the western hemisphere. At the same time, domestic rebellions—the Peasants' War in Germany, the Celali Revolts in the Ottoman empire, and the Pugachev Uprising in Russia to name just a few—threatened to overthrow the existing political and social hierarchy. Rural and urban riots triggered by rises in food prices were frequent and commonplace. The urban lower classes lived from hand to mouth and the scarcity of supplies, caused by poor weather or lack of foresight by

local magistrates, could provoke violent expressions of their discontent. But such rebellions could be also prompted by religious, social, or political factors or a combination of these. Thus, in the Netherlands, the Spanish efforts to contain the spread of Protestantism encountered increasing Dutch resistance, which finally erupted in the Iconoclasm of 1566 when Protestants sacked Catholic churches. Yet, fearing social rebellion, some leading Protestant Dutch noblemen chose to side with the Spaniards in suppressing the riots. Ultimately, it was the ruthless policies of the Spanish commander the Duke of Alba that drove Protestants into open rebellion against Spain. Similarly, in 1709, the brutality of the Safavid forces in Afghanistan sparked a rebellion among local tribesmen, who then went on to overthrow the Safavid dynasty in 1722. In the Ottoman empire, severe economic and social pressures in rural Anatolia caused the prolonged Celali Revolts that shook the Ottoman state in the late sixteenth and early seventeenth centuries. In England and France, the monarchs' attempts to strengthen their authority produced

contrasting results: while the French king triumphed over the nobles during the Fronde, his counterpart in England succumbed to Parliament in the Glorious Revolution. From the sixteenth century to the eighteenth century there was a series of peasant wars throughout the world. These rebellions were prompted by economic hardship (e.g., massive peasant uprisings led by Li Zicheng and Zhang Xianzhong in mid-seventeenth century China), resistance to intensified serfdom (e.g., the German Peasants' War, the Hungarian Crusade, the Cossack revolts in Russia), as well as revolts against state centralization (e.g., the Croquant uprising, the Swiss peasants' war, the revolt in Naples).

Globally, one of the most important patterns that scholars highlight in the early modern era is the gradual unfolding of the "Military Revolution" in Europe—a profound military, political and socioeconomic transformation between the sixteenth and eighteenth centuries. Such an approach usually focuses on the European expansion around the world, in particular the Spanish conquests of the Aztec and Inca states and the arrival and establishment of European navies in the Indian Ocean, where local Islamic and Indian states proved to be unable to retain supremacy of the seas. Equally interesting, however, is the increasing ability of Europe to fight off the Ottoman attacks, clearly revealed when comparing the Christian failures of the early sixteenth century with successes of the seventeenth century.

But we must not consider the eventual European dominance as inevitable since alongside successes, there were also plenty of failures. Non-European traditions greatly varied—from the sophisticated Ottoman and Chinese armies to primitive (militarily) forces in Siberia or North America—and Europe fared differently in its encounters with them. Closer inspection of events reveals that after the initial period of European conquests (roughly 1492 to 1560s), there was a long period during which this expansion slowed, halted, or was even reversed. Indeed, until the late eighteenth century much of Asia successfully resisted European inroads while adopting some European military techniques and weapons. China remained the most expansive and strongest state in East Asia, successfully containing the Portuguese to its coastline in the

sixteenth century, and the Dutch in Formosa (Taiwan) in the 1660s, and preventing Russian advances in the Amur valley in the 1680s. The Omani Arabs expelled the Portuguese from East Africa in the 1690s, and the Ottomans continued to display remarkable resilience and success against European attacks in the early eighteenth century. In the seventeenth and eighteenth centuries coastal West African states proved to be perfectly capable of resisting Europeans, who were successful only when supported by local troops. These setbacks were facilitated by intra-European rivalry which caused a concentration of resources upon warfare within Europe as well as continued overseas expansion at the expense of other European powers. Yet, one must also remember that Europe was a much more volatile region than, for example, central Asia, West Africa, or China, and this continued warfare allowed some European states to acquire an edge in military tactics, weapons, and administrative and political capability that eventually contributed to Europe's emergence as the dominant global power in the nineteenth century.

The European conquest of the vast American continent also offers some interesting patterns. When Europeans arrived in the Americas, they found a multitude of cultures and states interconnected through a complex web of relations, one of them being trade and commerce. The European conquests—of Cortes and Nuno de Guzmán, in central Mexico, Pizzaro in Peru, Francisco and Pedro de Alvarado Orozco in Guatemala, or Francisco de Montejo in the Yucatan Peninsula to name just a few—consequently followed the pre-Columbian trade routes which greatly contributed to their success. From the earliest years of Spanish colonization of the western hemisphere, the Spaniards became aware of how quickly they could seize control over local population by capturing local leaders. This tactic may have had precedents in Spanish experiences with the Moors or in North Africa, but the surprise capture of the local ruler during a seemingly friendly negotiation became a standard. Thus, in 1519, Cortés, invited to an audience with the Aztec emperor Moctezuma II, captured the emperor in an attempt to seize control of the empire. His success inspired Francisco Pizzaro to capture the Inca leader Atahualpa in 1531.

Diseases, and the Native Americans' lack of immunity to them, played an important role in the success of the European conquest in the western hemisphere, but the roles were reversed in Africa and parts of Asia where Europeans' exposure to deadly diseases (e.g., yellow fever) halted their expansion. In the Americas, despite the impact of diseases, Europeans often had to overcome local resistance and their military superiority usually played a major role in determining the outcome. Yet, European colonial coercion also invariably depended upon the collaboration of local elites. Despite the popular perception of the Spanish conquistadors as invincible and gallant warriors, the real story of success lies in local elites' early support for foreign invasions. Their motivation included both the desire to free themselves from existing military and tributary controls as well as the opportunity to aggrandize themselves with land and riches. Indeed, alliance-building was a fundamental practice in Mesoamerica, successfully used by the Aztecs in the form of the Triple Alliance (confederation of city-states of Tenochtitlan, Texcoco, and Tlacopan) to incorporate much of the region into their empire prior to Europeans' arrival. When Cortés arrived in Mesoamerica in 1519, the Fat Cacique of Cempoala followed a long-standing alliance-building tradition in offering the Spaniard an alliance with Tlaxcala, Huexotzingo, and other city-states against the powerful Aztecs; the presence of tens of thousands of native soldiers allowed the Spaniards to bring down the Aztec empire.

Finally, an important, and often overlooked, aspect to the conquest was the nonmilitary participation by natives who, by serving as spies, interpreters, porters, cooks, and so on rendered invaluable services to the conquerors. Such practices were not limited to Central or South America alone. During the seventeenth and eighteenth centuries, European states sought alliances with North American tribes and often used them to conduct proxy wars against each other; Britain and France became particularly adept in using their Native American allies to further their geopolitical interests during King George's War (1744–1748) and the French and Indian War (1756–1763). In India, the continued disunity, factionalism, and treachery among local

polities greatly facilitated European penetration, conquest, and dominance. At the same time, the conquest was less difficult where there were existing political institutions that the conquerors could take over or reach an accommodation with. For example, less urbanized or nomadic peoples, practicing asymmetrical warfare in difficult terrain, could successfully frustrate efforts of a more sophisticated and powerful enemy as the Russians discovered in the wilderness of Siberia and the Spaniards in Amazonia and the Andes. Europe's limited material and human resources meant that European overseas expeditions were, as a rule, small in size and relied on technological advantages. They usually sought a limited presence and not a complete dominance of a region. In fact, the European conquest of the Americas is more an exception than a rule. In Asia, the first decades of the European presence were limited to controlling key locations (islands, cities, straits) and building fortresses that were defended by navies. Such colonies were rarely built in territories controlled by major Asian states that could successfully repel Europeans as revealed by events in India, where the Mughals forced the East India Company to evacuate their Bengal base and surrender Bombay in 1686.

Aside from European expansion, one of the more important events in the early modern period was a rapid expansion of the Ottoman state into the Balkans, North Africa, Caucasus, and Mesopotamia. Historians distinguish several interesting patterns in these conquests. The early Ottoman sultans expanded their principality by *ghaza*, a religiously inspired holy war against their non-Muslim neighbors, which, however, was often conducted for predatory reasons, without any religious motives but rather in search of plunder and bounty. The Ottoman rulers also proved adept in arranging dynastic marriages by which they acquired new lands and military assistance. Local conditions and international geopolitics played an important role in determining the status of the newly occupied territory. Syria, conquered in 1516, was turned into an ordinary province while the Kurdish princes of eastern Anatolia (facing Iran) and the khans of Crimea (facing Russia) were given greater latitude of action. The Ottoman rulers also promoted

migration and resettlements of Turkoman nomads to the newly conquered areas. In the Balkans and the Caucasus, such policies sought to establish strongholds of Turkic-speaking loyal Muslim subjects and weaken the resistance of the local Christian population. The Ottoman sultans also sought to gain supporters among local non-Muslim nobility by granting them military fiefs (*timars*) in return for their acceptance of and loyalty to Ottoman suzerainty. Finally, the often-forgotten Ottoman passivity in Europe in the eighteenth century had a major impact on European political affairs as it allowed some European states (e.g., Austria, Russia) to pursue more aggressive foreign policy vis-à-vis their neighbors in 1733–1735, 1740–1748, 1756–1763, and 1792–1815.

—Alexander Mikaberidze

Akbar's Subjugation of Rajasthan

The reign of Akbar (Jalal-ud-din Muhhammad Akbar), who ruled from 1556 to 1605, transformed the history of the Mughal empire. Surpassing his predecessors, Babur (r. 1526–1530) and Humayun (r. 1530–1556), Akbar established unrivaled dominance over the Indo-Gangetic plains, the densely populated region between the Indus and Ganges rivers and a historical stronghold of Indo-Muslim power. He also embarked on a series of conquests that would unite the northern half of the Indian subcontinent under Mughal sovereignty. In addition to expansion, Akbar consolidated his power by creating a centralized state structure that brought the governments of the *parganas* (subdistricts), *sarkars* (districts), and *subahs* (provinces) as well as the military and nobility under direct control of the emperor. Akbar's reforms to the existing system of land assessment and revenue collection further centralized the Mughal state and persisted throughout the Mughal period and even into the British colonial period. The subjugation and incorporation of Rajasthan, a region south of Delhi composed of smaller kingdoms ruled by Rajputs, remains one of Akbar's earliest and most significant accomplishments in the continued expansion and consolidation of the Mughal state.

Situated on the southern frontier of the Mughal empire, Rajasthan became a coveted prize

for Akbar. Composed of fierce leaders and clans of the Kshatriya caste, Rajput kingdoms had posed a formidable challenge to Indo-Muslim power and expansion in the centuries before Mughal rule. Akbar's first foray into Rajasthan began with the conquest of Ajmer (1558) led by his first regent and military general, Bairam Khan (1556–1560). Later in 1568, a more mature Akbar launched his own military campaign against one of the most powerful Rajput rajas, Udai Singh (1540–1572), the Rana of Mewar. Mughal use of gunpowder—both guns and cannons—proved decisive for Akbar as he laid siege to Chitor, the fortified capital city of Mewar. Udai Singh fled Chitor, never to regain his kingdom, and Akbar commanded the destruction of the city fortress. During the following year, Akbar conquered another Rajput stronghold, Ranthambor, in a similar display of military superiority and power. Akbar's military prowess and achievements in Rajasthan strengthened Mughal prestige throughout the region and the entire empire.

The expansion of the empire was more intricate than the use of military force. While many Rajputs resisted the encroachments of the Mughal empire, other Rajput chiefs negotiated with Akbar, pledging their allegiance and service to the emperor in exchange for imperial privileges and continued rights to their lands. To crystallize the relationship, Rajput leaders offered their daughters in marriage to Akbar. A long-standing tradition within Rajput customs, matrimonial alliance (*saga*) was one of two ways that Rajputs forged ties with each other, and the practice between Rajputs and Mughals began in 1562 when Akbar himself married the daughter of Bharamall, a minor Rajput head of the Kachhwaha clan of Amber. For Rajput leaders like Bharamall and his male kin, the matrimonial alliance with Akbar ensured that their leadership and land at the local level remained intact and that Rajput culture and customs were protected. Additionally, Rajputs became the most heavily recruited population of non-Muslims for the highest-ranking posts in Akbar's military and administration. In exchange, Rajput leaders acknowledged the sovereignty of Akbar over Rajasthan and served the emperor in military and administrative capacities.

AKBAR-NAMA

How do historians know about the statecraft and politics of Akbar? One of the most elaborate sources of Akbar's reign is the *Akbar-Nama*, a multivolume work authored by the emperor's close adviser, Abul Fazl. The first two volumes of the *Akbar-Nama* offer a detailed history of Mughal rule, complete with impressive Mughal miniature paintings. The three-volume appendix, *Ain-i Akbari*, is an imperial manual for the administration of the Mughal state. Several chapters in the second volume depict Akbar's encounters with Rajputs, including the capture of Chitor, the conquest of Ranthambor, and the marriage between Akbar and his Rajput wife from Amber. The stories of Akbar's subjugation of Chitor and Ranthambor, both results of battle, emphasize the emperor's superior military skills and divine inspiration. In chapters on intermarriage and negotiated alliances with Rajputs, Abul Fazl makes Akbar's generosity and accommodation central to the narrative. Collectively, the volumes provide historians with an invaluable source for understanding Mughal perceptions of themselves and Indian society as well as the procedures and means undertaken by the emperor to more efficiently manage the military, revenue collection, and administration of the empire.

The following excerpt from the *Akbar-Nama* chapter titled "Expedition of the World-Conquering Army of the Shahinshah for the Conquest of the Country of Gujrat" describes how Akbar believed that the expansion of his empire would benefit the

populations of the newly acquired territories, including the "oppressed":

"The pious lord of the world always regards external administration as the decoration of the world of reality, and without any contamination of human desires recognises that his own satisfaction lies in the soothment of mankind. He always perceives what things are most important, and applies himself to the gathering together of the distressed and dispersed ones of the age. In conquering countries and cities his first thought is to inquire into and sympathise with the condition of the oppressed. Hence wherever the rulers act wisely and exert themselves to protect their subjects, he does not set himself to conquer that country though the means for doing so be at hand. And although it is clear to the front of his holy mind—which is truth's arena—that every extension of territory brings the plurality of the world into the majestic uniqueness of one of the sublime administrators of justice, and thus brings the highest form of worship to the bridal-chamber of manifestation, yet as the motive of his genius is the preservation of the general public—who are a wondrous trust from God—he does not address himself to such worship."

—Michele Louro

Source

H. Beveridge, trans., *The Akbarnama of Abu-L-Fazl*, Vol. 2 (Calcutta: Asiatic Society of Bengal, 1897–1939), 536.

Keenly aware of his limitations as a Muslim emperor of a largely non-Muslim state, Akbar actively worked to breach the gap between ruler and subject in Rajasthan and elsewhere. He abolished the *jizya*, a head tax for non-Muslims, and he sought religious and philosophical consultation from representatives of many religions including Hinduism, Jainism, Buddhism, Zoroastrianism, and even Christianity. Akbar's patronage of the arts also extended to non-Muslim contributors, especially Rajput painters and architects. The architectural syncretism of Akbar's capital in Fatepuhr Sikri also reflects the eclectic influence of Rajput, Mughal, Persian, Afghan, Jain, and Hindu styles.

Akbar's subjugation of Rajasthan and other kingdoms reflected a multifaceted tactic of military conquest and diplomatic negotiation that worked to create a new composite political order characterized by accommodation and inclusion. Many histories of the Mughal empire written during the British colonial period and more contemporary polemic appraisals have characterized the Mughals as oriental despots seeking plunder and conversion by the sword. However, the historical record of Akbar and his incorporation of Rajputs into the imperial state machinery suggests that early Mughal statecraft was a more creative, pragmatic, and inclusive endeavor.

—Michele Louro

Bibliography

- Richards, John F. *The New Cambridge History of India: The Mughal Empire*. Cambridge: Cambridge University Press, 1993.
- Schwartzberg, Joseph E., ed. *A Historical Atlas of South Asia*. Collaboration with Shiva G. Bajpai. Oxford, UK: Oxford University Press, 1992.
- Ziegler, Norman P. "Some Notes on Rajput Loyalties during the Mughal Period." In *Kingship and Authority in South Asia*, edited by John F. Richards. Madison: South Asian Studies Publication Series, University of Wisconsin Press, 1978.

The Mughal Invasion of the Deccan and the Maratha Response

First under the Mughal rule of his father Shah Jahan (r. 1627–1658) and then as the emperor himself, Aurangzeb (r. 1658–1707), also known as Alamgir, solidified Mughal power in the Deccan. Aurangzeb's reign initiated an era of both expanding Mughal scope and power and of fracturing cohesion, indicating imperial weakening. Aurangzeb has been maligned for practicing a brutal form of control, particularly targeting non-Muslim populations and even non-Sunni Muslims. With the same fervor he brought the loosely united Deccan sultanates directly under Mughal rule, which encouraged minorities to rebel against his intensifying power. In particular, Aurangzeb's foray into the Deccan is directly responsible for the rise of the Marathas in the western Ghats and around Pune as a concerted enemy of the Mughal state.

At the time of Shah Jahan's decision to annex the Deccan, the region was divided into three kingdoms: Ahmednagar, Bijapur, and Golconda. All three were Muslim states, and large numbers of Shia also inhabited the area, which was a considerable irritation to the orthodox Aurangzeb. His first attempts to subdue the area were frustrated by his elder brother Dara Shikoh, who convinced Shah Jahan to withdraw Mughal forces from the Golconda fort. Aurangzeb had to bide his time until 1658, when he defeated his brother, dispatched other claimants to the throne, and placed his father under house arrest until his death in 1666.

Rather than facing the prospect of war, Bijapur accepted Mughal suzerainty for which

it received as a reward the western Ghats and Pune, now the heartland of Marathas, wherein they founded a new Maratha kingdom under the Maratha hero Shivaji. Because of this new kingdom's direct proximity with the Deccan and the difficult terrain to control, the Marathas became a great concern for the Mughal empire. In the mid-1600s the Marathas formed a confederacy behind the charismatic Yavada ruler Shivaji (Shivaji). Shivaji challenged the Muslim oppression of the Hindus and led the Marathas in an uprising against the Muslim kingdom of Bijapur during 1655–1659. That victory enabled the Marathas to establish an independent state in the western Ghat mountains. Alarmed by Shivaji's success, the Mughal emperor Aurangzeb sent an army against him, but Shivaji's daring midnight attack defeated it. In 1664 Shivaji's forces sacked Surat, one of the largest Mughal ports, taking immense booty. In response Aurangzeb dispatched one of his ablest generals, Mirza Raja Jai Singh, with some 100,000 men. Jai Singh pursued Shivaji to Bijapur, where he defeated and forced him to sue for peace at Purandhar in 1665. The Maratha leader agreed to surrender most of his fortresses and pay compensation. He then traveled to Agra to pledge his allegiance to the Mughal ruler but was placed under house arrest inside the palace. Nevertheless, he escaped in August 1666 and rallied his supporters against the Mughals. Over the next two years he not only had won back all the lost territory but also had significantly expanded his realm, reorganizing his army and collecting taxes from Mughal regions. He sacked Surat a second time in 1670 and invaded Khandesh and Berar. Although the arrival of Mughal reinforcements, under Bahadur Khan, checked the Maratha's expansion by 1672, Shivaji turned his attention to Bijapur, Golconda, and Jinji and neighboring territories. He was the first Indian ruler to establish a naval force, which he used for defense and trade. In 1674 Shivaji proclaimed himself an independent sovereign (Chatrapati), but his rule proved to be short-lived. In April 1680 he died of illness in his mountain stronghold of Rajgarh.

In co-opting his enemy Shivaji, Aurangzeb was following a time-honored Mughal practice of integrating hostile elements into the empire. However, in the second half of his reign Aurangzeb's attitude toward the non-Muslim subjects

of his empire began to harden. In the late 1680s he went to war against the Marathas, this time led by Shivaji's son Sambhaji, who provided shelter to the rebellious Crown Prince Muhammad Akbar, the son of Aurangzeb, which provoked hostilities with the Mughal emperor. In 1681 Aurangzeb and his enormous courts (said to be numbering half a million men) came to the Deccan, where they stayed for the next quarter of a century. Aurangzeb conquered the Deccan kingdoms of Bijapur and Golconda during 1686–1687 and then turned his attention to the Marathas. In early 1689 Sambhaji was betrayed by one of his companions, who helped the Mughal forces locate and capture him at Sangameshwar. Following Sambhaji's execution in March 1689, Aurangzeb tried to absorb his kingdom but was unable to suppress the Marathas, who fought a protracted war of resistance with guerrilla tactics that kept Aurangzeb's troops committed but victory elusive. As Aurangzeb became mired deeper in the Maratha war, his control over his northern territories slackened. By the latter half of the 1700s the Marathas, with their organized military force opposed to Mughal rule, controlled the most territory, resources, and forces outside of the Mughal reach itself. The continuation of Mughal policies, particularly those aimed at non-Muslim minorities like the Sikhs, continued with Aurangzeb's son and successor Bahadur Shah (r. 1707–1712), leading to further fractures and driving local leaders to claim more autonomy.

—*Maryanne A. Rhett*

Bibliography

- Chand, Hukam. *History of Medieval India*. New Delhi: Anmol Publications, 2005.
- Chhabra, G. S. *Advanced Studies in the History of Modern India*, Vol. 1, 1707–1803. New Delhi: Lotus, 2003.
- Keay, John. *India: A History*. New York: Grove, 2000.
- Richards, John F. *The Mughal Empire*. Cambridge: Cambridge University Press, 2002.

Constructing Empire— Portuguese Ideas of Expansion, Particularly toward the East

European expansion, which later led to colonialism, began in the early fifteenth century when Portugal conquered the city of Ceuta, in

Morocco. A maritime kingdom, Portugal was the first to venture into the ocean because of its relative political stability in comparison with its contemporaries. Also, Prince Henry “the Navigator” was eager to make his fortune through obtaining the rights to commodities found in the lands discovered. Although he never actually sailed on any of the expeditions, his willfulness is what drove the caravels down the eastern coast of Africa. The lure of African gold that had, up until this point, only been traded by the Muslim and Jewish merchants, kept the Portuguese moving south despite the difficulties they encountered. They eventually did discover gold in the famous “gold coast,” but their southward journey did not stop. By the time João II became king, the goals had changed. By the late fifteenth century, they started to believe that rounding the southern tip of Africa would lead them to Asia. Finding a sea route to Asia would catapult the Portuguese into becoming the leaders of the spice trade in Europe and going to the Spice Islands by sea was cheaper, faster, and safer than going the traditional land route of the Muslims. This dream was realized in 1488 when Bartolomeu Dias rounded the southern tip of Africa, a place he would dub the “Cape of Storms” for the poor weather and rough waters he encountered there. The king would name it officially the “Cape of Good Hope” to symbolize the fortune they hoped to find on the other side. Dias would have gone all the way to India, but his crew mutinied, and he was forced to turn back. Finally, Vasco da Gama captained an expedition and finally reached India in 1498. Other European countries, especially Spain, had been attempting to finance their own explorations, but this was stopped by a bull from Pope Nicholas V in 1455 entitled *Romanus Pontifex*, which threatened ex-communication to any non-Portuguese vessels as it proclaimed everything south of the Canary Islands the realm of the Portuguese. This was later confirmed in 1497 with the Treaty of Tordesillas, which drew a line of demarcation 370 leagues west of the Cape Verde Islands, effectively giving everything east of that line to the Portuguese, and the rest to the Spanish.

The original empire that Portugal created was one of a series of trading posts rather than an empire of conquest, as the Spanish created. This phenomenon occurred not because the

Portuguese were necessarily nicer than the Spanish, but circumstances led to such maneuvers. As a small country, Portugal did not have enough people to even populate the Azores and Madeira Islands, let alone the numerous other trading posts they built along the coasts of Africa and Asia. Even if they had the population, neither the Portuguese, nor any of the Europeans, had the military technology to be able to forcibly take any of these areas because of the distance required to travel, and the fact that the Asian trading posts were all established in places where people already lived. The presence of powerful empires in the region prevented the Portuguese from even thinking of attempting a military conquest. As a result, the Portuguese mainly concentrated on trading spices and other luxuries from the east, and the king used this to make the treasury quite rich. With the expansion into the east came the inevitable arrival of missionaries. The Franciscans, Dominicans, and Jesuits all sent out missionaries to the various lands of the east, for the purposes of converting the people to Christianity. The Jesuits in particular were quite successful, converting thousands of people in India and Japan. The success led them to believe that in addition to making enormous profits, they were also doing God's work in the process. Despite this, the Portuguese were never truly able to expand in the east as they did in the west and in Africa, although they had quite an influence. Even after the Portuguese were replaced by the Dutch as the primary traders of spice in Asia, the Portuguese culture remained long past the exit of the Dutch in the nineteenth century.

—*Monique Vallance*

Bibliography

- Diffie, Bailey, and George D. Winius. *Foundations of the Portuguese Empire: 1415–1580*. Minneapolis: University of Minnesota Press, 1977.
- Russell-Wood, A. J. R. *The Portuguese Empire, 1415–1808: A World on the Move*. Baltimore: Johns Hopkins University Press, 1992.

Spanish Settlement of the Antilles

Upon the encounter by Christopher Columbus (1451–1506) with the New World in 1492, the fate of the Spanish Antilles would be characterized by demographic catastrophe resulting in

the deaths of thousands of indigenous peoples. The Spanish Antilles, composed of Spanish dominions in the Caribbean Sea that included such islands as Cuba, Puerto Rico, and Hispaniola, were settled by the Spanish in the early sixteenth century as part of the first wave of European settlement in the New World. The depletion of the Antilles' natives due to Spanish mistreatment, slavery, and disease resulted in the need to import African slaves to work the cash crop economies developing in the Caribbean colonies. The shift from indigenous to African coerced labor would have immense consequences for the subsequent history of the New World.

A group of islands, similar to the Antilles, existed in the minds of Europeans prior to Columbus's voyage. It had previously appeared in medieval maps as a collection of islands somewhere within a large area between the Canary Islands and India. Some scholars suggest that the term "Antilles" is a corruption of the lost continent of Atlantis. Following the 1492 arrival of Columbus, Europeans acknowledged that the dispersed lands consisted of an extensive archipelago within the Caribbean Sea and the Gulf of Mexico. As a result, the term "Antilles" was commonly assigned to this geographic region, and the term "Sea of the Antilles" entered common usage as an alternate name for the Caribbean Sea.

The initial contact between the Spanish and the native Arawak people of the Antilles was fraught with conflict. The expeditions that Columbus and others had taken to the Caribbean were intent on establishing their dominion and extracting wealth for the glory of Spain. Many of the Spanish cadres on these exploratory expeditions were composed of Castilian soldiers, veterans of the Reconquista in the south of Spain. Their familiarity with non-Christian "heathens" was relegated to Muslim Moors, whom they abhorred intensely. These men went to the New World with their old prejudices and worldviews, and the consequences would prove to be devastating for the native Arawaks. The Spanish imposed their rule and enslaved many of the natives, resulting in a series of rebellions violently repressed by Spanish arms.

The development of a massive agrarian enterprises in Spanish America, known as the *encomienda* system of land distribution, also

THE DEVASTATION OF THE INDIES: A BRIEF ACCOUNT

Bartolomeo De Las Casas (1474–1566) was a Spanish cleric who had formerly owned an *encomienda* in the New World and had been witness to the Spanish exploitation and enslavement of the natives. His recommendation was to replace natives with African slavery, which he regretted later in his life.

“The common ways mainly employed by the Spaniards who call themselves Christian and who have gone there to extirpate those pitiful nations and wipe them off the earth is by unjustly waging cruel and bloody wars. Then, when they have slain all those who fought for their lives or to escape the tortures they would have to endure, that is to say, when they have slain all the native rulers and young men (since the Spaniards usually spare only the women and children, who are subjected to the hardest and bitterest servitude ever suffered by man or beast), they enslave any survivors. With these infernal methods of tyranny they debase and weaken countless numbers of those pitiful Indian nations.

From that time onward the Indians began to seek ways to throw the Christians out of their lands. They took up arms, but their weapons were very weak and of little service in offense and still less in defense. (Because of this, the wars of the Indians against each other are little more than games played by children.) And the Christians, with their horses and swords and pikes began to carry out massacres and strange cruelties against them. They attacked the towns and spared neither the children nor the aged nor pregnant women nor women in childbed, not only stabbing them and dismembering them but cutting them to pieces as if dealing with sheep in the slaughter house.”

—Abraham O. Mendoza

Source

Bartolomeo De Las Casas, *The Devastation of the Indies: A Brief Account*, translated by Herma Briffault (Baltimore: Johns Hopkins University Press, 1982), 31–32.

caused enormous problems for the Arawaks. This system consisted of massive tracts of land distributed to Spanish colonists and included the enslavement of the local indigenous people. In tandem with mistreatment by their new Spanish overlords, subject to long hours working in the developing cash crop economies of the Caribbean, the rising death toll of the Arawaks resulted in their near annihilation. Many died from the introduction of European diseases such as smallpox and measles, as the Arawaks had little resistance to these new diseases.

The Spanish colonial administration also consisted of Catholic officials sent to convert the indigenous peoples to Christianity. Many of these officials looked apprehensively at this system of exploitation of the local populations and advocated against it back in Spain. The *encomienda* system of the Antilles, which eliminated nearly the entire population, was used as a key example in the criticisms of these clergymen. The debate over whether native peoples possessed souls and could be converted to Christianity

also played a role in their arguments. Ultimately, Bartolomeo De Las Casas (1474–1566), an advocate for the rights of American indigenous peoples, proposed that rather than enslave Native Americans, *encomendados* should import African slaves. The argument was that African slaves were better adapted to the harsh climatic conditions characteristic of the Caribbean sugar plantations. With papal backing, the New Laws of 1542 were passed in the Spanish dominions to prevent the exploitation and enslavement of Native Americans. The implementation of these laws was lax, and they were ignored for the most part. However, they did result in the growing importance of the importation of African slaves and the subsequent importance of the slave trade to the economy of Spanish America.

English, Dutch, and French incursions into the Spanish Caribbean, coupled with wars in Europe, resulted in their growing influence in the region and eventual possession of some of the former Spanish dominions in the Antilles. Their emerging presence in the New World also built

on the legacy of the African slave trade and the use of the slave trade in cash crop economies.

—*Abraham O. Mendoza*

Bibliography

- Babcock, William H. "Antillia and the Antilles." *Geographic Review* 2(9) (1920): 109–124.
- Crosby, Alfred W. "Conquistador and Pestilencia: The First New World Pandemic and the Fall of the Great Indian Empires." *Hispanic American Historical Review* 3(47) (1967): 321–337.
- Elliot, J. H. *Empires of the Atlantic World: Britain and Spain in America, 1492–1830*. New Haven, CT: Yale University Press, 2006.
- Elliot, J. H. *Spain and Its World, 1500–1700*. New Haven, CT: Yale University Press, 1989.
- Scelle, G. "The Slave-Trade in the Spanish Colonies of America: The Assiento." *American Journal of International Law* 3(4) (1910): 612–661.

Portuguese Settlement of Brazil

Until 1492, the Portuguese had been leading Europe in the Age of Discovery. The Portuguese had already sent their ships around the coast of Africa and were only six years away from reaching India. The Castilian queen, Isabel, desperate to catch up to the Portuguese, funded what seemed to many a foolish scheme: Christopher Columbus's expedition to find a western route to Asia. Instead Columbus encountered a new continent, and King Fernando and Queen Isabel were quick to send men to explore this new land. The Portuguese king, Manuel I, was not to be left behind and, thanks to the Treaty

of Tordesillas that allowed the Portuguese to explore the eastern part of the continent, was not far behind in sending ships west.

In 1500 an expedition led by Pedro Álvares Cabral landed on the shores of northeastern Brazil. The expedition included 13 ships and more than 1,000 men. Despite the enormity of the territory that would eventually encompass Brazil, the Portuguese king would not pay much attention to it at first. Unlike the other parts of South America, it was not immediately obvious what riches Brazil would provide for Portugal. The only thing that was found was brazilwood, a tree that could be processed in order to make dye for textiles. Seeing that Brazil was not going to give an immediate payout, King João III decided to move away from the royal monopoly and created 15 hereditary captaincies in order to cut administrative costs. These captaincies were given to various noblemen as rewards, which allowed them to administer their territories and the people in them as they chose, but they were required to pay 20 percent, or the *quinto*, to the king. However, most of these captaincies failed except for Pernambuco and São Vicente. Pernambuco only prospered because of the building of sugarcane mills, and after this sugar became Brazil's main export until the end of the seventeenth century.

With the failure of the captaincies, the Crown reverted Brazil's administration to royal control. In 1549 King João III sent Tomé de Sousa to establish a governorship and a capital, Salvador de Bahia. During this time the Portuguese met with trouble from both the French and the Dutch, who attempted to subvert Portuguese business by sending their own men in to trade with the native Tupi. This indigenous people, fewer in number than the other great civilizations of Ibero-America and living mostly in the interior, offered little resistance, making it easier for the Portuguese to settle in Brazil. Despite royal control, settlers continued to try to enslave the Tupi, efforts that largely failed because the natives too frequently escaped or died from oppressive labor conditions. Sousa also brought to Brazil the first Jesuits, who became another obstacle to the enslavement of the natives. Jesuit missionaries protested against the abuse of the Tupi and fostered their Christianization. Finally,



Portuguese admiral Pedro Álvares Cabral comes ashore near Porto Seguro, Brazil, in April 1500. (Library of Congress)

➤ HOW TASTY WAS MY LITTLE FRENCHMAN?

While the Portuguese attempted to settle Brazil, the Dutch and French were also attempting to encroach. The Tupi, the indigenous people of Brazil, were a single nation but divided into different ethnic groups who often warred with each other, and the European traders were able to use these rivalries to their own advantage. A particularly fierce rivalry occurred between the Tupinambas, who were allied with the French, and the Tupiniquins, allied with the Portuguese. Prisoners captured as a result of these wars were often killed in anthropophagic rituals, what is more commonly known as cannibalism. Once a person was eaten, those who had taken part in the ritual would then take on a new name, as they believed that the ritual changed them.

An eyewitness account came in the form of Hans Staden, a German gunner who was captured by the Tupinamba in 1554. According to Staden, the Tupinamba captured him while he was out hunting with his slave and mistakenly thought he was Portuguese. He was abducted by two brothers whose father had been killed by the Portuguese and were looking for revenge. The brothers presented Staden to their uncle, who told him that he would be ritually eaten after the appropriate

preparations. Staden claimed to be French because he knew that the Tupinamba were friendly with the French, and he hoped that if they found a Frenchman, he would verify Staden's story in order to save a fellow European and Christian. A Frenchman was found, a man who had been adopted as a "son" by a man in the next village. Staden was disappointed when the man told the Tupinamba that Staden had not understood a word of the French he had spoken to Staden. Despite this setback, Staden was eventually able to convince the Tupinamba that he was indeed not Portuguese, even if he was not French. Over the next year, Staden escaped and was recaptured several times. Eventually he was able to return to Germany, where he wrote *True Story and Description of a Country of Wild, Naked, Grim, Man-eating People in the New World, America* in 1557. This account confirmed what Europeans already thought of indigenous Americans: cruel, wild, and cannibalistic. Some historians claim that Staden's accounts of the cannibalistic rituals are exaggerated and unrealistic; nevertheless, his account provides some important information on the Tupi people and their relationships with the Europeans.

—Monique Vallance

relatively few Portuguese settled in Brazil, and those who did often intermarried with indigenous women.

More changes transformed the administration of Brazil through the seventeenth century. During the 60-year Habsburg reign over Portugal, King Philip II split Brazil into two *estados* ("states"): the Estado do Brasil and the Estado de Maranhão. Once the Spanish were overthrown in 1640 the system was kept, but the governors began referring to themselves as viceroys. In the 1690s gold was discovered in Minas Gerais, which changed the economy of Brazil from sugar-based to gold-based and dramatically increased imports of African slaves. In addition, settlers in Brazil's southern regions encroached on Spanish territory in order to gain more resources. In 1679 Manuel Lobo founded the Colônia de Sacramento, an important fort as well as a center for black market trading among Spanish

and Portuguese alike. Although the Portuguese and Spanish would fight over it several times, the town remained a part of Brazil.

Portugal's settlement of Brazil differed from the colonization of other European powers in the Americas. Although conflict with indigenous peoples was minimal, it took almost 200 years before the colony became a lucrative resource for the Portuguese. The settlement of Brazil would also be the jumping-off point for the African slave trade; over 4 million slaves were brought to Brazil in the 300 years of colonial history.

—Monique Vallance

Bibliography

- Bethell, Leslie. *Colonial Brazil*. Cambridge: Cambridge University Press, 1987.
- Capistrano de Abreu, João. *Chapters of Brazil's Colonial History, 1500-1800*. Oxford, UK: Oxford University Press, 1998.

Schwartz, Stuart B. *Sugar Plantations in the Formation of Brazilian Society: Bahia, 1500–1835*. Cambridge: Cambridge University Press, 1986.

Revolutionary Currents— Development of Representation

Regardless of the claims made by “enlightened” absolutist monarchs (Catherine II of Russia, Joseph II of Austria, and Frederick II of Prussia) that the interests of their subject peoples were heeded through their divine authority, in actuality many polities in Europe retained tightly reigned monarchical structures despite the popularity of the political discourses of the Enlightenment. However, significant developments in Britain and in its American colonies illustrated

the establishment of representative institutions as inspired by political thinkers such as Baron de Montesquieu, John Locke, and Thomas Hobbes. The “mother of Parliaments” in England managed to put itself at the forefront of the formation of public policy after slowly taking it from the Hanoverian monarchs, who were distracted by the politics of the Holy Roman Empire. The ebbing power of the monarchy in England had already been slowly devolved to Parliament since the days of the English Civil War (1642–1651) and the Glorious Revolution (1688). In British America colonial representative institutions, which were modeled on English political structures, were also established, setting the precedent for the subsequent independent American republic.

The English Civil War brought the obstinate advocate of monarchical divine right, Charles I, to confront Parliament, which was unwilling to give up its traditional legal privileges in the running of the English realm. The defeat of Charles I and his royalist Cavalier supporters did not end the prospect of an English absolutist state but actually brought it into existence through the establishment of the Cromwellian Protectorate. Oliver Cromwell, designating himself lord protector, dissolved Parliament due to his suspicions of potential dissension and political chaos following the end of the English Civil War. After the collapse of the Protectorate shortly after Cromwell’s death, Charles II was restored to the kingship with greater limitations to his power. However, his successor, the fiercely Catholic James II, much like his grandfather James I and father Charles I, believed that it was his duty to restore the English Crown’s absolute right to govern the realm free from the restrictions imposed by English law and the agency of Parliament.

Nonetheless, James II was replaced in 1688 by William of Orange, the Dutch (United Provinces) stadtholder who was the husband of the sister of James II. This event, known as the Glorious Revolution, thereby established England as a constitutional monarchy in which the king was bound to share political power with Parliament and was bound to English law. Subsequently, Parliament’s power steadily increased at the expense of the Crown, particularly under the rule of the Hanoverian kings (George I, George II,

► ELECTION OF THE HOLY ROMAN EMPEROR— THE ROLE OF THE ELECTORS

While the election of the Holy Roman Emperor, who symbolically ruled over the German realms of Central Europe, along with Bohemia, Hungary, Transylvania, and smaller Italian states and principalities, gave electors symbolic political power over the selection of the sovereign, it did not form the establishment of a body that truly represented the majority of the people. Electors, since the papal Golden Bull of 1356 that established this voting process, were a small group of hereditary nobility who ruled directly over their lands with little to no regard for the desires of the emperor. The emperor, typically a Habsburg who already ruled directly over Austria, Bohemia, and Hungary as well as smaller territorial enclaves in Central Europe, was fully aware of his circumscribed political position. Many of these electors, such as the elector of Brandenburg (later Prussia) and the elector of the Palatine, the elector of Saxony, or the elector of Bavaria, were kings or high nobles in their own right, contending at times for power with the emperor himself. Despite the continuity of the figurehead position of the Holy Roman Emperor well until 1806, the disparate Central European kingdoms held their own amid attempts by the Habsburgs (e.g., Thirty Years’ War) to centralize their power.

—Abraham O. Mendoza

and George III), who as German princes were more inclined to involve themselves in continental affairs and allow the English Parliament greater agency in domestic and foreign policy. The establishment and growing power of English political parties, the Tories and the Whigs, allowed for greater political participation of the upper echelons of British society, which consisted of mainly aristocrats and very wealthy commoners. In the late eighteenth century the development of the office of prime minister and the institution of the cabinet were firmly embedded in the representative institutions of late early modern Britain.

Across the Atlantic, British America, since its inception in 1607 at the founding of Jamestown and the founding of the Massachusetts Bay Colony in 1620, had developed representative institutions characterized by the inclusion of landholders, townsmen, and merchants as voters and active participants in government. While women, African slaves, indentured servants, and children were excluded from the vote and had little to no political rights, there were greater opportunities for freemen to attain representation vis-à-vis colonial governments. The House of Burgesses in Virginia, first elected in 1619, is an indication of the popular awareness of Enlightenment political ideals by wealthy colonial elites. Most of these colonial representative governments, in Virginia, New York, and Massachusetts, were modeled on the British two-house legislature composed of the House of Lords and the House of Commons. While loosely bound to the English Crown and Parliament through national sentiment, trade interests, and defense purposes, these autonomous legislatures were de facto sovereign entities that would fight British authorities after 1776 to defend their rights when Crown and Parliament would try to institute taxation measures after nearly a century of neglect.

—Abraham O. Mendoza

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century 1713–1789*. 4th ed. New York: Longman, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. Malden, MA: Blackwell, 2001.

Arena for Conquest— Early Modern Italy

Italy was a site of conquest and occupation by foreign powers throughout the early modern era. Beginning with the French invasion in 1494 and ending only with unification in the nineteenth century, Italy found itself prey to French, Spanish, and Austrian rule. The conquest that resulted in both the destruction and dispersion of the Italian Renaissance also laid the political, technological, and military foundations for European hegemony in the wider world.

When the French invaded Italy in 1494, many Italians wondered how a people they considered medieval and barbaric could so easily conquer a more advanced and sophisticated civilization. However backward they appeared to the Italians, the French under the young king Charles VIII were unified, prosperous, and strong, while Italy remained divided politically into a number of independent states. As each sought to expand its own power at the expense of the others, no one city-state had the strength to stand up to the massive new monarchies beyond the Alps.

Fifteenth-century Italy was divided into three major regions: feudal domains in the south, Papal States in the middle, and independent



Holy Roman Emperor Charles V defeats French king Francis I at the Battle of Pavia in February, 1525. The battle was a decisive event in the struggle between the Habsburg and Valois dynasties over control of Italy. (Hulton Archive/Getty Images)

➤ MACHIAVELLI ON LIBERTY AND EMPIRE

In these passages, Machiavelli makes the argument that the common good is cherished by republican governments more than by princes. He argues also that free citizens in a republic are more able to attain greatness or empire. However, there is a central irony here because the freedom that allows one state to conquer another necessarily deprives the other state of its liberty. Historians still debate which Machiavelli valued more, liberty or empire.

“2. It is easy to see how this love for a free life arises in peoples, because experience shows that cities never have grown in dominion and riches except when they have lived in freedom. Truly it is wonderful to observe what greatness Athens attained in the space of a hundred years, after she liberated herself from the tyranny of Pisistratus. And it is much more wonderful to observe what greatness Rome attained after she liberated herself from her kings. The reason is easy to grasp, because what makes cities great is not individual good but the common good. And beyond doubt this common good is attended to only in republics,

because all that advances it is put into execution. Even though it does harm to this or that private person, there are so many whom the said common good benefits, that they are able to go ahead in opposition to the wishes of those few who are injured by it. . . .

3. The contrary happens when there is a prince, for in most instances what benefits him injures the city, and what benefits the city injures him. Hence when a tyranny is set up over a free community, the least evil it can bring to such cities is that they make no more progress and do not increase further in power or wealth; generally, or rather always, it happens that they go backward.”

—Rebecca Boone

Source

Niccolò Machiavelli, from *Discourses on Livy*, book II, chap. 2, from Machiavelli, *The Prince and Other Works*, translated and edited by Allan H. Gilbert (New York: Hendricks House, 1964).

city-states in the north. The latter included the duchies of Savoy and Milan as well as the republics of Florence, Genoa, and Venice. In 1494 Ludovico Sforza, the tyrannical duke of Milan, invited the French army into the peninsula to make good on a claim to Naples and to attack his rivals. Although he simply continued the tradition of seeking temporary foreign intervention in local disputes, this time the French decided to stay and conquer the entire peninsula. Equipped with new mobile artillery and strengthened by the tight infantry formations of Swiss mercenaries, the French army faced almost no military opposition from the Italians. Some states surrendered without a fight, terrified by a brutality never before seen in previous Italian conflicts. Other states welcomed the French as liberators from traditional enemies until, that is, the French occupation became oppressive and intolerable.

To counter the threat from France, several states invited the Spanish army, led by Maximilian I, into Italy to defeat the French. The Italian

Wars, fought between the Spanish Habsburg and French Valois dynasties, lasted from 1494 to 1559. The Spanish, with organized battle formations and effective use of the arquebus, a kind of primitive musket, finally pushed the French from the peninsula. The Treaty of Cateau-Cambrésis (1559) established direct Spanish rule over Milan, Naples, Sicily, and Sardinia and reduced previously independent republics to satellite status. Most notably, Spanish domination ended the long tradition of republican government in Florence. Venice, however, survived as an independent republic until the Napoleonic era. After the war of Spanish Succession in 1714, Austria replaced Spain as the dominant force in northern Italy.

The Italian Wars contributed to the dispersion of Italian Renaissance culture throughout Europe. Italian artists, architects, and engineers (Leonardo da Vinci among them) brought their talents and perspective to northern courts. In an age before nationalist sentiment, talented and knowledgeable Italians often showed little loyalty

to their own states and offered their services to patrons north of the Alps. In fact, many Italian elites, including generals, diplomats, and government officials, used their expertise to carry out the foreign domination of their own homeland.

The invasion of Italy had enormous consequences for the theory and practice of conquest. Vast infantry formations rendered obsolete the knight on horseback, and modern warfare engendered the modern bureaucratic state. The wars also gave birth to political science, as occupational governments led to a crisis of political legitimacy. The Florentine political thinker Nicolò Machiavelli, in an effort to find meaning in the chaos and disorder of contemporary events, was moved to provide the first objective analysis of power. He also sought solutions to the problem of political liberty. To him, the destruction of Florentine self-government was a result of moral weakness in his fellow citizens, a lack of *virtù*, loosely defined as courageous dedication to the political community. Contemporary Italians generally showed little appreciation for the role of superior technology, organization, and resources in the military success of France and Spain.

For the victors, the conquest of Italy provided a training ground for empire. When Cortés and Pizarro conquered and destroyed the great empires of the Aztecs and Incas to establish a lasting dominion in the new world, they did so with the skills, technology, and veteran soldiers of the Italian Wars. The lessons of hegemony would be used repeatedly as the European powers extended their reach all over the globe centuries afterward.

—Rebecca Boone

Bibliography

- Guicciardini, Francesco. *The History of Italy*. Translated and edited by Sidney Alexander. Princeton, NJ: Princeton University Press, 1969.
- Hall, Bert S. *Weapons and Warfare in Renaissance Europe: Gunpowder, Technology and Tactics*. Baltimore: Johns Hopkins University Press, 1998.
- Hanlon, Gregory. *Early Modern Italy: Three Seasons in European History*. London and New York: Palgrave Macmillan, 2000.
- Machiavelli, Nicolò. *The Prince and the Discourses*. Translated by Luigi Ricci. New York: Random House, 1950.

The Language of Conquest in Early Modern Europe

The term “conquest,” meaning acquisition by force of arms, usually refers to a military operation with the goal of expanding territory. There was nothing new about the desire for states, kingdoms, and principalities to expand during 1450 and 1750. However, the way that wars of aggression were waged and the manner in which they were justified changed dramatically in the first global era. Western Europe inherited a theory of conquest from the Roman empire that was modified by legal scholars in the Middle Ages. The language of conquest later evolved to suit the interests of the two most important colonizing forces of early modern Europe: the Spanish and British empires.

Medieval ideas about so-called just war defended wars of aggression if they involved the claim of territories acquired legitimately by marriage or inheritance. The confusing nature of feudal law almost ensured a steady flow of contesting claims to territory and hence a state of almost constant warfare. Both the Hundred Years’ War (1337–1453) and the French invasion of Italy (1494) were examples of just wars based on feudal claims, even though both aimed at the conquest of foreign territory.

The revival of Roman law in the High Middle Ages also revived the Roman language of conquest. In this language, conquest was connected to the idea of *imperium*, or authority. The word “imperium” originally referred to the authority of Roman magistrates but gained the sense of military command by the time of Augustus. By the end of the empire the term “imperium” meant unlimited authority in both the civil and military spheres. Eventually the term “imperium” referred to the ultimate indivisible authority that the Romans claimed over an expanded territory that included various peoples. This was the Imperium Romanum, or Roman empire. The unquestioned legitimacy of the Roman empire automatically justified the aggressive wars that created it.

The emergence of the Roman concept of empire in the Renaissance greatly altered the language of conquest. By the sixteenth century,

empire was described as both natural and universal. In the writings of Machiavelli one sees the term “empire” used to describe a state organically destined to grow. Thus, conquest became necessary for states seeking *grandezza*, or greatness. In his description of the natural progression from state to empire, Machiavelli did not attempt to include a moral justification of conquest. However, his advice on how this could be done was extremely influential to early modern rulers and developed into the amoral political language known as “reason of state” most famously practiced by Cardinal Richelieu in the seventeenth century. In this way, aggressive war became the natural outgrowth of the nation-state.

Because the Roman empire claimed to encompass the entire known world, its rulers claimed an authority that was universal in scope. Medieval jurists claimed the Holy Roman emperor to be *de jure* lord of all the world, or *dominus mundi*. As the ruler of a Christian empire, the Holy Roman emperor claimed divine authority. In reality, medieval emperors were unable to establish universal rule due to their lack of military power. However, by the sixteenth century innovations in military technology, strategy, and bureaucracy provided rulers with greater military force. For example, the Spanish king turned Holy Roman emperor Charles V (1500–1558) had both the will and the resources to try to conquer and make good his claim to universal rule. His wars of conquest resulted in the domination of Italy and the establishment of an overseas empire in the Americas. The imperial language of the Spanish empire defended aggressive war as God’s will.

The conquest of the Americas brought several new considerations into the theory of conquest. Like the Romans and the Chinese, early modern Europeans tended to define the status of those outside of their civilization as barbarian. They followed the lead of Cicero, who claimed that those outside of Roman civilization were by nature fit only for servitude and that they benefited from Roman domination. When Christianity replaced civility as the defining feature of the Roman empire in the Middle Ages, it provided a defense for the conquest of non-Christians, both pagan and “infidel.” This attitude appeared in

the predatory nature of Portuguese trade in the fourteenth and fifteenth centuries (promoted as a Crusade to take resources from the infidels) and in the Spanish conquest of the Americas. The Spanish empire remained tied to the Christianizing mission until its end, although the desire for gold and glory undoubtedly also played a major role in its existence.

In the sixteenth and seventeenth centuries the right of conquest extended within Christendom as a result of the Protestant Reformation. The right to wage war against heretics, whether Protestants or Catholics, went largely unchallenged. Much gold from the New World was funneled into Spanish attempts to reclaim large areas of central Europe and the Low Countries for the Catholic Church. Religious warfare raged throughout England, France, and central Europe until the end of the seventeenth century, when religious passions died down and wars once again concerned the acquisition of territory.

A new justification of conquest emerged with the rise of the British Empire in the seventeenth and eighteenth centuries. By that time, a desire to justify conquest on rational and moral grounds replaced the militarism and religious fervor that had sparked earlier conquests. The British defended their empire building with the language of public benefit. Because it was based on sea power, the British Empire could claim itself as being distinct from previous militaristic and land-based empires. This maritime conception of the British Empire focused on commerce rather than war, natural law rather than religion. This accorded well with the change in the nature of the European nobility from a warrior elite to an aristocracy distinguished by the courtly values of taste and education. However, the mind-set that equated civilization with good manners further justified the domination of non-Europeans who, because they lacked these marks of European civility, could be considered less than human and therefore fair game for conquest.

The process of conquest played an important role in creating the nation-state. Not only did it result in the creation of government bureaucracies necessary to mobilize resources for war, but it also served in the creation of national identities as conquerors sought to justify the domination of other peoples. On the other hand,

the urge to expand empires across the globe has played a large role in the rise of globalization. In conclusion, the language of conquest has continued to change until the present, but unfortunately the destructive consequences of conquest remain the same.

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Bibliography

- Armitage, David. *The Ideological Origins of the British Empire*. Cambridge: Cambridge University Press, 2000.
- Machiavelli, Niccolò. *The Prince and the Discourses*. Translated by Luigi Ricci. New York: Random House, 1950.
- Pagden, Anthony. *Spanish Imperialism and the Political Imagination: Studies in European and Spanish-American Social and Political Theory, 1513-1830*. New Haven, CT: Yale University Press, 1990.
- Viroli, Maurizio. *From Politics to Reason of State: The Acquisition and Transformation of the Language of Politics*. Cambridge: Cambridge University Press, 1992.

The Invasion of Mesoamerica

The Spanish conquest of Mesoamerica, a region that extends south of central Mexico down to Costa Rica, began as settlers in Hispaniola and Cuba searched for a maritime passage to the East. In 1517 the governor of Cuba organized an expedition to sail west, seeking new lands and slaves. The fleet landed in northern Yucatan, where it encountered the sophisticated culture of the Maya. Although Mayan warriors killed or wounded most of the Spaniards, rumors of gold and silver caused great excitement in Cuba. The next year a second expedition learned that a powerful empire, the Aztecs, or Mexica, had recently conquered the region. The task of exploring and conquering these lands went to Hernán Cortés, a successful Spanish captain who had arrived in the West Indies 15 years earlier.

In March 1519 Cortés and 550 conquistadores landed in the Tabasco River. The Maya attacked the Spaniards but, unable to defeat them, offered them gold and young women, among them Malintzin, or Malinche, who spoke Maya and Aztec and was knowledgeable of the natives' customs. Called Doña Marina by the Spaniards,

she became Cortés' mistress and played a key role in the conquest of Mexico.

Other Indian groups that felt oppressed by Aztec domination joined the Spaniards. The king of Cempoala welcomed Cortés and told him about the resentment toward the Aztecs due to their demands for tribute and sacrificial victims. Indeed, the Aztec control of the area relied largely on the cruel repression of local rebellions. Meanwhile, Montezuma II, the Aztec leader, unsure whether the newcomers were gods or humans, pursued a cautious response. Cortés took advantage of the emperor's indecisiveness, intimidating the Indians with the use of European weapons, horses, and dogs while assuring the Aztec ambassadors of his good intentions.

The Spaniards began their progress toward Tenochtitlan, the Aztec capital, in August 1519. Montezuma allowed the Spanish army to march up to the sacred city of Cholula, where the Aztecs planned to annihilate them. Cortés, however, learned of the scheme and had the Cholulan leaders executed. A massacre of thousands of commoners, including women and children, ensued while the city was burned and looted. Apparently convinced of the futility of any resistance, a few days later Montezuma invited Cortés to Tenochtitlan. In November 1519 the Spaniards entered the Aztec capital, built in the middle of Lake Texcoco.

The Aztec emperor received the Spaniards with full honors. Enclosed in a city linked to the mainland by four causeways, the Spaniards were aware of their vulnerability. Seeking to strengthen their position, they took Montezuma hostage. In an effort to avoid a rebellion among the army officers, the emperor insisted that this was his own decision. In fact, he managed to prevent a major crisis, which only unfolded after Cortés was forced to abandon Tenochtitlan to confront a Cuban fleet pursuing him.

During Cortés' absence, the Spanish captain in Tenochtitlan, Pedro de Alvarado, interpreted a religious celebration as preparation for war and ordered an attack. After that the Spaniards, who had murdered almost all of the military elite, confronted a major Aztec uprising. Upon his return, Cortés had Montezuma address his people. During the melee the Aztec king was injured and died soon afterward. A secret sortie through

➤ CORTÉS IN TENOCHTITLAN

Twenty years old, Bernal Díaz del Castillo was one of the soldiers who participated in the conquest of Mexico between 1519 and 1521. An active participant in the invasion, he claimed to give an accurate description of the events in his *Verdadera Historia de la Conquista de Nueva España*, although he wrote it nearly half a century later.

“That country was thickly populated and we marched by short journeys, commending ourselves to God and His Good Mother, our Lady, and talked about how we should enter the city, while our hearts filled with hope that . . . Our Lord Jesus Christ . . . would protect us from the power of Mexico. . . . The next day . . . we took the causeway, which here was eight paces wide and led directly to the city of Mexico. . . . It was so filled with people . . . that we could hardly pass. . . . We didn’t know what to say or whether it was real. . . . We were going to the great city of Mexico numbering less than four hundred soldiers. . . . When we came close to Mexico, Montezuma descended from his litter while the great chiefs supported him with their arms beneath a marvelously rich canopy of green feathers worked with gold, and silver. . . . There were four other chiefs . . . and many other lords who walked before the great Montezuma sweeping the ground where he would pass . . . and putting down mats so he would not have to walk on the ground . . . When Cortés saw the great Montezuma approaching, he jumped from his horse and they showed great respect toward each other.”

—Ana Maria Kapelusz-Poppi

the causeways was now the only way out for the Spaniards. However, as they were attacked by thousands of canoes half of the Spaniards died in what they later called the “Sad Night” on June 30, 1520.

Cortés now realized that the conquest of Tenochtitlan depended on his control of the waterways. With the help of the Tlaxcalans, the Aztecs’ traditional enemies, the Spaniards built a small navy. Also during that time the European diseases carried by the invaders decimated the immunologically defenseless native population. Montezuma’s heir, who died of smallpox

a few days after assuming the throne, was one of the first among thousands of victims. In May 1521 the Spaniards began a new attack. Thanks to their fleet, they rapidly gained control of the lake and laid siege to the city. Under the lead of Cuahutemoc, one of Montezuma’s nephews, the Aztecs resisted for nearly three months, until the Spaniards demolished Tenochtitlan.

The conquistadores now controlled the core of the empire. Efforts to subdue the rest of Mesoamerica were one of the outcomes of the fall of the Aztecs, as Cortés’ associates continued to search for land, slaves, and treasures. Terror and abuse combined with disease annihilated much of the local population or forced indigenous Maya to flee into the forest.

—Ana Maria Kapelusz-Poppi

Bibliography

- Cortés, Hernán. *Letters from Mexico*. Translated and edited by A. R. Pagden. New York: Grossman, 1971.
- Díaz del Castillo, Bernal. *The Conquest of New Spain*. Translated by J. M. Cohen. New York: Penguin, 1963.
- Schwartz, Stuart. *Victors and Vanquished: Spanish and Nabua Views of the Conquest of Mexico*. Boston: Bedford/St. Martin’s, 2000.
- Smith, Michael. *The Aztecs*. 2nd ed. Cambridge: Blackwell, 2003.

The Portuguese Revolt of 1640

The sixteenth century began auspiciously for Portugal but ended very badly. Portuguese fortunes began to wane during the mid-sixteenth century when King D. Sebastião (Sebastian) decided to mount a crusade in North Africa against the Muslims. Sebastian was fueled by his desire to reclaim lands lost in North Africa by the Portuguese in the previous reign as well as by a crusading spirit fostered by his Jesuit education. Despite protests from his advisers, Sebastian stubbornly forged ahead with his wild plans, taking most of the young nobility with him. This mission ended in total devastation for Portugal when the king along with most of the young Portuguese nobles were killed at the Battle of Alcácer-Quibir in 1578. Sebastian’s gamble brought tragedy for his country. As an only child as well as the only surviving grandson of the

late king João III, Sebastian was the sole direct heir to the Portuguese throne. The only other person with a clear claim to the throne was his 66-year-old great-uncle, Cardinal Henrique. Henrique succeeded his great-nephew to the throne but died in 1580, leaving no heirs. The political vacuum caused a succession crisis that jeopardized Portugal's stability, as outsiders emerged to claim the throne. One of these was the ambitious Philip II of Spain, a grandson of Manuel I. Although Philip did not have the strongest claim, he did manage to win by both bribing the Portuguese nobles and sending in his troops. The conquest was relatively easy, as the strongest of Portugal's fighting forces lay buried in the North African desert.

The next 60 years were not easy for Portugal and its vast empire, now incorporated into the vast Iberian Union. On taking the throne in 1580, Philip had promised that all taxes collected there would be used only for Portugal's needs and that Portuguese soldiers would be deployed only to protect Portuguese possessions. However, the revolt of the Netherlands (1568–1648) and the Thirty Years' War (1618–1648) eroded Madrid's resources, and Philip IV was forced to renege on his grandfather's promise in order to bail out his dwindling treasury and shrinking empire. He ordered the removal of soldiers from critical vulnerable posts, enabling Dutch forces to attack Portuguese overseas territories including Brazil, Angola, and the Spice Islands. The situation worsened for the Spanish kingdoms outside Castile in 1621, when the Count-Duke of Olivares, Philip IV's *valido* (prime minister and counselor), began directing Spain's foreign policy. Olivares wanted to centralize control over the many kingdoms under Spain's dominion around Madrid and Castile. To him, this meant that they should no longer be allowed to use their taxes only for their own purposes but should also contribute to the greater good of imperial Spain, which meant paying for the various wars that it was fighting. This was more than many could handle. When Catalonia revolted in 1640, the equally unhappy Portuguese saw this as a chance to enact their own revolution. First, they would need a king around whom to rally. Rebellion leaders turned to João, the Duke of Bragança, who had been denied the

throne by Habsburg interference in the succession. After much negotiation, João finally agreed to participate in the revolt.

Next, the conspirators synchronized time and place, deciding that the rebellion would begin on December 1, 1640, before the palace of Philip IV's vice-regent, the Duchess of Mantua in Lisbon. At the stroke of nine o'clock in the morning, the rebels burst from their carriages and charged into the palace. One group attacked the Spanish guards at the front, another group secured the vice-regent's secretary, and the final group raced to the windows to proclaim that the revolt had occurred and that the Duke of Bragança was now João IV. The Duchess of Mantua was heard at another window shrieking for help and was only silenced when she was told that she had two options: she could either leave by the door or leave by the window. She left by the door, and the revolt was complete. Word was sent to João that they had been successful, and he arrived in Lisbon from his ducal estates in Vila Viçosa in southern Portugal on December 5. The revolt happened so quickly that when Madrid finally heard what had happened, no one could quite believe it. After some days of confusion, the rumors were finally confirmed by one of João's servants, a man of Castilian birth who was visiting at the time. By 1668, Portugal was recognized as once again independent by all the major European powers and the Catholic Church, and Spain relinquished any hopes it had of repossessing it.

—Monique Vallance

Bibliography

- Costa, Fernando Dores. "Interpreting the Portuguese War of Restoration (1641–1668) in a European Context." *E-Journal of Portuguese History* 3(1) (2005). http://www.brown.edu/Departments/Portuguese_Brazilian_Studies/ejph/.
- Ericeira, Count Luis de Meneses. *Historia de Portugal Restaurado*. Porto: Livraria Civilização, 1945.
- Valladares, Rafael. *A Independência de Portugal: Guerra e Restauração, 1640–1680*. Translated by Pedro Cardim. Lisbon: A Esfera dos Livros, 2006.
- Vertot, L'abbé René Aubert de. *The Revolutions of Portugal*. London: W. Taylor, 1724.
- White, Lorraine. "Strategic Geography and the Spanish Hapsburg Monarchy's Failure to Recover Portugal, 1640–1668." *Journal of Military History* 71 (2007): 379–402.

Native American Resistance Movements

As Native American cultures experienced deaths from disease and war as well as pressures from settlers to move off their lands, they began to resist. Though forms of resistance varied, they always had a spiritual dimension. For native people, spiritual or sacred power and political power were integrated. They believed that illnesses and defeat by the European military indicated a loss of spiritual power and also believed that they could gain spiritual power through ritual and strict adherence to native moral principles. Thus, native leaders urged their people to reject European ways, embrace traditional ways, and renew their sacred ceremonies in the hope of rejuvenating the spiritual power they needed to survive.

At first, tribes resisted individually. In the southeast, the Powhatens conducted several small-scale raids against Jamestown, probably to test the strength of and learn more about the invaders. In 1608 Powhatan's brother, Opechancanough, captured Captain John Smith and brought him back to the Powhatan's main village, Werowocomoco. Powhatan had already become acquainted with Smith in his previous bargaining for corn and other provisions. In Smith's account of his captivity, he claims that he was tried before Powhatan and sentenced to death. Smith's life was spared by the intercession of Powhatan's daughter, Pocahontas. Some have disputed this account, alleging that Powhatan staged a mock trial and deliberately planned the rescue for his own purposes. Whatever Powhatan's intentions, he did permit Smith to return to Jamestown.

Powhatan continued to observe the English warily. His warriors harassed the colonists with small-scale attacks. He continued to trade with the colonists, who remained dependent upon the Indians to maintain enough provisions, but became more contentious in dealing with them. In 1614 Englishmen kidnapped Pocahontas in order to recover some of their own people taken in the attacks. The settlers offered a prisoner exchange. Powhatan complied but nevertheless refused to return the stolen weapons that the colonists demanded.

As Native Americans found their economies changing, land bases disappearing, and belief

systems challenged, various communities began to cooperate in their resistance. Another early resistance movement was led by a Wampanoag man named Metacom, also known as Metacomet or Philip to the colonists. After losing his brother due to mistreatment by some Massachusetts soldiers, Philip led a group of resistance fighters against towns from Connecticut to Massachusetts. Called King Philip's War (1675) by colonists, the conflict devastated the traditional way of life for native people in New England. Though Philip successfully brought warriors from many communities together to create a large force, hundreds were sold into slavery abroad after they lost the war. Others, especially women and children, were forced into involuntary servitude. Ultimately the Wampanoag and other local native communities gradually adapted to the English way of life in order to survive.

Resistance often included religious experiences such as visions or ecstatic contact with spirits of water, earth, and sky. One of the first prophetic movements took place in the southeast, where Spanish soldiers and missionaries settled among native peoples. The Tarahumaras resisted the Spanish in 1616; numerous other religious revolts took place in the southeast between 1576 and 1656.

Elsewhere similar resistance movements emerged and flourished, shadowing British colonists as they moved westward. Often a severe depletion of game and loss of lands to colonists ignited festering resistance movements. Nativistic movements, embracing native culture and rejecting the culture of the foreign invaders, began in the northeast about 1737 and continued well into the nineteenth century. These were guided by prophets who had visions urging them to lead their people to cooperate with other Indian nations, return to native ways, conduct sacred ceremonies, and fight for their people.

In 1751 a Pennsylvania Indian agent identified prophets among the Shawnee and Onondaga Iroquois at the town of Otseningo who had visions that God had driven the game animals away to punish the Indians for their use of alcohol. The prophet urged the Indians not to trade with the English. From Otseningo the movement continued south and west from community to community. A young Delaware woman whose

name has not been recorded was one of the first prophets to mount a political challenge. One of many refugees in a Wyoming Valley town, she had a vision in which the Great Spirit told her to destroy the poison from among her people. She attributed the sickness and death of so many to a medicine bundle held by the local leadership who were bound to the Six Nations Iroquois and thus tied to the British. She rallied her people to fight the British and the Iroquois during the French and Indian War.

A few miles north, a Munsee Indian named Papoonan had a vision and began preaching a message of love and reformation. He preached that the Great Spirit was angry with the Indians for their use of alcohol and for other sins. While not promoting warfare, he did promote native ways and urged his people to resist the greed that he perceived in white culture.

In present New York State, an Assinsink prophet known as Wangomend also experienced visions and preached open hostility toward the British. He denounced the use of alcohol and re-introduced ceremonies to gain spiritual power. After the French and Indian War, he fled with his people to Ohio, where they encountered the Delaware prophet Neolin. Neolin inspired the Ottawa warrior Pontiac to lay siege to Detroit in 1763. Neolin emerged as the spiritual leader of a Pan-Indian militant movement. In 1760 he urged his followers to relinquish all the sins and vices learned from whites and reject the use of European-made goods. He believed that the Great Spirit would then provide the Delaware with the arms needed to defeat the British.

Prophetic movements often incorporated a purifying ritual as part of their ceremonies. Neolin had young men drink an herbal tea that caused them to vomit, thus purifying them of European influence. This ceremonial practice became widespread throughout Delaware country, where young men were trained in traditional techniques of warfare.

Neolin advocated armed resistance to Anglo-American expansion. His movement united the Delaware's quest with the Potowatomis, Shawnees, Wyandots, Miamis, Senecas, Ottawas, Chippewas, and others. Many other prophets also provided their people with an explanation for their misfortunes. By blaming their hardships

on cooperation with the British, Native Americans could turn to the sacred for spiritual power while uniting in opposition to the enemy.

Native Americans employed new prophecies, dances, and stories to forge alliances with other tribes, developing new religions to help transform the reality of colonial tyranny. The Delaware, Shawnee, Creek, and Sioux nations used a wide range of cultural resources, including Christian ideas about the sacred book and savior, and meshed them with traditional indigenous forms (such as purification practices and spiritual dances) in making their new religions.

Although Pontiac's War ended in 1765 without the defeat of the British, native resistance movements continued. One reason for their survival was the split among natives, with one side wishing to accommodate the British and the other side resisting. When the nativist cause faltered, they could blame accommodating Indians for having displeased the Great Spirit by rejecting native culture.

Several prophets developed a racial theory that white, red, and black people were created separately and should remain separate. Throughout Indian country, the belief in a preordained separation of Indians from whites and the quest for spiritual power persisted even in the face of military defeat. The Cherokee leader Old Tassel used this belief to defend his people's ways. Prophets who believed in a separate creation and separate road to salvation for Indians, Europeans, and Africans could reject Christianity and propose salvation through native religion. Although native religious rituals and Pan-Indianism failed to defeat colonists during this period, the idea of Indian unity continued. Northern nativists attributed their defeat to misconduct among their own people who had not defended their lands.

With the coming American Revolution some native communities sided with the British, while others sided with the settlers. Many of the New England tribes fought alongside the Americans, expecting that the expulsion of British control would liberate them as well. But in the southeast, aggrieved Shawnees, Cherokees, and Creeks joined the British in attacking American settlers, who had taken much of their land. A large Pan-Indian alliance grew during this period, part of the greater resistance movement across the

eastern woodlands (outside of New England). The Americans overpowered the Cherokees by 1776, while the Shawnees and Creeks were defeated by 1779.

For years, prophets continued to attract followers. Spiritual resistance movements continued into the nineteenth century, and numerous prophets arose. Later prophets, like the Shawnee Tecumseh, tried to unite all Indian peoples to resist assimilation. He and the Seneca prophet Handsome Lake are perhaps the best known of the many Native American resistance leaders.

—Pauleena MacDougall

Bibliography

- Calloway, Colin. *The Western Abenakis of Vermont, 1600–1800: War, Migration, and the Survival of an Indian People*. Norman: University of Oklahoma Press, 1990.
- Dowd, Gregory Evans. *A Spirited Resistance: The North American Indian Struggle for Unity, 1745–1815*. Baltimore and London: Johns Hopkins University Press, 1992.
- MacDougall, Pauleena. *The Penobscot Dance of Resistance*. Hanover: University of New Hampshire Press, 2004.
- Martin, Joel W. “Before and beyond the Sioux Ghost Dance: Native American Prophetic Movements and the Study of Religion.” *Journal of the American Academy of Religion* 59(4) (Winter 1991): 677–701.
- Rountree, Helen. *The Powhatan Indians of Virginia: Their Traditional Culture*. Norman: University of Oklahoma Press, 1989.

European and Native American Alliances

Studies of the European colonization of North America have gained greater subtlety with the introduction in recent decades of the notion of borderlands. Built into this field is the understanding that a simple model of violent domination is inaccurate as a template to impose on all indigenous-European historical relations. While the underlying narrative of conquest is difficult to contest, the borderline between conqueror and conquered becomes hazier when it is recognized that there were many shifting alliances between Europeans and Native American groups as Europeans gained a foothold and power by aiding some tribes in their intertribal disputes

and as both parties exchanged cultural patterns and established new norms. General patterns for such cultural and political borderlands differed between the Native Americans and different European groups, including the French, the English, the Spanish, and what were to be the Americans. As European groups engaged in their own intertribal disputes and warfare, Native American confederations, with a mind to survival, rather than remaining neutral often supported one among these powers, specifically in the many French and Indian wars of the seventeenth and eighteenth centuries and later in the battles of the English against the new American government during the Revolutionary War.

While the work of Spanish Jesuit and Franciscan missionaries in the Americas evinced some awareness and sensitivity to indigenous cultural beliefs, the relations of the French to Native Americans make the strongest case for the importance of the borderland, or the so-called middle ground. In his 1991 work *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815*, historian Richard White analyzed the relations of the French with Native Americans and their unique forging of a political and cultural middle ground between the peoples, with neither Europeans nor Native Americans dominating one another, as trappers (more specifically company agents known as *coureurs de bois*) took Native American wives, adapted to indigenous customs, and created an entire zone of cultural and linguistic hybridity. French Jesuits also mastered North American native languages in order to increase their success in conversions. At the same time, the authorities of New France rather than simply imposing martial control over an area took on a paternalistic role as peacekeeper, mediating tribal disputes, and so gained respect and cooperation from native peoples, as in one important case when an alliance was forged with Algonquins against Iroquois. The French-Indian alliance depended on the fact that the French goal was to establish and maintain a fur trading empire and not to colonize, repeople, or reshape the land in a European pattern.

Violence and domination also were not the only models for Puritan-Indian relations in New England. The *Mayflower* passengers who

settled at Plymouth, as depicted in *Mourt's Relation: A Journal of the Pilgrims at Plymouth* (1622), discovered a landscape that included many abandoned villages, the aftermath of the smallpox epidemics of 1617–1618 introduced earlier by traders who wiped out a huge percent of the native population. King Massosoyt, the leader (*sachem*) of the Wampanoag Confederation, sent to the Pilgrims as a representative Samoset, who spoke some English, to open negotiations. Eventually the Pilgrims made a treaty with Massosoyt and aided him in his conflicts with the Narragansetts and, in turn, were aided by Massosoyt in military affairs and basic survival skills. As a representative, Massosoyt sent to the Plymouth settlement Squanto, an early inhabitant of the middle ground. Squanto was an English-speaking Patuxet who had been kidnapped by English traders in 1614 and sold as a slave and had only recently returned to his homeland to discover his people entirely wiped out by smallpox. Although he later fell out of favor with Massosoyt because of his own maneuvering for power, Squanto, as the Thanksgiving tale indicates, introduced many indigenous agricultural and hunting-gathering techniques to the nearly starving settlers. These settlers had not, of course, journeyed to the New World with the intentions of learning from “noble savages.” In the same period, Thomas Morton, a British trader forced from the colonies for trading guns and rums for furs, lampooned the rigidity of the Puritans and valorized the Native Americans and their love of life in his literary work *New English Canaan* (1637). In ensuing decades, a different version of an English-indigenous middle ground developed as Puritan missionaries succeeded in converting Native Americans to Christianity and in setting up entire communities of so-called Praying Indians (that is, Christianized Indians).

The uneasy coexistence of English settlers and indigenous Americans lost all semblance of cooperation with the outbreak of Metacomet's (King Philip's) War (1675–1676). Metacomet, who gained position as sachem of the Wampanoag Confederation after the mysterious death of his brother Wamsutta, steered the Wampanoags and a wider confederation to war after a series of land disputes, injurious legal settlements, and clashes with Puritans. In this war

Puritans fought an all-out brutal war of domination against Narragansett, Wampanoag, Algonquin, and other tribes, under the leadership of Metacomet. During this conflict the settlers' fear and hostility toward Native Americans made the communities of Praying Indians easy targets. While some Praying Indians were protected, many fell to illness as refugees or were sold into slavery, while yet others formed militias that helped the English defeat Metacomet.

Historian Jill Lepore argues that this bloody conflict set the tone of the Indian wars of the next centuries, as settlers denied the basic humanity of indigenous peoples and Indian hating emerged as a basic creed. At the same time, this war in the English settlers' minds created a new middle ground as they began to forge an identity that was no longer entirely English yet not Indian; such anxieties over identity were also disclosed in the many captivity narratives published in those decades in which captured Euro-Americans described their experiences (sometimes favorably) living as a captive or member of a Native American group.

—Fred Nadis

Bibliography

- Lepore, Jill. *The Name of War: King Philip's War and the Origins of American Identity*. New York: Knopf, 1998.
- Salisbury, Neal. *Manitou and Providence: Indians, Europeans, and the Making of New England, 1500–1643*. New York: Oxford University Press, 1982.
- White, Richard. *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815*. New York: Cambridge University Press, 1991.

European Crusades against the Turks

The stunning military successes of the Ottomans against European powers beginning in the fourteenth century led to the establishment of an empire that included all of Anatolia, the Balkans, the remnants of the Byzantine Empire, and large parts of central eastern Europe. Until the sixteenth century the European response was dominated by failure, as European crusading armies experienced crushing defeats at

THE DEFEAT OF THE OTTOMANS AT THE SECOND SIEGE OF VIENNA, 1683

The second siege of Vienna came at the end of a phase of increased Ottoman aggression and resulted in a strategic loss for the Turks. Not only did the Turks fail to capture Vienna, but their attack inspired the formation of a new Christian Holy League, temporarily bringing unity to European forces, and resulted in the return of lands previously conquered by the Turks to European control. The following source deals with the defeat of the Turks at Vienna in September 1683 by Christian forces under the leadership of the Polish king Jan III Sobieski.

“The battle was fought on the twelfth, it lasted fourteen or fifteen hours; the slaughter was horrible, and the loss of the Turks inestimable, for they left upon the field of battle, besides the dead and prisoners, all their cannon, equipment, tents and infinite riches that they had been six years gathering together throughout the whole Ottoman Empire. . . . The battle ended by the infantry of the trenches, and of the Isle of the Danube, where the Turks had a battery [of artillery]. The night was spent in slaughter, and the unhappy remnant of this army saved their lives by flight, having abandoned all to the victors; even an infinite number of wagons, laden with ammunition, and some field pieces, that designed to have carried with them; and which were found next day upon the road they had taken; which makes us suspect that they’ll not be able to rally again, as neither having wherewithal to encamp themselves nor cannon to shoot with.

So soon as the Grand Vizier knew the defeat of his first lines, he caused a red tent to be pitched at the head of his main body, where he resolved to die for the Ottoman Empire, but his last efforts were to no purpose; and the wing of the Imperialists, which he attacked with all his might, was so opportunely succored by the presence of the king, who brought part of the troops of his left wing thither, that all fled before him. So soon as he [Sobieski] perceived the red tent, knowing by it that the Vizier was there in person, he caused all his artillery to fire upon that pavilion . . . [and] they brought down the red tent of the Grand Vizier; and the troop of Prince Alexander his second son, had the advantage to break through that body of cavalry, at the very place where the Vizier was, who was dismounted, and had much ado to save himself upon another horse; having left, . . . even the great standard of Muhammad, which the Sultan had put into his hands when he set out upon this expedition; and which the king [Sobieski] has sent to Rome . . . to be a testimony to the Pope, of this great victory.”

—Andrew Holt

Source

Polish Manuscripts, or The Secret History of the Reign of John Sobieski, the Ill of That Name, King of Poland, Containing a Particular Account of the Siege of Vienna, trans. François-Paulin Dalairac (London: Rhodes, Bennet, Bell, Leigh and Midwinter, 1700), 355–364.

Nicopolis in 1396, Varna in 1444, and Athens in 1456. Serbia, Bosnia, and Wallachia also came under Ottoman control by 1478, and by 1480 the Ottomans succeeded in briefly establishing a base for further military operations at Otranto in Italy, which caused fear that Rome itself could fall to a Turkish attack.

The earliest and most significant sign of a change in European fortunes came when European armies won an important battle over a much larger force of Turks at Vienna in 1529. It was the farthest advance into Europe by the Turks to date and likely would have provided a crucial base for further expansion had they not been defeated.

Perhaps equally important, the Turkish threat had forced an alliance between otherwise hostile Christian powers including Emperor Charles V and King Francis I of France, bringing into existence a general peace and unity among European powers that had long been desired by the papacy. The confidence inspired by the success at Vienna bolstered European hopes of recapturing Constantinople from the Turks. In 1536 Pope Paul III assured King Sigismund I of Poland that the retaking of Constantinople was high on his agenda, but French suspicion of the formation of a Venetian-papal alliance inspired a short-lived and unsuccessful Franco-Turkish alliance that

shattered European unity. Although the pope eventually negotiated a truce between France and the empire, by 1540 the Venetians had made a temporary peace with the Turks, effectively dashing Papal hopes of retaking Constantinople.

European-Ottoman warfare slowed in the mid-sixteenth century, but by the late 1560s Europeans realized that the Turks intended to seize Venetian Cyprus. In March 1570 the Turks demanded the surrender of Cyprus by Venice, and this brought about a new series of European-Ottoman wars in the eastern Mediterranean. None of these battles was as celebrated as the defeat of the Ottoman fleet at Lepanto in 1571. Under the auspices of the so-called Holy League, a quickly formed coalition of European forces that included the papacy, Spain, Savoy, Genoa, Venice, and the Knights of Malta defeated the Turks in a naval battle off the coast of western Greece. The battle at Lepanto was an important European victory because it devastated the Turkish fleet and temporarily, but significantly, degraded their naval capabilities in the region. The Holy League was formally disbanded after the signing of a peace treaty with the Turks in 1573.

Following the events of Lepanto and the subsequent peace treaty of 1573, conflict between Turks and Europeans again went into a period of decline that effectively lasted until the Turks successfully invaded Venetian Crete in 1645. This ignited a new series of conflicts between European and Turkish forces in eastern and central Europe. Perhaps the most notable European victory during this period happened during the second siege of Vienna in 1683. Although greatly outnumbered, the inspired leadership of Jan III Sobieski led the combined Habsburg and Polish forces to a decisive victory over the invading Ottoman army. This victory marked a turning point for European powers in their centuries-old conflict with the Turks and inspired Pope Innocent XI to call for the formation of a new Holy League in 1684. The league was initially composed of Habsburg Austria, Venice, and the Polish-Lithuanian Commonwealth, with the Russian Empire later joining in 1686. The newly formed league then engaged in a series of successful wars, ultimately forcing the Ottoman empire to surrender some of its European territories with the signing of the Treaty of Karlowitz in 1699.

➤ POPE PIUS II—COMMENTARIES

The following is taken from Pope Pius II's *Commentaries*, which provides the only autobiography ever written by a reigning pope. Pius (r. 1458–1464) wrote about himself in the third person, and in the following selection he details one of his many efforts to inspire enthusiasm in Europe for a crusading effort against the Turks.

“He [Pius II] then invited various bishops, abbots, notaries, royal ambassadors and all the officials of the Curia to a meeting in the palace chapel so that their advice too, could be heard. There he made public the project he had long held in his heart. He described the great disasters the Turks had inflicted on Christendom and explained how they were scheming to overthrow the Gospel law. The fall of a Christian nation was for him the bitterest blow imaginable; he was charged with the care of their sacred religion; he had decided to take the offensive against the Turks. Since this could not be done without help from the princes of Christendom, he was determined to hold a congress either at Udine or Mantua to hear the opinions of those whose aid he meant to enlist. It would be hard for him to leave Rome, the seat of St. Peter the Apostle and the ark of the Christian faith, but would be harder still to see the holy gospel destroyed in the course of his reign. To save it, he was resolved to stake not just the city and the patrimony of Peter, but his own health, indeed his very life. And so, though he was old and infirm, he proposed to cross the Apennines and the Po and confer with Christian princes about the rescue of the Christian faith.”

—Andrew Holt

Source

Pope Pius II, *Commentaries*, Vol. 1, edited by Margaret Meserve and Marcello Simonetta (Cambridge, MA: Harvard University Press, 2003), 215–217.

In the wake of the Treaty of Karlowitz, the Russian tsar Peter the Great (sole ruler during 1696–1725) continued crusading efforts against the Ottomans. Since 1698 Peter had been sending observers to learn of the training and abilities of the Knights of Malta and inquire on

the possibility of future joint ventures with the knights against the Turks. Peter's efforts ultimately ended in failure when he attacked the Ottomans in an unsuccessful crusade. Following the unexpected Ottoman victory, Peter was forced to return the Ottoman lands he had originally won from the Turks at the end of the seventeenth century in the Peace of Pruth in 1711. Sporadic warfare between Russia and the declining Ottoman empire continued until well into the nineteenth century with limited success for Russia.

Although some scholars have attributed the end of crusading in Europe to the fall of the last crusader state of Malta in 1798 (not to the Turks but to the forces of Napoleon), the distinction of crusading as a holy war in defense of the faith, as opposed to warfare for nationalist reasons, had begun to fade from the European consciousness centuries earlier. European monarchs had long been making treaties and alliances with Muslim powers against other Christian states to preserve their national interests rather than abiding by religious loyalties. Concurrently, and perhaps more significantly, the authority and influence of the papacy in European affairs steadily declined, with national governments filling the void and abandoning religious motivations in favor of national interests when making war.

—Andrew Holt

Bibliography

- Anderson, R. C. *Naval Wars in the Levant 1559–1853*. Princeton, NJ: Princeton University Press, 1952.
- Gocek, Fatma Miige. *East Encounters West: France and the Ottoman Empire in the Eighteenth Century*. New York: Oxford University Press, 1987.
- Housley, Norman. *The Later Crusades, 1274–1580: From Lyons to Alcazar*. Oxford, UK: Oxford University Press, 1992.
- Quataert, Donald. *The Ottoman Empire, 1700–1922*. Cambridge: Cambridge University Press, 2000.

The Changing Face of the European Crusade—Protestants and Pagans

The crusading movement against European pagans, collectively known as the Northern or Baltic Crusades, began with Pope Eugene III's papal authorization of a holy war against the "heathen"

of northern Europe in 1147 and ended at the Russian frontier in the early sixteenth century. While not nearly as well known as their more famous counterparts to the Holy Land, the pagan crusades were far more successful, resulting in the long-term spread of Christianity and western European social and governmental ideals in north-central Europe.

Although crusades against pagans began in the middle of the twelfth century, the movement intensified as crusading efforts in the Holy Land ended in the thirteenth century, which made available considerable additional manpower and resources, most notably the efforts of the Teutonic Knights, against pagans. While the crusaders, primarily based in Prussia (northeastern Germany), significantly contributed to the ultimate conversion of northern European pagans during the thirteenth and fourteenth centuries, they also created long-lasting hostilities that were not quelled by the spread of Christianity. For example, while the vast majority of Lithuanians had converted to Christianity by the end of the fourteenth century, they eventually formed a military alliance with Catholic Poland that had greatly reduced, but did not cripple, the power of the Teutonic Knights during the early fifteenth century.

The decline of the Teutonic Knights, historically the most dominant crusading order of the area, from the mid-fifteenth to sixteenth centuries was central to the end of crusading efforts against pagans in Europe. Their Catholic opponents in Poland and Lithuania protested the Knights' continued threat to Christians in the region as well as their continued dominance of parts of Prussia, challenged the legitimacy of the Knights' mission, and inspired increasing criticism by many ecclesiastical leaders in Europe. Although the Knights continued to engage in sporadic warfare with their Christian neighbors as well as a few pagans, their efforts were ineffectual. The effective end of the Knights as a crusading force in the north came in 1525, when their grand master, Albert of Brandenburg, renounced his vows and converted to Lutheranism to become Duke of Prussia, although some Knights continued to have influence in Livonia until the mid-sixteenth century.

Later crusades were also launched against alleged heretics. A successful precedent had been

► THE DESTRUCTION OF MAGDEBURG, MAY 1631

The following is from Otto von Guericke, burgo-master of Magdeburg, who recorded the destruction of his Protestant-controlled city in May 1631 by the combined forces of Ferdinand II and the Catholic League. Otto cites the Catholics' "common hatred of the adherents of the Augsburg Confession" (the primary confession of faith of the Lutheran Church) as at least partly responsible for the brutality of the victorious Catholic forces during which nearly 20,000 were slain and most of the city was destroyed.

"Thus it came about that the city [Magdeburg] and all its inhabitants fell into the hands of the enemy, whose violence and cruelty were due in part to their common hatred of the adherents of the Augsburg Confession. . . . Then was there naught but beating and burning, plundering, torture, and murder. Most especially was every one of the enemy bent on securing much booty. When a marauding party entered a house, if its master had anything to give he might thereby purchase respite and protection for himself and his family till the next man, who also wanted something, should

come along. It was only when everything had been brought forth and there was nothing left to give that the real trouble commenced. Then, what with blows and threats of shooting, stabbing, and hanging, the poor people were so terrified that if they had had anything left they would have brought it forth if it had been buried in the earth or hidden away in a thousand castles. In this frenzied rage, the great and splendid city that had stood like a fair princess in the land was now, in its hour of direst need and unutterable distress and woe, given over to the flames, and thousands of innocent men, women, and children, in the midst of a horrible din of heartrending shrieks and cries, were tortured and put to death in so cruel and shameful a manner that no words would suffice to describe, nor no tears to bewail it."

—Andrew Holt

Source

James Harvey Robinson, ed., *Readings in European History*, 2 vols. (Boston: Ginn, 1906), 2:211–212.

established during the early-thirteenth-century crusade against the Albigensians, located primarily in the south of France. Military campaigns launched by the papacy against political opponents during the thirteenth and fourteenth centuries (the so-called Political or Italian Crusades) were also justified through accusations of heresy. Among the most notable later crusades against heretics were the five unsuccessful expeditions launched against the Bohemian Hussites (often cited as forerunners to the Protestant Reformers) in the early fifteenth century.

Crusading efforts against heretics paved the way for crusading against Protestant Christians, who were initially considered heretics by the Catholic Church hierarchy. Although the Protestant Reformation came at a time when the papacy was dealing with the Turkish threat to Christian nations in eastern and central Europe, the Church hierarchy quickly took notice of the Protestant movement, and many considered it as dangerous a threat to Latin Christendom as the

Turks. In 1526 a proposal for a "general crusade" was incorporated into the Treaty of Madrid, which in part called for the "extirpation of the errors of the Lutheran sect." In 1551 Pope Julius III threatened a crusade against King Henry II of France for his aid to Protestants, and by 1566 King Philip II of Spain's spokesman declared that Protestants were more of a threat to Europe than the Turks. Aspects of the early stages of the Thirty Years' War (1618–1648), which began as a religious war before its evolution into more of a dynastic struggle, clearly drew at least some of its inspiration from the image and language of crusading.

Many early Protestants, Martin Luther in particular, showed little aversion to religious wars that resembled crusading. In fact, early Lutheran princes supported Catholic efforts to fight the Turks, and Protestant England formally initiated a six-week period of thanksgiving after the successful defense of Malta in 1565. Some Protestants even served with the Hospitallers on Malta

to provide for its later protection against the Turks. In the late sixteenth century, Huguenot Francis of La Noue theorized on a joint crusading effort of Catholics and Protestants for the liberation of Constantinople from the Turks. Yet as Protestantism matured, the Catholic nature and imagery of crusading lost its appeal, and future Protestant wars were not framed in the context of a crusade.

—Andrew Holt

Bibliography

- Christiansen, Eric. *The Northern Crusades*. London: Penguin, 1997.
- MacCulloch, Diarmaid. *The Reformation: A History*. London: Penguin, 2003.
- Seward, Desmond. *The Monks of War: The Military Religious Orders*. London: Penguin, 1995.

Bacon's Rebellion

Bacon's Rebellion was an upheaval in the Chesapeake region in 1675–1676. Class distinction and struggle permeated life during the Colonial period. Occurring 100 years before the Declaration of Independence, this event is described as the “first American Revolution” and is a case study in class struggle: years of distrust and animosity between Virginia elites and freemen erupted into violence and lawlessness.

At the center of the rebellion was the effort by wealthy elites to keep the colony's best lands and privileges out of the hands of the freemen. The freemen, formerly indentured servants, had

worked a specified amount of time for the cost of travel to the colonies. Once released from servitude, the freemen sought land and a new start. Virginia elites felt threatened by the large numbers of freemen and feared grievances would spill over to servants and slaves and lead to open rebellion. The fear was somewhat unwarranted, however, as Native American relations on the frontier actually provided the main cause for the revolution. White settlers pushed into the western back country because most of the best coastal lands were in the hands of elites. Left unprotected by inadequate militia, these settlers, many of them freemen and their families, suffered raids by hostile indigenous groups living in the same remote regions.

Declining tobacco prices due to England's war with the Dutch had forced many planters to seek favorable trade with friendly Native Americans, and officials were reluctant to upset relations because of isolated incidents on the frontier. Along the James River a group of freemen of humble means, led by disgruntled wealthy planter Nathaniel Bacon, Jr., took reprisal by carrying out a campaign that made little distinction between friendly and hostile indigenous groups. Invited to Jamestown by Governor William Berkeley, Bacon demanded a militia commission. Berkeley, fearing Bacon more than hostile Native Americans, accused the freemen of treason and declared their leader a traitor.

Bacon was arrested but later released. Bacon persisted in his quest for power, eventually winning a seat in the colonial legislature. Berkeley failed to prevent Bacon from taking his seat, and, faced with violence, he fled Virginia. With Berkeley gone, Bacon increased his forces and plundered the estates of pro-Berkeley elites. The class struggle escalated as Berkeley offered freedom to servants who joined his militia, while Bacon offered freedom to slaves and servants of Berkeley supporters. Troops from England were on the way to suppress the rebellion as Bacon descended into random plunder and theft. Bacon became ill—most sources credit dysentery—and died on October 26, 1676, leaving his men without a leader. The British troops arrived and arrested all but eighty of Bacon's followers in November.

On his return to Virginia, Berkeley carried out the hanging of about 24 wealthy men who



Scene from Bacon's Rebellion. (Library of Congress)

had supported Bacon. Their estates were taken to compensate pro-Berkeley victims who were plundered by Bacon's forces. King Charles II of England was displeased with Berkeley's response and called him back to England, where he died in 1677.

Subsequent legislation loosened Virginia's social system for whites, but made it even more difficult for slaves. Some scholars feel that slavery took a decidedly more cruel turn in the wake of Bacon's Rebellion, with officials there determined to draw rigid color lines to preclude future alliances among poor whites, indentureds, and slaves.

Today, Nathaniel Bacon Jr. is viewed by some as a champion of liberty who fought a cruel tyrant, hence a precursor of the American Revolution. Some scholars think this assessment too charitable and that Bacon was a selfish, power-hungry criminal.

—Thomas A. Wing

Bibliography

- Oberg, Michael ed. *Samuel Wiseman's Book of Record: The Official Account of Bacon's Rebellion in Virginia, 1676-1677*. Plymouth, UK: Lexington Books, 2009.
- Washburn, Wilcomb E. *The Governor and the Rebel*. New York: W. W. Norton, 1957.
- Well, Stephen S. *1676—The End of American Independence*. Syracuse, NY: Syracuse University Press, 1984.
- Wing, Thomas A. "Bacon's Rebellion." In *Class in America: An Encyclopedia*, edited by Robert E. Weir. Westport, CT: Greenwood Press, 2007.

The Fronde in France

The Fronde (1648-1653) was a civil war in France and was part of the larger movement in the seventeenth century by the European nobility to resist the encroachment of absolutist monarchs as they attempted to centralize their power. One of the main issues under contention was the right of the king to tax the nobles. The Thirty Years' War (1618-1648) and the Franco-Spanish War (1635-1659) caused stress on the royal treasury, and policies instituted by Cardinal Richelieu and his successor Cardinal Mazarin in turn led to heavy taxes on the nobles in violation of their feudal privileges. The

peasants also objected to the new taxes, and riots erupted at the end of the 1630s. In 1648 Mazarin was determined to raise taxes even higher in an attempt to gain a military victory for France once and for all. However, in order to raise taxes, the Parlement, France's judicial system, needed to approve them. Mazarin was hoping that since the *paulette*, the tax that gave the judges the rights to their offices, was due to be renewed that same year, he would be able to use that to pressure the judges into approving the tax. To add to the pressure, the nine-year-old Louis XIV was brought to the Parlement chambers on January 15 by his mother and regent, Anne of Austria and Mazarin, for a *lit de justice*. A lit de justice, or literally bed of justice, was a ceremony in which the king presented himself to the Parlement in order to pressure them into accepting a certain law or tax. However, rather than being pressured, the members of Parlement remonstrated against the tax.

News of the Prince of Condé's victory against the Spanish at the Battle of Lens in August gave Mazarin enough confidence to have the leaders of the Parlement arrested. This move proved to be a mistake, as the citizenry of Paris suddenly began to riot and barricaded the streets. The citizens used slings, or *frondes*, to throw stones into the windows of royal governors, thus giving the movement its name. The nobles also revolted, demanding that an Estates-General be called, as they knew that they would be able to vote down the tax in that forum. With the prince's army away, the royal family felt that it had no choice but to flee Paris. However, the Peace of Westphalia was signed shortly afterward, and Condé's army had Paris under siege by January. Not being able to combat the royalist forces, the nobles suggested asking for Spanish aid, a suggestion that was flatly refused by the citizenry. The fighting ended with the Peace of Ruell in March 1649; however, this truce did not end the Fronde itself but instead only ended what is known as the parliamentary phase.

Throughout 1649 several provinces continued to revolt, and this time Condé supported the revolutionaries against Mazarin. Condé was then arrested in January 1650. This move caused Condé's supporters to fight against the cardinal, which resulted in him leaving the country.

THE DUCHESS DE LONGUEVILLE

Many women, most especially Anne Geneviève de Bourbon, the Duchess de Longueville (1619–1679), were involved in the Fronde. As a princess of the blood and the wife of the governor of Normandy, she was instrumental in bringing her brothers Condé and Conti into the movement. More than just a supporter, the duchess held an active role in the planning of the first Fronde. She held war councils in her chambers at the Hôtel de Ville, recruited the troops, found the funding to pay them, and helped organize the defense. It is said that no military decisions were made without her approval. During the second Fronde, both her brothers and her husband were imprisoned for over a year. In the meantime she took leadership of the resistance in Normandy and even managed to negotiate a treaty with Spain from a Belgian border

town. This action would later earn a charge of high treason from the Crown, but once her relatives were released from prison, she spent the final months of the civil war protecting the Ormeé movement, even though by this time her estranged husband had already rejoined Mazarin's side. In 1650 she coauthored a pamphlet entitled *Apologie Pour Messieurs les Princes* in which she wrote that she must defend "the liberty to speak, as it is the only thing that remains to me." After the conclusion of the Fronde, her charge of treason was pardoned by Louis XIV, and she accompanied her husband to Rouen. As she was in disgrace at court, she devoted the rest of her life to religion and became a powerful patroness of the Jansenist movement in France.

—Monique Vallance

Condé was released and allowed to serve on the royal council. Fighting continued through 1651, and that same year Louis XIV ended his minority and took control as king. Condé did not appreciate his reduction in power, but he was forced to submit when he was defeated by royalist forces. Finally the Ormeé movement in Bordeaux sprang up, causing the nobles to stall their efforts. This movement started a revolutionary government in Bordeaux that claimed the right to govern themselves, outside the authority of the king. This movement threatened the power not only of the king but also of the nobles, and this caused the nobles to stop their rebellion against the king and helped restore royal authority. The second stage of the Fronde, the Fronde of the princes, was over by 1652, and Mazarin returned to France, where he served as Louis XIV's minister until Mazarin's death in 1661. Louis never forgot the betrayal of his nobles, and this would influence the later policies of his reign to increase his absolute authority. Therefore, the Fronde helped to increase rather than decrease absolute authority in France.

—Monique Vallance

Bibliography

Beik, William. *Absolutism and Society in Seventeenth Century France*. Cambridge: Cambridge University Press, 1989.

Kimmel, Michael. *Absolutism and Its Discontents: State and Society in Seventeenth Century France and England*. New Brunswick, NJ: Transactions, 1988.

Sonnino, Paul. *Mazarin's Quest: The Congress of Westphalia and the Coming of the Fronde*. Cambridge, MA: Harvard University Press, 2008.

Sonnino, Paul, ed. *The Reign of Louis XIV*. Atlantic Highlands, NJ: Humanities Press International, 1991.

"Time of Troubles" in Russia, 1598–1613

The so-called Time of Troubles in Russian history, more broadly dated at 1584–1618, refers to a chaotic period of social and political upheaval when the throne was left without an heir following the death of Fedor I (1584–1598), the only surviving son of Ivan IV (1547–1584), also known as "Ivan the Terrible." The cause for the Time of Troubles can, in one sense, be traced back to the death in 1581 of Ivan Ivanovich, the oldest of Ivan IV's three sons and the one being groomed to rule. Many believe that Ivan IV himself was responsible for his son's death, allegedly striking him with his staff in a fit of rage, though such an interpretation remains debated. Regardless, Ivan IV's second son, Fedor I, thus took over in

1584 upon his father's death and held the title of tsar until his own passing in 1598. But he proved incapable of the task at hand, and his brother-in-law, Boris Godunov, who was descended from lower-ranking boyar nobility and who had long served in the royal court, became the de facto ruler of the empire, eventually being elected tsar upon Fedor's death (r. 1598–1605). Godunov ruled in lieu of Russia being left with no legitimate heir to the throne, since Ivan's third son, Dmitry, had passed on before Fedor in 1591.

The Time of Troubles is thus dated to the inevitable crisis of leadership that became reality after Fedor departed, though its shadow was already cast when Ivan died, and it was not brought to its most acute point of tension until the sudden death of Godunov eight years after Fedor's time. But its underlying causes go back even further to the latter part of Ivan IV's reign, not only to the death of all three of his sons, particularly his firstborn in 1581, but also to the broader social chaos engulfing Ivan's tragic personal and dynastic history. Indeed, it was in many ways the harsh manner in which Ivan IV ruled in the period following the death of his beloved first wife, Anastasia, in 1560 that earned him the nickname Ivan the Terrible (although *grozny* in Russian means "formidable" or "awesome," not "horrific"). Whatever the cause, it was particularly reflected in his policy of Oprichnina administered by black-clothed secret police riding about the country on black horses and inflicting punishment at will upon the masses, a policy said to have arisen out of Ivan IV's paranoia over suspected conspiracy plots among the boyar, whom he believed had poisoned Anastasia. Those fears spilled over into the struggle between Ivan and the boyars for influence and control of Russian society and thus the policy of Oprichnina, dividing Russian domains between Ivan and the boyars and employing his secret police.

During this period elite landholders suffered grave losses, often expelled from their estates in the middle of the severe Russian winter and left stripped of their political influence and hereditary privileges. The resulting increase in taxation and significantly curtailed freedoms of the peasants instigated a mass exodus to the outskirts of Russian territory, away from the central

➤ "THE CULT OF IVAN THE TERRIBLE IN STALIN'S RUSSIA"

The sidebar title here is borrowed from a book written by Maureen Perrie. It reflects the fact that Josef Stalin looked to Ivan the Terrible and his Oprichnina of the sixteenth century as a model and inspiration for his mid-twentieth-century rule (1928–1953). Stalin is, of course, the notorious Soviet leader who, through his employment of the KGB, that is, the Soviet Secret Police and other means, bears responsibility for nearly three times more deaths than Adolf Hitler. Stalin was quoted as praising Ivan as "a great and wise ruler" who "wasted too much of his time repenting of his sins and praying for the souls of his victims," the latter sentiment reflecting the ironic fact that Ivan, in contrast to the unapologetic atheism of Stalin, had counted himself rather religious, engaging in confession and prayer.

Stalin's reverence for the first tsar of Russia led him to make a film about him entitled *Ivan Grozny*, the latter being the Russian term controversially translated as "terrible" in English, while some, like Stalin, suggested that "great" or "awesome" was a better rendering. A detailed transcript of Stalin's interview with the director of that movie in 1947 was published in 1988 when Mikhail Gorbachev revisited the whole question of Stalin's fascination with Ivan during glasnost. Gorbachev was the second Russian leader to dig up the Stalin-Ivan connection in a second wave of de-Stalinization, the first having been undertaken by the first Soviet leader to follow Stalin, Nikita Khrushchev (1953–1964), beginning with his condemnation of Stalin's destructive actions in 1956. Soviet historical representations of Ivan had been overall negative. Stalin sought to reform Soviet understanding of Russia's first tsar in order to help legitimate his own rule, with the result seeming to be a generally negative view of both in the post-Stalin era.

—R. Charles Weller

lands where most of the oppression was taking place, creating a labor shortage on many estates. Only the northern regions remained stable.

Godunov managed to bring a measure of restoration after Ivan's reign of terror with superior organizing abilities leading to greater social satisfaction and increased foreign trade. But the

damage had gone too deep, and Godunov himself finally resorted, in desperation, to heavy-handed policies that, combined with Fedor's death and a severe famine between 1601 and 1603, undermined his rule. Even before Godunov's sudden death in 1605, rumors had begun to surface that Ivan's third son, Dmitry, was still alive, having allegedly fled and taken refuge in Poland. Whether this originated as a popular rumor or one that was intentionally spread out of political motivation is not clear. It nonetheless came to be employed in a Polish religio-political cause, namely the takeover of Russia and, with it, its conversion to Catholicism.

This alleged Dmitry thus invaded Russia with a joint Polish and Ukrainian army. Russian peasants who had fled the central lands, discontented as they were with leadership in Moscow, joined ranks. Though at first turned back, Dmitry's army, with the further aid of Cossacks, proved successful, and Dmitry I was crowned tsar of Russia, ruling for more than a year (1605–1606). Filling the Russian court with Polish supporters, opposing Russian Orthodoxy, and parading Catholicism hardly won him any support among the more conservative Russian constituency. His reign was cut short in a popular uprising that brought Prince Vasili Shuiskii to the throne as Vasili IV, an act that itself provoked a counter-uprising, leading to civil war with the hereditary matter following from Fedor's death nearly lost in the haze. Amid the chaos, a second Dmitry from Poland invaded and usurped the throne once more. In spite of resistance efforts by Vasili who had appealed to Sweden for aid, Polish military rule was established in Moscow amid severe contestation, casting, as of 1610, a dark shadow over the entire country and its future.

In the face of Russia's permanent demise, the Russian Orthodox patriarch Germogen, held captive in the Kremlin, sounded a call across the country for national defense and liberation. The faithful among the Russian masses responded, and a bloody two-year struggle ensued that resulted in the reclaiming of Moscow. Following a period of debate over potential candidates, a new tsar of royal heritage was elected, Mikhail Romanov (1613–1645), who had ties to Ivan IV through his great-aunt, Ivan's beloved first wife Anastasia. And thus began 300 years of Romanov

dynastic rule in tsarist Russia, down to the Bolshevik Revolution and the communist takeover under Lenin in 1917. Romanov ascendancy also began a new chapter in Russian history, one that would face not only ongoing threats of foreign domination from Poland and Sweden and recurring wars with them but also leftover social, political, and economic challenges from the previous era, a partial solution for which was to be found in two centuries of enslavement of the peasantry, namely serfdom. Other new threats of foreign invasion were also to arise, only this time in the form of Westernization and its long forthcoming struggle with various aspects of Russian tradition, a struggle brought to its climax under the most famous of the Romanov rulers, Peter I, known also as Peter the Great.

—R. Charles Weller

Bibliography

- Chew, Allen F. *An Atlas of Russian History*. Rev. ed. New Haven, CT, and London: Yale University Press, 1970.
- MacKenzie, David, and Michael W. Curran. *A History of Russia, the Soviet Union, and Beyond*. 6th ed. Belmont, CA: Wadsworth/Thomson Learning, 2002.
- Perrie, Maureen. *The Cult of Ivan the Terrible in Stalin's Russia*. New York: Palgrave Macmillan, 2002.

Civil War in the Inca Empire

In or around 1438 CE, the Incas emerged in the southern highlands of Peru as supreme among various warring kingdoms in that region. The Incas rapidly expanded their empire to encompass parts of present-day Colombia, Ecuador, Peru, Bolivia, Chile, and Argentina. Yet in large part due to this rapid expansion, the Inca empire was characterized by frequent revolts, especially by groups on the farthest reaches of its empire. Another source of instability for the Inca empire was the internal politics of the Inca caste itself. Constant plots, intrigues, and internal revolts plagued the Capac Incas (royal Incas who traced their ancestry to the founding ancestor Manco Capac). This was largely engendered by the ancient tension between Hanan Cuzco (the lower moiety of the first five kings) and Hurin Cuzco (the upper moiety of the sixth and subsequent

kings) and by the poorly defined rules of succession to the state's highest office.

Although the Capac Incas were essentially one extended kindred, there were numerous factions among them organized along the lines of the *ayllus* (extended kin groups) and *panacas* (an entourage of descendants of an emperor responsible for celebrating his memory after his passing) of Cuzco. Each of these groups was self-sustaining in terms of wealth and had members occupying important and powerful posts in the government and army. Although the Sapa Inca, the emperor, had absolute power in theory, he was in reality dependent upon support from a majority of these factions.

The greatest cause of infighting was the confused system of succession to the imperial Crown. Unlike the European tradition of passing the crown to the oldest son of the reigning monarch, in Inca tradition the crown passed to the male of the royal bloodline who was judged by his peers to be the most able leader. The new ruler was in effect elected by his fellow Capac Incas. Because of the policy of the Incas that allowed them to take multiple wives, there was a numerous supply of men at any one time who were eligible by blood to ascend to the throne. A serious problem was that there were no clear legally encoded criteria for judging ability, and election to the highest office depended as much on political intrigues among the various Inca factions as on any other factor.

Numerous disputes arose over election results, with some even leading to revolts and coups. Civil wars over the succession, such as that between Huascar and Atahualpa just before the Spanish Conquest, were a frequent feature of the succession struggles. Emperors Capac Yupanki and Yahuar Huacac seem to have been assassinated while in office. Rulers Tarco Huaman and Inca Urcon were overthrown by their successors and written out of official Inca history. In an effort to prevent strife over the succession, some emperors appointed their heirs while still alive. These designated heirs were in some cases given coregency, the most notable being Topa Inca serving with his father, Pachacuti. This served as on-the-job training and allowed them to build up their own factions before the time came to ascend the throne. These efforts were not always

successful, however. Designated heirs such as Quispe Yupanki, the son of Capac Yupanki, and Pahuac Gualpa, the heir of Yahuar Huacac, were both assassinated by opposing factions.

—Gordon F. McEwan

Bibliography

Cobo, Bernabé. *History of the Inca Empire*. Austin: University of Texas Press, 1997.

D'Altroy, Terence N. *The Incas*. Malden, MA: Blackwell, 2004.

McEwan, Gordon F. *The Incas: New Perspectives*. Santa Barbara, CA: ABC-CLIO, 2006.

Rostworowski de Diez Canseco, Maria. *History of the Inca Realm*. Translated by Harry B. Iceland. Cambridge: Cambridge University Press, 1999.

Japanese Invasion of Korea

The Warring States period, or Sengoku, was a period of disunity in Japan that lasted from the mid-fifteenth century to the early seventeenth century in which the daimyo, or noble class, were at conflict with each other. One of the important people who contributed to the eventual unification of Japan under the Tokugawa was Toyotomi Hideyoshi (1536–1598), who conquered most of Japan and rose to the title of *kampaku* (imperial regent). Although he was never able to achieve the title of shogun, Hideyoshi was still able to attain a tremendous amount of power in Japan.

Hideyoshi had solidified his position in Japan by 1591, and one year later he would turn his sights on the rest of Asia. Sources suggest that Hideyoshi's plans for attacking Ming China were probably inherited from his former daimyo Odu Nobunaga, the first to begin the unification of Japan and the springboard by which Hideyoshi was able to continue the unification. This plan to attack China also hinted at a grander plan of eventually invading all of Asia. The key to attacking China would be to go through Korea, as that country was a good springboard for sending troops. The timing for this invasion is a bit strange, as Japan had only been at peace for a short time. Historians have also suggested that Hideyoshi had an ulterior motive: that by mounting a former invasion, he was ridding himself of troublesome daimyos and therefore securing his position even more. Of course, Hideyoshi could

➤ NOSES AS TROPHIES

Historians have been unable to determine the exact amount of deaths that occurred as a result of the Japanese invasion of Korea. However, some indication of the number was left by the Japanese themselves in the form of decapitated heads. The decapitating of heads as trophies of a kill in battle was a samurai tradition and was normally considered the only method by which a samurai could prove that he had killed a certain man. Toyotomi Hideyoshi was determined that his samurais would account for their kills in Korea in the same manner; however, the sending of heads from Korea to Japan proved to be a very impractical task. After the province of Namwon was captured in 1597, only the head of the Korean general was sent to Hideyoshi, while the noses of the other 3,726 casualties were sent instead of the heads. This began the custom of sending noses during the second phase of the war. The noses were sent to Japan packed in wooden barrels and pickled with salt. However, the noses were not carelessly thrown into the barrels; they and the names of their former owners were all recorded before being packed away. Unfortunately, not all of the records remain, so estimating the death toll can be tricky. Based on the fact that some commanders sent as many as 30,000 noses, historians have estimated that between 100,000 and 200,000 Koreans were killed during the second invasion alone. Today the noses remain buried near Toyotomi Hideyoshi's Great Buddha in Kyoto at a place called Mimizuka ("Ear Mound").

—*Monique Vallance*

have also been dreaming of seeing himself as the master of Asia despite the fact that he was already in his fifties and already had decreasing eyesight and appetite.

Between 1587 and 1590, Hideyoshi attempted to recommence diplomatic relations with Korea, which had been halted since 1555. However, the attempts were a failure and ended with a demand by Hideyoshi that Korea join Japan in its war against China by allowing Japanese soldiers to cross through Korea. The Koreans, ruled by King Seonjo, felt as though they were in a very difficult position. On the one hand they were allies with the Ming dynasty, and allowing the

Japanese to cross through Korea would not only signify a breaking of this treaty but would also cause the Chinese to send troops to fight the Japanese in Korea, which could spell disaster for their country. On the other hand, a refusal of Hideyoshi's demands would most certainly bring an invasion. The Japanese requests were refused twice, and Hideyoshi finally invaded Korea in 1592 despite some opposition from within Japan's government.

The Japanese landed in Korea on May 23, 1592, expecting surrender by the Koreans. To their surprise, the Koreans refused to surrender and instead chose to fight. The Japanese gained easy victories in the beginning, and very shortly they had conquered almost the entire country. However, their victories were short-lived, as many Koreans refused to submit to the Japanese rule, and rebellions began erupting all over the country. In addition, the Chinese army landed in June 1592, surprising the Japanese, who had expected the Chinese at a later date. Even though the Chinese did not gain any major victories, the combination of their arrival with the native rebellions caused the Japanese enough trouble that they were driven down to Seoul and isolated there. Hideyoshi's army remained in Seoul until 1597 as diplomats attempted to negotiate a truce with the Chinese, while Hideyoshi awaited word in Japan. All attempts at peace ended in failure, and Hideyoshi decided that there was no recourse left to him except to continue the war.

As before, the Japanese troops enjoyed some initial victories as hostilities were resumed in 1597. However, the army was thrown into turmoil when Hideyoshi died in August 1598. The death of their leader caused such confusion among the Japanese troops that the Chinese were able to push their advantage on land and the Koreans were able to push their advantage at sea to drive the Japanese out of Korea once and for all by December 1598. With Hideyoshi's death died all dreams of conquering China and Asia. Hideyoshi's successor, Tokugawa Ieyasu, not only made sure that the war with Korea was ended but also attempted to make amends with the Koreans by admitting guilt and sending back thousands of Koreans who had been enslaved in Japan. By 1624, Korean emissaries were sent to the coronation of Tokugawa Iemitsu, a sign that

relations had been repaired. As for China, some historians point to this war as one of the downfalls of the Ming dynasty, as their campaign in Korea made it more difficult for them to fight the Manchus, who eventually conquered China in 1644. However, the problems of the Ming were more deeply rooted and had already been going on long before the Japanese invasion of Korea. While the war did place a strain on the Ming army, this was not the single contribution to the downfall of the Ming.

—*Monique Vallance*

Bibliography

- Berry, Elisabeth. *Hideyoshi*. Cambridge, MA: Harvard University Press, 1982.
- Hall, John Whitney. *Cambridge History of Japan: Early Modern Japan*. Cambridge: Cambridge University Press, 1991.
- Turnbull, Stephen. *Warriors of Medieval Japan*. Oxford, UK: Osprey, 2005.

German Peasants' War

From 1524 to 1526 a series of peasants' rebellions, commonly referred to as the Peasants' War, shook the Holy Roman Empire. Historians still debate the nature of these revolts and their causes. Some argue that they grew out of the emerging religious controversy centered on Martin Luther and his challenge to the Roman Catholic Church. Others believe that peasant revolts were prompted by greater coercion that accompanied the emergence of a more centralized state. The name itself—Peasants' War—conceals the conflict's strong urban and religious character under a mask of provincial turmoil, and some scholars even suggested describing it as "an early bourgeois revolution" or "the Revolution of 1525."

A combination of the underlying political, legal, social, and economic tensions was at the heart of the Peasants' War. In the early sixteenth century, population growth caused wages to fall and unemployment to increase in the countryside. At the same time, the consolidation of territorial states led to legal and administrative reforms that marginalized local autonomy. The aristocratic and ecclesiastical lords imposed higher taxes, tried to gain control over village commons, and reinforced serfdom.

These conditions prompted many small-scale revolts that were common before 1520, while poor harvests in the early 1520s contributed to the greater likelihood of wider protests. Discord over lordship represented the most serious source of conflict, but tensions also ran high over taxes and other burdens as early modern states began to expand and centralize. Long-simmering conflicts between townsfolk and local leaders (be it lords or bishops) only added to the general anxiety. In the early sixteenth century the existing anticlericalism was reinforced by popular interpretations of Luther's writings that demanded a reform of the Church, which seemed to be preoccupied with its own political and economical power.

No other peasant rebellion in Europe's history advanced political programs as original as those of the Peasants' War. The best known of these programs was the Twelve Articles of the Peasants of Swabia, which expressed the main grievances of peasant rebels and revealed how far Protestant ideas penetrated into the German peasantry. Luther's idea of the priesthood of all believers implied freedom and equality in both spiritual and secular worlds and was used to sanction a challenge to one of the most important institutions of feudalism: serfdom. The Twelve Articles thus opened with a demand for every congregation to have the right to choose its own pastor to preach the Scriptures purely and clearly "without any human addition, doctrine or commandment." At the same time, Article 3 proclaimed that "It is the custom hitherto for men to hold us as their own property. And this is pitiable, seeing that Christ has redeemed and bought us all with the precious shedding of His blood, the lowly as well as the great, excepting no one. Therefore, it agrees with Scripture that we be free, and we will be so." The remaining provisions of the Twelve Articles used Luther's criticism of the Church to challenge tithes, various labor services, and restrictions on use of common lands, rivers, and woods. Indeed, Luther's condemnation of monasticism was used to sanction the peasant attacks on their monastic landlords. In 1523 the monastery of Weingarten complained that "the peasants, actually drunken with the gospel," came in from all the villages to plunder its properties.

Yet neither German princes nor the Holy Roman emperor paid attention to the peasants' grievances, prompting open hostilities in 1525. The war began as a revolt against the Countess of Lupfen in Stühlingen, south of the Black Forest. The disturbance spread quickly, and within a few months the rebellion sprawled across southern and central Germany; parts of modern France, Switzerland, and Austria; and northern Italy.

At its height in the spring and summer of 1525 the conflict involved hundreds of thousands of peasant rebels, becoming Europe's largest and most widespread popular uprising prior to the French Revolution in the late eighteenth century. The peasants formed Christian Assemblies, armylike regional groups, but never a unified front. The participation of many small towns, with their petite bourgeoisie, further complicated the politics of rebellion. In southwestern Germany the peasants rallied around Hans Müller von Bulgenbach and Gottfried "Götz" von Berlichingen, while Thomas Müntzer, a radical rival of Luther, led the struggle in central Germany. Numerous groups of rebellious peasants and townspeople, some of them led by lay preachers, sought to redress their grievances through direct talks with their lords or violent protests. The peasants in Thurgau allowed their beards to grow, swearing to never shave again until they were free men. At Kempten the peasants rose against their lord, the abbot; took him prisoner; and only liberated him at the price of a heavy ransom. The example was quickly followed by the peasantry in the neighboring regions, spreading along the northern shores of Lake Constance.

To suppress the peasant rioting, the Swabian League, an association of imperial states established in 1488, mobilized its forces under Georg Truchsess von Waldburg, a devout Catholic, who conducted the campaign with determination and skill as well as ruthlessness. After negotiating a peaceful end to the rebellion in Upper Swabia at Weingarten, Truchsess von Waldburg marched north to confront rebel armies in Württemberg and Franconia, reconquering the cities that they had occupied and beheading their leaders. In April 1525 the Swabian League scored major victories at Leipheim and Wurzach. A month later its victory at Boblingen put an end to peasant revolts in Württemberg (southwestern Germany),

while the Duke of Lorraine routed peasants at Zabern, massacring hundreds. By June the devastating defeats of peasant armies at Konigshofen, Frankenhausen, and Würzburg crushed the rebellion for good. Nevertheless, punitive reprisals by lords and princes lasted until 1527.

While Luther embodied for the peasants the promise of a new and more just society, Luther himself was terrified by the peasant upheaval and played one of the most vocal roles in the princely suppression of the uprising. Initially Luther adopted a neutral stance, admonishing both the rulers and the peasants that there was nothing Christian in their violence. "For both of you are wrong," he proclaimed, "and both of you want to avenge and defend yourselves, both of you will destroy yourselves and God will use one rascal to flog another." The rulers were tyrants and the peasants were rebels, Luther argued, and both stood condemned in the Scriptures. While admitting that many of the peasants' demands were just, Luther argued that this did not justify violence. But as the reports of peasants' "horrible raging undertaken against both divine and human law" reached him, Luther's sympathies had shifted toward the authorities. In his *Admonition to Peace: A Reply to the Twelve Articles of the Peasants in Swabia* (April 1525), he denounced the peasants' demands and argued in favor of retaining serfdom. "Did not Abraham and other patriarchs and prophets have slaves?" he chastised the peasants. "Therefore this article [demand for abolition of serfdom] is dead against the Gospel. . . . This article would make all men equal, and turn the spiritual kingdom of Christ into a worldly external kingdom." In May 1525 Luther published his new book, *Against the Robbing and Murdering Horses of Peasants*, that urged the German aristocracy to use any means to smite and destroy their rebellious subjects and reminded them that "nothing can be more poisonous, hurtful, or devilish than a peasant rebel." The rulers could act in good conscience because they had a just cause, Luther expounded. "Anyone who is killed fighting on the side of the rulers may be a true martyr in the eyes of God. . . . Anyone who perishes on the peasants' side is an eternal firebrand of hell, for he bears the sword against God's Word and is disobedient to Him, and is a member of the devil."

► WOMEN AND THE PEASANTS' WAR

Contemporaries blamed the start of the Peasants' War on a woman. The Countess of Lupfen allegedly ordered peasants who were busy with the harvest to search for snail shells upon which she wished to wrap newly spun yarn. The countess not only took the service required of peasants for their right to use land to irrational extremes but also attempted to make peasants do the work of handmaids, integrating "male" work into the "female" sphere of the household. This anecdote conformed to popular misogynist ideas. Female disrespect and foolishness were the final straws that provoked a violent reaction by the peasants.

The peasant rebels were often absent from their respective villages for weeks or even months, leaving their farms in the care of their wives. In addition to this passive support, on some occasions women actively took part in the insurgence. Women spread news about the revolt and asked men to join the rebellion. The peasants employed female messengers. The rebels attacked and destroyed castles and monasteries. They were accompanied by peasant women who took the opportunity to pilfer. After robbing convents, rebels threatened the nuns with rape. At Heggbach, peasant women threatened to turn the men loose on the nuns and, following the typical early modern motif of a "world turned upside down," demanded that the nuns should bear children and do farmwork, while the peasant women would live in the comparative luxury of the monastery. There were numerous women among the militant adherents of revolutionary preachers. During tumultuous actions in Thuringia and the Black Forest, women took up arms to defend these preachers. Thomas Müntzer ordered women to arm themselves and do battle for his cause. Instigated by townsmen, a group of women from Windsheim met to attack and pilfer a monastery in 1525. The women named one of their number as their officer. In the same year a group of women at Heilbronn formed a protest march, carrying with them the

Bundschuh (a heavy peasant boot connoting solidarity of laboring peasants), the symbol of the peasant rebels.

Two women who were believed to have magical skills became leaders or at least advisers of the peasant rebels. The first was a soothsayer who lived near Bludenz. She prophesized that even though the lords had gained the upper hand, the rebels would win the war within months. The other, the widow Margarethe Renner (Black Hofmännin), accompanied a criminal who had managed to become the leader of a peasant group. Hofmännin had refused to pay taxes and was rumored to be an accessory to murder. She tried to persuade the insurgents to attack the city of Heilbronn, which ruled over her village, and threatened to mistreat the women of Heilbronn's upper class. Hofmännin allegedly claimed that she had used magic to make the rebels invulnerable. After the conquest of the town of Weinsberg, Hofmännin took part in atrocities committed there. The insurgents executed several noblemen, defiled their corpses, and humiliated the countess of Helfenstein by driving her out of town on a dung cart. The Weinsberg outrages were widely reported and were used to justify the rigorous action that the aristocratic forces took against the rebels.

—Johannes Dillinger

Bibliography

- Franz, Günther. *Der deutsche Bauernkrieg* [The German Peasant War]. Darmstadt, Germany: Wissenschaftliche Buchgesellschaft, 1984.
- Kobelt-Groch, Marion. *Aufsässige Toechter Gottes* [Rebellious Daughter of God]. Frankfurt/Main: Campus, 1993.
- Ulbricht, Claudia. "Die Heggbacher Chronik" [The Heggbach Chronicle]. In *Gemeinde, Reformation und Widerstand* [Community, Reformation and Resistance], edited by Heinrich R. Schmidt. Tübingen, Germany: Bibliotheca-Academica, 1998.

Unlike Luther, German theologian Thomas Müntzer sided with the peasants, emerging as the spiritual leader of the rebellion in Thuringia. Arriving at Mühlhausen in late 1524, Müntzer and Heinrich Pfeiffer drafted the Eleven Mühlhausen Articles, which called for the dissolution

of the existing municipal government and the formation of an "eternal council" based on divine justice and the Word of God. Although they were briefly expelled by their opponents in late 1524, Müntzer and Pfeiffer returned to Mühlhausen in 1525, establishing a communistic

theocracy and leading the struggle against local German princes. Convinced that God was on their side, Müntzer led some 8,000 peasants against the princes of Hesse and Saxony but suffered a devastating defeat at the Battle of Frankenhausen in May 1525. Captured and tortured, Müntzer recanted and accepted the Roman Catholic mass prior to his beheading in Mühlhausen on May 27, 1525.

Thus, in spite of initial successes the insurgents were no match for the better-equipped mercenaries of the aristocracy. Even though the Peasants' War ended with the total military defeat of the rebels in several territories, it had important consequences. It was among the most significant rebellions in modern European history, briefly shattering the rule of countless lords, small princes, and urban governments in the southern and central parts of the Holy Roman Empire. The revolt's long-term effects on the Holy Roman Empire are more difficult to assess. Many lords and princes seem to have exercised more caution in their dealings with the peasantry after 1525, and serfdom did weaken in southern Germany by the late sixteenth century. The imperial authorities also tended to direct disputes between peasants and lords into the courts and commissions of arbitration so as to avoid any new violent upheavals. The Peasants' War also played an important role in historical-political debates of the nineteenth and twentieth centuries. The conservative German historian Leopold von Ranke dismissed

the war as an event unworthy of serious analysis, while Friedrich Engels and Karl Marx considered it a pivotal turning point in German history; their interpretation of this event highlighted the peasantry's conservative nature and argued in favor of urban proletariat's leadership of future revolutions. But above all the Peasants' War was a human tragedy, as many German regions were devastated, and probably up to 100,000 peasants lost their lives. "Should someone wish to erect a victory monument because he has defeated the rebellious peasants," observed the great contemporary artist Albrecht Dürer, "let him use this design." Dürer's design featured a column with cattle, sheep, and pigs around its base. Farther up were baskets of bread, vegetables, fruits, and agricultural implements, symbolizing the peasantry's hard labor and central role in everyday life. On top of the column, however, sat a peasant with a sword plunged between his shoulder blades.

—Alexander Mikaberidze

Bibliography

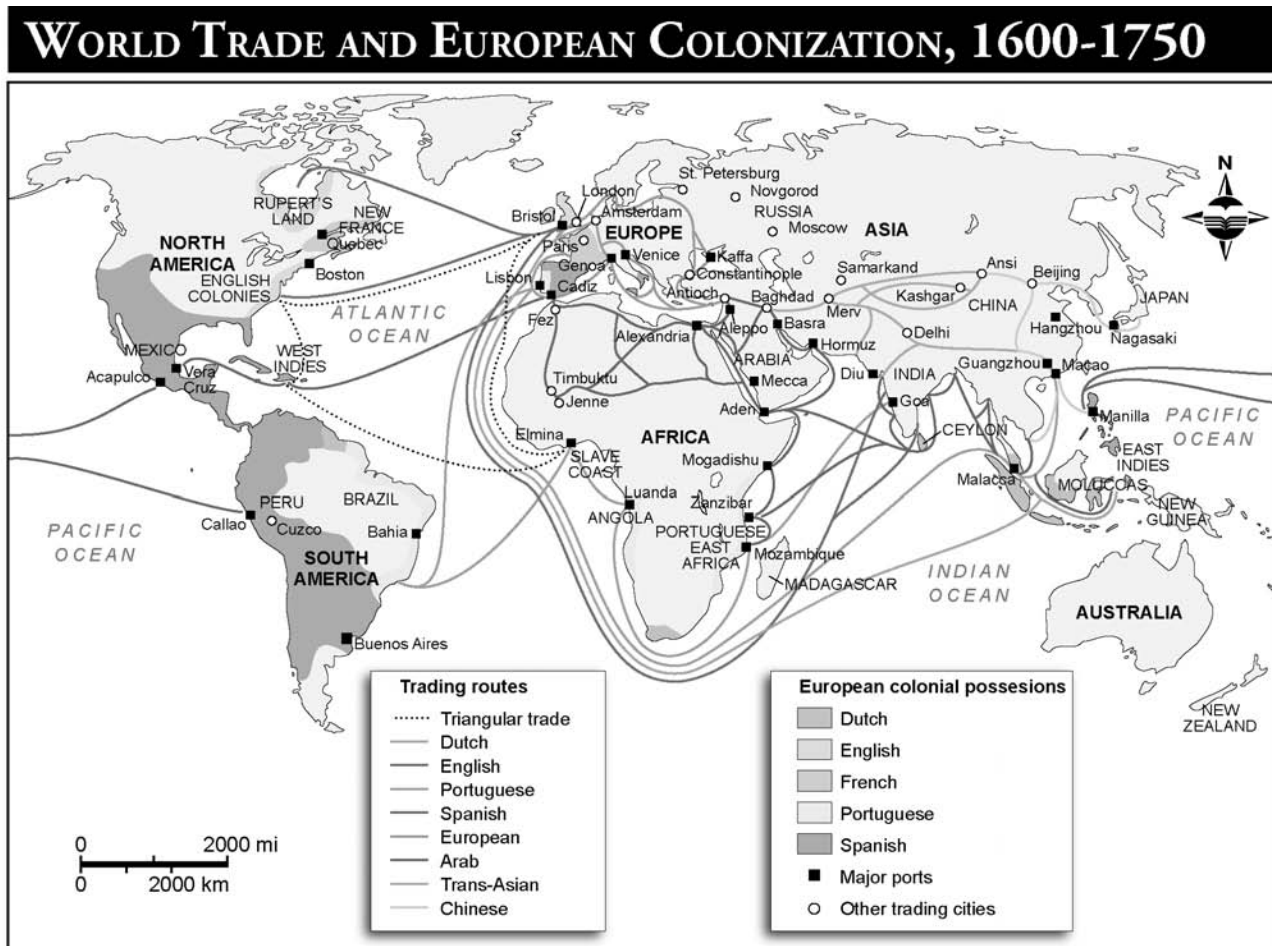
- Blickle, Peter. *The Revolution of 1525: The German Peasants' War from a New Perspective*. Baltimore: Johns Hopkins University Press, 1981.
- Edwards, Mark U. *Luther and the False Brethren*. Stanford, CA: Stanford University Press, 1975.
- Robisheaux, Thomas. *Rural Society and the Search for Order in Early Modern Germany*. Cambridge: Cambridge University Press, 1989.
- Zagorín, Pérez. *Rebels and Rulers, 1500–1660*. Cambridge: Cambridge University Press, 1984.

Economics and Trade

The global economy was transformed during the sixteenth century as new trade patterns emerged, connecting the Eurasian ecumenes with each other and incorporating the western hemisphere for the first time. The European Age of Expansion led to the discovery of the Americas and of new routes to Asia, setting into motion the forces that led to the emergence of European commercial and political influence on a global scale. Adam Smith, the great Scottish economist, was rather forthright in believing that “the discovery of America, and that of a passage to the East Indies by the Cape of Good Hope, are the two greatest and most important events recorded in the history of mankind.” Although Smith can be accused of clear exaggeration, the European discoveries certainly were among the major turning points in world history since they mark the start of “world trade” in the literal sense of the phrase. Nevertheless, Asian economies remained the strongest in the world during this period and drew Europeans like a magnet.

Prior to 1500 the largest share of trade was local and involved food crops, raw material, and local hand manufactures. Long-distance trade had flourished, and trade routes crisscrossed Asia, Africa, and Europe. But there was still no unified system of trade, and goods traveled in stages from one set of traders to another before reaching their final destination. In Asia, the famous Silk Roads connected China and India to the Ottoman empire and Europe. Goods moved along trans-Saharan trade routes, which were well integrated along an east-west axis, connecting northern, western, and central Africa. Within Europe, Italian city-states dominated the Mediterranean basin, while the Hansa League of the German cities exerted great influence over much of northern Europe. Aztec and Maya road networks connected various regions and cities throughout Central America, while the Incas developed a sophisticated network of roads along the western coastline of South America. The Indian Ocean was the great crossroads of international shipping. Bustling port cities housing a rich diversity of merchants of many ethnicities and religions filled the entire length of its littoral. Arab Muslim traders played the dominant role in the Indian Ocean basin, while Chinese traders controlled the East Asian waterways. Yet neither Arabs nor Chinese and other merchants sailed into the Atlantic or Pacific oceans. Sailing in what was the most lucrative region in the world, they felt no need to expand their operations into unknown areas. Unlike Europeans, who dreamt of reaching the wealth of India and China, these merchants were already there.

By the eighteenth century, however, economic realities had changed. Europeans were sailing on most of the world's seas, operating freely in the Atlantic and Pacific oceans. Russia's land expansion across Eurasia



integrated parts of northeastern Asia into a larger trade network. The European naval expansion forged new connections across the world, the most striking of them being those across the Atlantic and Pacific oceans. The inclusion of Asia and the Americas (and later Australia and Oceania) into this global economic system intensified interregional trade and promoted the spread of new crops and goods. But it also had adverse effects. Historically, the Indian Ocean trade was regional and highly specialized, with each region producing products that were locally raised or manufactured. India was known for its superb textiles and dyes; Southeast Asia produced precious gems and spices; East Africa served as a source of ebony, ivory, and slaves; while Arabia and Persia were known for horses, incense, and woven tapestries and carpets. Europeans transformed this regional commercial network by connecting them to each other as well as to the Atlantic, Pacific, and Mediterranean trade networks. Commercial power thus became global rather than regional, and Europeans, who monopolized global shipping, became power players in it. From the seventeenth century onward, European companies ensured that the wealth flowed out of the Indian Ocean directly into Europe, circumventing the great Islamic empires that used to control it for centuries and derived substantial benefits from it.

Age of European Expansion and Economic Transformation

Starting with early Portuguese and Spanish maritime exploration for new routes to Asia, Europeans began to utilize new technological innovations to get into new markets in Asia. They sought to reduce their reliance upon Muslim traders, who had delivered the goods and spices of the “East” for centuries before, and to profit from direct trade with India and China. After all, Columbus sought a new western route to India, not a new land that we now know as the Americas. Chinese tea, silk, and porcelain, as well as the spices and textiles of India and Indonesia were highly desirable in Europe, prompting Europeans to cross the oceans to get them. After the discovery of the Americas, Europeans fully employed its vast riches (primarily silver) to buy their way into Asian markets and advance their own economies. In 1500 the global economy centered on Asia, but some 250 years later the epicenter of the emergent global economy lay in the Atlantic world, where Europeans developed a triangular trade involving Europe, Africa, and the Americas.

Yet Europe’s influence on Asia was more modest than in the Americas, where Europeans established colonial empires and exploited local populations. Several factors played a role in this. To start with, the estimated population of Asia was about five times that of western Europe. Furthermore, Asians were immune to the European diseases that wrought such devastation on the Native Americans. Asian destinations were more remote than American, and more importantly, Asian states possessed a technological level that was as sophisticated as and sometimes superior to European states. Thus, Asian states were better positioned than the Aztecs or Incas to resist European conquest. Despite their success, Europeans did not monopolize all Asian shipping. Local Muslim, Hindu, and Chinese traders remained active throughout the region, oftentimes having an upper hand over their Christian brethren. But Europe dominated transoceanic trade, particularly in the Atlantic, and developed a network of trade outposts along the African and Asian coastlines. In Japan, despite an isolationist policy, the Tokugawa shoguns allowed Dutch traders access to the port of Nagasaki. Even in China, where a strong central government prevented European expansion into the mainland, the Portuguese still managed to establish their presence at the important port of Macao. Such outposts provided Europeans with access to overland trade routes and goods that were otherwise inaccessible to them. In the Americas, the collapse of local Amerindian states in the wake of European arrival meant that the region became almost completely dominated by European states. Population losses due to diseases as well as European technological advantages facilitated the rise of colonial enterprises in the Western Hemisphere. Spain took the lead in the process, creating the *encomienda* system

In 1500 the global economy centered on Asia, but some 250 years later the epicenter of the emergent global economy lay in the Atlantic world, where Europeans developed a triangular trade involving Europe, Africa, and the Americas.

that granted a Spanish colonist the right to exact tribute from a certain number of Amerindians in a specific area. In theory Amerindians remained free and the *encomienda* system provided royal protection to them, but in reality the local populace was brutally subjugated. Thus, the Spanish *repartimiento* system in Mexico and the *mit'a* system in Peru allowed colonists to employ Amerindians for forced labor, in essence subjecting them to slavery.

The opening of new trade lanes to the Americas and Asia shifted the main focus of Europe's trade from the Mediterranean to the Atlantic, while the established land routes through Islamic states were eclipsed by new naval trade lanes. European penetration of the Asian oceans was facilitated by the withdrawal of China and Japan from international trade and a lack of interest in naval trade from India and Iran. Until the eighteenth century, European trading posts in Asia were nearly all on the coastal periphery, although the Dutch did gain control over considerable territory in Indonesia in the early seventeenth century. The total volume of European shipping in Asian waters rapidly increased between the sixteenth and eighteenth centuries. The volume of trade was four times as big in the seventeenth century as it had been in the sixteenth century and nine times as big in the eighteenth century.

Naturally, not all European states benefited from this growth. Portugal became a marginal participant, with about 3 percent in the eighteenth century. On the other hand, the Dutch accounted for half of the expanded trade, while the British, with about a quarter, were a close second. The European market for the traditional export of spices was limited, but European demand for export items created new markets for cotton textiles from India, coffee and spices from Arabia and Indonesia, and raw silk, porcelain, and tea from China. European companies contributed to the rise of new centers of commerce in such places as Bombay, Calcutta, and Madras and encouraged the growth of some Asian industries. Thus, recent studies reveal that British and Dutch purchases of textiles accounted for about 11 percent of textile employment in Bengal in the period 1678–1718. Although in China the Ming dynasty renounced large-scale international trade by the late fifteenth century, Chinese manufacturing profited greatly from increasing European demand, which sent most of the American silver to China to pay for the goods.

Some Asian states failed to exploit economic opportunities that came with European arrival; success often depended on the personality of the ruler. In mid-sixteenth-century Iran, domestic and foreign threats stalled the economy, while Shah Tahmasp (1524–1576) tolerated rapacious appropriation of resources and material wealth by the elites. In fact, the shah played a leading role in this process. Upon his death, it was discovered that his treasury contained millions of gold and silver coins, 600 ingots of gold and silver (30.5 pounds or 13.8 kilograms each), 200 kharwars of silk (650 pounds or 295 kilograms each), and 30,000 pairs of fine and expensive garments. This enormous capital had languished unproductively for years in the treasury instead of being effectively invested or managed. At the same time, the shah's propensity to increase the rate of taxation while little was done to enhance production was bound to impoverish the masses of people. The reign

of Shah Abbas I (1587–1629) briefly stopped the process of economic stagnation. The shah restored internal peace and stability in the country and injected surplus revenue back into the economy, encouraging production and trade. He reorganized taxes, repaired the decayed irrigation systems, constructed roads and caravanserais, and suppressed crime and brigandage. As trade and commerce grew, many Iranian towns favorable to foreign trade expanded as well. Bandar Abbas, on the Persian Gulf, was transformed from a small village into a major commercial center.

But the shah's reign was not without fault. As a despot he encouraged production while that production served his purposes but strove to limit individuals' ability to accumulate and invest wealth. No institutional framework existed to protect property rights. For example, the shah had the right to declare himself heir to whomever he pleased. This legal insecurity led those who had acquired some surplus wealth to hoard rather than to invest to avoid being exposed to the despot's rapacity. The state also held monopolies on some trades and manufacture. In such circumstances, a political crisis (e.g., death of the shah or weakening of the central authority) inevitably caused an economic crisis. International factors only exacerbated the problems. John Fryer, an Englishman who visited Iran during 1672–1681, suggested that “the discovery of the sea route” to India by the Europeans may have also contributed to the decline of the Persian economy. In his view, the decline of Isfahan, one of the largest commercial centers in Iran, was undoubtedly caused by this discovery. In Fryer's book *A New Account of East India and Persia—Being Nine Years of Travels, 1672–81* (1698), he speculated that it was because “it was the storehouse and general market for Indian wares as well as its own,” whereas by then “it became a lake, in which riches do now stagnate, not circulate, or at least not with the force they did before.”

China's experience in the emerging global economy is striking as well. In 1400 China was the world's leading economy in terms of per capita income and outshone Europe in terms of technology, use of natural resources, and capacity for administering a vast empire. China's commerce flourished in the great cities of Beijing, Hangzhou, Guangzhou, and Nanjing, whose populations counted in the millions. Yet 300 years later, western Europe was overtaking China in per capita real income and technological and scientific development. Several factors contributed to such a decline. China turned its back on naval exploration and trade just as Europe was embarking on transoceanic voyages, and the court remained largely isolated from foreign commerce during large parts of the Ming and Qing dynasties. More importantly, China, which possessed some of the most sophisticated technologies, did not fully appreciate the Western technological challenge and restricted itself to an ethnocentric outlook that praised domestic achievements and ignored developments outside China. As a result, much of Europe's technological and economic

John Fryer, an Englishman who visited Iran during 1672–1681, suggested that “the discovery of the sea route” to India by the Europeans may have also contributed to the decline of the Persian economy.

development between 1500 and 1800 remained unappreciated in China. China's famous bureaucracy of professionally trained public servants, recruited by examination on a meritocratic basis, had a negative long-term effect as well, since the best and brightest minds were occupied with Confucian studies, leaving very few intellectuals focused on such mundane matters as engineering, mathematics, or science. The end of the Ming dynasty coincided with a period of commercial expansion, but both the Ming and Qing dynasties emphasized development of China's vast internal trade networks, seeing little benefit in enriching foreign economies. Both allowed commercial missions under the guise of diplomatic "tribute missions," but the goal was Chinese self-sufficiency rather than international expansion. In that regard, however, it is important to emphasize that China doubled in size during the reign of the Qianlong emperor (1711–1799). China was expanding its land empire at the same time that Europeans were launching outward to sea.

Initially there was relatively little demand for European goods in Asia. On the contrary, the introduction of better-quality products from Asia had a major impact on European manufacturing. For example, when it came to textiles, the arrival of high-quality Indian textiles caused great concern among local manufacturers in England, who in 1699 rioted in protest. Shortly thereafter Parliament prohibited the import of all dyed and printed cloth from India. Such protectionist policies facilitated the development of English textile manufacturing, which later played a decisive role in the demise of India's handloom textile business. Indeed, by the eighteenth century Europeans used their profits to improve their own manufacturing base and then sold their manufactured products (metalwares, cloth, weapons, etc.) throughout the world. The mercantilist doctrines urged European states to monopolize as much manufacturing as possible, while much of the world retained its emphasis on agricultural production and the extraction of natural resources that sustained growing European demand for such products. Thus, the nature of economic interactions had changed in a profound way. By the eighteenth century Europe turned parts of the world into sources of natural resources from which its industries fabricated finished goods that were then sold at substantial profit around the world.

Slave Trade

Starting with the Portuguese, European traders altered trading patterns in western Africa, drawing the region into a European-dominated Atlantic economic network and away from traditional trans-Saharan trade. European imports also reduced local craft production. More importantly, European arrival on the coast of western Africa marked the start of an international slave trade that had a major impact on the region. Portuguese, Dutch, English, and French traders purchased west Africans to be sold in the Americas. Although the slave trade was not new to Africa, there had been a long and sustained demand for slaves in the Islamic world, but the European slave trade raised this practice to a completely new level. Between the sixteenth and nineteenth centuries, an estimated

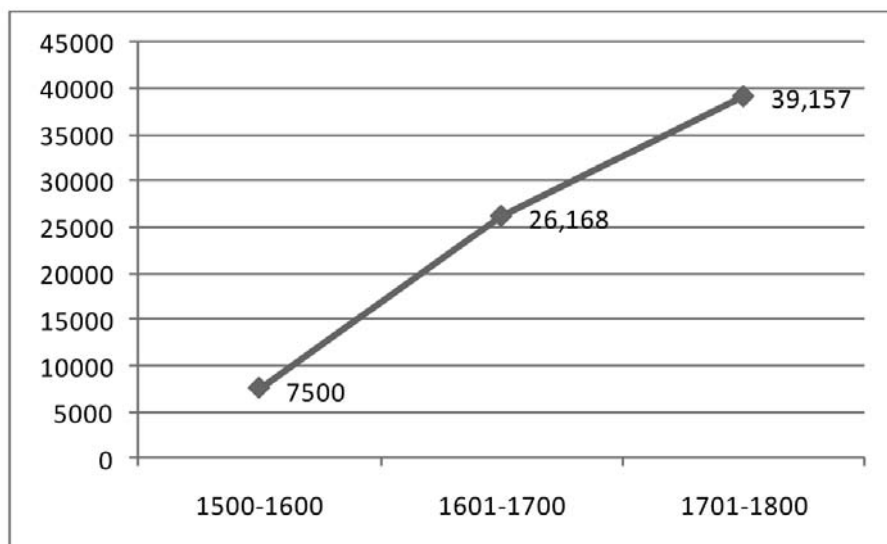
10 to 12 million Africans were enslaved and taken away from their native land. This massive exodus devastated local African communities and affected their economic, social, and cultural development. Yet the slave trade also profited some African communities, since European rarely ventured beyond the African littoral. The Africans accomplished the actual procurement of slaves and traded them for European weapons and manufactured goods. Such practices encouraged local rivalry and conflicts, shifting wealth and power from the continent's interior to its coastline.

Europe, on the other hand, benefited substantially from the slave trade, which became one of the cornerstones for the transatlantic triangular trade. Sailing from bustling ports such as Amsterdam, London, Lisbon, and Nantes, European traders carried guns, textiles, and other manufactured goods to Africa. There at coastal trading posts they traded their goods for slaves, whom they then transported across the Atlantic to slave centers in the Americas to be sold or exchanged for colonial goods (sugar, coffee, tobacco, etc.). Returning to Europe, the traders sold these colonial goods at a great profit, part of which they then reinvested in new trading trips to Africa. The slave trade played a central role in the shift of the global economy from the Indian Ocean to the Atlantic Ocean, facilitating Europe's rise as a dominant economic power. African slaves worked on plantations that produced cash crops and mined much of the silver that fueled the European economy. The Atlantic commerce helped jump-start the European Industrial Revolution and sustained military expansion that allowed Europe to project its power across the globe.

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The Price Revolution

In the sixteenth century, gold and silver were the most valuable products of the Americas. Silver was readily available in the mines of northern Mexico and the Potosi mines, located in the area of modern Bolivia. The Potosi site, discovered in 1545, held the largest silver deposits in the world. Some 40,000 Native Americans were employed in dreadful conditions. Between 1550 and 1800, over 80 percent of the world's silver and more than 70 percent of the world's gold originated in Mesoamerica and South America. Spanish galleons, laden with silver, sailed twice a year from the Americas to Spain, one shipment from Vera Cruz carrying Mexican silver and the other from Portobello with Peruvian bullion. Eventually a large percentage of the precious metals, particularly silver, was used in the Asian trade, sustaining European trade with China and India. Europe produced very little other than the silver that interested Asian traders. Eventually over one-third of all American silver produced between 1527 and 1821 ended up in China, where Europeans bought exquisite porcelain, silk, and tea.



Silver Shipments from Americas to Europe (metric tons) (Cambridge: Cambridge University Press, 1985).

(Source: Morineau, M. Incroyables gazettes et fabuleux métaux, 570.)

The vast influx of precious metals into Europe set off a round of inflation. The increase in the amount of gold and silver caused rapid rises in prices, which in conjunction with an increase of population disrupted the economies of some European states. The European population expanded in the wake of the Black Plague, and the number of cities with 100,000 inhabitants or more rose from five in 1500 to over a dozen in 1600. The population of the countryside, the villages, and small towns expanded as well. Rapid population growth created a heavy demand for food supplies, which farmers, despite improved agricultural methods and new crops, struggled to meet. Throughout the sixteenth and seventeenth centuries demand outstripped supply, causing prices to rise, while the abundance of gold and silver depreciated wages. The prices of basic consumable goods in England quadrupled between 1500 and 1600, while in Spain annual increases in prices averaged 2.8 percent between 1501 and 1562 and 1.3 percent per year afterward. In England the wages of construction workers doubled, but prices on food increased four and even five times, causing economic distress to wage earners. In Spain the increased supply of money accelerated inflation and prompted currency debasements, which only further undermined the economy. The Spanish monarchy declared bankruptcy in 1557, and suspended payments on its debts in 1575, 1596, 1607, 1627, and 1647. These defaults made future loans prohibitively expensive for Spain and stalled potential reforms that could have modernized the nation's economy. The effect of the price increases and inflation, however, was not uniform and variously affected European states. In England and the Netherlands, owners of fairly large estates did better due to rising prices than did smaller landowners. But in France minor nobility struggled to adjust, and many of its members had to turn to military careers. Price increases oftentimes provoked unrest and rebellions. In southwestern

Germanic states, local princes caused peasant uprising by imposing new taxes to offset price increases.

The availability of more money stimulated manufacturing and commercial enterprise because borrowing was less costly when money was losing value. A merchant could afford taking risks because a loan he took one year would be worth less, in real terms, three or five years later when money was due. This encouraged commercial risk taking, especially since colonies presented new markets to exploit. The trade boom facilitated the expansion of the banking industry, which had flourished in some parts of Europe in the fourteenth century. Renaissance Italy was a fertile ground for banks, with perhaps the most famous Italian bank run by the Medici family. In the fifteenth century, the Fugger family rose to prominence and replaced the Medicis as the leading bankers of Europe. Jacob Fugger rapidly expanded his family's commercial enterprises, setting up a chain with branches in all the major cities of central and western Europe. So great was the bank's wealth that it was able to rescue indigent kings and princes. In 1519 Fugger's financial support proved decisive in the imperial elections of the Holy Roman Empire.

In 1600 Spain and Portugal, the countries that spearheaded European colonial conquests in the sixteenth century, played limited roles in Europe's commercial life. Spanish and Portuguese merchants focused their efforts on extraction and transportation of precious metals, lacking the flexibility shown by other European traders, especially the English and Dutch. Neither Portugal nor Spain possessed well-developed infrastructures to absorb all the exports of their colonies or distribute them effectively. As a result, other commercial powers (England, the Netherlands, the Italian states, and the north German states) profited far more from colonial exploitation. The Netherlands particularly benefited in the new economic environment, causing some scholars to identify it as the first "modern" economy. Its cities, especially Antwerp and Amsterdam, took advantage of their location, a thriving local industry, and a rapid increase in bulky seaborne trade to emerge as the leading commercial centers in Europe. The Netherlands, a highly urbanized region, required imports of vast food supplies that facilitated the development of their merchant fleet, which soon came to dominate Atlantic transportation. Even Spain, which was engaged in a prolonged conflict with the Dutch, could not avoid the services that the Dutch merchants provided. The rise of Dutch and English trade centers came at the expense of other trade powers. The Republic of Venice, once the dominant trade power in the Mediterranean, declined to a second-rate status because it failed to adapt to new economic realities and had continued conflicts with the Turks. The Hanseatic League, which exerted great influence over northern Germany and the Baltic, also experienced a decline in its trade, much of which was lost to the more aggressive Dutch. By the mid-seventeenth century the Dutch themselves were

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challenged by England and France, both of which embarked on colonial empire building. The Anglo-Dutch Wars (1652–1654, 1665–1667, and 1672–1674) and the coalition wars against France marked the turning point in Dutch history. The Netherlands lost many of its colonies and ceded control over seas and trade lanes to the British.

Old World's New Ventures

Following the first wave of exploration and discovery, European financiers developed a few commercial innovations that gave them a vast advantage in overseas trade, such as further developing the extended commercial networks that had emerged in Europe in the medieval era and improving banking, which together laid the basis for a brisk growth in trade. Financiers and traders commonly used bills of exchange that eased business transactions since traders no longer had to carry vast amounts of gold and silver on their long and oftentimes dangerous journeys and could simply exchange promissory notes that could be cashed at a later point.

The infusion of gold and silver increased the credit supply that made it easier for financiers to pool their resources for long-term enterprises. Starting in the mid-sixteenth century traders began to raise capital required for their activities by selling stocks to finance overseas expeditions and paying dividends from profits gained from these ventures. The joint-stock companies chartered to trade in the Americas became known as the “West India Companies,” while those sailing to Asia were known as the “East India Companies.” Among the first such enterprises to be established were the English East India Company (EIC) and the Dutch East India Company, founded in 1600 and 1602, respectively; France was a relative latecomer, with its East India Company established only in 1664. Although officially independent of each

government, these trading companies recognized that it was in their best interest to further the state's interests.

Outside Europe, many traders developed economic enterprises around family-held businesses, rarely developing impersonal business practices such as joint-stock companies. In contrast, European companies, drawing on the capital of their financiers, conducted business across the oceans, carrying spices, raw silk, textiles, tea, porcelain, and other commodities. With their fleet fully armed and ready to fight, the joint-stock companies oftentimes used force to enter local markets and built fortresses to protect their interests. In the seventeenth century the Dutch East India Company eclipsed all of its rivals in Southeast Asia.

➤ THE DUTCH EAST INDIA COMPANY

Between 1500 and 1800, the Dutch East India Company accounted for 45 percent of the European voyages to Asia. Established in 1602, the company held a Dutch monopoly on trade with Asia and successfully organized a trade with heavy capital outlays over extended periods. Dutch ships were armed, and the company had the power to wage war, make treaties with Asian rulers, establish fortified ports, and enlist soldiers and administrators. The company maintained a fleet of about 100 vessels, each of them replaced after about ten years of sailing. Over the lifetime of the company, 1,500 ships were constructed for Asian trade, and by 1750 the company employed more than 12,000 sailors and 17,000 soldiers and administrative personnel in Asia.

Between 1602 and 1796 the company sent out almost 1 million Europeans to work in the Asia trade with nearly 5,000 ships, close to twice the number of ships sent by its nearest competitor, the English East India Company. Arriving in India at the Malabar Coast in 1604, the Dutch company extended its authority to the Indian coastline and Ceylon by 1610 and to Indonesia by 1620. Establishing their center at Cochin in 1663, the Dutch East India Company maintained a virtual monopoly on the pepper and cinnamon trade for the next 130 years.

Coming in the wake of the Portuguese and the Dutch, the EIC soon eclipsed its rivals and consolidated and expanded its operations in India. By the mid-seventeenth century it was involved in a wide variety of commercial enterprises, shipping spices and tea to Europe, cloth from southern India to Sumatra, and coffee from Arabia to India. Following its victories at Plassey in 1757 and Buxar in 1765, the EIC took control of the Bengal region of India, laying the foundation to the future British Empire in India.

Emerging Economic Theories

The new overseas trade opportunities had a profound impact on Europe, restructuring public life and gradually increasing the power of private business. Outside Europe, governments largely continued to dominate business interests in many areas, such as the Ottoman empire, India, Iran, China, and Japan. At the same time, business interests in some European states challenged established political order, seeking a greater political role in the government. The gradual transformation of the European state was driven by a new system of trade and exchange that we now call capitalism. As an economic system, capitalism is characterized by private (or corporate) ownership of wealth and the means of production and private control over major economic decisions (e.g., price, distribution, etc.). Such networks advocated the establishment of free competitive markets where private interests could pursue their economic interests. Although capitalist thought desired fewer regulations from state and church, they did depend on the support of the state in protecting them from foreign competition. Early capitalists often called upon governments for support in their commercial enterprises. Italy, where vibrant commerce and banking had been evolving since the Crusades, proved to be a fertile ground for capitalist ideas. Capitalists gained control of the governments in some city-states, such as Venice, Florence, and Genoa, where the state's resources were often expended in support of commercial pursuits.

Other European states followed a different trajectory. For instance, mercantilist theory predominated in France and Spain. Mercantilism advocated tighter government control of trade and commerce and, in particular, restricting the flow of gold and silver. The goal of mercantilist policies was to obtain maximum wealth, believed to benefit both the sovereign and the nation as a whole. In its early stages mercantilists believed that whoever possessed the most bullion—that is, gold and silver, which were the primary payment methods used in transactions—could

➤ PROTESTANTISM AND CAPITALISM

In the early twentieth century the prominent social scientist Max Weber put forth an argument that Protestantism's emphasis on hard work, individual achievement, and divine grace contributed to the emergence of capitalist enterprise. Weber argued that the Protestant doctrines encouraged followers to demonstrate their virtue through industriousness. Adherents were encouraged to find satisfaction in hard work. Protestantism created a pool of "sober, conscientious, eminently capable workers who regarded their labor as their divinely ordained purpose in life."

Weber's thesis, however, has provoked a long debate among scholars. Some challenged the notion of religion ceding the central place in life to the pursuit of economic gain. Others noted that capitalist practices could be observed prior to the Reformation, and in later periods some Protestant areas were not capitalistic while certain Catholic areas were. Yet debates over the relationship between business practices and religious doctrines, whether Protestant or Catholic, remain unresolved.

wield greater political and military authority. To achieve this the mercantilist doctrine urged the state not to import goods from outside its own boundaries but instead to sell exports as widely as possible in its own ships, thus increasing the inflow of gold and silver. To protect domestic manufacturing, safeguard national production and labor, and add a competitive edge to its products, the state should prohibit the import of foreign products or at least use tariffs to hamper them. Mercantilists promoted colonial expansion to secure sources of natural resources and, if possible, control over large populations that might provide abundant manpower at low wages. Mercantilist policies, however, prompted economic, military, and colonial rivalries between European states because the policies positioned states in direct competition with each other for colonial expansion and wealth. Since this theory posited resources to be finite, success in one country could occur only at the expense of another. King Louis XIV's minister of finance, Jean-Baptist Colbert (1619–1683), was one of the most vigorous

adherents of mercantilist thought, and his name is often used as a synonym for mercantilism. In charge of the French economy between 1665 and 1683, he worked hard to make France economically self-sufficient and to increase the nation's wealth. He promoted the establishment of trading companies (creating the West India Company in 1664), worked to increase exports, developed a commercial code, and improved communication within the country by building roads and canals. Colbert fostered colonies abroad, in particular in North America, where he sought to increase the labor supply by sending hundreds of indentured workers, settlers, and marriageable girls annually. His policies generated enormous revenues for the Crown, which Louis XIV unfortunately squandered on wars.

By the early eighteenth century some European economists began to consider the policies of the mercantile system to be erroneous. François Quesnay in France and Adam Smith in Britain advocated an end to government restrictions that limited the potential for economic growth. They favored a limited role for government, or a *laissez-faire* society where a government's role would be limited to providing defense against external aggression, administering justice, and preserving competition, and building and maintaining public works and institutions such as roads and schools. These economists argued that the principles of supply and demand would best regulate the movement of goods and the level of prices.

Trade and Colonial Conflicts

As the volume of international trade increased, so did its relative importance for a state's economy. Protecting overseas trade and major commercial sea-lanes became part of the geopolitical considerations. European naval advantages—a powerful technological combination of full-rigged, stoutly built ships carrying large effective cannon and handling large payloads—allowed European ships to force their way into local trade networks. In the early 1500s the Portuguese used their naval technological advantage to defeat Muslim navies in the Indian Ocean and take control of sea-lanes; a century later the English, French, and Dutch did the same. Although Asian states possessed sophisticated naval technology that equaled or in some cases (e.g., China's treasure ships) eclipsed European technology, Europe's naval activity was a result of complex socioeconomic factors that Asian (or African) states struggled to replicate. More importantly, most non-European states were land-based empires and had little interest in the seas or maritime trade. The income of the Indian rulers, including the Mughal emperors, was derived from land taxes, and they had no significant financial interest in foreign trade. China could have posed a major obstacle to European naval expansion in the Indian Ocean, but in the midst of the food-production uncertainties created by an exploding population, China was preoccupied by other concerns and showed little interest in external trade. With the exception of the Ottoman empire, no state navies challenged Europeans on the sea, permitting them to establish a virtual monopoly on transoceanic trade.

In India, the Mughals developed a powerful army to maintain their empire, but they had no navy. The Mughals were uncertain about the nature of the European threat. While India had been invaded by land for centuries, the Europeans came by sea, did not seem to be invading, and instead sought economic relations to which the Mughals had no objection. Yet once Europeans secured their mastery of the seas and gained a foothold on the coasts

of the Indian subcontinent, expelling them proved to be nearly impossible. Thus, in 1686 following tensions with the Mughals, the EIC blockaded Mughal trade with Southeast Asia. Mughal emperor Aurangzeb responded by expelling the English from their settlement at Hoogly but, lacking naval capacity, could do nothing against them on the seas. The English relocated to Calcutta and continued their commerce and armed competition.

European naval activity had a momentous consequence. Outside the Americas, Europeans pursued their colonial interests by establishing coastal entrepôt empires, a series of trade outposts connecting far-flung regions via sea-lanes. By the eighteenth century, control of the sea-lanes became one of the key national interests for many European states. Thus, the English statesman Henry St. John, Viscount

The Mughals were uncertain about the nature of the European threat. While India had been invaded by land for centuries, the Europeans came by sea, did not seem to be invading, and instead sought economic relations to which the Mughals had no objection.

Bolingbroke, explained that “As trade and commerce enrich, so they fortify our country. The sea is our barrier, ships are our fortresses, and the mariners, that trade and commerce alone can furnish, are the garrisons to defend them.” Such views contributed to the formulation of a new type of war, the *guerre de course*, or war against commerce, that entailed harassment of an enemy’s merchant shipping and attacks on its colonies. Such focus on the need to control the seas, at a time when the rest of the world was inland looking, meant that by the mid-eighteenth century European states, particularly Britain, exercised unrivaled mastery of the high seas.

Following the conquest of the Americas, the Spanish government tried to maximize its profits from trade in colonial goods. Spain confined trade in its colonies to Spanish nationals only and put in place rigid regulations to protect the system. Only a few specially designated colonial ports were allowed to ship goods to Europe, while all commercial transactions were subject to the *casa de contratación* in Seville. The Spanish system, however, had major drawbacks, since it restricted economic growth and facilitated corruption and smuggling. Such an arrangement also contributed to the outbreak of conflicts between Spain, England, and France, whose traders yearned to trade in the Americas and continued to lust after the wealth of the East. Asian economic systems were still viable but were beginning to falter as the period ended.

—Alexander Mikaberidze

■ Introduction: Innovations in Domestic Economy and Trade

The new overseas trade opportunities had a profound impact on much of the world and above all on Europe, where public life endured a thorough restructuring and the power of private business gradually increased. Capital was accumulated and was productively invested, contributing to the development of new forms of social organization used to exploit economic opportunities. Outside of Europe, the governments largely continued to dominate business interests, such as in the Ottoman empire, India, Iran, China, and Japan.

Merchants played a vital role in the economic life of the Islamic world, highlighted by the fact that the prophet Muhammad himself was a merchant during the earlier part of his life. During the Islamic Golden Age (eighth through twelfth centuries), the Islamic world witnessed the development of early forms of protocapitalism and free markets with their bills

of exchange, checks, promissory notes, transactional accounts, etc. Many of these early capitalist concepts were later adopted and developed by European merchants. The Quran contains several references to commercial activities but no specific rules that prompted Muslim jurists and theologians to lay down several fundamental principles that regulated Muslim commercial activity for generations. Muslim theologians argued that a merchant should begin his transactions with good faith and intentions and consider trade as a social duty. He therefore had to avoid any forbidden and suspicious business and carefully watch his words and deeds in business. Most importantly, he was not allowed to charge interest on loans. The last tenet, prohibition of usury, was widely debated in the Islamic world, with both sides of the argument citing Quranic verses and *hadiths* to support their positions. Thus, the economic reality varied depending on

a location, and interest-bearing loans took several practical expressions. The most widespread of them was *istighlal*, whereby when a man received a loan he immediately sold his house (or other property) to the creditor, who then leased it back to the borrower for the duration of the loan. If the creditor repaid his loan on time, he could reclaim his house; if he failed, then the parties could continue with the lease, with a rent now constituting an interest payment. The expansion of Islamic trade in the East and West also led to the adoption of trading patterns that prevailed in these localities. Investment in commercial enterprises took many forms. *Mudharabah* was a limited partnership whereby one partner gave money to another for investing it in a commercial enterprise, while profits generated were shared between the parties according to their initial agreement. *Musharakah* was a joint investment venture of two or more parties who jointly contributed capital to a business and divided the net profit and loss. Muslim merchants made wide use of *sukuks*, financial certificates that were the Islamic equivalent of European bonds, although interest-bearing bonds remained prohibited.

The situation was different in China, where the imperial court did not distinguish between foreign and domestic trade. The court believed that the world was composed of one true civilization with one true ruler, the emperor, who represented all humanity before the heavens. Thus, the Chinese scholars referred to their state as *Zhongguo* (the Middle Kingdom), implying that it was at the center of the civilization. Within this civilization there were those who were ruled directly by the emperor and those who were subject to various levels of subordination to the emperor (e.g., neighboring native chiefs and kings who delivered regular tribute and were allowed to trade within China). Meanwhile, an outermost circle of “barbarians” was completely excluded from tribute but given either limited rights of direct trade or traded indirectly by including their goods in the tribute offered by somebody else. Moreover, the trade of goods also carried an important symbolism because the foreigners were supposed to bring exotic goods that would have highlighted the emperor’s exalted status. The goods given by the

emperor in return (silk, porcelain, books) were symbols of refinement of the Chinese culture.

Thus, on the one hand Chinese political theory affected attitudes toward economy by concerning itself with status and culture instead of profit maximization. But China’s ruling dynasties also promoted trade and commerce with neighboring client states by expanding tribute trade and rewarding political loyalty. This had left foreign trade in the hands of foreign merchants. In the early fifteenth century China began to trade overseas. Chinese ships and merchants appeared in Japan, the Philippines, Indonesia, and Southeast Asia, while the Chinese admiral Cheng-ho led the famous naval expeditions into the Indian Ocean littoral. But this changed in 1433 when the emperor forbade further voyages, decreed the destruction of oceangoing ships, and prohibited his subjects from traveling abroad. Neighboring countries continued to pay tribute in exchange for the right to send trade missions to China. The Ming regulations limited the size and number of such missions, restricting them to certain ports. Although the Chinese economy did not break fundamentally new ground during the sixteenth through eighteenth centuries, Chinese levels of achievement remained high, and manufacturing and internal trade surpassed previous levels, allowing the nation to largely ignore Western goods. But much production lay in the hands of rural cottage artisans who lacked capital to seek economic expansion, while the Chinese upper class, rooted in traditionalism, looked disdainfully at purely economic activity. The Portuguese, who reached China in 1514, initially caused imperial irritation by their disrespect of Chinese laws. In 1522 Chinese forces drove them out of Guangzhou, but the Portuguese persisted in their efforts to trade with China. In 1557 China allowed them to set up a trading post at Macao in return for paying annual tribute. Over the next few centuries Macao turned into a major center for the commerce between China and Europe. At the same time, China’s refusal to open its domestic market prompted the Japanese and the Koreans, who were unwilling to pay tributes required for official trade, to turn to piracy. By the seventeenth century piracy became an organized industry that was perpetrated by raiding companies, some of which involved Chinese.

Unlike other parts of the world, Europe went through remarkable economic transformations between 1500 and 1800, including commercial expansion and growing financial sophistication. This period saw the gradual development of the European banking industry. The banks successfully circumvented the Catholic Church's ban on usury, which condemned any interest beyond the principal, by using the bill of exchange, which entailed a merchant lending money in one currency and receiving repayment (after a fixed amount of time) in another, with the profit disguised in the exchange rate. Of course, the fluctuating nature of exchange rates made the precise return on the bill uncertain, but the bank mostly profited from it. The Italian banks fell upon hard times in the sixteenth century and were soon eclipsed by the German banks, the most famous of them being the great Fugger company from Augsburg. The Fugger family created a Pan-European banking empire that engaged in a wide range of commercial activities, including speculation in the money market, trade in commodities, and extending credit to states. The Fugger bank survived until the seventeenth century, when its practice of extending large credits to rulers finally brought it down. Besides these major banking conglomerates, there were numerous local deposit banks that took in deposits and invested some of their savings in commercial ventures. However, the volatile nature of such investments often led to bankruptcies. The governments sometimes tried to restrict such practices and sometimes directly interfered in the banking operations, leading to the development of publicly controlled deposit banks that became particularly successful in Spain and Italy in the second half of the sixteenth century and in the Netherlands and Germany in the seventeenth century.

The European Age of Expansion, with its high demand for great capital investments for transoceanic journeys, contributed to the development of international banking and credit instruments. In the Netherlands, the Antwerp and Amsterdam bourses emerged as permanent markets where tradesmen could raise capital for their commercial enterprises. The spread of Protestantism allowed the Dutch to make lending at interest legal, while laws against usury

remained on the books in much of the Catholic world. The first modern banknotes—initially receipts used to reclaim the whole deposit but later presentable for part payment and assignable to others—appeared in London in the late seventeenth century. Yet similar ventures in Sweden and France ended in disaster and left a lingering public distrust of the banking business. Indeed, when an ordinary European needed a loan, he obtained it not from a bank but rather from a pawnbroker.

The gradual transformation of the European state was driven by a new system of trade and exchange that we now call capitalism. An economic system, capitalism is characterized by private (or corporate) ownership of wealth and the means of production and private control over major economic decisions (e.g., price, distribution, etc.). Such networks advocated the establishment of free competitive markets where private entities could pursue their economic interests. Although capitalist thought desired fewer regulations from state and church, early capitalists oftentimes asked governments to support their commercial enterprises. Italy, where vibrant commerce and banking evolved since the crusades, proved to be fertile ground for capitalist ideas, and city-states such as Venice, Florence, and Genoa saw capitalists gaining control of the government and using the state's resources for commercial pursuits. Other European states, however, followed a different trajectory. Thus, in France and Spain the governments embraced mercantilism, which advocated tighter government control of trade and commerce and particularly restricting the flow of gold and silver. The goal of mercantilist policies was to obtain maximum wealth, which was considered to benefit both the sovereign and the nation as a whole. In its early stages mercantilists believed that whoever possessed the most bullion—that is, gold and silver, which were the primary payment methods used in transactions—could wield the greater political and military authority. To achieve this, the mercantilist doctrine urged the state not to import goods from outside its own boundaries but instead to sell exports as widely as possible in its own ships, thus increasing the inflow of gold and silver. To protect domestic manufacturing and

add a competitive edge to its products, the state should hamper (through tariffs) or outright prohibit the import of foreign products, safeguarding national production and labor. Mercantilists promoted the importance of colonial expansion to secure sources of natural material and satisfy the need for a large population, which provided abundant manpower at low wages. Such policies, however, prompted economic, military, and colonial rivalries between European states, since colonial expansion and continuous demand for wealth in one country could occur at the expense of another. King Louis XIV's minister of finance Jean-Baptist Colbert (1619–1683) was one of the most vigorous adherents of mercantilist thought, and his name is often used as a synonym for mercantilism. In charge of the French economy between 1665 and 1683, he worked hard to apply mercantilist principles, seeking to make France economically self-sufficient and to increase the nation's wealth. He promoted the establishment of trading companies (creating the West India Company in 1664), worked to increase exports, developed a commercial code, and improved communication within the country by building roads and canals. Colbert fostered colonies abroad, in particular in North America, where he sought to increase the labor supply by sending hundreds of indentured workers, settlers, and marriageable girls annually. His policies generated enormous revenues for the Crown that Louis XIV unfortunately squandered on wars.

By the early eighteenth century, some European economists began to consider the policies of the mercantile system to be erroneous. François Quesnay in France and Adam Smith in Britain advocated an end to government restrictions that limited the potential for economic growth. They favored a limited role for government, or a *laissez-faire* society, whereby government's role would be limited solely to providing defense against external aggression, administering justice (and preserving competition), and building and maintaining public works and institutions such as roads and schools. These economists argued that the movement of goods and prices would be regulated by the balance between supply and demand.

—Alexander Mikaberidze

High Finance and Taxation— The Flourishing Economy of Early Modern India

Although the region prospered under the Delhi sultanate that ruled large parts of northern India for approximately four centuries prior to Mughal rule, the economy of early-modern India flourished under the Mughals. The Mughal empire was a Muslim empire founded in 1526 and eventually spanned an area that covered almost all of the Indian subcontinent by the early eighteenth century. By that time, the empire levied taxes on almost 150 million people and gained enormous wealth and power that drew the attention of Europeans. Emperor Akbar (r. 1556–1605) helped to secure this prosperity by creating a system of political, social, and economic reform that would make the Mughal empire one of the largest empires in the early-modern world. The Mughals maintained this dominant position until the death of the emperor Aurangzeb in 1707. After many political and social changes, the British East India Company began to exploit the wealth and potential of India by the latter eighteenth century.

The economy of the Mughal empire, as devised by Akbar and advanced by subsequent emperors, was highly sophisticated for the early-modern period. The land-revenue taxation system of credit and trade of commodities both internally and for foreign export made the imperial treasury, the emperor, and the imperial administration extravagantly wealthy. Flourishing in contrast to smaller empires, Mughal territory continually expanded, making more lands taxable, and thus the imperial coffers swelled. In addition, as non-Muslim peoples came under Mughal safeguard through expansion, they were taxed at a higher rate to secure Mughal military protection (although many rulers, including Akbar, abolished the tax known as *jiyza* on non-Muslims).

Wealth in the Mughal empire was concentrated in the upper echelons of Indian society. The elite included the imperial governors (*mansabdars*), the imperial administration, and, on a local level, the village tax collectors (*zamindars*), all of whom reaped vast riches in their positions. However, this concentration of wealth meant that the remaining population had little wealth,

relying upon their lands for sustenance. In addition, the Indian caste system influenced the distribution of wealth among the majority Hindu population; members of higher castes were those who held the greatest wealth, while the lower castes were the poor residents of rural villages.

The nucleus of Mughal prosperity was the land-revenue system implemented by Akbar. Imperial lands were partitioned into *jagirs* (specified allotments of land that varied in size) overseen by a *mansabdar*. The mansabdar, chosen by the emperor, was sent to govern and extract taxes from the jagirs. Agriculture was the basis of the empire's wealth, and almost all of the imperial income came from land-revenue taxation. This tax, levied at the behest of the emperor, could claim between a third and a half of each person's agricultural produce. Differing from other empires where the nobility were often excluded from taxation, the Mughal system was all inclusive except for some theologians and religious leaders, who did not pay taxes. After their deaths, however, the land reverted to being a taxable entity. The strength of this tax was that it was collected in currency rather than in produce. Thus, from peasants to nobility, the tax forced people into a fiscal economy.

The tax system was highly structured and was controlled by the central imperial administration. The mansabdars were appointed lands by the emperor himself. These lands were not in their home region, and this helped to curb the chance of abuse or exploitation. In addition, mansabdars were closely monitored by the central imperial administration, and any abuse or exploitation was heavily fined. The position of mansabdar was not paid; mansabdars were given a credit note from the emperor himself that allowed them to take 10 percent from the taxes that they collected. Additionally, the mansabdars had to fund a military band to protect the jagirs under their dominion.

In rural villages the taxes were collected by zamindars, who were the agents of the mansabdars. Zamindars, chosen from the superior ruling classes, often owed their positions to older village and religious relationships within the village unit. Their rights were superior to those of the peasants (known as *ryot* or *raiyyat*), and zamindars often held police and judicial duties.

They were hereditary possessors of a share in the village's produce from which they received an allowance (*nankar*).

The taxation system created a surplus that strengthened the economy. The surplus, primarily crops and foodstuffs, was traded on the local level. The money-driven economy also increased craft specialization (including a thriving textile industry) in urban areas, where approximately 15 percent of the Mughal population resided. Indeed, cities grew rapidly under the Mughal empire, as people were drawn by the trade and commerce that flourished in many centers. The populations of these imperial cities were some of the wealthiest members of Mughal society. Systems of credit helped traders to purchase and sell goods, and prosperity brought many luxuries to these centers. The wealth also fostered the expansion of educational and religious institutions throughout India.

The wealth created by this system also drew the interest of Europeans, as European traders, impressed by the splendor and wealth that Mughal cities exuded, quickly realized the mercantile opportunities available in India. External exports increased dramatically in the seventeenth century, especially in the trade of cotton and textiles. Rich-colored fabrics gained popularity in the West, especially in Britain. Merchants from the West began to settle at the Indian seaports, tempted by diamonds, spices, dye, silk, indigo, and especially cotton. The Dutch, followed by the Portuguese, French, and British, all formed their own East India companies. In 1627 the British East India Company built a factory at Surat, which cemented the commercial relationship.

By the middle of the eighteenth century, the Mughal empire began to change politically and socially. Excessive exploitation by the mansabdars evoked zamindars uprisings, while Maratha forces from western India attacked the Mughals on several fronts. The Battle of Plassey in 1757 brought British power and influence to the region. The British East India Company dominated Indian trade, and by the 1770s the British were firmly entrenched in the trade of commodities. The Mughal rulers retained their style and received a stipulated income, while the company ran the government and collected the taxes using the standing Indian officials. The company

was left with an excellent example of political unification as well as an economic system that efficiently taxed the greatest mass of people known to history at this time. Using these resources, the company embarked upon a policy of fiscal exploitation of India.

—Amanda Mazur

Bibliography

- Bayly, C. A. *Indian Society and the Making of the British Empire*. Cambridge: Cambridge University Press, 1988.
- Habib, Irfan. *The Agrarian System of Mughal India, 1556–1707*. 2nd ed. Oxford, UK: Oxford University Press, 1999.
- Habib, Irfan. *Essays in Indian History: Towards a Marxist Perception*. New Delhi: Tulika Print, 1995.
- Ziad, Zeenut, ed. *The Magnificent Mughals*. Oxford, UK: Oxford University Press, 2002.

India's Textiles—Peasant Weaving and the Rise of Capitalism

India had historically been famous for textiles such as fine muslins, delicate silks, and rich brocades and had established a small but eager market even in the West during the early modern era. English observers reporting from India in the seventeenth century indicated that there were almost 90 different varieties of fabrics that were produced there. But India's cotton textiles generated the most significant interest. These textiles were a significant part of the caravan trade that connected the Indian commercial emporia to the markets and bazaars served by the Silk Roads (and its tributaries) that extended from China to the Mediterranean. It also dominated India's contribution to the brisk transoceanic traffic that linked Indian ports to those in the Pacific Ocean, the Arabian Sea, and the gulfs in the Middle East and the African littoral of the Indian Ocean. Prior to the Industrial Revolution in Britain, India was the premier cotton textile manufacturing country in the world. It easily dwarfed others in the quantity, quality, and value of its production and exports.

Regular trade with Europe began in the seventeenth century with the establishment of the various East India companies and picked up

➤ MERCHANTS IN EARLY MODERN INDIA

The power and wealth of merchants in early modern India were formidable. Thus, merchants such as Jagat Seth could dispatch the entire revenue from the Eastern Provinces as a *hundi* (bill of exchange) drawn on his Delhi agents; Abdul Gafur controlled a trade almost equal to that of the East India Company in the early seventeenth century; Virji Vohra was worth almost 8 million rupees; the death of Casa Verona was commemorated with a 30-gun salute; Morshet Kanji and Janoji Bhosale could raise loans worth several million rupees for the Peshwa (ruler) of Maharashtra; and firms such as those owned by Bhyaram Gopaldas and Pestonji Vicaji had offices in most large urban centers. Many merchants also served as bankers to local governors and rulers. Some merchant entrepreneurs (such as Mir Muhammad Ardestani) could diversify their interests and investments into a variety of fields. Merchants occasionally worked cooperatively to advance their collective interests, were capable of negotiating agreements with foreign business entities, could influence the appointment or dismissal of high state officials, and engaged in various building projects. The fortunes of some of these individuals or mercantile families could be compared to the Fuggers of Augsburg, the Medici of Florence, or the Cranfields of London.

—Ahrar Ahmad

dramatically thereafter. One historian has calculated that by 1614 the English had ordered 12,000 pieces of textiles, by 1664 it had increased to almost 750,000 pieces, and by 1684 it increased to more than 1.5 million pieces. The fact that the weavers were able to meet the new and increasing orders from the English, French, Portuguese, Dutch, and Danish companies while satisfying the demand of its traditional markets suggests that the amount of textiles produced in India toward the end of the seventeenth century was truly astonishing. Consequently, Indian weavers were active agents in an economic enterprise that was significant and global.

The bulk of this activity was undertaken in the rural areas, with peasant households remaining as the basic unit of production. This has led some scholars to speculate that the structure

of production remained embedded in the traditional village system and therefore had limited capitalist production and development. However, merchants were intimately involved in the cycle of production and exchange in a way that was similar to their role in the European context. This mercantile intervention was necessary to connect the local producers with the distant consumers. In addition, the complexities of textile production required the integration of various craft skills (cotton cleaners, combers, carders, twistors, winders, bleachers, dyers, printers, painters, and embroiderers) that merchants helped to coordinate. Finally, the entire system depended on the practice of providing commercial advances (*dadni*) to the household weavers (the producers). This helped poor peasants by providing guaranteed buyers at the completion of their work. It also benefited the merchants because it removed supply anxieties and allowed them to establish some demand specifications. In spite of differences in context, extent of practice, and legal implications, some of the tendencies emerging in India clearly conformed to some of the protoindustrializing patterns demonstrated in Europe at the time.

This textile system was also consistent with the increasing monetization of the Indian economy. Under the Mughals a standardized trimetallic currency gradually came into existence, and imperial coins became ubiquitous. Moreover, creative credit and financial arrangements such as the use of *hundis* (i.e., promissory notes, bills of exchange, commercial paper) also developed and were extensively used to settle various economic transactions. The system was lubricated with the skills and resources of professional money changers (*sarrafs* or *shroffs*), who also issued and discounted hundis and provided rudimentary banking and insurance services.

Another aspect of the development of early capitalism is the evidence that some merchants increasingly treated the peasant manufacturers as wage labor rather than traditional price workers. In many large cities *karkhanas* (manufactories) were also being established where this transition in production relations was more obvious. However, it would be an overstatement to suggest that India's textile workers were poised on the brink of a capitalist revolution. Unfortunately, as

British colonial rule incorporated India into the international capitalist system, we will not know if India would have become an industrial power as an independent nation.

—Abrar Ahmad

Bibliography

- Ahmad, Ahrar. "Analyzing Pre-Colonial South Asia: Mode of Production or Proto-Industrialization?" *Journal of Contemporary Asia* 27 (1997): 315–337.
- Braudel, Fernand. *Civilization and Capitalism: 15th to 18th Centuries*, Vol. 3. Translated by Sian Reynolds. New York: Harper and Row, 1984.
- Chaudhuri, K. N. "The Structure of the Indian Textile Industry in the 17th and 18th Centuries." *Indian Economic and Social History Review* 11 (1974): 127–182.
- Chaudhuri, K. N. *The Trading World of Asia and the English East India Company: 1660–1760*. Cambridge: Cambridge University Press, 1978.
- Habib, Irfan. "Potentialities of Capitalist Development in the Economy of Mughal India." *Journal of Economic History* 29 (1969): 32–79.
- Perlin, Frank. "Proto-Industrialization and Pre-Colonial South Asia." *Past and Present* 98 (1983): 30–95.

Economic Growth in Tokugawa Japan

Although the Tokugawa shogunate followed a century of warfare, it started off on surprisingly sound economic footing. Peace and stability under unified Tokugawa rule allowed dynamic economic growth based on both agricultural production and commercial revolution. Throughout the seventeenth century the population grew, which resulted in greater consumer demand. It is estimated that by 1700 the population of Edo (now Tokyo), Japan's largest city, was over 1 million, while Osaka's and Kyoto's populations numbered about 400,000 each. This occurred essentially without foreign markets because after the *sakoku*, or "closed country" edicts, of the 1630s, the volume of trade declined, and exports consisted primarily of metal bullion.

Agriculture was the backbone of economic growth, with an economy based on rice. Social position within the warrior class was delineated through stipends of rice based on a measurement called the *koku*, which measures about five

bushels. To be a daimyo (literally a “great name,” or one of Japan’s approximately 260 territorial lords), one had to control lands that produced 10,000 or more koku per year. It was therefore in the interest of both the daimyo and the individual farmers to increase agricultural production. With unification and the removal of barriers at domainal borders, knowledge of improved technology such as tools, better strains of rice, and fertilizers began to spread more quickly and easily around the country. The rice-based economy stimulated land reclamation, increasing the acreage under cultivation. Irrigation techniques were refined and improved. Peace and better production also increased leisure time, which generated a better-educated literate group of cultivators so that farming information in printed form, often the result of scientific experimentation, circulated. As a result, agrarian production doubled within the first century of the Tokugawa shogunate. Wealthy farmers emerged who had tenants and employed hired laborers. Despite three major famines during 1732–1733, 1783–1787, and 1832–1836 and around 20 smaller ones, agricultural production increased overall throughout the Tokugawa period.

Control of foreign trade was one way that the shogunate sought to prevent the daimyo from acquiring wealth. Such control did, however, generally profit the shogunate and serve as a valuable link to the outside world. Some shogunal policies with entirely divergent purposes also encouraged economic growth. The system of alternate attendance, the requirement that daimyo spend part of the year in their home domain and part with their wives and children who were hostages in Edo, was similarly supposed to prevent accumulation of wealth by daimyo. However, this forced the daimyo to obtain cash for travel. It encouraged the construction of roads, bridges, and other aids to travel, including towns where the large retinues would stay. Ultimately the travel of these retinues across the country was responsible for maintaining a unified nation with an integrated economy rather than the small economically independent states from the quasi-feudal union of vassal states.

Because the economy was based on agriculture, most economic policy was directed at these activities. Merchants, at the bottom of the



Engraving of letters by the first and second Tokugawa shoguns with their seals, 1611 and 1617, granting protection to the Dutch trading post. (SSPL/The Image Works)

Confucian social scale, could be victimized by arbitrary measures such as forced loans or debt cancellation. On the other hand, mercantile activities were taxed much less heavily than agriculture. This encouraged commercial growth and increased urbanization. The fact that buildings in Japanese cities were constructed with wood also kept the economy booming. Every time a fire devastated a city, there was a flurry of reconstruction that kept craftsmen and raw materials suppliers such as lumber yards in business.

In the early years of the shogunate, commercial growth was in the hands of those with warrants from the shogun or daimyo. Monopolies were formed from which fees were extracted. In 1721 this became a licensing process for commercial groups. In the eighteenth century the pace of growth had slowed, but great fortunes were made through more diversified activities such as money lending. By the mid-eighteenth century, the economy was almost completely cash-based. Rice was exchanged for gold, silver, and copper. Paper money such as silver or rice certificates was used within some domains, and money orders were issued between merchants to facilitate intercity trade. Some of the large dry goods stores even began establishing fixed prices in all their branches.

Signs of protoindustrialization appeared by the beginning of the nineteenth century. These

➤ OSAKA, “THE KITCHEN OF JAPAN”

Located near a good harbor at the center of Japan, Osaka was historically a cultural and commercial center. The modern city began to flourish when Toyotomi Hideyoshi (ca. 1536–1598) ordered construction of Osaka Castle in 1583. His efforts were followed by merchants and craftsmen who in turn required religious institutions to serve their spiritual needs, all of whom were encouraged by Hideyoshi. Although Osaka floundered under Tokugawa assaults in 1614 and 1615, the population rebounded quickly. Markets for fruit and vegetables, fresh and dried fish, and fertilizer were established because of the size of the population. In addition, its proximity to other markets and easy access to rivers and the ocean allowed transport of goods to and from the city. The exchange of rice for cash had been common since the construction of the castle, and an exchange was officially founded in Dojima in 1688. This became perhaps the world’s first futures market (a market where contracts for delivery of commodities on specific future dates are auctioned to speculators). Most foreign goods passed through the hands of Osaka merchants, and a huge variety of products was produced there. Because of the commercial and financial centers in Osaka, warehouses and merchant guilds that brokered trade among all the regions of Japan were headquartered there. Osaka became known as “the kitchen of Japan” because most commodities passed through it at some time or another.

—Martha Chaiklin

included production for distant markets, complex divisions of labor, cottage industries, and technological improvements as well as mass production of staples such as lamp and cooking oil, soy sauce, sake, and miso (fermented bean paste). Cash crops such as silk, tobacco, tea, and indigo increased. Supplementary produce such as paper, dried fish, seaweed, and silk expanded and diversified by region. Daimyo encouraged and often monopolized these by-industries to improve their own finances. Luxury items increased, with more varieties of food products, restaurants, bars, and entertainment. In addition, the clothing and housing had improved, and increased leisure time had allowed for better

education. The advanced financial and protoindustrial practices of the Edo period paved the way for an astoundingly rapid transition to a modern economy.

—Martha Chaiklin

Bibliography

- Hanley, Susan B. *Everyday Things in Premodern Japan: The Hidden Legacy of Material Culture*. Berkeley: University of California Press, 1999.
- Morris-Suzuki, Tessa. *A History of Japanese Economic Thought*. New York: Routledge, 1989.
- Smitka, Michael. *The Japanese Economy in the Tokugawa Era, 1600–1868*. London: Taylor and Francis, 1993.
- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.

Venetian Shipyards

Venetian shipyards, most notably the Venetian Arsenal, were famous during the Middle Ages, the Renaissance, and the early modern era for their efficiency and great capacity to produce ships and everything connected with them. For modern historians, the Venetian Arsenal is considered a forerunner to the factories of the Industrial Revolution. In many ways the arsenal operated along the same lines as a factory. Venetians took pride in their arsenal, and it was one of the expected stops for European tourists.

The Venetian Arsenal was founded around 1104, although a private shipyard had probably existed on that location since the eighth century. Located in the Castello sestiere, the arsenal occupied around 60 acres (24 hectares). Eventually it was surrounded by 2.5 miles of walls (4 kilometers) and moats to protect it. The source of the name “Arsenal” is disputed. Some authorities believe that it came from “Arx Senatus,” or “fortress of the Senate.” Others believe that it came from the Arabic “Dar al Sina’a,” or “dockyard.” The concept was based on the Byzantine model. Unlike the private shipyards, the arsenal was a public institution, with the employees and materials provided by the state to ensure that the ships necessary to Venice’s survival and prosperity were available.

Originally the Venetian Arsenal was intended to maintain and repair privately built ships. Private builders were able to supply the

fleet necessary to protect Venice's commercial interests in the Mediterranean and the Black Sea. In 1172, for example, 100 galleys were built in only four months. Over the next few decades Venetian shipbuilders produced similar-sized fleets in short periods. The Venetian government recognized that the state's power depended upon its skilled craftsmen. The government passed legislation to prevent the craftsmen from emigrating in 1227. Experience quickly taught them that private builders could not afford to keep skilled workers busy all the time. In 1302 the Senate ordered that all state war galleys be built in the arsenal. The existing compound was too small, so in 1320 it was expanded. The Arsenal Nuovo was built at state expense and was large enough to build and maintain the entire fleet as well as store the galleys that were not needed at the time. Larger merchant ships were also built in the Arsenal.

The state provided apprenticeships for talented young men. It also guaranteed an income for skilled craftsmen. Even when the men were too old or sick to work, they received a day's pay as long as they appeared in the Venetian Arsenal. At its peak the Venetian Arsenal employed 16,000 men and women. Most were unskilled workers who provided muscle power to move material and finished products. All workers received such benefits as free wine and holidays. Most workers lived in housing within easy walking distance of the arsenal. The work at the arsenal required greater discipline than was usual during the Middle Ages.

The Venetian Arsenal developed methods of mass-producing galleys and sailing ships. The workers used the frame-first method instead of the traditional hull-first system. Wooden pieces were shaped and seasoned according to a standard pattern. They were then assembled to form a skeleton for a ship. The planks that made up the hull were then attached. Workers at the arsenal could assemble one galley each day when needed. Locals told tourists about a famous incident from 1574, when French king Henry III visited Venice. At the beginning of a state dinner, workers started to assemble a galley; when Henry finished eating, the galley was finished.

The Venetian Arsenal had three separate manufacturing centers. The most important



Building a galley in a Venice shipyard, woodcut by Bernhard Breidenbach from Peregrinatio in Terram Sanctam, fifteenth century. (Erich Lessing/Art Resource, NY)

was the shipbuilding area, charged with building, outfitting, and repairing ships. The second was a factory for making rope and cables. The ropes were needed for outfitting the ships. The third was a center for making gunpowder and casting cannons. The earliest bombards were cast in the arsenal during the 1370s and were soon placed on galleys for use against other ships and land targets. The skilled workers in the munitions factories also developed improved firearms. Handguns manufactured by the arsenal were made to have a higher muzzle velocity than usual to better penetrate armor. The arsenal also produced lighter cannons. The Venetian mercenary Bartolomeo Colleoni mounted some of these cannons on lightweight carriages to produce some of the first cannons suitable for field use.

Between the fourteenth and eighteenth centuries the Venetian Arsenal was considered a marvel for most Europeans. Tourists were shown the grounds, with its large amounts of materials and works in progress. Weapons and equipment for fighting men were stored for later use along with ships and galleys. The arsenal was largely destroyed during Napoleon's rule, but it remains an Italian naval base today.

—Timothy J. Watts

Bibliography

- Bondioli, Mauro. "The Arsenal of Venice and the Art of Building Ships." In *Boats, Ships and Shipyards: Proceedings of the Ninth International Symposium on Boat and Ship Archaeology, Venice 2000*, edited by Carlo Beltrame. Oxford, UK: Oxbow Books, 2003.
- Davis, Robert C. *Shipbuilders of the Venetian Arsenal: Workers and Workplace in the Preindustrial City*. Baltimore: Johns Hopkins University Press, 1991.
- Safley, Thomas Max, and Leonard N. Rosenband. *The Workplace before the Factory: Artisans and Proletarians, 1500-1800*. Ithaca, NY: Cornell University Press, 1993.

The European Commercial Revolution

The European Commercial Revolution, lasting from approximately 1500 to 1700, was characterized by economic expansion due to Europe's increased linkages with the New World across the Atlantic and growing ties with the Baltic East. The growing economic system of mercantilism, an economic system that advocated that governments regulate manufacturing, trade, and commercial expansion, encouraged the industries of many European states to develop and grow dramatically, taking advantage of the influx of specie—gold and silver coins—coming in from the New World. The discovery of the New World as well as growing trade with the Far East allowed Europeans to create a vast international network of banking, investment, and commercial ties. The growth of the Atlantic trade network saw the rise in economic and political importance of countries such as England, the Netherlands, and Spain but resulted in the relative decline of the Mediterranean-based system and inland commercial centers such as the Hanseatic League and the Venetian Empire.

The economic development of the Low Countries and England was contingent on opening markets made possible not only by the New World but also within Europe itself. Decades of constant warfare disrupted the economic primacy of France and the Habsburg-dominated Holy Roman Empire on the continent and allowed new economic powerhouses on the fringes to take over their markets. The creation of the new seafaring maritime economic powers of Spain and Portugal led to the decline of the Mediterranean trade routes and to the waning economic strength of the Italian city-states as well as their access to trade routes to the Far East through the Ottoman empire. With the exception of Genoa, most of the Italian city-states that had formerly been vibrant centers of European trade declined in relation to the Atlantic powers. Genoa adapted itself to the situation by creating a substantial banking network that encompassed the Spanish domains in Europe and the Americas.

The voyages of discovery not only expanded European colonization abroad, creating the potential for new markets, but also tapped virgin sources of raw materials, particularly silver.

▶ EUROPEAN INFLATION—CONSEQUENCES OF THE COMMERCIAL REVOLUTION

From the fifteenth through the seventeenth centuries a massive influx of Aztec gold and Peruvian silver saturated the Old World economy, creating spectacular wealth for some but ultimately destabilizing and transforming the economic foundation of Europe. Historians believe that New World goods and foods contributed to an improved standard of living in various European countries but also note that soaring inflation accompanied these improvements and plagued European society as a result. In perhaps the most striking example, the exorbitant amount of taxes extracted from Castilian gentry to feed the coffers of the Spanish king to fight wars against the Turks in the Mediterranean and the Protestants in Germany ruined the local economies of the Iberian Peninsula. In what historians call the price revolution prices rose at a relatively slow rate of about 1 percent per year on average in Europe, but in

general prices continued to rise for more than a century, having a severe impact on interest rates and rents. This contributed to a growing social and economic inequality.

Those areas that benefited from the Commercial Revolution, such as England and the Netherlands, saw an increase in their power that accompanied the decline of Spain and Portugal. These former economic powers failed to invest in their domestic industries and relied primarily on the exploitation of their foreign dependencies. England and the Netherlands, in addition to France, developed their own commercial ties with the Spanish and Portuguese dominions to supply them with goods. Spain and Portugal, while capable of maintaining their far-flung imperial possessions, were supplanted in terms of economic might by England, France, and the Netherlands.

—Abraham O. Mendoza

American silver provided Spain with plenty of specie to spend on its European wars against either the Ottoman Turks or Protestants, expanding the supply of money readily available to Europe. This created vast new money markets and banking networks that readily invested in the new commercial centers in England, France, and the Low Countries. This also led to the overwhelming growth of commercial networks through banks and insurance firms and to innovative methods of monetary exchanges such as bills of credit, all contributing to the growing modernization of the Western economy. While one major side effect of this process was the rampant inflation of the sixteenth century, such economic fluctuations benefited the merchant and banking classes then thriving. The development of joint-stock companies, such as the British East India Company and the Dutch West Indies Company, allowed companies of merchants to invest in colonial enterprises and trade networks fairly autonomously from centralized government interference. Joint-stock companies differed from mercantilist endeavors, which were headed by the state. The state also sponsored vast economic enterprises through such centralized investments in colonies, trade corporations, and fleets.

This period was characterized by the accumulation and loss of vast amounts of wealth. Spain accumulated massive amounts of gold and silver through its exploitation of the New World in addition to holding the crown of Portugal from 1580 to 1640. The wars of Philip II against the United Provinces (Netherlands) and his attempts to stamp out Protestantism depleted his sizable amount of specie. Portugal explored South America, Africa, India, and Southeast Asia, creating a substantial trade network that became the Portuguese Empire. The Dutch and the English also traveled to the New World, particularly North America, developing substantial colonies. The French subsequently followed and settled Quebec in 1608. However, they did not create settlement colonies in the same way as the English but instead set up primarily royal colonies.

Economic relationships between western and eastern Europe also changed dramatically during this period. Growing specialization in various trades and industries in the Atlantic

world created increased dependence on Baltic grain. In exchange for finished goods made in England, France, or the Netherlands, the eastern European countries of Muscovy (Russia), Poland, and Prussia traded grain. This aspect of the commercial revolution fostered a paradoxical effect on both merchant elites and the institution of serfdom. While serfdom ebbed away in western Europe, creating a vast independent peasantry, the bonds between lords and serfs were strengthened in the East to better put more lands into cultivation to take advantage of this new economic relationship with the West. As the eastern Slavic kingdoms managed to create their own direct linkages with western Europe through the Baltic Sea, they found less of a need to depend on the middlemen of the Hanseatic League in Germany, which declined substantially during this period.

—Abraham O. Mendoza

Bibliography

- Elliot, J. H. *Europe Divided, 1559-1598*. New York: Blackwell, 2000.
 Elliot, J. H. *Imperial Spain, 1469-1716*. New York: St. Martin's, 1963.

Mercantilism and Colbertism— Ideas and Practice

The term “mercantilism” was coined in the eighteenth century and referred to an economic policy in which a state exported more local goods and imported less foreign goods. Mercantilism was formally practiced in Europe during the sixteenth century but reached its height during the seventeenth century. It was a policy of aggressive economic nationalism initially based on bullion (silver and gold) and specie (coined money) and later on trade goods. It promoted self-sufficiency and a favorable balance of trade and increased the wealth of both the sovereign and the state. Mercantilist thought focused not only on creating a favorable balance of trade but also on wages, employment, domestic resources, and the standard of living. The loose ad hoc program was often criticized for its calculated analysis of social issues and of attempting to reduce humanity to mere economic statistics.

In practice, the government of each mercantilist nation was involved in regulating and

➤ BERNARD DE MANDEVILLE, *THE FABLE OF THE BEES*

The Fable of the Bees is one of the most important works of English satire produced during the eighteenth century. The poem was composed by Bernard de Mandeville (1670–1733), a native of Rotterdam who rose to prominence as a successful physician in London. Although denounced for its apparent encouragement of vice as the mainstay of the mercantile system, it was widely popular for its biting social and institutional criticisms.

Originally titled *The Grumbling Hive: or, Knaves Turn'd Honest*, the work first appeared in a pamphlet in 1705. The poem described a balanced society grounded in the vices of mankind. Pickpockets, lawyers, physicians, priests, soldiers, kings, and even Justice herself had been corrupted by greed and self-interest, yet all were essential in maintaining the flourishing society. Once the hive became virtuous, trade and industry ceased to be productive. Mandeville intimated that the mercantile system was based on vice, luxury, and greed. Immorality resulted in prosperity.

Mandeville reissued the poem in 1714 under a new title, *The Fable of the Bees: or Private Vices, Public Benefits*. The final edition was published in 1724. *The Fable of the Bees* became the focus of fierce attacks from the church, the courts, and the press but was wildly popular both in England and Europe.

—Breanna S. Griego

directing the economy. Mercantilism led to many wars in the early modern period as nations tried to capture available markets, particularly in the colonial sphere. The development of the mercantile system coincided with the emergence of European nation-states, particularly with Spain's acquisition of New World gold and silver. Spain and Portugal exercised a severe mercantile policy, especially in their colonial investments.

Among those nations that adopted the program, the Dutch posed a threat to the economic vitality of England and France. They were the dominant maritime force of the seventeenth century, and their cargo ships were among the swiftest vessels of the period. The competition inherent in the mercantilist doctrine made each

nation particularly sensitive to the strengths and weaknesses of their rivals. In England the Navigation Acts of 1651 put severe restrictions on imports. Many people became smugglers, pirates, and privateers to avoid the monopolies that limited the free trade of items such as indigo, tobacco, and slaves.

Private consumers and wage earners were weakened under the mercantile system. They were forbidden to ask for higher wages and were prevented from consuming potential exports. But business continued to boom, and new public institutions appeared. The Bank of Amsterdam opened for business in 1609, preceded only by the Bank of Venice. The Bank of England opened nearly 100 years later in 1694. Trading institutions, such as the Dutch and English East India companies, further increased the state's involvement in all aspects of trade and shipbuilding.

Mercantilist ideas were in decline when Adam Smith published the *Inquiry into the Nature and Causes of the Wealth of Nations* (1776). Laissez-faire, the idea of unrestricted trade, challenged the theory of mercantilism. The individual, not the state, drove the economy. The consumer, not the producer, should benefit in Smith's conception of preindustrial capitalism. David Ricardo, Thomas Robert Malthus, and John Stuart Mill relied on mercantilist theory to explain the discrepancy between population, wages, and rent.

Jean-Baptiste Colbert wanted France to achieve prosperity like the Netherlands. He adopted aggressive mercantile policies that became known as Colbertism. Colbert created the financial base that Louis XIV needed to fund his wars and used state-sponsored institutions to regulate trade, simplified administrative bureaucracy, and established a system of roads and canals to improve inland communication. Colbert was determined to enrich his country via commerce and envisioned France as the greatest of western European nations.

In order to make French exports more desirable, Colbert initiated laws that fixed the quality and measure of each article. Inadequate goods were destroyed, and idle and inefficient workers were punished. Colbert, in his attempt to strictly control production and commerce, increased state supervision to such an extreme that improvements were resisted. The workers



Portrait of Jean-Baptiste Colbert by Claude Lefebvre, seventeenth century. Colbert was chief minister of France during 1665–1683, under King Louis XIV. A staunch advocate of French overseas expansion, he is regarded as the father of the French Navy. (The Art Archive/Corbis)

found themselves unable to advance within the domain of regulated production. The work year was also increased to 14 months, but the workers received the salary of a 12-month work year.

Colbert was willing to improve the greatness of France at the expense of the workers as well as at the expense of England and the Dutch Republic. He convinced Louis XIV to go to war with Holland in 1672 to promote economic imperialism. The minister of finance developed the French navy in order to protect newly acquired colonies in North America. He kept talented Frenchmen within the kingdom by forbidding them, under pain of death, to serve foreigners.

Colbert was also a patron of the arts and literature. He founded the Academy of Sciences and brought the French Academy, the Academy of Inscriptions and Medals, and the Academies of Architecture, Music, and Painting under the jurisdiction of the state. The fact that he

personally enjoyed the arts was secondary to the fact that he directed all forms of production and expression to enhance the greatness of the kingdom. The term “Colbertism” came to be associated with the most extreme state control of production and commerce as well as the manipulation of the arts to serve as propaganda for the state. Colbert’s plan was bound to collapse in on itself due to its narrow and rigid regulations that did not allow for creativity or invention.

—Breanna S. Griego

Bibliography

- Duplessis, Robert S. *Transitions to Capitalism in Early Modern Europe*. Cambridge: Cambridge University Press, 1997.
- Mun, Thomas. *England's Treasure by Foreign Trade*. New York: Adamant Media, 2005.
- Murat, Ines. *Colbert*. Charlottesville: University of Virginia Press, 1984.
- Smith, Adam. *The Wealth of Nations*. New York: Prometheus, 1991.
- Wallerstein, Immanuel. *The Modern World System II: Mercantilism and the Consolidation of the European World Economy, 1600–1750*. San Diego: Academic Press, 1980.

The Latin American Price Revolution

The Price Revolution was a long period in which average prices rose throughout Europe and eventually around the world. This period of inflation owes its initial origins to the rise in population during the late fifteenth century as Europe recovered from the Black Death. During the 1470s new mining techniques that increased the output of silver combined with the opening of the Portuguese gold trade with West Africa to accelerate inflation by increasing the amount of precious metals in circulation. The effects of the Price Revolution were further spurred by the influx of silver from Spanish Mexico and Peru from the 1540s on.

Silver poured into Spain on galleons from the New World, especially from the 1560s onward, when use of mercury to extract silver from ores became prevalent. Silver shipments peaked in the 1590s at an average of 2 million ducats a year. Mexican silver helped finance the European trade with China via Manila and

➤ MEXICAN GOLD AND PERUVIAN SILVER

Spain developed two sources of silver in the New World: Peru and New Spain (Mexico). The Peruvian mines centered on Cerro Rico de Potosí in what is now Bolivia. At its peak, Potosí had a population of nearly 100,000. Some 13,000 Native American laborers each year, obtained under the *mita*, or system of forced labor, fed the mines. In Mexico the chief mining areas, such as Zacatecas, were to the north of the original Aztec empire. The Spaniards brought in Native Americans from other parts of New Spain and also brought in African slaves. Because these workers did not return to their homelands unlike Peruvian laborers, they quickly became Hispanicized.

Silver mined from Potosí was shipped north to Cartagena and then was taken by galleons to rendezvous with ships bearing the Mexican silver from Veracruz in the annual *flota* that carried the treasure to Spain. This colossal flow of treasure was a standing temptation to pirates and led English, French, and Dutch buccaneers to seize footholds in the Caribbean. Piracy sped the flow of



Pack train of llamas laden with silver from Potosí mines of Peru, 1602. (Library of Congress)

bullion into the world economy, as in 1628 when the Dutch seized the entire annual Spanish treasure fleet off Cuba.

—Timothy Neeno

Macao. Unfortunately, Spain's rulers, especially Philip II, channeled the initial influx of silver to finance their wars, spending currency faster than it came in. During 1566–1654 Spain squandered 218 million ducats on the war with the Dutch alone while taking in just 121 million ducats in New World specie. By 1575 Spanish silver coins, called pieces of eight, were in circulation throughout the continent. The Crown tried to horde the specie, taking the royal fifth of all silver produced, but smuggling, ongoing wars, and the country's need for imports as inflation eroded Spain's economy gradually disseminated the silver. Eventually the silver sped up a ruinous process of inflation that, abetted by wars and financial mismanagement, wiped out the Spanish middle class.

During the first period of European price increases, as silver became more plentiful and the money supply expanded, inflation soared to historic highs: 300 percent in England by 1650, for example. In France, by the end of the sixteenth century prices had increased more than 600 percent since the 1470s. Wages, however, lagged,

and many peasants found their standard of living declining. This led to increasing rural unrest, particularly in Germany and France. Merchants and craftsmen, on the other hand, generally flourished as the commercial climate became more active and the circulation of specie connected local economies. By the fifteenth century price increases in the Russian economy matched those in Europe. The same was true for the Ottoman Empire, New Spain, and Brazil and, with a 20-year lag, India. The Turkish silver *asper*, with which Turkey's elite *janissary* corps was paid, lost more than half its value versus gold between the 1530s and 1615. The Mogul empire, in contrast, benefited, as silver from the spice trade fed India's economy. Even in China where gold was in less demand, silver tended to drive prices up.

After 1603 silver shipments from the New World lessened due to a scarcity of mercury to process the ore, while deeper mining required heavier investments of capital. After 1693 there was a new wave of shipments of precious metals from the New World when the Portuguese began developing the gold mines of Goiás and

Minas Gerais in Brazil. Around 1700 Mexican silver production increased again, using skilled labor and fresh capital raised in Mexico City. The influx led to a second round of price increases in Europe beginning around 1729. Throughout the entire period of 1450–1770, price rises were abetted by population increase, a gradual expansion of credit, and an increased velocity of circulation of money as commercial life flourished. The Brazilian gold mining boom from 1693 to the 1730s kept the declining Portuguese realm afloat, while at the same time most of the gold ended up going to Great Britain, which by this time dominated Portugal's trade. But by the 1730s the Brazilian mines were played out, and by the 1770s Mexican silver production fell off again.

The great influx of silver and gold from the New World was not the sole cause of the Price Revolution, but it greatly increased the pace of the globalization of the world economy. Inflation shook up the old landed social order and speeded the shift in power to commercially oriented nation-states. Finally, the increased importance of bullion gave a stimulus to iconoclastic Protestantism and to the new economic philosophy of mercantilism.

—Timothy Neeno

Bibliography

- Braudel, Fernand. *The Wheels of Commerce: Civilization and Capitalism, 15th–18th Century*. Translated by Siân Reynolds. New York: Harper and Row, 1979.
- Fischer, David Hackett. *The Great Wave: Price Revolutions and the Rhythm of History*. New York: Oxford University Press, 1996.
- Wernham, R. B., ed. *The New Cambridge Modern History*, Vol. 3, *The Counter-Revolution and Price Revolution, 1559–1610*. Cambridge: Cambridge University Press, 1968.
- Williamson, Edwin. *The Penguin History of Latin America*. London: Penguin, 1992.

Customs Collection in Revolutionary America

The English settlement of North America was an extension of mercantilist thought. Various political theorists argued that there was a fixed amount of wealth in the world and that a nation's wealth could only be augmented through

closed trade with its colonies. Britain imposed the Navigation Acts to monopolize trade with the empire.

To ensure adherence to the acts, the British government posted an array of customs officials at the major ports in the 13 mainland colonies. Examining the vessels and cargoes engaged in overseas trade in the colonies, these officers were charged with preventing colonial merchants from ignoring the acts. Exploiting the enormous coastline by illegally landing goods and paying handsome bribes to various customs officers, colonial merchants were usually able to evade the acts without much trouble for most of the 1700s. This was very apparent when Britain passed the Molasses Act (1733), which imposed higher duties on all foreign molasses imported into the 13 colonies. Most colonial merchants openly evaded the taxes, continuing their smuggling operations. Down to 1763, lax enforcement in the colonies and widespread networks for smuggling rendered customs collection in the colonies an almost impossible feat.

The Seven Years' War (1756–1763) brought about a marked change in the British system of customs collection in the colonies. Widespread evidence of colonial trade with the French enemy, the need to station troops in the colonies in peacetime, and a ballooning of Britain's national

THE NAVIGATION ACTS

The Navigation Acts were a series of laws passed between 1651 and 1696. The acts established that trade between Britain and its colonies must be conducted on British or colonial vessels, with crews living in the empire. Colonial manufacturing would be restricted by the imposition of tariffs in the colonies, and certain colonial-grown commodities, like sugar and tobacco, could only be exported to Britain. Subsequent amendments loosened the restrictions on enumerated commodities, allowing some to be shipped to other markets in Europe. To ensure adherence to the acts, an array of customs officials were posted in several ports to examine the entry and clearance of vessels.

—Joseph Avitable

debt forced imperial policy makers to address the issue of customs evasion in the colonies. By instituting a rigid system of customs collection in the 13 colonies, British policy makers hoped to undermine the colonial trade with the French West Indies and raise revenue in the Americas to defray escalating military expenditures.

The Sugar Act (1764) was the first measure adopted to accomplish these two aims. By lowering the duty on sugar and molasses imported from foreign plantations, the British government hoped that incentives to smuggle would be lowered and that more colonial merchants would actually pay the import taxes on these goods. The Revenue Act (1766) further lowered import duties on these commodities but extended their collection to sugar and molasses imported into the colonies from all West Indian plantations. The Townshend Acts (1767) imposed a range of duties on manufactured goods and tea imported into the colonies. To ensure the proper collection of duties on these commodities, Britain increased the number of customs staff operating in the 13 colonies as well as their oversight. Finally, institutional changes were implemented, such as the creation of new courts charged with undermining smuggling and the stationing of naval vessels to patrol colonial waters, to further increase revenues collected in the colonies.

In the end, the customs reforms instituted after 1763 failed in their intentions. First, the British never devoted sufficient machinery to carry out their intentions in the colonies. The geographic size of the 13 colonies and the desire to save money by employing only a skeleton customs administration rendered efficient customs collection impossible. Furthermore, after the Seven Years' War, British needs to raise money ran into a solidifying colonial opposition, one that would lead to the American Revolution.

—Joseph A. Vitale

Bibliography

- Andrews, Charles M. *Colonial Period of American History*, Vol. 4, *England's Commercial and Colonial Policy*. New Haven, CT: Yale University Press, 1938.
- Barrow, Thomas. *Trade and Empire: The British Customs Service in Colonial America, 1660–1775*. Cambridge, MA: Harvard University Press, 1967.

Indentured Servitude in the Atlantic Economy

Indentured servitude came to British America with the establishment of the first settlement at Jamestown in 1607 and became prominent throughout much of the British dominions throughout the colonial period. Historians estimate that from 1630 to 1776 one-half to two-thirds of all immigrants to British America were indentured. Labor recruiters in England, Ireland, the Netherlands, and the German states actively recruited bondsmen, mostly men, for service in the Americas on contracts extending between three to seven years in exchange for travel fare and the promise of room and board and possibly land at the termination of the contract. Many of these indentured servants ended up working in dire conditions on cash crop plantations (i.e., tobacco, cotton, and sugar), and the lucky ones were employed in skilled trades, such as blacksmithing and construction. While France and the Netherlands also contracted indentured servants, it was on a significantly smaller scale than that of the English.

The Virginia Company's investors faced a critical situation in recruiting and maintaining a labor force in Jamestown suitable for working in a tobacco plantation. Consequently they developed an American system of indentured servitude based on existing contractual labor practices in England and appropriating the model of servants in husbandry, in which bondsmen worked and lived in the household of their masters by contract, typically on an annual basis. Because high transportation costs proved an obstacle for the average English laborers or tradesmen wishing to settle overseas, the company decided to use its own financial resources to subsidize passage for interested individuals in exchange for several years of labor, similar to the contractual conditions of the servants in the husbandry system. Contracted servants were expected to repay the company out of their earnings and by remaining with a master for the demarcated period, with the understanding that their master would provide food, shelter, and other commodities necessary for sustenance. Initially the contracts were written through the company itself, with the contractual

commitment owed directly to the company and its agents. As the practice expanded, indentured servants worked with specific individuals in different occupations across British North America in both the mercantile northern colonies and the agricultural cash crop southern and Caribbean colonies. Other joint-stock charter companies followed in the practice of this model to recruit laborers for their own American enterprises.

From the 1630s to the 1770s the institution of indentured servitude expanded to include not only bondsmen from England but also from elsewhere in the British Isles (Ireland and Scotland) and on the continent (the Netherlands, Germany, France, etc.) as well as in Africa. African indentured servants and slaves as well as English convict labor held a common lot with many white indentured servants in the Americas, sharing quarters, food, and labor with them and also enduring similar abuses from their overseers and oppressive working conditions. Furthermore, runaways and rebellious or indolent servants were subject to floggings, beatings, and other violent punishments, much like slaves. At times indentured servants were treated like chattel slaves, as they were given the bare minimum of food and clothing and had their contracts extended for minor infractions, such as breaking a dish. Nonetheless, violent abuse and the murder of indentured servants were illegal throughout much of British America, whereas the murder and severe abuse of slaves was slightly more tolerable. Moreover, indentured servants did attain a level of rights in the various colonies as these newly established colonial governments codified legal codes provisioning them with such. Former indentured servants were guaranteed the full rights of citizens upon the completion of their contractual obligations to their owner and were entitled to receive land and/or money if that was stipulated in said contract. Such rights had been originally agreed to by the company Assembly but eventually extended to the legal codes of the individual American colonial governments, which all had large numbers of indentured servants.

The destination of certain national groups also determined their treatment and condition as indentured servants in British America. Large numbers of German indentured servants were

> INDENTURED SERVANTS IN BACON'S REBELLION

Bacon's Rebellion, led by Nathaniel Bacon in 1676, was a large-scale revolt against the tidewater gentry who dominated the British American colony of Virginia. Frontiersmen, small farmers, small tradesmen, and especially indentured servants were subject to the overwhelming control of this planter aristocracy, whose interests were highly overrepresented in the legislature and in the central government under Governor William Berkeley. In response to a large-scale attack by local indigenous American tribes during 1675–1676, western settlers, many of them former indentured servants, demanded action by the central colonial government under Governor Berkeley. Berkeley refused to send troops, and this resulted in immediate rebellion. The rebellion was eventually quashed by the colonial government's forces, but the situation proved to the planters that indentured servants could be quite quarrelsome. Bacon's Rebellion marked a change, as planters began to import larger numbers of chattel African slaves, who were perceived as more amenable than unruly whites (and who would not expect land grants or have limited years on contract). New laws made slavery a lifelong status, passed on to one's children, thereby creating a racial hierarchy with African slaves at the bottom of Virginia society.

—Abraham O. Mendoza

settled in Pennsylvania, a colony established by William Penn. English Puritan indentured servants typically settled in the Massachusetts Bay Colony and in Greater New England. Irish indentured servants, who began arriving in droves in the late seventeenth and early eighteenth centuries, were spread far and wide between the Tidewater Atlantic southern colonies and in the Caribbean colonies as far as Barbados. Ethnic tensions between the English descended landowners and their Irish indentured servants could typically result in conflict, given the history of conflict between England and Ireland due to English colonization and religious intolerance in Ireland. In certain episodes, such as the Seven Years' War (1756–1763), the Irish openly rebelled against their English masters in league with their fellow French Catholic allies. While German,

Scottish, and English indentured servants did indeed receive their share of abuse under bondage, the Irish suffered far worse under British tutelage.

The tasks that indentured servants were required to complete ranged from the backbreaking labor of the sugar plantation to the more comfortable setting of the overseer of the day-to-day operations of a business concern. Indentured servitude was most important in the early decades of colonies that produced cash crops for export. Demand for these products led planters to contract large numbers of servants for the cultivation, harvest, and production of these crops, which in turn necessitated the contracting of skilled workers to build housing and facilities, provide transport, and perform different forms of specialized manufacturing (i.e., blacksmiths, coopers, and tailors). In the late seventeenth and early eighteenth centuries as working conditions worsened in places like Barbados and the Tidewater Atlantic colonies, characterized by their reliance on plantation economies, white indentured servants found those less desirable for settlement.

High numbers of indentured servants immigrated to the northern colonies, which offered diversified agricultural practices, throughout the colonial period. In the southern colonies and the Caribbean, however, with the rise of plantations, indentured servitude fell dramatically as the costs of servitude rose, and planters imported African chattel slaves. Furthermore, as economic conditions in the colonies improved, more free settlers were drawn to settle there. With the spread of Enlightenment ideals of human freedoms and natural law across the Atlantic, many elites and common folk began to see the institution of indentured servitude as backward and unbecoming, at least for white people. After the American Revolution and the establishment of the United States, the institution of indentured servitude ebbed into insignificance, remaining well into the middle of the nineteenth century in very small numbers. In contrast, with the end of the slave trade throughout the British Empire in 1806, indentured servitude remained vital to the plantation economies of the British Caribbean.

—Abraham O. Mendoza

Bibliography

- Bush, M. L. *Servitude in Modern Times*. Malden, MA: Blackwell, 2000.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Palmer, Colin A. *The Worlds of Unfree Labour: From Indentured Servitude to Slavery*. Brookfield, VT: Ashgate Variorum, 1998.

The Consumer Revolution in British North America

The consumer revolution refers to a period in colonial American history when people throughout the colonies radically increased their purchase (and consumption) of British imports. The birth of this consumer society reflected both the growth of a mercantilist class along the East Coast and the increasing availability of consumer goods. Although regularly associated with northern seaport towns, this consumer revolution extended to the southern colonies, frontier areas, rural hinterlands, and even military posts. Despite the romanticized idea of the self-sufficient colonial farmer, stores and peddlers incorporated rural dwellers into this economic revolution just as they did urban elites. This consumption followed an almost syllogistic pattern: rural consumers upheld urban colonists as their model for consumption, just as urban colonists based their consumption patterns on British ideals.

Current research dates the consumer revolution in British North America to the 1740s and 1750s. Yet the seeds of this consumptive ethic were planted during the late 1600s, when colonists began to acquire wealth and leisure time. Consumption increased dramatically during the mid-1700s because colonists could finally afford to purchase coveted British goods. The extent of this revolution is largely unquantifiable (e.g., how many rural dwellers adopted a consumptive lifestyle versus how many persisted in their use of locally produced goods), but this focus on material culture undoubtedly reflected a near-universal desire to imitate the tastes and lifestyle of contemporary English society. People living in New England, Georgia, Virginia, and the interior may have displayed distinct regional

cultures at this time, but they participated in the same transatlantic consumer culture and thus generally purchased the same wares. By the mid-eighteenth century, travelers could find exotic and luxury consumer goods in the most rustic of rural dwellings. Painted mirrors, furniture pieces, pewter serving pieces, tea services, European wines, ceramic dishes, silk cloth, brass pieces, ornamented combs, and colorful ribbons found their way into crude cabins and plantations alike. The greater part of these goods possessed little utilitarian value; rather, colonists purchased them for their aesthetic appeal.

Not all colonists embraced this new ethic of consumption. Ministers, fearing a decline of religious fortitude, worked (ineffectively) to loosen the hold of materialism on colonial peoples. In sermons, pamphlets, and individual exhortations, they pointed to the fate of other peoples—such as the Romans—who became dependent on or enamored with worldly goods. From a biblical perspective, misplaced trust in physical wealth encouraged idleness and pride. From a social perspective, wealthy colonists at times disapproved of this broadening marketplace because it eroded social deference by affording socially inferior persons the chance to purchase goods that historically denoted status or power. Elites insisted that innate civility and etiquette were as important as clothing and property in determining status, and these items, unlike their more tangible counterparts, could never be purchased. Thus, the elite used the ethic of consumption to justify a social hierarchy: those born below the upper echelon of society should accept their

lot, live prudently, and purchase practical items (wooden spoons, woolen cloth, etc.) rather than ornamental items. Finally, more attentive colonists warned of the economic consequences of this consumer culture. Colonists usually financed their consumption with tobacco exports, but importation almost always exceeded exportation. This imbalance in trade simultaneously perpetuated a cycle of debt and undermined the livelihoods of regional or local producers.

In the years leading up to the American Revolutionary War, the various forms of opposition bound together in a unique form of protest. Since consumer goods afforded colonists their identity as British subjects, rejecting those same goods through nonimportation and nonconsumption became an act of patriotism and virtue. This ethic of nonconsumption, though a challenge to the lifestyle of nearly all colonists, became an ideology that patriots, ministers, landowners, and farmers could all support.

—Kenna Lang

Bibliography

- Berkin, Carol. *First Generations: Women in Colonial America*. New York: Hill and Wang, 1996.
- Breen, T. H. *The Marketplace of Revolution: How Consumer Politics Shaped American Independence*. New York: Oxford University Press, 2004.
- Cuddy, Thomas W. *Revolutionary Economies: What Archaeology Reveals about the Birth of American Capitalism*. Lanham, MD: Rowman and Littlefield, 2008.
- Doezema, Marianne, and Elizabeth Milroy, eds. *Reading American Art*. New Haven, CT: Yale University Press, 1998.

■ Introduction: Fashioning Global Organizations

The advent of European exploration and global contact also initiated the beginnings of a global market. Economics are what drove the Portuguese, Spanish, French, English, and Dutch to brave the ocean waters in search of new lands. Spices and other luxuries from Asia had slowly made their way into Europe via the Silk Roads prior to the fifteenth cen-

tury, but the long and dangerous journey had made the products extremely rare and expensive. The opening up of the oceans provided economic opportunities that had never been possible before. This new activity required a new perspective on economics and trade.

The Portuguese cornered the market on spices as they were the first ones to send ships

to India, but their cornering of the slave trade would prove to have the most long-lasting effect on both the Portuguese and the Africans. The discovery of the Americas drove this new enterprise, and slaves became one of the more lucrative commodities for the Portuguese. This business caused four million Africans to be transferred to Brazil, and the slave plantation became the cornerstone of the Brazilian economy for centuries. For the Spanish, the innovation of the *encomienda* was a necessary means for financing the voyages to the Americas. Without the ability to create a royal monopoly the way the Portuguese had, the Spanish monarchs instead granted charters to those men who had the ability to fund their own expeditions. This charter guaranteed that the holder would have ownership of all products discovered in the area, as well as control of all of the native people residing in the region, with the right to exact tribute—conditions that often led to *de facto* slavery. The monarch relinquished his rights of ownership in exchange for a twenty percent tax over the products shipped in and out of the Americas.

The British also developed slave plantations in North America and the Caribbean, which exported crops such as tobacco, cotton, and sugar. However, North America did not become the crux of the British Empire until after the eighteenth century. The British began concentrating more on Asia, and India in particular, and this was made possible by bodies such as the East India Company. The use of a merchant company was convenient for the Crown, because the investors in the company financed the voyages, leaving minimal risks for the royal treasury, especially when the East India Company proffered loans to the government. The East India Company soon grew so powerful that it had private armies that advanced its interests throughout India. The Dutch also had an East India Company, and their company directed its interests more toward the South Pacific Sea and Japan. The Dutch were interested in breaking the Portuguese monopoly over the spice trade, and they were largely successful in the seventeenth century. In addition, they also broke the Portuguese control of the trade in Japan, by convincing the Tokugawa shoguns that they were not as interested in religion as the Portuguese. All of these

enterprises relied on either virtual or actual monopolies—monopolies that were to crumble under social, political, and economic pressures. Although the *encomienda* system was abolished in the sixteenth century, the other institutions did not meet their full demises until the nineteenth century.

—*Monique Vallance*

Slave Factories—The Economics of the African Slave Trade

During the era of the Atlantic slave trade, hundreds of slave-trading entrepôts dotted the West African coast from the Senegambia to Angola. Some were impressive stone-built forts, while others were little more than wooden stockades. All were generally referred to as “Slave Factories” by the captains and traders who sought human cargoes to transport to the Americas.

Most of these factories were under the control of local African states. However, along the Gold Coast and in the Senegambia (particularly on the island of Goree), the fortresses that were originally built as centers for the gold trade were later converted to centers for dealing in enslaved humans. Regardless of who controlled each factory, the factories served a similar purpose: to concentrate enslaved persons so that when ships arrived the enslaved people could be loaded as quickly as possible.

Those who operated the factories purchased enslaved persons from slave raiders and traders who operated in the African interior and who often marched the slaves hundreds of miles to reach the coast. The conditions in the factories were often deplorable, and perhaps as many as 10 to 25 percent of those who reached these factories died of disease or malnutrition while awaiting the arrival of slave ships.

When slave ships arrived, the captain or chief merchant would generally visit the factory and offer to the local authorities samples of the trade goods that had been brought to purchase the cargo of captives. These goods could include distilled spirits, cotton cloth, tobacco, cowrie shells, firearms and powder, and iron bars. Notably, as European or American slave traders had little means by which to coerce their African counterparts, the terms of exchange in regard to

price were often set by the African merchants. For example, European merchants preferred to use textiles and spirits to purchase captives, as these offered them the highest profits, but African traders often demanded such goods as firearms and cowrie shells, which offered lower profit margins due to the complexity of manufacture or the distance at which they had to be acquired (cowrie shells came from the Maldiv Islands in the Indian Ocean).

—Jonathan T. Reynolds

Bibliography

- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Lindsay, Lisa. *Captives as Commodities: The Transatlantic Slave Trade*. Upper Saddle River, NJ: Prentice Hall, 2008.

Middlemen—Arab Merchants in Two Worlds

In the early modern period, Arab merchants in the Mamluk period and then the Ottoman period were the key figures in linking the Indian Ocean and overland Silk Roads trade with Europe. These Arab merchants established trade networks not only through all of the Islamic world but also well into sub-Saharan Africa, Hindu kingdoms in India and Southeast Asia, and even in East Asia and parts of Europe. While many of the merchants were Muslims, Jewish and Christian Arabs also practiced their trade in these networks.

The trade networks linked the merchants back to their home communities in Egypt and Syria, particularly in the cities of Alexandria, Cairo, Damascus, and Aleppo. Here merchants received goods and sold them in the open air markets known as *suqs* or roofed markets (*khans*). The khans became increasingly reserved for use by the long-distance trade merchants. They were usually two-story buildings that provided storage space on the ground floor for merchandise and pack animals, while the upper story was used as a residence and shop, particularly for coffee and textiles. During the Ottoman era the covered markets became increasingly commonplace in the regional cities, so much so that many referred to a collection of khans as a *suq*.

Long-distance merchants were known as *tujjar* and primarily dealt in luxury goods such as textiles, coffee, and spices. These goods were imported from Yemen, India, and East Asia and then were sold throughout the Middle East and Europe. While their emphasis was on luxury goods, the *tujjar* also sold common mundane goods primarily to cover operating expenses in order to gain as much profit as possible from the luxury goods.

The *tujjar* formed loosely organized consortiums wherever they operated, with the leader of the consortium also operating as their representative to the local government. In many areas the consortiums often became dominated by wealthy families, and the leadership became hereditary, although one did not have to be a family member to be included in the consortium.

➤ THE KARIMI—CAIRO'S SPICE MERCHANTS

During the Middle Ages, Cairo's trade network stretched across North Africa, Asia, and the Mediterranean and into the Indian Ocean, particularly during the Mamluk sultanate (1250–1517). The Karimi were a merchant clan based in Cairo, although they also operated in other cities that specialized in the spice trade. Other merchant clans also traded in spices, but the Karimi remained the most dominant, beginning their near monopoly in the Indian Ocean during the reign of Saladin.

Many of the Karimi were Jewish, although others converted to Islam in order to gain favor with the Mamluk sultans. From the ports on the Red Sea, they sailed in convoy formations to purchase pepper and other spices in India and Sri Lanka and then returned to Cairo and Alexandria to sell to Italian merchants. Their dominance in the Egyptian spice trade lasted until 1423, when Sultan Barsbay monopolized the spice trade for the state. Rather than lose their lucrative business, many of the Karimi and other clans simply immigrated to India and continued their business away from the government's controls. This, rather than the arrival of the Portuguese in the Indian Ocean, appears to be the cause of the decline of commercial tax revenues in the Mamluk sultanate.

—Timothy May

The trade varied greatly between regions. Although Arab merchants were very active in trading with Europeans, most of the goods transported through the Mediterranean traveled on European ships. Here the Arab merchants were true middlemen, receiving goods from the east and selling them to the west. Initially the focus was on textiles and spices. Later coffee was added to the mix. In addition, Arab merchants began to purchase New World products like tobacco and silver specie and sell them in the transregional trade. Gradually New World foods entered into the assortment of goods as well.

In the Indian Ocean trade, Arab merchants were much more active in transporting goods, including coffee, silver specie, and tobacco to India, Iran, and East Asia. In the Indian Ocean trade, until Portuguese dominance, Arab merchants dominated the trade. These included Arabs from Egypt and Syria but more so Arabs from Yemen and Oman. Slaves from East Africa were also a major commodity for sale in India, where the Mughal emperors and nobles purchased them as eunuchs.

In the overland trade, Arab merchants led caravans to central Asia and even into China. The western terminus for the trade were the markets of Aleppo and then to the rest of the Mediterranean. Silk and other textiles formed the bulk of the trade. Most of the silk involved in the overland trade came in the form of raw silk from China and Iran, where it was then refined and woven by skilled weavers in the shops of Aleppo. The trans-Saharan trade also remained a major source of revenue. In addition to domestic slaves, merchants dealt in ivory, ostrich feathers, and gold. Mundane items were also bought and sold but, again, primarily to cover operating expenses, as Ottoman officers paid high prices for ostrich feather plumes for their headgear.

While banditry, like piracy for the seaborne trade, remained a threat, the greatest threat to the prosperity of the Arab merchants was the policies of the Safavid empire. For most of the Safavids' existence, they were amenable to trade coming from the Ottoman empire, even if their politics and armies clashed. Nonetheless, when the Safavids created a monopoly on the silk

production, this did threaten to cut the Arab merchants out in favor of European merchants operating in the Persian Gulf.

What is most notable about the Arab merchants in the early modern period was their ability to adapt. Exposed to nomadic raids, pirates, and eventual domination of the Mediterranean and the Indian Ocean by European merchants and governmental economic policies, the Arab merchants continued to adapt to changing conditions. Only with the rise of European imperialism and industrial production in the nineteenth century did Arab merchants find themselves in increasing difficulties.

—Timothy May

Bibliography

- Eldem, Edhem, Daniel Goffman, and Bruce Masters. *The Ottoman City between East and West*. Cambridge Studies in Islamic Civilization. Cambridge: Cambridge University Press, 2004.
- Hathaway, Jane. *The Arab Lands under Ottoman Rule, 1516–1800*. New York: Pearson Education, 2008.
- Kearney, Milo. *The Indian Ocean in World History*. New York: Routledge, 2004.
- Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.

Hong Merchants

For much of the Qing dynasty (1644–1911), the Hong merchants formed part of the Canton system of maritime trade between China and the West. Holding official licenses granting them exclusive rights to trade with the West, they acted both as merchants engaged in trade for their own profit and as guarantors of the order and security of the port on behalf of the Chinese government. Although only occasionally arranged into a monopoly called the Co-hong, this term has gained currency in the West as their collective designation. Their control over China's commerce with Europe and America could prove extremely lucrative. However, the need to satisfy two sides with very different ideas about trade and international relations often placed them in difficulty, a position that became more acute as British power and assertiveness grew in the nineteenth century. The crisis of the Opium

War (1840–1842) led to the end of the Hong merchant system.

In 1684 after securing control over the entire Chinese coast, the Manchu Qing government repealed its prohibition on overseas trade. The following year a maritime customs administration was established in the province of Guangdong, and a group of merchants was licensed to deal in foreign trade. It was common in China for a group of commercial houses (called *hang*, the origin of the word “Hong”) to collectively manage certain types of trade, and those dealing in foreign commerce came to be known as *yang* (“overseas”) *hang*, or the Thirteen Hong (a purely conventional number).

Trade with Europe, at first permitted at several ports along the coast including Ningbo in Zhejiang and Xiamen (Amoy) in Fujian, gradually coalesced at Canton (Guangzhou). Britain’s East India Company established a permanent “factory” (trading premise) there in 1715 and was joined by traders from other nations, while Chinese merchants from other provinces, particularly Fujian, also made it the base of their operations. British attempts to revive trade at other ports in the 1750s failed, and by 1758 Canton had formally become the only port open to Western traders (although nearby Portuguese and Spanish colonies had the right to send vessels to certain other ports).

The role and function of Hong merchants likewise shifted. In the early decades of the trade they often served merely as agents for powerful officials, but by the mid-1700s they were trading entirely on their own account as well as managing the subordinate staff of compradores (provisioners), linguists (interpreters), and others required for the operation of the port. In addition, the wealthiest Hong merchants were required to serve as security merchants, guaranteeing that Western traders and sailors would pay assessed duties and fees and obey other Chinese regulations. The security merchants also acted as intermediaries for all communication between Europeans and Chinese officials.

From a commercial perspective, the Hong merchants profited greatly from the growing English demand for tea. Trade in Indian cotton and other commodities was more volatile but

➤ HONG MERCHANT FAMILIES

The wealthiest Hong merchant families were the Pans and the Wus, whose firms rose to prominence in the latter half of the eighteenth century. The Pans used their wealth to become particularly active in the local cultural sphere, collecting books, building magnificent gardens, and composing poetry. Their fortune was eclipsed in the nineteenth century by that of the Wus. Relative latecomers to the trade, the Wu family prospered enormously under the stewardship of Wu Bingjian (1769–1843), known to contemporary Westerners as Howqua. As with other Hong merchants, the presence of *qua* in his commercial moniker (from *guan*, “official”) reflected the nominal bureaucratic rank he received in return for contributions to the government. Howqua was particularly close to American merchants at Canton and built up a portfolio of overseas investments, including railway shares. It has been suggested that his fortune, estimated at 26 million Spanish dollars, was the largest of any merchant of his day anywhere in the world. Despite their riches, members of both families sought (usually in vain) government permission to retire from the risks and frequent fiscal demands that fell upon them as the greatest Hong merchants.

—Matthew Mosca

also generally profitable. The most successful Hong merchants undertook sophisticated commercial and financial transactions on a global scale, often through British, Indian, or American agents. However, they also bore the heavy burden of providing gifts to the emperor and contributions in time of crisis as well as fees and bribes to local officials. Moreover, many Hong merchants had little capital, and it was not uncommon for them to go bankrupt through desperate and imprudent loans or transactions. In such cases, other Hong merchants became collectively liable for their debts. Several expedients were attempted to meet these difficulties. In 1720–1721 and 1760–1771 they organized themselves into a single trading monopoly (called the *gong hong*, or Co-hong). This system, designed to increase Hong profits and leverage, collapsed due to internal rivalries and foreign pressure. In

1780 a Consoo fund, designed to liquidate the debts of bankrupt merchants and cover other liabilities assessed on them as a corporate body, was established from the proceeds of a 3 percent levy on all trade.

The fortunes of individual merchants varied widely. The small number of Hong merchants who succeeded in accumulating enormous fortunes lived in luxurious estates and became important patrons of local culture and education. However, many Hong merchants also went bankrupt, which could result in their imprisonment or exile. Over the course of the nineteenth century the Canton system began to break down. Rebellions and natural disasters within China led to larger exactions, it became more difficult to find experienced and wealthy merchants willing to fill vacant positions as Hong merchants, and the growth in smuggling illegal opium increased imperial pressure on them to control foreigners. Guided by the view that freer trade would increase the volume and value of their commerce, Westerners increasingly resented the monopoly of Hong merchants on trade and diplomatic communication, especially after the dissolution, in 1833, of the British East India Company's monopoly on trade between England and China. The foreign trade monopoly of the Hong merchants was abolished in 1843 as part of the agreement ending the Anglo-Chinese Opium War (1839–1842).

—Matthew Mosca

Bibliography

- Ch'en, Kuo-Tung Anthony. *The Insolvency of the Chinese Hong Merchants, 1760–1843*. Taipei: Academia Sinica, 1990.
- Cheong, W. E. *The Hong Merchants of Canton: Chinese Merchants in Sino-Western Trade*. Richmond, UK: Curzon, 1997.
- Downs, Jacques M. *The Golden Ghetto: The American Commercial Community at Canton and the Shaping of American China Policy, 1784–1844*. Bethlehem, PA: Lehigh University Press, 1997.
- Greenberg, Michael. *British Trade and the Opening of China, 1800–42*. Cambridge: Cambridge University Press, 1951.
- Hummel, Arthur W., ed. *Eminent Chinese of the Ch'ing Period (1644–1912)*. Washington, DC: U.S. Government Printing Office, 1943–1944.

Dutch East India Company

The Verenigde Oostindische Compagnie (VOC), or United East India Company, was established by a group of merchants and mercenaries on March 22, 1602, and ushered in a 200-year Dutch hegemony in maritime trade. Known as the Jan Compagnie to the indigenous people of India, Indonesia, and East Asia, the company traded and battled its way to Dutch supremacy in Asian-European trade. During those two centuries of existence, the VOC built almost 1,500 ships, and more than 1 million people sailed as passengers, craftsmen, soldiers, or seamen to ports forcibly established throughout Asia. The primary purpose of the VOC was to be the monopolizing power in the Asian spice and pepper trade. By the end of the seventeenth century, the VOC had a monopoly on nutmeg, mace, and cloves and cornered much of the pepper market. Coffee, tea, and opium were also very profitable. In the eighteenth century, trading in spices was subsumed by textile goods and fabrics such as dyed cotton batiks and silk.

The VOC was formed by charter after initial spice expeditions carried out by competing smaller companies in the last decade of the sixteenth century. The central government of the United Provinces (now the Netherlands), known as the States-General, ordered the competing companies to combine and work together to establish Dutch dominance over the Portuguese and English in the extremely lucrative spice trade.

The VOC was able to establish monopolies for two related reasons: Their charter allowed them to use force, which they did without hesitation, and certain commodities could only be grown in very specific locales. The VOC was a merchant-soldier company and throughout its history employed more soldiers than seamen to outfit its expeditions. The military component of the VOC helped it become profitable; for example, nutmeg and mace were found only on the Banda Islands. The VOC quickly overpowered the indigenous government there, setting up an agreement whereby the Bandanese could trade only with the Dutch. Similar agreements were made throughout the East Indian islands of Java, Sumatra, Ceylon (Sri Lanka), and the Moluccas. The VOC generally established military

fort-ports in the islands where they traded. The most important of these ports were Batavia (formerly Jacatra, now Jakarta), on Java, and the Cape of Good Hope in South Africa. Founded in 1619 and 1652, respectively, these fort-ports were seats of Dutch power in the Indian and Pacific oceans and facilitated the establishment of the VOC's trade monopolies.

The VOC was governed by a board of directors known as the Heren XVII or Gentlemen XVII. The directors were the former governors of the original companies that came together to form the VOC. The cities from which these companies came became chambers. Local participants within each chamber, including servants, women, and bureaucrats, were individual shareholders in the VOC. Each chamber contributed delegates, the number of which was determined by the capital that chamber invested in the whole company. At its inception, the VOC collected 6.5 million guilders. The largest share of 3.7 million guilders came from the Amsterdam chamber; the Zeeland chamber deposited 1.3 million, Enkhui-zen deposited over 500,000, and the lowest was 170,000 guilders deposited from the Rotterdam chamber. The original capital stock was never increased in 200 years of the VOC's existence.

VOC seamen were notoriously hardened. Men from various northern European nations joined VOC crews because they had no other way to support themselves. The crews were composed of a mean sort of men because of the danger of the job. Two out of three seamen in the employ of the VOC died from disease at sea or while in service at posts in Asia. Despite rules to keep the ship somewhat hygienic, diet was poor, and the tropical weather exacerbated the spoiling of food and drink and the weak health of the men. However, the profits of the VOC—as much as 10,000 percent—were more than enough to keep the directors outfitting voyages.

We know about many aspects of VOC trips from contemporary travel accounts, such as the one by Nicolaus de Graaff. For example, the VOC had many rules to maintain order and hygiene on board. The most grievous crimes were mutiny, sodomy, and murder, but other crimes included playing cards or dice, gambling, and defecating in unapproved spots. Punitive measures included fines, solitary confinement, branding,

► PIETER VAN DAM'S *BESCHRYVINGE VAN DE OOSTINDISCHE COMPAGNIE* (DESCRIPTION OF THE EAST INDIA COMPANY), 1685–1703

Pieter van Dam (1621–1706) wrote the *Description of the East India Company* during 20 years of service for the Dutch East India Company (Verenigde Oostindische Compagnie, or VOC). The *Description* is a multivolume work that contains information about the VOC and its dealings in Asia. It was intended as a practical report on the VOC and to serve as a basis for reforms in the company. These records were so important to the company that during its lifetime, the VOC had the documents locked in a box that needed three different keys to be opened. These documents have since become important primary sources for historians.

Van Dam recorded policy and wrote letters to foreign kings and dignitaries on company policy as part of his job as the secretary, or *advocaat*, of the VOC. He was the chief permanent official of the VOC in the last half of the seventeenth century. Van Dam was 80 years old when he completed the *Description* in 1701.

—Elizabeth Sutton

flogging, keelhauling, and death. Women were not employed by the VOC, and those who tried to stay with their husbands by disguising themselves were dealt with harshly.

The VOC began to decline in the late seventeenth century and was routinely bailed out by the Dutch government throughout the eighteenth century. Overcome by corruption and debt, the bankrupt VOC was permanently disintegrated in 1798.

—Elizabeth Sutton

Bibliography

- Blussé, Leonard. *Strange Company: Chinese Settlers, Mestizo Women, and the Dutch in VOC Batavia*. Providence, RI: Foris, 1988.
- Boxer, C. R. *Jan Compagnie in War and Peace, 1602–1799*. Hong Kong: Po Fung, 1979.
- Davies, D. W. *A Primer of Dutch Seventeenth Century Overseas Trade*. The Hague: Martinus Nijhoff, 1961.
- Jacobs, Els M. *In Pursuit of Pepper and Tea: The Story of the Dutch East India Company*. Amsterdam: Walburg Pers, 1991.

Meilink-Roelofs, M. A. P., et al., eds. *Dutch Authors on Asian History: A Selection of Dutch Historiography on the Verenigde Oostindische Compagnie*. Providence, RI: Foris, 1988.

Reid, Anthony. *Charting the Shape of Early Modern Southeast Asia*. Chiang Mai: Silkworm Books, 1999.

The Dutch East India Company in Japan

The Dutch East India Company (Vereenigde Oost-Indische Compagnie in Dutch) was founded in 1602 and granted a 21-year monopoly on colonial activities in Asia by the States-General of the Netherlands. Aware of the lucrative voyages made to Asia by the Portuguese throughout the sixteenth century, the companies that would eventually make up the company had already begun making voyages to the Indies in 1595. The first to Japan began in 1598 when 22 ships departed Rotterdam for the Far East. Met by a series of disasters, the *Liefde* (Charity), the sole survivor of the fleet, drifted into Bungo, on the eastern shore of Kyushu, on April 19, 1600. Only 25 of the crew of 110 lived, and 5 more of them died ashore. Olivier van Noort of Utrecht was able to inform those in Rotterdam of the fate of the *Liefde* in 1601, when he returned from his own voyage to the east. During this time some of the crew, such as Melchior van Santvoort and Jacob Jansz Quaeckernaek, who had captained the *Liefde*, made voyages throughout Asia on Japanese or private junks.

In the spring of 1605 Quaeckernaek left Japan for the Netherlands with a license from Tokugawa Ieyasu for the Netherlands to trade with Japan. The first company ships to Japan arrived on July 6, 1609, and docked in Hirado. The men bore a letter to the shogun from Prince Maurice of Orange with the purpose of establishing a Dutch factory in Japan. Permission was granted by Ieyasu, and the Dutch established their trading post in Hirado since the Portuguese were firmly entrenched in Nagasaki. The first years of the factory were difficult because there was no steady supply of saleable goods, and the merchants relied heavily on the privateering of Portuguese vessels and Chinese smugglers. The Portuguese and Spanish also attempted to obstruct Dutch

trade by arousing suspicion among the Japanese, but the Dutch counteracted the attempts by telling the Japanese that the former had military and religious designs on Japan. Dutch shipping finally began to increase about 1617 and was greatly facilitated by the establishment of Batavia in 1619.

To improve supplies of Chinese silk, at that time the most significant trade item in terms of volume and value, a factory was established on Formosa (now Taiwan) in 1624 in order to facilitate contact with Chinese smugglers. This factory led to what is known as the Nuyts Affair. Pieter Nuyts was sent to pay respects to the shogun before taking office as governor of Taiwan. Nuyts's ignorance of Japanese protocol and arrogance caused the shogun to refuse to see him altogether. After taking office, Nuyts's inept efforts in 1628 to curb Japanese competition caused the Japanese traders on the island to take him hostage. When the shogun heard how he had treated subjects, he cut off all trade with the Dutch East India Company. Nuyts was arrested in Batavia and sent to Japan for punishment in 1632. There he was put under house arrest, and trade with the Dutch resumed a year later. From this time on, the Dutch made annual journeys to the capital to pay their respects to the shogun.

By this time the Portuguese were the only other foreign traders left in Japan, the Spanish having been expelled and the English leaving of their own accord in 1624. With the Dutch factory reopened, the shogunate moved to curtail Japanese movement abroad and to contain the Portuguese on Deshima, an artificial island in the Bay of Nagasaki. The outbreak of the Christian-led Shimabara Rebellion in 1637 led the shogunate to expel the Portuguese, as it viewed Christianity as a threat to its power. The Dutch East India Company was allowed to continue to trade in part because they sent a ship to fire upon the castle in which the rebels were under siege, in addition to the fact that the shogunate had long ago viewed Holland as a non-Christian state, and the Dutch had not concentrated on religious conversions in Japan. In 1641 the Dutch were ordered to move from Hirado onto the recently vacated island of Deshima.

They unhappily settled into the confines of the island (measuring 235 by 70 yards or 215 by 64 meters) that was connected to the mainland

by a guarded gated bridge. Deshima contained residences, warehouses, offices, and a garden. The number of people there varied over time but averaged about 15 Dutch residents, including the factory head, senior and junior merchants, the bookkeeper, the scribe, the warehouse master, and the doctor. The Dutchmen also brought slaves, usually of Indonesian or Indian descent, and various Japanese local and shogunal officials and workmen also spent time on the island.

Trade between the Dutch East India Company and the Japanese went through a variety of incarnations. For most of the seventeenth century the primary import into Japan was silk, which was exchanged for metal bullion. Later other textiles like wool came to increase in importance. Until 1668 this metal bullion was primarily silver but was replaced by copper when silver export was forbidden in that year. Silk was handled by what was called the *pancado* or *itowappu*, in which prices were fixed and sold to specified merchants. In 1655 this was abandoned. Trade occurred based on mutually agreed prices (*aitai shōbai*). Fears over the outflow of precious metals put an end to this practice, which was replaced by taxation. The taxation system was relatively successful in halting the outflow of gold and silver, but further measures were taken in 1685 by capping the amount of trade and reinstating the *itowappu*. In 1698 all foreign trade was put under the Nagasaki Geldkamer or *kaisho*. This office served as a middleman between the Dutch traders and Japanese merchants. All purchase prices were determined by the *kaisho* and were paid out in copper after deducting rent, food, and other expenses. The goods were then auctioned to the merchants. In 1700 a limit was set to five Dutch ships annually, which was reduced further to two in 1715.

These restrictive practices decreased trade value and volume considerably. However, in addition to the official company monopoly, from 1685 private trade was officially recognized by the shogunate. The company frowned upon its employees trading for their own profit, but because the company did not want to bother with many things that did not offer significant profits and the Japanese insisted that they be imported, trade was allowed by individuals. The company monopolized the import of many textiles and

other items in demand like spices, exotic woods, and buffalo horn. Company servants brought things like glass, pocket watches, and books. Private trade came to increase in significance as company trade declined.

While the primary purpose for contact on both ends was to conduct trade, the Dutch East India Company also had the significant role of conveying information into Japan through both formal and informal channels. Formal channels included the presentation of *fū setsugaki* which were reports on world events and audiences with the shogun, who might ask all sorts of questions about the outside world. Informal channels included interpreters, many of whom came to study more than language, and contacts with Japanese scholars.

The collapse of the Dutch East India Company in 1799 did not signal the end of Dutch trade with Tokugawa Japan. For a while the factory limped by relying on chartered ships. Eventually the Netherlands Trading Society, an organ of the Dutch government, took over the factory on Deshima, handling trade matters until commercial treaties were signed in the 1850s.

—Martha Chaiklin

Bibliography

- Boxer, C. R. *The Dutch Seaborne Empire, 1600–1800*. New York: Taylor and Francis, 1977.
- Glaaman, Kristof. *Dutch-Asiatic Trade, 1620–1740*. The Hague: Nijhoff, 1981.
- Goodman, Grant Kohn. *The Dutch Impact on Japan, 1640–1853*. Amsterdam: E. J. Brill, 1967.
- Goodman, Grant Kohn. *Japan and the Dutch, 1600–1853*. New York: Routledge, 2000.

English East India Company

During the first wave of European expansion in the early modern period, many countries had merchant companies dedicated to trade in Asia. England and, later, Britain were no exceptions. The “Governor And Company Of Merchants Of London, Trading Into The East Indies” was brought into existence by a royal charter on December 31, 1600; it was the fruit of several years of lobbying during the reign of Elizabeth I. The company was established to break Portuguese control of the spice trade and to compete with rival Dutch traders who had the same goal.

While profits were the primary objective, political reasons also played a role in the growth of the East Indies trade.

In the early years of the company, investors subscribed to each voyage separately. Many of the investors were part of London's mercantile community, and several had close ties to court. Even so, investors struggled to raise over £70,000 needed for the first voyage in 1601. It was not until the mid-seventeenth century that the East India Company (EIC) became a full-fledged joint-stock company and that investors committed to longer-range projects. The company was well organized and aggressive; its close financial relations with the Crown and growing profits made it a wise investment. Nonetheless, the Dutch East India Company (VOC) held an advantage over its English counterpart (including far more capital) and flourished from the 1580s to the 1680s, its golden age. Dutch strength in the region is best illustrated by the Amboina massacre of ten English merchants by the Dutch in 1623. This incident was the culmination of a protracted commercial struggle that forced the English to withdraw from the Dutch East Indies (present-day Indonesia).

Initially, English merchants sought to trade goods such as woolen cloth, lead, and tin that were not in great demand in Eastern markets. They found that silver bullion was much sought after and had a higher value in Asia. In the initial phase of trade, the company purchased enormous amounts of pepper for import and re-export, although it was also interested in other spices, cotton, silk goods, indigo, and saltpeter. Mortality and morbidity of seamen and merchants were a great problem, especially in the early voyages, but handsome profits meant that many were willing to take the risk.

The Dutch and English built their trading empires largely at the expense of the Portuguese. The Portuguese presence in the area still presented numerous obstacles for other Europeans who wished to trade, as did the vagaries of local politics and rulers. When the English defeated the Portuguese in India in 1612, they won valuable trading rights with the Mughal empire (which depended on client navies to police the waters).

Because the "Honourable Company" was tied closely to the favor of the Crown, the

political turbulence in Stuart England extended to the English abroad (especially when the EIC's charter was about to expire). The company weathered the storm, and by the late seventeenth century it had established land bases in India and used increasing force to protect its interests in the region. The company's monopoly did invite challenges from those who supported free trade and sought to share the profits, and the company managed to absorb or amalgamate with rival companies. During the eighteenth century the charter was renewed several times, with greater and greater financial concessions to the Crown from its very considerable earnings. By financing loans to the government, the company bought goodwill for its own endeavors in the East.

The cotton-goods trade declined after the mid-eighteenth century, but tea (imported from China) became extremely important for the company, and the EIC's presence in China was instrumental in spreading British influence in the Far East. Imports of textiles (such as calicoes, cotton, and silks) as well as various spices and foodstuffs completely altered the day-to-day existence of British society at all levels. By 1757 the company was bringing 3 million pounds (1.36 million kilograms) of tea to Britain. While trade with the East in the seventeenth century was characterized by the desire for spices, the eighteenth century was dominated by the tea trade.

The EIC became an agent of imperialism in India from the early eighteenth century (lasting to the mid-nineteenth century). The company was allowed to maintain an army to protect its trading interests abroad. However, the army became central to the expansion of British rule in India.

By the second half of the eighteenth century, the company was very influential in the subcontinent, especially in and around its bases in Bombay, Madras, and Calcutta; it seemed as if the company was just as interested—if not more so—in acquisition of territory and in power politics as in trade. The enormous power of the EIC in Asia brought more and more calls for government involvement from Britain. Parliament struggled to deal with the empire that Clive and the company had wrought. The company increasingly came under government scrutiny and was subject to

restrictive legislation during the nineteenth century. After the Indian Revolt of 1857, the British government took direct control of company territory in India. The company continued as an entity until 1873, when it was dissolved.

Western historians tend to emphasize the cultural changes introduced into the East by the company, while Asian scholars paint its influence in a much more negative light. Few would argue that the East India Company had a massive political, economic, and cultural impact in Asia and in Britain.

—Cheryl A. Fury

Bibliography

- Chaudhuri, K. N. *The Trading World of Asia and the English East India Company, 1660-1760*. Cambridge: Cambridge University Press, 1978.
- Keay, John. *The Honourable Company: A History of the English East India Company*. London: HarperCollins, 1991.
- Lawson, Philip. *The East India Company*. London: Longman, 1993.

Slave Plantations in the British Caribbean and North America

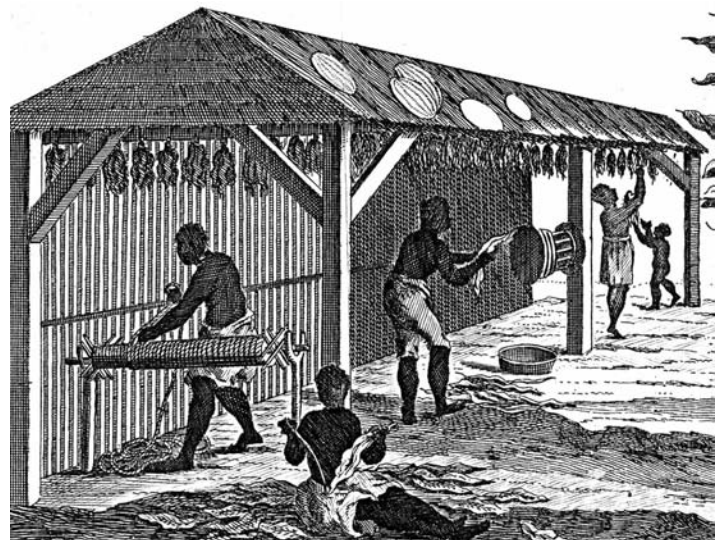
The European encounter with the Americas in 1492 and the decimation of the indigenous populations opened vast tracts of land to agriculture. In 1493 a year after his epochal voyage, the Italian explorer Christopher Columbus imported sugarcane into the Caribbean, and its cultivation became the basis of the first plantations in the Americas. Spain was quick to exploit its opportunities in the New World, enslaving Indians and forcing them to work on the sugar plantations. The Portuguese soon followed in the seventeenth century. However, it became impractical to use the natives, as harsh work conditions and diseases rapidly killed many, and familiarity with the terrain made it easy for those who did survive to run away. Because of this, Europeans began to develop the transatlantic slave trade, importing slaves from Africa to work on the plantations.

The English first developed colonies in Jamestown, Virginia, in 1607 and on the Caribbean islands of St. Christopher in 1624 and Barbados in 1627. The success of the Portuguese in growing sugarcane on slave plantations in Brazil did not at first inspire the English to follow

suit. In the early years at Jamestown the colonists struggled simply to survive and only after 1617 established plantations. Tropical sugarcane would not grow so far north. Instead, the colonists made tobacco their cash crop and in 1619 imported the first slaves, although the English at first relied primarily on indentured servants. Diseases were then rampant, and slaves were judged to be a costly investment on the mainland. After 1660, with the supply of indentured servants shrinking and many servants surviving to demand land of their own, the colonists shifted from free labor to slave labor on the tobacco plantations of Virginia and Maryland.

Successful in growing tobacco in the Chesapeake, the English transplanted it to the Caribbean but not at first as a plantation crop. Around 1650 the English replaced free farms with slave plantations and tobacco with sugarcane on Caribbean colonies. The English then adapted the Caribbean plantation system to the Carolina coast, establishing rice plantations around Charleston in the 1680s. English growers relied heavily on their slaves' knowledge of rice cultivation when the English turned to this crop. West African slaves, particularly women, contributed not only labor but also expertise as rice plantations were established.

The plantations in the Caribbean and North America required a steady influx of new slaves



Scene on an American tobacco plantation, 1725.
(Jupiterimages)

➤ SLAVERY—TWO ACCOUNTS

The following excerpts offer perspectives on slavery from the contrasting standpoint of the owner and an enslaved person. The first, an earlier account, is an excerpt from Richard Ligon's *A True and Exact History of the Island of Barbados* (1657). Here he is describing a planter's work managing the labor on a sugar plantation:

"I can name a Planter there [Barbados], that feeds daily two hundred mouths, and keeps them in such order, as there are no mutinies amongst them; and yet of several nations. All there are to be employed in their several abilities, so as no one is idle. The first work to be considered, is Weeding, for unless that be done, all else (and the Planter too) will be undone, and if that be neglected but a little time, it will be a hard matter to recover it again, so fat will the weeds grow there. But the ground being kept clean, 'tis fit to bear any thing that Country will afford. After weeding comes Planting, and they account two seasons in the year best, and that is, May and November; but Canes are to be planted at all times, that they may come in, one field after another; otherwise, the work will stand still. And commonly they have in a field that is planted together, at one time, ten or a dozen acres. This work of planting and weeding, the Master himself is to see done; unless he have a very trusty and able Overseer; and without such a one, he will have too much to do."

The second quote is from a later account, *The History of Mary Prince, a West Indian Slave* (1831). Mary Prince was a slave on Barbados in the early nineteenth century:

"Mr. D— had a slave called old Daniel, whom he used to treat in the most cruel manner. Poor Daniel was lame in the hip, and could not keep up with the rest of the slaves; and our master would order him to be stripped and laid down on the ground, and have him beaten with a rod of rough briar till his skin was quite red and raw. He would then call for a bucket of salt, and fling upon the raw flesh till the man writhed on the ground like a worm, and screamed aloud with agony. This poor man's wounds were never healed, and I have often seen them full of maggots, which increased his torments."

—Christopher Cuno

Sources

Richard Ligon, *A True and Exact History of the Island of Barbadoes* (London, Frank Cass, 1657, reprinted 1976); Mary Prince, *The History of Mary Prince, a West Indian Slave. Related by Herself. With a Supplement by the Editor. To Which Is Added, the Narrative of Asa-Asa, a Captured African* (London: F. Westley and A. H. Davis, 1831).

from Africa as well as Indians from the North American mainland to offset the large loss of slaves due to heavy workloads and tropical diseases. Work on the plantations often was unremitting and monotonous. Slaves toiled from dawn to dusk planting, cultivating, and harvesting crops. Certain crops, such as rice in the Carolinas, required extensive work through the hot summer months. There slaves could be assigned specific tasks each day. The demand for labor was acute during harvest, particularly on the sugar plantations in the Caribbean, where slaves had to cut and process sugarcane within hours to prevent the deterioration of sugar in the cane. The urgency of this work compelled slaves to toil day and night in the processing plants. Slaves worked not only in fields and factories but

also as overseers when white labor was scarce. In addition, many slaves were trained as skilled builders, craftspeople, and house servants to make each plantation a self-sustaining economic institution.

As a matter of law, masters controlled the labor of slaves. Although some masters offered incentives as motivation, such as time off from work, extra food or clothing, and even cash, compulsion and abuse were widespread. Masters did not hesitate to whip noncompliant slaves to set an example of what other slaves could expect for work that was less than diligent. Additional punishments included branding and castration (for runaways) as well as death.

As an institution, the slave plantation spread from Spanish and Portuguese colonies and then

English colonies throughout the Caribbean and the American South. These plantations were part of the larger transatlantic slave trade that formed an early mercantile economy. Many British merchants profited economically from the trade of slaves and goods produced by slaves on plantations. However, the long-term consequences of slavery and the plantation system were enormous. Slave plantations fostered a racial hierarchy of white over black, as owners justified slavery with arguments of racial superiority. The legacy of slavery and racism has continued to plague the United States for more than a century and a half after abolition.

—*Christopher Cumo*

Bibliography

- Beckles, Hilary, and Verene Shepherd. *Caribbean Slave Society and Economy: A Student Reader*. New York: New Press, 1991.
- Berlin, Ira. *Many Thousands Gone: The First Two Centuries of Slavery in North America*. Cambridge, MA: Harvard University Press, 1998.
- Dunn, Richard S. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624–1713*. Chapel Hill: University of North Carolina Press, 1972.

Innovations in the Plantation Complex—The *Encomienda* and *Hacienda* in Hispanic America

In the wake of the conquest, the Spanish commanders and Crown were hard-pressed to find ways in which to reward the conquerors. The members of the conquest expeditions were not soldiers in the strict sense of the word. They did not receive a salary from the Crown but instead were investors in a company. They expected to be rewarded for their efforts in proportion to their investment in the expedition. While some conquerors did gain gold, silver, and precious stones, all too many did not. In order to reward the conquerors, the local commanders with the acquiescence of the Crown allocated the two limited resources of the Americas: land and labor. In short, the *encomienda* was an institution of labor allocation, the *hacienda* an institution based on land that utilized labor.

Based upon traditions forged in Spain during the reconquest of the Iberian Peninsula from

the Muslims, the Spanish Crown authorized conquerors of the New World to collect taxes and tribute from the conquered peoples. This grant of tribute was called an *encomienda*, from the Spanish word *encomendar* (“to entrust”). Under this grant the natives of a specific town or village were required to pay taxes and tribute to a Spanish conqueror or early settler. Early in the history of the New World, part of the tribute was collected in the form of labor, given that most native communities did not use currency prior to the arrival of the Spanish. The Spaniard who received the grant of tribute was required to provide basic services to the natives, in particular to provide for their conversion to Christianity and to pay for the services of clergy to them.

Members of the conquering expeditions also received grants of land, called *mercedes*, upon which they could cultivate crops to provide for the sustenance of the colony. Under most circumstances, the conquerors used the labor services of the natives entrusted to the *encomienda* to raise crops, serve their households, and provide other labor for them. Because Indians in *encomienda* were used on estates, some modern observers concluded that the *encomienda* was a system of land distribution and exploitation, which it was not.

The institution of the *encomienda* quickly became emblematic of Spanish exploitation of the natives. The *encomienda* became associated with Spanish excesses in the New World and the exploitation of the natives in particular. A series of royal decrees from 1512 until 1542 sought to regulate and control the *encomienda*. In 1512 the Crown issued the Laws of Burgos, which effectively limited the *encomienda* to a system whereby recipients enjoyed native tribute, either in money, goods, or labor. This did not quiet critics who claimed that the institution was responsible for nothing less than the destruction of the native population of the Americas. Consequently, in 1542 the Crown promulgated the New Laws, which provided for the eventual disappearance of the *encomienda*. While new grants would be made throughout the sixteenth and seventeenth centuries as Spanish explorers gained new territories in the Americas, in the core areas of Mexico and Peru the *encomienda* began to disappear.

The New Laws provided for a transition to a system of wage labor wherein individual Spaniards would contract with the natives for their services. The intermediary institution was the *repartimiento*. Under the *repartimiento* a Spanish landowner would request a specific number of workers from a government office created for the distribution of Indian labor and for the transfer of money from the landowner back to the natives. As natives became accustomed to wage labor, the *repartimiento* would disappear. In fact, wage labor did slowly become the norm in colonial Latin America in the seventeenth and eighteenth centuries. It should be noted that from the very first years of the colonies, African slavery existed alongside native labor systems in many regions and was ubiquitous with certain industries, such as sugar production.

While the Crown was regulating the use of Indian labor in the colonial world, landownership developed under fewer constraints. Settlers could petition local royal officials for allocations of land. City councils were responsible for allocating house and garden plots within their territories. The royal government allocated land in rural areas for farms and ranches. A slightly different system existed for mines whereby miners could register their claims with the royal government. Yet none of these properties had value without the labor to exploit them. Farms, ranches, and mines needed large numbers of laborers to produce their goods. Consequently, *encomenderos*, with access to native labor through their grants, had an advantage over others. In this way the *encomienda* became associated with landowning.

The hacienda, simply speaking, is a large, highly integrated rural estate. It was based on the use of a large labor force. The hacienda might produce any of a wide range of goods, depending on the location. In central Mexico cattle, corn, and wheat were important; in southern Peru wine played an important role; and in other areas sheep and their wool were significant. By the seventeenth century a new form of labor had arisen: debt peonage. Under this system a landowner would provide employment to a group of natives. Yet during their term of employment the landowner would provide food, clothing, and shelter at grossly inflated

prices. Paying wages to the laborers was insufficient to satisfy the debt, and so over time the workers became tied to the estate.

While many private landowners owned haciendas, it was the Jesuits, the Catholic religious order formally known as the Society of Jesus, who perfected the institution. The Jesuits developed rural estates aimed at the commercial production of agricultural products in order to provide supplies for their colleges in the cities of the region as well as to sell goods at a profit to support their missionary and educational efforts. The Jesuits also benefited from being exempt from many forms of taxation that private estates had to pay, especially the tithe, a 10 percent tax on agricultural and pastoral production.

Hacienda is a general term for a rural estate. In the case of sugar production the hacienda existed along with the *ingenio*, or sugar mill, that would turn the raw cane into sugar through a complex industrial process of grinding, boiling, and bleaching. Haciendas dedicated to raising sheep also had *obrajes*, or mills, where the wool would first be turned into thread and then woven into cloth. These industrial complexes also relied on debt peonage as well as large numbers of African slaves.

—John F. Schwaller

Bibliography

- Gibson, Charles. *Aztecs under Spanish Rule*. Stanford, CA: Stanford University Press, 1964.
- Keith, Robert. *Conquest and Agrarian Change: The Emergence of the Hacienda System on the Peruvian Coast*. Cambridge, MA: Harvard University Press, 1976.
- Restall, Matthew. *Seven Myths of the Spanish Conquest*. Oxford, UK: Oxford University Press, 2003.
- Simpson, Lesley Byrd. *The Encomienda in New Spain: The Beginning of Spanish Mexico*. Rev. and expanded ed. Berkeley: University of California Press, 1966.

Slave Plantations in Portuguese Brazil

The plantation was the main staple of Brazil's economy until the end of the seventeenth century, when gold was discovered and replaced sugar as Brazil's largest export. From the end of the sixteenth century until the end of the

seventeenth century, Brazil was the largest producer of sugar in the world. The plantation system and the slaves who worked the plantations were staples of the Brazilian economic and social structures. Although anyone was technically able to start a plantation, in reality this required large amounts of capital. Therefore, the wealthy became the new nobility in Brazil, as they were the only ones who could afford to own a plantation.

Originally the plantation owners tried using the natives to work on their plantations. However, this did not work well, as the natives either died from disease and the hard labor or

ran away. This in combination with the voices of those who spoke out against the abuses suffered by the Indians made it less desirable to use the natives as the end of the sixteenth century drew to a close. Instead, the plantation owners turned their attention to Africa. The use of Africans as slaves was nothing new to the Portuguese, as African slaves were used in the sugar plantations on the islands of Madeira and São Tomé. The first Africans arrived as skilled laborers and in fact provided a major part of Brazil's skilled labor force. The use of the African slaves versus the Indian proved to be cost-efficient: most slaves paid for themselves in two years. The demand for this

➤ SLAVERY IN BRAZIL AND THE CATHOLIC CHURCH

Although slave life was well documented in North America, less evidence exists for those slaves who lived in South America. Therefore, historians sometimes must gather facts about how the slaves lived through other documents. A controversial topic has been the role of the Catholic Church; while it did seem concerned about the treatment of the slaves, it never condemned the slave trade. One document that shows this is the *First Constitutions of the Archbishopric of Bahia*, written by the archbishop of Bahia, D. Sebastião Monteiro da Vide, in 1707. In it he provides instructions for slave owners on how best to instruct the slaves on religion but also instructs on how to treat slaves.

One instruction lets masters know that they should not prevent slaves from marriage, nor should masters "treat them worse, or sell them to other faraway places where one of them, because of being a slave . . . cannot follow." However, Monteiro da Vide makes sure to also include that "we declare that once they are married, they remain slaves as before, and fully obligated to their masters' service."

The *Constitutions* also make it clear how slaves were able to pay for their personal necessities such as clothing. The bishop says that the masters make use "of the miserable slaves during the entire week, without giving them anything for their sustenance, or any clothing with which to cover themselves; this need . . . is met by giving them Sundays and Holy Days free so that at that time they may obtain their required food and clothing. As a result, the miserable slaves do not hear Mass,

nor keep the Law of God which forbids labor on those days. . . . [W]e exhort and ask all our subjects . . . that from now on they grant their slaves the needed support, so that they may observe the said precepts and live like Christians."

Finally, while the Church was concerned with the welfare of the slaves, it was not interested in ending the institution itself. Monteiro da Vide says that "although normally the immunity of the Church is valid and defends delinquent persons who seek shelter there, nevertheless there are exceptions to this rule concerning some crimes. . . ." Identify those that do not enjoy the immunity of the Church, he states "Nor the slave (even if he is a Christian) who flees from his master to free himself from slavery." However, the slave was not left completely without options: "if he runs away from his master because the latter intends to treat him with relentless severity, the slave will not be taken back to him unless he first makes a sworn promise, when he can make no other, that he will not mistreat him." If the master cannot promise this, then the slave "will be sold in cases when this is required by law." This document shows not only some aspects of slave life but also the complicated position that the Catholic Church had with slave owners.

—Monique Vallance

Source

Robert Edgar Conrad, *Children of God's Fire: A Documentary History of Black Slavery in Brazil* (Princeton, NJ: Princeton University Press, 1984), 161–162.

type of labor force grew rapidly, causing the development of a slave trade that went from Bahia, Brazil, to central Africa. Over three centuries some 4 million slaves were transported to Brazil from Africa, constituting one-third of the total slaves brought to the Americas. In addition, as the sugar prices rose in Europe, the use of slaves as cheap labor provided plantation owners with the availability to make large amounts of capital. The slave system became so engrained in Brazil's economy that even today the Brazilian government is having to free people forcibly entered into service in the many sugar plantations located in remote areas.

The slaves on the plantations lived in worse conditions than those employed in the mines or in private homes. In Latin America the law provided that slaves be allowed to purchase their own freedom. Slaves who lived near towns were often able to use their trade knowledge to make extra money to do so. On the plantations, however, especially the sugar plantations, slaves worked from dawn until dusk, leaving them little time to make extra money. Also, the distance from the city also made it more difficult for slaves to sue their masters over abuses that the slaves suffered. Field hands were more poorly dressed, fed, and housed than their counterparts who lived in the master's house, although a few masters did try to coax harder work out of their slaves by providing them with a higher quality of life than that received at other plantations.

By the end of the seventeenth century, Brazil's dominance of the sugar trade began to decline. This was not because of the cost of growing sugar, which remained 30 percent lower than for any other supplier. The decline came from the introduction of British and Dutch sugar into the market. Even though sugar was now lessening in importance, many of the plantations remained in business as the slaves began breeding, and therefore the plantation owners did not have the need to buy as many slaves to replenish those who died. However, the African slave population did not replenish itself that quickly; the birthrates remained comparatively low. Those plantation owners who chose to change their purpose switched to growing either coffee, cacao, cotton, or food. However, the importance of the plantations would be severely diminished after the

discovery of gold and the resulting gold boom in the late seventeenth century.

—Monique Vallance

Bibliography

- Bear, Werner. *The Brazilian Economy*. New York: Greenwood, 2001.
- Bethell, Leslie, ed. *Colonial Brazil*. Cambridge: Cambridge University Press, 1984.
- Schwartz, Stuart B. *Sugar Plantations in the Formation of Brazilian Society*. Cambridge: Cambridge University Press, 1985.

Commercial Expeditions in Early Colonial North America

The expansion of Europe was based on the fundamental reasoning of obtaining whatever riches might be found across the globe. For the Portuguese, the trade with Africa (initially gold but it became slaves beginning in the 1450s) and the Far East laid the basis of their empire, although they did colonize Brazil later on. The Spaniards pursued “God, glory, and gold” in the Americas. First they conquered the native peoples by force of arms and then subjected them to their coercive and oppressive labor systems. The arrival of the English and Dutch into North America completed the cycle of depopulation and devastation to the indigenous population. Rivalries spread among various European states: England versus Spain, England versus the Dutch, and the English versus the French.

The schism between Spain and the English (beyond England's envy of the treasure coming from the Americas) lay with Henry VIII's English Reformation. His decision to rid himself of his Spanish wife engendered hostility between the two kingdoms until the end of the Napoleonic Wars. Henry understood that the only way that England could survive any conflict with Spain was for a mighty English navy to be constructed. During Henry VIII's reign the navy grew from a mere 7 ships to 53 vessels (all sailing ships, as compared to the outmoded galley).

At the time of Henry's demise (1547), England had made no significant strides in exploration, but certainly interest in and expansion in nautical knowledge and technology was on the ascent. Sebastian Cabot nonetheless had been sent out by the king to find a northern way to

the Far East. For five years after 1548 Cabot made plans for his final expedition, and he organized a number of merchants into basically a syndicate to find the fabled Northeast Passage (through the waters of the Arctic north of Russia) to Cathay, China. Cabot did not go on this epic because of his age. Instead Sir Hugh Willoughby and his subordinate Richard Chancellor led the trading expedition, which ended in failure but fostered the forerunner to the Virginia Company, the Muscovy Company.

The divide between England and Spain did not end with Henry VIII's death but instead intensified with the reign of Elizabeth I (r. 1558–1603). In reality, Elizabeth waged an undeclared war upon Spain via her fabled “seadogs,” or privateers. She also sent out expeditions to gain a better understanding of the geography of North America. For instance, Martin Frobisher was sent out to reconnoiter Labrador and Greenland. He brought back to England a whole shipload of ore to assay which turned out to be worthless. This failure basically ended his plan for colonization, as no one was willing to provide funds for his enterprise. John Davis followed Frobisher and completed the exploration of Greenland. Henry Hudson, who had worked for the Dutch, returned to England and continued to explore North America, stumbling on what became Hudson Bay. Finally, in 1615 William Baffin in his voyage determined that Hudson Bay was not the fabled Northwest Passage.

Elizabeth especially liked the skillfulness of such people as Sir Francis Drake, who harassed Spain's galleons and even attacked Cádiz. The queen consequently decided that England was ripe for empire. She entrusted a wealthy courtier, Sir Walter Raleigh, with the plans and implementation of the founding of England's first North American colony. He sent out three expeditions (1584, 1585, and 1587) to Roanoke Island to found the colony, but each ended in abysmal failure. The first two merely returned to England, while the third became known as the Lost Colony; when a relief ship appeared later, everyone had disappeared. The English and specifically the monarchy had learned some valuable lessons about colonization. First, a trading post that would merely collect the product of Indians and then profit from it was inadequate (they could

not rely just on the wealth of an Indian trade). Moreover, they must have the means to produce sufficient foodstuffs. Second, such an enterprise as colony building required an extended group of benefactors, or a joint-stock company. Two groups of merchants and government officials in 1605 sought a charter from James I to establish joint-stock companies and find stockholders. A Royal Charter was extended in 1606 that would allow for settlement of “Virginia” by these companies. The central governing board was to be located in England, and authority for day-to-day administration was vested in a Council of Thirteen. Thus, in 1607 Fort James (later called Jamestown) was founded amid the harsh environment of the James River. Soon the colonists suffered from both disease and starvation, only to be saved by the local Native Americans. (The founding of Plymouth occurred in 1620, but it was supposed to occur earlier in Virginia.)

Prior to the final success at Jamestown, with a stable tobacco crop for export, Sir Humphrey Gilbert had pushed for a colony in Newfoundland (1582). (Raleigh, as observed previously, tried to found settlements at Roanoke.) These disappointing early efforts at founding colonies did add to the corpus of geographic knowledge, as reflected on the maps that were created. Usually when such expeditions landed the explorers had little knowledge of the interior regions. Prior to launching any colonization mission, knowledge was primarily obtained via travel accounts, maps, and once landed (interior exploration as well as native reports). The central feature of the English trading companies was locating a profitable product. English settlers took with them seeds to plant English products such as wheat, peas, barley, and other crops native to their homeland. On the journey they had to rely on stores of primarily dry or salted goods (an example being pork and fish) as well as large quantities of fresh water to sustain them before they found additional sources. Although exiled from the Council of Thirteen, Captain John Smith came to lead Jamestown (as the result of dissension and bad economic times) to a large degree because of his previous military experiences.

As with the English, improved nautical knowledge and improved ships allowed France to embark on exploration and colonization in

North America. Beginning in 1603 Samuel de Champlain ascended the St. Lawrence River, founding Port Royal, and then in 1608 he founded Quebec. Champlain lived and promoted Canada until his death in 1635; however, its relative poverty did not attract a great number of French immigrants. Without precious metals, French Canadians had to rely upon local fisheries and the fur trade with the Native Americans.

Dutch beginnings in North America commenced with the explorations of Henry Hudson during 1609 (in the service of the Dutch East India Company) along the Atlantic coast and into the river that “bears his name as far as Albany.” The Netherlands hence asserted a claim to the lands along the coastline from Virginia to Canada. The New Netherland Company (a joint-stock company) was established in 1614

to pursue the lucrative profits from the Indian fur trade. This company became the West India Company in 1621 and pushed for actual settlement in what would become essentially present-day New York state.

—John S. Leiby

Bibliography

- Billington, Ray Allen, and Martin Ridge. *Westward Expansion: A History of the American Frontier*. 5th ed. New York: Macmillan, 1982.
- Nowell, Charles E. *The Great Discoveries and the First Colonial Empires*. Ithaca, NY: Cornell University Press, 1974.
- Reich, Jerome R. *Colonial America*. 2nd ed. Englewood Cliffs, NJ: Prentice Hall, 1984.
- Taylor, Alan. *American Colonies*. Oxford, UK: Oxford University Press, 2001.

■ Introduction: Sea Lanes and Marketplaces—Early Global Trade Centers and Networks

In the fifteenth century, the global economy centered on Asia. The Indian Ocean was the great crossroads of international shipping and the entire length of its littoral was filled with bustling port cities—from Goa, Calicut, Bombay, and Diu in India, and Aden and Muscat in the Arabian peninsula, to Mombasa and other Swahili city-states along the eastern coastline of Africa—all of which housed a rich diversity of merchants of many ethnicities and religions. Arab Muslim traders played the dominant role in the Indian Ocean basin while Chinese traders from Macao, Guangzhou, and Hangzhou controlled the East Asian waterways. Sailing in what was the most lucrative region in the world, they felt no need to expand their operations into unknown areas; neither Arabs, nor Chinese or other Asian merchants sailed into the Atlantic or Pacific oceans. Outside Asia, Europe served as a vibrant commercial hub with Italian merchants controlling the Mediterranean trade while the German traders united in the Hanseatic League exerted great influence over north European commerce. Although Europeans had no direct access to Asian

riches, Oriental goods, nevertheless, still reached European customers through Islamic trade networks. Thus, Italian city-states had a close relationship with Ottoman merchants and traders while the Portuguese and Spaniards dealt with the Moors and the Moroccans. Across the Atlantic, the Aztecs in Central America and Inca in South America developed their own dynamic trade centers and networks that were, however, isolated from the rest of the world.

By 1750, the situation had dramatically changed. Seeking access to Asian riches, Europeans had gained control over the sea-lanes and freely operated in the Atlantic, Indian, and Pacific oceans. Russia's land expansion across Eurasia integrated the wilderness of northeastern Asia into a larger trade network. The Spaniards accomplished the same in Central America and South America, while the English, Swedes, Dutch, and French established commercial presences in North America. European naval expansion forged new connections across the world, the most striking of them being those across the Atlantic and Pacific oceans. As the volume of

international trade increased so did its relative importance for a state's economy and protecting overseas trade and sea-lanes became crucial to state interests. Naval superiority allowed Europe to force its way into local trade networks and maintain control of international trade, although European states routinely quarreled among themselves. Through their dominance of international sea-lanes, Europeans transformed regional commercial networks by connecting them to each other. Commercial power, thus, became global rather than regional, and Europe held the most prominent position in this new commercial order. Within Europe, European colonial conquests and expansion produced uneven results. Spain and Portugal focused their efforts on the extraction and transportation of precious metals and were eventually eclipsed by the other commercial powers (England, the Netherlands) that profited far more from global trade. The Netherlands particularly benefited in the new economic environment, causing some scholars to identify it as the first "modern" economy. Its cities, especially Antwerp and Amsterdam, took advantage of their location, their thriving local industry and their rapid increase in bulky seaborne trade to emerge as the leading commercial centers in Europe. Nevertheless, by the end of the seventeenth century, Dutch fortunes declined in the face of competition from England and France, as these countries gradually took control over the seas and trade-lanes.

—*Alexander Mikaberidze*

The Columbian Exchange and African Economics and Trade

Separate for millennia, the Old World and the New World evolved distinct ecosystems, each with its own complement of plants, animals, and microbes. The more diverse ecosystem, certainly the one richest in pathogens, was that of the Old World. These ecosystems came in contact in 1492, when Christopher Columbus landed in the West Indies. The European discovery of the New World made the Atlantic Ocean a conduit linking Africa, Europe, and Asia on one side of the Atlantic with the Americas on the other side. Columbus, unwilling to believe that he had discovered a new land, nonetheless furthered the transfer

of people, animals, plants, and microbes across the Atlantic in what historian Alfred Crosby has called the Columbian Exchange.

By 1500 farmers in sub-Saharan Africa were growing corn, a crop indigenous to southern Mexico and the Yucatan. A source of carbohydrates, corn became a staple in the diet of people throughout Africa. In the sixteenth century cassava followed corn to the Old World. It was valuable because it grew on land too poor for other crops, and it became a rich source of calories. Another source of calories was the potato, an American transplant grown in Africa after 1500. These starchy foods fed Africa's growing population. Peanuts likewise were transplanted from the New World to Africa. A valuable source of protein and fatty acids, peanuts enriched African soils with nitrogen. By the nineteenth century peanuts had become an export crop in many areas of Africa. African-grown peanuts found buyers back in the Americas and in China, where they were a popular garnish. Beans from America likewise provided Africans with protein and enriched the soil with nitrogen. Tomatoes and peppers gave Africans essential vitamins.

The flow of crops was not one way. Although the rice farmers in South Carolina tried Asian cultigens, by 1690 they settled on a variety of rice from Madagascar. As was true of peanuts in Africa, rice was an export crop in North America. Buying slaves from lands where rice was a staple, the planters in South Carolina used slaves both for labor and for their knowledge of rice culture. Coffee spread from Africa to Central and South America, where it was, like the peanuts in Africa and rice in North America, an export crop. Sorghum was another African transplant. Although it never rivaled corn, farmers planted sorghum in the American Midwest until soybeans, an Asian cultigen, replaced it.

The demand for slaves to work the plantations in temperate and tropical America stoked the slave trade, which was part of the Columbian Exchange of people. Some 10 million Africans crossed the Atlantic to the Americas. Large numbers died during the Middle Passage, though those who survived brought plants, animals, and pathogens with them. The Amerindians, having evolved in an ecosystem isolated from Old World pathogens, died in catastrophic

➤ AN UNORTHODOX OPINION—CORN IN PRE-COLUMBIAN AFRICA

In 1953 M. D. W. Jeffreys, using linguistic analysis, proposed that farmers grew corn in Africa before Christopher Columbus's birth. He believed that Arabs and Africans had established contact with the Americas as early as 900 CE. From the Americas, Africans or Arabs imported corn to Africa long before Columbus's epochal voyages. Jeffreys's evidence came from the Yoruba region in which historians there speak of a "yellow-skinned foreigner, who crossed the Niger from the north-east," as being the person who introduced maize. Records also show that "the Kesi were the first to cultivate maize and that their king, Ojoko, decreed that no maize was to be sold to surrounding tribes unless it had been killed for planting by being first soaked in warm water and then dried in the sun." Finally, Jeffreys states that he did not find any evidence that maize reached the Yoruba from the coast, which would have been the scenario if the Portuguese introduced it.

Many scholars have dismissed this theory, especially anthropologists who have found evidence of pre-Columbian corn husks in the Americas but not anywhere else. Those who disbelieve Jeffrey's hypothesis theorize that he misread the sources, mistaking native African plants for American maize.

—*Christopher Cumo*

Source

M. D. W. Jeffreys, "Pre-Columbian Maize in Africa," *Nature* 172 (November 21, 1953): 965–966.

numbers when exposed to smallpox and other Old World diseases. The arrival of Africans in the New World exacerbated the spread of diseases, for Africans brought with them yellow fever, a mosquito-borne disease; yaws, a bacterial infection; and other pathogens. These diseases killed Europeans as well as Native Americans, causing a shortage of labor. Europeans responded by importing an ever larger number of slaves from Africa. The flow of diseases was not one way. Pathogens crossed the Atlantic to Africa. Although there is some debate about its origins, the majority of scholars believe that syphilis, a venereal disease, originated in the

Americas. Sexual contact between whites and blacks spread the disease to Africa. Yet its resemblance to yaws makes syphilis difficult to pinpoint in Africa with certainty.

Animals appear to have made a smaller impact on Africa. From America, Africans imported the turkey, the guinea pig, the llama, and the alpaca, though none of these animals became a major source of food or, in the case of the llama, a beast of burden. Rather, Africans continued to rely on Old World cattle, sheep, pigs, horses, and other animals in their daily lives.

Before the Columbian Exchange, Africa was linked to the global exchange via the Muslim traders who led their caravans across the Silk Roads, the trade route that linked Asia to Europe and North Africa. Rather than beginning the trade link, the Columbian Exchange intensified the trade link between Africa and the rest of the world, as the European ships could not carry African products at a higher and faster rate. Farming aside, Africans mined gold, iron, and copper in Rhodesia, Zambia, and Katanga. Merchants traded these metals as well as ivory across the Indian Ocean for glass beads and textiles. In 1481 the Portuguese, determined to usurp the Muslim traders, established a fortress at Elmina on the Gold Coast in hopes of getting gold from the Ashanti mines. By then the Chinese were trading porcelain across the Indian Ocean for gold. Its commerce extending west to the Americas and east to China, Africa participated in a global economy long before the term became fashionable.

Other European nations followed Portugal, dividing Africa among them in the nineteenth century. During the colonial era, Africa produced raw materials and export crops for Europeans in an economy that enriched Europe and impoverished Africa. The retreat of the colonial powers in the twentieth century did little to change the economy. Africa has remained a producer of peanuts, petroleum, diamonds, and innumerable other export commodities. In some cases African nations, their land taken by cotton, peanuts, or another cash crop, must import food to avert famine. The legacy of the Columbian Exchange has left Africa among the poorest regions in the world.

—*Christopher Cumo*

Bibliography

- Bohannon, Paul, and Philip Curtin. *Africa and Africans*. New York: Natural History Press, 1971.
- Crosby, Alfred W. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Greenwood, 1972.
- Thornton, John K. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. Cambridge: Cambridge University Press, 1998.

Economic Effects of Portuguese Expansion into East Africa and the Omani Conquest of Zanzibar

The Portuguese disrupted the centuries-old pattern of east-west trade when they chartered a maritime trade route to Asia. They undercut the hitherto established trade between East and West via the Red Sea and the Mediterranean. Mercantile capitalism, which had gravitated around the Mediterranean, then switched to Portugal and later on to other European nations. Economic effects of Portuguese expansion into East Africa were felt by both Asians and Europeans. It was part of a process that turned a small nation in the Atlantic into a leading market for tradable goods. The Portuguese entry into the Indian Ocean was the first step toward integrating African trade within the world economy under Western control. Large areas of the African coast and the Arab world became integrated into the world capitalist system. This resulted in a decline of trans-Saharan economic relations between Arabs and Africans.

Vasco da Gama first made contact with East Africa in 1498 during his voyage to India. In 1499 Pedro Alvares Cabral explored Sofala and Kilwa, the center of the East African gold trade. In East Africa, the Portuguese wanted to maximize the acquisition of wealth as quickly as possible. The Estado da India (State of India), created in 1505, connected the Portuguese enclaves in the Indian Ocean. The Estado, a maritime trading empire east of the Cape of Good Hope that was subject to the viceroy of Goa, provided security for the factories as well as bases for the Portuguese fleets. They also gained control of East Africa's gold. The Portuguese exchanged pepper from India in return for East African gold and also silver and copper from Europe.

King João III issued a *regimento* (official instructions) in 1530 in order to tighten up trading activities on the East African coast. The *regimento* also aimed to regulate life in the fortress and even relationships with the East Africans. By this time, however, the major profits were made not in gold but instead in ivory. Ivory was bulky, and several coastal *feitorias* (trading factories) were needed, resulting in partnerships between the Portuguese and the Swahilis. During the mid-sixteenth century the Portuguese set up a trading network extending from Delagoa Bay (south of Sofala) to Mombasa. They also brought back into play abandoned factories, such as those in Kilwa. This activity led to friendships with old enemies, such as in Madagascar, where ivory began to be traded instead of gold. New trading bases were established in islands (Zanzibar and Pemba) and also down the East African coast, the most important being Delagoa Bay, developed in 1545. Although the Portuguese had a royal monopoly on trading ivory, it could

➤ PEDRO ALVARES CABRAL

Pedro Alvares Cabral (1467–1520) was a Portuguese nobleman chosen to command a fleet of 13 ships that sailed to the East in March 1500 to follow up the initial contacts made by Vasco da Gama's voyage. Cabral's fleet included 1,500 men and was captained by those carefully chosen such as Bartholomeu Dias, João de Sá, Pero Escolar, and Nicolau Coelho. Cabral was blown off course and accidentally discovered Brazil on April 23, 1500, while on the voyage to India. Resuming his voyage on May 2, he rounded the Cape of Good Hope and reached the Ilhas Primeiras, north of Sofala on Africa's east coast. He sailed farther north to Mozambique, where he obtained water, other supplies, and also a pilot to guide him up the coast to Kilwa, the main city in East Africa at that time, where Afonso Furtado was sent ashore to negotiate a treaty with the king. At Melinde, Cabral found a pilot to direct him to India. Although settlements in Brazil were established only 30 years after those in Africa and Asia, Cabral's discovery of another continent provided the platform for a Portuguese empire in the Americas and spread its influence in both hemispheres.

—Shihan de Silva Jayasuriya

not curtail private trading. Many Portuguese deserted the official empire and mingled with the East Africans, intermarrying and forming local trading networks.

In 1508 Afonso de Albuquerque captured the ports of Muscat, Sohar, and Karyat, but the Portuguese were expelled from Oman in 1650. The Portuguese gained control of Zanzibar in 1500 but in 1698 were ousted by the Omani Arabs. Portuguese control of East Africa was a major drawback to the Omanis, but by 1700 the Omanis took control of the East African coast up to Kilwa and Zanzibar. By the early eighteenth century the area from Mogadishu to Ruvuma was under the dominion of the imam of Oman. Until 1744 when the Al Bu-Said family became the rulers of Oman, its control of East Africa was hindered due to wars within Oman. East African towns were under *walis* (governors) who were almost independent rulers.

—*Shiban de Silva Jayasuriya*

Bibliography

- Beachey, R. W. *A History of East Africa, 1592–1902*. London: Tauris Academic Studies, 1996.
- De Silva Jayasuriya, Shihan. *The Portuguese in the East: A Cultural History of a Maritime Trading Empire*. London: I. B. Tauris, 2008.
- Newitt, M. *A History of Portuguese Overseas Expansion, 1400–1668*. London: Routledge, 2005.

Songhai Commerce

Trans-Saharan trade in gold, horses, salt, and slaves had a long history before the rise of the Songhai empire. Some trade may have trickled sporadically across the Sahara in Roman times, but the trade became regularized and institutionalized only after the large-scale adoption of the Arabian camel in the Sahara. Although camels were used in Mediterranean Africa from the early centuries CE, the growth of substantial regularized trade across the desert was accelerated after the camel-borne Arab conquest of the Maghrib in the eighth century. With the burgeoning of trans-Saharan trade, a series of large empires that controlled the trade emerged on the edge of the desert. First the Ghana empire (ca. 750–1060) and then the empire of Mali (1240–1460s), succeeded by the Songhai empire (1460s–1591) dominated the western Sudan from about 200 miles

(320 kilometers) southeast of the great bend of the Niger west to the Atlantic Ocean. Although the basic strength of all these empires derived from the large armies of spear-wielding infantrymen (Ghana is estimated to have been able to field up to 200,000 troops), all of these empires needed horses to arm their much smaller but more mobile troops of shock cavalry.

Songhai, a very warlike empire in the west African savanna (latter half of the fifteenth century through the sixteenth century) required a constant supply of horses to maintain its powerful army. These animals could only reach Timbuktu and Gao, Songhai's chief cities, after crossing nearly 1,000 miles (1,600 kilometers) of the Sahara. These Berber horses, rather small in comparison to European war horses, were raised in the western Maghrib north of the desert and then driven south across the great wasteland to serve as mounts in the Songhai cavalry. The horses traveled with camel caravans that must have carried extra water and fodder for the horses from oasis to oasis. The horses were expensive, and to pay for them the rulers of Songhai sent north principally gold and slaves. The going rate of exchange was one horse for 40 slaves.

In addition to the gold and slaves, caffeinerich kola nuts as well as ivory and ostrich feathers also were shipped north. The Berber merchants brought to the south steel swords, wheat, olive oil, wine, religious books, and Muslim scholars in addition to horses. Dates and salt were products of the desert, which the traders brought to the cities of Songhai. The dates were the chief food eaten by the traders on the desert caravans. The merchants of Timbuktu and Gao sent most of the salt into the forested highlands, from whence most of the gold was obtained. The natives of these gold-producing regions valued the salt highly, and it was often worth its weight in gold. Slaves, sent hundreds of miles away into the desert by the rulers of Songhai, mined the salt at deposits there.

It has been estimated that more than 6,000 slaves from Songhai were sent north along the desert route each year, but we do not have an estimate of the number of horses sent south. It has also been estimated that a ton of gold was sent to northern Africa each year during the fifteenth century and the early years of the sixteenth

century. After the early years of the sixteenth century, slaves replaced gold as the most important commodity because Portuguese traders in the ports on the Guinea coast were by that time able to obtain a large part of the west African gold production.

The slaves who were sent across the desert were obtained by purchase of prisoners of war or of captives caught by slave raiders. Unlike in the Atlantic slave trade, young women outnumbered males in the trans-Saharan trade. The women were to be used in domestic service, as concubines, or in the prostitution industry. Of the males who were trafficked, many were boys who would be castrated to serve in the harems of the rulers and the wealthy classes. Many of the young men were bought as recruits for the armies of Morocco, Egypt, or other north African states.

Other more prosaic commodities were traded on the desert route. Bales of goatskins were obtained from the seminomadic herdsman of the western Sudan. Taken to Morocco, these goatskins were tanned and sometimes sold as vellum in Mediterranean ports and were often processed as Morocco leather for use in the book-binding trade. Copper ore, mined in the Hoggar Mountains of the Sahara, was sent by camel south to be smelted near Timbuktu and Gao. Much of the refined copper would then be used in those cities to make pots and other containers, but some was also sent down the Niger on dugout canoes to be used to make brass and bronze utensils and objects of art by the forest peoples of the south.

The crossing of the desert required several months of travel, with caravans stopping frequently at the better watering places and oases to rest and recuperate. Traders preferred to travel in large caravans of up to 1,000 camels. Such a large caravan necessitated a carefully chosen route to afford the maximum amount of grazing for the camels and horses and, of course, water holes at not too great distances apart. With some rare exceptions, as when the Songhai emperor Aksia Mohammed (1442–1538) made his memorable pilgrimage to Mecca, the caravans would not be owned by a single trader but instead were owned by a group of merchants. Each caravan was governed by contracts among its constituent merchants, enforceable by Sharia

law. The caravans would start in the fall or winter when the weather was coolest but even then would travel at night and rest during the heat of the day. At the end of the journey (to Cairo, Tlemcen, Marrakech, or Fez) the caravan would break up. A return journey would not usually be attempted until the next year, when a new caravan would be organized.

Songhai remained powerful and controlled the lucrative trans-Saharan trade until 1591, when a Moroccan army, using muskets, defeated the much larger Songhai forces at the Battle of Tondibi. The Moroccans were seeking the source of Songhai's gold but found very little. Songhai was destroyed, but the trans-Saharan trade revived in a diminished form.

—Wilfred J. Bisson

Bibliography

- Austen, Ralph A. *Trans-Saharan Africa in World History*. New York: Oxford University Press, 2010.
- De Villiers, Marg, and Sheila Hirtle. *Timbuktu: The Sabara's Fabled City of Gold*. New York: Walker, 2007.
- Gilbert, Erik, and Jonathan T. Reynolds. *Africa in World History: From Prehistory to the Present*. Upper Saddle River, NJ: Prentice Hall, 2008.
- Wright, John. *The Trans Saharan Slave Trade*. London and New York: Routledge, 2007.

Gujarat—Indian Imperialism on the Coast

Gujarat was famous for its trade in spices, textiles, and indigo in the premodern world, forming a key node in the nexus of the thriving Asia trade. As early as the sixth century, cosmopolitan port towns such as Valabhi attracted traders from as far as the Arab lands, east African regions, and the Chinese and Indonesian coasts long before any European presence in the region. By the fifteenth century, people of many religions had settled in Gujarat. Local, regional, and central rulers legitimated their sovereignty by mutual tolerance of diverse faiths and the adaptation of their forms of rule to merchants' interests regardless of local beliefs. One can discern an increasing concern for coastal ports by central rulers and thus a political economy of mutual dependency between traders and rulers through most of Gujarat's history. Until 1750,

➤ EAST INDIA COMPANY

Through the sixteenth and seventeenth centuries, the East India Company set up factories in coastal towns across South Asia. Thomas Roe, an ambassador from England, was sent by King James to the court of Jahangir in 1615 in order to secure protection for the English factory at Surat, established in 1613. Once protection was secured, more trading stations were set up by the English in inland towns. The English used these factories to purchase export goods such as textiles, spices, and indigo, which

were shipped across the sea for sale in England. Over the next two centuries the East India Company secured the monopoly over the sea, and Gujarat's textiles became de-industrialized. Raw cotton was exported from Gujarat to England, and manufactured cloth was returned for sale in Gujarat. Gujarat's economy was thus subordinated into a vast network of imports and exports, which by 1857 was officially called the British Empire.

—Sheetal Chhabria

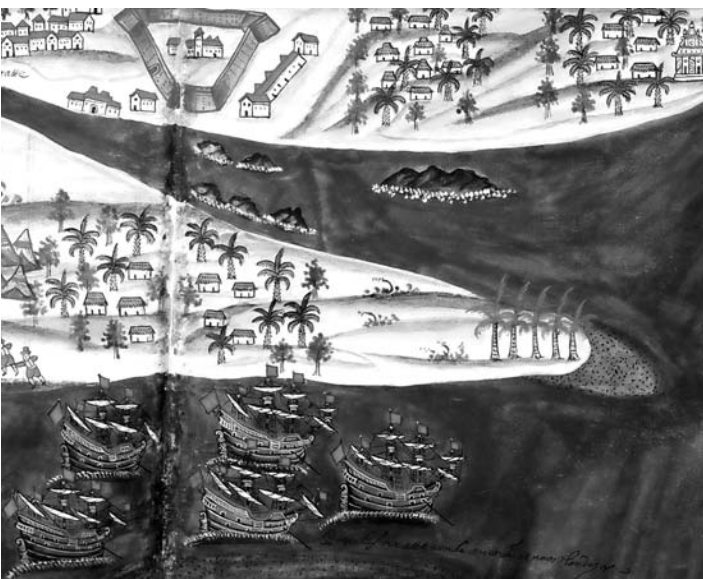


Illustration of Gujarat's port of Surat, from Historical Accounts of Portuguese Settlements, 1646. (Jupiterimages)

some of the world's greatest producers of cotton, for example, were located in the western ports of South Asia. Throughout its history, Gujarat's industry became world famous through the interaction of diverse communities, whose riches fueled the ambitions of imperial rulers.

The Delhi sultanate had a brief dominion over this land, which they first called Gujarat, during 1297–1402. The source of state revenue included taxes on trade in addition to agrarian revenue from both coastal and inland trade routes. Within the Delhi sultanate, to be governor of Gujarat was a highly sought-after position. The governor secured his position by his

ability to promise safe roads and infrastructure in exchange for a portion of the trade. By 1390, however, revenue stopped coming to the center at Delhi. Gujarat had broken from the Delhi sultanate, exemplifying the long pattern of conflict between regions and centers in the Indian subcontinent's history. Sultan Ahmed Shah of the new Gujarat sultanate made his capital at Ahmedabad in 1411. In the 1480s the Gujarat sultanate expanded its dominion north into southern Rajasthan and southward to Bombay (present-day Mumbai). Christopher Columbus's expedition of 1492 was prompted by Gujarat's contribution to the spice trade of the so-called Indies, which in his time included all of South and Southeast Asia. His accidental discovery of the New World set various European powers into a competition for the Indian Ocean. The Portuguese, Dutch, French, and English all settled on Gujarat's coast through the course of the fifteenth through eighteenth centuries, competing for their share of Gujarat's riches.

Gujarat appealed to the Mughals (1526–1857) of Delhi both because of Gujarat's commercial wealth and its convenience on the pilgrimage to Mecca, the *hajj*. During this period the imperial narrative of successful Mughal expansion becomes questionable when seen from Gujarat's perspective. In 1535 Humayun launched a campaign to capture Gujarat but failed to annex the kingdom. Akbar, Humayun's son, finally succeeded in 1574, turning Gujarat's port of Surat into the Mughal port for the *hajj*. But within three months of annexation the nobles of Gujarat attempted to drive out the Mughals. The

regional nobles briefly occupied Cambay, Surat, and other major seaports. Akbar was eventually triumphant, however, and political rule of Gujarat became one of Akbar's famous triumphs. Domination of Gujarat was thus achieved with difficulty and was repeatedly contested by regional sultans through the seventeenth century. By the eighteenth century the Marathas rose to power by sharing rights over land revenue with the Mughals, while the English fortified coastal factories and increased their share in the sea trade. Gujarat was divided into subregions of Maratha, English, and Mughal rule during the eighteenth century, after which the British triumphed as the imperial masters of both the land and the sea.

—*Sheetal Chhabria*

Bibliography

- Das Gupta, A. *Indian Merchants and the Decline of Surat, c. 1700–1750*. Wiesbaden: Steiner, 1979.
- Ludden, David. *India and South Asia: A Short History*. Oxford, UK: One World Publications, 2002.
- Pearson, M. N. *Merchants and Rulers in Gujarat: The Response to the Portuguese in the Sixteenth Century*. Berkeley: University of California Press, 1976.
- Richards, John F. *The Mughal Empire*. Cambridge and New York: Cambridge University Press, 1993.

Linchpins of the East Asian Economy—Ryukyu and Malacca

The archipelago of Ryukyu (Okinawa) between Taiwan and Japan and the port city of Malacca (Melaka) on the Malay Peninsula were two of the most vital maritime trade centers of Southeast and eastern Asia from the fifteenth century until the seventeenth century. They gained their prominent positions as a consequence of the seclusion of Ming China since the 1430s and Tokugawa Japan since 1633. When state-run maritime trade was abandoned and private overseas trade prohibited, marketplaces were required that offered indirect connections. Therefore, Ryukyu offered anchorages near the shores of China and Japan as well as close cultural and political ties to China's and Japan's spheres of influence. Malacca maintained frequent relations to China and provided a key position among

the Indian Ocean, Malayan archipelago, and the South China Sea.

Chinese sources increasingly mentioned Ryukyu as early as the mid-fourteenth century. Following private intermittent contacts, closer relations to the Ming dynasty in the form of tribute missions started in 1372. During this time Ryukyu was divided into three smaller kingdoms (Chung-shan [Chuzan], Shan-nan [Sannan], and Shan-pei [Samboku]), which were unified under the rule of Sho Hashi (1372–1439). The ruler of the following Sho regime, formally confirmed by the Ming emperors, controlled the maritime trade and institutionalized tribute missions. For this reason China regarded Ryukyu as a “maritime paragon.” Even the Ming permitted a limited but continuous settlement of Chinese families in Ryukyu. This caused long-term contacts and an increasing cultural orientation to China among the elites. The economic orientation toward China was based on the formal tribute relations that were extended to semiprivate trade under a regime of fixed prices. Ryukyu's traders were permitted to visit all Chinese ports, and often China provided vessels for their shipment.

Since the beginning of the fifteenth century Ryukyu also established contacts with Japan. Records mention several missions to Kyoto and voyages of trading vessels to Japanese ports. Because of its intermediary function, Japan claimed power over the islands. The shogun awarded Ryukyu to the daimyo of Satsuma, which initially meant that he had supremacy over trade. In 1609 Satsuma conquered Ryukyu. The kingdom became a tributary of Japan as well; however, its formal annexation as a province (*han*) did not occur until 1872. During the second Sho dynasty (1470–1872) Ryukyu kept a certain amount of autonomy, which was guaranteed by a strict separation policy by Japan's administration.

This kind of dual subordination to Japan and China enabled Ryukyu to keep its economic advantages alive and also maintain its function as a center of maritime trade. This guaranteed commercial contacts between Japan and China and long-distance routes to Korea and Southeast Asia. Formally Ryukyu's trade was incorporated in the system of tribute mission, but in practice it was carried out by free merchants. These could

➤ RYUKYU'S HORSE TRADE TO CHINA

Imperial China traditionally imported horses for its armed forces and as symbols of economic and political power. China depended on these imports, which mostly came from Central Asia. Additionally, maritime resources became profitable in the middle of the fourteenth century. Ryukyu played a significant role as a lynchpin of maritime trade and, most importantly, as home of a small and tough horse breed. These horses were domestic on the islands around the fourteenth century and were presumably bred for export purposes. Next to sulfur they were the only export product of the islands available for tribute trade to China. Since the beginning of the Ming dynasty, sources talk of varying numbers between 10 and 40 horses a year, occasionally even up to 120 animals. During the first half of the fifteenth century, sources suggest that there was one shipment every year. With the increasing reexport of Southeast Asian products, Ryukyu's horse trade gradually lost its relative importance. During the second half of the fifteenth century maritime horse imports to China decreased, and eventually Ryukyu lost this sector of its commerce. The example of horse trade illustrates Ryukyu's maritime trading position gained from the integration into the Chinese tribute system.

—Jürgen G. Nagel

be indigenous traders, but increasingly Japanese merchants became involved with the Korean trade, and Chinese traders dominated relations with Siam, Java, and Malacca. They obtained royal documents that declared their engagements tribute missions. The main commodities consisted of pepper, cloves, ivory, and several precious and dyeing woods from Southeast Asia that were reexported to China, Japan, and Korea together with commodities like silk and porcelain from China or copper and precious metals from Japan. Korea delivered primarily cotton and Buddhist scriptures for use in Ryukyu. Export commodities from Ryukyu were scarce and primarily consisted of sulfur and horses.

The port city of Malacca was founded by a noble refugee from Palembang during the very first years of the fifteenth century. Primarily a tributary to Siam, Malacca sought Chinese

protection with the first expedition of Zheng He during 1405–1407. That relationship was the first pillar of Malacca's rise to a regional power and an emporium of supraregional importance. The second pillar was built by intensive commercial relations to South Asia. Indian merchants were attracted by several measures including taxation and tariff policies. Consequently, several trade diasporas, especially Chinese and Gujarati, established communities during the fifteenth century. They received an autonomous status in terms of self-government, jurisdiction, and commerce and gained significant influence in policy and economy. Additionally, the connections to the West were strengthened by Islam, which was imported from India and accepted in Malacca around the 1510s. Furthermore, Malacca attracted traders from the Malay archipelago who provided regional spices, dyeing woods, maritime goods, and forest products. Thus, Malacca was able to connect the trade of India and Indonesia as well as China and—via Ryukyu—Japan and Korea.

As the main emporium of the spice trade, Malacca came under the focus of the Portuguese soon after their arrival in Asia. In 1511 Alfonso Albuquerque conquered the city, set an end to the sultanate of Malacca, and established a Portuguese colonial town. Since the Portuguese *Estado da Índia* had failed to monopolize the spice trade and therefore depended on profits from “licensed” private trade, Malacca succeeded in keeping its role as a trade center. The insidious decline began after the conquest in 1641 by the Dutch East India Company, which finally expelled the Portuguese from Indonesia. The Dutch desire to preserve Malacca's trade character, in particular for Indian and Chinese traders, was thwarted by restrictionist commercial policies based on the company's monopolistic aims. Eventually the Dutch abandoned the private spice trade in their own ports and concentrated its competitors' trade around the Malay Peninsula (pepper, spices, sandalwood, tin, and the principal Indian textiles). This secured a great share of its profits and completely excluded the Indian merchant groups, who then migrated to free ports like Aceh in the north of Sumatra. Most of the China trade was redirected to Batavia. Under Dutch control Malacca was reduced

to local importance only, as it had been in the early fifteenth century.

Despite huge differences, Malacca and Ryukyu shared some crucial characteristics. As emporia they were typical until the eighteenth century for the commercial system of Asia, which was based on maritime trade. They succeeded in integrating a whole trading world that reached from the Arab Peninsula to the Korean Peninsula. Their advantages consisted of their geographical situation, commercial policy, and integration into central cultural contexts (China, Japan, India, Islam). Thus, they were of exceptional interest for European expansionists. In the beginning Malacca and Ryukyu were able to profit from the intensified trade of the new competitors. Yet eventually these developments led to the decline of their status, not only by conquest or marginalization but foremost because of the rapidly growing European country trade since the early eighteenth century.

—Jürgen G. Nagel

Bibliography

- Hashim, Muhammad Yusoff. *The Malay Sultanate of Malacca: A Study of Various Aspects of Malacca in the 15th and 16th Centuries*. Kuala Lumpur: Dewan Bahasa dan Pustaka, 1992.
- Lewis, Dianne. *Jan Compagnie in the Straits of Malacca, 1641–1795*. Athens: Ohio University Center for International Studies, 1995.
- McRoberts, Robert W. “A Study of Growth: An Economic History of Melaka, 1400–1510.” *Journal of the Malayan Branch of the Royal Asiatic Society* 64(2) (1991): 47–78.
- Sakai, Robert. “The Satsuma-Ryukyu Trade and the Tokugawa Seclusion Policy.” *Journal of Asian Studies* 23 (1964): 391–404.
- Sandhu, Kernial Singh, and Paul Wheatley, eds. *Melaka: The Transformation of a Malay Capital, c. 1400–1980*. Kuala Lumpur: Oxford University Press, 1983.
- Shunzo, Sakamaki. “Ryukyu and Southeast Asia.” *Journal of Asian Studies* 23 (1964): 383–390.
- Smits, Gregory. *Visions of Ryukyu: Identity and Ideology in Early Modern Thought and Politics*. Honolulu: University of Hawaii Press, 1999.
- Thomaz, Luís Filipe F. R. “Melaka and Its Merchant Communities at the Turn of the Sixteenth Century.” In *Asian Merchants and Businessmen in the Indian Ocean and the China Sea*, edited by Denys Lombard and Jean Augin. Oxford, UK: Oxford University Press, 2000.

“Life So Affluent”—Asia’s Great Age of Commerce

The term “Age of Commerce,” a denomination originally coined by Anthony Reid, describes a crucial epoch of Southeast Asian economic history covering the fifteenth to the seventeenth centuries. It started in the context of the short-term opening of Ming China around 1400 and expired at the latest around 1680, when European merchants had gained control over several main branches of trade. The idea of an Age of Commerce can be expanded to all of Asia, whose economic areas were entangled in multiple ways. The nature of the period was formed by Asian as well as European influences. The origins are to be found before the beginning of the European expansion, but European expansion was one of the main activators of its dynamic, ultimately leading to partial European dominance in Asian commerce.

Following Fernand Braudel, three overlapping economic areas characterized pre-European Asia: the Islamic world (the western Indian Ocean, the Red Sea, the Arabia Gulf, and the central Asian deserts), the Indian sphere of influence (the whole Indian Ocean east and west of Cape Komorin), and China (as a continental power on the eastern continent and a maritime power of the western Pacific). With the Age of Commerce these greater regions reached their peak of interrelations. At the same time, the urban centers of exchange at the crossings experienced a unique blossoming. The Age of Commerce brought far-reaching changes to each of these regions. In China a short epoch opened that saw the maritime expansion under Zheng He (1405–1433) and was followed by a period of closure and a policy of licensing selected trading houses in South China for overseas trade during the last decades of the Ming dynasty. Japan did not close its gates for foreign trade until toward the end of the Age of Commerce. In Southeast Asia the era experienced a change from greater kingdoms to smaller city-states. And India experienced the blossoming of the Mughal empire, while the Arabian world was in a period of economic stagnation. The worldwide expansion of European trade is one of the key features of the epoch and delivered a

► TRADE DIASPORAS

Networks were the backbone of the far-reaching commercial systems of the Age of Commerce. The networks of the different trade diasporas proved to be particularly sustainable. Their specific characteristics provided both close cohesion and wide dispersion of economic protagonists. Trade diaspora groups featured conjointly a geographic origin (home country), an economic origin (trade), the organization and cognition as a self-contained community in the host countries, continuous interrelations beyond the borders of the host countries, and a real as well as symbolic relation to their place of origin. The core of these interrelational systems was kinship and a common culture or religion. The Chinese were the greatest trade diaspora. Coming mainly from South China, they settled all over Southeast Asia starting in the fifteenth century due to the closure policy of the Ming dynasty. They maintained the trade with Chinese luxury goods on the one hand and South-

east Asian products from the forest and the sea on the other hand. The Armenians were the trade diaspora with the geographically widest network covering all of Asia except Japan. In the beginning of the seventeenth century the Persian shah displaced them from their home country and settled them around their new center, New Julfan. From there they built up a trading network connecting even Europe with East Asia. Additionally, several Indian groups played an important role during the Age of Commerce: first of all the Muslim Gujarati as traders between the Indian textile centers and the Southeast Asian port cities, the Hindu Baniyars with comparable functions in central Asia, and the Hindu Chettiers from southern India who developed a focus on money exchange. All of these groups were the most important middlemen and trading partners of the European newcomers during the first decades of the seventeenth century.

—Jürgen G. Nagel

central contribution to the integration of Asian and world markets.

Asian trade covered a vast range of commodities. The base built commodities of everyday life. During this time foodstuff, especially rice, was the greatest quantity. But some very specific cash crops and luxury goods were responsible for the boom that constituted the Age of Commerce. Cloves and nutmeg had been well-known luxury goods since antiquity, even in Europe. But their main markets were to be found in China and India. The main areas of production were situated in the Malay Archipelago: cloves on the northern and central Moluccas and nutmeg primarily on the Banda Islands in the south of the Moluccas. Medieval Europe covered its demand via the Silk Roads and the eastern Mediterranean. The establishment of the sea route by the Portuguese, followed by English and Dutch companies, fueled demand and production dynamically but was not causative for market-oriented spice production in Southeast Asia. Coming from India, the growing of pepper spread rapidly to new areas during the Age of Commerce, particularly to the west coast of

Sumatra. Pepper production was scattered over a much wider landscape than other spices and was the most important luxury good in terms of trade volume.

Beside foodstuff, textiles provided the main products in Asian trade. The majority was produced in traditional Indian textile centers (Bengal, Coromandel, Malabar). Additionally, India exported cotton as a raw material. From China and Persia, silk and silk products were provided to the Asian as well as to non-Asian markets. Textile production was also domestic in Southeast Asia (e.g., batik from Java) but proved to be not saleable in other parts of Asia. For the Europeans, Asian textiles were the crucial product to exchange for precious metals in their balance of payment. Thus, textiles built up the heart of the European trade.

European merchants were forced to participate in the Asian trade by their biased balance of payment due to the low marketing opportunities for European products. Precious metals, especially silver from the Americas, were the only medium of exchange in Euro-Asian trade before the use of opium in the eighteenth century.

Thus, the participation of European merchants in inner-Asian merchant structures became an integral part of the Age of Commerce.

The so-called Silk Roads built up the central axis of the long-distance trade. Caravans through central Asia provided the majority of luxury goods from Asia for Europe. The land-based Silk Roads connected western China with trading centers in central Asia (e.g., Samarkand, Buchara) and farther on with the Levant, where the route ended in Aleppo and Alexandria. But also the maritime Silk Roads played an important role connecting the South China Sea via the coasts of India with the Red Sea and the Arabian Gulf. Furthermore, the route maintained a connection to some parts of eastern Africa, especially at the Somali and Swahili coast. The structure of transport connections represented a world economy of Asian imprint.

Despite the important role of caravans, the Age of Commerce was primarily an era of maritime trade. The majority of merchant exchange focused on small-scale trade, coastal traffic, and the rivers that offered a wide spread network to the interior. The main types of vessels were adapted to both waterways, which meant that they had a considerable advantage over the European ships. Fully developed streets were lacking in most regions outside of China and Japan.

Early forms of joint ventures and joint-stock companies, which were often highly specialized, became trading partners of the European merchants. The most established networks of that kind were provided by the different merchant groups, especially the Chinese, the Armenians, and several Indian communities. Most of them provided important networks of money lending and capital transfer. All of them enjoyed public protection in their host countries. At the peripheries of the Asian economy, political decisions, especially the closure policies of China and Japan, hampered trading possibilities. As a result, the more legal trading became restricted the larger the black market grew.

The Age of Commerce is not conceivable without states and rulers following mercantile interests. Governments increased the transaction costs of trade (taxes, protection, etc.) but also established public protection and infrastructure.

The most important examples of this are the city-states of Southeast Asia like Ayutthaya, Malakka, Bantam, and Makassar. These independent port cities served as entrepôts, especially of the dynamic trade in luxury goods, and guaranteed the interrelation of different commercial regions. A comparable role can be observed in the Indian states of the time. The base of that was a free trade policy that allowed all merchant groups, including the European companies, to participate in the market. Nevertheless, the position of the rulers remained a strong one. On the one hand they could restrict or offer market access following their own interests, as the Mughal government did. On the other hand they could participate in person in the market, as did several sultans in Southeast Asia (e.g., Aceh, Bantam). Due to the close entanglement of political and commercial spheres, the decline of political power went hand in hand with the restructuring of Asian commerce at the end of the Age of Commerce.

The Age of Commerce was a period of commercial expansion and increasing intercontinental integration. The period experienced side by side an intensification of commercial exchange in Asia, the growth of cities and states with a commercial orientation, and the integration of Europeans in the Asian economy and of Asian trade in global contexts. The main continuity of the period was the persistence of Asian forms of exchange and commercial organization. The main transformation, however, was the new and increasingly dominant role of Europeans in Asia.

—Jürgen G. Nagel

Bibliography

- Chaudhuri, Kirti N. *Asia before Europe: Economy and Civilisation of the Indian Ocean before the Rise of Islam, 1750*. Cambridge: Cambridge University Press, 1990.
- Frank, André Gunder. *ReOrient: Global Economy in the Asian Age*. Berkeley: University of California Press, 1998.
- Reid, Anthony. "An 'Age of Commerce' in Southeast Asian History." *Modern Asian Studies* 24 (1990): 1–30.
- Reid, Anthony. *Asia in the Age of Commerce, 1450–1680*. 2 vols. New Haven, CT: Yale University Press, 1988, 1993.

Macao as a Trading Center

Macao (Macau as written in Portuguese or Ao-Men in Chinese) is a small island and peninsula in southern China and was a Portuguese colony from 1557 until 1999. The traditional Portuguese account of their settlement of Macao is that Portuguese sailors helped the Chinese to defeat pirates in the South China Sea. The Ming government is said to have given Macao to the Portuguese out of gratitude for their help. Unfortunately, this account cannot be proved or disproved because many of the documents relating to Macau were lost in the Lisbon earthquake of 1755. What is known is that by 1560, the Portuguese were paying rent to the Chinese for Macao, and several permanent buildings had been erected on the island.

How the Portuguese were able to settle Macao is not as important as the fact that they were allowed to settle there. This was an unprecedented

move by the Chinese, as the establishment of the Portuguese presence there was the closest the Ming government had come to treating foreigners as equals to the Chinese. In fact, no other European power was able to achieve the level of diplomacy that the Portuguese had, though many tried. Macao was different from the other Portuguese settlements in that the Cantonese officials remained in residence on the island, and Portuguese residents paid them hefty sums in order to retain their residence there.

Despite the restrictions, an estimated 500 Portuguese households were settled there. By 1582 a *senado da camâra*, a municipal town council, was established in the Portuguese model, and finally in 1586 Macau was established into a viceroyalty of the Crown. The Portuguese success in Macao is attributed to their role as middle-men between China and Japan. At this time, Chinese merchants were forbidden to trade with the Japanese, as were the Japanese to trade with the Chinese. However, this restriction did not dampen the market for these forbidden goods in each country, and the Portuguese were able to take advantage of this situation. For example, Japanese demand for the silks coming out of China was high, while the Japanese produced more silver than China. A Portuguese merchant living in Macao would typically buy goods in a Cantonese market, load his ship, and take them to Japan, where he would trade them for silver. He would then return to China, where he was usually able to trade the silver for gold, which was sold at a much cheaper price in China than it was in Japan or Europe. It has been estimated that half of Japan's silver production was effectively poured into China during the last half of the sixteenth century.

Macao's Golden Age of trading started to see a decline in 1637 when the Japanese shogun halted all trade with foreigners. In 1641 it saw a further decline when the Dutch were able to capture Malacca from the Portuguese, thus breaking Portuguese dominance in the Asian market. Macao ceased to have any real importance as a trading post after 1685, when the Chinese emperor Kangxi opened up trade to the other European countries, breaking the Portuguese monopoly over the trade in China once and for all.

—Monique Vallance

► THE MACANESE LANGUAGE

Macao's position as a center for trade in Asia was exemplified by the existence of the Macanese language. This language is known as Patuá in Portuguese. Originally this language developed in the sixteenth century as the first Portuguese settlers married women from Malaysia and Sri Lanka, as they did not have permission to interact with the general Chinese population outside of Macau. As time went on, the language evolved to include elements of Japanese, Kristang (the language of Malacca), and finally Cantonese. The language is unique, as it changed in relation to the people who migrated and traded in Macao, much like the ethnicity of the people themselves. The language, which is classified as a Creole language, was the primary language of Macao until 1945, when more Chinese people began settling there after the Communist Revolution. Today the Macanese language is classified as "critically endangered" by UNESCO, and as of the year 2000 it was estimated that only 50 people in Macao still use it as a primary language. Unlike buildings and other artifacts left behind by the Portuguese, the Macanese language is an organic legacy of the Portuguese and their methods of colonization.

—Monique Vallance

Bibliography

- Russell-Wood, A. J. *The Portuguese Empire, 1415–1808*. Baltimore: Johns Hopkins University Press, 1998.
- Winius, George D., ed. *Portugal, the Pathfinder*. Madison: University of Wisconsin Press, 1995.

The Achean Pepper Trade— Taking the Trade from India

At the beginning of the sixteenth century, the city-state of Aceh (located in modern-day Sumatra) experienced a rapid rise from a local to a regional power and a supraregional entrepôt. Already in the middle of the century its influence covered both coasts of Sumatra. The early Islamization until the end of the thirteenth century enabled Aceh to establish contacts with the Ottoman empire, which provided soldiers, weapons, and military knowledge. This allowed an effective self-defense, including that against Europeans, and a successful military expansion. Meanwhile, local and Indian Muslim merchants and the rise of pepper growing enhanced the sultanate's economic advancement. Today there is a dispute over whether it was Ottoman patronage or Portuguese influence that caused this advancement. Doubtlessly, Aceh successfully used its outstanding political, geographical, and economical position to defend its status during the seventeenth century. Another factor was the centralization of power at the end of the sixteenth century when the dominant merchant oligarchs (*orang kaya*) were oppressed by the sultan in favor of a new elite class that was loyal to the palace. Furthermore, there was a tremendous population growth after 1550. The population doubled in only 50 years and reached 100,000 by 1640. This growth and the special situation as an entrepôt and as a pepper-growing region resulted in a critical dependency on food supplies. Some scholars regard this as a considerable cause for the later decline.

The Achenese success was rooted in the rise of the pepper trade. The immediate hinterland had always been a traditional pepper-growing area. During the 1520s Aceh seized control over this region by incorporating Pedir and Pasai, the most important pepper exporters of Sumatra. Until 1530 the Portuguese largely controlled

the Malabar pepper market, which had supplied Europe since the Middle Ages. In addition, Malacca, the main staple port for spices, was conquered by the Portuguese in 1511. Aceh benefited from this expansion in several regards. Asian merchants were attracted to the port for use as a freely accessible alternative. Traders from the Portuguese settlements on the Coromandel Coast of India especially frequented the port and established their own factories because Indian cloth was preferred over the local products in terms of quality and colors. On the other hand, Aceh occupied large parts of the pepper trade with China. Consequently the Chinese established communities during the seventeenth century, followed by Armenians and Arabs during the eighteenth century. Furthermore, Aceh became an interesting port of call for the new Dutch and English competitors who strived for free markets while avoiding the centers of Portuguese power. By the end of the sixteenth century Portuguese sources mention that 15,000 bahar (2,700 metric tons) of Achean pepper was being exported every year.

At the end of the sixteenth century the first Dutch arrived as representatives of the *voorcompagnien*, the forerunners of the United East India Company (VOC). Between 1601 and 1616 the Dutch ran a factory in Aceh; an English factory existed between 1611 and 1659. The sultans guaranteed the same conditions to these Europeans as they did to Asian traders. Nevertheless, the companies heralded the decline of the Achean pepper trade. In the beginning they tried to avoid the powerful sultanates by heading for centers closer to the producers and avoiding more expensive great entrepôts. In the middle of the seventeenth century the competitive situation was adjusted. The VOC established commercial supremacy in the Malay archipelago, while the English company was widely expelled from the region. Although Aceh remained a free emporium, unlike the conquered competing entrepôts (Malacca, Macassar, and Banten), and despite the growing Dutch supremacy in maritime trade, Aceh's influence eventually diminished. It abandoned pepper cultivation on its own heartland after the loss of Tikou and Pariaman to the Dutch in 1663. Fixed prices, production quotas, and frequent threats of force made

► ISLAM AND TRADE

The economic and political rise of Southeast Asia's port cities went hand in hand with the spread of Islam in the region. Aceh, as the first Indonesian state that accepted the new faith, provides a striking example for the mutual relation of religion, commerce, and power. For the local rulers, conversion provided a series of advantages. In times of conflict they counted on support of religious brethren in the great powers like Mughal India or the Ottoman empire. The Islamic state philosophy offered them the legitimization to concentrate power and establish a more effective administration of the port as well as better financial benefits from the trade. Otherwise, Islam transported the idea of free merchants and free trade, which characterized Southeast Asian port cities before colonization and allowed the continuous establishment of several merchant communities of high influence. The concrete administration was del-

egated to the habormasters (*shabandhars*), mostly officiated by members of foreign merchant communities, especially Chinese or Indians. Again, this was based on Islamic law, especially the maritime legal codes following the regulations of Malacca. In Aceh during the seventeenth century, four courts sat regularly. One of them dealt with questions of debt and inheritance, and another specialized in commercial disputes between merchants. Next to concrete maritime regulations, the commercial law concerned credits, bankruptcy, borrowing, and trusteeship and was based on Islamic rules. The acceptance of the Islamic religious and legal system allowed the sultans to shape an open but well-controlled entrepôt. This attracted private merchants, both Muslim and non-Muslim, as well as European companies during their first decades of establishment.

—Jürgen G. Nagel

pepper exports barely profitable. Some domestic troubles led to the enthronement of four queens instead of the male sultans, which weakened the state collaterally. Economic changes during the eighteenth century introduced new products (tin, opium, coffee, tobacco, sugar), more freedom on the markets, and new participants. Aceh especially benefited from the English trade; furthermore, it was able to reestablish the pepper trade at the end of the eighteenth century. The first new customer of Achean pepper was a private company at Sibolga established by the British officials of Bengkulu. That business became the impetus for new cultivations in the interior of Sumatra, which increasingly found customers on American ships calling at Aceh. The basis of the greatest cash cropping system and the most important pepper provider of Southeast Asia during the nineteenth century was established.

—Jürgen G. Nagel

Bibliography

- Andaya, Leonard Y. "A Very Good Natured but Awe-Inspiring Government": The Reign of a Successful Queen in Seventeenth-Century Aceh." In *Hof en bandel: Aziatische vorsten en de VOC, 1620–1720*, edited by Elsbeth Locher-Scholten. Leiden: KITLV Press, 2004.
- Bulbeck, David, et al. *Southeast Asian Exports since the 14th Century: Cloves, Pepper, Coffee, and Sugar*. Singapore: KITLV Press, 1998.
- Hadi, Amirul. *Islam and the State in Sumatra: A Study of Seventeenth-century Aceh*. Leiden: Brill, 2004.
- Houben, Vincent J. H. "The Pre-Modern Economies of the Archipelago." In *The Emergence of a National Economy: An Economic History of Indonesia, 1800–2000*, edited by Howard Dick, et al. Crows Nest, Australia: Allen and Unwin, 2002.
- Lee, Kam Hing. *The Sultanate of Aceh: Relations with the British, 1760–1824*. Kuala Lumpur: Oxford University Press, 1995.

The Spice Islands in Southeast Asian Trade

Today the Moluccas, tiny volcanic islands in eastern Indonesia, seldom make international news. Five hundred years ago it was a different story. The "Spice Isles" were the only source of cloves, nutmeg, and mace and the setting for an intense commercial competition. This battle to control the production and trade in these valuable commodities was a ruthless and violent conflict fought with great cruelty. Europeans, drawn to

the area by the lure of spices, were quite willing to enslave, torture, and kill both the indigenous populations of the Indies and other Europeans in order to achieve their political and economic goals. The struggle for the Spice Islands profoundly changed not just local societies but also the history and economy of the world.

The sparsely populated Spice Islands are located far from international markets. But according to archaeologists, as early as 1700 BCE cloves were exported as far afield as Syria. The demand for cloves (the dried flower buds of a tree native to a few islands around Ternate and Tidore), nutmeg, and mace (parts of a fruit found exclusively on the Banda Isles) fed high prices and prompted voyages across the globe in order to secure reliable supplies. These spices were used in medicine, in food preparation (both as a flavoring agent and as a preservative), and as a status symbol. Long-standing trade networks brought these commodities to India, China, and the Middle East, with Asia remaining the biggest market even after Europeans directly entered the trade in the sixteenth century. Spices would reach Europe through Constantinople, Aleppo, Cairo, and Alexandria through Venetian

middlemen. The trade centers of Srivijaya, which controlled the Straits of Malacca from 600 to 1000 CE, and the Javanese empire of Majapahit grew rich off access to the Moluccan spice trade. (The fourteenth-century visitor Friar Odoric was so struck by the quantity of spices for sale in the latter that he assumed they grew there.) The quintessential Southeast Asian trade emporium was Malacca, which for the whole of the fifteenth century, and under the tributary protection of China, grew rich by acting as a meeting place for networks of Asian spice merchants.

It may have been rumors of the great wealth accumulated at Malacca that brought the Portuguese into the Indian Ocean in 1497. In trying to set up a direct sea route for spices, the Portuguese were driven by the desire for profit and by religious zeal. Success in monopolizing the spice trade would bring great wealth into Portugal and would strike a blow against the Islamic powers, who up to this point had dominated the Indian Ocean. This Portuguese effort was a royal affair, the fleets sent out to seize control of trade networks were financed by the Crown, and it was the Portuguese viceroy Affonso de Albuquerque who began constructing a maritime

► TOMÉ PIRES AND THE *SUMA ORIENTAL*

In 1512 Tomé Pires, an apothecary from Lisbon of nonnoble background but with connections to the royal court, arrived in Goa. The viceroy Albuquerque was so impressed with his credentials that he put Pires in charge of the newly won trading port of Malacca. While there Pires settled mercantile disputes and became wealthy through trading in spices. After trips to Sumatra and Java, he wrote down his findings in a monumental work, the *Suma Oriental*. Unfortunately, the Portuguese were very protective of their new Eastern possessions and went to great lengths to conceal the exact route from Europe to Asia; the death penalty was enforced for the publication of any written account of their overseas empire for the whole of the sixteenth century. Although parts became known, Pires's book was not actually published until 1944. *Suma Oriental* is both encyclopedic in scope and very thoughtful in its observations. Although it is certainly biased in terms of its worldview, it is an

invaluable primary source for historians researching the early years of the European presence in Southeast Asia. The book outlines the sea route to Malacca, the politics of Southeast Asia, and local peoples and customs. Malacca and its downfall are described, and the cosmopolitan trading port is compared unfavorably to pious Portugal. Pires quite consciously sees the world through the lens of religious differences. He details the spread of the rival religion of Islam and assumed that the "heathen," Hindus and animists, would be interested in converting to Christianity, although in the meantime he noted (and generally disapproved of) their customs. As for Pires himself, in 1517 he led an ill-fated diplomatic mission to China. Cultural misunderstandings led the emperor to order the execution of the entire delegation, although there is some evidence that Pires himself died in wealthy obscurity after marrying a provincial Chinese lady.

—Michael Wood

empire through the establishment of a series of strategic bases across the Indian Ocean. The most important of these was Malacca, captured in 1511. Its fall was followed up with a direct voyage to the Moluccas in 1513. On the eve of the European arrival the population of the Moluccas had lived in relative isolation, despite long trade links with various Asian centers. The inhabitants of these islands had so prospered from the spice trade that they no longer needed to grow food and could instead import whatever rice and fish paste they needed. The Moluccas were organized into loose kingdoms and were mostly animist, although many of their rulers were recent converts to Islam. The Portuguese newcomers soon became involved in local political intrigues as they founded a series of forts. Although firearms had long been known to Asians, high-quality ship-mounted cannons gave the Portuguese a decisive military edge.

However, in the long term the Portuguese enterprise was a failure. Asian merchants, put off by Portuguese aggression and a propensity to demand conversion to Christianity, simply did business elsewhere. Muslim traders shifted operations to Aceh, Banten, Jambi, and other friendly ports. The royal monopoly on trade to the Moluccas was steadily eroded, and the Portuguese found that there was little local demand for Portuguese products; spices had to be either taken by force or paid for with cloth purchased in India. It was eventually found to be more profitable to make alliances with Asian merchants. By the mid-sixteenth century the Portuguese had become part of the Asian trade system, with Portuguese ships carrying local cargoes and with the gradual loss of control of such territories as Malacca. The Portuguese presence did have one notable legacy. Such missionaries as the Jesuit Francis Xavier succeeded in winning many converts; to this day the inhabitants of the Moluccas, while sharing a common local identity, remain divided into Muslim and Christian communities.

The Spanish felt that the Moluccas had been assigned to them in the 1494 Treaty of Tordesillas, in which the pope had divided the non-Christian world into Spanish and Portuguese spheres of control. After some physical clashes, the Spanish relinquished their claims in return for a large cash payment. However, the colony

they established in the Philippines did have some importance for the trade in spices; Manila attracted Chinese merchants interested in buying and selling these and other Asian products, with the whole process financed with Mexican silver.

English attempts to gain a footing in the lucrative spice trade were ultimately unsuccessful. In 1623 the Dutch executed ten English merchants in an incident described by the British as the Ambon Massacre. Similar setbacks in the western Java ports of Jayakarta (present-day Jakarta) and Banten eventually forced the English East Indies Company to abandon its involvement in the Indies to concentrate on bases in India. (Initially set up to facilitate the trade in cloves, nutmeg, and mace, these Indian centers formed the basis of the British Empire in India.)

Like the English, the Dutch were private traders sponsored by the state. A process of consolidation had created the Vereenigde Oost Indische Compagnie (United Dutch East Indies Company, or VOC), a joint-stock company given an extensive charter to buy, sell, and make war. Dutch activities in Asia were part of a commercial rivalry with Portugal that intensified once the Crowns of Portugal and Spain became unified. This meant that the Portuguese were now a part of the Dutch political struggle with Spain, which they were fighting for independence. After capturing the Portuguese forts in Ambon in 1605, they set about trying to monopolize spice production. In 1621 the Banda Isles were captured. Soon after the Dutch governor-general Jan Pieterszoon Coen ordered the massacre of most of the local population so that the islands could be turned into Dutch plantations to be worked with slave labor. Over the course of the next 60 years Dutch raiding parties uprooted spice trees and prevented any local trade in these commodities, which the Dutch saw as smuggling. This led to a great deal of slaughter and starvation. By 1667, with the capture of the port of Makassar in Sulawesi, the Dutch can be considered to have gained full control over the spice trade. (Although ultimately because of the vast distances involved that made it impossible to calibrate supply with actual market demand, poor-quality personnel and institutional corruption, and a heavy involvement in Javanese politics, the company went bankrupt in 1799.)

The failure of the Dutch to turn a profit after they had obtained the monopoly that so many had died for is one of the many ironies of the history of the Spice Islands. Another is that changing tastes and technology eventually greatly reduced demand for these products and their value. Cloves and nutmeg were successfully transplanted elsewhere. Spice production is negligible in the Moluccas today; Indonesia is in fact the world's biggest importer of cloves (used in *kretek* cigarettes).

—*Michael Wood*

Bibliography

- Andaya, Leonard Y. *The World of Maluku: Eastern Indonesia in the Early Modern Period*. Honolulu: University of Hawaii Press, 1993.
- Cortese, Armando, ed. and trans. *The Suma Oriental of Tomé Pires and the Book of Francisco Rodrigues*. 2 vols. London: Hakluyt Society, 1944.
- Lockard, Craig A. *Southeast Asia in World History*. New York: Oxford University Press, 2009.
- Reid, Anthony. *Southeast Asia in the Age of Commerce, 1450–1680*, Vols. 1 and 2. New Haven, CT: Yale University Press, 1988, 1993.

Centralizing the Siberian Fur Trade

Russian penetration of Siberia occurred not long after the conquest of Kazan in 1552 and Astrakhan in 1556. Russian peasants, traders, Cossacks, and explorers began to cross the Volga and Ural rivers for a variety of reasons, not the least of which was to tap into the lucrative fur trade. Much of this had been controlled for centuries by the various Tatar khanates, successors to the Mongol empire that stretched across Eurasia. As the Russians moved into Siberia, their attempts to take furs ran contrary to the desires of the Sibir khanate, from which Siberia takes its name, located in the Irtysh River basin.

The driving forces that opened up Siberia were the commercial efforts of Grigori Stroganov whom Ivan IV (1530–1584) awarded 9 million acres (3.6 million hectares) of land concessions around the Kama River, a tributary of the Volga. Stroganov and his family held an autonomous fiefdom, answerable virtually to only the tsar. A decade later, in 1568, Tsar Ivan doubled the Stroganovs' territories. Most of this

territory, however, was also claimed by the Sibir khanate.

Sibir raids on the easternmost frontiers threatened to drive the Russians back across the Volga River. The Stroganovs joined forces with Cossack adventurers led by Yermak Timofeevich. The Cossacks led by Yermak were analogous to conquistadors like Cortes and Pizarro. Initially hired to protect the Stroganov frontiers, Yermak was also an opportunist. He campaigned against the Sibir Tatars from 1581 to 1584, and the Russians emerged victorious although Yermak died, drowning under the weight of armor he plundered from the Sibir.

The defeat of the Sibir opened the rest of Siberia to the Russians. With only small tribes and little organized resistance, Cossacks reached the Okhotsk Sea by 1637. Along the way, they established forts known as *ostrogs* and assumed control of the fur trade. For the most part it was a simple process. While the Tatar khanates received furs as tribute from the various Siberian tribes, the Russians filled the vacuum caused by the destruction of the Sibir. In the easternmost reaches of their new empire, the Cossacks even competed with the Qing empire for furs in the Amur River valley of Manchuria.

With the domination of Siberia, furs quickly became one of the most important sources of revenue for Russia, at some points comprising 30 percent of the state revenue. Indeed, furs were popularly known in Europe as "Russian Gold." The government became the primary participant in the fur trade, possessing a near monopoly on it, and acquired furs through a variety of means. The primary way was as tribute or through taxes from the indigenous population. They also collected a 10 percent tax of the highest-quality furs from Russian trappers as well as buying the best furs from both natives and Russians. By the end of the sixteenth century, the treasury received 200,000 sables, 50,000 squirrels, and thousands of fox, beaver, and ermine pelts per annum. This wealth also paid for administering the Siberian territories.

While the state benefited from the trade, Russian expansion into Siberia had dire ramifications for the region. The demand for Siberian furs in Europe and the Qing empire made the trade too lucrative to ignore or consider the long-term

COSSACKS

Who were the Cossacks? The first Cossacks were Tatars who had broken off from the main khanates for a variety of reasons. Gradually they merged with Russian settlers who had remained on the steppe from the Mongol period. Russian peasants also joined them as they fled from increasing restrictions imposed on them in Muscovy. Gradually a syncretic culture of sedentary and Turko-Mongol steppe life emerged around the rivers from which they received their names, such as the Yaik and Don River Cossacks.

During Muscovy's and later Imperial Russia's expansion, the Cossacks had a tenuous relationship with the state. They viewed themselves as independent, whereas the Russian government viewed them as clients. Nonetheless, the Cossacks maintained much of their independence even as they played a key role in Russian expansion into Siberia. Like many of the explorers in the New World from western Europe, they often explored, conquered, and exploited without the knowledge of the state but eventually received recognition from the state if they were successful. At other times the state disavowed any relation, such as when the Cossacks in Siberia started a border conflict over the fur trade with the Qing empire with which the Russians hoped to sign favorable commercial treaties.

—Timothy May

consequences. Entire regions were trapped out. Indeed, much of the settlement of Siberia consisted of trappers moving eastward as the fur-bearing animals declined. At the same time, it is not difficult to understand why the Russians believed that the fur supply was endless. Among the Yakuts, sable furs held such a low value that Russian agents traded copper kettles based on the number of pelts that could fit into it.

Some efforts were made to establish fur farms, consisting of minks, sables, and other animals. In addition, diseases such as smallpox decimated the indigenous populations of Siberia, much as they did Native Americans in the New World. Yet at the same time the fur trade protected the native populations from conversion, as the Russian government prohibited Russian missionaries from proselytizing in the region.

The tsars, however, did not have the spiritual or cultural welfare of their Siberian population in mind. Orthodox Christians were exempt from paying tribute, so ultimately the administration of Siberia was more concerned with revenue than souls. Nonetheless, the Russians saw religion as a civilizing influence that would help maintain an orderly collection of furs. As a result, to promote civilization and to maintain the revenue, the Russians encouraged the spread of Islam in western Siberia and Buddhism in eastern Siberia.

—Timothy May

Bibliography

- Hosking, Geoffrey. *Russia and the Russians*. Cambridge, MA: Harvard University Press, 2001.
- Lincoln, W. Bruce. *The Conquest of a Continent: Siberia and the Russians*. New York: Random House, 1994.
- Naumov, Igor V. *History of Siberia*. New York: Routledge, 2006.
- Witzenrath, Christoph. *Cossacks and the Russian Empire, 1598–1725: Manipulation, Rebellion, and Expansion into Siberia*. New York: Routledge, 2007.

Western Economic Expansion in Central Eurasia

The economic expansion that occurred in central Eurasia between 1450 and 1770 was primarily accomplished by the Russians, although they and China's Qing dynasty (1644–1911) did sometimes act as counterbalances to each other's ambitions. The Spanish, Portuguese, and other western Europeans concentrated primarily on Asian and American market systems.

Russian expansion was markedly different than that of the western European powers during this period on at least two fronts. First, Russia's expansion was primarily land-based, an extension of its geographical borders into immediately adjacent territories, whereas western European expansion was primarily sea-based to regions geographically separated by vast oceans. Second and somewhat related, the first wave of Russian expansion into central Eurasia under Ivan IV "the Terrible" (1533–1584) was not based on the same scientific and technological innovations undergirding the western European surge.

Rather, it was facilitated by the same essential methods and forces inherited from centuries past. It was not until the second wave of Russian expansion into central Eurasia under Peter I “the Great” (1682–1725) that any depth of comparison can be made between Russian and western European imperialism. This was due to Peter’s attempts at Westernization of Russia during his reign. Even then, however, one must still bear in mind that the comparisons would be mainly military, with the Russian case still proving different in terms of economic systems as well as its continuing land-based versus sea-based venture. Russian economic expansion in central Eurasia involved both unofficial private and official political dimensions, which were interconnected and overlapping yet nonetheless distinct. Independent Russian entrepreneurs were involved in those regional cross-cultural contacts and trade networks from before the time of Ivan IV, possibly from as early as the Mongol era (1206–1368).

Under Ivan IV, Russian economic expansion in central Eurasia became clearly and decisively official via his annexation of Kazan, the capital of Tatarstan, in 1552. Through this move, the Russian state effectively took control of the trade flowing into and out of Kazan and began funneling its revenues into the Russian system. Land and property redistribution from Tatar Muslims to Russian Christians significantly affected the balance of economic advantage. The destruction of mosques and their conversion to Orthodox churches proved beneficial to construction crews and other Russian laborers, not to mention clergy, nuns, tax collectors, administrators, and others who gained employment through what in Tatar memory became “the darkest day” in their history. The annexation likewise opened greater spheres of opportunity for Russian merchants to be more directly involved in the trade with central Eurasia, gaining a state-supported upper hand in most economic affairs. This would have affected, in particular, the already existing trade among Bukhara, Khorezm, and Moscovy as well as Bashkorts, Kazakhs, western Siberians, and Moscovy, among others.

While no western European powers are known to have penetrated central Eurasia directly during this period, in 1553 an English expedition seeking a northern route to China was

sailing through the Barents Sea and happened upon the Russian White Sea port of Archangel. News reached Ivan, who welcomed them in Moscovy, as Russia was known before 1547, and granted them a monopoly on trade, free of customs. English goods thus entered the Russian market in sizable increase and steady flow. It would not be beyond reason to suppose that English goods began making their way into the central Eurasian markets through this historically unintended yet auspicious trade agreement.

Not long after, Russian control was extended to Astrakhan, a flourishing hub at the western edge of the central Eurasian trade network situated just above the Caspian Sea in the Volga River delta with links reaching all the way to Europe, Moscovy, southwestern Asia, Persia, and India. This effectively repeated the process that occurred in Kazan, though the takeover was not as dramatic or the destruction as great.

It remains a fact, however, that throughout Ivan IV’s reign all the way down to the early 1700s near the end of Peter the Great’s age of Russian enlightenment, Russian interest was not primarily focused on central Eurasia but instead had turned itself westward and eastward, respectively. Foreshadowing the later halt westward in the Crimean War (1853–1856), Russia was turned back in its westward advance under Ivan IV in the Livonian War (1558–1582). The Siberian peoples to the east, however, were not nearly so well equipped to withstand them, leaving Russia to extend its reach to the Pacific by 1689, spearheaded primarily by Russian fur trappers and other traders who blazed the trail that state officials and missionaries soon followed, supported of course by Russian military personnel.

It was the eastward advance across Siberia, together with the earlier conquests of Kazan and Astrakhan, that laid the groundwork for the next push deeper into central Eurasia, beyond Tatarstan and Bashkortistan into the Kazakh steppe and the oases areas farther south. That push can be dated to 1715–1762, from late in Peter’s reign to the ascension of Catherine II “the Great.” More accurately, the Russian intrusion into the central Eurasian steppe and oases regions has been depicted as occurring in three major stages dated 1715–1822, 1822–1867, and 1867–1895.

Peter I turned Russia's attentions back upon central Eurasia in 1715, calling it "the key" and the "gate" to the wealth of Persia and India. In that year, he sent a reconnaissance mission into the Caspian Sea that reached to Khiva (in modern Uzbekistan) with a view to strengthening Russian trade links with Persia and India by expanding Russian presence in central Eurasia. It was perhaps fortuitous that in the following year Zhungar forces attacked Russian troops near the converging borders of Mongolia, Kazakhstan, and Russia, with another clash occurring in 1720. Peter was mindful that menacing Zhungar (also called Oyrat or Kalmyk) raids from north-western Mongolia into Kazakh territory had been taking place with increasing severity since near the beginning of his reign. Thus, between 1716 and 1720 Russia established three military outposts—Omsk in 1716, Semipalitinsk in 1718, and Ust-Kamenogorsk in 1720—that effectively laid claim to land pressing into Kazakhstan's northernmost regions. The fortresses served to protect Russia from Zhungar attacks while at the same time intensifying Russian control over Russian-Kazakh economic exchange.

After Peter's death (1725), Russia secured agreements of allegiance and cooperation from each of the three Kazakh clan leaders in exchange for protection from the Zhungars, first from the Smaller Clan in 1731, then from the Middle Clan in 1740, and finally from the Large Clan in 1742. During the same period, Russia established more colonies along the Russian-Kazakh borderlands, namely Orsk in 1735, Orenburg in 1743, Iletskaia Zashchita in 1743, and Petropavlovsk in 1752. The Chinese defeat of the Zhungars in 1758 should have ended all pretense by Russia to advance farther into the Kazakh steppe, but it did not. By the time of Catherine the Great (1762–1796), the latecoming heir of Peter's vision, the central Eurasian steppe had been prepared for her "civilizing mission" among the Kazakhs. This included among other things the official enlistment of a multitude of Tatar Muslim merchants and missionaries to help extend Russian economic and political control over their Kazakh Muslim kin. However, it would not be until the middle of the nineteenth century that Russia would take full effective control of the southern central Eurasian regions.

—R. Charles Weller

Bibliography

- Chew, Allen F. *An Atlas of Russian History: Eleven Centuries of Changing Borders*. 2nd rev. ed. New Haven, CT, and London: Yale University Press, 1970.
- Grousset, René. *The Empire of the Steppes: A History of Central Asia*. Translated from the French by Naomi Walford. 1939; reprint, New Brunswick, NJ, and London: Rutgers University Press, 1970.
- Kozibaev, Manash K. *History of Kazakhstan: Essays*. Almaty: Gilim Shokan Ualihanov Institute of History and Ethnology, 1998.
- MacKenzie, David, and Michael W. Curran. *A History of Russia, the Soviet Union and Beyond*. 5th ed. Florence: West/Wadsworth Publishing, 1999.
- Weller, R. Charles. *Rethinking Kazakh and Central Asian Nationhood: A Challenge to Prevailing Western Views*. Los Angeles: Asia Research Associates, 1999.

The Worst of Enemies and the Best of Friends—Anglo-Portuguese Treaties, 1642–1703

The commercial relations between England and Portugal can be dated back to 1294. This long relationship was not always an amicable one, but it influenced and was influenced by political factors. While the relationship remained fairly equitable through the sixteenth century, foreign policy soon interfered and changed the balance in favor of England. By the middle of the eighteenth century, Portugal would be irrevocably dependent on England for trade.

Throughout the medieval period both countries shared commercial relations, with England exporting cloth to Portugal and Portugal sending such produce as fruit to England. Things remained friendly between the two until 1580 and the union of the Crowns of Spain and Portugal. The defeat of the Spanish Armada in England in 1588 caused English merchants to be expelled from Portugal until 1640, when the Portuguese were able to regain their independence. While England was one of the first countries to recognize Portuguese independence, things would change once again after the English Civil War and the emergence of Oliver Cromwell. In the 1640s and 1650s, treaties were signed between the two countries in which English merchants living in Portugal received significant

concessions such as easier access to the Portuguese colonies and freedom of worship, while in return the Portuguese only received recognition of their independence and the avoidance of an Anglo-Portuguese war.

Relations would improve after 1660, when Charles II came to the throne and the monarchy was restored in England. Charles married Catherine of Braganza, the daughter of João IV, which brought England £1 million and the colonies of Bombay and Tangier. While Tangier would not be very advantageous for England, Bombay would eventually afford the British the opportunity to colonize India gradually throughout the eighteenth century. In turn, Portugal received English ships and troops to assist them in their ongoing war with Spain. Although Portugal was required to pay for these services, the military aid did help ensure their independence once and for all.

The treaties of the seventeenth century served to create a tighter economic bond between the two countries, while the British slowly became the dominant party in this relationship. As the seventeenth century drew to a close, the scope of trade changed dramatically. As the popularity of Port wine grew, the Portuguese began concentrating on exporting that and other luxury items to England. Some even began pulling out their wheat fields in order to plant vineyards and partake in this new trade. While the Portuguese were exporting luxuries, they began importing necessities such as wheat and cloth from England. The Portuguese king, Pedro II, attempted a halt of this trade imbalance by imposing mercantilist policies in 1684 and 1685. Among these policies was the banning of English wool, which hurt the English because Portugal was their biggest customer. Things would change once again due to foreign policies and wars.

The War of the Spanish Succession (1701–1714) would seal the fate of the trade imbalance between England and Portugal with the Methuan Treaties of 1703. Of the three treaties negotiated by John Methuen, the first two were defensive and related to the War of Spanish Succession, while the third was commercial. The third treaty is by far the most infamous of the three, and it is one that many historians point

➤ JOHN MULES—AN ENGLISH MERCHANT IN PORTUGAL

The story of John Mules is an unusual one. Most English merchants who lived in Portuguese port cities lived in communities set apart from the Portuguese people. However, some did intermingle with the Portuguese population. Mules is an example of those who did manage to somewhat assimilate.

John Mules (sometimes spelled Miles or Muley) was perhaps the most prominent English merchant living in Portugal in 1650. However, unlike the other English merchants, he became almost fully integrated into Portuguese society. He first arrived in Lisbon as a young man in 1620. It is unknown if he was raised Catholic or converted in Portugal, but he married a Portuguese lady, and his many children were raised Catholic as well. Even though he eventually became naturalized as a Portuguese subject, he was never fully trusted by the Portuguese government. He was always referred to as English and treated as a part of the English community. Despite being treated as a foreigner, Mules was conferred special privileges by King João IV such as the right to send codfish from Newfoundland to Brazil without having to stop in Lisbon, which was normally the practice. After 1652 Mules's name disappears from the records, but it is unknown if that is because he retired or died.

—Monique Vallance

to as the moment in which Portugal became irrevocably economically dependent on England. By 1703, Portugal had entered into a Grand Alliance with England and the Holy Roman Empire against France and Spain in a battle for the rights to succession of the Spanish throne. Portugal was upset that France's wines were still being imported by England at a cheaper rate than the Portuguese wines, even though the two countries were enemies. King Pedro II was able to negotiate a preferential tariff for Portuguese wines, but in exchange he not only had to lift the ban on English wool but also had to allow it to enter the country duty-free.

Even though the treaty of 1703 is often pointed to as the defining moment in which Portugal became economically dependant on England, it was more the nail in the coffin of a

system that had been in place since 1654. The 1661 treaty established the Anglo-Portuguese trading relationship. The Portuguese appeared as though they were giving up too much in return for nothing, but actually what they were receiving were intangible things: security and freedom. Some modern historians suggest that the Portuguese were somehow tricked into giving the English so many advantages in trade. However, the Portuguese knew that it would be impossible to maintain their independence and empire without the help of the English. Selling off some of the empire was better than losing the entire kingdom.

—Monique Vallance

Bibliography

- Duncan, T. Bentley. *Uneasy Allies: Anglo-Portuguese Relations, 1642–1662*. New York: Vantage, 2001.
- Francis, A.D. *The Metbuens and Portugal: 1691–1708*. Cambridge: Cambridge University Press, 1966.
- Prestage, Edgar. *Chapters in Anglo-Portuguese Relations*. Watford, UK: Voss and Michael, 1935.

Early Modern Silver Trade

Silver comprised 60 percent of the output of north and central European metal-mining companies in the period between 1450 and 1600 and flowed into western Europe from Germany, Hungary, and Tyrol. Starting in the second half of the sixteenth century, silver also flowed into Europe from the Spanish colonies of Mexico and Peru, a supply that continued throughout the seventeenth century and came to dominate the European market. The tremendous but imbalanced expansion of the production of silver vis-à-vis other precious metals like gold and copper generated opportunities for shrewd money dealers to profitably speculate on the difference between the official mint ratios and the market value of precious metals. Hence, the value ratios between the precious metals inevitably changed. In the fifteenth century the European commercial gold-to-silver ratio expanded from 1:9 to 1:10, by 1600 the ratio grew to 1:12, and by 1700 the ratio grew to 1:15. But since silver was valued far more highly than gold in the Middle East and the Far East, the Western merchant had everything to gain from paying for his Eastern purchases in silver.

Amsterdam emerged as the major center for the redistribution of commercial silver both to northern Europe and to the Far East. The Portuguese, speculating on the relatively high silver prices, first began exporting Spanish silver coins (*piastra fuerte*, or “rials of eight”) to the East Indies in the sixteenth century. While at first the Dutch also exported many *piastra fuerte* to the Levant and the Far East, from 1625 Holland’s own silver trade coins commenced in gaining ground. By 1640 the Dutch East India Company was exporting an average of 1 million guilders of silver per year to the Far East, giving Holland the majority position in Oriental silver exports at the midpoint of the seventeenth century. By 1660 this average had increased to approximately 1.5 million guilders per year. The Dutch were assisted in their enterprise by their connection to new mining expeditions in Japan and, to a lesser extent, in China, Tonkin, Sumatra, and India. The history of Japanese mining was defined by two factors: the abrupt opening of silver mines throughout the country in the middle of the sixteenth century and its massive increase in silver production from this time to the middle of the seventeenth century. At its zenith, Japan’s silver output rivaled the production figures of the New World.

In Asia, Japan had become a major silver supplier by the mid-fifteenth century. Around this time, the Chinese switched from a paper currency to silver coins. Although the silver-to-gold ratio was more favorable in China, the trade embargo between the two countries did not allow for trade, so they relied on smugglers and the Portuguese to facilitate the trade. The Portuguese remained at the forefront of the East Asian trade until the beginning of the seventeenth century. Straddling the Asian scene, the Dutch East India Company had by 1639 established a monopoly on trade with Japan. Between 1640 and 1667, the Dutch company exported an average of 1.3 million guilders of silver per year from Japan to southern Asia. Thus, the company’s engagement in inter-Asiatic trade provided it with a sizable proportion—between one-third and one-half—of control over the world’s extant silver. This situation prevailed until 1668, when the Japanese government issued a decree prohibiting the exporting of silver, thus eliminating a vital factor in the Dutch company’s success. As

a result, companies throughout Europe staked heavily in Bengal, prompting demand for silver to increase correspondingly. But the Dutch company grew increasingly dependent on supplies of silver coin and bullion from its native Holland. Its exports rose during the 1680s and 1690s from 2.4 million to 3.6 million guilders annually, and in 1700 the company achieved a momentary peak of 5.1 million guilders. Ascending in the initial decades of the eighteenth century, another peak transpired between 1722 and 1728 when the Dutch company exported 6.8 million to 7.9 million guilders annually to Asia, largely in the form of Dutch *ducats*. While its exports would gradually decline, at no time in the next 30 years was the Dutch company's business less than 3 million guilders annually.

Second in the silver market only to the Dutch company was the English East India Company, officially founded by royal charter in 1600. Exporting to the Levant, the Indies, and southern Asia, the English company found its supplies in Cadiz, Lisbon, and, interestingly, Amsterdam. Of the three, the Spanish port city of Cadiz proved the most important to the English company, making Spain its ultimate fountainhead of silver. The Spanish brought large quantities of silver from their settlement at Acapulco, which quantities furnished the English company with annual profits of £14,700. Its most popular export was the piastra fuerte, which in India circulated side by side with the local currency, the *mahmudies* and rupees, and in the Indonesian archipelago became the major currency. To assert its hegemony, England minted its own coin of the same silver content as the piastra fuerte for trading by the English company, with the emblem of the *porticullis* on one side and the Arms of England on the other.

—Kirk R. MacGregor

Bibliography

- Chaudhuri, K. N. *The Emergence of International Business, 1200–1800*, Vol. 4, *The English East India Company*. Chippenham, Wiltshire, UK: Antony Rowe, 1965.
- Flynn, Dennis O., Arturo Giraldez, and Richard von Glahn, eds. *Global Connections and Monetary History, 1470–1800*. Aldershot, UK: Ashgate, 2003.
- Postan, Michael M., and E. E. Rich, eds. *The Cambridge Economic History of Europe*, Vol. 5, *The*

THE IMPORTANCE OF SILVER IN THE EARLY MODERN GLOBAL ECONOMY

The importance of the early modern silver trade was noted by scientists and economists of the time. Thus, Sir Isaac Newton observed before the British Parliament in 1717 that “When ships are lading for the East Indies, the demand of silver for exportation raises the price from 5 [shillings] 6 [pence] or 5 [shillings] 8 [pence] per ounce or above.” Likewise, in his 1776 *The Wealth of Nations*, Adam Smith explained why it was advantageous to carry silver rather than gold to Asia and Manila:

“because in China, and the greater part of the markets of India, the proportion between fine silver and fine gold is but as ten, or at most as twelve to one; whereas in Europe it is as fourteen or fifteen to one. . . . In the cargoes, therefore, of the greater part of European ships which sail to India, silver has generally been one of the most valuable articles. It is the most valuable article in the Acapulco ships which sail to Manila. The silver of the new continent seems in this manner to be one of the principal commodities by which the commerce between the two extremities of the old one is carried on, and it is by means of it, in a great measure, that those distant parts of the world are connected with each other.”

—Kirk R. MacGregor

Source

Adam Smith, *The Wealth of Nations*, 2 vols. (London, 1776), 310–311.

Economic Organization of Early Modern Europe. Cambridge: Cambridge University Press, 1977.

Stein, Stanley J., and Barbara H. Stein. *Silver, Trade, and War: Spain and America in the Making of Early Modern Europe*. Baltimore: Johns Hopkins University Press, 1999.

Couriers du Bois—The Canadian Fur Trade

As a result of contact between American Indians and Europeans in the North American wilderness, the fur trade dominated Canada's economic activity from the seventeenth century

➤ MÉTIS

The growth of the Canadian fur trade depended on intermarriage between Native American women and European men. Until the nineteenth century, European women were practically prohibited from the Canadian West. As a result, intimate relations between Indian women and European men were common. Marriage, though, rather than promiscuous relations was the norm. A native wife served as a critical liaison between Indian and European groups. The children of these interracial relationships were known as *métis*, people of mixed native and European ancestry. *Métis*, while found throughout Canada, were particularly common in fur trading areas. Two different groups of *métis* developed. One group descended from Hudson's Bay Company traders and the mainly Cree women who lived near their trading posts. The other group was a mixture of French traders and native peo-

ples. British *métis* were Protestant, spoke English, and often identified with their European ancestry. French *métis*, however, were generally Catholic, spoke French, and viewed themselves as a distinct Indian nation. In time, many Hudson's Bay Company fur traders came to prefer mixed-blood rather than Indian wives. Additionally, company officers intentionally raised their daughters in European rather than Indian cultural practices, another early indication of a growing racial divide. European women became increasingly present in the Canadian West beginning in the 1830s. After the Hudson's Bay Company sold its land to Canada in 1869, a period of frontier settlement began in the former fur territory. Intermarriage between white men and native women grew rare even as the sexual exploitation of native women increased.

—Kassi Klinefelter

to the nineteenth century. The French intermediaries engaged in this commerce came to be called *coureurs du bois*, or runners of the woods, a version of the original Europeans who traded for furs with American Indians. During this period the fur trade moved from east to west and from individuals to competing companies and finally to a monopoly by the Hudson's Bay Company.

Animal furs were Canada's first widely exploited resource. The continent's ten million beavers, 30–60 pound (13–27 kilogram) animals that live near water year-round, attracted the most attention from fur traders. Their fur produced felt for hats, which was a European fashion trend in the seventeenth century. The number of beaver furs sold reached a high point in 1793, with 182,346 furs purchased from Canada. Not surprisingly, beaver populations were decimated. As areas were exhausted, traders and Indians moved westward along Canada's waterways in search of additional animals. Fur traders caught and sold other animal hides as well. For instance, bears, deer, and raccoons were popular at the turn of the nineteenth century.

The French explorer Jacques Cartier discovered Canada's mainland in 1535 while searching

for a new route to Asia. He led three ships 800 miles (1,300 kilometers) up the St. Lawrence River, past present-day Quebec. His discovery gave France claim to the Canadian inland. However, by 1615 only 50 Frenchmen lived in the St. Lawrence colony. Initially, only fishermen and independent traders traveled to Canada from France. Étienne Brûlé, who lived with the Huron aborigines, is one example. It is believed that in 1612 he was the first Westerner to see Lake Superior and Lake Erie. In 1627 the *Compagnie des Cent-Associés* formed the first significant settlement in the area and controlled the St. Lawrence colony until 1663, when the French government assumed control and created New France.

In the mid-1600s British traders became active in the Canadian fur trade. Their most significant effort was the Hudson's Bay Company, chartered in 1670. This company gave its London investors control of the Hudson Bay drainage basin, approximately 40 percent of present-day Canada. Until the British conquered Canada in 1759, the Hudson's Bay Company and French traders competed fiercely for furs. The English traders relied on American Indians to deliver furs to their posts, whereas the French

traders brought their goods inland. English traders also differed from their French counterparts by avoiding involvement in Indian wars and efforts to Christianize or settle the Indians.

Life on Hudson Bay was uncomfortable. The summers were hot and plagued by insects, while the winters were bitterly cold. The company devised strict rules to govern the lives of its North American traders. Hudson's Bay Company traders were expected to lead virtuous, celibate lives; perform religious habits; and avoid alcohol and gambling. The company also tried to prohibit intimate relationships between its traders and Indian women. For the most part, however, it appears that traders regularly ignored the company's rules. Marriage between the two groups in particular became common, creating a significant métis population.

Even after the defeat of France in the Seven Years' War (1754–1763), the Hudson's Bay Company faced competition, especially from the North West Company, a coalition of Highland Scot traders. This Canadian-based company overshadowed the Hudson's Bay Company by venturing inland like their French predecessors. This situation changed in 1811 when Hudson's Bay Company stockholder Lord Selkirk established a settlement on the Red River, where the North West Company collected provisions for its transcontinental journey. During the last five years of the decade, this settlement created intense competition between the two companies until they merged into one company. The new Hudson's Bay Company was approved by the British colonial office and given administrative control of all nonsettled portions of British North America.

The Canadian fur trade declined over the nineteenth century. One aspect affecting the trade was the international price of beaver fur, which plummeted from 1837 from 1854, falling from 30–32 shillings to 7–8 shillings per pelt. Another factor was the Hudson's Bay Company's monopoly, which forced eastern Canadians to rely increasingly on timber. Finally, the 1797



*Rival companies soliciting trade with Native Americans in Canada, about 1680, illustrated in Charles Carleton Coffin's *Old Times in the Colonies*, 1898. (Library of Congress)*

invention of the steel trap and improved bait exhausted Canada's beaver fields. As a result, the Hudson's Bay Company's charter was extended for the last time in 1838; the British Crown granted the company a 21-year extension in an attempt to protect its American Indian subjects by preventing farming settlements in the area. The company officially closed in 1869 when it sold its remaining land to Canada. While its heyday had passed, fur trading continued into the twentieth century.

—Kassi Klinefelter

Bibliography

- Bumsted, J. M. *The Peoples of Canada: A Pre-Confederation History*. 2nd ed. Oxford, UK: Oxford University Press, 2003.
- Innis, Harold A. *The Fur Trade in Canada: An Introduction to Canadian Economic History*. New Haven, CT: Yale University Press, 1962.
- Van Kirk, Sylvia. *Many Tender Ties: Women in Fur-Trade Society, 1670–1870*. Norman: University of Oklahoma Press, 1980.

■ Introduction: Trade Goods for a World Market

Prior to 1500, the largest share of trade was local and involved food crops, raw material, and local hand manufactures. Long-distance trade did flourish and trade routes crisscrossed Asia, Africa, and Europe, but there was still no unified system of trade, and goods traveled in stages from one set of traders to another before reaching their final destination. The three great trade routes, via the Red Sea, the Persian Gulf, and the Silk Roads, were well outside the control of the great Italian merchant states, and the Muslim traders dominated the trade with China. Between 1450 and 1750, however, a new economic reality gradually emerged. By the early seventeenth century, European mariners had decoded the prevailing wind patterns across the vast expanses of the world's oceans, and goods of all kinds and people of all nations ranged over most of the globe. In this new global trade, Europe integrated America and Asia into larger trade network, intensifying interregional trade and promoting the spread of new crops and goods.

The Indian Ocean littoral remained one of the most vibrant and diverse economic centers of the world. From southern and eastern Asia came silk, ceramics, sandalwood, black pepper, and other spices. Western Asia supplied horses, textiles, metal goods, frankincense, and products from the Mediterranean. East Africa's trade with the Islamic world was not restricted to Egypt and the Red Sea but instead involved much of the eastern Indian Ocean littoral. One of the principal trading commodities was gold, which came from the region of Zimbabwe in southern Africa. Slaves were another highly valued commodity, as were elephant ivory and spices such as cloves. Imports to East Africa included ceramics and textiles from Iraq, Iran, India, and China. In West Africa gold was also the principal commodity, mined in the Bambuk, Bure, and Akan areas of the rain forest. Another major commodity was salt from the central Sahara, which enabled the Tuareg to exchange salt for gold, which was then transported by caravans to North Africa. Among other trade goods

were hippopotamus teeth that were used as ivory in parts of Europe and North Africa.

The arrival of Europeans to the coast of western Africa marked the start of the transatlantic triangular trade. Sailing from bustling ports such as Amsterdam, London, Lisbon, and Nantes, European traders carried guns, textiles, and other manufactured goods to Africa. There at coastal trading posts they traded their goods for slaves, who were then transported across the Atlantic to slave centers in the Americas, where they were sold or exchanged for colonial goods (sugar, coffee, tobacco, etc.). Returning to Europe, the traders sold these colonial goods at a great profit, part of which they then reinvested into new trading trips to Africa. Slaves played a central role in the shift of the global economy from the Indian Ocean to the Atlantic and in the rise of Europe as a dominant economic power. African slaves worked on plantations that produced cash crops and mined much of the silver that fueled the European economy. The Atlantic commerce helped jump-start the European Industrial Revolution and sustained military expansion that allowed Europe to carry goods across the globe.

Within a few decades of Columbus's voyages to the Americas, the exchange of crop species such as corn, wheat, coffee, tea, and sugar between continents had revolutionized the world's agricultural and labor markets. Thus, once a year the Spanish Manila galleons left Mexico weighed down with silver to venture westward along the equatorial route, pioneered by Magellan, to Manila in the Philippines. The silver was exchanged for oriental luxury goods, mainly high-quality Chinese silk, that had been brought in junks from the southern coast of the Ming empire to the Philippines and then shipped on the Manila galleons east to Acapulco. The sublime Asian luxuries, particularly silk, were the rage in the Americas, and upon visiting Mexico City in 1677, the Irish friar Thomas Gage was stunned to see "both men and women excessive in their apparel, using more silks than stuffs and cloths. . . . [In the jewelry district,] a man's

eyes may behold in less than an hour many millions worth of gold, silver, pearls, and jewels.” Drawn by the enormous profits of the silk trade, Spanish colonial merchants and bureaucrats routinely ignored royal edicts prohibiting any trade that circumvented Spain. Instead, Spanish colonial merchants established trade diasporas in the Philippines and Mexico and vigorously competed against each other.

In North America as in northern Eurasia, the fur trade remained for a long time the most profitable of commercial enterprises. At first Native Americans traded furs for European clothing, metal tools, and firearms, allowing Europeans to buy furs relatively cheaply and sell them dearly. European markets showed great demand for marten, muskrat, mink, otter, beaver, wolf, bear, and lynx, prompting enterprising French and British traders to establish companies to acquire and sell furs. Thus, the French traders routinely left their base at Montreal to roam the vast expanses of the Canadian prairies. In the early eighteenth century the French used the fur trade to further their strategic interests by building a series of fortified trading posts from New Orleans to Montreal that barred the western expansion of the British colonies. At the same time Russian merchants dominated the fur trade in northern Eurasia, where they served as middlemen between fur-producing northern Siberian regions and the main markets in Europe and the Middle East. The Stroganov family played a major role in supplying these precious commodities to the markets. The Stroganovs established trading posts across the Ural Mountains, regularly dispatched agents to purchase furs with European wares, and then sold furs to English and Dutch merchants. When increasing friction with the native peoples threatened this profitable trade, the Russian authorities encouraged the conquest of Siberia by private entrepreneurs and small armed bands, who forced the natives to pay tribute in furs (the so-called *yasak* system).

Europe was crisscrossed by numerous trade routes that carried goods to every corner of the continent. Luxuries (silks, spices, and gems), essentials (cotton, alum, and dyestuffs), and manufactured goods (cotton cloth, glassware, and metal goods) flowed from Italy and the Levantine

ports to western and northern Europe. The northern trade routes, dominated by the Hanseatic merchants, brought bulk items (grain, timber, iron, furs, etc.) from Scandinavia, Poland, and Russia to the rest of Europe. New textiles came from the Netherlands and England, while the annual arrival of spice ships from South and Southeast Asia marked the economic calendar for all of Europe.

—*Alexander Mikaberidze*

Mughal Decorative Arts for Western Styles

In the sixteenth century, European merchants in India were amazed by the types of precious items available in addition to the spices. Among these precious items were types of cloths not normally used in Europe as well as furniture produced by Indian craftsmen intended for the mundane comfort of Western traders. Indian craftsmen started to produce recognizably European furniture in Indian hardwoods after observing the astonishing habits of early European travelers who visited Indian bazaars; although Indians customarily sat and slept on the ground, these “stiff-jointed” Europeans chose to sit on chairs and lie in beds. These products fueled an export market in more luxurious pieces including cabinets and traveling chests on stands, fitted out with compartments and drawers, that were adorned by expensive Mughal decorative arts. The finest pieces had intricate inlays of ivory, mother-of-pearl, and ebony *sadeli* (artwork used to decorate wooden objects). Some incorporated both Mughal figures and Christian subjects, including the Madonna and Child or the Crucifixion.

Soon enough, Europeans cast envious eyes on another Mughal craft, the sumptuous knotted carpets produced in factories that Emperor Akbar established in Lahore and Agra. Traders and ambassadors entering the great Mughal court were obliged to remove their shoes and walk barefoot on magnificent carpets. By 1615 the East India Company started importing huge Lahori carpets into England where, curiously, they were put to use as table covers for major official ceremonies. The earliest imports were elaborate

► OF THE TRADE IN ELEPHANT TEETH, VELVETS, AND CHICKINOS

European traders sought many precious items from India. One European merchant, Cesare Federici, from Venice, wrote in amazement about the items available for trade while he explored along the Indian coast of the Arabian Sea in the sixteenth century:

“I could not have beleaved that there should be such a trade as there is: for in the time of every new Moone and every full Moone, innumerable small barks come in and out, laden with all sorts of spices, with silke of China, sandals, carved Elephant teeth, Velvets, Chickinos which be pieces of golde worth seven shillings apiece sterling, and with divers sorts of other marchandize. Also these barks lade out, as it were, an infinite quantity of Cotton and cloth of all sorts, as white stamped and painted, with great quantity of Indico . . . turbants made in Diu, great stones like to Carne-laens, Granats (garnets), Agates, Diaspry, Calcidonij, Hematites, and some kinde of diamonds. . . .

“I saw very maruellous things: there were an infinite number of artificers that made bracelets called Mannij, or bracelets of elephants teeth, of diuers colours, for the women of the Gentiles, which haue their armes full decked with them. And in this occupation there are spent euery yeere many thousands of crownes: the reason whereof is this, that when there dieth any whatsoever of their kindred, then in signe and token of mourning and sorrow, they breake all their bracelets from their armes, and presently they go and buy new againe, because that they had rather be without their meat then without their bracelets.”

—Hugh Purcell

Source

Viagge de M. Cesare de i Federici, nell' India Orientale, et oltra l'India, translated from the Italian by Thomas Hicock and published as *A Late Voyage to the East Indies* by Richard Jones and Edward White, London, 1588.

works of imagination, depicting elephants and mahouts (elephant drivers), dragons, crocodiles, fighting camels, cheetahs, and fantastic four-legged winged creatures in enchanted forests.

Cloth has always been the most global of all traded commodities, and long before European traders arrived in the region, India had been the established center of textiles. In the eighteenth century, the English initially sought out bright striped cotton weaves and muslins to use as cheap barter in their trade in the Spice Islands of Indonesia or for reexport to the Middle East and North Africa. It was the East India Company's resident agent in Gujarat, William Finch, who wrote to London proposing to launch “chinte” on the English market. Chintz is sometimes described as painted cotton; however, most of the color is applied not by brush but by using a blunt-ended bamboo stick or pen to draw the outlines. These mordant areas are then filled in by immersion in a vat of color. In conservative England, where linen and wool had been the principal materials for both furnishings and dress, decoration was simple, and the dyes were rarely colorfast. With

the importing of cotton and chintz, lightweight, bright, colorfast, and easy to wash new forms of cloth entered the market. But these new cloths had a mixed reception. The company directors demanded adaptations for the home market, preferring white backgrounds over the red. The red fabric was snapped up by the Dutch, who embraced the glowing red fabric.

Back in England, polite society, happy at last to have white-ground chintz on their walls and beds, remained resistant to wearing it. The earliest designs destined for the West emulated Jacobean crewelwork, depicting fantastic plants and trees emerging from rocky hills. These did not sit well on the human form, and the East India Company addressed the problem by commissioning the Indian chintz artists to replicate patterns of a daintier nature, often based on later Mughal taste for flowers as well as the developing European taste for chinoiserie (decorative arts influenced by Chinese styles). In 1660 Josiah Child mounted a marketing campaign circulating samples among influential style setters, including Charles II.

The status of chintz in the wardrobes of the fashionable upper classes was sealed in 1688 with the accession of Mary, daughter of James II, and her Dutch husband William to the English throne. By then, textiles accounted for 75 percent of all Indian exports into England.

—*Hugh Purcell*

Bibliography

- Findly, Ellison Banks. "Jaina Ideology and Early Mughal Trade with Europeans." *International Journal of Hindu Studies* 1(2) (August 1997): 288–313.
- Guy, John, and Deborah Swallow. *Arts of India, 1550–1900*. London: Victoria and Albert Museum Press, 1990.
- Riello, Giorgio, and Tirthankar Roy, eds. *How India Clothed the World: The World of South Asian Textiles, 1500–1850*. Leiden: Brill, 2009.
- Schimmel, Annemarie. *The Empire of the Great Mughals: History, Art and Culture*. Chicago: University of Chicago Press, 2004.

The Chinese Porcelain Trade— "To Please the Eyes of the Europeans"

When the Portuguese established trade contacts with China in 1517, they encountered a well-established system geared to the production of export goods. As early as the mid-twelfth century, at least 20 percent of the income of the Southern Song dynasty (1127–1279) had been the result of maritime commerce. In fact, the blue willow pattern thought typical of Chinese designs had been developed for the South Asian market. The Chinese themselves preferred pure white. By the sixteenth century, porcelain production in Jingdezhen was the largest industrial operation in the world, with over 1,000 kilns, 70,000 workers, and a production process that employed nascent assembly-line processes.

Chinese success in porcelain making inspired European imitators. As early as 1575 the Medicis—unwilling to lose a potential source of profit—had been trying to create imitations of Chinese porcelain adapted to the taste of Europeans. By 1638 the Dutch East India Company was commissioning the manufacture of items of European design decorated in a variety of acceptable motifs inspired by Chinese porcelain. A

few years later the English East India Company developed reliable Indian sources for such items. During the turmoil of the late Ming and early Qing dynasties, Chinese producers were unable to fill European orders, losing the market to Japan by the 1660s. As soon as the Qing dynasty reestablished a measure of stability, Chinese artisans scrambled to recover their European customers, deliberately incorporating the most successful elements of Japanese products. Melding stylistic features resulted in many interesting hybrids, such as a graceful set of European-style goblets decorated in a Chinese adaptation of a Japanese chrysanthemum design.

Seventeenth-century European consumers did not attempt to distinguish between the goods of Japan, Siam, China, or India. They were searching for aesthetic representations that were in accord with their perceptions of the exotic East. Within a rather brief time, European-manufactured Chinoiserie appeared more Asian to British eyes than the Chinese imports. British aesthetic sensibilities had combined with a flawed perception of China to create a demand that could not be satisfied by traditional Chinese motifs. Unwilling to relinquish a profitable market for their wares, the Chinese made stylistic adaptations to satisfy British tastes. By the end of the century, Chinese artisans were producing Baroque artwork for European consumption, thinking that they were replicating European designs. "Chinese" patterns had become so completely adapted to European standards that most Chinese artisans were unable to recognize any trace of Chinese influence in them. The resulting interpretations by Chinese craftsmen of Baroque and European pseudo-Asian exotica produced some attractive pieces, such as goblets described above, but there were also rather bizarre combinations, such as a Chinese-style lemon basket decorated with plump nude Renaissance-style cherubs.

The early modern European fascination with Eastern trappings reached Portugal first. When Vasco da Gama sailed to India in 1497, King Manuel ordered him to bring back "*porcelanas*," among other things. Da Gama did bring porcelain with him, and this began the Portuguese domination of the porcelain trade for the next century. In the 1530s alone, approximately 40,000 to 60,000 pieces of porcelain arrived in

Lisbon every year. From there it spread across the royal houses of Europe. Philip II collected some 2,000 pieces of Chinese art, primarily porcelains. It was probably in the court of Louis XIV, however, that the interest first became a mania. In his search for rare and elegant ornamentation for Versailles, Louis XIV developed a taste for Chinese art, going so far as to appear at a ball “dressed half in the Parisian fashion, half in the Chinese.” His flamboyant brother took things a step further and occasionally garbed himself in his own interpretation of the style appropriate for a great Chinese lord. The interest soon spread to the court of their less affluent relatives in England. The Stuart court introduced the vogue, but it did not come into flower until the arrival of William and Mary. Mary’s fondness for Chinese porcelains proved highly contagious. Continental fashions influenced England’s taste, but English Chinoiserie soon developed its own distinct quality.

Some collectors, British as well as continental, obtained authentic Chinese art, but those pieces should not be confused with Chinoiserie. The growing popularity of Chinoiserie is somewhat misleading. While the trend does signal an interest in the East, as discussed above, Chinoiserie itself is a distinctive European art form, an interpretation of Asian exotica. European interest in Asia was in large measure dependent upon finding an “Asia” that satisfied European expectations, with both European and Asian craftsmen producing items in accordance with European designs. Asia could be whatever Europeans wished: a metaphor for the tranquility shown on the blue willow porcelains, the Baroque opulence of a mandarin court, the ferocity of a dragon, or the serenity of a Confucian scholar. The China of European literary figures was as malleable as that of artists and merchants.

—Carolyn Neel

Bibliography

- Appleton, William Worthen. *A Cycle of Cathay: The Chinese Vogue in England during the Seventeenth and Eighteenth Centuries*. New York: Columbia University Press, 1951.
- Impey, O. R. *Chinoiserie: The Impact of Oriental Styles on Western Art and Decoration*. New York: Scribner, 1977.
- Jacobson, Dawn. *Chinoiserie*. London: Phaidon, 1993.

Lee, Thomas H. C. *China and Europe: Images and Influences in Sixteenth to Eighteenth Centuries*. Institute of Chinese Studies Monograph Series 12. Hong Kong: Chinese University Press, 1991.

Pepper Country—Sixteenth-Century Malabar, India, in the Global Marketplace

It was no coincidence that the Portuguese explorer Vasco da Gama, at the end of his epic voyage to the East, dropped anchor at Calicut (Kozhikode) on the Malabar Coast of southwestern India in 1498. Here was the gateway to the world’s greatest pepper-growing region. Malabar not only had the perfect monsoon climate to produce quality black pepper, cardamom, cinnamon, ginger, and turmeric, but it was at the heart of the oriental spice trade, an ancient network of seaways where ships from China and the Spice Islands of the East Indies bearing cloves, nutmeg, and mace converged with Arab dhows from the Middle East.

Before da Gama’s intervention, Arabs dominated the spice trade into Europe for centuries, transporting cargoes by sea and then in overland caravans to the Mediterranean. This brought wealth to the Mediterranean city ports of Alexandria, Genoa, and Venice. This Arab “monopoly” relied on creating great demand and maintaining utmost secrecy about their sources of supply. As prices escalated, discontent spread through the capitals of Europe. Spies were dispatched to identify the destinations of vessels trading out of the Red Sea and the Persian Gulf.

Throughout the fifteenth century, Western seafarers, especially the Portuguese who had quietly been making technological improvements in ships and cartography, sought a sea route to the legendary spice-bearing lands in the East. When da Gama rounded the Cape of Good Hope and traveled up the east African coastline and across the Indian Ocean to Malabar, he helped to define a moment in the Age of Exploration.

At Calicut, da Gama sent word to the local ruler, the Saamoothirippādu, or Zamorin, that he carried a letter from King Manuel of Portugal. Flattered, the Zamorin had da Gama processed through the city in a palanquin to the

palace, where a Brahmin priest took da Gama by the hand through heavily guarded antechambers into a vast audience hall ringed with tiers of seats occupied by courtiers. The Zamorin himself was seated on an *alkatyf*, or carpet, wearing fine white calico brocaded with gold flowers and large diamonds and a jewel-encrusted cap. Over *arrack* and *betel*, a treaty was enacted.

Muslim brokers in Calicut made every effort to overturn the Zamorin's deal with his exotic visitor. After all, through him they enjoyed unqualified access to the very best pepper, buying it at a fraction of the cost at which they sold it on to the Middle East. They were not prepared to share this profitable trade. They worked on the Zamorin, ridiculing the poor quality of da Gama's gifts, and in truth, European cloth, coral beads, and honey were inadequate presents for a king whose annual revenues were huge. Worse, da Gama had lied about having many ships under his command, explaining that he arrived with only three ships due to a storm scattering his fleet.

Relations deteriorated, and da Gama's sailors were reduced to bartering for sustenance on the waterfront. Da Gama was imprisoned, although the Zamorin eventually freed him and allowed him to acquire some spices and gems. However, da Gama's return voyage proved traumatic. He fought off an attack by boats out of Karnataka, and he then faced the monsoon storms as he crossed the Indian Ocean on his return to Africa, while 30 crew members died of scurvy. However, in 1499, more than two years after his departure, da Gama returned to a hero's welcome in Lisbon.

Da Gama's pioneering voyage of discovery proved the catalyst for a series of events that changed the world, triggering a lengthy Portuguese monopoly of pepper. In 1502 da Gama led a punitive expedition of 14 heavily armed ships back to Malabar. He relentlessly pursued his enemies, committing shocking atrocities against the Zamorin's people. Ironically, da Gama's one last mission in 1524 was to improve trade relations, but his savage reputation was remembered. He eventually died in Cochin.

One hundred years later, the formation of two powerful European rivals would come to dominate trade between Asia and Europe: the English East India Company, chartered in 1600,

➤ PEPPER (*PIPER NIGRUM*)

Black pepper has been one of the most valued spices throughout human history: fresh food, especially meat and fish protein, quickly becomes rancid, so pepper was prized as a preservative, and its hotness disguised any flavor of decay. Native to Malabar in southwestern India, pepper grew wild in the hills. Traditional medicine practitioners used it to treat indigestion and intestinal gas. It features in the sixth-century BCE Ayurvedic textbook the *Susrutha Samhita*. The epic *Mahabharata* describes feasts with meat sprinkled with pepper.

In Europe, pepper had been highly prized even in antiquity, and by the Middle Ages it was in such demand that peppercorns became a form of money, accepted in dowries, taxes, and rents. In London, a Pepperers' Guild of merchants was formed in 1180. In 1603 the English East India Company landed its first cargoes of peppercorns and other spices in London, but these were from Sumatra and Java (now in Indonesia), where pepper had been planted by early Hindu colonists. Although pepper was the company's single most important commodity, only in 1685, when the company was forced out of its major pepper factory on Java, did it turn to Malabar as an alternative source.

—Hugh Purcell

and the Dutch United East India Company, chartered in 1602. The two countries took advantage of Portugal's short union with Spain in 1580 and subsequent decline. Indeed, Elizabethan England awoke to the riches to be had in the East when privateers captured a Portuguese carrack, the *Madre de Deus*, laden with spices, jewels, porcelain, and textiles. A document on board comprehensively describing Portuguese trade in the East proved key to persuading Queen Elizabeth I to grant the royal charter to trade there.

In the end, it was the Dutch who seized the initiative in Malabar. In 1604 they signed a treaty with the Zamorin and began ousting the Portuguese from all their strongholds to the south until 1663, when they wrested control of Cochin. Despite growing competition from the British and French, the Dutch effectively controlled the Malabar economy for 130 years.

—Hugh Purcell

Bibliography

- Bowen, H. V., Margarette Lincoln, and Nigel Rigby, eds. *The Worlds of the East India Company*. Woodbridge, UK: Boydell, 2002.
- Dalby, Andrew. *Dangerous Tastes: The Story of Spice*. London: British Museum Press, 2000.
- Keay, John. *The Honourable Company: A History of the English East India Company*. New York: Macmillan, 1994.
- Rosengarten, Frederic. *The Book of Spices*. New York: Pyramid, 1973.
- Tracy, James. *The Political Economy of Merchant Empires*. Cambridge: Cambridge University Press, 1997.

Ruling the Tea Lanes—Shipping Tea to America

The ancient commodity of tea, the product of leaves from a rather common plant found throughout Asia, found its way into Europe in the seventeenth century by way of the Portuguese, who were the first to introduce it in Europe in the sixteenth century. However, the Dutch were the first ones to gain a direct trading relationship with the Chinese and in 1610 brought back the first shipload of tea to Holland. Even after Britain came to dominate the trade of tea by the end of the eighteenth century, the strong economic and commercial power of the Dutch remained an important factor impacting the supply of tea throughout what would become the emerging global British Empire.

Competition among all European states intensified throughout this era with the establishment of colonial empires, and the desire for exotic goods from Eastern markets drove much of Europe's economic, political, and military policy. Since the late Middle Ages, England and the provinces of the Low Countries (the Netherlands) struggled for position among the other major powers of Europe, especially Portugal, Spain, and France. A trade rivalry then developed between the Netherlands and England that culminated in a series of conflicts known as the Anglo-Dutch Wars, spanning the years 1651–1784. In an attempt to stabilize their trade interests in a rapidly changing economic environment, England enacted a series of Navigation Acts to restrict trade activity with new colonies to English goods and English ships. The periodic

Anglo-Dutch Wars and the continued strain in trade relations between the two states therefore impacted the transport of tea.

The story of tea and its place in the early commercial history of the Americas has its origins before it even arrived in England. In 1600 Queen Elizabeth I chartered the East India Company and granted a royal monopoly on all trade of all products obtained in Eastern markets. Tea was not immediately a popular product in England, as it was sparsely sold until 1661, when the Portuguese princess Catherine of Braganza introduced it to the royal court. At that time coffeehouses were popular in London, and even as tea gained in popularity it remained mostly a drink of the aristocracy until the mid-eighteenth century. The British East India Company became a conglomeration of wealthy merchants that by 1750 was almost exclusively concerned with a monopoly on tea. At this point in time, the commercial rivalry between the English and the Dutch was erupting into war, and the English were intent upon preserving a balance of trade. Tea was also becoming a popular import in the American colonies, but the government monopoly of the East India Company was largely ineffective there because of the lucrative black market.

By the early eighteenth century, the Dutch supplied significant amounts of tea in colonial ports at a much lower cost than the East India Company. Although the Navigation Acts specifically prohibited this type of trade, the laws were widely evaded. The First Anglo-Dutch War of 1652–1654 during the Cromwell Protectorate resulted in no real conclusion to the naval and commercial rivalry, and further conflicts between the two nations continued. At issue was the dominance of the sea-lanes, trade hegemony, and the economic balance of power, but with the Restoration of the English monarchy in 1660, future Anglo-Dutch conflicts would also bear the new strain of dynastic and religious concerns as well. All of these factors served to intensify the commercial rivalry and encouraged continued Dutch activity with the American colonies in the mid-seventeenth century. However, the Glorious Revolution of 1688 temporarily lessened the rivalry, with the accession of William III, Prince of Orange, to the English throne with his wife Mary II. The ascension resulted in

some commercial cooperation until the death of William in 1702.

The centers of the tea trade in the Americas were major ports such as Boston and New York, which also became the political centers of rebellion against the British Crown by the 1760s. Because the British colonies of the New World had been chartered and were permitted to grow and administer themselves independent of strict commercial regulation, the increasing need of Britain to organize and centralize governing responsibilities caused conflict by the middle of the eighteenth century. Following the conclusion of the Seven Years' War, Great Britain achieved a state of peace from warfare for the first time in many decades. The role that the colonies played in the start of the French and Indian War contributed to the growing indebtedness of the British government and led it to seek new means of ordering its colonial holdings and raising needed revenues. Because of the popularity of and large demand for tea in the colonies, Great Britain sought to more firmly regulate the taxation of the commodity as a means of stabilizing its postwar economy. Rather than trade with the East India Company, and in opposition to the provisions of the earlier Navigation Acts, colonies in North America continued to trade in contraband and smuggled tea.

By 1763 the East India Company faced the threat of bankruptcy, the result of not only tea smuggling but also generally poor economic conditions of world markets at the time. The directors and merchants of the East India Company recognized that its diminishing profits could be bolstered by the extension of the tea monopoly to the British colonies of North America and pressured Parliament to take action. The political result was a series of acts of Parliament known collectively as the Townshend Duties. The name is derived from Charles Townshend, Britain's chancellor of the exchequer, who was responsible for maintaining and monitoring revenue flow. Among these acts was the Indemnity Act of 1767 that repealed all taxes on tea imported to Britain, which in turn made it less costly to ship to the Americas. To offset the potential loss of government revenue, the same Parliament passed the Revenue Act, which created new taxes on tea to be imposed in the colonies.

➤ ENGLISH COFFEEHOUSES

The commercial sale of tea as a leisure beverage accelerated in England during the seventeenth century as it began to supplant the popularity of coffee in the coffeehouses of the era. Coffeehouses had a generally negative reputation in the post-Restoration period of English history, and there is evidence of Charles II's attempts to suppress them. People of all social strata frequented such places, where conversations doubtlessly ranged from the mundane to the political. Coffeehouses tended to be places where people conducted business and made social connections, but in an age still concerned with proper class delineation in society, there was an element of suspicion associated with such an open atmosphere. Not only was coffee a popular beverage in such institutions, as the very name suggests, but tea also became popular, and demand for it increased because of this unique social outlet for its consumption. In England these were male-only establishments that provided the framework and model for the salons and clubs of the eighteenth century. The introduction of tea to the coffeehouse environment is most pronounced in England, and this environment did much to anchor tea's place as the preferred social beverage of the people.

—Cheryl H. White

Also within these Townshend Duties were new broad powers for customs officials to search and seize contraband tea.

Organized boycotts throughout the colonies expressed the generalized discontent over these measures, and tea consumption markedly reduced in response. The Regulating Act permitted the East India Company to ship tea to the American colonies without duty of any kind, which reduced the price of British tea far below that of illicit competitors. The result was that many Boston area merchants saw no valid fiscal reason to refuse the shipments of the East India Company any longer, but emerging discontent among groups such as the Sons of Liberty eventually forced the issue. Proponents of ongoing tea boycotts continued to organize anti-East India Company events, the most famous of which became known as the Boston Tea Party in

1773. In one of the most famous acts of civil disobedience, the Sons of Liberty emptied chests of East India Company tea into Boston harbor, one of many reactions in the colonies that foreshadowed the coming Revolutionary War.

—Cheryl H. White

Bibliography

- Davies, Norman. *Europe: A History*. Oxford, UK: Oxford University Press, 1996.
- Diehl, Paul. *The Dynamics of Enduring Rivalries*. Chicago: University of Chicago Press, 1998.
- Gardner, Brian. *The East India Company: A History*. Philadelphia: Dorset, 1990.

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World History Encyclopedia

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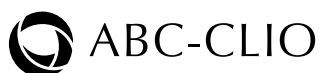
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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War and Diplomacy

Throughout the fifteenth to eighteenth centuries, the majority of states around the world were monarchies. Government affairs and diplomacy were thus conducted almost entirely at the ruler's discretion and in accordance with her or his personal interest or worldview rather than from national considerations. Territorial expansion was one of the most common motives for war but was oftentimes tied to another key factor, preserving and expanding dynasty. This could be accomplished by conquest but also through subtle diplomacy in which marriage featured prominently. Thus, the Austrian Habsburg dynasty's skillful use of arranged marriages to further its dynastic interests proved to be so successful that it was eventually summed up in an elegiac couplet: "Let others wage war, but thou, O happy Austria, marry; for those kingdoms which Mars gives to others, Venus gives to thee." Rulers oftentimes looked upon their daughters as pawns in their diplomatic games. King Henry VIII negotiated several potential marriages for his daughter Mary. When she was only two years old she was promised to the son of King Francis I of France, but after relations between the kings soured, the contract was repudiated, and instead she was betrothed to her first cousin, Holy Roman Emperor Charles V. But once the arrangement failed, Henry considered marrying Mary to either King Francis I or his second son, but these endeavors led nowhere as well. After her father's death, Mary, now aged 37, began looking for a husband herself and married Prince Philip II, the future king of Spain. The marriage, however, proved quite unpopular in England, where many feared that it would lead to their country's dependency and subservience to Spain. It also caused hostility in France, which was at war with Spain and was alarmed at the prospect of being completely encircled by the Habsburgs.

During the Middle Ages envoys were usually dispatched to resolve some particular matter (negotiate a trade treaty, establish an alliance, betroth a princess, etc.), and once the mission was accomplished they returned home. There was hardly any diplomatic continuity. However, by the late fifteenth century international affairs and diplomacy became a rather complex undertaking that required a more permanent system of intrastate communications and remains so. The origins of modern diplomatic traditions can be traced to Italy, where national security came to depend on the speed and accuracy of information that each city-state had about its neighbor. These cities began a practice of establishing permanent embassies, and Milan, Florence, and Venice emerged as major centers of diplomacy, introducing many traditions of modern diplomacy that later spread to other European states and other parts of the world. The period saw further elaboration of the rules of diplomacy. Ranking of

diplomatic agents was introduced, and the fifteenth-century diplomacy saw the transition from medieval figures of diplomatic representation (nuncii, procuratores, legati) to those of the ambassador and envoy.

By the late sixteenth century, permanent missions representing one country in another became customary. But maintaining an embassy and its staff was an expensive undertaking, and minor states usually exchanged envoys and minister plenipotentiaries who were ranked below ambassador. The Renaissance era witnessed the introduction of sophisticated ceremonial and ritualized protocol for receiving diplomats and conducting negotiations as well as sending regular written instructions to ambassadors. Routine communications were conducted as a rule in the vernacular language (often using numerical ciphers), while treaties or other important documents were written in Latin. The

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states established archives as depositories of documents so as to ensure diplomatic continuity and maintain histories of political, commercial, or other negotiations. Ambassadors' lengthy dispatches usually contained important political, military, and economic information; pen portraits of prominent people; and rumors and whispers overheard at the court. In addition

to conducting diplomacy, embassy staff members were engaged in espionage, and duplicity, bribery, and subversion became ubiquitous tools of diplomacy. As English diplomat Sir Henry Wotton (1568–1639) allegedly quipped, “An ambassador is an honest man, sent abroad to lie for the good of his country.” At the same time the diplomatic officials were granted sanctity of person, and any abuse directed against them was considered a breach of honor and insult to a state.

China had one of the most sophisticated diplomatic systems, which flourished under the Ming dynasty (1368–1644). The Ming emperor received numerous foreign envoys at the capital at Nanjing but also sent diplomatic missions, the most famous of which was the enormous tributary missions and expeditions of Admiral Zheng He (1371–1433), who sailed with the imperial fleet throughout Asia and eastern Africa. These expeditions ended in 1433, and the Chinese state limited its diplomatic engagements with the outside world, although it did maintain contacts with the newly arriving Europeans. The Chinese practice of kowtow (*kòu tóu*), a reverential deep bow to the ground that everyone presented to the emperor had to perform, proved to be a major issue of contention for European diplomats, who interpreted it as a sign of submission to the Chinese ruler. Similarly, during its expansion, the Ottoman empire generally employed unilateral nonreciprocal diplomacy when dealing with European states (e.g., Venice, the Habsburg empire, Poland). Thus, in his negotiations with European states, very rarely did the sultan treat their rulers as equals, and he usually claimed to have unilaterally granted peace or trade concessions at his own discretion. The Treaty of Karlowitz and the Treaty of Passarowitz, signed according to Western diplomatic norms in 1699 and 1718, respectively, signaled

a change in the status of the Ottoman empire. It was no longer an expanding power but instead was now a retracting power.

While diplomacy was vigorously pursued, the possibility of war was taken for granted throughout the world. Yet the nature of warfare changed profoundly between 1450 and 1770. The sixteenth and seventeenth centuries particularly marked a turning point in virtually all aspects of war. Army organization, strategies and tactics, and weapons went through major transformations. In 1450 Europeans were relatively inconsequential on the world stage. Constantly fighting against each other, they failed to halt the Ottoman destruction of the Byzantine empire and subsequent advances into the Balkans. By 1529 the Ottomans threatened Vienna at the very heart of Europe. Meanwhile, the Chinese were for a time the dominant power in Asian waters. In the early fifteenth century China's fleets were far larger than anything Europeans could deploy. There were several dynamic non-European powers; conflicts in the fifteenth- and sixteenth-century world did not necessarily center around Europeans. For instance, in 1526 Babur, a Muslim conqueror from central Asia, won one of the most decisive battles of the century at Panipat and established the Mughal dynasty in northern India. The revived Mongol state led by Altan Khan launched new attacks on Ming China. Toyotomi Hideyoshi united Japan and launched major campaigns against Korea in the 1590s. Meanwhile, Sapa Inca ("paramount leader") Pachacuti (ca. 1438–ca. 1471) and his successor Túpac Inca (ca. 1471–ca. 1493) expanded the borders of the Inca state to include most of the eastern coastline of South America. In central Mexico, the Triple Alliance of Tenochtitlan, Texcoco, and Tlacopan extended its power from the Gulf of Mexico to the Pacific shore.

Three hundred years later, European militaries were qualitatively superior to those of the rest of the world and spread across the entire globe. The seventeenth century marked a gradual but consequential shift in global power. Europeans checked the Ottoman advances at Vienna (1529), Malta (1565), and Lepanto (1570). European warships in the Indian Ocean destroyed the leading Indian and Ottoman fleets, and European trade and military strength began to make its impact in the Indian and Atlantic oceans. Spanish forces overthrew the Aztec and Inca states, a process greatly aided by European diseases. Of course, European impact was not universally strong, and much of Asia successfully resisted European inroads while adopting some European military techniques and weapons. China remained the strongest and most expansive state in East Asia, successfully controlling the Dutch in Formosa (Taiwan) in the 1660s and preventing Russian advances in the Amur Valley in the 1680s. The Omani Arabs expelled the Portuguese from East Africa in the 1690s, and the Ottomans continued to display remarkable resilience and success against European attacks in the early eighteenth century. Nevertheless, throughout this period European armies and navies succeeded in carving out global empires, as their superior military technology and tactics gave them major advantages over American and African states. European maritime dominance was of particular importance; it allowed Europeans to control maritime lanes to conduct

profitable trade that, in turn, sustained further expansion. This meant that it was Europeans who sailed off the coast of Asia, the Americas, or Africa and not the other way around. Europeans explored the world, charted the oceans, established markets, traded goods, and acquired the knowledge that further strengthened them. For example, the dominance of Spanish fleets in the Atlantic in the sixteenth century explains that empire's vast wealth. England's rise to global power rests primarily on its command of the seas. After the defeat of the Spanish Armada in

1588 and of the Dutch fleets in the seventeenth century, the English fleet became the world's most powerful naval force by the late eighteenth century.

However, certain qualifications must be placed on the above-mentioned generalization concerning European military superiority. Scholars often highlight European success while overlooking (or intentionally ignoring) differences in military priorities between European

and local states. For example, while the Portuguese secured their naval dominance in the Indian Ocean in the sixteenth century, China was occupied with expelling the Mongols, expanding into Korea, suppressing domestic turmoil, and curtailing Japanese pirates. Although the Portuguese and the Chinese did not fight a major war, a Chinese fleet, employing cannons, defeated a Portuguese squadron off Tunmên in 1522. Yet China, like other East Asian naval powers (Japan and Korea), did not attempt to challenge the Portuguese presence in the Indian Ocean since it had no interests in overseas territories and limited itself to protecting its shorelines. One wonders what would have happened if the Chinese continued to deploy large numbers of warships as they did prior to 1433.

The changes in the theory and practice of warfare over these three centuries proved to be so profound that many scholars often refer to this period as the era of the Military Revolution. The development was both cause and consequence of the transition from feudalism to capitalism, the emergence of early modern nation-states, and the formation of overseas empires. The introduction of gunpowder weapons was an important component of the Military Revolution. Gunpowder, invented in China by the 900s, had been earlier utilized by Chinese and some Asian states and reached Europe in the 1200s. In other parts of the world social, cultural, political, and economic environments prevented large-scale adaptation of gunpowder weapons. Thus, in Iran and Egypt local elites were reluctant to use gunpowder technology because of the perceived un-Islamic and dishonorable nature of these weapons. Furthermore, Iran was less urbanized than the Ottoman empire or India and was dominated by a powerful tribal aristocracy that traditionally relied on heavy cavalry. This aristocracy resisted the introduction of new technology that threatened its status, while the Iranian rulers, lacking urbanized centers, lacked sufficient funds to draw upon in building a modernized army. In India the Mughals made limited use of cannons and hand weapons, since it was their cavalry that brought them military superiority on the battlefield.

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Europe proved to be more receptive and by the mid-1400s experienced the gunpowder revolution that permanently transformed the nature of warfare. The change came slowly, since until the discovery of the process of corning (rolling and dampening), gunpowder was highly volatile and presented as much danger to its maker and user as to the intended victim. In 1460 Scotland's King James II was killed by one of his own malfunctioning guns. Europeans excelled in the art of gun making. Drawing upon their long experience of casting church bells, Europeans produced guns from a single cast, resulting in cannons much stronger than could be made by fusing together individual pieces of metal. The gunpowder artillery transformed siege warfare, as medieval castles proved to be vulnerable to artillery bombardments. In 1453 a renegade European master in the Ottoman service produced massive guns, called bombards, that decimated Constantinople's defenses and led to the city's fall in just six weeks. Similarly, Charles VIII's invasion of Italy in 1494 clearly demonstrated the potency of siege artillery as the French captured fortresses in quick succession. This led to the development of *trace italienne*, or star-shaped fortresses, that could successfully withstand artillery barrages. The most effective fortress designs were those of French engineer Sébastien Le Prestre de Vauban, who created dozens of fortresses employing bastions, ramparts, and angled fortifications to create interlocking fields of fire. Cannons also found use in the navy. By cutting gun ports in their hulls, Europeans turned their multisail ships, designed for the rough seas of the Atlantic, into powerful weapons that gave them a decisive advantage at sea from the late fifteenth century onward.

European smiths also created a portable hand-held ballistic weapon, the arquebus, an early muzzle-loaded firearm that appeared in some European armies by the late fifteenth century. Such firearms soon assumed the leading role in European armies because they reduced the overall skill level needed for military service. For example, it took years of practice to train a longbow archer, while almost any man could use a gunpowder weapon after a brief training period. Incremental refinements to the arquebus led to the matchlock musket (which used a burning wick to ignite gunpowder) in the early seventeenth century and to the flintlock musket (which was operated by the strike of flint upon a steel plate) by the eighteenth century. However, early small arms were notoriously inaccurate and required men to fire in large volleys without aiming; rifling, which imparts a spin on projectiles and increases their accuracy and range, remained limited. In the 1690s the invention of the ring bayonet, which could be fixed upon a musket, allowed the infantrymen to defend themselves between volleys.

Some of the factors that contributed to the European adaption of gunpowder weapons include a political instability that produced continued intrastate rivalry and warfare that sustained military innovation, a relative free-enterprise system, and the availability of key natural resources (e.g., iron, coal, etc.). Medieval European warfare had been dominated by heavily armored cavalry, but its power was waning even before the arrival of gunpowder weapons. This was in contrast to the Islamic powers (Mamluk Egypt and Safavid Iran) and Japan, where the

power of mounted warriors (mamluks and samurai) remained strong enough to resist the introduction of gunpowder weapons that would have undermined their status and authority. By the early sixteenth century some European armies revived an emphasis on the use of infantry. Thus, the Spanish army led the way in creating permanent infantry regiments, called *tercios*, that utilized pikes and gunpowder weapons and combined mobility and firepower. The Spanish success in Italy, where tercios established their value against French and Italian armies, proved contagious, and other European countries adopted new tactics. To fire gunpowder weapons effectively in volleys required getting men to complete a series of requisite steps in concert. Dutch prince and military reformer Maurice of Nassau created modern drill tactics that were based on uniform and intense discipline and new tactical formations. Maurice and King Gustavus Adolphus of Sweden developed new linear formations that featured soldiers armed with firearms lined up in rows, usually six to ten men deep. As the first line fired, soldiers moved to the back to reload, allowing the second line to open fire. This continuous rate of fire proved to be deadly effective, as revealed in the experiences of the Thirty Years' War (1618–1648) and subsequent conflicts.

The gunpowder technology did not remain exclusively in the hands of Europeans. Other nations quickly realized its advantages over traditional cavalry or missile troops and successfully implemented it. Thus, in the 1520s Babur employed men armed with matchlock muskets and field artillery against the Lodis and Rajputs, whose armies used no firearms. In Iran the Safavids, whose lack of gunpowder technology played a decisive role in their defeat against the Ottomans in 1514, quickly adopted the new technology. Thus, in 1528 the Safavid artillery played

an important part in the Iranian victory over the Uzbeks at Jam (1528). In Africa, the Songhai cavalry suffered heavily from Moroccan musketry at Tondibi (1591). Yet firepower was not always the decisive factor in winning a war. For example, European cannons were less effective against African earthwork fortifications. More importantly, there was a difference in understanding the very nature of warfare. In Mesoamerica in the early 1520s the Aztecs

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suffered defeat not because of Spanish firearms but in part because of their different cultural conceptions of warfare in which capturing enemy soldiers, not taking enemy territory and destroying its state, was the principal goal. Europeans, on the other hand, inherited Greek and Roman concepts of war that stressed killing, not capture.

In Europe the Military Revolution became closely intertwined with the transition from feudalism to capitalism and the rise of the nation-states. Prior to the fifteenth century, many European states relied on mercenary forces or private armies-for-hire (e.g., condottiere). Yet by the late seventeenth century, mercenary armies all but disappeared from Europe and were replaced by large armies of mobilized conscripts commanded by officers commissioned by sovereigns. Military administration

became highly centralized. For example, Oliver Cromwell's New Model Army, established in 1645, imposed a common form on all English forces, including the famous redcoat uniform. The gradual increase in the size of armies as well the cost to maintain them meant that only the wealthiest states could afford militarization. The balance of power in the world thus shifted in favor of those who could centralize their authority, expand their bureaucracies, and intensify taxation to gather resources necessary for the conduct of war. The power of kings and emperors grew, leading to the establishment of the so-called gunpowder empires of Spain, France, and England in western Europe; the Ottomans and Safavids in the Middle East; and the Mughals in India. Thus, in France the government of Louis XIV created a vast bureaucracy that handled the daily tasks of maintaining the largest army in Europe, which allowed France to exercise its authority over the entire continent.

Initially recruitment of infantrymen was accomplished through contracts for mercenaries. Prior to the seventeenth century, warfare was a seasonal affair. Most campaigning occurred between late spring and autumn, and few wars lasted longer than two or three consecutive campaigns. Hiring mercenaries for a brief period of time therefore made financial and military sense. However, mercenary recruitment oftentimes brought marginal elements of society into the army. Many of them were beggars, debtors, or criminals who enlisted for the lure of modest payments and potential plunder. Unit cohesion and loyalty were largely nonexistent, and levels of desertion were extraordinarily high. Mass disbanding at the end of the war often led to local violence and vagrancy. The nature of military service changed in the late seventeenth century, including changes in the character of recruitment and army life. The continued warfare meant that demand for soldiers was too great to rely on voluntary enlistment or mercenary contracts. Some states experimented with conscripting parts of their populations. Thus, in Sweden conscription of a part of the peasantry established a core of career soldiers around which the Swedish army was formed. In France conscript local militias were used from the 1680s, while in early-eighteenth-century Russia annual levies specified a proportion of peasants destined for permanent military service. The establishment of these permanent armies changed the life of the soldier. In return for regular pay, more rigorous standards of discipline were demanded, and soldiering turned into a full-time occupation.

Newly established military bureaucracies supervised details concerning recruitment, equipment, and service; uniforms were standardized, partly to inspire unit cohesion and to eliminate individuality from military service. Soldiers became separated from civilian life and contained within barracks, with their heavy emphasis on drill and military duties. A permanent army meant the existence of a number of permanent units, which eventually served as the source of group identity, loyalty, and rivalry with other units. At the same time, soldiers received some assurance of being supported in old age or disability, and this period witnessed the establishment of the first modern pensions and hospitals. The *Hôtel des Invalides*, founded in 1670 on the outskirts of Paris, was the first of many hospitals for military veterans. Mass armies produced

important social change, as they undermined the status of military elites. In Japan the military elite succeeded in preventing this change. After drawing on guns, provided by Europeans, to unite Japan, the Tokugawa shoguns banned guns in the seventeenth century and preserved the existing social order (with samurai holding top position in the Japanese society) well into the nineteenth century. In Europe the nobles, while losing their monopoly on military power, continued to play an important military role as officers. In the Ottoman empire the Janissaries, elite troops of male Christian children levied through the *devshirme* system (a tax also known as the child-collection tax in which Christian boys from the Balkans and Anatolia were taken from their homes, enslaved, and converted to Islam) from conquered Christian countries came to wield such prestige and influence that they dominated the government and blocked any reforms that threatened their status.

In Europe the rise of the new warfare had a terrible impact on human experiences of war. During the Thirty Years' War (1618–1648) as many as 1 million men served as mercenaries, and failing to receive regular

payments, they often turned to plundering, pillaging, and raping. Germany, which saw most of the action during this war, was thoroughly devastated, as entire villages were wiped out and towns sacked. Some estimates suggest that over 7 million civilians were killed in Germany during the war. Similarly devastating was the English Civil War (1642–1648). As fire-arm technology matured, battles resulted

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in heavier casualties. At Malplaquet in 1709, direct charges against musketeers led to over 30,000 casualties in just seven hours that were vastly disproportionate to desired political and military aims. By the early eighteenth century improvements in military technology and the onset of the Enlightenment led to rethinking of the nature of warfare. Emphasizing rationality, European thinkers believed that armies motivated by religion or ideology were irrational and too dangerous. The European thinkers urged moving away from pitched battles that produced carnage to fight more “rational” wars for limited gains and at limited cost. Thus, in the eighteenth century armies no longer sought to destroy their foes in decisive battles, and instead methodical operational warfare became a mainstay.

Europe's ability to seize an early lead in the gunpowder revolution produced an increase in warfare on the European continent but also expansion of European military power at the expense of non-European states. Between 1450 and 1750 there was an unprecedented spate of wars and revolutions throughout the world. Looking at the seventeenth century alone, one is struck by the fact that only 2 years (1670 and 1682) in an entire century were without a war between the European states. Looking at individual states, we see that between 1618 and 1678 the Dutch Republic was at peace for only 14 years, France was at peace for only 11 years, and Spain was at peace for only 3 years! These wars produced unparalleled political, social, and religious changes. The

prolonged Hundred Years' War ended in 1453 with a victory for France, while for England the loss of its continental possessions profoundly affected the development of that country for the next 500 years. In 1494 France attempted to expand its power to rich Italian states but became embroiled in a long conflict with Spain. By the end of the Italian Wars in 1559 Habsburg Spain had been established as the premier power of Europe, while the Italian states, which had wielded so much power during the Renaissance, were from now on reduced to second- and third-rate powers. Defeated in this conflict, France was plunged into a long political and religious strife that came to an end in 1589. In the meantime, England successfully dealt with the Spanish threat in 1588 and supported the Dutch rebels, who in 1648 secured their independence from Spain after 80 years of struggle. These conflicts sapped Spanish resources, and by the late seventeenth century Spain had entered a long period of decline. In the mid-sixteenth century Germany saw the beginning of religious conflict that continued for almost a hundred years. The Thirty Years' War produced devastation on an unparalleled scale in Germany, which lost up to a quarter of its population, while entire regions were laid to waste. Yet this war also marked the rise of France as a great power on the continent, and European states spent subsequent decades seeking to contain the French hegemony. Louis XIV involved France in several costly military campaigns culminating in the War of the Spanish Succession (1701–1714) that almost bankrupted France and ended its dominion over continental Europe. At the same time, the prolonged Great Northern War (1700–1721) ended in the defeat of Sweden and the rise of Russia as a dominant power in northeastern Europe.

The European penchant for war was shared by other regions of the world. In fifteenth-century Japan increased rivalry between daimyos (lords) and a dispute over shogunal succession led to the era of the Warring States, an era of nearly continuous military conflict and profound social and political upheaval that lasted until the early seventeenth century. The introduction of European firearms in the mid-sixteenth century proved to be a turning point in the Japanese civil strife. Oda Nobunaga, a samurai of the lesser daimyo ranks, used European military technology to defeat neighboring lords and extend his power to a large part of Japan. Following Nobunaga's death, one of his generals, Toyotomi Hideyoshi, completed the unification of Japan and pursued expansionist policies, organizing two massive (but unsuccessful) invasions of Korea between 1592 and 1598. Hideyoshi's death in 1598 provoked a power struggle that was won by Tokugawa Ieyasu in the decisive Battle of Sekigahara in 1600. Tokugawa's victory marked the beginning of the Tokugawa shogunate that lasted until 1868. While the emperor retained sovereign authority, the real authority and power was in the hands of the Tokugawa shoguns, who brought peace, stability, and economic growth to Japan while isolating it from the rest of the world.

In Southeast Asia, warfare between local states remained traditional, and the effect of gunpowder weapons was negligible. The Burmese kingdom of Toungoo conquered Pegu and Ava during the 1530s–1540s and seized Lan Na in 1556 and the Thai capital of Ayuthia in 1564. In the early eighteenth century the Mon (Talaing) Rebellion threw off the rule of the

Toungoo dynasty and led to the establishment of a Mon kingdom at Pegu. The Mon conquered the Burmese capital of Ava in 1752 but suffered defeats at the hands of Alaungpaya during 1754–1757. Alaungpaya eventually established the Konbaung dynasty that seized Tenasserim in 1757 and Manipur in 1759 and ravaged Siam and Laos in the 1760s. The arrival of Europeans had an important effect in the East Indies, where the Dutch East India Company gradually acquired sovereignty over the local states.

Gunpowder technology also played an important role in the struggle between Hindu and Muslim states in India. In 1526 Babur, a descendant of Timur, invaded northern India and defeated the army of the sultanate of Delhi, establishing the Mughal state. His successors conducted a series of victorious campaigns that brought Bengal (1575–1576), Kashmir (1585–1589), Tatta (1586–1593), and Gujarat (1572–1573) and Bijapur, Golconda and Baltistan (1630s) under Mughal authority. The Indian states developed armies that featured traditional cavalry, led by the local nobility, and a European artillery corps, often financed by a royal monopoly on precious stones. Vulnerability of existing fortresses and castles to artillery bombardments encouraged construction of less exposed fortifications that featured bastions similar to those in Europe. In the early eighteenth century the Mughal authority rapidly declined and was threatened by the rising power of the Hindu Marathas. Yet the invasions of Nadir Shah (1739–1741) and Ahmad Khan Abdali (1752–1762) greatly weakened both the Mughals and the Marathas, accelerating tendencies toward regionalism and fragmentation. This allowed the British East India Company to consolidate its power base in Bengal and Bihar and conduct successful campaigns to expand its authority throughout India.

In the early sixteenth century Altan Khan, a descendant of Chinggis Khan, united Mongol tribes once again and used their military strength to threaten Ming dynasty China. Between 1529 and 1570 he led several raids into China, crossing the Great Wall, besieging Beijing itself, and compelling the Chinese emperor to grant favorable trading rights to the

Mongol khanate. In response to the Mongol attacks, the Chinese developed mobile artillery and upgraded the Great Wall to accommodate musketeers, although the bulk of the Chinese army remained armed with traditional weapons. The early experience with gunpowder in China ensured that its fortified cities had very thick walls capable of withstanding artillery. The Ming dynasty's weakness in the first half of the seventeenth century was accompa-

nied by the rise of the Manchu state in Manchuria as a major power. After expanding their authority to Korea and Inner Mongolia, the Manchus entered China during a large-scale rebellion and replaced the Ming dynasty in 1644. The Ming resistance endured in the south of China, and sporadic warfare lasted for decades until the long reign of K'ang-hsi produced consolidation of central authority in the early eighteenth century.

By the late sixteenth century the Ottoman empire was one of the world's most powerful empires. During the reign of Sultan Mehmed II

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(1451–1481) the Ottoman realm rapidly expanded. With almost all of Anatolia under his control, Mehmed II besieged Constantinople, the capital of the once-mighty Byzantine empire, and captured it in May 1453. The loss of Constantinople exposed eastern Europe to a wave of Ottoman expansion. Although Mehmed's death was followed by a struggle for succession, major expansion resumed under Sultan Selim I (1512–1520). The Ottoman army by now had become a mixed force that featured traditional cavalry, infantry equipped with handguns, and field artillery. This military potential allowed Selim to conduct triumphant campaigns in the east, defeating the Safavid army at Chaldiran in August 1514 and capturing Syria and Palestine in 1516 and Egypt in 1517. Firepower was decisive in the Ottoman victories in Iran and Egypt. The conquest of Egypt and its vital port of Alexandria allowed growth in Ottoman naval strength in the Mediterranean. By the end of Selim's rule, the Ottoman state extended from Iraq to Serbia and from Anatolia to Tunisia.

Selim's son Suleiman (1520–1566) only further enhanced the Ottoman supremacy as he led his armies on 13 major campaigns and numerous minor ones. In 1526 he crushed the Hungarian army at Mohacs, and after overrunning most of Hungary he besieged (unsuccessfully) the Austrian capital of Vienna in 1529. The conquest of Iraq in 1534 was followed by Aden in 1538 and Massawa (on the Ethiopian coast) in 1557, while the Ottoman authority extended along the coast of North Africa to Algiers. The Ottomans also achieved considerable success in the eastern Mediterranean Sea, although they failed to capture Malta in 1565 and suffered defeat at Lepanto in 1571. Suleiman's reign proved to be the Golden Age of the Ottoman empire, and the next two centuries saw its gradual decline. In the seventeenth and eighteenth centuries the Ottomans did show occasional glimpses of the past grandeur but were largely on the defensive. During the tenure of the capable grand viziers from the Koprulu family, major domestic reforms and vigorous foreign policies were attempted, but they ultimately failed to produce decisive results. The Ottoman siege of Vienna in 1683 was the last time the Ottomans seriously threatened central Europe. The subsequent Treaty of Karlowitz (1699) marked a turning point in Ottoman history, as Sultan Mustafa II (1695–1703) was forced to surrender Hungary and Transylvania to Austria. In the eighteenth century the Ottomans were engaged in prolonged conflicts against the European states—most importantly against the rising Russian empire, which fought the Ottomans five times within that century—that exhausted Ottoman treasuries and contributed to internal turmoil.

In the early sixteenth century Iran emerged as a powerful state under the leadership of the Safavid dynasty. Yet this process was fraught with challenges. In 1514 the Safavids suffered a devastating defeat at Chaldiran, and in the mid-sixteenth century repeated Ottoman attacks kept Safavid power in check. The situation, however, changed with the accession of Shah Abbas to the Iranian throne. A brilliant statesman and commander, Shah Abbas presided over rapid territorial expansion and a cultural and economic blossoming. To consolidate his rule, Abbas modernized his army by importing European gunpowder technology, establishing an artillery corps, and creating a standing army of slave-soldiers

known as ghulams that he used to suppress domestic revolts and coerce disloyal provinces into submission. Abbas used this military might to expand his sphere of influence to the Caucasus, Iraq, and central Asia. Shah Abbas's death in 1629 marked a watershed moment in Iran's history. Most shahs after him lacked the necessary skills and experience, and the country suffered from internal divisions and turmoil. In 1722 the Afghan tribes invaded Iran and overthrew the Safavids. Over the next decade the country was torn by vicious civil strife as various pretenders fought for the crown. Nadir Khan of the Afshar tribe emerged as victor in this conflict, and in 1736 he proclaimed himself as shah. Nadir was a brilliant military commander whose campaigns revived an Iranian empire that extended from Georgia to India. Yet despite his successes, Nadir had come to be regarded as a cruel and capricious tyrant and faced a number of internal revolts and conspiracies, one of which resulted in his assassination in 1747. His death once more plunged Iran into a civil war that continued for three years and led to the rise of the Zand dynasty. Although its founder Karim Khan proved himself as a capable commander who reclaimed all of Iran by 1760, his success proved to be fleeting, and political disorder and economic decline characterized Iranian life. His death in 1779 led to another round of violence that only further weakened the Iranian state.

African warfare featured a variety of conflicts between African states, between native Africans and Europeans, and between non-African powers. The nature of African warfare was transformed by the introduction of firepower and the use of larger armies. In sub-Saharan Africa, shock warfare featuring hand-to-hand fighting in "open" order and missile tactics (the use of javelins, bows, etc.) prevailed until the use of firearms. This style of warfare had important social consequences, since it was rather selective in its manpower requirements and supported a social hierarchy. The spread of gunpowder changed this hierarchy as African states (e.g., Akwamu and Denkyira) began to conscript all males fit to bear arms. Still, gunpowder technology spread in

sub-Saharan Africa over a long time span and was not fully established until the 1770s. European colonization attempts certainly contributed to this process but also revealed the limitations of European musketeers, who struggled to adjust to the open-order fighting methods of their opponents. Throughout the seventeenth century European operations in West Africa were restricted to coastal possessions as diseases, difficult terrain, and local resistance prevented further expansion. In most cases Europeans achieved success against local states only when they oper-

ated in combination with African soldiers. In East Africa local African states were not naval powers, and this allowed the Portuguese to establish colonies in the sixteenth century. Yet 100 years later the Portuguese

Throughout the seventeenth century European operations in West Africa were restricted to coastal possessions as diseases, difficult terrain, and local resistance prevented further expansion. In most cases Europeans achieved success against local states only when they operated in combination with African soldiers.

hegemony was threatened by the Omani Arabs, who sacked Mombasa in 1661, raided Mozambique in 1670, and captured the Portuguese Fort Jesus in 1698. The Portuguese regained Mombasa in 1728 after a local mutiny but lost it again in 1729. In southern Africa the Dutch established a successful colony at Cape Colony, but their expansion to the east encountered the Xhosa, whose resistance delayed European expansion into the south African hinterland.

Throughout the sixteenth and seventeenth centuries Africa also experienced several important conflicts between non-African powers. Spain and Portugal conducted operations

against Muslim states in North Africa. The Anglo-Dutch rivalry in Europe spilled over to the Guinea coast in the second half of the seventeenth century. Similarly, struggles between Spain and the Dutch oftentimes unfolded along the Gold Coast. At the same time, Ottoman authority declined in North Africa during the early eighteenth century as Algeria, Tunisia, Tripolitania, and the Egyptian Mamluks gained greater sovereignty. The first three states became known as Barbary States to Europeans and were involved in numerous wars against both each other and European states.

—*Alexander Mikaberidze*

■ Introduction: Ideologies of Domination

People develop ideologies to justify and sustain every conflict. European explorers and conquistadors in the newly discovered Americas believed that they were doing God's bidding, subduing people in order to save their souls. Christopher Columbus's letter to the Spanish monarchs, written on his first voyage to the unknown land, provides clear evidence for the desire that guided him: "And Your Highnesses, as Catholic Christians and Princes devoted to the Holy Christian Faith and the propagators thereof, and enemies of the sect of Mahomet and of all idolatries and heresies, resolved to send me . . . to the said regions . . . to observe the manner in which may be undertaken their conversion to our Holy Faith." The Portuguese explorer Bartholomew Diaz echoed this sentiment, explaining his actions as motivated by his desire "to serve God and His Majesty, to give light to those who were in darkness." Similar sentiments can also be found in the Ottoman or Safavid policies, which oftentimes called for a holy war in defense of or to spread Islam.

However, such religious rhetoric often concealed more pragmatic motives. Thus, Spanish rulers Ferdinand and Isabella's claim to being "Catholic Kings" and their struggle against the Moors went hand in hand with their political motives of consolidating their power. In

seventeenth-century France, Cardinal Richelieu's approach to political philosophy often contradicted traditional Christian views, which he supplanted with the concept of *raison d'état*. The French state was a Christian state governed by a Christian king, Richelieu reasoned; therefore, whatever was done for the state was done for God. Such political philosophy justified expanding authority of the state and its domination, if not outright repression. As the cardinal famously put it, "God absolves actions which, if privately committed, would be a crime." French bishop Jacques-Benigne Bossuet further elaborated this ideology, arguing that "the royal throne is not the throne of man, but the throne of God Himself." The king's duty to God should be the only constraint on his power.

In China, on the other hand, the idea of the Mandate of Heaven was a central concept in China's political philosophy. Under this concept, heaven granted a mystical mandate to virtuous rulers whose actions determined the success or failure of their dynasty and the state. The more virtuous the ruler, the greater the mandate to rule. Rebellions, civil wars, invasions, famine, and plagues were common signs that a dynasty had lost the mandate to rule, and that a new ruling house would soon appear.

—*Alexander Mikaberidze*

The *Ain-i Akbari*—Akbar’s Empire in a Book

The *Ain-i Akbari* (literally Akbar’s Law, better translated as the Register of Akbar’s Empire) of Abu al-Fazl Allami is a massive and detailed description of the government and empire of the Mughal emperor Akbar (r. 1556–1605). Although the *Ain* runs to three volumes and more than 1,600 pages, it is itself the third volume of a larger work, the *Akbar-namah*, the official chronicle of Akbar’s reign. Abu al-Fazl was the principal architect of Akbar’s political program, not merely his biographer. The *Akbar-Namah* and thus the *Ain* articulate that program and do not merely record and describe. The historical part of the work depicts Akbar’s sovereignty as the outcome of human history, for it starts with Adam, and more specifically the Chingiz-Khanid and Timurid claims to universal monarchy. Abu al-Fazl says himself that “my sole object in writing this work was, first to impart to all that take an interest in this auspicious century, the wisdom, magnanimity, and energy of him who understands the minutest indications of all things, created and divine . . . and secondly to leave future generations a noble legacy” (1:152). He certainly achieved the latter goal.

The *Ain* consists of four books. The first describes Akbar’s imperial household; the second is a gazetteer of the empire, with a description of the provinces and provincial administration; and the third is primarily an anthropological description of the culture of Hindustan (the northern third of the Indian subcontinent) but includes such other material as a collection of Akbar’s sayings. Each part of Abu al-Fazl’s work connects to his conception of Akbar’s kingship. As the first excerpt indicates, he depicts kingship as a light emanating from God, a concept that dates back to pre-Islamic Iran. In Abu al-Fazl’s description of the insignia of royalty, he explains that kings “are fond of external splendor because they consider it an image of Divine glory” (1:52). He blames animosity between adherents of different religions on “the apathy of princes” (3:5), thus praising Akbar’s religious policy of *sulh-i kull* (peace with all, equal treatment of all religions) by implication.

Book I is a treasure trove of information on a variety of issues. It describes all of the products

of the imperial workshops, including coinage, tents, carpets, paintings, clothing, and weapons; the care and equipment of animals, including elephants, horses, camel, bovines, and mules; the imperial kitchen, including recipes and food prices; and the imperial construction program and building materials. Since the ruler was both the greatest consumer and the greatest industrialist of the empire, the descriptions provide immensely valuable data on economic history and the history of technology as well as art and culture. Abu al-Fazl’s comments on imperial artillery make clear that he regards the possession of guns as a mark of the security and splendor of the empire; guns were thus not merely practical weapons. He praises Akbar for devising several innovative weapons.

The unique value of Book I, however, lies in the descriptions of court routines, rituals, and etiquette and of Akbar’s role as a spiritual guide. Here, Abu al-Fazl presents the image of Akbar as Akbar wished to be seen. Abu al-Fazl, in his own words, ignores “those weak-minded zealots” who accuse Akbar of worshipping the sun and fire, choosing to “dismiss them with a smile” (1:164). Abu al-Fazl depicts Akbar not as a prophet but as a spiritual guide, defining that role as an extension of his kingship. Seekers of enlightenment from all religious backgrounds benefit from his insight and his blessing. The official description of Akbar’s personal religious order, the *Din-i Ilahi*, is in Book I. The explanation of court rituals defines making obeisance to the ruler as a privilege; the higher the rank of the individual, the closer the approach and the deeper the bow. The rituals thus assert that status depends on submission to the ruler; the deeper the submission, the higher the rank. The *Ain*’s description of court rituals continues in Book II with an explanation of the weighing ceremonies on Akbar’s solar and lunar birthdays, in which the emperor was weighed against such commodities as gold, silver, and tin and various grains, drugs, and fruits and the equivalent weights in these commodities given away. Akbar instituted these rituals, which followed Hindu models and helped to articulate Akbar’s sovereignty in a manner recognizable to Hindus.

Most of Book II, however, deals with Akbar’s military establishment, aspects of administration,

hunting, and amusements. Abu al-Fazl provides only a brief description of the *mansabdari* system, the system of numerical ranks that provided the military and administrative framework of the empire, and does not provide a systematic description of the Mughal bureaucracy; he devotes more attention to hunting, one of the standard activities of kings. His treatment of the military establishment is somewhat distorted because he ignores the contingents maintained by Mughal officers, the vast majority of the Mughal army, describing only the various units that formed part of the court establishment.

Although most of Book III consists of a description of provincial administration and a gazetteer of the empire, the book begins with an account of various calendars including, most importantly, the Illahi calendar, which Akbar established to replace the Hijri (Muslim) calendar. The description of provincial administration emphasizes justice—the protection of cultivators from oppression—in revenue collection. The gazetteer includes description of administrative subdivisions, revenue data, and general background, including provincial histories, of the 12 provinces of the empire.

Most of the last book describes Hindu culture and philosophy. It also includes a list of outsiders who have come into India, from Adam to Akbar's father Humayun; a list of the Sufi saints of India; a collection of Akbar's sayings; and a brief autobiography. Abu al-Fazl did not know Sanskrit. He derived his knowledge of Hindu culture from the Hindu intellectuals connected to Akbar's court and from the *History of Hindustan* of al-Biruni. Abu al-Fazl does not add any particular insight, but his description goes beyond what would be necessary simply to provide justification for Akbar's treatment. Abu al-Fazl makes no explicit connection to Akbar's policy of *sulh-i kull* but asserts that Hindus are in fact monotheists, as the third excerpt shows. Abu al-Fazl's vision embraces a cultural synthesis parallel to the political synthesis that Akbar had already achieved.

—Douglas Streusand

Bibliography

Abu al-Fazl. *A'in-I Akbari*. 3 vols, 2nd ed. 1949; reprint, New Delhi: Oriental Books Reprint, 1977–1978.

Abu al-Fazl. *A'in-I Akbari*. “Allami ibn Shaykh Mubarak Nagawri.” In *Akbar-nama*, translated by Henry Beveridge. 3 vols. 1897–1921; reprint, New Delhi: Ess Ess Publications, 1979.

Rizvi, S. A. A. *Religious and Intellectual History of the Muslims in Akbar's Reign*. New Delhi: Munshiran Manoharlal, 1975.

Streusand, Douglas E. *The Formation of the Mughal Empire*. New Delhi: Oxford University Press, 1989.

The Mandate of Heaven

The idea of the Mandate of Heaven, which first appeared in China during the early Zhou dynasty (1027?–771 BCE), became a central concept in China's political philosophy and remained the primary intellectual foundation for the legitimacy of later imperial rule. The idea bears certain moral and political implications that are significant and problematic for the Chinese theory of political authority.

The earliest description of the concept of the Mandate of Heaven appeared in the *Book of Odes* and the *Book of Documents*, both believed to have been created during the early Zhou. At the time, the Zhou dynasty had defeated the Shang (1045 BCE) and was confronted with potential threats from the members of the old Shang ruling class. The crucial question for the Duke of Zhou, who now claimed political authority, was how to justify the conquest of the Shang and institute a government. He argued that the Zhou were able to conquer and succeed the Shang through the same qualities of virtue that had earlier enabled the founder of the Shang to overthrow and succeed the Xia. The Shang had received a mandate from Heaven to overthrow the Xia, but the descendants of the Shang had not been able to preserve the mandate. The Duke of Zhou argued that the Shang lost their mandate because their ruler ceased to cultivate virtue, and the Zhou received the mandate as a result of the virtuous conduct of their ruler.

This interpretation of the Mandate of Heaven idea contains two distinct implications that influenced the later development of the Chinese political system. First, it asserts that the Heavenly mandate is not unchangeable and is not bound to a particular dynasty. If the rulers do not continue to cultivate virtue, then Heaven can confer

➤ EMPEROR QIANLONG'S LETTER TO KING GEORGE III

In 1793 Emperor Qianlong of the Qing dynasty (1644–1911) addressed two imperial edicts to King George III of Britain, rejecting the request communicated by Lord Macartney to permit an ambassador to the imperial court and trading privileges. Qianlong's letters asked how Britain could expect the Celestial Kingdom to alter its traditional regulations to meet the mundane desires of barbarians. Qianlong asserted also that since the beginning of history China had had a moral system monitored by wise rulers, and "there has been no hankering after heterodox doctrines." Following the Confucian tradition, China's emperor saw changes as threats and looked to the past to find ways to preserve the Confucian imperial state. As he observed:

"Swaying the wide world, I have but one aim in view, namely, to maintain a perfect governance

and to fulfill the duties of the state: strange and costly objects do not interest me. If I have commanded that the tribute offerings sent by you, O King, are to be accepted, this was solely in consideration for the spirit which prompted you to dispatch them from afar. Our dynasty's majestic virtue has penetrated unto every country under heaven, and kings of all nations have offered their costly tribute by land and sea. As your Ambassador can see for himself, we possess all things."

—Shu-chin Wu

Source

Franz Schurmann and Orville Schell, *The China Reader: Imperial China; The Decline of the Last Dynasty and the Origins of Modern China* (New York: Vintage, 1967), 107.

the mandate on another king or dynasty. Political authority, therefore, is believed to be based on objective, universal moral criteria rather than on power or lineage. This faith in political rule by virtue, however, does not diminish the fact that the victory of a new dynasty ultimately depends on power. Questions of how the Mandate of Heaven would be transmitted and how political rulers would manifest their virtue remained unresolved by China's political theorists.

Second, the idea that the Mandate of Heaven is conferred on one man of exceptional virtue implies that political order can be inaugurated and maintained only by the support of an elite. This view assumes the need for hierarchy and political order, which can only be maintained by men who have made themselves virtuous and are therefore entitled to govern. In addition, this view places great emphasis on human effort to cultivate virtue in order to serve Heaven, a view developed in detail later by Confucians.

The term "Mandate of Heaven" gained wide application in Confucius's time (ca. 551–479 BCE), but an idea of kingship that was compatible with the Zhou interpretation of the concept awaited further development by Mencius (371–289 BCE). In later Chinese thought, the Mandate of Heaven was linked to the idea that human

history cycles through periods of order and disorder, an idea widely appropriated by Chinese emperors and scholar-officials to explain the rise and fall of dynasties.

—Shu-chin Wu

Bibliography

- Mote, Frederick. *Intellectual Foundations of China*. New York: Knopf, 1971.
- Schwartz, Benjamin. *The World of Thought in Ancient China*. Cambridge, MA: Belknap Press of Harvard University Press, 1985.
- Tang, Chun-i. "The T'ien Ming [Heavenly Ordinance] in Pre-Ch'in China." *Philosophy East and West* 11(4) (January 1962): 195–218.

Kejawen—Religious Resistance on Java

Islam is the religion of the majority of Indonesians today and is especially entrenched on the island of Java. However, many Javanese have continued to hold to a set of indigenous beliefs termed *kejawen* (Javanese science), combining animist, Hindu, and Islamic elements. *Kejawen* stresses spiritual exercises such as meditation in order to attain a state of inner tranquility. Of central importance in this system are traditional ceremonies aimed at communicating with and placating

the spirit world. Powerful spirits are held to live at various points in Java, including mountains, the sea, and gravesites. *Kejawen*, however, is not an organized religion and possesses little in the way of clergy or a central scripture. Its followers do recognize a type of shaman (*dukun*) and venerate certain texts and folktales. Nor has *kejawen* directly rejected Islam but has, in fact, existed in symbiosis with Islamic practices.

At the beginning of the fifteenth century Java was dominated by the Majapahit empire. While the court practiced a local version of Hinduism and numerous temples dotted the landscape, the population retained many animist customs. By the middle of the century, however, this powerful Hindu empire was in decline. Muslim city-states emerged on the island's northern coast, and Islam slowly spread from these outposts into the interior. The emergence of *kejawen* as an identifiable set of beliefs is related to conversion to Islam, a process that continued until perhaps the end of the eighteenth century.

The form of Islam that developed in Java's interior blended elements common throughout the Islamic world with indigenous belief in the spirit realm and a reverence for local royalty. Javans viewed the rulers of Mataram, and later Yogyakarta and Surakarta, as descendants of the Majapahit Dynasty who consorted with the spirits of the mountains and the ocean while fulfilling the traditional roles of rulers. To this day, Javans hold that the sultan of Yogyakarta possesses supernatural abilities and enjoys an intimate relationship with Loro Kidul, a mythical marine goddess. The population, while nominally Muslim, devoted itself to appeasing the spirit world through modest ceremonies conducted with the help of shamans and exorcists in response to life crises. Importance was also placed on pilgrimages to holy places situated in the mountains and forests. Little attention was paid to regular prayer or study of the Quran. Although the veneration of the graves of holy men was common elsewhere in the Islamic world before the late nineteenth century, Muslim observers have viewed Javanese Islam with suspicion, and some Western scholars have even interpreted it as somehow un-Islamic. *Kejawen* could be seen as a type of religious belief and practice that goes beyond this form of Javanese

➤ CLIFFORD GEERTZ—*SANTRI, PRIYAYI, AND ABANGAN*

The nature of *kejawen* is connected to a terminology devised for the study of Javanese religion by American anthropologist Clifford Geertz (1926–2006). He divided Javanese society into three streams, *santri*, *priyayi*, and *abangan*. Although all three groups identified themselves as Muslim, they had very different ideas as to how this religion should actually be practiced. *Santri* took their commitment to Islamic regulations more seriously. Prayer, fasting, and the pilgrimage to Mecca were all central elements of *santri* life. The *priyayi* stressed refinement and the cultivation of inner peace and spiritual power through meditation, art, and mysticism. Some critics have questioned whether the *priyayi* is really a valid religious category at all and is not better understood as a sociological label for the minor Javanese aristocracy. The *abangan* stream was that of the rural peasant whose religious outlook was a syncretism that combined animism with Hinduism and Islam. The core ritual of the *abangan* variant was the *slametan*, a ritual intended to appease hostile spirits. *Kejawen* could be seen as simply a more defined version of the *abangan* stream, with more emphasis being placed on local traditions and a more obvious rejection of some of the Islamic practices associated with the *santri*. Much has changed since Geertz conducted his fieldwork in the late 1950s, especially as its rural society has come under increasing influence from a larger Pan-Indonesian society. Many Javanese have abandoned *abangan* or *kejawen* identities in favor of more self-consciously Islamic ones.

—Michael Wood

Islam. Islamic elements are downplayed in favor of indigenous elements. This has led some to claim that *kejawen* is not in fact Islamic at all but instead constitutes a separate religion.

—Michael Wood

Bibliography

- Geertz, Clifford. *The Religion of Java*. Glencoe, IL: Free Press, 1960.
- Koentjaraningrat. *Javanese Culture*. Singapore: Oxford University Press, 1985.
- Mulder, Niels. *Mysticism in Java: Ideology in Indonesia*. Amsterdam: Pepin, 1998.

Stange, Paul. "Religious Change in Contemporary Southeast Asia." In *The Cambridge History of Southeast Asia*, Vol. 2, *The Nineteenth and Twentieth Centuries*, edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1992.

Woodward, Mark. *Islam in Java: Normative Piety and Mysticism in the Sultanate of Yogyakarta*. Tucson: University of Arizona Press, 1989.

Reconquista and Inquisition— Ethnic Cleansing in Early Modern Europe

The Reconquista, the war to expel the Muslims who had overtaken the Iberian Peninsula in 711, came to a lull in the fourteenth century after several hundred years of fighting. By this time, the only Muslim territory left was the Kingdom of Granada, which had been a tributary to Castile since 1282. Ferdinand and Isabella concluded a truce with Abu-I-Hasan Ali, the king of Granada, in 1478; however, they still began a series of frontier skirmishes throughout the 1480s. Outwardly their intentions to bring Granada under the power of the Castilian crown were religious, but their motives were also political, as the "Catholic Kings" had been making moves within the Spanish kingdoms to consolidate their power. In fact, their marriage in and of itself was a method of consolidating the power of the Castilian and Aragonese crowns. The Castilian army finally took possession of the Alhambra on January 1, 1492. While this ended the last sovereign Muslim state in the Iberian Peninsula, the Muslims of Granada were still allowed to retain their houses and mosques and to practice their religion freely, and those wishing to return to North Africa were provided a ship to do so.

The addition of Granada made it important for Fernando and Isabel to try to instill a homogenous identity among the people of their composite kingdoms. Part of this identity included religion, and they now turned to the Jews living in their midst. Thousands of Jews had already been converted to Christianity in 1391, but the descendants of the *conversos* were still looked upon with suspicion, even 100 years later. This suspicion of Judaizing prompted the Spanish

monarchs to apply to Pope Sixtus IV for an Inquisition, which he granted on November 1, 1478. Four inquisitions were established in Europe from the thirteenth to the sixteenth centuries: in France, Rome, Spain, and Portugal. The first two were established to combat heretics, and the second two were specifically established in order to root out crypto-Jews, or those Christian converts from Judaism who were suspected of secretly continuing to practice.

The Spanish Inquisition was a royal institution directed and controlled by the Consejo de la Suprema y General Inquisición, created in 1483. The monarchs appointed the officials, gave them instructions, and paid their salaries. This new Inquisition worked like the old medieval one established to seek out heresy: torture was used, and the accused were not given the names of their accusers. Executions were doled out at ceremonies called autos-de-fé whereby either the bodies or the effigies of the condemned were "relaxed" by being burned at the stake. The Inquisition was allowed to use methods such as confiscation of property, exile, and execution in order to seek out people they deemed to be false conversos. They did this with such ferocity that it shocked the pope, who was unable to temper their efforts.

On March 30, 1492, an edict was issued that all Jews in the kingdom had four months to either be baptized or leave the kingdom. Many converted, but many more chose to leave the kingdom; it is estimated that anywhere between 150,000 and 800,000 Jews left the kingdom. The loss of this segment of the population was devastating to the Spanish economy; many of the kingdom's financial resources were lost. These Sephardic Jews (as Spanish and Portuguese Jews are known) managed to resettle all across the Mediterranean; however, over 50,000 were able to migrate to neighboring Portugal.

Many Spanish Jews considered Portugal to be a peaceful and tolerant country because it had been a long time since any known persecutions had occurred against Portuguese Jews. The fleeing people offered King João II a large amount of money in exchange for safe passage and residence in Portugal. He was reluctant to allow them in because he was threatened by the enlargement of the existing influential

THE PLIGHT OF CONVERTS TO CHRISTIANITY IN THE IBERIAN PENINSULA

After the conquest of Granada in 1492, Fernando and Isabel consolidated their control of Spain through expulsion of Jewish and Islamic peoples. Edicts expelled Jews from Aragon and Castile in that year; the Portuguese followed with expulsion of Jews in 1496. The persecuted were allowed to stay if they converted to Catholicism. These converts were called *Conversos* (Converts) in Spain and *Cristãos-Novos* (New Christians) in Portugal. Iberian Muslims, or Moors, were included in these policies, although they were not formally expelled until 1610. Thereafter, they were called *Moriscos* in Spain and were lumped under the term “New Christian” in Portugal.

For centuries afterward, Iberian culture was laced with suspicion of and discrimination against the new Christians and their descendents. Applications for honors such as military knighthoods and other patents of nobility resulted in extensive background checks to ensure that the applicant was pure of blood, meaning that they contained no Jewish or Moorish ancestry. This prejudice was reinforced by the activity of the Inquisitions in both countries, as new Christians were suspected of secretly being Crypto-Jews (converts who secretly



Artist's depiction of the expulsion of Jews and Muslims from Spain in 1492. King Fernando and Queen Isabel of Spain are petitioned for mercy while a prelate holds a cross in front of them in warning. (Jupiterimages)

practiced Judaism) no matter how little of their ancestry actually contained Jewish or Muslim heritage. In Portugal, the Marquis of Pombal would finally remove the official distinction of “New Christian” from the law in 1772.

—Monique Vallance

Portuguese Jewish community; however, the lure of the money promised proved to be too great to resist. Instead, he allowed them in for the price of eight *cruzdaos* apiece, but they were only allowed residence for eight months. Most of those who did not leave in time were enslaved by the Crown, with the exception of some 600 families who were financially able to buy their permanent residence in Portugal.

Manuel I succeeded João in 1495 and began his reign by freeing all the Jews who had been subjected to captivity. However, politics soon superseded any clemency Manuel felt toward the Jewish population. He hoped to marry Isabel, the eldest daughter of Fernando and Isabel. Manuel hoped that marrying Isabel would result in a united Iberian Peninsula under Portuguese hegemony. However, Isabel and Fernando would not agree to a marriage as long as Jews were allowed to reside in Portugal. On December 5, 1496, the official edict was issued that decreed

that all Jews were to leave or convert by October 1497. Even though this act would be politically advantageous, Manuel knew that the expulsion of the Jews would be economically disastrous. He found an interesting way of satisfying both sides: forced conversions. According to the chronicles, those Jews who refused to convert gathered in Lisbon in September 1497. They expected to find ships to carry them to their new homes but were instead met with priests who intended to baptize them. Historians now believe that instead of one mass conversion, it is more likely that the conversions took place throughout 1497 all over the country. However it happened, by October 1497 the Portuguese Jewish population had technically been eradicated, even though most did not leave the country. It was replaced with a community of *Cristãos Novos* (New Christians), and Manuel promised them that no inquiries would be made into the sincerity of their conversion for 20 years.

► CRYPTO-MUSLIMS IN SPAIN

Much attention has been drawn to the Sephardic Jews and their continuation of practicing their religion after conversion, but less attention has been paid to the crypto-Muslims. Like the *Conversos*, the *Moriscos* were also closely watched by the Christian community in order to discern whether or not the converted Christians and their descendents were in fact truly faithful. Many of the practices of the former Muslims were contrary to the Christian culture; therefore, any adherence to former cultural practices automatically raised the suspicions of their Christian neighbors and often resulted in the Morisco being called to the Inquisition. For instance, it was customary for the Spanish Muslims to circumcise baby boys at the age of eight days. However, since the Christians did not customarily circumcise their babies, the continuation of this practice would draw suspicion. Therefore, most families waited until the child was eight years old before circumcising him. Even the act of washing one's body could be

cause for suspicion. This is shown in the case of a woman known only as "Madalena Morisca" in the Inquisition records from Seville, Madalena was called before the Inquisition in 1609 because two eyewitnesses claimed to have seen her bathing her body early in the morning in their common courtyard. They swore to having seen her bathe her face and thighs, and one account also mentioned that she had bathed her "shameful parts." To the Inquisition, this bathing represented more than a desire to be clean; it represented a desire to adhere to the Muslim religion and its ritual cleansings, often required before prayer. This case is symbolic of the dual lives that the Moriscos were forced to live. Even if they had truly given up Islam in favor of Christianity, any cultural practices and the Arabic language were identified with the banned religion, causing them to alter and hide many of the practices that had once been a part of daily life.

—Monique Vallance

King Manuel's successor, King João III, reversed Manuel's policies toward the new Christians. After a particularly strong earthquake in 1531, the Dominicans began preaching that God was angry at their tolerance of crypto-Jews. That same year João applied to Rome for the establishment of an Inquisition in Portugal, to be organized in a similar way to the Spanish Inquisition. The New Christians sent a lobbyist to Rome in order to block the approval of this institution but only delayed it, and it was finally approved in 1536. Many historians believe that this Inquisition was established for political rather than religious reasons. By persecuting the Jews and establishing laws barring them from receiving certain privileges and marrying into the noble families, the king was asserting royal power by ensuring the oppression of the New Christians.

The fate of the Muslims left in the Iberian Peninsula is surprisingly less dramatic than that of the Jews. The decree that expelled the Jews also included the expulsion of the Muslims. However, unlike the Jews, the Muslims were not obstructed from leaving and in fact were given permission to cross over into Castile. According

to the chronicles, the Muslims were offered this courtesy because they did not want to subject Christians living in Muslim territories to retaliation. In addition, the Muslim community was much smaller and less economically significant than the Jewish one; therefore, the Christian population was not threatened by them. In fact, the only reason they were probably expelled with the Jews was that Manuel wanted to show Fernando and Isabel that he was serious about Portugal being a Christian kingdom.

Around this time, the Spanish monarchs were sending missionaries into Granada in an effort to convert them to Christianity. Francisco Jimenez de Cisneros, the bishop of Toledo, was determined to acquire a great number of converts and ordered the burning of the Quran and other Muslim books. This caused a revolt in the city, and royal forces were called in to put it down. They used such force against the citizens that 50,000 Muslims converted to Christianity just to avoid more trouble. A new revolt caused Fernando and Isabel to publish an edict on February 11, 1502, that expelled all Muslims. Most converted in order to avoid losing their ancestral

lands, and these converts were known as Moriscos in the Spanish kingdoms.

—*Monique Vallance*

Bibliography

- Gampel, Benjamin, ed. *Crisis and Creativity in the Sephardic World, 1391–1648*. New York: Columbia University Press, 1997.
- Harvey, Leonard Patrick. *Muslims in Spain, 1500–1614*. Chicago: University of Chicago Press, 1975.
- O’Callaghan, Joseph. *A History of Medieval Spain*. Ithaca, NY: Cornell University Press, 1975.
- Saraiva, Antonio Jose. *The Marrano Factory: The Portuguese Inquisition and Its New Christians, 1536–1765*. Boston: Brill, 2001.

Naval Strategy—*Guerre d’escadre and Guerre de course*

During the first era of global expansion, the terms *guerre d’escadre* and *guerre de course* meant competing naval strategies that were practiced during the age of sail. *Guerre d’escadre* referred to a strategy of controlling the sea through fleet-to-fleet encounters. It required a state to maintain large squadrons along with the requisite numbers of trained sailors and officers and the supporting infrastructure. *Guerre d’escadre* was very expensive and, as a policy, was beyond the capabilities of most European countries. In contrast, *guerre de course* referred to a policy of weakening or defeating an opponent by attacking its commercial shipping. *Guerre de course* was a traditional strategy of weaker states. Some of the benefits of the *guerre de course* included the use of smaller vessels and the commissioning of private shipowners to execute these plans. Letters of marque and reprisal were the legal documents permitting private shipowners to capture other vessels. Reprisal dated back to Roman law, under which individuals had a right to recover economic losses from attacks by foreign sailors. By the seventeenth century, this concept was expanded to allow governments to use private ships to harm the commerce of opponents and generate income. Theoretically, the system of letters of marque and reprisal that authorized privateering was closely regulated.

During the late seventeenth century and the eighteenth century, French authorities debated whether to wage *guerre d’escadre* or *guerre*

de course. Under Louis XIV, the French Navy had become the largest in the world. By 1677, it had 140 ships. When the War of the League of Augsburg broke out in 1688, the French Navy equaled the combined strength of the British and Dutch fleets and was able to support the deposed king of England, James II, in his efforts to gain Ireland. The French fleet won a victory over the combined allied fleets on July 10, 1689, at Beachy Head. The French failed to follow up on their naval victory, however. When the war required additional funds for the French Army, the French Navy was allowed to fall into disrepair. The allies gained control over the sea. Louis encouraged privateers, such as those based at Dunkirk, to attack allied merchant shipping. Letters of marque were issued to shipowners giving them legal permission to attack British or Dutch ships. Although allied commerce was greatly hampered by this strategy, it failed to break the allied control over the sea.

During the eighteenth century, French naval leaders were divided about which policy to follow. At times, they tried to build up a large fleet to challenge the British Royal Navy, but the costs of maintaining a large army did not allow them to match the British strength. The *guerre d’escadre* policy failed to bring them control over the sea. During other periods or after severe losses, the French would rely on a policy of attacking British merchant shipping. During the wars of the eighteenth century, the British lost thousands of merchant ships to French privateers. Captured ships would be taken to French or neutral ports. The ships and their cargo would be sold, providing supplies to the French and funds to the shipowners. This *guerre de course* failed to protect French merchant shipping, and the British were usually able to shut France off from overseas imports during times of war. The British also preyed upon French merchant shipping. Neutral merchant ships were stopped and inspected during this time to make certain they were not carrying contraband to France.

The French were only able to wage a successful *guerre d’escadre* once during the eighteenth century, thanks to exceptional circumstances. At the end of the Seven Years’ War in 1763, the British government downsized its navy. In contrast, the French Navy was expanded in hopes of

► ESTABLISHING RULES OF ENGAGEMENT IN THE RULE OF 1756

During the eighteenth century the French Navy generally avoided engaging the men-of-war of Britain's Royal Navy. Consequently, during the many imperial wars of the period, British warships targeted French merchant vessels, taking thousands of merchant ships and seamen and driving French shipping from the seas. To obtain imports from its colonies, the French turned to the ships of neutral powers. French Caribbean ports, loaded with sugar and coffee, opened their wharves to Dutch ships, yet the same ports were closed to non-French shipping during peacetime.

International law did not give the Royal Navy the authority to capture neutral shipping. During the Seven Years' War, British Admiralty courts, which decided if a captured ship, or prize, and its cargo could be sold, responded with the Rule of

1756. According to the rule, a neutral ship could not be given trade rights during war if those rights had not been given to it during peacetime. Such a ship violated its neutrality by giving aid to a belligerent nation. Royal Navy ships could therefore seize neutral ships carrying goods to and from enemy ports. The policy was naturally unpopular among neutral countries, and no other nation recognized the principle. Because the Royal Navy controlled the seas, no effective response could be made. By the mid-nineteenth century, however, diplomatic protests were having an effect. The British government chose not to apply the Rule of 1756 during the Crimean War and formally renounced it as policy in the 1856 Declaration of Paris.

—Timothy J. Watts

gaining revenge. When the American Revolution broke out in 1775, the French secretly began to support the Americans. On February 6, 1778, the French signed an alliance with the Americans and entered the war with Great Britain. French squadrons fought with equal or smaller British squadrons, thanks to the weakened British Navy. The most important naval battle was the Battle of the Chesapeake, fought in September 1781. Although the battle was a draw, the French forced the British squadron to return to New York without bringing reinforcements to Cornwallis at Yorktown. As a result, Cornwallis surrendered on October 19, ensuring an American victory.

Naval leaders continued to weigh the advantages of each type of warfare, considering the cost of maintaining large squadrons and trained sailors against the benefits of sea control. Both *guerre d'escadre* and *guerre de course* attracted adherents. The policy of *guerre de course*, however, became the rule for weaker naval powers. Privateering by private shipowners was outlawed by the Declaration of Paris in 1856, but *guerre de course* continued to be a viable policy into the twentieth century. During both World War I and World War II, German submarine warfare against allied shipping was a classic example of *guerre de course*.

—Timothy J. Watts

Bibliography

- Dull, Jonathan R. *The Age of the Ship of the Line: The British & French Navies, 1650–1815*. Lincoln: University of Nebraska Press, 2009.
- Jenkins, E. H. *A History of the French Navy: From Its Beginnings to the Present Day*. London: Macdonald and Jane's, 1973.
- Lambert, Andrew D. *War at Sea in the Age of the Sail, 1650–1850*. London: Cassell, 2000.
- Mahan, Alfred Thayer. *The Influence of Sea Power upon History, 1660–1805*. Englewood Cliffs, NJ: Prentice Hall, 1980.
- Symcox, Geoffrey. *The Crisis of French Sea Power, 1688–1697: From the Guerre d'escadre to the Guerre de course*. The Hague: M. Nijhoff, 1974.
- Willis, Sam. *Fighting at Sea in the Eighteenth Century: The Art of Sailing Warfare*. Rochester, NY: Boydell and Brewer, 2008.

Portuguese and Spanish Justifications for Conquest

The Age of Exploration was an age when more than land was discovered. To the surprise of the Spanish and Portuguese, they also discovered new peoples, with cultures and societies never before fathomed in the European imagination. The existence of these new people was a great shock to them, as neither the Bible nor any ancient texts actually described the natives

of the Americas. Therefore, the Spanish and Portuguese were in a new realm as they went through territory that was populated with new and exotic people. The people who lived in the Americas were both obstacles and facilitators to the settlement of the Americas. Ultimately the Europeans who arrived had justifications for the manner in which they came to possess and colonize the American continents. All of these directly coincided with their attitudes toward and perspective of the indigenous population.

One idea that was a major factor in the conquest of the Americas was the belief that the natives were “barbarians” or “savages.” The ancient Greeks used the term “barbarian” to refer to “outsiders” or “foreigners.” However, by the fourth century the term “barbarian” came to mean “culturally or mentally inferior.” This term was applied to people who were seen as living beyond what was deemed as “civilization” and often seen as less than human. This attitude was first applied by medieval Europeans to the people of the

THE TREATY OF TORDESILLAS

Portugal and Spain were steadfast rivals throughout the medieval and early modern periods. The major rivalry existed over land and territory, and that rivalry intensified as both kingdoms sent more and more explorers into the Atlantic. Throughout the fifteenth century, Portugal had been exploring down the western coast of Africa and setting up trading posts. Castile, ruled by Queen Isabel, commenced its explorations much later and began to encroach on African lands and trade already claimed by the Portuguese. As a result, Portuguese king João II negotiated a treaty with the Castilian queen in 1479. The Treaty of Alcáçovas stipulated that the Canary Islands belonged to Castile and that all territory south of the Canaries was under the sole dominion of Portugal.

In 1492 Christopher Columbus sailed west in an expedition financed by Queen Isabel and her husband King Fernando of Aragon. Columbus discovered the American continent but believed at the time that he had landed in India. On his return voyage to Castile, he made a stop in Portugal, probably to gloat because King João had denied Columbus’s application for the Crown to finance his expedition west. Upon informing the king that he had been to India, King João was quick to remind Columbus that the territory in fact belonged to Portugal because of the aforementioned treaty. King João began to organize a fleet of ships to claim the islands discovered by Columbus. In order to avoid war, Isabel looked to Pope Alexander VI, a Spaniard, to help settle the dispute. He hastily drafted a proclamation, or bull, full of geographical errors that drew a line on the meridian line passing 320 miles (100 leagues or 515 kilometers) west of the Azores Islands. Accord-



Pope Alexander VI establishes the Line of Demarcation to define the spheres of Spanish and Portuguese possessions in the New World in May 1493. Portuguese dissatisfaction with this arrangement led to the Treaty of Tordesillas in 1494. (MPI/Getty Images)

ingly, everything west of the line was allocated to Castile, and everything to the east was given to Portugal. The two kingdoms managed to negotiate a more accurate treaty in 1494, the Treaty of Tordesillas. This treaty was based on the pope’s earlier version but placed the line of demarcation at 1,184 miles (370 leagues or 1,905 kilometers) west of the Cape Verde Islands. The treaty prevented war between the two countries and, going through several diplomatic revisions, would last until 1750. However, it would not prevent Portugal from claiming Brazil for itself when Pedro Alvares Cabral discovered it in 1500. The Spanish would also claim the Moluccas in East Asia, actually on the Portuguese side of the line, and later sold them to the Portuguese.

—Monique Vallance

Canary Islands, the Guanches. The Portuguese king Duarte wrote to the pope in the 1430s in order to request that the Portuguese be allowed to complete the conquest of the Canaries, arguing that the people lived like “animals” in the forest. The Castilians were the ones who eventually completed the conquest, and the Guanches people went extinct. The arrival of Christopher Columbus in the Caribbean introduced Europeans to yet even more new people, who seemed even more “barbaric” than the Guanches had. The native people of Hispaniola wore little clothing, did not deal with money, and had an animistic religion, signs to Columbus that they were “savages.” A Papal Bull in 1493 allowed subsequent Spaniards to conquer the new territory, although it was meant for the purposes of converting them to Christianity. This image of the indigenous Americans persisted throughout the period of Spanish and Portuguese colonial expansion, even after the Spaniards encountered groups like the Aztecs that were sedentary and closer to what Europeans considered to be “civilized.” However, their practice of human sacrifice immediately demoted them to the level of the other natives. Their lack of humanity made it easy to justify Indian enslavement: if the “Indians” were no better than beasts, then there was nothing wrong with using them for labor against their will.

There were some who saw the natives as being human, but their lack of what Europeans considered “civilization” caused them to impose their civilization on the natives. This was done by organizing the indigenous people into village systems. In Portuguese America these village systems were known as *aldeias*, and in Spanish America they were known as missions. The purpose of these villages was to acclimate the natives to European culture as well as to introduce them to Christianity. In these villages the indigenous people were expected to assimilate to the European culture in dress, education, and religion. They were expected to work in exchange for the benefits that the Europeans saw themselves as providing, although the intended assimilation eventually became a miscegenation of the two cultures. By bringing civilization to the “primitive” natives, the Europeans saw themselves as the benefactors, bringing the benefits of their culture to people who, in their eyes,

did not know any better. Besides civilization, the saving of souls was one of the major justifications for conquering the indigenous peoples. According to Roman Catholic doctrine, baptism was necessary for entrance into heaven. Therefore, the missionaries who arrived in the jungles of South and Central America believed that they were bringing more than just civilization; they were bringing heaven as well. They believed that baptizing the natives and teaching them to read were beneficial to their eternal souls and justified whatever means necessary to meet that end. However, the maltreatment of the indigenous population did bother some, most famously Bartolomé de las Casas, a sixteenth-century Spanish Dominican who advocated with Charles V on behalf of the natives. Casas witnessed many of the abuses perpetrated by the Spaniards and fought ardently to end them. Other missionaries joined him, and they were successful in ending many of the practices that abused the natives.

In conclusion, the Spanish and Portuguese felt that they had the right to conquer the land and the peoples of the Americas because they were bringing civilization and Christianity. Since the Europeans were benefiting the lives of the natives (as they saw it), then the financial rewards they received were their just rewards. If the Spanish and Portuguese were doing God’s work, then they deserved their riches.

—Monique Vallance

Bibliography

- Bowden, Brett. *The Empire of Civilization: The Evolution of an Imperial Idea*. Chicago: University of Chicago Press, 2009.
- Francis, John Michael. *Iberia and the Americas: Culture, Politics and History; A Multidisciplinary Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2006.
- Gomes, Mércio Pereira. *The Indians and Brazil*. Gainesville: University Press of Florida, 2000.

Christian Missions—Catholic and Protestant Approaches to Conversion

By far the dominant force in early modern Christian missions was the Roman Catholic Church. Catholicism’s advantages over Protestantism in global missions were numerous. The Catholic

European empires of Portugal, France, and particularly Spain dwarfed the Protestant empires of Britain and the Dutch Republic. In the religious orders, particularly the Jesuits and Franciscans, the Catholic Church possessed a dedicated body of men without family connections who could be ordered to the ends of the earth, while potential Protestant missionaries often feared for their ability to protect and support their wives and families in areas remote from Europe. The Catholic Church also commanded financial and organizational resources vastly superior to anything available to their Protestant rivals. There was no equivalent in any Protestant Church to the *Congregatio de Propaganda Fide* in Rome that supervised Catholic missionary efforts. Central control had its limits due to the slowness of communications in the early modern world, which often left missionaries stranded without word from their superiors in Rome for years but still enabled the maintenance of missionary efforts for decades and centuries.

Areas ripe for Christian conversion divided into two classes: those areas where Christian missionary efforts were backed by European military force and those where they were not. In areas such as the Spanish-American empire or the English colonies in America where Europeans faced indigenous peoples, native religions were forcibly suppressed, and sacred sites and objects were destroyed. The people were then “Christianized” through a program of preaching, confession (in Catholic areas), and translation of the Bible and other Christian texts. Much of our knowledge of early modern Native American languages comes from the dictionaries, grammars, and translations produced by Catholic and Protestant missionaries.

Areas such as China or the Iroquois Confederacy that maintained independence from Christian powers posed a different challenge. (Islamic powers prohibited Christian conversions entirely, and the missionary presence in the Islamic world was negligible.) One common route for Catholic missionaries into independent non-Christian societies was trade. Catholic missionaries entered China through the Portuguese base at Macao, Japan through the Nagasaki trade, and the Kingdom of Kongo through the slave trade. However, the greatest early modern Protestant

➤ CLEMENT XI ON THE CHINESE RITES

In 1704 Pope Clement XI (r. 1700–1721) came down on the side of the mendicant orders against the Jesuits on the question of whether Chinese Christian converts could continue to perform traditional Chinese rites, known as the Chinese rites controversy. The first article of his decree deals with language, and the pope orders converts to avoid traditional Chinese terms in talking about God. These terms were compromised by their long associations with traditional Chinese religion.

“I. The West calls Deus [God] the creator of Heaven, Earth, and everything in the universe. Since the word Deus does not sound right in the Chinese language, the Westerners in China and Chinese converts to Catholicism have used the term ‘Heavenly Lord’ for many years. From now on such terms as ‘Heaven’ and ‘Shangdi’ should not be used: Deus should be addressed as the Lord of Heaven, Earth, and everything in the universe. The tablet that bears the Chinese words ‘Reverence for Heaven’ should not be allowed to hang inside a Catholic church and should be immediately taken down if already there.”

—William E. Burns

Source

Dun Jen Li, ed., *China in Transition, 1517–1911* (New York: Van Nostrand Reinhold, 1969), 23.

trading force, the Dutch empire, did not make use of trade to spread its brand of Christianity. Neither did England’s East India Company.

The basic differences in missionary approaches revolved around such issues as the best targets for conversion and the degree to which Christian converts were required to renounce their traditional culture. Generally the Jesuits focused on the social elite, hoping that if the people in the top layer of a society could be converted, their example and social power would move their societies to Christianity as a whole. Jesuit missionaries like Matteo Ricci in China or Robert Nobili in southern India adopted the manner and the culture of the elite to interest them in Christianity. This tactic was restricted to those cultures that Europeans considered civil, usually defined

as possessing cities, literacy, and a social hierarchy. Uncivil societies, such as those of the Native Americans, received much less respect from missionaries, and there was much less interest in adopting their ways as a conversion strategy.

The mendicant orders—the Franciscans and Dominicans—believed that following the example of the apostles meant that evangelizing the poor would reap the greatest harvest of souls. The Franciscans and Dominicans often charged the Jesuits with wanting the material comforts of the social elite and lacking true commitment to missionary work. There were fierce rivalries between Catholic religious orders over control of missions.

Another important issue was whether Christian conversion required a total change to a more European way of life. Generally Protestants took a harder line than Catholics, and the mendicants took a harder line than the Jesuits. Protestants insisted that Native American converts to Christianity adopt a more European-like lifestyle, as in the agricultural towns of Christian “Praying Indians” in New England. In China the Jesuit-identified strategy of accommodation allowed Christian converts to retain many traditional Chinese practices, such as veneration of Confucius and rites honoring ancestors, by defining these practices as civic rather than religious. This pitted the Jesuits against the mendicants in the Chinese rites controversy that was eventually settled in Rome in favor of the mendicants, dealing a devastating blow to the Jesuit mission in China. One large area of agreement among Christian missionaries, however, was the importance of enforcing Christian sexual morality on converts. Polygamy, concubinage, and the acceptance of homosexuality and cross-gender behavior were frequent targets of evangelists.

—William E. Burns

Bibliography

Bireley, Robert. *The Refashioning of Catholicism, 1450–1700: A Reassessment of the Counter Reformation*. Washington, DC: Catholic University of America Press, 1999.

The Pueblo Revolts in New Mexico, 1680

The first Spanish explorers passed through what became New Mexico in the early 1530s. Stories

of wealthy Indian cities spurred other expeditions, especially the Coronado expedition of 1540. Coronado’s failure to find riches caused Spanish authorities to leave the area alone for another 50 years. In 1598 around 400 colonists made their way to the Rio Grande Valley and established several settlements. The most important was the capital of Santa Fe. Franciscan priests established missions in the Pueblo towns throughout the region.

The Pueblos, taught to cooperate, put up little resistance to the Spanish incursion. Spanish demands for tribute and forced labor caused unrest, but the forced conversion to Christianity was the greatest cause of dissent. The Franciscans viewed the native religion, with its kachina gods, as evil. They tried to destroy all sacred objects and sites and prevent its practice. They called on the secular authorities to help them prevent the Pueblos from practicing their religion. Some authorities enthusiastically backed the Franciscans, but others disliked their claim of authority. Although some Pueblos were punished over the years, by the 1660s followers of the old religion were increasing.

Among the reasons for the increased following were environmental disasters and the spread of European diseases. Years of drought brought famine and reduced resistance to European diseases. Smallpox devastated the Pueblo Indians during the 1640s and again in the 1660s. The decline in living conditions discredited the Franciscans’ promise that Christianity would bring spiritual salvation and earthly advantages. Raids by Apaches also made it clear that the Spanish would provide little protection to the Pueblos.

Those who practiced the traditional religion were punished by the civil authorities. In the 1670s Governor Juan Francisco de Trevino energetically sided with the Franciscans against the Pueblos. In 1675 he had 47 leaders arrested for their religious practices. Four died, and the others were whipped. Among them was a native priest from Tewa named Popé. He moved to Taos and began to organize a revolt against the Spanish. Popé was able to unite the Pueblo towns to force the Spanish out. When Governor Antonio de Otermin learned of the plot, the Pueblos acted quickly. On August 10, 1680,

► TESTIMONY OF DON PEDRO NANBOA, 1680

Don Pedro Nanboa was a Native American from the Pueblo of Alameda who was captured by the Spanish during their retreat from Santa Fe on September 6, 1680. His testimony before Governor Antonio de Otermin about why the Native Americans had risen in revolt against Spanish rule offers rich insight into puebloan life under Spanish rule.

Nanboa was a widower and more than 80 years old at the time of the revolts, too old to participate in the fighting. But he supported the uprisings, and his testimony confirmed Spanish suspicions about the reasons for the Pueblo revolts. Nanboa revealed that the rebellion had been plotted for at least 12 years and that the Pueblos hoped to drive the Spanish from their lands and to restore their society to its original state. His people were

most angry about the Franciscan missionaries' efforts to eradicate traditional Puebloan religious practices. Since his boyhood, Nanboa complained, his people had had to meet secretly to practice their faith and to pass along their traditions. They also resented the work they were forced to do for the Franciscan missions and Spanish authorities without consideration of the Pueblos' needs.

Nanboa's testimony and similar testimony from other Pueblos influenced Spanish policy after reconquering New Mexico. In particular, the civil authorities were much more willing to allow the Pueblos to keep their traditions and to have more autonomy in order to preserve the peace.

—Timothy J. Watts

Pueblos all over the Rio Grande Valley rose up. Out of nearly 2,500 Spanish settlers, soldiers, and missionaries, they killed 380 settlers and 21 of the 32 Franciscans. Most of the survivors fled to Santa Fe. The Pueblos cut off the town's water supply, forcing Otermin and more than 1,000 refugees to flee for El Paso. The Pueblos allowed them to leave, wanting them out of the region more than to kill them.

When the Spanish fled, the Pueblos destroyed the churches and much of what the Spanish had built. Thousands of horses were released into the wild from the Spanish ranches. Other Native Americans heard of the revolt and rose up as well. The Pueblo Revolt was the only successful uprising against Spanish authority in North America.

After Popé died, the Pueblos fell back into a traditional pattern of cooperation. Beginning in 1692, Diego de Vargas led an expedition that began to reconquer the region. When the conquest was completed in 1696, however, civil authorities did not allow the Franciscans to reassert their authority. Instead, they recognized that the Pueblos had been driven to revolt by the threat to their native religion. The authorities allowed the Pueblos to practice their rituals and a greater degree of local authority.

—Timothy J. Watts

Bibliography

- Knaut, Andrew L. *The Pueblo Revolt of 1680: Conquest and Resistance in Seventeenth-Century New Mexico*. Norman: University of Oklahoma Press, 1995.
- Roberts, David. *The Pueblo Revolt: The Secret Rebellion That Drove the Spanish Out of the Southwest*. New York: Simon and Schuster, 2004.
- Silverberg, Robert. *The Pueblo Revolt*. New York: Weybright and Talley, 1970.
- Weber, David J. *What Caused the Pueblo Revolt of 1680?* Boston: Bedford/St. Martin's, 1999.

Slave Revolts in British North America—Virginia, New York, and South Carolina

Slavery was common to all of the British North American colonies, and so was slave resistance. However, outright rebellions were few. White slave-owning society was vigilant, and given the difficulty of slave movement and the difficulty of keeping secrets, rebellions were usually suppressed before they could even emerge. Differences among the many African languages that slaves spoke and low literacy also made it difficult for slaves to plan rebellions together. Rebellions often involved a core group of slaves from the same African ethnic or linguistic group. As well as communication, bonds of trust were also

THE SENTENCING OF JOHN AND SARAH HUGHSON

In sentencing tavern keepers John and Sarah Hughson to death for their participation in the New York Conspiracy, the court made clear the racial nature of their offense and the danger of whites and blacks associating:

"I cannot say the punishment is adequate to the horrid crimes of which you stand convicted. . . . [Y]ours are indeed as singular, and unheard of before, they are such as one would scarce believe any man capable of committing, especially any one who had heard of God and a future state; for people who have been brought up and always lived in a Christian country, and also called themselves Christians, to be guilty not only of making negro slaves their equals, but even their superiors, by waiting upon, keeping with, and entertaining them with meat, drink and lodging, and what is much more amazing, to plot, conspire, consult, abet and encourage these black seed of Cain, to burn this city, and to kill and destroy us all."

—William E. Burns

Source

Daniel Horsmanden, *The New York Conspiracy* (Boston: Beacon, 1971), 140–141.

greater in ethnically homogenous groups. However, slave rebellions also saw alliances between African and Native American slaves, free blacks, and marginalized elements of the white population, such as indentured servants, criminals, or the urban poor.

One of the earliest efforts at a large-scale rebellion involved slaves and white indentured servants in Gloucester County, Virginia, in 1663. Some of the indentured servants may have been Parliamentary soldiers from the English Civil War. The plot was betrayed by an indentured servant before the rebellion could actually begin. Conspiracies in the Northern Neck area were detected and suppressed in 1687 and 1688, and Virginia authorities continued to detect and suppress alleged slave conspiracies into the eighteenth century. The announcement that a slave conspiracy had been suppressed was often accompanied by trials and executions of

the alleged ringleaders and harsher measures against slaves and free African Americans.

The largest slave rebellion in British American history was the South Carolina Stono Rebellion of 1739. South Carolina's black majority society was more similar to that of the British Caribbean, from which many of its original settlers had come, than to that of other mainland colonies. About 20 slaves of Kongo origin led by a man referred to as "Jemmy" or "Cato" hoped to make their way to the Spanish colony of Florida. Spain was at war with Britain, and Spanish authorities in St. Augustine had proclaimed that escaped slaves from British colonies would be accepted as free. Another factor influencing the timing of the revolt's outbreak may have been the recent passage of the South Carolina Security Act, which would have required white men going to church on Sunday to carry firearms. The law was scheduled to go into effect on September 29, and the rebellion broke out on a Sunday, September 9.

The Kongo slaves first gathered near the Stono River in the early morning. They armed themselves by breaking into a shop selling firearms, killing 2 white storekeepers. The slaves went on to kill between 20 and 25 whites, although at least 1 white slave owner with a reputation for treating his slaves well was spared. Other slaves joined the rebellion, although many of them, lacking the military training of the Kongo slaves, may have been more of a burden than an asset to the rebels. Descriptions of the slave army indicate many features of African military organization, such as the use of drumming, dancing, and banners identifying units. The rebellion ended late in the afternoon in a large field near the Edisto River, where the slaves had stopped to rest. They were attacked by a large force of local whites, who killed many and forced the rest to flee. All were eventually captured. The Stono rebels received no trial, as panicked whites simply killed captured rebels or sent those judged less dangerous back to their owners. It is likely that Cato, if captured rather than shot in battle, was simply killed out of hand as a dangerous rebel. The rebellion was followed by the Negro Act of 1740, a revision to South Carolina's already very harsh slave code setting up strict controls on slave assembly and movement.

Cities, where slaves of different owners could more easily mingle and also deal with possibly sympathetic whites and free African Americans, were common areas of slave unrest and rebellion. New York City, which had a larger slave population than other northern cities, was particularly marked by slave revolts. There was a large revolt of 25 Coromantee slaves from the Gold Coast area of Africa on April 1, 1712. The slaves burned buildings on the edge of town and attacked whites who came to put out the fires, killing or wounding about 20 whites. The slaves fled to the area north of the city but were captured the next day. Under the harsh slave code, the slaves were judged guilty of “petty treason,” and 18 were executed. Their heads were displayed on pikes in the city to discourage further revolts. A new slave law, passed after the rebellion, set more restrictions on relations between free blacks and slaves and forbade free blacks from owning houses or land in the city.

In 1741 New York authorities claimed to have detected a large plot involving slaves, free African Americans, white criminals, and possibly Spanish agents. The fear of a slave conspiracy merged with the old English Protestant fear of a Catholic conspiracy and with property owners’ fear of crime in a high-crime city. Slaves and their accomplices were charged with arson—always a terrifying crime in an early modern city,

much of which was built of wood—and planning to slaughter New York’s citizens. The trials were the most elaborate and best-documented of any colonial slave revolt, thanks to the efforts of the city’s recorder, the barrister Daniel Horsmanden, author of *A Journal of the Proceedings in the Detection of the Conspiracy Formed by Some White People, in Conjunction with Negro and Other Slaves, for Burning the City of New-York in America, and Murdering the Inhabitants*. One hundred fourteen slaves were either convicted or confessed, and 31 were executed, some by hanging and others by burning. A white couple, John and Sara Hughson, who owned a tavern where slaves and their allies had allegedly plotted the rebellion, was also hanged. The main trial was followed by the trial of a white Catholic priest, John Ury. Despite very flimsy evidence of any connection to the conspiracy, Ury was also convicted and executed.

—William E. Burns

Bibliography

- Davis, Thomas J. *A Rumor of Revolt: The “Great Negro Plot” in Colonial New York*. Amherst: University of Massachusetts Press, 1990.
- Hoffer, Peter Charles. *The Great New York Conspiracy of 1741*. Lawrence: University of Kansas Press, 2003.
- Smith, Mark M. *Stono: Documenting and Interpreting a Southern Slave Revolt*. Columbia: University of South Carolina Press, 2005.

■ Introduction: Diplomacy and Diplomats

The origins of modern diplomatic traditions can be traced to Renaissance Italy, where national security came to depend on the speed and accuracy of information that each Italian city-state had on its neighbor. Medieval diplomacy was mainly conducted by nuncii, procuratores, or legati who formally delivered news or negotiated on behalf of their principal. These envoys were usually dispatched to resolve some particular matter (negotiate a trade treaty, establish an alliance, betroth a princess, etc.), and once the mission was accomplished they returned

home. Such an embassy was an honorable appointment and was headed by a prominent noble or citizen, often a member of the prince’s own family. There was limited diplomatic continuity.

However, by the late fifteenth century international affairs and diplomacy became a rather complex undertaking that required a more permanent system of intrastate communications. Through the maze of intrigue and the efforts to cajole, browbeat, and deceive each other, the Italian city-states—most notably Milan, Florence, and Venice—began a practice of establishing

permanent embassies, giving us the word “diplomacy” itself, from the “diplomas” or letters of credence that these resident envoys presented to the sovereign to whom they were accredited. These new permanent envoys could be selected from a wide field of obedient and skillful officials instead of prominent members of the courts who might be anything but capable or trustworthy. This, however, did not mean complete rejection of the dignified embassies of earlier times but instead meant using them as ceremonial exchanges to emphasize the importance of a given occasion. Continuous representation in a given country produced greater familiarity with conditions and personalities that shaped local politics and events and thus allowed for a more effective diplomacy. Aside from continuity, another key element in the emerging resident diplomacy was secrecy. The arrival of a temporary embassy was a public event, and its dealings were closely followed. On the other hand, permanent representation allowed envoys to conduct their negotiations informally, oftentimes behind the curtains, before making public announcements. This was an important element in relations between the states, since a successful negotiation by definition implied that each side had to settle for less than it desired. The secret nature of such talks allowed these states to maintain their reputation and the respect of other states as well as to prevent hostile factions or groups from sabotaging the talks.

In the fifteenth century and for some time later, foreign envoys were regarded not only as useful channels of communication but also as dangerous men, even spies, intriguing with the ruler’s domestic enemies. The turbulent relationship between Queen Elizabeth of England and the Spanish envoys in the last sixteenth century is just one example of this trend. Nevertheless, by the mid-seventeenth century permanent missions representing one country in another became the customary and normal way of conducting international business among sovereign states because they proved indispensable to rulers caught up in the pressures of power politics. European monarchs recognized the immunity of ambassadors and their staff from civil and criminal proceedings and the inviolability of their

embassy premises and their exemption from customs duties and from taxes. The seventeenth and eighteenth centuries saw the increasing professionalization of diplomacy. Prospective candidates received proper training to possess relevant knowledge and technical expertise to conduct their business. Routine communications were conducted as a rule in the vernacular language (often using numerical ciphers), while treaties or other important documents were written in Latin. The states established first archives as depositories of documents so as to ensure diplomatic continuity and maintain histories of political, commercial, or other negotiations. Ambassadors’ lengthy dispatches usually contained important political, military, and economic information; pen portraits of prominent people; and rumors and whispers overheard at the court. One of the best examples of a skilled resident envoy is that of the French ambassador François de Callières. Callières’s book *De la Manière de Négocier avec les Souverains* (1716) served as a textbook for many European diplomats, informing them on diplomatic behavior, polite conversation, and the gathering of information at a foreign court. The negotiator at foreign courts, Callières advised, must have a gift for languages, cultivate a sympathetic charm, and learn courtly manners so he could entertain well and make careful use of flattery and bribery. Different missions required different skills, but the diplomat should always avoid fraud and deception, which impair the confidence of sovereigns and their ministers. Callières’s book was preceded by Don Juan Antonio de Vera y Figueroa’s influential *El Embaxador* (The Ambassador, 1620), which also stressed the necessity of education as a prerequisite for the perfect ambassador. Furthermore, de Vera believed that mastery of theology and languages was not enough and that the successful envoy must have a wide knowledge of all branches of secular knowledge, including philosophy, mathematics, astronomy, music, and law. The ambassador must be an example of moral virtues in public service and must be a loyal, brave, temperate, and prudent servant of his sovereign.

The Renaissance era saw further elaboration of the rules of diplomacy. Ranking of diplomatic

agents was introduced, and fifteenth-century diplomacy saw the transition from medieval figures of diplomatic representation to those of the ambassador and envoy. The arrival and treatment of these diplomats were regulated by a protocol, procedural rules of diplomacy that entailed a rather elaborate ceremonial to burnish a prince's status and reputation and solemnize agreements. The development of protocol was of great importance, as it made the need for diplomats to continuously argue about procedure and precedence each time they met unnecessary. The diplomatic precedence—the order in which diplomats arrived, were received, and seated or appended their signatures to documents—was of particular significance since it symbolized the status and prestige of the country represented by the diplomats. Thus, in 1504 in an attempt to end bitter quarrels between ambassadors, Pope Julius II set forth an order of precedence, placing himself (unsurprisingly) first among the monarchs. The Holy Roman emperor came second followed by the kings of France, Spain, Aragon, Portugal, and Britain; the king of Denmark was at the fourteenth (and last) place. However, this diplomatic hierarchy caused new difficulties in the wake of the Reformation, when many kings and princes left the Catholic Church. Furthermore, the Spanish ambassadors refused to accept the pope's classification that placed them below the French envoys. The French and Spanish ambassadors became notorious for their rivalries and shoving and pushing. In September 1661 when the Spanish ambassador's coach tried to cut in front of the French ambassador at a procession in London, a bitter hand-to-hand battle erupted in the street, leading to a fissure in Franco-Spanish relations. Such diplomatic quarrels continued until the Congress of Vienna laid down specific rules on diplomatic hierarchy in 1815.

Throughout the fifteenth to eighteenth centuries the majority of states around the world were monarchies, and government affairs and diplomacy were thus conducted almost entirely at the ruler's discretion in accordance with his personal interest or worldview rather than some national considerations. Until the eighteenth century, responsibility for diplomacy was routinely divided among different bureaucracies, but a

central foreign affairs body gradually emerged in some European states. The establishment of a ministry of foreign affairs, as these bodies became known, was necessitated by the need to coordinate the state's foreign policies; to recruit, dispatch, finance, and maintain regular and secure diplomatic relations with permanent embassies abroad; and to manage foreign embassies in its own capital. France was the first European state to establish a ministry of foreign affairs. On January 1, 1589, the royal decree charged one of the state secretaries, Louis de Revol, with exclusive responsibility for foreign affairs and created a staff to assist him in his duties. Cardinal Richelieu established the Secretariat of State, a formal body in charge of foreign affairs, in 1626. In contrast, Britain's Foreign Office was established in 1782, and the U.S. State Department was established in 1789. It was the middle of the nineteenth century before Asian and African states followed suit.

Diplomacy is interwoven with international law that seeks to regulate relations between states and between other organized groups and individuals on the international scene. The international law as we now know it can be traced to the writings of Hugo Grotius, the Dutch jurist and diplomat who in the seventeenth century formulated it in his famous *De Jure Belli ac Pacis* (The Laws of War and Peace, 1625). In this book Grotius first examined the existing patterns of relations and behavior by European states and placed them in the context of international practices and Judeo-Christian tradition. He then suggested where these practices might be modified to make them more rational and more conducive to peace. For Grotius, diplomacy and international law were the means of achieving "the harmony of the world." Indeed, from Grotius's day to the present day, one of the major tasks of diplomacy has been to establish the rules of engagement and maintain peaceful relations in the international arena. Interestingly, these rules that European scholars like Grotius formulated based on peculiar European experiences as well as aspirations drawn from Christianity expanded far beyond their original scope of western Europe and, through European colonialism, came to encompass the whole world.

—Alexander Mikaberidze

Political Embassies in Early Modern India

In the early seventeenth century, Europe, in spite after decades of war, began reaching out to Asia in search of trade and wealth. This eventually led to a struggle for trade supremacy in the lavish array of goods that Europeans discovered in India. They had little understanding of whom to petition for trading rights or indeed where power resided. India, encompassing a rapidly expanding Mughal empire, regional kingdoms, and princely states with diverse beliefs and languages, was an enigma for European merchants. While shrewd traders made business arrangements with small states and sultanates on the coast, the Mughal emperor Akbar had been waging war on such small independent polities, consolidating his power until his dominion reached from the Arabian Sea to the Bay of Bengal and north across the mountains to Kabul. Thus, Europeans had to adapt to the region and circumstances of the time.

The Portuguese, who had reached India even before the Mughals, were first to have an embassy at the Imperial Court in Agra and to establish a strong naval presence in the Arabian Sea. By force of arms rather than diplomacy, they then set up a string of important coastal bases from Diu, in Gujarat, south as far as the island of Ceylon.

In 1612 a small English fleet triumphed over the Portuguese at the Battle of Swally off the coast of Gujarat. However, warfare was effectively cutting into profit from regional trade. The English needed their own royal ambassador at the Mughal court to represent their commercial interests and allow them to establish a permanent foothold in India. For this they required a *firman*, or royal patent, from the emperor giving them exclusive rights to reside and build factories and fortifications in Surat and other places. In return, the English East India Company was prepared to provide the emperor with goods and luxuries from European markets and pay Mughal import and export duties of 3.5 percent or, in the case of gold and silver, 2 percent.

The practice of maintaining interstate relations was in its infancy in India. Unlike

Europeans, the Mughals accredited ambassadors themselves only for specific missions, and bilateral diplomacy was a rarity reserved for countries perceived to be of equal rank, such as Safavid Persia. European countries were not as influential or significant to the Mughals. Emperor Jahangir's extensive memoirs rarely mention the English (or any other Europeans for that matter). His descriptions of them were only in reference to a major gift such as a carriage or when their navy defeated a Portuguese fleet. He wrote at greater length about a turkey. England, a small island far away with no army to speak of, mattered little in his view. At this time, European nations posed no danger to the great Mughal empire. Thus, an order sent to London by the East India Company agent in 1614 illustrates just how much English officials tried to impress the Mughals:

Maccrab Khan desires various things to be dispatched on the next ship to Surat for the Great Mughal: Two complete suits of armour, strong yet light. Curved swords, Knives of best quality. Satin and Velvet, red, yellow, green and tawny. All kinds of toys to keep the king happy, and women's toys. The largest mirrors[,] . . . mastiffs, greyhounds, spaniels.

Sir Thomas Roe, an English aristocrat and experienced diplomat, was appointed King James I's ambassador to Agra in 1613 and succeeded in extracting trading concessions from Emperor Jahangir. However, the Portuguese constantly gave more ostentatious gifts to upstage the English. Roe raged against this imperial baksheesh by stating that "such is the faithlessness of their people, that no trust, no confidence, is to be had in them—what they grant to-day shall be revoked tomorrow."

The Mughals, with their processions featuring richly caparisoned elephants to display their wealth and power, ruled northern India and were expanding southward to increase their territory and extract resources. Here they came across the Dutch.

The Dutch, though superb commercial strategists, had achieved independence from Spain

► HOW DANISH MERCHANTS BUILT ON DUTCH SUCCESS

In 1620 the Danish king appointed Admiral Ove Gjedde as ambassador to the king of Tanjore (in peninsular India), whose eastern frontier was the Coromandel Coast. To assist him in opening relations in the region, Gjedde brought along a Dutch captain, Roeland Crape, who had honed his diplomatic skills during the two years he had been resident in Tanjore. Crape's negotiations with the king proved quite fruitful. Gjedde was quickly summoned on the understanding that first he meet a Brahmin high priest. Ignorant of court protocol, he refused. As a consequence, King Raghunatha made him wait two days and insisted that he visit the priest before diplomatic relations could begin. Even so, after two weeks of talks the king still denied Gjedde what he wanted most, exclusive trading rights for Denmark and

the banishment of the Portuguese, with whom there had been some trouble. At this point Portuguese merchants were still well established in the region, paying substantial revenues. Gjedde would attain trading rights only on the condition that the Danes and Portuguese have amicable relations. Gjedde accepted. A treaty was concluded granting Denmark the same terms as those given to the Portuguese. They were provided with their own port and fortification on the Coromandel Coast as well as the right to practice their own religion.

The Danes retained peaceful and prosperous relations with Tanjore until 1755, when they moved farther north to trade near the mouth of the Hooghly River in Bengal.

—Hugh Purcell

only in 1581 and struggled to achieve diplomatic recognition in the early years. They too set up an East India Company, Vereenigde Oostindische Compagnie, with a view to dislodging the long-established Portuguese through informal diplomacy, forging friendly alliances with local rulers. The most significant of these was an offensive and defensive treaty made in southern India with the *zamorin* (king) of Calicut in 1604. Even so, it was to be more than 50 years and some fierce fighting before Dutch forces drove the Portuguese out of Malabar and Ceylon.

The French were late in the pursuit of South Asian trade, establishing their first factories in western India in 1668–1669 and then in 1673 transforming a fishing village on the Bay of Bengal into the thriving seaport of Pondichery. Like other Europeans before them, they set out to win trading allies among petty rulers, but they soon came up against Dutch and British commercial interests. By the 1740s there was heated competition between the French and the English, each making strategic alliances with ambitious rival polities. Then in 1744 news reached India that war had broken out between France and England. By the time a peace had been signed in Europe, there was open warfare between the two in India, culminating in the Battle of Plassey, the loss

to the French of Hyderabad, and the razing of Pondichery to the ground. In 1769 La Compagnie Française des Indes Orientales became insolvent.

—Hugh Purcell

Bibliography

- Subrahmanyam, Sanjay. *Explorations in Connected History: From the Tagus to the Ganges*. New Delhi: Oxford University Press, 2004.
- Subrahmanyam, Sanjay. *Money and the Market in India, 1100–1700*. Themes in Indian History Series. New Delhi: Oxford University Press, 1994.
- Subrahmanyam, Sanjay. *The Political Economy of Commerce: Southern India, 1500–1650*. Cambridge: Cambridge University Press, 1990.

Laihua Diplomacy under Ming-Qing Rule

Chinese foreign relations in the later imperial period, especially under the Ming (1368–1644) and Qing (1644–1911), were governed by the principles of *laibua* diplomacy, which meant the Confucian goal of transforming foreign peoples by their assimilation of Chinese cultural values and customs. Barbaric ways (*wu*) would give way to superior Chinese *wen* (cultivated gentility). Needless to say, such a policy and attitude often led to the Chinese being seen as arrogant,

➤ “YOU ARE FREE TO COME AND BE TRANSFORMED”

“You are free to come to be transformed” is a free translation of the term *laihua*. Literally, *lai* means “to come,” and *hua* means “to be transformed.”

—Yi Li

ethnocentric, and stubborn in their interactions with other peoples.

Laihua diplomacy was rooted in the Chinese perception of the world order. The Chinese have long referred to their country as *Zhongguo*, or the Middle Kingdom. From this perspective the world is concentric with China in the center, geographically as well as culturally; the Chinese influence would then radiate out from the center to transform those on the margins by enlightening them with reason, spraying them with imperial grace, and shocking them into submission with power. While such a perception was not uncommon in ancient times among a wide variety of peoples, the Chinese seem to have held it more strongly than most, making it the principle behind their characteristic tribute system of diplomacy. In addition, the Chinese idea of *laihua* was different from other ethnocentric perspectives in that the ultimate goal of *laihua* was to absorb all outside “barbarians” into the “civilized” world of China. Regardless of one’s birth, having adopted the Chinese “civilized” ways would make one a Chinese; having dropped such ways, on the other hand, would cause one to lose one’s Chinese-ness. Therefore, in the Chinese mindset the difference between themselves and others was cultural rather than biological.

The peculiarities of China’s historical interaction with its neighbors, especially the steppe nomads, over its long history had hardened the myth of *laihua*. Unlike the Chinese, many of the peoples on China’s periphery did not always have, at least in Chinese eyes, stable governments, writing systems, and the same kind of elaborate explanations of human society and nature. While military conflicts between China and many of these peoples at times ended in China’s humiliating defeats, the triumphant

“barbarians,” after taking over Chinese land, often adopted China’s more developed culture. This appears to have been a recurring story of the Tuoba, Qidans (Khitans), Ruzhen (Jurchen), Mongols, and Manchus. All of these peoples had at one time or another conquered part or all of China, but all had adopted the Chinese culture to various degrees. Undoubtedly such experiences had reinforced the idea of *laihua*, no matter how misleading it was. The official language issued by the governments in China was often flavored with rhetoric that would leave the impression that *laihua* diplomacy was indeed a reality.

Beginning in the sixteenth century, the first Europeans arrived on the Chinese coast, most of whom were merchants. Chinese authorities, drawing upon an ideology and diplomatic practices that were already many centuries old, regarded them as coming to pay tribute. The European merchants, who were hungry only for profits and handicapped by a language barrier, often opted not to disabuse the Chinese of this idea. The result was that the Europeans conducted their business, while the Chinese officials saw and had confirmed in their mind one more example of *laihua*: peoples from afar coming to be transformed by Chinese culture. Beginning in the eighteenth century, however, new players came to China. The new players were the rising powers of Britain and France, which grew increasingly self-confident as they surfed the high tide of their scientific and economic revolutions. Their egos were hurt deeply when the Chinese, following age-old precedents, received and regarded their arrivals as *laihua*. As a result, their accounts of how the Chinese treated them, although not without grounds, often contained exaggerations as a catharsis for their frustrations. The term “*laihua* diplomacy” thus entered into the Western vocabulary and became a Western trope or cliché, an example of and shorthand for perceived Chinese arrogance, backward-looking isolationism, and blindness. Toward and in the nineteenth century, *laihua* diplomacy provided a convenient Western explanation for China’s perceived misfortunes, especially after the Opium Wars, and the widespread belief that China’s arrogance was beyond changing.

However, the Chinese diplomacy during this period did not always fit well with this Western myth, for there was always a difference between the government's rhetoric and reality. Chinese merchants had long explored the worlds beyond, for example, particularly since the tenth century, and their thriving community in Calicut was well noted by the fourteenth-century Muslim traveler Ibn Batutta. Another example that complicated the myth of laihua diplomacy was the experience of the Jesuits in China. The Jesuits first arrived in China in the late sixteenth century, a time when the Ming ruling house was faced with multiple problems. The Jesuits' mission to China was evangelical; conflicts between the Christian and Confucian cultures were therefore inevitable. Indeed, some Jesuits were constantly rejected, and Francisco Xavier died at the gate of China. But many others managed to succeed as they sweetened the gospel with Western science and technology. The Chinese were particularly interested in Western astronomy, and many Chinese high officials, noticeably Guo Shoujing and Xu Guangqi, put their minds and hearts into the study of it. In their two-century-long stay in China, many of these Jesuits, like Matteo Ricci, enjoyed a fine reputation and were well received by their Chinese hosts. Some of the Qing rulers, although coming to rule over China from a seminomadic background, were also greatly interested in Western learning. Emperor Kangxi (r. 1662–1722) had a crew of Jesuits serving as his advisers, and from them the emperor learned about the West.

Chinese interest in and efforts to learn about the West paid off in the execution of their diplomacy. In the late seventeenth century, the eastward expansion of the Russians reached the eastern edge of Siberia to the Amur River Basin, the home base of the Manchus, and led to clashes with the Qing Chinese. Limited warfare ensued followed by negotiations mediated by the Jesuits who happened to serve the Qing court. In 1689 Qing China and tsarist Russia concluded the Treaty of Nerchinsk, a treaty formulated according to Western-style equal-footing diplomacy and that defined the international border between the two sovereign countries. The treaty remained in effect for more than 100 years until

the mid-nineteenth century, when the Russians changed the terms in the treaty, taking advantage of the so-called midcentury crisis that the Qing dynasty was going through. The Chinese not only worked with the Russians but also worked with other Westerners. On the eve of the First Opium War (1839–1842), the Chinese navy conducted a joint venture with the British to wipe out pirates along the Chinese coast. Although the venture was less than successful, it was an anomaly that the Western model of laihua diplomacy failed to explain.

—Yi Li

Bibliography

- Fairbank, John K. *The Chinese World Order*. Cambridge, MA: Harvard University Press, 1968.
- Giersch, Patterson C. *Asian Borderlands: The Transformation of Qing China's Yunnan's Frontier*. Cambridge, MA: Harvard University Press, 2006.
- Hansen, Valerie. *The Open Empire: A History of China to 1600*. New York: Norton, 2000.
- Waley-Cohen, Joanna. *The Sextants of Beijing: Global Currents in Chinese History*. New York: Norton, 1999.

The Puzzle House of the East— Jesuit Diplomacy under Matteo Ricci

Between the sixteenth and eighteenth centuries, the Jesuits emerged to be one of the most active agents in Eurasian diplomacy. Asia and Europe were never strangers to each other, but now the interactions between them became much more of a reality thanks to the activities of the Jesuits in East Asia, particularly in Japan and China. The Jesuits were instrumental in the making of a unique episode in the relations between the East and West at that time.

The Jesuit diplomacy took place against a background characterized with the rapid rise of European influence in the world. In 1511 the Portuguese took over the control of Malacca from the Arabs and subsequently gained direct access from the Indian Ocean to the China Seas. The Portuguese first arrived at China in 1514 and then in 1543 landed on the small island of Tanegashima in Japan. In 1557 they established a post at Macao, which served as a base for their

continuous ventures in East Asia. Other Europeans quickly followed suit: the Spanish came in 1592, and the Dutch came in 1600.

Riding on the rising tide of European presence in East Asia, the Jesuits began reaching out for the region in their evangelical work. The first Jesuit who ever set foot on the East Asian land was Francis Xavier (1506–1552), a Portuguese Jesuit who came to Japan in 1549. While Xavier's goal was to spread the gospel to the people in Japan, his Japanese host had a different idea in mind. At that time Japanese society was going through a period known as *sengoku*, or the warring states, with about 300 or so local lords fighting incessant battles over the control of the lands. Trade with the Europeans meant not only profits but also opportunities to import firearms. Assuming that Xavier's presence would bring in more money and guns, some local lords granted him permission to preach, and he thus founded the first Christian church in Japan. Xavier's initial effort was continued by other Jesuits who subsequently arrived and ushered in a period of Christian era in Japan, with 150,000 Japanese converted to Christianity.

Xavier's experience in Japan also set in motion the successful working of early Christian evangelism in East Asia. Prior to this time East Asia had only sparse contacts with Europe, and the main components in its cultures were, by and large, Daoism, Buddhism, Confucianism, and many local sects of shamanism. Many concepts of Christianity were extremely unfamiliar, if not antagonistic, for most East Asians. For example, the idea of the Virgin Mary giving birth to Jesus would go sharply against the family-centered social fiber in China, and the monotheistic worship of God was at odds with the worship of many gods in various Shaman practices. Strong resistance to the Jesuits' evangelism was therefore inevitable. By sweetening the Christian messages with fruits of Western material culture, however, the Jesuits were able to soften and then eliminate the built-in resistance. The blending of Christian evangelism with the Western material culture thus became a unique feature of the so-called Jesuit diplomacy.

The most successful in the Jesuit diplomacy were undoubtedly two Jesuits from Italy, Alessandro Valignano, who came to China in 1577,

and Matteo Ricci, who followed in 1583. Ricci was a central figure in the so-called Jesuit mission to Asia. Originally from Italy, he arrived in Macao, then a Portuguese enclave on China's coast, in 1582, and from there he entered and lived in China for the next three decades. During this period Ricci traveled around the country, studied the local culture, and mastered the Chinese language. His understanding of the Chinese culture paved the way for him to enter the inner circle of the Chinese elite. Christian evangelism in China was characterized by a skillful manipulation of the Chinese language to accommodate the biblical messages, sweetened by the modern science and technology developed in the West. Ricci gained great success in his mission, with many of the elite of China converting to Christianity.

Taking a lesson from the previous experience, these Jesuits charted a new course of action in China: they replaced Europeanism with cultural adaptation and brought Christianity into Chinese high society quietly to transform it from within. The Jesuit missionaries in China were instructed to learn to read, write, and speak Chinese so that they could see from the Chinese perspective rather than forcing the Chinese to see from the European perspective. With their knowledge of the Chinese language and culture, they introduced Western scientific and technological innovations to the Chinese. Their astronomical, mathematical, geographical, and other scientific achievements allowed them to make friends of many more open-minded Chinese scholars and officials, including some high officials such as Li Zhicao, director of the Board of Public Works, and Xu Guangqi, a member of the Hanlin Academy.

While the Jesuits carried out their evangelical mission in full integrity, they were also careful with the method by which to present the gospel. Since there is no equivalent to the term "God" in the existent Chinese language, for example, the Jesuits chose the closest term, *Tian* ("heaven"), to convey the Christian concept. While *Tian* carries the idea of transcendence in Chinese, it may not exactly translate the concept of an omnipotent creator in Christianity. The Jesuits knew that well, but they believed that the borrowing of the native concept would provide

a shortcut for delivering Christianity to the Chinese. In fact, such a strategy helped the Jesuits avoid many unnecessary clashes between the Chinese and Western cultures. While the Japanese warlords were taking the baits of commercial profits and effective weapons as they were eased into accepting Christianity, the Chinese scholar-officials were fascinated with the scientific and technological innovations of the West. Also as it was in Japan, at their prime the Jesuits converted up to 150,000 Chinese into Christians. Many Jesuits remained honorable guests and advisors for the rulers in China. In 1689 the Jesuits helped the Qing rulers to negotiate a Western-style international treaty with Russia, the Treaty of Nerchinsk.

Although having had its time, the Jesuit diplomacy came to an end both in Japan and in China. In Japan the political climate became increasingly unfavorable for evangelism. As the warring states gradually drew toward an end and unification emerged on the horizon, the Jesuits, as well as the firearms that they brought in, were viewed as agents that would upset the newly developed political stability. The Tokugawa government banned Christianity upon its successful unification in 1603, and by 1640 Christian influence in Japan diminished. The end of Jesuit diplomacy in China, on the other hand, was a result of the rites controversy. The strategy of cultural adaptation by the Jesuits was not always agreeable for other orders in Christianity; the Dominicans and Franciscans were among those who viewed such a strategy as compromising the integrity of Christianity. In 1704 the pope banned the use of the term "Tian" for translating the term "God." As the clashes continued to intensify, the Qing emperor Kangxi issued a decree in 1715 to repatriate all missionaries. After taking over the throne, Kangxi's son Yongzheng enforced the prohibition of Christianity much more strictly, thus marking the end of the Jesuit diplomacy.

—Yi Li

Bibliography

- Fairbank, John K., and Craig Reischauer. *East Asia: Tradition and Transformation*. Boston: Houghton Mifflin, 1989.
- Hall, John Whitney. *Japan: From Prehistory to Modern Times*. New York: Bantam Doubleday Dell, 1970.

- Hsu, Immanuel C. Y. *The Rise of Modern China*. New York: Oxford University Press, 2004.
- Spence, Jonathan. *Emperor of China: Self-Portrait of Kang-hsi*. New York: Vintage Books, 1975.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1999.
- Waley-Cohen, Joanna. *The Sextants of Beijing: Global Currents in Chinese History*. New York: Norton, 1999.

Japanese Diplomacy under Tokugawa

The immediate challenge in discussing Japanese diplomacy under the Tokugawa (1603–1868) is to overcome the problematic use of anachronistic terms like "Japan" and "diplomacy," which imply contacts between sovereign nation-states. In fact, the Tokugawa polity was nowhere near as coherent and centralized as modern nation-states, and current research challenges even the use of the word "Japan" to refer to the political unit that covered the archipelago. Certainly, an understanding of Japan as a cultural entity did exist during the Edo (Tokugawa) period and can be dated back to the *Kojiki*, a chronicle compiled in the early eighth century. However, the Tokugawa were, first and foremost, a samurai clan and recognized other powerful samurai clans as competing sources of (what moderns would consider) sovereignty in the archipelago by demanding personal loyalty from the clan leaders, known as daimyo.

Thus, the political reality of the Tokugawa state was a compartmentalized political structure, and "diplomatic" relations most often referred to relations between competing clans as well as their relations with the Tokugawa. As such, the biannual residency of all daimyo in Edo known as the *sankin kotai* (alternate attendance) system, established by the shogun (Tokugawa leader) in 1635, was a diplomatic strategy. By mandating that daimyo spend half their time in Edo and that their families reside there permanently, the Tokugawa government sought to strengthen their control over daimyo by keeping a close eye on them and holding their families hostage.

In this political climate, the shogun pursued two complementary approaches when

➤ GRAY AREAS—EZO AND THE RYUKYUS

Nowhere is the ambiguous nature of foreign relations under the Tokugawa better illustrated than in cases where the Tokugawa government delegated contact with non-Japanese to a specific clan instead of managing it directly. Ezo, a vague term used by the Tokugawa to denote the islands north of Honshu, was maintained as a semisettled border zone by the Matsumae clan, based on the southern tip of Hokkaido. The semisedentary way of life of the indigenous Ainu inhabitants of the islands was increasingly undermined by disease epidemics and Japanese encroachment. The Ainu gradually grew economically dependent on Matsumae and Tokugawa merchants, which the Tokugawa thought would help ensure a hostile reception for Russian explorers and merchants coming south from the Sea of Okhotsk.

Unlike Ezo, at least the southern tip of which was regarded as part of the Tokugawa polity, the Ryukyu kingdom, located south of Japan with Okinawa as its largest island, nominally existed outside of the polity. However, despite the Ryukyu kingdom's public status as a Chinese tributary state, it had been under the control of Satsuma samurai from southern Kyushu since 1609. Sugar revenues from plantations on the islands were sent north along with trade goods brought by Chinese and other Asian ships, which were free to dock in the Ryukyus.

—Viktor Shmagin

negotiating with non-Japanese people, both based on his position as the head of the Tokugawa clan: he dealt with foreign nations directly through an elaborate and highly selective protocol while at the same time tightly regulating the ability of other clans to have any contact with non-Japanese peoples. By controlling access to outside goods, people, and information, the Tokugawa sought to center the clans' attention on Edo, but naturally their ability to do so waxed and waned before collapsing completely in the 1868 Meiji Restoration.

The Tokugawa polity had numerous points of contact with the outside world. The edicts promulgated by Tokugawa Iemitsu in the 1630s, often collectively referred to as the *sakoku* (closed country) edicts, did not actually close

the Japanese islands to foreigners. Instead, they tightly regulated the basis of diplomatic contacts and trade (often synonymous) relations with non-Japanese people in line with evolving Tokugawa priorities. In fact, until the late eighteenth century, there was no understanding of the edicts as formulating anything like a coherent exclusion policy. Such an understanding was only proposed by supporters of the hard-line faction of Matsudaira Sadanobu within the Tokugawa government, supporters who interpreted historical facts selectively to push for a hard-line policy in dealing with increasing numbers of Western ships showing up in Japanese waters.

Unregulated trade with Europeans during the preceding Warring States period, especially with the Iberians, had made Europeans synonymous with firearms and Christian proselytizing in the eyes of the Tokugawa, both of which were also regarded as subversive. Consequently, the Tokugawa confined contact with the West to a small enclave of Dutch merchants on an artificial island in the middle of the bay of Nagasaki and tightly monitored the trade that passed through. The Tokugawa likewise saw diplomatic and military entanglements in Asia as dangerous but desired to trade with the continent and with Southeast Asia. Official trade with a limited number of Chinese ships was always permitted in Nagasaki, where the walled-in Chinese settlement fluctuated at around 2,000 people.

Chinese silks were exchanged for Japanese silver at such a rate that Japan became known in Asia as the “silver island,” and Japanese exports of silver amounted to as much as one-third of the world total in the seventeenth century. In 1668 the Bakufu put a stop on silver exports and turned instead to exporting copper and marine products, all with the aim of turning a profit. The Tokugawa also traded with Korea via Tsushima Island as well as through a Japanese settlement in Pusan, signifying that Iemitsu's ban on Japanese overseas travel was more flexible than the letter of his edicts would indicate.

This highly complex system eventually buckled under Western pressure, especially from the Russian drive south during the eighteenth and nineteenth centuries, and under political and economic crises long brewing in the Japanese archipelago. The Tokugawa's failure to

effectively monopolize foreign relations, both among Japanese clans and with the outside world, was complete by the time it signed the treaty of Kanagawa in March 1854 with Commodore Matthew Perry, opening Japan to American ships.

—Viktor Shmagin

Bibliography

- Jansen, Marius. *The Making of Modern Japan*. Cambridge, MA: Harvard University Press, 2002.
- Lensen, George. *The Russian Push towards Japan: Russo-Japanese Relations, 1697–1875*. Princeton, NJ: Princeton University Press, 1959.
- Roberts, Luke. “The Diverse Political Languages of Edo-Period Japan.” In *Writing Histories in Japan: Texts and Their Transformations from Ancient Times through the Meiji Era*, edited by James Baxter and Joshua Fogel. Kyoto: International Research Center for Japanese Studies, 2007.
- Walker, Brett. *The Conquest of Ainu Lands: Ecology and Culture in Japanese Expansion, 1590–1800*. Berkeley: University of California Press, 2001.

The Aesthetics of Diplomacy—Representations of Diplomatic Encounters

An ambassador, acting on behalf of his sovereign, became a key figure in political relationships during the first global age. Owing to the increasing significance of diplomacy as an arm of imperial policy, it was desirable to record ambassadors' encounters abroad as well as their reunions with their sovereigns. In many cases, a court chronicler and artist were commissioned and might even be sent to foreign embassies. For example, Gentile Bellini in the fifteenth century and Jean-Étienne Liotard in the eighteenth century were sent to the Ottoman Empire in order to satisfy the curiosity of Western nations about Eastern cultures. Peter Paul Rubens and Guido Reni also were among those who found themselves frequently in the position of ambassadors forming alliances and acting as mediators.

Not every diplomatic encounter was deemed important enough to be depicted artistically. A particularly challenging peace agreement and similar exceptional events warranted the time

and expense of painting. Consequently, in the fifteenth and sixteenth centuries diplomatic affairs were mainly recorded in manuscript and print. As diplomacy became institutionalized in the West, painters such as Vittore Carpaccio appropriated the legend of Saint Ursula to symbolize the subject of political courtship, Carpaccio creating idealized but authentic representations of diplomatic encounters of the time. An outstanding example of the Renaissance period and one of the few paintings commissioned by diplomats themselves is the portrait *The Ambassadors* by Hans Holbein the Younger (1533), which shows two French diplomats sharing the class consciousness of an emerging elite, united by a sophisticated concept of concord, governance, and education.

In the modern period, specific forms developed for representing the diplomatic encounters of both ambassadors and sovereigns, usually comprising the entry and procession, the reception, and the negotiation or submission or the affirmation of alliance and festivities. To emphasize the magnificence of an embassy, the length and splendor of the procession were highlighted in a similar manner to the traditional depiction of royal entries. These processions often competed with the magnificence displayed by the host. Such grandeur was well illustrated in Luca Carlevarijs's work *The Entry of the Earl of Manchester into the Doge's Palace* (1717) in which the splendor of the ambassador's procession was overshadowed by the superior beauty of Venice itself. To underscore the importance of both the embassy and the monarch, the procession of the Turkish ambassador Mehmet Efendi after the audience with Louis XV (1722 by Pierre-Denis Martin) was presented as a great spectacle.

The theme of diplomatic reception fulfilled a similar purpose. During the fifteenth century, manuscripts that depicted ambassadors kneeling down or standing before the throne of the monarch became the official record of political relationships. For instance, Antoine Coypel's representation of the Persian embassy's arrival at the Salle de Glaces in Versailles (1717) demonstrates the splendor of the French king's court and royal authority, emphasizing how Louis XIV received tribute or gifts from subservient nations. And the *Staircase of Ambassadors* (ca. 1652) depicted

➤ GIFTS TO THE MUGHAL EMPEROR AND THE CHINESE EMPEROR

In diplomatic encounters between Europe and East Asia, the tribute of gifts in the Asian court was equally as important as showing reverence by prostrating and kissing the foot of the ruler. As well as luxurious materials and precious objects of art and crafts, technological presents such as clocks, telescopes, lenses, globes, and microscopes were decisive in forming alliances and achieving commercial objectives. An Indian illustration (Padshahnama manuscript, ca. 1650) presents an audience of the Mughal ruler Shah Jahan, dominating the scene from his royal gallery and surrounded by his entourage, depicted in a strictly hierarchical arrangement. Behind a rail at the bottom of the image the European ambassadors lined up in a row seem to play an inferior role in this ceremony. Their European attire with dark hats is emphasized together with their gifts, richly decorated boxes and jewelry.

In China Western missionaries, particularly the Jesuits, took a leading role in embassies, offering

technical objects and their scientific knowledge and services to the emperor. Matteo Ricci presented in 1601 the first chiming clock to Emperor Wan Li. The clock tower that Ricci was ordered to build to house the clock collection was depicted with Ricci's portrait and appeared in other images of Peking, such as the tapestry *The Voyage of the Emperor* (ca. 1730, New residence, Bamberg). An example where astronomical devices were given as tribute to the emperor is found in a print of a Dutch embassy from 1670. While the embassy is waiting for the audience in the court of Midday Gate, the gifts, including a globe, are examined. Only three years later the Jesuit Ferdinand Verbiest offered a celestial globe and an armillary sphere to Emperor Kangxi, seen later in a 1793 Chinese tapestry that shows the embassy of Lord Macartney offering gifts from George III (Maritime Museum Greenwich).

—Daniela Roberts

diplomats from different countries and continents to Versailles, including the apology from the Spanish ambassador. The reception of an ambassador of the Sublime Porte by Frederick the Great of Prussia, from a 1741 engraving, even suggests an equal relationship between Prussia and the Ottoman Empire. In the context of Christian missionaries, the reception of ambassadors was often presented as an allegiance of different peoples of the world to Catholic belief and the asserted supremacy of the Holy See.

The negotiation itself was seldom the subject of an illustration or work of art. A Flemish manuscript, *La vrai chronique d'Ecosse*, depicting a conversation between two ambassadors, was a rare example. It was far more usual to represent the diplomatic outcome of negotiations. A tapestry in the style of Le Brun showed with solemnity the signing of the contract of alliance between Switzerland and France under Louis XIV in front of an altar, viewed by the whole royal court; the tapestry was authorized by the king to apotheosize his reign. The painting *The Swearing of the Oath of Ratification of the Treaty of Münster* (1648) was executed by

the artist Gerard ter Borch, part of the Spanish embassy, for his own purposes. The idea of Concordia with the assembly of diplomats, including himself, was featured here. Diego Velasquez's magnificent painting *The Surrender of Breda* (ca. 1635), however, narrated the capitulation of a town, including the obedient surrender of the key after the lost battle.

Another popular subject was that of festivities. In the British study *The Field of the Cloth of Gold* (c. 1545), we see a lively narrative of the glamorous encounter of Henry VIII and Francis I that had been arranged by Cardinal Wolsey. Such events not only displayed the magnificence and splendor of sovereigns, their courts, and ambassadors but also provided suggestions to aristocrats for decorating their stately homes. For example, the sixteenth-century *Valois Tapestries* (ca. 1580, Uffizi) was commissioned to decorate a royal residence showing a ball in honor of the Polish embassy. In a painting by Francesco Guardi, we see Venice's Doge presiding in his magnificent hall, demonstrating his wealth and prestige at a banquet for ambassadors at his court.

Illustrations of embassies to the Middle and Far East depicted those rare and exceptional occasions when European fascination with exotic and wondrous worlds could be indulged and, indeed, vicariously experienced. A painting of an arrival of the Venetian embassy in Damascus (sixteenth century, Louvre) focused on the town's silhouette and its oriental flavor. In historical accounts, however, the strict ceremony of the high court of the Sublime Porte, the throne of the sultan, the role of Janishars and viziers, or the presenting of gifts and vestments can be seen as the main interest (the audience of Cornelis Calkoen and Vicomte d'Andrezel, by Jean-Baptiste van Mour, ca. 1724/1727). In an illustrated manuscript of 1586 (NB, Vienna, 8615,f.134v), the banquet displayed for the ambassadors leads one to believe that the Sultan watched the spectacle unseen from a barred window. Similarly, an Ottoman illustration presents the reception of Austrian ambassadors who, guided by two pashas, are obliged to take a deep bow before the throne (A. Feridun, 1568/1569).

By the nineteenth century the presentation of diplomatic encounters remained an important genre of historical painting, depicting both contemporary and past occasions while following iconographic traditions.

—Daniela Roberts

Bibliography

- Clauzel, Denis, Charles Giry-Deloison, and Christophe Leduc, eds. *Arras et la diplomatie européenne XVe–XVIe siècles*. Arras: Artois, 1999.
- Hill, David Jayne. *A History of Diplomacy in the International Development of Europe*. 5 vols. London: Longmans, Green, 1911–1924.
- Jackson, Anna, and Armin Jaffer, eds. *Encounters: The Meeting of Asia and Europe, 1500–1800*. London: V & A, 2004.
- Mattingly, Garrett. *Renaissance Diplomacy*. London: Cape, 1955.

The Diplomacy of Commerce—European Merchants as Ambassadors

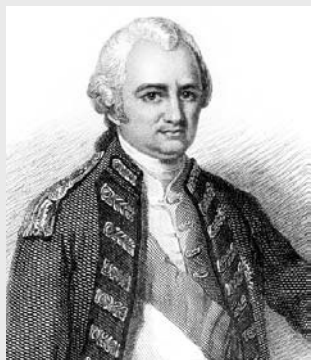
From the fifteenth century to the eighteenth century, European merchants served as liaisons for their respective states abroad. As official ambassadors and legates, or unofficial emissaries,

they served the diplomatic and economic interests of states while actively engaged in their own commercial activities. Representatives of the joint-stock companies were granted specific commercial privileges and autonomy in their dealings with non-European states, particularly in the New World and South and East Asia. In essence, European merchants were active participants in international affairs relating to the economic and political expansion of their countries of origin.

From the fourteenth century to the mid-sixteenth century, merchants throughout the Italian city-states, particularly in Venice, Genoa, and Florence, exerted considerable political influence in their respective states. Consequently, they were able to steer international policies toward expansion of their trade networks throughout the Mediterranean. Venice relied on its resident *baiulo* (diplomatic envoy) to ensure a stable commercial relationship over three centuries with Byzantium and later with its successor, the Ottoman Empire. Genoa and Florence retained similar officials in Constantinople, residing in specific quarters housing merchants and commercial warehouses. Such officials were responsible to their commercial interests back home, which also held considerable agency in the home government (e.g., the Venetian Senate). The complex relationship between merchants and their home governments influenced the appointment of diplomatic envoys and ambassadors. Venetian ambassadors were typically representative of the aristocratic merchant class and utilized the office of ambassador to create business contacts while residing at foreign embassies in both European and Muslim countries.

The growing importance of Atlantic trade networks—and after the initial voyages of discovery by the Spanish and Portuguese, the trade routes of the South Sea—led these southern European kingdoms to rely on merchants to represent the interests of the monarch overseas. Utilizing diplomatic methods similar to those developed by the Italian city-states, these merchants held charters that enabled them to negotiate treaties and even claim foreign lands. Historians recognize, however, that Spanish and Portuguese monarchs granted agency and concessions to ambassador merchants primarily

THE COMPLAINT OF THE NAWAB OF ARCOT



Robert Clive, British statesman and soldier. (Library of Congress)

At the end of the Seven Years' War (1756–1763) in Europe, the Second Carnatic War in South Asia began as a result of skirmishes between the British and French East India Companies. These private companies of merchant adventurers had involved themselves in the regional conflicts of local Indian rulers, and this interference in

local disputes opened the door to their participation in the selection of nawabs (Muslim provincial governors), particularly that of the nawabship of the Carnatic (coastal region of southern India). The major encounter of the Second Carnatic War occurred in 1751 as the French-supported nawab,

Chanda Sahib, laid siege to an English settlement. Robert Clive led the British forces to conquer Arcot, Chanda Sahib's capital. Clive's forces survived the counterattack on Arcot by the nawab's army, ensuring domination of the region by the British East India Company.

The post of nawab of Arcot (Carnatic) was created by the British to establish an Indian state dependent on the British East India Company. The French-backed rajah, one of the Mahratta (Hindu) princes, had been taken prisoner and deposed in 1751. Subsequently, his territory had been seized and transferred to the Nawab of Arcot by the company and set up as a protectorate to counter French ambitions in the region. Muhammad Ali Wallajah (r. 1749–1795) was made the independent ruler of the Arcot by the Mughal emperor in 1765. Wallajah supported the English against the French, leaving him heavily in debt and ultimately having to cede much of his domain to the British East India Company.

—Abraham O. Mendoza

because they would benefit directly rather than from an enlightened understanding of the interests of the merchants or of the nation. Portuguese explorers in Africa, Oceania, and South Asia acted on behalf of the kingdom of Portugal but also on their own initiative when conquering territories, creating colonies and establishing trade treaties with local rulers. Spanish merchants relied on Spanish clergy and military to conquer native peoples in the Americas, and these classes then secured their own claims from the monarch while utilizing colonial military forces to exact concessions and resources from the New World.

From the seventeenth century to the eighteenth century, England (Britain after 1707), France, and the Netherlands also relied on merchants to represent their political and economic interests as they advanced into the New World, southern Asia, and Oceania. The institution of the joint-stock company, chartered under the monarchs' auspices, allowed such corporate entities to expand into foreign lands with military

force as direct representatives of their respective countries. The establishment of colonies was financed by joint-stock companies because they provided the investment funds that were needed for colonization, which in some instances the home government could not afford. The Dutch East India Company (Vereenigde Oostindische Compagnie), the French East India Company (Compagnie Française des Indes Orientales), and the English East India Company all competed for territorial and commercial influence in South Asia and Oceania, leading to skirmishes and outright war throughout the seventeenth and eighteenth centuries, typically reflecting hostilities back in Europe such as the Seven Years' War (1756–1763). Through their charters, corporate officials from these companies were allowed to enter into direct trade negotiations, hostilities, and alliances with non-European states as full representatives of their home states. The direct relationship between state power and economic expansion abroad ensured the continuing importance of the merchant ambassador well into

the late eighteenth century. Among the more famous of the merchant ambassadors of this period are Robert Clive (1725–1774) of the English East India Company and Joseph François Dupleix (1697–1763) of the French East India Company.

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Bibliography

- Emmer, Pieter, and Femme Gaastra, ed. *The Organization of Interocceanic Trade in European Expansion, 1450–1800*, Vol. 13, *An Expanding World: The European Impact on World History, 1450–1800*. London: Variorum, 1996.
- Mattingly, Garrett. *Renaissance Diplomacy*. Boston: Houghton Mifflin, 1955.
- Prakash, Om, ed. *European Commercial Expansion in Early Modern Asia*, Vol. 10, *An Expanding World: The European Impact on World History, 1450–1800*. London: Variorum, 1997.

Innovations in European Diplomacy

The shift from medieval to early modern systems of diplomacy between the fifteenth and eighteenth centuries marked a dramatic change in European mentalities and political structures. As kingdoms composed of multiple principalities evolved into more centralized national monarchies, the need to create loyal armies composed of native recruits rather than unreliable mercenaries became the norm. Growing interactions with the Islamic world and the Far East led Europeans (particularly Italian city-states such as Venice and Genoa) to exchange embassies, including with other European states. In addition, the need for parties to engage within a functioning international system to legitimize state-sponsored aggression rather than the former reliance on the will of the monarch to decide what constituted a just war also characterized the shift in diplomatic practices in regard to the conduct of warfare. Historians debate whether a diplomatic revolution emerged during the Renaissance or whether the institutions of diplomacy were in place in early periods.

At the conclusion of the hostilities of the Thirty Years' War in 1648, much of this decades-long conflagration still retained characteristics

of warfare from the Middle Ages. The use of mercenaries in the pay of foreign powers and the reliance on religious discourses and on the will of the monarch as a reason to engage in warfare all retained vestiges of medievalism. However, diplomatic innovations had taken place during this war. Such innovations include acknowledgment of international laws that recognized the nation-state as a legitimate actor in armed conflict, a set of recognizable logical needs and goals that all aggrieved powers could agree on, and the growing bureaucratization of the military under many of the powers involved. In this regard, the Thirty Years' War is illustrative of much of the old and much of the new in European diplomatic practices.

The centralization of the institution of the military took place at an accelerated rate during this period. France, Prussia, and England diminished the autonomy of their respective aristocrats and subsumed their political power to the needs of the state. In doing so, they also relegated segments of the aristocracy to run the military affairs of the state as members of the officer corps in the army and the navy. In this manner, the European monarchs diminished the reliance on mercenaries and reduced the independence of the nobility in conducting their own foreign policy, usually at the expense of the nation. The resulting institutionalization of the military created a reliable force that was free from external and internal competing influences and subject to the direct control of the national monarchy.

The international system of laws regarding war shifted from the religiously derived concept of divine right into a more nuanced system derived from natural law that recognized the need to declare war based on logical motives recognized by all states. The shift from warfare for the sake of fighting for religious expansion (typically utilized as an excuse) to warfare for reasons of state characterized this period. Innovations in international law are attributable to Jean Bodin (1529–1596), Thomas Hobbes (1588–1679), and Hugo Grotius (1583–1645). French jurist Jean Bodin established the concept of state sovereignty that recognized the ability of the state to declare war when aggrieved by foreign hostility in violation of its interests or sovereignty.

➤ HUGO GROTIUS, EXCERPT FROM *ON THE LAW OF WAR AND PEACE*, 1625

Historians credit the Dutch legal scholar Hugo Grotius (1583–1645) with establishing the first guidelines for international law among the European states. Grotius's approach to diplomacy work diverged from the conventional practice of applying concepts of divine right to a greater reliance on the emerging concept of natural law.

I. The disputes arising among those who are held together by no common bond of civil laws to decide their dissensions, like the ancient Patriarchs, who formed no national community, or the numerous, unconnected communities, whether under the direction of individuals, or kings, or persons invested with Sovereign power, as the leading men in an aristocracy, and the body of the people in a republican government; the disputes, arising among any of these, all bear a relation to the circumstances of war or peace. But because war is undertaken for the sake of peace, and there is no dispute, which may not give rise to war, it will be proper to treat all such quarrels, as commonly happen, between nations, as an article in the rights of war: and then war itself will lead us to peace, as to its proper end....

III. As the Rights of War is the title, by which this treatise is distinguished, the first inquiry, as it



Hugo Grotius was one of the most important legal theorists in the history of the West. His works on international law remain the theoretical basis of relations between countries, and his writings on "natural law" were even more important during his life. (Library of Congress)

has been already observed, is, whether any war be just, and, in the next place, what constitutes the justice of that war. For, in this place, right signifies nothing more than what is just, and that, more in a negative than a positive sense; so that right is that which is not unjust. Now any thing is unjust, which is repugnant to the nature of society, established among rational creatures.

—Abraham O. Mendoza

Source

Hugo Grotius. *On the Law of War and Peace* (Whitefish, MT: Kessinger Publishing, LLC, 2004), 3–4.

English philosopher Thomas Hobbes utilized the concept of natural law rather than that of divine right to legitimize the recognition of the absolute monarch in foreign affairs. Legal recognition of the conduct of war within a logical framework based on natural law could convince legal scholars to accept warfare as a viable policy rather than mere reliance on the religious whims of a monarch. Dutch legal scholar Hugo Grotius expanded on these concepts, proposing an internationally accepted process for conducting war. Only a legitimate head of state could propose foreign aggression by first declaring such state of war for legitimately accepted reasons. He also set up rules and guidelines in terms of the exchange of prisoners, the conduct of soldiers toward civilians, and dealing with infringements on legal matters by both parties engaged in a state of hostilities.

The recognition of the national monarch as the sole authority of the evolving state within an international system based on natural law rather than on divine right greatly influenced the practices of ambassadors and foreign diplomats engaged in pursuing the interests of state of their respective monarchs. Foreign diplomats in fixed embassies abroad had typically followed orders from home. Due to the changes in this period, diplomats were accountable to an international system as well as to their leaders at home. While such guides of conduct represented an often ignored ideal, it still constituted a significant shift in the diplomatic practices of ambassadors. International laws and conventions applied to the practices of ambassadors, holding them accountable to the new guidelines of the European state system.

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Bibliography

- Contamine, Philippe, ed. *War and Competition between States*. New York: Oxford University Press, 2000.
- Elliot, J. H. *Europe Divided, 1559–1598*. Malden, MA: Blackwell, 2000.
- Lauren, Paul Gordon. *Force and Statecraft: Diplomatic Challenges of Our Time*. New York: Oxford University Press, 2007.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. Malden, MA: Blackwell, 2001.

Peace of Westphalia and the Creation of a New Order

The Peace of Westphalia (1648), which constituted two separate treaties, the Treaty of Münster and the Treaty of Osnabrück, formally concluded the hostilities of the Thirty Years' War (1618–1648) and the Habsburg-Dutch War (1572–1607, 1621–1647), respectively, as well as negotiated their terms for peace. While these wars, along with other conflicts such as the English Civil War (1642–1651) and the French Wars of Religion (1562–1598), constituted episodes of religious violence amid political contestations for hegemony by absolutist sovereigns, the Peace of Westphalia effectively recognized the primacy and legitimacy of the state as a legal entity. Both the Thirty Years' War and the Habsburg-Dutch War were fought by the Austrian and Spanish Habsburgs, respectively, to restore the universality of the Catholic Church against Protestant heresy, an issue that had been left unsettled since the Peace of Augsburg (1555), and to impose Habsburg hegemony. Effectively, the Peace of Westphalia created a diplomatic system of international law in which European states recognized the primacy of the state over that of religion within an international constitutional framework.

The congress of Westphalia first convened on December 4, 1644, in two German cities, Münster and Osnabrück. Representatives of Habsburg Spain, Bourbon France, and the United Provinces of the Netherlands, along with a papal mediator and imperial officials, met in Münster to negotiate a treaty ending the Habsburg-Dutch War. In Osnabrück, representatives of Protestant states of the Holy Roman Empire and Sweden

met with an imperial representative to conclude the Thirty Years' War. Both Sweden and France demanded that the Holy Roman emperor, Ferdinand III, allow for the inclusion of representatives from the individual states of the Holy Roman Empire in negotiations, which he initially resisted. By including them in the framework of peace negotiations, there was recognition on the part of all parties that individual states had a say, and therefore legitimacy, in diplomatic and international relations. While Swedish and French military power did prove to be a factor in persuading the Habsburgs, a desire for consensus was drawn from all sides after decades of endemic warfare.

The international diplomatic system devised at the Peace of Westphalia recognized the desire on the part of both Catholic and Protestant states of the Holy Roman Empire not to dismember this polity but also to confine the authority of the Austrian Habsburgs to their hereditary realms. Therefore, Frederick III remained Holy Roman emperor (a purely honorific status bestowed on the Austrian Habsburgs) but duly recognized the sovereign authority of the individual princes, bishops, and electors of the more than 300 constituent states of the Holy Roman Empire. These individual polities obtained the right to declare war, sign treaties, and levy taxes without any outside interference in their affairs. Moreover, the treaties also recognized the independence and sovereignty of the United Provinces vis-à-vis Habsburg Spain after eight decades of war. This mutual recognition on the part of all parties ensured the legitimacy of the sovereignty of the state, thereby eliminating by legal convention the prior assumption of the universality of both Catholicism and a united Christendom under one monarch.

Both France and Sweden, which both entered the Thirty Years' War on the Protestant side, also emerged from this conflict with their share of rewards at the expense of the Habsburgs and their allies. These concessions were sought as a means to ensure strategic advantages for themselves in the event of future hostilities in central Europe. Sweden acquired a portion of Pomerania along the Baltic as well as the cities of Wismar, Bremen, and Verden. France obtained a string of cities and territories

➤ RICHELIEU, FRENCH FOREIGN POLICY, AND CATHOLIC UNIVERSALISM

The French absolutist state, under the leadership of King Louis XIII's chief minister Cardinal Armand Jean du Plessis de Richelieu, developed a foreign policy designed to thwart both the Spanish and Austrian Habsburgs and establish French hegemony in Europe. Habsburg pretensions at reestablishing Catholicism throughout all of Europe, with themselves at the helm, was a threat to France's power. In an effort to confront this threat, Richelieu entered France into the Thirty Years' War on the side of the Protestant German states and Sweden against his fellow Catholic Habsburgs in Austria. His support for the Dutch in the Habsburg-Dutch Wars was criticized by those who viewed French flirtations with Protestants as treachery. Despite Richelieu's persecution of the French Huguenots within France, he was still guided by realism in foreign policy in engaging France's enemies. Moreover, because he was a Catholic cardinal and thus a top-ranking official of the Roman Catholic Church, his actions as chief minister illustrate that his loyalties belonged to the French state. This is indicative of the development of foreign policies geared more by state interests rather than by purely religious motivations during this period of early modern European history.

—Abraham O. Mendoza

along the Rhine. Moreover, the elector of Brandenburg obtained the cities of Minden, Halberstadt, and Magdeburg, contributing to his state's development into the powerful state of Prussia.

The Peace of Westphalia also addressed issues that had lingered unresolved since the Peace of Augsburg of 1555. The agreement recognized Calvinism on par with Catholicism and Lutheranism (still excluding other faiths within the imperial realms). Moreover, if a sovereign changed his religion, his subjects would not be forced to comply with such a change themselves (which negated the Peace of Augsburg). In addition, if a bishop, either Catholic or Protestant, changed denomination, he would have to resign his post. With the instituting of these changes, the state and its institutions (e.g., the

bureaucracy, the military, and the sovereign) became the primary agent of sovereignty, with religion and religious institutions receding as an integral legal element of power over the populace. However, this did not mean that religion lost all importance in European politics and society. Nonetheless, the precedent of an international system of states established by the Peace of Westphalia has developed into a world system in contemporary history.

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Bibliography

- Bobbitt, Philip. *The Shield of Achilles: War, Peace, and the Course of History*. New York: Anchor Books, 2002.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Lauren, Paul Gordon, Gordon A. Craig, and Alexander L. George. *Force and Statecraft: Diplomatic Challenges of Our Time*. 4th ed. New York: Oxford University Press, 2006.

Religious Truces in Europe

Throughout the medieval period, western Europe was unified religiously under one Christian Church. However, this unity became fragmented after 1517 when Martin Luther nailed his 95 theses to the door of the church in Wittenberg, Germany. The results of this act sent shockwaves throughout Europe and affected all areas of society. This fragmentation shook the Europeans to their core and divided people of all classes. In many cases, this division led to a great amount of conflict and threatened to tear apart several countries. It became increasingly clear as time went on that truces would need to be settled so that the religious fragmentation did not become a political one as well.

The Protestant Reformation began in Germany, and thus the political instability began there as well. Holy Roman Emperor Charles V was a Habsburg and a Catholic; therefore, he was staunchly opposed to the existence of the reformed religion in his domains. However, some of the German princes had other ideas. While they were nominally loyal to the Holy Roman

Emperor, the new religion proved to be very enticing to some of the rulers, and they began to support Luther. In 1521 Charles had Luther's works banned at the Diet of Worms. This caused a reaction by the princes and led to a decade of tensions before the Schmalkaldic League was formed in 1531. The formation of the league was for defensive purposes, and all of the members promised 10,000 infantry and 2,000 cavalry should the need arise. This need became more apparent in 1541 when Charles V began forging alliances with both sides of the religious line, especially Pope Paul III and Duke Maurice of Saxony. These alliances prompted the Schmalkaldic League to start a preemptive war against Charles in 1546. Even though the imperial forces were victorious, Charles wanted to make some sort of compromise to help relieve the tension. On May 15, 1548, the Interim of Augsburg was signed by Charles V. It made concessions to the Lutherans by allowing marriage of the clergy and communion in two kinds, but it still called for the Lutherans to readopt Catholic doctrine and practice. The Protestant rulers rejected this document and instead signed the Peace of Leipzig in 1549. In 1552 Elector Maurice of Saxony revolted against the emperor, and the interim was overthrown. However, by this time most had grown weary of the fighting, including the Catholic princes and Charles. As a result, the Peace of Passau was negotiated. This document gave Lutherans religious freedom until the next Imperial Diet, which was called for 1555 in Augsburg. Here the Peace of Augsburg was signed on September 25, 1555. It called for a religious truce and established *Cuius regio, eius religio*, or "Whose the region, his the religion." Instead of accepting Lutheranism as a separate religion within the German territories, the Peace of Augsburg stated that the ruler had the right to choose the religion of his realm. Any who lived within the territory were required to follow the official religion chosen by its ruler, and a grace period was provided in which people were allowed to move to another territory where their chosen faith was practiced. While the Peace of Augsburg served as a sufficient toleration for Lutheranism in Germany, it did not account for the further splintering of Christianity. Once other groups such as Calvinists and

Anabaptists began forming, a new peace needed to be worked out. That materialized in the form of the Peace of Westphalia in 1648. With the end of the Thirty Years' War, these groups finally received official recognition within the empire.

At the beginning of the Reformation, no one could guess that Luther's reformed religion was only the beginning of the fracturing of Christianity. Soon John Calvin's ideas began spreading as well. Calvinism spread to France in the 1530s, and by the 1560s those who adhered to it were known as Huguenots. The two religions did not coexist peacefully, as the Huguenots began openly criticizing the Catholic Church and its practices. Their criticism went beyond words, as many of the Huguenots were involved in bouts of iconoclasm in which they smashed statues and other religious items that they viewed as "idolatrous." The Catholics could not tolerate these actions and soon met them with violence. The Huguenots lived mostly in the south, but the fight moved into the royal court as some prominent members of the nobility, including princes of the blood, became Huguenots as well. Some of the most powerful nobles, namely the Guise family, were staunchly Catholic, and as a result they formed the Catholic League in order to fight the Huguenots. During this time Charles IX (1550–1574) ascended to the throne at the young age of ten, requiring his mother, Catherine de Medici, to be his regent. A religious war broke out in 1563 but was quickly ended with an armed four-year peace. Charles IX declared his majority that year, but he was both physically and mentally weak, meaning that Catherine continued to dominate the political scene. Catherine was interested in a truce, as she saw that France was in danger of civil war. Two more wars followed between 1567 and 1570, with Catherine granting more concessions to the Huguenots, but still no compromise could be reached, only another uneasy truce. Finally, Admiral Coligny changed everything.

Coligny was the leader of the Protestants in 1570 and managed to become a close confidante of the king. In the meantime, Catherine began arranging the marriage of her daughter, Marguerite, to Henry de Bourbon, the prince of Navarre, who was a Protestant. Catherine hoped

THE ASSASSINATION OF ADMIRAL COLIGNY

The events that took place on St. Bartholomew's Day, August 24, 1572, began with an attempt at the life of Admiral Coligny and ended with the brutal massacre of thousands of Huguenots all over the country, although the violence was mostly concentrated in Paris. Immediately after the admiral was shot, many already suspected the dowager queen, Catherine de Medici, as being the culprit who ordered the assassination. At the time there was no proof that Catherine was indeed behind the deed, and she never admitted her culpability. However, a memoir written by her son Henry, who at the time was the Duke of Anjou and would later become King Henry III, implicated his mother as well as himself as the ones who inadvertently instigated the violence that ensued that night. Even though Catherine had been searching for a truce between Catholics and Protestants by arranging the very marriage that provided the scene of the massacre, more important was the future of the dynasty, and Coligny had become a threat to it.

"Feeling assurance, from the menacing conduct of the king, that the admiral had inspired his majesty with a bad and sinister opinion of the queen my mother and of myself, we resolved to rid ourselves of him, and to call to our aid Madame de Nemours, to whom we held that we might reveal our projects from the mortal hate which we knew that she bore towards the said admiral. . . . The queen my mother and myself thereupon resolved to employ Maurevel, as being an instrument more fit to achieve our designs, and one already experienced in the deed of assassination. . . . [We] found no better expedient than . . . that the shot (coup d'arquebuse) should be fired from the window of the house where Villemur lodged—a spot very conveniently placed for our enterprise."

—Monique Vallance

Source

Martha Walker Freer, *Henry III, King of France and Poland: His Court and Times*, Vol. 1 (London: Hurst and Blackett, 1858), 115–117.

that the marriage would solidify the truce and ease tensions. In 1572 Catherine became especially worried about Coligny when he attempted to convince the king to ally with the English in order to help the Dutch in their rebellion against Spain. The thought of this horrified Catherine. Not only was France not equipped to fight the armies of Philip II, but it was also a Catholic country, and she could not foresee fighting another Catholic in order to help Protestants. This finally prompted Catherine to plan Coligny's assassination. The controversial marriage occurred on August 18, 1572. Four days later on the Feast day of St. Bartholomew, an attempt on the life of Coligny sparked a bloody massacre that resulted in the deaths of several thousand Protestants both in Paris and in the provinces. This event, more than any other, served to temper the Protestants, as they lost a majority of their leaders in the massacre and were also too afraid to fight the Catholics. Matters stayed the same, as Charles died in 1574, and his brother, Henry III, died in 1589. Henry's death meant the end of the Valois dynasty because he had no sons to inherit

the throne. This meant that the next person in line was Marguerite's now ex-husband, Henry de Bourbon. Henry understood that the majority of French people would not accept a Protestant king, so he converted to Catholicism before his coronation in 1594. Despite his conversion, he managed to finally enact a law that would bring about true religious tolerance in France. The Edict of Nantes (1598) guaranteed freedom of conscience and provided civil rights for the Huguenots. It also allowed the Huguenots to practice their religion within specific areas and gave them the right to keep certain "places of safety." This edict effectively ended the Wars of Religion in France.

Finally, England also saw religious strife, although it was not nearly as bloody as what was seen on the continent. Henry VIII's defection from the Catholic Church was mostly a political move, as Pope Clement VII was unable to grant him an annulment from his first wife, Catherine of Aragon. Because of this, the Church of England leaned doctrinally more toward the Catholic Church and retained many of its rituals.

Henry VIII's successor, Edward VI, was a staunch Protestant and instituted radical changes in the Church in order to comply with his personal beliefs. His short reign was followed by that of his sister, Mary I. As a Catholic, Mary was determined to return her kingdom to Rome; however, her reign was too short for her to be able to fully see this through. Finally, her sister Elizabeth I ascended in 1558, and as she was a Protestant, most expected her to return the Church of England to what it was under her brother. However, despite being a Protestant, Elizabeth was less concerned with religion and was more concerned with the unity of her kingdom. The new Act of Supremacy and the subsequent Act of Uniformity passed by Parliament in 1559 established what is known as the Elizabethan Settlement. The Act of Supremacy established Elizabeth as supreme governor of the Church ("head" was not used, as many feared a female leader) and separated England once again from the Catholic Church. The Act of Uniformity was passed in order to establish a common mainstream church that all subjects would be required to adhere to. England still had groups of Catholics and Calvinists (known today as Puritans) who were unhappy with the state of the Church of England. Both groups wanted reforms, and they were very vocal about it. The Act of Uniformity attempted a settlement by instituting a law that required all subjects to attend the Church of England or pay a fine. The act also attempted a compromise by allowing more freedom of worship within the Church. For instance, the new Book of Common Prayer allowed for people to view Communion as they chose, and they could either kneel or stand. Some elements of the Catholic Church remained, such as vestments and Communion wafers (instead of bread). Other vestiges of Rome were removed, such as the rood screens and candlesticks. Despite the continued protests of the fringe groups, Elizabeth's reign of 40 years allowed the settlement to cement. In fact, the modern-day Anglican Church still closely resembles the church of Elizabeth.

While these truces did bring about peace, they were not necessarily permanent and did not guarantee lasting peace. The Edict of Nantes, which had provided a reprieve from the violence of the religious wars, was revoked by

King Louis XIV in 1685, making Protestantism illegal and causing an estimated 400,000 Huguenots to leave France. In England, while the Church of England remained intact as Elizabeth had left it, the strife between the Calvinists and the adherents of the Anglican Church continued especially with the kings of the Stuart dynasty, which played a part in the English Civil War (1641-1649). In addition, Catholics remained legally excluded from Parliament or holding any other position within the government until the nineteenth century.

—Monique Vallance

Bibliography

- Cameron, Euan. *The European Reformation*. Oxford, UK: Oxford University Press, 1991.
- Elliott, J. H. *Europe Divided: 1559-1598*. Oxford, UK: Blackwell, 2000.
- Lake, Peter. *Moderate Puritans and the Elizabethan Church*. Cambridge: Cambridge University Press, 1982.

Peace of Karlowitz and the End of Ottoman Expansion

The Peace of Karlowitz of 1699 formally ended the Ottoman expansion into eastern Europe and recognized Habsburg hegemony while marking the beginning of Ottoman decline. The Habsburg-Ottoman War (1683-1699) took place simultaneously with Ottoman conflicts with Poland (1683-1699) and Russia (1686-1700). Ultimately, all three would unite as the Holy League against the Turks. While warfare in eastern Europe had been endemic in the seventeenth century, with the Ottomans at war with any one of these European powers, the Peace of Karlowitz stood as a benchmark in Habsburg-Ottoman diplomatic relations, with the former holding the upper hand. Moreover, the Habsburg realms, under the rule of Holy Roman Emperor Leopold I, expanded at the expense of the Ottomans rather than merely repelling their advances into central Europe.

In 1683 the Ottoman empire initiated war against Habsburg Austria by launching a major invasion directed at taking Vienna, the Austrian capital. The grand vizier, Kara Mustapha, led his Ottoman troops toward Vienna, arriving at the Austrian-Turkish border on July 1, 1683. Within two weeks Ottoman forces had encircled

THE SECOND BATTLE OF MOHACS

While the First Battle of Mohacs (1526) marked the ascension of the Ottoman empire in its farthest advance into Europe, given its defeat of Hungarian and Bohemian forces, the Second Battle of Mohacs (1687) constituted a key battle in expelling the Turks from eastern Europe and relegating them to the Balkan and Black Sea region. As such, the battle marked a significant benchmark in the course of the long history of the Habsburg-Ottoman Wars. After defeat at the Battle of Buda in 1686 the Ottomans sued for peace that was rejected by the Holy League, which sought to break Ottoman power. Habsburg and League forces under Charles, Duke of Lorraine, were sent into the lower Danube Valley near the town of Mohacs. On August 12, 1687, this force met the grand vizier's Ottoman armies, which immediately attacked and were promptly met with a fierce counterattack by Habsburg forces. Following the battle the Ottoman empire entered a severe political crisis, given widespread mutiny among the ranks and the disintegration of the Ottoman armies as well as a rapid transfer of power within the Sublime Porte. Moreover, this political instability allowed Habsburg forces to continue unabated as they ousted the Ottomans from Hungary and Transylvania.

—Abraham O. Mendoza

Vienna, with their cavalry looting and pillaging the Austrian countryside. Vienna was left with a garrison of a mere 11,000 troops. Poland, Saxony, and Bavaria sent contingents of troops to support Leopold's remaining field army and engage Ottoman forces surrounding the capital. In the meantime the Vienna garrison had successfully held back the Ottoman forces, regardless of their siege works, tunnels, and attempts to break through city walls. By September, Leopold's allies under the direction of Polish king John Sobieski defeated Ottoman forces, who abandoned their positions around Vienna, leaving much of their equipment and supplies behind.

In the following year, the Holy League (Austria, Venice, and Poland) was formed to take the initiative to drive the Turks out of Europe to follow up on the Ottoman failed siege of Vienna. Venice successfully drove the Turks out of Morea

in Greece. Austrian forces were able to capture key Turkish fortresses in the Danube region piecemeal within six years. Leopold I captured Gran (1683), Neuhausel (1685), Buda (1686), Esseg (1687), and Belgrade (1688), thereby pushing the Ottomans out of Hungary, Transylvania, Croatia, and Slavonia. At the Battle of Mohacs (1687), Habsburg forces soundly defeated Ottoman forces, reversing the Ottoman advance into eastern Europe. As Leopold captured these areas, he called for local elites to recognize his rule over them. Prince Eugene of Savoy (1663–1736) was Leopold's main general in his engagements against the Turks and proved himself to be a worthy leader. However, when France began the Nine Years' War (1688–1697), Austrian forces were caught in a two-front war. This allowed Ottoman troops to recapture Belgrade in 1690. However, for the rest of the decade the Ottomans were not able to advance against smaller, yet effective, Austrian forces along the Danubian front. In 1697 in the Battle of Zenta in Serbia, Eugene thwarted Ottoman forces, under the command of the sultan, attempting to cross the Tizsa River, smashing the bridgehead held by Ottoman janissaries. When the sultan had his *spahis* cross the bridge to assist the janissaries, the clogged bridge became a death trap, with thousands of them attempting to flee across the river and meeting their end by drowning en masse. As a result, the Ottomans were forced to acknowledge that the reconquest of their eastern European provinces was no longer possible. Their acquiescence resulted in the Peace of Karlowitz in 1699.

On January 1699 in the Serbian town of Sremski Karlovci (known as Karlowitz in German) a peace treaty was signed, after a two-month congress, that formally ended the Habsburg-Ottoman War as well as Ottoman conflicts with Poland, Venice, and Russia. In the Treaty of Karlowitz, the Ottoman empire formally ceded Hungary to Austria, Podolia (southwestern Ukraine) to Poland, and Dalmatia and Morea to Venice. While this diplomatic arrangement did not end Ottoman power in eastern Europe, it certainly did not allow for its further expansion at Habsburg expense. By 1715 the Ottomans declared war against Venice, retaking Morea. Austria responded by crushing Ottoman forces

at the Battle of Petrovaradin (Peterwardein) in 1716 and retook Belgrade. With the resultant Peace of Passarowitz of 1718, Habsburg Austria gained western Wallachia, northern Serbia, and the Banat from the Ottomans. Since the Peace of Karlowitz, the Austrians had proven able to be actively engaged against the Ottomans and pushed them into the Balkans. However, Venice was unable to regain its lost Mediterranean territories, while Poland and Russia, able to match Ottoman power at various points, were still not capable of reaching the Black Sea region. Karlowitz ensured that Habsburg hegemony of the region would prevent future Ottoman incursions into what were now the southeastern provinces of Austria.

—*Abraham O. Mendoza*

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century, 1713–1789*. 4th ed. New York: Longman, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.

The Salé Rovers

Situated along the estuary of the Bou Regreg, near the Atlantic coast of Morocco, the Muslim city of Salé emerged briefly as a self-governed pirate republic between 1627 and 1668. Less organized freelance piracy had existed in this region since the decline of the Roman empire. However, as long-distance overseas trade continued to shift its focus from the Mediterranean toward the Atlantic through the sixteenth and seventeenth centuries, the city's inhabitants were ideally positioned to harass and prey upon the latest shipping lanes that connected western Europe with the Americas, Africa, and Asia. For the light, swift caravels and galleys leaving Salé, lurking in wait off the Azores, Madeiras, or Canaries, where there was often a confluence of foreign merchant ships laden with specie and goods from around the world, did not require a prodigious sea voyage.

The Salé pirates, often referred to as rovers, operated independently of the corsair enclaves that dotted the Barbary Coast of North Africa. They represented an unusual collection

of indigenous peoples, religious refugees, and foreign renegades not subject to Moroccan rule or that of the Ottoman empire. The republic they created treated piracy as a business, and it derived its authority to enforce law and order by virtue of its financial success. A divan, or inner council, along with two elected officials responsible for the land defenses of the city and administration of the rover fleet, made up the core of their governing body. Although the divan was responsible for all government and public works, it was the rovers who supported the republic's treasury with a flat percentage from each prize taken. In effect, they constituted stockholders in a joint enterprise in which they and their government shared in both the risk and the profit of each illegal seizure made at sea. For approximately 40 years their city's local markets swelled with these stolen trade goods, while only a few items for sale, namely fish and timber, were actually produced legally in the vicinity of Salé.

There is no single dynamic event that explains Salé's expulsion of the Saadi dynasty and its subsequent break from Morocco in 1627. Instead, there appears to have been a combination of political and socioeconomic conditions (at home and abroad) that triggered the city's push for autonomy and the rebirth of its pirate community. First, the death of Ahmad al-Mansur, the Saadian ruler whose dynastic line had dominated Morocco with a firm hand for nearly 100 years, left a distinct power vacuum at Salé beginning in 1603. As his sons descended into a protracted succession war, they lost control of the city, along with two other nearby seaports at Mamora and Larache. Aside from civil unrest, a second major factor at work was the influx of Morisco refugees, Muslims who were being persecuted and thrown out of Catholic Spain between 1609 and 1614. Some historical estimates indicate that the Spanish Morisco population exceeded 13,000 at Salé by 1627. This rather profound demographic shift may have also had an impact on the number of underemployed and perhaps served as an added incentive toward a life of piracy.

Salé also attracted a growing community of renegade seafarers from England, France, and the Netherlands as well as Italy and Greece. Many of these individuals had drifted into piracy

➤ JAN JANSSEN

Renegade European seafarers, like the Dutch privateer Jan Janssen, readily adopted the foreign cultural traditions of Salé in exchange for socio-political and economic advancements within the pirate republic, particularly during its heyday in the 1620s. Born in the city of Haarlem, Janssen began his career at sea raiding Spanish shipping during the period of the Netherlands Revolts. He eventually fell captive to Algerian corsairs while cruising the merchant lanes off the Canary Islands in 1618. It is uncertain how Janssen was initially received by the Algerians. After all, by the time of his capture he was already an experienced seafarer, well versed in ship handling, gunnery, and boarding maneuvers, and he had been trained by professionals in western Europe. Clearly his captors respected this knowledge and skill, as they ultimately allowed him

to join their crew rather than remain a slave. Within a year, Janssen had voluntarily relocated to Salé and converted to Islam, taking the name Murat Reis, and he even married a local Moroccan. Although these may have been tactical maneuvers intended to secure greater wealth and social freedoms (rather than a genuine conversion or assimilation), the process still involved significant adaptations in language, customs, food, dress, and social relationships. Janssen, as Murat Reis, rose to local prominence and quickly established himself within the government framework of the Salé Republic. He even attained the elected position of admiral and was responsible for the city's rover fleet, pushing its slave raids as far north as Ireland and Iceland between 1619 and 1631.

—Eric Emery

from naval warships or licensed privateers, a legacy of the reduction in forces that punctuated each of the religious wars in Europe between the 1560s and the 1650s. The English, in particular, returned almost immediately to the crafts of piracy and slave trading in the Atlantic shortly after signing the Treaty of London with Spain in 1604. And although exploration, trade, and fishing absorbed a great deal of its professional sailors, these activities alone could not account for all of those displaced and left idle by the peace. By the 1620s, the English, French, and Dutch mercantilist states had also begun to monopolize the seaborne commerce of the Atlantic, surgically destroying and then supplanting the local shipping networks along the coast of Morocco and the rest of Africa. In turn, this practice encouraged the more seasoned European captains, officers, and sailors to volunteer their services aboard renegade vessels in search of more money and fewer restrictions. Moreover, the practice enticed local merchants from the minor seaports like Salé to use fishing and piracy to compensate for lost revenues.

Around 1651, the Salé rovers hit the high-water mark of their success. The rover fleet employed nearly 50 vessels, with mixed crews of Moroccans, Moriscos, and Algerian Berbers, many of whom were trained in ship handling,

gunnery, and boarding maneuvers by professionals from Europe. The rovers stole and resold an impressive array of foreign cargos: wine and oils from Spain, Portugal, and France; gold, timber, and slaves from Africa; sugar, gold, silver, and furs from the Americas; and silk, cotton, indigo, pepper, and spices from India and Indonesia. They also conducted raids and looted on land, thus supplying the slave trade with Christians from as far away as Newfoundland and Iceland and closer to home along the coasts of Ireland and the English West Country. After multiple failed attempts to break the rovers' hold on Salé (1629–1650), the monarchies of northern Europe resorted to diplomacy, and in some cases tribute payments, to protect their interests in the Atlantic. Dutch consuls even went as far as to legitimize the pirate republic with a formal treaty in 1651.

The Alaouite dynasty eventually managed to bring Salé back under the central authority of Morocco in 1666. The bulk of the rover fleet dissolved shortly thereafter, suffocated, at least in part, by tax increases and restrictive economic policies between 1666 and 1668. At the same time, the new mercantile powers of Europe were starting to use their enhanced social position to aggressively petition their government navies for more protections against piracy, such

as armed convoys of warships outfitted with the latest in long-range guns.

—Eric Emery

Bibliography

- Andrews, K. R. *Trade, Plunder, and Settlement: Maritime Enterprise and the Genesis of the British Empire, 1480–1630*. Cambridge: Cambridge University Press, 1984.
- Davies, J. D. “A Permanent National Maritime Fighting Force, 1642–1689.” In *The Oxford Illustrated History of the Royal Navy*, edited by J. R. Hill. Oxford, UK: Oxford University Press, 1995.
- Mainwaring, H. *The Life and Works of Sir Henry Mainwaring*. 2 vols. Edited by G. E. Manwaring and W. G. Perrin. London: Navy Records Society, 1920–1922.
- Rodger, N. A. M. *The Safeguard of the Sea: A Naval History of Britain, 660–1649*. London: Norton, 1997.

The Barbary Problem— Diplomatic Accommodation in the Contested Mediterranean

The North African regencies of Algiers, Tunis, and Tripoli—often known as the Barbary states—are among the most poorly understood states of the early modern period. Generally dismissed as little more than pirates’ lairs, they have been all but libeled in centuries of Western writing. Yet from the sixteenth century, when they became semiautonomous provinces of the Ottoman empire, they played a key role in the trade and diplomacy of the Mediterranean and helped shape the contours of European and United States politics into the early nineteenth century.

Following the collapse of the Almohad dynasty in the thirteenth century, political control in western North Africa was divided among the Hafsids in what are now Tunisia, the Marinid kingdom of Morocco, and other lesser states. Following the overthrow of the Muslim emirate of Granada in 1492, the Spanish and Portuguese pushed their reconquista into North Africa proper, raiding and capturing more than half a dozen coastal settlements in Morocco and Algeria between 1497 and 1510. (Spain retains five such territories, known as *plazas de soberanía*, the largest of which are Ceuta and Melilla.)

In the early 1500s the corsair brothers Aruj Pasha and Hayreddin Pasha—known as the Barbarossas—fled Ottoman lands in the eastern Mediterranean due to their association with a brother (and rival) of the newly installed Sultan Selim. The Algerines appealed to the Barbarossas for help against the Spanish, and they took the port of Algiers in 1516. On his brother’s death in 1518, Hayreddin Pasha turned to Selim for support, and Tunis and Algiers fell into the orbit of the Ottoman empire. A wide range of contemporary European documents indicates that in the sixteenth and seventeenth centuries the regencies were among the richest and safest places in the Mediterranean and that their laws were administered with greater justice than in much of Europe.

The regencies frequently contributed their ships to Ottoman fleets, particularly those sailing against the perennial enemy, Spain. The Ottomans depended especially on the Algerine fleet to represent their naval power in the



Ottoman admiral Hayreddin Pasha, known as Barbarossa, helped bring northwestern Africa into the Ottoman Empire. (Christie’s Images/Corbis)

► THE ANGLO-BARBARY THREAT TO AMERICAN SHIPPING IN THE MEDITERRANEAN

Following the American Revolution, U.S. merchants no longer enjoyed the protection of the Royal Navy, and many Britons hoped that American trade might be strangled at birth. In his *Observations on the Commerce of the American States* (1783), Lord Sheffield saw a role for the Barbary regencies in ensuring this outcome: “It is not probable that the American States will have a very free trade in the Mediterranean,” he predicted. “It will not be to the interest of the great maritime powers to protect them from the Barbary States. If they know their interests, they will not encourage the Americans to be carriers. That the Barbary States are advantageous to maritime Powers is certain.”

While serving as U.S. minister to France, with authority to negotiate treaties with the Barbary states, among others, Benjamin Franklin confirmed Sheffield’s point in a letter written the same year: “I think it not improbable that those Rovers may be privately encouraged by the English to fall upon us, to prevent our Interference in the Carrying Trade; for I have in London heard it is a Maxim among the Merchants, that, if *there were no Algiers*, it would be worth England’s while to build one.”

—Lincoln P. Paine

Sources

Benjamin Franklin, *Writings* (New York: Library of America, 1987), 1072; John Baker Holroyd, Earl of Sheffield, *Observations on the Commerce of the American States*. . . (London: Printed for J. Debrett, 1783), 204.

western Mediterranean, and several Algerines became *kapudan pasha* (admiral) of the Ottoman navy. Hayreddin Pasha led the Ottomans to victory at the Battle of Prevesa (1530) off Greece, while a successor, Uluj Ali, was the most successful commander in the Ottoman defeat at Lepanto (1573) and was afterward charged with rebuilding the fleet.

The fact that the corsairs operated from Muslim ports and with the sanction of Muslim rulers tends to mask the fact that many of the crew and a high percentage of the officers and commanders were Christian converts to Islam (or renegades, in the European view). There were

also considerable numbers of Christian pirates and privateers operating out of Livorno (Leghorn), Italy, and Malta, where the Knights of St. John had relocated after the Ottoman capture of Rhodes in 1522. Moreover, the French, English, Dutch, and other enemies of Spain cultivated commercial and diplomatic relations with the regencies, although the position of the latter was complicated by the fact that pirates of all nations sold goods, ships, and people—whether legally or illegally acquired—at Algiers, Tunis, Tripoli, and other ports. Captured crews and passengers were held for ransom or sold as slaves, as was common around the Mediterranean and even in northern Europe.

Although as an independent kingdom Morocco is generally treated apart from the Barbary regencies and many of its principal ports were held by the Spanish or Portuguese, the Atlantic coast port of Rabat/Salé became a center of corsair activity following the settlement there of Moriscos (Spanish Muslims) expelled from Spain in 1609. The initial focus of the so-called Salé rovers was Spanish shipping, but under the command of Christian renegades (or Muslim converts)—notably Murat Reïs, originally Jan Jansz, of Haarlem, Holland—in the 1620s they raided as far as the British Isles, Iceland, and Newfoundland. Barbary hostilities against merchant shipping in the Mediterranean and the Atlantic peaked in the first half of the 1600s, but accurate figures are difficult to obtain, and the actions of Barbary corsairs can only be assessed adequately alongside those of the more numerous Dutch, English, French, Italian, and Greek privateers and pirates.

The major European powers occasionally sent fleets to the regency capitals to secure better treatment for their nationals or to ransom slaves. But Algiers, for one, was as big as London and derived revenues from far more than corsairing and slave trading. In time, Europeans realized that the most economical approach was to make treaties with the regencies to guarantee safe passage for their ships while encouraging attacks on those of their rivals. This remained standard policy until the start of the nineteenth century, when Britain, France, and the United States deployed their fleets to enforce the abolition of corsairing, which effectively ended in 1816.

—Lincoln P. Paine

Bibliography

- Braudel, Fernand. *The Mediterranean in the Age of Philip II*. 2 vols. New York: Harper and Row, 1973.
- De Planhol, Xavier. *L'Islam et la mer: La mosquée et le matelot, VIIe-XXe siècle*. Paris: Librairie Académique Perrin, 2000.
- Fisher, Sir Godfrey. *Barbary Legend: War, Trade and Piracy in North Africa, 1415-1830*. 1957; reprint; Westport, CT: Greenwood, 1974.
- Rodger, Nicholas. *The Command of the Ocean: A Naval History of Britain, 1649-1815*. New York: Norton, 2005.
- Rodger, Nicholas. *The Safeguard of the Sea: A Naval History of Britain, 660-1649*. New York: Norton, 1997.

Commodore Anson's Embassy, 1743

Besides securing his personal fortune and future political career, Commodore George Anson's circumnavigation of the globe in 1740-1744, and particularly his stay in Canton in 1743, significantly altered British and European views of China, its government, and its military capability. Prior to the 1748 publication of Anson's *A Voyage round the World*, European intellectuals, such as Voltaire, were impressed by Chinese silks and ceramics and considered the distant Asian nation to be intellectually and morally superior to Europe. But Anson's harsh account of the ill treatment that he and his men received in Canton while seeking to resupply themselves for the voyage home led many Europeans to dismiss the Chinese government as corrupt and weak and the Chinese people as arrogant and deceitful.

In November 1742 the *Centurion*, the last of six vessels with which Anson had begun his voyage, arrived at Macao, the Portuguese trading post on the southern Chinese coast. The unexpected arrival of the first British warship to appear in Chinese waters discomfited officials of both the Chinese government and the British East India Company. In desperate need of repairs and supplies, Anson, who had little knowledge or experience of Chinese laws or customs, expected to have his needs met quickly. However, as the local East India Company agents explained, Anson could not approach the government directly but

should, like them, work through merchants of the major Chinese trading houses. When this method failed to produce quick results, Anson tried to contact the local viceroy, becoming more vocal and threatening in his demands as his frustration grew. Since the success and even continuance of their trade depended on maintaining good relations with local officials and merchants, the East India Company agents were as anxious as Anson to expedite his departure from China. They were greatly relieved when the refitted and restocked *Centurion* finally left Macao in April 1743.

Rather than sail west, however, Anson made for the Philippines where, off Cape Espiritu Santo, he captured the rich Spanish trade galleon *Neustra Señora de Covadonga* on June 20. Having sustained battle damage and burdened with many prisoners, Anson had no choice but to return to Macao. Upon arrival, he found his position even more precarious than it had been previously. Besides daring to wage war in Chinese waters, he had also disrupted commerce by capturing the ship that was the basis for Chinese trade with the Philippines. His return also reopened the vexed question of harbor dues, which the Chinese, considering all foreigners inferior, demanded of all European vessels. During his earlier visit, Anson had reluctantly anchored at Taipa, 6 miles (10 kilometers) from Macao, to avoid such demands. Since warships were exempt from such dues by European custom, he believed that paying the Chinese duties was dishonorable. Determined to avoid the frustrations of his previous visit, Anson engaged a Chinese pilot in Macao to guide him upriver to Canton. Threatening the pilot with hanging if he grounded the ship, Anson ignored his lack of permission to enter the river, refused to pay any harbor dues, and brought the *Centurion* and its prize to anchorage near the Chinese forts that guarded the river.

After a two-week delay in mid-July, the Chinese finally permitted Anson to land his prisoners and proceed upriver to a new anchorage about 4 miles (6.5 kilometers) outside the roadstead at Whampoa, where East India Company ships docked. By remaining outside the roadstead, Anson maintained his distance from Chinese customs officials, whose demands for harbor dues were again refused. The Chinese

THE CANTON SYSTEM

Because all European trade with China was limited to the port of Canton, the highly restrictive trade regulation established by the Chinese emperor in 1760 was known as the Canton System. The system allowed the Chinese government to control trade with the West and to limit Western contact with and influence on Chinese society.

Under the system, which was overseen by the superintendent of maritime customs, known as the Hoppo, foreigners could come to Canton only during the winter trading season and then were confined to 13 trading factories along the waterfront. They could not enter the walls of Canton itself, and at the end of each trading season they had to return to Macao. They could trade only with a group of 10 to 12 Chinese merchants, who were members of the *gonghang*, the officially authorized trading houses. Direct trade with any other Chinese merchants was strictly prohibited, as was any direct contact with Chinese officials. All European approaches to the Chinese government had to come through the *gonghang* merchants, who in return for their licensed trade monopoly were held fully accountable for the activities and behavior of the Europeans.

—John A. Wagner

merchants provided Anson with daily provisions but not with the large stock of supplies needed for the voyage home, and the next four months were consumed by torturous negotiations with Chinese officials, from whom Anson demanded supplies and a meeting with the local viceroy. The supplies were collected by late November, but the meeting did not occur until Anson's men won a measure of goodwill by helping put out a large fire in Canton. On November 30, eight of Anson's men carried him to the palace in a sedan chair. Forced to wait in an anteroom, Anson was finally admitted to the viceroy's presence, where he complained at length regarding his treatment. When this recital brought no reply, a perplexed Anson mentioned his men's assistance with the fire, which was acknowledged. The viceroy then ordered that the gathered supplies be loaded and wished Anson a good journey home. No mention was made of harbor dues. Much to the

relief of East India Company officials, the *Centurion* departed Canton in early December.

Anson reached England in June 1744 and published the account of his voyage in 1748. Its most shocking passages were those criticizing the Chinese government and society. Anson's remarks shattered the prevailing view of China as a land free of superstition and bigotry and initiated a growing British contempt for China that significantly affected Anglo-Chinese relations in the nineteenth century.

—John A. Wagner

Bibliography

- Anson, George. *Voyage round the World in the Years 1740–44*. Edited by Glyndwr Williams. Oxford, UK: Oxford University Press, 1974.
- Rodger, N. A. M. "George, Lord Anson, 1697–1762." In *Precursors of Nelson: British Admirals of the Eighteenth Century*, edited by P. Le Fevre and R. Harding. Mechanicsburg, PA: Stackpole, 2000.
- Rodger, N. A. M. *The Wooden World: An Anatomy of the Georgian Navy*. New York: Norton, 1996.
- Williams, Glyn. *The Prize of All the Oceans: The Dramatic True Story of Commodore Anson's Voyage round the World*. New York: Viking, 2000.
- Williams, Glyndwr. "Anson at Canton, 1743: 'A Little Secret History'." In *The European Outburst and Encounter: The First Phase, c. 1400–c. 1700; Essays in Tribute to David Beers Quinn*, edited by Cecil H. Clough and P. E. H. Hair. Liverpool: Liverpool University Press, 1994.

Pocahontas Stories— Mythologies of Friendship and Affiliation

Pocahontas, the legendary Native American girl, saved the life of Englishman John Smith, who faced execution by her father, a powerful seventeenth-century Algonquian chief. Her legendary staying of his execution, conversion to Christianity, and marriage to an Englishman named John Rolfe enabled successive generations to reinterpret her narrative within the context of changing American ideals.

Born in the mid-1590s, Pocahontas was the daughter of Chief Powhatan, who in the 1570s had united diverse Algonquian bands into a loose confederation. During the sixteenth century, Spanish and English traders and explorers

▶ JOHN SMITH

John Smith was born into a family of farmers in Willoughby, England, in 1580. He was short (5 feet 3–4 inches or about 1.6 meters tall) and stocky, with brown hair and a beard. In his late teens, Smith headed to the European continent to fight under the Dutch captain Joseph Duxbury. This began Smith's military career, which enabled him to rise above his lowly family status. Then, in his early twenties, he joined Austrian forces fighting the Turkish Ottoman empire. In 1602 Smith was captured and sold into slavery. After he escaped and returned to friendly territory, the Virginia Company hired Smith to serve as a captain for its American colony. During his two years in the Chesapeake, Smith learned the Algonquian language and developed a relationship with the Powhatan Indian people. Moreover, from 1608 to 1609 Smith served as president of Jamestown. After returning to England, he wrote a series of books about New England, seamanship, and English colonization. Each work reflected his passion for English settlement in the New World. However, his most famous work was the 1624 *Generall Historie of Virginia*, which recounted his experiences with the Powhatans and Pocahontas. In 1631 John Smith died a bachelor, leaving no descendents.

—Kassi Klinefelter



Pocahontas, daughter of the powerful Powhatan, depicted here during her voyage to England, supposedly saved Captain John Smith from death by pleading with her father. (Library of Congress)

traveled to the southeastern region of the North American continent inhabited by the Powhatans. In June 1607, newcomers established Jamestown, named after the English king, and called the land “Virginia” after the virgin queen, Elizabeth I. For the next six months, Pocahontas interacted with the English settlers. Through a system of trading frequently carried on by females, she learned the language and about English culture.

Over the next half-year, however, conflict and tensions increased between the newcomers eager to expand and the indigenous Powhatans. In an effort to protect his tribe from encroachment and seeking retribution for the murder of two Powhatans, Chief Powhatan captured John Smith. According to the English captain's own published narrative, he was about to be clubbed to death when eleven- or twelve-year-old Pocahontas forcefully intervened.

For the next six years, Pocahontas served as a translator between the English and Algonquian peoples, who otherwise lived in uneasy proximity. By 1613, however, tensions erupted between the Jamestown settlers and the Powhatans. Pocahontas was captured by the Virginians, who held her captive in an attempt to improve their bargaining position with her father. Incarcerated for months, Pocahontas re-created herself as a Christian woman and changed her name to Rebecca. Just days after her release in April 1614, she married John Rolfe, an English tobacco planter she had known during her captivity.

In June 1616 she traveled to London for seven months with her husband and son, where she was honored and feted and known as Lady Rebecca. The former Indian princess now impressed all as a proper Christian woman with a strong command of the English language and customs. However, Pocahontas, who became ill with

pneumonia or tuberculosis while living in London, died on board the ship while it was still on the River Thames, and she was buried in England.

Much of what we know about Pocahontas derives from Smith's own *Generall Historie of Virginie* (1624). But historians and other scholars in various disciplines have cast doubt upon the veracity of Smith's published recollection. Was it fact or fiction? Is it possible that Smith misunderstood the nature of the stay of execution that is at the center of the Pocahontas story? Research on Iroquoian women (also Algonquian) reveals that stopping executions was one way in which Native American women exercised their political power. Another method was the right to call for an "adoption." The Algonquians achieved retribution for a slain family member (and inadvertently added to their population) through an adoption process. It was often women who called for adoptions that led to raids. A recent anthropological interpretation maintains that Smith possibly misunderstood the nature of Pocahontas's actions, casting it in romantic rather than demographic terms. Her real intention was, perhaps, to adopt Smith into the tribe.

The "new" social history of Native American women further reveals, as scholar Jane Kamensky has argued, that "a Pocahontas-like figure [was] at the center of virtually every major encounter between natives and Europeans from the fifteenth century through the nineteenth." Other Native American women elsewhere also served as translators, emissaries, and guides to Euro-American men they occasionally married. However, scholars of Scottish ballads have demonstrated that even before 1300, narrative tales of the oral tradition are remarkably similar to the Pocahontas story. For example, in "Lord Bateman and the Turkish King's Daughter," the American version of "Young Beichan," a man is captured by a ruler and then rescued by his daughter (who converts to Christianity). It would seem, then, that Smith's story was informed by traditional literary conventions with which Europeans were already familiar.

Because Smith's story drew upon older European traditions, it was easily adapted by the British to express their concerns about colonization and by successive generations as well. The centuries-old icon of the preadolescent Native

American girl has reflected concerns and shaped perceptions about a wide variety of issues: race, gender, class, sexuality, liberty, culture, and national identity. Pocahontas has been the subject of paintings, poems, plays, and prints that romanticize our past and contribute to a historical mythology. Whether as exotic and sexual or maternal or virginal, powerful iconographic metaphors of the Native American princess (in contrast to the degraded dark-skinned "squaw") have been used widely, even to sell products such as tobacco, perfume, cigars, and flour.

Just as she reinvented herself in her lifetime, Pocahontas has symbolized nobility, Christianity, Otherness, femininity, and most recently, Disney's view of bourgeois feminism. In this postfeminist animated movie version, Pocahontas is not only physically precocious but is also superhuman. Though she was only about eleven or twelve years of age when she "saved" John Smith, Disney's Pocahontas is a towering titan with Barbie-doll proportions. Pocahontas also has the same romantic devotion that Barbie has to Ken. To heighten the devotion (and simplify the plot), the animated Pocahontas falls in love with John Smith and not John Rolfe, the Englishman she, in fact, did marry. Typically, the movie tied into a consumer market of Pocahontas clothing, accessories, toys, and books, making shoppers out of little girls who can imagine themselves as gorgeous, independent, courageous, and deeply romantic. Disney's historically inaccurate version of Pocahontas offended many Native Americans.

—Miriam Forman-Brunell

Bibliography

- Forman-Brunell, Miriam. "Pocahontas." In *Girlhood in America: An Encyclopedia*, edited by Miriam Forman-Brunell. Santa Barbara, CA: ABC-CLIO, 2001.
- Green, Rayna. "The Pocahontas Perplex: The Image of Indian Women in American Culture." *The Massachusetts Review* 16, no. 4 (1975): 698–714.
- Kamensky, Jane. *The Colonial Mosaic: American Women, 1600–1760*. New York: Oxford University Press, 1995.
- Woodward, Grace Steele. *Pocahontas*. Norman: University of Oklahoma Press, 1969.
- Young, Philip. "The Mother of Us All: Pocahontas Reconsidered." *Kenyon Review* 24, no. 2 (1962): 391–415.

Smallpox Diplomacy—Sir Jeffrey Amherst and Pontiac's Rebellion

The British victory over the French in the Seven Years' War (1754–1763), also known as the French and Indian War, eliminated the French from eastern North America. Those Native American tribes that had been allied with the French were concerned about this development. French relations with Native Americans had been relatively benign, with gifts and mutual benefits. The British had a reputation for being less accepting of Native American culture and traditions.

In 1760 British forces occupied Fort Detroit, the key to British control over the western Great Lakes region. At a conference on September 9, 1761, at Detroit, the British refused Indian requests for cheaper trade goods and ammunition. By 1763 most Indians believed that war was inevitable. The French practice of giving chiefs presents such as guns, knives, and clothing that they could then redistribute to their followers was abandoned. The number of guns and supplies of gunpowder available to the Indians was strictly limited, reducing their ability to hunt. Many Native Americans feared that they were being disarmed by the British. That view was reinforced by British occupation of French forts, such as Fort Detroit. The growing British military presence was believed to be a prelude to conquest. Even more disturbing was a flood of British American settlers from the coastal colonies. The white settlers claimed land used by the Indians for hunting purposes. An Indian spiritual leader known as the Prophet traveled through the region preaching that Native Americans should return to their traditional ways. The Prophet called for Indians to renounce the use of alcohol and European goods such as firearms and iron pots and knives. They should return to the state in which they had lived before Europeans came. The Master of Life would then reward the Native Americans. Most Native Americans in the region accepted the concept, including Pontiac, an Ottawa chief. At a conference that Pontiac held on the Ecorse River near Detroit, Indian leaders agreed to follow him in a war against the British.

Sir Jeffrey Amherst, commander in chief of British forces in North America, made relations



Ottawa chief Pontiac negotiates with English colonel Henry Bouquet at a council fire near the English camp on the Muskingum River in October 1764. (Library of Congress)

more difficult. Amherst had engineered the defeat of French forces in the war and had only contempt for Native Americans. He rejected traditional gift giving despite the advice of advisers with much experience on the frontier.

Pontiac recognized that Detroit was the key to the region. He arranged a surprise attack on the fort on May 7, 1763. The commander, Major Henry Gladwin, was suspicious and had the garrison armed and alert. Although Pontiac canceled the attack, some of his men attacked local settlers. When Gladwin refused to surrender on May 10, Pontiac placed Detroit under siege. In coordinated attacks, Native American tribes took all other British outposts in present-day Michigan, Indiana, and Ohio. Fort Pitt was unsuccessfully attacked on May 28 and subsequently placed under siege.

Amherst was furious that the Indians dared to revolt. When small outposts in Pennsylvania were overrun, he hurriedly arranged for reinforcements. In June, Colonel Henry Bouquet led 400 regulars toward Fort Pitt. In correspondence with Bouquet, Amherst suggested that blankets contaminated with smallpox be distributed to the Indians in hopes of causing an epidemic. He hoped to wipe out the people he called “vermin.” Smallpox had broken out among the garrisons in Fort Pitt. The commander had used a parley with the besieging Indians to distribute to

them handkerchiefs and blankets used by smallpox patients. Historians have debated whether infection through these means was possible, but smallpox did break out among the besiegers. Even so, Amherst apparently never pursued the smallpox idea. His letters to Bouquet also suggested using the so-called Spanish method to exterminate the Native Americans. This method included using hunting dogs, light infantrymen, and men on horseback to hunt the Native Americans like animals, with little danger to the British. Bouquet discouraged this plan because of a lack of hunting dogs.

Bouquet successfully relieved Fort Pitt on August 6. In a two-day battle known as the Battle of Bushy Run, Bouquet lost 50 men, and another 60 were wounded. His men were not able to pursue the Native Americans any farther. Fort Detroit had received 260 regulars as reinforcements on July 28. They sallied out to try to drive off the Indians but were ambushed by Pontiac and his men. The British suffered more than 150 casualties before retreating back inside the fort. The siege was finally broken in September when the schooner *Huron* arrived at Detroit after beating off an Ottawa war party in canoes.

Pontiac recognized that his war, despite its early successes, could not drive the British away. Because the British controlled the water routes to Detroit, the fort could hold out indefinitely. On October 15, 1763, he agreed to a truce and lifted the siege. It was the longest siege ever

undertaken by Native Americans against European forces. When Pontiac tried to resume the fighting in the spring of 1764, his allies refused. Sir William Johnson, the British official in charge of relations with the Native Americans, convinced Amherst to approve gifts and concessions to the Indians. Relations between the British authorities and Native Americans improved greatly. The revolt had other results as well. On October 7, 1763, King George III issued the Proclamation of 1763 forbidding settlement by Europeans west of the Appalachian Mountains, thus providing the Native Americans a breathing space. The revolt also helped bring on the American Revolution because it caused the British government to consider taxing American colonists to help pay for British soldiers to defend the frontier.

—Timothy J. Watts

Bibliography

- Anderson, Fred. *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754–1766*. New York: Knopf, 2000.
- Dowd, Gregory Evans. *War under Heaven: Pontiac, the Indian Nations, and the British Empire*. Baltimore: Johns Hopkins University Press, 2002.
- Hale, Nathaniel Claiborne. *Pontiac's War: The Great Indian Uprising against the English in 1763*. Wynnewood, PA: Hale House, 1973.
- Parkman, Francis. *The Conspiracy of Pontiac and the Indian War after the Conquest of Canada*. 1870; reprint, Lincoln: University of Nebraska Press, 1994.

■ Introduction: A Military Revolution or Evolution?

The term “Military Revolution” was coined by prominent military historian Michael Roberts in a 1956 essay. In it Roberts argued that the nature of warfare changed profoundly in the period between 1560 and 1660 and marked a turning point in virtually all aspects of war. Army organization, strategies, tactics, and weapons went through major transformations as a result of the innovations of various European military leaders, notably Maurice of Nassau in Holland and Gustavus Adol-

phus in Sweden. The concept of the Military Revolution was widely accepted for two decades until an academic debate around it emerged in the 1980s. British historian Geoffrey Parker expanded the concept to cover changes in fortress designs and naval innovations and stressed the worldwide implications linking the Military Revolution to the rise of Europe to global dominance. Scholars questioned whether a process lasting for over 100 years can be truly called a revolution. Instead, American historian Clifford

J. Rogers suggested the idea of successive military revolutions at different periods, for example, the “infantry revolution” of the fourteenth century, the “artillery revolution” in the fifteenth century, the “fortifications revolution” in the sixteenth, etc. He compared this process to a biological concept of “punctuated equilibrium evolution” that implies short spurts of rapid military innovation followed by longer periods of relative stagnation. Other historians noted that the Military Revolution was not necessarily a purely European phenomenon and that military transformation occurred outside Europe as well, such as in the Ottoman empire, in India, and in Qing China. More importantly, scholars contend that Military Revolution is not just about transformation of tactics and strategies but is also about profound political, economic, and social changes that occurred between the fifteenth and eighteenth centuries. Did the Military Revolution cause these changes in state formation, or did political and social changes contribute to the Military Revolution? The debate is ongoing, and no clear consensus has emerged so far among historians.

—Alexander Mikaberidze

European Military Transformations

Developments in military technology and advances in battlefield tactics from the sixteenth to the eighteenth century in Europe led to what historians refer to as the “military revolution,” which changed not only the nature of warfare itself but also diplomacy and statecraft. In 1955 historian Michael Roberts proposed that four major changes in warfare, occurring from 1560 to 1660, constituted a military revolution: the use of firepower replaced shock, the size of armies was increased, field strategies replaced sieges in offensive operations, and warfare affected civilian societies directly on a vaster scale. Roberts further suggested that these developments allowed for the establishments of constitutional centralization of states (using Protestant Sweden under Gustavus Adolphus as an example) and in effect were a major contributing factor in the evolution of the modern state. However, the historiographical debate that Roberts sparked

allowed for other historians to explore developments in military and state transformations in early modern Europe, which contributed to European hegemony in the world in later centuries.

Historian Geoffrey Parker, while in agreement with Roberts’s overall concept of a military revolution taking place, disagreed with his contention regarding the development of constitutional modern states. Parker also believed that Roberts overlooked developments in France and Spain. Roberts had argued that the state had been required to centralize its authority to administer and tax the populace in order to field and supply standing armies. Parker countered this contention by arguing for the Spanish Habsburg regime, which had not implemented political changes and was still able to maintain and field major forces throughout Europe, most notably the formidable *tercios*. Moreover, according to Parker, the Spanish had been the first in the fifteenth century to create a centralized bureaucratic structure to finance, train, and command its military forces without structural constitutional changes to the Habsburg composite state.

Parker also proposed that Roberts’s argument concerning the transition from siege warfare contributing to developments in tactics on the battlefield was not causally linked from the former to the latter. According to Roberts, modern warfare developed in response to the disuse of fortifications, which were less efficient due to vulnerability from artillery barrages. Parker was critical of this thesis and argued that improvements in fortifications actually contributed to the increase in field troops and the use of artillery. The development of the *trace italienne* in early modern military geography, where low walls, obstacles, and bastions allowed fortress artillery to defend itself from attacking forces, became an important innovation. These new fortifications forced military organizations to field larger armies to attack and maintain larger sieges. Garrisons and defensive forces were also forced to grow in size to match the increase in troops mustered by offensive military commands. Therefore, according to Parker, the revolution occurred nearly a century (1570) before Roberts had suggested (1660).

Historian Jeremy Black argued that the military revolution had actually occurred much later

► SPANISH *TERCIOS*

The Spanish *tercios* (“third”), a military formation composed of pikemen, swordsmen, and harquebusers (musketeers) of 3,000 troops, was a formidable force in early modern European warfare. This infantry formation developed in the Italian Wars (1494–1559) as a response to counter cavalry forces. Pikemen, a Swiss development in infantry, staved off cavalry forces with large spears, or pikes, protecting swordsmen and musketeers within the formation. The Spanish Habsburgs used *tercios* in their many wars of the sixteenth century, exhibiting the combination of the pikeman (defense against cavalry) and the musketeer (firepower) in battle, the old and the new, illustrative of the dynamic nature of the military revolution of early modern Europe. Moreover, fielding these large forces required the Habsburg state to create a viable system of taxation, supply, and military organization, also exhibiting the development of the absolutist state (at least with the composite state of Castile) vis-à-vis the military revolution. However, tactical improvements in the seventeenth century, by the military innovations of the Swede Gustavus Adolphus in the Thirty Years’ War and the Dutch Maurice of Nassau in the Habsburg-Dutch War, reduced the effectiveness of the *tercios* in battle, illustrating the evolution of long-term military transformations vis-à-vis tactics, technology, and the state.

—Abraham O. Mendoza

than proposed by both Roberts and Parker. For Black, the implementation of the ring bayonet, which meant the end of the use of pikemen, allowed for a vast increase in the number of infantry. Pikemen had been used in early modern Europe to protect the infantry from cavalry through the use of large pikes, in effect creating a wall around the columns of musketeers. The ring bayonet allowed armies to dispense with pikes and thus use their manpower for more musketeers in their infantries. Moreover, Black contended that standardization in weaponry and uniforms also contributed to the onset of the military revolution. He proposed, in contrast to Roberts’s thesis, that the modern state, in its administrative and bureaucratic capacities, allowed for strategic developments rather than vice versa.

Historian Clifford Rogers takes an entirely different framework to explain the military transformations in Europe by examining developments before those espoused by Roberts, Parker, and Black. Rogers discusses developments in preceding centuries and formulates these changes by discussing the “infantry revolution” and the “artillery revolution.” According to Rogers, the infantry revolution occurred in the thirteenth century during the Hundred Years’ War (1337–1453) between England and France, where the use of the longbow illustrated the value of the infantry as an integral component in battle against heavily armored knights. Moreover, pikes were also used to fend off cavalry attacks and thus conclusively began being used in larger numbers to counter traditional medieval knight cavalry charges. The need for larger infantries forced states to recruit and maintain troops of nonelites as these became integral components in national armies. Moreover, the artillery revolution, which also grew out of the Hundred Years’ War, was characterized by technological improvements in cannon barrels and more efficient use of gunpowder and contributed to changes in battlefield tactics, sieges, and the development of the state. They became pivotal to destroying strongholds and fortifications and could only be afforded by centralized states due to their expense. Therefore, according to Rogers, these developments, while antecedents to Roberts’s military revolution, illustrate the long-term process of the development of the modern state and changes in military technology and tactics in what he frames as a punctuated equilibrium evolution. In using this model, Rogers proposes that there was a series of military revolutions, all in reaction to previous disequilibrium introduced by prior revolutions and all part of a long-term process of transformation.

—Abraham O. Mendoza

Bibliography

- Black, Jeremy. *A Military Revolution? Military Change and European Society, 1551–1800*. London: Palgrave Macmillan, 1990.
- Bobbitt, Philip. *The Shield of Achilles: War, Peace, and the Course of History*. New York: Anchor Books, 2002.
- Parker, Geoffrey. *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800*.

2nd ed. New York: Cambridge University Press, 1996.

Rogers, Clifford J. *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*. Boulder, CO: Westview, 1995.

The Rise of European Naval Power

Before the sixteenth century, most violence at sea was employed by private individuals to further their own commercial interests. Permanent warship squadrons were few and small, and when monarchs ordered fleets to sea, they generally were composed of ships and crews acquired on a temporary basis by ship musters or requisitioning. From the 1500s on, there was a fundamental shift in Europe from private, commercial naval warfare to public, political warfare in which the nation-state came to monopolize the use of violence at sea. This change resulted from both technological advances in shipbuilding and weaponry and an array of bureaucratic reforms, mutually reinforcing developments that enabled governments to increase their revenues, enlarge their fleets, and thereby channel trade in ways beneficial to the state.

A material essential to Europe's overseas expansion was the adoption of a rig that combined the square sail of northern ships with the fore-and-aft lateen sail of the Mediterranean to create the earliest square-rigged ships. Armed with even light caliber guns, the Portuguese *caravela de armada*—the first European sailing ship developed as a warship—overpowered anything encountered in Asian waters. Yet the square rig was initially incompatible with the heavier guns being developed at the same time. In the 1470s, the Venetians began mounting large centerline guns in their galleys, which had long been overshadowed by the high freeboard of carracks and cogs. Galleys became the naval ship par excellence, not only in the Mediterranean, where sailing warships all but disappeared, but also in northern European waters. With their heaviest guns mounted high in the stern, square-riggers were easily outmaneuvered by galleys whose guns could penetrate enemy ships at or near the waterline with impunity.

Naval gunnery did not begin to mature until the development of the square-rigged galleon, whose low forecastles could accommodate heavy guns forward. The invention of the watertight gun port also allowed guns to be mounted nearer the waterline, and in time the placement of heavy guns amidships created the broadside battery standard from the seventeenth to nineteenth centuries. This in turn gave rise to the adoption of tactics centered on ships of the line. Naval warfare in Europe passed a watershed between 1571, the date of the last major sea battle fought between fleets of galleys, at Lepanto, and 1588, when the English navy checked the Spanish Armada in a week-long contest that was the first in which large numbers of square-rigged ships took part.

Even as naval guns and gunnery improved, boarding actions remained a mainstay of sea fighting. The artillery mounted on wooden ships was well-suited to reducing an opposing ship's effectiveness as a fighting or sailing unit and to killing people, but most ship losses were due to accidents, to which battle damage often contributed. In the Armada, only four Spanish ships (11 percent of confirmed losses) were captured or destroyed outright by English gunnery, three of them after they had run aground or been abandoned. These figures are comparable to statistics for the Royal Navy from the First Anglo-Dutch War (1652–1654) through the end of the Napoleonic Wars in 1815. In the course of ten major naval wars, the British lost 1,452 ships, only 14 percent to enemy action. More than half were lost in accidents, and captures accounted for a third. During World War II, by contrast, more than 80 percent of the 1,700 surface warships lost by all combatants sank as the result of enemy action.

The line of battle became a standard tactic for fleet engagements, as it allowed a heavy concentration of broadside fire on a specific part of the enemy's line. The preferred maneuver was "crossing the T," so that one's broadsides raked the enemy ships from stem to stern while the enemy could respond with only a handful of guns mounted in the bows. In their heyday, the largest ships of the line (first rates) had three full gun decks and mounted 100 or more guns, although the backbone of the battle fleet was the

➤ A SYSTEM OF RATES

The enormous increase in the number of ships in the French and English navies of the late seventeenth century would have been impossible without a concomitant improvement in fleet administration, which became more bureaucratized and systematic. This is most evident in the establishment by Samuel Pepys, clerk of the Navy Board, of a standard system for rating warships on the basis of the number and size of guns carried. N. A. M. Rodger has described this as a bureaucratic acknowledgment that the line of battle had been established as part of British strategy. This establishment determined officers' pay, overall manning requirements (a fixed number of men being required for each gun), and provisioning. Changes were made from time to time, but the rating system was remarkably static. In 1779 the Royal Navy's establishment was:

Rate	Guns	Men
First rate	100–120	850–875
Second rate	90–98	700–750
Third rate	64–80	500–650
Fourth rate	50–60	320–420
Fifth rate	32–44	200–300
Sixth rate	20–28	140–200

Ships of 60 guns and above were considered fit to lie in the battle line and referred to simply as vessels “of the line.” First-rate ships had three full gun decks (hence the expression “first rate” to describe something of the highest quality), but the backbone of the battle fleet was the two-decker of 60 to 90 guns.

—Lincoln P. Paine

two-decker of 60 to 90 guns. Other ship types included the frigate (later classified as fourth- or fifth-rate ships), a lighter, faster ship designed for raiding and dispatches, and a host of smaller types including heavily built bomb vessels that mounted mortars for shore bombardment. The sailing warship reached its acme during the French Revolutionary and Napoleonic wars (1793–1815), although ship design continued to improve in the decades of peace that followed.

However the emergence of completely new and distinct technologies in the 1800s rendered the sailing warship obsolete by mid-century.

Fighting was only one aspect of navies' missions. The increased size of individual fleets reflected the expansion of imperial commitments and a broader range of assignments. Strategy became ever more complex, involving convoy protection, extended blockades, commerce warfare, scouting, patrols in remote corners of empire, and diplomatic missions, much of this work being assigned to frigates.

The steady growth in the numbers of ships and the size of their armaments could not have happened without the development of government bureaucracies to administer the acquisition, repair and provisioning of ships, shipyards and bases, the development and stockpiling of weapons, and the recruitment and retention of officers and crew. Details of naval administration in the early modern period are sketchy, but these institutions were adequate for the purpose. The Portuguese fleet operated from bases strung from Brazil to India and East Asia, while the Spanish fleet had squadrons in Spain, for transatlantic convoy service, and in the Spanish Netherlands. The Ottomans maintained fleets and shipyards at Istanbul and Gallipoli, on the Black Sea, the Danube and Sava Rivers, and in the Aegean, Egypt and Yemen. In the 1520s, Sweden's Gustav I dissolved the monasteries (a year before his Danish counterpart and nearly a decade before England's Henry VIII did so) and built his kingdom's first permanent fleet from the proceeds. From 1597 to 1785, the Dutch Navy comprised five autonomous admiralties paid for by taxes on merchants collected by the admiralties and wartime supplements voted by the States General. The French Navy had a similar admiralty system until the seventeenth century, when finance minister Jean-Baptiste Colbert imposed more centralized control and founded schools of gunnery and navigation. When Peter the Great (1682–1725) created the Russian navy from scratch, he likewise established the Moscow School of Mathematics and Navigation and the St. Petersburg Naval Academy.

Yet the pinnacle of sea power was attained in Great Britain, which adopted a more

empirical approach to naval affairs, issuing *Fighting Instructions* that built upon the experience of actual battle and transmitted lessons learned to be used in future actions. Britain's naval administration combined centralized authority with functional specialties and distinct offices to oversee operations (the Admiralty), finances, shipbuilding and design, and recruitment of crews (the Navy Board), provisions (the Victualling Board), and armaments (the Board of Ordnance).

Apart from the technological changes, the most distinctive feature of naval warfare between the sixteenth and eighteenth centuries is the degree to which European states excelled at it. The primary challenge to European warships operating in Asia, the Americas and home waters was other Europeans. Before the end of the 1500s, the exercise of naval power in the interests of the state beyond the European Atlantic was limited, and Portugal and Spain tended their respective spheres of influence all but unchallenged in Asia and the Americas. Not until the Second Hundred Years' War between England and France did state fleets regularly fight each other in the Americas and Asia. Between England's Glorious Revolution of 1688 and the end of the Napoleonic Wars, England and France and their respective allies were at war more than sixty years and fought about forty major fleet engagements, only two of them in the waters of the British Isles, North Sea, or English Channel. The proximate causes of the individual conflicts differed, but common to all was the aim of preventing any one power—Britain, France or Spain—from dominating European affairs. The wars had enormous consequences beyond Europe, chief among them being the emergence of Great Britain as the first truly global power.

While European fleets were dominant, they were not completely unchallenged. Safavid Persia seized the island of Hormuz from the Portuguese with English help and the Omanis not only expelled them from their territory, but between 1652 and 1665 fought the Portuguese in East Africa, where they captured the port of Mombasa, and in India. The Omani fleet consisted of captured Portuguese ships and purchases from the English and the Dutch, but from the early years

THE TURTLE SHIP

The Japanese invasion of Korea in 1592–1598 faltered when Admiral Yi Sun-sin repeatedly prevented the Japanese from supplying their front lines by sea through a combination of a sophisticated and aggressive strategy, tactical discipline, and a fleet of perhaps five turtle ships (*geobukseon*), two-masted, oared galleys sheathed in iron and covered with spikes to prevent boarding. The turtle ship proved something of a dead-end in ship design, and Japan, Korea, and China remained relatively untouched by developments in naval warfare until the mid-nineteenth century.

—Lincoln P. Paine

of the Estado da India, a majority of the crews on European ships in the Indian Ocean were non-Europeans, so manning their fleet was never a challenge.

—Lincoln P. Paine

Bibliography

- Bathurst, R.D. "Maritime Trade and Imamate Government: Two Principal Themes in the History of Oman." In *The Arabian Peninsula: Society and Politics*, edited by Derek Hopwood. London: George, Allen and Unwin, 1972.
- Bruijn, J.R. *The Dutch Navy of the Seventeenth and Eighteenth Centuries*. Columbia: University of South Carolina Press, 1993.
- Brummett, Palmira. *Ottoman Seapower and Levantine Diplomacy in the Age of Discovery*. Albany: State University Press of New York, 1994.
- Domingues, Francisco Contente. "The State of Portuguese Naval Forces in the Sixteenth Century." In *War at Sea in the Middle Ages and Renaissance*, edited by John B. Hattendorf and Richard W. Unger. Rochester, NY: Boydell Press, 2003.
- Elisonas, Jurgis. "The Inseparable Trinity: Japan's Relations with China and Korea." In *The Cambridge History of Japan*, vol. 4, *Early Modern Japan*, edited by John Whitney Hall. Cambridge: Cambridge University Press, 1991.
- Glete, Jan. *Warfare at Sea, 1500–1650: Maritime Conflicts and the Transformation of Europe*. London: Routledge, 2000.
- Paine, Lincoln P. *Warships to 1900*. Boston: Houghton Mifflin, 2000.

Pow-key, Sohn, ed. *Nanjung Ilgi: War Diary of Admiral Yi Sun-sin*. Translated by Tae-hung Ha. Seoul: Yonsei University Press, 1977.

Rodger, N. A. M. *The Command of the Ocean: A Naval History of Britain, 1649–1815*. New York: W. W. Norton, 2005.

Military Transformation in Eurasia

Eurasian military transformations during the period 1450–1770 can be characterized by two themes and one technology. The first theme is the incorporation of nomadic steppe cavalry into many of the armies of the great Eurasian land empires. The synthesis of cavalry with sedentary infantry and artillery created some of the most dynamic and powerful military systems of the age but also led by the end of this period to the containment and finally the suppression of steppe nomadic power by sedentary states, reversing a millennium of steppe dominance. The second theme is the rise of navies, almost exclusively in Europe, with global reach and connected to commercial competition across the world's oceanic trade networks. The technology that facilitated both developments (though it caused neither) was gunpowder, especially in the form of cannon.

Settled states, whose economic bases were in agriculture, had long been at a military disadvantage in facing the bow-armed cavalry of the central Asian steppes. But with the decline of the Mongol empire, the last great power whose military strength derived primarily from steppe cavalry disappeared. The deep causes of this shift in power lay mostly in the growing disparity in demographics and resources between the settled societies and the pastoral world. The gradual expansion of the world of agriculture had been going on for almost two millennia but in a process whereby the less numerous but more militarily skilled steppe peoples periodically united and invaded the farming world. By 1500 agrarian expansion alone had begun to even the military balance, as greater resources allowed the construction of systems of fortifications defending the frontiers. When cannon and infantry firearms added expanded firepower to defensive bases, steppe cavalry forces had no real answer.

But gunpowder alone was not decisive, for steppe cavalry were still useful. The Ottomans, Mughals, Safavids, and Manchus all traced their origins to the steppes and deployed steppe-style cavalry while also exploiting the resources of their agrarian-based empires to raise large infantry forces (some, like the Ottoman janissaries, armed with muskets) and artillery trains. Russian alliance with the Cossacks produced a similar result. These synthetic military systems powered imperial expansion against other settled states and into the steppes alike. The taming of the threat from the steppes can be read as a mixed blessing for the great empires surrounding them, however. Steppe powers were not only a threat but also a challenge that stimulated creativity and change. After 1700 none of the great Asian powers faced any real military threat except for the Ottomans on their European frontier and so had no incentive to further change. When a new challenge came from an unexpected direction in the next era of world history, few were prepared for it.

The closing of the steppes also fragmented steppe-based trade routes just as ocean-based trade connections were becoming more prominent. Western Europe, for complex reasons, became the region that exploited and benefited from these expanding maritime connections most and, again for complex reasons, approached this opportunity in a highly militarized way, creating the first true oceangoing navies. A self-perpetuating combination of state and private interests pursued a policy not just of trade but also of colonization, in effect, of Asia's trade networks. Empires based not on vast land conquests but instead on networks of fortified ports emerged, and even the growing British presence in India resulted from the commercial interests of the British East India Company.

Growing European dominance at sea had two main causes. First, they were the first to develop the technological package of full-rigged ships armed with large ship-killing cannon. These ships were furthermore labor-efficient, requiring relatively small crews for large payloads, and strongly constructed and could be produced in different varieties, from multi-purpose armed merchantmen to specialized

warships. More than any development in land warfare, such navies constituted a military revolution in this period. European states and merchant companies used these ships to expand their share of long-distance trade and of local carrying trade within Asia (as well as to colonize the New World). But the other reason for European dominance at sea was that no major Asian state cared to compete. European ships posed no military threat to large Asian states, and the interests and cultural orientation of the ruling elites of Asian powers were focused on land, agriculture, and armies, not navies. Only the Ottomans in the Mediterranean built a powerful navy, and it was of the galley sort that sailing ships eclipsed after the 1580s.

The rise of European naval power was critically important. In addition to connecting the Americas to Eurasia and creating the Columbian Exchange, the rise of European naval power expanded European military influence in the world. By 1770 Britain was arguably the world's second most powerful military power, behind China. But such comparisons are somewhat limited in their usefulness, as it is also true that neither China nor European naval powers could project force around the globe in any significant way that could threaten another major power. Military force remained a regional factor throughout this period. And while European navies outclassed those of any potential rival, the same cannot be said in any clear way about their armies. This brings us to a more careful assessment of the role of gunpowder weaponry.

The consequences of this new mode of naval activity were momentous. It made possible the first truly global age, as the Americas were brought within the Eurasian sphere of activity. The Columbian Exchange of diseases, plants, and animals had huge long-term effects on both the Old World and the New World. This naval activity also, as noted, moved Europeans closer to the center of the world stage. By 1750 Britain was probably the world's second greatest power behind China, with France not far behind. But European power should not be exaggerated: its influence beyond the seas and immediate coastal areas, even in the Americas,

was limited. European navies were far ahead of the rest of the world's navies. Europe's armies, despite significant transformation, still were not ahead of the rest of the world, at least decisively.

Guns facilitated both the decline of steppe cavalry and the rise of European navies. But gunpowder was not a central cause of either trend. Both rested on prior and continuing demographic, economic, and social developments. The use of guns varied greatly depending on the contexts into which they were introduced, and their appearance did not lead to revolutionary changes. The strongest correlation across Eurasia is that effective mass use of guns, especially infantry small arms, corresponded to strong central governments capable of raising and training mass infantry armies. But stronger governments preceded and made possible this use of firearms, not just in Europe but also for the Ottomans and, most crucially, in China and Japan. State formation was not centrally a product of gunpowder technology. This casts doubt on the most common formulations of a so-called military revolution in European land warfare: the revolution happened at sea. European dominance in land warfare was a product of the political, cultural, and technological changes of the nineteenth century. Down through 1770, European land warfare was just one variation on a set of Eurasian military transformations that were centered on the decline of steppe cavalry, the rise of navies, and the interaction of state strength with military force.

—Stephen Morillo

Bibliography

- Friday, Karl. *Samurai, Warfare and the State in Early Medieval Japan*. London: Routledge, 2004.
- Hall, John W. *Government and Local Power in Japan, 500 to 1700*. Princeton, NJ: Princeton University Press, 1966.
- Mass, Jeffrey. *Warrior Government in Early Medieval Japan*. New Haven, CT: Yale University Press, 1974.
- Turnbull, Stephen. *The Samurai: A Military History*. London: Routledge, 1987.
- Varley, Paul. *Warriors of Japan as Portrayed in the War Tales*. Honolulu: University of Hawaii Press, 1994.

European Mercenaries and Renegades

Between the fifteenth and eighteenth centuries, as European sovereigns fought each other in myriad wars both on the continent and abroad, they often chose not to utilize their contentious aristocracies and rebellious populations, having learned the lessons of allowing these groups to accumulate too much power, but rather increasingly relied on the use of foreign mercenaries in the conduct of war. While noted political scientist Niccolò Machiavelli advised against the use of mercenaries in *The Prince* (1532) as “unreliable and dangerous” as they were disloyal and bound only to their master through their pay, they nonetheless formed an integral part of early modern European armed forces. In major engagements of the period, particularly the Eighty Years’ War (1568–1648), the Thirty Years’ War (1618–1648), the English Civil War (1641–1653), and the American Revolutionary War (1775–1783), the use of foreign mercenaries was widespread among the ranks in battle.

During the Hundred Years’ War (1337–1453) of the late Middle Ages, which was a long drawn out engagement between England and France,

the use of the aristocracy prompted many contentious situations as nobles sought to gain power at the expense of the monarch. While this war was ultimately won by the French Bourbons, it did illustrate the risks of relying on the aristocracy, as well as the risks involved with creating huge standing armies composed of the peasantry whose morale was contingent on food and pay. The Duke of Burgundy, a vassal of the French king, for example, had proven to be a more loyal ally of the English. Moreover, new technologies and more efficient tactics in warfare also required the use of specialized professionals, not merely aristocratic officers with chivalric reasons to fight.

In late Renaissance Italy and Spain, various states under leaders who wished not to use their native population bases to conduct warfare had already turned to the use of mercenaries. The assumption was that mercenaries, while expensive, provided a more reliable force to quell rebellion and to engage in warfare against enemies. Greater numbers of freelance soldiers, most notably from the Swiss cantons, offered their services to the highest bidder, often changing sides when the price was right. Highly trained and specialized in new tactics and in the use of new technology, Swiss soldiers were by far the best in Europe. Habsburg Spain, while creating some of the best fighting forces on the continent during this period, the *tercios*, used mercenaries back home as the leaders were suspicious of allowing Spanish soldiers on the peninsula where they could cause trouble.

The Thirty Years’ War, which pitted Bohemia and her Protestant allies against the Habsburgs, was another instance in which both sides resorted to the use of mercenaries to conduct war. Mercenaries were deemed more efficient as soldiers, filling a role that allowed national populations to maintain the conduct of trade and commerce. Rampaging armies of mercenaries swept across central Europe for three decades, raping and pillaging, not to mention changing sides, in the midst of the conflict. Among the most famous generals of these mercenary armies is Albrecht von Wallenstein. Wallenstein served the Habsburg emperor, bringing him several victories against his multiple enemies using his mercenary armies. While thinking of betraying his

➤ EUSTACHE DE LANNOY

Flemish naval commander, Eustache de Lanoy (1715–1777) worked for the Dutch East India Company (Vereenigde Oostindische Compagnie, VOC) in opening up trade in South India. The company sent him to establish a post at Colachel in South India. While ultimately defeated at the Battle of Colachel (1741) by the Travancore forces under the command of Maharaja Marthanda Varma, Lanoy subsequently was allowed to help train the forces of his former enemies. As a commander of Travancore forces as well as a tactical consultant, he was a pivotal element in the defeat of the Dutch forces in the region. Ultimately the Dutch were repulsed by Indian forces from the region. Furthermore, the remaining French and British contingents made alliances with native states to ensure that their own commercial dominion in the region was not ousted like that of the Dutch.

—Abraham O. Mendoza

patron in early 1634 and switching sides, he was assassinated by order of Emperor Ferdinand II.

In the Dutch-English Wars of the seventeenth century and the wars of Louis XVI of France, Irish, Scottish, German, and Swiss mercenaries provided the bulk of their forces. Many of these renegade soldiers had been either evicted from their homes during the Wars of Religions or found the life of a mercenary exciting and lucrative. Many of these mercenaries found themselves fighting against their former antagonists (such as Irish mercenaries fighting for France or the Dutch against England), while some of them held no such antagonism or quarrel and chose to fight for pay alongside or against a former aggressor. The array of wars of the seventeenth century produced increasing large numbers of mercenary armies, well trained and mustered, which moved from war to war in search of pay and booty. The use of mercenaries lasted well into the late eighteenth and early nineteenth century, most notably the British use of Hessian soldiers in the American Revolutionary War and Napoleon Bonaparte's use of Polish regiments in his crack forces.

—*Abraham O. Mendoza*

Bibliography

- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*, 2nd ed. New York: W. W. Norton and Co., 1979.
- Parker, Geoffrey. *Europe in Crisis 1598–1648*, 2nd ed. Malden, MA: Blackwell Publishers, 2001.
- Stoye, John. *Europe Unfolding 1648–1688*, 2nd ed. Malden, MA: Blackwell Publishers, 2000.

The Incan Military Response to the Conquistadores

The Incan military response to the Spanish conquistadores and their native Andean allies involved three stages of resistance. The first stage resisted the Spanish after the death of the Inca emperor Atahualpa at Cajamarca and attempted to halt the Spanish advance south to the Inca capital at Cuzco (1532–1534). The second stage encompassed the Inca rebellion and subsequent sieges of Cuzco and Lima (1536). The third and last stage of resistance was on the part of the lingering neo-Inca resistance in holdouts in the strongholds on the eastern slopes of the Andes

(1539–1572). Both before and after the Spanish incursion, Inca administrators mobilized soldiers and porters throughout the empire among both ethnically Inca populations and non-Inca ethnic groups under Cuzco's rule. Unlike Mesoamerica's Aztecs, Inca soldiers rarely gained renown as the fiercest of warriors. Inca armies won battles in large part because they could field and supply the largest armies; by keeping soldiers mobilized the longest they could successfully defeat most highland and coastal enemies. Inca armies proved less successful in extending their power into the jungles to the east, where seminomadic adversaries could simply slip away.

Superior Inca logistics and numbers also quickly proved insufficient to defeat the new invaders. After the first battle following the Spanish ambush and capture of Atahualpa at Cajamarca in 1532, overwhelming the Spanish by sheer numbers proved impossible. At first the Europeans held the Inca emperor hostage, and he ordered his forces not to attack. By the time the Spanish killed the captive Inca emperor, the Spanish had found numerous allies—and supply networks—among the other ethnic groups subordinated to Inca rule and even among Inca opposed to Atahualpa. After Cajamarca, in every battle the Inca defenders fought against the Spanish they fought against a growing number of native Andean rebels that far outnumbered the Spanish. The anti-Atahualpa forces fed, clothed, guided, and otherwise defended the small spearhead of heavily armed and armored European fighters in what quickly became an insurrection against Atahualpa and his royal line (called a *panaqa*). In essence, a civil war had merely been reignited. When the Spanish first marched into the mountains at Atahualpa's request, the emperor was purifying himself at the sacred thermal baths at Cajamarca after having defeated his half brother Huascar in a devastating civil war over imperial succession set off by the death of the last Inca leader, Huayna Capac, in 1527. By capturing and killing the victorious Inca Atahualpa, the Spanish revived and broadened the struggle for power in the Andes.

Atahualpa's generals Chalcuchima, Rumiñahui, and Quisquis attacked and harried the Spanish as they marched south toward Cuzco

➤ INCAN COUNTERTACTICS

Pre-Hispanic Indian peoples and cultures from Mesoamerica to the Andean highlands may have faced insurmountable strategic disadvantages vis-à-vis their Spanish opponents. However, they still developed countermeasures and enjoyed several tactical victories on the battlefield. This was especially true in the Incan heartland.

The Incas understood early that they would need to impede or suppress the Spanish cavalry. Their arsenal of spears, bows and arrows, battle-axes, maces, and boulders and stones could not defeat mounted Spaniards on the open battlefield. Consequently, the Incas aimed to seize favorable terrain or lure the Spaniards into well-prepared defensive positions. Incan warriors vastly outnumbered Spaniards and could match them in hand-to-hand combat.

During the Quitan Campaign (1534 CE) the Inca commander Rumiñavi dug and then camouflaged spiked horse traps. But the Spaniards learned of this, and his ruse did not succeed. Incan forces had better luck when they burned suspension bridges and forced the Spanish cavalry to cross

dangerous rivers, where Indians attacked them from above with spears and boulders.

Manco Inca's 1536 CE counteroffensive produced dramatic results. Within Cuzco, Indians ambushed mounted Spaniards by toppling entire stone walls onto them, burying them in the rubble. And Manco's forces also seized the initiative on the open ground by diverting rivers to flood the plains, thereby impeding the cavalry, and also by employing bolas (throwing weapons) to entangle horses' legs. Such countermeasures forced the Spaniards in future battles to redeploy their infantry to cover the cavalry.

—James Douglas Lockhart

Bibliography

- Davies, Nigel. *The Incas*. Niwot: University Press of Colorado, 1995.
- Hemming, John. *The Conquest of the Incas*. San Diego, New York, and London: Harcourt Brace, 1970.
- MacQuarrie, Kim. *The Last Days of the Incas*. New York: Simon and Schuster, 2008.

with Spanish reinforcements from Panama and gathered troops from restive ethnic groups, particularly the Huancas and Chachapoyas. When Spanish forces reached the imperial capital and ceremonial center of Cuzco in November 1533, Manco Inca, who opposed Atahualpa's lineage, received Francisco Pizarro and brokered an alliance that allowed Manco's faction to take power. Another powerful noble, Paullu Inca, led an army south to Chile with the Spanish in an unsuccessful bid to subdue the Mapuche. Meanwhile in Cuzco, Manco Inca chafed under Spanish abuses and plundering, and he resolved to call forth his forces to crush them. After escaping Cuzco, Manco Inca returned with a massive army of over 100,000 in May 1536 to lay siege to Cuzco, which was defended by the Spanish, the Cañari, and Inca factions allied with the Spanish. During the siege, Inca soldiers ambushed four expeditions of reinforcements from Lima by trapping them in gorges and killing them with boulders, arrows, stones thrown

by slings, and hand-to-hand combat mainly with clubs. The Cuzco siege ended when Paullu Inca returned with the Spanish from the south. Equally unsuccessful at dislodging the Spanish, the attack in August 1536 by Inca generals on the new Spanish administrative center in Lima failed when the local Andean polities aided the Spanish in routing the highlanders. With these stunning defeats, the Inca rulers ceased to be the main arbiters of power in the Andes. Spanish Andean allies were set aside into positions subordinate to the conquistadores and eventually Crown administrators.

By February 1539 organized Inca military resistance continued only from Vilcabamba and other remote bases of operations on the eastern edge of the former empire. This resistance first served under Manco Inca and was later led by some of his relatives. This remnant of Inca resistance alternated between warfare and diplomacy vis-à-vis the Spanish. Diplomatic negotiations were often brokered by Spanish missionaries.

Like their counterparts to the south in Chile, these neo-Inca “rebels” began to incorporate steel weapons, firearms, cannons, and horses into their arsenals. However, the greatest Inca weapon of all—the ability to command support up and down the Andes—had been lost. Without the Andean peasant population and its resources supporting their efforts, the Inca resistance could not regain control of the empire. The last neo-Inca ruler, Tupac Amaru, was defeated and captured in 1572 by an indigenous and Spanish force sent by the Spanish viceroy Francisco Toledo. Tupac Amaru’s beheading in Cuzco’s main square on September 24 ended the Inca military response to the Spanish invasion.

—Leo Garofalo

Bibliography

- Andrien, Kenneth J. *Andean Worlds: Indigenous History, Culture, and Consciousness under Spanish Rule, 1532–1825*. Albuquerque: University of New Mexico Press, 2001.
- De Betanzos, Juan. *Narrative of the Incas*. Translated and edited by Roland Hamilton and Dana Buchanan. Austin: University of Texas, 1996.
- De Castro Titu Cusi Yupangui, Diego. *History of How the Spaniards Arrived in Peru*. Translated by Catherine Julien. Indianapolis: Hackett, 2006.
- Guaman Poma de Ayala, Felipe. *The First New Chronicle and Good Government*. Edited and translated by David Frye. Indianapolis: Hackett, 2006.
- Rostworowski de Deiz Canseco, María. *History of the Inca Realm*. Translated by Harry B. Iceland. Cambridge: Cambridge University Press, 1999.

■ Introduction: Wars of Empire

The Military Revolution in Europe was intimately linked to the process of empire formation. The term “empire” derives from the Latin *imperium*, meaning “absolute authority.” In a political context, this term refers to a geographically extensive state ruled under a single monarch or governing body. In the period from the sixteenth to the eighteenth centuries, the term was applied to types of imperial authority throughout the world. Thus, the Portuguese and the Dutch established trading empires in Africa and Southeast Asia, while the European discovery of the New World proved a catalyst for colonial empires. While those of Spain, England, and France are widely known, other European states also actively participated in this quest for greater territory and authority. The Most Serene Republic, as the Italian city-state Venice was known until 1797, presided over a lucrative trade empire in the eastern Mediterranean. Sweden, nowadays a paragon of the modern democratic state, was one of the great European powers between 1611 and 1718 and controlled a vast territory in northeastern Europe, southern Africa, and North America. Inside Europe itself, states vied with each other for political power, commercial interests, or sheer prestige. Although

there was only one actual empire, that of the Holy Roman Empire, other states effectively rivaled its power, while the Bourbon-led France all but eclipsed the Holy Roman Empire in the seventeenth century. Yet the Swedish decline in the early eighteenth century signaled the rise of the Russian empire. Tsar Peter the Great declared himself an emperor in 1721 upon his victory over Sweden.

Empires existed outside Europe as well. Thus, the Inca state (Tawantinsuyo) was the largest empire in pre-Columbian America and stretched from Peru and Bolivia to southern Chile and Argentina. Territorially smaller but equally powerful was the Aztec empire in central Mexico. In Asia the largest and most powerful empire was that of China, whose emperors styled it as the Zhōngguó or “Middle Kingdom,” meaning in the center of the civilized world. In India the Mughal empire, founded by Babur in the early sixteenth century, became one of the largest and most sophisticated empires in the world, and at its largest extent it controlled virtually the entire Indian subcontinent. In the late seventeenth century the Mughal authority, however, was challenged by the Maratha Confederacy, which greatly expanded under the

rule of the Peshwas, the Brahmin chief ministers, reaching its height by the mid-eighteenth century. In neighboring Iran the Safavid dynasty, which came to power in 1502, restored a strong Iranian state that dominated the Iranian plateau and claimed influence in Afghanistan, central Asia, the Caucasus, and Iraq. Yet the Safavid authority was challenged both in the west, where it bordered the Ottoman empire, the largest and strongest of the Islamic empires, and in the east, where the Afghan tribes occasionally united to establish powerful states (e.g., the Durrani empire). In Africa the empire of Great Fulo flourished in western Africa but was rivaled by the Mali empire. Farther south, the Asante empire stretched from central Ghana to Côte d'Ivoire, and the Oyo empire, established by the Yoruba in Nigeria in the fifteenth century, emerged as one of the wealthiest West African states. In East Africa the sultans of Adal and the emperors of Ethiopia were engaged in a bitter rivalry over power in the Horn of Africa. In central Africa, vast territories in modern-day Angola, Congo, and the Democratic Republic of the Congo were under the rule of the kings of Kongo, who established a sophisticated government hierarchy and an extensive trading network.

The process of empire formation entailed military conflict and conquest, and the era between 1450 and 1750 produced an unprecedented spate of wars around the world. Looking at the seventeenth century alone, one is struck by the fact that only 2 years (1670 and 1682) in an entire century were without a war between the European states. Looking at individual states, we see that between 1618 and 1678 France was at peace for only 11 years, while Spain was at peace for only 3 years! Some of these wars were of regional nature, such as ten Venetian-Ottoman wars (between 1425 and 1718), six Ottoman-Safavid Wars (sixteenth and seventeenth centuries), the Portuguese-Moroccan wars (1458–1471 and 1578), and the Mughal-Safavid wars (1622–1623, 1638, and 1649–1653). These wars also include the numerous campaigns that the Aztec and Inca rulers, African kings, or North American tribal chiefs conducted to expand their territory, gain commercial advantages, etc. China was one of the Great Powers throughout the sixteenth and eighteenth centuries, and

after establishing domestic stability in the seventeenth century and enjoying a thriving economy, China embarked upon a century of imperial expansion that brought it by the mid-eighteenth century to its greatest territorial extent ever.

Other conflicts, however, were of a global nature and spanned vast territories around the globe. Several factors made these wars unique. They were fought primarily between European powers, such as France, Britain, the Netherlands, and Spain. They were usually centered on already extant mercantile empires and colonies and sought to undermine or supplant the enemy commercial interests in a specific region or in specific regions. These wars were often initiated not by governments but instead by the private initiatives of trading companies (e.g., the English East India Company or the Dutch East India Company), although economic, political, and military rivalry between their respective governments further facilitated them. Another characteristic of these global conflicts was unparalleled use of naval power across the globe. Prior to the fifteenth century, Europe was a marginal player in the world, but using its fleets Europe emerged as the dominant naval power around the globe. European naval expeditions undertaken during the Age of Discovery were not simply voyages of discovery. They also secured European ascendancy in maritime trade and led to the establishment of empires. First the Portuguese and then the Spanish followed by the Dutch, the French, and the English used naval power in support of their imperial enterprises. Technological superiority of European ships—a combination of full-rigged strongly built ships that carried large and effective guns—meant that European states could force their way into most regional trade networks, although there were exceptions, such as China and Japan. By the late seventeenth century European states developed the so-called coastal entrepôt empires that linked series of outposts around the globe by sea. Navies thus played a central role in creating, maintaining, and defending such an empire while maintaining control of major sea-lanes—such as between Africa and the Caribbean or between Europe and India via the southern tip of Africa—became an integral part of national interests. Furthermore, maritime activity became quickly linked

to a new political-economic philosophy, mercantilism, that had two basic premises. First, the total volume of world trade was constant, and second, a country should try to obtain a favorable trade pattern (more exports, less imports) so as to amass specie, which could be then used for military or political purposes. Such a mercantilist outlook sustained imperial policies of many European states that sought to grab a bigger slice of a static world economy.

—*Alexander Mikaberidze*

Wars of Nation and Empire— The Second Hundred Years' War

The Second Hundred Years' War is a historical label for a series of military conflicts between the kingdoms of England (Britain after the Act of Union with Scotland in 1707) and France that occurred from approximately 1689 to 1815. Similarly to the First Hundred Years' War (1337–1453), the term “Second Hundred Years' War” does not describe a single military engagement but instead a constant state of war between the two primary belligerents. Historians use the concept of the Second Hundred Years' War to highlight the interrelationships between the imperial wars of this period and to interpret the rivalry between France and Britain for power in Europe and the expansion of global empires abroad. The various wars between the two states during the eighteenth century usually involved other European countries in a series of shifting alliances with the exception of the War of the Quadruple Alliance (1718–1720) in which they fought together against Spain. Many of the wars, such as the Seven Years' War (called the French and Indian War in the British American colonies), are considered global wars and included battles in the colonies in the New World, India, and maritime shipping routes across the world. In addition, the conflict over religion and revolution contributed to the ideologies shaping the relationship between the two Great Powers, especially in regard to the enmity between Catholicism and Protestantism that spanned Europe.

The Second Hundred Years' War began with the accession of the Protestant William III as king of England in the Glorious Revolution of 1688. The series of wars fought between Britain and

France and their allies carried separate names in the Old World and the New World, suggesting a transitional period of global contact: the Nine Years' War, or King William's War (1688–1697); the War of the Spanish Succession, or Queen Anne's War (1702–1713); the War of the Austrian Succession, or King George's War (1742–1748); and the Seven Years' War, or the French and Indian War (1754–1763). Many of these wars overlapped chronologically in Europe and abroad at various points, but they all directly engaged Britain against France militarily. For instance, King George's War merged into the 1739 conflict between Britain and Spain known as the War of Jenkins' Ear, and the French and Indian War was triggered in America's Ohio Valley in 1753.

These wars for legitimacy in Europe and territories and trade routes abroad were complicated by Europe's religious conflicts. The Stuarts (1603–1647) had sought friendly terms with French monarch Louis XIV. Former Stuart kings James I (r. 1603–1625) and Charles I (1625–1647), both Anglicans with Catholic sympathies, had avoided involvement as much as possible in the Thirty Years' War on the continent. They had sought peaceful relations with France throughout the seventeenth century. King William III, however, sought to oppose Louis XIV's Catholic regime and positioned himself as a Protestant advocate against the hegemony of



British vice admiral Edward Vernon leads an attack on the Spanish at Porto Bello (in present-day Panama) on November 21, 1739, during the War of Jenkins' Ear. Painting entitled La Capture du Porto Bello en 1739, by George Chambers. (Corel)

➤ KING WILLIAM'S WAR—COLONIAL WARS DURING THE SECOND HUNDRED YEARS' WAR

Among the many wars between England (Britain after 1707) and France, King William's War (1689–1697) is the first of the colonial wars fought in North America simultaneously with a European war (in this case the War of the Spanish Succession). In this conflagration and others that followed, Britain and France made use of their respective Native American alliances in battle. British anxiety developed over France's friendly relations with the Abnakis, who were allied to the Pennacooks, Penabscots, and Micmacs in New England, and alleged plans to expel the English from North America in order to make it Catholic. Friction ensued. Along with their Iroquois allies, the British began to engage in attacks on French allies that resulted in retaliation. The result was a brutal war of attrition characterized by guerrilla tactics on both sides, with Native American allies doing the brunt of the fighting. While the Treaty of Ryswick (1797) officially ended the fighting, it would not be the last time Britain and France would make use of their Native American alliances to settle their colonial differences. Only after the French withdrawal from North America after defeat in the French and Indian War (1754–1763) would these wars by proxy end.

—Abraham O. Mendoza

Catholicism. Tensions mounted between the two kingdoms in subsequent decades, particularly with France offering protection to Jacobites who sought to overthrow the current English monarch, whether Stuart or Hanoverian. In such instances, both nations sought allies on the continent. The French-Habsburg antagonism in this period was valuable to Britain, providing it with a de facto ally. Following the reign of William III, the conflict between France and Britain shifted from religion to economic expansion abroad. Both states competed for colonial domination in Southeast Asia and the New World, particularly in the Caribbean.

In the late eighteenth century political ideology shaped British and French antagonisms, much in the same way that religion had in previous decades. The French Revolutionary wars of

this period (1793–1802) incorporated the War of the First Coalition (1793–1797) and the War of the Second Coalition (1798–1801) followed by the Napoleonic Wars (1803–1815), which included both the Peninsular War in Spain (1808–1814) and the Hundred Days (1815). British opposition to the French Revolution (1789–1799) and the subsequent wars against the French Republic and then the consulate and empire, both under Napoleon Bonaparte (r. 1799–1815), characterized the continuing antagonism between the two states. Bonaparte's defeat at the Battle of Waterloo in 1815 ended this endemic state of war between France and Britain. During the conflict Britain found common cause with allies in the continent, eager to throw off the French yoke, among them Austria, Prussia, and Russia. Both the French Revolution and Bonaparte presented a threat to British interests and trade on the continent, not to mention a subversive ideology threatening stability at home. Their relationship for the remainder of the nineteenth century involved tense diplomatic engagements but never again resulted in a violent conflagration. Alliance between Britain and France, first in the Crimean War and then in the First World War and the Second World War, illustrated their collusion against other hostile powers to defend their common interests. However, the First Hundred Years' War and the Second Hundred Years' War illustrate the longevity of the hostility between them.

—Abraham O. Mendoza

Bibliography

- Blanning, T. C. W. *The Culture of Power and the Power of Culture: Old Regime Europe, 1660–1789*. Oxford, UK: Oxford University Press, 2002.
- Crouzet, François. "The Second Hundred Years War: Some Reflections." *French History* 10 (1996): 432–450.

Establishment of Ottomans as Empire

The Ottoman state arose out of the ashes of the Mongol il-khanate in Anatolia. It was one of many *beyliks*, or polities, in the region. By 1326 the Osmons, or Ottomans as Europeans called them, controlled the region surrounding Bursa,

their first capital. Under the dynamic sultan Murad I (r. 1362–1389), the Ottomans crossed into Europe. Swiftly much of northern Greece, Macedonia, and Bulgaria came under their control. Ottoman authority in the Balkans was solidified with their victory at Kosovo in 1389. What is notable about the initial Ottoman invasion of Europe is that it came at the request of the Byzantine empire by a claimant to the Byzantine throne to help him secure power. Although the empire had a setback in 1402 when the central Asian military genius known as Timur-i Leng (Tamerlane) defeated Bayazid I (r. 1389–1402), it recovered and captured Constantinople in 1453 during the second reign of Sultan Mehmed II (r. 1444–1446, 1451–1481).

The city was a far cry from its previous glory but still wielded historical significance. With its capture, the Ottomans now viewed themselves as the inheritors of the Roman empire, thus legitimizing their rule over former Byzantine lands as well as potentially legitimating further conquests. Mehmed, now given the sobriquet of “Conqueror,” fused the Muslim and Christian worlds into a carefully nuanced vision of authority. The Ottomans continued to allow their Christian subjects to practice their religion, although Anatolia increasingly converted to Islam. Mehmed solidified his dominance south of the Danube by subduing Belgrade in 1456 and conquering the last Greek power with the conquest of the Peloponnesus in 1460. Although the legendary Scanderbeg fended off Ottoman encroachments for years, his death in 1468 ensured Mehmed II’s success in subduing Albania. In addition, Mehmed began ridding the islands of the eastern Mediterranean and the Aegean Sea of the Venetians by using lighter and more mobile galleys designed by Spanish and Italian shipwrights. By the time of his death, the Ottomans were the masters of eastern Europe south of the Danube, although a few holdouts remained.

With the rise of the Aq Qoyunlu and the decline of Timurid authority, eastern Anatolia proved to be a hotbed of activity again. Even after the defeat of the Aq Qoyunlu confederacy at Bashkent in 1473, eastern Anatolia remained volatile. As the Ottomans tightened their grip on the region, many Turkic chieftains sought new outlets for their independence. With the rise of

the Safavids in Azerbaijan, some Turkic nomads also turned to Shia Islam. The establishment of a dynamic Shia state in Iran threatened not only Ottoman authority over the tribes in eastern Anatolia but also the sultan’s role as the defender of Sunni orthodoxy.

The Safavids and Ottomans ultimately clashed at Chaldiran in 1514, with the Ottoman janissaries and artillery overcoming the horse-archer army of the Safavids. Although Sultan Selim I (r. 1512–1520) attempted to crush the Safavids once and for all, his army mutinied and forced Selim to cease his expansion into Azerbaijan. Nonetheless, eastern Anatolia was now firmly under Ottoman control. Selim’s territorial aggrandizement did not end. In 1516 he conquered Syria from the Mamluk sultanate and then Egypt in 1517. Eventually the Ottoman possessions would reach the Zagros Mountains that border Iran and Iraq; indeed, the conflict between the Safavids and Ottomans largely defines that border.

Selim’s son, Suleiman (1520–1566), extended the empire to its greatest extent. Suleiman began his reign with the conquest of Belgrade in 1521 and then drove the Hospitallars from their island fortress of Rhodes, where they had been a menace to Ottoman ships for centuries. Although Mehmed II had sparred with Hungary, his incursions did not result in long-term conquests. Under Sultan Suleiman the Ottomans expanded north of the Danube into Hungary. A victory at Mohacs in 1526 gave the Ottomans a dominant position over their former rival, but it also brought them into conflict with the Habsburg dynasty. While the Ottomans failed to take Vienna in 1529, the Ottoman-Habsburg rivalry would continue to the twentieth century in Europe, while the two empires struggled for dominance and influence in North Africa during the sixteenth and seventeenth centuries. Indeed, Ottoman authority stretched as far as Morocco, if only in name and not actual power. In addition, Suleiman seized the Safavid capital of Tabriz and extended Ottoman authority to the Tigris River with the seizure of Baghdad. Finally, the Ottomans became suzerains over the Crimean Tatars and thus were able to extend their influence into the steppes and play a role in Polish and Russian affairs. When Suleiman died in 1566, the Black Sea was a Turkish lake, and Hungary and

➤ CONSTANTINOPLE, 1453

By 1453 the Byzantine Empire consisted only of Constantinople, a few fortresses in the Peloponnese, and several islands. Its territory was completely surrounded by Ottoman holdings. When Mehmed II assumed the throne in 1451, he decided to eliminate the Byzantines. He signed treaties with Venice and Hungary to keep them from sending aid. In 1452 he ordered the construction of Rumeli Hisar on the European side of the Bosphorus to control sea access to Constantinople. When the fortress was finished in July 1452, the Ottomans prepared to besiege the city. One important innovation was the role played by cannon during the siege. With assistance from Christian engineers, the Turks cast heavy cannon to blow breaches in Constantinople's walls. The most massive cannon was 27 feet (8.2 meters) long and 2.5 feet (.76 meters) in diameter. It hurled a stone ball weighing more than 1,300 pounds (590 kilograms).

On April 5, 1453, the Ottoman army of 120,000 was camped outside Constantinople. Emperor Constantine XI Palaeologus had only 7,000 defenders. Firing began the next day. On April 20 four European ships with men and supplies forced their way past the Turkish fleet. Mehmed had some of his ships pulled overland to the Golden Horn, where they were able to sink the relief ships. After unsuccessful attacks on May 7 and May 12, a final



Rumeli Hisar fortress on the Bosphorus in present-day Istanbul, built by Mehmed II in 1452. (Hazlan Abdul Hakim)

Turkish assault began on May 29. The first two attacks were beaten off, but in a third attack the Janissaries forced their way through breaches blown by the cannon. The defenders were slaughtered, and the city was pillaged for three days. Constantinople became the Ottoman capital. The loss was a powerful psychological blow to Western Christianity, as it illustrated the relative strength of the Ottomans in contrast with the apparent weakness of Western Christendom.

—Timothy J. Watts

Moldavia were Ottoman subjects, as were Yemen and Iraq and at least in theory all of North Africa to Morocco.

After Suleiman, the empire ceased to expand with the exception of capturing Cyprus and other Aegean islands. While the Ottomans did suffer setbacks such as Lepanto in 1571 and some defeats to the Safavids, they did not lose significant amounts of territory until 1700, when they could no longer fend off the attacks from Safavid Iran, the Russian empire, Poland, and Habsburg Austria while also dealing with internal feuds and rebellions. Although it is often remarked that the Ottomans declined after the reign of Suleiman, if they did it was an extremely slow decline, as even in the eighteenth century they scored victories against the Russians in 1711 and against Austria in 1739. One reason

why they ceased to expand was the simple fact that they now shared borders with other states (Austria and Russia) that were coming under increasing centralization, which also allowed them to better marshal their resources against the Ottomans. Furthermore, because these states were also expansive, the Ottomans rarely had the luxury of fighting one war at a time. Many of the peace treaties they signed were simply so they could then pay attention to a new threat on a different frontier. Nonetheless, in the early eighteenth century the Ottomans were still a force with which to be reckoned.

—Timothy May

Bibliography

Aksan, Virginia H. *Ottoman Wars, 1700–1870: An Empire Besieged*. Modern Wars in Perspective

Series. London and New York: Pearson Longman, 2007.

Finkel, Caroline. *Osman's Dream: The History of the Ottoman Empire*. New York: Perseus, 2006.

Hathaway, Jane. *The Arab Lands under Ottoman Rule, 1516–1800*. New York: Pearson Education, 2008.

Lapidus, Ira M. *A History of Islamic Societies*. 2nd ed. New York: Cambridge University Press, 2002.

Ottoman Expansion into Eastern Europe

Named after their founder, Osman (d. 1324), the Ottomans were just one of many small emirates that emerged in Anatolia after the destruction of the Seljuk state by the Mongols in 1243. The characterization of Osman's followers as *gazis*, or frontier fighters for the faith, has been fiercely debated, in part because they expanded their power at the expense of both the Christian Byzantine empire and other Muslim emirates. Whatever their motivations, and they were most likely manifold, during the reign of Osman's son, Orhan (d. 1362), the Ottomans quickly expanded their domain in both Europe and Asia. After marrying a Byzantine princess in 1346, Orhan sent an army across the Dardanelles to support his father-in-law's bid for the imperial throne. This army was soon followed by settlers and more soldiers. The Ottoman expansion into Europe had begun.

Murad I (r. 1362–1389) continued the Ottoman expansion into what they called Rumeli, taking Adrianople (Edirne), which became his capital, in 1369 and Sofia in 1385. In 1389 Murad died fighting in the Battle of Kosovo Polje, but the Ottomans, now under the command of Murad's son, Bayezid I, won the battle. In 1394 Bayezid laid siege to Constantinople, which got the attention of Western as well as Eastern Christians. A crusade was called, but in 1396 Bayezid crushed this army at the Battle of Nicopolis. Unfortunately for Bayezid though, an even more powerful Turkic empire builder was leading his armies out of central Asia into Ottoman lands. Bayezid's defeat by Timur in 1402 plunged the Ottoman state into a decade of internecine warfare. Under the reign of Mehmed I (r. 1413–1421) and his son Murad II (r. 1421–1451), however, the

Ottomans expanded farther into Europe; into Albania, which gave them access to the Adriatic; and into Hungary, which led to the death of King Władysław III of Poland and Hungary at the Battle of Varna in 1444.

The European expansion continued under Mehmed II (r. 1451–1481), who earned the soubriquet “the Conqueror” for accomplishing what Muslim rulers had been unsuccessfully attempting since the seventh century CE: the conquest of Constantinople (Istanbul). With the acquisition of this new capital, Mehmed institutionalized a new household and bureaucratic structure based upon the institution of slavery and given concrete expression through the building of two new palaces. In the first or “old” palace, he established the imperial harem for the concubines who had replaced the neighboring princesses as the bearers of the sultan's children. The second palace, Topkapi Sarayı, was occupied by the high officers of the state, who during Mehmed's reign began to be Balkan Christian boys collected in the *devshirme* (“gathering”), who were converted to Islam and trained in the palace. Slave soldiers had played an important role in the army as Janissaries (from *yeni cheri*, or “new army”) since the late fourteenth century, but these new *kapikulu*, or “slaves of the Porte,” drawn from southeastern Europe, dominated all aspects of Ottoman governance and helped to strengthen the ties between Rumeli and the Ottoman capital. During Mehmed's reign the frontiers of the Ottoman state were greatly extended, both in the east and the west. He captured Athens in 1458, Serbia in 1459, the Morea in 1460, Bosnia in 1464, and Negroponte (Euboia) in 1470. In 1480 he laid siege to Rhodes. Mehmed also extended Ottoman authority northward across the Black Sea where the Crimea became an Ottoman vassal state, and the Genoese trading colony in Caffa (modern-day Feodosiya, Ukraine) was captured in 1475.

During the reign of Bayezid II (r. 1481–1512), the Ottomans had annexed Hercegovina (1483), invaded Moldavia (1484), and seized Naupaktos (Lepanto) in 1449 and Modon, Coron, and Navarino in 1500. Although Bayezid's successor Selim I (r. 1512–1520) mostly campaigned along the eastern frontiers of the empire, the Ottoman empire reached its apogee during the reign of

➤ OGIER GHISELIN DE BUSBECQ

Diplomat, antiquarian, naturalist, linguist, and sportsman, Ogier Ghiselin de Busbecq (1522–1592) was truly a renaissance man. He is credited with introducing the tulip into Europe and preserving numerous antiquities, including a transcription of the Roman emperor Augustus's *Res Gestae*. Busbecq's greatest contribution, however, was his description of the Ottoman empire during the reign of Suleiman the Magnificent (1520–1566). Ostensibly private correspondence to a friend and fellow diplomat, Busbecq published his *Turkish Letters* in 1589. During the next century this book was translated from Latin into seven languages, including English, and helped to shape European opinions of the Ottomans throughout the early modern era.

Although he constantly referred to the Ottomans as barbarians and lamented both their occupation of Christian countries and their treatment of

antiquities, he did praise their military discipline and prowess. Also, as the illegitimate son of a nobleman, he praised the Ottomans for rewarding merit over birth. He also used the Turks as a foil to lambaste Europeans for certain mores, like dueling, that he found objectionable.

The majority of Busbecq's legation was spent under house arrest, during which time he collected ancient coins and manuscripts as well as plants and animals, which he brought back to Europe. He also collected information about the history and culture of the Ottomans and their neighbors, including a vocabulary of Crimean Gothic. He was joined in his captivity by the Danish artist Melchior Lorck, whose numerous drawings, including a monumental panorama of Constantinople, also had an enduring influence on European conceptions of the Ottomans.

—Paul Millman

Suleiman the Magnificent (r. 1520–1566). In the 1520s Suleiman extended his European dominion to the gates of Vienna. In 1521 he took Belgrade, and in 1526 he annihilated the Hungarian army, including King Louis II, at Mohács, subsequently capturing the capital, Buda. After failing to take Vienna, the capital of the Habsburg empire, in 1529, Suleiman and his successors turned their attention to Persia and the Mediterranean. In the eastern Mediterranean, Suleiman expelled the Hospitallers from the island of Rhodes in 1522. He soon, however, faced a European counterattack. In 1535 Holy Roman Emperor Charles V led a successful campaign against Tunis, and an Ottoman-Venetian war began in 1536. In response, Suleiman established an alliance with Charles's enemy, King Francis I of France, and the Ottoman navy raided Spanish and Italian port towns while wintering in France in 1543. By 1540 Venice lost most of its Aegean islands, while Ottoman campaigns in the Mediterranean in the 1550s led to the siege of Malta (1565) and the capture of Chios (1566).

When the Ottomans once again entered into hostilities with the Habsburgs in the 1590s, it was with limited success. The 1606 treaty

negotiated at Zsitvatorok on the Habsburg-Ottoman borderland established a fixed and peaceful frontier that would last for most of the seventeenth century. Peace with the Habsburgs, however, did not preclude wars of expansion against the other regional powers. In 1645 the Ottomans attacked the Venetian territory of Crete, but this war dragged on for 25 years. This limited success was paralleled in the Ottomans' wars with Poland and Russia in the 1670s. While victorious against Poland in 1676, the very next year the Ottomans were forced to cede their newly acquired territory in western Ukraine to Russia. Despite these setbacks, Grand Vizier Kara Mustafa Koprulu, whose family had been entrusted with the governance of the empire by Sultan Mehmed IV (r. 1648–1687), set his sights on the prize that had escaped Suleiman the Magnificent. Yet this second attempt to conquer Vienna in 1683 proved to be the beginning of the end for the Ottomans. The city was relieved by an army led by the Polish king Jan III Sobieski, and in the ensuing 13 years of warfare the Holy League of Poland-Lithuania, Venice, Austria, and Russia drove the Ottoman frontier back. In the 1699 Treaty of Karlowitz the Ottomans ceded

large portions of their European possessions, including Hungary, to the victorious powers. The Ottoman expansion into Europe had ended.

—Paul Millman

Bibliography

- Goffman, Daniel. *The Ottoman Empire and Early Modern Europe*. Cambridge and New York: Cambridge University Press, 2002.
- Imber, Colin. *The Ottoman Empire, 1300–1650: The Structure of Power*. Basingstoke, UK, and New York: Palgrave Macmillan, 2002.
- İnalçık, Halil. “The Ottoman Turks and the Crusades.” In *A History of the Crusades*, Vol. 6, *The Impact of the Crusades on Europe*, edited by H. W. Hazard and Norman P. Zacour. Madison: University of Wisconsin Press, 1989.
- Kafadar, Cemal. “The Ottomans and Europe.” In *Handbook of European History, 1400–1600*, Vol. 1, *Structures and Assertions*, edited by Thomas A. Brady Jr. et al. Leiden: E. J. Brill, 1994.
- Sugar, Peter F. *Southeastern Europe under Ottoman Rule, 1354–1804*. Seattle and London: University of Washington Press, 1977.

Austro-Ottoman Rivalry

The Austrian and Ottoman empires had a long history of rivalry and conflict. The Ottoman expansion into Serbia and Hungary in the fifteenth century led to Ottoman raids on Austrian territory and prolonged Austro-Ottoman wars that shaped the history of both empires. The Ottomans initially raided the southern regions of Austria between 1408 and 1426, but subsequent decades saw more serious attacks. Sultan Suleiman I's successful invasion of Hungary, which resulted in the destruction of the Hungarian army at Mohacs in 1526, opened the way for systematic Ottoman attacks on Austrian territory. Furthermore, the Ottoman threat allowed the Habsburgs, the ruling dynasty of Austria, to unite the crowns of Austria, Hungary, and Bohemia. In 1529 Sultan Suleiman launched a major invasion of Austria proper. The Ottoman siege of Vienna (September 27–October 14, 1529) ended after the Ottoman forces compelled Suleiman to withdraw. In the absence of the Ottoman army, the Austrians captured several cities in Hungary. But Suleiman returned in 1532 when he led some 200,000 men from Constantinople at

the end of April. Holy Roman Emperor Charles V mobilized his army and sought support from other European states. Fortunately for the Austrians, the Ottoman army did not reach Vienna because it became bogged down at Güns (Koszeg), where the Austrian garrison heroically defended the fortress for three weeks. Sultan Suleiman showed his great admiration for the enemy's gallantry, inviting the Austrian commandant to his camp, where he was cordially received and awarded a robe of honor, as well as posting guards in the breach in the wall to prevent his troops from entering during the respite.

The dogged defense of Güns convinced Suleiman to give up on besieging Vienna, which was much more fortified. Fearing another Ottoman invasion, the Habsburgs sought to compromise while Suleiman, concerned about the rising Iranian power in the east, was quite willing to negotiate. The Treaty of Constantinople was negotiated in June 1533 and compelled Austria to give up Hungary and pay annual tribute to the Ottoman empire. The treaty survived for seven years, although it was violated on several occasions. When an open conflict erupted in 1540, Suleiman again sought to strengthen his authority in Hungary. The Ottomans defeated the Austrians at Buda and occupied central Hungary. In the Treaty of Gyula (December 29, 1541), Austria and the Ottoman empire agreed to partition Hungary: the Habsburgs received the western and northern regions, the Ottomans received central Hungary, and the eastern regions became the Ottoman client principality of Transylvania. However, hostilities soon resumed. The Austrians attempted to avenge their defeat by seizing Algiers and Tunis, which led to another disastrous failure. In 1543 Suleiman captured all fortresses leading to Buda, including Grau and Stuhlweissenberg, the largest in the area. Distracted by a new war against Safavid Iran in the east, the sultan entrusted the Hungarian theater to his lieutenants, who successfully campaigned in 1544. Hard-pressed, Austrians sued for a peace that confirmed provisions of the Treaty of Gyula.

After the failed Ottoman siege of Malta (1565), the 72-year-old Suleiman turned to Hungary, where he wanted to offset his failure at Malta as well as punish Holy Roman Emperor

Ferdinand I, who refused to pay the tribute. In 1566 the sultan's army invaded southwestern Hungary and besieged Szigetvár, whose Croatian commander Miklos Zrinyi led a valiant defense that destroyed most of the fortress and its garrison but inflicted heavy losses on the Turks. Suleiman died during the siege on September 6, but his death was concealed from the army until the fortress was stormed on September 8. Informed of the sultan's death, the Ottoman army returned to Constantinople (Istanbul) carrying Suleiman's embalmed body for burial.

Twenty-five years after Suleiman's death, the two empires clashed once again. The so-called Long War was caused by intermittent border strife between Austrian and Ottoman Hungary that intensified in 1591. Two years later a Croatian force inflicted a heavy defeat on the Bosnian Ottoman army at Sissek (Sisak), which provoked a war. In 1594–1595, with Pope Clement VIII's help, Austria established an alliance with Transylvania, Moldavia, and Wallachia. In 1595 Austrians reclaimed parts of Hungary, while their Wallachian allies successfully campaigned against the Turks on the Lower Danube. Alarmed by these setbacks, Ottoman sultan Muhammad III came to Hungary to personally lead his troops. In 1596 he snatched victory from the jaws of defeat at Mezokeresztes; with his troops fleeing en masse, Muhammad personally led a desperate charge with his remaining troops and turned the tide of battle. For the next five years the war became a battle of fortresses in which Austria gradually gained key fortresses in central Austria, although its attack on Buda failed in 1598. In 1599 the Austrian peace overtures were rebuffed by the sultan, whose new offensive led to the capture of Kanizsa (1600) and a victory at Buda (1605), which allowed the Ottomans to regain much of the land lost since 1595. The Long War ended with the Treaty of Zsitva-Torok (1606), which marked the first major check of Ottoman expansion and stabilized the Habsburg-Ottoman frontier for half a century.

The peace proved to be lasting, and Austria and the Ottoman empire enjoyed relatively peaceful relations for the next 50 years. Still, a new Austro-Ottoman war broke out in 1663 when Holy Roman Emperor Leopold I (1640–1705), seeking to challenge Ottoman influence, sent his army

under Count Raimondo Montecuccoli into Hungary. In 1663 Grand Vizier Koprulu Fazıl Ahmed led a massive Ottoman army into Habsburg Hungary and, after wintering in Belgrade, seized several Austrian-held fortresses, causing Leopold to begin peace negotiations. While negotiations were under way the Ottoman army marched toward Vienna but was defeated near the Szentgotthárd (St. Gotthard) Abbey north of the Raab River by Montecuccoli's army on August 1, 1664. In spite of the victory, Emperor Leopold, who was aware how weakened the Austrian army was, chose to proceed with negotiations and signed the Treaty of Vasvar. According to its terms, Austrians surrendered a number of border fortresses, recognized Ottoman control of Transylvania, and agreed to pay the sultan an annual "gift" of some 200,000 florins.

The Treaty of Vasvar held for 20 years before it was broken by another war. The so-called Great Turkish War, however, was not limited to Austrian-Ottoman conflict but also involved other European states that united into an anti-Ottoman coalition. Relations between Austria and the Ottoman empire remained tense. Austrian positions in Royal Hungary remained tenuous and faced resistance from the Kuruc movement led by Imre Thököly. In 1682 Thököly recognized Ottoman sovereignty, and an Austrian attempt to subdue him prompted Ottoman response. The Ottoman invasion of Austria in 1683 almost succeeded in capturing Vienna before the Austrian-Polish forces under King John III Sobieski of Poland scored a major victory at Vienna (September 1683) and drove them out of northwestern Hungary. Pope Innocent XI then helped create the Holy League consisting of the Holy Roman Empire, Venice, and Poland (Russia joined in 1686). The Poles conducted campaigns in Moldavia in 1686 and 1691, while Venetians attacked Ottoman interests in Dalmatia, Morea (southern Greece), and the eastern Mediterranean. The Ottomans repelled Russian invasions of the Crimea (an Ottoman vassal) in 1687 and 1689 as well as attacks on the Ottoman fort of Azov in 1695–1696. Yet the fate of the war was decided on the fields of Hungary, where the Ottomans suffered a series of defeats at Gran (Esztergom) and Neuhausel in 1685, Buda in 1686, and Mount Harsan (near Mohacs) in 1687.

By the end of 1687 southern Hungary and much of Transylvania came under Habsburg (Austrian) control, and Austrian operations extended into Serbia, where Habsburg forces celebrated victories at Belgrade in 1688 and Nis in 1689. Sultan Suleiman II's counterattack into Transylvania and Serbia was at first successful and led to the conquest of Belgrade in 1690. Yet the Ottomans then suffered defeats at Slankamen in 1691 and Grosswardein (Oradea) in 1692. Austria then became distracted by the War of the Grand Alliance against France and turned away from the Ottoman front for almost five years. In 1697 as the Ottoman army marched from Belgrade toward Hungary, an Austrian army under Prince Eugene of Savoy routed it at the Battle of Zenta on September 11. This crushing defeat compelled the sultan to accept peace negotiations, which resulted in the Treaty of Karlowitz on January 26, 1699. The Ottoman empire, although retaining Serbia, accepted Austria's control of all of Hungary (except the Banat of Temesvar), Transylvania, Croatia, and Slavonia and recognized Venice's influence in Morea and Dalmatia and Poland's presence in Podolia.

The Treaty of Karlowitz maintained peace between Austria and the Ottoman empire for 15 years. Both empires waged wars on other fronts, however, and Sultan Ahmed III concentrated his efforts on reclaiming lands in Greece, which resulted in the start of the Venetian-Ottoman War in 1714. Austria accused the Turks of breaking the treaty by endangering Venetian interests and made a defensive alliance with Venice in 1716. The Austrian army, led by the brilliant commander Prince Eugene of Savoy, routed the Turks at Peterwardein on the Danube River on August 5, 1716, and captured the Banat of Temesvar, the only remaining Ottoman region in Hungary. The following year Austrians invaded Serbia, defeating the Ottoman army and capturing Belgrade in August 1717. With the Austrians controlling much of Serbia and western Wallachia, the Ottomans sued for peace, confirming Austrian gains in Hungary, Serbia, and Wallachia. Some two decades later after Russia and the Ottoman empire became embroiled in a war, Austria chose to side with Russia and enter the fray, although Austria was not prepared for a war. The Ottoman army inflicted several major defeats upon the

➤ THE SIEGES OF VIENNA

From September 27 to October 14, 1529, Suleiman the Magnificent besieged the city of Vienna in hopes of breaking the power of the Austrian empire and opening the way to central Europe. More than 120,000 Turks repeatedly assaulted the fortifications around the city, defended by 16,000 troops and many civilians under the Count de Salm. A final attempt to storm a breach in the walls was repulsed with heavy losses, and Suleiman withdrew. The Turks soon found themselves fighting multiple wars against Russia, Venice, Persia, Austria, Hungary, and others and were not able to return their attention to Vienna until 1683.

In September 1683, the Turks, riding a resurgence of power, besieged Vienna again with 138,000 troops under Kara Mustapha Pasha. By this time, complex *trace italienne*-style fortifications, developed by the French engineer Sébastien Le Prestre de Vauban, were employed to defend many European cities, including Vienna. Giant Turkish guns, so successful against the old walls of Constantinople in 1453, were no longer very effective. The Turkish siege was poorly conducted, with no defensive breastworks to protect Turkish lines in case of rear attack. That is exactly what happened when King Jan III Sobieski of Poland came to the aid of Vienna with 30,000 troops. He was also given command of 40,000 Austrian troops, and a rear attack on the Turkish line led to a fierce, desperate, daylong battle that found the Turks sandwiched between the fortifications of Vienna and the forces of Sobieski. The Turks were crushed with huge losses, including six pashas. Kara Mustapha Pasha narrowly escaped, and Austria went on to take Belgrade, the Turkish Balkan stronghold, and then marched on Constantinople itself before the Turks sued for peace. Turkish power was forever broken in Europe.

—Christopher Howell

Austrians, most notably at Grocka (1739), and forced them to sue for peace. The Treaty of Belgrade, signed in 1739, proved to be a sweet retribution for the Ottomans, who compelled Austria to surrender Belgrade and parts of Wallachia.

Until the end of the eighteenth century, Austro-Ottoman relations remained relatively peaceful and focused on commercial and diplomatic

contacts. The Russo-Ottoman War of 1787–1792 changed that. Empress Catherine II of Russia shared her Greek Project—partitioning of the Ottoman empire—with Emperor Joseph and convinced him to take part in Russia’s war against the Porte. In 1783 Austria supported Russian annexation of the Crimea, an Ottoman vassal state, and this strained Austro-Ottoman relations. When the Porte declared war on Russia in August 1787, Austria joined as Russia’s ally, hoping to reverse territorial losses suffered in 1739. Yet early on Austrians suffered a major defeat at Karánsebes (September 1788), allowing the Turks to launch devastating raids deep into the Banat of Temesvar. Although Austrians later recovered their position and even captured Belgrade, unrest in the Netherlands and Hungary, compounded by Prussian hostility, compelled Vienna to end the war at all costs. The Treaty of Svishtov (Sistova) reestablished the prewar situation, with only minor Austrian territorial gains in Croatia.

—Alexander Mikaberidze

Bibliography

- Aksan, Virginia. *Ottoman Wars, 1700–1870: An Empire Besieged*. Harlow, UK: Longman, 2007.
- Fleet, Kate, Suraiya Faroqhi, and Res at Kasaba, eds. *The Cambridge History of Turkey*. 3 vols. Cambridge: Cambridge University Press, 2006–2008.
- Hochendlinger, Michael. *Austria’s Wars of Emergence: War, State and Society in the Habsburg Monarchy, 1683–1797*. London: Longman, 2003.
- Inalchik, Halil, and Cemal Kafadar, eds. *Suleyman the Second and His Time*. Istanbul: Isis, 1993.
- Murphey, Rhoads. *Ottoman Warfare*. New Brunswick, NJ: Rutgers University Press, 1999.
- Parvey, Ivan. *Habsburgs and Ottomans between Vienna and Belgrade, 1683–1739*. Boulder, CO: East European Monographs, 1995.

Russo-Ottoman Wars

Starting in the fifteenth century, the emerging Russian state and the Ottoman empire shared a long border and competed for territory and influence in the Balkans, the Crimea, and the Caucasus. Although the two empires were often brought into conflict with each other because of their alliances with other great powers in Europe, the early Russo-Ottoman wars were caused mainly by Russia’s desire to establish a warm-water port

on the Black Sea, which was under Ottoman control. The Ottomans initially used the term “Moskov” or “Moskovlu” to refer to the Russian state that emerged around the principality of Moscow (the so-called Muscovy or the Muscovy Rus). The first formal diplomatic contact between the two states took place in 1492 when the Muscovite embassy arrived at Constantinople to discuss long-distance trade. The Porte began to use the term “Rusiya” at the end of the seventeenth century when the Muscovy Rus came to include parts of Ukraine, and it was only in 1741 that the sultan recognized the Russian rulers as the “Emperors of All the Russias” (*tamamen Rusiya*). The early Russo-Ottoman relations were marked by a clear distinction in status between the powerful Ottoman state and the rising Russian principality. The sultans refused Russian offers of alliance and oftentimes relegated Russian affairs to their vassal khans of the Crimea, who conducted periodic raiding expeditions to the southern provinces of Muscovy. By the mid-sixteenth century, however, Muscovite Rus became strong enough to resist the Crimean Khanate, and Tsar Ivan IV (r. 1533–1584) destroyed the Kazan and Astrakhan khanates, important allies of the Crimean Tatars, during 1552–1556.

Since the Black Sea was bordered by the Ukraine to the north, the Ukraine was an area of constant struggle involving Russia, Poland, the Ottoman empire, and the Don Cossacks for most of the seventeenth century. During 1637–1642 the Don Cossacks captured Azov, an important Ottoman fortress, that they offered to Tsar Mikhail of Russia; however, the first Romanov ruler declined it to avoid a direct conflict with the Porte.

In 1654 following a powerful Cossack uprising against Poland, Russia signed the Treaty of Pereyaslavl with the Cossacks that granted Russia control over parts of eastern Ukraine. The Russian expansion, however, provoked a war with Poland and the Crimean Khanate, supported by the Ottoman empire. In 1672 the Ottoman Army occupied parts of southern Ukraine, and a preliminary contest between Russia and the Ottoman Turks began in 1676 after the Cossacks, under Ivan Samoilovich, hetman of the Left-Bank Ukraine, asked for Russian assistance against the Turks, who supported his rival

Hetman Petro Doroshenko. The Russian Army, supported by Ukrainian allies, captured the Cossack capital of Chyhyryn in 1676. The following year a large Ottoman army, under Ibrahim Pasha, invaded Ukraine and besieged Chyhyryn, although a Russian attack soon forced it to retreat. In 1678 the Ottomans besieged Chyhyryn once again, capturing it in August. Over the next two years the two sides limited their actions to raids and border attacks before the Treaty of Bakhchisarai, signed in 1681, established a buffer zone between the Ottoman and Russian-controlled regions of Ukraine.

In 1686 in the wake of the Ottoman defeats against the Holy League (Austria, Venice, Poland, and the papacy), Russia, under regent Sofia Alekseyevna, joined the war and organized two invasions, led by Prince Vasily Golitsyn, of the Crimean Khanate in 1687 and 1689, but both efforts ended disastrously for Russia, contributing to a discontent that resulted in the ouster of Sofia by her brother Peter. In 1695 Peter I took personal command of a force that sought to capture Azov, an Ottoman fortress on the northern shore of the Sea of Azov, an inlet of the Black Sea. Most of the Russian troops approached the area by traveling down the Don and Volga rivers. Because the Russians had no navy, however, they were unable to cut off the Ottoman access by water to the fortress at Azov. The Ottoman defenders turned back the Russians with heavy losses. Subsequently Peter took a year to build a navy at the Don River city of Voronezh. In the spring of 1696 the Russians again approached Azov with an enlarged force of some 75,000 troops. This time half the force traveled on the new warships down the river, and half came overland. As the land force engaged the fortress's defenders, the naval force was able to defeat the Turkish warships and blockade the fortress from the sea. The Russians were able to capture the city on July 28, 1696. Four years later the Treaty of Constantinople compelled the Porte to acknowledge Russia's control of the fortresses of Azov, Taganrog, Pavlovsk, and Mius.

Emboldened by his military success against the Swedes, whom he crushed at Poltava in 1709, Peter decided to force the Ottomans to open Constantinople and the straits to Russian commerce and gain free passage to the Mediterranean Sea.

Hoping to incite anti-Ottoman rebellion among the Orthodox Christian population of the Danubian Principalities (Wallachia, Moldavia, Bessarabia), Peter launched an ill-prepared campaign in the basin of the Pruth River, where he was defeated at Stanileshti (July 1711) and was surrounded by the Ottoman (and Crimean) forces under Grand Vizier Baltaci Mehmet Pasha. On July 21, 1711, Peter accepted the Treaty of Pruth, which required him only to restore Azov and its surrounding territory to the Turks. Considering Peter's desperate situation, the Turks certainly could have made greater demands but missed that opportunity.

In 1735 after a long period of occupation with European rather than Ottoman affairs, Russia, in league with Austria and Iran, declared a new war on the Ottomans. The Russian troops, led by Field Marshal Burkhard Christoph von Munnich and General Peter Lacy, invaded Crimea twice and captured Perekop, Azov, and Ochakov but were later forced to retreat due to logistical difficulties and a plague epidemic. In 1739 the Russians advanced into southern Ukraine, defeating the Turks at Stavuchany and capturing Khotin and Yassy. Meanwhile Austria, whose troops had been less successful than Russia's troops, was forced to sign a peace agreement that led to the Treaty of Belgrade in 1739. With its ally gone and war with Sweden looming, Russia chose to sign the Treaty of Nissa in October 1739. Russia restored portions of Moldavia and Bessarabia, including the city of Khotin, to the Turks, and promised to dismantle the fortifications at Azov, which Russia retained as a port. The Turks, however, opened the Black Sea to Russian commercial activity.

During the reign of Catherine II, the Russo-Ottoman conflict entered a new stage determined by Russia's role in the partitions of Poland and the increasing sophistication of the Russian military. In 1768 Russia interfered in Polish affairs, seeking to extend its authority over the once-mighty Polish-Lithuanian Commonwealth. Having promised help to Poland six years earlier, Sultan Mustafa III declared war on Russia in late 1768. Unlike the previous Russo-Ottoman war, Russian empress Catherine II made sure that her states were well prepared. In 1770 Russian troops led by Field Marshal P. A. Rumyantsev advanced

into Moldavia and defeated the Turks under Kaplan Girey and Ivazzade Halil Pasha at Larga and Kagul. The defeat at Kagul, one of the worst in Ottoman history, was so decisive that it spurred the Ottomans into introducing a series of Western-influenced reforms into the Ottoman Army. By the summer of 1770 Moldavia was occupied by the Russians. Meanwhile, the Russian fleet, under the command of Count Alexis Orlov, reached the coast of Greece, where it won the Battle of Chios on July 5, 1770. Two days later Orlov completely destroyed the Turkish fleet at Chesma Bay. In 1772 the Russian fleet bombarded Beirut to assist local rebels against the Porte and conducted diplomatic negotiations with the mamluk leader Ali Bey of Egypt. A Russian expeditionary force was also sent to eastern Georgia, where Georgian king Erekle II scored a major victory over the Turks at Aspindza (1770).

After a failed attempt to negotiate in 1772, the hostilities resumed in earnest. The Russian troops, under General Alexander Suvorov, also advanced to the Danubian Principalities, crossing the Danube in 1773 and 1774 and scoring a decisive victory at Kozluca (now Suvorovo) in 1774, which forced the Ottoman commander Muhsinzade Mehmed Pasha to sue for peace. The Treaty of Kuchuk-Kainardji was signed in July 1774. The treaty proved to be rather consequential for the Ottoman empire and had long-term effects on the history of the Middle East. Under Russian pressure, Sultan Abdulhamid I recognized the independence of the Crimean Khanate, which was annexed by Russia just nine years later, and ceded the territories in the northern Caucasus. The Ottoman empire retained Moldavia and Wallachia but recognized Russia's special position in the region. The Ottoman authorities also granted commercial privileges to Russian merchants throughout the empire and agreed to pay a heavy war indemnity.

The most consequential articles of the treaty dealt with Russia's role inside the Ottoman empire. Russia received the right to open consulates in any place within the Ottoman empire. The sultan agreed to let Russia establish a Russian Orthodox Church for local Russians in the Galata district of Constantinople (Istanbul). Article 7 also granted Russia the right to represent (and protect) the church and its personnel.

These provisions proved to be highly controversial, as disagreements over their interpretation quickly emerged between Moscow and Istanbul. Russia interpreted the provisions as granting it the status of the protector of Ottoman Orthodox Christians, which allowed Russia to actively interfere in Ottoman domestic affairs. The treaty was crucial in the development of the "Eastern question" and contributed to the outbreak of the Crimean War in 1853.

—Alexander Mikaberidze

Bibliography

- Aksan, Virginia. *Ottoman Wars, 1700–1870: An Empire Besieged*. New York: Longman, 2007.
- Jelavich, Barbara. *History of the Balkan: Eighteenth and Nineteenth Centuries*. Cambridge: Cambridge University Press, 1983.
- Jelavich, Charles, and Barbara Jelavich. *The Establishment of the Balkan Nation States, 1804–1920*. Seattle: University of Washington Press, 1986.
- Mikhailovsky-Danilevsky, Alexander. *Russo-Turkish War of 1806–1812*. 2 vols. Translated and edited by Alexander Mikaberidze. West Chester, OH: Nafziger Collection, 2002.
- Shaw, Stanford J. *History of the Ottoman Empire and Modern Turkey*. 2 vols. New York: Cambridge University Press, 1976–1977.

Ottoman-Safavid Wars

The Ottoman-Safavid wars included a series of conflicts between the Ottoman empire and Safavid Persia in the sixteenth and seventeenth centuries. In the early sixteenth century, Ismail, a Safavid leader who claimed descent from the Prophet Muhammad and Ali, succeeded in establishing a theocratic state in western Iran. In 1501–1503 Shah Ismail gained control of central and southern Iran, and by 1508 he campaigned in southwestern Iran and Iraq. The growing Safavid power soon threatened Ottoman interests in the region. In 1509–1512 Ismail played an active role in a civil war fought between the sons of Sultan Bayezid II, supporting Prince Ahmed against Selim. After seizing the Ottoman throne in 1512, Sultan Selim I prepared for a campaign against the Safavids. Aside from political considerations, religious differences (Sunni Ottomans versus Shia Safavids) also prompted this conflict. In 1514 Selim began the long march from

Adrianople to Azerbaijan. Ismail initially practiced a scorched-earth policy but then engaged the Ottomans in a decisive battle. Lacking artillery and trained infantry, the Safavid army suffered a decisive defeat in the Battle of Chaldiran in August 1514. Selim then plundered the Safavid capital of Tabriz and returned to Anatolia. In the next year's campaign the Ottomans captured the fortress of Kamakh and established control over Kurdistan and parts of Syria (Albistan). However, Ottoman inroads into Syria led to the Mamluk-Ottoman War in 1516–1517, which diverted the Ottoman attention from the Safavids and allowed Ismail to regroup, although he never seriously threatened the Turkish domain.

After the death of Shah Ismail in 1524, the Safavid Crown went to Shah Tahmasp, who exploited Ottoman preoccupation in Europe, where Suleiman I (Suleiman the Magnificent) conducted major campaigns in Serbia and Hungary, to stir up rebellion in eastern provinces of the Ottoman empire. Tahmasp also opened diplomatic negotiations with the Habsburgs on the creation of a Habsburg-Safavid alliance against the Ottomans. In response, Suleiman provoked the Uzbeks in Transoxania to attack Iran from the east. The war between Suleiman and Tahmasp began in earnest in 1526. The Ottomans, led by Grand Vizier Ibrahim Pasha, who was later joined by Suleiman himself, invaded Iraq and, over the next eight years, captured Baghdad, Bitlis, and Tabriz. Tahmasp avoided pitched battles and waged a scorched-earth strategy. Tabriz, recaptured by Tahmasp in early 1535, was sacked later that year by Suleiman. Minor skirmishes and border fighting persisted for almost a decade. The Safavid capture of Tabriz and Van provoked a second campaign by Suleiman in 1548. Yet again, Tahmasp adopted a scorched-earth policy, laying waste to Armenian highlands. The Ottomans reclaimed both Tabriz and Van as well as additional fortresses in Armenia and Georgia.

After a three-year hiatus, the war resumed in earnest. The Safavid attack on Erzurum in 1552 led to a counterattack by Suleiman, who reclaimed Erzurum and invaded western Iran in 1553–1554. Unable to defeat the Ottomans, Tahmasp chose to negotiate, signing the Treaty of Amasya in 1555. Under the terms of the treaty, the two powers determined their spheres

of influence, with Iran receiving Azerbaijan, eastern Armenia, eastern Kurdistan, and eastern Georgian kingdoms, while the Ottomans claimed all of western Georgia, Arabia, Iraq, and western Armenia and Kurdistan. Kars was declared neutral, and its fortress was destroyed.

The Peace of Amasya lasted until an Ottoman offensive in 1578 sought to take advantage of a period of Iran's weakness under Shah Muhammad Khudabanda (r. 1578–1587). The death of Shah Tahmasp I in 1576 resulted in a two-year-long civil war over the succession that weakened the Safavid state and led the Ottoman Turks to believe that Iran could at last be conquered. In 1578–1585 Sultan Murad III's armies seized Kars and invaded Georgia, where they captured Tbilisi (Tiflis). The Ottoman expansion into Georgia forced Shah Muhammad to release Georgian king Simon I of Kartli to fight the common enemy. Simon achieved considerable success in eastern Georgia, where he reclaimed the key fortresses of Lori and Gori before besieging Tbilisi in 1579. In 1580 he repulsed the Ottoman expeditions in Kartli, and in 1582 he routed a major Ottoman army on the Mukhrani field. The Ottomans, meantime, conducted operations in Daghestan and Azerbaijan and gained considerable success at Ganna and Karabagh in 1588. With Uzbek attacks intensifying in eastern Iran and the Ottomans capturing Tabriz in 1590, Shah Abbas Shah, who succeeded Shah Muhammad two years earlier, chose to enter into peace talks. The Treaty of Constantinople (also known as the Treaty of Ferhat Pasha, who commanded the Ottoman forces), signed in May 1590, ended the war. The treaty gave the Ottomans control of Azerbaijan, Georgia, Armenia, most of Qarabagh (except for Ardabil), most of Iranian Kurdistan, Luristan, and Daghestan.

The Safavids refused to accept the loss of vast territories in the Caucasus. After subduing Uzbeks, Abbas exploited Ottoman problems in Hungary to launch an offensive from the east. A surprise attack by the Safavid army led to the capture of Tabriz in late 1603. While Abbas commanded the main offensive in the northwest against the Ottomans led by Chighalah Pasgha, smaller Safavid forces raided Iraq and southern Caucasia. Ottoman sultan Ahmed I led a large army against Abbas but was defeated near Lake

➤ NADIR SHAH

Nadir Shah, born into a pastoral family of the Afshar Turkmen, had already established a strong military reputation by 1722 when Ghilzai Afghans invaded Iran and deposed the Safavid dynasty. By 1729, Nadir aligned himself with the surviving Safavid shah and helped drive the Afghans out of Iran. Facing Ottoman and Russian attacks and collapsed central authority, he successfully dealt with these threats, driving the Ottomans out of western Iran while simultaneously pressuring Russia into northern Iran. In 1736, he felt himself powerful enough to depose the shah and claim the throne himself. Over the next decade he embarked on a series of brilliant military campaigns that established the last great nomadic empires of conquest, which stretched from Baghdad to Delhi. In 1735 (and again in 1745), he crushed the

Ottomans in Iraq; in 1737–1739, he invaded Afghanistan and then India, destroying the Mughal army at the Battle of Karnal. After looting the Mughal treasury, which included the famous bejeweled Peacock Throne, the shah turned north to wage war in Central Asia and the Caucasus. By 1745, Merv, Bukhara, and Khiva as well as eastern Georgia and Azerbaijan were Iranian vassals. Despite his successes, Nadir had come to be regarded as a cruel and capricious tyrant, more feared than respected. The last years of his life were marked by mistrust and outbursts of extreme violence. A group of discontented officers organized a conspiracy against Nadir and assassinated him in June 1747. His death plunged Iran into a prolonged civil war.

—*Alexander Mikaberidze*

Urmia in 1606. Following up on his success, Abbas captured Baghdad, Mosul, and Diarbekkh by 1608, thus reclaiming almost all areas that the Safavids had lost in the preceding decade. In 1612 the new Treaty of Constantinople confirmed the Ottoman-Safavid frontier on the line established by Selim I and Ismail almost 100 years earlier; in return, the shah pledged to deliver 200 pack loads of fine silk annually to the Sublime Porte.

The Safavid failure to deliver the silk served as a pretext to the resumption of hostilities in 1616. An Ottoman army besieged Erivan (Yerevan) in 1616 but was repulsed and forced to withdraw. In 1618 the Turks attacked in the direction of Tabriz but were defeated at Soltaniyeh. Afterward peace negotiations began, resulting in the Treaty of Sarab (1618) that confirmed the terms of the last peace treaty.

The war of 1623–1639 was the last major war between the Safavids and Ottomans. It began as a result of a power struggle between local officials in eastern Ottoman provinces. Abaza Mehmed Pasha, the governor of Erzurum, rose in rebellion, while Baghdad had been, since 1621, in the hands of Janissary Subashi Bakr and his followers. Bakr futilely appealed to Sultan Murad IV for recognition as the new pasha, and when the sultan ordered Hafız Ahmed Pasha, the governor of Diyarbakir, to restore order in Baghdad,

Bakr turned to Abbas, who sent troops to assist him. To prevent Safavid capture of Baghdad, Hafız Ahmed chose to negotiate with Bakr and convinced him to recognize the sultan's authority. In response, the Safavid forces besieged Baghdad and captured it in January 1624. In the wake of this major victory, Abbas's troops took control of most of Iraq, including Kirkuk, Mosul, Najaf, and Karbala, the last two cities being holy to the Shiites. To recover these territories, the sultan dispatched Hafız Ahmed Pasha, who was appointed the grand vizier. The Ottomans organized several campaigns during 1625–1639. In the first campaign, the Ottomans captured Mosul in northern Iraq but unsuccessfully besieged Baghdad in 1625–1626; three years later, as Shah Abbas died in January 1629, Grand Vizier Gazi Ekrem Khusrev Pasha led another campaign into Iraq. Although he gained a victory at Mihriban (near Kermanshah) in May and sacked Hamadan in June, he failed to capture Baghdad in November and was forced to return due to bad weather. The Safavids reclaimed parts of Iraq, their efforts facilitated by the Janissary revolt and the murder of the grand vizier in February 1632.

Sultan Murad spent almost five years subduing internal revolts before he was able to turn his attention to Iraq. In March 1635 the sultan opened his campaign against Erivan, which was

captured in August 1635. One month later the Ottomans occupied Tabriz, but their campaign then stalled. Shah Sefi organized a Safavid counterattack that reclaimed Erivan in April 1636 and defeated the Ottomans at Ardalan (central Iran) in October. Sultan Murad delayed the start of a new campaign until 1638, when his army marched to Baghdad. Led personally by Murad, the Ottomans captured Baghdad in December 1638 and effectively restored their authority in Iraq. Peace negotiations soon began, resulting in the Treaty of Zuhab (or Treaty of Qasr-e-Shirin, May 1639) that established a boundary between the two empires that remained virtually unchanged into modern times. The treaty recognized Iraq (including Baghdad and the Shatt al-Arab), western Caucasia, and Kurdish territories as part of the Ottoman empire but granted southwestern Caucasia to Iran.

In 1722 the Safavid dynasty collapsed following the Afghan invasion. As Iran descended into political chaos, the Ottomans regarded it as an opportunity to expand their territory in Azerbaijan and western Iran, but their efforts failed due to local resistance as well as the rise of Nadir Shah (1730–1747) of the Afshar dynasty.

—Alexander Mikaberidze

Bibliography

- Fisher, William Bayne, Peter Jackson, and Laurence Lockhart, eds. *The Cambridge History of Iran*, Vol. 6, *The Timurid and Safavid Periods*. Cambridge: Cambridge University Press, 1986.
- Imber, Colin. *The Ottoman Empire, 1300–1650: The Structure of Power*. Basingstoke, UK: Palgrave Macmillan, 2002.
- İnalçik, Halil. *The Ottoman Empire: The Classical Age, 1300–1600*. London: Weidenfeld and Nicolson, 1973.
- Newman, Andrew J. *Safavid Iran: Rebirth of a Persian Empire*. London: I. B. Tauris, 2009.
- Savory, Roger M. *Iran under the Safavids*. Cambridge: Cambridge University Press, 1980.

Mughal-Safavid Wars

By the late sixteenth century, the Safavid empire, expanding eastward, and the Mughal empire, seeking new territories to the northwest, clashed over the issue of a sphere of influence in Afghanistan. Their conflict concentrated on the strategic

city-fortress of Kandahar, believed to be the key to controlling Afghanistan. In 1595 two Safavid princes defected to the Mughal court, surrendering the fortress to Emperor Akbar (1542–1605). In 1622 after consolidating his authority at home, the Safavid shah Abbas organized a major expedition to reclaim Kandahar. After a monthlong siege, the Mughal garrison surrendered. The Mughal emperor Jahangir (1569–1627) initially planned to send a punitive expedition and tasked his son Khurram (the future Shah Jahan) to lead it, but the expedition never materialized because Jahangir soon fell seriously ill and passed away. The Mughal court became embroiled in a bitter power struggle for the next few years.

Once Shah Jahan secured his authority, he turned his attention to Kandahar. The moment seemed opportune, since the death of Shah Abbas in 1629 caused domestic instability in Iran. In 1638 as the Mughals made preparations for the campaign against Kandahar, Ali Mardan Khan, a Safavid commander of Kandahar who quarreled with Shah Safi (r. 1629–1642), defected to the Mughal side and surrendered the fortress to Shah Jahan.

A decade passed before the Safavids were able to turn their attention to Kandahar. Shah Abbas II (r. 1642–1666) launched an expedition in 1648 and, after a two-month-long siege, captured the fortress. The following year the Mughals counterattacked under the leadership of young Aurangzeb, who laid siege to the fortress but could not take it before the onset of winter. The Mughals returned in late 1652 and once more in 1653 but failed to take the fortress on both occasions due to bad weather and logistical difficulties as well as a tenacious defense by the Safavid garrison.

—Alexander Mikaberidze

Bibliography

- Gommans, Jos J. *Mughal Warfare: Indian Frontiers and High Roads to Empire, 1500–1700*. London: Routledge, 2002.
- Newman, Andrew. *Safavid Iran: Rebirth of a Persian Empire*. New York: I. B. Tauris, 2006.
- Richards, John F. *The Mughal Empire*. Cambridge: Cambridge University Press, 1993.
- Ward, Steven R. *Immortal: A Military History of Iran and Its Armed Forces*. Washington, DC: Georgetown University Press, 2009.

Islamic Wars of Empire in West Africa

Between 1450 and 1750 CE, conflict increasingly defined the basis for political formation in West Africa. The ascendancy and decline of Songhai demonstrates the key role that the larger Islamic world played in the character of large empires. Smaller states were formed both in response to and in order to further the spread of Islam in the region.

The ruler Sunni Ali Bar (1464/1465–1492) seized control of the western Sudan by taking advantage of imperial Mali's weakened state to create the foundations of the empire of Songhai. An avowed Muslim, Sunni Ali based his polity on the lucrative trading centers of Gao, Timbuktu, and Jenne. Revered by some for his victories over raiders and hated by others for his tyrannical oppression, Sunni Ali organized the government system into provincial governors and created the basis for a civil service.

The century of rule that followed Sunni Ali's death was known as the Askia dynasty (1492–1592) and constituted a successful series of African rulers intent on expansion in concert with the larger world of Islam. A professional army was created, and the conquests of the empire

continued to expand its territory while promoting Islam. The era marked a period of intellectual and commercial vitality beginning with the conversion of urban elites to the faith and expanding to include the orbit of many smaller communities that remained firmly rooted in African traditions.

Other Muslim states also resisted Songhai overlordship and rebelled continuously. Yet the Songhai era persisted until the Moroccan sultanate's invasion of Songhai in 1571 effectively toppled the domination of the Sudan. Historians still debate the inevitability of Songhai's defeat in the Battle of Tondibi (1591) as a consequence of the technological advantages of Morocco (with firearms) rather than the result of internal disorder or administrative flaws. The decline of the great state nonetheless had a lasting impact on West African political development.

Not all political states were Muslim ones, nor did they always owe their origins to the spread of Islam. Mossi and Bamana resistance to Islam remained significant. By the 1660s, a Bamana state had emerged at Segou-Koro. Under the leadership of a warrior named Mamary Coulibaly (also known as Biton), who ruled from about 1700 until his death in 1755, the male age-grade organization was militarized and its religious

➤ WEST AFRICAN PRAISE SINGERS UNDER ISLAM

Before the arrival of literacy, West African states relied on the oral transmission of traditions across generations. Performers skilled with words and music served the political leaders of small villages and large empires. These specialists in shaping the past were known in Mande society as *jeliw*, in Wolof as *gewel*, and in Fulbe as *gawlo* (sometimes also called “griots”). The praise singers of West African empires were key allies to rulers and elite. Their performances could instill pride in warriors and ensure victory on the battlefield. They were spokespersons and advisors, mediators and diplomats. Their knowledge of genealogy and history played a crucial role in forming historical consciousness and maintaining the social and political fabric of society.

While the influence of bards declined in the Islamic era, they didn't entirely disappear. The

presence of Sufi performers and Muslim marabouts filled familiar roles, but the African praise singers also carried influence in Islamic societies. The performances of traditionalists continued to remember and record kings, battles, conquests, and migrations. They could inspire loyalty or rally reform. From the sixteenth century, West African Islamic scholars relied on oral traditions, and their subject matter influenced the writing of *tarikhs*, or local histories. Eighteenth-century travelers record the respect in which the traditionalists and praise singers were held. The ambiguity and contradictions of the spoken (and sung) words of oral specialists provide historians today with meaningful checks and balances on both Islamic and European versions of the past.

—Candice Goucher

and social foundations expanded in support of the state.

In the eastern Sudan, the Islamic dynasties at Kanem and Borno relied on trade in slaves and horses to maintain control between the area of Lake Chad and the Fezzan of North Africa. Their strong military cavalries waged successful jihads on the countryside during the sixteenth century. Control over peasant populations provided taxes and a lucrative income in the form of food, salt, and other tribute. The army was modernized with firearms and advisors from the Ottoman empire after the 1650s.

In northern Nigeria, the Hausa city-states (founded in the eleventh and twelfth centuries CE) flourished from the seventeenth to the eighteenth centuries. Ruling elites waged jihads on the unbelievers of the countryside and traded captives across the trans-Saharan routes to North Africa. Hausa traders carried their language, religion, and goods across a vast network of commercial arteries. The spread of Islam to the masses in the eighteenth century eventually provoked reform movements, culminating in the Wahabbism-influenced jihads of Usman dan Fodio (1754–1817), the Fulani son of a Muslim teacher in the northern Hausa state of Gobir and considered by some to be a divinely inspired reformer (Mujaddid).

Between 1650 and 1750, the most successful jihads were waged at the western end of the former Songhai territory in the Senegambia. At the imamate of Futa Djallon, Fulas gained political power in the eighteenth century. Service in the army was compulsory for Fulas and Mandinkas and was controlled by the almamy, a religious leader, who was guided by the council of democratically selected elders. With the monopoly over literacy and economic empowerment, Muslim merchant-clerics did as much to spread Islam as did the conquering armies of urban elites.

The era of conflict did not go unnoticed by European merchants on the West African coasts. They benefited from the instability of the interior; the changing ecology between 1630 and 1860, when drier conditions prevailed; and the shifting trade routes. Dessication and deforestation increased the amount of conflict over scarce resources, encouraging both Fula and Bambara expansion as well as European incursions. If

conflict defined the contours of political change, it did not always dominate the everyday lives of people. The Scottish traveler Mungo Park observed the hospitality of Segu in the late eighteenth century, remarking with surprise at the “prospect of civilization and magnificence” in the peaceful and generous society that welcomed him.

—Candice Goucher

Bibliography

- Bravmann, Rene A. *African Islam*. Washington, DC, and London: Smithsonian Institution Press and Ethnographica, 1983.
- Davidson, Basil. *A History of West Africa, 1000–1800*. London: Longman, 1990.
- Hunwick, John. *West Africa, Islam, and the Arab World: Studies in Honor of Basil Davidson*. Princeton, NJ: Markus Wiener, 2006.

Valois-Habsburg Rivalry

A long-standing political rivalry existed between two of the major ruling houses of Europe and dominated the political affairs of the sixteenth century. The House of Valois, the ruling house of France, was pitted against the House of Habsburg, the ruling dynasty of the Holy Roman Empire, the Netherlands, and Spain. It was a rivalry rooted in the complex political balance of power in Europe, beginning in the Middle Ages. The rise of the Habsburg family can be dated to the early twelfth century in Switzerland. Within a few generations of land acquisitions, the Habsburgs managed to secure the throne of the Holy Roman Empire. For several centuries, the Habsburgs intermittently held the imperial throne, along with extending influence elsewhere in Europe through marriage. These marriages often involved close relations and had eventually resulted in significant genetic anomalies and probably contributed to the eventual demise of the dynasty.

The Valois gained the throne of France in 1328 with the death of Charles IV, the last king of the House of Capet (Capetian dynasty). Charles IV died without a surviving male heir, so Philip of Valois, a cousin of Charles IV, took the French throne as Philip VI. This dynastic change in France was also a precursor to the Hundred

➤ MARRIAGE AND THE HABSBURGS

Historians often cite the rise of the Habsburg family as one of the most powerful in the story of Europe. Such dominance may have been won at a high cost. The chief approach to political dominance employed by the Habsburg family throughout the history of the Middle Ages was through marriage into other royal and powerful noble families. A popular motto often ascribed to the family eloquently expressed this idea: “Let others wage war, but you happy Austria, marry!” However, as the Habsburg presence and influence extended throughout the families of Europe through marriage and blood descendants, such a tactic eventually meant that there were close relational (consanguineous) marriages. Over the course of many generations this exerted a significant genetic toll. The so-called Habsburg chin, the excessively squared jaw evident among the Habsburgs by the fifteenth century, is one illustration of this and is clearly seen in coinage and portraits. Interestingly, this trait was found not only among Habsburg men but also among women of the family. By the time of the late seventeenth century, there had been so much close intermarriage within the Spanish Habsburgs that Charles II earned the undesirable nickname of *el hechizado* (“the bewitched”) due to his overtly obvious genetic deformities.

—Cheryl H. White

Years’ War wherein Edward III of England asserted his claim to the French throne through his descent from Philip IV of France through his mother, Isabella.

After the conclusion of the Hundred Years’ War, the Valois kings of France undertook efforts to centralize their power by diluting the power of a rival political faction in Burgundy. In keeping with the long-standing Habsburg tradition of using marriage as a means of extending political influence and control, Holy Roman Emperor Maximilian I married the last Valois duchess of Burgundy, named Mary, in 1477. The son of this union, Philip the Handsome, in turn married Juana of Castile, who was the second-eldest daughter of Fernando of Aragon and Isabel of Castile. Juana became heiress to the thrones of Castile and Aragon after the deaths of her brother Juan in 1497 and sister Isabel in 1498. However, her sanity was in question, and she was forced

to share her throne with first her father and then her son, Charles, who eventually took possession of both the Habsburg claim to the Holy Roman Empire and the thrones of Aragon, Leon, and Castile, thus essentially unifying Spain. As a result of this complex turn of events, he ruled his Burgundian lands from 1515 and became Carlos I of Spain in 1516 and Holy Roman Emperor Charles V in 1519. This so-called Habsburg Ring surrounded France and created a political threat to the power of the French Crown.

The threat of Habsburg domination in Europe was daunting in terms of territorial possessions and inherited titles. Charles V was heir to the Netherlands and the French Comte, the Spanish kingdoms of Aragon and Castile (along with the growing Spanish New World Empire), and the Holy Roman Empire. France was concerned about the formidable potential for control posed by this situation, but in reality Charles V’s authority varied from territory to territory throughout the German states of the Holy Roman Empire. In addition, his authority in the Spanish kingdoms was resented, as he never assimilated to the Spanish language or court traditions. Thus, Habsburg military domination was harder to come by than its perceived political domination. As the intense rivalry manifested itself during this age in European history, the House of Valois had significant resources of its own, considering the dense population of France and increasing centralization and consolidation of power within the monarchy. Also, the French king could reliably depend upon a stable income in the form of fixed taxation to finance military campaigns, something that the Habsburgs often could not depend upon.

Armed conflicts between the rival houses of Europe had their origins in the fifteenth century, when French kings Charles VIII and Louis XII undertook military campaigns in Italy to assert claims to the kingdom of Naples and the duchy of Milan. These actions resulted in Pope Julius II’s organization of an alliance called the Holy League that repulsed the French and stopped the extension of Valois influence on the Italian peninsula. However, the French king Francis I launched a second invasion of Italy in 1515, winning a significant victory at Marignano and spurring a wider war with the Habsburg Holy Roman emperor. At the Battle

of Pavia in 1525, forces of Charles V defeated the French and captured Francis I and held him for ransom. The French king was able to secure his release by promising to cede Burgundy to Charles V. Francis did not keep this promise to the Habsburg emperor, and war soon resumed between the powers, lasting until the death of Francis I in 1547.

The next king of France and son of Francis I, Henry II, was married as a teenager to Catherine de Medici in an effort to forge a strong political counterweight to the power of the Habsburgs. Once again, war resulted when Henry II invaded Italy in 1551. This conflict is known as the Italian War and reveals that the dynastic concerns related to the balance of power in Europe were far from over and not limited to the personalities of Francis I and Charles V (Carlos I of Spain). In 1555 Charles abdicated all of his titles, leaving his enormous empire split in half; his son Philip II took control of Spain, the Netherlands, Naples and the overseas empire, while Charles's brother Ferdinand I became Holy Roman emperor. In response to the Italian invasion, Philip II of Spain launched an invasion of northern France, and the conflict continued until 1559. This series of wars was quite damaging to both France and the Holy Roman Empire. At the same time, Europe was facing the great intellectual, social, and religious upheaval wrought by the Protestant Reformation, ensuring that military conflicts would now also carry the weight of religious concerns.

The death of French king Henry III in 1589 marked the end of the Valois dynasty. He had struggled to reach a compromise between religious factions of Catholics and Huguenots in France. This was an attempt that eventually resulted in Henry III's assassination at the hands of Roman Catholic extremists who feared that he would be succeeded as king by the Protestant Henry of Bourbon. In Spain the House of Habsburg effectively ended in 1700 with the death of Carlos II. Known as "the bewitched," Carlos was a mentally and physically weak young man who represented a culmination of all of the genetic inbreeding that had plagued the Habsburgs throughout the centuries. He was replaced by his great-nephew, Philip VI of the House of Bourbon, after the War of the Spanish Succession.

—Cheryl H. White

Bibliography

- Davies, Norman. *Europe: A History*. Oxford, UK: Oxford University Press, 1996.
- McGuigan, Dorothy. *The Habsburgs*. New York: Doubleday, 1966.
- Wheatcroft, Andrew. *The Habsburgs: Embodying Empire*. Minneapolis: Viking, 1995.

War of the Austrian Succession, 1740–1748

The War of the Austrian Succession was a major global conflict, fought mainly in Europe, that involved most of the major European states with the exception of the Ottoman empire, Portugal, and Poland. The war began as a result of Prussian designs on Austria's province of Silesia. Prussia utilized the pretext that Maria Theresa of Austria could not inherit the Habsburg throne from her deceased father Charles VI. The war pitted Prussia, France, and Bavaria against Britain, Spain, the Netherlands, and Russia, with Britain fighting against France and Spain overseas in their adjoining colonial possessions in North America (King George's War and the War of Jenkins's Ear, respectively), with most of the other belligerents fighting in Europe. While the war began as a Prussian attempt to expand its territories in Germany, it rapidly turned into a major war. French and Spanish Bourbon attempts to engage the Austrian Habsburgs and British desires to prevent any one major power from dominating Europe led to their immediate involvement in the conflagration.

In 1740 Maria Theresa inherited the Habsburg throne upon the death of her father, complying with the stipulations adhered to by the Pragmatic Sanction of 1713, which the German states had agreed upon. Prussian king Frederick II decided to invade Silesia in December 16, 1740, thereby violating the Pragmatic Sanction and instigating war with Austria. Prussia's well-trained forces were able to seize the province with ease as Austria prepared to meet the challenge during the following campaign season. By 1741 France and Bavaria had joined Prussia, and their forces plotted to take Vienna. However, Austrian counteroffensives were able to prevent the seizure of the Habsburg capital. Moreover, Maria Theresa was able to appeal to the Hungarian aristocracy and raise a *levée en*

masse of troops to engage the foreign invasion of the Habsburg lands. Nonetheless, French forces were able to seize Prague and occupy Bohemia and install the elector of Bavaria as king of Bohemia by November 1741. He was subsequently elected Holy Roman emperor as Charles VII in January 1742. After unsuccessful attempts to remove the Prussians from Silesia, Austrians sued for peace on June 11, 1742, at Breslau, ending the First Silesian War.

In 1743 Bavarian and French forces suffered various setbacks in engaging Austrian forces and maintaining their positions along the Danube. Along with British forces, the Austrians were able to defeat French and Bavarian forces on June 27, 1743, at the Battle of Dettingen. The British, Dutch, and Austrian forces were now allied against the French and Bavarian forces, with Spain joining the latter coalition. Russia and Sweden were able to neutralize each other's attempts to join the greater war, thereby minimizing their involvement. In 1744 after concluding a secret treaty with the French, the Prussians swept into Germany. This was at a time when Austria and its allies were distracted by French forces under Louis XV in northern Europe amassed against the Austrian Netherlands. While British, Austrian, and Dutch forces were able to successfully engage French forces along the Rhine in various engagements, the Prussians ran unopposed across much of southern Germany.

In 1745 the Quadruple Alliance was officially formed by Britain, Austria, the Netherlands, and Saxony through the Treaty of Warsaw. With the death of Holy Roman Emperor Charles VII, the Holy Roman Empire's throne again became contested. Prussian forces were able to maintain their position in Silesia and southern Germany, with Austrian forces unable to oust them. Francis I of Lorraine, the husband of Maria Theresa, was elected Holy Roman emperor, a move opposed by the Prussians and the Bavarians. Despite Prussian successes against Austrian forces, Frederick recognized Francis I's acquisition of the Habsburg throne in the Peace of Dresden on December 25, 1745, while it was recognized by the Austrians that Silesia was a Prussian province. This agreement ended the Second Silesian War.

In southern Europe the war was characterized by Spanish and Italian engagements, given

Bourbon Spanish attempts to acquire territory in Italy, particularly Milan, with Italian states divided in terms of their loyalties. As Austrian forces ousted Spanish forces from northern Italy, they occupied formerly independent Italian states, most notably Genoa. In contrast, in northern Europe, British and Dutch forces engaged French forces in defense of the Austrian Netherlands as well as their own possessions. With a Swedish-Russian settlement made in 1743, Russian forces, allied with Austria, marched from Moscow to the Rhine in 1746. The overwhelmed French and Spanish forces were forced to come to terms or continue fighting against the enlarged coalition. The Peace of Aix-la-Chapelle, signed on October 18, 1748, formally ended the War of the Austrian Succession. In the end, Prussia was able to retain Silesia at the expense of Austria, which was the trigger of the whole conflict.

—Abraham O. Mendoza

Bibliography

- Anderson, Matthew Smith. *The War of the Austrian Succession, 1740–1748*. New York: Longman, 1995.
- Browning, Reed. *The War of the Austrian Succession*. New York: St. Martin's, 1993.

War of the Spanish Succession, 1702–1713

Charles II of Spain died in 1700 without any issue. As Charles was the last of the Habsburg dynasty in Spain, the main two contenders for the throne were Philip, the Duke of Anjou and grandson of Louis XIV of France, and the Archduke Charles of Austria, of the Austrian Habsburgs. In his will Charles II named Philip as his heir, with the archduke as an alternate. While Louis XIV was determined to keep his grandson on the throne, Holy Roman emperor Leopold I wanted to both gain the throne for his second son as well as block French hegemony over the Spanish empire. The preexisting Bourbon-Habsburg dynastic rivalry played a role in triggering this conflict as well as the fears of Britain, Portugal, and the Netherlands at seeing French domination of Spain and its global empire. Diplomatic arrangements to divide Spanish possessions in Europe (particularly in Italy) at Charles II's death proved futile

in pleasing either side. These fears were realized when, after the death of Charles II, Louis XIV had Philip declared as Philip V, king of the entire Spanish empire, which violated the Second Partition Treaty, ratified by England and France in March 1700. The treaty had delegated the Spanish throne to the archduke, while handing over the Italian territories to the French. However, William III of England did not have the support of Parliament in declaring war against France and was therefore forced to accept Philip as king.

In 1701 Louis XIV provoked the ire of England and the Dutch by cutting them off from Spanish trade and recognizing James II's son (the Stuart pretender) as king of England, deploying troops into the Spanish Netherlands, and sending French merchants into the Spanish Americas. As a result, the Grand Alliance of the previous Nine Years' War, namely Austria, England, Netherlands, Portugal, and Prussia, was reconstituted to fight against France to prevent its dominance of Spain and its possessions. After the death of William III in 1702, Queen Anne (the younger daughter of James II) assumed the throne to ensure the legitimacy of her position as heir to the crown. John Churchill, Duke of Marlborough (1650–1722), was appointed the commander in chief of Dutch-English forces on the continent. A brilliant strategist and diplomat, he engaged and defeated the French in three major battles: Blenheim (1704), Ramillies (1706), and Oudenarde (1708). Early in the war, Marlborough attempted to engage French forces in an open field battle in the Lowlands rather than attacking fortifications and implementing siege works, which his Dutch allies preferred. The Dutch were reluctant to engage in open field combat and refused to attack, allowing the French to maintain their garrisons. However, his decision to engage the French along the Danube River in the southern Holy Roman Empire changed the course of the war.

French attacks in the surrounding regions of Vienna, the capital of Habsburg Austria, made the Danube region a crucial focal point in the war. Moreover, France's ally, Bavaria, was adjacent to Austria. Max Emmanuel, elector of Bavaria, viewed this conflict as an opportunity to increase his power within the Holy Roman Empire at the expense of Habsburg Austria. As a result, Marlborough decided to engage French

➤ CHARLES II—THE LAST SPANISH HABSBURG

Charles II (r. 1665–1700) of Spain, known as “the Bewitched” or “the Hexed,” had developed mental and physical disabilities as a result of Habsburg inbreeding from centuries of intermarriage. He had a protruding lower jaw that did not allow him to chew his food and caused difficulty in speech and constant drooling. As a child he did not learn to speak until he was four, and he did not walk until he was eight. Reportedly, he was carried like an infant until the age of ten and was not forced to attend school or attend to his own personal hygiene by his nurses. It was popular belief that Charles' problems came from some sort of sorcery or curse. This belief led him to be subjected to exorcisms, the result of which led to the king's increasing mental disabilities. Moreover, he was unable to procreate with his first and second wives as a result of his sterility. His inability to conceive an heir allowed his cousins, French king Louis XIV and Holy Roman emperor Leopold I, who had married Charles's sisters, to conspire for his throne. While he was alive Charles faced overtures from both France and Austria, in the context of the Bourbon-Habsburg rivalry, to settle on a will that would provide a successor, which would ensure an heir amenable to their geopolitical ends. In his final years Charles had to deal with his wily cousins essentially devising how to divide his realms upon his death. Upon his death, the Spanish Habsburg line, which had seen its heyday in the reign of Philip II, came to an end.

—Abraham O. Mendoza

forces by sending 40,000 troops from the Netherlands to the Danube region (a distance of 240 miles or 390 kilometers) secretly. By 1704 he had linked up with Austrian forces under the command of Prince Eugene of Savoy and his 18,000 troops at the Bavarian border with Austria. A large French army had been massed in Bavaria to engage this growing force. On August 13, 1704, Marlborough and Eugene's forces, combining a multinational army composed of Dutch, Danish, Prussian, Hessian, Hanoverian, and Austrian forces 52,000 strong, confronted a Franco-Bavarian force superior in artillery in the Battle of Blenheim. By engaging his infantry in battle, at a heavy cost in deaths and other casualties,

Marlborough's forces defeated the French and Bavarian armies, taking Bavaria out of the war.

Along other fronts, Grand Alliance forces also proved successful against France and its allies. In Spanish Italy, French ally Victor Amadeus II, Duke of Savoy, switched to the Grand Alliance in 1703, leaving the French with no supporters. Prince Eugene defeated French forces in Lombardy and drove the French out of Italy. In Spain itself, in 1703 English naval forces captured Gibraltar and ensured a naval presence in the Mediterranean, and Portugal joined the Grand Alliance against France. By 1705, English and Dutch forces successfully took the Spanish city of Barcelona. While Charles III of Austria subsequently made himself king of Spain, he was defeated by Philip V's loyal Spanish forces at the Battle of Alamanza in 1707. A Bourbon, Philip V was preferable to the Spanish rather than the Austrian Charles.

Following up on his victory in Blenheim, Marlborough crushed French forces at the Battle of Ramillies in 1706 back in the Netherlands. This resulted in French forces evacuating the Spanish Netherlands, leaving them to the Grand Alliance. In 1708 French forces attempted to retake these territories but were soundly defeated by Marlborough and Eugene's forces at the Battle of Oudenarde in the Spanish Netherlands. They subsequently captured the major French fortress at Lille, thereby threatening an advance on Paris itself. Back in France, bad harvests and famine stressed French forces and resources, triggered revolts, and forced Louis XIV to sue for peace in 1709. The Grand Alliance wanted Louis to remove his nephew Philip from the Spanish throne as a condition for ending hostilities. Louis's refusal ensured the continuance of the conflagration. At the Battle of Malplaquet, allied forces under Marlborough and Eugene, composed of 110,000 troops, confronted a French force of 80,000. While the allies decidedly drove the French army off the battlefield, they did not pursue them. Moreover, the allied forces sustained twice as many casualties in this pyrrhic encounter (24,000 allied versus 12,000 French casualties). In the campaigning season of 1710–1711, allied forces were again on the offensive.

By 1711 the Grand Alliance dissolved when newly crowned Holy Roman emperor Austrian Archduke Charles VI, who held territories taken

from France, was abandoned by Britain (no longer just England since 1707 as a result of the Act of Union with Scotland) and the Dutch, who did not want to assist the Habsburgs in their bid for European hegemony. Moreover, Marlborough was relieved of command by Queen Anne who, bolstered by a Tory resurgence in Parliament, allowed for entering into negotiations with France. The Dutch were reluctant to continue in the war, as were other members of the Grand Alliance. In the end, all sides entered into negotiations resulting in the Peace of Utrecht (1713) and the Peace of Rastatt (1714). Philip V remained king of Spain but renounced ties with France and lost his European territories. Charles VI acquired all the former Spanish Habsburg lands in the Lowlands and in Italy but renounced his claim to the Spanish throne. France's borders were set back to those of 1697, with the English acquiring possessions in the Americas. Prussia attained Spanish Gelderland and the right for its elector to be king "in" Prussia, with other allies receiving some territorial compensation.

—Abraham O. Mendoza

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century 1713–1789*. 4th ed. New York: Longman, 2000.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Elliot, J. H. *Imperial Spain: 1469–1716*. 2nd ed. New York: Penguin, 2002.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.

Sixteenth-Century Wars in Italy

The Italian Wars, also called the Great Wars of Italy, were a series of armed conflicts that lasted from 1494 to 1559, primarily involving France and Spain but also other European powers. The wars also featured a complex and changing set of alliances that at times pitted the major Christian powers of Europe against the Holy See of Rome. At issue was the control of the Italian peninsula, consisting of numerous small independent states that were often engaged in rivalry with each other. The lack of a comprehensive national unity in Italy during the early sixteenth century made these states particularly vulnerable to external aggression from the rival houses of Valois in France and the Habsburgs in

Spain and the Holy Roman Empire. There was a protracted struggle over the balance of power in Europe as a direct result of the Valois-Habsburg rivalry, and the weak and divided states of Renaissance Italy became the extension of that dynastic struggle.

The series of wars began in 1494 when the king of France, Charles VIII, invaded Italy at the invitation of Ludovico Sforza, the duke of Milan, who needed an ally against Venice. Charles seized the city-state of Naples, which provoked a reaction from other European powers because of French speed and brutality. Pope Alexander VI formed the League of Venice in 1495, consisting of King Fernando of Aragon, who was also king of Sicily; the duke of Milan, who turned against France when he realized that Charles could potentially have a claim on Milan; Holy Roman Emperor Maximilian I; and the Republic of Venice. In 1496 King Henry VII of England joined as well. While this alliance against France was initially successful, Charles's successor, Louis XII, was able to launch another invasion that resulted in the successful occupation of the city of Milan in 1499. However, in 1500 Louis XII reached an agreement with Fernando of Aragon to divide the city of Naples and took a French army south. Disagreements between Louis and Fernando over the exact details for partition of that kingdom soon erupted into war between France and Spain, ending in a Spanish victory and the expulsion of the French from Naples. Following decisive Spanish wins at Cerignola and Garigliano in 1503, Naples came under the control of Spanish general de Cordoba.

Meanwhile, the city-state of Venice was rapidly acquiring and expanding its own political power and attempting to exert influence over rival Italian states, including the papacy in Rome. Pope Julius II led France, Spain, and the Holy Roman Empire in forming a fragile alliance known as the League of Cambrai. In 1509 at the Battle of Agnadello the coalition defeated a Venetian army, but it was not long before tensions erupted yet again among the major powers. Pope Julius II decided that France was now the larger threat, and he withdrew from the League of Cambrai to forge an alliance with Venice. One year later the pope declared a Holy League against France, which included Spain, the Holy Roman Empire, and England. By 1512 the French were expelled

➤ EFFECT OF ITALIAN WARS ON ITALIAN RENAISSANCE

The wars in Italy during the sixteenth century brought about many changes throughout Europe. Although devastating to many of the Italian states, the wars likely had the effect of helping to spread the ideas and inspiration of the Italian Renaissance to other areas of northern and western Europe. Armies of France and the Holy Roman Empire and their political and diplomatic envoys took the Renaissance ideals beyond the borders of Italy to their home states and beyond. Although many historians mark the end of the Italian Renaissance with the onset of instability wrought by the sixteenth-century wars, foreign contact with the flourishing art and literature of the various Italian states was a corollary to military conflict. Most damaging to the Renaissance in Italy was the imperial occupation of Rome in 1527, which by stifling the power of the papacy effectively ended the support and patronage of that institution to artistic endeavors. With the waning of the Italian Renaissance, many of its influential figures migrated north, including Leonardo da Vinci, who went to France in 1516 at the invitation of Francis I. Other artists also joined efforts to create the School of Fontainebleau in France.

—Cheryl H. White

from the Italian peninsula a second time. However, the Holy League faced internal struggle as they fought over the spoils, resulting in Venice forming an alliance with France in 1513. The Holy League won a series of victories against the French, but the death of Julius II caused the league to fall apart. By this time Louis had died in 1515, leaving his successor Francis I to defeat the Holy League at Marignano that same year, and the league collapsed. As a result, all of northern Italy was ceded to France and Venice with the treaties of Noyon and Brussels.

The accession of the Habsburg Charles V as Holy Roman emperor in 1521 renewed tensions with France, as Francis had desired that title. Charles's addition of "Holy Roman Emperor" to his titles "King of Spain" and "Duke of Burgundy" provided a threat of the so-called Habsburg Ring, which surrounded France to the south, west, and east. This threat to the balance

of power in Europe served as the reason for France to begin another general war. Francis personally led a French army into Lombardy in 1525 but suffered a stunning defeat at the Battle of Pavia. Following this battle, the Spanish captured Francis and held him for ransom. This capture led Louise of Savoy, Francis's mother, to go to Ottoman sultan Suleiman the Magnificent to ask for his help. She managed to broker an alliance between the French and the Ottomans, an alliance that was completely unprecedented; at the time, it was unthinkable that a Christian monarch would ally with a Muslim one. Suleiman sent an ultimatum to Charles and used the situation as an excuse to invade Hungary in 1526, as it was on the way to Vienna. However, Francis was anxious to gain his own release and agreed to the terms of the Treaty of Madrid, in which he gave up his claims in Italy, Flanders, and Burgundy to the Habsburgs.

France was not alone in its concern over the political balance of power in Europe. The growing domination of the Habsburgs led Pope Clement VII to organize yet another coalition in 1526, this time involving the alliance of the papacy with several Italian states and France in the League of Cognac. By 1527 Holy Roman Emperor Charles V occupied Florence and the city of Rome, surrounding the Vatican with imperial troops. The pope was a prisoner of the Holy Roman emperor, and continued war forced Francis to conclude the Treaty of Cambrai in 1529, which removed him from the war. The League of Cognac dissolved, and Venice made peace with Charles.

Peace lasted until 1536, when the third war erupted between Charles V and Francis I with the death of the duke of Milan, Francesco Sforza. Charles's son Philip inherited the duchy, and France once again felt threatened by the expansion of Habsburg influence on the Italian peninsula. In response, Francis invaded Italy again and took the city of Turin but could not successfully occupy Milan. Charles then invaded France, defeated Provence and Aix-en-Provence, and reached Avignon before returning to Spain. This brief conflict ended in 1538 with the Truce of Nice but made no major changes to the existing state of French occupation of Turin or the Habsburg control of Milan.

Even though the Truce of Nice was to provide peace, neither Francis nor Charles was

happy with the status quo. Between 1538 and 1542 both parties attempted peaceful negotiations, but those broke down as Francis found that he could not give up his claim to the Duchy of Milan. Francis then partnered with Suleiman I of the Ottoman empire and combined Christian and Muslim forces for an invasion of Italy beginning in 1542. A joint fleet took the city of Nice in 1543, while French forces mounted a defeat of Charles's Imperial Army at Ceresole in 1544. Aligning with Henry VIII of England, Charles V countered with a general invasion of northern France. The efforts of the Anglo-Habsburg alliance crumbled due to lack of military coordination and cooperation, and the invasion of France was ended.

The final war in this series of conflicts involving the Italian states began in 1551. Henry II of France declared war against Charles V in order to recapture Italy. The decision of Charles V to abdicate his thrones in 1556 split the Habsburg control and essentially ended French ambitions in Italy by moving the fighting to central Europe, which guaranteed a Habsburg victory. By the terms of the Peace of Cateau-Cambresis in 1559, Henry II of France renounced all future claims to any of the Italian states and ended over half a century of aggression among the major European powers, with Italy as the principal battleground. The Italian Wars during the sixteenth century had significant consequences for the social and political environment of the Italian Renaissance and ensured that the various Italian states would suffer from a lack of unity until the nineteenth century.

—Cheryl H. White

Bibliography

- Cameron, Euan K. *The Sixteenth Century*. Oxford, UK: Oxford University Press, 2006.
- Guicciardini, Francesco. *The History of Italy*. Translated by Sydney Alexander. Princeton, NJ: Princeton University Press, 1984.
- Konstam, Angus. *Pavia 1525: The Climax of the Italian Wars*. Oxford, UK: Osprey, 1996.

A History of the British Raj

Robert Orme (1728–1801) was widely regarded as one of the foremost British experts on India during the mid to late eighteenth century. Orme was born in India, where his father worked as

a physician for the British East India Company, and he spent many years living and traveling in the Indian subcontinent during the 1740s and 1750s, when he worked for the company in several capacities (including as a writer).

In 1763 soon after his return to England, Orme published his seminal work, the three-volume *History of the Military Transactions of the British Nations in Indostan from the Year 1745*. Orme's book, being dedicated to King George III "to commemorate the successes of the British Arms in Indostan," was written to glorify the establishment and expansion of British rule (or the British raj), and modern readers will likely find it rather politically incorrect in places. Like many imperial children of his generation, Orme was convinced of the superiority of Britain's culture, political systems, and military prowess. By comparison, many of the characteristics of India's culture come across as ignorant and barbaric in Orme's book. For example, in his "Dissertation of the Establishments made by Mahomedan Conquerors in Indostan" (which was attached to the *History of the Military Transactions . . .*), Orme calls the Hindu religion "nonsense" and "a heap of the greatest absurdities" and the Indian caste system odious. He also claims that Indian art contains "no ideas of taste or fine design" and posits that Indians are too delicate and gentle to defend themselves, as evidenced by their history of being conquered, first by the Muslim Mughals and later by Europeans led by the British.

Nevertheless, for its time, *History of the Military Transactions . . .* was a remarkable book in many ways. Orme's work was one of the very first histories of the British East India Company and thus was a trailblazing account. Though his judgments would often not suffice for an objective sociologist today, Orme was a keen observer and takes great care to describe the particulars of Indian culture, religion, and political scene accurately and in detail. For example, as pointed out by Robert Travers in *Ideology and Empire in Eighteenth Century India: The British in Bengal*, Orme noted how the Mughal conquerors used existing Indian social and political institutions, especially the caste system, to expand and solidify their rule, much as the British did in the eighteenth and nineteenth centuries. Orme also used as many native sources as he could find, not content to rely on solely European accounts, and

➤ HOLWELL'S BLACK HOLE OF CALCUTTA

The Black Hole of Calcutta has left a lasting image in the national memory of Britain since the 1750s. The Black Hole itself was a military jail, a temporary place of confinement, for negligent or criminal sepoys and other East India Company troops located deep in the back of a garrison barracks in Fort William (in Calcutta/Kolkata), the fortified settlement of the British East India Company in Bengal. On the night of June 20, 1756, 146 British residents and others were rounded up and placed in the Black Hole jail after the fort had been successfully overrun by the forces of Siraj ud-Daula, the *nawab* of Bengal. The next morning, June 21, reportedly only 23 of the original 146 prisoners survived the ordeal in a cell that was 18 by 18 feet (5.5 by 5.5 meters) though some writings report it to be just 18 by 14 feet. John Zephaniah Holwell, a member of the company's Council and a revenue collector and magistrate, famously memorialized the incident in his so-called letter to a friend, published in 1758, with the long title "A genuine narrative of the deplorable deaths of the English gentlemen, and others, who were suffocated in the Black-Hole in Fort-William, at Calcutta, in the Kingdom of Bengal, in the night succeeding the 20th day of June, 1756, in a letter to a friend." Recently, historians have questioned the veracity in the reported number of deaths in the Black Hole.

—John Pincince

his research methods and abilities were impressive. His description of the Mughal conquest and European intervention reads like an epic and is grand in its sweep. His accounts of the various conflicts of mid-eighteenth-century India are rich in detail and anecdote and are impressively comprehensive. Finally, for every negative he ascribes to the indigenous Indians, there is a corresponding admiring comment; for his time, Orme was quite open-minded. To Orme, Indians were hardworking, peaceful, gentle, joyful, and astoundingly productive, especially given their (in his opinion) lack of technology and mechanical sense. In addition, though Orme lists a number of Indian failings, he is quick to note that there are many individual exceptions to be found. Thus, Orme did not necessarily hold that members of an entire "race" were all the same.

Through these earnest attempts at cultural relativism, Orme marks himself as a product of the eighteenth-century Enlightenment.

Orme's work was enthusiastically received by contemporary Britons, heady with patriotic imperial fervor from British successes in India and North America, and it underwent several editions and reprints. Perhaps the most notable aspect of Orme's book, however, is its endurance. Scholars still reference *History of the Military Transactions* . . . today as a well-written accurate work that provides a gripping account of a key period of early modern Indian history.

—Matthew DeFraga

Bibliography

- James, Lawrence. *Raj: The Making and Unmaking of British India*. New York: St. Martin's, 1997.
- Marshall, P. J. *The Making and Unmaking of Empires: Britain, India, and America, c. 1750–1783*. New York: Oxford University Press, 2005.
- Orme, Robert. *History of the Military Transactions of the British Nations in Indostan from 1745*, Vol. I. 4th ed. London: F. Wingrave, 1861.
- Travers, Robert. *Ideology and Empire in Eighteenth Century India: The British in Bengal*. Cambridge: Cambridge University Press, 2007.

The Rise of Prussia

The development of the Hohenzollern realms, mostly centered on the German state of Mark Brandenburg in the mid to late seventeenth century, into the dynamic and robust state of Brandenburg-Prussia (henceforth to be referred to as Prussia), was mostly the work of Frederick William, the “Great Elector.” Brandenburg had been held by the House of Hohenzollern since 1415 along with the right to elect the Holy Roman emperor (and hence the title of elector). In the midst of the Thirty Years’ War (1618–1648), Frederick William assumed possession of the Hohenzollern realms, namely Brandenburg; various scattered holdings in northern Germany; and the territory of Prussia (in his capacity as Duke of Prussia as a Polish vassal) in the Baltic region. In relation to the expanse of the rival state of Habsburg Austria, these were small holdings for an emergent German state. In spite of these challenges, Frederick William was able to extract taxes and a viable military force from his holdings while

building a modernized bureaucratic absolutist state based on the economic and social subservience of Junkers (Prussian aristocracy) and serfs.

Frederick William built the Prussian state on the premise that a permanent standing army was his upmost priority. In the context of the Thirty Years’ War, his standing army of 8,000 men, while small in relation to the other major powers, had been effective in battle and in clearing his family lands of foreign troops. In 1648 at the Peace of Westphalia, the settlement formally ending the Thirty Years’ War, Frederick William acquired more lands for Brandenburg-Prussia, most notably the adjoining territory of eastern Pomerania and the city of Magdeburg. However, in spite of the end of the Thirty Years’ War, Frederick William continued to campaign in other European conflicts, switching sides when it appeared that he had the most to gain. By 1688 Prussia had a standing military force of 30,000 troops.

Frederick William understood that he would not be able to finance a professional standing army through his own funds and thus established a system of taxation to exact funds from the Junkers, estates, and towns. In 1653 he struck a compromise with the Junkers whereby they would accept his permanent tax for his army and he would recognize their social and economic privileges vis-à-vis the serfs. In this arrangement, Junkers would have little say in the administration of the realm, but the arrangement recognized that only they had the right to own land and evict serfs at their whim, and they also had immunity from taxes (once this army tax expired). Moreover, Frederick William established a strong central government, centered around the *Generalkriegskommissariat* (military commissariat) that collected taxes, promoted state industries, managed the logistics of the military economy, and eventually supervised the state economy. In the midst of these economic developments, some 20,000 Huguenot refugees from France and the western Holy Roman Empire migrated to Brandenburg, forming an integral part of the emergent textile industry in that region. With the expiration of the army tax on the Junker class, the Prussian state subsequently extracted most funds from the towns and the peasantry, using or threatening military force when it was necessary to coerce payment.

The Prussian army became the central institution of the Prussian state and society under Frederick William's regime. The Prussian military was pivotal to his absolute control over society. From all the Hohenzollern territories, Junkers staffed the officer corps while the peasantry formed the rank and file, thereby reinforcing already rigid social and economic stratification in Prussian society. This meant that for Junkers, an officer's commission became an integral element in his social position in the aristocracy, which reinforced his authority over his peasants, who were also his soldiers. Moreover, it firmly established a military hierarchy within society with the Prussian monarch at the apex (always a Hohenzollern), followed by the Junker officer class and the peasant-soldiers.

Frederick William was succeeded by his son, Frederick III, elector of Brandenburg (r. 1688–1713), who assumed the title “King in Prussia” (which was outside of the Holy Roman Empire) in 1701 as Frederick I of Prussia. This arrangement was done in exchange for an alliance with Habsburg Austria, whose archduke was also Holy Roman emperor, against Bourbon France in the War of the Spanish Succession (1701–1714). Frederick William I (r. 1713–1740), also known as the soldier-king, built on the legacy of his grandfather and further centralized the control of the Prussian state by reforming the civil service, establishing public schools, and implementing changes in the military that increased its efficiency in its administration and in battle. He was succeeded by Frederick II (r. 1740–1786), also known as Frederick the Great of Prussia.

Frederick II of Prussia, regarded by contemporaries and historians as a pivotal figure in Prussian history, ruled over a far more homogeneous and uniform state than his predecessors. Moreover, his embrace of warfare led to the acquisition of vast territories in Silesia at Polish expense. His military exploits in the War of the Austrian Succession (1740–1748) and the Seven Years' War (1756–1763) made him one of the ablest military commanders of the European Great Powers of that time. Furthermore, Frederick II also presided over more bureaucratic reforms within the Prussian civil service, the drastic modernization of the state military, and infrastructural improvements in the

➤ PRUSSIA AND POLAND—REVERSAL OF ROLES

Prussia's diplomatic relationship with Poland began as one of a minor Hohenzollern margrave (the military governor of a mark), serving as a vassal of the Polish king, and ended with one in which the Prussian king took part in the dismemberment of what was left of Poland in the Polish Partition of 1795. Since 1466 Poland had held Prussia as a vassal state, which had been granted to the margrave of Brandenburg as a dukedom by the Polish king. This arrangement lasted well until 1701, when Frederick III of Brandenburg assumed the title “King in Prussia.” This was done so as not to offend the Polish Crown while assuming the trappings of royalty for the Prussian Hohenzollerns within the Holy Roman Empire, of which Prussia was not a part (but Brandenburg was). However, the Polish Crown had effectively lost control over its territories, partly due to the fact of the immense power of the nobility vis-à-vis the monarch. As a result, Poland lost vast amounts of its territory in the three partitions (1772, 1793, and 1795) of its territories to tsarist Russia, Hohenzollern Prussia, and Habsburg Austria, effectively turning its former German vassal state into its master.

—Abraham O. Mendoza

Hohenzollern territories. Frederick II built on the political and military successes of his predecessors to further establish Prussia as a European Great Power, which while not on par with Britain, France, Russia, and Austria was nonetheless a force to be reckoned with in the context of international relations and the European balance of power system. Moreover, the Hohenzollerns established the primacy of the military and state in the quotidian existence of Prussian society, which would carry over into nineteenth- and twentieth-century greater German society.

—Abraham O. Mendoza

Bibliography

- Anderson, M. S. *Europe in the Eighteenth Century 1713–1789*. 4th ed. New York: Longman, 2000.
- Clark, Christopher. *Iron Kingdom: The Rise and Downfall of Prussia, 1600–1947*. Cambridge, MA: Belknap Press of Harvard University Press, 2009.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.

■ Introduction: Wars of Colonial Expansion

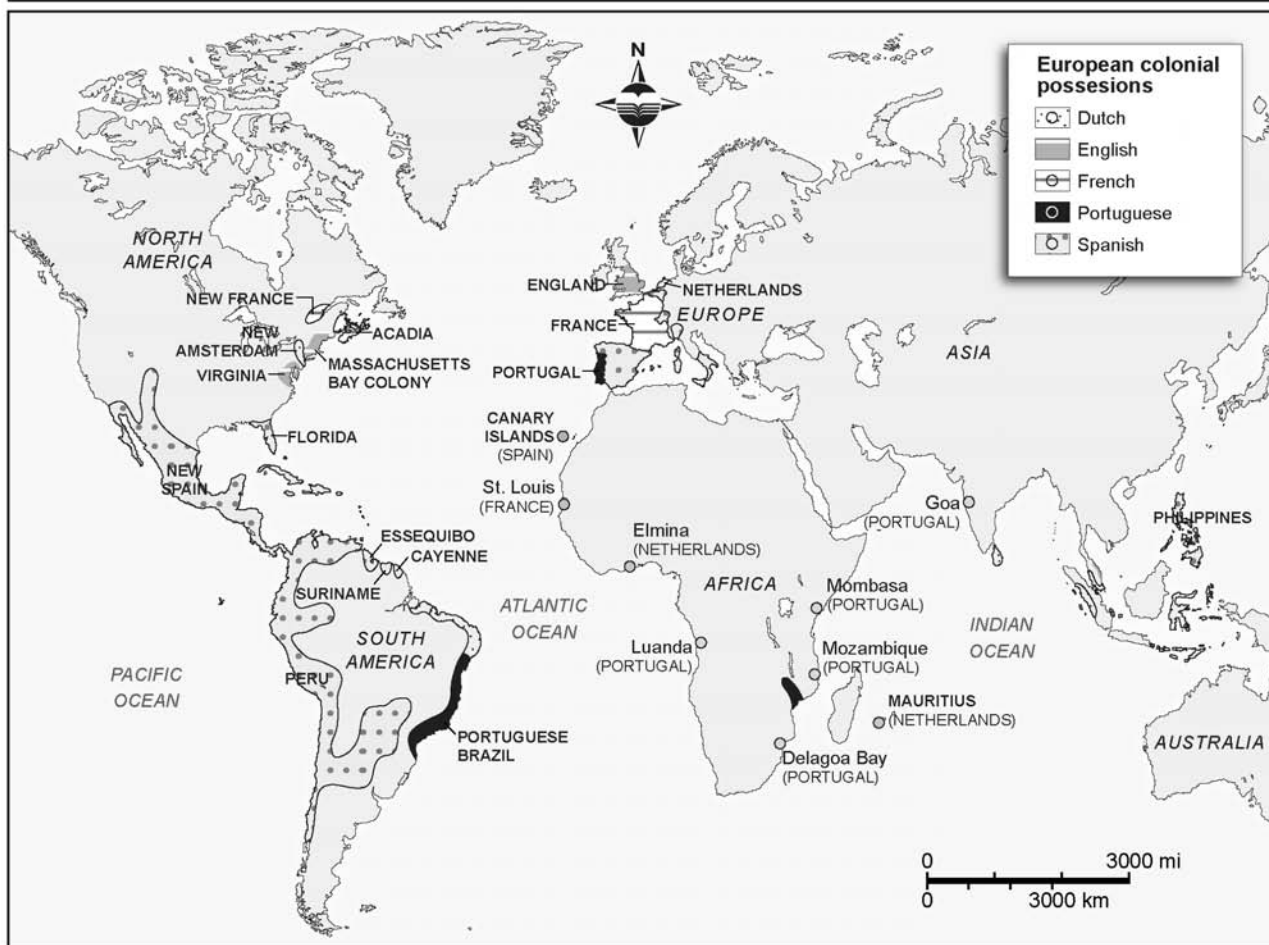
The European Age of Expansion initiated prolonged wars between European states over colonial possessions. As the volume of international trade increased so did trade's relative importance for a state's economy. Protecting colonies and overseas trade became part of geopolitical considerations. European naval advantages—the powerful technological combination of full-rigged, stoutly built ships carrying large effective cannons and handling large payloads—allowed European ships to force their way into local trade networks in Asia, Africa, and the Americas. In the early 1500s, the Portuguese used their naval technological advantage to defeat Muslim navies in the Indian Ocean and take control of sea lanes; a century later, the English, French and Dutch did the same. Although Asian states possessed sophisticated naval technology that equaled or in some cases (e.g. China's treasure ships) eclipsed European technology, Europe's naval activity was a result of complex socioeconomic factors that Asian (or African) states struggled to replicate. More importantly, most non-European states were land-based empires and had little interest in the seas or in overseas colonies. China could have posed a major obstacle to European naval expansion in the Indian Ocean but was preoccupied by other concerns and overlooked its importance. With the exception of the Ottoman empire, no state navies challenged Europeans on the sea.

European colonial rivalries had momentous consequences. Outside the Americas, Europeans pursued their colonial interests by establishing coastal entrepôt empires, a series of trade outposts connecting far-flung regions via sea-lanes. By the eighteenth century, control of the sea-lanes became a key national interest for many European states and contributed to the formulation of a new type of war, the *guerre de course* (war against commerce) that entailed harassment of the enemy's merchant shipping and attacks on its colonies. Such a focus on the need to control the seas, at a time when the rest of the world was inland looking, meant that by the mid-eighteenth century European states, particularly Britain, exercised unrivaled mastery of the high seas.

European colonial conflicts can be traced back to the Portuguese exploration of the fifteenth century when the Portuguese mariners discovered the islands of Madeira, Azores, and Cape Verde, and established outposts along the African coastline and India. Portuguese successes led to Spanish-funded expeditions by Christopher Columbus to explore an alternative route to Asia. The subsequent discovery of the Americas caused competing Spanish and Portuguese claims to undiscovered lands. The Treaty of Tordesillas (1494) sought to mitigate tensions between the two European states by dividing the world outside of Europe in an exclusive duopoly between the Iberian kingdoms along a north-south meridian. Although this opened virtually all of the Americas to Spanish colonization, the Portuguese successfully challenged Spanish dominance in South America where Portuguese colonies mushroomed on the Brazilian coast.

At the same time, the Portuguese achieved considerable success in the Indian Ocean where Dom Afonso de Albuquerque, the first viceroy of India, took advantage of European military superiority to conquer local cities and establish Portuguese control of the seas. In 1661, in the midst of a war against Spain, Portugal granted England access to its Indian possession, marking the start of the English presence in the subcontinent. By the seventeenth century both Iberian kingdoms faced great threats to their colonial interests from the Dutch, the English, and the French. These early colonial conflicts were driven by the newly invented joint public-private ventures, private companies formed to trade with colonies that soon claimed trade monopolies. The ships of the famed English, Dutch and French East India Companies played a crucial role in maintaining the spirit of rivalry and competition among the European states. Thus, by the seventeenth century, England and the Netherlands challenged Portugal's monopoly of trade with India and successfully tapped into the lucrative spice trade. Yet, the intense rivalry between English and the Dutch companies soon led to a series of Anglo-Dutch wars (1652–1654, 1665–1667 and 1672–1674) in which the Dutch triumphed over

EUROPEAN COLONIAL POSSESSIONS BY 1648



the English despite losing the colony of New Netherland in North America. The Netherlands' more advanced financial system allowed it to secure a strong position in Asia and to remain the world's dominant trade nation until the turn of the eighteenth century.

More consequential were colonial wars involving Britain, Spain, and France. Between 1450 and 1775, Britain and France fought at least a dozen wars, the most important of which were the War of the Spanish Succession (1701–1714) and the Seven Years' War (1756–1763). These wars developed a global character as Britain and France clashed over colonies in North America, the Caribbean, and the Indian Ocean. Ultimately, Britain triumphed over its archrival; and the Treaty of Paris, which ended the Seven Years' War in 1763, ended France's position as a major colonial power in India and North America. Less

decisive was the outcome of the Anglo-Spanish rivalry in which Spain successfully repelled British attacks during the Anglo-Spanish Wars of 1727–1729 and of 1739 after losing a few Caribbean colonies, most notably Jamaica, in the mid-seventeenth century.

—Alexander Mikaberidze

Pepper Wars—The Struggle for the Spice Islands

European commercial and colonial expansion into India, Ceylon, and Oceania, beginning in the fifteenth century, centered on the trade in nutmeg and mace of the Spice Islands (known to contemporaries as the Moluccas Islands), located in present-day Indonesia. Throughout much of the seventeenth century, Portuguese, Dutch, English, and French forces were engaged in a



A scene in Batavia, Java, Dutch East Indies, shortly after its founding in 1619. (The Print Collector/StockphotoPro)

► THE STRUGGLES FOR CEYLON (1638) AND MALACCA (1641)

In 1505 Portugal founded various settlements in Ceylon (present-day Sri Lanka) to ensure their domination of the international spice trade. Through Ceylon, Portugal had access to trade from and into the various Indian principalities of southern Asia, gaining much wealth for the Portuguese merchant class. However, by the mid-seventeenth century Dutch incursions into southern Asia and Oceania threatened Portuguese economic domination of the region. By 1658 after Dutch naval and military operations had gradually ousted Portuguese settlers and merchants, Portugal was forced to cede Ceylon to the Dutch.

In 1511 Portuguese forces conquered Malacca (present-day Malaysia). Portugal founded a colony there, resulting in the development of Malacca as an important colonial center for the international spice trade. After the fall of Malacca to Portugal, the sultanate of Johor and the sultanate of Aceh vied with Portugal for control of the Straits of Malacca, a crucial route for trade in the Indian Ocean. Portuguese military successes ensured their control of this important trade route. However, the Portuguese lost their fort at Malacca in 1641 to the Dutch due to waning Portuguese power in the Indian Ocean after a century of decline.

—Abraham O. Mendoza

fierce struggle for control of these islands—Ran (in the Banda Islands), Halmahera, Seram, Buru, Ambon, Ternate, Tidore, the Aru Islands, and the Kai Islands, among others—that were crucial to the spice trade and to access to trade with India, Japan, and China. Commercial expansion into these regions also created alliances, trade relationships, and colonial impositions with neighboring Asian states for the Europeans. Through the auspices of joint-stock corporations and the development of international trade networks, the Dutch, Portuguese, French, and English were able to penetrate the region economically and politically while squabbling over who got the biggest piece of the pie.

Before 1500, Italian domination of Mediterranean trade ensured that they had ready access to spices provided by international commercial networks with southern Asia and Oceania through their Arab allies and the overland spice routes. Seeking to end Venetian and Genoese domination of the spice trade spurred Portugal to discover a direct sea route to the Indies. From 1497 to 1498 famed Portuguese navigator Vasco da Gama sailed successfully around the Cape of Good Hope and up the eastern coast of Africa to Malindi (present-day Kenya) and from there to Calicut (present-day India). Da Gama's expedition allowed Portugal to seize control of the spice trade between India and Africa from the Arabs and Persians and to hold a monopoly for a century, until the Dutch entered the scene. This monopoly enabled Portugal to keep the price of pepper artificially high in Europe, as they took advantage of growing European demand.

After the Spanish took over Portugal in 1580, Portuguese colonial possessions became fair game for the Dutch, who were fighting a war of independence from the Spanish Habsburg monarch Philip II. The Dutch war effort included opposition against Spanish expansion across the globe, and so the Dutch sent expeditions to the East Indies early in the seventeenth century. By 1700 they had driven out the Portuguese and prevented English incursions, ensuring their trade links with India.

In 1619 a Dutch military garrison was established at Batavia (ironically appropriating the name for the Netherlands when it was a Roman

province), which became the headquarters of the Dutch East Indies Company (VOC) in the East Indies. The VOC was a joint-stock company, politically and economically influential back in the Netherlands, and its directors attempted to protect their investments and the company's control of the region through military force, political alliances, and economic domination.

The Dutch took advantage of their monopoly in the Spice Islands by restricting supplies and destroying large numbers of crops to create artificial scarcity in order to drive up prices. However, during the eighteenth century the British and also the French became determined to break the Dutch monopoly on the spice trade and penetrate the region themselves. By 1796 Britain had taken over territories throughout the East Indies, employing military tactics and economic incursions that the Dutch were unable to resist. French expansion into the region was curtailed, however, as the British expelled them from the East Indies during the Seven Years' War (1756–1763), limiting them to territory (Karikal and Yanaon) on the Coromandel coast, Pondicherry, Mahé on the Malabar coast, and Chandannagore in Bengal on the Indian subcontinent. The growth of British commercial interests in South Asia, particularly that of the English East India Company, made control of the Spice Islands crucial to their ambitions. However, in 1824 Britain signed a peace treaty that ceded much of the East Indies to the Dutch, with the exception of northern Borneo, while holding Ceylon, Malaya, and vast tracts of India. This strategy of dividing the world, or slicing the melon as European imperialism was later called, ensured British economic domination of India while relegating the Dutch to content themselves with possession of what subsequently became known as the Dutch East Indies.

—*Abraham O. Mendoza*

Bibliography

- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. New York: Norton, 1979.
- Emmer, Pieter, and Femme Gaastra, eds. *The Organization of Interoceanic Trade in European Expansion, 1450–1800*, Vol. 13, *An Expanding World: The European Impact on World History, 1450–1800*. London: Variorum, 1996.

Prakash, Om, ed. *European Commercial Expansion in Early Modern Asia*, Vol. 10, *An Expanding World: The European Impact on World History, 1450–1800*. London: Variorum, 1997.

The Campaigns of Afonso de Albuquerque

Afonso de Albuquerque was the true founder of the Portuguese empire in India, making it the first modern colonial empire. Despite many failures and opposition from his comrades, Albuquerque pursued a successful strategic plan. He recognized that holding certain strategic fortified ports, along with Portuguese control over commercial shipping, would result in command of the Indian Ocean. Albuquerque's forces were always outnumbered by his opponents, but decisive tactics, ruthlessness, and determination enabled Albuquerque to overcome great odds. He also used divisions in Indian society to find local allies in his campaigns.

Albuquerque served against Muslims in North Africa before his first voyage to India in 1503. On that trip he helped install a Portuguese ally as king of Cochin. Albuquerque also supervised the building of a Portuguese fort at Cochin, one of the first permanent Portuguese outposts in India. Although Albuquerque returned to Portugal in July 1504 with a valuable cargo of spices, his exploits showed that he was a capable commander who would not put his own interests above those of the Portuguese Crown. As a reward, King Manuel I gave Albuquerque command of 5 of the 16 vessels that sailed from Portugal in 1506. Furthermore, Manuel entrusted Albuquerque with a commission as governor of Portugal's Indian possessions when Dom Francisco de Almeida's term as governor expired.

Unlike Almeida, Albuquerque adopted a strategy of gaining permanent control of locations where trade routes came together. By forcing native merchants to deal with the Portuguese and by destroying Muslim rivals, he believed that Portugal could gain wealth and power out of proportion to its military forces. During the voyage to India in 1506, Albuquerque and Tristao da Cunha destroyed Arab cities along Africa's east coast. They parted company after capturing the island

► CONQUEST TRIGGERED BY FEAR—PORTUGUESE ACCOUNTS OF THE CAPTURE OF GOA

Goa became the chief outpost of the Portuguese empire in the Indian Ocean. Halfway up the west coast of India, Portuguese squadrons could easily reach most shores of the Indian Ocean from Goa. The city also served as a terminus for goods produced in western India that would then be shipped to Persia, Egypt, and markets farther west.

According to Albuquerque's *Commentaries* as well as near-contemporary accounts by Joao de Barros and Diogo Couto and by Fernao Lopes de Castanheda, Albuquerque did not intend to capture Goa in February 1510. Instead he planned to attack Hormuz or Aden. After leaving Cochin the fleet met with Timoja, a Hindu pirate allied to Albuquerque. Timoja told Albuquerque and his captains that the ruler of Goa had died and that the people hated his successor. When Albuquerque seemed reluctant to act, Timoja also warned that many Turks and Mamelukes were in Goa preparing a fleet to attack Portuguese bases. The threat from the Turks and Mamelukes was very serious, since the Portuguese feared their state-of-the-art weapons and ship technology.

Albuquerque's captains insisted that he attack Goa to forestall the Muslims. Albuquerque reluctantly agreed. After probing attacks succeeded, the Portuguese and their allies launched an all-out attack that easily took the city.

Officially Albuquerque claimed that he only captured Goa in 1510 because he was afraid of the future danger it offered. However, evidence indicates that Albuquerque used fear to win support from his captains. His attack on Hormuz in 1508 failed because his captains mutinied. Just a month earlier Albuquerque had unsuccessfully attacked Calicut. His use of fear as a motivating factor may have been intended to gain general support for a plan he had formed months before.

—Timothy J. Watts

of Socotra, at the entrance to the Red Sea. Albuquerque hoped that an outpost at Socotra would choke off Muslim commerce traveling through the Red Sea. He next attacked Hormuz in the Persian Gulf. The island controlled trade between Persia and the Indian Ocean. Albuquerque was

driven from Hormuz before he could establish permanent control.

Almeida refused to turn over command to Albuquerque when he arrived at the end of 1508. In February 1509 Almeida won the decisive Battle of Diu, destroying Muslim naval power. In November of that year Portuguese reinforcements confirmed Albuquerque's appointment, and Almeida departed. The commander of the reinforcing ships and men brought orders to attack Calicut. The attack in January 1510 miscarried, and Albuquerque was badly wounded.

Albuquerque's determination to succeed now showed itself. He massed 23 ships and 1,200 Portuguese at Cochin by the end of January and spread the rumor that he was going to attack Hormuz again. After consulting with local Hindu allies, however, Albuquerque attacked Goa. Goa was a Hindu city located halfway up the western coast of India. The city was on an island isolated from the mainland by saltwater streams. The Muslim ruler of Goa, Yusef Adil Shah, had recently died, and his successor was inland, fending off incursions by his neighbors. A sudden descent on Goa by Albuquerque's forces captured the city on March 1. A counter-attack by the new ruler, Ismail Adil Shah, drove the Portuguese from Goa, but the fleet was trapped in the harbor. Although Adil Shah offered to give Albuquerque land for a fortress, the governor refused anything less than all of Goa. Faced with starvation and mutiny, Albuquerque finally sailed from Goa on August 4, 1510.

Incredibly, Albuquerque returned in November 1510 to attack Goa again. His army numbered around 3,000 men, including Indian allies, and soon drove out the 8,000-man garrison left in Goa. Most of the Muslims in Goa were killed, and Albuquerque soon established new fortifications to defend the city. Goa became the capital of Portuguese India.

Campaigns against other Muslim powers quickly followed. The rich city of Malacca was captured in 1511, despite an overwhelming numerical superiority for the defenders. Hard fighting followed to defend Goa during August and September 1512, since the Muslim cannons and other weapons were the technical equals of the Portuguese ones. Albuquerque was conspicuous

in exposing himself to the enemy's fire when his men wavered. The successful defense of Goa caused many states around the Indian Ocean to open friendly relations with the Portuguese.

In February 1513 Albuquerque led an expedition against Aden, at the entrance to the Red Sea. Aden was the western terminal for trade in the Indian Ocean, just as Malacca was the eastern terminal. With approximately 2,500 men, including 800 Indian auxiliaries, Albuquerque tried to take Aden in a sudden attack but was driven off with heavy losses. He then led the first Portuguese expedition into the Red Sea, where he toyed with the idea of capturing Jidda, the port for Medina and Mecca. Later chroniclers claimed that Albuquerque considered trying to steal Mohammed's body and hold it for ransom, along with diverting the Nile River to devastate Egypt. In the end the Red Sea expedition came to naught, and Albuquerque was forced to return to Goa in August 1513 with little to show.

Albuquerque's last campaign was against Hormuz, which had resisted him in 1508. His forces landed on the island in March 1515. In a masterful but ruthless ploy, Albuquerque invited Hormuz's young sultan and his chief minister to a meeting. Although both sides were to be unarmed, Portuguese soldiers seized the minister and killed him. The intimidated sultan placed himself under Albuquerque's protection. To secure the Portuguese position, Albuquerque built a fortress to control the harbor. During this time he contracted a form of dysentery, which left him in a weakened state. On his way back to Goa he received word that he had been replaced as governor by Lopo Soares de Albergaria, a bitter enemy. Albuquerque died at Goa in December 1515.

—Timothy J. Watts

Bibliography

- Diffie, Bailey W., and George D. Winius. *Foundations of the Portuguese Empire, 1415-1580*. Minneapolis: University of Minnesota Press, 1977.
- Sanceau, Elaine. *Indies Adventure: The Amazing Career of Afonso de Albuquerque, Captain-General and Governor of India (1509-1515)*. London: Blackie, 1936.
- Stephens, H. Morse. *Albuquerque*. Oxford, UK: Clarendon, 1892.

The Spanish Regime in the Philippines

The permanent Spanish presence in the Philippines began in 1565 with the arrival of Miguel Lopez de Legazpi. His forces built a fort on the island of Cebu, where Magellan had landed almost 40 years earlier. A problem the Spanish colonists faced until the seventeenth century was sufficient food, as the local population engaged in subsistence farming and did not have enough for the influx of the Spaniards, modest though their numbers were. Reinforcements and supplies arrived from Mexico in 1566, 1567, and 1571, enabling the Spaniards to take Manila, located on the island of Luzon. Luzon was the trading center of the archipelago as well as an outpost of the Muslim sultanate of Brunei on the northern coast of Borneo.

Manila was taken on May 19, 1571, without bloodshed, and Legazpi proclaimed it as the capital of the islands on June 3, 1571. From there expeditions were sent out to explore as well as conquer the rest of the island of Luzon. For the most part much of the archipelago was taken with little bloodshed, leading to the myth of the easy or bloodless conquest of the Philippines. In reality the Spaniards were not able to subdue the population in various parts of the Philippines, such as the Muslim areas in the south and the Cordillera mountain range in northern Luzon. But in those areas where they "conquered" the local population, in reality they simply made arrangements whereby the local leadership would stay in place and work in conjunction with Spanish authorities.

Several factors should be kept in mind when considering the Spanish regime. First, the number of Spaniards was never large, certainly not large enough to maintain control over the local population. In fact, most Spaniards never left the Manila area. Second, control was maintained with the help of local leadership and the missionary friars. Third, the Philippines failed to live up to Spanish expectations for direct economic rewards, namely indigenous precious metals, spices, and similar raw materials, but they became an important commercial entrepôt. The Manila Galleon became the economic lifeline

➤ WHO IS A FILIPINO?

As in Latin America, the indigenous population in the Philippines was referred to as *indios* (Indians) or *naturales de la tierra* (natives of the land). That they were called *indios* was a carryover of Columbus's mistaken idea that he had reached the Indies. The term "Filipino," at least prior to the Philippine Revolution, therefore did not refer to the local inhabitants. In the Spanish world, a peninsular was a Spaniard born in Spain, a *criollo* one born in the Americas, and a Filipino a Spaniard born in the Philippines. Such distinctions were important to the Spaniards for social and political reasons. The peninsulares believed that any association with the local population tainted Spaniards, especially those who were unfortunate enough to be born in the Philippines, including the fact that they had been

raised with significant help from local women and had grown up with significant contact with the non-Spanish population. When reading Philippine history, it is important to keep these distinctions in mind. For example, when Miguel Lino de Espeleta became the first Filipino archbishop of Manila in the second half of the eighteenth century, the significance was not that a member of the indigenous population had risen to such a rank—for this would not happen until the twentieth century—but that a Spaniard born in the Philippines had done so. It was in the late nineteenth century, as the local population struggled for liberty, that they came to own the term "Filipino" as referring to the people of the archipelago.

—Damon Woods

of the Spanish population in Manila. Europeans were not allowed to enter China, and thus Manila provided a site where Spaniards could trade with Chinese merchants. A single ship, one of the so-called Manila Galleons, which were owned by the Spanish Crown, would bring silver and chocolate from Mexico, while 30 to 40 Chinese junks would bring silk and porcelain for trade. These Chinese goods would then be brought back to Mexico, often for transshipment to Europe.

As to the governance of the local population, the local inhabitants, as legal minors, were to be protected by the Spanish authorities. In terms of administration, the *indios* were treated as a separate commonwealth known as *la república de los Indios*. This commonwealth had its own code of laws and magistrates. While the physical reorganization (*reduccion*) of Philippine society into a system of manageable towns and villages has been emphasized by some, the reality is that there was strong continuity from pre-conquest to postconquest political structure in the islands. Needing the established leadership to work with them to collect taxes and keep the local population under control, the Spaniards made the position of local chief, the *datu* (or *datto*), hereditary and tax exempt, giving the *datu* incentive to collaborate. They further gave them the title *cabeza de barangay*, or head of

the *barangay*. Since Philippine society lacked the structure suitable for being governed by the Spanish authorities, the Spaniards took what was a rarely used Malay-derived social term, *balangay*; corrupted it into the term "barangay"; and made it the basic political unit over which the *cabeza de barangay* had authority.

Spanish legislation and Filipino responses led to the following geographical structure. The archipelago was divided into provinces with one major city, the capital. Municipalities, or townships (*pueblos*), consisted of the town proper (*poblacion*), villages (barangays, or barrios as they came to be known), and small hamlets (*sitios*). The head of the *pueblo* was known as *gobernadorcillo* and was an elected official. *Cabezas* were officials over the various barrios. In the mid-eighteenth century a proposal was made to take the duty of tribute collector from the *cabeza de barangay* and to have an elected official collect tribute. The idea was not enforced, but the notion of an elected *cabeza de barangay* did go into effect. The hereditary succession was abolished and replaced with elections, with the winner serving a minimum of three years. During his term in office the *cabeza* was exempt from paying taxes, and if he served more than ten years, he was exempt for life. In addition, new offices had emerged, including the *fiscal*, a position held in connection with the church in town.

It is worth noting that local officials often participated in revolts against Spanish authorities well into the eighteenth century. However, the Spaniards were generally able to win them over, as indeed the officials had much to lose if a revolt failed. But in the nineteenth century the revolts began to be led by peasants, those who were not part of the political structure and had little to lose if they failed.

—Damon Woods

Bibliography

- Abella, Domingo. "From Indio to Filipino." *Philippine Historical Review* 4 (1971): 1-34.
- Agoncillo, Teodoro A. *History of the Filipino People*. Quezon City: R. P. Garcia Publishing, 1990.
- Chirino, Pedro, S.J. *The Philippines in 1600*. Translated by Ramon Echevarria. Manila: Historical Conservation Society, 1969.
- Phelan, John Leddy. *Hispanization of the Philippines*. Madison: University of Wisconsin Press, 1959.

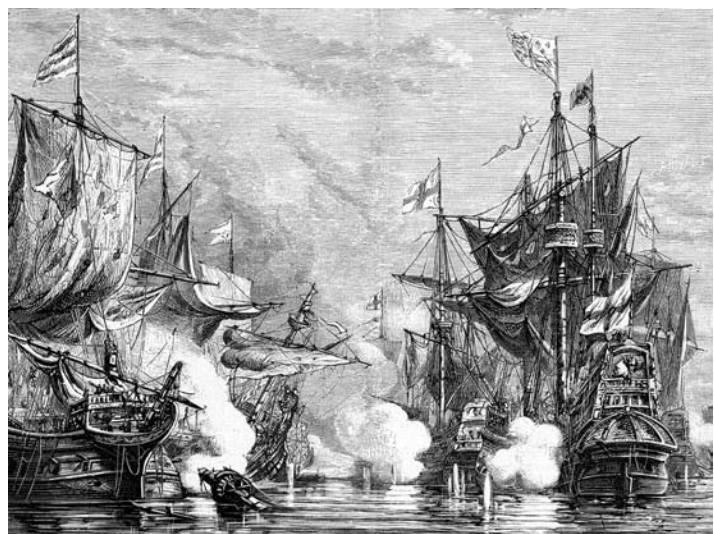
English Seafaring during the Sixteenth Century

As an island kingdom, England always had close ties to the sea, and its ports boasted experienced seamen and navigators. The English, however, came late to the exploration game. During the first wave of European expansion, the Treaty of Tordesillas (1494), which was repeatedly renegotiated, had divided the New World between Portugal and Spain with the pope's blessing. When King Henry VII of England sanctioned John and Sebastian Cabot's voyages to the New World, he urged his seafarers to find routes not already claimed by the powerful Spanish. As a result, English seamen tended to focus on possible northern passages to the riches of the East.

The Cabots did reach the New World, but their voyages sparked little interest or profit. Although Henry VIII is sometimes credited as the father of the Royal Navy, he was not concerned with exploration. By the mid-sixteenth century, however, private enterprise filled the void left by the state. A commercial contraction at home persuaded English seamen and merchant adventurers to invest more of their capital in the risky business of overseas expansion. From the 1550s onward, they sought charters from the Crown

that granted them regional trade monopolies and formed a number of new joint-stock companies to trade with far-off regions: the Muscovy Company (1553) sought trade with Russia, the Guinea Company (1555) looked to Africa, the Eastland Company (1579) concentrated on trade with the Baltic, and companies were also formed to trade with the Levant (1592) and the East Indies (1600).

Beginning in the 1560s, English seamen directly challenged Iberian hegemony in the New World and the East. Seamen such as John Hawkins hoped to fill a niche in established global trade networks, but Spanish authorities saw them only as unwelcome interlopers and heretics. While Hawkins's early voyages to Africa and the New World yielded very tidy profits (especially from the slave trade), Spain cracked down on this unsanctioned trade with its colonies during Hawkins's third disastrous voyage (1567-1569). The Spanish attack at San Juan de Ulua captured most of Hawkins's men and fleet; however, the two ships that managed to escape held Hawkins, the future architect of the Elizabethan navy, and his kinsman, Francis Drake, as the future scourge of Spanish ambitions at sea. The incident at San Juan de Ulua convinced English seafarers that it would be necessary to pry open New World trade through force.



British ships under Sir John Hawkins are surprised and defeated by a Spanish fleet off San Juan de Ulua, escaping with great losses and returning ruined to England, 1567. (Mary Evans Picture Library/The Image Works)

► SCURVY

The disease scurvy, associated with seafarers since ancient times, is caused by a lack of vitamin C (ascorbic acid). Early symptoms include lethargy and depression. Patients experience growing irritability, swelling of the gums, loss of teeth, and easy bruising. After one to three months, those afflicted experience shortness of breath and bone pain. Eventually this condition will result in death if untreated.

Although scurvy afflicts the land population, it is most readily associated with seafaring: an enhanced risk of scurvy went hand in hand with the growth of long-distance voyages during the first wave of European expansion. Many seafarers relied on a diet lacking in fresh fruit and vegetables. For example, during Vasco da Gama's voyage to India in 1497–1498, scurvy killed two-thirds of the crew.

During this first period of global expansion, there were many theories, most incorrect, about what caused scurvy. The notion of vitamins and balanced diets was unknown. Some sixteenth-century seamen connected scurvy and diet and discovered that citrus fruit was a cure. Despite John Woodall's assertions in *The Surgeon's Mate* (1617) and James Lind's research on oranges and lemons as a remedy in the mid-eighteenth century, dietary change was slow in coming. While British sailors picked up the nickname of "limeys" for stocking citrus for long voyages, the so-called plague of the sea that affected all nations was not conquered until the end of the eighteenth century.

—Cheryl A. Fury

English forays into Spanish sea-lanes incited a cold war during the 1570s, and England's plundering of Spanish ships and colonies sparked more heated exchanges during the 1580s. The aggressive actions of the English sea dogs and the not-so-circumspect support of their queen, Elizabeth I, earned the ire of King Philip II of Spain. Drake's attacks on Spain's possessions and Elizabeth's support of the Dutch rebellion against Habsburg rule strengthened Philip's resolve to send an impressive armada of ships against the "enterprise of England."

The English victory over the Spanish Armada in 1588 was much heralded at the time,

but it did not end Spanish designs on the island kingdom. Intermittent and inconclusive naval campaigns continued, and neither side was able to bring the struggle to a successful end. The conflict between England and Spain continued through 1604 after both Elizabeth I and Philip II were dead. Privateering (legalized piracy against enemies of the state) was in many ways the most consistent of England's efforts against Spain.

Elsewhere, English expeditions met with mixed results. Drake's circumnavigation in 1577–1580 (the second European expedition to accomplish the feat) demonstrated impressive seamanship. The Cathay Company's support of Martin Frobisher's voyages reinvigorated the search for a Northwest Passage to the East during the 1570s. These voyages did not yield much in the way of returns, and the company folded. John Davis made three additional attempts to search out the elusive passage. Judged unsuccessful at the time, these voyages did much in terms of exploring what is now the Canadian north.

Nor were the English as adept in their initial colonial enterprises as they were at trade and plunder. Colonies begun in the late sixteenth century, such as Roanoke, failed but paved the way for more successful attempts in the seventeenth century. Nonetheless, the developments of the sixteenth century established a foundation for later British sea power and empire.

—Cheryl A. Fury

Bibliography

- Andrews, Kenneth R. *Elizabethan Privateering: English Privateering during the Spanish War, 1585–1603*. Cambridge: Cambridge University Press, 1964.
- Bown, Stephen R. *Scurvy*. Toronto: Thomas Allen, 2003.
- Cuppage, Francis E. "Scurvy's Conquest and Sailors' Health." *Historian* 57(4) (1995): 695–702.
- Loades, David M. *The Tudor Navy: An Administrative, Political and Military History*. Aldershot, UK: Scholar Press, 1992.
- Scammell, G. V. *Ships, Oceans and Empires*. Aldershot, UK: Variorum, 1995.
- Watt, J., et al. *Starving Sailors: The Influence of Nutrition upon Naval and Maritime History*. Greenwich, UK: National Maritime Museum, 1981.
- Williams, Neville. *The Sea Dogs: Privateers, Plunder and Piracy in the Elizabethan Age*. New York: Macmillan, 1975.

The Dutch Regime in Indonesia

The Dutch first came to Indonesia during the era of the great chartered companies. After 1595 several smaller Dutch companies, known as *voorcompagnien*, began heading for Aceh, Banten, and the Moluccas. In 1602 they were united and gained a charter as the United Dutch East India Company (Verenigde Oostindische Compagnie, or VOC). This company gradually became the predominant power in Indonesia until the demise of the VOC in 1799.

The primary interest of the VOC was spices, in particular pepper from India and Sumatra, cinnamon from Ceylon, and, most profitably, cloves, nutmeg, and mace from the Moluccas. Consequently, the first VOC voyages headed for the Spice Islands, as the Moluccas were named at the time. The principal aim was to monopolize the spice market. In order to enforce their interests against indigenous suppliers and European competitors in that field, the Dutch followed a radical course of action. This course had no limitations as to the costs of the campaigns or on the use of violence.

The islands of Ambon, Ternate, and Tidore were the main suppliers of cloves in the seventeenth century, and were forced by threat of violence to guarantee exclusive market access to the VOC. On Ambon the VOC was able to establish territorial control, while the sultans of Ternate and Tidore were monitored by fortified factories. In 1623 the Dutch destroyed the tiny English factory on Ambon and executed its personnel, finally expelling the English from the Moluccas. Banda, the only supplier of nutmeg in the far south of the Moluccas, was conquered in 1621. The island's population either died in the genocide committed by the Dutch or was forced into slavery. The company delivered the nutmeg gardens to Dutch entrepreneurs, who cultivated them with imported slaves. In order to defend their monopoly on the Moluccas, the Dutch carried out armed naval operations (*krijstochten*) against indigenous traders blamed as "smugglers" and undertook costly raids to destroy any "illegal" clove plantations (*exstirpatien*). Concerning the Moluccan spices, the VOC was quite successful, but it did not succeed in preventing all clandestine trade. Concerning pepper, the

market structure proved to be too differentiated to successfully monopolize the commodity.

Under the Portuguese, the Southeast Asian spice trade was organized by emporia, export-oriented port cities and forts built in order to ensure a Portuguese monopoly over the trade in Asia. The VOC needed to gain control over the growing areas and also over these redistribution centers. Thus, the company conquered the most important port cities in cooperation with local allies (Malacca in 1641, Macassar in 1667, and Banten in 1682) and reorganized them as Dutch colonial towns under the administration of company officials. In principle, the VOC preserved the Portuguese structure of the Southeast Asian port cities by controlling trade and requiring the indigenous merchants to arrange for Dutch permission if they wanted to trade in company-controlled ports.

➤ A COLONIZATION PLAN, 1623

During the period of establishment, some United Dutch East India Company (Verenigde Oostindische Compagnie, or VOC) officials briefly debated whether to form a settlement colony in Indonesia like the Spanish in Latin America. Governor-General Jan Pietersz Coen himself submitted a plan to the company's directors suggesting long-term settlements of Dutch farmers in the Malay archipelago. He knew that such a project largely depended on guarantees for free private trade. According to his plan, they could attract settlers in Indonesia by allowing the free trade of all commodities except spices, the sacrosanct core business of the company. Additionally, Coen suggested a deficiency guarantee of the state. While Coen's settlement plans aimed for a sustainable basis of the Dutch presence, the investors in the Netherlands were more concerned with short-term assets. This became one reason for the failure to establish a colony. Other reasons were the government's disinterest in providing financial support and the considerable lack of interested settlers, especially females. This lack of Dutch women eventually led to an alternative colonial society based on marriages between Dutch men in the company's service and Indonesian women.

—Jürgen G. Nagel

Along with Batavia, founded in 1619 by Jan Pietersz Coen, this network of colonial towns served as the backbone of the Dutch regime in Indonesia. Batavia itself became the administrative and economic center of the VOC and it concentrated the majority of the regional and transregional trade in Batavia's harbor. In contrast, the other ports were controlled mainly for prohibitive purposes. In many smaller port cities, especially on the northern coast of Java, the company established informal control; residents passed the main state revenues to the VOC, giving these towns a semicolonial character. Thus, the Dutch profited from a significant part of the regional trade even though they did not control the pepper or textile trade as effectively as the Moluccan spice trade.

The company commanded limited military and naval resources. Thus, it was not able to secure a dominant position in all parts of the widespread Malay archipelago. Indigenous allies were indispensable. On the political level, the Dutch developed a network of contractual partners to whom they delegated the duties of control. Although those contracts were signed between sovereign partners, they usually were unequal in character in that they favored the Dutch. They offered protection to local rulers and, in return, expected support for the suppression of "illegal" commercial activities. The relationships varied in relation to the importance of the partners and the residents' ability to enforce agreements. Thus, the different contract situations varied from close military alliances to relations without any practical relevance. On the commercial level, the VOC preferred cooperation with trade diasporas, especially the Chinese who sustained trade connections to imperial China and advanced to become the leading population group in Batavia. In contrast, the company suppressed Indonesian merchants who were accused of undermining the Dutch monopolies and threatening the company's core business.

The VOC did not strive for a formal colonization of Indonesia but instead subordinated any territorial interest to commercial aims. This is reflected in the methods by which they founded or conquered colonial towns and even in the company's largest colonial possessions on Java. While the immediate surroundings of Batavia

came under direct control and were mostly cultivated by Chinese entrepreneurs, the VOC exploited internal conflicts between the Javanese states in the rest of the island. Mataram, in central Java, especially made substantial concessions to the company. The so-called Chinese War (1741–1743) strengthened Dutch indirect rule because the company defeated several Javanese leaders who tried to organize a revolt of Chinese coolies in the sugar industry. During its last decades the VOC used colonial control to introduce new cash crops like coffee. Thus, the VOC laid the foundations for the colonial state of the nineteenth century.

Even if the VOC developed a multifaceted image in the Malay archipelago, all its efforts were centered around the company's core activities: the trade of profitable Asian commodities. The Dutch combined market monopolies in the growing areas of the most important products, control over strategic port cities, a policy of alliances, and modest colonial influence. The result was a hierarchical Batavia-centered system characterized by a high degree of local autonomy due to scarce resources, communication problems, and the varying economical or strategic relevance of the different colonies. This system reached its economical peak in the 1680s. Nevertheless, its administrative structure laid the first foundation stone of the Dutch Indies as a colony.

—Jürgen G. Nagel

Bibliography

- Blussé, Leonard. *Strange Company: Chinese Settlers, Mestizo Women and the Dutch in VOC Batavia*. Dordrecht: Foris Publications, 1986.
- Gaastra, Femme S. *The Dutch East India Company: Expansion and Decline*. Zutphen, Netherlands: Walburg Pers, 2003.
- Hanna, Willard A. *Indonesian Banda: Colonialism and Its Aftermath in the Nutmeg Islands*. Philadelphia: Institute for the Study of Human Issues, 1978.
- Jacobs, Els M. *Merchant in Asia: The Trade of the Dutch East India Company during the Eighteenth Century*. Leiden, Netherlands: CNWS Publications, 2006.
- Lewis, Dianne. *Jan Compagnie in the Straits of Malacca, 1641–1795*. Athens: Ohio University Center for International Studies, 1995.

- Ricklefs, Merle C. *A History of Modern Indonesia, c. 1300 to the Present*. London: Macmillan, 1981.
- Vos, Reinout. *Gentle Janus, Merchant Prince: The VOC and the Tighrope of Diplomacy in the Malay World, 1740–1800*. Leiden: KITLV Press, 1993.

Russian Expansion into Siberia and Central Asia—Yermak the Conquerer

No name is as strongly associated with Russia's extraordinarily rapid and complete expansion eastward from the state of Muscovy into Siberia in the sixteenth century than that of the Cossack *ataman* (chieftain) known simply as Yermak. Muscovy's expansion from a small city-state to the center of a new Russian state had begun much earlier with the so-called Gathering of the Lands, reuniting the Russian states of Kievan Rus that had been decimated and scattered by the Mongol invasions in the thirteenth century. By the sixteenth century, however, the Gathering of the Lands was complete, and Russians were expanding beyond the area formerly claimed by Kiev. Driving the conquest were two irresistible motives: the search for security and the quest for riches. Added to this was opportunity. While to the north, south, and west Russia was hemmed in by dense populations and powerful states (such as Sweden, the Ottoman Empire, and the Polish-Lithuanian Commonwealth), to the east the vast frontier that stretched to the Pacific Ocean was sparsely populated by disunited and nomadic tribes. Once the formerly great khanate of Kazan (in southwestern Siberia in central Asia) was defeated by Russian armies under Ivan IV (Ivan the Terrible) in 1552, the way was open for the Russians. Many historians, such as Russian historian Nicholas Riasanovsky and global historians William McNeil and Peter N. Stearns, have pointed out that Russian exploration and conquest of Siberia paralleled the activities of the conquistadors from southwestern Europe in the New World in roughly the same period and with many of the same consequences: wealth for the conquerors, tragic destruction for the conquered.

Despite the lack of large-scale organized resistance, conquest of vast spaces in harsh climatic conditions that ranged from the permafrost of the

tundra to temperatures easily over 100 degrees Fahrenheit in the desert was no easy matter. Russian explorers and conquerors made good use of the extensive river system—"the roads that run" as Russians sometimes called them (including, in Siberia, the great Ob, Yenisei, and Lena rivers, together with their tributaries)—to travel far distances in short time periods. Searching primarily for furs, they concentrated on the taiga (forest) region north of the 50th parallel. The fabulously wealthy Stroganov family, with the explicit permission of the tsar himself, sent out explorers and trappers, followed closely by the official state military and administration. Among the more famous of these adventurers are Ivan Moskvitianin, who reached the Pacific in 1639, and Semen Dezhnev, who, with a handful of men and small boats, in 1648 sailed from the mouth of the Kolyma River through what would much later come to be known as the Bering Straits, at the tip of Siberia.

The scattered native tribes (Chukchi, Yukagirs, Yakuts, and many others) could either submit to conquest and pay tribute (usually in the form of animal skins)—and hope for concessions to their leaders—or face brutal suppression. Their relatively small numbers as well as their heterogeneity and disunity doomed them in any case to domination by the Russians. Yermak became the most well known of these daring yet brutal conquerors.

Yermak, sometimes also referred to with a patronymic as Yermak Timofeyevich, had been an outlaw *ataman* among the Volga and Don Cossacks (a traditionally troublesome group for



Yermak's Conquest of Siberia in 1582 by Vasily Surikov, 1895. (State Russian Museum, St. Petersburg, Russia/The Bridgeman Art Library)

the Russian state) and a pirate on the great Volga River. In the 1570s, however, Yermak joined those hired by the Stroganovs to provide protection and defense for their explorers and trappers. Yermak rapidly rose to prominence in the early 1580s when he successfully defeated a major khan of western Siberia, Khan Kuchum, and turned all of his territories over to the tsar for the collection of tribute. For the next four years Yermak continued the work of conquest and expansion, developing a reputation for extraordinary daring and accomplishment along the way. He is said to have died in battle, reportedly drowned while attempting to escape capture swimming across the Wagay River dressed in heavy chain mail, a gift from the tsar himself.

While the initial lure of Siberia lay primarily in its ample supply of furs, Siberia turned out to yield far more riches than the first conquerors, such as Yermak, could even imagine. Despite extreme difficulty in extracting them, diamonds, timber, and minerals such as iron, gold, salt, and oil have all contributed to making Siberia incalculably valuable to the Russian state into the present day and beyond.

—Anita Shelton

Bibliography

- Armstrong, Terence. *Yermak's Campaign in Siberia: A Selection of Documents*. London: Hakluyt Society, 1975.
- Bobrick, Benson. *East of the Sun: The Epic Conquest and Tragic History of Siberia*. New York: Poseidon, 1992.
- Lincoln, Bruce W. *Conquest of a Continent: Siberia and the Russians*. New York: Random House, 1994.

Contesting the Sugar Islands— The Franco-British Wars in the Caribbean

Spanish domination of the Caribbean kept the British and French from founding colonies there until the early 1600s. Several of the first new colonies planted there—Barbados and Jamaica, for instance—were founded in the 1620s to grow tobacco. Originally, planters sought indentured servants from Europe or enslaved Native Americans as the labor supply for this back-breaking work in challenging conditions but soon turned to enslave

Africans as the least expensive and most dependable labor force. When the tobacco market collapsed in the 1640s from overproduction in the Chesapeake, the planters experimented with other crops, such as indigo, but found limited success. By the 1670s, however, sugar growing and refining had become the islands' most important industry. European demand for sugar grew quickly. Because a successful harvest required large investments in machinery and African slaves to work the fields, the British and French colonies became dominated by large plantations with several hundred slaves. Income from sugar brought wealth to the producers and shippers, even while thousands of slaves died every year.

Beginning in the wars of the 1600s, the European powers sent expeditions to try to capture rival colonies or to protect their own. The geography of the Caribbean required naval squadrons to protect or capture the islands. Operations were complicated by disease and weather. Yellow fever quickly decimated armies and ships' crews. The threat of hurricanes usually limited naval operations between June and November. Even so, the value of the so-called sugar islands in the Caribbean was too great to ignore. Even in peacetime, pirates were a serious threat to unprotected shipping.

During the War of the League of Augsburg (1688–1697) and the War of the Spanish Succession (1702–1714), British and French forces each seized several islands, but British control over St. Christopher was the only permanent result. The War of the Austrian Succession (1740–1748) also produced little effect on the balance of power in the Caribbean.

By the 1750s France's Caribbean islands were its most valuable colonial possessions. They supplied most of the sugar used in Europe, providing needed income for the French government. When the Seven Years' War broke out, Britain used its naval superiority to attack the French islands. An amphibious attack on Martinique in 1758 was unsuccessful, but the British captured Guadeloupe in February 1759. Martinique and most other French Caribbean islands fell in 1762. The French Navy was unable to protect the islands because of a stifling British blockade. The Treaty of Paris confirmed British possession of Dominica, St. Vincent, and Tobago, but

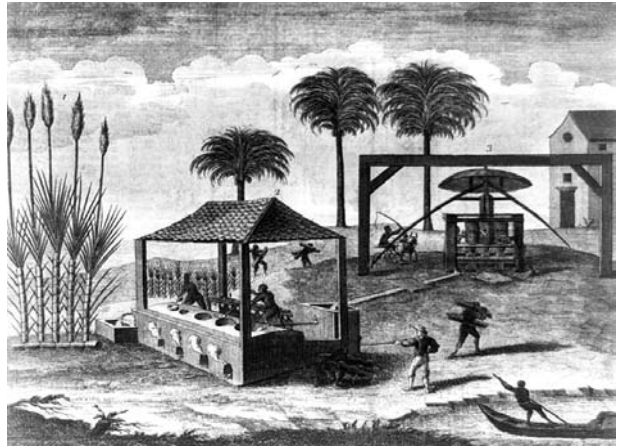
Martinique and Guadeloupe were returned to the French in exchange for Canada.

Many in France hoped for revenge. Their opportunity came with the American Revolution. After secretly helping the Americans, the French formally entered the war in 1778. The major fighting at sea took place in the Caribbean. The Royal Navy had been neglected after 1763, and worldwide British commitments meant that the French could usually match British forces in the region. In September 1778 a French landing force captured Dominica. The British responded by capturing St. Lucia in December. In 1779 the French captured St. Vincent and Grenada. The only naval battle that year ended in a draw.

During 1780 Admiral George Rodney fought several inconclusive battles with French squadrons. He captured several Dutch islands but no French possessions. He sailed for home in early 1781, leaving Admiral Samuel Hood in charge. Hood was challenged by a large French squadron under Admiral François de Grasse. French forces captured Tobago and St. Eustatius during 1781 before leaving for Virginia and Yorktown.

While the fighting in North America wound down in 1782, decisive battles took place in the Caribbean. In February 1782 the French captured St. Kitts. The decisive Battle of the Saints took place on April 12, 1782, near Dominica. Rodney, again in command, broke with traditional sailing order and led his ships through the French line of battle. The French lost seven ships of the line. The victory preserved British honor and salvaged their possession of some islands in the Caribbean. The Peace of Paris in 1783 returned most of the British islands to them including the Bahamas, which had been captured by the Spanish in 1782.

The final war between Great Britain and France over the Caribbean sugar trade took place during the French Revolution. The question of citizenship caused destabilization on St. Domingue by 1791, leading to a slave uprising. The outbreak of war and a British blockade prevented France from sending assistance to the settlers. British forces captured Martinique but were unable to take the other French possessions despite pouring half of the nation's military expenditures into the Caribbean during the 1790s. When the Peace of Amiens was



An engraving from 1749 of a West Indies sugarcane refinery, an industry made possible by the plantation system and slave labor. (Library of Congress)

signed in 1802, French regulars tried to regain St. Domingue but failed due largely to an outbreak of yellow fever that cut their forces in half. Victorious blacks established their own republic and renamed it Haiti.

The sugar imports from the Caribbean declined rapidly during the nineteenth century due to the development of a beet sugar industry in Europe. The sugar plantations also became politically untenable following a general rejection of slavery during the 1800s. The importance of the sugar islands declined correspondingly.

—Timothy J. Watts

Bibliography

- Gardiner, Robert. *Navies and the American Revolution, 1775–1783*. Annapolis, MD: Naval Institute Press, 1996.
- Mahan, Alfred Thayer. *The Influence of Sea Power upon History, 1660–1805*. Englewood Cliffs, NJ: Prentice Hall, 1980.
- McLynn, Frank. *1759: The Year Britain Became Master of the World*. New York: Atlantic Monthly, 2004.
- Toth, Charles. *The American Revolution and the West Indies*. Port Washington, NY: Kennikat, 1975.

Early Modern Maritime Empires and Expansion

Although there were numerous maritime empires before the early modern period, the era saw the creation and expansion of sea-based

➤ IMPERIAL DENMARK

The largest and most global of the minor European empires was that of Denmark. Even before Europe's age of maritime expansion had begun, Denmark exerted control over Norway (theoretically an equal partner in a union of Crowns but in practice subordinated to Denmark), Iceland, and the Faeroe Islands in the North Sea and possessed a strong maritime tradition. Greenland, although its earlier European settlers had abandoned it or died out, was still claimed by the Danish ruler in his capacity as king of Norway. Greenland was resettled from 1721. Although nowhere a dominant colonial power, Denmark had global reach, with the sugar slave plantation colonies of the Danish West Indies (St. Thomas, St. John, and St. Croix) in the Caribbean, Iceland, and Greenland in the North Atlantic, Tranquebar and other small colonies in India, including the Nicobar Islands, and Fort Christiansborg (in modern-day Ghana) and other slave-trade bases on the Atlantic coast of Africa. Tranquebar, on the southeastern Indian coast, was considered the capital of Danish India, was founded by the Danish East India Company in 1620, and was the first base for Protestant missionaries in India.

—William E. Burns

empires on an unprecedented global scale. These empires were based on west European states, by far the most important being Portugal, Spain, England, France, and the Dutch Republic, with Denmark, Sweden, Brandenburg, and the German-Polish principality of Courland playing minor roles. Although expansion rested on European maritime technology (including items like the magnetic compass that had originated elsewhere but had been adopted by European seafarers), Europeans were not invincible at sea. At the same time that these new empires were being built, an older European maritime empire, the Mediterranean empire of Venice, was slowly retreating before the land-based Islamic empire of the Ottoman Turks.

The most striking difference in the expansion of the new maritime empires was that between the Old World (Europe, Asia, and Africa) and the New World of the Americas. The technological

and disease advantages that Old World societies held over Americans made it relatively easy to establish territorial dominions, whether by subjugating the indigenous population in the Spanish fashion or expelling them in the English fashion. Afro-Asian societies were much better able to defend themselves and were often able to restrict European imperialists by mutual agreement to designated trading areas such as Macao in China, Nagasaki in Japan, and the slave trade outposts of the west African coast. As a result, the Portuguese and Dutch empires in the Indian Ocean were more empires of trading posts than territorial empires. France, England, and particularly Spain combined trading posts with large territories, mostly in the Americas, over which they exercised direct control. These territories, unlike the trading posts, could accommodate large-scale European settlement. By the eighteenth century there were about 3 million or 4 million European immigrants and European-descended people living in the Americas, about 5 percent of the population of Europe. Not all of these immigrants came from the colonial powers. Italian merchants and bankers were found in the Spanish colonies, and Germans were ubiquitous in the mining industry. The vast majority of new arrivals to the Americas were not European immigrants but rather African slaves.

Expansion did not merely include territory on land. It also included claims to control seas, as the Portuguese claimed to be lords of the Indian Ocean, while the Spanish claimed to be lords of the Pacific and the Caribbean. Such claims, which implied the exclusion of foreign commerce, were difficult to fully enforce. Fishing rights were also vigorously contested, particularly in the North Atlantic cod-fishing grounds.

A variety of forces pushed maritime expansion. Available wealth took many forms, from the gold and silver of Mexico and Peru to the furs, tobacco, and sugar of America and the spices and manufactured luxuries of Asia. Much early Spanish expansion was driven by land- and gold-hungry nobles, the “conquistadors,” essentially military entrepreneurs with only a loose relationship to the Spanish Crown. The French, Dutch, and English often formed companies that brought together merchants and investors under state sponsorship to found colonies

or expand colonial trade. Examples include the Vereenigde Oost-Indische Compagnie of the Dutch Republic (VOC, Dutch East India Company), the English East India Company and Virginia Company, and the French Compagnie de Nouvelle France. The spreading of the true faith was a particularly strong motivation in the Catholic empires of Spain, Portugal, and France, which could draw from the dedicated celibates of Catholic religious orders. Protestant missions, originally marginal, became a more active force in expansion in the eighteenth century. Encouraging colonization by dissident religious groups such as the Pilgrim Fathers of Plymouth colony or the Quakers of Pennsylvania was an English specialty with few successful parallels in the other empires. Strategic conflict among European states—the rush to claim territory before a rival state—also led to expansion.

Colonies often developed a certain autonomy. The slowness of communications between decision makers in Europe and colonies meant that local leaders had room for a great deal of initiative. The VOC, not the Dutch government, was the effective representative of Dutch policy in the Indian Ocean. Spanish and English American colonies in particular developed a strong sense of their own interests, which sometimes led to conflict with the imperial government. Local leaders could initiate hostilities against Native Americans or colonies of rival powers with little check from distant governments in London or Madrid. The tendency over the course of imperial history was for the state to play a more prominent role in colonial administration, particularly as warfare in colonial theaters became more central to European power struggles.

—William E. Burns

Bibliography

- Ames, Glenn J. *The Globe Encompassed: The Age of European Discovery, 1500–1700*. Upper Saddle River, NJ: Pearson Prentice Hall, 2008.
- Darwin, John. *After Tamerlane: The Global History of Empire since 1405*. New York: Bloomsbury, 2008.
- Parry, J. H. *The Age of Reconnaissance*. Berkeley: University of California Press, 1981.
- Scammell, G. V. *The World Encompassed: The First European Maritime Empires, c. 800–1650*. Berkeley: University of California Press, 1981.

Habsburg Spain as a World Empire

Spain under the Habsburg dynasty (1516–1700) became the first global power. Unlike many other empires that were built more gradually, like the Russian or British empires, the vast majority of the Spanish empire was built in a frenetic burst of activity stretching from Christopher Columbus's first voyage in 1492 to Pedro de Valdivia's founding of Santiago de Chile in 1541. In that time Spain explored, conquered, and settled the Caribbean; conquered and annexed the territories of the two most powerful American empires, the Incas of Peru and the Aztecs of Mexico; and established itself as the dominant power in Italy with control over Milan in the north and Naples in the south. Spanish forces also conquered Mers-el-Kebir and Oran in northern Africa, although plans to establish a north African empire were never successfully implemented. Although Spanish power continued to slowly expand from its initial New World bases, there were relatively few major acquisitions after this period, the most important being Florida, the conquest of which began in 1565, and the Philippines, named for Spanish ruler Philip II (r. 1556–1598), in which a Spanish presence centered on the town of Manila was established from 1565 to 1570. In Europe, Spain controlled the Low Countries and the Franche-Comte region as part of the inheritance of the dukes of Burgundy.

Two treaties with Portugal, the 1494 Treaty of Tordesillas and the 1529 Treaty of Zaragoza, divided the non-European world into Spanish and Portuguese spheres. The Portuguese empire in coastal Africa, Brazil, and the Indian Ocean was united under a common sovereignty with the Spanish empire when Spain and Portugal had the same rulers from 1580 to 1640. However, the two empires were administratively separate.

The Americas were particularly important to the empire. At its height, it controlled a belt of territory from Chile to what is now the southwestern United States and claimed the entirety of both continents except for Portuguese Brazil. In the Gulf of Mexico and the Caribbean, Spain controlled nearly the entire coast, with the significant exception of French-ruled Louisiana,

► A WAR THAT NEVER HAPPENED—THE SPANISH INVASION OF CHINA

Such was the confidence engendered by the ease of Spanish conquest in the Americas and the nearly bloodless takeover of Portugal in 1580 that some Spanish officials and priests in the Philippines believed that Spain could conquer all of China. Francisco de Sande, the third Spanish governor of Manila, claimed that 6,000 men could conquer the whole Chinese empire. Some who advocated the “enterprise of China,” such as the Macanese Jesuit Francisco Cabral, even argued that conquest could be accomplished using Japanese Christian soldiers rather than Spaniards. The most elaborate plan was put forth in 1586 in a letter signed by all the Spanish officials in Manila and carried to Madrid by the Jesuit Alonso Sanchez. The plan required an army of 12,000 Spaniards, 6,000 Japanese, and 6,000 Filipinos. The plan arrived in Madrid as the government was preparing the Spanish Armada against England and had no time for Chinese plans. In any case, Philip II, more aware of the limitations of Spanish power and the many areas where Spaniards were already engaged than his officials and priests in Manila, rejected such plans in favor of peace and trade with the Chinese.

—William E. Burns

and numerous islands, most importantly Cuba, Jamaica, and Hispaniola. The precious metals of Mexico and Peru were particularly valuable to Spain. In addition to the annual “plate fleets” that sailed from Mexico to Seville, the “Manila galleons” sailed from Acapulco to Manila in the Philippines, where their silver was exchanged for Chinese goods that were then returned to Mexico to be shipped to Spain and sold in Europe. Spain consistently sought to exclude European rivals from the Pacific.

Ideologically, the Spanish empire was identified with Roman Catholicism. This mission justified a variety of struggles, including those against European Protestants, the Islamic Ottoman empire, and the polytheistic societies of the Americas. Church personnel were a vital support of the empire. In the late sixteenth century rulers as geographically and culturally separate as

Elizabeth I of Protestant England and Totoyomi Hideyoshi of Shinto-Buddhist Japan took measures against the Catholic clergy, fearing that Catholicism was a stalking-horse for Spanish power.

Spain faced multiple enemies, several with a global reach including England, France, and the Dutch. The multitude of Spanish commitments frequently strained Spanish finances and manpower resources. The war that more than any other weakened the empire was the Eighty Years’ War (1568–1648) against the Protestant-dominated independence movement in the Low Countries that eventually formed the Dutch Republic in the northern Netherlands, leaving the south or “Spanish Netherlands” to Spain. The Dutch struggle was uniquely destructive because the Dutch both challenged Spain to maintain the “Army of Flanders” in the Netherlands at massive expense and attacked Spanish commerce on the high seas. Even during the Twelve Years’ Truce from 1609 to 1621 there was “no peace beyond the line,” as Dutch raiders continued to assault Spain in east Asian and American waters. The Dutch conflict merged into another conflict, the Thirty Years’ War (1618–1648), that drained Spain of many of its resources and pitted Spain against a coalition of European powers ultimately led by France. The stress placed on the empire by the war led to many revolts against Spain, the most important being the Portuguese revolt that again separated the Spanish and Portuguese Crowns.

Spanish decline in Europe, however, had little effect on the Spanish empire outside Europe. Jamaica was lost to England in 1655, and the western third of the island of Hispaniola was lost to France in 1697, but the vast majority of the empire was retained and even expanded, as Spain advanced on its frontiers with Native Americans in the far north and far south of its American empire.

—William E. Burns

Bibliography

- Brading, D. A. *The First America: The Spanish Monarchy, Creole Patriots, and the Liberal State, 1492–1867*. Cambridge: Cambridge University Press, 1991.
- Elliott, J. H. *Spain, Europe and the Wider World*. New Haven, CT, and London: Yale University Press, 2009.

- Kamen, Henry. *Empire: How Spain Became a World Power, 1492–1763*. New York: HarperCollins, 2003.
- Kennedy, Paul. *The Rise and Fall of the Great Powers: Economic Change and World Conflict from 1500 to 2000*. New York: Random House, 1988.
- Lynch, John. *Spain, 1516–1598: From Nation State to World Empire*. Cambridge, MA: Blackwell, 1992.
- Weber, David J. *The Spanish Frontier in North America*. New Haven, CT, and London: Yale University Press, 1992.

Bourbon France as a World Empire

France under the Bourbon dynasty (1589–1792) was a latecomer to the empire building of west European states. The Wars of Religion in the late sixteenth century prevented France from devoting much energy to colonization, and early efforts, such as the founding of “Antarctic France” (1555–1567) and “Equinoctial France” (1612–1615) in Portuguese-claimed Brazil and Fort Caroline, a colony of Huguenots in Florida (1562–1565), were crushed by Portugal and Spain. Even after France became a successful empire builder, its imperial agenda was consistently subordinated to its quest for European hegemony. The French colonial empire never became as central to French identity as the British and Spanish colonial empires were to their nations.

The founding of Port Royal in Nova Scotia in 1605 is often considered the foundation date of the French empire. Bourbon France’s imperial possessions were concentrated in North America, the Caribbean, and India, with fortresses on the west African coast, particularly Senegal, for the slave trade and the possession of a few islands in the Indian Ocean such as Mauritius and Ile Bourbon (now known as Réunion). France was the first European power to explore and claim much of the interior of North America, encircling the British colonies on the Atlantic coast to the north and west. The founding of the colony of Louisiana in 1699 with its capital New Orleans at the mouth of the Mississippi cemented French control over North America’s most strategically valuable inland waterway, a control reinforced with an elaborate network of fortifications. North America was the only region in

the French empire to draw significant French settlement but never drew the number of immigrants that the British colonies did. The French position in North America was further strengthened in the eighteenth century through alliance with the Spanish monarchy, occupied by the Bourbon dynasty after the War of the Spanish Succession (1701–1714).

In America, France drew on alliances with indigenous peoples more than did its Spanish, Dutch, and British rivals and, in striking contrast with the British, encouraged intermarriage with Native Americans. The fur trade, the economic lifeblood of French America, depended on cooperation with Native Americans. Native allies also played a vital role in the French colonial military. However, the French also faced opposition

► PIERRE POIVRE, COLONIAL ADMINISTRATOR AND BOTANICAL PIRATE

In the eighteenth century, France turned its island possessions in the Indian Ocean from way stations into profitable plantation colonies. A leader in this effort was Pierre Poivre (1719–1786), a missionary turned colonial administrator who devoted enormous effort to breaking the Dutch East India Company’s control over the spice trade. Poivre traveled in China, Indochina, and other areas of Asia and the Indian Ocean and had observed their agriculture systems as well as France’s. Inspired by the company’s garden at the Cape of Good Hope, Poivre planned to make the botanical garden on Mauritius, established by previous governor Bertrand-François Mahe de La Bourdonnais (1699–1753), a major center of research in economic botany in an effort to identify new crops for the French empire. A major obstacle was the tight control over the spice plants that the Dutch maintained. Poivre launched several clandestine expeditions to smuggle spice plants from Dutch Indonesia and the Spanish Philippines to the French islands. Eventually he managed to obtain nutmeg and clove plants. There was an intense debate between Poivre and French apothecary Jean-Baptiste Aublet (1720–1778) over whether or not the nutmeg plants were the “true nutmeg,” but spice cultivation was effectively established on Mauritius.

—William E. Burns

from the Iroquois Confederacy, the most powerful Native American group in North America. Like the Spanish empire, the French empire was strongly allied with the Catholic Church and drew heavily on Church personnel. French colonies in the Bourbon era were limited to Catholics only, even when Protestantism was tolerated in France itself. In Canada, French power supported Jesuit and Franciscan missionaries who worked both to convert native communities and establish relations between them and France. Catholicism bonded Native American communities to alliance with France rather than with the Protestant Dutch or English.

France's Caribbean colonies, which included Saint Domingue on Hispaniola, Martinique, Guadeloupe, and other islands as well as French Guyana on the South American mainland were important for their economic value. Saint Domingue in particular, with its slave-worked sugar plantations, became a generator of vast wealth for France. France's islands in the Indian Ocean served as way stations for the profitable trade with East Asia, an area where France was increasingly active in the late seventeenth century, but were also developed into agriculturally productive areas. France actively sought to introduce new crops to its colonies to make them more profitable, employing its world-leading scientific institutions to do so.

Bourbon France was destroyed as an imperial power in a series of disastrous eighteenth-century conflicts with Great Britain. In these wars France, as a continental power, was forced to maintain a large army to deal with its European rivals, while Britain, as an island with no territorial ambitions on the continent, could devote a much larger proportion of its resources to its navy and to expeditionary forces. These wars, particularly the Seven Years' War (1756–1763), resulted in the loss of French Canada, Louisiana, and nearly all of French India, reducing the French empire to its Caribbean possessions and a few scattered outposts elsewhere. France's surviving possessions in India and the Caribbean were required to demilitarize. France did not acknowledge this as a permanent defeat and launched a vigorous program of economic development of its remaining colonies and naval building to produce a navy rivaling Britain's

as a global force. The victory of France and its American rebel allies in the War of the American Revolution failed, however, to restore France as a power in the Americas or India.

—William E. Burns

Bibliography

- Delage, Denys. *Bitter Feast: Amerindians and Europeans in Northeastern North America*. Translated from the French by Jane Brierley. Vancouver: University of British Columbia, 1993.
- Fischer, David Hackett. *Champlain's Dream*. New York: Simon and Schuster, 2008.
- Grove, Richard H. *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860*. Cambridge and New York: Cambridge University Press, 1995.
- Ray, Aniruddha. *The Merchant and the State: The French in India, 1666–1739*. New Delhi: Munshiram Manoharlal Publishers, 2004.

The Colonial Wars in North America

Violence shaped the European colonization of North America. As a result of mutual fears, cultural misunderstanding, and increasing colonial encroachment on limited natural resources, armed conflict erupted on a regular basis between settlers and indigenous populations. Colonial powers also waged a number of wars against each other as commercial and imperial rivalries played themselves out in the New World.

The establishment and development of permanent settlements during the seventeenth century created tensions everywhere. English colonists fought the Powhatan in Virginia (1609–1646, intermittently); in New England, they confronted first the Pequot (1637) and then the Wampanoag and their allies during King Philip's War (1675–1676). The French who settled in the St. Lawrence Valley waged war against the Iroquois Confederacy (1609–1701, intermittently). Inhabitants of the New Netherlands fought the Lenape (1643–1645, 1659–1663), while Spaniards encountered resistance in Florida and New Mexico, most famously during the Pueblo Revolt (1680).

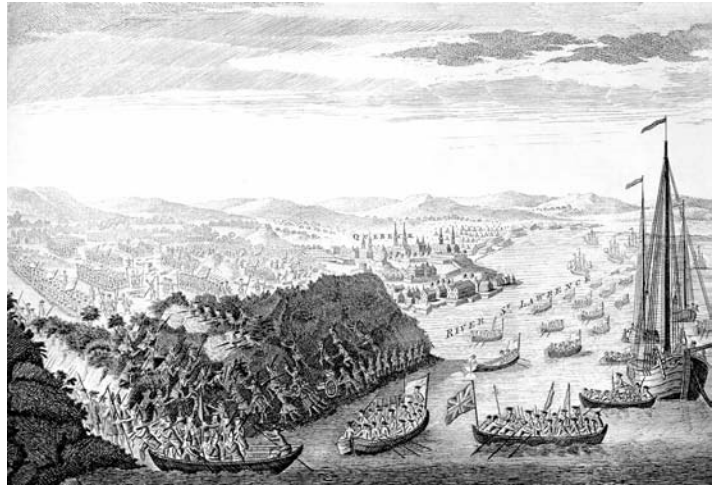
Through the next century, armed conflict continued to erupt between colonial powers and native nations. English colonists fought the

Tuscarora (1711–1715) and Yamasee (1715–1716, 1727) in the Carolinas as well as the Wabanaki in New England (1723–1727). In what is now Wisconsin, French forces and their indigenous allies waged intermittent war against the Fox (1712–1737); in Louisiana they fought the Natchez (1716–1729, intermittently) and the Chickasaw (1736, 1739–1740). In the American Southwest, a complicated pattern of raiding and trading developed between nomadic peoples such as the Navajo and Comanche and the Spanish and native populations of the Catholic missions.

Beginning in the late seventeenth century, the colonies of Great Britain and France were drawn into what became four major European wars: the War of the League of Augsburg (1690–1697), known to British American colonists as King William's War, was followed by the War of the Spanish Succession (1702–1713), also known as Queen Anne's War; the War of the Austrian Succession (1744–1748), also known as King George's War; and the Seven Years' War (1754–1763), also known as the French and Indian War. Spain, whose colony in Florida neighbored the southern Anglo-American settlements, battled Britain during the War of the Spanish Succession, the War of Jenkins' Ear (1739–1743), and the final phase of the Seven Years' War.

Offensive operations during the first three intercolonial conflicts had consisted in indecisive guerrilla-style raids on frontier settlements and amphibious assaults on seaboard strongholds. The Seven Years' War was of a different sort. Both Britain and France shipped large contingents of regular troops to the colonies and conducted operations, battles, and sieges in the European style. The initial victories went to the French and their allies, but the tide had turned by 1758. The capitulations of the French at Quebec (1759) and Montreal (1760) gave effective control of New France to the British. The Treaty of Paris (1763) formally transferred France's North American possessions to Great Britain. Spain, which ill-advisedly had entered the war in its last stage, agreed to relinquish Florida.

The westward impetus of Britons and Americans in the years following their imperial triumph brought about clashes with local populations. Traders and political agents in the region of the Great Lakes were challenged by a



British forces under the command of General James Wolfe take Quebec, Canada, on September 13, 1759, effectively ending the French and Indian War. (Library of Congress)

multitribal coalition during Pontiac's Rebellion (1763–1766), while settlers in the Ohio Country faced armed resistance during Lord Dunmore's War (1773–1774).

Throughout the seventeenth and eighteenth centuries, ways of making war were shaped by the colonial encounter, as combatants regularly adopted and adapted to their purposes the technologies, tactics, and customs of their friends and foes. Over time European Americans were successful against their native enemies not because of technological or tactical superiority but rather because they faced societies that were politically disunited and often weakened by epidemics. Moreover, colonists benefited significantly from the manpower and military skill of indigenous allies whose interests often overlapped with their own. Though the French relied most heavily on such alliances, the British and Spanish also made use of them at a number of critical junctures.

North America's colonial wars took an immeasurable human toll: the brunt borne by indigenous populations. Many were the victims of battles and massacres; others died from the privations that typically accompany warfare. Captivity was a common experience among survivors. Native peoples regularly integrated European American prisoners into their communities, while the colonists often sold Indian prisoners into slavery. For such men and women

► THE ROLE OF THE IROQUOIS AND HURON

Politically sophisticated and conveniently situated, the Iroquois Confederacy (Haudenosaunee, or Five Nations, later Six Nations) embarked early in the seventeenth century on a wide-ranging offensive against its indigenous neighbors. The French, who sided with their Huron and Algonquin trading partners, soon became another target.

Historians now believe that during this period the Iroquois followed the traditions of the mourning war, symbolically replacing their dead through the capture and adoption of enemies. Vigorous raiding by Iroquois warriors resulted in the disintegration of several large tribal confederacies, including the Huron (Wendat). Increasingly drawn into the French religious and political orbit, a sizable number of the latter resettled near Quebec after the destruction of Huronia (1649–1650). They remained staunch military allies of France.

The Iroquois offensive subsided toward the end of the seventeenth century. While a pro-French faction migrated to New France, most Iroquois remained on their traditional lands and, when the New Netherlands became New York, entered into a lasting alliance with the British. During the subsequent intercolonial wars, factions fought alongside both imperial powers. The Iroquois Confederacy continued to assert its neutrality from 1701 until the Seven Years' War, when it sided with Great Britain.

—Jean-François Lozier

as well as for countless refugees who were displaced and dispersed, one of the war's outcomes was the formation of new social bonds and identities.

—Jean-François Lozier

Bibliography

- Anderson, Fred. *Crucible of War: The Seven Years' War and the Fate of Empire in British North America, 1754–1766*. New York: Knopf, 2000.
- Brooks, James F. *Captives and Cousins: Slavery, Kinship, and Community in the Southwest Borderlands*. Chapel Hill: Published for the Omohundro Institute of Early American History and Culture, Williamsburg, Virginia, by the University of North Carolina Press, 2002.
- Haefeli, Evan, and Kevin Sweeney. *Captors and Captives: The 1704 French and Indian Raid on*

Deerfield. Amherst: University of Massachusetts Press, 2003.

Lepore, Jill. *The Name of War: King Philip's War and the Origins of American Identity*. New York: Random House, 1999.

Richter, Daniel K. *The Ordeal of the Longhouse: The Peoples of the Iroquois League in the Era of Colonization*. Chapel Hill: University of North Carolina Press, 1992.

Cycle of Conquest—Iberian Expansion into the Pacific

The Pacific Ocean was an enigma to the European mind-set before the sixteenth century. While men such as Marco Polo had ventured to Asia, the journey had been undertaken overland, through the Eurasian landmass, and not by sea. In fact, the Portuguese entered the Pacific Ocean by sea only after the first incursions into India by Vasco da Gama in 1498. Da Gama's arrival in South Asia proved to be the edge that the Portuguese needed to corner the spice trade. Not only was India an important hub in the Asian market, but it was also where the Portuguese gained the knowledge of what lay east: the lands of the Pacific Ocean. This information encouraged them to continue to push east, to discover the source of these all-important spices. In 1509 Diogo Lopes de Sequeira was sent to Malacca in order to negotiate a commercial agreement with the sultan there. Sequeira sallied through Madagascar and stopped in Cochín to hire some Muslim sailors to guide him the rest of the way. His ship sailed through the Bay of Bengal and then went through the straits between modern-day Sumatra and Malaysia before landing in Malacca. Initially the encounter was amicable, and Muhammad, the sultan, allowed Sequeira to establish a factory for trade. However, the Muslim merchants already in Malacca did not appreciate the arrival of a new competitor and convinced the sultan that the Portuguese were up to no good. Muhammad then sent his forces to attack the factory, killing some Portuguese and taking others as prisoners. This prompted Afonso de Albuquerque to arrive in 1511. He freed the prisoners, conquered Malacca, and sent Muhammad into exile. Malacca was a strategic place, as it was the only trading post between India and

► ANTONIO PIGAFETTA AND HIS ACCOUNT OF MAGELLAN'S VOYAGE

Antonio Pigafetta (1491–1534) was an Italian scholar who accompanied Magellan on his voyage to the Pacific. Pigafetta kept a copious journal of all the events of the trip. Since he was one of the few survivors who returned to Spain in 1522, the journal was preserved. The following is the account of the expedition's entrance into the Pacific and the experiences of the crew as they ran out of supplies with no land in sight:

"On Wednesday, 28th November, we left the strait, and entered the ocean to which we afterwards gave the denomination of Pacific, and in which we sailed the space of three months and 20 days, without tasting any fresh provisions. The biscuit we were eating no longer deserved the name of bread; it was nothing but dust, and worms which had consumed the substance; and what is more, it smelled intolerably, being impregnated with the urine of mice. The water we were obliged to drink was equally putrid and offensive. We were even so far reduced, that we might not die of hunger, to eat each piece of the leather with which the main-yard was covered to prevent it from wearing the rope.

These pieces of leather, constantly exposed to the water, sun and wind, were so hard that they required being soaked four or five days in the sea in order to render them supple; after this we broiled them to eat. Frequently indeed we were obliged to subsist on saw-dust, and even mice, a food so disgusting, were sought after with such avidity that they sold for half a ducat a piece.

Nor was this all, our greatest misfortune was being attacked by a malady in which the gums swelled so as to hide the teeth, as well in the upper as the lower jaw, whence those affected thus were incapable of chewing their food. Nineteen of our number died of this complaint. . . . Besides those who died, we had from 25 to 30 sailors ill, who suffered dreadful pains in their arms, legs, and other parts of the body."

—Monique Vallance

Source

Adolfo Caso, *To America and around the World: The Logs of Christopher Columbus and Ferdinand Magellan* (Boston: Branden Books, 2001), 258.

the China Sea. The Portuguese presence in Malacca was established not to disrupt the trade but rather to profit from it. Therefore, the Portuguese did not raise the customs duties originally set by Muhammad. In this region the Portuguese were not interested in controlling the people but instead wanted to control the trade. Forts were built for the purpose of eliminating their rivals so they could dominate the area.

Two months after Albuquerque conquered Malacca, he sent out two of his lieutenants, Antonio de Abreu and Francisco Serrão, to make contact with other islands, namely the Bandas and the Moluccas. It was possible to make this round trip only once a year, as the monsoon winds blew east for only a certain amount of time. Abreu had more luck than Serrão with spices, as he returned with a boatload. Even though Serrão did reach the Molucca Islands, his ship wrecked on an uninhabited island. The crew was saved when a pirate ship landed to investigate the scene, and Serrão's crew managed to hijack the

ship and escape. Although Serrão did not return to the Moluccas, more Portuguese did land and dominated the trade as well. Over the next few decades the Portuguese constructed more forts around the East Indies but more to protect against Spanish incursion than to control the natives. Although the Portuguese traded with the rest of the islands in the region, they only established one more permanent trading station on the island of Timor (part of present-day Indonesia). Their bases in the islands allowed the Portuguese to establish trade in China and Japan as well.

Spain's introduction into the Pacific started from a different direction. Rather than approaching from the east as the Portuguese had, the Spanish entered from the west. The first Spanish explorer to traverse into the Pacific Ocean was Vasco Núñez de Balboa when he crossed the Isthmus of Panama in 1513. The settlement of Panama was then established in 1519, but it would be many years before the

Spanish concentrated on settling the Pacific coast. Because the Spanish nationals were busy attempting to find their fortunes, it was instead Portuguese subjects who explored the Pacific Ocean in the service of the Spanish Crown. In September 1519 Ferdinand Magellan left Spain with five ships and headed westward. The journey was a hazardous one. They sailed the expanse of the Atlantic before reaching Rio de la Plata in January 1520, where one of the ships mutinied. They traveled through the straits in Argentina, a 38-day voyage with harrowing winds, and came out into a tranquil ocean that they dubbed “the Pacific.” Unfortunately the happiness at reaching a calmer ocean vanished, as their supplies ran out. It took 14 weeks before they finally landed in Guam on the verge of starvation. However, the natives stole from them, causing them to call the archipelago the “Ladrones,” or the “Thieves.” A subsequent stop in the Philippines established the Spanish presence there but also caused Magellan’s death, as he was killed during battle with the natives. The two surviving ships west the Philippines and attempted to make the trip home. One sailed east across the Pacific, but the headwinds were too strong, and the ship was forced west again. The second ship sailed west and was successful in rounding the Cape of Good Hope to finally reach Spain in September 1522. The first ship eventually returned, leaving 13 survivors of the original 265 who set sail in 1519. Besides being the first expedition to circumnavigate the globe, it also gave the Spanish the opening they needed to compete with the Portuguese in the Pacific.

However, this incursion into the Spice Islands was not as profitable as Charles V had hoped. Several expeditions sailed into the Pacific, but they were all disasters. In addition, the Treaty of Tordesillas had ceded Asia to Portugal, and the Portuguese king was upset by the Spanish presence there. Finally, Charles signed the Treaty of Saragossa (1529) in which he renounced all claims to the Spice Islands and the agreement that Spanish ships would not venture west of the Molucca Islands in exchange for 350,000 ducats. Several more independent incursions came out of Spain in the next 40 years, but none were successful. The Portuguese bases

were too strong and all too easily blocked these rogues. Finally in 1564, Miguel Lopez de Legazpi sailed to the Pacific at the request of Philip II. Legazpi eventually landed on the island of Cebu, in the Visaya Islands, and it proved to be a strategic port for them. Philip had instructed Legazpi to use as little violence as possible in order to avoid the problems that had occurred in the Americas, but Legazpi was forced to use violence nonetheless in order to put down native resistance. In the end the Spanish focused mainly on the Philippines, although this was a continuing challenge. The threat of Chinese pirates was ever present, and the lack of slaves on the island made it difficult for the colonists to feed themselves, let alone produce raw goods. The Spanish Philippines only existed based on the financial assistance it received from Mexico, even down to the nineteenth century.

In the end, even though the Portuguese strongly dominated the Pacific throughout the sixteenth century, that dominance ended by the end of the century. The union of the two Iberian countries spelled a downfall for the Portuguese empire in Asia, as the various wars fought by Spain took men away from protecting that area. In addition, the rebellion of the Dutch gave them the freedom and incentive to attack the Spice Islands. Eventually they gained a foothold by the beginning of the seventeenth century, and 100 years later they had fully ousted the Portuguese despite the fact that the Portuguese had regained their independence in 1640.

—Monique Vallance

Bibliography

- Beaglehole, John Cawle. *The Exploration of the Pacific*. Palo Alto, CA: Stanford University Press, 1966.
- Camino, Mercedes Maroto. *Producing the Pacific: Maps and Narratives of Spanish Exploration (1567–1606)*. Amsterdam: Editions Rodopi, 2005.
- Kamen, Henry. *Empire: How Spain Became a World Power: 1492–1763*. New York: HarperCollins, 2003.
- Newitt, M. D. *A History of Portuguese Overseas Expansion, 1400–1668*. New York: Routledge, 2005.
- Winius, George. *Portugal, the Pathfinder*. Madison: University of Wisconsin Press, 1995.

Vitus Bering and Russia's Pacific Exploration, 1725–1742

By the end of the seventeenth century, Russia had conquered most of Siberia, from the Ural Mountains to the Pacific Ocean. The new territories were as yet barely known much less systematically surveyed, mapped, or colonized. In addition, as the explorers and conquerors moved to the northeastern tip of Siberia, important questions arose. Given the vast distances and long, slow travel from Moscow or Saint Petersburg overland to the Pacific coast, could a sea route that was not iced over be found? How far from Siberia were the Americas? Could Russia not claim northwestern America for itself? Tsar Peter I was eager to learn the answers to these questions, as he hoped to discover vast new sources of wealth to help support his expansive and costly ventures for the Russian state. Consequently, in the early 1720s as the Great Northern War with Sweden that had consumed so much of his attention and Russia's resources for the previous 20 years ended, Peter looked for ways to intensify Russian exploration and exploitation of Siberia and beyond into the Pacific.

On December 23, 1724, a matter of days before his death from pneumonia after a boating accident, Peter signed orders to the Russian Admiralty to send a Russian expedition to Kamchatka to undertake exploration of the Siberian coastline to the north. His successor, Tsarina Catherine I, fulfilled Peter's plans. The man chosen to lead the expedition was Vitus Jonassen Bering (1681–1741), a Dane who had served in the Russian navy with distinction throughout much of the Great Northern War. Bering was known to be a captain of wide experience and proven talent, although he was not familiar with the northern Pacific. In 1725 he set out with members of his expedition (including carpenters, blacksmiths, and coopers) to travel to Kamchatka and build two seagoing vessels with which to carry out his explorations. Traveling through dense forests and marshes, with little to no help from either the local authorities or central authorities, it took them more than two years just to reach their destination. They then built a ship, the *St. Gabriel*, and in July 1728

prepared to leave Kamchatka with a crew of 40 men and enough food for one year and head northeastward along the coastline in search of America. Bad weather, poor visibility, and a coastline that seemed clearly to bend westward prevented Bering and his crew from discovering the northwestern coast of the Americas as they sailed twice (to and from) through the narrow straits that later would become known as the Bering Straits. However, the presence of driftwood not indigenous to Siberia and birds flying east seemed to indicate that land was not too far off in that direction. In 1729 Bering sailed back south to Okhotsk and from there returned overland to Saint Petersburg to make his report.

Shortly after his return, Bering indicated to the new Tsarina Anna his desire to continue his explorations, specifically along the Arctic coast, with the objectives of both mapping it and finding a passable waterway to the Pacific. This already ambitious plan mushroomed into a massive undertaking that would fulfill Peter's dreams: to map not only the Arctic coast but also to discover the route to America and chart the northern Pacific and its islands all the way down to Japan. Ultimately, the intention of the Second Kamchatka Expedition, as it was modestly called to throw off suspicious and competitive European powers, was nothing less than to claim the entire northern Pacific, including the northwestern American coast, and all its wealth for the Russian Empire.

Not surprisingly, in light of its ambitious nature, this expedition, which later came to be called the Great Northern Expedition of 1733–1742, was the largest such undertaking by far up to that time, involving over 3,000 men and requiring multiple teams and complex planning, all of which Bering presided over. Despite enormous difficulties posed by both nature (Arctic conditions) and man (including inadequate funding from Saint Petersburg, lost ships, feuds among the crews) and the death of Bering himself on December 8, 1741, from scurvy and what was called “gas gangrene” of the intestines, the expedition succeeded in most of its goals. With its conclusion, much of Siberia and the northern Pacific and the entire Arctic coastline had been charted and mapped; northwestern America

was reached from the east; an infrastructure for the colonization of Siberia had been laid (with the construction of rudimentary towns, administrative offices, iron foundries, salt works, ports, and supply depots, etc.); and traders, craftsmen, peasants, exiles, and others began to come (or were coerced) to populate the new and distant lands of the Russian Pacific.

—Anita Shelton

Bibliography

Bobrick, Benson. *East of the Sun: The Epic Conquest and Tragic History of Siberia*. New York: Poseidon, 1992.

Lincoln, W. Bruce. *Conquest of a Continent: Siberia and the Russians*. New York: Random House, 1994.

British Exploration in the Pacific

While the Spanish had begun exploration and colonization of the Pacific as early as 1520 with Ferdinand Magellan's circumnavigation of the globe and the Dutch had begun exploration in the early 1600s, English navigators did not engage in significant exploration of the Pacific until centuries later. The great exception was Sir Francis Drake. The hero-adventurer-pirate from England had already made a name for himself attacking



Sir Francis Drake, sixteenth-century English explorer, after a portrait by Samuel Lane. (Library of Congress)

Spanish possessions and shipping in the Caribbean. In 1578 Drake passed through the Strait of Magellan and into the Pacific on a top-secret mission to both devastate Spanish shipping and possibly discover the western entrance to the as-yet-elusive Northwest Passage. After raiding several ports and taking many prizes from the unprotected and unprepared Spaniards, Drake sailed up the western coast of North America. He may have traveled as far as present-day British Columbia. Finding no passage, Drake sailed west, stopping first at an island that might have been Palau and then heading to Ternate in the Moluccas before heading back to England.

Although several other attempts to raid Spanish shipping were made, it was not until more than a century later that another English captain made substantial progress in the Pacific. In 1739 with the outbreak of the War of Jenkins' Ear between Spain and England, George Anson attempted to repeat Drake's Pacific exploits against Spanish commerce. Although the journey was fraught with hardship, he too would eventually circumnavigate the globe, exploring the Marianas Islands, especially Tinian, en route

➤ ANSON AND SCURVY

George Anson fully expected to devastate Spanish holdings in the Pacific in even more spectacular fashion than had Sir Francis Drake. Anson left England for his martial voyage in 1740 with nearly 2,000 men and eight ships. When he returned three years later, he had only one ship and just over 500 of his original crew. Although storms and battles with the Spaniards had taken some toll, nearly 1,000 of his men had died of complications resulting from scurvy, a disease caused by severe vitamin C deficiency that leaves those afflicted prone to life-threatening infections. In part because of this disaster, great steps were taken to change the diets of British sailors by introducing leafy greens and citrus fruits. Such was the revolution that among James Cook's sailors 25 years later, not a single man died of the disease.

—Gerrit Dirkmaat

to Macao on his homeward voyage. Several decades later in 1765, John Byron sailed west from South America and charted and landed on several islands in present-day French Polynesia, the Gilbert Islands, the Marianas Islands, and the Marshall Islands. Two years later the English made their first landfall at Tahiti when Samuel Wallis anchored there in 1767. The most important English explorer of the period, James Cook, landed in Tahiti in 1769 on a mission to make astronomic measurements that would aid in the understanding of longitude. Cook also circumnavigated New Zealand and charted the eastern coast of Australia. On subsequent sailings he discovered various islands and made the first European landfall on the Hawaiian Islands, where he died in an altercation with native islanders.

Despite the knowledge of the area that Cook's voyages secured, the British were relatively late European arrivals to the Pacific, and British extension of imperial power to the area

followed rather slowly. However, by 1788 a penal colony for British convicts, many of them Irish, had been established in Australia. Another penal colony was established on the island of Tasmania in 1803. By 1829 the whole of the Australian continent had been claimed by Britain.

—Gerrit Dirkmaat

Bibliography

- Barclay, Glen. *A History of the Pacific from the Stone Age to the Present Day*. New York: Taplinger, 1978.
- Bawlf, Samuel. *The Secret Voyage of Sir Francis Drake, 1577-1580*. New York: Walker, 2003.
- Buck, Peter H. *Explorers of the Pacific: European and American Discoveries in Polynesia*. Honolulu: Bernice P. Bishop Museum, 1953.
- Campbell, I. C. *A History of the Pacific Islands*. Berkeley: University of California Press, 1989.
- Haycox, Stephen, et al., eds. *Enlightenment and Exploration in the North Pacific*. Seattle: University of Washington Press, 1997.

■ Introduction: Europe's Wars of Religion

Many historians interpret the European wars of religion as a struggle between dynastic states. Yet Europe's age of religious strife must be characterized also in two ways: first, as the struggle between the Catholic majority and the religious minorities and second, as a manifestation of the contest between nations to assert political and military dominance. Most of Europe's dynastic leaders attempted to centralize their governments during this period, and many engaged in imperial conquests including invasion and colonization to accomplish their ends. Religious grievances provided justification for widespread violence and aggressive domestic policies. Consequently, nearly all of Europe was, at one point or another, engaged in the wars of religion.

When Charles V became the Habsburg Holy Roman emperor in 1519, he ruled over vast lands, including French Burgundy, the Netherlands, Austria, and Aragon and Castile. The Valois king of France, Francis I, formed an

alliance with Pope Clement VII and Henry VIII of England to counter Charles V. The Habsburg-Valois Wars were mainly concerned with checking the power of the Holy Roman emperor, and they were concluded with the Treaty of Cateau-Cambrésis in 1559. The advance of the Ottoman empire also posed a threat to the Habsburgs during this period but was halted in 1571.

About the time of the ascension of Emperor Charles V, the Protestant Reformation broke out. Martin Luther, unsatisfied with the dogma and administration of the Catholic Church, posted his Ninety-Five Theses on the Wittenberg church door in 1517. Luther developed a doctrine of salvation by faith alone and directly challenged Catholicism. Protestant movements began under Ulrich Zwingli and John Calvin, among others, and their immense popularity greatly troubled the Catholic population of Europe. Luther and Calvin did not advocate violent resistance against those who persecuted the followers of the Protestant faith; the early years

► THE ST. BARTHOLOMEW'S DAY MASSACRE, AUGUST 24, 1572

Considered by many historians to be the watershed of the French Wars of Religion, the St. Bartholomew's Day Massacre intensified the conflict between Protestants and Catholics and also radicalized Huguenot resistance-right doctrine. The assassination of the Protestant Gaspard de Coligny, the admiral of France, triggered a series of bloody events, most notoriously the massacre of August 24, 1572, that were to characterize the remainder of the wars.

Influential Catholics such as Catherine de Medici and the powerful Guise family feared that Coligny exerted too much influence over Charles IX. Meanwhile, the Peace of Saint-Germain (August 8, 1570), which offered moderate toleration to France's Huguenots, was under attack as more Catholics came to believe that the toleration of a heretical sect undermined both the state and the faith.

Coligny was in Paris to attend the wedding of Henry of Navarre and Marguerite when an assassin's shot wounded him. He decided to remain in Paris with a detachment of soldiers, but in the early morning of August 24, a Catholic holy day, the king's guard, led by the Guise and other Catholic noblemen, burst into his residence and murdered him and his bodyguards. Coligny's body was mutilated, dragged through the streets, and finally hung from a gibbet; his head was removed and sent to Rome.

Coligny's grisly murder triggered a month-long massacre of Parisian Huguenots by the king's soldiers, neighborhood militias, and armed nobility. Charles IX, whom many Protestants suspected of having a pivotal role in the death of Coligny, could not bring the slaughter under control. Not all Catholics approved of the massacre, and some provided shelter for the Huguenots who fled Paris,



St. Bartholomew's Day Massacre on August 24, 1572, painting by François Dubois. (Art Media/StockphotoPro)

but most approved of the violent steps taken to destroy the Protestant community.

Historians consider the bloody violence against men, women, and children during the St. Bartholomew's Day Massacre as a purging of religious tensions. Catholics expected to destroy the Huguenot threat through humiliation and desecration. They torched homes; engaged in sexual violence, thievery, and pillaging; and mutilated bodies, dumping them into the Seine as a crude reenactment of Catholic baptism. In the end, 2,000 Huguenots were murdered in Paris, and more than 30,000 were massacred in the provinces.

The St. Bartholomew's Day Massacre had a profound effect upon the Huguenot population. Many abjured their faith and returned to Catholicism out of fear, while others fled to lands more tolerant of Protestantism. And many became more willing to confront Catholic persecution directly and to defend their faith through violence.

—Breanna S. Griego

of the Reformation were less radical than they could have been. The Peace of Augsburg (1555) was accepted by Charles V and granted concessions to Protestantism. Under the principle of *cuius regio, cuius religio*, each prince or ruler could choose Catholicism or Lutheranism, but not Calvinism, as the religion of his kingdom.

Meanwhile, Spain was recognized as the most devout of the Catholic states in the sixteenth century. Philip II was an ardent defender

of his faith, and his powerful navy dominated the seas. The Netherlands, ruled by Spain, had a growing Protestant population. Philip installed the Duke of Alba to replace Margaret of Parma as governor of the Netherlands and suspended their constitutional procedures. The Duke of Alba failed to put down a revolt, and Philip II invaded once again. William, the Prince of Orange and leader of the revolt, became the champion of the Protestant Netherlands. He united both

the Catholics and the Protestants in an attempt to remove Spain from the Netherlands.

Philip II also kept his eye on England, which remained firmly Anglican under Elizabeth I. The Virgin Queen had sent troops to the Netherlands to help in their revolt against Spain. When Elizabeth I executed the Catholic Mary, Queen of Scots, Philip launched the Armada, a fleet of ships determined to remove Elizabeth as queen and to install Philip II as the new king of England. But the Spanish Armada was soundly defeated by the English fleets, and less than half returned to the Spanish ports partly due to stormy weather. In addition, the Treaty of Cateau-Cambrésis (1559) divided Italian lands between Spain and France and left the Spanish Habsburgs as the ruling house in Italy.

In France, the wars of religion (1562–1598) had a profound effect upon the state in terms of the development of constitutionalism and the triumph of absolutism. The Guises, a powerful noble family, saw the toleration of the French Protestants, or Huguenots, as a threat to their dominance in the affairs of the church and the state. Catherine de Medici, the regent for her young son Charles IX, had granted limited toleration to the Huguenots in 1562. But in 1572 she decided to organize an assassination attempt against Gaspard de Coligny, a Huguenot and the admiral of France. Upon his execution, much of the Catholic population lashed out against the Huguenots, and thousands were violently murdered in the St. Bartholomew's Day Massacre (August 24, 1572).

Catholics and Huguenots proceeded to take up arms in violent defense of their faith. When Henry of Navarre, a Protestant, became heir to the throne after the assassination of Henry III (d. 1589), many Catholics were terrified of the possible repercussions. The radical Catholic League appealed to Philip II for military assistance against Henry. Once he ascended to the throne, Henry IV converted to Catholicism and issued the Edict of Nantes (1598), which granted toleration to the Huguenots. Henry was determined to reunite France after the disastrous period of civil wars, and he allegedly stated, "Paris is worth a Mass."

The English Civil War (1642–1648), also known as the Puritan Revolution, was a struggle over constitutional, social, and economic issues.

Parliament claimed to have independent rights and authority. James I defended his absolute power in his work *True Law of Free Monarchy* (1598) and attempted to minimize the role of Parliament. After Charles I was beheaded on January 30, 1649, Oliver Cromwell established the republican Commonwealth. Cromwell initiated a program of strict discipline and enforced the Puritan code of morals. It ended in 1660 when the son of Charles I, Charles II, a skillful politician and gregarious ruler, was restored to the throne. The reign of Charles II saw the revival of the arts and literature that had been suppressed during the Commonwealth, not to mention the reinstatement of monarchical rule.

The Thirty Years' War (1618–1648) was the last of the major wars of religion. Beginning in Bohemia, the war spread throughout Germany, Sweden, and the Netherlands, and nearly every European country was involved to some extent. Although there were shifting alliances and varied goals during the period of the wars, it may be generally described as an alliance of Western powers against the growing influence of the Holy Roman emperor. The Thirty Years' War ended the period of warfare driven by religious passions. The Peace of Westphalia (1648) effectively ended the battles, was an important step toward religious toleration, and marked the beginning of the period of modern statecraft.

—Breanna S. Griego

Bibliography

- Brandi, Karl. *The Emperor Charles V: The Growth and Destiny of a Man and of a World Empire*. Translated by C. V. Wedgwood. New York: Prometheus, 1980.
- Chadwick, Owen. *The Reformation*. London: Penguin, 1990.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Elliott, J. H. *Imperial Spain, 1469–1716*. London: Penguin, 1990.
- Holt, Mack. *The French Wars of Religion, 1562–1629*. 2nd ed. Cambridge: Cambridge University Press, 2005.
- Kingdon, Robert M. *Myths about the St. Bartholomew's Day Massacres, 1572–1576*. Cambridge, MA: Harvard University Press, 1988.
- Knecht, Robert J. *The French Civil Wars, 1562–1598*. London: Pearson, 2000.

Russell, Conrad. *The Causes of the English Civil War*. New York: Oxford University Press, 1995.
 Wedgwood, C. V. *The Thirty Years War*. New York: New York Review of Books, 2005.

French Wars of Religion, the Prelude

By the first half of the sixteenth century, France had recovered from the population losses caused by the Great Plague as well as the political and economic destruction wrought by the Hundred Years' War. Under the charismatic kings Francis I (r. 1515–1547) and Henry II (r. 1547–1559), the French monarchy began reclaiming its power. In 1539 Francis placed all of France under the jurisdiction of royal law courts, facilitating further centralization of authority. The Valois kings of France waged intermittent wars against their rival Habsburgs, but the costs of war proved to be more than the French government could afford. Aside from heavy borrowing and increased taxes, Francis also sought to raise necessary funds through the sale of public offices and improved relations with the papacy. In 1516 he signed the famous Concordat of Bologna (1438), which revised the earlier Pragmatic Sanction of Bourges under which French rulers rejected the papacy's control over the French church and asserted their superiority over the appointment of bishops, thus diminishing the papacy's influence inside the kingdom. Under the concordat, Francis recognized the supremacy of the papacy over the French church but retained the right to appoint all French bishops and abbots, which provided the monarchy with a rich source of money. Signed a year before Martin Luther's Ninety-Five Theses, the Concordat of Bologna proved to be consequential, effectively establishing Catholicism as the state religion. Francis, a rather broadminded ruler, was later unwilling to abandon his advantageous compromise with the Catholic Church. The French monarchy's efforts to centralize royal authority faced strong opposition from the great nobles, especially three aristocratic families, the Guise (Catholic) and Montmorency and Bourbon (both Protestant) families, who sought to contain and limit royal authority. However, in the early sixteenth century the long-standing struggle between the Crown and nobles over dynastic power and economics was further

exacerbated by the newly developed religious discord between Catholics and Protestants. Lutheran ideas spread to France in the 1520s, and royal policy toward them varied between tolerance and suppression. Although most French noble families remained Catholic, a number of them converted to Protestantism. During the Habsburg-Valois Wars, Francis I supported the rebellious German Protestant princes within the Holy Roman Empire and remained tolerant toward Protestants in France. However, in 1534 following the Affair of the Placards, when anti-Catholic posters appeared in public places in Paris and in four major provincial cities, Francis came to view the Protestants as a threat and ended his conciliatory policies. Under Henry II Protestant persecution continued intermittently, escalating toward the end of his reign when, in response to the spread of Calvinism, the king created a new court to try Protestants for heresy. Still, by the time Henry died in 1559, Protestants numbered around 10 percent of France's population of 18 million. The Protestant communities were not evenly distributed in France, with the largest communities located in the southern provinces of the kingdom.

The death of King Henry II in a jousting accident in 1559 was followed by a period of royal weakness when the three sons of Henry II failed to provide the necessary leadership: first the ailing 15-year-old Francis II (r. 1559–1560), who reigned less than two years; then his 10-year-old brother Charles IX (r. 1560–1574); and finally the 22-year-old Henry III (r. 1574–1589). The young kings, both inexperienced and ineffective rulers, were dominated by their mother Catherine de Médici and an ultra-Catholic faction led by the brothers Charles (cardinal of Lorraine) and Henri de Guise. The French nobility exploited the monarchical weakness. Similar to the German princes, who adopted Lutheranism as a way to oppose Emperor Charles V of the Holy Roman Empire, the French nobles often converted to Protestantism as a means to secure greater independence from the Crown. Soon armed clashes between Protestant anti-Crown and Catholic royalist nobility began to occur in various regions of France.

In the spring of 1560 a group of disaffected Protestant nobles led by Jean du Barry, Seigneur de la Renaudie, made a failed attempt to gain

control of the young king Francis II by abducting him and arresting the Guise brothers. However, the conspiracy was discovered before it was implemented. The conspirators were executed, and their bodies were hung from the balconies of the chateau of Amboise. The Guise suspected the hand of the prominent Protestant grandee Louis I de Bourbon, Prince de Condé, who was arrested but later freed for lack of evidence. This event only further increased tensions between the two sides. In late 1560 the Protestants began to worship more openly and targeted Catholic churches throughout France, destroying stained-glass windows, statues, sacred vestments, etc.

In December 1560 Francis II died and was succeeded by his adolescent brother Charles X, with Catherine de Medici as his regent. Facing economic problems, internal turmoil, and continued conflict with the Habsburgs, Catherine chose to compromise with the Huguenots (as the French Protestants became known). In early 1561 she freed all religious prisoners and formed a council of clergy, led by Chancellor Michel de l'Hôpital, to seek ways of achieving civic peace. Yet in the subsequent Colloquy at Poissy (September–October 1561), neither the Catholic nor the Protestant side showed a willingness to compromise, instead revealing how far apart their interests diverged. Meanwhile, the Huguenots redoubled their activities, systematically attacking Catholic churches and destroying statues, crucifixes, and altarpieces. These attacks naturally triggered a Catholic response, and the Parlement of Paris ordered the houses used for Protestant meetings to be razed to the ground, while Catholic preachers called the faithful to arm themselves in defense of their faith.

In early 1562 the Crown made another attempt to quiet down increasing disorders and implemented the Edict of Saint-Germain, which allowed the Huguenots to worship publicly outside of towns and privately inside of them. However, on March 1, 1562, Duc de Guise, traveling with an armed escort, came across a Huguenot service in Wassy-sur-Blaise in Champagne and massacred the worshippers. News of the massacre caused great rejoicing among the Catholics while enraging the Huguenots, thus sparking the ensuing wars of religion.

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Bibliography

- Diefendorf, Barbara. *Beneath the Cross: Catholics and Huguenots in Sixteenth-Century Paris*. Oxford, UK: Oxford University Press, 1991.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Holt, Mack P. *The French Wars of Religion, 1562–1629*. Cambridge: Cambridge University Press, 1995.
- Knecht, R. J. *The French Wars of Religion, 1559–1598*. New York: Longman, 1996.
- Konnert, Mark W. *Local Politics in the French Wars of Religion: The Towns of Champagne, the Duc de Guise, and the Catholic League, 1560–95*. Burlington, VT: Ashgate, 2006.

French Wars of Religion, 1562–1598

The massacre of French Huguenot worshippers at a Protestant service on March 1, 1562, in Champagne led to a series of escalating religious wars in France. Between 1562 and 1598 eight wars (1562–1563, 1567–1568, 1569–1570, 1573–1574, 1576, 1577, 1579–1580, and 1585–1598) plunged France into a chaos of civic strife. Galvanized by religious zeal, both sides committed atrocities and sanctioned widespread property destruction. After the Third War (1569–1570), with neither side prevailing and both desiring to end violent conflict, the crown sought a new compromise, resulting in the Peace of Saint-Germain-en-Laye on August 8, 1570. The treaty allowed some concessions to the Huguenots (such as control of fortified towns and the right to hold public office) and stipulated the marriage of Marguerite (Margaret) de Valois, King Charles's sister, to Henry Bourbon of Navarre, one of the Huguenot leaders, who converted to Catholicism for this alliance.

On August 18, 1572, Marguerite de Valois was married to Henry of Navarre, and a large assembly of the Huguenot nobility came to Paris for the wedding. The festivities ended in violence. Starting on August 24, 1572, in what became known as the Bartholomew's Day Massacre, some 3,000 Protestants were massacred in Paris, while over the next six weeks Huguenot property was pilaged and thousands of Huguenots were killed throughout France; in total, probably some 10,000 to 12,000 Huguenots lost their lives in this bloodshed. The news of the massacre was welcomed by the Catholic powers, notably

Philip II of Spain, while Pope Gregory XIII issued a medal commemorating the event.

Despite inflicting heavy losses on the Huguenots, the Bartholomew's Day Massacre failed to destroy them completely. It did, however, reinvigorate their hatred toward Catholics and their resolution to prevail in this conflict. The war began in earnest in late 1572 and continued for the next 17 years. In May 1574 King Charles IX died. His successor, Henry III, negotiated the short-lived Peace of Monsieur (1576), which granted concessions to the Protestants. Yet it was denounced by Catholics, notably the Guise family, which formed the Catholic League with the goal of exerting authority over Henry III and pursuing a war to destroy the Protestants once and for all. The league considered Henry III as being too conciliatory toward the Huguenots and compelled him to rescind his concessions to the Protestants in 1577.

By now France's internal conflict had become a proxy war for foreign powers, which provided financial aid and occasionally military reinforcements. The Guise faction received support from the papacy and Spain, while the Huguenots were supported by England and German states. By the mid-1580s in an attempt to end the war, Henry III tried to convince the leaders of the Catholic League to accept a negotiated settlement with the Protestants. However, the Guise leaders, already exercising great influence in the country and desiring to supplant Henry III with a member of the Guise family, refused to accept the settlement, leading to increased tensions between the king and the Guise family. Dissatisfied with Henry III, the league helped organize the Day of the Barricades on May 12, 1588, during which the king was driven out of Paris and the Guise family effectively seized control of the government; this event set the stage for the "War of Three Henrys" involving King Henry III, Henri duc de Guise, and the Huguenot leader Henry of Bourbon. In December 1588 Henry III, although a devout Catholic, realized that the ultra-Catholic Guise brothers represented his greatest danger and had them assassinated at Blois. Enraged by the murder, the Catholic League called for regicide and waged war against the king. In desperation Henry III allied with Henry of Navarre, and having no offspring, the king declared Henry of

Navarre his heir. In July 1589 the league's wishes to kill the king were realized when a Dominican monk named Jacques Clément assassinated Henry III during an audience.

The assassination marked the start of the final stage of the French wars of religion. Although Henry of Navarre successfully rallied his Huguenot forces and inflicted a decisive defeat on the Catholic League's army at the Battle of Ivry (March 14, 1590), he could not achieve a decisive military victory. He understood that the resolution could be achieved only through political means and allied himself with a moderate group of Catholics, called the *politiques*, to put France's needs ahead of religious differences. He agreed to convert to Catholicism, reputedly stating that "*Paris vaut bien une messe*" ("Paris is well worth a Mass"). Although the league (with Spain's support) continued to resist him until the mid-1590s, Henry of Navarre succeeded Henry III and was crowned as King Henry IV of France at Chartres in 1594, establishing the Bourbon dynasty on the French throne that would reign until 1792. In 1595 Henry declared war on Spain in an effort to stop its continuing support of the Catholic League. In 1598 he issued the Edict of Nantes, which allowed freedom of conscience and equality of rights but allowed Protestants to worship only in locations where they had already established strong communities.

The wars of religion had a profound effect on the country, as France suffered three decades of religious conflict and civic strife. Agriculture in many areas was shattered, commercial life declined severely, and population losses were severe in areas where fighting had been fierce. The war had a great effect on the French monarchy, revealing its fundamental weaknesses. Therefore, Henry IV, a shrewd prince who according to a folksong "knew how to fight, to make love, and to drink," came to realize that he required absolute control to maintain social order in France and keep the nobility in check, paving the way for the French absolutism of the seventeenth century.

Although it is often assumed that the Edict of Nantes ended the wars of religion by resolving religious tensions in France, in reality it failed to do so. Despite remaining in effect for 87 years, the edict failed to normalize relations between

the Catholics and Protestants. The Huguenots, who received important concessions, were deprived of equal status with Catholics, and the Huguenots' right to worship remained restricted. Catholics detested the very fact of the Huguenot presence in the country. Denominational clashes thus occurred regularly throughout the early seventeenth century, and in the late 1620s Cardinal Richelieu used military force to suppress the Huguenots and remove their hard-won political and military rights. Eventually King Louis XIV revoked the Edict of Nantes in 1685.

—Alexander Mikaberidze

Bibliography

- Carroll, Stuart. *Noble Power during the French Wars of Religion: The Guise Affinity and the Catholic Cause in Normandy*. Cambridge: Cambridge University Press, 1998.
- Diefendorf, Barbara. *Beneath the Cross: Catholics and Huguenots in Sixteenth-Century Paris*. Oxford, UK: Oxford University Press, 1991.
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Holt, Mack P. *The French Wars of Religion, 1562–1629*. Cambridge: Cambridge University Press, 1995.
- Knecht, R. J. *The French Wars of Religion, 1559–1598*. New York: Longman, 1996.
- Konnert, Mark W. *Local Politics in the French Wars of Religion: The Towns of Champagne, the Duc de Guise, and the Catholic League, 1560–95*. Burlington, VT: Ashgate, 2006.
- Racaut, Luc. *Hatred in Print: Catholic Propaganda and Protestant Identity during the French Wars of Religion*. Burlington, VT: Ashgate, 2002.

English Civil War to the Interregnum

The English Civil War emerged as a result of the conflict between Charles I and Parliament in regard to his attempts to circumscribe and curtail the authority of the representative institution of the English realm in addition to his pursuit of forcing Anglicanism on his subjects. While imbued with the notion of divine right of kings to rule by grace of God, which he inherited from his father James I and was an acceptable notion of kingship, Charles I was at odds with the fiscal limitations imposed on him by Parliament. He

thus levied forced loans, and those who refused to contribute were imprisoned. Charles I did not realize that when Henry VIII gave Parliament the right to make him supreme head of the English Church, he gave Parliament a power over the Crown that they were willing to use to protect their rights as property owners and taxpayers. When he called a Parliament in 1628 to raise money, both the House of Lords and the House of Commons granted him funds in exchange for agreeing to the Petition of Right. The Petition of Right recognized that the king could not enact taxes or borrow without Parliament's consent. This situation infuriated Charles, and he governed without a Parliament for 11 years and continued to circumvent Parliament's power over the English purse by seeking loopholes to raise money, such as ship money. Ship money was originally a levy imposed on maritime counties and was used for the purpose of maintaining the Royal Navy, but Charles used it for his expenses outside defense. Moreover, he also infuriated English Puritans (English Protestants who disapproved of Catholic rituals in Anglicanism) by placing Archbishop William Laud as head of the Anglican Church; Laud immediately set about persecuting Puritans. Moreover, Charles I and Laud aggravated the situation by imposing the Anglican Book of Common Prayer in Presbyterian Scotland, effectively triggering a rebellion (1638–1640).

Charles I was forced to meet this threat by convening a Parliament in 1640 in an attempt to unify the realms amid a Scottish invasion after having dismissed a prior Parliament that refused to grant him funds. The Long Parliament, known as such due to its continuous session from 1640 to 1653, immediately outlawed Charles's extraparliamentary taxes and removed Laud from power. Some more radical members sitting in the Commons, mostly Puritans, were keen on extracting power from the Crown and granting it to Parliament, leading to divisions within that body and the emergence of a royalist faction. This is illustrative of the fact that moderates resisted the more radical Puritan objectives and remained loyal to the Crown, despite their disagreements with Charles I. When Charles attempted to arrest parliamentary leaders in 1642, he triggered the impending civil war.

THE LEVELLERS

Among the more militant factions of the radical Puritans in Oliver Cromwell's New Model Army were the Levellers (who according to their critics wanted to "level" all of society to the same status). The Levellers advocated the idea of popular sovereignty and legal equality amid the radical political culture developing within the English Civil War on the parliamentary side. While they were opposed to Charles I's absolutist designs, they also opposed the aristocratic privileges that many moderates on the parliamentary side retained, which were deemed to be at the expense of the majority of the population of England. In their pamphlets and literature (more notably in the *Agreement of the People*), the Levellers called for drastic political changes within the English realm to ensure their ideas regarding social and legal equality. However, they were eventually thwarted by Cromwell and his supporters and were excluded from power after Pride's Purge and the subsequent establishment of the Rump Parliament, along with other fringe groups such as the Diggers (who advocated the dissolution of private property) and the Fifth Monarchists (who preached an eschatological theory around the coming year 1666). Nonetheless, these factions are evidence of the myriad political movements that existed in opposition to the monarchical rule and aristocratic hegemony in English society.

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The initial years of the civil war (1642–1646) pitted the Parliamentary Roundheads (who cut their hair short in the Puritan style) based in London and the wealthy southeast against the Royalist Cavaliers, who were based in the northwest. While most engagements were indecisive in the early years, at the Battle of Marston Moor in 1644 a Scottish-Parliamentary force decisively defeated a royalist army under Prince Rupert. A devout Puritan officer, Oliver Cromwell, reorganized Parliamentary forces into the New Model Army, removing commanders with royalist sympathies and replacing them with strict Puritan leadership. The New Model Army defeated Charles's royalist forces at the Battle of Naseby (1645), subsequently taking the monarch prisoner. While the royalists were defeated, the next two years were spent attempting to make

a settlement with Charles. However, the Parliamentary coalition split up due to religious and ideological differences regarding the future of England. Scottish Presbyterians, Puritan Independents, and radical factions (Levellers and Diggers) all sought different ends regarding religious matters. The Scottish Presbyterians sought to turn the Anglican Church into a national institution with elected leaders akin to theirs. Independents rejected any form of a state church and advocated religious tolerations (except for Catholics). Levellers advocated for suffrage and popular sovereignty, and the Diggers pushed for the abolition of private property.

These divisions led to Scottish Presbyterians joining forces with resurgent Cavalier forces to fight for the king against Parliament, given that he had sent out feelers that he would accommodate their religious interests. However, Cromwell effectively crushed this attack and ended divisions within Parliament by staging a coup. Colonel Thomas Pride only allowed ministers of Parliament friendly to Cromwell to enter Parliament (Pride's Purge), effectively creating what was known as the Rump Parliament. This would also ensure the exclusion of more moderate members of Parliament who might oppose the execution of the monarch. Cromwell took the opportunity to deal with Charles I (now stripped of his title and referred to as Charles Stuart) and had him executed on January 30, 1649, decapitated by ax, thereby removing him as a source of contention for rebellion. Cromwell thereby instituted an English Republic, effectively ruling through the New Model Army and the Rump Parliament, which was in essence a military dictatorship, known to posterity as the Interregnum (1649–1660). In 1649 he conquered Ireland and then Scotland (1650–1651), ensuring English control of all the British Isles and eliminating potential dissent. In 1653 he disbanded Parliament and instituted himself as lord protector of England due to continuing divisions within that body. While he was hesitant to have himself made king, he and his family enjoyed the royal trappings of the Crown. Moreover, his taxation measures imposed on the realm to fund his wars were far more than those of his royal predecessor. Cromwell ruled in this manner until his death in 1658, after which his son Richard became the next and

final lord protector. Because Richard lacked military experience and Parliament continually ignored the army's requests for funding, the army demanded that he dissolve Parliament, a move that caused his resignation on May 25, 1659. By 1660, General George Monck forced the Rump Parliament to recall the Long Parliament to include those excluded during Pride's Purge. The Long Parliament dissolved themselves, and a general election was held for the first time in 20 years. In 1660 the Convention Parliament invited Charles's son to return to the throne as Charles II, thereby restoring the Stuart monarchy.

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Bibliography

- Hill, Christopher. *The World Turned Upside Down: Radical Ideas during the English Revolution*. New York: Penguin, 1984.
- Purkiss, Diane. *The English Civil War: Papists, Gentlewomen, Soldiers, and Witchfinders in the Birth of Modern Britain*. New York: Basic Books, 2007.
- Russell, Conrad. *The Causes of the English Civil War*. Oxford, UK: Clarendon, 1990.
- Smith, Lacey Baldwin. *This Realm of England, 1399–1688*. 8th ed. New York: Houghton Mifflin, 2001.

English Restoration to the Glorious Revolution

After the tumultuous English Civil War and the repressive Interregnum under Oliver Cromwell's dictatorship, the English Protectorate he established in Britain proved short-lived. Cromwell's son Richard proved unable to maintain the loyalty of the English military, despite his attempts to maintain the structure of his father's state, and he was quickly removed from power. The reinstatement of the mostly Puritan Rump Parliament followed in 1659 amid attempts made by Cromwell's former military leaders to assert control of the realm. However, these were thwarted by General George Monck, who would instigate the dissolution of the Rump Parliament and the election of the Convention Parliament, which invited Charles I's son, in exile at the time, to take the English Crown as Charles II and the third Stuart monarch. Through the Declaration of Breda issued by Charles II in 1660, he accepted

the English Crown, and the Convention Parliament retroactively proclaimed him king of England since the death of his father in 1649. The English Restoration effectively reinstated the Stuart monarchy in England but did not end the political and religious divisions prevalent within English society.

While the Act of Indemnity and Oblivion of 1660 did return a significant amount of lands to former royalist supporters of Charles I, it also instituted official state lenience to most Cromwellian rebels by granting them indemnity. Subsequently the Cavalier Parliament of 1661 instituted drastic political changes that ensured the primacy of Parliament in taxation policy and effectively protected the remaining royal properties confiscated by the rebels during the English Civil War and the Interregnum. However, religious issues remained contentious amid the reestablishment of the Anglican Church and the myriad divisions among dissident groups and crypto-Catholics in English society. The Act of Uniformity of 1662 forced the Anglican Book of Common Prayer on all clergy, effectively expelling those who did not comply, who were henceforth referred to as Dissenters or Non-conformists (who were mostly Puritans). The related legislation, the Corporation Act of 1661, which required an oath of allegiance to the Crown by town officials as well as acceptance of the rites of Anglicanism, and the Conventicle Act of 1664, which outlawed meetings of five or more people, were both attempts by the Cavalier Parliament to enforce Anglican uniformity in the realm. These acts, known collectively as the Clarendon Code after the unpopular chief minister and lord chancellor, the Earl of Clarendon Edward Hyde, were illustrative of the contentious religious politics of the Restoration period.

While Charles II attempted to reverse some of the gains made by Parliament and persecute Puritans, it was not to the same degree as his father. Charles II clandestinely promised to the French king Louis XIV to restore England to Catholicism in exchange for large subsidies. In 1670 Charles signed the clandestine Treaty of Dover with France in which Louis granted Charles a pension and a guarantee to send troops to restore Catholicism in England if so desired. In exchange Charles II would publically

THE POPISH PLOT

The Popish Plot was an episode in Restoration England that illustrated the level of religious animosity in society and the deep suspicions held against Catholics and the French by the English. In the early 1670s Anthony Cooper, the earl of Shaftesbury (former lord chancellor), used his position in the anti-Catholic Green Ribbon Club and the Whig faction in Parliament to stir suspicion of Catholic machinations against Anglican England. In 1678 a defrocked Anglican clergyman, Titus Oakes, made accusations against the queen, Catherine of Braganza, and her physician, disclosing their alleged plot to poison the king and lead a Catholic rebellion. A month later Charles II's negotiations for a pension with Catholic France were revealed, but since the king was infallible, his minister, Thomas Osborne, the earl of Danby, was impeached by Parliament. Despite Charles's dissolution of Parliament, amid the panic unleashed by Oakes and propagated by the Green Ribbon Club, ten people were tried and executed on charges of treason, and the queen was deemed a traitor. While Shaftesbury and the Whigs took advantage of the situation to attempt to pass the Exclusion Bill and prevent the ascension of the Catholic James II to the throne upon the king's demise, Charles used his royal prerogative to dissolve Parliament and prevent its passage. Nonetheless, this alleged plot is indicative of suspicions that most of English society held in regard to Catholics, and based on Charles II's negotiations with Louis XIV, these suspicions were not completely unfounded.

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declare for the Catholic faith when convenient (which he did on his deathbed in 1685 when no longer “convenient”). Despite these machinations, anti-Catholic sentiment, particularly as exhibited during the Popish Plot, remained strong throughout much of English society. This sentiment was exacerbated by the fact that Charles's Portuguese and Catholic bride, Catherine of Braganza, had been unable to produce an heir. Even though he was encouraged to do so, Charles refused to divorce his wife, which meant that the de facto heir to the throne was

his brother James II, whom most believed to be Catholic. Parliament was able to maintain its power, despite the development of party politics (proroyal staunchly Anglican Tories and antiroyal Whigs). Moreover, Nonconformists were too numerous and too powerful in English society to be dislodged and were expected to bow to Anglican authority. Upon Charles II's death in 1685, his crypto-Catholic brother James II assumed the throne.

The Glorious Revolution of 1688 was essentially the invitation of William and Mary of the Netherlands by Parliament to receive the English Crown and essentially remove James II from power. This occurred as a result of James II's alienation of both Anglican Tories and nonconformist Whigs through his attempts to restore Catholicism in England. Moreover, both his second wife, Mary of Modena, and his son James were staunch Catholics. In 1687 James II issued the Declaration of Indulgence, which allowed freedom of worship to Catholics and Nonconformists and also allowed them into the military and public office. This was an attempt to dislodge the power base of the Anglican establishment in Parliament, which had enacted the Test Act back in 1673 to keep non-Anglicans out of the military and government. Mary, as James's eldest daughter, held a claim to the English Crown and thereby became a legitimate contender. Mary was initially offered the English Crown, but William would not accept being a royal consort and insisted on ruling jointly with her on equal footing. James immediately fled to France after William arrived in England with his army in 1688, and Parliament declared James's abdication. Thereby William and Mary accepted the Crown with the condition that they accept the Declaration of Rights (Bill of Rights of 1689), which outlined English civil liberties and outlawed the excesses practiced by the Stuarts, severely curtailing royal power in England and ensuring the primacy of Parliament in the governance of the realm. The Act of Toleration of 1689 was enacted to ameliorate religious tensions in England by allowing freedom of worship to Nonconformists (Catholics were specifically not included). This episode is referred to as the Glorious Revolution because supposedly no blood was spilled in the change of government, but in fact there were

battles fought in England and Scotland as well as the Williamite War in Ireland.

—*Abraham O. Mendoza*

Bibliography

- Hill, Christopher. *The World Turned Upside Down: Radical Ideas during the English Revolution*. New York: Penguin, 1984.
- Hutton, Ronald. *The Restoration: A Political and Religious History of England and Wales, 1658–1667*. Oxford, UK: Oxford University Press, 1985.
- Pincus, Steve. *1688: The First Modern Revolution*. New Haven, CT: Yale University Press, 2009.
- Smith, Lacey Baldwin. *This Realm of England 1399–1688*. 8th ed. New York: Houghton Mifflin, 2001.

Thirty Years' War

The Thirty Years' War (1618–1648) was both a civil war within the Holy Roman Empire and a major intra-European war, with both religious and geopolitical objectives on the part of all belligerents. It was a civil war as a result of the Austrian Habsburg policy to assert centralized power over its Protestant domains, particularly in Bohemia where the conflict began, as well as to secure their primacy within the Holy Roman Empire. Moreover, it was an intra-European conflict that pitted Protestant Scandinavian states (Denmark and Sweden) in league with Bourbon France (which was Catholic) against the Habsburgs (both Spanish and Austrian) for hegemony in the region. While the first stage of the war was fought mostly by Germans against Germans, the latter stages were mostly engagements by foreign mercenaries at the whims of the highest bidder, destroying, pillaging, and raping in their path of destruction. Furthermore, while this conflict did exemplify religious objectives, it also was fought for state interests, albeit in the context of Habsburg-Bourbon geopolitical objectives.

As the heir of the Habsburg throne, Ferdinand of Styria was keen on reversing the policies of religious toleration of prior Habsburg monarchs in the now-Protestant familial landholdings. His policies in Bohemia resulted in the so-called defenestration of Prague on May 23, 1618, whereby two Catholic emissaries sent to enforce his policy were thrown out of

the window of Hradschin Castle, effectively deposing Habsburg authority. With the death of Emperor Matthias, Elector Frederick V of the palatinate was elected by the Bohemian rebels as King of Bohemia, infuriating newly crowned Holy Roman Emperor Ferdinand II. Frederick V and the Bohemian rebels counted on Protestant support, but it was Ferdinand who secured solid Catholic support from Maximilian (Duke of Bavaria) and fellow Habsburg Philip III of Spain in addition to Protestant support from the Lutheran Elector of Saxony. At the Battle of White Mountain in 1620, the Bavarians trounced Bohemian forces. By 1622 Habsburg forces and their Spanish and Bavarian allies had conquered Bohemia and the palatinate, thus depriving Frederick V of his German lands.

In spite of Protestant defeats, the war continued as a result of mercenary armies under the leadership of such men as Ernst von Mansfeld (1580–1626) and Albrecht von Wallenstein (1583–1634). Mansfeld had initially fought for the Spanish but switched sides and effectively fought for Frederick. Despite the defeat of his patrons, Mansfeld continued to march within

THE DEFENESTRATION OF PRAGUE

The outbreak of the Thirty Years' War, which wreaked havoc and devastation across central Europe from 1618 to 1648 and had long-standing structural causes, is attributed to the defenestration at Prague. Following the 1617 election of the Catholic Ferdinand as king of Bohemia, he attempted to institute Catholicism in the realm. On May 23, 1618, Protestant elites ruled against two Habsburg administrators for violating Bohemian freedom of religion, as guaranteed by prior Habsburg rulers. Both of them were subsequently thrown out of the windows of Hradschin Castle. While both men survived by allegedly landing in a dung heap, this act effectively meant the Bohemian repudiation of Habsburg rule. This event triggered a civil war with intra-European dimensions, characterized by religious and political objectives on the part of major belligerents and also illustrating the shift in motivations for major European wars toward geopolitical motives.

—*Abraham O. Mendoza*

Germany, living and looting in northwestern Germany. Maximilian kept his forces in pursuit of Mansfeld while harassing Protestant populations in their path. This brought Christian IV of Denmark into the conflict, as he saw himself as protector of his fellow Protestants in the north, albeit with no German allies. Danish forces were soundly defeated by the Bavarians at the Battle of Lutter in 1626. In the meantime, Ferdinand was actively scheming to create a centralized Habsburg state, reduce Protestant power, and enforce Catholicism throughout the realm. Moreover, he hired Wallenstein to pursue his enemies and reduce his reliance on Maximilian. Wallenstein chased Mansfeld out of Germany while his forces actively destroyed, pillaged, and raped along the way. By 1629 Ferdinand issued the Edict of Restitution, which was an attempt to eliminate Protestantism in the Holy Roman Empire and centralize Habsburg rule as a Catholic absolutist monarchy.

In 1630 Swedish forces under Gustavus Adolphus entered northern Germany under the pretense of defending Protestantism. Ferdinand had removed Wallenstein from power in an attempt to placate his subordinates in the Imperial Diet and ensure the succession of his son to the throne and aid for the Spanish Habsburgs against the Dutch and the French. In light of these developments, Catholic France subsidized Swedish forces, in spite of their religious denomination, against the Habsburgs. France entered the war in an attempt to thwart Habsburg expansionism. Adolphus secured alliances with Protestant Brandenburg and Saxony against their Habsburg overlord. By 1631 Adolphus crushed Habsburg forces at the Battle of Breitenfeld, reversing Catholic territorial gains made in the past decade. At the Battle of Lützen in 1632 Protestant forces defeated the Habsburgs, despite the battle death of Adolphus. Wallenstein returned to the fore and, while presumably fighting for the Catholic Habsburgs, looked for a better deal with the Protestants. In 1634 he was dismissed of his command and murdered by an Irish mercenary. Later that year Habsburg forces defeated the Swedes and their German allies at Nördlingen.

From 1635 to 1648 French and Swedish forces harried the Habsburgs in Germany without forcing any major engagements or decisive

battles. Mercenary contingents on both sides lay waste to German cities and towns, destroying, looting, raping, and devastating the local populations. This led to a drain in population, economic decline, famine, and a prolonged period of suffering for a significant portion of the German population. Roaming bands of mercenaries, in tandem with their accompanying camps, lived off the local population and its resources. Ultimately, peace was negotiated through the intra-European Peace of Westphalia of 1648. This peace ensured the continued fragmentation of the Holy Roman Empire, recognized that German princes had the right to choose the religion of their realms (Catholicism, Lutheranism, and Calvinism), and forever ended Habsburg ambitions to consolidate their power over the German lands. The Swiss Confederation and the Dutch Republic achieved their independence from the Holy Roman Empire. France, Sweden, Bavaria, Brandenburg, and Saxony all received some territorial compensation at the expense of smaller German states. The Habsburgs were able to consolidate their power in their ancestral homelands in Bohemia and Austria. However, what had begun as a religious war within the Holy Roman Empire, albeit to ensure Habsburg hegemony, ended as a primarily dynastic struggle between Bourbon France and Habsburg Spain and Austria.

—Abraham O. Mendoza

Bibliography

- Dunn, Richard S. *The Age of Religious Wars: 1559–1715*. 2nd ed. New York: Norton, 1979.
- Parker, Geoffrey, ed. *The Thirty Years' War*. 2nd ed. New York: Routledge, 1997.
- Wedgwood, Cicely Veronica. *The Thirty Years War*. New York: New York Review of Books, 2005.

Wars of Religion—The Eastern European Experience

Because eastern Europe had long been a religious borderland, the various Catholic, Orthodox, Muslim, and pagan (until the late fourteenth century) polities that fought each other often employed religious justifications for their wars. Despite this tension (or perhaps because of it), many of these states were multiconfessional and became fairly tolerant of religious minorities. Yet while the Reformation and Counterreformation

► THE THIRTY YEARS' WAR, 1618–1648

Although in part a religious struggle, dynastic alliances, the rights of nobles and burghers, and economic and territorial ambitions all played a role in plunging Europe into one of the bloodiest periods of its history. For the most part, however, those East European states outside of the Habsburg empire played only a minor role in the hostilities of 1618–1648. In fact, the year of the Peace of Westphalia marked the beginning of two decades of violent internal and external conflicts in eastern Europe.

The war began in Bohemia in 1618 with the defenestration of Prague in which Protestants demonstrated their dissatisfaction with the Catholic Ferdinand of Styria being placed on the throne by launching his officials out of the castle windows. Two years later, however, the Protestant Bohemians were crushed at the Battle of White Mountain. Those rebels who did not flee were executed, and their lands were taken over by Catholics loyal to the Habsburg regime.

The Protestant revolt against the Habsburgs in Hungary had more success, mainly because the

Hungarians were aided by the neighboring Protestant prince of Transylvania, a multiconfessional state nominally a tributary of the Ottomans. When Prince György Rákóczi I made peace with the emperor in 1645, he was able to secure some liberties for the Hungarian Protestants.

Dynastic and territorial ambitions also drew Poland-Lithuania into the war. King Sigismund III, son of the king of Sweden, had lost his Swedish inheritance in 1599 and spent much of his reign trying to regain it. However, despite the fact that Sigismund was Catholic and Gustavus Adolphus of Sweden was Protestant, these were not confessional conflicts but instead just one of a series of battles between Poland and Sweden for hegemony in the Baltic. When the two kings died in 1632, Poland-Lithuania made peace with Sweden and turned to defend its eastern and southern boundaries from Russia and the Ottomans, thus ending its direct involvement in the Thirty Years' War.

—Paul Milliman

in eastern Europe did not produce anything like the endemic confessional violence that swept through France in the late sixteenth century and the Holy Roman Empire in the early seventeenth century, religion played a key role in the wars that engulfed eastern Europe in the middle decades of the seventeenth century.

By the seventeenth century, most of eastern Europe was divided between four multiethnic and multiconfessional empires: Sweden, Poland-Lithuania, the Habsburg empire, and the Ottoman empire. A fifth state, Muscovy, was attempting to unify all Russian Orthodox subjects under its rule. The degree of religious liberty within these states varied over time, but for the most part religious minorities enjoyed some degree of freedom. For example, Christians and Jews within the Ottoman empire were regarded as *dhimmis*, protected peoples who paid a *jizya*, or poll tax, that entitled them to religious freedom. They were also afforded some degree of self-governance under the millet system, in which subject religious communities were

governed by their own religious leaders. In addition, the 1573 Confederation of Warsaw guaranteed religious freedom to the inhabitants of the Polish-Lithuanian Commonwealth.

During the first two decades of the seventeenth century, however, toleration of religious minorities began to break down. In the Holy Roman Empire a series of conflicts between Bohemian, Moravian, and Hungarian Protestants culminated in the violence of the Thirty Years' War (1618–1648). Ironically, the end of this war was just the beginning of widespread confessional conflict in eastern Europe.

In 1648, the year of the Peace of Westphalia, Bohdan Khmel'nyts'kyi led the Zaporozhian Cossacks in a revolt against Polish rule, with the intent of creating an independent Ukrainian state. Although a number of factors contributed to this rebellion, the Orthodox Cossacks claimed religious persecution as one of the main justifications for the war. Confessional conflict had been fomenting since the 1596 Union of Brest, which caused a schism in the Ruthenian

(modern Ukrainian and Belarusian) Orthodox Church between Uniates, who recognized papal jurisdiction, and those who did not. After the Cossacks crushed the Polish army in May 1648, they massacred or forcibly converted many Uniates, along with Catholics and Jews. In 1654 the Cossacks turned to Orthodox Muscovy for assistance, and the Pereiaslav Agreement cites the defense of Orthodoxy as Muscovy's justification for breaking the Eternal Peace of 1634 with Poland.

During the next two years, Poland-Lithuania was invaded by its Protestant neighbors to the north and south: King Charles X of Sweden and Prince George Rákóczi II of Transylvania. By the end of 1656, most of the Commonwealth had been partitioned between these Protestant and Orthodox states. The plundering of Catholic churches and harassment of the clergy prompted King Jan Kazimierz to proclaim the Virgin Mary as Queen of Poland in order to help incite his subjects to defend Catholicism. Ultimately, however, economic and geopolitical factors played a role in involving other European states in the conflict against Sweden and Transylvania. George II was killed in a rebellion against the Ottomans in 1660, while Charles's death in the same year resulted in the signing of a peace treaty between Sweden and Poland. The war between Poland and Muscovy, however, was not resolved until 1667, in part because some of the Orthodox subjects in Muscovy's newly conquered lands were wary of the tsar's domination of their political and religious liberties.

In the centuries following the Ottomans' conquest of Constantinople in 1453, Muscovite propagandists had begun to characterize Muscovy as the "Third Rome," the political and ecclesiastical center of true Orthodoxy. Therefore, at the same time that Tsar Aleksei Mikhailovich was expanding the boundaries of his state to incorporate the Orthodox subjects of Poland-Lithuania, he also undertook a series of bureaucratic and ecclesiastical reforms in Russia. As in the Western wars of religion, however, these policies were linked in the minds of his subjects as attacks not only upon their religious rites but also upon their political rights. Revolts followed, sparking a *raskol* (schism) between the reformers and the so-called Old Believers. By the 1680s, tensions had escalated to such an extent

that some communities of Old Believers began to practice mass suicide through self-immolation in order to resist the reforms. Although arriving later and following a course different from those in the West, the East European wars of religions thus proved to be just as devastating.

—Paul Milliman

Bibliography

- Evans, R. J. W., and T. V. Thomas, eds. *Crown, Church and Estates: Central European Politics in the Sixteenth and Seventeenth Centuries*. New York: St. Martin's, 1991.
- Frost, Robert I. *The Northern Wars: War, State and Society in Northeastern Europe, 1558–1721*. Harlow, UK, and New York: Longman, 2000.
- Maag, Karin, ed. *The Reformation in Eastern and Central Europe*. Brookfield, VT: Scholar Press, 1997.
- Sugar, Peter F. *Southeastern Europe under Ottoman Rule, 1354–1804*. Seattle: University of Washington Press, 1977.
- Tracy, James D., and Marguerite Ragnow, eds. *Religion and the Early Modern State*. New York: Cambridge University Press, 2004.

Habsburg-Dutch War (Eighty Years' War)

The Eighty Years' War, also known as the Dutch Revolt, lasted from April 1572 to April 1607 and from April 1621 to June 1647, effectively ending at the Peace of Münster in January 1648. While it was a conflict centered on Habsburg Spain's attempt to crush the Calvinist Dutch rebellion headed by the provinces of Holland and Zeeland and mostly fought in the Low Countries between Spanish troops and Dutch rebel armies, it had global repercussions in the context of Spain's wars against Bourbon France, Tudor England, and the Ottoman empire and colonial conflicts with the Dutch in Brazil, the Caribbean, and North America. Moreover, it is a religious war due to Philip II's reluctance to allow religious freedom for the Calvinist Dutch in the northern provinces, which spurred their desire for independence from the Habsburgs. Given that Spain was caught in several wars simultaneously for nearly a century (with the English, the French, and the Ottomans), it was never able to bring the war with the Dutch to a swift end

regardless of its financial and military potential. Moreover, the Dutch were never able to successfully remove the Spanish foothold in the southern Low Countries (Flanders and the Brabant) regardless of their growing military power and alliances vis-à-vis Spanish forces.

As dukes of Burgundy the Habsburgs held the Low Countries as a hereditary possession, which were divided into 17 autonomous provinces. The Low Countries were characterized by thriving mercantile and commercial towns as well as a cosmopolitan entrepôt that served as financial and distribution centers for trade in Europe, contributing to their wealth and exposure to external currents of thought. Under Charles V the Low Countries were allowed a significant degree of autonomy, given their economic importance in financing Habsburg wars on the continent. The States-General, under the control of local merchant families and aristocrats, held a considerable amount of independence from Madrid. Moreover, Protestantism (in its Lutheran, Calvinist, and Anabaptist variants) had made significant inroads in the expanding Dutch middle classes, regardless of Charles V's attempts to reverse these trends.

Upon the accession to the Habsburg throne by Philip II, he attempted to centralize direct administrative control in the Low Countries as well as hinder the growth of Protestantism, which incited resistance in his Dutch and Walloon subjects. He increased the number of bishops in the Low Countries from 4 to 18 and increased the power of the Inquisition, further infuriating the local Protestants, who responded by destroying churches in 1566. In 1567 the Duke of Alba, along with 10,000 Spanish troops, was sent by Philip II to impose order and eradicate Protestantism and regional autonomy. While they were able to crush religious and political resistance to Habsburg authority in the south, the north remained in opposition to Spanish incursions. In 1572 the 17 provinces, under the nominal leadership of the Prince of Orange, were in open armed resistance, and rebellion against Spanish rule effectively began. In April 1572 Dutch rebel ships succeeded in capturing ports in Zeeland and Holland, which at the time were Catholic regions in the north. At this time thousands of Protestant refugees

➤ THE SPANISH ARMADA AND THE DUTCH REVOLT

In 1586 Philip II planned an invasion of England to once and for all quash that heretical kingdom and reassert Catholicism in that wayward realm. To do so, he assembled a Spanish fleet in Lisbon that would sail to the Spanish-controlled Low Countries, pick up the crack troops of the Duke of Parma, and cross the English Channel to the Thames River. By 1588, despite a series of setbacks, the Invincible Armada was mobilized and embarked with 130 ships and 30,000 troops. Unable to make contact with Parma's forces, the Armada was left alone to engage the English fleet, composed of smaller and more maneuverable ships. The Armada, in a giant crescent formation, met the English fleet in the English Channel, but both sides were reluctant to engage in combat. The Armada, anchored in Calais, was attacked by English fire ships, leading the Spanish fleet to scatter at sea, breaking formation. The English fleet attacked with full force, using its smaller ships to further scatter the larger yet bulkier Spanish fleet. The "Protestant Wind" then pushed the remnants of the Armada out to the North Sea, chased by the English around Scotland and Ireland with scores of ships and thousands of troops lost along the way. Half the fleet managed to return to Spain but put England and the Dutch on the defensive against Habsburg power in the Atlantic, thus ensuring their cooperation and eventual Dutch independence.

—Abraham O. Mendoza

from the south moved to the north, fearing Spanish reprisals. In 1577 the provinces united under the Union of Brussels against the Spanish, but when the Duke of Parma's army began to defeat Dutch forces, the Walloons returned to the Habsburg fold (organized into the Union of Arras in 1579), forcing the Prince of Orange to reorganize the northern provinces into the Union of Utrecht in 1579. The States-General of the Dutch rebel provinces declared their independence from Philip II in 1581, establishing the United Provinces (also known as the Dutch Republic).

Despite Spanish military superiority, Philip II was never able to effectively dislodge Dutch military resistance, mainly due to other

simultaneous conflicts that impeded concentrating the full strength of Spanish power projection in the Low Countries. Spanish attempts to invade England (most notably the Invincible Armada of 1588), direct and indirect interference in the French wars of religion, and endemic warfare in the Mediterranean littoral with the Ottomans also preoccupied Philip II in what he saw as his religious Catholic duty in stamping out Protestantism and preventing the spread of Islam, albeit at heavy financial cost. In this context, the Dutch rebels were able to garner alliances with the English and the French and benefit from Spanish distractions in the Mediterranean with the Ottomans. However, this also prolonged the conflict because of the Spanish ability to secure control over the southern Catholic (mostly Walloon) provinces and to successfully defeat the Dutch in various operations using their crack troops. Dutch commander Prince Maurice of Nassau sought to reunite the provinces, but established religious divides between the north and the south prevented this from occurring. In 1609 the Dutch and the Spanish arranged a truce that lasted for 12 years, during which the Dutch consolidated their military, naval power, and wealth, essentially becoming a world power unto themselves vis-à-vis the Habsburgs in the Americas and European trade.

In 1621 when war between the Spanish (now under Philip IV) and the Dutch resumed, Dutch

naval power secured effective control over the coastal and river systems of the United Provinces as well as those of the southern provinces. While Spanish forces were able to successfully counter Dutch forces, they were never able to defeat them in a way that would reassert Spanish control. Spanish military decline in the Low Countries was largely related to its overall decline vis-à-vis France and England, which had exhausted Spanish resources in the New World and in Europe. By 1648 both Dutch and Spanish fears of Bourbon France, which now threatened to conquer the Dutch and was the Habsburgs' main antagonist, led to the end of the Eighty Years' War. In that year the Spanish conceded Dutch independence, regardless of nearly a century of attempting to reassert Catholicism and Habsburg authority in the region as well as maintain Spanish prestige as a world power. Inadvertently and indirectly, they had contributed to the consolidation of the Dutch provinces as a major maritime global power and economic powerhouse.

—Abraham O. Mendoza

Bibliography

- Dunn, Richard S. *The Age of Religious Wars: 1559–1715*. 2nd ed. New York: Norton, 1979.
- Elliot, J. H. *Imperial Spain: 1469–1716*. 2nd ed. New York: Penguin, 2002.
- Parker, Geoffrey. *Europe in Crisis 1598–1648*. 2nd ed. New York: Blackwell, 2001.

■ Introduction: Alliances of Convenience

Writing in the early sixteenth century, Italian political theorist Niccolo Machiavelli advised rulers that “the one who adapts his policy to the times prospers, and likewise that the one whose policy clashes with the demands of the times does not.” Such political flexibility was crucial to political or military success, and so it inevitably bred short-term alliances of convenience by which sides involved hoped to prosper. Thus, in 1536 many European rulers were surprised to hear about an alliance between France and the Ottoman empire. This

agreement, possibly the first official nonideological coalition between a Christian and Muslim empire, was clearly an alliance of convenience since it provided both states an opportunity to harm a common enemy, the Habsburg empire. Similarly, in the late fifteenth century an alliance was forged between Venice and the Aq Qoyunlu state against the Ottoman empire, while in 1622 Safavid Iran and England united their efforts against the Portuguese, whose commercial network in the Persian Gulf (and the Indian Ocean in general) they both desired to supplant. The

Spanish conquest of the Aztec empire would have never succeeded if not for an alliance that the Spanish established with Native American tribes, notably with the Nahuas and Tlaxcalteca, who were threatened by the Aztecs.

As a rule, such alliances were short-lived and broke down once their usefulness expired. Former allies could, in fact, find themselves on the opposite sides of newly formed political marriages of convenience. Thus, during the War of the Austrian Succession (1740–1748) France and Prussia united their forces against Austria, which was eventually defeated. Yet concerned about the rising power of the Prussian state, France willingly accepted the Austrian offer of an alliance and, following the Diplomatic Revolution of 1756, fought against Prussia during the Seven Years' War (1756–1763).

—*Alexander Mikaberidze*

Hormuz Hustle—The English-Persian Alliance Ousts the Portuguese, 1622

Under the auspices of the Portuguese crown, Vasco da Gama's voyage in 1497–1499 from Lisbon around the Cape of Good Hope to India established the all-sea route between Europe and Asia. With this voyage he initiated historical processes equally as momentous as Columbus: the entrance of various European powers to the Indian Ocean, which magnified the economic importance of India and neighboring lands for Europe, laying the foundations for a global Portuguese empire. Their Asian empire was administered from Goa (in India) by the Estado da Índia. It was in this context that one of the earliest Portuguese conquests was the kingdom of Hormuz.

The city of Hormuz was probably founded by Ardashir I (r. 224–241) of Persia and was mentioned by Ptolemy and later visited by Marco Polo and Ibn Batuta. By the tenth century it was a principal port and market, and an Arab ruling dynasty was established there around 1100. This was "Old Hormuz," situated on the Persian shoreline. Owing to repeated raids, the town was moved in 1300 to an island offshore. This became "New Hormuz," and eventually it was referred to as Hormuz. With its conquest of territories along the Arabian and Persian coastlines

of the Persian Gulf, the kingdom of Hormuz developed into a formidable regional power. Due to its location at the entrance (Strait of Hormuz) to the Persian Gulf, its role as a great trade emporium, and its mercantile links with India, Hormuz became rich and powerful, maintaining the largest navy in the Gulf. According to reports, it had the largest population in the Gulf region (approximately 40,000), who were from the lands stretching between India and Europe, enjoying religious toleration with a great diversity of Muslims, Christians, Jews, and Hindus. This was its situation when it was first encountered and conquered by the Portuguese in 1507 under Afonso de Albuquerque, though it was abandoned by them and reconquered in 1515.

After 1515 the kings of Hormuz were confirmed as vassals of the Portuguese king, paid tribute, and shared their customs revenues; in 1543 the Portuguese took control over the customhouse. Hormuz's kings were appointed by the Portuguese captain on the island. The Portuguese also conquered other sites in the region, such as Qishm, Bahrain, and Muscat, but Hormuz remained the most important of their possessions, as its strategic location and ample revenues from customs were unparalleled. However, it seems that Portuguese rule over Hormuz also set off a decline of its trade, as they imposed new duties and regulations, making shipping more costly, and were especially harsh with important traders who were minorities, including Jews and Hindus. As a result, new trade routes (sea and land) were created that bypassed Hormuz.

With the ascension to the Persian throne of Shah Abbas I (r. 1587–1629), considered the greatest Safavid ruler, the Portuguese faced a new threat. Abbas began to utilize the silk trade as a means to finance his expansionistic policies and centralize control over Persia. He captured Caspian silk-producing areas and redirected silk trade away from Ottoman lands and instead toward the Gulf; he also established a royal silk monopoly. This meant that the Gulf, as the access point to trade with the outside world, took on a new importance in Abbas's strategies, and Portuguese Hormuz was a major obstacle to his designs. The Persian conquest in 1602 of Bahrain, an island under the suzerainty of Hormuz and from which the Portuguese derived revenue

➤ A MERCHANT-ADVENTURER'S ACCOUNT OF HORMUZ

Ralph Fitch, a relatively unknown figure in the history of European explorers, actually holds the distinction of being the first Englishman to reach and return from India during a journey that lasted from 1583 to 1591. He could be classed as a merchant-adventurer, his travels having both exploratory and mercantile purposes while simultaneously promoting English national interests—including carrying letters (and no doubt instructions) from Queen Elizabeth herself—in the face of intense imperial and trade competition with the Spanish, Portuguese, Dutch, and French. As a matter of fact, Fitch was captured for a time by officials of the united crowns of Spain and Portugal, arriving at Hormuz as a prisoner and then taken to India. The hazards of his long journey resulted in his being the sole survivor of the original party to make it back to England. He wrote this description of Hormuz during his travels in the region in 1583.

“Ormuz is an Island, in circuit about five and twenty or thirty miles [about 45 kilometers], and is the dryest Island in the world, for there is nothing growing in it, but only salt. For their water, wood or victuals, and all things necessary, come out of

Persia, which is about twelve miles [19 kilometers] from thence. All the Islands thereabout be very fruitful, from whence all kind of victuals are sent unto Ormus. The Portugals have a Castle here which standeth near unto the sea, wherein there is a Captain for the King of Portugal, having under him a convenient number of soldiers. . . . In this town are merchants of all Nations and many Moors and Gentiles. Here is very great trade of all sorts of spices, drugs, silk, cloth of silk, fine tapestry of Persia, great store of pearls, which come from the Isle of Baharim [Bahrain] and are the best pearls of all others, and many horses of Persia, which serve all India. They have a Moor to their King, which is chosen and governed by the Portugals.”

—Peter C. Valenti

Source

Ralph Fitch, “Letters Concerning the Voyage of M. John Newberry and M. Ralph Fitch,” in Richard Hackluyt, *The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation*, Vol. 10 (Charleston, SC: BiblioBazaar, 2008), 29–30.

from its valuable pearl trade, arguably heralded the eventual doom of the Portuguese in Hormuz. Abbas's policies propitiously intersected with the aims and economic interests of new players in the Gulf, the English.

The English had been cultivating better relations with Abbas since the 1590s as part of newly invigorated mercantile interests in London with the weakening of Portugal after the Iberian Union of 1580, the English defeat of the Spanish Armada in 1588, and information garnered from the Asian journeys of Englishmen in the 1580s. It was felt that the moment was right to enter the Indian Ocean. After the formation of the East India Company (EIC) by charter of Queen Elizabeth in 1600, the EIC began sending trade missions to India, and English traders became active in the Gulf from 1616 to 1619; English factories (trading stations) in Persia were linked to a factory built in the Gulf port of Jask in 1619. English traders gained silk concessions

from Abbas and even made naval challenges to the Portuguese in the Gulf.

Meanwhile, Abbas was tightening the noose: challenging the Portuguese around the Gulf and interdicting supplies sent to Hormuz. However, Abbas did not have the naval forces to face the Portuguese on the seas. Abbas's commander of the actions against the Portuguese, Imam Quli, the khan of Shiraz, offered a deal to the English commanders of a newly arrived fleet at Jask in late 1621: in return for assistance in conquering Hormuz, the English would gain customs-free trade rights and half the spoils of Hormuz. The Persians would provide ground troops and pay for half the costs of the enterprise. However, the two versions of this agreement differ as to who would keep Hormuz's castle. Furthermore, according to English sources, hints were made that noncooperation with this campaign meant revision of English trading rights. While the EIC in London discouraged offensive military

adventurism and England was currently at peace with Spain (Spain and Portugal were united during 1580–1640), EIC representatives in Asia thought that this was a golden opportunity.

Thus, in early 1622 the combined forces first took the Portuguese fortifications in Qishm, cutting off supplies to Hormuz. From February to April they attacked Hormuz: British ships encircled the island, while Persian soldiers took the city and besieged the Portuguese castle. The Portuguese in the castle ran out of supplies and surrendered in May. Hormuz city was then plundered, with the Persians getting the lion's share; it seems that the English did not recoup enough to balance out their expenses, nor did they acquire the castle or its ordnance. When news of the campaign reached London, the EIC had to pay a fine to King James I for endangering Anglo-Spanish relations.

Although the Safavids were an instrumental part of this campaign, Richard Boothby, a merchant familiar with Hormuz, later criticized the campaign's outcome, arguing that Hormuz in its heyday did more trade than London and Amsterdam combined and that the English should have held it. Despite these issues, from the English perspective they successfully undermined Portuguese predominance in the Gulf and ingratiated themselves with the Persians. Both the Persians and the English, as well as the Dutch, continued to skirmish with the Portuguese in the Gulf, while the Portuguese never recovered from the loss of Hormuz, which was considered "the key to Estado da India." By 1650 they lost Muscat, their last major stronghold in the region. The English went on to become the dominant power in the Gulf until 1971. From Abbas's perspective, he removed his greatest trade rival. Hormuz city was dismantled, and the material was used to build his new port at Gombroon, renamed Bandar Abbas, which became the most important port in the Gulf for the next 150 years.

—Peter C. Valenti

Bibliography

- Floor, Willem. *The Persian Gulf: A Political and Economic History of Five Port Cities, 1500–1730*. Washington, DC: Mage Publishers, 2006.
- Floor, Willem, and Farhad Hakimzadeh. *The Hispano-Portuguese Empire and Its Contacts with Safavid Persia, the Kingdom of Hormuz and*

Yarubid Oman from 1489 to 1720: A Bibliography of Printed Publications, 1508–2007. Belgium: Peeters, in association with the Iran Heritage Foundation and Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian, 2007.

Steensgaard, Niels. *The Asian Trade Revolution of the Seventeenth Century: The East India Companies and the Decline of the Caravan Trade*. Chicago: University of Chicago Press, 1973.

Subrahmanyam, Sanjay. *The Portuguese Empire in Asia, 1500–1700: A Political and Economic History*. London: Longman, 1993.

Changing Sides—Authority and Loyalty in Early Modern Europe

Loyalty in early modern Europe was a complex idea that involved many factors. The notion of nationalism did not yet exist. Instead, Europe was regionalized during the medieval era and, as a result, remained so even during the early modern period. The centralization of power under the monarchs meant that the nobles lost much of their ancient powers and privileges, especially that of commanding militaries. Despite this, many people still maintained strong loyalties to the regional lords, which was an obstacle in the development of absolutism. This proved to be problematic for monarchs when they needed to recruit soldiers in times of war.

In the medieval era, loyalty was solidified with oaths and exchanges of services. Power was measured by the amount of land one owned, not necessarily by titles. The more land a noble owned, the more rents brought in and the more men he commanded. The feudal system and the oaths sworn meant that a lord could call upon his vassal at any time to request the men necessary to fight a battle or a war in exchange for the protection that their own power guaranteed. Therefore, the king or queen was always threatened by the nobles, who could gather troops at any time to form a rebellion. The development of the centralized state meant that the nobles technically lost this power to summon armies without the permission of the king. Instead, kings gained the loyalty of their nobles by bestowing titles and privileges on them. The creation of bureaucracies not only aided in the administration of the ever-growing government

➤ MAGELLAN—PORTUGUESE CAPTAIN FOR A SPANISH FLEET

In the sixteenth century Portugal and Spain were fierce rivals, competing over the oceans in an attempt to find better trade routes to Asia and its lucrative spices and commodities. These forays into the Indian Ocean caused a shift to begin in the European economy, from an agriculturally based one to a market economy. The introduction of capital lured many men into the oceans in search of personal fortune. However, those sailing for the Portuguese Crown did not have as many opportunities to gain vast amounts of treasure. All of the discoveries made by Portuguese sailors were claimed exclusively by the Portuguese Crown, and all commodities became a part of the royal monopoly. While the explorers usually received rewards and other benefits from the king, they did not receive any revenues from the discoveries.

Conversely, the Spanish Crown did not have a large amount of money to back such ventures, so private entrepreneurs, who received a return by earning percentages of the revenue of whatever commodities they found, mostly funded their explorations. The close control of the Portuguese

king over the trade and exploration routes sometimes caused conflicts between the Crown and its sailors. For instance, Ferdinand Magellan attempted to convince King Manuel I in 1517 to allow him to form an expedition with the purpose of discovering a westward route to Asia. The king denied this request; the Portuguese were making great headway in the Pacific and had no need to spend money on such a risky venture. Angered, Magellan went to Spain and eventually took his plan to Charles V, who agreed to partially fund the expedition, which departed in 1519 and eventually circumnavigated the globe (although Magellan died in the Philippines and never saw the voyage end). Magellan was not the only explorer who changed nationalities in order to either carry out an idea or to gain greater wealth than would have been possible at home. The option of privately funded ventures lured many to turn their backs on their native soil, therefore causing some to compromise loyalty to their king in exchange for individual gain.

—Monique Vallance

but also gave the monarch a vehicle for rewarding the nobles. However, the rewards gained by the nobles did not extend to the commoners, which created a crisis of loyalty in that section of society. No longer could a noble simply call up a garrison of men for fighting his causes; the causes now belonged to the king. However, the people would no longer fight without some type of reward. By the sixteenth and seventeenth centuries, men expected pay in order to serve in the army. This complicated matters for the royal treasury, as it amplified the cost of war. Now that coin rather than loyalty was what tied the men to the battlefield, it took a steady stream of coins to keep them there. The use of mercenaries also became more common during this period. As standing armies now became the norm, the need for soldiers grew faster than the populations could provide. However, mercenaries tended to be ruthless toward their adversaries, especially toward noncombatants. Mercenaries were notorious for pillaging villages, raping

women, and other sorts of crimes, especially when their payments were not timely. Soldiers were also known to desert whenever they did not receive their pay, which happened often.

Even during revolts, when it might be expected that the soldiers' primary concerns would be the cause rather than rewards, the men still expected to be paid, and sides won or lost based upon the amount of coin they had. In some cases rebellions needed the aid of larger, richer countries that could provide more troops and money to keep the war going. Oftentimes this provided monarchs with the ability to interfere and sabotage rival powers. For example, when the Dutch revolted against the Spanish at the end of the sixteenth century, England was able to send money and troops to aid the Dutch. This gave Elizabeth I the opportunity to both aid another Protestant country in rebelling against a Catholic one and to help sabotage the internal affairs of Spain, one of England's most bitter rivals. This could all be done without formerly

declaring war, and if the Dutch lost, then the English did not lose much. The French used this same tactic against the Spanish in 1640 when both Portugal and Catalonia rebelled. Cardinal Richelieu was quick to offer help to both of the rebels in the hopes that fighting against these two would tie up Spain and cause it to lose the Thirty Years' War.

The centralization of power and the growing bureaucracy that resulted also caused people to evaluate where their true loyalties lay. The size of the armies and number of wars were growing faster than the treasuries could keep up with, causing major financial strains on many of the larger kingdoms. Spain was especially vulnerable to these issues. The Spanish kingdoms had slowly unified since the reigns of Isabel of Castile and Fernando of Aragon, but the unification of the Iberian Peninsula was not complete until 1580, when Philip II managed to incorporate Portugal as well, although it was run as a composite kingdom rather than one unified entity. However, the pressures of added territories to guard overseas plus the ongoing Dutch revolt, Thirty Years' War, and Franco-Spanish War caused so much pressure on the royal treasury that it went bankrupt three times between 1580 and 1640. To the Count-Duke of Olivares, Philip IV's closest minister, the only answer was to tax the other kingdoms more in order to help pay the burden. This increase in taxes caused outrage among the Portuguese and Catalonians in particular, who both revolted in 1640. They objected strongly to the taxes because they still viewed Philip as a foreign king and resented having to fund the wars. The Thirty Years' War and the Franco-Spanish War also caused pressure on the French treasury, leading Cardinal Mazarin to increase taxes on the peasants and attempt to tax the nobles. The French nobles had enjoyed exemption from taxation as part of their ancient privileges. This attempt at taxation resulted in the Fronde, which lasted from 1648 to 1653. These revolts show that even after the medieval period was long gone, loyalty was still a question of perception: the claim of a king to a title was not enough to win the loyalty of his subjects. Ancient identities and loyalties were very hard to forget.

—Monique Vallance

Bibliography

- Benedict, Philip, and Myron P. Gutmann, eds. *Early Modern Europe: From Crisis to Stability*. Cranbury, NJ: Rosemont, 2005.
- Bercé, Yves-Marie. *Revolt and Revolution in Early Modern Europe*. Manchester, UK: Manchester University Press, 1987.
- Glet, Jan. *War and the State in Early Modern Europe: Spain, the Dutch Republic and Sweden as Fiscal-Military States*. New York: Routledge, 2002.
- Kimmel, Michael. *Absolutism and Its Discontents: State and Society in Seventeenth Century France and England*. New Brunswick, NJ: Transactions, 1988.
- Nexon, Daniel H. *The Struggle for Power in Early Modern Europe*. Princeton, NJ: Princeton University Press, 2009.

Dutch Policy in the East Indies

Dutch expansion into Oceania and Southeast Asia in the early seventeenth century was dictated by the mercantilist objectives of the States-General of the United Provinces of the Netherlands. Following the lead of the Portuguese, Dutch merchants were well aware that these regions were key sources of spices and other commodities that would be purchased at high prices back in Europe. The wealth of the United Provinces, which had significantly depended on textile industries and other forms of early manufacturing traded throughout much of Europe in prior centuries, had established a close connection between governing authorities and commercial interests. Thus, the expansion of the Dutch into what was the purview of the Portuguese brought with it a more aggressive foreign policy. Late in the seventeenth and early eighteenth centuries, English expansion into the region would also force the Dutch to engage militarily and diplomatically to protect their commercial interests.

In 1601 the Dutch States-General established the Dutch East India Company (Vereenigde Oostindische Compagnie, or VOC), which was effectively a trade monopoly and a de facto agent of the government. This occurred as the Dutch rapidly displaced the Portuguese as the major European commercial power in the region, more indicative of Portuguese decline in their economic influence

► THE DUTCH AND THE EAST INDIES— MODERN IMPLICATIONS

In light of the relationship between the Netherlands and the East Indies that began in the seventeenth century, control of this region served to ensure the continued self-importance of the Netherlands as a Great Power despite its decline vis-à-vis Britain, France, and Germany in the eighteenth and nineteenth centuries. Moreover, the East Indies was seen as pivotal, if not absolutely necessary, for the Dutch government throughout the seventeenth to twentieth centuries. Regardless of conquest by the French and commercial domination by the British, Dutch retention of the East Indies, until 1949, served to ensure its national pride. In spite of the loss of the East Indies in its decolonization of the mid-twentieth century, the influence of Indonesian culture is seen in the modern Netherlands in the form of cuisine and a sizable Indonesian diaspora.

—*Abraham O. Mendoza*

in the region than anything else. The VOC established contracts with suppliers in the Moluccas and other entrepôts in Indonesia, seeking to lock out their English competitors. The VOC was able to formulate treaties, seize land, and build fortifications and settlements. Conflict with English expansion in the region inexorably led to hostilities between the two European powers. Given the amount of wealth derived from the lucrative spice trade in the Moluccas and the greater East Indies, it was imperative for the Dutch to drive out the English and ensure their revenues. Given that the Dutch government shared the same interests as the mercantile elite, this meant war with England. Thus, Dutch foreign policy was mostly guided by commercial interests back in the Netherlands, directly tied to the highly influential commercial classes.

Moreover, in light of the necessity of trade wars with Portugal and England, it was also imperative for the VOC to form alliances with local authorities in the East Indies, which would prove to be not only loyal trading partners but also amenable allies in the struggle to oust other European powers in the region. This was done more effectively through securing contractual

obligations that essentially ensured trade only with the VOC so that England could not penetrate the same sources. Furthermore, this also ensured regional recognition of Dutch commercial and military supremacy in the region, at least with other European powers. The VOC, as a direct government agent, had the authority to conduct all these affairs, given that it was reflecting the commercial interests of a mercantilist-minded Dutch elite and governing authority. In light of ebbing English and French interest in the East Indies and their growing commercial expansion in South Asia, the Dutch slowly found themselves in almost full possession of the spice and commodity market of the East Indies by the late seventeenth and early eighteenth centuries.

In spite of their ability to secure a near monopoly of commercial hegemony in the East Indies, the Dutch were hard-pressed by the English in European and American markets. The English pursued a more aggressive stance militarily vis-à-vis the Dutch, triggering a series of conflicts known as the Anglo-Dutch Wars in the mid-seventeenth century. While these wars were fought primarily for reasons of trade, they also exhibited the growing European rivalries for global expansion in which the Dutch were directly involved in the East Indies and Surinam. In spite of these mostly European confrontations, the Dutch were able to retain their commercial empire in the East Indies, as the VOC had been able to ensure its security by providing steady supplies of commodities and revenue to the governing authorities back in the Netherlands. Nonetheless, these conflicts also made the Dutch aware that the English and the French could also hold sway over their own spheres of influence in South Asia, which were effectively held in the same manner by the English East India Company and the French East India Company (which would result in similar patterns of establishing local alliances in an attempt to oust competitors). In the eighteenth century South Asia would become an English commercial zone of influence, much in the same way as the East Indies were primarily Dutch, effectively following policies similar to those of the Dutch in regard to commercial and state interests.

—*Abraham O. Mendoza*

Bibliography

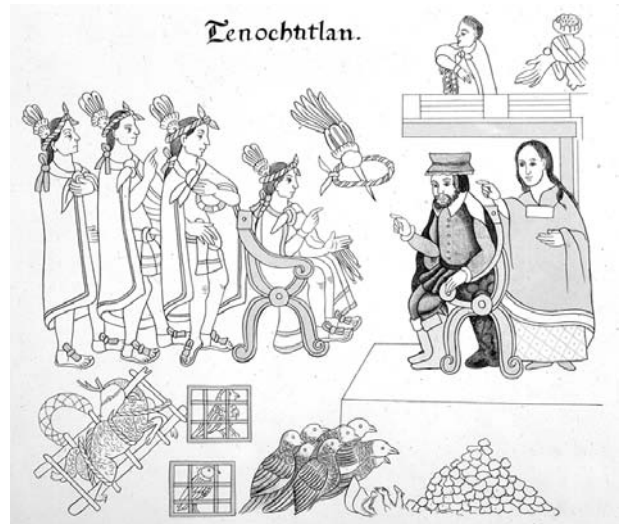
- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd ed. New York: Norton, 1979.
- Emmer, Pieter, and Femme Gaastra, eds. *The Organization of InterOceanic Trade in European Expansion, 1450–1800: An Expanding World; The European Impact on World History, 1450–1800*. Brookfield, VT: Ashgate, 1996.
- Prakash, Om, ed. *European Commercial Expansion in Early Modern Asia: An Expanding World; The European Impact on World History 1450–1800*. Brookfield, VT: Ashgate, 1996.

Dona Marina and the Conquest of the Aztecs

Dona Marina, also known as La Malinche or Malintzen, was an Aztec woman who played a key role in Hernando Cortes' conquest of the Aztecs. A convert to Christianity, Dona Marina was Cortes' interpreter and relayed his words to the Aztecs and other Native American peoples. Thanks to her, Cortes was able to build up a coalition of peoples who opposed Aztec domination and overthrew their empire. As a result, some later historians have portrayed her as a traitor to the Native American cause. The term *malinchismo*, derived from the Spanish nickname for Dona Marina, has come to mean a tendency to embrace foreign ideas and values while rejecting native ones. Others view her as one of the first citizens of the Mexico that was created by the conquest and as a strong and capable woman.

Dona Marina was born around 1504 in the Gulf Coast region of the Aztec empire. Her father was a chieftain. After he died, her mother remarried and had a son. Dona Marina's stepbrother replaced her in the succession, and she was sold into slavery among the Maya who lived near Cintla. Dona Marina soon learned Chontal Maya as well as her native Nahuatl, the language of the Aztecs.

Cortes and his expedition landed first on the island of Cozumel in 1519. They soon found a Spaniard named Geronimo de Aguilar who had been shipwrecked years earlier. From his time with the natives, he had learned the Maya language. Aguilar was able to direct Cortes toward the south, around the Yucatan Peninsula. They landed at Potonchan on the Gulf Coast. After a



Dona Marina translates between Cortes and the Aztecs, 1519, from Lienzo de Tlaxcala, sixteenth century. (The British Library/StockphotoPro)

battle with the local people, Cortes reached an agreement with the chieftain of Tobasco. He sent gifts to Cortes including 20 young women, among them Dona Marina. At first she was given to one of the other Spanish leaders. She converted to Christianity and received the name Dona Marina.

When Cortes pushed inland, he realized that the local people spoke not Mayan but Nahuatl. Aguilar was not able to translate for him. Cortes quickly found that Dona Marina could understand the language. From that point on, she remained close to Cortes. Aztec emissaries spoke to Dona Marina, who translated their words into Mayan for Aguilar. Aguilar in turn translated the words into Spanish for Cortes. The same awkward process was repeated when Cortes spoke to the Aztecs. Dona Marina soon learned Spanish, thus removing the need for Aguilar.

Dona Marina became Cortes' mistress as well as his translator. She was constantly by his side. In *The History of the Conquest of Mexico*, William Prescott claimed that Cortes was called "Malinche" (captain) by his men. By extension, Dona Marina became "La Malinche" (captain's woman). She bore Cortes a son named Martin Cortes who became the first recorded child of Spanish and Indian parents and, some historians assert, the first modern Mexican. The relationship between Cortes and Dona Marina seems to have been a deep one based on mutual respect.

She displayed a quick intelligence and ability as well as a deep devotion to her new faith. He refused other women offered to him on the campaign, and Dona Marina was regarded by Spanish and Indian alike as Cortes' alter ego.

Through Dona Marina, Cortes was able to gather much information about the Aztec empire. He realized that many of the peoples they dominated would be willing to join him to overthrow the Aztecs. After forming an alliance with the Totonac, Cortes moved on the Tlaxcalans, who had successfully resisted the Aztecs' conquest. After initial conflict, the Tlaxcalans negotiated an alliance with Cortes, thanks to Dona Marina. When Montezuma sent ambassadors with gifts to the Spaniards, Dona Marina interpreted their message and helped formulate Cortes' response. After Cortes and his allies reached Tenochtitlan in November 1519, Cortes and Montezuma met on the edge of the city. Again, Dona Marina served as translator.

Dona Marina continued to translate for Cortes in the negotiations that followed. He tried to convince Montezuma to accept Christianity and an alliance with the king of Spain. At a private meeting with only Montezuma, Cortes, and Dona Marina present, Cortes claimed that he had permission to place a cross and an altar in the main Aztec temple. An uprising followed, with Montezuma being killed in the fighting. The Spaniards fought their way out of the city on July 1, 1520. Nearly half of them died. Dona Marina reportedly rode on the same horse as Cortes during the retreat and survived.

The Aztecs failed to follow up their success, and Cortes rebuilt his army with Spanish reinforcements and Native American allies, such as the Tlaxcalan. His Indian allies remained loyal, thanks in part to Dona Marina. He returned and took Tenochtitlan after a five-month siege. Cortes spent the next few years pacifying the remainder of the country. When his wife arrived from Spain, Cortes arranged for a marriage between Dona Marina and a Castilian knight, Don Juan Xamarillo. Before she disappeared from history, Dona Marina was reunited with her mother and her stepbrother in 1523. She embraced them and forgave them for selling her into slavery. After giving them gifts, she sent them home.

—Timothy J. Watts

Bibliography

- Adams, Jerome R. *Liberators and Patriots of Latin America: Biographies of 23 Leaders from Dona Marina (1505–1530) to Bishop Romero (1917–1980)*. Jefferson, NC: McFarland, 1991.
- Henderson, James D., and Linda Roddy Henderson. *Ten Notable Women of Latin America*. Chicago: Nelson-Hall, 1978.
- Lanyon, Anna. *Malinche's Conquest*. St. Leonards, New South Wales: Allen and Unwin, 2000.
- Long, Haniel. *Malinche (Dona Marina)*. Santa Fe, NM: Writers' Editions, 1939.

European Traders and the Tupi in Brazil

Tupi (Too-PEE) refers to a common language spoken among numerous tribes who populated the coast of Brazil at the time of its discovery by the Portuguese in 1500. The word also applied to the natives who spoke this language, divided into tribes such as the Tamoyo (Tah-MOH-yoh) and Tupinamba (Too-pee-nahm-BAH). Their language was related to Guarani (Gwa-rah-NEE), spoken among the indigenous populations of southern Brazil, central Paraguay, and Bolivia. Tupi-Guarani was a lingua franca or common language for the inhabitants of this vast swath of eastern South America and served as a means of communication for barter and negotiation, which extended into the Andes and Inca territory using a complex network of footpaths.

The Tupi-Guarani did not have the same level of sociocultural development as that of Inca, Maya, or Aztec societies. Nor had the Tupi-Guarani developed complex organizations with permanent settlements, elaborate hierarchies, religious structures, or aesthetics. Rather, the Brazilian indigenous population functioned at a more basic level of social development, relying on seminomadic hunting and gathering for sustenance. Nonetheless, these societies were growing in population, increasing the density of occupation of fertile lands. The Tupi-Guarani had, for example, driven the Gê (Jay) Indians from the Atlantic coast into the Brazilian highlands and engaged in extensive, almost continuous, tribal wars.

In 1500 a Portuguese naval fleet landed along the northeastern coast of South America, claiming the land, which they initially thought was an

island, for their king. At the time, Portugal was among the leading maritime trading empires of the world and sought control of the eastern coast of South America for the wealth, particularly gold, that they hoped it would contain. Indeed, over the next several decades their Spanish rivals would find a wealth of precious and semi-precious minerals in Mexico, Central America, and the western coast of South America.

The indigenous tribe that the Portuguese encountered was the Tupiniquim (Too-pee-nee-KEEM). Initially the relationship of the Portuguese with this and other tribes would be peaceful. Indeed, a scribe on the Portuguese ships described the natives “as more comfortable with us than we with them.” The Portuguese ambition was not to extensively settle or occupy the lands they had already discovered in Africa and Asia. Their primary ambition was to establish coastal trading posts with fortresses if necessary, thereby obtaining products such as ivory, gold, slaves, spices, luxury goods, and other exotic materials for sale in Europe or other parts of their empire.

The land that the Portuguese found in South America offered little of exceptional commercial value except for one thing. A tree grew there in abundance from which a red dye could be extracted. Such a dye was much in demand among European cloth makers. The tree was named *pau-brasil* (POW bra-ZIHL) or brazilwood, a type of wood that, when processed, dyes to an emberlike tint. The finest-quality brazilwood, denominated “pernambuco,” was used in the making of musical instruments, especially bows for string instruments. The tree was harvested to such an extent in the Portuguese-occupied area of South America that the region came to be identified with it and known as “Brazil.” One of the oldest provinces from which brazilwood was harvested was Pernambuco. Indigenous groups felled and loaded these trees onto Portuguese ships in exchange for fabrics, trinkets, and other manufactures. In addition to the dyewood, the Portuguese also traded for exotic fauna, such as parrots and monkeys, that were of great curiosity in Europe. Several sailors remained in the newly found tropical land, establishing a tradition of miscegenation with the native population.



Tupis, indigenous Brazilians, harvest brazilwood for export in this scene by sixteenth-century Franciscan priest André Thevet. (Library of Congress)

A European rival, France, wished to break the Portuguese monopoly on this dyewood trade. France had a developed textile manufacturing and commercial system. Only a few years after the Portuguese discovery of Brazil, the French made advances into it, which they referred to as the “Land of Parrots.” They raided Portuguese ships laden with brazilwood. Attempting to establish a French colony, they settled an area south of the Portuguese near what is today the city of Rio de Janeiro. They traded with the Tupinambá (too-pee-nahm-BAH) and Tamoio (tah-MOY-yoh). To secure this trade, the French decided by the mid-sixteenth century to settle a colony there, using an island in the bay of Rio. The French considered this area France Antarctique (Antarctic or Southern France).

This French area lay between Portuguese-occupied areas of northeastern and southeastern Brazil. The Portuguese, in alliance with their indigenous trading partners, resolved to expel the French. A war ensued in which the French fought in alliance with their indigenous allies. The Portuguese were triumphant, expelling the French and in 1565 founding Rio de Janeiro as a Portuguese fortress and settlement.

By now, however, the economic role of Brazil for Portugal was changing. Rather than

➤ HANS STADEN AND THE TUPINAMBA

One of the earliest means by which Europeans of the sixteenth century learned of the indigenous populations of Brazil was through a book, *Hans Staden: The True History of His Captivity*. Published in 1557 in German, the work was by a German soldier who had sailed twice to Brazil on Portuguese ships. On the second voyage, in 1547, he was shipwrecked off the southeastern coast of Brazil. Surviving the shipwreck, he joined the artillery at a local Portuguese fort.

Tupinamba Indians besieged the fort in 1552, and Staden was captured. The Tupinamba were reputed for their cannibalism, and Staden assumed that they would also consume him. Cannibalism was considered a ritual way of conclusively defeating one's enemy and of absorbing that person's strength. Staden attempted various ruses in order to delay his fate.

He tried to explain to them that he was not Portuguese, the nationality of their enemy, but German. The tribal chief, however, did not understand or accept this distinction. Indeed, he

believed that Staden was trying to pass himself off as French, allies of the Tupinamba, when he was really Portuguese. Progressively learning Tupi, Staden used rudimentary medical skills to convince them of his power and usefulness to them. European diseases, however, liberated him. The Tupinamba fell victim to illnesses for which they had no immunity, and Staden thereby escaped.

Returning in 1555 to his homeland, two years later he published an account of his capture. The work became widely successful and was translated into various languages. It caused a sensation because of its numerous woodcut illustrations of cannibalism, depicting the Tupinamba stewing a human head or roasting a human body. Of more substantial and unique historical value, however, were what Staden recorded of the Tupinamba practices for food production and preparation, crafts, mating, family, religion, and social and political organization.

—Edward A. Riedinger

dyewood, sugar grown on vast plantations was proving much more profitable. Moreover, a better form of labor for such work became slaves imported from Africa. The indigenous population was alien to such settled, controlled labor, and its numbers had radically diminished. From hundreds of thousands settled along the coast, their numbers fell by an estimated 90 percent. This reduction occurred primarily because of exposure to European diseases to which the native population had no immunity. However, numbers were also reduced due to warfare with the land-hungry Portuguese. Their occupation of vast swaths of lands could not be checked by the Tupi-Guarani, who had scant defense against European weapons.

For the same reasons, the millions of natives who occupied the vast territory of modern Brazil, from the Atlantic to the Amazon River, were likewise decimated. Brazilwood itself fared little better. Within two centuries of their first harvesting,

tens of millions of trees had been felled. The tree is nearly extinct today, as are many of the remaining indigenous tribes in Brazil.

—Edward A. Riedinger

Bibliography

- Alencar, José Martiniano de. *Iracema: A Novel*. New York: Oxford University Press, 2000.
- Castro, Eduardo Batalha Viveiros de. *From the Enemy's Point of View: Humanity and Divinity in an Amazonian Society*. Chicago: University of Chicago Press, 1997.
- Clastre, Hélène. *The Land-without-Evil: Tupi-Guarani Prophetism*. Urbana: University of Illinois Press, 1995.
- Métraux, Alfred. *Historical Migrations of the Tupi-Guarani* [*Migrations historiques des Tupi-Guarani*]. New Haven, CT: Human Relations Area Files, 1970.
- Phillips, Richard F. "A Comparison of Observations on the Tupi." Master's thesis, University of Florida, 1981.

Thought and Religion

By the beginning of the early modern period, the religious and intellectual systems that governed most of the civilized world were centuries and in many cases millennia old. These systems organized the devotion of civilized and nomadic populations, served as bases for political legitimacy, dominated education, and provided the substance for the intellectual life of scholarly elites. Foremost among these religious traditions were Christianity in Europe, Ethiopia, and minority communities in the Middle East; Islam in a vast area stretching from central Asia to Indonesia to West Africa; Hinduism in India and offshoot cultures in Southeast Asia; Buddhism in much of Southeast, Central, and East Asia; and Confucianism in China and its East Asian cultural satellites. However, these “universal” religions and philosophies had not completely displaced older traditions of local worship, which continued in many parts of the world as well. These local religions, many of which incorporated shamanistic elements, were particularly strong among agricultural and hunter-gatherer populations and in the Americas, Africa, Australasia, and northeastern Asia. In Hindu India and China they persisted alongside the great religious systems.

Religion dominated intellectual as well as devotional life, although the great religions were joined by the tradition of ancient Greek thought, particularly the works of Aristotle, which played a central intellectual role in the Christian and Islamic worlds.

These great religious and philosophical systems were based on ancient and early medieval texts, many of which were written in languages that were no longer in daily use. Some of these ancient texts were sacred tomes that claimed divine inspiration, such as the Vedas of Hinduism, the Torah of Judaism, the Bible of Christianity, and the Quran of Islam. Some were more secular, such as the body of Greek philosophy, the Five Classics and the Four Books of Chinese Confucianism, or Judaism’s compendium of legal opinions, the Talmud. Each of these texts had also produced voluminous commentaries. To be a scholar was to master a set of ancient texts and the sacred languages in which they were written: Sanskrit for the Vedas, Hebrew for the Torah, Classical Chinese for the Classics, and so on. Buddhism and Christianity were more flexible about translating texts than were the other major traditions, for which the sacredness and authenticity of texts were embedded in the language in which they were written.

The class that interpreted these texts was the dominant intellectual and religious class in early modern societies. They included the priesthood of Christianity, Islam’s ulema, the scholarly Brahmins of India, and the Confucian scholars of China. Although state support underlay the power of these intellectual elites and the persistence of many of these

traditions, strictly speaking it was not necessary. Jews were a marginalized community throughout the world, yet without control of any state government they maintained a rich textual tradition and a professional intellectual class of rabbis. The Buddhist and Daoist traditions in China survived and sometimes even flourished despite the state's favoring of Confucianism.

The traditions also dominated the world of educational institutions, from the Confucian academies of China to the madrasas of Islam to the yeshivas of Ashkenazi Jewry and the church-affiliated universities of Christendom. The texts and languages of the classical traditions dominated the curriculum, and expertise in ancient texts was the mark of the educated man, as few institutions of higher education took much note of women.

Many societies were heirs of different, even conflicting, traditions. Latin Christendom was the heir both of the early Christians and of the "classical" tradition of ancient Greece and Rome. India had both indigenous Hinduism and imported Islam. China had the sometimes conflicting traditions of Confucianism, Buddhism, and Daoism. Japan had both a Buddhist and Confucian tradition imported from China as well as an indigenous tradition of "national" learning. In general, East Asians could participate in several religious traditions, while in the Western world religions were viewed as mutually exclusive.

Traditions were also divided. Islam was divided into the Sunni and Shia, and Christianity was divided into the Eastern tradition of Orthodoxy and the Western tradition of Roman Catholicism. Western Christianity would further fissure in this period with the rise of numerous Protestant groups, many of which would continue to subdivide. The intellectual dominance of the Neo-Confucianism of the Song dynasty

philosopher Zhu Xi would be challenged first in the Ming by the subjectivist and intuitionist school of Wang Yangming and then in the Qing by the antiquarian and philological *kaozheng* school. Buddhism, the most fragmented of the major traditions, was divided into the two large schools of the Mahayana and the Theravada and then into numerous smaller

Buddhism, the most fragmented of the major traditions, was divided into the two large schools of the Mahayana and the Theravada and then into numerous smaller schools, often fiercely at odds.

schools, often fiercely at odds. However, the early modern period was not marked by the growth of entirely new religions with the exception of Sikhism, an Indian religion that drew from the already-established traditions of Hinduism and Sufi Islam and established its own canon of sacred texts.

Not all religious leaders founded their authority on learning and textual expertise. Hindu ascetics, Sufi sheiks, and Christian preachers and mystics claimed a more direct connection with God. These figures often had difficulty with textually based authorities, as did those who interpreted texts in a nonstandard way, referred to as "heretics." Holy individuals, such as the Bodhisattvas of Mahayana Buddhism or the saints of Roman Catholicism, competed with and often triumphed over texts as objects of popular devotion. In Islam and Christianity, religious

authorities were often suspicious of popular devotion and called for a return to a religion based strictly on the text, a concept that underlay Protestant Christianity and numerous Islamic reform movements such as the Wahhabism of the eighteenth-century Arab reformer, Muhammad Ibn ab-dal Wahhab. Catholicism, Orthodox Christianity, and Buddhism tended to be more tolerant of devotional cults.

The scholarly traditions of religious and intellectual leadership were male traditions, and the charismatic tradition of religious leadership was male-dominated. The religious and intellectual professions were reserved for males, as were the major educational institutions. Women occupied a marginal intellectual role at best, although Catholic Europe and Buddhist Japan did provide an institutional religious role for them as nuns, where they had better access to education and ultimately to power.

The two traditions that were expanding the most rapidly in the early modern period were Western Christianity, in both its Catholic and Protestant forms, and Islam. Although Catholicism lost much of northern Europe to Protestantism, the expansion of Catholic empires—the Spanish and Portuguese in the beginning of the period and later the French—made it the first truly global religion, with a presence in every inhabited continent except Australia, of whose existence Europeans were ignorant. Catholicism's spread was also facilitated by dedicated members of religious orders who could engage in missionary efforts without the responsibilities of marriage and family and brought Catholicism to places where it could not be imposed by imperial force, such as China, Japan, Vietnam, and native communities in Canada. The new challenges presented by both globalization and the rise of Protestantism led to the creation of new religious orders, of which the most influential was the Society of Jesus, or Jesuits, who assumed a leading role in intellectual as well as religious life.

The maintenance of some degree of uniformity over this vast space of early modern Catholicism was eased by its unparalleled tradition of centralization, in which a small group of men in Rome were responsible for the direction of a worldwide church. The reaction to the Reformation actually strengthened Catholic centralism with the rise of institutions such as the Roman Inquisition and the Index of Forbidden Books as well as the definitive statement of Catholic doctrine issued by the Council of Trent. Uniformity in doctrine and to a lesser extent practice was actually rising. Despite the maintenance of Catholic uniformity, however, various local indigenous cults took root, such as that of the Virgin of Guadalupe in Mexico, which combined Catholic devotion to Mary with elements of pre-Columbian Mexican devotion to goddesses. Islam lacked Catholicism's central institutions but through such practices as the annual hajj pilgrimage to Mecca, which attracted devotees from all over the Islamic world, and the promulgation of Quranic Arabic, managed to also maintain a relatively high degree of standardization. Islamic unity was also aided by the Dervish brotherhoods such as the Nashqbandi, with branches from Turkey to China.

Catholicism's centralization also enabled it to be an effective religious persecutor, one of the few faiths to enforce a religious monopoly.

The expansion of Catholicism resulted in the effective end of indigenous American religious and intellectual traditions. Many Mexican and Central American documents were destroyed by the Spanish, who connected them with the Devil, and the practice of indigenous religious traditions was banned. Catholicism also opposed pluralism in Catholic

One of the Catholic Church's few rivals as an enforcer of religious uniformity was the Japanese Tokugawa government, which after turning against Catholic missionaries rooted out Japanese Catholicism over decades, leaving only a tiny isolated population.

societies. The rise of Spain and Portugal to world power was accompanied by the elimination of overt practicing Jewish and Muslim populations from the home countries. One of the Catholic Church's few rivals as an enforcer of religious uniformity was the Japanese Tokugawa government, which after turning against Catholic missionaries rooted out Japanese Catholicism over decades, leaving only a tiny isolated population. Protestant churches such as the Church of England also attempted

to enforce uniformity, as did the Shia Islamic Safavid Persian state but with less success. Other states such as the Ottoman empire, the Dutch Republic, and China maintained a high degree of religious tolerance, although no state lacked an official religion or treated all religious traditions on a footing of equality.

Although Protestant churches did not attain the global reach of Catholicism in this period, they too grew with the expansion of European empires. Protestant missionary efforts were handicapped by the fact that Protestant ministers, unlike celibate Catholic clergy, had family obligations. The most impressive example of Protestant globalism was the spread of British Protestantism in North America, where a broad range of Christianities flourished and some Native Americans were converted. Protestantism ranged from the Church of England in the southern colonies to the Calvinists of New England to the Quakers of Pennsylvania. The addition of non-British Protestantism, such as the Lutheranism brought by German immigrants, Roman Catholicism, and Judaism helped make British North America one of the West's most religiously heterogeneous communities.

Islam was also growing, although its path of expansion was slower, less dramatic, and more continuous with its medieval tradition than was Christianity's. Islam continued to grow in Africa, the Indian Ocean region, and Asia as well as moving into southeastern Europe with the expansion of the Ottoman empire. The eighteenth-century retreat of Islamic states did not in most cases mean the retreat of Islam, which proved able to survive in areas such as Russian or Chinese central Asia that had left Islamic sovereignty. Other religions that expanded in this period included a Buddhist sect, the Yellow Hat Lamaism of the Tibetan Dalai Lamas that expanded from its Tibetan base to east central Asia and Mongolia.

Although all areas were changing and developing religiously and intellectually, the most dramatic changes were occurring in the area of Latin Christendom. In addition to the Protestant Reformation and the global expansion of Catholicism, the West was also the area of

intellectual revolution. This began with the recovery of much of the classical corpus, particularly Greek works of philosophy and science, by Western “humanists” who despite the fact that many of them were priests based their claims to knowledge on secular rather than religious expertise. The revival of knowledge of classical Greek in the West, facilitated by the Byzantine decline that sent many Greek scholars westward, opened up an intellectual world. Incorporating this knowledge as well as the new knowledge being brought back from European explorers, conquerors, missionaries and settlers around the world required fundamental changes in the Western view.

Contact between intellectual and religious traditions was a two-way process, and direct contact with Westerners and the Western intellectual and religious tradition, often mediated by Jesuits, influenced the societies of Mughal India, Ming and Qing China, Japan, and other Asian societies. In eighteenth-century Japan where this process went furthest, Western learning provided a vantage point to criticize the historical dominance of Chinese thought and contributed to a growing intellectual pluralism.

By the late seventeenth century the West also had become more intellectually plural. Although virtually every thinker was either a Christian or paid lip service to Christianity, both ancient and modern secular models were increasingly influential. The religious divisions of the West tended to discredit religious repression and religious violence generally as well as promoted a secular scholarly study of the historical nature of religious texts with a contemporary Chinese parallel in the *kaozheng* movement. The Scientific Revolution and then the Enlightenment began to make a virtue of the break with the past and even the proclamation of religious unbelief. Thinkers such as the French Catholic René Descartes and the heretical Jew Baruch Spinoza proclaimed the entire ancient classical tradition as fundamentally in error in certain areas and, in Spinoza’s case, went on to question the religious traditions of Judaism and Christianity as well. One of the most dramatic aspects of the new thought of the Enlightenment was the fact that women were now able to play a public role as intellectuals and in a few cases, like the Italian Laura Bassi, even as academics.

—William E. Burns

■ Introduction: Invention and Innovation in Ways of Thinking

The early modern period was a great age of intellectual innovation. In European civilization, this was the period that spanned the Renaissance, the Protestant Reformation, the Scientific Revolution, and the Enlightenment. Numerous factors drove this wave of innovations. The printing press allowed for the more

rapid dissemination of texts and images in more accurate copies and drove an increase in literacy and the rise of new reading publics, which in turn drove intellectual innovation. Humanism led to the rediscovery and revival of numerous ancient texts, which in turn inspired new ideas. The rediscovery of the Greek language, assisted

by the Greek scholars who left Byzantium for the West during that empire's fifteenth-century decline, opened a dazzling range of new intellectual worlds. Ancient philosophies such as Platonism, Skepticism, Stoicism, and Epicureanism, ignored during the Middle Ages in favor of the Aristotelian tradition, were revived. Even the understanding of Aristotle was transformed. Catholics and Protestants, locked in a struggle for intellectual as well as religious supremacy, revolutionized the scholarly understanding of church history and theology.

Other civilizations also continued to develop their intellectual and religious traditions although not as dramatically as the Europeans. India saw the founding of a new religion, Sikhism, from the contact of Hinduism and Islam. New schools of Confucian thought emerged, such as the individualist “school of Wang Yang-Ming” and the antiquarian *kaozheng* scholars of the Qing period. The rise of the Dalai Lamas to power in Tibet was accompanied by the dissemination, sometimes by force, of the *gelugpa* or Yellow Hat school of Buddhism. Mulla Sadra in seventeenth-century Persia created a powerful intellectual synthesis of Shiite Islam, Aristotelianism, and mysticism that would influence Islamic philosophy to the present day.

The growing global contacts of the early modern period also drove intellectual innovation. Different cultures confronted each other's ideas. Traditional African cultures faced challenges from both Islam and the Christianity of the Europeans who established trading bases on the African coast. Chinese and Japanese intellectuals chose to reject or accept Christianity and in either case had to define the relation of the new ideas to the ones they learned from their own traditions. Jews, a community kept in constant motion by hostility of the societies they lived among, were exposed to different cultures and both originated and disseminated a wide variety of new ideas, from the mysticism of Rabbi Isaac Luria and the Safed Kabbalists in the Islamic Ottoman empire to the rationalism of Baruch Spinoza in the Christian Dutch Republic. European Christians, who instigated much of this contact, were faced with a flood of new information coming from all parts of the world, which somehow had to be integrated into their worldviews.

(European expansion led to the destruction of intellectual traditions as well as intellectual innovation. The intellectual and religious heritage of pre-Columbian American civilizations were largely lost in the European conquest.)

The combination of the revival of the ancient thought of the pagan Greeks and Romans in the European Renaissance and the increased contacts with the rest of the world in the Age of Discovery vastly broadened European awareness of other societies in both space and time. Exposure to ancient and foreign cultures tended to loosen the grip of Christianity on European intellectual culture, as did the increased importance of the divisions between Christians themselves in the Protestant Reformation and the era of religious wars that followed. European thought became increasingly secular. Writers such as the Italian courtier Baldassar Castiglione took a greater interest in the development of the individual in this world. The techniques of analysis of classical texts developed by European humanists in the Renaissance could be turned on the sacred texts of Christianity themselves, and although many who did this remained devout Christians, some saw the Bible as a secular text like any other. The competing claims of a variety of claimants to religious truth combined with the revival of ancient skeptical philosophy to produce a suspicion of all claims to intellectual and spiritual authority. Although few, even in the eighteenth century, were prepared to openly reject Christianity, European philosophies became increasingly based on reason rather than revelation. Seventeenth-century rationalist philosophers such as Spinoza and the Frenchman René Descartes presented their ideas as revolutionary innovations rather than continuations of classical or medieval philosophies. The success of science, particularly after the seventeenth-century Scientific Revolution, also lent prestige to intellectual innovation and secular thinking.

—William E. Burns

China's and Japan's Christian Centuries

During the early modern period, China and Japan experienced what historians refer to as Catholic centuries. In China, the era of Christian

conversion lasted from about 1600 to 1800, spanning the Late Ming (1348–1644) and early Qing (1644–1911) dynasties. Japan's Christian century, according to historian C. R. Boxer, extends from roughly 1550 to 1650, although the practice and proselytizing of Christianity was officially proscribed by the Tokugawa regime in the 1620s. While the conversion project was largely dominated by the Society of Jesus (or Jesuits), the Dominican and Franciscan orders also sent missionaries abroad to bring the gospel to East Asia and the Pacific.

While the resurgence of Catholic missions began as a response to the sixteenth-century Protestant Reformation in Europe, the scope of Counter-Reformation was clearly not limited to fighting heresy on the continent. The aggressive work of the Catholic missionary orders was part of a worldwide campaign to reinvigorate the Church's evangelical tradition by spreading the teachings of the gospel in areas of the world that had been more or less isolated from Europe until the early modern age of exploration. Because China and Japan were considered to be ancient, politically complex, and philosophically advanced civilizations, the strategies for conversion used in these countries differed widely from those used in the American hemisphere.

The Jesuits (founded in 1540) were especially effective in China, focusing their conversion efforts on members of the intellectual elite. Exploiting the philosophical similarities between Confucian and Christian ethics, the missionaries portrayed Christianity as a natural fulfillment of the ideas of humanity, filial piety, and virtue, long understood as the defining qualities of the Confucian gentleman-sage (*shi*). The Jesuits, whose missionary work was based on education, also represented the cutting edge of learning and technology for Chinese scholars. Their familiarity with mathematics, astronomy, mapmaking, and engineering and their seemingly prodigious ability to learn Asian languages earned them the credibility needed to capture the hearts and minds of the Chinese imperial elites. Matteo Ricci (1552–1610), Adam Schall (1591–1666), and Ferdinand Verbiest (1623–1688) were three Jesuits whose knowledge of Western science and appreciation for the subtleties of Chinese society made them



An illustration from a Chinese manuscript of the Jesuit missionary to China, Matteo Ricci, and his first convert. (Hulton Archive/Getty Images)

effective enough to be appointed to office in the Chinese court.

The Jesuit practice of accommodating Chinese traditional beliefs was also evident in the definition of God. While the Chinese had long worshiped a deity known as Shangdi ("Highest Lord") and venerated the idea of Tian (Heaven), the idea of a transcendent Father-God was nevertheless alien to Chinese thought. The term "Tianju" ("Lord of Heaven") was employed to invoke the omnipotence of the Christian God, an expediency that ultimately failed to do justice to either the Christian or Chinese ideas of a supreme deity.

All told, more than 1,000 missionaries worked in China during the seventeenth and eighteenth centuries, and they succeeded in gaining roughly 250,000 converts. Among these were the so-called Three Pillars of the Christian Church—Wu Guangqi (1562–1622), Li Zhizao

(d. 1630), and Yang Tingyun (1557–1627)—all scholars who saw in Christianity not only a doctrine of salvation but also the core of an elevated intellectual tradition.

The fortunes of Catholic missions began to decline in the late seventeenth century. The famous Rites Controversy, which pitted the Jesuits against fellow Catholic missionaries and opened a permanent schism between Rome and the Chinese court, is the event that defines the ultimate failure of Catholicism in China. Essentially, the Rites Controversy was an argument between Rome and the Qing court concerning the participation of Jesuit priests in official Confucian rites. Friar Ricci himself had defined these rites as civil rather than religious ceremonies, removing any sacramental impediment for Chinese Christians to join them. For decades, the Jesuits had endeared themselves to the bureaucratic elites by their open attitude to Chinese traditions. So successful were the Jesuits in embracing the aesthetics of the Chinese elite (wearing Confucian dress, speaking Chinese, assuming Chinese names and titles, and permitting the rites of ancestor veneration) that they were accused of paganism by rival orders, such as the Franciscans. When Rome attempted to rein in the ecumenism of the Jesuits and curtail the ancestor veneration by Chinese Christians, the emperor Kangxi (r. 1654–1722) moved to restrict Catholic worship in China by expelling all priests who refused to recognize the rites. His son, the emperor Yongzheng (r. 1723–1735) went even further, ordering all priests to be confined in Canton and Macao, effectively banning the Christians from missionary activity throughout the country from 1724 on.

The Jesuits came to Japan as early as 1549 and, under the leadership of Francis Xavier (1506–1552), achieved some success during a period of great violence and political fragmentation. The Japanese missionary project, of shorter duration than China's (Catholicism was banned in 1614 and violently suppressed thereafter), was marked by its own unique conversion strategies. Making their appeals largely to mutually antagonistic warriors, the missionaries insinuated themselves in local politics and economic activities and assisted local rulers in the acquisition of European weapons and manufactured products.

Accordingly, the so-called Christian Century in Japan is often portrayed somewhat cynically, with Jesuits fulfilling the role of anti-Buddhist power brokers. Among the realities that give credence to this portrayal is the fact that each of Japan's great Sengoku (Warring States) hegemons cautiously supported Christianity during their respective campaigns to unify the country. Oda Nobunaga, Toyotomi Hideyoshi, and Tokugawa Ieyasu all sponsored the activities of Christian missionaries but arguably only to the extent that this sponsorship served their own political goals. As Japan moved closer to political unification in the 1590s, finally attaining unification in 1600, Christianity became increasingly perceived as an alien faith and a threat to the stability of the realm. In 1637 a violent social protest led by peasants and disenfranchised samurai broke out in Shimabara (southern Japan). Because many of the rebels marched under Christian flags, the Tokugawa government blamed Christianity for the insurrection and put it down with great brutality. In the following decade, the shogunate moved with deliberation to end diplomatic and economic relations with Western countries, using fear of Christian contamination as a core rationale for a long-lasting policy of isolation. Compared to that of China, Japan's era of Christian conversions was relatively short-lived. It would be wrong, though, to underestimate either the influence of Christianity on Japanese historical development in this period or the religious zeal of the Japanese Christians. The ferocity with which the Tokugawa regime attacked Catholicism, to say nothing of the devotion with which hundreds of martyrs went to their deaths, suggests that the roughly 200,000 converts to Christianity in early modern Japan were indeed sincere in their conversions and in the practice of their faith.

—Eric Cunningham

Bibliography

- Boxer, Charles Ralph. *The Christian Century in Japan, 1549–1650*. Berkeley: University of California Press, 1951.
- Brockey, Liam Matthew. *The Jesuit Mission to China, 1579–1724*. Cambridge, MA: Belknap, 2008.
- Cooper, Michael. *Rodrigues the Interpreter: An Early Jesuit in Japan and China*. Boston: Weatherhill Books, 1994.

- Cummins, J. S. *A Question of Rites: Friar Domingo Navarrete and the Jesuits in China*. Brookfield, VT: Ashgate, 1993.
- Elison, George. *Deus Destroyed: The Image of Christianity in Early Modern Japan*. Cambridge, MA: Harvard East Asian Monographs, 1988.
- Golvers, Noel. *The Christian Mission in China in the Verbiest Era: Some Aspects of the Missionary Approach*. Ithaca, NY: Cornell University Press, 1999.
- Spence, Jonathan D. *The Memory Palace of Matteo Ricci*. New York: Viking, 1984.
- Waley-Cohen, Joanna. *The Sextants of Beijing: Global Currents in Chinese History*. New York: Norton, 1999.

Resolution and Composition— The Beginnings of the Scientific Method

The Scientific Revolution of the late sixteenth and seventeenth centuries dramatically transformed how Europeans conceived of the natural world and their own place in it. Scientists and scholars utilized the scientific method developed by Francis Bacon (1561–1626) and René Descartes (1596–1650) to decipher the natural world and to understand the inner workings of the body, the Earth, and the universe. The new approach endorsed by Bacon and Descartes introduced a process that liberated scientists from the antiquated philosophies of Ptolemy and Aristotle and from the faith-dominated paradigm of the churches and enabled them to investigate the physical environment in order to transform science and technology for the benefit of humanity.

In *Novum Organum (The New Instrument)*, published in 1620, English philosopher Francis Bacon encouraged scientists to work through an inductive method. Bacon's a posteriori approach moved from examining particulars toward a general theory or from specific experiments to theories that would guide scientists toward further experimentation. He advocated that scientists conduct rigorous experiments, observe the findings and collect data systematically, and share their findings with other scientists in order to accumulate a body of knowledge that a scientific community could expand on. Bacon's method was flawed, however, by its empirical emphasis, which did not encourage the abstract thinking

necessary in the emerging fields of mathematics, physics, and astronomy.

Whereas Bacon emphasized an empirical and inductive approach, French mathematician and philosopher René Descartes presented the scientific method as an a priori means for developing theories, working from the general to the particular. Descartes's *Discourse on Method*, published in 1637, proposed guidelines for deductive reasoning that mathematicians and physicists could utilize to delve into abstractions. In order to understand the complex composition of the natural world, he maintained, scientists must examine the most basic elements that made up the physical world and deduce from these features principles that would give meaning to greater abstractions. He suggested, therefore, that scientists should pursue general laws that systematically explained the natural world and from these move on to uncover particulars.

Bacon and Descartes proposed variants of the scientific method, but both were limited in their scope and knowledge of the day-to-day workings of scientists in the field. Bacon's conception of science was so procedural that he dismissed abstractions and generalizations, causing him to ignore the strides being made in the astronomy and physics of his day. He condemned scholars such as Galileo Galilei (1564–1642) for explaining motion in mathematical formulas because their thinking was too abstract. For his part, Descartes had little experience in experimentation and became caught up in his own theoretical assumptions. He too criticized Galileo but for being far too empirical and not sufficiently abstract in his explanations.

Despite their different approaches, Bacon and Descartes contributed to a significant change in the intellectual climate of seventeenth-century Europe. The dissemination of the scientific method contributed to the growth of collaboration in scientific societies that were subsidized by governments. British monarch Charles II (r. 1660–1685) chartered the illustrious Royal Society in 1662, and French chief financial official Jean-Baptiste Colbert (1619–1683) under Louis XIV (r. 1643–1715) subsidized the Académie des Sciences in 1666. Esteemed scientists such as Galileo and Isaac Newton were members of these prestigious organizations in

► NICHOLAS COPERNICUS, EXCERPTS FROM *THE REVOLUTIONS OF THE HEAVENLY BODIES*, 1543

Utilizing specialized equipment and the scientific method to make observations and reach his conclusions, Polish mathematician and astronomer Nicholas Copernicus (1473–1543) theorized that the Earth and planets revolved around the sun. The following excerpts illustrate the line of reasoning developed by Copernicus to substantiate his findings.

“That the earth is also spherical is therefore beyond question, because it presses from all sides upon its center. Although by reason of the elevations of the mountains and the depressions of the valleys a perfect circle cannot be understood, yet this does not affect the general spherical nature of the earth.

Refutation of the arguments of the ancients that the earth remains still in the middle of the universe, as if it were its center. From this and similar reasons it is supposed that the earth rests at the center of the universe and that there is no doubt of the fact. But if one believed that the earth revolved, he would certainly be of the opinion that this movement was natural and not arbitrary. For whatever is in accord with nature produces results which are the opposite of those produced by force. Things upon which force or an outside power has acted, must be injured and cannot long endure: what happens by nature, however, preserves itself well and exists in the best condition.”

—Abraham O. Mendoza

Source

Oliver J. Thatcher, ed., *The Library of Original Sources*, Vol. 5, *9th to 16th Centuries* (Milwaukee, WI: University Research Extension Co., 1907), 95–101.

their respective countries, contributing to the collective expansion of scientific findings and research. Members of these societies collectively listened to papers, shared equipment and methods, collected samples and specimens, and reported their findings in journals. While their memberships did consist primarily of scientists, they also included dilettantes; among the most

famous was Charles II, known for tinkering with chemicals in his own laboratory.

The scientific method provided a viable set of procedures and guidelines for scientists to practice their craft. Characterized by the processes of observation, developing hypothesis or theory, experimentation, collection of data, and the drawing of conclusions from such data, the scientific method contributed to the expansive body of knowledge well into our own time. Both Bacon’s and Descartes’s contributions to both inductive and deductive procedures in experimentation, in addition to their advocating of sharing results with the greater scientific community, also contributed to the popularity and growing institutionalization of science in European society. Thus, the scientific method was a major break from ancient and medieval authorities that were still respected into the late medieval era.

—Abraham O. Mendoza

Bibliography

- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. New York: Norton, 1979.
- Elliot, J. H. *Europe Divided, 1559–1598*. New York: Blackwell, 2000.
- Munck, Thomas. *Seventeenth-Century Europe: State, Conflict and the Social Order in Europe, 1598–1700*. New York: Palgrave Macmillan, 2005.
- Parker, Geoffrey. *Europe in Crisis, 1598–1648*. New York: Blackwell, 2001.

The Dignity of Man— Renaissance Humanism, Secularism, Individualism

The Renaissance (rebirth), or rediscovery of the classics in Europe in the late thirteenth and early fourteenth centuries, led to considerable contemplation about the place of humanity in the world and the role it should play in the realization of the Christian divine plan. Rather than focusing on leading a fulfilling life on Earth for the purposes of satisfying requirements for the afterlife, humanism sought to encourage people to pursue fulfillment in this life for the purposes of realizing God’s divine plan here on Earth. Emerging from the prosperous city-states of Italy and progressing throughout the rest of Europe among elites, humanism inspired many

➤ GIOVANNI PICO DELLA MIRANDOLA, EXCERPT FROM *ORATION ON THE DIGNITY OF MAN*

Giovanni Pico della Mirandola (1463–1494) was an Italian humanist, significant for proposing to defend 900 theses on religion, philosophy, and magic for which he wrote the famous *Oration on the Dignity of Man* in 1486, a key text of Renaissance humanism, emphasizing the role of humanity in the progress of civilization.

“I have read in the records of the Arabians, reverend Fathers, that Abdala the Saracen, when questioned as to what on this stage of the world, as it were, could be seen most worthy of wonder, replied: ‘There is nothing to be seen more wonderful than man.’

In agreement with this opinion is the saying of Hermes Trismegistus: ‘A great miracle, Asclepius, is man.’ But when I weighed the reason for these maxims, the many grounds for the excellence of human nature reported by many men failed to satisfy me—that man is the intermediary between creatures, the intimate of the gods, the king of the lower beings, by the acuteness of his senses, by the discernment of his reason, and by the light of his intelligence the interpreter of nature, the interval

between fixed eternity and fleeting time, and (as the Persians say) the bond, nay, rather, the marriage song of the world, on David’s testimony but little lower than the angels. Admittedly great though these reasons be, they are not the principal grounds, that is, those which may rightfully claim for themselves the privilege of the highest admiration. For why should we not admire more the angels themselves and the blessed choirs of heaven? At last it seems to me I have come to understand why man is the most fortunate of creatures and consequently worthy of all admiration and what precisely is that rank which is his lot in the universal chain of Being—a rank to be envied not only by brutes but even by the stars and by minds beyond this world. It is a matter past faith and a wondrous one. Why should it not be? For it is on this very account that man is rightly called and judged a great miracle and a wonderful creature indeed.”

—Abraham O. Mendoza

Source

Giovanni Pico della Mirandola, *Oration on the Dignity of Man*, trans. Elizabeth Livermore Forbes (Lexington, KY: Anvil, 1953), 1–2.

thinkers and scholars to ponder the significance of humanity’s place in the world, pursuing ends in this life and not in the next. Through involvement in the secular sphere of life—that is, through civic humanism—humanity could advance the interests of the state. Individuals could choose to edify themselves by studying the classics, acquiring the knowledge of the ancients through Byzantine and Islamic scholars, with the ultimate purpose of utilizing such knowledge to serve humanity and human progress. In this regard, humanism inspired the individual to seek involvement in the secular sphere and develop one’s human potential on an individual level in order to contribute to the development of humanity.

Renaissance Italian scholar Francesco Petrarca (1304–1374), or Petrarch, is recognized as the father of humanism for his idea that God had given humans their intellectual and creative potential to be utilized for the purpose of their human

development in this world. In *Secretum meum* he discusses how secular (worldly) achievements did not interfere with experiencing a viable relationship with God. As a devout Christian, Petrarch did not see a contradiction between having religious faith and developing the potential of humanity for secular ends. He recommended returning to classical learning, or *studia humanitatis*, particularly the study of grammar, rhetoric, poetry, history, and moral philosophy. In this regard he strongly advocated the study of ancient Greek



Francesco Petrarca, Italian Renaissance poet and humanist. (Library of Congress)

and Roman philosophers and statesmen in order to better understand the problems and moral questions of the past to guide one's conduct in the present and the future. He was also the first to recognize the Middle Ages as a distinct period in European history, seeing both Antiquity and his own time as different times of human enlightenment, divided by dark ages in the middle. By emphasizing the role of humanity in the world, he contributed to the advent of secularism.

Secularism, the pursuit of human development in the world rather than through the medieval emphasis on religious contemplation of the afterlife, was a significant element of Renaissance humanism. Leonardo Bruni of Arezzo (1370–1444) became an active defender of republican political values using the tenets of humanism to support his ideals, known as civic humanism. Studies of ancient statesmen such as Cicero inspired many, including Bruni, to recognize the similarities between their own republican forms of government and those of Antiquity. Upon this recognition Bruni, with verve and enthusiasm, became a vocal supporter of the Florentine republic. In his book *History of the Florentine People* he defended republicanism as the most efficient form of government, citing the ancient Romans as evidence. He further suggested that the destruction of republicanism by the Roman emperors led to the decay that resulted in the dark ages, creating a break in human progress that Florence was in the process of restoring. Thus, civic humanism took classical learning as a precedent to defend and improve existing political structures and to make the state a vehicle for human progress. The individual would have a significant impact in such an undertaking.

The internal and personal contemplation advocated by the humanists permitted the individual pursuit of self-improvement or enlightenment for the purposes of serving humanity later. Such thinking would lead critics of humanism, in the Church and in politics, to levy charges of self-involvement and un-Christian behavior on this element of this new intellectual movement. Humanists, such as Dutch theologian Desiderius Erasmus (1469–1536), countered that inner contemplation allowed individuals to make their own rational choices, rather than relying on

others for truth, regarding issues that concerned them. His critiques of the Church and its abuses and his recommendations for reform were an example of such a process.

—Abraham O. Mendoza

Bibliography

- Bouwsmma, William J. *The Waning of the Renaissance, 1550–1640*. New Haven, CT: Yale University Press, 2000.
- Nauert, Charles G. *Humanism and the Culture of Renaissance Europe*. 2nd ed. New York: Cambridge University Press, 2006.
- Nicholas, David. *The Transformation of Europe, 1300–1600*. New York: Oxford University Press, 1999.
- Whitlock, Keith, ed. *The Renaissance in Europe: A Reader*. New Haven, CT: Yale University Press, 2000.

The Evolution of Renaissance Classicism

The term “Renaissance classicism” refers to a fundamental attribute of the period that scholars refer to as the European Renaissance, roughly 1400–1600. Renaissance classicism was an intellectual movement that sought to mimic the literature, rhetoric, art, and philosophy of the ancient world, specifically ancient Rome. Scholars, politicians, and philosophers looked to ancient literary and artistic models for inspiration, and in turn this love of the classical world is termed classicism. The interest in the classical world was not new in the fifteenth century. In fact, there were powerful classicist themes in medieval Europe's scholarship, law, and art. However, when eighteenth- and nineteenth-century scholars sought to find the origins of their modern secular worldview, instead of pointing to the medieval classicists they pointed to the Italian (and other) classicists of the fifteenth and sixteenth centuries. Most notable among these modern scholars was the historian Jacob Burckhardt (1818–1897). Burckhardt claimed that the model of ancient Rome sparked a more secular individualistic society in Renaissance Italy. Burckhardt's rosy view of the Renaissance generally ignored the importance of religion, the horrors of incessant warfare, and the agonies of daily life during the period. Nevertheless, his

► ELEGANCES OF THE LATIN LANGUAGE

Lorenzo Valla's (1407–1457) *Elegances of the Latin Language* (1444) is a paean to the ancient Roman orators. In this section, Valla castigates the medieval period for what he believes to be a lack of learning and an ignorance of the classical world. However, his tone is positive, seeing the fifteenth century as a period of rebirth.

“Sorrow hinders and torments me, and forces me to weep as I contemplate the state which eloquence had once attained and the condition into which it has now fallen. For what lover of letters and the public good can restrain his tears when he sees eloquence now in that state in which it was so long ago when Rome was captured by the Gauls. . . . Students of philosophy have not possessed, nor do they possess, the works of the ancient philosophers; nor do rhetoricians have orators; nor lawyers the jurisconsults; nor teachers the known works of the ancients . . . those arts which are most closely related to the liberal arts, the arts of painting, sculpture, modeling, and architecture, had degenerated for so long and so greatly and had almost died with letters them-

selves, . . . [but] in this age they have been aroused and come to life again, so greatly increased is the number of good artists and men of letters who now flourish.

But truly, as wretched as were those former times in which no learned man was found, so much the more this our age should be congratulated, in which (if we exert ourselves a little more) I am confident that the language of Rome will shortly grow stronger than the city itself, and with it all disciplines will be restored. Therefore, because of my devotion to my native Rome and because of the importance of the matter, I shall arouse and call forth all men who are lovers of eloquence, as if from a watch tower, and give them, as they say, the signal for battle.”

—Jason M. Kelly

Source

From *The Portable Renaissance Reader*, ed. and trans. James Bruce Ross and Mary Martin McLaughlin (New York: Viking, 1953), 133–135.

research did point to the importance of classicism in the intellectual life of the Renaissance, a point on which later scholars elaborated.

The historical impetus for Renaissance classicism resulted from the political situation of medieval Italy. In medieval northern and central Italy, long-distance trade and the accompanying growth of cities led to the establishment of independent city-states as early as the twelfth and thirteenth centuries. Despite attempts by the papacy and various German rulers to assert their authority in northern and central Italy, these city-states were increasingly self-governing, involving many of the prominent citizens in civic affairs. Thus, knowledge of commercial transactions, the law, politics, and oratory became essential tools to the politically active citizen. Many families found that the emphasis on Aristotelian logic in the universities was too abstract and did not satisfy their need for a more practical education. In this context, an alternative approach to education developed: the *studia humanitatis*,

or humanistic studies. Humanist scholars taught the tools of grammar and rhetoric, important skills in argument that proved useful in the political context of the city-state. While not a philosophy per se, Renaissance humanism emphasized history and moral philosophy as guides to civic action and obligations. Assuming that medieval scholarship did not provide useful examples of rhetoric or moral philosophy, humanists turned to the classics. In Cicero, Quintilian, Sallust, and Livy, humanists found their rhetorical models, their historical examples, and their moral lessons.

With their interest in the classics and with their patrons' support, humanist scholars began foraging for classical examples. They searched for lost classical texts in the monasteries and archives throughout Europe. Likewise, they began to reread texts that had been widely available for centuries. Rejecting medieval scholastic techniques, which had emphasized logic and metaphysics in the reading of the classics, the

humanists approached the classics from a historical perspective and emphasized understanding them within their political and social contexts. They developed new methods of textual analysis and criticism known as philology. Philology had practical applications in Renaissance Italy, the most famous example being the Roman humanist Lorenzo Valla's (1407–1457) *Declamation on the Forged Donation of Constantine* (ca. 1440). Like other humanists, Valla recognized that classical texts were rife with errors: omissions, emendations, scribal errors, and even forgeries. Likewise, he noticed that language changed over time. The Latin of the first century BCE was significantly different from the Latin of the fourth century CE. Recognition of both of these philological premises was essential if humanists were to develop a truly classical rhetoric and grammar. However, in the political context of fifteenth-century Italy, philology had an even more significant application. With the patronage of King Alfonso of Naples, Valla applied his philological technique to a papal document titled the *Donation of Constantine*. Ostensibly, the *Donation of Constantine* was a fourth-century document in which the Roman emperor Constantine granted Pope Sylvester I political authority over Europe. With unrelenting accuracy, Valla dismantled it as a forgery by revealing anachronistic linguistic phrasings. Thus, historical criticism and philology became important elements in the humanistic education.

While Renaissance literary classicism emphasized Latin, interests extended to Greek scholarship as well. In part, this was because of the economic, religious, and political ties that western Europe had with Byzantium. The Mediterranean world fostered intellectual exchanges, which in the context of humanism encouraged some scholars to learn Greek. For example, as early as the late fourteenth century Manuel Chrysoloras, originally on a diplomatic mission from Constantinople, was teaching Greek and translating Greek texts in Italy. He became an instructor to early humanists such as Leonardo Bruni. The influence of Byzantine scholars on Renaissance classicism increased in the fifteenth century, culminating with the emigration caused by Sultan Mehmed II's capture of Constantinople in 1453. Particularly important to Renaissance classicism was the translation of the Platonic

corpus into Latin. The interest in Plato led to debates over these writings' correspondence with Christian doctrines, and writers such as Marsilio Ficino made Christian glosses on Plato's dialogues. Plato's writings led some to emphasize the *vita contemplativa* (the contemplative life) over the *vita activa* (the involved life), a transformation in humanism that happened against the political background of the rise of princes and the domination of ruling families such as the Sforzas of Milan (and elsewhere) and the Medici of Florence. In Florence, for example, the Platonic Academy, sponsored by Cosimo de' Medici and presided over by Ficino in the 1460s, emphasized metaphysics and mysticism over rhetoric, what is often termed Neoplatonism.

While Renaissance classicism was primarily a literary endeavor, it also transformed the visual arts. Renaissance scholars and artists increasingly turned to the ruins of the classical world around them for new artistic models. As scholars and princes collected classical manuscripts, they also collected coins and statues, which provided artists countless models on which to base their work. The ancient Roman models inspired new aesthetic conventions, which while present in twelfth- and thirteenth-century art came to dominate the styles of the Renaissance. Classical mythology became a prime subject matter for painting and sculpture. In the early fifteenth century Filippo Brunelleschi and Donatello traveled to Rome to draw and measure the ancient ruins. Brunelleschi's studies resulted in architectural works that diverged from the medieval Gothic and integrated elements from classical architecture. Donatello imbibed the models of classical statuary, in particular the style of *contrapposto* in which the figure is presented asymmetrically, resting the weight of the body toward one foot that is turned away from the front, in order to give the statue a semblance of vitality and motion. By the 1430s the humanist Leon Battista Alberti began writing a series of three theoretical works on art. Using classical sources as inspiration, he provided one of the first outlines of Renaissance artistic classicism. At the turn of the sixteenth century, the masters Michelangelo Buonarroti, Raphael, and Leonardo da Vinci became the exemplars of High Renaissance classicism.

By the mid-fifteenth century, classicism was a powerful educational and aesthetic force in Italy. And in the international context of Renaissance Europe, countries throughout Europe came under its influence. Humanists in universities or acting as private tutors trained a generation of nobles to appreciate the artistic, literary, and philosophical works of the classical world. The humanists' success in analyzing the classics led to a broadening of their philological techniques to scripture, the law, and even natural philosophy. By the end of the sixteenth century the effects of Renaissance classicism were found in nearly every facet of European elite culture.

—Jason M. Kelly

Bibliography

- Barkan, Leonard. *Unearthing the Past: Archaeology and Aesthetics in the Making of Renaissance Culture*. New Haven, CT: Yale University Press, 1999.
- Brucker, Gene A. *Renaissance Florence*. New York: Wiley, 1969.
- Eck, Caroline van. *Classical Rhetoric and the Visual Arts in Early Modern Europe*. Cambridge: Cambridge University Press, 2007.
- Godman, Peter. *From Poliziano to Machiavelli: Florentine Humanism in the High Renaissance*. Princeton, NJ: Princeton University Press, 1998.
- Harris, Jonathan. *Greek Emigres in the West, 1400–1520*. Camberley, UK: Porphyrogenitus, 1995.
- Holmes, George Andrew. *The Florentine Enlightenment, 1400–50*. New York: Pegasus, 1969.
- Kristeller, Paul Oskar. *Renaissance Thought: The Classic, Scholastic, and Humanist Strains*. New York: Harper, 1961.
- Nauert, Charles Garfield. *Humanism and the Culture of Renaissance Europe*. 2nd ed. Cambridge: Cambridge University Press, 2006.
- Rowland, Ingrid D. *The Culture of the High Renaissance: Ancients and Moderns in Sixteenth-Century Rome*. Cambridge: Cambridge University Press, 1998.

Europe's Age of Reason

Historians have conventionally used the term “Age of Reason” to describe a philosophical revolution that took place in Europe from the seventeenth through the eighteenth centuries.

Such intellectual movements are highly complex, however, and we should be careful in assigning terms such as “Age of Reason” or “The

Enlightenment” to historical periods. Regardless, the terms continue to be used, especially in Western civilization survey textbooks, and according to this vision of European history, during the “Age of Reason” prominent thinkers rejected traditional medieval understanding of philosophy, government, religion, and the natural world, offering instead radical ways of thinking that initiated a great debate between reason and faith.

In fact, the Age of Reason did not emerge in a vacuum. Late medieval thought, ironically, in light of the criticism of later rationalists, provided the framework for the emergence and development of movements that were foundational to the Age of Reason. The intellectual advances of the Scientific Revolution and the social and theological challenges of the Protestant Reformation found their ideological underpinnings in the later Middle Ages. From the



Title page of the 1651 edition of Thomas Hobbes' *Leviathan*. (Library of Congress)

late 1200s some European scientists began to emphasize evidence that could be observed and measured through new scientific methods, and some went so far as to question the theories of Aristotle, thereby laying a foundation for later scientific breakthroughs. Later, during the sixteenth-century Protestant Reformation, Christian thinkers such as Martin Luther and John Calvin followed in the footsteps of late medieval predecessors such as John Wycliff, John Huss, or even the larger Hussite movement in rejecting the dominant teachings of the Roman Catholic Church. They instead argued for the centrality of the Bible in the Christian faith over popes, ecclesiastical councils, and sacred tradition. Although Protestants never viewed reason, at least as envisioned by rationalists in the later Age of Reason, as superior to faith, their rejection of tradition and the authority of the Church provided an important precedent for which later thinkers could do the same, even if for vastly different reasons.

Like the Scientific Revolution and the Protestant Reformation, the Age of Reason represented a rejection of tradition. While earlier medieval thinkers such as Thomas Aquinas and the Scholastics who preceded and followed him worked to establish the continued relevance of ancient and medieval authorities, early modern thinkers such as Francis Bacon, René Descartes, and Immanuel Kant saw little relevance for the dominance of the past over their modern age. They instead sought to examine old and new evidence with fresh tools and insights, applying reason and experience, rather than faith or tradition, as the lenses through which such evidence would be evaluated. This new way of viewing things also influenced how they understood the world. Many abandoned traditional and often hostile European stereotypes of foreign peoples and showed a greater appreciation for non-western cultures. For example, the French satirist Voltaire, in his most popular work, *Candide*, depicts the main characters fleeing from the troubles of Europe only to find peace in Istanbul. In a similar way Montesquieu satirized French society by viewing it through Persian eyes in his *Persian Letters* of 1711–1720.

Few names have been as associated with the Age of Reason as that of French philosopher René Descartes (1596–1650). Descartes has been

considered the founder of modern philosophy and has also been hailed for his work in mathematics and science. He explicitly rejected past knowledge as a basis for knowing anything and, as a result, accepted nothing as certain until it could be reconciled with critical reasoning. His appeal to reason ranked him firmly among the rationalists of his day, including such thinkers as Baruch Spinoza and Gottfried Leibniz. The rationalist school of thought, in its broadest definition, appealed to reason as the chief source of knowledge. The rationalists were challenged by the empiricist school of thought, which included thinkers such as Thomas Hobbes and John Locke. Empiricists emphasized the role of experience and experiment in the formulation of ideas. From their theory of knowledge emerged the modern notion that all scientific hypotheses must be based on observations of nature rather than on revelation or a priori reasoning. Although the two philosophical systems sometimes clashed, both the rationalists and the empiricists rejected traditional beliefs as had been passed down though the Middle Ages and sought to understand the world through their new philosophies.

The Age of Reason also witnessed the emergence of novel political thought based on these innovative philosophies. In 1651 English philosopher Thomas Hobbes published *Leviathan*, a work that would become a foundation for modern Western political philosophy. In *Leviathan*, Hobbes asserted that a social contract exists between monarchs and the people they rule in which mutual self-interests preserve peace and order. Although Hobbes admitted that a social contract could become void when government failed in its responsibilities to its subjects, he otherwise denied the right to rebel against a legitimate social contract. In 1689 John Locke heavily modified Hobbes's social contract in his influential study *Two Treatises on Government*. Locke wrote this work in defense of England's Glorious Revolution (1688–1689) and argued that a government was only legitimate if it protected the natural rights of its citizens and ruled with their consent. Without such consent, argued Locke, citizens had a right to rebel against their government. Locke's views influenced later thinkers, including the Genevan philosopher Jean-Jacques

► RENÉ DESCARTES ON THE REJECTION OF TRADITION

The following selection from the opening paragraph of Descartes's first book of *Meditations* briefly describes the philosopher's earlier epiphany that many of the traditional beliefs he had once accepted were instead false. This realization inspired him to abandon all his previous opinions, which had been based on the wisdom of the past, and to embark on a new search for truth in his modern age.

"Several years have now elapsed since I first became aware that I had accepted, even from my youth, many false opinions for true, and that consequently what I afterward based on such principles was highly doubtful; and from that time I was convinced of the necessity of undertaking once in my life to rid myself of all the opinions I had adopted, and of commencing anew the work of building from the foundation, if I desired to establish a firm and abiding superstructure in the sciences. But as this enterprise appeared to me to be

one of great magnitude, I waited until I had attained an age so mature as to leave me no hope that at any stage of life more advanced I should be better able to execute my design. On this account, I have delayed so long that I should henceforth consider I was doing wrong were I still to consume in deliberation any of the time that now remains for action. To-day, then, since I have opportunely freed my mind from all cares [and am happily disturbed by no passions], and since I am in the secure possession of leisure in a peaceable retirement, I will at length apply myself earnestly and freely to the general overthrow of all my former opinions."

—Andrew Holt

Source

René Descartes, *The Method, Meditations and Philosophy of Descartes*. Translated by John Veitch (Washington and London: M. Walter Dunne, 1901), 219–220.

Rousseau. In his 1762 work *The Social Contract*, Rousseau expanded on Locke's work to argue for the supremacy of the general will of the people, and his arguments were influential before and during the French Revolution.

The Enlightenment of the eighteenth century was also a product and continuation of the Age of Reason. Just as the important thinkers during the early stages of the Age of Reason had rejected received knowledge and abandoned traditional forms of government and religion, so did Enlightenment-era thinkers such as Voltaire, Denis Diderot, and Thomas Paine. Perhaps the most well-known Enlightenment thinker was Voltaire, who rejected his Catholic faith in favor of a deism based on reason that allowed for religious freedom. Few critics of the Church were as effective as Voltaire, who unleashed his well-known satiric wit against traditional Christian dogmas and practices in a number of popular publications in the mid-eighteenth century. Like Voltaire, the French philosopher Diderot also promoted the Age of Reason in his written works, most notably through his monumental *Encyclopédie, ou dictionnaire raisonné des*

sciences, des arts et des métiers (Encyclopedia, or A Systematic Dictionary of the Sciences, Arts, and Crafts). Diderot declared that his goal was to change the way people thought about a wide range of issues covered in the nearly 72,000 articles in his encyclopedia, published in France between 1751 and 1780. He was successful, as his work is generally credited with having contributed to the intellectual and philosophical thinking that was foundational to the French Revolution. Like Voltaire and Diderot, the British-born Enlightenment thinker and American founding father Thomas Paine also argued for the superiority of reason over traditional beliefs in both his popular work *Common Sense* and his later controversial work, *The Age of Reason*. In *Common Sense*, published during the American Revolution in 1776, Paine denounced British rule, and his work became enormously popular with American Revolutionaries whose hard-fought independence from Great Britain led to the establishment of the earliest form of modern democracy in the West. Although Paine won considerable praise for *Common Sense*, his later work, *The Age of Reason*, brought him

an equal level of notoriety from the time of its publication in the early 1790s until his death in 1809. This was because *The Age of Reason* was a philosophical work highly critical of the Bible and considered deeply offensive by many Christian believers. Yet *The Age of Reason* was, and has remained, popular in rationalist circles from the time of its writing until the present day.

—Andrew Holt

Bibliography

- Blom, Philipp. *Encyclopédie: The Triumph of Reason in an Unreasonable Age*. London: Fourth Estate, 2004.
- Hulme, Peter, and Ludmilla Jordanova, eds. *The Enlightenment and Its Shadows*. London: Routledge, 1990.
- Israel, Jonathan I. *Radical Enlightenment, Philosophy and the Making of Modernity, 1650–1750*. Oxford, UK: Oxford University Press, 2001.
- Manuel, Frank Edward. *The Age of Reason*. Ithaca, NY: Cornell University Press, 1951.

Peace of Prague

Events leading to the Peace of Prague (May 30, 1635) began in 1630, when Sweden entered the Thirty Years' War on the side of German Protestants. Swedish troops or their proxies experienced considerable success against Catholic forces and restored several lands to Protestant control. Yet German Catholics, under the leadership of the Habsburg Holy Roman emperor Ferdinand II, rebounded in September 1634 with an important victory at the First Battle of Nördlingen. It was only after the events at Nördlingen that both sides began serious considerations for peace. The time was right, as by then the Swedes were looking for ways to get out of the war, and their German allies were increasingly suspicious of the Swedish commitment to the war and wanted to preserve gains from earlier victories. Catholics were inclined toward peace for two reasons. First, they temporarily had a stronger hand to play in any peace negotiations because of their recent victories (especially at Nördlingen). Second, many Catholics feared the long-term results of the war, as German Protestants had a seemingly inexhaustible supply of international support due to fears of Habsburg supremacy by both Catholic and Protestant powers.

The most notable leader of the German Protestants seeking peace was John George I (1611–1656), the duke elector of Saxony. In fact, only ten weeks after the Protestant defeat at Nördlingen, peace negotiations were begun between the electorate of Saxony (joined by the landgraviate of Hesse-Darmstadt) and imperial representatives of Ferdinand II that provided a foundation for the later Peace of Prague. Although negotiations began at Leitmeritz, in the summer of 1634 they were moved to Pirna, where they produced a preliminary agreement, the so-called Preliminaries of Pirna (or Pirna Points).

The primary goals of the negotiators were to eliminate all foreign presence in Germany and to settle the internal problems of the empire. To achieve this, compromise was needed, and both sides were willing. Perhaps the most important concession was the suspension of the Edict of Restitution for 40 years (a virtual revocation of the edict), which signaled the abandonment of militant efforts to restore Catholicism in Germany. In addition to special concessions for John George, the Pirna Points also included amnesty and restitution of property for all those who had taken up arms against the empire after 1630 as well as provisions for a unified imperial army to enforce the peace against those who opposed it (Germans and foreigners alike).

Once the negotiators had drafted the articles of the Pirna Points, it was left to Ferdinand II to decide if he would accept them. The emperor and his advisers began extensive deliberations on the articles before deciding to seek additional advice. Ferdinand II then convened a panel of 23 theologians to study the agreement and offer theological commentary on its acceptability. The group met on February 5, 1635, and included members of 8 different religious orders and 2 secular priests. The conference ended on February 16, and although 7 Catholic militants rejected any peace with the Protestants, the remaining participants favored the proposed treaty. Ferdinand II agreed with the majority, and the peace was formally implemented in Prague on May 30, 1635.

Although the Peace of Prague successfully ended the Swedish period of the Thirty Years' War, it failed to achieve a lasting peace. France, concerned about the strength of the Habsburg

➤ VALERIAN MAGNI ON THE PEACE OF PRAGUE

An important voice in the deliberations of the Peace of Prague was the Capuchin friar Valerian Magni (1586–1661). As a confidant of Pope Urban VIII (r. 1623–1644) and an adviser to Holy Roman Emperor Ferdinand II (r. 1619–1637), Magni was a logical choice for inclusion as one of 23 theologians invited to offer advice to the emperor on the acceptability of the so-called Pirna Points. In the following text Magni expresses his approval of the provisions of the Peace of Prague and argues that the emperor can accept them in good conscience. Specifically, Magni cites the example of St. Athanasius of Alexandria and his dealings with the Arians during the fourth century as a precedent for a provision of the Peace of Prague that called for Catholics to cede control of some churches to Protestants.

“Can it be in the present articles [Pirna Points], that peace with the Duke Elector of Saxony and the Catholic religion . . . preserves some internal evil? Is the Emperor able to concede [to the agreement] without sin and offense to God? . . .

I respond . . . the article presented to me with the Duke Elector of Saxony, and the Catholic

religion . . . sustains no internal evil, with respect for the sake of gaining good, and avoiding great evil . . . the Holy Emperor can ratify it with praise and merit from God. . . .

St. Athanasius . . . understood that he would have to give over the Church of Alexandria to the Arians . . . in order to take back another church from the same heretics of Antioch. . . . From such an example, however, one may infer; it is much more permitted to begin the act of settling the state [making peace] in the highest necessity to restore to the heretics one hundred churches, which are not to be defended without the danger of losing all that remains; when he [the emperor] receives from the heretics many thousands of churches.”

—Andrew Holt

Source

Valerian Magni, “Letter of Valerianus Magni to Cardinal Dietrichstein. Feb. 19, 1635,” translated by Andrew Holt, in *Osterreichisches Staatsarchiv, Haus-, Hof-, und Staatsarchiv* (Vienna), Reichshofkanzlei, Friedensakten, 11a, pp. 277–288.

position resulting from the peace, launched the last period of the Thirty Years’ War. Even so, the Peace of Prague represented a significant turning point in the Thirty Years’ War, if not the future of Europe, in four important ways. First, while the Peace of Prague did not end the war, it set an important precedent for the later Peace of Westphalia in 1648 in that it recognized Protestant authority in areas of Germany. Second, the Peace of Prague also reflected the growing awareness of the Catholic leadership that winning the complete restoration of Catholic lands might not be possible. Third, the Peace of Prague marked the death of the crusading spirit in Europe, which had been reinvigorated in the early stages of the war when it was understood as a religious conflict between Protestant and Catholics. The Peace of Prague forced Catholics to renounce crusading against Protestants and the entrance of Catholic France into the

war on the side of the Protestants (against other Catholics) and put an end to any notion that the Thirty Years’ War was a matter of faith. Finally, the Peace of Prague also reflected a decline in the authority of the papacy, as the pope was not consulted during the deliberations and drafting of the agreement.

—Andrew Holt

Bibliography

- Asch, Ronald G. *The Thirty Years War: The Holy Roman Empire and Europe, 1618–1648*. New York: St. Martin’s, 1997.
- Bireley, Robert. “The Peace of Prague (1635) and the Counter Reformation in Germany.” *Journal of Modern History* 48(1) (March 1976): 31–70.
- Bireley, Robert. *Religion and Politics in the Age of the Counterreformation: Emperor Ferdinand II, William Lamormaini, S.J., and the Formation of Imperial Policy*. Chapel Hill: University of North Carolina Press, 1981.

The Age of Discovery

The Age of Discovery, a problematic label for the initial period of cultural contact and exchange between Europeans and other world regions between 1400 and 1700, is characterized by a vast shift in early modern European worldviews and conceptualizations of their place in the world. While other world regions, such as China and India, had embarked on transoceanic voyages of discovery and developed commercial networks in previous centuries, the initial contact between Europe and the New World and much of the Old World had significant consequences for subsequent centuries in terms of the balance of global economic and political power. As early modern Europeans set forth on transoceanic travels in the Atlantic and Indian oceans, created global trade networks, and toppled civilizations, many of them began to conceive of themselves as the beacon of Christian civilization and as being superior to the cultures they vanquished and conquered. The rosy picture conceived by the notion of an Age of Discovery as a time when Europe began its formal debut on the world's stage to shed light on a dark world vastly contrasts with the rampant disease, decimation of indigenous peoples, and economic and political dislocations suffered due to the subsequent development of the Atlantic slave trade and imperialism.

The fall of Constantinople in 1453 marked the ascendancy of the Ottoman Empire in the Mediterranean region, much to the dismay of various European merchant states in Iberia and Italy. Italian city-states such as Venice and Genoa continued to ply their trades through Ottoman middlemen, but this inflated the prices of much-coveted spices from India, China, and Southeast Asia, wanted in much of western Europe. Iberian merchants in both the Spanish kingdoms and the Portuguese realms sought to capitalize on this situation by seeking to explore direct routes to the Far East and circumvent these Ottoman and Safavid middlemen.

The initial voyages of exploration and discovery began in earnest first in Portugal and then in Spain in the fifteenth and sixteenth centuries, given their geographic proximity to direct ocean currents and technological exchanges

with North African Muslim traders. Contact with the Muslim sultanates in North Africa exposed Iberian merchant seamen to new naval technologies, which they incorporated into their new oceangoing vessels, such as the caravel. Furthermore, the proximity of the Iberian peninsula to Atlantic currents, which allowed direct southerly and westerly travel both down the coast of Africa and toward the New World in the Americas, allowed explorers such as Vasco da Gama and Christopher Columbus to discover lands unknown to Europeans. While they were aware that India existed, these explorers merely searched for a direct route to get there. The Portuguese sought to find the direct source of gold in West Africa to circumvent Muslim traders, but they also discovered the source of the existing slave trade along the Bight of Benin and the Bight of Biafra. Portuguese explorers also found a tenable route to South Asia and the East Indies, putting them in direct contact with the Indian Ocean and Far East trade networks already in existence for centuries. The Spanish, building on Portuguese achievements, went west into the Atlantic also seeking to find the Indies (Japan in Columbus's case) and accidentally (or serendipitously) made contact with the Americas. This brought them into cultural contact with indigenous American people, whom they viewed as heathens because they were not Christian. Both the Spanish and the Portuguese, with preconceived notions of non-Christians in Iberia (mostly Jews and Muslims), brought these values with them to these uncharted regions, which influenced their perceptions of "the other." Disease and violence would soon follow. English explorers such as John Cabot, who happened upon Newfoundland while seeking a northwest passage to the East, discovered the enormous resources available in the vast stretches of North America. In the seventeenth and eighteenth centuries, English, Dutch, and French exploration of the new worlds (i.e., the Americas, Oceania, and South Asia) were a result of intra-European competition for resources (particularly treasure ships coming from New Spain) and an increasing awareness of a larger world open to trade. English and French intrusions into the Americas resulted in the establishment of colonies and trading posts for the purposes of cultivating

► BATTLE OF LEPANTO, 1571

The Battle of Lepanto of 1571 was a turning point in world history as the moment when a coalition of European naval forces defeated the Ottoman fleet off the coast of western Greece, inadvertently cutting them off from the Atlantic and ensuring European dominance of the Atlantic world. Even after the initial period of the Age of Discovery, Europe was still not on par with the economically flourishing Ottoman Empire, which continued to consolidate its territories, exploited its access to the trade routes of central Asia, and threatened Christendom along the Danube. On October 7, 1571, the combined fleets of Habsburg Spain, Venice, Genoa, and the Papal States (the Holy League) engaged the Ottoman fleet, ultimately defeating it. The battle asserted the Holy League's control over most of the Mediterranean and prevented the Ottomans from advancing into Europe. Furthermore, while it did not ensure Christian Europe's naval supremacy over the Ottoman Empire (which would not occur for several decades), it did ensure that the Ottomans were effectively blocked from the western Mediterranean and the Strait of Gibraltar. As a result, the Ottomans were essentially unable to engage in transoceanic Atlantic commerce; however,



Painting of the Battle of Lepanto between the Ottoman Empire and an alliance of European states, artist unknown. The battle, which took place on October 7, 1571, was the largest naval engagement in early modern times and the last great naval battle fought by traditional oar-powered galleys. (Jupiterimages/National Maritime Museum, London)

they continued to trade lucratively due to their access to overland Asian commercial networks and sea trade along the Red Sea, Persian Gulf, and Indian Ocean networks. The Ottoman Empire was still a formidable foe for Christian Europe well into the 1800s.

—Abraham O. Mendoza

immense quantities of cash crops (i.e., sugar, tobacco, indigo) and the fur trade with indigenous peoples. The Dutch sought to supplant the Portuguese in Brazil, Africa, South Asia, and the East Indies, thereby succeeding at creating a commercial empire in the latter two, with the English and French also seeking a piece of the pie amid the declining Mughal Empire.

The Age of Discovery also ignited intellectual and scientific paradigm shifts within Europe, given that older explanations and worldviews did not account for recent discoveries. Ancient Aristotelian and Ptolemaic frameworks of the globe and the universe, used through the Middle Ages, were supplanted by more accurate geographical and astronomical explanations. New conceptualizations of the universe and scientific epistemologies, driven by the scientific method and European intellectuals such as Francis Bacon, René Descartes, Galileo Galilei, and

Isaac Newton, drastically altered the existing European worldviews inherited since Antiquity.

—Abraham O. Mendoza

Bibliography

- Dunn, Richard S. *The Age of Religious Wars, 1559–1715*. 2nd Edition. New York: Norton, 1970, 1979.
 Elliot, J. H. *Europe Divided, 1559–1598*. 2nd ed. New York: Blackwell, 1968, 2000.
 Parker, Geoffrey. *Europe in Crisis, 1598–1648*. 2nd ed. New York: Blackwell, 1979, 2001.

Jewish Mysticism

Jewish mysticism, also referred to as Kabbalah in Hebrew, is an umbrella term referring to a wide range of philosophies and practices within Judaism concerning the nature of God, the interpretation of the Holy Scriptures, and the consequences of human action on the divine. The shared features of various Jewish mystic writings

ISAAC LURIA

Isaac Luria (1534–1572), known also as the “Holy ARI” (an acronym of his name but also meaning “lion” in Hebrew), is one of the most prominent figures in Jewish mysticism. Born in Jerusalem to a family of German origin, he was orphaned at a young age and was raised in his uncle’s house in Egypt. Here Luria acquired knowledge in formal rabbinic literature and began to show interest in mysticism. He also became a merchant, a practice that apparently continued to provide for him until his untimely death.

Luria published one book, a commentary on one of the chapters of the *Zohar*. Deeply influenced by the ideas of his teacher, Moses Cordovero, this text did not display the unique traits of Luria’s own thinking. Luria’s teachings were recorded by his disciples and followers, mostly

after his death, and this is probably the cause for some of the contradictions in his teachings.

According to Luria, the Sefirot are dynamic vessels (Kelim), which at the time of creation could not bear the light of the Eternal (Ein Sof) and burst (except for the three top ones, which were closer to the Ein Sof). The purpose of humanity is to be righteous in order to fix the vessels by their actions. When the vessels are completely fixed, the Messiah will come.

Luria’s introduction of a Messianic idea is one of his formative contributions to Jewish mysticism. It is said to be one of the foundations for such messianic movements as the Sabbatean movement of Shabbatai Zvi in the seventeenth century.

—Aryeh Amihay

can be said to focus on spirituality; the claim of access to esoteric, or hidden, knowledge; and a special interest in the supernatural, sometimes by means of magic. Throughout history, Jewish mysticism has played the role of an alternative, perhaps even subversive, philosophy to the main currents of Judaism. Although it has never received an authoritative status in Judaism and is sometimes even prohibited by rabbis, it remains a source of interest to Jews to this day.

The origins of Jewish mysticism are hard to trace. Some evidence of interest in mysticism can be found in certain later parts of the Tanakh (Jewish Bible) or in such nonbiblical works as the *Book of Enoch* (160s BCE), but none of these testifies to an established philosophical system as we find later on. The earliest book that can be defined as presenting a comprehensive mystical work is the *Book of Creation* (*Sefer Yetzirah*). Its date is greatly disputed, although most scholars have until recently regarded it to be no earlier than the second century CE and no later than the sixth century. In recent years this has been contested, with an increasing number of scholars ascribing it as early as the first century BCE.

The defining work for Jewish mysticism is the *Zohar* (*The Glow* or *The Brightness*), a composition written mainly in archaic Aramaic. It originally was a mystical commentary on the

Torah (Law), the first five books of the Bible that are also known as the Pentateuch. Later on appendices were added, such as a commentary on the *Book of Canticles* or a description of the meeting of the rabbis who wrote the *Zohar*. The *Zohar* claims to be written by rabbis from the time of the Talmud, in the first centuries CE, but this has been found to be untrue. It was published in the thirteenth century by a Cabbalist (a person who has knowledge in the Kabbalah) named Moses de Leon, who lived in Spain. Although de Leon claimed that he was copying it from ancient manuscripts, he was unable to show these manuscripts when asked to do so by Isaac from Acre, who traveled from Palestine to Spain to learn about the origins of the *Zohar*. Furthermore, we know that after de Leon’s death a rich man was willing to marry his son to de Leon’s daughter on the condition that he would receive the ancient manuscripts. De Leon’s widow and daughter claimed that such manuscripts never existed and that de Leon wrote it on his own accord. Aside from these anecdotes, scholars have also managed to establish a connection between de Leon and the *Zohar* on philological grounds. Many ideas that appear in the *Zohar* appear also in de Leon’s sermons, which he claims, strangely enough, to be new and original. These are probably sermons written before

he came to realize that he would have to ascribe his writings to some ancient figure in order to present his ideas to a wider audience.

After the expulsion of the Jews from Spain in 1492, the city of Safed in present-day northern Israel became a prominent center for Cabbalists for more than 100 years. The trauma of the expulsion led to a deep religious crisis, manifested in the fact that many Jews believed that such a terrible tragedy could only be a sign that Salvation was near. This helped Kabbalah rise to the surface and gain a wider audience and a more public platform than it had beforehand. Despite the fact that it continued to bear an esoteric character, more people were interested in practicing it, believing that they could bring redemption earlier.

Of the many Cabbalists who lived and taught in Safed at the time, we know of two major figures. One was Moses Cordevero (1522–1570), who had a major impact on the study of Kabbalah. Cordovero wrote a significant commentary on the *Zohar* titled “Pardes Rimonim” (Orchard of Pomegranates). The other major Cabbalist of the time was Rabbi Isaac Luria. Luria developed a specific form of mysticism based on the *Zohar* and other mystical traditions but at the same time introducing and formulating key terms that eventually became an essential part of Jewish mysticism and constituting what is known today as Lurianic Kabbalah.

The main enterprise of Jewish mysticism is to describe God, both in His physical appearance and His nature. This is one of the main aspects of Kabbalah that can be said to bear some affinity to the rationalist streams of Jewish philosophy. Although the solutions provided by Cabbalists and philosophers are quite different, they address similar issues.

One of the main problems confronted by Cabbalists is how God acts in the world. The premise is that God is metaphysical, that is to say, He is above nature, detached from nature, and therefore cannot be part of the earthly world. At the same time, everything in this world is supposed to be monitored and an expression of His will. The solution offered by Jewish mysticism to solve this contradiction is the system of the Sefirot (Enumerations). According to this theory, God is expressed by a complex

system. On the one end is the Ein Sof (Eternity, literally “Endless”), which represents the metaphysical aspect of God; it is all-encompassing and incomprehensible and is not directly related to the earthly world. The Ein Sof is connected to the head of the Sefirot, the system through which God connects to the world. The Sefirot include ten facets, of which the top one is connected to the Ein Sof and the bottom one is connected to the earthly world. The names of the Sefirot are Keter (crown), Bina (intelligence), Chochma (wisdom), Daat (knowledge), Gevura (power), Chesed (grace), Tiferet (splendor), Hod (majesty), Netzach (eternity), Yesod (foundation), and Malchut (kingship). The Sefirot also symbolize various aspects of God, serving to depict the contrasting attributes of His nature. Thus, for example, intelligence and wisdom represent two forms of His intellectual capacities, and power and grace reflect the two measures of His judgment, whether the sternness of a judge (power) or His leniency (grace). The Sefirot also symbolize the body organs: the crown is the head, the power and grace are the hands, and so forth. Each one of the Sefirot is connected with at least one biblical figure who was supposedly the epitome of this trait.

Other symbolic references include the use of letters of the Hebrew alphabet, which are supposed to belong to different Sefirot, and the use of numerology. The Sefirot are only one example of the heavy use of symbolism in Jewish mysticism. Many of the statements in mystic writings are cryptic, adorning them with an esoteric air. The system of the Sefirot was used to demonstrate how God invests the world with His goodness. At the same time, the system was described as a two-way street: each human action affects the Sefirot, stressing the importance of observing Jewish law.

—Aryeh Amihay

Bibliography

- Fine, L. *Physician of the Soul, Healer of the Cosmos: Isaac Luria and His Kabbalistic Fellowship*. Stanford, CA: Stanford University Press, 2003.
- Hallamish, M. *An Introduction to the Kabbalah*. Translated by Ruth Bar-Ilan and Ora Wiskind-Elper. Albany: State University of New York Press, 1999.

Scholem, G. *Major Trends in Jewish Mysticism*. 1941; reprint, New York: Schocken, 1995.
 Tishbi, I. *The Wisdom of the Zohar*. English translation by David Goldstein. Oxford and New York: Oxford University Press, 1989.

The Rise of the Dalai Lamas in Tibet

Since the time of the Fifth Dalai Lama, Ngawang Lobsang Gyatso (1617–1682), until the Chinese occupation of Tibet in the 1950s, the Dalai Lamas have been the spiritual and temporal leaders of the Tibetan people and the Tibetan nation. The institution of the Dalai Lamas in Tibet derives from a religious view held by Tibetan Buddhists by which it is believed that great spiritual masters, Buddhas and bodhisattvas, willfully choose to take repeated rebirths in the world in order to teach and be of benefit to living beings who are progressing on the path to Buddhahood. Thus, when a Dalai Lama dies, the greatest masters of his tradition of Buddhism are entrusted with the responsibility of finding his next reincarnation. Although there are probably more than 100 such recognized lines of reincarnate lamas (or *tulkus* as they are called in Tibetan) today, the line of the Dalai Lamas is considered to be the most important and most revered and has certainly been the most well known outside of Tibet.

The person formally identified today as the First Dalai Lama was Gendun Drub (1391–1475), a renowned scholar, meditation master, and direct disciple of Tsongkhapa, the founder of the tradition that has come to be known as the Geluk denomination of Tibetan Buddhism. Although the Dalai Lamas are officially Geluk *tulkus* due to this connection with Tsongkhapa and the founding of the Geluk tradition, many of the Dalai Lamas, including the current Dalai Lama, Tenzin Gyatso, practice in all four of the Tibetan Buddhist denominations.

Dalai Lama I, Gendun Drub, was widely regarded as one of the most powerful Buddhist teachers in Tibet during his time. He had thousands of disciples, including royalty, and traveled widely. As a result of his broad travels and popularity as a religious teacher, he was a major reason for the early spread of the Geluk

denomination in Tibet. Gendun Drub is probably most famous for two key accomplishments: the writing of profound philosophical treatises and the founding of the Tashi Lhunpo monastery. Tashi Lhunpo is one of the most important monasteries in the Geluk tradition, and for many centuries now it has been the seat of the Panchen Lamas, the second most powerful tulku line in the Geluk tradition.

Although there was initially no search for Gendun Drub's reincarnation because it was not yet the tradition to do so, numerous mystical signs, including proclamations by Gendun Gyatso (1475–1542) himself, indicated that he was in fact the reincarnation of Gendun Drub. When Gendun Gyatso made a visit to Tashi Lhunpo, he is said to have recognized many of his closest disciples from his previous life, calling them by name and relating stories about their earlier encounters together during the life of Gendun Drub. This convinced all concerned that Gendun Gyatso was the reincarnation of Gendun Drub.

It was not until the time of Gendun Gyatso's successor, Sonam Gyatso (1543–1588), that the title "Dalai Lama" was given to this line of reincarnate masters. Mongolia was a superpower in central Asia at the time, and Sonam Gyatso was invited to be the spiritual teacher of the Mongol court. There had been a long-standing spiritual friendship between the Mongols and the Tibetans, although this was the first encounter between the Mongols and the Geluk tradition. Altan Khan, chief of the Tumed Mongols and a descendent of the royal line of Chinggis Khan and Kublai Khan, took on Sonam Gyatso as his guru, and it was Altan Khan who gave him the title "Dalai Lama." "Dalai" is a Mongolian word meaning "ocean." "Lama" is the Tibetan word for the Sanskrit "guru," or spiritual teacher. The connotation was that Sonam Gyatso was the spiritual teacher whose wisdom was as vast as the ocean and thus was the Dalai Lama. Gendun Drub and Gendun Gyatso were retroactively called the First and Second Dalai Lamas, and Sonam Gyatso was considered the Third Dalai Lama. Sonam Gyatso had a powerful influence on Altan Khan and the Mongols, virtually converting Mongolia to the Geluk form of Tibetan Buddhism. The

relationship between the khans and the high Geluk lamas was cemented when Altan Khan's great-grandson was recognized as the Fourth Dalai Lama, Yonten Gyatso (1589–1616).

The next Dalai Lama, Ngawang Lobsang Gyatso (1617–1682), often referred to by Tibetans as the “Great Fifth,” was the first of the Dalai Lamas to assume the role of temporal as well as spiritual leader of Tibet. Tibet was not a unified country in the early seventeenth century. There was an ongoing conflict in what is now the central Tibetan province of Tsang where the king of Tsang, who was sympathetic to the rival Kagyu denominations of Tibetan Buddhism, was persecuting the Gelukpas. In the name of protecting the Geluk school, the Mongol army under the leadership of Gushri Khan came into Tsang. The king of Tsang could not resist, and ultimately the kingdom fell. Similar events took place in other ethnically Tibetan areas such as Ladakh. The Fifth Dalai Lama became a quasi God-king in this new theocracy, as he unified ethnic Tibetan areas under a central and consolidated government in Lhasa for which he was the head. Subsequent Dalai Lamas were to be the future rulers of Tibet, with a panel of four regents in control during the periods between the death of one Dalai Lama and the coming of age of the next.

Several of the next seven Dalai Lamas lived relatively short lives and did not greatly impact the nation or the institution of Dalai Lamas. The Thirteenth Dalai Lama, Thubten Gyatso (1876–1933), was the first to attempt to modernize Tibet. He predicted future troubles with China, and some Tibetans believe that he even consciously chose to die prematurely so that he would be of age in his next life when the Tibetans would be relying on his ability to lead them in their struggles against an occupying Chinese government.

According to many Tibetans, the Fourteenth Dalai Lama, Tenzin Gyatso (1935–present), is the greatest of all. With Tibet under heavy-handed occupation by the Chinese government since the 1950s, Tenzin Gyatso established a Tibetan government-in-exile in Dharamsala, India, and has been the unifying voice that has kept Tibetan culture and their hopes for regaining their nation alive. In 1989 he was awarded the Nobel Peace Prize for his long-standing commitment to

THE GELUK SCHOOL

The Geluk school is a denomination of Tibetan Buddhism that follows the traditions of philosophical thought and forms of meditation practice established by the towering Tibetan master Tsongkhapa Lobsang Drakpa (1357–1419). Tsongkhapa was a reformer who emphasized pure ethics, monasticism, rigorous philosophical study, a commitment to daily meditation, and regular periods of extended retreat. His approach to the Buddhist path, which serves as the fundamental structure for spiritual training in the Geluk tradition, is presented in its quintessential form in his famous treatise *The Great Treatise on the Stages of the Path to Enlightenment*. In this work, Tsongkhapa outlines a gradual path to Enlightenment, one that is inclusive of the entire spectrum of Indian Buddhist teachings and presented in progressive stages. He organized the vast body of teachings in such a way as to show how elements from the wide variety of Buddhist teachings work together and build upon one another, like stepping stones on a path, to help to create enlightened beings, or Buddhas. The Dalai Lamas are the most famous followers of the Geluk tradition, and it currently stands as the largest denomination of Tibetan Buddhism.

—James Blumenthal

nonviolence and his advocacy for peace and human rights around the world.

—James Blumenthal

Bibliography

- Gyatso, Tenzin [Dalai Lama XIV]. *Freedom in Exile: The Autobiography of the Dalai Lama*. New York: HarperOne, 1991.
- Jackson, Roger, Thukten Lobsang Chokyi Nyima, and Geshe Lhundup Sopa. *The Crystal Mirror of Philosophical Systems: A Tibetan Study of Asian Religious Thought*. Boston: Wisdom Publications, 2009.
- Laird, Thomas. *The Story of Tibet: Conversations with the Dalai Lama*. New York: Grove, 2006.
- Mullin, Glenn H. *The Fourteen Dalai Lamas: A Sacred Legacy of Reincarnation*. Santa Fe, NM: Clear Light Publications, 2001.
- Powers, John. *Introduction to Tibetan Buddhism*. Rev. ed. Ithaca, NY: Snow Lion, 2008.

The Rise of Sikh Belief and Community

Sikh belief has its origins in both Hinduism and Islam. Hinduism by 1500 CE had become a conglomerate that included both ancient Vedic rituals and emotional bhakti (devotional) cults, cults that combined abstract meditation and popular worship of the divine through manmade images or natural objects such as trees, animals, and rivers. Sikhism emerged from bhakti cults of northern India. On the other hand Islam, especially the Sufi tradition, also helped to inform belief. The founder of the belief became known as Guru Nanak.

THE JAPJI

The Japji is the morning prayer of Guru Nanak, supposedly recited by Sikhs each morning. Here is the first half:

“There is but one God whose name is true, the Creator, devoid of fear and enmity, immortal, unborn, self-existent.

The True One was in the beginning; the True One was in the primal age.

The True One is now also, O Nanak; the True One also shall be.

By thinking I cannot obtain a conception of Him, even though I think hundreds of thousands of times.

Even though I be silent and keep my attention firmly fixed on Him, I cannot preserve silence.

The hunger of the hungry for God subsideth not though they obtain the load of the worlds.

If man should have thousands and hundreds of thousands of devices, even one would not assist him in obtaining God.

How shall man become true before God? How shall the veil of falsehood be rent?

By walking, O Nanak, according to the will of the Commander as preordained.”

—Edwin Hirschmann

Source

Selwyn Gurney Champion and Dorothy Short, *The World's Great Religions: An Anthology of Sacred Texts* (New York: Dover, 2003), 301.

Nanak was born into a middle-class family in the turbulent Punjab region of northwestern India in 1469. He was a bright and inquisitive boy, but he was less interested in formal schooling or worldly matters. Instead, he pondered, wandered, and listened to the songs of minstrels and fakirs; he was attracted to the preaching and poetry of Kabir (ca. 1425–1505), a Banaras (Varanasi) weaver who declared that God is not to be found exclusively in the Vedas or the mosques but everywhere. Nanak began the habit of predawn bathing, and on one such occasion he received what he felt was divine revelation. It is said that he disappeared for three days and then returned and began to preach, discuss, instruct, and tour. He traveled around India and reportedly also visited Mecca and Medina.

When Nanak settled down, it was in Kartarpur, a village in the Jullundur sector of eastern Punjab. There his preaching and ministering attracted admiring crowds, who formed a loose-knit community called the *panth*.

Nanak accepted Hindu ideas of karma and rebirth but rejected what was viewed as the worship of idols and caste separations and inequalities. Instead, he viewed God as formless and preached meditation, honest labor, and sharing the fruits of labor as the way to seek union with God. Nanak's preaching and praying in the local Punjabi language, instead of the Sanskrit of Hindu rituals or the Arabic of Muslim prayers (languages less known by local people), helped him to reach ordinary Punjabis. In addition to praying (such as the daily Japji), a Sikh was supposed to behave courteously and honorably toward others, maintain cleanliness, give charity, and keep his reverence for God. No diets, fasts, or other austerities were recommended.

Before Nanak died in 1539 he named Angad, a close companion, to succeed him as guru. Guru Angad wrote out Nanak's hymns in his newly refined script called *gurumukhi*, or “guru's mouth.” The gurus usually chose their successors, although sometimes disputes and rifts developed within the community. Arjan, the fifth guru, compiled the Sikh holy book *Guru Granth Sahib* by including in it the teachings of the Sikh gurus and also of many Hindu bhaktas (devotees of God) and Muslim Sufi saints. He

also constructed the Golden Temple at Amritsar, the holiest Sikh shrine.

Later gurus developed the political role of the Sikh community and also fostered a turn toward militancy, especially after the fifth and the ninth gurus. The fifth guru angered Mughal leaders when he provided refuge to a Mughal political rebel, and the ninth guru had defended a group of Hindu Brahmins. Gobind Singh, who became the tenth and last guru (1675–1708), completed the conversion of the Sikhs into a martial brotherhood. In 1699 he proclaimed the order of the *khalsa*, or “pure.” Members promised to die rather than give up their faith, and they agreed to wear always the “five K’s”: uncut hair (usually wrapped in turbans), combs, underpants, sword (or knife), and bangle. He announced that there would be no further gurus and that disputes within the community would be settled by an assembly of the *khalsa* and its leaders.

In 1708 Gobind Singh appointed a zealous young ascetic, Lachhman Das, to succeed him and lead the *khalsa* community. This ascetic declared that he was the slave of the guru and took the name Banda, meaning “slave.” When Gobind Singh was assassinated, the charismatic Banda became the leader. He toured the Punjab countryside, raising armies from the Sikh and non-Sikh peasantry. These rebellious peasants slaughtered their landlords (many of whom were Muslims) and plundered their lands. They also demolished the fort of the nawab of Sirhind who had ordered the death of the two younger sons of Guru Gobind Singh. Consequently, the Mughal emperor Bahadur Shah dispatched an army to the Punjab. Banda was eventually defeated, tortured, and killed along with 700 of his associates in Delhi on June 9, 1716.

Banda’s death was followed by a long period of guerrilla struggle by the Sikhs against the Mughal empire until 1799 when one Sikh chieftain, Ranjit Singh, captured Lahore and became the first Sikh ruler of the sovereign state of Punjab (northwestern India). The region was annexed by the British in 1849, and it was partitioned at the end of British rule in 1947. The Muslim majority areas of West Punjab went to Pakistan, and the Hindu-Sikh majority East Punjab went to India.

Although there have been cycles of violence and nonviolence in their struggle for identity

and political power, the Sikhs have now largely taken to constitutional and peaceful ways of defending their faith and rights. While Sikhs historically have concentrated mostly in the Punjab region, the land of the birth of their faith, they are now settled all over the world.

—Pritam Singh

Bibliography

- McLeod, Hew. *Sikhism*. London: Penguin Books, 1997.
- Richards, John F. *The Mughal Empire*. The New Cambridge History of India, vol. 5. Cambridge: Cambridge University Press, 1993.
- Singh, Harbans. *The Heritage of the Sikhs*. Columbia, MO: South Asia Books, 1973.
- Singh, Khushwant. *A History of the Sikhs*. Vol. 1: 1469–1839. Princeton, NJ: Princeton University Press, 1963.
- Singh, Pritam. “The Political Economy of the Cycles of Violence and Non-Violence in the Sikh Struggle for Identity and Political Power.” *Third World Quarterly* 28(3) (2007): 555–570.

Christian Humanism in Europe

Humanism is an intellectual and philosophical construct that emphasizes the value of the individual and the importance of human abilities over religious ideas that traditionally place humankind within the framework of God’s creation. As a movement that had its distinct origins within the renewed study of the classical humanities during the Renaissance in Europe, humanism attracted scholars who were usually devoutly Christian but also saw significant value in promoting the secular nature of the human existence. Humanist thinkers of the era saw humanity as capable, resilient, and enterprising and as beings capable of making rational decisions apart from organized religion. In this way, the movement seemed to contradict the early Christian teachings of St. Augustine that man was free only to choose sin. Many humanists of the era also had no conflict with renewing many of the pagan concepts associated with the period of classical antiquity and did so through use of the classical languages of Latin and Greek.

Viewed historically, humanism appears to be either the result of the Middle Ages or, alternatively, the starting point for the modern age.

➤ ST. JUSTIN MARTYR'S *FIRST APOLOGY*

Among the intellectual influences of Christian humanism, the second-century Christian apologist St. Justin Martyr may have been the first to offer the idea that Christianity expressed within it the intrinsic value of humankind. In Martyr's *First Apology*, he argued that Christ allowed human culture but was ultimately in control of that culture. This early expression of humanism balanced the importance of human imprint upon culture with the need to recognize the principles of Christianity as having precedence over it. When viewed in this historical framework, Christian humanism was not an idea new to the Renaissance but was indeed a renewal of ancient thought that could be found as fully expressed in Christian thought as it was in pagan secular philosophy. The Christian humanist believed that God created man in His image and that God became man through the Incarnation of Jesus Christ. This understanding of the mystical union of God and humankind served as a solid foundation for espousing Christian humanism. In this way, the worth of the individual, a concept lost during the Middle Ages, was completely consistent with Christianity. This message of the Renaissance era wedded social concerns with the potential promised by human introspection, creating an intellectual environment that nurtured the future ages of the Scientific Revolution and the Enlightenment. Christian humanism has therefore profoundly influenced the thought of Western civilization.

—Cheryl H. White

Humanism is therefore a transitional movement that bridges two periods of human history while representing a renewed way of thinking. Unlike modern humanism, however, the humanism of the Renaissance was predominantly Christian in its orientation to scholarship. In fact, one of the distinguishing characteristics of this Christian humanism was its ability to offer faithful support to the established orthodoxy and doctrines of the Church while being sharply critical of many of its better-known and flagrant abuses. For example, one of the most controversial but noted of the fifteenth-century Italian humanists, Lorenzo Valla (1407–1457), used his skills as a classical scholar of Latin texts to prove that the *Donation of Constantine* was in fact a medieval

forgery of the Church. This document, purportedly authored by Emperor Constantine in the fourth century, made bold assertions about the authority of the pope over territories once part of the western Roman empire. The exposure of the document as a forgery served to increase cynicism and skepticism about the abuses of the late medieval Christian Church. The proper use of the term “Christian humanist” is limited to the description of scholars who had classical training in languages and rhetoric and used that training to address religious or theological issues. This description applied to a great many humanists of the Renaissance age.

The fact that Renaissance humanism had its beginnings in Italy was due in large part to the independent political nature of the Italian states and the fact that the commercial prosperity of the age financed a renewal there of classical art, literature, and philosophy. The establishment of the Platonic Academy in Florence by Cosimo de' Medici at the height of the Italian Renaissance in the middle of the fifteenth century expanded the intellectual outlook of humanism. The school encouraged the exploration of philosophical ideas about the nature of humanity and the place of humans in relationship to all of Creation. The school's scholars produced a Christianized concept of Platonic philosophy that influenced other Renaissance thinkers in Italy and throughout the rest of Europe. Through the patronage of powerful families such as the Medici, the movement of humanism was able to evolve beyond the examination of political and social institutions and promoted the use of history and languages to learn more about the possible meanings of human existence. The context of Christianity framed much of this intellectual exploration.

It was not long before humanism found expression outside of Italy. Humanism flourished among English thinkers of the age such as John Colet (1467–1519), who applied the characteristically humanist critical methods of language study to his work on Holy Scripture. In the Netherlands, Desiderius Erasmus established himself as a highly influential Christian humanist by satirizing the Church in works such as *Praise of Folly*. Erasmus was himself an ordained priest of the Church and a university teacher who made his home in various places throughout Europe

during his lifetime, expanding his influence on various other humanists of the age. One of the most significant contributions of Erasmus was his work to synthesize the teachings of Christianity with that of ancient pagans, which worked to place Christianity firmly within the movement to renew classical antiquity. Erasmus also produced a Greek translation of the New Testament in 1516 as well as Greek and Latin translations of the Church Fathers. He intended for his scholarship to introduce a rational approach to Christianity, contrasting the Aristotelian approaches of medieval scholasticism. By the end of his life, Erasmus evoked controversy as Protestants attempted unsuccessfully to garner his support for their cause.

Sir Thomas More, lord chancellor to King Henry VIII of England, was a friend and close associate of Erasmus. More published his signature work, *Utopia*, in 1516 and used the storytelling setting to attack human corruption evident in various social structures of the age. That same year Erasmus published a Latin work, *The Education of a Christian Prince*, which was, as the title suggests, a manual for princes to learn how to rule benevolently and peacefully. Both of these works greatly championed the cause of Christian humanism by appealing to a need to understand both the human condition and the societies framing the human existence. Both men were attentive to linking their intellectual explorations to a distinctly Christian ethic. Whereas the Church had traditionally asserted that promotion of the importance of the individual was tantamount to arrogance and sin, Christian humanists believed that the good of the individual was applicable on a broader scale to all of humanity.

The impact of Christian humanism on Western civilization became evident in the advancement of individualism, the approaching Scientific Revolution, and empirical observation and the development of the scientific method and served as the intellectual foundation for the Enlightenment. The medieval worldview had been God-centered and therefore restricted individual expression and exploration of meaning. In the age of the Renaissance, the renewed interest in the civilizations of classical antiquity brought about a rebirth of pagan secular ideas

that emphasized the value of the individual. Within the intellectual environment of that era, Christian humanists were able to promote simultaneously both the values of Christianity and the aspirations and abilities of humankind.

—Cheryl H. White

Bibliography

- Franklin, R. W., and Joseph M. Shaw. *The Case for Christian Humanism*. New York: Eerdmans, 1991.
- Jensen, De Lamar. *Renaissance Europe: Age of Recovery and Reconciliation*. Boston: D. C. Heath, 1981.
- Kristeller, Paul O. *Renaissance Thought and Its Sources*. New York: Columbia University Press, 1979.
- Nauert, Charles G. *The Age of Renaissance and Reformation*. New York: University Press of America, 1981.

Baldassare Castiglione and His Idea of the “Renaissance Man”

Baldassare Castiglione (1478–1529) was an Italian author during the High Renaissance, best known for his definition of the Renaissance man in his 1513 work *Il cortegiano* (*The Book of the Courtier*). Castiglione was born at Casatico near the Lombard city of Mantua in 1478. A poor aristocrat, he made his way by dint of his achievements. Castiglione was educated in Milan by the Humanists Girgion Merula and Demetrius Chalcondyles and then became a courtier at the court of Ludovico Sforza and became adept in the art of chivalry. In 1499 Castiglione entered the service of Francesco Gonzaga, the marquis of Mantua, his maternal relative, and this began his career. In 1507 Castiglione entered into the service of Guidobaldo da Montefeltro, duke of Urbino, where he met Pietro Bembo, Bernado Bibbiena, Guiliano de’Medici, l’Unico Aretino (Bernado Accolti), Ludovico di Canossa, and Ottaviano and Federico Fregoso. Castiglione served as ambassador for Urbino to the papal court of Leo X in Rome in 1513 and as a papal nuncio to the court of Emperor Charles V in 1525. Disappointed with the sack of Rome in 1528, Castiglione retired to Toledo, Spain, where he died in 1529.

Castiglione wrote several works, but his most important was *Il cortegiano*. It taught his

view of *cortegiania*, that is, the standards of conduct for the perfect gentleman, who lives in the courts of princes. It was written between 1513 and 1518 and revised until published in 1528. Set at the court in Urbino, which he knew well, *Il cortegiano* is organized into four books as a series of dialogues between the ladies and gentlemen at the court in Urbino over four successive evenings. To entertain themselves each evening they play games, the first of which is to describe the ideal courtier. However, the ideal or perfect courtier is for them a relative concept and not one of the eternal forms sought in the Platonic dialogues. Unlike the Platonic dialogues, which were only between men, Castiglione's dialogues included men and women and resemble the entertainment of the ladies and gentlemen in *The Decameron* (1353) by Giovanni Boccaccio (1313–1375). Their discussions range over topics such as the art of conversation, sex, love, and politics.

Castiglione's interlocutors describe the perfect courtier as a "Renaissance man" who is preferably of aristocratic birth (but need not be, because the true courtier is made by intellect and character) and is scholarly, a connoisseur, brave, skilled at arms, musical, poetic, witty, and speaks the *lingua cortegiana*, or court language. The courtier's style of behavior is studied negligence, which is an effortless grace (*sprezzatura*) or nonchalance concealing all art while making him loveable at first glance. The book also indicated the period's womanly ideal—both beautiful and discreet—and the ideal for interactions between the sexes.

Il cortegiano presented the highest moral aspirations of the Renaissance as a model for virtuous action, which many did not reach, and provided a standard toward which to aspire. It taught civility to many Italians and other Europeans. As the courts of kings grew in the number of attendees that included people other than the knights of the kings, there emerged opportunities for advancement for people who were not from the nobility. Often members of the clergy, secretaries, soldiers, entertainers, physicians, or others who had not been "born to the manor" and hence were not schooled in the manners of the nobility made their way to courts. By being taught the style of the perfect courtier, those

from below could advance, and those from above could develop refinement.

The influence of *Il cortegiano* made Castiglione the guide to aristocratic manners during the Italian Renaissance. Setting a standard for Western tastes and being of high literary caliber, it was soon translated into other languages (Spanish, French, and English) in new editions issued virtually every year until the early 1600s. It had a major impact upon the manners of the Renaissance and post-Renaissance gentry. Thomas Hoby translated it into English as *The Courtier* (1569) because it offered the antidote of social refinement to the existing "barbarity" of English manners. Sir Philip Sidney, who was called the "ideal English courtier," kept a copy of it with him at all times.

Around 1555 Giovanni Della Casa published "The Perfect Gentleman." It presented specific manners for polite society and was intended for a broader audience rather than as a guide only to courtly etiquette. In defining a genre, Castiglione's and Della Casa's works stimulated related works for molding the manners of the cultured classes. Others extended the image of the gentleman, an influence until today.

—Jack Waskey

Bibliography

- Burke, Peter. *The Fortunes of the Courtier: Europe's Reception of Castiglione's Cortegiano*. University Park: Pennsylvania State University Press, 1995.
- Hanning, Robert W., and David Rosand, eds. *Castiglione: The Ideal and the Real in Renaissance Culture*. New Haven, CT: Yale University Press, 1983.
- Hare, Christopher. *Courts and Camps of the Italian Renaissance: Being a Mirror of the Times of the Ideal Gentleman Count Baldassare Castiglione*. New York: Scribner, 1908.
- Rebhorn, Wayne A. *Courtly Performances: Masking and Festivity in Castiglione's "Book of the Courtier"*. Detroit: Wayne State University Press, 1978.

Skepticism

The term "skepticism" in early modern Europe referred to the philosophical belief that it was impossible to have certain knowledge of

anything. Skepticism meant that all knowledge, including scientific knowledge, was open to question. It identified seekers after certainty as “dogmatists.” There were three main sources for the revival of skeptical philosophy in the sixteenth century after a long period in the Middle Ages when it had played little role in European thought. The humanist revival of ancient Greek philosophy led to a rediscovery of the ancient skeptics, the growing awareness of the diversity of world cultures led to doubt of the universal validity of European customs, and the religious conflicts of Protestants and Catholics led to questioning of religious authority.

Greek manuscripts of the leading source for ancient skepticism, *Sextus Empiricus*, began to circulate in the late fifteenth century, and in 1562 Sextus’s works were published in Latin translation in France, the stronghold of skepticism in the sixteenth century. There were two major forms of ancient skepticism. Moderate or Academic skepticism asserted that nothing could be known for certain, while radical or Pyrrhonian skepticism asserted that it could not be known for certain that nothing could be known for certain. Radical skepticism was more influential in the early modern period.

The growing awareness of the diversity of the world’s cultures as travelers’ accounts of Asia, Africa, and the Americas proliferated caused some to question the universality of European mores and in a few cases even religion. The fact that societies could function with a wide range of beliefs and practices made it harder to argue that any were “true.”

Skepticism also spread through its use in religious conflicts. Protestants and Catholics used skeptical techniques to attack the foundations of the other side’s beliefs. Protestants claimed the Bible as the sole source of religious truth, but Catholic skeptics responded by asking how, in the absence of an authoritative institution, Protestants could be sure they had interpreted the Bible correctly. Protestants used skeptical arguments to attack Catholic reliance on the authority of the institutional church and the pope. Even if the pope can be sure of the right answer to a theological question, how could any believer be sure that the person claiming to be pope was actually pope? Skepticism was also employed by

radical reformers who supported religious toleration. Since religious truths could not be known certainly, it made no sense to punish those who disagreed with the majority. Some argued that skepticism destroyed all possibility of attaining truth through reason; therefore, the only way to know truth was through religious faith.

The best-known and most influential skeptical writer was the French Catholic essayist Michel Eyquem de Montaigne (1533–1592), the inventor of the essay form. The first two volumes of Montaigne’s *Essays* were published in 1580, followed by a completely revised edition of three books in 1588. A third edition with further revisions was published posthumously in 1595. As a skeptic, Montaigne’s motto was *Que sais-je?* (“How do I know?”). As a skeptic, he held that people should be even-tempered and tolerant. Montaigne was willing to challenge many of the most basic beliefs of his readers. One of his most famous essays, “On Cannibals,” contrasts Native Americans with French society, suggesting that the “savage” custom of eating a man after he is dead is not worse, and perhaps better, than the European practices of torture and burning people alive.

Montaigne was careful not to openly attack the authority of the Catholic Church. His friend and disciple the priest Pierre Charron (1541–1603) put his work into systematic form, promoting skepticism as the ideal foundation for Catholicism and presenting the Calvinists, then the Church’s chief rivals in France, as classic dogmatists. Skeptical arguments became common in French Catholic polemics against Calvinism. Catholic skepticism, which was later referred to as “fideism” due to its assertion that faith alone is the source of certainty, also attacked the mainstream Scholastic tradition, which sought certainty through reason. For this reason, Catholic skeptics always faced opposition in the Church, and Catholic skepticism never spread far beyond France. Even in France there was a vigorous reaction. The French Jesuit François Garasse (1585–1631) wrote *The Curious Doctrine of the Wits of These Times, or Pretended Wits* (1625), viciously attacking Charron and claiming that skepticism was a mask for impiety and licentiousness. The growing dominance of the Catholic Church within France led to an abandonment of skepticism in favor of dogma and authority

➤ MONTAIGNE IN ENGLAND

Michel de Montaigne was nearly as influential in England as he was in his native France. Many English people read French, so his *Essays* were widely circulated even before the first English translation appeared in 1603. The earliest references in English to the *Essays* date from the 1590s. John Florio, the translator of the *Essays*, was a tutor in French and Italian to young English noblemen and women. (Florio was of Italian descent but was born in London.) The three folio volumes of Florio's translation are each dedicated to noble women. Montaigne, a nobleman himself, was considered appropriate reading for young nobles. James Cleland's *Institution of a Young Nobleman* (1607) is largely plagiarized from Montaigne.

The influence of Montaigne on Shakespeare has attracted much interest, going back to the eighteenth century. The clearest example of Montaigne's influence, through the Florio translation, is the speech of the royal counselor Gonzalo in *The Tempest*. Gonzalo's speech to his fellow castaway, King Alfonso, describes an ideal commonwealth in language borrowed from Montaigne's essay *On Cannibals*. Montaigne's example also helped inspire the creation of the English essay. Early works inspired by Montaigne include Sir William Cornwallis's *Essays* (1600), the first collection of familiar essays in English.

—William E. Burns

by the mid-seventeenth century. The works of Montaigne were put on the Index of Forbidden Books in 1676.

Skeptics also attacked claims of certainty in natural philosophy whether they were made by Aristotelians, magicians, or scientists following Copernicus and Galileo. By the early seventeenth century several thinkers were attempting to establish knowledge on a basis immune from skeptical attack. The English philosopher Francis Bacon (1561–1626) believed that his empirical approach to natural knowledge would overcome skeptical objections, and the Frenchman René Descartes (1596–1650) in his *Meditations* (1641) put forth a logical structure based on the famous formula “I think therefore I am,” which he hoped would be unassailable by skeptical objections.

The ultimate solution to the problem that the skeptical assault on certainty posed in science was mitigated skepticism, which defined the scientific project not as one of seeking certainty but rather as seeking to make statements so highly probable that one was justified to act as if they were certain. Mitigated skepticism, often identified with an intellectual modesty that refused to go beyond the observed facts, was most fully developed in late-seventeenth-century England, where it was characteristic of the natural philosophers of the Royal Society chartered in 1662. Modified skepticism developed in opposition to both the dogmatic Aristotelianism characteristic of the university curriculum and the “enthusiastic” claim to certain knowledge by direct revelation from God that many blamed for the English Civil War of the midcentury. This skeptical approach was put forth in writings identified with the Royal Society and its program such as the Reverend Joseph Glanvill's (1636–1680) *The Vanity of Dogmatizing* (1661), republished with additions in 1664 as *Scepsis Scientifica* with a dedication to the Society.

—William E. Burns

Bibliography

- Frame, Donald M. *Montaigne: A Biography*. New York: Harcourt, Brace and World, 1965.
- Popkin, Richard. *The History of Scepticism from Savonarola to Bayle*. Rev. and expanded edition. Oxford, UK: Oxford University Press, 2003.
- Shapiro, Barbara. *Probability and Certainty in Seventeenth-Century England: A Study of the Relationships between Natural Science, Religion, History, Law and Literature*. Princeton, NJ: Princeton University Press, 1983.

Bible Translations and Historical Criticism

The early modern period was a great age of Bible translation. Among the reasons for this were the revived interest in ancient texts fostered by the humanist movement and the use of the Bible in the religious polemics of the Reformation era. Bible translations such as Martin Luther's German Bible (1534) or the King James Version (1611) in English had immense influence on their churches but also on the development of vernacular languages. Vernacular Bible translation

was a fundamental obligation of Protestants. The Catholic Church was much more cautious. The centuries-old Latin Vulgate of St. Jerome remained the official text, and the circulation of vernacular Bible translations was forbidden in Italy for centuries, but the Catholic Church produced “defensive” translations to guard against Protestant distortions and provide a vernacular version for Catholics. One example is the English Douay Version, the work of the English College at Douay in northern France, published in three parts from 1582 to 1610. Like other Catholic translations, the Douay version was a translation from the Vulgate rather than the Bible’s original text in Hebrew and Greek, although it also borrowed, without acknowledgment, from previous English Protestant translations.

Polemical interest in the Bible, combined with access to the Middle East and humanistic awareness of the problematic creation and transmission of ancient texts, led scholars to search for the oldest editions. The printing press made it possible to present their findings to a wider audience. The first printed “Polyglot” Bible, incorporating Latin, Greek, Hebrew, and Aramaic texts, was issued in 1520 and was the work of a team supported by the Spanish statesman Francisco Cardinal Ximenez de Cisneros (1436–1517). Humanistic scholar Desiderius Erasmus (1469–1536) issued a new edition of the Greek New Testament in 1516 along with a new Latin translation. Erasmus’s Greek text with a few modifications became known as the *textus receptus* and became the standard among Protestants until the nineteenth century, despite Erasmus’s several departures from the Greek manuscript tradition. (Erasmus made a particular mess out of Revelation, where his reliance on a single, incomplete Greek manuscript led him to fill in the gaps by translating the Vulgate back into Greek.)

Interest in early manuscripts led to increased awareness of the differences in biblical texts. One famous case was the “Johannine Comma,” a phrase added to the First Epistle of John to support the doctrine of the Trinity and eventually revealed as inauthentic. Erasmus omitted it from the first edition of his Greek New Testament but replaced it in subsequent editions due to pressure from Church authorities, for whom the Comma was one of the few biblical passages

➤ THE BIBLICAL EXPEDITION OF 1761

One of the most frustrating things for European Bible scholars was the lack of easy access to the settings of the Bible in the Middle East. The references to plants, animals, and geography in the Bible aroused many questions that could not be answered in a European library. To remedy this deficiency the German scholar Johann David Michaelis conceived of an expedition to the shores of the Red Sea. Frederick V, king of Denmark, financed the expedition, which consisted of a group of German and Scandinavian intellectuals, though not Michaelis himself. The members of the expedition were strictly ordered to avoid giving any offense to the Muslim rulers of the area by proselytizing for Christianity, a restriction that was controversial in Europe. The expedition, which left early in 1761, was frustrated by its inability to gain access to the Monastery of Saint Catherine in Sinai, with its legendary manuscript collection including the most important Greek manuscript of the Bible, the Codex Sinaiticus. The expedition’s botanist, Peter Forsskal, did manage to identify the source of the “balm of Gilead,” the Mecca balsam tree. Five of the expedition’s six members, including Forsskal, died in the Middle East.

—William E. Burns

supporting the doctrine of the Trinity. From there it passed into the *textus receptus*, ensuring that it would appear in Protestant as well as Catholic Bibles. Subsequent anti-Trinitarians such as Isaac Newton (1642–1727), who devoted much of his career to close study of biblical chronology and prophecy, attacked the Comma as indicative of the fraudulence of Trinitarianism, both in the early Church and in their own time.

The seventeenth century saw a diminishing interest in the details of the biblical text but expanded use of other humanistic critical tools such as establishing chronology and historical context. The increase in knowledge of Hebrew among Christian scholars along with growing familiarity with Rabbinic writings was also reshaping approaches to the Bible. The most radical critic of the Bible was the Dutch Jewish philosopher Baruch Spinoza (1632–1677), who put forth the first entirely secular reading of Scripture as

a historical document, containing much valuable teaching but not divinely inspired. Few followed in Spinoza's footsteps in the seventeenth century, and those who did were not scholars. One Deist influenced by Spinozism was the Englishman John Toland (1670–1722), who took advantage of the growing knowledge of early Christian writings to question the canonization of the Bible. He pointed out that the Church Fathers themselves did not agree on a single canon of scripture.

Spinozism raised the stakes of biblical scholarship, which was now concerned not only with differences between Catholics and Protestants but also the defense of Christianity as a whole. Dutch Remonstrant Calvinist Jean Le Clerc attempted to establish critical rules for interpretation of the biblical text, suggesting that this was the only way to defend Scriptural authority. Among the foremost Catholic biblical scholars was the French Oratorian priest Richard Simon (1638–1712), whose historical studies of the Bible were partly meant as a response to Spinoza but also as a counter to the Protestant belief in the Bible as the sole religious authority. Simon established the principle that while the Bible was divinely inspired in its original form, its subsequent copyists were not divinely protected from error. His studies, however, eventually aroused so much concern among Catholics that he was expelled from the Oratorians.

Seventeenth-century changes in biblical scholarship had little impact on biblical translation; there were very few innovations as specific biblical translations became canonical. Scholarship also had little impact on the most commonly used texts of the Bible in its original languages.

In the eighteenth century there was a return to textual scholarship, led at first by English

scholars such as the Cambridge classicist Richard Bentley (1662–1742) and then taken up by Germans such as the Lutheran Pietist and millenarian Johann Albrecht Bengel (1687–1752). Bengel began the long process of establishing the genealogy of biblical manuscripts and identifying the major “families” of early Bibles. Biblical study also assumed a more secular cast in many places. Even pious Christians like Bengel seldom identified their biblical studies with the quest for theological truth. In the generation after Bengel, Germany took the lead in biblical textual scholarship. Germany was particularly suited to support specialized scholarship due to its numerous Church-affiliated universities, many of which supported professorships in biblical studies. Important biblical studies still appeared in Britain. The Oxford professor Robert Lowth's *Lectures on the Sacred Poetry of the Hebrews* (1753), originally delivered in 1741, revolutionized the study of the Hebrew Bible by identifying the poetic conventions used by biblical writers.

—William E. Burns

Bibliography

- Frampton, Travis L. *Spinoza and the Rise of Historical Criticism of the Bible*. New York: T&T Clark, 2006.
- Griffiths, Richard, ed. *The Bible in the Renaissance: Essays on Biblical Commentary and Translation in the Fifteenth and the Sixteenth Centuries*. Aldershot, UK: Ashgate, 2001.
- Sheehan, Jonathan. *The Enlightenment Bible: Translation, Scholarship, Culture*. Princeton, NJ: Princeton University Press, 2005.
- Shuger, Debora Kuller. *The Renaissance Bible: Scholarship, Sacrifice and Subjectivity*. Berkeley: University of California Press, 1994.

■ Introduction: Envisioning Each Other

The most significant aspect of this era, 1450–1770, is that for the first time in millennia, most of the peoples of the world were brought into contact with each other. Over the years, isolated societies had addressed their environment and circumstances in various ways,

each of which gradually evolved into “the way” in which matters should be addressed. The cross-cultural contacts resulting from the European explorations were rarely smooth, as one consequence was that these assumed “ways” were called into question. The newly introduced

societies adapted to each other in various manners; generally through attempts to trade, other times through wary surveillance or violence. Often the societies attempted to understand newcomers within the context of their existing mythology, such as the “Noble Savage” context in which some Europeans viewed Native Americans. The more technologically advanced and politically cohesive a society, the more likely it was to stay intact after Europeans came into the picture. Japan, for instance, was able to control European access and to develop the technology and internal structures to survive. The arts, literature, and thought of this period indicate how different groups assessed one another and, at times, called into question their own core beliefs.

—Carolyn Neel

An Amazingly Curious People—Dutch Maritime Accounts

Even before the establishment of the Verenigde Oostindische Compagnie (VOC, United East India Company) in 1602, the people of the United Provinces (today’s Netherlands) were investigating trade routes in the Atlantic, Indian, and Pacific oceans. Many of the seamen on these voyages and later voyages of the VOC and its sister company, the West Indische Compagnie (WIC, West India Company), established in 1621, compiled journals documenting trade information and their own personal impressions of the landscape, flora, fauna, people, and cultures they encountered. These travel accounts are useful primary source documents that not only provide concrete information concerning trade practices and prices for historians of economics but, more recently, are also being interpreted by social historians, art historians, and anthropologists as documents that recorded the nature of the European, and specifically Dutch, interaction with and perception of non-European peoples.

Many of the accounts included printed illustrations of the indigenous flora, fauna, and people. In conjunction with the text, these pictorial and textual descriptions were often marketed as *naer het leven* (“from life”). In the early modern period the authority of a source was deduced by the ostensible veracity and documentation of

that which was directly observed. This was in contrast to earlier reliance on classical sources.

One of the earliest and most influential chroniclers of Dutch trade and travel in India, Southeast Asia, and Africa was Jan Huygen van Linschoten. Linschoten’s *Itinerario* was published in Amsterdam in 1596. The *Itinerario* included 32 engravings of market scenes, peoples, and various other Indian naturalia. Linschoten was a clerk for the Portuguese archbishop in Goa, on the west coast of India. The *Itinerario* sparked many subsequent Dutch voyages to the East Indies. A shorter version, the *Icones*, was also printed and indicates the popularity of travel accounts to the European market.

Other travel accounts were printed copiously in the seventeenth century. The VOC was incorporated in 1602, and many of its trade expeditions included someone who journaled about the events of the trip. Jan Nieuwhof documented a trip to China and to the East Indies in *An Embassy from the East India Company of the United Provinces to the Grand Tartar Cham Emperor of China* (1669) and *Voyages and Travels to the East Indies, 1653–1670* (1682). In Africa, Pieter de Marees wrote about the peoples of the Gold Coast of western Africa in his *Description and Historical Account of the Gold Coast of Guinea* (1602). As with many printed materials in the early modern period, information and artistic conventions were



Gathering of spices in India, illustration from Jan Huygen van Linschoten: History of the navigation of his voyage to the East Indies, 1638. (Library of Congress)

► NICOLAUS DE GRAAFF

The *Reisen van Nicolaus de Graaff, 1639–1687* (Travels of Nicolaus de Graaff, 1639–1687), was one of many travel accounts published and circulated in seventeenth-century Europe. Nicolaus de Graaff was a surgeon for the Dutch United East India Company (Verenigde Oostindische Compagnie). Originally from Hoorn, de Graaff spent almost 50 years traveling to the many ports where the Dutch traded. He journeyed to South America, Greenland, and the Levant. He sailed around the Cape of Good Hope five times to get to the spice islands of the East Indies. De Graaff recorded many detailed descriptions of daily life and human interaction both on and off the ships. In a lengthy passage, he listed the punishments that crew members might receive for disobedience. Sailors might be hit with the butt of a musket, put in heavy armor, flogged with a thick rope, dipped from the yardarm into the water, or keel-hauled three times. Descriptions such as these provide historians with insight into the formation of the Dutch empire.

—Elizabeth Sutton

frequently lifted from prior accounts without citing those sources. Olfert Dapper's later account of Africa, the *Description of African Provinces* (1668), has sections that derive from de Marees and Linschoten. Nieuhof's accounts have sections owing to Linschoten.

In addition to accounts of Asian travel, the Dutch who journeyed across the Atlantic also documented their observations in text and image. After the Dutch conquered Brazil from the Portuguese, Governor Johan Maurits van Nassau-Siegen commissioned the artists Albert Eckhout and Frans Post to create paintings of Brazil's peoples and landscape. Maria Sybilla-Merian was a female artist who traveled to Brazil and Surinam and documented in intricate and detailed watercolors the plants and animals of the region.

The written and pictorial accounts of the Dutch are very useful for today's historians. However, it is important to remember that the impetus for many of these accounts was Dutch imperial interests. Despite the seemingly innocuous text and pictures by merchants and colonizers, Dutch hegemony in trade did have

nefarious consequences. The VOC used military force to establish itself in the Asian spice trade. Across the Atlantic, sugar plantations in Brazil and Surinam were lucrative because of slave labor. The WIC exported African slaves to Dutch colonies in Brazil, Surinam, and New Amsterdam (New York).

—Elizabeth Sutton

Bibliography

- Boogaart, Ernst van den. *Civil and Corrupt Asia: Image and Text in the Itinerario and the Icones of Jan Huygen van Linschoten*. Chicago: University of Chicago Press, 2003.
- Linschoten, Jan Huygen van. *Itinerario*. Amsterdam: Cornelis Claesz, 1596.
- Marees, Pieter de. *Description and Historical Account of the Gold Coast of Guinea* [1602]. Translated and edited by Albert van Dantzig and Adam Jones. Oxford, UK: Oxford University Press, 1987.
- Nieuhof, Jan. *An Embassy from the East India Company of the United Provinces to the Grand Tartar Cham Emperor of China* [1660]. Translated by John Ogilby. Menston, Yorkshire: Scolar Press.
- Nieuhof, Jan. *Voyages and Travels to the East Indies, 1653–1670*. Oxford and New York: Oxford University Press, 1988.
- Parr, Charles McKew. *Jan van Linschoten: The Dutch Marco Polo*. Binghamton, NY: Vail-Ballou, 1964.
- Schmidt, Benjamin. *Innocence Abroad: The Dutch Imagination and the New World, 1570–1670*. Cambridge: Cambridge University Press, 2001.

Ethiopia Oriental—Europeans Imagine Africa

“Ethiopia Oriental” is an outdated expression from the medieval period that refers to the Oriental coast of Africa, more precisely Africa supra Ægyptum, a territory stretching from the Cape of Good Hope toward the Red Sea. Mythical kingdoms originated here, namely the kingdom of Prester John and the kingdom of what the Portuguese called Monomotapa (the Kingdom of Mutapa spanned what is present-day Zimbabwe and Mozambique). Europeans knew of this region thanks to the Portuguese explorers and their efforts to explore down the western coast of Africa. This geographical area belonged to the Estado da Índia, the Portuguese State of India

of which Goa was the capital. Places of trade, called *feitorias* in Portuguese, were established along the coast: Sofala in 1505, Mozambique in 1507, and Sena and Tete on the Zambesi in 1531. In 1609 the Dominican missionary João dos Santos (ca. 1560–1622) published an account of his sojourn titled *Ethiopia Oriental e varia história de cousas notaveis*. The king of Portugal sent an embassy to Prester John during the 1520s. Francisco Álvares (ca. 1490–1536), the chaplain who accompanied the ambassador, also wrote a text titled *Verdadeira Informação sobre a Terra do Preste João das Índias*, published in 1540. Beginning in the seventeenth century, Dutch, English, and French people also sailed in the Indian Ocean and published works. Europeans thus had access to a considerable amount of literature about Ethiopia Oriental.

In spite of the numerous publications describing the area, Europeans often had a false idea of this region. At the beginning of the sixteenth century, Europeans identified modern-day Ethiopia with the Christian kingdom of Prester John, with which they tried to make contact. Religious orders, especially Dominicans, wanted to appropriate Christianity's origin and especially Ethiopian monkhood.

Then, European attention turned to Southeast Africa. From the very first explorations, the Portuguese promoted the region as a land of plenty. Their accounts claimed that the kingdom of Monomotapa contained great wealth: the Zambesi river and the hinterland of the port of Sofala were presented as lands of gold. The king of Monomotapa was said to possess herds of elephants in the same way Europeans possessed herds of cows. André Thevet (ca. 1503–1592), the French royal cosmographer, portrayed the king as going to war, surrounded by his people and perched on a richly decorated elephant. The king was believed to have numerous wives, and the land was believed to abound with springs and rivers.

At the outermost bounds of the known world, European myths took shape in Southeast Africa. First, Europeans thought that Amazons lived in the kingdom of Monomotapa. Organized in war troops, they accompanied the king during campaigns. This idea was diffused namely by Filippo Pigafetta (1533–1603), an Italian

➤ JOÃO DOS SANTOS, *ETHIOPIA ORIENTAL*

Written by the Portuguese Dominican João dos Santos (ca. 1560–1622), *Ethiopia Oriental e varia história de cousas notaveis* was published in Evora in 1609. Concerning Africa Supra Ægyptum, this book is particularly interesting for the history of Southeast Africa, which is the territory that stretches from Delagoa Bay toward Querimba Islands. The author lived in this region for 11 years (1586–1597). This missionary account is divided into two parts. The first part is devoted to Oriental Africa from a geographical point of view, and the second part discusses oriental Dominican missions.

In this work, João dos Santos describes his own missionary experience and provides excellent information on Southeast Africa. He also surveys the rest of the territory using informants and readings. *Ethiopia Oriental* successfully interweaves Santos' missionary experience with details he compiled from his library resources. Indeed, he used some works that he derived from his humanist education but does not rely solely on them. He offers readers a most realistic picture of Oriental Africa at the end of the sixteenth century and undertakes some literary reviews, confronting contemporary works. However, *Ethiopia Oriental* remains a Dominican work, and some events, notably the Jesuits' action in this area, did not appear.

—Florence Pabiou-Duchamp

chronicler and traveler, in his work titled *Relatione del reame di Congo*. João dos Santos goes back over this question and refutes it. Second, Europeans thought that the queen of Sheba possessed a trading post in the kingdom of Monomotapa. This is how they explained the presence of certain mountaintop ruins. According to João dos Santos, Muslims of this region gave the same explanation. Exported from the Indian Ocean toward the Red Sea, the queen's gold was allegedly used for the construction of Solomon's Temple. This assertion appears in several works of the sixteenth and seventeenth centuries, namely *Ethiopia Oriental* and in the wreckage account of the *Santiago* ship in 1585. Finally, Southeast Africa was the subject of several famous poems. The Portuguese Luís de Camões (1524?–1580) devoted a song and a sonnet to it in his epic *As*

Lusiades, and Jean de la Fontaine's (1621–1695) fable *Deux amis* also took place in this kingdom.

In fact, Europeans wished to reform Ethiopia's Christianity. In the 1550s a Jesuit mission was sent there. Concerning the kingdom of Monomotapa, João dos Santos's works had put some myths into perspective. Nevertheless, Europeans refused to believe that the ruins were of African origins. Even when the German geologist Carl Mauch (1837–1875) discovered the Great Zimbabwe site in 1871, he believed that he was before copies of Solomon's Temple and of the queen of Sheba's palace, which shows that the legends persisted into the nineteenth century.

—Florence Pabiou-Duchamp

Bibliography

- Álvares, Francisco. *The Prester John of Indies: A True Relation of the Lands of the Prester John*. Translated by Lord Stanley of Alderley. 1881; reprint, Cambridge: Cambridge University Press, 1961.
- Garlake, H. S. *Great Zimbabwe*. London: Thames and Hudson, 1973.
- Newitt, Malyn. *A History of Mozambique*. London: Hurts, 1997.
- Pigafetta, Filippo, and Duarte Lopes. *A Report of the Kingdom of Congo and of the Surrounding Countries*. Translated by Margarite Hutchinson. New York: Negro University Press, 1969.
- Summers, Roger. *Zimbabwe: A Rhodesian Mystery*. London: Nelson, 1963.

South Asia Imagines Europe

Though there had been contact between South Asia and Europe in the ancient past in the form of Alexander's invasion of the northwestern regions and subsequent interactions with the Indo-Greek kingdoms as well as trade with the Roman empire in the ports along the western coast and the occasional solitary visitor (such as Marco Polo in the thirteenth century), there was no large-scale contact between South Asia and Europe until the late fifteenth century, with the arrival of the Portuguese expedition of Vasco da Gama. The arrival of da Gama marked the beginning of a period of extensive interaction between South Asia and Europe, culminating in the British Raj, the period of direct British rule of most of the subcontinent.

European domination of South Asia did not occur all at once and was not, in fact, the original intention of the first European visitors. The Portuguese, soon followed by the Dutch, the French, and the British, were initially interested only in trade. These powers entered into agreements with local rulers to establish coastal ports. For the most part, European interaction with South Asians was confined to these port cities. It was only the British who were eventually to expand their coastal foothold into a sizable empire, and this expansion did not begin in earnest until the late eighteenth century.

In addition to trade there was Christian missionary activity, which did involve individual European missionaries traveling beyond the European port cities and into the interior of South Asia. But the missionaries were relatively few in number, and at least in terms of numbers of converts, their impact on South Asian society was fairly marginal, though the Catholic missionaries in the southern part of India did have some successes, and this part of India has a significant number of Christians today. This region, however, had long had an indigenous Christian presence since at least the fifth century CE.

Prior to the relatively large-scale arrival of the Europeans as trading partners, the perception of foreigners in South Asia was largely negative, and foreigners themselves were of only marginal interest, particularly the dominant Brahmanical traditions. The Buddhists did take an interest in other countries and their peoples, being committed to missionary activity and spreading Buddhism throughout Asia. But by the end of the thirteenth century, Buddhism had largely died out in South Asia. The words for foreign peoples, *mleccha* and *yavana*, had mainly negative connotations. The word "mleccha" can be translated as "barbarian," or someone lacking in culture. The word "yavana" originally referred to persons of Greek origin but became a generic term for people from the West and was as much applied to Arabs, Turks, and Persians as to Europeans. A yavana was perceived for the most part as a violent invader and, as with mleccha, a person lacking in culture.

With more frequent contact, this perception of Europeans did not change. Indeed, this increased contact was seen by at least some

➤ EARLY EUROPEAN MISSIONARIES IN SOUTH ASIA—A VARIETY OF APPROACHES

Early European Christian missionaries in South Asia created controversy, not only among the non-Christians they were seeking to convert, but also among their fellow Europeans. One such missionary was the Portuguese Jesuit, Robert De Nobili. Unlike many of his fellow Christians, who looked down on traditional Hindu customs and beliefs, De Nobili believed that it was important to show respect for those Hindu traditions that he

found to be compatible with Christianity. In order to reach Hindus with his Christian message, De Nobili adopted the dress and customs of the Brahmins, the traditional religious teachers of Hinduism. The religious authorities of Europe were skeptical about this approach, called *acculturation*, which has since been adopted by many Christian missionaries.

—Jeffery D. Long

Hindus as a harbinger of an apocalyptic age, the end of the present world-age, or Kali Yuga. It was lamented at this time that “low,” “vile” (*nica*) foreigners such as the British had seized power in parts of India, a fact presented in a Sanskrit text of this period as a danger to the traditional Hindu social order comparable to the seizure of power by the demonic villain Ravana in the epic *Ramayana*. Another text refers to the Europeans as *gurunda*, which means “one who mutilates cows,” and the barbaric status of these foreigners is attributed to their practice of eating beef. The *gurunda* are said to have come to India “for the sake of trade.” It is also claimed, interestingly, that they are adherents of Buddhism. This latter claim may reflect a poor grasp of Christianity, which does bear some superficial resemblances to Buddhism; the fact that earlier Europeans with whom the Hindus had had contact—the Indo-Greeks—were Buddhist, and this past reality was simply projected onto the contemporary situation; or a combination of the two. In general, the coming of Europeans was seen as a harbinger of social disintegration.

Despite these negative characterizations of Europeans in Brahmanical texts, it is also the case that a number of South Asians, including Brahmins, worked closely with the Europeans, engaging in trade with them but also assisting them in understanding Indian culture and even aiding Christian missionaries in translating Sanskrit texts, for example, and explaining the philosophical concepts and practices of Hinduism. It could well be that the negative depiction of Europeans in texts of the period of early contact presents a reaction against an initially friendly

and cooperative relationship between some Hindus and this new foreign presence in the subcontinent.

—Jeffery D. Long

Bibliography

Halbfass, Wilhelm. *India and Europe: An Essay in Understanding*. Albany: State University of New York Press, 1988.

Keay, John. *India: A History*. New York: Grove, 2000.

SarDesai, D. R. *India: The Definitive History*. Boulder, CO: Westview, 2008.

China and the Western Barbarians

The Chinese, for millennia, had been aware of barbarians, both those with a proper attitude and those who rudely intruded into the realm of the civilized people, the Chinese. During the late fifteenth century, as global cooling was reducing pastureland in the Eurasian steppes, nomads once again began pressing against Chinese borders. The Chinese had been dealing with the steppe peoples for more than a thousand years, sometimes trading with them, sometimes conquering them, and occasionally, being conquered by them. They generally categorized these foreigners as hopelessly uncivilized unless the foreigners made the proper attempt to emulate Chinese culture, in which case they were considered “half-cooked,” meaning that although not yet culturally Chinese, at least they tried.

The Portuguese were the first western Europeans to sail directly into a Chinese port, navigating from the Malaysian state of Malacca to the south Chinese coast of China in 1514. In

➤ A COMPLAINT FILED AGAINST THE JESUITS

In his *Journal*, Matteo Ricci (1552–1641) discusses a complaint against the Christian missionaries filed with a local magistrate. Ricci quotes from the document as follows:

“These men [the Christian missionaries] teach that we should pay no respect to the images of our ancestors, a doctrine which is destined to extinguish the love of future generations for their forebears. . . . In the beginning they lived in small houses but by this time they have bought up large and magnificent residences. The doctrine they teach is something infernal. It attracts the ignorant into its fraudulent meshes, and great crowds of this class are continually assembled at their houses. Their doctrine gets beyond the city walls and spreads itself through the neighboring towns and villages and into the open country, and the people become so wrapt up in its falsity, that students are not following their course, laborers

are neglecting their work, farmers are not cultivating their acres, and even the women have no interest in their housework. . . . These priests distribute pictures of some Tartar or Saracen, who they say is God, who came down from Heaven to redeem and to instruct all humanity, and who alone, according to their doctrine, can give wealth and happiness; a doctrine by which the simple people are very easily deceived. These men are an abomination on the face of the Earth, and there is just ground for fear that once they have erected their own temples, they will start a rebellion.”

—Carolyn Neel

Source

Alfred J. Andrea, and James H. Overfield, *The Human Record: Sources of Global History*, 5th ed., 2 vols. (Boston: Houghton Mifflin, 2005), vol. 1, 489–490.

1535, the Chinese granted Portugal permission to dry their cargoes in Macao, but the Portuguese pressed for more. The Chinese easily rebuffed the Portuguese when they tried to force their way into Canton (Guangzhou) in 1521 and 1522. The unruly Portuguese breached Chinese protocol often, convincing the Ming dynasty that they had no conception of the proper way to approach the Celestial Kingdom. Not only were these Portuguese aggressive about trade, but they also participated in smuggling and piracy. Rumors circulated that they might be cannibals, as well. To make matters worse, in an age in which many Europeans believed bathing was dangerous, the Portuguese sailors smelled bad. The Chinese tried to avoid being in close proximity to them. Later, when the Spanish, Dutch, and others joined the Portuguese, the Chinese saw little reason to differentiate between them. They were simply the “red-haired barbarians,” not even as civilized as the northern steppe peoples. It was not an auspicious introduction to European trade.

In one of those coincidences that appear to haunt historians, the Ming appetite for silver

grew as the mines of the Spanish New World colony of Potosi went into high production. In China, the value of silver was set by a competitive market, not by a bureaucracy. Europeans became welcome traders. As much as a half of the silver mined in Spanish colonies ended up in the Ming empire. Guangdong, Fujian, and Zhejiang thrived. The bothersome barbarians also brought muzzle-loaded guns and cannons, which impressed Chinese military leaders. Despite their rude manners and ill scent, Europeans became a significant element of the South China trade networks.

The Portuguese sailors may have been a bit uncouth, but they brought with them a group of the most highly-educated and sophisticated Europeans of the day: the Jesuit missionaries. As might be expected, the Chinese and European literati found much to discuss. By 1601, the Jesuits were situated in Beijing (as well as other cities) and eventually became fixtures in court. The Jesuits were not especially successful in Christian conversion, but they taught subjects the Ming found most interesting: mathematics, astronomy, geography, cartography, and various

military arts. After the fall of the Ming, Fr. Von Bell remained to serve the Qing. The commonalities between the Court elite scholars and the Jesuits deepened. Many Jesuits became infatuated with Confucianism, defining Chinese rituals as “civic observances” rather than pagan rites. However, Franciscans and Dominicans introduced complications to the relationships when they complained to the pope about Jesuit toleration of “paganism.” In 1634 a Franciscan, Francisco de la Madre de Dios, and a Dominican, Francisco Dias, charged the Jesuits with improper use of Christian terminology; toleration of ancestor worship and excessive veneration of Confucius; refusal to tell the Chinese that Confucius was now imprisoned in Hell; and failure to promulgate the Church laws. The accusation of “ancestor worship” was the greatest problem. Ricci and his followers considered the rituals performed before ancestral tombs to be civic in nature, that is, an act of respect akin to putting flowers on a grave, not worship.

Nevertheless, the controversy raged for years, involving the intellectuals of Europe, and finally, the emperor. There were two trials regarding the matter. In 1656, the pope decreed in favor of the Jesuits; however that was reversed in 1704. In 1715, Pope Clement XI issued a bull, *Ex Illa Die*, to reaffirm the anti-rites stand. The matter was brought to the attention of the Kangxi emperor. The audacity of a European to rule on a matter pertaining to the Celestial Kingdom infuriated Kangxi; he issued an edict banishing all Christian missionaries from China except for the Jesuits at Court. The Jesuits, unfortunately, supported the Yongzheng emperor’s brother’s claim to the throne. When the Yongzheng emperor prevailed, he took stronger steps against proselytizing Christians, banning all except those who were useful advisors to the Court. In 1742, Pope Benedict XIV reiterated the stand against the performance of Chinese rites, and Christianity lost nearly all of its support in China. The Jesuits lost their privileged place in the Chinese court.

The Chinese perception of European traders as unruly, ill-mannered boors did not alter during the period from 1500 thru 1770. But the refined Jesuits did counter the image somewhat

with the upper echelons of Ming and Qing society. There was a dramatic revision in Chinese perceptions of Europeans in the nineteenth century, but that’s a tale for another day. The Jesuit order was dissolved in 1773, and only reestablished in 1814, after the French Revolution and Napoleonic Wars. When considering the nineteenth and twentieth century tragedies resulting from China’s relationship with Europeans, it is difficult not to wonder how things might have developed if there had still been a presence in China of intelligent Europeans who deeply understood and appreciated Chinese culture. We will, of course, never know the answer.

—Carolyn Neel

Bibliography

- Brook, Timothy. *The Confusions of Pleasure: Commerce and Culture in Ming China*. Berkeley: University of California Press, 1998.
- Crossley, Pamela Kyle. *A Translucent Mirror: History and Identity in Qing Imperial Ideology*. Berkeley: University of California Press, 1999.
- Davis, Walter W. “China, the Confucian Ideal, and the European Age of Enlightenment.” *Journal of the History of Ideas* 44, no. 4 (1983): 523–548.
- Spence, Jonathan D. *The Chan’s Great Continent: China in Western Minds*. New York: W. W. Norton, 1998.

Rangaku—Japan Imagines Europe

The advent of the restrictive trade and travel policies known as *sakoku* in the 1630s was accompanied by the violent repression of Christianity. In part because many important scientific works had been translated into Chinese by Jesuits and were thus suspect and in part because no clear lines had been drawn, for much of the seventeenth century there was a fear of having too close an association with Western intellectual trends. When Tokugawa Yoshimune took office as shogun in 1715, his interest in what the West might offer Japan promoted more open study and discussion. Free from most fears of official reprisals, Japanese intellectuals began to explore new ways of thinking. From this time on, some scholars were granted access to the Dutch who were in the capital for their court

EMERGENCE OF DUTCH STUDIES IN JAPAN

In 1639 the Dutch became the sole Western power to have diplomatic and trading relations with Japan until 1854. As a result, historians, even in nineteenth-century Japan, referred to this period as *sakoku*, or “closed country.” However, through the narrow conduit of the residents of the Dutch trading factory on Deshima in the harbor of Nagasaki, information about the West entered Japan. The study of anything to do with the West was known as *rangaku*, literally “Dutch Studies” as derived from the Japanese pronunciation of Holland (Oranda).

Although these studies were never outlawed, connections with Christianity put a damper on most Western thought after 1639. For example, works on mathematics and astronomy translated into Chinese by Matteo Ricci were forbidden because Ricci was a Jesuit priest. Under Shogun Yoshimune (r. 1716–1745) *rangaku* studies were again encouraged, especially in astronomy and medicine. The interpreters to the Dutch played a crucial role in advancing *rangaku*, and many *rangaku* scholars came from their ranks. *Kaitai Shinsho*, a translation by Maeno Ryōtaku (1723–1805) and Sugita Genpaku (1733–1817) of *Tafel Anatomia* by Johan Adam Kulmus (1689–1745), was a landmark because it revolutionized the study of medicine in Japan and, as a cooperative effort by top physicians, professionalized what had been more isolated, amateurish studies.

—Martha Chaiklin

journey where they were questioned, with the aid of interpreters, on knowledge obtained from books and news of Europe. Much of the work was sponsored by daimyo as well as by the shogunate itself. One important *rangaku* (Dutch learning) scholar who exemplified this range of patronage was Otsuki Gentaku, who was a physician in Sendai, established the first private *rangaku* academy in 1786 in Edo, and was appointed the head of the newly established office of translation in the shogunate in 1811. The primary focus of shogunal interest was on medicine and astronomy and, later (especially after Chinese defeat in the Opium War in 1842),

military hardware and strategy. The publication of the first Dutch-Japanese dictionary was produced in 1816 by Dutch Factory head Hendrik Doeff. Revised by Japanese interpreters, it was presented to the shogunate in 1833. This vastly aided in the study of foreign books.

Despite its insular nature, the intellectual trend known as *rangaku*, which required knowledge of a foreign language, produced some significant results. Perhaps the most important of these was the introduction of the sweet potato by Aoki Konyo to alleviate famine in the 1740s. Artistic studies led to the production of copper plates by Shiba Kokan and Aodo Denzen in the 1780s and the introduction of Western perspective by, for example, Maruyama Okyo, who used a camera obscura just as Vermeer had. However, much of the public had some idea of the West through art and objects, although to call something Dutch was in common parlance a way to call it bizarre. From the eighteenth century, prints known as *Nagasaki-e* that depicted foreigners were popular souvenirs from travelers to Nagasaki. By the late eighteenth century, especially during the influence of shogunal official Tanuma Okitsugu (1760–1786), there was a period known as *ranpeki*, or “Dutch Crazy,” in the pursuit of foreign material culture. While only the wealthy could afford actual objects, imported textiles were imitated and forged, Dutch-decorated ceramics and copies of cut glass were made, and netsuke were carved into imagined Dutchmen.

The relationship of Japan and the West and that of Japan and China took opposite trajectories. As *rangaku* became professionalized and accepted, Chinese thought, which in the form of Neo-Confucianism had formed the basis of Tokugawa thought, became less important. *Kokugaku* (nativist) scholars such as Motoori Norinaga worked to “cleanse” Japanese thought of Chinese influences.

—Martha Chaiklin

Bibliography

- Goodman, Grant K. *Japan and the Dutch, 1600–1853*. London: Routledge Curzon, 2000.
- Gunn, Geoffrey C. *First Globalization: The Eurasian Exchange, 1500–1800*. Lanham, MD: Rowman and Littlefield, 2003.

Numata, Jiro. *Western Learning: A Short History of the Study of Western Science in Early Modern Japan*. Tokyo: Japan Netherlands Institute, 1992.

Native Filipino Reactions to the Spanish at the Time of Contact

When the Spanish expedition, led by the Portuguese Fernando Magellan, landed in the Philippines on March 31, 1521, they were not the first outsiders to come to the Philippines. Trade and contact with other peoples of Asia had been going on for over six centuries when Magellan arrived. Filipinos also had been traveling extensively in Southeast Asia. In fact, the Portuguese historian Tome Pires recorded that there was a community of people in Malacca he called Luções (Luzones), people from Luzon.

The initial contacts with Spaniards were generally marked by the absence of any hostility. Magellan participated in the rite of peace with the leaders he met, and Miguel López de Legazpi did the same almost four decades later. Magellan entered into negotiations with Humabon, the chieftan of Segbu (the modern-day province of Cebu), and eventually the chief and his whole family were baptized. Problems arose when the Spaniards sought to impose their will on the local leadership and population. When Magellan proclaimed that Humabon would be the leader over the other local leaders, there was resistance. Chief Lapu-Lapu, from the island of Mactan, refused to recognize Spanish sovereignty, causing Magellan to launch an attack against his kingdom. Despite being outnumbered, Lapu-Lapu's army was able to defeat Magellan and his soldiers, and Magellan lost his life. Following this incident Humabon proved to be a traitor, as he invited several of the Spaniards to dinner and had them all killed. Those few who survived set sail, and although four more expeditions were sent, there would not be another successful one until the expedition of 1565, led by Legazpi.

In addition to the indigenous people, the Spaniards also came into conflict with another set of local people: the Muslims. Islam had

➤ BLOOD COMPACT—PEACEMAKING IN THE PHILIPPINES

Peacemaking in the precolonial Philippines was performed with a *sandugo* (*sanganduguan*), which in Filipino means “one blood.” In this ceremony, an agreement was sealed between warring factions who wished to establish peace. Both parties were given a cup of wine, into which each, having cut his arm, would drip several drops of blood. The cups were then exchanged, and each party would then shake it to mix the blood with the wine before drinking the entire contents. The Spaniards would come to call this *pacto de sangre*, or “blood compact.” It is said that Magellan performed such a blood compact with Kolambo, one of the first leaders he met in the Philippine archipelago. It was on Kolambo's island, Limasawa, that the first Catholic Mass was held on March 31, 1521. Kolambo later took Magellan to Cebu, where he met Humabon. When Miguel Legazpi arrived in 1565, he performed the same compact with Si Katuna, a leader of the island of Bohol. Andres Bonifacio, a major figure in the Philippine Revolution some three centuries after these events, said that the Spaniards had broken the blood compact and used this as a rationale for the struggle against the Spaniards.

—Damon Woods

existed in the Philippines since the fourteenth century and had established trading centers there. The local Islamic leaders were unhappy that Legazpi had made Manila the capital of the Philippines, as it became the center of their activities in the region. These leaders were under the authority of the sultan of Brunei. When authorities in Brunei learned of the Spanish fort in Cebu in 1565, they sent a young noble named Soliman to help those under their authority to build up the fortifications against the Spanish. Among the weapons used were artillery.

In 1570 Legazpi sent a military force to scout Manila. On the way they destroyed forts at Mindoro and Lubang, built by Soliman. De Goiti, the head of the expedition, sent a message of peace to Manila. Soliman responded, stating a desire for peaceful coexistence and promising

the Spaniards that they could settle where they wanted. Pleased with the response, De Goiti made his way toward Manila with the intention of solemnizing their pact. Along the way, the Spaniards met villages who spoke of atrocities committed against them by the chiefs in Manila, those directly under Brunei's rule. They welcomed the coming of the Spaniards.

De Goiti, Soliman, and Raja Matanda, a local chief, met in the Manila area and participated in the *pacto de sangre*. The Spaniards were given the right to establish a settlement and the promise that they would be exempt from tribute. But De Goiti was warned that the Muslims intended to attack him and his ships. The next morning, when the Spaniards fired a cannon as a signal to certain boats, the Muslims in Manila began to fire on the Spanish ships. The Spanish burned the fort to the ground and returned to Panay. The next year, 1571, the Spaniards returned to Manila and established a permanent presence.

One group that also fiercely resisted the Spanish intrusion was the local priests of the animistic religion, who were mostly women. The new religion brought by the Spaniards did not allow women to become priests; therefore, there was a natural antagonism. The friars wrote about stubborn shamans who would try to stop the Spaniards from entering a village and would try to intimidate the political leaders by making predictions of severe consequences. When there was conflict, they would lead men into battle, shouting out curses at the Spaniards.

Those Filipinos who welcomed the Spaniards often misunderstood the Spanish intentions. Some believed that the Spaniards would liberate them from Muslim slave raiders or the Muslim overlords of Brunei. Others thought that the Spaniards simply wanted to replace the authority of Brunei with their own, allowing local leadership to stay in place. But this was not always the case, leading to difficulties and what the Spaniards would view as revolts.

—Damon Woods

Bibliography

- Agoncillo, Teodoro A. *History of the Filipino People*. Quezon City: R. P. Garcia, 1990.
- Alamario, Virgilio S., ed. *Pacto de Sangre: Spanish Legacy in Filipinas*. Manila: Philippine-Spanish Friendship Day Committee, 2003.

Phelan, John Leddy. *Hispanization of the Philippines*. Madison: University of Wisconsin Press, 1959.

Noble Savages and Howling Wildernesses—Europe Imagines America

Despite the momentous nature of Europe's discovery of America in the late fifteenth century, the most characteristic feature of European visions of the New World and its inhabitants was not shock but rather a ready desire to assimilate the new people, places, and flora and fauna into traditional European categories of interpreting the world. From images of America as a howling wilderness—largely empty, untouched by “civilization,” and full of fierce, nomadic “wild men”—to romanticized notions of the “noble savage,” these visions often reveal more about diverse strains of early modern European thought and culture than they do about the people and places they refer to.

The first travelers, conquerors, and settlers from Europe, primarily Spanish and Portuguese, arrived in America prepared by a classical and late-medieval literary heritage to find fantastic natural wonders—such as the Fountain of Youth and immense stores of gold and silver—as well as strange-looking animals and strange-looking people such as the “wild men” of European legend or the Amazon women of ancient Greek legend. Furthermore, as Christians influenced by classical authors such as Aristotle and Pliny, they expected to find entire populations not only lacking in “true religion” and sorely in need of Christian instruction but also lacking in “civilization” and practicing all manner of behaviors, such as cannibalism and polygamy that needed correction by European example and governorship. Native Americans were typically classified as “barbarians” and “pagans,” categories at once intended to radically differentiate them from Christian Europeans but also—by conceptually linking them to Europeans' own ancestors and the peoples of pagan antiquity—intended to keep them within the realm of the familiar and to express hope regarding their eventual conversion to Christianity and assimilation into European ways of life.

However, as the conquest of Mexico unfolded and as missionary efforts met unexpected resistance, European visions of America shifted away from this initial optimism. Images of ritual cannibalism and human sacrifice by the Mexica haunted the Spanish, and even though the great city of Mexico was honored by the Spanish as a rival to ancient Rome itself in its grandeur, the conquistadores' destruction of the city was regarded as necessary and even just, given Mexica ritual practices. In Spain, a Royal Council was convened in 1550 to debate whether the Native Americans were even capable of conversion and civilization. Aristotelian theories of "natural slavery" came to the fore, and scholars questioned the very humanity of the Native Americans. Some scholars, to justify violent conquest and enslavement, drew parallels to the biblical enemies of ancient Israel who practiced human sacrifice and were visited by the wrath of Yahweh. The Dominican friar Bartolomé de las Casas famously defended the Native Americans in the debate, but his defense offered a differently problematic vision of their cultures as stunted and childlike and in need of long-term guidance by Christian Europeans.

Religious differences between Catholics and Protestants also affected European visions of America. The Catholic missionary enterprise by Spanish and Portuguese religious orders in South and Central America, and later in North America by French Jesuits, Franciscans, and others, continued to grow despite many setbacks, and generally the Catholic powers supported the resettlement of Native Americans into or nearby colonial towns and cities. Catholic colonies sometimes encouraged intermarriage between Native Americans and Europeans, despite growing cultural—and increasingly racialized—objections to the practice. The Protestant powers of England and the Netherlands, however, did not show the same eagerness to convert Native Americans or to resettle them into colonial communities. English settlers in North America, for example, tended to paint images of a savage but largely empty wilderness, preferring Native Americans to keep their distance or to be driven away by force. Other Protestant travelers, settlers, and writers—including French Huguenot writers such as Nicolas Le Challeux and Jean de

➤ COLUMBUS, MONTAIGNE, AND COLDEN WRITE ON THE INDIAN

A closer look at a survey of European writings about Native Americans in the early modern period might begin with the letters and journals of Christopher Columbus, Michel de Montaigne's essay "On Cannibals" (1580), and Cadwallader Colden's *History of the Five Indian Nations* (1727).

Columbus (ca. 1451–1506) issued somewhat contradictory statements about the island inhabitants of the Caribbean. He stressed their "warlike" nature, accused them of cannibalism, and criticized their "uncivilized" lack of towns and cities. Yet he also stressed their lack of weapons, their handsome features, and their friendliness and regarded their allegedly "timorous" nature as an opportunity and justification for total subjection to the Spanish monarchs and to the Catholic Church.

The French humanist Montaigne (1533–1592) never visited America, but his stunning essay "On Cannibals" praised Native Americans for their closeness to nature and their lack of such corruptions of "civilization" as class envy, greed, and slavery. Rather than condemning Native American cannibalism, Montaigne inverted the discussion into a powerful critique of European cruelty—including incidences of cannibalism—during contemporaneous religious and political conflicts. The text was foundational to later "noble savage" discourses.

Colden (1688–1776), a British scientist and official in colonial New York, wrote the first English account of the political and social life of the Iroquois, a text that is largely complimentary. Colden emphasized the workings of Iroquois governing and economic structures, comparing them positively (if somewhat romantically) to the ancient Romans. He intended his writings to convince British colonists to trade more with the Iroquois in competition with the French.

—Bronwen Catherine McShea

Bibliography

- Cohen, J. M. *Four Voyages of Christopher Columbus*. Baltimore: Penguin, 1969.
- Colden, Cadwallader. *History of the Five Indian Nations Depending on the Province of New-York in America*. Ithaca, NY: Great Seal Books, 1958.
- Montaigne, Michel de. *The Complete Essays*. Translated by M. A. Screech. London: Penguin, 2003.

Léry—tended to view the possibility of Native American “salvation” by God with a strong degree of pessimism. The missionary impulse did not dominate their visions of America.

On the one hand, such attitudes could cause writers such as Léry to dramatize and reify the frightening otherness of Native Americans. After visiting the Tupinambas living near the Bay of Rio in Brazil in 1557, he recounted a nighttime ritual he had witnessed where men and women howled, leaped, and foamed at the mouth in a circular dance. He was certain they were irrevocably possessed by the devil. On the other hand, an ironic result of his absolute sense of Christians’ alienation from the “savages” was an analytical detachment that could lead to a new kind of ethnographic study and appreciation of Native American cultures for their own sake, given a lack of interest in altering those cultures along European, Christian lines. Léry wrote lengthy positive descriptions of Native American social and political structures and customs. Interestingly, his discussion of cannibalism was more of a polemical attack on Roman Catholic Eucharistic theology and on the cruelty he witnessed against other Huguenots in France during the St. Bartholomew’s Day Massacre of 1571.

By the seventeenth century, many European writers, including the Catholic essayist Michel de Montaigne, contrasted positive images of Native Americans with European problems such as sectarian warfare, commercial greed, and social conflict. Frightening depictions of howling, naked, nomadic, and cannibalistic “savages” who lacked the goods of “civilization” often gave way to romanticized images of “noble savages.” Native Americans were valorized for their supposed nakedness and “natural” way of life; their lack of private property, commercialism, and class conflict; and their freedom from many of the forms of militaristic violence and social disorder known in Europe.

Romanticized visions of America and its inhabitants had existed from the beginning of European exploration and conquest but evolved over time in diverse European discourses. Such images existed alongside many demeaning views that justified conquest and slavery, including evolving scientific theories regarding the inferiority of Native Americans. In the early period of

colonization, climactic, geographical, and astrological theories of human difference, based on the writings of ancient thinkers such as Galen, Hippocrates, Aristotle, and Pliny, dominated the discussion. In the eighteenth century, modern, biological, and genetic theories of racial difference contributed to vigorous forms of racism. The history of European science, along with traditions of philosophy, religion, and literature, figures prominently in the story of changing European visions of America. The diversity of these visions, so closely bound up with the economic, political, and cultural history of imperialism, colonial resistance, and postcolonialism, continues to play a dynamic role in scholarly understandings of early modern encounters between Europeans and Native Americans.

—Bronwen Catherine McShea

Bibliography

- Greenblatt, Stephen. *Marvelous Possessions: The Wonder of the New World*. Chicago: University of Chicago Press, 1991.
- Henke, Lewis. *All Mankind Is One: A Study of the Disputation between Bartolomé de Las Casas and Juan Ginés de Sepúlveda in 1550 on the Intellectual and Religious Capacity of the American Indians*. DeKalb: Northern Illinois University Press, 1974.
- Léry, Jean de. *History of a Voyage to the Land of Brazil*. Translated by Janet Whatley. Berkeley: University of California Press, 1992.
- Pagden, Anthony. *The Fall of Natural Man*. Cambridge: Cambridge University Press, 1982.
- Ryan, Michael T. “Assimilating New Worlds in the Sixteenth and Seventeenth Centuries.” *Comparative Studies in Society and History* 23(4) (1981): 519–538.

Early Modern English Accounts of the Irish

As had been true in the twelfth century, early modern English historical and literary accounts of Ireland effectively rationalized the conquest and settlement of Ireland in the sixteenth and seventeenth centuries, extolling the innate supremacy of English culture and civilization in sharp contrast to their critical portrayals of the primitive society, customs, religion, and laws of the Irish.

The Tudor expeditions into Ireland (1534–1603) sought to extend England’s dominion and

hence English common law, culture, language, central government, and religion over all of Ireland. England's rule had previously been restricted to lordship of the English Pale on the basis of earlier Anglo-Norman conquests; this was the fortified area of English rule around Dublin, composed of the four medieval counties of Dublin, Kildare, Louth, and Meath.

Crown plantations soon sprang up in Munster and Ulster in the latter half of the sixteenth century and became the norm under James I, though subsequent private settlements proved the most profitable. These Elizabethan and Jacobean settlers from the mid-sixteenth century onward have been termed the "New English" by scholars to distinguish them from the "Old English," or descendants of the earlier Anglo-Norman settlers, many of whom had come to identify with the culture of Gaelic Ireland.

Plantations were envisioned, in the Roman imperial tradition, as having a number of productive functions along economic and military lines as well as model communities of English culture and the Protestant religion among the wild Irish. The Tudor and Stuart experiments in Irish plantations have been seen by some modern historians (notably Nicholas Canny) as early models of English colonies in America.

The contemporary accounts of English writers such as Edmund Campion, Sir John Davies, Edmund Spenser, and Barnabe Rich are widely seen by scholars as attempts to justify and give moral and legal weight to the English conquest and colonization of Ireland, much in the tradition of Gerald of Wales's polemical twelfth-century accounts. Accordingly, these works inevitably draw a contrast between the cultured civility of Englishmen, who were faithful subjects of the Crown and able to speak and understand the English tongue, and the primitive, backwards, and rude Irish and their deplorable way of life. In this portrait of the evils of Ireland, a genuine agenda toward the reformation of Ireland and Irish culture, religion, and society may arguably be seen as a motive for such compositions prior to circa 1580. Canny, however, has criticized the contention that these theories of reformation and conquest and colonization are binary opposites.

Sir John Davies (1569–1626) and Edmund Spenser (ca. 1552–1599) in particular may be



Edmund Spenser, sixteenth-century English writer.
(Jupiterimages)

considered typical of the type of New English settler in and English mind-set on Ireland common at this time, according to Adawy Peart. The writings of Sir John Davies on Ireland are distinguished by their self-congratulatory tone and overconfident narrative of the successful implementation of English common law in Stuart Ireland. A court poet and later the solicitor general and ultimately the attorney general for Ireland under James I, Davies, who was instrumental in the founding of the Munster plantation, penned *Discovery of the True Causes Why Ireland Was Never Entirely Subdued* (1612) and *Reports* (1615). Edmund Spenser was both a renowned English Renaissance poet and a New English Munster planter and is best known for his *The Faerie Queen* (1590–1596) and also for his *A View of the Present State of Ireland* (1596). The first of these, a verse epic, has been seen as an allegorical plea for more heavy-handed governmental policies in Ireland. Spenser's *A View of the Present State of Ireland* takes the form of a conversation between two Englishmen in which the more well-informed of the two expounds first on the failures of the Old English in Ireland

➤ A NEW DESCRIPTION OF IRELAND

Barnabe Rich (ca. 1540–1617) was an English soldier who rose to the rank of captain and served during the colonization of Ireland. He was also the author of numerous works, several of which Shakespeare relied on as sources. In his *A New Description of Ireland* (1610), he blamed most Irish vices on the inhabitants' Catholicism:

"Now to speak of their dispositions, whereunto they are addicted and inclined: I say, besides they are rude, uncleanly, and uncivil, so they are very cruel, bloody-minded, apt and ready to commit any kind of mischief. I do not impute this so much to their natural inclination as I do to their education that are trained up in treason, in rebellion, in theft, in robbery, in superstition, in idolatry, and nuzzled from their cradles in the very puddle of popery. This is the fruits of the Pope's doctrine that doth preach cruelty, that doth admit of murders and bloody executions. By poisoning, stabbing, or by any other manner of practice howsoever, the Pope teacheth subjects to resist, to mutiny, and to rebel against their princes. From hence it proceedeth that the Irish

have ever been, and still are, desirous to shake off the English government. From hence it doth proceed that the Irish cannot endure to love the English because they differ so much in religion. . . . [F]rom hence it is that the Irish had rather still retain themselves in their sluttishness, in their uncleanness, in their rudeness, and in their inhuman loathsomeness, than they would take any example from the English, either of civility, humanity, or any manner of decency. . . . God bring it once to pass that we might all join together, as well English as Irish, in the true acknowledgment of one God, of one religion, of one King, of one law, and of one love."

—Katharine Olson

Source

Barnabe Rich, *A New Description of Ireland, Together with the Manners, Customs, and Dispositions of the People* (1610), ed. James P. Myers in *Elizabethan Ireland: A Selection of Writings by Elizabethan Writers on Ireland* (Hamden, CT: Archon Books, 1983), 131–132, 144.

(including the unsuccessful application of English common law) and details the evils of Irish law, custom, culture, and society, ultimately proposing a forceful martial policy to conquer Ireland fully.

With English successes and the rise of the plantations from 1550 on, the penal laws and other legislation and governmental policies saw usage of the English language and culture expand substantially. The Irish Gaelic language thus suffered losses in cultural prestige, literary status, and usage in the years that followed the Tudor conquest of Ireland. A long period of language decline followed. The Act of Union of 1800 confirmed the superiority of the English language, as did English-medium national schools. The high mortality rate of Irish speakers during the years of the Great Famine and successive waves of immigration likewise further weakened the state of the language. It was only in the last century (1922) that Irish became an official language in Ireland, and substantial

and successful efforts have been made to ensure its preservation.

—Katharine Olson

Bibliography

- Connolly, S. J. *The Oxford Companion to Irish History*. Oxford, UK: Oxford University Press, 1998.
- Ellis, Steven G. *Tudor Ireland: Crown, Community, and the Conflict of Cultures, 1470–1603*. London and New York: Longman Group, 1985.
- Myers, James P., ed. *Elizabethan Ireland: A Selection of Writings by Elizabethan Writers on Ireland*. Hamden, CT: Archon Books, 1983.
- Peart, Shirley Adawy. *English Images of the Irish, 1570–1620*. Irish Studies, Volume 6. Lewiston, NY; Queenston, ON; and Lampeter, UK: Edwin Mellen, 2002.

Vespucci's World—Europe Imagines America

The publication of Amerigo Vespucci's *Mundus Novus* in 1504 contributed to the improvement of

the European understanding of world geography. This document was a letter in which he described the South American coast of Brazil and the River Plate, which he discovered during his 1501 journey as an explorer for the Portuguese king Manuel. In fact, in his letter Vespucci proclaimed the existence of a “new world.” He claimed that the territories encountered by Christopher Columbus in 1492 were not part of Asia. On the contrary, they constituted a new continent that contained many different peoples, plants and animals, all of them unknown to Europeans.

This new discovery sparked the imagination of the Europeans, who began attributing fantasy to this new world. They used ancient authors such as Pliny and Herodotus and medieval texts such as Marco Polo’s and Mandeville’s travel accounts in order to explain the radical novelty created by the enlargement of the world. For historians, it was a crucial intellectual process related to the incorporation of the new world in the minds of the Europeans. Its principal consequence was the definition of the American territories as an other.

The European representation of America was related to the challenging situation created by Columbus’s encounter with Guanahaní, the Caribbean island where his ships arrived in 1492. The native inhabitants, plants, and animals found by him were not included in the traditional geographical, natural, and theological knowledge possessed by the Europeans. The Bible, for instance, did not mention this new land or its inhabitants. Asia and Africa had been known to Europeans from antiquity, but America was not. Consequently, it was a new world whose representation was built during its exploration and conquest by the Europeans starting in the late fifteenth century. As a result, exploration and conquest were two crucial historical processes that formed the modalities adopted by the Europeans to produce an image about America.

The first modality is connected with the oral and written description produced by officials, explorers, and merchants who traveled to the new world. They produced an exhaustive inventory of the American natural resources, which were considered as possible commodities to be commercialized in Europe. But in many cases these natural objects were not included in the

➤ DE LAS CASAS AND THE DEBATES WITH SEPÚLVEDA

During the sixteenth century after the Columbian contact with the New World’s peoples, the Europeans were uncertain about the full humanity of Native Americans. In Spain this issue was discussed by theologians, priests, lawyers, and officials who had participated in the conquest of the New World. The discussion about the nature of the indigenous peoples emerged in particular during the dispute between the Dominican priest Bartolomé de Las Casas and the humanist Juan Ginés de Sepúlveda in Valladolid in 1550–1551.

For Las Casas, who founded his ideas from his personal experience in the New World as a soldier and priest, the Native Americans were fully rational beings capable of living in society and receiving the gospel. Sepúlveda, on the contrary, who followed the Aristotelian theory of natural slavery, believed that they were idolaters and cannibals. In other words, they were barbarous because they did not have the nobility and piety of the Spaniards.

If the Native Americans were human beings, then they were subjects of the Spanish king, but if they were not human beings, they were slaves without rights. De Las Casas and Sepúlveda were divided about the nature of the indigenous peoples and their capacity to live under Spanish law and the Catholic religion, both fundamental elements for establishing the rights of Native Americans.

—*Marcelo Fabián Figueroa*

European natural history texts. As a consequence, plants, animals, and even human beings were explained through comparison with the European world. For example, vegetables and plants were defined as native varieties of Eastern cinnamon and pepper.

The second modality is connected with the explanation of the overseas lands through the use of the notions given by the classical and Christian texts, which were taken as a conceptual framework in which to put the data found in the new world. The notions of paradise and a golden age were adopted to illustrate the simplicity of Native American society, on one hand, and the exuberant nature observed in the Caribbean and Brazilian coasts, on the other hand.

The above-mentioned modalities were connected with the material and symbolic European appropriation of America. Nevertheless, the existence of the “Indians,” as they called them, was the harder fact that the Europeans had to explain. The question of their humanity or degree thereof produced a debate during the sixteenth century. Beyond their curious clothes, habits, physiognomy, etc., the crucial question was, were the Indians human beings or beasts?

The answers formulated were founded in the traditional notions given by the classical and Christian thinkers: Native Americans could either be defined in Aristotelian terms as barbarous because they were without cities, laws, and political institutions, or they could be defined in Christian terms as incapable of receiving the gospel. This is the key question discussed by the Dominican priest Bartolomé de Las Casas and the humanist Juan Ginés de Sepúlveda in Spain in 1550–1551. The questioned capacity of the Native Americans to receive the Christian faith was crucial, because this faculty for conversion was one of the most important foundations of the legitimate European occupation of America.

The images created by the Europeans about America were a consequence of the political, economical, and intellectual processes linked with European overseas expansion and the configuration of early colonial empires. Consequently, these perceptions were the most tangible outcome of the territorial occupation developed by Spain, Portugal, France, Britain, and Holland in the early modern times as well as evidence about the history of the European relations with the peoples located beyond Europe.

—Marcelo Fabián Figueroa

Bibliography

- Armitage, David, ed. *Theories of Empire, 1450–1800*, Vol. 20. Aldershot, UK; Brookfield, VT: Ashgate Variorum, 1998.
- Elliott, J. H. *The Old World and the New, 1492–1650*. Cambridge: Cambridge University Press, 1970.
- Gil, Juan. *Mitos y utopías del Descubrimiento: Colón y su tiempo*, Vol. 1. Madrid: Alianza Editorial, 1992.
- Greenblatt, Stephen. *Marvelous Possessions: The Wonder of the New World*. Oxford, UK, and New York: Clarendon, 1991.

Pagden, Anthony, ed. *Facing Each Other: The World's Perception of Europe and Europe's Perception of the World*, Vol. 31, Pt. 1, *An Expanding World: The European Impact on World History, 1450–1800*. Aldershot, UK; Brookfield, VT: Ashgate Variorum, 2000.

Mesamerican Responses to the Spanish Encounter

The fall of Tenochtitlan, the capital city of the powerful Nuhua (Aztec) empire, at the hands of the Spanish army in 1521 signified a transformation of native institutions, customs, and religion for the indigenous groups of Mesoamerica. This shift in power was naturally met by varying degrees of assimilation, resistance, and indifference by both Spanish and native groups. Nevertheless, it was the native peoples throughout Mesoamerica who were forced to adhere to new sets of rules that aimed to dismantle traditional ritual practices. At the same time, existing socio-political structures were combined with Spanish administrative practices in order to control the newly conquered lands and to further Spanish economic interests. These changes triggered a number of responses that shaped colonial society.

The military conquest was immediately followed by an effort to convert natives to Christianity. The sole basis for the legitimacy of Spanish dominion in the New World was the introduction of Catholicism and the elimination of pagan worship. In order to accomplish this goal, Franciscan, Dominican, Augustian, and later Jesuit mendicant orders arrived from Spain and other parts of Europe during the early-sixteenth century to convert the indigenous of America. Spanish accounts of early evangelization emphasized the readiness of Indian groups to accept Christianity. Franciscan chroniclers in particular make mention of the baptism of thousands of Indians, their willingness to attend mass, and their support of the missionary enterprise. Yet local groups understood this process very differently.

For indigenous societies who were accustomed to worshipping a number of deities, the acceptance of a new god did not mean that one had to abandon the old. The Nuhua, Otomí, Maya, Mixtec, Zapotec, Tecpaneca, and Tlaxcalteca of

➤ BERNARDINO DE SAHAGÚN

Recognized as a pioneer in early ethnography, Bernardino de Sahagún (1499–1590), a Franciscan missionary from Spain, left a rich corpus of material on the culture, religion, and language of the Nahuas (Aztecs) of central Mexico. Sahagún was trained in grammar, law, theology, and history at the University of Salamanca. He arrived in New Spain in 1529 and immersed himself in Nahua culture and society.

At the time of his arrival, Franciscan missionaries had been active in evangelizing the native peoples of the New World. For Sahagún, it was imperative to learn the ancient customs and language of the Aztecs in order to convey Christian concepts more clearly. He studied Nahuatl and wrote the *Vocabulario en tres lenguas*, a trilingual dictionary of Nahuatl, Latin, and Spanish to enable his brethren to teach the Indians in their native tongue. Sahagún enlisted the assistance of indigenous students educated by the Franciscans to conduct interviews with community elders and native elites. His major goal was to bring together information on Nahua religion, culture, and geography. The testimonies and pictorials he collected resulted in a twelve-volume work known as the *General History of Things of New Spain*.

The *General History* is regarded as a landmark study of Aztec society before the conquest. The compendium received significant resistance from ecclesiastical authorities during the early colonial



Aztec musicians playing instruments, from the Florentine Codex by Bernardino de Sahagún, sixteenth century. (Bettmann/Corbis)

period as they believed it promoted pagan ritual. The work resurfaced during the nineteenth century among Mexican scholars who wished to emphasize the importance of Aztec civilization in the creation of a national identity.

—Alexander Hidalgo

central and southern Mexico added the Christian God to their existing pantheons. Nevertheless, they continued to venerate the ancient deities. Both secular and religious Spanish authorities understood this as a continuation of pagan practices and further determined to extirpate idolatrous practices. Indigenous communities responded by transferring ritual devotion from the public to the private sphere. No longer were traditional religious ceremonies celebrated out in the open. Instead, those who continued to worship “idols” did so at home, away from prying eyes. Mountains and caves, natural elements that represented a direct connection between the sacred forces and humanity, were used as

ceremonial sites to renew traditional beliefs. The burning of incense and copal, and sacrificial offerings of small birds and animals remained in practice throughout the colonial period. Despite numerous attempts by religious authorities to eliminate pagan rituals, indigenous groups continued to venerate their ancient deities during the sixteenth century.

The introduction of Christianity also affected the social dynamics of indigenous communities and how they responded to change. Traditionally structured along strict caste lines, villages vested political authority in native elites who were able to maintain a central base of power even after the Spanish conquest. Yet with

the advent of Christianity, ideals of egalitarianism infiltrated the ranks of indigenous society. Commoners, or *macehuales*, often found favor from clerics who enlisted their help in administering daily church activities. From their new positions of power, macehuales challenged elite authority and sought to advance their interests within the shifting social hierarchy. This dynamic often divided communities into factions. In addition, elite offspring were often educated by Spanish missionaries. Children, mostly males, were taught to detest traditional religious celebrations and practices such as drinking and polygamy. These efforts drove a wedge into the social relations of native communities that threatened the destruction of traditional roles. Yet an analysis of indigenous societies after the initial phase of evangelization suggests that communities found ways to negotiate the changes that resulted from Spanish intrusion and to rebuild existing structures.

Along with changes in religion and the internal restructuring of their communities, indigenous groups also contended with high taxation, labor drafts, and land usurpation. Both the Crown and ecclesiastical authorities demanded payment in-kind or in-specie at regular intervals during the year. Individual Spaniards who were awarded an *encomienda*, or labor consignments from local Indian towns, exacted their privileges indiscriminately. At the same time, the appropriation of indigenous land by Spaniards reduced traditional community space which negatively affected their ability to produce crops for internal consumption. In response, native villages learned to effectively use the Spanish legal system. Indigenous communities in central Mexico became active litigators in the Spanish courts and often succeeded in maintaining control of communal lands and in receiving *reducciones*, or tax exemptions, from Spanish administrators.

—Alexander Hidalgo

Bibliography

- Gibson, Charles. *The Aztecs Under Spanish Rule: A History of the Indians of the Valley of Mexico, 1519–1810*. Stanford, CA: Stanford University Press, 1964.
- Gruzinski, Serge. *Man-Gods in the Mexican Highlands: Indian Power and Colonial Society,*

1520–1800. Translated by Eileen Corrigan. Stanford, CA: Stanford University Press, 1989.

León-Portilla, Miguel. *Bernardino de Sabagún, First Anthropologist*. Translated by Mauricio J. Mixco. Norman: University of Oklahoma Press, 2002.

Lockhart, James. *The Nahuas After the Conquest: A Social and Cultural History of the Indians of Central Mexico, Sixteenth through Eighteenth Centuries*. Stanford, CA: Stanford University Press, 1992.

Alexander von Humboldt, *Political Essay on the Kingdom of New Spain*

From 1799 to 1804, Alexander von Humboldt (1769–1859), a Prussian scientist, and Aimé Bonpland (1773–1858), a French naturalist, made extensive original explorations in New Spain. With authorization from the Spanish Crown, they traveled through Venezuela, Colombia, Ecuador, Peru, Mexico, and Cuba. They also visited the United States. From these travels, Humboldt published over the next two decades more than two dozen volumes of original geographic observations and scientific discoveries. The originality of his work was based on its minute examination of a wide range of natural phenomena, integrating them into a systematic whole. These insights had a great influence on the young Charles Darwin, whose theory of evolution revolutionized Western science.

Among Humboldt's pioneering writing was the three-volume *Essai politique sur le royaume de la Nouvelle-Espagne (Political Essay on the Kingdom of New Spain)*. Published in Paris, where Humboldt was then living, the work appeared in two large volumes between 1808 and 1811 and then as five smaller volumes in 1811. An English translation was published the same year.

In Humboldt's day, the viceroyalty of New Spain, with its capital in Mexico City, consisted of Mexico, areas of Central America and the Caribbean, and the United States from Texas to California. Humboldt approached his examination of New Spain in terms of its physical, economic, and human geography, successively describing the terrain and climate of the region; its agriculture, business, and trade; the population; social



Alexander von Humboldt, renowned naturalist and scientific traveler. Humboldt's inland trek through the heart of the South American continent at the turn of the nineteenth century set the standard for explorer-scientists of the time. (Jupiterimages)

organization; the public health system; and administration and defense of the realm. Tables of statistics appear throughout the work.

The wealth of New Spain was based on mining resources, especially silver. It was the need to know more about the mines and mineral districts of New Spain that prompted the writing of the *Essay*. The value of the work was vastly enhanced through Humboldt's incorporation of a multivolume atlas, providing numerous original maps and a countrywide (Pacific Ocean to Gulf of Mexico) silhouette of the rising and falling mountainous profile of Mexico. Humboldt was uniquely qualified to write the *Essay*. He had traveled and researched throughout New Spain, taking extensive detailed notes. He had exceptionally wide access to archives in Spain and Mexico City. Moreover, he found the capital city, with its School of Mines, Botanical Gardens,

THE HUMBOLDT CURRENT

While the scientist Alexander von Humboldt was exploring the coast of Peru from 1799 to 1804, one of the most striking phenomena that he observed was the extraordinary aridity of the area. He wanted to know what caused this extreme scarcity of rainfall. Humboldt had observed that a broad current of cold water ran along the coast toward the equator. This stream cooled the air along the coast from southern Ecuador to northern Chile, suppressing the conditions for ample rainfall and allowing only the development of cloud, fog, and mist (*garúa*). This coastal ocean phenomenon came to be termed the "Humboldt Current" or "Peru Current."

—Edward A. Riedinger

and Academy of Painting and Sculpture, to be the most advanced scientific and cultural center in the Western Hemisphere, providing him access to advanced expertise.

Humboldt was most struck by the extreme inequality of Mexico's population. The vast indigenous majority of its people lived in extreme poverty. A tiny white minority dominated the realm, divided between those born in Spain and those born in the Americas. The former, the Chapetones or Gachupines, dominated and were thoroughly resented by the latter, the subordinate Criollos. Humboldt's wide grasp of the physical and human aspects of social organization demonstrate his character as both an exceptional naturalist and as a humane scientist.

—Edward A. Riedinger

Bibliography

- Helferich, Gerard. *Humboldt's Cosmos: Alexander von Humboldt and the Latin American Journey That Changed the Way We See the World*. New York: Gotham Books, 2004.
- Pérez Mejía, Angela. *A Geography of Hard Times: Narratives about Travel to South America, 1780–1849*. Albany: State University of New York Press, 2004.
- Rupke, Nicholas A. *Alexander von Humboldt: A Metabiography*. New York: Peter Lang, 2005.
- Sachs, Aaron. *The Humboldt Current: Nineteenth-Century Exploration and the Roots of American Environmentalism*. New York: Viking, 2006.

Black African Visions of Colonial American Society

The manner in which black Africans viewed the society of English North America depended upon both time and space. The first Africans arrived in colonial Virginia in 1619 after being exchanged for supplies with a Dutch ship. These first 22 Africans were not slaves but rather were indentured servants. After their acculturation to this new strange land and fulfillment of their indenture (normally five to seven years), these early black Africans set about making a life for themselves; some, able to obtain land, became tobacco planters.

These early African Americans experienced a large degree of interaction with their English counterparts. Hence, during this period they tended to adopt many English forms of manners and culture. This relative openness for African servants began to change over the course of time, thereby changing relations between both groups. A case in point is the 1640 sentence of black African indentured servant John Punch, who had run away from his master along with two white indentured servants. While the white servants merely had their service period extended (along

with some lashes from a whip), Punch was sentenced to “servitude for life.” In 1641 Massachusetts became the first colony to legalize slavery, and in succession over the span of the late seventeenth century the remainder of English North America followed this precedent. (Georgia was the last colony to adopt slavery during the early eighteenth century.) This development coincided with increasing demand for tobacco (both in England and in greater Europe) and the need to feed England’s Caribbean slaves with rice (the Carolinas became a primary producer).

Newly arrived black Africans naturally found their new status and surroundings disconcerting at best. Africans who had already endured at least a generation or so of slavery became agents of acculturation to the more recent arrivals. Many of these acculturated blacks had adopted the prevailing culture of their masters, depending upon their occupation and residence.

The expansion of plantation agriculture (especially during the late seventeenth century and the course of the following century) meant an ever-increasing number of new African arrivals who took a much longer time to acculturate to the society and culture of English colonial America.

➤ A DUEL OF LIVES—ANTHONY JOHNSON AND OLAUDAH EQUIANO

It appears that Anthony Johnson arrived in colonial Virginia in 1621. He was listed on the ship manifest as “Antonio a Negro.” By then, tobacco cultivation had taken hold as the main export product of the colony. Anthony clearly did not foresee the impact that skin color would play in his life or among blacks throughout colonial English America. However, it is evident that Anthony Johnson (in his early years in Virginia he was a servant) by 1645 was a man of wealth and prospered through the labor of his indentured servants. Anthony along with his wife Mary and their children moved to Maryland, where they purchased 300 acres (120 hectares). Anthony died on this plantation in the spring of 1670. While both his son and grandson prospered reasonably well, this was nonetheless behind the backdrop of

the expansion of chattel slavery in colonial America.

Olaudah Equiano’s experience was much different from that of Anthony Johnson. Equiano lived between 1745 and 1797, authoring along the way one of the important narratives about slavery in colonial North America. His saga began with his capture and then transport initially to Barbados via the infamous Middle Passage. He was fortunate to have survived, given the deplorable conditions on slave ships. In Barbados and then later in mainland America he experienced the cruelty of plantation slavery, being treated as if he were a beast of burden. His vision of colonial America, unlike that of Anthony Johnson, was one of endless oppression and degradation.

—John S. Leiby

Proximity to whites played a role in how black Africans viewed the colonial setting. In this regard, space helped to dictate their orientation. Blacks who resided in urban settings or on small farms assimilated to a greater degree to the prevailing colonial culture than those residing on large plantations.

When slavery began to expand during the late seventeenth century (within the tobacco-producing regions in particular), landowners sought a workforce they could employ to the limits of its productive capacity. This resulted in increased tension between landowners and their laborers. Narratives of the period are replete with complaints from landowners about the laziness of indentured servants. At first, white landowners tried to get as much labor and goods from their slaves as possible. Nevertheless, over time many slave masters compromised on the pace and duration of work. These compromises, however, did not prevent slaves from passively resisting through malingering and stalling tactics. Indeed, black slaves on the plantations of the Chesapeake and the lower South, to a large degree, dictated the pace and manner of production.

In contrast, urban blacks became far more acculturated to colonial American society as compared to those living in the countryside. Many urban masters hired out their slaves, as in major cities like New York, Philadelphia, and Charleston, among others. It was within the confines of these urban spaces that many blacks became highly skilled in such specialized trades as blacksmiths, tanners, carpenters, barbers, and other occupations.

Newly arrived Africans who ended up living on plantations did not assimilate as quickly as those blacks who lived in closer proximity with whites in urban areas or on small farms. Plantation slaves along with the newer arrivals retained a larger degree of their African cultural heritage

and consequently viewed colonial America as an alien environment to a significant degree. Assimilated black Africans, especially from the northern colonies, typically embraced the prevailing English culture and appreciated their relative freedom of movement. Yet below the surface all slaves yearned to be free. The family under slavery became a cornerstone of black society within the colonies, although black men by custom and because of slavery did not reside with their wives in the same percentage as their white counterparts. Some black Africans in colonial North America seemingly accepted their lower status but looked to eventual freedom. However, many slaves also resisted either in a passive or more active manner (through violence). In the latter category, the Chesapeake Rebellion (1730) and the Stono Rebellion (1739) were among the most notable of the colonial era. However, the most readily available forms of resistance for the majority of slaves were slowing down the pace of work, destroying crops, and sabotaging plantation and farm tools. Many enslaved people resisted by running away, which meant, if they succeeded, that they posed a serious financial loss to their masters.

—John S. Leiby

Bibliography

- Berlin, Ira. *Generations of Captivity: A History of African-American Slaves*. Cambridge, MA: Harvard University Press, 2003.
- Carson, Clayborne, Emma J. Lapansky-Werner, and Gary B. Nash. *The Struggle for Freedom: A History of African Americans*. New York: Pearson Longman, 2007.
- Wood, Peter H. *Strange New Land: Africans in Colonial America*. Oxford, UK: Oxford University Press, 2003.
- Wright, Donald R. *African Americans in the Colonial Era: From African Origins through the American Revolution*. Arlington Heights, IL: Harlan Davidson, 1990.

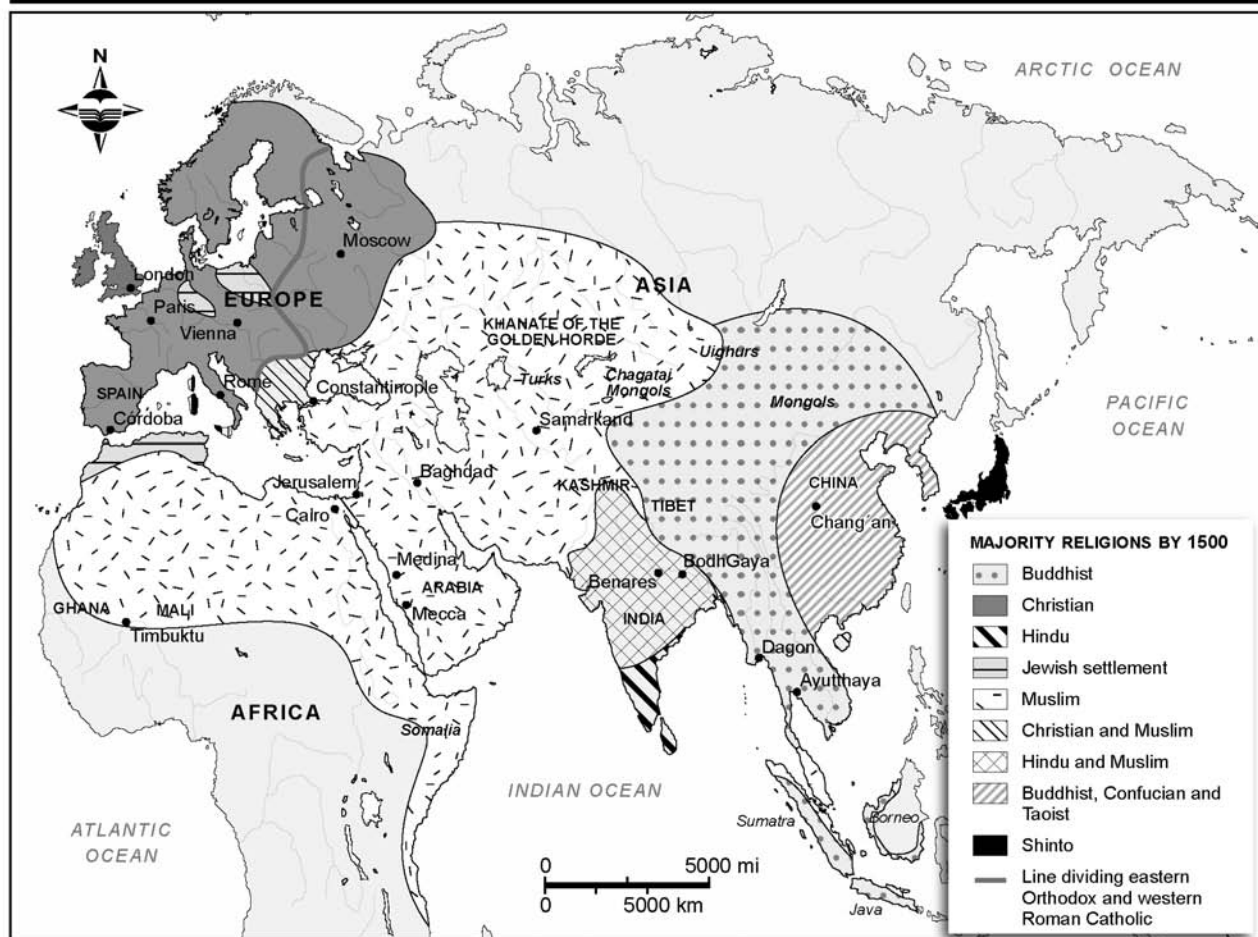
■ Introduction: Global Religious Movements—New Wine in Old Bottles

The early modern period was marked by the spread of already-established religions, particularly Christianity and Islam. Both of these major religions, as well as others, also fragmented with the Protestant Reformation in Christendom and the establishment of Shia Islam in Safavid Persia. Christianity and Islam took on new characteristics as they were adopted by new societies, and resistance to their spread also affected religious life.

The global expansion of Christianity was in large part due to the global expansion of European states. The leader in this expansion was Roman Catholicism, the religion of the nations

that led this expansion, Spain and Portugal. Catholicism in this period became the first truly global religion, with a presence in every inhabited continent except Australia, and the Catholic Church was the first global institution. Catholicism was adapted to numerous cultures, from the ancient literary civilization of imperial China to the hunter-gatherer economies of indigenous North Americans to the African monarchy of Kongo. Sometimes Catholicism came with the sword, as in Mesoamerica, but it was also often reliant on the persuasive abilities of its missionaries and whatever spiritual or material advantages they could offer.

MAJOR RELIGIONS IN EASTERN HEMISPHERE, 1500



Protestant Christianity, which originated in the early sixteenth century, also expanded through the early modern period but much more slowly. Its principal triumph was in the British colonies of North America, where despite the difficulty of converting Native Americans, colonists established numerous societies espousing different varieties of Protestantism, including Puritan Congregationalism in New England, Quakerism in Pennsylvania, and Anglicanism in the southern colonies.

Islam grew more slowly and peacefully than Christianity. Muslim traders, warriors, and Sufi orders spread the message of the Quran throughout Africa and Eurasia. The early modern Islamic umma, or community of believers, would stretch from parts of Hungary in the far north of the Ottoman empire to the coasts of western and eastern Africa to Indonesia and central Asia. The conflict between Christians and Muslims also became global, with conflict everywhere from the Philippines to Ethiopia to Morocco and central Asia.

Muslims entered the Americas only as African slaves, and Islam did not establish itself as an American religion. Muslim Africans, like their animist and Christian fellows, would face a religious revolution imposed by their Christian masters. But aspects of indigenous African religion would remain an important part of the culture of many African American societies, often being adapted into new religious and magical systems known as “conjure.”

Other religions changed as well. The Neo-Confucianism of Zhu Xi became the official ideology of the Chinese state in the Ming and Qing dynasties, enforced through the examination system, only to be challenged by the individualist “School of Wang Yangming.” Confucianism was also the official religion of Japan’s Tokugawa state, although attendance at Buddhist shrines was enforced on the Japanese population as an anti-Christian measure. Buddhism also changed, with the rise of the Yellow Hat sect of Tibetan Buddhism, the foundation of the line of Dalai Lamas that has continued to the present day. A new religion, Sikhism, emerged in India, drawing on both Hindu and Islamic elements.

—William E. Burns

Thought and Religion during the Expansion of Islam in West Africa

Between 1450 and 1750 CE, Muslim merchant-clerics and Sufi missionaries spread Islamic thought and religion in the West African Sudan. Since making early inroads beginning around the eighth century, Islam had gradually spread from North Africa across the Sahara. After 1450 CE, the incorporation of Muslim heritage into local oral traditions and the transmission of systems of language and learning reflect Islam’s increasing importance in identity and politics of the region. The era also marks the Africanization of Islam through the cultural assimilation of new values into existing networks of power.

The ruler Sunni Ali Bar (1464/1465–1492) seized an opportunity to take advantage of weakening Mali imperial forces by conquering the major urban trade and intellectual centers of Jenne and Timbuktu. While Sunni Ali was an avowed Muslim, he also retained African beliefs, including legitimizing claims of supernatural powers (that he could turn himself into a vulture and make his armies invisible to enemies), much as his Ottoman contemporary emperors would make. After his death the Askia dynasty (1492–1592) was installed, and the Songhai empire reached its zenith. The establishment of large communities of traveling scholars helped deepen the philosophical and cultural impact of Islam in urban centers, where Islamic schools of learning flourished. By the sixteenth century, the majority of Islamic scholars in Timbuktu were of Sudanese origin.

The orthodox Sunni Muslim faith had spread across North Africa from Egypt. Cairo became an important center of learning during the Mamluk dynasty (1250–1517 CE). Pilgrims from West Africa stopped in Cairo, where they interacted with scholars and artisans, many of whom were imported to the centers of Timbuktu, Jenne, Bornu, and Hausaland. When the Ottomans conquered North Africa in 1517, their influence in West Africa waned except in the state of Borno-Kanem near Lake Chad. A hostel for the African students and travelers continued to operate in Cairo. In the meantime, a powerful and independent Moroccan state led

THE AFRICAN SCHOLARSHIP OF WAR AND DIPLOMACY AT TIMBUKTU

The spread of Islam by armies also brought literacy and learning to West African urban centers after the fifteenth century. West African scholars authored a large number of important histories of local conflicts and emerging states. Mahmud Kati, the author of *Tarikh al-Fattash* (History of the Seeker of Knowledge), was a member of the Songhai emperor Askia Muhammad's royal court. Kati recorded the great deeds of his patron with an understanding that surpassed any subsequent chronicler but also translated oral traditions into written works that placed the rise of the great empire into a larger regional history. Kati's extensive library of books and manuscripts survives in Timbuktu, where it is looked after by his descendants.

Other African scholars provided firsthand accounts of the end of empires, including the demise of Songhai with the Moroccan capture of Timbuktu. Moroccans actually seized the renowned scholar Ahmad Baba and sent him into exile in chains. The scholar Abd al-Rahman as-Sadi (1596–1655) was born five years after the invasion but recalled the events that followed the traumatic conflict. In his *Tarikh al-Sudan*, he describes seeing “the ruin of learning and its utter collapse” under the Moroccans. Living through this history inspired Abd al Rahman as-Sadi to write in Arabic about the ancestors and heroes of the Songhai in his famous *tarikh*, a testimony to his rootedness in both the local and global reaches of the Islamic world.

—Candice Goucher

an invasion of Songhai in 1571. Although Morocco interfered in West Africa throughout the next century, the political turmoil also allowed greater independence and localized forms of Islamic thought and culture to evolve.

Timbuktu was one of several centers of learning in West Africa, and there were 150 schools in that city alone. Translators, doctors, jurists, and merchants selling manuscripts and books were encouraged by the city's wealthy patrons. The writer known as Leo Africanus noted the book trade to be among the most lucrative commercial ventures. The eighteenth-century spread of Islam through conquest was accompanied by a much greater awareness of *sharia*, the principles of Islamic law. In Borno the Kanuri language flourished, and the city's written records document the development of religious thought. Hausa became a lingua franca of the Sudan and northern forest regions, where it borrowed heavily from Arabic. The leading Muslims from Kano to Gao and Takrur were well known throughout North Africa and West Asia, suggesting an intellectual cohesion. Despite the changing political regimes, market towns remained the chief points of dissemination for African Islamic studies.

Literacy increased dramatically during the period between 1450 and 1750, extending the influence of the Arabic language across the

region's commercial arteries. The Quran was not translated, but rather people were required to learn its passages through recitation and memorization. The ability to write script was considered magical in many settings, and the written words in the form of prayers and sayings entered West African oral and visual traditions. Small verses inscribed on paper were enclosed in protective amulets; prayers, sayings, and geometric designs were traded on dyed and embroidered cloth and leather objects, carved wooden boards and furniture, and engraved copper-alloy basins and swords. All were carried far beyond the reach of schools and libraries to smaller pre-literate communities.

In the seventeenth century, Islamic ideas of reform shaped a number of social and political movements. The jihads in the Senegambia region began in the 1690s and resulted in the establishment of small but powerful Muslim-dominated states into the early eighteenth century. The states of Futa Jallon and Futa Toro used democratic principles to establish elected councils of elders to speak on behalf of ordinary people. The Muslim revival eventually spread eastward in the eighteenth century. The reformist philosophy also inspired important histories of the western Sudan. Two key works by Timbuktu scholars were the *Tarikh al-Sudan* (History of the Sudan) and the *Tarikh al-Fattash* (History of the

Seeker of Knowledge), completed about 1665. These works relied on oral traditions and helped to integrate the African past with contemporary Islamic thought. This intellectual unity would aid the spread of jihads as well as support the resistance against European incursions in the second half of the eighteenth century.

—Candice Goucher

Bibliography

- Bravmann, Rene A. *African Islam*. Washington, DC, and London: Smithsonian Institution Press and Ethnographica, 1983.
- Davidson, Basil. *A History of West Africa, 1000–1800*. London: Longman, 1990.
- Hunwick, John. *West Africa, Islam, and the Arab World: Studies in Honor of Basil Davidson*. Princeton, NJ: Markus Wiener, 2006.

The Coming of Christianity to the Kongo

The Kongo, an African kingdom in west-central Africa, had the most contact with the Portuguese before the seventeenth century. At its apex, the kingdom encompassed modern-day northern Cabinda, Angola, the Republic of the Congo, and the western portion of the Democratic Republic of the Congo. The Portuguese first developed contacts with the Kongolese after 1483 and soon sought to utilize the region as a base for the early transatlantic slave trade. At the same time, Portuguese missionaries did try to bring Christianity to all the Africans they encountered but were most successful with the people of the Kongo.

When the Portuguese first arrived in the Kongo, Nzinga Kuwu was the king. He welcomed the arrival of the foreigners and, in return, sent an embassy to Lisbon. In 1491 the Portuguese sent a large expedition to the Kongo, one that consisted of explorers, artisans, and missionaries. The missionaries achieved a major victory: Nzinga Kuwu was baptized and given the name João I. However, he eventually returned to the native religion of the Kongo, one that worshipped ancestral gods. A civil war soon erupted after his death in 1506 between his sons Mpanzu a Kitia and Afonso (who took this name after being baptized a Christian). Afonso eventually took the throne in 1509, and

from here he was able to begin pushing his Christian agenda.

For the Portuguese missionaries, Christianization meant more than a religious transformation; it meant a societal one as well. However, Afonso sought to utilize Kongolose societal organizations and merge them with Portuguese ideas. For example, according to the Kongolese, the monarch was the ancestral spokesman of the gods. Afonso endeavored to utilize and adapt this idea so that it would have a Christian rather than a native basis. In addition, he studied Portuguese law and changed the etiquette at court to one that was more similar to the Portuguese one. For instance, he called the provincial governors “dukes,” and the military leaders and court officials became “counts” and “marquises.”

In addition, the Christianity that Afonso pushed developed a uniquely African perspective. The traditional religion practiced by the Kongolese was one that revered two sorts of spirits: one type is based on location and the other on ancestral spirits. One of his first acts was to destroy the temple that housed all of their national deities, what they called the “house of idols” in the capital, Mbanza Kongo. He built a church over the ruins, which resulted in the term *nzo a ukisi* (“house of idols”), to be used for a Christian church. Afonso was determined to help the conversion of his people to Christianity from the top. In 1513 he took an oath of obedience to Pope Leo X.

The Christian religion spread quickly among local elites as they recognized that it was the route to royal favor. Even Afonso’s son, Henrique, was ordained as the first bishop of Bantu parentage in 1518. He had studied in Portugal for 15 years and returned to the Kongo in 1521. Afonso continued his mission of Christianizing the Kongo by opening a network of missionary schools all over the country by 1516. This was funded by a tithe, or a mandatory religious tax. As the kingdom of the Kongo grew in size and strength, the Christian religion spread with it in the form of its missionaries. Despite Afonso’s efforts and goals, Christianity never spread out past the elites by the time of his death in 1542.

Diogo I succeeded Afonso and not only continued the policies of his grandfather but he also expanded them. Diogo encouraged Jesuit activity

▶ LETTERS TO THE KING OF PORTUGAL ABOUT THE TRANSATLANTIC SLAVE TRADE, 1526

When the Portuguese arrived in the Kingdom of the Kongo in 1483, they brought with them more than just religion. They also brought the slave trade, which disrupted the balance of power and population of the local people. Afonso I became king of the Kongo in 1506, and he supported the Jesuit missionary work as a Christian. Yet he was disturbed by the effects of the slave trade on his kingdom. Although his people were not specifically targeted for enslavement, he did have problems controlling it, as often those subjects who set about capturing slaves from the surrounding areas were eager to deal directly with the Portuguese in order to avoid paying taxes. As a result, King Afonso wrote a series of letters to King João III in order to ask for his help.

“Sir, Your Highness should know how our Kingdom is being lost in so many ways that it is convenient to provide for the necessary remedy, since this is caused by the excessive freedom given by your agents and officials to the men and merchants who

are allowed to come to this Kingdom to set up shops with goods and many things which have been prohibited by us, and which they spread throughout our Kingdoms and Domains in such an abundance that many of our vassals, whom we had in obedience, do not comply because they have the things in greater abundance than we ourselves, and it was with these things that we had them content and subjected under our vassalage and jurisdiction, so it is doing a great harm not only to the service of God, but the security and peace of our Kingdoms and State as well . . . and so great, Sir, is the corruption and licentiousness that our country is being completely depopulated, and Your Highness should not agree with it nor accept it as in your service.”

—Monique Vallance

Source

Alfred J. Andrea and James Overfield, *The Human Record: Sources of Global History*, Vol. 2 (Boston: Houghton Mifflin, 2005), 124.

and even began sending out priests and chapel boys (ministers of noble birth) to convert the surrounding kingdoms. Thanks to all these efforts, Pope Leo X named the Kongo an Episcopal See in 1595, and the Church of São Salvador became a cathedral. By 1600 there were 13 parishes, each supported with teachers and offices and all supported with a combination of funding by the tithes and the king of Portugal. The results were shown by the dissemination of the religion outside of the noble class. People who lived in the cities and towns seemed to be knowledgeable about the liturgy of the Catholic Church, and masses were well attended. In the villages, people could at least recognize symbols such as the cross and rosary and sought to have their children baptized.

The successive years saw much civil unrest in the Kongo as the Portuguese tried to manipulate the different factions so that they could gain more political control and therefore more control over the slave trade. Although the Portuguese never formally took control of the Kongolese government, they did manage to maintain a certain amount of control over the kings, and

their continued influence as well as the continued devotion of the aristocracy meant that Christianity would remain an influential religion in central Africa.

—Monique Vallance

Bibliography

- Gondola, Ch. Didier. *A History of Congo*. New York: Greenwood, 2002.
- Hastings, Adrian. *The Church in Africa, 1450–1950*. Oxford, UK: Oxford University Press, 1996.
- Heywood, Linda Marinda, and John Kelly Thorton. *Central Africans, Atlantic Creoles, and the Foundation of the Americas, 1585–1660*. Cambridge: Cambridge University Press, 2007.
- Isichei, Elizabeth Allo. *A History of Christianity in Africa: From Antiquity to the Present*. Grand Rapids, MI: Eerdmans, 1995.

Ethiopian Resistance to Muslim Encroachment

The conflict between the Ethiopian Solomonic dynasty (which derives its name from the mythological Jewish king of Jerusalem) and the Islamic

THE PORTUGUESE AND JESUIT FACTOR

While fighting against its Muslim neighbors, Ethiopia also clashed with its Christian allies. The myth of Prester John, a legendary Christian patriarch and king said to rule over a Christian nation lost amidst the Muslims and pagans in the Orient, was of great interest to the kings of Portugal from the time of Prince Henry the Navigator. In their quest for an alliance and trade with this imaginary ruler, the Portuguese soon established diplomatic relations with Ethiopia. Their ambassador, Peros da Covilha, reached Shewa in 1493. In 1509, the Byzantine empress Helena sent an Armenian, “Matthew,” back to Portugal as her ambassador. However, the desire to foster joint operations against Islam was to give way to misconceptions in Lisbon and Rome that the Ethiopian Church was anxious to accept papal jurisdiction. This led to a disastrous phase in Ethio-European relations, a legacy of which was the lack of trust between Ethiopians and foreigners for a long period. Close contacts with Portugal inevitably led to Jesuit missionary activity, which the ancient Ethiopian Orthodox Tewahedo Church

perceived as a threat. Theological disputes between the Jesuits and Ethiopian clergy, including a bitter dispute over whether Christ had one totally unified (Tewahedo) divine nature or two separate divine and human natures, resulted in protracted religious and political schism in the kingdom between 1606 and 1632. Emperors Za Dengel (Asnaf Sagad II 1603–1604) and Susenyos (1607–1632) were secretly converted to Catholicism, but under the rule of Emperor Fasiladas (1632–1667), the Jesuits fell out of favor and were expelled. Although the future of Ethiopian allegiance to Alexandria was secured, the Jesuit interim (1500–1633) continued to influence the course of Ethiopian history. Pedro Páez (1564–1622), the Jesuit missionary who was described as “gentle, learned, considerate,” was highly influential in facilitating the spiritual and intellectual engagement of Ethiopian rulers with Catholic traditions. Some of the Catholic churches he designed are still standing and were an influence on Ethiopian architecture.

—Alexander Mikaberidze

sultanates of the Horn of Africa coast is better understood by analyzing the different social and religious structures of the two regions. The Ethiopians were Christians (Copts), farmers of the plateau and lacking a clan structure, while the inhabitants of the sultanates were Muslims, herdsmen of the savanna and members of a clan organization that was inherited from the first Muslim traders of Egypt and southern Arabia.

At the beginning of the ninth century, Islam entered this region due to the geographical importance of the African coasts at the horn in order to use it as a maritime hub on the Silk Roads so they could reach the Indian subcontinent by ship. Nevertheless, this Muslim foray, at least until the beginning of the fourteenth century, focused on the coasts and not on the Ethiopian plateau. During this same period the diplomatic relationships between the kingdom of Ethiopia and the Ayyubid (1171–1250) and Mamluk (1250–1517) vizierate of Egypt were generally peaceable. The Muslim traders became useful for the farmers of the Solomonic kingdom because they

were able to trade their agricultural products to the Islamic sultanates and profit due to drought in those regions.

However, the situation changed quickly after the emergence of the Ottoman empire (1293–1922) and the decadence of the Mamluk vizierate in the fifteenth century. While the vizierate controlled the entire area, which ranged from north-eastern Africa to the Horn all the way to southern Arabia (Yemen), the relationship between the two was peaceful and well supported by the Mamluk, who continued to maintain a constant diplomatic and trade connection that was useful for both. The situation changed during the fifteenth century because of the aggressive military campaigns conducted against the Ethiopian border by the Islamic sultanates, which led the Ethiopians to upgrade their military.

The Ethiopian defensive ability was stronger than the offense of the sultanates, who were divided into many clans and were less organized and poorly equipped. During the reign of the *negus* (the title of the Ethiopian king)

Yeshaq (1414–1429), the Ethiopian military blasted against the Ifat and Adal sultanates, destroying mosques and replacing them with churches. The lack of control of the Mamluk sultanate in the Red Sea region and in the Horn of Africa in particular, allowed a power vacuum during the fifteenth century and permitted an Ethiopian military predominance in the region. Under the negus Zara Yacob (1434–1468) and Baeda Maryam (1468–1478), the Ethiopians continued to favor defensive-offensive campaigns against the sultanates, managing to occupy many areas that had previously been under Muslim control. However, the situation changed in the sixteenth century when the Ottomans began helping the Islamic states militarily. After he conquered Egypt and Yemen, Selim I (1465–1520) began to supply the Ethiopians with new firearm models and modern muskets. On the other side, the arrival of a Portuguese fleet at the end of the fifteenth century prompted the building of both economic and military relations between the Ethiopians and the Europeans, which played an important role in the following century.

With the invasion of Ahmed Ibrahim al-Ghazi, nicknamed Gagn (“the lefthanded”), the military predominance of the Ethiopians was surpassed by the Islamic dominions. Gagn was described as an incredible warrior and general (*emir*), and his conquest of Ethiopia was considered so destructive and violent that after 400 years the emperor Haile Selassie, the last of the Solomonic dynasty, would remember in his diary that when he was a restless child, family members threatened that they would call the legendary Gagn to kidnap him if he would not change his unruly behavior. Gagn’s skills were not only military but political as well. He had the dexterity to unify the divided Muslim reigns and the ability to gather more soldiers and to convince them to join a battalion of Turkish Janissaries. In 1529 Gagn was able to pacify interclan wars and start the invasion.

The Ethiopian emperor of this historical period was Lebna Dangel (1508–1540), who tried to stop the invasion by first sending a general who was defeated and beheaded. The main Ethiopian army was then annihilated in the Battle of Shimbra Kure in 1529. Two years later Gagn started a major campaign in the northern direction and,

after defeating three Abyssinian armies, invaded the Wollo region, the Mazaga and Gojjam, destroying all the villages, churches, monasteries he encountered.

At the end of 1535 Gagn controlled the entire Shoa, Duararo, Lasta, Bale, Damot, and Had-ya areas and a great part of Ahmara and Tigré areas, potentially the entire empire. The emperor Lebna Dangel took to hiding, sleeping in different places at night, for the peril of encountering the Muslim foe. Gagn’s main goal was to capture then kill the emperor and so indicate to the entire world the end of the Abyssinian Copt reign and dynasty.

Gagn kept small garrisons in all the places that were conquered to recruit new forces and to convert the local Christian inhabitants to Islam. Lebna Dengel requested the military support of the Portuguese, but the geographic distance between the Horn of Africa and the European state was too wide to be minimized in a short time; when a new Portuguese fleet reached Massawa in 1541 with 400 musketeers, Lebna Dengel had been dead for a year.

Galawdewos was 18 years old when he succeeded his father to the throne of Abyssinia; faith in this new chief and in the tiny Ethiopian army was completely non-existent. However, it was under the leadership of this negus that the Abyssinians were able to reverse the situation, even if with the help of the European armies. After an incredible victory against the Portuguese army in 1541, Ahmad Gagn made the only mistake of the entire invasion campaign: dismissing the Turks, except for a regular force of 200 Janissaries, and returning to his headquarters near Lake Tsana.

At the same time Galawdewos’s army was engaged in a war against the Muslims in the Wag-ara region. He killed the chief of that army, Seid Mehmud, and started to behave as Gagn had done before. Galawdewos destroyed the entire region, burning the Muslims’ houses, villages, and mosques. The Abyssinians began to rally to their king, and a force of 8,000 soldiers and 500 horses gathered in a short time. Meanwhile, the Portuguese rearmed themselves from a depot, which Christopher de Gama had prudently established near Debaroa, and his chemist, who had luckily escaped from the previous defeat, made

gunpowder from the sulfur and saltpeter that abounded locally. The Portuguese were able to reach Galawdewos's army during the third year of reign of the king of Abyssinia while Gagn was calmly encamped near Lake Tsana, quite unaware of the resurrection of this foe.

In 1543 Galawdewos and the Portuguese armies fought against Gagn's soldiers in the Battle of Uoina Dega on the north side of Lake Tsana. During the battle Gagn was killed by one of the Portuguese musketeers. With his death the Muslim army fell into confusion and was defeated. After the death of Gagn, the intensity of the religious wars in the Horn of Africa decreased, the Abyssinian empire was reestablished, and the Portuguese became the Ethiopians' most important allies. The Muslims of the coast were never able to invade the plateau until the Ogaden War in 1978 between Somalia and Ethiopia.

—Marco Demichelis

Bibliography

- Pankhurst, R. K. P. *The Ethiopian Royal Chronicles*. London: Oxford University Press, 1967.
- Robinson, D. *Muslim Societies in African History*. Cambridge: Cambridge University Press, 2004.
- Trimingham, S. *Islam in Ethiopia*. London: Oxford University Press, 1952.

Neo-Confucianism in Ming/Qing Thought

Confucius (traditional dates 551/552–479 BCE) left behind an impressive legacy: Confucianism. This philosophy or, more accurately, way of living changed and developed in dramatic ways from the days of Confucius onward. Confucius emphasized tradition and study of a number of key central texts, which were later called Confucian Classics. The five texts that we call "The Five Classics" today are *The Book of Rituals (Liji)*, *The Book of History (Shangshu)*, *The Book of Changes (Yijing)*, *The Book of Poetry (Shijing)*, and *The Spring and Autumn Annals (Chunqiu zhuan)*. In Confucius's way of life, the central ideas of benevolence (*ren*), filial piety (*xiao*), and ritual, also translated as propriety (*li*), were important components that followers needed to incorporate into their lives.

Confucianism declined after the collapse of the Han dynasty (206 BCE–220 CE) and during

the long period of division in China (220–589) lost influence to Buddhism, which brought answers to questions about suffering and man's place in the universe. However, from the ninth century on a new form of Confucianism emerged: Neo-Confucianism. This revitalized Confucianism played a central role throughout East Asia. In China it corresponded with the rise of the examination system, by which aspiring men could earn a position in government. It also incorporated new strains of philosophy and intellectual development over the latter dynasties: the Ming (1368–1643) and Qing (1644–1911). In Japan it became the central philosophy by which the military governments ruled, and in Korea it also became the basis for serving in government.

The examination system was the most important factor in the centrality of Neo-Confucianism in China. Zhu Yuanzhang (1328–1398), the founder of the Ming dynasty, approved of Zhu Xi's (1130–1200) edition of the Four Books (*The Analects*, *The Book of Mencius*, *The Great Learning*, and *The Doctrine of the Mean*) and the Five Classics as the orthodox version to be learned. Every student in China, until the traditional exams were abolished in 1905, familiarized himself thoroughly with these texts.

Neo-Confucianism refers to a number of schools of thought. The two most important were the School of Principle (*lixue*) and the School of Heart-and-Mind (*xinxue*). The School of Principle was established during the Song dynasty, when the philosopher and scholar Zhu Xi synthesized the doctrines of earlier scholars and created the dynamics of their teaching. The School of Heart-and-Mind developed as a reaction to Zhu Xi's school, finding its most important expression in Wang Yangming (1472–1529).

One important set of ideas that Zhu Xi held are connected to cosmology. According to Zhu, the universe consists of a combination of *qi* (matter) and *li* (principle). *Li* is abstract, while *qi* is material,—or, if you like, *li* is the blueprint of a building, while *qi* is the stuff (bricks, windows, pipes) that make up the building. Beyond all things there is Taiji, the Grand Ultimate, which is a sort of super *li*. The goal of the student is to understand all of this by thorough study, or investigating objects until understanding the principle underlying all objects.

WANG YANGMING—ADAPTING CONFUCIAN THOUGHT IN THE MING DYNASTY

Confucian scholars are often considered conservative and unchanging. This is hardly the case when we consider a figure such as Wang Yang-ming (1472–1529), who was originally a follower of Zhu Xi. Wang's awakening to his own philosophy occurred when he tried to put into practice Zhu Xi's investigation of things (the technical term used in translating Zhu Xi's most important concept is *gewu*, which roughly means to study objects and ideas thoroughly). Wang did so by sitting in front of a bamboo plant and observing it for several days. Unfortunately, during this time he fainted and became very ill. He realized that this form of studying was not the best way to learn. Indeed, he came to the realization that learning was intuitive and internal and did not necessarily proceed through a rational process. Later in life Wang ran afoul of the emperor and was beaten, imprisoned, and exiled to a backward primitive region of China, inhabited by non-Han peoples. On the way there those hostile to him tried to have him assassinated. Wang once barely escaped by swimming across a river as would-be assassins pursued him. Nevertheless, he delighted in his exile and devoted himself to his learning. Afterward he was recalled to the capital and promoted. He became a prominent official whose duties included military ones. When one of the emperor's cousins rebelled and defeated government troops, Wang was put in charge of suppressing this rebellion. He did so successfully, leading his troops in battle and bringing the hapless rebel cousin as a prisoner to the emperor. Wang can be considered an ideal Confucian, a scholar who combined learning with practical problems of government administration. His philosophy and life have inspired the Chinese throughout their modern history.

—Ihor Pidhainy

Wang Yangming rejected this overly intellectual approach. Instead, he argued that li (principle) is within us and that all we need to do to investigate objects is to examine ourselves, for it is one's heart and mind that possess the Heavenly principle. In this way we can get to the principle of all things or objects. In addition,

Wang insisted on the unity of knowledge and action. This was in contrast to Zhu Xi's overly academic approach to learning.

Wang Yangming's writings made a strong impression on fellow scholars. Wang Gen (1483–1540), a follower of Wang, went about proclaiming the idea that all men are sages. Even more radical, Li Zhi (1527–1602) rejected all aspects of Confucianism as necessary to a well-ordered society. He argued that there is a childlike mind and heart that we lose because of civilization, and only through thoroughly following our selfish desires can we recover it.

During the Qing dynasty a third school developed, that of evidential learning. Its most important scholars included Gu Yanwu (1613–1682) and Dai Zhen (1723–1777). These scholars were concerned with getting back to the original meaning of the classics before they had been misinterpreted by Zhu and Wang. This school became important for its careful and painstaking scholarship in a wide array of disciplines, including history, philology, mathematics, phonology, and the like.

Although significant in the identity of the Ming and Qing dynasties, Neo-Confucianism came to be seen as a negative aspect of Chinese culture and identity. This idea, which had roots as early as the seventeenth century, became prominent during the nineteenth century, particularly after the Qing dynasty was defeated in the First Opium War (1840) and became dominated by Western imperial powers and then later by Japan. Chinese scholars rejected all aspects of Confucianism and particularly saw in Zhu Xi and the school of principles the main cause of Chinese backwardness during the nineteenth and twentieth centuries.

—Ihor Pidhainy

Bibliography

- Chaffee, John W. *The Thorny Gates of Learning in Sung China: A Social History of Examinations*. New York: Cambridge University Press, 1985.
- Chan, Wing-tsit, trans. and comp. *A Source Book in Chinese Philosophy*. Princeton, NJ: Princeton University Press, 1963.
- Dardess, John. *Confucianism and Autocracy: Professional Elites in the Founding of the Ming Dynasty*. Berkeley: University of California Press, 1983.

- Elman, Benjamin. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley: University of California Press, 2000.
- Elman, Benjamin. *From Philosophy to Philology: Intellectual and Social Aspects of Change in Late Imperial China*. Cambridge, MA: Harvard University Press, 1991.
- Elman, Benjamin, and Alexander Woodside, eds. *Education and Society in Late Imperial China, 1600–1900*. Berkeley: University of California Press, 1994.
- Fung, Yu-lan. *A History of Chinese Philosophy*. 2 vols. Translated by Derk Bodde. Princeton, NJ: Princeton University Press, 1953.
- Miyazaki, Ichisada. *China's Examination Hell: The Civil Service Examinations of Imperial China*. New Haven, CT: Yale University Press, 1981.

Neo-Confucian Ideology in Japan

Before the middle of the sixteenth century, Neo-Confucianism, which was formulated in thirteenth-century China, was confined in Japan to the Gozan temples of the Zen school of Buddhism in Kyoto. During this time, Neo-Confucian scholars were also Zen monks and priests. Japan did not have a scholar-official class as in China, and there was no connection between Neo-Confucianism and the ideology of the ruling elites in Japan. After 1550, during the wars of unification, some Zen monks began quitting their temples in favor of the pursuit of scholarship full-time. Thus, the separation of Buddhism and Neo-Confucianism had begun.

Some of these former Zen monks became advisers to the founder of the Tokugawa shogunate (1603–1867), Tokugawa Ieyasu (1543–1616). The most important of these scholars was Hayashi Razan (1583–1657), who was granted permission by the shogun to open a school of Neo-Confucianism in 1632, marking the start of the shogunate's support for Neo-Confucianism. Neo-Confucian ideas were appealing to samurai leaders for two main reasons. First, they provided them with a civilian political theory in a time of peace. In the final decades of the sixteenth century, warfare was nearly constant, and the samurai had little time or inclination to justify their territorial control in terms other than that of military power. This situation changed with the advent of peace and the subsequent establishment of

> HAYASHI RAZAN

The following passage is from Hayashi Razan (1583–1657), a former Zen monk and Neo-Confucian adviser to the shogunate. In addition to the Neo-Confucian opposition to Buddhism, its adherents were also critical of Daoism. In describing the essence of the Confucian Way (“the Way of the Sages”), Razan compares it with the Way as described in Daoism.

“Lao Tzu [Laozi] said: ‘The Way that can be told of is not an Unvarying Way.’ What he considered the Way was quiescence and nonstriving, and what he spoke of was the original undifferentiated state of nature. . . . The Way of the Sages is altogether different from this. Their Way consists in nothing else than the moral obligations between sovereign and subject, husband and wife, elder and younger brother, and friend and friend. . . . It is not what Lao Tzu called the Way. If one casts aside the moral obligations of man . . . then it is not the Confucian Way, it is not the Way of the Sages[.]”

—Mark McNally

Source

Sources of Japanese Tradition, Vol. 1, compiled by Ryusaku Tsunoda, Wm. Theodore de Bary, and Donald Keene (New York: Columbia University Press, 1958), 348.

the Tokugawa shogunate. Tokugawa leaders felt the need to justify their dominance over Japan to their vanquished foes, whose military power was largely still intact following the climactic Battle of Sekigahara (1600). Neo-Confucian ideals such as virtue and benevolence were therefore useful in crafting their political ideology. The second major reason for the Tokugawa adoption of Neo-Confucianism was its emphasis on hierarchy. Not surprisingly, Tokugawa leaders adopted an official system of four social classes during the seventeenth century, with the samurai on top followed in order by farmers, artisans, and merchants. Neo-Confucian scholars argued that this system of social classes, based on the Chinese model, was not arbitrary but instead was natural. Emanating from nature, this system of four classes was not only legitimate but also unchangeable.

Since the Japanese never established a civil service examination system as had the Chinese, the orthodox status of Neo-Confucianism had a different meaning in Japan, and other forms of scholarship arose during the eighteenth century that challenged the dominance of Neo-Confucianism. One of the most important of these was called Ancient Learning. Adherents of Ancient Learning believed that Neo-Confucianism was a profound distortion of original or Classical Confucianism. They argued that Chinese Neo-Confucian scholars of the Song dynasty (960–1279) had borrowed ideas from Buddhism and Daoism in their studies of the Confucian classical texts, which resulted in misinterpretations propagated down through the centuries. The only solution, they asserted, was to return to the original texts and bypass Neo-Confucianism altogether. The most influential of the Ancient Learning scholars was Ogyū Sorai (1666–1728), who argued that moral philosophy was irrelevant to the establishment of effective government. Sorai's scholarship became highly influential throughout Japan, and Sorai himself became an adviser to the eighth shogun, Tokugawa Yoshimune (1684–1751). Sorai's scholarship was so popular that it became part of the curriculum at Hayashi Razan's school and, in the process, nearly displaced Neo-Confucianism.

—Mark McNally

Bibliography

- Maruyama Masao. *Studies in the Intellectual History of Tokugawa Japan*. Translated by Mikiso Hane. Princeton, NJ: Princeton University Press, 1974.
- Ooms, Herman. *Charismatic Bureaucrat: A Political Biography of Matsudaira Sadanobu, 1758–1829*. Chicago: University of Chicago Press, 1975.
- Ooms, Herman. *Tokugawa Ideology: Early Constructs, 1570–1680*. Princeton, NJ: Princeton University Press, 1985.

Cycles of Decline and Renewal of Buddhism

After centuries of expansion from its birthplace in India to all parts of Asia, first southward (ca. third century BCE) and then northward (ca. first century CE), Buddhism had more or less been firmly established socially throughout the continent by means of missionary expansion along

the Silk Road trade routes. However, it has undertaken different processes of development, from marginal integration in China to full societal assimilation in Sri Lanka and Tibet. In all Asian countries, however, Buddhism has proved to have a major and enduring influence on local cultures. From the fifteenth to the eighteenth centuries, Buddhist communities were nevertheless challenged by environmental changes in their host societies. This period in the history of Buddhism is not very well documented, although the diversity of regional contexts explicitly discloses a cyclic process of decay and renewal in both southern and northern regions of Asia but for rather different reasons.

In Burma like elsewhere in South Asia, under the influence of the Mōns (a Burmese ethnic group) Buddhism spread out and took root in local settings in what are now the modern nation-states of Thailand, Laos and Cambodia. The Mōns were influential in a regeneration of Buddhist institutions, established in prior centuries throughout Asia, and were somewhat “corrupted” by their acclimatization to global societies. They impelled a “purge” of the *sanghas* (monastic Buddhist communities), the revitalization of the faith, and the building of sanctuaries. In Burma, King Dhammaceti (1472–1492) embarked on reforming the Buddhist Order after the foundation of the Mōn kingdom. During the Ayutthya kingdom (1350–1767) and after the adoption of Theravada Buddhism (“school of the elders”) under the Sukhothai sovereignty (1238–1448), Thailand followed similar transformations, and Buddhism was “purified” under Songdham (1610–1628) before flourishing again during the realm of Maha Dhammajara II (1733–1758). The Sinhalese experience was uneven. After the expansion of a great monastic civilization (which declined from the thirteenth century onward), the religious power of Buddhism weakened under the kingdom of Kandy (founded in 1581), a period of national division and political instability marked by the colonial influence of the Dutch and Portuguese in Sri Lanka.

The situation was quite different in northern Asia. In China, Korea, and Vietnam under Mahayana influence (Buddhism of the “great vehicle,” predominant in the north of Asia), Buddhist communities were threatened by the social and

political restoration of a neo-Confucianism, energized after the takeover of China by the Buddhist-oriented Mongols (thirteenth century) and its subsequent disintegration (fourteenth century). The Confucian reaction consisted of the restoration of the antique and ethical principles of social and symbolic order and harmony, firmly positioned against other faiths and significantly influenced by Buddhist and Taoist teachings. This process began in China under the Song dynasty (960–1279). The neo-Confucian movement spread to Japan during the Tokugawa or Edo period (1603–1868), to Korea under the Yi dynasty (1392–1910), and to Vietnam later in the fifteenth century, which led eventually to state regulation and the decreasing political influence of Buddhism. Although still deeply rooted culturally in Asian societies, Buddhism was challenged by unfavorable political forces. In return, the Japanese schools of Buddhism developed new strategies—ideological conversion to neo-Confucianism (especially in the Rinzai sect), alliances with the authorities (the shoguns or “military commanders”), and a refocus on philosophy and liturgy—a reason why Japanese Buddhism was intellectually flourishing although politically marginalized.

Tibet is a counterexample of these sinusoidal cycles of flux and reflux that Buddhism has undertaken throughout Asia. Yet the history of Buddhism in Tibet is also marked by a short and instable period of decline and renewal (at the turn of the tenth century). Afterward, however, the progress of Tibetan Buddhism showed unrelenting growth. Generations of great Indian masters visited the country, Tibetan masters were highly skilled, the major schools were founded, and the *dharmā* (Buddhist doctrine) was partially or totally adopted by the diverse populations of the vast provinces of Tibet in only four centuries. Years after its foundation (in the fifteenth century), the Gelug-pa school became a major social and religious force in Tibet. The lineage of the Dalai Lamas (meaning “ocean of wisdom,” a title assigned by the Mongols) has hence been instituted among the Gelug-pa, based upon and legitimated by the doctrinal system of the *tulku* (reincarnated masters), allowing both the transmission and the conservation of religious and political powers within the monasteries.

➤ HAKUIN, *THE EMBOSSED TEA KETTLE*, JAPAN

The religious history of Japan is marked by great spiritual figures, each of them being the source of a specific contribution to religion and culture. Hakuin (or Hakuin Ekaku, ca. 1685–1768) is one of them. He is considered responsible for a profound reform of the Rinzai tradition of Zen Buddhism that had been marginalized in eighteenth-century Japan and pursued the efforts of preceding reformers of Japanese Buddhism. His biography portrays him as a pious and inflexible monk, a zealous scholar in Buddhism in search of the truth who ended his life as one of the most famous Zen masters of his time. Committed to a “worldly” conception of Buddhism, he restored the use of very sophisticated soteriological techniques (aiming at spiritual salvation) such as the *koan*, words or anecdotes aiming at a reflection leading to enlightenment. “What is the sound of one hand clapping?” is the most reputed. He also reinstated a rigorous code of spiritual discipline, especially the practice of *zazen* (seated meditation), in order to attain the *satori* (awakening). These two techniques imprinted the hallmarks of modern forms of Rinzai Zen. Hakuin wrote many books and essays, including the renowned *The Embossed Tea Kettle* which has been translated worldwide.

—Lionel Obadia

The Buddhist Gelug-pa clergy consequently accessed the political leadership in 1642 under the sovereignty of the fifth Dalai Lama, Lozang Gyatso (1617–1682), and Tibet became the first Buddhist theocracy—a state of affairs that continued until the Chinese Red Army arrived in the twentieth century. At odds with the general oscillations between Buddhism and political power in surrounding regions, the case of Tibet in this period is a remarkable example of a complete fusion between religious and political power.

—Lionel Obadia

Bibliography

- Gombrich, Richard, and Heinz Bechert, eds. *The World of Buddhism*. London: Thames and Hudson, 1984.
- Harvey, Peter. *An Introduction to Buddhism: Teachings, History, and Practices*. Cambridge: Cambridge University Press, 1990.

- Keown, Damien, Stephen Hodge, and Tinti Paola. *A Dictionary of Buddhism*. Oxford, UK: Oxford University Press, 2003.
- Kitagawa, Joseph M. *Religion in Japanese History*. New York: Columbia University Press, 1966.
- Stein, Rolf A. *Tibetan Civilization*. Stanford, CA: Stanford University Press, 1972.
- Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*, Vol. 1, Part 2, *From c. 1500 to c. 1800*. Cambridge: Cambridge University Press, 2000.
- Wright, Arthur. *Buddhism in Chinese History*. Stanford, CA: Stanford University Press; London: Oxford University Press, 1970.

Christianity in East Asia

The so-called Age of Discovery, the period in which the Europeans began venturing forth into the oceans and encountering the lands of Asia and Africa, was more than just an initiation of trading routes and diplomacy. It was also a period in which Christianity left Europe, and to an extent western Asia, and spread along the trade routes being established. Unlike the Americas, where Christianity was imposed upon the native people, Asia would prove to be a much more complicated situation, especially in East Asia. The European position was a precarious one, and Christianity would have to be adopted by the Asians by choice rather than force. Established by the Portuguese, Goa became both a trading center and a missionary center in Asia. Goa was established as an archdiocese in 1557 and was used as a base by missionaries before traveling to places such as China and Japan in the hopes of finding converts. The first 50 years of missionary activities in Asia were dominated by the Franciscans and Dominicans, but progress was slow. They remained separate from the people; they did not learn the native languages, preferring to use translators instead. As a result, the newly baptized Christians normally consisted of women who lived with European men, slaves, or the extremely poor, what were called “Rice Christians.” This all changed with the arrival of the first Jesuits to Goa in 1542. The Jesuits were a new order and had a different approach to reaching the Asians. Starting with Francis Xavier, the Jesuits had much more

success as they attempted to learn the local languages and studied religious and philosophical texts. They were also the first to allow Asians into their order.

The missionary effort in Japan began with Francis Xavier, a Jesuit sent by King João III to establish a mission in Goa. After spending six years there, Xavier traveled to Japan in 1549 and laid the foundation for the Jesuit mission established in Kyoto in 1559. During the sixteenth century Japan was under the control of several different warlords. The Jesuits arrived in the wake of the Portuguese, who had brought with them not only an important link to the silver trade with Macao but also new weapons technology. These two elements became quickly linked as the daimyo began converting to Christianity and receiving in exchange the valuable technology that gave them an advantage over their neighbors. Oda Nobunaga was one in particular who used this knowledge to his advantage. With firearms, he quickly began defeating his neighbors and was well on the way to unifying Japan. In addition, the Jesuits were employing methods to make the Christian religion more attractive to the Japanese. The Jesuits modified their dress, diet, and hygiene to blend in with the Japanese. These efforts by the Jesuits met with success. Around 150,000 Japanese had converted by 1582, and 222,000 had converted by 1609. A printing press was brought to Japan in 1590, and the Jesuits used that as a tool of dissemination.

However, the methods that proved to be so successful during Japan’s “Christian century” led to their downfall. Part of Nobunaga’s fight was against the Buddhist True Pure Land Sect, which ruled over a large domain. His army was filled with Christians, and the Jesuits encouraged them to defeat the Buddhists. Nobunaga’s successor, Toyotomi Hideyoshi, originally protected the Christians and continued a relationship with them. Even though the firearms had been instrumental in the unification of Japan, Hideyoshi wanted to ensure that no one else would be able to repeat his successes; he restricted the Christians and expelled the missionaries in 1587. His distraction with conquering Asia meant that he did not enforce these laws, leaving the situation the same until his death in 1598.

ST. FRANCIS XAVIER IN ASIA

Francis Xavier (b. 1506) was one of the founders of the Jesuit order, and he is often looked at as the model for the Jesuits' missionary work in Asia. In 1540 he was appointed by King João III of Portugal to set up a mission in India. Xavier arrived in Goa, India, in 1542, and during the next six years he was able to establish Goa as the primary center of Jesuit activity. He also established the practice of learning the local language and customs in order to more effectively preach to the natives. This tool became the signature method of the Jesuits while out in the missions in both Asia and Latin America.

In August 1549 Xavier and two other Jesuits arrived in Kagoshima, Japan. Xavier is quoted as saying, "We shall never find among heathens another race equal to the Japanese." He remained in Japan for two and a half years, giving gifts such

as spectacles and clocks and wine to the elites and attempting to make ties with the learned class. By 1551 he had over 1,000 converts to Christianity. After learning about the scholarly nature of the Chinese people, he left Japan and attempted to make his way into China. However, on the way to China he took ill, and the expedition was forced to stop on the island of Sancian, just off the coast. He died there on December 2, 1552. Xavier left an equally large legacy in Japan. Just 20 years after his death, over 20,000 Japanese had been converted to Christianity even though there were never more than 9 Jesuits in residence at one time until 1563. Xavier also helped pave the way for the Jesuit Matteo Ricci and his mission in China, one that would prove to be a very important scientific exchange between East and West.

—Monique Vallance

The Christians received a reprieve for the first 11 years of the Tokugawa Shogunate. However, this period also saw the decline of the Portuguese monopoly over the Japanese trade and the entrance of the English and Dutch. In doing so, they did their best to turn the shogun against the Jesuits, hoping that doing so would turn the shogun against the Portuguese. During this time the Japanese Buddhists were organized into parishes to maximize governmental control, leaving the Christians outside government control. Despite the persecutions they endured, the Christians refused to recant, even when their lives were threatened. Tokugawa Ieyasu realized that this religion was a threat to his own power. In 1614 Ieyasu again banned all Christian missionaries. Many left, but there were still many who stayed behind in hiding, and Christianity continued to thrive. Tokugawa Hidetada was hostile to Christianity, and when he became shogun in 1616 he began organized persecutions of the Christians. He executed two Jesuits the next year, beginning a trend of executions and arrests. The Christian community continued to smuggle in priests, and upon discovering this in 1622, Hidetada executed 55 Christians and demanded that his daimyo join in the repression. They were

required to sign a statement swearing that they were not Christian and to travel once a year to their local Shinto shrine to step on a picture of the *pieta*. Many Christians were also tortured until they recanted their faith. Between 1614 and 1639 a total of 2,126 Christians were executed. The government campaign against Christians was intensified after the Shimabara rebellion in 1638 and effectively crushed the missionary efforts. The last Jesuit to enter Japan was the Italian Giovanni Battista Sidotti, who was imprisoned from 1708 to 1714, when he died of starvation. Despite this, there continued to be an enclave of secret Christians living in Japan who kept their practices alive through oral tradition.

Christianity existed in China in a much more peaceful manner. Francis Xavier dreamed of going to China but died on the voyage in 1552. Instead Michele Ruggieri, an Italian Jesuit residing in Macao, was given permission to enter China in 1580. He had learned to speak Mandarin and traveled through China with a shaved head and the dress of a Buddhist monk. This appearance probably facilitated the conversions that he achieved, but the progress was still slow. The spread of Christianity grew with the arrival of Matteo Ricci, who established the method by

which the Jesuits organized their mission. Their methods mimicked those of the Jesuits in Japan. They lived and dressed as Chinese natives and stressed to the elites the connections between Confucianism and Christianity. Ricci and his colleagues were accepted as learned scholars and had contacts with the emperor and his court. They also did not speak of sin but instead referred to ethics and showed the crucifix as little as possible in order to keep the Chinese from viewing Christianity in a negative light. After the victory of the Qing in 1644, the Jesuits stopped attempting to adhere to Confucianism and concentrated more on imperial service. This period saw a great amount of intellectual exchange, especially scientific and philosophical, between the Jesuits and the scholars of the imperial court.

The Jesuit methods were bitterly contested by the Spanish Dominicans, who arrived from Manila in the 1630s. This developed into what became known as the Chinese Rites Controversy, and both sides sent petitions to the pope defending their cases. Pope Alexander VII issued a papal bull siding with the Jesuits in 1656, but the disputes did not end. Matters were complicated by the arrival of the French at the turn of the century. At this time Chinese Christians numbered between 200,000 and 500,000. Controversy arose after Bishop Charles Maigrot attempted to ban Confucianism and keep the Chinese from attending ceremonies in honor of the dead. Although the Jesuits had many supporters in Europe, they shocked everyone by asking Emperor Kangxi to write a letter to the pope explaining that ancestor worship was not religious in nature. In 1706 Charles Maillard de Tournon, a French papal legate, met with Kangxi and informed him that the pope condemned ancestor worship. Infuriated, Kangxi expelled Tournon from his court and informed the Jesuits that they would either follow “the way of Father Ricci” or be exiled. Despite this decree, Pope Benedict XIV confirmed the decree of the former pope, causing a permanent schism between Catholicism and the scholarly elite. While Christianity continued to exist in China, it no longer held the influence that it had once had and afterward faded into the background.

—Monique Vallance

Bibliography

- Alden, Dauril. *The Making of an Enterprise: The Society of Jesus in Portugal, Its Empire and Beyond, 1540–1750*. Stanford, CA: Stanford University Press, 1996.
- Bays, Daniel H. *Christianity in China: From the Eighteenth Century to the Present*. Stanford, CA: Stanford University Press, 1996.
- Hsia, R. Po-chia. *The World of Catholic Renewal, 1540–1770*. Cambridge: Cambridge University Press, 2005.
- Lach, Donald F., and Edwin J. Van Kley. *Asia in the Making of Europe*, Vol. 3, *A Century of Advance*. Chicago: University of Chicago Press, 1993.
- O'Malley, John W. *The Jesuits: Cultures, Sciences, and the Arts, 1540–1773*. Toronto: University of Toronto Press, 1999.

The Spread of Christianity in Southeast Asia

It is important to make a distinction between the arrival of the Christian faith and its spread throughout Southeast Asia. As early as the late thirteenth century there are records of Catholic priests passing through the region while making their way to China. In 1291 the Franciscan John of Monte Corvino, who later became the first archbishop of Peking and patriarch of the Orient, stopped at certain points in Southeast Asia. Ordoric de Portu Naone, also on his way to China, stopped at Sumatra, Java, and Borneo around 1323. He visited Aceh and wrote of a kingdom south of Aceh called Sumatra. He was the first author to use the name Sumatra, although he wrote “Sumoltra.” Later in that century Bishop John del Marignolli traveled there and recorded that the number of Christian converts was very small, indicating the limits of Ordoric’s influence.

It was not until the coming of the Portuguese and the Spaniards that one finds any significant missionary activity in Southeast Asia. Francis Xavier (1506–1552), one of the original seven Jesuits who along with Ignatius of Loyola founded the Society of Jesus, was the best-known evangelist, traveling in the region, including time in Malacca, Amboina, Ternate, and Moro between 1545 and 1547. For the most part the Portuguese were not interested in converting the local population.

THE FRIARS IN THE PHILIPPINES

As one observer has noted, “The Spanish history of the Philippines begins and ends with the friar.”

Friars are members of the Mendicant Orders, which include the Augustinians who arrived in Southeast Asia with Miguel Legazpi in 1565, the Franciscans who came in 1577, the Jesuits who came in 1581, and the Dominicans who came in 1587. They were not known as missionaries, a modern term, but instead as *doctrineros*, or teachers.

The Spanish mission to the Philippines was a response to the friars’ experiences in the Spanish Americas. In Mexico, Peru, and the Caribbean the friars had been pioneers in Spanish conquest but were pushed out by later arrivals. But because few other Spaniards were willing to make the journey, first across the Atlantic and then the Pacific, to this remote outpost of the Spanish Empire, the Philippines represented an opportunity for the friars to regain the position and power they had lost in the New World.

As the Philippines lacked a lingua franca, or language common throughout the archipelago, concessions were made to the Mendicant Orders. The Spanish Crown allowed each order to take a portion of the archipelago for its mission, with all of the orders establishing houses in Manila and

parishes in the Tagalog provinces surrounding Manila. As the friars were the only Spaniards who could communicate with much of the local population, they gained significant power with both the Spanish authorities and Filipinos.

That the Philippines is now the only Christian nation in Asia points to the effectiveness of the friars’ work. But it also suggests the accommodations that Filipinos made with this invasive religion. In what John Leddy Phelan calls the Philippinization of Catholicism, Filipinos eclectically chose those aspects of this new faith that they would embrace. Although the church has been in the Philippines for more than four centuries, its historical role has been as an alien institution that extracted tribute in return for performing rituals. Financially supported by the Crown through the Patronato Real, or royal patronage, the friars served as agents of the Crown. And under the principle of *limpieza de sangre*, or purity of blood, they were quite unwilling to allow Filipinos to share in this privilege or to attain priesthood. Nor would they accommodate Filipino traditions, particularly the role of women as religious leaders such as priests, shamans, and healers.

—Damon Woods

Although Catholic priests are recorded as having spent time in Vietnam during the sixteenth century as the Portuguese attempted to set up trading posts, it was not until 1615 that significant missionary work, under the Jesuits, began to take place. Beginning in southern Vietnam, within a decade they set up a mission in the north. The most significant name associated with the beginnings of Catholicism in Vietnam is Alexandre de Rhodes, a French Jesuit who went to Vietnam only after Japan refused to allow in any more Christian missionaries. He is credited with developing *quoc ngu*, a Romanized system of writing Vietnamese, that made written Vietnamese accessible not only to European missionaries but also to the Vietnamese people. Unlike the Spaniards elsewhere, the Jesuits in Vietnam argued for a strong indigenous clergy and by 1650 had established a seminary of 100 students. Despite this success, the Catholic

mission to Vietnam faced two obstacles: (1) political hostility and persecution from various Vietnamese regimes and (2) a modest record of conversions, largely limited to the south and in the coastal regions.

Although the Protestant nations of the Netherlands and England came to Southeast Asia before the end of the sixteenth century, like the Portuguese their goal was to trade, not to convert the local population. Not until the end of the eighteenth century did the modern missionary movement begin, marking the spread of Christianity in Asia. The first Protestant missionary was Adoniram Judson, an American, who left for Burma in 1812. He settled in Rangoon, where he learned Burmese in order to preach and translate the Bible. His first convert came only after seven years of work. Later in his ministry Judson turned to the Karen, an ethnic minority in Burma. A significant number were

converted, and the Karen remain a predominantly Christian group.

In what is now known as Indonesia, Dutch East India Company merchants were fearful of offending the local Muslim population, so they discouraged missionary work there. Dutch officials even impounded a Javanese translation of the New Testament to prevent its distribution. This obstacle forced missionary societies to refocus their attention on ethnic minorities who worshipped animistic spirits in the fringe areas of the Moluccas, Timor, and the southwestern islands of Minahasa (northeastern peninsula of Sulawesi). The Rhenish Society, a German mission group, sent missionaries to southeastern Borneo in the first half of the nineteenth century; few converts resulted. Driven out in 1859 by an uprising, they move to Sumatra and worked among the Bataks. By the end of the nineteenth century one-third of the Bataks were Christian.

The twentieth-century U.S. taking of the Philippines was justified in part by the need for missionary work, that is, to convert Filipinos, Catholics, and animists alike to the Protestant faith. As President William McKinley told a group of religious leaders, he was convinced “that there was nothing left for us to do but to take them all, and educate the Filipinos, and uplift and civilize and Christianize them, and by God’s grace do the very best we could by them, as our fellow-men for whom Christ died.” Under U.S. domination, Christian teachings shifted from a traditional emphasis on the salvation of the individual to a Social Gospel that stressed social change through improvements in education, health care, and other advances.

Overall, Protestant missionary work in the countries of Southeast Asia, with the exception of Thailand, was limited by the exigencies of colonial rule. Colonial authorities were not sympathetic to meddlesome missionaries whose teachings on mercy and justice, they believed, could breed problems. Decolonialism and the independence movements that emerged following World War II, combined with the growth of the missionary movement in the United States, spurred rapid advances in the spread of Christianity throughout Southeast Asia. However, much of Southeast Asia remains non-Christian today.

—Damon Woods

Bibliography

- Anderson, Gerald H., ed. *Studies in Philippine Church History*. Ithaca, NY: Cornell University Press, 1969.
- Clymer, Kenton J. *Protestant Missionaries in the Philippines, 1898–1916: An Inquiry into the American Colonial Mentality*. Chicago: University of Illinois Press, 1986.
- Phelan, John Leddy. *Hispanization of the Philippines: Spanish Aims and Filipino Responses, 1565–1700*. Madison: University of Wisconsin Press, 1959.
- Reid, Anthony. *Southeast Asia in the Age of Commerce, 1450–1680*. Vol. 2. New Haven, CT: Yale University Press, 1993.

Catholic Mysticism and Utopians

Late medieval and early modern Catholicism was marked by a wide array of contributions and responses to the intellectual, religious, and cultural shifts of the period. Two of these shifts, often associated with the humanist movement and the Renaissance, were a new kind of exaltation of the individual as well as a new spirit of confidence in human abilities to create well-ordered and just societies. Mysticism and the conception of utopian communities were two very different, yet not unrelated, expressions of these shifts, the former focused very much on the spiritual potential of the individual apart from the world and other human beings, and the latter emphasizing the moral, political, and spiritual potential of human societies in the world.

Mysticism, a religious experience of direct, intense contact and communication between the individual soul and the divine, is a phenomenon familiar to many religious traditions. In late medieval and early modern Catholicism, although it had a great heritage in medieval and early Christianity, mysticism became quite prominent with the examples of Teresa of Avila and John of the Cross in Spain; Catherine of Genoa, Maria Maddelena de’Pazzi, and Giuseppe of Copertino in Italy; and several others. Characteristic of Catholic mysticism is the experience of intense, ecstatic union between God and the individual soul. Teresa of Avila and John of the Cross were not embarrassed to describe the experience in explicitly erotic terms. The idea that the body, the passions, and the senses were

mysteriously yet fully involved in an intimately spiritual experience was an idea cherished by some Catholic thinkers in this period, especially after the onset of the Protestant Reformation, by which dualistic conceptions of the flesh versus the spirit gained renewed traction.

Mystical experiences were often viewed with ambivalence by Church officials who were concerned that they seemed to bypass the mediating role of the sacraments and Church authority. Throughout Europe laypersons (both men and women) were attracted to mysticism, whether exposed to it through personal contact with monastic orders such as the Carthusians and Carmelites or through lay and religious practitioners of the *devotio moderna* that originated in the Netherlands. Sometimes lay interest led to confrontation with the authorities. There were not a few men and women, lay and religious, tried by the Inquisition in Spain, for example, to test the authenticity of mystical claims. The Church honored individuals such as Teresa, who was canonized a saint, but stressed that mystical experiences of God were exceptional and best left in the hands of professionals such as Teresa, who made lifelong commitments to a life of contemplative prayer and who developed methodological approaches to mysticism that could be pursued in the controlled, communal setting of the monastery. Despite these restrictions and precautions, however, Catholic mysticism stood out as a profound statement regarding the spiritual, indeed divine, potential of the individual human person.

Very different from mysticism, although not unrelated in its confidence in human potential and ultimate focus on spiritual well-being, were late medieval and early modern Catholic utopian movements. The term “utopian” is a somewhat catch-all scholarly category for what are best understood as very diverse movements—intellectual, social, and political—ranging from humanistic imaginings of the best possible human society to the formation of religiously based communities. These were inclusive of laymen and laywomen, oriented toward achieving social justice and peace in the world despite the perennial problems of sin and evil.

The word “utopia” literally means “not a place” in Greek and was coined in 1516 by the English Catholic humanist Thomas More for the



Detail from St. Teresa of Avila before the Cross, by Guido Cagnacci, seventeenth century. Teresa of Avila was a Spanish mystic and saint who reformed the Carmelite order during the mid-sixteenth century. She is depicted in tears and wearing a crown of thorns. In her hand she holds a crucifix with a figure of Christ and a Madonna lily (Lilium candidum), the symbol of chastity and innocence. (Jupiterimages)

title of a philosophical work that imagined a best-possible human society. Utopia—likely set in the Americas—followed no recognizable religion, and its property was largely held in common. Men and women lived peacefully together and were oriented toward happiness, which was identified with a life of virtue. Utopia was not perfect, however. It faced problems such as the need for coercion to maintain social order. It is arguable that More intended the text as an ironic commentary on the politically and socially optimistic mood of many contemporaries and was subtly expressing an Augustinian vision of a world fraught with corruption and sin and in need of the Church’s guidance and of the rule of law.

Beyond imaginative projects such as More’s there were vibrant, practical movements of Catholics that were akin to monasticism in their commitment to prayer, voluntary poverty, and

► THE BRETHREN OF THE COMMON LIFE

In the late fourteenth century a Dutch layman from a family of cloth merchants was silenced by Church authorities for preaching against clerical abuses and against what he believed was the externally oriented formalistic religious culture of his day. Gerard Groote (1340–1384) was the founder of the Brethren of the Common Life, a movement of laymen and laywomen who lived in a community devoted to work, prayer, and service to others and who held property in common and remained celibate. Unlike monks and nuns, they took no vows and saw their radical lifestyle as being in the world, oriented as much toward social transformation as toward prayer and contemplation.

Groote did not live to see the communities he founded grow into a widespread movement that greatly affected Catholic piety and aspirations for Church reform in the fifteenth and early sixteenth centuries. Concentrated in the Netherlands but spreading throughout central Europe, the Brethren initially focused their work on cottage industries such as manuscript copying and binding and cloth weaving. Later they devoted labor to educational

enterprises, founding student dormitories and local schools where the new humanist learning and the prayer methods of the *devotio moderna* were cultivated. Erasmus of Rotterdam was a student of the Brethren, as were Thomas à Kempis, Gabriel Biel, and Pope Adrian VI.

The Brethren were devoted to lay piety and social transformation through prayer and work in a manner that boldly combined utopian aspirations for human society with aspirations for highly individual and even mystical connections with God. Historians have for a long time linked their predilection for lay piety, individualized prayer, and humanism to the religious culture that birthed the Protestant Reformation, but their relationship to Catholic reform movements has also been explored. Many of their schools closed down during the religious conflicts of the sixteenth century, but some lasted through the late eighteenth century, and their influence also extended to many diocesan seminaries, Counter-Reformation teaching orders, and even the foundation of some European universities.

—Bronwen Catherine McShea

a communal lifestyle but that were self-consciously in the world. They included laymen and laywomen and were oriented toward the reform of society through charitable service, helping the poor, the elderly, and the sick. The Brethren and Sisters of the Common Life were the most well known of these movements. Another movement centered around the Oratory of Divine Love, founded in 1497 in Genoa by Ettore Vernazza, a layman who had been inspired to a life both of regular, frequent prayer and active service to the sick by the mystic Catherine of Genoa.

Utopian impulses were also strongly present among many Catholic missionaries in colonial America. Apocalyptic visions of establishing the Kingdom of God on earth reflected both a spirit of confidence in the possibilities of the age as well as Counter-Reformation Catholic desires to set up a new purified Church—some missionaries even used the phrase “New Jerusalem”—in pagan lands untouched by European

Christendom’s religious, political, and social divisions. The most impressive enterprise informed by these ideas was the network of Jesuit missions among the Guaraní Indians of Paraguay, southern Brazil, Uruguay, and Argentina. Throughout the seventeenth and early eighteenth centuries the Society of Jesus oversaw the region, with the permission of the Spanish Crown, in isolation from the colonial *encomienda* system. They encouraged the nomadic Guaraní to settle into communities, or reductions, that sometimes numbered more than 20,000. The reductions were modeled on the early Christian communities described in the Gospels, holding land in common and distributing equally among themselves the goods they produced. Their economic practices—which included a short workday with leisure time devoted to cultural activities and prayer—were so successful that thriving industries developed based on the reductions. This success proved to be the downfall of the enterprise, as Spanish and Portuguese authorities

concluded that the Jesuits were gaining too much power and economic independence in the region and posed a threat to their colonial rule. The missions closed in 1767 when the Jesuits were expelled from the region.

The South American reductions may seem far removed from mystics such as John of the Cross or Catherine of Genoa. However, relationships between Catholic mysticism and utopian enterprises could be very real and personal. The founder of the Jesuits, Ignatius of Loyola, was deeply influenced by mystical piety, and he cultivated methods of prayer that were at once based on the capacity of individual souls to attain to the heights of spiritual experience as well as to engage in active, effective lives of service to others. The order he founded exhibited tremendous confidence in the possibilities of social and even political efforts within communities while also exhibiting a degree of confidence in the individual that had few precedents in Catholic history. It is perhaps a peculiar feature of early modern Catholicism and of the larger historical moment in which it existed that such intensely individual as well as communitarian enterprises could develop alongside each other with equal prominence to influence the life of the Church.

—Bronwen Catherine McShea

Bibliography

- Bireley, Robert. *The Refashioning of Catholicism, 1450–1700: A Reassessment of the Counter Reformation*. Washington, DC: Catholic University of America Press, 1999.
- Logan, George M., and Robert M. Adams, eds. *Thomas More: Utopia*. Cambridge: Cambridge University Press, 1989.
- MacCulloch, Diarmaid. *The Reformation: A History*. New York: Viking, 2003.
- Olin, John C. *The Catholic Reformation: Savonarola to Ignatius Loyola*. New York: Fordham University Press, 1992.
- Reiter, Frederick J. *They Built Utopia: The Jesuit Missions in Paraguay, 1610–1768*. Potomac, MD: Scripta Humanistica, 1995.

Protest and Reform

The Protestant Reformation began as the attempt by individual theologians and pastors to correct various abuses within the Roman

Catholic Church, but what began as concrete expressions of concern and criticism gradually coalesced into the basis for the creation of new ecclesiastical and educational institutions. Older scholarship emphasized the Reformation as the dawning of a new era after the dark night of the European Middle Ages. But more recent research has shown that in addition to certain kinds of doctrinal and ecclesiastical discontinuity, there are important theological, educational, and social continuities between the Middle Ages and the early modern era.

On April 18, 1521, the Wittenberg university professor and former Augustinian monk Martin Luther (1483–1546) appeared for the second time before Holy Roman Emperor Charles V at the imperial Diet of Worms. Luther had publicly challenged a number of practices of the Roman Catholic Church, including alleged abuses of indulgences and the tyranny of the papacy. Having been excommunicated by the pope, Luther was asked by imperial representatives to defend the books he had written and to recant anything he was unwilling to defend. Luther's refusal to recant in the face of political and ecclesiastical pressure encouraged others to voice their own criticisms of the Church.

Luther himself continued to be a prominent voice of what was self-described as the “evangelical” movement, because it emphasized the “good news” (*evangelion*) of the Christian faith. As Luther and others continued to develop complaints against the state of the Roman Catholic Church, they were aided by various political figures who acted to protect them from retaliation. In 1530 Charles V called another diet, this time in the city of Augsburg, so that Luther and other theologians as well as like-minded German princes and city officials could further explain and defend their views. Philip Melancthon (1497–1560), a friend and fellow professor with Luther in Wittenberg, penned the Augsburg Confession (*Confessio Augustana*) to be presented to the emperor. Those who defended their views at the Diet of Augsburg are those most properly called Protestant (from the Latin *protestari*, “to publicly declare”), but the term “Protestant Reformation” has often been used to include a number of other groups critical of the Roman Catholic Church.

➤ JOHN CALVIN—*INSTITUTES OF THE CHRISTIAN RELIGION*

The first edition of John Calvin's *Institutes of the Christian Religion* was published in 1536 as the reformer sought to articulate basic instruction in the faith for the people of France. The populace was, at least by Calvin's standards, shockingly ill-educated in matters of Christian doctrine. Over time what began as a basic doctrinal manual eventually became a larger project, focused not only on providing the elements of the faith but also on comprehensively articulating a systematic statement of Christian teaching and answering criticisms of Calvin's theology by various opponents. The *Institutes* went through a number of revisions in the Latin and French editions appearing between 1536 and 1560. But Calvin's basic theological method remained the same. While commenting on the biblical text, in order to keep his exegesis "short and easy" (*brevitas et facilitas*) Calvin would extract long doctrinal discussions or excurses from his commentaries and place them into a different work, his *Institutes*, whose ordering was inspired by the Pauline model provided by Philip Melancthon's *Loci communes* (1521). The *Institutes* was an organized collection of doctrinal discussions drawn out of his exegesis and therefore represents one aspect of Calvin's theological project, a genre distinct from his biblical commentaries and sermons.

—Jordon J. Ballor

Along with the Lutherans who held to the Augsburg Confession, other figures were agitating for reform in the Church. Huldrych Zwingli (1484–1531) and after him Heinrich Bullinger (1504–1575) in the Swiss city of Zurich, along with other theologians and pastors including Johannes Oecolampadius (1482–1531) in Basel, Martin Bucer (1491–1551) in Strasbourg, and John Calvin (1509–1564) in Geneva, led the other branch of the so-called magisterial Reformation. The Reformed and the Lutherans are called magisterial because of the essential role that the civil magistrates and other political authorities played in supporting their causes. The Reformed also had a generally positive view of the role of the civil magistrate in promoting

godly behavior, and they emphasized their doctrinal solidarity with what they considered the best of the Church Fathers and the medieval scholastics. Although the Reformed shared with the Lutherans many criticisms of the theology and practices of contemporaneous Roman Catholics, they disagreed over a number of issues including the Lord's Supper.

A third group of reformers are sometimes called radical because of their emphasis on returning to the root (*radix*) of the Christian faith, the early Church. Whereas the magisterial reformers advocated various kinds of partnerships between the powers of the church and the state, the radical reformers tended to view the state with greater suspicion and denied that Christians could legitimately act as political authorities. These radical reformers are also sometimes called Anabaptists because they taught that the practice of infant baptism, largely accepted by Roman Catholics, Lutherans, and Reformed, was illegitimate, arguing instead that baptism of professing adults was the only valid form of baptism. While the radical reformation comprised groups with a great diversity of theological expression and practice, the Schleithem Articles of 1527 serves as a representative statement of Anabaptist tenets.

While many who advocated reform of the Roman Catholic Church were either excommunicated or voluntarily withdrew from papal authority, a number of those who remained within the Church also worked toward reforms of various kinds. Some of these changes were made in direct response to the Protestant Reformation, but others addressed some of the same issues against which Luther and others had complained. This movement is sometimes termed the Catholic Reformation or the Counter-Reformation. The Council of Trent (1545–1563), for instance, was convened both in order to respond to Protestant doctrines and to correct abuses within the Roman Catholic Church. The Society of Jesus (Jesuits) is a Catholic religious order founded by Ignatius of Loyola (1491–1556) and confirmed in 1540. Loyola initially focused on the reform of the self but through the Jesuit order increasingly emphasized wider institutional reform and the expansion of papal influence.

The reformation in England was undertaken at the instigation of King Henry VIII and involved the formation in 1534 of an English church separated from the authority of the Roman pontiff. The Church of England, or Anglican Church, was instituted under the Thirty-Nine Articles of Religion in 1563, and over the next two centuries myriad figures would work for continued reform in the British Isles, whether from within (conformist) or outside of (nonconformist) the institutional church. These so-called Puritans represented a diversity of perspectives on theological and social matters but generally supported efforts to deepen personal piety and renew institutional worship. These kinds of concerns were later taken up by John Wesley (1703–1791) and were institutionalized in Wesleyan as well as Presbyterian churches.

On the European continent there were also major pietistic movements associated both with the magisterial as well as the Anabaptist reformations. The Dutch Further Reformation (Nadere Reformatie) stands as an example of a post-Reformation movement that shared with English Puritanism a significant emphasis on personal and social renewal.

The various reformations of the sixteenth and seventeenth centuries would have a worldwide impact, especially through the work of evangelism and global missions. Protestant missionaries often accompanied the expansion of European trade and colonization into the Atlantic world and Asia.

—Jordan J. Ballor

Bibliography

- Bainton, Roland H. *The Reformation of the Sixteenth Century*. Boston: Beacon, 1985.
- Hillerbrand, Hans J. *The Division of Christendom: Christianity in the Sixteenth Century*. Louisville, KY: Westminster John Knox, 2007.
- Holder, R. Ward. *Crisis and Renewal: The Era of the Reformations*. Louisville, KY: Westminster John Knox, 2009.
- Muller, Richard A. *The Unaccommodated Calvin: Studies in the Foundation of a Theological Tradition*. New York: Oxford University Press, 2000.
- Oberman, Heiko A. *The Reformation: Roots & Ramifications*. Grand Rapids, MI: Eerdmans, 1994.

Steinmetz, David C. *Luther in Context*. Grand Rapids, MI: Baker Academic, 2002.

The Catholic Response and the Rise of New Orders

The period of revival of the Catholic Church and its reaction to the rise of Protestantism is known as the Catholic Reformation. The Catholic Church had been battling schism, oppression, and resistance long before the Protestant Reformation. The shock of the Protestant movement spurred the Church into adopting reform measures of its own, including the reorganization of pastoral and educational work and the cleansing of the administrative infrastructure.

The Catholic Church was in a state of decline during the sixteenth century. Many bishops held a plurality of posts and were an inconsistent presence in their dioceses. There was a definite lack of priests and monks as well, and as a result many parishioners became distant from the Church. Protestants took advantage of the situation and preached the reformed religion. New orders emerged within Catholicism led by men determined to curtail the spread of heresy. These orders attempted to return the Church to its former status.

The Capuchin and Theatine orders stressed mendicant values including humility, charity, poverty, and pastoral care, but these revived principles only exacerbated the moral decay of the Church. The Capuchins appeared around 1520 and were an order of friars who were recognized as the only permanent offshoot of the Franciscans. They made examples of themselves among the people by virtue of their austere and pious lifestyle and won many converts from Protestantism to Catholicism. The Theatine order was founded in 1524. The Theatines also lived a life of extreme poverty and strict rules. They worked assiduously to restore the clergy to a virtuous life and to reestablish the Church as a moral institution.

The Jesuits were the most influential of the Catholic orders that developed during the Counter-Reformation and emerged in part as a reaction to both Protestantism and the Inquisition. Orthodox Spain had launched the Inquisition

THE SPANISH INQUISITION

The Spanish Inquisition was launched in Spain on November 1, 1478, during the reign of Fernando and Isabel, particularly against the pseudoconverts from Judaism and Mohammedanism. Under Thomas Torquemada (1420–1498), the Inquisition was at its bloodiest. Once Cardinal Ximenez assumed the position of inquisitor-general, the Inquisition focused more on morality and the reform of the Church. Historians continue to debate whether the Inquisition was the reason why Spain did not endure civil wars like those in France and Germany.

In its efforts to eradicate heresy, the Inquisition developed from a purely religious act to full-fledged spectacles involving burning, drowning, and torturing suspects in an auto-de-fé, or act of faith. Censorship came down heavily on the arts. For example, artists were instructed on how many feathers should be on an angel's wing in order to remain within the bounds of orthodoxy.

The Inquisition also swept through Rome and Portugal. The Inquisitions of the early modern era were more violent and centralized than those of the medieval period. Orthodox Catholics were also subject to the Inquisition, and St. Ignatius of Loyola, St. Teresa of Avila, and Galileo Galilei were among those investigated for heresy. After 1700 the Inquisition began to decline, and the institution was finally abolished in the nineteenth century.

—Breanna S. Griego

in 1478 in an attempt to eradicate any and all forms of heresy, but Ignatius Loyola did not want the revival of Catholicism to be cast in blood. He founded the Jesuit order to espouse strict organization and nonviolent piety based on unquestioned obedience to the pope. The Jesuits worked directly for the pope and were officially recognized in 1540. They gained access to powerful rulers, stood as devout models for political leaders, exacted educational reform, and led missionary activity. The order was similar to Calvinism because both stressed physical and spiritual discipline. However, many Jesuits were tortured and persecuted throughout Protestant Europe and were attacked for their persuasive methods of conversion.

Erasmian humanism encouraged tolerant attitudes and produced irresolute reactions to heretical movements in western Europe. The Catholic Church had to resist the incursion of reforming attitudes from within the Church as well. Successive popes focused their efforts on strengthening the authority of the Church, but when Charles V and his mutinous army sacked Rome in 1527, Europe believed that divine punishment had been cast upon the papacy.

Recognizing the need to overcome the divisive schism between Catholicism and Protestantism, Paul III convened the Colloquy of Regensburg in 1541. Luther sent Melancthon, Calvin was present, and even Charles V advocated unity. The pope, in light of the success of the Spanish Inquisition, instituted the Inquisition in Rome in 1542 in an attempt to root out heresy. But pressure continued to grow for a general council to try to reconcile the division where the pope had failed. The Council of Trent was called in 1542, although it did not officially begin until 1544. The pope feared the power of the council, which revived memories of the medieval conciliar movement that had threatened to undermine papal authority. However, the infiltration of Protestantism into Italy and the failure of previous meetings weakened his position. The council set out to clarify dogma and to institute reform of the Church. Although Protestants appeared for one session of the council, it was largely a Catholic enterprise. The meeting reaffirmed justification by faith through God's grace, acknowledged the traditional sacraments, and banned pluralism in bishoprics. The council was convened several times, and the final session was called during 1562–1563 just as France broke into violent civil war. The Council of Trent gave Catholicism a clear and definite theology and produced greater conviction among its adherents.

The Counter-Reformation reinvigorated the vitality of the Catholic Church against the growing influence of Protestantism. Although many Catholics united behind the cohesive dogma and reorganized administration of the Church, Protestantism had become a powerful force, and the Counter-Reformation struggled to hinder its progress.

—Breanna S. Griego

Bibliography

- Jones, Martin D. W., ed. *The Counter Reformation: Religion and Society in Early Modern Europe*. Cambridge: Cambridge University Press, 1995.
- Koenigsberger, H. G., George L. Mosse, and G. Q. Bowler. *Europe in the Sixteenth Century*, 2nd ed. New York: Longman, 1990.
- Loyola, St. Ignatius. *Personal Writings: Reminiscences, Spiritual Diary, Select Letters, including the Text of The Spiritual Exercises*. Translated with an introduction and notes by Joseph A. Muniz and Philip Endean. London: Penguin, 1996.
- Mullett, Michael A. *The Catholic Reformation*. London: Routledge, 1999.

Global Cult of Mary

Mary (or Maryam in the Islamic tradition) was the mother of Jesus. In the early modern world her cult expanded to global proportions. According to the New Testament and the Quran, she conceived but remained a virgin. Marian devotion and the expansion of the cult were facilitated by her increasingly enigmatic characteristics. Noteworthy Marian apparitions occurred with the greatest frequency and range in the Americas, the most famous being that of the Virgin of Guadalupe near Mexico City (1531), but she was also believed to have appeared in Prague (1570), in Spain (Córdoba, ca. 1600), in France (Our Lady of Laus, 1664, and Marie Lenormand, 1769), and in Velankanni, India (after ca. 1580). In 1672 the Jesuit Wilhelm Gumpenberg published the *Atlas Marianus*, an illustrated global list of over 1,200 miraculous images of the Madonna.

In Europe, medieval Marian piety endured in early modern Catholicism, and common devotional practices such as the rosary were reaffirmed by the Council of Trent (1545–1563). New devotions also appeared, such as that of the Immaculate Heart of Mary, established in 1648 by Jean Eudes (1601–1680). The Feast of the Immaculate Conception was established in 1483, but whether Mary had herself been conceived without original sin would be debated for another 350 years. Dominicans in Bern (1507–1509), for example, faked an apparition of Mary who announced that she had been indeed conceived in sin, while the seventeenth-century diarist Josephe Mugaburu of Lima reported that an angry congregation had hounded a Dominican



Left: Nuestra Señora del Mayor Dolor, Chapel of the Hospital, Christo de la Buena Muerte (Christ of the Good Death), Algeciras. Note Mary's sad but accusing gaze at the onlooker together with her hands pointing to her dead son, as if to say "Look what you have done. This is your fault!" Right: Etching from the Historical Relation of the Kingdom of Chile by Alonso de Ovalle, SJ (Rome, 1696). La Virgen de las Nieves (the Virgin of Snows) is portrayed routing the Araucanian Indians outside the city of Concepción (unfortunately, Ovalle does not give a date for the victory). (Andrew Redden/Archivo de la Merced de Santiago)

from the pulpit for refusing to preach on the subject. Philip III of Spain (1598–1621), however, was only accepted as king by the councils representing the kingdoms of Spain on condition that he defend the doctrine of the Immaculate Conception with his life. Throughout this period, the cult of Mary was assisted by Renaissance and Baroque composers setting to music a large repertoire of Marian prayers.

The Orthodox tradition developed a rich Marian liturgy, but she plays a notably lesser role in its theology of salvation. Despite this, the figure of Mary as Empress, Queen, and Mother of God was always prominent in Orthodox iconography and formed the basis of a widespread and ancient devotion. Similarly long-standing, the celebrated hymn "Praise of Mary" is believed to have been translated through three consecutive traditions, from Syriac or Greek to Coptic, then Arabic, and finally its present Ethiopian text.

Although the first Protestant reformers accepted the virginity of Mary, their successors broke with the Catholic (and Islamic) viewpoint by taking biblical references to brothers of Jesus as proof that Mary and Joseph later had sons, which signified that she did not remain a virgin.

Distinctively Protestant, however, was the rejection of Mary as an intercessor between mankind and God. Despite the extensive destruction of Marian shrines during the Reformation, “Mary” still became an increasingly popular name for Protestant girls. Even the Protestant Elizabeth I of England was sometimes portrayed as a second Virgin Mary.

In art, the medieval Mary, covered with her son’s blood and emotionally overcome by his death, became a more stoical figure suffering only silently, perhaps reflecting a return to the aesthetics of the iconography of the Eastern and the Early Church. That this tradition continued in the early modern Western Church is evidenced by the ubiquity of images like the Pietà (made so famous by Michelangelo’s sculpture of the same name). The numerous representations of the Virgin of Dolores (La Virgen de Dolores, or “The Virgin of Pain and Suffering”) in Spain and the Americas often retained a tear that glistened on a face wrapped in grief to better provoke within the congregation a feeling of guilt and repentance for the death of her son. In Algéciras in the hospital chapel of Christ of the Good Death, a grieving Mary (called Nuestra Señora del Mayor Dolor, “Our Lady of the Greatest Pain”) looks directly at the devotee with her hands open, pointing at her dead son on her lap, with an accusatory expression. Madonnas portrayed with black skin were common, for reasons uncertain and perhaps unintended, although one contemporary explained it as a result of Mary’s intense grief. The Black Madonna of Częstochowa, an icon supposedly painted by St. Luke, was thought to have saved a monastery from a Swedish invasion and in 1656 was crowned by King Jan Kazimierz as queen and protector of Poland. Baroque columns topped with a statue of Mary, known as Marian columns, were popular especially in Italy and Habsburg lands and were sometimes built in thanks for deliverance from invasion or plague.

In Spain, Jewish converts to Christianity stressed the Jewish origins of Mary, and her blood purity was discussed. A legend from Seville, at least as old as 1494, explains that a statue of the Virgin gave victory to the thirteenth-century Castilian king Fernando III in his wars against the Muslims. During the reconquest,

Marian devotion centered around the recovery or finding of images in once Muslim-controlled territory, and many mosques were converted into churches dedicated to Mary. Nevertheless, some continued to attract Muslims, perhaps because of the resonance of Maryam in Islam.

The Virgin traveled to the New World with Christopher Columbus and his sailors as Stella Maris, or “Star of the Sea”; at least this was the particular Marian devotion that these explorers carried with them. Indeed, one of the three ships that crossed the Atlantic on Columbus’s first voyage was called the *Santa María*. Once there she reprised her role as conqueror and became *La Conquistadora*. According to tradition, her intervention facilitated the Spanish conquest of Tenochtitlan (1521), saved the Spaniards from losing control of the newly conquered Cuzco (1536), and as the “Virgin of the Snows” (la Virgen de las Nieves) intervened in a battle in Concepción, Chile, saving the Spanish from defeat and routing the Araucanian Indians.

In Cuba and Brazil, the Yoruba (present-day Nigeria) goddess Yemaja (Iemanjá) merged with the Christian Virgin. A devotion to Our Lady of Częstochowa (along with her image in this particular form) was imported to Haiti and would come to represent the voodoo spirit Erzulie. Similar syncretisms occurred in colonial Mexico and Peru, where the earth goddesses Coatlicue and Pachamama merged into the figure of Mary. In Alto-Peru (Bolivia), the Virgin became embedded in the Silver Mountain of Potosí as she and the earth-goddess became one. In the Americas, official attitudes to such syncretisms were ambivalent throughout the colonial period and very much depended on time, place and circumstance. Some missionaries, such as the first Franciscans in New Spain (Mexico), actively encouraged these associations. Similarly, in Potosí painted representations of the Virgin as the Silver Mountain were not uncommon, indicating that this devotion was relatively widespread. If we can talk in general terms, Marian cults were usually encouraged, despite ever-present worries among certain sectors of the Church about worship of indigenous or African gods in disguised form.

At Velankanni on the Bay of Bengal, three apparitions of Mary—one involved in rescuing

Portuguese sailors from a cyclone—led to the erection of a church there. The year 1598 saw the first celebration of Mary's role as protectress of Japan. In the seventeenth century, the persecuted and isolated Christians of Japan developed their own tradition of Mary, who was said to have grown up in the Philippines, where the king fell in love with her. Unfortunately for him, an unseasonal snowfall demonstrated the divinity of her virginity. Mary was taken up to heaven, and the king died of a broken heart. They then met and married in heaven. The snowfall comes from a thirteenth-century Roman legend, the setting reflects the Philippines' importance to the East Asian missions, and Mary's becoming a queen of the Philippines in heaven suggests an attempt to recognize her royal divinity without recourse to the more abstract notion of her as Queen of the Angels.

In both China and Japan, Mary became identified with Guanyin (Kannon in Japan), herself a synthesis of the Indian male bodhisattva Avalokitesvara and an East Asian goddess of mercy. In Japan, small cross marks turned Kannon statues into discrete objects of Mary devotion for persecuted believers. The Daoist-Buddhist pantheon guide *Shenxian Tongjian* (published in 1701) includes a Mary being taken up into the ninth (highest) level of the Buddhist Pure Land. Porcelain Guanyins were exported via the Philippines to Latin America as Sancta Marias.

Notwithstanding belief in Mary's participation in wars of conquest, the Marian cult gave solace to millions of devotees worldwide. Many believers took heart from their certainty that the Queen of Heaven interceded for sinners at the Last Judgment. From a more secular perspective, however, Mary can also be seen as a symbol of the cultural globalization that occurred in the context of the expanding empires, trade routes, and missionary networks of the early modern world.

—Andrew Redden and Luke Clossey

Bibliography

- Bailey, Gavin A. *Art on the Jesuit Missions in Asia and Latin America, 1542–1773*. Toronto: University of Toronto Press, 1999.
- Fornberg, Tord. "Why the Queen of Heaven Married the King of the Philippines: On Kirishitan Mariology." *Swedish Missiological Themes* 87 (1999): 21–28.

Hall, Linda B. *Mary, Mother and Warrior: The Virgin in Spain and the Americas*. Austin: University of Texas Press, 2004.

Pelikan, Jaroslav. *Mary through the Centuries: Her Place in the History of Culture*. New Haven, CT: Yale University Press, 1998.

The Global Cult of Jesus

The historical Jesus (d. ca. 33 CE) was a Jewish religious teacher. Christians recognize him as Jesus Christ, the only incarnation of God; Muslims know him as Isa ibn Maryam (Jesus son of Mary), the last prophet before Muhammad. Because of Jesus's importance to both these missionary religions, he was the most universally recognized figure in the early modern world. Their contacts with non-Western cultures led to the creation of syncretic Jesus figures across the globe.

In Europe, the Protestant reformers accepted medieval Latin Christology largely intact, and they depicted Christ as a single person in whom both a divine and human nature were inseparably united. Perhaps the most important point of dispute was the nature of the mass as re-creation of Christ's sacrifice, which Protestants felt was insulting to Christ, as if his crucifixion were insufficient to atone for all sin. In Luther's conception the entire Bible was about Christ, and Jesus's teachings and miracles were insignificant in comparison to his sacrifice and mission. Popular illustrations of the reformers' criticisms contrasted a poor Jesus crowned with thorns to a wealthy pope crowned with the triple tiara.

Jesus was equally important in parts of Europe less influenced by the Reformation. The Council of Trent (1545–1563) encouraged Catholics to continue the remembrance of Christ's passion and the mass ritual. In Jewish circles, the medieval gospel parody *Toledoth Yeshu* remained popular. In Spain in 1595, the discovery of lead disks revealed Arabic inscriptions that appeared to be a first-century record of the Church. These writings offered a syncretic message for Catholics and Muslims, honoring Jesus with a variation of the Islamic *shahadah* creed: "there is no god but Allah and Jesus is the spirit of Allah." The Arabic script was suspect, however, and the Church condemned the disks in 1682.



This eighteenth-century sculpture, Nino Jesus (Christ Child), from Puerto Rico, exemplifies the devotion to the Child Jesus. Long important in Spain, the cult expanded during the early-modern period via the Spanish empire into Mexico and the Philippines. The unpretentious execution of this object suggests the popularity of the Child Jesus, who was often associated with protective miracles. (Smithsonian American Art Museum, Washington, DC/Art Resource, NY)

Islamic teaching had venerated Jesus as a central spiritual figure since its inception, which has encouraged some Christians to view Islam as a heretical version of Christianity. The Jesus of the Quran is committed to “cleansing” false Christian understandings of his divinity (3:55), but as Islam developed, Jesus appears to take up a great variety of roles. The Hadith tradition included a Jesus who would return before Judgment Day to slay the Antichrist (and all pigs) and thus bring forth an age of peace on earth. Jesus developed in other Arabic literature as the object of popular devotion, as a combatant in theological disputes, or as a model of asceticism

or etiquette. The Shia theologian Majlisi (d. 1698) described a Jesus explaining that because money is a disease and scholars are doctors, we should beware of “doctors” too eager to catch “diseases” for themselves.

Most distinctive to the early modern period was Muslim rulers’ use of Jesus to bolster their own authority. Shah Ismail (r. 1501–1524), founder of the Safavid dynasty, identified himself as Jesus in poetry written in the language of the Muslim Turkmen tribesmen to the west, presumably in an attempt to win their loyalty. A century later, in the ceremonial capital city Fatehpur Sikri, Akbar the Great of the Mughal empire in 1602 erected the huge Gate of Magnificence (Buland Darwaza) leading into the mosque, with the Arabic inscription “Said Jesus, on whom be peace! The world is a bridge, pass over it, but build no house therein.” Written next to an inscription celebrating the conquest of Gujarat and Kandesh, the words of Jesus anticipate and dispel any censure of Akbar’s satisfaction.

Missionaries and colonists brought Jesus throughout the world. The Jesus figure received a mixed reaction in China. In 1600, one customs officer inspecting missionary gifts for the emperor was impressed by the benign realism of a painted Madonna and Child but thought that a crucifix was a device designed to assassinate the emperor. The *Shenxian Tongjian* (1701) includes Jesus among the Daoist-Buddhist pantheon.

In the Americas, European immigration and an expansionist Christian ideology gave the Jesus figure its greatest purchase. New Spain alone boasted at least 156 shrines to Christ, with crucifixes that were said to sweat, bleed, and provide protection from epidemics and famine. In colonial New England, one Puritan pastor spoke of hurting his “husband” Jesus by “liking other loves more than him”; another wrote of preparing his heart like a “featherbed . . . with gospel pillows, sheets, and sweet perfumes” so that he might be “impregnated” by Jesus. Such language caused some concern about undermining the institution of marriage but may have drawn men to New England’s congregations. To the disgust of their Calvinist and Lutheran contemporaries, Moravians took this one step further by describing Christ in female terms and taking the wound in his side to be a womb.

Although slave owners used biblical passages to justify slavery, many slaves were drawn to Jesus, and the South saw the widespread conversion of slaves by the late eighteenth century. In 1764 the Reverend John Cleaveland recorded the second conversion experience of Massachusetts slave Phillis Cogswell. The following quote is taken from scholar Erik R. Seeman's 1999 article:

"while I was about my work, those words came to my Mind, come unto me all ye that labor and are heavy laden and I will give you rest. I thought with myself, I am weary and heavy-laden, I have a burden of guilt lying on me, Christ is all-sufficient to give rest—I may come; I will come to Christ for Rest."

By the eighteenth century, Enlightenment thinkers in both Europe and the Americas expressed strident criticism of the Catholic Church and skepticism about religion generally. Yet an ideology that raised reason above superstition still found a place for Jesus, praising his teachings while ignoring his alleged miracles. In America, Benjamin Franklin could thus urge readers to emulate Jesus as well as Socrates.

—Luke Clossey

Bibliography

- Godbeer, Richard. "‘Love Raptures’: Marital, Romantic, and Erotic Images of Jesus Christ in Puritan New England, 1670–1730." *New England Quarterly* 68 (1995): 355–384.
- Khalidi, Tarif. *The Muslim Jesus: Sayings and Stories in Islamic Literature*. Cambridge, MA: Harvard University Press, 2001.
- Malek, Roman, ed. *The Chinese Face of Jesus Christ, Vol. 2, Faces and Images of Jesus Christ from Ming to Ching*. Monumenta Serica Monograph Series. Sankt Augustin Nettetal, Germany: Steyler, 2003.
- Pelikan, Jaroslav. *The Illustrated Jesus through the Centuries*. New Haven, CT: Yale University Press, 1997.
- Seeman, Erik R. "‘Justise Must Take Plase’: Three African Americans Speak of Religion in Eighteenth-Century New England." *William and Mary Quarterly*, 3rd ser., 56(2) (April 1999): 393–414.
- Taylor, William B. "Two Shrines of the Cristo Renovado: Religion and Peasant Politics in Late Colonial Mexico." *American Historical Review* 110(4) (2005): 945–974.

Jewish Messianic Movements

Throughout Jewish history, there have been numerous claimants to the title of Messiah, the prophesied leader who would restore the Jews to Israel and rebuild the Temple at Jerusalem. The early modern period saw several Messianic movements. Catastrophes for the Jews, most notably the persecutions in the Iberian kingdoms that culminated in the expulsions of 1492, were viewed as the "birthpangs of the Messiah" and raised Jewish interest in the possibility of deliverance. An early-fifteenth-century Messiah, the mysterious David Ruebeni, presented himself as originating from a Jewish kingdom in Arabia where his brother was the king and spoke of a Jewish-Christian alliance against the Ottomans. He won audiences with Pope Clement VII, Emperor Charles V, and King João III of Portugal before falling into the hands of the Spanish Inquisition in Llerna, where he probably died, as no more was heard from him after this. However, his final fate remains uncertain. One source claims that he was killed in Llerna in 1535, while another claims that he was executed by the Portuguese Inquisition in 1541. Ruebeni had a disciple, Shlomo Molko, a Portuguese Jew who had been forcibly converted to Catholicism and returned to Judaism under Ruebeni's influence. Molko also made Messianic claims and was executed by the Spanish Inquisition in 1532. A German Jew, Asher Lemlein, had a short-lived but well-publicized Messianic career around Venice from 1500 to 1502.

The Kabbalistic movement associated with the Palestinian town of Safed in the late sixteenth century contributed to a redefining of the Jewish Messiah, away from the political Messiah whose main task was the restoration of the Jews to Israel to a cosmic being who would repair the broken cosmos. Although Messianic thought did not play a central role in Kabbalah, Rabbi Isaac Luria (1534–1572), the leader of Safed, or "Lurianic," Kabbalism, and his disciple Hayyim Vital (1543–1620) were spoken of by their disciples and admirers in Messianic terms.

The most widespread and important Jewish Messianic movement of the early modern period was that of Sabbatai Zvi (1626–1676), a student of the Lurianic Kabbalah and Jewish law from

Izmir in Asia Minor. Sabbatai followed eccentric practices like swimming in the sea at night and in 1648 first proclaimed himself the Messiah, a proclamation that attracted little attention except to get him excommunicated and banned from Smyrna. He spent the next several years wandering through Greece and Palestine gathering followers. He married a woman named Sarah who had been orphaned during the Chmielnicki massacres of Ukrainian Jews in the late 1640s and who had lived as a prostitute for several years.

The key moment in the early history of Sabbatianism is Sabbatai's meeting in Israel with the brilliant Kabbalist Nathan of Gaza (1643–1680), who became the outstanding theoretician and publicist of the movement. Nathan's public faith in Sabbatai never wavered. Sabbatai's proclamation of himself as the Messiah in 1665 electrified Jewish communities from Hamburg to Yemen. Many Jews sold all of their possessions to journey to Israel in order to participate in the Messianic events. The Sabbatean movement was bitterly divisive, as polemics between Sabbatean and anti-Sabbatean rabbis and scholars grew harsher. Sabbatianism developed strongly antinomian elements, as Sabbatai publicly broke Jewish law and proclaimed that much of the law did not apply to the time of the Messiah. Many Sabbatians, however, ignored Sabbatai's antinomianism and viewed the Messianic era as calling Jews to a stricter observance of the Law.

The Sabbatian claims to Messiahhood challenged Ottoman authority over Jerusalem and its environs. Sabbatian attitudes toward the Ottoman rulers were ambiguous, as the sultan appears as both an ally and an enemy in Sabbatian literature. In 1666 the Ottoman authorities gave Sabbatai the alternatives of conversion to Islam or death. Sabbatai chose conversion and received a pension from the sultan. However, Sabbatai continued to present himself as a Jew in some circumstances, and the mistrustful Ottomans eventually imprisoned him. He died in Ottoman captivity.

Although Sabbatai's conversion horrified most of his Jewish followers and caused them to abandon their messianic hopes, it did not mean the end of the Sabbatian movement. Sabbatai's apostasy was explained by Nathan and others

in Lurianic terms as the Messiah's descent into the lowest non-Jewish depths in order to redeem them. Many of Sabbatai's followers, including Sarah but not Nathan, followed him into Islam. They formed a community known as the *Donmeh* that lasted into the early twentieth century, outwardly practicing Islam while maintaining a Jewish identity. Sabbatianism also persisted among the Jews of Christian Europe, operating underground but attracting the loyalty of some of the most eminent rabbis of the late seventeenth century and the eighteenth century. The controversy between Rabbi Jacob Emden (1697–1776) and Rabbi Jonathan Eybeschütz (1690–1764), whom Emden accused of being a secret Sabbatian, involved numerous Jewish leaders as well as Christian political authorities. Some Sabbatians immigrated to Israel.

The Sabbatean movement also attracted the interest of European Christians, who hoped that it would prove to be a path into Christianity for Sabbatai's followers or at least a blow at the Ottoman empire. Christian millenarians also saw Sabbatai's movement as a sign of the end of the world. After Sabbatai's conversion to Islam, Christian missionaries hoped to use the collapse of the movement to discredit Judaism in the eyes of Jews, a policy that had some successes. Christian writers also used Sabbatianism to ridicule apocalyptic and millenarian hopes among Christians as well as the foolishness of the Jews.

A succession of messiahs claimed to be the successors or the reincarnations of Sabbatai Zvi. Barukiah Russo (d. 1720 or 1721) preached an antinomian version of Sabbatianism asserting that the existing Torah was the Torah of the lowest realm and that the Torah of the highest realm permits or even commands those acts forbidden by the lower Torah. The most important of the eighteenth-century successors of Sabbatai was the Polish Jew Jacob Frank, who came into contact with Sabbatians while trading in the Ottoman empire. He claimed to be the reincarnation of King David as well as of Sabbatai. Under pressure from Polish authorities, Frank converted to Catholicism in 1759, but he and his followers who converted, like the *Donmeh*, retained a Jewish identity.

—William E. Burns

Bibliography

- Goldish, Matt D., and R. H. Popkin, eds. *Jewish Messianism in the Early Modern World*. Dordrecht, Netherlands: Kluwer Academic, 2001.
- Lenowitz, Harris. *The Jewish Messiahs: From the Galilee to Crown Heights*. Oxford, UK: Oxford University Press, 1998.
- Scholem, Gershom Gerhard. *Sabbatai Sevi: The Mystical Messiah (1626–1676)*. Princeton, NJ: Princeton University Press, 1973.

Catholic Crusaders in Imperial Service

The legacy of the crusades against the Muslims helped shape the ideology of conquest for the Spanish and Portuguese empires. The huge extent of the early modern Islamic world meant that Spanish and Portuguese explorers and conquerors could encounter Muslims at many places in Eurasia, Africa and their offshore islands, and when these encounters became hostile, as they often did, they could be viewed as extensions of the crusade. The crusades that played the most important role in early European expansion were not the medieval crusades in the Middle East, but the “reconquista,” the slow process extending over centuries by which the Iberian peninsula, the home of the most important early imperial nations, Spain and Portugal, had been regained for Christendom. The reconquista was completed in 1492 with the defeat and annexation of the Emirate of Granada, the last Islamic state in Spain. This effort, which drew on warriors from all over Spain, helped foster a common Spanish identity around the holy war. The same year Columbus set forth on the first of his voyages. He presented his voyage in a crusading context, suggesting that the wealth won from a new route to the Indies could then be applied to the recovery of Jerusalem.

There was some interest in extending the reconquista to Islamic North Africa, and Spain acquired a few strongholds in the region, including the town of Oran. (The Portuguese had actually preceded the Spanish as crusaders in Africa, with the conquest of Ceuta in 1415.) However, despite Isabel of Castile’s urging her heirs in her testament to relentlessly carry on the conquest

of Africa it never became a major area of Spanish effort. The main focus of Spanish expansionism in the sixteenth century was the new world and later the Philippines. Spanish aggression was justified in the name of spreading true religion, and Spanish conquest was followed by the destruction of temples, the slaughter of indigenous priests and the suppression of indigenous cults. Native American religion was identified with devil-worship. The destruction of indigenous religion (some of its elements, however, were also amalgamated) was complemented by the creation of a Catholic church on the Spanish model, with a parish and diocesan organization as well as religious orders, notably the Franciscans and later the Jesuits, and an Inquisition modeled on Spain’s. The leading role Spain played in the wars against European Protestants and the Islamic Ottoman empire reinforced the crusading image, although the principal Spanish orders of crusading knights, the Orders of Santiago, Calatrava,

➤ CAMÕES’S *OS LUSIADAS*, A CRUSADING EPIC

One example of the importance of the Crusading ideology in how European expansion was presented was the epic poem written in 1572, *Os Lusíadas* (Or *The Lusiads* in English), of the Portuguese poet Luis Vaz de Camões (1524–1580). *Os Lusíadas*, whose name is derived from the ancient tribe that resided in the region of Portugal named the Lusitanians during the Roman empire, is an epic poem that revolves around the historical successes of the Portuguese people, using Vasco da Gama’s expedition to the Indian Ocean as the central theme, and is generally considered the greatest epic poem written in Portuguese. Camões, who had spent some time in the East, presented da Gama and the Portuguese in general as motivated by the causes of winning honor and advancing Christianity rather than the trade issues that were actually uppermost in Portuguese exploration. Camões managed to combine the presentation of the Portuguese as Crusaders fighting Muslims in the Indian Ocean with an extensive use of the Olympian pantheon for plot machinery inspired by the epics of Homer and Virgil.

and Alcantara mostly fell into inactivity following the conquest of Granada and Pope Adrian VI's decree bestowing their grand masterships on the Spanish monarch in perpetuity in 1522.

The Portuguese also drew upon crusading ideology, but their African and Indian Ocean empire was considerably more precarious. The outright destruction of indigenous religions was not practicable in most circumstances, and the Portuguese were forced to treat these religions with varying degrees of tolerance. However, Islam remained the chief enemy, and the Portuguese attitude towards it was usually more hostile than that displayed to Hinduism, Buddhism or the indigenous African religions.

The Order of Christ, a Portuguese crusading order founded after the suppression of the Templars, played the most prominent role of any military order in the first wave of European expansion. Prince Henry “the Navigator” (1394–1460) was its grand master from 1417 and the Order of Christ was the foundation of much of his power and wealth. It received extensive administrative powers over the early Portuguese colonies in the Atlantic Ocean, including Madeira, and would later receive tax money from both African and Indian trade. Vasco da Gama, the first captain to circumnavigate Africa, was a member, transferring from his original membership in the autonomous Portuguese branch of the Order of Santiago, whose role in Portuguese overseas expansion was waning. Other members of the Order of Christ significant in early Portuguese exploration include Don Francisco de Almeida and Pedro Alvares Cabral, the discoverer of Brazil. However, the Order was declining in both Portugal and its empire by the mid-sixteenth century.

The ideology of crusading could also be employed to present conquest as “noble”—not motivated by material gain. However, imperial actions could also be judged by religious standards and found wanting. Spanish Dominican friar Bartolomeo de las Casas (1484–1566) agreed with Spanish imperialists that Spain had been given the New World by God in order to advance true religion, but went on to claim that Spanish greed and brutality had forfeited this title and that Spanish “crusaders” were driving Natives farther from Christianity through their bad example.

—William E. Burns

Bibliography

Kamen, Henry. *Empire: How Spain Became a World Power 1492–1763*. New York: Harper Collins, 2003.

Subrahmanyam, Sanjay. *The Career and Legend of Vasco da Gama*. Cambridge and New York: Cambridge University Press, 1997.

Quetzalcoatl and the Virgin— The Patois of Indigenous Religion and Imposed Catholicism

The conversion of the Native American population was one of the moral justifications for the Spanish conquest of North America. Spanish Catholic missionaries baptized tens of thousands of indigenous people in mass conversions, although critics, especially in Protestant denominations, wondered how committed the new Christians were to their faith. They complained that the native peoples merely grafted traditional rituals and beliefs of their former religion onto Christian practices. The peoples of preconquest Mesoamerica had followed a well-defined religious system in which a myriad of gods existed, each with its own special purpose. They organized spectacular rituals and sacrifices to honor each god and ask for specific favors, and they regarded particular sites as sacred to the gods, building elaborate temples and holding complex ceremonies there. Quetzalcoatl, the Feathered Serpent, the best known of the gods worshipped by the peoples within the Aztec empire, was deemed the patron of creation, learning, and knowledge. When the Spaniards conquered Tenochtitlan, the Catholic priests who accompanied the conquistadores were anxious to destroy all remnants of the native religion and convert the indigenous peoples. They especially feared that the local people would try to retain their old faith as much as possible. Those who were found to worship the old gods risked execution or imprisonment. To speed the conversion process, many of the priests learned the Nahuatl language, under the rational assumption that speaking to the people in their own tongue would make it easier to teach them about Christianity.

Surprisingly, the Christian missionaries found many similarities between Christianity

THE LADY OF GUADALUPE

According to legend, Mary, the Lady of Guadalupe, appeared on December 9, 1531, on Tepeyac Hill outside of present-day Mexico City to Juan Diego, a Chicemeca Indian, who had been baptized and was on his way to Mass. She asked him to go to the bishop and ask for a shrine to be built at the site. The bishop did not believe that Juan Diego and asked for proof. On December 12 the Lady appeared again and told Juan Diego to pick roses, which he would find on a hill, and take them to the bishop. Even though it was winter, the flowers were blooming. When Juan Diego poured the roses out of his cloak before the bishop, an image of the Lady was printed on the garment. A church was built at the site in 1533, and Juan Diego was canonized as a saint in 2002.

The story appealed to the Christianized Indians of Mexico because it blended aspects of their traditional religion with the Christianity introduced and often imposed by the Spaniards. The Lady appeared at a place believed to have been sacred

to the ancient Mesoamerican goddess Tonantzin, the goddess of sustenance. Moreover, the Virgin's image that appeared on Juan Diego's cloak had the coloring, features, and dress of a pregnant Indian woman. Guadalupe is believed to come from the Nahuatl *Coatlaxopeuh*, which means "Who Crushes the Serpent," and in Christian iconography, Mary is often depicted as crushing the devil, who appears as a serpent. Thus, the image had a double meaning for the Indians of Central Mexico, since one of their most popular god, Quetzalcoatl, was represented as a feathered serpent.

Some Spanish Catholic churchmen and officials resisted acknowledging this apparition as genuine because of the manner in which many local natives continued to associate the Virgin with Tonantzin, but in 1754 the Roman papacy officially declared *Nuestra Señora la Virgen de Guadalupe* to be the heavenly patroness of New Spain.

—Timothy J. Watts

and indigenous religious traditions. Some priests were able to build on these similarities and ease the conversion process. As a result, Christianity in Mexico assumed many of the outward aspects of the preconquistador faith. There was nothing unique about this phenomenon, however, because Christian missionaries, wherever they went, had been marrying their faith with local cultural traditions, especially religious traditions, since Christianity's earliest days.

The similarities between the religious traditions of Mesoamerica and Christianity included a belief in an afterlife. The native peoples had believed that the souls of those who died would go to different places, depending on the way they died and their burial. They also believed in the concept of confessing one's sins, and once sins were forgiven, it was then possible for a soul to reach paradise. Like many Christians, Mesoamericans believed in self-sacrifice to honor their gods. Instead of the self-flagellation found in Catholic Europe at this time, Mesoamerican nobles pierced different parts of their own bodies to shed life-giving blood. Religious processions were also important rituals

in both religious traditions. Images of the gods or saints or other religious artifacts were carried with pomp and music through the streets. The missionaries also found it useful to build their churches on the sites of former native temples, as had been the case as well in antiquity when Christianity triumphed in the Roman empire, Ethiopia, and elsewhere. Finally, Christian saints came to be viewed by the converted natives as comparable to their ancient deities. The Christian tendency, for example, to assign saints as the patrons of particular professions or activities was not unlike practices that went back to the origins of civilization in Mesoamerica.

In brief, the ability of the native peoples to see similarities between their old religious beliefs and customs and Christianity helped ease the conquest of Mexico.

—Timothy J. Watts

Bibliography

- Dussel, Enrique D. *The Church in Latin America, 1492–1992*. Maryknoll, NY: Orbis Books, 1992.
- Gossen, Gary H., and Miguel Leon Portilla. *South and Meso-American Native Spirituality: From*

the Cult of the Feathered Serpent to the Theology of Liberation. New York: Crossroad, 1993.

Pardo, Osvaldo F. *The Origins of Mexican Catholicism: Nabua Rituals and Christian Sacraments in Sixteenth-Century Mexico*. Ann Arbor: University of Michigan Press, 2004.

The Jesuit Relations

The *Jesuit Relations*, published in France from 1632 to 1673, were a series of annual reports from the Roman Catholic Jesuit missions in the lands claimed by France in North America. The *Relations* were a product of the hierarchical and centralized Jesuit system. Missionaries were required to produce an annual report on their missions for the Jesuit superior in New France. The superior edited and compiled the most important information from these reports into a

summary to his superior, the provincial of the Jesuits in France. In France, Paris publisher Sebastian Cramoisy printed the *Relations* in a series of duodecimo volumes. In addition to the *Relations* proper, numerous other accounts from the North American Jesuits were published in France and Italy in French, Latin, and Italian.

The first volume was produced in the wake of the return of French power and Jesuit missions to Canada in 1632 after a brief period of English occupation. The author was the newly appointed head of the Jesuit mission in Quebec, Father Paul le Jeune. Le Jeune remained the sole author for the next two *Relations* as well. The first *Relation* to appear in the form of a compilation of missionary reports was that for 1635, much of which was devoted to a report from the mission among the Huron tribe.

The *Relations* were written as an appeal to French Catholics in hopes of gathering the political and financial support that was essential for the maintenance of the missions. They called for support also for specific projects such as schools and hospitals for both French colonists and Native Americans. For this purpose, the *Relations* placed the missionary effort in a positive light, emphasizing the heroism and piety of the missionaries, the nobility of the Native American converts, and the marvels wrought by God to protect and extend the missions. Military metaphors were scattered profusely throughout the *Relations*, with the Jesuits cast in the role of brave soldiers assaulting Satan's strongholds in the New World. Although stories of the conversion and baptism of Native Americans were common, so too were accounts of the resistance to Christianity offered by many Native American individuals and groups and the torture and martyrdom of Jesuits at the hands of Native Americans, particularly the Iroquois. Leaders of traditional Native American religion, stigmatized in propaganda as sorcerers who, like the witches of Europe, derived their power from the Devil, were the villains of many stories. Their spells were often portrayed as ineffective in comparison to the prayers of the Jesuits and they themselves as victims of God's providential punishment.

Not all Jesuits reported in the same way. Some of the *Relations*, particularly in the early years, were rich in material concerning the

► BLACK ROBES—JESUITS IN CANADA

The Society of Jesus was the most important Catholic missionary order in French North America. The beginnings of the Jesuit mission were modest; two Jesuits arrived from France in 1611, but their efforts found little success, as they were captured by the English. A somewhat larger group arrived in 1625, but they were carried off by the English, who temporarily drove the French out of Canada. The permanent mission was established in 1632 when the French government put the Jesuits in charge of the overall missionary effort to the Native Americans.

Jesuits, referred to by the Natives as Black Robes after their distinctive garments, established themselves among many native communities. In addition to striving for the conversion and baptism of Native Americans, Jesuits worked to advance French interests against France's Dutch and English rivals. Jesuits also strove to convert seminomadic natives to sedentary agricultural life in the belief that this would render them more amenable to Christian conversion. The arrival of the Jesuits in Native American communities was often disruptive, as the Europeans carried numerous diseases to which the natives had little immunity. Jesuits identified as disease carriers or captured by hostile natives often suffered painful martyrdoms in retaliation.

—William E. Burns

languages, religion, customs, lifeways, and organization of Native American communities, knowledge gathered by Jesuits living among largely non-Christian Native Americans. Other accounts focused on conversions and the building of Christian communities among the Native Americans and advocated the Jesuit policy of encouraging seminomadic Native American groups to form sedentary communities. The *Relations* also included information on the natural history of North America with both descriptions of the animals and allegorical interpretations, such as the stink of the skunk is likened to the stink of sin. The *Relations* remain the most important written source for knowledge of Native American communities in the seventeenth century.

The mission of the French Jesuits was political as well as religious, and the *Relations* emphasized the good that the missions were doing for the power of France in North America as well as for the Church. Important events in the history of the French community at Quebec were recounted, with praise for those French Canadians who supported the missions. The Protestant English and Dutch were shown not merely as rivals for the souls of Native Americans but as threats to French power (particularly when allied with the Iroquois).

The published series of *Relations* came to an end with the papal effort to centralize the dissemination of missionary accounts by requiring permission for their publication. The Jesuits were caught between Rome and the French authorities, who were very reluctant to acknowledge papal authority over French publications. By seeking permission from Rome to publish, the Jesuits would anger the French authorities, and the simplest remedy was to simply cease publication. The cessation of the published series did not immediately result in the end of the compilation of manuscript *Relations*, which continued for several years in the hope that the printed series could be resumed.

—William E. Burns

Bibliography

Blackburn, Carole. *Harvest of Souls: The Jesuit Missions and Colonialism in North America, 1632–1650*. Montreal: McGill-Queen's University Press, 2000.

Moore, James T. *Indian and Jesuit: A Seventeenth-Century Encounter*. Chicago: Loyola University Press, 1982.

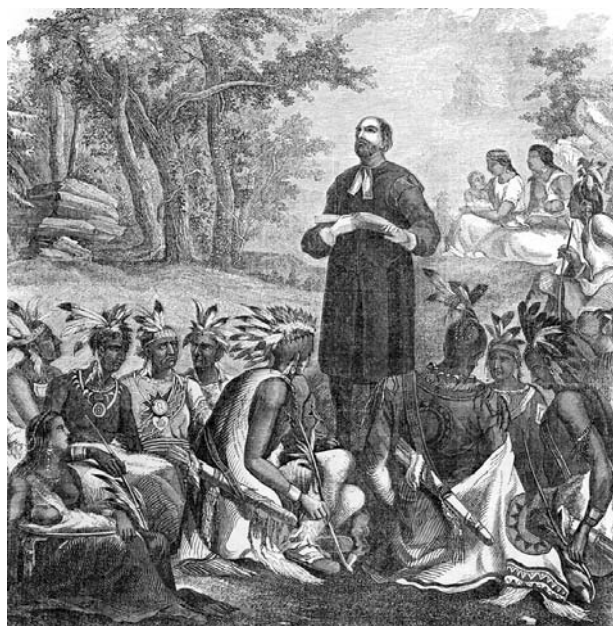
Thwaites, Reuben Gold, ed. *The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610–1791*. 73 vols. Cleveland: Burrows Brothers, 1898–1901.

The Praying Indians

During the early 1600s American Indians came into contact with European fishermen, explorers, and later colonists. In response, the Indian developed a variety of strategies for surviving the dramatic social and environmental changes that contact brought. These survival strategies ranged from resistance to European intrusion into their lands to assimilation (absorption) into colonial societies. The particular response that a tribe developed depended upon the intensity of contact.

For the peoples of southeastern New England—the Narragansett, Wampanoag, Massachusetts, and Pennacook tribes—the choice of a survival strategy was influenced by both the waves of European settlers and the waves of epidemics that assaulted them during the 1600s. For centuries, native peoples had been separated from contact with Europeans. Consequently, they had no natural resistance to European diseases such as measles, pneumonia, influenza, and smallpox. These diseases decimated villages, disrupted basic patterns of living, and undermined tribal values and institutions. As much as 90 percent of some villages along the New England coast were depopulated. The terrors of recurrent epidemic fundamentally transformed American Indian culture, eroding the integrity of its core values and disrupting its essential social institutions.

By the 1640s demoralized remnants had begun efforts to adapt to their changed world. In the Puritan stronghold of Massachusetts Bay Colony, a conversion movement gained momentum through the autumn of 1646 as small bands of Massachusetts and Wampanoag people who lived near English settlements took time from their daily rounds to hear ministers preach from the book of the powerful English God.



Puritan missionary John Eliot preaches to Native Americans, 1651. (Library of Congress)

From Roxbury, the Reverend John Eliot emerged as the most active of the Puritan missionaries. After a failed attempt to preach to the village of Cutshamekin, the most influential of the Massachusetts sachems, Eliot staged a second try at Nonanetum, near Cambridge, on October 28. This audience was more receptive. The Nonanetum remnants saw in Calvinist imagery—the anger of a vindictive Jehovah, sin and retribution, redemption of the elect—an explanation for the traumatic events that afflicted them. Leaders of the conversion movement sought to adopt certain English principles of order without integrating themselves fully into colonial society. Their strategy—acculturation—was a middle way between resistance and assimilation. Eliot called those who accepted the Puritan view of their experience Praying Indians.

Those who became Praying Indians were active participants in the acculturation process. Remnant leaders pressured Eliot to establish a Praying Town distant from both colonists and traditionalist tribes. Over the summer of 1650 they relocated to Natick, 18 miles (29 kilometers) west of Boston. By 1675 they had organized, and the colony's legislature had legitimized, 14 Praying Towns. These remnant communities were not entirely “new canoes,” as one

leader observed. Composites of birch bark and clapboard, the Praying Towns were not wholly Indian, not wholly English. All retained distinguishing indigenous customs. Some boasted a meetinghouse and one or several clapboard houses built after English fashion. Most residents preferred their familiar wigwam, the foreign structures “being more chargeable to build and not so warm, and cannot be removed so easily.” The traditional palisade fort protected their villages from enemy raiding parties by surrounding their wigwams within a wall of tree trunks sunk into the ground. On Assembly Days—occasions of special ceremony in the Puritan Commonwealth—the community gathered to the beat of the drum, English bells being expensive. As ancient hunting trails receded farther from the center of missionary influence at Natick, fewer and weaker Puritan practices marked the Praying Towns. The people of Punkapog, living just south of Boston and “advantaged by” an adjacent cedar swamp, adapted to the market relations of the colony's capital by selling shingles and clapboards. Forty miles (64 kilometers) to the north, however, the congregation of the Praying Town at Wamesit could be neither persuaded nor cajoled to exploit their productive fishing station and their ample herds of horses for the colonial market.

Until 1675 there was potential for inclusion of the converts in colonial society. Although relegated to the margins of social intercourse, the Massachusetts were gradually adapting to the new world created by colonial occupation and alien disease. But the potential for acculturation dissipated with the outbreak of Metacomet's War, the most destructive conflict in American history. Metacomet became sachem, or leader, of the Wampanoag in 1662. Efforts by Plymouth Colony to dominate his people led him to plot a general uprising against English colonists, allying with other tribes.

From the beginning of hostilities, most Praying Indians sided with the Puritans. Time and again they alerted colonial authorities to impending attacks, although their warnings were often ignored; other Praying Indians served as spies, scouts, and soldiers throughout the war. Even so, “the animosity and rage of the common people” erupted against the Praying Towns,

which were easy and accessible targets. In October 1675 after a dilapidated Dedham building caught fire, local militia surrounded Natick, marched its 200 residents to the Charles River, and escorted them to Deer Island in Boston Harbor. They were soon joined by others. As the number of refugees increased to about 500 over the winter, the magistrates funneled some to nearby Long Island.

Conditions in the barren, bleak, and windswept internment camps were miserable as dysentery and other illnesses swept the camps. By February 1676 it seems that hundreds had died. Anxious to demonstrate their loyalty, Praying Indians asked permission to organize a military troop; the platoon formed in time to see service against Metacomet's assault on Sudbury later that month.

Their participation contributed significantly to shift the tide of war to favor the colony's armies. In the closing days of the insurrection, as exhausted Wampanoag warriors struggled to elude colonial armies, Praying Indian scouts enabled a colonial expedition to track down and kill Metacomet himself. By the middle of May the General Court ordered the return of Praying Indian refugees from the Boston Harbor islands to the mainland. But the damage was done. The war reduced their populations considerably through conflict, atrocities, exposure, malnutrition, and disease. The war won, the General Court reduced the number of Praying Towns to just four.

In time, covetous English neighbors succeeded in absorbing the convert communities. Remnants once again, the praying people shifted for themselves, bereft of all but the barest support from the Puritan community. Recurrent pestilence, particularly smallpox, continued to compromise the remnants' survival. In 1678 the population of the first Praying Town was estimated at 212. By 1753 only 75–100 persons, gathered in 25 families, remained. At the end of the French and Indian War, only 37 Massachusetts were left. Finally, in 1855, the town of Natick reported only 1 living descendant of the Massachusetts Praying Indians.

The history of the Praying Indians established a precedent in relations between American Indians and European settlers. Europeans,

and later Americans, would follow the example laid down in the aftermath of Metacomet's War, subordinating their own laws and institutional missions to the imperative of economic development and material gain and exiling the Indians to the bleak recesses of marginality.

—Dane A. Morrison

Bibliography

- Bross, Kristina. *Dry Bones and Indian Sermons: Praying Indians in Colonial America*. Ithaca, NY: Cornell University Press, 2004.
- Jennings, Francis. *The Invasion of America: Indians, Colonialism, and the Cant of Conquest*. New York: Norton, 1975.
- Morrison, Dane. *A Praying People: Massachusetts Acculturation and the Failure of the Puritan Mission, 1600–1690*, Vol. 2. American Indian Studies Series. New York: Peter Lang, 1995.
- Ronda, James P. "‘We Are Well As We Are’: An Indian Critique of Seventeenth-Century Christian Missions." *William and Mary Quarterly* 34 (January 1977): 66–82.
- Salisbury, Neal. *Manitou and Providence: Indians, Europeans, and the Making of New England, 1500–1643*. New York: Oxford University Press, 1982.

Conjure

Conjure is the name for an African American magical system. Also known as tricking, goopher, mojo, and, since the late nineteenth century, hoodoo, it has long been a living link between black Americans and their African roots. Though most often found in the South, it has existed throughout the United States wherever a significant black population has settled.

Conjure began its history during the seventeenth century, with the rise of the British North American slave trade into the Atlantic Coast colonies. The African regions from which the unwilling laborers came were to influence its development enormously. In the Chesapeake, the African population was quite mixed, though by far the largest single ethnicity were the Igbo of the Bight of Biafra region of West Africa. Like most Africans and many Europeans of the day, the Igbo were firm believers in charms and spells. In Virginia, poisons were the most common weapon of the conjurer. Conceived of as spiritual instead of simply toxic substances, they

THE CONJURE TRADE

Whatever era they have inhabited, conjurers have been important people. Antebellum conjure men promised—and reportedly delivered—relief from the lash. After emancipation, African Americans needed money in addition to protection. Conjurers offered their magical assistance. Their versatility, coupled with a widespread belief in their powers, made many famous. Conjure men and women like Aunt Caroline Dye, Dr. Buzzard, and Dr. Jim Jordan are still talked about today. Some of them succeeded in doing more than building name recognition. Jim Jordan, for instance, used his conjure trade to build a large fortune, charging some customers thousands of dollars for his services. By the time he died in 1962, he had used his earnings to purchase several other businesses and to support a community of many dozens that grew up around his rural North Carolina shop. Scholars and popular authors, black and white alike, have often dismissed conjurers as mere superstitious charlatans. Clearly, they have been wrong.

—Jeffrey Elton Anderson

were an integral part of Igbo beliefs as well. The Igbo's American descendants turned to poisons to punish enemies and even cruel masters. The term *mojo*, used either as a synonym for conjure or as a designation of a type of charm, may be another Africanism introduced by the Igbo.

Though Igbo's were an early and persistent presence in the Chesapeake, the contributions of people of west-central African descent cannot be overlooked. Slaves of Kongo, Angolan, and related ethnicities were a numerical majority of South Carolina and Georgia's black population. One of their most obvious contributions was the heavy use of graveyard dirt, sometimes known as goopher dust, in their charms. Goopher appears to derive from the Kongo word *kufwa*, meaning "to die." This focus on the dead arose from west-central Africans' religious veneration for ancestral spirits, which was considerably stronger among the Kongo and related peoples than with most other Africans. Another west-central African import was the widespread use

of roots in conjure charms, a practice in keeping with the beliefs of the slaves' homeland.

Though the preceding practices and terms are but a few of the African features of conjure, one thing that sets it apart from hoodoo, its Mississippi River Valley cousin, is the absence of many of the latter's overtly African features. Hoodoo, as the magical and ceremonial aspect of Voodoo, relied on a variety of African deities and specific spirits of the dead. Such practices were rare in the rest of the South, at least by the nineteenth century. Even African words, though present, were far less common in conjure than in hoodoo. By the nineteenth century, the most common names for the practice, including conjure itself, were English. Goopher doctor was an exception to the general rule. In place of the missing Africanisms were Europeanisms. Practitioners were sometimes known as cunning men and women and high men and women, English terms for magic workers. Likewise, Bibles had become powerful conjure tools well before the end of slavery, and prayers to the Christian God had supplanted the deities. Though English terms and concepts strongly influenced conjure, it had in no way ceased to be African. On the contrary, it had become African American.

Historically, conjure men and women were vital components of this magical system. These were supernatural specialists who worked for paying clients, selling charms and spells tailored to meet their clients' needs for love, luck, money, revenge, or virtually anything else they might request. Prior to the first half of the twentieth century, practitioners gathered most of their magical materials from nature. Their best-known curios were John the Conqueror roots, five finger grass, black cat bones, devil's shoe string, and Chewing John roots. During the antebellum era, some of the conjurers' most popular products were designed to help slaves avoid punishment or successfully run away.

—Jeffrey Elton Anderson

Bibliography

Anderson, Jeffrey Elton. "Conjure." In *African American Religious Cultures*, edited by Anthony B. Pinn. Santa Barbara, CA: ABC-CLIO, 2009.

- Anderson, Jeffrey Elton. *Conjure in African American Society*. Baton Rouge: Louisiana State University Press, 2005.
- Chambers, Douglas B. *Murder at Montpelier: Igbo Africans in Virginia*. Jackson: University Press of Mississippi, 2005.
- Chireau, Yvonne. *Black Magic: Religion and the African American Conjuring Tradition*. Berkeley: University of California Press, 2003.
- Georgia Writer's Project, Savannah Unit. *Drums and Shadows: Survival Studies among the Coastal Negroes*. With an Introduction by Charles Joyner and photographs by Muriel and Malcolm Bell, Jr. Athens: University of Georgia Press, 1986.
- Long, Carolyn Morrow. *Spiritual Merchants: Religion, Magic, and Commerce*. Knoxville: University of Tennessee Press, 2001.
- McTeer, James Edwin. *Fifty Years as a Low Country Witch Doctor*. Beaufort, SC: Beaufort Book Company, 1976.

The Quaker Experience in Early America

The Society of Friends, or Quakers, originated in the religious ferment of mid-seventeenth-century England. Its early leaders included George Fox (1624–1691), generally viewed as the founder of the movement, and Margaret Fell (1614–1702). Quaker characteristics included the shunning of a professional ministry and a liturgy, plain dress, the refusal to take oaths or show deference by such customs as removing one's hat in the presence of a social superior, and pacifism. Quakers viewed the “Inner Light”—the subjective experience of the Holy Spirit—as the ultimate source of religious truth rather than the authority of a hierarchy or the Bible. The sacraments, including the Eucharist and Baptism, were interpreted in a spiritual rather than material sense. Like other radical Protestants of the seventeenth century, early Quakers believed that the Second Coming was near but often identified it as a return of the spirit of Christ in men and women rather than a physical return of Jesus to rule over the world. Quakers were suspicious of religious learning and elaborate theologies. Much Quaker group worship took place in silence. The term “Quaker” was originally bestowed by the movement's enemies in reference to the trembling

before God characteristic of many Quaker worshippers, particularly women. Quakerism was also marked by a higher degree of gender equality than other early modern European religious movements and was one of the few to encourage women to become missionaries. Quakers saw themselves as a people apart and generally married within their own community. Early Quakers were confrontational, challenging established religious forces from the Church of England to the Congregationalist Puritans of New England. Quaker missionaries even witnessed to the pope and the sultan of the Ottoman empire.

Quakers began to arrive in America shortly after the founding of the movement in England. They were persecuted in America as they were in England. Four Quakers were hanged in Boston from 1659 to 1661. Virginia also passed anti-Quaker laws. Many early American Quakers gravitated to Roger Williams's religiously tolerant Rhode Island. The General Meeting held there in 1661 was the beginning of the New England Yearly Meeting, the oldest Quaker yearly meeting in the world.

American Quakerism was transformed by the founding of the Quaker colony of Pennsylvania, named after its founder, the English Quaker William Penn (1644–1718). Penn received a charter for about 45,000 square miles (116,550 square kilometers) of American land from King Charles II on March 4, 1681. About 10,000 Quakers arrived in Pennsylvania over the next two decades, many of them from the north and the Midlands of England, the movement's heartland. Pennsylvania's capital of Philadelphia became the center of American Quakerism, and the Philadelphia Yearly Meeting, established in 1681, became its leading body. The Yearly Meeting was composed of delegates from local weekly, monthly, and quarterly meetings, an organizational model pioneered in England. Pennsylvania was deliberately founded as a “Holy Experiment” that would epitomize Quaker values. It was religiously tolerant, which is a central Quaker value and one that would help attract settlers. Penn also worked to win acceptance for his new colony from Native Americans nonviolently, a most unusual practice in the English colonial context. Reflecting Quaker egalitarianism, the colony also featured

➤ A QUAKER MARTYR, MARY DYER

Mary Dyer was one of New England's most notorious heretics. In 1637 Dyer joined with a woman named Anne Hutchinson and became involved in what would become known as the Antinomian Heresy, which was based on the belief that faith alone was what was required to achieve salvation. This was a more extreme belief than what the mainstream Protestants believed, because the Antinomians believed that the Mosaic law of the Old Testament was completely unnecessary. These radical beliefs caused the expulsion of Hutchinson, Dyer, and her husband William from Boston for heresy in 1637. After Dyer's expulsion, it was discovered that she had given birth to a deformed stillborn child, and Governor Winthrop ordered that it be exhumed. The corpse was depicted by her enemies as a "monster" and in their eyes showed God's wrath toward her.

William and Mary Dyer traveled to England in 1652, and it was here that Mary heard George Fox, the founder of the Society of Friends, preach. Feeling that the values of the Quakers were closely aligned with the Antinomians, Dyer joined the Quaker church and became a preacher before returning to Rhode Island in 1657, where she had lived after her expulsion from Boston. In 1658 Dyer heard of a proposed law in Massachusetts

that would ban Quakers, and this caused her to travel to Boston in order to protest the proposed law. This led to her imprisonment and expulsion from the Massachusetts colony. After her second expulsion, Dyer continued her missionary efforts as she traveled throughout New England and was arrested again in New Haven, Connecticut. She then returned to Boston again to visit her friends William Robinson and Marmaduke Stevenson, who had been imprisoned. This caused yet another arrest and this time permanent expulsion from the colony. Dyer defied this expulsion again by returning with a group of Quakers to protest the law. This time she was arrested and sentenced to death, although she received a last-minute reprieve, as her husband was friends with Governor John Winthrop. This reprieve carried with it the condition that she go back to Rhode Island and never return to Massachusetts. Dyer returned to Boston in the late spring of 1660, probably on a deliberate quest for martyrdom. This time she found no mercy and was hanged on Boston Common on June 1, 1660. Robinson, Stevenson, and William Leddra also were hanged and, along with Dyer, became known in Quaker tradition as the Boston Martyrs.

—William E. Burns

manhood suffrage rather than the imposition of a property or religious qualification for the vote.

As Quakers established themselves in Pennsylvania, they became more tolerated in other colonies and less confrontational to other forms of religion. Philadelphia became a center of education and social amelioration, with the founding of the Friends Alms House in 1729. It was joined in 1767 by the Bettering House, a combination of a workhouse for the poor and an alms-house for the disabled and elderly founded by Quaker merchants.

As Pennsylvania grew more religiously plural in the eighteenth century, attracting settlers from many areas of the British Isles and Germany, the Quakers increasingly had to share power with others. Even in Philadelphia, Quaker control was increasingly contested by Anglican and Presbyterian factions. Quakers themselves were politically, although not religiously, divided between one

faction supporting Penn's heirs, the Proprietary faction, and the Antiproprietary faction opposing them. Quakers were also increasingly divided on class lines, as many feared that prosperous Quakers were falling prey to the temptations of worldliness. A shared pacifism helped Quakers build alliances with some Pennsylvania groups of German origin, such as the Moravians, but the increasing involvement of the colonies in transatlantic wars, beginning with the Nine Years' War from 1688 to 1697, posed ultimately insoluble problems for Quaker resistance to war and militarism. Many saw the Quakers as hypocrites, benefiting from the efforts that others made to protect the colony while not participating in its defense themselves. Quaker members of the Pennsylvania Legislature resigned en masse in 1756 rather than vote taxes for the French and Indian War, dealing a blow to Quaker political power in Pennsylvania from which it never recovered.

Tensions between Quaker Philadelphia and the frontier population, much of it of Scots-Irish descent, became a major factor in Pennsylvania politics. The Paxton Boys, a group of Scots-Irish Presbyterian frontiersmen, murdered peaceful Conestoga Indians in December 1763 and marched in arms on Philadelphia the following month, further widening the gulf between Quakers and non-Quaker Pennsylvanians. Supporters of the Paxton Boys attacked the Quakers as hypocritical allies of bloodthirsty natives, while opponents defended the Quakers and portrayed the Paxton Boys as murderous cowards and religious fanatics. The Paxton Boys' massacre marked the end of William Penn's experiment in peaceful coexistence between European settlers and Native Americans.

Outside Pennsylvania, there was also a substantial Quaker community in western New Jersey centered around the city of Burlington. Although there was no overall Quaker hierarchy, American Quakers retained close connections with their fellow Quakers in England. By the mid-eighteenth century the transatlantic Quaker community was in the vanguard of the antislavery movement. In 1754 the Philadelphia Yearly Meeting denounced slavery, the first American religious body to do so. This was part of an internal struggle between Quaker abolitionists and Quaker slave owners.

—William E. Burns

Bibliography

- Dandelion, Pink. *An Introduction to Quakerism*. Cambridge and New York: Cambridge University Press, 2007.
- Fischer, David Hackett. *Albion's Seed: Four British Folkways in America*. New York: Oxford University Press, 1989.
- Tolles, Frederick B. *Meeting House and Counting House: The Quaker Merchants of Colonial Philadelphia, 1682-1763*. Chapel Hill: University of North Carolina Press, 1948.

The Adoption of Crusade Ideology in Mesoamerica

Many motives drove Christopher Columbus to sail west toward the Indies, but one purpose that drove the westward voyage of this complex and often inconsistent man was the dream of

converting the Great Khan of Cathay and joining with him in a final, great, and successful crusade against Islam, which in turn would usher in even greater events. In his so-called *Book of Prophecies*, a compilation of texts prepared essentially between 1501 and 1505 for the Catholic monarchs of Spain, Fernando and Isabel, the master mariner placed the discovery of the Indies into the grand divine plan for the forthcoming salvation of all humanity, the Final Judgment, and the End of Time. He argued that his voyage to the west had been the first step in the process of liberating Jerusalem, itself a necessary step in the unfolding of God's plan of universal salvation. Leaving aside the issue of whether or not he actually believed these messianic prophecies (and it seems clear that he did), it is clear that Columbus was appealing to a widespread belief that the road to Jerusalem lay through the Indies. After all, he was appealing to two crusaders, the Catholic Monarchs Isabel and Fernando, who had conquered Granada on January 2, 1492, and who saw victory over the last Muslim stronghold in the Iberian Peninsula as another stepping stone in their God-sanctioned struggle against Islam, a struggle that was foreordained to result in triumph.

Even after it became clear that Columbus had not sailed to the Indies, at least some European churchmen continued to harbor the hope that the lands and peoples of the Americas would be the means for the liberation of Jerusalem and the destruction of Islam, and they apparently imparted that dream to at least some of their Indian converts. Festivals celebrating the victory of Christians over Moors became an integral part of Catholic religious culture throughout Latin America wherever Spanish and Portuguese missionaries brought the faith after 1492. Among these were the Tlaxcalans, whose religious pageants offer an important example of how thoroughly Catholic Christianity was assimilated in the New World.

The Tlaxcalans, themselves Nahuatl but nevertheless traditional enemies of the Mexica and their Aztec empire, had been defeated by Hernan Cortés in September 1519, and following that defeat they allied with the Spaniards in their march against the Aztec empire. Thousands of Tlaxcalans participated in the fighting and proved to be a decisive factor in the Spanish

➤ A TLAXCALAN LIENZO—“WHEN THEY BAPTIZED THE LEADERS”

The image depicts the baptism of four Tlaxcalan rulers. Beneath the image of the Virgin Mary and Jesus, four male leaders kneel and receive the Eucharistic host of holy communion from a priest. Three noble Tlaxcalans, probably women, stand behind the priest, and behind them are three Spanish soldiers. Cortés dominates the upper register on our right and holds a crucifix and a book, presumably a Bible or book of prayer. To his left stands Doña Marina, his translator and lover, without whose aid he never would have succeeded in the conquest of Mexico. Behind them stand another Spaniard and a row of seven lances. The *lienzo* supposedly shows the conquest in chronological sequence, but we know from Spanish sources that these nobles were baptized only after the *la noche triste* (the Night of Sorrow) of either June 30 or July 10, 1520, when the Spaniards and their Tlaxcalan allies were driven out of Tenochtitlan with heavy losses.

—Alfred J. Andrea



(The Art Archive)

victory. A number of Cortés's lieutenants married Tlaxcalan women of high birth, and despite initial reluctance to give up their ancestral deities, the Tlaxcalan chiefs were baptized as Christians sometime after July 1, 1520.

Mock battle pageants between “Christians and Moors” had been a popular expression of Reconquest realities and ideology in the Iberian Peninsula since at least the late thirteenth century. Now they were translated to the New World and its Christian converts.

We are fortunate to have a description of a Corpus Christi pageant performed by the Christian Indians of Tlaxcala in 1539 to celebrate the peace treaty between Emperor Charles V and the king of France and recorded shortly thereafter by the Franciscan missionary Fray Toribio de Benevente Motolinía in his *History of the Indians of New Spain*. In this elaborate pageant, which was composed at least in part by the Tlaxcalans but clearly with the help of their Franciscan mentors, the playwrights portrayed the future conquest of Jerusalem by the combined armies of Charles V's European possessions and New Spain and the consequent baptism of its

presumed occupier, the Muslim sultan of Cairo (although, in fact, Jerusalem had passed into Ottoman hands in December 1516).

Significantly, the pageant included several large and spirited mock battles, which apparently served to underscore the fact that holy war and the festivals that celebrated divinely mandated conflict and bloodshed were as much a part of this new religion of the Tlaxcalans as they had been when they and other Mesoamerican tribes conducted “Flower Wars,” preconquest battles fought for the purpose of capturing enemy warriors who were then sacrificed to a local deity. Often the sacrifice was either preceded by or took the form of a mock battle, when the captive was given an ineffective wooden sword with which to battle a fully armed adversary.

The most striking aspect of this pageant and its mock battles is that all of the combined crusader forces, European and Indian, fail to take Jerusalem despite their bravery. The Christians only succeed when the combined Indian forces of New Spain are joined in the fray by a heavenly patron on a brown horse, Hippolytus, a third-century soldier-saint on whose feast day, August

13, 1521, the Spaniards and their Tlaxcalan allies had captured Tenochtitlan. Indeed, just as the Tlaxcalans are led by Saint Hippolytus, the Spaniards, who now sweep to victory alongside these new Christians, are led by Santiago Matamoros—Saint James the Moor-slayer—on a horse “as white as snow.” Significantly, Santiago was the patron-saint of the Reconquista, the crusading wars of reconquest waged by Christian Iberians against the Muslims of Spain from roughly the mid-eleventh century to late fifteenth century.

According to legend, the apostle Saint James the Greater, whose relics were believed to have been miraculously transported to Compostela in northwest Spain, had initially appeared to lead the Christian forces of Asturias to victory at the mythic Battle of Clavijo in 844. He was also the namesake of the Order of Santiago, the most powerful of the Iberian military orders, founded in 1170 in León. Significantly, Hernan Cortés, the conqueror of Mexico, belonged to that order, as did many of his subordinates. And we are told by the sources that these conquistadors regularly shouted out the traditional Spanish battle cry, “Señor Santiago,” as they went into battle in the Americas.

The meaning of this Tlaxcalan pageant is clear. There is every reason to conclude that the Tlaxcalans were anxious to present themselves, and fellow Nahuatl converts to Catholicism (including their former enemies, the Mexica), as latter-day crusaders and as having accepted totally the Spanish crusading ethos despite whatever animosities they still harbored against their conquerors.

Moreover, the Tlaxcalans were fully aware, as were the Spaniards, that Cortés’s small army of Spanish soldiers could never have conquered

the Aztec empire without the tens of thousands of Indian allies who marched with him, and chief among these were warriors from Tlaxcala. As a consequence, Tlaxcala became a privileged, largely self-governing province under Spanish colonial rule and was showered with honors and privileges.

The ideology of crusade was such a driving force in the Spanish conquest of Mexico that even the conquered and converted felt it necessary to claim identity with it. And what sort of crusade was that? By 1500, indeed well before that date, the crusade had metamorphosed into a struggle of apocalyptic proportions and with deep millenarian overtones. Put simply, it was a global, even cosmological, struggle between Catholic Christendom and Islam, heresy, heathenism, unbelief, and every manner of error, which included the “heathen errors and practices” of preconquest Mesoamerica.

—Alfred J. Andrea

Bibliography

- Gillespie, Jeanne. *Saints and Warriors: Tlaxcalan Perspectives on the Conquest of Tenochtitlan*. New Orleans: University Press of the South, 2004.
- Harris, Max. *Aztecs, Moors, and Christians: Festivals of Reconquest in Mexico and Spain*. Austin: University of Texas Press, 2000.
- Matthew, Laura E., and Michel R. Oudijk. *Indian Conquistadors: Indigenous Allies in the Conquest of Mesoamerica*. Norman: University of Oklahoma Press, 2007.
- Motolinía, Toribio de Benevente. *History of the Indians of New Spain*. Edited and translated by Francis Borgia Steck. Washington, DC: Academy of American Franciscan History, 1951.

■ Introduction: New Sites of Intellectual Inquiry

The early modern period was marked by the rise of a more organized and state-directed intellectual life in many areas of the globe and by a partial globalization of knowledge that increased demands on intellectuals.

One reason for the institutionalization of intellectual life was the rise of centralized

powerful states with an interest in advancing a specific ideology and controlling the interpretation of that ideology. In East Asia, the Ming and Qing dynasties of China, the Korean Joseon dynasty, and Japan’s Tokugawa shoguns based much of their legitimacy on Confucianism. For the Chinese government, the study of the

classics in the approved fashion was necessary for recruitment of civil servants. The Ottoman empire sought much of its legitimacy in the sultan's role of Islamic leader and integrated the ulama, the class of Islamic experts, into the state much more closely than had previous Islamic regimes. Islamic education was vital in this project, and the founding of madrasas were a way for the sultan and other Ottoman leaders to demonstrate piety. In Christian Europe the universities, both ancient like the universities of Paris and Oxford and newly founded like Leiden in the Dutch Republic, played an essential role in the process of Catholic and Protestant reform. European universities and the new universities of the European colonies in America served the state by providing much of the personnel for state churches and the legal and medical professions.

The Europeans faced the greatest intellectual challenge in integrating the new information coming in from all over the globe. The European encounter with the Americas led to a flood of new knowledge of land, people, plants, minerals, and animals. The discovery of the sea route to the Indian Ocean and ultimately East Asia led to vastly increased contacts with old civilizations, with their own rich intellectual traditions. Europeans responded by developing the most geographically far-flung intellectual associations to that date, Roman Catholic religious orders, notably the globe-spanning Jesuits, and the network of scientific societies that began to emerge in the late seventeenth century, led by England's Royal Society and France's Royal Academy of Sciences. European states also developed intellectual communities more narrowly focused on other regions, such as the Casa de Indio of Portugal and the Casa de Contratacion that compiled much of the information on the western sea route for Spain. By the late eighteenth century there were thriving voluntary intellectual communities based in European colonies, such as the British Orientalists in India or the American Philosophical Society in colonial Philadelphia.

From the examination halls of Qing China to the madrasas of Istanbul to the meetings of the American Philosophical Society, organized intellectual life was male. Those few women who participated, such as Bologna's Laura Bassi, were

recognized as highly exceptional. However, less formal groups, such as the salons of Enlightenment Paris, offered a greater scope for female participation. It was perhaps not a coincidence that the salons offered an alternative to the role of the intellectual as servant of the state and church, a model of the critical intellectual.

—William E. Burns

The White Deer Cave Academy—Confucianism in Japan

Although Neo-Confucianism was recognized as Japan's official form of scholarship, it was not the only form of Confucian learning in Tokugawa Japan (1603–1867). Without an examination system for the recruitment of government officials as existed in China, the Japanese had more freedom to criticize Neo-Confucianism, resulting in new fields of scholarship (such as Dutch Learning and National Learning) and alternative forms of Confucianism. Thus, there were two other major schools of Confucian thought: the school of Ancient Learning, especially the teachings of Ogyū Sorai (1666–1728), and an interesting group of scholars known as the Eclectics, represented by Inoue Kinga (1732–1784).

There were three main forms of Neo-Confucianism during the Tokugawa period. In 1640 the Tokugawa government established an academy for the study of Neo-Confucianism, and its first director was Hayashi Razan (1583–1657). Unlike the previous Muromachi era (1333–1573), warfare was not rampant during the Tokugawa period. Thus, samurai warriors found their martial skills less relevant in an era of peace. The purpose of the academy was the training of samurai for service in the fledgling Tokugawa government. A rival of Razan, Yamazaki Ansai (1618–1682), established his own private academy in Kyoto. Although Ansai dedicated himself to Neo-Confucianism, he had a more doctrinaire and even devotional view of it than Razan. Specifically, Ansai believed that he had a spiritual relationship with the greatest of the Neo-Confucians in China, Chu Hsi (1130–1200), whose school was called the White Deer Cave Academy. In this scheme Ansai asserted that the one true Neo-Confucian orthodoxy was transmitted to him alone, essentially bypassing

all other scholars—Chinese, Japanese, and Korean—over the intervening four centuries, including Hayashi Razan and his students. Ansai was so obsessed with his possession of orthodoxy that he eventually turned to Shinto ideas in an effort to prove that the Japanese were Confucian before Confucianism was actually imported into Japan from China.

The final form of Neo-Confucian learning was the Wang Yang-ming (Yōmei in Japanese) school. Wang Yang-ming (1472–1528) was a Chinese official who believed that the Neo-Confucian emphasis on study and memorization of the Confucian classics came at the expense of introspective self-examination. Although the Neo-Confucians advocated meditation, they maintained that the study of the classics was the *sine qua non* for any scholar. Wang Yang-ming inverted this hierarchy and encouraged his students to focus on their own hearts in order to fathom the principle (*li* in Chinese, *ri* in Japanese) of the cosmos. After ascertaining these universal truths, people were obliged to act on them in their daily lives. The teachings of Wang Yang-ming entered Japan during the Tokugawa period but did not attract as many adherents as either of the other two forms of Neo-Confucianism.

In response to the dominance of Neo-Confucianism, two alternative forms of Confucianism developed in Tokugawa Japan. The first to develop was the Ancient Learning school of thought. Although the scholars associated with Ancient Learning did not form a school in any formal sense, there were beliefs that they all shared. First, they believed that the Neo-Confucian interpretations of the Confucian canon (the *Four Books* and the *Five Classics*) were tainted with influences from Taoism and Ch'an (Zen in Japanese) Buddhism that they found unacceptable. Neo-Confucian interpretations therefore distorted the meaning of the original texts. Second, scholars could only apprehend the original meaning of ancient Confucianism by reading the canonical texts without the aid of Neo-Confucian glosses. Finally, scholars of Ancient Learning were critical of the passivity and quietism of Neo-Confucianism in favor of active individual practices. The most important of the Ancient Learning scholars was Ogyū Sorai, considered by

YAMAZAKI ANSAI, *REGULATIONS FOR THE SCHOOL OF THE WHITE DEER CAVE*

In this excerpt, Yamazaki Ansai explains the rules of Chu Hsi's academy. He first examines Chu Hsi's interpretation of the Five Relationships, which were central to Confucianism, before discussing the role of a Confucian education.

"Between parent and child there is intimacy.
Between lord and minister there is duty.
Between husband and wife there is differentiation.
Between elder and junior there is precedence.
Between friend and friend there is fidelity.

These five articles of teaching are what [the sage-kings] Yao and Shun commanded Ch'i, the Minister of Education, solemnly to promulgate as the five subjects of teaching. All that the student should study is contained in these five regulations. . . . In speech be loyal and true; in action be conscientious and reverent. Subdue ire and stifle passion. Change yourself for the better; do not hesitate to correct your errors. . . . Do not do to others what you do not care for yourself. When action fails to get results, seek the reason for failure in yourself. . . . The aim of teaching and guidance given by the ancient sages and scholars, it seems to me, is nothing more than to set forth moral principles, in order, first, to cultivate them in one's own person, and then to extend them to others. Simply to accumulate knowledge and learn to write well in order to gain fame and a well-paid position is far from being the true function of education."

—Mark McNally

Source

Excerpt of *Regulations for the School of the White Deer Cave* by Yamazaki Ansai, taken from *Sources of Japanese Tradition*, Vol. 1, 1st ed., compiled by Ryusaku Tsunoda et al. (New York: Columbia University Press, 1958), 356–357.

many to be Japan's Machiavelli for his emphasis on distinguishing personal morality from effective political control. The Neo-Confucians, of course, believed that morality and politics were tightly bound together; Sorai argued that personal morality was irrelevant to the ability of the ruler to govern well.

Scholars identified as the Eclectics (*setchūga-kusha*) comprised still another major Confucian alternative to Neo-Confucianism. During the eighteenth and nineteenth centuries these were scholars who tried to combine the emphasis on practice in Ancient Learning with the personal morality of Neo-Confucianism. One of the first to attempt such a blending was Inoue Kinga. Kinga studied Neo-Confucianism, including the teachings of Wang Yang-ming, and became the student of one of Ogyū Sorai's disciples before he founded his own private academy. Kinga encouraged his students to study the various forms of Confucianism and draw their own conclusions without the slavish devotion to a particular teacher, which he believed characterized the students of Sorai.

—Mark McNally

Bibliography

- Armstrong, R. C. *Light from the East: Studies in Japanese Confucianism*. New York: Gordon, 1974.
- Ooms, Herman. *Tokugawa Ideology: Early Constructs, 1570–1680*. Princeton, NJ: Princeton University Press, 1985.
- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.

The Madrasas of Ottoman Istanbul

The Ottoman empire saw a close institutional relationship between Islamic education and the state, with few precedents in Islamic history. Central to this relationship were the leading madrasas of the capital city of Istanbul, formerly Constantinople.

The construction of madrasas, schools of Islamic religious and legal studies, in newly conquered territories had a long Ottoman history. The earliest recorded instance is Sultan Orhan I's (r. 1326–1359) foundation of a madrasa in Nicea shortly after its conquest in 1331. Constantinople was different from other Ottoman territories with long Islamic histories, where Ottoman foundations coexisted with previously existing Islamic institutions. The Christian city of Constantinople was a blank slate Islamically. As Islamic rulers, Ottoman sultans were obliged to create a religious infrastructure, of which educational and intellectual institutions were an

important part. The conquest of Constantinople in 1453 by Ottoman forces under the leadership of Sultan Mehmed II (r. 1451–1481) was followed by the founding of several new madrasas as part of Mehmed's program of remaking the city into an Islamic capital. Some of the new madrasas were founded in old Byzantine buildings, but the sultan also had 16 new madrasas founded as part of the new Fatih mosque complex. These were divided into 8 major and 8 minor madrasas, the major madrasas becoming known as the Sahn madrasas. Their charter included a requirement that their teachers be expert in the "ancient" sciences, such as astronomy and mathematics, as well as the "religious" sciences, such as the study of the Quran and Islamic law and traditions.

Unlike the madrasas of the Seljuks or previous Islamic regimes in Asia Minor, Ottoman madrasas were ranked in a hierarchy according to how much their heads were paid. At the lowest level were those where the head received a daily fee of 20 *akces*. Sahn madrasas were in the second-to-the-highest financial class, as their heads received 50 *akces*. Fifty-*akce* madrasas were further divided into three classes, in ascending order *haric*, *dabil*, and the Sahn madrasas themselves. Sahn madrasa heads also ranked ahead of sanjaks, provincial governors, in Ottoman protocol. The only higher-paying madrasa was the Ayasofya madrasa, built when Mehmed converted the Byzantine church of Hagia Sofia into a mosque. The head of the Ayasofya received 60 *akces*. The 60-*akce* madrasas were in the *altmisli* class. Several other *altmisli* madrasas would be built in Istanbul and elsewhere in the sixteenth century.

Sultan Bayazid II (r. 1481–1512) also sponsored the building of madrasas in Istanbul, but they did not rival the Sahn or the Ayasofya. The next major initiative in Istanbul was Suleiman I's (r. 1520–1566) construction of a new hilltop Islamic complex, the Suleimaniye, designed by the famous architect Sinan. Sultan Suleiman was by far the greatest builder of madrasas in the history of the Ottoman sultanate and was responsible for two Istanbul *altmisli* madrasas, the Sehzaade madrasa and the madrasa dedicated to Suleiman's father, Selim I (r. 1512–1520), also the work of Sinan. The Suleimaniye was designed as

➤ ABU- AL-QA-SIM ALA- AL-DIN ALI- IBN MUHAMMAD QUSHJI-ZADE (D. 1474)

One of the earliest noted scholars associated with Istanbul madrasas was the central Asian astronomer Abu- al-Qa-sim Ala- al-Din Ali- ibn Muhammad Qushji-zade (also referred to as Ali Kuscu). Possibly born in Samarkand, Qushji was part of the circle of astronomers associated with the observatory of Samarkand and its Timurid ruler, the astronomer-prince Ulugh Beg (d. 1449). Like many Islamic scientists, Qushji was a polymath, writing on physics, mathematics, philosophy, and theology as well as astronomy. In astronomy, he did theoretical work on the motion of Mercury and was head of observation at the Samarkand Observatory. As a physicist, Qushji questioned Aristotelian ideas about the nature of substance and suggested that the earth might be in motion. Qushji did not wish to replace Aristotelian natural philosophy with another philosophy as much as he wished to completely separate astronomy from natural philosophy. After the death of Ulugh Beg, Qushji traveled through the eastern Islamic world

and served different Muslim princes. The ruler of the White Sheep Turkmen of eastern Anatolia, Uzun Hasan (1423–1478), employed Qushji on an embassy to the Ottoman sultan Mehmed II in Istanbul. In 1472 Qushji and his family relocated permanently to the Ottoman capital.

In Istanbul, Qushji taught at the Sahn madrasas and subsequently at the Ayasofya madrasa, at that time the highest-paid position in the Ottoman madrasa system. Some scholars have argued that the emphasis on rational sciences in the Sahn madrasas in part reflects the influence of Qushji on Mehmed II. Although he was only in Istanbul for a short time before his death, Qushji had a major impact on Ottoman education through his students, his descendants who included the philosopher and mathematician Miram Celebi (1475–1525), and his many textbooks and commentaries, which became standard texts in Ottoman madrasas.

—William E. Burns

a show of Suleiman's power and glory as well as piety. In addition to six madrasas, the complex included the Suleimaniye mosque, to which the sultan and his retinue proceeded in state for Friday prayers, public baths, and a hospital and other charitable facilities. Religious sciences dominated at the Suleimaniye madrasas more than they had at Mehmed II's complex, in keeping with the Islamization of the Ottoman state under Suleiman and the growing emphasis on Sharia as the basis of Ottoman law. A madrasa was dedicated to each of the four Sunni schools of legal interpretation. The heads of these four madrasas received 60 akces per diem, putting them ahead of Mehmed II's Sahn madrasas. There were two specialized schools as well. The Darulhadis, a center for the study of *badith*, the traditions associated with Muhammad and his companions, came to be recognized as the highest-ranking madrasa in the empire. Its teacher received 100 akces per day. There was also a medical madrasa, the Dar al-tibb, but its head received only 20 akces, reinforcing the dominance of religious learning in the Ottoman madrasa system. (The Dar al-tibb also only supported 8

students, as opposed to the 15 of the four general madrasas and the Darulhadis.)

The Suleimaniye madrasas were formally integrated into the Ottoman state through the requirement that their heads meet with the grand vizier after prayers on Friday and with the Shaykh al-Islam, the empire's top religious official, on Thursdays. Ottoman madrasas were also essential to the recruitment of religious officials throughout the empire such as the religious judges, or *kadis*, of the major cities. The connection between madrasa teaching and the holding of religious offices became formalized with the creation of a system of connections between which teaching at a particular level of madrasa was associated with promotion to a particular level of religious office. Teaching at a high-level madrasa, preferably in Istanbul, became a prerequisite for the highest Ottoman religious offices such as Shaykh al-Islam.

The madrasas of the Fatih and Suleimaniye complexes and the other madrasas founded by sultans and members of the imperial family were only the tip of the iceberg. In addition to the many madrasas found in Anatolian cities such

as Bursa and Edirne, some of great reputation, Istanbul had well over 100 madrasas. Subjects studied at Ottoman madrasas included the Arabic language, including its grammar and syntax; the Quran; hadith; theology; elocution; rhetoric and preaching; and the principles and application of jurisprudence. Instruction was by a small group method whereby about a dozen students resident at the madrasa read and discussed the material with the instructor.

Although subsequent sultans built madrasas, none rivaled the earlier sultans as madrasa builders. By the late sixteenth century there was a widespread perception among Ottomans that the madrasas were declining due to corruption and nepotism. Some posts of madrasa head became sinecures, held by persons who never actually taught but instead hired scholars at miserable wages to teach the actual classes. The hierarchy of madrasas also became more rigid and elaborate.

—William E. Burns

Bibliography

- Ihsanoglu, Ekmeleddin. "The Madrasas of the Ottoman Empire." Foundation for Science, Technology and Civilization, 2004. <http://www.muslimheritage.com/uploads/madrasas.pdf>. Accessed October 29, 2009.
- Necipoglu-Kafadar, Gülru. "The Süleymaniye Complex in Istanbul: An Interpretation." In *Muqarnas III: An Annual on Islamic Art and Architecture*, edited by Oleg Grabar. Leiden: Brill, 1985.
- Repp, R. C. *The Mufti of Istanbul: A Study in the Development of the Ottoman Learned Hierarchy*. London: Ithaca Press, 1986.

Universities as Centers of European Learning

A revolution in education took place during the European Renaissance that challenged but did not eliminate the medieval scholastic university curriculum based on logic and Christianity. The transition from Europe's Middle Ages to the Renaissance through scholars like Francesco Petrarca, Leonardo Bruni, Lorenzo Valla, and others is essentially the development and acceptance of Renaissance humanism. Humanism was an intellectual movement and educational program that eventually spread to various courts

and centers of learning all over Europe. The program was known as the *studia humanitatis*, or humanistic studies, and was based on the study of Latin grammar, rhetoric, history, poetry, and moral philosophy. Its origins began in Italy in the cities of Florence and Venice and among the ruling families of Milan, Urbino, Mantua, and Ferrara. Humanism tended to be an urban movement that found a home in republics, princely courts, and some universities and schools.

Humanism was generally secular and distinct from the chivalric culture of the nobility and the academic culture of the clergy, although it should not be viewed as pacifistic, egalitarian, irreligious, or anti-Christian. Humanist scholars turned to the ancient civilizations of Rome and Greece to draw inspiration from their literature and history. Renaissance humanists read ancient writers to gain knowledge of moral philosophy and ethics as well as models of governance and behavior relevant to their world. Nevertheless, many humanist teachers and professors, such as Erasmus of Rotterdam, were deeply religious men who emphasized Christian piety and the study of acceptable classical pagan literature as complementary means for improving the moral standards of their age.

The term *umanista* was Italian student slang for teachers or students of the *studia humanitatis*, which seems to have been first used at the end of the fifteenth century. Vittorino da Feltre (1378–1446) was one of the most famous teachers to provide a humanistic curriculum at his grammar school, called the Casa Giocosa, at the court of Mantua in 1423 under the sponsorship of the Gonzaga family. Another famous fifteenth-century school was at the court of Ferrara and was led by Guarino Guarini (ca. 1374–1460) in the service of the Este family. Important teachers like Vittorino and Guarino helped to spread the *studia humanitatis* throughout Italian court culture. These men tended to stress a holistic approach to education by stressing both the physical and intellectual development of students. The training was intense and, some might argue, rather monotonous in terms of learning difficult ancient languages and grammar.

Although students read and studied Latin authors in the medieval curriculum, Renaissance teachers increasingly added humanist

➤ AN EARLY UNIVERSITY BUILDING BOOM

Sixty-three new universities were founded in Europe between 1400 and 1601, such as Turin (1411) and Parma (1601) in Italy, Nantes (1409) in France, St. Andrews (ca. 1410) in Scotland, Louvain (1426) in the Low Countries and Wittenberg in Germany in 1502, the home of Martin Luther's Protestant Reformation. The simple reason for this growth in centers of higher learning is that an increasing number of men wished to pursue a university education. In general, boys studied the traditional seven liberal arts (Latin grammar, Latin rhetoric, logic, arithmetic, geometry, musical theory, and astronomy), and ambitious students continued on to the higher faculties of law, medicine, and theology. Men with law degrees were in great demand from kings, princes, and cities that needed civil servants to contribute to the growth of bureaucracies. Students were instructed in Latin, and the

length of studies varied from 1 to 3 years for a Bachelor of Arts degree, 5 to 7 years for law and medical degrees, and 12 years for a doctorate in theology. Men with BAs who went on to teach at the university were granted an MA, the traditional license to teach the arts, the *Licentia docendi*. Although the degrees were basically similar throughout Europe, the approach to the subjects could vary from university to university. A typical university had 30 to 40 professors and 300 to 500 students. Ambitious students often studied at more than one university, and schools with humanist-based curricula were highly prized. Famous humanist professors could demand high salaries, and students wished to study under them because they believed that they would gain a better understanding of Latin and Greek.

—Mark Loudon

material with a new emphasis on classical style and oratory. Emphasis on pedagogical treatises from ancient thinkers such as Quintilian played a large role in changing Renaissance schooling. The pursuit of eloquence became a defining feature of Renaissance humanism, with its emphasis on the study of language and philology. Public speaking, rhetoric, the study of history, and learning moral philosophy were important components of Renaissance education for both the sons and daughters of Italy's elite ruling families and the middle classes. This education was extremely practical, for these children would someday participate in governing the various city-states of Italy. It is estimated that by the end of the fifteenth century nearly all Latin schools in Italy promoted a humanistic curriculum. The influence of Italian humanist educational ideals spread over the Alps into France, Germany, the Low Countries, Spain, England, and even Poland. A general increase in literacy throughout Italy and Europe led to the demand to increase the number of grammar schools and universities.

There were several new colleges founded at existing universities in these countries that promoted the introduction of classical studies into the existing curriculum. For example, in the first decades of the sixteenth century in England, the

universities of Oxford and Cambridge were endowed with new colleges whose founders encouraged the study of classical learning. English humanist scholars and patrons brought an eclectic experience derived from their studies in Italian schools or elsewhere on the continent. By the sixteenth century the term "humanist" signified a much broader meaning than a teacher of the liberal arts. This label could be applied to anyone who favored the new learning, and it came to denote cultural preference. The Renaissance University had three objectives: some professors produced new scholarship and even new ideas, they all taught their disciplines to students, and the university granted degrees to students that permitted them to teach their subjects throughout the Latin Christian world. By the sixteenth century students influenced by Renaissance education produced a cultured elite, consisting mostly of men but also of some women such as Isabella d'Este (1474–1539), who promoted the humanist educational program in Europe for several centuries to come.

—Mark Loudon

Bibliography

Grendler, P. F. *The Universities of the Italian Renaissance*. Baltimore: Johns Hopkins University Press, 2002.

Grendler, P. F., ed. *Encyclopedia of the Renaissance*. 6 vols. New York: Scribner, 1999.

Nauert, C., Jr. *Humanism and the Culture of Renaissance Europe*. Cambridge: Cambridge University Press, 1995.

Rabil, A., Jr., ed. *Renaissance Humanism: Foundations, Forms, and Legacies*. 3 vols. Philadelphia: University of Pennsylvania Press, 1988.

Academies of Science in Europe

The seventeenth century saw the birth of a remarkable new institution, the scientific academy or society. Academies were originally structured gatherings of intellectuals and writers, sometimes linked to a court but independent of a university. Societies and academies differed from earlier informal gatherings of the learned in that they had written rules, met on a fixed schedule, had a roster of members, and had their own physical space. The origins of the academy were closely linked with humanism and were strongest in Italy, the heartland of humanism. The famous Platonic Academy of Florence in the late fifteenth century actively disseminated Neoplatonic philosophy. The scientific academy emerged in the seventeenth century, again originally in Italy. Rome's shadowy Academy of the Lincei or "Lynxes," the private project of the botanist Prince Federico Cesi (1585–1630), existed in various forms from 1603 to 1629 and was noteworthy for the participation of Galileo Galilei. The first academy devoted to experimentation, the Academy of Experiment, was sponsored by the Grand Duke of Tuscany and lasted from 1657 to 1667. By the late seventeenth century the most important European scientific societies by far were the Royal Society in England, chartered in 1662, and the Royal Academy of Sciences in Paris, founded in 1666.

The new societies had a much stronger institutional and corporate existence no longer dependent on a particular patron or intellectual leader and were much more closely tied to the state than their predecessors. The Royal Society and the Royal Academy were permanent institutions located in capitals of large kingdoms and flaunted their royal patronage in their names. They had libraries and collections and were often charged with government functions such as

overseeing observatories or advising the government on scientific and technological projects, often those related to economic development. Despite these similarities, they represented fundamentally different models.

The Royal Society, lacking state funding, had male-gender upper-class social status (rather broadly defined) and an interest in natural philosophy as sufficient qualifications for membership. It was funded by dues, which it often had trouble collecting. The Royal Society did not have a fixed number of members and lacked an internal hierarchy among its fellows, all of whom were theoretically equal. Institutions following the Royal Society model dominated the British Isles, Britain's American colonies, and the Dutch Republic, but the French Royal Academy proved more influential in French provincial societies and elsewhere on the European continent. The Royal Academy was a professional body whose members were limited in number, were ranked and paid a salary by the state, and were expected to produce scholarship that would redound to its glory and profit.

One significant similarity was that neither the Royal Society nor the Royal Academy imposed a religious test on members, promoting an idea of science as nonsectarian. Catholic Sir Kenelm Digby was an early member of the Royal Society in Protestant Britain, and Dutch Protestant Christiaan Huygens was a member of the Royal Academy in Catholic France. (The Royal Society would admit its first Jewish fellow, Emanuel Mendes da Costa, in 1747.) The German philosopher Gottfried Wilhelm Leibniz (1646–1716), a great believer in scientific organization, promoted the establishment of academies on the French model in Berlin, the capital of Prussia (founded in 1700), and St. Petersburg, the capital of Russia (founded in 1724 after Leibniz's death). These academies were originally mostly staffed by French and other west European scientists. Along with the Swedish Academy at Stockholm, founded in 1739, the academies and societies of France, Britain, Prussia, and Russia would lead European science in the eighteenth century. They were followed by a host of lesser societies in the provinces or in smaller states.

Academies and societies, not universities, dominated institutional science in the

► WOMEN AT THE BOLOGNA ACADEMY OF SCIENCES

Bologna, home of the University of Bologna, was a leading center of natural study in Italy, located in the Papal States. However, a permanent academy was founded only in 1714 as part of the university, with five salaried professorships for scholars expected to do research and publish. The academy was supported by the Senate of Bologna and the pope. It was expanded and put on a sounder financial footing by Pope Benedict XIV (1740–1758), a native of Bologna. Benedict expanded the class of paid academicians expected to publish and endowed the academy with revenues derived from suppression of a school for the poor.

Like other scientific societies, the Bologna Academy published a journal and contributed to joint astronomical observations. Despite Benedict's ambition, it had little impact outside Italy. The academy did not offer prizes, which was one way that provincial societies could attract interest in other parts of Europe, and suffered with the rise of new Italian scientific centers in Pavia and Turin.

One unique way in which the Bologna Academy sought to distinguish itself was by including women. The most noted was the University of Bologna physics professor Laura Bassi (1711–1778), who by the time of her death was the highest-paid member of the academy. The academy also looked outside Italy to recruit distinguished women who could not hope to be admitted to scientific organizations in their own countries. The French Newtonian Emilie Du Chatelet was admitted to the academy in 1746. Other women invited to join included the mathematician Maria Gaetana Agnesi (1718–1799), although she never formally accepted the invitation or came to Bologna. Two more women were admitted in the early nineteenth century: the obstetrician Maria Dalle Donne (1776–1842) in 1800 and the Greek professor Clara Tambaroni in 1802. The academy closed in 1804.

—William E. Burns

eighteenth century. The man almost universally acknowledged as Europe's greatest scientist, Isaac Newton (1642–1727), was president of the Royal Society from 1703 until his death. Membership in a scientific society, or preferably several, was vital for establishing the credentials of Europe's male scientists, and memberships were frequently listed after the author's name on the title pages of books. (Women, with very few exceptions, mostly Italian, were barred from membership.) The most important scientific periodicals were associated with scientific societies, including the Royal Society's *Philosophical Transactions* and the Royal Academy's monthly *Journal des Savants* and annual *Histoires and Memoirs*. Major societies and many minor ones also sponsored periodical publications and set problems for prize competitions. Scientific societies were only part of Europe's vast and growing array of learned institutions, and often a scientific society existed as one part of a large academy devoted to other topics as well, such as literature and industry. Groups specifically and exclusively devoted to science were usually found where there was a large concentration of

resources, such as the national capitals of Europe's most powerful states. Other specialized societies, such as societies for medicine, technology, agriculture, and economic development, also had scientific interests.

Communication and cooperation between scientific societies also grew in the first half of the eighteenth century, a process in which the Royal Society and the Imperial Academy of St. Petersburg were the leaders. Communication was mostly in the form of correspondence and the exchange of publications. Serious cooperation in joint scientific endeavors began in the 1750s and 1760s, and the worldwide campaign to observe the transits of Venus in 1761 and 1769 brought in every leading scientific society and many of the minor ones to sponsor expeditions and make and record observations.

The second half of the eighteenth century saw a wave of society creation, as European civic leaders believed that a society was essential to the prestige of their cities. Several societies were formed in Germany. The Göttingen Academy, closely connected with its university, was founded in 1752, followed by the Erfurt Academy

in 1754 and the Bavarian Academy of Sciences in Munich in 1759. The first enduring American society, the American Philosophical Society, was founded in 1768. The formal chartering of a scientific society often occurred after years of organization and informal meetings of local scientific investigators, indicating the vitality of scientific culture in eighteenth-century Europe.

—William E. Burns

Bibliography

- Hahn, Roger. *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666–1803*. Berkeley and Los Angeles: University of California Press, 1971.
- Hunter, Michael. *Establishing the New Science: The Experience of the Early Royal Society*. Woodbridge, Suffolk, UK, and Wolfeboro, NH: Boydell, 1989.
- McClellan, James E., III. *Science Reorganized: Scientific Societies in the Eighteenth Century*. New York: Columbia University Press, 1985.
- Moran, Bruce, ed. *Patronage and Institutions: Science, Technology, and Medicine at the European Court, 1500–1750*. Rochester, NY: Boydell, 1991.

The Jesuits and Intellectual Inquiry

The Society of Jesus, or Jesuits, a Roman Catholic religious order, was founded by a Spanish soldier-turned-priest Ignatius Loyola (1495–1556) and his small band of followers. The group was recognized by Pope Paul III (1534–1549) in 1540. From the beginning, the Jesuits were an intellectually elite order, and in a few decades their schools and universities throughout Europe and its colonies numbered in the hundreds. Intellectual inquiry was an important part of the Jesuit mission, but it was rigidly subordinated to authority both within the order and within the Catholic Church as a whole.

Intellectual inquiry played many roles in the Jesuit mission. Jesuit schools and colleges were ubiquitous in Catholic Europe, and even Protestants drew on the excellent Jesuit textbooks. Jesuit education was marked by a curriculum that combined humanism and scholasticism. Although the Jesuits were not founded to combat the Protestantism that had spread through most

of Europe in the preceding decades, they were quickly identified with the Catholic struggle. Intellectual combat with Protestant polemicists required vast knowledge and research in theology, philosophy, the Bible, and Church history. Jesuit champions included the theologian Robert Cardinal Bellarmine (1542–1621), the author of massive and erudite books defending the Catholic position, and Francisco de Suarez (1548–1617), a profoundly original theologian in the scholastic tradition who spent much of his career at Spanish Jesuit colleges. Another role was service to the administrative needs of the Church. The Jesuit astronomer and professor Christoph Clavius (1537–1612) led in the creation of the Gregorian Calendar, proclaimed by Pope Gregory XIII (pope during 1572–1585). Jesuit intellectual expertise also made them valuable to many Catholic and non-Catholic sovereigns, from the Chinese emperor Kangxi (r. 1661–1722) who drew on Jesuit cartographic skills to map his kingdom to the European rulers who relied on Jesuit institutions to train mathematicians and navigators.

One of the most intellectually demanding areas of Jesuit work was the missionary field. Along with other Catholic missionary orders, Jesuits were present on every inhabited continent except Australia, of which Europeans were ignorant. In “civil” societies with cities and written literature such as China and Japan, the Jesuits followed a distinctive strategy that required engagement with the intellectual and religious traditions of the social elites they were trying to convert. Jesuit missionaries sometimes even adopted indigenous lifestyles: Robert de Nobili (1577–1656) lived as a south Indian religious ascetic, and Matteo Ricci (1552–1610) lived as a Chinese Confucian intellectual. This required deep study of foreign languages, literature, and cultures. The Jesuits were responsible for the first presentation of Confucian texts in Latin, *Sapientia Sinica* (Chinese Wisdom, 1662), the first of a number of Jesuit-mediated Confucian texts that would appear in European languages in the late seventeenth century, as well as the first presentation of Aristotelian philosophy in Chinese, *Studies to Exhaustively Master Principles* (1683).

While Jesuits in the Americas had far less interest in the high culture of the peoples they

lived among, they produced a steady stream of works, from Jose de Acosta's *Natural and Moral History of the Indies* (1590) to Francesco Saverio Clavijero's four-volume *Ancient History of Mexico* (1780–1781). As the Jesuits increasingly drew from the Creole population of American-born Spaniards, by the eighteenth century their scholarship grew increasingly patriotic, defending the fertility of their lands and the greatness of their Pre-Columbian civilizations from the attacks of “enlightened” Europeans.

By 1750, the Jesuits had around 270 mission stations scattered over the globe. As missionaries, they both taught Western science and gathered information for Western scientists. Their worldwide reach was unparalleled until the rise of scientific societies in the eighteenth century. It was the Jesuits who introduced quinine, a cure for malaria, from South America to Europe. In one of the first efforts at global coordination of data gathering, the French priest and astronomer Marin Mersenne (1588–1648), a member of the rival Minim order, urged the Jesuits to make coordinated observations of lunar eclipses and magnetic variation. He recognized that only the Jesuits combined a global presence with the necessary training.

Jesuit inquiry was intended to serve the Church, not challenge it. Jesuits were required not just to defend Catholic doctrine but also to believe it. Jesuit authoritarianism did not merely apply to strictly religious matters. Although there was some intellectual pluralism among the early Jesuits, in 1611 General of the Order Claudio Aquaviva (1543–1615) decreed that Jesuits were required to defend the authority of Aristotle in philosophy. Jesuits were also required to support the theology of Thomas Aquinas. In the seventeenth century, Jesuits fell further and further behind other European scientists, Protestant and Catholic, who were free to reject Aristotle's authority.

The area where Jesuit authoritarianism most directly limited inquiry was astronomy, where Jesuits consistently defended geocentrism. In the trial of Galileo Galilei (1564–1642) in 1633, Jesuits, such as the astronomer and sunspot expert Christopher Scheiner (1573–1650), led the opposition, although it was the Dominicans who staffed the Roman Inquisition that eventually

➤ ATHANASIVS KIRCHER, S.J.

The German Athanasius Kircher (1602–1680) was the most distinguished and versatile Jesuit thinker of the mid-seventeenth century. Kircher entered the Society of Jesus in 1616 and was ordained a priest in 1628. In 1631 Kircher was driven from Germany by the Thirty Years' War. He was invited to Vienna in 1633 to be imperial mathematician to Holy Roman Emperor Ferdinand II but was diverted to Rome by the lure of papal patronage. Kircher became professor of mathematics and oriental languages at the Jesuit Collegio Romano. At Rome, Kircher was at the center of the worldwide Jesuit intellectual network and thus was in a unique position to gather information. He built an enormous museum in Rome, with objects from all over the known world, that became one of the glories of the city.

Kircher published over 40 books, many of them massively illustrated tomes of over 1,000 pages. Humanism, magnetism, optics, music, geology, fossils, Egyptology, astronomy, mathematics, chemistry, and Sinology did not exhaust his interests. *The Subterranean World* (1665) theorized that earthquakes and volcanic eruptions were caused by a network of underground fires. On a trip to Sicily, Kircher had witnessed an eruption of Etna and climbed to the edge of Vesuvius, inspiring his study of nature. Kircher's *Magnetism, or the Magnetic Art* (1665), contained a scheme for measuring a magnet's strength by using a balance. For example, *Magnetism* concluded with the discussion of God as “Nature's magnet.” Kircher's most famous work was his study of hieroglyphics, which he treated as complex symbols revealing ancient holy truths known to the Egyptians. Kircher was among the first to treat the Coptic language as relevant to Egyptology in his *Introduction to Coptic, or Egyptian* (1636). His Egyptian studies were given to the world in the massive *Oedipus Aegyptiacus* (1652–1654), which made Kircher a European celebrity.

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passed judgment on Galileo. Seventeenth-century Jesuits shifted from Ptolemy's purely earth-centered system to the Danish astronomer Tycho Brahe's version in which the sun rotated around the earth and the other planets around the sun. However, as astronomers, including

some Catholic astronomers, increasingly accepted the Copernican sun-centered system, Jesuits were less able to participate in theoretical discussions, while they continued to lead in some areas of observational astronomy.

Although the grip of Church authority gradually lessened in the eighteenth century, the Jesuits were increasingly marginalized as new intellectual forces, such as the European network of scientific academies, took a more prominent role. Jesuits combated the Enlightenment as they had once combated Protestantism, even though many of its champions had been educated at Jesuit schools. The high-powered journal of French Jesuits, the *Journal des Trevoux*, ably defended Catholic orthodoxy against both the Enlightenment and the Catholic Jansenist movement. Jesuit inquiry was also limited by many Catholic governments turning against them and expelling them from their kingdoms and possessions. This attack culminated in the suppression of the Society of Jesus in 1773.

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Bibliography

- Blackwell, Richard J. *Galileo, Bellarmine and the Bible*. Notre Dame, IN: University of Notre Dame Press, 1991.
- Findlen, Paula, ed. *Athanasius Kircher: The Last Man Who Knew Everything*. New York: Routledge, 2004.
- O'Malley, John W., S.J., Gauvin Alexander Bailey, and Steven J. Harris. *The Jesuits II: Cultures, Sciences and the Arts, 1540–1773*. Toronto: University of Toronto Press, 2006.
- O'Malley, John W., S.J., Gauvin Alexander Bailey, Steven J. Harris, and J. Frank Kennedy, S.J., eds. *The Jesuits: Cultures, Sciences and the Arts, 1540–1773*. Toronto: University of Toronto Press, 1999.

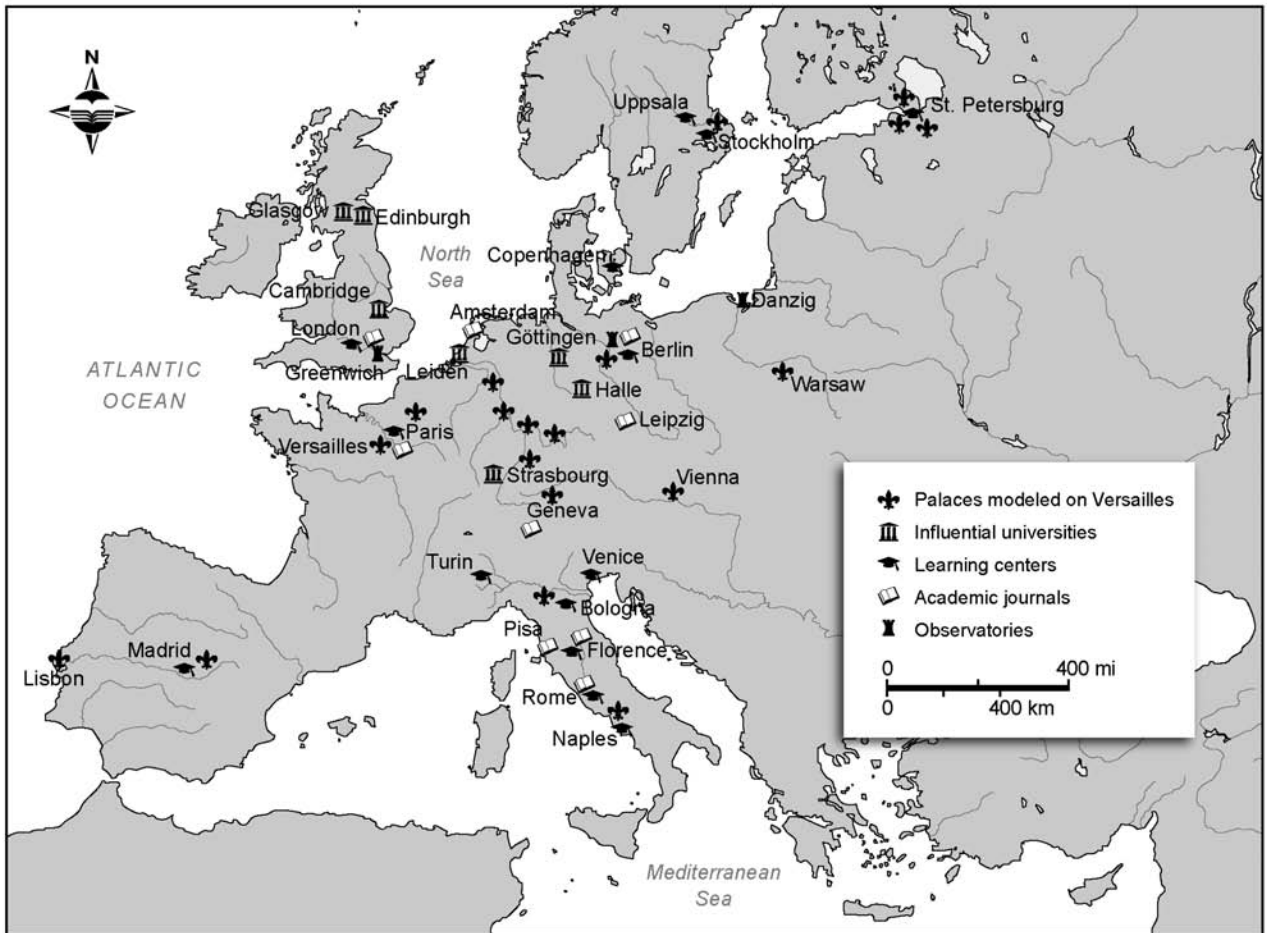
Salons, Women, and the Spread of the Enlightenment

The salon was a characteristic institution of the French Enlightenment. It had roots in the early seventeenth century, when the idea had originally been imported from Italian Renaissance courts. A model for early salons was the polished mixed-gender conversational culture found in Baldassar Castiglione's *Book of the Courtier*. Salons were a way of introducing the courtly

refinement characteristic of the Italian elite to the comparatively crude French court. (Catherine de Vivonne, the Marquise de Rambouillet [1588–1665], one of the earliest and most influential hostesses, had an Italian mother.) Salons were held on a weekly or biweekly basis in a space specifically set aside for the purpose. The seventeenth-century salon space was richly decorated, with mirrors, comfortable armchairs, porcelain, and an emphasis on refinement. Gatherings were held for the purpose of conversation, which had to follow certain forms in terms of vocabulary and forms of address. The purification of the French language was one of the missions of the early salons. Salons were sponsored and regulated by hostesses, upper-class women. They provided some space for female intellectual activity, and although few seventeenth-century French salon hostesses themselves wrote, they sometimes fostered female talent such as the novelist Madeline de Scudery (1607–1701), who was a member of the Rambouillet circle before becoming a salon hostess herself. The growth of female intellectual activity and the opposition it aroused from men can be seen in two plays of the popular French comic playwright Molière (1622–1673) ridiculing educated women, *Les Precieuses Ridicules* (1659) and *Les Femmes Savantes* (1672). Both were quite successful as plays and were considered classics of French literature, but they did not stop the growth of salons and women's intellectual culture.

The late seventeenth century saw the increased popularity of the “mechanical philosophy” of René Descartes (1596–1650). Cartesianism legitimated female intellectualism by claiming that souls were genderless although housed in bodies that were male or female, contributing to the spread of intellectualism among upper-class women. Cartesianism also has an advantage in that it is expressed in elegant French that women could read rather than the ponderous Latin of the Scholastic philosophers or Descartes's rival Pierre Gassendi (1592–1655), which restricted itself to an educated male readership. (It was at the urging of a salon hostess, Madame de la Salbière, that François Bernier produced his *Abridgement of the Philosophy of Gassendi*, which made the philosopher's thought available in French.) Descartes himself had friendships with several

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learned women and claimed that one reason he wrote in French was to be read by women. Since it was highly unusual for a woman to be educated in Latin, the spread of serious literature in vernacular languages opened up intellectual life to female participation and was in turn promoted by salon hostesses and other female intellectuals. Although some salon women had reservations about Descartes's approach to living things as machines, Cartesianism swept the salons in the second half of the seventeenth century, one key in its victory in French culture as a whole.

The intellectual salon of the eighteenth century, basically a Parisian phenomenon, was less aristocratic and less concerned with the refinement of manners and language than its seventeenth-century predecessors. It was a place where male middle-class and noble intellectuals

could meet on a basis of social equality and where the hostess was a gatekeeper, determining who was admitted and acting as a facilitator of introductions and an authority, keeping the conversation under control. (There were occasional male-run salons, but they were very much the exception.) Running a salon was a substantial commitment of time, energy, and money. Would-be salon hostesses were drawn from the social and economic elite and often attended other salons, sometimes for decades, before opening their own. Salon hostesses were also often intellectual celebrities in their own right, particularly in the medium of correspondence, often seen as more appropriate for a woman than writing directly for publication. Parisian salons made an important contribution to the culture of the Enlightenment, and admittance to a

► EMILIE DU CHATELET, A WOMAN OF THE FRENCH ENLIGHTENMENT

Emilie du Chatelet (1706–1749) was a leader in eighteenth-century French physics. Born into an aristocratic family, du Chatelet was exposed to French intellectual culture in her mother's salon. By the early 1730s du Chatelet was permanently settled in Paris, where she frequented salons and, with the acquiescence of her tolerant husband, began a series of affairs with leading thinkers, including the physicist Pierre-Louis Moreau de Maupertuis (1698–1759) and Voltaire (1694–1778), whom she met in 1733. Voltaire drafted du Chatelet, whose mathematical skills far exceeded his own, into his campaign for the replacement of Cartesian physics with that of Isaac Newton (1642–1727). Du Chatelet and Voltaire operated from a base at Cirey, a rural estate. There the two carried on experiments and worked on their writings. Du Chatelet's grasp of mathematics made her assistance vital to Voltaire in writing his Newtonian textbook, *Elements of the Philosophy of Newton* (1738). Du Chatelet's first published work, the anonymous *Institutes of Physics* (1740),

combined Newtonian ideas with some of those of Newton's rival, the German philosopher Gottfried Wilhelm Leibniz (1646–1716), such as *vis viva* (living force). (Voltaire was horrified at her respect for Leibniz, whom he loathed.) The work's anonymity was considered appropriate for the work of a woman. However, in the early 1640s du Chatelet also carried on a public controversy with Dortous de Mairan (1678–1771), the secretary of the Royal Academy of Sciences, over the formula for momentum. Du Chatelet's other significant work was a French translation of Newton's *Mathematical Principles of Natural Philosophy* (1687), drawing on a number of editions, commentaries, and popularizations of Newton. It included a commentary incorporating work done on mathematical physics since Newton's time. It was completed in 1749, shortly before du Chatelet's death in childbirth, but was not published until 1759 and remains the only translation of Newton's masterpiece into French.

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salon was an important step in the career of the young Parisian professional intellectual. In addition to the prestige of salon membership, the salon was a good place to read one's works, circulate manuscripts, and facilitate contacts. Certain salon hostesses were influential in securing admittance to the Parisian academies, such as the French Academy and the Royal Academy of Sciences. At the other end of the scale, hostesses competed for the major intellectual stars who would lend glamour to their salons. When Julie de L'Espinasse (1732–1776) left the salon of the Marquise de Deffand (1697–1780) to establish her own, she took with her one of Deffand's stars, the mathematician and writer Jean le Rond d'Alembert (1717–1783), leading to a violent split with Deffand and a close relationship with d'Alembert. Many male visitors to Paris, such as David Hume (1711–1776) and Benjamin Franklin (1709–1770), were particularly delighted by the close female attention given to major intellectuals. This delight was not universal; Jean-Jacques Rousseau (1712–1778) came to despise the salon hostesses, whom he saw as having abandoned

the female duty of domestic life to corrupt the virtue of the male public with artificiality.

The salon was one of the few institutional venues for freedom of speech in Old Regime France. Salon culture was generally identified with the Enlightenment against its conservative opponents. Within this broad consensus, salons were often identified with an intellectual or political party. Suzanne Necker's (1737–1794) salon helped advance the career of her husband, the Genevan banker Jacques Necker (1732–1804). Not much evidence survives as to what people in salons actually talked about. There was somewhat less emphasis on the female intellectual contribution in the eighteenth century than in the seventeenth-century salons. The principal literary art followed by eighteenth-century salon hostesses was correspondence, and many of them became well known for their letters, which were intended to be circulated after being read by their recipient. Madame de Deffand's correspondence with the English writer Horace Walpole (1717–1797) is one example.

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Bibliography

- Goodman, Dena. *The Republic of Letters: A Cultural History of the French Enlightenment*. Ithaca, NY: Cornell University Press, 1994.
- Harth, Erica. *Cartesian Women: Versions and Subversions of Rational Discourse in the Old Regime*. Ithaca, NY: Cornell University Press, 1992.
- Sutton, Geoffrey V. *Science for a Polite Society: Gender, Culture and the Demonstration of Enlightenment*. Boulder, CO: Westview, 1995.

William King, Archbishop of Dublin

The career of William King (1650–1729) spanned the great upheaval in Irish society following the defeat by William, Prince of Orange, of James II during the Glorious Revolution (1688–1689), known in Ireland as the Williamite War. During the uprising King, then dean of St. Patrick's

Cathedral in Dublin, found himself one of only two senior clerics of the Church of Ireland still resident there. The demands of this situation heightened King's intellectual skills, honed his sense of Irish distinctiveness, and ultimately secured an Irish identity for a significant portion of the native Irish Protestant community. An immediate consequence of this was a flourishing, particularly in Dublin, of a vibrant Irish Anglican intellectual community that would produce such authors as Jonathan Swift, Oliver Goldsmith, and Edmund Burke.

Upon William's landing in England, Richard Talbot, earl of Tyrconnell and James II's viceroy in Ireland, essentially declared martial law and aggressively promoted



William King, Archbishop of Dublin during 1703–1729. (Mervyn Archdall, *Monasticon Hibernicum*, 1786)

➤ ARCHBISHOP WILLIAM KING AND THE ORIGIN OF EVIL

Archbishop William King wrote *Essay on the Origin of Evil* in 1702 in which he discusses evil and its role in the universe. In it, King said that evil was a natural part of the universe, put there by a benevolent God who wished people to attain their own virtue by having to battle against evil. This went against the traditional view of good and evil being equally powerful forces, pitted against each other in the battle for human souls. The essay created a controversy among theologians and philosophers alike and influenced the utilitarian movement in the eighteenth century.

“Why God has created Free Agents.

I. . . . 'Tis certain that God was not compell'd by any necessity to create any thing at all, he might therefore have prevented all Moral Evils, if he had not endow'd any Being with Free Choice; for so there would have been nothing that could sin. But such a monstrous Defect and *Hiatus* would have been left in Nature by this means, *viz.* by taking away all Free Agents, as would put the World into a worse Condition than that which it is in at present, with all the Moral Evils that attend it, tho' they were multiply'd to a much greater Number.

II. For in the first place, if we set aside Free Agents, *i.e.* those which have the Principle of Action within themselves, there is properly nothing at all Self-active, for all other Beings are merely passive: there is indeed some kind of Action in Matter, *viz.* Motion; but we know that it is passive even with regard to that; 'tis therefore the Action of God upon Matter, rather than of Matter itself; for it does not move itself, but is moved. Without Free Agents then the whole World would be a mere *Machine*, capable of being turn'd any Way by the Finger or Will of God, but able to effect nothing of itself. Nay the whole Work of God could not of itself exert one single Act or Thought, but it would be totally Brute and Stupid, as much as a Wheel or a Stone. . . . We need not say, how much a World thus constituted would be inferior to the present, not how in-commodious and unworthy of its Divine Author.”

—Christopher Fauske

Source

Archbishop William King, *Essay on the Origin of Evil (De Origine Mali)* by Dr William King, Late Lord Archbishop of Dublin. Translated from the Latin . . . (London, 1731), 229–230.

the cause of the Catholic majority in Ireland. The majority of the members of the Church of Ireland with means fled to England. The ultimate success of William's forces, however, appeared to offer little comfort to the Church of Ireland, for victory had been secured almost entirely by anti-Episcopal Dutch Calvinist regular troops and Irish Presbyterians of Scottish descent who were demanding, at a minimum, that religious toleration be introduced in Ireland for all Protestants. In such a climate, the Church of Ireland needed a champion who could express himself with clarity and conviction. King emerged as such a champion. (Ironically, he was a convert from the Presbyterian faith of his father, a Scottish settler in Ireland.)

The publication that brought King to the attention of the public was his defense of the Anglicans who had remained in Ireland after 1688, *The State of the Protestants of Ireland* (1691). His argument had to carefully thread defending the Irish Anglicans' apparent loyalty to James II and celebrating William's victory while acknowledging the Anglican doctrine of passive obedience, which forbids political opposition to the rightful hereditary monarch. The work was influential enough to give the Irish Anglican hierarchy sufficient time to reestablish itself in Dublin. *The State of the Protestants* was also a distinctly Irish tract, laying a foundation for such seminal works as William Molyneux's *Case of Ireland* (1698) that would lead to increasingly well-defined philosophical espousals of rights of national identity and significantly influence the thinkers of the American Revolution.

King became active in all aspects of Irish intellectual and spiritual life. He produced two seminal works of Anglican theology, the 1709 sermon *Divine Predestination and Foreknowledge* and, more importantly, his 1702 *De Origine Mali* (*Essay on the Origin of Evil*). *De Origine* stimulated a spirited argument among intellectuals across Europe. (Pierre Bayle identified weaknesses in King's thought, while Gottfried Leibniz led a defense of the basic tenets of the work.) King was also one of the primary forces behind the reinvigoration of the course of study of Trinity College Dublin, supported efforts to translate the Bible into Irish, and attempted to oversee the creation of charity

schools to spread Anglican education (which he envisioned as engaging the liberal Enlightenment worldview). Politically, King's life was perhaps more one of failure than success; spiritually and intellectually, his contribution to Irish, British, and West European thought is still very much underappreciated.

—Christopher Fauske

Bibliography

- Fauske, Christopher J., ed. *Archbishop William King and the Anglican Irish Context, 1688–1729*. Dublin: Four Courts, 2004.
- King, Charles Simeon, ed. *A Great Archbishop of Dublin, William King, D.D., 1650–1729*. London: Longmans, 1906.
- O'Regan, Philip. *Archbishop William King of Ireland (1650–1729) and the Constitution in Church and State*. Dublin: Four Courts, 2000.

Universities and Intellectual Centers in Colonial North America

Less than two decades after the *Mayflower's* arrival in the New World, Puritan émigrés from England in 1636 established the British colonies' first university, Harvard. It was the third university to be established in the Americas, as both the University of San Marcos in Lima, Peru, and the Royal and Pontifical University of Mexico were chartered in 1551 by royal decree. By the eighteenth century more colleges had been established, including the College of William and Mary (1693), King William's Secondary School (later St. John's College, 1696), Yale (1701), Princeton (1746), Queen's College (later Rutgers University, 1766), Dartmouth (1771), and Royal and Literary University of Guadalajara (1791). Elites were also trained in secondary schools, the first of which was the Boston Latin School (1635). Schools were also founded for Native Americans largely with an eye to spreading Christianity, including Harvard's brief seventeenth-century experiment, the Indian College, that boasted only one graduate. Dartmouth College also had its origins as a "charity school" for Native Americans in the mid-eighteenth century.

The main goal of these early institutions was to educate and train ministers. The seventeenth-century curriculum at Harvard resembled that

► THE ROYAL AND PONTIFICAL UNIVERSITY OF MEXICO

New Spain's religious leaders first proposed a university in 1536 that would offer both training for clergy and secular learning. In 1551 Charles V's royal decree created both the Royal and Pontifical University of Mexico and the University of San Marcos in Lima, Peru. These decrees were followed by papal bulls that officially established the institutions several years later. Both were modeled on the University of Salamanca, Spain's oldest university, founded in 1254, which like its New World counterparts had financial support from both the Crown and the Vatican. Subject areas taught included the traditional arts of theology, canon law, civil law, and humanities. Soon after, medicine was added to both universities. The library had 10,000 volumes and was open to the public. At the Royal and Pontifical University of Mexico, the Chair of Medicine was established in 1578, a Chair of Vespers (an early evening lecture) was established in 1599, the Chair of Surgery and Anatomy was established

in 1621, and in 1637 a Chair of Astrology and Mathematics was established. Much of the education relied on the scholastic model that followed the traditions of Aristotle and Saint Thomas Aquinas. Professors offered lectures followed by a disputation or a debate. Not all learning was confined to lecture halls. As of 1645, medical students in Mexico City were required to attend dissections held every four months at the Royal Hospital for Indians. Royal decree required that universities also include the studies of indigenous languages, and chairs for the study of Nahuatl and Otomi were established in 1627. The rector of the college in Mexico (as in Salamanca) could judge crimes committed on the campus. The rector, however, was not allowed to impose harsh punishment such as mutilations or executions. As in Salamanca the university in Mexico had a dungeon, though it is said that the dungeon was rarely used.

—Fred Nadis

of medieval universities in Europe. Both Harvard and the University of Mexico lagged behind European developments in thought and science. The main subjects were philosophy, with an Aristotelian approach; the study of "learned" languages, such as Hebrew, Latin, and Greek; and belles lettres. Logic, ethics, geometry (algebra was not added to the curriculum until 1721), and astronomy were also objects of study. There was an effort to focus each day on one topic, or disputation, as in medieval universities. Charles Morton, versed in European scientific thought, came from England to Harvard as a fellow and vice president in 1686. Written in part in rhymed couplets, Morton's *Compendium Physicae* was adopted at Harvard and remained the primary science text in the colonies until 40 years later, when Isaac Greenwood took the Hollis Chair of Natural Philosophy at Harvard and his text *Newtonian Experimental Course on Mechanical Philosophy* became the standard.

Cultivation of the sciences was welcome in Puritan circles. Natural theology encouraged the study of nature as a way of appreciating divine handiwork. Books such as John Ray's *The Wisdom of God Manifested in the Works*

of Creation (1691) were popular in private libraries. Educated in Europe, John Winthrop Jr. (1605–1676), son of the first governor of the Massachusetts Bay Colony, pursued interests in alchemy, chemistry, astronomy, and medicine; he set up the colony's first ironworks, acted as a physician, and after the founding of the Royal Society of London for Improving of Natural Knowledge in 1660 became the first colonist to become a fellow. Harvard's early graduates included the clergyman, colonial leader, and later Harvard president Increase Mather (1639–1723) and his son Cotton Mather (1663–1728), a polymath who entered the university at age 11. In addition to his duties as a minister, Cotton Mather, a fellow of the Royal Society, wrote numerous books on subjects ranging from theology to history and had interests in natural history, agriculture, and medicine. He was a central figure in the controversial introduction of smallpox inoculations, an indigenous practice in western Africa, to the colonies.

While the university system in colonial New England helped produce keen minds including Thomas Jefferson and James Madison, both of whom were educated at William and Mary, scientific and technical knowledge required other

routes of diffusion. Following the formation of the Royal Society in Britain, there were several efforts to set up a similar society in the colonies. The idea was first proposed by Increase Mather, and half a century later the botanist and botanical collector John Bartram made a similar proposal. After first promoting Bartram's idea, Benjamin Franklin (1706–1790) succeeded in establishing the first such institution: the American Philosophical Society. In 1743 Franklin circulated his pamphlet *Proposal for Promoting Useful Knowledge among the British Plantations in America*. The pamphlet urged "That one Society be formed of Virtuosi or ingenious Men residing in the several Colonies, to be called The American Philosophical Society." The group would always have as standing members "a Physician, a Botanist, a Mathematician, a Chemist, a Mechanician, a Geographer, and a general Natural Philosopher, besides a President, Treasurer and Secretary." These members were to be charged with corresponding and disseminating knowledge to American Philosophical Society members. In addition to botany, the society would consider mining and minerals, medicine, chemistry, mathematics, stock breeding, and "philosophical experiments." The society formed, met, received acclaim from Europe, but soon after dissolved. It was revived 20 years later and has survived to the present.

One of the society's earliest publications (translated into several languages because of demand), *An Account of the New Invented Pennsylvania Fire-Places*, was an embellished sales pitch for the Franklin stove to benefit a friend of Franklin who was manufacturing the stoves, which Franklin had left unpatented. Franklin's reputation as a leading scientist was made in 1751 when Peter Collinson, president of the Royal Society, published Franklin's letters collected from 1747 to 1750 on electricity. When the disbanded American Philosophical Society was revived in 1767, it merged with several other groups to create an institution even more clearly modeled after the British Royal Society. Franklin was elected president of the new-formed society in 1769, an office he held until his death in 1790.

A second scientific society, the Virginia Society for the Promotion of Useful Knowledge, was founded in 1773.

American Philosophical Society members and associates included Franklin, physician Benjamin Rush, physician Thomas Bond, botanist John Bartram, mathematician and astronomer David Rittenhouse, ornithologist John James Audubon, and Thomas Jefferson. In 1794 Charles Willson Peale, the portrait artist, taxidermist, and exhibitor of natural wonders and technological innovations, moved his (and North America's) first museum to the American Philosophical Society headquarters, Philosophical Hall. Peale's supporters included George Washington and Thomas Jefferson.

Later institutions that promoted the "useful arts" in North America included numerous "mechanic's institutes," modeled after such societies in England and aimed at diffusing technical knowledge for mechanics, inventors, and industrialists. The first in the United States was the New York Mechanic and Scientific Institution (founded in 1822). A similar society, the Franklin Institute, was created in Philadelphia and named after Franklin; it is still in existence today.

—Fred Nadis

Bibliography

- Boyer, Carl B. "Charles Morton's 'Compendium physicae.'" *American Historical Review* 47.10 (October 1941): 85–87.
- Burns, William E. *Science and Technology in Colonial America*. Westport, CT: Greenwood, 2005.
- Morison, Samuel Eliot. *Harvard College in the Seventeenth Century*. Cambridge, MA: Harvard University Press, 1936.
- Parrish, Susan Scott. *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World*. Chapel Hill: University of North Carolina Press, 2006.
- Sellers, Charles Coleman. *Mr. Peale's Museum: Charles Willson Peale and the First Popular Museum of Natural Science and Art*. New York: Norton, 1980.
- Van Doren, Carl. "The Beginnings of the American Philosophical Society." *Proceedings of the American Philosophical Society* 87(3), Bicentennial of Thomas Jefferson (July 14, 1943): 277–289.

■ Introduction: Cycles of Tolerance and Persecution

In the early modern period many societies were dealing with the question of religious toleration. Reasons for this include the Protestant Reformation, which by dividing the Latin Christian world made toleration between Christian communities a lively issue, and the global expansion of Christianity, which brought intolerant Christian regimes to many new areas of the world, and forced non-Christian governments such as those of China and Japan for the first time to confront Christian churches and decide what to do about them. The spread of the printing press also provided a way for religious ideas to propagate themselves in hostile societies. And the centralized states of Asia, the so-called Gunpowder Empires, were allied with specific religions and ideologies, from the Sunni Islam of the Ottoman empire to the Neo-Confucianism of Qing China, and each had to decide how religious communities not sharing the politically dominant ideology in their vast empires were to be treated.

Religious toleration was often complicated by the issue of loyalty to the state. Catholicism, with its international hierarchy and its identification with the rising empires of Portugal, Spain, and France, was particularly likely to be suspected as a stalking horse for subversion or conquest. In the late sixteenth century states as far apart as Hideyoshi's Japan and Elizabeth's England took measures against Catholic priests, fearing them as intelligence gatherers and organizers for Spanish conquest. In zones of intense religious conflict, like that between Catholic and Protestant states in Europe from the Reformation to the Treaty of Westphalia in 1648 or the confrontation between the Sunni Muslim Ottomans and Shia Muslim Persians, membership in the religious community of the enemy state could be viewed as inextricably associated with political disloyalty. The conflict between the rising Hindu Maratha state and the Muslim Mughals in early-eighteenth-century India also took on some aspects of a religious war. Areas where the majority of the population adhered to the "enemy" religion, as Catholic Irish people did in the Protestant British Isles, were particularly likely

to see harsh persecution for political rather than purely religious reasons.

The reasons for persecution, however, were not always structural or related to international politics. The personality of a ruler could have much to do with his or her treatment of religious minorities. Mughal India went from the tolerant ruler Akbar, interested in religious dialogue and syncretism, to the strongly intolerant Muslim Aurangzeb in a few generations. Louis XIV of France expelled the Huguenots, French Protestants, from his country in 1685 not for any threat they posed—indeed, they would pose more of a threat outside France than within it—but because of his desire for religious uniformity throughout his kingdom. Other minorities who posed no threat to the state or the dominant church were persecuted for their challenge to social norms, a classic example being the Quakers of late-seventeenth-century England and British America whose distinctive dress and manners isolated them from the mainstream.

Intolerance could be turned against minorities whom the persecuting authorities themselves defined, as in the witch-hunts that took place throughout Europe and European colonies in America. Witches were not a religious minority but were defined as followers of Satan, the archrival of the God of Christianity. The Catholic Inquisitions, perhaps the most effective persecutors of the early modern era, proved extraordinarily successful at ferreting out individual religious dissidents or heretics who were not affiliated with a rival church (although the Inquisitions were often skeptical of witchcraft charges).

Toleration too took many forms. Religious minorities had a recognized place in many traditional polities. Jewish and Christian minorities, although discriminated against in many ways, were generally allowed to govern themselves in traditional Islamic states. Jews, but usually not Muslims, were tolerated in some European states, although this permission could be revoked at any moment. (Jews and other religious minorities could also be subject to popular violence even when ostensibly protected by

a tolerant state.) Parts of the Christian world, traditionally the least tolerant of the major Eurasian civilizations, moved toward toleration partly as a result of exhaustion after bloody religious wars. This was a phenomenon far more marked in Protestant than in Catholic societies. By the late seventeenth century a few European writers were arguing for religious toleration as a positive good rather than a necessary evil. Although some radicals argued for “freedom of conscience” on theoretical grounds, others were influenced by the example of the Dutch Republic, which demonstrated the compatibility of Christendom’s most religiously tolerant regime with strong economic growth.

—William E. Burns

Sunni-Shia Conflict in West Asia

The schism between Sunni and Shia Muslims began shortly after the death of the Prophet Muhammad in 632 CE. The Prophet had not left a living son and had not designated a successor. Some followers believed that the successor, or caliph, should come from Muhammad’s clan, the Hashemites of Mecca. Others believed that the caliph should come from his tribe, the Quraish, that included the rival clan of Umayya. A minority believed that any Muslim could lead the community.

Arab tradition sanctioned passing leadership from father to son but did not mandate it. Succession was often decided by consensus of clan or tribal leaders. Consequently, the leaders of the *umma* (community) selected one

of Muhammad’s early converts, Abu Bakr, as the first caliph. Abu Bakr was a member of the Prophet’s tribe but was not closely related, although he was the father of Muhammad’s favorite wife, Aisha.

The Muslim community accepted Abu Bakr (632–634), but some believed that Ali, the Prophet’s nephew, son-in-law, and adopted son, should be caliph. They were the Shiat Ali (the Party of Ali). Ali accepted Abu Bakr’s leadership and that of his successor Umar (634–644) but was not enthusiastic about Uthman, the third caliph (644–656). Uthman was a Muslim convert from the Umayyads, a rival clan in the Quraish tribe.

After Uthman’s assassination in 656, Ali finally became caliph. The Umayyads suspected that Ali was behind the death of Uthman, and their head, Muawiyyah, challenged Ali but did not immediately mount a revolt. Muhammad’s widow, Aisha, also claimed leadership in the name of her father and her status as the Prophet’s favorite wife. Ali defeated Aisha in 656 at the Battle of the Camel and allowed her to retire to Medina while he operated from Kufa (in present-day Iraq).

Ali faced a more serious challenge in 657 when he replaced Uthman’s nephew, Muawiyyah, as governor of Damascus. Muawiyyah was also the son of Abu Sufyan, one of Muhammad’s most zealous opponents. The assassination of Uthman coupled with the rivalry between the Hashemites and the more wealthy Umayyads fed the dispute on succession. This erupted in a dispute that would split Islam for centuries.

Ali and Muawiyyah met in battle at Siffin (in present-day Syria) in 657. Facing defeat, Muawiyyah’s army raised copies of the Quran on their spears and declared that the Muslim Holy Book required disputes to be settled by Allah. The basis for this was Muhammad’s declaration that Allah’s community could not err. This meant arbitration. Muawiyyah returned to Damascus. Some disagreed and formed a dissenting movement known as the Kharijites, or seceders. They dispatched assassins against Ali and Muawiyyah. They succeeded in killing Ali in 661 but were not successful against Muawiyyah. The latter, who had added Egypt to his rule, then became the first Umayyad caliph, beginning a dynasty that lasted until 750.



Battle of Siffin between the followers of Muawiyyah and of Ali. A miniature painting from a nineteenth-century manuscript of Hamla-i Haydari, a poetical account of the life of Ali by Bazil. (The British Library)

Ali's eldest son Hasan from his marriage to Fatima accepted Muawiyyah as caliph. The Shiat Ali returned after his death in 680. The question of succession continued. Some called on Muhammad ibn Hanafiyyah, a son of Ali by a wife other than Fatima, to lead a revolt. He was reluctant, and after his defeat in 687 he was allowed to retire to Arabia. Others insisted on a descendant from Ali and Fatima, and Ali's second son by Fatima, Hussein, claimed the right to be caliph and raised an army to confront Yazid, Muawiyyah's son. The Shia army was defeated at Kerbala in 680, and Hussein died with his followers. This occurred on the tenth day of the Muslim month of Muharram, Ashura, which has since become an important date in the Shia calendar.

The Alids then split into factions who argued on how far the line of descent from Ali could claim leadership. Some interpretations ended at 5 successions, some at 7, and most at 12. The first still exist in Yemen as the Ibadites. Those advocating for seven Imams (or Seveners), are also known to history as the Assassins, concentrated in India. The majority are the Twelvers, who supported the notion of 12 generations of Imams, the last of which disappeared in 869 (but will one day reappear). This Shia doctrine predominated in the Persian Islamic regions but also remains strong in some Arab areas.

The Shia developed a messianic tradition in which the last imam would return at the end of time as the Mahdi to prepare the world for the final judgment. Sunni Islam developed a similar doctrine but did not attribute to the Mahdi the same powers as the Shia Mahdi. Both reflect the influence of earlier Christian, Jewish, and Zoroastrian religious thought regarding concepts such as life after death, a Messiah, and a Day of Judgment. Although fundamentalist theologians of all three faiths insist that their Holy Books are divinely inspired, unique, and unchangeable, most historians tend to emphasize the cross-cultural and religious influences of varying peoples on each other, as this suggests. It should be noted that the Quran addresses the issue in different Suras. Modern Muslims and others point out Suras that endorse acceptance of so-called Peoples of the Book as legitimate believers not to be disturbed by the advance of Islam. Others, however, point to Suras that denigrate Jews and

➤ KHARIJITES—THE FORGOTTEN SCHISM IN ISLAM

Many of Ali's supporters rose to his banner to restore the caliphate to the family and clan of Muhammad. Others, however, supported Ali in reaction to what they believed was the corruption of their faith by Uthman and his nepotism. The Kharijites opposed Ali's agreement to arbitration in 657 after the Battle of Siffin and insisted that only Allah could decide the dispute over succession to Muhammad. Of more importance was their belief that Islam should return to their puritanical vision of the religion espoused by Muhammad rather than succumb to the materialism they attributed to Uthman and the clansmen he had appointed to positions of power. After Siffin the Kharijites opposed both Ali and his competitors. Ali defeated a Kharijite army at Nahwaran in 658, but the survivors carried on the movement, assassinating Ali in 660 and continuing to revolt against the Umayyads. Their religious beliefs remained fundamentalist, but they abandoned the insistence on the leader of Islam coming from the line of Ali or even the Prophet's clan. The Kharijites required only a sincere belief in Islam as requisite for election as imam, including from non-Arab peoples. This attracted Persians and others who believed that they were second-class citizens in the Islamic world. The Kharijites continued to threaten Umayyad and the Abassid caliphs for centuries. Over time the more militant Kharijites gave way to moderation, coming to power in Uman and north-eastern Arabia as the modern Ibadites. Their trade across the Indian Ocean led them to prominence in Zanzibar and East Africa, with a following in some North African communities that persists.

—Daniel E. Spector

Christians. The fact that both positions can be supported by quotation of various Suras illustrates the fact that all Holy Books can be selectively used to support varying interpretations.

—Daniel E. Spector

Bibliography

- Esposito, John L. *Islam: The Straight Path*. 3rd ed. New York: Oxford University Press, 1998.
- Hourani, Albert. *A History of the Arab Peoples*. Cambridge, MA: Harvard University Press, 1991.
- Sykes, Percy. *A History of Persia*. 3rd ed. New York: Barnes and Noble, 1969.

Syncretic Monotheism under Akbar the Great

Akbar's reign (1556–1605) as Mughal emperor was marked by many achievements. However, he is probably best remembered for the religious tolerance that he vigorously championed and personally exemplified. In this, his efforts took several forms. While some of his practical reforms and initiatives were bold, his philosophical project of developing syncretic religious ideals (attempting to integrate diverse religious beliefs and practices) generated admiration and controversy.

A person of irrepressible curiosity and intellectual courage, he built an Ibadat Khana (House of Worship) in 1575 in Fatehpur Sikri, a temporary capital of the Mughal empire. This city is located near Agra (the location of the Taj Mahal) and was completed in 1578. Akbar invited not only Muslim *ulema* (scholars) of both Sunni and Shia orientations but also Hindu *pundits*, Jain *sadhus*, Zoroastrian *mobeds*, Jesuit missionaries (e.g., Fathers Aquaviva and Monserrate), Buddhist monks, and Muslim Sufi mystics to discuss religious issues in an enlightened environment at his Ibadat Khana. He himself was an attentive listener and an engaged participant in these lively discussions. He began to be increasingly convinced that there were virtue and piety in all religions, and there was an underlying spiritual unity that transcended their differences. His notion of Din-i-Ilahi (Divine Faith) tried to capture that syncretic ideal.

It has been suggested that the Din-i-Ilahi was more a set of moral exhortations and an ethical system than a religion. It sought to restrain human failings such as lust, pride, slander, greed, and envy and inspire values of integrity, honor, altruism, gentleness, and tolerance. Specific religious/ritual requirements were minimal, and even the expectations that he had of the administrative leadership (e.g., the governors were supposed to keep night vigils and eat and sleep in moderation, practice meditation, celebrate birthdays by giving alms, etc.) were more suggestions than demands.

Incidentally, the emperor hardly ever referred to his teachings by any specific name, nor did he claim to be a prophet, introduce a priestly

hierarchy, initiate the writing of a new scripture, or encourage any proselytizing efforts. Indeed, the total number of adherents was probably less than 100 (by some accounts no more than approximately 20), and even many of his trusted advisors and friends did not convert. The phrase “Din-i-Ilahi” was coined after his death, and his own royal advisors often termed the ambiguous corpus of pronouncements on faith and practice as “regulations for guidance” or “rules for the royal disciples.”

Most Muslim scholars (the *ulema*) were either confused or angered by his efforts. First, there were some misunderstandings created in 1579 by the *mazhar* (a public edict, erroneously called the “Infallibility Decree”) in which the emperor was invested with powers to supersede the advice of Muslim theologians in matters both spiritual and temporal. This was probably a practical move on his part in the context of the squabbling *ulema*, and moreover, this was not unique in terms of Muslim paradigms of royal authority. However, in the context of Din-i-Ilahi introduced in 1581 and the grand titles that his disciples sometimes gave to him (e.g., “The Revealer of the Internal and the Depicter of the Real”), many Muslims assumed that Akbar was claiming some form of “Divine Kingship,” an idea that was anathema to orthodox Muslims.

Second, some of the rituals and practices he adopted also troubled many Muslims. Thus, his suggestion that a fire be left continuously burning in the court, his practice of meditating while he was facing the sun, his prohibition of the slaughter of animals on certain days, the official celebration of Nawroz (the Parsi New Year), his endorsement of some Shia doctrines, and his frequent visits to Sufi shrines were all considered by some mainstream Muslims as unacceptable deviations from the “straight path” of Islam. Indeed, Shaikh Ahmad Sirhindi, the preeminent Islamic scholar of the time and revered as the Mujaddid-i-Alfi-Thani (“The Renewer of the Second Millennium”), expressed concern, if not disdain, about some of the emperor's ecumenical compulsions.

It is unclear whether the emperor had actually left Islam in favor of his new creed. Some of his habits and indulgences were questionable from a Muslim perspective and would suggest that he had, indeed, abandoned the faith he

► RELIGIOUS TOLERANCE UNDER AKBAR THE GREAT

Akbar encouraged religious tolerance in various ways. First, he opened up the administration to include the most talented people in the country regardless of religious affiliation (almost 38 percent of higher military/administrative positions were held by Hindus). Second, while he was not the first Muslim emperor to marry non-Muslim women, he was certainly one of the first to allow them to pursue their own religious traditions, even in the royal household. And third, he took various policy initiatives to advance his message of *sul-hi-kul* ("peace with all").

Thus, Hindu courts were allowed to adjudicate on family and personal matters, and religious schools and places of worship of different faiths were permitted to be built (sometimes under royal patronage) and to function without hindrance. Some odious customs based on religion were addressed. For example, the practice of *sati* (i.e., self-immolation of Hindu widows in the funeral pyre) was condemned (and only allowed if the widow specifically consented to it), and marriage conventions were overhauled (child marriage was forbidden, and widow remarriage was permitted). Finally, he also eliminated many discriminatory laws and practices. For example, the pilgrimage



Emperor Akbar's Mughal pavilion known as Diwan-i-Khas at Fatehpur Sikri, India. (Cyril Bele)

tax on Hindus and Jains was abolished, the *jizya* (a special tax on non-Muslims) was repealed, and it was possible for people who had been forcibly converted, either by conquest or marriage, to return to the faith of their choice without fear or stigma.

—Ahrar Ahmad

was born in. However, he also continued to offer his prayers according to Islamic custom, the Friday *khutba* (sermon) continued to be read in his name (which indicated that he remained the symbolic leader of the Muslims), and he was not accused of publicly disparaging Islam, the Prophet Muhammad, or the Holy Quran, let alone seeking to displace any of them.

The Din-i-Ilahi was probably inspired by noble intentions, but as an effort at syncretic monotheism, it lacked clarity and coherence and hence failed to leave any substantial imprint on Indian history.

—Ahrar Ahma

Bibliography

- Burke, S. M. *Akbar: The Greatest Mughal*. New Delhi: Munshiram Manoharlal, 1989.
- Choudhury, Makhan Lal. *The Din-i-Ilahi: The Religion of Akbar*. New Delhi: Munshiram Manoharlal, 1997.

Habib, Irfan, ed. *Akbar and His India*. New Delhi: Oxford University Press, 1997.

Nezami, Khalique A. *Akbar and His Religion*. Delhi: Idarahi Adabiyati, 1989.

Cycles of Tolerance and Persecution under Aurangzeb

Muslim rulers of India, although keen to promote Islam, understood that they could not succeed if the Hindu majority was totally alienated. Although the stridently Sunni imams and ulemas at their courts urged them to strictly enforce Sharia law and to punish Muslim heretics and Hindus, the rulers wisely ignored their advice while showing deference and respect to them. The third Mughal emperor, Akbar (1556-1605), showed the greatest independence of mind in his dealings with Islamic authorities and went a long way toward persuading the Hindus that their religion and culture were safe under him.

➤ BADSHAHI MOSQUE

The greatest architectural monument from Aurangzeb's reign is the Badshahi Mosque (Emperor's Mosque) in Lahore, Pakistan. It is the second largest mosque in the Indian subcontinent. A deep sense of Islamic piety, the vast wealth of his Mughal empire, and perhaps a tinge of jealousy of his father Emperor Shah Jahan's legacy in architecture motivated Aurangzeb to order the building of the mosque some 12 years after he came to the throne. Completed during 1673–1674, it was strategically placed near to the bastion of the Mughal state, the Lahore Fort. During the succeeding centuries the mosque suffered from neglect by both the Sikh rulers of Punjab and the British. After the mutiny the British showed greater care, but it was only after 1939 that proper repairs began. Today it is maintained in a pristine state.

Aurangzeb cared for mosques more than palaces, and this is reflected in the rich ornateness showered on the Badshahi Mosque. The most wonderful floral designs, arches, and motifs are outlined in white marble inlaid into the red sandstone surface of the entire building, while stucco interior reliefs and baluster columns grace the inside walls. The courtyard of 174,900 square feet (16,250 square meters) can hold more than 60,000 people, and the entire structure is built on a raised platform.

—Burjor Avari

Akbar's policy was reversed by his great-grandson Emperor Aurangzeb (1658–1707), who in his desire to appease the theologians (partly perhaps out of guilt for his cruelty toward his family at the time of his accession) turned toward Islamic puritanism and fundamentalism. His mental outlook differed from that of Akbar in matters concerning the role of Islam in the state. Akbar wanted to develop an Indian version of Islam, working in harmony with other faiths of India. Aurangzeb wanted nothing less than an Islamic India, and in order to achieve this he promulgated laws and ordinances that increasingly became unnerving for Hindus as well as for many Muslims. His was a long reign during which repressive laws came in cycles rather than all at once. During some years Aurangzeb

showed the realism of his other peers and moderated his behavior, but he became increasingly intolerant as the years passed.

Aurangzeb's puritanical restrictions first affected those hallowed Hindu traditions at the court that his predecessors had retained as a way of demonstrating their goodwill toward Hindus. The Jharokha-darshan, an ancient ritual in which the monarch appeared on a balcony in front of his people, was discontinued, and the use of Hindu astrologers in making almanacs and fixing auspicious dates for important events was also discouraged. Other restrictions affected both Hindus and Muslims. For example, any outward signs of joyousness and gaiety at various festivals, whether Hindu or Muslim, were strictly discouraged. The great Shia festival of Muharram was stopped, and the lighting of lamps on the tombs of Sufi and other Islamic saints were also banned. Even the average length of a beard was fixed at no more than four fingers. These petty and silly restrictions were born out of a particularly joyless understanding of Islam that Aurangzeb had imbibed from his mentors. On the other hand, while there might have been a rational case for measures such as the prohibition of alcohol, narcotics, and gambling and the restrictions on prostitutes, such measures bore little result in practice.

The two most hurtful measures of Aurangzeb against the Hindus were the reimposition of the *jizya* tax and the destruction of their temples. The *jizya* dates from the earliest days of Islam, and its basic rationale was that a non-Muslim wishing to follow his own religion and to be exempted from war service in a Muslim state and its army had to pay a compensatory tax. This obviously created two classes of citizenship based on religion. Emperor Akbar considered the *jizya* as a discriminatory tax and as part of his vision to establish a Pan-Indian state with fair and equal rules for all Indians abolished it in 1564. Aurangzeb reimposed the tax in 1679 and additionally established discriminatory customs duties between Hindus and Muslims. It may be said, in defense of Aurangzeb, that financial desperation caused by his incessant wars rather than anti-Hindu sentiment might have driven him to levy these taxes. For the Hindus, however, it was like returning to

second-class status in their own land. Again the destruction of some of the most famous Hindu temples at such holy sites as Mathura and Benares and in the Rajput lands was a body blow to Hindu pride and respect. Quite likely Aurangzeb destroyed the temples not out of anti-Hindu bigotry but instead out of a determination to punish defiant Hindu princes, and it is also a fact that he often gave grants for repairing old temples and even building some new ones. Nevertheless, the overall effect of his actions on the Hindu psyche was highly negative.

Aurangzeb's religious fundamentalism stands in contrast to some of the developments that were taking place in contemporary Europe of the late seventeenth century. Certainly Europe had its share of despotic monarchs and religious and political persecutions, but the growth of important intellectual and social movements—Rationalism and the Scientific Revolution (as symbolized by the founding of the Royal Society in England), ideas of liberty and dissidence, and an increasing interest in the outside world—was destined to make the nations of the West the powers of the future. In the same year that Aurangzeb died, 1707, England and Scotland joined up to form the first stage of the United Kingdom. Within 50 years after his death this United Kingdom had won a territorial footing in Bengal, the richest province of the Mughal empire.

—*Burjor Avari*

Bibliography

- Asher, Catherine B. *Architecture of Mughal India*. Cambridge: Cambridge University Press, 1992.
- Asher, C. B., and C. Talbot. *India before Europe*. Cambridge: Cambridge University Press, 2006.
- Azzizuddin Husain, S. M. *Structure of Politics under Aurangzeb, 1658-1707*. New Delhi: Kanishka Publishers, 2002.
- Khafi Khan, M. H. *Khafi Khan's History of Alamgir*. Translated by S. Moinul Huq. Karachi: Pakistan Historical Society, 1975.
- Richards, J. F. *The Mughal Empire*. Cambridge: Cambridge University Press, 1993.
- Sarkar, J. N. *The History of Aurangzeb Based on Original Sources*. Calcutta: M. C. Sarkar, 1930.
- Sharma, S. R. *The Religious Policy of the Mughal Emperors*, 2nd ed. London: Asia Publishing House, 1962.

The Development of Sikh Syncretic Monotheism

Guru Nanak (1469–1539), the founder of Sikhism, was born Hindu from the Bedi branch of the Kshatriyas in Talwandi in modern-day Pakistan. His ideas are often seen as a hybrid of Hindu Bhakti and Islamic Sufism. Nanak desired to emphasize the inner experience rather than an external religious experience. It is likely that this emphasis was influenced by the Bhakti movement, which spread to northern India from the south. Furthermore, it emphasized the personal response to God by the devotee. Nanak viewed God in monotheistic terms, which would have been a contrast to the polytheism characteristic of many brands of Hinduism and was likely influenced by Bhakti teachings. Nanak understood God as embracing two diverse attributes: transcendent and immanent. God is expressed through different aspects of a single all-embracing concept that includes *sabad* (Word), *nam* (Name), *guru* (Divine Preceptor), *bukam* (Divine Order), *sach* (Truth), and *nadir* (Grace). These are offered by God to man, whose nature is unregenerate. Attaining this leads man to the wheel of transmigration instead of release and salvation. Man is vulnerable to *maya* (illusion) as a consequence of his *haumai* (ego). In the process of seeing the world without *bukam* (fate) is the perpetuation of the transmigratory process leading to a constant separation from God and death. Gobind Singh (the tenth and last Sikh guru) introduced external symbols as a way of distinguishing Sikhs from other religions and signifying the hardening of the boundaries of the *khalsa* (the pure ones). These included the five k's: *kes* (uncut hair), *kanga* (comb), *kara* (steel bracelet), *kacch* (white shorts), and *kirpan* (sword). Nanak's immediate successor was Guru Angad (1539–1552). He was succeeded by Guru Amar Das (1552–1574), who institutionalized the *langar* (community kitchen) and also began organizing the growing Sikh movement into *manjis* (ecclesiastical districts). Guru Ram Das (1574–1581) purchased land that would later become the Harmandir Sahib (House of God). Guru Arjan (1581–1606) is known as the compiler of the Sikh Sacred Text (*Guru Granth*

➤ READINGS FROM THE GRANTH

Guru Arjan (1581–1606) is known as the compiler of the Sikh sacred text, the *Adi Granth* (Original Book). Arjan relied on volumes that originated with his predecessors. The sacred text continued to develop with later gurus until the tenth guru, Gobind Singh, insisted in 1705 that no further gurus would be necessary, and the *Adi Granth* was renamed the *Guru Granth Sahib* (Revered Book Which Is Guru). What follows are excerpts from the *Granth*:

“There is but one God. He is all that is. He is the Creator of all things and He is all-pervasive. He is without fear and without enmity. He is timeless, unborn and self-existent. He is the Enlightener and can be realized by his grace alone. He was in the beginning; He was in all ages. The True One is, was, O Nanak, and shall forever be.” Japji 1, *Adi Granth* 1

“One Creator, One Sustainer, One Destroyer of the World.” Japji 30, *Adi Granth* 7

“The nature of ego is that we act in ego. The bondage of ego is that we are bound to the Round. How, yea, is the ego born? In which way is the Release? Yea, this is the Lord’s Will that in ego, one follows the writ of habit. Ego is a chronic malady: but within it also is the remedy. If the Lord be in Grace, one Practiseth the Word of the Guru. Sayeth Nanak: ‘Hear ye men, thus, yea, is this malady cured.’” Shaloka M.2(2), *Adi Granth* 466

“When one knoweth the One alone as True and obliterates Ego and the sense of otherness, one becometh a Yogi and knoweth the Guru’s Word, and within one flowers the Lotus which illumines one, yea. When one dieth to the self, one becometh a know all; and knoweth within the All-merciful God.” Siddh Gosti 24, *Adi Granth* 940

—David Savalani

Sahib). He is also known as the first Sikh martyr. His successor, Guru Hargobind (1606–1644), shaped the movement along more militant lines. Also, the Akal Takht (seat of temporal authority) is established at the Harmandir Sahib. The Gurdwara (place of worship), also known as the door to the guru, was also a legacy of Hargobind. He was succeeded by Gurus Har Rai (1644–1661) and then Har Krishnan (1661–1664). The ninth guru, Tegh Bahadur (1664–1675), was executed under the orders of the Mughal emperor Aurangzeb. Tegh Bahadur’s son Gobind Singh became the tenth and final guru (1675–1708), who created the khalsa). In turn, he did not appoint a human successor but instead empowered the *Guru Granth Sahib* and the *Panth* (Path) or community collectively to fulfill that function.

The Sikh movement emerged in India during Mughal rule. The Mughals held sway over much of India and therefore over non-Muslim populations. Mughal Islam was the standard utilized by Mughal authorities to determine the credibility and claims of other religions. Some of the gurus enjoyed cordial relations with the Mughal authorities such as Guru Amar Das, who hosted the Mughal emperor Akbar at the langar.

The relationship between the Mughal court and Sikhism was shaped by a policy of tolerance, especially during Akbar’s reign. Sikhism was not anti-Islamic, yet it was opposed to the violence against non-Muslims authorized by some of the Mughal rulers. For instance, Emperor Jahangir used his interpretations of Islam in order to oppress non-Muslims. The first Sikh victim of this was Guru Arjan, who was accused of blaspheming Islam in compiling the *Granth*. The true explanation may be that he had met with the emperor’s rival to the throne; the charges led to his torture and execution. Later, Guru Tegh Bahadur would be executed by Emperor Aurangzeb for refusing to convert to Islam. The Mughal policy of Akbar’s pluralism and tolerance of other faiths had gradually withered. Guru Tegh Bahadur’s decision to protect threatened Hindus shows that his decision to confront the Mughal powers with Sikh soldiers was for the purpose of protecting broader human rights.

—David Savalani

Bibliography

Fenech, Louis E. *Martyrdom in the Sikh Tradition*. New Delhi: Oxford University Press, 2000.

McLeod, W. H. *Guru Nanak and the Sikh Religion*. New Delhi: Oxford University Press, 1996.
Singh, Patwant. *The Sikhs*. London: John Murray, 1999.

The Spread of the (Hindu) Maratha State

During the mid-seventeenth century, Shivaji Bhosle (1627–1680) established the Maratha kingdom in western India. Although it is difficult to characterize Shivaji's kingdom as a formal state polity due to the nature of shifting geopolitical territory and more significantly that of indeterminate sovereignty, it was left to Shivaji's successors to establish formal state institutions and practices of sovereignty from the early eighteenth century until the dissolution of the Maratha state in the second decade of the nineteenth century following British victory in the Third Anglo-Maratha War (1817–1818).

"Maratha" is a historical term of reference for Kunbi-Marathas, lower-caste cultivators who came to be identified as a warrior caste in the Deccan region (or Maharashtra today) in the seventeenth century. From the late nineteenth century, Maratha identity became regionally generalized and referred to linguistic (Marathi) and cultural-geographical identity. Shivaji's effectual challenge to Mughal dominance, his rise to power, and the successive expansion of Maratha rule created one of the most powerful Indian states by the mid-eighteenth century. At its territorial height, the Maratha state reached as far as Bengal in the east, the borders of Mughal India to the north, and Goa and present-day northern Karnataka in the south. Expansion of the Maratha state came at the expense of Mughal rulers and led to frequent military confrontations with other regional powers, such as Mysore, Bijapur, and Hyderabad. The primary tool of state centralization involved military-fiscal patronage, patterned after Mughal land and revenue administration that provided various regional elites grants of land and political status for military service. This patronage system was too weak to consolidate and centralize state power, and by the eighteenth century a number of local Maratha elites, notably in

Baroda, Gwalior, Indore, and Nagpore, established semiautonomous states, creating the Maratha confederacy.

In 1674 Shivaji was crowned sovereign ruler of the territories under his control. He was proclaimed to descend from Rajput Kshatriya (warrior caste) lineage by Gaga Bhatt, a Brahmin priest from Varanasi, thereby legitimating Shivaji's position as *chatrapati* (king). During the brief reign of Shivaji's son Sambhaji (r. 1680–1689), the position of *peshwa* (prime minister), filled by Chipavan Brahmins, came to increasingly wield political power in the Maratha state. By the mid-eighteenth century, the peshwa became supreme leader of the Maratha state, after Shahu (r. 1714–1749), the last descendent of Shivaji, failed to produce a son. During the reign of Peshwa Balaji Baji Rao I (r. 1749–1761) supremacy was short-lived, as the Maratha state devolved into a confederacy of semi-independent states soon after the Marathas were defeated at the Battle of Panipat (1761) by combined forces of Mughal and Afghan armies.

In the face of the division of the Maratha state into semi-independent political constituents, conflict with the British East India Company (EIC) further exacerbated the consolidation of power among the emergent Maratha states. A series of wars between the Marathas and the EIC resulted in the collapse of the confederacy and the continued expansion of British power on the Indian subcontinent. The three Anglo-Maratha wars (1775–1782, 1803–1805, and 1817–1819) were a campaign for dominance between the two strongest military powers in India; British victory in the Third Anglo-Maratha War saw the disposal of the most powerful threat to British colonial expansion in the early nineteenth century. The war was an attempt by the peshwa to reassert his rule against the expanding British power. However, the British soundly defeated the forces of the peshwa and the Maratha states' irregular soldiers (*pin-daris*) in 1818. By 1819 the office of peshwa was abolished, and most remaining Maratha territories were either ceded to direct British rule or placed in a subsidiary alliance system of princely states that acknowledged British paramountcy in the Deccan.

—John Pincince

Bibliography

- Chandra, Satish. *Essays on Medieval Indian History*. Oxford, UK: Oxford University Press, 2003.
- Cooper, Randolph G. S. *The Anglo-Maratha Campaigns and the Contest for India: The Struggle for Control of the South Asian Military Economy*. Cambridge: Cambridge University Press, 2003.
- Laine, James. *Shivaji: Hindu King in Islamic India*. New York: Oxford University Press, 2003.
- Stewart, Gordon. *The Marathas, 1600–1818*. Cambridge: Cambridge University Press, 1993.
- Stewart, Gordon. *Marathas, Marauders, and State Formation in Eighteenth-Century India*. Oxford, UK: Oxford University Press, 1994.

Neo-Confucianism as Ming/Qing Ideology

An efflorescence of Confucianism, now identified as neo-Confucianism, began in the Song dynasty (960–1279) and reached its most influential stage during the Ming (1368–1644) and Qing (1644–1912) dynasties. Political, economic, and social rectitude were these teachings' primary concern, although religious aspects are implied as well in the Neo-Confucian emphasis on properly performed rites as both reinforcement and evidence of the proper relationship between Heaven above and the world below. The relationship between Neo-Confucianism and other philosophical schools and religions was complex. During Neo-Confucian development in the Song dynasty, syncretists generally permitted separate realms to dominant intellectual/religious influences, referred to as the Three Teachings: among the scholars who worked for intellectual/theological reconciliation, Daoism was associated with the organization of the physical world, Buddhism with transcendental elements, and Confucianism with governance and social organization. The degree to which these worldviews were embraced or persecuted at any given time was dictated largely by concerns about ethnicity, political power, and social order.

Strict socio-religious divisions were never the case. Confucianism—with its emphasis on literacy and governance—was generally practiced by the literati, members of the court, and other elites, while the beliefs of Daoism and Chinese (Chan) Buddhism resonated more with

the poor. When ideas or belief systems brush against each other, they generally leave footprints, traces of the exposure, although sometimes the reaction involves militant rejection of the opposing ideas. To maintain a certain level of social stability, it became necessary for Confucians to accommodate aspects of Daoism and Buddhism. This proved particularly difficult with Buddhism, which had traditionally been at odds with Confucianism. Confucians regarded Buddhist monasticism and concentration on the attainment of personal enlightenment through detachment as counterproductive to their own commitment to creating a stable society through the cultivation of personal virtue. Buddhists, in turn, tended to malign Confucianism as simply a temporary solution to worldly, spiritually unimportant problems.

Neo-Confucian accommodation with Buddhism was complicated by the presence of many unorthodox Buddhist sects. By the Ming era, Chinese Buddhism had become so firmly entrenched that splinter groups were viewed with suspicion by both mainstream Buddhists and Neo-Confucians. The White Lotus sect, for instance, was deemed particularly threatening by Neo-Confucians because of its empowering message to the poor and to women. Its adherents had been persecuted since the time of the Mongols, and by the time of the Ming dynasty the sect had morphed into an underground society and an instrument of politico-religious resistance to the established Neo-Confucian order. During the Qing dynasty, the White Lotus Society also advocated a return to Han rule (as its members were ethnic Chinese), putting it in direct opposition with the Manchu Qing. Tensions continued to escalate, culminating in the White Lotus Rebellion of 1796–1804, during which the Jiaqing emperor (r. 1796–1820) followed a course of brutal extermination.

The case of the White Lotus Buddhists helps to illustrate the important role played by ethnicity in determining the degree to which mainstream Neo-Confucianism tolerated other belief systems. When the Manchus overthrew the crumbling Ming state and founded the Qing dynasty, they were faced with the pressing issue of establishing their legitimacy. Viewed as barbarian outsiders by the Han for centuries, the

► THE REVOLUTIONARY TEACHINGS OF WANG YANGMING

In addition to responding to the influences exerted by other religions and philosophical movements in Chinese society, Neo-Confucian scholars had to address divisions within their own ranks. Unorthodox views and interpretations met with stiff resistance, as they represented a threat to the established sociopolitical order.

Such was the case of Wang Yangming (1472–1529), a Neo-Confucian philosopher, statesman, and military leader during the Ming dynasty. Although today considered one of the four most important Confucian scholars (along with Confucius, Mencius, and Zhu Xi), Wang was viewed as a dangerously revolutionary thinker by many of his contemporaries. He challenged the dominant school of Neo-Confucianism at the time, which asserted that a thorough and rational examination of the world was the only means by which to achieve knowledge that could then be used to inform proper action. Wang argued that all individuals were born with an innate and intuitive

recognition of the difference between good and evil, and that it was only through action that one gained understanding. Knowledge was tantamount to action—not a prerequisite for it.

These views were alarming to conservative philosophers, as they suggested that anyone could achieve wisdom via knowledge through action. This upset the traditional social hierarchy by placing the average Chinese peasant on par with—or even above—the more learned scholar, who spent his days in contemplation with little real action. In an attempt to minimize his influence, Wang was sent far from the capital to serve as governor of Jiangxi in southern China. His opponents also attempted to discredit his teachings by claiming that they had been corrupted by Buddhist thinking. Despite such efforts, the number of Wang's followers both at court and within the larger population continued to grow.

—Maxine Taylor

Manchus needed to gain acceptance from the subjects of their now vast domain. To that end, the Manchu rulers of the early Qing dynasty set out to become even more “Chinese” than the ethnic Han. They adopted Neo-Confucianism—the dominant philosophy of the Han elite—and took a hard-line stance on Buddhism and other “foreign” beliefs. As the Qing era progressed, however, and the Manchus became more thoroughly Sinicized, their position softened somewhat.

Neo-Confucians during the Ming and Qing dynasties were also confronted by the religions of the Western world, particularly Christianity. Christianity had been present in China since the seventh century, and its adherents experienced periods of both acceptance and persecution. The late Ming period saw the arrival in China of the first Jesuit missionaries, including Nicolas Trigault and Matteo Ricci. Although their beliefs may have sharply differed from many Chinese beliefs, these missionaries were generally well-regarded. They made an effort to assimilate into the Neo-Confucian-dominated court, wearing the silk robes of the elite and learning to speak Chinese. The Ming were impressed by the

Jesuits' understanding of mathematics, calendrical science, astronomy, gun manufacture, and hydraulics, as well as their skill in translation and diplomacy. Conflicts did arise, however. During the Nanjing Religious Incident of 1616–1622, for instance, a resurgence of conservative Neo-Confucianism led to the expulsion of all Jesuit missionaries from court and a rejection of European science as simply a pale imitation of a superior Chinese model. More liberal Neo-Confucians, however, soon reestablished a strong relationship with the Jesuits.

Although Christian missionaries experienced other reversals of fortune during the seventeenth century, they were generally appreciated by the Neo-Confucian elite of the early Qing dynasty for their usefulness in practical, rather than spiritual, matters. The Kangxi emperor (r. 1661–1722) benefited from the Jesuits' astronomical knowledge, which allowed him to perform his duty of accurately predicting solar eclipses; their experience with European artillery tactics and weapons production, which helped him subjugate rebels on Taiwan; and their diplomatic connections, which resulted

in peace with Russia through the 1689 Treaty of Nerchinsk. In 1692, with prompting from Father Tomas Pereira, Kangxi issued the Edict of Toleration, which legalized Christian missions in China, forbade attacks on Christian churches, and protected the rights of Chinese Christian converts.

In the early eighteenth century, however, a power struggle within the Catholic Church between Dominicans and Jesuits culminated in the Chinese Rites Controversy and a total ban on Christianity in China. The Dominicans argued that traditional Chinese cultural practices such as ancestor worship, offerings for the emperor, and seasonal rites for Confucius constituted idolatry and could not be tolerated among Chinese Christians. The Jesuits, more tolerant of the established cultures into which they inserted themselves, argued that these cultural practices were civic, not religious, in nature. Pope Clement XI sided with the Dominicans, and in 1705 he sent Charles-Thomas Maillard De Tournon to Beijing to communicate the papal ban on the observance of Chinese rites among Chinese Christians. When De Tournon met with Kangxi in January 1707, the emperor was outraged by this affront to Neo-Confucian authority and banished the legate to Macao. On March 19, 1715, Clement formalized the decision in the papal bull *Ex illa die*. In response, Kangxi banned Christianity outright in 1721. Notably, the emperor linked Christianity to the “small, bigoted sects of Buddhism or Daoism.” Although the issuance of the “Plane Compertum” decree by Pope Pius XII in 1939 reversed Clement’s decision, the intervening two centuries of Neo-Confucian hostility toward Christianity had severely weakened the latter’s presence in China.

—Maxine Taylor

Bibliography

- Chan, Wing-tsit. *A Sourcebook of Chinese Philosophy*. Princeton, NJ: Princeton University Press, 1963.
- de Bary, William Theodore. *Neo-Confucian Orthodoxy and the Learning of the Mind-and-Heart*. New York: Columbia University Press, 1982.
- Fung Yu-Lan, and Derk Bodde. “The Rise of Neo-Confucianism and Its Borrowings From Buddhism and Taoism.” *Harvard Journal of Asiatic Studies*, Vol. 7, No. 2 (July 1942): 89–125.

Makeham, John. *Neo-Confucianism: A Critical Examination*. London: Macmillan, 2003.

Kannon and Mary— Two Merciful Mothers

Christianity in Japan was banned for over two centuries during the Tokugawa (Edo) era (1603–1868). The authorities, eager to eradicate this foreign religion, executed and imprisoned thousands of Japanese Christians and ordered all families to register with local Buddhist parishes. To conceal their faith, Christians thereafter pretended to be Buddhist laypeople, yet they secretly maintained their faith with clandestine codes and ingenious adaptations. For example, Christians hid crosses inside Buddhist statues that were used during Buddhist funeral services for deceased family members. To outsiders the memorial image appeared Buddhist, but to the outlawed Christians it doubled as an object of Christian faith. Among some, the tea bowls in the Japanese tea ceremony were turned three times prior to drinking (to symbolize the Holy Trinity), or napkins were folded in a certain pattern to instruct insiders when to silently recite a Christian prayer.

Underground Christians, mostly in the Nagasaki area, also created statues of the Virgin Mary (Mother of Jesus) disguised as the Buddhist deity Kannon (Goddess of Mercy). These images, called “Maria Kannon,” were made or altered to look like Kannon, but they were not worshipped as Kannon. Instead, the Christians venerated these Buddhist statues by silently praying to Mother Mary. Many statues, moreover, had a Christian icon hidden inside the body or camouflaged in the artwork. During the dark years of Christian persecution in Japan, these secretive methods fooled government agents and helped the Christians to keep their faith hidden and alive.

Representations of Mother Mary in the guise of Kannon did not arouse much suspicion, for Kannon (as described in Buddhist scripture) can appear in many different forms, both male and female. Kannon emerged early in the development of Mahayana Buddhist traditions in India, Southeast Asia, China, and Tibet. Originally depicted only as male, Kannon in later centuries reached great prominence in China and then

➤ KANNON, AMIDA, AND HEAVEN

Kannon is worshipped independently in Japan, but she is also closely associated with Amida Buddha, one of the loftiest savior figures in Japanese Buddhism. Amida ("Infinite Life") presides over the Western Paradise. When a Buddhist dies, Amida descends from his paradise to lead the faithful back to his Pure Land of Ultimate Bliss. Kannon is one of Amida's main attendants. In artwork, Kannon is often shown alongside Amida descending from heaven, while solitary statues of Kannon commonly include a small image of Amida in her headdress.

Amida's role as savior, moreover, parallels in part the role of Jesus the redeemer. Not surprisingly, faith in Amida was readily doubled with Christian faith during the anti-Christian persecutions of the Edo era. To avoid suspicion, Christians created Amida images that were mounted on crosses. Their veneration of this Amida cross appeared to outsiders as devotion to Amida, but it also doubled as an article of Christian faith.

—Mark Schumacher

Japan in her various female manifestations: those associated closely with the virtues of compassion, gentleness, purity of heart, and motherhood. In Japan, the three feminine forms of Kannon most related to motherhood are Koyasu Kannon (child giving), Juntei Kannon (pure one), and Jibo Kannon (loving mother). These three are venerated as patrons of easy delivery and childrearing and are often depicted holding a child.

Maria-Kannon statues were commonly made of white porcelain. Most were effigies of the Koyasu Kannon. These sculptures also resembled the popular White-Robed (Byakue) Kannon of Chinese origin but with the deity holding a child. This imagery could easily double for secret veneration of the Virgin and Child. Less common Japanese images of the Kannon showed her nursing a baby. This latter form apparently appeared in the anti-Christian Edo era. It is generally considered Japanese in origin and was supposedly developed to supplant Koyasu-sama, the Japanese Shinto deity (kami) of easy childbirth.

Like Mother Mary in Christian traditions, the female Kannon of Japan embodies the love and compassion of a "mother par excellence." Even today, Kannon remains one of the most widely worshipped Buddhist saviors in Japan and Asia. In China, she is known as Kuan Yin.

—Mark Schumacher

Bibliography

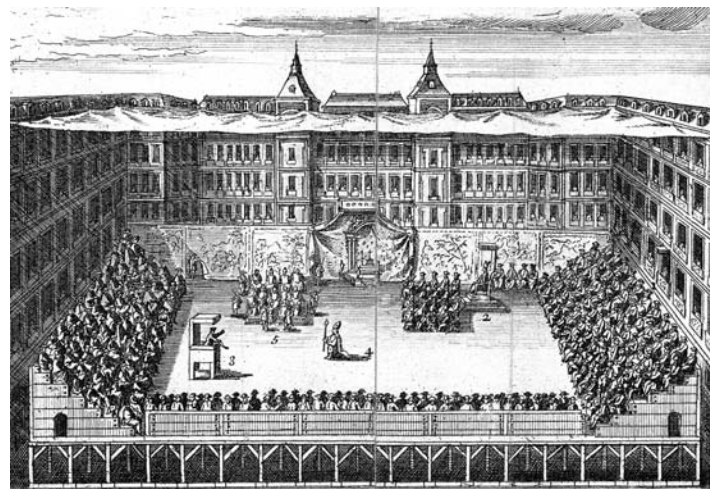
Joseph, Ken. *Lost Identity*. Tokyo: Kobunsha Paperbacks, 2005.

MacWilliams, Mark W. "Temple Myths and the Popularization of Kannon Pilgrimage in Japan: A Case Study of Oya-ji on the Bando Route." *Japanese Journal of Religious Studies* 24 (1997): 3–4.

Palmer, Martin, and Jay Ramsay, with Man-Ho Kwok. *Kuan Yin: Myths and Prophecies of the Chinese Goddess of Compassion*. London: Thorsons, 1995.

Catholic Inquisition

The Inquisition is historically the most reviled and hence misunderstood of all institutions in the Catholic Church. The first step in dismantling stereotypes about the Inquisition is to recognize that there was no single entity known as "The Inquisition." No unified organization



An auto de fé in Madrid's Plaza Mayor during the Spanish Inquisition, seventeenth century. (Jupiterimages)

INQUISITION STUDIES

This is an exciting time to study the Inquisition, particularly the Roman Inquisition. After centuries of secrecy, the Congregation for the Doctrine of the Faith opened its archives in Rome in 1998. These archives contain much new material from the Roman Inquisition and nearly complete records from the Inquisitorial court of Siena. The new material includes complete transcripts of many Inquisitorial trials as well as minutes and decrees from the regular administrative meetings of the Congregation for the Doctrine of the Faith. The archives also contain the full archives of the Congregation of the Index, which oversaw Indices of Prohibited Books from the sixteenth century to the mid-twentieth century.

A few important monographs, based previously on inaccessible sources from these archives, have already appeared. It should be noted that the archives are not at all complete and are still largely uncatalogued. Nonetheless, this dramatic event has the potential to influence scholarship in a wide range of fields.

Founded as the Sacred Congregation of the Universal Inquisition, the congregation's name was later changed in the early twentieth century to the Sacred Congregation of the Holy Office and finally to the Congregation for the Doctrine of the Faith. Prior to becoming Pope Benedict XVI in April 2005, Cardinal Joseph Ratzinger was prefect of the Congregation for the Doctrine of the Faith and oversaw the opening of its archives.

—Emily Michelson

possessed a long arm and a mandate to suppress freedom of thought, torture or execute all dissidents, and instill fear throughout its jurisdiction through horrific practices and secret tribunals. Rather, the term “inquisitions” reflects a series of independent procedures intended to address specific perceived localized threats of heresy in Europe between the thirteenth and sixteenth centuries. The most significant of these were the medieval Inquisitions founded in the thirteenth century, the Spanish Inquisition of the late fifteenth century, and the Roman Inquisition of the mid-sixteenth century. While these procedures were sometimes as punitive and cruel as popularly imagined, in many instances they

were often significantly more lenient. The purpose of Inquisitorial procedure at all times was to defend and protect the Catholic community of the faithful from dangerous doctrine and to restore sinners to the Catholic fold.

The papacy established the earliest Inquisitorial courts in Europe in response to growing heretical movements in the eleventh and twelfth centuries, specifically the Cathars and the Waldensians in southern France. The growth of both heretical movements and various procedures to stem them were each, in their own way, contemporaneous reactions to the growing power of the papacy in this era as well as to the centralization and codification of church dogma. Inquisitorial procedure derived from ancient Roman law, but medieval Inquisitorial courts were first established in the 1220s and 1230s. In the early decades their effectiveness largely reflected the interests and zeal of individual Inquisitors, who were often members of mendicant orders. Inquisitorial courts spread throughout Europe, especially France, Italy, and parts of Spain. They were responsible for identifying, prosecuting, and punishing heretics (and later witches), if necessary through execution. Many manuals for inquisitors remain, notably that of Bernard Gui (1323–1324). Records from Inquisitorial proceedings are among the most valuable sources for learning about medieval society.

By the early fifteenth century, the papal-sponsored inquisitions had waned, whether because heretical groups were less active or because secular authorities were better equipped to address them. Between the late fifteenth century and the mid-sixteenth century, however, the Inquisition was revived and reinvented, primarily in two major locations: Rome and, most famously, Spain. Inquisitorial courts were also instituted in Portugal and in the Americas in the sixteenth century. These different Inquisitions functioned independently of one another and had different objectives and rationales.

In Spain and also in Portugal, Inquisitorial courts served primarily to identify *conversos*, Jewish converts to Christianity. Pope Sixtus IV established the Inquisition in Spain in 1478 at the request of the rulers Fernando and Isabel. Its first inquisitor general, Tomas de Torquemada, established the basic procedures and

organization for Inquisitorial courts and earned a historical reputation for cruelty. Its most famous ceremony, the auto-de-fé, was a public recitation of sentences against the accused; it did not include executions.

The Inquisition relied on denunciations from citizens, many of whom believed that conversos were secretly continuing Jewish practices and thus threatening Christian society. The Inquisition in Spain thus resulted from and also perpetuated tremendous anti-Semitic sentiment in Spanish society and also contributed directly to the expulsion of the Jews from Spain in 1492. To a lesser extent, the Spanish Inquisition also prosecuted *moriscos*, or Muslims who had converted to Christianity. The Spanish Inquisition was not substantially involved in witchcraft trials but did take an interest in literature and worked to enforce censorship and expurgation lists. The first 50 years of the Inquisition, from 1478 to 1530, were its most active. By the eighteenth century it was largely inactive and was abolished in the early nineteenth century.

Pope Paul III founded the Sacred Congregation of the Universal Inquisition in 1542 as a response to the Protestant Reformation. The Roman Inquisition, as it is more commonly known, operated entirely separately from other Inquisitions of the same period.

The purpose of the Roman Inquisition was to centralize the process of investigating suspected heretics, principally Protestants. Recent research into surviving Inquisitorial records has demonstrated that contrary to popular opinion, the Roman Inquisition was rarely an instrument of terror. Rather, it built many safeguards into its juridical system, such as the right of appeal, the use of friendly witnesses, and defense attorneys. Most of the time courts chose to employ milder forms of punishment. Sentences of lifetime imprisonment, for example, usually ended after a few years. Capital punishment was rare, and torture was a last resort.

The papal Index of Prohibited Books was first published in 1559 amid much controversy. The archives of the Congregation of the Index were transferred to the Inquisition archives in the twentieth century. During their active phases, the two institutions operated separately.

—Emily Michelson

Bibliography

- Given, James B. *Inquisition and Medieval Society: Power, Discipline, and Resistance in Languedoc*. Ithaca, NY: Cornell University Press, 1997.
- Kamen, Henry. *The Spanish Inquisition: A Historical Revision*. New Haven, CT, and London: Yale University Press, 1997.
- Lea, Henry Charles. *A History of the Inquisition of the Middle Ages*. 3 vols. 1888; reprint, New York: Harbor Press, 1955.
- Peters, Edward. *Inquisition*. Berkeley and Los Angeles: University of California Press, 1989.
- Tedeschi, John. *The Prosecution of Heresy: Collected Studies on the Inquisition in Early Modern Italy*. Binghamton, NY: Medieval and Renaissance Texts and Studies, 1991.

Witch-hunting in Western Europe

The notorious European witch-hunts, or witch craze, that resulted in hundreds of thousands of deaths of women, men, and children between primarily 1500 to 1650 CE is regarded by historians as a pivotal long-term event that illustrated the anxieties and fears of a society in the process of political, economic, and social transition. The witch-hunts were characterized by false accusations (blaming the accused for anything from bad harvests to impotence), acts of torture to extract confessions, trial by ordeal, and grisly executions by hanging, fire, or drowning



Four English women are hanged as witches, while other women mourn and male officials supervise. The witch hunter at the right is being paid for his work. From a woodcut, 1649. (Stapleton Collection/StockphotoPro)

► TRIAL BY ORDEAL—WITCH-HUNTS AND METHODS OF EXTRACTING CONFESSIONS

A common practice for extracting information from suspected witches during episodes of witch-hunts used by early modern European authorities was the medieval practice of trial by ordeal. Typically, the suspect's arms and legs would be bound, and she would be thrown into a river or other body of water. The logic of this process was that if she was a witch she would float to the top, as she would have to resort to using witchcraft to survive. If she was innocent, she would surely drown. Those who floated would have "confessed" to being witches and would be duly executed. Those who did not were lamented as innocent, and charges would be dropped. Growing skepticism over the practice and its faulty logic would eventually lead to its abandonment. However, other methods of torture, such as the rack, would continue to be utilized to extract confessions of practicing witchcraft, committing adultery with the devil, participating in a Black Sabbath and orgies, and desecrating and blaspheming the church and the deity. Ultimately, by the eighteenth century, there was growing skepticism of torture as a valuable tool for extracting information, as many authorities reasoned that under duress people would say anything.

—Abraham O. Mendoza

by either secular or religious authorities. Moreover, as these were occurring in the midst of the Protestant Reformation and the Catholic Counter-Reformation, religious authorities from all denominations were particularly keen on eliminating the malfeasance of witchcraft from society. In addition, secular authorities and scientific institutions, while adhering to ideals of social progress and the primacy of science, were simultaneously supportive of the elimination of witchcraft from early modern European society. In fact, Protestant authorities were more vigorous in their persecution of witches than that of the infamous Catholic Inquisition, which was more moderate in its methods. Current estimates of total dead from the witch-hunts by historians range from 40,000 to 100,000 across Europe.

Historians of early modern Europe argue that the witch-hunts occurred as a result of

long-term changes across western Europe, particularly in the Holy Roman Empire, Scotland, England, France, and the Scandinavian realms. Bad harvests, the outbreak of disease, economic hardships, and war, which had typically been blamed on other ostracized groups such as Jews, became more and more associated with witchcraft performed by older women, mostly widows and spinsters. The Catholic condemnation of witches through the publication of the *Mal-leus Maleficarum* (1487) compiled by Heinrich Kramer and James Sprenger made demonology a severe offense punishable by religious and subsequently secular authorities. However, once a series of accusations emerged and more confessions were extracted, sometimes by force, more and more people would be accused and would also then name names. Amid these panics, authorities would allow kangaroo court systems to be put in place and further encourage the mob to round up more suspects. In the midst of torture, executions, and ubiquitous paranoia, a single witch-craze episode could take out several hundred people in a given region. Recent studies have illustrated that women of all ages and social class, not just older unprotected poor women, were accused and condemned of witchcraft. Men, while they were persecuted as witches, amounted to a fraction of the total number of women accused and sentenced for witchcraft. These men were also usually related to an accused witch by blood or marriage. The Catholic regions of Spain, Italy, and Portugal also had witch-hunts, albeit on a smaller scale than in Protestant Europe. Since they were under the jurisdictions of their respective national inquisitions under papal authority whose intention was to convert souls, not eliminate witches, they did not devolve into widespread persecutions.

Modern scholars of the European witch-hunts link the prevalence of witch-hunts to long-term transitions in European society in general. Economic growth based on interregional networks, a growing belief in science and progress, and the gradual leveling of society fueled anxiety among the populace, who harkened back to the security of the Middle Ages. Witchcraft, associated with women who did not know their place in society (i.e., widows, poor women, midwives, outspoken women, etc.), was projected

onto any woman who did not fit the prescribed place in early modern Europe. Furthermore, men and children were also subject to persecutions albeit on a much smaller scale. The prevalence of the witch-hunts would finally peter out across much of western Europe in the mid-1700s amid growing skepticism and in the wake of the Enlightenment.

—*Abraham O. Mendoza*

Bibliography

- Barstow, Anne L. *Witchcraze: A New History of the European Witch Hunts*. New York: HarperOne, 1995.
- Kors, Alan Charles, and Edward Peters, eds. *Witchcraft in Europe, 400-1700: A Documentary History*. 2nd ed. Philadelphia: University of Pennsylvania Press, 2000.
- Levack, Brian. *The Witch-Hunt in Early Modern Europe*. 3rd ed. New York: Longman, 2006.

Women in the European Reformation

Women played a significant role in both the Protestant and Catholic reformations, but they suffered a backlash in large part because of beliefs about women's nature and roles that can be traced to early European societies. Women's subordination in the West had been justified by the idea of their inferiority to men, and Protestant reformer Martin Luther, following established Christian traditions, asserted that women were physically, intellectually, morally, and emotionally weaker than men. He emphasized the necessity of women's subordination specifically within marriage, which he encouraged over celibacy for both laypeople and priests. Luther, himself a former monk, married a former nun, Katherine Von Bora, who developed the new role of pastor's wife. According to Luther's concept of "calling," every woman was called to become a wife and mother in a household where her husband was now the spiritual head. Since most women married, the higher status of marriage was a plus for women. However, this emphasis on women's domestic role also supplied an ideology that supported limitations on women's economic opportunities, limitations supported by a lengthy economic downturn that edged women out of urban guilds and even out of workshops. Along

with the moral campaign supported by both Protestant and Catholic reformers, this ideology heightened suspicion of the growing numbers of single women. The effort to close nunneries in Protestant lands sometimes produced more single women in lay society but was often met with resistance, and a number of female religious houses remained open.

Many Protestant and Catholic women became activists for their faith. Luther's ideas that Scripture alone should be the Christian's guide and that every believer is a priest encouraged women to interpret Scripture for themselves. Since faith alone, rather than the sacraments, determined who was saved, a woman was free to decide for herself if her faith had been kindled, if she was among those predestined for salvation, a concept in both Luther's and Calvin's thought. The impact of these ideas on women appears in the lives of activist Protestant women such as Anne Askew, Argula von Grumbach, and Katherine Zell, who challenged the Apostle Paul's dictate that women be silent in the church and whose activism significantly contributed to the success of Protestantism. However, because of the patriarchal belief in women's inferiority, Protestant authorities did not support formal leadership roles for women, and in the long term women's public activism was overridden by the emphasis on their domestic role. Anabaptist women, who supported more radical reform and claimed even greater equality with men in their faith, were those most often martyred for their beliefs.

It has generally been accepted that for Protestant women the deletion of the Virgin Mary and the female saints from churches and devotion was a great loss in terms of both role models and imagining female power. However, in her focus on England Christine Peters has challenged this, asserting that by the late medieval period the Virgin Mary was a model of the suffering Christian for men and women alike rather than a role model for women. In most Protestant lands the option of entering a convent was also lost, although in some Protestant areas religious houses remained open for centuries because of their occupants' determination. While some women entered convents at their families' behest, others chose to live among women dedicated to the

➤ ARGULA VON GRUMBACH

Argula Von Grumbach (who lived approximately from 1492 to 1554 or possibly 1568) was a Protestant noblewoman residing in Catholic Bavaria (southern Germany). She was the first Protestant female writer to appear in print, and she exemplified the radical possibilities of Protestantism and its temporary challenge to patriarchal restrictions. In 1523 and 1524 she wrote seven letters to various authorities, agitating publicly for Luther's Protestant ideas. She was acutely aware of her subordinate status as a woman and defended her speaking out in two ways. In her first letter, to university authorities who had forced a young student to recant his support for Luther, she says that she spoke out because no man had challenged the authorities. She faced a backlash, however, with gendered insults used to attack her. One person wrote that she was "Born a Lutheran whore and gate of hell." A student castigated her for shamelessly forgetting that she was a maid (a

pure young woman) and daring to attempt to teach the authorities. A preacher referred to her as "an insolent daughter of Eve, a heretical bitch and confounded rogue." The authorities apparently left it up to her husband to discipline her, and she may have suffered violence at his hands.

From the beginning, Grumbach cited Scripture as the source of her belief that obedience to God trumped obedience to her husband or the magistrates. This was a revolutionary and empowering idea for women who, like Grumbach, could read and interpret Scripture for themselves (an important part of the Reformation). Grumbach seems to have been silent after 1524, possibly because the German peasants who revolted in 1525 quoted Scripture extensively to justify their demands. This may have increased the danger of a woman's using Scripture to challenge male authorities.

—Martha Skeeters

service of God in institutions that sometimes provided education and always were an alternative to marriage.

Catholic women demonstrated their commitment to reform and their opposition to Protestantism by organizing both lay and religious orders to serve the poor and the sick and to teach. Successful efforts such as Angela Merici's Company of St. Ursula and Isabel Roser's female Jesuit order, however, were denounced by the Roman Church's Council of Trent (1545–1563), which ordered the reclaustration of female religious. Later, the controversial English Catholic activist Mary Ward (1585–1645) was disparaged as a "Jesuitress" by conservative Catholic clerics for her successful missionary and educational work.

Both the Protestant and Catholic reformations also contributed to the eventual increase in the number of women who were accused of witchcraft in part because of the reformers' emphasis on the Devil, which increased fear. Believed to be weaker and more sensual than men, women were thought more likely to succumb to the Devil's wiles and serve him as witches. The reformers' moral campaign emphasized a sense

of sexual sin that was reflected in witchcraft charges against women. This fueled the rise of witchcraft trials in Europe and later North America in the 1600s.

—Martha Skeeters

Bibliography

- Coudert, Allison. "The Myth of the Improved Status of Protestant Women: The Case of the Witchcraze." In *The Politics of Gender in Early Modern Europe*, edited by Jean Brink, Alison Coudert, and M. Horowitz. Sixteenth Century Essays and Studies, 12. Kirksville, MO: Truman State University, 1989.
- Leonard, Amy. *Nails in the Wall: Catholic Nuns in Reformation Germany*. Chicago: University of Chicago Press, 2005.
- Peters, Christine. *Patterns of Piety/Women, Gender and Religion in Late Medieval and Reformation England*. Cambridge: Cambridge University Press, 2003.
- Wiesner, Merry. *Gender, Church, and State in Early Modern Germany*. Harlow, Essex, UK, and New York: Addison Wesley Longman, 1998.
- Wiesner, Merry. *Women in Early Modern Europe*. 2nd ed. Cambridge: Cambridge University Press, 2000.

Defining the Limits of Toleration in Post-Reformation Europe

The intellectual and social climate that followed the Protestant Reformation in early modern Europe did not foster a spirit of toleration or the peaceful coexistence of diverse belief systems. Rather, intolerance was further inflamed amid tensions between the multiple Protestant creeds and the resurgence of Catholicism in the form of the Counter-Reformation. Political affiliations came hand in hand with religious association, triggering multiple conflagrations such as the Thirty Years' War (1618–1648). Science and technology progressed during this period, yet unexplained events still were credited to witchcraft, leading to murderous witch-hunts. These attitudes applied within both Catholicism and Protestantism and extended to non-Christians, especially Jews and Muslims, illustrating the level of intolerance that characterized early modern Europe during the centuries following the Reformation. In the aftermath of the chaos and carnage of the mid-seventeenth century, skeptics began to question the irrational nature of much of the prejudices and fears prevalent in European society, contributing to the development of the eighteenth-century intellectual movement historians have called the Enlightenment.

The schism between Catholicism and Protestantism following Martin Luther's break with the Church (1517) provoked intense disarray in the political arrangements of early modern Europe. German Lutheran princes, French Huguenot lords, and British Puritan gentry used the discourse of religion to rationalize their political choices in confronting the power of their respective overlords. The various wars of religion that erupted as a result of this phenomenon were characterized by years of bloody conflict and violence. The Thirty Years' War fought by the Catholic Habsburgs against Lutheran rebel princes turned into a European fratricide that included all the major powers. However, what had begun as a fight between Catholicism and Protestantism resulted in a war against Habsburg supremacy in central Europe, illustrating a tendency to appropriate religious tensions to serve political ends.

The multiple denominations that subsequently followed Luther's break with Rome, in

the form of Calvinism, Anabaptism, and other sects, created myriad new faiths resisting Catholicism and each other. In some instances, Lutherans hated Calvinists more than Catholics and vice versa. While Lutheran princes looked at Calvinists and other Protestant groups with contempt and enacted forms of mild persecution, Catholics continued to persecute Protestants in their lands, culminating in the St. Bartholomew's Massacre (August 25, 1572) in which the Huguenots of Paris were killed by Catholic mobs. After the Reformation the secular authorities in various Protestant principalities and territories throughout Europe assumed the legal authority that they had wrested from the Catholic Church and former Catholic monarchs. Meanwhile, the Catholic Church was utilizing the Inquisition in order to root out heresy and combat Protestantism, having developed in Spain as a means of cleansing the Catholic kingdoms of Jews and Moors in the fifteenth century. Simultaneously, secular Protestant political entities pursued their own persecution of clandestine Catholics in Protestant areas. In England, Catholics were generally scorned and removed from offices of the state and subject to mild levels of persecution. In particular, official state persecution of Catholics in the reign of Queen Elizabeth II followed the death of Catholic Queen Mary, who had persecuted Anglicans during her own reign. Anabaptists were alienated and disliked by other Protestant sects anywhere they happened to emerge. The interfaith bickering that resulted among the various Protestant creeds had the ironic result of prompting many to return to the Catholic fold, particularly around Calvin's Geneva where Swiss towns saw Calvinism as much too constricting of their social lives in regard to alcohol, festivals, and feast days.

The intolerance of the Protestant sects toward each other and toward Catholicism intensified the persecution of people deemed as heretics or witches. The infamous European witch-hunts between 1500 and 1700, in particular, illustrate the severity of intolerance throughout both the Catholic and Protestant domains. Social outcasts, usually women, denounced and accused by neighbors, would usually be rounded up and tried as witches. Official persecution of witches in both Catholicism and Protestantism

➤ MARTIN LUTHER, EXCERPT FROM *THE JEWS AND THEIR LIES*, 1543

Martin Luther, known for his dissension from the Catholic Church and his establishment of Protestantism, published some vehement attacks on Jews, another example of the level of intolerance that existed in the centuries after the Protestant Reformation. This excerpt illustrates how religious intolerance was not unique to the Catholic Church of early modern Europe.

“What shall we Christians do with this rejected and condemned people, the Jews? Since they live among us, we dare not tolerate their conduct, now that we are aware of their lying and reviling and blaspheming. If we do, we become sharers in their lies, cursing and blasphemy. Thus we cannot extinguish the unquenchable fire of divine wrath, of which the prophets speak, nor can we convert the Jews. With prayer and the fear of God we must practice a sharp mercy to see whether we might save at least a few from the glowing flames. We dare not avenge ourselves. Vengeance a thousand times worse than we could wish them already has them by the throat. I shall give you my sincere advice:

First to set fire to their synagogues or schools and to bury and cover with dirt whatever will not burn, so that no man will ever again see a stone or cinder of them. This is to be done in honor of our Lord and of Christendom, so that God might see that we are Christians, and do not condone or knowingly tolerate such public lying, cursing, and blaspheming of his Son and of his Christians. For whatever we tolerated in the past unknowingly and I myself was unaware of it will be pardoned by God. But if we, now that we are informed, were to protect and shield such a house for the Jews, existing right before our very nose, in which they lie about, blaspheme, curse, vilify, and defame Christ and us (as was heard above), it would be the same as if we were doing all this and even worse ourselves, as we very well know.”

—Abraham O. Mendoza

Source

Martin Luther, *Luther's Works*, Vol. 47, *The Christian in Society IV*, trans. Martin H. Bertram (Philadelphia: Fortress, 1971), 290–293.

resulted in the death of hundreds of thousands of women, men, and children. Famine, disease, and any other sort of calamity that afflicted a local community were typically conveniently blamed on the local elderly widow. A jealous or angry neighbor could denounce anyone, often leading to charges, a trial, and an eventual execution, usually by fire. The widespread witch craze during this period illustrates how Protestant authorities outdid the former Catholic Church in efforts to smite heresy and witchcraft. For example, in predominantly Protestant southwestern Germany, 3,229 witches are estimated to have been executed from 1591 to 1670 under the auspices of secular leaders.

Currents of thought in science and technology as well as politics progressed erratically within Europe's fervent religious intolerance. Scientists such as Galileo Galilei (1564–1642) and Isaac Newton (1642–1727) sought to challenge the Church's traditional insistence on the deity's direct operation of the physical world;

yet even Newton served on a royal commission to suppress witchcraft. Nevertheless, thinkers such as Baron de Montesquieu (1689–1755), René Descartes (1596–1650), and Jean Bodin (1529–1596) questioned the irrational mood of this period and advocated a more moderate course in religious affairs and politics. The emergence of the skeptics and the *politiques* in European intellectual circles openly engaged in extricating politics and society from the intolerance that led to the Wars of Religion, the witch craze, and the persecution of so-called deviants. Critical of the values begat by both Catholic and Protestant politicians, these currents of thought offered new interpretations of political and social structures to avoid the excesses of the post-Reformation period.

—Abraham O. Mendoza

Bibliography

Elliot, J. H. *Europe Divided, 1559–1598*. 2nd ed. New York: Blackwell, 2000.

Levack, Brian P. *The Witch-Hunt in Early Modern Europe*. New York: Longman, 1987.

Parker, Geoffrey. *Europe in Crisis, 1598-1648*. 2nd ed. New York: Blackwell, 2001.

The Limits of Enlightenment

The limits of the Enlightenment are best understood in terms of its uncritically held assumptions. In contrasting itself with the “Dark” Ages, the Enlightenment boasted less external control over an individual’s ability to think and develop. The motto of the Enlightenment, given by Immanuel Kant, was “dare to reason.” The Enlightenment also presented itself in contrast to the Wars of Religion that devastated Europe during the late sixteenth and seventeenth centuries, proposing an alternative in increasingly democratic and secular institutions. While there is some truth in the claim that the Enlightenment gave more opportunity to reason without external pressures from tradition and social caste systems, the limits of the Enlightenment can be seen in the ways that its presuppositions kept certain kinds of thinking from taking place.

The first noticeable limiting presupposition is connected to the Enlightenment’s project to overcome religious wars. A number of Enlightenment thinkers attributed the causes of religious war to people’s overly subjective interpretation of divine revelation, or biblical interpretation. Instead, they advised people to view special revelation itself as suspect and to search for what is universal among all humans. Special revelation does not count as universal because it is not available to all humans, and even among those who have access to special revelation, the multiple interpretations keep religion from serving as common ground. This thinking led to the Enlightenment’s preference for natural, as opposed to revealed, religion (religion without the need for scriptures, as was thought at that time to exist among tribal groups). This was noticeable in the transition from theism to deism (belief in a God who creates but does not rule in history, who gives no scriptures and performs no miracles) and then from deism to naturalism. Naturalism serves as a limit to the Enlightenment because it does not recognize as objects of knowledge anything besides the material world.

Another limiting presupposition of the Enlightenment was what it took to be certain. For rationalists such as René Descartes (1596–1650), the starting point was the individual human. However, Descartes did not reckon with the different views of the self found in various worldviews and instead presupposed that the individual exists as a real being (as opposed to the illusory self posited by the Advaita Vedanta school of Hindu philosophy).

Other rationalists likewise failed to recognize the fallacies of their presuppositions and instead assumed that their starting points were common-sense positions.

In contrast, empiricists such as John Locke (1632–1704) asserted that people acquire knowledge first through the sensory evidence. Locke described the mind as a *tabula rasa*, or blank slate, until its interaction with information gathered by the senses. This sense data could be collected and methodically ordered so as to arrive at a scientifically based knowledge of the world. The empiricists encountered two intellectual problems, however: first, inferences drawn from sense data, or inductive reasoning, remains subject to erroneous logic; second, sense data must be interpreted to be meaningful, and the interpretations cannot themselves be derived from sense data without circularity.

The inability of rationalists and empiricists to demonstrate the possibility that we can acquire certain knowledge led skeptics such as David Hume (1711–1776) to argue that certainty is not possible. To respond to this criticism, Immanuel Kant (1724–1804) proposed what he called a Copernican Revolution in philosophy by distinguishing between the noumenal and phenomenal worlds. The noumena (being in itself) is unknowable, whereas the phenomena (being as experienced by humans) is the sole object of knowledge. The human mind structures the phenomena by adding categories such as space, time, and causation, which are not present in being in itself.



Immanuel Kant, eighteenth-century German philosopher. (Library of Congress)

While Kant's intention was to counter Hume's absolute skepticism, his solution in fact undermined the effort to demonstrate that certain knowledge was possible and contained other significant problems. For instance, Kant asserted that noumena influenced the phenomena. Yet if humans cannot directly know being in itself, then they cannot comprehend causation between the noumenal and phenomenal worlds. Therefore, if nothing can be known about the noumenal world, then nothing can be said about it, and concepts such as causation are humanly constructed and thus subject to logical error. However, Kant had a great deal to say about the noumenal world. Kant's distinction between the noumenal and phenomenal is not different than the classical problem between appearance and reality. But this distinction assumes that something can be known of both and that one can be compared to the other. If reality cannot be known, then only appearance can be spoken of, and the problem of appearance and reality does not arise.

These limiting presuppositions and Kant's proposed solution to skepticism provided the basis for a pervasive skepticism that undermined the Enlightenment's goal of attaining the universal and certain. This failure is sometimes thought to prove that the universal and certain cannot be obtained and that instead difference and particularity should be emphasized. However, an alternative possibility is that the Enlightenment did not consistently apply its own principles. As noted above, both rationalists and empiricists imported presuppositions that they did not question. Like the religious factions that the Enlightenment wished to avoid, uncritically held assumptions resulted in skepticism. The solution is to search for the universal and certain at the presuppositional level, asking questions about the most basic issues that can be thought about rather than importing interpretive assumptions.

—Owen Anderson

Bibliography

- Anderson, Owen. *The Clarity of God's Existence: The Ethics of Belief after the Enlightenment*. Eugene, OR: Wipf and Stock, 2008.
- Hume, David. *Dialogues Concerning Natural Religion*. New York: Hafner, 1955.

Kant, Immanuel. *Critique of Pure Reason*. Translated by Norman Kemp Smith. New York: Palgrave Macmillan, 2003.

Livingston, James C. *Modern Christian Thought: The Enlightenment and the Nineteenth Century*, Vol. 1. 2nd ed. Upper Saddle River, NJ: Prentice Hall PTR, 1996.

Neiman, Susan. *Evil in Modern Thought: An Alternative History of Philosophy*. Princeton, NJ: Princeton University Press, 2002.

Oppy, Graham. *Arguing about Gods*. New York: Cambridge University Press, 2006.

Superstition and Witch-hunting in Eastern Europe

From 1400 to 1750, eastern Europe underwent a similar phenomenon as that experienced by western Europe in terms of widespread persecutions of witches, warlocks, vampires, and suspected heretics amid the social and economic changes prevalent at the time. Witch-hunts in both Catholic Poland and Hungary, influenced by the ideas of *maleficium* (evil deeds through witchcraft) and demonology from the German lands, were an extension of events going on in western Europe in the late sixteenth century and the seventeenth century. In contrast, Muscovite Russia experienced a surge in witch-hunts just as the phenomenon was on the decline in the rest of Europe, well into the eighteenth century. Moreover, widespread superstition based on local folklore in various regions of eastern Europe, in places like the Balkans, Romania, and Russia, created significant scares surrounding vampires and werewolves. Such local legends and myths explained the unexplainable, particularly events such as death, famines, outbreaks of disease, and other instances of social and political chaos prevalent at the time. Furthermore, this folklore illustrated a lack of social cohesion given its popularity among the uneducated peasants who, while “good” Orthodox or Catholic Christians, still adhered to local beliefs stemming back to pre-Christian “pagan” times and were willing to lay blame on scapegoats from the dregs of society.

Ideas stemming from early modern western Europe, particularly from the Catholic states within the Holy Roman Empire, had a significant impact on Poland and Hungary. Poland saw a

surge in witch-hunts in the seventeenth century and reached its peak in the early eighteenth century. This has been attributed to the fact that the witchcraft trials were switched from the ecclesiastical courts, which tended to be more lenient on the accused, to the secular courts. In addition, Poland became re-Catholicized after 1648, and a war between Sweden and Russia involved much of Poland, which caused much stress and a rise in religious fervor. Although exact numbers are not known, it is estimated that several thousand of the accused were convicted and executed during this period. Hungary's surge in witch-hunts also occurred in the late seventeenth century due to the expulsion of the Turks and the reestablishment of Christianity as the official religion. The trials peaked in the first two decades of the eighteenth century but waned by midcentury, when Empress Maria Theresa began restricting them. Historians have estimated that around 1,000 people were executed in Hungary during this period.

In the borderlands between the Habsburg and Ottoman domains, mostly Romania and the Balkan regions, local superstitions (folk belief systems) surrounding vampires and witches also resulted in the persecution or at least in the suspicion of physical manifestations of evil among the living. The terms “vampire” and “werewolf,” which were both associated with the so-called undead, were used to label local people deemed responsible for local catastrophes. These practices were typically associated with desecration of corpses, holy symbols, and other occultist rituals practiced by suspected pagans and heretics. Such myths shared many common characteristics with the ubiquitous anti-Semitism prevalent in these regions, which involved the infamous blood libel. People accused of being vampires were blamed for sucking the blood of the innocent or eating the bodies of their victims in addition to plotting to destroy communities and practicing maleficium. These beliefs also extended farther east into Muscovite Russia.

Muscovite Russia had various surges of witch-hunts throughout much of its history, but these reached their high point in the late seventeenth century and into the eighteenth century. The ecclesiastic authorities of the Russian Orthodox Church worked in tandem with tsarist

➤ HEINRICH KRAMER AND JAKOB SPRENGER, *MALLEUS MALEFICARUM*

The *Malleus Maleficarum* (The Hammer of Witches), written in 1486 by Heinrich Kramer and Jakob Sprenger and published in 1487, is a famous treatise on witches. The purpose of this treatise was to refute all arguments against witchcraft, dispel any skepticism against the existence of witchcraft and its impact in the physical world, and instruct magistrates and church officials on the procedures for discovering and prosecuting witches. Kramer and Sprenger, both Germans, were associated with the Church as clerics and inquisitors and were intensely familiar with canon law. They issued this document for the purpose of exposing the existence of witches in early modern European society and their responsibility for events such as famine, epidemics, and wars, further suggesting that they were likely to be women. Furthermore, the *Malleus Maleficarum* popularized the notion of *maleficium*, which was the practice of witchcraft in tandem with the devil in order to bring disorder and disasters in the physical world through the use of potions, spells, and satanic rituals. Even after the Protestant Reformation, when large parts of Europe broke with the Church, the *Malleus* continued to be used as a reference for the persecution of witches throughout most of Europe during times of the more ferocious witch crazes.

—Abraham O. Mendoza

secular officials in the persecution of witches and warlocks. The most significant characteristic of Russian witch-hunts is the fact that men rather than women were more susceptible to accusations of witchcraft. In fact, more men were accused and executed for witchcraft than women in early modern Russia, given the association of warlocks, rather than with witches, with magic in Orthodoxy. Moreover, the strict procedures designated by the Orthodox Church and the tsarist state made the entire process of prosecuting witches, which was much more bureaucratic and meticulous, relatively more effective and thereby avoided the outbreak of witch crazes in contrast with events in western Europe, minimizing the total number to only a few hundred executions. Some historians attribute

this to the fact that the only recorded cases come from the highest courts, meaning that the trials of serfs and those tried in local courts were not recorded, making it impossible to determine exactly how many people were actually tried and executed for witchcraft. Many of these outbreaks were associated with the tsarist persecutions of so-called Old Believers who opposed reforms of the Russian Orthodox Church and were deemed heretics in the fifteenth century. Practices such as water torture, trial by ordeal, and the use of other devices designed to extract confessions were prevalent in the persecution of witches, warlocks, and vampires.

—*Abraham O. Mendoza*

Bibliography

- Barstow, Anne L. *Witchcraze: A New History of the European Witch Hunts*. New York: HarperOne, 1995.
- Kors, Alan Charles, and Edward Peters, eds. *Witchcraft in Europe, 400–1700: A Documentary History*. 2nd ed. Philadelphia: University of Pennsylvania Press, 2000.
- Levack, Brian. *The Witch-Hunt in Early Modern Europe*. 3rd ed. New York: Longman, 2006.

Spanish and Portuguese Inquisitions in the Americas

The Spanish and Portuguese Inquisitions were initiated in response to what they saw as threats from the “new Christians,” or those families who were formerly Jewish and had recently converted to Christianity. While the crypto-Jews remained highly susceptible to both Inquisitions on the continent, those fears would be transferred to those living in the Americas.

Beginning in 1478 the Spanish Inquisition was created, designated with considerable power and jurisdiction by the Catholic Church. This Inquisition was able to reach outside of Castile and Aragon and even into neighboring Portugal. Therefore, when the Spanish began establishing their colonial empire in the Americas, the Inquisition was able to reach across the Atlantic as well. From the 1500s to the 1530s, friars were granted inquisitorial powers that were used for weeding out mainly those Jewish *conversos* and indigenous Christians who were believed to be false converts. In 1569 Philip II

ordered the establishment of Inquisition tribunals in Mexico City and Lima, Peru. Another one would later be established in Cartagena, Colombia, in 1610. Besides the *conversos*, these tribunals were set up to also protect against Protestant influence, especially once the British and Dutch began exploring the Americas. The Inquisition held jurisdiction over all non-indigenous baptized Christians. Protestants also fell into this category, as they had also received Christian baptism.

The main difference between the Inquisition in Spain and the Inquisition in Spanish America was the level of secrecy involved with the accusations. The accused were completely isolated from the outside world. Sometimes this isolation would last for years and many times only ended with the execution of the accused. The accused were also not informed of their charges, making it difficult for them to defend themselves against their accusers. Throughout the colonial period, the Inquisitions in the Americas only ordered execution in 100 cases, which constituted 1 percent of the total cases. Aside from *conversos*, the Inquisition also tried people for crimes such as sodomy, blasphemy, and bigamy. One of the ways in which the Inquisition sought to protect the colonists from what they saw as destructive ideas was through censorship. Incoming ships were searched for censored material, and manuscripts were inspected before publication. This did slow the dissemination of information within Spanish America but did not completely deter it.

Brazil had a different experience when it came to the Inquisition. Portugal established its Inquisition later than Spain, in 1547. A formal tribunal was never established in Brazil. Rather, the bishop of Bahia was given special inquisitorial powers whereby he and his *familiares* sought out sin and heresy among “Judaizers” and Protestants. Those considered to be guilty by the bishop were sent to Portugal, where they were put on trial.

There were a few instances in which the Inquisition made visits to Brazil. By 1591 the Dutch were becoming a real threat to the Portuguese in Brazil as they attempted to overtake the Portuguese settlements there. As a result, an inquisitorial court was sent to inquire into the

THE BLACK LEGEND

The term “Black Legend” was first introduced by historian Julian Judieras in his book *The Black Legend and Historical Truth*, written in 1914. The Black Legend has its origins in economic and religious rivalry: Protestants in countries such as England and Germany resented Spanish domination of the Americas. The Black Legend refers to the way the Spanish people conquered the Americas and depicts the Spanish as unnaturally bloodthirsty, cruel, and religiously fanatical. However, this “legend” is misleading. The Spanish were not any more cruel to natives than other Europeans were in their own colonial experiments. This supposed penchant for violence and cruelty is habitually attributed to the conquest of Granada in 1492. It is thought that because the Spanish were fighting off the Moors until 1492, they retained that same mentality in the Americas. This is a fallacy, because when the Spanish began fighting for Granada in 1490, they had not fought the Muslims for more than 100 years.

Part of this portrayal comes from comparisons to the Portuguese empire and its methods of colonization. The Portuguese are regarded as being tolerant because their colonization efforts did not involve the amount of deaths that the Spanish ones did. It is not that the Portuguese are

genetically predisposed to being nice; rather, the circumstances were different. The natives of Brazil did not die in the dramatic manner of the Aztecs or the Maya because these peoples were immersed in the interior of Brazil and therefore did not interact with the Portuguese for many years. Moreover, these natives did not possess the great amounts of wealth that the Aztecs did, so the Portuguese did not find it necessary to kill them in order to get to their gold. Finally, the Portuguese and Spanish expeditions were different in nature. The Spanish were mostly private expeditions of people intent on looking for the riches that they could not find in Spain. The Portuguese expeditions were crown-sponsored voyages with the purpose of establishing trading posts. Since Portugal was a smaller country, they needed to intermarry with the natives in order to retain their influence and could not afford to kill the natives. It is circumstances, not national character, that explains these and many other differences between Europeans and their actions. The criticisms of the Spanish empire have lasted until the present day and have been used by the non-Castilian regions of Spain to attack the central government.

—Monique Vallance

Dutch and see how much of a threat their presence posed to “Catholic Christianity and Christian morals in Brazil.” From Bahia, this court moved on to Pernambuco in 1593. The court returned to Portugal in 1595 but would return to Brazil again in 1618 and 1646. The main objective of these courts seems to have been to root out crypto-Jews, but they did not meet much success in this task.

—Monique Vallance

Bibliography

- Burkholder, Mark A., and Lyman L. Johnson. *Colonial Latin America*. 5th ed. Oxford, UK: Oxford University Press, 2004.
- Diffie, Bailey W. *A History of Colonial Brazil, 1500–1792*. Malabar, FL: Krieger, 1987.
- Giles, Mary E., ed. *Women in the Inquisition: Spain and the New World*. Baltimore: Johns Hopkins University Press, 1999.

Peters, Edward. *Inquisition*. Berkeley: University of California Press, 1989.

Schwartz, Stuart. *Sovereignty and Society in Colonial Brazil: The High Court of Bahia and Its Judges, 1609–1751*. Berkeley: University of California Press, 1981.

Witches, Quakers, and Dissidents in British North America

Late-seventeenth- and early-eighteenth-century British North America experienced a variety of political, social, and economic tensions, particularly in New England, that led to the marginalization of certain groups of society based on their religious denomination, class, or gender. Economic growth, increases in population, and social stratification led to a gradual decline in the primacy of Puritanism, leading to widespread anxiety in colonial society about the loss of their

➤ COTTON MATHER, *WONDERS OF THE INVISIBLE WORLD*

Cotton Mather (1663–1728) was a Puritan minister, theologian, author, and scholar. While mostly noted for his association with the Salem Witch trials, he was also an advocate of science, Enlightenment thought, and smallpox inoculation. Nonetheless, it was his writings on the Salem Witch Trials, primarily in his *Wonder of the Invisible World*, for which he is mostly recognized. As a result, his historical reputation has been that of a religious bigot who sought to condemn and persecute witches, and he is known less for his other interests, which reveal him to be a much more complex and well-rounded individual given the context of the time and place. In *Wonders of the Invisible World*, while he does examine the supernatural elements of the world and condemn the use of witchcraft, he is also critical of the use of spectral evidence in the courtroom. Mather was skeptical that judges in the witch trials could make adequate use of accusations based on events that could not be proven in court and relied on speculative observations.

—Abraham O. Mendoza

established values to religious dissidents and the threat of supernatural evil as espoused by witches. This led to the persecution of witches, the ostracizing of Quakers, and the banishment of religious dissidents, mostly in New England, as a direct result of these dynamic changes in colonial American society. While the persecution of people who did not conform to the standards of Puritan communities of New England mirrors events across the Atlantic (witchcrazes, state and church persecutions, autos-de-fé), it occurred on an albeit smaller scale in terms of total numbers with less catastrophic social effects.

The notorious Salem Witch Trials of 1692, which occurred in the Massachusetts Bay Colony, offer a glimpse into the social and economic dislocations occurring in early colonial American society. The Salem Witch Trials occurred as a series of hearings before local officials regarding the use of witchcraft by local women, mostly in relation to local girls. With approximately 150 arrests after a frenzy of accusations, the courts eventually convicted 29 people of the felony

charge of witchcraft, resulting in 19 executions. Fourteen women and 5 men were hanged, and 1 man was crushed to death during an attempt to extract a confession from him. Five others were believed to have died in prison. Historians conclude that a variety of factors led to this outbreak of hysteria concerning witchcraft in the local community. The Massachusetts Bay Colony had recently lost its charter under James II and was placed under the Dominion of New England, resulting in decreased autonomy from the Crown. Furthermore, the young girls who had been “possessed” began accusing local women of witchcraft, mostly older women of low economic stature and position, which scholars interpret was a way of lashing out against their own subordinate position in a highly oppressive patriarchal and theocratic society. However, Salem was an anomaly within the greater history of the witch-hunt craze, as it was in North America and nothing like it occurred afterward.

In spite of Anglican intolerance in England spurring Puritan settlement in British North America, Puritans did not in turn accept other religious denominations within their dominions, particularly Quakers. Quakers, otherwise known as the Society of Friends, whose interpretation of Scripture differed from other Calvinist Puritan sects, had also migrated in large numbers to British North America to escape persecution in Anglican England. In the mid-1600s, numbers of them had settled in the Massachusetts Bay Colony or New York to spread their beliefs, which led to some of them being imprisoned and banished, with some cases of certain individuals being publically flogged. While Quakers did experience intolerance in the largely Puritan Massachusetts Bay Colony and New York, they were more welcome in the relatively tolerant colonies to the south, namely New Jersey, Delaware, and even Catholic Maryland. Pennsylvania, established by notable Quaker William Penn and granted to him by royal decree in 1681, was created specifically for the purpose of Quaker settlement.

Other religious dissidents, such as Roger Williams and Anne Hutchinson, who espoused more liberal interpretations of Scripture and the role of religion in society, were also subject to banishment from Puritan society. Roger

Williams (1603–1683), a theologian who had broken with Anglicanism, settled in the Massachusetts Bay Colony in 1631. His controversial views concerning the separation of church and state, equitable relations with indigenous Americans, and religious toleration eventually got him exiled from Massachusetts in 1635. From there he settled in what was to become Rhode Island in 1636, which was established as a beacon of equality and religious toleration, with its capital at Providence. Similarly, Anne Hutchinson (1591–1643), a dissident Puritan minister, controversial because of her position as an unauthorized woman minister, was also banished from Massachusetts. Her belief that women were entitled to share in the ministry in the same capacity as men as well as her advancement of the idea

of social equality of women in Puritan New England eventually led to a trial and imprisonment. Having been accused of blasphemy, heresy, and trying to poison the minds of women, she was demonized as a “Jezebel” by local Puritan notables. Upon her release and banishment, she continued to advocate her positions as her followers continued to be persecuted by authorities.

—Abraham O. Mendoza

Bibliography

- Katz, Stanley N., John Murrin, and Douglas Greenberg, eds. *Colonial America: Essays in Politics and Social Development*. 5th ed. New York: McGraw-Hill, 2000.
- Taylor, Alan. *American Colonies: The Settling of North America*. New York: Penguin, 2002.

■ Introduction: Ecclesia and Doctrine

Among the most dramatic developments in the religious history of the early modern period was the splintering of Roman Catholic Europe into numerous religious bodies. The Catholic Church retained or regained control of most of the European population as well as expanding with Spanish, Portuguese, and French conquest and commerce to become the first worldwide church, but it was forced to cede much of the European north to the new “Protestant” churches. The causes of the Reformation are one of the most vexed problems in European history, but the differences between Catholics and Protestants clustered around a handful of issues. Some involved rejection of the Catholic hierarchy; Protestants unanimously rejected the special status that Catholics gave the clergy, as particularly marked by the practice of clerical celibacy. In one of the most famous slogans of the Reformation, its pioneer, Martin Luther, called for “the priesthood of all believers.” Protestants rejected the authority of the pope, many even identifying him as the biblically foretold antichrist or “man of sin.” Protestants were identified with the doctrine of “salvation by faith,” rejecting the idea that good works of any kind could contribute to salvation. The doctrine of

Purgatory, which held that those who died in sin could work off the penalties through suffering before finally being admitted to heaven, was unanimously rejected by Protestants along with associated practices, such as masses and prayers for the dead to ease their passage through Purgatory. Protestants also denied Transubstantiation, the belief that the wine and bread consecrated during the Mass were actually transformed into the blood and flesh of Jesus Christ, despite their remaining unchanged to human senses.

But differences between Protestant churches could also be great. Lutherans and Calvinists, while both opposing Transubstantiation, differed passionately on what exactly the formula “this is my body” really meant. The Church of England preserved many of the rituals and physical trappings of Catholicism, causing its Scottish and Continental Protestant contemporaries to view it as a weak, compromising body. The persistence of bishops in the Church of England and other “Anglican” churches also made them different from Protestant bodies with similar theologies that rejected episcopacy in favor of Congregational or Presbyterian church organization. The Anabaptists, by denying the validity of infant baptism, seemed to be attacking every

other church as illegitimate and were the most viciously prosecuted of all, by Catholic and Protestant alike. The Socinians, a small minority, rejected the doctrine of the Trinity and were also persecuted by Protestants and Catholics.

All of these differences, while often carried to the point of physical violence, also led to the blooming of a rich body of dogmatic and controversial literature. The Council of the Catholic Church held at Trent issued a systematic statement of its doctrine, while endless catechisms, confessions, and doctrinal statements came from Protestant presses. Priests and ministers sought to instill their doctrines in their parishioners through catechizing, preaching, and teaching. All of these together made the sixteenth and early seventeenth centuries the last period in European history when intellectual life was dominated so completely by religion.

—*William E. Burns*

The Eucharistic Theology of John Calvin

In his theology of the Eucharist, also known as Holy Communion, or the Lord's Supper, John Calvin (1509–1564) sought to forge a middle



Sixteenth-century theologian John Calvin. (Library of Congress)

way between the eucharistic theologies of the two principal branches of Protestantism in his time: the Lutheran and the Reformed. Lutherans founded their conception of the Eucharist on the words of institution, “This is my body” and “This is my blood,” that Jesus uttered as he distributed bread and wine at the Last Supper. These words implied, in the Lutherans’ view, that Christ’s physical body is in, with, and under the bread and wine, namely, the elements of the Eucharist.

The Reformed, by contrast, held that Christ’s ascended body resides exclusively in heaven. They therefore interpreted the words of institution figuratively and, before Calvin’s influence outstripped that of Swiss Protestant reformer Huldrych Zwingli (1484–1531), treated the Eucharist primarily as a memorial of Christ’s crucifixion, in accordance with Jesus’s words, “Do this in remembrance of me” (Luke 22:19). In view of their disagreement on this topic, the Lutheran and Reformed churches could not unite. Indeed, the Lutherans considered belief in Christ’s physical presence in, with, and under the bread and wine of the Eucharist a fundamental article of the Christian faith and thus denied that the Reformed were Christians.

Calvin sought to remedy the Lutheran-Reformed breach by articulating what he considered Scripture’s doctrine of the Eucharist, a doctrine that, in his view, affirmed the truths in both positions while rejecting the inadequacies of each. With the Lutherans and against a Zwingli-inspired Reformed view of the Eucharist, Calvin insisted that in the Eucharist, Christ’s flesh is actually present to persons of genuine Christian faith.

With the Reformed and against the Lutherans, however, Calvin insisted with equal firmness that believers feed on Christ’s flesh in the Lord’s Supper only in a spiritual manner. One must interpret the words of institution figuratively, he argued, because otherwise one would implicitly affirm that unbelievers, destined for eternal death, will live everlastingly, for Christ promises that whoever eats his flesh will live forever (John 6:51). Moreover, the Lutherans themselves interpreted the words of institution figuratively in that they did not identify the bread and wine per se with Christ’s body and

blood but held that Christ's body and blood are in, with, and under the eucharistic elements.

Calvin insisted that the Lutherans err in considering Christ's flesh ubiquitous and thus capable of occupying many places at once, for the nature of flesh excludes ubiquity. To declare Christ's body ubiquitous, therefore, would be tantamount to denying that Christ assumed a human nature, that is, the heresy of Docetism, condemned by Lutherans, Reformed, and Catholics alike. According to Scripture (e.g., Acts 3:21), Calvin asserted, Christ's body will remain in heaven, far from the elements of the Eucharist, until his second coming.

With the Lutherans and against the Zwinglian Reformed, however, Calvin denied that Christ's flesh is absent from believing participants in Holy Communion. Although the minister does not drag Christ's body down from heaven when he utters the words of institution, Calvin maintained, Christ does lift the souls of believers up to his body in heaven. Precisely for this reason, however, Calvin held with the Reformed and against the Lutherans that one could consistently affirm that believers spiritually feed on Christ's flesh while denying that unbelieving communicants do so as well.

The Eucharist, Calvin taught, exhibits, conveys, and seals God's offer of eternal life through faith in the crucified Christ. It exhibits this offer by presenting, in visible tokens, the body and blood of Christ shed for sinners. It conveys this offer by serving believers Christ's crucified flesh in a spiritual manner that they may eat of it by faith and live forever, and it seals God's offer by assuring believers that they receive salvation through faith in Christ just as surely as they eat the eucharistic elements.

The Lord's Supper, Calvin believed, also unifies the church by visibly uniting its members to Christ, who by sharing himself with all believing communicants makes all of them one in him. Such benefits, in Calvin's view, warrant the celebration of the Lord's Supper at least once a week. His own church of Geneva, however, allowed Calvin to celebrate the Eucharist only once a month, and Reformed churches of later generations have typically served communion even less frequently. Calvin never overcame Lutheran-Reformed divisions over the Eucharist. He did,

➤ THE *CONSENSUS TIGURINUS*

Swiss Protestants' embrace of a common confession of eucharistic doctrine, the *Consensus Tigurinus* (1549), reflected agreement more apparent than real over the doctrine of the Eucharist. This document, a set of 26 articles drafted by Calvin, constitutes a painstakingly worded compromise designed to conceal sometimes dramatic differences among the signatories. Especially significant ambiguities appear in articles 14, 19, and 20 in which the phrase "in the Supper" may mean either "by means of the Supper" or "during the Supper."

Construed in the former sense, these articles affirm Calvin's view that God conveys grace by means of the Eucharist. Construed in the latter sense, however, they accord with the opposing views of Heinrich Bullinger, who also signed the *Consensus*. Under threat of invasion by the Catholic emperor Charles V, the document's signatories appear to have closed ranks and agreed to disagree about the finer points of eucharistic theology.

—Dennis Jowers

however, unite the Swiss Reformed churches in a common confession on the subject, the *Consensus Tigurinus* of 1549.

—Dennis Jowers

Bibliography

- Calvin, John. *Calvin: Theological Treatises*. Edited and translated by J. K. S. Reid. Philadelphia: Westminster, 1954.
- Calvin, John. *Institutes of the Christian Religion*. 2 vols. Edited by John T. McNeill. Translated by Ford Lewis Battles. Philadelphia: Westminster, 1960.
- Gerrish, B. A. *Grace and Gratitude: The Eucharistic Theology of John Calvin*. Minneapolis: Fortress, 1993.
- McDonnell, Killian. *John Calvin, the Church, and the Eucharist*. Princeton, NJ: Princeton University Press, 1967.

Luther and Zwingli

The intellectual legacy of the Protestant Reformation that began in the sixteenth century in the Holy Roman Empire found expression in the

➤ LUTHER, ZWINGLI, AND THE EUCHARIST

Although many theological disagreements separated early Protestant reformers, the major theological conflict between Martin Luther and Ulrich Zwingli centered on the nature of Christ's presence at the Eucharist. While the Eucharistic theology of both men repudiated the teaching regarding Transubstantiation, a view long held by the Roman Catholic Church that the Eucharist contained the actual body and blood of Christ, Luther's view of the Eucharist nevertheless came to embrace the idea that Christ was indeed present in a mysterious and sacramental way in the celebration of the Eucharist ("Real Presence"). Zwingli, however, believed that the Eucharist was a memorial or commemoration only and termed his Eucharistic theology the "Real Absence." Because such an intense theological rift threatened the unity of the Protestant movement, the two men agreed to meet in public debate in Marburg in 1529. At this Marburg Colloquy, the disagreement between the two reformers escalated to the point that Luther rose to write on the table the words from the Gospel, "This is my body." The two reformers could not reach an agreement about this crucial issue, and the Marburg Colloquy ended with the divisions between the two factions only further intensified. The irreconcilable theological differences between the two men split the Protestant Reformation.

—Cheryl H. White

lives of two men whose theological disagreements splintered the early movement of Protestantism: Martin Luther (1483–1546) of Germany and Ulrich Zwingli (1484–1531) of Switzerland. Both men promoted reformist views of the Roman Catholic Church as contemporaries, but their failure to reach accord on key theological issues meant that the Protestant movement of the sixteenth century would eventually divide.

Martin Luther took Augustinian orders in 1507 and rapidly rose through the clerical ranks to become professor of Holy Scripture at the University of Wittenberg in the Holy Roman Empire. By early 1519 Luther had formulated the basis of what would become his personal theology that justification before God comes through faith alone, a teaching that contradicted the

doctrine of works as taught by the Roman Catholic Church. Luther also deplored the corruption that he viewed within the Church, including the practice of the sale of indulgences, which generated considerable revenues for Rome. Luther posted his famous *Ninety-Five Theses against the Sale of Indulgences* to his church door in Wittenberg on October 31, 1517, to arouse awareness of this particular abuse.

Luther could not have predicted the firestorm of controversy that resulted from his action. Copies of his theses circulated throughout Europe, and Luther failed to respond to orders that he answer charges of heresy. Instead, he sought and received the protection of the powerful Frederick III of Saxony and worked further on theological treatises related to the study of the Holy Scripture, particularly the Epistles of St. Paul. In 1520 Luther completed the *Address to the Christian Nobility of the German Nation*, which asked the nobles to assist with church reforms in Germany, and his work *Babylonian Captivity of the Church*, which amounted to an attack on papal claims of supremacy. Also during that year Luther published *On the Freedom of a Christian Man*, which argued his theological position on justification by faith alone, a conclusion that Luther claimed to have reached through his study of *St. Paul's Epistle to the Romans*. Pope Leo X issued a papal bull (*Exsurge Domine*) that same year ordering Luther to recant his heretical views or face excommunication. A later papal bull of January 1521, *Decet Romanum Pontificem*, formally excommunicated Luther from the Roman Catholic Church.

By this time, Luther's theological positions were so strong that his conscience would not permit him to recant, even when Holy Roman Emperor Charles V summoned him to answer to the Diet of Worms in 1521. Taking refuge in Wartburg, Luther proceeded with a German translation of the New Testament and further reforming works such as his *Catechisms*. His movement attracted a large and enthusiastic following of like-minded reformers and quickly spread throughout the Holy Roman Empire. Many of Luther's followers helped spread reform throughout various places on the European continent.

One such reformer was a priest from Switzerland, Ulrich Zwingli, who was born in Waldhaus

in 1484. Also intensely interested in the study of Holy Scripture, Zwingli found himself stirred to reformist ideas as well, initially from the work of Christian humanists such as Desiderius Erasmus. Unlike Luther, Zwingli's theology did not focus on concern over the means of salvation but instead focused on the idea that Holy Scripture was the only authority binding on every Christian. Zwingli's interpretation of Holy Scripture led him to encourage his followers to abandon certain traditional Christian practices such as Lenten fasting, veneration of saints, and frequent celebrations of the Eucharist. The cornerstone and beginning point for all of Zwingli's theological expositions was Holy Scripture, placing it above the authority of previous Church Councils or even the writings and opinions of the Church Fathers.

For Zwingli, only those rituals and observances that Holy Scripture distinctly and literally authorized were valid. In this way Luther and Zwingli differed dramatically, for Luther understood Holy Scripture to allow the observance of two Sacraments (Baptism and Eucharist), and he sought to preserve many elements of traditional Christian observance. When the city council of Zurich asked for public debate centered on Zwingli's ideas, Zwingli prepared a series of brief articles that remain an excellent source of his theological summations. These articles promoted Zwingli's views that Holy Scripture was the only authority binding upon the Christian and included his criticism of the sacrificial nature of the sacrament of the Eucharist, the denial of the veneration of saints, and an attack on what he believed to be the false teaching of purgatory. However, he did not completely denounce the sacraments. Instead, he interpreted them to be an "oath" or "pledge", as opposed to mystical signs from God.

Because the theological disagreements between Luther and Zwingli had the intellectual potential of splintering Protestantism, the two men agreed to meet in 1529 in Marburg to engage in an open public debate over their differing views of the Eucharist. Luther's belief in a doctrine that he termed "Real Presence" affirmed the sacramental nature of the Eucharist, while Zwingli's theology of the "Real Absence" reduced the ritual to a mere commemoration of

the Last Supper. Believing it to be a memorial and a sacrament in that it showed their Christian allegiance, Zwingli did not offer the Eucharist frequently to the people of his church in Zurich. These quite pronounced differences of opinion did not allow for compromise or reconciliation of viewpoints. Both men left behind an intellectual legacy that other reformers quickly adopted and adapted, influencing many Protestant groups today. Among Zwingli's original followers emerged a more radical group known as the Anabaptists, who broke away from Zwingli's reform movement over the issue of infant baptism.

The original intent of these reformers had been to renew and restore the one, holy, catholic, and apostolic Church; reform its abuses, and correct its errors. Beginning new Christian churches had not been the expected outcome. Luther devoted much of his life to restoring the Pauline doctrine of justification to Church teaching regarding salvation. Indeed, Luther urged his followers not to use his name to identify themselves, citing the universality of the one church. Zwingli died in 1531 while fighting in a religious war at the Battle of Kappel. While no Christian groups directly attach his name to their lineage, Zwingli's theology influenced many of the modern churches of the Reformed tradition in Europe.

—Cheryl H. White

Bibliography

- Atkinson, James. *Martin Luther and the Birth of Protestantism*. London: Marshall, Morgan and Scott, 1982.
- Bellitto, Christopher M. *Renewing Christianity: A History of Church Reform from Day One to Vatican II*. New York: Paulist Press, 2001.
- Jensen, De Lamar. *Reformation Europe: Age of Reform and Revolution*. Boston: D. C. Heath, 1992.

John Knox

John Knox was a Protestant reformer from Scotland, born in 1505 in Haddington, although some biographers dispute this date and argue for a later birth date of 1510 or 1515. Not much is reliably known of his formal education and early adulthood, although his volumes of original writings suggest that he had a proficiency in both Latin and French and probably also

➤ KNOX AT ST. ANDREW'S CASTLE

Following the murder of Cardinal David Beaton in 1546, the Scottish government and ecclesiastical authorities undertook serious measures to identify all Protestant dissidents and place them under arrest. Knox could hardly have escaped the notice of these authorities and moved around the countryside to avoid detection and arrest for some time following Beaton's murder. Because Knox tutored the children of some influential Scottish lords, he enjoyed some degree of protection, at least for a brief period. Knox took refuge in the Castle of St. Andrew's among the notorious company of the murderers of Cardinal Beaton and perhaps hundreds more Protestant sympathizers. While Knox abhorred the execution of George Wishart, whose death led to the murder of the cardinal, he must have morally wrestled with the actions of the murderers. These circumstances likely made for a strange mixture of religious dissent and religious fervor during this confinement at St. Andrew's Castle. While taking refuge in the castle, Knox read the *Gospel of John* in the chapel of the fortress and offered extensive commentary on it to those who assembled to hear him. This early circumstance provided Knox with the opportunity to demonstrate what would become a notable and renowned personal characteristic: a fiery and inspiring style of preaching.

—Cheryl H. White

studied at least some Hebrew. Some sources claim that Knox received a university education at St. Andrews; others suggest that he studied at Glasgow. Furthermore, scholars know little of his ecclesiastical career in his native country beyond the fact that he was an ordained priest. Early religious influences for Knox were few, given what was likely limited exposure to diversity of thought. However, reformed thinking probably found its way into Scotland by the early 1540s by way of George Wishart, who became interested in Protestantism because of his travels through Germany. Wishart's execution in 1546 at the hands of the Scottish cardinal David Beaton only intensified Protestant sympathies in Scotland, and Knox became a champion of spreading the new reformed thinking there. In the political turmoil and aftermath of Wishart's

execution and the subsequent retaliatory murder of Cardinal Beaton by a group of radicalized Scottish Protestants, Knox himself faced imprisonment and later exile to England.

While in England, Knox was a frequent visitor at the court of King Edward VI, where he received a license to preach in 1549 and served a brief period as a royal chaplain. A gifted preacher with a renowned talent for powerful oratory, Knox soon developed a reputation for having the ability to arouse Protestant sentiments. However, even with the Anglican reforms of Edward VI's reign, the Church of England remained too Roman in practice for Knox's evolving theology, so he refused a bishopric of Rochester when it was offered to him in 1552. Knox played a consultative role in the first revision of the English *Book of Common Prayer* during that same year. Knox's work on the English prayer book included the development of the theologically significant "Black Rubric," which carefully stipulated that an individual decision to kneel during Holy Communion did not imply acceptance of the doctrine of Transubstantiation. By this time Knox's personal theology approached a unique blending of Lutheran and Calvinist reformed thought, particularly with regard to doctrines regarding the Eucharist. Following the accession of the Roman Catholic Mary I to the throne of England in 1553, Knox traveled to Geneva, where he consulted with John Calvin. Meanwhile, his own home country of Scotland was also under Roman Catholic rule in the form of regency for Mary Stuart, Queen of Scots, led by her mother, Mary of Guise.

In 1555 Knox briefly returned to Scotland to survey the state of religion there. Although still under the regency of Mary of Guise, Knox found the countryside amenable to Protestant thought, and he found support among many of the fiercely independent Scottish lords. He did not stay long in Scotland, returning to Geneva the following year, where he found a home for two years in the Reformed Church of John Calvin. It was in Geneva in 1558 that Knox published his famous pamphlet *The First Trumpet Blast against the Monstrous Regime of Women*, a treatise thought to target the reigns of both Mary Tudor in England and Mary of Guise in Scotland. The work argued that women did not

have the divine right or authority to rule except in rare circumstances, and Knox first published the document anonymously for fear of its repercussions. It was also during this time that Knox's exposure to the tenets of Calvinism further solidified his politically theological belief in the right of a people to overthrow a wrongful government. When English Protestant exiles in Geneva left to return to England upon the accession of Elizabeth I in 1558, Knox decided to return to Scotland yet again.

Knox found a complex political and religious environment when he returned to Scotland and was himself the object of Mary of Guise's designs to eliminate Protestantism there. The Protestants waged a revolution against the Catholic regency and found Knox as the central point of focus. Negotiating with the government of Elizabeth I for support for the Protestant cause, Knox helped bring about a victory. In 1560 Mary of Guise died suddenly, and the subsequent Treaty of Edinburgh ended all formal hostilities, paving the way for the Scottish Parliament to implement Protestant reforms, including the renunciation of papal authority in Scotland and the prohibition of the celebration of Mass. Following this, Knox became the minister at the Church of St. Giles in Edinburgh and was instrumental in the development of a reformed liturgy for the Church of Scotland. He helped develop both the Scottish Confession of Faith and the Scottish Book of Discipline, which patterned church government along a Presbyterian model. Scholars believe that by this time Knox was already working on his five-volume *History of the Reformation*, which he completed several years later. The work remains a standard chronicle of the reformed movement in Scotland during the sixteenth century.

When Mary Stuart, Queen of Scots, returned to Scotland from France in 1561, she and Knox had a troubled relationship, although Knox maintained that he would abide by her lawful rule in a series of personal confrontations. Continual theological conflicts with Roman Catholic authorities characterized Knox's time in Scotland, where he continued to assert Protestant ideals regarding church administration and ordination. Meanwhile, a series of personal scandals led to Mary Stuart's abdication in 1567 in favor of

her one-year-old son James (the future James I of England and James VI of Scotland). John Knox preached the sermon at the young king's coronation, cementing the survival of Protestantism in Scotland for the future. By the time of Knox's own death in 1572, his pervasive influence in matters related to church polity and governance ensured that the Church of Scotland would have a Presbyterian model rather than the Episcopal model of the Church of England.

—Cheryl H. White

Bibliography

- Brown, Peter H. *John Knox: A Biography*. London: Adam and Charles Black, 1895.
- Cowan, Henry. *John Knox: The Hero of the Scottish Reformation*. New York: Putnam, 1905.
- MacCulloch, Diarmaid. *The Reformation*. New York: Viking, 2003.
- Marshall, Rosalind K. *John Knox*. Northampton, MA: Interlink Publishing, 2008.

Nikon's Reforms

Nikon was a patriarch of the Russian Orthodox Church whose significant efforts at reform eventually led to a deep division within the Church. Born Nikita Minin in 1605 of peasant origins outside of Novgorod, he received a monastery education before becoming a secular parish priest in Moscow and taking a wife. However, their marriage produced three successive stillborns, which convinced Nikon that he needed to seek the monastic life. After convincing his wife to become a nun, he entered the Solovetskii monastery, where he took the name Nikon. A disagreement led him to join a neighboring monastic community of Kojezersk, of which he became the abbot in 1643. Over time his work ethic and dedication to monastic life earned him the attention of the Russian Church hierarchy, and Tsar Alexis appointed him the metropolitan bishop of Novgorod. Nikon was then elected patriarch of Moscow in 1652.

Once he became patriarch of Moscow, Nikon undertook a series of reforms, none of which were without controversy. He primarily directed the reforms at achieving a complete restoration of old Greek worship rituals and texts for use within the Orthodox Church in Russia. These reforms offered the promise of bringing the Russian

THE OLD BELIEVERS

The Old Believers are those who became separated from the Russian Orthodox Church following the reforms of Patriarch Nikon in the seventeenth century. As a protest against what they believed to be unnecessary concessions and modifications to more closely align with the Greek liturgy and ritual, these separatists denounced the change of the traditional Russian rites and refused to embrace the innovations. Although some of the dissenters fled Russia, many remained and followed the guidance of Awakum Petrov, a priest who led the conservative response. At a national synod in 1666, the Russian state and church declared this conservative element to be heretical. Many of the Old Believers suffered imprisonment and execution for their refusal to comply with the new church reforms. Persecutions and attempts to suppress this faction within the Russian Church ranged from moderate to severe at varying points in history until 1905, when Tsar Nicholas II promoted an end to discrimination against the Old Believers. Since that time, this faction within Russia has begun to reclaim a legitimate place with religious society and the right to worship in the form that was in place immediately before Nikon's reforms in the seventeenth century.

—Cheryl H. White

Church into a more complete alignment with the Orthodox churches elsewhere in Europe by achieving uniformity of practice and worship. Nikon sought to address the service books used in Russia, which long before had been translated from Greek into the Russian language. However, over time there were mistranslations and textual errors, which affected many of the rituals of the Church so that they no longer aligned with the Greek Orthodox tradition. Nikon's reform efforts sought to restore these texts to the exactness of the original Greek texts from which they derived. Even in the previous century, the Greek Orthodox Church in Constantinople had criticized the Russian mistranslations and misuse of the original liturgy, but a Russian synod of 1551 had authorized their continued use.

Nikon's personal role in Russian reform extended only to liturgical issues; he left the textual reforms to a committee of correctors.

Furthermore, Nikon's view of the Church seemed to change once he became patriarch, as he began to see the Church as supreme to the state, probably due to the privileges extended to him by the tsar, which included allowing Nikon the use of the sovereign title. He publicly opposed a series of Russian laws (*Ulozhenie*), portions of which sought to restrict the power of bishops over Church lands. Nikon also published "The Schism of the Roman Church" in which he argued that all of the civil and ecclesiastical powers of the papacy rested with the Russian patriarchate. His power seemingly knew no limits, even extending to issuing decrees in the name of the tsar when Alexis left Russia for war in 1654.

Not surprisingly, Nikon's attempts at reform met with strong opposition. Early resistance manifested itself within the printing office in Moscow, where a number of workers refused to complete the printing of a new Psalter. Nikon responded by placing the printing office under the supervisory jurisdiction of his own office. Other dissenters included a group known as the Zealots of Piety, of whom Nikon had once been a member, who made strong appeals to the tsar for him to intervene and stop the changes taking place. Many within the Russian Church believed that Russian national identity was linked to continued independence from the dictates of the Greek Orthodox Church and accused Nikon of attempting to "Hellenize" the Russian Church. Undeterred, Nikon called synods in 1654 and 1655 and corresponded with the patriarch of Constantinople to organize and coordinate what he believed were the necessary reforms. Nikon published the reformed service books in 1656, affirmed by a synod that met the same year. Henceforth anyone making the sign of the cross with two fingers instead of three would be excommunicated (this was a practice that developed uniquely in Russia and contradicted the Orthodox teaching on the symbolism of making the sign of the cross as a personal act of devotion). He also sought reforms with priestly vestments to bring them more in line with the Greeks. Finally, he went on a campaign to eliminate any icons he found to be "heretical counterfeits" by conducting house-to-house searches. Any who were found to not abide by the new rules would face severe punishments.

Reaction was swift and strong. Some opponents accused Nikon of anti-Russian sentiments and of corrupting the old ways. It did not help that these reforms coincided with a plague in 1654 and that people were nervous about the approach of the year 1666, a year that many feared would bring the apocalypse. During the same time Nikon's enemies began maligning him to the tsar, attempting to convince the tsar that the power of the Church had now eclipsed his own power. This plot worked. The tsar became angry with the patriarch, and Nikon offered his resignation, which was accepted. Nikon retired to his previous monastery but apparently attempted to regain his office when he learned that the patriarchate remained vacant. In 1664 Nikon simply appeared in the Moscow church for services and occupied the patriarch's reserved place as if he had never retired his post. In addition, Nikon's behavior was increasingly eccentric, accented by extravagant personal dress and decorum and the undertaking of an expensive building campaign for a new patriarchal palace.

The controversy surrounding Nikon brought the patriarchs of Alexandria and Constantinople to Russia to attend the synod arranged to try Nikon on charges of betrayal of the Russian Church. The synod of 1667 formally deposed him as patriarch and stripped him of all ecclesiastical authority except for that of a monk. Furthermore, the synod sentenced Nikon to life confinement at the monastery of Therapontof on the White Sea. Nikon was succeeded by Joaseph II, who confirmed all of Nikon's reforms. Following Nikon's death in 1681 his reforms continued to stir controversy, creating an eventual divide within the Russian Orthodox Church among those who accepted the reforms of Nikon and the "Old Believers," the resistance group that evolved from the Zealots of Piety, who continue the Russian liturgical practices that existed prior to 1655.

The circumstances surrounding the fall of Nikon from power and influence remain confusing, since clearly his reforms stood after his deposition and death. Many scholars believe that his brusque manner and demanding nature created many enemies for him who worked to bring about his downfall. In addition, Nikon's

desire to assist the Russian Church in operating independently of the state likely incurred the ire and mistrust of Tsar Alexis, whose support was necessary for Nikon. The tsar also registered public disagreement with Nikon in 1656 over some of the liturgical changes, although it remains uncertain how much this influenced the tsar in turning against the patriarch. Before Tsar Alexis died in 1676, he requested that Nikon be restored to the patriarchy of Moscow, but a later synod refused this. When Nikon died in 1681 his funeral was that befitting of a patriarch, and all judgments against him were revoked.

—Cheryl H. White

Bibliography

- Fuhrmann, Joseph T. *Tsar Alexis: His Reign and His Russia*. Detroit: University of Michigan Press, 1981.
- Julicher, Peter. *Renegades, Rebels and Rogues under the Tsars*. Jefferson, NC: McFarland, 2003.
- Meyendorff, Paul. *Russia, Ritual and Reform: The Liturgical Reforms of Nikon in the Seventeenth Century*. Crestwood, NY: St. Vladimir Seminary Press, 1987.

Creating the Anglican Church

The Church of England as it developed in the sixteenth century was a combination of disparate elements. Unlike many continental Protestant churches such as those in the Lutheran and Reformed traditions, it looked to no one individual as its founder. Following Henry VIII's (1491-1547) break with Rome in 1529, there was a complicated struggle among English Protestant activists, the English state, and the fundamentally conservative and Catholic mass of English people. Although the institutional structure of English Catholicism was broken down in the 1530s, from the link with Rome to the religious orders, much Catholic doctrine continued to be part of the English church. This was mainly due to the fact that Henry's break with Rome was due to an argument over the annulment of his marriage rather than doctrine. For instance, William Tyndale (ca. 1494-1536) was condemned by Archbishop Wolsey in 1529 for his translation of the New Testament. In addition, the Six Articles of 1539 reaffirmed, under penalty of persecution as a heretic, such Catholic doctrines as



Allegorical illustration regarding the breaking of ties between England and Rome. King Henry VIII is depicted sitting on his throne surrounded by clergymen and named bishops. He is trampling on the figure of Pope Clement VII, who defied the king over the matter of the divorce from his first wife, Catherine of Aragon. In 1534, the English Parliament, under pressure from Henry, enacted the Act of Supremacy, officially severing England's ties to the Roman Catholic Church. (Hulton Archive/Getty Images)

transubstantiation and priestly celibacy. The infrastructure of bishops, archbishops, cathedrals and much of the hierarchy among secular priests also remained. However, Henry did enact some Protestant changes to the English church, including authorizing the publication of the Great Bible, the first state-authorized publication of the Bible in English, in 1538. Henry's religious leanings tended to change according to his political needs; however, he never formally denounced the doctrine or ritual of the Catholic Church.

The reign of Henry's son Edward VI (1547–1553) was the high-water mark of Protestantism in the Church of England. Although Edward was a committed Protestant, the real work was carried out by a group of his advisers and regents,

notably the archbishop of Canterbury, Thomas Cranmer (1489–1556). Catholic doctrines and practices banned in Edward's reign included the mass, clerical celibacy, images in church, and liturgy in Latin—innovations that provoked much ineffective popular opposition. Prayer Books providing complete Protestant liturgies were issued in 1549 and 1552, although much of their content was derived from previous Catholic liturgies. A campaign of iconoclasm and confiscation was instituted during Edward's reign, forcing many churches to hide their valuables under the floor and in parishioners' homes. Still, Edward's men were able to take a vast amount of church silver, which was melted down and used for coins. The Book of Common Prayer never came into use, as Edward died in 1553, leaving his Catholic sister Mary I on the throne.

The death of Edward and the accession of Mary (1516–1558) led to a dramatic return to Catholicism and persecution of Protestants including Cranmer, who was burned at the stake as a heretic. It is estimated that 284 Protestants were executed during the five short years of Mary's reign. In addition to providing a martyrology for subsequent generations of English Protestants, the Marian persecution also drove around 800 church leaders—the Marian Exiles—to the European continent, where they were exposed to the ideas and practices of Continental Reformed Churches. Some concluded that the Church of England, even as reformed in Edward's reign, was still tainted with Catholicism. Mary was able to reinstitute all of the vestiges of Catholic doctrine and ritual and also reverse all acts passed by Parliament during Henry's reign that had formally separated the Church of England from Rome. However, she was never able to formally return England to the Catholic Church.

In 1558 English religion changed again with the accession of Mary's Protestant sister Elizabeth (1533–1603). Elizabeth's first order of business was to put through the Act of Supremacy in 1559, which reinstated the acts repealed by Mary and made Elizabeth supreme governor of the Church of England. The use of the term "supreme governor" instead of "supreme head" was due to a concern by some at having a woman at the head of the church. The next issue dealt with the issuing of a new Prayer Book in 1559, which was a

modified version of the 1552 book. The modifications caused quite a stir, as they allowed for the return of priestly vestments and left the question of transubstantiation open for interpretation. The Convocation of the Church of England drew up the Thirty-Nine Articles, a statement of faith, in 1563, and Parliament made it binding on the clergy in 1571. The articles were formulated to appeal to a broad spectrum of citizens, affirming such classic Protestant doctrines as Justification by Faith alone, the final authority of the Bible on matters related to salvation, the permissibility of clerical marriage, and lay communion in both bread and wine as opposed to the Catholic practice of reserving the wine for the clergy. The articles drew on previous English statements of faith and both Lutheran and Reformed Continental works. This middle-of-the-road approach, or the Elizabethan Settlement, was bound to cause anger on both sides as being either too Catholic or not Catholic enough. This problem was solved with the passing of the Act of Uniformity in 1559, which gave the Book of Common Prayer authority and stated that every man was required to attend church once a week or be fined 12 pence.

Although Elizabeth was revered as the savior of English Protestantism, many members of the Church believed that it needed more reformation. The use of vestments, considered by many a relic of the Catholic priesthood, was particularly controversial. Many also condemned the use of images in church as tending to idolatry. By the latter part of Elizabeth's reign, some were challenging the very existence of bishops and arguing for an alternative church polity based on continental models: Presbyterianism, a belief in the equality of all ministers, and church government by ministers and elders. Presbyterianism overlapped with Puritanism, a belief in the urgency of Church reform in the direction of Continental and Scottish Protestantism. The principled defense of the English Church against the Presbyterians as a *via media* between extremes was most influentially put forth by the minister Richard Hooker (1554–1600) in *Of the Laws of Ecclesiastical Polity* (1594–1662).

Despite these disagreements, Elizabeth's reign was marked by the slow but permanent work of making the English people Protestant. The accession of her cousin James VI of Scotland

➤ JOHN FOXE AND *ACTS AND MONUMENTS*

The most influential Church history produced in the English Reformation was the minister John Foxe's *Acts and Monuments*, popularly known as the *Book of Martyrs* or *Foxe's Martyrs*. The first edition was published in Strassburg in Latin in 1554, as Foxe, like many Protestant ministers, was in exile during the reign of the Catholic Queen Mary. An expanded edition in English was published in 1563, and many more editions appeared in the following centuries. Foxe portrayed Church history as a struggle between marginalized heretics carrying the true faith and a Church hierarchy headed by the pope intent on crushing it. Foxe particularly focused on the sufferings of Protestants during the reign of Queen Mary. Foxe's belief in the responsibility of the "Godly Prince" to reform religion made his position congenial to the Elizabethan government. *Acts and Monuments* was one of the "four chained books" ordered to be kept in English parish churches. The gory illustrations of the tortures and executions of heretics made the first encounter with Foxe's work a memorable occasion for generations of English children. The work also contributed to the strong anti-Catholicism that would be a feature of English Protestant culture for centuries.

—William E. Burns

(1566–1625) as James I of England in 1603 was the first since Henry VIII's nearly a century earlier not to lead to a change in religion, which dashed the hopes of those Puritans that James's Presbyterian upbringing would bring about the reforms they desired. James's principal contribution to the Church of England was his commissioning of a group of scholars to produce the King James translation of the Bible (1611), a work that drew heavily on previous Protestant translations like Tyndale's. Along with the Book of Common Prayer, the King James Version would be a powerful shaper of English language and thought for centuries.

—William E. Burns

Bibliography

King, John N. *Foxe's Book of Martyrs and Early Modern Print Culture*. Cambridge and New York: Cambridge University Press, 2006.

MacCulloch, Diarmaid. *Thomas Cranmer: A Life*. New Haven, CT: Yale University Press, 1996.
 Marsh, Christopher. *Popular Religion in Sixteenth-Century England*. New York: St. Martin's, 1998.

The Church of Ireland, 1688–1729

The Church of Ireland as a national as well as religious entity had been born out of debate and compromise. The church claimed (and continues to claim) to be the true apostolic and Catholic Church in Ireland. These assertions share certain doctrinal arguments with the Anglican organization; however, the Church of Ireland also had a distinct doctrinal tradition. The struggle between Protestant William, Prince of Orange (r. ca. 1688–1702), and Catholic James II (r. 1685–ca. 1688) known as the Glorious Revolution in England and the subsequent Williamite campaign in Ireland saw a significant improvement of the church's security but did little to resolve the question of the church's relations with its English counterpart.

From the start, the Church of Ireland was concerned with its own identity. Wholesale adoption of the Church of England's canons, archbishop James Ussher argued in 1634, would "betray the privileges of a national church. . . . And . . . we might fear in time to have a canon obtained in the church . . . giving the Church of England such superintendence over us, that nothing should be made law here that were not allowed there." Ultimately, the Church of Ireland adopted the Church of England's Thirty-nine Articles but also kept the Irish Articles of 1615.

In the aftermath of the Williamite campaign in Ireland (1688–1691), elements of both compromise and separation were forcefully expressed. Ironically, one reason that at least some Church of Ireland clerics could advocate an Irish exceptionalism was that in 1688 and 1689, when James's government had been in control in Ireland, church officials had prepared memoranda outlining a justification for breaking the church-state compact and renouncing establishment status. The Church of Ireland would be led in the last years of the seventeenth century and into the eighteenth century by clerics who could envision existence without the imprimatur of the state.

Furthermore, the victory by William, Prince of Orange, was largely a result of Irish Presbyterian efforts and a primarily Dutch regular army campaign in Ireland. The Anglican contribution to the 1688–1691 struggle had been, at best, of limited significance.

In 1691, one archbishop and seven bishops (out of a total of 24) were appointed by the newly secure government to fill vacant sees. A further bishop was appointed in 1692. These appointments led to a dramatic resurgence in Church of Ireland activity. However, 1692 marked the high point of appointments of Irish-born clerics to the episcopal bench until well into the nineteenth century. From the start of the new administration, there was significant disagreement between the church hierarchy and the new powers in England. Perhaps the first indication of disagreement could be seen in the senior clerics who refused to renounce their oath to James II; among the nonjurors were one bishop, William Sheridan of Kilmore, and two figures who would become prominent in the nonjuror movement in England, Henry Dodwell and Charles Leslie. The degree of sympathy within the Church of Ireland to this position, with its direct challenge to the legitimacy of William and Mary's reign, became clear in 1697 when the administration sought to require an oath of abjuration of James II. Opposition was immediate from bishops Thomas Lindsay (Raphoe), William Lloyd (Killala), and William King (Derry). Their position was supported by all four of the archbishops.

That same year, bishops of the Church of Ireland led the opposition to the Security Bill, which would have removed the few remaining safeguards enjoyed by the Catholic majority in Ireland. Also in 1697, King managed to create to a voting bloc in the House of Lords that almost scuppered final passage of the Treaty of Limerick. The legislation differed significantly from that agreed to by the original signatories. The measure passed the upper house by just one or two votes—the record is unclear—and King insisted on attaching a protest to the bill, which was, he said, a breach of "the public faith of the Kingdom given in the Articles of Limerick."

Once the extent of the independence of the Irish bishops became clear, the authorities in Whitehall responded by translating English

► EDWARD SYNGE AND TOLERATION

The following excerpt is from Edward Synge's sermon titled *The Case of Toleration consider'd with Respect both to Religion and Civil Government*, preached to Parliament and published in 1725. In it, he advocated limited toleration toward Catholics in Ireland, a view that was met with much criticism. Except for a treatise published the following year in which he defended himself, this would be the last time Synge would put such views into print.

"THE Governours of the Christian Church, have in no Case a Right to use Temporal Force or Coercion; That memorable Declaration of our Blessed Saviour, *My Kingdom is not of this World*, plainly cuts off all Pretence to it: And since they have not a Right themselves to use Force, 'tis plain they cannot have a Right to command or oblige the Magistrate to use it, for this is in Effect the same Thing as to have the Power of using it themselves. . . .

FROM what has been said on this Point, We may draw this very important Conclusion, That all Persons in a Society, whose Principles in Religion have no Tendency to hurt the Publick, have a Right to a *Toleration*.

BY a *Toleration*, I mean a Liberty to worship God according to their Consciences, without any *Encouragement* from the Civil Government on the

one Hand, or *Fear of Infliction of Punishment* on the other: And the Reason why all men, whose Religious Principles do not hurt the Publick, have a Right to a *Toleration*, is this, because of the Supposition, they are Guilty of no Offence against the State, and it has been prov'd that the Magistrate has no Right to use Force against them on any other Account.

He may indeed encourage his own Religion, which is no more than every other Man, as far as he has Power, does with Respect to his own Sect; He may also limit the Enjoyment of Places of Trust or Profit, to those whose Opinions in Religion agree with his own, if such a Limitation be for the Publick Good: And by doing this, he injures no Man, because he deprives no Man of any Thing, to which he has, properly speaking, a Right. But every Man whose Principles in Religion do not tend to hurt the Publick, has a right to *Liberty of Conscience*, and consequently to a *Liberty of worshipping God according to it*."

—Christopher Fauske

Source

Edward Synge, *The Case of TOLERATION consider'd with Respect both to RELIGION and CIVIL GOVERNMENT* . . . , 2nd ed. (Dublin, 1726), 15, 21–22.

clerics to the more important Irish sees whenever a vacancy occurred, the three most notable appointments being John Evans, appointed to Meath in 1716; William Nicolson, appointed to Derry in 1718; and Hugh Boulter, appointed to Armagh in 1724. Such appointments were not simply motivated by spite; in 1724, the Church of Ireland owned 5 percent of the land in Ireland and thus was a significant power in matters of economics and husbandry.

The temporal powers in Dublin Castle, who actually had to work with the Irish houses of Parliament, sought sometimes to moderate the effects of the policy of importing bishops but nonetheless looked with distrust at the group of Irish bishops led by King and, after his death, by Edward Synge (archbishop of Tuam, 1716–1741) and John Stearne (bishop of Dromore and then

of Clogher, 1717–1745), whose votes were often at odds with the administration's desires. The presence of such men in the House of Lords helped lay the groundwork for the grouping of varied interests that would become identified as the Patriot Party. These clerics who had witnessed the turmoil of 1688–1691 were heirs to the Caroline tradition that had given Anglicanism two of its great theologians, James Ussher and Jeremy Taylor, and, perhaps counterintuitively, were less concerned with Catholic threats than they were with opposing perceived increasing political interference in their activities and with what they took to be far too tolerant a view of Protestant dissent.

On the other side, clerics such as Boulter saw the Irish bishops as obstructionist and obstinate, motivated by petty frustrations at their society's

increasing integration with a Pan-British polity. In a debate over who should be appointed archbishop of Cashel, Boulter sent one letter to England; he was furious that it should be necessary even to ask “the ministry to consider who is the proper person to recommend to bishopricks here, an Irish speaker, or an English primate.” It was the adjectives rather than the nouns in that choice that Boulter thought should be decisive.

From William King’s accession to Derry in 1691 until his death in 1729 and beyond, there was a strong and consistent argument within the Church of Ireland that it had henceforward to justify its position on the merits of the debate rather than by virtue of state-sanctioned support. Such concerns brought Church of Ireland thinkers into contact with such continental philosophers as Pierre Bayle. They also helped give the ideas of Robert, Viscount Molesworth, visibility in Britain and hence in the North American colonies, particularly his seminal work *An Account of Denmark as It Was in the Year 1692*, which made it plain that state-sanctioned Protestantism could be as repressive as Catholicism.

Francis Hutcheson, the founder of the Scottish sentimental school of philosophy, which would shape British enlightenment ideas well into the nineteenth century, recognized King’s theodicy, *De Origine Mali*, as seminal in the creation of his *Inquiry into the Original of Our Ideas of Beauty and Virtue*.

Better than any other clerical family, the Synge, who produced a prodigious number of bishops and archbishops from the time of Charles I well into George III’s reign, illustrate the intellectual endeavors that were a significant part of Church of Ireland activities. One example will have to suffice, the sermon preached by Edward Synge, the son of the archbishop of Tuam, to the Irish houses of Parliament in 1725. He chose for his text Luke 14:23: “Compel them to come in that my house shall be full.” In Synge’s hands, the word “compel” becomes an appeal to win the intellectual argument. He condemned existing anti-Catholic legislation as no better than the anti-Protestant legislation to be found in Catholic countries.

Such intellectual vigor was linked to a massive campaign of church building and restoration, a consistent attack on absentee clerics and

on clerics who held multiple livings, and periodic investments in charity and poor schools as well as in the elite schools attached to cathedrals, an aspect of Church of Ireland activity strongly supported by at least some of the English-born clerics, chief among them Hugh Boulter.

The first four decades after King’s succession in Ireland represented a remarkable flourishing of Church of Ireland creativity driven by a genuine sense of Irish distinctiveness combined with an intellectual engagement with contemporary philosophical developments across western Europe. When Nicolson complained of King in 1719 that “the Angel of St Patrick’s is now guardian of the kingdom” he did not mean it as a compliment, yet this phrase better encapsulates the positives and weaknesses of the Church of Ireland at that time than any more modern commentary has yet managed.

—Christopher Fauske

Bibliography

- Acheson, Alan. *A History of the Church of Ireland, 1691–1996*. Dublin: Columba, 1997.
- Ford, Alan, James McGuire, and Kenneth Milne, eds. *As by Law Established: The Church of Ireland since the Reformation*. Dublin: Lilliput, 1995.
- James, F[rancis] G[odwin]. *Lords of the Ascendancy: The Irish House of Lords and Its Members, 1600–1800*. Dublin: Irish Academic Press; Washington, DC: Catholic University of America Press, 1979.
- Mant, Richard. *A History of the Church of Ireland*. 2 vols. London, 1840.
- Phillips, Walter Alison, ed. *History of the Church of Ireland*. 3 vols. Oxford, UK: Oxford University Press, 1933.

Congregatio de Propaganda Fide

The Congregatio de Propaganda Fide (Committee for the Propagation of the Faith) was the committee of cardinals responsible, under the pope, for supervising the missionary efforts of the Catholic Church in non-Catholic countries. It was formally created by Pope Gregory XV (who served as pope during 1621–1623) on June 6, 1622, in the bull *Inscrutabili Divinae*, succeeding an earlier, more informal body or “cardinalatial commission.” The congregation consisted of 13 cardinals, 2 prelates, a secretary, and a

consultor. Like other congregations formed during the Catholic Reformation, it was part of an effort to transform the College of Cardinals from a body of semi-independent “Princes of the Church” to a group of Papal servants. The congregation was supposed to meet weekly, and like other congregations it reported directly to the pope. Church revenues were assigned to its upkeep, the mark of a permanent institution as opposed to the earlier informal grouping. Initially, its principal revenue was the ring-tax leveled on newly appointed cardinals. The congregation also benefited from pious gifts and bequests from the Catholic faithful.

The Catholic Church faced major missionary challenges in this period stemming from the Protestant Reformation, which had seen the triumph of what Catholics viewed as heresy in many formerly Catholic territories and the increased contacts of European Catholics across the globe. The congregation supervised the missionary efforts of numerous Catholic religious orders, including the Jesuits, Capuchin Franciscans, and Dominicans. It demarcated spheres of activity for different religious orders, hoping to keep conflict among them to a minimum. In the ongoing dispute between the Jesuits and the Mendicant orders—the Franciscans and Dominicans—over the proper strategy for missionary work, the congregation usually took the side of the mendicants, emphasizing the conversion of the poor rather than of the middle class and leaders of society. (There were major tensions between the congregation and the Jesuits, who were viewed as unwilling to work with other orders or bodies within the Church and too closely allied with Spain and Portugal.) The congregation also encouraged building a native clergy and Church organization and discouraged the idea that adopting Catholicism required the abandonment of all native customs and the adoption of European lifestyle and dress.

The congregation’s immense responsibilities led to an increase in its assets as well as a bureaucracy to handle the burden of its correspondence and day-to-day work. It received a missionary education center, the Collegium Urbanum from Gregory’s successor Urban VIII (pope during 1623–1644) in the 1627 bull *Immortalis Dei*. (When a cardinal, Urban had been

➤ THE CONGREGATION IN INDOCHINA

One of the congregation’s longest struggles was with the Portuguese in the Indian Ocean, who claimed the right to appoint bishops even in those territories not under direct Portuguese rule because of the *padroado real*, an agreement between the Crown and the Holy See that gave the Portuguese king the right to control the publishing of papal bulls and the right to appoint high church officials in its overseas territories. The congregation preferred to appoint its own vicars-apostolic in non-Christian territories. It had its chance to usurp the *Padroado Real* after 1640, when Portugal’s independence from Spain caused a break in relations with the Church until 1668. In 1658, the congregation appointed three French priests associated with the newly founded Paris Society for Foreign Missions: Ignace Cotelendi (1630–1662), François Pallu (1626–1684), and Pierre Lambert de la Motte (1624–1679), vicars-apostolic of the growing Christian community in Indochina. It was unusual to send secular priests—not members of a religious order—abroad as missionaries and controversial to send French priests in an area that the Portuguese viewed as their own preserve. Since neither the Portuguese nor the Protestant powers trading in the Indian Ocean, England and the Dutch Republic, would transport them overseas, the priests made the difficult journey over land. Cotelendi died in Sri Lanka along the way, but Pallu and de la Motte became founders of the Catholic Church in Siam, now Thailand. A seminary for native priests was established in Siam’s capital, Ajuthia. De La Motte founded the Lovers of the Holy Cross, a community for female religious, one of the first founded in East Asia and still in existence today.

—William E. Burns

a member of the congregation.) The Palace of the Collegio de Propaganda Fide was begun by architect Gian Lorenzo Bernini. However, Bernini was taken off the job, and the palace was completed by Baroque architect Francesco Borromini (1599–1667). The palace remains a Roman landmark to this day and is considered a gem of the Italian Baroque. The congregation also controlled a Roman printing press, known for the immense variety of fonts required to

reprint Catholic works in different languages with different alphabets.

The formation of the congregation was also an effort to divert the Catholic missionary effort from the control of Catholic states, particularly Spain and Portugal, into the hands of the papacy. Since the Spanish empire in the New World was already under a Catholic monarchy, it was outside the congregation's jurisdiction, and its foundation had little effect. The congregation was more successful in its long-term effort to wrest control over the missionary effort in the Indian Ocean and in China from the Portuguese authorities eager to subordinate the Catholic effort to Portuguese political and economic concerns. In addition to converting Protestants and non-Christians, the congregation also supervised efforts to reconcile the churches of the East, such as the Maronites, to Rome. It had jurisdiction over Eastern rite churches in communion with Rome. As the congregation's jurisdiction included all countries not officially Catholic, it also supervised territories with very large and established Catholic populations that had fallen under non-Catholic governments, such as Ireland under the Protestant English monarchy and that portion of Hungary ruled by the Muslim Ottoman Turks. In these territories, the congregation's concern was less with making conversions and more with maintaining church organization and preserving believers' access to the sacraments in the face of a frequently hostile government. Given the large distances and slow communications that separated Rome from its missions in Asia, Africa, and the Americas, the congregation was unable to exercise close supervision over missionary outposts.

The modern word "propaganda" is derived from the congregation. The congregation itself was renamed *Congregatio pro Gentium Evangelisatione* (Congregation for the Evangelization of Peoples) by Pope John Paul II in 1982.

—William E. Burns

Bibliography

- Bireley, Robert. *The Refashioning of Catholicism: A Reassessment of the Counter Reformation*. Washington, DC: Catholic University of America Press, 1999.
- Ellis, John Tracy. *Catholics in Colonial America*. Baltimore: Helicon, 1965.

Sacrae Congregationis de Propaganda Fide memoria rerum: 350 years in the service of the missions. 5 vols. Rome: Herder, 1971–1975.

Congregationalism in Colonial New England

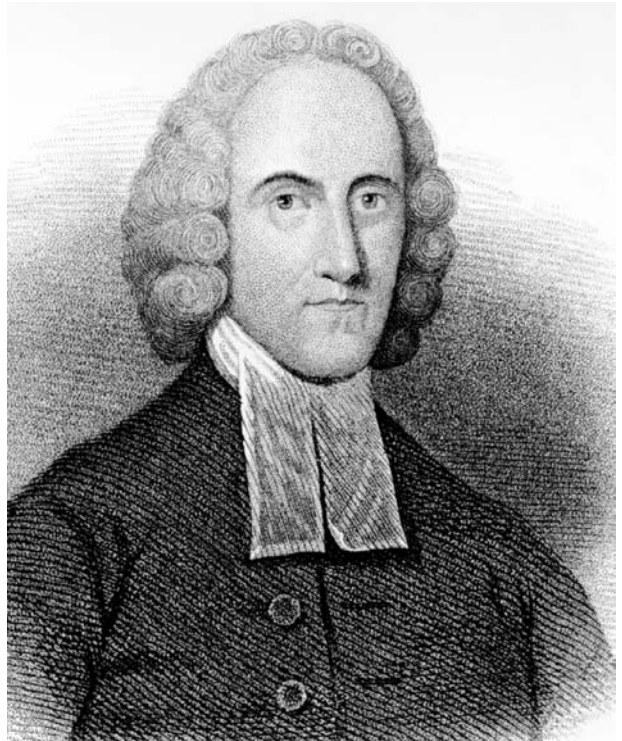
At the end of the sixteenth century, an effort at religious conciliation known as the Elizabethan Settlement eased religious tensions between Catholicism and Protestantism in England. Under Queen Elizabeth I, the Church of England finally had a set doctrine and ritual, along with a law obligating every subject to attend service with the state church. While this created a compromise, it did not satisfy the fringe groups who were not happy with the religious status quo. One of these groups was the Calvinists, who would later be known as Puritans because of their desire to "purify" the Church of England of what they saw as its Catholic elements. Although these people are often lumped into one group, they did not share one monolithic belief. While they were all unhappy with the Church of England, they varied in their approaches to it. Some were willing to work with the Church in the hope that they could be a positive influence. On the other end of the spectrum, there was a more radical group of Calvinists, known as Separatists, who wished to separate themselves from the Church of England altogether.

The early reigns of both James I (r. 1603–1625) and Charles I (r. 1625–1649) gave the Calvinists hope that they would finally see the reforms they wanted. However, neither James nor Charles was willing to change the practices of the Church in order to suit the needs of the Puritans, particularly when they called for an end to the power of its bishops. Many Puritans, especially the Separatists, preferred the Congregational model of church governance, which meant that each church was made up of men and women who willingly came together to seek God's favor and who were collectively responsible for its administration, rather than leaving matters to a bishop. These Puritans saw the state-supported Church of England as a horrible mishmash of Protestant and Catholic elements. In their quest for a godly life, they wanted to break away from the oversight of what they saw

as the corrupt hierarchy of the Anglican Church, particularly its bishops and archbishops. Their congregational form of church government, however, was not to the liking of the political and religious leaders of England. It struck them as being socially disruptive and even treasonous. Therefore, certain groups of Puritans decided that they could no longer continue to remain a part of the mainstream Anglican Church, and if they wanted to practice their faith in peace, they would have to do so elsewhere. Despite these sentiments, there were still many Puritans who chose to remain in England and figured prominently in the English Civil War (1641–1649).

Beginning in 1620, groups of Puritans crossed the Atlantic and established their own colonies in New England. The group now known as the Pilgrims was made up of Separatists, and they established their colony in Plymouth, Massachusetts. The largest number of immigrants, however, were non-Separatist and settled in Massachusetts Bay. Almost at once they put their Congregationalist beliefs into practice. The result was known as the New England Way. Free of any pressure from the English state or the Anglican Church, the Massachusetts Bay Puritans made their independent congregations into the cornerstone of both their religious and political life. To join a church, each Puritan settler had to demonstrate that he or she had experienced God's grace. In other words, they had to confess that they were bound for heaven and that they could lead an orderly and moral existence. The founders of the Massachusetts Bay colony also made church membership into a voting requirement among men; women simply could not vote. In theory, godly members of the various congregations could be counted on to elect godly men to govern them. The Puritans expected this connection between church and state to make the Massachusetts Bay colony into an example of a perfect society that the rest of the world would want to follow.

Almost at once, however, the Puritans began to fear that their church was becoming corrupt. As proof of that trend, the colonists pointed to the assaults that some of their own people directed against New England Congregationalism. In the 1630s Roger Williams and Anne Hutchinson attacked the connection between



Jonathan Edwards was a theologian, philosopher, and evangelical Congregational minister who exerted an enormous influence on the course of religious history in America. (Library of Congress)

church and state, urging the settlers of Massachusetts Bay to practice religious toleration. Puritan leaders were outraged, and they expelled the troublemakers from the colony. Even that kind of decided action, however, could not halt what most colonists perceived as New England's decline into worldly compromise. By the mid-seventeenth century, many Puritans born in the colony were not experiencing God's grace. As a result, neither they nor their children could become full members of the church. In 1662 the Puritans responded to this situation with the Half Way Covenant. Men and women no longer had to experience the grace of God to join one of New England's churches. The act of baptism was sufficient, though the Lord's Supper remained the privilege of the genuinely godly. This was a major watering down of the Congregationalist ideal, even if it preserved the connection between church and state among the Puritans.

The New England colonists continued the painful process of altering their ideal church structure to account for reality during the

THE JEREMIAD

The collapse of the Puritan effort to transform Congregationalism into a model for the rest of humanity had an important impact on New England culture. It produced a unique form of sermon known as the Jeremiad.

The Jeremiad was named for the grimmest of the Old Testament prophets: Jeremiah. In the hands of New England's ministers, it became a catalog of the ways that the colonists had displeased God and how God had punished them for their sins. The Puritans interpreted any type of misfortune as a sign that New England was slipping further out of divine favor. To avoid these calamities in the future, the preachers urged their fellow Puritans to follow the example of the founders of the colonies. Over time, however, preachers who employed the Jeremiad falsely implied that the

original settlers of New England had been men and women of sterling virtue who had created something close to a perfect church in their new home. It was an example that no society, dealing with the realities of colonial life in the seventeenth and eighteenth centuries, could hope to emulate. In the end, the Jeremiad contributed to the growing sense of disappointment and failure among the later generations of Puritans. Literary historian Sacvan Bercovitch, in *American Jeremiad* (1980), argued that the genre of the Jeremiad in which the American people's shortcomings are decried yet set guideposts for fulfilling the country's true promise and destiny that can be traced beyond the Puritan pulpit to writers and orators such as Henry David Thoreau, Walt Whitman, and Martin Luther King.

—Todd Webb

eighteenth century. The greatest challenge to the Puritan vision came in the 1730s and 1740s in the form of a religious revival directed by respectable ministers, such as Jonathan Edwards, and more freewheeling preachers, such as George Whitefield. These revivalists called on the men and women of New England to admit their sinfulness and to welcome God into their souls. This message may have swept new people into the churches, but it also split many congregations into hostile factions. Some of the revivalists' more enthusiastic followers left Congregationalism entirely and found a new home among groups like the Baptists. Those who remained in the old Puritan churches divided between New Lights, who supported the revival, and Old Lights, who thought that mass conversions were a danger to church and society, based as they were on wild and sometime uncontrollable emotionalism. This faction-ridden version of New England Congregationalism would have been unrecognizable to the men and women who crossed the Atlantic in the early seventeenth century to establish a perfect world.

—Todd Webb

Bibliography

Hall, David D., ed. *Puritans in the New World: A Critical Anthology*. Princeton, NJ: Princeton University Press, 2004.

Miller, Perry. *The New England Mind: From Colony to Province*. Boston: Beacon, 1961.

Miller, Perry. *The New England Mind: The Seventeenth Century*. Boston: Beacon, 1961.

Noll, Mark. *A History of Christianity in the United States and Canada*. Grand Rapids, MI: Eerdmans, 1992.

Taylor, Alan. *American Colonies: The Settling of North America*. New York: Penguin, 2001.

Puritans and Protestantism

"Puritan" was the name given to the most extreme Protestants within the Church of England, generally people who did not believe that the English Reformation of the sixteenth century had done enough to "purify" the Church of its Catholic rituals, traditions, and doctrines. This complex group of Protestants first came to be known for their critical reactions to the broad comprehensive religious settlement of Elizabeth I (known as the *via media*, or middle way). Beginning in England as a general reactionary group, Puritans eventually separated into more distinct factions, some of which became so discouraged by the slowness to reform that they migrated to the New World. Many of this group settled in various colonies that ultimately would become the United States.

Generally, Puritans encouraged a simpler and more direct approach to worship styles, rejecting much of the traditional liturgy that still remained in the reformed Church of England. Indeed, more than any other issue, worship style was what attracted Puritan reform efforts. The traditional Roman Catholic Mass had been modified by the English reformers of the sixteenth century, but for Puritans too much of the old ritual remained. These beliefs about worship were rooted in strong theological foundations about the simple eloquence of the Christian experience and man's relationship to his God. Even though Puritanism is not exclusively or singularly associated with any one reformed theological school of thought, many English Puritans were Calvinist in their doctrines. The theological roots of Puritanism can generally be found in the various strains of reformed theology from the continent of Europe, and it is likely that earlier English theologians such as John Wycliffe and his Lollard movement of the fourteenth century may also have had an intellectual influence on the movement. For Puritans, all of humankind was dependent upon God for salvation, and they therefore sought a simple form of preaching and worship to emphasize the importance of that relationship.

The reign of Elizabeth I provided a religious atmosphere that was conducive to toleration of broad extremes. Many prominent men in the Elizabethan government were Puritans

including Sir Francis Walsingham, who served as Elizabeth's secretary of state. After her death in 1603, religious pressures brought by Puritans against King James I and his successor, Charles I, ultimately brought about dramatic political changes for England. One of the earliest and most consistent demands made by Puritans was for England to abolish the episcopacy, which led to James I making a famous statement in refusal: "No bishop, no king!" James I made only one significant concession to Puritan demands, which was to appoint a commission to undertake a new English translation of the Bible. The King James Version first appeared in print in 1611.

Because of the reluctance to reform on the part of the English monarchy, many Puritans began to immigrate to the New World. By the middle of the seventeenth century, distinct Puritan factions began to emerge, with some more radical than others. Most Puritans favored Presbyterian-style church governance over the Episcopal (bishop) model and tried to reform the Church of England from within, but Separatists sought to completely separate and disengage from the Church of England. Independent Puritans sought a congregational model for local churches that minimized the impact of a national church. Many of the early immigrants to the New World from England were disaffected Puritans who saw no hope of further reformed religious expression within the English Church. Many of those who stayed in England formed a

➤ SOCIAL CHANGES IN PURITAN ENGLAND

Under the Puritan influence of the seventeenth century, England witnessed some rather dramatic social changes resulting from religious dominance in directing domestic policy and regulating public behavior. An act of Parliament outlawed the observance of Christmas as a holiday, because the festival originated with an ancient pagan observance related to the winter solstice. William Shakespeare's famous stage and venue for his plays, the Globe Theatre in London, was closed. The government closed all pubs and brothels and enacted strict laws concerning leisure activities such as gambling and hunting. All of these measures were largely unpopular, but perhaps none elicited a

stronger reaction among the populace than the banning of Christmas observances. In 1647 riots broke out in several places throughout England as Puritan authorities reminded citizens that it was illegal to keep the superstitious traditions related to the Christmas holiday. The Puritans of New England were equally zealous in their attempted suppression of Christmas, as the Massachusetts Bay Colony also outlawed its celebration. The reaction of Puritanism against Christmas is an extreme example but is representative of the core belief of "purifying" the Christian faith and ridding it of all pagan and medieval influences.

—Cheryl H. White

powerful political element within the English Parliament that led to the English Civil War.

At issue during the English Civil War were which form of church governance would dominate and what type of national government should be in place. The Parliamentary army (known as the Roundheads), led by a country squire named Oliver Cromwell, defeated the forces of Charles I (the Cavaliers) during the war. Following the king's defeat, he was brought to trial for treason and executed in January 1649. Until the Restoration of the Monarchy in 1660, England was a Puritan nation, ruled by a Protectorate under Cromwell until his death in 1658. This period also witnessed the Puritan abolition of the office of bishop. This time in English history is known as the Interregnum. The Restoration of the Monarchy with Charles II in 1660 also restored the Church of England and the episcopacy, but the Puritans continued to be a political faction within the English Parliament and played a role in carrying out the Glorious Revolution of 1688 that brought Protestants William of Orange and Mary II to the English throne.

When Puritan groups separated from the Church of England in the seventeenth century, many of them settled colonies in the New World. Among these was the group that settled the Plymouth Bay Colony in Massachusetts in 1620. While the Puritans extended religious influence in almost all of the English colonies of the North American Atlantic seaboard, it was in New England that their influence was most prominent.

Many Congregationalist churches in the English Puritan tradition that were planted there in the seventeenth century continue to flourish today. Early leaders of this Puritan settlement initiative in Massachusetts included such men as Richard Mather and John Cotton.

Because a central element of Puritanism was the belief that God's divine election had preordained the chosen to direct political affairs, they claimed that they alone had the ability to interpret the meaning of Holy Scripture as it related to societies. This union of church and state seemed to mirror the national model of the Church of England of which they had been vocally critical and resulted in giving these groups exclusive control over the colonial environment. Throughout the colonial period of the United States, Puritanism had profound and lasting impact on religious thought and on social and cultural developments as well. The point at which Puritanism ceased to be the dominant social and cultural influence is difficult to assess, but most scholars agree that Puritan ideals continued to exert influence into the nineteenth century.

—Cheryl H. White

Bibliography

- Adair, John E. *Puritans: Religion and Politics*. Detroit, MI: Sutton Publishers, 1998.
- Coward, Barry. *The Stuart Age*. London: Pearson Education, 1980.
- Lake, Peter. *Moderate Puritans and the Elizabethan Church*. Cambridge: Cambridge University Press, 1982.

Science and Technology

The early modern period was a time of unprecedented scientific and technological advance, driven both by factors within civilizations and by the contacts between them. Technology and science also spread between civilizations with unprecedented rapidity, although technology proved much more able than science to overcome cultural barriers.

The diffusion of Chinese technology, which had begun centuries earlier, continued to work transformative effects. When the English philosopher of science Francis Bacon wrote about what distinguished his own modern times from the earlier world, he identified the technologies of printing, gunpowder, and the magnetic compass, all originally Chinese, although printing was probably invented independently in Europe. World science and technology were further transformed by the greater contacts between civilizations, driven primarily by European expansion in the early modern period. Geographical and ethnographic knowledge exploded, with continents previously unknown to Europeans and Asians added to their base of geographic knowledge. In natural history, Europe received a flood of new information and even specimens of previously unknown plants, animals, and stones from the newly encountered areas of the world. Although European explorers and conquerors were the primary transmitters of the knowledge of indigenous people throughout the world, it did not remain restricted to Europe. Cartographers from other civilizations learned of the new geographical discoveries, and the new American crops such as corn, tobacco, and tomatoes spread in many areas of the Old World, bringing new technological challenges and solutions with them. Expansion itself created new problems and solutions such as in the field of navigation, which underwent revolutionary changes in this period.

As has often been true in world history, few forces were more powerful than war in spreading new technologies. Gunpowder weaponry, having first spread from China to Europe during the Middle Ages, became a global phenomenon in the early modern period and was used by peoples ranging from the Ottomans, Mughals, and Safavids—the Islamic “gunpowder empires”—to Native Americans and often forcing radical political and social reconstruction along with the creation of new militaries. Only Tokugawa Japan, with its rigorously maintained isolation, was able to “give up the gun” and revert to an earlier stage of military technology.

Commerce was another powerful force behind the technological development and the transfer of technology between regions. Europeans were fascinated by the porcelain of East Asia—a highly profitable luxury good—and in the early eighteenth century finally figured out

how to replicate it at home. Countries tried to guard their technological secrets, often forbidding the emigration of technologically skilled workers, like the famous Venetian glassmakers. Despite restrictions, however, workers were often recruited to bring technical skills with them, like the German miners recruited by colonial American landowners who had discovered profitable deposits of ore on their lands.

By far the most dynamic center of scientific development in the early modern period was Europe, particularly western and northern Europe. The Islamic tradition, the world's most advanced scientific tradition for centuries, fell increasingly behind, although historians still debate the degree to which the decline of Islamic science was an absolute decline or whether it was merely a relative decline compared to the rapidly accelerating Christian European tradition. These early modern changes in European science are often referred to collectively as the Scientific Revolution and treated as the foundation of modern science. As a revolution, the process was marked by the overthrow of the authority of the ancient Greek natural philosophers, astronomers, and physicians. In content, astronomy moved from the earth-centered universe of Ptolemy and Aristotle to the vaster sun-centered universe of Copernicus, Kepler, and Galileo. In physics, qualitative Aristotelianism was replaced by mechanical Cartesianism and then by mathematical Newtonianism. Changes in astronomy and physics were the most dramatic and far-reaching during the period, but important transformations also happened in other fields. In medicine, the tradition deriving from the ancient Greek physicians Galen and Hippocrates was challenged by a plethora of new anatomical discoveries, the most dramatic being William Harvey's discovery of the circulation of the blood, and by the rise of chemical and mechanical theories of bodily function.

Although these new scientific developments flowered in Europe, their roots lay in many other civilizations as well. The Arabic tradition in astronomy, mathematics, and medicine was an important foundation. The Scientific Revolution is unimaginable without the European adoption of the Indian system of numerals including the zero, acquired through Europe's contacts with the Islamic world. Despite its overthrow of ancient authority, the new science built on the old. The idea of a careful rigorous investigation of the natural world had been established

in European intellectual life by the revival of Aristotelianism in the twelfth century and work that went beyond Aristotelian physics at several European universities by the end of the thirteenth century. The Renaissance humanist revival of other ancient philosophical schools—Platonist, Epicurean, Skeptical, and Stoic—also stimulated new thinking about the natural world. Early modern scientists often presented themselves as restorers of the

Early modern scientists often presented themselves as restorers of the past; the French priest and natural philosopher Pierre Gassendi presented his atomistic theory of matter as the revival of the philosophy of Epicurus.

past; the French priest and natural philosopher Pierre Gassendi presented his atomistic theory of matter as the revival of the philosophy of Epicurus. Similar processes were happening in other early modern

societies. Like Renaissance humanists recovering ancient philosophies but to a lesser degree, the *kaozheng* Confucian revivalism of eighteenth-century China stimulated investigation of the natural world. As Gassendi found the roots of his atomism in the ancient wisdom of Epicurus, Mei Wending, a late-seventeenth-century Chinese scholar, argued that the “Western” science recently introduced to China by European Catholic missionaries was originally Chinese knowledge that had traveled westward but had been lost in its homeland due to the many wars of early Chinese history and had only now returned to China.

The new Western science was not a monolith. Like other revolutionaries, the makers of the Scientific Revolution quarreled fiercely among themselves over everything from different claims to priority in a discovery to the role of the Bible in scientific questions. The enemies of Galileo Galilei, for example, who engineered his silencing in 1633 for championing against the Bible the Copernican theory that the earth rotates around the sun, included astronomers as well as theologians. Debates between Newtonians and Cartesians and “chemical” and “mechanical” medicine continued into the eighteenth century.

From Europe, these new discoveries and theories made their way to European colonies, greatly aided by printing. By the mid-eighteenth century the American colonies had produced one scientist of remarkable distinction, Benjamin Franklin, as well as a literate scientific public. Franklin’s interest in electricity was sparked by reading an English magazine that reprinted a translation of a work by a Swiss published in a French-language Dutch periodical describing the work of three German electrical scientists, remarkable testimony to the international world of eighteenth-century science.

The spread of the new European science to other societies was usually much slower, although Russia adopted European science and established scientific institutions in great haste as part of its drive to modernize under Tsar Peter the Great. The Society of Jesus, a powerful force in the development of worldwide science, introduced Western astronomy and cartography as well as other disciplines into China in the seventeenth century. The Japanese acquired scientific knowledge both from Chinese-language texts, many of Jesuit origin, and directly from the Dutch trade colony at Deshima. The spread of European science into the Islamic world was much slower, but by the early eighteenth century the Ottomans, Europe’s closest Islamic neighbor, had some access to it. Although the spread of European science was the most dramatic, it was not the only scientific tradition spreading across civilizations in the early modern period. Seventeenth- and eighteenth-century Japan saw heightened interest in Chinese natural philosophy, while the last great astronomical observatories in the Islamic tradition were built in the early eighteenth century by an Indian Hindu ruler, Jai Singh.

With the dramatic intellectual changes of the Scientific Revolution, science assumed a much more central institutional cultural role in Europe. Scientific institutions spread across Europe in the seventeenth century, developing from the temporary and informal Italian groupings, the Accademia dei Lincei and the Accademia del Cimento, into the permanent institutions of England and France founded in the 1660s,

the English Royal Society and the French Royal Academy of Sciences. By the eighteenth century this network of societies could coordinate truly global projects, such as the measurements of the transits of Venus across the face of the sun in 1761 and 1769. Meetings of scientists and networks of correspondence were supplemented by printed periodicals: England's *Philosophical Transactions*, the French *Journal des Savants*, and the myriad of more popular magazines that brought news of the new science to a broad European and colonial public, male and female. New scientific instruments, such as the telescope, the microscope, and the air pump, were found in the hands of more and more men and women. Museums and botanical gardens, collecting natural items from all over the world, became popular visiting places. Experiments, which played only a very minor role in science before the Scientific Revolution, were now not only essential to scientific work but were also presented to curious audiences by lecturers and demonstrators as a form of intellectual entertainment.

—William E. Burns

■ Introduction: Renaissance to the Scientific Revolution

The European Renaissance of the fifteenth and sixteenth centuries helped set the stage for the scientific revolution that reached its height in the seventeenth century. Renaissance humanists in their fascination with classical antiquity revived, translated, and published numerous ancient Greek texts of science, natural philosophy, mathematics, and medicine. They sought out surviving manuscripts of ancient Greek and Latin works from libraries and made them available to a wide public with the help of the printing press, invented in the mid-fifteenth century. The humanist movement was also greatly aided by the immigration of Greek scholars and manuscripts to the West, prompted by the decline of the Byzantine empire and its fall to the Ottoman Turks in 1453. Most early modern scientists had some humanist education, and humanistic Latin provided an “international language” that enabled scientists from different countries to communicate with each other before the rise of French in the late seventeenth century. The legacy of scientific Latin persists to the present day in the scientific names of plants and animals.

Humanists wished to recover and create improved texts of the Greek authorities in the

sciences, including Aristotle in natural philosophy and biology; Ptolemy in astronomy, astrology, and geography; Euclid, Archimedes, and Apollonius in mathematics; Strabo in geography; Theophrastus and Dioscorides in botany; Plato and Hermes Trismegistus in natural theology; and Galen and Hippocrates in medicine. Although humanists read Aristotle with care, they often opposed or simply disregarded the Aristotelianism of the European universities, which rested on a limited number of texts, not all of them the authentic work of Aristotle, and presented Aristotle with an elaborate body of commentaries by Arabs and medieval professors. Although ancient Roman writers did not have the same intellectual authority as Greeks, there were also important scientific aspects to the study of Pliny the Elder in natural history, the Stoic philosopher Seneca, the epic poets Lucretius and Ovid, the engineer Frontinus, and the medical encyclopedist Celsus.

The reverence of humanists for ancient Greek and to a lesser extent Roman authorities was exceeded only by their contempt for medieval Latin and Arab writers. Humanists valued Arab writers such as Avicenna only for the light

they shed on the Greeks and Greek writings that had been lost. However, the university tradition that valued these earlier writers continued alongside humanism.

By the sixteenth century, professional humanists were spending much of their time editing ancient texts and trying to recover their exact meaning in their original context. Given all the corruptions introduced by the copying and recopying of manuscripts over the centuries and the differences between different manuscript traditions, humanist editors often had to use scientific knowledge to reconstruct the wording and meaning of the texts. The reconstruction of ancient calendars was an enormously demanding task, requiring elaborate and detailed astronomical and philological research. The Italian mathematical humanist Federigo Commandino (1509–1575) translated many Greek mathematical works into elegant Latin, greatly contributing to the advance of mathematics. Many sixteenth-century botanists were mainly concerned with identifying the plants described by the ancient botanists and sometimes even apologized in their writings for the inclusion of plants unknown to the ancients!

Humanists revived various non-Aristotelian schools of ancient philosophy as live intellectual options. The ancient tradition offered so many possibilities that there was little interest in rejecting it totally. Galileo Galilei flaunted his contempt for Aristotelian physics but invoked Archimedes as an alternative Greek role model (and owed more to Aristotelian logic than he cared to admit). There was a long-standing humanist interest in Plato, nearly all of whose writings had been unavailable to the medieval West, as the greatest of the Greek sages. Epicurean atomism, most notably represented in Lucretius's frequently translated and reprinted Latin poem *On the Nature of Things*, also attracted interest from mechanical philosophers, although its alleged connections with atheism made it religiously suspect. Stoic natural philosophy also had its modern champions. Even the radical heliocentrism of Nicolaus Copernicus had ancient precedents in the thought of Aristarchus and Pythagoras.

As the humanists recovered more knowledge of the particular context in which ancient thinkers worked, their limitations became more

evident. Aristotle, for example, was not the “master of those who know” praised by medieval poet Dante Alighieri but instead was a particular man working in a particular time. Modern knowledge, such as the discovery of the Americas, also brought out the partial and limited nature of ancient thought. The study of antiquity itself became more “scientific” during this period, with intellectual triumphs such as the Huguenot scholar Isaac Casaubon's 1614 demonstration from linguistic evidence that the magical and theological writings of Hermes Trismegistus dated from the first Christian centuries rather than from the time of Moses. The Confucian *kao-zheng* scholarship of China, with its emphasis on rigorous textual research, offers a parallel.

—William E. Burns

Bibliography

- Gaukroger, Stephen, ed. *The Uses of Antiquity: The Scientific Revolution and the Classical Tradition*. Dordrecht: Kluwer Academic, 1991.
- Grafton, Anthony. *Joseph Scaliger: A Study in the History of Classical Scholarship II: Historical Chronology*. Oxford, UK: Oxford University Press, 1993.
- Osler, Margaret J., ed. *Atoms, Pneuma and Tranquility: Epicurean and Stoic Themes in European Thought*. Cambridge: Cambridge University Press, 1991.

Man Apart—The Renaissance

The cultural and organizational transformation that began in Italy during the fourteenth and fifteenth centuries and eventually spread to the rest of Christian Europe is customarily referred to as the Renaissance, connoting a rebirth of the classical civilization of the Greeks and Romans. Although the term “Renaissance” is an invention of the nineteenth century, the idea that the civilization of the ancients was being revived goes back to the Renaissance period itself.

Northern Italy was the center of Renaissance culture. It was in cities such as Florence, Rome, and Venice that scholars rediscovered and re-examined ancient architecture, art, and music. These were the centers of efforts for recovery of lost works of art, manuscripts, and coins (the collecting of which was a major cultural movement during the period). The Italian city-states



Andrea Palladio's Villa Rotunda, Vicenza, Italy, sixteenth century. (Tom Perkins)

themselves were more similar to classical Greek poleis and Republican Rome than were any other late medieval polities. They became the focus of political experimentation, including an abortive attempt to revive the Roman Republic by Cola di Rienzo, a friend of Francesco Petrarca (1304–1374), and other Renaissance writers. The praise that Cicero, Aristotle, and other classical authors gave to civic involvement was congenial to city-state leaders, particularly before the later fifteenth century when republican governments were overthrown by autocrats who eventually gave way to rule by foreign princes.

One of the most important aspects of the revival was linguistic. Many humanists, as these writers were called based on their concentration on human rather than divine subjects, placed particular emphasis on ancient rhetoric, a subject largely ignored in medieval universities. They saw themselves as returning to the classical Latin of the ancients, particularly to the rhetoric of the Roman orator and philosopher Cicero, instead of the so-called corrupt Latin of the Middle Ages. Indeed, the term “Middle Ages” was itself a Renaissance invention, popularized by the first important Renaissance writer, Petrarca. The craze for the revival of classical Latin culture led to the recovery of lost ancient texts moldering away in monastery and cathedral libraries. The Latin classics rediscovered in this period include the works of the rhetorician Quintilian and the *Germania* of Tacitus. The invention of printing in the middle of the fifteenth century also meant that these texts could be circulated on a far wider scale than ever before.

Study of the Latin classics led inescapably to awareness of the dependence of the Latins on the Greeks. At the same time that Western interest in learning ancient Greek was growing, the decline of the Byzantine Empire in the East led to an exodus of Greek scholars and manuscripts to the West. The arrival in Italy of learned Greeks such as the Platonic scholar Basilios Bessarion began well before the final fall of the Byzantine capital Constantinople to the Ottoman Turks in 1453. Bessarion, who translated Aristotle's *Metaphysics* into Latin, actually rose to be a cardinal of the Catholic Church and at one point a candidate for the papacy. The fact that these scholars brought Greek manuscripts with them was also important. Many ancient classics, including nearly all of Plato, had never been translated into Latin and were thus unknown to the medieval West.

Another important aspect of the Renaissance was in the arts. Renaissance artists and art theorists urged abandoning the medieval idea that art was an attempt to stir the passions through the creation of striking images in favor of thinking of art as the accurate representation of human activity in the world. This ultimately led to the invention of perspective, conceived as an accurate way to represent three-dimensional space on a two-dimensional canvas. An even more emphatic rejection of medievalism past took place in architecture, where scholars and architects such as Andrea Palladio (1508–1580) condemned the Gothic style as barbarous and sought to restore classical ideas of harmony and balance.

One problem for Renaissance writers and artists was the relationship of the pagan writers and artists whose work they admired to the Christian culture of their own time. The revival of classical culture went along with a veneration of classical heroes such as Julius Caesar and an individualist emphasis on seeking imperishable fame rather than the salvation of the soul. Everyone from Italian mercenaries to Spanish conquistadors in America presented their careers in the mold of classical warriors. Few Renaissance thinkers went so far as to condemn Christianity or advocate paganism, although the Florentine historian and political theorist Niccolò Machiavelli (1469–1527) thought that classical paganism was more suited than Christianity for effective rulers.

Many argued that classical values and Christian values could be reconciled and that knowledge of the classics could make better Christians. This attitude is particularly associated with the so-called Northern Renaissance, the expansion of the Renaissance outside Italy to Germany, the Netherlands, France, Britain, and Spain in the late fifteenth and sixteenth centuries. The Fleming Desiderius Erasmus (1469–1536), the pious scholar and writer who was the most celebrated leader of the Northern Renaissance, applied humanistic critical techniques to recover the original form of early Christian texts, including the Bible. Religious humanism led to an interest in Hebrew alongside Greek and Latin. Renaissance humanists were found on both sides of the divide in Christendom after the Protestant Reformation.

Although Renaissance artists spent more effort on secular art such as portraits or scenes from classical mythology and history than had their medieval precursors, they also devoted considerable efforts to the creation and adornment of churches and other religious sites, the most famous example being Michelangelo Buonarroti's painting of the Sistine Chapel in Rome.

—William E. Burns

Bibliography

- Bouwmsma, William J. *The Waning of the Renaissance*. New Haven, CT: Yale University Press, 2000.
- Burke, Peter. *The Italian Renaissance: Culture and Society in Italy*. Princeton, NJ: Princeton University Press, 1999.
- Hale, J. R. *The Civilization of Europe in the Renaissance*. New York: Athenaeum, 1994.

Creating a New World— Copernicus, Brahe, Kepler, and Bruno

Medieval European cosmology presented a physical picture of the universe with the earth at its center while the sun, moon, and planets were embedded in vast rotating crystalline spheres that rotated around the center, thus tracing circles around the earth. The stars were embedded in another outmost sphere. In order to make this picture fit the data of astronomy, however, adjustments had to be made. Observations revealed that the planets did not move as if they were

traveling with a uniform circular motion. Various mathematical devices had to be introduced to fit the data, among them the idea that the spheres that actually carried the planets were centered on a point near but not identical with the earth (i.e., they were “eccentric” to the earth). Epicycles were points on the circle that the planet orbited around while being carried on the larger circle, and equants were points other than the center of the sphere relative to which the sphere's motion was uniform. Together, they made the picture become even more complex. The geocentric system is also called the Ptolemaic system after the Greek astronomer Ptolemy (100–170 CE), who originated much of it.

The Polish priest and astronomer Nicolaus Copernicus (1473–1543) adjusted this received picture in his *On the Revolutions of the Celestial Spheres* (1543), getting rid of the equants by centering the motions of the planets on the sun rather than the earth. However, the Copernican system otherwise closely resembled the traditional one, down to the spheres carrying the planets, the epicycles, and the circular orbits; indeed, Copernicus viewed the greater circularity of his system as an advantage over Ptolemy's. Copernicus's theory at first gained few supporters, partly because it seemed to contradict the Bible but more importantly because it contradicted Aristotelian physics, which relied on an earth-centered cosmos to which heavy objects fell because they sought their natural place at the center of the universe. The fact that the apparent relative positions of the stars did not move when the earth moved—the lack of “stellar parallax”—also forced Copernicus and subsequent Copernicans to posit a much larger universe, with the stars at a much greater distance from earth than was commonly accepted at the time. For these and other reasons, only about a dozen sixteenth-century thinkers can be identified as accepting Copernicanism as a true picture of the universe. However, some adopted Copernicanism as a way to calculate planetary positions without endorsing it as an accurate description of physical reality.

The gravedigger of the celestial spheres was not Copernicus but rather the Danish nobleman and astronomer Tycho Brahe (1546–1601), an opponent of Copernicanism. Tycho argued that comets were heavenly bodies rather than, as

► THE NEW STAR OF 1572

A star bright enough to be seen in the daytime appeared in the constellation of Cassiopeia in early November 1572. It steadily dimmed, disappearing from sight by March 1574, but it made a remarkable impression. Europe's astronomers and cosmologists debated its nature and whether it was positioned above or below the sphere of the moon. A superlunary new star dramatically challenged the Aristotelian distinction between the perfect and unchanging world beyond the sphere of the moon and the imperfect and corruptible one below it.

Tycho Brahe published most extensively on the star. Brahe's first publication, *On the New Star* (1573), combined a record of his observations, a demonstration of the new star's position in or near the sphere of the fixed stars, and an astrological interpretation of its meaning. Although not widely distributed, this work contributed to making Tycho's reputation among astronomers, and he returned to the subject throughout his career. The English Copernican Thomas Digges's (ca.1546–1595) publication on the comet combined the most accurate observations of the new star after Tycho's with a plea for the Copernican system. The leading Ptolemaic astronomer, the Jesuit Christoph Clavius, also held that the new star demonstrated the corruptibility of the heavens.

—William E. Burns

Aristotelians would have it, disturbances in the atmosphere. Heavenly comets had to cross the celestial spheres in which the planets were embedded to reach the sun and were clearly incompatible with solid crystalline spheres. Tycho's fully developed view of the planetary system, the Tychonic system, put the earth at the center, with the sun and moon orbiting the earth while the other planets orbited the sun. This offered the same mathematical advantages as Copernicanism without challenging either the Bible or Aristotelian physics. The Tychonic system and variations such as the semi-Tychonic system, which combined a Tychonic planetary system with a rotating earth, became very popular, supplanting the Ptolemaic system as the chief rival to Copernicanism. The late sixteenth century also saw a revival of interest, even among

Ptolemaic astronomers, in ancient Stoic and Epicurean theories that held that the planets were not embedded in spheres but instead traveled like fish in the sea or birds in the air.

The next great blow to the traditional picture was that of the German astronomer Johannes Kepler (1571–1630), who had imbibed Copernicanism from his teacher Michael Maestlin (1550–1631). Kepler's outstanding mathematical skills combined with Tycho's excellent observational data to form the basis of a modified Copernican system. Kepler abandoned celestial spheres and replaced Copernicus's circular orbits with ellipses, with the sun at one focus. This enabled him to completely abandon epicycles and show planetary motion as a smooth and continuous curve. The prejudice in favor of circularity was ingrained (even Kepler thought that the universe as a whole was spherical) though, and the other leading Copernican of the first half of the seventeenth century, Galileo Galilei, did not accept Kepler's elliptical innovation. Neither did many technical astronomers, for whom the mathematical power of Kepler's theories, not the accuracy of their depiction of physical reality, was the central consideration. Technical astronomers, who viewed Kepler's astronomical tables, the *Rudolphine Tables* (1627), as the best available, were not necessarily interested in the theory behind them. Kepler's theory also faced the difficulty of explaining how and why the planets moved in their ellipses. Kepler had viewed the planets as alternately pushed and pulled by the sun's magnetic force. This explanation proved unconvincing, particularly as experiments with actual magnets showed that they could not make other magnets rotate around them.

While they displaced the earth from the center of the universe, Copernicus and Kepler still placed the solar system in a central position. One of the few to challenge this idea was the Italian friar and magician Giordano Bruno (1548–1600). Although he did not have the observational and mathematical skills of an astronomer, Bruno was one of the very few sixteenth-century natural philosophers who took Copernicanism as an accurate description of physical reality rather than a mathematical scheme for making astronomical calculations. He went beyond Copernicus, though, in setting forth the idea, which had

ancient precedents, of an infinite universe full of stars like the sun with planets orbiting around them. Bruno denied that celestial spheres carried the planets in their orbits and criticized Copernicus for retaining them. However, Bruno was unable to come up with an alternative explanation for planetary motion. Bruno's execution for heresy in Rome, although not caused by his astronomical views, tended to bring them further into disrepute among Catholics.

—William E. Burns

Bibliography

- Christianson, J. R. *On Tycho's Island: Tycho Brahe and His Assistants, 1570-1601*. Cambridge and New York: Cambridge University Press, 2000.
- Gingerich, Owen. *The Eye of Heaven: Ptolemy, Copernicus, Kepler*. New York: American Institute of Physics, 1993.
- Grant, Edward. *Planets, Stars, and Orbs: The Medieval Cosmos, 1200-1687*. Cambridge and New York: Cambridge University Press, 1994.
- Taton, Rene, and Curtis Wilson, eds. *The General History of Astronomy*, Vol. 2, *Planetary Astronomy from the Renaissance to the Rise of Astrophysics, Part A: Tycho Brahe to Newton*. Cambridge and New York: Cambridge University Press, 1994.

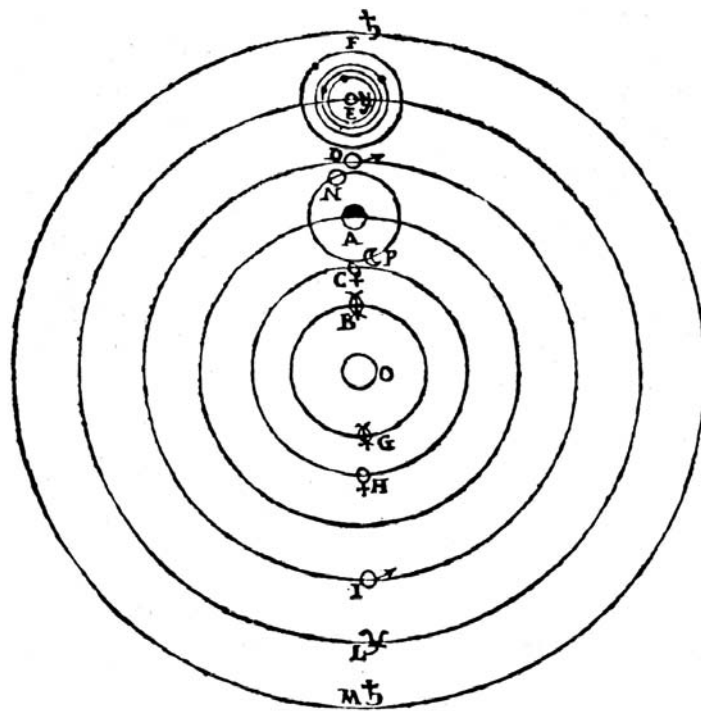
Galileo's World—Europe's Scientific Revolution

Nurtured in the universities of Europe, the Scientific Revolution marked the beginning of modern science with its method of experimentation to test hypotheses. This new method differed from the medieval tendency to cite traditional authorities to advance a new idea. Calling into question the dependence on ancient sources, the Scientific Revolution offered a modern understanding of the universe.

Before the fifteenth century, Europeans believed in a geocentric universe, one with the earth at the center and the sun and planets revolving around it. The Greeks Aristotle and Ptolemy of Alexandria had taught geocentrism, and their authority in this matter was above reproach during the Middle Ages. The voyages of the fifteenth century, however, revealed flaws in Ptolemy's geography, opening his cosmology to scrutiny. More critical of ancient authorities

than was the Renaissance, the Reformation of the sixteenth century created a climate in which a person could criticize Aristotle and Ptolemy. In opposition to them, Polish astronomer Copernicus revived the heliocentrism of Greek astronomer Aristarchus of Samos. By putting the sun rather than the earth at the center of the universe, Copernicus found that he could simplify an explanation of the orbits of the planets and, believing the universe to be inherently simple, advanced this view in *On the Revolution of the Heavenly Spheres* (1543). Fearing that the Catholic Church might retaliate against him for contradicting geocentrism, he resisted publishing *the Heavenly Spheres* during his lifetime. Only after his death did it appear in print.

Elegant though it was, Copernicus's system failed to predict the orbits of the planets with precision. The difficulty lay in his ascribing circular orbits to the planets. Aware that Copernicus's system was imperfect, Danish astronomer Tycho Brahe sought a compromise between geocentrism and heliocentrism. He put the earth at the center of the universe and the sun and moon



Galileo's diagram of the Copernican (heliocentric) system of the universe, and also showing his own discovery of the four moons of Jupiter, from Galileo Galilei *Dialogo*, 1632. (Jupiterimages)

➤ UNSIGNED LETTER, *ON THE REVOLUTION OF THE HEAVENLY SPHERES*, 1543

The 1543 Edition of Copernicus's *On the Revolution of the Heavenly Spheres* included an unsigned letter as a preface.

Briefly mistaken as Copernicus's own work, it was actually written by Lutheran theologian Andreas Osiander (1498–1552) who helped bring the manuscript to publication. The letter indicates some of the concerns that Copernicus's supporters felt they needed to address.

"Since the newness of the hypotheses of this work—which sets the earth in motion and puts an immovable sun at the center of the universe—has already received a great deal of publicity, I have no doubt that certain of the savants have taken grave offense and think it wrong to raise any disturbance among liberal disciplines which have had the right set-up for a long time now. If, however, they are willing to weigh the matter scrupulously, they will find that the author of this work has done nothing which merits blame. For it is the job of the astrono-

mer to use painstaking and skilled observation in gathering together the history of the celestial movements, and then—since he cannot by any line of reasoning reach the true causes of these movements—to think up or construct whatever causes or hypotheses he pleases such that, by the assumption of these causes, those same movements can be calculated from the principles of geometry for the past and for the future too. This artist is markedly outstanding in both of these respects: for it is not necessary that these hypotheses should be true, or even probably; but it is enough if they provide a calculus which fits the observations."

—Christopher Cumo

Source

Timothy McGrew, Marc Alspector-Kelly, and Fritz Allhoff, eds., *Philosophy of Science: An Historical Anthology* (Malden, MA: Wiley-Blackwell, 2009), 110.

in orbit around the earth as had Aristotle and Ptolemy, but Brahe put all of the other planets in orbit around the sun, as had Copernicus. Brahe's pupil Johannes Kepler rejected this hybrid and, sure that Copernicus was right, sought to refine his system. Dissatisfied with Copernicus's circular orbits, Kepler cast about for other geometric shapes, finally hitting upon the ellipse. The sun was not at the center of the universe but rather at one focus of the ellipses that described the planetary orbits.

The heliocentrism of Copernicus and Kepler drew strength from Italian astronomer and physicist Galileo Galilei, whose contributions fall into two categories. First, Galileo turned a telescope to the sky and discovered the moons of Jupiter. Because Jupiter is a planet, the Earth, which also has a moon, must likewise be a planet rather than a stationary object, he surmised. Second, Galileo replaced Aristotle's notion of impetus with the modern concept of inertia. According to Aristotle, a thrower imparts impetus to an object, giving it motion. While not far from the truth, the notion of impetus struck Galileo as vague. Instead, he

proposed that objects have inertia. In his experiments, Galileo quantified the acceleration of an object, giving new precision to the study of motion. Faultless though his science was, Galileo misjudged the reaction of the Catholic Church. In asserting heliocentrism in his *Dialogues on the Two Chief Systems of the World* (1632), he encountered the opposition from Church officials that Copernicus had feared. Pope Urban VIII brought Galileo before an inquisition, forcing him to recant the idea that the Earth was a planet and sentencing him to live his last years under house arrest.

The study of motion culminated in the work of British physicist and mathematician Isaac Newton. In *The Mathematical Principles of Natural Philosophy* (1687), Newton formulated the law of gravity to account for the facts both that objects fall to the ground and that the planets stay in orbit around the sun rather than fly off into space. In unifying terrestrial and celestial motion, he demonstrated that the same physical laws operate throughout the universe. Like Galileo and French mathematician and philosopher René Descartes, Newton labored to

quantify motion in the belief that the universe displayed mathematical regularity.

The Scientific Revolution fired the imagination of poets and intellectuals. British poet Alexander Pope glorified the achievements of Newton, and the philosophes of the Enlightenment saw the Scientific Revolution as a model of progress. Inherent in the notion of progress was a faith in the power of science to better the lives of ordinary people. This faith in science spilled over to eighteenth-century America, where Thomas Jefferson and Benjamin Franklin espoused the belief that science could advance the public good. The creation of a small band of intellectuals, the Scientific Revolution had by the eighteenth century spawned a popular movement that championed the utility of science.

—*Christopher Cumo*

Bibliography

- Bowler, Peter J. *Making Modern Science: A Historical Survey*. Chicago: University of Chicago Press, 2005.
- Cohen, I. Bernard. *Revolution in Science*. Cambridge, MA: Belknap Press of Harvard University Press, 1985.
- Kuhn, Thomas S. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought*. Cambridge, MA: Harvard University Press, 1957.

A New World Order— Newton's *Principia* and Bowditch's *Navigator*

Isaac Newton (1642–1727) published *Principia Mathematica Philosophiae Naturalis*, often referred to as *Principia (Mathematical Principles of Natural Philosophy)* in 1687. For centuries later, it was the most important text in physics. The title itself was a departure in Western scientific thought in bringing together quantitative mathematics and hitherto primarily qualitative natural philosophy. Published at the prompting of Newton's ally Edmond Halley, *Principia* set forth the scientific ideas still most associated with Newton. These included his law of universal gravitation—an attractive force between bodies varying directly with the mass of the bodies and inversely with the square of the distance—and his three laws of motion: a body at rest or

in motion in a straight path will tend to stay in that state, a change of motion in a body varies with the force impressed, and each action has an equal and opposite reaction. Newton's laws applied to both the heavens—they explained why the planets moved in elliptical orbits around the sun—and to earthly phenomena such as falling bodies and the tides. His conception of physics as the search for laws that could be expressed mathematically and would apply universally dominated the subsequent development of the science and also influenced other sciences.

The *Principia* was a difficult text, requiring advanced mathematical knowledge that few Europeans were equipped to understand. Written in Latin, it was aimed at a Europe-wide audience of the learned rather than simply at Newton's English contemporaries. (An English translation did not appear until 1729.) Its difficulty was one reason that its initial impact was limited. Another was the strength of Cartesian physics based on the science of the French philosopher René Descartes. Although Newton's mathematics won universal admiration from those qualified to judge it, others were suspicious of the ability of the gravity he described to bring two bodies together across a distance without anything connecting them. Admitting the existence of such a force seemed like a way of bringing back discredited occultist ideas of magical forces rather than being based on a mechanical approach to nature like Cartesianism.

Newton saw his science and numerous other intellectual exertions as efforts to understand the mind of God and to comprehend ultimate truth. God was the lawgiver of Newton's law-governed universe. Newton was more religious in his approach to natural philosophy than his seventeenth-century predecessors Galileo Galilei or even Descartes, claiming in a letter of the *Principia*, “When I wrote my treatise about our system, I had an eye on such principles as might work with considering men, for the belief of a Deity; and nothing can rejoice me more than to find it useful for that purpose.”

Nathaniel Bowditch (1773–1838) was a largely self-educated Massachusetts clerk and sailor who became one of the leading Newtonians of the new United States. Growing up in the seafaring community of Salem, Bowditch

THE MARQUISE DU CHATELET AND EIGHTEENTH-CENTURY FRENCH NEWTONIANISM

The French noblewoman Emilie du Chatelet was one of the few women to participate in mid-eighteenth-century Newtonian physics. In 1733, she met the Enlightenment philosopher Voltaire, then campaigning for Newtonianism in France. The two began a love affair that was also an intellectual partnership. Du Chatelet's mathematical skills far exceeded Voltaire's, making her assistance vital as he wrote his Newtonian textbook, *Elements of the Philosophy of Newton* (1738). Du Chatelet's first published work, the anonymously published *Institutes of Physics* (1740), combined Newtonian ideas with those of Newton's great rival Gottfried Wilhelm Leibniz. The text's anonymity, considered appropriate for the work of a woman, enabled her enemies to spread the rumor that she had not written it herself. Her other significant work was the French translation of Newton's *Mathematical Principles of Natural Philosophy*, which drew on a number of editions, commentaries, and popularizations of Newton as well as the Latin text itself. More than a translation, it included a commentary incorporating work done on mathematical physics since Newton's time. Du Chatelet's translation was completed in 1749, shortly before her death in childbirth, but was not published until 1759. It remains the only French translation of Newton's masterpiece.

—William E. Burns



The Marquise du Châtelet was one of the brilliant women of the Enlightenment, a noted mathematician, physicist, and feminist, as well as the long-term mistress of the French philosophe Voltaire. (Bettmann/Corbis)

from a young age became renowned for his mathematical skills. He taught himself calculus and Latin to understand the *Principia* and also learned French, the most important language of international science at the time. He also had practical experience, sailing on five commercial voyages to the East Indies and Europe, on the last of the five as commander. His *Practical Navigator* began as a revision of the English writer John Hamilton Moore's guide to navigation, *The Practical Navigator*. Bowditch worked together with his brother William and produced the first American edition of the work in 1799. The third edition of Bowditch's revision appeared in 1802 as *The New American Practical Navigator*, and it was in its tenth edition as a standard manual of navigation and seamanship by the time of Bowditch's death.

Bowditch's improvements on Moore included the correction of some errors and a new and simpler way of computing the longitude by the method of lunar distances, one more usable by sailors rather than astronomers. The excellence of Bowditch's work was recognized quickly. In 1799 he was elected to one of America's leading learned societies, the Academy of Arts and Sciences. *The New American Practical Navigator*, or *Bowditch* as it is familiarly known, remains after many ongoing revisions a foremost authority on navigation. In 1868 the copyright was purchased by the U.S. Navy Hydrographic Office, and it continues to be published by the Department of Defense. Bowditch himself continued to publish in astronomy and mathematics while maintaining an active career as a businessman. His best-known work after

The New American Practical Navigator was his translation of the first four volumes of the French Newtonian physicist and mathematician Pierre-Simon Laplace's five-volume *Celestial Mechanics* (1829–1839).

—William E. Burns

Bibliography

- Greene, John C. *American Science in the Age of Jefferson*. Ames: Iowa State University Press, 1984.
- Jacob, Margaret. *Scientific Culture and the Making of the Industrial West*. New York: Oxford University Press, 1997.
- Westfall, Richard. *Never at Rest: A Biography of Isaac Newton*. New York: Cambridge University Press, 1980.

Mechanistic Philosophy

Seventeenth-century Europe saw the rise of “mechanical philosophy” as a way to understand nature. Mechanical philosophers viewed matter and motion as sufficient to explain all natural occurrences. For strict mechanical philosophers, matter itself was “dead,” or inert, acting only as motion was impressed upon it. Bits of matter interacted only by direct contact or impact; “action at a distance” was impossible. Mechanical philosophy was distinct from traditional Aristotelianism, which saw matter as seeking its “natural place,” and magic, which relied on attractive and repulsive forces acting at a distance.

Mechanical philosophy originated as a way of doing physics compatible with Copernican heliocentric astronomy. Aristotelian physics, the dominant school before the seventeenth century, depended on a geocentric cosmos, while mechanical philosophers were Copernicans. The most influential mechanical philosophers of the first half of the seventeenth century were two closeted Copernican Catholic Frenchmen, René Descartes (1596–1650) and Pierre Gassendi (1592–1655). Their mechanical philosophies were quite different. Descartes emphasized his own originality rather than claiming to revive a classical tradition. He saw the universe as a plenum, full of different kinds of matter with no empty space, or “void.” For Descartes, matter was infinitely divisible. His mechanical philosophy was most systematically set out in his 1644 Latin textbook *Principles of Philosophy*.

Gassendi was a humanist who claimed to be reviving the atomism of the ancient Greek philosopher Epicurus. Like the Epicureans, Gassendi saw the the universe as composed of atoms—the smallest bits of matter, not capable of being divided—circulating in a void. Gassendi's Christianity led him to reject some Epicurean ideas, such as the eternity of atoms and their infinite number, but he devoted enormous effort to demonstrating the compatibility of atomism and Christianity. Gassendism, mostly expressed in difficult Latin tomes rather than the elegant French of Descartes's popular works, never rivaled Cartesianism in France but had a great influence in England.

Arguments between the two sects of mechanical philosophers often turned around the existence of the void, which was fundamental to atomism but which Cartesians, like Aristotelians, denied. The invention and dissemination of air pumps, instruments for producing a crude vacuum by pumping the air out of a vessel, supported atomism by demonstrating a void. By the end of the seventeenth century, versions of Cartesianism that accepted the void were circulating.

Although many natural phenomena could be explained by mechanical interaction, some presented difficult problems. Magnetism was a classic example of action at a distance, so mechanical philosophers had to find mechanical explanations. Descartes came up with a complicated explanation based on a “subtle” matter of corkscrew-shaped particles, not immediately apparent to the senses. Gassendi and other atomists also explained magnetism and other physical phenomena by the interactions of particles of various shapes or with special properties. Another tough explanatory challenge was life. Descartes believed that the human body was a mechanical automaton informed by a nonmaterial soul and speculated that the link between soul and body was located in the pineal gland. Animals, lacking souls, could be treated purely as machines. This mechanistic biology was taken further by the iatromechnists, or mechanical physicians, of the late seventeenth century, including the Neapolitan atomist Giovanni Alfonso Borelli (1608–1679). Through the Leiden medical professor Herman Boerhaave (1668–1738), mechanistic thought shaped the medicine of the Enlightenment.

▶ ROBERT BOYLE ON MECHANICAL PHILOSOPHY AND RELIGION

Robert Boyle was a devout Protestant and a mechanical philosopher. The following passage from *The Excellence and Grounds of the Mechanical Philosophy*, first published in 1674, attempts to find a religiously safe way to endorse a mechanistic approach to the cosmos.

“By embracing the corpuscular, or mechanical philosophy, I am far from supposing, with the Epicureans, that, atoms accidentally meeting in an infinite vacuum, were able, of themselves, to produce a world, and all its phenomena: nor do I suppose, when God had put into the whole mass of matter, an invariable quantity of motion, he needed do no more to make the universe; the material parts being able, by their own unguided motions, to throw themselves into a regular system. The philosophy I plead for, reaches but to things purely corporeal, and distinguishing between the first origin of things, and the subsequent course of nature, teaches, that God, indeed, gave motion to matter; but that, in the beginning, he so guided the various motion of the parts of it, as to contrive them into the world he design’d they should compose, and establish’d those rules of motion, and that order amongst things corporeal, which we call the laws of nature. Thus, the universe being once fram’d by God, and the laws of motion settled, and all upheld by his perpetual concurrence, and general providence; the same philosophy teaches, that the phenomena of the world, are physically produced by the mechanical properties of the parts of matter, and, that they operate upon one another according to mechanical laws.”

—William E. Burns

Source

Roger Ariew and Eric Watkins, *Modern Philosophy: An Anthology of Modern Sources* (Indianapolis: Hackett Publishing, 1998), 262.

Mechanical philosophy had a complicated relationship to religion. The alliance between Christian theology and Aristotelianism was longstanding and nearly as influential in Protestant as in Catholic Europe. The association of atomism with Epicurus, reviled as an atheist, was

also a problem. A disciple and correspondent of Descartes and Gassendi, Marin Mersenne (1588–1648), developed the mechanical philosophy in a religious direction. Mersenne, a priest from a particularly ascetic order of Franciscan friars, the Minims, saw the magical tradition, and particularly the “vitalist” belief that nature is somehow alive, as the root of all heresy. Unlike other mechanical philosophers, he did not see Aristotelianism as the main enemy. Mersenne claimed that nature was not alive and that it acted mechanically except when God or other supernatural entities, such as devils or the souls of humans, acted directly on it. Mechanical philosophy enabled a clear distinction between nature in its ordinary course and miraculous actions, which made possible a definition of miracles as those events that were not mechanically determined.

For both Catholics and Protestants, however, the mechanical philosophy had dangerous associations with materialism and determinism. Many intellectuals viewed mechanical philosophy as useful in combating superstition but feared that a consistent mechanist materialism could be seen as disputing divine action in the world, leading to “atheism,” defined less as lack of belief in God than as lack of belief in divine activity. Descartes himself got into trouble in the Dutch Republic with conservative Calvinist university authorities because of this. (Despite this initial bad start, the Dutch universities were the first to adopt Cartesianism.) The philosophy of Dutch Jew Baruch Spinoza (1632–1677), combining strict mechanical determinism with a God immanent in nature rather than transcendentally outside it, was even more radical and frightening. Catholics also had problems explaining the doctrine of transubstantiation, the transformation of the bread and wine of the Mass into the flesh and blood of Christ, in mechanical terms. These religious issues got Descartes’ works put on the Church’s Index of Forbidden Books in 1663.

Mechanical philosophy in both Cartesian and Gassendist forms was introduced to England in the 1650s. The English sometimes combined ideas from the Cartesian and atomist traditions or even combined mechanical philosophy with concepts taken from other traditions such as Aristotelianism or alchemy. Strict mechanical philosophy, with its insistence on mechanical

and only mechanical explanations, was not congenial to antidogmatic English scientists, in addition to being religiously problematic. English mechanical philosophers were willing to consider the possibility of an active noninert matter as long as it acted mechanically. Anglo-Irish chemist Robert Boyle (1627–1691), the leading British chemist and the inventor of the term “mechanical philosophy,” combined mechanical and alchemical ideas. Physicist Isaac Newton (1642–1727) combined mechanical explanations with universal gravitation, which many mechanical philosophers, particularly the Cartesians dominant on the European continent, saw as an intellectually illegitimate revival of occult and magical forces.

—William E. Burns

Bibliography

- Fisher, Saul. *Pierre Gassendi's Philosophy and Science: Atomism for Empiricists*. Leiden: Brill, 2005.
- Osler, Margaret J. *Divine Will and the Mechanical Philosophy: Gassendi and Descartes on Contingency and Necessity in the Created World*. Cambridge: Cambridge University Press, 1994.
- Shaw, Peter, ed. *Philosophical Works of the Honourable Robert Boyle*. 3 vols. London: W. and J. Innys, J. Osborn and T. Longman, 1725.

The Beginnings of the Scientific Method—Francis Bacon and René Descartes

In the seventeenth century the new science became an increasingly self-conscious activity, accompanied by the rise of the methodological reflections. Although modern philosophers and historians of science reject the idea of a single scientific method, many of the methods used by modern scientists rest on seventeenth-century foundations.

The most conscious attention to scientific method was paid by English statesman and philosopher Francis Bacon (1561–1626). Bacon's most influential published work of natural philosophy was *The Advancement of Learning* (1605), published in an expanded Latin edition as *De Dignitate et Augmentis Scientiarum* (1623). In it and his other works such as *The New Organon* (1620), Bacon proposed to

replace Aristotelian deductive logic, working from general principles to individual cases via the syllogism, with a new form of inductive logic, reasoning from particular instances to general statements. The compilation of empirical data from numerous observations was central to Bacon's method. Since more people could make more observations, an important part of Bacon's vision was collaboration between scientists. His utopia, *The New Atlantis* (1627), described a fictional cooperative scientific institute called Solomon's House. Solomon's House, where investigators gathered information and philosophers analyzed it, was occupied by a hierarchy of natural philosophers and investigators. It was closely allied with the state, which was a central element in Bacon's vision. Bacon was suspicious of natural philosophy carried out by independent investigators with no connection to the political and social hierarchy.

Bacon also believed that the ultimate goal of science was practical use. He viewed technological change, particularly the printing press, the magnetic compass, and gunpowder as marks of the modern era and hoped that organized scientific enquiry would further expand human powers.

The great weakness of the Baconian method was the difficulty of getting from facts to theories and applications. William Harvey, the discoverer of the circulation of the blood, was Bacon's physician but derided his system as devoid of practical use. Baconian science in practice could degenerate to mere fact gathering, as in Bacon's own *Sylva Sylvarum; Or, a Naturall Historie* (1627). Bacon was also suspicious of mathematics, possibly due to its connection with magic.

Although Bacon hoped that King James VI and I, the dedicatee of *The Advancement of Learning*, would put Baconian policies into action, state-sponsored Baconianism had to wait for the Puritan regimes of the 1650s following the English Civil War. There were many reasons why Puritans found Baconian ideology attractive. Many, although not all, Puritan intellectuals shared Bacon's anti-Aristotelianism due to their hatred of medieval Catholic Scholastic theology. More importantly, Bacon's emphasis on renewal and progress fitted with the millenarian and reforming tendencies of Puritanism. The period

➤ A BACONIAN VENTURE—THE CONFERENCES OF THEOPHRASTE RENAUDOT

Many of Bacon's works were in Latin, as he expected them to influence intellectuals in continental Europe, few of whom read English. One continental Baconian was the French physician Theophraste Renaudot (1584–1653). Inspired by the Baconian ideal of collective inquiry, Renaudot held conferences with about 100 participants at a warehouse every Monday afternoon from August 22, 1633, to September 1, 1642. These conferences were open and included both nobles and bourgeois, among them many physicians who worked at Renaudot's clinic. Each conference was devoted to a particular topic. Religion and politics were barred, and many conferences were devoted to medical or natural-philosophical topics ranging from the existence of unicorns to Paracelsianism to recent innovations such as the motion of the earth or Galileo's theories of sunspots. Conference speakers argued from a wide variety of intellectual positions, from Aristotelian to Paracelsian, although many were not exclusively committed to a particular school. Renaudot published both weekly proceedings and massive collections of 100 conferences. These went through many editions and repackagings, including a two-volume English translation published in 1664 and 1665.

—William E. Burns

saw efforts at Baconian fact gathering, technological research, and Bacon-inspired reforms of education.

The Baconian ideal of fact gathering and collaboration, however, was not discredited after the overthrow of the Puritans and the Restoration of Charles II in 1660 and eventually inspired the foundation of permanent academies of science such as England's Royal Society. (The Royal Society also benefited from Bacon's Englishness, which helped them put their work in a patriotic light.) Although scientists, particularly in England, frequently harkened back to Bacon, late-seventeenth-century Baconianism also drew from other sources, such as the experimentalism of magnetism investigator William Gilbert or the empiricism of French atomist Pierre Gassendi. Characteristics of the full-fledged Baconian

philosophy included a continued emphasis on cooperation between natural investigators as well as on empiricism, experimentalism, opposition to the ancients and particularly Aristotle, resistance to theorizing, and belief in the possibility of improvement of human powers through the progress of science and technology. Since it emphasized method rather than a particular set of natural-philosophical theories, Cartesians, atomists, alchemists, and even Aristotelians could work together under the Baconian aegis of cooperation, natural philosophy, and progress. The experimentalist Robert Hooke attempted to systematize Baconian logic into a "Philosophical Algebra" that would generate scientific conclusions from empirical data.

A contrast to Bacon in method was French mathematician and philosopher René Descartes (1596–1650). Equally anti-Aristotelian, Descartes emphasized deduction from first principles rather than Bacon's fact gathering. Descartes did not reject empirical work. He performed experiments and made investigations, but his science remained theoretical. Descartes's ultimate ambition seems to have been to replace Aristotle as the dominant philosopher in the schools and intellectual life generally, and to do so he presented his core ideas and theories as metaphysically certain. Descartes also presented his science as a unity in which different branches of science were ultimately unified by the same principles. For Descartes, these were mechanical principles: the reduction of the universe to matter and motion. Cartesianism was one of several schools of mechanical philosophy in the seventeenth century. While Bacon was open to different types of scientific explanation, Descartes and Cartesians believed that for an explanation to be valid, it must be capable of being expressed in mechanical terms. Descartes also differed from Bacon in having much less interest in practical use. One similarity between the two was a lack of interest in mathematizing science. Despite Descartes's own mathematical skills, Cartesian science remained quantitative rather than qualitative.

In the 50 years after Descartes's death in 1650, Cartesianism became the predominant school of natural philosophy in France and most of Europe. Cartesianism had several advantages

over its principal competitors in France, the Aristotelianism of the universities and the rival atomistic mechanical philosophy of Gassendi. A small band of dedicated Cartesians in the 1650s and 1660s edited and published Descartes's letters and unpublished works, organized conferences, and finally orchestrated the dramatic return of Descartes's body from where he had died in Sweden to be buried in Paris in 1667. Methodologically, Cartesians continued to view experiment as secondary to logical deduction as a mode of scientific enquiry. However, Cartesians increasingly deviated from Descartes by abandoning his belief in certain knowledge and making ingenious explanations for natural phenomena with the goal of plausibility and even entertainment value rather than certainty. Cartesians following Descartes also made increased use of mathematics, particularly in response to Isaac Newton's anti-Cartesian *Mathematical Principles of Natural Philosophy* (1687).

—William E. Burns

Bibliography

- Broughton, Janet, and John Carrierio, eds. *A Companion to Descartes*. Malden, MA: Blackwell, 2007.
- Gaukroger, Stephen. *Descartes: An Intellectual Biography*. Oxford, UK: Oxford University Press, 1995.
- Gaukroger, Stephen. *Francis Bacon and the Transformation of Early-Modern Philosophy*. Cambridge and New York: Cambridge University Press, 2001.
- Martin, Julian. *Francis Bacon, the State, and the Reform of Natural Philosophy*. Cambridge and New York: Cambridge University Press, 1992.

Kaozheng

During the seventeenth and eighteenth centuries, Chinese intellectuals developed the practice of kaozheng, or evidence-based research, often associated with Han education. Some scholars of the Qing dynasty (1644–1912) looked back toward the Han dynasty (202 BCE–220 CE) as a time of pure Confucianism and tried to reinstitute the scholarly methodology of that age. These scholars constituted the Kaozheng, or Han-Learning, school. They believed that Neo-Confucianism, incorporating the Buddhist and Daoist influences of the Song dynasty (960–1276), had

polluted Confucianism by focusing on individuality rather than the necessity of a unified society. These Kaozheng scholars, supported by the Qing emperors, blamed Neo-Confucianism for the fall of the Ming dynasty and began meticulously analyzing Confucian texts.

Chinese scholars under the reign of Qing emperor Kangxi provided the foundation for kaozheng scholarship. One of the most important examples was Gu Yanwu, a member of the Han learning school. Gu traveled throughout northern China studying technology and making careful copies of Han era documents. During these travels he took detailed notes on texts, artifacts, and the geography. Gu's approach broke with Song and Ming approaches to scholarship. Intellectuals

➤ COPERNICUS IN CHINA—JESUIT TEACHINGS

Although the Jesuits introduced Western astronomy to China, they did not teach the Copernican system, since teaching it as a description of physical reality was banned by the Roman Catholic Church. Instead, Jesuits in China as in Europe supported first the Ptolemaic system, with the earth at the center of the planets' orbits, and then beginning in the 1630s shifted to Tycho Brahe's system, which depicted the sun and moon as orbiting the earth and the planets as orbiting the sun. Although the Chinese had no access to European writings defending Copernicanism in the seventeenth century, Copernican astronomy reached China indirectly. Jesuit writing in Chinese on cosmological theory discussed the Copernican system in general terms in order to refute it. Jesuits revealed to the Chinese the telescopic discoveries of Galileo Galilei, which Galileo himself and other contemporary astronomers viewed as evidence for Copernicanism, and used astronomical tables, some of which were based on Copernican assumptions. The news of Galileo's discoveries quickly reached China; by 1615 Father Emmanuel Diaz had included descriptions of Jupiter's satellites and the phases of Venus in his Chinese book, *Problems of Astronomy*. The first person to advocate in Chinese the heliocentric system as clearly superior for astronomical calculation was the Jesuit astronomer Michel Benoist (1715–1774).

—William E. Burns

➤ XIANGYUE (COMMUNITY COMPACT)

One of the reconfigurations of Confucianism by the Song dynasty scholar Zhu Xi (1130–1200) was the idea of *xiangyue*, or Community Compact. Zhu Xi's idea built on the example set by the Lü family in 1077. The Lü's monthly meetings entailed elections, food, and detailed behavioral regulation. Like the Lü family's example, Zhu's community meetings were designed to teach Chinese elites appropriate hierarchical behavior. In this effort, he established five age grades with specific rules of conduct for each group. Seniority seating, greetings, clothing, and invitations were among Zhu's detailed protocols. Discussions held during these meetings praised good deeds and corrected errors. The ultimate goal of the Community Compact was to connect the Chinese elite family to the state, creating a fusion of private and public interests. This Neo-Confucian idea was not regularly practiced until the Ming dynasty. The goals and procedures of Community Compacts were revitalized by the Chinese Communist Party in the twentieth century. As John Fairbank and Merle Goldman note, "the content would differ but the methods of criticism and self-criticism would resurface under the People's Republic." In each instance, the goal was an applied community morality.

—Kassi Klinefelter

during those periods focused on morality and metaphysics, and thus their work was less specific and more philosophical and neglected archival research. Influenced by Gu's work and possibly European sciences, kaozheng scholars attempted to reconstruct the original meaning and authenticity of the Confucian classics through philology, astronomy, and textual analysis.

The Yangzi Delta was the home of mid-Qing kaozheng scholarship. Successful evidence-based research required large archives and money to finance the work. In response to this need, libraries were created in the Yangzi region. This region benefited financially from China's consolidated trade with foreigners, which by the 1600s included the Dutch, British, Portuguese, and Spanish. Merchants often used their wealth to finance kaozheng scholars and documentary collections. Additionally, in this area semiautonomous

kaozheng academies developed in the late eighteenth century; the three main centers were in Yangzhou, Zhenjiang, and Hangzhou. For many, kaozheng broke the traditional scholar-official bond by establishing research as a full-time profession. However, the independent nature of the research blocked poorer self-educated scholars and women from kaozheng scholarship. Kaozheng was commemorated in 1829 by Ruan Yuan, the emperor's top official in the Guangdong province (where European trade was conducted). His collection of 180 kaozheng works illustrates the connection between the evidential research movement and the merchant community.

Increased knowledge and interest in the social and physical sciences resulted from this evidence-based scholarship. Kaozheng researchers' attempts to seek truth from the facts required systematic patterns of study and large collections of data. Consequently, detailed examinations of the past provided insights into hydraulics, astronomy, government, and cartography. Additionally, modern Chinese archaeology developed from this movement. In the 1890s when researchers were analyzing oracle bones from the Shang dynasty, the kaozheng interdisciplinary approach provided them with the knowledge to recognize their importance.

Kaozheng was the driving force for the intellectual development, although sometimes he was most notable for inspiring resistance. The Qing dynasty was a period of intellectual diversity. Following the pattern of the Ming dynasty, Qing rulers supported the Zhu Xi interpretation of Confucianism. These Neo-Confucian ideas—loyalty to emperor, moral self-cultivation through study, and positive role models—were known as the School of Song Learning, or the School of Principle. During the Qing dynasty, the government encouraged the spread of Zhu Xi's ideas by incorporating them into the official examination syllabus. The Tongcheng School, centered in Anhui, also embraced Zhu Xi's idealistic view of Confucianism. However, Tongcheng scholars broke with their Song contemporaries by embracing literature as the means to understand Confucian moral philosophy. The Tongcheng and Song schools had a shared hostility toward kaozheng. They objected

to its reliance on empiricism and undermining of the Confucian classics.

Han learning and kaozheng scholarship were intellectual movements that challenged China's Confucian system. During the seventeenth century, for instance, Yan Rouju's analysis proved that the old-text version of the Book of Documents that was used in the imperial exams was, in fact, a forgery. Utilizing his method of close textual analysis, mid-Qing scholars demonstrated that during the Han dynasty phony documents were inserted into the Confucian classics. This discovery along with the Han learning rejection of Song thought due to its corruption by Buddhist and Daoist ideas cast doubt on the authenticity of other sacred Confucian texts and scholarly objectivity. Unlike the humanist scholarship of the Renaissance, however, the subversive potential of these challenges to the status quo was never developed by Han or kaozheng scholars. Instead, scholars of the Qing era achieved an intellectual compromise. Song Confucianism was utilized for moral questions, while Han and kaozheng scholarship dominated textual research.

—Kassi Klinefelter

Bibliography

- Elman, Benjamin A. *From Philosophy to Philology: Intellectual and Social Aspects of Change in Late Imperial China*. Cambridge, MA: Council on East Asian Studies, Harvard University, 1984.
- Smith, Richard J. *China's Cultural Heritage: The Qing Dynasty, 1644–1912*. Boulder, CO: Westview, 1994.
- Zarrow, Peter. *China in War and Revolution, 1895–1949*. London: Routledge, 2005.

Innovations in Navigation

The eighteenth century witnessed the perfection of innovations in navigation that made long-distance voyages across the open seas safer and more accurate. Thanks to these innovations, exploration and trade were possible and economical. They made the world a different place.

During the late Middle Ages, seafarers rarely sailed far from locations they knew. Navigation was done through observing the positions of stars and landmarks on nearby shores. Portolan books were also available to navigators in the

Mediterranean by the end of the thirteenth century. The manuscripts gave sailing directions along the coasts, including landmarks, distances, and warnings about hazards, although these books did not seem to be widespread, as the first one did not appear in England until 1489.

In other parts of the world such as the Pacific, navigators became skilled at finding their way through observation and memorization. Polynesian sailors learned to note the points at which certain stars rose and to sail courses in relation to those points. They also memorized current patterns and watched for clouds and birds that indicated the presence of land.

By the fifteenth century, however, ships were sailing far out of sight of land. Europeans were attracted by the rewards of trade with Asia, and countries like Portugal were sending expeditions farther and farther to locate a sea route. Navigators developed the skills to determine how far north or south they were of the equator (i.e., latitude). The most common way was to use an astrolabe to find the sun's altitude at noon. Tables with the sun's position on different days were gradually compiled to show how far from the equator a ship would be. Columbus used a declination table on his voyage.

By the seventeenth century, the most pressing problem for navigators was to find out their position to the east or west. Different methods were proposed. Most methods involved observing a celestial body and comparing the time to the time at an agreed-upon place. In England, Greenwich was chosen as the base location, as it was the site of the Royal Observatory since 1675. Different phenomena were suggested for observation, including the moons of Jupiter, Earth's moon, and the sun's midday position. An important first step before these methods could be used was the need for detailed tables of the celestial bodies' positions on different days. By the end of the eighteenth century, accurate tables had been produced and were widely distributed.

To encourage scientists and inventors to develop improved navigation systems, European governments offered prizes. In Spain in 1598, Philip III offered a 6,000 ducat prize plus an annual income of 2,000 more ducats for life to anyone who could discover longitude. Galileo was

► DEVELOPMENT OF THE PRAHU

The *prahu* (also seen as *proa* or *prau*) was the traditional sailing craft of the people of Malaya and Polynesia. It consisted primarily of a main hull and a second much smaller hull or outrigger. A crab-claw sail, so-named because of its curved shape, was used. The prahu is unique among sailing vessels because the vessel does not turn like other vessels but simply changes directions. The front becomes the rear and vice versa. The sail could be easily managed by a small crew. Prahus came in many sizes, ranging from small canoes to larger vessels that included cabins and considerable carrying capacity. The prahu was used by Malayan traders to carry goods to the ports controlled by the Europeans in Southeast Asia for shipment to Europe during the eighteenth and nineteenth centuries. It was also the basic vessel used by the Polynesians to migrate and settle the scattered islands of the Pacific. Even though it was built with Stone Age technology, the prahu remains one of the fastest sailing vessels, thanks to its small hull area and efficient sail. The prahu was an especially effective technology for the Pacific Ocean and the South Seas, thanks to its seagoing capabilities and the Polynesians' abilities to navigate over long distances without printed charts or sophisticated instruments.

—Timothy J. Watts

among those who offered suggestions. In 1636 Holland offered a similar prize. The French government of Louis XIV encouraged research and financial support to researchers. In 1714 Parliament offered a reward of 20,000 pounds to the person who developed an effective way of discovering longitude. Thousands of people made suggestions to these governments hoping to win the prize.

An important part of many of the methods proposed was a timepiece that could be used on board ships. Early experiments with clocks

showed their workings were upset by the motion of the ship, along with the wetness and changing temperature. It was not until 1735 that John Harrison built the first practical clock, using a pendulum of alternating iron and brass bars that was not as sensitive to temperature. Over the next 30 years Harrison built four more clocks that met the requirements set out by Parliament, but he only received his money after a petition to George III.

The method that Harrison proposed to determine longitude, which was finally successful, was for a ship's navigator to note when the sun reached its zenith. This observation would indicate the local midday. The clock on board was kept at Greenwich time, and difference between that time and the local time was calculated. For each hour difference between the two times, the ship was approximately 15 degrees east or west of Greenwich.

The proof that navigation had improved during the eighteenth century was the success of Captain James Cook and his voyages. Cook successfully used *The Nautical Almanac*, produced by Nevil Maskelyne for the years 1767–1769 with tables of lunar positions, on his voyage to the Pacific in 1769. Cook's well-publicized voyage proved to any doubters that sailors could now navigate across the world with accuracy.

—Timothy J. Watts

Bibliography

- Richardson, Brian William. *Longitude and Empire: How Captain Cook's Voyages Changed the World*. Vancouver: University of British Columbia Press, 2005.
- Sobel, Dava. *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*. New York: Walker, 2005.
- Sobel, Dava, and William J. H. Andrewes. *The Illustrated Longitude*. New York: Walker, 2003.
- Vehmeier, H. M. *Clocks: Their Origin and Development, 1320–1880*. Ghent: Snoeck, 2004.

■ Introduction: Expanding Knowledge of the World—Knowledge Transfers

Scientific and technical knowledge was transferred through many avenues during the early modern era. Some transfers took the traditional form of written texts, which in Europe and its cultural sphere were radically transformed through Guttenberg's invention of printing during the 1450s and the subsequent spread of printing presses throughout the Western world. Printing not only enabled the creation of hundreds or thousands of copies of a given text but also ensured that each copy was close to identical, minimizing the errors and confusions that second, third, and subsequent generations of copies introduced into manuscripts. Innovations in language also facilitated knowledge transfer in Europe and other civilizations. Scholarly languages such as Latin in Europe, Arabic in the Islamic world, and Classical Chinese in East Asia long had been vehicles for communication among intellectuals, scientists, and artists. By the mid-eighteenth century the use of Latin was declining in Europe, with French taking its place in many areas. And with increasing levels of literacy, vernacular languages that fostered greater communication between people who spoke different everyday languages played a greater role in Europe. An active culture of scientific popularization through lectures, magazines, and books was one result of this transformation in the ways in which knowledge came to be transferred.

Although printing had been practiced in East Asia since the seventh century, it was not adopted in India, the Islamic world, or other societies during this period. Knowledge continued to be circulated via manuscripts as well. European missionaries in China, India, and elsewhere like the Jesuit Matteo Ricci spread European science in the languages of the people they lived among. Their real purpose was using science and technology to open the door for religious conversion, but their scientific offerings were often more prized than their religion. Missionaries, explorers, and conquerors like Hernando Cortez also collected natural history, medical, and anthropological information from the newly encountered

territories. This knowledge often made its way into print.

Knowledge was also transferred orally and through everyday practices. The global spread of crops following the European encounter with America, for example, meant that the knowledge of how to grow and prepare foods also spread. Europeans avidly learned from Native Americans the uses of corn, tobacco, potatoes, and numerous other crops. As American crops spread across the Old World to Africa, India, China, and elsewhere, broader cultural knowledge spread with them. Cultural complexes of food knowledge spread in other directions as well. Enslaved West Africans in South Carolina brought the knowledge of rice cultivation and preparation to America, benefiting not themselves but their masters.

Knowledge transfer was not, however, a generally accepted practice during the early modern period. Governments, corporations, and religious orders were among those that treated certain kinds of information as proprietary. The Spanish and Portuguese governments in particular kept their navigational and cartographical knowledge as secret as they could to prevent competition from other European powers. The Catholic Church established an Index of Forbidden Books that banned the publication of many works of science, most notoriously Copernicus's *On the Revolutions of the Celestial Spheres*. Islamic religious authorities prevented the spread of printing and especially images throughout the Islamic world. Japan's Tokugawa government suppressed much European scientific writing in Chinese for fear of its contamination by the forbidden religion of Christianity while encouraging the spread of traditional Chinese science and scholarship to support the established order.

—William E. Burns

On European Time in Asia—Jesuit Reform of the Chinese Calendar, 1640s

Following the conquest of China by the Manchu Qing dynasty in 1644, Western methods of

➤ FERNAND VERBEIST AND THE KANGXI EMPEROR

The most important Jesuit scientist in the China mission after Schall von Bell was the Fleming Fernand Verbeist (1623–1688), who entered China in 1659. Verbeist bore some of the brunt of the reaction from traditional Chinese scholars who saw the Jesuits as rivals in the early Qing dynasty. He fought back in the traditional manner of Jesuits in China by demonstrating the superiority of his astronomical methods over those practiced by traditional Chinese and Islamic astronomers. After defeating his rivals in a contest of predicting the precise position of the sun at a given time, Verbeist was appointed head of the astronomical bureau in 1669. Unlike previous Jesuits in China, he actually succeeded in building a close and long-lasting personal relationship with an emperor. A skilled politician, Verbeist accompanied the young and intensely curious Kangxi emperor on his travels. Verbeist built mechanical devices for the emperor and tutored him in Western technology and science, although his Jesuit rivals in Beijing suggested that he exaggerated his familiarity with the ruler. After Verbeist's death from being thrown by a horse, he received a magnificent state funeral at the emperor's command. However, Verbeist failed in his ultimate objective of converting the Kangxi emperor to Christianity.

—William E. Burns



Jesuit priest and astronomer Fernand Verbeist, in Chinese dress. (Giraudon/Art Resource, NY)

astronomical calculation, as practiced and taught by European Jesuit missionaries, received the official endorsement of the Chinese state. The techniques were applied to one of the imperial government's core tasks, the creation of a calendar. Chinese calendars included predictions of the time and duration of eclipses and other celestial phenomena, and the prestige of the government was endangered by inaccurate predictions.

Astronomer Johann Adam Schall von Bell, the leader of the Jesuit mission in Beijing, had spent many years after his arrival in Beijing in 1623 building his influence in the court of the Ming ruler by carrying out technical functions, including the casting of cannon and the inspection of fortresses. Like other Jesuits in China, Schall von Bell hoped that by demonstrating their usefulness to the imperial government

the Jesuits would ultimately lead to converting the emperor and the empire to Roman Catholic Christianity. The conquest of China by the Manchus at first seemed a crippling blow to Schall von Bell and the Jesuits' ambitions. In addition to the physical destruction wrought by the war, the credit that the Jesuits had built up with the leaders and courtiers of the Ming government was now entirely useless. Schall von Bell even considered abandoning the astronomical mission in favor of an exclusively religious approach but relented when a fire spared the building where he kept his mathematical books. He interpreted this as a divine sign that his mathematical work was pleasing to God. Schall von Bell's hopes were vindicated when the Qing assumed the authority of a Chinese dynasty and inherited responsibility for the calendar.

Schall von Bell sent a petition that predicted the time and duration of a forthcoming solar eclipse to the new Chinese emperor with a request that the Board of Rites test the prediction. The day of the eclipse, September 1, saw Schall von Bell's calculations publicly verified in the presence of officials of the Astronomical Bureau. He was offered the position of director of the bureau, setting a precedent that would be followed by Western Jesuits until news of the suppression of the order reached China in 1774. As head, Schall quickly replaced astronomers trained in Islamic and traditional Chinese methods with experts in Western astronomy.

The Chinese calendar combined lunar and solar reckoning, and like all such calendars it required frequent readjustment. Schall von Bell's appointment was the culmination of a long process whereby both Western methods and Christian personnel, Jesuits and Chinese converts, had infiltrated the astronomical bureaucracy. This influence was not lost with the Qing conquest, as there was considerable institutional continuity between the Ming and Qing dynasties. Despite their rejection of Copernican astronomy, the Jesuits and their Chinese pupils possessed many advantages over the traditional Chinese methods that had previously dominated calendar making. Western benefits included a more accurate cosmology based on a spherical Earth, while traditional Chinese thinking identified the Earth as flat. The Jesuits also possessed superior astronomical instruments and more accurate tables, including the famous Rudolfine tables of Johannes Kepler.

—William E. Burns

Bibliography

- Golvers, Nel, ed. *The Christian Mission in China in the Verbeist Era: Some Aspects of the Missionary Approach*. Leuven, Belgium: Leuven University Press and the Ferdinand Verbeist Foundation, 1999.
- Ronan, Charles E., and Bonnie B. C. Oh, eds. *East Meets West: The Jesuits in China, 1582-1773*. Chicago: Loyola University Press, 1988.
- Sivin, Nathan. *Science in Ancient China: Researches and Reflections*. Aldershot, UK: Variorum, 1995.
- Spence, Jonathan. *To Change China: Western Advisers in China 1620-1960*. Boston: Little, Brown, 1969.

Propagatio Fidei per Scientia—Matteo Ricci and Chinese Astronomy

Matteo Ricci (1552-1610) was an Italian Jesuit missionary largely responsible for the introduction of Western astronomy in China. He arrived in China in 1582 and lived there until his death. After failing to attract sufficient interest in Christianity among ordinary Chinese while dressing like a Buddhist monk, Ricci decided to follow a top-down conversion strategy focused on the Confucian literati and the imperial government. This was the strategy of *Propagatio Fidei per Scientia*, spreading faith through knowledge. Rather than immediately seeking converts, he hoped that impressing China's elite with the power and usefulness of Western science and technology would lead to the acceptance of Western religion. Taking the costume of a Confucian sage, Ricci learned to imitate the polished literary Chinese of the literati and even translated the Chinese Four Books, Confucian classics, into Latin.

Astronomy, which Ricci viewed as a branch of mathematics, was particularly important to this strategy. He saw that the Chinese government valued celestial knowledge, relying on accurate calendars and predictions of eclipses to demonstrate the ruler's possession of the mandate of heaven. The official calendar was also relied on throughout East Asia for its designation of fortunate and unfortunate days. But the Chinese calendar combined lunar and solar reckoning and, like all such calendars, needed frequent adjustment. Ricci recognized that the study of the cosmos, unlike natural philosophy and medicine, was an area in which Western science was clearly superior to the Chinese. This superiority could be objectively measured by comparing the accuracy by which Western and Chinese astronomers predicted celestial events such as eclipses. Part of the reason that Ricci was allowed to reside in Beijing permanently after 1601 was that the government hoped he could help with the calendar. (Other areas of Western superiority exploited by Ricci and later missionaries were geography, cartography, and clock making.)

Ricci had studied at the Collegio Romano, the Jesuit college in Rome, under the greatest

➤ JOHANN ADAM SCHALL VON BELL,
YUANJING SHUO (ON THE TELESCOPE), 1626

Johann Adam Schall von Bell was the most important of the group of Jesuit astronomers who arrived in Macao, then a Portuguese-controlled city in China, on July 15, 1619. Of German descent, he eventually became the leader of the Jesuit mission in China and the head of the Chinese astronomical bureau. He began to make a reputation for himself after his arrival with successful predictions of the time and duration of eclipses. Schall von Bell's *Yuanjing Shuo* was the first extensive discussion of the telescope to appear in Chinese. In addition to describing the instrument and its operation, he also recounted some of the recent telescopic discoveries of Galileo, including the moons of Jupiter and the phases of Venus. This was not the first description of these discoveries to appear in Chinese, but it was the fullest. Schall von Bell's praise of the telescope was not restricted to its astronomical uses. He also pointed out that it was very useful in war, giving a general a chance to inspect an enemy's army from a safe distance. The Jesuits presented a telescope to the Ming emperor in 1634.

—William E. Burns

Chinese of Euclid's *Elements* that the superiority of Western astronomy was in part due to the rigor with which Europeans, Italians in particular, examined natural phenomena. Although Ricci never reaped the harvest of conversions that he hoped, some Chinese were led to Christianity through their admiration for Western science. The path of involvement in Chinese astronomy that Ricci established was followed by Jesuit missionaries until the suppression of the order by the pope in 1773.

—William E. Burns

Bibliography

- Ronan, Charles E., and Bonnie B. C. Oh, eds. *East Meets West: The Jesuits in China, 1582–1773*. Chicago: Loyola University Press, 1988.
- Spence, Jonathan. *The Memory Palace of Matteo Ricci*. New York: Viking Penguin, 1984.
- Spence, Jonathan. *To Change China: Western Advisers in China 1620–1960*. Boston: Little, Brown, 1969.

Self-Sounding Bells in Chinese Culture

The term “self-sounding bell” (*zimingzhong* in Chinese) refers to the elaborate Western-style mechanical clocks made either in Europe or China that were popular at the Chinese court in the seventeenth and eighteenth centuries. The first European clocks were brought to China sometime in the late sixteenth century and were introduced to the Ming (1368–1644) court when the Jesuit missionary Matteo Ricci (1552–1610) presented the Wanli emperor (r. 1573–1620) with two chiming clocks in 1601. The interest in Western timepieces continued into the Qing dynasty (1644–1911) when the Kangxi (r. 1662–1722) and Qianlong (r. 1736–1795) emperors collected them by the thousands. These clocks, as objects that combine Western mechanical technology with Chinese-European decorative styles, are a tangible result of the interactions between East and West that took place in the seventeenth and eighteenth centuries.

The history of Western mechanical clockwork in China is connected to the Jesuit presence at the court. Not only did the Jesuits supply the first clocks and watches from Europe, but they also introduced the theory and mechanics

Jesuit mathematician and astronomer, Christoph Clavius, with whom he retained a lifelong friendship and correspondence. (Clavius's gift of his new book on the astrolabe, which Ricci received in 1596, was particularly useful for making astronomical calculations.) Although Ricci had not received specialized astronomical training, he would have learned geometry, trigonometry, cosmological theory, and the use of basic astronomical instruments such as the astrolabe at the Collegio. In a letter sent in 1605 he implored his Jesuit superiors at Rome to send trained astronomers, but before they arrived (after Ricci's death) he was able to make do with his basic training and mathematical skills in predicting eclipses and adjusting sundials.

Although Ricci was aware of the Chinese skill in observational astronomy, he noted that their cosmological theory was weak and their mathematics comparatively crude. He proclaimed in the preface to his translation into

of clock making as well. Together with Chinese scholars, they coauthored or translated a number of treatises on mechanics, and when the emperor established a workshop devoted to clock making within the palace complex, the Jesuits worked alongside the Chinese clock makers in producing pieces for imperial use.

European science and technology, and in particular clockwork, were an important part of the Jesuits' proselytizing strategy of using science to secure a place for the mission. This strategy was aided by an already-present Chinese interest in science and by a curiosity in things from the West. Within this strategy, clocks were particularly useful: their unfamiliar technology made them especially appealing to the Chinese, unlike other Western objects such as painting that had an existing Chinese counterpart. Thus, the Jesuits were able to enter China and were allowed to reside in the capital. Eventually they were granted a special residence and a church in the Forbidden City.

Elaborate Western-style clockwork held a special place in the collecting interests of the Kangxi emperor and his grandson, who ruled as the Qianlong emperor. Made of expensive materials, these objects were an unusual combination of European aesthetics mixed with Chinese decorative motifs. They not only signaled the time with music and bells but did so with a number of accessory functions that included spinning jeweled flowers, waterfalls made of twirling glass rods, and mechanical figures that moved. Both the Kangxi and Qianlong emperors wrote poems in praise of "self-sounding bells," and the Kangxi emperor even made an effort to learn something about the theory and practical aspects of clock making.

As information on the imperial interest in elaborate clockwork became known, both Chinese and Europeans alike selected clocks as gifts or tribute to the court. The members of the Macartney embassy of 1792–1794, for example, made certain that English clocks and watches figured prominently among the gifts they were to present to the emperor. As the number of imported pieces could not satisfy this demand, a clock-making industry emerged in the cities of Guangzhou and Suzhou in the eighteenth century. These makers also helped to supply the needs of the urban elite who wanted to emulate imperial taste.

➤ JAMES COX'S FAMOUS CLOCKS

This elaborate gilt-bronze clock, made by James Cox of London in 1770 and once owned by the Qianlong emperor, is now in the collection of the Palace Museum in Beijing. Cox's work was in great demand at the Chinese court. This piece epitomizes the so-called self-sounding bells that so captivated the Chinese through features such as the jeweled flowers, the glass-rod waterfall, and the flying jeweled dragon, all of which spin or twirl to the accompaniment of music. Although Cox claimed to use Chinese elements in his work, this clock shows that these pieces were not based on Chinese aesthetics but instead represented the exotic East of the European imagination. This clock stands 34 inches (86 centimeters) in height.

—Catherine Pagani



(Palace Museum Beijing)

It is unknown exactly how many clocks were once in the great collection of the Qing emperors, but estimates put the number in the thousands. The collection was greatly diminished by the political upheaval in the nineteenth

century, when pieces were destroyed or carried off to Europe. Presently there are approximately 1,000 clocks from Qianlong's imperial collection in the Palace Museum in Beijing. They serve as reminders of the exchange of ideas in the arts and the sciences that occurred between two vastly different cultures in the seventeenth and eighteenth centuries.

—Catherine Pagani

Bibliography

- Pagani, Catherine. "Clockmaking in China under the Kangxi and Qianlong Emperors." *Arts Asiatiques* 50 (1995): 76–84.
- Pagani, Catherine. *"Eastern Magnificence and European Ingenuity": Clocks of Late Imperial China*. Ann Arbor: University of Michigan Press, 2001.
- Patrizzi, Osvaldo. "The Watch Market in China." Part 1, *Arts of Asia* 10(2) (March–April 1980): 65–75; Part 2, *Arts of Asia* 10(3) (May–June 1980): 100–111.

Chinese Astronomical Clocks and European Mechanical Clocks

When the Jesuit missionaries presented European mechanical clocks to Chinese officials in the late sixteenth century, they assumed that the clocks' great popularity was owing to the technological sophistication of these devices, which was hitherto unknown to the Chinese. However, they had underestimated past native Chinese horology (as had, curiously, the Chinese themselves).

In China and Europe, both mechanical clocks and astronomical clocks incorporated sophisticated technologies. Both relied on a clockwork-like drive called an escapement to control the driving force by allowing the rotating wheel to move slowly, continuously, and with constant speed. Astronomical clocks added an aesthetic component, such as mechanized celestial globes and armillary spheres that represented the motions of celestial bodies. The Chinese had used a type of mechanical clock in connection with astronomy as early as the late seventh century. This technology culminated in a great water-powered astronomical clock of the eleventh century. However, while the Chinese had made great achievements early on, their skill did not progress beyond the developments of the thirteenth century, and eventually the technology

was lost. Clock making in Europe began during the late thirteenth century but was slower in developing the same sophistication as that in China. Then during the seventeenth century it underwent rapid technological advancement, resulting in greater reliability and the miniaturization of the mechanism.

The oldest known escapement used in the West is the verge and foliot. A horizontal bar with a weight on either end, called a foliot, oscillates and causes the verge, or vertical shaft, to set in motion a toothed wheel. This escapement, mentioned in an astronomical treatise of 1271, was weight-driven and not very accurate, as it depended on both the quality of the components and the overall cleanliness of the machine to perform reliably. The verge and foliot was such a fundamental technology that it was used exclusively until around 1670, when it was replaced by the anchor escapement.

Sometime during the first half of the fifteenth century a spring-driven escapement appeared as an alternative to weight-driven mechanisms. The main shortfall of this drive was that the coiled spring lost power as it unwound, and it lost this power unevenly. The addition of a fusee, a spindle wound with cord, helped to equalize the force. Although the spring drive lacked reliability, it did allow for clocks to be made portable; in 1512, Peter Henlein (1480–1542) of Nuremberg produced the first timepiece small enough that it could be carried in a pouch.

The two crucially important improvements to timekeeping took place during the seventeenth century: the pendulum and the balance-spring. The pendulum clock, invented by the Dutch astronomer and physicist Christiaan Huygens (1629–1695) in 1657 (although Galileo had remarked on the motion of the pendulum around 1582 and published his work in 1639), used a suspended weight as the force to control the escapement wheel and verge. The pendulum gave a constant rate to the escapement, a development that added precision and revolutionized timekeeping.

Following the introduction of the pendulum during the mid-seventeenth century came the flat spiral balance spring, one of clock making's most important developments. Balance springs enabled timepieces, particularly watches, to be made

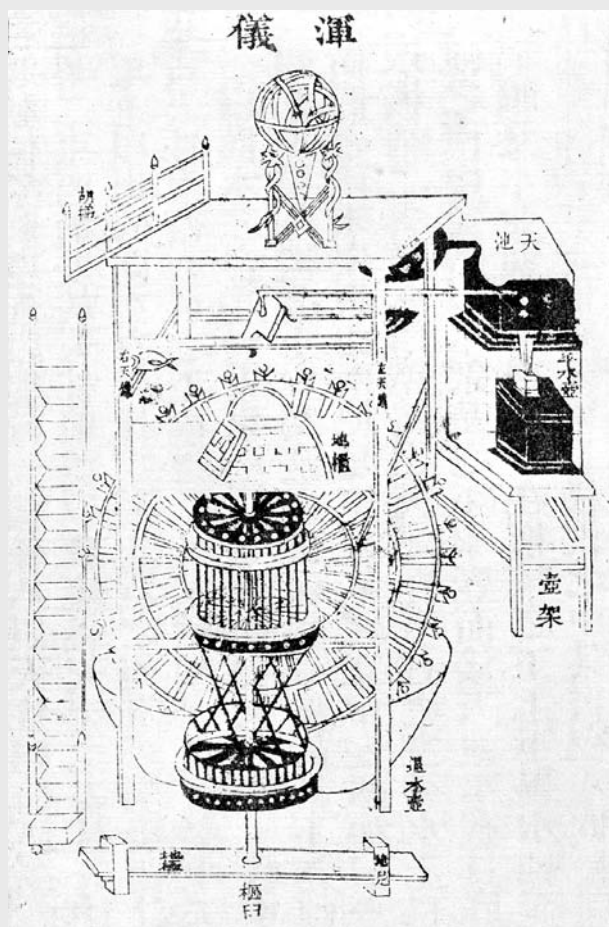
► SU SONG'S CLOCK

The eleventh-century work *Xinyixiang fayao* (*New Designs of an Armillary Sphere and Celestial Globe*) by the astronomer Su Song (1020–1101) details the mechanism for a great mechanical clock tower constructed at the Song dynasty capital of Kaifeng in 1088. Together, the text and woodblock-printed illustrations provide information on an important area of Chinese mechanical arts. This clock's escapement, termed a celestial balance (*tianheng*), controlled the gears and rotated the celestial globe and armillary sphere. Unlike Western clocks, Su's great astronomical clock tower was powered not by a falling weight but rather by scoop wheels that used water.

Su Song's astronomical clock had a five-story pagoda in the front, and each story had a door. At the appropriate time manikins appeared, ringing bells, banging gongs, beating drums, or holding tablets to show the hour. There were 117 manikins in total. The large water-powered scoop wheel set the clock in motion.

Su Song's text has since inspired a long line of scholars, making his one of the most famous of early clocks in both China and the West. The descriptions and accompanying illustrations in the original work have enabled a number of working models to be made, all of which bring to life a long-forgotten achievement in Chinese mechanical arts.

—Catherine Pagani



Design for a Chinese water clock by Su Song, 1088.
(School of African and Oriental Studies, London, UK/The Bridgeman Art Library)

even smaller than before. The invention of the balance spring has been attributed to Huygens, in 1675. However, while Huygens was the first to construct a watch with a balance spring, his contemporary, Robert Hooke (1635–1703), claimed to have developed the idea first. Recent evidence in support of Hooke's claim appears to have put an end to the centuries-long controversy.

The last great development in Western horology was the marine chronometer, an accurate timekeeper that could be used at sea. In 1660 both Huygens and Hooke tried unsuccessfully to construct such an instrument, and in 1661 Huygens produced a pendulum-powered marine clock that was of use on calm water only. With

a strong need to solve the problem of determining exact longitude in open water, in 1714 the British government offered a prize of £20,000 to anyone who could accomplish this. In 1761 John Harrison (1693–1776) found success with his chronometer. The precision of this timekeeper significantly increased England's power at sea by giving the country an enormous advantage over other seafaring nations and made England the leader in timekeeping technology.

When the Jesuits arrived at the Chinese court in 1601, they carried with them clocks and watches that represented the latest in European timekeeping technology. Although not terribly accurate, these clocks were small and portable

and could chime the hours. The enthusiastic response to these gifts led the Jesuits to believe that the Chinese never had any type of mechanical clock. However, the Chinese had invented a type of mechanical clock nine centuries earlier, predating the European verge and foliot escapement by 500 years.

It was generally believed that the first mechanical clock in China was that of the Tantric Buddhist monk Yixing (638–727) and the scholar Liang Lingzan, constructed in 725. This clock was powered by water and had a type of escapement that caused a wheel to turn automatically. However, evidence suggests that the mechanical clock may have existed at least several decades before Yixing's creation. An eighth-century text describes a "twelve double-hour wheel" dating to 692 that contained a "great regulator" (*dayi*). This was very likely an armillary sphere that had an early form of escapement.

Following these first mechanical clocks came the mercury-driven astronomical clock of Zhang Sixun (fl. 979). This clock, presented to the emperor Tang Taizong in 979, used a scoop device to turn the wheel and had bells to ring the hours and jack-work manikins bearing tablets to show the time. Unlike water that froze completely, mercury only partially froze in winter, which ensured that the mechanism continued to operate in colder weather, although it still had some problems in extreme temperatures. The clock was a three-story structure powered by a vertical transmission shaft and featured an armillary sphere mounted on the top that was used to observe the positions of the stars. It also had horizontally mounted jack-work that signaled the time by presenting tablets with the time written on them and by ringing bells, banging gongs, and beating drums.

The most famous of Chinese mechanical clocks is detailed in a text by the Chinese astronomer Su Song (1020–1101), who described a great mechanical clock tower, constructed in 1088, featuring a celestial globe and an armillary sphere. The escapement, called a *tianbeng* (celestial balance), was powered by scoop wheels that used water to control the gears and rotate the celestial globe and armillary sphere. The clock survived in the city of Kaifeng until 1126, when the invading Jin took the clock to Beijing,

where it fell into disrepair. In the late twelfth century, it was badly damaged by lightning; not long afterward, the bronze armillary sphere was left behind when the Jin fled the Mongol invasions.

The last major development in native clockwork technology came about in the Yuan dynasty, when the Chinese mathematician, civil engineer, and astronomer Guo Shoujing (fl. 1280) resided at the Mongol court of Kublai Khan. Guo made two clocks for the ruler, both of which had jack-work powered by water. He also made a mechanically rotating celestial globe that worked like those of Zhang Heng and Su Song before him. Unfortunately, it is no longer extant, as it was melted down at a later date. With the fall of the Yuan dynasty in 1368, much of what the Mongols had built, including their water-powered clocks, was destroyed. Clock-making tradition was not eradicated, but little remained of its former glory.

By the late sixteenth century, native achievements in mechanical clockwork were long forgotten. When the Jesuits arrived, they were never to know that Chinese technology in this area had been well advanced, with gear work—such as that of Su Song's clock—that was not only well able to provide the power to rotate wheels and activate fancy jack-work but was also more accurate than early Western clocks.

Although the horological traditions of China and Europe are distinctly different, both divided time into equal beats, showing different solutions to the same problem. Ultimately, however, it was the mechanism of the European clock that held far more potential.

—Catherine Pagani

Bibliography

- Forte, Antonino. *Mingtang and Buddhist Utopias in the History of the Astronomical Clock: The Tower, Statue and Armillary Sphere Constructed by Empress Wu*. Rome: Istituto Italiano per il Medio ed Estremo Oriente and Paris, Ecole Française d'extrême-orient, 1988.
- Landes, David. S. *Revolution in Time: Clocks and the Making of the Modern World*. Cambridge, MA: Belknap Press of Harvard University Press, 1983.
- Maurice, Klaus, and Otto Mayr, eds. *The Clockwork Universe*. Washington, DC, and New York: Smithsonian Institution and Neale Watson Academic Publications, 1980.

Needham, Joseph, Wang Ling, and Derek J. de Solla Price. *Heavenly Clockwork: The Great Astronomical Clocks of Medieval China*. 2nd ed., with supplement by John H. Combridge. Cambridge: Cambridge University Press, 1986.

Pagani, Catherine. *"Eastern Magnificence and European Ingenuity": Clocks of Late Imperial China*. Ann Arbor: University of Michigan Press, 2001.

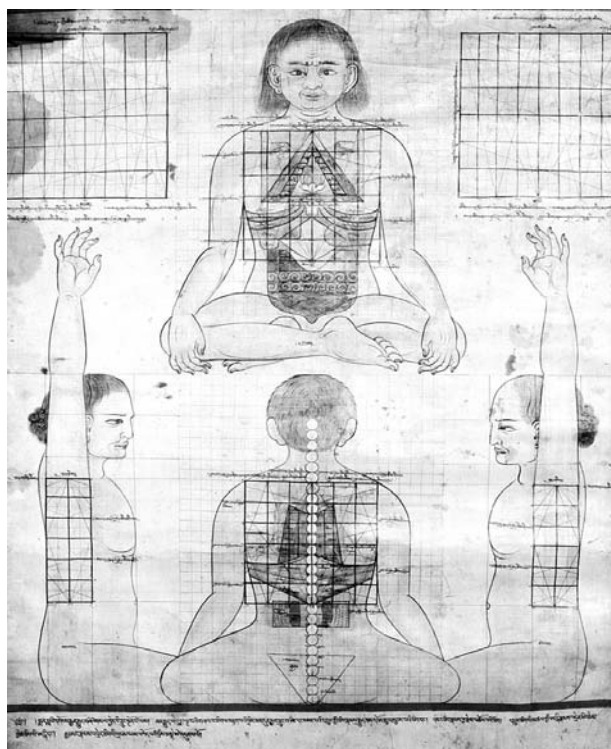
Tait, Hugh. *Clocks and Watches*. 1983; reprint, London: Trustees of the British Museum, 1986.

The Fifth Dalai Lama and Advances in Tibetan Medicine

The Tibetan "Science of Healing," also known in Tibetan as Sowa Rigpa, is one of the great Asian medical traditions along with Chinese medicine and classical Indian medicine (Ayurveda). A unique feature of Tibetan medicine is the cosmopolitan nature of its origins, resulting in a fundamental medical text entitled *Four Medical Tantras* (in Tibetan, *Gyue Shi*). In this and other early medical texts dating back to at least the twelfth century CE, we find influences from Chinese, Indian, and Arab medical traditions. These were adapted to the climate and high altitude of Tibet and combined with indigenous knowledge, in particular Buddhist wisdom and local pharmacology. Over the centuries many commentaries have been written on the *Four Medical Tantras*, elucidating their intricate details. One issue that commentators hotly debated was whether this four-volume treatise was an original Tibetan work or whether it was taught by the "Medicine Buddha," a manifestation of the historical Shakyamuni Buddha. When the Fifth Dalai Lama, Ngawang Lobsang Gyatso (1617–1682), arose as a powerful leader in Tibet and politically unified this vast country in 1652, the debate about the origin of the *Four Medical Tantras* was at its height. The Dalai Lama and especially his posthumous regent, Desi Sangye Gyatso (1653–1705), likewise took great interest in the text. Moreover, following the Dalai Lama's death, Desi Sangye Gyatso would advance medical learning by writing concise commentaries on the theory, practice, and history of Tibetan medicine, producing a unique series of 79 medical scroll paintings and establishing Tibet's first

medical college, continuing the Fifth Dalai Lama's reformation of Tibetan medicine.

After the Fifth Dalai Lama's unification of Tibet, which local clans and kings had ruled since the twelfth century, a new era started not only politically but also in the fields of religion and culture. The related yet frequently warring clans and rulers practiced streams of Tibetan Buddhism that differed from the more widespread forms of Buddhism practiced elsewhere in Asia. The Dalai Lama propagated the Gelugpa tradition of Tibetan Buddhism that stressed monastic discipline, astute learning, and debate, hence Gelugpa monks' name, which means "the ones of the virtuous path." Many monasteries were soon converted into Gelugpa establishments, the local rulers to a large extent lost their influence, and tax payments were now made to the new centrally administrated state in which religion and politics were inseparable. Through favorable bonds with the Mongols, Tibet again gained considerable power in Asia. Internally,



A medical thanka from a version of the commentary on the ancient *Four Tantras*, the fundamental treatise of Tibetan medicine. The commentary was prepared by Sangye Gyamtso (1653–1705), Regent of Tibet, as an attempt to codify Tibetan medical science. (Werner Forman/Corbis)

► TIBETAN MEDICAL THANKAS

The Tibetan Medical Thankas are a unique set of scroll paintings that illustrate Tibetan medical theory and practice in great detail and color. The stated aim of the Tibetan regent Sangye Gyatso (1653–1705), who commanded this piece of art and science, was to clarify one of his commentaries on the core Tibetan medical text the *Four Medical Tantras*. Most importantly, the paintings advanced understanding of anatomy, embryology, and materia medica and helped both to clarify and standardize the locations of the points where moxibustion (treatments in which herbs are incinerated or hot iron rods are placed on certain points of the body) and bloodletting are performed. In Tibetan medicine these latter fall under the category of external treatments, as opposed to the much more commonly used internal treatments. Those consist of ingesting compounded medicines, which can contain up to 120 different herbal, mineral, and animal ingredients. The craftsmanship of the medical Thankas is remarkable, and while some have large paintings that fill the whole scroll, many consist of minute drawings placed in close sequence, reminiscent of modern-day cartoons. This first set of Thankas was later copied, and today sets of the Thankas are held at the Tibetan medical hospital in Lhasa and at the Museum of the History of Buryatia in Ulan Ude, the capital of the Republic of Buryatia in Siberia.

—Theresia Hofer

the theocratic government devoted an increasing amount of resources to innovations in the fields of religion, astrology, and medicine. To hold together such a vast land as Tibet, having a multitude of local traditions, languages, and cultures required carefully tied alliances, a good administration, and a powerful army. The promotion of a more standardized understanding of human health and suffering could be considered a subtler yet equally important part of this ambitious enterprise. The Fifth Dalai Lama invited physicians from many places in Tibet to Lhasa to practice at his court. He studied Tibetan medicine with them, but it was the regent Sangye Gyatso, ruling after the Fifth Dalai Lama's death, who brought his work in the field of medicine to fruition.

Sangye Gyatso was open to, yet critical of the medical traditions embodied by different court physicians. He found much confusion in medical and historical writings, and after studying with his teachers, perusing many of his predecessors' works, and discovering new versions of older texts, he completed a new edition of the *Four Medical Tantras*. He then wrote two commentaries on this that are still well respected and in current use. He had the idea of linking one of the commentaries, "Blue Lapis Lazuli," to visual illustrations. For this he used extant sketches by Tibetan physicians. He also called on pharmacology experts from far and wide to validate and clarify plant identifications and had the best available artists collaborate closely with him and his physicians in transforming all of this medical and pharmacological knowledge into accurate illustrations. The result was an amazing and comprehensive series of 79 scroll paintings, called Thanka, that illustrate in great detail and color what previously had only been studied on the basis of texts and oral explanations. Moreover, in 1696 the regent established a medical college in Lhasa at a prominent location on top of the "Iron Hill" opposite the Potala Palace. The Medical Thanka were exhibited at this college as a study aid for students who had been recruited from monasteries throughout Tibet. Many of the graduates from this college later became court-physicians for the ruling elite of Tibet or returned to their monasteries to set up medical colleges. Thanks to all of these efforts, Tibetan medicine was again considered an important branch of the ten Tibetan Sciences, along with such areas of knowledge as Buddhism, logic, astrology and others.

Following the innovations introduced by Sangye Gyatso and due to the vast power that Tibet had once again gained under the Fifth Dalai Lama, Tibetan medicine spread throughout and beyond its homeland. It was soon practiced in the Himalayan kingdoms of Bhutan, Ladakh, Nepal, and Sikkim in the south but also went north to Mongolia and Buryatia. This heritage still survives and develops distinctively in these countries as well as in the country where it originated, today administered by the People's Republic of China.

—Theresia Hofer

Bibliography

- Clark, B. *The Quintessential Tantras of Tibetan Medicine*. Ithaca, NY: Snow Lion, 1995.
- Parfionovitsch, Y., G. Dorje, and F. Meyer. *Tibetan Medical Paintings: Illustrations to the Blue Beryl Treatise of Sangye Gyatso (1653–1705)*. London: Serindia, 1992.
- Stein, A. *Tibetan Civilisation*. London: Faber and Faber, 1972.

Early Modern European Archaeology

While the archaeology of the early modern period differed substantially from modern archaeology, many in the West practiced archaeology—the study of material culture—in the technical sense. The term “archaeology” was first used in English in the seventeenth century, but most archaeologists would have preferred to call themselves natural philosophers (the early modern term for a scientist) or, more often, antiquarians (those who study ancient material and textual objects). Early modern antiquarians rarely devoted their full time to the study of archaeology, and therefore they were not professionals in the modern sense. Still, they formed societies dedicated to studying ancient material culture, and they published countless books and essays on their discoveries.

Several important events contributed to the development of archaeology in early modern Europe. Perhaps most importantly, the movement that became known as the Renaissance encouraged scholars to meticulously study the remains of classical Rome and, to a lesser extent, Greece. Throughout much of the early modern period, the focus on classical culture was primarily textual analysis. However, a number of scholars, artists, and architects turned their attention to classical statues, temples, and public buildings, particularly those in Rome. Helping to drive their interests were numerous kings, princes, and church officials who spent enormous sums to collect antiquities for their collections. In fact, those with the best collections could point to it as a sign of status. Kings and nobles also became patrons of scholars who, in turn, studied their collections. By the end of the seventeenth century, scholars, kings, and nobles worked together

to establish academies and societies dedicated to studying subjects such as natural philosophy, archaeology, and inscriptions. The infrastructure upon which the modern profession of archaeology was built had been established.

Early modern collecting was not limited to Roman and Greek artifacts. Europeans also collected prehistoric objects that they found buried in fields and tumuli throughout Europe and North America. While not always certain how to classify these objects—arrowheads were often thought to be elf-shot or thunderbolts—they displayed them in curiosity cabinets. Importantly, the prehistoric objects that they found were understood within the context of biblical scripture, classical philosophy, and local tradition. Thus, prehistoric remains were always dated according

➤ FLINT CERAUNITES

By the eighteenth century, the idea that arrowheads were thunderbolts or elf-shot fell out of favor with many scholars. However, some earlier writers had already suggested this. In this selection, Michele Mercati (1541–1593), an Italian natural philosopher, describes their origins. This passage suggests that antiquarians could study transformations in ancient human societies by analyzing developments in their material culture.

“The ‘ceraunite’ is common in Italy; it is often called an ‘arrow’ and is modeled from thin, hard flint into a triangular point. Many believe that they are cast down by lightning; yet those who study history judge that before the use of iron they were struck from very hard flint for the folly of war. Indeed, for the most ancient peoples, pieces of flint served as knives. We read in the holy scriptures of how Sephorah, the wife of Moses, circumcised her son according to Israelite custom, with a well-sharpened stone. . . . In the period we are considering there was no worked iron in lands of the West; boats, houses, and all other works were fashioned with sharpened stones.”

—Jason M. Kelly

Source

Alain Schnapp, *The Discovery of the Past* (New York: Harry N. Abrams, 1997), 347.

to the biblical 6,000-year timeline. This inhibited the development of stratigraphy, an archaeological tool that links an artifact's age to the geological layer from which it is excavated. Not until the mid-nineteenth century was stratigraphy used widely in archaeological practice.

From 1492, the European plundering of the Americas brought back artifacts from these continents that were displayed side by side with classical and prehistoric objects. In the wake of Europe's Scientific Revolution of the seventeenth century, natural philosophers increasingly attempted to analyze and classify these objects. Through studying their material cultures, natural philosophers increasingly equated the indigenous peoples of the Americas to the earliest Europeans and peoples of the Near East. Both were seen as primitive, less-civilized versions of early modern Europeans. From this perspective, a theory of cultural evolution developed in the Enlightenment, which privileged European civilization over all others. Thus, archaeology became a tool to justify European imperialism and its so-called civilizing mission into the nineteenth century.

—Jason M. Kelly

Bibliography

- Haskell, Francis, and Nicholas Penny. *Taste and the Antique: The Lure of Classical Sculpture, 1500–1900*. New Haven, CT: Yale University Press, 1981.
- Jacks, Philip Joshua. *The Antiquarian and the Myth of Antiquity: The Origins of Rome in Renaissance Thought*. Cambridge: Cambridge University Press, 1993.
- Piggott, Stuart. *William Stukeley: An Eighteenth-century Antiquary*. Rev. and enlarged ed. London: Thames and Hudson, 1985.
- Schnapp, Alain. *The Discovery of the Past*. New York: Abrams, 1997.
- Sweet, Rosemary. *Antiquaries: The Discovery of the Past in Eighteenth-century Britain*. London: Hambledon and London, 2004.
- Trigger, Bruce G. *A History of Archaeological Thought*. Cambridge: Cambridge University Press, 1989.

Rice Culture from Angola to South Carolina

Between the fifteenth and eighteenth centuries, rice cultivation increased in acreage in Japan

and migrated to the New World. While peasants in Asia and Africa continued to grow rice on small paddies for local consumption, in South Carolina slave owners relied on African slaves to produce a surplus rice crop for export. Whether in the Old World or the New World, the cultivation of rice required heavy labor, particularly in preparing a paddy for planting and inundation. Harvests brought a brief respite from the demands of cultivating rice.

In their explorations the Portuguese found rice cultivated throughout West Africa. In Gambia farmers grew rice in marshes and along the Gambia River, where it could be easily irrigated. Where rain sufficed, farmers in Guinea grew upland rice, which did not need irrigation. Farmers there planted rice after having cleared the ground of trees and burning the debris. In the seventeenth century the introduction of iron tools throughout West Africa changed rice culture. Now able to hack out mangrove trees at the roots, farmers planted rice in swamps that had been mangrove forests. The production of rice found a commercial outlet: slavers bought it to stock their ships for the Atlantic crossing. In the seventeenth century Europeans also encouraged Africans to grow Asian varieties of rice rather than indigenous strains in the belief that African rice was inferior. Because Europeans were willing to pay for Asian rice, farmers throughout Guinea-Bissau planted it at the expense of indigenous varieties. Reflecting this European market for rice, in 1725 one Frenchman found rice for sale wherever he went in Guinea-Bissau.

As in Africa, the cultivation of rice in China had roots in antiquity. The Yangtze River valley was the center of rice culture, and in the fifteenth century peasants migrated into the already populous valley to grow rice. These peasants grew rice to pay rent in a sharecropping system. Landlords took roughly half the rice crop as rent, leaving peasants the other half. The rise in population from 70 million in 1400 to 270 million in 1770 indicates a corresponding increase in rice production. Part of this increase came from a more than doubling of cultivated land between 1400 and 1700. Yet the fact that population grew faster than cultivated

acreage implies an increase in yield per acre of rice.

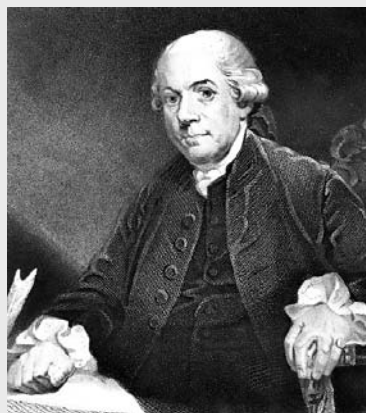
As in China, farmers in Japan expanded rice-growing acreage after 1600, experimented with new varieties, and built new irrigation canals. Until the eighteenth century Japanese peasants, like their counterparts in China, operated in a sharecropping arrangement, giving their landlords rice as rent and subsisting on buckwheat and barley. After 1700 landlords demanded rent in cash, leaving peasants free to sell their rice or, selling other crops instead, to keep rice for their own use.

After experimenting with other crops the English inhabitants of South Carolina began growing rice around 1685. Presumably this rice was from Asia, although around 1690 the English imported rice from Madagascar, and this variety became the mainstay of rice culture in South Carolina. The African influence on rice cultivation went beyond the variety of rice planted. The slaves whom South Carolinians imported into the colony brought with them knowledge of how to grow rice. Prizing this knowledge, the planters of South Carolina sought slaves with such expertise. By one estimate, 43 percent of slaves imported into South Carolina in the eighteenth century came from areas where rice was a staple. With unpaid blacks supplying the knowledge and the labor, production soared from 10,000 pounds (4,500 kilograms) in 1698 to 83 million pounds (37.6 million kilograms) in 1770. Production on this scale demanded extensive irrigation. The collection of water into ponds and the digging of canals between pond and field worked well on a small scale. Around 1750 planters began harnessing the tide to irrigate their fields, using gates to capture freshwater, which the ocean pushed ahead of it as it rose.

In Asia and Africa the cultivation of rice has remained a way of life. In South Carolina it withered away, stagnating and then declining in the nineteenth century so that by 1900 the rice plantations of the eighteenth century were nothing more than a memory. In this respect the cultivation of rice has been a more powerful historical force in Asia and Africa, where it continues to shape daily life.

—Christopher Cumo

➤ RICE CULTURE IN COLONIAL SOUTH CAROLINA



Henry Laurens, Virginia planter.
(Chaiba Media)

Alexander Garden was a physician and botanist in South Carolina, who observed how slavery abused African Americans. In vivid language, he describes the tedium and difficulty that African Americans faced in cultivating rice.

“Our Staple Commodity for some years has been Rice, and Tilling, planting, Hoeing, Reaping, Threshing, Pounding have all been done merely by the poor slaves here. Labor and the Loss of many of their lives testified [to] the Fatigue they Underwent, in Satiating the Inexpressible Avarice of their Masters. You may easily guess what a Tedious, Laborious, and slow Method it is of Cultivating Lands to Till it all by Hand, and then to plant 100, 120 Acres [40–50 hectares] of Land by Hand, but the worst comes last for after the Rice is threshed, they beat it all in the hand in large Wooden Mortars to clean it from the Husk, which is very hard and severe operation.”

—Christopher Cumo

Source

Alan Taylor, *American Colonies: The Settling of North America* (New York: Penguin Books, 2002), 239.

Bibliography

- Bray, Francesca. *The Rice Economies: Technology and Development in Asian Societies*. Oxford and New York: Basil Blackwell, 1986.
- Dethloff, Henry C. *A History of the American Rice Industry, 1685–1985*. College Station: Texas A&M University Press, 1988.
- Hawthorne, Walter. *Planting Rice and Harvesting Slaves: Transformations along the Guinea-Bissau Coast, 1400–1900*. Portsmouth, NH: Heinemann, 2003.

The Pocahontas Exchange— Tobacco Culture in Virginia, 1610s

Tobacco was one of the great discoveries of the Americas, for both indigenous peoples who learned how to cultivate it and Europeans who adapted it to their tastes and made it a significant staple crop. Many Native American groups used tobacco, incorporating the plant into political and spiritual ceremonies, and it was one of the first New World crops to which Europeans took a liking. Columbus's mariners smoked tobacco, and it was prominently featured in many early European descriptions of the New World. Throughout the sixteenth and seventeenth centuries, physicians praised its health benefits, and

medical manuals popularized the fallacy that tobacco was a cure for another product of the New World: syphilis. Tobacco smoke certainly did not manifest these health-giving properties, but the plant undoubtedly made many people rich, beginning with its earliest commercial cultivators in the Spanish New World empire.

Tobacco comes in many varieties with different characteristics. The Spanish developed a particularly palatable variety cultivated in Spain's Caribbean colonies that became known as Spanish tobacco. Spanish tobacco had acquired a dominant position on the European market by the end of the sixteenth century, a position that the Spanish worked hard to maintain. The English, who mostly smoked tobacco in pipes, were among avid users of the crop.

The English settlers who established their first permanent settlement at Jamestown in the Virginia Colony in 1607 found that the tobacco cultivated by local Powhatan people was too bitter for European tastes to be a profitable export crop. John Rolfe (the husband of Pocahontas), a settler with a tobacco addiction and an interest in alchemy, experimented with the local product in an attempt to make its flavor smoother and more marketable, but he eventually gave up. The solution he adopted was to import tobacco seeds from the Spanish Caribbean. But Spanish authorities protected their monopoly by forbidding others to obtain their superior seed. The seed would have to be smuggled from the Spanish plantations. In 1613 Rolfe was the first Virginian to obtain the smuggled seeds of a variety of Spanish tobacco called Oronoco, or tall tobacco, smuggled from Trinidad or Bermuda in the Spanish Caribbean.

Obtaining the tobacco was only the beginning of the establishment of a tobacco industry in the new colony. Although the tobacco they were growing was different, settlers with no experience in tobacco cultivation had the advantage of being able to draw on the expertise of local Native Americans of the Powhatan tribe. Tobacco went from many stages between planting and consumption. Protecting the growing plants from worms and weeds required great care. The harvesting of the tobacco plants in August was followed by the drying of the leaves. The Jamestown planters initially followed the

► JAMES I ON TOBACCO

Ironically, the king after whom Jamestown was named, James I, was one of the greatest opponents of tobacco in Europe. His *A Counter-Blaste to Tobacco* (1604) denounced the herb in scorching terms as unhealthy, sinful, and disgusting:

“And for the vanities committed in this filthie custome, is it not both great vanitie and uncleannesse, that at the table, a place of respect, of cleanelinesse, of modestie, men should not be ashamed, to sit tossing of Tobacco pipes, and puffing of the smoke of Tobacco one to another, making the filthy smoke and stinke thereof, to exhale athwart the dishes, and infect the aire, when very often, men that abhorre it are at their repast? Surely Smoke becomes a kitchin far better then a Dining chamber, and yet it makes a kitchin also oftentimes in the inward parts of men, soiling and infecting them, with an unctuous and oily kinde of Soote, as hath bene found in some great Tobacco takers, that after their death were opened. And not onely meale time, but no other time nor action is exempted from the publike use of this uncivill tricke.”

—William E. Burns

Source

King James I, *A Counter-Blaste to Tobacco* (Edinburgh, UK: E. and G. Goldsmid, 1885 [1604]), 29–30.

indigenous practice of piling the leaves on the ground for drying, but around 1618 Thomas Lambert began hanging the plants vertically in a shed for quicker and more even and efficient drying. This became the standard practice in Virginia, eventually taking the form of hanging the entire plant in a tobacco house, constructed with loosely connected walls that allowed the moisture to be carried off by the breezes.

Following drying, the tobacco leaves were stripped from the stems and pressed into wooden barrels, or hogsheads, holding about 50 pounds (23 kilograms) apiece, which kept it in good condition and impeded smuggling, as tobacco was a heavily taxed commodity. The barrels were loaded onto ships that plied the placid waterways that honeycombed Chesapeake Bay and then were carried to England. From England, the leaves were reexported to Europe, where they were further processed into cigars, pipe tobacco, and snuff.

Tobacco growing and processing were labor-intensive. Much of the hard work was at first done by English indentured servants and eventually by African slaves, the first shipment of which arrived in the colony in 1619. Tobacco

proved to be the economic salvation of the struggling Jamestown colony, particularly after Rolfe promoted the Virginia product during his visit to England with Pocahontas in 1616. The subsequent tobacco boom became so frenetic that colonists reportedly grew it in the streets of the town and even in the cemetery.

Virginia's economy continued to be based on tobacco through the seventeenth century, and tobacco was even treated as a medium of exchange, like currency. The colonists gained a monopoly over the English tobacco market, producing enough for home consumption and further export into lucrative continental markets as well. Virginia tobacco acquired a European reputation for its high quality. Even after the Chesapeake economy diversified in the eighteenth century, tobacco remained a major source of wealth and the single greatest export from the British American colonies.

—William E. Burns

Bibliography

- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. New York: Grover, 2001.
- Robert, Joseph C. *The Story of Tobacco in America*. New York: Knopf, 1949.

■ Introduction: New Technologies of Learning

The rise of new technologies of learning was intimately bound up with the rise of new knowledge, particularly in the sciences. Although the period saw little direct application of new scientific knowledge to create new technologies (one exception was Benjamin Franklin's lightning rod), many scientists were involved in technological research, and technological innovations such as the printing press enabled the dissemination and preservation of knowledge on an unprecedented scale. (The brilliant mechanical and anatomical studies of artist Leonardo da Vinci had very little impact on European thought because they were not circulated through print.) The printing press also drove a great expansion of literacy and contributed to the spread of education. Cheap textbooks could spread reading and writing to all but the poorest Europeans, although

the degree to which Europeans made use of this possibility varied greatly in different nations.

New technologies also created new objects of knowledge. Inventions such as the telescope and the microscope allowed investigators like astronomer Galileo Galilei and "microscopist" Antoni van Leeuwenhoek to discover phenomena that had previously been entirely unknown, such as the moons of Jupiter or the "animalcules" found in human semen. New meteorological instruments such as the barometer enabled the measurement of different qualities of the air, making the atmosphere an object of knowledge.

In other cases, new knowledge forced technology to adapt to it. A classic example is Western cartography in which the store of knowledge was vastly expanded following the voyages of Columbus, Vasco da Gama, and their successors.

This led to the development of new cartographic techniques. The resulting maps could then be accurately reproduced and distributed in standardized form with the use of the printing press. Expansion also drove research in navigational technology, with spillover effects in areas such as the study of magnetism and horology (the making of accurate clocks). The drive to create more accurate timekeepers for both land and sea absorbed the efforts of many European scientists, and the ability to measure smaller and smaller intervals of time opened new possibilities for scientific research.

Early modern Europeans were building on the technologically dynamic Middle Ages, and although ancient Greek and Roman technological writings were read, there was no classical revival in technology as existed in other fields. Many, of whom the most famous is the English philosopher Francis Bacon, hoped for the improvement of the world and human power over nature through further technological improvement. The opposite phenomenon in many ways was happening in the world's previous technological leader, China, the location of the original invention of the printing press. China was losing much of its technological dynamism. The Chinese imperial court was interested in new Western technologies. A telescope was presented to the emperor in 1634. Clocks and other mechanical devices were of particular interest to Chinese collectors, but despite the fact that China had led the world in the sophistication of its clocks in the Middle Ages, the new Western devices did not spark Chinese interest in imitating or even improving them. The Islamic world was similarly reluctant to adopt the new technologies of learning, partly due to their implicit threat to religious authority.

—William E. Burns

Technologies of the Word— Movable Type and the Printing Press

Printing with movable type involves a separate block for each letter or character, which is then composed to produce a printed page. Like the printing press itself, printing with movable type was first invented in China. Chinese printers initially used ceramic or wooden blocks.

The first system of metal movable type was invented in Korea in the eleventh century and was eventually adopted in China as well. China and Korea, however, were limited in their ability to fully exploit movable type by the huge number of Chinese characters, which would require an immense number of blocks in a printing shop. Movable type was used for some large projects, however, such as the massive Qing dynasty encyclopedia *Guji-n Tushu-Jicheng*, whose 5,040 volumes were printed with bronze movable type.

In the early 1450s, movable type printing was introduced to Europe by Nuremburg artisan Johannes Gutenberg. Historians still debate whether Gutenberg's invention of printing was independent or was influenced by the East Asian tradition of printing, which had already existed for centuries. There is no direct evidence of East Asian influence on Gutenberg, but it cannot be ruled out.

Gutenberg's invention had a profound impact on European culture. The English philosopher Francis Bacon (1561–1626) would identify it, along with gunpowder and the magnetic compass, as one of the three inventions that marked the modern age. Such was the impact of printing that many argued that it was a gift of divine providence. The book was also the first mechanically mass-produced object, blazing a trail for industrialization and standardization.

The best-known work from Gutenberg's press, the Gutenberg Bible, was published in 1456. Printing first spread to other areas in the Rhineland and then to the humanistic and religious centers of Italy. The 1470s saw the rapid dissemination of printing throughout Europe, and it was found in all European countries except the Ottoman empire by 1490. Printing enormously increased the volume of written words in Europe. Roughly 8 million copies of over 40,000 books were printed in the first 50 years of printing, a figure comparable to the number of manuscripts produced since the fall of the Roman empire. As many as 50 million may have been produced in the next 50 years. The number of books sometimes exceeded the ability of Europe to absorb them. As early as 1472 Rome saw a crash caused by the overproduction of books, with a subsequent price collapse and the failure of many printers.

Printing changed culture in many ways. It was connected to a great increase in literacy and the development of new literatures and new publics, particularly as printing grew more common and printed items became cheaper. Printing not only enabled the much wider distribution of books and other written works but also changed their nature. Although copies of a book often had slight differences, printed books were standardized to a far higher degree than manuscripts could be. The printed text was “fixed,” far less vulnerable to the kinds of corruptions that came in when a manuscript was copied. The vast number of printed books meant that texts were far less likely to be lost than in the manuscript era. Despite these advantages, printing did not destroy manuscript culture. Many early printed books imitated manuscripts, and some manuscript books were actually copied from printed books. Printed books were initially sold in the established outlets for selling manuscript books and were housed in the same libraries, although the sheer volume of printed material eventually forced an enormous expansion of the infrastructure for holding books. Manuscripts continued to circulate when only a very small number of copies was needed or wanted or when an aristocratic or female poet shunned the commercialism or public role of print.

For religious and political authorities, printing was a double-edged sword. Governments and churches employed the press to circulate their own decrees or propaganda. Printing enabled an expansion of the church-dominated educational sector, with the production of standard textbooks. However, given the capacity of one printer to produce hundreds or thousands of copies of a subversive text or image, a print culture was also harder to police than a manuscript one. One difference between the Protestant Reformation and previous movements against the Catholic Church such as Lollardism was that Protestants were able to distribute their writings far more widely in far more copies. The Church attempted to control printing through the Index of Forbidden Books, a list of books that Catholics were forbidden to own or read established in 1557 and only abolished in 1966. (In addition to attacking Protestant printing, the Church also sought to control the growth of Jewish

WORKING THE PRESS

Printing presses worked by forcing sheets of paper together with ink-covered type made from an alloy of lead and antimony. Individual pieces of type, each bearing a letter, punctuation mark, or space, were put together on an iron rod, called a composing stick, by a composer, the most highly skilled printing worker. This task required literacy and was particularly difficult because the text had to be loaded backwards so as to appear the right way on the page. Groups of lines were set in galleys, wooden cases that were then set into an iron chase, which collected the lines for an entire page. The type in the chase was smeared with ink, and the chase was securely fastened to the stone bed of the press. The moistened sheet of paper was placed in a wooden frame hinged to the chase, and the two were brought together. A pressman brought down the platen, which forced the chase and the paper together so that the ink was transferred to the paper. He did this by pulling a lever that turned a screw. While the compositor was a skilled worker, the pressman’s primary qualification was the muscular strength to bring the platen down with sufficient pressure. The printed paper was then removed from the press and hung up to dry.

—William E. Burns

printing.) Established Protestant churches instituted censorship regimes of their own, often working hand in hand with the state. Areas of greater religious pluralism, such as the Dutch Republic, were often areas of greater press freedom. Although printing was generally freer in Protestant countries, the Republic of Venice, where the government was often at odds with the Church, was a center of relative press freedom in the Catholic world.

European governments maintained censorship to control the circulation of dangerous political ideas. Weak governments also contributed to free printing. The collapse of central government authority in the English Civil War of the mid-seventeenth century led to an explosion of printing in which radical religious views found their way into print. A similar phenomenon took place during France’s contemporary Fronde rebellion.

The possibility of losing control over the dissemination of religious ideas is one reason why the Islamic world was slow to adopt printing. Although Ottoman authorities were aware of European printing, opposition from conservative religious scholars kept printing out of Islamic lands for centuries. The Ottoman sultans Bayezid II and Selim I issued decrees against printing in 1485 and 1515, respectively, although this ban applied only to Muslims. Christians and Jews were free to operate presses in the empire. It was not until around 1720 that a Muslim-owned and -operated press was introduced in Istanbul.

—William E. Burns

Bibliography

- Eisenstein, Elizabeth. *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*. 2 vols. Cambridge: Cambridge University Press, 1979.
- Johns, Adrian. *The Nature of the Book: Print and Knowledge in the Making*. Chicago: University of Chicago Press, 1998.
- Watt, Tessa. *Cheap Print and Popular Piety, 1550–1640*. New York: Cambridge University Press, 1991.

Chinese Printing—Technological Innovations and Their Cultural Implications, 1500–1800

During the latter half of the Ming Dynasty (1368–1644), economic and demographic advances fostered a printing boom that extended the reach of printing technology and its effects both geographically and socially. By the beginning of the sixteenth century, printing had been in use in China for more than seven centuries. However, political and economic disruptions during the mid-fourteenth century had led to a scaling back of government and commercial printing. Printing activities did not surpass the level of the thirteenth century until the late fifteenth and sixteenth centuries. The arrival of the Manchus and European missionaries during the last century of Ming rule then set the stage for the rise of a multilingual empire eager to promote distinct cultural traditions through printing projects and for its negotiations between different traditions of printing technology.

This Ming printing boom was not an age of technological innovation. Rather, economic and social transformations affected the operations of printers as well as the printed materials they produced. Increased production of cheaper bamboo paper, especially in the southeastern provinces of Fujian and Zhejiang, lured printers and led to a decline in production costs and book prices. Printers similarly reduced costs by gradually shifting from elaborate calligraphic styles to a standard artisanal style, employing straight character strokes. This more mechanical presentation required less skill from carvers and allowed for greater numbers of characters per page. New binding techniques for printed sheets further drove down costs and prices. Until the fifteenth century, the most common types of binding required book binders to paste printed leaves into a stiff paper cover and then pierce holes in the spine and weave through paper threads to hold the leaves together. In time, silk or cotton reinforced the paper threads. By the sixteenth and seventeenth centuries, pasting gave way to stitched binding. Binders folded the printed leaves, stacked them, and then pierced holes, typically four, through the leaves and the cover sheet. After threading, these volumes proved to be more durable and compact and thus more suitable for shipping and storing.

As books became more widely available and affordable, well-to-do readers sought high-end books with a different look and feel from the standard editions with artisanal fonts printed on rough bamboo paper. Print shops in some of the better-known urban centers, such as Nanjing and Huizhou, capitalized on this niche market and put out exquisite multicolor volumes. Whereas color printing had been previously limited to single-sheet prints and occasionally classical texts, hundreds of novels, plays, and classical literary and medical texts as well as art albums and paintings manuals were printed in color during the late sixteenth century and the seventeenth century. Such editions were typically printed in two to five colors, each color applied in different stages, using smooth and absorbent high-quality papers.

As in the twelfth century, the second boom in Chinese printing corresponded to the growth in the number of men preparing for the civil

service examinations. According to one conservative estimate, the number of imprints rose from an average of fewer than 10 titles per decade between 1368 and 1468 to more than three times that number in the following century and reached an average of 53 titles per decade in the last four decades of the sixteenth century. The number of graduates of the lowest-level examinations during these centuries shows a similar increase, rising from around 30,000 in 1438 to around 500,000 in the late seventeenth century. The number of students preparing for the examinations would have been much greater. The majority of the students and graduates did not succeed in higher-level examinations and were unable to obtain positions in the bureaucracy. However, they constituted a large reading public and were also increasingly drawn into the world of publishing. Between the sixteenth and eighteenth centuries students preparing for the examinations and graduates waiting for appointments worked in publishing as professional authors, compilers, editors, proofreaders, and printers. Some of them gained fame as best-selling authors and editors, specializing in classical and historical studies and examination aids or in works and critical studies of fiction.

Urbanization, especially in the lower Yangzi region, was a second factor shaping print culture in the sixteenth and seventeenth centuries. During the Ming dynasty print shops existed in all provinces of the empire, but the majority of imprints were produced in a few large cities, most notably Nanjing, Suzhou, Hangzhou, Huizhou, and Jianyang. Nanjing, for example, was the home of as many as 93 print shops. Authors and editors producing for the market were either residents of or conveniently located near these major urban centers.

After the Manchu conquest in 1644, these cities lost their dominance in the book market to Beijing in the North as well as to provincial cities and peripheral areas across the Qing Empire. Outlying towns such as Sibao, in the mountains of western Fujian Province, became printing centers, serving peripheral populations that had been previously excluded from the book trade of the large urban areas. As printing centers became dispersed, the reach of printed books moved down the social hierarchy. The late Ming period

witnessed a printing boom of vernacular literature as authors and printers of novels and dramatic literature began to address their works to commoner readers, the so-called uncultured men and women (*yufu yufu*). Consequently, printers in these sites produced a variety of primers, manuals, dictionaries, and works of popular literature such as collections of local songs. They also sent out peddlers and branch bookstore managers across wide areas to market books to families of commoners and to readers of both genders.

The arrival of Jesuit missionaries in the second half of the sixteenth century resulted in the exchange of European and Chinese traditions of learning. The Jesuits and their Chinese collaborators translated and printed hundreds of titles on religious, scientific, technological, and historical topics. Sino-European cultural contact at the time did not challenge Chinese traditions of printing technology. The Jesuits used woodblock technology. It was not until the nineteenth century that woodblock technology was gradually replaced, not by typography but by lithography. Until this time, government and commercial printers in the Qing Empire produced thousands of titles, mostly by woodblock and also in movable type, in Chinese as well as in Manchu, Tibetan, and Mongolian. The systematic investment in the printing of languages other than Chinese was a new phenomenon and testifies to Qing dynasty efforts at creating a multiethnic imperial culture. Ironically, Manchu texts printed in the eighteenth century were to play a very different role in the twentieth century, when they became symbols of Manchu nationalist identity.

—Hilde De Weerd

Bibliography

- Brokaw, Cynthia Joanne, and Chow Kai-wing. *Printing and Book Culture in Late Imperial China*. Berkeley: University of California Press, 2005.
- Chia, Lucille. *Printing for Profit: The Commercial Publishers of Jianyang, Fujian (11th–17th Centuries)*. Cambridge, MA: Harvard University Asia Center, 2002.
- Chow, Kai-wing. *Publishing, Culture, and Power in Early Modern China*. Stanford, CA: Stanford University Press, 2004.
- Ho, Ping-ti. *The Ladder of Success in Imperial China: Aspects of Social Mobility, 1368–1911*. New York: Columbia University Press, 1962.

McDermott, Joseph Peter. *A Social History of the Chinese Book: Books and Literati Culture in Late Imperial China*. Hong Kong: Hong Kong University Press, 2006.

Tsien, Tsuen-hsuei. *Science and Civilisation in China*, Vol. 5, *Chemistry and Chemical Technology; Part 1: Paper and Printing*. Cambridge: Cambridge University Press, 1985.

Technologies of Vision— The Telescope and Microscope

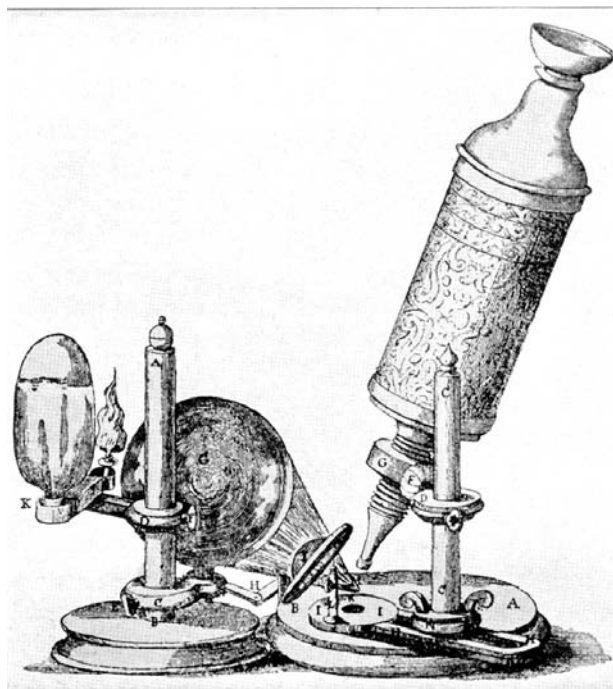
Although the optical properties of glass lenses had been known for centuries, it was not until the early seventeenth century that they were employed in radical extensions of human senses, the telescope and microscope.

The telescope emerged first. The earliest recorded description of a telescope combining a convex lens at the far end of a tube with a concave lens as an eyepiece occurs in a Dutch patent application in 1608. The inventor was a spectacle maker named Hans Lipperhey. The principle was so simple that much of the telescope's early spread was caused by people hearing about it

and building their own. Galileo Galilei made the most powerful telescopes of the time, with a magnification between 15 and 20 times. They enabled him to discover the largest satellites of Jupiter and the phases of Venus. The publicity given to his discoveries helped spread interest in telescopes and their astronomical uses. Another astronomer involved in telescope making was Johannes Kepler, inventor of the so-called astronomical telescope that combined two convex lenses and obtained greater accuracy of observation and a larger field of view at the price of turning the image upside-down. By the 1640s, telescopes based on Kepler's model were becoming standard for astronomy while diverging from the more common models whose uses included spying on enemy armies or identifying vessels at sea. The telescope brought home to astronomers the relative closeness of the planets in space and their similarity to the earth as opposed to the unimaginable distances and differences between the stars.

All of these refracting telescopes presented difficulties with unclear images and chromatic aberration (the splitting of the light coming from the object observed into different colors). Isaac Newton devised the reflecting telescope in 1668 to solve these problems and built the first in 1670, but producing effective reflecting telescopes was beyond the technological capacities of the seventeenth century. By the late seventeenth century, good refracting telescopes were widely available. Telescopic astronomy boomed as the invention of the micrometer and the addition of telescopic sights to standard astronomical instruments such as quadrants enabled the mapping of the heavens with unprecedented accuracy.

Both refracting and reflecting telescopes improved in the eighteenth century as London instrument makers displaced the Italians as leaders in telescope making. The chromatic aberration problem was solved by an English landowner and amateur scientist, Chester Moor Hall (1703–1771). Moor's telescope combined a convex lens of crown glass with a concave lens of flint glass. Workmen he contracted and supervised created the first achromatic refracting telescopes in 1733. Despite Moor's success, refracting telescopes were losing their astronomical usefulness. After the 1720s when instrument makers



Robert Hooke's compound microscope, an invention that greatly improved microscopy in the seventeenth century. (North Wind Picture Archives)

➤ ANTONI VAN LEEUWENHOEK

The greatest microscopist of the Scientific Revolution, the Dutch tradesman Antoni van Leeuwenhoek (1632–1723), was also one of the least-educated major European scientists. He never attended a university and was unfamiliar with Latin and French, the international languages of science at the time. Van Leeuwenhoek made more than 500 microscopes, favoring the single-lens design. Some were of exceptionally high quality, capable of magnifications of 270. While other scientists used microscopes to investigate particular interests such as medicine or natural history, for van Leeuwenhoek microscopy was an end in itself. He put an enormous number of things under the lens, including hair clippings, blood

samples, and items obtained from local businesses such as infested grain and pieces of butchered animals. During 50 years of observation, van Leeuwenhoek's skill, diligence, and patience enabled him to assert himself on the international scientific scene. His fundamental discoveries include red blood cells, the circulation of blood through the capillaries, the existence of protozoa, and the nature of the male sperm cells. Van Leeuwenhoek's house at Delft, full of microscopes set up with objects for visitors to examine, was a major tourist attraction, often making it difficult for him to carry on his research.

—William E. Burns

had learned to make reflecting telescopes, most astronomers employed them.

The exact origins of the microscope are unclear, but it was invented shortly after the telescope. The earliest examples were associated with the Dutch engineer Cornelius Drebbel (1572–1633). Drebbel's early designs, employing two convex lenses, were replaced by the late seventeenth century with the more efficient single-lens design, which avoided chromatic aberration. Systematic and widely distributed microscopic research did not emerge until the second half of the century and was closely associated with the Royal Society of London. Marcello Malpighi's *On the Lungs* (1661) and Robert Hooke's lavishly illustrated *Micrographia* (1665), which included several technical improvements to the microscope, inaugurated this new era.

The areas of science most affected by microscopy were natural history and anatomy. The most important anatomist to use the microscope was Malpighi, who published several microscopic studies on the structure of the human body, on the anatomy of the silkworm, and on the development of the chick embryo. Other microscopists studied plants, insects, and bodily fluids. Due to its difficulty and lack of an institutional base—microscopic anatomy did not become part of the curriculum at medical schools—microscopy began to decline by the late seventeenth century.

Of the two main types of early microscopes, the single and compound lens, the single lens was the more serious scientific tool. Most important discoveries were made with single-lens microscopes. Good microscopes became more widely available commercially in the eighteenth century and were used for diversion and entertainment as well as scientific research. London instrument makers dominated the eighteenth-century microscope industry. Their improvements were largely in the mounts and lighting of microscopes rather than in the magnification itself.

Compound microscopes, like refracting telescopes, were handicapped by chromatic aberration. The solution to this problem for telescopes was not immediately followed by the solution for microscopes. Although different lens arrangements reduced aberration considerably, reliable achromatic microscopes only became widely available in the 1820s.

—William E. Burns

Bibliography

- Fournier, Marian. *The Fabric of Life: Microscopy in the Seventeenth Century*. Baltimore: Johns Hopkins University Press, 1996.
- Van Helden, Albert. *The Invention of the Telescope*. Special issue of *Transactions of the American Philosophical Society* 67 (1977).
- Wilson, Catherine. *The Invisible World: Early Modern Philosophy and the Invention of the Microscope*. Princeton, NJ: Princeton University Press, 1995.

Navigational Technologies

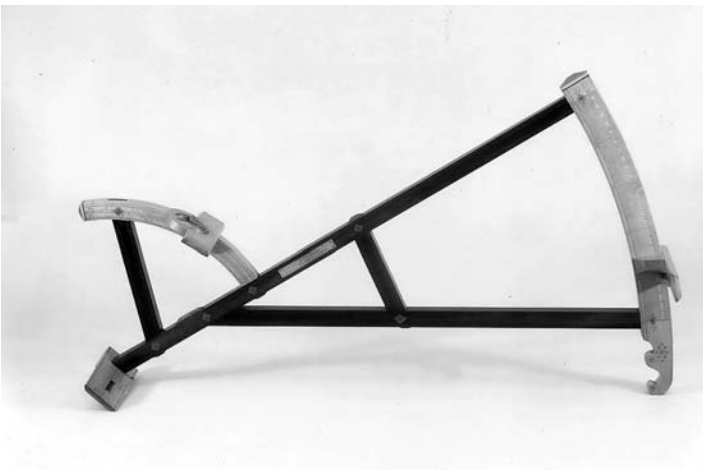
The dramatic expansion of the geographical range of European seafaring in the early modern period meant that navigation greatly concerned individuals, businesses, and governments. Navigational uses underlay the founding of the Greenwich and Paris observatories. Governments offered lavish rewards for successful navigational methods, and navigational problems engaged the attention of many scientists.

The magnetic compass, used for knowing the direction of a ship, was already in general use in the late medieval period by Chinese, Arab, and European seafarers. The earliest leaders in grappling with the complex navigational problems posed by long voyages on the open ocean were the Spanish and Portuguese. The Casa de la Contratacion, founded in 1503 to regulate Spanish movement to and from the New World, trained pilots and captains in cartography and navigation. The Portuguese naval officer Joao de Castro (1500–1548) made the first study of magnetic declination. A Portuguese mathematician and professor, Pedro Nunes (1502–1578), demonstrated that great circle routes were shorter than sailing in a straight line.

Of the two basic questions in fixing the position of a ship out of sight of land at a given moment—that of latitude (north-south) position and that of longitude (east-west) position—the first

was far less difficult. The altitude of the polestar or the sun above the horizon told the latitude. Portuguese sailors were using quadrants to determine the altitude of the polestar in the fifteenth century. South of the equator where the polestar was no longer visible it was necessary to use the sun, whose path was more complicated. Printed tables of the variance of the sun's apparent path around the earth, the ecliptic, from the equator assisted in this procedure, as did the invention of the backstaff by the English sea captain John Davis in the early seventeenth century. This enabled an observer facing away from the sun to take its altitude. (The old method, which required looking directly into the sun, took a heavy toll of sailors' eyesight.)

The longitude was a far tougher problem. As the celestial bodies seemed to rotate around the earth from east to west (the shift to Copernicanism made no difference to navigators, whose skills were based on the appearance of the sky, not the underlying reality), they could not offer a way to know one's position. Existing methods, based on lunar observation or simply estimating a ship's speed, were maddeningly and even dangerously imprecise. Most approaches to the longitude reduced the problem to that of finding the difference between the time on the ship and the time at a fixed point, usually that of the home port. The difference in time could be translated into spatial terms as the difference in longitude between the two points. There were all sorts of bizarre schemes for this, but the two main approaches were using astronomical objects to give the correct time and creating a clock able to give accurate time on a ship. If the home port time of a celestial occurrence was known, all that would be necessary would be to compare the ship's own time on observation of the occurrence. Galileo Galilei hoped that the movements of the satellites of Jupiter that he had discovered could be the astronomical clock, but the precise telescopic observations needed were impossible on board ships. The effort to create a clock that could be accurate on the rolling deck of a ship underlay many of the clock-making innovations of Robert Hooke, Christiaan Huygens, and others in the late seventeenth century, but these efforts were also in vain.



Backstaff, used to calculate altitude of stars and planets, about 1734. (The Art Archive/Eileen Tweedy)

► GALLEONS, PORTOLANS, AND THE VOLTA DO MAR

The rise of ocean voyaging in the late-fifteenth- and sixteenth-century European Atlantic nations was accompanied by several new technologies or adaptations of old ones. The dominant ocean-crossing ships were the galleons. Galleons were multidecked sailing ships with three to five masts. Their bodies were made of oak, while the masts were made of pine. Galleons were adaptable to both commerce and war. They were very expensive and were usually built by governments or by merchant syndicates. Portolans were originally detailed charts of particular coasts for the use of sea captains and pilots. Originating in the Middle Ages, they were far

more detailed than most medieval maps. Individual portolans were eventually compiled into extensive maps of particular areas. The secrets that these maps contained were valuable, so they were not widely distributed. They were also vulnerable to corruption in copying and recopying. The Volta do Mar, a Portuguese phrase meaning “turn on the sea,” was a sailing technique of steering away from the destination in order to pick up favorable winds. The first well-known Volta do Mar was the one by which Portuguese vessels sailed back from voyages to Africa and in the South Atlantic.

—William E. Burns

Great Britain, with the world's largest colonial empire, took the lead in development of navigational technology in the early eighteenth century. The Longitude Act of 1714 established a prize for an accurate method of determining the longitude. The French Royal Academy of Sciences also established a prize. The first of two methods developed involved taking the distance between the moon and a fixed star and then comparing it to the time that distance would appear at a given point on land as given in a table, known as lunar distances. The leader in this effort was the astronomer royal, Nevil Maskelyne. The second method was an accurate clock devised by the English clockmaker John Harrison.

Although the new navigational technology was of inestimable use to European seafarers, it was not necessary for successful navigation. Some of the world's most impressive navigators were Polynesian sailors, who made their way across millions of square miles of vast, nearly landless water in the southern Pacific with a knowledge of the stars, the observation of ocean currents, and the flight of birds, among many other techniques.

—William E. Burns

Bibliography

Howse, Derek. *Nevil Maskelyne: The Seaman's Astronomer*. Cambridge: Cambridge University Press, 1989.

Howson, J. B. *A History of the Practice of Navigation*. Glasgow, UK: Brown, Son and Ferguson, 1951.

Sobel, Dava. *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time*. New York: Walker, 1995.

The Order of New Worlds— European Cartography after Columbus

In sixteenth-century Europe, cartography, the science of mapping, was transformed by the humanist revival of the ancient cartographical tradition, by the vast increase in geographic information available to Europeans during the process of global expansion, and by the introduction of the printed, as opposed to the hand-drawn, map. The most common form of world map in the Middle Ages was that of Asia, Europe, and Africa huddled around Jerusalem at the center of the world. (This was known to be a flat representation of a spherical world; no educated person in the Middle Ages believed in a flat earth.) The continents were shown as crude outlines with no attempt to represent geographic detail. The Renaissance transformed maps radically.

The revival of the world system of Claudius Ptolemy, the ancient Greek geographer and astronomer, gave cartographers more sophisticated geometrical methods to represent an area on a map, although Ptolemy's focus on the

➤ ABRAHAM ORTELIUS

In 1570, Antwerp bookseller and cartographer Abraham Ortelius (1527–1598) published *Theatrum Orbis Terrarum* (*The Theater of the World*), often considered the first atlas. Although a capable mapmaker himself, he concentrated on collecting the maps, improving them, and reducing them to a common format. *Theatrum* was itself a printed and bound collection of mostly European maps, based largely on the studies of his friend Mercator. Ortelius also included a bibliographic commentary that has preserved the names of many obscure cartographers in what amounted to a history of cartography. *Theatrum* depicted North America as a wide continent rather than as a narrow barrier between Europe and Asia, as it had often been shown before. The frontispiece added a personification of America as a goddess to the traditional three of Asia, Europe, and Africa. With the prestige gained from *Theatrum*, Ortelius became official geographer to Philip II of Spain, the sovereign of Flanders whose globe-spanning empire was a preeminent consumer of cartographic services. *Theatrum* continued to be published in updated editions until 1612, appearing in 31 editions in seven European languages.

—William E. Burns



The Theater of the World (*Theatrum Orbis Terrarum*), published by Flemish cartographer Abraham Ortelius in 1570. (The British Library/StockphotoPro)

Mediterranean and Indian Oceans rather than the European continent made his usefulness for specific geographic data limited. New knowledge, beginning with the charts of the coast of West Africa and the Atlantic Islands produced by Portuguese seafarers in the fifteenth century, stimulated the creation of new maps while also introducing difficult problems in the reconciliation of different maps. Cartographers continued to accompany voyages and expeditions of discovery and conquest.

Maps were instruments of not only knowledge but also power. Governments attempted to control the process of mapping in order to prevent the knowledge they represented from falling into the hands of rivals. In the colonial realm, mapping both facilitated invasion and functioned as a symbolic expression of power. To map a country and to name its geographical features was to control it. In 1503, King Fernando of Aragon founded the Casa de Contratacion in Seville. It included a repository of maps. In 1512, the royal pattern, a continuously updated cartographic pattern, was established at the Casa de Contratacion. In addition to permitting the coordination of observations from different Spanish voyages, the Casa de Contratacion kept this knowledge under Spanish government control, although the effort was ultimately a failure.

One of the main problems in keeping cartographic information secret was the rise of printing. America began to appear in maps printed outside Spain rather early. The first published map to include the word “America” was the German Martin Waldseemüller’s *Cosmographica* (1507). In addition to leading to much wider and freer dissemination of maps, printing made it possible to produce large numbers of identical, standardized maps. The two most important cartographers of the sixteenth century, two Flemings and friends, Gerhard Mercator (1512–1594) and Abraham Ortelius (1527–1598), both issued printed maps. Mercator devised the projection of the earth’s spherical surface onto the flat surface of a map that bears his name. The term “atlas” is derived from Mercator’s reference to the ancient Greek Titan who held the world on his shoulders in his later three-part collection of world maps, *Atlas* (1585, 1590, 1595).

Maps served many purposes. Some were promotional. The earliest English maps of the New World, for example, encouraged investment in New World expeditions by emphasizing easy access to the wealth of China and Japan through a wide, and yet to be actually discovered, Northwest Passage. Based more on hope than observation, such maps were essentially fictional. Even maps with some pretensions to accuracy varied widely, both in the information they conveyed and in the features they emphasized. Military maps depicted fortresses and the connections between them, whereas maps designed for merchants identified natural resources and trade routes. Cultural and economic differences influenced mapping styles. Seventeenth-century Dutch maps of upstate New York traced vital waterways and trade routes, reflecting the fact that early Dutch settlers in the region were mostly interested in trading for furs with Native Americans. When the English took over the territory, their maps were organized in terms of delineating the landed properties suitable for agriculture and the relations of English

and French fortresses. Waterways were shown less as routes for trade than as boundaries.

During the seventeenth century, cartography, in addition to steadily integrating more new geographic knowledge, became a more mathematically based and cooperative discipline, with the gradual acceptance of the Mercator projection as the standard. Mapmaking both within and outside Europe grew more mathematically precise. Galileo Galilei's discovery of the moons of Jupiter provided a basis for rigorous identification of geographical positions and distances. Mapmaking projects grew into larger, often government-sponsored collaborative efforts rather than being projects of individual mapmakers.

—William E. Burns

Bibliography

Short, John Rennie. *Making Space: Revisioning the World, 1475–1600*. Syracuse, NY: Syracuse University Press, 2004.

Taylor, Andrew. *The World of Gerard Mercator: The Mapmaker Who Revolutionized Geography*. New York: Walker, 2004.

Wilford, John Noble. *The Mapmakers*. 2nd ed. New York: Vintage Books, 2001.

■ Introduction: “Guns and Steel”—Military Technology and Conquest

In the early modern period, Europe led—but did not monopolize—a global military transformation sparked by an increase in the use of gunpowder weapons. Gunpowder affected every area of warfare, from the battlefield, where it underlay a rise of infantry at the expense of cavalry; to the siege, where it sparked a transformation of military architecture; to naval battles, in which the ability of ships to fire on one another led to deadlier and far more decisive conflicts.

The rise of battlefield gunnery underlay one of the most important transformations in Eurasian history: the decline of the central Asian horse archer as the master of the Eurasian battlefield. The Ottomans were among the first to demonstrate this transformation as they established

their dominance over the Middle East. Their gunpowder infantry, particularly the famous janissary corps, demolished the steppe-oriented cavalry-dominated forces of the Egyptian Mamluks and Persian Safavids in the early sixteenth century. Gunpowder enabled the partition of the old central Asian nomad heartland between the settled empires of Russia and China in the eighteenth century.

Cannons also transformed siege warfare. The first great siege in which cannons played a central role was the Ottoman conquest of Constantinople in 1453. The huge cannons of the Ottomans were extremely difficult to move. The future lay with more mobile cannons that could effectively accompany an army on the

move. Mobile cannons were first widely used in the French invasion of Italy in 1494. Cannons rendered the high but thin defensive walls of the traditional fortress obsolete overnight. New fortresses with low thick walls were very expensive, often requiring the resources of a government to build. The local warlord was being effectively priced out of the military market. Control over gunpowder weaponry was so essential to government in the early modern Islamic world that Ottoman Turkey, Safavid Persia, and Mughal India are referred to collectively as “gunpowder empires.” Gunpowder helped make the early modern period one of unprecedented political stability throughout much of the Islamic world. But European kingdoms were gunpowder states as well, and the new technologies underlay the strength of centralized monarchies. Even the last group of “northern barbarians” to carry through the “great enterprise” of conquering China, the Manchus, had to acquire and master the use of artillery in order to do so.

Naval warfare moved from the era when weapons fired by individuals on the decks of ships could be decisive—as they were at the Battle of Lepanto in 1571, a victory for Christian gunners over Turkish archers—to one when massive cannons mounted on ships were the decisive weapon, as they were in the English victory over the Spanish Armada in 1588. Another technological transformation with military implications was the increase in long-range shipping. This was related to innovations in both shipbuilding and navigation. Shipping improvements enabled European states to project power on an unprecedented global scale. The combination of the seagoing ship with heavy guns underlay the Portuguese and Dutch empires in the Indian Ocean.

—William E. Burns

Europe's New Warfare in West Asia

The period 1450–1750 was marked by European penetration based on superior naval technology and command of the high seas. It outflanked powerful Ottoman and Persian empires, but European power was mostly restricted to points of support along the coast.

Since the end of the crusades, European forces had been banned from the Asian landmass, and nomads of the steppe invaded Europe. The introduction of gunpowder weapons to Europe altered this, and European knowledge was widely sought after. German and Hungarian gunners helped the Turks in the siege of Constantinople in 1453. Venetians tried unsuccessfully to persuade the Aqquyunlu of Persia to deploy gunpowder weapons against the Turks in 1472. The Portuguese and Russians provided Persians with the cannons to fight the Uzbeks, and Europeans also served as gun makers and gunners in several Asian armies from the sixteenth century on.

European ship construction made quantum leaps during the fifteenth and sixteenth centuries, introducing new hull constructions, multiple gun decks, and complex riggings as well as navigational instruments, which gave European naval power greater range and punch. Portuguese navigator Vasco da Gama arrived in the Indian Ocean in 1498, but the object of European penetration of the period was trade, not territorial conquest or migration. Actual physical control was limited to the coastal areas from a few fortified positions. The Portuguese pioneered this process, acquiring bases as far east as Nagasaki (1570), but beyond the Malacca Strait they could wield little military power.

Opponents in regions of political fragmentation, such as the coastal areas of the Indian subcontinent and the Philippines, were easily defeated by the Portuguese and Spanish, respectively. Consolidated powers like several Indonesian sultanates and the Ottomans, however, could still match them in coastal waters with their galleys. Foes like the Egyptian Mamelukes and Ottoman Turks contested the strategic access of the Europeans to the Persian Gulf and the Red Sea. A Portuguese base at Ormuz by the head of the Persian Gulf, established in 1507, had to be recaptured seven years later. Portuguese attempts on Aden in 1513 and 1517 were repulsed. And unlike the Americas, Asian opposition to European presence on land also deployed firearms and body armor of metal. Purpose-built Dutch, French, and English warships, however, furthered the European naval lead in the following century.

At the turn of the seventeenth century the Portuguese empire fell into decline because of

➤ ALBUQUERQUE ON THE BATTLE OF HORMUZ, *COMMENTARIES*, 1557

After attacking a number of cities on the coast of East Africa in 1556, Afonso d'Albuquerque sailed on to the island of Hormuz and arrived on September 25, 1557. Even though Albuquerque's opponents at Hormuz were armed with ships and artillery comparable to that of the Portuguese, Albuquerque was still able to defeat them and gain possession of the island for the Portuguese. The following is an excerpt from the chronicle describing the battle:

“As some days had elapsed since the king [of Hormuz] had received certain information of our fleet, and the destruction which the great Afonso Dalboquerque had wrought in all the places along the coast, he began to prepare himself to fight with him. For this end he gave orders to detain all the ships that came into the port of Ormuz [Hormuz], and added a force of sixty great vessels, into which he draughted off many soldiers and much artillery, with everything that was required for the undertaking. And among these great vessels there was one belonging to the King of Cambaya, called the Meri, of about one thousand tons burden, with many men and guns, and well equipped for its own defence; and another of the Prince of Cambaya, of six hundred tons, so well appointed that it required nothing from the king's magazine. And besides these ships there were in the harbour about two hundred galleons, which are long ships with many oars, but not very large, and they are armed with two large mortars in the prow, and packed with

cotton bales, so high that the rowers are hidden from sight.” (p. 105)

“When morning broke, and Afonso Dalboquerque plainly saw that no message from the king [of Hormuz] was forthcoming, and that this delay meant war and not peace, he ordered a broadside to be fired. The bombardiers took aim so that with the first two shots they fired they sent two large ships which were in front of them, with all their men, to the bottom—one being the Prince of Cambaya's, the other that of Meliquiaz of Diu. Afonso Lopez da Costa, who was stationed on the land side, vanquished and sent to the bottom some portion of the galleons and atalaia's which his artillery could reach. Manuel Telez, after having caused great slaughter upon some vessels, gave orders to let go a cable, which was laid out to the sea, and ran into a large vessel which lay close to him, and killed a part of the men in it, while the rest threw themselves into the sea, and those who were heavy-armed went down at once.” (pp. 112–113)

—Timothy J. Watts

Source

The Commentaries of the Great Afonso Dalboquerque, Second Viceroy of India, Vol. 1, translated from the Portuguese edition of 1774, with notes and an introduction by Walter de Gray Birch (London: Printed for the Hakluyt Society, 1875).

a union with Spain and competition with the Dutch. Once allies, the Dutch were now the enemies of the Portuguese due to their own rebellion with Spain, beginning in the 1580s. The first Dutch expedition set sail in 1596, and the Dutch East India Company was established in 1602 with authority to conduct war on behalf of the Dutch republic. Though its main base was located at Jakarta on Java, this new leading world maritime power would assert itself around the rim of the Indian Ocean and in the Mediterranean. The Portuguese were driven from Sri Lanka, Ambon, and the Malabar Coast, but the many wars with France and England in the 1670s weakened the Dutch

position in Asia, especially in the face of growing English power.

From the seventeenth century, inter-European struggles entered into a symbiosis with those along the coast of the Indian Ocean. Local forces were mobilized against rivaling Europeans, but just as often European power could be exploited by Asian princes. For example, in 1622 the Safavids of Persia took the Portuguese base of Ormuz with English help, and the Turks received Portuguese assistance against the Safavids in 1624. Even when the European coastal strong points were safe, they still relied on cordial relations with local powers that controlled the hinterland in order to trade.

The sultanate of Oman also rose to rival European maritime supremacy. In 1650 its forces captured the Portuguese base at Muscat with European ships in the port, and assistance from Dutch and English navigators, administrators, and gunners was acquired. They attacked Portuguese positions at Mumbai (1661–1662), Bassein (1674), and Diu (1676), but their main efforts were directed toward eastern Africa, and the Omani left no lasting impressions on the division of power in India.

In the eighteenth century France and Britain were the main European contenders for power in India. Northern parts of the subcontinent were still held by the mighty Mughals, but India was under heavy pressure from Safavids in the east, Afghans in the north, and Maratha in the south. The latter would rise to be the main opponent of the Europeans as the Mughals fell into decline. Asians found it increasingly difficult to implement new techniques of casting iron guns, flintlock muskets, grapeshot, and bayonets as well as drills and tactics, which were opened up for wider European control. In the Seven Years' War (1756–1763) the British gained the upper hand in the contest for India. The French enjoyed a short renaissance during the American Revolution (1775–1783) but were finally banished during the Napoleonic Wars (1803–1815).

—Frode Lindgjerdet

Bibliography

- Black, Jeremy. *War and the World: Military Power and the Fate of Continents*. New Haven, CT, and London: Yale University Press, 1998.
- Montgomery, Field-Marshal Viscount of Alamein. *A Concise History of Warfare*. Ware, UK: Wordsworth, 2000.
- Ropp, Theodore. *War in the Modern World*. Baltimore and London: Johns Hopkins University Press, 2000.

Tools for Gunpowder Empires

During the fifteenth century Europeans began to explore the outside world. They possessed a number of advantages over most of the peoples they encountered. One was the drive to discover new lands and exploit the economic benefits they offered. Another was the development and

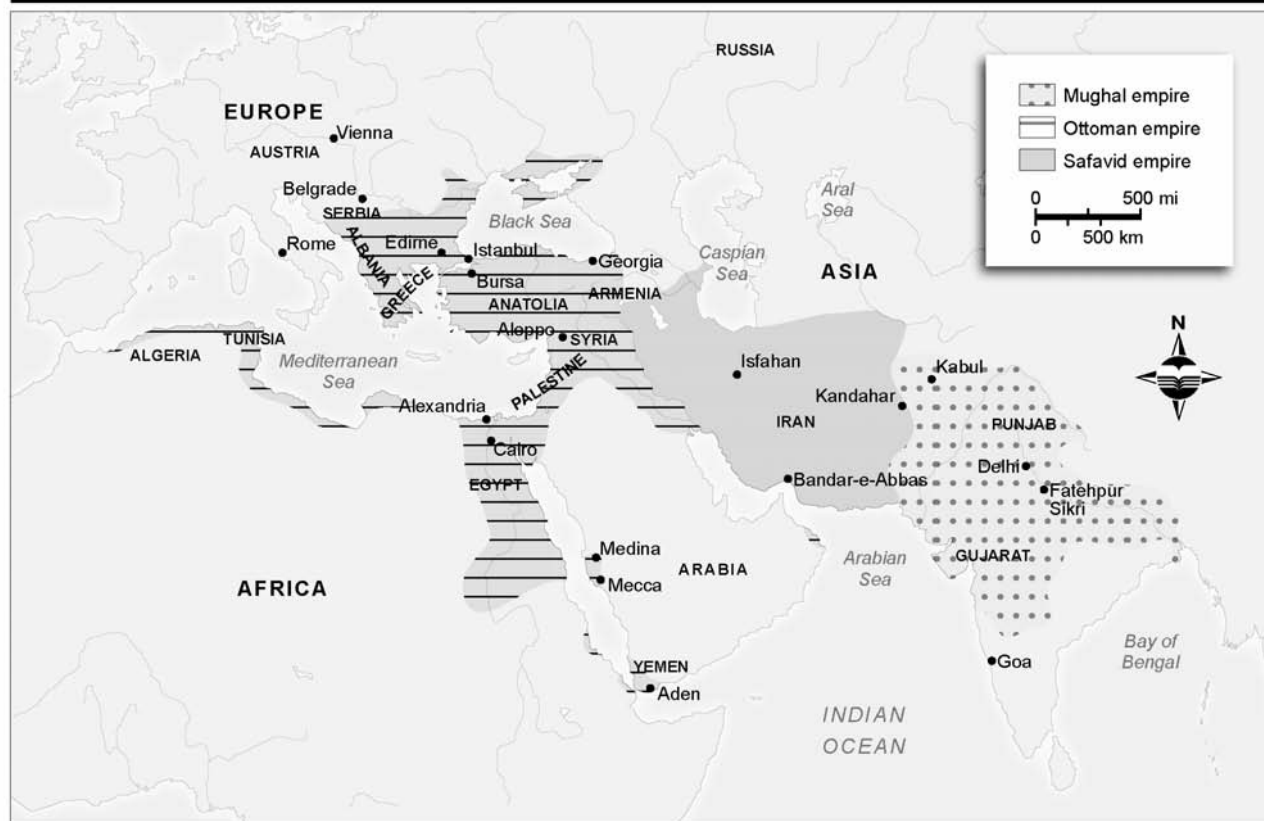
integration of naval technologies that led them to undertake long voyages, such as fore and aft rigging and magnetic compasses. The third was the development of military technologies that offered significant advantages over the peoples they encountered. The most important of these military advantages was the use of gunpowder weapons. Although Europeans were not the first to use gunpowder, the ways in which they used these weapons allowed small numbers to defeat the indigenous peoples. Whether it was relying on cannon on board ships to pummel opponents or disciplined volleys by muskets on land, European firearms provided the tools to build empires.

The first use of gunpowder for weapons throwing projectiles comes from China. Gunpowder had been developed in China by 950 CE, but it was apparently first used in fireworks displays and in fire lances designed to burn opposing soldiers. Early guns are recorded in Europe in 1326. Few historians doubt that the technology made its way remarkably fast from Asia to Europe, perhaps with the Mongol conquerors. Small hand cannon were used by individuals, while large weapons that threw heavy stone balls were developed for use against walls. Early siege cannon, such as the ones used against Constantinople by the Ottomans in 1453, were very heavy and were hard to move from place to place. They were rarely used in battles in the field between mobile armies.

By the sixteenth century many soldiers were armed with the harquebus. This was a heavy smoothbore matchlock weapon. It did not replace the pike and other edged weapons but instead supplemented them. Because the smoothbore weapons were very inaccurate, military commanders recognized that they needed to be used in large numbers, firing on the same target. Groups of soldiers, organized into ranks, could fire at a target, and hopefully some would hit it. Pikemen had to protect the harquebusiers after they fired, since they would be defenseless.

The first European conquerors used firearms against the native people they encountered. For peoples such as the Aztecs, the first experience could be terrifying. The large amount of smoke and noise from a firearm had a psychological impact on Native Americans. Spanish conquerors

GUNPOWDER IN THE TURKIC EMPIRES IN THE 16TH CENTURY



combined this with more mobile cannon. When Cortes laid siege to Tenochtitlan in 1521, he used his harquebus and cannon to wear down the defenders.

The European use of firearms proved decisive in the Americas and in Africa to establish empires. Because nearly all natives had never seen firearms, they provided a decisive psychological advantage. Native rulers soon tried to obtain their own firearms or to hire European soldiers against their enemies. In the Congo, for example, King Afonso I accepted Christianity and adopted European ways in 1506 in order to maintain good relations with Portuguese traders. Portuguese soldiers with firearms helped maintain his kingdom against invaders until finally establishing their own territory. In North America the Iroquois and other tribes in present-day New England and Canada were most anxious to obtain firearms for themselves. European traders refused to trade firearms since they realized that the weapons provided their most important

advantage. In the late seventeenth century, however, the Dutch provided some guns to the Mohawks. To provide protection to their own client tribes, the English and French began to trade firearms for beaver furs. By 1700 most of the eastern tribes were armed with many firearms.

While native peoples became familiar with hand weapons, European ships armed with cannon were able to control the seas and help establish empires. No native people were able to match the size and power of European ships, giving the invaders an advantage in coastal regions.

The matchlock was cheap but also unreliable. During the seventeenth century it was gradually replaced by the flintlock. The harquebus was replaced by a lighter musket, weighing around 10–12 pounds (4.5–5.4 kilograms). Because European settlers needed dependable weapons, flintlocks replaced matchlocks more rapidly in the colonies than in Europe. A higher ratio of firearms to settlers existed in the colonies than in Europe. Trade muskets intended

THE MATCHLOCK HARQUEBUS

A soldier fires a matchlock harquebus. Note that he uses a rest to hold the heavy weapon steady. When a lit match is touched to the gunpowder in a priming pan, the charge inside the barrel fires a projectile. The soldier carries individual charges on a bandolier around his chest. These were usually small wooden tubes with a musket ball and powder charge already measured out.

—Timothy J. Watts



(North Wind Picture Archives)

for the fur trade were also produced in Europe. These had shorter barrels, making them more useful in the forest, and were not as well made as most other firearms. By the 1700s firearms were common among Native Americans and other native peoples. They were able to devise tactics to overcome European firearms and to fight on more even terms. What they could not do was overcome the European superiority in logistics and organization.

—Timothy J. Watts

Bibliography

- Archer, Christon I. *World History of Warfare*. Lincoln: University of Nebraska Press, 2002.
- Black, Jeremy. *War in the Early Modern World*. Boulder, CO: Westview, 1999.
- McNeill, William Hardy. *The Age of Gunpowder Empires, 1450–1800*. Washington, DC: American Historical Association, 1989.

Pacey, Arnold. *Technology in World Civilization: A Thousand-Year History*. Cambridge, MA: MIT Press, 1990.

Pauly, Roger. *Firearms: The Life Story of a Technology*. Westport, CT: Greenwood, 2004.

In the Wake of the Caravel—Innovations in the Brig, Schooner, and Sloop

During the fifteenth century, European shipbuilders combined the advanced characteristics of the ships built in Mediterranean and Baltic shipyards. As a result, they created oceangoing ships that were capable of exploring the world, opening trade with non-Western ports, and creating European empires.

The most important vessels of the Middle Ages had been shallow draft galleys, propelled by oar and sail, suited for the relatively calm waters of the Mediterranean, and used in both naval and commercial fleets. By the 1300s, innovations in shipbuilding and design introduced stronger, more capable vessels. In the Mediterranean the round ship was constructed around a wooden skeleton, following a carefully drafted plan. Shipwrights then nailed planks to this frame, laying the edges flush against each other. The round ship was generally a two-masted vessel, with some having three masts after 1400. The masts carried triangular lateen sails, adopted from Arab vessels called *dhows*. Quarter-mounted rudders or steering oars allowed steersmen to navigate holding a tiller.

In the Baltic, shipbuilders developed the clunky cog. Unlike the keel-mounted Mediterranean round ship whose structure offered greater stability, the cog was built on a flat plank. The design gave it a capacious hold that accepted larger cargoes and allowed it to be run upon beaches so that cargo could be loaded almost anywhere, but it was made for a rolling wet voyage. The hull was built by eye, without a standard plan and without a skeleton. In its clinker-built design, overlapping boards formed the hull. The single-masted cog sported a square sail, which could be worked by fewer men than a lateen rig but was less efficient in propelling the ship. A tiller—essentially the same system used on ships today—attached like a hinge at the center of the stern to work the

ship's rudder. Somewhat more seaworthy than its Mediterranean counterparts, cogs were relatively small, averaging about 75 feet (23 meters) long.

Although crusading armies from northern Europe had traveled aboard Mediterranean ships to the Holy Land from the eleventh through the thirteenth centuries, this form of vessel did not appear in Atlantic waters until the 1400s. At that time, shipwrights in Germany and Holland began to experiment with building the skeleton of a ship first. The process was cheaper and resulted in more standardized ships. It also allowed for a stronger ship. Stronger ships were important because of the more turbulent Atlantic Ocean and also because of the growing recognition that ships needed to carry cannons at sea. By the 1440s, caravels appeared. Like Mediterranean ships, they had three masts and a skeleton. Like Baltic ships, they had flat bottoms and hinged rudders. Most caravels carried square sails on the first two masts and a lateen sail on the mizzenmast. They ranged in size from 60 to 200 tons and were about 65 to 80 feet (20–25 meters) long. Caravels were intended mostly to carry cargo, but they could carry a few cannons. They were also better sailers than most other ships. Caravels were often used for fishing in the North Sea because they were so seaworthy. Two of Columbus's ships were caravels, and most other early explorers used caravels.

At nearly the same time, the carrack appeared as commercial shippers and as warships. Its design resembled the caravel and carried the same arrangement of sails but was larger, some as large as 2,000 tons, and had a bowsprit for additional power. At the bow and stern, upper decks supported castles, protective perches from which its warriors could hurl weapons down at boarders. The carrack was less seaworthy than the caravel, however, because the castles caught the wind, and the carrack thus tended to drift downwind.

Some shipbuilders realized that larger ships were not as fast or handy as smaller ones. The English shipbuilder and admiral Sir John Hawkins (1532–1588), noted for building the ships that defeated the Spanish Armada in 1588, experimented with the carrack design. He found that reducing the size of the castles and increasing the ratio of length to beam (width) to 3:1 or more made a faster ship. The result was the



Watercolor of sixteenth-century caravels by Rafael Monleón y Torres, Museo Naval Madrid. The caravel was the culmination of the blending of characteristics of Baltic and Mediterranean ships. Its improved sailing abilities and endurance made the voyages of discovery during the fifteenth and sixteenth centuries possible. (The Art Archive/Museo Naval Madrid/Gianni Dagli Orti)

galleon, primarily a warship that could outmaneuver and outfight caravels and carracks and carried most of its armament on a gun deck.

The galleon was adopted by other European nations almost immediately. The most important warships of the Spanish Armada and the opposing English fleet were galleons. By 1600 the galleon had successfully married the best characteristics of the Mediterranean and Baltic styles, resulting in a European warship that could dominate those produced by any other region around the world.

—Timothy J. Watts

Bibliography

- Cipolla, Carlo M. *Guns, Sails and Empire: Technological Innovation and the Early Phases of European Expansion, 1400–1700*. New York: Pantheon, 1965.
- Guilmartin, John F., Jr. *Galleons and Galleys*. London: Cassell, 2002.
- Hutchinson, Gillian. *Medieval Ships and Shipping*. Rutherford, NJ: Fairleigh Dickinson University Press, 1994.

The New Warfare—Gunpowder, Artillery, and Muskets

The development of firearms would contribute to a shift in the global distribution of power in favor of European states and states with a

► BATTLE OF PLASSEY, 1757

After longstanding disputes with the British East India Company, the nawab of Bengal sacked Calcutta on June 26, 1756. A force of 900 European soldiers and 1,500 sepoys under Lieutenant Colonel Robert Clive was dispatched from Madras to retake Calcutta, which they accomplished on January 2. The outbreak of the Seven Years' War (1756–1763) ensured French support for the nawab and renewed hostilities in March. The British decided to remove him from power and had no problems finding rivals to support them, most notably Mir Jafar Ali Khan, the inspector general of the nawab's army.

On March 23 Clive's force woke up to the news that the 50,000-man-strong French-supported forces of the nawab were approaching their camp outside Palashi (Plassey). Heavily outnumbered, the British enjoyed the cover of the embankments surrounding a mango grove and were able to withstand artillery bombardment and stop cavalry charges with deadly grapeshot from their own cannons. Also, large parts of the nawab's army were bribed to not fight at their best. When a rainstorm broke out the British troops covered their supplies with tarpaulins, while the gunpowder of their opponent became soaked and useless.

Around noon Mir Jafar convinced the confused nawab that the British were withdrawing, and the Bengal army was ordered back to its camp, only to be pursued by the enemy and bombarded from positions on an overlooking hill. The camp was stormed around 5:00 p.m., and the battle developed into a rout. The outcome marked a turning point in the inter-European struggle for supremacy in India and ushered in the British Raj (1858–1948).

—*Frode Lindgjerdet*

population of European descent. Military use of gunpowder made from charcoal, saltpeter, and sulfur dates at least back to the Chinese Song dynasty (960–1279 CE). Filled into ceramic or metal containers known as Zhen Tian Lei, these crude explosives were either thrown by hand or launched by catapult. Such devices have been excavated with the remnants of the Mongol fleet that attempted to invade Japan in 1274 and 1281. Gunpowder-based rockets and flamethrowers appeared in the twelfth century.

In the thirteenth century Mongol invaders also brought gunpowder to Europe.

Early artillery guns were heavy and cumbersome to deploy and were mostly used in siege warfare. Projectiles were usually solid balls of iron, lead, stone, or even arrows. Explosive grenades had probably been fired from Chinese guns in the fourteenth century but did not appear in Europe until the mid-sixteenth century. In the eighteenth century, grapeshot (lead or iron pellets) fired from ordinary cannon proved far more deadly in close quarters against infantry and cavalry than the medieval ribaldequin and other primitive multishot weapons. In the sixteenth century, cast bronze cannons emerged. They were safer to use and cracked rather than fragmented like iron guns. Lighter and easier to maneuver, they could also be deployed more successfully in field battles. Trunnions, introduced in the early eighteenth century, greatly improved the speed of aiming, and the Cronsted system of casting from 1725 produced cheap, reliable iron guns.

Early handguns were miniature cannons mounted at the end of a stock. They too were heavy and were mostly used when defending a fixed position rather than by moving infantry. In the fifteenth century the harquebus appeared, and the matchlock greatly improved the aiming process. The wheel lock appeared around the same time, but its mechanisms were too delicate and expensive to allow it to be used in any great numbers in war.

The flintlock musket was an improvement in safety, accuracy, and loading time. It was issued to European armies in the latter half of the seventeenth century and remained a standard infantry weapon until the percussion cap (invented in 1805) and the breechloader made it obsolete around the time of the American Civil War (1861–1865). At the end of the seventeenth century the bayonet made musketeer formations independent of the pike men, usually deployed between the musketeers to offer protection during loading. First the plug bayonet was fitted directly into the muzzle, but more practical socket bayonets soon replaced it. Bayonets also encouraged more aggressive infantry tactics.

The emergence of firearms contributed to a wide range of social and military change.

Together with the English longbow, the pike, and the modern state, firearms made heavy cavalry obsolete and helped bring down feudalism as a political system in Europe. Fortifications also changed from an emphasis on high towers and walls to low bulwarks several yards thick constructed to withstand bombardment from heavy siege guns. The culmination of these developments was the advent of star-shaped and bastioned fortresses in the late seventeenth century that called for a remaking of many European cities toward more regular and rectangular street patterns to ease military domination from these fortresses. Printing and literacy enabled not only the organization and maneuvering of multiple columns on the field of battle but also the training of large formations with standardized drills, the latter reaching the peak of perfection in the mid-eighteenth century.

Europeans were not the first to employ firearms, nor did they enjoy monopoly of their use, but they took the lead in their development from about 1450. Non-Europeans kept pace until about the mid-eighteenth century, but this was often done through assistance from European officers, gunners, and gun makers. The ratio of guns to troops remained low with these forces, and non-European armies often failed to center their tactics on firepower or to adapt sufficient logistical systems. The European edge has usually been attributed to constant competition and war between the European states, but the emergence of the modern scientific method was also a contributing factor. This edge was first evident on the high seas, where sealable gunwales and more stable construction enabled an increase in the number of onboard artillery pieces by the mid-fifteenth century. The development of firearms also ended the threat from nomadic peoples of Eurasia against sedentary states.

—Frode Lindgjerdet

Bibliography

- Black, Jeremy. *War and the World: Military Power and the Fate of Continents, 1450–2000*. New Haven, CT: Yale University Press, 1998.
- Blackmore, Howard L. *Guns and Rifles of the World*. New York: Viking, 1965.
- Newark, Tim, ed. *The World Wide History of Warfare*. London: Thames and Hudson, 2009.

Fortresses Design in Europe and Asia

The need to defend against Turks in the Mediterranean as well as to protect trade routes and outposts across Asia and the New World ensured the continued building of fortifications by Europeans throughout the early modern era (1500–1750 CE). To deal with continued innovations and improvement to artillery, fortresses and castles in early modern Europe adapted new architectural features to improve both their defensive utility against cannon and the offensive capabilities that such artillery offered. These new features appeared first in Italy, where Charles VIII (1470–1498) of France had demonstrated how devastatingly effective cannon could be when aimed at medieval castles and forts and how very vulnerable to cannon those older forts were. The new style, called *trace italienne*, appeared squat and bulky when compared to its medieval predecessors but was far superior in its ability to withstand artillery attack.

The newer style eliminated the tall towers, machicolations, and thinner walls of medieval fortress design. Towers were both vulnerable to cannon fire and poor platforms for defensive artillery; machicolations splintered into deadly shrapnel when hit with cannonballs, and when cannon pounded the base of curtain walls or towers, the walls collapsed. Walls in the *trace italienne* style were lowered and thickened dramatically, with long sloping faces along the curtains to deflect cannon fire. Lower walls were less dangerous for defenders than were tall towers and when combined with broad stable platforms created ideal bases for defensive artillery. Perhaps the most important innovation, and the one responsible for the distinctive star shape of these early modern fortresses, was the angle bastion. These projected out from along the curtain walls, preventing any blind spots and protecting against oncoming siege batteries. By placing these angle bastions at intervals around the fortress, artillery could both protect the walls and subject an advancing enemy to cross fire. Ditches also became an important element of these new fortresses, offering both additional protection for defensive artillery and an obstacle to oncoming infantry.

In its most basic form, a temporary but effective bastion-and-rampart style fort could be erected relatively quickly using earth and turf, reinforced by rough timbers and shielding defenders from fire with wicker baskets filled with dirt, much like modern sandbags. But these fortifications, while of great short-term utility, were not generally maintained in times of peace and thus needed refurbishing or rebuilding each time their use was required. Permanent fortifications were always at the ready and in areas vulnerable to attack in the heated political environment of the sixteenth and seventeenth centuries were the best way to ensure that a territory or town was not vulnerable.

While the proliferation of new military literature ensured that the defensive superiority of these innovations was widely known, actual adaptation was slow mainly due to the sheer expense of new building. Modification of older fortifications by lowering towers, thickening the walls, and building gun platforms was often a lower-cost alternative. Nonetheless, this new style of fortress building was common by the seventeenth century throughout Italy, France, Germany, and the Low Countries and continued to spread across the rest of Europe, the New World, and Africa.

Wherever Europeans traveled in the early modern world, they took their artillery and fortress designs with them. While the actual structures were often determined as much by the local landscape, materials, and available labor, the purpose of these structures was still the maintenance of a defensible position from attackers with artillery.

The trace italienne was *the* acknowledged superior design for fortresses during the early modern era, but in practice it was not always the best for factory forts that sprang up along the shipping routes utilized by European traders and merchant vessels. Colonial fortifications were mainly outposts for trading and refitting ships and varied greatly in their design based on their location. If the colonial outposts were of particular importance, building materials would be shipped from Europe to ensure their strength and defensive utility, but more often they were only a four-bastioned rectangular structure built of local materials, essentially just defensible compounds.

Although improved artillery was a feature of warfare that spread throughout the world, fortifications in Asia did not see the same trend toward architectural innovation that was so distinctive in Europe. Turkish castles built as late as the mid-seventeenth century followed the medieval pattern of square walls with round towers at the corners, with a nod to the defensive importance of artillery by adding rows of casements along the bases of both towers and curtain walls. In India, native fortresses did not change significantly until the mid-eighteenth century, when the British East India Company ruled the subcontinent. Until that time, the fortifications more closely resembled the medieval European fortresses with machicolated ramparts, towers, and tall walls pierced with loopholes. In China, traditional fortified towns surrounded by towering pounded-clay walls faced with brick, as thick as 40 feet (12 meters) at the base and up to 60 feet (18 meters) high, continued to be the standard in defensive architecture. These *ch'eng* were a central feature of Chinese government and economy, and the ramparts, carefully spaced towers, and gateway structures in the center of each side that served dual purposes as barracks and citadels ensured that they were always ready for defense as well.

In Southeast Asia, while stone fortresses did exist in the sixteenth and seventeenth centuries, they were relatively rare. Bricks and mud were the preferred materials of indigenous peoples; a noted contrast was the proliferation of stone forts built throughout the region by the Portuguese and Spanish during the same time period. The Europeans who observed these structures were amazed by the strength and durability of the bricks made throughout Southeast Asia and declared them to be far superior to those in the West. These brick forts, during times of attack, were often augmented by makeshift timber stockades. In addition to these kinds of structures, permanent wooden fortifications were also common. In Siam, fortified cities were protected by masonry walls backed with earth, surrounded by massive stockades of teak. Even though firearms had arrived with the Europeans, their adoption in Southeast Asia was not uniform. Where gunpowder weapons were adopted, fortress designs were modified by

creating loopholes for musketeers, thickening the walls, and making strategic use of ditches.

—*Laura Wangerin*

Bibliography

- Black, Jeremy, ed. *War in the Early Modern World, 1450–1815*. London: University College London Press, 1999.
- Charney, Michael W. *Handbook of Oriental Studies*, Vol. 16, *Southeast Asian Warfare, 1300–1900*. Edited by M. C. Ricklefs, V. Lieberman, and D. K. Wyatt. Leiden and Boston: Brill, 2004.
- Duffy, Christopher. *Siege Warfare: The Fortress in the Early Modern World, 1494–1660*. London and New York: Routledge, 1996.
- Neiberg, Michael S. *Warfare in World History*. London and New York: Routledge, 2001.
- Pepper, Simon, and Nicholas Adams. *Firearms and Fortresses: Military Architecture and Warfare in Sixteenth-Century Siena*. Chicago and London: University of Chicago Press, 1986.
- Tallett, Frank. *War and Society in Early Modern Europe, 1495–1715*. War in Context Series. New York: Routledge, 1992.

Western Maritime Technologies as Tools of Empire

Crucial factors in the development of sea-going navigation included: the use of the magnetic compass for direction-finding; recording distance traveled on a portolan chart; the invention of the caravel furnished with a big rudder, three masts and more sails; and improvements in casks to store provisions. Christopher Columbus’s arrival in the New World in 1492 and Vasco Da Gama’s journey to India in 1498 would have been unthinkable without these maritime technologies, which permitted the Spanish, Portuguese, Dutch, English and French to occupy vast territories in the Americas and to establish routes and commercial enclaves in Asia and Africa from the late fifteenth century onwards. Nevertheless, the use of these technologies did not come automatically to Europe. On the contrary, over the last four decades scholars have reconsidered the historical context in which they were developed and used. Consequently a more precise image has emerged of the different types of techniques that were used, the cumulative and practical character of technological improvements, the institutional context in which

these changes occurred, and the crucial cross-cultural relations on which European maritime expansion was progressively founded.

The maritime technologies mentioned above, such as the magnetic compass, did not develop overnight; earlier versions had developed in China, and the technologies Europeans relied on in the fifteenth century were the result of progressive innovations first by Catalan, Venetian, and Genoese sailors in the Mediterranean Sea from the thirteenth century, and then innovations introduced by the Portuguese and Spanish in the fourteenth and fifteenth centuries in the conquest of the Atlantic archipelagoes such as the Canaries, Madeira, and the Azores. Other technologies used by the Europeans in the conquest and settling of the Americas also trace their roots to the thirteenth century. These include the organization of the slave plantation and sugar cane production, the development of financial mechanisms, ethnographic description of peoples outside of Europe, the recording of geographical characteristics of territories occupied or conquered, and the development of firearms as well as the tactics of war and the art of fortification, etc.

Sea-going navigation had a pronounced practical character. This condition was not eliminated by the use of the compass and portolan chart. Sailors and navigators were experts at finding the Pole Star to establish north and at recognizing wind patterns in order to prevent shipwrecks. In fact, the empirical knowledge possessed by experienced sailors and navigators competed with the theoretical knowledge developed by cosmographers well into the eighteenth century, when more precise instruments like the sextant and the chronometer were invented. This interplay between practical and theoretical knowledge is a key element in the development of the technologies of navigation used by the Europeans in the construction and maintenance of their colonial empires from the sixteenth to eighteenth centuries.

Institutions for recording, conserving, and creating geographical information also aided the advance of maritime capabilities. Every trip to overseas territories produced information related to new geographical discoveries or astronomical observations, or further cartographic evidence about existing territories provided by indigenous

people, etc. Consequently, every time a ship returned to Europe from Africa, Asia, or the Americas it brought not only gold, silver, or spices but also new and more precise data. The Europeans knew the value of these data, and created specialized institutions to record, conserve and protect them. In these institutions the information was inventoried and transformed into secret geographical information in order to support political aims. For instance, the House of Trade founded in 1503 by Isabel of Castile produced maps to use as evidence of Spanish sovereignty in their territorial disputes with other European powers.

The maritime technologies used by Europeans during the sixteenth, seventeenth, and eighteenth centuries, despite their modest and unsophisticated appearance, were key tools in the process of empire construction. They were in fact progressively incorporated in the institutional structures developed by the imperial powers from the sixteenth century onwards. The importance of these technologies was related to the enormous maritime distances that had to be covered to connect Europe with its overseas territories. Consequently, they served four purposes: first, safer navigation; second, the accumulation and exploitation of astronomical, geographical and cartographic data; third, the creation of inventories and maps of territories discovered and conquered; and finally, the support of elaborate (and problematic) scientific arguments demonstrating Europeans' right to possess non-European territories.

—*Marcelo Fabián Figueroa*

Bibliography

- Adas, Michael, ed. *Technology and European Overseas Enterprise: Diffusion, Adaptation and Adoption. An Expanding World, the European Impact on World History, 1450–1800*, vol. 7. Brookfield, VT: Variorum Ashgate Publishing, 1996.
- Chaunu, Pierre. *European Expansion in the Later Middle Ages*. Edited by Richard Vaughan. Translated by Katharine Bertram. The Netherlands: North-Holland Publishing Company, 1979.
- Peck, Douglas T. "Theory versus Practical Application in the History of Early Ocean Navigation." *Terrae Incognitae* 34 (2002): 46–59.
- Storey, William K. ed. *Scientific Aspects of European Expansion. An Expanding World, the European Impact on World History, 1450–1800*, vol. 6. Brookfield, VT: Variorum Ashgate Publishing, 1996.
- Verlinden, Charles. "The Transfer of Colonial Techniques from the Mediterranean to the Atlantic." In Felipe Fernández-Armesto, ed., *The European Opportunity. An Expanding World, the European Impact on World History, 1450–1800*, vol. 2. Brookfield, VT: Variorum Ashgate Publishing, 1995.

Military Technologies on the Habsburg-Ottoman Frontier during the Sixteenth and Seventeenth Centuries

For 200 years, the Habsburg-Ottoman frontier was the site of nearly constant low-level conflict between the two empires. Periods between declared wars were marked by cross-border raids by irregular forces on both sides. Local units adopted firearms as their main weapons, along with guerrilla tactics that stressed stealth, individual initiative, and ruthlessness. The border itself was marked by fortifications that ranged from cutting-edge architecture to primitive fortifications that provided forward-operating bases for raiding units over the longest frontier of the time in Europe.

In the early sixteenth century, the Ottomans continued their expansion against the ineffective state of Hungary. In 1521 they captured the major fortress of Belgrade. Five years later the Battle of Mohacs destroyed Hungary's ruling dynasty and armed forces. Most of Hungary, Croatia, and Slovenia were overrun by the Ottomans, while the Habsburgs took the rest. The border between the two empires was approximately 620 miles (1,000 kilometers) long, stretching from the Adriatic Sea to Transylvania. To stabilize the situation, the Habsburgs hired thousands of mercenaries to secure the border. The cost quickly proved excessive, so they resurrected the Roman practice of military colonies. Groups of Greek Orthodox refugees, along with Serbs and Croats, were settled along the frontier. In return for land, religious freedom, and exemption from taxes, the settlers promised military service. Only a portion of the local residents served at a time unless Ottoman troops were on the move. The others cared for

the families of those on duty. These settlers developed into a class of military professionals known as *grenzers* (borderers). Approximately 20,000 *grenzers* and mercenaries guarded the long frontier at any one time. The first standing Habsburg army did not come into existence until 1598, when three permanent regiments were organized to serve on the military frontier.

The military frontier became a sort of no-man's land, with virtually no commerce or industry. Unlike other Habsburg territories, a military administration, not a civil government, controlled the frontier zones. Many small fortifications were built to control roads and trails across the border. Over 100 large and medium fortifications were also constructed along major routes. The frontier was divided into six geographical zones, each with a general responsible for maintaining the defenses and controlling the local forces. During the second half of the sixteenth century, Italian architects were hired to design modern fortifications that were intended to mount large numbers of cannons and could withstand artillery fire. The larger fortifications were normally garrisoned by mercenary troops who were trained to fight in the open in large formations. In contrast, the *grenzers* specialized in raiding and individual combat. They learned to take advantage of the terrain to protect themselves and to approach an enemy without being seen. While most European field armies used a combination of pikes and matchlocks, these irregular troops were armed mostly with small-caliber muskets. They specialized in ambushes and never tried to fight in formations.

While most of the Habsburg soldiers were infantry, some groups of cavalry were also raised, particularly in Hungary. These were the hussars, whose name came from the Hungarian term for “20.” In theory, every twentieth man in the frontier districts served in the light cavalry units. They were based upon the Ottoman *sipahi*. Both types of units traveled fast and excelled in scouting and raiding missions. Like their *grenzer* brethren, the hussars earned a reputation for wild attacks, ruthlessness, and bravery. They rarely tried to fight attackers who were better armed but instead retreated and used their mobility to strike when conditions were more favorable.

THE HUSSARS

By 1702, the regular Habsburg army included eight regiments of hussars. Their unique and colorful uniforms made them stand out from other cavalry. The hussar wore a tall fur cap or felt shako, as in this picture. A bag of colored cloth hung down from one side. Light boots, long tight pants, and a tight-fitting tunic known as a dolman were always worn. The most distinctive article of the hussar uniform was the fur-lined pelisse, or outer jacket. It was normally worn across the back while slung from the shoulders, as in this picture, or with the left arm through the sleeve and the pelisse hanging down to cover the left side of the body.

—Timothy J. Watts



A Hussar on Horseback by Bernardo Bellotto, 1773. (Kunsthistorisches Museum, Vienna, Austria/The Bridgeman Art Library)

The Ottomans adopted similar tactics to defend their side of the border. They constructed fortifications or renovated ones taken from the Hungarians to defend important routes. Local militia forces were recruited and paid for with taxes known as *ocaklik*, paid by non-Muslim residents of the region. Provincial governors served as commanders of the local militia and were responsible for constructing defenses. Like their Christian counterparts, the Muslim militia ordinarily operated as irregulars, using firearms as their main weapons. During a major campaign, however, such as the Ottoman attack on Vienna in 1683, local militia would form a significant part of the invading Muslim army.

Both Christian and Muslim forces engaged in raiding across the border even in times of peace. Because of the length of the frontier, small groups could easily slip across. If they did, defenders would try to track them and intercept them before they could escape with their booty. Both sides regularly looted, burned, and murdered inhabitants on the other side. Prisoners were rarely taken: grenzers and Muslim militia could expect to be killed out of hand.

During the Thirty Years' War (1618–1648), grenzers were hired by the Habsburg rulers to serve in Germany. The grenzers' reputation quickly terrified both friends and foes. By the beginning of the eighteenth century, the irregular infantry and hussars had a considerable impact on other European armies. Their skill in scouting, ambushes, and raids on more regular forces led European generals to form similar light infantry and cavalry units. Until the French Revolution, these specialized units played a role that regular infantry and cavalry could not.

During the late sixteenth century, both armies recognized the need for more soldiers armed with firearms. Although the janissaries had largely abandoned the bow decades before, many Ottoman auxiliary soldiers had retained their traditional weapons. In contrast, Habsburg infantry followed the Spanish example of increased numbers of soldiers with matchlocks mixed with pikemen. Habsburg formations evolved from rectangular blocks to thinner lines, allowing more soldiers to fire simultaneously. More numbers of soldiers were also recruited by the Habsburgs, creating larger armies. During the Fifteen Years' War (1591–1606), Ottoman commanders gratefully welcomed European deserters trained with firearms from Habsburg armies.

The seventeenth-century development of tactics based on firepower instead of charges to settle a battle with personal weapons favored the Habsburgs. During the second half of the century, Habsburg armies included many veterans of the Thirty Years' War. Habsburg armies also recognized the need for intensive drill and training to successfully carry out these tactics. By the end of the period, Habsburg armies had achieved a significant advantage over their Ottoman opponents.

—Timothy J. Watts

Bibliography

- Hickok, Michael Robert. *Ottoman Military Administration in Eighteenth-Century Bosnia*. New York: Brill, 1997.
- Hochedlinger, Michael. *Austria's Wars of Emergence: War, State and Society in the Habsburg Monarchy, 1683–1797*. New York: Longman, 2003.
- Rothenberg, Gunther Erich. *The Austrian Military Border in Croatia, 1522–1747*. Urbana: University of Illinois Press, 1960.

■ Introduction: Innovations in Medicine

Medicine in the beginning of the early modern period was practiced in a number of learned traditions by physicians conversant with classical texts ranging from Hippocrates in the West to the Yellow Emperor's Classic of Internal Medicine in China. Medicine

was also practiced on a far more empirical and in many cases more effective manner by a legion of healers, bonesetters, and midwives.

Cultural traditions dictated many of the differences between medicine as practiced around the world. The East Asian idea of the body as

dominated by energy flows differed from the Western tradition of examining the body's organs in terms of functionality. However, medical ideas and practices, particularly pharmacology, were able to travel across cultures. The European explorers and conquerors of the New World drew on Native American expertise in the uses of America's healing plants. One of these plants, quinine, became the first successful treatment for malaria, a disease that had stymied European physicians and healers for centuries. European physicians in India consulted with Hindu Ayurvedic practitioners on Indian drugs. Smallpox inoculation reached Europe and colonial America from different routes, including the Islamic Middle East and Africa. By the eighteenth century, European medicine was attracting growing interest among Japanese physicians.

The European medical tradition was the one undergoing the most revolutionary changes in the early modern period. These changes were in part driven by European expansion that led to the introduction of new drugs such as quinine and even tobacco, touted as a wonder cure by many of its promoters in the sixteenth century. However, intellectual developments indigenous to the European tradition also affected medical ideas, particularly in the area of anatomy and physiology. In the fifteenth century European shared with Islamic medicine a common foundation in the works of the classical Greek physicians Hippocrates and Galen and the subsequent Arab writers such as Ibn Sina, known in the West as Avicenna. European medical writers in the Middle Ages had added to the classical tradition but had not fundamentally revised it, and the works of the ancients and Avicenna remained at the core of the European medical curriculum.

In the Renaissance, humanistic researchers in Europe rediscovered a variety of hitherto lost classical medical texts as well as issuing improved editions of the established Greek canon. The revival of classical medicine was followed by innovations in the understanding of the body, most notably the English physician William Harvey's description of the circulation of the blood, generally viewed as the most important innovation in theoretical medicine in the early modern period. The "scientific revolution," with its emphasis on overthrowing ancient authority,

helped discredit the classical medical tradition. New technologies, such as the microscope, also brought new knowledge to physicians. By the eighteenth century the classical tradition had been left behind in most European medical schools, replaced by a variety of medical philosophies. However, advances in medical theory often had little effect on medical practice, and medicine did not grow remarkably more effective in treating disease or prolonging the life span in this period.

—William E. Burns

Medicine—Physiology and Anatomy

The early modern period was marked by radical changes and innovations in the understanding of the human body's structure and processes. In the Middle Ages, the dominant understanding of the body had rested ultimately on the ancient Greek physician Galen (129–ca. 199). Galen's many surviving works, with numerous commentaries and derivative works by Greek, Arab, and Latin physicians, dominated the medical school curriculum. Anatomy was a low-status discipline, often associated with surgeons rather than physicians. The chairs of anatomy established at several universities in the sixteenth century initially had less prestige than the traditional medical chairs. The revival of interest in anatomy among physicians dated from the fifteenth century but really took off with the publication of a Latin translation of Galen's recently discovered *On Anatomical Procedures* in 1531.

The medical schools of northern Italy and particularly the University of Padua in the territory of the Venetian Republic were centers of anatomical research. The lavishly illustrated *Of the Fabric of the Human Body* (1543) by the Flemish Paduan Andreas Vesalius (1514–1564) laid the foundation for subsequent anatomists. Like Galen's anatomical work, which Vesalius had worked with closely as a translator, it was presented in a logical order, from the skeleton outward, as opposed to medieval anatomy texts, which presented their material from the outside in, the order in which a dissector encountered human organs. Vesalius's study revealed that Galen and his ancient colleagues had made many

► THE REDISCOVERY OF THE CLITORIS

Ancient medical writers' awareness of the clitoris had been lost during the Middle Ages. The French physician Charles Estienne (ca.1505–1564) was the first modern anatomist to describe it, in his *Dissection of the Parts of the Human Body* (1545), associating it with urination. His description had no discernible influence, and priority in the “discovery” would be keenly contested by two Italian professors. Gabriel Fallopio described it in a work written around 1550 but not published until 1561, *Observationes anatomicae* (*Anatomical Observations*). Realdo Colombo (1510–1559) took advantage of the gap to claim the discovery in *De Re Anatomica* (1559). Contemporaries generally judged Fallopio as the discoverer, but Colombo innovated by emphasizing the clitoris's role in female sexual pleasure. Despite the publicity given to the priority dispute, it took some time for the difference between the clitoris and the labia to become fully established in the medical literature.

The establishment of the clitoris as a distinct organ of sexual pleasure tremendously affected the way male medical specialists thought about female sexuality, particularly sex between women. Women who penetrated other women were increasingly defined as monstrous, possessing freakishly enlarged clitorises. Surgical removal was recommended, and sometimes practiced, to “cure” this behavior.

—William E. Burns

errors, partly because they had been forbidden to dissect the human body and had to extrapolate from animals. Galen, relying on the evidence of dogs, claimed that the human liver had five lobes when in fact it has none.

Although much subsequent work built on Vesalius, emphasis shifted from his Galenic preoccupation with structure to the function of body parts, a shift inspired by the biological works of Aristotle. Bartolomeo Eustachio (d. 1574), a Roman professor, was one of the first to write anatomical monographs on particular organs and is the namesake of the Eustachian tubes of the ear. Two who followed Vesalius as professors at Padua's medical school were Gabriele Fallopio (1523–1562), the first to describe what became known as the Fallopian tubes, and

Girolamo Fabrici, known as Fabricius of Acquapendente (1533–1619), the first to describe the valves of the veins and the teacher of English physician William Harvey (1578–1657).

The path of the blood through the body was one of the oldest problems in medicine. Galenists thought that venous blood originating in the liver and carried in the veins carried nourishment. The heartbeat powered the movement of some venous blood from the liver to the heart via the vena cava. This blood was combined with air in the heart; it was combined with air to form arterial blood, which carried vitality through the body powered by the pumping of the arteries themselves in synchronization with the heart. The problems for Galenists were how the venous blood crossed from the right ventricle of the heart to the left and how air got from the lungs to the heart. Galen had theorized that venous blood seeped through tiny pores in the wall separating the ventricles, and the pulmonary vein carried air from the lungs to the left ventricle, returning vapors to be exhaled.

Early modern anatomists began to chip away at this picture. Vesalius questioned the pores of the heart and the role of the vena cava. The pugnacious Realdo Colombo (1510–1559), a rival of Vesalius at Padua, described the “lesser” or pulmonary circulation of blood between the heart and lungs in his *De Re Anatomica* (*On Anatomy*), published in 1559. Fabricius argued that the valves kept the body's lower extremities from being flooded with blood. Harvey's *De Motu Cordis* (*Of the Motion of the Heart*), published in 1628, set forth a complete theory whereby all the blood, rather than a portion of it, was transformed from venous to arterial via the pulmonary circulation and whereby the heart, a muscle that acted in the body as a pump more active in contraction than dilation, drove the blood through the system of arteries and veins, a single system centered on the heart rather than Galen's dual heart-liver system. As an Aristotelian, Harvey viewed the heart as more important than the liver, and as an anatomist, he noted the vast quantities of blood that circulated from each heartbeat, far more than the liver could replenish. Harvey's theory was bitterly rejected by Galenists at conservative medical faculties like the University of Paris. However, in the

long run Harvey's theory proved fatal to Galenic physiology, which most medical theorists abandoned by the end of the seventeenth century. The principal circulatory problem that Harvey had left unsolved—how the arterial blood circulated back into the veins as venous blood—was solved by the Bologna professor and pioneering microscopic anatomist Marcello Malpighi's (1628–1694) observation of the capillaries in the lungs of a frog, described in his *De Pulmonibus (On the Lungs)*, published 1661.

The theoretical implications of the circulation were unclear. Harvey himself believed that blood carried a spirit endowing the body with life. However, René Descartes interpreted it in a mechanical way, an interpretation followed by the influential school of iatromechanists (medical mechanists), who extended mechanical interpretation to other physiological processes. Prominent iatromechanists included the scientist Giovanni Borelli (1608–1678), who studied the workings of the muscles; the physician Giorgio Baglivi (1668–1707), who compared the body to a windup mechanical doll; and the Leiden medical professor Herman Boerhaave (1668–1738), perhaps the most influential physician of the eighteenth century. Seventeenth-century anatomy spread well beyond Italy. The Danish scientist Nicholas Steno discovered the duct of the parotid gland, Steno's duct. England's "Oxford Physiologists," including Richard Lower (1631–1691) and John Mayow (1645–1679), carried on Harvey's work, investigating blood circulation and respiration and identifying the redness of blood with its exposure in the lungs to "nitro-aerial" particles in the air. Several investigators studied the glands, a focus of great interest in the late seventeenth century. The English physician Thomas Wharton's (1614–1673) *Adenographia* (1656) was the first complete treatment of the human glandular system.

—William E. Burns

Bibliography

- Cunningham, Andrew. *The Anatomical Renaissance: The Resurrection of the Anatomical Projects of the Ancients*. Aldershot, UK: Scholar, 1997.
- French, Roger. *William Harvey's Natural Philosophy*. Cambridge and New York: Cambridge University Press, 1994.

O'Malley, Charles Donald. *Andreas Vesalius of Brussels, 1514–1564*. Berkeley and Los Angeles: University of California Press, 1964.

Medicine—Pharmacology

The European pharmacopeia increased greatly during the early modern period. The rapid increase in the amount of available drugs was driven by changes in medical theory, notably Paracelsianism, and European expansion.

Philip Theophrastus Bombast von Hohenheim, known as Paracelsus (1493–1541), a German-Swiss physician and theologian, was an extremely pugnacious personality who denounced professors and physicians as ignorant and greedy frauds and advocated learning from peasants, women, and unlearned medical practitioners. Paracelsus attacked the dominant medical tradition as inaccurate and useless and advocated direct observation rather than reading old books. Late-sixteenth-century writers turned Paracelsus's chaotic writings into a system, known as Paracelsianism. Paracelsian medical writers denied the traditional theory that the body could be made healthy by balancing its humors and proclaimed chemistry as the foundation for all medicine. Like other alchemy-influenced chemical physicians, they argued that more effective medicines could be created by alchemical refining and distilling of the herbs used by conventional physicians, while many traditional physicians were endorsing "simples," parts of plants used in their basically natural form. Paracelsians were divided on many issues, and university-educated Paracelsians denounced unlearned Paracelsians as unqualified or fraudulent. There were also divisions between those who embraced the magical side of Paracelsus's legacy and those who spurned it. Europe's medical establishment slowly became more tolerant of chemical medicines. Seventeenth-century Paracelsianism lost much of its controversial nature as well as its identity as an independent movement, blending into new systems of chemical medicine and chemical philosophy.

The expansion of the pharmaceutical repertoire continued a trend from the Middle Ages. European apothecaries had long sold drugs from other parts of the world. At the beginning of this

➤ JAN BONTEKOE, THE TEA MAN

The seventeenth-century Dutch chemical physician Jan Bontekoe was the greatest promoter of the health benefits of an Asian wonder drug recently arrived in Europe, tea. (Bontekoe was a strong believer in the medical virtues of exotic substances; he also endorsed chocolate, opium, tobacco, and coffee.) The earliest evidence of widespread tea drinking in Europe comes from the middle of the century. Bontekoe's *Tractat van het Excellensie kruid Thee* (Treatise on the Excellence of Tea, 1678) claimed that tea drinking had cured him of kidney stones and bloody urine. He recommended against drinking strong tea with sugar in favor of numerous cups of weak tea, unsweetened, although a little milk was permissible. Bontekoe recommended as many as 12 cups of tea after dinner and suggested that for tough cases as many as 200 cups a day might be necessary. Bontekoe explained the healthful action of tea by its ability to "thin" blood that had grown thick and cold. Tea was also an alkali, which counteracted harmful acids. He explained tea's helpfulness against dysentery by its ability to counteract damaging acids introduced into the stomach by excessive consumption of fats, vinegar, and wine. He dismissed rumors that tea caused falling sickness, impotence, and barrenness.

—William E. Burns

period Venice was the great drug mart of Europe due to its leading role in Middle Eastern trade, particularly important because much of the pharmaceutical literature was of Arabic origin. The increased ease of transport caused by the Portuguese circumnavigation of Africa in 1498 added to the volume of exotic medicines from India and farther east while eventually marginalizing Venice. Amsterdam would replace it as the great center of exotic drugs by the seventeenth century.

Many new products from Africa, Asia, and the Americas were first promoted as healthful drugs. Powdered Egyptian mummy had a reputation as a cure-all. Tobacco from America was originally promoted in Europe for its alleged health-giving properties. The Americas contributed several new medicines that became very

popular. The Andean tree bark called guaiac, thought to cure the new disease syphilis, was being imported into Europe by the early sixteenth century. The other major American pharmaceutical innovation was the bark of the cinchona plant, introduced by the Jesuits (hence the term "Jesuit's bark") in the early seventeenth century; it was used for the treatment of fevers and was particularly effective against malaria, which plagued the Jesuits and other inhabitants of Rome. Modern quinine is derived from cinchona. In both cases Europeans learned of the medical properties of the substance from the American natives, the usual pattern in exotic pharmacological research. There were also efforts to acclimate foreign medical plants in Europe, often spearheaded by the botanical gardens associated with university medical schools.

Paracelsianism and the increased uses of the new drugs were in many ways opposed movements. A key Paracelsian tenet was that local bodies were best cured by local drugs, although this belief was not restricted to Paracelsians. Another common belief was that diseases were best cured by plants originating from the same area as the disease itself, one reason for the popularity of guaiac as a cure for syphilis, a disease thought to be of American origin itself. Paracelsians and others looked with suspicion on the classical and Arabic pharmacopoeia because its medicines were suited for Mediterranean bodies rather than those from northern European countries where Paracelsianism was strongest. They also frowned upon the new drugs from Asia and the Americas. Much pharmaceutical literature had a strongly nationalistic cast, boasting of the medical superiority of local herbs over foreign spices. Paracelsians and other localist practitioners were the driving force behind much local botany done with the hope of identifying healthful plants.

This new medical knowledge, along with older ideas, was embodied in pharmacopoeias: lists of authorized medicines, the ways to prepare them, and their uses. These pharmacopoeias were usually the creation of state-sponsored physicians or physicians' organizations. The creation and revision of a pharmacopoeia was often keenly contested by physicians and apothecaries of different schools aiming to shape medical practice to their desired end.

The apothecaries, one of the three organized branches of medicine, along with the physicians and surgeons were at the center of changes in pharmacology. Unlike physicians, apothecaries were usually not educated in the medical theory taught in universities, whether Paracelsian or traditional, and learned their craft by apprenticeship. Apothecaries were government regulated and were often treated with suspicion, as it was believed that some dealt in poisons. Apothecaries, like other medical practitioners, quarreled with physicians. Physicians argued that they should regulate the apothecaries' guilds and that apothecaries should be forbidden to give medical advice. Apothecaries claimed that physicians were infringing on the apothecaries' monopoly of drug selling. On the other flank, apothecaries had to defend their monopoly over specifically medical substances from grocers and the wandering vendors of unlicensed medicines known as charlatans. (Italians dominated this profession, hence the spread of the Italian *ciarlatani* into other European languages.) Other herbal practitioners included housewives, expected to make up simple herbal recipes for their families, and wise women in villages. Their practice was much less affected by scientific change than was that of the commercial apothecary, however.

Some apothecaries innovated in chemical medicine; the German alchemist and apothecary Johann Rudolf Glauber (1604–1670) devised several antimony-based medicines. The Society of Apothecaries of London engaged in large-scale medical manufacture with a laboratory and a joint-stock company beginning in 1682. Apothecaries' organizations also ran physic gardens, growing medical plants for commercial use. Like other medical professionals, apothecaries contributed to medical literature by writing on their own professions. Some also accumulated pharmaceutical museums, like the Italian apothecary Francesco Calzolari (1521–1600) whose museum included the unicorn's horns thought to cure poisoning.

—William E. Burns

Bibliography

Cook, Harold J. *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age*. New Haven, CT, and London: Yale University Press, 2007.

Cooper, Alix. *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe*. Cambridge: Cambridge University Press, 2007.

Debus, Allen G. *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*. 2 vols. New York: Science History Publications, 1977.

Kremers, Edward, and George Urdang. *Kremers and Urdang's History of Pharmacy*. 4th edition, revised by Glenn Sonnedeker. Philadelphia: Lippincott, 1976.

Medicine in Islam

Medicine in the early modern Islamic world continued to be based on the classical tradition of the ancient Greeks Hippocrates (fifth century BCE) and Galen (129–210 CE) as carried on, expanded, and reinterpreted by the great medieval Muslim physicians, such as Muhammad Ibn Zakkariya Al Razi (d. ca. 925) and Abu Ali al-Husayn Ibn Sina (980–1037). This medical literature, mostly in Arabic and Persian, was complemented by an emerging literature in Ottoman Turkish and other younger Islamic languages. The Galenist approach was holistic, focused on maintaining or restoring health rather than curing specific diseases. A healthy body was one that balanced the four humors: yellow bile, black bile, phlegm, and blood. Diet was viewed as particularly important for maintaining balance and overall health, and there was an extensive literature drawing from indigenous as well as Greek sources on the health benefits of different foods. Early modern Muslims also viewed health as having an important spiritual dimension in that the health of the body was dependent on the health of the soul. The ideal physician was a “wise man” rather than merely a skilled professional.

In addition to this learned medicine of Greek origin, there was a textual medicine indigenous to Islam, the so-called Medicine of the Prophet. The Medicine of the Prophet was a systematization of Quranic verses and *badith*, or sayings attributed to Islam's founder Muhammad, related to medical issues. The Medicine of the Prophet was the first text studied by many Muslim medical students, but it dealt with a limited range of issues and did not provide a theoretical framework. Commentators on prophetic medicine

➤ JOSEPH DE LA BROSSE, *PHARMACOPEIA PERSICA*

Although the most famous transfer of Islamic medical knowledge to Europe was the introduction of smallpox inoculation in the eighteenth century, there was a long-standing European interest in the drugs to be found in the geographically vast world of Islam. One who revealed Islamic pharmacology to Europeans was the French Discalced Carmelite friar Joseph de la Brosse (1636–1697), also known by the name he adopted on entering the order, Ange de Saint Joseph. De la Brosse spent many years in the Persian and Ottoman empires, serving as prior of his order in the Persian cities of Ispahan and Basra. After his recall to Rome in 1679, his Latin *Pharmacopeia Persica* was published in Paris in 1681. It was largely based on an earlier work by Persian physician Mozaffar ibn Mohammad Hosayni Sefai (d. 1556). In addition to discussing remedies derived from plants, *Pharmacopeia Persica* also contains the first European medical description of trehala, an edible substance derived from the cocoons of a species of Middle Eastern beetles and used to treat coughs and pulmonary diseases. De la Brosse also published a Persian grammar, *Gazophylacium lingua Persarum* (1684).

—William E. Burns

such as the Egyptian scholar Jalal al-Din al-Suyuti (d. 1505), author of *The Proper Road and the Thirst-Quenching Spring of Prophetic Medicine*, often used a Galenic framework to present prophetic medical injunctions. Suyuti's commentary was widely distributed through the Islamic world as far as India. Shia Muslims also employed the Medicine of the Prophet but supplemented it with the medical sayings of the early Shia imams. The Safavid Shia theologian Muhammad Baqir al-Majlisi (d. 1698) wrote a voluminous commentary on prophetic medicine that incorporated several Greek ideas as well.

The influence of Western-learned medicine on Islamic medicine was still weak in this period and was mostly found in the Ottoman empire, the Islamic society with the closest connection to the West. Like the Europeans, sixteenth-century Islamic physicians faced the challenge of the “new disease” of syphilis. The first treatise on the subject from a Muslim physician dates from 1569.

The author was Imad al-Din Mas'ud Shirazi, a physician at the hospital in the Persian city of Mashhad. Shirazi recommended a plant called China root as a treatment for the disease, the same remedy recommended by many European authorities. The new medicine of German physician Paracelsus (1493–1541) and his disciples influenced Ottoman medicine through the work of Salih ibn Nasrullah (d. 1669) and subsequent practitioners of “chemical medicine” or “new medicine.” Ottoman Paracelsians, however, did not always clearly distinguish between the new chemical medicine and the old humoral medicine. In 1768 an Ottoman court physician, Subhi-Zade ‘Abd al-Aziz, made two translations of treatises by Dutch medical mechanist Herman Boerhaave (1668–1738) at the behest of Sultan Mustafa III. Like the earlier Ottoman Paracelsians, the sultan's physician tried to integrate the new ideas with the tradition of Galenic humoral medicine.

Learned medicine was complemented by a variety of folkloristic medical beliefs, such as the inoculation for smallpox. Many Muslims and their Christian, Jewish, and Zoroastrian neighbors believed that disease could be caused by the evil eye or by wicked spirits. There were many religious practices recommended for the sick person. These beliefs are even found in learned texts such as al-Suyuti's. Physicians were outnumbered by a range of “unlearned” medical professionals, including surgeons, midwives, and circumcisers. Surgeons mostly dealt with external problems such as wounds, boils, and abscesses. They were considered practitioners of a craft rather than “wise men” like the physician, and the Islamic literature in surgery is tiny compared to the voluminous literature aimed at physicians.

Although Ottoman sultan Suleiman I (r. 1520–1566) founded a medical madrasa as part of Istanbul's Suleimaniye complex, which he hoped to make the intellectual center of the empire, the training of physicians in the Islamic world remained based on an informal system of apprenticeship or training in hospitals. The profession of physician was often passed down from father to son. Physicians and surgeons were becoming increasingly professionalized in this period. The Ottoman state was a major employer of physicians and surgeons, both in the court hierarchy and in the military. The sultan's

head physician, who was usually recruited from those with expertise in both medicine and Islamic law, was regarded as the head of the medical profession in the empire.

Hospitals remained functioning throughout the early modern period. Hospitals were founded by Islamic rulers and the very wealthy as acts of charity, one of the duties of Islam. They were supported by waqfs (religious endowments) that provided a dedicated income stream enabling some to last for centuries. Great medieval hospitals like Cairo's al-Mansur, founded in 1284 by the Mamluk sultan Qalawun, survived the entire early modern period and were joined by new hospitals founded by early modern Islamic rulers such as the hospital in Edirne founded by Ottoman sultan Bayezid II (r. 1481–1512). Hospital foundations were seriously declining by the eighteenth century, however. Hospitals had an educational function, providing a place for young physicians to be trained. Although dissection was strictly forbidden in Islam, the hospital provided a place for physicians to gain clinical experience. Some hospitals included lecture rooms and libraries, very important since medical education revolved around mastering the classical medical texts. Islamic communities also included mental hospitals. However, most hospitals were located in cities when Islamic society was predominantly rural, and the number of hospitals was small in relation to the overall population. Hospital care for the physically and mentally sick never became the norm in early modern Islamic society.

—William E. Burns

Bibliography

- Elgood, Cyril. *Safavid Medical Practice: Or, the Practice of Medicine, Surgery and Gynaecology in Persia between 1500 A. D. and 1750 A. D.* London: Luzac, 1970.
- Mossensohn, Miri Shefer. *Ottoman Medicine: Healing and Medical Institutions, 1500–1700.* Albany: SUNY Press, 2009.

Medicine in Mesoamerica

Like other aspects of the culture of the people of the valley of Mexico before the Spanish conquest in the early sixteenth century, much of their medical knowledge has been lost. However,

medicine, particularly pharmacology, was one of the areas of native knowledge that Europeans had the most interest in, and there are several texts and documents preserved on the subject. Distinguishing between genuine indigenous medicine and European influences in postconquest documents remains a challenge for scholars.

Mesoamericans were a relatively healthy population by premodern standards, as they had less vulnerability to famine and epidemic diseases than similar Old World peoples. However, they faced other diseases such as rheumatism, gout, gastrointestinal and respiratory infections, sexually transmitted diseases, and many other medical problems.

The dominant people of Mexico in the late fifteenth century, the Mexica, or Aztecs, viewed the body as a microcosm of the universe, with the heart playing the role of the sun, the diaphragm the earth, and the skull the vault of heaven. Organs played similar functions in the microcosm as their complements did in the macrocosm; the heart gave heat to the body as the sun gave heat to the earth. The genital and anal openings of the lower body and the souls of the feet connected the body to the underworld. A healthy body was conceived as one where all organs were working together harmoniously. A body in which one organ was out of balance was unhealthy.

Mesoamericans also saw the universe as spiritual and associated the body and specific organs within it with spirits. A spiritual entity called *tonalli* endowed the body with life, entering it at the moment of conception and dwelling in the top of the head. Hair was viewed as protection for the tonalli, and some grew their hair long when facing a particular danger, cutting it when the danger was over. Men, but not women, could also lose tonalli through excessive sexual intercourse. Children were particularly vulnerable to the loss of tonalli before the closing of their skulls. Tonalli could temporarily leave the body during sex, sleep, or a sudden attack of fear, and there was a risk of it not returning. Other major spirits were the *teyollia*, associated with the heart, and the *ibiyotl*, associated with the liver. Although these entities were nonmaterial, their actions were usually regarded as natural, not necessarily prompted by the actions of gods or sorcerers.

► THE BADIANUS MANUSCRIPT

One of the main sources of knowledge of Mesoamerican medicine is the *Badianus Manuscript*, an illustrated herbal with the description of 184 plants and their uses. It is also known as the *Codex Barberini*, after an early owner. It was originally compiled in Nahuatl, the language of the Mexica, by Martín de la Cruz, a native physician associated with the Franciscan College of Santa Cruz of Tlatelolco, the earliest institution of higher education in Spanish America. Cruz's work was then translated into Latin by another native, Juan Badianus. The date of the Manuscript is 1552, three decades after the Spanish conquest, and the extent to which the *Badianus Manuscript* reflects European influence remains controversial. Arranged by disease rather than by botanical consideration, it contains descriptions of treatments for epilepsy, skin diseases, wounds, coughs, diarrhea, and foot injuries, among many other medical conditions. For nosebleeds, it recommends juice from nettles mixed with salt, urine, and milk and applied to the nose. Knowledge of the *Badianus Manuscript* was lost for many years until it was rediscovered in the Vatican Library in 1929. In 1990 Pope John Paul II gave the manuscript to the government of Mexico. It is now housed in Mexico City.

—William E. Burns

Diseases were conceived of in terms of hot and cold. Different levels of heat were associated with the different organs of the body. The heart was hotter than the liver, and the male organs were hotter than the female organs. Cold diseases included gout and fevers with chills, while fevers without chills were hot diseases. Cold diseases, however, did not always require hot remedies.

Religion was an important part of Mesoamerican medicine. The Mexica goddess of medicine was Tzapotlatenan, originally a successful human medical practitioner deified after her death. She was a member of the Rain God complex, associated with the god Tlaloc who was viewed as responsible for many diseases. Quetzalcoatl was also considered to be knowledgeable in medicine, and some of his shrines were resorted to by the sick, hoping to be cured by prayers to the god. Ixtilton looked after the health of children.

Different gods were conceived of as having responsibility for different diseases or different aspects of the body. Punishment from the gods could cause disease, as could witches or malevolent supernatural entities. Disease was often viewed as a punishment for sin, particularly sexual sin. Adultery and homosexuality were viewed as particularly likely to bring on disease through the liver and its associated spirit, the *ihiyotl*. The remedy was confession before the goddess Tlazoteotl, the divine eater of filth, who consumed the sins of the confessor. (Tlazoteotl was also the patron goddess of midwives.) After confession, penances such as fasting or the piercing of the tongue with reeds were applied. Seemingly neutral acts such as urinating on particular plants could also result in disease. The day and time a person was born and the positions of the celestial bodies at that time influenced health as well as other aspects of her or his destiny. The day and time when an illness first manifested itself was also astrologically significant. Magical or divine attacks damaged specific organs or areas of the body—for example, a type of sorcerer called the *teyollocuani* (“heart-eater”) ate the *teyollia*, causing weakness and eventually death. Many conditions were treated with rituals, prayers, and spells. However, the same illness could be interpreted as having both natural and supernatural causes, which were not viewed as mutually exclusive.

There were a variety of medical professionals, including those chosen by Tlaloc to cure “cold” illnesses associated with that god. They were chosen by being born on a certain day or being struck by lightning. However, there were also specialists who operated on the basis of medical expertise rather than supernatural status. Both men and women practiced medicine, but there seems to have been a professional division, with men handling wounds, broken bones, and nasal surgery and women handling midwifery, ulcers, and ocular surgery. The frequency of war in Mesoamerican culture made the treatment of wounds particularly important. Treatment of wounds with a sap derived from the leaves of the agave plant, a natural antibiotic, was more effective than contemporary European techniques. Mesoamericans practiced some of the most advanced surgery in the world, with good control of infection even if

they lacked the theoretical framework to understand the concept. Mesoamericans also practiced trepanation, the cutting of holes into the skull, although not with the frequency with which Andeans practiced it.

Physicians were expected to have expertise in the vast Mesoamerican pharmacopeia, which employed around 2,500 plants. Usually Mesoamericans used specific plant products, rather than mixtures, to combat specific diseases. Animal substances were also used, as the tail of an opossum was believed to speed childbirth. Mineral substances were employed as well. As a metal related to the sun and thus the heart, gold was believed to be a treatment for heart pain.

—William E. Burns

Bibliography

- Cruz, Martin de la. *The Badianus Manuscript: Codex Barberini, Latin 241, Vatican Library; An Aztec Herbal of 1552*. Introduction, translation, and annotations by Emily Walcott Emmart. Baltimore: Johns Hopkins University Press, 1940.
- Ortiz de Motellano, Bernard R. *Aztec Medicine, Health and Nutrition*. New Brunswick, NJ, and London: Rutgers University Press, 1990.
- Viesca, Carlos. "Medicine in Ancient Mesoamerica." In *Medicine across Cultures: The History and Practice of Medicine in Non-Western Cultures*, edited by Helaine Selin. Dordrecht, Netherlands: Kluwer, 2003.

Smallpox Inoculation

Smallpox was one of the most feared killers in the early modern world, and even survivors frequently bore ugly scars, or pocks. The eighteenth century saw the first real advances in its treatment in Europe with the introduction of inoculation. Variolation, the infecting of a healthy person with a mild smallpox to create immunity, had a long history in Asia and Africa and was mentioned in scattered European publications beginning in the seventeenth century. The method of inoculation was done by scratching the skin with a needle to expose blood, and then a thread laced with smallpox would be introduced inside the wound. This method usually caused the patient to fall ill with the disease, but it was not as virulent. Accounts of inoculation from Istanbul appeared in *Philosophical Transactions*, the

journal of Britain's Royal Society, in 1714 and 1716. One of the main sources for the introduction of the actual practice to Europe, however, was Lady Mary Wortley Montagu (1689–1762). Lady Montagu was the wife of the British ambassador to the Ottoman empire, Edward Wortley Montagu (1678–1761), and had observed the practice among Turkish peasant women. On her return to England in 1721, she had her five-year-old daughter immunized by the surgeon Charles Maitland (1677–1748). Montagu responded to attacks on inoculation in a short journalistic piece, "A Plain Account of the Inoculating of the Small Pox by a Turkey Merchant," published in the London newspaper *The Flying Post* in 1722. Physician and collector Sir Hans Sloane (1660–1753) was also working to promote inoculation in England. Inoculation spread quickly in Britain and more slowly on the European continent. George, Prince of Wales, the future George II (1683–1760), helped spread the practice by having two of his daughters inoculated, setting a precedent for German and Russian royalty who would also encourage inoculation by subjecting themselves and their families to it. For many Enlightenment thinkers, inoculation became a symbol of scientific progress.

In Boston, Puritan minister and Fellow of the Royal Society Cotton Mather (1663–1728), who had lost wives and children to smallpox, was the leading champion of inoculation. He worked primarily from the reports in *Philosophical Transactions* and descriptions of African practices from his slave Onesimus. Mather and physician Zabdiel Boylston (1676–1766) began to openly promote inoculation during a smallpox epidemic in Boston in 1721. Mather and other leading Boston ministers who followed his lead to support the procedure were personally attacked by people who thought it too risky. At their head was the anti-Mather journalist James Franklin (1697–1735), proprietor of the *New England Courant*, Boston's independent newspaper, assisted by his younger brother and apprentice Benjamin Franklin (1706–1790). Inoculation was also believed to be an impious attempt to meddle with the will of God, who employed the disease to chastise sinners. While trying to cure smallpox or any other disease that God sent as a punishment was permissible, even obligatory, claiming to prevent disease

► CATHERINE THE GREAT AND SMALLPOX INOCULATION IN RUSSIA

Catherine the Great (r. 1762–1796) of Russia's fear of smallpox was sharpened by the death of Anna Sheremeteva, the fiancée of Catherine's minister Count Nikita Ivanovich Panin (1718–1783), on May 17, 1768. Catherine was inoculated on October 12, 1768, by an English surgeon, Thomas Dimsdale (1712–1800). Dimsdale was a successful inoculator who had written a book on the subject and was brought to Russia specifically for the purpose of inoculating Catherine. The operation was a complete success, and Dimsdale was rewarded with 10,000 pounds, an annual pension of 500 pounds, the rank of councillor of state, and a Russian barony. The young boy from whom the infectious

material was taken, Alexander Markov, was also ennobled. Catherine's son the Grand Duke Paul (1754–1801) was inoculated on November 2, also successfully. These successes were widely publicized, as Catherine's goal was to promote inoculation to her subjects as safe and healthful. The monarch's example began a fad among courtiers, some of whom were inoculated by matter from Catherine's and her son's pustules, assimilating the new practice to the traditional role of the monarch as healer. Catherine also established an inoculation house in Petersburg where Russians could be inoculated for free.

—William E. Burns

was in the mind of many an attempt to forestall God. Boston Christians also found inoculation suspect as an Islamic practice. Franklin even linked the inoculation campaign with the earlier Salem witch-hunt, both examples of the excessive zeal, arrogance, and lack of wisdom of the clergy in general and Mather in particular. There was also secular opposition. Boston's best-educated doctor, William Douglass (1691–1752), believed that the procedure was unreliable and unsafe. These fears were founded on the fact that those inoculated still fell ill with the disease and posed a threat to spreading smallpox to others. A bomb was actually tossed into Mather's house but failed to explode. Mather believed that the Devil had taken possession of those who opposed inoculation and attacked him personally. The pamphlet controversy over inoculation went on for years, long after the end of the epidemic, as the issue became less inoculation itself than Boston ministers' claims to authority. However, when another smallpox epidemic threatened New England in 1730, even Douglass supported inoculation.

Like many medical procedures, inoculation could be done as an elaborate ritual with purges and bloodletting by a physician or quickly and cheaply by a surgeon. One dynasty of British surgeons, Robert Sutton (1707–1788) and his son Daniel (1735–1819), claimed to have devised a cheap, reliable, and effective method to inoculate 400,000 people in 30 years with a very low death rate. Inoculation was never risk-free, and

the fact that inoculated people did sometimes die of smallpox hindered its spread.

The efficacy of inoculation was also the subject of some of the earliest statistical analyses of public health. The secretary of the Royal Society, James Jurin (1684–1750), and the Yorkshire physician Thomas Nettleton (1683–1742) made empirical studies of smallpox's mortality and inoculation's effectiveness. Inoculation also led to a controversy between mathematicians Daniel Bernoulli (1700–1782) and Jean le Rond d'Alembert (1717–1783) in the 1760s over Bernoulli's assertion that probability theory endorsed taking the small risk of inoculation over the large risk of dying of smallpox. D'Alembert, who endorsed inoculation, nevertheless claimed that Bernoulli's argument was weak and based on inadequate data. D'Alembert argued that it was unrealistic to expect a person considering inoculation to treat the immediate risk of death as strictly comparable to the risk of dying of smallpox spread out over the person's remaining lifetime.

—William E. Burns

Bibliography

- Miller, Perry. *The New England Mind: From Colony to Province*. Cambridge, MA: Harvard University Press, 1953.
- Porter, Roy. *The Greatest Benefit to Mankind: A Medical History of Humanity*. London: Harper Collins, 1997.
- Rounding, Virginia. *Catherine the Great: Love, Sex and Power*. New York: St. Martin's, 2007.

Carrying Inoculation from Africa to Boston

From the earliest days of exploration and settlement, smallpox had periodically devastated the Native American population. Slave ships from Portuguese Angola and other West African ports were often blamed for bringing smallpox to the Caribbean and South America. But in 1721 Boston's Puritan minister Cotton Mather (1662–1728) struck the first major blow against smallpox (variola) in the American colonies.

Severe smallpox epidemics, often brought by ships from the West Indies, had periodically struck colonial Boston. Hundreds of colonists, many of them children, had perished in these cycles. Clergymen interpreted these visitations

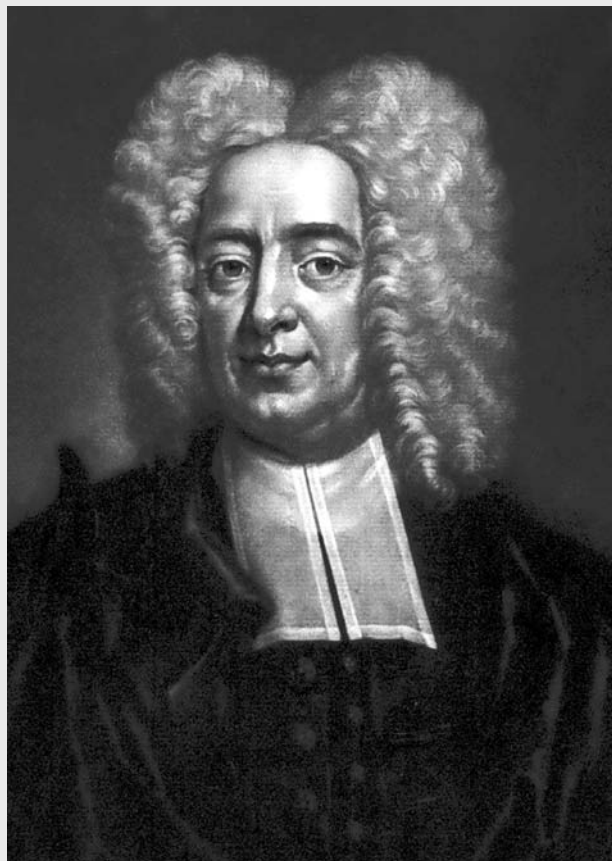
as divine judgment upon a sinful people. Quarantines, isolation, and the standard remedies of the day had little effect. Survivors, who were immune for life, were often marked by pitted scars. Pock-marked slaves were highly desirable because they were thought to pose no danger to the household.

In 1706 Mather learned from his slave Onesimus about the practice of inoculation in his African homeland. Fluid from the pustules of a natural smallpox victim was scratched into the skin of a nonimmune individual, who usually suffered a mild case leading to lifelong immunity. Mather confirmed the story with other Boston slaves and slave traders. Unbeknown to European physicians at the time, smallpox inoculation was a long-standing folk medicine practice not only in Africa but also in China and India.

► COTTON MATHER AND *THE ANGEL OF BETHESDA*

In isolated New World settlements, religious leaders, as educated men, had traditionally been called upon to provide medical advice. By 1700, larger towns such as Boston had regular medical practitioners, the majority trained by apprenticing themselves to local physicians, as well as a variety of folk healers. Massachusetts Bay Colony's Puritan theologian Cotton Mather was one who was widely read in the European medical and scientific writings of his day. Indeed, he had contemplated a career in medicine before electing to follow in the clerical footsteps of his father, Increase. Mather saw the relationship between medicine and theology as an "angelic conjunction" and did not hesitate to offer medical advice when called upon by family or acquaintances. From 1720 to 1724, he gathered his vast medical knowledge into a single manuscript titled *The Angel of Bethesda*, a reference to the biblical healing pool (John 5:1–9). Many of the 66 chapters blended theology with medicine. *The Angel* was the first medical textbook written in the American colonies but was never published in colonial Massachusetts, possibly due to opposition from the rising medical profession. The American Antiquarian Society eventually published the manuscript in 1972.

—Sandra Moss



Cotton Mather, early American Puritan leader. (Library of Congress)

In 1714 London's Royal Society published a report about the apparently safe and effective practice of inoculation in Turkey. Mather read the article and informed the Royal Society by letter about the practice among African slaves. He resolved to recommend inoculation to Boston's physicians when smallpox next struck Boston.

Smallpox arrived in April 1721 aboard HMS *Seahorse* and spread rapidly. The physicians of Boston, led by European-educated William Douglass (ca. 1691–1752), were familiar with the report from Turkey but were also aware of an unsuccessful French army trial. Worried about multiplying the epidemic already raging in the town, the physicians rejected Mather's advice. They feared that inoculation-induced smallpox was as contagious as smallpox acquired naturally through the respiratory tract. The physicians also resented a minister's meddling in medical affairs.

Mather convinced Zabdiel Boylston (1679–1766), an apprentice-trained Boston doctor well regarded for his surgical skill, to begin an inoculation trial. Boylston, who had survived smallpox in an earlier epidemic and was immune to the disease, successfully inoculated his own son and two slaves. He made a small skin incision and applied the serum from a fresh pustule, dressing the site with a cabbage leaf. But wary local officials attempted to curtail the inoculations, and suspicious townsfolk who opposed inoculation directed their anger at Boylston and Mather. In a war of words in newspapers and pamphlets, the two sides attacked one another on medical and theological grounds. Mather, who referred to smallpox as a destroying scourge, and his pastoral colleagues defended inoculation as a divine blessing and asserted that volunteers for inoculation demonstrated their faith in God. Anti-inoculationists saw the practice as a challenge to divine will. In November angry citizens flung a grenade into Mather's home, where a relative was recovering from inoculation. Mather was spared martyrdom by a faulty fuse.

Despite popular and official opposition, throughout the autumn and winter of 1721 Boylston inoculated children, servants, and leading citizens from Boston and nearby towns. By midwinter the epidemic was over. Boylston used statistics as powerful proof of the efficacy of

inoculation. Of 5,759 Bostonians (roughly half the population) who acquired smallpox naturally, 844 (15 percent) died of the disease. Of 247 people inoculated by Boylston, only 6 people (2 percent) died.

By 1722 inoculation, also called variolization, began to gain favor in Boston. In 1724 Boylston visited the Royal Society in London, where he consulted with British physicians and wrote his account of the Boston epidemic. In the decade that followed the 1721 epidemic, Douglass and other colonial physicians began to practice inoculation. Civic officials enforced strict isolation of inoculees to protect the nonimmune. Later in the century, temporary isolation hospitals were set up under the supervision of a physician who advertised his excellent safety record (usually about 1 percent mortality) and charged for his services. Groups or classes of clients were prepared for inoculation with regimens of cathartics and other medicines. After inoculation, they remained in isolation until the smallpox pustules crusted over. Inoculation began to be seen as a preventive measure even in the absence of a raging epidemic, although the procedure was never without its critics. In the face of a smallpox epidemic that threatened to destroy his army, George Washington ordered that his troops be inoculated under strict isolation conditions in the winter of 1777. Inoculation fell out of favor with Edward Jenner's introduction of the much safer cowpox vaccination at the end of the eighteenth century.

—Sandra Moss

Bibliography

- Beall, Otho T., and Richard H. Shryock. *Cotton Mather: First Significant Figure in American Medicine*. Baltimore: Johns Hopkins University Press, 1954.
- Blake, John B. "The Inoculation Controversy in Boston: 1721–1722." *New England Quarterly* 25 (1952): 489–506.
- Estes, J. Worth. *Hall Jackson and the Purple Foxglove*. Hanover, NH: University Press of New England, 1979.
- Mather, Cotton. *Diary of Cotton Mather*. American Classics. New York: Frederick Unger, 1957.
- Wilson, Ola E. *A Destroying Angel: The Conquest of Smallpox in Colonial Boston*. Boston: Houghton Mifflin, 1974.

■ Introduction: Science and Gender

Early modern European societies were marked by a strong gender hierarchy subordinating women to men, and this extended to the practice of science. Men were more literate, particularly in Latin, the international language of intellectual life, and had a virtual monopoly of higher education as both teachers and students. The institution most hospitable to professional intellectuals—the Catholic and Protestant clergy—was also male. The all-male models of the clergy and the university professoriat greatly influenced the new model of the scientific profession, with which both had a considerable overlap. Given these circumstances, it was inevitable that the new science of the scientific revolution was as dominated by men and male concerns as was the old science that was being replaced.

The ideology of the European scientific revolution often contrasted the male investigator with a personified Nature conceived as passive and feminine. The English philosopher Francis Bacon expressed this idea most vividly, also characterizing the traditional Aristotelian science of Europe as “feminine” due to its passive attitude toward nature and calling for its replacement by a “masculine” science. Bacon’s *The New Atlantis* depicted a utopia that combined organized scientific investigation with a profoundly patriarchal social and political order. Bacon even began speaking of putting nature “to the question,” that is, torture. The portrayal of the vigorous aggressive male scientist was not always linked to the struggle with female nature, however. Male investigators were also depicted as wrestling with another personification of nature, the shape-changing Greek god Proteus, who according to legend answered the questions of those who bested him.

Although the Aristotelian construction of female inferiority—women were characterized by the weaker qualities of “coldness” and “moistness” as compared to “hot, dry” males—was increasingly questioned along with much else about Aristotelian science, female inferiority itself was seldom doubted by men of the new science. Generally the tendency in the early

modern period was for scientists to emphasize women’s difference from men in contrast to the idea, drawn from the ancient authorities Aristotle and Galen, that women were “imperfect men,” defective creatures who in the womb had lacked the heat to reach the perfection of the male form.

The arenas for women to participate as creative scientists, never many, were also disappearing. The “scientific household” in which women participated as their husband’s or father’s assistants or scientific partners in an alchemical laboratory or astronomical observatory attached to a dwelling was becoming obsolete by the late seventeenth century with the rise of institutions affiliated with governments, universities, or scientific academies. Women were excluded from the new institutions of the European scientific revolution, including the new scientific academies such as England’s Royal Society and France’s Royal Academy of Sciences, and the most elite scientific periodicals. The attendance of celebrated natural philosopher and duchess Margaret Cavendish as a guest at a meeting of the Royal Society provoked great controversy, and she had no successors in the early modern period. The general trend was for women to be less active as scientists as science became more institutionalized.

However, despite these barriers many women did succeed in participating in the new science, and many more were part of its audience. Upper-class women were sometimes patrons of the sciences. Queen Christina of Sweden (1626–1689) invited French natural philosopher René Descartes (1596–1650) to Stockholm to serve as her tutor, with disastrous consequences when he died of the cold. In her later exile in Rome after her conversion to Catholicism, Christina even established a small scientific academy in Rome, the Physical-Mathematical Academy. There was also scientific activity, including experiments in the female-run salons of seventeenth-century Paris. Salon scientific culture was particularly influenced by Cartesianism.

If women were viewed with suspicion or hostility as creators of science, the situation was quite different when they assumed the role of the

audience for male displays of scientific knowledge. The interest in popularization to both men and women was one of the most dramatic differences between the science of the early enlightenment and the science of the Middle Ages and the Renaissance, which was much less public. Sometimes women were expected to receive the new knowledge as part of their professional career, as when surgeons addressed audiences of midwives on anatomy. However, by the late seventeenth century an interest in science was often considered part of the culture of cultivated women. The growing volume of scientific writing in vernacular languages, particularly French, the international language of Europe's social elite, was much more open to women than was the Latin literature. Women were frequently addressed in works of scientific popularization, most notably Bernard de Fontenelle's *Conversations on the Plurality of Worlds* (1686), which presented Cartesian science in the form of a dialogue between an older male scientist and a young noblewoman. The Italian nobleman Franco Algarotti's widely translated *Newtonianism for Ladies* (1737) took a similar approach, as did the Swiss mathematician Leonhard Euler's three-volume *Letters to a German Princess* (1768–1772). In France and to a lesser extent in England, women attended public lectures and demonstrations, and the annual *Ladies' Diary, or The Woman's Almanack*, beginning in 1704, appealed to the scientific and mathematical interests of educated Englishwomen. Women were also encouraged to identify and collect plants as an improving hobby, and some advanced to become skilled botanists. However, the growing emphasis within botany on explorations to collect plants from the far corners of the world favored males as botanists.

Women interested in the sciences, like other learned women, were also the targets of ridicule, notably in the great French comic playwright Molière's *The Learned Ladies* (1672), which satirized Cartesian salon women, and, more affectionately, in the English playwright Susannah Centlivre's *The Basset Table* (1705), which included an enthusiastic female experimentalist. Male virtuosi were also satirized for their unmanly obsession with trivialities, as Thomas Shadwell satirized Sir Nicholas Gimcrack in *The Virtuoso* (1676) and Jonathan Swift mocked the

Academy of Laputa in the third part of *Gulliver's Travels* (1726). However, women were often attacked more viciously than men, with satirists drawing on the traditional prejudice that learned women must be unchaste, unattractive, unfeminine, or bad housekeepers and mothers.

—William E. Burns

Bibliography

- Burns, William E. "A Proverb of Versatile Mutability': Proteus and Natural Knowledge in Early Modern Britain." *Sixteenth Century Journal* 23 (2001): 969–980.
- Merchant, Carolyn. *The Death of Nature: Women, Ecology and the Scientific Revolution*. San Francisco: Harper, 1980.
- Schiebinger, Londa. *The Mind Has No Sex? Women in the Origins of Modern Science*. Cambridge, MA: Harvard University Press, 1989.

Women and Learning

The fitness of women for intellectual endeavors was widely debated by both men and women in early modern Europe. Women were excluded from Europe's leading intellectual and scientific institutions, the Christian ministry and Jewish rabbinate, the medical profession, the universities of both Catholic and Protestant Europe, the Jewish yeshivas, and the new scientific academies. The rationales for these exclusions varied. The exclusion of women from religious professionalism rested on the belief that God had reserved these positions for men, a belief that few men or women challenged in the early modern period. (The one exception was Catholic religious orders, which produced a disproportionate number of women intellectuals.) Arguments for the exclusion of women from the secular learned professions also sometimes rested on the divine decree of female subordination going back to the book of Genesis but included non-religious reasons as well.

In the Middle Ages, the secular arguments for female intellectual inferiority had been linked to an Aristotelian hierarchical cosmology. Women, exhibiting the "inferior" qualities of coldness and moistness as opposed to the heat and dryness of men, were subordinate to them. The legacy of Aristotelian ideas of female subordination was a powerful one. Margaret

Cavendish (1623–1673), the most prolific female author on natural philosophy in the seventeenth century and an anti-Aristotelian, while strongly asserting her right as an individual woman to set forth her theories, in many of her works accepted the intellectual inferiority of women as a class, perhaps due to the softness of their brains.

In the Renaissance, women humanists were respected but treated as remarkable phenomena, not at all indicative of the potential of women as a class. What raised awareness of the presence of women intellectuals and scientists was the printing press and the rise of vernacular languages. Women were now able to express their ideas in a way that was not dependent on access to institutions and in languages that were not largely restricted to the male elite, as were Latin, Greek and Hebrew. However, many men continued to argue that women should avoid entering their thoughts into print. Women intellectuals were caricatured as avoiding their domestic duties. Even women intellectuals who conformed to the highest standards of Christian virtue could be looked on with suspicion, as they were playing a “public” role reserved for men and were associated with unchastity, the greatest female sin in male eyes. However, certain areas of technology and medicine were considered appropriate for women to publish on, including midwifery and household maintenance.

Renaissance Neoplatonism, which exalted the soul above the body, minimized the intellectual differences between men and women that were asserted on the Aristotelian basis of woman’s biological inferiority. The assumption that “souls have no sex,” common in Christian theology, meant that intellectual women and their allies could now assert that physical differences between men and women were irrelevant to their spiritual and intellectual capacities. (Some argued that women had no souls, but this view was heretical and highly marginalized.) Neoplatonic ideas of gender equality had the biggest influence in Italy, particularly Venice, among such female intellectuals as Tullia d’Aragona (1510–1556) and Lucrezia Marinelli (1571–1653).

Seventeenth-century natural philosophers had different views of the relation of gender to scientific knowledge. Francis Bacon (1561–1626), followed by many Baconians including the

➤ MARIA WINKELMANN AND THE BERLIN ACADEMY

The story of the German woman astronomer Maria Winkelmann (1670–1720) shows that even when a woman’s intellectual ability was undoubted, institutional misogyny continued to exclude her. Winkelmann received her first training at the house of her father, also an astronomer. In 1692 she married the astronomer Gottfried Kirch (1639–1710), hoping to continue her studies. She and Kirch worked together in astronomical observations and calendar making before and after Kirch was invited to Berlin in 1700 as the first astronomer of the newly founded Berlin Academy of Sciences. In 1702 Maria discovered a comet, but since the report of the discovery bore Gottfried’s name as academy astronomer, it was assumed that he had discovered it. He later gave Maria the credit. Gottfried Kirch died in 1710, and Maria petitioned the Berlin Academy to appoint her an assistant astronomer for calendar making. Although she was clearly qualified, the academy, embarrassed to have a woman in an official role, denied her the position. She continued to publish in astronomy. In 1716 when her son Christoph was appointed academy astronomer, Winkelmann moved back to Berlin and continued to work on astronomical calendars, although as a woman she faced much hostility from members of the academy.

—William E. Burns

founders of the Royal Society, argued that true science was a masculine endeavor. However, this distinction was not simply reducible to the difference between men and women—for Baconians, the science of the ancients, despite having been created by males like Aristotle, was quintessentially “feminine”—passive and weak towards nature. Masculine science would take a more active and dominant role to wrest nature’s secrets from her and turn them to human advantage. However, the Baconian vision of institutional science, as laid out in *The New Atlantis* and later embodied by the Royal Society and the Royal Academy of Sciences, had no place for women.

The seventeenth-century natural philosophy that most encouraged female intellectual participation was that of René Descartes (1596–1650). This was not because Descartes was a feminist

or even particularly interested in gender issues, although he did have women intellectual friends and correspondents and ended his life as a tutor to Queen Christina of Sweden. The reason that Cartesianism was available for women's use was that it, like Neoplatonism earlier, assumed a disconnection between the mind and the body. The increasingly fashionable denigration of Aristotle in which Cartesians participated also offered the chance to attack the theories of subordination based on his work. The French Cartesian François Poullain de la Barre (1647–1725) wrote an influential tract supporting gender equality that was translated into English as *The Woman as Good as the Man* (1677).

Although British empiricism, stemming from Bacon, was less friendly to female intellectuals than was Cartesian rationalism, there were significant exceptions. The empirical philosophy of English physician John Locke (1632–1704), who, like Descartes, had numerous female intellectual correspondents and friends, also placed little emphasis on differences of gender, and Locke advocated the same education for upper-class girls as for upper-class boys in his influential writings on education. An anonymous Englishwoman published *An Essay in Defence of the Female Sex* (1696), which combined Cartesian and Lockean ideas to assert the intellectual equality of men and women. However, the most influential woman philosopher of late-seventeenth-century England, Mary Astell (1666–1731), was a Platonist who advocated separate educational institutions for women.

Some hoped to broaden women's education beyond basic literacy and religious training to incorporate science. The French alchemist Marie le Jars de Gournay (1565–1645), author of *The Equality of Men and Women* (1622), and the English scholar, poet, and royal tutor Bathua Makin (ca. 1600–ca. 1674), in her *An Essay to Revive the Ancient Education of Gentlewomen, in Religion, Manners, Arts & Tongues* (1673), put forth proposals for educating women in the sciences, but like many proposals for educational reform in the seventeenth century they had little practical effect. Women's education in the sciences remained restricted to simple math for doing household accounts and some medicine and "kitchen chemistry." However, some

schools for upper-class women in the eighteenth century taught more advanced science, justified either as a diversion or as a way of demonstrating the wonderful works of God.

—William E. Burns

Bibliography

- Hunter, Lynette, and Sarah Hutton, eds. *Women, Science and Medicine, 1500–1700: Mothers and Sisters of the Royal Society*. Stroud, Gloucestershire, UK: Sutton, 1997.
- Laqueur, Thomas. *Making Sex: Body and Gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press, 1990.
- Schiebinger, Londa. *The Mind Has No Sex? Women in the Origins of Modern Science*. Cambridge, MA: Harvard University Press, 1989.

Women Scientists

Despite the numerous institutional and cultural barriers to women being scientists in early modern Europe, many did manage to participate in the scientific enterprise. The roads for female participation in science were diverse.

Men who operated alchemical labs, astronomical observatories, or other scientific enterprises out of their homes as hobbies or small business enterprises often drew on their wives, sisters, and daughters as assistants, workers, and intellectual partners. In some cases, these women went on to establish themselves as scientific figures in their own right. The tradition of household astronomy was particularly strong in Germany, and many women astronomers were German. One example is Maria Cunitz (1610–1664). Trained by her father in astronomy, Latin, and other "male" disciplines, Cunitz married another astronomer but was the intellectually dominant partner in her marriage. Her main work was a simplification of Johannes Kepler's complex astronomical tables, the *Rudolphine Tables*, designed for use by working astronomers. Cunitz's book *Urania Propitia* (1650) was written in Latin and named after the classical muse of astronomy. In addition to the tables, it also dealt with astronomical theory and practice. Such was the book's quality that Cunitz was referred to as the "second Hypatia," after the ancient Greek woman mathematician. However, many denied that a woman could have

been capable of writing the book, and subsequent editions appeared with a foreword by Cunitz's husband denying that he had any part in it. Another German, Maria Clara Eimmart (1676–1707), the daughter and wife of astronomers, made 250 detailed illustrations of the surface of the moon. The astronomers Johann Hevelius and John Flamsteed worked with their wives, Elizabeth Koopman Hevelius (1647–1693) and Margaret Flamsteed (ca. 1670–1730), as partners in their scientific endeavors. Both women survived their husbands and supervised the publication of the star catalogues their observatories had produced. The inability of women to transform these household positions into recognized salaried positions at public institutions, however, can be seen in astronomer Maria Winkelmann's (1670–1720) failure to be appointed to the Berlin Observatory after the death of her astronomer-husband Paul Kirch (1639–1710).

Women could still possess scientific authority in areas associated with traditionally feminine functions, although this authority would be increasingly challenged by men. The most obvious example is midwifery, at least until the rise of the man-midwife in the eighteenth century. Women published many books on delivering babies. The conflict with the man-midwives and their technologically driven approach to midwifery inspired the publication of the English midwife Elizabeth Nihell's passionate defense of traditional female midwifery, *Treatise on the Art of Midwifery, Setting Forth Various Abuses Therein, Especially as the Practice with Instruments* (1760). Women were also credited with knowledge of technology associated with household management. Manuals of so-called domestic chemistry, often female-authored, contained practical procedures and recipes, but as chemistry developed, these works were increasingly scorned by male chemists. Women of the upper classes also collected and published medical recipes, as tending simple medical problems of their servants and the tenants on their lands was one of their traditional responsibilities.

Women with disposable incomes such as Mary Somerset, Duchess of Beaufort (1630–1714), could be botanical and natural history collectors and gardeners. However, women natural historians were limited by their relative inability

➤ A WORKING SCIENTIST—THE ECONOMIC LIFE OF MARIA SYBILLA MERIAN

Unlike many women who were wealthy or were part of a male-headed household, Maria Sybilla Merian spent much of her life supporting herself and her two daughters through her own efforts. After moving to Amsterdam in 1691, she painted cloth and sold paints to artists. Owners of natural history books also paid her to color in the black-and-white copperplate engravings. Her expedition to Surinam was not just scientific research; Merian's plan was to turn a profit. She and her daughters Johanna and Dorothea, illustrators themselves, planned to collect specimens of Surinamese plants and animals for sale to European collectors. The specimens that Merian brought back, some dried, some preserved in alcohol, were displayed in the town hall of Amsterdam. She also sold paintings that she had made in Surinam. *Metamorphoses of the Insects of Surinam* was a very expensive book, a collaborative effort of Merian and her daughters published on the finest paper available and with some of the earlier editions featuring engravings hand-colored by Merian herself. The most expensive editions were three featuring Merian's original drawings rather than engravings, one of which sold to Tsar Peter the Great of Russia for 3,000 guilders.

—William E. Burns

to travel outside Europe and examine exotic plants and animals in their native localities, an activity that was increasingly prominent in science by the eighteenth century. One exception was German entomologist Maria Sybilla Merian (1647–1717). Like Eimmart, Merian entered the scientific community through one route often considered appropriate for women, as an illustrator. (The only woman on the staff of Paris's Royal Botanical Garden, the center of eighteenth-century botany, was an illustrator, Magdeleine Basseporte [1701–1780].) Merian's first works were illustrations of flowers and insects. At the age of 52, Merian left her home in Amsterdam, the center of world natural history collecting, for Surinam in South America, accompanied by her daughter. After returning to Europe in 1701, she published *Metamorphoses of the Insects of Surinam* (1705). Merian's observations and

vivid illustrations made it a recognized classic, although like many works by women it came under increasing attack by male writers in the subsequent decades. Another exception was Lady Anne Monson (1727–1776), the wife of an officer in Britain's Indian army and an associate of the botanical circle of Carl von Linne.

Although university educations and careers were restricted to men, with a few exceptions in Italy, autodidactic women were able to participate in natural philosophical conversation. René Descartes had several women correspondents, including Princess Elizabeth of Bohemia (1618–1680). Some women went beyond criticizing men's ideas to publish their own theories. In theoretical natural philosophy, the most original woman writer of the seventeenth century was Margaret Cavendish (1623–1673), Duchess of Newcastle. Cavendish's wealth, social position, and support from her husband enabled her to publish several works on natural philosophy including *Observations upon Experimental Philosophy* (1666). She accepted atomism but opposed the mechanical philosophy that reduced the universe to matter and motion in favor of a more vitalistic philosophy of the energies within matter. Her work was too eccentric to have much influence on the scientific establishment. Another English woman natural philosopher was Anne Conway (1630–1679), who unlike the flamboyant Cavendish did not publish

her work or put herself forward in other ways but whose *The Principles of the Most Ancient and Modern Philosophy* was published anonymously after her death. Conway's authorship was widely known, and her antimechanical Kabbalah-influenced vitalist philosophy influenced Gottfried Wilhelm Leibniz, among others.

Women were also active in translating scientific books. The English poet and dramatist Aphra Behn (1640–1689) translated Bernard de Fontenelle's Cartesian *Conversations on the Plurality of Worlds* from French into English with a commentary of her own. The most historically significant female translator was the French noblewoman Gabrielle Émilie Le Tonnelier de Breteuil, Marquise du Châtelet (1706–1749), whose translation of Isaac Newton's *Mathematical Principles of Natural Philosophy* from Latin into French was posthumously published in 1759, contributing to the spread of Newtonian physics in France. It remains the only French version of Newton's masterpiece.

—William E. Burns

Bibliography

- Hunter, Lynette, and Sarah Hutton, eds. *Women, Science and Medicine, 1500–1700: Mothers and Sisters of the Royal Society*. Stroud, Gloucestershire, UK: Sutton, 1997.
- Schiebinger, Londa. *The Mind Has No Sex? Women in the Origins of Modern Science*. Cambridge, MA: Harvard University Press, 1989.

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World History Encyclopedia

Era 7: The Age of Revolutions, 1750–1914 ■ Volume 14

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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 7 The Age of Revolutions, 1750–1914

An Age of Transformation

Change has occurred in every era, indeed in every year, month, and moment of human history. But true turning points, eras in which change is transformational and revolutionary, are rare. Throughout history there have been only three. The first occurred 200,000 to 250,000 years ago, when after millions of years of evolution the first human beings, *homo sapiens*, emerged in Africa. The second began around the ninth or tenth millennium BCE when agriculture appeared in the Middle East. As agriculture spread to other regions over the next several thousand years, it turned most human beings into farmers and herders and set the stage for the emergence of cities and states, the development of social hierarchies, and inventions ranging from writing and the alphabet to metallurgy. Although humans after 1000 BCE created intellectual traditions and religions of lasting importance and continued to make technological advances, these advances were not transformational. A great majority of human beings devoted their lives to food production, and agriculture remained the basis for society and government.

A third great transformation began around 1750, when human beings learned to build complex machines powered by new sources of energy that increased productivity to unimagined levels, created new wealth, and revolutionized travel and communications. These innovations were accompanied by urbanization, scientific progress, mass education, and many new political and social movements: liberalism, democracy, socialism, feminism, and nationalism as well as fascism and totalitarianism. Taken together, these developments gave rise to new modern societies far different from the agrarian societies in which humans had lived for thousands of years.

Europe was the first region to experience these changes, and Europeans were the driving force behind their spread to other parts of the world. By 1900 a handful of European states, along with the United States, controlled vast empires that stretched around the globe. They had the world's largest and most lethal armies and navies. They produced most of the world's manufactured goods, dominated world trade, and controlled world capital markets. They had the world's highest levels of per capita wealth, the best health care, and the most impressive schools and universities. Never before had global economic and political relations been so decidedly tipped in favor of just one small part of the globe. Europe had been transformed, and Europe had transformed the world. These transformations are the outstanding themes of world history from 1750 to 1914.

Europe's Moment

Although historians have many opinions about the underlying causes of Europe's transformation, they all agree on when it began and what events set it in motion. It began in the late eighteenth century, when England experienced the first stages of the Industrial Revolution and when Great Britain's North American colonies and France experienced political upheavals that changed what people thought about justice, human rights, freedom, and the relationship between rulers and subjects.

England's Industrial Revolution began in the late 1700s with the introduction of a number of new devices and techniques in the textile and iron industries and the development of the first efficient coal-burning steam engines. It continued in the early 1800s, when steam engines found countless new applications and when the artisan's workshop was giving way to mills and factories where hundreds or even thousands of laborers worked in surroundings that allowed for specialization, organization, and discipline. During the 1800s industrialization spread to continental Europe, the United States, and Japan and on a limited basis to other parts of the world. Decade by decade, one technological innovation followed another in an outburst of inventiveness never before seen in history. Whole new industries were created. Commercially viable railroads and electric telegraph systems were introduced in the 1830s, the generation and utilization of electricity became widespread in the 1880s, and gasoline-powered engines were introduced in the 1890s. New methods were developed for making steel, paper, and industrial chemicals. Refinements of gear shapers, lathes, drill presses, and other machine tools enabled manufacturers to make and maintain sophisticated and specialized machines for the production of everything from farm implements to bicycles to guns. Productivity soared.

Largely because of industrialization, during the nineteenth century Europe became the hub of a global system of trade and finance in which it was the dominant exporter of manufactured goods and a voracious importer of coffee, rubber, tin, palm oil, wheat, cotton, metals, and other primary products. Europe also exported vast amounts of capital throughout the world, where English pounds, French francs, German marks, and Dutch guilders were used to build railroads, telegraph systems, and canals and to fund banks and government loans.

By increasing Europe's standard of living and making available new sources of food, industrialization contributed to a threefold increase in Europe's population between 1750 and 1900, from 150 million to 450 million.

Industrialization changed European society in many ways. By increasing Europe's standard of living and making available new sources of food, industrialization contributed to a threefold increase in Europe's population between 1750 and 1900, from 150 million to 450 million. Furthermore, as a result of the emigration of between 50 million and 60 million Europeans in the 1800s, the number of people of European descent living abroad

grew from approximately 9 million in 1750 to 150 million in 1914. Within Europe the makeup of the population also changed. As factories

spread, the numbers of craftsmen, rural laborers, and small farmers declined. In contrast, the middle class, including everyone from petty clerks to prosperous businessmen, grew in numbers and wealth, and a large class of unskilled industrial workers emerged. By the late 1800s girls were being educated alongside boys in public schools, and more women were attending universities and entering the paid workforce as teachers, nurses, office workers, and retail clerks. Feminist movements demanding legal and political equality for women were gathering strength. Most importantly, industrialization made Europe increasingly urban. Around 1800 only 12 percent of the population lived in towns with populations over 5,000. By 1900 that percentage had increased to 34 percent and was just short of 40 percent if largely rural Russia is excluded. In 1900 Europe had 226 cities with populations over 100,000 and 12 with populations over 1 million.

Inevitably, economic and social changes of such magnitude affected politics. In the 1700s Europe was made up of hundreds of states, many of them small principalities, city-states, and ecclesiastical territories in present-day Germany and Italy. Most of these states were monarchies in which kings ruled by divine right and without representative institutions or constitutional checks. Everywhere society was based on the principles of hierarchy and privilege. High offices in government and the military were monopolized by aristocrats who enjoyed exemptions from certain taxes and a host of other legal and honorific privileges. Tax burdens fell disproportionately on politically disenfranchised peasants and in large states such as France varied from province to province and city to city.

The institution of absolute monarchy and the principles of hierarchy came under increasing scrutiny in the eighteenth century, especially in France. Writers such as Montesquieu and Voltaire praised England's limited monarchy, in which landowners and merchants had forced their monarchs to recognize the powers of Parliament and accept other constitutional restraints as a result of two seventeenth-century revolutions. The Swiss-born writer Jean-Jacques Rousseau proposed that political legitimacy was based on popular sovereignty, not divine right. In the 1780s Europeans were intrigued by what had occurred in North America, where after the American Revolution the former 13 colonies had come together to found the United States of America, a republic with a written constitution that guaranteed basic human rights.

The great turning point in Europe's political history was the French Revolution of the 1790s. Although not the first political upheaval in Europe's history to be called a revolution, no previous revolution matched the extent, ambitions, and impact of the revolution in France. This was the first revolution to involve an entire population. Peasants, artisans, unskilled workers, women, members of the middle class, clergy, and even nobles played key roles. This was also the first revolution to go beyond removing a particular monarch or seeking narrow changes in politics or religion. French revolutionaries sought a complete break from the past and the creation of a radically new type of society based on reason and equality.

The French Revolution also introduced nationalism as a potent political force. Previously, Europeans had shown little emotional

attachment to governments in which they had no voice and that they perceived as representing the interests of a privileged minority. This changed when the French overthrew their monarchy, ended the privileges of the nobility, and created a government based on democracy, liberty, and equality. When a coalition of states declared war on France in 1792 to restore the old political order, the French fought with patriotic fervor to preserve their revolution and extend its principles. First under revolutionary regimes and then under Napoleon, the French by 1810 had established an empire and alliance system that stretched from the Iberian Peninsula to Russia. In response, nationalism began to stir in other parts of Europe.

In the short term the French Revolution failed to realize many of its goals. The idealism of the 1790s gave way to the heavy-handed rule of Napoleon after 1799 and the restoration of the old regime in France and much of Europe after 1815. Efforts to turn back the clock proved futile, however. By 1914 monarchs still reigned, and aristocrats still played important roles in government, but they did so in states with written constitutions, representative assemblies, political parties, and regular elections. Democratization was accompanied by the emergence of socialist parties dedicated to the principle of social and economic equality. By 1914 nationalism had redrawn the map of Europe. Italy and Germany had become unified nations, and Belgium had gained its independence from the Netherlands, Norway had gained its independence from Sweden, and Greece, Romania, Serbia, and Bulgaria had gained their independence from the Ottoman empire. In 1905 even Russia, the archsymbol of autocracy and repression, experienced a revolution that resulted in a state parliament, the recognition of political parties, and a written constitution.

Europe and the World

While Europe itself was undergoing sweeping changes, it was also transforming the world as a result of its economic reach, its empire building, and the emigration of millions of its people. Imperialism was nothing new for Europeans. In the 1500s and 1600s Europe's maritime states laid claim to the Americas, the West Indies, and the Philippines, while Russia extended its borders across northern Asia to the Pacific Ocean. Between the 1780s and the 1820s most of Europe's American colonies won their independence, but in Africa and Asia new European empires were emerging. The British gained control of parts of India, the Russians added territories in the Caucasus region, the Dutch extended their power in the East Indies, and France invaded Algeria. Then, between the early 1870s and 1900 Great Britain added 4.5 million square miles (11.7 million square kilometers) and 66 million people to its empire, France added 3.5 million square miles (9.1 million square kilometers) and 26 million people, Russia added half a million square miles (1.3 million square kilometers) and 6.5 million people, and Germany added 1 million square miles (2.6 million square kilometers) and 13 million people. Acquisitions by Belgium, Italy, and the United States

added to these totals. By 1900 one-third of all the earth's people lived in European or American colonies.

What accounts for this explosion of European empire building? One part of the explanation was the ever-widening technological and military gap between Europe and the rest of the world. With steamship navies, magazine-fed repeating rifles, and machine guns, Europeans and the native troops they paid to fight for them had distinct advantages when facing African or Asian resistance. The electric telegraph, oceangoing steamships, and the opening of the Suez Canal in 1869 also played important roles. In 1800 a letter from London took five to eight months to reach India, depending on the season; by 1870 a telegraph message from London to India took just five hours. The Suez Canal shortened the voyage from London to Bombay (present-day Mumbai) by half and to Singapore by almost a third. The introduction of faster and more efficient steamships reduced the time further. All these advances enabled Europeans to administer colonies and manage distant business enterprises with a speed and efficiency unimagined in the past.

Not all Europeans (or Americans) favored imperialism. Anti-imperialist sentiment goes back to the eighteenth-century Enlightenment and continued in the nineteenth century in the writings of Jeremy Bentham, John Stuart Mill, and others. During imperialism's heyday, left-wing political parties generally opposed colonization, and in 1899 the treaty by which the United States annexed the Philippines inspired heated debate in the U.S. Senate and barely received the two-thirds approval necessary for passage. Clearly, however, during the late nineteenth century proimperialist arguments won the day among statesmen and most members of the general public.

Many were convinced that colonies made economic sense in an age of industrial expansion and growing competition. At a time when trade was stagnating as a result of an economic downturn and growing protectionism, colonies could serve as safe markets for manufactured goods; as sources of many industrial raw materials and consumer goods such as coffee, tea, and sugar; and as areas for investments in mining, road building, railroad construction, and other enterprises. In an atmosphere of growing nationalism, an empire came to be viewed as a badge of national greatness. As rivalries intensified, it was difficult to stand by when a rival grabbed a bit of territory in Africa or Asia. These points of view emerged in an intellectual atmosphere that justified European dominance because of the supposed superiority of European values and institutions, a superiority thought to be linked to inherent racial qualities. Imperialists furthermore were convinced that colonial rule would foster the work of missionaries, advance education, expand health care, end slavery, improve the lot of women, and teach the values of hard work and discipline. Colonialism, they maintained, was more than a matter of pursuing national self-interest. It was also a civilizing mission to advance human progress.

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Europe Extended: The Americas and “Neo-Europes”

European ascendancy from 1750 to 1914 can be measured not only in terms of Europe’s empires but also by the extent to which Europeans exported their institutions, values, languages, and religions to the Americas, southern Africa, Australia, and New Zealand. All of these regions had at some point been part of European empires, and all achieved political independence before 1914. All experienced substantial European migration and settlement, especially in the nineteenth and early twentieth centuries, when they attracted approximately 60 million European immigrants.

In all these regions European conquest and settlement transformed the makeup of the population. Inhabitants of the Pacific Islands and Indigenous Australians were ravaged by European diseases and along with the Khoikhoi, Xhosa, Zulu, Herero, Ndbele and countless other Africans were driven from their lands. In parts of Latin America and Canada, native peoples intermarried with whites to produce populations of mestizos, métis, or “coloreds.” Populations were further diversified in the Americas by the continued importation of African slaves well into the nineteenth century. The Americas and to a much lesser degree southern Africa also attracted smaller numbers of Asian immigrants. In all these regions, however, Europeans dominated economic and political life, Christianity gained new followers, and the use of European languages spread.

European political control ended first in the Americas, where the Thirteen Colonies won their independence from Britain between 1776 and 1783 and where Latin America threw off Spanish and Portuguese rule in the 1810s and 1820s. In North America the former colonies came together to form a single nation, the United States of America, while in Latin America independence resulted in the founding of just short of 20 new states, from Mexico in the north to Chile and Argentina in the

south. Each of these new states became a republic except Brazil, which was a monarchy until 1889. None of them escaped political conflict. In Latin America liberals battled conservatives, federalists battled centralists, and Catholics battled secularists; periods of constitutional government alternated with rule by military strongmen. Regionalism was also a source of

conflict, especially in Brazil, Argentina, and the United States, the latter of which fought a bloody civil war between 1861 and 1865. Property restrictions and systems of indirect elections disenfranchised the mass of the peasantry in much of Latin America, where republican and dictatorial governments alike represented the interests of large landowners and businessmen. Democracy in the United States was also less than perfect. By 1914 women could vote in presidential elections in only two states, and after emancipation most blacks were prevented from voting by intimidation and systematic exclusion from the voting rolls.

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In contrast to the experience of the rest of the Americas, Canada's path to political independence was largely peaceful. Originally settled by small numbers of French fur trappers and farmers, Canada became part of the British Empire following the British victory over France in the Seven Years' War (1756-1763). In the late eighteenth century and the nineteenth century its English-speaking population grew as a result of immigration of British Loyalists during the American Revolution and migration from Britain. Despite tensions between French-speaking Lower Canada and English-speaking Upper Canada, people in both regions chafed under British rule, and in the 1840s, rather than risk another war for independence, the British withdrew their troops, agreed to the unification of Upper and Lower Canada, and granted this new entity the machinery of self-government. In 1867 the British Parliament passed the British North America Act, which approved the formation of the Dominion of Canada, consisting of “old Canada,” the provinces of Quebec and Ontario, and the maritime provinces of New Brunswick and Nova Scotia. Canada, now a self-governing state within the British Empire (with foreign affairs controlled by Great Britain until 1931), soon embarked on a period of westward expansion that resulted in difficult interactions with native peoples and métis but ultimately resulted in the incorporation of Manitoba, British Columbia, Saskatchewan, and Alberta into Canada between 1870 and 1905.

Canada's experience was a model for other British colonies with significant white English-speaking populations. Australia accepted dominion status in 1901, followed by New Zealand in 1907. The road to independence in South Africa was rockier. Settled by Dutch farmers in 1652 and annexed by Great Britain in 1806 during the Napoleonic Wars, in the 1800s the region saw a three-way struggle among the Zulu and other African tribes; the Boers, mainly Afrikaans-speaking descendants of the Dutch settlers; and more recently arrived English businessmen, settlers, and officials. Following the South African (or Boer) War from 1899 to 1902, the two Boer republics, Transvaal and the Orange Free State, became part of the British Empire but with the promise of limited self-government. In 1910 they united with two British colonies, Natal and the Cape Colony, to form the Union of South Africa. Blacks were barred from sitting in the new state's parliament, which in 1913 restricted black land ownership to regions that made up just 7 percent of the new state's territory.

By the early 1900s the Americas and the new dominions in the British Empire were important players in the world economy. After the Suez Canal opened in 1869 and refrigerated steamships were introduced in the 1870s, New Zealand became an exporter of mutton and dairy products, while Australia exported great quantities of wool. South Africa was a major source of gold and diamonds. Canada exported fish, meat, dairy products, lumber, and wheat. Latin America prospered in the late 1800s from its exports of beef, sugar, hides, guano, and metals. Banks, railroads, and shipping, however, were controlled mainly by British investors, and the region's manufactured goods were overwhelmingly British imports. So great was Latin America's dependence on European investments, markets, and manufactures that the late nineteenth

century is referred to as an era of neoimperialism, reminiscent of the region's status during the colonial era.

The United States was also an exporter of primary products, with the South a main source of cotton for England's textile mills and the Great Plains a major supplier of Europe's wheat. But the United States also became a major industrial power. Blessed with coal, petroleum, and iron ore along with a skilled and energetic workforce, an expanding domestic market, a boom in railway construction, ample capital, and probusiness governments, American manufacturers after the Civil War pumped out a huge stockpile of industrial and consumer goods. By 1914 the United States was a dominant force in the world economy and was about to assume an equally important role in politics.

Africa and Asia in the Age of Imperialism

Although European imperialists claimed that their imperialist conquests were spreading the benefits of civilization, few Asians or Africans were eager to be “civilized” by becoming subjects of a European power. Although some collaborated with Europeans out of self-interest, a more common response was resistance, first seen in the British conquest of India in the 1700s. The British gained a foothold in Bengal in 1757 after defeating the Bengal Army at the Battle of Plassey and confirmed their authority in 1764 at the Battle of Buxar, in which an army of European and sepoy (native) soldiers defeated the combined forces of Bengal, Oudh (Awadh), and the Mughal emperor. Over the next several decades the British extended their authority in India, but only after fighting wars against Mysore (1766–1799), the Maratha Confederacy (1775–1818), and the Sikh kingdom of the Punjab (1845–1846 and 1848–1849).

In Southeast Asia, British hegemony in parts of Burma (Myanmar) was established in 1826 after the First Anglo-Burmese War and extended to all of Burma in 1886 after the Third Anglo-Burmese War. The Vietnamese fought the French in two wars, and the Filipinos, having just won their independence from Spain, fought the United States between 1899 and 1902 to prevent annexation. Wars against Dutch rule in the East Indies were fought by the Javanese between 1825 and 1830 and by the Sumatran sultanate of Aceh between 1873 and 1904. In Africa, resistance to European aggression was offered by the Zulu and Ndebele in southern Africa, the Ethiopians and Sudanese in the northeast, the Asante in the west, and the Algerians in the north. The extension of Russian power in the Caucasus and Inner Asia resulted from a series of wars from the 1770s to the 1870s against the Ottoman empire, Persia, Chechnya, Dagistan, and numerous smaller territories and tribal groups.

The Europeans were victorious in all these wars except two, the First Anglo-Afghan War of 1839–1842 and the Italo-Ethiopian War of 1895–1896. But their victories were costly. The French were forced to commit 100,000 troops to fight in Algeria, one-third of its army at the time. Between 1899 and 1902 the United States sent 126,000 troops to fight in the Philippines and lost over 4,000 of them. Asian and African casualties were much higher. It is estimated that between 1750 and 1913

colonial wars cost 300,000 European lives and between 800,000 and 1 million among their opponents. Some historians claim that if deaths by famine, disease, and forced migration are included, as many as 25 million Africans and Asians may have died as a result of colonial wars.

Once colonial rule had been established, victors faced the challenge of governing millions of new subjects, few of whom were pleased with their new status. In a number of notorious cases, the first impulse was self-enrichment through plunder. After taking control of Bengal, officials of the British East India Company extorted “gifts” from Indian princes, appropriated tax revenues, took advantage of special trade arrangements, and happily accepted bribes from Indian merchants and bankers. Robert Clive, the victorious commander at Plassey, returned to England in 1760 at age 32 as one of the kingdom’s wealthiest men. The actions of Clive and his colleagues were roundly condemned, and soon the English government imposed controls over the behavior of its greedy merchants.

Other examples abound. In the 1830s the Dutch imposed the so-called Cultivation System on Sumatran and Javanese farmers, who were forced to allocate acreage to cash crops such as coffee, tea, sugar, and indigo, which the Dutch then sold on the international market. By the 1850s, profits from the system provided over 30 percent of state revenues for the Netherlands government. However, by the 1860s Dutch public opinion had turned against the Cultivation System as excessively exploitive, and the system was gradually dismantled. A few decades later Belgian king Leopold II also had dreams of instant riches when he managed to turn much of east-central Africa into his private colony, the Congo Free State. After claiming all uncultivated land in the colony, his agents compelled villagers through torture, intimidation, mutilation, and murder to meet quotas for the collection of rubber and ivory. His enterprise became an embarrassment for the Belgians, whose government took over his holdings after information about his brutal regime caused an international outcry.

In most cases the goals and policies of the colonizers were more modest, though no less motivated by self-interest. At minimum, colonial administrators sought to create and maintain a level of economic activity that would provide sufficient tax revenues to make the colonies self-supporting while simultaneously benefiting the economies of the mother countries by providing food and raw materials, opportunities for investment, and a market for manufactured goods. Reaching such goals required administrations capable of providing law and order and efficient tax collection, all at minimal expense.

Colonial regimes varied, but overall their similarities are more striking than their differences. All of them were basically authoritarian, with authority in the hands of Europeans. In the Indian Raj, policy decisions and appointments were made at first by the East India Company’s Court of Directors, next by the royal Board of Control, and after company rule

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ended in 1858 by the secretary of state for Indian affairs. Until 1854 administration of Britain's other colonies was the responsibility of the secretary of war and afterward the colonial secretary. By the early 1900s all major imperialist states had ministries to oversee their colonies except the United States, which gave the president authority to set policy for the Philippines. In the colonies themselves authority was exercised by an appointed official, usually a governor-general, under whom served department heads and provincial administrators. Overall the number of European colonial officials was small. In the late 1800s approximately 6,000 English officials worked in the Indian Civil Service at a time when India's population was around 300 million. In Rwanda and Burundi, two kingdoms in German East Africa with a combined population of 4.5 million, there were 11 German civil servants and 40 German soldiers in 1914.

Nowhere was a serious effort made to seek input and advice from the colonized. Though natives served on legislative councils to advise the governor-general and provincial governors in several British colonies in Africa (from the 1840s) and in India (from the 1860s), they were handpicked from the elite and rarely dissented from the official line. Only in 1909 was a highly restricted Indian electorate given the right to vote for assembly representatives. In any case, neither the governor-general nor the provincial governors were obligated to accept the advice they received.

Although denied political power, Africans and Asians were essential for the functioning of all colonial regimes. Colonial armies were officered by Europeans but consisted mainly of native troops. Native people also were responsible for local administration. The British Empire is best known for its reliance on "indirect rule," a policy identified with the colonial administrator Frederick Lugard in which the British relied on traditional rulers—princes, chiefs and emirs—to collect taxes, settle minor disputes, and enforce other regulations. Although French and Dutch administrators had somewhat more interactions with their colonial subjects, they too depended on appointed "chiefs" or village leaders to carry out policies at the ground level.

With the exception of the Portuguese, who were content to make their money in Mozambique and Angola "the old-fashioned way" through the sale of slaves and the export of contract labor, other co-

lonial powers sought to profit from their possessions by encouraging economic development and integrating the colonial economies into global markets. This meant claiming whatever mineral wealth the colony might have and encouraging farmers to grow crops for which there was global demand. Vast tracts of land were appropriated and given or sold at bargain prices to individual Europeans or businesses for mining or farming. Europe-

ans also received rights to mine diamonds and gold in southern Africa, tin in Malaya, and phosphates on Pacific islands. For lands that remained in the hands of Asians and Africans, colonial regimes frequently

To meet demands of European businesses for workers, colonial governments requisitioned unpaid labor and forced villagers to accept wage-paying jobs by requiring that taxes be paid in cash rather than in agricultural products.

required that acreage be set aside for cash crops, such as cotton in eastern Africa and sugar and coffee in Java. To meet demands of European businesses for workers, colonial governments requisitioned unpaid labor and forced villagers to accept wage-paying jobs by requiring that taxes be paid in cash rather than in agricultural products.

Colonial regimes supported infrastructure projects when they could afford them, and the projects served their purposes. Mainly using money raised through taxes on the colonies themselves, they improved harbors, built roads, installed telegraph systems, and, most importantly, introduced railroads. The first railroad lines were laid in India in the 1850s, and by the end of the century India had more than 25,000 miles (40,234 kilometers) of track, more than all of Asia combined and the fourth-largest railroad system in the world behind the United States, Canada, and Russia. The railways were foreign-owned, financed through the issue of bonds guaranteed by the Indian colonial government, and consisted of rails and moving stock manufactured in England.

One thing that was not encouraged was native industrialization. Only India showed a modest degree of industrialization, and this only after its handicraft-based cotton industry had been damaged (but not wiped out entirely) by cheap English imports. The first Indian cotton mills were built with English capital in the 1850s, and more such mills were established after the 1870s when a number of Indian entrepreneurs became involved in the industry. By the late 1870s India was supplying cotton yarn for the Chinese and Japanese markets, but weaving enterprises struggled to overcome English competition. India and the rest of the colonial world were still overwhelmingly agrarian in 1914 and remained so at the time of independence later in the twentieth century.

By the early 1900s it was still too early to offer answers to the question of whether imperialism, as many of its advocates claimed, benefited the Africans and Asians who came under its sway. In many regions the colonial era had just begun. Even in the early 1900s, however, some preliminary judgments could have been made. Imperialism's defenders could cite the Europeans' success in limiting slavery and the slave trade, founding schools and universities, introducing modern medical care and industrial-age technologies, providing security, and spreading Christianity. Imperialism's detractors also could have made some strong points. They could have pointed to the deaths of many tens of thousands of native Australians, Maori in New Zealand, and other Pacific islanders from contact with European-borne diseases. They could have cited the millions of Asian and Africans who died in colonial wars and rebellions. They also could have cited atrocious examples of cruelty that occurred in the jungles of Leopold II's Congo and the deserts of German Southwest Africa, where rebellious Herero were driven into the Kalahari Desert to die of thirst when German troops were ordered to block their access to water. Others could point to the underlying racism of the whole imperialist project, the self-interest behind economic policy, and the hypocrisy of campaigning against slavery while using forced labor to build roads.

Many Asians and Africans accommodated themselves to their new rulers. Some, who benefited from new educational and professional

opportunities, expressed their gratitude to Europeans for opening the door to science, Western thought, and new technologies. Many, however, were deeply resentful. The Java War (1825–1830), the Maji-Maji Rebellion (1905), the Herero War (1912), and the Indian Rebellion (1857–1858) were major uprisings, and there were countless others on a smaller scale. By the late 1800s nationalist movements were taking shape in Vietnam, Africa’s Gold Coast, Egypt, and especially India. In 1885 the Indian National Congress was founded to win educated middle-class Indians a voice in decision making and greater opportunities in the Indian Civil Service. Two decades later extremists within the organization were calling on the British to “quit India” and were sponsoring civil disobedience campaigns and boycotts to make sure the British got the message. The Indians rallied to the British cause in World War I, sending troops to fight in the Middle East, Africa, and Europe. But nationalism grew in the interwar years, and after World War II India and Pakistan won their independence, the first major step in the disintegration of the vast European empires built between 1750 and 1914.

Independent States in Africa and Asia

In all of Africa and Asia, only seven states were still independent in 1914. One of them, Liberia, which was founded as a colony by private philanthropists for repatriated American slaves, avoided partition by England and France only because of diplomatic pressure from the United States. In the other six states—Ethiopia, the Ottoman empire, Persia, Thailand, China, and Japan—leaders understood the precariousness of their situations and implemented programs of military, political, and economic reform to defend their territorial integrity and sovereignty. The timing, implementation, and results of these programs differed, but only one was an unequivocal success. Japan not only avoided foreign control but also became an agent of imperialism itself.

Ethiopia preserved its independence as a result of military preparation and battlefield success against Italy, one of the weaker European powers. Although steps toward strengthening Ethiopia’s military had been taken by his immediate predecessors, Emperor Menelik II (r. 1889–1913) receives most of the credit for preserving Ethiopia’s independence. On taking power he was aware of Ethiopia’s vulnerability especially in relation to Italy, which was eager to prove that it was a great power by jumping into the scramble for Africa. In 1889 he conceded to the Italians the disputed prov-

Against an Ethiopian army of 80,000 to 100,000, Italy suffered a humiliating defeat and was forced to sign the Treaty of Addis Ababa, which recognized Ethiopian independence.

ince of Eritrea to buy time to outfit and enlarge his army in anticipation of an Italian attack. The attack came in 1895, when a dispute over the wording of the 1889 Treaty of Uccialli provided Italy a reason to invade. At the Battle of Adowa, fought on March 1, 1896, the 18,000-man Italian Army, consisting mainly of new conscripts and Eritreans, was hampered

by a shortage of artillery, outdated guns, and inaccurate maps. Against an Ethiopian army of 80,000 to 100,000, Italy suffered a humiliating defeat and was forced to sign the Treaty of Addis Ababa, which recognized Ethiopian independence.

After his victory, Menelik took steps to modernize Ethiopia's economy and educational system. New roads were built, harbors were upgraded, and banks, a postal service, railroads, and telephone and telegraph systems were all introduced with the help of European advisers and capital. Nonetheless, Ethiopians feared renewed European interference when Menelik died in 1913. They were saved by the outbreak of World War I in 1914, but in the end they could not escape colonization. In 1936 an invasion ordered by the Italian dictator Benito Mussolini led to Ethiopia's annexation in May 1937.

Whereas Menelik relied on military preparedness to protect Ethiopia's independence, the rulers of Thailand, Mongkut (r. 1851–1868) and his son Chulalongkorn (r. 1868–1910), took a more nuanced approach to prevent a British or French takeover. Aware of European military capabilities, their strategy was to avoid giving England or France a pretext for armed intervention while simultaneously pursuing government reform and economic modernization. Mongkut, for example, in 1855 signed a treaty of commerce and understanding with Britain that served as a model for treaties with other Western powers. By doing so, he not only avoided conflict but also attracted capital for banks and construction projects. Chulalongkorn continued his father's policy of conciliation and reform. He gradually abolished slavery, reformed the police and judicial system, and overhauled his administration. Working with European experts, he founded academies to train army and navy officers, sponsored schools for children of aristocratic families, and encouraged study abroad. Despite these efforts, Chulalongkorn still faced French and English territorial demands. Between 1893 and 1909 he ceded Laos and two Cambodian provinces to the French and four Malay provinces to the British. But the core of the country was preserved.

Persian rulers also pursued a policy of diplomacy, military reform, and economic development to protect their nation's territorial integrity and independence. But their plans were poorly executed, and as a result, by the early 1900s much of Persia was under the control of Russia and Britain. In the early 1800s Persia was just beginning to recover from decades of anarchy following the fall of the Safavid dynasty in the 1720s. When the Qajars, a Shia tribe from northern Persia, took power in 1794, they inherited a disunited country, an entrenched clerical elite, and an economy based almost entirely on agriculture and pastoralism. Aware of the Qajars' tenuous hold on power and stung by military defeats at the hands of the Russians in the 1810s, Crown Prince Abbas Mizra (1783–1833) and a number of other Persian princes sought to reform the military. They developed "new armies" comprised of full-time soldiers trained by European officers and equipped with modern firearms and artillery. These troops performed poorly in the Russo-Persian War of 1828–1830, and for the rest of the nineteenth century military reform was a low priority for the Qajar shahs. As a result, in the early 1900s Persia had a tiny navy and only a 25,000-man army, comprised of

poorly trained conscripts, irregular tribal fighters, and a Russian-trained “Cossack” brigade.

Persia managed to retain a semblance of independence only because the two interested European powers, Russia and Great Britain, counterbalanced one another. Beginning in the 1850s, Russian and British diplomats sought to influence Persian foreign policy (often through bribes), while their businessmen competed for concessions to control Persian shipping, railroad construction, insurance, petroleum, and tobacco. Such concessions attracted foreign capital and lucrative bribes for the shah and his officials but disgusted many of his subjects. In 1891 the government was forced to revoke a tobacco concession to a British firm after it caused nationwide demonstrations and a boycott of all tobacco products.

By the turn of the century government policies had generated opposition from many groups including the Shia clergy, who opposed their rulers’ infatuation with things European; businessmen who resented concessions; and officials, journalists, and intellectuals who sought constitutional limitations on the Qajars’ arbitrary rule. In 1905 antigovernment protests in Teheran forced Shah Muzaffar al-Din to approve a new constitution that provided for a parliament with control over finances and foreign affairs. With the new government facing bankruptcy and widespread disorder, in the fall of 1907 Russia and Britain announced the Anglo-Russian Convention. This made northern Persia a Russian sphere of influence and allocated a smaller region in the southeast to Britain. The Persian government maintained authority over a middle portion of the country, which faced civil war and continued Russian and British interference until World War I. Persia was still independent, but its experience in the nineteenth century was hardly a success.

In contrast to Persia, Ethiopia, and Thailand, the Ottoman empire and China were both major world powers in 1750. China was fresh from conquests in central Asia, had the world’s largest economy, and was in the midst of a long period of effective rule under its fourth Manchu emperor, Qianlong (r. 1735–1796). The Ottoman empire, centered in Anatolia, was no longer a feared military power, but it still ruled a multi-ethnic, religiously diverse empire that stretched over three continents.

China and the Ottoman empire both experienced foreign and internal threats in the nineteenth century, and in response their rulers made efforts to introduce wide-ranging reforms. Much was accomplished but not enough to preserve the Ottoman empire or China’s tradition of imperial rule. China’s imperial age ended in 1911 when the Qing dynasty was overthrown, and the Ottoman empire ended in September 1922 when the parliament of the new Turkish republic abolished the sultanate. The heir of the Ottoman empire was the smaller secular nation-state of Turkey, in which its new leader Mustafa Kemal relentlessly pursued policies of modernization and Westernization that in many respects drew upon the efforts of nineteenth-century Ottoman reformers.

Reform became a topic of discussion among Ottoman officials much earlier than in China. Beginning in the seventeenth century, many Ottoman officials wrote memoranda outlining plans for ending corruption, increasing revenues, revitalizing the army, and regaining control of the

provinces. In the late eighteenth and nineteenth centuries, reform also became a priority of the sultans and their closest advisers. With territories in Europe and a history of fighting European armies, Ottoman leaders were aware of the economic and military changes taking place in Europe and their need to catch up if they hoped to compete with their long-time rivals.

In contrast, reform in China became a priority only in the mid-nineteenth century. Although signs of dynastic decline first appeared in the late 1700s, they failed to spark major concern. Indifference also characterized China's early dealings with Europeans. British appeals to expand trade were rejected, and emperors and officials continued to view Europeans as their inferiors. Then in the mid-1800s catastrophe struck. Following defeat by the British in the First Opium War (1839–1842), China was forced to accept the first of what proved to be several unequal treaties that resulted in territorial losses in Burma, Vietnam, Korea, and Taiwan and the acceptance of spheres of influence in which foreigners claimed special rights and economic privileges. More catastrophic was the eruption of three major rebellions: the Taiping Rebellion (1851–1864), which raged through central China; the Nian Rebellion (1851–1868) in the north; and a series of Muslim revolts (1855–1873) in the west. The rebellions were suppressed but at great cost: an estimated 20 million deaths resulted from the Taiping Rebellion alone.

Early Chinese and Ottoman reform movements both focused on strengthening the military. The centerpiece of the New Order introduced by Sultan Selim III in 1792 was a new army unit made up of professional soldiers trained by European officers and given modern weapons and artillery. Administrative changes and tax reforms were devised to pay for these new troops, and educational reform meant founding military schools for future officers. China's Self-Strengthening Movement, which began in the 1860s, had a similar focus. Its advocates believed in the superiority of Chinese values and institutions but conceded that China had fallen behind Europe militarily. Thus, China could strengthen itself by recommitting to Confucian values and by introducing the study of Western languages, mathematics, and science. This would give them the expertise to build the ships and weapons needed to surpass and defeat the West.

In both the Ottoman empire and China, the meaning of reform changed over time. Sultan Mahmud II (r. 1808–1839) continued to emphasize strengthening the military but made a broader commitment to Westernization. His government sent young men to Europe to study, encouraged steamship service between France and Anatolia, and founded publishing houses, newspapers, and schools with specialties in science and mathematics. During the era of Tanzimat, or restructuring, that took place under sultans Abdul Mejid (r. 1839–1861) and Abdul Aziz

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(r. 1871–1876), the government went further still. It revamped the legal system along European lines, committed itself to guaranteeing the rights of the sultan's Christian and Jewish subjects, established provincial assemblies, and drew up a blueprint for a system of public education. Toward the end of the Tanzimat era, the concept of reform was expanded to include constitutionalism and parliamentary government. In 1876 progressive government ministers convinced the newly installed Abdulhamid II to accept a constitution with provisions for cabinet government and a parliament but to no avail. In 1878 Abdulhamid suspended the constitution and ruled as an autocrat until 1908.

In its different stages Ottoman reform was consistently supported by the sultans, some of whom acted decisively against conservative opponents. Mahmud II, for example, knowing that the Janissary corps and the Islamic clergy had undercut Selim III's reforms, crushed and disbanded the Janissaries in 1828. He and his successors found ways to weaken the clerical establishment by limiting its role in law and education. Even the autocratic Abdulhamid II fully embraced the Tanzimat program of educational reform and economic development.

The concept of reform underwent a similar evolution in China, but the process took place in just a few decades rather than over a century. In 1898 Emperor Guangzhu went beyond self-strengthening when in three months he issued dozens of decrees that committed his government to deemphasizing the importance of Confucian studies for the civil service examinations, streamlining administrative procedures, establishing technical and engineering schools, and promoting economic development by stimulating industry and commerce and encouraging farmers to grow crops for export. The emperor's program was scuttled by conservative opponents, but in the early 1900s reformers pushed for even more radical changes, some of which were implemented. They abolished the civil service examination system; established new ministries of education, police, and commerce; reformed the penal code; introduced budgetary planning; and established a program for a transition to constitutional government.

Although Chinese reformers accomplished a great deal, ultimately they failed to provide China with the economic and military weapons to stand up to Japan and the Western powers; they also failed to save the dynasty and China's Confucian tradition. By the 1890s many Chinese, stirred by nationalism and inspired by ideologies of constitutionalism and liberalism, were convinced that even the most vigorous reforms could not revive China's fortunes. A clean break with the past—revolution—was needed. The revolution came in 1911 when an army mutiny in central China spread to other provinces and led to the abdication of the last emperor in February 1912. After more than 2,000 years of imperial rule, China now became a republic.

The Ottoman empire also experienced political upheaval in the early 1900s. In 1908 the Young Turks, led by Turkish-speaking army officers, took advantage of army mutinies and popular disturbances to pressure Sultan Abdulhamid II to reinstate the Constitution of 1876 in 1908 and force him to resign in 1909. He was replaced by Mehmed V, Abdulhamid's 65-year old younger brother, who had never showed the

slightest interest in public affairs. It was now left to the Young Turks to guide the Ottoman empire through the perils of World War I and its aftermath.

Like Persia, the Ottoman empire, China, and Thailand, Japan faced foreign threats and internal tensions in the nineteenth century and, like these other states, managed to remain independent. Japan did so, however, without foreign spheres of influence, and losses of territory. Rather than becoming a victim of imperialism, Japan itself became an imperialist power.

Since the early 1600s Japan had been governed by members of the Tokugawa dynasty, who as shoguns ruled on behalf of the ceremonial and politically powerless emperors. Under their rule Japan experienced 250 years of peace and economic expansion, but by the early 1800s disenchantment was growing. The shoguns had provided no meaningful response to problems of rural discontent, famines, samurai indebtedness, higher taxes, conflicts between daimyo and the shogunal administration, and foreign pressures to end Japan's seclusion policy. Then in July 1853 Commodore Matthew Perry entered Edo (present-day Tokyo) Harbor with eight ships and demanded on behalf of American president Millard Fillmore that Japan open its ports to foreign trade and accept the presence of an American consul. In early 1854 the shogun acquiesced, and by 1858 he had signed commercial treaties with the major European powers. Perceived as a humiliation and a threat, these events further discredited the shogun and inspired support for a radical restructuring of Japanese politics in which the emperor would resume political authority. Tensions grew in the 1860s and came to a head in early 1868 when forces led by the Satsuma and Choshu clans deposed the shogun and replaced him with the 14-year-old Emperor Mutsuhito. The new era of Meiji ("Enlightened Rule") had begun.

Although the events of 1867-1868 theoretically restored the emperor to power, decisions during the Meiji era were made by a small group of ministers devoted to the spirit of their mottoes: "rich country, strong army" and "civilization and enlightenment." They achieved breathtaking results. Centrally controlled prefectures and municipalities replaced the approximately 250 semiautonomous daimyo domains. All taxes, to be paid in money rather than grain, went directly to the central administration. The daimyo and samurai lost their privileges, and all class distinctions relating to dress, marriage, travel, and occupation were abolished. A ministry of education, founded in 1871, established a national system of schools and universities in which foreign languages, mathematics, science, and other Western subjects were taught in addition to Japanese and Chinese literature and history. The government worked with former samurai, merchants, and even men of peasant backgrounds to open mines, construct factories, build shipyards and arsenals, and create nationwide railway, telegraph, postal, and banking systems. The Meiji

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leaders' willingness to borrow from the West is perhaps best illustrated by the Constitution in 1889, which called for a bicameral parliament, an all-male propertied electorate, and the guarantee of freedom of religion, speech, public assembly, and the press.

All these policies had the objective of strengthening Japan to fend off the West and earn the West's respect. This meant building a strong army and navy. Along these lines, one of the first acts of the Meiji leadership was to abolish private daimyo armies and replace them with a national conscript army equipped with modern weapons and led by officers schooled in European methods of training and strategy. Their success can be measured by the Japanese victories over China and Russia and the winning of an empire in Korea, Taiwan, and southern Manchuria.

Many factors contributed to the success of the Meiji reformers. Japan's relatively small size and homogeneity made it easier to push through radical changes than in a giant empire like China or the religiously and ethnically diverse Ottoman empire. Also, the country's high literacy rate and well-developed commercial system prepared it well for the changes introduced after 1868. Japan's tradition of borrowing from foreigners (Confucianism and Buddhism, for example) made it easier to learn from the West. Furthermore, once in power, the Meiji leaders faced less interference from foreign powers, with the United States recovering from its civil war and the Europeans focused on China. Most importantly, the Meiji leaders were able to draw on the support of the Japanese people, who were committed to avoiding India's and China's fate at all costs. Nurtured by the educational system and reinforced by the military training experienced by millions of Japanese men, nationalism was a powerful force driving the Japanese achievement.

The End of an Era

With the benefit of hindsight, we can now see that the world in the early twentieth century once more was on the brink of momentous changes, just as it had been in the late eighteenth century when the Industrial Age was beginning, France and the Americas were experiencing revolutions, and Great Britain was pushing into India. In the early 1900s, Ottoman, Persian, and Chinese revolutions showed the determination of Asian peoples to break free from ancient traditions. The transformation of Japan and its victories over China and Russia showed that industrialization and military modernization, along with all the political and social changes that made them possible, were attainable by non-Westerners. Resistance to colonialism was becoming stronger. Meanwhile in Europe, nationalism intensified, armies continued to swell, and one diplomatic crisis followed another until the summer of 1914, when diplomacy failed and the generals took over. What everyone expected to be a short war lasted four years, with unimaginable costs. A new era of transformation was about to begin.

—James H. Overfield

Environment and Population

As long as human beings have walked the earth they have changed the environments in which they lived. Between 1750 and 1914, more human beings walked the earth than ever before and did so with new capabilities, needs, and ambitions. As a result, they brought about environmental changes that were more rapid and profound than in any previous period of human history. Depending on their circumstances, human beings responded to these changes in different ways. Many were apathetic or unconcerned, some were enthusiastic, and a few, convinced that humans had reached a turning point in their relationship with the world in which they lived, were apprehensive.

Any discussion of environmental change between 1750 and 1914 must begin with population growth. Around 10,000 BCE when the Paleolithic era was reaching its end, approximately 6 million humans lived on earth, an increase from the several hundred thousand humans in 40,000 BCE. Over the next 10,000 years, when agriculture spread from Mesopotamia to the rest of the world, the human population increased to 250 million, reflecting an average annual rate of growth of .4 per 1,000, or a doubling every 2,000 years. A slightly higher growth rate of .6 per 1,000 resulted in a population of 750 million to 800 million in 1750. Then, in just 150 years world population more than doubled, soaring to just over 1.6 billion by 1900. Increases were most rapid in the Americas, where the population underwent a ninefold increase, and in Europe, where the population tripled. Of the world's major regions, Africa experienced the smallest population increase, but even so, the number of Africans increased from an estimated 104 million in 1750 to 138 million in 1900. Between 1750 and 1900 a population explosion had begun, setting the stage for even more rapid population increases in the twentieth century.

The world's population grew despite the loss of lives to epidemics and famines. As more and more humans crowded into large cities, millions died in cholera and typhus epidemics caused by polluted water and poor sanitation, and as Pacific islanders came into contact with European explorers and traders, hundreds of thousands, perhaps more, died from smallpox, influenza, and other Eurasian diseases for which they had no immunity. In many parts of the world famines took an enormous toll. More than 1 million died in Ireland between 1845 and 1849 as a result of potato crop failures. India suffered no fewer than six major famines between 1770 and 1902, with a loss of life in the neighborhood of 20 million people. The Indian famines of the 1870s and 1890s were both the result of droughts caused by a concentration of El Niño events that also affected China, the Middle East, northern Africa, and Brazil.

Catastrophic famines hit northeastern and southern Africa when cattle herds were infected by the Rinderpest virus after diseased cattle from India were introduced to Eritrea in the late 1880s.

Despite such losses, world population surged. The reasons include improvements in sewage and water systems, campaigns against certain diseases such as smallpox through the use of vaccinations, and the decline of other diseases such as the bubonic plague for reasons that are not entirely clear. By far, however, the most important cause was the increased availability of inexpensive and nutritious food. Both a cause and a result of the world's population growth, increased agricultural production resulted mainly from the allocation of more land to farming and raising animals. This was accomplished by cutting down forests, increasing irrigation, reclaiming land from the sea, and, most importantly, opening up of vast territories in Argentina, Brazil, Uruguay, Canada, the United States, Australia, and New Zealand to farming and grazing. On new and old farmland, productivity increased because of the use of natural and man-made fertilizers and the introduction of farm machinery, ranging from the steel plow and McCormick's reaper to pea threshers, manure spreaders, milking machines, and a host of other devices. Finally, revolutionary changes in transportation made food more available. Railroads and steamships provided inexpensive transportation for moving grains across continents and oceans, and when ships and railroad cars were outfitted with compressed-gas coolers, they also could carry beef and mutton. All of these changes increased the world's food supply, which in turn resulted in lower mortality rates, especially among infants and children.

Of equal importance to population growth in terms of its environmental impact was industrialization, a process which by 1914 was concentrated in just a few parts of the world but nonetheless affected the whole globe. The most immediate effect of industrialization was to accelerate urbanization. City growth already was taking place in many parts of the world on the eve of the Industrial Revolution. Although the size of some cities, such as Paris, Edo, and Istanbul, remained fairly constant in the eighteenth century, the populations of others soared. Between 1700 and 1800, Beijing grew from 650,000 to 1.1 million people, Guangzhou grew from 200,000 to 800,000 people, and London grew from 550,000 to 959,000 people. By 1800, Japan had ten cities with more than 50,000 people, with the largest, Edo, numbering 685,000.

Industrialization was not the only cause of city growth. Cities also grew because of the overall increase in the world's population, changes in international migration patterns, and the exodus from rural to urban areas in the face of declining economic prospects for peasants and small farmers. To cite one example, Mexico City, where little industrialization took place, grew from 128,000 in 1800 to approximately 500,000 in 1900. But industrial cities experienced the most spectacular growth. In England's industrialized heartland, from 1800 to 1900 Liverpool grew from 77,000 to 400,000 people, Birmingham grew from 73,000 to 250,000 people, Leeds grew from 53,000 to 172,000 people, and Manchester grew from 25,000 to 367,000 people. London, the seat of government and a center for trade, finance, and manufacturing, had

a population of 6.5 million by 1900, a more than sixfold increase from the start of the nineteenth century. By 1900 the United States had 19 cities with populations over 200,000; its largest city, New York, had a population of just short of 3.5 million, compared to 60,500 in 1800.

The world's growing cities all faced unprecedented environmental challenges. The time-honored practice of dumping garbage and human and animal wastes into a river and waiting for them to be carried downstream was an imperfect solution to an ancient problem when a city had had 40,000 or 50,000 inhabitants but spelled catastrophe when a city had ten times that number.

London's abuse of the Thames River is a prime example of the inadequacy of old methods. By midcentury, the mixture of organic waste and industrial chemicals in the Thames had killed all the river's fish and sea mammals and produced odors so noisome that the "Big Stink" of 1858

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forced Parliament to adjourn for a week. Nonetheless, Londoners continued to pump much of their domestic water supply from the Thames, a practice that led to the cholera epidemics of 1832, 1848, and 1849.

Other urban environmental problems were unique to the industrial age. Workers and their families were jammed into overcrowded neighborhoods near the factories where they worked, and everyone suffered from the noise pollution constantly generated by machinery, trains, whistles, and ever-increasing numbers of human beings. In cities where coal was used for domestic heating in addition to providing power for factories, smoke and soot blackened the facades of buildings; killed trees; attacked stone statues and facades; exacerbated diseases of the nose, throat, and lungs; and interfered with everyday domestic chores such as drying laundry and keeping floors and furniture clean.

Industrialization's impact spread far beyond urban centers. In areas surrounding industrial cities, open land and farms disappeared as cities expanded, suburbs grew, and railroad lines were extended. Winds blew contaminated air over nearby regions, and rivers carried urban sewage and chemicals to downstream towns. To meet the enormous demand for coal, countless new mines were opened not only in Europe and the United States but also in nonindustrial regions such as Sumatra, Colombia, and parts of southern Africa. Tin mining was introduced to Bolivia and expanded in Malaya, and copper mines were opened in South America, Africa, and Japan. Mining, especially when combined with smelting operations, frequently had devastating effects. The expansion of the Ashio copper mine, situated in a valley just 60 miles (97 kilometers) from Tokyo, stripped nearby hillsides of trees (used for railroad ties, mining supports, lumber, and fuel) and poured ever greater amounts of smoke laden with sulfuric acid into the air. Deforestation contributed to a series of massive floods in which waters from the Watarese River, polluted with arsenic, copper sulfate, and other heavy metals, ruined many thousands of acres of farmland and caused hundreds of deaths. Deforestation in the environs of the Ashio mine was just one

example of a worldwide phenomenon. Brazil, India, Burma (present-day Myanmar), European Russia, Australia, hundreds of Pacific islands, and North America all experienced substantial forest losses in the 1800s.

The industrialized world's need for food, fiber, and raw materials changed patterns of land use and agriculture in every part of the world. Egypt, India, and parts of sub-Saharan Africa increased the acreage devoted to growing cotton rather than foodstuffs to meet the demand of the textile industry; India increased its production of jute and hemp for rope making; and western Africa became a major exporter of palm oil. By the early twentieth century, new environmental pressures resulted from the increased use of petroleum as an energy source. At a time when automobile use was still in its infancy, commercial oil wells were being drilled in Russia, Romania, Pennsylvania, Texas, California, Canada, Sumatra, Persia, Peru, Mexico, and Venezuela.

The exchange of goods between the world's industrialized and nonindustrialized regions was just one part of another development with significant environmental implications: the increased interactions among the world's peoples as a result of exploration, migration, and colonialism. Although the "era of exploration" is a term usually identified with the fifteenth and sixteenth centuries, it also applies to the eighteenth and nineteenth centuries, when Europeans explored and mapped much of Africa's interior, parts of South America, the Arctic and Antarctic regions, the interior of Australia, and thousands of Pacific islands.

Of all these regions, Australia, New Zealand, and the Pacific islands experienced the most severe environmental consequences. By 1750, only a small number of Pacific islands had been sighted and visited by European mariners. This changed in the late eighteenth century, when the English and French sent dozens of expeditions to the Pacific. The most important by far were the three expeditions led by the Englishman Captain James Cook between 1768 and 1779. In the wake of the explorers, European and American whalers, sealers, and traders followed, and the results were catastrophic. Because of its isolation from Eurasian disease pools, the region experienced epidemics of smallpox, influenza, and a host of other diseases. Further population losses took place as a result of social disruption, forced labor, and outright enslavement. Not just humans suffered. European and American seal hunting began on New Zealand's South Island and the southern shores of Australia in the late eighteenth century and ended around 1830 because the seals had been killed off. Whaling in the Pacific also began in the late 1700s and peaked in the 1830s and 1840s, when many hundreds of whaling ships sailed every year. Hundreds of thousands of whales were killed and butchered, and as a result of declining harvests, the industry slowly shrunk beginning in the 1850s. During their visits to Pacific islands for food and repairs, whalers and sealers were among the first Europeans to introduce alien species to the region including mosquitoes, which served as vectors for new diseases, and new types of rats, which multiplied prodigiously and preyed on birds, crops, and wild plants. Other species of plants and animals, introduced to the region for their perceived benefits, had unintended and often damaging consequences.

On many islands, pigs and goats escaped to the wild, where they multiplied and devastated native plants.

European colonialism and migration also had important environmental consequences in other parts of the world. Colonial administrators in Asia and Africa were committed to programs of economic development, both to make the colonies self-supporting and to generate profits for European businesses. They sponsored railway construction, irrigation projects, logging and mining and prodded (in some cases required) native farmers to grow commercially valuable items such as coffee and cotton rather than food crops.

All of these undertakings had negative environmental consequences. The European colonial presence in India and Africa threatened wildlife as a result of overhunting. It is difficult to even guess how many animals were shot or trapped for sport by European and American hunters, but we do know that after serving as president,

Theodore Roosevelt went on a year-long African safari in 1909–1910 in which he alone killed close to 350 animals, including 9 lions, 8 elephants, 6 monkeys, 15 zebras, and 1 crocodile.

Theodore Roosevelt went on a year-long African safari in 1909–1910 in which he alone killed close to 350 animals, including 9 lions, 8 elephants, 6 monkeys, 15 zebras, and 1 crocodile. We also know that by the time of the former president's African adventure, concern about the declining numbers of species in Africa and India had already resulted in the adoption of game controls by colonial administrators, which among other things banned the killing of young females, restricted hunting to certain times a year, and required hunting licenses.

Migration in its various forms also had significant environmental effects in the 1800s. In Africa, English, Afrikaners, and German farmers introduced new conceptions of private property and built fences to control the movement of Africans' cattle herds. English settlers in New Zealand and Australia imported many dozens of English animals and plants to their new homelands to remind them of home. Garden plants such as blackberries and Scotch thistles flourished in Australia's mild winters and turned into weeds that choked indigenous species. Blueberries also offered protection and food for Australia's booming population of wild rabbits, which devastated Australian and New Zealand landscapes after having been introduced by English settlers. Other new animals were introduced for commercial reasons. A stunning example is the increase in the size of the New Zealand sheep herd from 23,000 in 1851 to over 20 million in 1901. To accommodate them, in just one decade, from 1890 to 1900, 10 million acres (over 4 million hectares) of forests, 27 percent of New Zealand's forest cover, were converted to grassland.

The expansion of the United States provides the best example of how the movement of peoples, when combined with population growth, transformed nineteenth-century landscapes. In 1790 the United States consisted of 13 states on the Atlantic coast with a population of just fewer than 4 million people; in 1910 it consisted of 46 states (Arizona and New Mexico became states in 1912) stretching to the Pacific with a population of more than 92 million people. As the

frontier pushed inexorably westward, native peoples were killed or displaced, cities were founded, railroad lines were laid, grasslands were transformed into farms, millions of acres of forest land were lost, and certain species such as the buffalo were hunted to near extinction. In 1890 the director of the U.S. census declared that the American frontier was closed, and three years later in his famous book *The Significance of the Frontier in American History*, the American historian Frederick Jackson Turner argued that this meant the end of a crucial epoch in American history.

By the time Turner wrote his book, many others had also begun to sense that a turning point had been reached in terms of humankind's relationship to the environment. Calls to end or at least mitigate the damage caused by human activities began to be heard. Some steps had already been taken. During the nineteenth century many cities responded to the problems caused by rapid growth by building or extending sewers and water systems. Others introduced ordinances for limiting smoke emissions, noise, and the release of industrial wastes and chemicals into waterways. By midcentury, German methods of forest management, whose roots go back to the eighteenth century, had been embraced by many German states and also were being adopted in other parts of the world, notably the United States, Japan, and colonial India. The first examples of mass action over environmental issues occurred. After flooding caused by practices at the Ashio copper mine destroyed 88 villages and killed 300 people in 1896, thousands of aggrieved Japanese peasants organized a protest in Tokyo, where they battled police and won the support of a number of prominent politicians and intellectuals. Two years later the government issued a set of rules for the operation of the giant copper mine that gradually returned the Watarese River floodplain to a reasonable level of health.

Of more lasting significance was the beginning of organized environmental movements in the United States and Europe. Although modern environmentalism is sometimes traced back to Benjamin Franklin's successful efforts in 1739 to have the Pennsylvania colonial legislature ban the dumping of wastes in the Schuylkill River and remove tanneries from Philadelphia's business district, its more immediate origins are in the mid-nineteenth century. The University of Vermont professor George Perkins Marsh revolutionized environmental thought in his book *Man and Nature* (first published in 1864), in which he drew on examples ranging from ancient history to recent developments in Vermont to argue that out of ignorance, greed, and lassitude, human beings had brought ruination to nature in the form of deforestation, species extinction, avalanches, desertification, and the destruction of beauty. He wrote that "Man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are turned to discord." He called on humanity to adopt a new ethos based on striving for balance between human needs on the one hand and human responsibility to nature on the other. Marsh's book sold 100,000 copies in just a few months, and his ideas gained resonance among individuals on both sides of the Atlantic who backed government policies and joined organizations dedicated

to conservation, species protection, and the preservation of wilderness. In the first half of the twentieth century, in the midst of two world wars and economic depression, concern over the human impact on the environment waned, only to revive and grow from the 1960s onward.

—James H. Overfield

■ Introduction: Weather and Climate

In an age of scientific advance, industrial progress, and dazzling technological achievements, much that occurred between 1750 and 1914 resulted from something no human could control, the weather. Few areas of the world escaped weather-related famines, floods, or epidemics. In the 1810s volcanic activity, above all the eruption of Mount Tambora in 1816 on a small Indonesian island, filled the skies with volcanic ash, caused a variety of global weather anomalies (especially a fall in temperatures) that led to widespread famine, and contributed to typhus and plague epidemics in Europe and the worldwide cholera pandemic that began in India in 1816 and 1817. In the second half of the nineteenth century a series of El Niño events resulted in drought-caused famines in lands stretching from Southeast Asia across Africa and all the way to eastern South America. India was hit especially hard. The failure of the monsoon rains in 1866, 1869, 1876–1878, 1896–1897, and 1899–1900 led to famines that killed approximately 13 million people. To China's sorrow, periods of famine in the 1850s and the late 1870s, mainly caused by drought, were followed in 1887 by abnormally high rainfall in the Huang He (Yellow) River's catch basin. The resulting flood resulted in the deaths of between 900,000 and 2 million people. Weather also affected politics and war. A string of dry summers, a freakish hailstorm in July 1788, and a bitterly cold winter in 1788–1799 ruined much of the French grain crop and caused extreme hardship among the rural and urban poor, who on the eve of the French Revolution became further alienated from the king, who was blamed for doing nothing, and the

nobility, who were blamed for hoarding grain. Two decades later the onset of a Russian winter, no worse than most, contributed to the devastating failure of Napoleon's invasion of Russia in 1812–1813.

Was the weather between 1750 and 1914 subject to more droughts, floods, storms, and extreme temperature fluctuations than previous eras? Did broad changes in overall climatic patterns occur? Such questions are difficult to answer given the paucity of evidence. Instruments for making meteorological measurements—the thermometer, barometer, hygrometer (for measuring humidity), rain gauge, and anemometer (for measuring wind strength and direction)—all had been invented or refined in Europe in the seventeenth century, but efforts of various learned societies in the 1700s and early 1800s to organize the systematic collection of weather data in different parts of the world generated only a small amount of usable information, mainly pertaining to Europe and eastern North America. In the absence of statistical data, historians of climate rely on information derived from written sources such as diaries, individual weather logs, and agricultural records and from the analysis of grain prices, tree rings, and year layers in ice sheets, glaciers, and lakebed sediment.

Using these sources of information, many historians of climate place the period from 1750 to 1914 at the close of the Little Ice Age, defined as a long period of colder temperatures dating back to the 1300s and early 1400s, which followed a period of milder temperatures known as the Medieval Warm Period. There is

substantial evidence to support such a periodization scheme for Europe, eastern North America, and much of China, but at this point experts disagree over how useful such concepts are for the world as a whole. The scientific panel that prepared the 2001 report of the Intergovernmental Panel on Climate Change, established in 1988 under the auspices of the United Nations to investigate the impact of human activity on climate, expressed extreme skepticism about the concepts. The panel wrote that “The conventional terms of ‘Little Ice Age’ and ‘Medieval Warm Period’ appear to have limited utility in describing trends in hemispheric or global mean temperature changes in past centuries. With the more widespread . . . reconstructions of temperature change now available, the spatial and temporal character of these putative climate epochs can be reassessed. In the absence of information it is questionable how much the rest of the world experienced similar patterns of climate.”

People who lived in the nineteenth century did not consider themselves to be living through a major period of climate change, even though 1860 is often mentioned by historians as the end point of the Little Ice Age. The copious records generated by national weather services, which were founded in the United States and most European states in the nineteenth century, show no evidence to suggest that temperatures were beginning to permanently trend upward in the 1800s. They show extreme cold temperatures in the 1810s; gradual warming in the 1820s, 1830s, and 1840s (but with at least seven bitterly cold winters); colder than warmer temperatures in the late 1850s and 1860s, when glaciers began to recede; and finally, beginning with the late 1870s, a period of extended cold winters and wet summers lasting until the end of the century.

Paradoxically, although nineteenth-century weather was erratic and inconsistent, long-term patterns of climate change became a matter of intense interest among scientists. The reason was the mounting body of evidence that in the earth’s distant past low temperatures had caused one or perhaps several “ice ages” and that at other times warmer temperatures and abundant rainfall had turned a good part of the globe into a giant rain forest. Once such theories gained general acceptance by the 1870s, scientists began to

offer numerous explanations for climate fluctuations, including changes in the earth’s orbit, the amount of sunspot activity, the height and shape of landmasses, ocean currents, solar output, and volcanic activity. The work of the British scientist John Tyndall (1820–1893) suggested another possibility: that variation in the amount of atmospheric water vapor, hydrocarbons, and carbon dioxide, all capable of preventing the escape of the earth’s heat into space, were the underlying cause of climate change. In the 1890s and early 1900s the research of the Swedish scientist Svante Arrhenius (1859–1927) focused specifically on the role of atmospheric carbon dioxide, which he believed varied over time as a result of chemical changes in the earth’s crust. In 1904, however, he published a paper in which he suggested that human activity, specifically the burning of coal and other fossil fuels, increased the amount of atmospheric carbon dioxide. This, he speculated, would be a good thing. Its warming effect would make the earth’s climate less erratic and increase agricultural production. Arrhenius was writing at the end of two decades of harsh European winters and before the onset of global warming in the twentieth century, so his optimism was not unreasonable.

—James H. Overfield

Environmental Change and Disease Transmission

The types of diseases that a population is exposed to are heavily influenced by that population’s environment. Some diseases require specific temperature or moisture conditions to survive. Other diseases are only likely to be passed on to people if certain animals that carry the disease are present as in the case of malaria, which is transmitted by mosquitoes. Other diseases are endemic to certain populations and are only likely to become epidemics when they infect new populations who lack a genetic immunity to them as in the case of smallpox, which was endemic to Europe but devastated Native American populations in the fifteenth and sixteenth centuries. Still other diseases are only likely to be transmitted when population densities are high.

Beginning in the mid-seventeenth century, the ecological and population dynamics of the

globe began to alter significantly. By around 1750 massive population growth had occurred in Western Europe and China. In those regions of the Americas where European colonization was most settled, Native American population rates declined to their lowest points, while the populations of European colonists and imported African slaves continued to grow. This also occurred in other regions of the world where European colonizers encountered populations that had previously lived in relative isolation, such as the islands of the Pacific Ocean.

At the time that population dynamics were changing, so too were the conditions in which many of these populations lived. In Western Europe intense industrialization and urbanization radically altered the lifestyles and population densities of many people. In North America the eastern seaboard was also becoming increasingly urbanized, while white settlers on the frontier continued to expand westward in increasingly large numbers after 1812. Meanwhile, enslaved Africans, forcibly exported to North America, South America, the Caribbean islands, and elsewhere, also found themselves in new environments. Voluntary transplants to new environments throughout the world included European colonists, traders, and soldiers, all of whom relocated to regions of the Americas, Africa, Asia, and the Middle East, permanently and temporarily, to live and to work.

One result of this massive transformation of the world's population and environmental dynamics was the establishment of new routes for spreading disease and epidemics. Another result was the introduction of unfamiliar diseases to populations who lacked the genetic immunity, acquired antibodies, or knowledge required to resist or avoid them. The first of these was perhaps most dramatically demonstrated in the years and decades following 1817 when a series of deadly cholera epidemics spread from India throughout Europe and Asia.

Cholera, a disease spread by fecal contamination of drinking water, was endemic to the region along the lower Ganges River. Periodically, festivals or pilgrimages to this region would carry outbreaks of cholera to areas throughout or around India. During one 1817 cholera epidemic, however, a new element was introduced.

➤ SMALLPOX INOCULATION

By the time it was introduced to Europe, smallpox inoculation had been practiced for centuries in many regions of Asia, Africa, and the Middle East. These populations tried to protect themselves against smallpox by exposing themselves to small amounts of the disease as children. When successful, this practice resulted in a mild nonfatal infection that conferred a lifelong immunity. When unsuccessful, however, it could result in death from smallpox infection.

In 1717, Lady Mary Wortley Montague, an English aristocrat who had survived smallpox as a child, traveled to Turkey. While there, she witnessed firsthand the practice of smallpox inoculation. Impressed by this procedure, she worked to bring the practice to Europe but met with limited success. Few of those who had not already been exposed to smallpox as children were willing to intentionally risk infection, and many were skeptical about the efficacy of the practice.

Then, in 1796, country physician Edward Jenner developed a new approach to smallpox inoculation. Rather than using smallpox, he offered a vaccine made from the related cowpox virus, producing the same immunity while eliminating the risk. Despite continued resistance, this improvement did much to help spread the practice of vaccination and reduce smallpox infection. In 1980, the World Health Organization declared smallpox to have been entirely eradicated from the world's population.

—Skylar Harris

British ships and troops were also present and, as a result, enlarged the epidemic along two main routes. The first route was northward, where the British military had been fighting a series of battles for colonization along the northern borders of India. New troops arriving from the south carried the cholera epidemic northward, where it spread further to opposing Nepalese and Afghan forces.

The second route was by sea and was much more extensive. In one direction, it reached the islands and mainland of Southeast Asia, China, and Japan. Sailing westward, the epidemic was spread to southern Arabia, where slave traders then carried it to the east coast of Africa. Ships

also brought the epidemic into the Persian Gulf, where it spread northward into southeastern Europe, around the Caspian Sea. Repeats of this pattern throughout the 1830s would make cholera a disease with global presence, reaching Western Europe and the Americas early in that decade with predictably disastrous results.

As a result of increased travel between distant areas and growing population density, the decades between 1750 and 1820 also saw other smaller epidemics spread in regions throughout the world. In 1750 unsanitary conditions led to a typhus epidemic in London that spread quickly through the densely populated, poorly maintained city, killing thousands. In 1793 a ship from the Caribbean arrived in Philadelphia carrying passengers infected with yellow fever. As a result of a particularly hot, dry summer, Philadelphia's waters were unusually shallow and warm, providing a perfect breeding ground for large numbers of mosquitoes. The importation of yellow fever combined with the increase in the mosquito population to introduce an epidemic that killed 2,000 of Philadelphia's 55,000 residents. In 1771 an outbreak of the plague began in the agricultural regions of eastern Russia where it then spread to cities, killing tens of thousands of people.

While many of the changes that occurred during this time period served to facilitate the spread of disease or the introduction of new diseases, some changes helped to combat disease. Some of these changes had to do with living standards. While the largely agricultural regions of China and eastern Asia continued to be subject to periodic epidemics of varying types, as agricultural productivity increased and political stability was maintained the diseases that these epidemics spread became less likely to cause fatalities and more likely to become common but survivable maladies.

Other advances in decreasing the incidence and fatality rate of disease came from advances in medical techniques. American colonists and settlers living in remote regions of North America were vulnerable to epidemics of smallpox. As a result of their isolation, it was unlikely that they would have been exposed to smallpox as children, and thus they were more likely to die from the disease than were inhabitants of regions where smallpox was endemic. However,

many of these settlers were able to protect themselves with the risky but effective practice of smallpox inoculation, a practice that had been popular throughout Asia, Africa, and the Middle East for centuries before being imported to Europe through Turkey in the early eighteenth century. This technique was made safer and more popular after 1796 when the technique of using inoculations from cowpox was developed, as inoculations from cowpox produced the same level of immunity without the risk because cowpox is not dangerous to humans.

Other advances in the fight against disease were the result of changes to the environment. Through both intentional and unintentional means, the incidence of disease in some areas declined as a result of environmental changes that reduced or eliminated disease habitats. As Western Europe's agricultural practices shifted increasingly toward large-scale cattle farming, the incidence of malaria decreased or even disappeared in those regions. This was because mosquitoes preferred to feed on cattle, and the parasite that mosquitoes can carry that causes malaria does not survive in cattle. As a result, the chain of malaria transmission was broken, dramatically decreasing its incidence.

Other decreases in disease transmission due to environmental changes were more intentional. Beginning in the early 1750s, the need for attention to public health and city planning in the form of sanitation and water supplies began to receive increasing amounts of attention. By the end of the century many major cities had begun implementing the reforms needed to gradually provide clean drinking water and the safe disposal of waste. While these early systems were frequently flawed or incomplete and were subject to failure, they proved increasingly effective in reducing disease, as contaminated drinking water, along with unsanitary conditions that encouraged rodent infestations, had long been a major cause of many common and serious epidemics such as cholera and typhoid as well as a host of other gastrointestinal disorders.

In parts of the world where these improvements were not made, however, these diseases and others continued to be a serious problem for local inhabitants and new arrivals. In warm climates in particular the lack of cold seasons

meant that mosquitoes were present year-round. While in other regions cold months typically put an end to mosquito-born diseases such as malaria and yellow fever, these ailments were common year-round in warm climates, and it would not be until later in the nineteenth century that the connection between these diseases and mosquitoes would be made.

—Skylar Harris

Bibliography

- Bollet, Alfred Jay. *Plagues and Poxes: The Impact of Human History on Epidemic Disease*. New York: Demos Medical Publishing, 2004.
- Crosby, Alfred. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge University Press, 1986.
- McNeill, William H. *Plagues and Peoples*. New York: Doubleday, 1977.
- Oldstone, Michael B. A. *Viruses, Plagues, and History*. Oxford: Oxford University Press, 1998.
- Watts, Sheldon. *Epidemics and History: Disease, Power, and Imperialism*. New Haven, CT: Yale University Press, 1999.

Theories of Climate Change

Discussion of climate change and its causes long predates the twentieth century. Most European intellectuals before 1800 believed that temperatures had increased since ancient times, a change they attributed to the conversion of forests to pastures and fields. Many thinkers also were convinced that climate affected human character and helped determine the types of societies in which various populations lived. Europeans believed, for example, that North America's cold and stormy weather explained the "backwardness" of America's native peoples and doomed its European settlers to a low level of culture and intellect. A number of American writers, including Thomas Jefferson, countered such arguments by asserting that the continent's climate was warming and would continue to warm as forests gave way to farmland. Such views were rejected by Noah Webster, the noted American lexicographer, who in his essay "On the Supposed Change in the Temperature of Winter" (first delivered as a lecture in 1799) denied both Jefferson's claim and also the theory that Europe's climate had warmed since antiquity.

In the nineteenth century, theories of climate change were shaped by three developments. First, a number of government agencies, scientific organizations, and learned societies began collecting and publishing data on temperatures, winds, and barometric pressure. Students of climate were no longer forced to rely solely on literary references and memory. Second, the study of climate became more scientific. Students of climate drew on insights from physics, chemistry, astronomy, and geology, and increasing numbers sought to test their theories through experiments and data analysis. Finally, the study of climate was forever changed when from the mid-nineteenth century onward it became generally accepted that the earth had experienced not just one but several ice ages followed by eras of global warming. Such massive changes could not be explained by the clearing of forests.

During the 1800s, many theories were advanced to explain the earth's fluctuating climate. They include theories based on the circulation of ocean currents, sunspot cycles, the inclination of the earth's axis and the earth's orbit, solar radiation, wind patterns, the drifting of global landmasses, mountain building, and volcanic activity. In addition, a small number of scientists proposed that changes in the atmosphere were determinants of global temperatures.

This role of the atmosphere was first suggested by the French scientist Joseph Fourier (1768–1830) in the 1820s. Fourier proposed that the earth received heat mainly from the sun but also from its interior and the stars. He further argued that the earth radiated much of the sun's heat back into space in the form of "invisible heat rays," thereby preventing the earth from becoming as hot as the sun itself. Not all the heat escaped, however. If all the heat radiated back into space, he calculated that the earth would have temperatures well below freezing. To Fourier, this was averted because the atmosphere intercepted and absorbed heat radiated from earth and prevented its escape into space, just as glass plates can slow the escape of heat from an enclosed space.

John Tyndall (1820–1893), a many-sided Irish scientist famous for his studies of crystals, in the 1850s turned his attention to the capacity of various gases to absorb heat. In 1859 he began

collecting gases in tubes to test their transparency to infrared radiation. He found that oxygen, nitrogen, and hydrogen let most of this radiation pass through with little absorption. Because air is mostly oxygen and nitrogen, Tyndall was ready to conclude that atmospheric gases had no role in heating or cooling the climate. But when he filled a tube with methane, he discovered that it absorbed more infrared radiation. Tyndall next tested carbon dioxide and ozone, finding that they too absorbed heat. Finally, he tested water vapor and found that it absorbed 80 times more heat than did oxygen and nitrogen. Tyndall thus provided a chemical explanation for the phenomenon described by Fourier.

Ensuing research built upon Tyndall's findings. In the 1890s two Swedish scientists, Svante Arrhenius (1859–1927), the 1903 Nobel Prize winner for his work on electrolytes, and Arvid Högbom (1857–1940) published papers on atmospheric carbon dioxide. In 1894 Högbom described all the processes that might affect the amount of carbon dioxide in the atmosphere. In addition to volcanic eruptions, the formation of limestone, the breakdown of silicates, the combustion of meteorites in the atmosphere, and the role of oceans, he discussed deforestation and coal burning. Although he estimated that in 1894 500 million tons of coal would be burned around the globe, this would increase the amount of carbon dioxide in the atmosphere only by .001 percent, an amount he considered insignificant. In his view, other factors had greater potential for bringing about the altered carbon dioxide levels that could cause major climate changes.

In 1896 Arrhenius calculated how relatively minor changes in the amount of carbon dioxide in the atmosphere would affect the earth's overall heat budget (the balance between incoming and outgoing heat). He estimated that were the concentration of carbon dioxide in the atmosphere to increase 2.5 to 3 times its current level, arctic temperatures would increase by 8 to 10 degrees Celsius. Conversely, if levels were to decrease by a third or a half, temperatures between the 40th and 50th parallels would decrease enough to set off another ice age. Arrhenius continued to write on climate and the carbon cycle for the next decade. In a popular work published in 1904 (an English translation

Worlds in the Making appeared in 1908), he more strongly asserted that burning fossil fuels might affect terrestrial temperatures. Noting that the annual amount of coal consumed had increased to 900 million tons in 1904, he suggested that over several centuries "the advances of industry" would slightly moderate temperatures. This did not alarm Arrhenius. To the contrary, "global warming" would benefit humankind by making the earth more productive and preventing the onset of another ice age.

In the first half of the twentieth century, debates about the causes and effects of climate change continued, and theories that centered on the role of atmospheric carbon dioxide went out of favor, only to be revived in the late 1930s by the work of G. S. Callendar and a growing awareness of rising temperatures across much of the globe.

—Christopher Cumo

Bibliography

- Archer, David. *Global Warming: Understanding the Forecast*. Malden, MA: Blackwell, 2007.
- Fleming, John Roberts. *Historical Perspectives on Climate Change*. Oxford: Oxford University Press, 1998.
- Silver, Jerry. *Global Warming and Climate Change Demystified*. New York: McGraw-Hill, 2008.
- Weart, Spencer R. *The Discovery of Global Warming*. Cambridge: Harvard University Press, 2003.

El Niño-Southern Oscillation, 1870–1900

The El Niño-Southern Oscillation (ENSO) refers to year-to-year variations in sea surface temperatures, convective rainfall, surface air pressure, and atmospheric circulation that occur across the equatorial Pacific Ocean. The term "El Niño" was first used by Peruvian fishermen in the eighteenth century to describe the warming of the waters in the eastern Pacific that often was noticed around Christmastime (hence the term "El Niño," which means "the little boy" and refers to the Christ child). When the warm temperatures last for more than five months, this is referred to as an El Niño event and can have significant effects on world climate. The warming of waters in the eastern Pacific occurs when westerly blowing trade winds decrease, allowing warm

water from the Indian Ocean and the western Pacific to move east. This is accompanied by what is now called the Southern Oscillation, which during an El Niño event refers to a rise of air pressure over the Indian Ocean, Australia, China, and Indonesia and a fall in air pressure in the central and eastern Pacific and in northwestern South America. La Niña, meaning “little girl,” refers to the opposite conditions.

Current theory about the causes and effects of El Niño events can be traced back to the nineteenth century, when weather observatories across the globe provided for the first time a wealth of information on global patterns of rainfall, temperatures, and atmospheric pressure. In the 1870s a British meteorologist stationed in India, Henry Blanford, suggested that the failure of the monsoons in India was part of a general meteorological event affecting most of the Indo-Australasian region; he also hypothesized that fluctuations in atmospheric pressure were the cause. His hypothesis was confirmed in the 1920s by another British meteorologist working in India, Gilbert Walker, who coined the term “Southern Oscillation” to describe the periodic fluctuations in atmospheric pressure between the eastern and western tropical regions of the Pacific. Subsequent research linked these changes to changes in water temperature.

From the 1870s to the 1890s, the warming events associated with ENSO were uncharacteristically severe. The result was a series of so-called megadroughts and famines in parts of Africa, Eurasia, and South America. Drought and famine were reported in Egypt, China, India, Java, the Philippines, New Caledonia, Korea, Brazil, Russia, and southern and far northern Africa. There were three distinct periods of drought, the first occurring from 1876 to 1879, the second running from 1889 to 1891, and the third lasting from 1896 to 1902. Estimates suggest that as many as 50 million people may have died due to drought-related famine during these three decades. During the first drought, it is estimated that 9 million to 20 million died in China alone, 6 million to 10 million died in India, and nearly 1 million died in Brazil. During the second period of drought, Ethiopia and the Sudan each lost nearly one-third of their respective populations. And in the third period,

➤ THE GREAT PERSIAN FAMINE OF 1870–1871

The megadroughts of the 1870–1900 El Niño–Southern Oscillation (ENSO) cycle took a spectacular toll on Persia. In 1870 and 1871 the northern and eastern provinces did not receive any precipitation, wiping out crops on a large scale and bringing a famine with wide-ranging social consequences. The drought was followed by a sharp rise in grain prices, more than tripling the price of bread; this was followed by frequent and violent food riots. In addition to violence, there were reports of cannibalism. In the city of Qom, rumors spread that individuals from the city’s outskirts would lure women to their homes with the promise of a meal, only to kill and eat the women instead. There were reports of child abduction and of parents eating their own children. The result was a society nearly paralyzed by fear.

—Katherine J. Worboys

the drought stirred destructive epidemics of malaria, bubonic plague, dysentery, smallpox, and cholera in Asia and Africa.

The drought and famine events had significant political repercussions. It has been suggested (most strongly by American historian Mike Davis in his 2002 book *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*) that with the populations in many parts of Asia and Africa severely weakened by drought and famine, imperialist nations were able to more easily conquer and control additional lands to extend their respective empires. Drought in Egypt, for example, contributed to the bankruptcy of the Egyptian government, which in turn invited more European interference in Egyptian affairs and ultimately the occupation of Egypt by the British in 1882. Famine in northern China and Korea paved the way for increased Japanese interference in Korean affairs and contributed to Japan’s victory over China in the Sino-Japanese War (1895). In southern Africa, drought enabled the Portuguese to extend their territorial holdings in Angola and weakened the Zulu in their struggles against the British. In several regions famine gave Europeans the opportunity to expropriate communal lands and tap new sources of plantation and mine

labor. The ENSO cycles of the 1870s through the 1890s thus contributed significantly to many of the intranational social and economic disparities still existing in the twenty-first century.

—Katherine J. Worboys

Bibliography

- Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. New York: Verso, 2002.
- Okazaki, Shoko. "The Great Persian Famine of 1870–1871." *Bulletin of the School of Oriental and African Studies, University of London* 49(1) (1986): 183–192.
- Solow, Andrew R. "An Exploratory Analysis of a Record of El Niño Events, 1800–1987." *Journal of the American Statistical Association* 90(429) (1995): 72–77.
- Yang, X. B. "El Niño and Infectious Disease." *Science* 275(5301) (1997): 739.

Climate, Weather, and the French Revolution

In an era of European climate history referred to as the Medieval Warm Period, from approximately 1000 CE to the early 1300s, northern, western, and southwestern France experienced moist, temperate airstreams from the Atlantic Ocean, which created a favorable environment for grain cultivation. Warmer streams off the Mediterranean produced conditions suitable for vineyards as well as olive and chestnut cultivation in the south and the southeast. In the early 1300s, average temperatures began to decline, and Europe entered into a period of colder weather that lasted until the nineteenth century. Within this Little Ice Age, temperatures fluctuated, with the coldest periods in the years following 1650, 1770, and 1850. The cold temperatures after 1770 had a direct bearing on the causes and events of the French Revolution.

For much of the eighteenth century, France experienced increases in agricultural productivity, rents, and land values. Prices remained strong because of the demands of France's growing population. Beginning in the late 1760s, however, grain-growing regions of France experienced a series of bad harvests, the worst of which occurred in 1775. In the Mediterranean regions, the wine crop failed in 1778, and a series

of volatile annual yields followed. With the decline in grain production, income for noble landowners fell. In response, many hired surveyors and estate agents to determine methods of increasing the grain yields and their income from their rural estates. The result was the reassertion of noble prerogatives that had fallen into disuse, such as the restrictions on the amount of common land that peasants could utilize for pasturing livestock and gathering firewood. The courts enforced these prerogatives, causing widespread discontent. This agricultural recession also reduced tax income for the government just when French involvement in the American Revolution was putting further pressure on finances. Various proposals to raise revenues and reduce debt through new taxes met stiff public resistance and led directly to the government's decision in 1788 to reconvene the Estates General in 1789 to address the nation's financial crisis.

As political excitement across France grew in 1788 and 1789, a series of highly unusual weather events occurred. Following crop damage caused by an abnormally dry spring, on July 13, 1788, a hailstorm destroyed hundreds of square miles of crops just before harvest time. These events were followed by one of the longest, coldest winters in French history, which caused widespread starvation in the countryside and a spike in grain prices in urban areas.

There is little question that food shortages and increased food prices further eroded support for the king and contributed to the unrest of the French Revolution. Government efforts to deal with the crisis in the winter of 1789 by limiting grain exports and increasing imports failed. Other European countries also were experiencing shortages, and frozen rivers and canals made transport difficult and expensive. In the summer of 1789, peasant discontent over high taxes and the nobility's recent efforts to extract more money from them by enforcing old rights and privileges contributed to the nationwide peasant revolts known as the Great Fear. This led directly to the revolution's August Days in which the National Assembly ended the feudal privileges of the clergy and nobility. The Women's March on Versailles, which occurred on October 4, 1789, involved 6,000 to 7,000 women (and some men) who broke into the Versailles palace and

demanded that Louis XVI do something about bread shortages and high prices. The crowd referred to Queen Marie Antoinette and the young Dauphin Louis Charles as “the baker’s wife” and “the baker’s boy.” In response, the royal family left Versailles and returned to Paris, accompanied by the crowd, who also brought wagonloads of flour from palace storerooms, creating the public perception that the court at Versailles hoarded grain while ordinary Parisians starved. Although there is no evidence that Marie Antoinette actually uttered the famous phrase “let them eat cake” in response to bread shortages in Paris, there was a widespread perception that the royal couple was indifferent to the suffering of their subjects.

—Carolyn Harris

Bibliography

- Doyle, William. *The Oxford History of the French Revolution*. Oxford: Oxford University Press, 2002.
- Fagan, Brian M. *The Little Ice Age: How Climate Made History, 1300–1850*. New York: Basic Books, 2000.
- Grove, Jean M. *The Little Ice Age*. London: Methuen, 1988.



An artist's version of the Women's March on Versailles, October 4, 1789. (Library of Congress)

■ Introduction: Environmental Consequences of Human Activities

In all but a few cases, what humans did to the environment between 1750 and 1914 were things they had been doing for hundreds and even thousands of years. Deforestation had been going on since the beginnings of agriculture; polluted rivers, foul air, overcrowding, and disease had been a part of urban living since cities first appeared in the fourth millennium BCE; and transforming landscapes, disease pools, and animal populations through transregional migration, trade, and travel had ancient precedents long before the voyages of Vasco da Gama and Christopher Columbus launched a new era of global interaction in the 1400s. Even the utilization of coal, the first fossil fuel to be widely used in the nineteenth and twentieth centuries, was not entirely new. The Chinese may have been

using coal to smelt copper as long ago as 1000 BCE, and references to coal mining in England, Scotland, and other European areas can be found in thirteenth-century writings. Despite such continuities, the central theme in the history of humankind's environmental impact between 1750 and 1914 is change, change that occurred at a faster rate and with more profound effects than in any previous 150-year period in history.

The driving forces behind these changes varied over time and from region to region. For the era as a whole, however, the most important single agent for change was the doubling of the world's population from an estimated 769 million in 1750 to 1.65 billion in 1900. Inevitably, this meant that more land was allocated to farming and grazing; new irrigation projects were

undertaken; forests increasingly were felled for fuel, timber, and conversion to arable land; the demand for minerals swelled; more animals were killed for their meat and furs; and more pollution was produced. The surge in numbers also created more city dwellers, who made up less than 3 percent of the world's population in 1800 and slightly over 10 percent in 1914. Such rapid urbanization, which also was driven by industrialization and various socioeconomic changes in rural areas, exacerbated age-old problems of ridding cities of garbage and human and animal wastes while simultaneously providing clean water for drinking and cooking.

A second source of worldwide environmental change between 1750 and 1914 was the increased interaction among the world's people. Explorers, missionaries, sailors, whalers, and sealers from Europe and the United States introduced killer diseases to the Pacific islands. Steamships, railroads, and the movements of soldiers and tourists made it possible for diseases like cholera and the plague to transform themselves from local outbreaks to worldwide pandemics. Imperialism hastened the exploitation of African and Asian minerals, forests, and arable land to meet the needs of the West's industrial economy. Mass migrations filled up virtually empty regions of the Americas and Australia and led to the creation of farms, ranches, towns, and cities on lands barely disturbed by any human presence. The introduction of European plants and animals—sheep, cattle, pigs, rabbits, and rats, among others—had already transformed the Americas' environment beginning in the sixteenth century and did the same in the nineteenth century to Australia, New Zealand, and many Pacific islands.

Industrialization was a third major cause of global environmental change, even though it was concentrated in only a few regions. Its most immediate effects were in cities. Early in the Industrial Revolution when water power was the main source of energy, most factories and mills were built in rural areas. This changed, however, after the 1820s, when most industries came to be concentrated in cities after coal not only replaced water power and wood as the major source of energy for industry but also became the fuel of choice for home heating and cooking.

City-based industrialization added to congestion and overcrowding, produced by-products, many of them extremely toxic, that further polluted the air and water supplies, and added to noise pollution through the constant din of factory whistles, steam engines, and construction sites. By far the greatest urban polluter was coal. In heavily industrialized England, coal production increased from 10 million tons in 1800 to 60 million tons in 1850 and 225 million tons in 1900. Wherever coal became the dominant urban fuel (and this includes cities as far-flung as Pittsburgh and Kolkata), its burning produced enormous amounts of ash; covered clothes, gardens, and furniture with soot; and filled the air with smoke that caused respiratory problems, eye diseases, and acid rain.

The environmental effects of industrialization were not, of course, limited to cities. World agriculture was affected, as millions of acres of land were given over to growing cotton or grazing sheep to meet demands of textile manufacturers. Mining for coal and a host of metals, including iron, copper, nickel, tin, and gold, expanded in many parts of the world, bringing with it a host of health and safety problems for miners and many adverse environmental effects, including air degradation, damage to local plants, animals, and soil quality, and pollution of waterways and aquifers through mine drainage. Smelting operations, in which ores often were roasted over coal or charcoal in open pits, were even more damaging. Even some of the benefits of industrialization had negative environmental effects. Industrialization put new wealth into the pockets of Europeans and Americans, whose consumer demands contributed to deforestation in tropical regions (so ever greater quantities of coffee, tea, and sugar could be grown); encouraged the hunt for whales (whose oil was used in lamps and whose bones were used for corsets, fishing rods, umbrellas, and whips), elephants (whose ivory was used for billiard balls and piano keys), rhinoceroses, hippopotami, tigers, and lions (whose stuffed heads could be viewed in trophy rooms); and resulted in the killing of millions of fur-bearing animals (whose pelts were turned into hats, coats, and gloves).

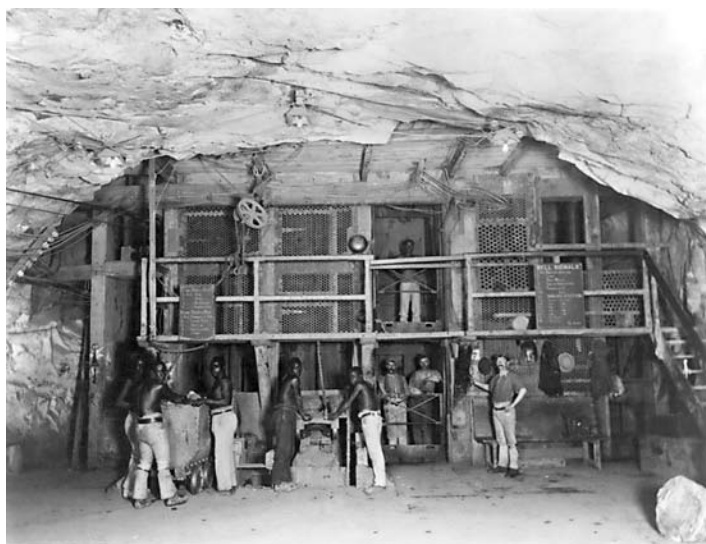
Human effects on the world's environment were not entirely negative. Forest preservation

programs were established in Europe, the United States, and British India. Organizations to protect wildlife came into existence on both sides of the Atlantic, and governments took the first steps toward protecting wilderness regions and setting quotas for hunters. Steps also were taken to prevent and lessen the effects of pollution but with mixed results. Some cities instituted smoke abatement programs, but the tall chimneys they mandated lessened pollution at ground level but did not prevent it from being carried by the winds to surrounding regions. Many cities also installed or updated their sewer systems after it became evident that polluted water was a major cause of disease. After London completed its sewer system in 1865, it had no more outbreaks of cholera, but since the city's wastes were not eliminated or treated but instead were simply transported into the Thames River beyond the city's eastern limits, fish and shellfish taken from the Thames estuary soon were unfit to eat. Some decades later the city of Chicago undertook a massive project that reversed the flow of the Chicago and Calumet rivers so that beginning in 1900 its sewage flowed into the Illinois River and ultimately into the Mississippi. Chicago had clean drinking water but faced decades of lawsuits from cities on the Mississippi, which now were the recipients of Chicago's waste, and nearby states and the province of Ontario, which claimed, justifiably, that the diversion of Chicago's rivers lowered the level of the Great Lakes. Clearly, there would be no quick or easy solutions to the environmental traumas caused by human beings and their actions.

—James H. Overfield

Changing Patterns of African Land Use

The value and use of African land took new shape in the period of European contact and with the advent of colonial rule. The customary view of land value shifted to the notion that wealth could be achieved by owning property rights to land that could be exploited. Traditional practices of subsistence farming, pastoralism, and communal land ownership gave way to cash crop agriculture, increased dependence on the export of natural resources and farmed



Kimberly diamond mine in South Africa, between 1890 and 1915. By 1890 South African diamond mines were controlled by De Beers Consolidated Mines under Cecil Rhodes. (Frank and Frances Carpenter Collection, Library of Congress)

crops, and land ownership conflicts. Changes in land use varied from region to region depending on a region's resources and the economic benefits of exploitation, but increasingly the sharply conflicting values, uses, and views on land ownership between Africans and Europeans affected the control and use of the land.

During the colonial era, Europeans sought ways to encourage economic growth to pay for their military and administrative costs as well as to benefit individual merchants and the colonial power's domestic economy. The exploitation of Africa's natural resources and the commercial use of land often provided the solution. Africa's many resources had been exploited by Africans prior to colonial conquest, but under colonial rule wealth was extracted from the land without being redistributed to the African population as had previously been the case.

Many African regions were rich in metal and mineral deposits, offering mining opportunities for global markets. African gold mining had attracted sustained commercial activity via maritime contact with European powers in the 1400s, but direct European exploitation by Europeans of Africa's mineral resources began only in the 1800s. Beginning in the 1850s with

► LAND USE AFTER THE BERLIN CONFERENCE

Landownership took on new meaning during the scramble for African territories initiated by the Berlin Conference in 1884–1885. At the conference, European powers settled on a system for taking possession of African lands. Although no Africans attended, the conference developed rules for the partition, which later helped the colonizers divide Africa and create boundaries. During the subsequent colonial era, the pattern of landownership and boundaries in Africa shifted from traditional communal boundaries to private ownership and arbitrary boundaries set by the colonial powers.

Inherited by later generations, these colonial boundaries became the boundaries of nation-states. They challenged both the land-use prac-

tices of the precolonial past and future possibilities, including the transnational movements of pastoralists. Colonial boundaries redirected the flow of trade and peoples. The boundaries were created by Europeans and for Europeans without much knowledge of the continent itself and with little regard to Africans' interests. Colonial powers lumped together diverse cultural groups, cut across cultural lines, and made states either too small to support themselves or too large to be effectively governed. The arbitrary land boundaries established by the Europeans have had lasting effects for African states and remain an impediment to viable economic independence for many regions.

—Melissa L. Levison

the discovery of the copper belt of southern central Africa, profitable mining sparked worldwide interest in African lands. When diamonds were discovered in Kimberley, South Africa, in the 1860s, a series of dramatic events triggered industrialization and capitalist development, restructuring the economic history of the region. This mineral revolution placed African lands, especially those areas where minerals had been discovered, as focal points for European powers hoping to capitalize on the continent's natural resources and profit from the worldwide demand for these minerals. After 1886, South African gold mining reached a new level with the introduction of large mechanized mining equipment, allowing gold to be extracted from greater depths. Recognizing the economic potential in Africa's natural resources, colonizers capitalized as quickly and economically as feasible, taking land from traditional practices such as subsistence farming and pastoralism. Despite early European interest, gold mining in West Africa remained in African hands until 1897, when the British-owned Ashanti Goldfields Corporation gained a concession in the Gold Coast. Equipment was diverted from South Africa during the Boer War, and mining techniques were quickly modernized. In the mineral-rich Central African Katanga region, a multinational group of investors began exploitation of the copper mines

after King Leopold claimed territorial possession in 1891.

Changes in agriculture also affected land use in Africa. In many regions, farming shifted away from domestic farming for subsistence to commercial cash crop production for profit. In West and Central African coastal regions, the use of lands adjacent to the slave castles shifted to crops such as maize that could provide food to European ships. As the slave trade gave way to legitimate commerce, more land was used to produce cash crops including groundnuts, coffee, tobacco, palm oil, cocoa, sugarcane, maize, and cotton, all destined for markets outside Africa. The new commercial commodities were a mix of indigenous crops and new crops introduced from the Atlantic world, such as maize and tobacco. During the nineteenth century, cash crop agriculture increased with the necessity of taking land from traditional farming practices, inevitably affecting food production. Forced labor sometimes was utilized on lands appropriated by European settlers, as in the case of cotton growing in German East Africa or timber in German Togo, but typically cash crop farming allowed Africans to meet the heavy taxation demands placed on them by colonizers.

Conflicts over land between agricultural and pastoral African groups existed prior to colonialism; however, with the increase in agricultural

cash crop production, spurred by European involvement, the struggle for land ownership between these groups intensified. For example, among the displaced Maasai groups in the Rift Valley of East Africa, limited land propelled groups to vie for tenure. Conflicts also occurred between German and British colonial administrations and native pastoralists when outside powers attempted to transform the traditional practice of pastoralism into commercial agriculture. Pastoral groups such as the Maasai traditionally used and traveled over large areas of land to provide for their animals; however, as the numbers of cash crop plantations and subsistence agricultural plots increased, the land available to pastoralists significantly declined. Most significantly affected were regions most heavily settled by Europeans such as the temperate East African highlands and the frontiers of Southern Africa.

European colonists' exploitation and commercialization of natural resources and land sparked land tenure conflicts. In precolonial Africa little sense of private property existed, and land was seen as a resource to be used, not owned. This approach to land use changed most dramatically during the colonial period when land came to be viewed by the legal system as a commodity, something to be owned, sold, inherited, and exploited. Precolonial customary law provided that rights to land were negotiable and seen as collective or kinship rights as opposed to individual rights. As European powers' desire for profit grew, land became highly valued, causing conflict and debate. Under colonialism, Africans' views of customary law were co-opted in the service of colonial rule in order to appropriate unclaimed territory or territory that had been negotiated through treaties with traditional African rulers, as happened in the early mining claims in South Africa. Land use came to be seen as land ownership, and rights of individuals to use the land became the justification for ownership to the specific plot of land. The ambiguities of customary law and the frequent manipulation of it during the colonial period have left lasting tension and conflict that remain territorial issues in areas such as the Congo today.

—Melissa L. Levison

Bibliography

- Falola, T. ed. *Ghana in Africa and the World: Essays in Honor of Adu Boahen*. Trenton, NJ: Africa World Press, 2003.
- Hallett, R. *Africa since 1875; A Modern History*. Ann Arbor: University of Michigan Press, 1974.
- Pottier, J. *Customary Land Tenure in Sub-Saharan Africa Today: Meaning and Contexts*. <http://www.acts.or.ke/pubs/books/docs/groundCustomary.pdf>.
- Watson, T. *Colonialism in the Congo: Conquest, Conflict, and Commerce*. Providence, RI: Thomas J. Watson Jr. Institute for International Studies, Brown University, 2005.
- Watson, T. *Freedom in Our Lifetime: South Africa's Struggle*. Providence, RI: Thomas J. Watson Jr. Institute for International Studies, Brown University, 2003.

Deforestation as Global Phenomenon

Although humans had cleared forests for millennia, deforestation increased substantially between 1750 and 1914. Rough estimates suggest that the forest cover diminished worldwide from 6.215 billion hectares in 1700 to 5.678 billion hectares in 1920, a reduction of 8.6 percent. The main causes were population growth and land clearance for agriculture, but other factors, such as industrialization, colonization, and new means of transportation and communication, also contributed. In response, concern over deforestation grew, as evidenced by the emergence of conservation and environmental movements, romanticism, and the concept of rational forestry.

Industrialization increased demand for wood for fuel, construction timber, and other useful industrial products from trees such as bark and resin. Wood remained a key source for heating until far into the twentieth century, despite the growing use of coal. As a result, cutting was done more systematically. Previously, logging mainly involved the cutting of individual trees by small-scale owners, but increasingly large-scale logging and processing operations moved directly into forests themselves. As a result, older forms of common forest usage that have functioned against deforestation such as pasture, collecting bedding for animals, wood gathering, and other means of subsistence declined.

The growth of the world's population, from 679 million in 1700 to 1.65 billion in 1900, also put pressure on the forests. Forest clearing for agriculture took part first in the temperate zones of the Northern Hemisphere, with the extinction of much of the North American primary forest as a prime example. It is probable that over 46 million hectares had been felled in the United States by 1850, with the eastern parts of the country affected most. Subsequently, forest clearing followed human migration patterns to the northern Midwest and eventually by the end of the nineteenth century to the Pacific Northwest. Altogether, about 121.4 million hectares of forest were lost.

In the subtropics and tropics, forests were cleared for the expansion of indigenous agriculture as well as for forest products for export. The loss of the forest cover was highest in tropical Africa, with about 83 million hectares lost, followed by Latin America with 76 million hectares lost and South Asia with 42 million hectares lost. Many forested areas were converted into plantations by European colonizers for growing commodities such as sugar, coffee, tea, tobacco, and cotton for the world market in places such as the Caribbean, Brazil, India, and Southeast Asia. Beginning in the second half of the nineteenth century, steamships made it faster and cheaper to ship the commodities grown in these regions to European and U.S. markets, and railways facilitated the exploitation of timber in remote areas.

One of the first environmentalists to discuss deforestation was the American George Perkins Marsh (1801–1882) in his work *Man and Nature* (1864). His thoughts about the role of forests as protectors of the soil and regulators of the water table were the intellectual foundation for the conservation movement. Romanticism, with its emphasis on the aesthetic values of forests, presented another perspective on deforestation. Believing that forests had a transcendental value, romantics praised them as a spiritual tonic against the ills of urban life. The concept of preservation, claiming to save the forest for its own sake and not for human ends as conservationists postulated, grew out of this thought. Rational forestry, the scientific study of forests with the

goal of balancing preservation and economic use, evolved in the late eighteenth century, especially in Central Europe. Foresters developed the concept of sustained yield, according to which the amount of wood harvested should not exceed what could be replanted. This principle has become a cornerstone of forest management until today.

The conservation, preservation, and rational forestry movements did not stop deforestation in all parts of the world. While the rate of deforestation decreased in the late nineteenth century in the temperate zones, it has increased since 1850 in the subtropics and tropics, where it has led to soil erosion, torrents, and gullies as well as long-term effects such as decreased precipitation, desiccation, and climate change. Deforestation continued in the twentieth century and is a major concern in the early twenty-first century.

—Lars Kreye

Bibliography

- Guha, Ramachandra. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. Berkeley: University of California Press, 2000.
- Langston, Nancy. "Reflections: On Teaching World Forest History." *Environmental History* 10(1) (2005): 20–29.
- Marsh, George Perkins. *Man and Nature*. Edited and with a new introduction by David Lowenthal. Seattle: University of Washington Press, 2003.
- Williams, Michael. *Deforesting the Earth: From Prehistory to Global Crisis*. Chicago: University of Chicago Press, 2006.
- Turner, B. L., II, William C. Clark, Robert W. Kates, et al., eds. *The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere over the Past 300 Years*. Cambridge: Cambridge University Press, 1993.

Chinese Agriculture—Land Issues and Population Growth

Although scholars have feverishly debated the relationship between population and land use in Chinese history, it is commonly agreed that the increase of agricultural land has not kept pace with population growth since the eighteenth

century. Although many questions remain concerning the magnitude of population growth, the dynamism of Chinese society, and the emergence of an “agricultural revolution,” the consensus is that in this period population increased dramatically, resulting in heightened competition over scarce resources such as land, water, and food.

Population growth was the dominant factor in Chinese society during the eighteenth century, the most prosperous era of the Qing dynasty (1644–1911). Most demographers agree that the population increased during this century from around 100 million to over 300 million. Statistics show that population growth continued until the early twentieth century. Though the population of the empire grew both in absolute numbers and in density, there was tremendous regional variation. Some scholars argue that population growth was slight in the most densely populated Jiangnan area (southeastern China) between 1680 and 1850 compared to that of the whole empire; at the same time, the Sichuan area (southwestern China) had almost the same growth rate as the empire as a whole due to heavy immigration.

The Qing government attempted to increase arable farmland to support the burgeoning population. With the territorial expansion of the Qing empire, especially in the far north and west, extensive land reclamation took place. Large-scale migration from fully populated areas to frontier areas began in the mid-eighteenth century. Concurrently, the Qing government waived taxes on newly cultivated fields; in many areas, cultivators were entitled to private ownership of the fields, which motivated people to reclaim more land from rivers, lakes, highlands, and frontiers. As a result, arable land acreage greatly increased.

Agricultural production was significantly improved too. There was no major breakthrough in agricultural technologies, but traditional technologies were practiced with more sophistication. High-yield New World crops, such as maize and sweet potatoes, were introduced and spread. They contributed to an increase in agricultural production and became a basic food for people in many regions. Their ability to grow

on dry and sloping lands also helped to convert large mountain areas to farmlands. After 1700, the cropping pattern in the Yangzi delta shifted from single cropping within a year to double cropping, which included early-ripening rice in the spring and wheat or beans in the winter. Through the new cropping pattern, a higher yield was achieved on the same amount of land.

Did these changes enable agriculture of this time period to meet the needs of the expanding population? There are controversies focusing on whether the output per capita (or the agricultural productivity) increased and hence improved living standards. Older scholarship argued that China underwent “agricultural involution.” Scholars holding this view believe that although the agricultural production increased in total, such increase was the result of intensive labor input on land with no change in technologies, leading to diminishing labor productivity or declining output per capita. Some research shows that the output per capita did decline from the late 1700s and early 1800s.

Revisionists have a more positive view. They argue that there was an agricultural revolution in the seventeenth and eighteenth centuries, including the introduction of new crops, the intensification of agricultural cultivation, the introduction of new cropping patterns, and the spread of commercialization. In addition, the population growth rate in this area was surprisingly far below the level of the empire as a whole. Therefore, Chinese society before the early nineteenth century, especially in the Jiangnan area (lower Yangzi delta), enjoyed similar living standards, agricultural production, and labor productivity to those of England. Revisionist scholarship provides new perspectives on Chinese agriculture in this time period, but final conclusions cannot be drawn concerning population and land use in China due to the absence of accurate data on population and agricultural output.

—Yan Gao

Bibliography

Elvin, Mark. *The Pattern of Chinese Past*. Stanford, CA: Stanford University Press, 1973.

Huang, Philip C. C. *The Peasant Economy and Social Change in North China*. Stanford, CA: Stanford University Press, 1985.

Lee, James Z. *One Quarter of Humanity: Malthusian Mythology and Chinese Realities, 1700–2000*. Cambridge: Harvard University Press, 1999.

Pomeranz, Kenneth. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton, NJ: Princeton University Press, 2001.

Population Growth and Environmental Degradation in China

Many historians of China have concluded that population growth led to severe environmental degradation on a nationwide scale, especially after the late eighteenth century. One indication of environmental degradation was the increasing frequency and severity of droughts and floods in the nineteenth century and onward. Although it is hard to know the precise effects of population growth on the environment, a clear link existed between an increasing human-land ratio and the overexploitation of natural resources.

Rapid population growth was an important feature of eighteenth-century China. Demographers estimate that China's population almost tripled from the beginning of the century to more than 300 hundred million by the century's end. Such growth intensified exploitation of natural resources as a result of increased demand for food, land, timber, and minerals. Emperors of the early and high Qing period (1640s–1820s) implemented grand schemes of land reclamation, and new crops and cultivation methods were introduced to improve production. Although these efforts kept the massive population fed, environmental damage resulted.

Large mountainous areas were deforested and converted to farmlands. New World crops such as maize and sweet potatoes spread quickly to different regions in the eighteenth century because of their high yields and adaptability to the dry and sloping mountain environment. The spread of new crops was a double-edged sword, providing food for the Chinese people but also contributing to deforestation. Activities by *pengmin* (shack people)—refugees driven

to the mountains by war, famine, tax burdens, and other causes—also depleted the highland resources. The *pengmin* chopped down trees, cultivated crops, and exploited mines, resulting in mountain soil erosion. Tons of soil carried from upstream highlands filled riverbeds, slowed water flow, and contributed to downstream floods. In addition, deforestation destroyed the habitats for animals (i.e., elephants and tigers) and led to the extinctions of animal species.

In the lowlands of southern and southeastern China, land was mainly reclaimed from marshes, lakes, and river floodplains, and the risk of flooding increased. Sophisticated schemes of irrigation and flood control had existed for centuries in these areas. Basic water control constructions included *yuan* (small circular constructions to protect farmlands from river waters) and long dikes. Farmlands were usually subject to taxation by the government. However, the Qing government exempted newly cultivated land from taxes in the mid-eighteenth century. Consequently, many people built illegal dikes to reclaim land from rivers and lakes in order to increase agricultural profits. Such behavior blocked the waterways and caused larger and more frequent floods in the eighteenth century.

The frontier environment was also deteriorating as a result of population growth and migration. From the mid-eighteenth century onward, the Qing government lessened the restrictions on migration from southern and eastern China to the northern and western frontier areas. Indeed, the government encouraged migration to these border regions by providing financial and material aid to migrants. The areas beyond the Great Wall were gradually opened up, and a significant portion of the northwestern prairies was converted to agricultural land. Intensive cultivation damaged the topsoil of land and speeded desertification.

Population dynamics and environment are certainly closely related. However, it is uncertain whether demographic change was the main reason for environmental degradation. Other socioeconomic factors such as the problem of resource distribution might also have influenced resource exploitation. For example, vague property ownership rules led to the overuse of common-pool resources by self-interested

individuals. Other scholars argue that the lower than average temperature and higher rainfalls of this time period also contributed to natural disasters. Therefore, the problem of environmental degradation can be best understood as the result of multiple causes.

—Yan Gao

Bibliography

- Elvin, Mark. *The Retreat of the Elephant: An Environmental History of China*. New Haven, CT: Yale University Press, 2004.
- Elvin, Mark, and Ts'ui-jung Liu. *Sediments of Time: Environment and Society in Chinese History*. Cambridge: Cambridge University Press, 1998.
- Marks, Robert. *Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China*. Cambridge: Cambridge University Press, 1998.

Air Pollution and the Industrial Revolution in Europe

The Industrial Revolution depended on coal, iron, and steel. Coal combustion and chemicals released during the smelting of metal ores were two major sources for the escalating air pollution during this period. Yet paradoxically, large-scale industry did not cause most pollution in the early period of industrialization. Thousands of open hearths in individual households, often burning sulfurous bituminous coal with insufficient oxygen, sullied the air in Europe's teeming urban areas with particulates and sulfur dioxide. Domestic hearths produced 85 percent of all smoke in Great Britain in the early nineteenth century. Hundreds of thousands of fireplaces in London contributed to a gradual rise in the frequency of fog from about 1750 through the 1890s. A more apt term, "smog" (a word created by combining "smoke" with "fog"), was coined in 1905. A week of smog enveloped London in 1873, darkened the days, and led to more than 700 deaths.

In addition to pollution from domestic hearths, industrial emissions contaminated air in the vicinity of large industrial plants. The smelting of ores, for example, released quantities of sulfur that harmed vegetation, animals, and inhabitants. These problems were well known in the older industrialized regions. Freiburg in Saxony, for instance, boasted a long history of

mining and smelting, and public debates about links between local industry and air pollution took place from the late 1840s. Proposed solutions came from several quarters. Farmers and foresters from the forestry academy at Tharandt, in Germany, tried to determine which kinds of trees and other plants best resisted the impact of smoke and sulfur, while experts in hygiene and industrial technicians looked for ways to reduce emissions from the smelting plants. Their most important innovation was a chimney tall enough to disperse the emissions. The first such chimney, built in 1860, was 197 feet (60 meters) high; it was surpassed in 1889 by a chimney 460 feet (140 meters) high. Nonetheless, contemporary specialists knew that emissions did not disappear but instead were diluted in the atmosphere and fell to the ground within a larger radius. Polluting industries profited from dilution, for it complicated the evidence of any single industrial plant's responsibility for damage to property. Neighbors and farmers called for compensation, but the expense of lawsuits and the disputed effects of emissions made justice difficult. Tall chimney stacks became the norm throughout much of northern Europe from the 1860s, silencing local complaints and sending the problem elsewhere.

The decentralization of air pollution and the sheer variety of its sources also prevented control. In Great Britain, responsibility for regulating such hazards lay with local governments for most of the nineteenth century. Such a system of regulation faced notable drawbacks: local governments could not act against distant sources of pollution, they were the site of frequent conflicts of interest between officials and industry, and they embodied the basic belief that tough enforcement would drive away industrial employers. Lord Palmerston's Smoke Nuisance Abatement Act of 1853 pushed industry to implement the "best practical means" available to prevent smoke, and although prosecutions did occur while Palmerston remained home secretary, fines were rarely high enough to deter pollution. Besides, domestic pollution remained outside the orbit of the law.

Despite earlier national legislation, regulating air pollution on the European continent met with little more success. Napoleon Bonaparte

issued an imperial decree in 1810 to check industrial nuisances, and it continued to influence legislation not only in France but also in the Netherlands and postindependence Belgium. Aimed at industries that emitted “insalubrious” or “disagreeable” odors, the decree theoretically covered a variety of atmospheric pollutants but betrayed a distinct nineteenth-century preoccupation with odors (considered vectors of disease-causing miasma) and called explicitly for the protection only of local property owners. French citizens became increasingly vocal during the century, gradually placing industry on the defensive with respect to residents and public authorities.

Napoleon’s imperial decree did not provide for sanctions or penalties of any kind. Instead, it classified industries into categories according to allowable distances from human habitation, thereby foreshadowing the twentieth-century practice of industrial zoning. Under this system a multitude of sins was allowed to continue. Moreover, France lacked an adequate corps of industrial inspectors, even after passage of a more rigorous law on industrial nuisances in 1917. That function was given to an existing corps of labor inspectors, who were overburdened and generally lacked technical knowledge or authority when confronting big industrialists. The story was much the same in Belgium and the Netherlands. Following independence in 1830, the Belgians set up a system of preventive licenses but applied it casually. A Dutch nuisance act of 1875 placed considerable power to license industry in the hands of municipalities, but it too remained ineffectual.

Of the German states, Prussia possessed the most important industrial zones, including the Ruhr Basin, Silesia, and the region near Leipzig. In 1845 the Prussian government put into force a trade regulation (*Gewerbeordnung*), a law carried over by the German Reich in 1871. The regulation stipulated that every businessman who wanted to establish a factory that might harm the local environment had to request permission from the state authorities and publicize his intentions. Citizens could consult the plans and make objections, and authorities were obliged to take these objections into account. They could refuse

permission or place specific obligations upon the entrepreneur; their decisions could not, however, be questioned through judicial review.

As in France, the Prussian regulation functioned less to protect citizens against pollution than to ensure industry’s legal security and to protect private property. If a neighbor could prove that an industrial plant had damaged his property, he might obtain compensation from the polluting firm. Most complainants were farmers owning fields in the vicinity of industry and suffering from crop damage or fishers who lost their livelihood due to polluted rivers. Such cases were more often lost than won, however, and some courts imposed sanctions only on companies that “consciously” polluted their environments. Moreover, it was extremely difficult to establish precise links between specific plants and specific damages. At any rate, once a plant was approved, no avenues were available to close it down or to tighten the entrepreneur’s obligations. Only in the mid-twentieth century was the law rescinded.

Throughout Europe, few authorities wished to oppose industry in the nineteenth century. Even though technicians accumulated knowledge of filters, recycling of vapors, and much else—the expression “acid rain” was first used in 1872—they rarely acted to intervene at the source. In Germany, for example, “trade taxes” on industry flowed directly into municipal budgets, so most local authorities went no further than enforcing zoning policies. About a century after the Napoleonic decree inaugurated the practice in France, local planning authorities in Germany began to delimit urban zones that were to be shielded from industry. Whereas middle- and upper-class Germans typically inhabited the protected areas, industrial workers lived in industrialized zones and had to tolerate pollution. Reinforcing the class bias of zoning practices, a significant legal principle called *Ortsüblichkeit* (local custom) guided the German judiciary in matters of pollution. Lawyers and judges argued that inhabitants had to accept even major pollution when they lived in an area dominated by industry. The notion of local custom cast pollution as a part of local geography.

—Tamara Whited and Jens Engels

Bibliography

- Bernhardt, Christoph, and Geneviève Massard-Guilbaud, eds. *Le Démon moderne: La pollution dans les sociétés industrielles d'Europe*. Clermont-Ferrand, France: Presses Universitaires Blaise-Pascal, 2002.
- Brimblecombe, Peter. *The Big Smoke: A History of Air Pollution in London since Medieval Times*. London and New York: Methuen, 1987.
- Winter, James. *Secure from Rash Assault: Sustaining the Victorian Environment*. Berkeley: University of California Press, 1999.

Human Impact on the Water Cycle

The water cycle is also known as the hydraulic cycle, referring to the unending circulation of water, driven by solar energy, between the atmosphere, terrestrial surface and underground waters, and the oceans. Water can change its state among liquid, ice, and vapor in this cycle. Human activity is an integral part of this cycle. Through direct manipulation of water bodies, humans have changed the natural pattern of the water cycle and adapted it to multiple purposes. From the eighteenth century to the early twentieth century rapid industrialization and urbanization significantly affected the distribution and quality of water. During this period, the scale and scope of environmental problems such as the severity and frequency of floods grew and new problems such as water pollution and epidemics caused by waterborne microorganisms increased.

Although humans had influenced the water cycle throughout history, limits of muscle power and technology prevented the intensive exploitation of water resources. This changed as a result of the Industrial Revolution, when people gradually disrupted the human-water balance. Basically, human activity affected the water cycle in two areas: the overabundance or scarcity of water in various places on the planet and the quality of water.

Farming was the major impetus for change chiefly through deforestation, which affected the movement of water in the terrestrial sphere. Rapid population growth, increasing demands for natural resources, and the drive for profit led to large-scale land reclamation schemes in both

Europe and Asia. Land reclamation increased the amount of cultivable land but it led to the felling of trees and the draining of wetlands. Deforestation, intensive agricultural cultivation, and wetland loss eroded the soil surface and decreased the infiltration of water in the terrestrial realm. At the same time, wells used as sources for both irrigation and drinking water lessened the groundwater flow in some areas, although the utilization of groundwater was less intensive than in the twentieth century.

Dam and dike construction and river diversion also affected the water cycle. Use of such technology in agricultural irrigation and flood control had a long history, notably in ancient Egypt, China, Sri Lanka, and Mesopotamia. After 1850 as a result of advances in science and

➤ 1887 YELLOW RIVER FLOOD

The Yellow (Huang He) River has been “China’s sorrow” throughout thousands of years of Chinese history and has flooded many times. Running through the loess plateau between Shaanxi and Shanxi provinces, the Yellow River carries a huge amount of silt, which has contributed to a notoriously high-level riverbed. The erratic flows of river waters and changeable river course also have brought unpredictable troubles to the river basin area. For centuries Chinese people had built dikes to tame the river, but such intervention into the natural cycle of the river in some cases accentuated the flooding problem.

The Yellow River flood in 1887 was one of the worst floods in recorded history. In the fall of that year, rising river waters accompanied by heavy rainfalls breached the dike section in Henan Province, which led to a massive flood in the flat northern China plain. Approximately 11 cities and 300 villages, covering approximately 50,000 square miles (129,500 square kilometers), were inundated in waters that were 20–30 feet (6–9 meters) deep. It is estimated that as many as 900,000 people died in the flood and 2 million people became homeless. In the aftermath of the flood, a pandemic and lack of basic necessities caused additional deaths. The Yellow River flood is believed to be the most devastating flood in history.

—Yan Gao

technology, dam and dike construction also increased. Many large dams were built in Europe and the United States mainly for irrigation and by the turn of the century for electricity as well (the hydroelectric power station at Niagara Falls in the 1890s is a famous example of this). In China the grand scheme of taming the Yellow River had been carried out for centuries by building long, firm dikes. Numerous dams and dikes served as barriers for water flows and slowed down surface water runoff, which increased the risk of floods. In addition, dams and dikes contributed to the siltation of a number of rivers, which brought bigger and more frequent floods. The increasing frequency of floods in nineteenth-century China was an example of the disrupted water cycle.

Urbanization, which required water for recreational and municipal purposes, seriously challenged the water cycle. Urbanization meant erecting buildings, paving roads, and constructing systems to provide water for urban residents. These activities produced hard, impervious surfaces and decreased the ability of the land to absorb water. This in turn increased flood risks by increasing the amount of surface runoff of water. The diminishing infiltration of surface runoff could lead to the decline of groundwater levels, affecting stream flows during dry weather and even contributing to the process of desertification.

The quality of water was also affected by the process of industrialization and urbanization during this time period. Before 1800 water pollution was a local matter, but in the nineteenth century human impact on water bodies became more and more widespread, especially in industrial areas. For example, while in 1848 only modest water contamination in Lake Michigan was caused by waste from the 30,000 Chicago residents, in 1885–1886 alone 90,000 people around Chicago died of waterborne diseases, mainly typhoid. Although intense human activity scarcely extended beyond the inland seas and coastal areas even in the twentieth century, coastal water bodies were still adversely affected by different types of pollution. Heavy metals from industries usually found their way into lakes, rivers, and finally seas, a process that had destructive effects on the marine environment.

—Yan Gao

Bibliography

- McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.
- Tarr, Joel. *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective*. Akron, OH: University of Akron Press, 1996.
- Thomas, William L. *Man's Role in Changing the Face of the Earth*. Chicago: University of Chicago Press, 1956.

The Columbian Exchange

In 1750, the process referred to by some scholars as the Columbian Exchange had been under way for at least one quarter of a millennium. Named after Christopher Columbus, this exchange involved the transfer of plants, animals, and other organisms between the Old World and the New World. Organisms such as horses and cacao, distributed along the commodity networks of the Atlantic, had already begun to transform societies on both sides of that ocean, while others such as smallpox and influenza had annihilated aboriginal societies in the Americas, Oceania, and Australasia, allowing for increased settlement by Europeans and others. In the latter part of the eighteenth century, these patterns continued to develop as economic regimes grew in scale and capacity, as human migrations increased in size and complexity, and as the power of the nation-state increased. By the early twentieth century, everyday life around the world had been transformed.

The local on-the-ground effects of these exchanges were extremely complex. Often, the same commodity could play very different roles in different settings. Almost immediately after their introduction to Asia, for example, American plants such as sweet potatoes and tobacco began to be incorporated into Chinese society, in fact helping spur an agricultural revolution, but these staples had little impact in India until the nineteenth century.

Such exchanges often had enormous ecological ramifications: innocuous plants in their original settings became invasive weeds in new ones, while introduced animals competed with or preyed upon indigenous ones. In most cases, organisms accompanying new settler

THE TORTUOUS HISTORY OF A TUBER

Few things illustrate the complexity of the Columbian Exchange more than the history of *Solanum tuberosum*, the potato. Originally a bitter, altitude-loving wild tuber, it had been domesticated at least 2,000 years ago by indigenous peoples living in what is now Peru and Bolivia, resulting in cultivars of diverse colors, shapes, tastes, growth habits, and ecological niches. Encountered by the Spanish in 1537, potatoes were one of the earliest commodities of the Columbian Exchange, although it would take at least two centuries for the potato to overcome European growing conditions and become a staple food. Thanks to its subterranean productivity, the potato also had to overcome widespread beliefs in its questionable impact on morals. Many Europeans, from religious and intellectual elites to peasants and the urban poor, thought that the potato caused disease, moral degeneration, and even promiscuity. While often associated with the poor in Europe, the potato could also be a food of the elite. In 1793, for

example, they were being grown in the royal Tuileries of Paris. European migrants then brought potatoes with them to their colonies including those in the Americas, the tuber's second Atlantic crossing. The ecology of the potato, when combined with the economic and political policies of nation-states, could cause new migrations in its own right. The best-known example is that of the potato blight that devastated Ireland in the nineteenth century, leading to a new diaspora of the Irish out of Europe and into settler societies in such places as Canada and the United States. As peoples and places became increasingly interconnected through empire and globalization, the potato would be there to the extent that it is now a staple in cuisines and economies around the world, ranging from Indian *aloo tikka*, Italian *gnocchi*, Ashkenazi-Jewish *latkes*, McDonald's ubiquitous fries, and, back on the plant's home turf, *patapas a la huancaína*.

—Coll Thrush

populations triumphed in these new environments. Examples include Norway rats on Caribbean and Pacific islands, rabbits in Australia, and bilgewater-borne mosquitoes in Hawaii. Sometimes, as was particularly true with diseases, the effects of these migrations were felt far ahead of the settler newcomers. In the case of the horse, its introduction by the Spanish into the Great Plains of North America made aboriginal bison-hunting practices more efficient and, arguably, more destructive prior to the near extinction of the great bison herds at the hands and guns of Americans.

For all their complexities and ironies, however, these exchanges, when considered together, generally favored the colonizer over the colonized, the introduced over the indigenous, and—by the twentieth century—utilitarian simplicity (e.g., monocropping) over cultural and biological diversity. In Africa, for example, maize had been incorporated into many local food systems soon after its introduction in the sixteenth century as part of a diverse suite of food-production practices. Only in the nineteenth

century, as those food systems were drawn into global markets that demanded regularity from their commodities, would dependency on maize as a staple contribute to food insecurity there. Informed by closely linked colonial discourses and doctrines of cultivation, labor, and improvement—all of which had profound racial and religious origins and implications—that developed in the late eighteenth and early nineteenth centuries, the exchange of people and things between ecologies and continents was far from an equitable process. Combined with the rise of both the nation-state and economies of scale associated with nineteenth-century industrial capitalism, such ecological transformations generally favored certain classes of people. For example, attempts by governmental entities to ameliorate the negative environmental effects that often accompanied colonialism—soil erosion caused by introduced livestock, the destruction of fisheries by industrial and agricultural pollution, and so on—all too often served corporate interests while simultaneously marginalizing or even criminalizing the

powerless, most notably aboriginal communities, immigrant groups, and those living at subsistence levels more generally. Such practices, which some scholars now refer to as environmental injustice, were important elements of life in settler societies such as the United States and South Africa, where ecological exchange had resulted in stark inequalities of both opportunity and condition.

In the end, then, the question remains as to what to call this larger process. The term “Columbian Exchange” is perhaps a bit of a misnomer in that it takes its name from Christopher Columbus and thus erroneously focuses on Europeans as the sole or primary actors, while the term “exchange” suggests a relatively equal and neutral mutuality. Another term that has been suggested, then, is “ecological imperialism,” which has found support from many scholars thanks to its acknowledgment that biological and ecological processes facilitated new social and economic relations and that these relations were far from equal. Perhaps the most powerful indicator of the effects of these patterns is the extent to which they had come to seem normal by the early twentieth century: the Great Plains as the breadbasket of North America, so-called authentic dishes such as Italian marinara or West African *piri piri* or Irish potato stew, nonaboriginal majorities in places such as Argentina and New Zealand—and the simple fact that many people in these places continue to think that “that’s the way it’s always been”—all attest to the profound effects of the Columbian Exchange.

—*Coll Thrush*

Bibliography

- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. New York: Cambridge University Press, 1993.
- Hawke, Sharryl Davis, and James E. Davis. *Seeds of Change: The Story of Cultural Exchange after 1492*. Menlo Park: Addison Wesley, 1991.
- Knobloch, Frieda. *The Culture of Wilderness: Agriculture as Colonization in the American West*. Chapel Hill: University of North Carolina Press, 1996.
- McCann, James C. *Maize and Grace: Africa’s Encounter with a New World Crop, 1500–2000*. Cambridge: Harvard University Press, 2005.

Extinctions and Near-Extinctions

Although extinction is a natural phenomenon and a fate that has befallen an estimated 99.9 percent of all species that have ever lived on this planet, between 1750 and 1914 the many changes wrought by the Industrial Revolution and human population growth led to the destruction of a number of plant and animal species. This period also marked the emergence of a scientific and popular understanding of extinction as both a natural occurrence and the result of human actions.

The extinction of a species may be triggered by a number of causes, either internal (genetic) or external (environmental). A lack of genetic diversity, genetic degradation through hybridization, habitat loss, overpredation, disease, and climate change can, either independently or, as is more often the case, in tandem with other factors, lead to the annihilation of a species. All of these factors may occur naturally or as the result of human activity, whether intentional or inadvertent.

The Industrial Revolution in Britain and, later, continental Europe and the United States negatively affected plant and animal species in several ways. At the most basic level, an increase in the human population meant a corresponding increase in the need for food and space, which in some cases led to overhunting and the wholesale destruction of habitats to make way for farms and cities. The Industrial Revolution also prompted the diffusion of people to areas of the globe that had previously seen little, if any, human habitation. Species on remote islands, for instance, had evolved in isolation and so could not withstand even minor changes in their habitats. Similarly, animals living in frontier areas had little fear of human newcomers and made easy prey for food or sport. The factory system created by the Industrial Revolution allowed for production on a much greater scale, leading many fur- or feather-bearing animals to be hunted to or over the brink of extinction. New forms of transportation, machinery, and weapons facilitated the rapid destruction of even once widespread and abundant species.

These trends are evident when one examines even a small sampling of the numerous

► THE NEAR-EXTINCTION OF THE AMERICAN BUFFALO

The now famous near-extinction of the American buffalo (*Bison bison*) during the 1800s was prompted by both economic and cultural pressures. Large-scale cattle ranchers disliked buffalo because they competed with domestic cattle for grazing land. Buffalo were also considered a nuisance by railroad companies because large herds could damage tracks and locomotives and cause lengthy delays. Most importantly, however, buffalo were seen as the key to breaking Indian resistance on the Great Plains. By destroying the large herds that were both the main food source and symbolic center of many tribes, Anglo-Americans hoped to starve, or at least force the relocation of, Native American groups hostile to white expansion.

Actively encouraged by the federal government and military, buffalo hunting increased dramatically beginning in the mid-1800s. Several hundred commercial hunting operations killed tens of thousands of buffalo each day. Hides were shipped back east and to European markets and were made into clothing, rugs, and even machine

belts. Additionally, individuals traveling via railroad often shot buffalo from their train cars for sport. Such wholesale slaughter soon took its toll. While there had been an estimated 60 million buffalo at the beginning of the 1800s, by 1875 that number had dwindled to about 1 million. Just 20 years later, in 1895, there were only a few hundred buffalo left.

By the 1870s, it had become apparent to the general public that the buffalo was facing extinction. In 1876, zoologist Joel A. Allen published a series of articles highlighting the precipitous decline of the species and arguing for protection of the remaining herds. Initial efforts at preservation, however, were hampered both by the powerful railroad and ranching industries and the buffalo's integral role in the war of attrition against the Plains Indians. It was only through the development of privately owned herds in the late 1800s and early 1900s, such as that of rancher James Philip, that the buffalo was saved from extinction.

—Maxine Taylor

species that met their ends during the late eighteenth, nineteenth, and early twentieth centuries. Many were overhunted, including the sea mink, a North American mammal that died out in the 1860s as a result of large-scale fur trapping. Similarly, *Santalum fernandezianum*, a plant native to Chile, was harvested to the point of extinction in the early 1900s for its aromatic wood that was used to fashion a variety of decorative household objects. Other species, such as Bennett's seaweed, were destroyed more indirectly from human contact. A red algae found in the coastal waters of Australia, Bennett's seaweed became extinct by the early 1900s due to water pollution and an increased level of silt that were the results of the high volume of maritime traffic to Australia.

In other cases, species disappeared through a combination of anthropogenic (human caused) factors. Steller's sea cow, for instance, was a large marine mammal native to the Bering Sea that was driven to extinction in the 1760s predominantly as a result of overhunting for its meat, oil, and hide. Overhunting of sea otters in the same

region also had a role to play in the sea cow's demise: in the absence of the sea otter, the sea urchin's natural predator, sea urchins proliferated, in turn competing with the sea cow for the sea grasses that made up the diets of both species. The tarpan, a breed of small Eurasian horse, slowly disappeared as a unique species through hunting and hybridization with domesticated horse varieties, finally meeting its end in the early 1900s. The quagga, a relative of the zebra that once roamed southern Africa, was hunted for its meat and hide, but was also decimated through competition for grazing land with domestic sheep and goats brought by settlers.

Even species that were once abundant could fall victim to human excess. The passenger pigeon was once one of the most prolific avian species in North America, with an estimated population of between 3 and 5 billion birds. During the 1800s, however, vast numbers—sometimes as many as 50,000 a day in one location—were killed in order to provide inexpensive meat to city dwellers, supplied regularly by railroad. And, because passenger pigeons

could only survive predation through large flock size, once numbers dropped past a threshold that may have seemed still quite high, the animals could not effectively employ this survival strategy. The last passenger pigeons were killed in the early 1900s, although extinction may have been inevitable for decades.

Perhaps more significant than the loss of these and other species during this time was the burgeoning scientific awareness of extinction, first as a natural reality and, by the late 1800s, as a phenomenon that could be produced—or prevented—by humans. Until the late 1700s, the extinction of a species was inconceivable. The concept of extinction was incompatible with the *scala naturae* (“Great Chain of Being”), the predominant framework for understanding the natural world that had been in place since antiquity. According to the Great Chain of Being, all of nature was ordered from least perfect (soil) to most perfect (God). Extinction was impossible because there could be no missing “links” in the chain, which was seen as unchanging and without flaws. The concept of the “Balance of Nature”—that God had created an adequate number of creatures and would not allow any of them to disappear because this would create disharmony in nature—was also a central belief.

Fossils were widely held to be the remains of species still in existence elsewhere on the planet. (And, because much of the globe remained uncharted, it was difficult to dismiss this theory.) Others suggested that fossils were the victims of the biblical Flood, thus helping make the idea of extinction more acceptable by placing it within a religious context. Yet it was not until the French paleontologist and anatomist Georges Cuvier (1769–1832) delivered a paper in 1796 on the distinctions between fossilized mastodons and extant elephant species that extinction became accepted as scientific fact. Cuvier, who became the chief proponent of catastrophism, believed that many species had become extinct in the past due to natural “revolutions” or dramatic earth-changing events.

The acceptance within the scientific community of extinction as a natural phenomenon led most naturalists to regard contemporary examples of apparent extinction with a sense of resignation. The belief that humans could not—and

should not—influence the fate of a species was supported in the mid-1800s by Charles Darwin’s theories of natural selection and survival of the fittest. If a species declined, it was argued, it was because it was inherently less viable than others, and its extinction was a natural consequence of this inferiority. In the late 1800s, however, amid increasingly unarguable examples of human-induced extinction, it became clear that humans had had a direct role in the annihilation of a number of species.

These scientific advances were accompanied by an increased popular interest in natural history. By the early 1800s, “bioprospecting”—the exploration of new regions in order to bring back plant and animal specimens for elaborate gardens and menageries—had become a favorite hobby among the upper class. As interest increased, the number of zoos and museums skyrocketed. Although the stocking of these personal and public collections often helped spur extinctions, the interest in natural history also heightened awareness of endangered species. In the mid-1800s, for example, Europeans and Americans became fascinated with the dodo, a flightless bird native to Mauritius that had been extinct since the late 1600s. Although little interest had been paid to the dodo until this time and many people believed the strange-looking creature had been a myth, the discovery of a number of dodo bones captivated the public’s imagination and brought the man-made extinction of the dodo and other species to light. The dodo has remained perhaps the most recognizable and culturally significant symbol of extinction.

With dawning awareness of man’s impact on the fate of species, by the late 1800s calls for conservation increased, spurring the passage of regulatory and protective legislation and the creation of wildlife preserves and captive breeding programs. This heightened interest coincided with a number of other social trends, including Progressivism (the social reform movements of the era that rejected “laissez faire” policies). In addition to viewing the extinction of a species as an economic and ecological loss, the public began to see it as a moral one, a symbolic failure of forward-thinking modernism. The preservation of endangered species also went hand-in-hand with imperialism, as naturalists in Europe and

the United States turned increasing attention to species in Africa, Oceania, and Latin America.

—Maxine Taylor

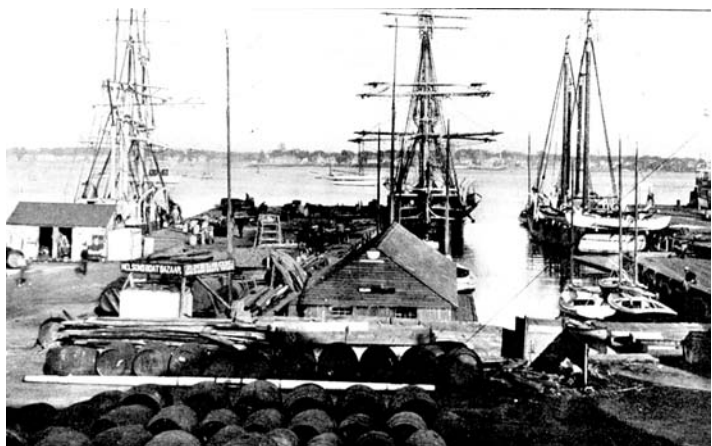
Bibliography

- Barrow, Mark V., Jr. *Nature's Ghosts: Confronting Extinction from the Age of Jefferson to the Age of Ecology*. Chicago: University of Chicago Press, 2009.
- Carey, S. W. *Theories of the Earth and Universe: A History of Dogma in the Earth Sciences*. Stanford, CA: Stanford University Press, 1988.
- Miller, C. A. *Jefferson and Nature: An Interpretation*. Baltimore, MD: Johns Hopkins University Press, 1988.
- Rudwick, M. J. S. *Georges Cuvier, Fossil Bones and Geological Catastrophes: New Translations*. Chicago: University of Chicago Press, 1997.

The Rise and Fall of the Worldwide Whaling Industry

Commercial whaling originated in the coastal regions of western Europe in the eighth or ninth century. After 1750, the industry expanded rapidly to different parts of the northern and southern Atlantic, driven by technological change and a growing demand for whale oil, used mostly for lighting. During the eighteenth and nineteenth centuries, the industry remained essentially unregulated. Competition between the main whaling nations was intense and fueled a constant search for new whaling grounds and more efficient hunting and processing methods. By 1900, key whale products had been replaced by other materials, and whale stocks in many regions of the globe were depleted, resulting in the gradual decline of the industry.

Archeological evidence suggests that whale harvests took place as early as the first century CE in the Bering Strait. The Basques, however, were the first commercial whalers, using small boats and implements with iron blades to kill slow-swimming right whales in the Bay of Biscay for an emerging international market around 1000 CE. Sometime before 1500, the Basques constructed larger boats and crossed the Atlantic Ocean to hunt off the coasts of Newfoundland and Labrador. They were met on the Grand Banks by ships from Britain and France in the early sixteenth century, and the region



Whaling ships and casks of whale oil in New Bedford, Massachusetts, 1901. (National Oceanic and Atmospheric Association)

subsequently became the center of the European whale trade. Led by Holland, the several whaling nations expanded their operations to the waters near Spitsbergen in the Arctic Ocean amid growing competition and rising oil prices in the mid-seventeenth century. By 1815, England was the dominant global whaling power, due in large part to its control of the hunting grounds for right and bowhead whales in the Davis Strait, west of Greenland.

When North Americans began whaling in the eighteenth century, they were primarily interested in sperm whales. These large whales yielded less oil than other whales but contained ambergris and spermaceti, which were valuable for their use in the production of perfume and candles. The New England whale fishery reached its apex in the 1720s, when Nantucket and New Bedford emerged as important production centers and ports for the larger whaling vessels of the era. Subsequently, American whalers sought out new whaling grounds near the Falkland Islands and in the Pacific Ocean, where they discovered rich stocks of bowhead and gray whales off the coasts of Alaska and Baja California in the mid-1800s. Meanwhile, English whalers moved into the southern Atlantic Ocean and the Indian Ocean in search of sperm whales and into the bays of Tasmania, Australia, and New Zealand in pursuit of right whales.

In 1863, the invention of the harpoon cannon by Norwegian Svend Foyn launched the era

of modern industrial whaling. When mounted on steam-powered ships, this invention enabled the traditional whaling powers, as well as new whaling nations such as Japan and Russia, to kill large numbers of fast-swimming whales in previously unexploited waters, first near northern Norway and later in the Antarctic. As a result, several whale species were nearly exterminated by the turn of the twentieth century. In 1904 and 1913, this intensive exploitation led to bans on coastal whaling in Norway and Iceland. In the 1930s, the leading whaling nations signed the first international treaties regulating pelagic, or open-sea, whaling, which was increasingly conducted after 1926 with large factory ships capable of processing entire whales on board. This growing concern about diminishing whale stocks, in combination with the earlier development of alternatives to whale oil as the process for refining kerosene improved, signaled the start of a gradual decline in worldwide whaling.

—Brad Martin

Bibliography

- Ellis, Richard. *Men and Whales*. New York: Knopf, 1991.
- Hacquebord, Louwrens. “‘There She Blows’: A Brief History of Whaling.” *North Atlantic Studies: Whaling Communities* 2 (1990): 11–21.
- Tonnessen, J. N., and A. O. Johnsen. *The History of Modern Whaling*. Translated by R. I. Christophersen. Berkeley and Los Angeles: University of California Press, 1982.

Polluted Waterways—The Thames River and London’s Big Stink of 1858

The Big Stink of London occurred during the summer of 1858, when exceptionally hot weather and unprecedented levels of pollution overwhelmed the Thames River. As an immediate result, the unbearable stench fuming from the river caused members of Parliament to evacuate the chambers of the House of Commons. More importantly, the events surrounding the summer of 1858 became a catalyst for massive projects of sewage reform in London and throughout Britain.

The polluted state of the Thames River in 1858 was a result of several factors. Intense

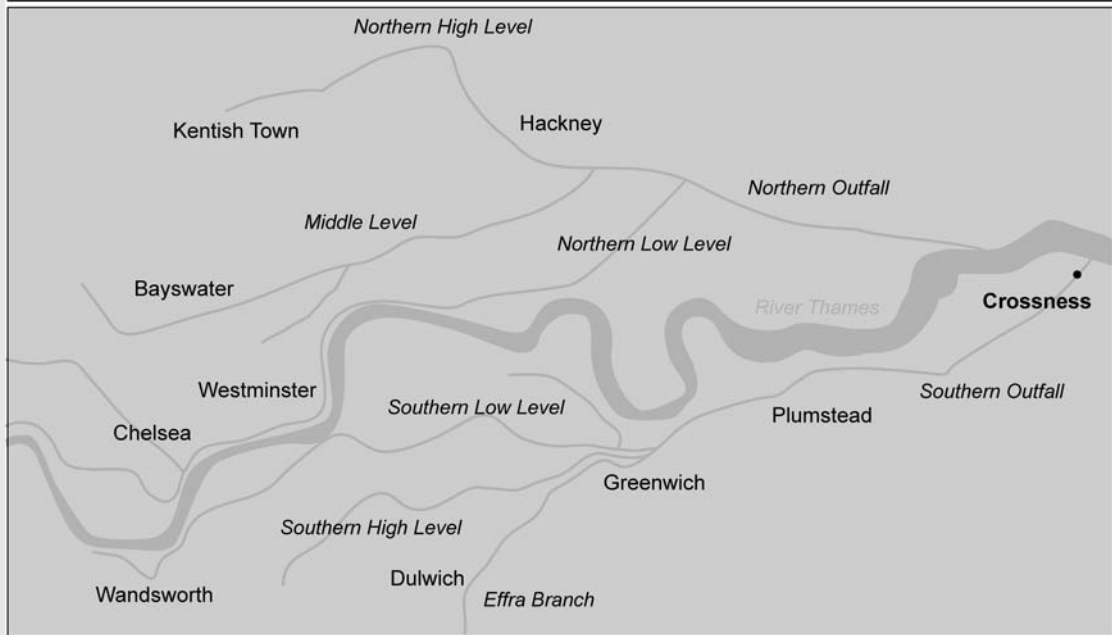
and rapid industrialization and urbanization in Europe during the eighteenth and nineteenth centuries increased population densities and environmental pollution, perhaps most acutely in London. In 1800 London’s population had reached more than 1 million, and by 1850 the capital had more than 2.5 million inhabitants. Coupled with unsanitary living conditions, insufficient hygiene, overwhelming poverty, and the tidal flow of the Thames, waterborne epidemics led to staggering mortality rates. Once contaminated, pumped and piped water is a highly efficient medium for the transmission of epidemic disease. Indeed, as population densities rose, waterborne epidemics were the primary hazard to urban populations. Cholera, typhoid fever, dysentery, and various other conditions of diarrhea all contributed to the high mortality rates witnessed by nineteenth-century populations.

The dominance of the miasmatic theory (that bad air causes diseases) and anticontagionism (that diseases were not caused by specific agents) among laypersons and physicians deflected attention from direct person-to-person spread of disease and further hindered effective responses until the full development of germ theory. The medical understanding of the specificity of disease and the role of water in spreading epidemics began to change first with epidemiological studies conducted by the London physician John Snow during the cholera outbreaks of 1848–1849 and 1854–1855. Subsequent epidemiological and bacteriological investigations under John Simon’s staff at the Privy Council and the Local Government Board (John Netten Radcliffe, George Buchanan, John Burden Sanderson, and Richard Thorne-Thorne) provided the conclusive evidence of the waterborne transmission of these deadly epidemic diseases.

Concurrent improvements in water supply throughout the first half of the nineteenth century only exacerbated the threat of waterborne epidemics. The sewers that did exist were poorly constructed and were most often unconnected. The majority of the London water supply was inadequately provided by pipes originally laid by the Romans and distributed through local parish pumps. Although plans for a comprehensive sewer system had been discussed

LONDON METROPOLITAN SEWERS, 1858

METROPOLITAN SEWER SYSTEM, CIRCA 1858



The construction of the sewers by the Metropolitan Board of Works after 1858 was the defining civil engineering project of the nineteenth century. Between 1856 and 1859 alone more than 82 miles (132 kilometers) of brick intercepting sewers were built in London. The intercepting sewers were connected to more than 450 miles (724 kilometers) of main sewers, which received the contents of 13,000 miles (20,921 kilometers) of small local

sewers. In all, the new metropolitan sewers serviced about half a million gallons (nearly two million liters) of waste per day. The construction of the intercepting sewer system involved more than 300 million bricks, about 900,000 cubic yards (688,100 cubic meters) of concrete and mortar, and the excavation of more than 3.5 million cubic yards (2.7 million cubic meters) of earth.

—Jacob Steere-Williams

by the Royal Commission of the Corporation of the City of London and Parliament created the Metropolitan Board of Works in 1851, it was not until the summer of 1858 that legislative action would be taken to remedy the polluted state of London's waterways.

As a result of the fetid status of the Thames in 1858, Parliament witnessed firsthand the state of the Thames and took decisive action. New legislation greatly expanded the authority of the Metropolitan Board of Works, then under the control of public health engineer Joseph Bazalgette. Parliament granted Bazalgette the power to construct a completely new system of drainage for the entire metropolitan area. Bazalgette's

scheme included new pumping stations, rebuilt sanitary sewers, and an intricate system of outfall works. The linchpin of Bazalgette's comprehensive plan was that Parliament gave the Metropolitan Board of Works taxing authority and loaned it 3 million pounds to complete the renovations.

Bazalgette's project continued throughout the second half of the nineteenth century. The whole system comprised more than 1,300 miles (2,092 kilometers) of sewers and four pumping stations. Deptford and Crossness were completed in 1865, Abbey Mills in 1868, and Western in 1875. Along with the main drainage scheme, Bazalgette's plans also included the embanking

of the Thames in central London, a major public health engineering feat. Indeed, the Big Stink of 1858 was a catalyst for many of the drainage reforms that improved London's waterways during the second half of the nineteenth century.

—*Jacob Steere-Williams*

Bibliography

- Halliday, Stephen. *The Great Stink of London: Sir Joseph Bazalgette and the Cleansing of the Victorian Metropolis*. Stroud: Sutton, 1999.
- Hardy, Anne. *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine 1856–1900*. Oxford, UK: Clarendon, 1993.
- Wohl, Anthony. *Endangered Lives: Public Health in Victorian and Edwardian England*. Cambridge, MA: Harvard University Press, 1983.

The Opening of the Great Plains in the Americas

The Great Plains region of North America, also known as the Prairies, comprises approximately 1.4 million square miles (3.6 million square kilometers) of the temperate continental interior. It extends approximately 2,400 miles (3,840 kilometers) from central Canada south through the United States into Mexico and is approximately 500 miles (800 kilometers) wide between the western boundary, the foothills of the Rocky Mountains, and the eastern boundary where its predominant but varied grassland merges with forest. Prior to European immigration, the region was occupied by numerous tribes of Native

Americans whose lifeways were dominated by hunting bison, the native herbivores, that roamed the plains in vast herds.

The Spanish conquistadors Francisco Vázquez de Coronado and Hernando de Soto were probably the first Europeans to arrive in the region, which they did independently in the southern United States in the early 1540s. They were searching for gold but found only scattered Native American settlements. Within the next 100 years Europeans were attracted to the region to exploit native animals, especially beaver, for fur. In 1803 the Louisiana Purchase gave the United States control over approximately 800,000 square miles (2.1 million square kilometers) of the French-owned territory of Louisiane, which extended into central Canada and comprised much of what is now the central portion of the United States, including the Great Plains. This purchase, along with Lewis and Clark's transcontinental expedition in 1804, made the interior more accessible and attractive to settlers who traveled west via waterways and wagon routes. Fur traders and fur companies continued the exploration of North America; their trading posts became the first significant European settlements in the Great Plains and beyond in the early 1800s.

The railway era in North America began in 1828. The iron horse spread rapidly along the eastern seaboard initially and then westward. Towns were established at railway heads, many of which became major cities such as Dodge City in Kansas and Fargo in North Dakota. Others

ENVIRONMENTAL CHANGE IN THE GREAT PLAINS

Environmental change caused by the settlement of the Great Plains was unprecedented. Flora, fauna, and soils were altered. As cropland replaced grassland, vast quantities of carbon dioxide were released into the atmosphere as roots, stems, and leaves were removed, often by fire, and the soil's organic carbon was subject to degradation. How many plant species became extinct remains unknown, but the plight of the passenger pigeon (*Ectopistes migratorius*) is well documented. Once an abundant game bird, its population was between 3 billion and 5 billion prior to 1700; by 1914

it was extinct. Loss of habitat, overhunting, expanding city markets for feathers (for hats) and meat, and the railway, which facilitated meat transport (especially following refrigeration in the 1850s), contributed to the pigeon's fate. The bison almost suffered the same fate for similar reasons, though it was especially targeted as part of the U.S. Army's program against Native Americans. Within a century only 1,000 animals remained from a population estimated to have been between 25 million and 60 million in 1800.

—*A. M. Mannion*

were ephemeral and disappeared as the railway moved on. These gateway settlements were the starting points for pioneers who continued farther west. By 1860 the railways were encroaching into the Great Plains; by the 1880s there were four transcontinental rail links whose construction was facilitated by generous land grants from the government. Land grants were also available to individuals through the Homestead Act of 1862, which awarded a claim of 160 acres (65 hectares) provided that the land was cultivated.

The period between 1860 and 1920 was one of tremendous environmental and social change as millions of settlers, mostly from Europe, transformed the social and economic landscapes, brought urbanization to this vast semiarid grassland region, made the passenger pigeon extinct, and almost drove the bison to extinction. It was not, however, a period of opportunity for Native Americans, who were mostly confined to reservations by 1880. By 1900 more than 200 million acres (81 million hectares) had been cleared as the frontier moved west and agriculture was established. Vast fields of cereal crops, especially wheat and corn, replaced grassland to create a cereal belt; oats, rye, and barley were also cultivated. The vast scale and rapid rate of change are reflected in the fact that between 1866 and 1900 the cultivation of wheat in the United States increased from 15.4 million acres (6.2 million hectares) to 49 million acres (19.8 million hectares) while the cultivation of corn increased from 30 million acres (12.1 million hectares) to 95 million acres (38.4 million hectares). Most of this expansion was in the Great Plains. Moreover, farmers became increasingly specialized so that crop monoculture became the predominant land use. By 1914 the Great Plains region had become a foundation of agricultural production in the United States.

Farther south, large-scale ranching started in Texas in the 1830s and moved north. This was due to a combination of factors, including an abundance of grass, native wild horses and cattle, good breeding programs that produced tough stock, a pioneering spirit, hard-working skilled adventurers (cowboys), the availability of range rights, westward-pushing railways, and an increasing market for meat in the eastern cities. Cattle were entirely range-reared until the

fatefully cold winter of 1886, after which ranchers began to produce feed as stock for harsh winters.

—A. M. Mannion

Bibliography

- Webb, W. P. *The Great Plains*. Lincoln: University of Nebraska Press, 1981.
 Wishart, D. J. *Encyclopedia of the Great Plains*. Lincoln: University of Nebraska Press, 2004.

The Emergence of the Ranch in the American West

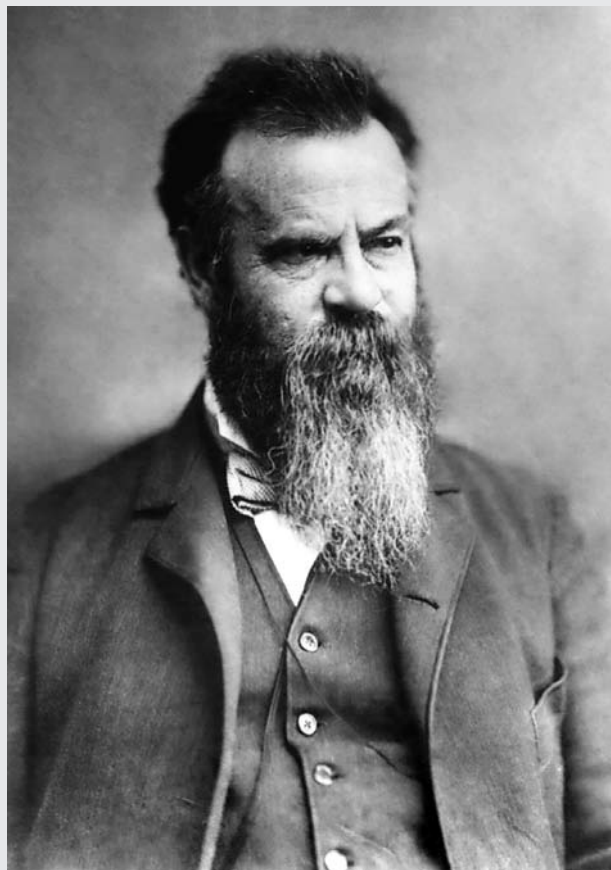
Ranches, generally speaking, are farms that rely on uncultivated, self-replenishing vegetation as fodder for livestock. Ranching is a way to utilize rangelands, too boggy, dry, hilly, or rocky for farming crops or too remote and inaccessible to attract settlers. Where grass will grow, cattle can graze and support an economy. The romanticized ranches of popular media reflect ranching practices followed shortly after the U.S. Civil War, but the roots of the nineteenth-century ranches go back centuries.

Cattle were domesticated more than 6,000 years ago in Anatolia or southeastern Europe. Columbus carried cattle to Caribbean islands in 1493, and by the 1520s other Spanish colonizers took them to North, Central, and South America. The Roman Catholic Church received extensive lands in Spanish Mexico, including parts of present-day Texas, California, Arizona, and New Mexico. Some missions controlled numerous peripheral *ranchos*. Nobles and soldiers also gained land grants from the Crown. Cattle were easier to establish than farms and villages, and occupying land with herds was a quick way to assert control and support ownership over large areas. Cattle were fenced out of gardens and grain fields to forage on unimproved open range. From a few hundred animals, Spanish colonial herds increased to hundreds of thousands, with some cattle escaping to live wild. Rancho cattle were tended by an ethnically mixed economic underclass, including slaves from cattle-raising African tribes. For the most part, cattle ran practically wild, and roundups resembled hunts. Until the early 1800s, since Spaniards preferred mutton to beef, the major products from

➤ JOHN WESLEY POWELL AND RANGELANDS

During the Civil War, the Homestead Act gave 160 acres (65 hectares) of western public land to adults who had “never borne arms against the United States” in return for occupying and farming it for five years. But the region was poorly understood. Despite local boosters’ claims to the contrary, much of the land was unfit for farming. Beginning in 1867, geologist John Wesley Powell explored the Rocky Mountains by boating the Colorado River and its upper basin tributaries. Powell quickly realized that most of the American West could support livestock but not farming. His 1879 “Report on the Lands of the Arid Regions of the United States” and later papers urged increased rangeland homesteading acreages, organizing watersheds with cooperative irrigation schemes, and providing government with natural resources reports. Powell became director of the U.S. Geological Survey, but his ideas were considered radical, and most were politically opposed. In 1909 and 1916 allowable rangeland homesteads were finally expanded to 320 and then 640 acres (130 and 260 hectares, respectively), still inadequate for profitable ranching in much of the arid West.

—Matthew Chew



John Wesley Powell, U.S. explorer, soldier, and geologist. In 1869 he led an expedition down the Green and Colorado rivers that passed through the Grand Canyon. (Library of Congress)

Spanish cattle were hides and tallow, easily preserved and shipped.

English, Dutch, and French colonists also brought cattle. Before and after the American Revolution, raising livestock was a frontier activity, gradually moving westward into Indian lands ahead of farming and town settlement. As in the Spanish colonies, cattle were tended by poor people with little prospect of economic advancement. After Mexican independence from Spain in 1821, Anglos from the United States began to settle in Texas, where many assembled herds from wild Spanish cattle. As the U.S. frontier moved westward and the Mexican frontier moved northward, technologies, practices, and

peoples mixed. The lasso, boots, wide-brimmed hats, and horned saddle all became more standardized. An itinerant landless underclass, or cowboy proletariat, began to emerge. Living rough, dangerous, and often short lives, few of these men resembled movie stars.

Ranching was a boom-and-bust business. The California and South Dakota gold rushes brought booms; bad weather, Indian raids, market hunting, and eastern farm competition brought busts. The most sophisticated ranch operators tapped European and eastern U.S. investors as sources of relatively inexpensive operating capital. During the Civil War, Texas ranches openly sold cattle to Union customers and smuggled them

to the Confederacy to avoid Union reprisals. After the war, government incentives, homesteaders, and massive private investment in mining companies, telegraph lines, and railroads helped provide new markets and transportation opportunities for cattlemen. Simultaneously, however, the growing demand for hides and meat drove ranchers to more remote areas because of land-use conflicts with farmers and townspeople.

In the early 1880s, cattle prices were high and rains were good, so herd sizes drastically increased. By the late 1880s, however, hard winters and droughts destroyed many herds. The fact that a large ranch could produce animals at a cheaper price per head than smaller operations, the luck of having arrived first to homestead at critical watering sites, ruthless business practices, and political connections combined to allow some ranchers and syndicates to consolidate holdings, forcing out marginal competitors. Some exploited huge areas of government-owned no-man's land. But American settlers continued to migrate westward, and ranching retreated to ever more remote and marginal lands. In the mid-1870s, newly invented barbed wire fencing helped ranchers to quickly and

cheaply establish land boundaries. Irrigation projects large and small made former rangelands farmable. Improving railroads opened more eastern markets to western products and carried civilized people and amenities westward.

Ranching contributed significantly to the opening of the American West. Ranchers and cowboys became symbols of perseverance and self-sufficiency. Later innovations such as highway transportation, mechanical refrigeration, and advanced veterinary medicine have changed the way ranchers do business, but converting grass into animals remains a way to make a living from otherwise marginal lands.

—Matthew Chew

Bibliography

- Guice, John D. W. "Cattle Raisers of the Old Southwest: A Reinterpretation." *Western Historical Quarterly* 8 (1977): 167-187.
- Jordan-Bychkov, Terry G. *North American Cattle-Ranching Frontiers: Origins, Diffusion, and Differentiation*. Albuquerque: University of New Mexico Press, 1993.
- Worster, Donald. *Under Western Skies: Nature and History in the American West*. New York: Oxford University Press, 1992.

■ Introduction: Disease Epidemics and Human Response

By the eighteenth century the Afro-Eurasian plague pandemic of the 1300s had become a distant memory, and the wave of epidemics that had swept through the Americas during the Age of Exploration had finally subsided. Infectious diseases continued to be the major cause of deaths, with some, such as smallpox, especially deadly. In the 1700s smallpox killed millions, including an estimated 400,000 Europeans, among whom were an Austrian emperor, a Russian tsar, a Swedish queen, and kings of France and Spain. But by the 1700s even smallpox had become endemic, that is, constantly present in a population, with mortality rates more or less constant from year to year. Epidemics occurred, but they tended to be localized and of short duration. In the Western world, for example, smallpox epidemics were limited

to Iceland in 1707-1708 and Boston in 1720 and 1730. The plague struck Marseilles in 1720, killing almost half its residents, and Moscow in 1770-1771, where it claimed 50,000 victims. A virulent strain of influenza swept through Europe in 1781-1782, and an outbreak of yellow fever in Philadelphia killed several thousand in 1793. This pattern of brief localized epidemics, which also was the norm in Asia and Africa, was a far cry from the devastating pandemics of the past.

What might have been the beginning of a new phase in humanity's relationship with disease-causing organisms was cut short, however, in the nineteenth century, when epidemics became more lethal and global. Increased migration and trade, new and faster means of travel, and imperialism all promoted the spread

of disease-causing bacteria, viruses, and parasites as a result of increased contact among the world's peoples. Urbanization also contributed. Urbanization meant increased susceptibility to disease as a result of overcrowding, contaminated water supplies, and inadequate systems for disposing of human waste and garbage.

Deadly epidemics affected every part of the globe. Worldwide influenza epidemics occurred in 1847–1848, 1857–1859, and 1889–1892. In the late nineteenth century the world experienced its third bubonic plague pandemic, one that greatly exceeded the sixth-century Plague of Justinian and the fourteenth-century Black Death in geographical scope. Having begun in southwestern China in the 1850s, it spread gradually throughout China and reached the major port cities of Guangzhou and Hong Kong in 1894. From there international shipping carried the disease to port cities on every continent, resulting in a pandemic that killed approximately 13 million people (mostly Chinese and Indians) and lasted well into the twentieth century. The most deadly global traveler of the era, however, was not *Yersinia pestis*, the bacterium that causes plague, but rather *Vibrio cholerae*, the cause of cholera. This lethal infection of the small intestine, capable of causing death in hours after its onset, was endemic to India but in the nineteenth century spread around the world, causing no fewer than six pandemics between 1816 and the first years of the twentieth century. How many succumbed to cholera in the 1800s will never be known, but the number of deaths might well have reached 35 million to 45 million. Not just human beings experienced mass die-offs. In 1889 cattle shipped to Africa from India introduced rinderpest, a highly contagious viral disease, resulting in an epidemic in which an astounding 90 percent of all cattle died in sub-Saharan Africa. Famine and sleeping sickness (spread by tsetse flies that flourished when vacant pasture land reverted to brush) killed millions of Africans.

Although devastating, the upsurge in deadly epidemics is not what makes the late eighteenth century and the nineteenth century so important in the long history of humanity's struggle with disease. Of much greater consequence was a host of new treatments, preventative measures,

and scientific breakthroughs that for the first time gave humans the knowledge and means to fight against dozens of killer diseases with hope for success.

Over the centuries afflicted persons, learned scholars, illiterate peasants, practicing physicians, and public officials all had speculated about the causes of disease. Divine judgment, fate, witchcraft, foul air, moral failure on the part of the afflicted, evil winds, imbalances in bodily fluids, and poor diet were just a few of the many explanations they offered. Based on such theories, they devised preventions and treatments in ever greater numbers. Some, such as prescribing rest, quarantining new arrivals to a city during epidemics, and administering certain herbal medicines, undoubtedly did some good. Others, such as the bleedings and purgings routinely prescribed by European physicians unquestionably did great harm. Most treatments might have had some benefit by giving a sick person reason to hope but had no real medical effect one way or the other.

This changed in the eighteenth and nineteenth centuries. The worldwide acceptance of inoculation and later vaccination as a means of fighting smallpox, the increased use of quinine to treat malaria, the distribution of fresh produce (especially citrus) to prevent scurvy among sailors, and efforts to clean up urban water supplies to prevent cholera and other diseases are all examples of positive steps taken before doctors and scientists understood the true causes of disease. Such an understanding was achieved only in the closing decades of the century, when microbiologists such as Robert Koch (1843–1910) and Louis Pasteur (1822–1895) proved beyond a doubt that microorganisms (“germs”), not foul air, were the cause of infectious diseases. Their work underscored the importance of public sanitation efforts; made possible the development of vaccines to prevent rabies, diphtheria, tetanus, and typhoid fever; and made antisepsis mandatory for surgeons and midwives. Other scientists and physicians made important breakthroughs in understanding how certain diseases spread. The discovery that mosquitoes transmitted malaria and yellow fever led to mosquito-control campaigns that saved countless lives and made possible, among other things, the completion of the Panama Canal between 1904 and 1914.

It did not take long to discover that the battle against killer epidemics had not been won by 1914. Estimates of how many people died from the influenza pandemic of 1918–1919 range from 50 million to 100 million. Even if the low estimate is correct, it would make this pandemic the deadliest in history. Despite the subsequent development of new vaccines and the discovery of antibiotics in the twentieth century, human beings continue to be threatened by new diseases such as HIV/AIDS, which emerged in the 1980s, and old ones such as influenza, which in the form of swine flu gave rise to fears of a potentially devastating pandemic in 2009 and 2010. None of this should detract, however, from the important, indeed revolutionary, medical and scientific advances that occurred between 1750 and 1914.

—James H. Overfield

The Bubonic and Pneumonic Plague

Living in the guts of fleas and transmitted to rodents and humans by a flea bite, the bacterium *Yersinia pestis* causes plague. The fleas live on rats and, once infested with the bacterium, transmit it to their hosts. When large numbers of rats die, fleas seek a secondary host and, finding it in humans, infect them with plague. Symptoms include stupor, high fever, chills, and headache. Within six days of infection, lymph nodes swell under the arms or in the neck or groin. These swellings, known as buboes, give bubonic plague its name. Bubonic plague kills 60–90 percent of its victims when untreated. When the plague bacillus enters the lungs, victims can transmit the disease by coughing. This highly contagious form of plague, pneumonic, is nearly always fatal when untreated.

An ancient disease, plague erupted in the sixth century CE in Byzantium, in the fourteenth century in Eurasia, and between the eighteenth and twentieth centuries worldwide. This last outbreak, the third plague pandemic, killed 13 million people in the nineteenth century alone. Plague appeared in the Middle East and the Ottoman empire in the 1770s. These isolated flare-ups of plague died out, but in the nineteenth century the disease became active in China. In

1855 a military revolt in Yunnan prompted the emperor to dispatch troops to quell the uprising. In their march soldiers crossed the Salween River, whose surrounding land had plague-carrying rats. Infected by the disease, these soldiers transmitted plague wherever they went. During the next 40 years, plague devastated large areas of China, reaching Guangzhou and Hong Kong in 1894. Within a decade of its arrival in Hong Kong, plague afflicted the world's major seaports. During its global spread, plague infected several species of rodents in addition to rats, notably squirrels in San Francisco (1900) and marmots in Manchuria (1911).

Alarmed, Japanese and European authorities worked to combat the disease, sending Japanese physician Shibasaburo Kitasato and French physician Alexandre Yersin to Hong Kong in 1894. Both scientists isolated the plague bacillus in the blood of human corpses and dead rats. Yersin used the bacillus to infect mice and guinea pigs, proving it to be the cause of plague. Kitasato published his findings a few weeks before Yersin and thus has received credit for discovering the bacillus. As important as the discovery of the bacterium was, it left unclear how plague spread from rodents to humans. Japanese physician Masanori Ogata, working in Formosa (present-day Taiwan), made the link in 1897, identifying the plague bacillus in fleas. During the next decade, scientists isolated two strains of the plague bacterium, one endemic to northern Asia and central Africa and the second endemic to India, Sri Lanka, and the seaports infected worldwide.

In combating plague, Kitasato championed a cleanliness campaign involving disinfection



Alexandre Yersin, French bacteriologist and co-discoverer of the bacillus responsible for the bubonic plague. (Leonard de Selva/Corbis)

➤ PLAGUE IN HAWAII

Probably originating in Hong Kong, plague reached Hawaii in 1899. That summer, Honolulu's Board of Health detained several ill sailors from Japan and Hong Kong. All died under mysterious circumstances perhaps of plague. Chinese physician Li Fai, who had witnessed plague firsthand in Hong Kong, reported the first plague death in Honolulu in December 1899. Four additional cases in the following days raised fears of an outbreak. All of these cases originated in Chinatown, leading white elites to blame Chinese newcomers for the disease. A three-man commission, established by Hawaii's attorney general, blamed the Chinese for living in filthy overcrowded conditions. The commission called for isolation of the sick but took no notice of the rats and fleas that transmitted the disease. The Board of Health dispatched work crews to disinfect homes with carbolic and sulfuric acid, a practice reminiscent of the cleanliness campaigns elsewhere. The board closed schools and churches, banned public gatherings, and burned condemned houses, leaving hundreds homeless in Chinatown. Recognizing the centrality of rats to plague's spread through Honolulu, the Board of Health offered 25 cents to anyone who found a rat, alive or dead. Knowing that the Chinese, fearing the intrusion of whites into their lives, were concealing plague victims, the board offered \$100 to anyone who reported a case of plague. By the board's orders, Chinese who worked in the homes of whites had to shower in public every morning before work lest they transmit the disease to whites. Most of these measures stressed sanitation and cleanliness, an approach that, doing little to eliminate rats and fleas, did not save Honolulu from plague. Between December 1899 and March 1900, physicians reported 71 cases of plague in Honolulu. Sixty-one died, and of these 41 lived in or near Chinatown.

—*Christopher Cumo*

of homes, the trapping and killing of rats, isolation of the sick, and deep burial of the dead in quicklime. Physicians who thought that filth caused plague likewise favored a cleanliness campaign. The fact that many people, especially the poor, lived in squalor seemed to confirm the filth hypothesis. Concurring with Kitasato in February 1897, British authorities in Bombay

(present-day Mumbai) hired 30,966 people to disinfect homes by spraying carbolic acid, mercuric chloride, and quicklime on roofs, walls, and floors. Their homes inundated, homeowners complained that these chemicals ruined their belongings. In some cases work crews nearly dismantled the badly constructed homes of the poor in search of rats. Running through sewers, the disinfectants flushed rats out of their burrows, sending them into other homes and perhaps abetting the spread of plague in the city. Spreading through the subcontinent, plague killed 6 million Indians between 1898 and 1908. The cleanliness campaign had failed. Worse, the work crews that cleaned up dead rats suffered high mortality, making the cleanliness campaign hazardous to the people who did the work of combating plague.

A few physicians held to the old miasma hypothesis. Corrupt air, they believed, caused plague. The putrid odors from rubbish heaps in many cities seemed to confirm this hypothesis, although it was difficult to reconcile the hypothesis with the fact that people who lived several blocks from the trash piles were also vulnerable to plague. Other physicians identified plague as a contagion, as a disease that is transmitted via person-to-person contact. These physicians were not far from the truth, for pneumonic plague is a contagion although bubonic plague is not. Other physicians asserted, despite the findings of Kitasato and Yersin, that plague spread from infected soil to the feet, penetrating the skin and thereby infecting its victims. Still others contended that humans contracted plague by eating contaminated food. In 1898 the Plague Research Commission falsified these claims. Attacking plague from another angle, British medical officer Richard Strong began in 1906 to use solutions of dead plague bacteria as a vaccine, but his efforts failed. Only in the 1930s would bacteriologists develop a vaccine against plague.

At first physicians puzzled over the seasonal variation in plague outbreaks. In the spring the number of plague cases increased rapidly before falling precipitously in the summer. This pattern was due to rainfall. Abundant rainfall in spring drove rats, along with their disease, from the sewers into homes in search of shelter. The onset of dry conditions in summer encouraged

rats to return to their burrows, minimizing their contact with humans.

According to one authority, plague spread around the world because steamships carried rats and thereby plague farther and faster than had sailing ships. In the age of sail, plague ran its course through the rats aboard ship before a ship made land. Steamships, however, larger than sailing ships, had a larger number of rats. Plague remained virulent for the comparatively brief voyages from port to port. Moreover, cities grew rapidly during the nineteenth century, providing a habitat for plague-carrying rats. During the third pandemic, mortality was higher in cities than in the countryside. Among farming communities, plague was infrequent because the plowing of land destroyed rat burrows.

Europeans, who had been victims of earlier plagues, were remarkably free from the ravages of the third pandemic. Houses of brick walls and tiled roofs were harder for rats to penetrate than were houses of wooden walls and thatch roofs. A more regular supply dissuaded Europeans from hoarding food against lean times. Without food to eat, rats had little incentive to invade the homes of Europeans. Finally, during the eighteenth century brown rats replaced black rats throughout Europe. Unlike black rats, the brown rat avoided humans and so did not spread its diseases to them.

Plague abated in the twentieth century with the discovery of antibiotics and the development of a plague vaccine. Before these breakthroughs, plague had been a scourge of humanity. It killed the poor disproportionately, crammed as they were into vile quarters. The filth of their homes undoubtedly attracted rats, although outside the medical community few people connected rats, fleas, and people as transmitters and recipients of plague. Instead, they blamed the gods.

—*Christopher Cumo*

Bibliography

- Altman, Linda. *Plague and Pestilence: A History of Infectious Diseases*. Springfield, NJ: Enslow, 1998.
- Kiple, Kenneth. *Plague, Pox and Pestilence*. New York: Barnes and Noble, 1997.
- Orent, Wendy. *Plague: The Mysterious Past and Terrifying Future of the World's Most Dangerous Disease*. New York: Free Press, 2004.

Understanding the Plague

Plague is a zoonosis, an infectious disease that normally infects animals but occasionally crosses the species barrier to cause human disease. The worldwide human death toll from plague throughout history is estimated at around 200 million. It has been associated with three major pandemics. The first, during the sixth century CE, became known as the Plague of Justinian, named after the eastern Roman emperor Justinian I (r. 527–565) who himself contracted the disease. Plague is thought to have started in Egypt, from where it spread by ship to Constantinople, the Near East, northern Africa, Europe, and central and southern Asia. An estimated 100 million people were infected, and as many as 40 million may have died. The second pandemic, often referred to as the Black Death, occurred in the fourteenth century and caused 50 million human fatalities. It is thought to have begun in central Asia and spread across Eurasia and into parts of Africa. One-third to one-fourth of Europe's population is estimated to have died during this second pandemic.

The third pandemic started around 1855 in the Chinese province of Yunnan, from where it spread to many parts of China and reached Hong Kong and Guangzhou in 1894 and Singapore and Bombay (present-day Mumbai) in 1896. It is estimated that during the first two decades of the twentieth century, over 12 million people died in India alone as a result of plague. The disease also spread to Southeast Asia, South Africa, Madagascar, North America, and South America via steam ships. In late 1899, plague was introduced to Honolulu by ships arriving from Hong Kong. In 1900 it was reported in San Francisco, and in 1901 it was reported in Cape Town, South Africa. Subsequently, the disease became established in the western and southwestern United States, where it still persists.

Before the etiologic agent of the plague was discovered, theories about the disease's causes abounded. Dating back to the Middle Ages, one theory linked the disease to bad air, which entered the lungs and caused the disease in the blood. There were many theories about what caused the bad air, including the alignment of planets, the phases of the moon, or divine intervention. In several medieval European cities, people blamed

and murdered Jews, who were accused of poisoning wells, while others sought to placate God by organizing processions of flagellants.

Only during the third pandemic were the true causes of the plague discovered. The two major advances were the discoveries of the pathogen that causes this disease and the nature of its transmission. The etiologic agent of plague is the bacillus *Yersinia pestis*, which, based on its biochemical and metabolic characteristics, has been classified into three biovars, or groups. The group that caused the third pandemic is called *Orientalis*. Its complex life cycle involves a rodent host that functions as a natural reservoir and a flea that represents the transmission vector. During their blood meals, infected fleas transmit the pathogen between rodents and can also infect humans, which represent accidental hosts. In several medieval plague epidemics, it was reported that finding large numbers of dead rats was shortly followed by human outbreaks. In this context, it is important to note that efforts to indiscriminately eradicate rats were often followed by outbreaks in the human population. This is explained by the fact that in the absence of rats, infected fleas were seeking alternate hosts and started more frequently biting and infecting humans.

Yersinia pestis was identified and isolated in Hong Kong, during the third pandemic, by two researchers working independently: Alexandre Yersin, a Swiss-born French physician who previously had worked at the Pasteur Institute in Paris and was trained by Louis Pasteur, and Shibasaburo Kitasato, a German-trained Japanese bacteriologist who studied in Berlin with Robert Koch. Both men arrived in Hong Kong in June 1894, a few days apart from each other. Kitasato, leading a team of six researchers, was received with hospitality by the local government. Yersin, accompanied by only two aides, one of whom soon abandoned him, was much less well equipped technically and received a cooler welcome. Yersin identified bacilli from buboes and lymph nodes of infected patients and from the blood of patients with very severe disease and was able to culture and examine under the microscope material isolated from the buboes. Kitasato found bacilli in the blood of several patients he examined and reported that the same

organism was present in buboes and in internal organs examined during autopsies.

Within a few months both investigators were able to publish their findings. Kitasato published his findings in the British journal *The Lancet* in August 1894, while Yersin published his discovery a month later in *Annales de L'Institut Pasteur*. Even though the two investigators offered similar descriptions of the pathogen, several differences exist between their reports, and despite the fact that Yersin arrived in Hong Kong a few days later, was less well equipped, and published his findings later, he provided a more accurate description of the pathogen. Kitasato described this nonmotile bacterium as slightly motile, while Yersin did not comment on this characteristic. In addition, Yersin correctly described the microorganism as Gram-negative, which means that the bacterium does not retain a crystal violet dye during the staining procedure used to classify bacteria based on structural particularities of the cell wall; Kitasato's article was not conclusive on this point. This subsequently led some investigators, more recently, to raise the possibility that Kitasato's samples might have been contaminated with another microorganism, such as pneumococcus, the etiologic agent of bacterial pneumonia, and it was in fact well known that many plague victims had secondary infections with this pathogen. They have questioned whether he had, in fact, correctly identified *Yersinia*. Yersin also noticed large numbers of dead rats throughout Hong Kong and was the first the one to propose, in 1897, that a connection exists between rats and the plague.

After its discovery, the bacillus that causes plague was known under different names, including *Bacterium pestis*, *Bacillus pestis*, *Pasteurella pestis*, and *Pestisella pestis*. Yersin's more accurate scientific description resulted in the pathogen being called, in 1954, *Yersinia pestis*. In 1897 Masanori Ogata, a Japanese physician working in Taiwan, and a year later Paul-Louis Simond, a French bacteriologist working in Bombay, were the first ones to independently propose that fleas are important in plague transmission. Both reported that humans with plague often had previously been bitten by fleas and, in addition, that rats developed symptoms similar to those in humans. When the investigators

prepared extracts from fleas and injected them into healthy rats, they observed that the animals developed plague. Another one of Simond's important findings was that in the absence of fleas, plague cannot be transmitted from infected rats to healthy ones.

In 1896 Waldemar Mordecai Haffkine, a Russian bacteriologist who studied with Nobel Prize laureate Ilya Mechnikov and was in Calcutta working on a cholera vaccine, developed the first heat-killed vaccine against plague that was widely used in India. Haffkine, credited with developing the first effective human vaccination against a bacterial infection, injected himself with the vaccine. Subsequently, several trials revealed that it was a success. When, in 1902, 19 individuals in an Indian village developed tetanus subsequent to vaccination and died a few days later, Haffkine was held responsible and was suspended from his position as director of the Plague Research Laboratory in Bombay. A report, released a few years later, provided strong evidence pointing toward the fact that contamination occurred when the vaccine bottles were opened under nonsterile conditions; Haffkine was exonerated and became the director of the Biological Laboratories at the Presidency General Hospital in Calcutta. In his honor, the Plague Research Laboratory, which in 1905 became the Bombay Bacteriological Institute, was renamed the Haffkine Institute in 1925. It remains an important public health establishment.

—Richard Stein

Bibliography

- Bibe, D. J., and T. H. Chen. "Diagnosis of Plague: An Analysis of the Yersin-Kitasato Controversy." *Bacteriological Reviews* 40 (1976): 633–651.
- Byrne, J. P. *The Black Death*. Westport, CT: Greenwood, 2004.
- Echenberg, M. *Plague Ports: The Global Urban Impact of the Bubonic Plague*. New York: New York University Press, 2007.
- Hays, J. N. *Epidemics and Pandemics: Their Impact on Human History*. Santa Barbara, CA: ABC-CLIO, 2005.
- Orent, W. *Plague: The Mysterious Past and Terrifying Future of the World's Most Dangerous Disease*. New York: Free Press, 2004.
- Zietz, B. P., and H. Dunkelberg. "The History of the Plague and the Research on the Causative Agent

Yersinia pestis." *International Journal of Hygiene and Environmental Health* 207 (2004): 165–178.

Smallpox

The period 1750–1914 saw a tremendous change in the effects of smallpox on human populations. At the start of this period smallpox was an endemic disease in most of the world, and periodic epidemics were responsible for hundreds of thousands to millions of deaths. Among survivors, blindness and disfigurement were common. However, by the early twentieth century the development and use of the smallpox vaccine had worldwide impacts on mortality.

Smallpox is an infectious disease caused by the variola virus, a double-stranded DNA virus that affects only humans. There are two forms of smallpox infection: *variola major*, the more common and more severe form, with mortality rates of approximately 30 percent, and *variola minor*, which is less common and has much lower associated mortality.

In the late eighteenth century smallpox was responsible for 400,000 deaths per year in Europe, possibly accounting for 10 percent of all European deaths. Severe smallpox epidemics that took place in Germany in 1766, 1786, and 1801 were responsible for more than 20 percent of all deaths in cities such as Berlin. In eighteenth-century England, 80 percent of deaths from smallpox were in children younger than five years old.

In some regions, smallpox was not equally distributed in all populations. In eighteenth-century China, smallpox was more common among the Han Chinese majority population (many of whom were infected as children) than among the ruling Manchus. Fearing smallpox infections, members of the ruling group established isolated lodgings to protect important individuals from exposure to smallpox, implemented a system to identify smallpox patients, and ordered infected individuals to leave the capital. These actions increased tensions between the Manchu and Han. Representatives from foreign states were ordered by the emperor not to travel to Beijing unless they already had been infected.

Other major disruptions that weakened the general health of populations also increased

▶ SMALLPOX AS A WEAPON

Smallpox has been used as a weapon for hundreds of years. In the fourteenth century, Tartar forces used catapults to send bodies of smallpox victims into towns to infect the defending populations. An often-cited use of smallpox as a weapon was in the British North American colonies in 1763. In May, a confederation of Delaware, Shawnee, and Mingo tribes led by the Ottawa leader Pontiac began a siege of the British Fort Pitt in western Pennsylvania. Smallpox was reported to be present in the fort in June. Following an unsuccessful conference to resolve the siege, William Trent (a trader and captain of a militia company at Fort Pitt) wrote that two Indian representatives were given “two Blankets and an Handkerchief out of the Small Pox Hospital,” presumably with the intent of causing smallpox among the siege forces. Large numbers of deaths due to smallpox were reported among these tribes in 1764–1765. However, it is unknown whether these were due to the transfer of smallpox-infected materials from the British, as smallpox epidemics had also been reported among these tribes earlier in 1763. During the American Revolutionary War (1775–1783) the British were accused of using smallpox against the Continental Army. The Geneva Protocol of 1925 prohibited the use of bacteriological (biological) weapons.

—Michael Halpern

their susceptibility to smallpox. In the Sudan during the period from 1885 to 1899 wars, food shortages, and large population movements resulted in more frequent epidemics. Famine in the Bengal region of India was also reported to increase the fatality rate of smallpox epidemics during the late 1700s.

Individuals who survived smallpox infections were immune to subsequent smallpox infections. An early treatment to prevent smallpox was variolation, in which healthy individuals were exposed to infectious materials such as pus or scabs from survivors with mild smallpox cases. The goal was to cause a mild case of the disease and subsequent immunity in treated individuals, but variolation also could cause severe and potentially fatal smallpox infections. Patients who were treated by variolation could also spread the virus to others while they had

active infections in the same way as those who had been infected naturally. Variolation had been used for centuries in China, India, and the Ottoman empire. This technique was disseminated in 1721 in England by Lady Mary Wortley Montague, who had learned of variolation while her husband served as the British ambassador in Istanbul; the procedure gained rapid acceptance shortly thereafter. Also in 1721, the first variolation in America was performed in Boston by Dr. Zabdiel Boylston (1676 or 1679–1766) at the urging of the prominent clergyman Reverend Cotton Mather, who had learned of this technique from his slave Onesimus.

Unlike variolation, vaccination involves immunizing healthy individuals with antigenic materials to prevent smallpox infections without actually causing smallpox. The first widely used smallpox vaccine was developed by the English doctor Edward Jenner (1749–1823) in the late eighteenth century, using pus from individuals who had contracted cowpox. Cowpox was an infectious disease common among milkmaids; it was related to smallpox but resulted in mild symptoms. Individuals infected with cowpox became immune to smallpox (the term “vaccination” is derived from the Latin word for “cow,” *vacca*). Jenner published a paper on his initial vaccine tests in 1798. Although initially there were strong negative reactions to Jenner’s work, including from medical professionals who supported variolation, use of the Jenner vaccine spread quickly; approximately 100,000 individuals in the United Kingdom were vaccinated within two to three years following publication of Jenner’s paper.

Dr. John Clinch (1749–1819) performed what may have been the first smallpox vaccination in North America (in Newfoundland, Canada) around 1799, using material supplied by Jenner. The Boston physician and Harvard professor Benjamin Waterhouse (1754–1846) performed the first vaccinations in the United States. Subsequently, using material supplied by Waterhouse, President Thomas Jefferson vaccinated a number of his own family members. Spanish authorities were able to transport vaccine materials to South America and the Philippines starting in 1803 by vaccinating pairs of orphan boys every ten days onboard a ship, the *Maria Pita*, using

lymph gathered from a previously vaccinated pair. In 1804 a wealthy Brazilian landowner sent slaves to Lisbon to be treated with the Jenner vaccine. The slaves then returned to Brazil as human reservoirs for subsequent vaccinations. Arm-to-arm vaccination (i.e., using materials that came directly from previously vaccinated individuals) continued to be practiced until the 1880s, when calf lymph suspended in glycol was developed as a source for vaccinations.

Mandatory vaccination laws were passed in the early 1800s in several European countries. The United Kingdom passed its first Vaccination Act in 1840, providing free smallpox vaccinations to the poor and outlawing variolation; the 1853 Vaccination Act made smallpox vaccination mandatory for all British infants. The incidence of smallpox and smallpox mortality decreased substantially in populations required to be vaccinated. For example, an 1855 law in Boston required children to receive the smallpox vaccination to attend public school. A review of 700 smallpox cases seen during an epidemic in Boston in 1901 showed that 19 percent occurred among children ages one to five years old (who, being too young for public school, were not required to be vaccinated), but only 3 percent occurred among children ages six to ten. Despite evidence for the effectiveness of smallpox vaccination, there were numerous challenges to mandatory vaccination. In 1905 the U.S. Supreme Court supported Massachusetts's mandatory vaccination law, ruling that states can pass such laws to protect the public from dangerous communicable diseases. The British vaccination act was amended in 1907 to permit parents to refuse to have their children vaccinated on moral or religious grounds. While mandatory smallpox vaccination has been discontinued worldwide due to the eradication of this disease (the last case in the United States was in 1949, while the last naturally occurring case in the world was in Somalia in 1977), disputes regarding mandatory vaccination for other communicable disease continue today.

—Michael Halpern

Bibliography

Albert, Michael R., Kristen G. Ostheimer, and Joel G. Breman. "The Last Smallpox Epidemic in Boston

and the Vaccination Controversy, 1901–1903." *New England Journal of Medicine* 344 (2001): 375–379.

Alden, Dauril, and Joseph C. Miller. "Out of Africa: The Slave Trade and the Transmission of Smallpox to Brazil." *Journal of Interdisciplinary History* 18 (1987): 195–224.

Chang, Chia-Feng. "Disease and Its Impacts on Politics, Diplomacy, and the Military: The Case of Smallpox and the Manchus (1613–1795)." *Journal of the History of Medicine* 57 (2002): 177–197.

Fenn, Elizabeth A. "Biological Warfare in Eighteenth-Century North America: Beyond Jeffrey Amherst." *Journal of American History* 86 (2000): 1552–1580.

Hartwig, Gerald W. "Smallpox in the Sudan." *International Journal of African Historical Studies* 14 (1981): 5–33.

Hopkins, Donald R. *The Greatest Killer: Smallpox in History*. Chicago: University of Chicago Press, 2002.

Janoff, Edward N., and Ruth Lynfield. "Smallpox: Remembrance of Things Past, or the Coming Plague?" *Journal of Laboratory and Clinical Medicine* 142 (2003): 211–215.

Shurkin, Joel N. *The Invisible Fire: The Story of Mankind's Victory over the Ancient Scourge of Smallpox*. New York: Putnam, 1979.

The Campaigns for Inoculation against Smallpox

Inoculation is the deliberate exposure of a person to a disease, often by inserting infectious material under the skin (see sidebar), with the intention of producing immunity. Inoculation to prevent smallpox may have been introduced in China or India as early as the third century CE and certainly was practiced in these regions and the Ottoman Empire in the early modern period. Inoculation with the smallpox virus was introduced in England in the eighteenth century with the demonstration to the scientific world by the English country doctor Edward Jenner (1749–1823) in 1796 that infection with cowpox, a relatively benign disease, conferred immunity from smallpox. Jenner published his observations on the relationship between cowpox and smallpox in *An Inquiry into the Causes and Effects of the Variolae Vaccinae, a Disease Discovered in Some of the Western Countries of England, Particularly Gloucestershire and Known by*

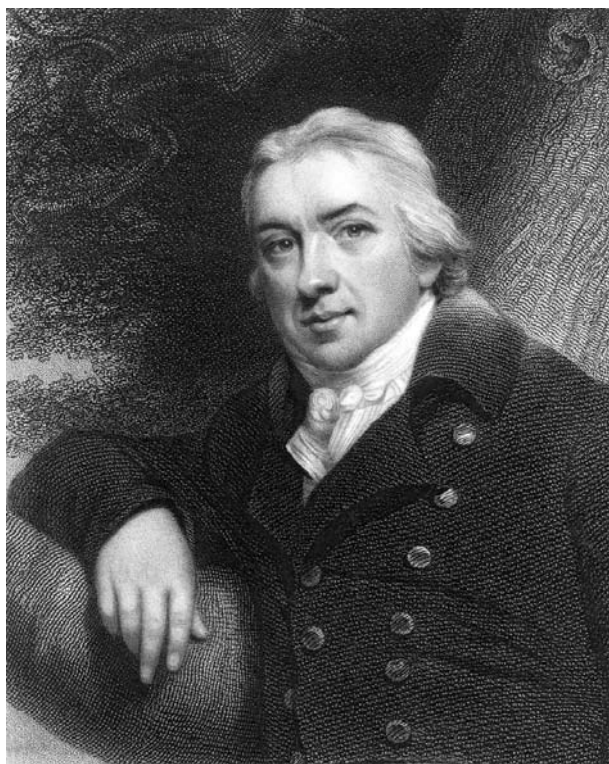
➤ INOCULATION, VARIOLATION, VACCINATION, AND IMMUNIZATION

The terms “inoculation,” “vaccination,” and “immunization” are often used synonymously today to refer to techniques of creating immunity to disease through deliberate exposure to infective material, but they do have distinct meanings. Immunization is the broadest term and means to protect from disease through introduction of a weakened organism or toxin. Inoculation strictly speaking refers to the practice of inserting infectious material under the skin. Variolation, from the Latin name for smallpox, *variola*, refers to inoculation against smallpox. The term “vaccination” was coined by Edward Jenner to refer to inoculation with cowpox and comes from *vacca*, Latin for cow.

—Sarah Boslaugh

the Name of the Coxpox (London: Sampson Low, 1798). The book was extremely successful and helped to popularize the idea of inoculation with cowpox, often called “vaccination” after the Latin word *vacca*, meaning cow, as protection against smallpox. Despite some religious opposition and some skepticism about Jenner’s procedure from some segments of the medical community, the benefits of vaccination ensured its spread throughout the Western world. Vaccination was performed in most European countries and in the United States by the early 1800s. However, at first administration of the vaccine was voluntary and was not universally available.

The concept of vaccination as a public health measure, rather than a medical decision to be left up to each individual, led to universal compulsory vaccination in many countries. The Scandinavian countries were first, beginning with Denmark in 1810, Norway in 1811, and Sweden in 1816. Other countries followed, including Prussia in 1835 and England in 1853. In the United States, a 1905 court ruling established the principle that the state could require individuals to be vaccinated for the common good. However, while most of Europe became free of smallpox in the early twentieth century, smallpox remained endemic in a number of countries, and it is estimated that there were 10–15 million smallpox



Edward Jenner was an English physician who discovered the first vaccine for smallpox. (Jupiterimages)

cases in 31 countries as late as 1967. Due to intensified mass vaccination efforts in those remaining countries, the last naturally occurring case of smallpox was observed in Somalia in 1977, and in 1980 the World Health Organization declared that smallpox had been eradicated.

—Sarah Boslaugh

Bibliography

- Baxby, Derrick. *Jenner's Smallpox Vaccine: The Riddle of Vaccinia Virus and Its Origin*. London: Heinemann Educational Books, 1981.
- Bazin, Herve. *The Eradication of Smallpox: Edward Jenner and the First and Only Eradication of a Human Infectious Disease*. Translated by Andrew Morgan and Glenise Morgan. San Diego: Academic Press, 2000.
- Fenner, Frank, Donald Ainslie Henderson, Isao Arita, Zdenek Jezek, and Ivan Danilovich Ladnyi. *Smallpox and Its Eradication*. Geneva: World Health Organization, 1988.
- Plotkin, Susan L., and Stanley A. Plotkin. “A Short History of Vaccination.” In Stanley A. Plotkin and Walter A. Orenstein, eds., *Vaccines*, 3rd ed., 1–12. Philadelphia: W. B. Saunders, 1999.

Yellow Fever

From the eighteenth to the early twentieth centuries, yellow fever was one of the most feared epidemic diseases. Yellow fever is caused by a virus and is transmitted to humans by the *Aedes aegypti* mosquito. Although primarily a tropical disease, yellow fever caused devastating epidemics in many North American cities. The first symptoms of the disease, which include fever, chills, headache, and vomiting, were often mistaken for malaria, influenza, or dengue fever. In severe cases, victims experienced high fever, black vomit, jaundice, convulsions, and delirium. Death might result from damage to the liver, kidneys, and heart. Determining the mortality rate of yellow fever is difficult because mild cases may not be diagnosed, but it is probably about 20 percent.

Historians have disagreed about whether yellow fever originated in the New World or was endemic in Africa and did not reach the Americas until the seventeenth century. Evidence for the existence of particular diseases and insect vectors in pre-Columbian America remains ambiguous, but modern immunological and entomological studies support the theory that the yellow fever virus originated in Africa.

Yellow fever as well as *Aedes aegypti*, were probably imported into the Western Hemisphere in the seventeenth century in ships transporting

slaves to the West Indies. Outbreaks of yellow fever occurred in Barbados and Cuba in the 1640s, followed by increasingly widespread epidemics. In 1802, an army of 40,000 sent by Napoleon to Haiti to suppress the Haitian Revolution was wiped out by an epidemic of yellow fever, and fear of the disease was a major factor in the French decision to abandon efforts to recapture Haiti.

Yellow fever epidemics occurred in many American cities, including New Orleans, Savannah, Baltimore, New York, and Philadelphia. The devastating epidemic that struck Philadelphia in 1793, killing at least 4,000 of the city's approximately 40,000 inhabitants, has been of particular interest to historians. Benjamin Rush (1745–1813), patriot and physician, blamed the outbreak on noxious effluvia generated by sacks of coffee putrefying on the city wharf and treated his patients with bloodletting. Debates about the proper response to the epidemic became embroiled in political conflicts. Some observers blamed the epidemic on the influx of Haitian refugees, while others insisted that the epidemic was caused by unsanitary local conditions.

Yellow fever became a disease of special interest to the United States as a result of the Spanish American War and the subsequent occupation of Cuba. In 1900, Walter Reed (1851–1902), James Carroll (1854–1907), Jesse W. Lazear (1866–1900), and Aristides Agramonte

► WALTER REED—CONQUEROR OF THE YELLOW FEVER

Walter Reed was born on September 13, 1851, in a small country home at Belroi, Virginia, the son of a minister of the Methodist Episcopal Church. A graduate of the University of Virginia School of Medicine, Reed received further training at the Bellevue Hospital Medical College in New York City. In 1875 he was commissioned a first lieutenant in the U.S. Army Medical Corps as an assistant surgeon. After postings in Arizona, Alabama, and South Dakota, in 1893 he accepted a post as professor of clinical microscopy at the Army Medical School in Washington, D.C., while holding the chair of bacteriology at Columbia University (now George Washington University). After the Spanish-American War he was appointed head of

the Yellow Fever Commission, and as a result of his experiments he and his assistants definitively proved that yellow fever was caused by the bite of a mosquito rather than by contact. The subsequent clearing of mosquito-breeding areas effectively eliminated the disease in Latin America and the southeastern United States. Seven years after his death, the Walter Reed Army General Hospital, as it was then known, opened its doors on May 1, 1909, to 10 patients. Today the Walter Reed Army Medical Center is a major research institution, serving the military community in the Washington, D.C., area and around the world, admitting 16,000 patients a year.

—James H. Overfield

(1869–1931), who served as the U.S. Army Yellow Fever Commission, investigated the cause and means of transmission of the disease. The commission was influenced by Juan Carlos Finlay's (1833–1915) mosquito hypothesis. Carroll and Lazear served as human guinea pigs and contracted yellow fever from the bite of infective mosquitoes. Carroll survived, but Lazear died. An additional series of experiments unequivocally demonstrated the validity of the mosquito theory, but the virus was not isolated until 1927.

Acceptance of the mosquito theory made efforts to control yellow fever possible. William Crawford Gorgas (1854–1920) carried out a systematic attack on the disease and *Aedes aegypti* in Cuba and in the Panama Canal Zone that made completion of the canal in 1915 possible. Gorgas also helped clarify the problem of jungle yellow fever among the tree-dwelling primates of South America and Africa. Because of this animal reservoir of disease, the virus could not be eradicated, but appropriate public health measures can prevent or minimize the threat of urban epidemics.

—Lois Magner

Bibliography

- Coleman, William. *Yellow Fever in the North: The Methods of Early Epidemiology*. Madison: University of Wisconsin Press, 1987.
- Delaporte, François. *The History of Yellow Fever: An Essay on the Birth of Tropical Medicine*. Translated by A. Goldhammer. Cambridge, MA: MIT Press, 1991.
- Estes, J. Worth, and Billy G. Smith, eds. *A Melancholy Scene of Devastation: The Public Response to the 1793 Philadelphia Yellow Fever Epidemic*. Cancon, MA: Science History Publications, 1997.
- Humphreys, Margaret. *Yellow Fever and the South*. New Brunswick, NJ: Rutgers University Press, 1992.

Malaria

Malaria is a disease whose symptoms include fever, chills, darkened urine, headache, nausea, vomiting, joint pains, aches, confusion, lethargy, anemia, seizures, and in extreme cases coma and death. Protozoa of the genus *Plasmodium* cause four types of malaria, of which only one type, that caused by *Plasmodium falciparum*, is

fatal. Yet one-quarter of cases are deadly, with mortality rates high among children. Anopheles, a genus of mosquito, transmits *Plasmodium* through its bite. Once in the body, the malaria parasites congregate in the liver, where they multiply for 9 to 16 days. At the end of incubation the parasite enters the blood, feeding on the hemoglobin in red blood cells.

The term “malaria” derives from the Italian term “*mala aria*” for “bad air,” revealing that people in Europe and elsewhere initially associated the disease with foul air. But no understanding of the causes of the disease was achieved until the nineteenth century, and no effective treatment was known outside of South America, where natives of the Andean highlands mixed the ground bark of cinchona trees with water to treat the cold shivering associated with the disease. Europeans in South America were introduced to the medicinal qualities of cinchona bark quinine in the 1600s, and although they had no idea why it worked (it is now known that it contains chemical compounds that interfere with the reproduction of the parasite that causes the disease), by 1800 the use of ground cinchona bark for treatment of malaria was widespread in Europe and in parts of Africa where Europeans resided. This led to efforts to cultivate the cinchona tree in parts of the world other than Peru, but the first seeds planted on Java in the early 1800s failed to germinate, and seedlings cultivated in England were killed by insects. Although the Peruvian government in the early 1800s banned Europeans from cinchona forests in the interest of protecting its monopoly, seed smuggled out of the country in 1865 was taken to Java, and this time it grew successfully under the direction of Dutch botanists. Soon Java became the world's leading producer of cinchona bark. In 1820 French chemists Pierre Pelletier and Joseph Caventou specifically identified the antimalaria properties of cinchona bark when they isolated the crystalline alkaloid and discovered a process to extract it from the bark. They named the white powder quinine, after *quinquina*, the word used by native Peruvians for the cinchona tree.

By the late 1800s the mystery of malaria's cause was solved. Throughout most of the nineteenth century the miasma (bad air) theory had

the support of most scientists and physicians, although as early as the late 1700s a few physicians speculated that the disease was caused by some sort of parasite or the bite of mosquitoes. A promising step was taken in 1847 when German physician Heinrich Meckel noted the existence of black pigmented crystalline structures in the blood of malaria victims. In 1878 Edwin Klebs, a German pathologist, and Corrado Tommasi-Crudeli, an Italian microbiologist, published a paper in which they claimed to have isolated a bacterium that caused the black pigment associated with the disease. This view was challenged a year later by the French physician Charles Laveran, whose work on the blood samples of malaria victims in Algeria revealed the existence of microscopic parasites linked to the disease. The theory that parasites rather than a bacterium caused malaria was universally accepted by the 1890s, by which time an understanding of the parasite's life cycle also had been achieved. Meanwhile, a number of physicians, most notably the British physician Patrick Manson, had begun to suspect that the disease was spread by mosquitoes. Inspired by Manson, who incorrectly thought that malaria was contracted by drinking water that contained dead mosquitoes, another Scottish physician, Ronald Ross, proved in 1897 that the disease was transmitted by the bite of the female of the *Anopheles* species of mosquito. Independently the Italian researcher Giovanni Battista Grassi confirmed Ross's findings, and the issue of who should receive credit for the discovery was bitterly contested in the early 1900s.

Once the role of the *Anopheles* mosquito was confirmed, new methods to combat the disease were undertaken. As early as 1899, Ross instituted a cleanliness campaign in the British colony of Sierra Leone, clearing the streets of tires, bottles, cans, and anything that could hold water. Where he could not drain water he recommended pouring oil in it to kill mosquito larvae. In 1901 U.S. assistant surgeon general William Gorgas went beyond Ross's program. Dispatched to Cuba, Gorgas drained standing water, screened the windows of homes, and burned pyrethrum, an insecticide whose fumes were toxic to mosquitoes, in homes. Success in Cuba led Gorgas to Panama, where the United States

was digging the Panama Canal. Between 1905 and 1910 Gorgas ordered the cutting of grass and brush to a height less than 1 foot (0.3 meters) in the belief that mosquitoes would not fly across large stretches of open ground. Moreover, he ordered the draining of all standing water within 200 yards (183 meters) of a village and within 100 yards (91 meters) of an isolated home. Where drainage was impractical he added larvicide to water. By Gorgas's order, all canal workers received free quinine. Because of these efforts, the death rate from malaria fell by a factor of ten in Panama between 1906 and 1909.

After World War II malaria was eliminated from much of the world under the direction of the World Health Organization. Since then it has returned as a major killer, with between 1.5 million and 3 million people dying from the disease per year. The reasons for the disease's resurgence include laxity in antimalarial campaigns; poverty and deteriorating health systems, especially in Africa; drug and insecticide resistance; global warming (which increases the breeding and life span of *Anopheles*); and increasing migration and other forms of global interaction (which spread the disease).

—Christopher Cumo

Bibliography

- Honigsbaum, Mark. *The Fever Trail: In Search of the Cure for Malaria*. New York: Picador, 2003.
- Marcus, Bernard. *Malaria*. Philadelphia: Chelsea House, 2004.
- Packard, Randall M. *The Making of a Tropical Disease: A Short History of Malaria*. Baltimore: Johns Hopkins University Press, 2007.
- Rocco, Fiammetta. *Quinine: Malaria and the Quest for a Cure That Changed the World*. New York: Perennial, 2003.

Cholera

While working in India in 1563, the Portuguese doctor Garcia de Orta became the first person to diagnose a cholera epidemic. Records of death due to dehydrating diarrhea date back much further, however, suggesting that the disease was likely present in India for hundreds of years before de Orta issued his report. Little was known about the disease until the nineteenth century, however, when physicians defined cholera as an



This sketch, "Death's Dispensary," was drawn by George Pinwell in 1866, twelve years after John Snow traced the cholera epidemic in Soho, London to a public pump that drew water from a sewage-filled spring. (Centers for Disease Control and Prevention)

acute bacterial disease that affects the intestinal tract and is caused by the bacterium *Vibrio cholerae*.

Scattered cholera epidemics sprang up throughout the seventeenth and eighteenth centuries in India, primarily in villages lining the contaminated Ganges River. In 1816 the scattered epidemics coalesced into the world's first of seven cholera pandemics, clusters of epidemics occurring simultaneously across wide geographic areas. The first pandemic lasted from 1816 to 1826, beginning in Bengal, spreading across India, and eventually reaching as far as China and the Caspian Sea. Just three years after the first pandemic ended the second pandemic began, this one lasting until 1851 and infecting Western Europe, North America, and Russia. It killed U.S. President James K. Polk, among others. The third pandemic (1852–1860) killed

more than 1 million people in Russia, while the fourth spread across Europe, North Africa, and the United States. The fifth pandemic (1881–1896) began in India, eventually reaching Western Europe, while the sixth pandemic (1899–1923) returned to Russia, and the seventh (1961–1970s) began in Indonesia, reaching Bangladesh in 1963, India in 1964, the Soviet Union in 1966, and North Africa and Italy in 1973. The organism that caused the seventh pandemic also appeared in South America in 1991.

Cholera is an implicitly social disease. The bacteria spread through social contact between both individuals and regions. Transnational and intercontinental trade routes played a primary role in disease transmission, and soldiers returning from war carried the disease with them, as did religious pilgrims. Numerous epidemics have plagued the holy city of Mecca since 1850, and Muslims making their hajj (pilgrimage) have frequently brought the disease back to their homes, spreading cholera throughout much of the Muslim world.

In the nineteenth century, cholera also emerged as a singularly frightening disease. In many cases, the disease appeared to choose its victims arbitrarily; it maintained a high fatality rate, particularly during the earlier pandemics, and often resulted in a violent and painful death. Because of these factors, cholera operated as a powerful social actor. This was particularly true among the poor, who were disproportionately affected by cholera outbreaks due to the lack of sanitation in impoverished areas. In 1830 the disease spawned a series of working-class uprisings in Russia known as the Cholera Riots. During the second pandemic, the tsarist government enacted numerous anticholera measures, including quarantines, armed cordons, and migratory restrictions. These measures stirred dissent among Russia's lower classes. Dissenting individuals spread rumors that government officials and doctors were intentionally contaminating people, and agitated mobs began raiding police departments and state hospitals and killing public officials, landowners, and other elites. Sporadic riots continued until the military suppressed the violence in 1831.

Cholera also operates as an indicator of social development. The United States and most

▶ JOHN SNOW'S FAMOUS CHOLERA MAPS

The third pandemic ravaged London from 1853 to 1854. During the two-year outbreak, the medical doctor John Snow made a series of discoveries that facilitated the rapid growth of both medical geography and epidemiology. In studying the spread of the disease, Snow mapped each cholera death in the Soho district of London on a street map. He then correlated the deaths to a water supply map, discovering that two particular companies had supplied the water to nearly all of

the epidemic's victims. After a series of scientific experiments, Snow concluded that the cholera toxin was a waterborne agent. As a result, his work contributed to a significant advancement in epidemiology and gave birth to the field of medical geography, a field utilizing spatial patterns and population-based measures of biological conditions and abnormalities to survey public health epidemics.

—Katherine Worboys

European countries have eradicated cholera through hygiene and sanitation programs, but the disease remains endemic in many impoverished nations in Latin America, Africa, and Asia.

—Katherine J. Worboys

Bibliography

- Arnold, David. "Cholera and Colonialism in British India." *Past and Present* 113 (November 1986): 118–151.
- Cotter, John V., and Larry L. Patrick. "Disease and Ethnicity in an Urban Environment." *Annals of the Association of American Geographers* 71(1) (March 1981): 40–49.
- Evans, Richard J. "Epidemics and Revolutions: Cholera in Nineteenth Century Europe." *Past and Present* 120 (August 1988): 123–146.
- Frerichs, Ralph R. "History, Maps, and the Internet: UCLA's John Snow Site." *Journal of the Society of Cartographers* 34(2)(2001).

Venereal Diseases

Despite the Scientific Revolution, venereal disease, usually understood as variations of syphilis, remained a mystery to Western medical science no less than to other medical traditions. In Europe and in England before the Victorian Era, sexual activity and diseases spread by it were discussed rather openly in society, and mercury-based remedies, such as Frenchman Jean Keyser's *dragées* (sugared almonds) and the pills and drops of the English "Dr. Leake," were openly advertised and sold. Nonetheless, diseases that polite society conveniently assumed had been contracted by men from

infected female prostitutes were sources of personal shame and stigma. Inevitably venereal diseases were linked in the public mind with libertinism, homosexual activity, and prostitution. Social commentators decried the commonplace that an unfaithful husband or once-wayward groom would not only infect his wife but also cause her to produce children scarred by so-called hereditary venereal disease. Some French moralists saw the eventual decline of French temperament as the inevitable result of contemporary trends, a fear adapted and echoed by American reformers a century later.

In 1797 crude experiments in France demonstrated that syphilis and gonorrhea were distinct diseases, and in 1837 Parisian clinician Philippe Ricord confirmed this and further refined the medical understanding of the stages of syphilis. A few years later Prussian public health reformer Rudolph Virchow discovered that syphilis is a systemic disease that affects many human organs and does not only cause localized symptoms. In 1876 researchers first documented cardiovascular syphilis, and in 1879 German Albert Neisser identified the *Gonococcus* bacterium as the pathogen causing gonorrhea, a finding that ranks among the earliest clear linkages of a particular microbe to a particular disease. As germ theory, championed and advanced by German Robert Koch, Frenchman Louis Pasteur, and their students, rolled back the once hegemonic humoral theory of disease, gonorrhea, once considered a mild inflammatory malady, was linked to other serious conditions such as arthritis, meningitis, and peritonitis.

➤ A JAPANESE PHYSICIAN ON HIS SYPHILIS PRACTICE, 1810

“When I was young I made a point of questioning those with a reputation for treating syphilis successfully, and I learned their therapeutic methods. But when I put them into practice I never obtained the desired results. . . . I collected all their theories and recipes. Every time I encountered a syphilitic I would try one of them, choosing it to suit the symptoms, but I have not found the miraculous recipe which works every time. Later I perused all the books which describe the prescriptions of the Dutch medics and I tried those too, but the outcome was no different. In the meantime I had acquired an undeserved reputation over the years and my patients grew in number day by day and month by month. Eventually I was treating more than 1,000 a year, of whom seven or eight hundred were syphilitics. Over a period of forty to fifty years I must have treated several tens of thousands. I am 70 this year, but I still have no perfect knowledge. . . . [T]his disease is increasingly difficult to cure, and nothing has changed since I was young.”

—Joseph Byrne

Source

Dr. Sugita, “Nocturnal Dialogues with My Shadow,” in Claude Quétel, *History of Syphilis* (Baltimore: Johns Hopkins University Press, 1992), 115.

As medical science shed light on these diseases, the prudish nature of Victorian culture in Britain, its colonies, America, and many European societies tended to hide individual cases from public view by respecting traditional doctor-patient confidentiality. At the same time, Victorian-era reformers sought to control the scourge that many saw as rampant and destructive of the social fabric. In step with the times, Americans saw the issue not only as a medical one but also as a matter of public sanitation. Sexually transmitted diseases were associated with crowded and dirty urban centers and with the immigrants and prostitutes commonly found there. European-trained physician and reformer Prince Albert Morrow of New York sparked activity with his 1880 translation of the French *Syphilis and Marriage* by Ricord colleague

Alfred Fournier and Morrow’s own *Social Diseases and Marriage* (1904). The first international conference on venereal disease and its prevention was held in Brussels in 1899, and a second conference was held there in 1902. The first conference inspired Fournier to found the French Society for Sanitary and Moral Prophylaxis in 1901 and prompted the founding of *La syphilis*, the first journal dedicated to venereal disease. These activities spurred Morrow to write his book in 1904 and to found the American Society for Sanitary and Moral Prophylaxis in New York in 1905. Both societies harnessed the period’s optimism that state action could eventually wipe out the so-called social diseases, especially through education.

Prostitution remained at the center of the target, but responsible officials tended to be torn between regulating prostitutes to make the activity safer or abolishing them altogether. Regulation had been a typical approach in Europe since the French government had instituted it in 1800. Victorian Britons and Americans were less likely to accept such liberal notions. Regulation of prostitution not only offended Christian sensibilities but required disclosure and record keeping that seemed to violate traditional Anglo-Saxon notions of liberty.

In 1905 the German scientists Fritz Schaudinn and Eric Hoffmann discovered the spirochaete *Trepanoma* that causes syphilis, and the following year August Wassermann and his colleagues developed the diagnostic Wassermann Test for the disease. Finally, in 1909 the German Paul Ehrlich and the Japanese Sahachiro Hata landed on the successful arsenic-based magic bullet named Salvarsan, a watershed development that initiated the age of chemotherapy. But the moral reformers of the American Progressive Era only extended their crusade, often rubbing elbows with early feminists and eugenicists. Urban police departments established vice squads. In 1910 the Mann Act forbade the transport of women across state lines for immoral purposes, and branches of Morrow’s society coalesced into the American Federation for Sex Hygiene. In 1911 Standard Oil tycoon John D. Rockefeller established the Bureau for Social Hygiene as a center for scientific social and medical research, and the following year he founded the American Social Hygiene

Association, with Harvard president Charles W. Eliot as titular head.

—Joseph Byrne

Bibliography

- Brandt, Allan M. *No Magic Bullet: A Social History of Venereal Disease in the United States since 1880*. Expanded ed. New York: Oxford University Press, 1987.
- Hayden, Deborah. *Pox: Genius, Madness, and the Mysteries of Syphilis*. New York: Basic Books, 2004.
- Quétel, Claude. *History of Syphilis*. Baltimore: Johns Hopkins University Press, 1992.

Hansen's Disease—Incidence and Treatment

Hansen's disease, also known as leprosy, is one of the oldest and most feared diseases in human history. Comparative genomics research suggests that the bacterium that causes the disease, *mycobacterium leprae*, evolved in East Africa or South Asia before 40,000 BCE. Recent findings in paleopathology have corroborated references in the *Vedas* to indicate that lepromatous leprosy was present in India by 2000 BCE (our earliest historical record of leprosy). Most researchers agree that leprosy was then introduced to Mediterranean populations by the returning army of Alexander the Great in 327 BCE and Pompey's legions into Italy in 62 BCE, while it remained endemic in India and Asia. Yet the disease was not widespread in Europe until the Middle Ages, when expanding trade networks facilitated its spread. By this time Judeo-Christian understandings of leprosy were based on the Old Testament book of Leviticus, which asserted that those with leprosy should be sent "without the camp." The Third Lateran Council of 1179 CE, presided over by Pope Alexander III, ordered that those with the disease should be segregated from the rest of society. Leprosaria (places for care and sometimes quarantine) were soon established all over Europe, popular fear of the disease increased, and a precedent was set for connecting sinful living and leprosy. Whether those labeled as having leprosy truly had Hansen's disease remains a subject of scholarly research and debate. Nonetheless, reports of the disease declined in Europe after the fourteenth century and did not

reemerge on any large scale until the nineteenth century, when largely in the context of global colonialism it began to be perceived as an "imperial danger" by Western powers.

Mycobacterium leprae was first identified under the microscope by G. H. Armauer Hansen, a Norwegian bacteriologist, in 1873. His discovery disproved theories that leprosy was hereditary and focused research on its nature as an infectious disease and its potential cure. While the exact mode of transmission is still not understood, once entering the body the bacterium attacks the peripheral nervous system, and depending upon a person's immune response, the infection can be self-arrested or develop into the *tuberculoid* (milder) or *lepromatous* (more severe) forms. Hansen's disease is not highly contagious, but the visually disturbing symptoms of untreated leprosy have led it to be highly feared in most cultures. The incubation period for *mycobacterium leprae* is generally accepted to be three to five years of prolonged and close contact. It is rarely fatal, but because it compromises the immune system, if left untreated those with the disease are susceptible to secondary infections.

By the mid-1700s, leprosy was sporadically identified by European explorers and their ships' surgeons among the various indigenous peoples they encountered. It is likely that the disease was globalized through the expansion of maritime

➤ "LEPROSY" AND POPULAR DISCOURSE

Today, the term "leper" is considered derogatory and offensive, as it is a painful reminder to those persons with Hansen's disease of the historical and religious stigma so often attached to the disease. It should not be used in common discourse but may be used when quoting directly from historical sources or scripture. Contemporary scholars often use the terms "leprosy" and "Hansen's disease" interchangeably in their writings, as Hansen's disease denotes the disease caused by the *mycobacterium leprae*, and leprosy is understood to not only refer to the disease but also to the social and cultural construction(s) of the illness as well.

—Kerri Inglis

trade networks from regions where leprosy remained endemic (most notably, Scandinavia, North Africa, Egypt, India, and parts of Asia). In the mid-1800s, leprosy was most commonly found in the tropics and became a concern to Western powers because of its incidence among colonized populations. This concern led to public health policies and even medical treatments that relied heavily upon medieval social constructs of leprosy. In most parts of the world, quarantine was the treatment of choice. Although well intentioned, this policy was often carried out in ways that perpetuated the stigma attached to leprosy and reflected the dynamics of power and control in the colonial setting. Moreover, many came to believe that those with leprosy were in need of moral cleansing more than medical care, most of the work among the diseased being done by missionaries, missionary physicians, and religiously motivated volunteers. The leprosy settlement established in the Hawaiian Islands in 1865 is a prime example of such an approach.

The Molokai leprosy settlement was one of the most famous settlements for persons with leprosy and became a model for many others in the late nineteenth and early twentieth centuries. In Hawaii, fear of the disease resulted in the kingdom's Board of Health passing the 1865 Act to Prevent the Spread of Leprosy, which allowed the forceful removal of patients from family and homes to be quarantined on an isolated peninsula on the northern coast of the island of Molokai. Patients at first struggled to survive with inadequate food and water supplies, proper shelter, and medical care. Yet many considered the settlement on Molokai as the model to follow when dealing with leprosy—that is, quarantine—in Fiji, Tahiti, the Philippines, Guam, the Americas, Africa, and Asia. While quarantine was a rational response for those who feared the disease and hoped to stop its spread, leprosy is one of the least contagious of infectious diseases; those placed in quarantine prior to the 1900s rarely received actual medical care. For too many with Hansen's disease, quarantine meant a lifetime of isolation, exile, and abandonment.

One exception was in Norway, where Hansen and other bacteriologists continued their groundbreaking work and supported a model of quarantine that still allowed patients some

interaction with family and community. Another model was found in China, which many considered to be the main source of the disease. In their efforts to modernize and eradicate the stigma of the disease associated with their nation, the Chinese efforts to control leprosy often reflected national political movements of the time. But it was the Molokai model of leprosariums—places of isolation for those with leprosy—that were mainly found throughout the colonized world.

The involvement of the Belgian priest Father Damien de Veuster (1840–1889) at the Molokai leprosy settlement brought a great deal of international attention to the situation in Hawaii and to those suffering from the disease. The combination of Hansen's discovery and the attention afforded Damien's story motivated many to move beyond the moral constructs and seek out a cure for the disease. Throughout the late 1800s various treatments involving diet, medicinal concoctions, herbal baths, and oils were tried in diverse settings around the world. In the early 1900s many put hope in treatments involving chaulmoogra oil (a medicine from India), but the treatment was unable to cure the disease. Then, soon after the discovery of sulfone drugs in the 1920s, it was found that though not a cure, such drugs could effectively arrest the bacteria from progressing. Thus, dapsone was used widely beginning around 1950, but more recently dapsone-resistant strains of the disease have appeared. More recently, multidrug therapy has successfully been used to treat Hansen's disease, and the eradication of leprosy has become a goal of the World Health Organization.

—Kerri Inglis

Bibliography

- Buckingham, Jane. *Leprosy in Colonial South India: Medicine and Confinement*. New York: Palgrave, 2002.
- Demaitre, Luke. *Leprosy in Premodern Medicine: A Malady of the Whole Body*. Baltimore: Johns Hopkins University Press, 2007.
- Edmond, Rod. *Leprosy and Empire: A Medical and Cultural History*. Cambridge: Cambridge University Press, 2006.
- Gould, Tony. *A Disease Apart: Leprosy in the Modern World*. New York: St. Martin's, 2005.
- Leung, Angela Ki Che. *Leprosy in China: A History*. New York: Columbia University Press, 2009.

Clean Water and Sanitation in Africa and Asia

Most public health scholars agree that the provision of clean drinking water has done more to improve the health of the general populace than any medical discovery. The major requirement to ensure clean drinking water is that a system of sewage disposal and potable (drinkable) water supply be established that prevents contamination of drinking water. Dreaded waterborne diseases such as cholera are almost unknown in the developed world today due to the development of municipal water and sewage systems. The growth of European cities in the eighteenth and nineteenth centuries made the need for such sanitary measures clear, as people living in crowded conditions provide an ideal environment for disease transmission. Regular epidemics of waterborne disease prompted what is now called the sanitation revolution in Europe and the United States. Part of this revolution was the assumption by municipalities of the responsibility for sewage disposal and water supply to the municipality.

There was similar need for sanitation in the large cities of the European colonial empires, particularly in colonies in tropical regions such as India and Nigeria. However, these reforms were instituted much later in Africa and Asia, if at all. Even today, many people in the developing world do not have a reliable source of clean drinking water. Ironically, the need for municipal water supplies and sewage systems was partially a result of European colonization, which promoted the growth of cities as centers of government and trade in regions where most of the population had lived in rural areas.

Scholars differ as to whether the efforts of colonial medicine and public health made the conditions of native peoples better or worse. Certainly the primary purpose in instituting sanitary campaigns was to safeguard the health of the Europeans and secondarily that of the native labor force. The public interest in sanitation was sometimes used as a pretext to institute or codify the segregation of native peoples from colonial settlers. Colonization also introduced new diseases and created the ideal environment for their transmission by creating crowded cities

THE SANITATION SYNDROME—PUBLIC HEALTH MEASURES AS TOOLS OF REPRESSION

Sanitation is a public good that theoretically benefits everyone. However, as Maynard N. Swanson argues in a much-cited article, the legitimate public interest in controlling infectious disease was used as justification for imposing segregation in the Cape Colony (South Africa) in the early twentieth century. Measures imposed ostensibly for purposes of public health included mass removal of nonwhite persons and restriction of their movement through institution of the pass system. Swanson and later authors further argue that nonwhite persons and settlements were often discussed as vectors of disease and that public health efforts frequently focused on segregating them from white people rather than improving sanitary conditions in their neighborhoods.

—Sarah Boslaugh

without the necessary sanitary infrastructure. On the other hand, colonialism did introduce many features of modern medicine and public health to countries earlier than they might have otherwise been known there. Furthermore, the infrastructure of the public health system today in many former colonies can be traced back to that established by the former colonial powers.

The case of cholera in India is a prime example of how sanitary measures were instituted first for the protection of colonial officers, in this case the British army, and only later for the benefit the Indian population. Cholera, which is spread through the contamination of drinking water and food with sewage, was a serious disease in nineteenth-century India. More than 15 million people are estimated to have died from cholera in India between 1817 and 1865. British soldiers and their families regularly fell victim to cholera, which forced the government to take measures to control the disease. A Royal Commission was appointed in 1859 to investigate sanitation in the British Army in India, and among its recommendations was the obligation to improve the health of Indian subjects as well as British soldiers. In 1864, a sanitary commission was appointed for each Indian province with the primary aim of controlling cholera.

The benefits were seen primarily by the British soldiers, however. Their mortality fell steadily over the next 30 years, while Indian deaths from cholera remained high (more than 800,000 in 1900, for instance).

Several international organizations aided in the spread of public health practice and knowledge to Africa and Asia in the nineteenth and early twentieth centuries. The Pan-Arab Quarantine Board of Health, based in Egypt, was created in 1892 to develop methods to control plague and yellow fever. The Office International d'Hygiène Publique (OIHP), whose membership later included India and Pakistan, was established in 1907 and was primarily concerned with communicable diseases such as cholera, but the OIHP also concerned itself with sanitation and hygiene. The Health Organization of the League of Nations, formed after World War I, also helped to improve health in Asia. The organization set up a field office in Singapore to study infectious diseases in Asia and assisted China in developing its public health service.

—*Sarah Boslaugh*

Bibliography

- Arnold, David. *Science, Technology and Medicine in Colonial India*. The New Cambridge History of India III:5. Cambridge: Cambridge University Press, 2000.
- Mohamed, Jama. "Epidemics and Public Health in Early Colonial Somaliland." *Social Science & Medicine* 48 (1999): 507–521.
- Swanson, Maynard W. "The Sanitation Syndrome: Bubonic Plague and Urban Native Policy in the Cape Colony, 1900–1909." *Journal of African History* 43(3) (1977): 387–410.

The Sanitation Revolution and Public Health Movements in Europe and the Americas

The sanitation movement of the mid-nineteenth century in Europe and the United States had at its heart a profound tension between the classic nineteenth-century principle of personal liberty and the growing importance of collective health and citizenship. From the movement emerged a highly influential view of the proper relationship between medicine and the state, one mediated in Europe and the United States by the creation

and expansion of new public health agencies. This movement was part of a broader aspiration among the newly affluent middle classes—initially in Britain and later in Europe and the United States—to place their own standards of morality, civility, and hygiene at the heart of life in industrial societies. Sanitation reform was seen as necessary to improve not only health but also wealth, welfare, and morality.

In 1800, 80 percent of the British population lived in rural villages. By 1900, 80 percent lived in towns and cities. Industrialization and urbanization brought wealth for the middle and upper classes but also high levels of urban poverty, squalor, and disease. Epidemic diseases such as cholera, first seen in Britain in 1831, swept through overcrowded slums. Industrialization made the country as a whole rich, but the workforce was sick and getting poorer, at least in the short term.

A key question for nineteenth-century intellectuals was how to respond to the new industrial poverty. In the early 1800s, laissez-faire capitalism—the principle that trade and industry should be subject to as few regulations as possible—dominated British public life. One expression of laissez-faire capitalism was in the provision of fresh water and the disposal of sewage in the new industrial cities. Water was provided by private companies or from communal street pumps, and sewage was collected in cesspools or emptied into rivers, often the only source of drinking water. Through the lens of modern bacteriology, it seems obvious that this cycle of contamination was implicated in the transmission of disease. But to city dwellers, sewage disposal was only one aspect of urban life, all of which seemed dirty and diseased. Early sanitation reformers saw all aspects of the urban environment as causes of disease.

Many reform movements in this period were based on the Christian evangelical movements of the 1830s and 1840s. The sanitation movement possessed this element of morality: epidemics were seen not as God's punishment of sin but rather as a result of the human failure to look after His creation and His poor. This reflects a gradual movement away from laissez-faire ideology, as the middle classes began to take a paternalistic—some said patronizing—interest in the health and welfare of the poor.

Two strands characterized the sanitation movement. The public strand, led by middle-class physicians, politicians, and journalists, emphasized the material and collective aspects of sanitation: sewers, clean water, and so on. The private strand, associated with groups of middle-class women such as the Ladies Sanitary Association, took an interest in individual behavior and circumstances. These groups entered and inspected the homes of the poor and offered education in cleaning and cooking. These strands were complementary, and their interests often coalesced. In the 1830s, for example, both campaigned to provide public washhouses in which the poor could clean themselves and their clothes.

A leading figure in the public strand of the British sanitation movement was the lawyer and civil servant Edwin Chadwick. Chadwick had been a student of the English utilitarian philosopher Jeremy Bentham (1748–1832) and adopted the utilitarian principle of using government to produce “the greatest happiness of the greatest number.” From 1834 onward, Chadwick worked for the Poor Law Commission, a government organization investigating poverty. From 1837 the British government introduced official registration of births and deaths. Early records revealed a very high infant death rate in poor urban areas: 153 infant deaths per 1,000 live births, compared with fewer than 16 per 1,000 in the West today. This and Chadwick’s work for the commission convinced him that disease was associated with poverty.

In 1842 Chadwick published *Report on the Sanitary Condition of the Labouring Population of Great Britain*. His main conclusion was that rotting organic matter such as sewage and food waste released a malodorous and poisonous “miasma,” which was responsible for transmitting infectious epidemic diseases such as cholera. In his view, slums were not a danger just to their inhabitants: the miasma they generated could spread disease to a whole town. This miasmatic model of disease provided a rationale for Chadwick’s proposed program of “environmental” sanitation reform: improving water supplies, building sewers and drains, regulating refuse disposal, and controlling industrial pollution.

Though widely seen as a challenge to personal liberty, Chadwick’s program of reform

received governmental approval with the 1848 Public Health Act. The act established the General Board of Health to oversee public health and sanitation reform, with Chadwick as chairman and the London physician John Simon (1816–1904) as medical officer. Despite Chadwick’s pioneering work, the most radical sanitation reforms took place under Simon’s supervision after Chadwick had left the board. Simon favored a neocontagionist model of epidemic disease in which disease was spread from case to case by waterborne particles. This model provided an equally strong rationale for sanitation reform.

In 1858 the engineer Joseph Bazalgette (1819–1891) was commissioned to build a massive integrated sewer system for London. In the hot summer of that year, the level of the River Thames fell, and the smell of rotting sewage on its banks caused Parliament to be suspended for several weeks. Several years of these “great stinks” and a major cholera epidemic in 1866 brought home the need for further sanitation reform and the completion of Bazalgette’s scheme. The swift change in public attitudes toward sanitation reform is illustrated by the fact that the 1866 Sanitary Act, though far more interventionist than the Public Health Act, faced little opposition in Parliament and the press.

Both Europe and the United States experienced cholera epidemics in the first half of the nineteenth century, but only in the 1870s did the condition of their industrial cities begin to reach crisis point. Political instability, particularly the European revolutions of 1848 and the American Civil War, complicated sanitation reform. The emergence of bacteriology and new theories of disease transmission in France and Germany in the late nineteenth century added a scientific dimension to the activities of the sanitation movement in these countries. In Germany, sanitation reform became part of Otto von Bismarck’s (1815–1898) program of political unification, industrial modernization, and social welfare. In France meanwhile, two “great stinks” in Paris in the 1880s triggered a nationwide program of sewer construction and slum clearance, though such efforts raised concerns about aggravating underlying class tensions in French society.

Though Chadwick’s work had inspired some sanitation reformers in the United States in the

1840s and 1850s, the turmoil of the American Civil War hampered their efforts to establish a federal agency for sanitation reform. In the aftermath of the war, many cities and states established health boards, which oversaw food quality, water supplies, and the containment of epidemic disease. The National Board of Health, established in 1879, took responsibility for coordinating scientific research into contagious diseases and sanitation engineering at a national level. As the influence of the sanitation movement spread across Europe and the United States, the incidence of epidemic diseases declined sharply. Public health reformers began to shift their emphasis away from sanitation reform, embracing a wider concern for the social and medical problems associated with urban poverty.

—Richard Barnett

Bibliography

- Barnes, David. *The Great Stink of Paris and the Nineteenth-Century Struggle against Filth and Germs*. Baltimore: Johns Hopkins University Press, 2006.
- Barnett, Richard. "Sanitation Movement of the Nineteenth Century." In *Encyclopedia of Pestilence, Pandemics, and Plagues*, edited by Joseph P. Byrne. Westport, CT: Greenwood, 2008.
- Duffy, John. *The Sanitarians: A History of American Public Health*. Urbana: University of Illinois Press, 1990.
- Hardy, Anne. *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856–1900*. Oxford, UK: Clarendon, 1993.
- LaBerge, Ann Elizabeth Fowler. *Mission and Method: The Early Nineteenth-Century French Public Health Movement*. New York: Cambridge University Press, 2002.
- Worboys, Michael. *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865–1900*. New York: Cambridge University Press, 2000.

Tuberculosis

Tuberculosis is a highly contagious infectious disease caused by the microorganism *Mycobacterium tuberculosis*, which most commonly infects the lungs but can also affect other parts of the body, including the central nervous system, lymphatic system, bones, and connective

tissue. Tuberculosis is primarily spread through the air—for instance, when an infected person coughs or sneezes and a susceptible person inhales the infectious aerosol droplets—but can also be contracted through infected milk and meat products. Because tuberculosis victims often become anemic and therefore pale due to blood loss and failure of the bone marrow cells to produce red blood cells, tuberculosis was sometimes known as the white plague. It is also known as consumption due to the wasting effects of the disease, which seemed to consume a person from within.

Despite the availability of effective treatments, tuberculosis remains a common disease today: it is estimated that one-third of the world's current population has latent tuberculosis, and tuberculosis is the second most common cause of death from infectious disease among adults worldwide.

Although tuberculosis is an ancient disease, it became particularly widespread in Europe and the United States in the eighteenth and nineteenth centuries, when the Industrial Revolution created ideal conditions for its spread. It is estimated that in the late nineteenth century, 10 percent of all deaths in the United States were due to tuberculosis, and in France it was the most common cause of death from infectious disease.

Although tuberculosis claimed victims from all social classes, it was deadlier among the poor, whose crowded living conditions encouraged contagion. For instance, in the 1840s in London, death rates from tuberculosis were four times higher in the poor parishes of Whitechapel and St. Giles Cripplegate than in wealthier Westminster. Further evidence of the relationship between tuberculosis and crowded, unsanitary living conditions was the high incidence of death from tuberculosis in prisons in the late nineteenth century. Tuberculosis was the assigned cause of death for three-quarters of the Massachusetts prison population between 1890 and 1895, and in Chatham Naval Prison in Great Britain, between 1870 and 1880 half the prisoners died each winter from the disease.

In the nineteenth and early twentieth centuries, the most common treatment for tuberculosis was confinement in a sanatorium, a special

➤ ROBERT KOCH

Robert Koch (1843–1910) was a German physician and microbiologist who was awarded the 1905 Nobel Prize in Physiology or Medicine for his discovery of *Mycobacterium tuberculosis*, the organism that causes tuberculosis. This discovery made possible the first modern efforts to prevent and control tuberculosis through sanitary measures. Previously, many had believed it to be a hereditary disease. Koch also discovered the anthrax bacillus (1877) and the cholera bacillus (1883).

Koch developed what are known today as Koch's Postulates, which state four criteria required for an organism to be considered the cause of a disease. The postulates are:

1. The organism must be found in all diseased animals and not in healthy animals.
2. It must be isolated and grown in a pure culture (in the lab).
3. When introduced into a healthy animal, the cultured organism should cause disease.



A physician and founder of bacteriology, Robert Koch was the first to prove that specific microorganisms caused specific diseases. A Nobel Prize winner, he is best known for having identified the bacteria that cause cholera and for his research into the cause of tuberculosis. (Library of Congress)

4. It must be possible to reisolate the organism from the newly infected animal.

Although Koch's Postulates are not considered entirely valid today, they represent an important stage in the development of scientific microbiology.

—Sarah Boslaugh

hospital or rest home. The first sanatorium in Europe was opened in the Bavarian Alps in 1854, and the first U.S. sanatorium was opened in Saranac Lake, New York, in 1886. By 1938, more than 700 sanatoriums had been built in the United States. It is debatable whether the typical sanatorium regime of exposure to fresh air, exercise, and a nutritious diet was helpful in curing tuberculosis. It may be that the chief benefit may have been the removal of infected people from society, thus lowering the risk of exposure for everyone else.

Tuberculosis was so common in Europe and the United States in the early industrial era that it was often portrayed in literature and art. For instance, the operatic characters Mimi in Puccini's *La Bohème* and Violetta in Verdi's *La Traviata* both die of the disease, Thomas Mann's novel *The Magic Mountain* is set largely in a sanatorium in the Swiss Alps, and the painter Edvard Munch often portrayed consumptives in his work. Because tuberculosis often infected all members of a family, it was once thought that it was hereditary. Such theories were abandoned, however, when the infectious nature of

tuberculosis was established after the German physician and scientist Robert Koch (1843–1910) successfully isolated *Mycobacterium tuberculosis* in 1882. His discoveries inspired the establishment of a number of national public health organizations focused on combating the disease. Such organizations were formed in France and Denmark in 1891, the United States in 1892, Germany in 1895, and Great Britain in 1897. Effective public health measures included public education in hygiene, improved housing, isolation of contagious individuals, and legal prohibitions of public spitting. However, tuberculosis remained a common disease in the United States until the development of antibiotics in the 1940s.

Two other scientific advances played major roles in the battle to control and prevent tuberculosis. The first was the discovery of X-rays by Wilhelm Conrad von Röntgen in 1895. This technology allowed accurate diagnosis and monitoring of tuberculosis. The second scientific advance, which once seemed to hold the promise of eradicating the disease entirely, was the discovery of streptomycin, the first effective medical treatment for tuberculosis, by Selman

Abraham Waksman (1888–1973) in 1946. Rather than being eradicated, however, tuberculosis has made a resurgence over the last few decades, and the emergence of drug-resistant strains in U.S. cities such as New York and Miami have focused renewed attention on this disease.

—Sarah Boslaugh

Bibliography

- Bates, Barbara. *Bargaining for Life: A Social History of Tuberculosis, 1876–1938*. Philadelphia: University of Pennsylvania Press, 1992.
- Daniel, Thomas M. *Pioneers of Medicine and Their Impact on Tuberculosis*. Rochester, NY: University of Rochester Press, 2000.
- Dormandy, Thomas. *The White Death: A History of Tuberculosis*. New York: New York University Press, 1999.
- Rothan, Sheila M. *Living in the Shadow of Death: Tuberculosis and the Social Experience of Illness in American History*. New York: Basic Books, 1994.

Foreign Diseases in Oceania

Several factors contributed to depopulation among indigenous societies throughout the Pacific during the eighteenth and nineteenth centuries. They included conflicts with Europeans, enslavement, and environmental and social changes, but the most important factor by far was the introduction of foreign diseases among people who lacked immunity. Oceania did not suffer regional pandemics because of the geographical isolation of the islands and their distance from larger germ reservoirs. Yet specific populations were disrupted and devastated by the introduction of foreign infectious diseases at rates similar to those experienced by Native Americans following the arrival of Europeans. While it is believed that a small range of infectious diseases existed among Pacific islanders before foreign pathogens were introduced, in most cases islander immune systems were unable to counter the onslaught of foreign pathogens. Furthermore, those areas of Oceania with the greatest degree of geographical isolation from other Pacific island communities, for example, Hawaii, Aotearoa, and Rapa Nui, had the least developed immunity and thus were most vulnerable to infections.

Ferdinand Magellan was the first European explorer to encounter Pacific islanders, when he arrived with his fleet at Guam in the Marianas in March 1521. Subsequently, the Spanish established regular trade routes across the Pacific, the most important of which was the route between Acapulco in Mexico and Manila in the Philippines. Not until the voyages of the British navigator Captain James Cook, however, did the Pacific begin to experience the full impact of contact with the world of Europe and America. In the wake of Cook's three voyages to the Pacific in the mid to late 1700s, a host of sealers, whalers, merchants, missionaries, and settlers followed. With every new visitor to island communities came the possibility of foreign disease introduction.

Micronesia, the western region of Oceania, consists of many small islands and atolls, including the Mariana, Marshall, and Caroline island groups. In the Marianas during the Spanish-Chamorro Wars (1670–1700), the indigenous Chamorro population dropped from 70,000 (as reported by Jesuit missionaries in 1668) to less than 4,000 in 1710 (according to Spanish accounts). While armed conflict accounts for many losses, most historians agree that Chamorro depopulation was due mainly to the introduction of foreign infections. In the eighteenth and nineteenth centuries as contacts with Europeans increased, several more epidemics struck the Chamorro population, including leprosy, an ongoing issue, smallpox (1849), measles (1861), whooping cough (1898), and influenza (1899). By the end of the 1800s the overall population of Guam began to increase, but now it was a mixture of Chamorro, Filipino, and Spanish ancestry.

Due to a lack of European interest and the islanders' reputations for violence, the other islands of Micronesia tended to have less outside contact until the mid-1800s, when trade with Westerners increased. Nonetheless, the inhabitants of these other Micronesian islands, with less foreign contact, were no more immune to foreign diseases than those of the Marianas. Southeast of Guam, Chuuk's population (as high as 35,000 in 1827) declined rapidly as a result of tuberculosis, measles, venereal diseases, and smallpox epidemics. Farther east on the island of Pohnpei, islanders suffered from diseases brought mainly

by explorers and whalers: dysentery (1843), influenza (1845), and smallpox (1853). It is suspected that venereal disease was introduced to the Marshall Islands as early as 1850 (causing infertility and population decline), and further depopulation resulted from epidemics of chicken pox (1887–1892), measles (1890, 1907), influenza (1899, 1902–1904), hepatitis (1900), whooping cough (1902), and typhoid (1905).

Melanesia, the southwestern region of the Pacific, contains the larger islands of Papua New Guinea, the Solomon Islands, Vanuatu, New Caledonia, and Fiji. They experienced population losses, but imported infectious disease was not the major cause. Because of their proximity to one another, Melanesians had more consistent contact within their island groups than did the islanders of Micronesia and Polynesia. As a result, their immune systems were not as susceptible when foreign pathogens were introduced. Also, European contact was limited until the nineteenth century because of the Melanesians' fierce reputation and, in a reversal of what happened elsewhere, the Europeans' fear of infection. There is evidence that malaria and perhaps even typhus were present in the Solomon Islands when the Spanish explorer Hernando Gallego arrived in 1568. Malaria was likely present in other parts of the region as well. Although Fiji experienced major epidemics in 1791–1792, 1802–1803, and 1875, reducing the population by a third (to approximately 100,000) by the end of the 1800s, elsewhere the loss of population resulted more from blackbirding (the enforced enslavement of native peoples) than disease. Except for those in Fiji, the region was spared major epidemics until the twentieth century, when their interaction with foreigners increased.

Polynesia, the central and southeast region of the Pacific, also includes a large number of islands, including Hawaii, Rapa Nui (Easter Island), Aotearoa (New Zealand), Samoa, Tonga, the Cook Islands, and Tahiti. Polynesia received much more attention than Micronesia and Melanesia from Euro-Americans from the eighteenth century onward. As explorers, merchants, whalers, missionaries, and settlers arrived in Oceania, the islands of Hawaii, Tahiti, the Marquesas, and Aotearoa experienced severe population losses from influenza, measles, and tuberculosis.

➤ RAPA NUI

The history of Rapa Nui, an island of 63 square miles (163 square kilometers) in eastern Oceania named Easter Island by the Dutch navigator Jacob Roggeveen in 1722, provides one of the most striking examples of the impact of foreign disease. The island was settled around 900 CE, and its population may have been as high as 7,000 to 9,000 by the 1600s. Theories about the reasons for Rapa Nui's population decline continue to be debated, but there is no doubt that depopulation accelerated after the arrival of Roggeveen and his crew. While anchored offshore for a week, some 150 men went ashore for one day and introduced venereal diseases to the islanders. Sporadic visits by other Europeans continued until the 1830s, when ships' captains became cautious of landing at Rapa Nui because of the prevalence of syphilis.

Then in 1862–1863, when the population was approximately 3,000, as many as 1,400 islanders were kidnapped by Peruvian and Spanish slavers. Ninety percent died from the harsh treatment of their masters and the unfamiliar environment. By August 1863, due largely to international protest, the surviving Rapa Nuians were to return to their home. Unfortunately, many had contracted smallpox and tuberculosis, and as a result only 15 returned to Rapa Nui. The resulting outbreak of smallpox killed an estimated 1,000 people. By 1877 the people of Rapa Nui numbered only 111. Leaders, elders, and those who were the keepers of island culture and traditions were gone, and much of the history of Rapa Nui had been lost.

—Kerri Inglis

These diseases seem to have had less impact on other populations of Polynesia, such as that of Tonga, that were less frequently visited by foreigners. However, throughout Polynesia, European and American explorers, whalers, traders, merchants, and migrants introduced venereal diseases that diminished islanders' ability to procreate. Syphilis and gonorrhea contributed to sterility and infant mortality, causing decline in indigenous populations. As new infectious diseases were introduced, island communities had little time to recover physically and demographically before another epidemic hit. Hawaii and Aotearoa present clear examples of this.

When Captain Cook and his crew arrived in the Hawaiian Islands in 1778, the island's population was approximately 400,000. Venereal diseases and tuberculosis were introduced with the first foreign contact. By the time Protestant missionaries established themselves in the 1820s, the Hawaiian population was down to 135,000. In the late 1840s Hawaii experienced epidemics of influenza, measles, whooping cough, and dysentery. In 1853 there was a smallpox epidemic, and from the mid-1860s to 1900 Hansen's disease (leprosy) caused the quarantine and deaths of approximately 5,000 people. The native Hawaiian population continued to decline, reaching a low of 39,000 in 1896.

In Aotearoa, foreign disease and conflict with Europeans reduced the Maori population by an estimated 10–50 percent during the nineteenth century. From the 1790s onward, venereal diseases, dysentery, influenza, whooping cough, measles, typhoid, and tuberculosis were all introduced. The geography of the islands and the wide distribution of the population helped limit the spread of infection, but communities that were in close proximity to one another were much more susceptible to infections and had difficulty recovering. Population estimates for the Maori prior to 1800 are difficult to

confirm, but in 1840 the indigenous population was estimated at 100,000. According to the 1896 census, the Maori had declined to 42,113.

By the early twentieth century, populations throughout Oceania had been devastated by foreign diseases, some suffering as much as 80–90 percent depopulation. Most island populations began to recover in the years from 1890 to 1920, largely as a result of intermarriage with new immigrant groups. While some efforts were made to combat these disease outbreaks, neither traditional healers nor practitioners of biomedicine had many answers during this era before the advent of antibiotics.

—Kerri Inglis

Bibliography

- Fischer, Steven Roger. *A History of the Pacific Islands*. New York: Palgrave, 2002.
- Kirch, Patrick V., and Jean-Louis Rallu, eds. *The Growth and Collapse of Pacific Island Societies: Archaeological and Demographic Perspectives*. Honolulu: University of Hawai'i Press, 2007.
- Kunitz, Stephen. *Disease and Social Diversity: The European Impact on the Health of Non-Europeans*. New York: Oxford University Press, 1994.
- Miles, John. *Infectious Diseases: Colonising the Pacific?* Dunedin, New Zealand: University of Otago Press, 1997.

■ Introduction: World Population Patterns

In the early twenty-first century any person with access to the Internet can go online and consult any one of several world population clocks, which provide second-by-second estimates of the world's population. All of them utilize powerful computers and sophisticated statistical methodologies to analyze massive quantities of data from censuses, surveys, records of births and deaths, and various other government records. Nonetheless, their numbers are still estimates. The world population clock provided by the U.S. Census Bureau provides the following warning: "The populations displayed on the clock are not intended to imply that the population of the world is known to the last per-

son. Rather, the clock is our estimate of the world population size and an indication of how fast it is growing."

If present-day figures about world and regional populations are (very) educated guesses, calculating population figures for the distant past is even more difficult. Sir William Petty (1623–1687), an English economist, made a pioneering estimate of the world's population in a book he published in 1682 that mainly focused on the population of the city of London. With no actual population data to work with, his calculations were based on two educated guesses: the first about the actual size of the world's land areas (which was quite accurate) and the

second about these land areas' carrying capacities (which were severely underestimated). His resulting estimate of a world population of 320 million people is now thought to be slightly less than 50 percent of the actual number. Such an error brings into full relief the difficulties of estimating historical populations in the absence of statistical data.

The practice of conducting regular censuses, which seek to provide insight into the basic structure and trends of society by gathering information about all inhabitants of a region or political entity, goes back to the seventeenth century. It is thought that the first effort to collect such data took place in New France (Quebec), where 16 surveys were conducted of the colony's population between 1665 and 1754. Beginning in 1749 the Swedish government ordered pastors of the state-controlled Lutheran Church to submit parish lists, which were then used to calculate the population of the kingdom. In 1787 a similar system was instituted in Lutheran Denmark. Several Italian and German states also conducted censuses in the eighteenth century, but none was as important as the national census conducted by the United States in 1790 and every decade thereafter. Its purpose was both to gather information about the population and also to allocate seats in the House of Representatives. Britain inaugurated regular censuses in 1801, and in the course of the nineteenth century so too did several Latin American states and all European states, with Russia being the last to do so in 1897. Censuses also were instituted in New Zealand in 1864, Canada in 1871, India in 1871–1872, Egypt in 1897, and Australia in 1901. Japan, however, instituted its first census only in 1920, and for most of Asia, Latin America, and all of Africa except Egypt, censuses were not begun until after World War II.

As a result, historians' estimates of the world's population before the twentieth century rely heavily on information gleaned from tax registers, statistics on households, dwellings and hearths, and various other forms of socioeconomic and even literary information. Not surprisingly, these estimates show a fair amount of variation depending on the data and methodology utilized. In broad terms, however, estimates of world population between 1750 and 1914 are

all in agreement about two basic points: that the world's overall population and the percentage of people living in cities both markedly increased. It took the human species countless millennia to reach the world's population level of approximately 770 million people in 1750. Then in the next 150 years, a mere blink of time in history, the world's population more than doubled to reach approximately 1,650 million by 1900. The rate of growth was fastest in the Americas, which in 1700 made up less than 2 percent of the world's population but in 1900 made up just over 13 percent. It was slowest in Africa, whose population grew modestly, from approximately 107 million in 1700 to 133 million in 1900. In every part of the globe, cities increased in numbers and size. Between 1700 and 1900, the number of cities in the world with populations over 100,000 increased from 34 to 287, and the number of cities with populations over 500,000 increased from 5 to 43.

Aside from overall growth and urbanization, historical demographers have described another broad change in the world's population patterns between 1750 and 1914. This is the change in fertility and mortality patterns that takes place as societies undergo economic development from preindustrial to industrial economies. First proposed by the American economist Warren Thompson in the late 1920s, the demographic transition model suggests that agrarian societies are characterized by high rates of mortality and fertility and thus have slowly growing or stable populations. At the beginning stages of industrialization (stage two of the transition model) mortality rates begin to fall, but fertility rates remain the same, resulting in a younger population and rapid population growth. In stage three fertility rates begin to fall, resulting in a population with relatively small numbers of dependent children and nonworking older adults. With proportionately a large part of the population of working age, this is the stage in which substantial economic growth is likely to occur. Finally, in stage four, mature industrial societies have low birthrates and mortality rates, resulting in large but stable populations.

The demographic transition model is not without its critics, who have argued that it applies to Europe but somewhat less well to the

United States and much of the developing world. Less debatable is the significance of the demographic realities that the model seeks to clarify and understand. Population growth and the changing structure of populations were simultaneously causes and indicators of the broad transformations in human societies that occurred between 1750 and 1914.

—James H. Overfield

Population Patterns in Asia

Population counts and estimates for Asia between 1750 and 1914 must be used with great care. Surviving records often focus on selected groups and regions such as genealogies of the Manchu ruling class in China or population registers known as *shumon aratame cho* from selected villages in Japan. House counts, tax data, and reports of government officials also can be used as indicators of population trends, but do not establish population patterns for the entire region. Registers of births and deaths become more available only in the closing decades of the period. Prime examples are parish registers in the Philippines; colonial population censuses in parts of British India, Sri Lanka, and Dutch Indonesia; and national registers in Meiji Japan.



Between 1875 and 1901, a series of famines struck various provinces in India, resulting in the deaths of over nineteen million people. This photograph taken in Madras, India, about 1876, shows a few of the many victims of famine during this period. (Sean Sexton Collection/Corbis)

Despite such deficiencies in the data, it is clear that population growth occurred across the region between 1750 and 1914. China's population doubled from approximately 150 million people in 1700 to 300 million in 1800 and reached 430 million by the mid-nineteenth century. Increased agricultural productivity during the Qing era (1644–1911) raised standards of living and stimulated population growth. By the nineteenth century new crops such as sweet potatoes, maize, and peanuts were cultivated in less arable lands, thus adding to food production. Rice production also increased with the intensification of irrigation and paddy and terrace farming. Political and natural calamities, however, did cause temporary increases in mortality. The casualties and dislocation wrought by the Taiping Rebellion (1850–1864) took the lives of as many as 25 million people. In massive famines in northern China in 1876–1877, the death toll was between 9 million and 13.5 million. Female infanticide also limited growth. Sample data on farmers born between 1774 and 1873 indicate that from one-fifth to one-quarter of baby girls fell victim to infanticide.

Following a period of rapid growth, when the population rose from an estimated 10 million in 1600 to 25 million in 1720, Japan's total population remained around 26 million to 27 million through the mid-nineteenth century. Domestic peace during the Tokugawa era (1603–1868) fostered agricultural growth from the expansion of cultivated lands and the spread of labor-intensive farming methods. Consequently, workloads for men and women in farming villages increased and likely had adverse effects on marital fertility and infant and maternal mortality. Late marriage upon obtaining economic resources to support families also slowed the rate of natural increase among the most fertile group of the population. For instance, women's mean age at marriage was above 20 in the 1600s and 1700s, whereas the Chinese equivalent was 16.1 to 16.8 from 1650 to 1850. Abortion and infanticide also suppressed the birthrate. Surviving village data indicate declining birthrates from 5.5 children for female cohorts born before 1700 to 3.2 children for those born between 1750 and 1800. Moreover, extensive famines, namely the Tenmei (1782–1787) and Tempo (1833–1837)

famines, caused a short-term population decline. The late nineteenth century saw a decline in famine intensity, as the Meiji government (1868–1912) modernized infrastructure and implemented relief policies. Food production kept pace with Japan's population that reached over 50 million by 1914.

Aggregates of indirect estimates suggest that the population of the Indian subcontinent increased from about 161 million in 1800 to over 283 million by 1901. In the eastern region of Bengal, for instance, increases in sales of salt, tax collections, and house counts indicate that the population grew from around 30 million in 1790 to 65 million in 1860. Meanwhile, periodic famines and epidemics attenuated growth. The famine of 1770 in Bengal killed approximately one-third of its population, whereas cycles of famine in the 1890s accounted for the loss of over 40 percent of the population in the north-western region of Rajputana. In Punjab in the far northwest, mortality rose sharply following the famine years of 1898 to 1899 due to the malaria, cholera, and plague epidemics that ravaged the region. During the peak year of 1902, the epidemics resulted in the deaths of 10 percent of the registered population. Female infanticide and Hindu prohibition of widow remarriage also moderated the population growth. As in Japan, famine mortality began to decline in the late nineteenth century. Relief policies, such as the Famine Codes in the 1870s, and improved communications, notably the expansion of railway transport, enabled the British colonial government to distribute food aid more efficiently.

Crude estimates of Southeast Asian population show a considerable increase from 35 million in 1800 to 86 million in 1900. Peace and stability and the effective end of periodic wars after the 1750s offer one explanation for the growth. Warfare in traditional Southeast Asia had often disrupted marriage, as it was intended to capture manpower, a valued resource in the thinly populated region. The formation of powerful centralizing states in modern-day Vietnam, Thailand, and Burma brought stability to family relations and was likely to have increased marital fertility. Commercial growth under colonial rule in the nineteenth century also spurred

demographic expansion. For instance, as the Dutch consolidated the Indonesian archipelago, they expanded tropical agriculture and encouraged labor-intensive wet rice cultivation to produce excess rice for export. Farming households met the growing labor demand by increasing the number of children as a future workforce. Thus, farming villages became more densely populated.

Siberia, or Russia's Asian periphery bordering the Ural Mountains in the west, the Arctic Ocean in the north, the Pacific Ocean in the east, and the Mongolian steppes in the south, experienced a staggering demographic growth from 1750 to 1914. The total population of Siberia increased from about 1.2 million in the late eighteenth century to 5.7 million a century later, and that of the far eastern region jumped from around 70,000 in 1860 to 855,000 in 1911. Migration of settlers into Siberia throughout the period was a primary factor for the rapid growth. Upon consolidating territories in the region in search of furs and precious metals, imperial Russia sponsored mass colonization of Russian settlers to cultivate barren lands and develop the economy in the thinly inhabited frontiers with predominantly non-Russian populations. In the nineteenth century, around 10 million farmers, largely from central Russia, settled in Siberia. While Slavic peoples accounted for 66 percent of the population in the far eastern region in 1897, East Asian and European minorities also moved to Russian Asia for commercial opportunities.

Overall, greater food production, economic expansion, and political stability contributed to the regional population growth during 1750–1914. Famines, warfare, and selective infanticide commonly raised mortality rates and suppressed population growth. Abortion and marriage restrictions were also at work in keeping fertility levels in check.

—Akiko Sugiyama

Bibliography

- Hanley, Susan B., and Arthur P. Wolf, eds. *Family and Population in East Asian History*. Stanford, CA: Stanford University Press, 1995.
- Liv-Bacci, Massimo. *A Concise History of World Population*. 4th ed. Malden, MA: Blackwell, 2007.

Liu, Ts'ui-jung, James Lee, David Sven Reher, Osamu Saito, and Wang Feng, eds. *Asian Population History*. New York: Oxford University Press, 2001.

Ó Gráda, Cormac. *Famine: A Short History*. Princeton, NJ: Princeton University Press, 2009.

Population Patterns in Africa

Between 1750 and 1914, disruptions accompanying the slave trade and colonialism limited African population growth. African population increased by only 60 percent (from approximately 65 million to approximately 110 million), while at the same time world population nearly tripled. The impact of the slave trade was uneven but led to significant population decline in the areas most involved. Abolition of the trade allowed an increase in the population growth rate in some areas in the decades between 1850 and 1880, but the rate again declined as Europeans imposed their rule over most of the continent. As the worst excesses of colonial conquest ended, the population growth rate once again began to rise.

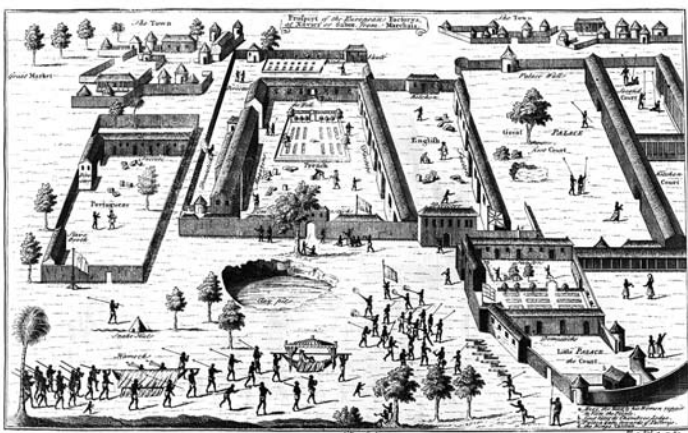
In western and central Africa, the region most affected by the Atlantic slave trade, the period 1650–1850 brought significant population decline, particularly in the coastal areas of the Bight of Benin, the Bight of Biafra, and the Congo-Angola regions. The Atlantic trade

reached a peak in the late eighteenth and early nineteenth centuries, with roughly half of the total number of Africans enslaved taken after 1770.

Population patterns and gender ratios also were affected. The wars accompanying the slave trade caused dislocation as people moved away from border areas or sought safety in remote and inaccessible places. Since roughly 60 percent of the slaves sent across the Atlantic were men, the gender balance in these areas became skewed. More women found themselves held in slavery in Africa, and polygamy may have increased. Some of the population loss was probably offset by the introduction of new crops, especially cassava and maize, but the introduction of these crops also led to women performing more of the agricultural labor.

Despite its official abolition in the early to mid-1800s, the Atlantic slave trade continued in western and central Africa until the late nineteenth century. During the nineteenth century the Congo-Angola coastal area between Cabinda and Luanda and its hinterland, with a population of around 4 million people, lost about 1 million people to the slave trade. After 1850 the Atlantic trade dwindled, but the trans-Saharan and Indian Ocean trades continued and even expanded throughout most of the nineteenth century. Between 1800 and the 1880s an estimated 1.2 million slaves were sold into the trans-Saharan trade, and an additional 800,000 were sold into the Indian Ocean trade. As a result, during the second half of the nineteenth century population on the eastern coast of Africa declined, and that of the savanna regions and the Horn stagnated or declined. The gender balance in these areas tilted toward males, as the majority of slaves taken in this trade were female.

European conquest often brought disease, famine, and ecological disaster in its wake. While not new to Africa, smallpox, typhoid, cholera, and measles accompanied the Europeans' arrival, sickened people weakened by hunger, and expanded to new areas on river steamboats. Beginning in 1899 as labor recruitment and tax collection brought people into closer contact with tsetse flies, sleeping sickness spread from the mouth of the Congo River to the eastern shores of Lake Victoria, killing up to 80 percent of the population in some areas.



An eighteenth-century engraving of a slave compound maintained by traders from four European countries on the Gulf of Guinea in present-day Nigeria. The transatlantic slave trade accounted for the forced migration of approximately six million Africans in the eighteenth century alone. (Library of Congress)

► PROBLEMS IN ESTIMATING AFRICA'S HISTORICAL POPULATIONS

In the absence of censuses, demographers and historians of Africa have used combinations of fragmentary evidence to reconstruct historical population trends. These include retrospective estimates from recent populations, studies of contemporary fertility and mortality patterns, changing slave prices, and educated assumptions. The relevant factors are disparate and sometimes contradictory. Possible losses from slave wars were no doubt offset by increases in population from new food crops, but to what extent? Inevitably, historians' estimates differ. For example, Philip S. Curtin has fixed the number of people taken

from Africa in the Atlantic trade at around 12 million; J. E. Inikori has estimated that the number was closer to 16 million, asserting that the West African population declined significantly during the period. Others have argued that during the years of the slave trade, the African population remained stable because the loss of people was offset by polygamy and new food crops. The final estimates are more than simply numbers. At issue is the question of the overall impact of the slave trade on Africa, not only from the fifteenth through the nineteenth centuries but even today.

—Barbara Traver

In the 1890s the widespread outbreak of rinderpest, an extremely lethal infectious viral disease affecting cattle and some species of wildlife, was introduced into Africa by infected cattle sent to feed Italian troops invading Eritrea. The disease devastated herds from the Red Sea westward across the Sudanic region to the Atlantic Ocean and southward through the savanna to the Cape. Up to 90 percent of domestic cattle died in affected areas. While earlier rotational agriculture had protected the soil, the growing of cash crops on large-scale plantations led to loss of soil fertility, reducing the foods available to support population growth. Brutality and punitive expeditions also killed many Africans. In the Congo Free State, for example, forced rubber collecting caused the abandonment of food crops, which led to starvation and flight. As a result, an estimated 5 million to 8 million people perished.

European demand for African labor and the growth of cities led to internal migration. The use of forced labor for portage often moved men long distances from their homes. Elsewhere, many men were encouraged to leave the countryside to seek employment on plantations and in mines, leaving women to maintain the farms. Ancient cities such as Begho, in present-day Ghana, declined, while newer ones, especially European administrative centers, grew in population. Population pressure led to mass migrations such as the Nguni movement (*mfecane*)

that shook southern and eastern Africa, depopulating some areas, moving peoples around the region, and creating new polities and ethnic groups.

A few factors contributed to limited demographic expansion at the end of the period. Increase during the nineteenth century in the population of three immigrant groups—liberated slave communities, Europeans, and Asians—would affect racial and political conflicts in the twentieth century. After the early colonial period modest stability, expanded transportation, and some improvements in health care allowed faster population growth.

—Barbara Traver

Bibliography

- Ajayi, J. F. Ade, ed. *Africa in the Nineteenth Century until the 1880s*. Abridged ed. General History of Africa/UNESCO International Scientific Committee for the Drafting of a General History of Africa No. 6. Oxford: J. Currey; Berkeley: University of California Press, 1998.
- Boahen, A. Adu, ed. *Africa under Colonial Domination, 1880-1935*. General History of Africa/UNESCO International Scientific Committee for the Drafting of a General History of Africa No. 7. London: Heineman; Berkeley: University of California Press, 1985.
- Inikori, J. E., ed. *Forced Migration: The Impact of the Export Slave Trade on African Societies*. London: Hutchinson University Library, 1982.
- Manning, Patrick. *Slavery and African Life: Occidental, Oriental, and African Slave Trades*.

African Studies Series No. 67. Cambridge: Cambridge University Press, 1993.

Ogot, B. A., ed. *Africa from the Sixteenth to the Eighteenth Century*. General History of Africa/ UNESCO International Scientific Committee for the Drafting of a General History of Africa No. 5. London: Heineman; Berkeley: University of California Press; Paris: UNESCO, 1992.

Population Patterns in North America

From the 1750s to 1914 the United States and Canada experienced a general population increase due to a high natural growth rate, transoceanic immigration, and the continuation of the slave trade even though it was outlawed by the United States and Great Britain in the early 1800s. As a result, the U.S. population increased from 4 million to 76 million from 1790 to 1900, while Canada's population expanded from 75,000 in 1761 to 5 million by 1901. Moreover, both Canada and the United States experienced significant internal migration. In both, populations expanded westward throughout the nineteenth century and became more urbanized.

From the mid-1700s to the early 1900s, the United States and Canada experienced steady population growth. Population growth in this period was a worldwide phenomenon, resulting mainly from increased agricultural productivity but also from improved medical care, the increased availability of fresh water, and improved sanitation. In the United States the population doubled every 23 years from 1776 to 1860. During these years, the African American population, although growing, declined in relative terms, from 19 percent to 11.6 percent of the population between 1790 and 1900. The U.S. population grew at a rate of 3 percent per annum from the later 1700s to the time of the Civil War, with immigration constituting a quarter of the total 3 percent growth rate. During the same period African American growth rate was only 2.2 percent per annum. Canada in the late eighteenth century had an even higher growth rate than the United States, 3.9 percent annually. However, this rate declined in the course of the nineteenth century to 3.7 percent from 1811 to 1861 and then to only 1.3 percent from 1861 to

1901 due to emigration and falling birth rates. As a result, while Canada in the first half of this period had a population that was 10 percent the size of the United States, by 1900 this number dropped to only 7 percent. Despite declining growth rates in the late nineteenth century, populations in Canada and the United States still expanded more rapidly than in Western and Central Europe, where the growth rates were .4 percent and .7 percent, respectively.

While the U.S. and Canadian populations continued to grow in the second half of the nineteenth century, fertility rates declined. In the early 1800s the United States had one of the world's highest fertility rates, with an average of 7 children per woman. By 1860, however, the rate had already dropped to 5.2 children per woman, making it closer to that of Western Europe (England's rate was 4.9) and lower than that of Canada. By the 1870s the U.S. fertility rate was lower than any country in Western Europe other than France, at 4.5 children per woman. Canada's fertility rates also declined after 1861 in English-speaking areas (although they remained high in French-speaking communities).

Death rates, after rising sporadically up to the 1860s, fell in the late nineteenth century following the Civil War, when 600,000 Americans out of a population of 32 million were killed. Medical innovation played a significant factor in the subsequent fall in death rates. For example, after vaccinations replaced inoculations in the 1790s, smallpox in the United States declined as a serious public health concern. In the mid-nineteenth century, America's cities had a higher mortality rate than the countryside due to diseases such as typhus, tuberculosis, and cholera, whose spread was encouraged by unsanitary living conditions and overcrowding. Overall mortality rates declined in the post-Civil War years as the United States implemented sanitary reform. When cholera, for instance, again threatened the inhabitants of New York City in 1866, the death rate was minimized by applying Englishman John Snow's 1850 discovery that the disease was spread by water contaminated by feces.

The African slave trade and transoceanic immigration were also significant factors in the increasing population in North America from 1750 to 1914. From the sixteenth century to the

nineteenth century, approximately 10 million to 11 million enslaved Africans were brought to the Americas, with more than half of this forced migration between 1760 and 1860. While most of these Africans were brought to the Caribbean and Brazil, approximately 250,000 slaves were brought to the United States during the late eighteenth century before the slave trade was outlawed in 1808.

An even larger demographic shift occurred from 1820 to 1930 when 50 million Europeans left Europe in the largest transoceanic migration in world history. Thirty-one million of these immigrants traveled to the United States, while another 13 million traveled to other parts of the Americas. The first wave of immigration consisted mainly of northwestern Europeans who traveled to Canada or the United States. Canada's major period of immigration was 1826–1835, when it received 40 percent of all European immigrants traveling to the Americas. The second wave of immigration occurred between the 1880s and the 1930s. These immigrants, more likely to be Catholic or Jewish, came primarily from southern and eastern Europe. During the first decade of the twentieth century, on average almost 1 million immigrants arrived in the United States each year. The foreign-born population during this period reached 14.7 percent of the total population in 1910.

Significant emigration also occurred from Canada and Mexico to the United States. Half a million Canadians, out of a population of only 4.5 million, migrated to the United States in the final decades of the nineteenth century; they constituted 10 percent of U.S. immigrants from 1890 to 1914. Historians attribute this shift to a rising Canadian population without concurrent growth in industrialization, urbanization, or tillable land. As a result of Mexican immigration, in 1910 more than 200,000 Mexican nationals and 100,000 of their children lived in the United States.

The United States also experienced internal migration. In the late 1800s an ever-growing number of Americans moved west. In 1860, the Eastern Seaboard was the home of more than half of the U.S. population. However, by 1910 this number dropped to 41 percent. Western and Pacific states experienced the fastest growth, growing from 14 percent to 30 percent. In Canada,

➤ SHIFTS IN THE AMERICAS' INDIGENOUS POPULATION

In contrast to most other ethnic groups, America's indigenous population experienced a period of general decline from 1750 to 1900. Before 1492, the Americas were dominated by descendants of northeastern Eurasians who scholars believe migrated to the Americas from approximately 10,000 to 8,000 BCE. Isolated for nearly 10,000 years, the Americas' indigenous populations lacked immunities to many Eurasian and African diseases; therefore, Western diseases resulted in virgin soil epidemics, epidemics in which a new and deadly disease spreads to nearly all members of a population. Some isolated indigenous groups did not encounter European diseases until the nineteenth century. For instance, malaria was unknown to the Chinookans and Kalapuyans, two of the largest groups in northwestern Canada. In the 1820s, they had a combined population of 18,580. A decade later, malaria combined with other diseases reduced their population to 2,433. Their demographic decline suggests patterns of other Native American groups. While numbers are debated, it is estimated that in North America, Indian population numbers dropped from 1.9 million to 500,000 from 1500 to 1900. In the United States and Canada, the number of Native Americans continued to decline until 1900. (The 1870 census marks the lowest recorded Native American population in the United States, with just under 30,000.) This pattern, though, was reversed by the early twentieth century as their population began a period of growth.

—Kassi Klinefelter

the westernmost territories, present-day British Columbia, did not experience widespread settlement until the 1850s and 1860s after gold was discovered in the area and then the Hudson Bay Company's land was sold to the state, respectively. Only a small number of blacks moved west. Despite having received emancipation during the Civil War, they mainly remained in the South. In 1860, 93 percent of African Americans lived in slave states. Forty years later this number had dropped by only 2 percent.

Significant urbanization also occurred in Canada and the United States in the late nineteenth

and early twentieth centuries. In 1810 the United States had only 2 cities—New York and Philadelphia—with populations of more than 50,000; by 1860 the number rose to 16 cities. By 1920, the U.S. census for the first time recorded more residents living in cities than rural areas. U.S. urbanization was uneven. In 1920, 74 percent of urban residents lived in the Northeast or the Midwest, while only 17 percent resided in the South. Canada's urbanization, in contrast, began at the turn of the twentieth century. The largest period of urban growth occurred from 1900 to 1911, when Canada's urban population rose from 28.7 percent to 37.2 percent. In the early twentieth century, Canada's cities, while generally smaller than their American counterparts, grew nearly 200 percent. In both Canada and the United States, immigration and industrialization were the main causes of urbanization.

—Kassi Klinefelter

Bibliography

- Haines, Michael R., and Richard H. Steckel, eds. *A Population History of North America*. Cambridge: Cambridge University Press, 2000.
- Klein, Herbert S. *A Population History of the United States*. Cambridge: Cambridge University Press, 2004.

Population Patterns in Latin America

According to a United Nations estimate, the population of Latin America grew from 16 million in 1750 to 85 million in 1914. This more than fivefold increase occurred in two phases. The first phase saw relatively slow but steady growth for more than a century, in which the people of Latin America doubled in number (16 to 30 million); while the second phase witnessed the population almost tripling (30 to 85 million) in little more than sixty years.

In 1750, the Latin American population consisted of three racial groups and mixtures of the same: Indians, who were generally the conquered people and the lowest in the social and political hierarchy; African slaves, who worked as slaves on plantations, in the mines and as servants; and the whites, both those born in the Americas (creoles) and those born in Spain or

Portugal (*peninsulares*, or *gachupines*) who occupied the highest rung of the social and political order.

The Indians of the Americas, who (except for the Inuit) had been the sole occupants of the American continent and may have numbered about 50 million on the eve of their conquest by Europeans, suffered a demographic disaster in the sixteenth and seventeenth centuries. Largely as a result of disease, the Indian population of the Americas declined in the sixteenth and seventeenth centuries to perhaps five million; by the eighteenth century this demographic hemorrhage had stopped and the indigenous population began a very slow rebound.

The European conquerors made up for the loss of Indian labor by importing African slaves, and by 1750 there may have been three and a half million of them in the Americas. The Spanish and Portuguese in Latin America probably numbered four million in 1750. About four and a half million Latin Americans were *mestizos*, descendants of Indian mothers and European fathers. The remaining half a million were *mulattos*, mixed offspring of African and European couplings. The mestizos were the fastest growing element of the Latin American population until the latter half of the nineteenth century.

By the 1780s, increased European demand for tropical products, particularly sugar, chocolate, coffee, and cotton, stimulated increased settlement in Brazil, the Caribbean coast of Venezuela and Columbia, and Cuba. This led to a moderate increase in immigration from Spain, particularly Andalusia and the Basque Provinces as well as the start of larger imports of African slaves to work on the new plantations. Additionally, stepped-up European demand for hides and leather, as well as for jerked beef to feed the increased number of plantation slaves who grew the tropical goods, prompted European and mestizo frontiersmen to move out on the Argentine pampas and the Venezuelan llanos to hunt the wild cattle that roamed these grasslands.

The wars for independence had a negative impact on the moderate population growth that Latin America was experiencing, but except in Uruguay and Hispaniola, the slowing effect of these wars on population increase was quickly repaired. More serious were the consequences

of disease epidemics that increased mortality as the port cities grew in commercial activity, population, and squalor. Improvements in city water supplies, sanitation and sewerage systems brought most of the epidemics under control, but not until the early twentieth century.

In the latter half of the nineteenth century, the great European and North American economic expansion fueled a growing demand for Latin American exports, especially coffee, meat, sugar, bananas, minerals and rubber, but much of Latin America was too sparsely populated to take full advantage of this burgeoning demand. In the first half of the century, the increased demand for labor to produce sugar and coffee stimulated a spike in the African slave trade, especially to Brazil and Cuba, but after 1850, British naval and diplomatic efforts ended that source of laborers. The alternative labor supply was European and, to a much lesser extent, Asian. Latin American leaders had a racial preference for European immigration; they saw this not only as the solution to their labor shortage but also as a way to “whiten” populations in which “backward” darker racial strains were so prominent. Under the slogan “To govern is to populate,” most Latin American governments in the last half of the nineteenth and the first decades of the twentieth century launched programs to encourage immigration from Europe.

There had been a very moderate flow of immigration from Europe throughout the period. Before independence, most of the European immigration to Brazil had, by government fiat, been Portuguese, while Spanish law restricted immigration to Spanish colonies to Spaniards. After achieving independence, the new states threw the gates open to all Europeans, but hoped to attract northern Europeans especially.

However, it was not until the latter part of the nineteenth century that massive immigration from Europe began. Large numbers of Italians, Spaniards, Portuguese, and Germans migrated to southern Brazil, Argentina, and Uruguay in the late nineteenth and early twentieth centuries. People from England, France, and Ireland found homes in Argentina and Chile, and many Spaniards migrated to Cuba before and after the Spanish American War (1898). Lebanese

➤ TRANS OCEANIC SWALLOWS

In the 1890s, the cost of a transatlantic crossing was reduced to about \$10 for steerage, enabling agricultural migrant workers to take passage on steamships from northern Italy to Argentina. The migrants could work during the harvest season in the southern hemisphere’s summer and fall. In the southern winter, these migrants would return to Italy, to harvest the grapes and olives in the Mediterranean harvest time. These annual sojourners were known as *golandrinos* (swallows) because they returned to Italy at the time the swallows returned from their winter migration to Africa.

—Wilfred J. Bisson

and Poles added to the ethnic diversity of most Latin American capitals.

The largest number of immigrants to Brazil, Argentina, and Uruguay were from Northern Italy. More Argentines claim Italian ancestry than claim Spanish roots. The Italians who migrated to Argentina and southern Brazil were expected to become tenant farmers on large estates, but after a few years in the new lands, many migrated to the growing cities. The focus for immigrants to Argentina was Buenos Aires, which in the early years of the twentieth century became the first Latin American city to have a population of a million. Rio de Janeiro was the next to achieve that distinction a few years later. São Paulo, today the largest metropolis in South America, was also an early magnet for Italian as well as Portuguese immigrants. With the abolition of slavery, these immigrants were expected to provide cheap labor for the coffee *fazenda* (coffee plantations). In some places coffee fazendas were divided into plots that were rented on a share-crop basis to immigrants. It was expected that one immigrant family could care for and harvest 1,000 coffee trees. But this arrangement was not sufficient to hold immigrants on the land after they had paid off the money the employer had advanced for their ocean passage. Many found opportunities in booming São Paulo and other cities.

Latin America’s population was further diversified by immigration from Asia. As early as the 1860s, Chinese indentured workers began to be

imported into Peru to work the guano fields on the islands off the coast and to extract nitrates from mines in what became Northern Chile after the War of the Pacific. Chinese indentured workers were also brought to Cuba to cut sugar cane. (Fulgencio Baptista, president-dictator of Cuba from 1933 to 1959 who was overthrown by Fidel Castro, was descended from one of these Chinese immigrants, while Castro's father was an immigrant from Spain.)

Japanese immigrants also began arriving in Latin America in the early twentieth century. Most of these were brought in to work on the coffee fazendas, but most quickly found niches in the diversified economy of São Paulo. Today, about a million and a half Brazilians claim Japanese ancestry, as do nearly 100,000 Peruvians.

On the eve of World War I, Latin America was still a very lightly populated region, though it was more than five times as populous as it had been in 1750. In 1750, the region of southern South America was a backwater, but by 1914 it had become the most dynamic part of Latin America. During the 164 years since 1750, Latin America's population had become more "Europeanized." One question that historians have been unable to answer is, what happened to the many Afro-Argentines who lived in the La Plata region in the eighteenth century? Did they not leave descendants? Did their descendants meld into the mass of Argentine population, without leaving a trace?

—Wilfred J. Bisson

Bibliography

- Robinson, David James. *Studies in Spanish American Population History*. Cambridge: Cambridge University Press, 1990.
- Salzano, Francisco, and Maria Bortilini. *The Evolution and Genetics of Latin American Populations*. Cambridge: Cambridge University Press, 2005.
- Sanchez-Albornoz, Nicholas. *The Population of Latin America: A History*. Berkeley: The University of California Press, 1974.
- Scobie, James. *Argentina: A City and a Nation*. New York: Oxford University Press, 1964.
- United Nations, Population Division, Department of Economic and Social Affairs. *The World at Six Billion*. New York: United Nations, 1999.

Population Patterns in Oceania

Following European contact, a series of cultural and demographic changes occurred throughout Oceania. These transformations included the exchange of material goods, cultural symbols, and genetic material; dramatic reduction in native populations because of introduced diseases; the arrival of settlers from Europe and East Asia; and the imposition of European colonial rule. Yet indigenous peoples and cultures persisted through all of these transitions and continued to survive through the twentieth century.

By 1750, European explorers had charted many of the major island groups in the Pacific Ocean. The last major island chain to be discovered by European people was Hawaii, which was sighted in January 1778 by the crew on Captain James Cook's third voyage of discovery. Hawaiians were among the last Polynesians to make contact with Europeans. Other groups in highland New Guinea and Western Australia did not make contact with Europeans until the twentieth century. Contact with Europeans resulted in trade, conflict, and occasionally settlement. The earliest European settlers in Oceania, often referred to as beachcombers, were European men who "went native," adapting to the local culture and marrying women from the islands where they stayed, sometimes raising large families.

Epidemics caused by microbes such as smallpox and influenza had a dramatic impact in Oceania, causing large numbers of islanders, who had no natural immunity, to die. At the same time, sexually transmitted diseases were often spread through the widespread practice of exchanging sexual favors for trade goods. Syphilis was particularly problematic, as it reduced the birthrate among Oceanic populations. These diseases often resulted in the deaths of the majority of the native population of a given island over a span of a century or less. In the late nineteenth and early twentieth centuries, Hansen's disease (leprosy), feared throughout the world, was introduced into Oceania. Because of these diseases, Oceanic populations had often been dramatically reduced by the time Europeans

began exploiting and colonizing them more systematically.

Whaling and trade played a major role in the dispersion of different groups of people throughout Oceania. Native people were often recruited onto whaling ships that would take them on a yearly circuit, following pods of whales around the Pacific Ocean. Whaling companies encouraged sailors to rely on credit, keeping the sailors in debt and thus forcing many to a life at sea. Port towns such as Honolulu and Levuka, Fiji, developed and prospered as a result of whaling and trade networks and often served as the first foothold of colonial settlement in the islands. British settlement in Australia and French settlement in New Caledonia in the nineteenth century were initiated by the perceived need to transport and house prisoners in far-off lands. Penal colonies represented another kind of colonial foothold for European nations. Eventually, port towns and penal colonies would grow to become major colonial centers for European maritime powers.

When Europeans began establishing settlements in Oceania, they believed they were colonizing lands that were empty or full of savages who were destined to be assimilated or to simply die off. The imposition of European-style settlement patterns, religion, and ideology often resulted in conflict with native people. The British were particularly enthusiastic in their colonization of New Zealand and Australia, in which thousands of settlers, along with imported flora and fauna (particularly sheep), were introduced. Because of colonial pressures, the Maori fought a number of wars with British settlers in New Zealand in the mid-nineteenth century. Alongside the British and French, Germany began to assert its presence in the Pacific by the late nineteenth century, establishing colonies in Micronesia and engaging in diplomatic conflict with the Americans and British over colonial rights to Samoa. The United States, itself a settler society, would make an important entrance into Oceania by annexing the Hawaiian Islands in 1900.

Imperial claims to islands in Oceania were accompanied by an influx of European settlers. These settlers often formed a wealthy minority.

➤ HANSEN'S DISEASE IN THE PACIFIC

Hansen's disease, more commonly referred to as leprosy, is one of history's most feared and misunderstood illnesses. Its appearance in Oceania resulted in the establishment of isolated settlements, such as Kalaupapa, Hawaii; Quail Island, New Zealand; and Makogai, Fiji. Thousands of people were forcibly removed from their homes and families and were imprisoned in these quarantine stations. In Hawaii, the disease was given many names, but perhaps the most telling one is *ma'i ho'oka'awale 'ohana* (the disease that tears families apart). Compared to smallpox or influenza, Hansen's disease caused a small number of deaths, but the legacy of forced removal and exile has left an important mark on history in Oceania.

—James L. Flexner

In contrast, thousands of migrant laborers moved throughout Oceania in the nineteenth and twentieth centuries. Many came from China or Japan and worked throughout Oceania, from the sugar plantations of Hawaii to the goldfields of New Zealand and Australia. Most of the laborers were men, and many remained on those islands and established families, sometimes marrying native women.

By the beginning of World War I, the populations in Oceania had changed drastically. What had been a region dominated by native people and cultures, with the occasional beachcomber, was transformed into a region of empires in which no island existed without some kind of European claim to dominance, whether real or imagined. At the same time, many Oceanic people, from Australian Aboriginals to native Hawaiians, continued their traditional lifeways while adapting to developments in the modern world. Much of twentieth-century history in the Pacific is marked as much by the resilience and continuity of native cultures as by the transformations outlined above.

—James L. Flexner

Bibliography

Beaglehole, J. C. *The Exploration of the Pacific*. 3rd ed. Palo Alto, CA: Stanford University Press, 1966.

- Denning, G. *Islands and Beaches: Discourse on a Silent Land, Marquesas, 1774–1880*. Melbourne: Melbourne University Press, 1980.
- Gosden, C. *Archaeology and Colonialism: Cultural Contact from 5000 BC to the Present*. Cambridge: Cambridge University Press, 2004.
- Kimura, Y. *Issei: Japanese Immigrants in Hawaii*. Honolulu: University of Hawaii Press, 1988.
- Stannard, D. E. *Before the Horror: The Population of Hawai'i on the Eve of Western Contact*. Honolulu: Social Science Research Institute, University of Hawaii, 1989.

Thinking about Population—Malthus

Thomas Robert Malthus (1766–1834) is well known for many things but is remembered mainly for his views of population growth and its dangers. He was a Cambridge graduate and an Anglican curate and professor. Each of these positions molded, shaped, and influenced Malthus's writings.

Malthus's most famous book, *An Essay on the Principle of Population*, went through six editions between 1798 and 1826. Each new version added data, answered criticisms, and presented more detailed discussion of the author's views on the topic of population. The essay was

➤ MALTHUS'S DIFFERING OPINIONS ON THE CORN LAWS

Malthus's ideas influenced pieces of legislation other than the 1834 Poor Law. The Corn Laws, which created import tariffs on foreign grain between 1815 and 1846, were a way of protecting the price of British corn by placing tariffs on grain imports. During the debate on the Corn Laws, Malthus wrote two distinct and opposing pamphlets. In 1814 in his first pamphlet, he supported the idea of free trade and opposed the proposed Corn Law legislation. By 1815, however, he had changed his position. Given the uncertainties of the post-Napoleonic world, Malthus argued that the United Kingdom should not depend on foreign imports. Malthus, in this way, became an opponent of the increasingly popular idea of free trade.

—Glenn Duerr

a response mainly to the arguments of William Godwin (1756–1836), the English journalist and political philosopher, and the French writer the Marquis de Condorcet (1743–1794), both of whom were strong believers in human progress and the ultimate perfectibility of society. Countering their arguments that population growth was a sign of economic health and the general progress of society, Malthus viewed population growth as leading to inevitable catastrophe.

Malthus's basic argument was that population growth will always have a tendency to outstrip the resources, especially the food resources, needed for existence. Such a catastrophe occurs because population increases geometrically (for example, 2, 4, 8, 16, etc.), whereas food production increases arithmetically (for example, 1, 2, 3, 4, etc.). Population increases geometrically because it is compounded with the birth of each new human being.

Population increases can be held in check by positive checks, such as famine, disease, and war that raise the death rate, and preventive checks, which lower the birth rates. The main preventive check was moral restraint, by which he meant delaying marriage and practicing sexual abstinence until that time. His advocacy of moral restraint was directed mainly toward the poor, who were both the main reason for population growth and its primary victims. His emphasis on moral restraint derives in part from his training as an Anglican curate and Christian teachings on the dangers of sexual promiscuity. Malthus's concerns also led him to question the benefits of public charity for the poor. Such charity encouraged further population growth and undermined the character and morality of the poor.

Malthus's writings were both influential and controversial. William Pitt the Younger, prime minister from 1783 to 1801 and 1804 to 1806, and the British Whig politicians who wrote the Poor Law Amendment Act of 1834 were both influenced by Malthus's thinking about the effects of charity. Others criticized Malthus for what they perceived as his callousness toward the poor and his excessive pessimism about the human ability to increase agricultural production. Malthus's arguments about how overpopulation leads to inevitable competition for limited

resources contributed to Charles Darwin's ideas of the struggle for existence and natural selection. Beginning in the 1960s, Paul Ehrlich, the author of *The Population Bomb* (1968), and many others who were concerned with the dangers of overpopulation echoed many of Malthus's ideas and came to be known as Neo-Malthusians.

—Glenn Duerr

Bibliography

- Elwell, Frank W. *A Commentary on Malthus' 1798 Essay on Population as Social Theory*. Lewiston, NY: E. Mellen, 2001.
- James, Patricia. *Population: Malthus, His Life and Times*. 1979; reprint, Boston: Routledge, 2006.
- Malthus, Thomas. *An Essay on the Principle of Population*. 1798; reprint, Ann Arbor: University of Michigan Press, 1959.
- Turner, Michael, ed. *Malthus and his Time*. New York: St. Martin's, 1986.

Race Suicide

Race suicide refers to late-nineteenth- and early-twentieth-century fears in the United States about decreasing birthrates of white native-born citizens and a corresponding increase in fertility among immigrant and nonwhite racial groups. Historians agree that such a decline was occurring and attribute it to an increase in marital fertility control through child spacing, contraceptive use, and abortion. In Herbert Klein's study of the population history of the United States, he notes that fertility rates among white women in the United States dropped from approximately seven births per woman in 1800 to roughly three and a half in 1900. Conversely, from 1850 to 1930, the foreign-born population of the United States increased from 2.2 million to 14.2 million. Concern over race suicide was especially prominent in northern cities most affected by immigration and the northern migration of African Americans from the South. For example, in 1890 four-fifths of the New York City population was foreign-born or first-generation Americans. Native-born white Americans feared that when combined with the influx of immigrants from southern and eastern Europe in the late 1800s and their higher birthrates, democracy and American culture were threatened.

Decreasing birthrates during the late 1800s were also documented in European countries. France, in particular, had the lowest rate of fertility among European nations during the nineteenth century. In England, the downturn in fertility in the late nineteenth century raised concerns about the nation's ability to maintain its empire. While declining birthrates in Europe and the United States were of national concern, their conceptualization as a race suicide was specific to the United States.

The term "race suicide" was coined by the American sociologist Edward Alsworth Ross in his 1901 article "The Causes of Racial Superiority." Ross, like other nativists, believed that the characteristics of native-born white Americans—foresight, industriousness, and self-reliance—made them the superior race. However, Ross feared that these same characteristics led native-born whites to have fewer offspring so they could provide them a higher standard of living. Ross thought that superior white Americans were committing race suicide by failing to match or exceed the birthrates of immigrants and nonwhites.

U.S. president Theodore Roosevelt shared Ross's alarm about the falling birthrates of native-born white Americans. In 1903 Roosevelt drew public attention to race and birthrates when he publicly expressed his fears about race suicide. Roosevelt chastised feminists and "self-indulgent" men and women for their desire for smaller families. He exhorted white men and women to have large families as part of their patriotic duty to the nation and to civilization. During Roosevelt's presidency, Americans sent photos and letters about their large families to the White House and received presidential letters of congratulations in return. However, some Americans rejected the notion that the country was suffering from a race suicide. Feminists, such as Reverend Anna Howard Shaw, responded to Roosevelt's critiques, pointing out the hypocrisy of focusing on a potential race suicide while many living children were already suffering from poverty, child labor, and lack of medical care.

The concept of race suicide developed within the larger context of eugenics and scientific racism during the late nineteenth and early twentieth centuries. Eugenicists such as Frances Galton and Charles Davenport held the

➤ BETTER BABY CONTESTS

Concerns in the United States about race led to a host of race betterment projects, including Better Baby Contests. These contests began in the early twentieth century as a way to reward parents for children who reached certain standards of racial, aesthetic, physical, and developmental perfection. After noticing the ways that livestock competitions bettered farm animals, Mary T. Watts and Margaret Clark, club women and rural reformers from Iowa, concluded that this same model could be used to improve human beings. Thus began the first Better Baby Contest as part of the Iowa State Fair in 1911.

Better Baby Contests were open to the public and consisted of physician-judges using standardized scorecards to evaluate infants. The contestants were divided into groups based on age (12–24 months or 24–36 months) and then underwent tests for physical, aesthetic, and psychological fitness. The scorecard measured weight, height, and cranial circumference as well as eye and nose shape, facial expressions, attention, and energy. Winning babies were awarded cash prizes and medals and often were featured in local

newspapers. All the parents who entered their babies in contests received a scorecard containing notes from the physicians about how to improve their child's condition. Thus, Better Baby Contests were a way for parents to gain access to medical evaluations for their children. By 1914 most states held Better Baby Contests, often as part of state fairs, and more than 100,000 babies had been examined.

While Better Baby Contests were at first well received, reservations about their competitive nature and skepticism about the quality of received medical advice for less-than-perfect infants generated criticism. Additionally, the contests were often open only to white babies, and the judging criteria reflected Eurocentric ideals of what qualified as perfection. By the 1930s, the Great Depression and centralized New Deal health policies led to the demise of Better Baby Contests. Overall, Better Baby Contests were one early-twentieth-century effort to stave off the threat of race suicide by encouraging the propagation of fit children.

—Lena McQuade

misguided belief that human stocks or races could be improved through regulating reproduction. Race suicide, with its emphasis on encouraging the “fit” to reproduce, was considered a form of positive eugenics as opposed to negative eugenic practices such as sterilization. Fears of race suicide were also based on false scientific theories of racial hierarchy such as those advocated by French diplomat Joseph Arthur de Gobineau. Following Gobineau's theory of the inborn inequality of all human races, many Americans believed that there was a hierarchy of races that placed whites and northern Europeans at the zenith of civilization, blacks and Africans at the bottom, and all other races in the middle. Proponents of these racist theories were concerned that increased reproduction among the less desirable would lead to the decline of American culture. Likewise, they were also worried that this decline would be hastened by a lack of reproduction—a race suicide—among economically sufficient native-born whites.

Despite turn-of-the-century policy makers' and politicians' concerns about race suicide, some current historical research suggests that these fears may have been misplaced. In their study of fertility rates among immigrant, second-generation, and native-born women of native parents, historical scholars Miriam King and Steven Ruggles found that second-generation women had the lowest fertility rates of any other group. Basing their study on U.S. Census data from 1900, they discovered that the overall fertility of immigrants and their children was markedly lower than that of native-born women of native parents. While there are questions about the reliability of census data from the turn of the century—it is possible that some women were not surveyed or that their responses to census officials might have been incorrectly counted—King and Ruggles' conclusions raise the possibility that fears about race suicide were perhaps unfounded. The controversy over race suicide was most likely a

response to changing social structures, particularly immigration, urbanization, and feminism, during the early 1900s.

—Lena McQuade

Bibliography

- Chase, Allan. *The Legacy of Malthus: The Social Costs of the New Scientific Racism*. New York: Knopf, 1977.
- Engs, Ruth Clifford. *The Eugenics Movement*. Westport, CT: Greenwood, 2005.
- King, Miriam, and Steven Ruggles. "American Immigration, Fertility, and Race Suicide at the Turn of the Century." *Journal of Interdisciplinary History* 20(3) (Winter 1990): 347–369.
- Klein, Herbert S. *A Population History of the United States*. Cambridge: Cambridge University Press, 2004.
- Ross, Edward A. "The Causes of Racial Superiority." *Annals of the American Academy of Political and Social Science* 18 (1901): 67–89.
- Stern, Alexandra Mina. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley: University of California Press, 2005.

Birthrate Reduction through Family Planning

During the eighteenth and nineteenth centuries, before the mass production of reliable contraceptives, people experimented with a remarkably creative array of tools, toys, and techniques to prevent conception. Until the twentieth century, however, the only clearly effective method of contraception was abstinence. Ultimately, developments in medical technology and improved education about the realities of conception and pregnancy resulted in a greater acceptance of family planning in the twentieth century.

In the eighteenth century, Europeans and Americans relied on several strategies, many of which were ineffective or highly unreliable, to forestall pregnancy. One such strategy was douching. After intercourse, women would rinse their vaginas with water or a combination of water and other substances, such as vinegar. Another common method was the rhythm method, a means of avoiding or assuring pregnancy by timing intercourse according to a woman's menstrual cycle. The withdrawal of the

penis before ejaculation was another strategy to avoid pregnancy. In addition to these methods, many people used mechanical contraceptives during intercourse, including a wide range of diaphragms, pessaries and condoms.

During this era, the contraceptive probably used most frequently in England was the condom. Although the purpose of the condom was primarily to prevent disease—that is, as a prophylactic—contemporaries recognized that the condom could also prevent impregnation. In reality, though, the condom was an unreliable tool for either purpose. Condoms were produced from a wide range of substances, including the large intestines of sundry farm animals, and the cost of the materials combined with the fact that manufacturers created them by hand made condoms expensive. Because of this cost, eighteenth-century men reused their condoms, and those who failed to clean their prophylactics after intercourse may have actually helped to spread disease.



British scholar Thomas Malthus's theory on population growth and the inevitability of poverty significantly influenced economic, political and scientific thought in the nineteenth century. (National Library of Medicine)

THE WOMAN REBEL

No historical figure is more strongly associated with birth control than the nurse, activist, and writer Margaret Sanger. Though her greatest claim of fame would come later, Sanger first promoted the idea of birth control in 1914, when she published issues of her magazine, *The Woman Rebel*. The magazine's first issue proclaimed that its aim was "to advocate the prevention of conception and to impart such knowledge in the columns of this paper." *The Woman Rebel* did so bluntly, in part by challenging long-held superstitions about sex used to deter and even scare people away from intercourse. She declared, for instance, that "Seldom does the girl practicing promiscuity become pregnant." Sanger repeatedly struck at these types of assumptions, which she dismissed as a "stupid fallacy." In another issue, she declared that marriage laws only served to "abrogate the freedom of woman by enforcing on her a continuous sexual slavery and a compulsory motherhood." This type of frank discussion aroused the fears of censors, and later that year Sanger was indicted for publishing articles deemed "obscene, lewd, lascivious, filthy, and of an indecent nature." After fleeing to Europe to avoid trial, Sanger returned in 1915, and in 1916 charges against her were dismissed.

—Joel Silverman

Attitudes toward family planning changed across Europe in the nineteenth century thanks in part to the English economist Thomas Malthus (1766–1834), who in 1798 wrote the influential pamphlet *An Essay on the Principle of Population As It Affects the Future Improvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers*. In his pamphlet, Malthus warned that the food supply would not keep up with the growth of the population, since population expanded geometrically and the food supply only expanded arithmetically. His solutions to this problem included controlling the growth of population through abstinence and marrying later in life. Although Malthus actually opposed the use of contraception—he was, after all, an

Anglican clergyman—proponents of family planning championed his theories about population control. Malthus argued against the conventional wisdom that larger populations led to more wealth. In his view an increase in population instead drained the resources of society. Societies that ignored the need to control their populations could face famine, disease, and war. In the 1800s, neo-Malthusians adopted part of Malthus's argument to suggest that birth control could assist societies in solving social problems such as poverty.

The neo-Malthusians' arguments were complemented by improvements in contraceptive technology. The introduction of mass production techniques for condoms in the nineteenth century decreased costs and made contraception more available to those who desired it. But social mores and religious doctrine reduced the potential market for such goods. Laws in England and America banned texts that discussed contraceptives as obscene, and in 1873, the U.S. Congress approved a law that essentially banned the dissemination of materials relating to contraception and abortion through the U.S. mail.

With the increasing presence of women in public roles and with changing attitudes toward sexuality, activists took up the cause of birth control in the early twentieth century. As modernist men and women openly discussed sex in urban cafes and in other public forums, they began to champion family planning as an individual liberty. Activists such as Margaret Sanger, who coined the phrase "birth control," realized that they might successfully challenge anticontraceptive laws by demonstrating that those laws conflicted with popular ideals about free speech.

—Joel Silverman

Bibliography

- Brodie, Janet Farrell. *Contraception and Abortion in Nineteenth-Century America*. Ithaca, NY: Cornell University Press, 1994.
- Katz, Esther, Cathy Moran Hajo, and Peter Engelman, eds. *The Margaret Sanger Papers Electronic Edition: Margaret Sanger and the Woman Rebel, 1914–1916*. Columbia, SC: Model Editions Partnership, 1999. Electronic version based on the microfilm edition of *The Papers of Margaret Sanger*, <http://adh.sc.edu>.

McLaren, Angus. *A History of Contraception: From Antiquity to the Present Day*. Cambridge: Basil Blackwell, 1990.

Urbanization in India under Colonial Rule

Indian cities underwent many substantial changes between 1750 and 1914. Many existing cities such as Allahabad grew larger, while some such as Lahore shrank. Several cities such as Bombay (present-day Mumbai), Calcutta (Kolkata), Madras (Chennai), and New Delhi, all created to serve as administrative and commercial centers, were new. The nature of cities also changed during this period. Some cities such as Bombay and Calcutta, for example, saw the emergence of an urban working class as a result of industrialization. Others took on a new European appearance as a result of British construction of military and civil districts or cantonments that were patterned after European rather than Indian cities. Generally, the number and size of towns increased, with the urban population growing from 8.7 percent in 1871 to 10.2 percent in 1921 due to periodic famine in the countryside and expanding industrialization in the cities.

At the beginning of the eighteenth century the major British colonial cities were Bombay, Calcutta, and Madras. These cities served the British East India Company as commercial, administrative, and military centers and grew rapidly as the company conquered new territories; as a result, during the nineteenth century they became the most populous cities in India. For example, the population of Calcutta grew from 120,000 in 1750 to 350,000 in 1820, while the population of Bombay went from roughly 161,000 in 1816 to 773,000 in 1881. Calcutta served as the capital of British India from 1772, when the first governor-general, Warren Hastings, transferred all important offices to the city from Murshidabad, until 1911, when the capital was moved to the newly built city of New Delhi.

Prior to British conquest, the major cities in northern India, such as Delhi, Agra, Lucknow, Benares, Ahmedabad, and Lahore, were administrative, religious, and commercial centers for the Mughal empire and its successor states. In

1700 Delhi, as the capital of the Mughal empire, had a population of roughly 500,000 and was an important religious center for Hindus, Muslims, and Jains. The city was a major commercial hub for regional and international trade in textiles and agricultural products as well as banking.

In the south, Mysore and Hyderabad were important provincial capitals, while Poona (Pune) served as the capital of the Maratha empire. Hyderabad, the capital of the princely state of Hyderabad, became allied with the British in the 1760s but remained ruled by the nizams or kings until incorporation into the republic of India in 1948. The population of Hyderabad grew from just under 200,000 in 1800 to 367,000 in 1881 and 448,000 in 1901. The city was an important Muslim cultural center with numerous mosques and schools; it also was a major commercial center throughout the eighteenth and nineteenth centuries.

With the crumbling of the Mughal empire, Delhi declined in importance as a cultural, political, and economic center especially after the sack of the city by the Persian warlord Nadir Shah in 1739. In particular, Lucknow, Hyderabad, and Bhopal replaced Delhi (and Agra) as chief Muslim cultural centers. By 1800 the population of Delhi dropped to about 100,000 from a high of about 500,000. Merchants, bankers, and artisans left Delhi for more prosperous and stable cities such as Hyderabad, Lucknow, and Calcutta.

Lucknow became the capital of the kingdom of Awadh in 1775 and grew rapidly under the patronage of the nawab or king. Growing to a population of about 200,000 by 1800, Lucknow became the fourth-largest city in India and served as the home of a distinctive culture. It was a wealthy commercial city that supported large numbers of artisans, attracted by the lavish consumption of luxury goods by the royal court. The city became famous in northern India for its literature, music, and dance and the elegant manners and overall refinement of its people. The city was well known for both its Urdu-language poets and courtesans. The British, however, considered the city to be dirty, decadent, and dangerous especially after the city served as a major center of the rebellion in 1857–1858. Lucknow was also notable for its substantial Shia Muslim population.

COLONIAL BOMBAY

By the late nineteenth century, the British had transformed Bombay into one of India's key trade ports and a major center of industrial production. This photograph, taken by Deen Dayal, highlights the dominance of British colonial architecture as well as the port activity far off in the distance.

—Eric Strahorn



(British Library)

As they conquered new territories, the British initiated numerous changes in the cities they took over. For example, they added new sections to each city for the military, known as cantonments, as well as civil lines for the civilian bureaucracy. These new areas allowed the British to avoid what they considered the dirty, unsanitary, and even dangerous old sections of cities. They also attempted to replicate British cities by building English-style houses, churches, libraries, and race courses. The cantonments also had an important economic impact. For example, the British established a military cantonment in the town of Cawnpore (Kanpur) in 1801. Cawnpore had a population of about 5,000 in 1801 but grew to 30,000 in 1830. Especially after 1860, Cawnpore became a major industrial center due to increased military spending by the British. Merchants from throughout northern India flocked to Cawnpore to set up leather goods workshops and cotton and woolen mills to provide the military with boots, uniforms, and blankets.

Following the rebellion of 1857–1858, the British sought to strengthen their control and prevent further uprisings. In many of the larger cities such as Madras and Bombay, they established new police forces patterned after the London Metropolitan Police and the Irish Constabulary. In cities that had been involved in the rebellion, such as Lucknow, the British did more than create new police forces. They sought to transform them so that they could be better controlled. In Lucknow, they demolished roughly two-fifths of the city, destroying mosques, houses, and entire neighborhoods to make room for wide streets that provided for the more efficient movement of troops. The city declined in importance after the provincial capital was transferred to the city of Allahabad, which itself grew rapidly, doubling its population from 55,000 in 1860 to 120,000 in 1890.

In the late nineteenth and early twentieth centuries the British built railroads connecting the major Indian cities. This altered trade routes throughout India so that Bombay and Calcutta replaced older cities such as Surat as the country's major ports. In turn, this fueled the industrialization of Bombay and Calcutta. By the late nineteenth century these and other capital cities became centers for the Indian nationalist movement. The Indian National Congress was founded in 1885, and its first annual meeting was in Bombay. The northern city of Allahabad was the hometown for Congress party leaders Motilal Nehru and Jawaharlal Nehru and became an important center for the Congress after 1900.

—Eric Strahorn

Bibliography

- Bandyopadhyay, Sekhar. *From Plassey to Partition: A History of Modern India*. New Delhi: Orient Longman, 2004.
- Bayly, C. A. *Rulers, Townsmen and Bazaars; North Indian Society in the Age of British Expansion, 1770–1870*. Cambridge: Cambridge University Press, 1983.
- Oldenburg, Veena. *The Making of Colonial Lucknow*. Princeton, NJ: Princeton University Press, 1984.
- Tomlinson, B. R. *The Economy of Modern India, 1860–1970*. Cambridge: Cambridge University Press, 1993.

City Growth in East Asia

In 1750, just before the outbreak of political, agricultural, and industrial revolutions of the West, five of the largest cities in the world were in East Asia. The Chinese imperial capital of Beijing was the largest city in the world with a population of more than 900,000, while Edo, capital of Tokugawa Japan, was second with at least 700,000 inhabitants. The “merchants’ capital” of Osaka, the nearby imperial capital of Kyoto in Japan, and Hangzhou of China were also among the world’s top ten cities in the mid-eighteenth century. However, by 1914 Tokyo (formerly Edo), remained the only East Asian city among the top ten of the world’s largest urban areas.

Edo (meaning “bay entrance”) grew dramatically after Ieyasu, the first Tokugawa shogun, designated the once small fishing village as the headquarters of his government in 1600. As the apparatus of bureaucracy and the number of resident samurai grew, so did Edo. Most of the country’s taxes were sent to Edo to pay for the operations and expansion of the shogun’s government. Urban growth was primarily generated, however, by the government’s “alternate attendance” requirement that most of Japan’s 250 daimyo lords spend every other year living in Edo with their immediate family members—who could never leave Edo—and their major vassals. Consequently, the number of servants, merchants, artisans, entertainers, and other townsmen to serve the needs of elite samurai and their families in Edo grew exponentially despite disasters such as the Great Fire of 1657, which burned down more than 60 percent of the city.

Osaka, Kyoto, and Nagasaki also were major cities of politics, culture, and trade in Japan during the Tokugawa era (1600–1867), but the shogun’s government in Edo was able to maintain political control over the country until Westerners seeking trade and rebellious samurai forced the shogun from power in 1868 and “restored” imperial rule. The new imperial government and the newly installed emperor, Meiji, quickly moved to Edo, renamed it Tokyo (meaning “eastern capital”), took over the reigns of political authority, and even took over the shogun’s castle. With the increase in international trade in the

late nineteenth and early twentieth centuries both in Tokyo and in nearby Yokohama, adoption of industrialization policies, and rebuilding of the city (major portions of which had not been rebuilt since the devastating Ansei earthquake of 1855), Tokyo continued to expand. By 1914 it had a population of 3.5 million, the largest city in Asia.

While the urban population and urban space of Edo/Tokyo adapted to natural disasters and a new government consciously adopted Western methods of industrialization in the late 1800s, the Chinese cities of Shanghai and Hong Kong dramatically expanded by being forcibly brought into the sphere of Western colonialism and international trade. After a series of commercial, legal, and political disputes with the imperial government in Beijing in the early nineteenth century, Britain fought and defeated China in what are known as the Opium Wars (so-called because one issue, but certainly not the only issue, was the lucrative and morally questionable trade in the illegal drug). According to the Treaty of Nanjing, which ended the First Opium War in 1842, five Chinese cities, including Shanghai, were opened to residence and unrestricted trade by British and subsequently other Western merchants. In addition, Hong Kong Island was ceded to Britain “in perpetuity.”

At the conclusion of the Second Opium War (or Arrow War) in 1860, the Chinese government ceded part of the Kowloon peninsula on the mainland facing Hong Kong Island to the British; in 1898 China agreed to lease the rest of Kowloon and the adjoining New Territories and islands to the British for 99 years. Hong Kong therefore became a single political entity composed of Hong Kong Island, the Kowloon peninsula, and the New Territories. Situated at the mouth of the Pearl River leading to Guangzhou and the heavily populated Guangdong Province, Hong Kong became an economic boomtown, an international trade and shipping port, and an intersection of British and Chinese culture. At the time Britain took control of Hong Kong Island in 1842, only 1,500 people lived on the island, nearly all of whom were fishermen. By 1860, the population of Hong Kong Island and Kowloon had grown to 100,000. After the New Territories were added at the end of the

nineteenth century, the population of Hong Kong grew to nearly 200,000 people, working as tradesmen, merchants, fisherman, farmers, and factory workers.

Meanwhile, Shanghai was the only one of the five cities opened to Westerners for unrestricted trade by the Treaty of Nanjing that witnessed substantial urban and economic growth in the following decades. Located near the mouth of the Yangtze River, leading to Nanjing, Wuhan, and into the heart of China's agricultural region, Shanghai had been an important transportation and commercial center since the Song era (960–1279 CE). Important in both coastal and river trade, Shanghai also emerged as a major center of cotton manufacture and trade. Native associations controlled most industries and legal institutions of the city and also assisted the many Chinese who fled to Shanghai due to rebellions and famine. Yet government-imposed trade restrictions and piracy historically hampered Shanghai's economic growth. In 1800 Shanghai's population was about 90,000, a substantial city to be sure but far less than the 1.1 million population of Beijing. By 1914, however, Shanghai's population increased more than ten times and was virtually the same as the population of Beijing, which remarkably had not increased during the nineteenth and early twentieth centuries. By 1925 Shanghai was China's largest city and has remained so to the present day. The reason for this dramatic growth was the incorporation of Shanghai into the international trade network as a consequence of the First Opium War. Moreover, its strategic location made Shanghai the entry port for all trade going to major cities located along the Yangtze River in central China.

Cities in East Asia brought into the international trade network, forcibly or otherwise, witnessed the most substantial urban growth from the late eighteenth to the early twentieth centuries. And in Japan's case, uniting both the political and imperial capital in Tokyo and consciously establishing "Western" industrialization policies also significantly contributed to its urban growth. Urban growth in East Asia brought many benefits but also brought problems such as increased crime, public health issues, unemployment, and the environmental pressures of growing populations living in relatively compact

areas. All of these problems would have to be addressed in the twentieth century.

—John Van Sant

Bibliography

- Chandler, Tertius. *Four Thousand Years of Urban Growth: An Historical Census*. Lewiston, NY: St. David's University Press, 1987.
- Naito, Akira. *Edo, the City That Became Tokyo: An Illustrated History*. Translated, adapted, and introduced by H. Mack Horton. Tokyo: Kodansha, 2003.
- Seidensticker, Edward. *Low City, High City: Tokyo from Edo to the Earthquake*. Cambridge: Harvard University Press, 1991.
- Tsang, Steve. *A Modern History of Hong Kong*. London: I. B. Tauris, 2004.
- Wasserstrom, Jeffrey. *Global Shanghai, 1850–2010*. London: Routledge, 2009.

Urbanization in Europe

Europe's population in 1750 was roughly 111 million; a century later it was 209 million, and by 1900 it had added another 100 million inhabitants. In 1750 an estimated 12.2 percent of Europeans lived in cities, and about 19 percent did a century later. By 1910 the portion had doubled to more than 40 percent. Britain was Europe's most urbanized society in 1750, with about 24 percent of its population living in cities, a proportion that doubled by 1850 and rose to almost 80 percent by 1911. Over the same period France went from about 15 percent to 44 percent, and the urbanized population of German states more than doubled, from 28.3 percent in 1850 to 60 percent in 1910.

Capital cities such as London, Paris, and Berlin absorbed much of this growth, but in every country provincial centers grew up and flourished as well. In 1750 London was home to 11 percent of Britain's population, and in 1800 it was still Britain's only city with more than 100,000 inhabitants. In 1800 Europe as a whole had 21 cities—only three of which were in France—with more than 100,000 residents. After a century of urbanization Europe could boast 143 such cities. In 1911 Germany contained 48 of these, while Britain had 39 and France had only 15.

Between 1750 and 1914 population growth and technological innovation accelerated trends

in urban growth and development. By 1914 Enlightenment-era cities had become the aging centers of centrifugally expanding metropolises, transformed by industrialization; readily available gas and electricity; steam, diesel, and gasoline-powered locomotion; revolutions in structural engineering; ever more densely packed populations; and effective systems of public health and administration.

Before the 1850s the Industrial Revolution, which had its origins in rural Britain, gradually gravitated toward towns and cities, creating centers of production in the English Midlands, the Parisian suburbs, and later the German Ruhr Valley. Existing road and river transportation routes delivered coal and raw materials to urban factories and allowed the efficient transport of finished products. Relatively dense populations provided local labor, while ancillary support firms found it convenient to serve multiple industries in close proximity. Navigation canals and then steam-powered railroads drew industrial centers and their suppliers and markets more tightly together, while steam shipping made even transoceanic shipping cheaper and faster. Older port cities thrived and grew in regional importance. Natural population growth in Europe fed cities' increasing appetite for labor, including women and children.

Events such as the Irish Potato Famine of the late 1840s encouraged the movement of poor and unskilled individuals and families to industrial centers such as Liverpool and Manchester and resulted in ever more densely packed slums among whose residents substance abuse and crime became commonplace. Industrial Manchester grew from 41,032 in 1774 to 270,901 in 1830 and more than doubled again by 1900. Skies darkened as soft coal smoke settled above industrial centers and capitals such as Paris and London. Indeed, capitals such as Paris, St. Petersburg, Vienna, and Berlin also served as the industrial centers of their respective countries.

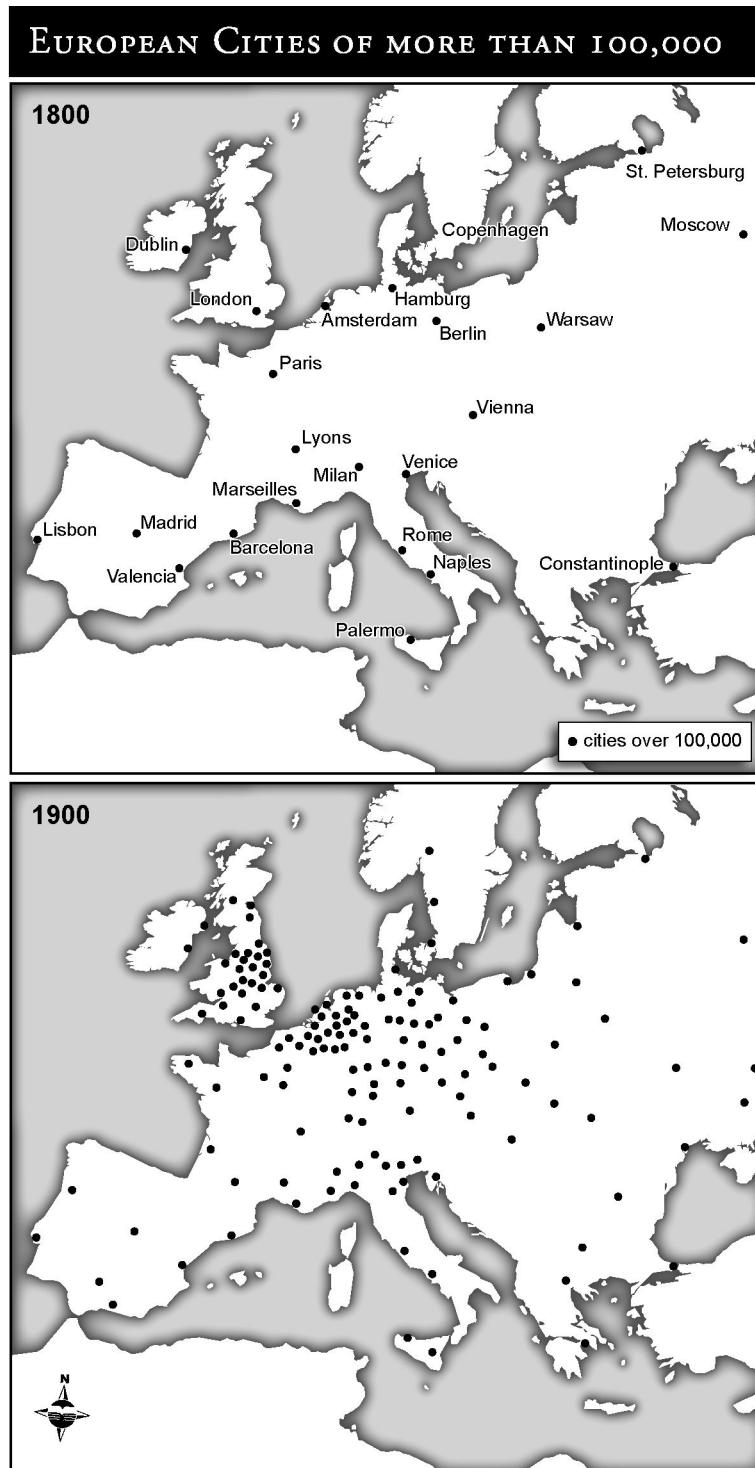
Although plague had disappeared from Europe, new scourges of tuberculosis and especially cholera, which swept from seaport to seaport and inland in a series of pandemics from the late 1820s, killed thousands. Disease prompted major changes in the supply of drinking water and the removal of waste products



Manchester, England was the first and most famous of Europe's new industrial cities. It grew from 25,000 in 1772 to 455,000 in 1851. (North Wind Picture Archives)

to and from cities. Supplying drinking water to burgeoning cities such as Paris (with a population of 550,000 in 1800) and London (with a population of 1 million in 1800) often entailed drawing upon polluted sources. Once cholera was convincingly associated with tainted water (in London), municipal authorities either regulated or took control of this supply. Sewerage and other forms of public sanitation had long been recognized by Europeans as a function of the city government, and urban growth and concurrent patterns of disease attributed to filth prompted concerted civic action in many cities. This is often referred to as the Sanitation Movement, which intensified in the second half of the nineteenth century.

Upgrading infrastructure, especially in capital cities, also often meant clearing away older structures and replacing them with open spaces such as parks and wide streets for carts and carriages. Medieval town walls disappeared from Paris, Vienna, and Florence, their courses becoming broad boulevards that physically and symbolically both joined and divided the old from the new. Neoclassical town planners and military defense officials respectively stressed the beauty and utility of long, straight corridors down which a royal procession or a royal cannonball aimed at rioters might travel at will. Paris's Champs Elysees as well as London's Regent Street and Trafalgar Square represent this public formalism. Planners affected by



the Romantic Movement, who believed in the aesthetic and healthful properties of natural open space, saw to it that even expensive and greatly sought-after urban green spaces needed to be preserved and made available to public use as parks in Paris (Palais Jardin Royal, 1746),

Berlin (Tiergarten, 1772), and Vienna (Augarten, 1775). Budapest built new buildings for its Hungarian parliament during the 1880s, and in the 1830s London replaced its Parliament buildings in grand neomedieval style after fire gutted the old complex.

➤ ALEXIS DE TOCQUEVILLE ON MANCHESTER, ENGLAND

Though perhaps best known for *Democracy in America*, Alexis de Tocqueville traveled extensively throughout England and Ireland in the 1830s and 1840s with the mission of comparing the social and political order of these regions with his native France. The following is an excerpt from his travel notes, which were edited and translated more than a century later in *Journeys to England and Ireland*.

“Thirty or forty factories rise on the tops of the hills I have just described. . . . The wretched dwellings of the poor are scattered haphazard around them. Round them stretches land uncultivated but without the charm of rustic nature, and still without the amenities of a town. . . . Some of these roads are paved, but most of them are full of ruts and puddles into which foot or carriage wheel sinks

deep. Heaps of dung, rubble from buildings, putrid, stagnant pools are found here and there among the houses and over the bumpy, pitted surfaces of the public places. . . . Below some of the miserable dwellings is a row of cellars to which a sunken corridor leads. Twelve to fifteen human beings are crowded pell-mell into each of these damp, repulsive holes. . . . Look up and all around this place you will see the huge palaces of industry [factories]. . . . These vast structures keep air and light out of the human habitations they dominate.”

—Joseph Byrne

Source

Alexis de Tocqueville, *Journeys to England and Ireland*, translated and edited by J. P. Mayer (New York: Doubleday, 1968).

As cities became more crowded, the effective movement of people became ever more important. Horse-powered omnibuses and tracked trolleys moved crowds on already congested streets, and in the 1830s discussions began about the possibility of building an underground railway system for London, with actual construction beginning in 1860. The subway opened in 1863 and was designed to link the inner city with the main railroad terminals that brought workers into the city from the rapidly expanding northern suburbs. Railway stations were in the avant-garde of nineteenth-century cast-iron building construction. Often fusing the new technology of metal framing and extensive use of glass with the Romantic era's Gothic Revival style, rail stations embodied the Victorian desire for efficiency and good taste. Retail trade also took advantage of the new technology at Paris's Bazar de l'Industrie, Milan's Galleria, and Moscow's GUM department store. While Americans used iron to build skyward (the term “skyscraper” was coined in Chicago in 1891), European cities retained skylines dominated by their palaces and cathedrals.

Eighteenth-century cities provided a comfortable level of social life and entertainment for those with the leisure and resources to tap

into them. Coffee houses (Paris had 1,800 cafés in 1788) and chocolate shops, opera houses and theaters, a horse race track or two, and some more or less seedy gambling establishments catered to upper-class tastes. Gin mills, bordellos, and truly seedy gambling houses took the money of beggars and the working poor. Classes mingled in Iberian bullrings and in public parks and gardens, and eighteenth-century London entrepreneurs introduced pleasure gardens with their heady combination of cards, food, music, dancing, and surreptitious sex at Ranelagh and Vauxhall. Smaller cities with hot springs, such as Belgium's Spa and England's Bath, developed to serve the wealthy as they pursued good health and good conversation among their own kind during the social seasons.

Such pleasures and a kind of liberal utopianism fueled later-nineteenth-century urban reform movements, often called Garden City or City Beautiful. Urban planning as a profession had its roots in these attempts to remedy the pathological social and economic conditions among the lower classes by creating urban physical environments with clean air, water, streets, and buildings that were both aesthetically pleasing and fully functional.

—Joseph Byrne

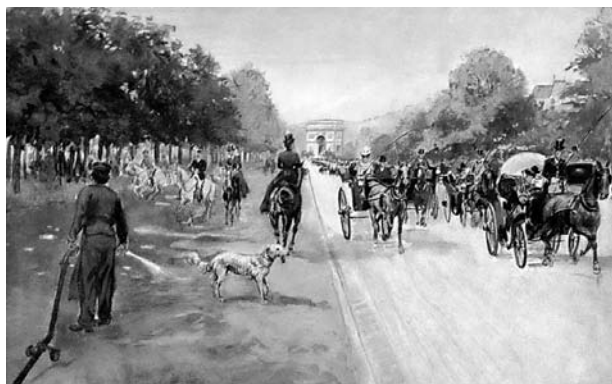
Bibliography

- Briggs, Asa. *Victorian Cities*. Berkeley: University of California Press, 1993.
- Hall, Peter. *Cities in History*. New York: Pantheon, 1998.
- Lees, Andrew, and Lynn Hollen Lees. *Cities and the Making of Modern Europe, 1750–1914*. New York: Cambridge University Press, 2008.

City Planning—Haussmann's Paris

City planner Baron Georges-Eugène Haussmann (1809–1891) as prefect of the Seine oversaw a sweeping transformation of Paris aimed at enlarging the city's streets, building architectural landmarks, creating parks, and improving hygiene. Contemporary Paris still bears his imprint, as do cities from Buenos Aires to Lyon that were modeled after the Parisian style.

Louis-Napoléon Bonaparte, who served as president of France from 1848 to 1852 and then as Emperor Napoléon III until 1870, initiated the plans for refashioning Paris for several reasons. The city had only 82 miles (132 kilometers) of sewers and few wells in 1848, so the Seine River doubled as a sewer and a source of fresh water. Hygiene was consequently deficient, with cholera epidemics in 1831 and 1848 killing 18,000 and 19,000 people, respectively. Public parks were rare. Narrow twisting streets and 16 bridges (10 of them privately owned) were insufficient for a city that grew from 1 million in 1848 to 2 million in 1870. Small streets also made it easy to erect barricades during the many political upheavals that followed the French Revolution.



Riders and carriages along the Avenue du Bois in Paris, by Georges Stein, about 1900. (Mary Evans Picture Library/The Image Works)

New construction projects would improve sanitation, employ the restless working class, and make barricades less effective. Napoléon III dreamed of matching the achievements of his uncle Napoléon I, who had built the Ourcq Canal and several bridges in Paris, and even of Roman Emperor Augustus, who had beautified ancient Rome. In addition, the project would put into practice Comte de Saint-Simon's semimystical Christian-Scientific socialism, a philosophy that appealed to the emperor. It would also satiate Napoléon III's personal passion for architecture and create gardens similar to those he had enjoyed while in exile in London.

A few projects, including the lengthening of Rivoli Street, began as early as 1848, but the opposition of Jean-Jacques Berger, prefect of the Seine, to deficit spending convinced Napoléon III to replace him in 1853 with the more proactive Haussmann. Haussmann, a lifelong civil servant with an authoritarian personality, had a virtual blank check since Paris had no elected city council and he enjoyed direct access to the emperor.

Following a survey to draw an accurate map of Paris, Haussmann added 90 miles (145 kilometers) of streets and improved many existing ones. Such streets were large (the Avenue de l'Impératrice reached a record width of 460 feet or 140 meters), paved with asphalt rather than cobblestones, lit with gas, and lined with stone buildings of standardized design. Avenues frequently ended on large new edifices to provide monumental vistas. Among them were new wings linking the Louvre to the Tuileries Palace; a prefecture of police, a court of justice, and a hospital (Hôtel Dieu) on the Ile de la Cité; an opera house; and central markets in the Halles neighborhood.

Haussmann's collaborator Adolphe Alphand (1817–1891) was charged with creating large parks in the English style. The Bois de Boulogne on the city's west side was considered such a success with its winding alleys, race track, waterfall, and internal lake that Alphand built four similar parks in Vincennes, Buttes Chaumont, Parc Monceau, and Montsouris. A network of smaller neighborhood parks throughout the city pushed the total area of public parks from 47 to 4,500 acres (19 to 1,821 hectares).

Less glamorous yet essential to improved hygiene were waterworks designed by engineer

Eugène Belgrand (1810–1878). An ambitious plan to draw water from the Soude-Somme spring 114 miles (183 kilometers) away was abandoned, but several smaller aqueducts improved the city's water supply. A network of modern sewers, linked by a siphon built under the Seine River, collected all waste and directed it to a large collector at Asnières, where it was recycled or released downriver from the capital.

The cost of these ambitious projects totaled 2.5 billion francs from 1850 to 1869, or 44 times the annual budget of the entire city. Haussmann financed most projects by borrowing, hoping that growing revenue would offset the initial investment. Facing opposition in the National Assembly, however, he failed to request proper approval before contracting many such bonds. The ensuing political scandal forced Haussmann's resignation in 1870. The Franco-Prussian War (1870–1871) and the advent of the Third Republic (1871–1940) brought an end to most ongoing projects. Haussmann's influence was lasting despite his undignified departure.

—Philippe R. Girard

Bibliography

- Carmona, Michel. *Haussmann: His Life and Times, and the Making of Modern Paris*. Chicago: Ivan R. Dee, 2002.
- Harvey, David. *Paris, Capital of Modernity*. New York: Routledge, 2003.
- Jordan, David P. *Transforming Paris: The Life and Labors of Baron Haussmann*. 1995. Reprint, Chicago: University of Chicago Press, 1996.
- Pinkney, David H. *Napoleon III and the Rebuilding of Paris*. 1958. Reprint: Princeton, NJ: Princeton University Press, 1972.

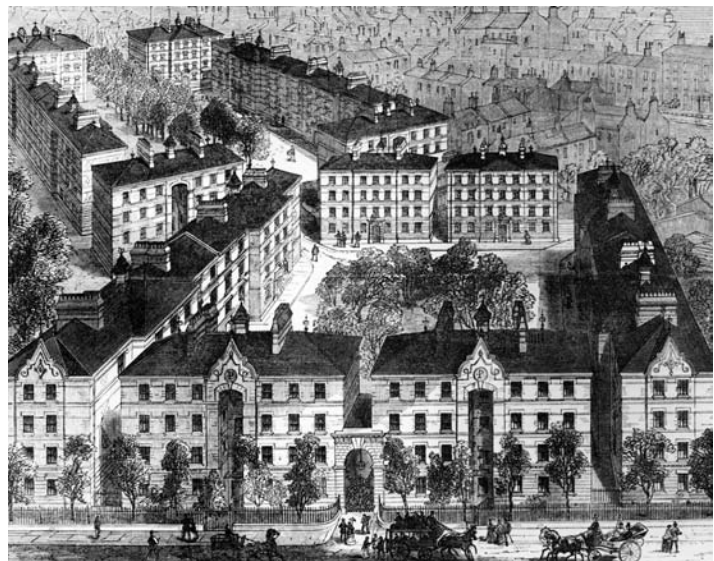
Housing Reform

With the onset of industrialization and urbanization, social reformers such as Robert Owen (1771–1858), Friedrich Engels (1820–1895), and Octavia Hill (1838–1912) voiced criticism and dissatisfaction with the living conditions of working-class families. The existence of poor housing conditions for lower-class families concerned these thinkers and activists, as these conditions appeared to endanger the very existence of civilized life. However, social reformers differed greatly over the reasons and character of as well

as the solution for the perceived Social Question. While many social reformers saw the Social Question as a direct consequence of economic inequality and therefore as a side effect of unrestricted capitalism, others, such as Octavia Hill, took into consideration the cultural dimensions of the substandard living conditions of the lower classes.

Since England had a head start in industrialization, it faced its social repercussions much earlier than all other countries. In response to the emerging housing problem for the lower classes, London took a lead in developing various concepts for the provision of working-class housing within modern cities. Housing trusts (Pure Philanthropy), limited dividend housing companies (Philanthropy and Five Percent), and the concept of friendly rent collecting proved to be the most successful strategies that attracted social reformers from various cities in continental Europe and North America. Three individuals (George Peabody, Sydney Waterlow, and Octavia Hill) dominated the landscape of housing reform for much of the nineteenth century.

In 1862 George Peabody, a successful Massachusetts merchant, decided to donate £500,000 to benefit the London poor. This gift was used to create a housing trust, which was to provide healthy and affordable housing for working-class



The model buildings in Peabody Square, Blackfriars Road, London. Built by the American philanthropist, George Peabody as “working men’s tenements” for the poor. (Hulton Archive/Getty Images)

➤ HERRMANN JULIUS MEYER

After much success as the owner of the German publishing house Bibliographisches Institut, Hermann Julius Meyer (1826–1909) retired in the 1880s and dedicated his life to social reform. Inspired by George Peabody's housing trust in London, Meyer provided nearly 19 million marks for the construction of four large settlement projects for working-class families in Leipzig. This housing trust became the largest such institution in Germany. Meyer insisted on providing housing only for those who were in real need and who fit his image of the ideal family. Renters had to comply with a variety of requirements. Only workers with a steady income between 800 and 1,800 marks per year were admitted. Earning more than 1,800 marks might result in the renter being expelled from his apartment.

Meyer also insisted that only families with three to five members should be admitted as renters in his apartments. Therefore, he instructed his architect to build buildings four stories high with apartments that provided sufficient space for such a small number of people. Subletting was prohibited and would lead to immediate cancellation of the rental contract. Meyer's first settlement project in the Leipzig suburb of Lindenau consisted of several apartment buildings that were subdivided into smaller houses with multiple entrances and staircases so that long hallways and thus contact between renters were avoided. The buildings surrounded a large inner place with small plots of gardens that were leased to the tenants.

—Thomas Adam

families in and around the British capital. This philanthropic enterprise soon received competition from Sydney Waterlow's Improved Industrial Dwellings Company, founded in 1863, that was based on the idea that affordable housing could be produced while guaranteeing a limited profit of 5 percent. Both concepts found admirers and imitators all over Europe and North America. Over the next three decades, housing trusts and limited dividend companies appeared in many European and North American cities. Within Germany, Herrmann Julius Meyer, the owner of the world famous publishing house *Bibliographisches Institut*, followed in Peabody's footsteps. Starting in 1887, Meyer created the largest German housing trust in the city of Leipzig. Henry I. Bowditch, a wealthy Boston physician, introduced Waterlow's model to the United States. In 1871 Bowditch convinced 163 wealthy Bostonians to join him in the creation of the Boston Cooperative Building Company, which was one of the first American limited dividend housing companies.

Bowditch was also the first to introduce to an American audience Octavia Hill's ideas about house management and the improvement of the conditions of the poor. Since 1864 Hill had taken over the management of several thousand apartments for lower-class tenants

in London. In contrast to Peabody and Waterlow, Hill was convinced that the housing crisis could not be solved solely by economic reform (namely, higher incomes for workers); any solution must include cultural and moral education. Hill championed the principle that the poor need as much instruction and guidance as they need economic improvement. According to her concept of friendly rent collecting, renters had to pay the rent weekly in advance, and the rent was collected by upper-class women (the nineteenth-century version of social workers). These women were expected to establish friendly relations with the tenants and were in charge of teaching the tenants standards of cleanliness and orderly behavior.

Based on this assumption, Hill created during the 1860s a model for social housing that attracted the attention of housing reformers from Russia, Germany, the United States, and South Africa. In the ensuing decades, Hill Associations were founded in Amsterdam, Berlin, St. Petersburg, Philadelphia, and New York, to name just a few prominent cities; her writings were translated into German, Russian, and many other languages. Hill's ideas even influenced modern city planning in Japan. Seki Hajime publicly professed his intellectual debt to Hill when he developed his solution to the housing crisis

of Osaka during the 1920s. In South Africa the government adopted Hill's ideas for developing a state-sponsored training program for women housing managers, who were employed to administer the colored and European townships in the country's largest municipalities of Port Elizabeth, East London, and Johannesburg from the 1930s onward.

—Thomas Adam

Bibliography

- Adam, Thomas. *Buying Respectability: Transnational Perspectives on Elite-Philanthropy in American, Canadian, and German Cities from the 1840s to the 1930s*. Bloomington: Indiana University Press, 2009.
- Robinson, Jennifer. "Octavia Hill Women Housing Managers in South Africa: Femininity and Urban Government." *Journal of Historical Geography* 24 (1998): 459–481.
- Spain, Daphne. "Octavia Hill's Philosophy of Housing Reform: From British Roots to American Soil." *Journal of Planning History* 5 (2006): 106–125.

The Growth of Cities in the United States, 1820–1914

The process of urbanization—the shift from rural, agrarian communities to an urban industrial society—occurred steadily after 1820 in the United States. In that year there existed only 56 towns with 2,500 to 25,000 residents, and 5 large cities. By 1870, these numbers exploded to 612 towns, 45 cities, and 6 metropolises with over 250,000 inhabitants. In this period, immigrants were arriving en masse from Europe, many having been actively recruited by railroad companies and midwestern states that desired to populate their fertile farm land. Those not settling as yeoman farmers settled mostly in crowded cities, contributing to congestion and urban growth, as well as to industrial production.

During the 1860s and 1870s, the bulk of European newcomers arrived from northwestern Europe, primarily from the British Isles, the German states, Scandinavia, and Switzerland. These European source areas expanded after 1880 to include immigrants from southern and eastern Europe. The vast majority of all immigrants avoided the American South, given the

dominant plantation agricultural system that provided little industrial incentive for newcomers. The Civil War did little to alter this migration pattern. With increased industrialization came a more rapid shift to urban areas, so that by 1880, the urban population had become 28 percent of the total population, compared with 11 percent in 1840.

As linear business blocks appeared along small town main streets, larger urban downtowns were undergoing immense changes of their own. *Downtown* refers to the center city in general, including the mixed land uses of industry, retail, hotels, warehouses, office space, theaters, and tenements. The term downtown originated in New York, due to the location of the financial district at the southern tip of Manhattan. As the American frontier moved west, newer cities were laid out with specialized business districts in mind. The modern central business district, or CBD, appeared in larger cities during these postwar decades and encouraged specialized land-use zones. The CBD became the office core of downtown, often including high-end retail options and entertainment venues.

The bidding process for valuable urban space encouraged industrial activities to separate from the office core of the city, accompanied by a similar "filtering out" of social and ethnic populations and classes. During these decades, residential districts became more socially, ethnically, and occupationally similar and less diverse. Prior to the 1860s, most large cities had contained a great mixture of wholesale and retail traders, financiers, professionals, craftsmen, government workers, and a wide variety of residences and social classes all mixed together. By the 1880s, larger cities witnessed a new pattern of concentric land-use rings. Progressing outward from the CBD was the industrial zone, working-class neighborhoods, wealthier suburbs, and finally the agricultural hinterland. This urban pattern still generally characterizes today's larger American metropolises.

New industrial wealth enabled the upper and middle classes to escape the congested city of "teeming masses," leading to a growing demand for suburban housing. The poorer classes, full of immigrants, remained in the central city to rent in slum or near-slum conditions. When

substantial numbers of African Americans migrated to northern industrial cities, they competed with immigrants at the bottom of the social hierarchy.

Tenement apartments often lacked heating, windows, running water, indoor plumbing, and proper sewers. Approximately one in five urban families took in boarders during the nineteenth century, despite crowding. Even worse, the homeless were left to find sleep in doorways or alleys. There were no public housing developments or medical services during this time—only a few charitable associations to cope with the needs of millions.

Philanthropists attempted numerous experiments with subsidized housing for the poor, though such efforts were generally short-lived due in part to mismanagement. Overcrowding and poor sanitation led to epidemic outbreaks of disease: tuberculosis, cholera, diphtheria, and influenza claimed as many lives as did industrial hazards. As commentators fretted on the revolutionary potential of downtrodden urban masses, the efforts of private charities eventually gave way to Progressive era legislative reforms. These collective efforts led to some much needed improvements by 1900, such as reducing infant mortality, vocational training for ghetto youths, the advent of kindergartens to ease working mothers' daily problems, the creation of parks and playgrounds, housing codes, and increased attention to slum conditions. The failure of these measures to eradicate urban poverty in a time of unprecedented wealth, however, led to the conclusion that the root causes of poverty were not to be found in the quality of the physical environment alone.

At the same time as Progressives sought urban reform, newer suburban communities drew away middle- and upper-class populations. Between 1815 and 1860, the cities of New York, Philadelphia, Boston, and Chicago exhibited the most extensive suburban growth yet witnessed in the world. The urban poor and African Americans led the way to the periphery during the early nineteenth century. By the 1850s, however, the country borderlands beyond the city were increasingly discovered by middle- and upper-class families.

The American suburban ideal was entrenched prior to the Civil War. Around Chicago,

for instance, a variety of country homes and “villa-residences” had already materialized. Only after 1865 did the horse railways of Chicago—combined with existing steam railroads—fuel an even more rapid transition of families to that city's periphery.

A series of innovative transportation improvements allowed ever more American families to realize the new suburban dream. Two inventions had already provided access to the borderlands by the 1840s. Steamboat service, particularly in New York, up the Hudson River, and around Long Island, enabled many families to live in outlying small towns. Brooklyn began to prosper with middle-class commuter families. It was railroad travel that precipitated a revolution in suburban living, however. It made possible the success of places like Llewellyn Park and additional square miles of borderland country cut into 1- to 3-acre (0.4 to 1.2 hectare) lots.

By the 1870s, political alliances—known today as urban “growth machines”—had organized for mutual self-interest. These were coalitions of growth proponents that viewed suburban development on massive scales as economically beneficial. Real estate developers, land owners, and city boosters learned to promote urban peripheries systematically, often in partnership with transit owners, utilities, and local governments. Following the Civil War, America's largest cities underwent dramatic spatial change. A combination of steam ferry, omnibus, commuter railroad, horse car, elevated railroad, and cable car enabled cities to virtually turn themselves “inside out.” This new distribution of population was governed primarily by growth coalitions enhancing their investments by attracting the wealthy and excluding the poor. The number of commuters between suburb and city center increased as businessmen opted for the benefits of country living, within an easy and cheap commute of downtown.

Of course, millions of workers and their families, concentrated in vast urban slums, could only dream about suburban life. By the end of the nineteenth century, an estimated two of every three American urban residents were still tenants, most of them living in crowded tenement buildings.

—Thomas W. Paradis

Bibliography

- Conzen, Michael. "The Progress of American Urbanism, 1860–1930." In *North America: The Historical Geography of a Changing Continent*, edited by Robert Mitchell and Paul Groves. Savage, MD: Rowman and Littlefield Publishers, 1990.
- Hayden, Dolores. *Building Suburbia: Green Fields and Urban Growth, 1820–2000*. New York: Vintage Books, 2003.
- Jackson, Kenneth. *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press, 1988.
- Kasson, John. *Rudeness and Civility: Manners in Nineteenth-Century Urban America*. New York: Hill and Wang, 1990.
- Paradis, Thomas W., ed. *The Greenwood Encyclopedia of Homes through American History*. 4 vols. Westport, CT: Greenwood Press, 2008.
- Stilgoe, John. *Borderland: Origins of the American Suburb, 1820–1939*. New Haven, CT: Yale University Press, 1988.
- Ward, David. "Population Growth, Migration, and Urbanization, 1860–1920." In *North America: The Historical Geography of a Changing Continent*, edited by Robert Mitchell and Paul Groves. Savage, MD: Rowman and Littlefield Publishers, 1990.

American Urban Landscape Architecture—Frederick Law Olmsted

Frederick Law Olmsted (1822–1903) is one of the pioneers of landscape architecture in the United States and the designer of the first generation of great urban parks in the country. In addition to his work as a landscape architect, Olmsted had worked as a journalist and as the secretary of the U.S. Sanitary Commission during the American Civil War. His work as a landscape architect and his pioneering ideas about the ideal city form were continued by his son Frederick Law Olmsted Jr. and by other colleagues in his landscape architecture firm.

The list of Olmsted's projects for green areas, urban parks, parkways, and other landscape projects in New York state is long and includes Central Park and Prospect Park in New York City, Buffalo Park and Parkway System in Buffalo, and the Niagara Falls State Reserve. He also was key to the planning of the Emerald Necklace in Boston; several sections of the 1893

➤ CITY BEAUTIFUL MOVEMENT

The City Beautiful Movement developed in the transition from the nineteenth century to the twentieth century (1897–1902) as a response to the challenges created by the industrialization and the urbanization of the United States as well as an attempt to upgrade the appearance of cities. It was part of a wider process of social and urban reform developed in the context of the Progressive Era ideals and was influenced by what had been done in Europe under the classicist principles of the Beaux Arts School of Paris (e.g., in the boulevards of Paris, under the guidance of Haussmann, and in the construction of the Ringstrasse in Vienna) and by an eclectic combination of aesthetic ideals previously applied in cities all over the country. Daniel Burnham, a Chicago-based architect responsible for several classic buildings in that city and the leader of the team responsible for the construction of the World's Columbian Exposition in 1893, was the leading figure of the City Beautiful Movement. He was also the head of the team responsible for the design of the 1901 McMillan Plan for Washington, a team that also included Frederick Law Olmsted Jr. The priority given to beauty by the City Beautiful Movement was replaced in the 1910s by a focus on the functionality of the city and by the idea of planning as a comprehensive activity. This marked the birth of American city planning, a process in which Frederick Law Olmsted Jr. played a key role.

—Carlos Nunes Silva

Chicago World's Columbia Exposition, whose general plan was designed by Daniel Burnham; Belle-Isle Park in Detroit; Piedmont Park in Atlanta; the area around the United States Capitol in Washington, D.C.; the landscape design for dozens of college and university campuses; Cherokee Park in Louisville; Golden Gate Park in San Francisco; Mount Royal Park in Montreal, Canada; and the design and planning of several major suburbs (e.g., Riverside, Illinois; Moraine Farm, Beverly, Massachusetts; and Biltmore Estate, North Carolina).

The project for Central Park in Manhattan, New York, is perhaps his best-known work. The creation of this park was first proposed in the 1840s by, among others, Andrew Jackson

Downing (1815–1852), the first notable American landscape architect. Downing was inspired by Hyde Park in London and by the Bois de Boulogne in Paris. In 1853 city authorities decided to create such a park in the middle of the island of Manhattan, and a design contest was launched in 1857. Olmsted and his partner, the English-born architect Calvert Vaux (1824–1895), submitted the winning proposal. The construction lasted from 1858 to 1876 on land that included swamps and shanties. Calvert Vaux had been the lead designer and had begun planning with Downing, who died soon after the partnership started. Following the death of Downing, Vaux invited Olmsted to join the project, which was the start of a long and fruitful collaboration in the planning of urban parks.

Central Park was designed in terms of the republican ideal common to early-nineteenth-century discourse, that is, that all the citizens of a democracy ideally should be inculcated with virtue in order to better contribute to the society. Along with other proponents of the city parks movement, Olmsted hoped to create an urban retreat where people from different social classes could safely mingle and be ennobled by natural vistas, thereby lessening social tensions in the city between wealthy and poor.

Among other influences, Olmsted's landscape architecture reflected the European urban parks he visited years before as well as the fruitful collaboration he developed with Calvert Vaux. Olmsted traveled in Europe on several occasions in the 1850s and visited several cities and urban parks in Europe. Birkenhead Park, opened in 1847 near Liverpool, England, made a particularly strong impression on him.

Olmsted's vision in part was a forerunner of the later City Beautiful Movement, which was based on Progressive Era ideals about urban reform. According to this perspective, civic virtue would result from city beautification and from Beaux-Arts classicism, which had in Daniel Burnham and Charles Mulford Robinson two of its most active practitioners.

Olmsted's legacy was continued by his son Frederick Law Olmsted Jr., one of the two most important landscape architects to practice City Beautiful planning, the other being John Nolen. Frederick Law Olmsted Jr. worked within

the boundaries of the City Beautiful movement but also in the formation of city planning. By becoming involved in city planning, which was understood as a continuous and comprehensive planning process, the younger Olmsted distanced himself gradually from the progressivist ideal behind city beautification and embellishment.

—Carlos Nunes Silva

Bibliography

- Callow, Alexander B., ed. *American Urban History: An Interpretive Reader with Commentaries*. New York: Oxford University Press, 1969.
- Hall, Peter. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, UK: Blackwell, 1990.
- Hayden, Dolores. *Building Suburbia: Green Fields and Urban Growth, 1820–2000*. New York: Vintage Books, 2003.
- Mumford, Lewis. *The City in History: Its Origins, Its Transformations and Its Prospects*. London: Secker and Warburg, 1961.
- Peterson, Jon A. *The Birth of City Planning in the United States, 1840–1917*. Baltimore: John Hopkins University Press, 2003.

Mass Transportation

Preindustrial communities were typically small in both population and land area. Work and home were close together, so the question of the journey to work was not significant. People walked when they needed to get somewhere, but with the possible exception of taking goods to market, distances were short for the majority of the population.

All this changed with industrialization. As cities grew larger and population densities increased, the need grew for efficient mass transport in cities. To accomplish this required the creation of a system in which regularly scheduled passenger services operated on a predetermined route, using shared vehicles. The first such systems were privately owned and operated but, increasingly, came into public ownership because of their importance to the urban infrastructure.

The largest cities experienced the problem of how to move large numbers of people around the city first. The solution generally was

in the form of short-stage horse-drawn coaches operated by private entrepreneurs or for-hire horse-drawn taxicabs. London's experience was typical. By the beginning of the nineteenth century London had become an international financial center, the country's largest port, an industrial center, and the center of government. Its population was about 1 million by 1800, increasing to 1.75 million by 1831. As businesses expanded, they frequently took over the most central sites; those residents who could afford to move did so, but the poorer sections of the city became increasingly overcrowded and congested.

Privately operated horse-drawn coaches had been operating since the 1760s to and from the villages just outside central London. By the 1820s, about a fifth of all stage coaches licensed in the country, about 600, operated in the London area. Their design made them unsuitable for extended travel on city streets, however, and they were expensive (horses were expensive to look after, and license fees and mileage duties increased their operating costs), thus putting them out of reach of most working people.

A better design—simply a box on wheels that was easy to get into and out of—had been pioneered in Paris, where in 1828 100 of these so-called city coaches were in operation. This design was adapted by a London coach builder, George Shillibeer, to carry 20 passengers pulled by three horses. The first, known as Shillibeer's omnibus, started operations in July 1829. Shillibeer added more, and competitors started operating smaller omnibuses holding 12 passengers.

The costs of operating omnibuses in London fell as the mileage duty was reduced. The number of passengers who could be carried increased with the addition of lengthwise seats on the top, the first double-decker buses. Similar horse-drawn buses operated in all major cities. In the United States, the first ones were used in New York City in 1829 and in Philadelphia in 1831. Some cities, including London and New York, improved the smoothness of the ride by laying iron rails in the streets, flush with the surface to avoid disrupting other traffic.

Steam engines had been adapted for use by riverboats early in the nineteenth century, and most major cities saw them in use. The problem

with adapting the steam engine to land transport was the size: early steam engines were too heavy for ordinary roads and required specially built tracks for street railway use. London's first such steam-powered street railway opened in 1836.

A later alternative to street-level steam railways were cable-hauled systems. With these, a continuous-loop cable was laid just under the road surface, turned by a large steam engine located in a central powerhouse. Each carriage attached itself to the cable and was hauled along its route as the cable moved. London's first such cable rail line opened in 1841. In the United States, 23 cities operated cable systems in 1890. Soon after, they were replaced by electric traction systems except in San Francisco, where cable cars proved more suitable than electric traction for the hilly terrain.

Mass-transportation systems still created enormous road congestion, especially as cities grew larger. In the second half of the nineteenth century, attention began to turn to solving this problem. New York City adapted the steam railway to the city by putting it above street level on an elevated track (the el), opening its first elevated line in 1876. An alternative was to go underground. The first underground passenger railway, 3.5 miles (5.6 kilometers) in length, opened in London in 1863. Initially it was not a completely closed underground system, as the steam locomotives had to periodically vent built-up steam in one of the cuttings that existed along the tracks. As the system expanded, ventilation remained a problem, partly solved by the changeover to electric traction at the end of the century. Once deep-level lines were built, ventilation fans were a necessity.

The first application of electricity to urban mass transit was in Richmond, Virginia, in 1888, using power from overhead lines. In London, the electrification of tramways developed slowly, with the first being opened in 1901, but speeded up with the decision to electrify the former horse tramways in the center of the city in 1903. The first application of electricity underground in 1890 was not successful, as the line was too small and underpowered, but ones built by private entrepreneurs after 1900 were more successful once technology had developed sufficiently to enable larger trains to be powered by electricity.

The impact of electrification, both underground and on the surface, was great. It was much cleaner than horses and quieter than steam, although the generation of electricity contributed to a different type of pollution, as did the later changeover to liquid fuels. Fast, improved access to the center of the city permitted residential growth outside, following the new lines. Aboveground, the shift to gasoline- or diesel-powered buses, replacing earlier electric battery or steam buses, began in earnest after 1890. These buses were cheaper to operate than horse-drawn ones and could carry more passengers. In London in 1911, only 13 percent of all passenger vehicles were still horse-drawn, a share falling to 6 percent by 1913.

In continental Europe, the Paris Metro opened its first line in 1900, although plans to build an underground rail system there dated back to 1845. Its carriages were made of wood and offered both first- and second-class carriages, a two-class system that remained in place until 1991. The Berlin U-Bahn opened its first line in 1902.

The building of underground systems was slower in the United States. The first was a short line in Boston, opened in 1897, and the first in New York City was opened in 1904. Both of these systems were initially built by private interests. In the United States, public transit systems reached a peak passenger load of 17.2 million in 1926 but then began losing riders due to competition from private automobiles.

—Christine Rider

Bibliography

- Barker, Theo. *Moving Millions: A Pictorial History of London Transport*. London: London Transport Museum, 1990.
- Post, Robert C. *Urban Mass Transit*. Westport, CT: Greenwood, 2006.
- Rider, Christine. "Urban Transportation." In *Encyclopedia of the Age of the Industrial Revolution, 1700–1920*, edited by Christine Rider. 2 vols. Westport, CT: Greenwood, 2007.
- Trench, Richard, and Ellis Hillman. *London under London: A Subterranean Guide*. London: John Murray, 1993.

■ Introduction: Thinking about Nature

Throughout the ages, human beings have speculated about the meaning and significance of the natural world. In eastern Asian thought, nature was a source of beauty and a guidepost to discovering the "Way." To many religions, it was revered as the dwelling place of the gods and spirits who had the power to confer or deny sustenance. Hindus, Buddhists, and Jains taught that nature was sacred, leading some to adhere to *ahimsa*, the doctrine of non-violence toward all living things. Europeans tended to view nature as an adversary that could benefit humankind if dominated and controlled. Only with the rise of environmentalism in the past two centuries has nature come to be viewed as something needing to be conserved, preserved, and protected from human damage.

Although environmentalism as a broadly supported activist social program is conventionally dated from the 1960s, concern over protecting

nature goes back to the late eighteenth century. Not surprisingly, such a concern originated at a time when nascent industrialization, growing population, and Europe's worldwide commercial expansion all contributed to increasing the scale and intensity at which humans were using and abusing the natural world. By 1800, commercial hunting had seriously depleted the populations of beaver, sable, ermine, and other fur-bearing animals in North America and Siberia. Demands for fuel, farmland, building materials, and ship construction had increased wood consumption to the point at which deforestation and soil erosion became matters of concern for European governments and European colonial administrators in India, the Caribbean islands, and the Indian Ocean island of Mauritius. As industrialization took root in Europe and spread to the United States and Japan in the nineteenth century, urban crowding, inadequate systems

for waste and sewage disposal, polluted water supplies, and smoke pollution all came to be understood as pressing environmental issues.

As a result, during the eighteenth and nineteenth centuries organizations dedicated to environmental causes proliferated, and governments in many parts of the world adopted policies to limit pollution and protect wilderness areas from uncontrolled exploitation. Efforts to preserve forests from overuse date back to the Middle Ages in Europe, but government-sponsored scientific forestry emerged only in the eighteenth century, when a number of German states adopted forestry programs based on detailed survey techniques, studies of growth rates, systematic replanting programs, and regulation of forest use—all under the direction of professional foresters. German forestry schools provided a training ground for foresters of many European nations and the United States, and German foresters provided leadership for new conservation programs in several states, including the United States and British India. The success of scientific conservation programs inspired the work of the American George Perkins Marsh (1801–1882), whose *Man and Nature* (1864) warned against mankind's profligate use of forests and other natural resources. Forests, he argued, should be preserved not only for their wood but also for their capacity to prevent floods, limit soil erosion, protect watersheds, and provide habitat for wildlife.

For Marsh and advocates of early forestry programs, the purposes of conservation were basically utilitarian. For many of their contemporaries, however, the preservation of nature had a spiritual and moral dimension. A line of philosophers, poets, essayists, and mystics stretching from the late 1700s to the early 1900s declared that nature provided more than products to warm, clothe, and feed human beings. More importantly, it served as a source of moral inspiration, self-awareness, spiritual insight, peace, comfort, mystery, and succor and as an antidote to the commercialism and materialism of industrial society. Such convictions inspired movements to preserve wild habitats and wild species, which in turn led to the beginnings of the national parks movement and the founding of wildlife reserves in many parts of the

world including Africa, where big-game hunting and habitat loss threatened populations of elephants, rhinoceroses, hippopotami, and many large carnivores.

Yet another type of early environmental activity was centered in the very industrial cities that Romantic poets and transcendentalist philosophers found so threatening and repugnant. Inspired by concerns for public health, the needs of manufacturers for adequate water supplies, and crises such as London's "Big Stink" of 1858 (caused by the stench emanating from the Thames River), major cities in Europe and North America installed or upgraded sewer systems, piped in clean water, and made efforts to remove the mountains of garbage their residents produced every day. Reformers also succeeded in setting aside or expanding open spaces for urban parks, where city dwellers would have opportunities for recreation and at least some limited contact with trees, lakes, and green grass.

Efforts to protect the environment in the eighteenth and nineteenth centuries had some notable successes. By the late 1800s, scientific forestry was being practiced in many parts of the world, and many millions of square miles of forests were being regulated and managed by government agencies. The construction of sewer and clean water systems undoubtedly made big-city life healthier, especially in the United States, Europe, and the British dominions.

One should not, however, exaggerate the level of environmental awareness in the 1800s or the number of environmental success stories. Many individuals remained convinced of nature's limitless bounty (despite mounting evidence to the contrary) or resisted environmental reforms because they were too expensive or flew in the face of individualism and economic opportunity. The relatively small numbers of people who joined environmental organizations were drawn mainly from the middle and upper classes. They were, for example, the main supporters of programs for urban smoke abatement; their efforts were opposed by members of the working class, who depended on cheap coal for heat and feared job losses if manufacturers were forced to restrict production or install expensive equipment. Many environmental "solutions" papered over rather than solved problems.

Garbage often was hauled out of cities only to be dumped offshore or burned; untreated sewage typically was discharged into rivers beyond the city limits with little thought given to downstream environmental damage.

In other cases, environmental activism was too little and too late. Beginning in the late 1800s a number of groups in Europe and elsewhere were formed to protect species of wild animals. The Royal Society for the Protection of Birds, founded in England in 1889, and other similar organizations had some success in halting the slaughter of birds whose plumage was used to decorate women's hats and army officers' uniforms. In 1900 what is often referred to as the world's first international environmental conference met in London to consider ways to protect African animals from overhunting. The European colonial powers in attendance signed a convention that protected gorillas, giraffes, and chimpanzees and limited hunting of gazelles and elephants. It did little good, however, for lions and cheetahs, which were classified as vermin and whose hunting was encouraged. Nor could such steps erase the damage of what man the predator had already caused in the 1800s: extinctions of the American passenger pigeon and countless other small mammals and birds, the collapse of Pacific whale and seal populations, dangerous reductions of African and Indian big game, and the reduction of the immense American bison herds from an estimated 30 million animals around 1800 to less than 1,000 a century later.

—James H. Overfield

The Enlightenment Tradition—Thinking about Nature

The European Enlightenment was marked by many diverse ways of thinking about nature and its relationship to humanity. Although there were many disagreements and contradictions in Enlightenment views about nature, a few themes can be picked out. In thinking about nature, the Enlightenment built on the Christian tradition by concentrating on its usefulness for humans. The use of land for the maximum benefit of humanity was a moral value and a criterion

for ranking civilizations. Scottish Enlightenment thinkers such as economist Adam Smith (1723–1790) divided history into four stages defined by a relationship with the land: hunter-gathering, pastoral, agricultural, and commercial. Progress through the stages was seen as a process of improvement. It continued in the Enlightenment's own time through the often violent displacement of herding peoples, hunter-gatherers, and other people not making the full use of their land, such as Scottish Highlanders and Native Americans, by more “civilized” peoples. The process by which unproductive wilderness was turned into productive agricultural land often involved the transformation of unowned or communally owned land into private property on the European model. Those natural features that prevented agriculturalists from making full use of land, such as mountains or economically useless trees, were condemned as blemishes.

None of this means that the thinkers of the Enlightenment were universally hostile to or contemptuous of nature. The tradition of natural theology—of using nature to demonstrate the existence and attributes of God—remained powerful in the eighteenth and early nineteenth centuries and increasingly drew from the evidence of natural history as well as physics. It received a classic formulation in William Paley's *Natural Theology, or, Evidences of the Existence and Attributes of the Deity* (1802). The beauty and glories of nature were widely praised, particularly by botanists and zoologists such as Georges-Louis Leclerc de Buffon (1707–1788), director of the Royal Botanical Garden in Paris, and Swedish inventor of modern biological classification Carolus Linnaeus (1707–1778). The writings of eighteenth-century naturalists such as the Anglican minister Gilbert White (1720–1793) reflect a deep love of nature, as shown in the close observations recounted in his frequently reprinted *The Natural History and Antiquities of Selborne* (1789). The study of nature was regarded as a way of improving the mind, and natural history in particular became a popular avocation among many.

Gardens and parks were widespread, and public ones such as London's Hyde Park were popular recreation spots. Many wealthy

landowners devoted a large portion of their land and wealth to the creation of ornamental gardens, such as Thomas Jefferson's gardens at Monticello. However, the point of eighteenth-century gardens and parks was to show nature as shaped by the hand of humanity. The lack of interest in preserving the land in its original state can be seen in the wide popularity of exotic plants as garden ornaments. The rigid geometry of the formal garden of the age of Louis XIV (r. 1643–1715) had been abandoned in favor of something more adapted to the contours of the land, but no one would mistake the eighteenth-century garden for a wilderness. The activity that did promote keeping large areas of land in something close to their natural state was hunting, the sport and often the obsession of European aristocrats and nobles. The Enlightenment monarch Frederick the Great of Prussia (r. 1740–1788) was one of the few European rulers who disliked it.

Many believed that the cultivation of the land improved not merely the land but also the cultivator. French Enlightenment champion Voltaire's novel *Candide* (1759) ends with the famous line "let us cultivate our garden" ("il faut cultiver notre jardin"), which shows that *Candide* has given up his world-spanning ambitions and has settled on a poor but contented life. The image of the virtuous farmer in contrast with the corrupt city dweller occurs frequently in the propaganda of the American Revolutionary era. However, the farmer, particularly the European peasant, was not seen as someone who had perfected a craft but instead as someone who would benefit from advice. Agricultural improvement was a popular cause in the eighteenth century, spawning numerous societies and publications even if its impact on actual farming practices was limited. Some groups working for agricultural improvement were gatherings of local landowners, while some, such as the Paris-based Royal Society of Agriculture, were backed with state power and resources.

One area where much of the Enlightenment, particularly the radical and skeptical Enlightenment, differed from mainstream Christianity was that it saw humanity as part of nature rather than separated from it by the possession

➤ THOMAS JEFFERSON ON LAND AND INDIANS

In 1803 President Thomas Jefferson wrote this letter to Indian Agent Benjamin Hawkins expressing his views on Native Americans, settlers, and the changing uses of the land:

"I consider the business of hunting as already become insufficient to furnish clothing and subsistence to the Indians. The promotion of agriculture, therefore, and household manufacture, are essential in their preservation, and I am disposed to aid and encourage it liberally. This will enable them to live on much smaller portions of land, and indeed will render their vast forests useless but for the range of cattle; for which purpose, also, as they become better farmers, they will be found useless, and even disadvantageous. While they are learning to do better on less land, our increasing numbers will be calling for more land, and thus a coincidence of interest will be produced between those who have lands to spare, and want other necessities, and those who have such necessities to spare, and want lands. This commerce, then, will be for the good of both, and those who are friends to both ought to encourage it."

—William E. Burns

Source

Thomas Jefferson, *Writings* (New York: Library of America, 1984), 1115.

of a soul. As such, humanity, like animals and plants, was shaped by its natural environment. *The Spirit of the Laws* (1748) by Charles-Louis de Secondat, Baron de Montesquieu, ascribed many aspects of human society to the different climates in which different societies had developed.

—William E. Burns

Bibliography

- Ambrosoli, Mauro. *The Wild and the Sown: Botany and Agriculture in Western Europe, 1350–1850*. Translated by Mary McCann Salvatori. Cambridge: Cambridge University Press, 1997.
- Daston, Lorraine, and Gianna Pomata, eds. *The Faces of Nature in Enlightenment Europe*. Berlin: BWV-Berliner Wissenschafts-Verlag, 2003.

Natural History and the Roots of the Modern Environmental Movement

While environmental thought dates back to the ancients, the roots of modern environmentalism are commonly traced to two intellectual movements of the eighteenth and nineteenth centuries: the Enlightenment and Romanticism. Whether one interprets the latter as a reaction to or as an outgrowth of the former (the latter opinion now predominating), historians generally portray the modern environmental movement as emanating in part from the scientific rationality of the Enlightenment and in part from the Romantic ideal of a holistic and sublime nature.

Notably, the three particular events most widely associated with the dawn of modern environmentalism—the 1962 publication of *Silent*

Spring by Rachel Carson, the 1901–1909 presidency of Theodore Roosevelt, and the 1864 publication of *Man and Nature* by George Perkins Marsh—allude more to an Enlightenment heritage than to Romanticism. In all three of these chronologically disparate events, each identified individual shared two important characteristics: a thorough understanding of the scientific process and a belief that public policy should be based on scientific knowledge. Carson was a scientist, Roosevelt nearly so, and although Marsh avowed that he was not a scientist, his writings demonstrate a talent for synthesizing scientific information. Although densely written, Marsh's tome remains remarkably cogent today inasmuch as it presciently identified a now-familiar suite of threats to species, forests, water, and deserts. The book certainly takes pride of place as the first focused treatment of problems that we now generically characterize as environmental (a term unavailable to Marsh, who used the term “physical geography” in roughly the same way that we now define the term “environment”) and the first to make a strong and articulate call for the more rational use of the earth's resources.

Carson, Roosevelt, and Marsh also held beliefs about nature that were essentially Romantic, and it would be wrong to make a sharp distinction between the rationalist and Romantic tendencies in their worldviews. This interwoven complexity is prefigured in the natural historians of the eighteenth and nineteenth centuries, many of whom strongly influenced the thinking of Marsh and his successors. Notable figures of this period include the French Comte de Buffon (1707–1788), who first articulated the principles of biogeography; the Swede Carolus Linnaeus (1707–1788), the father of modern taxonomy; and the English curate Gilbert White (1720–1793), whose 1789 *Natural History of Selborne* remains the fourth most-often published book in the English language. Along with their peers, these natural historians falteringly pushed forward the haphazard development of various protoecological concepts, concepts that would eventually come to be subsumed under the rubric of “ecology” although that particular word would not be coined until 1866 by the German biologist Ernst Haeckel (who would define ecology as “the investigation of the total relations of the animal both to its inorganic



George Perkins Marsh's 1864 work *Man and Nature*, republished in 1874 as *The Earth as Modified by Human Action*, is considered a classic of the early environmental movement. (Library of Congress)

and to its organic environment”). One critical concept was that nature appeared as it did due to the effects of species interacting with each other and not due to the direct benevolence of a divine power ensuring that all would be harmonious in nature, this being a central premise of the dominant ideology of natural theology. Among these interacting species was man, whose effects on the earth did not escape the notice of many of these natural historians.

Despite living in an age of reason, a phrase used somewhat interchangeably with the Enlightenment, these individuals also largely shared a belief in an underlying harmony in nature, an organic holism that lay beyond the scope of a purely empirical and reductionist rationality. For example, as Donald Worster recounts in his pathbreaking history of environmental ideas, *Nature's Economy* (1977), even as Gilbert White fully embraced the utility of nature for the purposes of man, he also described his hometown southwest of London as partially representing an Arcadian dream of reconnecting man to the “vital energies” of the earth. In such manner, these natural historians not only laid down a scientific foundation for future environmentalists but also put forth a mode of thinking about the interrelatedness of nature that would become a staple first of the Romantic movement and in turn of the environmental movement.

Emblematic of this dual role of natural history was the Prussian explorer Alexander von Humboldt, who set out on his five-year expedition to the Americas in 1799. The scientific and narrative volumes that Humboldt produced upon his return to Europe would solidify his status as the era's preeminent man of science, a celebrity whose reputation would not fade into its current near-obscurity until the early twentieth century. Both during and after Humboldt's lifetime, the sheer range of his physical and intellectual explorations into the natural world would inspire legions of post-Enlightenment scientists, very much including Marsh. Yet more inspiring than Humboldt's scientific credentials was the fact that he had made a critical intellectual connection between man and his environment, which in turn resulted from the Prussian explorer's insistence on studying nature as a unified whole. Humboldt's philosophical approach to science

➤ EARLY AMERICAN NATURALISTS

Alexander von Humboldt was fascinated with the United States, even though his time there was limited to a short stay on his way home to Europe from the New World's tropical regions. He would no doubt have relished the opportunity to follow in the footsteps of the pantheon of American naturalists who had made their marks by exploring the virgin North American continent. These included Mark Catesby, John James Audubon, John and William Bartram, François and François-André Michaux, Alexander Wilson, Benjamin Silliman, Thomas Nuttall, and Benjamin Smith Barton. These names should figure prominently in the development of environmental thought. A predominant reason they do not is the fact that scholarship on the early roots of American conservation has generally focused on American Romanticism, a tradition that has emphasized the important roles of such well-known writers as Cooper, Emerson, and Thoreau. Yet it was these North American naturalists who first expressed concern over deforestation and erosion, decried the regional extirpation of species, and celebrated the sublimity and balance of nature.

—Charles Chester

thus constituted a necessary stepping-stone in Marsh's ominous recognition that “man has reacted upon organized and inorganic nature, and thereby modified, if not determined, the material structure of his earthly home.”

In sum, there have been particularly important periods in the growth of the environmental movement. But when we look closely at these periods and at the conservation personae who define them, we find that Marsh, Roosevelt, Pinchot, Muir, and more recent advocates all share a large conceptual debt to an earlier pantheon of explorer-naturalists. Looking at the world with the optimistic skepticism of the Enlightenment along with the ideal of a holistic nature inherent in Romanticism, these scientists endeavored to understand man's role in nature. In doing so, they ultimately enabled their successors to understand that man's effects on nature could be dangerously reciprocal.

—Charles Chester

Bibliography

- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge, MA: Belknap Press of Harvard University Press, 1995.
- Carson, Rachel. *Silent Spring*. 40th anniversary ed. Boston: Houghton Mifflin, 2002.
- Glacken, Clarence J. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press, 1967.
- Judd, Richard W. "A 'Wonderful Order and Balance': Natural History and the Beginnings of Forest Conservation in America, 1730–1830." *Environmental History* 11(1)(2006): 8–36.
- Lowenthal, David. *George Perkins Marsh, Prophet of Conservation*. Seattle: University of Washington Press, 2000.
- Marsh, George Perkins. *Man and Nature: Or, Physical Geography as Modified by Human Action*. Cambridge: Scribner, 1869.
- Sachs, Aaron. *The Humboldt Current: Nineteenth-Century Exploration and the Roots of American Environmentalism*. New York: Viking, 2006.
- Worster, Donald. *Nature's Economy: A History of Ecological Ideas*. New York: Cambridge University Press, 1977.

Early Environmental Groups

The United Kingdom's Manchester Association for the Prevention of Smoke, founded in 1842, arguably lays claim to the status as the earliest environmental group on record. No doubt, tilting at the opaque windmill of industrial air pollution must have seemed a quixotic endeavor, for the group faced opposition not only from industrialists but also from laborers, the majority of whom equated belching smokestacks to domestic comfort. So even though the city did institute air pollution regulations within two years of the association's establishment, the cause and effect are unclear, and, more importantly, substantive remediation of the problem would not come for decades.

The United Kingdom lays claim to a number of other local and national environmental groups founded later in the nineteenth century. Established in 1865, the Commons Preservation Society garnered several victories in its efforts

to protect open spaces (and continues today under the name the Commons, Open Spaces and Footpaths Preservation Society, more commonly known as the Open Spaces Society). There was also the Society for the Protection of Birds (now the Royal SPB), established in 1891. Beyond Great Britain, a small number of British subjects in the colony of Natal responded to the decimation of African game populations by establishing the Natal Game Protection Association in 1883, a move that was followed by the establishment of other such associations in southern African colonies.

During this time period the only other country to substantially contribute to this new social phenomenon—again, a phenomenon that long preceded the label of “environmental group”—was the United States. There were some halting initial steps, most notably the establishment of the first Audubon Society in 1886 by the noted naturalist George Bird Grinnell. The editor of the popular sportsman's magazine *Forest and Stream*, Grinnell had already been involved with the Committee on the Protection of North American Birds of the American Ornithologists' Union (AOU), but this was a scientific society with an institutional structure far different from that of a typical environmental group. But even after its reported membership swelled to 39,000 individuals, the group's activities were largely limited to Grinnell's avid pamphleteering. Due to his many other commitments, he was unable to sustain the organization, and it effectively went defunct in 1888.

One of the reasons Grinnell was so busy was his association with the future president Theodore Roosevelt in establishing the Boone and Crockett Club in 1887. This organization was not what we think of today as an environmental group; rather, it was exactly what it proclaimed to be: an elite club with membership limited to 100. No doubt, with its proximity to power—indeed, with its founder in the position of the country's chief executive officer—the club played an instrumental role in several conservation victories. Although the group would later open itself up to a far broader membership base, its institutional structure would never reflect a typical environmental group with membership open to all. The same can be said of its

➤ FAUNA & FLORA INTERNATIONAL

President Theodore Roosevelt kept up a regular correspondence with a number of British sport hunters, some of whom were also converts to the cause of conservation. One of them, Edward North Buxton, was also an associate member of the Boone and Crockett Club that Roosevelt had helped to found. In 1903 the indefatigable Buxton, a verderer or Royal forest official, was alarmed to hear that the colonial authorities in the Sudan were contemplating the degazetting (reducing a protected site so that it no longer legally or physically exists) of a particularly important game reserve. After a successful letter-writing campaign, Buxton would by the end of that year have organized his influential colleagues into the Society for the Preservation of the Wild Fauna of

the Empire (SPFWE). A notable member of the SPFWE was the governor-general of the Sudan—that is, the person whom the group had swayed in its first campaign—and another was Roosevelt, who became an honorary member in 1904. Over the course of the twentieth century the organization's name would change a number of times. Today, the Fauna & Flora International (FFI) works in more than 60 countries through projects ranging from scientific research and landscape planning to sustainable extraction and land acquisition. As old as the organization is its journal, *Oryx*, an authoritative voice on matters of both conservation advocacy and conservation science.

—Charles Chester

European equivalent, the Society for the Protection of Wild Fauna of the Empire, established in England in 1903 and now known as Fauna and Flora International.

Five years after the Boone and Crockett Club began, a much different organization came to life, one that lays strong claim to the description “archetypal.” During the campaign to designate Yosemite as a national park (the area had been protected by the State of California since 1864, eight years before the establishment of Yellowstone as the world's first national park), conservationists had considered the idea of establishing an organization to promote the cause. Although the designation was achieved in 1890, a new group was not organized until 1892. With the noted conservationist John Muir at its helm the Sierra Club was born, with the tripartite mission of fostering enjoyment of the outdoors, providing information about the Pacific coast's mountain regions, and advocating for their protection. During the twentieth century, the Sierra Club would come to be associated mostly with the latter conservation mission, albeit with a far greater geographic encompassment than the mountain ranges of California and a broader suite of environmental concerns than just that of land protection.

Four years later, in 1896, two Boston socialite women founded the Massachusetts Audubon

Society. On the grounds that fashion trends were responsible for the decimation of bird populations on the continent, they convinced hundreds of women to eschew feathered hats. Mass Audubon, as the organization is now informally called, is thus the oldest extant Audubon Society; it was followed by other state and local chapters and the National Committee of Audubon Societies in 1902 (which became the National Association of Audubon Societies in 1905 and finally the National Audubon Society in 1940).

Taking a broad perspective of these pre-World War I environmental groups, it is notable that the earliest did not set a precedent. Whereas the Manchester Association focused on pollution control, subsequent groups focused almost exclusively on wildlife protection. This remained the case throughout the progressive era, the inter-world war years, the post-World War II boom, and up to what is commonly regarded as the birth of the modern environmental movement: the publication of Rachel Carson's *Silent Spring* in 1962. Yet even as widespread adoption of the term “environmental” largely dates from this time period, the pre-World War I organizations provided copious evidence that civil society could and did play an important role in influencing public policy.

—Charles Chester

Bibliography

- Adams, William M. *Against Extinction: The Story of Conservation*. Sterling, VA: Earthscan, 2004.
- Cohen, Michael P., and Sierra Club. *The History of the Sierra Club, 1892–1970*. San Francisco: Sierra Club Books, 1988.
- Cowell, Ben. “The Commons Preservation Society and the Campaign for Berkhamsted Common, 1866–70.” *Rural History* 13(2) (2002): 145–161.
- Fitter, Richard, and Peter Markham Scott. *The Penitent Butchers*. London: Collins, 1978.
- Graham, Frank, and Carl W. Buchheister. *The Audubon Ark: A History of the National Audubon Society*. Austin: University of Texas, 1990.
- McCormick, John. *The Global Environmental Movement*. New York: Wiley, 1995.

American Transcendentalism and Nature

Transcendentalism was the name given to a collection of individuals and a host of new and old notions about the nature of God, humankind, and the physical world and about the relationships among individuals, society, and the natural environment that circulated through the United States, and particularly New England, in the decades before the American Civil War. With

➤ RALPH WALDO EMERSON

The seer of Transcendentalism was Ralph Waldo Emerson (1803–1882), whose self-assured writing and lectures, with his credo of self-reliance and his emphasis on an original relation to nature, gave voice to the sense of unboundedness that took root in Jacksonian America during the 1830s and 1840s. Emerson was the voice of the future as pioneers were moving westward and before the shadow of slavery and the American Civil War crept across the landscape. Emerson, like so many of those he influenced, spoke for the potential of the individual and the nation. His first important essay, “Nature,” was published in 1836 at the inception of the transcendentalist movement. By the 1850s, the Sage of Concord—whose aphorisms could be attuned to the spiritual seeker and the entrepreneur alike—had become a household name throughout the country and one of America’s first national celebrities.

—Louis Mazzari

kinship to the romantic movement in philosophy and the arts, this movement was difficult to define because its adherents refused definition, and was impossible to categorize because its theorists railed against categories. Insisting on self-reliance, they could barely create a community. Yet as a group they offered a philosophy that was emphatically idealistic rather than materialistic, in contrast with the decidedly commercial culture then flourishing. Attempting to break with traditions of all kinds, the transcendentalists sought a new relation between the individual and society through the study of nature. Suddenly the natural world was seen as the incarnation of God’s perfection, and Transcendentalists sought to catch that scent of perfectibility from every flower in the meadow.

Transcendentalism began as a turning away from religious dogma and church hierarchy and toward the lessons of nature as discovered by each individual through both observation and, importantly, intuition as a more direct and accurate means toward knowledge and wisdom. Many of the Transcendentalists, including Ralph Waldo Emerson, George Ripley, James Freeman Clarke, Convers Francis, and Theodore Parker, had been trained as Unitarian clergy. By the standards of the early nineteenth century, the Unitarians were extremely liberal, rejecting the Calvinist past and the era’s emotional Christian revivalism. Emerson pointedly broke with the authenticity of the “miracles” of the Bible and announced that an individual’s obligation was not to Jesus but rather to his own divinity. This was a big step away from his earlier Unitarian conviction that all knowledge comes by sensory experience and that we learn about God only through ministerial interpretation of His Word in the Bible. Both Ripley and Emerson left their positions as clergy.

Many critics, including most of the traditional clergy, accused Transcendentalists of pantheism and often of atheism. Yet the movement considered nature—which many capitalized, as though spelling the name of God—as the multi-form manifestation of divinity on earth and the source of information not only about the world but also for the way to lead a moral and spiritual life. For the Transcendentalists, nature could be read the way their forefathers had read the Bible for the underlying truths of life it would

reveal to the observant eye. If God emanates through everything and everyone in the world, then study of even the most humble aspects of the world would reveal universal wisdom. Drawing inspiration from transcendentalism, poet Walt Whitman, in his many editions of *Leaves of Grass* (1855), celebrated the universal in the smallest particular.

The rise of Transcendentalism during the 1830s and 1840s coincided with the birth of America's cash economy and the growth of the factory system, when wealth was becoming the preeminent sign of worthiness among more Americans. Reacting against this new capitalist economy, the Transcendentalists sought instead to somehow use nature as a way to measure a soul. The movement quickly grew to encompass politics and philosophy, the arts and literature, individual self-reliance, and social reform.

Boston was the hub of Transcendentalism, Harvard the alma mater of many of its proponents, and Concord, 20 miles (32 kilometers) to the west, its Delphi, home to its most prominent figures, Henry David Thoreau, Bronson Alcott, and Emerson, the movement's oracle. During its flowering, Transcendentalism generated an influential journal of arts and opinion, the *Dial*, edited by Margaret Fuller. It also led to the founding of two renowned but short-lived communal farms in eastern Massachusetts: Brook Farm (1841 to 1847) and Fruitlands (1843 to 1844). Perhaps the most influential literary work to come out of the movement was Henry David Thoreau's *Walden* (1854). The long-term effects of Transcendentalism have been prodigious, even among those who reacted against it. In perhaps the greatest American novel, *Moby Dick* (1851), Herman Melville refutes Transcendentalism's search for truth in nature; a tragic hero sails the world in a futile and destructive attempt to avenge the white whale, whose terrible and unknown nature remains forever inscrutable.

In different and unforeseen ways, Transcendentalism set the stage for much of subsequent American history, politics, art, and culture, from medical reform to the Marlboro Man, from the self-made American businessman to the counterculture of the 1960s, women's rights, and environmentalism.

—Louis Mazzari

Bibliography

- Buell, Lawrence, ed. *The American Transcendentalists: Essential Writings*. New York: Modern Library, 2006.
- Emerson, Ralph Waldo. *Nature, Addresses, and Lectures*. Boston and New York: Houghton Mifflin, 1883.
- Gura, Philip F. *American Transcendentalism: A History*. New York: Hill and Wang, 2007.
- Hankins, Barry. *The Second Great Awakening and the Transcendentalists*. Westport, CT: Greenwood, 2004.
- Miller, Perry, ed. *The American Transcendentalists: Their Prose and Poetry*. 1957; reprint, Baltimore: Johns Hopkins University Press, 1981.

The National Parks Movement in the United States

Until the 1890s, most Americans considered the notion of preserving wild land in public parks as preposterous. It was the nation's manifest destiny to expand westward and to settle and exploit the wilderness, not to protect forests, mountains, and rivers.



Two giants of the conservation movement: John Muir (right) and Theodore Roosevelt on Glacier Point at Yosemite National Park, 1906. (Library of Congress)

➤ CULTURE AND NATURE IN THE NATIONAL PARKS

While we tend to think of the wilderness contained within national parks as something natural that predates humans, many scholars have recently argued that nature in these parks is also very much a historical and cultural artifact. At Glacier, Grand Canyon, Yosemite, and other parks, early park administrators removed Indian groups who had used natural resources in these areas for centuries. Park officials at the time also exterminated some predators, which unintentionally allowed other species to multiply; extinguished fires started by lightning or Indians; stocked fish; and built roads, campgrounds, and structures. Where nature ends and culture begins is still very much an open question in national park scholarship. A particularly provocative 1995 essay, William Cronon's "The Trouble with Wilderness, or, Getting Back to the Wrong Nature," ignited much debate among environmentalists.

—Colin Fisher

Source

William Cronon, "The Trouble with Wilderness, or, Getting Back to the Wrong Nature," *Environmental History* 1(1) (1996): 7–28.

Despite the emphasis on settlement and utility, some early-nineteenth-century Americans called for wilderness parks. Most famously, the painter George Catlin in 1832 argued for "a *Nation's Park*" on the Great Plains that would contain "man and beast, in all the wild and freshness of their nature's beauty." Others such as the writer Henry David Thoreau, landscape painters, and early tourists in search of views of the sublime, as spectacular wild landscapes were called, attributed aesthetic and spiritual value to wilderness, although they frequently approached wilderness with ambivalence and some fear.

As wild country disappeared after the Civil War, increasingly large numbers of Americans clamored for wilderness preservation. In 1864 Congress set aside Yosemite Valley and the Mariposa Grove of Sequoias as wilderness preserves and then ceded these properties to the state of California to administer for the people in perpetuity. In 1872 Congress established Yellowstone

National Park, which stands as the first true national park in the world.

The U.S. Census Bureau's announcement of the frontier's closure in 1890 and widespread anxiety over the loss of wilderness in the years immediately after further fueled interest in national parks. Tens of thousands of middle- and upper-class tourists, including members of new preservation groups such as the Sierra Club, made outings to wilderness parks, not just to see the sublime but also to hike and camp. Railroad companies, looking for increased traffic and revenues, also supported the national parks and even built hotels and chalets in some of the parks. Between 1890 and 1916 the federal government not only reclaimed Yosemite but also established 11 additional national parks. Some of these, such as Grand Canyon National Park, started out initially as national monuments, which were federal lands with historic, prehistoric, or scientific values that the president of the United States could set aside as prescribed by the Antiquities Act of 1906. During his presidency, Theodore Roosevelt was aggressive in applying the Antiquities Act to preserve wilderness.

While the number of parks grew during the early twentieth century, they were poorly managed and were inadequately funded by Congress. They also faced considerable threat from outside interests. After the 1906 San Francisco earthquake, the city, desperate for a reliable source of fresh water, lobbied for the construction of a dam in the Hetch Hetchy Valley within Yosemite National Park. The proposal to build a dam in the park furthered conflict between conservationists such as Gifford Pinchot of the U.S. Forest Service, who advocated the scientific management of natural resources on public lands, and preservationists such as John Muir, who argued that national park wilderness should be reserved for the physical and spiritual renewal of visitors. Despite the best efforts of Muir and the Sierra Club that he helped found, Congress passed the Raker Act in 1913 that authorized the construction of the Hetch Hetchy dam.

Disappointment with park management coupled with outrage that a dam had desecrated Yosemite National Park led to calls for the creation of a National Park Service that would efficiently administer and protect the parks. In

1916 Congress fulfilled the wishes of park supporters and established the Organic Act establishing the National Park Service. Famously, the act mandated that the new National Park Service “conserve the scenery and the natural and historic objects and the wild life” within the parks and “provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

—Colin Fisher

Bibliography

- Catlin, George. *North American Indians*. London: Penguin, 1989.
- Porter, Robert, Henry Gannett, and William Hunt. “Progress of the Nation.” In *Report on Population of the United States at the Eleventh Census: 1890, Part 1*, edited by Bureau of the Census. Washington, DC: U.S. Government Printing Office, 1895.
- Sellars, Richard West. *Preserving Nature in the National Parks: A History*. New Haven, CT: Yale University Press, 1997.
- Runte, Alfred. *National Parks: The American Experience*. Lincoln: University of Nebraska Press, 1979.

Painted Nature—Nineteenth-Century Landscape

A European or American landscape painter during the nineteenth century received inspiration from sources as diverse as the natural sciences, philosophies of aesthetics, political ideologies, and the literary arts. The pluralism of nineteenth-century art styles, known broadly as Romanticism, Realism, Symbolism, Impressionism, and Post-Impressionism, and other lesser-known communal approaches such as those of the English Pre-Raphaelites and the French Barbizon School, was a result of burgeoning democratic principles as well as socialist trends in politics, the popularization of the sciences in culture, and growing physical and social mobility brought about through developments in technology and transportation.

The stages of stylistic development in landscape painting may be charted through the representational practices and aesthetic debates formed at the intersections of art, science, and

other cultural productions. Paintings of nature reflected human progress as well as an increased understanding of the underlying mechanism of geological action on terrestrial appearance, as can be seen early in the century in the oeuvre of the German Romantic painter Caspar David Friedrich (1774–1840) and later in the works of the American painter Frederick Church (1826–1900). The artist who composed a landscape used varied methods to communicate the experience of viewing broad vistas or random details within universal or local settings. Compositional strategies developed by artists of the seventeenth and eighteenth centuries conveyed spatial depth. These illusionary spaces served as outdoor stages for grand historical events or picturesque idylls. Before the nineteenth century, the landscape was a supporting ground for acts of human heroism or folly, not a topic unto itself.

During the Romantic era, landscape as subject became an expression of emotional depth rather than historical narrative. During this period, a framework of subjectivity based on the doctrines of the eighteenth-century philosophers Edmund Burke, Immanuel Kant, and Jean-Jacques Rousseau placed the observer of a landscape painting within the picture’s ground as a spectator, enabling him or her to experience the immensity of nature. Within their respective cultures, Caspar David Friedrich, the British painter J. M. W. Turner (1775–1851), and the French artist Eugène Delacroix (1798–1863) transformed the way people viewed the landscape by elevating the experiential above the rational (imagination over reason).

Following the progression from eighteenth-century ideals of the picturesque and the sublime, natural scenery became an essential visual motif used within the styles of Romanticism and Realism. Awe-inspiring visions of the Romantic gave way to real landscapes modeled on the close observation of nature. Painters began to reflect on questions other than those concerned with beauty. The appearance of steam engines within the paintings of Turner documented a technological advance that transformed the previously remote areas of Britain, and some art historians credit Turner with addressing the ecological consequences of the rapid urbanization of previously pastoral acreage. Other British

► CASPAR DAVID FRIEDRICH, “THE WRECK OF HOPE”

Caspar David Friedrich was one of the most important German painters in nineteenth-century Europe. Trained as a topographic draftsman, Friedrich expanded upon his own measured understanding of nature through his participation in the rich cultural milieu of Romantic Dresden. This dramatic vista epitomizes the type of spectacular view worthy of attention from a Romantic landscape painter. The subject of the painting, “The Wreck of the Hope,” was an event reported widely in the press throughout northern Europe. Friedrich fabricated the image from these accounts. The eccentric composition anticipates the emphasis on inventive arrangements of surface design that would figure significantly in landscape painting at the end of the nineteenth century.

—Catherine Clinger



(Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

artists such as John Constable (1776–1837) depicted a new space of human and nature interface, and the Scottish painter William Dyce (1806–1864) situated his views in a way that acknowledged the effects of geological, historical, and astronomical time. Later in the century, the French Pointillist painter Georges Seurat (1859–1891) addressed ideologies of leisure time from a socialist perspective that was closely linked with the psycho-physical theories of Charles Henry, which proposed that the compositional arrangement of vertical, horizontal, and diagonal lines could have a soothing or aggravating effect on the viewer and could thus be used to incite a specific response. Seurat also employed the theory of simultaneous contrast of color proposed by Michel Eugène Chevreul to visually engage the viewer in the optical mixing of primary colors (red, blue, yellow) with secondary hues (orange, green, violet) in a dot pattern.

Whether consciously or unwittingly, the depiction of landscape assisted modern nation-states in their quest to consolidate state power through the presentation of visual evidence of their existence. A prime example of this is the group of American painters known as the Hudson River School who associated the country's unspoiled wilderness with its limitless economic

potential. Some artists, such as the Barbizon painter Théodore Rousseau (1812–1867), actively resisted the appropriation of wilderness for mercantile purposes. Rousseau led protests against the French government's plan to construct roads and initiate monocultural forest practices in the beloved Forest of Fontainebleau.

Later in the nineteenth century, the Impressionist painters modeled their approach to landscape on the Realist plein-air painters who worked in the out-of-doors. Their subject was light. Shapes within nature became indistinct, and color was used to an exaggerated effect. Claude Monet (1840–1926) represented a verdant garden in a way that made one doubt its solidity. It seems that once the light faded from the sky, all would dissolve with it. The measured fields of foreground, middle ground, and background gave way to the flattening of space and the patterning of surface by the end of the nineteenth century. The spatially ambiguous landscapes of post-Impressionist Paul Cézanne (1839–1906) were among the primary sources for Cubist artists in the early twentieth century.

There were also artists who worked independently of these major movements. The fervent renderings of the south of France by the Dutch painter Vincent Van Gogh (1853–1890)

stand on their own as testaments to his unique vision. The theoretical approaches used to codify the range of human emotional responses to landscape, relate modern color theory, or comment on industrial development did not always inform the practice of a nineteenth-century landscape painter. However, the advance of individual rights of certain classes and races in Europe and America did result in greater diversity in the artistic production of landscape painting

that set the stage for the radical artistic projects of the twentieth century.

—Catherine Clinger

Bibliography

- Andrews, Malcolm. *Landscape and Western Art*. Oxford: Oxford University Press, 1999.
- Halkes, Petra. *Aspiring to the Landscape*. Toronto: University of Toronto Press, 2006.
- Vaughan, William. *Romanticism and Art*. London: Thames and Hudson, 1994.

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Society and Culture

Few periods in world history present greater challenges to social and cultural historians than the years between 1750 and 1914. Unquestionably, societies around the world changed in many ways. Slavery and serfdom were virtually abolished, industrialization expanded the middle class and created a new class of salaried factory workers, aristocrats in Europe and Japan lost ancient privileges, and age-old inequalities between men and women were challenged. Change was not the entire story, however. Many long-standing social relationships and attitudes endured, leading many social historians to make continuity rather than change the era's dominant theme. Much the same can be said about cultural history. Revolutionary political, economic, and technological developments in combination with increased literacy and greater contacts among the world's peoples brought inevitable changes, but many values, perceptions, customs, and tastes continued.

In the area of social history, the most extraordinary development between 1750 and 1914 was the nearly complete suppression of legalized slavery. This was extraordinary because slavery had existed for thousands of years, during which time it had evoked little outrage or opposition. It was extraordinary furthermore because the level of slave trading and the number of enslaved individuals both reached historic peaks in the late eighteenth century. The drive for abolition, spearheaded by Protestant religious groups and others inspired by the Enlightenment ideal of universal human rights, began in Europe and British North America in the late eighteenth century. Between 1761 and 1807 Portugal, several New England states, revolutionary France, and Haiti abolished slavery, and in 1807 Great Britain, the world's leading slave-trading nation, and the United States both outlawed the slave trade. During the nineteenth century slavery was abolished throughout Europe, Europe's African and Asian colonies, Latin America, the United States, and Thailand. By the early twentieth century slavery and the slave trade existed only in outlying areas of the Ottoman empire and East Africa.

Slaves were not the only exploited social group to disappear between 1750 and 1914. Serfdom, a centuries-old European socioeconomic system that bound millions of peasants to a particular agricultural estate and required them to perform unpaid labor for their lord, gradually ended as states granted serfs freedom to move, marry whom they wished, pursue professions other than farming, and own land. Serfdom ended in Austrian Habsburg lands in 1781, in Prussia between 1807 and 1816, in Hungary in 1848, and in Russia in 1861 (individually owned serfs) and 1867 (state-owned serfs). Russia's emancipation decrees freed over 40 million individuals, ten times the number of slaves freed by Abraham Lincoln's Emancipation Proclamation.

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Another group whose numbers shrunk between 1750 and 1914 consisted of pastoralists, nomads, and foragers who lived outside well-defined state structures and hence in the nineteenth century were lumped together as “tribal peoples.” Although their numbers in the late eighteenth century were small, no more than 4.8 percent of the world’s population, they occupied large swaths of territory in Asia, the Americas, Africa, and Australia. In the 1800s, however, several factors combined to reduce their numbers further. States and colonial governments expropriated their grazing and hunting lands and redistributed them as private property to farmers, ranchers, and mining and railroad companies. When native peoples resisted, governments responded with the full force of their modernized armies and in a few cases launched extermination campaigns against them. Missionaries introduced doctrines that undermined traditional beliefs, and European settlers introduced new diseases, alcohol, and firearms, which in combination had more deadly results than warfare. By 1900 foragers existed only in a few remote and isolated regions, and most pastoral nomads had been assimilated, removed to reservations, or killed off by wars and disease.

The freeing of slaves and serfs and the organized campaigns to drive pastoralists and foragers off their lands are examples of social changes brought about largely by state action. Other examples abound between 1750 and 1914. In revolutionary France and, over time, most of Europe, legislative change and revolutions stripped nobles of their privileges and diluted their political power by extending voting rights in parliamentary elections to members of the middle and lower classes. In Meiji Japan the country’s leadership took steps to end Japan’s ancient class hierarchies by opening careers to all Japanese irrespective of their social standing and depriving aristocratic samurai of their legal privileges, including their monopoly on military service. The Meiji government also took steps to improve the lot of those at the bottom of society. In 1871 it granted full equality to the *barakumin*, outcasts who since early Tokugawa times had been forced to live in segregated communities and pursue professions as butchers, leather workers, grave diggers, and executioners, all considered to be “unclean” by other Japanese.

In some cases, the results of such state-mandated changes were more symbolic than real. European aristocrats, for example, maintained their wealth and high social standing throughout the nineteenth century and continued to play major roles as army officers, diplomats, and cabinet ministers. In Japan, ex-samurai dominated the small oligarchy that controlled politics during the Meiji period, while the *barakumin* continued to experience discrimination and low wages. Most former slaves and serfs, although technically free, continued to be exploited.

Other major causes of social change between 1750 and 1914 were urbanization and industrialization. Cities grew around the world because of overall population growth and rural to urban migration.

Only in industrializing areas, however, did the makeup of these cities' populations change significantly. Factories created a new class of salaried workers, including women and children, who unlike artisans and craftsmen did not own their tools and equipment and had no ownership stake in the business that employed them. Poverty and squalor marked their lives, especially in the early stages of industrialization. Over time, however, prices for food and manufactured goods fell as a result of productivity gains, while wages increased, partly because of pressures brought to bear by labor unions and socialist political parties. Although hardship and unemployment did not disappear, the new working class in the industrialized West enjoyed rising living standards from the mid-1800s until World War I.

Urbanization and industrialization also contributed to the creation of the modern middle class, or bourgeoisie. The preindustrial bourgeoisie, consisting of artisans and petty shopkeepers at the bottom, professionals (mainly lawyers and physicians) above them, and merchants and financiers at the top, had existed in many parts of the world for centuries. With industrialization, the middle class was first transformed by the entry into its ranks of industrial entrepreneurs, the most successful of whom joined bankers and wealthy retailers at the top of the bourgeoisie social pyramid. Below this extremely wealthy group were families with incomes from small businesses, real estate, government posts, managerial positions, and careers in medicine, academia, engineering, accounting, and the law. The lower middle class, or petty bourgeoisie, consisted of shopkeepers, schoolteachers, minor officials, clerks, and some craftsmen in luxury trades.

The bourgeoisie were responsible for many important political and cultural developments in nineteenth-century Europe and America. They provided support for liberalism and parliamentary rule. They were strong believers in education as a means of social and professional advancement. With wealth and leisure, they provided readership for newspapers and novels, bought tickets to concerts and plays, patronized museums and libraries, went on tours, took vacations at seaside resorts and spas, and avidly participated in new sporting and recreational activities by taking up bicycling, tennis, and golf and attending athletic contests between amateur and professional teams.

The bourgeoisie also supplied much of the energy for the beginnings of modern feminism. Although challenges to discriminatory practices against women took place in many parts of the world, they were strongest in Europe and areas of European settlement, where women were better educated, had more freedom, and benefited from the growing acceptance of the idea of universal human rights.

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Revolutionary Republican Women demanded equality within marriage, access to public education, greater vocational opportunities, and political rights. In 1792 the English writer Mary Wollstonecraft argued in her widely read *A Vindication of the Rights of Women* that women were the intellectual equals of men but lacked education. Such voices were muted in the conservative atmosphere of the early 1800s, but from the 1850s onward increased schooling for girls, new employment opportunities for women, a declining birthrate (which reduced the time women devoted to child care), and the implications of democratic and socialist ideologies all contributed to feminism's revival. Despite opposition, women made progress. Rewritten civil codes gave married and divorced women greater rights, universities were opened to women, and negative stereotypes about women's abilities and roles in society weakened. The feminists' greatest battle was over political rights. Suffragists fought to gain the vote, but by 1916 only women in Scandinavia, New Zealand, Australia, and the states of Idaho, Utah, Wyoming, and Colorado could vote in national elections. Elsewhere women gained this right after World War I.

Beyond Europe and areas of European settlement, efforts to end discriminatory practices against women were inspired by Western missionaries, colonial officials, and Western-educated intellectuals and political leaders who came to see their society's treatment of women as an impediment to progress and a sign of backwardness. In China, for example, Protestant missionaries played an important role in a campaign to end footbinding, a practice that Westerners and many Chinese came to view as the archsymbol of Chinese women's oppression. In India, missionaries, British officials, and a number of Western-educated male Hindus sought, with some success, to end *sati* (the ritual suicide of widows by burning) and child marriage, allow widow remarriage, and reduce illiteracy. In the Middle East, efforts to educate girls were undertaken by missionaries and, beginning with the rule of Muhammad Ali (r. 1805–1848) in Egypt and the era of the Tanzimat reforms (1839–1876) in the Ottoman empire, also by Egyptian and Ottoman leaders. Such plans were largely unrealized, however, and throughout the region discussions of women's political rights, educational opportunities, and dress were limited mainly to upper-class women in cosmopolitan cities such as Cairo, Beirut, and Istanbul. Only in Japan, where Meiji reformers expanded educational opportunities for girls in the 1870s, did anything close to a feminist movement develop. Feminist writings began to appear in the 1880s, and in 1911 the first feminist organization, Seitosha (Blue Stocking Society), was founded.

Major social and cultural shifts came more slowly to areas that experienced little industrialization. In Latin America a white ruling class of wealthy landowners and merchants dominated society, while the Indian population fell into deeper poverty, especially from the 1870s onward, when white and mestizo landowners expropriated millions of acres of communal Indian lands. Only after the beginnings of industrialization and the influx of European immigrants in the 1880s did a small working class and a modestly growing middle class introduce an element of change to the region's culture and social relationships.

Continuity also characterized social developments in China, where most of the population remained peasants. Artisans and merchants played important economic roles, but with little industrialization, the number of factory workers was minuscule, and the middle class experienced no appreciable growth. China's Confucian-inspired social order, which placed the gentry, or scholar officials, at the top and farmers, artisans, and merchants below them, remained unchallenged despite rebellion, imperialism, and military defeat. Only in the 1890s did reformers begin to question the qualifications of the gentry to lead China and the value of the civil service examination system, which for centuries had produced the country's social and political elite by testing young men on their mastery of Confucianism. In 1906 the government abolished the examinations, a profoundly important step that set the stage for the overthrow of the imperial government itself in 1911.

In Europe's Asian and African colonies, colonial administrators, with the exception of their campaigns against slavery, had little interest in sponsoring or mandating changes in existing social values and hierarchies. To do so, it was believed, would only cause instability and resistance. In India, the British made no effort to weaken the caste system and in fact contributed to its growing rigidity and the heightened caste-consciousness of the Indian people. They did this by collecting and disseminating detailed information on their subjects' caste affiliations and by encouraging the idea that caste was an indicator of intelligence, racial purity, status, and suitability for different occupations. In Africa, the colonial era gave rise to the idea that Africa's population could best be understood as composed of numerous tribes, perceived to be a form of social organization suitable only for hunters and gatherers and primitive agriculturists. Such an assumption downplayed the complexity of precolonial African society, which consisted of a mosaic of lineage groups, age cohorts, clans, villages, chiefdoms, kingdoms, and empires. Tribes, however, made convenient units of administration, and in the system of indirect rule introduced by the British, chiefs, as heads of tribes, were given responsibility for local affairs.

The effects of British rule on the Indian caste system and the previously discussed role of Western missionaries in promoting feminist causes in China and the Middle East are two examples of a phenomenon that increased significantly between 1750 and 1914: cultural interchange. The prime example of this interchange was the diffusion of Euro-American mores, customs, tastes, fashions, and pastimes to many parts of the world. European business suits and top hats became the norm for statesmen and businessmen across much of Asia and parts of Africa. Upper-class women in Meiji Japan continued to wear traditional kimonos in their homes but when attending social events danced to Strauss waltzes in gowns imported from Paris and London and adorned themselves with Western-style jewelry and hats. Western fashion norms also affected many Pacific island women, who adopted Mother Hubbard dresses, wide loose-fitting gowns with long sleeves and a high neck, at the urging of missionaries who had been shocked by the natives' penchant for nudity and perceived sexual promiscuity.

Western influence went well beyond fashion. Western-style churches, office buildings, and train stations became part of the urban landscape in hundreds of colonial cities. In Japan, after Tokyo's Ginza district was destroyed by fire in 1872, it was rebuilt with two- and three-story Georgian-style brick buildings designed by an Irish architect. In larger cities, colonial administrators and native rulers built museums for the display of art and artifacts and theaters and opera halls where Western music was performed. The most famous such building was the Royal Opera House of Cairo, built on orders of Khedive Ismail. Designed by Italian architects, it opened in 1869 with a performance of Giuseppe Verdi's *Rigoletto* and two years later premiered Verdi's even more famous opera, *Aida*. Residents of African and Asian cities could also participate in Western pastimes. The Oriental Cricket Club was founded by Mumbai in 1848. An English-style thoroughbred race course was built in Shanghai in the same year. Baseball was introduced in Japan in 1878 by Japanese students returning from the United States, and by 1900 hundreds of club teams existed. Association football, or soccer, gained enormous popularity in Britain in the late 1800s and simultaneously was introduced in South America and other parts of the world. In the twentieth century this English invention became the world's most popular sport.

Western tastes and cultural norms had little impact at the village level or among the poor and illiterate. Nor were they welcomed universally. In the Middle East, many Muslims viewed Westernization as a dangerous threat to Islam. In Japan, the mania to Westernize that gripped the nation in the 1870s and 1880s had faded by 1900. And in India, an affirmation of Hindu customs and a rejection of further Anglicanization of Indian culture became a central theme for nationalist politicians such as Bal Gangadhar Tilak, who opposed British efforts to raise the age of marriage from 10 to 12 years old because he opposed the colonizers' right

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to interfere in Indians' beliefs and customs. Mohandas Gandhi, who asserted the superiority of Indian civilization to that of the West in *Indian Home Rule* (1909) and rejected Western dress in favor of simple peasant's garb, capitalized on these sentiments as he led India to independence between the 1920s and 1947.

Asian and African influences on Western culture between 1750 and 1914 were relatively insignificant. Although explorers' accounts, travel, travel literature, opportunities to study non-Western art in museums, and the emergence of anthropology as an academic discipline provided Europeans and Americans with vast amounts of information about the non-Western world, concrete signs of Afro-Asian influence on Euro-American culture were limited. Eighteenth-century interior designers, furniture makers, landscape architects, and pottery makers went through a period of chinoiserie in which they adopted certain principles of Chinese design in their work. Beginning in the mid-1800s, the opening of Japan to world trade created a flurry of interest in Japanese

painting, textiles, and ceramics. Prominent painters such as Degas, Renoir, Van Gogh, Pissarro, and Monet and the architect Frank Lloyd Wright are all on the list of painters and designers inspired by Japanese design. In the early 1900s Picasso and Matisse were influenced by African art, and the New Orleans musicians who started the musical style that came to be known as jazz were inspired by their African heritage. Outside the world of art and music, however, the cultures of Africa and Asia were subjects of interest but not sources of inspiration or models for the reform of behavior, society, or politics.

—James H. Overfield

■ Introduction: Families

Despite the fundamental importance of families to the structure and functioning of human societies, family history became a subject of inquiry and research among academic historians only in the 1960s and 1970s. Drawing on parish registers (which recorded births, deaths, and marriages), census records (which became increasingly available in the nineteenth century), tax records, probate records, and a variety of literary sources, historians, mostly French and English, were able to shed new light on the “modern European family,” characterized by nuclear rather than extended families, late marriage, a relatively large number of individuals who remained single, and efforts on the part of married couples to control or reduce fertility. Exploding the myth that such “modern” practices resulted from nineteenth-century industrialization and urbanization, these historians showed that such practices were well under way in much of England and northwestern Europe as early as the sixteenth century. Interest in family history was given further impetus by the pioneering work of the French historian Philippe Ariès, whose *L'Enfant et la Vie Familiale sous l'Ancien Régime* (1960; English translation, *Centuries of Childhood*, 1962) argued that the modern concept of childhood emerged from the sixteenth to eighteenth centuries in western Europe, when upper- and middle-class Europeans no longer viewed young people between the ages of 7 and 15 as “miniature adults.” Instead, they came to view these

years as a distinct life stage during which children needed to be nurtured and protected from adult realities such as birth, death, sex, war, and tragedy. Although Ariès's conclusions have been criticized, his imaginative use of cultural evidence in addition to demographic data has had a lasting influence on the field of family history.

Since the 1960s and 1970s family history has flourished but has tended to focus on developments in Europe, especially western Europe and North America, where changes in family life affected and were affected by industrialization, urbanization, migration, secularism, increased literacy, public schooling, feminism, and new political ideologies such as democracy, liberalism, and socialism. A major stimulus to the study of the family was the upsurge of interest in women's history from the 1970s onward. In their studies of courtship, motherhood, divorce, inheritance laws, and views of girlhood, historians trained in women's history inevitably deepened our understanding of the history of families. As a result of recent work in family history, we now more fully understand how family attitudes and practices varied according to class and region and how they changed over time. These changes are amply discussed in the entries in this section.

Whereas family life in nineteenth-century western Europe and North America was marked by both continuity and significant change, throughout eastern Europe, Latin America, Asia, and Africa traditional family-related attitudes

and practices largely persisted. Arranged marriages, extended rather than nuclear families, patriarchy, veneration of ancestors, the acceptance of polygyny, and long-established practices relating to divorce and widowhood continued, even though they began to be questioned and criticized by Western missionaries, colonial administrators, and native social reformers. In Meiji Japan, for example, despite the new regime's support for female education, the growing number of women in the workforce, and the existence of a nascent feminist movement, the official policy of the Meiji reformers was to consign women to their traditional role as head of the household, homemaker, and "good wife and wise mother." Article 5 of the Police Security Regulations of 1890 (renewed in 1900) barred women from joining political organizations, voting, and standing for public office. In China, traditional notions of marriage and the family came under attack during the Taiping Rebellion (1850–1864), whose leaders declared equality between men and women and outlawed concubinage and footbinding in areas they controlled. Campaigns against arranged marriages and footbinding were renewed in the 1890s but had little effect except among small numbers of Western-oriented middle-class families. Similarly, in the Middle East the debate about marriage and the family was initiated by reformers such as the Egyptians Qasim Amin (1863–1908) and Muhammad Abduh (1845–1905), who called for female education and greater equality within marriage. Their works created controversy but resulted in no concrete changes in family law or practice.

The situation was somewhat different in India and Africa. In both regions, not only did traditional practices come under criticism from Western missionaries and native reformers, but colonial administrations had the power to put at least some of their ideas into practice through legislation. In India, for example, the campaign against widow burning (*sati*), which was supported both by Westerners and also Indian reformers such as Rammohun Roy (1774–1833), culminated in the 1829 legislation that outlawed the practice in much of India. In 1856 the Indian government passed the Widow Remarriage Act, which prohibited the practice of enforced widowhood, even for women who were widowed

while still young. At the end of the century reformers took up the issue of child brides after the death of an 11-year-old Bengali girl due to forceful intercourse by her 35-year-old husband in 1889. In 1891 the administration proposed the Age of Consent Act to raise the age of consent and consummation from 10 to 12 years. The legislation was supported by Indian reformers and some Indian women but was bitterly opposed by Hindu nationalists. Although it passed in 1891, it never was seriously implemented, and the marriage of girls as young as 11 is still practiced in parts of early-twenty-first century India.

In colonial Africa missionaries wrestled with how best to deal with the issue of polygyny, the widespread but by no means universal practice of African men having multiple wives. Although some missionaries believed that Africans could remain in polygynous marriages even after becoming Christians, the majority opinion was that monogamy was an indispensable part of converting. Colonial governments supported this majority opinion and established legal codes that favored or enforced monogamous Christian marriage. In Nigeria in 1884 and the Gold Coast in 1908 British authorities established legal registration procedures for Christian marriages and licensed churches to perform state-sanctioned marriage ceremonies that required monogamy. Other regimes levied special taxes on men with more than one wife. As in India, however, missionary efforts and legislation made little headway in changing age-old African attitudes toward families and marriage. In the early twenty-first century the percentage of African men and women in polygynous marriages is only slightly lower than what it had been in the nineteenth century.

—James H. Overfield

African Families in the Early Colonial Era

The sudden military invasion of most of Africa by European countries in the late nineteenth century had a dramatic impact on African family life. Warfare, diseases, the rise of migrant labor, the chaos of war, and the imposition of new colonial legal institutions all affected family relationships. Elder men in many societies lost their ability to control younger men and women as

they had in the past. However, colonial officials sometimes collaborated with prominent African men to restrain the freedom of women and younger male relatives.

Military invasions of Africa between 1870 and 1910 tore apart many African families. Many African men died fighting British troops and their African allies in Kenya, Sierra Leone, Zimbabwe, and elsewhere. French forces in West and Central Africa, Portuguese soldiers in Angola and Mozambique, and the soldiers of Leopold II of Belgium in the Congo not only resulted in combat deaths but also forced many families to flee to safety in remote areas or to European missions. Troop movements also contributed to the spread of diseases such as sleeping sickness. Upheavals such as these also made it possible for some women and younger men to escape the authority of male elders and leading men who lost their lives or their prestige in anticolonial conflicts. Some women in Kenya chose to follow colonial military columns and migrant laborers working on railroad construction and on plantations far from home rather than stay at home. The ambiguous relationship of colonial officials to domestic slavery sometimes allowed families to reunite. In areas such as French West Africa, some slaves took advantage of French efforts to ban servitude to seek out family members. However, in northern Nigeria and elsewhere, other slave owners sought to mask their purchase of slaves by describing their purchases as marriage transactions.

Once the fighting was over and colonial regimes were established, economic changes also affected family life. Migrant labor, especially the need for workers in South African mines, meant that male workers could spend many years away from their home villages and their families. Some families suffered, especially when migrant workers did not send money home. Women in Mozambique took over tasks once dominated by men in agricultural work or sought to move to urban areas to support themselves. Younger men paid in wages often challenged the authority of elders, who lacked access to cash. The wide use of mercenaries and foreign Africans as clerks and traders helped to create new family arrangements. Gabonese traders stationed in Dahomey and Cameroon often married local

women, while Zanzibari, Hausa, and Senegalese troops garrisoned far from home formed families with local women.

Maintaining stability was a goal of many colonial governments, but their policies often disrupted local gender relations. Most governments did little to restrict polygamous marriages, but the chaos of early colonial occupation led many women to flee husbands and ask for divorces in newly formed courts of law. Women in Ghana had some success demanding payments and the dissolution of marriages in court, but authorities often conspired with leading men to make divorce very difficult. In Zambia and Zimbabwe, colonial officials abandoned their earlier willingness to listen to women's concerns and gradually worked to limit women's rights within marriages between 1890 and 1914. While French officials in West Africa and British authorities in Zanzibar and northern Nigeria tried to limit freedoms for slaves, many captives left their defeated masters and tried to reunite with their old families. By 1914 many governments tried to strengthen the power of elder men through new legal codes and discrimination against women and younger men. However, some women used these courts to demand more independence or more resources from husbands and male relatives.

Religious changes had mixed results for African families. Many African societies disdained Christian mission teachings on marriage and the prohibition on premarital sex, but female converts to Christianity often refused to accept polygamous marriages. African-led Zionist churches in South Africa, by contrast, defended polygamy. Violence against women and children was often less acceptable among African converts. Thus, religious changes affected African families in many different ways.

—Jeremy Rich

Bibliography

- Allman, Jean, and Victoria Tashjian. *"I Will Not Eat Stone": A Women's History of Colonial Asante*. Portsmouth, NH: Heinemann, 2000.
- Chanock, Martin. *Law, Custom, and Social Order: The Colonial Experience in Malawi and Zambia*. 2nd ed. Portsmouth, NH: Heinemann, 1998.
- Coquery-Vidrovitch, Catherine. *African Women: A History*. Boulder, CO: Westview, 1997.

Jeater, Diana. *Marriage, Perversion, and Power: The Construction of Moral Discourse in Southern Rhodesia, 1894–1930*. Oxford: Oxford University Press, 1993.

Family Law in Meiji Japan— The Civil Code of 1898

For 30 years following the Tokugawa regime's collapse, Japan's political and intellectual leaders struggled to fashion a legal code that balanced the best features of Western principles and traditional Japanese culture. In the end, the Civil Code of 1898 reflected deep Japanese ambivalence toward modern notions of individual rights and retained the considerable powers that traditional household patriarchs had over their families.

The need for legal reform became apparent shortly after the Meiji Restoration. In the 1850s, Western gunboat diplomacy forced Japanese leaders to accept a series of humiliating treaties that opened Japanese ports to foreign trade, put tariffs under international control, and created a system of extraterritoriality. Foreign nationals accused of crimes in Japan were tried not by Japanese law but rather in consular courts of their home countries. Angered by the Tokugawa

shogun's inability to satisfactorily rebuff Western demands, young Japanese officials overthrew the regime and in 1868 established a new government in Emperor Meiji's name dedicated to the rapid adoption of Western technology and institutions.

The Meiji government needed a new legal system that was both uniform across different regions and social classes in Japan and acceptable to Westerners for the repeal of extraterritoriality. During the 1870s, the Meiji regime replaced formerly semiautonomous feudal domains with centralized administration from Tokyo. The samurai-dominated class structure was also abolished, making Japanese subjects equal before the law. There was still a need for a uniform legal code to replace earlier laws that differed according to domain and class. In 1869, the government charged Eto Shimpei (1834–1874) with drafting a civil code based on French law. In 1880, the Meiji government asked the French lawyer Gustave Emile Boissonade, who had been hired to teach officials in the Japanese Ministry of Justice, for a draft of a civil code. A government committee reviewed the Boissonade project and submitted its own draft, which was approved in 1890 to become effective in 1893.

EXCERPTS FROM THE JAPANESE CIVIL CODE

The following chapter and section divisions are taken from Book IV, "Relatives," of the Japanese Civil Code, adopted in 1898:

"Chapter II: The Head and Members of a House

Section II: Rights and Duties of the Head and Members of a House

Article 746: The head of a house and its members bear the (family) name of such house.

Article 747: The head of a house is bound to support its members.

Article 748: Property acquired by members of a house in their own name constitutes their own separate property.

When it is uncertain whether property belongs to the head or a member of a house it is presumed to be the property of the head of the house.

Article 749: Members of a house may not fix their place(s) of residence against the will of the head of the house.

So long as members of a house are not at the residence(s) designated by the head of the house and contrary to the provisions of the preceding paragraph, the head of the house is relieved from his obligation to support such member(s). . . .

Article 750: The consent of the head of the house is required when a member of a house (desires) to be a party to marriage or adoption. . . ."

—John Sagers

Source

Civil Code of Japan, trans. W. J. Sebald (Kobe: J. L. Thompson, 1934), 169–170.

The new civil code created considerable controversy between supporters of Western theories of individual natural rights and traditionalists who believed that maintaining the patriarchal household system was vital to Japan's social stability and cultural survival. The Japanese Diet passed a bill postponing enactment of the civil code and appointed a commission, which rewrote Books Four and Five on family matters. Hozumi Yatsuka (1860–1912) feared that ancestor worship and filial piety, which he believed were at the foundation of Japanese culture, would deteriorate if family authority over individuals was not spelled out in law. Saionji Kimmochi (1849–1940), on the other hand, thought that Japan should conform to international legal standards and that attempts to preserve cultural particularities were misguided.

The Meiji Civil Code embraced individualism in property ownership and personal liability but gave household heads extensive powers over family members. Books One through Three on general provisions, property rights, and contracts were based largely on the earlier French drafts. Book Four on relatives and Book Five on succession, however, were rewritten according to Japanese practice. Individuals were required to be registered as part of an extended family or house. Approval of the house head was required for any member to change households through marriage or adoption. Houses were patriarchal, and wives generally entered the households of their husbands. Women could be house heads if no suitable male heir was available, but upon their marriage headship usually passed to the husband. In cases of divorce, the children usually remained in the father's house. Women could own property, but the house head was designated as the property's manager, although the wife's consent was required for him to sell the property or use it as security for a loan. As these examples show, the house head's authority circumscribed individual rights granted in other parts of the Meiji Civil Code.

The Meiji Civil Code remained in effect until after World War II, when the Allied occupation of Japan prompted a revision that abolished the house head system in 1947.

—John Sagers

Bibliography

- Civil Code of Japan*. Translated by W. J. Sebald. Kobe: J. L. Thompson, 1934.
- Hatoyama, Kazuo. "The Civil Code of Japan Compared with the French Civil Code." *Yale Law Journal* 11(6) (1902): 296–303.
- Hirakawa Sukehiro. "Japan's Turn toward the West." In *Cambridge History of Japan*, Vol. 5, *Nineteenth Century*, edited by Marius B. Jansen. Cambridge: Cambridge University Press, 1989.
- Ishii Ryosuke. *Japanese Legislation in the Meiji Era*. Translated by William J. Chambliss. Tokyo: Pan-Pacific Press, 1958.
- Steiner, Kurt. "Revision of the Civil Code of Japan: Provisions Affecting the Family." *Far Eastern Quarterly* 9(2) (1950): 169–184.

Hindu Critics of Traditional Indian Marriage—Rammohan Roy and Ishwarchandra Vidyasagar

In the nineteenth century, Rammohan Roy (1773–1833), known as the "father of modern India" and founder of the Vedantist-reformist society Brahmo Samaj, and Ishwarchandra Vidyasagar (1820–1891), a prolific scholar and reformer who worked to secure greater educational access for women and lower-caste Indians, challenged traditional Hindu marriage practices as part of their more general critique of the treatment of Hindu women. Upper-caste Hindu orthodoxy advocated *sati* (in which widows cremated themselves by throwing themselves upon their husbands' funeral pyres or burning themselves) and argued that the practice was sanctioned by Hindu law in the *Vedas*, *Śāstras*, and *Puranas*. Roy, on the other hand, found an altogether different interpretation: *sati* was immoral, and it was either murder or suicide but not a virtuous action. Instead, Roy asserted that a widowed Hindu was supposed to lead a life of asceticism; such a view was provided for in the *Vedas*, the laws of Manu, and the *dharmasāstras*.

The role of Hindu inheritance laws further influenced Roy's stance on *sati* and the treatment of Hindu widows. In his "Brief Remarks Regarding Modern Encroachments on the Ancient Rights of Females, According to the Hindoo Law of Inheritance" (1822), Roy declared that modern Indian civilization was degraded and that the interpretation and application of Hindu law

► ROY ON SATI AND HINDU MARRIAGE, 1822

“It is not from religious prejudices and early impressions only that Hindu widows burn themselves on the piles of their deceased husbands, but also from their witnessing the distress in which widows of the same rank in life are involved, and the insults and slights to which they are daily subjected, that they become in a great measure regardless of existence after the death of their husbands: and this indifference, accompanied with the hope of future reward held out to them, leads them to the horrible act of suicide. These restraints on female inheritance encourage, in a great degree, polygamy, a frequent source of the greatest misery in native families; a grand object of Hindoos being to secure provision for their male offspring, the law, which relieves them from the necessity of giving an equal portion to their wives, removes a principal restraint on the indulgence of their inclinations in respect to the number they marry.”

—Vidyasagar on Hindu (Re)Marriage, 1855

“An adequate idea of the intolerable hardships of early widowhood can be formed by those only

whose daughters, sisters, daughters-in-law, and other female relatives, have been deprived of their husbands during their infancy. How many hundreds of widows, unable to observe the austerities of a *Brahmacharya* life [i.e., celibacy], betake themselves to prostitution and foeticide and thus bring disgrace upon the families of their fathers, mothers, and husbands. If the marriage of widows be allowed, it will remove the insupportable torments of life-long widowhood, diminish the crimes of prostitution and foeticide, and secure all families from disgrace and infamy.”

—John R. Pincince

Sources

Raja Rammohan Roy, “Brief Remarks Regarding Modern Encroachments on the Ancient Rights of Females,” in *The Essential Writings of Raja Rammohan Roy*, edited by Bruce Carlisle Robertson (Delhi: Oxford University Press, 1999), 150–151; Isvarchandra Vidyasagar, *Marriage of Hindu Widows* (Calcutta: K. P. Bagchi, 1976), 16–17.

left women, and widows specifically, in a state of destitution. For example, Roy argued that Hindu inheritance laws in Bengal created conditions whereby family members coerced a Hindu widow to join her dead husband on the funeral pyre, thereby removing her from inheritance claims and the commitment of family members to provide her sustenance and support.

According to Roy, women in general were mistreated by men: by their fathers, brothers, husbands, uncles, and religious men. It was no wonder that Hindu widows might choose sati in an act of desperation. In other words, sati was an act of suicide or, worse, murder. Beyond that, Roy was largely silent on the subject of Hindu marriage or widow remarriage. Instead, he continuously stressed an austere life for a Hindu widow. With regard to marriage generally, Roy frequently was critical of polygamy, child marriage, and dowry, especially as practiced among his own upper-caste group of *kulin* Brahmins.

In 1829 the administration of Lord William Bentinck (1774–1839), governor-general during

1828–1835, passed Regulation XVII, which abolished sati. The preamble to the regulation noted that the “revolting” practice violated Hindu laws and instead offered “a life of purity and retirement” for widowed Hindi women. This interpretation was in accordance with the arguments set forth by Roy in his pamphlets. Not until 1856 were Hindu widows accorded the right to remarry, largely due to the endeavors of Ishwar-chandra Vidyasagar.

Like Roy before him, Vidyasagar offered a new interpretation of the texts that formed the compendium of Hindu law and legal commentary on Hindu marriage. Unlike Roy, however, Vidyasagar considered three, rather than two, options available to Hindu widows: remarriage, asceticism or *brahmacharya*, and sati. Whereas Roy supported a widowhood of asceticism, Vidyasagar defended the right of Hindu widows to remarry, most notably in his pamphlet “In Favor of Widow Re-marriage,” first published in 1855. He wrote a number of pamphlets in support of remarriage, spoke and argued on the

subject in public, and even established a society to advance Hindu widow remarriage. He also advanced the cause in offices of the East India Company administration. Eventually Vidyasagar succeeded when the government of Bengal passed the Hindu Widow's Remarriage Act of 1856 (Act XV of 1856). Vidyasagar, as a social reformer, was equally critical of polygamy; child marriage, particularly child widowhood; inheritance laws; and the oppressive conditions of the extended Hindu family.

—*John R. Pincince*

Bibliography

- Bandyopadhyay, Sekhar. "Caste, Widow Remarriage and the Reform of Popular Culture in Colonial Bengal." In *From the Seams of History: Essays on Indian Women*, edited by Bharati Ray. New Delhi: Oxford University Press, 1995.
- Kopf, David. *The Brahmo Samaj and the Shaping of the Modern Indian Mind*. Princeton, NJ: Princeton University Press, 1979.
- Roy, Rajah Rammohan. "Brief Remarks Regarding Modern Encroachments on the Ancient Rights of Females, According to the Hindoo Law of Inheritance." In *Translation of Several Principal Books, Passages and Texts of the Vedas and of Some Controversial Works of Brahmunical Theology*, edited by Raja Rammohan Roy. London: Parbury, Allen, and Co., 1832.
- Roy, Rajah Rammohan. *The Essential Writings of Raja Rammohan Roy*. Edited by Bruce Carlisle Robertson. Delhi: Oxford University Press, 1999.
- Sarkar, Sumit. "Vidyasagar and Brahmanical Society." In *Writing Social History*. New Delhi: Oxford University Press, 1996.
- Vidyasagar, Ishvarchandra. *Marriage of Hindu Widows*. Calcutta: K. P. Bagchi, 1976.

Family Law in Revolutionary and Napoleonic France

The French Revolution produced profound changes in French society, including family law. During the Revolution, women gained legal equality with men and sought changes to their marital status. The wedding no longer required priests, and after September 1792 only a civil marriage was legal. This required only a mutual pledge signed before a civil authority. Divorce, prohibited by the Church, was legalized and simplified, allowing women to file for divorce after

September 1792. This led to a rush for divorces, and within two years, almost 6,000 divorces were granted in Paris alone. Many unwed couples lived together, which led to many children born out of wedlock. By 1797, the government recorded some 4,000 foundlings in Paris and about 44,000 foundlings in the rest of France.

The Jacobin government (1793–1794) advocated its own family program aimed at breaking up the traditional family, an institution that mirrored the inequalities and injustices of pre-Revolutionary France. The government suppressed the husband's authority, made spouses equal in rights, set up family courts that supplanted patriarchal authority, abolished the law of primogeniture, and ended the right of parents to jail a minor child for disciplinary purposes. The ideas of equality and liberty emancipated sons and daughters from their parents and loosened parenting.

French family law was drastically reversed after the rise of Napoleon Bonaparte, who seized power in November 1799. Napoleon promulgated his famous Civil Code in 1804 and set a new legal basis for the family. The Civil Code's provisions concerning family law and the treatment of women were hotly debated, since they represented a step back from the Revolutionary principles and a resurrection of the customary and religious-based laws of the ancien régime. Napoleon's conservative views on this subject and his emphasis on the value of family played an important role in this. The interests of individual family members were subordinate to the interests of the family unit.

Under Napoleon, marriage was completely secularized and turned into a civil ceremony. The issue of a dowry, which was a prevalent tradition at the time, was resolved through an arrangement between the couple in their marriage contract. The age limits were set at 18 for a man and 15 for a woman, but the government had the right to grant dispensations of age. The marriage could be dissolved only in case of the death of one of the parties or through a lawfully pronounced divorce.

After the Revolution, many felt that morality had declined because it had become too easy to obtain divorces. The Catholic Church opposed divorce and civil marriages in general and lobbied

in favor of restoring its control over the family. However, Napoleon's Civil Code made it more difficult to obtain a divorce. Divorce by mutual consent (Article 233) was retained, but the only legal grounds for divorce were adultery, cruel and excessive punishment of one spouse (Article 232), and "outrageous conduct, ill-usage, or grievous injury" (Article 231). These changes were detrimental to women's status and a retreat from the Revolutionary laws that set simple and equal grounds for divorce for both genders. For example, under the Civil Code, if a wife caught her husband having sex with another woman and shot him, she was considered a murderer. If the situation was reversed, the husband's actions were considered justified, and charges could not be brought against him. Furthermore, a woman's right to divorce was seriously curtailed by the provision that allowed the husband to keep a mistress physically outside the home to avoid the charge of adultery. The wife found guilty of adultery could be imprisoned from three months to two years, depending on the inclination of the husband. Yet a husband convicted of adultery was subject only to a fine of from 100 to 2,000 francs.

The Civil Code also strengthened the authority of fathers and husbands. The wife owed obedience to her husband (Article 213), but the husband pledged protection to the wife. The wife was obliged to live with her husband and to follow him anywhere he decided to reside. She could not plead in her own name, without her husband's permission, in business transactions. However, Article 218 stressed that "if the husband refuses to authorize his wife to plead in her own name, the judge may give her authority." Women's property was managed by a husband or a male relative, and women were treated as if they were minors in legal proceedings.

Fathers had the right to imprison disobedient children for a month up to the age of 16 and for six months thereafter. A father could prevent his son's marriage until he was 26 and his daughter's until she reached 21. Elder children still needed the formal permission of their parents to marry (Articles 148–153, 173–174). To preserve the family, the Civil Code reversed the Revolutionary laws concerning illegitimate children. Individual legitimate children could not be disinherited, but illegitimate children could

inherit only if they were legitimized. The wife was excluded from inheriting any portion of the family property since it was assumed that the husband would make separate arrangements for the maintenance of his spouse.

—Alexander Mikaberidze

Bibliography

- Bock, Gisela, and Allison Brown. *Women in European History*. Malden, MA: Blackwell, 2002.
- Madelin, Louis. *The French Revolution*. New York: Putnam, 1916.
- Plumptre, Anne. *A Narrative of a Three Years' Residence in France, Principally in the Southern Departments, from the Year 1802 to 1805*. London: Taylor, 1810.
- Schwartz, Bernard, ed. *The Code Napoleon and the Common-Law World: The Sesquicentennial Lectures Delivered at the Law Center of New York University, December 13–15, 1954*. 1956; reprint, Union, NJ: Lawbook Exchange, 1998.

Family Law in Nineteenth-Century Europe—Marriage, Women's Status, and Child Custody

Just as the nineteenth century saw dramatic changes in perceptions of the family and womanhood, it also was a period of change in the area of family law and women's legal status. The Napoleonic Code, enacted in France in 1804, perhaps exemplifies the period best. The code overturned legislation adopted during the French Revolution that legalized divorce and gave women greater rights in matters pertaining to child custody, property divisions, and alimony. The code also put into law the developing separation between public and private that confined women to the domestic sphere. Under the new laws, which were enacted throughout the Napoleonic empire, women had no legal rights to property and had limited access to divorce. Even this limited access to divorce was reduced further in France, when in 1816 divorce was made illegal, not to be restored until 1884.

In England, unaffected by the Napoleonic Code, laws also were restrictive but were gradually modified over the century as women argued for their rights. Beginning with the 1753 Marriage Act, Parliament began enacting laws

CAROLINE NORTON

Caroline Norton (1808–1877) was a feminist and social reformer in addition to being considered one of the great beauties of her age. Her marriage to lawyer George Norton was a failure, and in 1836 she left her husband. George Norton garnered the income from his wife's books and hid away their children in Scotland and Yorkshire. He refused to grant her a divorce and retained control of their children. Caroline was given supervised visiting rights only after one of the sons was killed in a riding accident. She became an advocate for women's rights within marriage and wrote a number of books and pamphlets on the subject. The following is an excerpt from one of her texts, *English Laws for Women in the Nineteenth Century*:

"I learnt, too, the LAW as to my children—that the right was with the father; that neither my innocence nor his guilt could alter it. . . . The eldest was but six years old, the second four, the youngest two and a half, when we were parted. I wrote, therefore, and petitioned the father and husband in whose power I was, for leave to see them—for

leave to keep them, until they were a little older. Mr. Norton's answer was, that . . . if I wanted to see them, I might have an interview with them at the chambers of his attorney. I refused, and wrote as follows to my solicitor. . . . 'I must decline seeing my children in the manner proposed. I say nothing of the harshness, the inhumanity of telling me I must either see them at the chambers of his solicitor, or not at all; but I say it is not DECENT that the father of those children should force me, their mother, out of the very tenderness I bear them, to visit them at the chambers of the attorney who . . . conducted the proceedings for the intended divorce. . . . Why then, are my children kept from me?—from me, whom even their own witnesses proved to be a careful and devoted mother? Mr. Norton says, the Law gives him my children.'"

—Katherine Worley

Source

Caroline Norton, *English Laws for Women in the Nineteenth Century* (privately published, 1854), 49–50.

affecting marriage. Under this law, legal marriages were to be performed by a clergyman of the Church of England as a public act except for Jews and Quakers. Parental consent was required for anyone under the age of 21. While the law's intent was to prevent sons and daughters of the gentry and aristocracy from marrying without their parents' knowledge, it was a move toward the regulation of marriage by the state. In 1857 Parliament passed the Matrimonial Causes Act. Previously, divorce, while legal, was only obtainable through an act of Parliament, making it impossible for the poor and difficult even for those who could afford it. The 1857 act equalized access to divorce by allowing proceedings to take place in a court of law, but women were encumbered with a heavier burden of proof than men when presenting grounds for divorce. While men were allowed divorce on grounds of adultery, women also had to prove that their husbands had committed incest, had abandoned them, or had been unusually cruel.

In addition, married women's access to their property remained limited. Under the English law of coverture, upon marriage a woman's property was ceded to her husband. Any property or earnings she might acquire while married also belonged to her husband. In the 1800s, however, married women slowly gained greater control over their property as a series of laws concerning married women's property were passed and amended. In 1870 a law was passed that allowed married women to retain control of a limited amount of any earnings as well as any property owned prior to marriage. Finally in 1882, with the Married Women's Property Act, a married woman was allowed full access to her property and wages just as if she were single.

Restrictions also existed regarding women's rights to their children in the cases of divorce or separation. In the early 1800s women had no recourse to custody of their children, as women were considered incapable of rearing a child properly on their own. This began

to change, however, as a new notion of natural, moral motherhood came to bear on issues of child custody. The shift to a more private, domestic concept of the family brought with it the idea that women were naturally more inclined toward a child's welfare than men, and by the late 1830s this shift affected both social thinking and legislation. After a very public divorce from her husband George, Caroline Norton, a novelist and poet, lobbied Parliament for the custody of her young children. In her arguments, Norton argued that women, as mothers, played a critical role in a child's life. After failing to pass in the House of Lords, the bill was eventually passed and made law in 1839 as the Infant Custody Act. Under this law, women, as long as they had not committed adultery, could petition for custody of their children under the age of 7. While important, this law still did not hold men and women as equals in regard to their rights to children, and the laws changed very slowly over the following decades. In 1873 the Custody Acts gave women rights to children under the age of 16, but it was not until 1925 with the Guardianship of Infants Act, nearly a century after Norton first presented her case, that men and women had fully equal rights under the law to their children.

Changes in family law in continental Europe were more limited but resembled those in Britain in some respects. In France, prohibitions against divorce were lifted in 1884, and laws were passed that strengthened women's rights with respect to property and the custody of children. France, like Britain, also passed legislation to protect children from mistreatment by their parents. In Italy, before unification, systems of family law in the various Italian states drew heavily on the Austrian and French civil codes and also were influenced by the teachings of the Roman Catholic Church on matters relating to divorce, for example. After unification, the *codice civile* outlawed divorce but affirmed the secular character of marriage by affirming that all marriages had to be recorded by the state. Fathers were granted authority over the person and property of children, but their use of the property that women brought to the marriage in the form of a dowry was restricted in various ways. In newly united Germany as a result of a law passed in 1875, a civil ceremony became the

exclusive means of entering into matrimony. Efforts to write a civil code for Germany as a whole proved difficult because of divisions between Protestant regions, where divorce had been permitted since the late 1700s, and Catholic areas, where divorce was illegal. When a new civil code was adopted in 1900, divorce was permitted for reasons of adultery, serious criminal conduct, willful desertion, threats of murder, and "grave violations of duties of marriage or by dishonorable or immoral conduct that has caused so grave a disorder" that the marriage could not continue. Otherwise, the code granted husbands authority over children, property, and the person of their spouse. Nowhere on the continent did the autonomy of married women advance as far as in England.

—Katherine Worley

Bibliography

- Bonfield, Lloyd. "European Family Law." In *Family Life in the Long Nineteenth Century*, edited by David Kertzer and Marzio Barbagli. New Haven, CT: Yale University Press, 2002.
- Davidoff, Leonore, and Catherine Hall. *Family Fortunes: Men and Women of the English Middle Class, 1780–1850*. Chicago: University of Chicago Press, 1987.
- Jalland, Pat. *Women, Marriage, and Politics, 1860–1914*. Oxford: Oxford University Press, 1986.
- Stone, Lawrence. *Broken Lives: Separation and Divorce in England, 1660–1857*. Oxford: Oxford University Press, 1993.

Divorce Law in Europe and the United States

Throughout the eighteenth and nineteenth centuries, various legal codes and practices defined the often narrow conditions for marriage dissolution in Europe and the United States. The limited possible grounds for a divorce, the demand for proof of a spouse's guilt, and the lengthy and complex legal procedures made marriage dissolution difficult and expensive. Moreover, divorce was likely to result in social ostracism in the Christian West. Therefore, it remained a marginal phenomenon into the twentieth century. It did, however, stir heated political and social debates in Europe and the United States, as definitions and codifications of divorce seemed to

► LES DIVORCEUSES—CARICATURES OF THE DIVORCE DEBATE

In 1848, the French illustrated newspaper *Le Charivari* published a series of drawings titled “Les divorceuses” by political satirist Honoré Daumier (1808–1879). During that revolutionary year, new attempts to reinstate divorce in France were brought forward by Minister of Justice Adolphe Crémieux. Radical women’s groups quickly joined in the debate, demanding the right to divorce, while critics across the political spectrum pointed to the moral dangers of women’s social and sexual liberation that would result from the codification of divorce. Daumier’s caricatures ridiculed the politicized women demanding their rights and suggested not only the absurdity of divorce legislation itself but also women’s inability to comprehend national politics.

—Josephine Hoegarts

Translation: “Ladies . . . there is a rumour that we will soon be refused the law allowing divorce . . . Let us unite and declare a state of emergency for the nation!” Illustration by Honoré Daumier, from “Les Divorceuses” series, plate no. 1, Le Charivari, August 4, 1848. (Bibliothèque Nationale, Paris, France/Giraudon/The Bridgeman Art Library)



question the sanctity of marriage and called for a reevaluation of married women’s rights.

Divorce had been available in a number of early modern Protestant states, dating as far back as the era of the Protestant Reformation. A more widespread liberalization of divorce laws, however, only occurred at the turn of the nineteenth century with the rise of the liberal secular state. Throughout the nineteenth century, legislators, journalists, and preachers debated the terms, conditions, and what critics perceived as possibly immoral outcomes of divorce in Europe and the United States. In revolutionary France, as the movement entered its radical phase in the fall of 1792, the Legislative Assembly broke with the Catholic Church’s doctrine that marriage was indissoluble by allowing spouses to divorce legally on the grounds of immorality, cruelty, insanity, conviction for certain crimes, two years’ desertion, emigration, or mutual consent. Based on the principle that marriage was a civil contract, divorce proceedings were cheap and available to all men and women.

The Napoleonic Civil Code (1804), however, redefined the criteria for marriage dissolution in France and by extension those parts of Europe under French rule (including Italy, the Netherlands, Belgium, and parts of Germany). Divorce was made much more difficult because of the strictly defined criteria for at-fault divorce and by the long, complex, and expensive procedures it required. In 1816, following the restoration of the French monarchy, divorce in France was abolished altogether, but the regulations of the civil code were reestablished in 1884.

In Belgium, a civil code introduced in 1831 copied the Napoleonic regulations on divorce, which remained in force until World War I. Similarly, the 1838 Dutch code resembled the Napoleonic code, although divorce by mutual consent could only be obtained after a five-year period of judicial separation. In Italy, divorce was not included in the civil code of 1865, and numerous attempts to introduce it (from 1878 onward) failed, until divorce was finally legalized in 1974. In Prussia, the *Allgemeine Landrecht* (General

State Law) that had been under construction since 1750 was finished in 1794. It defined marriage as dissoluble but, according to the guilt principle, required that one party was responsible for the marital breakdown. This principle of responsibility was maintained and more strictly applied in the *Bürgerliches Gesetzbuch* (Civil Code) that codified divorce in the German empire in 1900. In England, divorce was only attainable by an act of Parliament until the Matrimonial Causes Act was passed in 1857 and allowed for divorce through law courts on the grounds of adultery, incest, cruelty, bigamy, or desertion. In the United States, although the divorce policy remained restrictive and only allowed for at-fault divorce, a complete dissolution of marriage with the possibility to remarry became possible in most states as early as 1800.

Despite the different trajectories of European civil codes and their treatment of divorce, the grounds on which a divorce could be obtained were remarkably similar in all nineteenth-century secular states (in Catholic countries such as Spain, canon law, the internal ecclesiastical law of the Catholic Church, remained in force until well into the twentieth century and made it impossible to dissolve the sacramental marital bond). Desertion for seven years or more, adultery, and cruelty were the most common grounds on which the injured party could seek a divorce. Other grounds included insanity, severe insult, refusal of sexual intercourse, impotency, conviction to a degrading punishment, abandonment of Christianity, and the impossibility to live together. Of these causes, cruelty was most cited by women, whereas divorce because of adultery was usually granted to men.

For adultery, the Napoleonic code had specified that a husband could be granted a divorce on the grounds of simple adultery, whereas a wife could only ask to be separated from an adulterous husband if he housed his mistress. The double standard was upheld in the Victorian Anglo-American world too, as women's adultery was considered more dangerous because it could result in illegitimate offspring. Women's adultery was also seen as anomalous in itself, as women (in contrast to men) were supposedly immune to sexual urges.

The image of the innocent and submissive wife was also prevalent in proceedings based on

allegations of cruelty. Especially in the United States, where the romantic, companionate marriage was most ardently advocated, women's petitions for divorce could be framed as self-defense. This option was less available to European women, as the French legal code stipulated that women were to obey their husbands. In legal practice, this resulted in granting husbands marital authority, similar to the authority they exerted over their children. A man's right to correct his wife was tacitly acknowledged as long as it did not disturb the community's social order.

—Josephine Hoegarts

Bibliography

- Basch, Norma. *Framing American Divorce: From the Revolutionary Generation to the Victorians*. Berkeley: University of California Press, 1999.
- Phillips, Roderick. *Putting Asunder: A History of Divorce in Western Society*. New York: Cambridge University Press, 1988.
- Stone, Lawrence. *Road to Divorce: England 1530–1987*. Oxford: Oxford University Press, 1990.

Childhood

Childhood, at first, seems a static idea that has always had the modern meanings of play, innocence, and learning. However, this ideal of childhood is a relatively recent creation, and ideas of childhood varied throughout time and space. In the Western world, the meanings of childhood underwent many transformations from the eighteenth through the early twentieth centuries. Allowing for class and geographical variations, there were three broadly defined phases: the pre-Enlightenment phase, the Enlightenment phase, and the Industrial phase.

Prior to the Enlightenment era, childhood was not considered a distinct phase of life. Working-class children, including both the urban working class and the rural peasantry, left home to become apprentices or domestic servants and were seen as neither children nor fully independent adults until they married. Furthermore, the primary role of family was patriarchal and often authoritarian, and its purpose was to pass on land and status to offspring, not to nurture or protect them. Some historians argue that children were seen not as a blessing but as an emotional and financial burden on the family until they were old

enough to become economically viable. For example, for working-class families historians point to the high rates of child abandonment while noting that in upper-class households parents and children were separated, as wealthy children were often left to wet nurses, nannies, and tutors. Furthermore, many historians argue that the high infant and child death rates kept parents from investing too much in their children. Finally, prior to the Enlightenment era many Western societies believed that all children were tainted by Original Sin and thus born corrupt.

However, in the eighteenth century many Enlightenment thinkers challenged the idea that children were born sinful and reified childhood as a time of blessed innocence. Rousseau, influenced by earlier thinkers such as John Locke, argued in his famous 1762 book *Émile* that children, unlike adults, were born free from the taint of modern civilization and that their education should nurture that natural innocence instead of focusing on rote memorization. However, Rousseau only advocated this for males and argued that females should be confined to domestic tasks and spheres. Later, Romantics such as William Wordsworth sentimentalized childhood and used children as metaphors of innocence, truth, and beauty in their works. These thinkers contributed to the idea that children should be valued despite their lack of economic worth and that the key to their development was education. Further, they gave parents permission to lavish affection on their children, whereas paternalistic authority and harsh discipline were previously deemed crucial to raising one's offspring. Indeed, motherhood was given a new importance at least among the middle and upper classes, as mothers were seen as the primary teachers of children and as having a great deal of influence on their development for good or ill.

These ideals, in conjunction with lowered rates of infant mortality and an increase in privacy and leisure time for upper and middle classes, served to sanctify childhood as a particularly important and joyous part of life. However, these ideals sometimes clashed with the realities of working-class life during the Industrial era when children were increasingly employed in factories, as their wages were often needed to supplement the family income. Though conditions varied, in some industries,

THE CREATION OF THE BRITISH BOY SCOUTS

For many people, belonging to an international youth group such as the Boy Scouts or Girl Guides was a significant part of their childhood. The Boy Scouts was originally created at the end of the nineteenth century due to concerns about the declining British Empire. In particular, Britain's poor performance in the Boer War raised concerns about the moral and physical fitness of the populace; many connected increased urban living and women's rights to a crisis in British masculinity. In response to these concerns Robert Baden-Powell, a decorated Boer War veteran, created the Boy Scouts in 1908. The Scouts, which focused on morality, physical fitness, obedience to authority, acceptance of one's social station, and staunch patriotism, used outdoor activities and the appropriated and reinterpreted customs of North American indigenous peoples to reawaken young men's "primitive" masculinity. The movement was widely popular among the middle and upper classes. It spread to North America in 1910, and the female branch, the Girl Guides, was created in 1912. Though the underlying messages of the movement have changed, it remains an internationally accepted organization.

—Heather Stanley

particularly the textile industry, the hours and conditions were seen by the upper and middle classes as brutal. Philanthropists and government officials worried about the development of children forced to work from an early age, especially as they had little or no schooling. This led to the creation of child labor laws in many countries, and eventually many Western nation-states made elementary schooling both free and compulsory although attendance was difficult to enforce. As children became more visible, especially as school attendance increased, new standards were set for development and endorsed by a newly professionalized group of experts.

Though it seems at first that the history of childhood from the eighteenth to the twentieth centuries is a story of progress, it should be noted that many families rejected measures such as compulsory education as interfering and paternalistic. For many working-class children, school conditions were the same as work but without remuneration. However, it is clear that

ideas of childhood changed drastically during this time period as children went from being defined as not yet adults to individual entities experiencing a more clearly demarcated time in their life cycle that, in turn, was given much increased importance.

—Heather Stanley

Bibliography

- Cunningham, Hugh. *Children and Childhood in Western Society Since 1500*. New York: Addison Wesley Longman, 1995.
- Gottlieb, Beatrice. *The Family in the Western World from the Black Death to the Industrial Age*. Oxford: Oxford University Press, 1993.
- MacDonald, Robert H. *Sons of the Empire: The Frontier and the Boy Scout Movement, 1890–1918*. Toronto: University of Toronto Press, 1993.
- Mintz, Steven, and Susan Kellogg. *Domestic Revolutions: A Social History of American Family Life*. New York: Free Press, 1988.
- Rosenthal, Michael. *The Character Factory: Baden-Powell and the Origins of the Boy Scout Movement*. New York: Pantheon, 1986.
- Stearns, Peter N. *Childhood in World History*. New York: Routledge, 2006.

Birth Control

The use and development of birth control in the West during the nineteenth century was shaped by religious beliefs about marriage and sexual behavior that prohibited birth control use, and by views about women's control over their bodies. These views shaped Victorians' understanding of human reproduction and sexuality and the production, distribution, and consumption of various forms or methods of birth control. At the same time, developments in medical science and technology improved the knowledge and control of human reproduction and sexuality. Into this amalgam of ideas have to be added the Victorian social and cultural concerns with propriety and decorum, and similar informal restraints in other societies.

The nineteenth century is notable for the development of contraceptive devices, as well as chemical agents such as spermicide. Also of significance during the century was the publicity that birth control received. In the early decades of the century, broad health reform movements

included family planning as a way to improve women's (and their offsprings') health. Ideas about sexual restraint influenced the practice of birth control, since abstinence was an effective component of any family planning regime.

Not only Christian conservative moralists promoted sexual restraint; health reformers often championed sexual restraint as a requisite for good health. This was a reflection of Victorian ideals that privileged the intellectual and spiritual and disparaged the physical aspects of human life and social behavior. From the 1870s forward, birth control was consistently a major concern of feminists and the women's movement, although various feminists supported it in different ways and to different degrees. Outside the women's movement were groups such as the iconoclastic free lovers, who believed contraception was necessary for women to avoid the trap of marriage.

Various forms of birth control spread throughout western European countries during the century. Family planning through birth control was so effective in France in the first decades of the century that the phrase "French family" came to be a synonym for a family with two children. German medical practitioners and reformers met with success in promoting birth control. In England, the neo-Malthusians promoted and advocated birth control as a way to limit population growth and thereby poverty. Neo-Malthusians based their support of birth control on the arguments of Thomas Robert Malthus that were put forth in his *Essay on Population* (1798)—that the working class should practice "moral restraint" (delaying marriage and practicing abstinence) to ease population growth. One such neo-Malthusian in England was Francis Place, often credited with starting the birth control movement in the English-speaking world in the 1820s. Place recommended methods such as semen-absorbing sponges, as a way for the working class in industrial England to improve their standard of living.

But as working-class communities continued to have the largest families, his entreaties were not effective with that social group. In the United States, neo-Malthusianism was coupled with socialist utopian thought in the publications of British-born Robert Dale Owen (*Moral Physiology* [1830]), and the feminist reformer

and writer Frances “Fanny” Wright. Owen’s book, considered the first American book on birth control, also recommended sponges as well as coitus interruptus and the condom, which became both practical and inexpensive with the vulcanization of rubber in the 1840s. In the United States, the neo-Malthusian Edward B. Foote promoted the use of a cervical diaphragm, another significant technological innovation in the nineteenth century.

The privacy traditionally enshrouding birth control was breached in the nineteenth century by the publication of numerous medical and popular writings. These included works such as Charles Knowlton’s *The Fruits of Philosophy* (1832) and Frederick Hollick’s *The Marriage Guide* (1850), as well as pamphlets and advertisements touting various methods and devices to prevent conception. Opponents of birth control attempted to stem the tide of publicity and diffusion of information by making it illegal to produce, distribute, or consume materials about contraception or abortion, which were legally classified as obscene.

Medical and scientific works on contraception both promoted the latest knowledge about what were believed to be effective methods or devices and criticized unfounded traditional folk methods. An example of this was the work of the German gynecologist Friedrich Adolph Wilde, who had invented the cervical cap. Wilde promoted scientifically confirmed methods of prevention in *Das weibliche Gebär-unvermögen* (1838). In the United States, Charles Knowlton’s *Fruits of Philosophy* (1832) was the first of numerous medical tracts on birth control that promulgated the cervical cap. Throughout Europe, birth control moved into the public sphere; in

Amsterdam, Aletta Jacobs opened a birth control clinic in 1882.

By the end of the of the nineteenth century, urbanization, secularization, and changing views of gender and marriage were leading to the promotion of voluntary motherhood through birth control and laying the groundwork for the birth control movement of the twentieth century.

—Jody Pennington

Bibliography

- Brodie, Janet Farrell. *Contraception and Abortion in Nineteenth-Century America*. Ithaca, NY: Cornell University Press, 1994.
- Gordon, Linda. *The Moral Property of Women: A History of Birth Control Politics in America*. Rev. ed. Urbana: University of Illinois Press, 2002.
- Himes, Norman Edwin. *Medical History of Contraception*. Baltimore: Williams and Wilkins, 1936.
- McLaren, Angus. *Birth Control in Nineteenth-Century England*. London: Croom Helm, 1978.
- McLaren, Angus. *A History of Contraception: From Antiquity to the Present Day*. Oxford: Blackwell, 1990.
- Noonan, John Thomas. *Contraception: A History of Its Treatment by the Catholic Theologians and Canonists*. Cambridge, MA: Belknap Press of Harvard University Press, 1986.
- Pennington, Jody. “Birth Control.” In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History*, Vol. 5: *The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.
- Reed, James. *From Private Vice to Public Virtue: The Birth Control Movement and American Society since 1830*. New York: Basic Books, 1978.
- Riddle, John M. *Eve’s Herbs: A History of Contraception and Abortion in the West*. Cambridge, MA: Harvard University Press, 1997.

■ Introduction: Social Change

The entries in this section can be viewed as a series of case studies that illustrate one of the salient features of social history in the period from 1750 to 1914: the existence of tremendous national and regional

differences in the rate and substance of social change.

A transformation of historic proportions occurred in western and central Europe, where a combination of population growth, falling

birthrates, an expansion in state activity, technological innovation, and above all industrialization created a new type of society as different from what had previously existed as agricultural society had been from the hunting and gathering cultures it replaced beginning around 10,000 BCE. Modern Europe's transformation, virtually complete by 1914, included urbanization, growing secularism, higher educational levels, greater equality for women, and new ideas about work and leisure. It also meant a reordering of social groups. The number of farmers and rural laborers declined in both absolute and relative terms; factory workers emerged as a major component of the working class; the middle class grew in numbers, power, and prominence; and older groups such as artisans and landed aristocrats suffered relative decline. All of these changes occurred in an intellectual atmosphere of growing confidence in science and a decline in the intensity of religious belief.

Before 1914, only the United States experienced a social transformation comparable to that of industrialized and urbanized Europe, but it did so under circumstances that made American society unique in some respects. These circumstances included the absence in the American past of an entrenched aristocracy and peasantry; the impact of massive immigration, especially from Europe; the democratizing effects of the Western frontier; and the relatively greater strength of organized religion.

Beginning in the late 1860s, Japan experienced the beginnings of a radical break from its past with the decision of the Meiji regime to embark on a new course of state-directed Westernization. By 1914 aristocratic samurai and daimyo had lost their legal privileges (but only some of their political clout), a nationwide system of public education had been established, and legal equality irrespective of one's social class had been guaranteed by the constitution. Millions of Japanese embraced Western grooming habits, clothing styles, music, sport, and diet. By 1914, however, industrialization was still in its early stages of development, and a majority of Japan's population still consisted of farmers.

Other parts of the world experienced rapid population growth and accelerated urbanization, and inevitably these developments caused

hardship for certain groups and contributed to social tensions. China presents the best example of a society in which the situation of the peasantry deteriorated in the nineteenth century in the face of rising land prices and increased taxes. Some Chinese peasants migrated overseas, and many moved to cities, but these were cities in which the number of factory jobs was minuscule. In 1914 China was still a country of small farmers and a tiny middle class. Until the very end of the period the social and political dominance of the gentry (which in China meant degree holders who had passed the civil service examination at least at the county level) remained unchallenged.

Despite its large cities, India remained a land of small agricultural villages populated by illiterate and generally impoverished peasants whose lives were largely unaffected by British rule. For their part, British colonial officials undertook a small amount of social engineering in their efforts to end *sati*, limit child marriage, and improve the status of widows, but such steps were controversial and difficult to enforce. The British made no effort, however, to tinker with the Indian caste system, the backbone of Indian society. Indeed, certain of their policies might have made caste divisions even more rigid and more central to Indian society than they had been before the British takeover.

Africa, like India, was colonized in the nineteenth century, but the process began in earnest only in the late 1800s, more than a century after the British began to expand their authority in India. The process of colonization brought about massive social disruption to much of Africa and caused severe hardship for farmers and herders who lost their lands or were forced to migrate. Aside from the British and French campaign to suppress slavery, however, colonial officials, who relied heavily on local chiefs to carry out their policies, were uninterested in changing traditional social relationships at the village level.

Latin American society also experienced few fundamental changes in the course of the nineteenth century, despite the uptick in immigration from Europe and Asia in the late 1800s. After independence, few changes in property relations took place, which meant that ethnic and social groups that had dominated colonial

society continued to do so after independence, even though the new governments embraced the concept of equality of all men before the law. Wealth, power, and prestige remained concentrated in the hands of a ruling class of white landowners. The export boom of the late nineteenth century enriched this small minority but brought ruination to many Indian village communities, whose lands were expropriated and whose members were reduced to tenantry and peonage.

The entries that follow all shed light on worldwide social relationships between 1750 and 1914, an era marked not only by revolutionary transformations but also by significant continuities.

—James H. Overfield

The Chinese Gentry in the Late Qing Era

The circumstances of the Chinese gentry changed dramatically with the coming of the Qing dynasty (1644–1912). Long before the Manchus entered China, they were familiar with Chinese institutions. The Qing deeply admired Confucian social and political philosophy but considered their Ming predecessors to be decadent and corrupt. The new rulers were determined to return Chinese government to a mythical Confucian ideal. The examination system remained the primary path for Chinese participation in public service: those who passed earned for themselves and their families entry into an elite class known in the West as the gentry. As had been true for many centuries, any male could rise in station through success in the examinations, but sons of existing gentry had an advantage: their families had both insight into the process and the resources to support the costs. Under the Qing, there was also a category of military gentry, but membership was very small, and the group lacked significant social impact.

There were never sufficient bureaucratic positions open for all aspirants. In theory scholars occupied themselves with governing, but in fact, under the Qing, there were about 1.1 million degree holders competing for 27,000 official positions. Only a small percentage of those holding even the highest designation could expect

public employment. Members of the gentry not holding offices constituted the scholar gentry. Despite the shortage of employment, having a son who passed the examination brought many advantages to families, including reduced taxation and certain legal immunity. In return, the gentry acted as a stabilizing force. They were intermediaries between the government and commoners, sponsored most public construction projects, and provided military assistance when needed.

The Manchurian Qing dynasty had a complex relationship with members of the elite Chinese gentry class primarily because the gentry were not (and indeed never had been) a homogeneous social group. Conflicts between various groups holding gentry status had accelerated as the Ming dynasty spiraled downward. Under the late Ming, fraud in assessing and collecting taxes had involved numerous gentry families in very

THE PRICE OF DISLOYALTY

The Qing emperor Qianlong (r. 1736–1796) understood the importance of preventing potential rivals from gaining too much power. Qianlong doubled the size of China during his reign but watched over the Chinese gentry with care that bordered on paranoia. Qianlong was determined to prevent any disloyalty that might undermine his empire. He punished any suspected breach quickly and harshly. The first example occurred early in his reign when his wife died. Qianlong reverted to a long-abandoned practice of requiring 100 days of mourning. For the first 27 days, government officials were required to wear coarse mourning garb and refrain from pleasure. There was no written prohibition against shaving; in fact, shaving was an innovation introduced (and required) by the Qing. Nevertheless, Qianlong insisted that shaving during a period of mourning was disrespectful. Many of the officials had shaved before they learned of the prohibition, and protested—to no avail—that they had not known of the tradition. Before the end of the controversy, several of the empire's highest officials were beheaded or allowed to commit suicide in lieu of execution for the insult of shaving. Additionally, many of their subordinates were removed from office and banished.

—Carolyn Neel

unsavory activities. Some, particularly the large landholders, had become corrupt and oppressive. Many other members of the scholarly elite were aghast at the state of affairs and saw it as a clear indication that the Mandate of Heaven had passed. But there were also gentry scholars who supported the Ming emperor and followed his heirs into retreat. Those Ming loyalists left the Qing with a deep mistrust of expatriates. Long after the last Ming heir was executed, overseas Chinese were still suspected of treason.

In their treatment of the gentry, the Qing were in many ways more conservative than their Ming predecessors. From the beginning, the Qing sought to preserve Chinese structures, such as the Confucian examination system, as well as their own Manchurian identity. Qing emperors generally monitored the behavior of the gentry carefully and rewarded conformity to traditional Confucian viewpoints. They patronized conservative schools and acted firmly to eliminate the abuse of privileges by gentry families who had profited from coercion and fraud under the Ming. The scholar gentry rewarded the Qing for their protection by providing the rationale and rites that legitimized the Qing as heirs of the Mandate of Heaven. Until late in the dynasty, the Qing prohibited gentry scholars from discussing current politics, encouraging them to spend their time searching for the true meaning of the ancient Confucian writings.

The gentry remained relatively quiet until deteriorating conditions in the nineteenth century stirred both the bureaucracy and gentry scholars to speak out on public issues. Prior to the Opium War, many of the gentry participated in impassioned debates about the problems of increasing drug use in China. Gentry of all levels struggled to preserve Confucian ideology and stability in Chinese society after the disruptions of the Taiping Rebellion and other mid-nineteenth-century disasters. Many came to believe that accepting some elements of European culture was necessary for survival, adopting the motto “Chinese learning as the basis; Western learning for practical use.” By the end of the second war with Britain in 1860, most of the bureaucratic and scholarly gentry passionately supported the Qing dynasty, but their scholarly debate never resulted in a coherent plan.

The European powers had no ambivalence about the role of the gentry, considering them troublesome deterrents to modernity. The Boxer Protocols imposed on China by European states in 1901 suspended the examination system in 45 Chinese cities as punishment to the gentry. In 1905 the crippled Qing abandoned the examination system entirely, but the tradition of scholarly debate about public policies survived.

—Carolyn Neel

Bibliography

- Levenson, Joseph Richmond. *Confucian China and Its Modern Fate: A Trilogy*. 1st combined ed. Berkeley: University of California Press, 1968.
- Wong, Roy Bin. *China Transformed: Historical Change and the Limits of European Experience*. Ithaca, NY: Cornell University Press, 1997.
- Wright, Mary Clabaugh. *The Last Stand of Chinese Conservatism: The Tung-Chih Restoration, 1862–1874*. Stanford, CA: Stanford University Press, 1967.

Chinese Merchants

Chinese merchants have ranged in status from sophisticated entrepreneurs, bankers, and financiers to industrious and intelligent peasants who manage to expand their incomes through handicraft production. It is not possible to develop a blanket description of their activities or their lives. Nevertheless, we can generalize a bit about their wealth, social status, and range of activity. At the apex of the commercial hierarchy stood those families who had achieved both gentry status and wealth in business. Often after a family member had achieved a title through the imperial examination system or as a reward for meritorious service, the family would devote itself to accruing a fortune in business. Qing dynasty officials often forged dynamic relationships and occasionally family ties with these gentry merchants. The idea that merchants were disdained by the Chinese court has been overstated.

It is important not to confuse philosophy with social reality. Confucianism has traditionally held commerce in some disdain, but wealthy merchant families could in fact attain high position. The official Confucian attitude toward merchants was critical, with many Confucian scholars believing that the quest for profits

encouraged competition (and therefore disharmony) and drained resources from the real contributors, particularly the peasant farmers. From this it might appear that commerce was not a vital part of the Chinese economy, but from the Han dynasty until the present, prosperous trading families have been a vital part of the Chinese economy. China's class lines had been permeable for many centuries. If a man (and sadly it was always a male) was bright enough to pass the civil service examinations, any male could aspire to a high-level position. The determining factor was often money; families with the resources to buy a good education for their sons were more likely to attain elevated status. Families whose sons passed the examinations, even if they did not find employment in the bureaucracy, benefitted from lower rates of taxation and certain legal immunities.

Until 1700, China's material culture and standard of living were among the richest in the world. During much of the period following 1750 Chinese internal commerce remained vital, as brokers became essential to moving critical resources across the nation. The Qing dynasty, which generally supported philosophical conservatism, was pragmatic in its dealings with the brokers, bankers, and merchants. Commerce was needed in order to move food and other necessities throughout the empire. In 1763 Yang Yingju, the governor-general of Shaanxi and Gansu, wrote a memorial on grain prices and the internal grain trade (quoted in *Sources of Chinese Tradition*, cited below): "Whenever grain boats from Guangxi came to Guangdong, the merchants were authorized freely to select brokers to whom they could entrust the sale, giving them a reasonable fee for their costs. For a long time, things went this way peacefully."

The Qing accepted responsibility for the state's economic structures. The Finance Ministry was charged with overseeing the functioning of the economic system and the prosperity of the people, yet significantly it had no offices outside the capital. The ministry worked through the court and provincial bureaucracy as well as through personal relationships with powerful merchants and functionaries. In the mid-eighteenth century during the High Qing period, the ministry was very successful in managing

internal trade, but the ministry's ability to impose its will deteriorated with the dynastic decline.

Commerce continued even as the power of the Qing dynasty dwindled. Porcelains and silk were still in high demand, but tea was the most important commercial crop. The tea merchants and brokers thrived, although much of the trade was unofficial, with only about 20 percent of the trade actually reported and taxed by the Qing. One trading family, the Dashengkuai, founded a tea brokerage company in the late seventeenth century that stayed active until the twentieth century. At its height it had many branches throughout China, with 6,000–7,000 employees. In some areas, particularly in Mongolia, where tea consumption was high, other Han Chinese tea brokers were able to become powerful, controlling much of the banking and other financial services. Merchant families also benefited from their associations with other merchant families. One of the characteristics of Chinese merchants was their proclivity for depending on personal relationships in their decision-making processes. Usually family relationships were involved, but voluntary associations, sometimes called fictive kinship, could also be a factor.

After the Opium Wars, the Qing court actively forged relationships with merchant families.

The origins of Chinese Chambers of Commerce in the highly commercialized Lower Yangzi Region are obscure but seem to have been a reaction to increasing foreign influences. After the European incursions, merchants organized themselves to promote Chinese business interests.

By the end of the nineteenth century, the Qing government was actively seeking ties with merchant associations. In one notable instance at the beginning of the twentieth century, the Qing imperial commissioner for commerce, Sheng Xuanhuai, and local elites worked to form the Shanghai Commercial Consultative Association (SCCA). Sheng believed that these groups could help end the divisions between officials and commercial interests, particularly desirable as foreigners became increasingly powerful.

Across China, the number of these associations accelerated as the Qing power declined. During the period 1701–1750 (the High Qing), 18 came into existence; during 1751–1800, 36

came into existence; and between 1801 and 1850, the period of increasing rebellions and foreign encroachments, notably the first Opium War, there were 46 new associations formed. As the Qing deteriorated, between 1851 and 1900 120 new merchant associations formed. During the first 12 years of the twentieth century, there were 62. After the fall of the Qing, many of these merchant associations assumed government functions in attempts, often successful, to maintain order in the face of government dissolution.

—Carolyn Neel

Bibliography

- De Bary, William Theodore, Irene Bloom, Wing-tsit Chan, Joseph Adler, and Richard John Lufrano. *Sources of Chinese Tradition*, Vol. 2. 2nd ed. New York: Columbia University Press, 1999.
- Leonard, Jane Kate, John R. Watt, and Cornell University East Asia Program. *To Achieve Security and Wealth: The Qing Imperial State and the Economy, 1644–1911*. Cornell East Asia Series. Ithaca, NY: East Asia Program, Cornell University, 1992.
- Richardson, Philip. *Economic Change in China, c. 1800–1950*. New Studies in Economic and Social History. New York: Cambridge University Press, 1999.
- Tong, Chee Kiong, and Yong Pit Kee. “Guanxi Bases, Xinyong and Chinese Business Networks.” *British Journal of Sociology* 49(1) (1998): 75–96.

Chinese Peasants

Since the twentieth-century revolutions, casual observers have usually characterized Chinese peasants in one or the other of two extremes: as virtuous, diligent yeoman farmers or as vicious, dangerous rebels. The truth, of course, is that they could be either or both. During good economic periods, it was possible for peasant families to accumulate the land and resources to enter into commercial ventures and rise in wealth and position. Unfortunately, the period 1750 through 1914 was a time of hardship for many peasants.

Peasants generally earned their living as subsistence farmers, although some were able to devote the land and time necessary for commercial production. In northern China grains and other dry-land crops were predominant, while rice

was the major crop in the south. Villages in the north differed in social structure from those in the Yangzi delta, largely due to the differing land-ownership patterns. Northern peasants were more likely to own the land that they farmed. Only about 18 percent of peasants in northern China rented land as opposed to 42 percent in the delta, where gentry and merchant families owned many huge estates. As time passed, fewer peasants were able to earn more than necessary to sustain life, but in the areas with the most fertile land, some grew crops—such as tea, mulberry leaves for silkworms, or foodstuffs—for commercial purposes. As was true for peasant farms across the world, Chinese peasant families generally supplemented their income through craft production, weaving cotton or silk, making leather goods, etc. Traditionally, men worked the land while women concentrated on weaving and other indoor tasks, but during periods of low production women also worked in the fields and paddies.

Lineage formed the basis of nearly every peasant village, with all males claiming a common ancestor. The Qing taxed northern villages directly and needed a well-defined organizational structure to deal with the state. They established village councils, which chose men from their own communities to serve as village heads. Councils usually made decisions. Southern village organization was less formal; the state dealt with the southern peasant villages through intermediaries, usually one or more of the wealthy urban landowners. These patterns tended to remain stable; even postrevolutionary organizing met little success in the delta.

Population increase had the most dramatic impact on the lives of peasants. There is a wide variance in population estimates, but the figures used by James Lee and Wang Feng in *One Quarter of Humanity* are well supported. They estimate that the population grew from 225 million in 1750 to 500 million in 1900 even considering the huge numbers who died in famines, rebellions, and wars. The Qianlong emperor doubled the land area of China, but much of the additional ground was minimally suited to agriculture. Improved technology and New World crops such as sweet potatoes, white potatoes, maize, and peanuts sustained the growth for a

time but did not provide a long-term solution. The Qing government's answer to shortages was to urge peasants to simply work harder, bringing about a situation described by Ray Huang as involution: greater effort with lessened returns.

Qing taxation policy worsened the problem. The Chinese monetary system included the use of both silver and copper. Silver was required for payment of taxes and the salaries of officers and bureaucrats; lower-level market transactions were conducted with copper coinage. As silver became rarer, the value ratio between the silver and copper altered from 1:2 to 1:3. Chinese peasants received their income in the devalued copper currency but were required to render taxes in silver. The decline in the value of copper was ruinous to families whose earnings were near subsistence levels; prices escalated as income declined. The deflation in the value of money combined with the scarcity of rice, leaving people vulnerable to famine. One unforeseeable consequence was an increased number of men who were unable to marry. Two factors contributed to the sex imbalance: first, in harsh times parents were much more likely to abandon or kill female infants, so more males lived to reach adulthood. Second, not all females who grew to womanhood were available for marriage. Young women were in high demand as courtesans, concubines, or maids in wealthy families. Their fathers often sold them, but occasionally they left their birth family of their own volition in search of a more secure life. Approximately 20 percent of lower-class males were unable to find wives. Some of these men became urban laborers, some joined roving bands, but nearly all were on the fringes of society, not quite fitting in anywhere. They were a volatile presence.

China has a long history of peasant rebellions. Even before the death of the Qianlong emperor, the Qing faced the White Lotus Rebellion (1796–1804). There were famines in 1810, 1811, 1846, and 1849, resulting in about 45 million deaths. The Jiaqing emperor (r. 1796–1820) faced constant rebellions in one area of China or another, often multiple rebellions at once. From that time onward, emperors dealt with constant famine and rebellion. During the Taiping Rebellion (1850–1871), which cost more than 20 million lives, the Qing dynasty lost two wars

to Europeans. Two El Niño events (1876–1878 and 1888–1902) caused millions more to die from starvation. In 1899 the Yellow River levees broke, destroying more than 2,000 villages. There were further humiliations. In 1895 the Japanese defeated the Qing in a war over control of Korea, and in 1900 European troops put down the Boxer Rebellion, which aimed at expelling foreigners and supporting the Qing. The Qing lost all claim to legitimacy.

Through all of this, despairing and enraged peasants joined in roving armies, smashing village walls and attacking local officials. From the Zhou dynasty forward, widespread famine and rebellion signaled the loss of the mandate to rule. Observers have often credited (or blamed) the intellectual elite for the overthrow of the last ruling dynasty of China, but desperate peasants fueled the rebellions. The downfall of the Qing dynasty in 1911, however, did not better the conditions in which peasants were living.

—Kassi Klinefelter and Carolyn Neel

Bibliography

- Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. London and New York: Verso, 2001.
- Eastman, Lloyd E. *Family, Fields, and Ancestors: Constancy and Change in China's Social and Economic History, 1550–1949*. New York: Oxford University Press, 1988.
- Gardella, Robert Paul. *Harvesting Mountains: Fujian and the China Tea Trade, 1757–1937*. Berkeley: University of California Press, 1994.
- Huang, Philip C. *The Peasant Economy and Social Change in North China*. Stanford, CA: Stanford University Press, 1985.
- Huang, Philip C. *The Peasant Family and Rural Development in the Yangzi Delta, 1350–1988*. Stanford, CA: Stanford University Press, 1990.

Japanese Society during the Late Tokugawa Period

The well-ordered feudal society developed by the Tokugawa shogunate in the early seventeenth century began to experience substantial change by the late 1700s and early 1800s. The once-powerful aristocracy made up of daimyo (lords) and samurai (retainers) experienced deep declines, while wealthy merchants and

OSHIO'S REBELLION, 1837

The most sensational demonstration against the late Tokugawa government was led by Oshio Heihachiro (1793–1837), a samurai and former government official who urged villagers around Osaka to rise up and destroy the city. He issued a proclamation in 1837 that declared, “We must first punish the officials who torment the people so cruelly. . . . Then we must execute the haughty and the rich Osaka merchants. Then we must distribute the gold, silver and copper stored in their cellars, and the bales of rice hidden in their storehouses.” Early in 1837 Oshio and several followers led a raid against government offices and set fire to parts of the city, hoping thereby to spark a major peasant revolt. After two days of turmoil, government authorities put down the rebellion. Oshio took his own life, but not before his rebellion had led to the destruction of nearly a quarter of Japan’s key commercial center.

—Daniel A. Métraux

restless tradesmen and peasants grew both in stature and power. The old feudal structure of Japan, which had been built to resist change, was on the verge of collapse in the mid-nineteenth century just at the time that the United States, Great Britain, and other Western nations forced the Tokugawa shogunate to abandon its long-held policy of *sakoku* (isolation from any foreign contact).

For much of the Edo period (1603–1868), Japan was a peaceful and well-ordered society. Although occasional peasant disturbances occurred, especially in the mid-eighteenth century, Japan was capably administered, agriculture flourished, cities grew, and a thriving and a rapidly expanding commercial sector improved standards of living. During two and a half centuries of peace Japan developed a broad network of roads, a growing commercial economy, and the basis of a strong banking and financial system.

Early Tokugawa Japan was a highly organized and stratified society, with the daimyo and samurai at the top and merchants at the bottom. During this peaceful period, samurai put away their swords and became civilian administrators in the daimyo domains (*han*) where they lived.

From generation to generation, samurai were paid fixed salaries, which did not rise with inflation, during the eighteenth and early nineteenth centuries. Tax revenues, often paid in the form of rice, also remained fairly static during much of this period, which meant that many domain governments as well as the shogun’s treasuries were facing shortfalls by the 1830s.

The samurai were facing severe economic and social stress by the early 1800s, worsened by severe cuts in their stipends ordered by cash-strapped domain-based governments. Many samurai families turned to commercial pursuits, often working part-time or full-time in merchants’ or artisans’ shops to supplement their incomes.

Some samurai were forced to pawn their family swords and armor, send their daughters away to work as servants or housekeepers, and even resort to infanticide to avoid financial disaster. In some instances lower-ranking samurai began demanding that leadership positions be given to those of greater talent over those with higher birth.

At the same time, the real income of many merchants and artisans continued to grow. The commercial revolution of the middle and late Tokugawa periods led to the growth of a market economy and the vast expansion of available goods and services. Several merchant families founded lucrative businesses that continue to thrive today including the Mitsui and Sumitomo corporations. These families became very wealthy by building commercial conglomerates that included the production of a variety of goods, increasing numbers of stores, restaurants, inns, and other commercial activities. They also offered massive high-interest loans to the domain governments and to the samurai and daimyo families. Some peasant families, especially large landowners, also prospered as Japan’s growing population required more and more food.

While Japan remained a largely agricultural society, it was also becoming increasingly urban. Regional castle-towns expanded rapidly, but the real growth came in such large cities as Osaka, the nation’s commercial center, and Edo (present-day Tokyo). Edo was little more than a fishing village when the shogunate moved its government there in the early 1600s, but by the mid-nineteenth century it had become one of

the largest urban centers in the world with well over one million residents.

There were, however, real suffering and growing anger among many poorer peasant families. The higher cost of commercial goods, comparatively lower prices for their agricultural products, and occasional famines caused great hardship and considerable unrest. The Tempo famine (1833–1838) caused severe hardships and starvation. Officials in northern Japan in 1836 counted over 100,000 dead, with frequent reports of deserted villages, unburied corpses, and even instances of cannibalism. James McClain cites one diarist who wrote: “Corpses were thrown into wells, and there was a report of a woman who ate her children. The starving and dead were all over. . . . Robbery, burglary, and stealing were the order of the day. . . . The world was without order.”

Many peasants organized themselves into groups to demand help from the government in terms of food relief, temporary postponements in tax collection, and the interdiction of grain shipments to cities. Urban residents, meanwhile, demanded greater shipments of food, tax relief, and an end to price gouging by merchants. When these demands failed to bring desired results, rural and urban riots and uprisings occurred. The more than 400 major disturbances of the 1830s easily outnumbered the riots for the entire seventeenth century. The scale of the disturbances also grew. In 1836 an estimated 100,000 demonstrators caused havoc in Mikawa Province, while nearly 30,000 protesters rose in anger south of Fuji. The large scale of these uprisings and the weak financial condition of the national and domain governments clearly demonstrated the rapid decline in social and government authority throughout Japan.

Another challenge to the established order was the growth of many new religions. New religious movements frequently occurred during times of social turmoil, when especially poorer people turned away from established religions to new millennial religious movements that offered them relief here and now. The most successful of these new religious movements was Tenrikyo (the “Religion of Divine Wisdom”) founded in 1838 by Nakayama Miki (1798–1887) that continues to thrive to this day. Tenri recruited many of

its many members in regions where famine and economic dislocation were greatest in the 1830s and 1840s. Faith, Tenri leaders said, offered mankind the sole means of escape from death and misery in life. Through prayer and faith these new communities of religious believers would overcome the evils of their age and “renew the world” by introducing an earthly paradise where all believers would live in peace and prosperity.

The late Tokugawa era was turbulent, but the quick and nearly bloodless takeover of the government by the leaders of the new imperial army in 1868 and the successful creation of a strong new government precluded a major social uprising that might have otherwise occurred.

—Daniel A. Métraux

Bibliography

- Bellah, Robert N. *Tokugawa Religion: The Values of Pre-Industrial Japan*. Glencoe, IL: Free Press, 1957.
- Bix, Herbert P. *Peasant Protest in Japan, 1590–1884*. New Haven, CT: Yale University Press, 1986.
- Craig, Albert. *Choshu in the Meiji Restoration*. Cambridge: Harvard University Press, 1961.
- Harootunian, Harry D. *Toward Restoration: The Growth of Political Consciousness in Tokugawa Japan*. Berkeley: University of California Press, 1991.
- McClain, James L. *Japan: A Modern History*. New York: Norton, 2002.

Social Change in the Meiji Period

To achieve their goal of turning Japan into an industrial and military power capable of withstanding pressures from the West, leaders of the Meiji Restoration restructured institutions, eliminated old class lines, and opened careers to all classes. By 1914 Japanese society had changed in many ways, but cities were affected more than rural areas, and some groups, notably women, failed to benefit substantially from policies that provided opportunities for political involvement and social mobility to a larger segment of Japanese society.

One of the first acts of the Meiji reformers was the creation of a new peerage, consisting of princes and nobles. Edicts in 1868 abolished the titles of *shogun* (military ruler), *kanpaku* (regent to the emperor), and *sessho* (regent

➤ CHANGES IN DAILY LIFE IN MEIJI JAPAN

In addition to the elimination of old class lines and the opening of many careers to all classes, everyday life was also changed by the influx of Western ideas and influences. The Meiji emperor himself started to wear Western-style military dress, and in 1872 Western dress became mandatory at court and other official functions. Founded in 1873, the prestigious Meiji Sixth Year Society devoted itself to promoting all aspects of Western knowledge. However, the influx of Western ideas did not change the structure of village life or the mode of agricultural production. While industrialization transformed the cities, it only served to widen the contrast between cities and the countryside. For most commoners, daily life remained similar to what it had been in the late Tokugawa years. New foods such as meat and bread were still considered luxuries, and significant changes occurred only after the turn of the century. Susan Hanley, a historian of Tokugawa and Meiji material culture, has argued that because everyday material culture remained the same, people were better able to absorb the shock of other dramatic political, economic, and social changes that occurred during the Meiji period.

—Kirsten Ziomek

to the emperor when a minor). By giving new titles of prince, marquis, count, viscount, and baron to former *daimyo* (feudal lords) and *kuge* (court nobility), members of the old Tokugawa elite were compensated for their loss of political power. They also eradicated the samurai's role as warrior and member of the ruling class. In 1872 the army became truly national, with conscripted commoners becoming its foundation. Other samurai privileges also were eroded. In the 1870s commoners were allowed to acquire surnames (previously used only by *daimyo*, samurai, and some merchants), and in 1876 samurai were prohibited from wearing swords, which were a former mark of social distinction. When the government replaced the *han* (domain) system with prefectures, the samurai also lost their administrative roles. The government stopped paying stipends to the samurai and gave them pensions instead. These changes, which

eradicated the samurai class, led to numerous revolts especially in the southwest, where the Restoration's leaders had originated and where expectations of the new government among the samurai had been highest. Violence culminated in the failed Satsuma Rebellion of 1877, the "last stand of the samurai."

Dissatisfaction with the government's social and political changes was not limited to the samurai. The Freedom and People's Rights Movement, an organization active in the 1870s and 1880s, sought an elected legislature and a commitment to the protection of civil liberties. Although initially comprised of discontented samurai, in the 1880s it gained support from village leaders demanding a role in national politics and a number of elite women who demanded political rights. The government responded to their demands in 1890 by promulgating a constitution, but one that banned women from political activity. The constitution stipulated that the upper house of the Diet was to be appointed by the emperor and that the lower house was to be elected by approximately 450,000 male tax-paying property owners, just over 1 percent of the population.

Most commoners could not vote in the first election, but they benefited from reforms in education and employment. The Ministry of Education, the first ministry created by the new government, set as its goal education for all regardless of wealth and status. In 1873 primary education was mandated for all boys and girls, but the law had to be retracted due to difficulties in securing money and teachers and in convincing rural parents to send their children to school. However, in 1900 compulsory education was once more mandated, this time for six years, and by 1910 the compliance rate had risen to 97.4 percent.

In addition to providing commoners access to education, in 1868 the government abolished hereditary restrictions on occupation and class. Commoners were allowed to ride horses in 1871 and, with the abolition of the domains in 1871, could travel throughout the country (in the past passports were required to travel between domains). In 1871 intermarriage between status groups was allowed. In addition, the subcaste status group, the *burakumin* (hamlet people), was raised to commoner status. Burakumin had been discriminated against because they often

performed jobs considered tainted due to their association with death such as tanning hides, butchering, grave digging, or serving as executioners. During the Tokugawa period they had to wear distinctive clothing and display identification marks to distinguish their status. They had been banned from using certain shrines and temples and could not marry outside their class. Although they legally became commoners in the Meiji period, those identified with the burakumin class continued to experience discrimination throughout much of the twentieth century.

The abolition of the domains also affected the peasantry. In 1873 the taxing system was reformed, with taxes no longer being paid by the daimyo but instead by farmers based on the assessed value of their land. Ownership rights were established, and poor peasants who could not afford to pay their taxes were forced to mortgage their land or become tenant farmers (working on someone else's land in exchange for a portion of the crops). Since tenant farmers did not own their own land, many became economically dependent on the people for whom they labored, often in a cycle of debt and destitution. The rate of tenancy was 25 percent in 1873, but after the new system of land tenure was implemented, the tenancy rate increased to 40 percent by 1893. Many tenant farmers were forced to supplement their incomes by working for extended periods in a city or neighboring town. In many cases, female family members were sent to cities to supplement their family income by working in factories.

By 1890 working-class women, mostly from rural villages, were a major component of the workforce in Japan's developing industrial economy. Young girls from the countryside were often contracted to work in factories for up to five years in exchange for money paid in advance to their cash-strapped families. Most workers in light industry were female; in textiles they made up 60–90 percent. In the late nineteenth century female farm and factory workers produced approximately 40 percent of Japan's gross national product and 60 percent of its products for export. This reflected the preponderance of women workers in the production of silk, one of Japan's most profitable exports.

The Meiji era also saw the emergence of a new middle class, comprised of people who

worked in government, schools, or the new institutions and organizations. Middle-class reformers tackled the social ill of prostitution, tried to reform poor housing conditions of lower-class families, and visited the homes of the lower classes in order to help monitor and cure juvenile crime. Members of this emerging new middle class also helped the government promote its campaigns to reform everyday life, which entailed promoting hygiene in the kitchen and encouraging efficient management of time. This new middle class differed from the old middle class of small business owners and manufacturers, who maintained their importance in city and country alike. The status of merchants also improved during the Meiji period. Previously, the accepted social hierarchy placed samurai at the top, followed by peasants, craftspeople, and lastly merchants, who were looked down upon because of their association with money. After the government reforms, however, the samurai, once at the top, lost their status, while merchants gained more respect for their contributions to society.

It is important to note that although urbanization and industrialization are often viewed as prime symbols of the changes during the Meiji period, most Japanese still labored in the countryside, where there was little evidence of either Westernization or industrialization.

—Kirsten Ziomek

Bibliography

- Ambaras, David. "Social Knowledge, Cultural Capital, and the New Middle Class in Japan, 1895–1912." *Journal of Japanese Studies* 24(1) (1998): 1–33.
- Beasley, W. G. *The Meiji Restoration*. Stanford, CA: Stanford University Press, 1972.
- Garon, Sheldon. *The Molding of Japanese Minds: The State in Everyday Life*. Princeton, NJ: Princeton University Press, 1997.
- Hanley, Susan. *Everyday Things in Premodern Japan: The Hidden Legacy of Material Culture*. Berkeley: University of California Press, 1997.
- Jansen, Marius. *The Making of Modern Japan*. Cambridge: Belknap Press of Harvard University Press, 2000.
- Kornicki, Peter, ed. *Meiji Japan: Political, Economic, and Social History, 1868–1912*. London: Routledge, 1998.

Social Change in India during British Rule

There are some fundamental conditions that need to be noted in regard to social change in India during the British period. First, it is important to note that the British initially appeared in India as merchants of a private company, the East India Company (established in 1600), not as conquerors, and the idea of empire slowly developed because of changing circumstances. In a sense, the British Empire emerged in India without great effort, in large part due to the disintegration of the Mughal empire and the resulting increase of weaker regional powers. Indeed, there was not a sense of India as a coherent entity. India had long been an area and culture (or, more accurately, cluster of cultures) used to absorbing migrant peoples. But much as in Europe, cultures were regionally based.

The British had no intention of staying. Even when the idea of empire did develop, there was no intent of remaining, no attempt at settling (as there had been in North America). The British were there for commerce. Originally they found India fascinating. As they transformed from traders to rulers, they came to view India and Indians as inferior: non-European, non-Christian, nonwhite. The British came to despise Indians and, after the great rebellion of 1857, to fear them. (In 1900 there were about 1,000 British administrators over 300 million Indians and probably 100,000 British totally.) Further, the British drive for profit remained dominant; for example, during famines, foodstuffs were still sent to Britain, and economic change was made for the benefit of the British, not for the welfare of the Indians.

Nevertheless, there were some positive developments as well. It is arguable whether some or all of these changes would have happened anyway, but the influence of British culture is obvious in some key political and social advances. Chief among them was probably the widespread use of the English language, which contributed to unification or nationalism: a sense of oneness superseding or at least linking regional identities. This in turn made possible the freedom movement: leaders in the various regions could

communicate with one another in the same language. It also made it possible for leaders like Nehru and Gandhi to be educated in England in English law, which not only brought the realization that the behavior of the British in India was not in keeping with their ideals but also opened the door to the development of democratic institutions in India. Universities were established in India using English as the medium of instruction. This led to Indian participation in the civil service system and eventually to technological development. Probably most important here is the national parliamentary democracy, clearly patterned after the British system.

The current Indian Administrative Service is an outgrowth of the colonial Indian Civil Service (itself inspired by the traditional civil service of China), which, if reluctantly, came to employ and train Indians. The universities taught English literature and culture, and an Indian literature in English developed (and is flourishing today). The railway system had (and has) a great impact on imbuing regions with a sense of national identity, as did the telegraph. Urbanization contributed to a social fabric incorporating, and in some instances supplanting, caste identities.

Social reform often provided a break with traditional abuses such as suttee (or sati), the burning of widows on the deceased husband's funeral pyre. But this is a complicated matter, sometimes luridly exaggerated in the West. It was a despicable practice but was not as common as perhaps believed or always participated in unwillingly by the widow. Unfortunately it still occurs, albeit illegally and very infrequently. While originally hesitant to interfere in Indian customs, the British outlawed the practice in 1829. But the greater influence in ridding it from acceptance was likely due to the Bengal Renaissance.

The Bengal Renaissance emerged in the British capital of Calcutta (now Kolkata). The Bengal Renaissance included a number of social and artistic movements and organizations. This was a reformist movement influenced by British culture and reacting to Western and Christian criticism (and condemnation) of Indian culture in general and Hinduism in particular. The Bengal Renaissance's cultural and artistic importance

was far-reaching. One outstanding example is a type of painting, a fusion of folk and urban styles, known as Kalighat (after the area around a Hindu temple in Calcutta). Much of the subject matter involves social commentary or observation. It was largely of the nineteenth century but anticipated some twentieth-century international artistic developments aligned with anticolonialism and colonial legacies. It is an outstanding example of synthesis, of Hindu tradition reacting to British influence.

Social change occurred not just because of British rule but often in spite of it. It must be emphasized that as in all cases of imperialism, the ruling culture thought itself superior, often exercising disdain and misunderstanding for the culture and customs of the ruled. The British were no exception, but they did provide more opportunities for development than other imperial rulers. And for the most part the Indians used the opportunities constructively.

—Fritz Blackwell

Bibliography

- Collingham, Lizzie. *Curry: A Tale of Cooks and Conquerors*. Oxford: Oxford University Press, 2006.
- Judd, Denis. *The Lion and the Tiger: The Rise and Fall of the British Raj, 1600–1947*. Oxford: Oxford University Press, 2004.
- Khanna, Balraj. *Kalighat: Indian Popular Painting 1800–1930*. Boston: Shambhala Redstone Editions, 1993.
- Markovits, Claude, ed. *A History of Modern India, 1480–1950*. Translated by Nisha George and Maggy Hendry. London: Anthem, 2002.

European Society during the Old Regime

The historian's difficulty in characterizing the society in Old Regime Europe is compounded by the ambiguity of the term "Old Regime." Although 1789, the year in which the French Revolution began, is universally considered its closing point, there is considerable debate about when it began. This analysis takes 1650 as its starting point, the beginning of an era in which absolutism was the dominant form of government on the continent.

Traditionally, Old Regime Europe has been presented as a "society of orders" that transformed itself into a "society of classes" by the turn of the nineteenth century. More recent studies have challenged this description, arguing that the medieval ideal of three orders—clergy, nobility, and peasantry—obscures the many gradations of position, privilege, wealth, autonomy, poverty, and obligation that made up the fabric of European life. The ideal was developed by medieval clerical scholars and was, even in its inception, an attempt to thwart social change, never truly describing Europe's society.

Despite its deficiencies, the theory of a society governed by orders does provide a beginning point for understanding European life under the Old Regime. Fundamental to the society of orders were the ideas of privilege and hierarchy. Membership in one of the two upper orders, the clergy or the nobility, gave an individual various privileges. These privileges varied depending on the wealth and position of the particular individual and the state in which he lived. The dominant group in the third order, the peasants, were the laborers of eighteenth-century Europe. In eastern Europe most peasants were serfs, tied to the land and to their lord. In western Europe most peasants were freemen but still bore the burdens of a lower social status that kept all but the most prosperous in perpetual debt to the lord—whether a nobleman, a wealthy commoner, or an ecclesiastical establishment (church or monastery)—who governed their land.

In Russia, Prussia, Poland, and territories ruled by the Habsburgs, the privileges of the nobility, the ruling house, and the church remained strong throughout the Old Regime. Attempted agrarian and fiscal reforms under Maria Theresa (d. 1780) and Joseph II (d. 1790) in the Habsburg monarchy were reversed by their successors. Absolutism relied upon an accommodation between the crown and the nobility. This accommodation was achieved in many ways, but central to it was the Crown's support for the nobility's wealth in land. Overall Europe had 3.5 million to 4 million nobles in the eighteenth century, about 3 percent of the total population. Two-thirds of these nobles were located in the states of Poland, Spain, Russia, and Hungary. They were not all wealthy;

➤ JOSEPH II AND AGRARIAN REFORM IN THE HABSBURG MONARCHY

Maria Theresa, empress of the Habsburg monarchy (1740–1765) and coregent (1765–1780) with her son Joseph II, was one of the first European rulers to initiate significant agrarian reform. Her aim was to stimulate the economy by turning serfs into tax-paying freemen with a greater incentive to be efficient farmers. Called the Raab system after the minister who created it, the reforms established a free peasantry with small plots on royal estates. Labor service was commuted to a payment made in cash or kind. Peasants were thus free to spend all their time farming their own plots. Joseph, ruling alone after 1780, sought to expand the reforms to the rest of the monarchy's serfs. Maria Theresa had applied the reforms only in her German-speaking lands in deference to the powerful Hungarian nobles. Joseph made the interest of the state his first priority. Convinced that economic growth was a key to state power, Joseph abolished the personal servitude of serfs, giving them the freedom to move, enter a trade, or marry without their lord's permission. He also established state-licensed judges to settle agrarian disputes.

Furthermore, he surveyed all of the lands of the Habsburg monarchy, assessing taxes based upon the soil's quality. Nine rates were established, and taxes were payable by all landowners, even nobles. To complete his assault on serf labor, Joseph reduced the robot payment (a payment that serfs owed the landowner to replace the unpaid labor that once had been required of them) so that a peasant would owe his lord and the state no more than 30 percent of his gross income. With the land tax set at about 12 percent, this reduced the amount that the lord could collect to about 18 percent. Surprisingly, Joseph's agrarian policies were protested by peasants as well as lords. This was due to the opposition Joseph generated with his reform of the Catholic Church in the Habsburg monarchy and to the difficulty that the population had in understanding the reform legislation. In any event, Joseph's reforms ended abruptly with his death in 1790. His successors reversed the efforts of both Joseph and Maria Theresa in the last decade of the century.

—Annette Chapman-Adisho

in fact, many nobles were scarcely better off than the peasantry but still enjoyed certain symbolic privileges such as the right to wear a sword, sit in the front pew of the village church, and be addressed with deference. The wealthiest nobles were few in number but controlled enormous landholdings and, in eastern Europe and Italy, serfs. For Europe's serfs, the Old Regime meant a life of toil. Landed estates in eastern Europe were divided into two parts: the demesne (the lord's land) and peasant plots. On average, most serfs were required to work three days per week for the lord and more at harvest time. Serfs also paid taxes from the harvests of their own plots to the lord, the state, and the church. Serfs were bound to their lord by a legal arrangement known as personal servitude. They were dependent upon their lord's permission to marry, move, or change their trade. The only real distinction between serfdom and slavery was that the serf had a "legal personality" and could bring suit against his lord in court. The legal justice of the Old Regime favored the lords, however, as they or their agents

had the right to administer justice through the manorial courts.

In western Europe serfdom was essentially abolished by the sixteenth century, and by the eighteenth century land ownership was mixed, with even the restriction on "noble land" only belonging to the nobility long gone. The nobility, the Crown, and the church owned land, as did wealthy urban dwellers whose fortunes had been made in government service, commerce, manufacture, or rents (from their landholdings). Peasants also owned land, and some owned enough that they hired other peasants to work for them. In western Europe, the labor obligations that peasants owed their seigneur were largely converted into dues and fees. Even peasants who owned their land frequently held only nonallodial ownership, which meant that they had the right to work the land and claim its harvest but did not own the land outright. Their children inherited the same rights and obligations. Peasants enjoying nonallodial ownership owed the lord a quitrent, which was an annual tax, in addition

to other taxes. The lord also had monopolies on milling, baking, wine making, and hunting as well as control of local manorial courts.

Despite the hardships of their lives, Europe's peasants under the Old Regime enjoyed a communal organization that was remarkably efficient. Most fully developed in northern Europe, the peasant commune divided common lands as well as some lands held under individual tenure and provided for cooperation with the tasks of plowing, harvesting, and the grazing of animals.

Some Europeans lived outside of the ideal order of three estates. Town dwellers whose freedoms from the manorial system were preserved in charters are one example. Another is Europe's Jewish communities. Kept outside of the society of orders by Christian prejudices, Europe's Jews were restricted in every state by a variety of regulations on where they could live and the trades they could pursue.

Besides the changes that were apparent to contemporaries, society in Old Regime Europe underwent a number of significant changes that were less apparent. First among these was an increase in population; Europe's population increased by about 16 percent from 1700 to 1750 and by another 30 percent from 1750 to 1800. This population increase served as a stimulus to agriculture, with previously marginal land brought into cultivation for cereal crops. Ultimately, however, Europe's agricultural production could not keep up with its population growth, and the end of the century saw greatly increased grain prices. The population increase also expanded poverty in both rural and urban Europe. Increasingly, the poor were not confined to a few categories of unfortunates but instead came to be found among many who were able-bodied rural males and in the prime of their years. This new face of poverty was troubling for contemporaries, who explained it as the result of moral failings. It was first in England that contemporaries began to understand that a changing economy was at least in part responsible for the creation of this new class of laboring poor.

—Annette Chapman-Adisho

Bibliography

Behrens, C. B. A. *The Ancien Régime*. New York: Norton, 1967.

Dipper, Christof. "Orders and Classes: Eighteenth-Century Society under Pressure." In *The Eighteenth Century*. Edited by T. C. W. Blanning. Oxford: Oxford University Press, 2000.

Woloch, Isser. *Eighteenth-Century Europe: Tradition and Progress, 1715–1789*. New York: Norton, 1982.

The Middle Class in Industrial Societies

The rise of the middle class during 1750–1914 is closely associated with the Industrial Revolution. Urbanization (and later suburbanization), the pre-eminence of the capitalist economic system, and the separation of the public and private spheres of social life each aided in the definition of the middle class. The middle class came to wield progressively more political, economic, and cultural power, while traditional sources of power such as the nobility and organized churches tended to lose influence in these realms.

The Industrial Revolution began in Britain in the second half of the eighteenth century and spread to Western and Central Europe and the



A woman and her daughter dust the parlor, about 1870. (Library of Congress)

► THE MIDDLE CLASS AND LIBERALISM IN NINETEENTH-CENTURY EUROPE

Many middle-class individuals in nineteenth-century Europe supported liberalism, one of the first mainstream post-French Revolution political movements that claimed liberty as man's primary right and the basis of modern society. Liberalism represented middle-class interests of personal liberty and individuality opposed to reinvigorated conservative forces in Europe after Napoleon's fall. Liberals stood for middle-class interests in their belief that education and property were the basis of political rights. Early liberalism focused on negative liberty, or individual liberty from coercion by outside authorities (as manifest in the free market, freedom from compulsion by the state, and so on). By the second half of the nineteenth century, liberals focused on positive liberty, a belief that the state must guarantee equality of opportunity through universal education, public health laws, and the like. Liberals succeeded in guaranteeing positive liberties in many European nations in the second half of the nineteenth century but were undone by their own successes. Many workers, exercising their new political rights, affiliated themselves with socialist parties that pushed for further reform. In response, many members of the middle class abandoned liberalism for conservative or nationalist political parties, discrediting liberalism in the decades preceding World War I.

—Andrew Denning

United States in the nineteenth century. By the last two decades of the nineteenth century, Germany and the United States had emerged as the preeminent sites of industrial growth and innovation. In the early twentieth century, industrialization began to take hold in areas of Eastern Europe, Russia, and Japan. In the time period in question, however, the industrial middle class can largely be considered a Western phenomenon.

As a social group, the middle class is notoriously difficult to define. Many choose to define the middle class negatively; that is, the middle class was neither the lower class (working poor) nor the upper class (nobility born into social prestige). The remaining population is a large and heterogeneous group that, when examined carefully, shows as many differences as

commonalities. The middle class may be defined by wealth, education, occupation, or social status, among other possibilities. Thus, there exists no objective definition of the middle class. However, we can generalize in regard to the characteristics of this social grouping in relation to simultaneous industrialization.

The middle class generally drew from white-collar occupations such as commerce, finance, and manufacturing (excluding manual labor). Such vocations were generally small and unorganized in preindustrial societies but grew exponentially as trade and the acquisition and management of capital became the principal economic activities under the capitalist system. Other white-collar professional groups such as doctors, lawyers, and teachers underwent a period of professionalization whereby occupational standards and principles were defined in order to both regulate the quality of such professions and prevent the loss of business to cheap (and often underqualified) imitators on the open market. A large sector of the middle class benefited from the massive expansion of state power and the subsequent growth of bureaucracy to administer the directives of the state.

While socioeconomic definitions offer insight into the groups that made up the middle class, shared cultural attitudes unified a geographically and economically disparate population into what may be called a middle class. The middle class reacted against the conformity and social stratification of preindustrial states by adopting a more individualist philosophy in concert with ideals of personal liberty (especially economic independence) that served as the backbone of industrial capitalism. As a result, middle-class culture valued individuality to such an extent that many critics, including Karl Marx, blamed middle-class individualism for the dissolution of traditional social bonds and for fueling class conflict.

The wealthier members of the middle class, as newcomers to social and cultural prestige by way of their economic prowess, quickly came to imitate the standard-bearers of prestige: the nobility. The growth of consumer culture under the capitalist system allowed affluent middle-class individuals to satisfy their demand for luxury by purchasing the trappings of wealth. While nobles were no longer politically dominant, prominent

members of the middle class still aimed to marry up. That is, by marrying a child to a member of the nobility, middle-class families hoped to improve their own social standing.

Despite newfound social prestige, the middle class struggled to translate economic power into political gain. The example of Great Britain is instructive. In the early nineteenth century, despite middle-class economic prowess, the aristocracy maintained a stranglehold on political power. In 1832, the upper middle class received the right to vote with the passage of the Reform Act, which expanded suffrage to individuals paying large rents. The passage of the 1867 Reform Act lowered rent restrictions and thus extended the franchise to a larger segment of the middle class. Such restrictions were echoed throughout Europe in this era. Middle-class political power was thus predicated not on universal suffrage but rather on securing the vote only for wealthy segments of the middle class (and certainly excluding the workers).

The middle class also placed great emphasis on education. Theoretically, education represented a vehicle of progress, both of technical innovation in the industrial system and as a means of bettering one's social and economic standing within the capitalist meritocracy. In reality, however, schooling helped to perpetuate existing conditions by reinforcing existing social hierarchies within the middle class and further exacerbating the disparity between the upper and lower middle classes. That is, the pursuit of higher education in fine arts disciplines, literature, and philosophy served as a mark of distinction. The aim was to be perceived by one's peers as cultured. In contrast, more technical fields with practical applications were less distinguished and came to be associated with the lower middle class. Such a division was aggravated by the creation of separate schools for technical and vocational training.

In the nineteenth century, middle-class culture showed an intense concern with morality, a manifestation of the importance that the middle class afforded to outward appearance and the visual indicators of wealth and prestige. Victorianism describes the largely middle-class drive in England to curb sexual licentiousness, crime, and cultural depravity in the nineteenth century.

Echoes of Victorianism were to be found among the middle class in other industrialized nations as well.

Middle-class culture also saw a redefinition of gender roles. Whereas preindustrial society often included women as economic actors, the industrial middle class popularized the concept of separate spheres for men and women. The public sphere represented the male realm, while the private sphere (the home) was the female domain, preventing many women from experiencing public life.

The rise of middle-class culture was mirrored by an associated interest in leisure. For the middle class, leisure was often a public pursuit, and middle-class values transformed the urban landscape in Europe and the United States by establishing spaces where leisure time could be enjoyed: parks, museums, zoos, theaters, concert halls, and libraries. The novel gained in popularity due in large part to high levels of literacy and the insatiable cultural appetite of the middle-class readership.

The middle class quickly rose to prominence in this era, translating economic success and increasing social prestige into cultural power. Middle-class culture steadily became a mass culture, as middle-class morals, tastes, and behaviors served to unite disparate groups across the social spectrum.

—Andrew Denning

Bibliography

- Kocka, Jürgen. "The Middle Classes in Europe." *Journal of Modern History* 67(4) (1995): 783–806.
- Pilbeam, Pamela M. *The Middle Classes in Europe, 1789–1914*. Basingstoke, UK: Macmillan Education, 1990.
- Wahrman, Dror. *Imagining the Middle Class*. Cambridge: Cambridge University Press, 1995.

Middle-Class Values and Self-Help Books

Until the eighteenth century, much European and American nonfiction sought to explain moral, scientific, or social ideas in an exhaustive and intellectual manner. In such treatises, the discipline, its further development, and debates among its scholars were the focus.

➤ SAMUEL SMILES AND SELF-HELP

Samuel Smiles (1812–1904) was not the first person to use the term “self-help,” but he is responsible for its association with a certain type of literature. Smiles is best known for a series of advice books, which included *Self-Help* (1859), *Character* (1871), *Thrift* (1875), *Duty* (1880), and *Life and Labour* (1887). In them, he emphasized that people of modest origins could achieve success through high aspirations and hard work and that individuals’ development was essential to the improvement of society. These views are evident in the opening paragraphs of *Self-Help*, where Smiles writes: “The spirit of self-help is the root of all genuine growth in the individual; and, exhibited in the lives of many, it constitutes the true source of national vigour and strength. Help from without is often enfeebling in its effects, but help from within invariably invigorates.”

Although Smiles was not the first writer of such books, the simplicity of his prose and his inclusion of interesting capsule biographies of famous men made his works quite readable. Each volume was published in Great Britain and the United States.



Samuel Smiles was a best-selling author of inspirational books teaching middle-class values of self-reliance, thrift, and responsibility during the era of the Industrial Revolution in Great Britain. (Library of Congress)

Self-Help alone was translated into several languages (including Japanese and Turkish) and sold more than a quarter million copies internationally. Smiles captured the widespread interest in self-improvement among nineteenth-century Britons and Americans who aspired to the middle class, and *Self-Help* remains an important cultural document to this day.

—Bernadette Lear

However, the long century from the Enlightenment through World War I is notable for the birth of the self-help book, which broadened the typical authorship, audience, and scope of nonfiction. This new genre was particularly important for helping nonacademics to understand and interact with all aspects of the material and spiritual world, and for prioritizing each reader’s personal development over the progress of the given branch of learning. Put another way, self-help books—which were written to be understood and enjoyed by the layperson—emphasized practical how-to aspects of the topic and encouraged the reader to take personal responsibility and pride in his or her own achievement. With this in mind, self-help manuals are usually distinguishable from other works of nonfiction.

In the period 1750–1914, self-help books were primarily a Western phenomenon. Their rise should be understood within broader trends of the era. Throughout the nineteenth century, many traditional social and economic barriers were eroding in the Western world. Not least

important were the expansion of the right to vote, faster communication and travel, the beginning of new and large businesses, compulsory education, improved literacy, lower costs and new printing technologies (making books more affordable and attractive), and increased leisure time. There was a widespread belief in human perfectibility, a possibility that extended from the individual to the community and beyond. For those who could take advantage of these opportunities, a valid question was, how? Unsurprisingly, written self-help guides (which were very portable and could be thumbed through at will) enjoyed a wide readership.

Early works of this type emphasized spiritual development and linked material success to Christian piety. Over time, however, guides began to broach worldly topics more directly. In the late eighteenth and early nineteenth centuries, one of the best-known self-help authors was Benjamin Franklin, whose *Autobiography* he himself felt was “fit to be imitated.” His work provides a good example of the culture’s transition from

religious to secular concerns. In Part 2 of the *Autobiography*, Franklin described how he devised a list of 13 “virtues” to master. The Puritan’s ability to place and maintain limits on oneself clearly underlies many of them: “TEMPERANCE, . . . SILENCE, . . . ORDER, . . . RESOLUTION, . . . FRUGALITY, . . . INDUSTRY, . . . SINCERITY, . . . JUSTICE, . . . MODERATION, . . . CLEANLINESS, . . . TRANQUILITY, . . . CHASTITY, and . . . HUMILITY.” Yet concerns about political fairness, hygiene, financial comfort, and inner peace (as well as some toleration for drinking, “venery,” and other human weaknesses) are also present. Although its contents were not entirely new, Franklin’s book had an extraordinarily wide readership. Samuel Smiles, whose tremendously popular *Self-Help* (1859) gave a catchy name to the genre, emphasized some of the same themes as Franklin, although Smiles drew lessons from a variety of British industrialists in his own era. The virtues that Franklin and Smiles identified more or less characterized self-help manuals written through World War I.

A culture of self-improvement permeated many aspects of nineteenth-century life, and most self-help books demanded that readers act as well as believe. In addition to reading, people often joined lyceums, library associations and book clubs, savings institutions, civic campaigns, gymnasiums, correspondence schools, and other organizations. Mid- and late-nineteenth-century writers produced manuals for all fields of human endeavor. In addition to addressing attitude, intellect, and morals, they dealt with building design and landscaping, business, cooking and homemaking, conversation and etiquette, farming and gardening, music making and other artistic expression, and much more. In fact, some authors (including Smiles) set pen to paper after successes as popular lecturers.

Most guides were written by people who had already achieved something and were giving recommendations to a younger generation or those of a lower social station. Therefore, some scholars believe that self-help books were intended to control perceived inferiors. This line of thought contends that the middle and upper classes felt threatened economically and socially and tried to shape the newly empowered masses to a middle-class worldview. Although this interpretation has

been substantiated, one must not forget that people of all backgrounds have willingly sought and taken advice and have published success guides of their own for others like themselves. For instance, women such as Catharine Beecher offered advice to other women on cooking, house cleaning, and other domestic work. Antebellum students used Benjamin Homer Hall’s *A Collection of College Words and Customs* to initiate themselves into the vocabulary and rituals used on nineteenth-century campuses. Foreign-language newspapers contained articles on finding employment and other topics of interest to new immigrants. Thus, to view self-help books solely as a top-down phenomenon is to misunderstand the reasons behind the ongoing popularity and importance of the genre. As long as humankind has an interest in self-improvement, there will be texts to guide it.

—Bernadette Lear

Bibliography

- Briggs, Asa. *The Age of Improvement, 1783–1867*. 2nd ed. Harlow, UK: Longman, 2000.
- Ehrenreich, Barbara. *For Her Own Good: Two Centuries of the Experts’ Advice to Women*. Rev. ed. New York: Anchor Books, 2005.
- Hilkey, Judy. *Character Is Capital: Success Manuals and Manhood in Gilded Age America*. Chapel Hill: University of North Carolina Press, 1997.
- Jarvis, Adrian. *Samuel Smiles and the Construction of Victorian Values*. Thrupp: Alan Sutton, 1997.
- Kett, Joseph F. *Pursuit of Knowledge under Difficulties: From Self-Improvement to Adult Education in America*. Stanford, CA: Stanford University Press, 1994.
- Rodrick, Anne Baltz. “The Importance of Being an Earnest Improver: Class, Caste, and *Self-Help* in Mid-Victorian England.” *Victorian Literature and Culture* (2001): 39–50.
- Travers, Tim. *Samuel Smiles and the Victorian Work Ethic*. New York: Garland, 1987.

The Working Class and Political Tensions in Early Industrial Britain

Periods of social upheaval, if not caused by warfare or external aggression, often are the result of political change lagging behind economic change. In Britain in the late eighteenth and early nineteenth centuries, remarkable economic

changes were occurring as a result of the Industrial Revolution, including industrialization, urbanization, and new economic relationships. The political structure remained relatively unchanged, however, reflecting the agrarian past of the country. Hence it is hardly surprising that new political movements emerged, demanding a greater share in the country's governance by the disenfranchised.

At the beginning of the nineteenth century, the right to vote was limited mainly to the landed aristocracy. The rise of a manufacturing-based capitalist class, with limited access to the traditional political establishment, and the growth of an industrial working class meant that the majority of the population in Britain was disenfranchised. As such, they had no formal mechanism by which to pursue their economic and political goals.

In these circumstances, antipathy arose between the landed aristocracy and the burgeoning industrial capitalist and middle classes and between the working classes and the landed aristocracy and capitalists. This situation generated political cooperation between the disenfranchised classes that otherwise shared little in terms of their political and economic needs and objectives. The creation of cross-class movements arose to ensure the extension of the franchise as a means of furthering political and economic agendas.

As the size of the industrial working class grew, however, the interests of the workers and the capitalists diverged. Some workers began to form associations with other workers in the same trade to bargain for higher wages and working conditions, although it was the skilled craftsmen who set up most of the lasting associations of working-class men during the period of 1750–1850. Workers united for several reasons: to protect themselves from exploitation, to maintain their living standards to increase their wages, and to provide funds for unemployment and sickness benefits. Unfortunately, the unskilled workforce had little to bargain with; for the most part, they were illiterate and did not earn enough to set aside funds to protect themselves from the ravages of unemployment or sickness. They also lacked political representation to push for legislative solutions.

The high prices accompanying the Napoleonic Wars and the resulting trade embargo caused severe distress for the working class; as early as 1795, Norfolk laborers agreed to organize a petition drive for higher wages. The embryonic workers' movement situated in the Corresponding Societies, however, was crushed by the Corresponding Societies Act of 1799 that made national associations with related branches illegal and by the Combination Acts (1800) that outlawed all trade-union organizations. These laws provided for summary trial and conviction of workers threatening any form of collective action. They were used primarily against unskilled workers, who were now barred from striking for higher wages. Although the Correspondence Societies of the skilled workers were now illegal and could not bargain for higher wages or better conditions, they still were able to provide their members with unemployment insurance and sickness benefits.

Given that unskilled workers were unable to set up trade societies, they had little protection against unemployment and sickness. This made them vulnerable to price changes of necessities and to the whims of the market in terms of their wages. The introduction of labor-saving machinery, the long work day, and low wages became the focus of the ire of the working class. Their primary response was the collective bargaining riot. These machine-breaking riots were a familiar feature of the early stages of the Industrial Revolution and were directed not only at machines but also at all of the property of the capitalists, such as raw materials, finished commodities, and buildings. A sustained form of this illegal action, Luddism, was active primarily from 1811 to 1813. The eighteenth and early nineteenth centuries were punctuated by riots brought about by rising prices of goods, tolls, new machinery, enclosures, press gangs, and so forth. Riots occurred as early as the 1760s and 1770 (e.g., Wilkes Agitation) and continued in the Gordon Riots (1780) and the mobbing of the king (1795 and 1820).

Primarily under the control of the landed aristocracy, the government attempted to destroy this burgeoning working-class movement. From 1760 to 1810, the number of offenses punishable by death increased by 63 and came to include petty theft, destroying machinery, breaking

down fences when commons were enclosed, and the destruction of property. One in every three sentenced to death for these crimes actually was executed. Those whose execution was commuted were transported to Australia and the other prison colonies. Because there was not a police force at the time, the military often were called in to break up these riots. However, the military often created its own destruction, and an attack on the riot by the military had serious political ramifications.

It is essential to note that these riots were spontaneous; participants were not members of organizations that had goals and strategies. The working classes did not have an ideology around which to unite, just their dissatisfaction with their situation, and they had no acceptable form of release for their anger. Champions of the working class at the time included Henry Hunt and William Cobbett; however, they did not have a sufficient understanding of the economic system or the organizational skills to unite these disparate people.

The rise in spontaneous working-class activity provoked additional measures, and the rights of habeas corpus were suspended in 1794, enabling imprisonment without judicial orders and detention without charges. Many strikes occurred in the early years of the nineteenth century in the textile districts, followed by arrests and trials of workers. Textile workers became convinced that strikes were futile without political change leading to parliamentary representation. This led to the issue of parliamentary reform; demonstrations and meetings pressuring for reform were held throughout industrial districts.

One of these meetings was in Manchester in 1819 and resulted in the Peterloo Massacre. Following a charge by the military in an attempt to arrest Henry Hunt at a peaceful political demonstration, 11 people were killed and hundreds injured. This massacre led to further demonstrations, severe criticism of those directly and indirectly responsible, and divisions within the landed aristocracy. The authorities' response to the unrest led to the enactment of what is known as the Six Acts, which were intended to restrict public meetings and demonstrations. The acts enabled judges to impose more severe penalties, strengthened libel and sedition laws, allowed

magistrates to search houses and confiscate weapons, restricted the right of public meeting, and imposed a stamp tax designed to prevent people from reading newspapers published by the radicals by increasing their prices.

With the support of working-class leaders and movements, the industrial capitalists and middle classes obtained the franchise—provided they met the property qualifications—with the Reform Act of 1832. This reform, however, did nothing to ensure the franchise for those without property. In fact, the manner in which the reform was structured led to the loss of the limited representation that the working class had in agricultural districts. The organization of workers into movements, such as the cooperative movement or the National Union of the Working Classes, did not develop seriously until the 1820s and 1830s. Attempts to organize trade unions for unskilled workers did not begin until after the repeal of the Combination Acts in 1824. The organization of workers into a general political movement for parliamentary democratization did not come until the Chartist period (1838–1848). Universal male suffrage independent of property qualifications in Britain was not achieved until 1918, and women gained the right to vote in 1928.

—Susan Pashkoff

Bibliography

- Cole, G. D. H. *A Short History of the British Working Class Movement 1789–1848*. Vol. 1. London: George Allen and Unwin and Labour Publishing, 1927.
- Halevy, Elie. *A History of the English People in the Nineteenth Century: England in 1815*. Vol. 1. London: Ernest Benn, 1960.
- Pashkoff, Susan. "Working Class Protest Movements." In *Encyclopedia of the Age of the Industrial Revolution, 1700–1920*, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.
- Thompson, E. P. *The Making of the English Working Class*. New York: Vintage, 1966.

Social Change in Latin America

In the Bourbon period of Spanish America (1713–1821), society was much the same as it had been under the Habsburgs. The most profound difference was the growing influence and discontent

of white Spaniards who had been born in the colonies and were known as Creoles. Peninsular Spaniards (Peninsulares), those born in Spain, were at the apex of the colonial social pyramid and held high-ranking posts in the imperial bureaucracy as well as high offices in the Catholic Church. The officer ranks of the regular Spanish Army on service in the empire were also dominated by the Peninsulares. Creoles, on the other hand, held lesser positions in the bureaucracy or Church and were granted commissions in the colonial militia. In the private sector, the Creoles tended to be large landholders (*hacendados*) but also obtained wealth as wholesale merchants and in a variety of other enterprises. The rest of colonial society was divided in a caste system (*regime de castas*) largely based on race that included mestizos, Africans, and Indians; these classifications were further subdivided into an array of additional racial combinations.

The independence movement that erupted by 1810 in Spanish South America was led largely by the Creole elite who had been greatly influenced by the political theories of the Enlightenment and the examples of the American Revolution and the French Revolution. In contrast, the revolt in Mexico was started by Miguel Hidalgo, a Creole priest who appealed to the masses and was initially opposed by his fellow Creoles. By 1822, Spain's New World Empire consisted only of Cuba and Puerto Rico.

In the immediate aftermath of independence, there was outwardly little societal change in the former Spanish colonies. The most significant change was the departure of most of the Peninsulares, although some remained and became members of the new Creole elite. While the Creoles had united to defeat Spain, this unity was soon bifurcated in the early postindependence period. The Creoles divided into two political groups: Conservatives, who became the defenders of the old order, and Liberals, who favored modernization and a political system that emulated the model of the United States. The removal of Spanish control opened the region to the influx of new ideas from abroad. Intellectual movements including positivism, romanticism, and socialism found adherents in Latin America.

In theory, the newly formed republics did away with the colonial *regime de castas*, as

their constitutions mandated racial equality. In reality, many of the groups retained their distinct racial and cultural identity, which often led to blatant racial discrimination. However, some groups, most notably mestizos, managed to improve their lot and obtained political, social, and economic power. Indians, on the other hand, generally remained at the lower echelons of the social system. In many instances Indians were worse off, because the protective laws from colonial times were rescinded and the Spanish Crown no longer served as their protector. Some Indians escaped abuse by “becoming” mestizo, which meant abandoning their indigenous costumes and customs and speaking Spanish. Until the 1870s, Indians continued to live on communal lands in much the same manner as during the colonial period and even precolonial period. In the 1870s Indians in much of Latin America suffered an assault on their communal way of life, as many of their lands were expropriated as part of economic development schemes. Hence, debt peonage increased, and a type of serfdom evolved that trapped Indians on land owned by whites or mestizos. Another consequence was the emergence of the *patrón* (boss) system that required Indians to show deference to whites, including the removal of hats and the bowing of heads. In many instances, personal decisions, including marriage, had to be approved by the *patrón*. Indigenous peoples were supposed to receive benefits under the *patrón* system including shelter, food, and health care, but when provided these services were often substandard.

Racial lines in nineteenth-century Latin America were not clearly delineated, and attitudes were often contradictory. Some mestizos and mulattos were able to obtain high political office. Examples included Juan José Flores in Ecuador, Vicente Guerrero in Mexico, and Andres Santa Cruz in Bolivia. In Mexico, Benito Juárez, a full-blooded Zapotec Indian, became president. The Creoles often sought the support of mestizos to enhance their political power. However, the introduction of positivism and social Darwinism in the latter half of the nineteenth century intensified racial prejudice. This was mitigated for mestizos, and even pure-blooded Indians, who claimed pure-white blood and in many instances were accepted as such by whites. In some

instances the social status of blacks improved, most notably in Venezuela. However, in most of the newly formed republics, blacks represented a small portion of the population and remained isolated and marginalized.

Another significant societal change brought on by the Wars of Independence involved the status of women. For example, Manuela Sáenz, Simon Bolívar's lover and confidant, served in the revolutionary army and accompanied the liberator on several of his campaigns. Other Creole women participated in the wars by serving as spies and messengers. However, new laws often deprived women of some of the property rights they had enjoyed under Spanish colonial rule. The concept of Marianismo, which celebrated the virtues of the Virgin Mary including tolerance, love, docility, and resignation, became the expected standard for women of high social standing in the new republics of Latin America.

Educational opportunities for women were also limited, but in some countries women were provided with the fundamentals of a primary-level education. Argentina took the lead in improving education and was the most progressive in this area. While some women made some advances, especially in the arts, most remained largely in traditional roles throughout the nineteenth century.

—George Lauderbaugh

Bibliography

- Burns, E. Bradford. *The Poverty of Progress: Latin America in the Nineteenth Century*. Berkeley: University of California Press, 1980.
- Bushnell, David, and Neill Macaulay. *Latin America in the Nineteenth Century*. 2nd ed. Oxford: Oxford University Press, 1988.
- Halperín-Donghi, Tulio. *The Aftermath of Independence in Latin America*. New York: Harper and Row, 1973.

■ Introduction: The End of Slavery and Serfdom

The end of Atlantic slavery and of the serfdom of eastern Europe and Russia was a protracted and complex process with roots in the eighteenth century. The growth of abolitionist sentiment initially among both Protestant Christian and secular enlightenment writers helped people to conceive of the abolition of slavery as a practical possibility and moral desideratum, but in and of itself this sentiment was unable to challenge the entrenched power of slaveholders. Opposition by slaves and serfs themselves put greater strain on the institutions, but with the major exception of the Haitian revolution (1791–1804) seldom did slave or serf revolts lead directly to slavery's or serfdom's end. The massive disruption caused by the French Revolution led to the Haitian revolution, a temporary abolition of slavery on the other French Caribbean islands, and contributed to the abolition of serfdom in those areas of Europe occupied by the French. Although slavery in the French empire was partially restored by Napoleon, the ideal of the universal rights of man,

which spread from the French to other revolutionaries, worked against both slavery and serfdom. The revolutions of the Latin American republics against Spain were usually accompanied or quickly followed by the abolition of slavery in the newly independent nations. The displacement of slavery and serfdom by capitalist systems resting on free wage labor was an underlying process in the end of those systems. Industrial capitalist heartlands like the North of England and New England were also strongholds of abolitionist sentiment. Serfdom was also opposed by centralizing monarchies which saw it as a support of independent landlord power.

The struggles against slavery and serfdom were seen as related. The most protracted struggle against serfdom took place in Russia, and the Russian intelligentsia who campaigned against it copied many of the techniques of the abolitionists, although the popular mobilization practiced by British and American abolitionists was not possible in Russia, with its virtually non-existent public sphere. The most successful piece of

anti-slavery propaganda, the American novelist Harriet Beecher Stowe's *Uncle Tom's Cabin* (1852), was received as an anti-serfdom work and widely read in translation, even though it was banned in Russia until 1857. Russian serfdom, like European serfdom generally, did not find the intellectual defenders that Caribbean and American slavery did, perhaps because serfdom lacked the racial dimension of Atlantic slavery. It was abolished in Russia for private estates in 1861, for state serfs in 1866.

The struggle against slavery took place in two stages, the abolition of the slave trade (mostly meaning the transatlantic trade from Africa) and the abolition of slavery itself. Although the end of Atlantic slavery was mostly peaceful (in fact the peacefulness of the end of British Caribbean slavery in 1834 was used as an argument for abolition), it was marked by two great blood-lettings, one at the beginning of the process, the Haitian revolution, and the other towards its end, the American Civil War (1861–1865). The abolition of slavery in the United States, finalized following Union victory in the Civil War, was not the end of the emancipation process, as slavery was abolished in Cuba, then a Spanish colony, in 1886 and in Brazil in 1888. The ends of Atlantic slavery and Russian serfdom did not mean the ends of unfree labor. Slavery persisted as an institution in China and the Islamic world into the twentieth century, and the legal abolition of slavery throughout the world was not completed until the 1960s. Nineteenth-century Caribbean slavery was replaced by indentured servitude drawing on Indian and Chinese labor, while convict labor in the United States had many of the characteristics of slavery. Despite the legal abolition of slavery in European colonies, imperialists coerced labor from their subjects in systems resembling slavery or sometimes even more harshly, as in the Belgian Congo.

—William E. Burns

Eighteenth-Century Critics of Slavery

Opposition to slavery in eighteenth-century Western society came from two main sources: Protestant Christianity, particularly Quakerism and Evangelicalism, and the Enlightenment. This

opposition was expressed both with idealistic assertions that slavery violated human rights and pragmatic arguments that slavery was economically inefficient.

The Enlightenment's principal impact on the debate was to promote humanitarian arguments on the antislavery side as well as secular proslavery arguments. Most Enlightenment thinkers expressed at least a verbal opposition to chattel slavery. Attacks that highlighted the misery of slaves and the hypocrisy and cruelty of those who exploited them or defended slavery were commonplace in Enlightenment rhetoric. Enlightenment philosophers combined denunciation of slavery's cruelty with the assertion that the institution violated the natural and inalienable rights that slaves, like all people, possessed. This same litany of rights would be asserted in classic Enlightenment-influenced political documents, such as the U.S. Declaration of Independence and the French Declaration of the Rights of Man. However, the Enlightened of Europe never campaigned against slavery as vigorously as they did against evils closer to home, such as religious intolerance or judicial torture.

Although Enlightenment writers frequently attacked the enslavement of Africans in the Atlantic trade, denunciation of slavery was not always correlated with egalitarian ideas about race. The leading philosopher of the Scottish Enlightenment, David Hume (1711–1776), strongly opposed slavery but held extreme views on black intellectual inferiority, comparing blacks who had acquired proficiency in European intellectual disciplines to trained parrots. Hume and other late-eighteenth-century thinkers (particularly in



Eighteenth-century Methodist leader and abolitionist John Wesley. (Hayward Cirkner and Blanche Cirkner, eds., Dictionary of American Portraits, 1967)

➤ JOHN WESLEY ON THE SLAVE'S LIFE, FROM *THOUGHTS UPON SLAVERY*

"When the vessels arrive at their destined port, the Negroes are again exposed naked to the eyes of all that flock together, and the examination of their purchasers. Then they are separated to the plantations of their several masters, to see each other no more. Here you may see mothers hanging over their daughters, bedewing their naked breasts with tears, and daughters clinging to their parents, till the whipper soon obliges them to part. And what can be more wretched than the condition they then enter upon? Banished from their country, from their friends and relations for ever, from every comfort of life, they are reduced to a state scarce anyway preferable to that of beasts of burden. In general, a

few roots, not of the nicest kind, usually yams or potatoes, are their food; and two rags, that neither screen them from the heat of the day, nor the cold of the night, their covering. Their sleep is very short, their labour continual, and frequently above their strength; so that death sets many of them at liberty before they have lived out half their days. . . . Did the Creator intend that the noblest creatures in the visible world should live such a life as this?"

—William E. Burns

Source

John Wesley, *Thoughts upon Slavery* (1774), 23–24.

Scotland) also emphasized the pragmatic argument against slavery, claiming that it was economically harmful and that slave societies were not as wealthy or productive as ones with free labor. The economist Adam Smith argued in *The Wealth of Nations* (1776) that free laborers were ultimately more efficient than slaves since they required less supervision.

Opponents of slavery on religious grounds were less likely to employ pragmatic arguments; the religious argument against slavery only slowly worked its way into the mainstream of Christianity. Such opposition was strongest in Britain, the world's leading slave-trading nation, and in the British American colonies. The first religious denomination to take a stand against slavery was the Society of Friends (Quakers), which condemned slavery and the slave trade as early as 1727. The first important American abolitionists were the Quakers Anthony Benezet and John Woolman. The second religious critique of slavery came from evangelical revivalists in the English-speaking world, led by the founder of Methodism, John Wesley, who published *Thoughts upon Slavery* in 1774. Wesley and other English evangelical abolitionists, including the lawyer Granville Sharp, were influenced by Benezet. Their work painted a dramatic picture of the cruelty of slavery and, unlike much of the work of the Enlightenment critics, appealed directly to readers' emotions. Sharp, one of the first English antislavery activists, also argued that

slavery could have no recognized existence in English law. Afro-Europeans and former slaves, such as Olaudah Equiano, also attacked slavery based on their personal experiences.

—William E. Burns

Bibliography

- Gay, Peter. *The Enlightenment: An Interpretation*. New York: Knopf, 1969.
- Hannaford, Ivan. *Race: The History of an Idea in the West*. Washington, DC: Woodrow Wilson Center Press, 1996.
- Wesley, John. *Thoughts upon Slavery*. Philadelphia, 1774.

Antislavery Movements in the United States

The U.S. abolitionist movement sought the emancipation of slaves in the South. It was rooted both in the Enlightenment's doctrine of human rights and in evangelical Christianity's attack on the immorality of slavery. The early wave of abolitionism in the eighteenth century peaked between 1784 and 1804, when slavery was abolished in the North and many slaves were manumitted in the South. By 1810 this wave had subsided, and abolitionists endorsed a gradual, compensated emancipation.

In 1816 a group of abolitionists who were concerned about the effects of emancipation on whites formed the American Colonization Society, which favored transporting free blacks to

EMANCIPATOR—EXTRA.

NEW-YORK, SEPTEMBER 2, 1839.

American Anti-Slavery Almanac for 1840.

The seven cuts following, are selected from thirteen, which may be found in the Anti-Slavery Almanac for 1840. They represent well-authenticated facts, and illustrate in various ways, the cruelties daily inflicted upon three millions of native born Americans, by their fellow-countrymen! A brief explanation follows each cut.



The peculiar "Domestic Institutions of our Southern brethren."



Selling a Mother from her Child.



Mothers with young Children at work in the field.



A Woman chained to a Girl, and a Man in irons at work in the field.



"They can't take care of themselves"; explained in an interesting article.



Hunting Slaves with dogs and guns. A Slave drowned by the loss.



Scurviness of the Northern States in arresting and returning fugitive Slaves.

Illustrated front page of the anti-slavery newspaper *Emancipator*, 1839. (Bettmann/Corbis)

colonies in Africa. This movement was widely supported by Christian antislavery advocates in the late 1810s and 1820s. In the 1820s several prominent black abolitionists spoke out against colonization and gradual emancipation. In 1829 David Walker, a former slave, published his pamphlet titled *Appeal to the Colored Citizens of the World* in which he denounced colonization and urged slaves to arm themselves and rebel against their masters. Two years later, Nat Turner's rebellion in Virginia caused Southern slaveholders to suspect that Walker's pamphlet had circulated among the slaves.

In January 1831 the abolitionist movement was fortified when William Lloyd Garrison (1805–1879), a Massachusetts-born journalist and social reformer, began publishing the antislavery

journal *The Liberator*. Influenced by evangelical preachers, Garrison denounced slavery as a scandal and a sin, condemned colonization, and urged fellow citizens to embrace "immediate, unconditional, uncompensated emancipation." In 1832 he cofounded the New England Anti-Slavery Society in Boston, which, unlike previous organizations, included both whites and blacks.

Other abolitionist groups were soon established in New York City, upstate New York, and Ohio. In 1833, 62 representatives from these groups gathered in Philadelphia and founded the American Anti-Slavery Society (the first national organization), which sought absolute, immediate emancipation. One year later the society started publishing a nationally circulated periodical, *The Emancipator*, that became part of a flood of antislavery literature. Members were urged to employ "moral suasion" and spread antislavery literature to convince Northerners to support abolition. Membership in the new organization mushroomed. By 1838 there were 1,350 chapters with more than 250,000 members.

As early as 1833, abolitionists confronted mobs of hostile Northerners who considered the call for immediate emancipation socially disruptive and revolutionary. Antiabolitionist violence increased in 1835, after the American Anti-Slavery Society launched a postal campaign to spread abolitionist literature. Violence peaked in 1837 when a mob killed antislavery newspaper editor Elijah P. Lovejoy in Alton, Illinois. Meanwhile, angry Southerners pressed the president and Congress to censor abolitionist literature. In response, Congress adopted a series of resolutions between 1836 and 1840 collectively known as the gag rule, which stipulated that Congress would not consider antislavery petitions. Abolitionists continued to flood Congress with thousands of petitions, however, and in 1844 the gag rule was repealed.

After 1835, ideological disagreements splintered the American Anti-Slavery Society. Garrison and his supporters sought involvement in multiple reform movements. They encouraged women to join the society and started to merge abolitionism with the battle for women's rights. In contrast, anti-Garrisonians considered women's rights unnecessary, believing that the United States (apart from the flaw of slavery)

was fundamentally sound. Both sides also disagreed over the need for political action. Garrisonians were committed to campaigns of moral suasion rather than direct political action, while anti-Garrisonians envisioned a political party based on abolitionist principles. A group of anti-Garrisonians launched the Liberty Party in 1840 to challenge the Democratic and Whig parties. The Liberty Party received only modest support, and in 1848 it joined with other groups at a meeting in Buffalo, New York, to found the Free Soil Party.

Such divisions ultimately led anti-Garrisonians to abandon the American Anti-Slavery Society at its 1840 meeting. Most of them joined the American and Foreign Anti-Slavery Society, founded by Arthur and Lewis Tappan. Meanwhile, Garrisonians retained control over the original American Anti-Slavery Society. This split caused the abolitionist movement to lose its unity and momentum. Women became increasingly convinced that they needed their own organization to fight effectively for their rights. In 1848 a group of female abolitionists, headed by Elizabeth Cady Stanton, gathered at Seneca Falls, New York, and started the first U.S. women's rights movement. Meanwhile, in the 1840s, some African American abolitionists determined that their goals did not fully coincide with those of the American Anti-Slavery Society, and others came to believe that white abolitionists tended to patronize them. Some resigned from the society and became active in the National Negro Convention Movement to fight discrimination and promote the advancement of free people of color. Some of the most famous African American abolitionists included Frederick Douglass, Harriet Tubman, and Sojourner Truth, who toured Northern cities and delivered lectures on their experiences in slavery.

In 1850 the Fugitive Slave Act (requiring Northerners to help slave owners capture escaped slaves) convinced many Garrisonians to abandon moral suasion and support active slave resistance. Most abolitionists supported the militant strategies of activists such as John Brown, who famously led a raid in 1859 against the arsenal at Harper's Ferry, Virginia. With the secession of Southern states in 1861, abolitionists sided with the Union. However, they denounced

➤ AN ABOLITIONIST MANIFESTO

The following excerpts are from the Declaration of Sentiments, adopted by the founders of the American Anti-Slavery Society in 1833.

"We believe and affirm . . .

That the slaves ought instantly to be set free, and brought under the protection of law:

We further believe and affirm—that all persons of color, who possess the qualifications which are demanded of others, ought to be admitted forthwith to the enjoyment of the same privileges, and the exercise of the same prerogatives, as others; and that the paths of preferment, of wealth and of intelligence, should be opened as widely to them as to persons of a white complexion.

We maintain that no compensation should be given to the planters emancipating their slaves:

Because it would be a surrender of the great fundamental principle, that man cannot hold property in man . . . :

Because, if compensation is to be given at all, it should be given to the outraged and guiltless slaves, and not to those who have plundered and abused them."

—*Enrico Dal Lago*

Source

Louis Ruchames, ed., *The Abolitionists: A Collection of Their Writing* (New York: Putman, 1963), 78.

the administration of President Abraham Lincoln when it became evident that the government had not engaged in war for the purpose of destroying slavery. Instead, they increased their demands for immediate abolition.

After the Emancipation Proclamation of 1863, abolitionists pushed for a constitutional amendment on abolition. In July 1865, after the passage of the Thirteenth Amendment, which prohibited slavery, Garrison abandoned the American Anti-Slavery Society, declaring that it had fulfilled its aim. The society lasted until 1870 after the passage of the Fourteenth and Fifteenth Amendments, which were meant to protect the rights of African Americans.

—*Enrico Dal Lago*

Bibliography

- Aptheker, Herbert. *Abolitionism: A Revolutionary Movement*. New York: Twayne, 1989.
- Goodman, Paul. *Of One Blood: Abolitionists and the Origins of Racial Equality*. Berkeley: University of California Press, 1998.
- Stewart, James B. *Holy Warriors: The Abolitionists and American Slavery*. New York: Hill and Wang, 1996.
- Walters, Ronald. *The Antislavery Appeal: American Abolitionism after 1830*. New York: Norton, 1978.

Abolition of the European Slave Trade

The institution of slavery had existed and had been sanctioned for thousands of years, but the slave trade of the fifteenth through eighteenth centuries was unique for its racialized nature, its linkages with New World exploration, and its sheer magnitude: although historians continue to debate specific numbers, it is clear that during four centuries between 11.5 million and 12 million Africans were brought to the New World in the largest forced migration in human history. The abolition of the Atlantic slave trade, accomplished during the nineteenth century, marked an end to the commerce in human beings that had shaped European, New World, and African history (and individual lives) since the Europeans' arrival on Africa's west coast in the 1400s.

The slave trade was instigated by the Portuguese in 1444, when 235 African slaves were sold at public auction in Portugal. Both the Portuguese and the Spanish used slave labor to produce sugar on islands off the African coast in the 1400s and then after 1500 transported slaves to the New World to perform plantation labor and hunt for gold and silver. The relatively small trade in the 1500s and 1600s became a vast market in the 1700s as a system of global triangular trade developed to which slavery was intricately bound. European commodities were traded in coastal Africa for slaves, who were transported primarily to the New World. Slave-grown products such as sugar, cotton, and tobacco were then traded back to Europe. All European states with American colonies—among them France, England, and the Netherlands—and a few others such as Prussia participated. From 1680 to

1808, Britain was the main transporter of African slaves across the Atlantic. The late eighteenth century saw the highest numbers of slaves transported, with 24,000 slaves exported from African ports each year in the last quarter of the century. Between 1780 and 1790, 750,000 Africans were transported across the Atlantic, 325,000 by Britain alone.

As long as the slave trade had existed, some had protested it. A few voices cried out in the 1500s and 1600s, and during the Enlightenment and Revolutionary eras, a host of philosophers, evangelical Christians, and others joined the ranks of the critics. The number and power of these voices increased in the late 1700s, particularly in England. Quakers in the British colonies had long protested the institution. After the American Revolution some suggested ending slavery or the trade, but Article V of the U.S. Constitution forbade discussion of banning the slave trade until 1808. For reasons both material and moral, England became the site of the most resistance to the slave trade in the late 1700s. One of the first blows against slavery came in 1772, when a British court ruled that James Somerset, a slave transported from Virginia to England who subsequently had escaped only to be recaptured and placed in shackles on a ship bound for Jamaica, should be set free. The Somerset case is wrongly thought of as one that ended slavery, but it did contribute to the erosion of support for the institution.

Protest against the trade in England arose, and interested British citizens employed sugar boycotts, political petitions, and other methods to protest. Quakers worked to expose the horrors of slavery, and in 1787 the London Abolition Committee (LAC) formed, adopting the plank that the slave trade was “both impolitick and unjust.” As the slave trade was seen as the root of the evil of slavery, many decided to focus on ending it first. The image of a kneeling, chained slave pleading, “Am I Not a Man and a Brother?” appeared on snuffboxes, cufflinks, rings, and other objects and became an icon of antislavery work. Reformers circulated published narratives of slaves to increase British sympathy and to expose the evil of the slave trade.

In 1792, 519 petitions with 390,000 signatures flooded Parliament. Members of Parliament

▶ OLAUDAH EQUIANO'S FAMOUS PROTEST OF THE SLAVE TRADE

British antislavery activists worked to arouse sympathy by highlighting the harsh realities of slavery and of the slave trade, particularly the horrors of the Middle Passage, the trip across the Atlantic in a cramped, unhygienic slave ship. One of the most poignant antislavery narratives was that of Olaudah Equiano. Generally thought to have been born in 1745 in present-day Nigeria, Equiano was kidnapped and sold into slavery as a child. As slave to a naval captain and British merchant, Equiano eventually was able to buy his freedom. In 1789 with the support of the recently founded Society for the Abolition of the Slave Trade, he published *The Life of Olaudah Equiano, or Gustavus Vassa, the African*, which quickly became a best-seller.

Some of the book's most famous passages depict the brutalizing effects of the slave trade. Taken aboard a slave ship, he recalled, "I was soon put down under the decks, and there I received such a salutation in my nostrils as I had never experienced in my life; so that with the loathsomeness of the stench, and crying together, I became



Frontispiece and title page from *The Interesting Narrative of the Life of Olaudah Equiano*, 1789. (Library of Congress)

so sick and low." He offered readers a firsthand account of the sights, smells, and experiences of the Middle Passage, even describing the suicide of two slaves. Although one scholar recently argued that Equiano was born in South Carolina, not Nigeria, his narrative, one of the few works penned by an African in the eighteenth century, resonated with many as they contemplated the abolition of "the inhuman traffic of slavery."

—Bonnie Laughlin-Schultz

also protested. William Wilberforce, a member and leader of LAC, delivered an angry speech condemning the trade in 1789, and the first heated debate in the House of Commons followed. The war with France sidetracked the anti-slave trade movement briefly, but by 1804 (following Napoleon's reintroduction of slavery, which had been temporarily abolished during the French Revolution), LAC began pressuring Parliament again. On March 25, 1807, Parliament passed the Abolition of the Slave Trade Act, which fined captains of slave ships.

After abolition, Britain pressured other countries to end their trades. The Danes had already abolished slavery in 1802 (the law was passed in 1792, but its provisions were not to take place for ten years), and the British Royal Navy patrolled the Atlantic to enforce the end of its trade and published antislavery tracts into French, Spanish, Portuguese, and Dutch. The American slave trade was outlawed in 1808, and the French and Dutch followed in 1815 and 1814, respectively. At the Congress of Vienna in 1815,

Great Britain offered blanket condemnation of the trade, negotiating treaties with Spain, Brazil, and other importers to eliminate their trade to America. Legal trade of slaves in the Atlantic finally halted once and for all in 1867. While an illegal trade flourished throughout the nineteenth century, the legal end of the slave trade in Britain and elsewhere dealt a large blow to the institution of slavery.

—Bonnie Laughlin-Schultz

Bibliography

- Carretta, Vincent. *Equiano, the African: Biography of a Self Made Man*. Athens: University of Georgia Press, 2005.
- Carrington, Selwyn. *The Sugar Industry and the Abolition of the Slave Trade, 1775-1810*. Gainesville: University Press of Florida, 2002.
- Davis, David Brion. *Inhuman Bondage: The Rise and Fall of Slavery in the New World*. New York: Oxford University Press, 2006.
- Equiano, Olaudah. *The Life of Olaudah Equiano, or Gustavus Vassa, the African* (1789). Mineola, NY: Dover Publications, 1999.

Hochschild, Adam. *Bury the Chains: Prophets and Rebels in the Fight to Free an Empire's Slaves*. Boston: Houghton Mifflin, 2005.

Thomas, Hugh. *The Slave Trade: The Story of the Atlantic Slave Trade, 1440–1870*. New York: Simon and Schuster, 1997.

The End of Serfdom in Prussia, Austria-Hungary, and Poland

The peasants of eastern Germany (Prussia), Poland, and Austria-Hungary were freed from serfdom in the first half of the nineteenth century. Serfdom, a system by which peasants were legally bound to the land they tilled and were required to work the land for their landlord as well as pay rent in money and/or in produce, had died out in most of Europe west of the Elbe River by the end of the fifteenth century, though localized pockets of it existed in France until its abolition in 1789 and in Scotland until 1799. While serfdom was being abandoned in western Europe in the fifteenth century, it was being imposed on the peasants of central and eastern Europe, where it had not existed previously.

The rise of serfdom in eastern Germany, Poland, Lithuania, Bohemia, and the areas conquered by the Austro-Hungarian empire from the Ottoman empire, a process which has been called “the second serfdom,” has been attributed to the push by landed aristocrats for a stable and cheap labor force needed to produce grain in a developing market-oriented agricultural system; this goal was coupled with the drive by incipiently centralizing governments for what they believed was a more rational system of rural taxation. In all cases, it was a collusion of the interests of both the aristocracy and weakly centralized governments to reduce the peasants’ personal freedom and tie peasant labor to the land for the economic purposes of the aristocrats and fiscal purposes of the state. In Poland, serfdom was regulated by the Piotrkow Statute of 1496, while in eastern Germany the institution developed after the suppression of the peasants in the Peasants’ War of 1524–1526. During the struggle with the Ottoman empire the Habsburg rulers imposed serfdom in Hungary. Czech peasants were reduced to serfdom after the suppression of the Bohemian

Revolt (1618–1621) at the outset of the Thirty Years’ War (1618–1648).

After the Thirty Years’ War, serfdom in eastern Germany became especially repressive in Mecklenburg, Pomerania, and Prussia. There, serfs were sometimes forced to perform unpaid labor on the estates of the nobles for up to six days a week, as well as to pay to the landlords, in money or goods, more than 30 percent of their incomes in rent. The landlords controlled serf marriages, and serfs had no freedom to move. Serfdom began to assume most of the attributes of slavery, and the serfs were looked on as an inferior and despised class.

In the eighteenth century, responding to the ideas of the Enlightenment, movements to abolish or ameliorate both slavery and serfdom began to gain ground. In addition, the idea that serf agriculture was inherently inefficient and unproductive began to take root by the middle of the eighteenth century in the governing circles of the liberalizing but absolute monarchies of Austria-Hungary and Prussia. Both governments passed decrees to curtail the worst abuses of the oppressive institution. Maria Theresa, ruler (r. 1740–1780) of the Austro-Hungarian empire promulgated with her son and heir, Joseph, a 1780 decree regulating the labor (*robot*) serfs were required to render freely to the landlords. As a result, the requirement that serfs give free labor to the landlords was limited to no more than three days a week, whereas previously it had been unlimited. In 1781, Maria Theresa’s son Joseph II (r. 1780–1790) promulgated two decrees governing serfdom in Bohemia, restricting the power of serf owners over serfs and giving the serfs freedom of movement, freedom to marry, even freedom of occupational choice. Serfs were given the right to buy the plot of land they farmed and many took advantage of this privilege. Joseph tried to introduce a system where serf labor (*robot*) would be changed to a system of peasant tenantry. Serfs on crown land in Bohemia and Moravia were freed. Unfortunately, the decree met strong resistance by nobles and was substantially modified in Hungary. In Prussia, the state actively supported the power of the nobles (*Junkers*) over the serfs, though Frederick II (“the Great”) is said to have personally disliked the institution of serfdom.

The process by which the “second serfdom” was abolished received further inspiration when the Constituent Assembly of France declared the feudal order suppressed on August 4, 1789. With this, the remaining vestiges of serfdom were put on their way to extinction, but the final annihilation of feudal rights was not complete until 1793 when the conditions by which the peasants redeemed their rights to land were established. Because of this and the promise of social equality implicit in the French Revolution’s Declaration of the Rights of Man and of the Citizen, serfdom in eastern Europe was increasingly seen as an anomaly. The revolutionaries of France carried the ideology of human equality throughout western Europe, and when Napoleon’s armies defeated the armies of the Fourth Coalition at the Battle of Friedland (1807) the Prussian king, Frederick William III (r. 1797–1840) and his talented chief minister, Karl von Stein, in order to ensure the loyalty of the Prussian peasants as well as to strengthen the Prussian economy, issued a decree abolishing serfdom (1807). The decree ended the nobles’ control over the peasant’s freedom to marry and to move in the search of better opportunities. Importantly, the decree banned the system of forced unpaid labor the peasants had been required to render their landlords. It did not give the peasant property rights in the land they tilled, which they were expected to occupy as rent-paying tenants. This was a gift of personal freedom without land.

After Napoleon’s victory at Friedland over the Russians and the resulting Treaty of Tilsit (1807), the core of Poland was organized as the Grand Duchy of Warsaw. This was essentially a satellite of the Napoleonic empire, ruled by the French ambassador in Warsaw. The Napoleonic Code was imposed on the new state, and serfdom was explicitly abolished. But, as in Prussia, the peasants gained personal freedom, and freedom from forced labor, but without any land. In Poland as in Prussia, the peasants became rent-paying tenants. (It is ironic that while Napoleon was abolishing serfdom in Poland, he was re-imposing slavery in the French West Indies.) After the collapse of Napoleon’s empire and the Congress of Vienna in 1815, the Grand Duchy of Warsaw was ruled by Russia. Russia maintained its system of serfdom in Russia proper until

➤ AN ENLIGHTENMENT PHILOSOPHER ON ABOLISHING SERFDOM IN POLAND

In 1771, the French political philosopher Jean-Jacques Rousseau was recruited by a group of Polish patriots to draw up recommendations on the steps Poland might take to strengthen its monarchy and protect itself from interference from Prussia, Russia, and Austria-Hungary. The result was Rousseau’s *Consideration on the Government of Poland*, a work in which the famous Frenchman recommended freeing the serfs but only when the serfs were prepared for it.

“To free the common people of Poland would be a great and worthy enterprise, but bold, perilous, and not to be attempted lightly. Among the precautions to be taken, there is one which is indispensable and requires time; it is, before everything else, to make the serfs who are to be freed worthy of liberty and capable of enduring it. . . . whatever happens, remember that your serfs are men like you, that they have in themselves the capacity to become all that you are. Work first of all to develop that capacity, and do not free their bodies until after you have freed their souls. Without this preliminary, you may be sure that your enterprise will fail.”

—Wilfred J. Bisson

Source

Jean-Jacques Rousseau, *Considerations on the Government of Poland* (1772), Chapter VI.

1862, but in its Polish provinces, the 1807 abolition of serfdom was not repealed.

In Austria-Hungary, the requirement of forced serf labor (*robot*) was abolished in the Revolution of 1848. With the end of the *robot*, the last vestige of serfdom disappeared, and many of the lesser gentry in Austria were ruined as numbers of the freed peasants migrated to the growing cities. In Hungary, where serfdom persisted until 1853, the nobles prospered because their landholdings were much more extensive and because the Hungarian nobles were given more liberal payments for their freed serfs.

After 1853, the abolition of serfdom in nearly all of Europe outside of Russia was complete.

—Wilfred J. Bisson

Bibliography

- Bideleux, Robert, and Ian Jeffries. *A History of Eastern Europe: Crisis and Change*. London: Routledge, 1998.
- Bush, M. L. *Servitude in Modern Times*. Malden, MA: Blackstone Publishers, 2000.
- Freedman, Paul, and Monique Bourin, eds. *Forms of Servitude in Northern and Central Europe: Decline, Resistance and Expansion*. Turnhout, Belgium: Brepols Publishers, 2005.

The Abolition of Serfdom In Russia

On February 21, 1860, the Russian government issued legislation that emancipated more than 20 million serfs on noble lands. Similar statutes in 1863 and 1866 granted freedom to another 30 million peasants who lived on Crown and state lands. Although scholars continue to debate the consequences of this emancipation, all agree that it marked a turning point in Russian history. While serfdom had existed in Russia in various forms for more than 500 years, by the 1850s many educated Russians, influenced by

events of the preceding century, including the Enlightenment, the American Revolution and the French Revolution, the abolition of slavery in most of the Americas, and the end of serfdom in Central Europe, no longer defended serfdom on intellectual or moral grounds. Tsar Nicholas I (1825–1855) had established nine commissions to study serfdom and recommend reforms. However, few significant changes occurred because of the many practical issues raised by any large-scale emancipation scheme and the potentially disruptive economic and political effects of liberation. Why then did the situation change so rapidly?

Russia's defeat in the Crimean War revealed Russia's internal weaknesses and convinced the new tsar, Alexander II (1855–1881), that emancipation was a necessity. From the outset Alexander made it clear to the nobility that emancipation in one form or another was inevitable and intervened repeatedly to overcome the resistance of the rank-and-file gentry. In 1857 the government encouraged nobles in every province to form committees and draft proposals for change. In 1858 after many of these proposals suggested emancipating serfs without giving them any land of their own, Alexander declared that emancipation had to include land to minimize the danger of forming a large mass of discontented landless rural poor. From then on the general principle guiding the deliberations of the various commissions involved in drafting the legislation was that serfs should receive an amount of land roughly comparable to that which they had farmed for their own subsistence under serfdom.

What this meant in practice was, of course, open to dispute, and in the final legislation the nobles were generally successful in minimizing both the amount of land and the quality of the land that the serfs received. The serfs also had to compensate the landlords for the land they acquired. However, since most serfs lacked the funds for this, the state was to pay the nobles, and the peasants were then to repay the government through annual redemption payments over the next 49 years. The price that the peasants paid for the land was far more than it was worth, because even though the government denied it, the price was also meant to compensate the

► CHRONOLOGY—KEY DATES IN THE ELIMINATION OF SLAVERY AND SERFDOM IN THE WEST

- 1789—Revolution eliminates last vestiges of feudalism in France.
- 1806—Serfdom ends in Prussia, Bavaria, and other German states.
- 1807–1808—Great Britain and the United States abolish slave trade.
- 1834—Slavery abolished in British colonies.
- 1848–1849—Revolutions lead to abolition of serfdom in Austria and Hungary.
- 1854–1856—Russian defeat in the Crimean War strengthens the hand of reformers and convinces Tsar Alexander II of the need to confront the issue of serfdom.
- 1857—Tsar Alexander II calls for emancipation proposals.
- 1861—Emancipation Statute for serfs on private lands. Start of American Civil War.
- 1863—Emancipation Statute for peasants on Crown lands. Emancipation Proclamation in the United States.

—Craig Patton



Alexander II was tsar of Russia from 1855 to 1881. He led Russia through a period of many unprecedented and sweeping reforms in an attempt to modernize the country. (Library of Congress)

nobles for the loss of the serfs' labor and dues. To ensure that the redemption payments (and other taxes as well) were paid, the peasant commune (*mir*) was made collectively responsible for all peasant obligations and given extensive powers over its members.

In trying to accommodate the interests of nobility, the government knew that it risked angering the peasantry and did its best to either diffuse or suppress unrest. Violent protests still broke out in various areas in the weeks following the decree, but these were quickly crushed by police and the army. Although the disturbances soon ended, tensions in the countryside remained high, with large numbers of peasants bitterly hostile to both the nobles and the government. This resentment grew in succeeding decades as new economic and political developments worsened the peasants' plight, helping set

the stage for full-scale revolution against the imperial regime in 1905 and 1917.

—Craig Patton

Bibliography

- Emmons, Terrence. *The Russian Landed Gentry and the Peasant Emancipation of 1861*. Cambridge: Cambridge University Press, 1968.
- Field, Daniel. *The End of Serfdom, Nobility and Bureaucracy in Russia, 1855–1861*. Cambridge: Harvard University Press, 1976.
- Lincoln, W. Bruce. *The Great Reforms: Autocracy, Bureaucracy, and the Politics of Change in Imperial Russia*. Dekalb: Northern Illinois University Press, 1990.
- Mosse, W. E. *Alexander II and the Modernization of Russia*. Rev. ed. New York: Macmillan, 1962.
- Radzinsky, Edvard. *Alexander II: The Last Great Tsar*. Translated by Antonia Bouis. New York: Free Press, 2005.

Abolitionist Movements in Great Britain and Europe

Abolitionist movements, supported by disciples of the Enlightenment who believed in the principle of universal human rights and by Christians who were repulsed by the many cruelties of slavery, first appeared in Europe in the late eighteenth century and the nineteenth century.

Abolitionist movements began in Great Britain, whose merchants dominated the transatlantic slave trade in the eighteenth century. The issue first attracted public attention in the 1760s and early 1770s when an English lawyer, Granville Sharp, unsuccessfully challenged the legality of slavery in Great Britain in a number of widely publicized court cases including the so-called *Somerset's Case* of 1772, when the presiding judge Lord Mansfield did, however, rule that it was illegal to forcibly remove a slave from England. Sharp also played a key role in the founding of the Committee for the Abolition of the Slave Trade, whose members sponsored lecture tours and petitioned members of Parliament to end the slave trade. They also sponsored the publication of many books and pamphlets, including the widely read *The Interesting Narrative of the Life of Olaudah Equiano*.

In Parliament, opposition to the slave trade was supported by a core group of 35 to 40

➤ CONSUMER HABITS AND SLAVERY

Sugar was the first crop to use the plantation system, a system which would eventually also be used for other crops (including cotton). Brazilian sugar plantations were developed mainly by the Portuguese, while those of the West Indies were controlled by the French, British, Spanish, Dutch, and Danes. The rise of slave labor increased sugar production while lowering the price, meaning that sugar became available not just to the wealthy, but also to the middle and then lower classes. More sugar meant that west Europeans could fuel their escalating coffee, chocolate, and tea habits, all of which increased the necessity for slave labor and further lowered the price of sugar.

Another result of sugar and the plantation system was the mass development of rum, made in the Caribbean by pressing juice from the sugarcane plant, separating it from molasses, adding yeast and water, and distilling it for various periods of time. The tiny island of Barbados produced greater revenue for England than the combined tobacco colonies of Virginia and Maryland. After the abolition of slavery many Caribbean islands maintained rum as a major export product, and production patterns—such as distilling time or the use of molasses versus sugar juice—have been transformed from vestiges of slavery and colonialism into sources of local and national pride.

—Melissa Verlet

abolitionists led by William Wilberforce known as “the saints.” Their major success was the passage of the Slave Trade Act of 1807, which effectively barred British merchants from participating in the slave trade. The British thereby joined the Danes, who had abolished the slave trade in 1792, and soon were joined by the United States, which banned the slave trade effective on January 1, 1808. After the 1807 act slaves were still held, though not sold, within the British Empire. The abolitionist movement revived in the 1820s after the end of the Napoleonic Wars. This time its target was the institution of slavery itself. In 1823 the Anti-Slavery Society was founded and included many members who were veterans of the Committee for the Abolition of the Slave Trade. A notable feature of the revived abolitionist movement was the increase

in female participation and an insistence by abolitionist leadership that political candidates publicly pronounce their stance on slavery. In 1833 Parliament passed the Slavery Abolition Act, which called for the emancipation of slaves in Britain and the British Empire no later than 1838. A sum of £20 billion was set aside to compensate slave owners; no compensation was provided for the former slaves. Throughout the nineteenth century, Britain used its navy to interdict slave ships and exerted diplomatic pressure on many nations to end the slave trade and slavery.

French abolitionists were influenced by British antislavery leadership but tended to couch their arguments in secular rather than religious terms. The Society of the Friends of Blacks was founded in 1788 and remained in existence until 1793. In early 1789 it had 141 members. In its five years of existence, it published antislavery literature and lobbied the revolutionary National Assembly to end French participation in the slave trade. In February 1794 at the height of the revolution’s radical phase, the National Assembly passed the sweeping Universal Emancipation decree, which effectively freed all colonial slaves. The law was impossible to enforce, however, and once in power Napoleon once more made slavery and the slave trade legal. Although another organization, the French Society for the Abolition of Slavery, emerged in the nineteenth century, slavery was not outlawed again until 1848, and the smuggling of slaves to the French West Indies continued until the 1870s.

Spain, Denmark, Portugal, the Netherlands, and the Ottoman empire, in many cases in response to British diplomatic pressure, all ended slavery at some point between 1847 and 1886. Having already been abolished in all the states of the Western Hemisphere, in the course of the 1800s slavery ended in Cuba in 1886 and Brazil in 1888.

—Melissa Verlet

Bibliography

- Eltis, David, and James Watkin, eds. *The Abolition of the Atlantic Slave Trade: Origins and Effects in Europe, Africa, and the Americas*. Madison: University of Wisconsin Press, 1981.
- Hunt, Lynn, ed. *The French Revolution and Human Rights: A Brief Documentary History*. Boston: Bedford Books of St. Martin’s, 1996.

Jennings, Lawrence C. *French Anti-slavery: The Movement for the Abolition of Slavery in France, 1802-1848*. New York: Cambridge University Press, 2000.

Marques, João Pedro. *The Sounds of Silence: Nineteenth Century Portugal and the Abolition of the Slave Trade*. Translated by Richard Wall. New York: Berghahn Books, 2006.

■ Introduction: Gender and Sexuality

The major changes of the modern period—political revolution, industrialization, urbanization, imperialism, and the rise of science and secularization, among others—greatly affected gender and sexuality. The traditional orders that had regulated gender and sexuality for millennia in some cases, such as Christianity, Islam, Hinduism, and Confucianism, were challenged by the transformations of the time. The attack on tradition could come from many sources. The wave of industrialization that swept from late-eighteenth-century Britain to Meiji Japan brought working-class women out of the home and into factories and other places of paid employment, leading to transformations in gender and household relations. Empire, by bringing cultures into sometimes violent conflict, led to the spread of Western ideas about gender and sexuality to countries with very different traditions. Imperial power brought about such results as the abolition of sati in India, the missionary campaign to abolish footbinding in China, and the introduction of laws against homosexuality in societies that did not previously have them. The East, particularly including the Islamic world and eastern Asia, also became a symbol of both heterosexual and homosexual license in the eyes of European and Euro-American men. The rise of large urban centers, with their cultures of anonymity, led to the expansion of male and female prostitution as well as the growth of gay and lesbian subcultures.

Beginning with the European Enlightenment, sex and gender were increasingly analyzed in scientific and medical rather than religious terms. Secular and anticlerical political movements led to state law replacing religious law in governing sexual relations, although the content of the law was often similar. Male and female homosexuality—a term invented in this

period—and other “deviations” were increasingly understood as “unnatural” rather than sinful, although no less harshly punished. Although many religious writers and preachers participated in the great crusade against masturbation that was so marked a feature of Western sexuality in this period, physicians led the charge, which focused more on the disastrous consequences of the “solitary vice” in this world than in the next. The increasing criminalization of abortion often saw male physicians assert the superiority of their expertise over that of pregnant women. The creation of a male-defined “science of sex” was the work of the nineteenth century, particularly in the German lands, culminating in the psychoanalysis of Viennese physician Sigmund Freud.

As more women gained access to literacy and the ability to publish and circulate their work, criticisms of traditional gender roles were more widely read, discussed, and analyzed. The emancipatory impulse arising out of the Enlightenment and the American and French Revolutions was applied by women in the Western nations, who increasingly organized for the vote, control over personal property, and access to higher education and the professions, this despite the fact that the leaders of the French Revolution and the revolutions that followed in its stead were often more interested in curtailing women’s political influence than expanding it. Although the vote was only attained in a few peripheral regions such as Wyoming and New Zealand, efforts in other areas proved more productive. Women’s access to education was also related to the creation of new professions in the expanding economy of the nineteenth century such as nursing, teaching, and clerical work, although these were all treated as inferior or ancillary to male professions. The opening of professions to

women did not mean that all men and women approved of women working outside the home, however. The period also saw the rise of a “domestic ideology”—sometimes referred to as the “cult of domesticity”—that was strongest in the middle classes, which viewed women as particularly biologically suited for marriage, motherhood, and housekeeping.

—William E. Burns

Women in Meiji Japan

The Meiji period (1868–1912) is lauded as the time when Japan instigated a series of political and social reforms leading to institutional reconstruction in the name of modernizing and Westernizing. These changes were carried out in order to achieve *bunmei kaika* (“civilization and enlightenment”) and were seen as a way

to build a strong nation; they were so successful that by World War I Japan was the only non-Western great power. During the Meiji period, women’s roles and all aspects of their lives—political, private, and public—were influenced not only by their social class and their access to education and work but also by new government laws and restrictions.

Although women were legally banned from political participation in 1890, prior to that, during the 1880s and the Freedom and Popular Rights Movement (*jiyu minken undo*), there were many women advocates for equal rights as well as the elevation of women in the family and society. Women’s education, equal rights, monogamy, divorce (men had the right to divorce on the grounds of adultery but women did not), and the outlawing of prostitution and concubinage all became contested issues during the 1880s. Some intellectuals at the time believed that reform of the family was enough to elevate the status of women, for example by banning concubinage and enforcing monogamy. Fukuzawa Yukichi (1853–1890) was one of the earliest participants in the debate about women (*fujin ronso*) and the author of *Nihon Fujinron* (*Discourse on Japanese Womanhood*), published in 1885. Other intellectuals, however, viewed the elevation of women as linked to their access to political rights. During the popular rights movement both male and female activists demanded that women be given equal political rights to men. Kishida Toshiko (1861?–1901), a woman who was part of the popular rights movement and also a member of the Liberal Party during the 1880s, undertook a major speaking tour around Japan to advocate for women’s political rights. Women as well as men were struck by Kishida’s speeches; for most of them she was the first woman they heard lecture about the need for women’s liberation and the principle of equality among men and women. Kishida inspired many women to form their own local organizations and also helped organize the Women’s Lecture Society in Kyoto. Its founding meeting in 1883 had 2,000 women participants. Kageyama Hideko (1865–1927) was another female activist who was inspired by Kishida; she also gave political speeches and inspired the



Fukuzawa Yukichi was one of Meiji Japan’s most influential thinkers. An advocate of Westernization, he supported parliamentary government, public education, and women’s rights in addition to many other causes. (Fukazawa Memorial Center for Modern Japanese Studies, Keio University)

growth of larger feminist groups such as the Japan Christian Women's Reform Society (Nihon Kirisutokyo Fujin Kyofukai) and Women's Morality Association (Fujin Tokugikai). The period of women's political activism was short-lived, however. After 1884 the government enforced restrictions on popular speech, and women advocates turned to expressing their opinions in journals and magazines, whose circulation was limited to those privileged enough to read them.

In 1890 the cabinet enacted the Law on Associations and Meetings (*Shukai oyobi kessha ho*), which barred women from attending political meetings or joining political organizations. In 1900 the Home Ministry redrafted these bans as the Security Police Law (*Chisan keisatsu ho*). The Civil Code of 1898 reinforced women's legal status by reinforcing the patriarchal model of the family, mandating inheritance by primogeniture, and stating that a woman had no share in her husband's property while all of her property became his. It also decreed that a woman had no legal rights to her children.

During the Tokugawa period (1600–1868) according to different local practices and legislation, some women had participated in local politics. Because the Tokugawa shogunate had been unable to impose systematic control over all the domains, local society was often beyond central state control. In some domains, widows had been allowed to take their husbands' place on village councils, and in others women participated in elections. However, during the Meiji period, when the government examined the constitutions of other Western countries, they followed the examples set by the leading Western countries and barred women from any political involvement for the first time in Japanese history.

While women were barred from political participation, they did, however, gain access to education during the Meiji period due to the government's expansion of the national education system. Compulsory primary education for both males and females was mandated in 1873; however, it had to be retracted due to difficulties in securing money, finding sufficient teachers, and convincing rural parents to send their children to school. In 1890 only slightly more

➤ GOOD WIFE, WISE MOTHER

The role of women as embodying *ryosai kenbo* ("good wife, wise mother") was popularized by the Ministry of Education in its urging that women uphold moral examples for their families. The ideal of "good wife, wise mother" was not for all women, however. The Ministry of Education did not demand that lower-class women leave the workforce and return home but instead reminded middle-class women who were already at home of the importance of their role in maintaining the family. Lower-class women did not have the luxury of staying at home to raise their families. They needed to work to make a living. Part of the "good wife, wise mother" ideology was to promote the idea that women should be excluded from politics not due to their physical, mental, or moral inabilities but rather because their primary duties were at home.

—Kirsten Ziomek

than 30 percent of females actually attended school. However, in 1900 the government made four years of education compulsory education. In 1910 the compliance rate had risen to 97.4 percent, and compulsory education had been extended to six years. In 1899 a law established at least one higher school for girls in each prefecture. Education in higher schools for females and males differed drastically. The curriculum of girls' higher schools was not the academic equivalent of boys' middle schools, let alone equal to the curriculum of boys' higher schools. The differences between female and male higher schools were due to perceived gender roles. For women, the purpose of higher schools was to cultivate refined taste and a gentle and modest character. For men, higher schools prepared them for the entrance exams to the elite universities, which remained bastions of male students. Women were to gain enough education to prepare them for their duties as wives and mothers and were not to receive any more education than necessary. The women who went beyond compulsory education to the higher schools were usually from middle-class families. While most rural women completed the years of compulsory education, oftentimes they had to stop

going to school in order to help their families on the farm or went to the cities to earn money in the factories.

By 1890 working-class women were a crucial component of the developing industrial economy. There were more female workers than males in light industry; in textiles the workforce was 60–90 percent female. During the late nineteenth century females produced 40 percent of the gross national product and 60 percent of products for foreign exchange. During the first decade of the 20th century, 60 percent of the workforce in factories and shops were female. The working conditions of women and children were harsh, comparable to those in the West during early industrialization. Peasant girls from the countryside who had been sent to the city by their families to help supplement farm income comprised much of the workforce in factories.

In 1901 the government founded the Japan Women's Patriotic Association, an organization that proclaimed that women should help prepare the nation for war and that in time of war their role included consoling the nation's families. From 1901 on, women participated in government-sponsored organizations, often in relation to war efforts. While some women turned their attention away from issues of women's rights in order to help with war efforts, other women continued to debate the proper role of women in both the private and public spheres. During the Taisho period (1912–1926) women feminists such as Yosano Akiko, Yamakawa Kikue, Hiratsuka Raicho, and Yamada Waka became well known for their participation in very heated debates about the protection of motherhood from the government, the role of women as mothers, and equal rights. Although the ban against women's attendance in political meetings was lifted in 1922, the struggle for suffrage was longer, with Japanese women gaining the right to vote in 1945.

—Kirsten Ziomek

Bibliography

- Bernstein, Gail, ed. *Recreating Japanese Women, 1600–1945*. Berkeley: University of California Press, 1991.
- Bernstein, Gail, Andrew Gordon, and Kate Wildman Nakai, eds. *Public Spheres, Private Lives in*

Modern Japan, 1600–1900. Cambridge: Harvard University Press, 2005.

Jansen, Marius. *The Making of Modern Japan*. Cambridge, MA: Belknap Press of Harvard University Press, 2000.

Schirokauer, Conrad, David Lurie, and Suzanne Gay. *A Brief History of Japanese Civilization*. Belmont, CA: Thomson Wadsworth, 2006.

Sievers, Sharon. "Feminist Criticism in Japanese Politics in the 1880s: The Experience of Kishida Toshiko." *Signs* 6(4) (Summer 1981): 602–616.

Feminism in Late Qing China

Feminism in late Qing China (1644–1912) offered Chinese women a theoretical foundation for the advancement of their interests in twentieth-century society. During the 1890s and early 1900s, feminism promoted the idea of equal rights for women in political, social, and economic arenas, and women sought to realize these goals through collective action. Drawing on both indigenous and Western sources, late Qing intellectuals merged feminism with the struggle for national liberation from Western imperialism and Manchu occupation. Thus, feminist goals were intertwined with nationalist aspirations.

The position of Chinese women—expounded upon and culturally reinforced by Confucian scholars for many centuries—was considered to be inferior to that of men. Learning from oral instructions and basic literacy, women from gentry households were expected to show strict obedience to male family members, confine their activities to the domestic sphere, and observe rules such as foot binding, gender segregation, chastity, and womanly virtues. They were generally excluded from public occupations, thus making them economically dependent. All of these factors combined to subordinate gentry women through the Qing period.

Nevertheless, during the Qing era challenges emerged with the purpose of transforming the subordinate position of women of all social classes. These challenges included profeminist male writings by authors such as Yu Zhengxie and Li Ruzhen in the mid-Qing period, mid-nineteenth century peasant rebellions such as the Taiping Rebellion, and marriage-resistance associations in southern China, especially Guangdong.

None of these challenges, however, gained wide support among Chinese women. It was not until the 1890s that feminism gained strength through the movements to end foot binding and establish female schools. Inspired by Christian missionaries and currents of Western liberal thought, late Qing reformers such as Kang Youwei and Liang Qichao advocated both movements as a means of conferring educational opportunities for women in order to save China.

Feminism in China reached its maturity in the 1900s. Stimulated by missionaries and reformers and accelerated by media culture, some women activists demanded equality in several spheres. For example, Chen Xiefen propagated women's educational rights. Qiu Jin taught Chinese girls to dedicate themselves to anti-Qing revolution. Zhang Zhujun alerted women to the issue of economic independence. He Zhen proposed a women's revolution and a women's suffrage movement in China. Like other late Qing reformers, these women were moved by a growing concern for national salvation and integrated feminist aims within a Chinese nationalist framework.

Feminism also took the form of organized action on the part of late Qing women. Founding women's periodicals, establishing female schools, forming patriotic associations, raising funds for revolution, and plotting anti-Qing uprisings were key strategies for raising awareness and fostering greater equality. Some of these activities were partly influenced by contemporary suffragist activities in Europe and the United States. Although the feminist struggle would continue after the fall of the Qing dynasty (focusing in particular on women's suffrage and sexual liberation), the immediate outcome of feminism was the awakening of some Chinese women to become actively involved in public affairs apart from their domestic roles.

—Yuen Ting Lee

Bibliography

- Barlow, Tani E. *The Question of Women in Chinese Feminism*. Durham, NC, and London: Duke University Press, 2004.
- Croll, Elisabeth. *Feminism and Socialism in China*. London: Routledge and Kegan Paul, 1978.
- Kazuko, Ono. *Chinese Women in a Century of Revolution, 1850–1950*. Edited by Joshua A. Fogel.

➤ QIU JIN

Qiu Jin (1875–1907), pioneer of the women's movement in China, came from a scholar-gentry family in Zhejiang province. Unconventional in behavior, she practiced fencing and riding and dressed in male attire in her formative years. In 1904, she went to study in Tokyo. While in Japan she encouraged Chinese female students to fight for equal rights and filled them with patriotism. Upon her return to China in 1906, she founded a women's journal, directed a female school, and organized some anti-Qing uprisings. With the exposure of a plot in Hangzhou, she was arrested and executed in 1907. Qiu Jin was regarded as a woman martyr in the events leading up to the 1911 Chinese Revolution.

—Yuen Ting Lee

Translated by Kathryn Bernhardt et al. Stanford, CA: Stanford University Press, 1989.

Zheng, Wang. *Women in the Chinese Enlightenment: Oral and Textual Histories*. Berkeley: University of California Press, 1999.

The Ending of Sati in India

Sati is a form of ritual suicide in which a Hindu widow throws herself on her husband's funeral pyre to show absolute monogamous marital devotion to her spouse even in death. Reluctant women were sometimes coerced into practicing sati or were thrown onto the fire by others. The practice originated in honor of the Hindu goddess Sati (or Dakshayani), who burned herself in response to the humiliation of her husband (Shiva) by her father.

It is unclear when the practice began, though it clearly originated over 2,000 years ago. Sati was practiced across India by 1000 CE (and still occurs occasionally in the twenty-first century), but it became a regional, sporadic, and underground phenomenon by the late nineteenth century.

Sati began to decline with the Mughal conquest of India and the arrival of Europeans in the sixteenth century. Although the Muslim Mughals were determined to respect local customs, believing that cultural autonomy helped

► CHARLES NAPIER AND SATI

Sir Charles Napier (1782–1853) is often credited with one of the most famous quotes in British imperial history. As governor-general of the Sindh, a province he captured in early 1843 at the head of an East India Company army, Napier followed the lead of several other British administrators by outlawing sati. When local Hindu leaders complained to Napier that this measure destroyed centuries of custom and tradition, he allegedly replied, “This burning of widows is your custom; prepare the funeral pile. But my nation also has a custom. When men burn women alive we hang them, and confiscate all their property. . . . Let us all act according to our national customs.”

Though a colorful story, it is uncertain whether or not this famous exchange took place or, if it did, exactly what was said; there are several versions. What is certain is that Napier did outlaw sati in the Sindh and that this act caused sati in the region to soon die out or be driven underground.

—Matthew DeFraga

Source

Byron Farwell, *Eminent Victorian Soldiers: Seekers of Glory* (New York: Norton, 1985), 93–94.

promote order, they disapproved of sati and frequently tried to suppress it. However, Mughal policy on the matter frequently changed, and efforts to eliminate sati were inconsistent. Thus, though the practice waned under Mughal rule, it did not die out.

The first Europeans in India, the Portuguese, who as Catholics believed that suicide was a mortal sin, outlawed sati in their territory of Goa, although the practice was not common in this part of India. Subsequently the Dutch and French banned the practice in the small territories they controlled. Individual British officials in the 1700s made efforts to eliminate the practice but without the official backing of the British East India Company. Responding to pressure from liberal reformers and evangelical Christian groups in Britain, the company banned the practice in Kolkata in 1798 and began collecting data on the extent of the practice in 1813. By then, opposition to the practice included a number of Hindu

leaders and intellectuals, including the “Father of Modern India,” Ram Mohun Roy, whose sister-in-law had been forced to commit sati. A major step was taken in 1829, when Lord William Bentinck (1774–1839), governor-general of Bengal, outlawed the practice of widow burning in the territory under his control, claiming that it was barbaric and theologically unjustified. Officials were required to report instances of sati, with the perpetrators to be tried in British courts. Hindus unsuccessfully challenged the ban in the courts, but it was upheld in 1832. Subsequently, other territories under British control also enforced the ban, although some princely states not directly administered by the British continued to tolerate the practice until the early 1900s.

Many Indians resented this example of British interference with their customs, and the controversy over the banning of sati was one of many factors that contributed to the Indian Rebellion of 1857.

—Matthew DeFraga

Bibliography

- Farwell, Byron. *Eminent Victorian Soldiers: Seekers of Glory*. New York: Norton, 1985.
- James, Lawrence. *Raj: The Making and Unmaking of British India*. New York: St. Martin's, 1997.
- Hawley, John Stratton, ed. *Sati, the Blessing and the Curse: The Burning of Wives in India*. New York: Oxford University Press, 1994.
- Narasimhan, Sakuntal. *Sati: Widow Burning in India*. New York: Anchor, 1992.

Ottoman Women

Ottoman women's concern with love and sex, and the forms through which this was expressed, took on a new prominence in the nineteenth century as the multiethnic, multifaith empire underwent major periods of reform and accelerated social change. Though many of the formal changes, notably those of the Tanzimat reforms (1839–1876), were directed at men's political and social roles (notably the development of a secular-influenced education system and the palace bureaucracy or civil service), it was widely understood that the ramifications of these innovations were altering women's social roles and the relations between men and women. The advent of Sultan Abdulhamid in 1876 brought

a suspension of the Tanzimat constitution, and though the sultan continued, for example, many of the education reforms undertaken by his predecessors, many Ottomans found his reign to be culturally and politically repressive. This was especially so for elite Ottomans involved in the palace bureaucracy and for those prominent in the reformist factions (of which the young Turks were to eventually emerge as the most prominent in the 1908 revolution that reinstated the constitution).

In a period noted for Abdulhamid's censorship of the press and his network of spies, matters of love took on a heightened significance as a proving ground for personal freedom. As Duben and Behar (1991) point out, when it was difficult to directly express political demands, the demand to choose affective marriages rather than arranged unions came to stand in for unavailable political liberties—for men and for women. In the politicization of love, the consumption of western (mainly French) literature was seen as a major factor. With elite women now often literate in European languages (owing to the increased numbers of foreign governesses in elite harems, and the attendance of mainly non-Muslim girls at foreign-run missionary schools), the consumption of western romances was sometimes held to be a mixed blessing, making girls dissatisfied with their lot in life and giving them unrealistic expectations.

Commentators from all political perspectives regarded the role of women as an indicator of the general state of the civilization, whether emancipation was seen as a sign of progress or of the decay of valued traditions. Ottomans of all political persuasions also knew that reforms were played out under the eyes of a curious West—whose fascination with the harem was longstanding. The Western Orientalist fantasies of the harem as a space of sexualized excess and depravity bore little relation to its existence as a family domicile, just as the western obsession with polygyny bore little relation to its actual practice, and by the mid-nineteenth century, its rarity. Ottomans were frustrated by western presumptions about the nature of their family life, though rebutting this was often made difficult by cultural prohibitions against discussing the family with outsiders.

Nevertheless, by the second half of the nineteenth century, women themselves were expressing opinions in ever-growing numbers. With increased female literacy, especially in the modernizing metropolises of Cairo and Istanbul, women's cultural and political participation outside the home began to expand. The women's press was active in both cities from the 1890s, and women writers discussed everything from marriage to fashion and from politics to domestic science. Well informed about western feminism, Ottoman women were not uncritical in their appraisal of Western so-called liberation. But the western model of chosen rather than arranged marriage and self-contained nuclear family living came to be associated increasingly with self-fulfillment and modernity in progressive and elite circles.

What has often, until recently, been overlooked is the extent to which progressive and reformist women were in direct contact with western feminists, not just by reading western sources, but also through networks of personal contacts with western women travelers and correspondence with western activists. This was a two-way exchange in which western women evaluated their own conditions in relation to the lives of Ottoman women. In the mid-century, women in Britain expressed envy that Islamic law, unlike British law, allowed women to own and inherit property, while at the end of the century, the British feminist Grace Ellison, used to male hostility at home, was astonished at the number of progressive Ottoman men who supported female emancipation as a part of a project of national social emancipation.

In the last quarter of the nineteenth and first quarter of the twentieth centuries, progressive Ottoman women (often but not exclusively Muslim) expounded their views in polemics, memoir, and travel literature written and published in French, German, and English. Specifically challenging western misconceptions about harem life, their books simultaneously intervened in local and international debates about women's rights. Books by women from this period, such as Fatma Aliye Hanum (1862–1936), Halide Edib (1883–1964), and Demetra Vaka (1877–1946), found a market in the West because of the often prurient appetite for harem literature.

Nevertheless, their books told of the challenges faced by a generation of women whose lives were often radically different from those of their mothers. In the transition that many of this generation experienced from the end of the empire to the advent of the Turkish republic (with its avowedly nationalist and secular project of westward-looking modernization), the sexual politics of love, marriage, and family life were experienced as bewilderingly, but sometimes empoweringly, unstable. The creation of new models of femininity—played out in personal relations and state regulation—was a crucial aspect in the development of regional modernities in the territories that had once been Ottoman.

—Reina Lewis

Bibliography

- Duben, Alan, and Cem Behar. *Istanbul Households: Marriage, Family and Fertility (1880–1940)*. Cambridge: Cambridge University Press, 1991.
- Lewis, Reina. "Ottoman Women." In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History: Volume 5, The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.
- Lewis, Reina. *Rethinking Orientalism: Women, Travel and the Ottoman Harem*. New Brunswick, NJ: Rutgers University Press, 2004.
- Lewis, Reina, and Nancy Micklewright, eds. *Gender, Modernity and Liberty: Middle Eastern and Western Women's Writings: A Critical Sourcebook*. London: I. B. Tauris, 2006.

Eighteenth-Century Feminist Writers

The rise to prominence of feminist writers during the eighteenth century reflected the changing perception of the role of aristocratic and bourgeois women in both French and British society. Writing for publication was a socially acceptable occupation for upper-class women, and many female writers commented on the evolving popular perception of acceptable behavior for women. The work of these feminist writers, who expressed themselves through both fiction and political tracts, was an expression of the influence of French Enlightenment ideals of personal liberty and English rationalist philosophy. Feminist writers through the century addressed

such diverse subjects as the purpose of female education, the role of wives and mothers within the family, and the range of acceptable occupations for respectable women.

At the beginning of the century, marriages between members of propertied families often focused exclusively on economic outcomes without regard for the personal inclinations of the married couple. Both husbands and wives contributed to the economic livelihood of their families through the management of aristocratic landed estates or the maintenance of the bourgeois family business. As the century progressed, the idea that marriage should provide romantic fulfillment as well as economic security became widespread, drawing attention to the individual qualities of women. During the late eighteenth century, society began to view the domestic realm as a separate sphere from the masculine realm of economic activity, with women responsible for setting the moral tone of the household instead of contributing to its financial stability. This separation of public and private spheres appeared in the works of such eighteenth-century writers as novelist Samuel Richardson and satirist Richard Steele.

British author Anne Finch, countess of Winchelsea (1661–1720), wrote poetry in the same classical Augustan style as her male contemporaries. While male poets often characterized women as passive receptacles for male adoration, Finch expressed the ideal of mutually satisfying relationships wherein both partners show respect for one another and make compromises to sustain the marriage. Finch shared the opinions of the seventeenth-century philosopher John Locke (1632–1704), who argued that women should have access to scholarly educations. The English author Mary Astell (1666–1731) argued that this education should be delivered in a convent-style setting to protect female students from the influences of a patriarchal society.

Another English woman, Hannah More (1745–1833), received a scholarly education from her father, who was the headmaster of a charity school. More believed that bourgeois women had a duty to provide a moral example for both their own families and poorer members of society. She expressed her views through numerous volumes of didactic works as well as the 1809

► RESPONSES TO MARY WOLLSTONECRAFT GODWIN

The radical nature of Wollstonecraft's *A Vindication of the Rights of Woman* and *Maria or the Wrongs of Women* as well as the author's extramarital relationships drew intense personal criticism from conservative male writers. The English politician Horace Walpole declared her a hyena in petticoats, while the Reverend Richard Polwhele stated that she deserved her death from complications following childbirth. Female writers, including those who espoused a conservative ideology, showed a greater degree of sympathy for Wollstonecraft and acceptance of her writings. The playwright Amelia Opie (1769–1853) based the title character of her play *Adeline Mowbray* on Wollstonecraft, emphasizing the pure intentions of her heroine. Literary critic Anna Barbauld (1743–1825) declared herself an admirer of *A Vindication* but feared that visiting the author of the treatise would result in ostracism from polite society. The pro-



An eighteenth-century British writer, philosopher and feminist, Mary Wollstonecraft argued that women were by nature the intellectual equals of men. (Library of Congress)

tagonist of Frances Burney's (1752–1840) novel *The Wanderer* is an enthusiastic supporter of both women's equality and the French Revolution mirroring the experiences of Mary Wollstonecraft.

—Carolyn Harris

moral novel *Coelebs in Search of a Wife*. She supported evangelical religious movements, the founding of charity Sunday schools in working-class neighborhoods, and the campaign for the abolition of the slave trade.

In France, numerous eighteenth-century philosophes debated the status of women with society, most notably the Marquis de Condorcet (1743–1794), who published *On The Granting of Civil Rights to Women*. The French novelist Madame de Tencin (1682–1749) utilized the setting of medieval historical events to disguise her analysis of contemporary relationships between men and women. She condemned male domination within marriage because it was achieved by force instead of moral authority. Another French author, Olympe de Gouges (1748–1793), wrote political tracts in response to the French Revolution. Her *Declaration of the Rights of Woman* challenged the masculine focus of the manifestos issued by the Estates-General, a stance that contributed to the eventual suppression of revolutionary women's political organizations and the execution of de Gouges.

The most famous feminist writer of the eighteenth century was Mary Wollstonecraft Godwin (1759–1797), who also lived in Paris during

the French Revolution. She wrote her celebrated 1792 treatise *A Vindication of the Rights of Woman* in response to revolutionary literature that established universal rights for male citizens of France. Wollstonecraft rejected the patriarchal framework of the church, state, and family, arguing that women should be educated to be strong rational partners for men instead of passive sexual objects. She advocated a national system of coeducational schools to provide an equally rigorous education for both male and female children. Her writings also criticized male economic dominance over women, arguing that the absence of respectable economic activities for middle-class wives made marriage a form of legalized prostitution. Wollstonecraft also challenged the prevailing perception of women as sexually passive, arguing in her 1798 pamphlet *Maria or The Wrongs of Women* that women had strong sexual desires, a stance that generated controversy throughout the nineteenth century.

—Carolyn Harris

Bibliography

Goulianos, Joan. *By a Woman Writ: Literature from Six Centuries by and about Women*. New York: Bobbs-Merrill, 1973.

Hardt, Ulrich H. *A Critical Edition of Mary Wollstonecraft's A Vindication of the Rights of Woman: With Strictures on Political and Moral Subjects*. New York: Whitson, 1982.

Jacobs, Eva. *Woman and Society in Eighteenth Century France*. London: Athlone, 1979.

Rogers, Katharine M. *Feminism in Eighteenth Century England*. Chicago: University of Illinois Press, 1982.

Women Workers in the Industrial Revolution

The Industrial Revolution of the early nineteenth century entailed both economic transformation and also social and gendered changes. As the first country to industrialize, England quickly gained a reputation for the harsh working conditions endured by women and children in its mines and factories. The reality of working-class women's lives posed a challenge to the middle-class ideal of the "Angel in the House," which posited female delicacy, purity, and exclusion from the male world of work and money.

Many of the earliest industrial workers were immigrants from the English countryside, but the young single women in search of

economic opportunity often found more hardship than success. Like their male counterparts, women workers toiled in factories, textile mills, and mines from 12 to 18 hours a day, six days a week, yet earned only half of a man's wage. Many jobs performed by women, such as those of seamstress or laundress, continued to be done inside the home, usually a poorly lit and unheated one- or two-room apartment, or women sold watercress, flowers, meat pies, and other goods on city streets. Domestic service provided another form of employment for young single women, especially Irish immigrants; these grueling live-in jobs paid even less than factory work but provided room and board (usually a shared bed with another servant in an attic or cellar). The increase in prostitution in the nineteenth century is related to industrialization, as periods of unemployment made it necessary for many women to supplement their meager incomes.

Although the middle class benefited from the cheap labor of the working class, many reformers decried the dangerous conditions of England's factories and mines. Investigative journalists particularly exaggerated the moral conditions of the workplace, with descriptions of lewd language, partial nudity, and sexual misconduct among male and female workers. Such reports prompted Parliament to interview workers during the 1830s and 1840s and pass protective labor laws to limit the hours and types of jobs performed by women. The Factory Act of 1844, for example, limited the number of hours a woman could work a day to 12, and the Mines Act of 1842 prohibited women entirely from mining. However, many forms of employment (especially jobs done at home and on the street) continued to go unregulated. Some families actually resented governmental interference since every wage was necessary for survival, and women often preferred working at night so they could take care of their youngest children during the day.

The married female worker faced a double burden as she tried to balance a long workweek with her domestic duties. Fearful of losing their jobs, married workers, who had on average six to eight children, took little time off between births, leaving infants in the care of their older siblings or neighbors or sometimes drugged and unattended at home. Overworked and malnourished,

➤ WOMEN WORKERS AND THE LOWELL MILLS

The Lowell Mills in Massachusetts recruited large numbers of farm girls from rural New England in the 1830s. Aware of the brutal reputation of the English mills, Lowell promised concerned parents that their daughters would find a safe and protected environment as well as decent-paying jobs in the textile mills. Not only were workers given room and board, but they also were provided with lectures, prayer services, and recreational programs. However, when the mills faced increased competition, the company cut wages, and safety conditions deteriorated. When mill workers went on strike in 1844, they were replaced with cheaper Irish immigrants. Furthermore, the solidarity forged by the young women living together in the Lowell dormitories had fueled their unionizing efforts, prompting the mill owners to require newly hired workers to find lodging in privately run tenements or as boarders with families.

—Julie Taddeo

these women also had a greater risk of complications and dying in childbirth than middle-class women. Male or female, workers were not compensated for injuries suffered on the job, and women, with long hair and breasts that could get caught in machinery, were especially vulnerable.

Early attempts by workers to unionize usually excluded women, since male workers saw them as competitors; indeed, factory owners preferred women because they could pay them lower wages for the same jobs done by men. Additionally, with their lower wages and responsibilities at home, women lacked the time and money to participate in union activity. By the 1880s, however, women were more visible as strikers, such as during the Matchgirls' Strike in London in 1888. These strikers with their yellowed skin and phossy jaw (bone disease caused by overexposure to phosphorus) called attention to the low wages, dangerous conditions, and indifference of employers that persisted late into the century.

Two schools of thought regarding the impact of the Industrial Revolution on women's lives continue to compete. Since Ivy Pinchbeck's 1930 study *Women Workers and the Industrial Revolution, 1750-1850*, historians have debated whether women's lives improved or worsened. For middle-class women who could rely on the cheap and abundant pool of domestic servants to clean their homes and help raise their children, their lives materially improved, and their time was freed to pursue philanthropic, social, and eventually feminist activities outside of the home. However, since these families could now purchase what their women once made, middle-class women did lose a vital economic role within the home. Work became associated with paid labor performed outside the home, part of the public sphere of men. The working-class woman, meanwhile, challenged the dichotomy of public and private, as she labored both in and out of the home for money. Moralists feared that such labor masculinized the so-called weaker sex. Other threats to women's supposed delicacy and purity, traits greatly valued in the nineteenth century, arose as a result of industrialization and urbanization. As women migrated from rural areas to find work, they lost the safety net of kin and community, as the

rise of illegitimate birth rates attests. Still, the lives of working-class women were not simply marked by work and despair. The city afforded them new freedoms and a lively urban culture of pubs, music halls, and working-class solidarity.

—Julie Taddeo

Bibliography

- Lown, Judy. *Women and Industrialization: Gender at Work in Nineteenth-Century England*. Minneapolis: University of Minnesota Press, 1990.
- Pinchbeck, Ivy. *Women Workers and the Industrial Revolution, 1750-1850*. London: Routledge, 1930.

Women and the French Revolution

The impact of the French Revolution on the status of women in French society remains widely debated. Women, despite their active participation in the revolutionary events, were no better off in 1804, when the Napoleon Code codified the revolutionary achievements, than when they had been marching to Versailles some 15 years earlier.

When it came to women, the Old Regime was full of contradictions. On one hand, it seemed that never before had women appeared to be so powerful or so sexually liberated. At the royal court and in the numerous salons, women wielded immense influence, and the names of royal mistresses (e.g., Mme. de Pompadour and Mme. du Barry) or society hostesses (e.g., Mme. du Deffand, Mme. du Tencin, and Marquise de Châtelet) remain the most obvious examples. Yet there was also a darker side to this picture. Antifemale prejudice was as strong in the eighteenth century as in any previous age, and the birth of a female child was still not generally considered desirable. Furthermore, convictions about women's inferiority were actively promoted. The ideal woman was thought to be pious and submissive, to accept male (be it father or husband) authority without question, and to spend the greater part of her time praying and attending to her family.

Facing a widespread misogyny, some women expressed their protest and challenged prevailing notions. The monthly *Journal des Dames* became the focal point for female voices

between 1759 and 1778. In the 1780s Marie-Armande-Jeanne Gacon-Dufour's (1753–1835) pamphlets blamed men for the current condition of women, who were forced into arranged and abusive marriages. Many female writers sought to adapt some of the ideas of Enlightenment philosopher Jean-Jacques Rousseau and used his views of femininity to reevaluate women's role as wives and mothers. As a result, on the eve of the French Revolution there were many publications extolling the virtues of motherhood and its role in rejuvenating the nation.

The French Revolution had a profound effect on this discourse, as the leaders of the revolution, who were all males, embarked on creating an entirely new political and social order but failed to consider women's place in this order. Amid heated discussions on the nature of citizenship during 1790–1791, no one gave thought to including women within its definition. Thus, the Declaration of the Rights of Man and the 1791 Constitution granted social and political rights only to males, who were divided into “active” and “passive” citizens based on property requirements. In later years the revolutionary government adopted “universal” suffrage, which was extended to millions of men but once again excluded women, who were automatically considered “passive” citizens due to their gender and alleged inferiority. Such treatment is especially remarkable considering the role that women played in the early stages of the revolution. In Paris, educated women asserted themselves politically and called for reforms to transform their place in the society. Of equal importance was the involvement of poor women in revolutionary events, which the authorities considered of great danger. Indeed, it was these poor women who resorted to “taxation populaire.” Tired of high prices, they forcibly seized goods from merchants and distributed them at just prices determined by popular consent. Furthermore, on October 5–6, 1789, women numbering in the thousands marched and stormed the royal palace in Versailles, bringing the royal family to Paris, which in itself influenced the course of the revolution. The events of the October days are noteworthy for attempts to disguise and minimize the power of women. A government investigation (the Chatelet Inquiry)

claimed that the women who had participated in the march had been bribed and that many of them were not women at all but instead were men in women's clothing.

Failure to gain political and social rights naturally aroused protests from women and some males, who argued for the need to extend social and political rights to women. Marquise de Condorcet famously proclaimed that either no individual had genuine rights or else all had the same rights despite their sex, color, or religion. The most vocal voice of the women's movement was Olympe de Gouges (1748–1793), a Parisian playwright who was unhappily married at the age of 16 and, after the death of her husband, decided never to remarry. In 1791 de Gouges wrote the Declaration of the Rights of Woman as a response to the Declaration of the Rights of Man and Citizen. She accused the revolutionaries of 1789 of appropriating the revolution exclusively for the benefit of males and for oppressing women.

During 1790–1791 women formed several political clubs, with the *Cercle social*, *Les Amies de la vérité*, and *Société fraternelle des patriots de l'un et l'autre sexe*, being the most important ones. They regularly attended and participated in the meetings of the Jacobin and Cordelier clubs as well as section assemblies of Paris. Pauline Léon, Etta Palm d'Aelders, Claire Lacombe, and Théroigne de Méricourt played prominent political roles during 1790–1792. Women often joined protests against new laws (i.e., Le Chapelier Law) that abolished professional and workers' organizations and threatened their livelihood. Despite their pressure on the National Assembly, the women's calls to adopt legislature granting the right to divorce, equal educational opportunities, and regulating women's health remained largely ignored. Nevertheless, women did make some tangible gains. Divorce was legalized in 1792, and legislation allowing women to inherit property was passed in later years.

Female participation in politics increased during 1792–1793, when they exerted great influence in the meetings of Section assemblies of Paris and organized a powerful radical group, *Les Citoyennes republicaines revolutionnaires* (The Society of Revolutionary Republican Women), that united militant women and

supported the Montagnard policies. Its members played a prominent role in the Montagnard ouster of the Girondin government between May 31 and June 2, 1793. However, only a month later a rift opened between the society and the new Montagnard government, which refused to implement the more radical demands of the society. In the subsequent conflict, the government began to crack down on women's involvement in political life. On October 30, 1793, the government decreed that henceforth all women's clubs and associations were illegal. Women leaders were persecuted, and some, including Olympe de Gouges, were executed. Although this largely ended women's involvement in politics, women continued to protest. In February 1795 when state-supported workshops providing jobs to the poor were disbanded and the bread rations were reduced, women organized bread riots in Paris. In response, the National Assembly passed laws requiring women to stay in their houses and stating that groups of five or more women found in the streets would be disbanded by force and held under arrest. The political activism of women thus came to an end. The few gains in women's rights were eventually lost under Napoleon's Civil Code (1804) that limited women's rights and reestablished male authority over them.

It should be noted that not all women favored the revolution. Some rural women saw few advantages in the new political order, which seemed to have undermined their way of life through a plethora of reforms. Furthermore, the revolutionary government's attack on the Catholic Church, which remained influential in provinces, added additional incentive for women to turn against the revolution. Thus, when the government began to force the clergy to pledge allegiance to the state, the mere rumor of such an oath caused a violent protest by women in the small town of Sommières in the south of France.

—Alexander Mikaberidze

Bibliography

De Gouges, Olympe. "Declaration of the Rights of Women." In *Women in Revolutionary Paris, 1789-1795*, edited by Darline Gay Levy, Harriet Branson Applewhite, and Mary Durham Johnson. Chicago: University of Illinois Press, 1979.

Hufton, Olwen. *Women and the Limits of Citizenship in the French Revolution*. Toronto: University of Toronto Press, 1992.

Landes, Joan. *Women and the Public Sphere in the Age of the French Revolution*. Ithaca, NY: Cornell University Press, 1988.

Scott, Joan Wallace. *Only Paradoxes to Offer: French Feminists and the Rights of Man*. Cambridge: Harvard University Press, 1996.

Spencer, S., ed. *French Women and the Age of Enlightenment*. Bloomington: Indiana University Press, 1984.

The Cult of Domesticity in the United States and Britain

Beginning around 1820, middle-class Americans and Britons experienced the emergence of a redefined set of gender roles that effectively and ideologically associated men with the public domain and women with the realm of the home. The public and private spheres, as they came to be known, delineated the proper realms of activity and action for men and women. In this ideology, which held sway until the late nineteenth century, men's activities outside the home were considered vital to the maintenance of his family and to the functioning of business and government. Women's role in the home was similarly elevated. Indeed, women's household activities took on a heightened meaning in the nineteenth century: the cult of domesticity suggested that women's work was entirely essential to the social order. In their domestic role, wives and mothers were expected to act as exemplars of Christian values. Thus, though seemingly confined to the private sphere of the home, women of the period were charged with an important civic responsibility: creating and maintaining the very foundations of civilized society.

The emergence of this ideal of the middle-class family, with a domestically focused mother and a working father, has been linked to the Industrial Revolution. Previously, families comprised independent economic units, but the shift to an increasingly urban industrialized world created new economic and social realities. Families in the nineteenth century were less likely to produce goods for their own consumption than in generations past. Moreover, the emergence of new industrial economic centers spelled a shift

for middle-class families as male heads of household participated in work outside of and away from the home. Men, particularly husbands and fathers, thus began to be associated with the public realm and paid labor while women, who often remained in the home, were linked with the domestic realm and the uncompensated labor of reproduction, child rearing, and home maintenance.

While historians have made clear connections between the emergence of industrialization and the gender division of labor represented by the separate spheres, it is also true that the ideals that undergirded these complementary male and female roles predate industrialization. Christian doctrine, although varied according to denomination, provided a coherent source of information on the basic moral differences between men and women and offered justification for the spheres. Additionally, during the eighteenth and into the nineteenth centuries, Europeans and Americans were increasingly persuaded of the supposed innate biological differences between men and women that helped explain their distinct social roles. In both the popular and scientific imagination, women were supposed to be weaker, more delicate, and less fit for the rigors and dangers of the industrialized world than were men. Yet it was just this delicacy that recommended women for their role in the home: it became women's obligation to create a haven or sanctuary as a retreat from the harsher and potentially corrupting elements of the public world.

Contemporary writers remarked extensively on the emergence of the newly articulated female domestic role. French writer Alexis de Tocqueville (1805–1859) was among those who described the separate spheres in favorable terms, elaborating on the lofty position inhabited by American women who appeared—to him at least—to happily inhabit the domestic realm. Though Tocqueville elaborated on female domesticity as a distinctively American ideal, English writers appear to have been committed to promoting a similar set of prescriptions as well. Writing in the late eighteenth and early nineteenth centuries, for example, the English author and philanthropist Hannah More (1745–1833) argued for the continued education of women so that they might properly fulfill their

role as wives and mothers. In the United States, the educator Catherine Beecher (1800–1878) wrote persuasively about the important civic duty fulfilled by American women. Beecher suggested that the public world of industry and government operated in tandem with the smooth functioning of the private sphere. Popular periodicals promoted this ideal as well: *Godey's Lady's Book* and later *The Ladies' Home Journal* offered practical advice on the efficient governance of the home and provided affirmations on the significance of women's work within it.

Women's historians have been less willing to celebrate the domestic ideology of the nineteenth century than contemporary writers. In the 1960s and 1970s they tended to interpret women's role in the home as limited, confining, and often claustrophobic. Contrasted with the world of paid labor and direct civic agency, the domestic sphere was thought to stunt women's progress. Moreover, historians writing on the subject invoked a pejorative language to describe women's association with the domestic realm. The term “cult” seemed to intimate that women of the period acted as unwitting accomplices in their own subjugation.

Subsequent interpretations of women's role in the period have stressed the extent to which women's position as arbiters of moral values offered justification for a much more expansive role, one that would ironically lead them into the wider world. Beginning in the 1980s, women's historians began to piece together a narrative of a nineteenth-century middle-class women's experience that allowed for the promulgation of domestic values in the public sphere. Middle-class women, these historians argued, began to conceive of themselves not just as uplifters of their families but of society more broadly. Women's function in the home seemed, in this interpretation, to recommend them for much more civically active roles than it might at first have appeared. Historians suggested that middle-class women were emboldened rather than hindered by their moral responsibilities and thus expanded their role in unexpected ways, taking up public roles as temperance advocates, abolitionists, and missionaries.

Though this shifting perspective interrupted the existing historiography by arguing

for and demonstrating middle-class women's agency, historians grew critical of the way in which domestic women appeared to exploit the opportunities presented to them by what was once deemed to be a limited role. Middle-class women, historians began to argue, used their class and racial privilege to export middle-class ideals to men, women, and families in their own country (as in temperance and other reform efforts) and across the globe (as in their work with foreign missions). If middle-class women escaped a closed domestic sphere, they did so at the expense of those they purported to uplift.

—Jennifer Thigpen

Bibliography

- Beecher, Catherine. *A Treatise on Domestic Economy*. With an introduction by Kathryn Kish Sklar. 1841; reprint, New York: Schocken Books, 1977.
- Davidoff, Lenore, and Catherine Hall. *Family Fortunes: Men and Women of the English Middle Class, 1780–1850*. Chicago: University of Chicago Press, 1987.
- Kaplan, Amy. "Manifest Domesticity." *American Literature* 70 (1998): 581–606.
- Kerber, Linda. "Separate Spheres, Female Worlds, Women's Place: The Rhetoric of Women's History." *Journal of American History* 75 (1988): 9–39.
- Ryan, Mary. *The Empire of the Mother: American Writing about Domesticity, 1830–1860*. New York: Haworth, 1982.
- Stott, Anne. *Hannah More: The First Victorian*. New York: Oxford University Press, 2003.

Domestic Violence in Europe in the United States

In the nineteenth century in Europe and North America, there were no commonly accepted understandings of the rights of women and children. Wives and offspring, in the strict legal sense, were chattel or property, and as such could be traded, sold, or abused without consequence. Slaves, servants, and prostitutes were often in a similar situation, with violence and abuse being a part of their daily lives. While the infamous "rule of thumb," which allowed a man to beat his wife with a stick no thicker than the circumference of his thumb, is a legal fiction,

many Victorians believed it to be one of the rights men enjoyed over their wives.

Regardless of the etymology of "rule of thumb," wife beating did exist, despite legislative attempts to curtail the practice. As early as the seventeenth century, documents from the Massachusetts Bay Colony stated that "no man shall strike his wife . . . on penalty of such fine not exceeding ten pounds for one offense." In Maryland, in 1882, the punishment for spousal beating was forty lashes at the whipping post.

Some of the most sordid narratives regarding domestic violence can be found in the literature of the nineteenth century. In Charles Dickens's (1812–1870) *Oliver Twist*, the panorama of poverty and the working classes is dramatized through the story of Nancy, the mistress of a criminal, who is beaten and finally murdered by her lover. George Eliot's (1819–1880) novella, *Janet's Repentance*, focuses on the abuse of a lawyer's wife. Elizabeth Cleghorn Gaskell's (1810–1865) writings about the abuse that prostitutes and young women suffered was instrumental in Josephine Butler's campaign to eradicate the survival problems of lower-class women. Thomas Hardy's *The Mayor of Casterbridge* (1886) begins with a drunken man who sells his wife to another man in a drinking house. The great publicist of nonfictional domestic violence was Frances Power Cobbe, whose "Wife Torture in England" (1878) created a public scandal, and eventually led to changes in the law. Court records document those extreme cases that the authorities decided to prosecute, but then, as today, many cases of battering were never reported; hence, there is no way of knowing the actual extent of abuse.

More importantly, husbands, fathers, and male relatives believed that they had a right to "chastise" their wives and children by physical means. It appears that often their wives agreed, as much as they might have lamented it. The origin of this belief comes from a variety of biblical sources, both in the Old and New Testaments. As a source of behavioral modeling and comportment, the Bible dictated gender relationships by naming the man as the head of the household. Statements such as "submit yourself unto your husband," "the husband is the head of the wife," or "the husband shall rule over the

wife,” were claimed to justify men abusing their wives. Women were regarded as children or possessions, and expected to “mind” and “behave.” Marriage vows subtly enforced this biased attitude, and used the word “obey” in the woman’s pledge but not in the man’s. In France, certain parts of the Civil Code conformed to a belief in woman’s connection to sex and sin, derived from the creation myth and Eve’s disobedience. According to one source, Napoleon wanted certain portions of this code to be read by women during marriage ceremonies so that they remained aware of their inferiority and the requirement that they be submissive to their husbands.

In England, a husband could beat his wife and hold her prisoner, provided he did so without cruelty. It is difficult to understand how this could be done without cruelty, but this right to imprisonment remained law until the 1890s. Since divorce was extremely uncommon, economic circumstances forced unhappy marriages to remain intact. During the lifetime of a marriage, conflicts could escalate to the point that “till death do us part” meant murder instead of death by natural cause, although wife murder usually led to prosecution, even if not conviction.

The reasons for marital violence were varied, and although poverty added to the stresses of family life, the upper classes were not immune. The apparent preponderance of domestic violence in the lower classes was because their lives were more transparent. They did not have the means to protect their privacy from public scrutiny and documentation.

It was not until 1878 that the English Parliament passed a law that allowed women to petition the courts for separation on grounds of assault. However, in the nineteenth century, there were few options available for women to survive without the support of a husband. Furthermore, if a woman had an income, her husband could request, through a judge, that it be garnished. No proof was necessary.

Sexual relations in marriage were likewise unbalanced. A man could use violence to force his wife to perform her conjugal duty. There was no such thing as rape in marriage as long as a man used force for what was defined as normal. A woman’s infidelity in marriage threatened

reproductive bloodlines and future distribution of property if she produced a child from that union. A man’s adultery was tacitly acceptable as long as he kept his mistress away from the home he shared with his wife. However, in France, if a man caught his wife in a sexual act and killed her and her partner, he was excused under the “red article” of the French Penal Code.

Some critics of gender inequality, such as Frances Power Cobbe, assumed that wife beating, wife torture, and wife murder did not occur in the upper classes, but J. W. Kaye pointed out that educated and refined men expressed their disregard for women in different ways. The nineteenth century was an important time for changes in gender relationships within marriage. By the turn of the century, the nature of marriage was beginning to evolve from patriarchy to a more companionate character. Those changes were aided by the entry of women into the labor force during World War I and women’s gradual political enfranchisement. Although domestic violence did not disappear, women’s voices were given more agency, as their public presence was validated.

—Lana Thompson

Bibliography

- Arnaud-Duc, Nicole. “The Law’s Contradictions.” In *A History of Women: Emerging Feminism from Revolution to World War*, edited by G. Duby and M. Perot. Cambridge: Belknap Press, 1995.
- Bauer, Carol, and Lawrence Ritt. “‘A Husband Is a Beating Animal’: Frances Power Cobbe Confronts the Wife-Abuse Problem in Victorian England.” *International Journal of Women’s Studies* 99, no. 102 (1983): 99–118.
- Hammerton, A. James. *Cruelty and Companionship: Conflict in Nineteenth Century Married Life*. Oxford: Oxford University Press, 1992.
- Lawson, Kate, and Lynn Shakinovsky. “Violence, Causality and the ‘Shock of History’: George Eliot’s ‘Janet’s Repentance’.” Chap. 3 in *The Marked Body: Domestic Violence in Mid-Nineteenth-Century Literature*. Albany: State University of New York Press, 2002.
- Thompson, Lana. “Domestic Violence.” In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History*, Vol. 5: *The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.

New Professional Opportunities for Women—Nursing, Teaching, Clerical

In the nineteenth century, women in urbanized societies sought new employment in white-collar work and professions that required education and training. With the rise of industrial capitalism and the introduction of compulsory schooling in many European countries, women were eager to compete for jobs newly created by the expansion of the service sector of the economy. The important sites for women's work in this tertiary sector included government offices, banks, post offices, telephone and telegraph exchanges, schools, hospitals, and department stores. Women's entry into nursing, teaching, and office work feminized these fields, also contributing to the dismantling of gender inequalities.

Women's desire and need to work clashed with the prevailing view that most women should make marriage their primary occupation. In France, school curriculum throughout the nineteenth century encouraged girls to prepare for a life of domestic duties, while many boys aspired to university study or skilled work. Yet many women were obligated to work to assist the family economy. Necessity and opportunity led to the doubling of women's participation in

the workforce in Britain between 1851 and 1901. Simultaneously, feminists challenged the ideology of domesticity that sought to limit women to a smaller sphere of society. Europeans gradually came to accept female employees in nursing, teaching, clerical, and office jobs because such work was less well paid and less prestigious than the male-dominated professions such as medicine, law, science, and academia. Moreover, discrimination limited the numbers of women in the higher ranks of all occupations. At the end of the nineteenth century, most governments regulated women's labor, restricting their hours in certain industries to protect women from harm and to enhance men's wages and work opportunities. In the Middle East and Asia, women entered new professions later than in Europe and North America, typically after 1914.

The professionalization of nursing was one of the major developments shaping the medical field and women's job opportunities during the second half of the nineteenth century. Previously, unpaid nursing was performed by family members, religious orders, or charitable institutions. In hospitals, nursing was traditionally associated with manual labor performed by the uneducated working classes. Florence Nightingale (1820–1910) professionalized nursing by elevating it to a scientific and medical practice. The

► THE NEW WOMAN

During the 1890s, the term “new woman” emerged in vocabularies to signify the women who were pursuing lives of their own in a broadening public sphere. In most respects the new type of woman seemed to reject Victorian concepts of home and domesticity by seeking a life independent of marriage, entering previously all-male professions, and pursuing a freer lifestyle. Literary figures mirrored real women's lives as innovators and activists. Playwright Henrik Ibsen's protagonist Nora walked out on her stifling bourgeois marriage in *A Doll's House* (1879) to seek self-actualization. Career women were emblematic of this modern trend. When law graduate Jeanne Chauvin (1862–1926) demanded that the hitherto all-male bastion of the Paris bar admit qualified

women, she stirred up a vociferous controversy about the future of gender relations, work, and family. Her successful entry into the profession in 1900 was rightly seen as a triumph of feminism, while critics warned that women would abandon the home and forsake children, bringing an end to society as they knew it. The modern urban working woman was conspicuous in her convention-defying choices to smoke, ride a bicycle, and wear rational dress, notably pants. While pursuing new fashions in attitudes and lifestyle, women also became participants in an expanding consumer market that fostered desire for individual pleasure and the means of gratification through consumerism.

—Sara Kimble

introduction of her exacting hygiene practices to reduce infections led to the dramatic reduction in preventable deaths in military hospitals during the Crimean War (1854–1856). On the opposing side of this conflict, at least 160 Russian women volunteered as nurses. Nightingale's reforms changed the perception of nursing into a respectable field eagerly pursued by daughters of the educated middle classes.

By the 1880s, large hospitals employed formally trained nurses. The rising popularity of nursing was evident in the British census. In 1851 nurses numbered fewer than 2,300. In 1901 their ranks swelled to more than 25,000. In France, competition between Catholic sisters and lay nurses resulted in a greater proportion of secular staff by 1911. European women also joined colonial missions to provide medical aid while reinforcing imperialism. Whether at home or overseas, nursing remained a low-pay labor-intensive field employing youthful, docile, and unmarried women. During World War I (1914–1918), tens of thousands of women from all warring nations served their country out of a sense of duty, a desire to be useful, and for the promise of adventure. Nursing at the front lines exposed women to the same dangers and hardships as men, and women performed with alacrity and won the respect of the public. Nursing in wartime was seen as a young woman's obligation to the nation, the virtuous counterpart to men's duty in soldiering.

Teaching became a prototypical feminine job with the development of public schools. Teaching was seen as an extension of women's traditional roles as educators and also served as preparation for motherhood. In 1800 few girls entered a classroom, yet by 1914 nearly all attended school if they lived in Northern or Western Europe. At the end of the nineteenth century, women flocked to educational institutions such as Girton College at Cambridge University for advanced study or Sèvres in France for teacher training. American Catherine Beecher (1800–1878) facilitated women's entry into teaching by arguing that their nature suited them to care for youths. By 1907 female teachers held 70 percent of all teaching positions in public primary schools in Italy and Spain. In Britain by 1911, three-quarters of all teachers were female. Teaching was also

an important path for social mobility. In Russia, 40 percent of all female teachers in rural schools came from economically modest backgrounds.

The marriage bar cut short women's careers in teaching in many countries, including Britain, Germany, and Russia. However, France permitted women to continue working after marriage, and the state encouraged married couples to seek positions together in rural schools. Female teachers were typically paid less for the same work until unionization eliminated wage differentials between men and women. In France, female teachers won the right to equal pay for equal work in 1909. Only rarely, however, did women become university professors, such as did the Nobel Prize winning Marie Curie (1867–1934).

The growth of government bureaucracies, an evolution in the nature of white-collar work, and an expansion of educational opportunities for women all encouraged women to enter the tertiary sector. Middle-class women sought respectable and meaningful work in offices, shops, and professions that could provide them with the means to support themselves if they could not or chose not to marry. Female workers could be paid a third to a half as much as men and were subject to paternalistic rules and sexual harassment, but they were less likely to complain about conditions.

Job opportunities for women expanded across the European continent during World War I as men abandoned their jobs for the front. While the majority of women worked in war industries, women broke into other white-collar occupations hitherto closed to them due to exigencies of the war. Women's participation in traditionally masculine work was intended for the duration of the war only. In fact, the war resulted in the long-term destabilization of conservative views of women's abilities and changed young women's expectations for the future.

Under the Russian Empire, women were formally prohibited from working in civil service. However, in the 1880s and 1890s, women found work in minor government positions, banking, and railroads and as office secretaries. Liberal feminists were victorious in bringing about equal employment opportunities and political rights during the Russian Revolution of 1917. By the 1930s, the Soviet Union led the world with

the numerically successful integration of female professionals into all major fields.

—Sara Kimble

Bibliography

- Clark, Linda L. *Women and Achievement*. Cambridge: Cambridge University Press, 2008.
- Engel, Barbara Alpern. *Women in Russia, 1700–2000*. Cambridge: Cambridge University Press, 2004.
- Fuchs, Rachel G., and Victoria Thompson. *Women in Nineteenth Century Europe*. New York: Palgrave Macmillan, 2004.
- Migdal, Penina, and Miriam Slater Glazer, eds. *Unequal Colleagues: The Entrance of Women into the Professions, 1890–1940*. New Brunswick, NJ: Rutgers University Press, 1987.
- Simonton, Deborah. *A History of European Women's Work, 1700 to the Present*. London and New York: Routledge, 1998.

Housework

Housework has been a consistent, while often overlooked, aspect of labor history, though its scope and meaning have changed over time. In the eighteenth, nineteenth, and early twentieth centuries housework was mainly undertaken by women, with or without the help of servants, and was centered on three main tasks: laundry, cooking, and general cleaning. Most historians agree that aside from regional variations, housework was relatively static prior to the mid-nineteenth century. Changes occurred during the Industrial Revolution as a result of technological innovation; however, many historians argue that these innovations actually created more work by raising standards of cleanliness. Yet these modifications were not adopted evenly across time and space. Rural dwellers had to wait for proper infrastructure in order to utilize new products, and the poor could not always afford them. For many, modern conveniences were unavailable until the 1920s and 1930s.

Laundry remained by far the most onerous household task well into the late nineteenth century, as few houses had indoor plumbing. Most rural houses received their water supply from wells or streams, and urban residents relied on communal taps. This meant that women had to haul their water before even beginning

to wash their clothing. However, in some areas such as rural France, Ireland, and Scotland, women preferred to construct freestanding washhouses near streams. The washing procedure consisted of forcing the water, mixed with a cleaning agent, through the clothing by beating it, scrubbing it, or even stomping on it. Soap was expensive and rarely used until the mid-eighteenth century. Instead, stale urine, due to its ammonia content, and lye were the main cleansing agents. After washing, linens were given a blue rinse made from powered glass and then were starched before being wrung out and hung to dry. Finally, most clothing and linen had to be ironed with solid irons of varying weights, which were heated on the fire or, later, the stove. Laundry remained a time-consuming and difficult chore until the invention of the electric washing machine in 1914, though innovations such as the wringer and the electric iron did alleviate some of the burden. Consequently, many households chose to send some of their laundry out to a local washerwoman.

In contrast, cooking underwent several changes during this time period. Prior to the mid-nineteenth century the majority of cooking

› SPRING CLEANING

The term “spring cleaning” has a historical basis. When houses were heated by a central fire pit or stove and lit by rush lights, candles, or lamps, soot and grime accumulated throughout the winter months. When spring finally arrived the household was turned upside down, as carpets were pulled up and beaten outside and the underlying floor was swept and the tacks cleaned. Curtains were taken down and washed, walls were wiped down, furniture was polished, and the house was generally aired out. Even individuals not directly involved in this endeavor had to put up with missed meals, blocked-off rooms, and exhausted housewives and servants. However, spring cleaning was also a relief, as it heralded the warmer weather; the return of laundry drying outside instead of inside, where it dripped onto the heads of the inhabitants; and a return of privacy, as the household no longer had to crowd around light and heat sources.

—Heather Stanley

was done over an open fire in a central room that also served to heat the home. In both the United States and Europe the range, which usually consisted of a cast iron grate and various trivets to support pots, became popular around the 1830s, though these were quickly replaced in the United States by the closed stove, heated by wood or coal. Keeping these lit and clean was a time-consuming task. These stoves were less popular in Britain, where gas cooking became widely available in the late nineteenth century. Rural women often blurred the edges between housework and paid work by caring for chickens and dairying, which might feed the household or be bartered or sold for other goods. Even in urban areas making meals was a labor-intensive task because, for example, chickens were usually sold unplucked, and flour had to be sifted for impurities.

Before the advent of the vacuum cleaner in the 1900s, most general cleaning consisted of cleaning the hearth, dusting, cleaning the floor either with a broom or by strewing wet tea leaves or sand on carpets to pick up the dust, and cleaning the pots and pans with sand or salt. As with laundry, improvements were slowly introduced for cleaning through the advent of indoor plumbing and commercially prepared soaps. These developments as well as public health concerns did cause the levels and expectations of cleanliness to steadily rise during this period. However, the kind of weekly cleaning that would become expected in the post-World War II era was still uncommon.

—Heather Stanley

Bibliography

- Davidson, Caroline. *A Woman's Work Is Never Done: A History of Housework in the British Isles, 1650–1950*. London: Chatto and Windus, 1982.
- Robertson, Una A. *The Illustrated History of the Housewife, 1650–1950*. New York: St. Martin's, 1997.
- Schwartz Cowan, Ruth. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books, 1983.
- Simonton, Deborah. *A History of European Women's Work, 1700 to the Present*. London: Routledge, 1998.
- Strasser, Susan. *Never Done: A History of American Housework*. New York: Pantheon Books, 1982.

Feminist Movements in the United States

The origins of feminism in the United States can be traced back to the end of the eighteenth century, when a number of women began to question the social, political, and cultural norms that determined their lives in the new republic. In the decades that followed, women, with some male support, worked to expand women's rights, at first in regard to educational opportunities and family roles and subsequently in the area of politics. This so-called First-wave Feminism lasted from the late eighteenth century to 1914 and prepared the groundwork for Second-wave Feminism, which in the 1960s and 1970s sought to end discrimination against women in areas related to sexuality, family, the workplace, and reproductive rights. This was followed by Third-wave Feminism, a term that is applied to several diverse strains of feminist theory and activity that emerged in the 1990s and are viewed as reactions to perceived failures of Second-wave Feminism.

During the American Revolution women played key roles as both patriots and loyalists, but despite their contributions, they were denied political rights once independence had been achieved. In the early 1800s prevailing attitudes redirected women's political and patriotic tendencies away from their more public roles taken on during the revolution in order to reinforce their roles as wives and mothers. The doctrine of Republican Motherhood emphasized the need for women to remain in the home and educate their sons and daughters on how to be effective citizens and good Christians in the newly formed republic. Such a role required that women receive an education, and indeed literacy rates for women increased markedly in the first half of the nineteenth century. But it also narrowed the boundaries of women's lives.

In the late eighteenth and early nineteenth centuries, several influential writers published works that became cornerstones of First-wave Feminism. *A Vindication on the Rights of Woman* (1792), written by Englishwoman Mary Wollstonecraft, had many American readers. It argued that women's perceived inferiority was not inherent but instead resulted from a lack of

SOJOURNER TRUTH AND THE QUANDARY FOR WOMEN OF COLOR

Like many in the women's rights movement, Sojourner Truth, a former slave, worked to end slavery and to expand women's rights. Her best-known speech—"Ain't I a Woman?"—delivered in Akron, Ohio, in 1851 encapsulated the continuing issue over the involvement of African American women within the various women's movements. In it she questioned the treatment of African American women in general and within the movement specifically. Sojourner Truth, like many of her counterparts, faced dual systems of oppression due to her race and gender. The question of place within the movement for those facing multiple systems of oppression remains unresolved to the present day and became a major issue during Third-wave Feminism.

—Jennifer Janson

(Norman Barton Wood. *The White Side of a Black Subject: A Vindication of the Afro-American Race, from the Landing of Slaves at St. Augustine, Florida, in 1565, to the Present Time*).



education. She forcefully argued that both sexes should be treated as rational, thinking beings capable of reason and full participation in society. Judith Sargent Murray, the American counterpart to Wollstonecraft, wrote the essay "On the Equality of the Sexes" in 1790 in which she also argued for equality between the sexes based on intellectual capability. Margaret Fuller's *Woman in the Nineteenth Century* (1845) was another important American feminist work. Fuller, a journalist who was editor of the transcendentalist magazine *The Dial* and a writer for the *New York Tribune*, compared women's lot to that of slaves and called for a new awakening in which women would be considered the intellectual and spiritual equals of men.

Such writings provided the background for the first women's rights convention, which was organized by Elizabeth Cady Stanton and Lucretia Mott and took place in 1848 in Seneca Falls, New York. Delegates produced the "Declaration

of Sentiments," inspired by the Declaration of Independence, that outlined the rights to which women were entitled, including the vote. In the decades that followed many feminists, including Stanton, Mott, Susan B. Anthony, and Sojourner Truth, worked for the vote, but women were also involved in other reform efforts focusing on temperance, the abolition of slavery, improved education, and better health care. The slow pace of reform in these areas strengthened the conviction among women that in order to create real change in American society they needed the vote.

The movement for women's rights was temporarily suspended with the American Civil War. When the war ended, disputes within the movement led to an ideological split in the American Equal Rights Association, which had been formed in 1866 to advocate for a constitutional amendment to guarantee the vote for blacks and women alike. In 1869 it split into two groups. The National Woman Suffrage Association (NWSA)

opposed the Fifteenth Amendment (which guaranteed blacks the right to vote) because it failed to give women the vote and also advocated for reform of divorce laws and the end of discrimination in matters of work and pay. The less-militant American Woman Suffrage Association (AWSA) was founded by staunch abolitionists who feared that the Fifteenth Amendment would be defeated if it included a provision on women's voting rights. They avoided issues other than gaining the vote for women, which they believed could best be achieved on a state-by-state basis rather than by a constitutional amendment. In 1890 the two groups reconciled and joined forces as the National American Woman Suffrage Association (NAWSA). Under the leadership of Susan B. Anthony, the NAWSA oversaw the work of hundreds of smaller local and state groups that supported woman suffrage legislation in their states and communities. It was the most important suffrage organization in the United States and was instrumental in winning the ratification of the Nineteenth Amendment to the U.S. Constitution in 1920. With the achievement of this long-sought goal, First-wave Feminism in the United States came to an end.

—Jennifer Janson

Bibliography

- Dickenson, Donna, ed. *An Introduction to "Woman in the Nineteenth Century and Other Writings" by Margaret Fuller*. Oxford: Oxford University Press, 1994.
- Freedman, Estelle B. *No Turning Back: The History of Feminism and the Future of Women*. New York: Ballantine Books, 2002.
- Kerber, Linda K. *Women of the Republic: Intellect and Ideology in Revolutionary America*. New York: Norton, 1986.
- Norton, Mary Beth. *Liberty's Daughters: The Revolutionary Experience of American Women, 1750–1800*. Boston: Little, Brown, 1980.
- O'Hare, Carol, ed. *Jailed for Freedom: American Women Win the Vote*. Troutdale, OR: NewSage, 1995.

Feminist Movements in Europe

Feminism is the critical response to the systematic subordination of women as a group to men as a group within a given cultural setting.

A feminist believes that men and women should have equal rights and opportunities. The word *féminisme* emerged first in France in the 1870s, yet the goal of righting the imbalance of power between the sexes dates from centuries earlier.

As early as the fifteenth century, writers defended women's equality and called for ending women's subordination in the family, law, and society. The Venetian-born French writer Christine de Pisan (1364–1431) authored a political treatise, *The Book of the City of Ladies* (1405), in which she condemned the demeaning remarks made about women by ancient authorities, such as Aristotle and Ovid, and defended women's capacity for intellectual achievement and their right to govern. Important humanists viewed women as spiritually equal to men, and the Cartesian theorist François Poulain de la Barre (1647–1723) pushed this notion into the secular sphere by arguing that "the mind had no sex." Enlightenment philosophers from Sweden to Spain engaged in rich intellectual debates about gender roles and developed a literary movement on the "woman question." While many authors denounced women's subordinate existence, others, most famously Jean-Jacques Rousseau (1712–1778), developed an antifeminist resistance by denigrating women and prescribed for them a limited sphere of action in domesticity. The patriarchal worldview that women were uniquely suited for the private realm profoundly influenced European social structures during the nineteenth century.

The French Revolution was an extremely important moment for the rise of a popular movement for women's rights. In France, women's activism existed alongside men's activism. However, women's activism made monumental impacts at particular moments, including the march in October 1789 when women brought the king to Paris, in 1793 when women protested for political rights, and during the insurrections of May 1795. The revolutionary government recognized women's civil rights but not their civic rights, permitting women equal inheritance and divorce rights but excluding them from political rights. A former actress turned writer, Olympe de Gouges (1748–1793), enumerated the universal rights that belonged to women, including property, taxation, and citizenship, in her *Declaration of the*

► FAMILY PLANNING IN LATE-NINETEENTH-CENTURY EUROPE

Family planning was one of the most controversial issues in late-nineteenth-century Europe. At a time of declining birthrates, most governments criminalized birth control devices, contraceptive information, and abortion in the interest of encouraging larger families. Critics equated contraception with obscenity and the encouragement of promiscuity. Christian churches and the medical establishment likewise opposed any artificial controls of fertility. Consistent with the double moral standard, most governments regulated prostitution as a necessary outlet for men's licentious nature.

In Britain from the 1820s onward, anyone who published pamphlets about methods to prevent pregnancy ran the risk of prosecution under obscenity laws. Contraception became a public issue in 1877 when Charles Bradlaugh (1833–1891) and Annie Besant (1847–1933) were brought to trial for one such publication. Their guilty verdict led to the creation of the British neo-Malthusian

League that advocated family planning and eugenics. By 1882, the pioneering Dutch female doctor Aletta Jacobs (1851–1929) opened the world's first birth control clinic. Working with poor patients, Jacobs witnessed the physical toll and poverty associated with too-frequent pregnancies. Believing that abstinence was impracticable, she began fitting women with diaphragms developed by German physician Wilhelm Mensinga. In France, Nelly Roussel (1878–1922) touted the health and social benefits of smaller families in her national lecture tours. The most radical campaigns were in Germany, where Helene Stöcker (1869–1943) founded the German League for the Protection of Motherhood in 1905. This group uniquely criticized the double standard of sexual morality, supported sex education, and called for the end of state-regulated prostitution and the decriminalization of abortion.

—Sara Kimble

Rights of Woman and Citizens (1791). Revolutionary women could count on a few supporters such as the Marquis de Condorcet (1743–1794), a mathematician and philosophe, who condemned sex and race discrimination as an injustice. De Gouges and other women's rights leaders were put to death by guillotine for their ideas. After the radical pamphleteer Thomas Paine (1737–1809) called for individual rights based on capacity to reason rather than property, British author Mary Wollstonecraft (1759–1797) claimed women's rights on the same basis in her essay *A Vindication of the Rights of Woman* (1792). Wollstonecraft championed the most acceptable feminist ideas that women needed education and economic opportunities to aid their families and live with dignity.

The counterrevolution and the rise of Napoleon ushered in a culturally conservative era that narrowed the vision of women to that of subordinate wives who owed obedience to their husbands under strict laws. The dominant politics of liberalism left a conflicted legacy, as liberal ideas legitimated challenges to traditional authority and served to enfranchise men but denied women's claims to citizenship on the

basis of sex differences. In the early nineteenth century, married women had no legal right to property or to their earnings; no freedom of movement or conscience; no freedom regarding their bodies; and no rights in regard to their children. Feminists criticized the laws that stripped women of their basic rights, and they objected to additional regulations that prohibited paternity suits, required women to take their spouse's nationality, and decreed adultery a crime only if committed by wives. Reformers Josephine Butler (1828–1906) in Britain and Hubertine Auclert (1848–1914) in France argued that under such laws matrimony more closely resembled slavery rather than the ideal of companionate love as described by romantics. Writer Caroline Sheridan Norton (1808–1877), falsely accused of adultery by her drunken husband and denied custody of her children, published critical pamphlets and thus helped secure a series of legal improvements achieved by parliamentary acts. Married women's property rights followed in England (1870), Germany (1900), and France (1907), primarily benefiting bourgeois women.

Mainstream feminists hoped to ameliorate women's condition and to remake society

according to their values. As legal and social distinctions drove a wedge between men's and women's roles in the family and society, women became increasingly associated with all that was civilized, spiritual, and moral. Activists, organized into solidarity groups, utilized the perception of women's domestic virtue to justify moral reformation in the outside world. Women joined political campaigns to abolish slavery and prostitution. They formed temperance associations to end the abuse of alcohol and condemn male domestic violence. Other feminists concerned with the condition of the working classes called for labor regulations to protect pregnant laborers and new mothers and end exploitation. The global nature of these concerns and the technological advances in travel and communication led to the growth of international associations such as the International Council of Women. Many reform objectives were successfully achieved piecemeal and gradually during the twentieth century.

The repeated appeal for women's voting rights punctuated modern history, often corresponding with democratic reforms. Many male and female feminists came to see political rights as the key to achieving all their goals. In 1848 French utopian socialist and working-class journalist Jeanne Deroin (1805–1894) demanded that the provisional government grant women suffrage rights, for which she was thrown in prison. Under a less-repressive regime, moderate republicans Maria Deraismes (1828–1894) and Léon Richer (1824–1911) cofounded a French society for women's rights to secure an equal share of rights and liberty for women. Deraismes, a persuasive writer, argued that women's inferiority was not a fact of nature but “a human invention and a social fiction.” In Britain, Barbara Smith Bodichon (1827–1891) and her allies gathered signatures for a voting rights petition in 1866 that Liberal members of Parliament John Stuart Mill and Henry Fawcett presented to the House of Commons. This act began a decades-long effort for suffrage dominated by the peaceful methods of the National Union of Women's Suffrage Societies. In 1905 Emmeline Pankhurst (1858–1928), leader of the Women's Social and Political Union, urged “deeds, not words,” and spearheaded a militant campaign

characterized by civil disobedience and hunger strikes.

In Germany, where women were prohibited from attending political meetings, cautious leaders, including Louis Otto-Peters (1819–1895), initially focused on moderate demands for education and economic rights rather than the vote. The German women's movement was divided over class issues, whereby socialist leaders such as Clara Zetkin (1857–1933) espoused the belief that only the overthrow of capitalism could emancipate women. Women's suffrage was granted more readily in countries with less-divisive women's movements including Finland (1906), Norway (1913), and the Soviet Union (1917). Over 20 nations granted women the right to vote after the First World War (1914–1918), partly in recognition of women's wartime patriotism. With few exceptions, formal constitutional equality for women hung in abeyance until after the Second World War (1939–1945).

—Sara Kimble

Bibliography

- Accampo, Elinor. *Blessed Motherhood, Bitter Fruit: Nelly Roussel and the Politics of Female Pain in Third Republic France*. Baltimore: Johns Hopkins University Press, 2006.
- Anderson, Bonnie S., and Judith P. Zinsser. *A History of Their Own: Women in Europe from Prehistory to the Present*. New York: Harper and Row, 1988.
- Fauré, Christine, Richard Dubois, et al., eds. *Political and Historical Encyclopedia of Women*. New York: Routledge, 2003.
- Fuchs, Rachel, and Victoria Thompson. *Women in Nineteenth-century Europe*. New York: Palgrave Macmillan, 2005.
- Jacobs, Aletta H., and Harriet Feinberg, eds. *Memoirs: My Life as an International Leader in Health, Suffrage, and Peace*. New York: Feminist Press, 1996.
- Offen, Karen M. *European Feminisms, 1700–1950: A Political History*. Stanford, CA: Stanford University Press, 2000.
- Paletschek, Sylvia, and Bianka Pietrow-Ennker, eds. *Women's Emancipation Movements in the Nineteenth Century: A European Perspective*. Stanford, CA: Stanford University Press, 2004.
- Smith, Bonnie G., ed. *Women's History in Global Perspective*. 3 vols. Urbana and Chicago: University of Illinois Press, 2004.

European Women and Imperialism

In recent decades, historians interested in a wide range of subjects have shown that European imperialism was not solely a masculine affair. Conceptually and in practice, women were at the heart of the imperialist project. The gendered social dynamics of European societies provided Europeans with models and metaphors for their relationships with foreign lands and their peoples. Empires and their constituent parts were regularly represented by Europeans in gendered terms, while imperial projects were commonly depicted as masculine adventures involving the domination of female virgin territory. At the same time, European women were both physically and intellectually fully involved in the accumulation and management of imperial possessions. European women were actively engaged in the processes of building and reorganizing empires in a variety of roles: as wealthy and influential investors in imperial ventures; as authors, artists, and social scientists involved in studying and representing their empires' subjects; and as missionaries, colonists, and sight-seeing travelers.

Between the mid-eighteenth century and the beginning of World War I, people from all parts of Europe became involved in extracontinental imperialist ventures. Older empires such as those of the Portuguese, Spanish, Dutch, French, and British continued to offer opportunities and challenges to the men and women who managed them throughout this period. By the end of the nineteenth century a wide range of other European nations, most notably Belgium, Germany, and Italy, were working to carve out imperial holdings overseas, a process that was perhaps best illustrated by the unrestrained scramble for Africa at the turn of the twentieth century. Even regions of Europe that were not engaged in building empires of their own during this period saw emigrants departing for overseas destinations in the hope of finding better lives. The European mass emigration, colonization, and imperial domination of other parts of the world during these years touched the lives of women at all levels of European society.

The well-entrenched separate spheres of work for men and women in European cultures meant that women were not expected to perform the same functions as men within the imperial context. Typically, women were

▶ ELLEN JOYCE

Almost 50 years of dedicated service to the British imperial cause had earned Ellen Joyce the prestigious titles “Lady of Grace of the Order of St. John of Jerusalem” and “Commander of the British Empire” by the time of her death in 1924. Joyce stands out as a particularly ambitious, energetic, and effective female imperialist, but she was far from alone in her work for empire, which involved promoting and facilitating the emigration of thousands of British women to colonial destinations over the course of the late nineteenth and early twentieth centuries. Like hundreds of other middle- and upper-class British women, Joyce worked as a private individual and as a member of women's organizations to feminize an empire that she saw as both glorious and in desperate need of women's civilizing influences. The photograph of Joyce featured here is situated in a page taken from the golden anniversary history of the Girls'



(The Women's Library)

Friendly Society, an imperially oriented society for the encouragement of purity, humility, and religiosity in working-class girls. Joyce served as the primary figure in this society's Emigration Department from 1883 and as the president of the British Women's Emigration Association until 1919.

—Lisa Chilton

underrepresented in the ranks of Europe's imperial power brokers. Yet as members of their societies' elite, individual women could play important roles in the formation of their nations' imperial agendas. Queen Victoria's assumption of the title "Empress of India" serves as a striking example of a woman's personal and symbolic engagement with imperial authority. Less ostentatiously and by a wide range of means, hundreds of wealthy and socially influential women took it upon themselves to determine the workings of particular aspects of their nations' empires. For example, by the end of the nineteenth century, organizations such as the Girls' Friendly Society, the Imperial Order Daughters of the Empire, the Victoria League, and the British Women's Emigration Association had established links between imperially minded women throughout the British Empire. Likewise, although women were less likely than men to work as natural scientists or geographers in the imperial context, large numbers of women engaged in the collection, classification, and dissemination of information about newly discovered environments overseas. Where European women were expected to play a significant part in empire making was in the production of the next generation of white colonials and in the realm of cultural imperialism. The arrival of white women in the colonies was typically heralded by colonial authorities as a sign of advancement. Their presence was expected to improve the moral conditions of colonial communities generally, while their availability for marital partnership with white males was celebrated as a cure for the problem of growing mixed-race populations. White women were heavily involved as missionaries and educators and by personal example in the Christianization and acculturation of colonized peoples. They were also assigned the task of ensuring that white men would remain true to their own so-called superior racial and cultural identities. White women were seen as a bulwark against white men's tendency to "go native" when left to their own devices in areas dominated by aboriginal peoples.

The relationships that were established between European women and colonized peoples varied widely depending upon the sociopolitical

contexts and the personalities of the people involved. As the employers of relatively powerless workers, European women could have a huge impact on the quality of life of colonized people. The most common employer-laborer relationship that European women experienced was that of mistress to domestic servants. In the European context (and in some Europeanized colonies), these relationships were typically between white women of different classes. When the servants were not Europeans, these relationships were complicated by socially and institutionally recognized racial hierarchies. In certain colonial contexts, such as in India and parts of Africa, where servants might more commonly be men, the mistress-servant relationship was further complicated by differences of gender. The mixed-gender dynamics involved in these mistress-servant relationships could result in significantly different cultural power relations.

Violence (especially sexual violence) perpetrated against white women by nonwhite men was used extensively in propaganda designed to strengthen the hands of states involved in imperial conflicts. Likewise, in various locations ranging from India to Southern Africa to North America, incidents in which white women were harmed or threatened by men of color were used to justify laws restricting the rights of colonized peoples and to excuse colonials' acts of violence against indigenous populations.

European women experienced empires differently depending upon their class, their relationships with the men around them, and their sociopolitical contexts. European women could venture out into the extra-European imperial world as indentured, impoverished, uneducated domestic servants or as the much-pampered wives and daughters of colonial governors; being a woman of European background in Haiti at the end of the eighteenth century would have resembled being a woman of European background in eastern Canada at the beginning of the twentieth century in very few respects. For some women, the reality of European empires provided wonderful opportunities to explore, to grow, and to achieve measures of freedom and independence unavailable within the much more conservative, traditional European contexts. For other

women, life in the context of shifting imperial powers meant round after round of violence and uncertainty.

—Lisa Chilton

Bibliography

- Chilton, Lisa. *Agents of Empire: British Female Migration to Canada and Australia, 1860–1930*. Toronto: University of Toronto Press, 2007.
- Gouda, Frances, and Julia Clancy-Smith, eds. *Domesticating the Empire: Languages of Gender, Race, and Family Life in French and Dutch Colonialism, 1830–1962*. Charlottesville: University Press of Virginia, 1998.
- Levine, Philippa, ed. *Gender and Empire*. Toronto: Oxford University Press, 2004.
- Perry, Adele. *On the Edge of Empire: Gender, Race, and the Making of British Columbia, 1849–1871*. Toronto: University of Toronto Press, 2001.
- Pratt, Mary Louise. *Imperial Eyes: Travel Writing and Transculturation*. New York: Routledge, 1992.
- Procida, Mary A. *Married to the Empire: Gender, Politics and Imperialism in India, 1883–1947*. Studies in Imperialism Series. New York: Manchester University Press, 2002.

Feminism in Latin American Societies

Prior to independence, women in Latin America found little opportunity for intellectual or economic advancement. Although women participated in a wide range of economic activities, social mores kept them subordinate. The Catholic Church provided the only female organizations as well as the only opportunities for women to pursue advanced learning. These limitations conformed to the ideal known as *mari-aniso*, which limited female activity to the home and upheld patience, circumspection, and self-sacrifice as feminine traits.

Following independence, most nations in the region created new opportunities for women. Partly out of imitation of the United States and partly out of a desire for a more secular society, the new governments promoted education for both men and women and created new organizations to take over duties previously performed by the Church. These efforts included hiring foreign teachers in order to train women

CECILIA GRIERSON



(Archivo General de la Nación, Argentina)

In 1889, Dr. Cecilia Grierson (here photographed in 1914) became the first woman in Argentina to receive a medical degree. In 1900 following her visit to the International Council of Women meeting in London, she cofounded the Argentine National Council of Women, the first organization of its kind in Latin America.

—Gregory Hammond

as educators and the creation of national charitable organizations such as Argentina's Beneficent Society, which operated schools, hospitals, and orphanages throughout the nation. Education and the chance to be active in society beyond the boundaries of church and home resulted in individual feminists making themselves heard in the second half of the nineteenth century. These activists, inspired by European and American feminists, advocated civil and workplace reforms designed to improve the status of women. Gradually, women began to enter into professions such as medicine and law, which had once been exclusively male. Teaching became an especially popular career for middle-class women.

The combination of arguments of female intellectuals and new economic trends forced a serious discussion regarding women's issues. In the late nineteenth century, the Industrial Revolution began in Latin America, and as in Europe and North America, women joined the urban workforce in large numbers. This influx of women contributed to the overall political and

social upheaval associated with the urbanization of the early twentieth century. New political parties and labor unions as well as the Catholic Church all sought to incorporate women into their activities. These organizations differed philosophically but tended to share certain principles concerning women. They all agreed that modern society threatened women with denigration and abuse, that women's role as mothers made them morally superior beings, and that in order to prevent abuse and safeguard the maternal role, society had to provide special protections for women. Feminist organizations that emerged in the midst of the political upheaval of the early twentieth century shared these principles. However, feminists interpreted the maternal role in an expansive rather than a restrictive way that encouraged women to enter the public sphere beyond the home and thus improve public morality. Only a handful of women, such as those associated with anarchism, sought a radical reorganization of gender roles.

The turn of the century saw the emergence of new women's organizations that combined the innovation of the intellectual feminists and the organizational know-how of established female organizations. These new bodies forged ties to international feminist groups while adjusting feminist arguments to local conditions. Women's suffrage, for example, was not a priority for Latin American feminists. Instead, they addressed the civil code structure of their nations that relegated married women to the legal status of minors. In addition, Latin American feminists, like their counterparts abroad, tackled a variety of social issues, including educational reform, public health, vices such as alcoholism, and workplace protection. Women's groups approached these issues through a combination of direct community action (such as adult education classes) and lobbying. In this way, they gained political experience that served them well in later years. In the short term, however, they achieved only limited success, due in part to ideological, racial, and/or class fragmentation and to persistent reticence, if not outright refusal, on the part of male politicians to acknowledge women's issues.

By the beginning of World War I, women in Latin America had laid the basis for expanded civil rights. Although many of their goals were

still unrealized, they had achieved some short-term gains, particularly in education and workplace reforms. They had also demonstrated that they could enter the previously all-male sphere of politics without damaging their femininity.

—Gregory Hammond

Bibliography

- Dore, Elizabeth, and Maxine Molyneux, eds. *Hidden Histories of Gender and the State in Latin America*. Durham, NC: Duke University Press, 2000.
- Lavrin, Asunción. *Women, Feminism, and Social Change in Argentina, Chile, and Uruguay, 1890–1940*. Lincoln: University of Nebraska Press, 1995.
- Miller, Francesca. *Latin American Women and the Search for Social Justice*. Hanover, NH: University Press of New England, 1991.

Sex in Enlightenment Thought

The Enlightenment thinkers challenged Christian Europe's prevailing sexual order with a secular and positive view of sex, yet most were conservative in supporting male domination and emphasizing that the purpose of sex was procreation.

For the Enlightenment thinkers, sexual desire was not sinful lust but instead was natural and praiseworthy. Enlightenment thinkers rejected traditional Christian suspicion of sex, particularly the Catholic tenet that celibacy indicated spiritual superiority. However, most Enlightenment thinkers did not believe in unfettered license but instead believed that sex should be regulated, not by the Bible or the Church but by nature's laws. Although some Enlightenment thinkers took a tolerant attitude toward different sexual behaviors, belief in natural law often entailed rejecting not only celibacy but other sexual practices considered unnatural, because they were unprocreative. Many Enlightened thinkers including Voltaire and Immanuel Kant endorsed the violent hostility to masturbation that emerged in eighteenth-century Europe. Champions of the Enlightenment also employed homophobic attacks on their enemies, particularly the Jesuits and other religious orders. Another reason that celibacy was blameworthy, in this view, was that it fostered same-sex relations.

Adopting a more positive attitude to sexuality was part of the Enlightenment program of social reform. Such new attitudes, they believed, would have beneficial social consequences. Many Enlightenment thinkers, particularly in France, believed that their society was underpopulated. Sexual repression, particularly in the institutionalized form of celibacy, contributed to this problem. Celibates were parasites on society in their refusal to participate in the creation of the next generation. Celibacy was much more an issue for the Enlightenment in Catholic countries such as France, with their legions of celibate priests, nuns, and monks. It was much less discussed in Protestant countries, where celibacy had much less presence. Abolition of celibacy and the acceptance of sex as a natural phenomenon would lead to an increase in population, thus strengthening the state. Some, such as Benjamin Franklin, also advocated abolition of the stigma against unmarried mothers for the same reason. Franklin's satire "The Speech of Miss Polly Baker" (1747), whose heroine had borne five children out of wedlock, was popular in France as well as America.

Enlightenment philosophers also emphasized the positive role of sex and relations between men and women in creating and sustaining human society. Sociability was an important Enlightenment value. (Enlightenment belief in sociability was also another reason for rejecting masturbation, which was viewed as not merely unnatural but antisocial.) Scottish writers such as William Robertson, who were particularly interested in the development of society, credited the refinement of sexual attraction as an important force in the civilizing process.

Enlightenment thinkers usually did not challenge the traditional male dominance in society, marriage, and the law. They did not root male dominance in divine law but rather in the naturally different functions of the genders. Woman's natural function was domestic, as a wife and mother, while man's was public. Sexual desire was as natural and praiseworthy for women as it was for men, particularly since sex led to motherhood, but although many male Enlightenment thinkers had affairs with married women and showed some sympathy for women trapped in unhappy marriages, few questioned the double

➤ DENIS DIDEROT AND THE MYTH OF TAHITI

Denis Diderot (1713–1784), a leading writer of Enlightenment France, vigorously attacked the sexual hypocrisy and repression of European society. Diderot's *Supplement to the Voyage of Bougainville* (1772) paints a picture of Tahiti as a utopia of sexual freedom, contrasting the Tahitians' frank acceptance of sex with the repression and hypocrisy of European visitors who bring both sexual shame and sexually transmitted disease. Diderot even endorses intergenerational incest, particularly if a father begets children with a daughter too ugly to attract men. Yet for Diderot and his fictional Tahitians, sex is largely valuable because it leads to the conception and birth of children. The Tahitians frown on sex with women who cannot conceive, and sterile or menstruating women wear particular clothing to indicate their sexual unavailability. Sterile women who have sex are punished. So radical was Diderot's *Supplement* that during his lifetime it circulated only in manuscript form to his closest friends.

—William E. Burns

standard that oaths of marital fidelity are more binding on wives than on husbands. Female philosophers such as Mary Wollstonecraft were often more distrustful of the Enlightenment's emphasis on sexuality. Wollstonecraft believed that the reduction of women to their sexual functions was central to the oppression of women in society. An overemphasis on sex made women into flirts and men into sexual predators. Wollstonecraft believed that marriage should be based on mutual friendship rather than sexual attraction. Jean-Jacques Rousseau, in contrast, believed that sexuality in a civilized society, as opposed to the animal-like sexuality of the state of nature, illegitimately shifted power to women, as it allowed them to manipulate men.

To challenge harmful ideas about sex, sexual matters had to be openly discussed. The writings of many Enlightenment philosophers such as Diderot were sometimes censored for that reason. Pornographic books circulated along the same distribution networks as the works of the Enlightenment and were also referred to as "philosophic books." Some Enlightenment writers

were also pornographers. Diderot, for example, was imprisoned for his pornographic work *The Indiscreet Jewels*. Late-eighteenth-century pornography often drew upon Enlightenment secularism and materialism, most notably in the works of the Marquis de Sade.

—William E. Burns

Bibliography

- Darnton, Robert. *The Literary Underground of the Old Regime*. Cambridge: Harvard University Press, 1982.
- Gay, Peter. *The Party of Humanity: Essays in the French Enlightenment*. New York: Knopf, 1964.
- Gooden, Angelica. *Diderot and the Body*. Oxford, UK: Legenda, 2001.
- Porter, Roy. *The Flesh in the Age of Reason: The Modern Foundations of Body and Soul*. New York and London: Norton, 2003.

Homosexuality

It is generally accepted that in all societies and centuries people have engaged in sexual activities with other people of the same sex. The way these activities have been conceptualized and to what degree they have been considered part of normal sexuality or, in contrast, excluded from it has changed many times. The current use of the term “same-sex sexuality,” which is supplanting homosexuality in Anglophone academic discourse, is an example of the endlessly shifting understanding of sexual practices different from what are considered those of the majority of people.

In 1869, when the word homosexual was coined in German by the Austro-Hungarian Karl Maria Kertbeny, one could already make out a number of conceptualizations of same-sex desire or practices, which complemented and extended the religious notion of sodomy. The nineteenth century was profoundly marked by legal and psycho-medical discourses on deviant sexuality brought about in large part by the after-effects of the Enlightenment and the Industrial Revolution. Bénédict Morel’s *Traité des dégénérescences* (Treatise on Degeneration), published in 1857, formed the foundation for later theories that associated all forms of deviant sexuality with hereditary decay. By linking physical stigmata to all mental disorders, Morel, like his fellow French

medical doctor and forensic expert Auguste-Ambroise Tardieu, paved the way to the notion of same-sex desire as the obvious consequence of an inherited sexual pathology.

This notion achieved its logical conclusion in the view put forward by the German legal official Karl Heinrich Ulrichs, who in 1864 coined the term Urning (in English, Uranian), a reference to Aphrodite Uranus and the praise of Uranian pederasty in Plato’s *Symposium*, to proclaim the existence of a third sex distinct from the male and female. According to Ulrichs, members of the third sex desired men because they harbored a female soul in a male body. As sociologist David F. Greenberg argues, Ulrichs’s writings were the first in the modern era to systematically link same-sex attraction as a hereditary trait with cross-sex identification. However, although Ulrichs’s formulation concerned an alleged third sex, only the body lent itself to ambiguity; desire was clearly constructed as a bipolarized attraction between a “male self” and a “female self,” albeit inverted in the case of the Uranian. Yet, despite its negative conceptualization of same-sex desire as an inborn mistake, this definition, in a way, could carry a highly positive connotation since it puts same-sex desire on an equal footing with opposite-sex desire, both being natural phenomena.

In 1869, Carl Westphal described same-sex desire as *conträre Sexualempfindung*, contrary sexual sensation. Westphal defined same-sex desire as deviant from what custom expected as desire—the attraction of opposites—and linked it with deviant sexual identity. Westphal’s and Ulrichs’s definitions of same-sex desire and transgender identification as pathology and not as vice must be read in the light of the legal situation in Germany during their time. In France, the Napoleonic code made no mention of same-sex activities after the French Revolution. Accordingly, it made no difference whether same-sex desire was a vice or a congenital illness, since in neither case could it constitute a cause for legal regulation. In contrast, Ulrichs and Westphal lived under the antisodomy laws existing first in Prussia and, in the aftermath of the Franco-Prussian war of 1871, in Germany. Both Ulrichs and Westphal, who might have wanted to define same-sex desire as pathological in the beginning in order to

► KEY EVENTS IN THE HISTORY OF HOMOSEXUALITY

- 1778—Baron Friedrich von Steuben, one of the great military strategists of the eighteenth century, is dismissed from the U.S. military service for engaging in sodomy with Lieutenant Gotthold Frederick Enslin. The event might be considered the first instance of the U.S. military's dismissal of a member of the armed forces for homosexual behavior.
- 1786—Pennsylvania removes the death penalty as a punishment for sodomy. By the end of the century, a number of other states had followed suit in reducing the penalty for sodomy.
- 1861—Civil laws against homosexual acts among men are abolished in England and Ireland.
- 1869—The Hungarian physician Karl Maria Kertbeny coins the word homosexual.
- 1885—The British Parliament recriminalizes all male homosexual acts in both public and private.
- 1896—Adolf Brand, German writer, anarchist, and gay rights activist, publishes the first edition of *Der Eigene* ("The Community of the Special"), the first periodical dealing with issues of homosexuality. Publication is eventually shut down in 1931 by edict of Adolf Hitler.

- 1897—Magnus Hirschfeld, Max Spohr, and Erick Oberg found the Scientific-Humanitarian Committee in Germany. It is the first association in the world to campaign for social and legal recognition of lesbians, gay men, and transgendered persons.
- 1897—Havelock Ellis, English physician, social reformer, and sexologist, publishes *Sexual Inversion*, generally regarded as the first serious book to treat homosexual behavior as a normal variant of human behavior rather than as a crime, a disease, or a sin.
- 1908—Edward Carpenter, English poet, social activist, gay rights proponent, and philosopher, publishes *The Intermediate Sex*, arguably his most influential book on gay issues.

—David E. Newton

Source

David E. Newton, *Gay and Lesbian Rights: A Reference Handbook*, Second Edition (Santa Barbara, CA: ABC-CLIO, 2009), 120–121.

exempt it from these laws, concentrated on gender identity rather than on behavior.

In 1878, the Italian forensic doctor Arrigo Tamassia took a similar path to Westphal's in his attempt to name same-sex desire. While his translation of *conträre* as *inversione* was slightly off the mark, it emphasized homosexuality as a distorted gender identity. The French neurologists Jean-Martin Charcot and Valentin Magnan took up Tamassia's terminology and rendered it into French as *inversion du sens génital*, inversion of the genital sense. Yet, while the word inversion recalls the idea of contrary sexual sensation, Charcot and Magnan were actually at variance with Westphal and other German-speaking theorists who diagnosed same-sex desire as pathology distinct from other supposed perversions. The two French scientists instead fitted same-sex desire into a general theory of degeneration. By clinging to the concept of inversion they failed to differentiate preference for people of one's own sex (sexual orientation)

from identification with the opposite gender (transgender identification). This changed with the growing currency of the term homosexual. Through references especially in the German neuropsychiatrist Richard von Krafft-Ebing's *Psychopathia Sexualis* (1886), this term became widely accepted, first in the German-speaking world and later on everywhere in Europe, to describe those who have sex with or are sexually attracted to people of their own sex.

Thus, the earlier contrast between prohibited immoral genital acts and deviant desire is increasingly replaced by a discourse where human identity itself becomes radically enmeshed in sexuality. This theory of homosexuality and object choice was continued in Sigmund Freud's psychoanalysis. While Freud avoided any moral condemnation, he nevertheless considered same-sex desire an arrested state of the normal development from polymorphous sexuality toward the ideal, if imperfect, state of adult heterosexuality. In other words, a psychic accident

occurs in the individual's evolution from primitive pansexuality to civilized heterosexuality.

Because Freud did not view homosexuality as a hereditary illness or group inverts among the degenerates, his claims mark an important break from the tendency to pathologize homosexuality. Yet at the same time, Freud's Oedipus and castration complexes were profoundly heterocentric. Although he allowed for polymorphous sexuality in early childhood, the process of maturation should preferably lead to the ultimate goal of heterosexual desire, in which nonprocreative impulses have been largely repressed. Homosexuality was therefore partly congenital and acquired in Freud's analysis: congenital in that it was present in all human beings and acquired in that it has not been completely repressed.

The sexological construction of homosexuality as a hereditary pathology thus shifted toward a view that imagined homosexuality as some kind of failure in the acculturation of the child. In either interpretation, the patient's sexuality was considered deficient, an imperfect version of the adult heterosexual. According to Michel Foucault, the nineteenth (and early twentieth) century made men and women come to recognize themselves as "subjects of desire" and "subjects of a sexuality."

If before same-sex desire was discussed in terms of deviant sexual acts, customarily referred to as sodomy or pederasty, for which the cure was to live in abstinence or to repent, now same-sex desire was defined in terms of either a potentially curable (American psychoanalysis) or probably incurable (Freud) pathology.

—Max Kramer

Bibliography

- Bristow, Joseph. *Sexuality*. New York: Routledge, 1997.
- Foucault, Michel. "An Introduction." In *The History of Sexuality*, Vol. 1, edited by Robert Hurley. New York: Random, 1978.
- Greenberg, David F. *The Construction of Homosexuality*. Chicago: University of Chicago Press, 1988.
- Hall, Donald E. *Queer Theories*. New York: Palgrave Macmillan, 2003.
- Halperin, David. *One Hundred Years of Homosexuality*. New York: Routledge, 1990.

Kramer, Max. "Homosexuality." In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History*, Vol. 5: *The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.

Lesbianism

Lesbianism, in broad terms, is female homosexuality. Definitions of lesbianism, homosexuality, and other phenomena that were deemed as sexual perversions emerged throughout the nineteenth century. As new terminology was coined through the works of sexologists, the existence of the "lesbian" began to take shape toward the end of the century. However, it did so apart from the realities of what the true lesbian identity could have been, with definitions mostly based on medical and sexual studies formed in the context of the Victorian age. With so few sources left behind by women, and with the obvious secrecy involved in same-sex relationships, it is difficult to ascertain if a "lesbian identity" or "lesbian community" existed at all in this era. However, with the popularity of romantic friendships between women, the emergence of the "New Woman," and research work performed by sexologists, it is apparent that under the veil of the Victorian era, where sexual purity stood at the top of a high list of standards expected from women, Queen Victoria was wrong in saying that "ladies did no such thing."

Romantic friendships seem to have flourished in the nineteenth century, with many women, both single and married, maintaining very intimate relationships with one another. These relationships were fully accepted in nineteenth-century culture prior to marriage as an opportunity for young women to develop emotionally. It is a matter of debate whether many, if any, women in romantic friendships engaged in sexual relations with each other; however, accounts from personal diaries do affirm that some women did enjoy a great deal of freedom under the guise of this common practice. Proof can also be found in novels such as Margaret J. M. Sweat's (1823–1908) *Ethel's Love Life* (1859), which dealt with erotic relationships between women. Sweat is believed to have written the first lesbian novel in the United States.

Throughout the nineteenth century, the lives of some women began to change and improve. With more opportunities for higher education, social mobility, and economic independence, women were able to stretch the confines of the private sphere. Through these changes, the notion of the “new woman” emerged, typically a western woman from the middle and upper classes, who was able to enjoy economic freedom and avoid the pressures to marry and have children. With an escape from compulsory domesticity, it is thought that many new women found solace in relationships with other women, who may have better understood their new feminist ideals and growing political voices in involvement in the causes of abolitionism, the temperance movements, and other concerns of the time. The new woman and lesbians were therefore perceived by many as a threat to social order and as another vice created by industrialization and urbanization.

The family structure in the nineteenth century had the patriarch as the head of household and the main breadwinner. This construct often stood in the way of women setting up a home together. However, some women were able to expand these boundaries and were able to enjoy life in the company of their female partners. At both ends of the social spectrum, possibilities for cohabitation existed. First, there were women who were economically independent, who did not need to take a husband in order to ensure their livelihood. This freedom was often practiced by “new women” whose radical approaches to home life mirrored their feminist and egalitarian political views. Within this context, new women often committed themselves to “Boston marriages,” where two single women lived together in long-term relationships. This included the American founder of the settlement movement, Jane Addams, as well as the president of Bryn Mawr College, M. Carey Thomas.

However, for the most part, social and familial structures discouraged such arrangements. And, even though some privileged women were able to live together, they were still constrained by their family responsibilities and by the loss of respectability associated with breaking the norm and challenging woman’s place in society. The other group of women who, for at least some

period of time, were able to enjoy cohabitation were unmarried working-class women. The necessity to pool their funds in order to secure accommodation, allowed romantic partners a freedom that would have been unknown to most middle- and upper-class women. It is likely that in most cases, women who were involved in intimate friendships saw them end when marriage, children, and new family commitments ensued.

Definitions of lesbianism and homosexuality emerged through the research and conclusions of sexologists throughout the era. Sexologists thrived in an atmosphere in which people were being categorized according to their sexual orientation, which stigmatized people who were seen as deviant. Medical manuals written in the mid-nineteenth century tended to pronounce on the appropriate limits of female friendship. For example, sexologists like Richard von Krafft-Ebing, a professor of psychology, spent the last part of the century cataloguing and classifying sexual pathologies. In 1886, he published *Psychopathia Sexualis*, which included over 200 cases detailing sexual behavior. The German physician Karl Westphal wrote the history of a young lesbian and coined the phrase “contrary sexual feeling.” Havelock Ellis wrote the first English book to deal with homosexual behavior and to deal with the subject of lesbianism without treating it as a disease or a crime. His book *Sexual Inversion* (1896) had six case studies of lesbianism. He believed that feminism and all-female environments, such as all-female schools, could lead women toward same-sex relationships and noted the difference between “true inverters” and those for whom the “characteristic could be prevented.” He also associated lesbians with having masculine traits but a woman’s body and estimated that one in ten people were homosexuals. Some have argued that sexologists constructed lesbianism as a form of deviance in order to attack the feminist movement and women who challenged the patriarchal conventions of the late nineteenth century.

The work accomplished by sexologists did give an insight into lesbianism in the nineteenth century. For example, studies had been made of another kind of women who enjoyed same-sex female relationships, the prostitute. Many doctors and sexologists of the time drew parallels between prostitution and lesbianism, claiming

that one caused the other. This was accompanied by a rising fear that industrialization and urbanization were creating sexual perversions among other ills. In 1836, Alexandre-Jean-Baptiste Parent-Duchatelet published *De la Prostitution dans la Ville Paris* which gave evidence of same-sex relations between women in France. In his survey of Paris's regulated brothel district, Parent-Duchatelet discovered that as much as 25 percent of prostitutes had lesbian experiences. Duchatelet blamed this fact on the behavior of men who frequented brothels. Krafft-Ebing supported Duchatelet's findings in his *Psychopathia Sexualis*, writing that prostitutes sought comfort with the company of other women as a respite from sexual activity with perverted male clients. However, he also thought that lesbianism was situational and that women would resume heterosexual behavior in the proper conditions. Many assumptions were made about lesbianism, and even though it remained a legal act throughout the century, it was seen as a deviant act belonging to the underclasses.

—Danielle Bertrand

Bibliography

- Bertrand, Danielle. "Lesbianism." In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History*, Vol. 5: *The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.
- Diggs, Marylynne. "Romantic Friends or a Different Race of Creatures? The Representation of Lesbian Pathology in Nineteenth-Century America." *Feminist Studies* 21 (1995): 317–40.
- Miller, Heather Lee. "Sexologists Examine Lesbians and Prostitutes in the United States, 1840–1940." *NWSA Journal* 12 (2000): 67–91.
- Miller, Neil. *Out of the Past: Gay and Lesbian History from 1869 to the Present*. London: Vintage, 1995.
- Vicinus, Martha. *Intimate Friends: Women Who Loved Women, 1778–1928*. Chicago: The University of Chicago Press, 2004.
- Vicinus, Martha. *Lesbian Subjects*. Bloomington: Indiana University Press, 1996.

Prostitution

In the nineteenth century, prostitution became a politically and morally charged issue as Western governments proposed methods to regulate

its practice. While prostitution obviously predated the nineteenth century, the numbers of women who worked in brothels or walked the city streets exchanging sex for money did dramatically increase during this period. Industrialization, urbanization, and the lack of well-paid employment opportunities for working-class women combined to drive many into prostitution. Although an occupational choice made out of desperate necessity, prostitution was regarded by politicians, doctors, and moralists as the great social evil that threatened both the physical and moral health of the nation.

Prostitution was not a topic suitable for public discussion. Relegated to the pages of fiction, the prostitute was considered to be a fallen woman seduced by an aristocratic rake and paid a heavy price for her moral weakness, usually with her own death. In reality, she was often a young laundress, seamstress, or domestic servant who relied on prostitution as a temporary solution to poverty, and neither she nor the working-class community in which she lived and worked regarded her actions as criminal. Commonly referred to by authorities as a "public woman," the prostitute challenged the middle-class ideology of separate spheres in which women were supposed to be sexually chaste and morally superior to men. Nevertheless, many politicians and doctors believed that the prostitute was a necessary evil who protected more respectable women from the sexual advances of men. Still, doctors and moralists blamed the prostitute (and not the men who paid for her services) for the rise in syphilis, called the new plague, in the nineteenth century and urged their governments to curb her activities.

The first attempt to regulate prostitution occurred in France under the direction of Napoleon Bonaparte, who attributed the rise of gonorrhea and syphilis that ravaged his Grand Army to prostitute camp followers. The Napoleonic Code of 1810 introduced a system of brothel licensing across Europe that continued for the next century and a half. Under this system, prostitutes were required to work in brothels and undergo regular examination for venereal disease. The police also had the authority to seek out and arrest clandestine prostitutes (those who refused to work in the brothels), and

► JOSEPHINE BUTLER

As the leader of the campaign to repeal the Contagious Diseases Acts in England, Josephine Butler (1828–1906) demonstrated how powerful women, who lacked the legal and political rights of men in the nineteenth century, could be. The daughter of an abolitionist father and an evangelical mother, she combined these two strands of political activism and Christian charity in her efforts to help prostitutes, whom she regarded as her fallen sisters. The accidental death of her six-year-old daughter in 1863 prompted Butler to perform rescue work in which she opened up houses of rest for physically ill prostitutes and even took some into her own home, attracting the gossip and criticism of her middle-class neighbors. As a feminist, she promoted higher education and employment opportunities for women, but she also believed that women's alleged moral superiority could be put to use to improve society. She saw the Contagious Diseases Acts as an insult to all women and an excuse for male vice and argued that if women had the right to vote, such laws would not be passed. Known for her delicate beauty and charismatic speaking skills, Butler shocked many of her middle-class contemporaries with her public speeches about prostitution, venereal disease, and the “instrumental rape” that doctors inflicted upon working-class women. She traveled all over England and published hundreds of speeches, enduring the heckling of men and even attempts on her life. However, she garnered the support of working-class men who resented the authority of the police in their communities and the terrorizing of working-class women. Many working-class women, however, were afraid to publicly speak out against the



Josephine Butler of Great Britain was an ardent feminist and Christian who worked tirelessly to improve the welfare of prostitutes around the world, whom she viewed as victims of male exploitation. (Library of Congress)

Contagious Diseases Acts, and the voice of the prostitute was often lost in the public debate over the system of regulation.

—Julie Taddeo

this led to raids on cafes and lodging houses and often the arrests of innocent women. Not surprisingly, regulation did little to curb rates of venereal disease because men were excused from medical inspection on the grounds that it would be too humiliating.

Across the Channel, the English government, at the urging of military and medical officials, also attempted to regulate prostitution to stop the spread of syphilis, which had infected 7 percent of the civilian population by midcentury.

Again, rather than encouraging men to undergo medical examination and abstain from extra-marital sex, the English government placed the blame for venereal disease solely on prostitutes. The Contagious Diseases Acts of 1864, 1866, and 1868 enabled authorities to arrest any woman who “looked like” a prostitute and force her to undergo a medical examination. If venereal disease was detected, she was then quarantined in a lock hospital (medical jail) in which she was not only treated for a disease that had no cure

at the time but was also remoralized with prayer and domestic training. Feminists regarded the Contagious Diseases Acts as highly discriminatory in that they reinforced a sexual double standard and excused male vice. Under the leadership of middle-class activist Josephine Butler, the repeal campaign against the acts succeeded in 1886. Unfortunately, by then many women who once relied on prostitution as a temporary measure had been marginalized and turned into outcasts within their own community. Another unintended result of regulation had been to turn prostitution from a female-controlled occupation into one dominated by male pimps. As in France, regulation in England also failed to limit the cases of venereal disease.

—Julie Taddeo

Bibliography

- Harsin, Jill. *Policing Prostitution in Nineteenth-Century Paris*. Princeton, NJ: Princeton University Press, 1985.
- Walkowitz, Judith. *Prostitution and Victorian Society: Women, Class, and the State*. Cambridge: Cambridge University Press, 1980.

Abortion

Historically, abortion has been widely used as a method of limiting births, although the methods prescribed were not always effective. Perhaps the earliest recorded incident of an abortive technique is found in the royal archives of China about five thousand years ago.

Although the Anglo Saxons had probably regarded abortion solely as an ecclesiastical offense, Henry de Bracton (d. 1268) in his *Laws and Customs of England* carried over the provision of canon law on this topic into civil law, but condemned abortion only if the fetus had been formed and animated. When this occurred, however, was never defined by him. This continued to be the standard for English law until the nineteenth century. William Blackstone (1723–1780), whose commentaries had a great influence on American law, upheld the common law tradition of abortion only after quickening (when the fetus makes noticeable movements). Lawrence Lader held that after England's break with Rome under Henry VIII, English ecclesiastical courts seem to

have lost all interest in the question, leaving the subject to be a matter of common law.

In 1869, Pope Pius IX returned to the sanctions of Sixtus V and eliminated the distinction between a nonanimated and animated fetus. All abortions, according to Pius IX, should be regarded as murder. One of the reasons for the change was quite clearly an effort for consistency because the doctrine of Mary's Immaculate Conception promulgated by Pius IX in 1854 had stated that "from the very first moment of her conception" in her mother's womb she had been preserved from all stain of an original sin. This seemed to imply that Aristotle's old distinction of the changing nature of the soul was no longer valid. In fact, in a sense, the pope was reflecting new developments in biology. William Harvey had argued that all life came from the egg but this had been challenged by the discovery of spermatozoa in 1677. Although there had been a debate between the ovists and spermists over the importance of each, there had been a growing belief that fertilization took place when the sperm and egg met. Some by the middle of the nineteenth century were even arguing that the sperm penetrated the egg, although this was not documented until Oscar Hertwig observed it in sea urchins in 1875. Still, it seemed that life itself might begin with the earliest successful mixture of the male element with the female. Probably ultimately, however, it was not biology that decided which direction the pope would go but the necessity for consistency. If life for the Virgin Mary began at the moment of her conception, then all life must begin at the same time.

Moreover, the pope's rulings in a sense were reflecting a growing hostility to abortion. In 1803, the English parliament had replaced the common law about abortion with legislation that classed abortion (after quickening) as murder. Much of the impetus for the secular legislation against abortion was to preserve lives. American physicians, in their attempt to gain status over their rivals, such as midwives, also condemned the procedure, and their professional societies not only prohibited their members from engaging in abortion but had such prohibitions enacted into law. All of the states enacted laws prohibiting physicians from performing abortions.

Until the nineteenth century, folk remedies for abortion and superstitions about abortion essentially remained unchanged over the centuries. In the nineteenth century the selling of abortive products became a commercial business, although older more interventionist methods continued to be available. Technically, most of the remedies available did not mention the word abortion but went under such suggestive names as the "Female Regulator," "Uterine Regulator," "Woman's Friend," "The Samaritan's Gift for Females," and many others. Most of the remedies were described as having the imprimatur of science behind them. The label on Graves Pills for Amenorrhea stated, for example,

"These pills have been approved by the École de Médecin, fully sanctioned by the M.R.C.S. of London, Edinburgh, Dublin, as a never-failing remedy for producing the catamenial or monthly flow. Though perfectly harmless to the most delicate, yet ladies are earnestly requested not to mistake their condition [if pregnant] as MISCARRIAGE WOULD CERTAINLY ENSUE."

Many of the pills simply commercialized traditional remedies such as tansy, pennyroyal, aloes, hellebore, rue, ergot, and cotton root. The medicines were often effective. In fact, as late as 1939, the Federal Trade Commission forbade the sale and advertisement of a number of compounds designed to regulate menstruation on the grounds that the compounds posed serious health hazards. If advertised drugs and potions were not effective, there were instruments available to assist. *The American Medical Times* in 1863, under the title of "Instruments of a Notorious Abortionist," described forty simple instruments ranging from spoon handles bent in various shapes to pen holders with attached wires to actual forceps (Brodie, 1994, 226). There were also professional abortionists who were not yet forced underground.

Increasingly, however, there were legal restrictions put on abortion. For much of United States history, abortion had been treated according to the common-law tradition in which abortions before quickening were not punishable. Those procured later in pregnancy might be high misdemeanors if the woman died, but not felonies. As criminal code revisions began in the various states, replacing the common law,

abortion was often singled out for attention. The laws varied. In Connecticut, Missouri, and Illinois, abortion restrictions came in the form of tighter laws against the use of poisons. The first state to make an abortion a crime was New York, which in 1829 prohibited anyone, including a physician, from attempting abortion at any period of pregnancy except to save a woman's life. The state then proceeded to legalize abortions done by physicians when the mother's life was at stake, delegating to the medical profession the control of abortion. Most states followed this same delegation of authority.

Inevitably abortion began to go underground. Many of those providing such abortions were women. Perhaps the best illustration of the prevalence of women abortionists is the case of Elizabeth Blackwell, who is generally recognized as the first woman in the United States to graduate from a medical school. When she tried to establish her practice in New York City in the 1850s, she was denied rental at the first few boarding houses she approached because the landlords mistook her for an abortionist.

Probably the best-documented abortionist was Madame Restell, actually Ann Trow Lohaman (1812-1877), who ran a mail order business and abortion service in New York City from the 1840s through the 1870s. Because technically, as indicated above, abortion by nonphysicians was illegal in New York state, Restell was often arrested, although only once was she sentenced to a term in prison. Mostly she was tolerated by the law enforcement officials, and she grew famous and wealthy, leaving an estate of more than a half-million dollars when she died. She was not alone, and abortionists who were arrested were often not found guilty, particularly if abortion took place before quickening.

—Vern Bullough

Bibliography

- Brodie, Janet Farrell. *Contraception and Abortion in 19th Century America*. Ithaca, NY: Cornell University Press, 1994.
- Haller, John S., and Robin M. Haller. *The Physician and Sexuality in Victorian America*. Urbana: University of Illinois Press, 1974.
- Lader, Lawrence. *Abortion*. Boston: Beacon Press, 1966.

The Scientific Study of Sexual Relations in Europe

The discipline of sexology, though not the term itself, dates from the second half of the nineteenth century. The word “sexology,” a Latin-Greek hybrid describing the study of sex, originated from the German *Sexualwissenschaft*, which was first used in 1907 by the dermatologist and sex researcher Iwan Bloch (1872–1922). Sexology differs from erotology insofar as it focuses upon the theoretical rather than the practical aspects of sexuality. The advent of sexology in Britain and continental Europe was made possible by a number of related factors, including the French physician B. A. Morel’s influential concept of physiological and psychological “degeneration,” the medical profession’s growing interest in homosexuality, and the public’s concern over the proper relationship between men and women. During its early phases in the Victorian period, sexology was generally viewed as a somewhat radical and morally questionable field of study.

Among the first sexologists was the gay German lawyer Karl-Heinrich Ulrichs, who coined the term “Uranism” (for homosexuality) in a series of twelve pamphlets (1864–1879). His neologism derives from the Greek word Uranus (Heaven) and refers to a distinction Plato draws in his *Symposium* between earthly (Pandemian) love and heavenly (Uranian) love—the former existing between men and women, the latter between men. Blending ancient mythology with contemporary biology, Ulrichs explains how human beings are divided before birth into three categories: male, female, and “urnings” (male homosexuals) or “uringin” (lesbians). In Ulrich’s opinion, male and female homosexuals are those with the biology of one sex and the sexual instinct of the other; thus, he describes an urning as a “female soul in a male body.” Because Uranism is inborn, natural, and healthy, he contended, laws against it ought to be repealed. His views were shared by the Austrian-Hungarian writer Karoly Maria Kertbeny, who in 1869 first used the term “homosexual” in an anonymous pamphlet addressed to the Prussian Minister of Justice.

Perhaps the best-known practitioner of sexology was the Austrian psychiatrist Richard von Krafft-Ebing. Krafft-Ebing at once maintained

the accepted wisdom of his period and sought to advance it through evolutionist theory. He believed, as did most of his contemporaries, that masturbation was dangerous, and that it was implicated in mental illness and sexual pathology. Yet he also subscribed to the more progressive notion that defects in the nervous system were responsible for disease, and he claimed that while some “perversions” were innate and others acquired, even those of the latter type could not manifest themselves in individuals whose nerves were sound. His opinion on the primary function of sex—to reproduce—logically led to his judgment that any sexual practices not conducive to reproduction were unnatural.

Krafft-Ebing’s case studies of unconventional sexuality were collected in his *Psychopathia Sexualis* (1886), in which he analyzes homosexuality, fetishism, sadism, and masochism. To categorize these variations, he either uses the terms devised by others or develops his own. He borrows “homosexuality” from Kertbeny and “fetishism” from the French psychologist Alfred Binet, while deriving “sadism” from the Marquis de Sade (who took pleasure in giving pain), and “masochism” from Leopold von Sacher-Masoch (who enjoyed receiving it). Krafft-Ebing also discusses satyriasis, nymphomania, necrophilia, incest, and pedophilia, mostly from a legal point of view.

Krafft-Ebing hoped that *Psychopathia Sexualis* would assist other physicians in treating the sexual difficulties of their patients and enable the courts to cope more thoughtfully with diverse sexual practices. Because his book was read not only by professionals but also by the general public, however, its most significant effect may well have been to help make alternative sexuality a topic of widespread discourse and debate. *Psychopathia Sexualis* also influenced the forensic psychiatry practiced in continental Europe during the early twentieth century.

Another significant late-Victorian sexual text is *The Evolution of Sex* (1889) by Patrick Geddes and J. Arthur Thomson. Unlike *Psychopathia Sexualis*, *The Evolution of Sex* focuses on mainstream sexuality and is especially concerned with “the divergent evolution of the sexes” as expressed in “the preponderating passivity of the females, and the predominant activity of the males.” Geddes and Thomson

argue that men's often-destructive "katabolic" nature expends energy, while women's nurturing "anabolic" temperament conserves it. They also claim that "[m]an thinks more, woman feels more." These sex-based dichotomies apply to even the lowest forms of life and are immutable; hence, "What was decided among the prehistoric Protozoa cannot be annulled by Act of Parliament." Because the sexes are "complementary and mutually dependent," men and women ought to cooperate more fully; furthermore, women ought to play a larger role in public life if the human species is to progress toward higher levels of civilization.

In *Love's Coming of Age* (1896), Edward Carpenter draws upon the work of Geddes and Thomson. While he accepts the differences between the sexes as biologically determined, he believes that men and women should not be "two groups hopelessly isolated in habit and feeling from each other." Moreover, he claims that male dominance jeopardizes civilization, and that female influence is a necessary counterbalance. Carpenter is more original when arguing for sex as a means of unifying two people rather than simply reproducing the species. Himself a gay man and the author of the pamphlet "Homogenic Love and Its Place in a Free Society" (1894), Carpenter also discusses homosexuality in a section entitled "The Intermediate Sex." Here, he argues that those of the "Uranian type" are often fit and healthy, and that they might well "have an important part to play in the evolution of the race."

Carpenter's progressive attitude toward sexual diversity is shared by Havelock Ellis in his seven-volume *Studies in the Psychology of Sex* (1896–1928). In the first volume, Ellis contends that sex is "the central problem of life," describes the deleterious effects of silence on this crucial

topic, and promises to present his research and conclusions "in that cold and dry light through which alone the goal of knowledge may truly be seen." Using medical, anthropological, biological, literary, and autobiographical sources, Ellis investigates the wide range of sexual practices with grace, conscientiousness, and objectivity. His books are remarkable for both their sober tone and their willingness to challenge commonplace assumptions about topics such as masturbation.

Developing from the work of Ellis and other pioneers, sexology flourished during the first decades of the twentieth century. Most activity in the field occurred in Berlin, where the *Zeitschrift für Sexualwissenschaft* (Journal of Sexology) was published in 1908; the Society for Sexology took shape in 1913; the Institute for Sexology was created in 1919; and the International Meeting for Sexual Reform on a Sexological Basis was convened in 1921.

—Jamil Mustafa

Bibliography

- Bland, Lucy, and Laura Doan, eds. *Sexology in Culture: Labelling Bodies and Desires*. Chicago: University of Chicago Press, 1999.
- Bland, Lucy, and Laura Doan, eds. *Sexology Uncensored: The Documents of Sexual Science*. Chicago: University of Chicago Press, 1999.
- Bullough, Vern L. *Science in the Bedroom: A History of Sex Research*. New York: Basic Books-HarperCollins, 1994.
- Mustafa, Jamil M. "Sexology." In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality throughout History*, Vol. 5: *The Nineteenth Century*, edited by Susan Mumm. Westport, CT: Greenwood Press, 2007.
- Porter, Roy, and Lesley Hall. *The Facts of Life: The Creation of Sexual Knowledge in Britain, 1650–1950*. New Haven, CT: Yale University Press, 1995.

■ Introduction: Education and Literacy

The spread of literacy and educational institutions during the eighteenth and nineteenth centuries accompanied the growth of industrialization, colonization, and the devel-

oping ideology of modernization. The scientific revolution that underpinned industrialization and its creation of new material comforts encouraged a thirst for new knowledge that was matched

with new printing techniques and the mass production and distribution of books and periodicals. Education and literacy became adjuncts to the zeal for modernization, progress, and the growing taste for leisure entertainments. Institutions that encouraged universal literacy also meshed with the rhetoric of the Enlightenment and the goal of ideal citizenship, although widespread literacy in industrialized nations did not become a reality until the mid- to late nineteenth century.

The amorphous ideology of progress also propelled European colonization with its “civilizing” mission. Interested foremost in profit and stability, European rulers warily cultivated a common culture and language in colonial realms and sought to forge a social environment amenable to commerce. Colonization also opened these realms to zealous Christian missionaries, who cultivated religious and secular instruction in educational institutions. In a somewhat contrary pattern in eastern Asia, elites in both Japan and China tried to evade colonization by developing a modern industrial and social order that included public education and was capable of matching Western powers. This effort met with more success in Japan, in part because its much smaller population more easily accommodated a top-down model for massive social change.

How traditional institutions, languages, and learning should be approached in the colonial world did not always fit a monolithic template of an “imposed” culture. The British East India Company in its early decades discouraged missionary work in India, as the company’s profit-driven directors recognized that the effort to convert the indigenous populace to Christianity could create tension and provoke unrest. While the British model of empire favored the cultivation of native elites and indirect rule, educational policy for decades vacillated between the “Orientalists” who sought to respect indigenous scholarship and allow existing educational institutions to flourish and those English missionaries and utilitarian reformers who took for granted the superiority of a curriculum based on the study of the English language and Western science, literature, and history. This debate essentially ended in the 1830s when colonial authorities accepted the recommendations of Thomas Macaulay, who in his famous “Minute

on Education” of 1835 proposed that Indian schools should have the goal of producing a native elite “English in taste, in opinions, in morals, and in intellect.” In China, which already had a well-educated elite, missionaries first catered to young women and the poorer classes, whose education was limited in the traditional order. These and other schools ultimately began to rival the traditional Confucian model in creating well-trained graduates fit for bureaucratic positions. In Africa, the missionary schools in British realms and secular schools established by the French helped forge local elites who ultimately would lead anticolonial movements, as was also the case in China and Southeast Asia.

—Fred Nadis

British Educational Policies in India

Parts of India came under British rule as early as 1757, but educational policies did not receive much attention from colonial administrators until the end of the eighteenth century. During the early decades of the nineteenth century there was a heated debate among scholars, officials, and missionaries about the form and content of the education to be provided to Indian nationals. Policies eventually developed a top-down filtration model of education, with higher education receiving greater attention than primary education and with a greater emphasis on “modern” English education than either traditional Sanskrit/Persian education or modernized vernacular education. Ultimately, British educational policies in India lent at least nominal support to all three systems and were the combined product of particular, and often opposing, ideological standpoints.

Early British administrators engaged with education in an attempt to continue preexisting custom. In Bengal, the first Indian region to come under British rule, local rulers had an established tradition of supporting educational projects. Warren Hastings, British India’s first governor-general (1773–1785), accommodated policy to Indian conditions and supported the Persian and Sanskrit scholarship then prevalent among literate classes. This approach ensured that British rule would not noticeably upset

➤ MACAULAY'S MINUTE ON INDIAN EDUCATION

Macaulay's 1835 Minute is perhaps the best-known document on Indian education today. It was written at the height of the Orientalist-Anglicist debate, wherein the former argued that it was the administration's duty to support and encourage traditional learning, and the latter upheld that only English education had any value. This document is remembered for both its energetic rhetoric as well as the level of its prejudice, which enabled the writer to declare that "a single shelf of a good European library was worth the whole native literature of India," despite his having "no knowledge of either Sanskrit or Arabic."

This document is seen as representative of the contemptuous attitude of the colonizer toward a subject civilization and has therefore become iconic of colonialism. It has garnered more credit as a turning point in British educational policy than historical records justify, in part because of the

quality of its rhetoric and in part because of its influence on Lord Bentinck. "Macaulay's children" is today a common idiomatic—and often pejorative—phrase referring to Indians who value European modes of knowledge and being over their own culture: "Indians in blood and colour, but English in tastes, in opinions, in morals and in intellect."

—Vasudha Bharadwaj

Source

Thomas Babington Macaulay. "Minute Recorded in the General Department by Thomas Babington Macaulay, Law Member of the Governor-General's Council, dated 2 February 1835." In *The Great Indian Education Debate: Documents Relating to the Orientalist-Anglicist Controversy, 1781–1843*, edited by Lynn Zastoupil and Martin Moir. Richmond, UK: Curzon, 1999.

local expectations, thus minimizing possible resistance to the foreign power. Subsequent administrators continued to uphold this policy of reconciliation, leading to the establishment of the College of Fort William in 1800 so that newly arrived British officials could be trained in Indian literature and culture.

Proponents of the evangelical and utilitarian movements, however, challenged the Orientalist policy of reconciliation in the nineteenth century. Evangelists such as Charles Grant (1746–1823) believed that by choosing to uphold Indian institutions and traditions, the British administrators were making themselves passive spectators of un-Christian depravity. They argued that the proper education was the sole means to rationality as exemplified by Christianity and Western learning and that the dissemination of the English language was the first essential step toward exposing the errors of the native way of life. Language and education thus became critical weapons for achieving the larger goal of cultural transformation.

These opposing points of view about educational models generated much friction and led to a legislative compromise in 1813. The East India Company made its first major financial

commitment to education because of the Charter Act of 1813. The act set aside 100,000 rupees so that Indian literature and native scholarship could be encouraged even as Western sciences were introduced in British Indian territories. Thus, the British administration in India made public education (at least nominally) its responsibility 20 years earlier than in England because of a combination of local tradition, political expediency, and ideological motivations. Until the 1830s, however, the directives of the 1813 Charter Act were only partially carried out. The annual financial grant continued to primarily fund Sanskrit, Arabic, and Persian learning, despite demands for a focus on modern science education.

In 1835 Lord William Bentinck ordered that English education, including mainly language, literature, and science, should receive the maximum funds: this order significantly shifted the terms of the debate. English replaced Persian as the language of government records, a change that marked English as the language of political dominance and mobility. The avowed project of modernization and advancement through English education clearly set the project at odds with the case for holding on to ancient tradition as

represented by Sanskrit and Persian. Subsequent policy placed explicit religious matters outside the purview of the administration, though “neutral” moral values were to be all-pervasive.

The official line citing modernization and advancement generated a discussion of the relative merits of English and the local vernacular languages as the medium of instruction. Lord Auckland in 1839 restored some of the pre-1835 support for native scholarship but maintained the focus on English education. He also upheld the filtration theory, which supported higher education and teacher training instead of investment in primary education. Neither Bentinck’s nor Auckland’s resolutions took a stand to promote the vernacular languages and education, which increasingly were propounded as the means to diffuse European ideas among a wide audience. Indians also took up the cause of the development of the vernacular languages, driven partly by a sincere desire to educate the masses, partly by a sense of cultural loyalty, and partly by disillusionment with the failed promise of English.

These divergent points of view shaped Sir Charles Wood’s educational dispatch of 1854, which was the cornerstone of educational policy for the rest of the century. This document came close to achieving a compromise among all the dissenting factions: it retained as its primary objective the dissemination of Western learning but also reaffirmed a commitment to the study of Indian classics. It rejected the filtration theory in favor of supporting primary education and instituted grants for private ventures; both aspects encouraged vernacular education.

In 1904, however, regulatory policies were put in place to curb the growth of schools and colleges. Lord Curzon, then governor-general of India, was alarmed that Western ideas of governance and democracy could recoil upon the rulers and mandated a minimum fee for financial aid and government recognition, thus increasing the cost of education. The number of scholarships that institutions could offer was also reduced. Once again, education became a means to check the Indian potential to threaten British ascendancy.

—Vasudha Bharadwaj

Bibliography

- Ghosh, Suresh Chandra. *The History of Education in Modern India, 1757–1998*. New Delhi: Orient Longman, 2000.
- McCully, Bruce Tiebout. *English Education and the Origins of Indian Nationalism*. New York: Columbia University Press, 1940.
- Naregal, Veena. *Language, Politics, Elites and the Public Sphere: Western India under Colonialism*. London: Anthem, 2002.
- Viswanathan, Gauri. *Masks of Conquest: Literary Study and British Rule in India*. New York: Columbia University Press, 1989.
- Zastoupil, Lynn, and Martin Moir. *The Great Indian Education Debate: Documents Relating to the Orientalist-Anglicist Controversy, 1781–1843*. Richmond, UK: Curzon, 1999.

Missionary Schools in Colonial Africa

Christian missionaries initially came to Africa in the late eighteenth century as part of the abolitionist movement and were the first to introduce Africans to Western education. The major influx of missionaries to Africa began after the slave trade was abolished by Britain and the United States in 1807. One of the most famous, David Livingstone, was a Scottish member of the Universities’ Mission to Central Africa (UMCA), who traveled through eastern, central, and southern Africa between 1840 and 1873. The three C’s—Christianity, Commerce, and Civilization—that he advocated for Africa summarize missionary efforts to spread the word of God, replace the slave trade with legitimate commerce, and rid Africa of its savage customs. This civilizing mission thus rested on both proselytism and education.

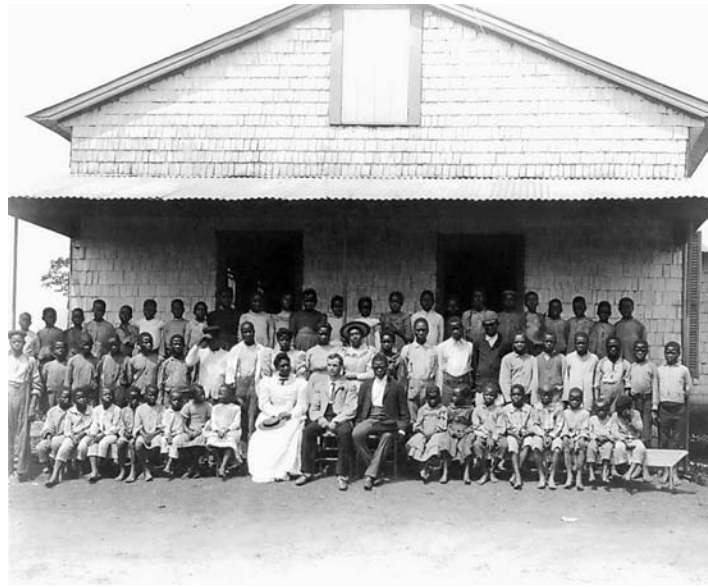
Missionaries, like other Europeans, remained limited to the coasts of western and southern Africa until the mid-nineteenth century, when missionary-explorers such as Livingstone began work in the interior. While the first Anglican missionary arrived in the Gold Coast in 1751, Catholic missionaries did not come to stay in Senegal until after 1800. The 1787 settlement at Freetown in Sierra Leone, established for London’s black poor and later African freed slaves, welcomed the Church Missionary Society (CMS)

in 1804. The CMS established the Fourah Bay College in 1827, which in 1864 educated Samuel Ajayi Crowther, bishop of the Niger. In South Africa, where the Dutch Reformed Church provided missionary education for whites, extensive missionary activity among Africans came in the early nineteenth century.

The first missionaries to stay in East Africa were the CMS missionaries Johan Ludwig Krapf and Johannes Rebmann, who arrived in the 1840s. Although they had little success along the predominantly Muslim coast, they established a viable CMS station and school for a community of freed slaves at Freretown near Mombasa, Kenya, in 1875. Other missionaries who settled in the African interior during the nineteenth century include the French White Fathers, the London Missionary Society, the UMCA, the Moravians, and various groups of Catholics, Anglicans, Baptists, Presbyterians, Lutherans, Methodists, and other denominations.

The earliest converts were often freed slaves, the poor, and members of other disadvantaged groups. Most Africans saw mission schools as a means toward higher-paying jobs in the new cash economy, which resulted in increased freedom from the control of elders and chiefs. Missionary education thus created a Western-educated African elite further out of the reach of chiefs and elders by the 1840s in western and southern Africa and elsewhere by the first decade of the twentieth century. Not all chiefs disapproved of the missionaries. Moshoeshe, leader of the southern African kingdom of Lesotho, befriended European missionaries in the mid-nineteenth century primarily to gain access to horses and guns. He discontinued indigenous initiation schools and employed mission school graduates as scribes as a way to encourage his people to attend mission schools.

Mission schools generally ran on a strict schedule or time table. The curriculum included reading and writing, arithmetic, Bible study, drill or physical education, and handwork. Instruction often began in the vernacular and switched to a European language at the higher levels. Literacy, especially the ability to read the Bible, was central to missionary education. Colonial governments of the early twentieth century



A group of students and staff at a Presbyterian mission school in Liberia, about 1895. (Library of Congress)

criticized missionaries for focusing too much on literary instruction, but not all missions were academically oriented. The Basel mission in Ghana, for example, implemented an educational program centered less on academics than on practical instruction, or learning by doing, in 1843. Even in other missions, students were often expected to work for the mission under the pretext of vocational training. Boys learned carpentry while building furniture for schools and homes and learned agriculture while working the school farms. Girls were taught cooking and cleaning by doing the domestic chores of the mission.

The administrations of most British colonies in Africa relied heavily on missions to carry out educational work, whereas the French were quick to establish a secular education program. British governments subsidized mission schools by providing grants and paying teachers' salaries throughout the colonial period. Meanwhile, in Senegal, for example, the first French government school opened in 1818, and by 1903 the French passed the first of a series of laws designed to limit the influence of missionary education. In both cases, the influx of Christian missionaries sparked colonial interest in Africa, and mission schools produced an influential

THE BOMBAY AFRICANS

The Bombay Africans were former slaves whom members of the Anglican Church Missionary Society (CMS) rescued from Arab dhows in the Indian Ocean and brought to the Sharanpur Christian Village near Bombay (present-day Mumbai), India. One hundred fifty Bombay Africans returned to East Africa when W. S. Price from the Indian mission came in 1875 to establish a mission station and school at Freretown, just opposite the island of Mombasa in present-day Kenya. This new CMS settlement was named after Sir Bartle Frere, who negotiated the Treaty of Abolition with the sultan of Zanzibar in 1873. Many of the well-educated Bombay Africans became teachers at the Freretown School upon arrival. By the late 1880s the schools at Freretown and the nearby CMS station at Rabai had a combined total of more than 350 students. There were separate boys' and girls' schools, and the mission offered training for teachers and catechists. When the Imperial British East African Company arrived in 1888, company officials offered educated Africans clerical jobs with much higher salaries than the mission could afford. As a result, Freretown lost all but one of its African teachers by 1890. In the 1890s African residents at Freretown became increasingly dissatisfied with the low level of education offered at their schools in comparison to the new CMS Buxton High School, which catered to Indian, Arab, and African Muslims living on the island of Mombasa. Just like Freetown in Sierra Leone, the Freretown settlement symbolized missionary efforts to create a model Christian community educated in Western values and free from slavery.

—Corrie Decker

class of Western-educated elites across the continent. Many of the first presidents of independent African countries, such as Kwame Nkrumah, who became president of Ghana in 1957, were products of mission schools.

—Corrie Decker

Bibliography

- Hastings, Adrian. *The Church in Africa, 1450–1950*. Oxford, UK: Clarendon, 1994.
- Jones, D. H. "The Catholic Mission and Some Aspects of Assimilation in Senegal, 1817–1852." *Journal of African History* 21 (1980): 323–340.

Strayer, Robert, *The Making of Missionary Communities in East Africa: Anglicans and Africans in Colonial Kenya, 1875–1935*. London: Heinemann, 1978.

Missionary Schools in China

From the time they arrived in China, missionaries began establishing schools to support their evangelical work. China had a well-established educational system. However, it was designed mainly to prepare young men for success on the Chinese government's civil service examinations and focused almost exclusively on the Confucian classics. Missionaries saw education as an opportunity to extend their efforts to spread Christianity especially among the female population and the lower classes, who made up a majority of the converts.

The use of schools for mission work began with the Catholic religious orders that arrived in the sixteenth and seventeenth centuries. The goal of these early schools was to educate their converts, develop educated leaders for the Church, and create a Chinese priesthood. The establishment of schools by Protestant missionaries goes back to Robert Morrison of the London Missionary Society, who arrived in China in 1807. In 1818 he founded the Anglo-Chinese College in Malacca with William Milne. While the college was mainly meant as a training institution for Western and Asian missionaries, it was the first Protestant educational institution connected to the China missions. After the First Opium War (1839–1842), the school was transferred to Hong Kong. Elijah and Eliza Bridgman, of the American Board of Commissioners for Foreign Missions, opened the first mission school for girls in Shanghai in 1850. After returning from furlough in 1864 Eliza moved to Beijing, where she founded another school for girls, the Bridgman Academy.

Even though efforts to establish schools before 1860 were relatively successful in integrating education into the movement, missionaries remained confined to treaty port cities, where they established schools in connection with their work. The end of the Second Opium War in 1860 opened China's interior to Western penetration, allowing mission societies to extend

▶ SAMPLE COURSE OF STUDY FROM A CHINESE GIRLS SCHOOL IN CHEFOO, SHANDONG

The list of courses below provides an example of what Chinese female students in nineteenth-century American Presbyterian (North) mission schools were studying. The curriculum varied depending on the school and mission, but it shows that the schools provided a well-rounded education and were not just religious institutions.

Course of Study

First Year

Three Character Classic
Mandarin Catechisms
Gospel of Matthew, from 1st to 8th chapters

Hundred Family Names
Commit to Memory 500 Characters

Second Year

Read the Analects (Confucius)
Explain the Analects (1st Part)
Explain Three Character Classic

Commit to Memory 500 Characters
Parables of Our Lord
Mental Arithmetic (1st Part)

Third Year

Great Learning (Confucius)
Doctrine of the Mean
Mencius (1st Part)
Explain Analects (2nd Part)
Catechism on 10 Commandments (1st Part)

Mental Arithmetic (2nd Part)
Geography (1st Part)
Book on the Soul
Arithmetic (1st Vol.)

Fourth Year

Mencius (2nd Part)
Book of Poetry (1st and 2nd Parts)
Explain Great Learning
Explain Doctrine of the Mean
Catechism on 10 Commandments (2nd Part)

Mandarin Essays
Vocal Music
Arithmetic (2nd Vol.)
Geography (2nd Part)
Evidences of Christianity (1st Book)

Fifth Year

Book of Poetry (3rd and 4th Parts)
Arithmetic (3rd Vol.)
Evidences of Christianity (2nd Book)
Essays in Mandarin
Book Keeping

Explain Mencius
Review Geography
Acts of the Apostles
Old Testament History
Physiology

Sixth Year

Book of History (1st and 2nd Parts)
Explain Book of Poetry (1st and 2nd Parts)
Composition
Epistle to the Romans
Primer of Physical Geography

Book of Essays (1st Part)
Review Analects
Elements of Natural Science
Extracts from Chinese History
Elements of Geology

Seventh Year

Book of History (3rd and 4th Parts)
Composition
Explain Book of Poetry (3rd and 4th Parts)

Extracts from English History
Book of Proverbs (Old Testament)

—John Stanley

Source

“General Plan and Constitution of Girls’ Boarding School.” November 1882, Dengzhou. *Presbyterian Historical Society*. MF10.F761a.r205.

their reach into new areas. As new missionary stations were opened, missionaries established many primary and secondary schools. Protestant schools were organized to provide their new converts with an education and to spread Christianity to non-Christians. Primary schools for boys and girls could be found throughout a station's assigned area and were founded by traveling missionaries or local Christians under missionary guidance.

Other schools focusing on older students were founded in the central stations where the missionaries resided. The high schools for older students were founded by those who found preaching unfulfilling and by wives who remained at the station while their husbands were preaching in the field. By the time of the 1890 conference of Protestant missionaries, held in Shanghai and attended by most Protestant groups regardless of denomination or nationality, the various societies reported a total of 16,836 pupils in mission schools. The Catholic Church was equally successful, with 558 schools containing 8,013 male and female pupils reported throughout the Kiangnan (Jiangnan) mission in 1879. In 1898 the number of pupils increased to 16,571.

The curriculum adopted by the Protestant missions taught secular as well as religious subjects. They were some of the first institutions to include Western subjects such as physiology and arithmetic, which were intended to open the eyes of students to a new type of learning and provide them with knowledge they could use to transform Chinese society. The courses on Chinese subjects were offered to attract students to the school. While the subjects taught tended to be consistent throughout China, language of instruction varied considerably. Some institutions conducted classes in English, and others insisted on Chinese. Through their schools the Protestants provided education to the lower classes and women who did not always have ready access to schools.

The Catholic schools also incorporated religious and secular subjects into their curriculum. Unlike the Protestant schools, however, Catholic schools generally excluded non-Christian students. Their schools were intended to strengthen the Church, not to convert new sections of the

population. While they did incorporate Western and Chinese teaching materials, they avoided any writings that might encourage superstition or non-Christian ideas. Like the Protestant schools, Catholic schools did teach certain Chinese materials to ensure that their graduates would be seen as educated by society.

During the nineteenth century the Protestant mission societies made the first attempts to develop uniform policies for the schools. Toward this end, missionaries formed the School and Textbook Series Committee in 1877. In 1890 a further step was taken with the formation of the Educational Association of China. These organizations also provided opportunities for sharing ideas on education.

By the early twentieth century, Protestant mission schools had developed into more professional enterprises with permanent principals and staff. New staff was appointed by the mission boards specifically to teach and administer the schools. The schools were no longer staffed by part-time workers or missionaries whose primary responsibility was preaching and pastoral work. With the new emphasis on education, the school systems expanded. By 1917 Protestant organizations reported 191,033 students. One of the major problems that all mission schools encountered after 1900 was funding. In general the U.S.- and European-based mission societies provided all of the funds to build and run the schools. However, as school systems began to expand, the home churches could not keep pace. Therefore, mission societies began to insist on tuition for students who could afford to pay for their education.

While still expanding their school systems, Protestant mission societies also cooperated in the establishment of union colleges in response to demand for higher education. Given the expenses involved, the few institutions of higher learning founded in the nineteenth century, such as the Dengzhou College under Calvin Mateer in Shandong, were small and provided a general education rather than training in a specific subject such as science or history. In the twentieth century these early institutions developed into universities that included instruction in the liberal arts, medicine, and theology. Many postsecondary training schools, particularly denominational

training schools for ministers or teachers, also developed during the 1910s. Some of the newly organized universities included Shandong Christian University (Qilu/Cheeloo) (1904), the University of Nanking (1910), and Ginling College (1913). Ginling College was founded as a women's college in Nanjing.

The Catholic Church also expanded the number of its schools between 1900 and 1914. While the schools remained focused on educating existing converts and training Church leaders, they also began admitting small numbers of non-Christian Chinese. However, they remained far behind the Protestants in size and the scope of their school system, and their focus remained on primary schools and charitable work rather than on institutions of higher education.

The missionary schools established in the nineteenth and early twentieth centuries produced scores of graduates who became, among other things, teachers and administrators in local government institutions. Because of their advanced training, some mission graduates went on to achieve political prominence. Mission schools also opened up educational and professional opportunities for new sections of the population. Notable in this regard were the many young women who studied in mission schools and became teachers, doctors, or nurses.

—John Stanley

Bibliography

- Bays, Daniel H., ed. *Christianity in China: From the Eighteenth Century to the Present*. Stanford, CA: Stanford University Press, 1996.
- Bays, Daniel H., and Ellen Widmer, eds. *China's Christian Colleges: Cross-Cultural Connections, 1900–1950*. Stanford, CA: Stanford University Press, 2009.
- Hayhoe, Ruth, Glen Peterson, and Yongling Lu, eds. *Education, Culture & Identity in Twentieth Century China*. Ann Arbor: University of Michigan Press, 2001.
- Hyatt, Irwin. *Our Ordered Lives Confess: Three Nineteenth-Century Missionaries in East Shantung*. Cambridge: Harvard University Press, 1976.
- Latourette, Kenneth S. *History of Christian Missions in China*. New York: Macmillan, 1929.
- Lutz, Jessie G. *China and the Christian Colleges, 1850–1950*. Ithaca, NY: Cornell University Press, 1971.

Xi, Lian. *The Conversion of Missionaries: Liberalism in the American Protestant Missions in China, 1907–1932*. University Park: Pennsylvania State University Press, 1997.

Missionary Schools in Oceania

Christian missionaries were often the first resident agents of European colonialism in indigenous communities throughout the world. In Oceania missionary activity was generally entangled with religious belief and nationalism, with the Roman Catholic missions supported by the French and Protestant missions supported by the British and Americans; there was also conflict within these two major factions. One important aspect of missionary activity was education of both recently converted adults and their children. Education included reading, writing, basic arithmetic, and the study of scripture, but it could also include other subjects such as lessons on morality, European history, dance, and manners. In the latter case, mission education that stressed modes of domestic life based on European notions of propriety over indigenous ways of living served to legitimize European claims to superiority. Many missionaries in Oceania were simultaneously fascinated and repulsed by indigenous traditions. The goal of the missionaries, as colonial agents, was to educate indigenous peoples about Western ways of living and to discourage the continuation of indigenous practices, often driven by a sincere desire couched in Christian belief to save “innocent” souls who had not been baptized. Ironically, many missionaries held the belief that Oceanic peoples, like indigenous people throughout the world, were in danger of disappearing or that this process was inevitable.

Archaeologist Angela Middleton, whose work focuses on New Zealand, divides missions in Oceania into two categories: missions as institutions in Australia and missions as households in the Pacific islands, including New Zealand. In Australia missions were large institutions, often seen as equivalent to prisons, not least by the Aboriginal people who were sent to such places. In these missions, children were sometimes forcibly removed from their families to be educated in Western ways either before or after entering

► MISSION SCHOOLS AS PRESERVERS OF OCEANIC CULTURE HISTORY

Mission schools often had the implicit or explicit goal of wiping out the indigenous practices of Oceanic people by discouraging ways of life and modes of thought that were seen as uncivilized or heathen. At the same time, missionaries were fascinated by the rituals and traditions they were trying to suppress. Besides explorers' accounts, some of the most detailed eighteenth- and nineteenth-century accounts of traditional Oceanic cultures come from missionaries. As a result, missionaries and their students became some of the best-known sources for understanding traditional Oceanic cultures. For example, some of the classic records of traditional Hawaiian culture were originally written down by Samuel Kamakau and David Malo, native Hawaiians originally educated in mission schools. Te Rangi Hiroa found some of the best primary sources on traditional Mangarevan ethnography in the work of Père Laval and his student Mama Taira Putairi. As mission schools encouraged widespread literacy, they also encouraged the writing down of Oceanic traditions, oral histories, genealogies, traditional chants, and systems of knowledge. These sources are preserved today, providing valuable records for scholars interested in understanding what Oceanic cultures were like prior to and immediately after initial European contact as well as the perceptions of the early missionaries. It is a testament to the resilience and adaptability of Oceanic cultures that many traditions were preserved, in some cases using the educational institutions of the missions meant to wipe out those traditions.

—James L. Flexner

the institution. This practice of removing children to mission sites for reeducation forms part of the legacy of the “Stolen Generations” of Aboriginal children in Australian history, analogous to the legacy of Bureau of Indian Affairs schools in North America, which famously sought to “Kill the Indian, and Save the Man.”

In contrast, many mission stations elsewhere in Oceania, such as New Zealand and Hawaii, were operated as households. The missionaries in these settings often lived in close contact with the local population, incorporating local

children into the household and sometimes relying heavily on indigenous people for their subsistence while at other times becoming entwined in local political struggles. In the mission station at Te Puna, New Zealand, missionary John King and his family often included Maori children in their household, including children of chiefly descent. Household missions exemplified the civilized mode of domestic life, and the incorporation of indigenous children was critical to the acculturation process.

In Hawaii the educational programs of the American Board of Commissioners for Foreign Missions, including school-building activities, were immediately recognized and encouraged by Hawaiian royalty as politically valuable, notably by Queen Ka'ahumanu. Some Hawaiian elites even sent their children abroad to be educated. One result of the support of missionary activity by Hawaiian royalty was a high literacy rate among Hawaiian commoners and elites alike in the nineteenth century; where foreign missionaries were not available, local native Hawaiians filled in. In the leprosy settlement at Kalaupapa, Moloka'i, Hawaii, during the 1880s and 1890s, separate schools were set up by Catholic missionaries as part of the boys' and girls' orphanages in the community. In this case, Hawaiian children sent to Molokai after their diagnosis with leprosy, often without parents or family members, were part of a nested institution, an orphanage and school within a leprosarium run by the independent Kingdom of Hawaii, part of the project of a larger institution, the Roman Catholic mission to Hawaii, supported by the French government. Far from being carried out for purely charitable purposes, though such a motivation was surely there in some cases, mission education took place in a wider context of global colonial politics.

—James L. Flexner

Bibliography

- Hiroa, T. R. *Ethnology of Mangareva*. Honolulu: B. P. Bishop Museum Press, 1938.
- Kirch, P. V., and M. Sahlins. *Anahulu: The Anthropology of History in the Kingdom of Hawai'i*, Vol. 1, *Historical Ethnography*. Chicago: University of Chicago Press, 1992.
- Middleton, A. *Te Puna—A New Zealand Mission Station: Historical Archaeology in New Zealand*. New York: Springer, 2008.

Osorio, J. K. K. *Dismembering Labui: A History of the Hawaiian Nation to 1887*. Honolulu: University of Hawaii Press, 2002.

Education in Meiji Japan

The Meiji government, which came to power in 1868, launched a series of educational reforms in order to speed up the country's modernization and strengthen national solidarity. For the first time in Japanese history, a national schooling system at the elementary level for the entire population was introduced. In order to develop professionals in Western science and technology as well as educate the elite class for state administration, a centralized system of higher education was also established. By the end of the Meiji period, the teaching of Confucianism and Shintoism had become an important component in fostering both patriotism and loyalty toward the emperor as sacred and inviolable.

Meiji Japan inherited a literate population from the Tokugawa period. Prior to the Meiji Restoration, the male literacy rate was estimated at 40 percent, while the female literacy rate was 17 percent, primarily because commoners and samurai received a Confucian education at writing schools (*terakoya*) or even acquired advanced training at private schools (*shijuku*) in Western science, geography, military science, and medicine. In 1872 the Fundamental Code of Education (Gakusei) provided an outline for replacing these traditional schools with a French-style national school system. In this first comprehensive plan for the entire population, 8 universities, 256 middle schools, and 53,760 elementary schools were to be established. Four years of compulsory education was aimed at achieving a higher rate of literacy throughout the population. However, the shortage of central funding prevented a smooth start. The percentage of girls who attended elementary schools was much lower than that of boys. No university was established. The government's emphasis on its Europeanization policy also caused dissatisfaction among local ex-samurai because of the central planning policy.

Conservatives who opposed Western methods of education demanded the revival of Confucianism and Shintoism. From 1885 to 1889,

> GAKUMON NO SUSUME

The popular enthusiasm for education in early Meiji Japan was fostered by Fukuzawa Yukichi's seventeen volumes of *Gakumon no Susume* (An Encouragement of Learning), published from 1872 to 1876. This work emphasized the importance of education for the entire population regardless of class and gender and encouraged practical learning rather than traditional forms such as Confucianism and Hu Shih's studies. It was one of the most influential works of enlightenment thinkers in the Meiji period, selling 3.4 million copies until Fukuzawa's death in 1901. The Meiji government banned the first section in 1881 because a remark on the equality of all men (drawn from the U.S. Declaration of Independence) could become a psychological backbone for the People's Right Movement.

—Ryoko Nakano

Mori Arinori, the new minister of education, initiated a project of establishing a Prussian-style nationalist education system in order to create loyal and hard-working subjects. As epitomized in the Imperial Rescript on Education (Kyoiku Chokugo) of 1890, moral teaching (*shushin*) as the central value for elementary education emphasized traditional Confucian and Shinto values such as benevolence, justice, filial piety, and reverence for the imperial house. Japanese writings and Japanese translations replaced books written in Western languages. In 1904 the Ministry of Education introduced compulsory textbooks for elementary education.

To foster the advancement of specialized knowledge in the sciences, the ministry prepared a path of higher education for first-class students. The Decree on the Imperial University (1886) granted the term "Imperial" to five state-financed universities (four more universities were added by the 1918 University Order) and ranked them above private schools (renamed "universities" after 1918) that had already carried out substantial programs of higher education. As a result, Tokyo Imperial University became central to the recruitment of civil service bureaucrats and the education of specialists in advanced sciences and technology.

By the end of the Meiji period in 1912, the Japanese education system had made a remarkable transformation. Although female education lagged behind male education in terms of secondary education, almost the entire population, including girls, had entered elementary schools. Owing to the state-centered education system that provided a moral and nationalistic doctrine for people's daily lives, the Meiji government achieved a state-controlled system of education, laid the foundation for national solidarity and loyalty toward the emperor, and stimulated the further growth of technical and vocational training for industrial development in Japan.

—*Ryoko Nakano*

Bibliography

- Marshall, Byron K. *Learning to Be Modern: Japanese Political Discourse on Education*. Boulder, CO: Westview, 1994.
- Passin, Herbert. *Society and Education in Japan*. New York: Columbia Teacher's College, 1965.

Education in Colonial Southeast Asia

Prior to the introduction of Western education in the latter half of the nineteenth century, Southeast Asian societies had a long tradition of literacy and education for boys deriving from their diverse Hindu, Buddhist, and Islamic religious heritages and institutions. Buddhism, with an education system based on the monasteries, was firmly established in Burma, Thailand, Laos, and Cambodia. Islamic schools existed in the Malay Peninsula and Indonesia. In Vietnam, Confucian principles derived from China underpinned a highly systematized pattern of education. Only in the Philippines is there little evidence of such a tradition of religious education.

The initial contacts between Western-style education, both Christian and secular, and these earlier educational traditions varied from one society to another. In Thailand, the only country not to be colonized, the reformist King Chulalongkorn (r. 1868–1910) used the Buddhist monastic schools as the basis on which to graft his modernizing Western-style education system. Elsewhere, traditional religious education was

gradually displaced as increasing opportunities became available to gain a modern Western-style education and as families saw the potential economic advantages that it gave their children in the colonial economy.

Until the latter half of the nineteenth century except for Thailand, Christian missionaries played the major role in establishing Western schools for the small European populations and local elites in Southeast Asia. By the late nineteenth century the growing Chinese minority populations also began to provide schools for their own children. Both missionary and Chinese schools, which were concentrated in urban areas, operated independently and did not provide a common system of education. Financial constraints shaped colonial education policies, since the colonies were intended to provide wealth to their colonial masters rather than to be an economic burden. Specifically, this meant limiting funding given to education and schools. Initially, among British administrators, there was also a concern to avoid the emergence of an alienated class of educated unemployed as was perceived to have happened in India.

However, by the end of the nineteenth century the potential for education to provide the skilled workers required in the colonial economy as well as to be a mechanism for managing the colonies' ethnic diversity led to greater direct involvement by the colonial administrations in providing and controlling schooling. Supporting these interventions were philosophically based policies such as the French *mission civilisatrice* (civilizing mission) and the Dutch Ethical Policy, which was adopted in the Dutch East Indies after 1900.

Debates about the language of education—whether teaching should be done in the local language or in the colonial language—played an important part in the formulation of colonial education policies. In Burma (Myanmar), British administrators adopted policies based on extensive English-language education. However, British administrators in the Federated Malay States and the Straits Settlements believed that this policy had led to a large overeducated population that was dissatisfied with the traditional way of life and unable to find employment in the relatively small, Western-oriented urban

economies. Instead, they settled on a policy of vocationally oriented vernacular primary education for Malay students. However, for the Malay elite, who were to provide the core of Malay colonial administrators, they established the Malay College at Kuala Kangsar in 1905. It was modeled on Eton and intended to groom the country's leadership. The government played only a limited role in establishing English-language schools for non-Malays. The Chinese established their own schools, while the children of Indian plantation workers were educated in vernacular primary schools, which plantation owners were required to fund.

This pattern was also replicated in French Indochina and the Netherlands East Indies. The Dutch increased opportunities for Dutch-language schooling, although the majority of children were educated in vernacular schools. In Indochina, the 1917 Code of Public Instruction was a key expression of education policy and practice. In the rural areas, a system of vocationally focused village primary schools that used the vernacular evolved. In Vietnam, Quốc Ngữ, or romanized Vietnamese, replaced the traditional Chinese characters for Vietnamese; this was a means to distance the new schools from the traditional ones. In the higher levels, French was introduced.

The Philippines under U.S. control from 1898 followed a different path. Although the Spanish administration had promulgated educational decrees in 1863 and 1865 applying to primary and secondary schooling, little progress had been made to implement these policies. When the Americans established civilian control of the Philippines in 1901, they rebuilt the education system using English and patterning the organization, curriculum, and methods of instruction on those in the United States.

—Christine Inglis and Sophal Ear

Bibliography

- Furnivall, J. S. "Colonial Southeast Asia—Instruction or Education." *Pacific Affairs* 15(1) (March 1942): 77–89.
- Inglis, Christine. "Education, Western Secular." In *Southeast Asia: A Historical Encyclopedia, from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

A CRITIQUE OF TRADITIONAL EDUCATION

"Here [in colonial Southeast Asia prior to the twentieth century], as everywhere formerly, we find the gift of letters associated with religion and the traditional culture. The small boy learning to recite Pali verses, the little children learning their folk-dances are not being taught how to make a living in the modern world, but how to live as Burmans, or rather, as people used to live in Burma before it came into contact with the modern world. The system was intensely practical in the sense of fitting them for life, but not at all practical in the modern sense of enabling them to earn a livelihood. . . . In Indo-China, the French found few illiterates, but their education was of no use 'pour les besoins de la vie pratique' [for the practical needs of everyday life]. In the Malayan countries there were Koran schools, but the pupils studied only the Koran."

—Christine Inglis and Sophal Ear

Source

J. S. Furnivall, former Indian Civil Service officer turned Burma scholar and reformer, in *Pacific Affairs*, March 1942.

- Kelly, Gail. *French Colonial Education: Essays on Vietnam and West Africa*. Edited by David Kelly. New York: AMS Press, 2000.
- Loh, Philip Fook Seng. *Seeds of Separatism: Educational Policy in Malaya, 1874–1940*. Kuala Lumpur: Oxford University Press, 1975.
- Postlethwaite, T. Neville, and R. Murray Thomas, eds. *Schooling in the ASEAN Region: Indonesia, Malaysia, the Philippines, Singapore, Thailand*. London: Pergamon, 1980.

Education in Latin America after Independence

In the sixteenth century the Roman Catholic Church began the process of formal education in the Americas, with the primary goal to Christianize the indigenous populations. The Dominicans, Franciscans, and later the Jesuits established many of the first schools in Latin America. In time, as the number of Spanish settlers increased, the Catholic Church also established schools for the Spanish and mestizo populations, including

universities in Santiago, Chile; Quito, Ecuador; Cordoba, Argentina; and Mexico City. Indians were also students and in some instances faculty in the colonial universities. The colonial universities were open only to males.

In the first decades after independence, the Catholic Church remained the dominant force in education. This dominance was eventually challenged by the demand of citizens for reforms that included modern methods and secular education. While the Church continued to have a role in education, it lost its monopoly. By the end of the nineteenth century the educational systems in most of the countries of Latin America had been secularized.

Argentina provides the best example of the secular transformation of education in the second half of the nineteenth century. Domingo Faustino Sarmiento (February 15, 1811–September 11, 1888) was an educator and president of Argentina (1868–1874) whose leadership and vision resulted in Argentina's premier public education system. Sarmiento fled to Chile in 1840 due to his opposition to the Argentine dictator Juan Manuel Rosas. While in Chile, Sarmiento served as the director of a new normal school, an institution that trained teachers. Later the Chilean government sent him to Europe and the United States to study educational methodology. Sarmiento discovered the work of the U.S. educators Horace and Mary Mann and was soon convinced that their theories regarding public education were superior to what he had seen in Europe. Sarmiento returned to Chile and wrote two important works: *About Public Education* and *Schools as the Basis of Prosperity and Republican Government in the United States*.

In 1855 Sarmiento returned to his native Argentina and became the director of education for Buenos Aires Province. In this post he became a crusader for universal public education for both men and women. He proposed a modern curriculum that included science, vocational arts, and physical education. During his tenure (1856–1861) he opened 34 new schools and oversaw the publication of new textbooks. However, his ideas concerning secular education for women met with vehement opposition from the Catholic-controlled Society for Charity. As minister plenipotentiary to the United States

(1864–1866) Sarmiento renewed connections to U.S. educators, including Mary Mann (Horace died in 1859) and toured many teachers colleges and universities.

When Sarmiento became president of Argentina in 1868, he made educational reform the hallmark of his administration. Sarmiento established a network of teachers colleges, recruited U.S. teachers to work in Argentina, and revised the curriculum nationwide. He also implemented kindergarten and founded public libraries. Sarmiento's successors continued and expanded his reforms, resulting in the preeminence of Argentina's public education system in South America.

Mexico attempted to reform its education system during the presidency of Benito Juárez (1855–1870). Juárez appointed Gambino Barreda as head of a commission to reorganize Mexico's schools. The result was *Leyes orgánicas de la educación pública* (Organic Laws of Public Education). These laws, passed in 1867 and 1869, mandated free secular public education. Barreda proposed a new curriculum based on the educational philosophy of the French positivist thinker Auguste Comte. The new field of study emphasized the physical and social sciences. Barreda devoted his energy to founding the Escuela Nacional Preparatoria (National Preparatory School) and served as its first director. Mexico's educational reforms were less extensive than Argentina's and never became available to the majority of Mexican children. When the Mexican Revolution started in 1910, most of Mexico's school-age children had no opportunity to attend school.

Chile was also progressive in reforming education in the nineteenth century. In Ecuador there was tension between Liberals and Conservatives over education. For example, the Conservative president Gabriel García Moreno (1861–1865 and 1869–1875) advocated parochial schools funded by the state and administered by various Catholic orders. The Liberal Eloy Alfaro (1895–1901 and 1905–1911), on the other hand, favored state-funded and state-controlled secular schools. Brazil's education system was strongly influenced by the Church throughout most of the century.

During the colonial period 31 universities were established in Latin America. Most were modeled after the University of Salamanca,

which was founded in Spain in the thirteenth century. Latin American colonial universities were chartered by the Crown and administered and staffed mostly by Catholic clergy. Enlightenment philosophies of the late eighteenth and early nineteenth centuries challenged the intellectual underpinnings of the colonial universities, but they remained largely unchanged when the wars of independence started in 1810. The wars of independence did not fundamentally change the structure of the existing universities, but the new republics replaced the Crown as the chartering authority. The first national university was the University of Buenos Aires, founded in 1821. In Mexico the Royal and Pontifical University, founded in 1551, was nationalized but suffered frequent closings. The National University of Mexico was not founded until 1910. Latin American universities in the nineteenth century focused on law and medicine, with these respective branches dominating the institutions. Students at the universities were mostly males from the Creole elite. In the latter half of the century the influence of Positivism resulted in changes, including expanded state control and new curriculums based on both pure and social science. The scholastic approach of nearly 300 years was abandoned. Another development was the creation of normal schools to train teachers to meet the needs of the expanding public school system in many countries.

—George Lauderbaugh

Bibliography

- Maier, Joseph, and Richard W. Weatherhead, eds. *The Latin American University*. Albuquerque: University of New Mexico Press, 1979.
- Stewart, Watt, and William M. French. "Influence of Horace Mann on the Educational Ideas of Domingo Faustino Sarmiento." *Hispanic American Historical Review* 20 (1940): 12–31.
- Vaughan, Mary Kay. *The State, Education, and Social Class in Mexico, 1880–1929*. Dekalb: Northern Illinois University Press, 1982.

Public Education in Europe and the Americas

Prior to the late eighteenth century, schools in Europe and the American colonies were primarily private or run by churches. This changed in

the eighteenth and nineteenth centuries, when the growth of nationalism and democracy, secularization, social change resulting from the Industrial Revolution, and the realization of the value of an educated populace contributed to the widespread development of public education. Democratic and national values encouraged nations to create and standardize public education, mostly for primary grades, and create secular (particularly non-Catholic) schools. In the nineteenth century school curricula expanded from basic reading and writing to one that emphasized character building, discipline, and preparation of students for successful careers and citizenship. Largely because of public schools, by the early 1900s levels of literacy in most of northwestern Europe, the United States, and Canada reached 90 percent or higher, and in other parts of Europe and the Americas percentages were heading in that direction. Education beyond the primary grades was increasingly becoming the norm.

During the eighteenth century, there was general agreement among leading European intellectuals and rulers that some sort of plan for teaching basic literacy was a worthy object for governments intent on preparing their subjects to make contributions to the nation's social, political, and economic progress. More than a dozen states, among them Prussia, Denmark, Sweden, Austria, Poland, Bavaria, and Portugal, devised plans for systems of national education but, with one notable exception, never went beyond the planning phase. The exception was Prussia, where King Frederick II (r. 1740–1786), supposedly appalled by the illiteracy he found among Prussian troops during the Seven Years' War, issued an edict in 1763 that required compulsory schooling for boys and girls from 5 to 13 or 14 years of age. During his reign a chair of pedagogy was founded at the University of Halle in 1779, and a year after his death in 1787 school administration was centralized under a national school board.

In France, the revolutionary government drew up ambitious plans for a national system of education in the early 1790s, including the establishment of teacher training schools, but little was accomplished. Napoleon (1769–1821) also proclaimed the right to universal education, but

➤ HORACE MANN, FATHER OF AMERICAN PUBLIC EDUCATION

Horace Mann (1796–1859), lawyer, senator, and educator, is known as the Father of American Public Education and was instrumental in transforming state charity schools, designed for children in poverty, into a universal free public school system made up of what Mann called “common schools.” He was passionate that public education be nonsectarian, supported by state taxes, and open to children of all classes, religions, and backgrounds.

Mann grew up in poverty with limited schooling, but after educating himself and spending some time with a private tutor, he was admitted to and graduated from Brown University. He then completed his law degree in 1823 and served as state representative and senator of Massachusetts. Mann was a great believer in education as the right of every child and as being essential in improving the lives of children and society as a whole. In

1837 he became Massachusetts’s first secretary of the State Board of Education.

Among his many achievements, Mann campaigned for state school improvement; helped to establish a state mental hospital, “normal schools” (teacher training schools), and free libraries; and supported efforts to build new secondary schools, increase teachers’ salaries, and promote funding and availability of student materials. He influenced education beyond his home state and was instrumental in improving national public education. As editor of the *Common School Journal*, he wrote yearly reports on a variety of topics that argued the benefits of an educated population, revealed the successes of the model Prussian school system, and rationalized the use of taxes to develop public education. His efforts helped to pass the Massachusetts Compulsory Attendance Statutes in 1852.

—Kim Kennedy White

in practice his national education system was designed mainly to serve the upper classes. In 1814, the restoration of the monarchy left education again under the control of the Catholic Church. Free compulsory education became available in France only in 1881 and 1882, when laws were introduced by Jules Ferry (1832–1893), the minister of public instruction. In other parts of Europe, public education also took hold. The Casati Act of 1859 gave responsibility for primary education to individual towns in the Italian states (and later unified Italy in 1861). Scandinavian countries were in the forefront of providing compulsory education; for example, Sweden offered mandatory and free schooling for children aged 7–14 in 1842, and Denmark’s “common schools,” or public schools, were established in 1894 for primary students. The British government first became involved in public education in 1833, when Parliament provided money to build schools for poor children. The Forster Act of 1870 introduced the concept of state-funded education for primary students and established a system of local school boards with the responsibility of building and running nondenominational schools, raising funds, and subsidizing church schools. The Education Act

of 1872 provided public schools in Scotland. The Elementary Education Act of 1880 enforced compulsory school attendance for children 5–10 years old. Further legislation increased the age when students could leave school to 13 years old, and in 1902 the school boards were replaced with Local Education Authorities, still in use today, that provided a school system for both elementary and secondary education funded mostly by local taxes.

In the United States, support for the concept of public schools goes back to the era of the American Revolution. Thomas Jefferson (1743–1826), a lifelong advocate of public education, believed that educated citizens were critical for a successful government. Following the signing of the Declaration of Independence in 1776, 13 states had their own constitutions, 7 of which provided for public education.

Only in the mid-1800s, however, were concrete steps taken to provide for universal, state-funded, and compulsory education. Massachusetts (1852) and New York (1853) were the first states to pass laws for compulsory public elementary schools, and others soon followed. By 1900, most states required elementary-aged children to attend school.

From the late 1800s to 1914, progressive reformers saw public education as a way to “Americanize” immigrant children by instilling values that would produce productive American citizens. After 1900 more children attended high schools, and industrial and vocational programs provided incentive for more working-class students to complete their secondary education. Schools began to expand their curricula to include physical education. Reformers such as John Dewey (1859–1952) argued that education is a critical component of democracy and that the curriculum should do more than deliver knowledge; education should also be experiential. Furthermore, educational opportunities expanded for children of color. At the turn of the century, African American and white students had roughly the same attendance rates, although most schools continued to be racially segregated.

In Canada, the development of secular public schools differed for each province. Canada’s constitution, the British North America Act of 1867, gave provinces authority over education, and by the end of the nineteenth century elementary education was compulsory. In South America, discussions about public education were part of a larger ongoing debate about the role of the Roman Catholic Church in society. An important step was taken in Mexico during the late 1860s when, during the presidency of Benito Juárez (1806–1872), laws were passed to provide for compulsory, free, and nonreligious primary education. Other countries in Latin America developed national education systems and were typically based on European models. Brazil’s Constitution of 1824 strived for public elementary education for all citizens (but it was not achieved until later), Uruguay’s Law of Common Education was passed in 1877, and Argentina established compulsory public education in 1884.

—Kim Kennedy White

Bibliography

- Addis, Cameron. *Jefferson’s Vision for Education, 1760–1845*. New York: Peter Lang, 2003.
- Brock, Colin, and Donald Clarkson, eds. *Education in Central America and the Caribbean*. London: Routledge, 1990.
- Herbst, Jürgen. *Women Pioneers of Public Education: How Culture Came to the Wild West*. New York: Palgrave Macmillan, 2008.

Maynes, Mary Jo. *Schooling in Western Europe: A Social History*. Albany: State University of New York, 1985.

Mondale, Sarah, and Sarah B. Patton, eds. *School: The Story of American Public Education*. Boston: Beacon, 2001.

Urban, Wayne J., and Jennings L. Wagoner. *American Education: A History*. New York: Routledge, 2009.

Vaughn, Mary K. *The State, Education, and Social Class in Mexico, 1880–1928*. DeKalb: Northern Illinois University, 1981.

The Evolution of Newspapers in Europe and the Americas

Although the dissemination of Gutenberg’s printing press in the late 1400s and the 1500s encouraged the issuing of religious tracts, broadsides, ballads, confessions of criminals, and other printed ephemera, the first daily newspapers did not appear until 1660 in Germany, 1677 in Paris, and 1702 in England. They developed from earlier “news books” or “news sheets” that were published irregularly or on a weekly basis, offering accounts of foreign news and discussions of local politics.

As literacy increased in the industrial era, the demand for news increased, causing innovations in reporting and relaying news through new technologies. During the eighteenth and nineteenth centuries the number of newspapers increased dramatically. The number of European news titles in 1750 was 183, rising to 522 in 1800. There were 980 titles in 1825, 2,044 in 1835, 10,964 in 1885, and 18,647 in 1914. By comparison, newspapers in the United States amounted to 18 in 1760, 359 in 1810, 861 in 1820, and 1,403 in 1830. In the 1830s when Alexis de Tocqueville visited the United States from France, he remarked on how many newspapers were available to American readers. In the United States, the number of newspapers reflected high literacy rates, which in 1800 were 90 percent in some areas. By this time, there were more American papers per capita than in Europe. As the nineteenth century continued, American newspapers eclipsed European papers in the number of titles. In 1885 there were 13,494, and in 1911 there were 22,806.

New technologies made important contributions to increased newspaper production. Europeans at first dominated the technology and manufacturing of improved printing presses. Earl Stanhope's invention of iron-framed presses around 1800 and Friedrich Koenig's steam-powered cylinder press in 1811 assisted in the ease and speed of imprint production at the turn of the nineteenth century. By the 1840s and 1850s, rotary presses allowed for an unprecedented number of imprints per day. For example, American inventor Richard Hoe's rotary press could produce 2,000 sheets per feeder each hour. Newspaper companies took advantage of these technological advances. In 1820 seven of the eight steam presses in London were used by newspapers.

Public participation in politics contributed to the content of newspapers. During the wars for independence in the Americas, newspapers were a means of public dialogue and of instilling nationalism. Isaiah Thomas's *Massachusetts Spy* and Benjamin Edes and John Gill's *Boston Gazette* sought to instill revolutionary fervor. Colonial newspapers that supported the British cause, such as James Rivington's *Gazetteer* in New York and John Mein's *Boston Chronicle*, lost public support and went out of business. Venezuelan revolutionaries Simón Bolívar and Francisco de Miranda took inspiration from the American revolutionaries' use of newspapers. Bolívar especially was interested in using newspapers to sway public opinion against Spain. Beginning in 1809 revolutionaries in Mexico and Chile skirted Spanish restrictions on the press by publishing political newspapers aimed at independence. Later in the nineteenth century abolitionists in the United States depended on newspapers to gain support for their cause, particularly William Lloyd Garrison's *The Liberator*.

Political party presses, paid for by subscription, in the United States and Britain not only gave local, national, and international news but also added commentary that favored a political party. While not specifically owned by the party, partisanship could lead to some funding support and the awarding of other printing contracts. In 1808 in the United States, about 80 percent of the existing 329 newspapers were party-aligned.

Politics was not the only form of content. By the 1780s, nonpolitical news in many English newspapers outweighed political content. More emphasis on fashion, literature, and the theater attracted readers' attention. Sports also entered the content of newspapers. During the 1760s, the English paper *Chelmsford Chronicle* began reporting race results. In the United States, reports of horse races and cricket games became a fixture in the 1830s. By the 1850s, prize fighting frequently appeared in the news, followed by baseball in the 1870s and football in the 1890s. As news of sports increased, newspapers began offering sporting news in its own section with a distinct writing style. Also, throughout the nineteenth century illustrations and "cartoons" developed into comics.

Advertising was also a major source of revenue for newspapers, allowing prices to remain low for readers. Advertisements were present in the newspapers of the seventeenth century. For example, in Germany in the eighteenth century, government-regulated newspapers known as *Intelligenzblätter* emerged, some of which depended on advertising revenue and small print runs (of 500 to 1000 on average). Throughout the eighteenth century and most of the nineteenth century, advertisements were often on the front pages of newspapers. However, as publishers sought to capture readers' attention, front-page news became necessary, and advertisements were relegated to the back page. For example, the penny papers were a long-standing format for inexpensive daily news; by the mid-nineteenth century many of these in the United States relied largely on revenues from numerous patent medicine advertisements. In the late nineteenth century, new dailies with huge circulations emerged in the United States that largely depended on revenue, instead, from department store advertisements.

How news was gathered was revolutionized by the development of the telegraph in the 1830s and 1840s. Soon editors were using the new technology to relay and acquire information from distant places. The speed of reporting news became even more important during the latter half of the nineteenth century when communications empires competed against each

► NEWSPAPER COMIC STRIPS

Comic strips such as the “Katzenjammer Kids” had become a fixture of newspapers by 1915, so much so that nearly all major newspapers in the United States had one in their syndicate systems. The ancestors of the comic strips are the woodcut illustrations used on broadsides at the dawn of the printing age in the fifteenth century. Smaller woodcuts, and later engravings into metals like copper, were assimilated into newspaper content in the forms of mastheads and illustrations. Seventeenth- and eighteenth-century newspapers often reused woodcuts as illustrations for various purposes. Even after the development of photography—but before methods for printing photographs were developed—specialists often rendered versions of photographs into enhanced woodblock illustrations in nineteenth-century periodicals, such as the *Illustrated London News* and *Leslie’s Illustrated Weekly*.

The earliest cartoons to appear in newspapers were often caricatures of political figures. For example, political cartoons in the United States began to appear in the 1830s as opponents of Andrew Jackson sought to attach Jackson’s likeness to their criticisms of his policies. European uses of cartoons also focused on political or social commentary. German artist Wilhelm Busch (1832–1908) is credited as the inventor of the modern comic strip. Beginning in 1859, Busch contributed comics to the leading German weekly newspapers. His popular “Max und Moritz” introduced continuous characters. Busch’s comic was so popular that French and Austrian publishers began to

publish plagiarized versions of Busch’s originals. “Max und Moritz” would also inspire the German American cartoonist Rudolph Dirks (1877–1968) to create one of the most successful comic strips in history, the “Katzenjammer Kids.”

During the intense competition between Joseph Pulitzer and William Randolph Hearst around 1900, both publishers introduced comics to gain readers. Pulitzer began in 1894 with the first full-color page to include a comic strip. The comic strips in Pulitzer’s newspapers, however, lacked a continuous character that readers could identify. That distinction belonged to two important comics of Hearst’s media empire. Richard Outcault (1863–1928) introduced the first American continuous character, “Yellow Kid,” to American readers in 1896. From this character and the sensational news reporting of Hearst’s papers the term “yellow journalism” came to be widely used. Outcault also revived the speech balloon, an element that had waned at the end of the eighteenth century. While it had a character and dialogue, this comic had little narrative and was only a single large panel. In 1897 the “Katzenjammer Kids” combined continuous characters, speech balloons, and regular panels. The “Katzenjammer Kids” was immensely popular but ran only two or three times weekly. Daily comics began in 1907 with “Mr. A. Mutt” by Bud Fisher (1885–1954), appearing in the *San Francisco Chronicle*. “Mutt,” a black-and-white comic, ran six days each week, serving as the archetype for daily black-and-white comics in American newspapers.

—Barton Price

other. The telegraph was instrumental in the consolidation of news groups that shared news stories. Charles-Louis Havas founded the Agence France-Presse in 1835. Havas’s news service later used the telegraph to provide news to various French newspapers. His employees Julius Reuters and Bernhard Wolff started news services in England and Germany, respectively. The Associated Press (AP) was formed in 1848 as a result of an agreement among the *New York Sun*, the *Herald*, the *Tribune*, the *Express*, the *Courier and Enquirer*, and the *Journal of Commerce*. This media cartel received European news arriving by ship in Boston, where agents relayed

news by wire to New York. Editors of the AP papers claimed rights to the news and sold items of news to nonmember editors. Later the AP leased Western Union lines to Washington, D.C., and Chicago to further extend the network of news exchange. At the close of the 1850s, the joining of the Magnetic Telegraph Company, the Electric Telegraph Company, and Julius Reuter’s news service monopolized the distribution of news from Reuters in the British Empire. Around 1900, other newswire associations such as the United Press Associations, founded in 1907 by Edward W. Scripps, and the International News Service, founded in 1909 by William Randolph

Hearst, competed with the AP for control of telegraphic lines and of news stories.

Media moguls such as William Randolph Hearst and Joseph Pulitzer offered innovations to newsprint formats and newspaper reporting as a result of fierce competition for readers. Hearst, who introduced color print to newspapers, is most famous for his tactics of yellow journalism during the “paper wars” with Joseph Pulitzer in 1896–1898. By 1935, Hearst had 26 daily newspapers in 19 cities and operated two news services. Pulitzer developed New Journalism, a form that included larger headlines and sensationalist exposés of urban ills as well as more pages, news, and illustrations as a way to attract readers. In addition to founding United Press Associations (later United Press International), Edward W. Scripps founded the first American newspaper chain, which included 34 newspapers in mid-sized cities in the Midwest and toward the Pacific coast. In England, Lord Northcliffe (1865–1922) built his media empire by acquiring the *London Evening News* (1894) and the *London Times* (1908) and founding the *Daily Mirror* (1903).

By the early 1900s newspapers were a significant social and cultural force that provided information, opinion, and even entertainment for millions of individuals. Along with mass-circulation books and periodicals, newspapers with their mass circulation, reliance on new technologies, and ability to both cater to and shape public tastes, provided an early foundation for what would later be termed mass culture.

—*Barton Price*

Bibliography

- Carroll, Dewey Eugene. *Newspaper and Periodical Production in Countries of Europe, 1600–1950: A Quantitative Historical Analysis of Patterns of Growth*. PhD dissertation, University of Illinois, 1966.
- Ferreira, Leonardo. *Centuries of Silence: The Story of Latin American Journalism*. Westport, CT: Praeger, 2006.
- Martin, Shannon E., and David A. Copeland, eds. *The Function of Newspapers in Society: A Global Perspective*. Westport, CT: Praeger, 2003.
- Moran, James. *Printing Presses: History and Development from the Fifteenth Century to Modern Times*. Berkeley: University of California Press, 1973.
- Mott, Frank Luther. *American Journalism, a History: 1690–1960*. 3rd ed. New York: Macmillan, 1962.
- Starr, Paul. *The Creation of the Media: The Political Origins of Modern Communications*. New York: Basic Books, 2004.
- Winseck, Dwayne R., and Robert M. Pike. *Communication and Empire: Media, Markets, and Globalization, 1860–1930*. Durham, NC: Duke University Press, 2007.

Books and Reading

In 1792, London bookseller James Lackington reported in his memoirs that four times the number of books were being published and sold that year as had been 20 years earlier. He observed that even “the poorer sort of farmers and even poor country people in general” were now gathering their families on cold winter nights to read “tales and romances” rather than telling “stories of witches, ghosts, and goblins.” The bookseller’s impressions have been confirmed by historians, who have described the eighteenth century as a period in which reading became a popular everyday activity.

Historians ascribe this change to a number of factors, including a rise in literacy rates, improved standards of living, increased leisure, the commercialization of the publishing industry, and the Age of Enlightenment’s faith in the power of knowledge and reason as the source of progress. During the eighteenth century books increasingly were transformed from rare, treasured possessions into widely distributed texts with contents shaped by the tastes of the bourgeoisie and, if the London bookseller Lackington is correct, even the “poorer sort of farmer.”

Literary journals, such as the *Tatler* (1709) and the *Spectator* (1711), religious tracts, political tracts, semipornographic smears of enemies and even of the French royal family, reference works including Denis Diderot and Jean d’Alembert’s *Encyclopédie*, satiric novels such as Voltaire’s *Candide* (1759), and scientific journals that published research for natural philosophers and also instrument makers, along with broadsides and newspapers, all cultivated the interests of a growing reading public and, when necessary, eluded barriers set down

by government censors as politically incendiary or obscene.

Books were as much weapons as forms of entertainment. Political pamphlets, such as Thomas Paine's *Common Sense* (1776) and *The Rights of Man* (1791), proved the revolutionary potential of Enlightenment thought, as both writings inflamed the passion for liberty that erupted in both the American Revolution and the French Revolution. The violent excesses of the French Revolution created backlashes in America and Europe, leading to the suppression of newspapers, pamphlets, and books as well as the suppression of societies such as the Free Masons connected to secularism and freethinking. Following the Napoleonic Wars as Europe regained stability, censorship control receded. However, books continued to be censored if they were regarded as overly bawdy or licentious.

In the nineteenth century, along with rising public literacy and education, book and periodical production became industries advanced by new technologies, including rotary steam presses, stereotyped plates, and cheaper methods of making paper and bookbindings. Improved roads and railroads made it cheaper and easier to distribute printed material of all sorts from big-city publishing centers to small towns and villages. Industrial production offered cheaper copies of books as well as periodicals and newspapers, which competed with books for readers. Even families that were far from well-to-do could afford a small collection of books. Chapbooks were hawked on the streets, and numerous periodicals carried serialized fiction from authors such as Charles Dickens and Fyodor Dostoyevsky, with book volumes soon following. Authors such as James Fenimore Cooper, Walter Scott, Victor Hugo, and Charles Dickens were translated into a variety of languages and earned a wide international following. Indeed, the novel developed alongside the growth of the middle class in Europe and in America.

Literacy and reading habits were not limited to the upper or middling classes. Industrialization and urbanization required a literate workforce. In Britain, Germany, France, Italy, the United States, and elsewhere, whether motivated by a socialist agenda to ensure the dignity of workers or the republican theory that the

voting public must be well informed and "virtuous," reading came to be viewed as a means of self-improvement. Science was a topic of widespread fascination, reflected in the nineteenth-century public's taste for lectures, books, periodicals, and science-related articles in newspapers. Newspapers and periodicals that catered to specific audiences such as women, African Americans, immigrant populations, and workers were also common by the late nineteenth century in the United States.

With the implementation of formal public education, there was an increase in the demand for educational texts. Compulsory education in France had begun in 1793 but did not become a reality until the 1880s. Some scholars have asserted that based on the ability to sign wills, literacy in the United States among property-owning males was close to 100 percent by the time of the American Revolution. Compulsory education laws were first enacted in Massachusetts (1852) and New York (1853), but it was not until World War I that most states provided compulsory free education. In Britain, compulsory education emerged via legislative reforms. After 1870, most of Europe had compulsory public education. Britain achieved 90 percent literacy rates.

Public education was enhanced when public lending libraries appeared in America and in Britain after 1850. Prior to this, libraries were private and not as accessible to working people (for example, the Library Company of which Benjamin Franklin was one founder in Philadelphia, 1731). Readers often shared books in reading circles or at home, and a single volume would often be read by several people. Novels were the most popular books distributed by subscription libraries. But as the popularity of lyceum clubs in early-nineteenth-century Britain and the United States indicates, with visiting lecturers offering perspectives on current knowledge, numerous topics such as philosophy, science, politics, spiritualism, and religion also intrigued the reading public. In the United States and Protestant Europe, the Bible was a perennial best-seller.

In Asia, the development of publishing in India was hindered by the great diversity of India's languages. During British rule, however, the introduction of modern printing presses in India's major cities (the first printing press had

been established in Goa by the Portuguese in the 1560s), advances in education, and increased use of local languages rather than Arabic, Persian, or Sanskrit led to the appearance of India's first newspapers as well as an Indian publishing industry that produced magazines, journals, Western works, works of social and political commentary, and works of fiction. Somewhat similarly, increased contact with the West and the adoption of the Tanzimat reforms of the mid-1800s gave rise to what is called the Tanzimat era of Turkish literature, in which publishing houses began producing print material in many different genres and forms, including many works geared specifically for reading by women and children.

China had a long literary and scholarly tradition connected to Confucian philosophy and the long-standing civil service exams that both gentry and some gifted commoners trained for, as passing these exams at different regional levels permitted employment in the government bureaucracy. Novels blossomed during the Ming period (1388–1644), with popular tales about bandits, judges, adventures, and erotica. At the turn of the eighteenth century, the city of Chengdu had 10 major publishing houses, Beijing had 100 publishing houses, and wealthy merchants established some free public libraries. From 1773 to 1783, under orders of the Qianlong emperor, the entire scholarly community helped compile *The Four Treasuries* (history, classics, philosophy, literature), a compendium of knowledge in numerous fields of specialties that dwarfed the work of the French encyclopedists, their contemporaries, collecting together 3,500 annotated works of knowledge in 36,000 volumes. Seven handwritten copies were created by scribes and housed as separate collections in various imperial palaces and in several libraries open to scholars. China's contact and conflict with Western powers in the nineteenth century also prompted the writings of the Self-Strengthening Movement, which argued for a balance between modernization (that is, Western influences, technologies, and weaponry) and tradition.

The Japanese, with their long history of artistic and literary excellence, were exposed to Western culture through Dutch trade and schools. During the Edo period (1603–1868)

printing flourished, and public tastes encouraged the wide circulation of printed material. Novels of the Edo period and the Meiji period (1868–1912) often included beautifully rendered color woodblock prints that folded out from the frontispiece pages. By the 1860s, Western influence thoroughly intersected with a literate culture in Japan. The *Kaigai Shimbun*, which provided Japanese readers with foreign news, began publication in 1865 at the end of the Edo period. Numerous other mass-circulation newspapers appeared in the decades that followed. *Bungei Kurabu*, a magazine for women, also became popular at the turn of the twentieth century. Reading Western works became a crucial practice as the Japanese in the Meiji era sought to avoid being overrun by foreign powers and to adapt Western technologies and learning so as to position Japan as a regional and world power.

—Robert McParland

Bibliography

- Allen, James Smith. *In the Public Eye: A History of Reading in Modern France, 1800–1914*. Princeton, NJ: Princeton University Press, 1991.
- Darnton, Robert. *The Forbidden Best-Sellers of Pre-Revolutionary France*. New York: Norton, 1995.
- Kornicki, Peter. *The Book in Japan: A Cultural History from the Beginnings to the Nineteenth Century*. Honolulu: University of Hawaii Press, 2000.
- Jordan, John O., and Robert L. Patten, eds. *Literature in the Marketplace: Nineteenth Century British Publishing and Reading Practices*. New York: Cambridge University Press, 1995.
- Porter, Roy. *English Society in the Eighteenth Century*. New York: Penguin, 1990.
- Quay, Sarah E., and Gabrielle Watling. *Cultural History of Reading*. Santa Barbara, CA: Greenwood, 2008.
- Vincent, David. *Literacy and Popular Culture: England, 1750–1914*. Cambridge: Cambridge University Press, 1989.

Public Libraries

Although libraries have existed for several thousand years, they were reserved for the higher social classes and took the form of private, school, or research libraries. The first public libraries were established in Great Britain, North

America, and Australia in the late nineteenth century. Technological advances in printing, a growing middle class that increasingly valued knowledge and education, and improved literacy rates contributed to the growing popularity of public libraries during this time.

Today, public libraries provide citizens with reference materials for information, learning, and entertainment and are considered essential to a literate and educated population. Unlike other types of libraries, public libraries are noncommercial book-lending institutions, supported by taxes and private donations and open to any citizen who wants to use them, and contain a mix of popular and scholarly materials.

The public library movement can be traced to the nineteenth century, when many middle-class and working-class Europeans came to view libraries as a source of enlightenment and social progress. They demanded access to books, pushing for libraries that were financed and administered by local or national governments and open to all. Support for libraries was strongest in Great Britain. France, Germany, and other continental states established the first fully democratized public libraries at the end of the nineteenth century, almost a full half century after Great Britain.

In the 1840s, the leading supporter of public libraries in Great Britain was William Ewart, a member of Parliament from Liverpool and an ardent social reformer. He introduced bills to Parliament on this issue beginning in the 1840s, and despite opposition from those who opposed the idea of using public funds to pay for libraries that would be mainly used by the working classes, the Public Libraries Act was approved in 1850. The bill gave boroughs in England and Ireland the right to collect taxes to open and maintain public libraries in towns with populations larger than 10,000. Manchester opened Britain's first public library in 1852. The Public Libraries Act of 1853 included Scotland. By 1914, Britain had more than 300 public libraries.

During the mid-nineteenth century, public libraries were also developed in the United States. Public libraries were established because of generous donations from influential people such as multimillionaire John Jacob Astor, philanthropist James Lenox, politician Samuel J.

➤ ANDREW CARNEGIE AND AMERICAN PUBLIC LIBRARIES

Scottish-American Andrew Carnegie (November 25, 1835–August 19, 1919) was a businessman, major philanthropist, and lifelong book lover. Among many other accomplishments, Carnegie is known as the “Patron Saint of Libraries.” The Andrew Carnegie foundation financed the construction of nearly 1,700 public libraries in the United States from 1900 to 1917, each displaying a variety of architectural styles. Carnegie also funded libraries in Great Britain, Ireland, Scotland, Canada, Australia, New Zealand, Serbia, the Caribbean, and Fiji.

Carnegie's first library opened in 1883 in his hometown of Dunfermline, Scotland. In 1889 he opened his first public library in the United States in Braddock, Pennsylvania, home to his major company, the Carnegie Steel Company. During segregation, African Americans did not have access to public libraries. Carnegie funded separate libraries for African Americans such as Houston's Colored Carnegie Library. He strongly believed that with hard work comes success and that libraries provided essential opportunities for learning.

—Kim Kennedy White

Tilden (who were all essential to the founding of the New York Public Library), international financier Joshua Bates (who funded the founding of the Boston Public Library), and Andrew Carnegie (the steel magnate who funded libraries across the United States). The first municipal public library to allow people to check out materials at no cost to take home and use was the Boston Public Library, opened in 1852. One of the most important public libraries in the United States, the New York Public Library, established in 1895, involved the consolidation of several libraries—the Astor (opened in 1849) and the Lenox (opened in 1870) libraries, both privately owned, and the New York Free Circulating Library (established in 1878)—and the support of the Tilden Trust. In 1876, two notable events occurred: the founding of the American Library Association, with nearly 103 librarians, and the publication of a book on the classification of library materials by Melvil Dewey, the inventor of

the Dewey decimal system. During the last half of the nineteenth century, women's clubs, through donations and fund-raising, established two-thirds of the country's libraries. Public libraries were supported by these organizations, public tax money, and philanthropists like Andrew Carnegie. By 1910, the United States had more than 1,000 large public libraries (libraries that housed at least 5,000 books).

During this period, public libraries were also established in Canada, Australia, and New Zealand. In 1779, Governor Frederick Haldimand, concerned with a lack of resources and ignorance among his citizens, founded the first publicly funded Canadian library in Quebec City. In Australia, the New South Wales government bought a bankrupt subscription library and opened the first free public library in 1869 in Sydney. The explosion of public libraries in colonial New Zealand was remarkable. Local settlers in Wellington established the first public library in 1841. Between 1840 and 1914, the settler population in New Zealand grew to just over 1 million, and nearly 770 public libraries were founded; a third of them were created from 1840 to 1874, and two-thirds were created between 1875 and 1914. Public libraries opened in both urban and rural areas, and New Zealand achieved the highest number of libraries per capita of any nation.

—Kim Kennedy White

Bibliography

- Battles, David. *The History of Public Library Access for African Americans in the South, or Leaving behind the Plow*. Lanham, MD: Scarecrow, 2009.
- Battles, Matthew. *Library: An Unquiet History*. New York: Norton, 2004.
- McCook, Kathleen de la Pena. *Introduction to Public Librarianship*. New York: Neal-Schuman, 2004.
- Traue, J. E. "The Public Library Explosion in Colonial New Zealand." *Libraries & the Cultural Record* 42(2) (2007): 151–164.
- Wiegand, Wayne A., and Donald G. Davis Jr. *Encyclopedia of Library History*. New York: Garland, 1994.

Public Museums

The emergence of the first public museums is a European phenomenon. From the princely and aristocratic cabinets of curiosities (or wonder

rooms) of the sixteenth and seventeenth centuries to the public museum as experienced in the twenty-first century, there exists a long history of continuous reshaping, which has affected dramatically the identity, role, and function of this institution. The process of transformation from an elitist establishment to a publicly accessible site is strongly associated with the social, political, and cultural contexts of each period and country.

In the middle of the eighteenth century, the intellectual and philosophical underpinnings of the Enlightenment valued encyclopedic knowledge and the ability of human reason to organize this knowledge according to general principles. In this context, the purpose of collecting was geared toward systematic classification and exhibition according to scientific guidelines. The accumulation of natural and man-made curiosities gradually shifted to ordered groups of objects. The foundation of the first public museums took place in the middle of the eighteenth century. At that point, the definition of the museum became tied to the specific building that housed collections for public view. Private collections, sold or bequeathed to public museums, formed the core of these institutions. Yet what was "public" remained ambivalent, since access was initially intended for respected groups of the upper middle class and the aristocracy on an intermittent basis. The British Museum in London was the main example of the transitional phase from private to public viewing of collections.

The British Museum, which was founded in 1753 by an act of Parliament, was on the threshold of the process of democratization of museums. Following the acquisition of the collection of natural history specimens, coins, books, and manuscripts of Sir Hans Sloane (1660–1753), a physician to the Duke of Albemarle, the British Museum opened to the public in 1759. Soon after that, numerous private collections were acquired by the museum. In its early years of operation through the first decades of the nineteenth century, admission was permitted for a few days per week following a written application of the potential visitor.

The Louvre Museum in Paris, France, was founded in 1793; it was then that the new French republic transformed the palace of King Louis XVI and royal collections of art into a

public museum with free access to every citizen. The museum was significantly enriched by the treasures amassed during the victorious campaigns of Napoleon (1769–1821) in European cities up to 1815. The establishment of the Louvre initiated a series of subsequent transformations of royal art collections into public museums around Europe and the United States.

Public museums of the nineteenth century were defined as safeguards of the national heritage and as critical instruments for the construction of national identities. The first public institution in the United States, the Smithsonian Institution in Washington, D.C., today a complex of museums and research centers, was established in 1846 by the generous endowment of a British gentleman, James Smithson (1765–1829), who had never visited the United States himself. Other national museums founded during that century were the Prado Museum in Madrid, Spain (1819); the National Gallery in London (1824); the National Archaeological Museum in Aegina, Greece (1829); the Alte Pinakothek in Munich, Germany (1836); the Hermitage Museum in St. Petersburg (1852); the National Museum in Montreal, Canada (1843); the American Museum of Natural History (1869); the National Museum of Denmark (1892); and the Victoria and Albert Museum in London (1898). Municipal museums flourished in major cities as tools for popular instruction and recreation, such as the Yorkshire Museum in York (1822), the Philadelphia Museum of Art (1876), the Walker Art Gallery in Liverpool (1877), and the Manchester Museum in England (1890).

What had started in the middle of the eighteenth century as a site for the nobility had become a site for the social erudition of the working class by the late nineteenth century. Yet the outbreak of World War I (1914–1918) gravely impeded the development of museums toward fulfilling their social role and educational potential.

—Anastasia Filippoupoliti

Bibliography

Alexander, Edward P., and Mary Alexander. *Museums in Motion: An Introduction to the History and Functions of Museums*. 2nd ed. Lanham, MD: AltaMira, 2008.

WORLD EXHIBITIONS

World exhibitions grew in parallel to nineteenth-century public museums. Unlike public museums, however, these exhibitions had greater ease of access and themes that related to industrial arts and their application to everyday life. World exhibitions mingled a wealth of products from both European countries and the colonies celebrating iron and the steam engine. The organizational scheme of such displays positioned the exhibits in such a way as to be viewed according to two modes of classification—country and subject—in a round space that allowed visitors a direct engagement with objects.

In Europe, international exhibitions took place mainly in London (1851, 1862, 1871–1874, 1883–1890, 1895, and 1896) and in Paris (1855, 1862, 1867, 1878, 1889, and 1900). The *Great Exhibition of the Works of Industry of All Nations* that was held in the Crystal Palace in Hyde Park, London, from May 1 to October 15, 1851, was the first world exhibition.

—Anastasia Filippoupoliti

Caygill, Marjorie. *The Story of the British Museum*. 3rd ed. London: British Museum Press, 2002.

Conn, Steven. *Museums and American Intellectual Life, 1876–1926*. Chicago: University of Chicago Press, 1998.

Duncan, Carol. *Civilizing Rituals: Inside Public Art Museums*. London: Routledge, 1995.

Impey, Oliver, and Arthur MacGregor, eds. *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-century Europe*. Oxford, UK: Clarendon, 1985.

Public Art Galleries, 1750–1900

The term “public art gallery” (or “public art museum”) refers to an institution collecting and publicly displaying works of art as well as the building where the display is located. This cultural medium had its formative period in eighteenth- and nineteenth-century Europe. Art collections in antiquity (such as those in Pergamon, Egypt, and Rome) and throughout much of history served as means of dynastic legitimization and representation; only a few collections, such as medieval church treasuries, were

➤ GALLERY

Architecturally derived from the medieval knight's halls, a gallery was a long hall-like anteroom in palaces generally connecting the state apartment (a set of grand rooms elaborately decorated for representative purposes) with other (ceremonially) important rooms. Seventeenth- and eighteenth-century galleries like that of Versailles, Vienna-Schönbrunn, or Potsdam-Sans Souci became large and sumptuous architectural features in the residences. They generally had one long wall with a row of big windows, giving excellent lighting to the room and making it perfect for displaying artworks. The term "gallery" was later used to refer to large painting collections and included the building as well as the institution. The Uffizi in Florence, originally built between 1559 and 1581 to house bureaucratic offices (*uffizi*), had a "galleria" on the upper floor displaying works of art. This is probably the origin of the term "gallery" as a reference to an architectural setting displaying artworks.

—Angela Opel

publicly accessible. The earliest known example for a specific artistic interest in collecting is the treasury of Jean Duc de Berry (1340–1416) in the late fourteenth century, which was also the time of the earliest examples of cabinets (exhibition rooms) of art and curiosities and cabinets of *naturalia* (works of nature) as forerunners of modern museums.

Collecting in early modern times was marked by the emerging interest in artifacts of antiquity and subsequently in the aesthetic qualities of contemporary art. From the fifteenth to the seventeenth centuries, art collections were formed and maintained by a number of rich and powerful families and individuals. During the Italian Renaissance in the 1400s, the Medici of Florence, the papal court in Rome, the Este family of Ferrara, the Gonzaga of Mantua, and the Montefeltro of Urbino were all notable collectors. In northern Europe, prominent collectors were Archduke Leopold Wilhelm of Austria (1614–1662) in Brussels; King Charles I (1600–1649), Thomas Howard, the Earl of Arundel (1585–1646), and George Villiers, First Duke

of Buckingham (1592–1628), in England; Cardinal Richelieu (1585–1646) and Cardinal Mazarin (1602–1661) in France; and Queen Christina (1626–1689) in Sweden. Collections maintained by princes and kings were generally displayed in the gallery or in the state apartments, which was a set of grand rooms for use by the sovereign.

In the eighteenth century these galleries were separated from the ceremonial rooms to other parts of the residence and finally were separated from the residence altogether. This began with the first autonomous gallery building exclusively displaying artworks, the "art house" of Johann Wilhelm, elector of the Palatinate in Düsseldorf, in 1712. In addition, due to changing views of art and education during the Enlightenment, galleries were opened to more segments of the general public starting in the late eighteenth century. Besides art's aesthetic qualities, Enlightenment philosophers and poets such as Friedrich Schiller (1759–1805) stressed its potential to edify and enhance man's humanity. The exhibition of artistic collections themselves changed from a decorative focus to an educational and didactic approach in that art was arranged according to artists, artistic schools, or regions. This was first attempted in 1700 at Salzdahlum Palace near Braunschweig and then systemized at Düsseldorf in 1763.

Art galleries/museums, the earliest specialized form of public museums, in many cases developed out of the arts departments of multidisciplinary museums. Ultimately, however, the conceptualization of the museum emanating from the French Revolution (the *Muséum Français* in Paris), which stressed the separation of art and nature, prevailed over the multidisciplinary structure of many early foundations such as the British Museum (1759).

The earliest public art galleries include the Palais de Luxembourg in Paris, where during 1750–1779 the Medici paintings of Peter Paul Rubens were publicly displayed, followed by the Oberes Belvedere in Vienna (1781) and *Muséum Français* in Paris in 1793 (later called the *Museum Central des Arts* and the *Musée Napoleon* in 1803). The main formative period of public art galleries, however, was between 1830 and 1914, starting in Europe with *Alte Pinakothek* in Munich (1836) and the *New Hermitage Museum*

in St. Petersburg (1839) and in the United States with the Wadsworth Atheneum in Hartford, Connecticut (1842).

Whereas in Europe some museum foundations were underwritten by governments (e.g., the Altes Museum in Berlin, founded in 1828) and others by wealthy members of the bourgeoisie (Städel Museum in Frankfurt/Main, founded in 1817), in the United States and Australia museums were founded and funded mainly by private individuals. Museums that originated from private initiatives include the oldest public art museum in the United States, the Wadsworth Atheneum; the Metropolitan Museum of Art in New York City, which focuses on world art; and the Bendigo Art Gallery in Bendigo, Victoria. In other parts of the world, for example, in former colonies such as India, public art galleries were mostly founded in the twentieth century, following earlier nineteenth-century foundations of archaeological or colonial public museums.

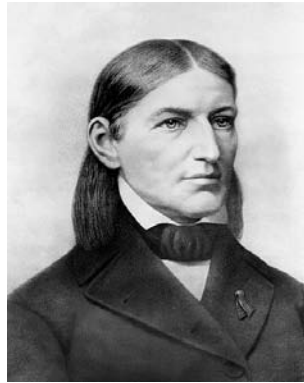
—Angela Opel

Bibliography

- Bazin, Germain. *The Museum Age*. Translated by Jane van Nuis Cahill. New York: Universe Books, 1967.
- Bjurström, Per, ed. *The Genesis of the Art Museum in the 18th Century: Papers Given at a Symposium in Nationalmuseum Stockholm, June 26, 1992, in Cooperation with the Royal Academy of Letters, History and Antiquities, Stockholm*. Stockholm: Nationalmuseum, 1993.
- Krantz, Les, ed. *American Art Galleries: The Illustrated Guide to Their Art and Artists*. New York: Facts on File, 1985.
- Prior, Nick. *Museums and Modernity: Art Galleries and the Making of Modern Culture*. New York: Berg, 2002.
- Sherman, Daniel. *Worthy Monuments: Art Museums and the Politics of Culture in Nineteenth-Century France*. Cambridge: Harvard University Press, 1989.

Kindergarten Movement

The term “kindergarten” (German for “children’s garden”) refers to an institution for children ages four to six that is based in Friedrich W. A. Fröbel’s (1782–1852) theories of early childhood development. In contrast to religious teaching about original sin, Fröbel saw the child



An educator and theoretician concerned with discovering and fostering the growth of inner, spiritual forces of human development, Friedrich Fröbel of Germany is best known for pioneering the kindergarten system. (Library of Congress)

as inherently good and innocent; he believed that all education should start with sense perception and stimulation of interest in learning. Fröbel divided childhood from ages one to six into distinct stages—infancy, early childhood, and childhood—and suggested that each developmental stage requires specific educational challenges and environments.

Fröbel believed that at age four children should no longer be educated by their parents alone but should be entrusted to a kindergarten, which was to provide an environment of playful learning and allow children to gather together with their peers. His ideas quickly became identified with liberalism and even revolution by both many of its proponents and, more importantly, German governments. The concept of kindergarten challenged traditional ways of child rearing (in families) and also traditional views of women and motherhood. Furthermore, many of the supporters of kindergartens were liberals who played a part in the 1848 Revolution. Teachers from Thuringia even petitioned the Frankfurt Assembly to consider the kindergarten as an element of a new and democratic system of public education.

Following the defeat of the revolution, the concept of kindergarten education was considered politically dangerous and a threat to traditional religious doctrines. Kindergartens removed children not only from the private sphere of the family, which was seen as the normal and religiously defined space for child rearing, but also from previously church-dominated institutions of child rearing. Prussia was the first of the German states to ban all kindergartens in 1851 (the ban was lifted ten years later). Since many of the kindergarten educators had to leave

➤ MARGARETHE SCHURZ AND THE FIRST AMERICAN KINDERGARTEN, 1856

In 1856 Margarethe Schurz (1833–1876) opened the first American kindergarten in Watertown, Wisconsin. She was born Margarethe Meyer into a well-off family of Hamburg, Germany. Margarethe and her sister Bertha (later Bertha Ronge) were introduced to Friedrich Fröbel and his new concept of kindergarten during the 1840s. After Bertha had established the Hamburg College for the Female Sex, she made sure that Margarethe attended this new school, where Fröbel lectured in 1849–1850. After a nervous breakdown Margarethe traveled to London, where she lived with her sister and brother-in-law. Here she met Carl Schurz, whom she married in 1852. After their immigration to the United States, Margarethe Schurz created in late 1856 or early 1857 a kindergarten, conducted in German, to care for her own and her neighbors' children in Watertown, Wisconsin. In 1859 Boston transcendentalist and educational reformer Elizabeth Peabody (1804–1894) learned about Schurz and her kindergarten. Peabody decided to open her own kindergarten in Boston in 1860, although she insisted that all instruction was to be in English. Thus, she translated the German concept of the kindergarten into the American kindergarten.

—Thomas Adam

Germany and go into exile, they took the idea of the kindergarten with them to other European countries and North America. From here the kindergarten idea spread all over the world.

In 1851 the German emigrés Johannes (1813–1887) and Bertha Ronge (1818–1863) opened the first kindergarten in London. While the success of the kindergarten movement in England was limited in numbers and influence, it fared much better in the United States and Australia. In the United States kindergartens spread quickly throughout the country, especially in cities such as Chicago, New York City, Milwaukee, Philadelphia, and St. Louis, which had large German immigrant populations. By the 1880s, however, most American cities had kindergartens and even training schools for kindergarten teachers.

German emigré Margarethe Schurz (1833–1876), the sister of Bertha Ronge and the wife of Carl Schurz (1829–1906), the famous German American politician and general of the American Civil War, opened the first American kindergarten in Watertown, Wisconsin, in the autumn of 1856. Instruction was conducted in German, and the focus was on play. In the following years the idea was quickly adopted by middle- and upper-class Americans who saw the advantages of Fröbel's ideas for early child education. However, Fröbel's ideas first needed Americanization. Elizabeth Palmer Peabody (1804–1894) assumed a leading role in translating Fröbel's ideas and thus creating an Americanized version of the German kindergarten. This Americanized version embraced urbanization and took city life as the starting point for its curriculum. German songs and embrace of a romanticized view of nature were replaced by a focus on the life experience of American children, academic instruction, and preparation for school.

In Australia, Edward Combes (1830–1895), a New South Wales member of Parliament, took the lead in advocating kindergartens. Combes had visited kindergartens in France, Austria, Belgium, Sweden, Great Britain, and the United States in 1880 as part of a mission to investigate the conditions of schooling in these countries. His *Report on the Lighting, Heating and Ventilation of School Buildings in Great Britain, the Continent of Europe, and America: With Remarks on School Discipline, Normal Colleges, and the "Kindergarten" System* (1880) included a section on the kindergarten and thus was the first publication on Fröbel's idea in Australia.

China introduced the kindergarten concept indirectly via Japan through Japanese translations of European literature. Kindergartens in Japan were mandated by the state but were introduced at the local level by villages as part of the modernization of the education system in the 1870s. American missionary Annie Lyon Howe (1852–1943) founded the first kindergarten in Kobe in 1889. She made Fröbel's principles the basis of her kindergarten and instructed kindergarten teachers in a special training school. Howe's kindergarten was the prototype for all further Japanese kindergartens. Around

1900 Chinese intellectuals and officials advocated the introduction of the kindergarten from Japan. Chinese rulers copied verbatim Japanese regulations with regard to preschool education, and the terms adopted by Chinese educators derived from the Japanese language. *Mengyangyuan*, the word used for kindergartens in China, means “the institute for nourishing young children.”

—Thomas Adam

Bibliography

- Baylor, Ruth M. *Elizabeth Palmer Peabody: Kindergarten Pioneer*. Philadelphia: University of Pennsylvania Press, 1965.
- Shapiro, Michael Steven. *Child's Garden: The Kindergarten Movement from Froebel to Dewey*. University Park and London: Pennsylvania State University Press, 1983.
- Wollons, Roberta. *Kindergartens and Cultures: The Global Diffusion of an Idea*. New Haven, CT, and London: Yale University Press, 2000.

■ Introduction: Food and Drink

Food preparation changed after the Industrial Revolution. Prior to 1750, most food in Western countries was cooked over an open fire in a fireplace, and drinks such as beer were brewed at home. One hundred years later, trains with refrigerated cars carried fruit and slaughtered beef, and English travelers carried Schweppes carbonated beverages with them throughout the world. Stoves and cookbooks became common, as did restaurants in which diners could choose from different options on a menu. World trade made tea, coffee, sugar, and name-brand beers into commodities available around the globe. Canned and bottled food and “invented” foods such as bouillon and breakfast cereals (“shredded wheat,” for example) were introduced in the second half of the nineteenth century along with advertising campaigns. Food and drink helped mark identity; some also became political battlegrounds. In the United States, abolitionists were often health food faddists who preferred to stay in special “Graham Hotels” that could offer them the appropriate food and the company of like-minded clients. Throughout the nineteenth century and the early twentieth century, religious revivalists and social reformers launched temperance campaigns in Britain and the United States. Often these involved the targeting of immigrant populations, such as Germans and Irish in the United States. The Indian Mutiny of 1857 was triggered in part when rumors were spread that the rifle cartridges that the Hindu and

Muslim soldiers were being issued, which they had to break open with their teeth, were greased with beef and pork fat. While more food and varieties of food were available to more people, the industrialization of food production had obvious drawbacks. In general, industrial workers were too impoverished to benefit and frequently suffered from malnutrition. While vegetarian health food faddists such as the Grahamites and their preference for a diet based on whole wheat, beans, and a variety of unsalted gruels may appear somewhat quaint, their concerns may have been rational. In an unregulated market, the adulteration of food with additives that ranged from harmless (though fraudulent substitutes) to quite poisonous was common. Examples of adulteration common to the nineteenth century include the use of sawdust as a filler in bread, chicory in coffee, or the addition of dangerous chemicals to beer to improve the color or foaming properties. Likewise, disease and contamination were common in meat products as a result of unsanitary conditions in slaughterhouses and meatpacking facilities.

—Fred Nadis

New World Foods in Nineteenth-Century India and Southeast Asia

While having a profound effect on the diets of Europeans, the migration of food species from the Americas as a consequence of the Columbian

➤ NEW WORLD FOODS AND LANGUAGE

The cultural diffusion of New World foods can be traced through their etymological derivation in Asian languages. Portuguese words for the pineapple (*ananas*), guava (*peyara*), and papaya (*pepe*) have been retained in the north Indian languages. Variations of indigenous American words such as *caju* (cashew), *tomatl* (tomato), and *camotl* (sweet potato) are found in many local vernacular languages from India to the Philippines.

—Adrian Carton

Exchange also radically transformed agricultural practices and eating habits in India and Southeast Asia. In an uneven process of diffusion and adoption, New World foods such as maize, potatoes, pineapples, cashew nuts, peanuts, papayas, capsicums, and chilies were introduced to the region by different waves of Portuguese and Spanish explorers from the sixteenth century. The impact of these foods on South and Southeast Asia can be seen in terms of their nutritional importance and their cultural transmission through culinary and linguistic adaptation. In significant ways, New World foods permanently changed Asian eating habits while also consolidating broader ecological transformations.

The association between peppers and Asia is such that most Europeans continued to believe well into the nineteenth century that the chili originated in India. Botanists confirm, however, that the genus *Capsicum* originated in the Americas. The Portuguese facilitated the transport of New World foods to Asia via the Lisbon to Goa route in the early sixteenth century, while the Spanish galleon route from Acapulco to Manila in the later sixteenth century offered another pathway of diffusion. Hence, India and the Philippines became the main arteries by which these new foods entered the Asian diet. Their journey was not always direct, however, but instead was the result of multiple migrations. For example, the cultivation of maize was introduced by the Portuguese on the west coast of Africa in the sixteenth century, and from there it traveled to the east coast of Africa and eventually to India. The papaya was introduced to

the Philippines by the Spanish, and from there it traveled to Southeast Asia and then eventually to India through the trade networks of the Portuguese. Some New World foods, such as the pineapple, were seen in the markets of Mughal in north India in the late sixteenth century, well before their appearance as exotic delicacies in England. Others, such as the tomato, were late-comers and came to India from Europe in the nineteenth century.

The peanuts that make a classic Malaysian satay sauce and the chilies of staple Indian dishes are therefore foreign imports that were unheard of in that part of the world before the sixteenth century. Sweet potatoes and maize were also significant contributors to a nutritional and dietary revolution. Originally only eaten by Europeans and Muslims in India, both the sweet potato and the white potato became important sources of nutrition in areas with soil too poor to sustain other crops. In Southeast Asia, moreover, sweet potatoes were also important as a filler crop between rice harvests to sustain populations where rice was not seasonally available.

Likewise, maize acted to diversify Asian crops. The vernacular term *makkai* (“Mecca corn”) in north Indian languages seems to suggest an association with the Mughal empire and an early adoption of this American food source on the subcontinent. By the nineteenth century it had a widespread distribution in India, where it was a supplement for the poor in the highlands of the Himalayas and in areas such as the Punjab. In present-day Indonesia maize has also become the most important secondary crop as land suitable for rice production has grown scarce. In the face of increasing population pressure, the cultivation of maize was particularly lucrative in the highlands of Java, a region generally unsuitable for rice production.

Therefore, by the late nineteenth century, sweet potatoes and maize radically transformed traditional sources of nutrition in India and Southeast Asia. New World foods were also valuable additions to a system of crop rotation whereby peanuts, chilies, and potatoes were often rotated with older crops such as eggplants and sugarcane. The long-term consequences of the introduction of New World foods on the region are subject to debate, but some general

trends seem certain. Ecological historian Alfred Crosby supports the view that the diversification of the rice harvest with American food crops enabled greater populations to be supported in the vegetarian societies of India and Southeast Asia by the nineteenth century.

—Adrian Carton

Bibliography

- Achaya, K. T. *A Historical Dictionary of Indian Food*. New Delhi: Oxford University Press, 2002.
- Crosby, A. *The Columbian Exchange: Biological and Cultural Consequences of 1492*. Westport, CT: Praeger, 2003.
- Kiple, Kenneth, and Kriemhild Ornelas, eds. *The Cambridge World History of Food*. Cambridge: Cambridge University Press, 2000.
- Mazumdar, Sucheta. "The Impact of New World Food Crops on the Diet and Economy of China and India, 1600–1900." In *Food in Global History*, edited by Raymond Grew. Boulder, CO: Westview, 1999.

Food Policy in Meiji Japan

Japan's state-level food policy has always centered on the production and distribution of rice. State control of food in Japan took place in a real sense only in 1942 at the height of World War II as the food supply drastically dwindled. However, ordinances from the imperial courts started as early as 675 CE, when according to the *Nihonshoki* (Chronicles of Japan), Emperor Temmu issued ordinances to encourage rice production and prohibited the consumption of meat from five beasts: cows, horses, dogs, monkeys, and chickens. The motives behind the prohibition included the Buddhist doctrine of mercy for all living beings and the use of rice in ritual meals and funerals, when puffed rice is used to symbolize rice that cannot be grown again. The taboo against killing animals was reinforced by the notion of defilement incurred by death, either of a human or of an animal, in Japan's native Shintoism. In reality, the prohibition of eating meat was also to protect rice agriculture, in many ways the basis of Japan's rural economy and the major source of taxation.

During the Meiji Restoration the prohibition against meat consumption was officially removed. In 1871 Emperor Meiji issued an

ordinance for food consumption at the imperial palace to include beef, mutton, pork, venison, and rabbit meat, and he publicly ate meat on January 24, 1872. French cuisine became the official meals for public entertainment at the imperial court.

There were two forces that prompted the state policy on food during the Meiji period. The first was the regime's goal of seeking "Civilization and Enlightenment" (*Bunmei Kaika*) by imitating the West. Eating meat was associated with progress and modernization, so when one ate meat, one was symbolically "ingesting" the West. Not all Japanese agreed with the new policy. For example, some members of the *yamabushi* (ascetic Buddhist mountain hermits) came to the palace on February 18, 1872, to appeal to the emperor to restore the prohibition on meat eating. During the scuffle with the palace guards, four of the *yamabushi* died, one was seriously injured, and the rest were arrested.

DISCOVERING VITAMIN B1

When Takaki Kanehiro proposed a link between a diet of polished white rice and beriberi, vitamin B1 had yet to be discovered, and hence he attributed the disease to a protein deficiency. In 1897 Christiaan Eijkman (1858–1930), a military doctor in the Dutch Indies, theorized that there was a nerve poison in the rice endosperm from which the outer layers of the grain gave protection. Another Dutch doctor, Gerrit Grijns (1865–1944), concluded that the outer layers of the grain contained an unidentified essential nutrient. In 1910 the Japanese chemist Suzuki Umetaro succeeded in extracting a water-soluble complex of micronutrients from rice bran and named it aberic acid. He published this discovery in a Japanese scientific journal, which, when translated into German, failed to state that it was a newly discovered nutrient, a claim made in the original Japanese article. Hence, his article was largely ignored. In 1911 the Polish scientist Casimir Funk (1884–1967) published the results of his research in which he isolated the same complex from rice bran and called it a *vitamine*. In most accounts he is still given credit for formulating the concept of vitamins.

—R. Kenji Tierney

Meat eating was encouraged by leading intellectuals such as Fukuzawa Yukichi (1835–1901), the influential author, educator, translator, and founder of Keio University. In 1882 he wrote an article in which he discussed why meat should not be prohibited on nutritional grounds. In 1890 he wrote that Japan was not suited for rice cultivation, and thus the people should eat meat and rely on foreign rice.

The second important factor that encouraged meat consumption was the state's commitment to building a strong military. The slogan "Rich Country, Strong Army" led to the adoption of Western cuisine, dried bread (*kanpan*), and meat by the military. Initially Western cuisine was introduced by the Japanese navy in order to build the "soldiers' body" that could compete with the body of meat-eating Westerners. This diet also served to reduce the high incidence of beriberi, a severe nervous disease now known to be caused by vitamin B1 deficiency and often associated with a diet of polished white rice. In 1884 Takaki Kanehiro, a British-trained physician in the Japanese navy, observed that beriberi was common among Japanese sailors, whose diet consisted largely of white rice, but was nonexistent among Western sailors, who included meat in their diets. Takaki performed controlled experiments using two battleship crews, and the results convinced him and Japanese naval officials that dietary changes were necessary, including the consumption of meat along with rice, vegetables, fish, and wheat. The army, however, adhered to the rice diet at the advice of Mori Ogai, a medical doctor and a well-known novelist. The superiority of the navy's diet was proved during the Sino-Japanese War (1894–1895) and the Russo-Japanese War (1904–1905) when the army lost many soldiers to beriberi while the navy lost hardly any.

While Japan's engagement in its imperial wars necessitated a large food supply to feed its military, many of the soldiers had been drafted from the farming areas, which resulted in a reduced labor force for production at the moment of increased demand. Thus, starting with the latter part of the Meiji period, each prime minister began issuing more explicit food policies, with a focus on the distribution of rice (*shokuryo seisaku*). They emphasized self-sufficiency in rice

agriculture and regarded abundant food as a sign of patriotism.

—R. Kenji Tierney

Bibliography

- Cwiertka, Katarzyna J. *Modern Japanese Cuisine: Food, Power, and National Identity*. London: Reaktion Books, 2006.
- Cwiertka, Katarzyna J. "Western Food and the Making of the Japanese Nation-State." In *The Politics of Food*, edited by Marianne E. Lien and Brigitte Nerlich. Oxford, UK: Berg, 2004.
- Shibusawa, Keizo. *Japanese Life and Culture in the Meiji Era*. Translated and adapted by Charles Terry. Tokyo: Toyo Bunko, 1969.

Preserving Food—Bottling and Canning

Women had known about the techniques of bottling and artificially preserving foods long before the Industrial Revolution. Before the 1790s, housewives were well aware that covering cooked meats with fats had the effect of preserving meat. This technology was later applied to potting fruit syrups and conserves in what were called viall glasses. Machinery, however, revolutionized this technique. Credit for this goes to Nicolas Appert (1749–1841), whose invention of canning (known as bottling in England) was a response to the need to supply food to soldiers fighting the Napoleonic Wars (1799–1815). Canning was based on two ideas: fully corking a vessel filled with food trapped in a *bain-marie* (water bath) and heating its contents with the aim of dispelling all the air. Initially glass jars were used, but eventually these were replaced by the tin can. In England, Bryan Donkin (1768–1855), in collaboration with others, established a factory for canning food such as boiled and cured beef, carrots, mutton and vegetable stew, veal, and soup to meet the navy's demand for preserved provisions to sustain their medical stores.

The use of glass bottles to contain preserved foods continued. By the turn of the eighteenth century, there were 37 glass houses in London producing bottles mainly for wine and medicine. The glass bottle also made its way to the United States, where it was more commonly used than the tin can. William Underwood

(1787–1864), having worked as an apprentice in pickling and preserving in a London house, took off for New Orleans, Louisiana, in 1817, and beginning in 1820, in collaboration with a partner, he established a factory bottling fruit such as damsons, cranberries, currants, and quinces and later included jams and jellies, ketchups, pickles, and sauces.

Partly owing to the fact that business was slow in the United States, the technique of bottling also was introduced to South America when Underwood and his partner began aggressively exporting their goods to the rest of the world. Other markets for their products were the Dutch East Indies, Gibraltar, India, Hong Kong, Manila, and the West Indies, where they were marketed under an English brand name. In 1835 the company started to export tomatoes to Europe after importing the seed from England. Little effort went into marketing the fruit in the United States, as it was commonly thought at that time that the tomato, a member of the nightshade family, was poisonous, although it had been long domesticated in the New World and eaten in Europe.

English sauces also were made available in large quantities owing to the technique of bottling. Worcestershire sauce is an example. It has been said that when the former official of the East India Company, Lord Marcus Sandys, returned from India in the 1830s, he turned over the recipe of one of his favorite Indian sauces to two local chemists, John Lea and William Perrins, in the hope that they would replicate it. Originally known as Worcester sauce because the first factory producing the sauce was set up in Bank Street in Worcester, this condiment was an instant success; from 636 bottles sold in 1842, sales increased to 30,000 bottles in 1855.

Although the bottling of foods was more popular initially in the United States, the American Civil War (1861–1865) changed this, giving way to a cheaper alternative: the tin can. The first few cans were produced with a rather primitive technology. Cans were manufactured from rolled sheets of wrought iron onto which was placed a top that was hammered in and soldered on all sides. Lifting the lids from early cans was impossible until a ring was fitted around the lid.

By the middle of the nineteenth century, the soldering process was eliminated by a machine that pressed out the top and bottom of a can. The technique of canning was improved further with the discovery that calcium chloride added to the water bath increased the temperature, thus reducing the boiling time of the food from five hours to half an hour.

Fish was a major canned food product. A competitor to Underwood and his partner was the American Thomas Kensett, who learned of the technique of canning from his father-in-law Ezra Doggett, an English immigrant. They established a factory in New York that canned salmon, lobsters, and oysters. Although Kensett patented the tin can in 1825, it became widely used only in 1839.

The canning of fish also took off in Europe. Nantes, France, was the birthplace for the canning of young pilchards, otherwise known as sardines. Soon the industry spread to Brittany, and by 1870 the canning of fish was a flourishing trade. The success of this trade continued, and by 1880 50 million cans of sardines were produced annually in France, with at least 3 million exported to Britain. Soon similar factories sprouted in Cork, Ireland, and in Aberdeen and other parts of Scotland, making it possible for frozen and smoked salmon to reach the London markets.

In the United States, large-scale canning factories packing fish developed in 1864. The technique of canning also led to the easy availability of other products, such as condensed, evaporated, and powdered milk. Patents for evaporated milk and powdered milk were filed in 1847 and 1855, respectively.

Curiously, the canning of meat as an industry did not develop to such a large scale. Canned meat was used by armies fighting the American Civil War and by the Anglo-French forces in the Crimea, but in the domestic market the preference was for frozen meat owing to the invention of refrigeration. In the United States in the 1850s, the first refrigerated rail car transported butter from Ogdensburg, New York, to Boston, Massachusetts; soon the refrigerated rail car was transporting frozen meat from Chicago to cities on the eastern seaboard.

—*Theresa W. Devasabayam*

Bibliography

- Capatti, Alberto. "The Taste for Canned and Preserved Food." In *Food: A Culinary History from Antiquity to the Present*, edited by Jean-Louis Flandrin and Massimo Montanari. Translated by Albert Sonnenfeld. New York: Columbia University Press, 1999.
- Devasahayam, Theresa W. "Food." In *Encyclopedia of the Age of the Industrial Revolution*, Vol. 1, edited by Christine Rider. Westport, CT: Greenwood, 2007.
- Goody, Jack. "Industrial Food: Towards the Development of a World Cuisine." In *Food and Culture: A Reader*, edited by Carole Counihan and Penny Van Esterik. New York: Routledge, 1997.
- Leeming, Margaret. *A History of Food: From Manna to Microwave*. London: BBC Books, 1991.
- Pedrocco, Giorgio. "The Food Industry and New Preservation Techniques." In *Food: A Culinary History from Antiquity to the Present*, edited by Jean-Louis Flandrin and Massimo Montanari. Translated by Albert Sonnenfeld. New York: Columbia University Press, 1999.
- Smith, Andrew F. "Canning and Bottling." In *The Oxford Encyclopedia of Food and Drink in America*, Vol. 1, edited by Andrew F. Smith. New York: Oxford University Press, 2004.
- Tannahill, Reay. *Food in History*. London: Penguin, 1988.

Food and the Industrial Revolution—Production and Marketing

The Industrial Revolution involved more than the manufacture of textiles, steel, and steam engines. Novel developments in the production and distribution of foods transformed eating habits. The use of machinery to produce foods, new techniques of preserving and extending the shelf life of foods, retailing and wholesaling, and new railway systems allowed for large quantities of foods to be distributed to more people than had ever been possible before. Manufacturing foods in large amounts was possible only with the use of machinery at every stage of production: washing, grading, separating, peeling, chopping, and packaging.

Beginning in the 1800s, breakfast became the first meal in the Anglo-American world transformed by industrialization with the introduction of cereal-based foods. The development

of cereal-based foods first occurred at Battle Creek, Michigan, in the 1880s when physician John Kellogg (1852–1943) experimented with cereals in an attempt to provide natural and healthful foods to Seventh-day Adventist vegetarians. At this time, the majority of people ate breakfasts heavy on fatty foods and light on grains, although a growing number of people were determined to further the vegetarian cause. Kellogg himself wanted to find a way to help his patients solve their digestive problems with fiber-rich grains. Boiling the grain did not render satisfactory results; instead, Kellogg rolled corn meal, baked it, and hence invented cornflakes. Years later an ex-patient of Kellogg's, Charles W. Post (1854–1914), experimented with the techniques of flaking, puffing, toasting, and extrusion, producing Grape-Nuts in 1898, followed by Post Toasties (originally called Elijah's Manna) in 1908. An innovative businessman, Post advertised his products as "Health foods to well people." Others in the same league include Henry Perky (1843–1906) of Denver, Colorado, who invented Shredded Wheat in 1893.

Other new foods were also created. A technique for making meat extract from stock that was later dehydrated was developed in France, and by 1830 meat bouillon was available as so-called bouillon bars in pharmacies. Later, factories producing meat bouillon for the growing European market emerged in Uruguay. With the spread of this technique, factories producing meat bouillon also appeared in Argentina, Australia, New Zealand, and North America.

Other traditional foods formerly prepared by women in home kitchens continued to appear in grocery stores. In Britain, one example was Hovis bread, dating back to 1886. Richard "Stoney" Smith (1836–1900), having successfully found a way to retain the wheat germ in flour, wanted to find a more consumer-friendly name to market the flour and announced a national competition. The winning name was *hominis vis*, Latin for "the strength of man," from which the term "Hovis" originated. Advertising spread the Hovis brand, starting with the cycling boom in the early twentieth century when the company produced road maps directing cyclists to venues where they could inflate their tires at no cost, find lodging overnight on their long cycling

trips, and, of course, find bakeries where Hovis bread was sold. In the 1920s Hovis signs appeared above bakery storefronts, and the famous slogan “Don’t say brown, say Hovis” appeared on television in the 1950s. Newer forms of advertising have ushered the Hovis brand name into the twenty-first century, as their breads are touted to be nutritious and beneficial to health.

Biscuits (cookies in the United States) were another mass-produced food. For more than 150 years, Fox’s in Britain had been producing everyday family favorites enjoyed by millions. Older still is the brand Huntley and Palmers. Thomas Huntley, who owned a bakery, had the brilliant idea of hiring an employee to deliver his biscuits to waiting passengers at the Crown Hotel opposite his shop. His idea paid off, as customers began requesting that their local groceries stock Huntley’s foods. In 1841 Huntley was joined by his cousin George Palmer, and within 50 years their biscuits sold not only across Britain but also across the world.

Since the beginning of the Industrial Revolution, mass-produced foods increasingly have made their way into homes. Four factors, however, are instrumental in the growing popularity of industrial foods over time: branding, packaging, advertising, and marketing. Mass-produced foods displayed on the shelves of grocery stores are always sealed in attractive packaging and stamped with a label. The packaging of many mass-produced foods conveys the same message: foods are wrapped in clear plastic and are well sealed to prevent contamination. Mass-produced foods also spell consistency, predictability, and reliability in terms of quality, and only the use of machinery could have brought about the production of standard foods on a large scale.

It was advertising and marketing, however, that were essential in promoting some brands over others. Women became the targets of aggressive advertising tactics as factory-made foods were repeatedly advertised as time-saving, nutritious, and pure because they have been produced in sanitized environments. The Industrial Revolution also spurred the retailing industry in the second half of the nineteenth century. The neighborhood grocer was replaced by duplicate food shops across the country: the chain store. Thomas Lipton (1848–1931) opened

his grocery shop in Glasgow, Scotland, in 1872; after 26 years, 245 branches had been established. Across most developed and developing countries in the world today, chain supermarkets are the norm.

At the onset of the Industrial Revolution, mass-produced foods were expensive and purchased only by travelers and explorers or exported to British outposts. In due course, these foods appeared at the dinner table of the different social classes as economies of scale made it possible for them to be sold at cheaper prices. For the working class, this facilitated the transition from rural to urban living. For them, purchasing mass-produced foods eased the possibility of urban living because of their competitive prices.

Industrial foods have another advantage in that they can be stored and consumed at any time within the period of expiration. Although the techniques of pickling and preserving may have been discovered before the Industrial Revolution, machinery paved the way for large quantities of such foods as well as for many others to be produced. Stocking up on mass-produced foods not only eliminated the need for daily shopping but also meant that seasonal food and fruit usually eaten only at certain times could now be enjoyed throughout the year.

—Theresa W. Devasabayam

Bibliography

- Bralsford, Ray. “Food Processing.” In *The Food Consumer*, edited by Christopher Ritson, Leslie Goffton, and John McKenzie. Chichester, UK: Wiley, 1986.
- Devasabayam, Theresa W. “Food.” In *Encyclopedia of the Age of the Industrial Revolution*, Vol. 1, edited by Christine Rider. Westport, CT: Greenwood, 2007.
- Flandrin, Jean-Louis. “Introduction: From Industrial Revolution to Industrial Food.” In *Food: A Culinary History from Antiquity to the Present*, edited by Jean-Louis Flandrin and Massimo Montanari. Translated by Albert Sonnenfeld. New York: Columbia University Press, 1999.
- Goody, Jack. “Industrial Food: Towards the Development of a World Cuisine.” In *Food and Culture: A Reader*, edited by Carole Counihan and Penny Van Esterik. New York: Routledge, 1997.
- Leeming, Margaret. *A History of Food: From Manna to Microwave*. London: BBC Books, 1991.

Santlofer, Joy. "Cereal, Cold." In *The Oxford Encyclopedia of Food and Drink in America*, Vol. 1, edited by Andrew F. Smith. New York: Oxford University Press, 2004.

Tannahill, Reay. *Food in History*. London: Penguin, 1988.

The Invention of the Restaurant in France

Public places where one ate food in exchange for payment have existed in other cultures, such as in eleventh-century China, but the use of the term "restaurant" reflects the emergence of a dining experience that is anchored very much in a specific time and place. It was invented between 1765 and 1782 as a result of the social,

economic, and political changes that occurred in tandem with the collapse of the old regime in France. While public inns and taverns in France served food and refreshments to ordinary people in exchange for payment before and after the invention of the restaurant, the latter became a symbol of public dining for the urban bourgeoisie in Paris, from which it was transported to the rest of the world.

Originally, *un restaurant* was a term that appeared in the sixteenth century to refer to a small bowl of medicinal broth prepared by reducing meat down to a rich stock, which provided a restorative meal for those with a weakened constitution caused by illness or incapacity. In 1765 A. Boulanger opened what could arguably be called the first restaurant in Paris since it was the first urban public space for the consumption of these restoratives. Restaurateur's rooms, often called *maisons de santé*, subsequently emerged all over Paris as places where these medicinal broths, but not food, could be consumed for a price.

In 1766 Mathurin Roze de Chantoiseau combined an institution that sold restorative broths with a salon for political discussion and financial transactions. His philosophy that aiding the health of the individual through digestive restoration was akin to aiding the health of the nation is especially significant. It established a relationship between the restaurant as a social space where one restored one's health through the consumption of bouillons and the commercial affairs of the nation. Hence, the first Paris restaurants that emerged along the salon model were often citadels of public display where those with money to spare congregated to celebrate the art of consumption.

While these salons of health restoration were humble institutions, their increasing association with affluence saw a parallel demand for a wider variety of food choices from a wealthy clientele looking for culinary choice rather than medicinal aids. In 1782 Antoine Beauvillers opened what we would now recognize as a restaurant in the modern sense of the term. Calling it La Grande Taverne de Londres, he ironically needed to make the institution sound foreign to Parisians. Offering different types of meals listed

THE GRAND RESTAURANT

When Boulanger offered sheep's feet in white sauce as a restorative on his menu, he was sued by the guild of caterers, or *les traiteurs*, on the basis that such a dish was a ragout and not a sauce. They lost the case, and thus this decision opened the way for restaurateur's rooms to serve more than mere broth. After the French Revolution the abolition of the restrictive guilds, which monopolized the selling of food in Paris, meant that it became easier to open new places for public eating where a variety of different foods could be consumed together. The abolition of aristocratic privilege meant that cooks who were formerly employed in the private kitchens of wealthy estates found new vocations in luxury restaurants. By the early 1800s the concept of the grand restaurant had emerged. These establishments continued to use the à la carte menu but served several courses of often complex dishes. These included establishments such as La Maison Dorée, Véry, and Les Frères Provençaux. At Véry, for example, diners could choose from 6 kinds of soup, 8 kinds of hors d'oeuvres, 17 chicken or game dishes, 9 fish dishes, 7 roasts, and 4 desserts. Some of the most popular dishes in early Parisian restaurants included dishes such as *langue de boeuf fourrée* (beef tongue) and *dinde en daube* (braised turkey).

—Adrian Carton

on a printed menu from which patrons could choose their own personal favorites, Beauvilliers also seated customers at smaller and more individual tables. Whereas ordinary people frequented inns and taverns and paid a standard rate for basic fare on communal tables, the act of dining in a Paris restaurant was subsequently a political expression about the privileges of bourgeois status. It was this journey from restorative broth to citadel of gastronomic consumption that marked the invention of the restaurant.

—*Adrian Carton*

Bibliography

- Kiple, Kenneth, and Kriemhild Ornelas, eds. *The Cambridge World History of Food*. Cambridge: Cambridge University Press, 2000.
- Pitte, Jean-Robert. "The Rise of the Restaurant." In *Food: A Culinary History*, edited Jean-Louis Flandrin and Massimo Montanari. New York: Columbia University Press, 1999.
- Spang, Rebecca L. *The Invention of the Restaurant: Paris and Modern Gastronomic Culture*. Cambridge: Harvard University Press, 2000.

Working-Class Diet in Nineteenth-Century Europe

For centuries, the primary dietary staple of laboring Europeans was home-baked bread. Grain was cheap, and bread was easy to make, filling, and fairly caloric and could feed a relatively large family. Peasants during the Middle Ages and the early modern era were at the mercy of the grain harvest, as the failure of a crop reduced the availability of grain for bread; any available grain became prohibitively expensive and was hoarded by the wealthier segments of society. Wealthier Europeans were never as reliant on bread, as they were able to supplement their diets with meat, fruits, vegetables, and luxury food items, all of which would provide nutrition in the event of crop failure. As hunting lands were generally reserved for the rich, poor Europeans suffering through famine had the choice between starving or risking harsh punishment, even death, for poaching. Though many rural poor were able to cultivate small vegetable gardens, these were not sufficient in the event of crop failure. In any event, though bread would keep workers alive, it

did not contain enough nutrients to ensure good health. As a result, workers' health suffered, and many died young.

By the nineteenth century, the diet of the European working class had begun to change. As one major example, throughout Britain the primary staple of wheat (bread) was giving way to less costly potatoes as the main staple. According to historian E. P. Thompson, weavers in England were especially hard hit by the Industrial Revolution, with many reduced to near or actual starvation on a diet that consisted of onions, potatoes, oatcakes, oatmeal, "blue" (or rancid) milk, home-brewed ale, and, as luxuries, tea, coffee, and bacon. In Limoges, France, in the mid-nineteenth century, the working-class diet consisted of potatoes, lard soups, cabbage, turnips, and pancakes. In the first decades of the nineteenth century, beer consumption among the working class in Britain went down as a malt tax made home brewing costly, while tea became the stimulant of choice for laborers. Sugar, whiskey, and gin consumption also increased.

Throughout the nineteenth century, European poor were increasingly moving into the overcrowded and unsanitary cities for work. Vegetable consumption declined, as tending a family garden became less common. Urban workers no longer had the room or the time to bake bread at home, so they had to buy it elsewhere. There were few if any health regulations in nineteenth-century European cities that addressed the baking of bread or the preparation of other foodstuffs. As a result, urban workers often consumed bread and other foods that were adulterated with harmful substances, often factory by-products put to new uses. Though meat consumption increased, slaughterhouses were notoriously unsanitary, and the trade-off of more protein for disease was usually on balance a negative one, particularly as modern medicine was still in its infancy.

The main culprits in adulterated food were the metal waste products of factories. Copper, lead, iron, aluminum, mercury, and even poisons such as strychnine found their way into food. Though rich Europeans also experienced the effects of food adulteration, the urban working class and poor were hardest hit. Sometimes

dangerous chemicals or other additives were added to food or drink on purpose for taste, preservation, or color. In addition, nineteenth-century cities had very poor sewer systems, and human waste would often collect in the streets, where it mixed with foodstuffs.

Fortunately, working-class food consumption improved by the end of the century due to several factors: improved sanitary and sewage conditions in the cities, better food-preservation techniques, increased availability of vegetables, greater health regulation of food production and in factories, and the invention of canned food. Even so, life expectancy among the working class was still many years less than “higher” sections of society well into the twentieth century.

—Matthew DeFraga

Bibliography

- Post, J. D. *The Last Great Subsistence Crisis in the Western World*. Baltimore: Johns Hopkins University Press, 1977.
- Ross, Alice. “Health and Diet in 19th-Century America: A Food Historian’s Point of View.” *Historical Archaeology* 27(2) (1993): 42–56.
- Thompson, E. P. *The Making of the English Working Class*. New York: Vintage, 1966.
- Vernon, James. *Hunger: A Modern History*. Cambridge: Harvard University Press, 2007.
- Wilson, C. Anne. *Food & Drink in Britain: From the Stone Age to the 19th Century*. Chicago: Academy Chicago Publishers, 2003.

The Cooking Revolution in the West—Cooking Ranges and Cookbooks

The nineteenth century witnessed a revolution in the way in which food was prepared. To some extent, this revolution was the result of urbanization but was also influenced by growing industrialization and reliance on technology. The replacement of an open fire as the main method of cooking food resulted in greater efficiency and also changed the dishes that were produced. Cookbooks with directions for cooking on stoves, standardized measurements, and tips for housekeeping and entertaining according to an idealized middle- and upper-class standard became the norm during this period as well.

Western society expected more refinement and elegance in its dining during this time.

Since the time when humankind mastered fire hundreds of thousands of years ago, food had been cooked over open flames. Disadvantages were many, including smoke, difficulty in maintaining temperatures, dangers from fires, and inefficiency. Different cultures searched for a method that allowed for more control over cooking. Ceramic and stone cooking stoves appeared in China by the second century BCE, but in Europe development lagged behind. For centuries, most cooking was done on hearths or braziers. Experiments with three-sided chambers that allowed easy access to the fire as well as a secure cooking surface were attempted. Between 1300 and 1600, increased use of iron permitted craftsmen to experiment with iron boxes to enclose a fire for cooking purposes. These innovations were largely limited to the households of wealthy individuals. By 1750, however, freestanding cast iron stoves were becoming more common, especially in North America and western Europe. Innovators like Benjamin Franklin helped to make such stoves practical and popular for heating. Before 1800, these stoves also were used by some for the primary purpose of cooking.

By the early 1800s, inventors in Europe and the United States introduced improved cooking stoves. In Britain, Benjamin Thompson invented the Rumford Stove, which had a large cooking surface that included openings in which to place pots to make better use of the heat. Individual fires, and hence temperatures, could be regulated by increasing or decreasing the draft at each opening. The Rumford Stove was efficient but too large for individual homes. An American named Philo Stewart used Thompson’s principles to develop the smaller Oberlin Stove, patented in 1834. The Oberlin Stove was very popular and sold an average of 3,000 units a year over the next 30 years. Although some households continued to use the traditional hearth, cooking stoves were popular because they were more fuel-efficient. By 1850, most urban American and European middle- and upper-class households had cooking stoves. A waist-high cooking surface reduced stooping

► FANNIE FARMER'S BOSTON COOKING-SCHOOL COOK BOOK

Fannie Farmer (1857–1915) is not only credited with writing one of the most internationally successful cookbooks in history but also with creating a standard that many cookbooks have since emulated. While in high school in Massachusetts, Farmer suffered a paralytic stroke. Unable to continue to college, she worked as a mother's helper after recovering. The experience of domestic life developed an interest in and aptitude for cooking in Farmer.

Farmer's parents helped her attend the Boston Cooking-School, under Mary J. Lincoln. The school was one of a number of cooking schools founded to train professional chefs. Such schools also tried to instill modern scientific principles about nutrition and hygiene among their students. Farmer graduated in 1889 from the school and then remained as assistant director. She became director in 1894.

One of Farmer's accomplishments was to recognize that all housewives, especially middle-class ones, would benefit from these modern

ideas. Because not all women had the opportunity to attend a cooking school, Farmer revised Lincoln's *Boston Cooking-School Cook Book*. While the original was intended as a text for cooking schools, Farmer's edition was aimed at women in general. It was an encyclopedic book with over 1,000 recipes, arranged by categories. A busy housewife could easily turn to the chapter on soups and pick out the one she wanted. Other chapters covered beef, pork, fish, potatoes, and vegetables. Breads, desserts, sauces, and many other types of dishes were covered. Farmer's recipes were clear and explicit, giving standardized measurements for the different ingredients and cooking times. The cookbook also included household tips such as how to can vegetables, cleaning tips, and substitutes for certain ingredients. Farmer's cookbook went through multiple editions published before and after her death in 1915 and was translated into various languages, including Braille.

—Timothy J. Watts

by cooks. The stoves also usually had ovens, heated by hot air circulated from the firebox before it was vented through the chimney. Wood and charcoal were the most widely used fuels at first but were later replaced by coal, kerosene, and gas.

While early cooking stoves were improvements over hearths, they had drawbacks. The relatively small firebox required cooks to add fuel frequently, and the heat was also unevenly distributed on different parts of the cooking surface. Constant adjustment of dampers to control the fire and the need to move pots from hotter to cooler areas gave cooks little time for other tasks. Early ovens were also so small that few dishes could be baked. Inventors during the first half of the nineteenth century continued to introduce new features to meet women's complaints. Between 1820 and 1839, for example, 165 patents were issued for cook stoves in the United States. Features ranged from multilevel cooking surfaces at different heights on the

same stove, to keep from having to lift heavy pots very far, to a rotary cooking surface that moved like a turntable, to make it easier to maintain constant cooking temperatures.

Critics accused the cook stove of causing a breakdown of the family and traditional values. Nostalgic memories of the family gathered around the fireplace while meats roasted and a stew simmered over a roaring fire were popular in some literature of the period. The cook stove, located in an isolated kitchen, could hardly be considered the heart of the family, unlike the hearth.

Changing patterns of cooking based on the stove also contributed to the spread of cookbooks. Both printed and manuscript books of recipes and household tips had appeared during the medieval and early modern periods, but they were primarily intended for professional cooks. In 1796, *American Cookery* by Amelia Simmons, a former servant about whom little is known, appeared, making it the first cookbook

written by an American for an American market. Other cookbooks followed, with increasing emphasis on the use of ingredients native to North America such as cranberries, turkey, and corn instead of products found originally in Europe. Many cookbooks were aimed at the growing middle class. Beginning about 1850, cookbooks for cook stoves instead of fireplaces appeared. While some cookbooks included recipes for the health-conscious, such as vegetarians, more were for sweet dishes that required stoves. More cakes, candies, and other treats were made for the prosperous middle and upper classes. Other examples of changing diets included less roasted and more baked meat along with fried, instead of grilled, food. Cookbooks also instructed cooks in technical matters related to stoves, such as how to maintain constant cooking temperatures by regulating the fires. Housewives also received tips on running a household according to middle- and upper-class standards and values. Much attention was given to table settings and entertaining to impress guests. Improvements in preserving foods, particularly the development of canning, enabled families with financial resources to serve a greater variety of foods at all times of the year. The first truly modern cookbook was *The Boston Cooking-School Cook Book* by Fannie Farmer, with standardized measurements and directions in the recipes, making cooking more of a science and less of an art.

An increase in the number of cooks and domestic servants employed in middle- and upper-class households was another feature of the cooking revolution in the nineteenth century. As the middle class grew in Europe and North America, middle-class households employed members of the lower classes to perform duties in their homes. The concentration of food preparation and cooking in the kitchen often kept the servants isolated from the family.

—*Timothy J. Watts*

Bibliography

- Brewer, Priscilla J. *From Fireplace to Cookstove: Technology and the Domestic Ideal in America*. Syracuse, NY: Syracuse University Press, 2000.
- Cowan, Ruth Schwartz. *More Work for Mother: The Ironies of Household Technology from the*

Open Hearth to the Microwave. New York: Basic Books, 1983.

Field, Rachel. *Irons in the Fire: A History of Cooking Equipment*. Marlborough, UK: Crowood, 1984.

Wine and World Commerce

By 1750 the trade of wine had entered into global capitalist networks, while its production still maintained distinctive regional characteristics including the application of local agricultural techniques, the cultivation of different grape varieties, and the employment of particular wood types used for barrel making. The core of wine production in Europe stretched from the Iberian Peninsula along the northern Mediterranean coast and as far north as France's Loire and Germany's Rhine River valleys. Although wine had been produced in other parts of Europe and indeed other parts of the world for centuries, it was from this core that wine entered into global trading networks. The value of luxury wines as a marker of status was sparked by concurrent demographic changes in Europe, most notably the enormous growth of town and city life, yet the majority of wine produced prior to the 1800s remained of poor quality and was destined for local markets. In the nineteenth century the rapid growth of overseas colonies and more intricate trade networks generated an increase in viticultural production around the globe and also inspired technological innovations for the aging and transport of wine as well as the improvement of its quality.

During the 1600s viticulture was introduced into various non-European locations, including Latin America and southern Africa. These vines had been planted and cultivated by European settlers destined to either profit or simply earn a living from a familiar occupation. Two centuries later, this same combination of factors, along with the sheer determination of a few individuals, helped carry the vine into other new areas, including California, Australia, and New Zealand. Interestingly, it was often the wine importers and merchants of northern Europe, particularly the Dutch and the English, rather than the wine producers of southern Europe who introduced viticulture in the colonies of Africa and the South Pacific. In North America,

German and Italian immigrants were instrumental in the early cultivation of some of today's most recognizable vineyards, including those in Napa County and Sonoma County in California. Prior to the Oriental Exclusion Act of 1882 that barred Chinese immigration for ten years, Chinese laborers, often derogatorily referred to as coolies, built many barrel cellars, caves, and wineries, many of which still stand today on the West Coast of the United States.

The turn toward global viticulture had some unexpected consequences for traditional European producers. The dreaded phylloxera, an insect that feeds off the roots and leaves of vines, was inadvertently carried from the United States to Europe via returning colonists as well as ambitious scientists and winemakers in the 1860s. Many European vineyards, especially those in France, succumbed to diseases associated with phylloxera, fundamentally changing the social and economic structure of global viticulture. The majority of European vineyards had to be expensively and painstakingly replanted with resistant American rootstocks, a process that proved impossible for many small producers. Eventually, much of the world's vine-growing areas were in some way affected by phylloxera or its variants. Many pesticides and artificial nutrients were invented to help offset the negative effects of the scourge. Today, the use of artificial chemicals and synthetic procedures in winemaking remain controversial topics.

The greatest shift in wine culture from 1750 to the early twentieth century was the significantly higher level of capital invested in the production and storage of wine. The increasing costs of vine cultivation, in addition to the making and storing of wine, led to a decline in the amount of small family and peasant producers. Much of the needed capital was provided by *négociants*, or large-scale merchants, who were not dependent on an annual yield for their labor. In return, these merchants controlled many of the winemaking processes and distribution channels. If wine was still a tenuous product in global capitalist exchange in 1750, it was most certainly firmly entrenched by the 1910s.

—Kevin Goldberg

➤ NAPA VALLEY

The integration of wine production and wine sales is often necessary for success. This combination is usually aided by certain relationships built on trust and past experience; this often comes in the form of sibling kinship. The story of brothers Jacob and Frederick Beringer, immigrants to the United States from the German city of Mainz in the 1860s, is an example of how understanding both wine production and wine sales led to success. Jacob purchased and cultivated vines in Napa Valley, California, while older brother Frederick worked in New York selling and distributing Jacob's wine across the eastern seaboard and Europe. Today, Beringer still stands as one of the most recognizable names in the wine world.

—Kevin Goldberg



Men work in a commercial wine distillery in Bordeaux, France, 1905. (Library of Congress)

Bibliography

- Brennan, Thomas. *Burgundy to Champagne: The Wine Trade in Early Modern France*. Baltimore and London: Johns Hopkins University Press, 1997.
- Pinney, Thomas. *A History of Wine in America: From the Beginnings to Prohibition*. Berkeley, Los Angeles, and London: University of California Press, 1989.
- Unwin, Tim. *Wine and the Vine: An Historical Geography of Viticulture and the Wine Trade*. London and New York: Routledge, 1991.

Food and Health—Regulating Adulterated Food

With the rise of industrialization, the commercial manufacture of food became more centralized and took place on a much larger scale than ever before. As populations shifted into urban centers, more individuals lacked the time and facilities needed to produce their own food and instead relied on mass-produced staples. Although the availability of such items was convenient and a sign of the era's increased prosperity, much commercially produced food and drink contained misleading or even harmful ingredients. The struggle to expose and prevent such food adulteration became one of the most significant milestones in public health during the late nineteenth and early twentieth centuries.

An adulterant is any substance added—either accidentally or, more commonly, intentionally—to a food or beverage that is unwanted by or hazardous to the consumer. Adulterants were used to increase weight (by bulking up or adding water), cut costs (by replacing more expensive ingredients with cheaper substitutes), or make an item more appealing (by changing its appearance, taste, smell, or texture). Water, for example, was used to dilute milk and gin, while sawdust helped enlarge loaves of bread. Cheap rye or potato flour was often substituted for more expensive wheat flour, and ground tapioca took the place of cocoa powder in chocolate. Coffee (which often contained a large percentage of ground chicory) was made darker through the addition of burnt sugar. Although such adulteration was unscrupulous, other instances posed serious health risks. Bread was artificially whitened with chalk, and spent tea leaves and coffee grounds were reprocessed using animal dung. Brewers used a plant source of strychnine to increase the bitterness of their beer and added opium to make it more addictive. Red dyes commonly used in cheeses, cayenne pepper, and candy were made with lead and mercury, while green dyes were made from copper salts. Manufacturers added sulfuric acid to vinegar to increase its acidity.

Although in Great Britain a number of laws had been passed in the late 1700s and early 1800s forbidding the inclusion of certain

harmful substances in foodstuffs, there was no reliable way to test for adulterants, so the laws were difficult to enforce. Consumers were forced to rely on the honesty of the merchant. Scientific advances during the early and mid-1800s, however, made it possible for the first time to more accurately determine the composition of food and drink. Microscopes could clearly illustrate the differences between ingredients that might appear the same to the naked eye, and chemical reactions could detect the presence of certain toxic substances. For example, hydrogen sulfide, when added to a sample of food colored with lead or copper compounds, produced a black precipitate. Similarly, adding a solution of barium chloride to a liquid such as vinegar containing sulfuric acid would result in a white precipitate.

In Britain, Frederick Accum (1769–1838) was the first to raise the alarm about the adulteration of food. A German-born chemist working in London (and also well known for his work in connection with gas lighting), Accum developed many of the chemical tests used for identifying adulterants. In 1820 he published *A Treatise on Adulteration of Food and Culinary Processes*, which highlighted the many forms of adulteration and argued that such practices should be considered criminal acts. The treatise also listed the names and addresses of manufacturers that had been convicted under existing laws for producing or selling adulterated items. His book won the author a number of enemies. Although the book sold out quickly in Britain and the United States and a German edition published in 1822 also did well, Accum's career was cut short in 1820 by a lawsuit related to the allegation that he tore pages out of books at the Royal Institution (the members of which included many prominent businessmen) and took them to his home. Amid public scandal, he returned to Germany, and his work was quickly discredited and forgotten.

The issue of food adulteration was next taken up by Thomas Wakley (1795–1862), a surgeon, member of Parliament, and founding editor of *The Lancet*, a medical weekly newsletter established in 1823. In 1851 Wakley created the Lancet Analytical and Sanitary Commission, with physician Arthur Hill Hassall (1817–1894) as its head commissioner. Between 1851 and 1854

► COCA-COLA AND THE CRIMINALIZATION OF COCAINE

Cocaine, a central nervous system stimulant derived from the leaves of the coca plant, was a popular ingredient in many patent medicines during the late nineteenth and early twentieth centuries. Physicians had noted cocaine's usefulness as an analgesic, but less reputable sources claimed that it could cure everything from flatulence to cowardice.

Whether in cigarette, powdered, or injectable form, cocaine was readily available from a wide variety of companies, including Parke-Davis (once the largest pharmaceutical company in the United States) and the Chicago-based merchandiser Sears & Roebuck. Cocaine was also mixed with wine; one brand, Vin Mariani, had as much as 7.2 milligrams of cocaine per ounce (about 30 milliliters) of wine.

Cocaine's most famous application was as an ingredient in Coca-Cola (as the first part of the drink's name indicates). Lack of regulation in the late nineteenth century and the fact that the recipe was a carefully guarded secret make it impossible to determine the exact amount of cocaine used in Coke's production, but amounts likely ranged from 0.5 to 5 ounces (14 to 142 grams) of coca leaves per gallon (3.8 liters) of syrup. This would mean as

much as 1 milligram of cocaine in each glass of soda. In 1904 the company began using only "spent" leaves, from which most of the cocaine had already been extracted. When the 1906 Pure Food and Drug Act required manufacturers to list habit-forming ingredients in their products, Coca-Cola stopped its use of cocaine. Coke does, however, still include a coca extract that contains no cocaine.

Although cocaine's addictive properties soon became clear, its gradual criminalization was due largely to the fact that it became linked with racial and class fears of the era. Sensationalist mass-media reports claimed that cocaine addiction was rife among poor blacks, laborers, and "unsavory" elements in society, who were responsible for rape, murder, and all manner of criminal activity. While the Pure Food and Drug Act simply required cocaine to be a listed ingredient, the Harrison Narcotics Tax Act (December 17, 1914) made it illegal for individuals to distribute and use cocaine. Pharmaceutical companies and doctors could still make and prescribe cocaine for medical purposes, but this would now be regulated and taxed. The ban on cocaine was not strictly enforced until the Controlled Substances Act of 1970.

—Maxine Taylor

the commission analyzed more than 2,500 samples of food and drink for adulterants. *The Lancet* published the findings in frequent reports, which showed that many common goods such as coffee, sugar, flour, tea, bread, and tobacco were adulterated. A Parliamentary Committee of Inquiry was established to investigate the accuracy of the commission's reports, and Wakley and Hassall's work led directly to the passage of the Food Adulteration Act of 1860. Although this first act had little practical impact, it was soon replaced by the Food Adulteration Act of 1872, the Sale of Food and Drugs Act of 1875, and the Food Adulteration Act of 1899. Under the guidelines of the 1872 act, the Society of Public Analysts was created in 1874 (with Hassall serving as its first president) in order to monitor the safety of foods and beverages being sold in Britain.

The United States lagged several decades behind Britain in the movement to prevent food

adulteration. Up until the early 1900s, state governments were responsible for overseeing food safety, resulting in a patchwork of regulations unenforceable across state lines. The Progressive Era's agenda of political and social reform and government regulation of business, however, primed Americans for federal legislation governing food safety. The public had been alerted to the issue of food adulteration by events in Britain as well as by the work of the U.S. Department of Agriculture's Division of Chemistry, directed by Harvey Washington Wiley (1844–1930). From 1887 to 1902, the division published a ten-part series titled *Foods and Food Adulteration*, which examined the issue in great detail. But it was Upton Sinclair's 1906 exposé *The Jungle* that proved to be the most powerful catalyst for change. Sinclair's book, meant to highlight the corrupt and exploitative nature of the Chicago meatpacking

industry, also revealed the horrible condition of the slaughterhouses and the animals killed there. Frightened by accounts of animals riddled with disease, carcasses contaminated with feces, and even workers accidentally falling into grinders, Americans demanded regulation. On June 30, 1906, Congress passed the Meat Inspection Act, which required the USDA to inspect all carcasses and slaughterhouses.

Passed on the same day as the Meat Inspection Act, the Pure Food and Drug Act had a much broader impact. It prohibited the production, sale, or interstate transport of (vaguely defined) adulterated food. The act also prohibited the sale of dangerous patent medicines and required manufacturers to list all habit-forming substances used in their products. To enforce these new measures, the Division of Chemistry—later transformed into the Bureau of Chemistry and then the Food and Drug Administration (FDA)—was given sweeping regulatory powers. The Pure Food and Drug Act later was superseded by the more comprehensive Food, Drug, and Cosmetic Act of 1938.

—Maxine Taylor

Bibliography

- Accum, Frederick. *A Treatise on Adulteration of Food and Culinary Processes*. London: Longman, 1820.
- Burnett, John. *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*. London: Thomas Nelson, 1966.
- Hassall, Arthur Hall. *Food and Its Adulterations: Comprising the Reports of the Analytical Sanitary Commission of The Lancet for the Years 1851 to 1854*. London: Longman, 1855.
- Sinclair, Upton. *The Jungle*. 1906; reprint, New York: Simon and Schuster, 2004.
- Young, James Harvey. *Pure Food: Securing the Federal Food and Drugs Act of 1906*. Princeton, NJ: Princeton University Press, 1989.

Taverns and Saloons

In the early eighteenth century the tavern or saloon, as an establishment primarily for drinking and socializing separate from other functions such as lodging, became a feature of urban and rural landscapes throughout the Western world. The rise of the tavern, particularly when

combined with the social and demographic changes attendant to immigration, colonialism, and industrialization, was a source of both anxiety and exuberance, and such establishments would become places—both literally and figuratively—of debate.

William Hogarth's famous prints *Gin Lane* and *Beer Street* (1751) capture both the centrality of drinking establishments to everyday life and the anxieties they provoked: while beer seemed to stimulate congeniality, industry, and health, gin—a relatively new invention at the time—inspired dissipation, sloth, and madness. Meanwhile, many European colonial authorities saw taverns, both in port cities at home and overseas, as sites of social disorder and rebellion, a fear that proved true in some American colonies, where they played central roles as gathering places for revolutionaries.

Debates about saloons and taverns and the social disorder they allegedly created continued throughout the nineteenth century, reflecting broader conflicts along lines of race, class, ethnicity, religion, and gender, and were expressed in movements for temperance (the controlled and moderate use of alcohol, including laws forcing taverns to close on Sundays) and prohibition (the outright banning of alcohol). White middle- and upper-class women in Britain and America, for example, linked temperance drives and other actions to broader campaigns for suffrage and abolition, with the result that prohibition came to be seen as a “women’s” cause, while also focusing on the “overindulgence” of working-class people. In the cities of North America and elsewhere, the growing presence of Catholic immigrants from places like Ireland and Germany, with strong drinking traditions, meant that temperance, nativism, and “anti-Popery” went hand in hand, while on the frontiers of settlement, conflicts between the “saloon crowd” and the forces of “law and order” often shaped discourses and policies regarding the control of aboriginal peoples and others.

Long-standing anxieties about taverns and saloons, along with the rising power of centralized nation-states and movements for social reform such as Progressivism, created the ideal conditions for prohibition in the early twentieth century, particularly in parts of the world

dominated by Protestantism. In the United States, many states began enacting prohibition after 1900. In part due to the efforts of national organizations such as the Anti-Saloon League of America, Congress passed an amendment to the U.S. Constitution in 1917 to make prohibition the law of the land (the Eighteenth Amendment, which was ratified in 1919 and went into effect in 1920). Simultaneously, many Canadian provinces enacted similar laws, while in Britain alcohol consumption was intensively regulated through rationing, taxation, and restrictions on pub hours. In Scandinavia, measures were taken ranging from strict controls on sales and imports to outright prohibition. Most national prohibition schemes were abandoned within a generation, most notably in the United States, where another constitutional amendment in 1933 repealed prohibition, acknowledging that it had failed to do anything but fuel an enormous black market of moonshine and speakeasies. Nonetheless, many local jurisdictions would continue to place restrictions, including complete bans, on taverns and saloons throughout the twentieth century.

—*Coll Thrush*

Bibliography

- Blocker, Jack S., Jr., David M. Fahey, and Ian Tyrrell, eds. *Alcohol and Temperance in Modern History: An International Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2003.
- Dillon, Patrick. *Gin: The Much-Lamented Death of Madam Geneva*. Boston: Justin, Charles, 2003.
- Rorabaugh, W. J. *The Alcoholic Republic: An American Tradition*. New York: Oxford University Press, 1979.
- Tyrrell, Ian. *Woman's World/Woman's Empire: The Woman's Christian Temperance Union in International Perspective, 1880-1930*. Chapel Hill: University of North Carolina Press, 1991.

The Temperance Movement in the United States

During the nineteenth century, a movement developed to eradicate the negative effects of alcoholic beverages on individuals and society. Known as the temperance movement, its followers' belief in the destructiveness of alcohol found outlet in a loose association of organizations

beginning in the 1820s and culminating in the United States in 1919 with the ratification of the Eighteenth Amendment to the Constitution (Prohibition).

Benjamin Rush (1745-1813), one of the founding fathers of the United States, in 1784 became one of the first significant advocates of temperance in a newspaper editorial titled "An Inquiry into the Effects of Spirituous Liquors on the Human Body and the Mind." He later published the "Inquiry" in book form, eventually selling more than 170,000 copies. The body and spirit were not wholly disconnected, however, and Rush's "Inquiry" included a so-called moral thermometer that gauged the negative effect of spirits on every aspect of the drinker, no matter where in the world he did his drinking.

Temperance organizations in the United States began in Saratoga, New York, in 1808, and then spread through New England. By the 1830s, local chapters of temperance organizations numbered in the thousands. The Ulster Temperance Society, founded in Ireland in 1829, was the first significant European organization to oppose alcohol. In 1832, seven English workers signed a pact against the use of liquor. Their influence spread, and three years later the British Association for the Promotion of Temperance began. On the Continent, temperance organizations gained influence in the Scandinavian countries by the late 1830s.

The scope of temperance organizations evolved over time. At first, their focus was personal, with members pledging not to drink alcohol. In the 1840s, however, groups began refusing alcohol to others. Finally, advocacy of an alcohol-free society and laws to make that society possible became the temperance goal. Advocates wanted social reform, as did many others in the new industrial society. One of the most common early tactics was the temperance pledge. Local and national organizations in the United States and Britain encouraged citizens to sign prefabricated pledges promising to abstain from alcohol. Signing was far easier than abstaining, however, and the pledges were often used as publicity tools for politicians or protective fronts for drinkers.

As the crusade for abstinence from alcohol grew as a result of urbanization and improved

communication, many different groups and individuals took part, some affiliated with organized temperance societies and others on an individual basis. In Britain, artist George Cruikshank authored a series of books on the dangers of alcohol, including *The Bottle* in 1847 and *The Drunkard's Children* in 1848. His illustrations, along with those of the eighteenth-century artist William Hogarth, depicted the bleak life of those who imbibed. Theobald Matthew, a Catholic priest, led thousands in Ireland to the temperance cause. In the United States, the crusading Carry A. Nation often took violent measures in saloons across the country in an effort to persuade Americans of the dangers of liquor. Various religious groups became involved as well. In Europe and the United States, abstinence from alcohol often was portrayed as a measure of Protestant decency, a counter to the Catholic vulgarity of drink. Catholics, however, also were ardent temperance advocates in many parts of Britain and the United States; groups such as the Pennsylvania Catholic Total Abstinence Society preached temperance as a religious duty.

Probably the most notable group of temperance advocates, however, were women—particularly U.S. women. In addition to Carry A. Nation, the prominent feminists Susan B. Anthony and Frances Willard also took stands against alcohol. Though originally a male-dominated endeavor, temperance slowly came under the purview of women. In 1874 in Cleveland, Ohio, the Woman's Christian Temperance Union (WCTU) was founded, followed in 1895 by the Anti-Saloon League. Male drunkenness, which produced the bulk of temperance grievances, was considered a particular problem for females due to their place in society. Men were perceived as the breadwinners, and in a system in which women were dependent on men, women took a special interest in the problem. Additionally, in an age in which women were lauded as paragons of domesticity, temperance offered many a route to the public sphere that otherwise may have been withheld from them.

Perhaps the most significant mass movement of temperance advocacy (other than established organizations such as the WCTU) was the Woman's Crusade. In 1873 and 1874,

U.S. women engaged in nonviolent direct action against liquor distillers, transporters, and retailers through petitions, demonstrations, and prayer vigils. Their success led to state and local legislation as the groups sought aid from the religious community. Many women used the temperance movement as a springboard into the suffrage movement.

The WCTU gained an international membership in the early 1880s, leading to the formation of the World Woman's Christian Temperance Union in 1883. The development of the WCTU into a global entity was indicative of the smaller world created by the better communications of the Industrial Revolution. The Order of the Good Templars, founded in New York in 1851, had an international membership. Later, in 1909, the International Prohibition Confederation began in London. Formed from an international conference on prohibition, the confederation's membership included representatives from Europe, the United States, Canada, Australia, India, and various nations in both Africa and South America. Eliza Daniel Stewart, a leader in the Woman's Crusade of the 1870s, used her success to publicize a speaking tour that took her across the United States and, in 1876, to Britain, where her enthusiasm led to the British Woman's Temperance Association.

The country of Stewart's birth had been actively engaged in the temperance debate for almost a hundred years at the time of her trip to Britain. The American Temperance Society had more than 1 million members before the Civil War. In 1851, Maine prohibited alcohol sales and consumption, making it the first dry state. Though the temperance movement ultimately abated, its legacy remained. As citizens in Europe and the United States adapted to the changing society, cultural apprehension somewhat dissipated, and U.S. prohibition officially was repealed by the Twenty-first Amendment in 1933. Individual dry counties across the United States, however, still retain the legacy of the temperance movement by banning the sale of alcohol. Most of them are located in rural areas, as those in the country attempt to reclaim what those in the burgeoning cities of the Industrial Revolution never could.

—Thomas Aiello

Bibliography

- Aiello, Thomas. "Temperance Movement." In *Encyclopedia of the Age of the Industrial Revolution*, Vol. 2, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.
- Bordin, Ruth. *Frances Willard: A Biography*. Chapel Hill: University of North Carolina Press, 1986.
- Bordin, Ruth. *Women and Temperance: The Quest for Power and Liberty, 1873–1900*. Philadelphia: Temple University Press, 1981.
- Harvey, Bonnie Carman. *Carry A. Nation: Saloon Smasher and Prohibitionist*. Berkeley Heights, NJ: Enslow, 2002.
- Lambert, W. R. *Drink and Sobriety in Victorian Wales, 1820–1895*. Cardiff: University of Wales Press, 1983.
- Shiman, Lilian Lewis. *Crusade against Drink in Victorian England*. New York: St. Martin's Press, 1988.
- Tyrrell, Ian R. *Sobering Up: From Temperance to Prohibition in Antebellum America, 1800–1860*. Westport, CT: Greenwood Press, 1979.

Temperance Movement in Great Britain

As elsewhere in Europe, the drinking of alcohol in the form of wine, beer, cider, and various distilled spirits in England has had a long history. Although its excessive use had attracted its share of critics, its use was generally accepted and tolerated as a part of life. From the 1690s through the 1820s the British government even actively promoted gin production as a way to utilize surplus grain and raise revenue. Only in the nineteenth century did temperance become a social cause whose adherents sought to limit the amount of alcohol consumed within the general community, especially among working-class males, or ban its use altogether.

The temperance movement's origins can be traced back to the eighteenth century. English authorities took steps to limit excessive gin drinking among the poor of London and other cities by passing a series of laws between 1729 and 1751 that raised taxes on gin and sought to regulate its sale in the many thousands of cheap gin mills that had sprung up in the early 1700s. In the late 1700s the writings of the Scottish-trained American physician Benjamin Rush drew attention to the health dangers of alcohol

consumption. Read on both sides of the Atlantic, his "Inquiry into the Effects of Ardent Spirits upon the Body and Mind" challenged the traditional view of alcohol as something good for one's health and suggested that alcohol abuse was responsible for epilepsy, dropsy (a buildup of fluid in the body), mental disorders, liver failure, apoplexy (strokes), and many social ills.

In the nineteenth century the temperance movement emerged as one of several reform movements that also included women's suffrage, abolitionism, and improving housing, education, and labor conditions. Like these other reform movements, temperance drew support both from evangelical Christians, who saw alcohol abuse as a threat to salvation, and utilitarian reformers, who saw it as a threat to the general good of society.

The first temperance organizations began to appear in Ireland, Scotland, and northern England in the 1820s and from the beginning were marked by disagreements and tensions. Temperance supporters from the middle and upper classes, who dominated these early organizations, often struggled to view those they helped, usually the poor, as equal. By the 1840s leadership began to shift to the working class, often Baptists and Methodists outside the established Anglican Church. Temperance's definition was also bitterly contested. At first the goal was reasonable alcohol use, but unity was destroyed by those who declared all use sinful, including sacramental wine. In 1832 the tradesman Joseph Livesey, originator of teetotalism (total abstinence), started a teetotal group. As working-class teetotalers gained prominence within the movement, many moderates came to view them as embarrassing fanatics.

Regionalism also furthered disunity, as northern English supporters tended toward more ardent teetotalism than did southerners. Northerners feared control by London, giving rise to two national temperance societies: the British Association for the Prevention of Intemperance, based in the north, and the National Temperance Society, based in the capital. Local temperance societies often split over how explicit antidrink pledges should be, dividing into long-pledge and short-pledge groups. Thomas Swindlehurst, a working-class temperance leader known for his unpolished style, in

WOMEN IN TEMPERANCE

Catherine Booth, who worked with her husband in the 1860s in organizing the Salvation Army, is one of the more prominent examples of women's involvement in the temperance movement. However, women had long before been involved in temperance through women's auxiliaries to local and national men's societies. Their work with children's church societies was vital in transmitting temperance to the next generation. Most importantly, however, women found in temperance, suffrage, and abolition movements opportunities to hone leadership skills, such as organizing meetings, publicity, public speaking, and advocacy journalism. English and American women were instrumental in temperance becoming international. Margaret Parker and Margaret Lucas both became head of the British Women's Temperance Association, founded in the 1870s. Women were, like men, unable to prevent group schism. In 1906 Isobel Somerset, head of the World's Woman's Christian Temperance Union and the British



A strong advocate of temperance and charitable work for the poor, Catherine Booth co-founded the East London Christian Mission with her husband William in 1865. It became the Salvation Army in 1878. (Harold Begbie. The Life of General William Booth, 1920)

Women's Temperance Association, was forced out because she supported governmental regulation rather than prohibition. Eventually women held office in temperance groups formerly dominated by men, but this did not cause women's groups to disband.

—J. Elton Smith

the 1830s and 1840s took temperance's message to the destitute through emotionally ardent appeals and grandstanding events in the streets and in rented halls. These events were designed to draw the attention of the poor to teetotalism as the only escape from the misery caused by drunkenness. Brewers, formerly welcome in temperance as responsible-use advocates, were condemned by teetotalers.

Young people had their own temperance societies, usually auxiliaries of adult ones. Many youths joined Bands of Hope, founded in 1847 by adult temperance workers, or other religious or secular temperance clubs. Anglicans set up special forward-looking programs, meeting prisoners on discharge and helping them understand alcohol's links to criminality. Women were important not only in organizing children's temperance work and assistance for prisoners but also in setting up their own organizations.

The Salvation Army, an English religious organization that became international, was founded in the 1860s by William and Catherine Booth in London's slums. Originally not quasi military, it took that form in the 1870s with officers,

marching bands, and a military style of strict discipline. The Salvation Army won gradual acceptance, as many in England recognized its faithfulness in helping persons devastated by alcohol. Hostility between and within denominations occurred over using sacramental wine and whether teetotalism should be mandatory for members and ministers. Methodism suffered schisms over this question. In 1888 the Church of England officially rejected grape juice at communion, although other denominations required it.

The 1870s saw further parliamentary efforts to control alcohol's use. An 1871 licensing law for stricter regulation of alcohol sales sponsored by cabinet member H. A. Bruce was blocked by alcohol special interests, but in 1872 some licensing reform passed. Controversial among temperance supporters was whether government should enact prohibition or heavily regulate usage through stricter licensing or Sunday closing laws and whether pubs losing licenses deserved compensation. The prohibition strategy was widely unpopular in England. Member of Parliament Wilfrid Lawson, director of the United Kingdom Alliance, helped bring temperance

issues before Parliament. The National Temperance Federation, formed in 1884 and chaired by member of Parliament W. S. Caine, failed in coordinating all temperance organizations.

The Liberal Party's 1895 platform supported local choice whether to adopt prohibition, but antiprohibition sentiment fueled Liberal defeat. However, a 1902 law made it illegal to sell alcohol to minors. Temperance continued to distance itself from mainstream British society as secularism grew in influence. Temperance became more identified with sectarian fanaticism. With World War I the movement declined,

although in America prohibitionist temperance had yet to reach its high point.

—J. Elton Smith

Bibliography

- Hibbert, Christopher. *The English: A Social History, 1066–1945*. New York: Norton, 1987.
- Shiman, Lilian Lewis. *Crusade against Drink in Victorian England*. New York: St. Martin's, 1988.
- Tyrrell, Ian. "Women and Temperance in International Perspective: The World's WCTU, 1880s–1920s." In *Drinking: Behavior and Belief in Modern History*, edited by Susanna Barrows and Robin Room. Berkeley: University of California Press, 1991.

■ Introduction: Leisure in the Industrial Era

The Industrial Revolution, with its accompanying development of transportation and communication networks, encouraged urbanization, the concentration of work forces and production, and the commercialization of culture. The developing order lent new possibilities for leisure within and across social classes and within the private and public spheres. Throughout the industrial era, older leisure forms survived and slowly transformed, such as medieval fairs in Europe, while increased literacy offered new audiences for the evolving print culture (newspapers, magazines, novels, and libraries), and sports moved from recreation to professional spectator-based leisure. Another constant: elites' efforts to contain unruly entertainment venues and activities. The spread of department stores and of consumer possibilities also changed general attitudes toward leisure and its value.

In earlier centuries, workers' perceived natural tendency toward "idleness" and dissipation enforced notions that poverty and hunger were useful spurs to production, while idleness should be punished or frowned upon. Yet Enlightenment and romantic thought, as offered, for example, in the pedagogical theory of Jean-Jacques Rousseau (expressed in his novel *Émile*) and in the early-nineteenth-century theory of Friedrich Fröbel (founder of the Kindergarten

movement in Germany), stressed human potential and the value of allowing citizens to better themselves. Laborers, certainly, had no doubt as to the benefits of leisure. Two major objectives of the labor movement in the 1800s across the industrial world were a ten-hour workday in the early nineteenth century and then an eight-hour workday after midcentury. As the chorus of a popular 1878 labor song put it: "Eight hours for work, eight hours for rest, eight hours for what we will."

Throughout the nineteenth century, whether functioning within a Christian moral context (particularly with the temperance movement to limit or ban alcohol) or from the basis of the republican philosophy that an informed and enlightened citizenry could benefit a society as a whole, elites sought to encourage temperate living habits, education, and moral uplift. General education, popularized science, and moral entertainments were seized upon as methods to maintain a virtuous populace. The lyceum movement, which spread from Scotland to France and North America, encouraged laborers ("mechanics") and office workers to attend lectures, borrow books from lending libraries, and, in general, educate themselves. Much of this education focused on the sciences.

In the 1830s and 1840s in cities that were industrial and commercial centers, galleries of

popular science opened to the public. Notable examples were the Adelaide Gallery and the Polytechnic Institution in London, the Royal Victoria Gallery of Practical Science in Manchester, and the longer-established Peale's Museum in Philadelphia. These museums featured dazzling displays of technology, products of industrial arts, electric eels, "oxyhydrogen projecting microscopes," the firing of steam guns, lectures, and much else. Beginning with the Crystal Palace Exposition of 1851 in London, world's fairs became popular destinations that offered educational opportunities, displays of national pride, a narrative of the march of civilization, and surrounding amusement zones. Inside the expositions were gardens, fountains, halls filled with machinery, and national exhibits and products of the industrial and fine arts.

Older public venues, including fairs that had survived for centuries, remained popular, such as St. Bartholomew's Fair in London, where fairgoers at the turn of the nineteenth century could see waxworks, "human freaks," animal exhibits, and exhibitions of glass blowing and clockwork automatons or could enjoy rides. Steamships and rail lines increased the crowd size of some traditional fairs such as the fair at Greenwich, while electric streetcar companies often developed beer gardens, pleasure grounds, or amusements at the end of their routes to increase weekend ridership.

Many reformers in Europe and the United States fretted over the possibly harmful effects of industrial labor and urban life and regarded physically active leisure as a corrective to social ills. The gymnastics movement that began in Germany as the *Turnverein* in the early nineteenth century encouraged good health and fitness as a nationalistic blow to possible physical and moral degeneracy. Friedrich Ludwig Jahn's *Die Deutsche Turnkunst* (1816) influenced educators not only in Germany but also in Switzerland, North America, and elsewhere, propelling the development of the new sport of gymnastics. In the United States, educator Catherine Beecher also promoted the value of exercise in her *Course of Calisthenics for Young Ladies* (1832). Friedrich Fröbel's kindergartens in Germany also emphasized the importance of movement and dance to young students.

As an antidote to stunted urban vistas, proponents of the rural cemetery movement in the United States, beginning with the creation of Mount Auburn in 1831 in Massachusetts, sought to make cemeteries natural refuges for picnics and strolls. Public parks proponents, such as Frederick Law Olmsted, further promoted the values of nature viewing as a preventative against social ills in such arenas as Central Park and Prospect Park in New York City and Delaware Park in Buffalo, New York. The playground movement of the late nineteenth century also stressed the value of exercise and sports to the impoverished. Organized sports generally spread from privileged circles to wider participation by lower classes and also developed into large-scale spectator sports, such as cricket in Britain and boxing and baseball in the United States.

Throughout the nineteenth century, middle- and upper-class women had few opportunities for escape into the larger public realm. In the late nineteenth century, department stores, as an adjunct to parlor culture, provided one new venue for middle-class women to roam, leaving their children in nurseries at the department stores while they took in a concert or art exhibit and viewed the latest fashions. Industrial innovation also dovetailed neatly with the interests of suffragettes and health reformers to fuel the bicycle craze of the 1880s and 1890s throughout Europe and North America. Mass-produced bicycles allowed new freedom of movement as did clothing reform, as women who decried the harmful effects of the wearing of tight corsets took to wearing "bloomers" in public on their rides. While some reformers seized on the healthfulness of the bicycle craze, preachers denounced Sunday cyclists who took to the roads instead of attending services.

Reading material also was mass-produced and retailed to different social classes. Ladies' magazines taught the niceties of parlor culture and emphasized the importance of a woman's role in the home and the value of a well-stocked household and parlor, adding taste distinctions to shopping. Dime novels as well as magazines that published stories and serial chapters gained enormous circulations in North America and Europe. U.S. dime-novel publishers such

as Street and Smith assigned plot sketches and characters to their stable of authors, the more adept of whom could write two 40,000-word novels a week; the resulting books were then distributed to newsstands in first runs of about 50,000 copies.

By the end of the nineteenth century and in the early twentieth century, the burgeoning commercial culture was giving way to what historians call mass culture, in which standardized products could be sold to enormous anonymous segments of the public. Prime examples include mass-circulation newspapers, sheet music for popular songs, Edison wax cylinders for phonographs, and the developing music halls and vaudeville theater circuits throughout the industrial world that offered urban audiences smoothly programmed and standardized nights of entertainment.

Spectacles—that is, mass theatrical productions in which audiences were dazzled by the sheer scale of productions and backstage logistics—also emerged. These included Wild West shows, circuses, and renderings of historical spectacles such as the destruction of Pompeii. Electrification and displays of lit buildings at world's fairs and on city skylines as well as the flashing and streaming electrical displays of the “Great White Way” in New York added new possibilities. On the occasion of the opening of the Paris world exposition of 1889, one observer remarked that the entire city of Paris had become a “permanent exposition.” As this culture of the spectacle emerged, staged dramas and exhibitions slowly gave way to electrical media, whether in the kinoscope parlors of the late 1890s or the storefront movie theaters (or “nickelodeons”) that emerged in the 1900s and slowly became an acceptable middle-class venue.

—Fred Nadis

Bibliography

- Allen, Robert. *Horrible Prettiness, Burlesque and American Culture*. Chapel Hill: University of North Carolina Press, 1991.
- Cross, Gary S. *A Social History of Leisure since 1600*. State College, PA: Venture Publishing, 1990.
- Hatcher, John. “Labour, Leisure and Economic Thought before the Nineteenth Century.” *Past & Present* 160 (August 1998): 64–115.

Schwartz, Vanessa R. *Spectacular Realities: Early Mass Culture in Fin de Siecle Paris*. Berkeley: University of California Press, 1999.

Walton, John K., and James Walvin, eds. *Leisure in Britain, 1780–1939*. Manchester, UK: Manchester University Press, 1983.

Board Games and Puzzles in Europe and the United States

Over the past 150 years, games have served multiple purposes. Prior to the nineteenth century, board games were mainly played by adults. In the 1800s, however, family-focused board games developed and gained popularity as many Europeans and Americans enjoyed increased literacy and leisure time. Board games and puzzles provided children and families with opportunities for fun, entertainment, and learning. Game playing allowed for time spent with family and friends and promoted the values and ideals of society. The board games and puzzles that developed throughout the nineteenth century were more easily manufactured and mass-produced and became more affordable and available to the middle classes.

For most of the nineteenth century, leisure time increased for middle-class families as much of Europe and the United States became increasingly urban. The home became the center for entertainment and learning. Many store-bought games emphasized literacy and typically involved a board on which game pieces or counters were moved across, on, and off using dice, cards, or spinners. By the 1870s games were more easily manufactured, and many middle-class families were able to purchase mass-produced board games and jigsaw puzzles. Early board games were intended to teach moral values and reinforce gender roles. *Mansion of Happiness*, invented by the W. & S.B. Ives Company in 1843 and the first board game sold in the United States, re-created real-life situations, depicted vices and virtues, and rewarded the good deeds and punished the bad.

In the latter half of the nineteenth century and in the early twentieth century, board games also focused on themes of capitalism and materialism. In *The Checkered Game of Life*, created by Milton Bradley in 1860, players move through

➤ JIGSAW PUZZLES

When European mapmakers pasted maps onto pieces of wood and cut them into small pieces in the 1760s, they likely did not realize that they were inventing one of the most popular toys ever. London mapmaker John Spilsbury was the first to commercialize jigsaw puzzles in the 1760s.

Jigsaw puzzles are games in which a picture is assembled of interlocking pieces. The object is to put the pieces of the puzzle back together, reforming the picture. The name was given because the puzzles were made by painting pictures on wood and then cutting randomly shaped pieces with a jigsaw cutting tool. The first jigsaw puzzles were maps intended to teach children geography and were soon popular in Britain (1760s), France and the Netherlands (1770s), and Germany and Austria (1820s). Map puzzles appeared in North America in the 1850s.

By 1900 jigsaw puzzles were created and sold for both children and adults, and by 1908 the puzzles were a massive craze in the United States. Jigsaw puzzles were expensive due to the labor involved in making them. In 1908, for example, a 500-piece puzzle typically cost \$5. Parker Brothers, the popular game maker, began selling puzzles in 1887. The puzzles were so popular that the company devoted an entire factory to their production in 1909.

—Kim Kennedy White

mundane stages of life such as marrying, getting a job, having a family, and making money. Milton Bradley's *The Game of the District Messenger Boy* (1886) taught that hard work and good deeds can allow anyone to succeed.

As more west Europeans and Americans traveled during the late nineteenth century, travel games such as *Around the World* (1873) and *The McLoughlin Brothers' Game of Round the World* (1890) gained popularity. In addition, new games were created through the adaptation of older games. The ancient games of Snakes and Ladders and Ludo from India were repackaged and introduced to English families in the latter part of the nineteenth century and are more commonly known as Chutes and Ladders. The game of Halma, which was invented by an American surgeon in 1883, was inspired

by Hoppity, an English game from 1854, and later became Stern-Halma in 1893 in Germany, better known as Chinese Checkers. The present-day game of Othello also got its start in the late nineteenth century, with two English inventors claiming to be the creators; Lewis Waterman claimed to have created the game of Reversi in 1888, but John W. Mollet claimed that Othello was based on his game of Annexation that he invented in 1870.

The mid-nineteenth century saw the beginnings of game-manufacturing companies as the industry took off in popularity and sales. The Milton Bradley Company opened its doors in 1860 in Springfield, Massachusetts. Its founder, Milton Bradley (1836–1911), is credited with pioneering the game board industry. The Parker Brothers also got their start in the nineteenth century. As a teenager, George Parker (1866–1952) invented and successfully sold a game called Banking in 1883 and joined his brother Charles in establishing Parker Brothers in 1888 in Salem, Massachusetts. Their initial inventory featured 29 games, most of which were invented by George Parker.

By 1900 more than 500 game companies were in business, with an annual market of \$20 million. Game manufacturing continued to explode with the creation of other types of games and puzzles, such as the crossword puzzle, invented by Arthur Wynne in 1913, and the jigsaw puzzle craze of the early twentieth century.

—Kim Kennedy White

Bibliography

- Anderson, James M. *Daily Life during the French Revolution*. Westport, CT: Greenwood, 2007.
- Chudacoff, Howard P. *Children at Play: An American History*. New York: New York University Press, 2007.
- Frost, Ginger S. *Victorian Childhoods*. Westport, CT: Praeger, 2009.
- Lepore, Jill. "The Meaning of Life: What Milton Bradley Started." *New Yorker* (May 21, 2007): 38–43.
- Orbanes, Philip. *The Game Makers: The Story of Parker Brothers from Tiddledy Winks to Trivial Pursuit*. Boston: Harvard Business School Press, 2004.
- Parlett, David Sidney. *The Oxford History of Board Games*. Oxford: Oxford University Press, 1999.
- Volo, James M., and Dorothy Denneen Volo. *Family Life in 19th-Century America*. Westport, CT: Greenwood, 2007.

Music Halls in Britain and France

The rise of the music hall during the late Victorian and Edwardian periods in Britain and during the Belle Époque (Beautiful Era) period in France provided the masses with various entertainments. Music halls, similar to vaudeville in the United States, combined elements of saloons, pubs, and theaters and showcased a variety of acts that included everything from opera, folk songs, and popular dance to ballet, comedy, and sing-a-long musical sketches.

Music halls differed from theater in that patrons could sit at tables and drink alcohol and smoke during the show. Famous performers of the time appeared on music hall stages such as Marie Lloyd (1870–1922), one of the best-known singers and comediennes, who began her career in music halls as a teenager. At the turn of the century, music halls also provided adult entertainment and even more exotic and outrageous acts. The British music halls appealed to a mass audience and, in particular, the lower classes, while in France the music halls were open to all social classes but were particularly popular with the aristocracy.

Charles Morton opened the first music hall, the Canterbury, in 1852 in the Waterloo area of London. A competing music hall, the Weston, opened in 1857 in the West End of London where, during the 1850s and 1860s, other music halls began opening and quickly gained popularity. Popular music halls in the West End included the Alhambra (1860), the Oxford Music Hall (1861), and the London Pavilion (1861). At the end of the nineteenth century, music halls had gained popularity in the suburban areas of England and had spread to Scotland and Ireland.

On January 22, 1907, the “Music Hall War” broke out in London because of labor disputes among music hall performers, stage hands, and managers, causing a two-week strike. Many of the music hall “stars” were unaffected financially by the strike but came out in support of those employees in less lucrative positions. Most of the employees’ demands were accepted in arbitration, such as a minimum wage and maximum working hours.

Music halls also gained enormous popularity during the Belle Époque in France, a golden age of peace and prosperity in which arts,

THE FATHER OF THE HALLS

Charles Morton was born in East London in 1819 and is known as the “Father of the Halls.” Inspired by the early music and supper rooms, he built and managed the first of the great music halls, the Canterbury Music Hall, in 1852. The 1,500-seat hall showcased music, comedy, and other variety acts. Morton, a savvy businessman, coined the term “music halls” and popularized them through aggressive marketing and advertising in *The Times*. He increased hours and admitted women in order to gain wider appeal, and in 1861 he opened his second theater, the Oxford, in competition with another great music hall of London, the Weston Music Hall. Morton was responsible for successfully reviving and managing several music halls and theaters before his death in 1904.

—Kim Kennedy White

entertainment, and leisure flourished. The first music hall, the Fantasies Oller, was opened by Joseph Oller in Paris in 1875. The three best-known music halls of the period were the Moulin Rouge, the Casino de Paris, and the Folies Bergère. The Moulin Rouge opened its doors in 1889, and while it was known for the cancan dancers, the hall provided entertainment in the form of lavish productions and prominent singers, dancers, and comedians.

Popular music hall songs during World War I were patriotic and reflected the war effort. Music hall audiences sang songs such as “Keep the Home Fires Burning” (1914), “Pack Up Your Troubles” (1915), and “It’s a Long Way to Tipperary” (1914). In 1914 music halls began to decline as other forms of entertainment gained popularity, and licensing restrictions required a separate bar, as drinking was banished from the auditorium. Today few historic music halls remain, as many were claimed by fire and bombing during the world wars or were demolished, to be replaced by new buildings and businesses.

—Kim Kennedy White

Bibliography

Carter, Alexandra. *Dance and Dancers in the Victorian and Edwardian Music Hall Ballet*. Aldershot, UK: Ashgate, 2005.

- Earl, John. *British Theatres and Music Halls*. Buckinghamshire, UK: Shire, 2005.
- Maloney, Paul. *Scotland and the Music Hall, 1850–1914*. New York: Manchester University Press, 2003.
- Pessis, Jacques. *The Moulin Rouge*. New York: St. Martin's, 1990.
- Russell, Dave. *Popular Music in England, 1840–1914: A Social History*. New York: Manchester University Press, 1998.

World's Fairs

World's fairs, also called international exhibitions or international expositions, became popular venues in the mid to late nineteenth and early twentieth centuries. The fairs were opportunities for nations to celebrate the achievements of the Industrial Revolution as well as to commemorate historic events. Although the holding of commercial fairs, often in conjunction with holidays, dates back to medieval times in Europe, the world's fairs of the nineteenth century and later were of a size and scale unknown until that time. Furthermore, they were truly international, as represented in their exhibits, exhibitors, and amusements.

The first major world's fair was the Great Exhibition of the Works of Industry of All Nations, held in Hyde Park in London in 1851. Commonly called the Crystal Palace after the popular designation given to its famous iron and glass hall, the exhibition drew 6 million visitors. A series of subsequent exhibitions was held in Dublin, Ireland (1853); New York City (1853–1854); Paris (1855); London (1862); and Dublin (1865). The 1867 Exposition Universelle, on the Champ de Mars in Paris, instituted a number of features that thereafter became elements of many world's fairs. These included national pavilions, ethnic restaurants, an amusement area, and special gardens and waterways. The Paris exposition had over 100 national pavilions financed by individual nations themselves, ranging from Swiss chalets to English lighthouses to Islamic mosques. There was a working model of the Suez Canal, boat rides along the Seine River, and sightseeing trips aboard a double-decker balloon.

Vienna held a major exhibition, the Weltausstellung, in 1873 along the Danube River. Its

main building was over a half mile (0.8 kilometers) in length, crossed by 16 transepts and surmounted by a huge cast-iron dome 320 feet (97.5 meters) across and 270 feet (82 meters) high, affording visitors a view of the grounds and the city. Crowds, however, proved disappointing, totaling 5 million people. Santiago, Chile, hosted the Exposición Internacional in 1875, and Cape Town, South Africa, held the South African International Exhibition in 1877, but these were eclipsed by the 1876 Centennial Exhibition in Philadelphia, celebrating the 100th anniversary of the birth of the United States. The Philadelphia exposition, occupying 236 acres (95.5 hectares) in Fairmount Park, featured national pavilions (such as a British half-timbered building), ethnic restaurants, and exhibits of new inventions including the Westinghouse air brake and Edison's telephone. Other major exhibitions followed: Paris (1878), Sydney (1879–1880), Melbourne (1880–1881, 1888–1889), Amsterdam (1883), Calcutta (1883–1884), New Orleans (1884–1885), London (1886), Glasgow (1888), Brussels (1888 and 1897), Barcelona (1888), and Antwerp (1885 and 1894).

The 1889 Exposition Universelle in Paris, celebrating the centennial of the French Revolution, was made famous by the Eiffel Tower. Over 32 million visitors attended the Paris fair, held at the Champ de Mars as well as along the south bank of the Seine. The massive Palais des Machines was an engineering marvel, constructed of steel and glass with a 375-foot (114-meter)-wide central aisle. The 1893 Columbian Exposition in Chicago, held one year late but celebrating the 400th anniversary of Columbus's voyage to the New World, attracted over 27 million visitors. Carved out of swampy land in Jackson Park along Lake Michigan, the site of the fair was designed by noted landscape architect Frederick Law Olmsted. The gleaming Beaux Arts buildings of this "White City" featured electric lights that dazzled evening visitors, as did special exhibits by Westinghouse and General Electric. An electric railway and a movable sidewalk shuffled visitors throughout the site. The contiguous Midway Plaisance featured sideshows and exhibits including the belly dancing of Fahreda Mahzar, known to the world as "Little Egypt," and 3,000 nationals residing in the Midway's

ethnic villages. The largest of these villages was the German one, which occupied 17,000 square feet (1,580 square meters) and was shipped to Chicago from Germany in 65,000 pieces. It featured a sixteenth-century town, complete with a moated castle, a church, houses, an inn, and a town hall. Of special interest was the mammoth Ferris-wheel, 250 feet (76.2 meters) in diameter and carrying 1,440 people. At Chicago and other fairs, there were also scholarly ethnological exhibits by anthropologists; however, these were often overshadowed by the amusement sections.

In 1900 Paris hosted the Exposition Universelle, with its Art Nouveau emphasis. Five thousand multicolored incandescent lights as well as a Spirit of Electricity driving a chariot with multicolored flames illuminated the night sky. In addition, an annex at Vincennes hosted the first Olympic Games outside of Greece. The Paris exposition set a new attendance record of over 48 million people. The 1901 Pan-American Exposition in Buffalo, New York, featured more than 200,000 electric lights to illuminate its buildings; however, the assassination of U.S. president William McKinley on its grounds cast a gloom from which it could not escape.

The 1904 Louisiana Purchase Exposition in St. Louis, Missouri, held one year after the centennial of the Louisiana Purchase, was mammoth, occupying 1,272 acres (515 hectares), 15 major exhibit halls, and a total of 1,576 buildings. The fairgrounds were so large that visitors traversed them on 13 miles (21 kilometers) of railways as well as by boat. An amusement section known as the "Pike" was home to ethnic villages and twice-daily Boer War reenactments. The St. Louis fair also featured demonstrations of wireless communications; 160 steam, electric, and gasoline automobiles; and an airfield with five dirigibles. Three Belgian exhibitions followed at Liège (1905), Brussels (1910), and Ghent (1913). Italy hosted fairs at Milan (1906) and Turin (1911), the United States hosted fairs at Jamestown (1907) and Seattle (1909), Ireland hosted a fair at Dublin (1907), and New Zealand hosted a fair at Christchurch (1906–1907).

In 1912, 15 nations signed an agreement at Berlin to establish rules for the holding of international exhibitions, but its terms never reached fruition before the outbreak of World War I.

Except for the Panama-Pacific Exposition of 1915 in San Francisco, the era of world's fairs was interrupted, not to be resumed again until the British Empire Exhibition of 1924–1925.

—Paul Tenkotte

Bibliography

- Allwood, John. *The Great Exhibitions*. London: Cassell and Collier Macmillan, 1977.
- Greenhalgh, Paul. *Ephemeral Vistas: The Expositions Universelles, Great Exhibitions and World's Fairs, 1851–1939*. Manchester, UK: Manchester University Press, 1988.
- Rydell, Robert W. *All the World's a Fair: Visions of Empire at American International Expositions, 1876–1916*. Chicago: University of Chicago Press, 1984.
- Tenkotte, Paul A. "Kaleidoscopes of the World: International Exhibitions and the Concept of Culture-Place, 1851–1915." *American Studies* 28 (Spring 1987): 5–29.

Circus

For centuries, performances such as juggling, horseback riding, and tight-wire walking flourished at Saint's Days and other festivals in Europe, but the modern circus did not emerge until the late eighteenth century in London. The revived art soon spread worldwide. Circus impresarios in England and the United States of the nineteenth and early twentieth centuries made much of their connection to the late Roman Empire, when circuses had last flourished in the Western world. These modern circuses mirrored new dreams of empire as they took up motifs such as chariot races and displays of Roman axe juggling in their shows and promotions.

The modern circus began in 1760 when Philip Astley, an expert horse rider and handler, opened a riding school at Ha'Penny Hatch in London, where he, his wife, his son, and other performers amused audiences with horseback riding feats in its center ring. To advertise, Astley and his family rode on horseback through the streets accompanied by trumpet players and a clown, who passed out handbills through the window of a carriage. Astley's show grew progressively more grandiose, incorporating acrobatics, aerial artists, tightrope walkers, theater, and a full orchestra. By 1772 Astley's troupe



This 1896 poster for the Adam Forepaugh & Sells Brothers circus parodied the burgeoning women's rights movement of the era, encouraging spectators to come and see its female performers—including a female ringleader—in leading roles, and as prototypes of “the new woman in a novel sphere.” (Library of Congress)

began to perform in France and opened an amphitheater in France as well as in London.

At the turn of the nineteenth century Lewis B. Lent performed at the New York Theatre during the winter and in warmer months toured with his troupe via steamboat on the Ohio and Mississippi rivers. By the early nineteenth century many competing traveling circuses, relying on wagons and tent shows, were touring in Europe and the United States.

The railroad helped to turn the circus into even grander enterprises in the late nineteenth century. Already renowned for his many ballyhooed enterprises, including his American Museum in New York City that had succumbed to fire, in 1872 showman P. T. Barnum joined two partners to create the circus Barnum, Coup and Costello. They bought and built their own train cars, and their circus, larger than that of any rival wagon shows, also incorporated Barnum's human oddities and was an immediate financial success.

While Barnum, Coup, and Costello experimented with a two-ring circus, its later merger with the circus of James Bailey led to the creation of the three-ring circus in 1881, a distinctly American spectacle. Barnum and other

producers began to experiment with narratives to give shape to these spectacles. In 1887 Barnum adapted the staged spectacle “Nero, or the Destruction of Rome,” for his circus, offering a story line featuring Roman decadence, chariot races, and reenactments of Christian martyrs being thrown to wild beasts.

The 1880s also saw the development of Buffalo Bill Cody's Wild West Show, a circus variant that more directly fed the mythology of the new American empire. These shows, which glorified the taming of the Wild West, often employed dozens of trick riders, trick shooters, and Native American performers, offering reenactments of buffalo hunts, stagecoach robberies, and battles.

The circus is clearly a resilient art form, adaptable to many lands and governing ideologies. The age of P. T. Barnum and Buffalo Bill also saw the founding of the Moscow Circus. This popular institution, founded in 1888 and housed in lavish headquarters, survived the transition from tsarist Russia into the Soviet era, when the Soviet Union's revolutionary leaders recognized the populist value of the circus and provided state-sponsored circus training schools. With state backing, in the Soviet Union the circus maintained a prestige that had faltered until recent decades in much of the rest of the world.

—Fred Nadis

Bibliography

- Croft-Cooke, Rupert, and Peter Cotes. *Circus*. New York: Macmillan, 1976.
- Davis, Janet. *The Circus Age: Culture and Society Under the American Big Top*. Chapel Hill: University of North Carolina, 2002.
- Kasson, Joy. *Buffalo Bill's Wild West: Celebrity, Memory, and Popular History*. New York: Hill and Wang, 2000.
- Malamud, Margaret. “The Greatest Show on Earth: Roman Entertainments in Turn-of-the-Century New York City.” *Journal of Popular Culture* 35(3) (Winter 2001): 43–58.

Amusement Parks

At the turn of the twentieth century, modern amusement parks such as Coney Island's Steeplechase, Luna Park, and Dreamland developed as day-trip holiday spots for urban dwellers. Earlier

spas and pleasure gardens in Europe and the Americas had offered outdoor amusements such as concerts, dancing, firework displays, and rides. The new amusement parks as pioneered at Coney Island featured extravagant architecture, adaptations of new technology, and an engineered approach to the creation of thrills and crowd management. Promoters sought to make the new amusement parks safe places for working-class and middle-class visitors of both genders. Historians have argued that along with other contemporaneous innovations such as the department store, tabloid newspapers, and transit systems, amusement parks helped incubate twentieth-century mass culture.

Amusement parks and world's fairs have always been closely linked. After the Philadelphia Centennial Exposition of 1876, one promoter brought its iron observation tower to the Coney Island beachfront. In 1904 George Tilyou built a large Ferris wheel as an early attraction at what became Steeplechase Park, a decade after the debut of the first Ferris wheel at the World Columbian Exposition in Chicago. Tilyou was also the first promoter at Coney Island to successfully build an enclosed amusement park and charge admission, relying on fantastic architecture and novel rides to attract crowds. His premier early attraction was the Steeplechase ride, which took riders on mechanical horses down a series of hills. More elaborate roller coasters followed, while steamship and train lines also brought crowds to the hotels, restaurants, beer gardens, and area attractions.

Fanciful architecture that was meant to both inspire awe and create thrills was highlighted in the new parks such as Luna Park and Dreamland. The new amusement parks often combined the grandeur of the world's exposition fair grounds with the bawdy pleasures of the world's fair carnival midways. If the electric-lit beaux arts architecture, canals, and fountains of the 1893 Columbian World's Exposition in Chicago inspired masses of fairgoers, the fanciful Orientalist architecture developed at Luna Park and Dreamland elicited both reverie and angry critiques.

Many artists took inspiration from the wild architecture, innovations, and liberalized social codes exhibited at the amusement parks and on

➤ CONEY ISLAND AT NIGHT

Luna Park, which opened in 1903 at Coney Island, featured extravagant architecture. Its swollen minarets, gargoyles, and electric lights created a surreal landscape that delighted turn-of-the-century customers. The architectural style encouraged working- and middle-class customers to find release from their regimented workplaces and the stricter social codes that had been associated with the Victorian era. In the early twentieth century, numerous replicas of Luna Park opened across the United States and worldwide.

—Fred Nadis



(Library of Congress)

the beachfront, a venue that allowed more daring dress and more frank sexual behavior. Some intellectuals, however, were appalled at the manipulated environment. Maxim Gorky, the Russian novelist and social reformer, first praised

the strange vistas of Coney Island when viewed at night from a distance but concluded after his 1906 visit that the amusement park was a “slimy marsh of boredom” pandering to low tastes. Viewing Coney Island as the epitome of the new commercial regime, he concluded of its electric-lit expanses that “the cold gleam of the dead fire bares the stupidity of it all.” The Chicago-based social reformer Jane Addams also argued that the mechanized fun at amusement parks could only dehumanize customers. Both Gorky and Addams were discontented witnesses to the triumph of mass culture and the emerging values of consumer society.

Simultaneous with the rise of Coney Island, amusement parks became a common feature in numerous cities throughout the United States and Europe. Many of these were older pleasure gardens adapted to the American model, including Tivoli Gardens in Copenhagen, Blackpool Pleasure Beach in England, and the Wurstelprater in Vienna. Often the parks were situated at the end of electric trolley lines and were designed to encourage ridership on weekends.

Shortly after their emergence in the West, along with mass transit and department stores, the amusement park spread to other modernizing nations such as Japan. As in the United States, the Japanese amusement centers were placed on new train lines to encourage ridership. The earliest was Takarazuka Family Land, which opened in 1911 outside of Osaka and mixed a hot springs resort with entertainment. In 1912 another amusement park, Shinsekai (New World), which included a replica of Coney Island’s Luna Park, opened at a former exposition grounds in Osaka. Many more amusement parks opened on train lines in Japan in the 1920s.

—Fred Nadis

Bibliography

- Cross, Gary S., and John K. Walton. *The Playful Crowd: Pleasure Places in the Twentieth Century*. New York: Columbia University Press, 2005.
- Kasson, John. *Amusing the Million*. New York: Hill and Wang, 1978.
- Weinstein, Raymond M. “Disneyland and Coney Island: Reflections on the Evolution of the Modern Amusement Park.” *Journal of Popular Culture* 26(1) (Summer 1992): 131–164.

Cycling

First in Europe and then in the United States a fascination with technology and the sentiment that leisure was a feature of modern life combined to produce the bicycle. The bicycle found a market of consumers among both the middle and working classes and thus brought leisure to a wide public.

Theories abound about the bicycle’s true inventor. Some trace its origins to a student of Leonardo da Vinci or to the French nobleman the Comte de Sivrac, who in 1791 supposedly was seen riding around Paris on a *célérifère*, a two-wheeled wooden frame with no steering that was propelled by pounding the feet on the ground. Others give credit to a German, Karl von Drais, who in 1818 patented his *Laufmaschine* (Running Machine) that resembled the mythical *célérifère* but had steering. For the next several decades tinkers and inventors experimented with pedal-driven tricycles and quadricycles, but none were commercially successful. A major breakthrough occurred in 1863 when French machinists Pierre Michaux and Pierre Lallement each claimed credit for adding pedals to the front wheel; by the 1880s manufacturers in Europe and the United States were churning out the Safety, a bicycle with two wheels of the same size, an iron diamond-shaped frame, rubber tires, a chain to propel the rear wheel, and coaster brakes. Mass production lowered the cost of the bicycle in the United States from \$400 in the 1880s to \$20 in 1898. Europeans enjoyed a similar reduction in price.

As an inexpensive means of transit, the bicycle democratized leisure in Europe and the United States. Men took rides through the countryside on Sunday, often their only day off during the week, and women, despite the uneasiness of some men, took up cycling to challenge Victorian notions of what constituted leisure for women. Corsets and ankle-length skirts would not do; women instead bared their legs in short skirts and bloomers. The straddling of a bicycle struck some men as too provocative a position for women. No less threatening were young women who took up cycling to court men beyond the watchful eye of parents. This use of

THE BICYCLE CORPS

By the 1890s, the bicycle had already revolutionized leisure activity throughout Europe and North America. Reasonably priced, dependable and capable of traveling large distances with ease, the bicycle soon caught the attention of the U.S. Army, which saw a potential martial use in the relatively new invention. The 25th Infantry Regiment of Missoula, Montana, an African American regiment, was assigned to test the viability of a bicycle infantry corps. From their home base at Fort Missoula, 20 African American infantrymen and 2 white officers mounted their bicycles for a series of grueling long-distance rides. The 25th's most notable rides included an 800-mile (1,287-kilometer) round-trip trek to Fort Yellowstone in 1896 and a 1,900-mile (3,058-kilometer) trip to St. Louis,

Missouri, in 1897. Although the men faced harsh weather and rough terrain, pedaling with 55 pounds (25 kilograms) of gear and a 10-pound (4.5-kilogram) rifle, they still managed to travel at twice the speed and half the cost of a normal infantry unit. Plans for an even longer ride to San Francisco were permanently postponed when the 25th was called to Cuba, without their bicycles, to fight in the war against Spain. After the war, advances with the automobile soon made the bicycle obsolete for military purposes.

Bibliography

Slatta, Richard W. "Bicycle Corps." In *The Mythical West: An Encyclopedia of Legend, Lore, and Pop Culture*. Santa Barbara, CA: ABC-CLIO, 2001.

cycling as a means of courtship prefigured the enthusiasm that couples would take in parking with the automobile.

If cycling afforded leisure for both men and women, it also extended leisure over space. Travel on foot or by horse no longer limited how far men and women could go in pursuit of leisure. Men undertook a Century, a ride of 100 miles (161 kilometers) in a single day, and, along with women, used the bicycle for camping or vacations. Groups of men and women rode their bicycles to a pristine spot for a picnic, visited friends in a nearby town, or took in a baseball game. Cycling afforded sightseeing on a scale that could scarcely have been imagined in the era of the horse as Americans and Europeans used the bicycle to explore a picturesque sight or historic monument. Bicycle clubs in Europe and the United States organized rides for novice and experienced cyclist.

In the short term the bicycle amplified reformers' calls for good roads as indispensable for both travel and leisure. The bicycle also imparted a mobility to men and women that anticipated the mobility of the car. By the early twentieth century the bicycle's influence began to wane with the adoption of the automobile, which, especially in the United States, replaced the bicycle in sightseeing. Families took to the road by car rather



Men ride high-wheelers on the plaza near Trinity Church in Boston, about 1900. (Library of Congress)

than bicycle as the Sunday drive replaced the Sunday outing by bicycle. As the automobile spread, the bicycle became a plaything of children rather than adults. In Asia, Africa, and Europe, however, adults continued to use the bicycle, although often for transportation rather than leisure.

—Christopher Cumo

Bibliography

- Caunter, C. F. *The History and Development of Cycles*. London: Her Majesty's Stationery Office, 1955.
- Herlihy, David V. *Bicycle: The History*. New Haven: Yale University Press, 2004.
- McGonagle, Seamus. *The Bicycle in Life, Love, War and Literature*. London: Pelham, 1968.
- Smith, Robert A. *A Social History of the Bicycle: Its Early Life and Times in America*. New York: American Heritage Press, 1972.

Golf

In the century and a half before World War I, golf evolved from a local unorganized and sometimes illegal pastime to a worldwide highly organized competitive sport. Versions of the game originated in Holland and Scotland in the thirteenth and fourteenth centuries, with the Scottish variety of hitting the ball into a hole in the ground rather than against a pole or tree becoming the most popular.

In the mid-eighteenth century, golfers brought order to the game by establishing exclusive clubs, publishing rules, and standardizing

courses. In 1744 golfers at the Leith Links established the Honourable Company of Edinburgh, the first known golf club, and held a tournament for which the city of Edinburgh purchased a silver cup to be awarded to the champion. Originally open to all golfers, the Honourable Company of Edinburgh restricted the tournament to members only in 1764. Formed in 1754, the Golfers at St. Andrews (later known as the Royal and Ancient) held a tournament and awarded a silver cup to the winner. For this tournament St. Andrews drafted and published 13 rules, the earliest known rules of the game. In 1773 St. Andrews restricted play on the course to club members and those of the Honourable Company of Edinburgh. Originally designed as a 22-hole course, St. Andrews reduced the number of holes to 18 in 1764. As other courses followed the St. Andrews model, 18-holes became the standard length for golf courses. The proliferation of golf clubs continued throughout the eighteenth century, including London's Blackheath in 1767, the first outside of Scotland.

The nineteenth century brought further developments to golf, especially in equipment. Since the early seventeenth century, golfers had used clubs fashioned from branches of thorn trees and a leather-covered ball stuffed with feathers. In 1826 hickory imported from North America began to replace thorn tree branches as the material for golf club shafts. The most notable innovation, however, came in 1848, when a Scottish clergyman, Dr. Robert Peterson, fashioned a ball from gutta-percha, a rubbery derivative of Malayan trees. Obtaining the material from the packing in shipments from India, he softened it in hot water, molded it into the shape of a ball, and allowed it to harden. Far more durable than the previous feather-stuffed leather-covered ball, the new "guttie," as it commonly became known, kept its shape, resisted water, and flew more accurately. Using nails to make small indentions in the surface of the ball, golfers improved ground contact as well as the aerodynamics of the ball.

After patenting his invention in 1850, Peterson contracted with manufacturers in London and Edinburgh, who mass-produced the popular ball. In 1898 Coburn Haskell, a dentist in Cleveland, Ohio, introduced a ball with a rubber core

► HARRY VARDON—GOLF'S FIRST INTERNATIONAL SUPERSTAR

In 1900 Harry Vardon became golf's first international superstar when he toured the United States, playing in more than 80 tournaments and winning the U.S. Open. Born in Grouville, Jersey, Channel Islands, on May 9, 1870, he began playing golf in his teens, became a professional at age 20, and won the first of a record six British Open titles in 1896. Runner-up in the 1913 U.S. Open, Vardon lost to amateur Francis Ouimet, the first native-born American to win the tournament. Vardon made his last U.S. Open appearance in 1920 at age 50. Developing a grip that bears his name, Vardon won 62 tournaments in all before health problems stemming from a bout with tuberculosis curtailed his career. A noted golf course architect who designed several British links, he coached the sport and wrote instructional manuals and inspirational books before his death in Totteridge, England, on March 20, 1937.

—Adam Hornbuckle

wrapped with elastic threads and covered with gutta-percha that proved to be even more lively than balls made of gutta-percha only. In 1905 William Taylor, a British lens maker, developed the current dimpled surface after experimenting with various designs. Innovations in the golf club followed the development of the guttie, as the harder ball required a more durable device. Improvising at first by wrapping leather straps around the end of the club, golfers soon turned to ironsmiths to attach an iron bar to the end of the club, thus coining the term “iron” for the club.

Throughout the nineteenth and early twentieth centuries, golf became increasingly international and competitive. Golf followed the expansion of the British Empire, with courses established in India, Australia, New Zealand, and Canada. In 1888 John Reid, a Scottish immigrant, established the first permanent golf club in the United States, St. Andrews, near Yonkers, New York. Although looked upon as an upper-class pursuit, golf proliferated throughout the United States, with over 900 clubs by the turn of the century. Originating in 1860, the British Open became the first major international championship tournament, followed by the U.S. Open in 1895. British golfers dominated the U.S. Open until Francis Ouimet, a native-born American of French Canadian descent, won the tournament in 1913.

—Adam Hornbuckle

Bibliography

- Frost, Mark. *The Greatest Game Ever Played: Harry Vardon, Francis Ouimet, and the Birth of Modern Golf*. New York: Hyperion, 2002.
- Labbance, Bob, Brian Siplo, and Tony Jacklin. *The Vardon Invasion: Harry's Triumphant 1900 American Tour*. Ann Arbor, MI: Sports Media Group, 2008.
- McGrath, Charles, and David McCormick. *The Ultimate Golf Book: A History and Celebration of the World's Greatest Game*. Boston: Houghton Mifflin, 2006.

Tennis

Lawn tennis owes its existence to Walter Clopton Wingfield (1833–1912), who invented it in the spring of 1874. For patent reasons, Wingfield named his invention “Sphairistike or Lawn

Tennis” in order to distinguish it from the game of real or court tennis, an indoor sport which was on the decline in England at the time. Like court tennis, lawn tennis took over the principle of striking a ball over a net, of only allowing strokes on the volley or after the first bounce of the ball, and the curious scoring system by fifteens. Unlike real tennis, however, lawn tennis introduced standardized courts as early as 1877; in 1878, the height of the net was set at 4 feet 9 inches (1.45 meters) at the posts and 3 feet (0.9 meters) in the middle, and the distance of the service line was set at 21 feet (6.4 meters) from the net. The tennis ball was also standardized with the acceptance of the white flannel-covered rubber tennis ball developed by J. M. Heathcote in 1874.

Lawn tennis was also able to dispense with the expensive roofed facilities needed by the older game. The invention of the lawn mower had made it possible to trim sufficiently the lawns of the English manor, which led to the creation of smooth playing surfaces. The discovery of vulcanization by Charles Goodyear resulted in the production of rubber balls filled with air, which bounced sufficiently high, even on grass. This made the hard surface of the real tennis court superfluous. As early as the nineteenth century, lawn tennis began to be played on other surfaces as well—on the asphalt of disused roller-skating rinks, on wood, and on clay (an invention of the Germans). The clay court was, albeit reluctantly, introduced in England after the turn of the century.

Originally, lawn tennis was intended as a five o'clock tea pastime for the well-to-do and the landed gentry. In addition, it offered the Victorian matron an opportunity to engineer the marriage of a daughter with a promising young man from the neighborhood. As a consequence, it was scoffed at by the real athletes of the time, university students who derisively referred to it as pat-ball and considered it a girls' game. However, after the first All England Championships of Wimbledon in 1877, for which a committee had laid down the rules, lawn tennis gradually began to be regarded, alongside cricket, as a serious elite sport. From cricket, too, lawn tennis adopted its sportswear—white linen shirts and flannels and, not infrequently, cricket caps. For

a long time, women continued to wear their everyday dresses, tightly laced corsets, petticoats and long skirts, with heeled shoes and broad-brimmed hats into the bargain. Until the turn of the century, this latter item prevented most of them from delivering an overhead service. Only the example of the young American, May Sutton, at the Championships of 1905, and the appearance at Wimbledon of Suzanne Lenglen (known as the “Divine”) after the First World War, eventually persuaded female tennis players to wear short skirts.

—Heiner Gillmeister

Bibliography

- Barrett, John. *100 Wimbledon Championships: A Celebration*. London: Collins, 1986.
- Cook, Jane, ed. *International Who's Who in Tennis*. Dallas: World Championship Tennis, 1983.
- Evans, Richard. *Open Tennis: The First Twenty Years*. London: Bloomsbury Publishing, 1988.
- Gillmeister, Heiner. “Lawn Tennis.” In *Encyclopedia of British Sport*, edited by Richard Cox, Grant Jarvie, and Wray Vamplew. Santa Barbara, CA: ABC-CLIO, 2000.
- Gillmeister, Heiner. *Tennis: A Cultural History*. London: Cassell/Leicester University Press, 1998.
- Parsons, John. *The Ultimate Encyclopedia of Tennis*. London: Carlton/Hodder & Stoughton, 1998.

Cricket

Cricket is an English bat-and-ball game that has remained popular mainly in England and countries of the former British Empire. The written rules of the game were formulated in the eighteenth century, providing a landmark in the evolution of modern sport. Cricket became a game between two sides of 11 players who took turns batting. An inning was completed when 10 of the 11 players had been dismissed. The chief means of dismissal were caught, bowled, stumped, run out, and leg before wicket (when the ball hits the batsman's body when it would have otherwise hit his wicket). Play occurs at the center of an oval on a wicket consisting of three stumps at each end of a 22-yard (20-meter) prepared grass pitch. An over consists of a set of six balls bowled from one end to 1 batsman. This is followed by an over from the other end by another bowler to the batsman at the other

end. A batsman can hit the ball (on the full or on the bounce) to any part of the field, and a run or runs are scored when both batsmen safely reach the other end. If the ball reaches the boundary, four runs are scored; if the ball is hit over the boundary, six runs result. Batsmen do not have to run when they hit the ball.

Underarm bowling was the norm initially, but the laws were altered in the nineteenth century to allow roundarm and then overarm bowling, though the rules dictated that the ball should be bowled with a straight arm and not thrown.

The origins of cricket are obscure, although it seems clear that the game was played in rural areas in the south of England as early as the sixteenth century. It is estimated that by the eighteenth century 1,000 village clubs were playing some form of the game. Cricket was transformed in the eighteenth century when it generated interest and participation among aristocrats and wealthy landowners because it was a complex and leisurely game amenable to subtle distinctions of class, a focus for gambling, and a place to resolve personal rivalries. Aristocrats added to the status of the game not only by playing it themselves but also by helping formulate the rules and establish its core institutions. Some gentlemen of London were instrumental in the formation in 1787 of cricket's powerful governing authority (until recent decades), the Marylebone Cricket Club (MCC), which was and is based at cricket's most famous ground, Lord's.

By the nineteenth century cricket was considered by educators as a manly and moral game and was introduced at the leading public schools, such as Eton and Harrow as well as Oxford and Cambridge universities. Cricket teams, based on counties, emerged by the mid-nineteenth century. While women had been prominent in village cricket, those women who formed clubs in cities in the late nineteenth century were regarded with suspicion as trespassers on male territory.

Working-class professionals helped transform cricket into a profitable mass spectator sport when they organized squads that toured England in midcentury and then overseas (Canada and the United States in 1859, Australia in 1862, and Australia and New Zealand in 1864).

▶ PLAYING FOR THE ASHES

With their suggestive and even spiritual symbolism that cricket is a matter of life and death, the Ashes have become a potent and compelling symbol for Anglo-Australian competition in a series of (usually five) test matches conducted over a season. The Ashes concept emerged after the Australian team defeated England for the first time on its home soil at The Oval, London, in 1882. There followed two mock obituaries in the English press lamenting the “death of English cricket,” stating that the body would be cremated and the Ashes taken to Australia. What started as a joke became a serious metaphor of Anglo-Australian competition.

The Ashes Trophy consists of a small and fragile terra-cotta urn that contains a set of ashes, said to be the ashes of English cricket. Mystery surrounds the origin of the ashes, and there are many competing myths regarding their origin. It is likely that two women wanting to perpetuate the joke burned a bail, a stump, or a ball that they placed in the urn and gave to the visiting English captain, Ivo Bligh, in 1883 after an English victory. The ashes were later given to the Marylebone Cricket Club, and the trophy remains on display there in its museum.

—Richard Cashman

The professionals paved the way for the growth of international cricket. The role of the professional in the rise of international cricket has not been properly recognized because amateurs held the positions of power in the cricket world. There was a sharp social divide, and segregation between amateur (that is, “gentlemen”) and professional cricketers—with separate accommodations, dining, and even travel—continued well into the twentieth century.

In the twentieth century cricket became popular in many countries of the British Empire such as Australia, where a determination to beat the motherland at its own game provided a powerful incentive for cricket playing. The first test match between Australia and England in Melbourne in 1877 was between an English professional team and an Australian Eleven (the national team). International tours and test matches became a regular feature from that time. South Africa became a test match-playing nation in 1889 and was followed by the West Indies, New Zealand, India, Pakistan, Sri Lanka, Zimbabwe, and Bangladesh in the twentieth century.

—Richard Cashman

Bibliography

- Birley, Derek. *The Willow Wand: Some Cricket Myths Explored*. London: Queen Anne Press, 1979.
- Sandiford, K. *Cricket in the Victorian Age*. Aldershot, UK: Scholar Press, 1994.

The Organization of Horse Racing in Eighteenth-Century England

Although horse racing in one form or another has existed since ancient times, the modern version of the sport took shape in eighteenth-century England. Introduced in England in the late twelfth century, horse racing flourished at fairs and markets until the middle of the seventeenth century, when the Puritans banned it along with other sports and entertainment from 1649 to 1660. Sports and entertainment resumed with the restoration of the Stuart monarchy in 1661, and horse racing found an avid supporter in Charles II, who maintained a stable of race horses and erected a private racecourse at Newmarket near Windsor Castle. Newmarket became a horse-racing hub, and periodically Charles would retreat to the village to attend races, sometimes competing in them himself. Owners often raced their own horses then, but by the end of the seventeenth century they began to employ professional jockeys.

After the death of Charles II in 1685, horse racing continued to receive royal patronage from William III (r. 1688–1702) and Queen Anne (r. 1702–1714). Like Charles, William maintained a stable of race horses and attended and bet extensively on races. Anne, on the other hand, had more business and organizational interests in the sport. She opened the Royal Ascot racecourse on August 11, 1711, with a race in her honor, “Her

➤ TREGONWELL FRAMPTON

Regarded as history's first professional race horse trainer, Tregonwell Frampton maintained the royal stables for several English monarchs in the late seventeenth and early eighteenth centuries. Born in Morton, England, on April 3, 1641, Frampton developed a keen interest in cockfighting, falconry, hare coursing, and horse racing as a youth. Recognized as the best falconer in Derbyshire in the early 1670s, he moved to Newmarket to race horses full-time. Having gained a reputation for producing and riding champion horses, Frampton became the royal horse race trainer under William III after winning the Newmarket Town Plate with one of the king's horses in 1695. Known for his unscrupulous tactics, Frampton remained in royal service until his death on March 12, 1728.

—Adam Hornbuckle

Majesty's Plate," in which seven horses competed in three separate 4-mile (6.4-kilometer) heats for a purse of 100 guineas. In addition to founding the Royal Ascot, she promoted the early development of the thoroughbred, a line of horses bred specifically for racing. Anne introduced the Darley Arabian, based primarily upon three stallions, the first of which, Byerley (Bylerly) Turk, settled to stud in Middridge, England, in the late 1680s. The Darley Arabian stallion was brought to England from Syria by Thomas Darley to the genetic line in 1704. The third stallion, the Godolphin Arabian, named for his owner Francis Godolphin, Second Earl of Godolphin, joined the line in 1729.

With the succession of George I to the English throne in 1714, organizational interest in horse racing passed from the throne to the gentry and the titled nobility. Owners such as Godolphin gained control of the sport, providing it with formality and rules. Before races, owners and jockeys convened to decide and agree upon the length of the course, weights of the mounts, number of heats, judges, and riding protocol. Owners brought formal organization to horse racing not so much to promote sportsmanship but to protect their investments, as formal organization provided both predictability in betting and expansion for greater profits.

In 1750 London race horse owners and breeders established the Jockey Club to administer races at Newmarket by establishing rules of dress and behavior for jockeys and appointing judges, starters, clerks, and other racing officials. By the end of the century the Jockey Club had exerted its influence throughout the entire English horse-racing scene, bringing standardization and order to the sport.

Toward the end of the eighteenth century the rise of horse-racing publications and auction and gambling houses also contributed to the organization of the sport. In 1770 James Weatherby began publishing the *Racing Calendar*, at the time the nation's foremost horse-racing publication. By disseminating racing news, printing racing schedules, and publishing rules and regulations, the *Racing Calendar* brought order to a sport that had expanded significantly during the century. In 1766 Richard Tattersall opened an auction house near Hyde Park Corner outside London. With two subscription rooms reserved for members of the Jockey Club, the Tattersall's became the meeting place for horse-racing's aristocratic elite.

—Adam Hornbuckle

Bibliography

- Craig, Dennis. *Horse-Racing: The Breeding of Thoroughbreds and a Short History of the English Turf*. London: J. A. Allen, 1982.
- Longrigg, Roger. *The History of Horse Racing*. New York: Stein and Day, 1972.
- Lowerson, John. "Horse Racing." In *Sport in Britain: A Social History*, edited by Tony Mason. Cambridge: Cambridge University Press, 1989.
- Vamplew, Wray. *The Turf: A Social and Economic History of Horseracing*. London: Allen Lane, 1976.

Association Football

Association football, also called soccer, is an outdoor sports game that has become the world's most popular international team sport. The game has eleven players to a side. The object is to advance a round ball about 28 inches (71 centimeters) in circumference into the opponent's goal. The game (usually called a match) is played on a rectangular grass field measuring 120 by 75 yards (110 by 68.6 meters). Centered on each end-line is a netted goal 24 feet (7 meters) wide

by 8 feet (2.4 meters) high, guarded by a goalkeeper, the only player allowed to use his or her hands. The other ten players attempt to advance the ball past their opponents; they are limited by rules such as the no-hands rule, offside, and dangerous play. A referee, who is assisted by linesmen (currently termed “referee’s assistants”), regulates the match. The referee has the power to issue yellow and red cards to the players for dangerous play or for arguing. A player receiving two yellow cards or one red card in a match is disqualified, and his or her team is at a disadvantage for the remainder of the match. The match is composed of two forty-five-minute halves, and substitutions are limited. The referee has the discretionary power to add injury time to each half.

Countries that can claim ancient games similar to football include China (*tzu chu*), Japan (*kemari*), Greece (*episkyros*), and Italy (*harpastum* and *calcio*). Yet the game from which the modern version of football has developed began in England. The first recorded game of football was probably at Ashbourne in Derbyshire on a Shrove Tuesday (the day preceding Ash Wednesday), some time in the third century. Although some early games were relatively highly structured, most were crude versions of the current game and often little more than street battles. Because of the violence associated with it, the game was often banned in England over the centuries. Despite frequently being outlawed, its popularity—particularly in public schools—persisted into the nineteenth century, when formal rules were introduced.

The first formal rules for association football were drafted at Cambridge University in 1848. On October 26, 1863, eleven London clubs met at the Freemason’s Tavern and voted upon a set of formal rules for club play that closely followed the Cambridge rules. The clubs that dissented from the newly established rules went on to form the modern version of rugby, while the remaining clubs formed the Football Association. The first concern of the Football Association was to establish universal rules under which to compete; by the late 1870s, the Football Association was recognized as the governing body of English football.

Perhaps the most influential individual in promoting the modern version of association

football was Charles W. Alcock (1842–1907). Alcock promoted the Football Association as a universal rules committee and came up with the idea for a cup competition that would become the FA cup. The first FA cup final was played in 1872, with the Royal Engineers losing to the Wanderers, captained by Alcock himself.

The FA cup helped to popularize football in England, and the idea of professionalism quickly took hold and increased the quality of play dramatically. As a result, the Football League was founded in 1888, with its Scottish equivalent following in 1890. The first international match occurred in 1872 between Scotland and England.

The spread of football outside of England, mainly due to the British influence abroad, started slowly, but it soon gathered momentum and spread rapidly to all parts of the world. When the Fédération Internationale de Football Association (FIFA) was founded in Paris in 1904, its original members were France, Belgium, Denmark, the Netherlands, Spain (represented by the Madrid FC), Sweden, and Switzerland. Germany did not send a representative but cabled its intention to join. British missionaries introduced the game to Africa, where they hoped it would teach discipline, teamwork, and selflessness. The first African football associations came into existence in South Africa in the 1910s. English settlers introduced the game to New Zealand and Australia in the 1880s, although in each country, rugby football became more popular. In North America, the primitive form of football had arrived with the early English settlers. Although football has been present for more than 300 years in North America, as a professional spectator sport it has not gained the popularity that it enjoys in other parts of the world. In Canada and the United States football took a back seat to hockey, baseball, basketball, and variations of football similar to rugby (US and Canadian football).

Football gained its most enthusiastic reception in Latin America. In the 1860s, British sailors brought the game to Argentina. The Argentine Association Football League was formed on February 21, 1893; it has been called the Argentine Football Association since 1903. Football was imported to Brazil in 1894, where it has become immensely popular. The Uruguayan Football

Association was formed in 1900, and the Paraguayan Football Association followed in 1906. Football rapidly gained popularity in Central America as well. Football was introduced to the modern Olympic Games in 1908, with England winning the title. The FIFA World Cup, presently the world's most closely followed sports competition, began in 1934, with Uruguay winning the first title.

—Benjamin Croucher

Bibliography

- Archer, Michael, et al. *The International Book of Soccer*. New York: A and W Publishers, 1977.
- Croucher, Benjamin. "Association Football (Soccer)." In *Britain and the Americas: Culture, Politics, and History*, edited by Will Kaufman and Heidi Slettedahl Macpherson. Santa Barbara, CA: ABC-CLIO, 2005.
- Glanville, Brian. *Soccer: A History of the Game, Its Players, and Its Strategy*. New York: Crown Publishers, 1968.
- Mason, Tony. *Passion of the People? Football in South America*. London: Verso, 1995.
- Russell, Dave. *Football and the English*. Preston, England: Carnegie Publishing, 1997.
- Wagg, Stephen, ed. *Giving the Game Away: Football, Politics and Culture on Five Continents*. London: Leicester University Press, 1995.

Rugby Football

Rugby football is a modern sport whose evolution and diffusion outside of England were shaped by class-specific values and British imperialism. A forerunner of American football, rugby is a game in which players have 80

minutes to score by kicking an oval-shaped ball over the crossbar of an H-shaped goal or by touching down the ball in the try zone beyond the goal. Two teams of 15 players (in the Rugby Union version of the game) or of 13 players (in the Rugby League) compete to advance the ball by kicking, passing, or pushing contests called scrums toward the try zone. They defend against the advance of the opposing team by tackling. Both versions of rugby have their origins in the varied forms of premodern English winter folk games. In the 1820s and 1830s, rugby became a distinct game from soccer when students at English public schools (private institutions), with whom ball sports were most popular, began to carry rather than simply kick the ball.

The students of Rugby School under the headmastership of Thomas Arnold (1795–1842) fixed the rules of this form of football in 1845 and legitimated the sport as a test of manhood, Christian values, and skill that surpassed other elite field sports such as hunting and fishing. Baron Pierre de Coubertin (1863–1937), founder of the modern Olympic Games, visited Rugby School and other public schools in 1883 and initiated the popularization of rugby in France. The rules set down by Rugby School were further codified at Cambridge University in 1863 by public school graduates where, along with Oxford University, adult public school alumni had been playing rugby since the 1840s. After the foundation of the Football Association in 1863, former public school students formed a separate Rugby Football Union (RFU) in 1871, the first such union in the world. From its elite traditions within the public schools, rugby spread first

INTERNATIONAL RUGBY

The International Rugby Board (established in 1886) governs the rules and competitions for international Rugby Union teams. In the 1880s the national teams of South Africa, New Zealand, and Australia hosted the English national team, toured in England and between colonies, and often beat England. International rugby officially began in 1883 when England, Scotland, Wales, and Ireland competed in the Home Nations tournament, adding France in 1910. Rugby Union football was

a popular sport at the Summer Olympics before its removal in 1924. The first international Rugby World Cup, held every four years, took place in New Zealand and Australia in 1987. Eighty national teams from six continents compete for 20 spots in the Rugby World Cup. New Zealand, Australia, South Africa (which was banned from participation during 1985–1992 due to its system of apartheid), and England have each won.

—Garrett Washington

among upper-middle-class former students and then to working-class men in England's northern counties during the 1870s.

Elite RFU players espoused the values of amateur play and denounced working-class rugby practices of ranking teams, organizing regular multiteam competitions, and, most importantly, paying players for work missed. These tensions led to a split in 1895 when 22 teams, primarily from the northern counties, seceded from the RFU and founded the Northern Union (NU), which aimed to pay players and attract spectators. The NU legalized the payment of players (1898), increased the excitement for spectators by reducing the number of players on the field from 15 to 13 (1906), and adapted the rules to make rugby more continuous, less violent, and hence more spectator-friendly (1897–1906). Rugby League, referring to the NU style of rugby, was the form most popular outside of the upper-middle class and the elite circles of public school alumni and spread more quickly within England and to Wales and Ireland than the RFU form, known as Rugby Union. Since the 1960s, the Rugby Union game has moved rapidly toward professionalization, removing player compensation limits (1995) and becoming the most popular form of the game today.

The modernization of rugby led to its increased popularity and its spread across the globe. English colonists and shipmen began exporting rugby to British colonies in the 1860s and formed teams that toured abroad, providing the basis for international rugby today. The national teams of the former British colonies Australia (1899), New Zealand (1888), and South Africa (1889) have dominated the sport since the early twentieth century, losing occasionally to the French and English national sides. Rugby is currently played by both men and women in over 100 countries.

—Garrett Washington

Bibliography

- Black, David R., and John Nauright. *Rugby and the South African Nation: Sport Cultures, Politics, and Power in the Old and New South Africas*. Manchester, UK: Manchester University Press, 1998.
- Chandler, Timothy J. L., and John Nauright, eds. *Making the Rugby World: Race, Gender, Commerce*. London: F. Cass, 1999.

Davies, Gerald. *A History of the Rugby World Cup*. New York: Penguin Putnam, 2003.

Dunning, Eric, and Kenneth Sheard, eds. *Barbarians and Gentlemen: A Sociological Study of the Development of Rugby Football*. New York: New York University Press, 1979.

Vamplew, Wray, and Brian Stoddard, eds. *Sport in Australia: A Social History*. New York: Cambridge University Press, 1994.

Baseball

Baseball evolved in the United States during the nineteenth century and by the early twentieth century had assumed its modern form, with two established major leagues consisting of clubs in the major American cities. Baseball at this time was considerably more popular than any other sport in the United States and was commonly referred to as the National Game or the National Pastime.

An early explanation of the origins of baseball was that it had been invented by Abner Doubleday in Cooperstown, New York, in 1839 (hence the location of the sport's Hall of Fame in that town). However, it is now recognized that baseball evolved gradually out of a series of bat-and-ball games common in the American Northeast that in turn had origins in games played in England. An important milestone was achieved when an amateur club, the New York Knickerbocker Base Ball Club, formulated a set of rules



A professional baseball team that played in New York City from 1880 to 1887, the New York Metropolitans are pictured in 1882. They played in the Polo Grounds, just north of Central Park. (Library of Congress)

CY YOUNG

One of the greatest pitchers in the history of baseball, Cy Young (1867–1955) played 22 years, from 1890 to 1911, with clubs in Cleveland, St. Louis, and Boston. He was a member of the Boston Americans (later the Red Sox), the team that won the first World Series in 1903, and he pitched a perfect game (a complete game without any batters reaching base) in 1904. Playing at a time when pitchers routinely completed almost every game they started and pitched far more often than today, he set all-time marks in wins (511) and complete games (749) that will likely never be broken. Young was elected to the Baseball Hall of Fame in 1937.

—Wesley Ferris

that became the basis of modern baseball. In the 1840s and 1850s amateur baseball clubs composed of clerks and skilled artisans proliferated, particularly in and around New York City. In the early 1860s the American Civil War helped to spread the game throughout the United States.

Amateur baseball began to be supplanted by professional baseball in the late 1860s. The Cincinnati Red Stockings, the first club to pay all of its players in 1869, went undefeated that year with a record of 57 wins and no losses. Professionalization reflected an increasing commercialization of the game as baseball grounds were enclosed and fees charged for admittance. In 1876 the first modern professional league, the National League, with clubs in eight cities was formed, followed in 1881 by the American Association, sometimes referred to by its critics as the Beer Ball League because it cut admission prices, sold liquor at games, and played games on Sunday. Power within the sport shifted from players to the clubs and their owners when the owners of clubs in the two leagues agreed in 1882 on the reserve clause, which forced players to remain with their current club until they were traded or released. Low salaries and abuses connected with the reserve clause led in 1890 to the formation of a rival Players' League in which players and management shared revenues equally. National League owners launched a vigorous campaign to undermine the new league,

which went out of business in 1891. Among the star players of late-nineteenth-century baseball were first baseman Cap Anson, outfielder Willie Keeler, and pitcher Cy Young.

Commercialization of baseball was not limited to the founding of professional teams. In 1876 a star player, Albert Spalding, founded the sporting goods company A. G. Spalding and Brothers, and his Chicago-based firm soon established a near nationwide monopoly on the sale of baseball equipment, including bats, balls, gloves, and catchers' masks. In addition to brewers who sought to promote their beer by identifying their product with baseball clubs, tobacco companies tried to increase sales by including picture cards of ballplayers in packages of cigars and cigarettes.

Several other professional leagues were formed in the late nineteenth century, and numerous minor leagues, both professional and amateur, existed throughout the United States, but only the National League remained as a major league in 1900. In 1901 the American League began to challenge the dominance of the National League, leading to several years of open conflict including clubs raiding the opposite league for players and the location of multiple clubs in the same city in an effort to drive out the other league. Peace was agreed to in 1903 that recognized both leagues as major leagues, symbolized by the holding that year of a World Series championship between the two league champions to determine the overall champion. Baseball in the early twentieth century was known as the dead-ball era, as pitching dominated and run production declined with very few home runs.

In the early days of baseball, there was the occasional presence of African American players on otherwise white clubs, including several in the early years of the National League. However, many white players, such as Adrian C. "Cap" Anson, the player-manager of the Chicago White Stockings, refused to play with African Americans, and from the 1880s African Americans were barred from the major leagues by the unwritten but strictly enforced color line. Although the first professional African American baseball clubs were formed in the 1880s, it was not until after World War I that regular African American leagues were formed. Baseball in

its early days was also overwhelmingly a male sport. Analysis of crowd pictures of early games shows that more than 90 percent of the spectators were male.

—Wesley Ferris

Bibliography

- Burk, Robert F. *Never Just a Game: Players, Owners, and American Baseball to 1920*. Chapel Hill: University of North Carolina Press, 1994.
- Rader, Benjamin G. *Baseball: A History of America's Game*. Chicago: University of Chicago Press, 1992.

Baseball in Meiji Japan and Latin America

The modern game of baseball, having evolved from English and Gaelic games such as cat, cricket, and rounders in the early 1800s, rapidly became the most popular sport in the United States in the second half of the nineteenth century. Baseball also gained a wide following in Japan and Latin America, especially Cuba.

In the late nineteenth century, struggling under unequal treaties with the great powers of Europe and the United States, many Japanese came to see sport as an opportunity to demonstrate that contrary to negative foreign stereotypes, they were neither physically nor intellectually inferior to Westerners. In the 1860s U.S. civilian and military residents began playing baseball in Japan's treaty ports but prohibited Japanese from watching or playing the game. U.S. teachers, however, recruited to both educate and Westernize elite Japanese students, argued that sport was vital for educating Japan's future leaders. William E. Griffis (1843–1928), who served as superintendent of education for Ichizen Province and later had a distinguished career as a writer and lecturer, drew attention to the need for sport in a balanced curriculum through his *New Japan Series of Reading and Spelling Books* and frequent meetings with Japanese students, instructors, and government officials. Meanwhile, English professor Horace Wilson (1843–1927) at Tokyo University and other American teachers introduced the game of baseball to their students in the early 1870s.

Although railroad workers in Tokyo formed Japan's first recorded baseball team in 1878, high

▶ EARLY HIGH SCHOOL AND COLLEGE BASEBALL IN JAPAN

The success of the Ichiko high school baseball team in Japan in the 1890s was followed by the success of the Keio University and Waseda University teams (Tokyo), primarily composed of Ichiko graduates who would forge even stronger connections between Japanese and American baseball. Between 1905 and 1915, both college teams toured the United States and played against universities such as Stanford and Millikin, while universities including Chicago, Wisconsin, Washington, and Stanford sent their teams to Japan as well.

—Garrett Washington

school and college baseball at first dominated the sport. In particular, the First Higher School of Tokyo (Ichiko) formed a team in 1890 that succeeded after six years of refusals in convincing the American team of the Yokohama Athletic Club (a foreigners' club, endowed with Japan's only true baseball stadium at the time) to play against them in the summer of 1896. The three consecutive and substantial victories of the Ichiko team over the U.S. sailor-led Yokohama team forced Westerners in Tokyo to reevaluate their Japanese stereotypes. It also began Japan's love affair with baseball.

Although high school and collegiate baseball remained the emphasis for the sport in Japan, frequent contact with U.S. teams encouraged the professionalization of Japanese baseball. In 1907 the country's first admission-charging baseball game was played, and in 1934 the Yomiuri Giants (Tokyo) and Hanshin Tigers (Osaka) became Japan's first true professional teams. In 1936 the Japanese Baseball League was formed, laying the foundation for the Pacific League and the Central League of today's professional baseball circuit in Japan.

In Latin America, baseball was first introduced to Cuba in the 1860s by students returning from studies in the United States and by U.S. sailors. Despite an 1868 ban on baseball playing by Spanish officials because of its "anti-Spanish" and "insurrectionist" tendencies, the game grew in popularity. The first recorded game was

played in December 1874 between Club Matanzas and Club Habana, and the first league, consisting of Matanzas, Habana, and Almendares was organized in 1878. In the 1880s and 1890s, the league expanded and was professionalized. After the ban was lifted against black players, many stars from the American Negro leagues played winter ball in Cuba. Cuban sugar planters introduced baseball to Dominican plantation workers in the 1870s as a diversion from their harsh working conditions. Cubans, along with U.S. servicemen and workers, were instrumental in introducing the game to Puerto Rico, Venezuela, and Mexico. Seamen on USS *Montana* first played baseball in front of Mexicans in Guaymas in 1877, and U.S. railway laborers in Nuevo Laredo encouraged Mexican workers to take up the game. In 1887 Mexico City residents formed their own ball club. By 1925 Mexico City had several teams that constituted the core of Mexico's newly inaugurated professional Mexican Baseball League of five clubs, largely due to the promotional efforts of sports journalist-turned-league president Alejandro Aguilar Reyes (1902–1961), known as “Fray Nano.”

—Garrett Washington

Bibliography

- Arbena, Joseph L., and David G. LaFrance, eds. *Sport in Latin America and the Caribbean*. Wilmington, DE: Scholarly Resources, 2002.
- Bjarkman, Peter C. *Diamonds around the Globe: The Encyclopedia of International Baseball*. Westport, CT: Greenwood, 2005.
- Bjarkman, Peter C. *A History of Cuban Baseball, 1864–2006*. Jefferson, NC: McFarland, 2007.
- Pyle, Kenneth. *The New Generation in Meiji Japan: Problems of Cultural Identity, 1885–1895*. Stanford, CA: Stanford University Press, 1969.
- Roden, Donald. “Baseball and the Quest for National Dignity in Meiji Japan.” *American Historical Review* 85(3) (1980): 511–534.

Ice Hockey

Ice hockey emerged in eastern Canada from the 1860s to the 1880s. Soon it gained popularity in the rest of Canada and gained a following in the northern United States. By 1914 many North American professional leagues had appeared, and a few Europeans also had adopted the sport.

For hundreds and even thousands of years in different parts of the world, people had enjoyed games in which goals were scored by using a stick to send a ball or ball-type object (a rock, perhaps) over a line or into a goal. Over the course of two or three decades late in the nineteenth century, eastern Canadians developed a distinctive stick-ball-goal sport that became known as ice hockey. It incorporated rules and conventions used in various games already familiar to Northern Europeans or Native Americans, including hurling (hurley), shinty (shinny), ricket (wicket), field hockey, lacrosse, bandy, and rugby. A landmark event in the development of a unique sport was the first match played indoors, at Montreal's Victoria Rink on March 3, 1875.

Over the next four decades after 1875 the rules, equipment, and strategies of hockey evolved, primarily in Canada. The original puck was a disc made of wood, but soon pucks were made of vulcanized rubber. The players gradually adopted protective equipment, and their sticks and skates became far more efficient and satisfying than those used in early matches. By the twentieth century the game was played on ice surfaces that were (ideally) similar in size to the one in Montreal's Victoria Rink (the accepted standard becoming 200 feet by 85 feet [61 by 26 meters]), but a major difference was that the ice was surrounded by high boards that protected spectators and kept pucks in play. In early hockey games players were off side if ahead of the puck, but early in the twentieth century the rules were adjusted to avoid constant stoppages and to encourage combination or scientific play.

Prior to the First World War hockey was referred to as a manly sport. This term meant that it tested qualities that males should possess, including physical toughness and courage. However, most people considered female hockey acceptable, provided it was not as violent and competitive as the male variety. In Canada, many women's teams were formed beginning late in the 1880s.

By the 1890s the top male hockey players in Canada were superior athletes who were recruited by teams in cities where indoor arenas could hold large numbers of spectators. Beginning in 1893 many of these teams competed for the Stanley Cup, emblematic of Canadian

➤ ARTIFICIAL ICE

After the First World War hockey became a popular international sport and a major North American professional sport. These developments would not have occurred without the creation of artificial ice in the nineteenth century.

Artificial ice is made when a thin layer of water is spread over a cold floor. The floor is cooled by a solution pumped through pipes below the surface. Above the floor and all around it, the air can be warm enough that spectators can watch hockey games (or other ice events) in comfort. Artificial ice was one result of nineteenth-century efforts to develop refrigerators. The early cooling agent usually was ammonia. By the 1870s a few small skating rinks had artificial ice. The first hockey

game on artificial ice probably occurred in Baltimore in 1894. Soon such games took place in other large U.S. cities.

Artificial ice made it possible for hockey to become popular anywhere. Early in the twentieth century, even in Canada's comparatively cold climate, the construction of artificial ice arenas seemed desirable. Spectators liked them, and many natural ice games had been ruined by untimely thaws. The first of (eventually) hundreds of Canadian artificial ice arenas were built in Vancouver and Victoria in 1911 to host the games of the new professional Pacific Coast Hockey Association.

—Morris Mott

hockey supremacy. High-caliber matches generated gate revenues that far exceeded the expenses that the hockey clubs had for travel and ice rental. Players were aware of this fact. Usually for various reasons they wanted to retain their status as amateurs, but they accepted money or other rewards and were in fact professionals.

Openly professional leagues and teams appeared early in the twentieth century, first primarily in Pennsylvania and northern Michigan, then in various parts of Canada. By World War I several professional leagues had been founded. One league that seemed to have a future was the National Hockey Association, which had been formed in 1910. By 1914 the association had franchises in the large cities of Ontario and Quebec. It became the National Hockey League in 1917.

By 1914 Canada was the home of ice hockey, but the game had adherents in the United States as well as in several countries in Western Europe. In 1908 the International Ice Hockey Federation (IIHF) was formed by representatives from France, Switzerland, Great Britain, and Belgium. In 1910 the IIHF arranged the first European Championship tournament. After World War I, the IIHF facilitated the spread of hockey to new countries. Also, it oversaw the entry of ice hockey into the Olympic Games (1920) and the development of the annual World Championship (1930).

—Morris Mott

Bibliography

- Diamond, Dan, ed. *Total Hockey: The Official Encyclopedia of the National Hockey League*. New York: Total Sports, 1998.
- Fitsell, J. W. *How Hockey Happened: A Pictorial History of the Origins of Canada's National Winter Game*. Kingston, Ontario: Quarry Press, 2006.
- McKinley, Michael. *Putting a Roof on Winter: Hockey's Rise from Sport to Spectacle*. Vancouver: Greystone Books, 2000.
- Vaughan, Garth. *The Puck Starts Here: The Origin of Canada's Great Winter Game, Ice Hockey*. Fredericton, New Brunswick: Goose Lane Editions and Four East Publications, 1996.

American Football

American football developed in the nineteenth century, first at the collegiate level. It was originally the result of a merging and transformation of two English sports, English football (soccer) and rugby. While there is some dispute as to what game should be considered the first official American football game, most historians agree that the game began in the decade following the American Civil War.

There were various forms of football being played on American campuses in the 1860s, often as an expression of interclass rivalry. In November 1869, Rutgers played Princeton in New Brunswick, New Jersey, in what has often been



Scenes from the football game between Yale and Princeton played at Manhattan Field in New York City on Thanksgiving Day, 1891. (Library of Congress)

referred to as the first American football game. The field was much larger then, and each team fielded 25 men in a chaotic scramble after the ball. Players attempted to advance the ball by either kicking it or hitting it with the hand or fist. The victory went to the first team to get the ball through the stationary posts in the opponent's goal six times, and Princeton had the honors, winning 6–4. Most of the rules of this early game were based loosely on soccer.

By 1874, several colleges were fielding football teams. Of great consequence was an international game played that year in Cambridge, Massachusetts, between Harvard University and Montreal's McGill University. Since the teams had different rules, two games were played. While Harvard favored the soccer style of play with just a few exceptions, McGill's team favored the rugby style, complete with scrum line. Harvard players came away with a new appreciation of the advantages of the more rugby-oriented play.

Student representatives of perennial rivals Yale and Harvard were determined to have a football match in 1875, and meetings were held to decide what rules should be enforced. Harvard's advocacy of the rugby style of play won out, and as a result the game more closely resembled the modern game, with 15 players fielded per team and carrying the ball, lateral passing, and tackling permitted. In 1876 the American Intercollegiate Football Association (AIFA), comprised of Columbia, Harvard, Yale, and Princeton, came into existence, with the purpose of

settling on rules changes for intercollegiate play. Through this institution many rule changes would eventually be instituted, such as the change from a round to an oval ball.

No one effected rule changes in the early period more than Walter Camp (1859–1925), known as the “father of American football.” Camp was the star running back for Yale for six years (1876–1882) as an undergraduate and then as a medical student. He dominated the early rules discussions and became the game's greatest innovator. His arguments brought about the line of scrimmage in 1880, thus allowing the offensive team to run set plays rather than the continuous mad scramble for the ball. This change clearly demarcated American football as a sport different from rugby or soccer and set in motion a series of changes that quickly followed. In addition, in 1880 the AIFA reduced the size of fielded teams to 11 (the recognized number today) and made the field smaller.

Because the new scrimmage line encouraged teams to try to maintain possession the entire game by using delay tactics, even if it meant giving up yardage consistently, Camp instituted the safety rule, which penalized the offensive team for being tackled in its own end zone. By 1882 a system of downs was instituted, allowing the offensive team three chances to advance 5 yards (about 4.5 meters). Fields were marked with lines every 5 yards for this purpose, and the resulting gridiron became one of the game's most notable features. Other important changes allowed blockers to run interference for the ball carrier and defensive players to make tackles below the waist. The scoring for touchdowns and field goals continued to be modified.

The new rule changes helped increase the sport's popularity, and football soon spread beyond the confines of elite universities. By 1900 more than 40 universities were fielding football teams, and thousands of spectators attended the matches. The popularity of football also reached across the nation in the form of local athletic clubs. In 1892 the Allegheny Athletic Association became the first team to pay a player, William Heffelfinger, making him the first paid professional American football player.

The sport was harshly criticized as barbaric in some circles, and it was not uncommon for

► BLACK PIONEERS IN EARLY AMERICAN FOOTBALL

While few African Americans had the opportunity to play football in the early stages of the game, Walter Camp did not shy away from naming black players to his Walter Camp All-America team. In back-to-back years, 1892 and 1893, Camp selected African American William Henry Lewis of Harvard for the position of center-rush. The first black collegiate football player, who played at Amherst College before attending Harvard as a law student, Lewis was one of the few blacks playing at white universities during an age of increasing segregationist restrictions, upheld by the 1896 *Plessy v. Ferguson* Supreme Court decision.

On the professional side Charles W. Follis, who had starred on his Wooster, Ohio, high school team, became the first paid black professional football player when he signed a deal with the

Shelby (Ohio) Athletic Club in 1904. Follis was an exceptional player, scoring an 83-yard (76-meter) touchdown in the first game after his signing. He endured jeers, taunts, and threats from opposing crowds. In one game against Toledo, the epithets hurled at Follis were so disturbing that the Toledo team captain, Jack Tattersoll, stopped the game and screamed at his own fans, saying, "Don't call Follis a nigger. He's a gentlemen and a clean player and please don't call him that."

—Gerrit Dirkmaat

Source

Charles K. Ross, *Outside the Lines: African Americans and the Integration of the National Football League* (New York: New York University Press, 1999), 13.

players to be horribly injured and even die. Such was the brutality of the game that in 1905, 19 players were killed. In 1906, in an effort to free up the game and reduce its violence, John Heisman (1869–1936), the outstanding coach at Auburn University, led the charge against the now more conservative camp to institute the forward pass. Heisman won, and the pass was legalized. This gave football a dynamic feature that has remained with the game ever since.

While the game spread quickly through the nation's colleges (the first Rose Bowl game featuring an East team, Michigan, versus the West team, Stanford, played in 1901), the professional aspect of the game was centered primarily in Ohio. In 1920, in an effort to control rising salaries, standardize contracts in order to prevent team jumping by players, and regulate the rules of the game, the American Professional Football Association, forerunner of the National Football League, was created.

—Gerrit Dirkmaat

Bibliography

- Oriard, Michael. *Reading Football: How the Popular Press Created an American Spectacle*. Chapel Hill: University of North Carolina Press, 1993.
- Ross, Charles K. *Outside the Lines: African Americans and the Integration of the National Foot-*

ball League. New York: New York University Press, 1999.

Umphlett, Wiley Lee. *Creating the Big Game: John W. Heisman and the Invention of American Football*. Westport, CT: Greenwood, 1992.

Athletics—Track and Field

Athletics, or track and field as it is more commonly known, is one of the world's oldest sports. Prehistoric men developed running, jumping, and throwing skills for survival. Ancient Egyptian and Mesopotamian artists depicted men practicing these skills, and the Greek poet Homer described athletic displays in the *Iliad* and the *Odyssey*. The first recorded athletic competition came in the form of a stade, a 200-meter (219-yard) race, in the Olympic Games in 776 BCE. At the height of the Olympic Games, the track and field program consisted of footraces ranging in distances from 200 to 4,800 meters (approximately 3 miles), discus and javelin throws, and the standing long jump. In addition to the individual events, the Olympics also included the pentathlon, composed of the 200-meter race, discus and javelin throws, the broad jump, and wrestling. In addition to the Olympic Games, track and field comprised the Pythian Games, Nemean Games, and Isthmian Games as well as the Heraea Games for women.

<i>US Standard</i>		<i>Metric Standard</i>	
<i>Event Distance</i>	<i>Metric Equivalent</i>	<i>Event Distance</i>	<i>U.S. Equivalent</i>
100 yard	92 meter	100 meters	109 yards
120 yard	110 meter	110 meters	120 yards
200 yard	183 meters	200 meters	219 yards
220 yard	200 meter	400 meters	0.25 miles
440 yard (0.25 mile)	402 meters	800 meters	0.5 miles
1 mile	1600 meter	1,500 meters	0.9 miles
2 mile	3200 meter	3,000 meters	1.9 miles
3 mile	4800 meter	5,000 meters	3.1 miles
26.2 mile (marathon)	42.2 kilometer	10,000 meters	6.2 miles
		3.5 kilometers	2.1 miles
		20 kilometers	12.4 miles
		30 kilometers	31.1 miles

Organized track and field competition vanished with the end of the Olympic Games in the fourth century; however, throughout the Middle Ages noblemen practiced running, jumping, and throwing in addition to horseback riding, jousting, and fencing. After pedestrianism, or long-distance race walking, enjoyed great popularity in England during the eighteenth and nineteenth centuries, track and field reappeared as an organized sport in the nineteenth century as part of English public school and university physical education and athletic programs. Eton introduced track and field as an interclass, or intramural, sport in 1837, followed by Exeter and Oxford in 1850. At the university level, Cambridge and Oxford held intramural track and field meets in 1857 and 1860, respectively. In 1864 Oxford and Cambridge competed against each other in the first intercollegiate track and field meet. The meet consisted of eight events; each team won four events. Oxford athletes won the 100- and 440-yard dashes and the high and long jumps, while Cambridge runners claimed the 1-mile run, the 120- and 200-yard hurdles, and the 2-mile steeplechase. In 1873 the Intercollegiate Association of Amateur Athletes of America held the first collegiate track and field championship in the United States, and in 1894 Yale University competed against Oxford in England.

England held the first national track and field championship on March 23, 1866. Sponsored by the London Amateur Athletic Club, the meet was held at Walham Green in London. The London Athletic Club continued to sponsor the national championships until 1880, when the Amateur Athletic Association assumed control of the event. In 1876 the New York Athletic

Club held the first national track and field championships in the United States. The New York Athletic Club continued to sponsor the national championships through 1878, after which the National Association of Amateur Athletics of America took it over. In 1888 the newly formed Amateur Athletic Union sanctioned the meet until 1978. On September 21, 1895, the London Athletic Club and the New York Athletic Club met at Manhattan Field in the world's first international track and field meet. Underscored by decisive victories by Bernard Wefers in the 100- and 220-yard dashes and Thomas Conneff in the 1- and 3-mile runs, the Americans defeated their British counterparts in all 11 events held that afternoon.

The revival of the Olympic Games in 1896 provided a major stimulus toward the expansion of the track and field program. Beginning with 11 events in 1896, the program expanded to 29 in 1912. Of the 29 events contested in 1912, 20 have remained as part of the track and field program and form the basis for most modern track and field meets. Track events (now measured in meters) include the 100-, 200-, 400-, 800-, 1,500-, 5,000-, 10,000 meter runs; the 110- and 400-meter hurdles; the 3,000-meter steeplechase; and 4 x 100 and 4 x 400 meter relays. Field events include the high jump, pole vault, long jump, triple jump, shot put, discus throw, hammer throw, and javelin throw. The 10-event decathlon, contested over two days, consists of the 100 meters, long jump, shot put, high jump, and 400 meters on the first day and the

110-meter hurdles, discus throw, pole vault, javelin throw, and 1,500-meter run on the second day. The 26.2-mile (42.2 kilometer) marathon, part of the Olympic program since 1896 to commemorate the legendary run by Phidippides to inform the Athenians of the Greek victory over the Persians at Marathon in 490 BCE, is held separately from most track and field meets. In 1908 the Olympics incorporated race walking into the athletics program, with 3.5-kilometer and 16-kilometer events. Since 1956 the standard Olympic race walking distances have been 20 and 50 kilometers. In 1928 the Olympics included 5 events for women (the 100- and 800-meter runs, high jump, discus throw, and 4 x 100 meter relay), and by 2008 women competed in most of the same events as the men except for the 50-kilometer walk and the 100-meter instead of the 110-meter high hurdles and the heptathlon instead of the decathlon.

With the Olympic Games, track and field gained worldwide popularity. In 1912, 17 national track and field federations met in Berlin to form the International Amateur Athletic Federation (IAAF). Providing the sport with an international governing authority, the IAAF standardized the events and equipment and approved world records. In 1914 the IAAF published the first official track and field world records. As the International Association of Athletics Federations, the IAAF continues to govern the sport track and field.

—Adam Hornbuckle

Bibliography

- Baker, William J. *Sports in the Western World*. Rev. ed. Urbana and Chicago: University of Illinois Press, 1988.
- Mandell, Richard D. *Sport: A Cultural History*. New York: Columbia University Press, 1984.
- Miller, Stephen G. *Ancient Greek Athletics*. New Haven, CT: Yale University Press, 2004.
- Quercetani, R. L. *A World History of Track and Field Athletics: 1864-1964*. London: Oxford University Press, 1964.
- Rader, Benjamin G. *American Sports: From the Age of Folk Games to the Age of Spectators*. Englewood Cliffs, NJ: Prentice Hall, 1983.
- Wallechinsky, David, and Jaime Loucky. *The Complete Book of the Olympics: 2008 Edition*. London: Aurum, 2008.

Sports and Nationalism— The Gaelic Athletic Association

The Gaelic Athletic Association (GAA) is the Irish amateur athletic association that focuses on the promotion of traditional Irish sports as a means of promoting Irish nationalism. The GAA's first meeting, held on November 1, 1884, in Hayes's Hotel in Thurles, was attended by seven men, including founder Michael Cusack and one of Ireland's best-known athletes of the day, Maurice Davin. The GAA strove to align itself with various Irish nationalist movements, including the Irish Republican Brotherhood (IRB). In fact, the first three patrons of the GAA were not affiliated with the IRB: Archbishop Thomas William Croke, a strong supporter of an independent Ireland; Michael Davitt, founder of the Irish National Land League; and Charles Stewart Parnell, a Protestant who led Irish Parliament representatives in William Gladstone's government. As the organization sought to assert pride in Irish heritage through sport, the GAA prohibited its athletes from participating in or attending sports events that were considered foreign, a ban that was not lifted until 1971.

The GAA was not the only group seeking to promote Gaelic athletics. The main rival of

➤ HURLING

Hurling is an Irish field game played with wooden sticks (*caman*) that have a slight outward curve at the bottom in order to strike a hard ball (*sliotar*) toward a goal. The ball may be hit on the ground or in the air using the caman or balanced and carried on the end of the caman. A goal may be scored by driving the ball under the goal post (as in soccer) or by using the caman to get the ball over the goal post.

Legend has it that the ancient kings of Ireland played an early form of hurling, a version considered so violent that ancient rules dictated punishment for deaths caused during hurling match play. Today, hurling remains a rather violent game and is often linked to masculinity, a fact not overlooked by the Gaelic Athletic Association (GAA) when it chose to resurrect the sport in the late nineteenth century.

—Lindsay Krasnoff

the GAA was the Irish Amateur Athletic Association (IAAA), formed in 1885. The IAAA was composed mainly of Protestants and Unionists, thereby acting as a foil to the more Catholic GAA. The GAA sought to differentiate itself from the IAAA by emphasizing the native games of Ireland and by its selection of sports-playing days. The IAAA did not hold games on Sundays, in observance of the Sabbath; however, this was in contradiction with the schedule of the average workingman, whose only day off was Sundays. In sponsoring games on Sundays, the GAA sought to undermine the IAAA and reinforce its commitment to Irishmen.

The GAA's mission was not only to promote Irish athletics but also to make sports accessible to the everyday worker and artisan. Therefore, although in the early years the GAA emphasized different sports, it soon settled on sports that cost little to play and could easily be pursued by anyone. To this end, the four main sports of the GAA were handball; rounders, a close cousin to American baseball; hurling, a cross between lacrosse and field hockey; and Gaelic football, a game that was more a mix of rugby and soccer. Rules for these games were codified in the 1880s, and by 1887 the GAA sponsored the first All-Ireland championships for hurling and Gaelic football. There is irony in the introduction of codified rules and championship competitions—British sports practices first introduced in the Victorian period—into an Irish nationalist athletics group.

By the turn of the century, hurling and Gaelic football emerged as the most popular sports among players and spectators, and subsequently these two sports received the most focus from the GAA in following years. The events that solidified these sports' dominance within the GAA were the All-Ireland championships of 1903. For all GAA championships, there was one decisive winner; no ties were allowed for a championship match. Therefore, the rules stipulated that a tie must be replayed. If the replay match ended in a tie, then there was an additional 30 minutes of play time added to the clock, or another replay match would be required to break the tie. The 1903 championship games for both hurling and Gaelic football spanned three games due to this no-tie rule. Each match drew more

spectators than the last, thus creating the first mass-spectacle athletic events in Ireland.

—Lindsay Krasnoff

Bibliography

- "All About Hurling." The Official Website of the GAA. http://www.gaa.ie/page/all_about_hurling.html.
- "The Birth of Cumann Luthcleas Gael." The Official Website of the GAA. http://www.gaa.ie/page/the_birth_of_cumann_luthcleas_gael.html.
- Mandle, W. F. *The Gaelic Athletic Association & Irish Nationalist Politics, 1884–1924*. London: Christopher Helm, 1987.
- McDevitt, Patrick. *May the Best Man Win: Sport, Masculinity, and Nationalism in Great Britain and the Empire, 1880–1935*. New York: Palgrave Macmillan, 2004.

The Professionalization of Sports in Europe and the United States

The professionalization of modern sport within Europe and the United States occurred from the mid-nineteenth century to the early twentieth century. One major factor was increasing urbanization, which coincided with greater leisure time enjoyed by the working classes and an increase in wages. The emergence of a standard set of rules and regulations for most sports and the establishment of organized governing federations—at both the national and international levels—both reflected and aided the movement toward professionalization.

The process of codification of game rules began in Great Britain in the 1850s with association football (known to Americans as soccer), one of the first sports to be regulated. The first codified rules of soccer were drawn up at Eton in 1815 and were followed by the Cambridge Rules of 1848. Soccer was also one of the first sports to be institutionalized, professionalized, and governed at the international level. The first professional association was the Football Association of England (FA), which formed in 1863. The international governing body of soccer, the International Federation of Football Association (FIFA), was established by Frenchman Jules Rimet in 1904 to standardize the game throughout the world.

The amateur athletic club in the early to mid-nineteenth century was a sporting society where

upper- and middle-class men continued to play sports and compete after graduating from school or university. This type of club began to give way in the 1850s and 1860s to club teams owned by industrialists who staffed their teams with workers from the factories. As competition for players and victories began to grow, some of these teams began to pay wages to players derived from tickets sold to the public to watch matches. Increasingly, athletic prowess was an incentive to the working class: to earn better wages through one's sporting skills rather than through factory work was a means of economic and thus social elevation. With the influx of working-class players and spectators, many elites abandoned these games in favor of other sports, such as polo, that maintain a class barrier.

The mainstay in American professional sports during this era was baseball, a cousin of cricket and rounders that evolved in the early nineteenth century. The National Association of Baseball Players was founded in 1858 and codified the game's rules; however, this was an amateur group. The first professional salaried baseball team was the 1869 Cincinnati Red Stockings. Basketball was another homegrown sport in the United States, invented in 1891 by James Naismith at the Young Men's Christian Academy (YMCA) in Springfield, Massachusetts. Because it was played indoors and was inexpensive, basketball grew quickly in popularity not only in the United States but also in Europe. The first professional basketball game in the United States was played during the 1896–1897 season by the Trenton Basketball Team of Trenton, New Jersey, while in Europe the game was taking root as early as 1894.

By 1914 many team sports, both of European and American origin, fielded professional teams that paid players some form of salary. However, it would not be until the post-1919 period, with its specialty sporting press, that professional sport would evolve into one of the largest leisure activities of the masses.

—Lindsay Krasnoff

Bibliography

Cashman, Richard, and Michael McKernan, eds. *Sport in History: The Making of Modern Sporting History*. Queensland, Australia: University of Queensland Press, 1979.

Crego, Robert. *Sports and Games of the Eighteenth and Nineteenth Centuries*. Westport, CT: Greenwood, 2003.

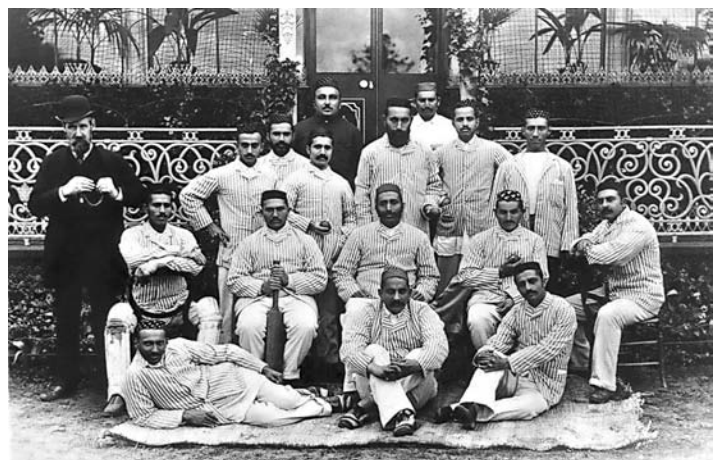
Gibbons, Denis. "The Origins of European Hockey." In *Total Hockey: The Official Encyclopedia of the National Hockey League*, edited by Dan Diamond. New York: Total Sports, 1998.

Tranter, Neil. *Sport, Economy and Society in Britain, 1750–1914*. New York: Cambridge University Press, 1998.

Sports and Imperialism— British Sports in Asia, Africa, and the West Indies

The British sports that evolved between 1750 and 1914 included individual sports such as horse racing, boxing, tennis, and golf, and team sports such as rugby, association football (or soccer), cricket, and polo. During this period, sports underwent modernization, professionalization, organization, and codification. This revolution in sports originated in Great Britain during the mid-nineteenth century and served to create the modern structures of today's games.

Although each sport has its own particular evolution, the origins of many modern team sports are traceable to the British public school system of the nineteenth century, which were in fact private schools that charged tuition to its pupils. It was within these structures that young boys enjoyed regular recreation time in which they participated in athletic exercise. It was felt



Indian cricket team during a tour of England, 1886. (Bob Thomas/Popperfoto/Getty Images)

POLO

Polo is a sport played on horseback in which competing teams seek to score goals by driving a hard ball into the opposing team's goal with the use of a mallet. The equipment and horses needed to play polo were—and remain—expensive; therefore, historically polo was a sport of the wealthy.

The origins of polo are unknown, but many believe that it derives from an old Indo-Persian game designed to train cavalry. Although polo was practiced within India during the seventeenth century, it was not until the mid-nineteenth century that British administrators in India, observing the game played by Indian princes, began to play the sport with great enthusiasm and drew up a set of rules. Thus, it was in India, the crown jewel of the British Empire, where polo first developed a large following. By the 1870s and 1880s it was a primary focus within Indian society and was viewed by the British as a good means of interaction between the elites of both sides. Indian elites also took pride in polo as a traditional sport that distinguished them from their British rulers. Polo spread in popularity outside of India to England, Argentina, Ireland, and the United States and became an Olympic sport in 1900.

—*Lindsay Krasnoff*

that team sports encouraged certain characteristics or traits that were deemed essential in the ideal British subject: an ethic of fair play, a sense of teamwork, democracy on the playing field, submission to adult authority, and the adherence to a regulated set of rules. Two of the earliest team sports nurtured in this environment were soccer and rugby, originating out of the Rugby School run by Thomas Arnold, who is often credited as the father of the modern forms of these games.

Team sports were initially domains of the British elites and middle classes, whose sons mingled at public school and university and continued to play their games after graduation. As the nineteenth century progressed and sports became professionalized in the 1860s, some sports became increasingly the domain of the working class within the British mainland. Although some sports such as soccer were abandoned by the

elites as more commoners began to take the field, the initial impetus behind backing a sporting culture—that is, the instillation of what was deemed a proper British moral code via sport—became stronger, especially vis-à-vis the British Empire. British authorities found in sport an excellent opportunity to create a stronger link within the empire and to impart and reinforce British conduct and ideals to colonial populations.

From the mid-nineteenth century through the early twentieth century, Britain encouraged a program of sports imperialism that sought to infuse British behavior and ideals into the indigenous elites. Throughout the empire, sons of the native elites were sent to Britain to attend university, where they picked up different team sports and brought them back to the colonies afterward. Another way that the British colonized via sports was through British workers who left the home isles for jobs within the empire or on the continent to build bridges, railroads, and roads. These workers sought to play the games they had played at school and thus taught the locals the games developed within the British public schools and universities. In this way the British spread soccer widely during the Victorian and Edwardian eras, and by 1900 it was the most popular British sport played abroad. The other main way that the British used sport to colonize the empire was through playing games with the indigenous elites. It was not uncommon for British administrators to engage in sports against a local side. Through this contact the native ruling elites intermingled with the British and thus forged bonds to help govern the empire.

British sports such as soccer, rugby, and especially cricket served the empire as a unifying link that transcended culture and place. Not only did sport serve to tie the colonies to the home isles, but it also served as an intercolonial link to aid in creating a tie among different parts of the empire. To this end, colonial teams competed against each other in addition to British teams. In fact, sport could be said to be one of the most successful British exports during this time. Cricket became popular in Australia, South Africa, India, and the West Indies, with Australia and South Africa joining England as the original three founders of the International Cricket Council in 1909.

Sport was seen not only as a way to create British nationalism through a shared set of ideals and behaviors throughout the empire but also as a way to assert British gender norms. Sports, especially team sports such as rugby that involved aggression, were seen as enabling participants to assert their masculinity, a masculinity shared by all men within the empire who played the same games and a masculinity that set them apart from other powers.

Some parts of the British Empire were keen to adapt to the new sports, while others developed more distinct games. For example, British rugby became quite popular in South Africa and New Zealand, where oftentimes they were enjoyed by larger cross-sections of the populations than in Britain itself. British football, however, took a different turn in Australia, where it developed into

Aussie Rules football. By the eve of World War I, British sports dominated most reaches of the globe, the legacy of which carries through to the modern day, where a British team sport, soccer, is the most popular sport on the global level.

—Lindsay Krasnoff

Bibliography

- McDevitt, Patrick. *May the Best Man Win: Sport, Masculinity and Nationalism in Great Britain and the Empire, 1880–1935*. New York: Palgrave MacMillan, 2004.
- Stoddart, Brian. “Sport, Cultural Imperialism, and Colonial Response in the British Empire.” *Society for the Comparative Study of Society and History* (1988): 649–673.
- Tranter, Neil. *Sport, Economy and Society in Britain, 1750–1914*. New York: Cambridge University Press, 1998.

■ Introduction: Cross-Cultural Encounters

The growth of international trade, increasing levels of migration, the emergence of tourism, opportunities for cheaper and faster travel, heightened missionary activities, and conquests by China in the 1700s and Russia and the European states in the 1800s all ensured that the number and intensity of encounters among the world’s peoples increased dramatically between 1750 and 1914. The cultural ramifications of these encounters were far-reaching and profound. They also were one-sided. Although they are often described in terms of “exchange” or “interchange,” neither term is accurate when applied to the cultural encounters of the 1800s. Both words imply acts of reciprocal giving and receiving between two more or less equal entities. No such balance characterized the cultural interactions of the nineteenth century. Although examples of Western cultural influence on Asia, Africa, and Oceania abound, there were relatively few signs of Western cultural borrowing from Asian and African societies.

Throughout the early modern era, Africans and Asians who interacted with Westerners conceded that Europeans had impressive expertise

in mathematics, science, and technology, especially in the area of weapons design and manufacture. Thus, Chinese emperors beginning in the late sixteenth century supported the presence of European Jesuits at the imperial court because of what they could teach the Chinese about instrument making, cartography, mathematics, and weaponry. Indian, Persian, and even Ottoman rulers hired Europeans to upgrade their arsenals and teach their armies the latest European training methods and tactics. A number of Asian rulers also were impressed by European painting techniques and ordered their court painters to imitate the Europeans’ use of color and single-point perspective. This includes Mughal emperor Jahangir (r. 1605–1622) and a series of Chinese emperors, who hired dozens of European painters who passed on some of their painting techniques to Chinese court painters. But Asians and Africans showed little interest in other aspects of Western culture, which for many of them was represented by the boorish behavior of aggressive merchants and unruly sailors.

This changed dramatically in the nineteenth century, when industrialization, political

revolution, scientific progress, and an outburst of technological innovation transformed the Western nations into the world's dominant economic and political force. In India and other African and Asian colonies, imperialism opened the way for increased missionary activity; turned English, French, or Dutch into the language of government; and introduced Western legal concepts, medicine, and schools. Even in British colonies, which relied heavily on indigenous rulers to implement government policies at the village level, the standing of traditional elites was undermined.

The two dominant colonial powers, France and Great Britain, made efforts to produce small numbers of “assimilated” Westernized natives who would be receptive to Western rule and could serve as colonial administrators, teachers, and medics. When the British politician and historian Thomas Macaulay issued his famous memorandum on Indian education in 1835, he stated that the purpose of the European-style, English-language-based curriculum he proposed was to create “a class of persons Indian in blood and colour, but English in taste, in morals, in opinions, and in intellect.” The French goal was to produce *évolués* (“evolved ones” or “developed ones”), Africans and Asians who had “evolved” by shedding their native identities and accepting European values and behavior patterns. Such individuals, many of whom had studied or traveled in Europe, spoke French, were comfortable with French rule, worked for French firms or in the colonial administration, and usually lived in cities. They were the desired end product of France’s assimilation policy, which looked forward to the day when its Europeanized colonial subjects would become full French citizens, with political rights and duties no different from a Frenchman who lived in Paris, Lyons, or Marseille.

The reaction to Western ascendancy in those areas of Asia and Africa that remained politically independent varied greatly. On one extreme was Meiji Japan, where in 1868 the emperor issued the so-called Charter Oath, promising that “Evil customs of the past shall be broken off” and that “Knowledge shall be sought throughout the world.” This set the stage for three decades of social, political, and

educational reform modeled on the West. Viewing Westernization as a patriotic duty, Japanese adopted Western dress and grooming habits, learned to play baseball and enjoy European classical music, took ballroom dancing lessons, and took up Western practices such as teeth brushing and handshaking. Meanwhile, the government sent students to study abroad and imported hundreds of Western experts to modernize the military, revamp law codes, teach science, and restructure the educational system. In contrast, China’s advocates of self-strengthening resisted wholesale Westernization and clung to the idea that they could save traditional Confucian culture by adopting Western technology and nothing else. Nonetheless, missionary schools, increased contacts with Westerners in treaty ports, and contacts with members of overseas Chinese communities guaranteed that Western ideas would spread. These ideas inspired the flurry of reforms undertaken by the Qing government in the early 1900s, but they also inspired the revolutionaries who overthrew the Qing regime in 1911–1912.

The experiences of the Ottoman empire and Persia fell between those of Japan and China. In both regions, contacts with Western ideas through travel, missionary schools, commerce, and diplomacy (the Ottoman empire allied with Britain and France in the Crimean War) created a small but growing number of city-based individuals whose tastes, attire, knowledge of European languages, and secularism set them apart from the vast majority of their countrymen. Such contacts also convinced rulers and intellectuals of the need to introduce Western science and certain Western-inspired political reforms, but their efforts were frustrated by the lack of money and an undercurrent of religious opposition to all things Western and Christian.

Western views of Asia and Africa also changed. In the eighteenth century, writers such as Voltaire (1694–1778) contrasted the secularism, enlightened rule, and tolerance of China with the inept governments, religious bigotry, and constant warfare that plagued Europe. Wealthy consumers paid for high-priced Chinese porcelains even after Europeans discovered in the early 1700s how to make a porcelain that rivaled what the Chinese had been producing

for centuries. The artistic movement chinoiserie peaked in the mid-eighteenth century, when European painters, furniture makers, interior decorators, architects, and garden designers were influenced by Chinese models. In the late eighteenth and early nineteenth centuries, British Orientalist scholars learned Sanskrit and studied ancient Indian religious writings, convinced that they had discovered a civilization that rivaled that of ancient Greece.

In nineteenth-century Europe small numbers of painters, composers, and designers drew inspiration from non-Western art and music, especially toward the century's end. Beginning in the 1860s Japanese woodblock prints inspired many impressionist painters in France. The Czech composer Antonín Dvořák incorporated Native American and African American motifs into his orchestral and chamber music after residing in the United States for three years in the 1890s. Between 1907 and 1909 the paintings of Pablo Picasso were influenced by African sculpture, and Paul Gauguin, who lived out his last years in the South Pacific, incorporated elements of "primitive" Polynesian art into his paintings. In other areas of thought and culture, however, nineteenth-century Europeans were convinced that they had little to learn from Asians and Africans. Macaulay in his "Minute on Education" reflected educated European opinion when he wrote that "A single shelf of a good European library is worth the whole native literature of India and Arabia," adding that such literature contained "medical doctrines, which would disgrace an English farrier, [and] Astronomy, which would move laughter in girls at an English boarding school." Among nineteenth-century Europeans, there was no movement to study non-Western languages, no urge to adopt non-Western dress, and no impulse to remodel their schools, political institutions, marriage customs, or anything of significance based on the practices of India, China, or any other non-Western region. Instead, the practices and beliefs of people in the rest of the world came to symbolize superstition, backwardness, and stagnation, a characterization that reinforced the Westerners' sense of superiority and underscored the need for their "civilizing mission."

—James H. Overfield

African Influences on European Culture, circa 1900

In the eighteenth and early nineteenth centuries Africa was the source of people sustaining the profitable Atlantic slave trade. By the late nineteenth century, driven by the need to locate raw materials to feed their manufacturing industries, Britain, France, Germany, and Belgium had colonized sub-Saharan Africa. Encounters with African peoples were documented by missionaries, explorers, and administrators, and evidence of their contact with African culture was confirmed by artifacts acquired through trade or plunder. These objects eventually influenced the modernist art movement.

Initially, African artifacts were not considered to be art but anthropological material culture, and by the beginning of the twentieth century, ethnographic museums in major European cities housed extensive collections of objects from Africa. Ironically, the forced removal of African art objects from their continent of origin resulted in their preservation in Western museums. Had the objects remained in Africa, insects and climate probably would have destroyed them.

Masks and wood carvings of figures dominated museum display. They exhibited formal sculptural properties but diverged radically from prevailing Western concepts of art. Not only did they offer no evidence of naturalism, but they seemed to confirm the premises of social Darwinism, allowing Europeans to assert that they were civilized while Africans were unsophisticated primitives who created heathen ritual objects.

In the first decade of the twentieth century, avant-garde artists in France and Germany who were trying to define new ways of representing their changing world had lost faith in the capacity of naturalism to convey new ideas. They were intrigued by the ingenious use of materials and powerful presence, or inner force, apparent in carvings by the peoples of Africa and Oceania. French and German artists studied Western and Central African tribal art to learn how the sculptors used form and space (relationships between volumes, rhythms, and surface decoration). They were less interested in African cultural values and their visual embodiment because they

➤ AFRICAN INFLUENCES ON EUROPEAN CULTURE



Fang culture Ngil mask, wood and distemper, nineteenth century. This is similar to the mask seen in the 1912 photograph of Andre Derain's Paris studio. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

Stories about the discovery of African art cannot be confirmed. Vlaminck claimed to have discovered African art in 1905. In the autumn of 1906 he acquired a mask that he sold to Derain, who showed it to Matisse and Picasso. It was probably a Fang mask from France's colony in the Congo. Extant photographs of Derain's studio, circa 1912, show a Fang mask on the wall amid other masks and statues. Fang face masks are highly simplified, with a symmetrical alignment of minimalist features. Many of them carry scarification marks, something that is discernible in Picasso's painting, *Les Femmes d'Alger* (1907).

—Marion Arnold

knew little of African social organization and religion, but they imagined that African carvings, because they were simplified, were authentic expressions of ritual practices and simple or primitive lifestyles lived close to nature.

African art exerted a strong influence on artistic movements such as the French Fauves and cubists and the German expressionists. By 1906 Maurice Vlaminck, Henri Matisse, and André Derain were collecting African art in Paris, and in Germany the Brücke artists, Ernst Ludwig Kirchner and Erich Heckel, were studying primitive art. These artists were attracted by the freedom with which the human face and body could be manipulated through distortion, exaggeration, and geometric simplification. They realized that stylization and abstract pattern might express

the essence of the human condition. African art language offered Western artists ways of freeing themselves from the objective of imitating life in painting and sculpture. Their work became less descriptive and more concerned with ideas rather than appearances. The expressive power of form and decoration that characterized much of the African art helped Western artists to confirm the theories they were constructing about the aesthetic role of visual language in modernist theory.

—Marion Arnold

Bibliography

- Harrison, Charles, Francis Frascina, and Gill Perry. *Primitivism, Cubism, Abstraction: The Early Twentieth Century*. New Haven and London: Yale University Press in association with the Open University, 1993.
- Rhodes, Colin. *Primitivism and Modern Art*. London: Thames and Hudson, 1994.
- Rubin, William. *Primitivism in 20th-Century Art: Affinity of the Tribal and Modern*. New York: Museum of Modern Art, 1984.

Chinoiserie

Chinoiserie was a style or fashion in European art and architecture that grew out of the vastly increased contact and trade with China after 1600. The term, coined in eighteenth-century France, usually applies to the decorative arts and carries connotations of fad, fashion, and frivolity, but it was a major instance of long-distance trade and cultural borrowing in the early stages of Europe's worldwide maritime expansion.

Art historians have been quick to point out that the vogue for Chinese motifs and materials, especially porcelain and lacquerware, did not significantly affect the development of high art in Europe. This is true, but it ignores the impact that Chinese-inspired styles had on luxury items and eventually on everyday goods used first by the European aristocracy and then by the middle classes. It also neglects the enormous impact that these goods had on European perceptions of China and the exotic "other."

In terms of economic value and widespread appeal, Chinese porcelain, named china in England, led the chinoiserie fad. Since the Middle

➤ AUGUSTUS THE STRONG'S QUEST FOR TRUE PORCELAIN

In early-seventeenth-century Europe, Augustus the Strong was more than a bit player in the game of European power politics. As elector of Saxony and king of Poland, he ruled one of the wealthiest and most powerful states of central Europe. But he had a serious problem: his obsession with collecting imported Chinese porcelain threatened to bankrupt his state. His ministers were so concerned that they saw only two solutions to this impending financial crisis: they had to find an alchemist who could change lead into gold to finance these expensive imports or discover how to make the porcelain.

For over 100 years Europeans had been trying to discover the secret of this remarkable ceramic with its hard, smooth surface; painted designs under the glaze; and almost magical translucence. The Medici in Florence had produced a good-quality soft-paste glaze known as *faience*, and many kilns in Europe had been turning out this slightly inferior

product to meet the demand for a nonimported version of this expensive long-distance import.

But Augustus would have only the best. He found his alchemist, a Johann Bottger; locked him in a castle; and told him to produce or else. Amazingly Bottger did, by discovering the secret ingredient that had eluded all other Europeans. It was kaolin, a powdery mineral found near the famous Chinese imperial porcelain kilns at Jingdezhen but also widely available elsewhere if you knew what you were looking for. Combined with high-temperature firing, kaolin produced the long-sought-after true hard-glaze porcelain.

Augustus immediately set up a large ceramics works at Meissen, about 12 miles (19 kilometers) from his court in Dresden, and the European porcelain industry was born. Of course he tried to keep the technique a secret, but when two of his potters fled Saxony, the secret was out.

—Ralph Croizier

Ages this porcelain had been highly prized by the rich and powerful throughout Asia and into Europe. When expanded maritime trade made it more available, the European upper classes used a large portion of the silver from the Americas to finance its purchase. They also sought to discover the secret of its manufacture, finally succeeding in the early seventeenth century.

This development allowed Europeans to create their own porcelain kilns and produce their own designs, particularly in the decoration of vases, plates, small statues, decorative tiles, and, reflecting the enormous popularity of the Chinese beverage, tea, teapots and cups. These European adaptations were usually far more ornate and heavily decorated than their Chinese prototypes, particularly those reflecting the taste of the Chinese scholarly class. As ceramics and as wares in other fields, they should be seen not as imperfect imitations of Chinese style but rather as a creative response to external stimuli reflecting contemporary European needs and taste. The most famous European porcelain producers were located at Meissen and Nymphenburg in Germany, Delft in Holland, Sèvres in France, and Derby in England, but the taste



*Meissen sugar bowl from dinner set made for the Archbishop Elector Clement Augustus of Cologne, 1735.
(Francis G. Mayer/Corbis)*

for fine china and the vogue for chinoiserie extended all over Europe.

Textiles were another culturally and economically important part of chinoiserie. Imported silk went as far back as the Roman Empire, but in the seventeenth century cotton garments with Chinese designs, usually woven in India, spread widely, especially in England. In interior

decor, Chinese tapestries were used as fashionable wall hangings; wallpaper, another Chinese invention, became even more widespread. The furniture in these upper-class rooms consciously imitated Chinese taste in cabinets, tables, chairs, and screens. Often such items were coated with Chinese lacquer and decorated with imaginary Chinese scenes. In England, this was called Japanning, as different regions of the East were frequently confused.

There is also considerable semantic confusion about the Anglo-Chinese garden, a French term for a natural-looking asymmetrical design of parks for English country estates developed in the eighteenth century. Not much was known about Chinese gardens when these parks were first developed, and apart from a rejection of rigid geometrical design, they have very little in common with real Chinese gardens. However, the fondness for quasi-Chinese ornamental buildings, pavilions, and pagodas used to decorate these private parks did give them a certain Chinese quality. The most famous of these eighteenth-century follies is the still standing ten-story pagoda in the Royal Gardens at Kew.

By the nineteenth century the rage for Chinese-looking things was largely past, but the curious and exotic teacup images of a Chinese never-never land had a lingering influence on Western perceptions of the East.

—*Ralph Croizier*

Bibliography

- Impey, O. R. *Chinoiserie, the Impact of Oriental Styles on Art and Decoration*. New York: Scribner, 1977.
- Jacobson, Dawn. *Chinoiserie*. London: Phaidon, 1983.
- Madeleine, Jarry. *Chinoiserie: Chinese Influences on European Decorative Arts in the 17th and 18th Centuries*. New York: Vendome, 1981.

Japonisme

The term “Japonisme” refers to the influence of Japanese art and design on the formative period of modern Western art, especially in France, during the second half of the nineteenth century. Japonisme should be distinguished from the concomitant rage for things Japanese—kimonos, furniture, ornaments, wall hangings, and cheap

tourist souvenirs—that swept across Europe and the United States following the opening of Japan in 1853. The name that the French applied to that more general phenomenon was “Japonaiserie.”

Japonaiserie was also a significant cross-cultural phenomenon, but Japonisme, the impact of Japanese colored woodblock prints on impressionist and postimpressionist artists, would have a much larger influence on the development of modern art. And since modern Western art spread worldwide in the twentieth century, it could be argued that these Japanese Ukiyoe prints of ordinary life in premodern Japan played a key role in the birth of modern world art.

Western art critics and historians have usually emphasized the internal cultural dynamics in the shift from Renaissance-style pictorial realism, or naturalism, that occurred after 1860 and led through impressionism, postimpressionism, cubism, and surrealism to a very different way of seeing and depicting the world. They point to the invention of photography making realistic representations less necessary, the accelerating pace of change in industrializing societies, and the search for novelty.

All of this is true. Change was in the air, and discovery of a sophisticated foreign art source was more a stimulus than a basic cause. The opening of Japan and the sudden appearance of a very different and very sophisticated visual culture enabled European painters, especially the Parisian avant-garde, to borrow new techniques and compositions and develop a new way of depicting the visual world.

The painters who absorbed this new Japanese view of art read like a Who's Who of early modernism: Paul Manet, Vincent Van Gogh, Edgar Degas, Paul Gauguin, Camille Pissaro, Henri Toulouse-Lautrec, and James McNeill Whistler. They all appreciated the flatness of Japanese art as a two-dimensional design and soon rejected the attempt to present the illusion of three-dimensional depth that had been central in European art since the Renaissance. In European art academies, methods to evoke depth had been codified into a strict set of rules about fixed point perspective, shading, and other compositional devices. In Japanese art, European avant-garde artists found new visual conventions: asymmetrical, decentered compositions with figures cut

➤ EDGAR DEGAS—JAPANESE INFLUENCE WITHOUT JAPANESE CONTENT

Cultural influence need not be obvious to be profound. On the surface, Edgar Degas is one of the least Japanese painters of his time. Manet, Van Gogh, Whistler, and even Monet all put Japanese objects in their paintings. Degas remained thoroughly French in his subject matter, but he was keenly interested in Japanese styles of composition and owned a large collection of Ukiyo-e prints by the foremost masters, including Hiroshige, Hokusai, and Utamaro. These prints very much influenced Degas's painting. Witness the typically French impressionist painting *Bains de Mer* (1867). There is nothing Japanese here except the basic way in which the picture is conceived and presented. The painting includes minimal modeling or shadowing of the figures, large flat patches of black resembling the geometric designs of a Ukiyo-e print, and an asymmetrical composition where figures and objects pull the viewer's eyes away from the center and off the edges of the picture frame.

This style was all new, all bold, all shocking to eyes used to conventional Western picture compo-



Edgar Degas, *Bains de Mer*, 1867. (National Gallery, London/Art Resource, NY)

sition. And it was a sure sign of the great sea change that was about to take place in Western art over the next 50 years. Would the change have happened without the contact with Japanese prints? Probably, but not in the exact way it did. By the 1860s, a shrinking globe was creating serious cross-currents and cross-fertilization in world art.

—Ralph Croizier

off or shown at unusual angles; bright flat colors; sharply outlined forms; and a fondness for scenes of ordinary urban life that went well with what middle-class Paris was becoming.

Although Paris was the center of Japonisme, as it was the center for European art in general, the vogue for Japanese styles spread to other countries, notably Britain, where the American-born James McNeill Whistler settled after a sojourn in Paris. Whistler is the artist most closely associated with Japonisme because of his frequent use of Japanese props and costume and at a deeper level because of his incorporation of Japanese sensibilities and compositional devices into his later work.

Japonisme also influenced the English pre-Raphaelite School with its aversion to mechanized, industrial society and became closely involved with the aesthetic movement in decoration and design. By the end of the century, these decorative elements fed into the rise of art nouveau. Another interesting legacy is Japonisme's tendency to anesthetize everyday life rather than

set art apart as something special, which had a strong impact on folk arts and crafts. This aesthetic carried into the twentieth century with the British potter Bernard Leach and his followers.

Twentieth-century modernists, notably the American architect Frank Lloyd Wright, found in Japanese art inspiration for a simplified and more natural aesthetic. In that sense the dialogue between Eastern and Western aesthetics continued long after Japonisme's defining moment of influence on the birth of modern Western painting, roughly between the 1860s and 1890s.

—Ralph Croizier

Bibliography

- Chisaburō, Yamada, and Ō mori Tatsuji. *Japonisme in Art: An International Symposium*. Tokyo: Committee for the Year 2001, 1980.
- Lambourne, Lionel. *Japonisme: Cultural Crossings between Japan and the West*. London and New York: Phaidon, 2005.
- Wichmann, Siegfried. *Japonisme: The Japanese Influence on Western Art in the 19th and 20th Centuries*. New York: Harmony, 1981.

European Influence on Indian Painting, 1700–1900

With the slow deterioration of the Mughal Empire after the seventeenth century and the rise of British power in India, a gradual shift in artistic patronage and cultural prestige saw European-style art, including painting, eclipse all native Indian traditions.

In the sixteenth century, court artists had shown considerable interest and skill in incorporating European realistic techniques into mogul miniature painters. But this was voluntary cultural borrowing, very different from what came later as Britain established political control over the subcontinent. There was no systematic attempt by the British to teach European art to their Indian subjects before the 1850s, but company patronage for pictures of native flora and fauna done in realistic European style fostered a certain amount of artistic copying from the West. Combined with dependent Indian princes' desire to have European-style art to impress their British superiors, this led to a marked decline in native arts as Indian court artists picked up such realistic skills of post-Renaissance European art as fixed-point perspective, foreshortening, and chiaroscuro.

Concerned by the decline of economically important native arts and crafts by the mid-nineteenth century, the British established government art schools first in Madras and then in Calcutta (Kolkata) and Bombay (Mumbai). These were intended to promote native arts by introducing some European techniques, notably drawing skills. The schools had the unintended, but not entirely unwelcome, effect of training a new class of Westernized Indians who aspired to the social status of independent professionals as in modern Europe, not the craftsman position of artists in traditional India.

English was the language of instruction in art schools, and the schools supported and were supported by the growth of other modern art institutions such as art societies, museums, and exhibitions. The British authorities provided patronage in the form of awards and commissions, as did some of the native rulers, but it was the growth of the Westernized English-speaking middle classes that provided the necessary market for this new art and new type of artist.

Some of the notable academy-trained painters from this period were Pestoni Bomanji, Mahadev Dhurander, and Antonio Xavier Trinitade (born of mixed parentage in Goa), but by far the most famous Indian painter of the nineteenth century was Ravi Varma. Of aristocratic background in Kerala and mainly self-taught, he mastered the Victorian style of dramatic and sentimental figure painting to become a national celebrity.

Just as the creation of a new English-educated elite led to the rise of modern Indian nationalism by the end of the nineteenth century, the success in spreading European academic art led to a nationalistic reaction against this conservative establishment style. The focal point for this was Bengal, where in 1896 the pro-Indian art teacher E. V. Havell became head of the Calcutta art school. He discouraged formal academic training with its emphasis on copying and instead urged students to look to their Indian artistic traditions in order to develop their creative and spiritual powers.

This artistic message found resonance with young Bengalis, notably Abindrinath Tagore (nephew to the Nobel prize-winning poet Rabindrinath Tagore), whose 1905 painting *Bharat Mata* (Mother India) became an icon for the nationalist movement.

The politicized struggle between academic realism and Indian revivalism would become a major theme in twentieth-century Indian art, but it should be noted that this revivalism was also based on Western theories of art, notably the aesthetic movement and art nouveau at the end of the nineteenth century.

—*Ralph Croizier*

Bibliography

- Dalmia, Yashodhara. *The Making of Modern Indian Art: The Progressives*. New York: Oxford University Press, 2001.
- Guha-Thakurta, Tapati. *The Making of a New "Indian" Art: Artists, Aesthetics, and Nationalism in Bengal, c. 1850–1920*. Cambridge: Cambridge University Press, 1992.
- Mitter, Partha. *Art and Nationalism in Colonial India, 1850–1922*. Cambridge: Cambridge University Press, 1994.
- Ramachandran, A. "Raja Ravi Varma: The Marketing Strategies of a Modern Indian Artist." In *Indian Art: An Overview*, edited by Gayatri Sinha. New Delhi: Rupa, 2003.

► RAVI VARMA—WESTERN-STYLE INDIAN SUBJECTS

Ravi Varma (1848–1906), the most famous artist of nineteenth-century India, was almost the perfect example of what Lord Macaulay was aiming for in his famous “Memo on Education in India” (1835): “a class of brown skinned Englishmen . . . English in manners, intellect, and style.”

Almost, but not quite, and that difference tells a lot about why Macaulay’s vision of the cultural as well as political absorption of India would go so far awry. Varma, a member of South Indian Brahmanic aristocracy from the kingdom of Travancore in what is now Kerala state, was brown enough and Indian enough. And he became the outstanding master of European-style oil painting in India, winning prizes as far afield as Vienna and Chicago as well as many honors from his British rulers.

Although exposed to European influences at the court in Travancore, he was a self-taught genius who, nevertheless, became a model for the professional artists who emerged from the British established art schools in India, the ones who both decorated the Raj’s monuments and inspired the new Westernized Indian middle classes. Varma was a master portrait painter, getting unprecedented prices for his commissions from the princes of native states, but it was his ambitious paintings of historical scenes from Hindu mythology that made him nationally famous. Thoroughly Western in style but completely Indian in content, they emulated the most prestigious genre of Western painting, historical scenes from antiquity.

Adept at the use of progressive technology, Varma and his brother set up a press to produce cheap reproductions to satisfy the enormous market for Hindu devotional pictures. These Westernized gods and goddesses are still the standard depictions in popular iconography.

So, had the English education succeeded in making brown-skinned Englishmen? The artistic language was English enough, but the content was



Ravi Varma, The Triumph of Indrajit, 1903. (Sri Jayachamarajendra Gallery, Mysore)

all Indian, or rather Hindu. This combination made Varma’s art popular in all regions of India, but in recalling ancient Vedic glories, it notably excluded Muslims and other minorities. Also, by its focus on the Hindu past, the content reaffirmed a traditional concept of Indian identity. As subsequent history showed, that Indian identity would not go away despite the attempts to modify and modernize through the Western education that Macaulay had advocated.

—Ralph Croizier

British Scholars and the Indian Renaissance

The collective response to British colonial penetration by Indian intellectuals, writers, and artists from the middle of the nineteenth century until independence in 1947 has become known as the Indian Renaissance, echoing the artistic

and intellectual flowering that occurred in Europe between the fourteenth and sixteenth centuries. By the turn of the nineteenth century, the presence of British merchants and their territorial ambitions had profoundly affected the Indian economy, political environment, society, and culture. Indians sought creative ways to

► ACADEMIC ASSOCIATION

One of the most important and influential Indian scholarly societies was the Academic Association, which started at the Hindu College at Calcutta (present-day Kolkata) in 1828. Some scholars see the Academic Association and its offshoot, the Society for the Acquisition of General Knowledge, as a microcosm of the larger process of Indian Renaissance. The young Indian intellectuals who comprised the Academic Association along with more peripheral figures called themselves Young Bengalis. Adherents and disciples of the British thinker and professor at the Hindu College, Henry Louis Vivian Derozio, these students were enamored with the ideas of free thought and relished the chances afforded them at the college and in the Academic Association to challenge traditional norms. They initially turned their attentions to a critique of Hinduism and the religious traditions of the Indian subcontinent, attempting to bring rationalist thinking to the study of religion. As time went on, however, the Academic Association and the Young Bengalis lost favor with many nationalists, who saw them as adhering too rigidly to the Western intellectual canon. Similar to the Indian Renaissance, the Academic Association utilized British scholars to contribute to an intellectual awakening in India but splintered under the demands of Indian nationalism.

—Brock Cutler

interact with the new political and social realities as the British used their technological and military advantage to penetrate ever farther into the subcontinent. This renaissance of Indian literature, art, and thought arose out of collaboration between Indians and their British intellectual counterparts: Indians were exposed to trends of thought from Britain while they were struggling to carve out a national identity. Thus, from the beginning the Indian Renaissance had to relate to and contend with British scholars and the views they represented.

Most scholars view the Indian Renaissance as a number of different intellectual and artistic movements in various geographic areas and languages, each one responding to the challenges of the others as well as British and other European movements (although the period is called

“Renaissance,” the most influential thinkers largely came from the European Enlightenment tradition). The Renaissance originated in Bengal, the first area confronted with an intensive British presence. Merchants and other Bengalis oriented their economy toward trade with the British, and new middle-class groups appeared that were confronted daily with the need to shape an identity distinct from the views they witnessed in British writings about their communities. As British scholars worked to define India’s history, they also set up Western-style schools and universities where they could both work with Indian intellectuals and provide Indians with a “modern” education. Writers such as Jeremy Bentham, Isaac Newton, Charles Darwin, and Thomas Paine were some of the most influential authors in these schools, and their work helped lay the foundation for Indian Renaissance thought. In the years before the 1857 Indian Rebellion, the relationship between Indians and British scholars was largely one of collaboration. However, after 1857 animosity between the two groups grew.

The rise and eventual wealth of the new Indian merchant and political classes—what some refer to as the birth of an Indian bourgeoisie—created a group of Indians willing and able to sponsor Indian scholars and artists as they experimented with new styles and modes of expression. This new artistic freedom allowed Indians to take a more active approach to questioning and reshaping their culture and history, providing impetus to combat British incursions and scholarship that sought to define culture and history in British terms. The literary and artistic innovations that came out of this confrontation were similar throughout the various Renaissance movements in India: religious reform, nationalism, secular questioning of tradition, and the return to vernacular or popular forms of language and expression. British scholars can therefore be seen as both catalysts and enemies of the Indian Renaissance: as Indians were exposed to British and other European forms of thought and culture, they were inspired to reinvent the cultural and intellectual vibrancy of Indian art and thought.

The cultural production of the Indian Renaissance quickly lent itself to nationalist move-

ments throughout the subcontinent. Many British scholars also advocated on behalf of the Indian nationalist movement, but for the most part the adherents of nationalism arose from the fertile ground laid by the intellectuals and artists of the Indian Renaissance. In order to challenge and confront British domination on the subcontinent, many thinkers developed a desire to confront and master the British tools of economic and technological change, such as the printing press and Western scientific methods. By the end of the First World War, British scholars were largely marginalized in India. The Indian Renaissance is traditionally understood to have ended with infighting among the nationalist factions struggling for the right to define what India would become.

—Brock Cutler

Bibliography

- Bishop, Donald H., ed. *Thinkers of the Indian Renaissance*. New Delhi: Wiley Eastern Limited, 1983.
- Chaudhuri, Amit, ed. *The Vintage Book of Modern Indian Literature*. New York: Vintage Books, 2004.
- Rawat, Ramesh. "1857 and the 'Renaissance' in Hindi Literature." *Social Scientist* 26 (1998): 95–112.

The Japanese Cult of the West in the Meiji Period

Despite intense opposition to the influx of outsiders into Japan, Japanese leaders' desire to learn from the West became slowly popular in the late Tokugawa period. As people became aware of European colonial advances in India and China, the Tokugawa Bakufu (shogun's office) made a concerted effort to study the West. The Bakufu sought to grasp the secrets of European and American strength in order to protect the island nation from European imperialism.

Around 1811, Japan's fascination with the West resulted in the establishment of the first central institution for translation, study, and teaching of Western languages in Japan, the Bansho Shirabesho, or Institute for the Study of Barbarian Books. Navigation and gunnery were its principal interests, but the curriculum gradually enlarged to include various disciplines such as mathematics, physics, chemistry, and

mechanical engineering. Similar schools were soon established in all parts of Japan.

On the face of it, Commodore Matthew Perry's arrival in Japan with his Black Ships in 1853, and his demand that Japanese ports open to U.S. trade led to an increase in Japan's access to information about the West by broadening opportunities for study and travel. Therefore, in the 1860s a number of envoys were sent overseas, and students were dispatched to study navigation, shipbuilding, and other aspects of technology that would directly contribute to national strength. But those subjects promptly broadened into various fields of Western knowledge such as philosophy, science, and religion.

During the Tokugawa period, Japan's primary purpose in sending students to study abroad was to find ways of protecting itself from European or American incursion. After the Meiji Restoration in 1868, students abroad found themselves more engaged with the nation-building and Westernization of the country. The number of students overseas had increased significantly; between 1871 and 1873, there were as many as 350 students studying abroad under Japanese-government sponsorship. About two-fifths were in the United States studying technology, mining, commerce and agriculture, and the rest were either in Britain focusing on engineering, industry, and trade; in France studying law; or in Germany concentrating on political science and medicine.

Of all the travelers to Europe or America, none took his task more seriously than Fukuzawa Yukichi. He epitomized the Japanese cult of the West in many ways. In 1860 he joined the first Japanese mission to America, and two years later he visited France, England, Holland, and several other European nations as a member of the first Japanese mission to Europe. The information collected during these journeys was turned into one of his most celebrated works, *Seiyo Jijo (Conditions in the West)*, published in three volumes in 1866, 1868, and 1870. This book, written in a clear, simple style, delivered concise accounts of everyday life and social institutions in the West, such as hospitals, schools, newspapers, and museums.

However, the most important venture to the West was the Iwakura Mission. The Iwakura

➤ FUKUZAWA YUKICHI AND THE CULT OF THE WEST

Fukuzawa Yukichi (1835–1901) was a prominent educator, writer, and propagator of Western knowledge. Born into an impoverished low-ranking samurai family, Fukuzawa was unable to fully employ his talents in the traditional Japanese society. He eagerly studied Dutch and Western science in Nagasaki and Osaka, which helped him actively engage in foreign trading.

After Japan's opening of her ports, Fukuzawa began to learn English and was sent to America and several European nations as an envoy. Especially with the publication of his famous book *Seiyo Jijo* (*The Situation in Western Countries*, 1866–1870), Fukuzawa became known as an authority on the West. The book came out at a time when many Japanese began to turn their attention to Western knowledge and technology. Believing that Westernization would advance the independence of Japan, he devoted his life to educating his countrymen to Western thought. His

passion for public education was reflected in a series of pamphlets titled *Gakumon no Susume* (*The Encouragement of Learning*, 17 volumes, 1872–1876). These texts begin with the assertion that “heaven does not create one man above or below another man. This means that when men are born they are by nature equal,” pointing out the importance of the principle of equality of opportunity.

In 1875 while the *Gakumon no Susume* pamphlets were still appearing, Fukuzawa wrote a more complex work, *Bunmeiron no Gairyaku* (*An Outline of a Theory of Civilization*, 1875). In it he argues that civilization is relative and comparative according to time and circumstance and that Japan is at a crossroads between advancing forward into modern civilization and falling into barbarism. It was at this time that the enthusiasm for the Western learning reached its peak in Meiji Japan.

—Inhye Kang

Mission was an 18-month stay in the United States and Europe between 1871 and 1873 intended both to raise Japan's international prestige and to closely examine Western societies for their sources of wealth and power. The idea was put forward by Iwakura Tomomi, and the mission set out in 1871 from Yokohama, bound for San Francisco. From there, the ambassadors visited Britain, France, Belgium, the Netherlands, Russia, Prussia, Germany, Denmark, Sweden, Austria, Italy, and Switzerland and finally returned home on September 13, 1873. A body of facts and opinion collected during this mission was published as a five-volume report in 1878. The mission, therefore, embodied the Japanese diplomatic endeavor to secure Japan's international stature through direct experience of the West.

Most of the envoys and students sent abroad before the Meiji Restoration came back not only with information on Western technology and culture but also with the enthusiasm for the West. Their firsthand exposure led many who became Meiji leaders to believe that economic strength and civilization were the sources of European national power. In contrast to the Tokugawa shogun's reserved attitude toward the

West, the Meiji government was characterized by its aggressive borrowing from the West. The Meiji government, under the slogan of “Civilization and Enlightenment” (*bunmei kaika*), vigorously adopted a modern social system from the West both to abolish the feudal socioeconomic system and to build a “rich country and strong army” (*fukoku koyobei*). Accordingly, Westernization of customs and everyday life was heavily encouraged, including practices such as wearing Western clothes and eating Western foods. The government also adopted the Gregorian calendar, implemented telegraph and postal services, and started constructing a modern transportation system. The adoption of Western civilization so extremely engulfed 1870s Japan that many Japanese started to regard its own tradition as antiquated and equated “Civilization and Enlightenment” with the imitation of all things Western.

In addition to studying and traveling abroad, a growing range of translations, books, and newspapers about the West also contributed to the Japanese craving for the West. Two vehicles of Westernization were the society Meirokusha (Meiji 6 Society) and the journal *Meiroke Zasshi*, appearing in 1874–1875. The society was founded

by Japan's leading intellectuals and played a prominent role in introducing and popularizing Western ideas during the early Meiji period with the journal and a series of public lectures.

Moreover, a number of translations of Western works fulfilled the Japanese appetite for the West. In 1871 Nakamura Masanao translated both Samuel Smiles's *Self-Help* and John Stuart Mill's *On Liberty*. Other works, such as *Robinson Crusoe*, *Aesop's Fables*, *The Arabian Nights*, and Rousseau's *Social Contract* were also translated in the Meiji period. The production of such translations enabled the emergence of straightforward prose in Japan and a new interest in the individual as subject.

By the 1880s, many Japanese had traveled to Europe and America and recognized the problems faced by those societies, often the aftermath of rapid industrialization and the stresses of international competition. The wave of enthusiasm for the West abated, and a more skeptical approach to Western civilization emerged. This realization inspired a resurgence of pride in Japanese culture and tradition during the 1880s and 1890s.

—Inhye Kang

Bibliography

- Beasley, W. G. *The Rise of Modern Japan*. London: Weidenfeld and Nicolson, 1995.
- Gordon, Andrew. *A Modern History of Japan: From Tokugawa Times to the Present*. New York and Oxford: Oxford University Press, 2003.
- Jansen, Marius B. *The Making of Modern Japan*. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2000.
- Nish, Ian Hill. *The Iwakura Mission in America and Europe: A New Assessment*. Meiji Japan Series. Richmond, Surrey, UK: Japan Library, 1998.
- Tanaka, Kyoko, and National University of Singapore, Department of Japanese Studies. *On the Periphery of the World: Japan's Internationalisation in Historical Perspective*. Singapore: Department of Japanese Studies, National University of Singapore, 1989.

The Beginnings of Jazz in America

Jazz is a musical style that emerged during the last decades of the nineteenth century. While musical innovations took place in a number of places in the United States, most early jazz

musicians were African Americans from the South. In particular, a significant number of the music's primary innovators such as Buddy Bolden, Jelly Roll Morton, Bunk Johnson, Kid Ory, Sidney Bechet, King Oliver, and Louis Armstrong were born and raised in New Orleans and its environs. Nineteenth-century New Orleans was a cosmopolitan city unlike any other in the United States, combining French, Spanish, Caribbean, and Anglo influences coupled with a nuanced and stratified attitude toward race that created a social space for free blacks and mixed-race individuals (the so-called creoles of color).

The musicians who created jazz developed an approach to music making that combined European instruments, harmony, and song forms with African ways of music making: call and response, polyrhythms, syncopation, improvisation, and voicelike instrumental techniques (growls, smears, pitch bends, fake fingers, etc.). These ideas were then applied to the popular music of late-nineteenth-century America: minstrel songs, military marches, ragtime, blues, spirituals, parlor songs, ballads, opera, and Caribbean music. Improvising on these musical styles, African American and creole musicians added syncopation and a swinging beat, creating the slow drag and up-tempo strut that would form the backbone of most popular New Orleans musical styles.

The instrumentation of early jazz ensembles grew out of brass bands, many of whose members had access to a musical education and could read music, and string bands (typically including bass, guitar, mandolin, and violin, with an added cornet or clarinet). New Orleans society dance bands drew on both types of ensembles, eventually coalescing into the classic small jazz ensemble of cornet, clarinet, trombone, tuba, banjo, piano, bass or tuba, and drums. These groups developed a style that moved away from controlled ensemble playing typical of ragtime toward a looser style exemplified by polyphonic (and polyrhythmic) collective improvisation, especially among the frontline horns (cornet, clarinet, and trombone). Solo improvisations were featured, but these were often worked out ahead of time and were usually confined to variations on the extant melodic material rather than the type of free harmonic creation developed by Louis Armstrong and others in the 1920s.

► CHARLES “BUDDY” BOLDEN

The life of cornetist Buddy Bolden (1877–1931), reputed to be the first great jazz soloist, is surrounded by mystery, in part because little was written about him during his lifetime and no recordings exist of his playing (though he is rumored to have made at least one that is now lost). But as researchers began compiling early oral histories of jazz in the 1930s, Bolden’s name came up repeatedly, accompanied by a number of narratives of dubious origin: that Bolden played so loud that his trumpet could be heard for miles, that he edited a scandal sheet known as the *Cricket*, and that he was the proprietor of a barbershop. While these stories would later prove to be false, many were propagated for years by writers relying on faulty or manufactured accounts rather than primary sources.

What is known is that Buddy Bolden was born and raised by a single mother in New Orleans. He began playing cornet as a boy and by his teens was playing professionally. Reliable accounts by his contemporaries attest to his powerful, flexible sound; his rhythmic drive; and an improvisational style that utilized flattened blue notes and vocal-like effects. Bolden is often credited with establishing the instrumental lineup for the classic New Orleans sound: cornet, clarinet, trombone, and rhythm section. In the end, Bolden’s career was cut short by mental problems exacerbated by acute alcoholism, resulting in his commitment to the Jackson State Mental Hospital in 1907, where he remained until his death in 1931.

—Andrew Connell

Bands played primarily for dancing, often advertising their appearances by parading through the surrounding neighborhoods in the back of a truck to promote an upcoming show. Often competing groups, upon meeting in the street, would engage in impromptu musical battles. These bands performed in riverfront taverns, saloons, gambling dens, and houses of prostitution, while some bandleaders, such as Kid Ory, rented out dance halls. Recompense was minimal, and the majority of African American and creole musicians of the time worked in other professions, unable to support themselves solely on music. For example, the creole clarinetist Alphonse

Picou worked as a tinsmith and a plumber, while cornetist Pops Foster was a longshoreman. In addition, with few exceptions bands were strictly segregated, as were the performance venues.

In the early decades of the twentieth century, many of these musicians joined the great migration of southern blacks northward, finding greater economic opportunities in Chicago, New York, and California. The cornetist Joe “King” Oliver found lucrative work with his Creole Jazz band in Chicago, bringing with him his young protégé Louis Armstrong, who by 1925 had emerged as the greatest soloist of the early jazz era. Armstrong’s series for the Okeh label, known collectively as recordings of the Hot fives and Hot sevens, would revolutionize jazz performance practice. Made with collaborators such as the pianist Earl Hines and clarinetist Johnny Dodds, these records presented a new level of instrumental virtuosity and flexible ensemble interaction, especially within the rhythm section, and Armstrong’s harmonically based improvisations transformed jazz from a collective to a soloist’s art form, a model that most jazz musicians have followed ever since.

—Andrew Connell

Bibliography

- Gabbard, Krin. *Hotter Than That: The Trumpet, Jazz, and American Culture*. New York: Faber and Faber, 2008.
- Marquis, Donald M. *In Search of Buddy Bolden, First Man of Jazz*. Baton Rouge: Louisiana State University Press, 1993.
- Peretti, Burton. *The Creation of Jazz: Music, Race, and Culture in Urban America*. Urbana and Chicago: University of Illinois Press, 1992.
- Shipton, Alyn. *A New History of Jazz*. London and New York: Continuum, 2008.

The French School of the Far East

Since its birth in the years after the French colonization of Indochina, the French School of the Far East (École Française d’Extrême-Orient, or EFEO) has been an important institution for the creation and dissemination of knowledge about Asia. The EFEO is an educational institution in France operated by the national Ministry of Education. The chief aims of the school were and still are the study of archaeology, anthropology,

➤ ANGKOR WAT

The Cambodian national flag has changed numerous times over the years, but many of its permutations include the depiction of a walled structure directly in the middle: the main temple at Angkor Wat, one of the oldest existing Buddhist and Hindu temples in Cambodia and the largest religious structure in the world. Built by Suryavarman II in the twelfth century, Angkor Wat was built as a Hindu temple and later converted to Buddhist use. Symbols of national unity, the temple and the site around it were the domains of the *École Française d'Extrême-Orient* (EFEO) Cambodian branch from the first years of the twentieth century until 1972. During these years the EFEO uncovered and restored much of the ancient city of Angkor and also established Angkor Wat as one of the principal religious sites in East Asia. Despite the political upheavals throughout the region, the scholars at Angkor worked diligently to protect the magnificent site from destruction.

—Brock Cutler

One of the four temple gateways at Angkor Wat, the twelfth-century temple complex studied and restored by scholars from the French School of the Far East in the twentieth century. (Corel)



history, art, and languages of mainly East and Southeast Asia. The school has been both a place of cultural exchange and mutual sharing and also a symbol of the French colonial endeavor and the imperial implications of Orientalist study. This dual interpretation has existed since the school's inception and has survived through colonial wars, the end of the French administrative presence in the region, and the rise of independent states.

French Orientalists (scholars of non-European cultures and languages) had wanted for some time to create a school in Asia as a sister to their schools in Athens (1846) and Rome (1875). After attempts to establish a center for study in India proved fruitless, they turned their attention to the recently conquered areas of Indochina. The governor-general of Indochina,

Paul Doumer, used his influence to establish the *Mission Archéologique d'Indochine* at Saigon in 1898, and in 1901 the institution was moved into a new building in Hanoi and given the new title *École Française d'Extrême-Orient*. (The school was moved from Vietnam in 1957 and now operates in multiple smaller centers throughout the region.) This new body was designed to be regional in scope and to undertake the systematic study of Southeast Asia in order to further both general understanding of the region and French colonial interests. Many of the early specialists at the school were Indianists or Sinologists, and a number of them served as colonial administrators during or after their time at the school.

The first conference held at the new EFEO building in Hanoi occurred in 1902 and, with the participation of experts from France, Germany,

Britain, and Italy as well as the Netherlands Indies, Siam (Thailand), and Japan, was a good representation of the cross-cultural and political nature of the institute. The success of this conference—the Congrès International des Études d'Extrême-Orient—initiated a series of exchanges among the academic and policy experts of the participating countries, leading to the sharing of both scholarly knowledge and solutions to common colonial policy problems.

This level of collaboration was important not only for the advancement of scholarship and knowledge of the traditions and cultures of Asia but also for bringing together French and Asian intellectuals with their colonial administrative counterparts. These collaborative meetings meant that scholarly work had a direct effect on government policy and social movements in the colonial period. Not only did governments and administrators gain from this sharing, but insurrectionary and nationalist leaders used the scholarship to lend credence to their movements. Far from being merely a haven for colonial thought, the school also attracted many of the brightest Indochinese intellectuals, who used archaeological and linguistic discoveries to strengthen their arguments for the fundamental existence and solvency of a national culture.

The EFEO was a pioneering institute of scholarship and study in French-dominated East Asia. This Orientalist scholarship contributed not only to the body of knowledge about East Asian societies and cultures through the ages but also to the creation of policies and methods of governing the colonial holdings of Europeans in Asia. The school can also be credited with protecting the cultural patrimony of cultures throughout Asia, as specialists uncovered and helped preserve many archaeological sites now deemed national monuments. While some viewed these archaeological excursions as a form of cultural imperialism, without the actions of the EFEO many of today's most treasured national sites may have disappeared altogether.

—Brock Cutler

Bibliography

- Bayly, Susan. "French Anthropology and the Durkheimians in Colonial Indochina." *Modern Asian Studies* 34 (2000): 581–622.
- Clémentin-Ojha, Catherine, and Pierre-Yves Manguin. *Un Siècle Pour l'Asie: L'Ecole Française d'Extrême-Orient, 1898–2000*. Paris: Les Editions du Pacifique, 2001.
- Demieville, Paul. "News of the Profession: Organization of East Asian Studies in France." *Journal of Asian Studies* 18 (1958): 163–180.

■ Introduction: The Birth of Modernism in Europe, 1880–1914

The term "modernism" encompasses a diversity of artistic and cultural movements that erupted across Europe and the United States during the period from 1890 to 1930. Critics and historians disagree over the exact beginning and ending dates of modernism, but most see its origins in France in the late 1860s and 1870s in the impressionist paintings of Édouard Manet (1832–1883), the symbolist poetry of Charles Baudelaire (1821–1867), and the realist novels of Gustave Flaubert (1821–1880). Distinctly modernist music began somewhat later with the work of Gustav Mahler (1860–1911), Richard Strauss (1864–1949), and Claude Debussy (1862–1918). Modern architec-

ture came later still, around 1900, with the work of Louis Sullivan (1856–1924) and Frank Lloyd Wright (1867–1959) in the United States, Victor Horta (1867–1941) in Brussels, Antoni Gaudí (1852–1926) in Barcelona, Otto Wagner (1841–1918) in Vienna, and Charles Rennie Mackintosh (1868–1928) in Glasgow. In literature, the year 1922, during which T. S. Eliot's *The Waste Land* and James Joyce's *Ulysses* were published, is often viewed as the high point of the modernist movement.

As a collection of ideas and styles, modernism posited a break from the past but was rooted in tradition. Many modernists elicited new forms of expression (free verse in poetry and

abstraction in painting) and new ideas (primitivism) while depending on nineteenth-century Romanticism or Greek and Roman myths for points of reference. T. S. Eliot (1888–1965) found models for his inspiration in writers of the early seventeenth century, Robert Frost (1874–1963) studied Horace, and Ezra Pound (1885–1972) turned to ancient Japanese Noh drama and Chinese ideographs. Much modernist output (prose, poetry, painting, drama) arose from an anxiety to grapple with the complexity of mechanical and surreal urban life and its alienating effects. Victorian notions of truth and stability (already shaken by ideas from Darwin, Marx, Nietzsche, and Freud) were challenged.

Some modernists were self-consciously aware of their positions as vanguards of the “new” and wrote manifestos about their art, such as the Imagist poets led by Ezra Pound, whose claim “make it new” is seen as a rallying cry for new forms and ideas. The Futurists, who flourished in Italy in the early 1900s and influenced Futurist movements in Russia and England, issued dozens of manifestos on painting, sculpture, design, theater, film, fashion, textiles, literature, music, architecture, and even cooking. The Italian Futurist Filippo Tomaso Marinetti (1876–1944) worked with Christopher Richard Wynne Nevinson (1889–1946), a British painter, to produce the manifesto “Vital English Art: A Futurist Manifesto.” In relation to architecture, Louis Sullivan’s (1856–1924) statement that “form follows function” is both opaque and transparent, a paradox that represents modernism in many forms.

Visually “modern,” the skyscrapers of the late nineteenth century owed as much to engineering as to art, and the architecture behind them rejected historicism. Art Nouveau relied on steel and other metals for paradoxical primitivism. Indeed, modernist architecture embraced many of the same ideals as visual and literary modernism. For example, Frank Lloyd Wright (1869–1959) epitomized the trend to borrow cross-culturally in order to create a new blended style of architecture.

The other visual arts of sculpture and painting were similarly transformed by modernism. Movements of note include Fauvism (a short-lived movement characterized by strong color

and wild brush strokes), Cubism (in which painted objects are broken apart, analyzed, and then “reassembled” from different perspectives), Expressionism (in which artists attempted to depict emotions rather than physical realities), Dada (whose advocates prided themselves on their rejection of war, bourgeois culture, and most forms of art), Symbolism (which rejected naturalism and realism and sought to express ideas indirectly by imbuing objects and images with symbolic meaning), and Surrealism (which grew out of Dadaism and was particularly strong in Britain), to name a few. The Armory Show of 1939, which toured New York, Chicago, and Boston, included both U.S. and European artists and introduced avant-garde art to the United States. An international exhibition of surrealist painting in Britain in 1936 led to the publication of *The London Bulletin*, which included both art and literature.

After the 1930s, the term “modernist” was rarely applied to literary figures, but it continued to be used in connection with dance, music, and art. Although never without its share of critics, modernism’s rejection of tradition and its commitment to artistic freedom and experimentation have had a lasting impact on all aspects of Western and, to an extent, world culture.

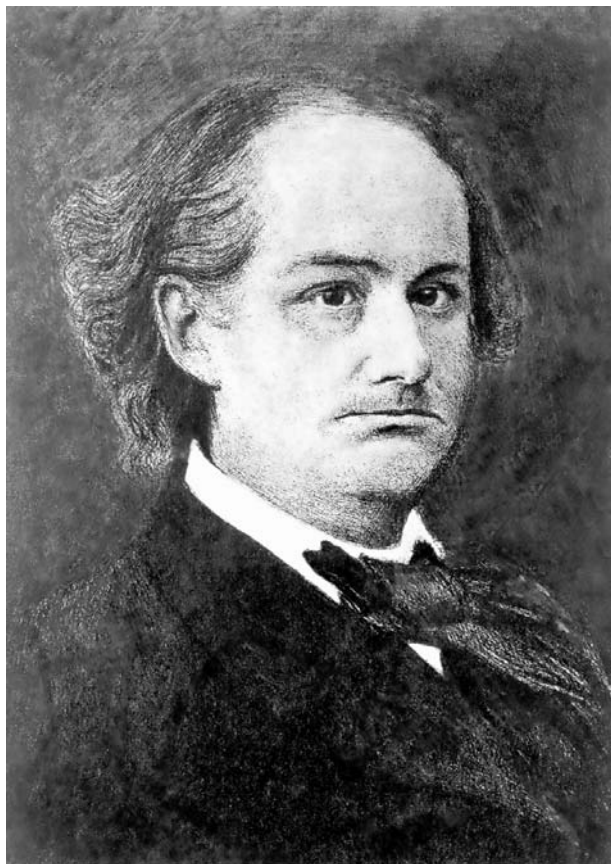
—Gregory F. Tague

Bibliography

Tague, Gregory F. “Modernism.” In *Britain and the Americas: Culture, Politics, and History*, edited by Will Kaufman and Heidi Slettedahl Macpherson. Santa Barbara, CA: ABC-CLIO, 2005.

Literary Symbolism

Symbolism originated as a literary movement in France and Belgium in the 1880s, arising from a desire for something beyond the real and the material. At its root lay a dissatisfaction with the ideas of progress espoused in the name of science, which the symbolists believed left little room for the presence of higher ideals. It was for this reason that they rejected naturalism, which sought to describe its subjects in realistic detail and often drew upon scientific theories of evolution and heredity to do so. Instead, symbolism had as its goal to suggest and evoke but never



Charles Baudelaire was the father of symbolist poetry and a highly respected critic of the French art and literary world during the nineteenth century. (Library of Congress)

describe. It eschewed mimetic descriptions in favor of evocations of sensations, spirituality, and interior thoughts and feelings.

Although Jean Moréas (1856–1910) codified the term “symbolism” to refer to the new poetry, this did not signal the beginning of the movement as much as it described what had already been taking place. The poet Charles Baudelaire (1821–1867) was widely acknowledged as a precursor to symbolism, for the themes of *Le spleen de Paris* (1869) and the ideal that structured his book of poetry, *Les Fleurs du mal* (1857), also interested the new generation of writers. Three of the most prominent symbolists—Stéphane Mallarmé (1842–1898), Paul Verlaine (1844–1896), and Arthur Rimbaud (1854–1891)—had all published collections of poetry by the time Moréas wrote his manifesto. In fact, the manifesto was largely a response to growing criticism of the new movement, derisively referred to as “decadent.” This impelled Moréas to propose the term “symbolism” in its place, although some, including Verlaine, continued to prefer the term “decadent.”

The criticism directed at symbolism posed logistical problems as well. Denied access to established periodicals, the new vanguard sought other means of defending themselves against

➤ JEAN MORÉAS’S “SYMBOLISM—A MANIFESTO”

The following is an excerpt from Jean Moréas’s “Symbolism—A Manifesto” published in 1886. Unlike most Symbolist writing of the time, which usually appeared in small, ephemeral publications, this manifesto was published in a major journal.

“The enemy of teaching, of declamation, of false sensibility, of objective description, Symbolist poetry seeks to clothe the Idea in a sensible form, which, nevertheless, would not be a goal in itself, but which, while serving to express the Idea, would remain subject to it. The Idea, in its turn, should not be seen as deprived of the sumptuous trappings of exterior analogies; for the essential

character of Symbolic art consists in never going as far as the conception of the Idea itself. Thus, in this art, scenes of nature, human actions, all the concrete phenomena cannot manifest themselves as such; they are sensible appearances destined to represent their esoteric affinities with primordial Ideas.”

—Isabel Suchanek

Source

Jean Moréas. “Le Symbolisme, Un Manifeste littéraire.” *Le Figaro, Supplement Littéraire*, Sept. 18, 1886, 150. Translated by Isabel Suchanek.

their critics and disseminating their ideas and works. To that end, many of them founded their own journals, and this period consequently witnessed an enormous outgrowth of journalistic activity. Many of these publications were ephemeral, lasting only one or two years, although some, such as *La Revue blanche* or *Le Mercure de France*, experienced greater longevity.

If symbolists rejected naturalism's objective descriptions, they also rejected the rigid rhyme schemes of their poetic predecessors, the Parnassians. The most pointed attack was against the alexandrine, a twelve-syllabic line of verse usually divided by pauses into equal halves or thirds, that formed the basis of much traditional French poetry. Seeking to infuse new life into a medium that they believed had become staid and conventional, the symbolists turned to lines of verse with odd numbers of syllables and irregularly spaced pauses. This also had the effect of enhancing the musicality of the poem, a central concern for many and deriving in part from their fascination with the German composer Richard Wagner.

This interest in Wagner also led symbolists to explore the idea of synesthesia, the interrelation of the different senses and, in their minds, often associated with a spiritual experience. Baudelaire had suggested as much in "Correspondences" (ca. 1852–1856) when he wrote that the sounds, smells, and colors responded to one another, a notion echoed by Rimbaud's "Vowels" (1871), which paired each vowel with a different color. Additionally, synesthetic theater was much in vogue at the end of the nineteenth century. One such production covered the floor in flowers and sprayed incense in the air while an organ played music by Erik Satie and trumpets sounded the prelude to the Wagner opera *Parsifal*.

Symbolism's rejection of the conventional, along with its emphasis on nuance and imprecision, led to formal innovations such as the development of *vers libre* (free verse) practiced by Gustave Kahn (1859–1936), among others. It was now the unity of form and idea that determined the individual verse as opposed to a given number of syllables or rhyme scheme. Mallarmé's poem "Un coup de dés jamais n'abolira le hasard" (A Throw of the Dice Will Never Abolish Chance) was also significant in this regard. In varying the

size and placement of the text, composing with the white of the page as much as the words themselves, Mallarmé created a work that was simultaneously visual and aural and that would prove enormously influential for both poetry and art in the years to come.

—Isabel Suchanek

Bibliography

- Balakian, Anna Elizabeth. *The Symbolist Movement: A Critical Appraisal*. New York: Random House, 1967.
- Genova, Pamela A. *Symbolist Journals: A Culture of Correspondence*. Burlington, VT: Ashgate, 2002.
- Houston, John Porter, and Mona Tobin Houston, trans. *French Symbolist Poetry: An Anthology*. Bloomington: Indiana University Press, 1980.
- Moréas, Jean. "Symbolisme—un manifeste": *Supplement littéraire du Figaro*, September 18, 1886. Partially reprinted in *Art in Theory, 1850–1900: An Anthology of Changing Ideas*, edited by Charles Harrison and Paul Wood with Jason Gaiger and translated by Akane Kawakami, 1014–1016. Oxford, UK: Blackwell, 1998.

Impressionist Art and Music

Impression, Sunrise, Claude Monet's 1872 view of the harbor at Le Havre, marked a new way of seeing for artists. As if through a painted veil of atmosphere, Monet's scene, created by visible brushstrokes and dashes of color, was the catalyst for the term "impressionist" that came to define a style of painting that influenced modern art's dictum *l'art pour l'art* (art for art, a phrase coined by James MacNeill Whistler) and the music of composers such as Emmanuel Chabrier (1841–1894), Claude-Achille Debussy (1862–1918), and Maurice Ravel (1875–1937), among others.

Monet displayed his landmark work at the first impressionist exhibition in 1874, held at the studio of photographer Gaspard-Félix Tournachon, better known as Nadar. Celebrated for his aerial photographs of Paris, Nadar wished to elevate photography to an art form and contended that light and an appreciation for its effects required artistic intellect. That light was the crucial element in both photography and impressionist painting explains this first impressionist exhibition alliance. Impressionists'



Claude Monet, *Impression, Sunrise*, 1872. (Erich Lessing/Art Resource, NY)

desire to unite their style of painting with the contemporary world and its latest technologies was sanctioned by the writings of critic and poet Charles Baudelaire (1821–1867), who argued that modern life was the only viable subject for artists to undertake. Pierre-Auguste Renoir, Alfred Sisley, Berthe Morisot, Edgar Degas, Paul Cézanne, and Camille Pissaro were among the artists who also showed their works at Nadar's studio and who painted subjects as diverse as the ballet, new train stations, and the expansive avenues of Haussmann's renovated Paris as well as the French countryside.

Plein air painting, or painting in the out-of-doors, was common practice with many impressionist painters and especially with Monet, who mixed his paints directly in nature to assure spontaneity in his art. The importance of nature as a motif cannot be overstated in impressionist art and music. Evoking an immediate sensory response was of primary concern for the impressionists, as was their interest in light effects, in capturing fleeting moments of light and especially its delicate shimmers on fluid surfaces through the use of color. They celebrated color as fundamental to art and revered the works of Eugène Delacroix (1798–1863), whose loosely applied color was primary to the structure of his art. This diminished the importance of linear qualities and highly finished surfaces central to the practices of neoclassicists such as Jacques-Louis

David (1748–1825) and Jean-Auguste-Dominique Ingres (1780–1867). However, by the late 1880s the bold blocks of color that Paul Cézanne began to employ in his Provençal landscapes foreshadowed later concerns in art.

Impressionist music, too, sought to appeal directly to the senses by creating harmonies that often suggested an undefined, vaporous realm between dream and reality. Emmanuel Chabrier moved in impressionist circles and avidly collected impressionist paintings. He was the first composer to interpret impressionist ideas of color and light into music with *Pièces Pittoresques* for piano in 1882, a decade after *Impression, Sunrise*. Thus, impressionist music was infused with other artistic trends such as symbolism, realism, and the music of Richard Wagner. Chabrier's music influenced Claude Debussy, perhaps the best known of the impressionist composers, whose *Printemps* (Spring) of 1887 is seen as the first impressionist musical composition. Its evocation of nature, from the dawning of spring and the renewal of life, is heard from the light melody of its opening bars to the full-blown orchestral design of trumpet fanfares to the suppressed cymbal and harp in its closing. Debussy's musical layering can be seen as an equivalent to the multiple paint strokes of the impressionist canvas. Titles such as *Nocturnes* suggest his debt to Whistler's canvases, although Maurice Ravel's later *Nocturnes* pays homage to Debussy himself. *Prélude à l'Après-midi d'un Faune* (1894), Debussy's most important impressionist work and inspired by Mallarmé's poem of the same name, conjured the sensuousness of nature with a free flow of musical strains rather than a defined melody. Unlike Debussy's fluid melodies, Ravel's *Jeux d'Eau* maintains a defined musical line, showing his classical orientation while keeping the accompaniment lush and impressionistic.

—Tamara Wilde

Bibliography

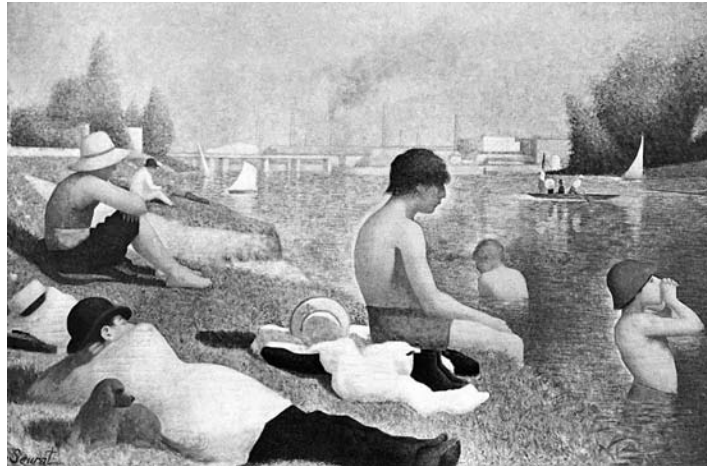
- Palmer, Christopher. *Impressionism in Music*. London: Hutchinson, 1973.
- Rubin, James. *Impressionism*. London: Phaidon, 1999.
- Thompson, Belinda. *Impressionism, Origins, Practice, Reception*. New York: Thames and Hudson, 2000.

Postimpressionism

The eighth and final French impressionist exhibition, featuring works by Camille Pissarro, Edgar Degas, Berthe Morisot and others, but nothing by Claude Monet or Auguste Renoir, was held in 1886. By that date a number of artists, including Monet and Renoir, were expressing dissatisfaction with the impressionist project of rendering ephemeral optical experiences pictorially. Personal friction among the original impressionists also contributed to the disintegration of the group. For the next 20 years progressive artists experimented with different forms of pictorial representation that, through form and subject matter, embodied a commitment to European modernity.

Postimpressionism was neither a structured art movement nor a term adopted by nineteenth-century artists. It was the label applied spontaneously in 1910 by English art critic Roger Fry to a collection of modern art from France. Asked to describe the artists whose work he had assembled for a London exhibition, Fry said that they came after the impressionists and added, “Let’s just call them postimpressionists.” Fry’s two postimpressionist exhibitions in 1910–1911 and 1912–1913 included work by deceased artists such as Vincent van Gogh (1853–1890), Paul Gauguin (1848–1903), and Paul Cézanne (1839–1906) as well as Henri Matisse (1869–1954) and Pablo Picasso (1881–1973), whose careers as radical modernists were then just beginning to acquire significance. Despite the fact that postimpressionism was originally used as a synonym for early modernist art that deviated from the principles of impressionism, the term is often applied in particular to four important painters working in France in the final decades of the nineteenth centuries: van Gogh, Georges Seurat, Gauguin, and Cézanne.

Viewing their work retrospectively, it is obvious that although they embraced impressionism for short periods, these painters subsequently developed highly personal ways of translating perceptions of reality into distinctive vocabularies that synthesized what was seen with what was known about form and space. Van Gogh, using saturated color and impasto brushstrokes (a technique in which paint is thickly laid on an



Georges Seurat, Bathers at Asnières, 1883. (Corel)

area of the surface or the entire canvas) to energize simplified shapes, allows his passionate, subjective feelings about people, landscapes, and objects to penetrate his subject matter. In this respect, he can be understood as a forerunner of expressionism since his style and method of painting and the angst in his subject matter influenced the twentieth-century German expressionists. Gauguin is often associated with the literary movement of symbolism. His most distinctive work was created in Brittany and the South Seas. He acknowledged the enigma of nature and the power of the imagination. Using pure nonnaturalistic color and flattened form, he suggests the invisible, symbolic connotations of nature. Seurat, familiar with the optical principles of prismatic color, added to impressionism a scientific rational structure. Seurat’s neo-impressionism, a systematic division of color and tone (or divisionism), investigates how the eye sees light. He devised a method of painting in small colored dots (pointillism) that rendered sensations of volumes in space.

Cézanne, like Seurat, analyzed what he saw in a disciplined, rational, and calculated manner. He developed a vocabulary of short colored marks that function as spatial signs rather than as accurate descriptions of the world. The marks make the viewer aware of their identity as brushstrokes on flat surfaces. Abandoning the long-established premises of linear perspective that postulates a consistent vision of nature, Cézanne juxtaposed multiple viewpoints, indicating that

➤ ROGER FRY

Roger Fry (1866–1934), art historian, critic, and painter, named and promoted postimpressionism. In numerous books and articles he explained the aesthetic premises of modern painting to a hostile British public. His theory, known as formalism, suggests that arrangements of shapes, tones, and colors can produce profound aesthetic emotions for viewers. For Fry, form—not subject—is significant. By freeing painting from the objective of having subjects that imitate the visible world and interpret anecdotal and literary subjects, Fry positioned visual art in the forefront of avant-garde expression. He became a fervent advocate of Cézanne's paintings, giving extensive exposure to the artist's work at both London postimpressionist exhibitions and writing a Cézanne monograph (1927). Fry's lucid texts contributed significantly to modernist theory and influenced the later critics Herbert Read and Clement Greenberg. Fry's most significant publication, still in print, is his collected essays, *Vision and Design* (first published in 1920).

—Marion Arnold

what we know about the underlying geometry of volumetric structure can be rendered on two-dimensional surfaces through signs that function as equivalents of perceptual information. Cézanne's work exerted a significant influence on Braque and Picasso and helped them to formulate cubism.

The leading postimpressionists worked within the traditional genres of landscape, portraiture, and still life but, with the possible exception of Gauguin, abandoned the narrative themes that continued to dominate academic painting in their era. The ideas they explored had a lasting influence on the development of twentieth-century movements, particularly fauvism, German expressionism, and cubism.

—Marion Arnold

Bibliography

Frascina, Francis, Nigel Blake, et al. *Modernity and Modernism in the Nineteenth Century*. New Haven, CT: Yale University Press, 1993.

Fry, Roger. *Vision and Design*. Mineola, NY: Dover, 1998. First published 1920.

Royal Academy of Arts. *Post-Impressionism: Cross Currents in European Painting*. London: Royal Academy of Arts. Catalogue published in association with Weidenfeld and Nicolson, 1979–1980.

Cubism

In the early twentieth century, Cubism rejected the earlier representational conventions in art and radically redefined pictorial objectives. It is unhelpful to think that Cubism is concerned with cubes. The name was given flippantly when Henri Matisse made a joke about Georges Braque's geometric imagery submitted to the 1908 Salon d'Automne (Autumn Salon), an annual exhibition of modernist painting first organized in 1903.

Arguably the seminal twentieth-century art movement, Cubism has multiple sources. The most important are Paul Cézanne's (1839–1906) rejection of one-point linear perspective and adoption of faceted geometric planes to evoke structure and the arrival in France of art and artifacts from Africa and Oceania. The latter, like Cézanne's images, were conceptual rather than perceptual in their expressive objectives and motivated artists to look again at nonnaturalistic Egyptian art and archaic Greek sculpture. Cubism was initiated in Paris by Pablo Picasso (1881–1973) and Georges Braque (1882–1963), both of whom experimented independently with monumental simplified, geometric form before forging a close relationship in 1909 and sharing their ideas.

Although Cubism is characterized by continuous evolution, for convenience it is useful to consider an early Cézannesque phase (1907–1910) that yields to Analytical Cubism (1910–1912) and is followed by Synthetic Cubism (1912 onward). Early Cubism is defined by Picasso's *Les Femmes d'Alger* (1907). This radical work refers to African and Iberian sculpture in the way Picasso simplifies and distorts volumes and stylizes two female faces so severely that they resemble masks.

Analytical Cubism is typified by tertiary colors (neutral colors such as brown or gray) and



Pablo Picasso, *Les Femmes d'Alger (O. K. G.)*, 1907. (The Gallery Collection/Corbis)

an analysis of volumes into small faceted, transparent planes that allude to physical form but no longer demarcate solid objects and surrounding spaces. The flat picture plane became an ambiguous surface of references or signs with cryptic relationships to the world. As images grew more distorted and difficult to interpret, words were introduced as clues or evidence of the games that the artists played with reality and with their viewers.

Synthetic Cubism manifests a new sense of simplicity. Objects are delineated as flat shapes or are constructed through the addition of cut and pasted paper shapes (*papier collé*) and non-art materials. This strategy introduces questions about reality as illusion or as physical fact asserting the materiality and tactility of surfaces. Cubist ideas not only revolutionized representational codes but also asserted that modern life, daily behavior, and new ideas about time and space offered provocative stimuli for art located in the modern industrial, prewar twentieth century.

Although Picasso and Braque are known as the major Cubists (joined by Juan Gris [1887–1927]), their work was not widely exhibited in Paris and was known only to a small group of

THE CUBIST LEGACY

By destroying representational conventions, Cubism influenced painting, sculpture, design, and architecture throughout Europe. Having challenged the limits of art and traditional uses of materials, Cubism stimulated the transgressive spirit of Futurism, Dadaism, and Surrealism and, by defining a new formal vocabulary, motivated the rationalism of Neoplasticism, Suprematism, Constructivism, and Bauhaus design premises. Although the Cubists did not produce abstract art, the logical extension of their ideas was geometric abstraction that appealed to the mind. In Holland, the Neoplasticists van Doesburg and Mondrian developed *De Stijl* painting, which had no reference to the visible world and was essentially a philosophy about universal harmony. In postwar revolutionary Russia, where artists were involved in designing a new society, Malevich produced pure, nonobjective paintings determined by logic rather than the inner life that motivated Kandinsky's abstract paintings. Finally, Cubism was to influence post-World War II American Abstract Expressionism and Clement Greenberg's late modernist theories known as Formalism.

—Marion Arnold

artists and writers. The poet Guillaume Apollinaire referred to “the Cubists” in print in 1911, and the name was then adopted by a group who exhibited at the Salon des Indépendants. The Salon Cubists popularized Cubist ideas. The most influential of these artists were Albert Gleizes (1881–1953) and Jean Metzinger (1883–1956), who jointly wrote *Du Cubisme* (1912). Their paintings offered stylized but comprehensible images, while their sculptor colleagues—Jacques Lipchitz (1891–1973) and Henri Laurens (1885–1954)—analyzed volumes as semiabstract figurative structures.

—Marion Arnold

Bibliography

- Antliff, Mark, and Patricia Leighton. *Cubism and Culture*. London: Thames and Hudson, 2001.
- Cooper, Douglas. *The Cubist Epoch*. London: Phaidon, 1995.
- Cowling, Elizabeth. *Picasso: Style and Meaning*. London: Phaidon, 2002.

Futurism

Futurism, which emerged in 1909 in a manifesto published in the Parisian newspaper, *Le Figaro*, was an affirmation of dynamic modernity. Stylistically, Futurist painting and sculpture resemble Cubism, but the Italian art movement was not an offshoot of Cubism. Although Cubist painting was moving toward the establishment of visual autonomy, Futurism located itself in the long-standing relationship between literature and art. The founder of Futurism was Filippo Tommaso Marinetti (1876–1944), an avant-garde poet, playwright, and impresario. Marinetti aimed to free Italy from the weight of inherited cultural traditions. His tactics were a series of aggressive manifestos and impromptu speeches in which his rhetorical language glorified violence and the machine age.

Marinetti's assertiveness attracted a group of young painters to his cause, and in 1911 Umberto Boccioni, Carlo Carrà, Luigi Russolo, and Marinetti joined Paris-based Gino Severini in a tour of Parisian exhibitions. They also visited the studios of Georges Braque and Pablo Picasso. In their Bernheim-Jeune exhibition of 1912 in Paris, the Italian Futurists attracted

considerable publicity through their shock tactics and self-promotion. They advocated the dissolution of boundaries among sight, sound, and touch (synaesthesia) and between the body at rest and the body in motion (kinaesthesia). Cognizant of modern technology, they introduced photographic information on movement (pioneering work by Eadweard Muybridge and Étienne-Jules Marey) into painting; this is seen in the painting of Giacomo Balla (1871–1958). In condemning the past, they affirmed speed, industrial mechanization, and violence. This ideology was to become subsumed in Italian fascism.

The Futurists issued many manifestos to gain publicity. In 1912 Ballila Pratella published a manifesto for music. This was followed by Russolo's "The Art of Noises" (1913), the result of his experiments with noise machines. Experiments in photography led to Anton Giulio's "Fotodinamica Futurista" (a 1912 manifesto) and "Manifesto of Futurist Cinema" in 1916. He then made a full-length Futurist film, *Perfido Incanto*. These manifestos and performances influenced the Dadaists. The Futurist painters were influenced by ideas on motion, dynamism, simultaneity, and temporality. These concepts resulted in rather literal paintings of multiple views and repetitive outlines rendered in the divisionist techniques of small brush marks. More radical were the sculptures of Umberto Boccioni (1882–1916). His *Unique Forms of Continuity in Space* (1913) manifests abstracted interior and exterior human form in motion. The work he completed before his early death in the war verged on pure abstraction, and his unorthodox use of materials echoed those that Picasso used in his relief sculptures.

Futurism was a movement dominated by aggression, exhibitionism, and words. Marinetti's provocative manifestos made outrageous statements: "a racing car is . . . more beautiful than the *Victory of Samothrace*"; "We will glorify war." The technical manifestos by the artists offer ideas on new subjects: "All subjects previously used must be swept aside in order to express our whirling life of steel, or pride, or fever and of speed"; "Our renovated consciousness does not permit us to look upon man as the

➤ A FUTURIST IN POLITICS

Futurism was a deeply nationalistic movement. Considered politically rather naive by most scholars, the Futurists wanted to impel Italy into the modern age by discrediting its rich cultural past and projecting faith in an industrialized future. Marinetti welcomed World War I (1914–1918) as an opportunity for cultural cleansing. After the war he attempted to align advanced art and technology with the emergent reactionary right-wing fascist ideology. In early 1918 he founded the Futurist Political Party, which a year later was absorbed into Mussolini's Fascist Party. Marinetti stood as a candidate in the 1919 election. He was not elected but eventually became Mussolini's cultural adviser. Marinetti's career within Futurism and the direction taken subsequently by Futurist ideas indicate that the movement was an exception to the usual alignment of modernist avant-gardism and left-wing politics.

—Marion Arnold

centre of universal life. The suffering of a man is of the same interest to us as the suffering of an electric lamp.” In 1914 Marinetti’s “free word poetry,” *Zang Tumb Tuum*, explored the concept of sound. It was printed in *Parole in libertà*, which had a modernist cover designed as a word picture with a variety of new typefaces. Marinetti favored a purely phonetic, textural, and graphic use of words in poetry, a point of

conflict with the Russian Cubo-Futurists who adopted a structuralist approach to language.

—*Marion Arnold*

Bibliography

- Humphreys, Richard. *Futurism*. London: Tate, 1998.
 Martin, Sylvia. *Futurism*. London and New York: Taschen, 2005.
 Tisdall, Caroline, and Angelo Bozzollo. *Futurism*. London: Thames and Hudson, 1978.

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World History Encyclopedia

Era 7: The Age of Revolutions, 1750–1914 ■ Volume 15

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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Migration and Travel

Travel (a word derived from the French *travailler*, meaning “to work hard” or “toil”) is the process of moving from one place to another or going on a trip or tour. Travel can be undertaken by an individual or large group, cover a short or long distance, and have countless motives. Migration is a unique form of travel and typically refers typically to movements of groups rather than individuals and involves the relocation of these groups outside their home community. Relocation may be as brief as the several months of a hunting or agricultural cycle, or it may be permanent. Migrations also have a narrower range of causes than travel. Voluntary migrations are undertaken by pastoralists and foragers in response to seasonal changes and by other groups to improve their economic condition or escape political or religious oppression. Involuntary migrations result from expulsion from one’s homeland, forced military service, or, in the case of slaves, capture and sale to individuals outside their community. Travel and migration have played central roles in human history from its very beginning; between 1750 and 1914 both underwent significant changes.

Histories of travel between 1750 and 1914 justifiably focus on technological innovation: the advent of steamships and railroads beginning in the early 1800s, the development of the gasoline-powered automobile in the 1880s, and the first successful airplane flight in 1903. Such developments are only part of the story, however. Significant innovations in overland and waterborne travel occurred before the steamship and railroad era. Even after this era began, horses, mules, and camels maintained their importance as means of personal travel, and animal-drawn transport and sailing ships continued to play major roles in moving people and goods in much of the world.

In the eighteenth and early nineteenth centuries, before or during the very first stages of the Industrial Revolution, water travel was becoming safer, faster, and less expensive. In Europe, especially England, and the United States, the movement of grain, coal, and a host of other goods was facilitated by a boom in canal building that began in the 1700s and continued well into the nineteenth century. Concurrently, ocean travel was made safer by the invention of the first practical sea-going chronometer, developed by the British craftsman John Harrison in several versions between the 1730s and 1760s. The most important advance in marine navigation since antiquity, Harrison’s clock enabled mariners to keep accurate time on the oceans, which in turn made it possible to plot longitude in addition to latitude. Ocean travel was also becoming more regularized. In 1817 the Black Ball Line, an American firm, transformed the haphazard transatlantic passenger trade by

scheduling and advertising monthly trips departing on the first of each month between Liverpool and New York City. It soon had many competitors on both sides of the Atlantic.

In 1817 the Black Ball Line, an American firm, transformed the haphazard transatlantic passenger trade by scheduling and advertising monthly trips departing on the first of each month between Liverpool and New York City.

Improvements in sailing ship design continued well into the early industrial era. By the late 1700s European and American shipbuilders were producing many types of specialized sailing vessels, the most impressive of which were the large and heavily armed East Indiamen, which carried goods and passengers between Europe and India and even China by way of the Cape of Good Hope. Blackwell frigates, which replaced the more

cumbersome Indiamen in the 1830s, were smaller but faster; they could complete the journey from England to Bombay (present-day Mumbai) in 85 days. History's fastest sailing ship, the clipper, was produced in the United States and elsewhere beginning in the 1840s. Designed originally for the voyage from the U.S. East Coast to the gold mines of California, it was capable of speeds of more than 30 miles (48 kilometers) per hour. Another significant innovation was the appearance of steel-hulled sailing ships in the 1850s. They were widely used for the transport of wool, grain, coal, and other products for which speed was not a priority. They disappeared from the world's oceans only in the late 1930s.

Fewer advances took place in overland travel in the prerailed era. In the Atlantic world, mainly in response to increased commercial travel, road building and maintenance attracted the attention of engineers and governments beginning in the 1700s. The French government founded a school of road and bridge construction in 1747 and appointed Pierre-Marie-Jérôme Trésaguet its first inspector general of roads in 1775. Trésaguet, along with two Scotsmen, Thomas Telford (1757–1834) and John McAdam (1756–1836), pioneered new methods of road construction, all using mixtures of large and small stones and gravel. Although the French government maintained a system of roads (*les routes impériales*) that linked France's major cities, in the United States and the rest of Europe road construction and maintenance were left to private entrepreneurs. Licensed and occasionally subsidized by governments, they built and maintained many miles of toll roads, or turnpikes, from which they hoped to profit. Despite these changes, overland travel, even on roads built according to the latest methods, could not compete with travel on rivers and canals. Horse-drawn loads on land moved no faster than 2 miles (3.2 kilometers) per hour, and the costs were high. In 1817 it cost 19.2 cents a mile to move a ton of goods from Buffalo, New York, to New York City; after the completion of the Erie Canal, the cost was reduced to less than 1 cent.

None of these changes—canal building, new sailing ship designs, and road construction—approached the significance of the steamship and the railroad. The first commercially successful steamboat was built in 1807 by the American inventor Robert Fulton; after a test run of the *Clermont* from New York City to Albany was completed in 24 hours, he

was awarded a monopoly for steamship operation on the Hudson River. In this remarkably inventive and entrepreneurial age, larger and faster steamships soon were plying the rivers, lakes, and coasts of the United States and Europe and crossing the world's oceans. Each decade saw innovations in ship design that made the vessels of the preceding decade obsolete: paddle wheels gave way to screw propellers; bulky wooden hulls were streamlined and made of iron; boiler and engine designs were improved; and by the end of the century steam turbines replaced reciprocating engines. By the 1890s, mammoth ocean liners with crews of 800 and passengers numbering over 2,000 were crossing the north Atlantic in a little over a week at speeds just under 50 miles (80 kilometers) per hour. The use of steamships and the opening of the Suez Canal in 1869 dramatically reduced travel time to Asia. The trip from Amsterdam to Java in the Dutch East Indies took a year in 1650, three months with favorable winds in 1850, and only three weeks in 1914.

Steam power also transformed overland travel through the railroad. Pulling loads on wooden tracks had been used in European mining operations since the 1400s, and iron tracks were first used in England in the 1780s. Between 1802 and 1825, English engineers designed and built steam-driven locomotives for use on private railways to serve coal mines, and then in 1825 the world's first public railway opened between Stockton and Darlington in England's coal-mining district. In 1830 the Liverpool & Manchester Line became the first railway linking two major cities, and soon passengers, mail, and goods were being transported on its 35 miles (56 kilometers) of track. The worldwide boom in railway construction had begun.

By 1914 networks of railroads crisscrossed Europe, with the densest in Germany, with 37,820 miles (60,865 kilometers) of track, and Great Britain, with 19,840 miles (31,929 kilometers) of track. The United States, with 429,040 miles (690,473 kilometers) of track, had knitted the country together with the completion of the transcontinental railroad in 1869, as did Canada in 1885 and Russia in 1903. Railroads were also introduced to Asia, Africa, and South America; by 1910 India had the world's fourth-largest rail network after the United States, Germany, and Russia. Decade by decade, engines became more efficient and powerful, braking systems were improved, and amenities for passengers such as lavatories, sleeping cars, heating systems, and dining cars became standard features. Rail technology not only revolutionized long-distance travel but also transformed how people moved about large cities. Many cities installed trolley car or tramcar systems in which vehicles, often powered by electricity, moved on rails built into existing streets. The world's first underground railway system opened in London in 1863, and the first electric-powered underground trains came into use in London in 1890.

By the early 1900s railroads and steamships had changed the world in many ways. Directly or indirectly they created millions of jobs. By the early 1880s the world's shipyards had produced 22,000 steamships, and its factories had produced an astounding 100,000 steam locomotives and 2.75 million carriages and wagons. Millions of workers were employed in these enterprises, and millions more were employed

mining coal, producing iron, laying track, constructing bridges, building stations, taking tickets, moving baggage, and administering railway and shipping companies. By reducing costs and transit times, steamships and railroads also contributed to the fourfold increase in world trade between 1850 and 1910.

Faster and cheaper transportation led to other changes in how humans lived their lives. Mail services were expanded and improved. New suburbs, made possible by railway lines and metro systems, mushroomed around major European and American cities. Tourism—travel for relaxation, fun, a change of pace, or enlightenment—was transformed from an activity of young aristocrats, who toured European capitals and cultural centers as part of their informal education, to one enjoyed by large numbers of middle-class and even working-class Europeans and Americans, who flocked to spas, beaches, ski areas, and mountain resorts. An indication of tourism's popularity and economic importance is the emergence of travel companies such as Thomas Cook and Son. Founded in 1841 when Cook arranged an 11-mile (18-kilometer) railroad trip for 570 temperance campaigners from Leicester to Loughborough, England, by the end of the century the firm had offices worldwide; arranged thousands of annual tours to every inhabited continent (including trips around the world); marketed its own lines of guidebooks, luggage, and travel ware; and made travel arrangements for millions of individual customers. Most importantly, cheap travel by rail and steamship contributed to an unprecedented surge in world migration between the early 1880s and 1914, when more human beings left their homes for lives in new lands than in any 25-year period in history.

Although migration peaked in the late nineteenth and early twentieth centuries, large-scale migration was a defining characteristic of the entire era from 1750 to 1914. Until the mid-1800s, migration mainly involved the involuntary movement of human beings destined for slavery. These migrants were mainly Africans who labored in the mines and fields of the Americas and the Caribbean. Of the 10 million to 12 million Africans sold into slavery during the era of the transatlantic slave trade, slightly more than half did so between 1750 and 1867, the year in which the last legal shipment of slaves arrived in Havana, Cuba, in a Spanish ship. Even after Great Britain (1807), the United States (1808), Denmark (1802), the Netherlands (1814), France (1818), and Spain (1867) outlawed the slave trade, it continued illegally until slavery itself was abolished in Cuba and Puerto Rico in 1886 and Brazil in 1888. Many slaves in the Americas experienced further migration after they or their ancestors had completed their Atlantic crossing. As cotton culture spread across the southern United States, for example, many slaves born on plantations in coastal states were sold to planters in western Alabama, Arkansas, and Texas. Slavery also caused the forced migrations of Sudanese to Egypt, where they served as laborers and soldiers; of East Africans and Indians who worked on the plantations of the Indian Ocean islands of Mauritius and Réunion; and of still other Africans who crossed the Sahara in caravans to serve as servants or concubines in North Africa and parts of the Middle East.

The gradual abolition of slavery in the 1800s did not lessen the worldwide demand for cheap labor. To a degree, migrant workers from the world's poorer regions, especially China and India, were recruited to fill this need. Many of them were indentured servants, who in return for their passage were required to work three to seven years on plantations or in mines. It is estimated that 30 million to 40 million Indians migrated between 1830 and 1914, dispersed around the globe to places such as Mauritius, South Africa, Fiji, Sri Lanka, Myanmar, and Malaya. They were joined by as many as 40 million Chinese, who emigrated to many of the same regions that attracted Indians. Unlike the Indians, however, they also settled in South America, Canada, and the United States. In the United States, unease over their numbers and "strangeness" led to a series of bans on Chinese immigration that were not lifted until China became a U.S. ally in World War II.

These Indians and Chinese and lesser numbers of Japanese and Filipinos accepted the risks and hardships of emigration mainly out of economic necessity. Population growth, most rapid in India and China, created shortages of arable land as well as rising rents and growing rural poverty. Many Chinese and Indian peasants responded by migrating to cities or to relatively less populated areas such as the offshore island of Taiwan for the Chinese and the northwest region of Assam for the Indians. But many more came to view overseas migration as the best choice.

A deteriorating rural economy also was the main cause of the flood of migrants who left Europe in the nineteenth and early twentieth centuries. Modest numbers of Europeans—somewhere around 800,000—had migrated and permanently settled in the Americas in the more than 300 years between the time of Columbus's discoveries and the early nineteenth century. Then in the slightly more than seven decades between 1840 and 1914, 50 million to 60 million people left Europe for the Americas and other regions, and millions more migrated from rural regions to cities, either permanently or to pursue part-time employment. Overwhelmingly, their motives were economic. During the nineteenth century the lives of Europe's small farmers, peasants, and full-time agricultural workers disintegrated in the face of population growth, the consolidation of small farms into large ones, and on these larger farms the use of seasonal rather than year-round labor. Equally devastating was the decline of rural industry, as mechanized textile mills replaced the work of spinners, weavers, and lace makers whose labor had provided income for rural households. Crop failures also played a role. It is no accident that the first upsurge in European emigration occurred in the "hungry forties," when the potato crop withered and died in Ireland and across northern Europe. While economic hardship pushed millions of migrants out of Europe, economic opportunities pulled them to the Americas and other regions. With land at a

The gradual abolition of slavery in the 1800s did not lessen the worldwide demand for cheap labor. To a degree, migrant workers from the world's poorer regions, especially China and India, were recruited to fill this need.

premium in Europe, it was hard to resist the lure of the cheap or even free farmland provided by the U.S. Homestead Act (1862), the Canadian Dominion Lands Act (1872), and various land ownership laws passed by the Australian colonies in the 1860s and 1870s. For nonfarmers, it was equally hard to ignore the opportunities for jobs in heavy industry, food processing, commerce, manufacturing, mining, and services of many different kinds. Finally, in the second half of the nineteenth century, railroads and steamships lowered the costs and reduced the hardships of overland and ocean travel. In the 1860s it took 44 days by sailing ship to complete the trip from northern Europe to the United States, but in the 1880s it took only 10 days by steamship and just a week in the early 1900s. Competition among shipping companies and booking agents reduced costs to the point that a ticket from Liverpool to New York City could be purchased for only nine dollars, an amount that could be earned by one week's labor in the United States.

Increased human mobility, a marked feature of world history between 1750 and 1914, continued to accelerate in the twentieth century. In 1908 the first Model-T Ford rolled off the assembly line in Detroit, and with it the automobile age can be said to have begun. The first commercial airline flight took place in January 1914, when regular service was opened up between St. Petersburg and Tampa, Florida; the first regularly scheduled transatlantic flights began in 1939 when Pan American Airlines began service between New York City and Marseilles. Migration also grew and changed character. Transnational labor migration peaked in the decade before World War I, but the movement from rural areas to cities continued to grow. By the end of the century, just under half of the world's population lived in cities with more than 20,000 people. Sadly, the twentieth century also swelled the numbers of another type of migrant: refugees driven from their homes in flight from the century's many political conflicts, wars, and genocides.

—James H. Overfield

■ Introduction: Involuntary Migration

Involuntary migration, simply defined, refers to the movement of individuals from their homeland to a new community against their will. Unvaryingly, force or the threat of force is involved. Between 1750 and 1914 more human beings became involuntary migrants than in any other comparable period in history. They included prisoners transported to penal colonies, children who were forced to leave their homes to accompany their migrating parents, victims of warfare, and native peoples of the Americas, New Zealand, Australia, and Africa who were

driven from their land after it had been appropriated by white settlers. By far, however, the largest group of involuntary migrants consisted of black African slaves who were forced to move from one part of Africa to another or to more distant places such as the Middle East, Indian Ocean coastal regions, or the Americas.

Each type of involuntary migration had distinct causes, but all were related to the emergence of a global economy and the expansion of European power around the world in the eighteenth and nineteenth centuries. Penal colonies

utilized by the Russians, French, and British as destinations for convicted criminals all were founded in distant parts of these European countries' empires: Siberia for the Russians, Guyana in South America and New Caledonia in the Pacific for the French, and the American colonies and Australia for the British. The forced migration of aboriginal peoples from their homelands also was tied to European expansion and colonization. It began with the arrival of the first Spaniards on Hispaniola and Cuba in the early 1500s but peaked in the nineteenth century, when the Boers began their Great Trek in South Africa, the British began to colonize Australia and New Zealand, and Americans, Canadians, and newly arrived immigrants began to fill up North America. In 1830 during the presidency of the former Indian fighter Andrew Jackson, Indian removal to the west became official policy of the U.S. government.

The upsurge in slavery worldwide resulted in part from demands for soldiers, manual workers, domestics, concubines, and agricultural laborers in the Middle East and Indian Ocean coastal regions, but it mainly was caused by the demand for cheap labor on the plantations of Brazil, the Caribbean, and North America that produced sugar, tobacco, indigo, rice, and cotton for the world market. Some Africans who were transported overseas as slaves already had been enslaved in Africa because of indebtedness or some other crime, but most were captured as a result of wars, slave raids, or kidnapping. Slave raiders profited when they sold their slaves to African coastal merchants; who profited when they sold slaves to European slave traders; who profited when they sold the slaves to plantation and mine owners in the Americas and the Caribbean; who profited when they sold the products the slaves produced to European businessmen; who profited from the sale of cotton shirts, snuff, coffee, candy, rum, processed sugar, and a host of other products to millions of consumers worldwide. With so many people profiting from and depending upon slave labor, the stupendous growth of the slave trade in the eighteenth century is unsurprising. During the 1700s slightly over 6 million Africans were sold into slavery in the Americas alone, compared to the approximately 200,000 prisoners transported by the

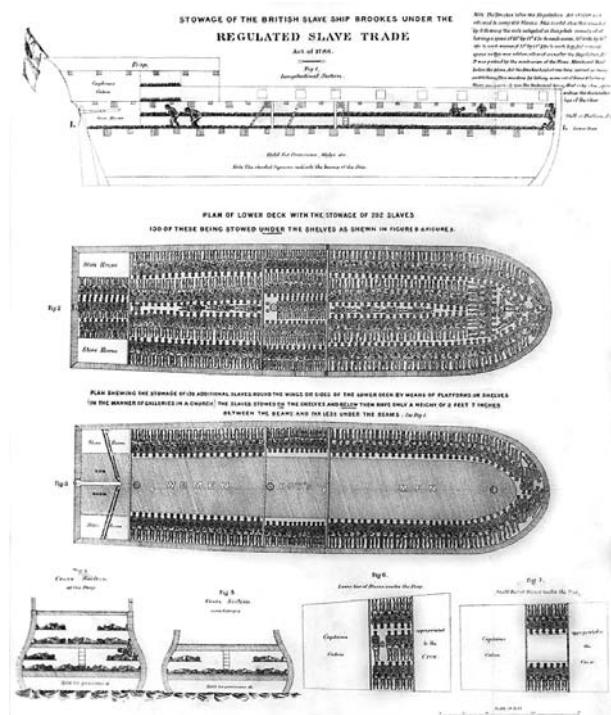
British to overseas penal colonies in the eighteenth and nineteenth centuries.

In the course of the nineteenth century, the number of involuntary migrants declined. The British shipped the last load of criminals to Australia in 1868. By the 1880s, the Native Americans, the First Nations in Canada, Australian aboriginals, and various African peoples who had survived decades of disease, displacement, and warfare were all safely settled in reservations or native reserves. The greatest change was the shrinkage of the slave trade. Although an estimated 3.3 million Africans were sold into slavery overseas between 1801 and 1900, most of this occurred in the first part of the nineteenth century. In 1792 Denmark outlawed the slave trade, although the ban did not take effect for another ten years. In 1807 Great Britain and the United States made the slave trade illegal, with the U.S. ban taking effect on January 1, 1808; in the decades that followed the major mercantile states of Europe and the Ottoman empire followed suit. In Africa, French and British colonial authorities took steps to suppress slavery and slave raiding within Africa. The world's two greatest sugar producers, Brazil and Cuba, outlawed the slave trade in 1850 and 1866, respectively, but smuggling continued until Cuba outlawed slavery in 1886 and Brazil did so in 1888. By then, forced migrations in the previous century and a half had changed the world economy, affected ideas of race, contributed to new ideas of nationhood, altered world demographics, and affected millions of lives.

—James H. Overfield

The Transatlantic Slave Trade, 1750–1900

The flow of slaves across the Atlantic to meet the demand for labor in the New World was an integral part of the expanding global economy in the early modern period. The slave trade further integrated Africa into the global economy, although not on an equal footing with Europe. The trade and the slavery on which it was based reduced people to commodities, stripped them of freedom, and classified them by race, fostering a racism that still persists in the United States and other parts of the world. The slave trade was the largest forced migration in history.



The print “Stowage of the British Slave Ship Brooke” was produced in 1789 by English abolitionists to show the inhumane conditions on a slave ship that carried the maximum number of slaves permitted by the Regulated Slave Trade Act of 1788. (Library of Congress)

The discovery of the Americas created new economic opportunities, especially in agriculture and mining. In 1493 only a year after his first voyage, Christopher Columbus introduced into the Caribbean sugarcane, the crop on which Europeans built the first plantations in the New World. Sugarcane demanded, particularly at harvest, a large labor force. Europeans sought to meet the demand for labor by using criminals, orphans, and indentured servants and supplemented these sources with Native Americans. But none of these expedients sufficed. Native Americans succumbed to Old World diseases, and the supply of European laborers met only a fraction of the demand. In the mid-fifteenth century the Portuguese had solved the problem of labor by enslaving Africans to grow sugarcane on São Tomé and the Madeiras, islands off Africa’s Atlantic coast. The Spanish introduced African slaves to the New World when they imported the first slaves to Hispaniola (now the island of Haiti and the Dominican Republic) in 1502.

The institutionalization of slavery in the New World led directly to the slave trade due to the fact that demand for slaves outpaced the growth in supply by natural increase nearly

➤ A SLAVE SHIP ARRIVES IN BARBADOS

The following excerpt comes from a widely read autobiography of Olaudah Equiano, who was kidnapped and sold into slavery in Africa. After serving several masters, he was freed and became a leading critic of slavery and the slave trade.

“At last we came in sight of the island of Barbados, at which the whites on board gave a great shout, and made many signs of joy to us. We did not know what to think of this; but as the vessel drew nearer, we plainly saw the harbor, and other ships of different kinds and sizes, and we soon anchored amongst them, off Bridgetown. Many merchants and planters now came on board, though it was in the evening. They put us in separate parcels, and examined us attentively. They also made us jump, and pointed to the land,

signifying we were to go there. We thought by this, we should be eaten by these ugly men, as they appeared to us; and, when soon after we were all put down under the deck again, there was much dread and trembling among us, and nothing but bitter cries to be heard all the night from these apprehensions, insomuch, that at last the white people got some old slaves from the land to pacify us. They told us we were not to be eaten, but to work, and were soon to go on land, where we should see many of our country people.”

—Christopher Cuno

Source

Olaudah Equiano, *The Life of Olaudah Equiano, or Gustavus Vassa, the African* (Boston: Isaac Knapp, 1837), 50.

everywhere in the Americas. By 1750 Portugal, Britain, the Netherlands, Denmark, and France transported just over 51,000 slaves a year from Africa to the Americas. The dominant slave traders were Portugal and Britain, each of which tallied more slaves than the Netherlands, Denmark, and France combined.

The European powers established fortresses on the western coast of Africa. Tropical diseases and the lack of manpower prevented them from penetrating the continent's interior. Instead they depended on Africans to deliver slaves to them. Poorly fed and confined in close quarters on the coast and aboard ship, Africans were vulnerable to disease. Mortality increased with the length of a voyage, from less than 10 percent for a crossing of fewer than 20 days to nearly 25 percent for a crossing of more than 2 months. Malaria, yellow fever, and intestinal disorders caused two-thirds of all deaths, and smallpox, scurvy, and suicide caused the remaining one-third. Once a ship set sail slaves, crammed 100 to 1,000 per ship depending on its size, were at the mercy of the weather. Rain often prevented them from getting fresh air on deck and increased the likelihood of disease. Storms occasionally sank ships. In these instances crews frequently abandoned slaves, kept below deck, to their fate. The vagaries of wind could lengthen a crossing. The voyage from the Guinea Coast required a ship to cross the doldrums twice, each time risking a prolonged calm. Ship captains, who seldom had more than three months of food on hand at the beginning of a voyage, reduced slaves' rations at the first inkling that a crossing might take longer than expected.

Once a ship landed, an inspector checked slaves for transmissible diseases. The detection of a sick slave lengthened slaves' confinement aboard ship in quarantine. Disembarkation at last gave slaves access to fresh food and water but also confronted them with the ordeal of sale. Slave traders felt no compunction about separating family and friends and disrobing slaves for inspection by potential buyers. Sellers usually auctioned slaves, the young and old first, followed by men and then women who appeared to be fertile. Women of childbearing age commanded a higher price than prepubescent and postmenopausal women because buyers, despite denials, appreciated the potential of these

women to reproduce. As an alternative to auction, a seller specified the price of slaves of similar age and physical condition and permitted buyers to pick from this group, much as buyers select a car from a dealer's lot.

By the nineteenth century the slave trade had fallen out of favor. The planters in the United States and Barbados, with a self-sustaining slave population, did not need to import slaves. Enlightenment thinkers branded slavery and by implication the slave trade as inhumane and wasteful. The Society of Friends (Quakers) and other religious reformers declared slavery and the slave trade contrary to the tenets of Christianity. Denmark in 1802, Great Britain in 1807, the United States in 1808, the Netherlands in 1814, France in 1817, Spain in 1820, and Portugal in 1819 (north of the equator only) ended the slave trade. Slaves continued to be smuggled into Cuba and Brazil until Britain pressured Cuba to abandon the slave trade in 1867. Brazil followed in 1888, ending four centuries of commerce in humans.

In the short term the end of the slave trade left the nations of North and South America to grapple with the legacy of slavery. The United States fought a civil war over slavery, although other nations in the Americas assimilated the former slaves without tumult. The degree of interbreeding in some societies made it difficult to determine whose ancestors had been slaves and whose had been free. Often, as in Brazil, one's pedigree was a mix of both slave and free, negating the stigma of the slave trade. Over the long term the slave trade reduced Africa to an appendage of Europe, first as a network of colonies and today as an economic dependent of both Europe and the United States.

—Christopher Cumo

Bibliography

- Curtin, Philip D. *The Atlantic Slave Trade: A Census*. Madison: University of Wisconsin Press, 1969.
- Eltis, David, Stephen D. Behrendt, David Richardson, and Herbert S. Klein, eds. *The Trans-Atlantic Slave Trade: A Database on CD ROM*. New York: Cambridge University Press, 1999.
- Inikori, Joseph E., and Stanley L. Engerman, eds. *The Atlantic Slave Trade: Effects on Economies, Societies, and Peoples in Africa, the Americas, and Europe*. Durham, NC: Duke University Press, 1992.

Klein, Herbert. *The Atlantic Slave Trade*. New York: Cambridge University Press, 1999.

Postma, Johannas. *The Atlantic Slave Trade*. Westport, CT: Greenwood, 2003.

The Slave Trade on Africa's East Coast

The Indian Ocean slave trade on the east African coast was older and lasted longer than the transatlantic slave trade on west African shores.

Slave trade on Africa's East Coast is ancient, probably as old as the Indian Ocean trade, which goes back at least to the first century CE, when Greek and Roman merchants from Egypt and other merchants from India sailed the Red Sea route to Rhapta (a port thought to have been located on the Somali coast) to purchase cargoes of ivory, tropical woods, and slaves. By the fourth century CE, Ethiopian traders from the Red Sea port of Adulis were very active in Indian Ocean trade, including slaves, as hoards of Gupta and other Indian coins discovered in Ethiopia attest. In the mid-seventh century, the increasingly powerful Muslim Arabs began to dominate Indian Ocean trade, forcing the Ethiopians to take refuge in their highlands.

About a century after emergence of the Arab traders on the Indian Ocean, Swahili trading cities began to appear on the coast and the islands off the coast of what are today Kenya, Tanzania, and Mozambique. The Swahili, an ethnic group who speak Swahili, a Bantu language, became very active traders by the eighth century, dealing with Arabs and Persians who settled in these towns. The Swahili intermarried with the Muslim merchants and became devout Sunni Muslims. The Swahili continued to trade in slaves; in fact, slaves may have become the most important item of commerce. Many east African slaves were sold to work on burgeoning sugar plantations in southern Iraq. In the ninth century, African slaves were so numerous in southern Iraq that they rebelled and established their own state (869–883), the suppression of which required a major effort by the Abbasid caliphate.

East African slaves continued to be a major, but not exclusive, element in the commerce of the Swahili cities. Swahili traders also exported ivory, tropical woods, pig iron, green quartzite,

and, increasingly, gold from the mines of Great Zimbabwe. The Swahili cities prospered until the Portuguese conquered most of them, beginning in 1505. Portuguese occupation of these east African ports lasted more than two centuries, during which time Portuguese attempts to monopolize or control Indian Ocean trading routes disrupted much of the commerce in the area. Portuguese occupation, however, probably stimulated the slave trade. The Portuguese, with their plantation colonies from Brazil to Indonesia, required a copious supply of cheap slave labor. Most slaves for these plantation colonies came from western Africa, but eastern Africa, especially Mozambique as well as Madagascar, also contributed slaves to the plantation colonies.

Slaves continued to be purchased from the Portuguese by the Arabs, Persians, and Ottoman Turks. Many of these slaves were used in the households or harems, and for this reason many of the male slaves were castrated. In the Ottoman empire, both black slaves from Africa as well as white slaves from Europe were used. In the sultan's palace, white eunuchs were employed as general servants. For those who rendered intimate personal service, such as bathing and dressing the sultan's wives and concubines, black eunuchs were preferred.

In the late seventeenth century Saif Sultan, the ruler of Oman, began to create an Omani empire by driving the Portuguese from the Swahili cities. By 1730 all of the Swahili ports were in Omani hands except those in Mozambique. From then on, the Portuguese played a minor role in Indian Ocean commerce. Swahili merchants were free to deal with the Dutch, English, and French, who were all clamoring for slaves. Most of the slaves who stocked the plantations of these European states came from western Africa, but early in the eighteenth century the French began to develop extensive plantations on Mauritius and Ile de France (Réunion). The eighteenth century witnessed a boom in plantation agriculture, and with it came a burgeoning of the slave trade, both on the west and east coasts of Africa.

Zanzibar became the leading entrepôt for the export of east African slaves. Slaves would be bought by merchants who traveled up to several hundred miles into the interior of Africa, accompanied by *askaris* (armed guards). When enough

slaves had been purchased, the merchants would turn around and march them to holding pens on Zanzibar Island. At the beginning of the eighteenth century, the demand for slaves was still light enough that it could be met by peaceful purchase of individuals who had fallen into slavery by social processes customary to African cultures. But as the demand for slaves began to outstrip the supply in the latter part of the eighteenth century, slave-hunting expeditions were sent out to capture new supplies of slaves. Slave hunting often resulted in burnt and destroyed villages, much killing, and the disruption of any kind of social stability. For hundreds of miles deep into the interior of eastern Africa, the people lived in constant fear of the slave catchers.

The eighteenth and early nineteenth centuries constituted the heyday of the slave trade on the east African coast. While the British and the Americans outlawed the international slave trade in 1807 and sent naval forces to patrol the seas in an attempt to interdict the trade, the Atlantic slave trade, though illicit, continued at a reduced rate until 1860. On Africa's East Coast, it continued until 1890 (and later illegally into the twentieth century).

By the 1840s, the British began to use their power in the Indian Ocean to coerce east African rulers to take steps to end the slave trade, but it was not until 1873 that the sultan of Zanzibar was forced to issue a decree ending the slave trade. Gradually enforcement of this decree resulted in a virtual cessation of the trade. However, slavery continued to be legal in parts of the British East Africa Protectorate into the early twentieth century.

—Wilfred J. Bisson

Bibliography

- Clarence-Smith, William, ed. *The Economics of Indian Ocean Slave Trade*. London: Frank Cass, 1989.
- Cooper, Frederick. *Plantation Slavery on the East Coast of Africa*. New Haven, CT: Yale University Press, 1977.
- Lofchie, Michael F. *Zanzibar: Background to Revolution*. Princeton, NJ: Princeton University Press, 1965.
- Manning, Patrick, ed. *Slave Trades, 1500–1800: Globalization of Forced Labor*. Brookfield, VT: Ashdorth, 1996.

The Trans-Saharan Slave Trade

The centuries-old trans-Saharan slave trade persisted during the Atlantic trade era, peaking in about the middle of the nineteenth century and gradually declining in most areas between the 1880s and about 1914. The export trade to Muslim North Africa and West Asia involved an estimated 2 million slaves in the nineteenth century, with the largest number traveling across the Sahara desert from the savanna west of the Nile Valley toward the Ottoman Empire and parts of the Indian Ocean world.

The expanding numbers of enslaved Africans were more the result of internal events than a response to increasing demand from foreign merchants. The mid-nineteenth-century droughts, civil unrest, and political instability in West Africa helped to increase the number of human commodities. Although the trans-Saharan trade paralleled the transatlantic era, there was little stimulus from the maritime networks. Only in the Atlantic coastal region of the western Sudan was there any overlap between the two slave trading systems.

The enslaved Africans that fed the trans-Saharan markets originated mostly through raiding activities or capture in holy wars (jihad) carried out by small Muslim states in the eighteenth century. Slaves served in harems, as porters on trading caravans, as servants, and as soldiers in military actions. Their forced labor supported the growth of so-called legitimate commerce, including plantation agriculture, as well as mining and herding. Importantly, political prisoners were moved as far as possible from their point of origin along the edge of the Sahara. The value of slaves increased with the length of their journey alongside other trans-Saharan export commodities, such as salt, gold, and kola nuts. The bulk of the captives ended up in Morocco and Libya, whose ports then extended the journey eastward into Asia. By the 1800s the political economies of both North Africa and West Africa were also dependent upon slave exports for their supplies of money, luxury textiles, firearms, and horses.

The slave trade increased through much of the nineteenth century. The Turko-Egyptian conquest of Sennar (on the Nile River) in 1820 led to a sharp increase in slave recruits for the

► EYEWITNESS TO THE SLAVE TRADE—SIR HUGH CLAPPERTON'S MISSION

The journey of Scotsman Hugh Clapperton's second expedition to West Africa (1825–1827) as recorded in his diaries provides insightful analysis of views on the trans-Saharan slave trade. His journey was a British government mission that involved travel from the Bight of Benin (Nigeria) and sought the source of the Niger River. Clapperton observed that both raiding and regional conflicts such as the Sokoto Caliphate's jihad, which had broken out in 1804–1808, produced the bulk of war captives for the trans-Saharan trade. Although Muslims opposed the sale of slaves to Christians, Clapperton reported that the Sokoto government taxed this trade. Many profited from the trading caravans, including the women who followed them with foods: “boiled beens Maize Yams fowels and pudding for sale,” as the Clapperton diary entry on June 22, 1826, reported. That very year the conflicts between the Sokoto caliphate and Borno relied on weapons obtained through the slave trade.

Clapperton also participated in the debate over the slave trade and “just” enslavement within the caliphate itself. The writings of Al-Hajj ‘Umar (ca. 1835), ruler Muhammad Bello, and others indicated the Muslim dimensions of the debate over abolition. British and Muslim ideas embraced common elements of cautious expediency when it



Scottish explorer Hugh Clapperton. (Library of Congress)

came to fully condemning the slave trade. Ultimately Clapperton's expedition failed to wring any impact or influence. His observations and interactions do reveal the autonomy of nineteenth-century Muslim states in the interior of Africa and thus their eventual role in abolishing slavery in the century to follow.

—Candice Goucher

Source

Jamie Bruce Lockhart and Paul E. Lovejoy, eds., *Hugh Clapperton in the Interior of Africa: Records of the Second Expedition, 1825–1827* (Leiden and Boston: Brill, 2005).

Egyptian army. After 1840 the Sudanese expanded their commercial networks and supplied the region's production sector with slave labor from the northern Niger region to Darfur. One famous merchant, Al Zubayr, settled in the Bahr el Ghazal with a private slave army that numbered 1,000 in 1856. In 1878 his son Sulaiman's army was estimated at 6,400. Soon afterward, in 1896, the export trade in slaves was almost completely eliminated by a British and Egyptian blockade, although the local use of slave labor persisted into the twentieth century.

The abolition of slave trading by European governments beginning in 1807 initially had very little impact on the trans-Saharan trade. Even while the slave trade was being banned by many governments, slavery was increasingly embraced as a nineteenth-century economic strategy across

the African interior. The eventual abolition of slavery by European colonial states had varied consequences for the regions involved in trans-Saharan exports. In most places, including Chad, Borno, and Mali, slavery continued after the establishment of French or British colonial rule in the 1880s but was of lesser importance as an institution. The British were most determined to end the trans-Saharan trade and less concerned about the continued use of slave labor. In 1899 the British governor of the Sudan actually called for discretion in gradually eradicating slavery. Still, the export trade in slaves was halted in most of Africa, with the exception of the Wadai-Kufra route across the Sahara. Its legacy of political instability, raiding, and dependency relationships continues to torment the Saharan regions of the Sudan.

—Candice Goucher and Tracie Peterson

Bibliography

- Lovejoy, Paul E. *Transformations in Slavery: A History of Slavery in Africa*. Cambridge: Cambridge University Press, 1983.
- Manning, Patrick, ed. *An Expanding World: Slave Trades, 1500–1800: Globalization of Forced Labour*, Vol. 15. London: Variorum, Ashgate Publishing, 1996.
- Toledano, Ehud. *The Ottoman Slave Trade and Its Suppression, 1840–1890*. Princeton, NJ: Princeton University Press, 1982.
- Wright, John. *The Trans-Sabaran Slave Trade*. London and New York: Routledge, 2007.

Migrant Labor in South Africa

Migrant labor in South Africa during the period 1750–1914 is generally characterized by the exploitation of indigenous groups to meet colonialists' growing labor needs. South Africa began as a Dutch colony that served as an outpost for shipping goods to and from Asian markets. The Cape Colony functioned as a restocking station where ships could acquire fresh produce and make repairs. As shipping to the Indian Ocean increased, demand for foodstuffs rose, and in response the Dutch East India Company (DEIC) began to sponsor migration to the colony to support food production by giving land to European farmers, called Free Burghers, who wanted to settle in the Cape area. To support the early labor needs, the DEIC also imported Asian slaves from its eastern colonies.

As the number of European migrants to South Africa increased, the Dutch colony began to expand inland to what was viewed as open territory. However, colonial expansion led to land conflict between migrant farmers and African groups, including the San, Khoikhoi, and eventually Xhosa peoples. Dutch migrant farmers, called Trekboers, expanded into the interior and after defeating the San and Khoikhoi used them for slave labor to assist in producing goods. The Trekboers attempted to remain autonomous from the political structure in Cape Town, but they were important producers of items such as sheep, cattle, and butter, which they sold to the Cape Colony.

Britain gained control of the South African colony after Napoleon agreed to a cease-fire at the Treaty of Amiens in 1803. The change to

British rule fundamentally altered the economic and political landscape in South Africa. In 1820 a large number of British settlers migrated to eastern South Africa to farm. Many had little knowledge of farming, and they relied heavily on enslaving indigenous groups. The added number of migrants placed additional population pressure on indigenous groups already in the region, including Xhosa and Zulu peoples, and also caused conflict between farmers of Dutch ancestry, called Afrikaners, and the British.

In the mid-1830s Britain began a process of gradual emancipation of slaves, which led to major changes in South Africa. Khoikhoi and San slaves became victims of a system of debt servitude and sharecropping so that white society could continue to use them as a labor source. Racism was a major underlying concept of Afrikaner politics, which led to the later system of Apartheid and underscored the rationale behind labor relations with indigenous Africans in the latter half of the nineteenth century and the early twentieth century.

The discovery of gold and diamonds in the 1860s led to intensive urbanization in a short

➤ AFRIKANER MIGRATION AND AFTERMATH

Afrikaners viewed British policies as an encroachment on their way of life and left the Cape Colony area in 1836 on what is called the Great Trek. By the end of the decade approximately 6,000 Afrikaners, called Voortrekkers, along with 5,000 Khoikhoi servants traveled into the interior and by the 1850s formed their own system of government. Eventually Afrikaner autonomy came to an end with their defeat during a bloody conflict called the South African War (Boer War) in the early 1900s. However, Afrikaners were able to regain political control through a constitution that favored white voters and established color bars (a system of regulations limiting Africans' rights) in their favor. Apartheid developed from this political system, which attempted to segregate Africans from white society while manipulating them as a source of manual labor. During this encroachment on their rights, Africans attempted to form labor movements, but most of their strikes were brutally crushed by the powerful mining corporations.

—Adam Paddock

period of time with the founding of cities such as Johannesburg. In order to find labor to work the mines, the British and Afrikaner governments implemented a series of laws to force indigenous people to fulfill their labor needs. The introduction of a tax on indigenous Africans forced them into wage labor, and the pass law of 1895 restricted their movement within different regions of the country. This law prohibited Africans from changing jobs, which curbed labor competition. In order to further maintain low labor prices, the Witwatersrand Native Labor Association (WNLA) promoted the migration of industrial workers from around the world, particularly from China.

The Natives Land Act of 1913 required all Africans not working in industrial labor to remain in areas designated as reservations, labeled by Afrikaners as Homelands. These areas often contained the least fertile land, and an increasing population among Africans led to starvation and disease. Generally, men working the mines were allowed to relocate to segregated areas near cities, but their families were required to remain in the reservations. Conditions for African migrant laborers were deplorable barrack-style housing without running water, heat, or electricity. Homelands essentially functioned as reservoirs of African labor used to meet Afrikaner labor needs.

—Adam Paddock

Bibliography

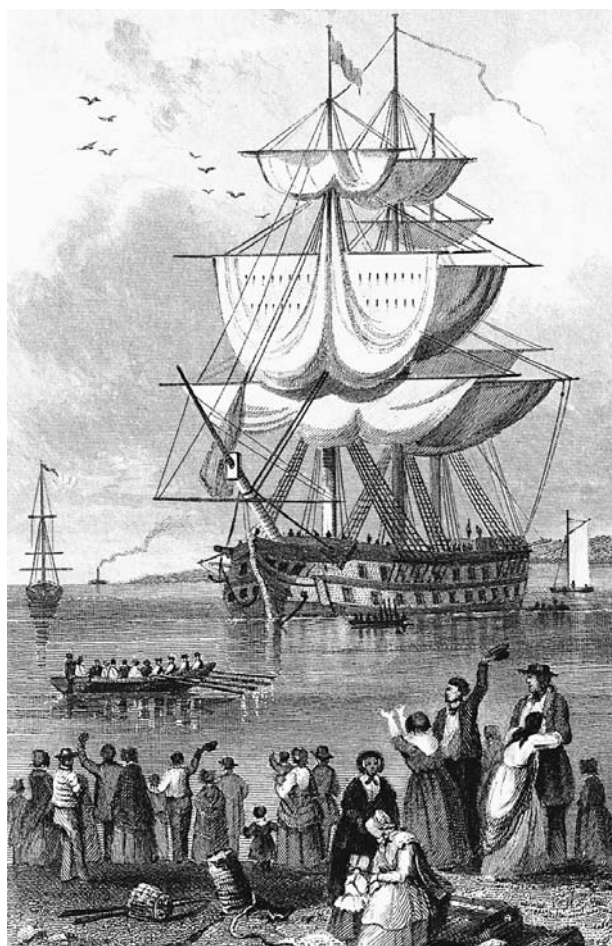
- Crush, J. S. *South Africa's Labour Empire: A History of Black Migrancy to the Gold Mines*. Boulder, CO: Westview, 1991.
- Lacey, Marian. *Working for Boroko: The Origins of a Coercive Labour System in South Africa*. Johannesburg: Raven, 1991.
- Moodie, T. Dunbar. *Going for Gold: Men, Mines, and Migration*. Berkeley: University of California Press, 1994.
- Williams, John A. *From the South African Past: Narratives, Documents, and Debates*. Boston and New York: Houghton Mifflin, 1997.

Transportation of Convicts to Australia

In January 1788, 18 years after Captain James Cook claimed the eastern coast of Australia for the British Crown under the name New South

Wales, 11 British ships sailed into Botany Bay carrying the continent's first white colonists, almost three-quarters of whom were convicts. Over the next 80 years, the British government would send around 160,000 convicts to Australia, coerced migrants sent from Britain for penal, economic, and imperial reasons. Vastly outnumbering free migrants until the gold rushes of the 1850s, they provided the labor upon which Australian economic growth was founded and paved the way for the influx of free migrants that started in the 1830s.

During the seventeenth and eighteenth centuries, transportation to its North American colonies was used as a punishment in Britain for a range of lesser criminal offenses. However,



Convicts arrive in Australia, about 1820. With an independent United States no longer available to accept its convicts, Britain laid claim to Australia, with penal settlements beginning in 1788. Over the next eighty years approximately 165,000 convicts were resettled in Australia. (Jupiterimages)

with the outbreak of the American Revolution in 1775 this system ended, leaving hundreds of criminals already sentenced to transportation to America crowding in inadequate jails. An alternative needed to be found, and eventually the decision was made to return to transportation. However, instead of selling convicts as bonded servants for the term of their sentences to employers in already-established colonies (as had been done in America), the British government decided that a penal colony would be founded. The site that was eventually selected in 1786 was New South Wales. While it would seem that the primary motive for the settlement of Australia was a penal one—it was to be a faraway dumping ground for British convicts—it has also been suggested that there may have been strategic, geopolitical, and commercial motives.

Around 82,000 convicts were eventually sent to New South Wales between 1788 and 1840, with numbers greatly increasing after the end of the Napoleonic Wars and peaking in the 1830s. Sixty-eight thousand convicts were also sent to the colony of Van Diemen's Land (now Tasmania), the first party of settlers having been sent there in 1803 to affirm British rights to the island when it was feared that a French occupation was imminent. Finally, after 1850, around 10,000 convicts were also sent to the colony of Western Australia, which had been founded in 1829 and was struggling with a labor shortage.

Convicts and ex-convicts largely made up the workforce in Australia during its first 50 years of European settlement. Most having been convicted of offenses against property in Britain and Ireland, they were usually young, reasonably healthy, and predominantly male. Only about one-sixth of those transported to the eastern colonies were female; the convicts sent to western Australia were all male. Bringing to Australia a range of skills, they were either employed by the government or assigned to work for private employers. While male convicts worked on public works or labored in rural areas, female convicts were usually employed in domestic service or other indoor labor. Male convicts who proved recalcitrant could receive punishments ranging from flogging to working in chain gangs to being sent to a penal settlement; the usual punishment for female convicts was confinement.

➤ HARDENED, PROFESSIONAL CRIMINALS OR OCCASIONAL, PETTY THIEVES?

All the convicts who were transported to Australia had been found guilty of breaking the law. However, historians are divided as to their degree of criminality. During the 1950s, 1960s, and 1970s, the consensus that emerged from a number of prominent studies (by Manning Clark, Alan Shaw, and Lloyd Robson, among others) was that Australia's convicts were mainly hardened criminals who were members of a criminal subculture; they were transported for relatively serious offenses and were often repeat offenders. In the late 1980s, however, a new collaborative study edited by Stephen Nicholas and titled *Convict Workers* argued that most convicts were ordinary members of the British and Irish working classes who had held regular employment prior to conviction; they were usually first-time offenders found guilty of petty theft. The study was greeted with a storm of debate, and while some historians have accepted the revisionism presented in *Convict Workers*—appreciating its shift in focus away from convicts as criminals to convicts as workers—others have questioned the study's methodology and novel interpretations of the convict data.

—Amy Lloyd

Good behavior could be rewarded by remittance of sentence. Convicts, moreover, had a range of legal and political rights that allowed them to actively participate in the colonies' affairs. Transportation to Australia was a very effective form of migration, as very few returned to Britain after serving their sentences. Those who stayed in Australia (called emancipists) gained the same legal rights as free citizens and often became valuable, and even prosperous, members of society; social relations between them and the "respectable" free migrants, however, were strained. While colonial employers were largely satisfied with the convict system, transportation faced increasing opposition in Britain during the 1820s and 1830s: it was increasingly criticized as an ineffective deterrent to crime and as a system of slavery that corrupted and demoralized not only the convicts and employers but also society in general. In 1838 a parliamentary committee

was appointed and ultimately recommended the abolition of transportation to New South Wales. This resulted in the suspension of transportation to that colony in 1840. Transportation was eventually abolished in Van Diemen's Land in 1853 and in western Australia in 1868.

—Amy Lloyd

Bibliography

- Clark, C. M. H. *A History of Australia*. Carlton, Victoria: Melbourne University Press, 1962–1987.
- Forster, Colin. "Convicts: Unwilling Migrants from Britain and France." In *Coerced and Free Migration: Global Perspectives*, edited by David Eltis, 259–291. Stanford, CA: Stanford University Press, 2002.
- Hughes, Robert. *The Fatal Shore: A History of the Transportation of Convicts to Australia*. London: Collins Harvill, 1987.
- Nicholas, Stephen, ed. *Convict Workers: Reinterpreting Australia's Past*. Cambridge: Cambridge University Press, 1988.
- Robson, L. L. *The Convict Settlers of Australia*. Carlton, Victoria: Melbourne University Press, 1965.
- Shaw, A. G. L. *Convicts and the Colonies: A Study of Penal Transportation from Great Britain and Ireland to Australia and Other Parts of the British Empire*. London: Faber and Faber, 1966.

Indigenous Australians in the Nineteenth Century

When the first British settlers arrived at Sydney Cove in Australia in 1788, approximately 300,000 Indigenous Australians were living in distinct communities throughout the continent. For more than 40,000 years their ancestors had lived in Australia, where as hunters and

food-gatherers they had established a complex and rich oral tradition with a reverence for the land and a spiritual belief in what they called Dreamtime. Their numbers, however, were reduced drastically during the nineteenth century primarily through newly introduced diseases (measles, whooping cough, and influenza) and through the pacification by force policy adopted by the new white settlers.

At first the small number of newcomers lived in and around the settlement of Sydney, but by the 1820s their expeditions pushed out across the Blue Mountains westward, northward into Queensland, and south to Melbourne and Victoria. More often than not they met violent resistance from the Indigenous Australians, who saw their lands being appropriated by the advancing foreigners. In 1828, for example, 28 settlers in Van Diemen's Land (Tasmania) were killed and their houses burned within a month's time. The governor declared martial law, and in 1830 a group of 3,000 armed men formed a barricade (the Black Line) across the island and physically pushed the inhabitants to the coast. This massive offensive prevented any further attacks upon the whites in the area, and eventually the indigenes agreed to move to a reservation on Flinders Island, just off the coast. Once there, they all succumbed to various diseases. The last Indigenous Tasmanian to survive—a woman named Truganini—died in 1876.

Elsewhere in Australia, governors used mounted police to conduct pacification expeditions that killed thousands of Noongar and Kamilaroi people. Firearms, of course, were superior to the spear, and the warriors had no fortifications from which to oppose the advancing white

THE LAST INDIGENOUS TASMANIAN—TRUGANINI

The daughter of a Tasmanian chief, Truganini (1819–1876) led a turbulent life divided between her native culture and the advancing white settlers. Members of her family were kidnapped and murdered. Despite that, she served as an interpreter and guide to George Robinson, the chief protector of aborigines, between 1830 and 1834. She moved frequently from one place to another and became involved in several attacks upon white

settlers near Melbourne. She was the last Indigenous Tasmanian left when she died on May 8, 1876. Members of the Royal Society of Tasmania exhumed her bones two days later and put them on display in their museum. In 1976 they were finally returned and given a proper burial. She has the distinction of being the only Indigenous Tasmanian to appear on an Australian stamp.

—Robert Craig

immigrants. They resorted to guerrilla warfare tactics, avoided direct encounters, and often lay in wait to attack. The settlers retaliated with brutal repressions. In 1838, for example, a group of cattlemen set out in pursuit of a group of Indigenous Australians responsible for killing some livestock. The vigilantes happened upon a peaceful group of Kwiambal people who were generally known to be helpful to the local whites. They attacked and butchered the entire party of 28, consisting mostly of women and children, in what became known as the infamous Myall Creek Massacre. Seven of the vigilantes were brought to trial, found guilty, and hanged. It was the first time in Australia that whites were executed for the murder of indigenous persons.

Despite all of this violence, there were some sincere efforts by white settlers to aid the Indigenous Australians, but most seem to have failed. In 1814 Governor Macquarie's attempt to open a school for the children was unsuccessful, and the efforts by the Wesleyans, Anglicans, and Catholics failed because of their misunderstanding of the spiritual nature and culture of the indigenes. In the late 1830s the government created the post of "Protector of Aborigines," which gave the chief protector wide powers to oversee the well-being of the Indigenous Australians. Missions were established to educate the children, convert them to Christianity, and teach them to live like Europeans. Authorities allowed children to be forcibly removed from their natural families for education. It is estimated that between 1869 and 1969 over 100,000 children—referred to as the Stolen Generation—were thus removed and placed in separate communities. Some argued that it was for the protection of the children, while others believed that the black race could be eradicated by encouraging its assimilation and marriage within the white community. Abuses of power of mission authorities were reportedly widespread, and many believed that mission children were to be educated as servants or to work as unpaid slaves.

By the end of the nineteenth century the indigenous population had dropped to approximately 90,000, their lands had been appropriated by the Europeans, and most of the Indigenous Australians lived in areas generally unsuitable for habitation. By then, it appeared to many of

the white settlers that the indigenous population was doomed to eventual destruction.

—Robert Craig

Bibliography

- Attwood, Bain. *Telling the Truth about Aboriginal History*. Crows Nest, Australia: Allen and Unwin, 2005.
- Connor, John. *The Australian Frontier Wars, 1788–1838*. Sydney: University of New South Wales Press, 2002.
- Lake, Marilyn. "The White Man under Siege: New Histories of Race in the Nineteenth Century and the Advent of White Australia." *History Workshop Journal* 58 (2004): 41–62.
- Short, Damien. "Assimilation, and the Indigenous Peoples of Australia." *International Political Science Review* 24(4) (October 2003): 491–513.

Maori Migration in New Zealand

The internal migrations and resettlement of the Maori in New Zealand were initiated and accelerated by Western discovery and subsequent colonization. Dutchman Abel Tasman in 1692 and British captain James Cook in 1769 explored parts of the coastline. Cook established bartering relations with the Maori, or the *tangata maori* (local people), describing them as intelligent and adaptable and recommending British settlement. Originally the Maori had migrated from eastern Polynesia, perhaps the island of Raitea, to New Zealand about 1125 CE. A larger migration had arrived around 1350 CE in a fleet of canoes—*Tainui*, *Te Arawa*, *Aotea*, *Tokomaru*, *Takitimu*, *Kurabau*, and *Matatua*—and each canoe name became ancestral to a Maori tribe. The Maori settled predominantly in the North Island around the Bay Islands and along the coasts with a sparser population located on the South Island. The arrival of additional *pakeha* (European white settlers) from 1802 to 1840 to establish sealing and whaling stations along the coast on New Zealand's North Island caused forced internal migrations of Maori. Europeans built a major settlement at Kororareka (now Russell), where they processed sealskins and whale oil and repaired ships.

Initially the Maori supplied the *pakeha* with pigs, potatoes, fruit, flax, and timber around the Bay of Islands in exchange for muskets, fish



Maori chiefs recognize British sovereignty by signing the Treaty of Waitangi on May 21, 1840. Painting by A. D. McCormick. (Mary Evans Picture Library/The Image Works)

hooks, and iron implements. Muskets became an important factor when the northern tribes of Maori, especially the Ngapuhi, led by the warrior Hongi Hika from the north Auckland region, launched a series of intertribal wars known as the Musket Wars during the 1810s to 1840. Seeking *utu* (revenge) against their enemies for seizures of land and scarce resources, especially the Ngati Whatua, the northern tribes led by the Ngapuhi warred against the southern and central Maori tribes of the North Island. The conflicts caused massive migrations, as the Ngapuhi's enemies fled southward when their traditional hand-to-hand club weapons—the *patu* and the *mere*—proved no match against muskets.

Hongi Hika attacked the Ngati Maru tribe in the Thames area in 1821 and also the Ngati Paoa around Tamaki (Auckland). He attacked the Waikato tribe, headed by Te Wherowhero, in 1822 and the Arawa tribe in Rotorua in 1823; in 1825 he defeated his rivals the Ngati Whatua in the battle at Te Ika-a-ranga-nui. However, he was wounded in 1827 in an interclan siege and died in 1828. The resulting internal Maori migrations to seize new lands and resources or to evade enemies changed the tribal landscape of New Zealand, with many tribes moving into the South Island. Maori musket warfare spread from the North Island to the northern portion of the South Island when the Ngati Toa confederation attacked the Ngai Tahu, seeking additional

land and sources of greenstone (nephrite jade). Desperate Maori tribes without muskets soon obtained them by bartering embalmed human heads for them.

The Musket Wars produced an outcry from the white settlers calling for Britain's protection. Amid rumors that the French were about to colonize New Zealand, in 1833 Britain stepped in and appointed James Busby as official British resident. Busby took his post in Kororareka (which became the country's first capital) with the goal of mediating the Musket Wars.

By 1840 the Maori population had been reduced from 100,000 to 60,000 as a result of the intertribal warfare of the Musket Wars. Ten thousand had been killed in warfare, and an additional 30,000 were killed by enslavement and the introduction of foreign diseases. Internal migrations and wandering *toa* (bands of warriors) were created as alliances changed or as victors pushed forward, which in turn caused some Maori to father children outside their own tribes. This strengthened the genealogical relationships between many previously separate Maori tribes. Smaller *iwi* (tribes) such as the Muaupoko and the Rangitane were pushed out of their traditional homelands by rival coalitions. The wars allowed victorious chiefs to occupy new lands. Chief Te Rauparaha, leader of the Ngati Toa, occupied Kapiti near Wellington. Chief Ati Awa ventured to the Chatham Islands in 1835 and subdued the Moriori. Thus, the Musket Wars had introduced new and complex Maori population groupings. Moreover, many Maori had turned to Christianity amid the turmoil. Intertribal warfare had also created a longing for peace among European white settlers and the Maori, who turned to Britain to end conflicts.

The push for Britain's systematic colonization, settlement, and annexation of New Zealand was spearheaded in 1837 by the New Zealand Association, based in England and organized by Edward Gibbon Wakefield. It developed into the New Zealand Company in 1839 and encouraged British settlers to occupy the Cook Strait region, resulting in the founding of Wellington, Wanganui, and New Plymouth on the North Island and Nelson, Otago, and Canterbury on the South Island. Initially the earliest New Zealand settlements were de facto under British authority

extending from Australia's New South Wales, but British Resident James Busby favored outright British annexation and the establishment of a separate government over New Zealand.

In 1839 London's Colonial Office sent naval officer Captain William Hobson to New Zealand to negotiate sovereignty issues with the Maori chiefs. As a result of his diplomacy, British sovereignty was extended over New Zealand through the signing of the Treaty of Waitangi on February 6, 1840. Tamati Waaka Nene, the Hokianga chief, supported the treaty and convinced additional chiefs to agree by stressing the need of the Maori to live in harmony with European settlers and ensure peace. In December 1840 New Zealand became a separate British Crown colony with Hobson as governor. British leadership encouraged the settlement or seizure, through purchase or confiscation, of the most fertile Maori lands. The New Zealand Company bought 400,000 acres (161,875 hectares) from the Ngai Tahu for £2,400 in 1847. But numerous Maori continued to be forced from their lands as sheep raising became profitable, with 2 million sheep introduced by 1860.

Misunderstandings between Maori and Europeans over land titles and sovereignty issues generated by the Treaty of Waitangi gave way to open conflicts known by the British as the Maori Wars or the Land Wars of the 1840s–1860s. The treaty had been written in English and Maori, and several words—*Kawanatanga* (governorship), *Rangatiratanga* (Chieftainship), and *Taonga* (properties/valuables)—caused disputes. Eventually victorious, Britain retaliated against its opponents by confiscating some of their tribal lands such as those of the Ngai Tahu (where gold would later be discovered in the Otago-Dunedin area in 1861) on the South Island and large sections of the Waikato and Taranaki. Land alienation either through sale or confiscation confined the Maori to remote areas of New Zealand in the central North Island along its east coast and far north. In 1862 the Native Land Act legalized further sales of land between settlers and Maori. New waves of immigrants, dominated by the Scots, arrived and settled in Dunedin in the late 1850s; Cornish miners and Chinese to work in the gold mines joined them in the 1860s. By the end of the nineteenth

THE TREATY OF WAITANGI

The Treaty of Waitangi was called New Zealand's Magna Carta by the British because it protected Maori land interests in exchange for their recognition of British sovereignty. The first clause declared that Maori chiefs had signed over their full sovereignty or absolute power to Queen Victoria. The second clause guaranteed existing powers of chieftainship and protection for all natural resources held by the Maori; it also stipulated that the Maori were to offer land for sale to the Crown before selling it to private individuals (to prevent abuse of Maori rights). The third clause guaranteed Maori the rights and privileges of British subjects. A fourth clause guaranteed religious freedom. So important was this treaty that the date of its signing, February 6, 1840, now known as Waitangi Day, is celebrated as New Zealand's national birthday, although, as might be expected, it is often the focus of protest by Maori activists who believe that the Maori were duped into surrendering sovereignty.

—Barbara Bennett Peterson

century, settlers from Britain made up 96 percent of the white population, with the Scots forming 21 percent of that figure. Scandinavians, Germans, Croatians, and others made up the remaining 4 percent. By 1870 the Maori had lost most of their valuable lands (22 million hectares out of 26 million were owned by *pakeha*). But Maori passive resistance continued through an unofficial parliament (1892–1907), a council of influential Maori chiefs, and later by political activism of the Young Maori Party to lobby for socioeconomic improvements.

—Barbara Bennett Peterson

Bibliography

- Banner, Stuart. *Possessing the Pacific*. Cambridge: Harvard University Press, 2007.
- Brooking, Tom. *The History of New Zealand*. Westport, CT: Greenwood, 2004.

Native American Migrations in the United States

Native American migrations prior to European contact, as well as voluntary and involuntary

migrations between 1492 and 1750, differed significantly from the forced migrations of Native Americans between 1750 and 1914, when the general pattern was one of conquest and displacement.

During the colonial era, European powers interacted with each tribe as independent nations, and their transactions were based on the prevailing business practices of the negotiating country. France, Spain, the Netherlands, and England all traded manufactured items for goods that the Native Americans provided such as fur pelts, fish, and wild game as well as the rights for safe passage and parcels of land. By the eighteenth century, Britain had established legal precedents to deal with the tribes. These policies recognized the inherent rights of tribal nations to move about unmolested within their tribal territories and to carry out the practices of their governments and cultural traditions. In theory, taking Indian lands could be justified only through honest trade or by a justifiable war.

American Indians believed that land should be shared by those who needed the resources that the land yielded. For example, both the Chickasaw women in eastern Mississippi and the Wampanoag women in Rhode Island and Massachusetts were responsible for farming, while the men hunted nearby or as far away as was necessary, the only restrictions on their territory being the territorial boundaries of their enemies. People of European descent, in contrast, believed in individual ownership as well as government control over the land. These differing views caused continual conflict between Americans and indigenous groups. Conflict escalated in the aftermath of the American Revolution, when securing land from Native Americans became the focus of U.S. Indian policy in the form of negotiating treaties and adopting legislation to force involuntary migrations.

In 1778 the United States began to make treaties with tribes in which the tribes surrendered large tracts of land or rights of way. By 1800 many tribes had left their traditional territories and moved westward in order to avoid the expanding American settlements. During this period the Cheyenne, possibly attracted by buffalo, began migrating westward from the Minnesota River region to the Black Hills of South

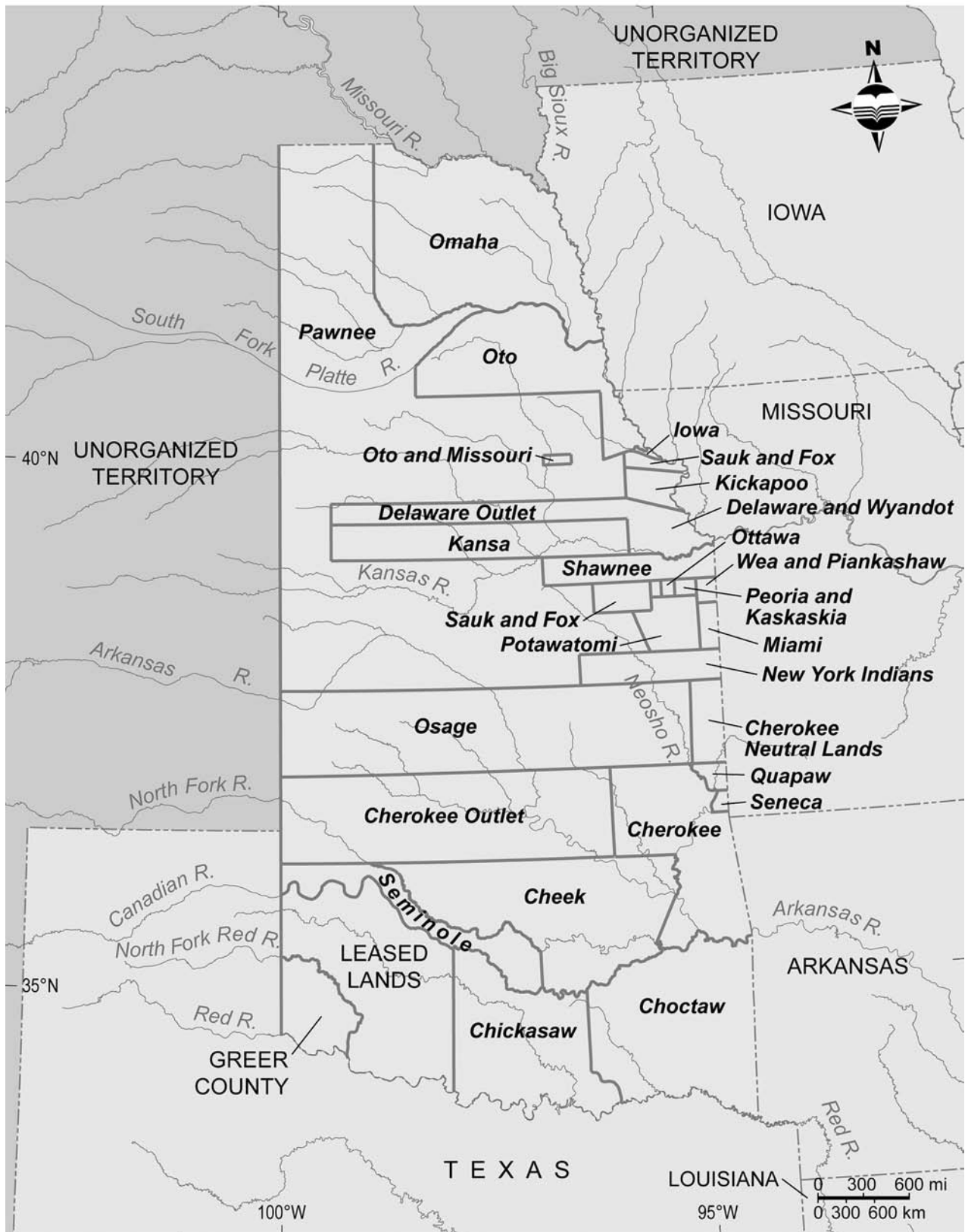
Dakota, where they remained for a few years. According to tradition, after a spiritual encounter in which they received the Sacred Arrows and instructions on how to live as holy people, the Cheyenne migrated farther west into the Yellowstone River region. After a time the tribe split into two bands, with the Southern Cheyenne migrating south toward Colorado in search of wild horses and eventually drawing close to the Arapaho.

In 1800 smallpox spread along the northern Missouri River, killing many among the tribes in the region, including the Omaha. Those Omaha who survived decided to migrate westward with the intention of fighting to the death their traditional enemies, the Cheyenne, Oto, and the Pawnee. After a time the Omaha gathered strength and decided to return to their village at Omaha Creek in northeastern Nebraska. Soon the Omaha were forced to migrate farther into northeastern Nebraska to avoid the attacks from the nearby Dakota Sioux, the Ponca, and the Oto and Pawnee from the south.

Between 1814 and 1824, General Andrew Jackson negotiated 9 out of 11 treaties with the southeastern tribes. The land surrendered with these treaties gave the United States over 75 percent of Alabama and Florida as well as parts of Georgia, Tennessee, Mississippi, Kentucky, and North Carolina, but only a small number of southeastern Indians willingly migrated to western regions at this time. In the 1820s Georgia began to pass laws and implement other policies that restricted the activities of Cherokee people. Preachers were not allowed to minister in Cherokee lands without a license; Native Americans could not advocate resistance to their impending removal; and the Georgia militia destroyed their peach orchards and shut down the *Cherokee Phoenix* newspaper as well as other businesses.

In 1828 Georgia legislators found an ally in Andrew Jackson, the newly elected president. In 1830 Jackson signed the Indian Removal Act of 1830 and authorized the military to remove almost 100,000 southeastern Native Americans from their homes in Georgia, Alabama, and Florida in a forced migration to Indian Territory. Jackson's decision established a policy that gave the federal government the instrument for

INDIAN TERRITORY, 1854



➤ NATIVE AMERICANS AS SLAVE OWNERS

During the Indian Removal period of the 1830s, the Chickasaws migrated from Mississippi to Indian Territory with 1,100 slaves, the Seminole left Florida with 500 free blacks, and the Creek and Cherokee tribes both brought large numbers of slaves with them from Alabama and Georgia. By 1861 these tribes faced both internal and external conflict as the American Civil War moved into Indian Territory. Remaining neutral was impossible. Tribal leaders argued over whether they should seek the support of the Confederacy or migrate northward into Kansas.

The conflict pitted tribal leader against tribal leader and tribe against tribe. On the northern boundary of Indian Territory, Seminole chief Billy Bowlegs fought against Stand Watie, the disputed chief of the Cherokee Nation, and his Confederate supporters. Opothleyahola, an honored leader of the Muscogee Nation, leading over 5,000 Creeks, migrated north into Kansas, where his people were later joined by 3,000 more Seminole, Cherokee,

Delaware, Euchee, Choctaw, Chickasaw, and Caddo tribal refugees.

After the war James Harlan, secretary of the interior, was sent to Indian Territory with a verdict of treason against all the tribes that had supported the Confederacy, with instructions to negotiate a new treaty. The Treaty of 1866 rescinded previous treaties and forced the Cherokee, Creek, Seminole, Chickasaw, and Choctaw tribes to give land allotments and tribal citizenship to their emancipated slaves.

In 1883 an investigation by the Department of the Interior over freedman citizenship disputes within the Cherokee Nation resulted in separate citizenship rolls, with freedman citizens sharing in Indian land allotments and cash annuities. By 1915 the controversy had lapsed until 2002, when Marilyn Vann organized the Descendants of Freedmen to renew the fight for reinstatement as tribal citizens.

—Claudette Robertson

removal and relocation of every tribe within the United States. The involuntary migrations had started with removing the Choctaw from Mississippi in 1828 and continued with the Chickasaw, Creek, Cherokee, and Seminole through the 1840s.

Although the Potawatomis were originally from Wisconsin, Illinois, and Indiana, they also were forced to migrate to Kansas in the 1840s, as were the Shawnee of Ohio. By the time the last band of Seminoles was resettled in Indian Territory in 1856, the United States had entered into the first of a series of treaty negotiations for more land. All of the western Indian wars were settled by treaty negotiations that forced the Plains, Southwest, and Pacific Northwest tribes to migrate and settle on reservations located in various regions of the nation.

Early tribal migrations in California differed somewhat from those that occurred in other regions of the country. The California tribes were hunters and gatherers whose rare voluntary migrations were usually localized. Except for those hunters who crossed over into Oregon, Nevada, and Arizona on short hunting expeditions, the

California tribes generally stayed within their traditional territories. However, by 1848 when gold was discovered on the American River, the California tribes faced the same fate as other tribes. By 1864 most of the California tribes had been forced to migrate to reservations within the state. One of the few exceptions included many of the California Modocs, who, led by Captain Jack, had resisted forced removal and had been arrested and removed first to Kansas, then to Florida, and finally to Indian Territory.

During the settling of the west and after the American Civil War, the United States forced many tribes to migrate. The Nebraska Pawnee, Omaha, and Oto were all relocated to Indian Territory. The Arizona Apache, Cayuga, Seneca from the northeast, the Comanche from Texas, Cheyenne from Colorado, Delaware from the east coast, Arapaho from Idaho, and Wyandotte from Kansas were all forced to migrate to Indian Territory. The Cussata migrated to Texas, and the Navajo, Pima, Zuni, Pueblo, and New Mexico Apaches were all forced onto restricted reservations in what is now the four corners of Colorado, Utah, Arizona, and New Mexico. The

Chippewa and other Great Lakes tribes were forced onto reservations, as were all of the New England, eastern seaboard, and Pacific Northwest tribes. The Crow, Blackfeet, Sioux, and the remaining Plains tribes were escorted by the U.S. Cavalry during the forced migrations to the many reservations that had been set aside for this purpose.

These forced migrations deprived the tribes of their land, destroyed their ways of life, and led to high mortality rates. Upwards of 50 percent of the Creek and Cherokee populations as well as 15 percent of the Choctaw population died during and immediately following the relocation period. Later, around 50 percent of the Seminole people died during and after their forced migration to Indian Territory. As it was with the southeastern tribes during removal, many of the other tribes also suffered significant population losses during and after their forced migrations due to starvation, disease, and extreme weather conditions during those months of travel.

—*Claudette Robertson*

Bibliography

- Clark, Blue. *Indian Tribes of Oklahoma: A Guide*. Norman: University of Oklahoma Press, 2009.
- Deloria, Vine, Jr., and Clifford M. Lytle. *American Indians, American Justice*. Austin: University of Texas Press, 1983.
- Hill, Edward E., comp. *Guide to Records in the National Archives of the United States Relating to American Indians*. National Archives and Records Services. Washington, DC: General Services Administration, 1981.
- Thornton, Russell. *American Indian Holocaust and Survival. A Population History since 1492*. Norman: University of Oklahoma Press, 1987.
- Waldman, Carl. *Atlas of the North American Indian*. New York: Facts on File, 1985.

Native Peoples of Canada

In 1750, Canada was one of four French colonies on the St. Lawrence River in northeastern North America, a fur trade outpost in which native peoples held great sway and that took its name from an aboriginal word for “settlement” or “land.” In this and neighboring colonies, native peoples exerted significant control over European traders and settlers in the first centuries

of prolonged contact through their greater numbers, superior knowledge of land and its resources, and sophisticated political strategies that played the French, English, and other Europeans against each other. As the newcomers’ emphasis shifted from trade to permanent settlement, however, pressures to deal with the Indian land question arose, resulting in the Royal Proclamation of 1763. This established, in theory at least, an orderly process by which

➤ AN INDIGENOUS PLEA TO THE PREMIER OF CANADA

In 1910, chiefs of the Secwepemc, Okanogan, and Nlaka’pmux peoples of British Columbia sent a petition to Sir Wilfrid Laurier, premier of the Dominion of Canada, documenting experiences that had been shared by many of Canada’s native peoples:

“Gradually, we are becoming regarded as trespassers over a large portion of this, our country. Our old people say, How are we to live? If the government takes our food from us they must give us other food in its place. Conditions of living have been thrust on us which we did not expect, and which we consider in great measure, unnecessary and injurious. We have no grudge against the white race as a whole, nor against the settlers, but we want to have an equal chance with them of making a living.”

It would be several more decades before native people, through sweeping legal changes, shifting ideas about race and the nation, and their own activism, would begin to see a glimmer of the “equal chance” in the chiefs’ 1910 petition to the premier. In 1914, however, the everyday reality for Canada’s aboriginal people like their future looked bleak, even though they and their lands had played central roles in the development of the nation.

—*Coll Thrush*

Source

Memorial to Sir Wilfrid Laurier, Premier of the Dominion of Canada from the Chiefs of the Shuswap, Okanagan and Couteau Tribes of British Columbia, presented at Kamloops, BC, August 25, 1910.

aboriginal title could be extinguished through treaties and purchases by the Crown.

The 1763 “proclamation line,” beyond which resettlement would be tightly controlled, was never intended to be static. In fact, it was adjusted only five years later by the Treaty of Fort Stanwix, reflecting growing numbers of English settlers after the end of the Seven Years’ War. The end of wars between colonial powers in the northern part of the continent—including the American Revolution and the War of 1812—also rendered useless many of the diplomatic strategies that had helped maintain native control over lands and resources. Meanwhile, epidemics that had begun with first contact intensified during the late eighteenth and early nineteenth centuries, and the resulting demographic losses in turn freed up the lands of what was now known as British North America to even larger numbers of newcomers.

Out of this chaos new native identities were formed, most notably that of the Métis. The descendants of French and British men and Ojibwe, Cree, Saukteaux, and other native women, the Métis created a distinct culture with its own language, Michif, and established communities throughout large swaths of central southern Canada and the northern plains of the United States. The status of the Métis remains one of the most unique (and most complex) features of Canada’s native legal and cultural landscape.

The confederation of British North America’s colonies into the Dominion of Canada between 1867 and 1873 coincided with the beginning of what became known as the Numbered Treaties, negotiated under the terms of the Proclamation of 1763. The 11 treaties, the last of which was signed in 1930, continued the appropriation of native lands within a new national context. (In British Columbia, however, most of the land was never ceded by treaty, although native peoples were placed on hundreds of tiny reserves.)

The process of aboriginal dispossession from the land in the form of treaties and the segregation of native people onto reserves were in the nineteenth century accompanied—and in many ways contradicted—by a series of policies aimed at the assimilation of native peoples into mainstream Canadian society. The most

important of these was the Indian Act of 1876, which established (and, many would argue, curtailed) the rights of legally defined Indians in Canada; for example, native women who married nonnative men lost their Indian status, as did their children. Meanwhile, other acts targeted specific cultural practices, such as the notorious 1885 law against Potlatch (a ceremony among northwestern Indians involving feasting, dancing, and the redistribution of wealth through gift giving). New institutions such as missionary-run residential schools participated in acts of repression and reeducation that are now considered by many as forms of cultural genocide. Such policies of “civilization” did not go unchallenged. Throughout Canada, aboriginal people resisted the political, economic, and cultural effects of colonialism by means both subtle and overt. Of the latter, well-known examples include a “massacre” conducted by Tsilhqot’in warriors in British Columbia in 1864 and the “rebellions” of the Métis on the prairies in 1869 and 1885.

Many Canadians have prided themselves on their nation’s “kinder and gentler colonialism” compared to the violence that dominated native-newcomer relations in the United States. However, by the early twentieth century in both nations, resettlement by nonaboriginal people had often outpaced government attempts to control it, multiple epidemics had vastly reduced native populations, and official policies of dislocation, assimilation, and disenfranchisement had eroded most aboriginal communities’ cultural traditions and political and economic autonomy. Meanwhile, interpersonal violence, particularly against native women, remained a persistent feature of Canada’s cultural landscape.

—Coll Thrush

Bibliography

- Francis, Daniel. *The Imaginary Indian: The Image of the Indian in Canadian Culture*. Vancouver: Arsenal Pulp, 1992.
- Miller, J. R. *Skyscrapers Hide the Heavens: A History of Indian-White Relations in Canada*. Toronto: University of Toronto Press, 2000.
- Ray, Arthur J. *I Have Lived Here since the World Began: An Illustrated History of Canada’s Native People*. Toronto: Key Porter Books, 1996.

Indigenous Peoples and European Expansion in South America

Despite the expansion of Spanish and Portuguese political power throughout much of South America in the sixteenth and seventeenth centuries, groups of native peoples remained in areas outside the sphere of effective state control. During the eighteenth and nineteenth centuries, Spain and Portugal made fresh attempts to extend their political control and economic activities at the expense of Native American communities. These efforts often resulted in violent confrontations between Europeans and Native Americans and between the European powers themselves.

European moves against Native Americans during the eighteenth century at first focused on communities with preexisting ties to European culture. Roman Catholic religious orders, especially the Jesuits, had long-established mission communities around the fringes of European colonization, most notably among the Guaraní people of Paraguay. Reports of Jesuit exploitation of the natives, disputes over the border between Brazil and the Spanish colonies, and confrontations in Europe provided the Portuguese and Spanish governments with an excuse to expel the Jesuits from the colonies and seize control of the Native American communities. In this way, the European governments forced these relatively autonomous native communities to integrate into the colonial structure. Restrictions on access to labor disappeared, and government agents encouraged or used force to make the natives adopt European customs and intermarry with whites. By the time of South American independence in the 1820s, most of these communities had ceased to exist as separate entities. However, Native American communities of the Amazon basin, both in Brazil and Spanish America, continued to exist outside the sphere of state control. While successive Brazilian governments all proposed plans for the development of the interior, the vast majority of the nonnative population remained in the coastal region. The small number of Europeans and Euro-Brazilians who did migrate to the

THE CONQUEST OF THE DESERT

For most of the nineteenth century, the Argentine government sought to limit the territory of the Araucanians. Alfred Ebélot, a French engineer hired to oversee fortifications, wrote this description of the impact of the Argentine campaign of the 1870s:

“The savages’ way of fighting is not the same as in earlier times. They no longer charge with deafening shouts. Their combat is silent; only the voice of the leader is heard and the trumpet that sounds the orders. The few deserters who have taken refuge with them, plus the reinforcements who have had experience with white men who have fought in open country, have no doubt helped teach the Indians the strategy of warfare. But it is misery, above all, that has so rapidly perfected their military education. To stop them from plundering is to cut off their livelihood. Poor devils! They do what they can.”

—Gregory Hammond

Source

From Gabriela Nouzeilles and Graciela Montaldo, *The Argentine Reader: History, Culture, Politics* (Durham, NC: Duke University Press, 2002), 132.

interior went as prospectors, rubber tappers, or slave raiders. Afro-Brazilian slaves also fled into the interior, sometimes working in cooperation with Native Americans in order to avoid recapture. These communities, some of which grew to considerable size, posed a persistent threat to the government that ended only with the abolition of slavery in Brazil in 1888.

Another area of conflict was the southern cone of South America, where on both sides of the Andes various nomadic Native American communities adopted European weapons and horses to great effect. The Mapuche of Chile and the Araucanians and Tehuelche of Patagonia in particular were powerful adversaries of the Spanish, although trade and even intermarriage also took place between them. These natives established a resilient, though ill-defined, boundary between themselves and the Spanish.

SOUTH AMERICA, 1810–1914



In Chile, the Bío-Bío River south of Santiago marked the border. In Argentina the more open grasslands south of Buenos Aires witnessed a standoff between the two cultures as first Spanish and later Argentinean authorities sought to establish fortifications and permanent ranching settlements in the region, only to lose control during times of political crisis.

Conflicts between the European cultures and the Native Americans continued well into the independence period, with raids becoming increasingly frequent and violent. In 1876 the Araucanians came within 60 miles (97 kilometers) of Buenos Aires, seizing some 300,000 head of cattle and 500 prisoners. This prompted the Argentines, led by General Julio Roca, to launch the so-called Conquest of the Wilderness, a campaign similar to the Plains Indians Wars of the United States. Under Roca, the Argentinean army swept southward, driving the Araucanians and Tehuelche before them. The victorious Argentines relocated the few survivors onto reservations, and Roca himself went on to win the presidency as a reward for his success.

A similar campaign ended the independence of the Mapuche in southern Chile. Toward the end of the War of the Pacific (1879–1884), which extended Chile's northern border at the expense of Peru and Bolivia, the Mapuche rebelled against Chilean rule. This prompted the Chileans to make the final push against the Mapuche, establishing fortifications south of the Bío-Bío River and directing veteran military units against the Native Americans between 1881 and

1883. As in Argentina, the Chileans wiped out most of the Native Americans and placed the remainder onto reservations.

In both the southern cone and the Amazon basin, immigration played an important role in the process of European expansion. Following the maxim of Argentine statesman Juan Batista Alberdi that “to govern is to populate,” South American elites encouraged European immigration into these regions to spur economic growth and culturally whiten the population. Governments across South America established agencies in Europe to encourage migration to underpopulated areas. In Argentina and Chile, these newcomers provided the long-term settlement necessary to establish the permanent presence of European culture. Brazil, however, while successful in attracting Europeans, could do little to induce these new citizens to settle beyond the established settled areas. In 1914, therefore, the Amazon basin was still a wilderness zone in the eyes of the government, which established the Indian Protection Service in 1909 in order to regulate contact between Native Americans and whites.

—Gregory Hammond

Bibliography

- Bethell, Leslie, ed. *Chile since Independence*. Cambridge: Cambridge University Press, 1993.
- Burns, E. Bradford. *A History of Brazil*. New York: Columbia University Press, 1980.
- Rock, David. *Argentina 1516–1987: From Spanish Colonization to Alfonsín*. Berkeley: University of California Press, 1987.

■ Introduction: Voluntary Migration

Between 1750 and 1914, unprecedented numbers of people decided to migrate. In some cases the move was permanent; in others it lasted for only a single growing season, the months it took to dig a canal or lay a railroad line, or a few years. For some, migration involved a short journey from a rural village to a nearby industrial town; for others, it meant a long ocean voyage from England to Australia or New Zealand. The migrants had many motives and

reached their destinations in many different ways. Dissimilar in so many ways, in aggregate the experiences of these voluntary migrants reshaped cultures, permanently altered the world's ethnic and racial complexion, contributed mightily to economic growth, and changed thinking about the meaning of nationhood. Their choices and experiences are a key part of the world's history between the eighteenth century and the early twentieth century.

There were many reasons why people chose to migrate. Religion was the main reason for many Polish and Russian Jews, who migrated to western Europe and the Americas to escape the pogroms of tsarist Russia in the 1880s and 1890s. Religion also inspired the Mormons, who found a home in Utah after fleeing from persecution in Ohio, Missouri, and Illinois. Political factors were decisive for American Loyalists, who moved to Canada during the American Revolution; the aristocratic emigrés, who fled France to escape the French Revolution; and the Forty-Eighters, who after the failures of the revolutions of 1848 left Germany, Bohemia, and Hungary for the United States, Canada, and elsewhere. Others chose to migrate in response to specific localized disasters such as the failure of the potato crop in Ireland and other parts of Europe in the late 1840s. For the most part, however, the decision to migrate was a response to long-term and worldwide economic and demographic trends. Most of the emigrants from Europe and Asia were peasants or farm laborers whose economic situation deteriorated in the nineteenth century as a result of population increases, land shortages, and rising rents. In Europe, enclosure of common lands and the gradual introduction of mechanized equipment further darkened small farmers' and farm laborers' prospects.

Emigration provided an alternative. Many Asians and Europeans left the countryside for their own countries' cities, which had employment opportunities in factories, construction projects, domestic service, and a variety of jobs that required no particular training or skill. Others migrated longer distances. Two million, mainly from China and India, emigrated as indentured servants, individuals whose passage was paid for in return for two to seven years of work as laborers for land and mine owners in the West Indies, the Pacific Islands, and South America. Since the work was harsh, it was an option mainly for the poorest and most desperate. With the cost of travel decreasing, especially after the construction of railroads and the introduction of oceangoing steamships, overseas migration came within the reach of 30 million to 40 million Indians, who provided

labor in much of the British Empire, and 10 million to 15 million Chinese, who continued to migrate to Southeast Asia and now added the United States, Canada, Peru, and South Africa as destinations. The greatest source of emigration was Europe. Fifty million to 60 million Europeans left as migrants between 1840 and 1914, with approximately 30 million going to the United States and smaller numbers to Canada, South America, Australia, New Zealand, South Africa, and Siberia. By 1914 the percentage of the earth's landmass in which Europeans were a majority reached a remarkable 40 percent. This was just one of the ways in which migration changed the world in the years between 1750 and 1914.

—James H. Overfield

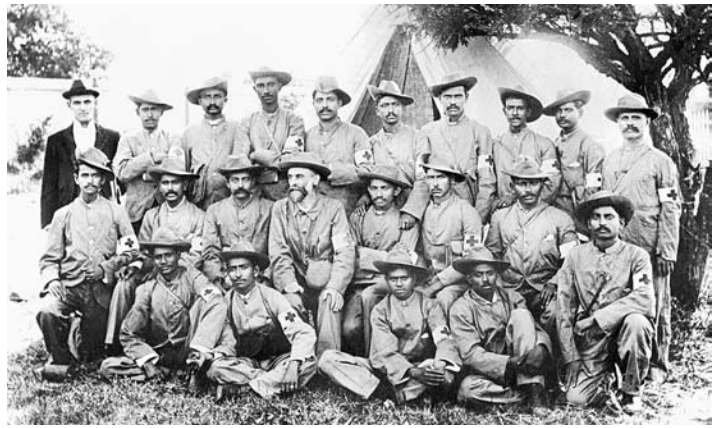
Indian Emigration to Africa, Trinidad, Guyana, and the Pacific

Indians have long been on the move. Well before the eighteenth century, people from the Indian subcontinent traded throughout the Indian Ocean region with societies in the southeastern Asian islands, the Arabian Peninsula, and the eastern coast of Africa. In addition to being traders and merchants, Indians for many centuries traveled to areas of eastern Asia as pilgrims and missionaries spreading Buddhism and have ruled in various parts of Southeast Asia, most significantly in Indonesia. While Indians had been on the move for more than 2,000 years, the settlement of Indian populations overseas began to occur only during the nineteenth century. Due to a confluence of historical events—the expansion of Omani power in eastern Africa, the abolition of slavery in the British Empire, and growing European competition for resources—Indians ceased from being itinerant traders, hopscotching around the coasts and islands of the Indian Ocean; they became part of the economic revival in the region complete with settled communities, first on Zanzibar island and eventually throughout coastal and then inland East Africa.

Current scholarship better reflects the fact that Indian overseas movements predated nineteenth-century British colonialism,

in contrast to older research that relegated Indian overseas migration to British initiatives alone. Previous scholarship described a triangulated relationship between the British at the apex and the Africans and Indians at the sides, a view that falsely identifies the British as agents of historical change with Africans and Indians as passive receptors or pawns. British colonial rule dramatically changed the degree and nature of Indian movements but did not always serve as progenitor. When the sultan of Oman moved his capital down eastern Africa's coastline to the island of Zanzibar in 1840, he encouraged Indian traders, who had been itinerant traders on the coast, by supporting a policy of free trade. His pro-Indian policy resulted in Indian traders' success and the general success of northwestern Indian Ocean trade.

British interventions were responsible directly, however, for changes elsewhere in the world. Following the abolition of slavery in the British Empire in 1833, British plantation owners around the world faced labor shortages. With most of India under British control at the time, British labor needs in the Caribbean, Pacific islands, and Africa coincided with British access to a labor pool in colonized India. Thus began a system of indentured labor servitude. The first Indian indentured laborers left Madras for Mauritius in 1834, immediately following the Act of Emancipation. Other laborers were recruited from all over India for indentured labor contracts in various parts of the British Empire. For instance, Indians from Calcutta began to work in British Guyana's sugar plantations in 1838, and Indians from Madras were recruited to work on Malaysia's rubber plantations in the 1840s. The largest number of Indian immigrants (close to half a million between 1834 and 1912), indentured workers as well as merchants who followed economic opportunities, went to Mauritius, followed by British Guyana, South Africa, Caribbean islands such as Trinidad, Pacific islands such as Fiji, and other Indian Ocean islands such as Réunion. Following the abolition of slavery in French and Dutch colonies, arrangements were made with British authorities to utilize Indian laborers under similar terms of indenture in other European plantation colonies. Among the



Mohandas Gandhi, leader of the Indian independence movement, lived close to two decades in Natal Province, South Africa, where as a lawyer he led a struggle to win basic civil rights for Indian immigrants. In 1899 during the Boer War, he organized an Indian ambulance corps of 1,100 men, based on his conviction that if Indians wanted rights as subjects of the British Empire, they also should fulfill their obligations. (DPA/The Image Works)

later destinations for Indian indentured workers were Kenya and Uganda in the late nineteenth century, most notably to build the Uganda Railway for the British East Africa Company, but also to work in civil service.

Unlike slavery, indentured labor consisted of wage work under specified contractual terms. The terms of the contract, length of stay, and wages varied based on the location. Indian indentured servitude in British Guyana, for instance, was based on five-year contracts, whereas the contracts to parts of the British East African territories were for three years. Like slavery, however, Indian indentured laborers endured severe working conditions such as inadequate housing conditions and long workdays, restricted movements, and lack of basic needs such as adequate food, water, and health care. Furthermore, the strategies for recruitment in India themselves indicate that indentured laborers were not always voluntary participants. Given the extreme poverty in parts of India, the notion of choice migration can be called into question. Some were kidnapped by recruiting agents or forced into indentured servitude by the dearth of agricultural possibilities in India due to floods or drought. By the beginning of World War I, the British importation of Indians

➤ INDIAN CULTURE IN EASTERN AFRICA

Cultural integration abounds in eastern Africa. With centuries of migration, trade, and settlement of diverse communities along the East African coasts, the foods, architectural designs, and even language have been marked with hints of Indian, African, and Arabic tones. Cuisine in eastern Africa reflects its pluralistic past and present. From the eating of Indian samosas, a triangular-shaped pastry filled with both potatoes and peas or with ground meat, to the ubiquity of curries, cuisine in East Africa continues to adapt into a rich fusion by incorporating elements of those who have arrived either over land or from overseas. The Indian presence also affected language. A walk down a main street in Mombasa, Nairobi, Dar es Salaam, or Kampala evokes an auditory carnival of Swahili, Gujarati, Luganda, English, and even possibly Arabic or Hindi. While Swahili is a language that has evolved via a *mélange* of historical influences, urban East Africa continues to be a cosmopolitan

linguistic region. One example is the *dukawalla* (shopkeeper). Any Indian in East Africa will tell you that the word is based on synthesizing the Hindi or Gujarati word for shop (*dukan*) and one who is associated with it (*wallah*). Any local African will say, however, that the word is Swahili, with Arabic roots. Ethnolinguists have not made any definitive conclusion about the origins of *dukawalla*. Some suggest that the word traveled to coastal East Africa from Gujarati- or Hindi-speaking Indian merchants across the northwestern Indian Ocean; others argue that the word traveled southward from Arabic-speaking Yemeni or Omani merchants and rulers, thus influencing the syncretic Swahili language. Interestingly, both Hindi and Gujarati languages have a significant influence from Persian and Arabic. Perhaps the word *dukawalla* and its etymological trajectory thus serve as a symbol of the cultural diversity of East Africa.

—Savita Nair

began to come to a close, while the French and Dutch, who imported fewer to begin with, continued until approximately 1920.

Today's overseas Indian communities are not wholly descendants of former indentured laborers. In addition to those who migrated during the twentieth century, many trace their ancestry back to Indian merchants, adventurers, and entrepreneurs who had migrated to former European colonies. In order to fulfill an economic sector untapped by Indians, Europeans, and the indigenous population, Indian entrepreneurs accompanied and followed their nineteenth-century indentured labor counterparts to serve as petty merchants, shopkeepers, and skilled and semiskilled professionals in colonial territories. Indian merchants who had historically engaged in trading activities along the Indian Ocean littoral were the predecessors to those who took advantage of other colonial needs: Indian shop owners in Mombasa, Nairobi (Kenya), Natal (South Africa), and Fiji, for example. In fact, it is often overlooked that Mohandas K. Gandhi's stay in South Africa

was prompted in 1893 by his employment as an attorney for an Indian business firm in Durban (South Africa).

—Savita Nair

Bibliography

- Clark, Colin, Ceri Peach, and Steven Vertovec. *South Asians Overseas: Migration and Ethnicity*. Cambridge: Cambridge University Press, 1990.
- Northrup, David. *Indentured Labor in the Age of Imperialism, 1834–1922*. Cambridge: Cambridge University Press, 1995.
- Tinker, Hugh. *A New System of Slavery: The Export of Indian Labour Overseas, 1830–1920*. London: Oxford University Press, 1974.

Indian Diaspora in Central Asia

In the mid-sixteenth century a number of caste-based family firms located in and around the city of Multan in northwestern India began to send agents to distant markets beyond the boundaries of India, forging what would become one of the most expansive merchant diasporas of the early modern world. For more than 300 years

the Indian merchants who populated this diaspora maintained a network that stretched across much of Eurasia. These merchants were widely known for their transregional trade in a number of commodities, especially Indian cotton textiles, and also for their money-lending activities in both urban and rural markets.

The diaspora was uniform in that all the merchants were from northern India, but it was ethnically and religiously diverse. The vast majority of the Multani merchants belonged to a number of Hindu castes, including the Bohra, the Bhatia, and especially the Khatri. A smaller number of Muslim Multanis are recorded as having populated the diaspora from its earliest days. Marwari Jains and Sikhs are also known to have joined these groups in later years. Despite this diversity, Multan served as the epicenter of this diaspora from the mid-sixteenth century through the eighteenth century, when the majority of the family firms relocated to the city of Shikarpur, in Sindh. In the late eighteenth century Sindh developed as the center of what has been termed a microworld economy, held together in part by the rapid flow of people, wealth, and information throughout the expansive Shikarpuri network.

During the seventeenth century this diaspora grew to some 35,000 individuals living in an interconnected network of communities dispersed across Afghanistan, Iran, Central Asia, the Caucasus, and much of Russia. In the mid-seventeenth century the largest diaspora community was by far the one in Isfahan, the capital of Safavid Iran (1501–1736), which was home to more than 10,000 Indian merchants. Other large Indian diaspora communities were located in Kabul and Qandahar in Afghanistan, Bandar Abbas in the Persian Gulf, Bukhara in Central Asia, and the Russian port city of Astrakhan on the Caspian Sea.

By the time the diaspora emerged, the Multani firms had a well-developed system to enlist agents and prepare them for work in distant locations. Before being dispatched into the diaspora, the firm directors loaned their agents a certain amount of capital, generally in the form of a commodity for export. The agents then arranged for their commodities to be transported by caravan across the inhospitable intermediary lands. After

➤ JOSIAH HARLAN ON HINDU MERCHANTS IN AFGHANISTAN

Josiah Harlan (1799–1871) was one of the more colorful characters of the nineteenth-century Anglo-Russian Great Game, a colonial contest for markets and political power in Central Asia. Harlan earned fame as the first American adventurer to visit Afghanistan but is perhaps better known as the likely inspiration for Rudyard Kipling's classic *The Man Who Would Be King*. In 1838, Harlan led a large army of Afghan soldiers across the Hindu Kush to suppress a rebellion against the government of the Afghan amir Dost Muhammad Khan (r. 1826–1839, 1843–1863) in Kabul. From Afghanistan, Harlan traveled on to Russia and then to America where, authoring his memoirs, he recalled that he had been surprised by the ubiquitous nature of Hindu merchant-moneylenders in Central Asia.

“Wherever there is a bazaar Hindoos are a necessary part of the establishment! These people are always found amongst the buyers and sellers in all the cities of Central Asia and constitute the bankers or money changers in all commercial communities there. . . . [T]hey form an indispensable part of the population. All financial affairs are entrusted to their management.”

—Scott Levi

Source

Josiah Harlan, *Central Asia: Personal Narrative of General Josiah Harlan, 1823–1841*, edited by Frank E. Ross (London: Luzac, 1939), 65.

several months of travel they would take up residence in a caravansary, a hostel for merchants, where they would begin selling their goods.

The Indians did not allow the cash they retrieved to sit idle as they prepared for their return home. Rather, they were trained to put their capital to work by reinvesting it in other commercial activities, most commonly in interest-earning money lending. Because many farmers depended on credit to get their crops planted, agricultural loans constituted an important and lucrative venture for the Indians. The Indian diaspora

merchants therefore operated at a critical juncture between urban and rural markets, serving their host societies by providing investment capital to facilitate agricultural production even when local peoples could not afford the initial investment. This partially explains the motivation of Muslim administrators to protect the predominantly Hindu Indian merchants and ensure that they could conduct their business in a safe and predictable climate. Typically Indian merchants spent several years in the diaspora, occasionally even decades, before returning home.

In the 1870s Konstantin von Kaufman, the governor-general of Russian colonial Central Asia, implemented a series of policies that targeted the Indian merchants in his territory, undermined their business interests, and effectively brought an end to the Indian diaspora in Central Asia. In Afghanistan, Indians maintained an active presence right up to the partition of India in 1947. In Iran, Indian commercial activities were fully disrupted by the political turmoil in the second quarter of the eighteenth century. Indians subsequently returned, however, and have been active there since.

—Scott Levi

Bibliography

- Dale, Stephen. *Indian Merchants and Eurasian Trade, 1600–1750*. Cambridge: Cambridge University Press, 1994.
- Levi, Scott C. *The Indian Diaspora in Central Asia and Its Trade, 1550–1900*. Leiden: E. J. Brill, 2002.
- Markovits, Claude. *The Global World of Indian Merchants, 1750–1947: Traders of Sind from Bukhara to Panama*. Cambridge: Cambridge University Press, 2000.

Chinese Emigration to Southeast Asia and the Americas

Chinese emigration beyond imperial borders goes back thousands of years, with merchant and pirate activity predominating from the fifteenth century and mass chain migrations from Fujian and Guangdong characteristic of the nineteenth century. Most Chinese emigration was to Southeast Asia, but many thousands also entered transnational flows created by European empires to Africa, India, Europe and especially to

the Americas. By 1900 about 3 million Chinese lived abroad, with more than 80 percent living in Southeast Asia. The Chinese overseas are significant because of their adaptations to non-Chinese host areas, including intermarriage, their perceived nonassimilation and retention of some religious and cultural customs, and the ties of some with their home areas in mainland China.

Chinese emigration to the areas that are now considered Southeast Asia began before the Ming dynasty naval admiral Zheng He (1371–1433) sailed to Java, Thailand, Burma, and beyond. In the fifteenth century Melaka was already a major Chinese trading port. By the 1600s tens of thousands of Chinese merchants active in Manila ensured that China's goods flowed to Europe and that New World silver flowed into China.

In Southeast Asia, sojourning took place in three identifiable stages for most Chinese. The first stage was when the community was all male, and religious and nonreligious organizations were set up allowing chain migration of relatives and neighbors from particular villages. The second stage was when those men who did not return to their families in China married local wives, forming family communities that retained some cultural ties to China and enabled their sons to continue to profit from the growing China trade. The classic examples of this are known as the *peranakan* in Dutch-controlled Java and the *baba* in British Melaka. The third stage was a fresh influx of males from China, dependent on the push factors of poor economic conditions in southern China and pull factors of economic and political openness in Southeast Asia. These newcomers provided husbands for the *peranakan*, *baba*, and mestizo women and ensured continuing ties with Chinese languages and culture.

Misunderstandings and Spanish attempts to control and tax trade led to a massacre of 20,000 Chinese in Manila in the early seventeenth century. Tensions between local populations and Chinese immigrants grew and diminished based on the local situation and divergent European colonial policies in the eighteenth century and beyond. In places like Java, tensions have simmered up to the present day when the *peranakan* (local-born Chinese) have been segregated from

Europeans and indigenous peoples, whereas in the Philippines, where new immigration from China had been cut off in the middle of the eighteenth century, the Chinese mestizo became fully engaged with local concerns.

In the nineteenth century, large numbers of Chinese laborers (coolies, from mandarin *kuli*) took the place of slaves throughout the European empires in southeast Asia and the Americas to work mines and build railroads in abominable conditions, unprotected by any agreements with the Qing government of China. In most areas strict laws prohibited women from coming to ensure that the Chinese would return to China. Men who could not save enough money to return to China lived out their lives in numerous Chinatowns that often died with them. These Chinese did not have connections in China or abroad, nor did they have trading experience.

An important change around 1900 brought these people of disparate experiences to understand themselves in a new way. They became *huaqiao*, legitimized overseas Chinese nationals with a stake in China's future. In the first decade of the twentieth century, overseas Chinese nationalism reached a fever pitch as revolutionaries like Sun Yatsen, exiled reformers like Liang Qichao and Kang Youwei, and representatives of the Qing government traveled throughout the overseas Chinese communities to raise financial support for their causes.

—David Luesink

Bibliography

- McKeown, Adam. *Chinese Migrant Networks and Cultural Change: Peru, Chicago, Hawaii, 1900–1936*. Chicago: University of Chicago Press, 2001.
- Pan, Lynn, ed. *Encyclopedia of the Chinese Overseas*. Singapore: Chinese Heritage Centre, 1998.
- Wang, Gungwu. *The Chinese Overseas: From Earth-bound China to the Quest for Autonomy*. Cambridge: Harvard University Press, 2000.

Immigration to the United States, 1750–1820

Migration to the nascent republic helped lay the foundation for the modern United States. While immigration was largely unregulated and unrecorded between 1750 and 1820, the first laws

on immigration, naturalization, and citizenship were created in this period; their principles would serve as the cornerstones of federal legislation until the 1960s. Immigration data were not collected before the Steerage Act of 1819, which mandated the reporting of immigrants by ship captains to federal authorities. The figures on European immigration provided below are estimates. These figures do not take into consideration the forced migration of African slaves.

1750s: 64,000
 1760s: 47,000
 1770s: 15,000
 1780s–1790s:
 1800s: 80,000
 1810s: 118,000

Reliable estimates are not available for the 1780s and 1790s.

These figures alone do not convey the many complexities of immigration. Warfare, specifically the Napoleonic Wars (1800–1815) in Europe, and their North American outlier, the War of 1812, disrupted immigration patterns. Revolutions also played a part in diversifying the population of the young republic. Some 80,000 Loyalists of all ethnicities left for Canada or England as a consequence of the American War of Independence. Some 20,000 French refugees from the Haitian Revolution of 1791–1804 (almost all of the white inhabitants), conservative French citizens fleeing the excesses of the French Revolution (1789–1799), and Irish and British radicals who found little sympathy at home for their support of the French Revolution all contributed to the emerging mosaic of American ethnicities. Immigration from Europe resumed when warfare in Europe ceased in 1815; indeed, of the record 168,000 immigrants estimated to have left for the United States in the 1810s, 70 percent came in the second half of the decade. Not all immigrants elected to stay. Some of the French returned home with the establishment of the Directory in 1795, while others returned after Napoleon took power. Return migration would become more prevalent in the late 1800s.

North America was a diverse place. Even by 1750 the English and their descendants were no

➤ BENJAMIN FRANKLIN ON ETHNIC TENSIONS IN EARLY AMERICA

Tension over immigration is by no means a modern invention. In 1751, Benjamin Franklin asked

“[W]hy should the Palatine [South-West Germany] Boors be suffered to swarm into our Settlements, and by herding together establish their Language and Manners to the Exclusion of ours? Why should Pennsylvania, founded by the English, become a Colony of Aliens, who will shortly be so numerous as to Germanize us instead of our Anglifying them, and will never adopt our Language or Customs, any more than they can acquire our Complexion.

Which leads me to add one Remark: the Number of purely white People in the World is proportionably very small. All Africa is black or tawny, Asia chiefly tawny. America (exclusive of New Comers) wholly so. And in Europe, the Spaniards, Italians, French, Russians, and Swedes, are generally of what we call a swarthy Complexion; as are the Germans also, the Saxons only excepted, who with the English, make the principal Body of White People on the Face of the Earth. I could wish their Numbers were increased.”

Franklin feared that the continual influx of Germans would fundamentally alter the ethnic composition and eventually the very nature of the North American colonies. The quote illustrates a recurring theme in the history of American immigration: the fear of the unwholesome influence of the outsider on American civilization, whether presented in racial, ethnic, or religious terms.

—Rune Reimer Christensen

Source

Benjamin Franklin, *Autobiography and Other Writings*, ed. Ormond Seavey (Oxford: Oxford University Press, 1999), 252.

longer an absolute majority except in the New England colonies, though they remained the largest ethnic group overall. German-speaking immigrants comprised one-third of the population of Pennsylvania by 1760, while the Scots-Irish comprised another 30 percent of the colony. The first federal census of 1790 reported

that out of the nearly 4 million inhabitants of the United States, 48 percent were English in origin, 19 percent were African, 12 percent were Scots and Scots-Irish (Protestants), and 10 percent were German, while Swedes, Dutch, French, Irish (Catholics), and Welsh comprised the remainder. Native Americans were not counted.

Not all immigration was voluntary. The 1790 Census reported almost one person in five was of African descent, almost all of whom were slaves. Another source of involuntary migration was the deportation of convicts from Britain; up to 50,000 convicts were sent to the colonies before the American Revolution. As securing passage across the Atlantic proved beyond the means of many, more than half of all white immigrants to the colonies and the early republic came as indentured servants. Also known as redemptioners, they gave their labor for a period of five to seven years to whoever would hire them in return for transportation, food, and lodging but no money. When their term expired, they were free. Some worked in Southern fields alongside slaves, and masters often worked indentured servants more severely to exact as much labor as possible in the allotted time. Conversely, some redemptioners learned trades that could later be parlayed into a living.

Indentured servitude was a mostly British phenomenon until 1788, when Parliament extended legislation banning the emigration of skilled laborers from Britain to encompass Ireland. In 1803, the British Passenger Act limited the numbers of immigrant passengers. As the British system of indentured servitude began to wane, another group of mostly German or Swiss families became available. These families paid for a portion of their passage and were allowed a grace period after reaching the New World to complete payment. Failure to do so meant indentured servitude to cover the outstanding debt.

Why did immigrants come? Political motivations spurred some, such as the French, to emigrate. For others, the decision was born of dire need. A population explosion in Europe between 1750 and the mid-1800s combined with the early phase of the Industrial Revolution, principally in England, created surplus populations. Local disasters also contributed, such as the crop failures that drove as many as 15,000

Irish and 20,000 Germans to migrate to the United States between 1815 and 1817.

The immigration and naturalization laws of the young republic tell us much about the development and delimitation of American citizenship. The Naturalization Act of 1790, the first act to define eligibility for citizenship of the young nation, limited naturalization to “free white persons” who had resided for two years in the United States and any of their children under 21 years of age. In 1795, a new act extended the residency requirement to five years. Applicants for citizenship now had to submit a declaration of intent at least three years before submitting their formal application for citizenship.

The four acts comprising the Alien and Sedition Acts of 1798 exacted greater restrictions on immigration and migrants. The Naturalization Act of 1798 extended the residency requirement to 14 years and the declaration of intent to five years. The original wording of the Naturalization Act preventing all foreign-born people from voting or holding office was defeated in Congress. The Alien Act also authorized the president to deport any alien deemed “dangerous to the peace and safety” of the country. These measures were meant to stem the flow of immigrants and limit their gaining of political influence through naturalization. Especially targeted were French and Irish radicals, large numbers of whom were more sympathetic to the Jeffersonian-Republicans than to President Adams’s Federalists. By 1802 the measures were expired or had been repealed.

The year 1820 heralded a new era in immigration to the United States in many ways. Redemptionism as a means of immigration was coming to an end. Also coming to an end was unrecorded immigration. The year saw 17,197 arrivals documented under the Steerage Act, a figure that already by the end of the decade would seem low. The scene was set for the era of mass migration.

—Rune Reimer Christensen

Bibliography

- Archdeacon, Thomas J. *Becoming American: An Ethnic History*. New York: Free Press, 1983.
- Dinnerstein, Leonard, Roger L. Nichols, and David M. Reimers. *Natives and Strangers: A Multicultural History of Americans*. 4th ed. New York: Oxford University Press, 2003.

Grubb, Farley. “The End of European Immigrant Servitude in the United States: An Economic Analysis of Market Collapse, 1772–1835.” *Journal of Economic History* 54 (1994): 794–824.

Hofstadter, Richard. *America at 1750: A Social Portrait*. New York: Knopf, 1971.

Jones, Maldwyn Allen. *American Immigration*. 2nd ed. Chicago: University of Chicago Press, 1992.

Immigration to the United States, 1820–1880

From 1820 to 1880 in the first great wave of migration to the young republic, approximately 10.2 million immigrants came to the United States. Originating mainly from northern Europe and the British Isles or Canada, they contributed to the rapid growth of the U.S. population in general and its urban population in particular. Immigration during this period had a major impact on American culture.

The 1820s saw only a relatively modest increase in immigration to the United States, with about 160,000 people coming in a ten-year period, as opposed to 40,000–60,000 in the previous decade. However, the character of immigration was beginning to change. Ireland replaced Great Britain as the primary source of immigrants, although the British still made up a sizable percentage. This trend continued in the 1830s and especially the 1840s as a result of the Great Potato Famine (1845–c. 1850). Millions of Irish, forced by economic privation, sought to



Engraving depicts Irish emigrants fleeing the Potato Famine by way of a ship leaving from Liverpool, England. (The Illustrated London News, July 6, 1850)

► THE FIRST ILLEGAL IMMIGRANTS—AFRICAN SLAVES

One group of immigrants is difficult to quantify during this period. The African slave trade became illegal in the United States in 1808. However, the high demand and subsequent high price of slaves in the South encouraged an illicit African slave trade. Pirates such as Jean Lafitte (ca.1780–ca.1826) made fortunes preying upon slave vessels hailing from other countries, especially Spain and Portugal, and selling the contraband human cargo in the markets around New Orleans. Although Portugal and Spain had assented to English pressure in 1815 to end the slave trade, almost no effort was made to enforce such a ban. As a result, many African slaves were taken first to Cuba and then from the thriving slave markets there were exported to various destinations in the New World. The slaveholding regions in the United States were prime markets for the smuggling

human cargo, as slaves often fetched three times more in the United States than they would in Cuba. Slave owners, not surprisingly, lied about the African origin of any slaves thus acquired, making census tabulations a useless tool to determine the number of African slaves who arrived during the first half of the nineteenth century. However, highly publicized cases of African slave smuggling, such as the *Amistad* case in 1839 and 1840, made clear that slave importation to the New World was still occurring despite its illegality. Some scholars estimate that 50,000 to 100,000 or more African slaves were illegally brought to the United States in the more than half a century between the ban against their importation to the United States and the end of slavery following the American Civil War.

—Gerrit Dirkmaat

create new lives by migrating to various countries. In the two decades between 1840 and 1860, more than 1.5 million Irish immigrants came to the United States. Even after the potato crop recovered in the 1850s, thousands of Irish continued to emigrate, seeking better economic opportunities and escape from oppressive English domination that allowed landlords to exploit the impoverished Irish tenant farmers, evicting those who could not pay rents. Most settled in Boston, New York, and other northern cities, although a large contingent made New Orleans their home as well, as the rapidly growing port city provided opportunities for unskilled workers.

The Irish were supplanted as the primary immigrant group by Germans during the latter half of the 1850s. Various economic difficulties, including crop failures, population pressures, the consolidation of landholdings, new farming techniques by the large landholders, and enclosure of previously public land, spurred German immigration. In addition, turmoil that existed in the German states as a result of the failed revolution of 1848 led to the immigration of thousands of German intellectuals, many of whom were leaders in establishing German-language newspapers in the United States. Although German

immigration increased in the 1850s, it had been going on for most of the century. Between 1820 and 1860, prior to the peak of German immigration, nearly 2 million Germans left Europe for the United States. German immigration steadily rose until the last decade of the nineteenth century, although there was a slight dip in the 1860s due to the American Civil War.

The Germans were a much more disparate and diverse group than the Irish. While the Irish were nearly all Catholic and enjoyed a similar shared cultural history, German newcomers included Catholics, Protestants, and Jews. Some came from the large urban areas of northern German states and Prussia, while others were from German-speaking areas of the Russian and Austrian empires. While they shared a common language, in the absence of a unified German state (Germany would not be unified until 1871) many felt no special connection to other Germans prior to their arrival in the United States, where common language bonds often forged such feelings of unity. German immigration would continue to outpace all others until the final decade of the nineteenth century.

Perhaps as many as 200,000 of the immigrant Americans classified as German between 1840 and 1880 were German-speaking Jews.

This first large-scale Jewish migration to the United States would also leave an indelible imprint in American cities. Jewish neighborhoods became common features in several large American cities.

The influx of immigrants changed the character of American cities substantially. More than half of all the residents of New York City by 1860 were immigrants. Cities such as Boston, whose population had been largely of English descent, had a different character by the mid-nineteenth century, when more than 35 percent of residents were immigrants by 1860, and two-thirds of those immigrants were Irish Catholics. Ethnic enclaves within cities became a standard feature of large cities.

The 1860s also saw a great influx of immigrants from the Scandinavian nations, with more than 100,000 coming in that decade alone. Many settled in the upper Midwest in search of fertile farmlands. Often whole villages of Norwegian or Swedish immigrants would come to America in the space of several years, a form of chain migration that often replicated the old country patterns of life in their new surroundings. Eventually, 800,000 individuals, a full one-third of Norway's population, would migrate to the United States.

Although a majority of immigrants hailed from northern Europe, Asian immigration to the west coast of North America had a major impact on that region. Chinese peasants, as gold prospectors, laborers, and small businessmen, sought the economic opportunities that they hoped post-gold rush California could afford them. In 1852 alone, more than 20,000 Chinese immigrants landed in San Francisco. While immigration to eastern cities dwarfed this figure overall, the relatively small population of California allowed Chinese immigrants to make a major impact. Although initially welcomed as cheap laborers by enterprising whites in the West, nativist racial fears steadily grew in the face of continued migrations. The first immigration barrier in American history would be raised in 1882 with the Chinese Exclusion Act, preventing any further Chinese immigration.

Fears of the rapid influx of immigrants held by the Protestant, Anglo-Saxon majority led to several nativist, or anti-immigrant, political and

social campaigns. Because most immigrants sought economic opportunities provided by the free labor economy of the North and eschewed the less opportune slave society of the South, political nativism had the greatest support in the North. Anti-immigration sentiments often turned violent, such as the anti-Irish riot in the Philadelphia area in 1844. The American Party, often referred to as the Know-Nothings, had as its primary platform anti-Catholic legislation, strict immigration restrictions, and a greatly increased period of residency before immigrants could become citizens. Although this party briefly prospered in the mid-1850s, electing several members to Congress, it would quickly be displaced by the more pressing issue of slavery in America; however, nativist feelings and sentiment would be a recurring theme in American history.

—Gerrit Dirkmaat

Bibliography

- Bankston, Carl L., ed. *Immigration in U.S. History*. Vols. 1 and 2. Pasadena: Salem Press, 2006.
- Gabaccia, Donna R. *Immigration and American Diversity: A Social and Cultural History*. Malden, MA: Blackwell, 2002.
- Miller, E. Willard. *United States Immigration*. Santa Barbara, CA: ABC-CLIO, 1996.
- Ueda, Reed, ed. *A Companion to American Immigration*. Malden, MA: Blackwell, 2006.

Immigration to the United States, 1880–1914

The period between 1880 and 1914 witnessed one of the largest global population shifts in human history. Advances in transportation technology, such as the steamship's superiority over the sailing ship, had the effect of shrinking the globe for travelers. Immigrants were pushed from their sending countries for a variety of reasons, from lack of opportunity in their homelands and compulsory military service to flight from famine and persecution. Peasant regions across Europe experienced overpopulation, which placed strains on the distribution of land. Many left the impoverished countryside for cities, further increasing the burden on agricultural land to provide staple crops for growing urban populations and in turn prompting the consolidation of landholdings and the closing of common lands.



A group of immigrants at Ellis Island wait to enter the examination hall, early 1900s. (Library of Congress)

► CHINESE RESTRICTION

Chinese migrants to the United States were predominantly single males, many of whom saw their sojourn in the United States as a means to accumulate money before returning home to purchase land and start a family. By 1880 the 105,000 Chinese who resided in the United States faced low pay, hazardous working conditions, and blatant racism. During periodic economic downturns the usually culturally isolated Chinatowns of the West Coast experienced sporadic anti-Chinese riots as competition for wages intensified. In 1882 Congress voted to restrict Chinese immigration for ten years and periodically renewed the legislation before making it permanent in 1902. While laborers were prohibited, merchants, teachers, students, diplomats, and travelers were exempt from exclusion. The Exclusion Laws would stand until 1943. The Chinese Exclusion Act marked the first time in American history that the United States restricted an immigrant group because of its race and class.

—Benjamin Pottruff

Emigration now became an attractive option for peasants no longer tied to the land. Pull factors also played an important role in determining the destination of emigrants, and during the 1880s corporate America began to actively recruit labor from Southern and Eastern Europe.

The United States absorbed some 33 million of the 55 million emigrants who left Europe. Italians, Hungarians, Czechs, Slovaks, Poles, Serbs,

Slovenes, Russians, Romanians, and Greeks began to arrive in the United States in dramatically larger numbers than ever before. Furthermore, these groups were more culturally distinct than earlier immigrants from Northern and Western Europe, who could expect inexpensive land and decent wages. These new immigrants entered the United States at a time when the closing of the frontier signaled the end of cheap land and when low-paying unskilled jobs in factories proliferated. While many dreamed of owning land, the vast majority of these immigrants remained trapped in teeming cities. Many new immigrants moved into cramped and congested tenements of large cities, such as New York and Chicago, where overcrowding and poor sanitary conditions appeared in stark contrast to the predominantly rural settings left behind in the Old World. Unable to acquire land or property, many immigrants competed in the vast labor markets of urban industrial cities for low wages, working long hours often in unsanitary and hazardous conditions.

Immigrants tended to settle within communities of people who had emigrated from a similar region in a process scholars have described as chain migration. These communities, although often ethnically segregated, tended to soften cultural adjustment for newcomers. Ethnic enclaves such as Little Italy became a feature of many rapidly growing urban centers. Within these communities Immigrant Aid Societies proliferated, helping newcomers with instruction in the English language and American customs while still valuing religious practices and cultural customs and maintaining native languages. However, this persistence of Old World languages and customs concerned many commentators of the day.

The massive number of immigrants arriving in the United States prompted Congress to fund a reception center to process new immigrants and screen them for undesirable qualities. In 1892 Ellis Island off the coast of New Jersey opened its doors to the huddled masses of the Atlantic world. The immigration law of 1882 gave the federal government, through the secretary of the treasury, executive authority over immigration but delegated the actual inspection of immigrants to existing state agencies. While

nothing was done to specifically exclude groups by national origin on the East Coast, the West Coast incorporated a series of restrictive measures against Chinese in 1882 and Japanese in 1907. At a time when African Americans were being disenfranchised, these early restrictive measures ensured that newcomers would be racially identifiable as white.

Further attempts at immigration restriction met with varying success. Federal legislation did impose a 50-cent head tax on all immigrants and excluded lunatics, idiots, convicts, women suspected of prostitution, any person likely to become a public charge, and people with loathsome or dangerous contagious diseases. Early attempts to impose a literacy test on new immigrants were repeatedly vetoed by Presidents Grover Cleveland, William Taft, and Woodrow Wilson. Liberal naturalization and voting laws in the United States allowed strategically situated ethnic minorities to prevent either of the major political parties from committing resolutely to the issue of immigration restriction. Minorities that blocked restriction had the additional advantage of appealing to traditional family ideals, and these claims were bolstered by business interests whose insatiable appetite for labor kept immigration restriction from becoming a political reality.

Thus, without intending to restrict immigration, the United States took a hesitant but decisive step to control it. Those who were still uneasy about the growing numbers of foreign-born persons and the role of these newcomers in American society demanded that immigrants cut their ties to the Old World and undergo a process of Americanization. In 1908 a Jewish immigrant named Israel Zangwill penned a play, *The Melting Pot*, that gave a name to the process of throwing off Old World loyalties and adopting American nationality. The outbreak of hostilities between European powers in 1914 disrupted global migration flows and proved to be a test of loyalties for many foreign-born residents of the United States. In the postwar period, the United States became a gatekeeping nation in which immigration restriction, largely based on race and nationality, ended this period of virtually unchecked immigration from Europe to the United States.

—Benjamin Pottruff

Bibliography

- Bodnar, John. *The Transplanted: A History of Immigrants in Urban America*. Bloomington: Indiana University Press, 1985.
- Daniels, Roger. *Coming to America: A History of Immigration and Ethnicity in American Life*. New York: HarperCollins, 1990.
- Higham, John. *Strangers in the Land: Patterns of American Nativism, 1860–1925*. New York: Atheneum, 1955.
- Jacobson, Matthew Frye. *Barbarian Virtues: The United States Encounters Foreign Peoples at Home and Abroad, 1876–1917*. New York: Hill and Wang, 2000.
- Lee, Erika. *At America's Gates: Chinese Immigration during the Exclusion Era, 1882–1943*. Chapel Hill: University of North Carolina Press, 2003.

Canadian Immigration

In 1750, most of what is now Canada was occupied by First Nations groups, who had little if any direct contact with people of nonaboriginal background. By 1914, Native Canadians constituted only a small fraction of the nation's population; Canada was populated from the Atlantic to the Pacific by immigrants and their offspring from places as diverse as Scotland, Russia, Italy, West Africa, the West Indies, and China. Between 1750 and 1914, Canada's economy, physical environment, and social and political cultures underwent dramatic changes. Canada evolved into a nation of industrialized cities, which included an extensive network of national railways, a liberal democratic political structure, a comprehensive system of European-style state institutions, and evidence of large-scale land settlement (made possible by systematic First Nations land alienation). These changes were spurred on by the attitudes, ideas, and labor of hundreds of thousands of immigrants.

At the middle of the eighteenth century, First Nations groups of varied linguistic backgrounds and social and economic practices peopled Canada from coast to coast. European traders and colonists had made significant incursions in the region by this time, though the prairies and the west coast still lacked permanent European settlements. By comparison, Atlantic Canada contained well-established communities of French

THE HOME CHILDREN

Over the course of the 1870s through the 1930s, approximately 98,000 British children migrated to Canada under the auspices of various philanthropic organizations, the most famous of which was Dr. Barnardo's Homes. The Home Children, as they came to be known, were typically orphans or the products of broken and impoverished families. Upon their arrival in Canada they were distributed to rural homes, where they worked as farmhands and domestic servants. A small percentage of the children were legally adopted into their host families. In the late nineteenth century, these child migration schemes received extensive political and financial support. The idea that children corrupted by British urban squalor and unfit parents could be saved through integration into wholesome colonial rural environments, benefiting both the sending and receiving societies, appealed to Late Victorian middle-class sensibilities. However, as abuses of the system came to light and as the social climate in Canada changed, Home Children programs increasingly became the focus of criticism.

—Lisa Chilton



Group of Dr. Barnardo's Home Children, photographed upon their arrival at the port of St. John, New Brunswick, in the early twentieth century. (Library and Archives Canada PA-041785)

men and women. For a full century and a half, New France had been the focus of France's on-again, off-again, generally ineffective colonizing efforts, the most significant of which were Louis XIV's colonization endeavors during 1663–1672, when hundreds of indentured male servants and *filles du roi* (single women selected from French state institutions) were sent to the colony. For some French administrators, New France was an important colonial asset in the contest with England for imperial possessions, and thus French emigration to the region was at least sporadically supported.

The Treaty of Paris (1763) resulted in the absorption of New France into British North America, thus ending the period of French colonialism in Canada. Britain's control of this new region did not result in any immediate marked increase in immigration; British emigrants continued to head to New England and its western frontiers rather than toward the cold French-inhabited north. In the aftermath of Britain's takeover of New France, demobilized British

troops (some of whom were mercenaries from continental Europe), Scottish Highlanders (who had been cleared off the land by landowners looking to implement more lucrative farming practices), and small numbers of land-seeking New Englanders settled in the newly acquired British territory.

The onset of the American Revolution (1775–1782) stimulated British North America's largest influx of immigrants of the eighteenth century. By the late 1770s, refugees from the war-torn American colonies were streaming into Nova Scotia and Quebec at a pace that made it difficult for the fledgling British North American colonies to adequately receive them. The challenges posed by the large numbers of loyalist immigrants were further complicated by the fact that they often arrived in great need and with high expectations of state assistance born of promises made by government officials looking to undermine the American effort in the revolutionary war. The loyalist immigrants who settled in Canada during the late eighteenth century

included well-established white Americans, recent British immigrants, Native Americans, free blacks, and slaves. They represented people of a wide range of class backgrounds. Their mass settlement in areas such as New Brunswick and Upper Canada fundamentally altered the Canadian political landscape.

Immigration from Europe was limited during the late eighteenth and early nineteenth centuries due to the American Revolution and the Napoleonic Wars. However, after 1815, British immigration to British North America picked up considerably, spurred on in part by the efforts of British charities and of landlords looking to remove impoverished tenants from their estates. The potato famine (1845–c. 1850) resulted in a mass exodus of people from Ireland, thousands of whom traveled to the British North American colonies. The extreme physical and economic distress of these immigrants combined with the poor sanitary conditions of the ships on which they traveled resulted in the spread of contagious diseases among immigrants and from immigrants to their host communities. British North American governments responded by establishing new laws and taxes as well as state-run agencies and institutions through which to manage the movement of newcomers to the region.

When the British North American colonies confederated in 1867 to form an independent nation, immigration ranked as a top priority for Canada's political leaders. Opening up the Canadian west to hardworking farmers was touted by Prime Minister John A. Macdonald and others as the most likely way to boost Canada's economy and to secure for Canada the rights to the Prairies and British Columbia. However, during the 1870s and 1880s immigration did not meet the government's expectations. British immigrants continued to come to Canada but in smaller numbers than Canadian immigration promoters wished, and relatively few settled on the land. Russian Jews, Mennonites, Hungarians, and Icelanders began to arrive in Canada during these decades, fleeing from social and political persecution and/or economic hardship. Chinese immigrants, attracted by contracts to work on the railways, entered Canada in large numbers but were considered to be merely sojourners by white Canadians, who set up legal barriers to

subsequent large-scale Chinese immigration. It was not until the late 1890s, when the Canadian government began to work at actively recruiting European immigrants previously considered unattractive, that the Canadian Prairies were effectively settled and farmed.

The Canadian government's success at recruiting immigrants at the turn of the century drew hostility from conservative members of the public, who protested the creation of instant farming communities of "Galicians," the growth of urban communities of Italians and of Jews, and the arrival of people they considered to be of questionable moral and physical health. In the period preceding the First World War, immigration continued to be a priority for Canada's political leaders, and increasing numbers of immigrants entered Canada in search of better social and economic opportunities. At the same time, persistent criticism resulted in the implementation of new laws and social agencies designed to screen, monitor, and deport "undesirable" newcomers.

—Lisa Chilton

Bibliography

- Eccles, W. J. *The French in North America, 1500–1783*. Revised ed. East Lansing: Michigan State University Press, 1998.
- Elliott, Bruce S. *Irish Migrants in the Canadas: A New Approach*. Montreal: McGill-Queen's University Press, 1988.
- Hoerder, Dirk. *Creating Societies: Immigrant Lives in Canada*. Montreal: McGill-Queen's University Press, 1999.
- Knowles, Norman. *Inventing the Loyalists: The Ontario Loyalist Tradition and the Creation of a Usable Past*. Toronto: University of Toronto Press, 1997.
- Knowles, Valerie. *Strangers at Our Gates: Canadian Immigration and Immigration Policy*. Toronto: Dundurn, 2007.

Migration to Latin America, 1800–1914

In the immediate aftermath of independence, many of the new republics of Latin America encouraged immigration to attract non-Iberian settlers to assist in development or nation building. Approximately 1,000 military men, including

► EMBRANQUECIMENTO AND EUROPEAN IMMIGRATION

The openness of the Brazilian state to increased European migration during the late nineteenth and early twentieth centuries was in part motivated by an ideology heavily influenced by the scientific theories of the period that argued for the racial superiority of Europeans. This ideology, known as *embranquecimento* (or *blanqueamiento* in Spanish-speaking nations where it was also present), sought to whiten the nation through increased European immigration as well as the absorption and eventual elimination of African and Native American populations through more extensive racial mixture. Consequently, Brazil encouraged greater European immigration, especially from Germany, while also restricting the immigration of Africans as well as Asians. Such policies were similar to those of the United States, which sharply curtailed non-European and even Eastern European immigration through restrictive quotas while allowing for extensive immigration of Northern and Western Europeans. However, Brazil's vision of whitening through interracial blending contrasted sharply with the implementation of laws in the United States that prohibited racial intermarriage and promoted segregation. This difference can be explained in part by the extensive historical intermarriage between Europeans, Africans, and native Brazilians. Ultimately, in the 1930s under the regime of Getúlio Vargas, the Brazilian government rescinded its favorable policies toward European immigration in reaction to increasing unionization among European immigrant workers and as part of a populist strategy to appeal to native-born Brazilians as a whole by forging a nationalist identity.

—Josef Castañeda-Liles

Irish and British volunteers who had fought in the armies of liberation, chose to remain in Latin America once independence had been achieved. In addition, peddlers, sailors, and tradesmen arrived in many of the main ports and larger cities in the 1820s. Italians exiled for revolutionary activities arrived in Argentina starting in 1820, the most celebrated being Giuseppe Garibaldi (1807–1882), the Italian patriot and soldier. A small contingent of Norwegians founded a colony in Santa Catarina in Brazil. Uruguay had one of the largest

concentrations of foreign settlers—33,000—mostly French from the Pyrenees. Two thousand Swiss came to Brazil in 1819 and founded Nova Friburgo. Chinese contract labors were brought to Cuba and Peru in large numbers in the first half of the nineteenth century.

By 1870 voluntary migrations to Latin America began to increase dramatically, and in time nearly 11 million Europeans relocated to the region. Italy was the source of 38 percent of the immigrants, followed by Spain (28 percent) and then Portugal (11 percent). France, Germany, and Russia contributed 3 percent each. Argentina received 46 percent of the immigrants, Brazil 33 percent, Cuba 14 percent, Uruguay 4 percent, and Mexico 3 percent. Overpopulation in Europe along with industrialization and urbanization contributed to the exodus of people seeking a better life in other parts of the world in this period. At the same time the United States and Latin America did not have enough labor in their native populations for the amount of work that needed to be done. To meet the demand for a larger and more qualified workforce, some countries implemented aggressive programs to promote immigration.

In Brazil the impetus for migration centered on the need for labor, partially due to the anticipated demise of African slavery. Between 1872 and 1930, 3.3 million immigrants arrived in Brazil, mostly from Italy, Portugal, and Germany. The new immigrant population was concentrated in three areas of southeastern Brazil. The largest contingent, approximately 1.7 million, settled in the state of São Paulo, while the remainder went to the city of Rio de Janeiro and the states of Paraná, Santa Catarina, and Rio Grande do Sul. By 1914 only 5 percent of Brazil's population had been born abroad (1.6 million of 30 million). However, the immigrant population was large in São Paulo (18 percent of the population) and in several other southeastern states (13 percent of the population). In addition to Europeans, Brazil encouraged immigration from Japan. By 1914 more than 100,000 Japanese had arrived, resulting in the largest concentration of Japanese outside of Japan. Brazil was also the destination for 2,000 former citizens of the short-lived Confederate States of America, who were attracted by Brazil's exotic setting and

slave-based society. Many were former plantation owners or military men who saw opportunity in Brazil.

Argentina began promoting immigration in the 1830s to encourage economic development. The intellectual and liberal leader Juan Bautista Alberdi represented Argentina's immigration policies when he proclaimed that "To govern is to populate." However, it was the surge in the European demand for Argentine beef and related products in the last quarter of the nineteenth century that brought a flood of immigrants to Argentina. Seasonal workers known as *golondrinas* (swallows) from Italy and Spain arrived to work the wheat harvest and the cattle drives. Although many returned to Europe after their seasonal work was finished, some stayed and found year-round work in Argentine meatpacking plants; as stevedores, warehousemen, or teamsters; or in other industrial or commercial pursuits. The foreign-born populations of Argentina exceeded 30 percent (2.4 million of 7.9 million) by 1914, and 44 percent lived in or near the port of Buenos Aires.

Uruguay, much like its larger neighbor Argentina, experienced a similar influx of immigrants from Italy and Spain to work primarily in the wheat fields and on sheep and cattle ranches. Starting in the 1880s until the Great Depression in 1930, approximately 640,000 immigrants arrived in the smallest of the South American republics. By 1900 the population of Montevideo, Uruguay's capital, had grown to 268,000, and half of that number were foreign-born.

—George Lauderbaugh

Bibliography

- Daniel, G. Reginald. *Race and Multiraciality in Brazil and the United States: Converging Paths?* University Park: Pennsylvania State University Press, 2006.
- Morner, Magnus. *Adventurers and Proletarians: The Story of Migrants in Latin America*. Pittsburgh: University of Pittsburgh Press, 1985.
- Solberg, Carl. *Immigration and Nationalism, Argentina and Chile, 1890-1914*. Austin: University of Texas Press, 1970.
- Young, George F. W. *The Germans in Chile: Immigration and Colonization, 1849-1914*. New York: Center for Migration Studies of New York, 1974.

European Migration to Australia, New Zealand, and Africa

Europeans have participated extensively in intercontinental migrations, with most of the migration occurring between 1830 and 1920. After 1800, economic growth in Europe could only be maintained by using international migration as a safety valve. The exodus of Europeans permitted European economies to create prosperity while escaping a situation in which economic growth was absorbed by an increase in population. By changing continents, Europeans also managed to live longer and better than their fellow Europeans who did not move. While most of the immigrants went to the Americas, a significant percentage of Europeans migrated to Africa, Australia, and New Zealand.

Great Britain, one of the major colonial powers, proved the most successful in using the export of population to establish imperial control. It also planned emigration as way of reducing the poverty rate as well as the number of troublemakers at home. The indigent, convicts, and orphaned children were shipped out to the Americas, Australia, New Zealand, Rhodesia, and South Africa.

As the remotest of the large landmasses, Australia and New Zealand were the last to be peopled by Europeans. Distance deterred free settlement. Traveling from Britain to Australia and New Zealand cost more and took longer than to anywhere in the New World. This produced sparsely populated communities and required state assistance for the working class to emigrate. By 1839 Great Britain decided that a managed system of emigration would best help it fill the Southern Hemisphere. The British government set up the Land and Emigration Board, part of the Colonial Office, to select and transport emigrants. The program was financed by the sale of land in the Australian outback. Convict transportation continued until 1840, but free emigrants were increasingly in the majority. Most were English, many were Irish, and smaller numbers came from Scotland. Southern Australia's Germans were the first bloc from continental Europe.

Convict transportations and recruitment of immigrants created an Irish presence in Australia from the opening up of the colony, but the



Bullfinch gold mine in western Australia in 1910. Gold rushes were one of several factors that encouraged migration to Australia in the nineteenth and early twentieth centuries. (The Illustrated London News Picture Library)

rise of mass emigration from Ireland to Australia is characteristic of the post-1850 period. The Potato Famine of 1845 to c. 1850 prompted panic-stricken flight. However, the 70 years following the famine period witnessed more emigration than the two centuries before 1845, with approximately 333,000 Irish settling in Australia and New Zealand. The Australian Irish were met with suspicion and hostility, partly because of their Catholicism and partly due to the convict image that was attached to them. The Australian Irish avoided urban ghettos for a widespread settlement pattern, however, that contributed to their assimilation.

Organized white settlement of New Zealand began in 1840 under the auspices of the New Zealand Company, a business dedicated to helping settle the country with British immigrants. This English venture sent 8,600 emigrants to the country during the next three years. Difficulties in completing topographical surveys led to delays with land allocation to the immigrants, while immigrant land claims conflicted with Maori title to the land. Faced with these difficulties, the New Zealand Company dissolved in 1847. Immigrants in subsequent decades came chiefly from Great Britain, although a significant influx of Germans and Scandinavians occurred during the second half of the nineteenth century. New Zealand authorities strongly opposed Irish immigration and attracted a higher percentage of Scots than Australia.

As part of the British Empire, Australia and New Zealand were largely British countries. There was comparatively little immigration from southern Europe largely because of a lack of government assistance. The earliest Italian migrants to Australia were Catholic missionaries who worked with Spanish priests among the Aborigines during the 1840s. The gold rush of the 1850s drew more Italians. Few Greek and Spanish migrants appear in records from the first half of the nineteenth century. In general, southern European immigration was minimal until the late nineteenth century. In 1891 there were about 3,900 Italians, 600 Greeks, and 1,000 Spanish, Portuguese, and French immigrants living in Australia. By 1921 there were about 7,250 Italians, 4,600 Greeks, and 1,700 Spanish, Portuguese, and French. Swedish immigration to Australia is very small and difficult to measure since many entered Australia without address-change certificates or passports prior to World War I. The first Swedes arrived in Australia between 1830 and 1850, the same time that the first free immigrants from the English lower classes arrived. The Swedes were seamen who paid their passage by working on British or Swedish ships and who had been dismissed or had deserted their ships in Australian ports. Many worked on the wharves of Sydney, Melbourne, or Adelaide. The emergence of the whaling and sealing industries also brought some Swedish seamen to Australian waters and Australian soil. Once in Australia, the Swedes had little contact with the old country and did not act as magnets for new immigrants.

South Africa did not attract British emigrants to the same extent as Australia and New Zealand. The most serious attempt to introduce immigrants came in 1820 when Great Britain planned to establish soldiers discharged after the Napoleonic wars on the Eastern Cape. However, the land proved harsh, and few emigrants were interested. The discovery of diamonds in Kimberley and gold in the Transvaal sparked British immigration to South Africa. The white population increased from 328,000 in 1875 to 1.117 million in 1904, but the Dutch remained the white majority.

The British experienced similar difficulties in trying to establish Rhodesia (present-day Zimbabwe) as a white man's country. The

► PROTECTING BRITISH EMIGRANT WOMEN

Traveler's organizations, such as the South African Colonisation Society (SACS), particularly emphasized that they could guarantee the safe passage of women. Between 1884 and 1916, at least 22,482 women emigrated to far-flung parts of the British Empire with the aid of traveler's organizations. These groups regularly warned about the danger that young women faced when they attempted to arrange their own migration. Viewed as too incompetent to manage the tasks involved in moving, women were thought to be vulnerable to falling into poverty, prostitution, and crime as a result of their migration experiences. In the article "A Journey under the Care of the SACS" in the June 1909 issue of the *Imperial Colonist*, the author highlighted the difference between unmanaged and managed migration:

"There is an idea that the departure of Colonists from the Old Country is generally attended with

a vast amount of confusion, a multitude of unwieldy bundles and packages, a crowd of ill-assorted human beings jostling one another in hopeless discomfort, tears, and boisterous attempts at fictitious merriment. . . . [It] is certainly not a true picture of colonization as conducted by any of the well-known societies now responsible for so much of the arterial blood of the British Empire—its men, women, and children. Perhaps this is especially noticeable in the work done by the Societies for the protected Emigration of women."

—Caryn Neumann

Source

Lisa Chilton, *Agents of Empire: British Female Migration to Canada and Australia, 1860–1930* (Toronto: University of Toronto Press, 2007), 54.

British under Cecil Rhodes occupied Rhodesia in 1890 and almost immediately began to encourage white immigration to the land. A parliament controlled by white British settlers gave preferences to whites in all aspects of life, including access to land, education, health, business loans, and training. Social segregation reinforced the superior position of whites in the country. Despite these advantages, Great Britain had limited success in enticing whites to move to Rhodesia. By 1904 the white population of Rhodesia stood at 68,954, almost exclusively of English heritage.

Portugal did not support emigration to the same extent as the government of Great Britain, partly because so many Portuguese left that the country suffered from the drain. Little of this emigration went to Africa, with most Portuguese opting for Brazil. Only about 50 emigrants per year embarked to Portuguese Africa during the last quarter of the nineteenth century. From 1901 to 1906 this number went up to 2,033, a modest number compared with the total average of 25,000 departures from Portugal. France, as a continuation of its rivalry with Great Britain, established colonies in Senegal, Mauritania,

Guinea, French Somaliland, Mali, Ivory Coast, Benin, Niger, and Chad. Its longest-lasting African success came in Algeria, but relatively few French settled in this country. As a result, France simply did not have the population to establish a strong grip on Algeria.

—Caryn Neumann

Bibliography

- Chilton, Lisa. *Agents of Empire: British Female Migration to Canada and Australia, 1860s–1930*. Toronto: University of Toronto Press, 2007.
- Cohen, Robin, ed. *The Cambridge Survey of World Migration*. New York: Cambridge University Press, 1995.
- Denoon, Donald, et al. *A History of Australia, New Zealand, and the Pacific*. Malden, MA: Blackwell, 2000.
- Emmer, P. C., and M. Morner, eds. *European Expansion and Migration: Essays on Intercontinental Migration from Africa, Asia, and Europe*. New York: Berg, 1992.
- Grant, Robert D. *Representations of British Emigration, Colonisation, and Settlement: Imagining Empire, 1800–1860*. New York: Palgrave, 2005.
- Mlambo, Alois. "Building a White Man's Country: Aspects of White Immigration into Rhodesia up to World War II." *Zambezia* 2 (1988): 123–146.

Mlambo, Alois. "Some Are More White Than Others: Racial Chauvinism as a Factor in Rhodesian Immigration Policy, 1890–1963." *Zambezia* 2 (2000): 139–160.

Migrant Workers and Worldwide Railroad Construction— The Navvies

The term "navvies" was originally used to describe migrant construction laborers in Britain and in many other parts of the world in the late eighteenth and nineteenth centuries. Although not all navvies were immigrants, many of the navvies were Irish or Scottish laborers who sought economic opportunities in construction in Britain, the United States, Canada, Australia, and other global destinations accessible by sea. These men would migrate throughout the world to wherever canals, railroads, and other transportation networks of the industrial revolution were needed. They lived in temporary camps alongside the work sites.

The word "navvy" is derived from "navigator," a nickname for not only the men who worked on canals at the end of the eighteenth century but also a slang term for the canals themselves. Another nickname used for navvies was "bankers," a term originally for the men who had worked on constructing seawalls. Navvies were distinguished from other laborers by the difficult and dangerous work they performed, their migrant lifestyle, and the notoriously riotous social customs in which they took part.

As the nature and technology of the public works projects changed, navvies migrated to new locations and learned new skills. First, from the 1780s to 1830, much of the work focused on excavation for canals, such as the Erie Canal in the United States. Next, from the 1830s to the 1880s, considered the heyday of the navvy, efforts turned to constructing the vast network of railroads in America and the British Empire. Their primary role in this system was one of excavation and hauling earth from one location to another. During the last phase, from the 1880s to the 1930s, workers turned their efforts to other modern public works projects such as reservoirs.

The migration of workers was both possible and necessary because most of the projects required plentiful unskilled labor. The locations of the work did not typically enjoy a large enough local population willing to do menial labor in grueling or dangerous conditions. For example, the most common form of excavation was embanking, in which the navvies moved soil to the course of the railroad tracks to build up the land where the route was too low to avoid a steep gradient. Blasting and tunneling were common tasks as well. Whether jobs were more specialized, such as bricklaying, or more menial, such as leading horses or guiding buckets of muck on cables, the conditions were generally dangerous, difficult, and temporary enough to dissuade locals from participating.

The hierarchical distribution of responsibility and reward at each work site encouraged navvies to complete their work efficiently and with quality. A system of subcontracting developed in which bosses financially penalized late projects. This pressure ensured that every worker had a stake in the success of a project. Subcontractors hired foremen, called gangers, to manage the laborers themselves. Navvies respected some gangers more than others, and for those they respected worked harder or were at least less confrontational.

Despite navvies' satisfaction in their tedious work, frustration over economic hardships or civil and religious persecution that initially drove many of the navvies to migrate created an environment of limited congeniality. The navvies valued their independence above all else. Although they were often kind to each other, they purposefully avoided befriending other navvies. To ensure this social distance, men purposefully rotated where they lived in order not to develop too close ties with one another and arranged to sleep in different dwellings than those of their co-workers. Similarly, if family members worked in the same navvy camp, they tended to live and work separately. Some of the men were independent by nature and avoided social ties because they did not wish to be obligated in any way to friends or family members. In addition, the tendency to avoid close ties might also have been related

to a sense of shame felt for the lowly nature of the work being done, regardless of the frequent boasting and bravado that accompanied their drinking.

Navvies prided themselves in being able to perform the most dangerous jobs. They tended to destroy any machines they encountered that threatened to cut out future work, even those designed to do some of the more dangerous work. In some cases an injury or a death would leave a family without a breadwinner. Although most navvies traveled without families, a minority did travel with their families. Despite navvies' usual tendency toward limited sociability, in such cases a sense of empathetic responsibility prompted navvies to contribute to funds for widows and orphans. Injured or sick navvies were also often given a sick pay supplied by other navvies.

The migrant navvy camps sprang up wherever there was work. Sometimes a contractor built the initial barracks. After those were full, navvies continued to build shanties and sod huts, or they squatted in windmills, old forges, or abandoned kilns. Labor reform movements encouraged better living conditions for the workers in the latter part of the century, and some of the camps eventually included a hospital or a school.

The communities around these locations struggled with the perception and reality of drunken fighting men. Navvies were notorious for traipsing through town and taking some of the local women with them when they left. Furthermore, ethnic tensions led to struggles for work and intense fighting. The Irish, who were perceived to work for lower pay than other groups, were often the targets of Scottish and English mobs of laborers. These battles were serious and persistent.

Despite the negative image that the navvies had in communities through which they passed, there is no doubt that they accomplished amazing feats of workmanship. They built the railroads that were the infrastructure of the British Empire and the rest of the industrialized world in the nineteenth century. Regardless of their reputed antisocial behavior, they left behind a legacy that includes invaluable seawalls, canals,

railroads, roads, viaducts, reservoirs, and even such landmark structures as the Crystal Palace.

—Steven Sams

Bibliography

- Brooke, David. *The Railway Navy: "That Despicable Race of Men."* North Pomfret, VT: David and Charles, 1983.
- Coleman, Terry. *The Railway Navvies: A History of the Men Who Made the Railways.* London: Pimlico, 2000.
- Conder, F. R. *The Men Who Built Railways.* London: Thomas Telford, 1983.
- Morris, Michael. "Towards an Archaeology of Navvy Huts and Settlements of the Industrial Revolution." *Antiquity* 68(260) (September 1994): 573–584.
- Sykes, A. J. M. "Navvies: Their Social Relations." *Sociology* 3(2) (1969): 157–172.

Jewish Migration to Palestine

Oppression and persecution of the Jews in eastern Europe in the latter part of the nineteenth century gave impetus to the Zionist emigration for Palestine and led to the establishment of Petach Tikva, the first agricultural community (i.e., Zionist settlement) in Palestine in 1878. Jews accounted for 24,000 of the 400,000 residents of Palestine in 1880, but that number more than doubled after the initial wave of immigration (the First Aliya) of eastern European Zionists. These immigrants settled on small farms throughout Palestine and at first employed Arab labor. By 1895 Jews accounted for 47,000 of the 500,000 residents of Palestine and owned 0.5 percent of the land. The Jewish Colonization Association began aiding Zionist settlements in Palestine in 1896.

In 1897 Austrian-Jewish journalist Theodor Herzl convened the First Zionist Congress in Basel, Switzerland, in response to increasing European anti-Semitism following the Dreyfus Affair in France in 1894 and his call for a Jewish state in his influential short book *Der Judenstaat* (The Jewish State), published in 1896. The First Zionist Congress created the World Zionist Organization (WZO), elected Herzl as the first WZO president, authorized the WZO to establish branches in all countries with consequential Jewish populations, and determined Zionism's

goal to be the creation of a legal (guaranteed) Jewish homeland in Palestine (Israel). The WZO was formed to unite the Jewish people politically so that Judaism acting as one organic whole might exert more power in addressing the plight of world Jewry and in creating a homeland in Israel (Palestine) for Jews.

At the First Zionist Congress, the political Zionism of the Jews of western Europe merged with the settlement activities in Turkish Palestine, promoted and successfully engaged in by the eastern European Hovevei Zion, organizations that are now considered the forerunners and foundation-builders of modern *Zionism*. The WZO created companies and institutions designed to accomplish its policies, the most prominent among many being the Jewish Colonial Trust, established in 1899; the Jewish National Fund, established in 1901; the Anglo-Palestine Bank, the Jewish Colonial Trust's subsidiary, established in 1902; and Keren Hayesod (The Foundation Fund), established in 1920. The Jewish National Fund was created to acquire land in Palestine. Keren Hayesod funded Zionist and Yishuv (Jewish communities in Palestine) activities and created companies such as the Palestine Electric Company, the Palestine Potash Company, and the Anglo-Palestine Bank.

The WZO's actions promoted and facilitated the Second Aliya (literally "Ascent") between 1904 and 1914, which brought primarily secular Jews (including socialists) into Palestine and raised the Jewish population to 6 percent of the Palestinian total. The many farms and factories bought or built by the Baron Edmond de Rothschild Foundation were insufficient to employ this number of people, and so many participants in the Second Aliya eventually left Palestine.

Fearing that the publication in 1904 of "The Awakening of the Arab Nation in Turkish Asia," by the Syrian Christian Najib Azoury, which publicly warned the Arabs of the Zionist plan for Palestine, would hamper its plans, the 1904 Fourth Zionist Congress determined that there was a need for an alternative Jewish national homeland in Argentina. However, the 1906 Fifth Zionist Congress reaffirmed Palestine as the future Jewish national homeland. The Arabic-language newspaper *Al-Karmil* was founded in 1908 in Haifa with the express purpose of

opposing Zionist colonization, but this did not prevent the 1909 establishment of the first Zionist kibbutz (collective) farm. By 1910, Arabic-language newspapers in Beirut and Damascus sounded the alarm over Zionist land acquisitions and the growing Jewish population, and in 1911 the Arab newspaper *Filastin* began calling Arabs living in Palestine "Palestinians." One of the earliest books in Arabic, Najib Nassar's *Zionism: Its History, Objectives and Importance*, was also published in 1911. The Jews accounted for 85,000 (12 percent) of the 700,000 total population of Palestine by 1913, the same year the First Arab Nationalist Congress met in Paris.

All these developments set the stage for the series of steps that led to the founding of the independent state of Israel after World War II.

—Richard M. Edwards

Bibliography

- Avi-Yonah, Michael. *The Jews of Palestine: A Political History of Palestine from the Bar Kokhba War to the Arab Conquest*. New York: Schocken, 1984.
- Biale, David. *Cultures of the Jews: A New History*. New York: Schocken, 2002.
- Bright, John. *A History of Israel*. 4th ed. Louisville, KY: Westminster John Knox Press, 2000.
- Dimont, Max. *Jews, God and History*. New York: Simon and Schuster, 1962.
- Pappe, Ilan. *A History of Modern Palestine: One Land, Two Peoples*. Cambridge: Cambridge University Press, 2003.

Nineteenth-Century Gold Rushes

Nineteenth-century gold discoveries sparked gold rushes, manias that rivaled, if not eclipsed, the major speculative crazes that have periodically rocked financial markets. England adopted the gold standard following the Napoleonic Wars, and the United States was on a de facto gold standard after 1834. The discovery of gold in California in 1848 and in Australia in 1851 increased the world's monetary gold reserves from 144 million pounds sterling in 1851 to 376 million pounds sterling in 1861, an increase of 161 percent over a ten-year period. Gold discoveries enabled the United States to become an official gold standard country. They also supplied the monetary reserves for the world to adopt

the gold standard in the last quarter of the nineteenth century. Following the gold discoveries, a silver monetary standard became the mark of a low-income country.

On January 4, 1848, James W. Marshal found gold on land in California owned by a Swiss man named Sutter. The discovery occurred nine days before the United States signed a treaty with Mexico making California, New Mexico, Arizona, Nevada, and Utah part of U.S. territory. The secret soon leaked out, though not in time to prevent the signing of the treaty, and gold fever infected the residents of San Francisco and Monterey, most of whom went straight to the gold mines, leaving their houses empty. Workers left employers, and employers decided to join their workers mining for gold. Soldiers deserted, and ship captains were afraid to make port for fear that sailors would leave for the gold mines. Some ships lay stranded in harbors, deserted by sailors who took up prospecting. Mexican miners and Native Americans were brutally and sometimes violently excluded from the search for gold. In 1850 the California legislature enacted the Foreign Miners' Tax of 1850, which put a \$20 monthly fee on foreign miners. Between 1848 and 1850 the population of San Francisco multiplied twenty-five-fold, from 1,000 to 25,000. Wages at unheard-of levels lured immigrants, who were content to leave the actual mining to others and take jobs as cooks or fill other skilled positions. The prices of life's necessities soared. Deck cabins detached from deserted ships as well as tents and wood shanties furnished housing for miners and fortune seekers.

The repercussions of the Australian gold discoveries were milder compared to the California experience. An emigrant who had already prospected in California began in 1851 searching for gold in the Northern Bathurst region of Australia, an area that geologists believed contained gold. Gold was discovered, but the mines were scattered. This factor, coupled with a well-established sheep industry, blunted the demographic effects of the strike.

The last years of the nineteenth century saw another round of gold discoveries. America's monetary gold stock more than doubled between 1890 and 1900, thanks to discoveries in Alaska, northeast Canada, and South Africa. A

new cyanide process for extracting gold from low-grade ores also added to gold production. In 1886 fortune seekers from around the world descended upon South Africa after an Australian miner, George Harrison, came upon a rocky outcrop of gold. Within a decade South Africa accounted for 23 percent of the world's gold production. What was called Ferreira's Camp went from a dusty miners' village to the largest city in South Africa. Along the way, it changed its name to Johannesburg. In 1896 gold was discovered in the Klondike area of Canada along the Yukon River, on a scale comparable to the California gold discoveries. Twelve dollars' worth of gold could be separated in a dish full of sand. Thirty thousand prospectors, crossing a mountain

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Advertisement for one of the ships that brought prospectors from the eastern seaboard to participate in the California gold rush. Although the company promised large profits and a safe investment, few prospectors struck it rich. (Joseph Henry Jackson, ed. Gold Rush Album, 1949)

range in Arctic conditions, arrived after heroic trials of endurance that could match the hardships of any expedition or human migration in history. Dawson City was born. Its resident miners held out against disease and starvation. At the depth of the misery, salt fetched its weight in gold. Gold was found in other provinces, and Canada became the world's third-largest gold producer.

Gold mining in Alaska dates back to the 1870s. In 1880, mining prospectors Joe Juneau and Richard Harris learned where to find gold from Chief Kowee, an Auk Indian who lived on Admiralty Island. Their strike touched off the Juneau gold rush and led to the founding of the city of Juneau. Another Alaskan gold rush, this one noted for lawlessness and starvation, occurred in 1886 with the discovery of gold on Franklin's Bar on the Fortymile River. The Klondike gold rush of 1896 further fueled the mania for gold in Alaska. Nome, Alaska, became the scene of a major Alaskan gold rush in 1898–1899, as did Fairbanks, Alaska, in 1901.

Under the gold standard a shortage of monetary gold stocks led to falling prices between 1875 and 1895, making gold that much more valuable. As prices fell, the scramble for gold increased in intensity. Gold discoveries eased monetary tightness, allowing prices to rise and reducing the value of gold and the intensity of the search for gold.

—Charles Larry Allen

Bibliography

- Allen, Larry. *The Encyclopedia of Money*. Rev. ed. Santa Barbara, CA: ABC-CLIO, 2009.
- Littlepage, Dean. *The Alaska Gold Rush*. Sebastopol, CA: Albion Publishing Group, 1995.
- Vilar, Pierre. *A History of Gold and Money, 1450 to 1920*. Translated by Judith White. London: Verso, 1991.

The Great Trek

The Great Trek, the movement of the Boers from Cape Colony to lands beyond the Orange and Vaal rivers, was an attempt to preserve a way of life that became, for their heirs, equivalent to the movement of a chosen race to their promised land. It served to reinforce not only the

conviction they had of their superiority to black Africans, but also the importance of avoiding contamination by ideas from other white people holding different views.

The willingness of the Boer population in the British colony at the Cape to tolerate the changes made between 1806 and 1836 was finite. Piet Uys, a leader of the Great Trek, said: "We have been deprived of all our domestic authority over the apprenticed coloureds in our homes and on our farms, and this has made these coloureds so insolent that we are no longer secure in our property and even our lives." It was not only the abolition of slavery in 1834, but also acts such as the enforced use of English in schools and in courts of law and the increasing shortage of land that drove them to leave the colony. From 1835, for almost ten years, some 14,000 people of Dutch descent migrated inland. In carving new territory for themselves the Voortrekkers, as they were known, encountered black Africans, some of whom were engaged in building empires of their own. Battles were fought with the Ndebele in the north by Hendrick Potgieter, and Piet Retief and Andries Pretorius struggled with the Zulu in the east. The decisive Battle of Blood River and the associated vow, known as the Covenant, exerted a deep influence on the Boer people.

The action of trekking, moving on when conditions were no longer acceptable, did not cease in the nineteenth century. In the 1920s Deneys Reitz, then a government minister, encountered Trek Boers in Angola who, dissatisfied with their treatment by the Portuguese, were driving their great ox-wagons towards the Congo.

—Martin Marix Evans

Bibliography

- Etherington, Norman. *The Great Treks: The Transformation of South Africa, 1815–1854*. New York: Longman, 2001.
- Evans, Martin Marix. "Great Trek, The." In *Encyclopedia of the Boer War*. Santa Barbara, CA: ABC-CLIO, 2000.
- Ransford, Oliver. *The Great Trek*. London: Murray, 1972.
- Reitz, Deneys. *No Outspan*. 1942. Reprint, Prescott, Arizona: Wolfe Publishing, 1994.
- Troup, Freda. *South Africa: An Historical Introduction*. London: Eyre Methuen, 1972.

Russian Migration to Siberia

Russian migration to Siberia was a long and slow-developing affair. Russians began crossing the Urals as early as the eleventh century to trade with natives they collectively called Iugriians. In 1582 the Cossack commander Ermak Timofeev led a small army of Cossacks and mercenaries against the Tatar khanate of Sibir, centered on present-day Tiumen. This event began Russia's lightning advance eastward, since with the khanate's demise there remained no organized polity between Moscow and the Pacific Ocean. By 1700 Cossack explorers were already in Kamchatka, and Moscow could claim a territory larger than North and South America combined. Explorers paved the way for state servitors, fugitive serfs, and exiles to follow.

The initial impetus for expansion was Moscow's dependence on the lucrative fur trade for which natives such as the Buriats, Yakuts, and Chukhchi were forced to provide tribute (*iasak*). By Peter the Great's reign (1689–1725) many fur-bearing species were already nearing extinction, so the government increasingly focused on exploiting Siberia's mineral wealth and securing the territory through colonization. Such efforts required large numbers of settlers: laborers for metallurgical works in the Urals, Altai, and Transbaikalia; soldiers to protect these sites against Kalmykh and Kirgiz armies as well as a feared invasion from China; and peasant agriculturalists to support these non-food producers.

The enservment of a growing proportion of European Russia's population discouraged emigration, however, and the autocracy accordingly responded in two ways, first by increasing the number of exiles to Siberia and second by appealing for foreign colonists. Whereas foreigners were happy to settle along the Volga and in southern Russia, few agreed to go to Siberia. As for the growing numbers of exiles, many were innocent serfs handed over by their owners in exchange for reductions against military levies and other inducements. A 1760 imperial ukase (tsar's proclamation), for example, rewarded landowners with 20 rubles for each male under the age of 15 and 10 rubles for each female. Catherine the Great (r. 1762–1796) also deported

GROWTH OF SIBERIAN POPULATION, 1763–1911

	Natives	Russians and Foreigners	Total
1763	260,000	420,000	680,000
1797	363,362	575,800	939,162
1815	434,000	1,100,500	1,534,500
1858	648,000	2,288,036	2,936,036
1897	870,536	4,889,633	5,760,169
1911	972,866	8,393,469	9,366,335

Source: Donald W. Treadgold, *The Great Siberian Migration: Government and Peasant in Resettlement from Emancipation to the First World War* (Princeton, NJ: Princeton University Press, 1957), 32, Table 1.

—Andrew Gentes

large numbers of Old Believers (Russian religious dissenters), who mostly settled in Transbaikalia and raised cattle.

During the 100-year period ending in 1917 more than 1 million people were forcibly removed to Siberia, yet the majority of exiles, convict or not, failed to become productive settlers. Some were assigned to penal labor sites in Nerchinsk and elsewhere, others were sent to penal colonies near Irkutsk and (after 1884) on Sakhalin island, but most were relegated to a squalid life in unwelcoming peasant villages. Tens of thousands belonged at any given time to the caste of vagrants known as *brodiagi*, who contributed to the region's soaring crime rates. Tsarism failed throughout its existence to ameliorate Siberia's function as the nation's prison.

Nonexiles nevertheless consistently constituted the majority of Siberia's population, which as of 1796 numbered 412,000 Russian males, some the offspring of exiles, others retired soldiers, servitors, traders, or fugitive serfs. This cohort expanded to almost 900,000 by 1815, largely owing to a demographic shift spurred by Napoleon's 1812 invasion. Serfdom continued to limit migration, however, as did bureaucratic lethargy, which explains the absence of a coherent settlement policy even after the 1861 emancipation. Logistics also proved a challenge, as Siberia lacked good roads, its rivers were often

frozen or overflowing, and huge distances had to be traversed between supply points. Migration did not appreciably accelerate until Siberia's first railroads began to appear in the 1880s.

The Trans-Siberian railroad, whose construction began in 1891 under the urging of Finance Minister Sergei Witte, improved access to the region, including especially the Russian Far East. More than 190,000 people migrated in 1896 alone. However, the railroad's many technical limitations prevented it from transferring sufficient numbers of troops during the Russo-Japanese War (1904–1905), and its economic benefits failed to meet expectations. By the time of the outbreak of the 1917 revolution, Siberia had a population of over 9 million Russians and foreigners.

—Andrew Gentes

Bibliography

- Gentes, Andrew A. "Towards a Demography of Children in the Tsarist Siberian Exile System." *Sibirica* 5(1) (2006): 1–23.
- Marks, Steven G. *Road to Power: The Trans-Siberian Railroad and the Colonization of Asian Russia, 1850–1917*. Ithaca, NY: Cornell University Press, 1991.
- Treadgold, Donald W. *The Great Siberian Migration: Government and Peasant in Resettlement from Emancipation to the First World War*. Princeton, NJ: Princeton University Press, 1957.
- Wood, Alan. "The Use and Abuse of Administrative Exile to Siberia." *Irish Slavonic Studies* 6 (1985): 65–81.

Westward Migration in the United States

Since the founding of the British colonies on the eastern seaboard of North America, settlers attempted to spread west across the continent. By the mid-eighteenth century, much of the eastern coastline and the adjacent interior had been settled, and colonists ventured into the Ohio and Mississippi river valleys. This led to conflict with the French, who claimed the territory, and with Native Americans, who had lived there for centuries. However, France relinquished these territorial claims in 1763 after its defeat by the British in the French and Indian War. After defeats in the War of 1812, the Creek War, and the Black Hawk War, Native Americans were

subject to forced removal beginning in 1829 under President Andrew Jackson. By 1795 over 200,000 white Americans lived in this region. Their numbers climbed to over 1 million by 1810 and more than 6 million by 1850.

A more significant stage of westward migration commenced in the mid-nineteenth century as U.S. territory expanded to the Pacific coast. This expansion was achieved through the Louisiana Purchase (1803) and Mexico's cession (1848) of its lands north of the Rio Grande following the Mexican-American War. In addition, the United States acquired territory in Florida and the Pacific Northwest from Spain and Great Britain, respectively. Between 1840 and 1870, over 300,000 Americans migrated to the West, many of them making the arduous journey in caravans of covered wagons. Most individuals and families migrated to the West for economic reasons. Many were family farmers of modest means who lived in the Midwest or Upper South. However, the largest single group of migrants, nearly 120,000 (mostly single men), came to profit from the California gold rush, which started in 1849. Others sought greater personal freedom. The Mormons, for example, sought the freedom to worship as they pleased. African Americans, many of them newly freed from slavery, migrated to towns on the Great Plains hoping for more opportunities. By 1880, 15,000 African Americans lived in the West. Though some found a greater degree of equality with whites, discriminatory laws and practices denied full citizenship and restricted their opportunities for decades.

For many migrants, the biggest attraction was the land reserved for public distribution by the federal government. The Homestead Act (1862) granted 160 acres (65 hectares) free to any citizen or immigrant qualified for naturalization who agreed to build a house on the land, live there, and farm it for five years. The law also allowed settlers to buy the land outright after they had lived on it for six months at the nominal price of \$1.25 an acre. Though this legislation benefited many white settlers, racial restrictions disqualified most nonwhites from the massive land distribution. Furthermore, Mexicans with land grants awarded by the Mexican government or the Spanish Crown were frequently dispossessed through the burden of

lengthy and expensive legal battles. Between 1862 and 1890, approximately 2 million people settled on nearly 375,000 farms claimed through the Homestead Act.

The passage of the Homestead Act corresponded to the construction of the transcontinental railroad. Completed in 1869, it linked Omaha, Nebraska, with Sacramento, California, transforming a journey that had taken several months by wagon or stagecoach into a five-day train trip. Covered wagons virtually disappeared after 1870, and the convenience of railroad travel encouraged further settlement.

Despite the promise of a better life in the West, the decision to migrate was not easy. Migrants and settlers faced a series of Indian wars in the second half of the nineteenth century, though Native American power in the West was subdued by 1890. The physical challenges of the terrain also made the journey treacherous. Nearly 10,000 migrants died on the westward trails, with disease causing 90 percent of all deaths. Moreover, the journey was costly. Although the Homestead Act offered free land, it cost between \$750 and \$1,500 to travel to Oregon or California and establish a farm in the 1840s and 1850s. Thus, the very poor were unlikely to migrate.

Bibliography

- Billington, Ray Allen, and Martin Ridge. *Westward Expansion: A History of the American Frontier*. Albuquerque: University of New Mexico Press, 1982.
- Limerick, Patricia Nelson. *The Legacy of Conquest: The Unbroken Past of the American West*. New York: Norton, 1988.
- Merk, Frederick. *History of the Westward Movement*. New York: Knopf, 1978.
- West, Elliott. *Growing Up with the Country: Childhood on the Far Western Frontier*. Albuquerque: University of New Mexico Press, 1989.
- White, Richard. *"It's Your Misfortune and None of My Own": A New History of the American West*. Norman: University of Oklahoma Press, 1991.

Immigration Restrictions in the United States and White Settler Colonies

During the second half of the nineteenth century and the early twentieth century, the United

States most self-governing colonies in the British Empire passed laws to restrict the immigration of Asians, mainly from China, India, and Japan. The European settlers in these colonies, having taken the land from the indigenous inhabitants, sought to avoid the arrival of non-Europeans, whom they perceived as racial inferiors and economic competitors.

The first immigration restriction laws were passed during the Australian gold rush. A small but steady flow of Chinese, mostly from Guangdong and Fujian provinces, had been arriving in eastern Australia during the 1840s, but this number increased with the discovery in 1854 of rich gold fields in the colony of Victoria. In 1855 the Victorian Parliament limited the number of Chinese migrants a ship could carry to one person per 10 tons of ship's weight and levied a poll or head tax of £10 on each arrival. The neighboring colonies of southern Australia and New South Wales passed similar laws to prevent Chinese from landing in their territory and then traveling overland to Victoria. When the gold rush declined in the 1860s, all three colonies repealed their legislation.

Chinese immigration to the west coast of North America led the U.S. Congress to pass the Chinese Exclusion Act of 1881. British Columbia likewise enacted a series of racist laws from 1878. Some of these laws were struck down by the government of Canada, but then in 1885 Ottawa passed an act to restrict Chinese immigration and introduced a head tax. By 1903 this tax had been increased to \$300 per person, and in 1906 Newfoundland established a similar levy. The American legislation led the Australian colonies to fear that the American ban on Chinese arrivals would lead to an influx to Australia. During the 1880s the Australian colonies reintroduced poll taxes and limits on the number allowed to be landed per ship's tonnage. Western Australia enacted immigration restrictions for the first time but still allowed Chinese to land in the underpopulated north of the colony.

European settlers in the southern African colony of Natal targeted their immigration restriction laws against Indians. In 1896 the government stripped Indians of voting rights on the grounds that the country they came from did not have a parliament (there is no record

that this argument was used to similarly prevent Russian migrants from voting). In 1897 Natal introduced a law requiring migrants to be able to pass a dictation test in a European language. The dictation test soon became the accepted method to restrict non-European migration throughout the British Empire. In 1902 neighboring Cape Colony copied the Natal legislation. British Columbia had done the same in 1900, although again the Canadian government disallowed the law. New Zealand adopted the dictation test in 1907.

The creation of the Commonwealth of Australia in 1901 enabled the passing of national laws to enforce the “White Australia” policy. The Immigration Restriction Act was passed in 1901, although it was not, as has sometimes been suggested, the first law created by the federal Parliament. Once introduced, the dictation test rarely had to be enforced, as it deterred most Asian migrants from even attempting to sail to a country where it was in place.

The Republic of Transvaal and the Orange Free State had introduced immigration restrictions toward Indians while they were independent states, and these remained in place after

British annexation. After the establishment of the Union of South Africa in 1910, more anti-Indian laws were passed. Mohandas Karamchand (Mahatma) Gandhi began his career of civil disobedience by leading the protests against this legislation and eventually forced the government of South Africa to compromise.

—John Connor

Bibliography

- Connor, John. “Immigration Restrictions.” In *Encyclopedia of the Age of Imperialism: 1800–1914, A–K*, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood, 2007.
- Hexham, Irving. *The Irony of Apartheid*. New York: Edwin Mellen, 1918.
- Macdonald, Norman. *Canada: Immigration and Colonization, 1841–1903*. Toronto: Macmillan, 1966.
- Markus, Andrew. *Australian Race Relations, 1788–1993*. Sydney: Allen and Unwin, 1994.
- Rich, Paul B. *Race and Empire in British Politics*. New York: Cambridge University Press, 1990.
- Saxon, Alexander. *The Indispensable Enemy: Labor and the Anti-Chinese Movement in California*. Berkeley: University of California, 1971.
- Windschuttle, Keith. *The White Australia Policy*. Sydney: Macleay, 2004.

■ Introduction: Exploration

Although Europe’s “age of exploration” is usually identified with the sixteenth and seventeenth centuries, it would be more accurate to say that the discoveries of this era were but the first stage of a much longer era of exploration that lasted until the early 1900s, when the American Robert Peary reached (so he claimed) the North Pole in 1909 and the Norwegian polar explorer Roald Amundsen reached the geographic South Pole in 1911. By 1750, the work of exploring the globe was still far from complete. Explorers of the Age of Columbus had confirmed the earth’s great size, revealed the existence of a “new world” in the Americas, and opened up sea-lanes that linked the coastal peoples of most parts of the world. It was left to explorers of the eighteenth and nineteenth centuries to dispel persistent myths such as the

existence of an unknown southern continent (Terra Australis Incognita) and the possibility of rounding North America by a Northwest Passage; they also explored, mapped, and studied the African interior, much of North and South America, central Asia, most of Australia, the islands of the Pacific Ocean, and the regions of the northern Arctic and Antarctica. One constant in world exploration between 1500 and 1900 is that the explorers themselves and their sponsors were overwhelmingly Europeans, with some notable contributions made by Americans, Canadians, and Australians in the eighteenth and nineteenth centuries. Another constant was the complexity of these explorers’ motives.

Famously, the explorations of the age of Da Gama, Columbus, and Magellan were motivated by “God (making converts to Christianity and

hurting the Muslims), Gold, (economic gain), and Glory” (seeking personal fame and national prestige). Of these three, religion no longer was a significant inspiration for exploration in the nineteenth and early twentieth centuries. Although the nineteenth century saw an outburst of European and American missionary activity, much of it was concentrated in India, China, and the Middle East, areas that needed no further exploration. Missionaries serving in Africa and Oceania benefited from the discoveries of explorers and the attendant publicity, but neither the sponsors of exploration in these regions nor the explorers themselves saw themselves primarily as doing God’s work. A notable exception was David Livingstone (1813–1873), a Scottish Congregationalist minister who explored central and eastern Africa in the 1850s, 1860s, and early 1870s and became one of the great heroes of Victorian Britain. He hoped that his explorations and discoveries would pave the way for other Britishers to establish a presence on the continent and bring “God, Commerce, and Civilization” to the Africans.

The pursuit of economic gain persisted as a motive for exploration in the eighteenth and nineteenth centuries, but it was less of a factor than in earlier centuries, when explorers dreamed of vast fortunes to be made from the discovery of gold and new trade routes to Asia. In the eighteenth century similar dreams of wealth kept alive the searches for the “unknown southern continent” and northwest and northeast passages to Asia, but with the abandonment of such efforts in the nineteenth century, economic gain receded in importance. King Leopold II of Belgium provides the exception in this case. He hired the American journalist and explorer Henry Stanley to explore the Congo River basin in the 1870s as part of his grandiose plan to establish personal control over a vast commercial empire in tropical Africa. Other examples of economic motives for exploration include anticipated royalties from books, expeditions to investigate potential routes for railroad and telegraph lines, and publicity stunts such as the sponsorship of Stanley by the *New York Herald* to find the “lost” David Livingstone in Africa. More striking, however, is the number of expeditions that were undertaken despite

having no conceivable economic benefits. These include explorations of the Australian interior, the earth’s polar regions, and the deserts of Africa, Arabia, and central Asia.

If religious and economic motives declined in importance, the prospect of winning fame and glory remained as strong as ever. Captain James Cook, whose voyages to the Pacific between 1768 and 1779 ushered in a new era in the history of exploration, wrote in his journal during his first Pacific voyage that “Was it not for the Pleasure which Naturly [*sic*] results to a man from being the first discoverer, even was it nothing more than Sand or Shoals, this kind of Service would be insupportable especially in far distant parts like this, Short of Provisions and almost every other necessary.” Many others besides Cook were drawn to exploring for no other reason than to be the “first discoverer” of something: the Unknown Southern Continent, the source of the Nile, the course of the Niger, the North and South Poles, an ancient “lost city,” or some new natural wonder.

In admitting to the satisfaction he anticipated for being the first to discover something new, Cook was expressing a dream of countless earlier explorers; in other respects his voyages to the Pacific show that exploration was about to enter a new stage of its history. His first voyage was sponsored not just by the Royal Navy, which had an ongoing interest in the wind patterns, ocean currents, and islands of the Pacific, but also by the Royal Society of London, Britain’s leading scientific society. His primary mission was to take astronomical measurements on the island of Tahiti when Venus passed between the earth and the sun. This was part of a worldwide effort to observe the transit of Venus from a number of locations to better calculate the distance between the earth and the sun. He also had on board the notable botanist Joseph Banks, who along with two Scandinavian colleagues discovered, collected, and described hundreds of new plants from the islands they visited.

Cook’s contributions to science and the emerging academic discipline of geography inspired dozens of similar expeditions to the Pacific by the English, French, Russians, and Spaniards in the late eighteenth and early nineteenth centuries. The Spaniards also supported an ambitious

scientific expedition led by Alessandro Malaspina, who between 1789 and 1794 sailed around the globe to collect information and map Spanish possessions. His goal was not the expansion of Spanish power or the advancement of Spanish economic interests but rather the “progress of navigation, geography, and of humanity.” His voyage generated a tremendous amount of geographical and scientific information and brought back no less than 16,000 plants and seeds for the Royal Botanical Garden in Madrid. During the nineteenth century Britain’s Royal Geographical Society, France’s Société de Géographie, and many similar organizations promoted and subsidized exploration around the world. Their success can be measured by the fact that in 1895 delegates to a meeting of the International Geographical Congress, an organization founded in 1871, declared that only one more great geographical challenge remained: the exploration of Antarctica. They urged scientific societies throughout the world to take up the challenge, and in response no fewer than 16 Antarctic expeditions were launched before the start of World War I. On December 14, 1911, the Norwegian Roald Amundsen and his men reached the South Pole, bringing to a close an era of exploration and discovery lasting more than 400 years. After planting the Norwegian flag, they returned to their tent and celebrated with cognac and cigars.

—James H. Overfield

Explorations of Africa

Prior to the nineteenth century, the interior of Africa was largely unknown to Europeans. Small colonies and trading posts dotted the coastline, but there was little incentive or desire to move inland. This began to change in the early nineteenth century for several reasons. The prevalence of Enlightenment ideals spurred a desire to comprehend the world, and the increasing prestige of science made ignorance of the interior of Africa intolerable. Another important impulse was the increasing tempo of missionary work, as missionaries sought to bring Christianity and civilization to the inhabitants of Africa. Perhaps paramount, the exploration of Africa opened the possibility of increased trade and commerce. These motives

intermingled with each other and provided a strong impetus for the exploration of Africa.

The beginning of European exploration of Africa is often dated from 1788, when a dozen wealthy Londoners founded the Association for Promoting the Discovery of the Interior Parts of Africa (known as the African Association), committed to discovering the origin and course of the Niger River and the location of the city of Timbuktu, the “lost city” of gold. The members of the organization were motivated by a desire to advance scientific knowledge and to end the slave trade, but the founders also were interested in commercial opportunities. Although explorers sponsored by the association never reached Timbuktu (this was accomplished by a major in the Royal Navy, Alexander Gordon Laing, in 1826), the Scotsman Mungo Park was the first European to view the Niger River in 1796. His *Travels to the Interior Districts of Africa* (1799) was translated into several languages and was widely read.

Among other early European explorers were the German missionaries Johannes Rebmann and Ludwig Krapf, the first Europeans to see Mount Kilimanjaro and Mount Kenya, in the late 1840s, and another German missionary, Heinrich Barth, who explored the Sahara. At the same time, the British missionary David Livingstone began his exploration of southern Africa, which included crossing the continent from west to east and traveling the Zambezi River. An important goal of European explorers was the discovery of the source of the Nile River. The expedition of Richard Burton and John Speke led to the European discovery of Lake Tanganyika and Lake Victoria in 1858, and on a later expedition with James Grant, Speke came to correctly believe that Lake Victoria was the source of the Nile. This claim remained disputed for some time, however, and Livingstone spent his last years in Africa searching for an alternative source of the Nile. Other important expeditions included those of the German Gerhard Rohlfs, who in 1867 traversed the Sahara to become the first European to cross Africa from the Mediterranean to the Gulf of Guinea; Germans Gustav Nachtigal and Georg Schweinfurth, who explored Sudan and central Africa; and Mary Kingsley of Britain, who explored parts of West Africa in the 1890s.

DAVID LIVINGSTONE

David Livingstone (1813–1873), perhaps the most famous European explorer of Africa, was a British missionary sent to southern Africa in the early 1840s by the London Missionary Society. He was soon drawn into the interior of central Africa in furtherance of his missionary work, and his explorations of the 1840s and early 1850s included becoming the first European to see the Victoria Falls. His discoveries made him famous and helped popularize the cause of African exploration and the bringing of civilization to the continent. He later focused on determining the source of the Nile River. During this journey he lost contact with the outside world, leading to his famous discovery by the reporter Henry Stanley in 1871, with the words “Doctor Livingstone, I presume.” Livingstone died two years later in Africa, still searching for the source of the Nile.

—Wesley Ferris

Scottish explorer David Livingstone holds a map of Africa. Portrait by Alonzo Chappel, from a photograph taken in 1867. (Library of Congress)



The initial European explorations of Africa were not directly linked to attempts by the Great Powers to gain new colonies on the continent, but the mapping of Africa did facilitate subsequent colonization, and some explorations of the late nineteenth century were closely related to efforts to expand European territory. This link was epitomized by the later explorations of Henry Stanley, who in the late 1870s solved one of the last great mysteries of African exploration by tracing the course of the Congo River to the ocean. This opened up the Congo to Europeans, and Stanley was later to play an important role in organizing the Belgian colonization of the region. By the end of the nineteenth century the exploration of Africa had been completed, and the knowledge thus gained proved vital in the colonization of the continent before the First World War.

—Wesley Ferris

Bibliography

- Hibbert, Christopher. *Africa Explored: Europeans in the Dark Continent, 1769–1889*. London, UK: Allen Lane, 1982.
- Ross, Andrew C. *David Livingstone: Mission and Empire*. London, UK: Hambledon and London, 2002.
- Stark, Peter. *At the Mercy of the River: An Exploration of the Last African Wilderness*. New York: Ballantine Books, 2005.

Explorations in Central and Southwestern Asia

Dormant and secluded during much of the early modern period, the vast region of central and southwestern Asia located between the 30th and 40th parallels, from Persia to Mongolia, recaptured the Western world's interest in the late eighteenth century when the region became

the world's last imperial frontier. Exploration played a central part in the complicated ballet of diplomatic maneuvers and military intimidation. Adventurers by nature, the explorers were trained as veterinarians, cartographers, archaeologists, businessmen, soldiers, ethnographers, geographers, and even spiritual leaders. They assembled impressive expeditions through immense hostile regions. Relying on extraordinary survival skills, strength, resiliency, and boldness, they navigated in and out of business, academia, adventure, politics, and public opinion. Their actions brought central Asia to the world's attention and shaped imperial ambitions.

By the time of the Russo-Persian Treaty of 1813, Britain and Russia were locked in a rivalry that lasted until the Anglo-Russian Convention of 1907. The first encounters took place in western central Asia. In 1812 the British East India Company sent William Moorcroft (1770–1825) to Bokhara to look for equine stock. Moorcroft continued without permission to Tibet, gathered fauna and flora specimens, and returned with maps and a theory of Russian imperial expansion from Afghanistan to Tibet that would influence British politics for the rest of the century. A second expedition to Bokhara in 1819 ended his career in the company after he initiated an unauthorized alliance proposal with the ruler of Ladakh to secure Kashmir, a region that Moorcroft considered a vital east-west trade link. He continued his explorations from Kashmir to Bokhara until his death in 1825, together with the young geographer George Trebeck (1800–1825). Alexander Burnes (1805–1841) followed in Moorcroft's footsteps to Bokhara and Tehran in 1832, exactly when the Russians, who had been trading furs, woolens, and cotton with central Asia since 1559, were moving closer to Afghanistan. Burnes became a victim of the first Anglo-Afghan War in 1841 along with explorer and intelligence officer Arthur Conolly (1807–1842), who coined the term "The Great Game" to describe the British-Russian rivalry.

After a lull of 20 years, explorers resumed their efforts east of Lake Balkash, in present-day Kazakhstan, following Russian exploration and expansion in eastern central Asia, from Tibet, which the Chinese had closed off to foreigners in 1792, to Mongolia. The exploration of the Ussuri

River by Russian geographer Nikolai Przhevalsky (1839–1888) and his four expeditions in the 1870s and early 1880s, from Turkestan and Mongolia to Dzungaria, Quinghai, and Tibet, pioneered a new era in the study of the geography, fauna, and flora of central Asia. Interpreting the Chinese hold on Xinjiang and Tibet as weak, Przhevalsky encouraged the Russian government to conquer both. Russian archaeologist Pyotr Kozlov (1863–1935) continued his work by mapping the Gobi desert. Politics mixed with exploration in yet another way when Sir Francis Younghusband (1863–1942), a British army officer, explorer of Manchuria and Gobi, and nephew of explorer Robert B. Shaw of eastern Turkestan fame, met with his counterpart, Russian Captain Bronislav Gromchevsky (1855–1926), in northern Pakistan in 1889.

The post-1860 explorations were systematic, scientific, and international. Sponsored by geographic societies, Oriental studies institutes, and assorted museums, explorers enjoyed unprecedented fame. Their feats were publicly rewarded, and their travelogues became instant best-sellers. Swedish geographer, topographer, and photographer Sven Hedin (1865–1952), although apolitical before World War I, was financed by the Swedish Geographic Society, used research assistants and local scientists, traveled under Russian protection, and visited Beijing to consult Chinese scholars. This acclaimed European explorer conducted three major expeditions between 1894 and 1908 to central Asia and mapped 65,000 square miles (168,350 square kilometers) of "white spaces." With Lhasa as his goal, he first went to Tibet through the Pamir mountains, across the Taklamakan desert to the lost city of Khotan. On his second expedition he mapped the "wandering lake," Lop Nor, and found the ruins of Lulan and its artistic treasures. A new era was born.

By the early 1890s, the region between Tibet and Mongolia was attracting an increasingly diverse set of individuals. Diplomat and ethnographer William Rockhill (1854–1914), U.S. envoy to China in 1884, conducted two expeditions to Tibet and Mongolia, in 1888 and 1891, making numerous ethnographic and geographic notations. British explorers, notably A. D. Carey, were exploring the same areas. Central Asia had become fashionable and was attracting celebrities. The intrepid British painter, ethnographer,

and explorer Arnold Henry Savage (1865–1924) went to Tibet twice, in 1897 and 1903–1904, and, having survived Tibetan capture and torture, became an acclaimed lecturer and writer. The future Nicholas II (1868–1918) met with central Asian personalities during his 1891 Asian trip, including the leader of the Theosophical Society, Madame Blavatsky. A cousin of Russian railroad magnate and finance minister Sergei Witte, Blavatsky influenced several explorers to search for the mythical city of Shambala, a Buddhist Pure Land that would be the ideal place to establish a universal brotherhood of humanity. Even Younghusband was not immune to the spiritual quest of attempting to bridge Christianity with the Hindu and Buddhist religions.

Sir Aurel Stein (1862–1943), an Austro-Hungarian scholar and mapmaker, most clearly represents the transition from exploration to archaeology. Searching for lost cities from Taklamakan to Chinese Turkestan, he discovered the Mogao caves of Dunhuang and bought or seized thousands of Buddhist manuscripts. Having excavated a perfectly preserved stupa at Khara-Khoto in 1908–1909, Pyotr Kozlov sent thousands of documents and artifacts to St. Petersburg. Russian and German archeologists teamed up between 1898 and 1903 under the leadership of Dmitri Klementz (1847–1914), head of the Ethnographical Museum in St. Petersburg. British, French, American, and Japanese archeologists, sponsored by their national geographic societies, Oriental studies institutes, and assorted museums, descended upon central Asia. Before the Chinese government could react, Xinjiang was plundered in the first decade of the twentieth century.

The scramble for antiquities was accompanied by one last entanglement between explorers and politicians over Tibet. Kozlov obtained an audience with the Dalai Lama in 1905. Rockhill, at the turn of the twentieth century, initiated a century of U.S. involvement in Tibet with President Theodore Roosevelt's blessing, became an adviser to the Dalai Lama, and was instrumental in the Dalai Lama's submission to China in 1908. In the years before World War I, however, the search for control of energy and raw materials took the world's attention away from central Asia. From Caspian Sea oil to Manchuria's ores, resources located at both ends of

THE LASTING CONTRIBUTIONS OF NINETEENTH-CENTURY EXPLORERS IN ASIA

The discoveries made by nineteenth-century explorers in central and southwest Asia became familiar concepts, values, and landscapes during the twentieth and twenty-first centuries. We owe the discovery of the Khyber Pass, the Indo-European migration theory, rhubarb, and the improved manufacture of Cashmere shawls to William Moorcroft. The only extant race of wild horses, the Przewalsky horses, owes its name to Nikolai M. Przewalsky. German geographer and China expert Ferdinand von Richthofen (1833–1905) coined the term "Silk Road." Sven Hedin found the sources of the Brahmaputra and the Indus rivers. Thanks to Sir Marc Aurel Stein, we are aware that Buddhism spread from India to China via the Silk Roads, and we learned about ancient Indian medicine and necromancy. Madame Blavatsky's Theosophical Society ushered in a new spiritual understanding between East and West and pioneered the baby boomers' spiritual pilgrimages to Katmandu and Calcutta. William W. Rockhill established a scholarship fund for Chinese students in the United States and predicted one century early the creation of a Pacific Rim economy and the interest of the United States in China. Alfred T. Mahan (1840–1914), the American prophet of naval power, predicted one century early the growing U.S. interest in China and the importance of reopening the Silk Roads. Even the future Russian tsar Nicholas II took a trip through central Asia in 1891 and met with the Who's Who of the Silk Roads explorers.

—Alice-Catherine Carls

the Silk Road, near the seashores, attracted the Great Powers. The maritime age would last for another century, and central Asia would again be secluded until the end of the Cold War.

—Alice-Catherine Carls

Bibliography

- Beckwith, Christopher I. *Empires of the Silk Road: A History of Central Eurasia from the Bronze Age to the Present*. Princeton, NJ: Princeton University Press, 2009.
- Hopkirk, Peter. *The Great Game. The Struggle for Empire in Central Asia*. New York: Kodansha International, 1994.

Meyer, Karl E., and Shareen Blair Brysac. *Tournament of Shadows: The Great Game and the Race for Empire in Central Asia*. New York: Basic Books, 1999.

Western Travelers and Explorers in Southeast Asia

Southeast Asia was the site of long-distance travels by Southeast Asian traders and mariners, as well as, Chinese, Indian, Arab, and Persian merchants, pilgrims, and diplomats long before the arrival of significant numbers of Europeans. Their chronicles, along with those of the illustrious European observer Marco Polo (1254–1324) in the late thirteenth century, all provide information about the region. Information increased appreciably from the time of the Portuguese and Spanish voyages of discovery in the sixteenth century, then from Dutch, English, and French sources in the seventeenth and eighteenth centuries.

Only from the 1850s onward, however, do we witness a surge of European exploration and travel in Southeast Asia. Some travelers experienced only brief encounters with what to them were strange peoples and places. There were those who came for a longer sojourn in the region; some, such as colonial administrators, traveled extensively in their assigned districts. Other Europeans embarked on journeys of exploration to increase scientific or geographical knowledge; to open up remote populations to commerce; to map, survey, and fix territories and boundaries; or to pacify so-called untamed tribes and plant the flag in unclaimed terrain.

Very often, superficial encounters were made in the context of maritime trade and discovery. Good examples are the English navigator Thomas Forrest's visit to Brunei in 1776 and the adventurer Erskine Murray's attempt to establish a British presence in the sultanate of Kutai on Borneo's east coast in 1844. The writer Joseph Conrad's description of his visit to Indonesia's Bangka Island in 1883 is similar. Accounts of residence in Southeast Asia and brief excursions from home bases are numerous. The most famous such sojourner was Anna Leonowens (1831–1915), the British travel writer, educator and social activist, who worked in Siam from 1862 to 1868, where she taught the wives and

children of King Mongkut. Her experiences were turned into a bestselling novel in 1944 by Margaret Landon, *Anna and the King of Siam*, which inspired films, television miniseries, and most notably, Rodgers and Hammerstein's 1951 hit musical *The King and I*.

Among the most famous of the nineteenth-century explorers was the Frenchman Francis Garnier (1839–1873). Appointed in 1862 as the official in charge of Cholon, a city in the recently established French colony of Cochinchina, Garnier with his colleague Doudart de Lagrée (1823–1868) and four other Frenchmen, was the first European to explore the Mekong River basin from its delta in South Vietnam to its headwaters in southern China in 1866–1868. Another notable French explorer was the naturalist Henri Mouhot (1826–1861). Although he was not the first European to discover the ruins of Angkor Wat, he did bring them to the attention of a European audience in his posthumously published *Voyage dans les royaumes de Siam, de Cambodge, de Laos et autres parties centrales de l'Indochine* (1863–1864).

In other parts of mainland Southeast Asia, Sir J. G. (George) Scott (1851–1935) is among the best-known explorers. He traveled over much of the eastern borderlands of Burma in the late 1880s and early 1890s to conclude treaties and alliances with local rulers, to undertake mapping and surveying, and to fix territorial boundaries between the British, French, Thai, and Chinese possessions in this region. The Norwegian natural scientist Carl Bock (1849–1932) secured a reputation for adventure and travel in several locations in Southeast Asia, and provided some dramatic descriptions of “savage” and “exotic” peoples and customs. He was commissioned by the governor-general of the Dutch East Indies to explore southeastern Borneo in 1879–1880, after his zoological collecting trip to Sumatra in 1878. He subsequently traveled independently through Siam and Laos in 1881–1882. Also important was the extended journey of the great English naturalist and evolutionist Alfred Russel Wallace (1823–1913), who spent an extraordinary eight years of scientific discovery (1854–1862) in the islands of Indonesia, during which time he collected more than 125,000 natural specimens.

—Victor T. King

Bibliography

- Gullick, John. *Adventurous Women in South-East Asia: Six Lives*. Kuala Lumpur: Oxford University Press, 1995.
- King, Victor T., ed. *Explorers of South-East Asia: Six Lives*. Kuala Lumpur: Oxford University Press, 1995.
- King, Victor T, ed. and comp. *Moving Pictures: More Borneo Travel*. Kuala Lumpur: Oxford University Press, 1999.
- King, Victor T. "Travelers and Sojourners, European." In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.
- Osborne, Milton. *River Road to China: The Mekong River Expedition, 1866-73*. London: George Allen and Unwin, 1975.
- Saunders, Graham, ed. and comp. *Tropical Interludes: European Life and Society in South-East Asia*. Kuala Lumpur: Oxford University Press, 1998.

European Explorers in the Pacific

In the wake of Ferdinand Magellan's famed circumnavigation of the globe between 1519 and 1522, numerous others sailed across the vast expanse of the Pacific Ocean, first sighted by Balboa in 1513. These included Alvaro de Mendana (1567-1569), the Spaniard who mapped the Solomon Islands; Sir Francis Drake (1577-1580); and Pedro Fernández de Quiros, another Spaniard who (with Mendana in 1595-1596 and Luis Vaez de Torres in 1605-1606/1607) made landings on the Marquesan and Tuamotu islands and discovered the Torres Straits, the body of water between Australia and New Guinea. From then on the Dutch prevailed. Jakob Le Maire and Willem Schouten in 1615 sailed across the Pacific, threading their way through the Tuamotu archipelago and on to Samoa and the Moluccas, finally reaching Jakarta in 1616. In 1642 Abel Janszen Tasman sighted present-day Tasmania and reconnoitred the Western coast of New Zealand for the first time. Jacob Roggeveen in 1721 discovered Easter Island on his journey across the Pacific. Almost all thought that they had at one point or another caught sight of a southern continent.

The exploration of the Pacific Ocean gained momentum in the closing decades of the eighteenth century as the geopolitics of European

empire building altered. The complex web of European alliances, the defeat of the French in the Americas in 1763, and the triumph of British naval power were all important factors. Equally important were Enlightenment ideals based on the pursuit of knowledge. Exploration was also a matter of science, as botanists, artists, mathematicians, and astronomers took to the seas with explorers such as Louis Antoine de Bougainville, James Cook, and Jean-François de Galaup, Comte de Lapérouse.

George Anson (during 1740-1744) and John Byron (during 1764-1766) sailed around the world with these geopolitical strategies in mind. Anson, in the *Centurion*, was instructed by the British Admiralty to sail around Cape Horn with a squadron to undercut Spanish commerce on the Western South American coast and to attack Spanish settlements. Extremely bad weather, the scattering of his fleet during the passage through the straits and in the Pacific, and illness and death on board made any such initiatives immediately impossible. After several months of respite at Juan Fernandez, Anson pillaged Spanish ships from the South American coast to China with huge success for three years. He arrived at Spithead on June 15, 1744, after unknowingly escaping a French attack in the channel due to fog.

Commodore John Byron left England in June 1764 in the frigate *Dolphin* and with the sloop *Tamar*, captained by Patrick Mouat. Byron's instructions from the Admiralty made it clear that he was to comb the South Atlantic from latitudes 33° to 53°, to pinpoint Pepys' Island and the Falkland Islands. Because, as his instructions noted, they had not been "sufficiently surveyed as that an accurate judgment may be formed of their coasts and product," he was to do so to secure a foothold in the South Atlantic to ensure future exploration of the Pacific. He was then to sail north up the American coast in the age-old search for the route linking the Pacific to the Atlantic (more commonly known as the Northwest Passage). After taking possession of the Falklands in the name of the king, Byron concluded that his ships were in no condition to take up the California trek specified in the instructions and instead sailed around the Cape and continued across the Pacific in search of the Solomon Islands. He sailed home across the Pacific

➤ A EUROPEAN VIEW OF TAHITI IN 1768

“As soon as we had moored, the ship was surrounded by a great many canoes several in which there were women. After the free and friendly manner of a number of our men, one of the island women ventured on board with an old man and some of her countrymen. She was tall and well-made. In her colour she was as white as any Spanish lady might wish.

Many of our luxurious men, plainly destitute of provisions for such many months, were uncommonly longing. They came presently near, looked, admired and touched. Soon, the flimsy veil which concealed the lures from their eyes in honour of modesty which may perhaps be condemned, was torn away and more readily it is true to say by the Indian nymph goddess herself than by our men. She was plainly only true to the employments of her country which alas the corruption of our practices have banned from our own.

What hand could render with sufficient nicety the discovery of the marvels uncovered by

this veil having fallen away so happily? A retreat which was in honour only of Love itself. Our eyes met hence with an enchanting dell that this God had surely created Himself. Our senses were excited to the utmost degree and a burning warmth seized upon our minds, we were consumed.”

—Sandhya Patel

Source

“Charles-Félix-Pierre Fesche, Volunteer: A Journal of Navigation Written aboard His Majesty’s Frigate the *Boudeuse* Commanded by Sieur de Bougainville with a Description of the Island Named NEW CYTHERA or Otherwise Tahiti,” on anchoring at Tahiti in April 1768. Translated from the French by Sandhya Patel, *Journal of Maritime Research*, National Maritime Museum, Greenwich, April 2003, <http://www.jmr.nmm.ac.uk/>.

heading west and then through the atolls of the Tuamotu archipelago, discovering Takaroa and Takapoto and sighting Rangiroa. He was back in England by May 1766.

In the wake of these and other British voyages, other European nations began sending ships on missions to explore the Pacific Ocean with more explicit hopes of seeking out the Terra Australis Incognita. Thus, Byron’s voyage was followed in 1766 by that of Captain Samuel Wallis in the very same *Dolphin* accompanied by the *Swallow*, captained by Philip Carteret. The British Admiralty’s instructions to Wallis were to “discover and obtain a complete knowledge of the Land or Islands supposed to be situated in the Southern Hemisphere.” Wallis discovered the Society Islands, Tahiti, and the self-named Wallis Island and claimed that he had caught a glimpse of a large landmass, possibly the Southern continent. The *Dolphin* and *Swallow* lost sight of each other in the Straits of Magellan, and Carteret continued southward across the Pacific alone, discovering and naming Pitcairn Island on which the *Bounty* mutineers took refuge in 1790. Carteret arrived in England in 1769

after having been overtaken by the French vessel *La Boudeuse*, commanded by Louis-Antoine de Bougainville. In October 1766 Louis XV of France had sent Bougainville on a voyage around the world with the storeship *Etoile*, captained by Chesnard de la Giraudais. Both ships proceeded to the Pacific, where they were to map and take possession of any islands they might discover. The expedition made no major discoveries, and Bougainville came to doubt the existence of the *continent austral* during the voyage, which ended in 1769.

The exploration of the Pacific nevertheless continued. The most successful of these explorers was James Cook, who made his first voyage to the Pacific (1768–1771) in the *Endeavour*, ostensibly to observe the transit of Venus over the sun at Tahiti. The Admiralty’s secret instructions, however, made it clear that Cook was to determine the existence of a vast continent in the Pacific by sailing as far south as possible. After leaving Tahiti he sailed to latitude 40° 22' and concluded that it was unlikely that any great landmass might be nearby. He sailed on to New Zealand, where he disproved the theory that

New Zealand was the northernmost point of the Southern continent. Cook went on to map the eastern coast of Australia in 1770. Cook sailed through the Torres Straits, arriving home in July 1771 to great acclaim.

In 1772 Cook set off again with essentially the same objective. Cook sailed south of the Cape of Good Hope and reached the Pacific in early 1773. After he completed a return voyage from New Zealand to Tahiti, his ship the *Resolution* set off on a second loop in November 1773 to explore the southern extremes of the Pacific Ocean between New Zealand and Cape Horn. Cook reached latitude 71° 10' and concluded that any continent south of this latitude would be nothing more than a frozen, almost inaccessible waste stretching to the South Pole.

Cook then turned north. He stopped off at Easter Island, rediscovering the Marquesas (not visited since the sixteenth century), discovered and mapped the Palliser Islands, and charted the New Hebrides. He discovered New Caledonia, the Isle of Pines, and Norfolk Island (later an ill-famed penal colony) and was back in New Zealand in October 1774. On the final leg of this voyage he sailed more or less straight across the Pacific Ocean to the South American coast to cover any ground he may have missed. This voyage finally laid to rest the myth of a Terra Australis and established the geographical limits of the Pacific. Cook was back in England in July 1775.

Cook's last expedition to the Pacific in the *Resolution* and the *Discovery* (captained by Charles Clerke) in 1776 had as its goal the discovery of the Northwest Passage into the Atlantic from the Pacific Ocean. He stopped off at Tahiti and then sailed into the North Pacific, discovering Christmas Island and the Hawaiian archipelago (Sandwich Islands) in January 1778. He pushed far north to latitude 70° 44' and surveyed the coasts in search of a passage into the Atlantic. Failing to find the Northwest Passage, he decided to head for the Sandwich Islands to make repairs on the *Resolution*. In January 1779 the Hawaiian archipelago was once again in sight, and Cook was received there as a deity. He set sail on February 4 but had to return on February 11 after a storm. Relations were less cordial this time. On February 14 Cook was killed onshore by Hawaiians.

Of the major Pacific archipelagos, only Fiji remained to be discovered. Another Englishman, William Bligh, discovered these islands during his incredible voyage in an open boat across half of the Pacific Ocean following the mutiny on the *Bounty* in 1789. By the end of the eighteenth century, the boundaries of the Pacific Ocean had been mapped. French navigators Jean François de Galaup, comte de La Pérouse (who lost his life in the Pacific in 1785), Antoine Raymond Joseph de Bruni D'Entrecasteaux along with Jean-Michel Huon de Kermadec in 1791–1793, and Etienne Marchand in 1790–1792 continued efforts to pinpoint archipelagos and dispel myths. The existence of the Northwest Passage between the Atlantic and the Pacific remained a remote possibility. However, George Vancouver's four-year voyage during 1791–1795 settled the question: there was no easy maritime route from the North Pacific to the Atlantic.

—Sandhya Patel

Bibliography

- Beaglehole, John. *The Exploration of the Pacific*. Stanford, CA: Stanford University Press, 1966.
- Lamb, Jonathan, Vanessa Smith, and Nicholas Smith, eds. *Exploration and Exchange: A South Seas Anthology*. Chicago: University of Chicago Press, 2001.
- Lincoln, Margarette, ed. *Science and Exploration in the Pacific: European Voyages to the Southern Oceans in the Eighteenth Century*. Suffolk, UK: Woodbridge, 1998.
- Obeyesekere, Gananatha. *Apotheosis of James Cook: European Mythology in the Pacific*. Princeton, NJ: Princeton University Press, 1992.

The Mapping of Australia, Tasmania, and New Zealand

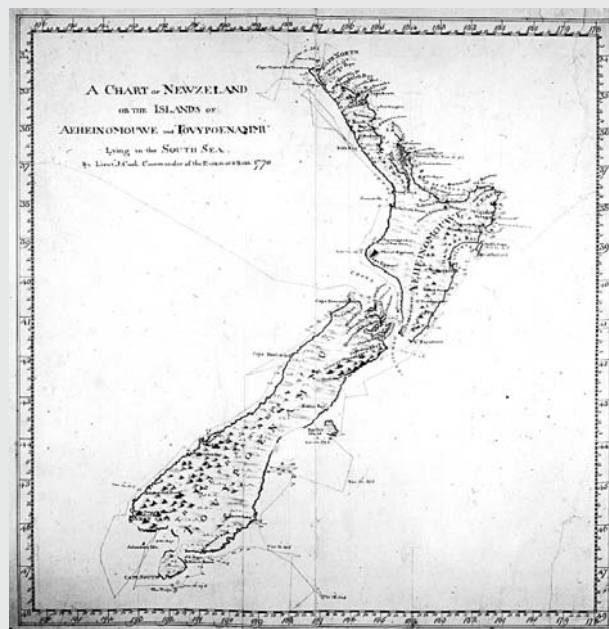
By 1750 Dutch encounters with Australia, going back to the initial discovery of the north coast of Australia in 1606 by Willem Janszoon, had yielded maps of the continent's west coast and part of the southern coast, a region marked on European maps as New Holland. In addition, the Dutchman Abel Tasman had mapped the southern coast of Tasmania and a small section of the west coast of New Zealand during voyages in 1642 and 1644. However, these encounters indicated that these regions held nothing of value. Thus, it was not

► COOK'S 1770 MAP OF NEW ZEALAND

Cook's map of New Zealand, constructed during his 1769–1770 *Endeavour* voyage, is very accurate even though he had no chronometer to help calculate longitude. The map does contain some errors (Banks Peninsula is shown as an island, Stewart Island as a peninsula), but it remained the standard map of New Zealand for nearly 80 years.

The track of the *Endeavour* is marked on the map, showing the way that Cook's voyage was at the mercy of currents, waves, and weather. The map also shows the influence of Tupaia, Cook's Tahitian passenger. Tupaia was able to communicate with the Maori, and the map shows Maori names for some features, including the two main islands.

—Claire Brennan



(The British Library/StockphotoPro)

until the eighteenth century that further mapping was undertaken by Europeans. Captain James Cook (1728–1779), commissioned by the Royal Society of London to sail to the Pacific to observe and record the transit of Venus across the sun, is well known for his accurate maps of New Zealand and the eastern edge of Australia, drawn in 1769 and 1770. Cook made a close circumnavigation of New Zealand, destroying any hope that it might be part of the Southern Continent. He named the eastern region of Australia New South Wales and claimed the region for Britain. He spent eight days anchored in Botany Bay, the area of Australia that became a British penal settlement and eventually the city of Sydney.

A British penal colony was established in Sydney in 1788 even before the outline of the continent was known. After the founding of Sydney, the mapping of the Australian, Tasmanian, and New Zealand coastlines advanced quickly, in part because Sydney provided a European base in the region and in part because Sydney's very existence inflamed Anglo-French rivalries. In 1797 an expedition from Sydney led by Matthew

Flinders and George Bass determined that Tasmania (Van Diemen's Land as it was known until 1856) was an island separated from the mainland of New South Wales. Flinders went on to complete the first close circumnavigation of the Australian continent between 1801 and 1803. In the process, he destroyed the widely held belief that New South Wales was a separate landmass from New Holland and that there was a strait between them that would provide an easy route from Sydney to Asia. During this period French exploration of the Pacific region also increased. In 1802 Flinders met Frenchman Nicholas Baudin's expedition in Encounter Bay off the south coast of Australia. Baudin was also engaged in the search for a strait and in the mapping of the New Holland/New South Wales coastline.

The coastlines of Australia, Tasmania, and New Zealand were mapped well before the interiors. The settlers at Sydney only succeeded in crossing the Blue Mountains, a range that begins approximately 70 miles (113 kilometers) to the east of the city, in 1813. Previously they had been restricted to a small coastal region, as

Australia's Great Dividing Range (which includes the Blue Mountains) shut the eastern seaboard off from the continent. While Australian explorers from both the east and west were lured inland by hopes of finding great rivers or an inland sea, Australia's arid conditions made exploration and mapping of the interior extremely difficult even after coastal settlements had been established. Settlement and mapping continued up to and beyond 1914, particularly in the eastern parts of Australia, but large sections of the continent remained unmapped because of the difficulties of desert travel. Australia's vast interior was eventually mapped from the air beginning in 1930.

The mapping of the interiors of Tasmania and New Zealand was easier because they are smaller and less arid. The mapping of Tasmania was largely complete by 1848. The mapping of New Zealand was helped by the ability of explorers to communicate with all inhabitants of New Zealand using the Maori language, but in the North Island it was hampered first by war and then by deliberate resistance to surveying (including the destruction of survey markers). In New Zealand, as in Australia, mapping followed settlement, but it was completed by 1895.

—Claire Brennan

Bibliography

- Gascoigne, John. *Captain Cook: Voyager between Worlds*. London: Hambledon Continuum, 2007.
- Pearson, Michael. *Great Southern Land: The Maritime Exploration of Terra Australis*. Canberra, Australia: Department of the Environment and Heritage, 2005.
- Richards, Michael, and Maura O'Connor, eds. *Changing Coastlines: Putting Australia on the Map, 1493–1993*. Canberra, Australia: National Library of Australia, 1993.

Polar Expeditions

Before the nineteenth century, economic considerations drove most of the initial explorations of the northern polar region by Europeans, as intrepid ship captains hoped to find a way to penetrate Asian markets by a shorter route. In the nineteenth century, polar expeditions gained a quasi-scientific status because of the thrill of discovering new resources and the true geographic

and magnetic poles. By the twentieth century, the marriage of science and adventure was encapsulated by such expeditions to study the relatively unknown geologic, oceanographic, climatic, and meteorological conditions at the poles. Although most scientific expeditions were undertaken under national auspices with strategic or propaganda objectives in mind, they often served the interests of science as well.

The thrill of adventure brought polar expeditions into public consciousness, and expedition leaders became heroes. Many scientists were drawn to the expeditions, including the founder of the theory of continental drift, Alfred Wegener (1880–1930), who died on the Greenland Ice Sheet in 1930. The American Robert Peary (1856–1920) made celestial and magnetic observations on his journey to the North Pole; when he reached it in 1909, he proclaimed that he had finally gotten the North Pole out of his system. He became an instant celebrity and disappointed the hopes of other nations to achieve this “first.” However, historians have pointed out defects in his scientific observation techniques; indeed, some have suggested that these defects help to show that Peary never really reached the pole at all and fell short by 100 miles (160 kilometers).

With the North Pole evidently reached, the South Pole on the continent of Antarctica became the next objective. In fact, Peary's announcement spoiled the plans of the Norwegian Roald Amundsen (1872–1928) to reach the North Pole. Amundsen quickly revised his plans and headed south, where a British expedition led by Robert Scott (1868–1912) already was planned. Amundsen argued that because the British claimed to be conducting scientific research, he did not believe that there was a competition. But the scientific elements of the expedition, in Britain as well as in Norway, were secondary to achieving the goal of being first. In this case, the famed competition between the Norwegian and British teams ended in tragedy. Amundsen's team was first to reach the pole, in 1911, and returned alive. Scott's team arrived at the pole 34 days later, finding the remnants of Amundsen's camp. The entire party died on the return trip in 1912.

In popular culture, polar explorers were the great national heroes of their time, combining



After reaching the North Pole, American Robert Peary became an instant celebrity. However, historians have pointed out defects in his scientific observation techniques and some have suggested that these defects help to show that Peary fell short of reaching the pole by a hundred miles. (National Oceanic and Atmospheric Administration)

virile endurance with scientific discovery. In 1914 Irishman Ernest Shackleton (1874–1922) embarked on an expedition to cross the Antarctic, but in 1915 his ship was caught in the ice and crushed. For five months he and his men survived and became British celebrities for their endurance. In 1926 Richard Byrd (1888–1957) became a U.S. celebrity for flying a plane to the North Pole. In 1937 Soviet pilot Valerii Chkalov (1904–1938) became a celebrity (in his own country) for being the first to fly over the North Pole from Moscow and land safely in the United States (in the state of Washington), breaking the nonstop long-distance flying record. That same year Mikhail Gromov (1899–1985) followed up by making the same journey and landing in California.

Scientific study received less attention from the press than did exploration. Anthropologist Vilhjalmar Stefansson (1879–1962), for example, began a series of ice floe experiments and other explorations in the Canadian Arctic around the time of these more widely known efforts in Antarctica. His studies yielded a great deal of knowledge about the environment of the arctic and its peoples, but his fame paled next to the explorers.

Scientific research often entailed international cooperation rather than competition. In 1932–1933 several countries organized the Second International Polar Year (the first was held 50 years earlier), designed to have numerous scientists take similar measurements in various places at roughly the same time. Magnetic, aurora, and meteorological observations dominated the scientific work during the Polar Year, conducted by a network of stations in the Arctic and Antarctic. The International Meteorological Committee, which planned much of the year, hoped that the scientific work would have practical applications related to terrestrial magnetism, marine and air navigation, wireless telegraphy, and the forecasting of weather.

—Jacob Hamblin

Bibliography

- Kirwan, L. P. *A History of Polar Exploration*. New York: Norton, 1960.
- Rawlins, Dennis. *Peary at the North Pole: Fact or Fiction?* New York: Robert B. Luce, 1973.

Lewis and Clark Expedition, 1804–1806

Even before the Louisiana Purchase in 1803, U.S. president Thomas Jefferson had begun preparations for an overland expedition to the Pacific Ocean by seeking the advice of prominent scientists and naturalists on possible areas of focus for such an expedition. Each was also asked to tutor Meriwether Lewis (1774–1809), President Jefferson's personal secretary and the man he had selected to lead the anticipated westward expedition. As Jefferson's personal secretary, Lewis had been privy to the highest levels of domestic and diplomatic information regarding the Western lands, and like Jefferson, was convinced of their geopolitical importance. On January 18,

1803, Jefferson sent a secret message to Congress calling for an expedition to explore the West by following the Missouri River to its headwaters, portaging the mountains, and following the Columbia River from its headwaters to the Pacific. It would fill in the unknown “middle” of the West, an area that was still a mystery to cartographers.

After Congress agreed to fund the Corps of Discovery that was to explore the West, Jefferson completed the purchase of Louisiana Territory from the French in May 1803. Lewis, having been selected to lead the expedition, was charged with preparing the Corps by securing the party of explorers, creating a budget, preparing a list of needed supplies, and setting a schedule. One of his first decisions was to recruit his friend William Clark, with whom he had served in the U.S. Army, to join the expedition as a co-leader. Lewis made an effort to get a captain's position for Clark, but Secretary of War Henry Dearborn refused his request. Although Lewis and Clark have been recognized as equals in their leadership of the Corps of Discovery, officially, this was not the case.

Before embarking, Lewis designed a boat made of an iron frame with animal hides that he believed would be especially useful in the “short portage” across the mountains. Lewis had also designed a special flatboat for use on the Missouri. It had front and rear cabins, with sides that could be raised in the event of an attack by Native Americans. Once these vessels were constructed, Lewis joined Clark at St. Louis to begin the mission. After they witnessed the formal exchange of the upper part of the Louisiana Territory at St. Louis on March 10, 1804, Lewis and Clark and their group of 33 men aboard one flatboat and two pirogues set out on May 14.

Travel upriver at first was difficult. The flatboat often ran aground on sandbars or became caught on underwater snags, and the men had to lift the boat or empty and reload its cargo to free the vessel. Along certain stretches, they had to pull the boats upstream with huge ropes that they dragged along the riverbanks. Once the expedition went beyond the junction of the Platte River, it entered Native American territories. By August 1804, the expedition reached the camp of the Oto tribe, where Lewis made a speech to the members of the tribe at a powwow. Lewis

told them that the party came in peace. He also informed them that the Spanish father was now gone, and hereafter the Great White Father in Washington would be their leader. He then smoked the calumet and distributed presents to the tribe.

Farther up the Missouri, the Corps encountered the Sioux, who were considered to be the scourge of the Upper Missouri. They lived near enough to Canada to be under the economic spell of British gifts and trade goods. Viewing the Americans as intruders, they gave them a cold reception and showed their displeasure at the quality or quantity of the Americans' presents. When it appeared the Sioux warriors might begin hostilities to prevent the further advance of the Americans, Lewis and Clark made clear they would continue their journey westward.

When not dealing with Native Americans or maintaining discipline among their crew members, Lewis and Clark spent much of their time collecting samples of the flora and fauna. Lewis found fossils and collected geological samples to send back to Jefferson. As the winter of 1804 approached, the Corps neared the village of the Mandan in the Dakota region, where the Americans were well received. Here Lewis and Clark met the French Canadian Toussaint Charbonneau and his indigenous wife, Sacagawea. Both joined the Corps when the group left the Mandan village in the spring after a harsh winter in which Lewis and Clark sent out hunters to kill game for the Americans and the Mandan alike.

When the expedition departed on April 7, 1805, it entered unknown territory. The corps continued up the Missouri River, and when the river seemed to split where the Marias and Missouri rivers join, members of the expedition divided into smaller groups, hoping to locate the Great Falls of the Missouri. Not finding this landmark within a day, they decided that the South Fork of the Missouri was the main branch they should follow. After reaching Great Falls, it took the corps 24 days to portage 85 miles (137 kilometers) around the falls and the steep canyon country that followed. Once beyond the Great Falls, the Corps returned to the river for transportation. At this point, Lewis had to accept the failure of his much-acclaimed collapsible

iron-and-hide boat, which proved useless when tested. As the expedition reached the headwaters of the Missouri River, members of the Corps spotted hunters from the Shoshoni tribe, who advised them as to the best route across the Rocky Mountains. With this information, the expedition crossed the Continental Divide at Lemhi Pass (in present-day Montana) on August 12, 1805.

After the difficult crossing, the Corps came upon the Shoshoni (or Snake) village where one of the miracles of the expedition took place. Sacagawea discovered that the Shoshoni chief was her brother Cameahwait, whom she had not seen in the four years since she had been kidnapped by the Hidatsa (who later sold her to the Mandan tribe). Upon seeing his sister, Cameahwait was deeply moved, and he helped the Corps by providing horses and other provisions. Having crossed the Bitterroot Mountains, the expedition followed the Snake River until it reached the Columbia River, which it followed until reaching the Pacific Ocean on November 8, 1805.

After constructing Fort Clatsop at the mouth of the Columbia River, the expedition wintered over, and then in March 1806, began its journey home. On reaching the western base of the Rocky Mountains, members of the Corps divided into two parties to explore a larger area and find the easiest passage across the mountains. The parties were to rejoin at the falls of the Missouri. During this phase of the expedition Lewis's party encountered hostile members of the Piegan Blackfoot tribe, who attempted to steal their guns and horses. Shots were fired, and two Native Americans were killed—the only indigenous casualties of the entire expedition. On August 11 an accident occurred while hunting. Private Peter Cruzatte fired into some bushes and wounded Lewis. Although the flesh wound

to his leg was painful, Lewis survived, and during his recovery, Clark assumed command.

On September 23, 1806, the Corps made its triumphant return to St. Louis. The members of the expedition were feted as heroes, having achieved a feat that many had believed was impossible. The Lewis and Clark Expedition strengthened the U.S. claim to the Louisiana Territory, and also provided a basis for a claim to the Oregon country, that in 1846 would be divided with Great Britain by a diplomatic agreement. The expedition provided a wealth of information about the flora, the fauna, and the ethnography of the West. The travels of Lewis and Clark also expanded our collective geographical sense of the West by providing accurate maps that confirmed the vastness of the region. The expedition also disproved certain mythic falsehoods, such as the incredible hope that an easy, all-water route to the West might exist.

—Junius P. Rodriguez

Bibliography

- Fresonke, Kris, and Mark Spence. *Lewis & Clark: Legacies, Memories, and New Perspectives*. Berkeley: University of California Press, 2004.
- Harlan, James. *Atlas of the Lewis and Clark Expedition*. Columbia: University of Missouri Press, 2003.
- Lavender, David. *Way to the Western Sea: Lewis and Clark across the Continent*. New York: Harper and Row, 1989.
- Morris, Larry E. *The Fate of the Corps: What Became of the Lewis and Clark Explorers After the Expedition*. New Haven, CT: Yale University Press, 2004.
- Ronda, James P. *Lewis and Clark among the Indians*. Lincoln: University of Nebraska Press, 1984.
- Seefeldt, Douglas, Jeffrey L. Hantman, and Peter S. Onuf. *Across the Continent: Jefferson, Lewis and Clark, and the Making of America*. Charlottesville: University of Virginia Press, 2005.

■ Introduction: Travel and Tourism

In the period from 1750 to 1914, the development of railroad lines, steamships, and telegraphy as well as rising standards of living and financial innovations such as traveler's checks

(introduced in the 1890s) reshaped travel, whether for migration, commerce, exploration, religious pilgrimage, or pleasure. Tourism, previously a privilege confined to elites, became via-

ble for the middle class and workers in the nineteenth century.

Leisurely travel, designed to refresh participants and to take them out of the everyday routine, has its roots in religious pilgrimage. The Hajj, or yearly pilgrimage to Mecca, is one of the basic tenets of Islam. All Muslim males are expected to make the journey at least once in their lives; Tibetan Buddhist tradition also encourages pilgrimages to the four holy sites of the Hearth of Buddhism. Formerly restricted to monks, royalty, and elites, by the seventeenth century numerous Japanese pilgrims including tradesmen, farmers, and merchants dedicated themselves to a several-month pilgrimage on the island of Shikoku, where they made their way on foot for 780 miles (1,300 kilometers) to the island's 88 Buddhist temples. Such travelers, in pursuit of enlightenment, were nevertheless in need of places to stay, provisions, appropriate garb, guidebooks, trinkets, and even comforts such as prostitutes. In India, the first guidebooks to Jain holy sites were published in the seventeenth century. European pilgrimages to Rome, the Holy Land, and various shrines such as Santiago de Compostela and Lourdes also depended on well-established commercial networks, guidebooks, and tour guides.

Tourism dedicated to a secular version of self-improvement emerged with the Grand Tour, a form of cultural pilgrimage common to seventeenth- and eighteenth-century aristocrats, particularly from Britain. Armed with guidebooks, tutors, foreign language study, and trunks, young gentlemen (and ladies with chaperones) set off after their studies for a tour of continental Europe that would last from several months to several years, during which they would mingle in high society in Paris (as well as Versailles and Fontainebleau) and admire the natural beauty of the Swiss Alps, the art and architecture of Italy, the universities of Germany, and then, if funds held out, the art treasures of Holland and Flanders. The young aristocrat on the tour would keep an elaborate journal, correspond, and buy souvenirs.

The new elites who emerged with industrialization hoped to provide their children with similar polish and, to a large extent, took over the routes of the Grand Tour, with travel aided by the development of railway networks,

including railways in colonial realms, and by early travel agencies. In North America a separate circuit developed called the Fashionable Tour that drew elite travelers from the United States and Europe. Such travelers, attuned to the artistic trends that had emerged with romanticism, sought out the picturesque and sublime in landscapes at such locales as Natural Bridge, Virginia; the Hudson River Valley of New York; and Niagara Falls. Like those who took the Grand Tour, these travelers kept elaborate journals and relied on the accounts of elite writers to guide their own experience. For example, high-end travelers to Niagara Falls tried to avoid commonplace views and the masses; to aid them, an entrepreneur created a special shielded staircase that led down to Table Rock so that an aesthete could emerge at this vantage point above the dizzying chasm and experience the sublime. Visiting Table Rock in 1831, the English writer Francis Trollope commented, "Wonder, terror, and delight completely overwhelmed me. I wept with a strange mixture of pleasure and of pain." This intense aesthetic reaction, akin to a religious experience, was one of the chief goals of such tourism. Such travelers were quite different from working-class travelers who also relied on the Erie Canal and railroads to visit Niagara and other nature retreats, enjoy a holiday, or watch tightrope walkers, fireworks, or the celebrated jumper Sam Patch leap into rivers.

As elite travelers' efforts to avoid their plebeian fellow travelers at Niagara Falls indicate, tourism and travel were not simply limited to the wealthy. New train and steamboat networks were sufficiently inexpensive to draw working-class travelers, whether for day trips and picnics or for longer voyages. Steamboat travel in the United States in particular was very inexpensive especially for deck passengers who helped fuel the boats at stops for wood, making long river journeys possible for migrants and workers. Low ticket costs on transatlantic ships also aided the boom in immigration to the Americas of the late nineteenth century. The introduction of second-class rail travel and then, in the 1840s, third-class rail travel in Europe increased ridership on the extensive rail networks of Britain and Europe.

Commuter rail lines, urban horse railways, and later electric trolleys also opened new travel

possibilities. As the era of world fairs began in the 1850s, travel to expositions such as the 1851 Great Exhibition of the Works of Industry of All Nations (or Crystal Palace exhibition) in London or to the Philadelphia Centennial International Exhibition of 1876 became popular with all classes. The spas that harbored the elites gave way to seaside resorts popular with the working and middle classes (with groups of hotels catering to each) and, by the end of the nineteenth century, to amusement parks. In an odd mimicry of the values held dear by elite travelers, some of the first roller coasters were carefully decked out as scenic railways to give passengers the sense of rushing past Alpine mountains, streams, and other glorious scenery.

—Fred Nadis

The Era of the Grand Tour

The era of the Grand Tour is the earliest period of modern leisure travel, that is, travel undertaken for pleasure or edification rather than for work, religious pilgrimage, or other obligation. During this period, running roughly from the sixteenth through eighteenth centuries, British travelers in particular formalized the practice of traveling along planned itineraries in continental Europe with an eye to gaining valuable knowledge and experience. Lasting a year or more, these extended trips were vital in grounding elite claims to culture and class and, in the

long term, in establishing leisure travel as a social rite in the West.

At first it was young and almost exclusively aristocratic British males who undertook a Grand Tour in the period between their university education and their assumption of an office or occupation. The purpose of the journey was to acquaint these young travelers with the European cultural patrimony descending from ancient Greece and Rome. Stops in France and Italy took precedence, the most common itineraries starting in London and moving on to Paris for several weeks and then Geneva before an extended stay in Italy and in particular the cities of Rome, Florence, Venice, Turin, and Naples. As Italy most abounded in both monuments of the classical past and in the art and architecture of the Renaissance, extended time there was considered vital to finishing a young man's education. Over time, Grand Tour itineraries also included shorter stays in smaller Italian cities, time in Germany and the Netherlands, and even some viewing of Alpine landscape as that taste developed in the later eighteenth century.

The conditions encountered on the tour varied from place to place and often could be quite arduous; they also depended upon the resources of the traveler. Even the wealthiest travelers often voiced disgust and disappointment at their experiences along the itinerary. Most commonly, the young man would embark on the Grand Tour with a tutor appointed by his

► EIGHTEENTH-CENTURY ROME—COOL WATER, FILTHY STREETS

Tobias Smollett was one of many English travelers who noted the contrast between the Italian cities' cultural glories of Italy's past and the fetid conditions of their streets and public buildings. The city reeked of "hartshorn," a baker's agent that gave off a strong ammonia smell.

"Nothing can be more agreeable to the eyes of a stranger, especially in the heats of summer, than the great number of public fountains that appear in every part of Rome, embellished with all the ornaments of sculpture, and pouring forth prodigious quantities of cool delicious water, brought in aqueducts from different lakes, rivers and sources,

at a considerable distance from the city. . . . This great plenty of water, nevertheless, has not induced the Romans to be cleanly; their streets, and even their palaces, are disgraced with filth. . . . The corridors, arcades and even staircases of their most elegant palaces are depositories of nastiness, and indeed in summer smell as strong as spirit of hartshorn."

—Patrick Young

Source

Letter of February 28, 1765, by Tobias Smollett, in Tobias Smollett, *Travels through France and Italy, 1766* (New York: Praeger, 1969), 316.

father and with one or more servants in tow. After the Channel crossing, transport was by rented private carriage or by “diligence,” a more public means of transporting larger groups. Lodging options included inns and small hotels of often-dubious condition or, for those capable of affording them, furnished private residences. Once in Italy the tourist would commonly contract with an Italian guide, who made local travel and lodging arrangements and served as translator. Again depending upon the status of the young man’s family, letters of introduction from home might secure access to courts or to meetings with prominent local or expatriate aristocrats. Worldly concerns for improving one’s status and making social and diplomatic connections thus merged in the Grand Tour, with more high-minded ones relating to the refinement of taste and the appreciation of classical culture.

The Revolutionary and Napoleonic wars severely disrupted English travel to the continent, and as the taste for leisure travel gradually filtered down the social order, first in England in the eighteenth century and then on the European continent and in America in the nineteenth, the Era of the Grand Tour began to give way to new forms of travel more appropriate to an industrial middle-class. Limited by time and budget, the traveling middle classes of the nineteenth century still harbored cultural ambitions in their travel, but their train- and guidebook-abetted movements attracted the scorn of writers and seasoned travelers for whom the Grand Tour remained a touchstone for sophisticated travel. The “cultural tourism” of American travelers, often young women accompanied by their mothers in an extended tour of European sites, sustained the tradition of the Grand Tour right up to the outbreak of World War I.

—Patrick Young

Bibliography

- Black, Jeremy. *The British Abroad: The Grand Tour in the Eighteenth Century*. New York: St. Martin’s, 1992.
- Hibbert, Christopher. *The Grand Tour*. London: Methuen, 1987.
- Withey, Lynn. *Grand Tours and Cook’s Tours: A History of Leisure Travel, 1750–1915*. New York: William Morrow, 1997.

Religious Pilgrimage and the Railroad in India

For millennia, pilgrims from all religions have embarked on sacred journeys across the Indian subcontinent and beyond, but it has only been in the last 150 years that pilgrimage has become a defining religious experience for a large portion of the Indian population. The railroad, a powerful force in transportation since the mid-nineteenth century, greatly affected both the availability and experience of pilgrimage for the entire Indian population. Access to rail-assisted conveyance expedited the inclusion of pilgrimage into the normative practice of religious experience and contributed to the rise of nationalism on the subcontinent.

Over thousands of years, various religious traditions in India—Hinduism, Buddhism, Islam, Christianity, Sikhism—have incorporated pilgrimage to holy sites into their practices. For many individuals, however, long-distance pilgrimage was never an option, as the absence of cash and the long time periods involved in undertaking a pilgrimage (on foot with pack animals) were obstacles not easily overcome. As a result, most individuals—across caste and class lines—completed pilgrimages to holy sites almost exclusively within local areas. For the richest and most mobile groups (large landowners, usually), however, networks of pilgrimage extended throughout the subcontinent and connected them with other like-minded groups and individuals. In this way religious traditions spread across regional areas and helped in the ongoing definition of Indian culture.

With the coming of British and other European colonizers came the impetus to create networks of railroads to facilitate the transfer of goods and labor across large areas that were not previously commercially connected. As the rail companies extended tracks into the countryside, many planned their lines along routes traditionally used for pilgrimages, seeing the pilgrims as an easy market for their products. Indeed, surveys were taken of pilgrims along major routes to determine how much they would be willing to pay for a rail service taking them to the site; most pilgrims acknowledged that they would be willing to pay nearly the same price as they

► THOMAS COOK AND HAJJ

Between 1886 and 1893 the English travel firm Thomas Cook and Son received a contract from the British government to ensure the health and safety along the railroads of Muslim pilgrims from India completing the hajj, or holy pilgrimage to Mecca. A Christian firm based in London, Thomas Cook and Son was thus employed by the colonial government in India with facilitating the fulfillment of requisite tenets of the faith for Indian Muslims. More Muslims were able to complete hajj more quickly than before, changing both the nature of pilgrimage and the relationship between commercial interests and a specific religious community in the colonial setting. While some viewed this situation as exploitative, we can now see that the railroad changed the relationship between the colonial government and its subjects, revolutionizing the interactions of government, private enterprise, and religious observance.

—Brock Cutler

spent on food and lodging during their pilgrimage. Thus, pilgrims themselves—and their traditional networks and routes—were not passive actors along these routes but instead actually determined to a large extent the shape and area of the railroad lines.

By the 1870s when many of the rail lines that originated at coastal hubs met up to create a legitimate railway network, pilgrims were using railroads for a large portion of their travels. For the most part, pilgrims did not separate along caste lines while on pilgrimage; however, the wealthier pilgrims were able to book passage in a car with seats, while the poorer groups made the trips in cars primarily designed to carry trade goods or animals. During the most popular festival times, extra goods cars were hitched to the end of the train, and as many people were let into a car as could stand inside it.

The relative economy and speed of rail travel allowed considerably more people to become pilgrims, affecting the nature of the pilgrims' journey in quality as well as quantity. The experience of pilgrimage changed from a lengthy but perhaps pleasant journey to a relatively quick but unpleasant ordeal in the train car. By increasing the

numbers of people who could become pilgrims, trains also changed the use of pilgrimage within religion: more people could now look at pilgrimage as a viable part of religious experience, and pilgrimage—even to distant sites—became more normalized within religious traditions.

Railways also complicated the categories of pilgrimage and tourism. The railroads were part of a larger process of technological modernization in India, along with which came the secularization of larger numbers of the population. These individuals did not necessarily give up the practice of pilgrimage but rather combined it with a more secular desire to visit sites in their country. Pilgrimage started to become a part of national tourism as more people changed their religious traditions into national traditions.

—Brock Cutler

Bibliography

- Bhardwaj, Surinder Mohan. *Hindu Places of Pilgrimage in India: A Study in Cultural Geography*. Berkeley: University of California Press, 1973.
- Kerr, Ian J., ed. *Railways in Modern India*. Oxford: Oxford University Press, 2001.
- Sopher, David E. "Pilgrim Circulation in Gujarat." *Geographic Review* 58 (1968): 392–425.
- van der Veer, Peter. *Imperial Encounters: Religion and Modernity in India and Britain*. Princeton, NJ: Princeton University Press, 2001.

The Hajj in an Era of Steam Travel

The hajj, or pilgrimage to Mecca, in Saudi Arabia, is one of the five pillars of Islam. Healthy Muslim males must make the hajj at least once in their lives, as long as it causes no hardship for the family (Quran 2.196–198). The hajj takes place once a year during the second week of the last month of the year, Dhu l-Hijjah (usually April/May on the Western calendar). Women may also make the hajj, but only if they are married and with their husbands or accompanied by a (male) relative. Modern travel, which avoids many of the hardships of the past, has steadily increased the number of pilgrims. In 1876, for example, only 6,000 pilgrims made the hajj; in 2000, 2 million pilgrims journeyed to make the hajj.

Until the late nineteenth century, the journey to Mecca involved pilgrim caravans across

the desert, usually following trade routes, the majority coming through Damascus. Bedouin attacks were common; often, the government paid money (*surra*) to guarantee safe passage for pilgrims through certain tribes' areas. Prior to 1869 travel could take several months; the journey from Damascus to Medina took 30 days. When the Suez Canal opened in 1869, steamships shortened the journey. From 1908 to 1913 the Hijaz Railroad between Damascus and Medina made the trip even more rapid, but the railroad was used during World War I and partially destroyed.

Muslims from outside the immediate area often found problems when trying to secure permission to leave their home countries. European countries, including Russia, often made the necessary paperwork so complicated as to all but forbid Muslim departure. An outbreak of cholera in Europe in the 1830s was attributed to the return of Muslim pilgrims from Mecca. As a result, Europeans began to take an even more controlling interest in travel to Mecca by Muslims.

—Linda Kay Davidson and David M. Gitlitz

Bibliography

- Brower, Daniel. "Russian Roads to Mecca: Religious Tolerance and Muslim Pilgrimage in the Russian Empire." *Slavic Review* 55, 3 (1996): 567-584.
- Faroqhi, Suraiya. *Pilgrims and Sultans: The Hajj under the Ottomans*. London: Taurus, 1994.
- Gitlitz, David, and Linda Kay Davidson. "Hajj." In *Pilgrimage: From the Ganges to Graceland, an Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2002.
- Peters, F. E. *The Hajj: The Muslim Pilgrimage to Mecca and the Holy Places*. Princeton, NJ: Princeton University Press, 1994.

European and American Tourism in the Railway Age

Railway travel, especially during the railway age, inspires images of luxury and adventure. Yet when the first steam railways were constructed in England in 1825, little thought was given to carrying passengers. Entrepreneurs such as those behind the first railway lines, the Stockton and Darlington and the Liverpool and Manchester, believed that trains were best suited to carrying material goods. Companies soon reevaluated

their assumptions, resulting in 24.5 million people traveling by English trains in 1842, 73 million in 1850, and 507 million in 1875. By 1913 the London Brighton and South Coast Railway drew 75 percent of its revenue from passenger traffic.

At the same time, tourism itself attracted more and more devotees. From the late sixteenth century, many of Britain's most respected young men explored continental Europe to learn languages, improve aesthetic tastes, and master other skills necessary to become future diplomats, goals that were often abandoned by the young travelers who instead opted to pursue hedonistic excess in the bars and brothels of Italy and France. With time, this so-called Grand Tour drew more and more elite tourists and popularized the idea of travel among a still broader cohort. Although the age of the Grand Tour ended with the Napoleonic Wars, the invention and proliferation of railways made touring accessible to many more people than had been previously possible and launched a whole new age of bourgeois travel.

Not long after the construction of the first efficient railway engine, George Stephenson's Rocket in 1829, entrepreneurs dramatically expanded available rail lines in Britain and beyond. Between 1846 and 1848, 2,600 miles (4,200 kilometers) of track were laid in England.

➤ TRAVEL GUIDEBOOKS

The rise of leisure travel prompted a corresponding demand for guides that taught prospective tourists both what ought to be seen and also how to go about seeing important sites. Londoner John Murray was among the first to capitalize on the growing need when he published a *Hand-book for Holland, Belgium, and North Germany* in 1836. Karl Baedeker of Koblenz, Germany, followed suit with a similar guide three years later. Baedeker and Murray were the most successful nineteenth-century guidebook authors, but railway lines and package travel companies such as Thomas Cook and Son soon published their own guides to market their own products and to educate travelers about potential destinations.

—Eric Zuelow



Poster for the Orient Express, France, 1889. The first non-stop route from Paris to Istanbul was established in that year. (Roger-Viollet/The Image Works)

The distance increased to 6,300 miles (10,100 kilometers) by 1851, 13,400 miles (21,600 kilometers) by 1870, and 18,700 miles (30,100 kilometers) by 1900. Similarly, the United States, with its vast landscapes ripe for exploitation, became smitten with railway construction. While a mere 23 miles (37 kilometers) of track existed in 1830, by 1860 entrepreneurs extended this to 30,626 miles (49,288 kilometers). American railways peaked in 1916 with an amazing 254,037 miles (408,833 kilometers) of track available to passengers. European countries such as Russia and Germany also undertook significant railway projects, although these efforts were quite conservative when compared with those undertaken in Britain and the United States.

The available tourist routes extended well beyond Europe and America. The rush to empire during the last years of the nineteenth century prompted a policy that is sometimes referred to as railpolitik. Rail lines allowed for the easier economic exploitation of territory by colonial powers, the rapid movement of military forces, and the conquest of new sights and sites by tourists. Thus, extensive railway construction in places such as India, South Asia, Latin America, and Africa allowed expanded travel options while also aiding imperial ambitions.

As the number of tracks increased, so too did the range of tourists. Initially, elites dominated railway travel. Railway companies believed that first-class travelers represented the highest potential profit, so tickets were accordingly expensive. At the same time, many elites worried that a mobile working class might bring political upheaval; keeping workers fixed to specific towns and cities was in everybody's best interest. Furthermore, workers and their social betters had vastly different ideas about how best to spend leisure time. While the middle and upper classes preferred quiet, solitary travel, workers expected a boisterous communal experience. Thus, elites turned up their noses at working class excursionists.

Despite objections, railway companies soon dismissed objections in favor of profits. In 1835 the Stockton and Darlington Railway added working-class, or third-class, compartments to its trains. In 1844 the Liverpool and Manchester Railway followed suit. Whereas first- and second-class compartments offered reasonably comfortable benches, third-class accommodations initially entailed little more than open boxes without seats; passengers, seen as little more than livestock, had to stand.

Although third-class passengers provided less than 20 percent of railway revenues in 1840, their numbers increased markedly after the 1851 Exposition in London, the first world's fair. This event, proposed by Queen Victoria's husband Prince Albert, celebrated Britain's industrial achievements. Employers encouraged workers to attend the event; many even offered them subsidized trips. Moreover, both working-class organizations and professional tour companies

such as Thomas Cook and Son endeavored to provide inexpensive fares. The result was a dramatic expansion of working-class interest in short-term excursion travel, especially to seaside resorts such as Blackpool in northwest England. By 1870 the proportion of third-class travelers increased to 65 percent of total travelers, providing some 44 percent of railway revenues. Third-class accommodations improved as a result, narrowing the gap between first- and third-class conditions.

Workers did not alone benefit from improved traveling conditions. Early first-class cars were dark and unpleasant. Sleeping cars, introduced on American trains in 1836, rode on inadequate springs, and passengers risked being bounced from uncomfortable bunks. Little changed until George M. Pullman, an inventor and industrialist, braved one of the cars in 1858 while traveling from Buffalo to Chicago. Horrified by his experience, he developed his first luxury sleeping car, the Pioneer, in 1864. The car, both larger and wider than ordinary rail cars, sat atop more comfortable springs and provided travelers with comparatively luxurious accommodations. After his first Pioneer was used as part of Abraham Lincoln's funeral train, Pullman launched the Pullman Car Company. Throughout the rest of the century, the company offered a line of luxury sleeping, dining, and passenger carriages. For well-to-do tourists, the prospect of long-distance adventures, such as across the United States, became considerably more appealing.

With expanded routes and a range of available carriages, companies such as Thomas Cook and Son offered more package tours. At first, Cook focused his efforts on trips to Scotland—Cook's Tartan Tours—as well as working-class excursions to seaside resorts and to the countryside. After his son John Mason joined the business in the 1860s, the company offered more and more high-priced packages to continental destinations. They added an American trip in 1866. Trips to Egypt and the Middle East followed not long after.

Meanwhile, American railway companies used the growing tourism market as a money-maker. Following completion of the First

Transcontinental Railroad in 1869, the Northern Pacific and Santa Fe Railway Companies, among others, moved to diversify their products. Railroad companies developed the first national parks, complete with theme hotels and star attractions, to expand rail revenues. Visitors anxious to travel to Yellowstone, Glacier, and the Grand Canyon National Parks arrived at their destinations in luxurious Pullman cars.

The great age of railway tourism ultimately drew to a close with the appearance of affordable automobiles and, eventually, cheap airfares. Yet the imagined romance of rail travel has yet to disappear.

—Eric Zuelow

Bibliography

- Barton, Susan. *Working-Class Organisations and Popular Tourism, 1840–1970*. Manchester, UK: Manchester University Press, 2005.
- Brendon, Piers. *Thomas Cook: 150 Years of Popular Tourism*. London: Sacker and Warburg, 1991.
- Sears, John F. *Sacred Places: American Tourist Attractions in the Nineteenth Century*. Amherst: University of Massachusetts, 1989.
- Sillitoe, Alan. *Leading the Blind: A Century of Guidebook Travel, 1815–1914*. London: Macmillan, 1995.
- Smith, David Norman. *The Railway and Its Passengers: A Social History*. Newton Abbot, UK: David and Charles, 1988.
- Stover, John F. *American Railroads*. 2nd ed. Chicago and London: University of Chicago Press, 1997.

Seaside Resorts

Seaside resorts became the preferred leisure destination for the traveling middle and upper classes—and eventually for many in the working classes as well—over the course of the nineteenth century. Their growing appeal as tourist destinations signaled a great shift both in cultural and medical attitudes toward the sea and also in the social composition and mores of the touring class. Seaside resorts played an essential role in the development of leisure as a defining component of modern life.

Even the most seasoned European traveler of the early 1700s would have been astonished, and not a little mortified, by the prospect

➤ TAKING THE WATERS

The word “spa,” borrowed from the name of a Belgian resort town to describe any facilities for supervised water therapy, has now become a generic term for therapeutic relaxation facilities. Early spas were developed at locations with natural thermal or mineral springs, whose use was sometimes already part of much older healing traditions. The development of what is termed “hydrotherapy” is usually traced to the Romans, who throughout their empire constructed public baths for recreational and therapeutic use. New theories developed with a revival of interest in the sixteenth century with the publication in 1553 of Conrad Gessner’s *De balneis omnia quae extant* a book summarizing knowledge of the medical properties of water. During this European revival, wealthy men and women organized seasonal retreats to the spas to experience a social and therapeutic regime under medical supervision. Well-known European spas included Aix-les-Bains and Vichy in France, Carlsbad and Baden-Baden

in Germany, Aquincum and Hunyadi Janos in Hungary, Karlovy Vary in the Czech Republic, and Tunbridge Wells in England. After the French revolution, spa culture was further elaborated; by the eighteenth century, it had spread to the middle classes in Europe and America.

North American spa culture is linked directly with older traditions via developments in nineteenth-century hydrotherapy, a treatment with a particularly strong female following. In North America, natural-resource-based resorts combined Old-World-style facilities with regionally influenced architecture and treatments. Their models were predominantly western European; well-known spas like Saratoga Springs in New York, Hot Springs in Arkansas, and Banff in Alberta drew wealthy families for extended seasonal visits by offering them a wide range of organized activities and recreational facilities, as well as treatments at their hot springs.

—Teri Brewer



The Promenade and Tower from South Pier, Blackpool, England, about 1900. (Library of Congress)

of repairing to coastal areas to find repose and rejuvenation. The sea was viewed as a place of danger and oblivion, fueling fear and incomprehension far more than desire. British upper-class travelers first began in the mid- to late

eighteenth century to look to the sea as a site for healthful invigoration and sublime imaginative release. Following their lead, continental royals, aristocrats, and upper bourgeois began in the early nineteenth century to migrate to beach areas for pleasurable repose from court life and urban discomfort. The dramatic expansion of railway networks from the 1830s forward in Europe and the United States was key in bringing coastlines within easy reach of large cities, and the growing speed, comfort, and affordability of the trains made pleasure travel a real possibility for the middle classes. As tourist traffic grew, seaside resorts capable of receiving larger crowds for extended periods multiplied on both the American and European shores of the Atlantic, along the Mediterranean coast, and on the Adriatic and Baltic coasts as well.

The names of these elite resort towns would become fixed in the vocabulary of the international traveling classes: Scarborough, Brighton, and Weymouth in England; Dieppe, Trouville, St. Tropez, and Nice in France; and Newport and Southampton in the United States. At these resorts, sea bathing was only one part of the

experience and not always the most important one. These were places of bourgeois and aristocratic sociability, so a full retinue of leisure and social activities structured the day, with the plunge into the water usually taking place—if at all—in the morning. Beach resorts of this elite type centered around one or more grand hotels, luxury palaces embodying the latest in comfort and taste. The hotels commonly housed casinos as well, offering a seemingly limitless array of distractions that included daily dinners and teas, seaside promenades, excursions to nearby towns in search of local color, dances, and sport. The round-the-clock pursuit of amusement had to coexist with still-prevalent norms of modesty and respectability, however. Bathing costumes commonly covered most of the body with heavy material, and many beaches enforced gender segregation.

A leisure site of the well-to-do for most of the nineteenth century, the seaside gradually

began to attract a more socially diverse clientele. Again, Britain was at the forefront of this popularization of leisure, with the resort town of Blackpool receiving working-class day trippers in the 1870s. By the late nineteenth century, coastal areas of the northeastern United States such as Cape May on the Jersey Shore were attracting a heavy traffic of workers from nearby cities during the summer months. Coney Island in Brooklyn, New York, incorporated its coastline into a vast complex of spectacular amusements, auguring the dawning of a new age of mass consumption in the twentieth century.

—Patrick Young

Bibliography

- Corbin, Alain. *The Lure of the Seaside in the Western World 1750-1840*. Translated by Jocelyn Phelps. Berkeley: University of California Press, 1994.
- Lencek, Lena, and Gideon Bosker. *The Beach: The History of Paradise on Earth*. New York: Viking, 1998.

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Politics and Statecraft

Political change between 1750 and 1914 was far-reaching and ubiquitous. Economic and social changes generated new conflicts, posed new challenges for leaders, and produced new ways of thinking about government and the state. Huge empires disappeared, and new ones came into existence. Revolts and revolutions convulsed many societies, while in others “reform” became a watchword. New ideologies, including democracy, liberalism, nationalism, and socialism, clashed with centuries-old political principles of monarchy and hierarchy. Most importantly, states became more efficient and expanded the scope of their activities even while written constitutions in some parts of the world bound rulers and subjects alike to a set of mutually accepted rules.

The increase in state power was a worldwide phenomenon but was most pronounced in Eurasia. In the 1700s the larger Eurasian states were governed by monarchies that focused their energies on two related tasks: first, the maintenance of a strong military, and second, the collection of sufficient revenue to pay for it. The need for revenue in turn required attention to the regulation of trade and other economic matters. But many socially useful and even necessary undertakings—policing, providing justice through the court system, education, the care of the poor and sick, and the maintenance of food supplies—were left to private individuals, local elites, or private charities. Furthermore, since bureaucracies were expensive, many tasks of government were carried out by unpaid local magnates or municipalities rather than actual government officials. Many states depended on large landowners to recruit troops and collect taxes, while others assigned the task of collecting taxes to private financiers or tax farmers, who collected taxes and kept a percentage for themselves.

Beginning in the late 1700s the scope of state activities began to expand, and the rights, privileges, and responsibilities of local communities, powerful social classes, and organized religions were limited or abolished altogether. The first examples of this trend can be found in late-eighteenth-century Europe, where “enlightened despots” such as Frederick II of Prussia (r. 1740–1786) and Joseph II of Austria (Holy Roman Emperor, 1765–1790; archduke of Austria, 1780–1790) sought to increase revenues and efficiency by attacking customary law and the privileges of nobles, towns, provinces, guilds, and representative assemblies. But the major example of

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the new intrusive, all-powerful state emerged in France during the era of the French Revolution and Napoleon, when state power was marshaled to reform and restructure French society from top to bottom while simultaneously recruiting and outfitting what to that point was the largest army in European history.

Following Napoleon's defeat the scope of state activities in Europe continued to grow, especially from the 1870s onward, when tax revenues generated from population growth and industrialization supported expanding budgets. European states invested in education; assumed greater responsibility for public health; carried out censuses; compiled data on agriculture, trade, and manufacturing; issued visas and passports to control travel and migration; and introduced or expanded postal services. The German and Russian governments took active roles in promoting industrialization. Following Germany's lead, states began to provide social security for their citizens by making available health insurance and old-age pensions. Larger states extended their systems of military conscription, and armies and military budgets grew, as did the apparatus of government. Between 1850 and 1914 the number of government employees increased from 140,000 to 864,000 in Austria-Hungary, from 67,000 to 535,000 in Great Britain, and from 300,000 to 583,000 in France. Germany, which did not exist in 1850, had 1 million government employees in 1914.

State growth also occurred where Europeans settled or established colonies. During the 1800s Australia and much of North America came under state control for the first time. In sub-Saharan Africa many hundreds of local and regional political entities were replaced by a few dozen colonial states, all with clearly delineated borders imposed by European diplomats. Within these colonial states, Europeans introduced new efficiencies to the tasks of organizing armies and collecting taxes but, like many previous African rulers, still relied on village headmen and "chiefs" to do the government's work at the local level. In India the colonial government planned railroads, undertook mammoth irrigation projects, initiated telegraph and postal systems, and oversaw schools.

In Meiji Japan, every step in its transition to a modern industrial state was directed by a central government that on taking power abolished Japan's ancient political structures and entire social classes, introduced military conscription and new tax schemes, and began issuing directives on everything from education to personal grooming habits. In the Ottoman empire, Persia, Thailand, and Ethiopia, reform inevitably entailed an increase in state authority, as central governments took steps to modernize armies, educational systems, and economies. Even in the United States, with a traditional distrust of central power, the federal government in the early 1900s undertook new initiatives in the areas of economic regulation, consumer legislation, and conservation.

As states became more powerful, subjects in some parts of the world were determined to find ways to control or at least influence how that power was exercised. The revolutions in the Atlantic world at the end of the eighteenth and in the early nineteenth centuries—American, French, Haitian, and Latin American—all were directed at ending "tyranny," the abuse of state power by absolute monarchs and their

officials. To prevent tyranny, revolutionaries created a new instrument: written constitutions. These documents set forth specific rules on how the state should function and provided protections for the individual's right to criticize the government. They also provided for elected representative assemblies with control of legislation and taxes and at least some influence on foreign policy and ministerial appointments. If constitutional safeguards and parliaments were not enough, subjects, as the only legitimate source of political authority, had recourse to revolution. As stated in the U.S. Declaration of Independence, when a government is destructive of basic human rights, "it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness."

The short-term results of the Atlantic revolutions were disappointing. Independent Haiti sunk into political turmoil, and many politicians of the new Latin American states ruled as they pleased despite what their constitutions said. Following the Congress of Vienna, monarchies were restored in much of Europe. But in Europe the conservative revival was a brief prelude to a period of renewed political ferment, marked by the emergence of new ideologies, frequent revolutions, and the erratic but unmistakable progress of constitutionalism and parliamentary government.

The most notable feature of nineteenth-century European (and American) politics was the degree to which people from all walks of life became politically involved. For some this meant backing revolutions, dozens of which occurred across Europe between 1820 and 1905. For others it involved taking part in demonstrations, joining political clubs, following political developments in newspapers and journals, rioting, or signing petitions. In 1842 no fewer than 3.3 million individuals signed a petition submitted to the British House of Commons demanding annual parliamentary elections and the extension of suffrage to all adult males. By 1842 universal manhood suffrage (barring slaves) already had been established in the United States and would gradually take hold in much of Europe. By the onset of World War I it existed in France, Germany, Britain, Austria-Hungary, Switzerland, Belgium, the Netherlands, Norway, Spain, Greece, Bulgaria, and Serbia. Women were excluded from voting in national elections, but in the United States and England they were pushing hard to change this. Extending the franchise led to the growth of political parties that represented the full spectrum of ideologies from monarchism to socialism. In 1910 the party with the largest representation in the German Reichstag was the Social Democratic Party, which espoused socialism and represented the interests of Germany's industrial working class. Much had changed since 1750, when a German state, elected parliaments, an industrial working class, and socialism (both the word and the concept behind it) had not existed.

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In much of Asia and Africa, indigenous political development came to a halt once colonialism was imposed, and in those states that remained independent, Western political ideologies and practices were only one of several influences on government institutions and political movements. Some of the most important developments in the 1800s—jihad in Africa and the Taiping Rebellion in China—drew on religion, not the principles of the French Revolution. Many reform-minded leaders at first were convinced that economic and military reforms were possible while maintaining traditional political structures and practices. This changed, however, as the century progressed. In 1876, hoping to show the world its dedication to modernization and prevent the abuse of power by the sultan and his officials, reformers in the Ottoman empire convinced Sultan Abdulhamid II (r. 1876–1909) to support a constitution, only to have him suspend it a year later. The leaders of Meiji Japan, after studying and observing the workings of government in the United States and Europe, also concluded that their project of economic and military modernization would be well served by adopting a written constitution. Announced to the Japanese by the emperor in 1890, the Meiji Constitution outlined the rights and duties of the emperor and his subjects, spelled out the functions of government, and established a bicameral parliament chosen by an electorate of some 450,000 voters. Such practices, it was believed, would provide clear lines of communication between rulers and subjects and engage political activists and local elites in the governing process. The Ottoman and Japanese constitutions were drawn up by officials and were simply presented to the populace, but in the early twentieth century in Persia, China, and the Ottoman empire, where the 1876 constitution was defunct, constitutional government was instituted the same way it had been introduced in Europe and the Americas: through revolution. A phenomenon that in the late eighteenth century had initiated more than a century of far-reaching political change in Europe and the Americas had now reached Asia, where the effects would be just as momentous.

Many of the leaders of these revolutions were ardent nationalists who rose up against their sultan, shah, or emperor not necessarily because they loved constitutions and parliaments but because they could

not bear living under rulers who had failed to protect their nations from defeat and humiliation at the hands of foreigners. Nationalism emerged during the era of the French Revolution, when the French people fought with new patriotic fervor to save their revolution and extend France's borders, and Germans, Russians, Italians, and others fought with equal fervor to break Napoleon's hold on Europe.

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ing to revolutions across Europe in 1848, the unification of Germany and Italy between 1860 and 1871, and anti-Ottoman wars of liberation in the Balkans from the 1820s onward. By the end of the century nationalism had become a secular religion, taught in schools and patriotic

histories, instilled through military training, and replete with rituals, monuments, anthems, marches, martyrs, and heroes. This gave people a feeling of being part of something grand and noble and inspired support for their leaders' programs of militarization and imperialism.

Outside of Europe nationalism also was becoming a potent force, especially in Algeria, Egypt, India, Vietnam, and the Philippines, where leaders drew on its power in their struggle against colonialism. In China it was directed against both foreign rule of the Manchus and Western interference. In India a sense of nationalism grew out of colonialism, which helped people of the subcontinent think of themselves as "Indians"—a common identity bolstered by the colonizers' efforts to build roads, railroads, a postal system and impose English as the lingua franca among the elite. This new sense of nationhood inspired the founding of the National Congress in 1885, popular support for boycotts of British goods in the early 1900s, and the decades-long struggle for independence under the leadership of Mohandas Gandhi from the 1920s to 1947.

The winning of independence by India and Pakistan along with many dozens of former colonies is one example of how nationalism affected developments in the twentieth century. Nationalism also contributed to the causes and dreadful slaughter of World War I; inspired fantastic dreams of military glory among Italian fascists, German Nazis, and Japanese imperialists; and was a direct cause of World War II, the most dreadful war in human history. No other ideology has matched its awesome power to inspire and destroy.

—James H. Overfield

■ Introduction: Government and Politics, 1750–1800

The world between 1750 and 1800 was on the brink of momentous political changes, and in some parts of the world these changes had already begun. Safavid Persia and Mughal India, two of the three great Islamic empires that had dominated southern and southwestern Asia in the early modern era, disintegrated. The Thirteen Colonies declared their independence from Great Britain in 1776, and in the wake of what came to be known as the American Revolution, a new republic based on democratic principles, the United States of America, came into existence. In the 1790s France also experienced a revolution that brought down the monarchy, ended aristocratic privilege, reduced the power of the Catholic Church, and introduced nationalism as a potent political force. In China, Japan, Latin America, the Ottoman empire, and much of Africa, older

political forms prevailed, but tensions and problems were growing.

Rulers and regimes around the world faced many different challenges in the eighteenth century, but one they shared in common was how to match revenues with expenses. This was an old problem but one that had become especially acute in Europe and southern and southwestern Asia as the size of armies grew and needed to be equipped with cannon, artillery, and firearms. Revenues, which were limited by exemptions and bureaucratic inadequacies, might have sufficed in peacetime but not in times of war. At the end of the seventeenth century, the need to increase revenues compelled the Mughal emperor Aurangzeb to launch a series of military campaigns to extend his territory in southern India, but they only compounded the empire's fiscal and political problems and led to its rapid decline in the

1700s. In Europe, the need of governments to pay for debts incurred in two major midcentury wars, the War of the Austrian Succession (1740–1748) and the Seven Years' War (1756–1763), drove government policies from the 1770s onward and had ramifications for the Americas and even China. In Europe, this was the age of enlightened despotism in which rulers in France, Austria, Prussia, Russia, and a host of smaller states sought to augment revenues by expanding commerce, increasing agricultural production, and, most importantly, boosting revenue by devising new taxes, taxing previously exempt regions and persons, limiting regional autonomy, and increasing the size and efficiency of their bureaucracies. Spain and Great Britain imposed new taxes not only on their European subjects but also on those in the Americas. In the 1760s “No taxation without representation” became a rallying cry in the Thirteen Colonies and discontent over new taxes caused Inca revolts in the 1740s and early 1780s and set the stage for the Latin American wars of independence after 1800.

Other parts of the world were not immune from political tensions and discontent. During the closing years of Qianlong's reign (1736–1795, informally until 1799) against a backdrop of growing population pressure and ongoing European efforts to open China to increased trade, China experienced an embarrassing military setback in Vietnam, the outbreak of rebellions in several parts of the empire, and a growing uneasiness over the state's failure to address pressing fiscal and administrative issues. In Japan the eighteenth century was a period of ongoing fiscal crisis, brought on mainly by decades of economic stagnation going back to the early 1700s. Shoguns and daimyo alike cut costs, borrowed, manipulated the currency, and made new demands on their subjects in the form of taxes and labor requisitions. Tensions between domain rulers and the shogun's administration grew, as did the level of discontent in villages and cities.

In Africa a variety of factors—the intensification of the slave trade, Islamist revival in the western Sudan, population pressures in the south, and growing commerce in eastern and southern Africa—all contributed to political instability and change. In Africa and elsewhere, however, the political changes of the 1700s were

mere previews for the momentous upheavals that were to follow in the nineteenth century.

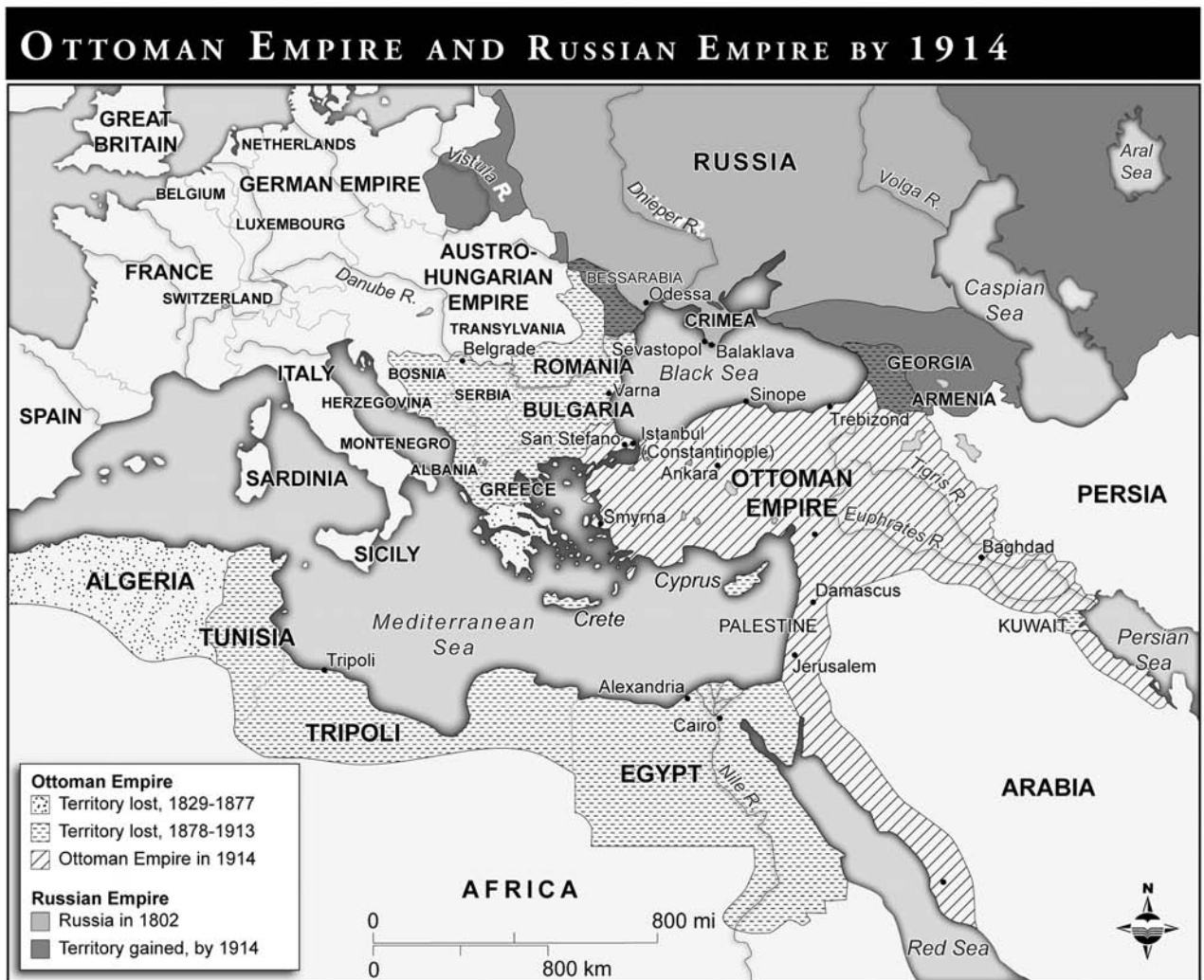
—*James H. Overfield*

The Ottoman Empire—Government Practices and Institutions, 1750–1800

The institutions and practices of the Ottoman government became increasingly decentralized between 1750 and 1800. Ostensibly, the sultan and the bureaucratic, military, and religious elites, especially the janissaries and the ulema (scholars of Islamic law), were to use their positions to integrate, appease, and rule the diverse religious, ethnic, and social groups within the Ottoman empire. Although the Ottoman government enacted legislation concerning foreign policy and broad judicial and fiscal issues, in practice it otherwise allowed the various provinces to carry out the everyday tasks of government. After coming to power in 1789, Sultan Selim III attempted to strengthen his own position through the implementation of numerous military and economic reforms. However, the initiatives of Selim III actually increased the power of local elites at the expense of the sultan.

The Ottoman system of government in the late eighteenth century included religious and secular institutions that existed to ensure the stability of the Ottoman state. The janissaries were the elite military corps, garrisoned throughout the empire to defend it from external attacks and to maintain internal law and order. The scribes constituted the Ottoman imperial bureaucracy, which oversaw the administration of everyday affairs in the capital, Istanbul, and the passing of decrees relevant to the provinces. The ulema were highly respected religious scholars whose role was to safeguard the conservative moral order that characterized the long-standing traditions of the Ottoman state.

Although these institutions helped preserve the relative stability of the Ottoman state in the late eighteenth century, their underlying weaknesses led to the shifting of administrative power from the Sublime Porte (the imperial bureaucracy) to the local provinces. For instance, in the course of the eighteenth century the military capabilities of the janissaries fell behind



those of the European armies, which had undergone a military revolution from 1650 to 1750 through the development of more advanced firearms and battlefield tactics. Nevertheless, the presence of large numbers of janissary troops in the provinces gave them an elite status. Moreover, their prevalence precluded the imperial Ottoman government, which was small in size and lacked modern tools of communication and transport, from enforcing its own power in outlying districts of the empire. Likewise, the ulema also served in the various provinces and concerned themselves increasingly with local affairs, frequently promoting religious and educational public work programs. Both the janissaries and the ulema allied themselves with powerful guilds that controlled the local economies in order to enhance their own elite status.

➤ **AYAN AND THE OTTOMAN STATE**

The *ayan* (provincial notables) played a crucial role in the practices of the Ottoman government during the late eighteenth century. The *ayan* consisted of important individuals or elite families who had enormous wealth and typically filled positions in the provincial government as military officers, tax collectors, or governors. The *ayan* established powerful support bases in the provinces, which forced the Ottoman imperial government to recognize them as intermediaries between the Sublime Porte and the local population. One such notable, Ali Pasha of Yanina, even ruled northern Greece and Albania for several years and was widely viewed as a vassal prince rather than an Ottoman subject.

—Jake Hamric



Reception at the court of Sultan Selim III at the Topkapi Palace, Istanbul, Ottoman period, late eighteenth century. (Bridgeman-Giraudon/Art Resource, NY)

In 1789 Sultan Selim III enacted a comprehensive economic and military reform program called the *Nizam-I Cedid* (New Order). These reforms were designed to increase central state power by solidifying the collection of taxes in the provinces and instituting a greater amount of organization and discipline in the janissary corps. In general, Selim III wanted to restore the principle of *adalet* (justice) to Ottoman government. However, his reform measures failed due in large measure to the fierce opposition of the janissaries and conservative religious leaders. Moreover, the sultan relied on the *ayan* (provincial notables) for tax collection as well as for providing a suitable army to fight the French after Napoleon's invasion of Egypt in 1798 and to fight the Russians after war was declared in 1806. Nevertheless, the New Order allowed for Ottoman officials to consult with European advisers about the Ottoman economy and military and therefore served as a period of transition between the centralized Ottoman state of the seventeenth century and the *Tanzimat* (Reforms) of the nineteenth century.

—Jake Hamric

Bibliography

Finkel, Caroline. *Osman's Dream: The Story of the Ottoman Empire 1300–1923*. New York: Basic Books, 2005.

Quataert, Donald. *The Ottoman Empire, 1700–1922*. Cambridge: Cambridge University Press, 2000.

Shaw, Stanford. *History of the Ottoman Empire and Modern Turkey*, Vol. 1, *Empire of the Gazis: The Rise and Decline of the Ottoman Empire, 1280–1808*. Cambridge: Cambridge University Press, 1976.

Chinese Government during the Reign of Qianlong, 1736–1795

The Qing dynasty emperor Hongli, better known by his reign title, Qianlong, was the longest-ruling monarch in Chinese history. Coming to the throne in 1736, he formally reigned until 1795, when he officially abdicated in order to avoid the appearance of eclipsing his grandfather but held on to power until his death in 1799. During his reign the economic growth and population increases that had begun under his grandfather, the Kangxi Emperor (r. 1662–1722), and his father, the Yongzheng Emperor (r. 1723–1735), continued. China's fortunes deteriorated soon after Qianlong's death, however, paving the way for the social upheavals and military setbacks of the nineteenth century.

Qianlong's reign was the high point of the Qing dynasty and the beginning of its deterioration. During his reign the size of China doubled, and he laid the groundwork for a multiethnic empire. He was also one of the great patrons of the arts. During his reign, Beijing went through a massive beautification program. The formerly austere capital was supplied with numerous palaces, walls, gardens, and gate towers. Painting and literature flourished. He also had many shortcomings as a ruler. Factional strife between Han and Manchu subjects increased during his reign. Toward the end of his reign, increasing corruption brought about a growing cynicism toward the government. And, most importantly, he failed to appreciate the growing importance of Western powers such as Britain.

When Qianlong came to the throne as a young man, he was aware of the dangers of factionalism and set about to ensure that no group was dominant at court. Nevertheless, there developed a rivalry over influence at court between the powerful ministers who had been instructed by his father, the Yongzheng Emperor,



During the long reign of the Qianlong emperor, China remained the wealthiest and most populous nation in the world. Signs of future problems, however, became evident in the last years of his reign. (Réunion des Musées Nationaux/Art Resource, NY)

to watch over him: E'ertai (1680–1745), a Manchu whose followers were mostly Manchu, and Zhang Tingyu (1672–1755), whose followers were mostly Chinese. Qianlong gradually weakened both sides by slowly withdrawing his support from them. In later years, Qianlong allowed no faction to become powerful at court. Nevertheless, by the end of his reign, court favorites dominated the political scene.

Qianlong's manner of governing was a compromise between the sternness of his grandfather and the relative flexibility of his father. In particular, Qianlong was generally forgiving when it came to corruption on the part of his officials. Yet he could be harsh when he felt that the officials had not been fully loyal or had failed in some particular endeavor. For example, when the general Nuoqin had lost battles in Sichuan in 1749, Qianlong had him beheaded with Nuoqin's grandfather's sword in front of the defeated army.

➤ HESHEN AND CORRUPTION AT COURT

In 1775 Heshen (1750–1799) was an obscure Manchu Banner soldier stationed at the Qianqing Gate when he met the Qianlong emperor. Qianlong, who was 65 years old at the time, took an immediate liking to Heshen, and the two became fast friends. Over the next few years Heshen rose meteorically through the ranks, being granted a number of exceedingly high appointments including superintendent of the Customs at the Chongwen Gate (which allowed him to earn a fortune), president of the Board of Revenue, and lieutenant general of a Manchu banner. Qianlong even betrothed his beloved daughter to Heshen's son in 1780; the two were married in 1790. Heshen's power was formidable and his greed limitless. For the next 20 years he filled the government with his friends and family and made himself an immense fortune from all sorts of corrupt practices. However, when Qianlong died the Jiaqing emperor stripped Heshen of all his positions and power. Heshen was allowed to commit suicide, but his son (who was Jiaqing's brother-in-law) was allowed to live and later attained high titles.

—Ihor Pidhainy

Qianlong was more successful in unifying the Qing empire. He did this by ruling as the ideal ruler in the eyes of all his people, speaking their languages and writing in their scripts. For the Manchus, he was a traditional Manchu warrior who upheld Manchu customs and rituals. For the Han Chinese, he was a Confucian emperor steeped in Chinese culture. He paid close attention to the ideas of loyalty and filial piety and visited Confucius's temple nine times, where he kowtowed in obedience at the philosopher's tomb. For the Mongols and Tibetans, Qianlong was a Buddhist monarch, a reincarnation of Manjusri, the Bodhisattva of compassion and wisdom.

In addition to representing himself as the bearer of culture, Qianlong also instigated a great scholarly project: the Four Treasuries Library, one of the great Chinese cultural achievements. Between 1772 and 1787, thousands of scholars were employed in gathering, selecting, editing, and commenting upon thousands of works. The final work consists of over 3,500

complete texts, with summaries of more than 10,000 additional texts. This project, however, went hand in hand with Qianlong's literary inquisition, by which thousands of books were burned for political and moral reasons. The vast majority were destroyed because of derogatory writing about the Manchu, their rulers, or earlier non-Han dynasties. The writers and their families were often executed or sent off as slaves to the far reaches of the empire.

Qianlong's military undertakings were generally successful, although there were several unsuccessful campaigns. The empire was expanded through its many wars. This included the defeat of the Dzungars, whereby Qianlong was able to secure the area of Xinjiang and to maintain control over the Dalai Lama and the Mongols. Qianlong's armies also defeated the Gurkhas of Nepal, the Jinchuan (Khamba Tibetans), the Uighurs, and rebels in Taiwan. However, his armies did not succeed in every major encounter. They fared poorly in both Burma and Vietnam. These wars were a major drain on the treasury, even though much of their costs were subsidized by merchants.

Finally, Qianlong's reign saw the growth of contact with Western powers, particularly England, whose importance in trade was growing throughout the century. All European trade was limited to the port of Guangzhou, where Western merchants were restricted to dealing with Hong merchants. Due to these restrictions and the trade deficit with China, Great Britain sent an ambassador to the Qing court in 1793. The mission, led by the experienced diplomat Lord Macartney, accomplished many of its objectives but failed to establish formal diplomatic or trade relations. The mission is remembered today for the refusal of Lord Macartney to perform the ritual kowtow to Qianlong and the Qianlong emperor's rejection of British requests to expand trade. It is noteworthy, however, that Qianlong invited Macartney to return the following year. Unfortunately, the Napoleonic Wars intervened, and by the time another mission was sent, both Macartney and Qianlong had died. Friction between the Chinese and the British continued, leading to the Opium War in 1839.

Qianlong's reign was the turning point in the fortunes of the Qing dynasty. The extensive

warfare drained the government treasury. Corruption, particularly after 1775 when a favorite, Heshen (1750–1799), was appointed to high positions of power, was also a major problem. After Qianlong's death, the empire began its downward spiral so that within two generations it was embroiled in a major rebellion (Taiping) and had lost wars to Western armies.

—Ibor Piddbainy

Bibliography

- Hevia, James. *Cherishing Men from Afar: Qing Guest Ritual and the Macartney Embassy of 1793*. Durham, NC: Duke University Press, 1995.
- Kahn, Harold L. *Monarchy in the Emperor's Eyes: Image and Reality in the Ch'ien-lung Reign*. Cambridge: Harvard University Press, 1971.
- Mote, Frederick. *Imperial China: 900–1800*. Cambridge: Harvard University Press, 1999.
- Peyrefitte, Alain. *The Immobile Empire*. New York: Knopf, 1992.
- Woodside, Alexander. "The Ch'ien-Lung Reign." In *The Cambridge History of China*, Vol. 9, *The Ch'ing Empire to 1800*, edited by Willard J. Peterson. Cambridge: Cambridge University Press, 2002.

Japanese Government and Politics in the Eighteenth Century

Japan was ruled by the Tokugawa shogunate from 1600 to 1867. The Tokugawa political system is usually referred to as the *bakuban* system, linking the *bakufu*, the government of the shogun, and the *han*, the domains of the local daimyo (lords). The government was feudal in its structure and organization in that the shogun and his central government bureaucracy in Edo (now Tokyo) exercised control over each daimyo as a feudal suzerain. The shogun treated the daimyo as his personal vassals bound to him with oaths of personal loyalty in return for which the daimyo held their domains as fiefs of the shogun. Actual government rule came from a group of senior councillors who worked with or on behalf of the reigning shogun. Each daimyo governed one of Japan's approximately 280 domains through a group of officials, samurai, who achieved this leadership rank through family inheritance.

The shogunate designed numerous regulations to prevent the daimyo from expanding

their power at the central government's expense. Daimyo were expected to maintain surveillance on each other's domains and to report suspicious activity to the shogun. There were severe limits on what a daimyo could do, where he could travel, and how many samurai retainers he could keep. All daimyo were required to travel to Edo at least once a year or every other year depending on the distance of their domain from Edo (*sankin kotai*). They had to maintain a sumptuous house in Edo and to leave their families there as virtual hostages. They always traveled with a number of domain officials, retainers, and guards at all times. Failure to comply with these regulations could mean transfer of the daimyo to a smaller domain or even complete confiscation of the daimyo's lands.

The daimyo were divided into three categories: *fudai* (vassal), *shimpan* (collateral), and *tozama* (allied). These divisions derived not from strength or wealth but rather from the degree of trust that the shogunate had in them. The *fudai* daimyo descended from families that had served under the Tokugawa before 1600. Their territories frequently abutted shogunal lands, thus forming a buffer from outside attack, and most of the shogun's high officials came from their ranks.

The *tozama* daimyo, by contrast, were literally kept at a distance. Most *tozama* daimyo descended from houses that shogunal founder Tokugawa Ieyasu considered too strong to be his direct vassals or had allied with him only after he had seized power in the Battle of Sekigahara in 1600. Their domains tended to be larger than those of the *fudai* and were located in regions far from the center of Japan. *Tozama* daimyo were not allowed to participate in the administration of the shogunate. The *shimpan* daimyo were branch families of the Tokugawa, were given domains confiscated from other daimyo, and were excluded from office in the bakufu. The result was a highly structured and orderly political system that allowed central political authority to reach far down into the general population.

The politics of the shogunate, like those of the domains, has been described by historian Peter Duus as court politics in which power was consolidated through personal influence, alliances, and persuasion. The shogun's top officials (*roju*) built up factions of supporters through

friendship, patronage, and marriage and secured power through coalitions with other factions and with other *fudai* daimyo. An extensive bureaucracy under the *roju* collected taxes, managed finances, legislated and enforced laws, managed economic enterprises, and built and maintained infrastructure.

The major political questions tended to be socioeconomic. Foreign affairs mattered little because Japan had closed itself from any contact with the outside world since the first years of the Tokugawa era. Peace contributed to a commercial revolution that in turn brought about several transformations: urbanization, population growth from about 18 million in 1590 to about 25 million in the early 1800s, the growth of wealthy and powerful merchant houses, and the emergence of a class of wealthy farmers and landlords. Unfortunately for the shogunate and many daimyo, taxes and fees were at fixed levels, which caused many of them to fall into debt when income failed to keep up with expenses.

Some domains fared better than the shogunate because they often were able to gain monopolies on items produced, sold, and traded from their regions. The shogunate tried to make ends meet by extracting forced loans from wealthy merchants or debasing currency to pay off loans with cheaper money. Various attempts at government reform in the eighteenth century called for curtailing merchant privileges, greater austerity in shogunal spending, price fixing, and debasement of currency. At the same time there was considerable discontent among samurai throughout the country because their fixed incomes could not keep up with inflation.

The traditional political order imposed by the shogunate in the early 1600s was experiencing considerable stress by the end of the eighteenth century. The daimyo and samurai faced increasing financial problems as their fixed revenues or stipends failed to keep up with rising prices. Some merchants and large-scale landowners prospered, but many ordinary peasants experienced hardships and vented their frustrations through riots and protests.

The arrival of foreign ships in the early 1800s provoked a major crisis for the bakufu. At first the shogunate was able to keep the foreigners at bay, but a strong show of force by an American

squadron led by Commodore Matthew Perry in 1853 and 1854 forced the government to open Japan and to rescind its exclusion policies. This evident weakness encouraged certain *tozama* domains and samurai to rise up against and eventually overthrow the shogunate in the late 1860s.

—Daniel Métraux

Bibliography

- Bellah, Robert N. *Tokugawa Religions: The Values of Pre-Industrial Japan*. Boston: Beacon, 1957.
- Duus, Peter. *The Rise of Modern Japan*. Boston: Houghton Mifflin, 1976.
- Najita, Tetsuo, ed. *Tokugawa Political Writings*. Cambridge: Cambridge University Press, 1998.
- Nosco, Peter, ed. *Confucianism and Tokugawa Culture*. Princeton, NJ: Princeton University Press, 1984.
- Totman, Conrad D. *Politics in the Tokugawa Bakufu, 1600–1843*. Cambridge: Harvard University Press, 1967.
- White, James. *Social Conflict and Political Protest in Early Modern Japan*. Ithaca, NY: Cornell University Press, 1995.

Enlightened Despotism in Prussia, the Habsburg Empire, Sweden, and Spain

The form of statecraft known as enlightened despotism, which emerged in Europe during the late eighteenth century, attempted to combine philosophical ideals of social justice with the institution of hereditary, absolute monarchy. French Enlightenment thinkers such as François-Marie Arouet (Voltaire) and Denis Diderot encouraged Europe's rulers to use their power to implement reforms, such as religious toleration, increased access to education, equality before the law, and

the abolition of serfdom. Monarchs in Prussia, the Habsburg Empire, Spain, and Sweden all adopted policies that reflected Enlightenment thought to varying degrees. These policies, however, were motivated more by pragmatism than idealism. Their purpose was to strengthen monarchical government and increase productivity.

The intense competition between Prussia and the Habsburg Empire during the eighteenth century was the impetus for reform in both regions. The two monarchies were enemies in the War of the Austrian Succession (1740–1748) and the Seven Years' War (1756–1763). Frederick II (Frederick the Great) of Prussia (r. 1740–1786) sought to strengthen his state by allowing non-noble Prussians to become army officers, government officials, and judges, positions that had previously been the exclusive preserve of the nobility. This measure increased the pool of talent that Frederick drew upon to administer his kingdom. He also abolished serfdom on Crown lands, which both reduced peasant unrest and increased the number of subjects who were compelled to pay monetary taxes. While both measures were in keeping with the Enlightenment ideals that Frederick admired, they also increased his power as a monarch.

The Habsburg Maria Theresa (r. 1740–1780) distrusted the ideas of the French Enlightenment and banned the works of Voltaire from the Habsburg Empire. Nevertheless, the empress recognized that such egalitarian measures as increased taxation of the nobility and clergy as well as limits on the degree of labor imposed on the peasantry would result in increased stability and greater revenue for the Crown. Maria Theresa's son, coruler, and eventual successor, Joseph II (r. 1765–1790), admired the progressive theories espoused by Voltaire and the other philosophes, but on becoming emperor the implementation of a single educational system from the elementary grades to university served a practical purpose. The new system provided educated bureaucrats for the Habsburg civil service. Joseph's more radical innovations, such as a universal property tax, the dissolution of the monastic orders, and equalization of judicial penalties for all social classes provoked widespread opposition, and as a result many of these measures were reversed after his death.



Frederick II, also known as Frederick the Great, was one of the most important rulers in German history. He ruled Prussia as an enlightened despot between 1740 and 1786, firmly establishing his kingdom as one of the great powers of Europe. (Library of Congress)

► THE ROLE OF FRANCE IN THE 1772 MILITARY COUP OF GUSTAVUS III

When Gustavus III ascended the Swedish throne in 1771, the Estates of the Realm (members of the nobility, clergy, burghers and peasants, all of whom had deputies to represent their views in parliaments), were divided into two distinct factions: the “Hats,” who supported a closer relationship with France, and the “Caps,” who supported a closer relationship with Russia. The differences between the two factions prevented the young king from implementing his proposed reforms. Gustavus III predicted the necessity of a coup before his ascension and traveled to France in 1771 to gain support for increased monarchical authority in Sweden. In Paris, Gustavus was praised by prominent philosophes such as Voltaire because of his espousal of Enlightenment ideals. On the

advice of former French foreign minister Etienne-François duc de Choiseul, France agreed to pay 1.5 million livres in annual unconditional subsidies to the Swedish monarchy and appoint an ambassador to Stockholm. This backing from the French government allowed Gustavus to wield the necessary financial and diplomatic resources to support his military coup. This demonstrated that the French government believed that an enlightened despot could better achieve stability in Sweden than a parliamentary oligarchy and that adherence to Enlightenment ideals did not preclude Gustavus from imposing his monarchical authority over the Swedish government.

—Carolyn Harris

Both Charles III of Spain (r. 1759–1788) and Gustavus III of Sweden (r. 1771–1792) introduced reforms inspired by the Enlightenment in an attempt to consolidate their own authority at the expense of the nobility. Charles limited the privileges of wealthy sheep ranchers and sought to diversify the Spanish economy and increase foreign commerce. Gustavus, a nephew of Fredrick the Great, staged a military coup to break the authority of noble factions and increase the prestige of the Crown in 1772. Like Charles he revoked noble trade monopolies, thereby removing obstacles to foreign and domestic commerce. Noble opposition in both Spain and Sweden succeeded in reversing many of these reforms after the deaths of Charles and Gustavus. The revocation of innovations introduced by the enlightened despots undermined popular support for absolute monarchical rule, contributing to liberal and radical political movements in the late eighteenth and early nineteenth centuries.

—Carolyn Harris

Bibliography

- Beales, Derek. *Joseph II*. Cambridge: Cambridge University Press, 1987.
- Fraser, David. *Frederick the Great: King of Prussia*. London: Allen Lane, 2000.
- Gagliardo, John G. *Enlightened Despotism*. London: Routledge and Kegan Paul, 1976.

Harvey, A. D. “Gustav III of Sweden: The Forgotten Despot of the Age of Enlightenment.” *History Today* 53(12) (December 2003): 9–15.

Russia under Catherine the Great

The 35-year reign of Catherine the Great (1762–1796) was an age of lavish and sophisticated cultural life at court, tremendous military and political successes, and increased opportunities for the nobility. At the same time, however, it was a period of increased inequality and oppression for the serfs, state peasants, and ethnic minorities who made up the vast majority of the population. This was, of course, no accident. Catherine, like all absolutist rulers of the time, depended heavily on the nobility to preserve order and help administer the state, and the nobles’ cooperation depended on the maintenance of their privileges, especially the use of serf labor. Moreover, as a German princess who had married into the Romanov dynasty and then, after years of an unhappy marriage usurped the throne (and may have been complicit in the death of her husband), with the help of the first of numerous lovers, Catherine was even more dependent on the goodwill of the aristocracy. Thus, while she was free to exploit the opportunities that arose for expansion, she shunned any significant internal changes that might have alienated the nobility.



Portrait of Catherine the Great, by Dmitry Gregorievitch Levitsky, 1783. (Scala/Art Resource, NY)

Catherine cultivated the image of an enlightened ruler and was, in fact, well acquainted with many of the leading philosophers of the late eighteenth century, both personally and through their writings. In 1767 she established the Legislative Commission to revise Russian law and reorganize governmental administration; she even wrote a set of guidelines that was infused with liberal ideas. However, when the commission's deliberations led to bitter disagreements among representatives of the nobles, townsmen, and state peasants, she disbanded it and ignored most of its recommendations. The domestic changes implemented under Catherine were primarily administrative reforms that strengthened her personal power and the privileges of the nobility. The country was divided into 51 provinces, which in turn were composed of smaller districts, each having its own local council, courts,

and administration. While the Crown appointed provincial governors and certain district administrators, minor officials were to be elected by the local gentry, which included all those who enjoyed noble status as a result of landownership or government service. The privileges of the gentry were expanded in 1785 with the Charter of Nobility. Under this legislation, gentry were exempted from compulsory state service and direct taxation, free to dispose of their property (both land and serfs), permitted to operate industrial enterprises on their estates without payment of any license or fees, free from corporal punishment, and free to travel or live abroad.

The provisions that increased noble authority over serfs were in part a response to the Pugachev Revolt, which shook the country from 1772 to 1775. The rebellion began among Cossacks in the Ural region who were angry over their loss of autonomy and heightened military obligations. It quickly spread to neighboring regions as serfs and peasants joined in the hopes of ending their oppression. Only by ending a war with Turkey was the government able to marshal enough troops to crush the revolt. While the revolt highlighted the misery of the peasantry and the need to reduce the burdens placed on them by both the state and landlords, it strengthened the bond between Catherine's government and the nobility and made any such reforms impossible for nearly a century.

If Catherine proved cautious and later even reactionary in domestic affairs, she pursued an adventurous and highly successful foreign policy that resulted in territorial expansion in the south and west. While much of this success was due to the internal decay, division, and weakness of Russia's traditional adversaries, especially the Ottoman empire and Poland, it was also due to Catherine's skills and those of her advisers and generals. Russia successfully fought two major wars with the Ottomans and achieved its long-held goal of gaining complete access to the Black Sea. The First Russo-Turkish War, from 1768 to 1774, resulted in Russian conquest of the southern Ukraine, including the entire north coast of the Black Sea and the Crimea. The conquered territory was reorganized by G. A. Potemkin (1739–1791), who besides being Catherine's lover was an able administrator; numerous towns and ports

were established. The Second Russo-Turkish War, from 1787 to 1792, saw further Russian victories, but diplomatic pressure from other states, especially Austria and England, meant that Russia's territorial gains were limited.

During Catherine's reign, Russia also played a key role, along with Prussia and Austria, in the partitions of Poland. The Polish government was an elective monarchy in which the landed magnates competed fiercely for the Crown while appealing for support not only from the Polish gentry but also from neighboring rulers. This gave Catherine the opportunity to interfere in Polish affairs by making one of her former lovers, Stanislaw Poniatowski, the new king in 1764 and having herself declared protectress of the Polish-Lithuanian Commonwealth in 1768. When Poniatowski allied with various nobles to curtail Russian influence, Catherine used Russian troops to crush the rebellion and entered negotiations with Prussia and Austria. This led to the partition of Poland in 1772. When the French Revolution of 1789 inspired Polish reformers to once more try to transform the country's antiquated and inefficient political system,

Catherine and her fellow monarchs intervened again in 1792 and 1795, each time claiming more territory. By the third and last division in 1795, Poland disappeared completely from the map. For its part, Russia acquired nearly two-thirds of the former Polish state and made the territories an integral part of its greatly expanded empire.

—Craig Patton

Bibliography

- Alexander, John T. *Catherine the Great: Life and Legend*. New York: Oxford University Press, 1989.
- Blum, Jerome. *Lord and Peasant in Russia from the Ninth to the Nineteenth Century*. Princeton, NJ: Princeton University Press, 1961.
- de Madariaga, Isabel. *Russia in the Age of Catherine the Great*. New Haven, CT: Yale University Press, 1981.
- Duffy, Christopher. *Russia's Military Way to the West: Origins and Nature of Russian Military Power, 1700–1800*. London: Routledge and Kegan Paul, 1981.
- Jones, Robert E. *The Emancipation of the Russian Nobility, 1762–1785*. Princeton, NJ: Princeton University Press, 1973.

■ Introduction: Revolts and Revolutions, 1770–1820

Revolts and revolutions both are violent reactions to perceived injustices and oppression, but otherwise the two political phenomena have little in common. Revolts tend to involve individuals mainly from a single socioeconomic group such as peasants, slaves, students, workers, taxpayers, soldiers, or inhabitants of a particular region. For this reason, participants in revolts seek the redress of grievances specific to their situation rather than a restructuring of society. Also for this reason, most revolts fail. Lacking broad support, revolts are quickly crushed or slowly subside and, at least in the short run, achieve few if any palpable results. Conversely, by definition, revolutions are successful. They bring about fundamental changes in the very nature of government, often the result of the transfer of power from one social

group to another. Their impact, furthermore, goes beyond politics. Legal systems, education, religious life, economic policies, the arts, and many features of everyday life also are affected.

The years between 1770 and 1820 had their share of revolts. Indians rose up against Spanish rule in Peru in 1780–1781, and Indian peasants and artisans, with some Creole support, rose up against new taxes in New Grenada (present-day Colombia) in 1781. Peasant rebellions were endemic in Russia, with Pugachev's Rebellion (1774–1775), which gathered support from disaffected religious groups and Cossacks, winning a number of victories before being suppressed by government forces. Many dozens of slave revolts occurred in Brazil, the sugar islands of the Caribbean, and the southeastern United States. But these years are mainly remembered not for

revolts but for revolutions, the most important of which, the American Revolution (1775–1783), the French Revolution (1789–1799), the Haitian Revolution (1791–1804), and the Latin American wars for independence (1808–1829), changed the course of political history.

These four Atlantic revolutions all were influenced by the intellectual ferment generated by the eighteenth-century Enlightenment, whose leading thinkers relentlessly criticized the divine right of kings, noble privilege, and religious oppression while promoting free trade, limited government, freedom of expression, constitutionalism, and popular sovereignty. Human beings, they asserted, need not passively accept the status quo but could use their reason to create a better social and political order. Although they shared this common vocabulary, each of the era's major revolutions was unique. Each grew out of varied circumstances, followed distinct paths, and had different results. All were important. Each one of them contributed to the acceptance of a new set of values and assumptions that ushered in a new age in politics.

The American Revolution began officially with the writing of the Declaration of Independence, a ringing endorsement of the principles that all men are created equal and that oppressed peoples have the right to abolish any government that does not protect its subjects' basic rights. After their military victory over Great Britain in 1781, the leaders of the new nation embraced republicanism rather than monarchy, issued a bill of rights, and adopted a constitution based on the principles of federalism and the separation of executive, legislative, and judicial power.

Unlike the American Revolution, which focused mainly on politics, the French Revolution centered on social issues, in particular the achievement of legal equality for all citizens in a society that for centuries had favored the interests of the privileged nobility and clergy. It also was more ambitious in its determination to break from the past. In its most radical phase in 1793 and 1794, revolutionary leaders sought to eradicate all vestiges of the old regime by adopting the metric system, renaming the months and days of the weeks, and abolishing Christianity. When attacked by Prussia, Austria, and other

powers bent on overturning the revolution, the French people rose up to defend their revolution with a patriotic spirit that introduced nationalism as a potent factor in war and politics.

The Haitian Revolution ended French rule over St. Domingue, whose 500,000 slaves produced great quantities of sugar and coffee and made up almost 90 percent of the colony's population. What began as a slave rebellion ended in the founding of the new state of Haiti, the second independent republic in the Americas. The Haitian Revolution inspired slave rebellions in Jamaica and the American South, strengthened the nascent abolitionist movement, and gave hope that even for the most downtrodden people oppression was not their inevitable lot.

The Latin American wars for independence resembled the American Revolution in that political changes, which resulted in the formation of a dozen new republics and one monarchy (Brazil), were not accompanied by significant social transformations. In the United States this meant the preservation of slavery and the continuation of a relatively egalitarian social order among whites. In Latin America it meant the preservation of not only slavery but also of a large politically impotent and economically exploited Indian population, a powerful and privileged Catholic Church, and the political domination of a class of wealthy white landowners. Despite these limitations, the successful independence movements in Latin America strengthened the idea that a new era in politics had begun, one in which revolutions could play a central role.

—James H. Overfield

Late-Eighteenth-Century Rebellions in Latin America

Traditional interpretations have portrayed the native populations of the Americas as passive in their response to the Spanish conquest and subsequent colonization. This view has been challenged by recent scholarship that reveals that indigenous peoples resisted Spanish rule through revolts, relocation, and sabotage. Revolts, many of which started in the aftermath of the conquest, were the most consequential form of resistance. The first revolt of the Incas led by Manco II in 1536, the Mixton War (1540–1542) in Mexico,

and the great uprising by the Maya of Yucatan in 1546 are but several examples of fierce early resistance on the part of native populations.

The seventeenth century was relatively free of popular uprisings, but there was a revival in the eighteenth century brought on by additional taxes and other burdens resulting from administrative and fiscal reforms instituted by the Bourbon government. The Bourbon reforms were implemented to improve the efficiency of the Spanish empire in extracting wealth from the Americas. They generally benefited large landowners, commercial interests, and mine owners but further impoverished the masses. From the 1740s to the 1780s these policies led to numerous revolts, the two largest and most violent of which took place in Peru and New Granada.

The revolt in Peru was led by José Gabriel Condorcanqui, an Indian cacique (chief) who assumed the name of Tupac Amaru II, thus linking his movement to the last Inca, Tupac Amaru I (1554–1572). (“Inca” meant ruler of the empire, but the Spanish mistakenly referred to the whole empire as Inca.) The causes of the Great Andean Rebellion were abuses of the Indian population by Spanish royal officials. These included the *mita* (labor drafts), *repartos* (the forced purchase of inferior and unwanted products), and Indian taxes. From 1777 to 1780 Condorcanqui appealed to imperial officials to end the abuses. When he saw that there would be no redress, he seized the *corregidor* (magistrate) of the province of Tinta and later hanged him. Within weeks, more than 40,000 Indians joined his revolt. On November 18, 1780, the rebel army attacked the town of Sangarara and massacred approximately 600 people.

Condorcanqui's rebellion inspired other uprisings throughout the Peruvian highlands, resulting in the destruction of haciendas and *obrajes* (sweatshops), where workers were forced to work under austere conditions and for long terms. This impeded not only their liberty but family life as well. Condorcanqui appealed to Peruvian creoles and mestizos to join the revolt, but this did not materialize. Instead, creoles and mestizos alike became victims of the Indians' wrath, which included the burning of churches, massacres, and destruction of property and public works. The turning point in



José Gabriel Condorcanqui, or Tupac Amaru II, led the famous 1780 rebellion against Spain's rule in Peru. (Daniel Laine/Corbis)

the revolt came during January 8–10, 1781, near Cuzco when forces loyal to the Crown routed the rebel army. On April 6, 1781, Condorcanqui was captured in the mountains near his home town of Tinta. He was later forced to watch the execution of his wife and one of his sons. Condorcanqui was then brutally executed by being lashed to four horses that were sent to the four points of the compass. Following his execution, the revolt became even more radical and bloody as new leaders attempted to mobilize all Indian males into a war to the death. Reinforced Spanish troops eventually prevailed, and the revolt petered out during the first six months of 1783.

The Comunero Revolt, which started in 1781 in New Granada (present-day Colombia), was also brought on by desperate economic conditions linked to Bourbon reforms. However, this revolt was more limited in scope. The revolt centered on specific grievances, including the sales tax, forced sales of merchandise, new taxes

on tobacco, and a head tax. The insurrection broke out in the colonial town of Socorro, an important agricultural center in northern New Granada, where a central committee, or *común*, had been elected to represent the peasants and artisans of the town and the nearby region. Other towns also elected committees, and representatives were known as *comuneros*, which soon became the name for the revolt.

Creoles were involved in some leadership roles, but the masses of *comuneros* were comprised of Indians and mestizos. A mass march was organized on the Viceregal capital of Bogotá to present the demands of the *comuneros*, including reduction in tribute and sales taxes for Indians and mestizos, return of confiscated lands, repeal of the new tobacco tax, and preference for creoles in official church and government appointments. In an effort to buy time, Spanish officials agreed to these demands. However, when the bulk of the rebel army had disbanded, the Spanish announced that the agreement was null and void since it had been signed under duress. Only one rebel leader, José Antonio Galán, was canny enough to keep his rebel band armed and ready. Galán continued armed resistance but was ultimately captured by the Spanish and executed on January 30, 1782. His death ended the revolt of the *comuneros*.

Although directed against perceived abuses and injustices in Spain's colonial regime, Condorcanqui's rebellion, the Comunero Revolt, and the many other smaller rebellions that occurred were not previews of the later wars for independence. Rebel leaders repeatedly professed their loyalty to the Crown and the Church. In the view of some historians, the violence and class warfare of the rebellions may have even delayed the independence movement by strengthening the alliance between the creole elite and Spanish authorities.

—George Lauderbaugh

Bibliography

- Fisher, Lillian Estelle. *The Last Inca Revolt, 1780–1783*. Norman: University of Oklahoma Press, 1966.
- Martín, Luis. *The Kingdom of the Sun: A Short History of Peru*. New York: Scribner, 1974.
- Phelan, John Leddy. *The People and the King: The Comunero Revolution in Colombia, 1781–1783*. Madison: University of Wisconsin Press, 1978.

Pugachev's Rebellion

One of the largest peasant revolts in European history, Yemelyan Pugachev's rebellion had a lasting influence on Russian history. By the mid-eighteenth century Russia emerged as a first-rate European power after the wide-ranging and radical reforms of Peter the Great. As the empire sought to modernize itself the status of the peasantry declined, while the Russian monarchs confirmed the authority of nobles over their serfs in return for the nobles' political cooperation. Heavy taxation, abuses, and arbitrary treatment caused peasant anger to run high and led to multiple peasant revolts throughout the 1750s and 1760s. Although the Russian imperial government suppressed these revolts, the peasant agitation soon culminated in Pugachev's Rebellion between 1773 and 1775.

The son of a Don Cossack, Yemelyan Pugachev was born in the early 1740s and participated in the Seven Years' War (1756–1763)



Yemelyan Pugachev was a disaffected Russian army officer who in 1774–1775 led the most serious mass uprising in early modern Europe prior to the French Revolution. Claiming to be the murdered tsar Peter III, he attracted support from peasants and religious dissenters before his movement was crushed by tsarist forces. (Library of Congress)

► PUGACHEV AND REFORM

The results of Pugachev's Uprising were far reaching and far from favorable to the lower classes in Russia. Early in her reign Catherine the Great toyed with the idea of liberal reform in the spirit of the Enlightenment movement, but Pugachev's Uprising marked a turn toward more conservative policies. It signaled a closer alliance between the Crown and the gentry to secure their political power and social standing. In response to the collapse of regional authority during the revolt, the empress launched a thorough administrative reform, which disregarded historical and regional considerations to create new administrative units of provinces (*gubernia*). Catherine the Great also accelerated the incorporation of the gentry, which culminated in the Charter of the Nobility of 1785. The charter confirmed earlier

privileges and exemptions of the nobility and added new ones that enhanced the nobility's status and extended their authority over the peasantry. This in turn strengthened serfdom, which also spread to new regions, especially to the Ukraine. As a result of these changes, the census of 1794–1796 revealed the growth of serfdom, with serfs constituting more than 53 percent of peasantry and almost half of the entire population of the Russian Empire. Stricter controls were established over the Cossacks, and the autonomy of the Don and Ural Cossack hosts was limited. Catherine the Great, however, sought to combine coercion with limited reforms, which she advocated in the last two decades of her reign.

—Alexander Mikaberidze

when Russia dispatched Cossack forces into Prussia. In later years Pugachev took part in the Russo-Turkish War of 1768–1774, earning promotion to a junior officer rank in 1770. After the war he abandoned military service and, for the next few years, led an impoverished existence in the Kuban and Southern Ural regions, where he witnessed popular unrest against serfdom. In February 1772 he was arrested as a deserter but escaped and later found shelter with the Old Believers religious sect. In January 1773 he again was arrested and sentenced to exile in Siberia but managed to escape in May. Over the next few months he organized an insurrection of the Yaik Cossacks that ignited the flames of a full-blown insurrection in the Ural region.

Pugachev assumed the name of Emperor Peter III, who was killed during the coup d'état that his wife Catherine (now Empress Catherine the Great) organized in the summer of 1762. Pugachev claimed that he, or "Peter III," had escaped the plot and had been hiding for the past ten years awaiting an opportune moment to reclaim his throne. The revolt quickly spread through the region where peasants and laborers at various ironworks in the Ural region protested intolerable conditions of bondage and exploitation. However, not all workers joined

the rebellion, and some even fought against Pugachev's troops. In general, the revolt appealed to peasantry and workers as an opportunity to take revenge for all they had suffered, striking out against a social order in which they saw nothing but abuse and oppression. In his famous manifesto, Pugachev promised that "noblemen will no longer exploit the peasants by making them do onerous work and pay heavy taxes, for all men will be free and independent." He promised to grant to those who followed him land and threatened punishment and death to those who opposed him. These promises appealed to a wide range of social classes (such as serfs, workers in various sectors, and priests) and ethnic groups (such as Tatars and Bashkirs) who gradually joined the revolt. Despite his own illiteracy, Pugachev recruited local priests and clerks to prepare his royal decrees.

Throughout the autumn of 1773, Pugachev created a governing apparatus to direct his growing number of supporters and organized a military force. By December his troops amounted to some 25,000 men with 86 cannon. After capturing several fortified points in the Yaik region, Pugachev's rebels besieged the fortress of Orenburg. Various detachments were sent to the neighboring provinces, raiding

Yekaterinburg, Chelyabinsk, and Samara. The rebels seized more than 90 factories and works that accounted for almost three-quarters of all industry in the Ural region. However, Pugachev failed to exploit this manufacturing capacity for his own good since many factories were looted and workers refused to work and instead chose to join Pugachev's army.

By now the imperial government began to pay attention to the unrest that it earlier had dismissed as nonconsequential. At the end of 1773 General Alexander Bibikov was appointed to lead a retaliatory army and forced Pugachev to raise the siege of Orenburg. The rebels instead moved to the east and in July 1774 seized the town of Kazan, which further alarmed the imperial authorities. Attacked by the government forces, Pugachev then retreated to the Volga region, spreading revolt to Penza, Tambov, and Nizhni Novgorod provinces. The imperial government, after hastily concluding a peace with the Ottoman Empire, shifted its military forces, led by Generals Michelson, Suvorov, and Bibikov, to suppress the growing unrest. In August 1774 Pugachev unsuccessfully besieged Tsaritsino and suffered a series of defeats, which turned the tide of war in favor of the empire. The demoralized rebels began to dissipate and abandon the cause, while Pugachev himself was seized by his own men in September 1774 and handed over for a bounty of 100,000 rubles. Transported in an iron cage to Moscow, Pugachev was tried and executed in a brutal manner on January 21, 1795.

—Alexander Mikaberidze

Bibliography

- Alexander, John T. *Autocratic Politics in a National Crisis: The Imperial Russian Government and Pugachev's Revolt, 1773–1775*. Bloomington: Indiana University Press, 1969.
- Alexander, John T. *Emperor of the Cossacks: Pugachev and the Frontier Jacquerie of 1773–1775*. Lawrence, KS: Coronado, 1973.
- Bodger, Alan. *The Kazakhs and the Pugachev Uprising in Russia, 1773–1775*. Bloomington: Research Institute for Inner Asian Studies, Indiana University, 1988.
- Madariaga, Isabel De. *Russia in the Age of Catherine the Great*. New Haven, CT: Yale University Press, 1982.

The White Lotus Rebellion

The White Lotus Rebellion refers to anti-Qing rebellions in China that began in the 1770s and continued until 1804. Famine, population pressures, tax increases, and perceived harassment by government officials led to the uprisings. The White Lotus Rebellion was notable, however, both for the long-standing cult that promoted it and because it began in central China rather than among the minority populations of outlying provinces.

The origins of the White Lotus society lay with a Buddhist cult of the thirteenth century. Members of the White Lotus never resigned themselves to Manchu rule under the Qing dynasty (established in the seventeenth century), but it was not until the 1770s that an organized uprising took place. In 1774 a martial arts and herbal healing expert named Wang Lun led a group of rebels against the Qing. Wang Lun drew from the peasant population of Shangdong Province, to the south of Beijing. Other participants in his forces included barge pullers, coolies, and other urban people who worked along the Grand Canal that connected Nanjing and Beijing.

Wang Lun called on the “Eternal Venerable Mother” goddess, an important deity in traditional folk-Buddhism. His ideology was millenarian, calling attention to catastrophe on earth rather than advocating such political goals as land reform or help for the poor. He was able to convince his followers that he was immune to Qing reprisals, however, and in the early days of his revolt this seemed true. His forces captured several cities including Linqing, an important city on the Grand Canal. A massive response from the imperial armies soon crushed Wang Lun's following, however, slaughtering them along with their families.

Because the government did not do anything about the underlying causes of the discontent, Wang Lun's defeat did not put an end to disorder in Shandong. Again in 1796, White Lotus rebels rose up. For the most part, the rebellion consisted of sporadic anti-Qing violence by roving bands using guerrilla tactics. Yet by this time, the government forces had become riddled with corruption and could not defeat the movement that lasted until 1804.

—Karen Mead

Bibliography

- Kuhn, Philip A. *Rebellion and Its Enemies in Late Imperial China: Militarization and Social Structure, 1796–1864*. Cambridge: Harvard University Press, 1980.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1990.
- ter Haar, B. J. *The White Lotus Teachings in Chinese Religious History*. Honolulu: University of Hawai'i Press, 1999.

The American Revolution

Political issues during the period leading to the American Revolution fall into two main categories: relationships between the American colonies and Great Britain and relationships among the American colonies. The breakdown in British-American relations proceeded largely from British attempts to raise revenue in the colonies through a series of taxes passed by Parliament. The economic and political roots of the American Revolution are thus tightly interwoven.

The British government had expended considerable funds in the Seven Years' War, known in the United States as the French and Indian War (1754–1763); as a result of the British victory over the French, Great Britain, according to the provisions of the Treaty of Paris, gained control of

vast new North American territories, including Canada. However, the British had paid a price for their victory in terms of adding substantially to their government's national debt. They also faced expenses from having to administer and defend their newly gained territories. Beginning with the Sugar Act (or Revenue Act) in 1764, Prime Minister George Grenville, in cooperation with Parliament, attempted to raise funds in America to help reduce government debt and to defray the expense of maintaining British troops in America. From the British point of view, such taxation was justified: the French and Indian War was fought partly to shield the American colonies from French threats, and British troops in America continued to play a protective role.

American colonists rejected such arguments. They disliked the Sugar Act and protested hotly against the Stamp Act (Duties in American Colonies Act, 1765), which required colonists to pay a tax on every sheet of paper used for legal papers, ships documents, newspapers and other publications, licenses, and even playing cards. Revenues from the tax were to be used to help pay the costs of defending and protecting the new American frontier near the Appalachian Mountains. Nonetheless, Americans found the new tax repugnant not because of its costs but because of its implications. From the colonial

THE VIRGINIA RESOLVES

On May 30, 1765, upon learning of the Stamp Act, the Virginia House of Burgesses, in what came to be known as the Virginia Resolves, spelled out its opposition to the new tax:

“Resolved, That the first Adventurers and Settlers of this . . . Dominion of Virginia brought with them, and transmitted to their Posterity . . . all the Liberties, privileges, Franchises, and Immunities that have at any Time been held, enjoyed, and possessed, by the People of Great Britain.

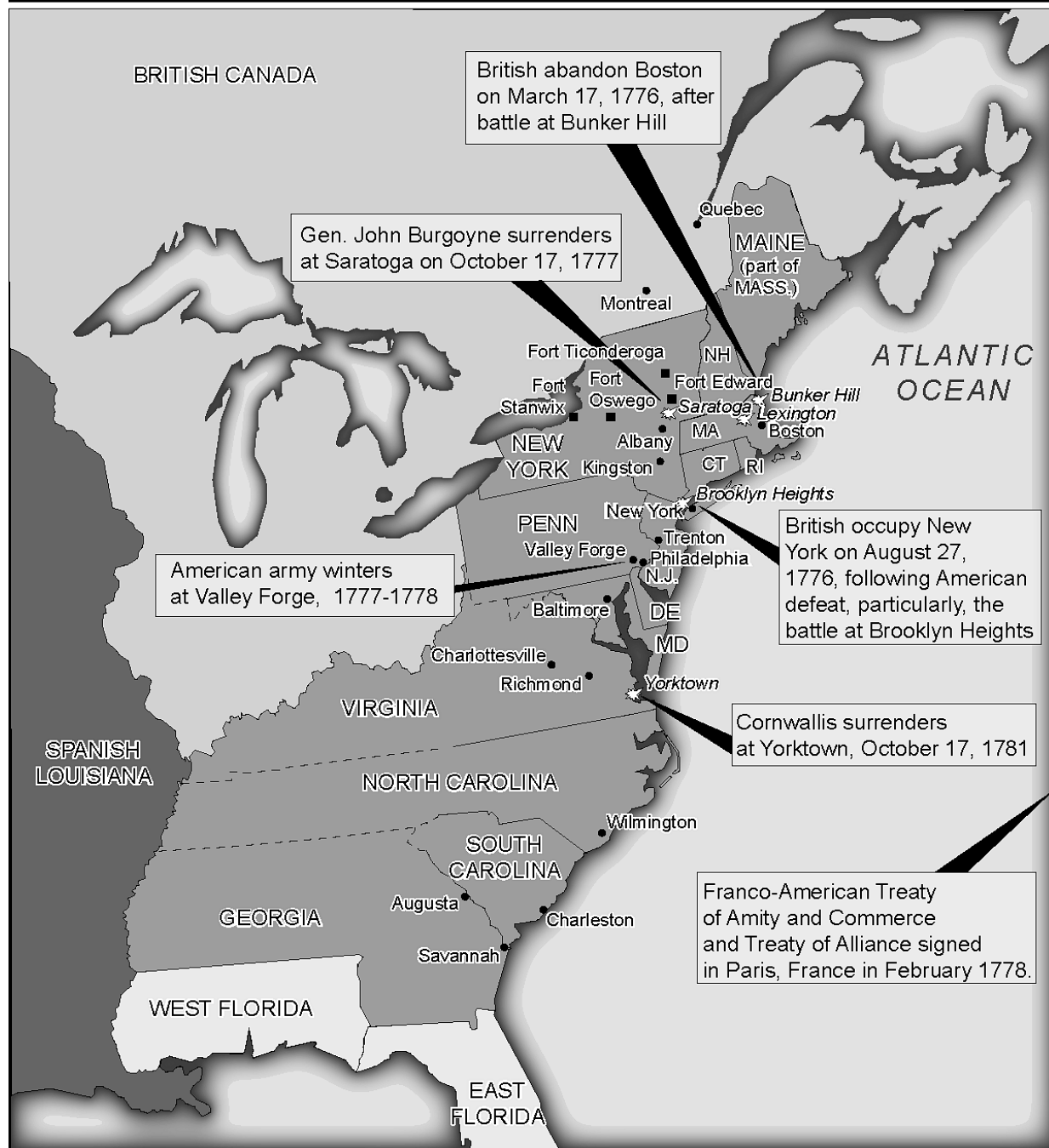
Resolved, That by the two royal Charters, granted by King James the First, the Colonists aforesaid are declared entitled to all Liberties, Privileges, and Immunities of Denizens and natural Subjects, to all Intents and Purposes, as if they had been abiding and born within the Realm of England.

Resolved, That the Taxation of the People by themselves, or by Persons chosen by themselves to represent them, who could only know what Taxes the People are able to bear, or the easiest method of raising them, and must themselves be affected by every Tax laid on the People, is the only Security against a burdensome Taxation, and the distinguishing characteristic of British Freedom, without which the ancient Constitution cannot exist.”

Source

Robert Middlekauff, *The Glorious Cause: The American Revolution, 1763–1789* (New York: Oxford University Press, 2005), 84.

THE AMERICAN REVOLUTION



point of view, previous British taxes—the Navigation Acts (a series of laws which restricted the use of foreign shipping for trade between Great Britain and its colonies) and the Molasses Act of 1733 (which required colonists to buy more sugar from the British West Indies rather than cheaper French West Indian sugar)—had

been intended to regulate trade and protect British commerce. They also had been loosely enforced. The Stamp Act, however, was viewed as a direct attempt by England to raise money in the colonies without the approval of colonial legislatures. The door now seemed open to similar taxes in the future.

Critics of the colonists pointed out that older British taxes were only lightly enforced; the colonists thus appeared to reject any form of real British taxation. Nevertheless, the colonists maintained that as British subjects, they had to consent to their own taxation; because the colonies were not represented in Parliament, Parliament had no right to tax them. British apologists responded with the notion of “virtual representation,” namely, that while many subjects of the crown in both Britain and America did not vote directly for members of Parliament, the body of Parliament acted to represent all British subjects.

The Americans were not convinced, and a series of protests and riots against the Stamp Act exploded across America. Colonial legislatures lodged formal protests with the London government. American boycotts of British goods put considerable pressure on British merchants, and led to the repeal of the Stamp Act and the Sugar Act in 1766. However, at the same time, Parliament passed the Declaratory Act, reasserting its sovereignty over the colonies in all matters, including taxation. Subsequent Parliamentary attempts to tax the colonies—the Townshend duties of 1767, the Tea Act of 1773—were also rejected by the Americans.

The taxation issue led to other points of conflict between the Americans and the British government. Colonists objected to the Quartering Act (1765), which mandated that they shelter British soldiers stationed in America. Indeed, as tensions grew, Americans increasingly resented the presence of British troops; the Boston Massacre of 1770 occurred as a result of colonial mob action. However, the most striking conflicts occurred after the “Boston Tea Party” of 1773, when colonists boarded three ships laden with taxed tea and dumped the tea into the harbor. Parliament responded harshly to the destruction of British property and the challenge to Parliamentary sovereignty; it passed the Coercive Acts (1774), closing the port of Boston, restricting Massachusetts’ self-government, and increasing the prerogatives of British forces in America. The Quebec Act, passed the same year, attached the rich Ohio River Valley to Quebec and maintained existing political and religious structures in French Canada, including the Catholic Church. American colonists bitterly resented the rejection

of their claims to the Ohio Valley, as well as the protection of Roman Catholics in Canada.

The tensions between Britain and the American colonies created an increasing sense of unity among those colonies. The Stamp Act Congress, held in New York in October of 1765, had included representatives from 9 colonies; it made formal statements of loyalty to the Crown but lodged official protests against Parliament’s taxing authority. Nine years later, in September 1774, the First Continental Congress met in Philadelphia in response to the Coercive Acts. It included delegates from all colonies but Georgia, and ultimately adopted the Suffolk Resolves, a firm rejection of British regulations on colonial trade. In addition, the Congress laid the foundations for a formal boycott of British goods and an embargo on American exports to Britain. Finally, in May of 1775, after the battles of Lexington and Concord, the Second Continental Congress met in Philadelphia. This body included representatives of all 13 colonies and took control of the growing conflict and the Continental Army. Although characterized by considerable internal disagreement, the Congress unanimously issued the Declaration of Independence in July 1776 and directed the American war effort to the end of the American Revolution.

—Rob Kiely

Bibliography

- Bailyn, Bernard. *Ideological Origins of the American Revolution*. Cambridge, MA: Harvard University Press, 1967.
- Bonwick, Colin. *The American Revolution*. New York: Palgrave Macmillan, 2005.
- McCullough, David. *1776*. New York: Simon and Schuster, 2005.
- Middlekauff, Robert. *The Glorious Cause: The American Revolution, 1763–1789*. New York: Oxford University Press, 2005.
- Morgan, Edmund Sears. *The Birth of the Republic, 1776–1789*. 3rd ed. Chicago: University of Chicago Press, 1992.

The Founding of the United States of America

In 1783 the Peace of Paris ended the American Revolution and recognized the independence of the Thirteen Colonies from Britain. The leaders



The U.S. Constitution is signed on September 17, 1787 at the Constitutional Convention in Philadelphia. The Constitution was drafted by legislators in Philadelphia between July and September 1787. Painting by Henry Hintermeister, 1925. (Library of Congress)

of the new United States labored to fashion a central government on a republican model; they were determined to avoid the dangers of an encroaching tyranny from either a centralized power or mob rule. Heir to the Enlightenment critique of monarchy and alert to the danger of an oppressive government, the Continental Congress in 1777 had adopted the Articles of Confederation, which established a central government with minimal power and was ratified by the states in 1781. The central government could declare war, borrow money, and make treaties with foreign nations but could not tax the states, raise an army, regulate interstate and foreign trade, or create a federal judiciary. The central government could persuade and encourage but could not compel the states to do anything because the articles guaranteed their sovereignty and reserved to them all power not expressly delegated to Congress. The problems inherent in the Articles of Confederation eventually allowed Federalists, such as Alexander Hamilton, to successfully promote a democracy with a strengthened central authority.

Unable to collect taxes and with little reserve in specie, the central government met its obligations by printing notes that it promised to redeem in the future for specie. Each issuance of notes made more unlikely the promise of redemption, and inflation was the result. By 1783,

146 paper dollars were worth only \$1 in coin. With paper money nearly worthless, creditors seized the assets of debtors. In 1786 a band of farmers in Massachusetts, fearful of losing their farms, marched on courthouses, closing them down to prevent foreclosures.

Unhappy with this turbulence and with the inability of the central government to enact reforms without the consent of all the states, George Washington, James Madison, and other leaders gathered in Annapolis, Maryland, and urged the Congress to call a constitutional convention to revise the Articles of Confederation. Congress endorsed this proposal in early 1787, and later in the year 55 men from 12 states met at Philadelphia to create a new central government. The fruit of the Philadelphia convention was the U.S. Constitution, which the states ratified in 1788. The Constitution provided for three branches of government. Congress, composed of the Senate and the House of Representatives, had the power to collect taxes, regulate interstate and foreign trade, raise an army, establish a national currency, and create the lower courts. All these powers had been denied to the central government under the Articles of Confederation. The president, the head of the executive branch, had the power to command the army, make treaties with foreign nations subject to congressional approval, veto legislation, and appoint people to the executive branch and to the judiciary subject to congressional approval. The Supreme Court headed the judiciary and had the power to resolve disputes over the meaning of the Constitution. To placate anti-Federalists such as Patrick Henry, who were fearful of allowing the central government greater power over states and individuals, the Bill of Rights, which protected individual liberties, was added to the new Constitution.

The Constitution also reflected compromises regarding representation and sectional disputes. First the framers struggled over how to weigh population. Delegates of populous states wanted Congress to apportion representatives by population, whereas delegates of small states wanted equal representation in Congress. These factions compromised by allotting equal representation in the Senate and by apportioning representatives by population in the House of Representatives. Second, slavery also was a divisive issue.

➤ ALEXANDER HAMILTON—THE NEED FOR A STRONG CENTRAL GOVERNMENT

In 1787 and 1778 Alexander Hamilton, John Jay, and James Madison published a series of brilliant essays known as *The Federalist* in defense of the Constitution. The following excerpt comes from Federalist Paper Number 1, written by Hamilton:

“After full experience of the insufficiency of the existing federal government, you are invited to deliberate upon a new Constitution for the United States of America.

The subject speaks its own importance; comprehending in its consequences nothing less than the existence of the UNION, the safety and welfare of the parts of which it is composed, the fate of an empire in many respects the most interesting in the world. It has been frequently remarked that it seems to have been reserved to

the people of this country to decide by their conduct and example the important question whether societies of men are really capable or not of choice, or whether they are forever destined to depend for their political constitutions on accident and force. If there be any truth in the remark, the crisis at which we are arrived may with propriety be regarded as the period when that decision is to be made; and a wrong election of the part we shall act may, in this view, deserve to be considered as the general misfortune of mankind.”

—Christopher Cumo

Source

The Essential Federalist and Anti-Federalist Papers, ed. David Wootton (Indianapolis: Hackett Publishing, 2002), 140.

Northerners wished to exclude slaves from the census and thus from influencing the number of representatives in the House, whereas Southerners wanted slaves to be counted in full. Despite this difference, neither Northerners nor Southerners intended to enfranchise slaves. As a compromise, delegates adopted Pennsylvania delegate James Wilson’s suggestion to count each slave as three-fifths of a person. Despite the wrangling over slavery, the terms “slave” and “slavery” do not appear in the Constitution.

Slaves were not alone in being unable to vote. Women likewise could not vote, and most states barred white men who did not own property. Yet the trend toward broad participation in the electoral process gained momentum in the early republic. The states formed from the Northwest Territory adopted constitutions that enfranchised all men. Mississippi, Alabama, and Florida enfranchised all white men, and New York, Massachusetts, Rhode Island, Delaware, and Maryland dropped their requirement that men own property to vote.

With a stable political system, vast tracts of land, and a bustling commerce, the United States attracted immigrants in search of opportunity. These new Americans believed that they could achieve their dreams through hard work. The United States had no aristocracy, no class

barriers, and no traditions to mar the aspirations of ambitious newcomers. The founding of the United States created more than a polis; it created a land of possibilities.

—Christopher Cumo

Bibliography

- Lienesch, Michael. *New Order of the Ages: Time, the Constitution, and the Making of Modern American Political Thought*. Princeton, NJ: Princeton University Press, 1988.
- Morris, Richard B. *The Forging of the Union, 1781–1789*. New York: Harper and Row, 1987.
- Wood, Gordon S. *The Creation of the American Republic, 1776–1789*. Chapel Hill: University of North Carolina Press, 1969.

The Origins and Early Stages of the French Revolution

One of the great events in world history, the French Revolution has attracted and repelled in equal measure. With results ranging from the Declaration of the Rights of Man and the Citizen to the Terror, it was the best of times and the worst of times, as Charles Dickens memorably put it. For better or for worse, the French Revolution laid the foundations of modern politics, creating concepts and terms still employed today.

THE CONSTITUTION OF SEPTEMBER 3, 1791

In September 1791 the National Assembly approved a new constitution for France. The following excerpts from the preamble and the first section set forth the basic principles of the revolution's early moderate phase.

"The National Assembly . . . abolishes irrevocably the institutions which were injurious to liberty and equality of rights.

Neither nobility, nor peerage, nor hereditary distinctions, nor distinctions of orders, nor feudal regime, nor patrimonial courts, nor any titles, denominations, or prerogatives derived therefrom . . . any longer exists. . . .

The Constitution guarantees as natural and civil rights:

1st, That all citizens are admissible to offices and employments, without other distinction than virtues and talents;

2nd, That all taxes shall be assessed equally upon all citizens, in proportion to their means;

3rd, That similar offences shall be punished with similar penalties, without any distinction of persons.

The Constitution guarantees likewise as natural and civil rights:

Liberty to every man to come and go without being subject to arrest or detention . . . ,

Liberty to every man to speak, write, print, and publish his opinions without having his writings subject to any censorship or inspection before their publication, and to worship as he pleases;

Liberty to citizens to assemble peaceably and without arms in accordance with police regulations; . . .

The legislative power may not make any laws which infringe upon or obstruct the exercise of the natural and civil rights recorded in the present title and guaranteed by the Constitution; . . .

Citizens have the right to elect or choose the ministers of their religions. . . ."

—James H. Overfield

Few observers in the 1780s predicted the demise of absolute monarchy in France. Certainly none of the leading intellectuals connected with the French Enlightenment, many of whom were harsh critics of the inequalities and inefficiencies of eighteenth-century French society, were calling for or envisioning so radical a restructuring of the nation's legal and political structure. Yet it is the weaknesses rather than strengths of the French Crown that stand out as the major cause of the revolution. Finance and administration were chaotic, there was no proper budgeting, and the famous *compte rendu* ("statement of accounts"), published by Finance Minister Jacques Necker in 1781, was the first time that any figures had been produced, even if they were misleading and deliberately designed to attract fresh loans. The monarchy had become dependent on borrowing to survive. Reducing expenditure proved to be impossible, not because of a bloated court but on account of century-long military commitments that engaged France in a battle for both continental and maritime

hegemony. When it managed to separate these two commitments and fight an essentially naval war, as in the American War of Independence (1775–1783), France succeeded in defeating its long-standing enemy, Britain, for the first time in a century. Yet the financial strain was immense, and the aftermath of the war demanded urgent reforms, which ministers were unable to deliver. Belying the absolutist principle, the tax system only functioned with a measure of consent from various privileged and provincial bodies, according to the traditional, unwritten constitution. Controller General Charles-Alexandre de Calonne convened an Assembly of Notables in 1787, hoping that it would underwrite his proposals for fiscal and administrative reform, but even this handpicked body proved obstructive. A more authoritarian approach was adopted, but it produced stiff resistance. The monarchy was obliged to back down and recall the long-dormant Estates-General, a representative assembly dating back to the Middle Ages that had last met in 1614.

The old monarchy was not overthrown; rather, it collapsed as a result of its own shortcomings. The question was, what would replace it? For most Frenchmen the Estates General was too antiquated to serve a modern parliamentary function. Its division into three chambers, for clergy, nobility, and the Third Estate (everyone else from wealthy financiers to lowly peasants), provoked controversy during the winter of 1788–1789, for it appeared to give the first two orders a built-in majority over the Third Estate. Each estate would have the same number of delegates, each would meet separately, and each would cast one vote, meaning that the two “privileged orders”—the clergy and the nobility—would always have an advantage. This led to a campaign to “double the third” and have voting by head rather than by order. The campaign produced the famous pamphlet by Abbé Sieyès, “What Is the Third Estate?” He wrote, “What Is the Third Estate? Everything. What Has It Been Until Now in the Political Order? Nothing. What Does It Want To Be? Something.”

The issue was still unresolved when the Estates General met at Versailles in May 1789, and it was ultimately a group of delegates, mostly but not exclusively from the Third Estate, who decided to break the deadlock and declare themselves the National Assembly, with the task of writing a new constitution for France. The king and many nobles naturally demurred, but growing unrest in town and country, which owed a good deal to harvest failure and high bread prices as well as the unprecedented political situation, brought riots that worked to the advantage of the National Assembly by persuading their opponents to call off countermeasures. The taking of the Bastille in Paris on July 14 was symbolically significant, but in order to pacify rebellious peasants, a more important event took place on the night of August 4, when liberal nobles and clergy rose one after another to renounce and outlaw their numerous legal privileges. At this point the term “ancien régime” was coined to describe the former state of affairs, now swept away.

It seemed that a new era was dawning, not just for France but for the world as a whole; the Declaration of the Rights of Man and of the Citizen issued later in August 1789 was cast in

universal terms. The French Revolution assumed a European dimension from the outset, inspiring admiration in many quarters and posing an implicit challenge to the old order everywhere. Virtually every institution in France awaited reform, and turning principles into practice was a huge undertaking. Ordinary people were anxious for real reform, yet the consensus in favor of change did not prevent the emergence of deep disagreements over its precise configuration. The bitter debate over the king’s role as a constitutional monarch is a good example. The debate led to Louis XVI’s attempt to flee the country in 1791, confirming suspicions that he rejected the French Revolution. A split within the Catholic Church, the subject of substantial reform, forced thousands of dissident clergy into opposition, while even priests who accepted the Civil Constitution of the Clergy became increasingly suspect.

In this atmosphere, external affairs had a decisive impact on the development of the revolution. The emperor of Austria was naturally concerned that his brother-in-law (Louis) and sister (Louis’s queen, Marie Antoinette) were at risk, while other countries bordering France offered haven to aristocratic emigrés, many of them military officers. The revolutionaries took the plots and proclamations of these aristocrats and their foreign supporters at face value, worried that they would attract support among dissidents inside France. As a result, the prospect of war increasingly appealed to revolutionary politicians as a means of flushing out traitors and uniting patriots behind the revolution. There were few objections when in April 1792 the French parliament declared war on Austria and Prussia. Early defeats, however, brought deeper division rather than unity. The search for a scapegoat inevitably indicted the king, and on August 10, 1792, as Prussian invasion menaced the capital, the people of Paris stormed the Tuileries palace; Louis was dethroned and incarcerated for his own safety. With him fell the constitutional monarchy and all hope of a moderate settlement.

The French Revolution now became increasingly radical and violent. It was overshadowed by the war, which initially took a turn for the better in September 1792 and then worsened as Britain and the maritime powers joined the

anti-French coalition early in 1793. By then Louis had been executed, but his death did nothing to unite opposing factions in the new National Convention, which was elected on the basis of virtually universal male suffrage in September 1792. On the contrary, the fate of the king drove individuals further apart, and the war raised the stakes by turning dissenters into traitors. Hope of establishing a democratic regime was dashed in the summer of 1793, when the regime faced a combination of civil war and invasion. The Republic was thoroughly beleaguered, with foreign troops massed on every frontier while Britain ruled the waves. Major cities outside Paris revolted against the dictatorship of the capital after Jacobin radicals in the Convention purged rival deputies with the assistance of lower-class militants. Several parts of the countryside were also in flames, notably the west where an area known as the Vendée, which was seething with religious tension and conflict between urban and rural dwellers, experienced a bloody uprising triggered by hostility to the military draft.

The odds seemed overwhelming, but the Republic benefited from its enemies' divisions: only once, at Toulon (where local royalists welcomed the British Royal Navy), did foreign and domestic opponents make common cause. Republicans resorted to a policy of coercion known as the Terror. One might describe the emergency powers that galvanized the government as a "war dictatorship," mobilizing the country's resources in unprecedented fashion. Instead of the weak executive that had replaced the monarchy, a Committee of Public Safety was created, made up of 12 deputies from the Convention. They ruled by decree and oversaw the representatives on mission, who were dispatched to the provinces to control local authorities. There was a growing inclination to employ the weapons of repression: imprisonment by watch committees and execution by Revolutionary tribunals or military commissions.

Given the manpower employed in suppressing internal revolt, not to mention duty on the frontiers, much effort during 1793–1794 was devoted to recruiting and supplying a vast army of approximately 750,000 men. This mass levy, which placed the resources of the nation at the disposal of the government, drew on the vast

demographic reserves that had never been harnessed effectively. A series of talented generals rose from the ranks to replace the old noble officer corps. The tide of war duly turned, and by the spring of 1794 there were calls for a slackening of the repression. By now, however, the Terror had acquired its own momentum, and there were some, like Maximilien Robespierre, who saw it not simply as a means of defending the revolution but also as a means of raising it to new heights. The past year's supreme sacrifices, so they thought, would usher in utopia.

—Malcolm Crook

Bibliography

- Aston, Nigel. *The French Revolution, 1789–1804: Authority, Liberty and the Search for Stability*. Basingstoke, UK: Palgrave Macmillan, 2004.
- Doyle, William. *The Oxford History of the French Revolution*. 2nd ed. Oxford: Oxford University Press, 2002.
- Furet, François. *The French Revolution: 1770–1814*. Oxford, UK: Blackwell, 1996.
- McPhee, Peter. *The French Revolution, 1789–1799*. Oxford: Oxford University Press, 2002.
- Schama, Simon. *Citizens: A Chronicle of the French Revolution*. London: Viking, 1989.
- Stone, Bailey. *Reinterpreting the French Revolution. A Global-Historical Perspective*. Cambridge: Cambridge University Press, 2002.
- Sutherland, D. M. G. *The French Revolution and Empire: The Quest for a Civic Order*. Oxford, UK: Blackwell, 2003.

The Reign of Terror

From June 1793 to July 1794, a period sometimes referred to as the Montagnard Dictatorship, the radical Montagnards dominated the Convention and controlled government. They implemented radical policies to stabilize the country amid civil strife and foreign invasion. The civil war in Brittany and Vendée (western France) continued unmitigated, forcing the government to divert substantial forces there. The Girondins who escaped persecution in Paris incited the so-called Federalist Risings in major cities in Normandy and Provence. In August 1793 in a major blow to the Revolutionary government, the Federalists surrendered the strategic port city of Toulon and the entire French Mediterranean fleet to the

British. Meanwhile, the Prussian and Austrian armies threatened France from the north and northeast.

To deal with these threats, the Montagnards issued the *levée en masse* (August 1793), which mobilized the resources of the entire nation to fight the revolution's enemies and in doing so transformed the nature of military conflict. The decree proclaimed that "all Frenchmen are in permanent requisition for the services of the armies. The young men shall fight; the married men shall forge arms and transport provisions; the women shall make tents and clothes and shall serve in the hospitals; the children shall turn linen into lint; the old men shall betake themselves to the public squares in order to arouse the courage of the warriors and preach hatred of kings and the unity of the Republic." Eager citizen-soldiers poured into the French armies, helping to turn the tide of war.

In September 1793 Terror was made into official government policy, and extreme measures were adopted to implement radical economic and social programs. The Constitution of 1793, although never implemented, provided for direct representative democracy with a guarantee of universal manhood suffrage. The Law of the Maximum introduced state control over prices and wages. Rudimentary social security was provided under the Law of 22 Florial (May 11, 1794), which promised a small income and free housing to the aged, ill, or disabled. The Decrees of Ventôse (February–March 1794) confiscated the property of emigrés and "recognized enemies" of the nation, which was then distributed to the socially disadvantaged. Plans were laid to create a free public education system, with elementary education compulsory for all.

While professing democratic ideals, the Montagnards governed dictatorially. Special legislation was passed limiting civil liberties and expanding the government's authority. In September 1793 the Law of Suspects made it possible to arrest any person who, by their conduct, associations, talk or writings, had shown themselves partisans of tyranny or federalism. The Committee of Public Safety, a 12-member executive committee with vaguely defined powers and under the leadership of Maximilien Robespierre, assumed the executive power,

➤ DEATH OF MARAT

Jean-Paul Marat was a radical leader of the French Revolution whose popular political writings addressed broad conspiracies and demanded the execution of political enemies. He was the leader of the Montagnards, the most radical wing of the National Convention, and was known for ruthless attacks in the power struggle against the moderate Girondins. As depicted in Jacques-Louis David's famous 1793 painting *Death of Marat*, on July 13, 1793 Charlotte Corday stabbed Marat to death in his bath. Corday, a Girondin supporter, held Marat responsible for the Reign of Terror, declaring during her trial that she killed not a man "but a wild beast that was devouring the French people."

while the Revolutionary Tribunal rendered swift but hardly impartial justice. The representatives on mission were sent to provinces and armies, wielding supreme political and military authority.

The Montagnards were themselves divided over the extent of social reforms, with some calling for further equalization of wealth. The middle-class leaders, however, felt that these changes violated the sanctity of private property and vehemently opposed them. One of the most lasting reforms of the Montagnard government was the adoption of the unified metric-decimal system of weights and measures, which remains in use to the present day.

The Montagnards used the Terror for a partisan political purpose as well as a means of stabilizing the country. They attacked their rivals and succeeded in executing early leaders of the Revolution, members of the royal family, feminists, and the leading Girondins, decapitating their most dangerous opponents. The executions were used to eliminate any threat to the Revolutionary government, and the bloody blade of the guillotine became a grisly symbol of this turmoil. The total number of executed remains unknown and varies from as low as 14,000 to as high as 40,000. Contrary to popular view, most of the people executed were not aristocrats and priests but rather workers and peasants. This period also saw further secularization of French society as churches and monasteries were closed and

de-Christianization had began. A new calendar was adopted to reflect the ideals of the Revolution, while a civil religion dedicated to the Supreme Being sought to replace traditional beliefs.

By early 1794 these harsh methods seemingly had paid off, as the military situation improved. The Revolutionary armies drove the Austrian-Prussian armies away from French borders and invaded neighboring Belgium, Netherlands, and German principalities. They also suppressed Federalist uprisings inside France, with the representatives on mission employing ferocious methods to eliminate the enemies of the Revolution. At Nantes, Jean Baptiste Carrier had hundreds of prisoners chained in barges that were sunk in the Loire River, while in Lyons, Collot d'Herbois and Joseph Fouché had prisoners tied to stakes in open fields and mowed them with canister. As the situation stabilized, some revolutionaries suggested that the Terror should end, which caused the Montagnards to split into factions, with Robespierre and his allies advocating a radical program of continued Terror, while Georges Danton and his supporters calling for moderation. In April 1794 Danton and his allies were arrested and, after a sham trial, executed. Robespierre and his supporters became more isolated and conspicuous, insisting on continuation of the Terror and the creation of a "Republic of Virtue." By June 1794 the Montagnards, never a solid bloc, disintegrated and collapsed in the coup of the 9th of Thermidor (July 27, 1794); Robespierre and his followers were executed the following day.

—Alexander Mikaberidze

Bibliography

- Andress, David. *The Terror: The Merciless War for Freedom in Revolutionary France*. New York: Farrar, Straus and Giroux, 2006.
- Bouloiseau, Marc. *The Jacobin Republic, 1792–1794*. New York: Cambridge University Press, 1983.
- Doyle, William. *The Oxford History of the French Revolution*. Oxford: Oxford University Press, 2002.
- Furet, François, and Denis Richet. *La Révolution française*. Paris: Hachette-Pluriel, 1986.
- Lefebvre, George. *The French Revolution*. 2 vols. Translated by John Hall Stewart and James Friguglietti. New York: Columbia University Press, 1962–1964.

The Era of the Directory

On the 9th of Thermidor (July 27, 1794) members of the National Convention turned against the architect of the Reign of Terror, Maximilien Robespierre, and his followers and ordered their arrest. The next day Robespierre and 21 others were guillotined without trial, and the radical stage of the French Revolution came to an end. In 1795 the National Convention adopted a new constitution that created a bicameral legislative branch (Council of Five Hundred and Council of Ancients) and delegated the executive power to a five-member Directory. The suffrage was curtailed from the universal suffrage granted in 1793 to a limited one based on taxes paid. Many of the democratic reforms adopted in 1793 and 1794 were reversed, and efforts toward social and economic equality were abandoned. White Terror spread through the country as supporters of republicanism and the Terror were persecuted.

The Directory, in fact, became a bourgeois republic that struggled to find stability amid internal chaos and war. The government attempted to stand in the political center, opposing both royalists and radical leftists, which made it vulnerable to conspiracies. The general discontent led to several abortive uprisings in Paris, first by the radical sans-culottes in the Prairial Rising (May 20, 1795) and then by the right-wing sections on 13 Vendémiaire, Year IV (October 5, 1795). In 1796 the Conspiracy of the Equals, led by Gracchus Babeuf, sought to establish a social model closely resembling communism but was uncovered by police.

The Directory failed to solve the continuing financial crisis in France. It eliminated the revolutionary currency based on *assignats* (by then worthless) and issued new currency, but hyperinflation continued, causing widespread hardship among the populace. In 1797 the government returned to metal currency, but this did not alleviate the crisis. Civil strife made the government unable to collect regular taxation, leaving the state treasury empty. Many industries, especially silk cloth production in Lyon, were devastated.

The Directory was more successful in its foreign policy. In 1795 peace treaties were signed

with Prussia and Spain while the French armies advanced into the Rhineland and Holland. Only Austria and Britain were still fighting against France. In 1796–1797 Napoleon Bonaparte successfully campaigned in Italy, forcing Austria to sue for peace and cede the Austrian Netherlands (modern Belgium) and northern Italian regions to France. In 1798 and 1799 the French occupied Switzerland, the Papal States, and Naples, where they established sister republics modeled after the revolutionary France. In May 1798 the Directory, in order to threaten the British commercial interests in India, dispatched an expeditionary corps under General Bonaparte to Egypt.

France's aggressive foreign policy and the threat of the spread of the revolutionary ideology threatened other European powers and encouraged the formation of the Second Coalition of Austria, Russia, the Ottoman empire, and Britain in 1799. This coalition achieved great success in the spring and summer of 1799, when Russo-Austrian forces defeated the French armies and recaptured all of Italy. Domestically, France suffered from peasant uprisings in the south and ongoing insurgency in the west. The Directory itself was in turmoil, as its membership changed several times throughout the year. Some members of the Directory actively conspired against their colleagues, seeking army support to achieve their political goals. At this crucial moment, General Bonaparte returned to France in early October 1799 and organized a coup d'état on 18 Brumaire (November 9–10) that overthrew the Directory and established the consulate.

—Alexander Mikaberidze

Bibliography

- Doyle, William. *The Oxford History of the French Revolution*. Oxford: Oxford University Press, 2002.
- Francois, Gendron. *The Gilded Youth of Thermidor*. Montreal: McGill-Queen's University Press, 1993.
- Lefebvre, George. *The French Revolution*. 2 vols. Translated by John Hall Stewart and James Friguglietti. New York: Columbia University Press, 1962–1964.
- Soboul, Albert. *The French Revolution, 1787–1799*. Translated by A. Forrest and C. Jones. New York: Random House, 1974.

Nationalism in the Era of the French Revolution

European nationalist movements emerged between the seventeenth and twentieth centuries, a process in which the French Revolution played a key role. Previously, European identity was connected to one's region, town, family, local ruler, or even profession. After the French Revolution the nation-state became the most important common identifier among many people, effectively placing it above any other allegiance.

Growing nationalist sentiment in France can be traced to King Louis XVI's decision to call a meeting of the Estates General (consisting of the clergy, nobility, and commoners) in 1788 to enact fiscal reforms. The process of choosing candidates and preparing *cabiers* (sets of proposals to be considered by the elected delegates) caused many French men and women to consider political issues from a national rather than simply a local or class perspective. Once the Estates General met, it soon became clear that people of varied backgrounds desired broad measures to improve the social and political conditions of the country, and when the king threatened to disband the meeting, the Third Estate (the commoners) declared themselves the National Assembly and vowed not to disband before they wrote a constitution for France. They were joined by some members of the clergy and nobility, a sign of willingness to put the interests of the nation over those of particular groups.

This meeting and the revolutionary acts that followed drew heavily on Enlightenment principles of individual rights, liberty, and reason. The storming of the Bastille on July 14, 1789 in Paris was a powerful symbolic act because it signified the power shift from king to the people. Ordinary citizens joined together to defy the monarchical, hereditary, and birth-determined system in order to claim France for the people. In August 1789 the National Assembly passed the Declaration of the Rights of Man and Citizen, which stipulated that “the principle of all sovereignty resides essentially in the nation. No body or individual may exercise any authority which does not proceed directly from the nation.” This direct reference to the nation established a precedent by which the nation-state became the focus of an individual's

primary allegiance, trumping all other traditions and customs. In December the historic regional boundaries of France were abolished, and administrative departments were created in their place. Since regional customs and loyalty formed the hallmark of identity for most provincial French at that time, this was a significant step in the shift of loyalty to the greater republic.

Outside France, rulers and their aristocratic advisers feared the revolution. Austrian and Prussian monarchs were the chief opponents of the Revolution, and in August 1791 they issued the Declaration of Pilnitz, in which they stated their willingness to restore Louis XVI to his rightful authority. Tensions grew, and in April 1792 the ruling party in the National Assembly—the Girondins, considered moderate republicans—declared war. Later in the year the convention issued a decree promising assistance to all peoples seeking to oppose tyranny and recover their liberty. In such an atmosphere nationalist feelings intensified, as the revolution was threatened on many sides. By 1793 France faced a coalition made up of Austria, Prussia, Britain, Holland, and Sardinia, and monarchists within French borders seemed to be gathering strength, especially in the provinces. By 1793 the *sans culottes*—a working-class Parisians devoted to turning the revolution to the needs of the commoners—joined with more radical Jacobins, and together their agenda largely drove the revolutionary events of 1793 and 1794, often referred to as the Reign of Terror.

Their agenda included undying loyalty to the nation and its republican form of government. At the urging of the Committee of Public Safety, which served as the de facto executive branch of government, the National Assembly created mandatory military conscription laws between February and August 1793—the *Levée en Masse*—to defend the country. Every able-bodied man and woman within French borders was encouraged to participate in the struggle against the revolution's enemies. Symbols and images became essential elements in the creation of unity and national identity as well. The use of various symbols—from the formation of Jacobin clubs throughout France to the planting of liberty trees and the use of symbolic images on coins—encouraged nationalist and democratic

sentiments among the common people. Revolutionary language and publicity, symbols and gestures, and republican imagery—such as the use of the cockade, the singing of “La Marseillaise,” and the appearance of iconic male and female figures representing liberty and equality—all combined to create a political culture around which the French could congregate.

In an attempt to break with tradition, executions of people from peasants to aristocrats and from monarchists to troublesome republicans were aimed to rid France of the Old Regime and firmly establish a “Republic of Virtue,” based not on religion or heredity but on Enlightenment values of rights, reason, and liberty. Because the calendar was based on Christianity, it too was thrown out and a new one created in relation to Revolutionary events. To ensure no competition for ultimate loyalty to the nation, religion itself was then declared illegal. This more than anything else lessened the support for the Revolution in provincial France, where pockets of the population remained deeply attached to Catholicism.

The rise of Napoleon, who was elevated to the position of first consul in 1799, further strengthened and spread the idea of nationalism. In France, Napoleon further centralized the government, making Paris the undisputed hub of French cultural and political life, a move that was largely symbolic but did serve to create more uniformity and thus encourage identity with the larger nation. Germany was especially affected by the Revolutionary tide. In Germany, although many embraced the ideals set forth in the Revolution, others embraced romantic nationalism and emphasized the *Volk*, or people; ethnic and racial similarities and a connection to the land of Germany were highlighted as unifying features of German people. Across Europe, Napoleonic armies created nationalist movements in various countries as people responded to their conquests or occupations. This occurred not only in Germany but also most notably in Italy and Spain. In the case of England, the threat of Napoleon's expansionism is often credited by historians as a force in creating nationalist sentiment. Although diplomats at the Congress of Vienna following Napoleon's defeat tried to ignore these stirrings of nationalism, a

new and potent force had entered the world of nineteenth-century politics.

—Melissa Verlet

Bibliography

- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. New York: Verso, 1991.
- Greenfeld, Liah. *Nationalism: Five Roads to Modernity*. Cambridge: Harvard University Press, 1992.
- Hunt, Lynn. *Politics, Culture, and Class in the French Revolution*. Berkeley: University of California Press, 1984.
- Rapport, Michael. *Nationality and Citizenship in Revolutionary France: The Treatment of Foreigners, 1789–1799*. Oxford, UK: Clarendon, 2000.

France under Napoleon

Life in Napoleonic France must always be seen in the context of a nation almost perpetually at war with her neighbors. With the execution of King Louis XVI and the establishment of the French Republic, the old order of Europe was determined to avenge the death of the king and restore, in their eyes, order to the continent. Thus, like all leaders, Napoleon had to balance the needs of national security and a war economy with the desire of the people to live in peace and prosperity. He managed to do this to a remarkable degree, at least in part due to the fact that, until 1814, military actions were not on French soil.

Napoleon's government was, in today's terms, a middle-class, pro-business government that sought to provide a high level of equality and a reasonable level of liberty. One reason that France had been willing to accept his rule was the dire condition of the country under Napoleon's predecessors. Napoleon's economic and financial reform brought a level of stability to France that had not been seen in decades. Financial reforms, improved tax collection, tight budget controls and an increased emphasis on improving exports helped keep inflation, and discontent, under control.

To cite one example, France went from being an importer of butter and cheese to an exporter. Exports in other areas, such as textiles, also greatly improved, and the added income gave benefited French citizens. Overall, exports

soared and imports declined, all to the good of the French public. In addition, Napoleon's establishment of the Bank of France provided an added measure of fiscal and monetary stability.

The French people also benefited from legal reforms, most notably in the establishment of a unified civil code eventually known as the *Code Napoléon*, as well as substantial educational reforms. He founded the first professional fire brigade in Paris. Transportation had languished in previous governments, and Napoleon spent millions on road improvements, including making them cooler by requiring trees to be planted alongside most of them. In addition to roads, he had canals built and harbors expanded. He ordered the first paved road in Paris and established an agency to protect rivers, lakes, and forests.

Napoleon placed special emphasis on the concept of equality for males, making it his highest priority. His famous quote on the matter, "In every soldier's knapsack is a marshal's baton," reflected his commitment to giving all male French citizens an equal opportunity to advance in society, and to serve the needs of the state. He worked to secure the rights of all elements of French society by removing the benefits of caste and privilege and granting religious freedom. People of all faiths could now practice their religion freely. Jews were no longer required to live only in certain areas, a policy he extended to all of his empire. Napoleon's belief in religious freedom led to tension with the Pope, who wanted the Catholic Church to be the nation's official religion. His promotion of Jewish liberation put him at odds with many in his government and even in his family, and he sometimes wavered under such pressure.

While Napoleon worked hard to promote equality, the same cannot be said with regard to liberty. Napoleon had little use for trade unions, which he generally suppressed. He made effective use of a secret police that kept him informed about what was happening throughout the nation; when considered necessary, it rounded up, arrested or deported those individuals whose presence was deemed dangerous. The seemingly constant state of warfare led to the imposition of conscription. This diminished Napoleon's popularity somewhat, and conscription-avoidance was common.

► NAPOLEON'S GOALS AS A RULER

There are many examples of Napoleon's thoughts on his goals as a ruler. Perhaps none of his writings better reflect those ideas than his letter to his brother Jérôme on November 15, 1807, telling him how he should govern his new kingdom of Westphalia (a part of modern-day Germany). The letter is excerpted below:

"I enclose the Constitution for your Kingdom. It embodies the conditions [of Jérôme's governance]. . . . I am concerned for the happiness of your subjects, not only as it affects your reputation and my own, but also for its influence on the whole European situation . . . your throne will never be firmly established except upon the trust and affection of the common people. . . . What German opinion impatiently demands is that men of no rank but of marked ability shall have an equal claim upon your favor and your employment, and that every trace of serfdom, or of a feudal hierarchy between the sovereign and the lowest class of

his subjects, shall be done away. The benefits of the Code Napoléon, public trial, and the introduction of juries, will be the leading features of your government. And to tell you the truth, I count more upon their effects for the extension and consolidation of your rule than upon the most resounding victories. I want your subjects to enjoy a degree of liberty, equality and prosperity hitherto unknown to the German people. . . . Be a constitutional king. Even if reason and the enlightenment of the age were not sufficient cause, it would be good policy for one in your position. And you will find that the backing of public opinion gives you great natural advantage over the absolute kings who are your neighbors."

—J. David Markham

Source

Correspondance de Napoléon Ier; Publiée par ordre de l'empereur Napoléon III (Paris: Imprimerie Impériale, 1858–1869), xvi, 13361.

France's government was already centralized and Napoleon made it even more so. He established a system of prefects and judges, all appointed by, and accountable to, the central government. The educational curriculum was designed in Paris and required of all schools. Napoleon encouraged all boys to obtain an education and provided middle-class scholarships to that end. Girls were given less consideration, but even they made educational gains during Napoleon's rule. All of these policies tended to unite the French as never before and give them confidence and pride in their government.

Napoleon is often accused of censorship, and there is no question that he was careful to control the flow of news as best he could. The number of independent newspapers declined under Napoleon's rule and the news they were allowed to print was often controlled. He used every mechanism available to promote the official version of events, so much so that some of his official publications were held in contempt by many Frenchmen. All that said, it should be remembered that nations at war often exert tight domestic control. And, indeed, even with all of

the domestic restrictions in place, France was still a far freer nation than it had been during the old regime and at various stages of the revolution. While many royalists had fled the country, Napoleon welcomed all but the most radical of them back to France.

Part of Napoleon's effort to establish legitimacy to his government was his use of plebiscites to give the people an opportunity to either approve or disapprove his actions. Napoleon even used the plebiscite to confirm his decision to become emperor in 1804. While the people supported this move and he continued to be a popular leader, the establishment of an Imperial Court and Imperial Nobility seemed to some to be a move away from the ideals espoused during the Consulate. Without doubt, power became more centralized under the Empire, but Napoleon continued to be popular and his reforms made him a rather progressive emperor.

Moreover, writers of the day almost universally noted that conditions in France had greatly improved under Napoleon. Crime was down, trade was up; French culture thrived, as theaters opened, concerts were performed, and literature

flourished. It would all eventually come to an end, but for most of his reign, life in France under Napoleon was good.

—J. David Markham

Bibliography

- Cronin, Vincent. *Napoleon Bonaparte: An Intimate Biography*. New York: William Morrow & Company, 1972.
- Franceschi, General Michel, and Ben Weider. *The Wars Against Napoleon: Debunking the Myth of the Napoleonic Wars*. New York: Savas Beatie, 2008.
- Markham, J. David. *Napoleon's Road to Glory: Triumphs, Defeats and Immortality*. London: Brassey's, 2003.

Haitian Revolution

The Haitian Revolution (1791–1804) resulted in Haiti's independence from France and the emancipation of Haiti's slaves. It was the only successful slave revolt in history.

On the eve of the revolution, Haiti (then known as Saint-Domingue) was France's most prosperous colony in the Western Hemisphere, along with Europe's most important provider of sugar and coffee. Whites numbered about 30,000 and stood at the apex of society. They were divided between rich planters (*grands blancs*) and the urban poor, soldiers, and bureaucrats (*petits blancs*). Despite their privileged status, whites resented France's tight hold on colonial affairs and restrictions on trade. Free blacks and mulattoes (or *gens de couleur*) also numbered about 30,000. They held many coffee plantations and slaves, but they complained of widespread racial discrimination. Haiti's approximately 500,000 slaves were divided between those born in Haiti (*créoles*) and those imported from Africa (*congos* or *bossales*). These slaves, particularly those employed for strenuous field duties, lamented their lack of freedom and had revolted several times in the past, particularly in 1758 (Makandal Rebellion). Small communities of maroons lived quasi-independently in the mountainous interior.

Unrest began in 1789 with news that the French Revolution had begun. Whites capitalized on the revolution to gain greater autonomy from France, and in 1790 the Barnave Decree allowed white landowners to elect deputies to

colonial assemblies. Free men of color demonstrated to gain the rights listed in the Declaration of the Rights of Man and of the Citizen, but the colonial lobby insisted that the declaration did not apply to people of color. Vincent Ogé, a free person of color who had failed to be admitted as a representative in the French National Assembly in 1790, launched a short-lived rebellion that resulted in his execution (1791). The slaves were last to revolt. In August 1791 in a Voodoo ceremony held in Bois Caïman, Dutty Boukman, Cécile Fatiman, Jeannot, Georges Biassou, and Jean-François Papillon pledged to rise against the French. Though its details remain unclear, the event traditionally marks the beginning of the Haitian Revolution. The resulting uprising destroyed much of Haiti's northern plain before France granted full citizenship to the *gens de couleur* (April 1792), who subsequently helped French troops subdue part of the slave revolt.

➤ TOUSSAINT L'OUVERTURE

Toussaint L'Ouverture was the most prominent figure of the Haitian Revolution and the father of modern Haiti. Although born into slavery c. 1743, Toussaint de Bréda, as he was known before the revolution, was eventually granted his freedom and became a moderately successful, slave-owning planter. In 1791, a slave revolt erupted in Haiti and, after helping his family and his former master to safety, he took up arms against the French. He quickly became a ranking officer, commanding his own guerrilla army. He allied himself with Spain in the battle against French colonizers; however, sometime after France abolished slavery in 1794 he switched sides and helped France defeat his former Spanish allies. Toussaint became the leading military and political figure on the island as he expelled French agents and defeated mulatto rivals in the South. Though he did not seek outright independence from France, he established a constitutional government and named himself governor-general for life. In 1802, France launched a final campaign against the dangerously autonomous Haiti, and though the French captured Toussaint, who died of pneumonia in a French prison in April 1803, they ultimately failed to maintain control over Haiti. L'Ouverture is still revered in Haiti today.

The outbreak of a general European war in 1793 further weakened France's hold on Haiti. Spain attacked Haiti from Santo Domingo (modern-day Dominican Republic), while Britain landed troops in all major ports with the support of many planters wary of the French revolutionaries' radicalism. Facing multiple enemies, French commissioner Léger-Félicité Sonthonax decided to emancipate all of Haiti's slaves (August 1793) and to enroll his former black enemies as allies against foreign invaders. One such new ally was Toussaint Bréda L'Ouverture, a former slave coachman who had joined the rebellion and fought in Spanish ranks before joining Sonthonax. The emancipation of the slaves, ratified by the French assembly (February 1794), led to a French victory and the withdrawal of Spanish (1795) and then British troops (1798).

L'Ouverture emerged as the leading figure on the island when hostilities ceased. Eager to eliminate political rivals, he expelled French agents such as Sonthonax, Gabriel d'Hédouville, and Philippe Roume de Saint-Laurent and defeated rival mulatto general André Rigaud in the War of the South (1799). L'Ouverture then took over Spanish Santo Domingo (1800) and drafted a constitution making him governor-general for life with the right to name his successor (1801). He promoted racial reconciliation and economic recovery, but he presided over a regime that was military and autocratic. Former slaves, now nominally free, were forced to remain as farm laborers (*cultivateurs*) on plantations.

Fears that L'Ouverture was moving toward outright independence convinced First Consul Napoléon Bonaparte to send a 19,000-man expedition led by his brother-in-law, General Charles Victoire Emmanuel Leclerc. Leclerc managed to land his troops (February 1802) and deport L'Ouverture, but guerrilla warfare and a yellow fever epidemic killed most of the French soldiers, including Leclerc himself (November 1802), along with French reinforcements. United under L'Ouverture's successor Jean-Jacques Dessalines, blacks and mulattoes proved victorious, and the remnants of the French expedition, led by General Donatien de Rochambeau, left Cap Français (now Cap Haïtien) in November 1803. Dessalines officially proclaimed Haiti's independence in Gonaïves (January 1, 1804), then ordered virtually

all white Frenchmen to be killed (January–April 1804). Haiti emerged from the conflict as the first independent black republic in the world, but due to the revolution's length and violence, Haiti was economically destitute and an international pariah.

—Philippe Girard

Bibliography

- Dubois, Laurent. *Avengers of the New World: The Story of the Haitian Revolution*. Cambridge: Harvard University Press, 2004.
- Fick, Carolyn E. *The Making of Haiti: The Saint-Domingue Revolution from Below*. Knoxville: University of Tennessee Press, 1990.
- Geggus, David P. *Haitian Revolutionary Studies*. Bloomington: Indiana University Press, 2002.
- Girard, Philippe. *The Slaves Who Defeated Napoleon: Toussaint Louverture and the Haitian War of Independence, 1801–1804*. Tuscaloosa: University of Alabama Press, 2010.
- James, C. L. R. *Black Jacobins: Toussaint l'Ouverture and the San Domingo Revolution*. New York: Random House, 1963.
- Ott, Thomas O. *The Haitian Revolution, 1789–1804*. Knoxville: University of Tennessee Press, 1973.

Spanish American Wars of Independence—Causes

The Spanish American Wars of Independence of the early nineteenth century had causes rooted on both sides of the Atlantic. Dissent within colonial societies increased due to dissatisfaction with various economic and political reforms initiated by Spain in the eighteenth century among influential native-born white colonists (Creoles). Additionally, the examples of the successful revolutions in British North America, France and Haiti as well as the Enlightenment rationale for these revolts further inspired Spanish American independence movements. Events in Europe provided the spark, however. Napoleon's invasion of Spain in 1808 and the removal of King Ferdinand VI of Spain in favor of his brother Joseph Bonaparte resulted in a constitutional crisis that set the stage for outbreak of wars of independence in Spanish America in 1810.

During the eighteenth century, Spain and its vast American empire were ruled by Spanish Bourbon monarchs after Philip V, the grandson

of Louis XIV, was installed as king of Spain by the Treaty of Utrecht after the War of the Spanish Succession (1701–1714). The Bourbons pursued a comprehensive program of political reform aimed at improving efficiency of colonial governance. A succession of Bourbon kings sought to tie the colonies closer to the mother country, enhance defenses against foreign rivals, tighten their mercantilist control of the economy, and trim the influence of the Church, which had grown wealthy and powerful. As a result of these policies, colonists at the lower end of the social hierarchy were at risk for deployment in newly expanded militia forces, while wealthy Creoles were locked out of key political positions in favor of European-born *peninsulares*. Other sectors of colonial society also had grievances: native peoples continued to suffer under systems of forced labor, while mestizos and other people of color were prevented from obtaining positions in the state and Church, and suffered considerable legal and social discrimination. Many Spanish Americans were also disturbed by the decision of the government to expel the Jesuit religious order from the Americas in 1767, a move that offended their conservative religious views and deprived the colonies of some of their best educators.

Despite growing tensions between the Spanish monarchy and its colonial subjects, increasing dissatisfaction among Creoles, the spread of Enlightenment ideas, and the inspiration of the American and French revolutions, as late as the early 1800s, the independence movement was still in its infancy. Events in Europe were soon to alter the situation dramatically. Political turmoil increased in Spanish society in the last years of the eighteenth century. King Charles IV was threatened with deposition by his son Ferdinand, and with the Napoleonic invasion of Madrid in 1808, agreed to step down in his son's favor. Napoleon, in his zeal to expand his empire, took the opportunity to remove both father and son from power and make his own brother Joseph Bonaparte king of Spain. In the six years that followed, Spaniards and colonists participated in several experiments in self-rule, establishing local *juntas* as shadow governments as guerrilla warfare continued against the French occupation. In Spain, partisans opposing

French rule organized an interim Spanish government under the direction of the Supreme Central Junta, which organized the gathering of a Cortes, or national parliament, which met between 1810 and 1814 in the coastal city of Cádiz under the protection of English naval guns. In 1812 the Cortes produced a constitution that provided for a limited monarchy and freedom of speech and of the press, but made few concessions to the Spanish American colonies.

As these events unfolded, pro-independence American leaders saw an opportunity to move toward their goal. In the spring of 1810, anticipating the fall of Cádiz to the French, in the name of the imprisoned Ferdinand VII, they organized popular demonstrations in Montevideo, Caracas, Quito, La Paz, Buenos Aires, and Santiago that forced Spanish officials to cede their authority to local juntas. These moves were resisted by groups loyal to Spain, and fighting between patriots and loyalists began even before Ferdinand VII was restored to the throne in 1813 and promptly rejected the reforms approved by the Cádiz parliament during his imprisonment. He also dispatched Spanish troops to the Americas, to put down the anti-Spanish rebellions. His efforts failed, however and after a decade of war, Spain's American colonies from Mexico in the north to Chile and Argentina in the south were independent.

—James H. Overfield

Bibliography

- Brading, D. A. *The First America: The Spanish Monarch, Creole Patriots, and the Liberal State, 1492–1867*. Cambridge: Cambridge University Press, 1991.
- Bushnell, David and Neill Macaulay. *The Emergence of Latin America in the Nineteenth Century*. New York: Oxford University Press, 1994.
- Rodriguez, Jaime O. *The Independence of Spanish America*. Cambridge: Cambridge UP, 1998.

The Independence of Brazil

The achievement of Brazilian independence from Portugal resembled independence movements in other parts of South America in that it was rooted in growing discontent with colonial rule in the late 1700s among landowners and urban professionals. Both groups resented higher

➤ JOSÉ BONIFÁCIO DE ANDRADE E SILVA (1763-1838)

A native Brazilian, José Bonifácio was the first minister to Pedro during 1821-1823. Bonifácio was instrumental in convincing Pedro to stay in Brazil and also pushed for a peaceful independence. In 1821 Bonifácio wrote “Lembranças e Apontamentos do Governo Provisorio de São Paulo” (Records of the Provisional Government of São Paulo), which laid the foundation for the modern Brazilian state and encouraged the emancipation of slaves. He also was pivotal in the establishment of a constitutional monarchy in Brazil, resulting in Brazil’s first constitution in 1824. However, the original men who had supported José Bonifácio began to turn against him by 1823 because of his attempts to end slavery and because of other land reform policies that hurt the Brazilian landed elite. This caused him to side with the radical liberals; however, their policies were something he could not

support long term, which caused a very uncomfortable political situation for the minister. He attempted to resign once but was dissuaded by Pedro. Bonifácio succeeded in his second attempt but was recalled by the emperor and finally was able to resign on July 15, 1823. However, although Bonifácio had resigned as first minister, he retained his position in the National Convention (the Brazilian parliament). A dispute over the emperor’s veto rights resulted in the arrest of Bonifácio and other Convention members in November 1823, and Bonifácio left for France in 1824. He returned in 1829 to become tutor to the five-year-old Pedro II after the abdication of the boy’s father. Despite his political troubles and controversial ideas, José Bonifácio will always be known as the architect of Brazilian independence and nationalism.

—*Monique Vallance*

taxes, Portuguese control of the economy, and widespread corruption among colonial officials. Brazilian independence was unique, however, in that it was achieved quickly with little bloodshed and ironically was facilitated by the Portuguese monarchy itself.

In January 1808, Prince Regent João of Portugal (ruling for his mentally unstable mother, Maria I) and the entire Portuguese court fled from Lisbon to Rio de Janeiro under the protection of the British Royal Navy. Napoleon had invaded Portugal, and João was seeking to avoid the fate of Carlos IV of Spain, whose government was being pressured by Napoleon. The king’s enemies were looking for Napoleon’s support in gaining Carlos’s abdication, which eventually was achieved. This resulted in the abdication and imprisonment of both Carlos IV and his son Fernando VII. Napoleon then installed his brother Joseph as king of Spain.

With the arrival of the Portuguese court, Brazil flourished economically and intellectually, as Joao opened the ports to free trade (a move that mainly benefited British merchants), introduced universities and newspapers, and founded a national museum and a national library. Although Napoleon was defeated in 1814, João chose to remain in Brazil rather than face

political uncertainties in Portugal, which since 1808 had been ruled by an English-controlled regency. In response to demands from some of his Portuguese subjects and diplomats at the Congress of Vienna to return to rule his kingdom from Europe rather than Rio de Janeiro, Joao ended Brazil’s colonial status and made it an integral part of the kingdom of Portugal in 1815.

In 1820, liberal constitutionalists overthrew the British regency in Portugal. After establishing a constitutional monarchy with a parliament, or Cortes, they renewed their demands that João return to Europe. João returned in 1821 but left his eldest son Pedro as regent in Brazil with a cabinet consisting of secretaries of the interior, foreign affairs, finance, war, and the navy. The Portuguese Cortes, whose 181 delegates included 65 from Brazil, passed a series of laws in 1821 designed to return Brazil to its former colonial status, especially in regard to economic matters. Then in January 1822 it demanded that Pedro return to further his education. Pedro refused to leave and announced, “Eu fico!” (“I will stay!”). He ordered all Portuguese troops to leave Brazil, declaring them enemies. On September 7, he received notice that the Cortes had declared his government traitorous and once again demanded his return. Pedro

threw his sword into the ground on the banks of the Ipiranga River, declaring, "Independence or death!" He was declared emperor on October 12 and was crowned Pedro I on December 1.

Although Portuguese troops offered some resistance to the new regime, they were defeated in 1824 by a mercenary army hired by Pedro and led by an Englishman, Lord Admiral Thomas Cochrane. The United States recognized Brazil that same year, but other countries refrained, waiting to see what Portugal would do. Great Britain was instrumental in negotiating the terms of peace between Portugal and Brazil, which was finally settled in a treaty, signed on August 29, 1825, that recognized Brazil as an independent empire. Joao VI was recognized as coemperor

until his death, and Brazil was required to pay Portugal £2 million. Britain was also granted a preferential 15 percent tariff on imported goods as well as an agreement to eventually end the slave trade as payment for its role in the negotiations.

—Monique Vallance

Bibliography

- Burns, E. Bradford. *A History of Brazil*. New York: Columbia University Press, 1993.
- Da Costa, Emilio Viotti. *The Brazilian Empire*. Chapel Hill: University of North Carolina Press, 2000.
- Schultz, Kirsten. *Tropical Versailles: Empire, Monarchy, and the Portuguese Court in Rio de Janeiro, 1808-1821*. New York: Routledge 2001.

■ Introduction: African Politics before the Scramble

For at least a century before the late nineteenth century, when the "scramble for Africa" turned the world's second-largest continent into a vast European colony, Africa was experiencing major political changes. To generalize about these changes is difficult. Precolonial Africa consisted, as it had for centuries, of many hundreds of kingdoms, empires, city-states, chiefdoms, sultanates, and confederations in addition to regions with no formal states. Clearly, however, Africa from the mid-eighteenth century onward experienced a period of political instability and flux caused by new forces that varied in substance, intensity, and location. These changes had the potential to point Africa down new paths of political and economic development. Where they might have led is anyone's guess, for in the late 1800s it was determined that European imperialism, not indigenous African developments, would decide much of the continent's future.

Many forces contributed to the political changes in Africa on the eve of the colonial era. In some cases change occurred because of the sudden demise of a major state, which then had a ripple effect in a larger region. Such was the case in West Africa, where the wealthy and militarily powerful Oyo empire (in present-day

southwestern Nigeria and Benin) collapsed in the early 1800s as a result of a succession dispute. This set off a series of wars, shifting political arrangements, and the emergence of Dahomey as a formidable regional power.

In the Sudan, the large region stretching across north-central Africa south of the Sahara and Libyan deserts, resurgent Islam reshaped politics. After the collapse of the Muslim Songhai empire in the late sixteenth century, the region had broken up into numerous small, unstable regional states, ruled in many cases by pagan or nominally Muslim kings. Beginning in the early eighteenth century the status quo was challenged by Islamic scholars and teachers whose calls to establish strict Islamist theocracies gained support among ethnic Fulani and their leaders. The result was a series of jihads, or holy wars, that began in western Sudan in the 1700s and spread eastward over the next century. The most famous was the Sokoto jihad, which was launched in 1795 by the Fulani leader Usman dan Fodio and led to the formation of the Sokoto caliphate in Hausaland. Other jihads continued in the nineteenth century, resulting in a string of Islamic states across northern and central Sudan.

In southern Africa, population pressure was a major catalyst for political change. Conflict over grazing land among the pastoral peoples of the region intensified in the late eighteenth and early nineteenth centuries as a result of overpopulation caused by migration and rising birthrates. Drought, the introduction of slave trading in the region, and northward migrations of Dutch settlers added to tensions. The result was the rise of a powerful Zulu kingdom under the leadership of Shaka, whose large and disciplined armies spread terror through the region, setting off a series of northward migrations by his defeated rivals. The Zulu kingdom ceased to exist as an independent state in 1879, but not before its conquests had caused a series of wars and political changes not only in southern Africa but also in regions that stretched 1,000 miles (1,600 kilometers) northward, to the Great Lakes region in present-day Tanzania.

The fate of the Zulu empire, which lost its independence after a military defeat by the British, is an example of how contact with outside forces, mainly but not exclusively from Europe, affected Africa's political landscape. Every part of Africa was affected by such pressures. In the northeast, Napoleon's short-lived invasion of Egypt between 1798 and 1801 set the stage for the rise to power in Egypt of the Albanian adventurer Muhammad Ali, whose armies conquered Sudan (the political entity south of Egypt, not the region) in 1821 in pursuit of slaves, gold, and prestige. Along Africa's eastern coast, increased Arab involvement in the slave and ivory trade led to the formation of a commercial empire under the control of the Omani Arab leader Seyyid Said, who in 1840 moved his capital from Muscat, on the southwest corner of the Arab Peninsula, to the island of Zanzibar, off Africa's coast. Arab commercial activities also affected the interior, where competition to supply coastal merchants with ivory and slaves led to slave raids, political disintegration, and warfare, made worse by the proliferation of firearms.

Paradoxically, on Africa's west coast where the slave trade declined after Great Britain, the United States, and other European nations outlawed it, the actions of abolitionists contributed to political change. English abolitionists in 1787 founded the colony of Sierra Leone as a homeland for repatriated slaves, and it became a

Crown colony in 1808 after the original organizers and an English trading company abandoned the enterprise. A similar undertaking, in this case for freed American slaves, was sponsored by the American Colonization Society. This resulted in the founding of the state of Liberia, which though not an American colony, received diplomatic support from the U.S. government and benefited from American philanthropy.

European political involvement was most extensive in southern Africa, where the Dutch East India Company established a settlement at Cape Town in 1652. By the late eighteenth century the region had attracted several thousand permanent Dutch settlers, some of whom had left the coast to become *trekboers*, or frontier farmers, in the interior, where they clashed with native peoples over grazing lands. Tensions in the region grew in the early nineteenth century after the British took control of Cape Colony from the Dutch and adopted a series of policies, especially the outlawing of slavery in 1834, which the Boers found deeply disturbing. To escape British authority and acquire new land for their expanding population, in the 1830s the Boers embarked on the Great Trek, a migration to the east and northeast that led to further conflicts with native peoples, clashes with the British, and the formation of three Boer states: Natalia, Transvaal, and the Orange Free State. The victims in these entangled events were the African people, who were driven off their land or reduced to the status of squatters, tenant farmers, or laborers on land owned by whites. As was true for Africa as a whole, however, these events were only a foretaste of the losses encountered after the European onslaught began in earnest in the closing decades of the century.

—James H. Overfield

The Formation of the Sokoto Caliphate

The Sokoto caliphate emerged as an Islamic society during the early nineteenth century in Hausaland, located in present-day Nigeria. The caliphate was formed following an Islamic revolt led by Shaikh Usman dan Fodio (1754–1817). Usman dan Fodio was an ethnic Fulani and was raised in the hamlet of Degal as a Sufi Muslim. Prior to his jihad, he openly accused leaders in

Gobir, the capital of Hausaland, of being sinful infidels who used perverted interpretations of Islamic law to advance and validate corrupt governmental practices. Dan Fodio drew disciples from throughout Hausaland due to his education, charisma, and recognized piety. By 1804, tensions had intensified between the government of Gobir and dan Fodio and his community of followers. The Usmanian community formally banded together, migrated to a secluded countryside, and declared war against Gobir.

Shaikh Usman dan Fodio's eventual victory against the government of Gobir did not come easily. His army was primarily made up of older Islamic scholars, with limited to no experience in combat. While overall the government's army had better-trained soldiers than did dan Fodio, he had several commanders who were more competent than the government's military leaders. Dan Fodio's diligent preaching and leadership throughout the jihad also played a critical role in his victory. During the revolution, dan Fodio corresponded with multiple leaders in Islamic communities throughout Hausaland, urging them to support the jihad. Shaikh Usman dan Fodio was able to increase the size of his army through these invitations. The jihad also extended throughout Hausaland, with a focus on conquering Gobir. After four and a half years and a series of battles, Gobir was annexed and its government was overthrown. The area was rebuilt and renamed Sokoto.

Sokoto became the capital of dan Fodio's caliphate, and dan Fodio became the first caliph. Sokoto was established as an Islamic society, modeled after the teachings of the Quran and Sunna, and became the largest polity in West Africa at the time. The caliphate claimed power over Hausaland and also expanded westward and southward. Crossing between the eventual western and eastern ends of the kingdom took nearly four months, and it was a two-month journey to travel from the north to the south. Because of its vast size, responsibilities and leadership within the Sokoto caliphate was shared. Dan Fodio divided the caliphate between his second son, Muhammad Bello, and his brother, Abdullahi. These men also appointed additional local leaders, who were given instructions on proper Islamic conduct along with emirates to control. Sokoto was highly regarded both for its military strength and

also Islamic scholarship. Even as caliph, dan Fodio continued to compose celebrated poetry and wrote a variety of Islamic texts on government, history, and Quranic exegesis.

Muhammad Bello worked closely with his father in founding the caliphate and succeeded him following dan Fodio's death in 1817. Bello was able to assume the office of caliph without any violence or rebellion. However, revolts against Sokoto arose soon after Bello's appointment. Bello studied the history of Arab conquests and, by imitating others' tactics, was able to suppress rebellions, further expand the caliphate, and consolidate his power. Bello was admired for his patience, intellect, and statesmanship. His strong political and religious leadership ensured the continuation of the Sokoto caliphate. Upon Bello's death in 1837 his full brother, Abu Bakr Atiku, took his position. Male descendants of dan Fodio continued to rule Sokoto until its fall in the early twentieth century.

—Dianna Bell

Bibliography

- Hiskett, Mervyn. *The Sword of Truth: The Life and Times of the Shebu Usman Dan Fodio*. New York: Oxford University Press, 1973.
- Johnston, H. A. S. *The Fulani Empire of Sokoto*. Oxford: Oxford University Press, 1967.
- Last, Murray. *The Sokoto Caliphate*. Harlow, UK: Longmans, 1967.

Political Developments in East Africa, 1750–1880

Between 1750 and 1880 political developments in East Africa, from the western shores of the Indian Ocean to the western arm of the Rift Valley, between Kilwa in the north and the Zambezi River to the south brought about greater regional unity through responses to new opportunities for participation in global trade networks. After 1750 the involvement of foreign traders transformed the scale and organization of coastal and interior relations. A century later, the Swahili coast, while firmly part of the western Indian Ocean rim, also had developed ties with the African interior through empire building, migration, and the intensification of long-distance trade.

Foreign trade with East Africa played a significant role in this century of changing political landscapes. In the 1770s French sugar and coffee

► EYEWITNESS ACCOUNT OF THE SWAHILI OF ZANZIBAR

As described by the British traveler Richard Burton, the ethnic diversity of Zanzibar in the 1840s was dazzling. Historically the cultural mixing on the East African coast was a consequence of its geographic location on the rim of the Indian Ocean and the array of commercial opportunities that this location afforded. The Swahili language (kiSwahili) was born sometime around the first millennium CE. It was an amalgam of Bantu linguistic structure and vocabularies borrowed from a large number of trading partners, including Persian, Arabian, and South Asian. Apart from a few Arab documents, prior to the nineteenth century there were almost no written descriptions of the participants in the process of becoming Swahili. In the nineteenth century the moving frontier of Swahili speakers once again included South Asians, Arabs, and local East African-born migrants. Their island and inland success was observed by foreign merchants and travelers, including Burton.

According to Burton, there were several different groups of Arabs and Baluchis and a variety of South Asian religious and ethnic groups in Zanzibar, a bustling island city-state. Burton observed that some “Indians” reportedly spoke Swahili as their first language, suggesting that in the cultural crucible of East Africa they were immigrants and not visitors. Over time the adoption of the Swahili language, Islam, and a cosmopolitan urban life helped to meld together the disparate elements of the region, allowing political consolidation to make headway even in remote towns in the interior.

—*Candice Goucher and V. Keven Shipman*

plantations in the western Indian Ocean created a heightened demand for slave labor. In particular, the activities of Arab, Swahili, and Yao slave traders drew larger numbers of enslaved Africans from the interior to the East African coastal markets. By the early nineteenth century Omani commercial and political interests had spread to the East African coast. Under the Omanis, Kilwa was rebuilt and became a major port for slaves and ivory.

Before 1800 the interior states had controlled most of the trade to the East African coast. In

the 1820s the Omani sultan and ruler of Muscat Seyyid Said (1790–1856) established clove plantations on the islands of Pemba and Zanzibar. When he eventually moved his capital to Zanzibar in 1838, Seyyid Said consolidated political power, albeit in the shadow of the British Empire. Accompanying Seyyid Said to Zanzibar was the British agent for the East India Company, Atkins Hamilton, himself a sign of expanding British imperial interests in East Africa. American and other merchants soon followed. Increasing numbers of Swahili merchants of local coastal, Arab, and South Asian extraction also began to lead their own trading caravans into the interior. By 1863 ivory exports from Zanzibar were more than 300 tons, and 70,000 slaves were exported annually; by the mid-nineteenth century urban centers in the interior were brimming with new migrants from the coast.

During this period of dramatic economic transformation, the region's political systems increasingly were based on the ability of ruling elites to manipulate the participation of their subjects in long-distance trade in slaves, ivory, copper, guns, iron, gold, and foodstuffs. Political reputations were based partly on the achievement of material wealth and influence accrued during caravan travels. Even as the trade in enslaved Africans declined, slave labor was utilized by the caravans in the form of porters and by elites in expanding agricultural production. The persistence of slavery in East Africa gave European colonists later in the century an excuse to intervene in the region.

The possibilities of trade created new regional dynamics that sometimes bypassed coastal connections but never fully avoided them. The nineteenth-century rise of Buganda in the interlake region did not resemble the earlier kingdom of Bunyoro, a village-based confederation that relied on tribute from raiding. In contrast, Buganda was highly centralized and heavily engaged in the slave trade with the north, attracting the attention of North African Muslims and European Protestant missionaries in the 1860s. To the south, farmers were increasingly dominated by Tutsi pastoralists, leading to two major kingdoms in the mid-eighteenth century, Rwanda and Burundi. Eventually even clan-based chiefdoms coalesced into larger states

that increasingly relied on long-distance trade in iron, salt, slaves, and ivory to cement their control over the region's political economy. In the long term, East African political independence would give way to the imperialist desires born of the capitalist era.

—Candice Goucher and V. Keven Shipman

Bibliography

- Alpers, Edward A. *Ivory & Slaves in East Central Africa*. Berkeley and Los Angeles: University of California Press, 1975.
- Gilbert, Erik. "Coastal East Africa and the Western Indian Ocean: Long-Distance Trade, Empire, Migration, and Regional Unity, 1750–1970," *The History Teacher* 36(1) (2002): 7–34.
- Kusimba, Chapurukha M. *The Rise and Fall of Swahili States*. London: AltaMira, 1999.
- Sheriff, Abdul. *Slaves, Spices and Ivory in Zanzibar*. Athens: Ohio University Press, 1987.

Political Developments in Central Africa, 1750–1880

Important political changes took place in Central Africa during the volatile period between 1750 and 1880. Politics in the region, which straddles the equator between the North Atlantic coast and the Great Lakes region, were dominated by violence, greed, and increased foreign interventions, as the transatlantic slave trade became a driving force behind political developments. The

region's role in the Atlantic slave trade brought about the most dramatic changes in political power. Enslaved Central Africans were primarily shipped to Brazil as a result of the Portuguese presence in Angola. Although Britain declared the abolition of the slave trade in 1807, Portugal continued the coastal Atlantic slave trade for another 30 years. Thereafter the slave trade underwent important changes, shifting from European interest and involvement to an increased control by Arab-Swahili traders.

The access to weapons, gained through the trading of slaves, brought about changes in the region's political structures. This resulted in political instability for many fragmented kingdoms that were forced to align and realign as the political landscape changed. Swahili and Portuguese Creole merchants were also penetrating the easternmost parts of central Africa. Trade caravans carrying slaves and ivory attracted migrants from the East African coast and encouraged the growth of towns in the regions of the upper Congo and Zambezi. These creolized societies became competition to inland kingdoms as they started to control trade routes. For example, the Luba kingdom, in the marshy grasslands of the Upemba depression, asserted political power by conquering smaller states as it expanded eastward toward Lake Tanganyika in the late eighteenth century. The growing pressure of Arab-Swahili traders brought on the decline

► THE PORTUGUESE QUEST FOR A TRANSCONTINENTAL AFRICAN EMPIRE

In the late eighteenth and early nineteenth centuries the Portuguese sought to connect their territories in Angola on the South Atlantic Ocean with those in East Africa on the western rim of the Indian Ocean. By 1760 Mwata Kazembe III Lukwesa Ilunga had emerged as a powerful leader in the interior between these two oceans. He secured his political control by demanding submission of the region's competing kingdoms in exchange for security. Ironically his brief but successful reduction in conflict allowed the Portuguese administrator, Dr. Francisco José Maria de Lacerda, who was exploring the region, to reach the interior capital of Kazembe in 1798. Although Lacerda died awaiting an audience with Mwata, his chaplain returned

with Lacerda's notebooks, among the earliest documentary evidence of Kazembe.

The subsequent attempts to claim the site that Lacerda had documented ignored African sovereignty. The site on the Matizi stream was eventually purchased as Portuguese territory from a neighboring chief and became an early, if isolated, colony. The trade route through the interior that would have created transcontinental connections across Central Africa was never realized by the Portuguese. Aside from the brief occupation of the military garrison (1837) and a feeble attempt to grow manioc, Lacerda's imperial dream proved to be not only deadly but elusive.

—Candice Goucher

of the Luba in the latter part of the nineteenth century. Arab-Swahili access to guns also threatened the northern trade of the Luba.

The stability of other Central African states was equally dependent on external trade. The Kuba kingdom developed east of where the Kasai and Sankuru rivers join, northeast of their Luba trading partners. Long-distance trade routes had been established during the seventeenth century in connection with European slave traders who introduced new crops such as maize from the Americas. Their trade networks reached the Atlantic coast and linked them closely with the forest and savanna peoples of the north and south such as the Lele. Living near rivers with good soil, the Kuba flourished as they gained a rapid population growth that secured the success of their political structure, which protected trade routes for more than two centuries. However, the uncompromising presence of Arab and European slave traders eventually challenged the political power of the Kuba kingdom. This foreign pressure primarily contributed to the decline of the Kuba in the late nineteenth century.

The emergence and growth of the Lunda Empire, to the south of the Luba, was an important factor in maintaining the political balance in West Central Africa at the beginning of the nineteenth century. The slave trade caused the Lunda to become one of the major suppliers of slaves. By the mid-nineteenth century the seminomadic Chokwe peoples, to the south,

absorbed power with the Lunda. The Chokwe arose as a new political power, becoming strong trade rivals specializing in ivory, honey, and wax. Their focus on such goods expanded their trade and influence. They were very skilled hunters and blacksmiths with a reputation for attacking slave caravans. The Chokwe repeatedly intervened in Lunda succession disputes, allowing them to expand farther north and assimilate Lunda. As more local peoples became prey to aggressive slave trading by groups such as the Chokwe, indigenous societies began to use slaves more intensely than ever before. For example, men began taking slave wives. Women, who were displaced by kidnapping and subsequent enslavement, were eventually integrated into other societies, often as a result of Chokwe raiding parties. Their experiences furthered the processes of cultural integration and constant political realignment that characterized the era.

—Adam Carpinelli

Bibliography

- Birmingham, David. *The Portuguese Conquest of Angola*. London: Oxford University Press, 1965.
- Miller, Joseph C. *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730–1830*. Madison: University of Wisconsin Press, 1988.
- Reefe, Thomas Q. *The Rainbow and the Kings: A History of the Luba Empire to 1891*. Berkeley: University of California Press, 1981.
- Vansina, Jan. *Kingdoms of the Savanna*. Madison: University of Wisconsin Press, 1966.

■ Introduction: Political Developments in Europe, 1815–1914

Having experienced 25 years of war and revolution, the monarchs and diplomats who attended the Congress of Vienna in 1814–1815 following the defeat of Napoleon did their best to reestablish the old political order that had existed before 1789. They restored royal dynasties to their “rightful” thrones in Naples, Spain, France, Piedmont-Sardinia, and the Netherlands and redrew national boundaries in ways that gave precedence to the balance of power, not the aspirations of emerging nationalist movements. The

efforts of the French king Charles X to restore the privileges of the nobility in the 1820s, the suppression of nationalist clubs in Germany in 1819, the English Parliament’s eagerness to approve censorship legislation in 1819, and the success of Tsar Alexander II in persuading Prussia and Austria to join a holy alliance to protect throne and altar all were signs that conservatism was ascendant. It was a brief and fleeting ascendancy, however, and in the century that followed the transformation of European politics continued.

This transformation continued, first of all, because of the social changes brought about by urbanization and industrialization. The middle class grew in numbers and wealth; a large class of factory workers emerged, the number of farmers and rural workers declined; and wealthy landowners, who had lost many of their privileges during the era of the French Revolution, faced economic challenges after serfdom ended in central and eastern Europe and agricultural prices plummeted in the late 1800s. The spread of literacy, the proliferation of daily newspapers, and the formation of political parties ensured that Europeans could follow political developments and form political opinions at levels unknown in previous eras. Finally, despite efforts of conservative politicians, the events and ideals of the French Revolution—its commitment to equality, freedom, popular sovereignty, and democracy—continued to be the standard by which individuals judged governments. It also was an inspiration for further change.

A unique feature of political life in the nineteenth century is the emergence of ideologies: integrated bodies of sociopolitical doctrines, assumptions, and aims that are espoused in competition with other ideologies. Between the 1810s and the 1840s all of the following words, each representing a different ideology, appeared in the English language: liberalism, radicalism, socialism, republicanism, conservatism, monarchism, nationalism, and communism. The ideas behind many of these ideologies were not necessarily new. Most can be traced back to the era of the Enlightenment and French Revolution and in some cases even earlier. Reverence for tradition and stability, for example, existed long before “conservatism” entered the English language in 1835.

Every one of the ideologies that emerged in the early 1800s changed over time. Liberals, mainly drawn from the ranks of the middle class, maintained their commitment to free trade, parliamentary government, and the protection of basic freedoms throughout the period but by the end of the century had become more willing to use government to solve social issues and more comfortable with extending the right to vote to workers and women. Socialism was at first represented by a range of individuals who were appalled by the injustices and inequalities

of emerging industrial societies and envisioned alternative societies based on cooperation, harmony, and the communal ownership of property. After Karl Marx, who dismissed these early socialists as “utopian,” socialism gathered millions of followers, mainly drawn from the working class and intellectuals, who joined organizations and political parties committed to the destruction of capitalism, either by revolution or the ballot box. Nationalism was at first identified with intellectuals, young people, and idealists who allied themselves with liberalism and republicanism and committed themselves to the principle of national self-determinations for all peoples. After the failure of the liberal/nationalist revolutions of 1848, nationalism increasingly came to be identified with pragmatic and conservative politicians and causes such as economic protectionism and higher military budgets.

Although liberalism, socialism, nationalism, and conservatism were part of the political vocabulary of every European state, as the following group of entries shows, the political histories of individual states and regions varied considerably between 1815 and 1914. Great Britain remained a constitutional monarchy but one in which acts of Parliament in 1832, 1867, and 1884 extended the right to vote to virtually all adult males. France after the Congress of Vienna also was a constitutional monarchy but after experiencing revolutions in 1830, 1848, and 1870–1871, it ended the century as a republic deeply divided among radicals, socialists, republicans, liberals, conservatives, and monarchists. For Germany and Italy the major development was national unification, achieved in Italy after Rome and the surrounding territory were annexed by the Kingdom of Italy and in Germany at the conclusion of the Franco-Prussian War. Farther east, Russia remained an autocracy but one capable of undertaking major reforms such as the freeing of the serfs in 1861 and 1886. It too received a constitution and parliament after the Revolution of 1905.

By the early twentieth century the forces of liberal democracy were ascendant. Most European states were still monarchies, but with few exceptions they were monarchies with constitutions, parliaments, free speech, and a free press. Although not without enemies on the Left and

the Right, democracy and constitutionalism seemed to have a bright future. As in so many other areas of European life and thought, these political expectations were shattered by the slaughter of World War I and its aftermath.

—James H. Overfield

The Decembrist Revolt, 1825

The Decembrist Revolt was an abortive rebellion centered in St. Petersburg and southern Russia and led by liberal members of the Russian army officer corps in December 1825. Its goals were to prevent Nicholas, the younger brother of the recently deceased Tsar Alexander I, from assuming the throne and to implement a program of constitutional and social reform. The rebellions were easily suppressed by forces loyal to Nicholas and thus set the stage for three decades of reactionary and oppressive rule by Nicholas I (r. 1825–1855).

During the Napoleonic Wars, many Russian officers while campaigning in Western Europe were exposed to new liberal political ideas growing out of the Age of Enlightenment and the French Revolution, including constitutionalism, representative government, and freedoms of speech and the press. Some entertained even more radical ideas, including an end to Russian serfdom. After the defeat of Napoleon these officers returned to a Russia ruled by Alexander I (r. 1801–1825), who by then had lost most of his earlier enthusiasm for liberal reform and had delegated much of his authority to the archconservative General Aleksey Arakcheyev (1769–1834). Arakcheyev was especially unpopular within the army for his role in establishing the so-called military-agricultural colonies, settlements of army veterans and local serfs who lived under harsh discipline and combined agriculture and service in the army reserve.

In this oppressive and reactionary atmosphere, liberal-minded army officers played a key role in the formation of secret societies. These included the Union of Salvation, founded in 1816 in St. Petersburg by an idealist young officer, Pavel Pestel; the Union of Welfare, founded in 1818 after Pestel left St. Petersburg and temporarily disbanded in 1821; the Southern Society, founded in 1821 by Pestel in Tulchin, a city in the southwestern Ukraine; and the Northern

Society (1822), a reincarnation of the Union of Welfare. The two latter societies played the key role in the events that unfolded in December 1825. The Northern Society advocated a rather conservative constitutional monarchy, while the Southern Society under Pestel favored a centralized Russian republic, which Pestel had outlined in his treatise *Russian Truth* (*Russkaya Pravda*). The Southern Society developed a rigid organization and established contacts with other revolutionary groups including the Society of the United Slavs, which sought to establish a democratic federation of all Slavic peoples. Pestel's effort in 1822 to merge the Northern and Southern Societies failed when the more moderate northern group refused to endorse his republican agenda.

The disappointment among members of these societies with the course of Alexander I's reign was revealed upon his unexpected death on December 1, 1825. Normally, Alexander's eldest brother Grand Duke Constantine, who commanded Russian troops in Poland, would have succeeded the childless Alexander I. However, a few years earlier, Constantine had married a Polish noblewoman of lower status and secretly renounced his rights to the throne. In 1822, Alexander formalized this arrangement in a manifesto, which confirmed his youngest brother, Nicholas, as successor to the throne. However, the manifesto remained unpublished, and very few people at the court knew about it. On Alexander's death, Constantine, who had no desire to reign, swore allegiance to Nicholas, but Nicholas refused to announce his accession to the throne until Constantine traveled to St. Petersburg and officially announced his abdication. Constantine refused, and in the confusing situation that followed, support for Constantine grew among Russians who were committed to upholding the laws of succession or opposed Nicholas because of his reactionary views. The succession crisis ended only on December 25, when Constantine publicly reaffirmed his position and assumed the title of the emperor.

The Northern Society, taking advantage of this brief but confusing interregnum, staged an uprising in St. Petersburg on December 26, when the conspiring officers convinced soldiers to refuse to take a loyalty oath to Nicholas and

defend the rightful interests of Constantine. The rebel leaders wanted to enter the Governing Senate, the highest legislative, judicial, and executive body in the empire, and demand the publication of an edict that would abolish serfdom, grant freedom of speech, and establish an assembly that would in turn adopt a constitution. Some 3,000 soldiers filled the Senate Square in the heart of the capital. The government was caught unprepared, but General Mikhail Miloradovich, the governor of St. Petersburg, quickly mobilized the remaining forces that surrounded the mutineers.

Both sides showed hesitation. The Decembrists suffered from incompetent and indecisive leaders and general confusion among their ranks, while Nicholas I was reluctant to start his reign with a massacre. Acting on his own, Miloradovich, a decorated general of the Napoleonic Wars, personally rode to the rebel troops hoping to use his stature to talk them into submission, but he was shot dead by Petr Kakhovsky, an officer and member of the Northern Society. Finally, by the end of the day after Nicholas approved the use of force to end the uprising, government troops opened fire, killing about 60 people and wounding dozens. The capital was placed under martial law, and large-scale arrests followed.

Meanwhile, the Southern Society, based in Tulchin, suffered a serious blow when the police arrested their leaders, including Pestel and Sergey Muravyev-Apostol. As the news of events in St. Petersburg arrived on December 27–28, the members of the Southern Society decided to act by using force to free some of the arrested leaders. The rebel Chernigov Regiment, led by Muravyev-Apostol, staged an uprising on December 29 but was quickly disarmed by government troops. All rebel leaders, both in St. Petersburg and Tulchin, were arrested. An extensive investigation, in which Nicholas I personally participated, resulted in the trial of 289 Decembrists. Five of them, including Pestel and Muravyev-Apostol, were executed. Thirty-one were imprisoned, while the rest were banished to Siberia.

Nicholas was deeply affected by the Decembrist uprising, which made him suspicious of even mildly liberal ideas and set him against any major political change in Russia. Instead, Nicholas tried to rely on as few advisors and officials

as possible and developed a new administration that focused all decision making on the tsar himself. This created a cumbersome system that became increasingly repressive after a wave of liberal revolutions in Europe in 1830 and 1848. In turn, this delayed the introduction of much-needed reforms to transform the social and political structure of the Russian empire.

—Alexander Mikaberidze

Bibliography

- Barratt, Glynn. *Voices in Exile: The Decembrist Memoirs*. Montreal: McGill-Queen's University Press, 1974.
- Mazour, Anatole. *The First Russian Revolution, 1825: The Decembrist Movements, Its Origins, Development and Significance*. Stanford, CA: Stanford University Press, 1961.
- O'Meara, Patrick. *The Decembrist Pavel Pestel: Russia's First Republican*. New York: Palgrave Macmillan, 2003.
- Raeff, Marc. *The Decembrist Movement*. Englewood Cliffs, NJ: Prentice Hall, 1966.

The Revolutions of 1830

The failure of European statesmen to reinstitute a conservative political order in Europe was fully revealed in 1830, when a wave of revolutions and revolts swept across much of Europe. Although revolutionaries succeeded in achieving their goals in France and Belgium only, the fact that insurrections also occurred in Poland, Italy, Spain, and Germany shows that liberalism and nationalism had broad ongoing support.

In France the restored Bourbon monarchy of Charles X was by 1830 deeply disliked by liberals for the king's attempts to install an ultraroyalist government and set aside the charter granted by his predecessor, Louis XVIII, in 1814. In July 1830, Charles X dissolved the Chamber of Deputies, disenfranchised three-quarters of the French electorate, restricted the press, and ordered new elections under the restricted franchise. While middle-class liberals wanted to protest by refusing to pay taxes, on July 27 the common people of Paris began attacking royalist symbols and clashed with the city gendarmes. The king's general, Marechal Auguste-Frédéric de Marmont, who was particularly disliked as a former Napoleonic general who had surrendered Paris to the

allies in 1814, wanted to move against the mobs immediately, but the king hesitated. This delay allowed the Parisians to block streets with barricades in strategic areas while former national guardsmen joined in the rebellion. With royalist troops increasingly demoralized, Charles X fled from Paris to Versailles and then to Rambouillet and abdicated in favor of his son, who in turn abdicated in favor of his nephew. Liberals in the Chamber of Deputies, however, supported Louis-Philippe, the Duke of Orleans, who had been appointed lieutenant-general of the realm by Charles X on July 31 and had a reputation of sympathy for liberalism. Louis-Philippe accepted the offer and, after agreeing to uphold the Charter of 1814, became “king of the French” rather than “king of France.” Charles X fled to England. During Louis-Philippe’s reign the size of the electorate was doubled, and the Catholic Church ceased to be the official state religion, but France was still far from being a republic.

In August, revolution spread to Belgium, under Dutch rule since the Congress of Vienna (1815). After riots by agricultural and industrial workers had been put down by civilian authorities in Brussels, the Dutch were not alarmed by a spontaneous uprising following a performance of the nationalistic French opera, *La Muette de Portici* (its plot centered on a revolt in Naples against Spanish rule), and delayed sending troops. When Dutch authorities did respond, a clash between Dutch troops and rebels in a Brussels park ended with 400 rebels and 750 Dutch dead, an enormous toll that led to the Dutch evacuation of the city and the establishment of a provisional French-speaking Catholic government. This government proclaimed the independent state of Belgium on July 21, 1831, that then crowned Leopold of Saxe-Coburg-Gotha its first king.

Nationalism also inspired revolution in Poland, which the Congress of Vienna had established as a kingdom with its own army but with Tsar Alexander I of Russia as king. Although Alexander granted the Poles a constitution in 1818 that provided for a parliament, it had little authority. When it expressed opposition to certain Russian policies in 1820, Alexander prohibited it from meeting for five years. Encouraged by events in France, in November 1830 Polish military cadets in Warsaw rebelled and captured the

arsenal, forcing the withdrawal of occupying Russian troops. In January, under popular pressure, the Polish parliament declared that Tsar Nicholas I was no longer the Polish king, formed a provisional government, and prepared the Polish army for an anticipated Russian attack. Although the government raised an army of 30,000, it was weakened by divisions between moderates and radicals, and without hoped-for aid from France and Great Britain, Warsaw fell to the Russians in the autumn of 1831. Under restored Russian authority, Tsar Nicholas abolished Poland’s constitution, parliament, and army.

In 1830 nationalist insurrections in Italy, directed against Austrian rule, took place in Parma, Modena, Bologna, and several cities in the Papal States but were crushed by Austrian troops and the Papal army. German revolts occurred in several Rhineland states and forced the rulers of Hesse-Kassel and Hanover to make liberal concessions. Popular uprisings also led to the granting of constitutions in Saxony and Brunswick. However, when a nationalist rally attracted 30,000 people in 1832 to the university city of Heidelberg, the diet of the German Confederation passed the Ten Articles, which called on member states to take steps against liberalism and rebellion. In Germany and elsewhere, liberalism and conservatism remained in a state of tension until 1848, Europe’s next great revolutionary year.

—Margaret Sankey

Bibliography

- Church, Clive. *1830 in Europe: Revolution and Political Change*. London: Allen and Unwin, 1983.
- Collingham, H. A. C. *The July Monarchy*. London: Longman, 1988.
- Kossmann, Ernst Heinrich. *The Low Countries: 1780–1940*. Oxford, UK: Clarendon, 1978.

The Revolutions of 1848

The Revolutions of 1848 were a series of liberal-nationalist revolts in France, Italy, Germany, Austria, and Hungary as well as a number of other regions of Europe in 1848 and early 1849. Immediate causes include the famines and economic depression that had gripped Europe after 1846, years of oppression by post-Bonapartist monarchies, lingering liberal and republican

sympathies from the French Revolutions of 1789 and 1830, feelings of ethnic solidarity and nationalism, and the emerging ideologies of socialism and anarchism. Although the revolutionaries failed to achieve their goals, the revolutions had long-term ramifications for European political developments.

The first revolt occurred in Palermo, Sicily, on January 12. In late February, Parisians rose in revolt when soldiers killed 52 demonstrators outside the Ministry of Foreign Affairs, and King Louis-Philippe abdicated and fled to England. Liberals, republicans, and nationalists rebelled in several Rhineland cities on March 3, in Vienna on March 12, in Berlin on March 15, in Milan on March 18, and in Venice on March 22.

In France, after Louis-Philippe's abdication a provisional republican government, consisting mainly of moderates, established national workshops to provide work for the unemployed and arranged for elections to a constituent assembly. When the assembly decided to close the national workshops because of cost, working-class violence broke out in Paris, and the assembly gave dictatorial powers to General Louis Eugène Cavaignac to restore order. Between June 24 and 26, class warfare erupted in Paris between workers and the National Guard, ending only after 1,500 workers had been killed and between 12,000 and 15,000 were arrested. The government then issued a constitution for the Second Republic and arranged for elections. In December, Cavaignac lost the presidential election to Louis Napoleon (Napoleon I's grandson), who gradually consolidated his authority until, in 1852, he could proclaim the Second Empire, with himself as Emperor Napoleon III.

In Austria, rioting in Vienna forced the resignation of Emperor Ferdinand I's powerful state chancellor Prince Metternich on March 13. The empire seemed ready to dissolve after Ferdinand granted virtual autonomy to Bohemia and Hungary. Shortly after dissatisfied Bohemian subjects revolted in Prague on June 12, Austria and other royalist governments launched sustained counter-revolutionary attacks. By fall they were succeeding throughout Europe, most notably in Austria, where Field Marshal Alfred Windischgraetz recaptured Vienna from the revolutionaries on October 31. But Ferdinand I, who suffered from



Lithograph from 1848 shows fighting at the Barricade in front of the Kolln City Hall in the Breiten Strasse, March 18–19, 1848. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

severe epilepsy, was unable to reestablish civil order, recover lost Italian provinces, or subdue Hungary. He abdicated on December 2 in favor of his nephew, Franz Josef I, who reigned until 1916.

Unchecked rioting erupted in Berlin on March 18. The most powerful German prince, Prussian king Frederick William IV, after eight years of failing to pursue liberal reforms instituted by his father, Frederick William III, was compelled on March 22 to promise a constitution for a representative government. The violence continued in many German states, and in May delegates gathered in a national parliament in Frankfurt to consider a constitution for a united Germany. Politically divided and weakened after King Frederick William IV refused its offer to become king of Germany, the assembly disintegrated in the face of counterrevolution. Following the revolution's failure, large numbers of constitutionalists and liberal sympathizers fled. Many settled in the United States, where they became known as "48ers."

Nationalism was the primary fuel of revolution in Italy, where rebels of all political leanings sought to throw off Austrian, French, and papal influences to create a unified country. In March, Lombardy, Venetia, and Tuscany all expelled Austrian troops and declared republics, and the king of Piedmont-Sardinia, Charles Albert, offered troops in support. In response, Austria dispatched Field Marshal Josef Radetsky to suppress anti-Austrian uprisings in northern Italy. Radetsky defeated King Carlo Alberto of Sardinia at Custoza in July and captured Milan in early August. After the loss of Milan, Giuseppe Garibaldi waged guerrilla warfare against the Austrian presence in Italy and later commanded Italian forces when they resisted French-supported efforts to restore papal control of the Papal States. When the French took Rome in July 1849 and the republic of Venice surrendered after an Austrian siege in August, Italy's revolution was finished.

In Hungary, a province of the Habsburg empire, the Hungarian patriot Louis Kossuth made a famous speech in the Hungarian Diet on March 3, 1848, calling for Hungarian independence from Austria. In April the Diet took advantage of Austrian disorder to force Ferdinand to accept wide-ranging reforms, known as the April Laws. They established Hungarian home rule, freedom of speech, tax reforms, and the loosening of serfdom. Emboldened by Kossuth's defiance of Austria but unwilling to be part of a Hungarian republic, Serbs, Croats, Czechs, Slovaks, Romanians, and other ethnic minorities, mostly Slavs, demanded their own nations and revolted against both Hungary and Austria, thus weakening Kossuth. After the suppression of the revolt in Vienna and the abdication of Ferdinand I, the Austrian government took a harder line against the Hungarian rebels. An imperial army took Pest in early 1849, but the revolutionaries, entrenched in Debrecen, declared total independence from Austria and fought on against Austrian and Russian troops, which the tsar had dispatched in response to the Austrian emperor's appeal for intervention. The Hungarian army surrendered in August 1849, and Kossuth fled into exile.

With the Hungarian defeat, the revolutionary movements that had shaken Europe came to an end, with little to show in terms of results. In the face of counterrevolution, the revolutionaries

were plagued by political disagreements, social divisions, and a lack of military power. The revolutions' main consequence was the strengthening of conservative governments, which in the 1850s and 1860s satisfied some of the aims of the 1848 revolutionaries in terms of national unification and moderate constitutional reform but were strongly opposed to revolutionary, republican, and socialist ideals.

—Eric v.d. Luft

Bibliography

- Jones, Peter S. *The 1848 Revolutions*. London: Longman, 1991.
- Langer, William Leonard. *The Revolutions of 1848*. New York: Harper and Row, 1971.
- Sperber, Jonathan. *The European Revolutions, 1848–1851*. Cambridge: Cambridge University Press, 1994.
- Stearns, Peter N. *1848: The Revolutionary Tide in Europe*. New York: Norton, 1974.

The Paris Commune of 1871

The French military debacle in the Franco-Prussian War (1870–1871) led to the downfall of Napoleon III and the proclamation of the Third Republic in September 1870 and then a civil war in which radical patriots in Paris under the direction of the revolutionary municipal council, or Commune, fought against the antirepublican National Assembly sitting in Versailles. The savagely fought civil war, which lasted from March to May 1871 and ended with the crushing of the Commune's supporters, revealed the deep social and political divisions within French society.

Eager to replicate Napoleon I's military triumphs and angered by the publication of secret diplomatic correspondence (Ems dispatch), French emperor Napoleon III (r. 1852–1870) began the Franco-Prussian War against a coalition of German states. The war, which featured the generalship of the talented Helmut Graf von Moltke of Prussia and the mediocre Achille Bazaine and Marie Edmé Patrice de MacMahon of France, began with the siege of Metz and the disaster of Sedan (September 1, 1870) in which Napoleon III and much of his army were captured. A proupublican Parisian crowd declared the end of the Second Empire and the creation of the Third Republic upon learning of the defeat (September 4, 1870).

A provisional government fought on throughout the winter as Prussian-led forces besieged Paris, but the provinces were less committed to the war. National elections elected a monarchist pacifist majority headed by Adolphe Thiers. Thiers signed a peace treaty in Versailles on January 18, 1871, in which France ceded to Germany most of Alsace and the Lorraine department of Moselle and promised to pay an indemnity of 5 billion francs.

Patriotic elements in Paris found the treaty dishonorable, however, and resented the requirement that Prussian troops be allowed to ceremonially take control of the city. Tensions exploded when Thiers attempted to disarm the Parisian National Guard and take away its cannons, which had been purchased by local subscribers. After General Claude Martin Lecomte and General Clément Thomas were shot in Montmartre on March 18 as they tried to seize cannons, Thiers fled to Versailles with troops still loyal to him.

On March 26, Parisians elected a city council known as the Commune of Paris (lesser communes were formed in various provincial towns). The French term *commune* means “small town”; such administrative entities are generally governed by elected municipal councils, but Paris had not benefited from this privilege (and would not until 1977) because of its revolutionary tradition. The Commune’s supporters, or Communards, generally had leftist allegiances, as the Parisian working class had been radicalized by months of war and food shortages during a four-month Prussian siege. Some followed Louis Auguste Blanqui (1805–1881), a radical revolutionary held hostage by Thiers; others were inspired by anarchists such as Louise Michel, the syndicalist Pierre Proudhon, and the Jacobin journalist Louis Delescluze. In its short life, the Commune passed significant social legislation, including the abolition of the death penalty, pensions for relatives of veterans, and remission of various debts and rents. It was generally anti-Catholic and restored the Republican calendar. It was committed to internationalism, adopted the red flag instead of the tricolor flag, and destroyed the Vendôme Column because it celebrated Napoleon I’s battles.

Thiers, hoping to restore his authority in Paris, attacked Paris from Versailles on April 2,

1871 (the German coalition remained officially neutral, though its sympathies lay with Thiers). Fighting was brutal, culminating in the *semaine sanglante* (Bloody Week, May 21–28) as government troops reached the working-class districts of eastern Paris. The Communards, sensing defeat, burned government buildings (including parts of the Tuileries palace) and shot hostages (including the archbishop of Paris). Government troops executed even more prisoners following their victory, and the total death toll reached 18,000 to 30,000 dead. Another 7,000 Communards chose exile or were deported, many of them to French colonies in New Caledonia and Algeria.

Despite its violent birth and continued political instability, the Third Republic survived until 1940 and remains the longest-lasting French regime since the French Revolution. The Commune uprising, though ultimately unsuccessful, has been revered and studied by communists in France and elsewhere. Mao Zedong and Vladimir Illyich Lenin both admired the Commune; so did Karl Marx, who wrote a series of addresses (published as *The Civil War in France* in 1871) to draw the lessons from the revolutionaries’ defeat.

—Philippe Girard

Bibliography

- Eichner, Carolyn Jeanne. *Surmounting the Barri-
cades: Women in the Paris Commune*. Bloom-
ington: Indiana University Press, 2004.
- Marx, Karl. *The Civil War in France: The Paris Com-
mune*. 1871; reprint, New York: International
Publishers, 1968.
- Shafer, David. *The Paris Commune: French Politics,
Culture, and Society at the Crossroads of the
Revolutionary Tradition and Revolutionary
Socialism*. New York: Palgrave Macmillan, 2005.
- Taithe, Bertrand. *Citizenship and Wars: France in
Turmoil, 1870–1871*. New York: Routledge, 2001.

Politics of the French Third Republic

Despite chronic governmental instability, the Third Republic (1870–1940) in France intro-
duced key legislation instituting personal free-
doms, free education, and the separation of
church and state. Its diplomatic record was
mixed, as the creation of a vast colonial empire

and victory in World War I were followed by ignominious defeat in 1940.

The military disaster at Sedan (September 1, 1870) during the Franco-Prussian War prompted the population of Paris to declare the end of the Second Empire of Napoleon III (r. 1852–1870) and the advent of the Third Republic (September 4, 1870). Radical Parisian patriots (the Commune) refused to surrender as Prussians besieged the capital the following winter, but national elections brought to power a majority that was both pacifist and monarchist. The temporary government, headed by Adolphe Thiers and headquartered at Versailles, signed a ruinous peace with Germany (January 1871), then killed or exiled its radical opponents during a civil war in the heart of Paris (April–May 1871).

Despite the proclamation of the Republic, the monarchists who controlled the assembly came close to restoring monarchy in the 1870s. Heir to the throne Henri, Comte de Chambord, had many supporters until he insisted that France abandon the revolutionary tricolor. The royalist Marshall Marie Edme Patrice de MacMahon was elected president in 1873. Constitutional laws passed in 1875 failed to label the government as republican until a last-minute amendment that passed by a single vote (the Wallon Amendment). Finally, on May 16, 1877, MacMahon forced the republican prime minister Jules Simon to resign and dissolved the assembly. The republican victory in the ensuing elections had lasting consequences, as it finally marginalized the royalist camp and turned subsequent presidents into mere figureheads.

The Right, including supporters of the Orléans and Bourbon dynasties, Bonapartists, extreme nationalists (*revanchistes*), and anti-Semites, refused to participate in government until World War I, as did the Far Left including the growing communist movement. The national assembly's small, fractious republican nucleus caused much ministerial instability, and governments rarely lasted more than two years throughout the Third Republic. Political crises were endemic. General Georges Boulanger, whose aggressive nationalism was popular among Frenchmen, almost became dictator in 1889. The bankruptcy of the Compagnie Universelle du Canal Interocéanique de Panama (1889) sparked a massive scandal when it

was revealed in 1892 that the company had paid bribes to leading politicians and journalists. The conviction of the Jewish French officer Alfred Dreyfus for espionage in 1894 began 12 years of political turmoil that only abated when a court exonerated him in 1906.

Given such instability, the Third Republic's achievements were notable. Jules Ferry (premier during 1880–1881 and 1883–1885) passed two laws in 1881–1882 that, along with the Goblet Law of 1886, made primary education free, compulsory, and secular. Other laws protected freedom of the press (1881) and the right to form associations (1901) and implemented the separation of church and state (1905). Overseas, France built a colonial empire that was second only to Great Britain and stretched from North and West Africa to Indochina. The French-Russian Treaty of Alliance (1894) and the Entente Cordiale with Great Britain (1904) gave France allies that proved essential when World War I broke out in August 1914. Despite continued governmental reshuffles and the loss of 1.3 million men, the regime rallied extremist parties through a policy of national union (*union sacrée*) and eventually defeated Germany in November 1918.

—Philippe Girard

Bibliography

- Bloch, Marc. *Strange Defeat: A Statement of Evidence Written in 1940*. New York: Oxford University Press, 1949.
- Mayeur, Jean-Marie, et al. *The Third Republic from Its Origins to the Great War, 1871–1914*. New York: Cambridge University Press, 1988.
- Rémond, René. *The Right Wing in France from 1815 to De Gaulle*. Translated by James M. Laux. Philadelphia: University of Pennsylvania Press, 1966.
- Weber, Eugen. *France, Fin de Siècle*. Cambridge, MA: Belknap Press, 1986.
- Weber, Eugen. *Peasants into Frenchmen: The Modernization of Rural France, 1870–1914*. Stanford, CA: Stanford University Press, 1976.

The Fight for Women's Suffrage in Great Britain and the United States

The term “suffrage” simply means the right to vote, though in Europe and North America it most often refers to women's voting rights.

► THE WOMEN'S SOCIAL AND POLITICAL UNION

The Women's Social and Political Union (WSPU) was founded in 1903 by a small group of women in Manchester, England. Particularly notable among the founders were Emmeline Pankhurst and her daughter, Christabel. Both were well-educated middle-class women from a background of political activism, factors that made them particularly suitable to help lead the cause of women's suffrage in the United Kingdom.

The WSPU was distinct from its sister organizations primarily because of its tactics. While most women's suffrage groups aimed for slow change through legal political action and education, the members of the WSPU soon grew tired of waiting. After almost 20 years of peaceful yet ineffective action, the WSPU began to engage in militant, even violent, acts. By the 1910s, WSPU members were vandalizing buildings and public places with slogans, smashing windows, burning property, and bombing political targets. Particularly strong and well-trained women were picked to form a special bodyguard and intimidate opponents.

The WSPU was painted in a contradictory manner by its opponents, who called it a terrorist group and yet sneered at its members as "suffragettes," a term designed to highlight the supposed feminine weakness of the group. As the WSPU's violence escalated, however, the British government began to take the organization very seriously as a threat. Some WSPU members were beaten by police, and many were dragged off to prison. When WSPU "suffragettes" responded to their imprisonment with hunger strikes, prison guards responded with violence, including forced feedings.

It is unclear exactly what impact the WSPU had on the eventual achievement of women's suffrage in Britain after World War I. What is certain is that there was no more controversial or visible women's suffrage group in the United Kingdom, and the WSPU certainly put the suffrage movement on the front pages.

—Matthew DeFraga

The movement for women's suffrage in both the United States and the United Kingdom was a long and bitterly contested process, complete with numerous controversial incidents and tactics as well as many instances of harsh reprisals against suffrage advocates. Though women who fought for suffrage called themselves "suffragists," militant suffragists were often derisively labeled "suffragettes" by their opponents.

The outpouring of liberation sentiment engendered by the Enlightenment and the American and French revolutions late in the eighteenth century included some notable calls for women's rights, sometimes promoting suffrage. In 1791, for example, French feminist Olympe de Gouges published her treatise *Declaration of the Rights of Women and the Female Citizen*, which called for equal rights for men and women and stated that women were in all senses the equal of men. Though many eighteenth-century appeals for women's rights did not specifically mention suffrage, they set the stage for the suffrage movement by putting women and their opinions on the public stage.

The women's suffrage movement picked up steam in the United Kingdom after two 1830s' acts formally excluded women from the voting process. The fact that this same legislation (along with another in the 1840s) extended wide voting rights to British men of different classes yet kept all women disenfranchised particularly irked feminists. Inspired by the Chartist tradition and the writings of political philosophers Jeremy Bentham and John Stuart Mill (both of whom advocated women's suffrage), the first national women's suffrage group, the National Society for Women's Suffrage, was founded in 1872. The extension of the vote to all British men during the 1880s further heightened the civil inequalities between men and women, and two new and more influential groups, the National Union of Women's Suffrage Societies (NUWSS), led by Millicent Fawcett, and the militant Women's Social and Political Union (WSPU), organized by Emmeline and Christabel Pankhurst, were founded at the turn of the twentieth century.

If the vote had once been regarded as a privilege—open primarily to men of property—and

not a right, voting restrictions steadily eased for white males in the United States so that by 1830 ten states allowed all white males the vote without restrictions, and many of the states in New England had extended the vote to free black males. With this backdrop, the fight for women's suffrage on a national level picked up in the 1840s, when suffragist pioneers Lucretia Mott, Margaret Fuller, and Elizabeth Cady Stanton became active. In 1848 two key events put women's suffrage on the national political scene: the founding of the Liberty Party and the Seneca Falls Convention. The Liberty Party, though unsuccessful, campaigned on the national level for universal suffrage, among other things. More important was the Seneca Falls Convention, which was attended by most important women's suffragists in the country, including male supporters such as Frederick Douglass and William Lloyd Garrison. Though the main topic was women's rights in general, the Declaration of Sentiments drafted by the convention set the agenda for the American suffragists, who continued to hold conventions, notably the first National Women's Rights Convention in 1850. The American Civil War took the focus away from women's suffrage, but in 1869 (the same year that the Fifteenth Amendment gave the vote to all black males) two particularly influential groups were created: the National Woman Suffrage Association, led by Elizabeth Cady Stanton and Susan B. Anthony, and Lucy Stone's American Woman Suffrage Association. To increase their influence, the two groups were merged in 1890 to form the National American Women Suffrage Association (NAWSS).

Nineteenth-century ideals in Britain and the United States depicted women as the moral monitors of their families; they were expected to be good wives and mothers, confining their activities and authority to the domestic sphere. Women publicly agitating for equality with men sparked fears that national morality would erode if women were allowed to ignore their "proper" domestic role and step into the public sphere. The prominent intellectual Catherine Beecher argued that although women were in all ways equal and perhaps even superior to men, it was best not to demand the vote to maintain social stability.

Tactics used by suffragist groups tended to be peaceful. The NAWSS generally limited its actions

to public meetings and appeals to Parliament, though the 1907 Mud March through the streets of London was a more visible display. Peaceable tactics were fairly successful in the United States, where a number of states had already allowed women's suffrage when the Nineteenth Amendment was passed in 1919. In Britain, however, frustration over a lack of progress led to increasingly radical tactics, particularly by the WSPU. Women from the WSPU smashed store windows and destroyed property to gain attention for their cause. Perhaps the most disturbing act occurred at the 1913 Epsom Derby, where WSPU member Emily Davison stepped in front of the king's horse and was killed. Her exact intentions are unclear, but she was certainly trying to gain attention for the WSPU.

The outbreak of World War I temporarily shelved suffrage movements in both Britain and the United States, mainly because women were needed as factory workers, thereby gaining a measure of freedom and responsibility outside the home. After the war women were quickly given the vote in both the United States and the United Kingdom, though whether this was inevitable or given as a reward for wartime services is debated. Other nations had already granted suffrage to women, starting with New Zealand in 1893.

—Matthew DeFraga

Bibliography

- Banner, Lois W. *Elizabeth Cady Stanton: A Radical for Woman's Rights*. New York: Addison, Wesley, Longman, 1980.
- Buhle, Mary Jo, and Paul Buhle, eds. *The Concise History of Woman Suffrage: Selections from History of Woman Suffrage, by Elizabeth Cady Stanton, Susan B. Anthony, Matilda Joselyn Gage, and the National American Woman Suffrage Association*. Champaign-Urbana: University of Illinois Press, 2005.
- Flexner, Eleanor, and Ellen Fitzpatrick. *Century of Struggle: The Woman's Rights Movement in the United States*. 3rd ed. Cambridge, MA: Belknap, 1996.
- Kent, Susan Kingsley. *Sex and Suffrage in Britain, 1860–1914*. Princeton, NJ: Princeton University Press, 1987.
- Smith, Harold L. *British Women's Suffrage Campaign, 1866–1928*. 2nd ed. Boston: Pearson Education, 2010.

The Unification of Italy

Proclaimed in 1861, Italian unification actually took the first half of the nineteenth century to achieve. After French emperor Napoleon I conquered Italy during the Napoleonic Wars, he

reorganized the various states, introduced some of the ideas of the French Revolution, and deposed many of the traditional monarchical rulers. The Congress of Vienna of 1815, which redrew the boundaries of Europe after Napoleon's defeat, attempted to restore the traditional forms

THE UNIFICATION OF ITALY, 1859-1870



of government that had ruled Italy under the auspices of the Austrian empire. However, liberalism had made serious inroads during Napoleon's reign, and many Italians resented the restoration of monarchs and conservative government. Instead, they wanted to see the creation of a unified Italian state guided by a liberal constitution.

The movement for Italian unification became known as the *risorgimento*, meaning the resurgence of Italian nationalism and culture. Supporters of the *risorgimento* sparked revolts in Naples, Piedmont, Modena, Parma, and the Papal States during the 1820s and 1830s but met with little success. To better coordinate the efforts of the *risorgimento*, nationalist Giuseppe Mazzini organized a group called Young Italy shortly after the failed revolts. Young Italy led the Italian phase of the Revolutions of 1848, although unfortunately the *risorgimento* did not achieve much lasting progress during these popular uprisings.

In the decade following the Revolutions of 1848, however, the Kingdom of Sardinia-Piedmont emerged as a supporter of the *risorgimento* under King Victor Emmanuel II and the skilled diplomat Camillo Benso di Cavour. In 1859 Cavour led Sardinia-Piedmont and several other northern Italian states in a rebellion against Austrian domination, forcing the Austrian empire to recognize their independence after the battles of Magenta and Solferino. The Italians had substantial help from the French and conceded the provinces of Nice and Savoy to France as payment for this assistance after independence had been won.

With most of northern Italy free of Austrian dominance, popular revolts led by Giuseppe Garibaldi broke out in several southern provinces and proved successful. Under Cavour's guidance, Lombardy, Naples, Sicily, and several other duchies elected to annex themselves to Sardinia-Piedmont in 1860 under the rule of Victor Emmanuel II, who proclaimed the creation of a unified Italy the following year with a constitution and himself as head of state. The last provinces on the Italian peninsula to join the new nation were Venice in 1866 and the Papal States in 1870.

Bibliography

Beales, Derek, and Eugenio Biagini. *The Risorgimento and the Unification of Italy*. 2nd ed. New York: Longman, 2003.

Coppa, Frank S. *The Origins of the Italian Wars of Independence*. New York: Longman, 1992.

Riall, Lucy. *Garibaldi: Invention of a Hero*. New Haven, CT: Yale University Press, 2008.

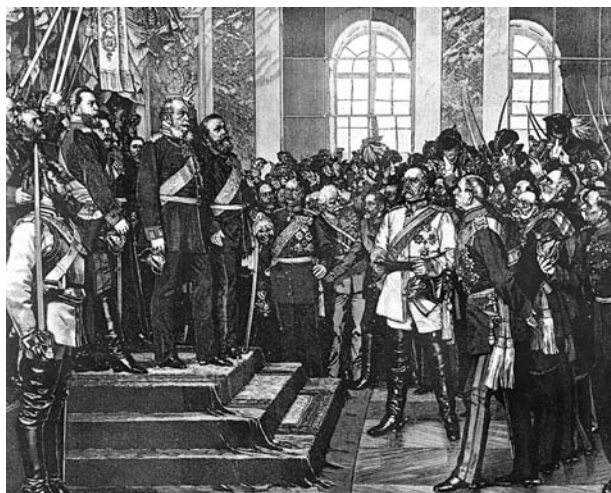
Riall, Lucy. *The Italian Risorgimento: State, Society, and National Unification*. New York: Routledge, 1994.

Ridley, Jasper. *Garibaldi*. London: Phoenix Press, 2001.

The Unification of Germany

Completed in 1871, German unification created a militarily and economically powerful nation-state in the heart of Europe, thereby ending centuries of German disunity and altering the European balance of power.

German unification took place against a background that included rising nationalism among Germany's professional and commercial classes and within the intellectual community; calls for a reform of the Germanic Confederation, which had been established by the Vienna Congress of 1814–1815; industrialization and a growing economic unity among the German states; rivalry between the Austrian Empire and the Kingdom of Prussia; and a European states system transformed by the Crimean War of 1853–1856. Specifically, German unification was brought about as a result of actions taken by the Kingdom of Prussia and its ambitious



Otto von Bismarck reads Prussian king Wilhelm I's Proclamation of the German Empire at Versailles on January 18, 1871, following Prussia's victory in the Franco-Prussian War. (Hulton Archive/Getty Images)

UNIFICATION OF GERMANY, 1865–1871



minister-president (prime minister), Otto von Bismarck (1815–1898).

Under Bismarck's guidance Prussia waged and won three short wars from 1864 to 1871 that allowed it to unite all German lands except Austria under its leadership. In the first of these wars, the Schleswig-Holstein War (January–October 1864), Prussia and Austria fought Denmark to prevent the incorporation of the small Duchy of Schleswig and its partly German population into the Danish kingdom. Victorious, Prussia and Austria were unable to agree on the fate of Schleswig and its sister duchy, Holstein, and these disagreements led to the Austro-Prussian

War of 1866. In the Austro-Prussian War, or Seven Weeks' War, Prussia defeated Austria and the other states of the Germanic Confederation, with the decisive battle occurring near the Bohemian village of Königgratz (Sadowa) on July 3. Victory allowed Bismarck to dissolve the Germanic Confederation, exclude Austria from German affairs, and organize the states and cities of northern Germany into the Prussian-dominated North German Confederation. As of 1867 only the continuing independence of the south German states of Baden, Bavaria, and Württemberg and the opposition of Napoleon III's France stood in the way of German unity.

► BISMARCK'S "BLOOD AND IRON" SPEECH

On September 30, 1862, Prussian minister-president Otto von Bismarck informed the budget committee of Prussia's parliament, "Not through speeches and majority decisions will the great issues of the day be decided—that was the great mistake of 1848 and 1849—but through iron and blood." Immediately mislabeled the "Blood and Iron" speech, Bismarck's statement has been occasionally, and inaccurately, interpreted as a sign that the minister-president had in mind a

concrete strategy, relying on military force, to achieve German unification under Prussian leadership. In reality, Bismarck's words were designed to win over the liberal opposition, which had blocked King William I's efforts at army reform since 1860. Still, Bismarck's declaration foreshadowed the actual methods that Prussia employed to create the German Empire.

—Bruce DeHart

The Franco-Prussian War (June 1870–January 1871) provided Prussia the opportunity to remove both obstacles. Supported by the other members of the North German Confederation and the south German states, Prussia defeated France easily, toppling Napoleon III and leaving the French unable to stop unification. Moreover, as the fighting went on, ardent nationalism spread throughout southern Germany, and Bismarck used this fervor to persuade the rulers of Baden, Bavaria, and Württemberg to join with the states of the North German Confederation to form the German Empire.

Formally proclaimed at the Palace of Versailles on January 18, 1871, the German Empire was to be headed by the Hohenzollern Dynasty of Prussia, whose king, William I (1861–1888), became German emperor William I. With the advantages of a growing population of 41 million, the world's best army, and a rapidly industrializing economy, the German Empire immediately superseded France as the leading continental power. In the ensuing decades newly unified Germany developed global aspirations that contributed to the coming of World War I in 1914.

—Bruce DeHart

Bibliography

- Carr, William. *The Origins of the Wars of German Unification*. London: Longman, 1991.
- Planze, Otto. *Bismarck and the Development of Germany: The Period of Unification, 1815–1871*, Vol. 1. Princeton, NJ: Princeton University Press, 1990.
- Showalter, Dennis. *Railroads and Rifles: Soldiers, Technology, and the Unification of Germany*. Hamden, CT: Shoestring, 1975.

Nationalist Revolts in the Balkans

The nineteenth century in the Balkans was marked by the rise of successive nations in search of identity and statehood against Ottoman rule. The first major nationalist revolt in the Balkans occurred in 1804 when the Serbs rose to challenge the half-millennium-long Ottoman presence in the region. The Ottomans had advanced their control over the Balkans up to the so-called Danube-Sava line (running westward from the Black Sea along the Danube and Sava rivers to the Adriatic) between 1345 and 1529 when they attempted (but failed) to take Vienna. The 9 million predominantly Orthodox Christians who lived in the region were administered, as was the entire Ottoman empire, according to the *millet* system, which divided and administered the population according to religious affiliation, thus allowing some measure of regional autonomy. As the general strength and prosperity of the Ottoman state declined in the eighteenth century, however, the burdens of increasingly heavy taxation, privileges for the Muslim minority, and general abuse by and corruption of the bureaucracy became insupportable to the Balkan people.

Sensing the waning of Ottoman power, the region was already producing rebellions against Ottoman domination several decades prior to 1804, but these were sporadic, poorly organized, and ultimately futile efforts by disunited subjects against a still overwhelmingly superior power. However, by the start of the nineteenth century three things had changed: the Ottoman empire had slid irrevocably into decline (soon to

THE BALKANS, 1878–1913



be known as the “Sick Man of Europe”); other major European powers, such as Russia and Austria, had become interested in resolving the “Eastern Question” to their own benefits; and the Balkan peoples had, under the influence of the French Revolution and the Napoleonic Wars, begun to organize themselves into aspiring nations in pursuit of statehood. The result was that by the end of the nineteenth century,

five independent states had emerged in the Balkans: Serbia, Greece, Bulgaria, Romania, and Montenegro.

The Serbian revolt of 1804–1812 was led by George Petrovich (1768–1817), known as Kara-george (“Black George”) for his bellicose character and dark appearance; despite financial and military support from Russia, it was still crushed by the Ottomans in 1812. Nevertheless, the

revolt inspired not only successive generations of Serbs but also other Balkan peoples to challenge Ottoman sovereignty. Through the diplomatic efforts of Milos Obrenovich, the Serbs won from the beleaguered Ottomans the right to their own monarch and a form of autonomy in 1830. After Piedmont's successful unification of Italy in 1859, the Serbs then asserted themselves to be the "Piedmont of the Balkans," suggesting their desire to unite all southern Slavic peoples into a single Serb-led state.

The next to rise were the Greeks under the influence of Philike Hetairea, a secret Philhellenic society, who were aided in their efforts by the British, French, and Russians and in 1830 won their independence. Moldavia and Wallachia received autonomy from Ottoman control in the wake of the Crimean War from the Great Powers of Europe (who were concerned with keeping Russia at a distance from the straits leading into the Mediterranean) at the Congress of Paris in 1859 and shortly thereafter united in a Romanian state. The Bulgarians rose in 1876 with Russian backing and won their independence in 1878. That same year at the Congress of Berlin, Serbia and Montenegro were both granted full independence by the Great Powers of Europe.

Undermined from within by their own economic decline and challenged from without by aspiring small nations backed respectively by European Great Powers, the Ottoman empire was forced out of Europe in the Balkan Wars of 1912–1913, retaining only Constantinople and the small section of Thrace surrounding the city.

—Anita Shelton

Bibliography

- Glenny, Misha. *The Balkans: Nationalism, War and the Great Powers, 1804–1999*. New York: Penguin, 2001.
- Jalevich, Charles, and Barbara Jelavich. *The Establishment of the Balkan National States, 1804–1920*. Seattle; London: University of Washington Press, 1977.
- Kaplan, Robert D. *Balkan Ghosts: A Journey through History*. New York: Picador, St. Martin's Press, 2005.
- West, Rebecca. *Black Lamb and Grey Falcon: A Journey through Yugoslavia*. Twentieth Century Classics Series. New York: Viking, 1941. Reprint, New York: Penguin, 1995.

Political Developments in Britain, 1815–1914

British politics in the nineteenth century revolved around the gradual progress toward a modern parliamentary democracy while avoiding the political uprisings that plagued much of continental Europe. This period also saw the emergence of strong political parties and party organizations that sought to sway the new electorate.

By the early nineteenth century the British political system had in some ways adopted modern features, such as the importance of the office of prime minister, the authority of the elected House of Commons over the hereditary House of Lords, and the removal, on most questions, of the monarch from active politics. In other respects, however, the political system remained antiquated. For example, representation in the House of Commons was given to towns and villages that had long since declined in population or even disappeared (these seats being known as rotten boroughs), while the franchise was strictly limited. Most political figures were either Whigs or Tories, with the term "Tory" gradually giving way to the term "Conservative" beginning in the 1820s. In the early 1800s these were associations without rigid party discipline or central control.

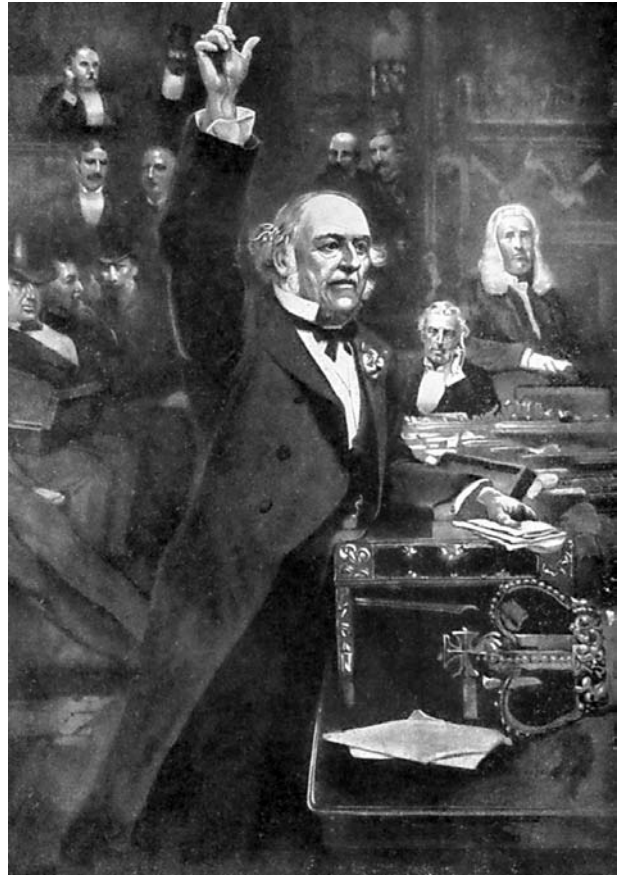
However, the desire for political reform increased in the late 1820s. The Roman Catholic Relief Acts of 1778 and 1791 had allowed Catholics to own property, inherit land, and join the army and had given propertied Catholics the right to vote. These were soon followed by increasing demands for changes to the political system itself. The result was the First Reform Act of 1832, proposed by the Whig government of the second Earl Grey, and supported by widespread public agitation. This act significantly altered the political system through the redistribution of seats in Parliament, with some rotten boroughs being disenfranchised and new industrial cities gaining representation for the first time. Equally important, the franchise was extended, and many middle-class men received the vote for the first time. However, the working class remained excluded; this led to the rise of the Chartist movement in the 1830s and 1840s, which demanded further political reforms.

However, these demands were refused, and the movement dissolved by the end of the 1840s.

The Conservative government of Sir Robert Peel of the early 1840s was confronted by the issue of free trade, symbolized by the large-scale middle-class protest against the Corn Laws, which applied duties on imported wheat. The repeal of the Corn Laws in 1846 by Peel's government constituted a triumph of laissez-faire economics but split the Conservative Party, with the departure of Peel and his supporters. In time the Peelites would join together with the Whigs to form what came to be known as the Liberal Party. A leading political figure of the 1850s and 1860s was the Whig politician Lord Palmerston, who served as prime minister for two terms. He appealed to patriotic sentiment in the British public through an aggressive foreign policy, although domestically he remained opposed to further political reforms.

Palmerston's death in 1865 opened the possibility of reform, and in 1867 the Second Reform Act was passed. This act mandated a further redistribution of seats in favor of the new industrial centers and widened the franchise to include, for the first time, elements of the working class. The Third Reform Act of 1884 expanded the franchise to rural laborers, while other reforms in the interim resulted in the secret ballot and forbade certain corrupt electoral practices. As a result of these reforms, political parties found that they had to devise new ways to reach and influence the expanded electorate. The result was increased party organization, which included not only new campaign strategies but also more stringent party discipline in the House of Commons. Members of Parliament became increasingly tied to their party, and their scope for independent action was diminished.

Politics in the years after the Second Reform Act were dominated by William Ewart Gladstone, leader of the Liberal Party, and Benjamin Disraeli, leader of the Conservative Party. The latter attempted with some success to identify the Conservative Party with the rising tide of imperialist sentiment in Britain. The two leaders exchanged successive election victories until Disraeli's death in 1881. In the mid-1880s Gladstone took up the cause of Irish Home Rule, whereby Ireland, ruled by Britain with



British prime minister William Gladstone introduces his Home Rule Bill in Parliament in 1886. (Chaiba Media)

representation in the House of Commons, would be given its own parliament to deal with domestic affairs. This split the Liberal Party, with those in disagreement, including the bulk of the aristocracy, leaving the party and forming the Liberal Unionist Party. The latter formed an electoral alliance with the Conservatives until the two formally merged in 1912. The Liberal split over Ireland led to 20 years of almost uninterrupted Conservative rule under Lord Salisbury and subsequently Arthur Balfour. These governments acted to maintain and expand the British Empire, epitomized by the Boer War, and also implemented limited social reforms.

By the early 1900s a movement had emerged within the Conservative Party in favor of abandoning free trade, but the voting public remained sceptical, and the Liberal Party was returned in a landslide victory in 1906. The Liberals would remain in power through 1914 and pushed through a series of social reforms

► WILLIAM EWART GLADSTONE

William Ewart Gladstone (1809–1898) began his political career in 1832 as a Conservative member of Parliament but left that party in 1846 with Sir Robert Peel over the issue of free trade. In the 1850s and 1860s Gladstone served several terms as chancellor of the exchequer, delivering a series of budgets that set the standard of Liberal finance that included low government expenditure, the elimination of tariffs, and balanced budgets. By the late 1860s he began to champion radical solutions to issues such as the disestablishment of the Irish Church, and on such a platform he won his first election as leader of the Liberal Party in 1868. His governments of 1868–1874 and 1880–1885 passed a number of reforms, and he also transformed politics by speaking directly to the growing electorate at mass rallies such as in his Midlothian campaign of 1879. His adoption of the cause of Irish Home Rule in 1886 severely split the Liberal Party, and he retired from politics in 1894 after twice failing to get a Home Rule measure passed by House of Commons.

—Wesley Ferris

including old-age pensions and unemployment insurance, both of which were financed by the imposition of graduated taxation through what came to be known as the People's Budget of 1909. The powers of the House of Lords to veto legislation passed by the House of Commons were also removed through the Parliament Act of 1911 after the House of Lords had initially refused to pass the People's Budget. This period also saw the rise of the Labour Party, a coalition of trade unionists and socialists that advanced the causes of the working class and gained significant representation in the House of Commons for the first time in 1906. Before World War I Labour generally cooperated with the Liberals in an electoral alliance that, despite a certain amount of friction, did not indicate that the former would supplant the latter as the party of the progressive Left.

By 1914 the problem of Irish Home Rule again dominated British politics, with the outbreak of armed revolt in Ireland now a distinct

possibility. However, the sudden start of World War I put a temporary end to domestic political conflicts, although in the long run the war would permanently transform British politics.

—Wesley Ferris

Bibliography

- Biagini, Eugenio. *Liberty, Retrenchment, and Reform: Popular Liberalism in the Age of Gladstone, 1860–1880*. Cambridge: Cambridge University Press, 1992.
- Perry, Jonathan. *The Rise and Fall of Liberal Government in Victorian Britain*. New Haven, CT: Yale University Press, 1993.
- Shannon, Richard. *The Age of Salisbury, 1881–1902: Unionism and Empire*. London: Longman, 1996.

Political Transformations in Austria-Hungary, 1815–1914

The series of political transformations that occurred in Austria-Hungary between the Congress of Vienna (1815) and the outbreak of World War I resulted in the decentralization of the Austrian empire. Conflict between the liberal or nationalist aspirations of the various regions of the empire and the Habsburg monarchy's goal of a unified empire characterized the political climate of the period. The Austrian sphere of influence also shifted from leadership among the Italian and German states to territorial interests in the Balkan regions. Successive Habsburg emperors proved unwilling to embrace both a decentralized empire and a changing sphere of influence for the monarchy. The result was a decline in the monarchy's popularity, contributing to the eventual collapse of the Habsburg empire in 1918.

The concept of the Habsburg inheritance as an empire, ruled from the Austrian capital of Vienna, arose in 1804 when King Francis I assumed the title of "Emperor of Austria." Napoleon Bonaparte's dissolution of the Holy Roman Empire in 1806 left the Austrian empire as the largest unified political entity in Europe. When Emperor Franz Joseph ascended the throne in 1848, the empire included Austria, Hungary, Bohemia, the Italian regions of Lombardy and Venetia, Galicia, and the Grand Duchy of Cracow.

The Austrian empire emerged victorious from the Napoleonic Wars. Through the

negotiations of the gifted foreign minister Prince Klemens von Metternich (1773–1859), the Austrian empire emerged from the Congress of Vienna as the leader of the German Confederation and as the dominant power in Italy. Metternich advocated the maintenance of a strong centralized monarchy in the Austrian empire and opposed the development of liberal independent regimes in central Europe.

Metternich's policies led to widespread discontent in numerous regions of the Austrian empire, particularly in Hungary and Italy. This discontent culminated in the revolutions of 1848, when the young emperor Franz Joseph faced a war in northern Italy and an insurrection in Hungary. The imperial armies recaptured the rebellious Italian cities and imposed a police state on Hungary, resulting in the exile of numerous members of the liberal aristocracy and revocation of the traditional Hungarian Constitution. The surviving Hungarian elites continued to foment rebellion in Hungary until Franz Joseph agreed to transform the empire into the dual monarchy of Austria-Hungary in 1867.

Austrian ascendancy among the German and Italian states collapsed during the same period. Lombardy and Venetia had remained under military control after the suppression of the 1848 revolution. Franz Joseph's refusal to accept Italian demands for reform led to defeat in the Italian war of 1859. Habsburg attempts to maintain dominance of the German confederation conflicted with Prussian ambitions, forcing Franz Joseph to concede his leadership position in Germany during the Austro-Prussian war of 1866.

During the late nineteenth century, the foreign policy of the Austro-Hungarian empire focused on control over the Balkan states of the declining Ottoman empire. The annexation of Bosnia-Herzegovina in 1878 upset the balance of the dual monarchy and caused tensions with Russia. Franz Joseph addressed these issues by forbidding the inhabitants of the newly annexed territories from seeking Austro-Hungarian citizenship, contributing to widespread discontent in the region. This unstable environment in the Balkans eventually resulted in the Balkan Wars of 1912–1913 and precipitated the outbreak of the First World War, with the assassination of

➤ EMPRESS ELISABETH AND THE DUAL MONARCHY

Elisabeth of Bavaria, wife of Emperor Franz Joseph, supported Hungarian self-government under a dual monarchy and formed close friendships with many members of the liberal Hungarian aristocracy. The empress learned to speak fluent Hungarian in the 1860s and used her influence over Franz Joseph to advocate the transformation of the Austrian empire into a dual monarchy. Her support for Hungary, to the exclusion of the rights of her non-Hungarian subjects, aroused the disapproval of the court in Vienna, which contained many Bohemian nobles who had remained loyal to the Habsburgs in 1848. Elisabeth ignored this criticism, furthering the career of the nationalist Gyula Andrássy, who became the first constitutional prime minister of Hungary in 1867.

—Carolyn Harris

the heir to the Austrian throne providing the catalyst for widespread European hostilities.

—Carolyn Harris

Bibliography

- Hamann, Brigitte. *The Reluctant Empress: A Biography of Empress Elisabeth of Austria*. New York: Knopf, 1986.
- Roberts, J. M. *The Penguin History of Europe*. London: Penguin Books, 1996.
- Sked, Alan. *The Decline and Fall of the Hapsburg Empire, 1815–1918*. London: Longman, 1989.

Poland under Russian Rule, 1772–1918

The Polish Commonwealth (*Rzeczpospolita*) disappeared from the map of Europe after more than a century of internal decline and three successive partitions by its neighbors Russia, Prussia, and Habsburg Austria in 1772, 1793, and 1795. Other than the experience of a Duchy of Warsaw (created by Napoleon) between 1807 and 1813 and the Congress Kingdom, a quasi-autonomous state under Russian protection that existed between 1815 and 1864, Poles lived under the direct rule of the three partitioning states.

Poles living in the Russian Partition were governed according to the three pillars that upheld

THE POLISH NATIONAL ANTHEM

The Polish National Anthem was written by Józef Wybicki in 1795 to commemorate the departure of Polish legions, led by General Henryk Dąbrowski, to fight alongside Napoleon Bonaparte. After the failed Kosciuszko Revolt, many Poles immigrated to France and joined Bonaparte's forces in the hope that Bonaparte would restore Polish autonomy and establish a new Polish state.

"Poland has not yet perished,
So long as we live.
What foreign violence has robbed from us,
We will reclaim, sword in hand.

March, march, Dąbrowski,
From the land of Italy to Poland.
Following your leadership
We will become a single nation.

We'll cross the Vistula, we'll cross the Warta,
And we shall be Poles.
Bonaparte gave us the example
How to be victorious.

March, march Dąbrowski . . .

As Czarniecki went to Poznań
After the Swedes overran us,
To save our country
We will return across the sea.

March, march Dąbrowski . . .

As a father said to his Basia,
Tears in his eyes,
'Listen, now, are those our boys
Beating the drums?'

March, march, Dąbrowski . . ."

—Anita Shelton

Source

Trochimczyk, Maja. "Sacred versus Secular: The Convoluted History of Polish Anthems," in *After Chopin: Essays in Polish Music*, ed. Maja Trochimczyk (Los Angeles: Polish Music Center at USC, 2000).

the entire Russian state: Orthodoxy, Autocracy, and Nationality (that is, Russian nationality). For the largely Catholic Poles, whose political history had been dominated by the Republic of Nobles with an elected monarch (in stark contrast to the autocratic system practiced in Moscow) and whose cultural history emphasized a Western orientation, inclusion in the Russian state, an ancient enemy, could hardly have been less congenial. Thus, it is not surprising that the period of partition was marked by repeated armed revolts against Russian control. While Russian rulers varied in their attitudes toward their Polish subjects, the general policy was to weaken and extinguish the Polish national consciousness.

The repeated Polish uprisings followed a clear pattern: efforts at reform provoked Russian repression, which was followed by violent uprising. After the first partition of 1772 the last king of Poland, Stanislaw-August Poniatowski, undertook extensive political reforms inspired by the early French Revolution. These reforms culminated in the progressive Constitution of May 3,

1791. Catherine II of Russia could not tolerate this and in 1793 instigated the Second Partition, which provoked the Kosciuszko Revolt in 1794, and finally in 1795 the Third Partition. Under these circumstances, it is easy to understand why, under the slogan "For Your Freedom and Ours!" Polish Legions soon became Napoleon's favorite troops.

After the Congress of Vienna in 1815 Poles tried to make the most of their purported autonomy within the Congress Kingdom under the rule of Alexander I of Russia, who toyed with ideas of constitutionalism. However, when he was succeeded by his reactionary brother, Nicholas I, and when France again threatened to explode in revolution in 1830, the Poles revolted and deposed the tsar. The military repression that followed culminated in the Organic Statute of 1832, which severely curtailed Polish autonomy and resulted in the Great Migration of Polish insurrectionary leaders to France.

The January Uprising of 1863 was the next generation's effort to wrest independence from

Russia during a decade of internal upheaval and reform in the Russian empire under the “Great Emancipator,” Alexander II. It was also crushed by the Russian Army, and the Congress Kingdom was formally terminated in 1866. During the rest of the nineteenth century Poles turned to Organic Work, an effort to build economic and moral strength in the nation even while the Russian state subjected them increasingly to policies of Russification. These policies included decreeing Russian as the official language of Vistulalands, as the Polish lands now were called. Although Poles received some representation in the Duma (first legislature) in imperial Russia in 1906, such gains were reduced in the conservative electoral reform of 1907.

World War I created deep divisions in opinion about whether nationalist Poles should align themselves against the Germans or the Russians. These divisions culminated in the split between Roman Dmowski, representing Poles diplomatically in Paris at the Peace Conference in 1918, and Jozef Pilsudski, who organized the Polish Legions to fight against the Russians in a war of independence that climaxed at the Battle of Warsaw in 1920. This battle resulted in Poles gaining extensive eastern lands and ended only in March 1921 with the Treaty of Riga. The era of Partitioned Poland came to an official end with the recognition in Paris of the principle of Polish independence on June 3, 1918.

—Anita Shelton

Bibliography

- Berend, Ivan T. *History Derailed: Central and Eastern Europe in the Long Nineteenth Century*. Berkeley: University of California Press, 2003.
- Davies, Norman. *God's Playground: A History of Poland*. 2 vols. New York: Columbia University Press, 1984.
- Lukowski, Jerzy. *The Partitions of Poland, 1772, 1793, 1795*. London: Addison Wesley Longman, 1998.
- Wandycz, Piotr S. *The Lands of Partitioned Poland, 1795–1918*. Seattle: University of Washington Press, 1974.

Russia to 1905

As is true for so many states around the world, the history of Russia from 1750 to 1905 was

dominated by the imperative to respond to the challenges of the modernizing West. While Peter I (r. 1682–1725) had become “the Great” due to his efforts to Westernize Russia at the start of the eighteenth century, Russia continued to struggle in keeping up with the West. Thus, Russian rulers throughout this period were challenged over and over again. As they attempted to meet the challenge with inadequate resources, they tended to concentrate at the top levels of government and society and neglect the impoverished peasantry. This created a schism within Russian society that ultimately proved impossible to mend.

Peter's daughter Elizabeth I, who ruled between 1741 and 1762, is remembered particularly for ways in which she worked to further the Westernization of Russia's ruling elite. She did so by requiring the gentry to send their children abroad to study and importing the Italian architect Rastrelli to continue the efforts of her father to make St. Petersburg the finest capital city in Europe. She also involved Russia in all European diplomacy and its two major wars, the War of the Austrian Succession (1740–1748) and the Seven Years' War (1756–1763). All of this cost a great deal of money, which she squeezed from the peasantry through heavy taxes. Throughout the eighteenth century as the stock of the gentry rose, that of the peasants declined. The gentry were granted privileges (such as exemption from service to the state under Peter III in 1764), while the serfs lost what few rights they had previously enjoyed.

This trend reached its peak under Catherine II (r. 1764–1796), who despite her ambition to be known as an enlightened monarch, rendered about 1 million “Crown peasants” into servitude to private owners, extended the geographic reach of serfdom into the Cossack lands, and deprived peasants of the right to petition the empress for redress of grievances. Catherine became known as “the Great” primarily for her successful expansion of the Russian state, taking the north shore of the Black Sea up to the Dniester River from the Turks in a series of three actions between 1768 and 1794 and instigating the three partitions of Poland with Austria and Prussia in 1775, 1793, and 1795.

Alexander I (1804–1825), Catherine's grandson, was the first Russian ruler to seriously

► IDEALS OF THE DECEMBRIST REVOLT

Peter Kakhovsky was a Russian army officer and an active participant in the Decembrist Revolt of 1825. He failed to carry out his task of assassinating Tsar Nicolas I but killed two high army officers, a crime for which he was hanged in 1826. Before Kakhovsky died he wrote the following defense of his actions in a letter to a superior officer:

“The people have conceived a sacred truth—that they do not exist for governments, but that governments must be organized for them. This is the cause of struggle in all countries; peoples, tasting the sweetness of enlightenment and freedom, strive toward them; and governments, surrounded by millions of bayonets, make efforts to repel these people back into the darkness of ignorance. But all these efforts will prove in vain; impressions once received can never be erased. Liberty, that torch of intellect and warmth, was always the attribute of peoples emerged from ignorance. We are unable to live like our ancestors, like barbarians or slaves.”

—Anita Shelton

Source

Peter Kakhovsky, “Extract from a Letter of Kakhovsky to General Levashev,” quoted in Anatole G. Mazour, *The First Russian Revolution, 1825: The Decembrist Movement; Its Origins, Development, and Significance* (Stanford, CA: Stanford University Press, 1937), 274.

consider both the emancipation of the serfs and constitutionalism as reforms essential to the continuing modernization and Westernization of Russia. However, he interpreted the invasion by Napoleon and his Grande Armée in 1812 as a challenge to Russia’s special mission as the “Third Rome,” or last protector of Orthodox Christianity. Thus, although his reign began with expectations of Western-inspired reform, it ended on a reactionary note. Alexander’s role at the Congress of Vienna in 1815 and as organizer of the Holy Alliance of Russia, Prussia, and Austria against further revolution in Europe confirmed his status as a reactionary. His brother, Nicholas I, who succeeded him in 1825 after defeating the short-lived challenge to his succession of the Western-inspired Decembrist Revolt, was

a thoroughgoing reactionary both at home and abroad. At home, Nicholas countered the pull of the West with a reaffirmation of Russian tradition, advancing the idea that the Russian state rested on the “three pillars of Orthodoxy, Autocracy and Nation.” Abroad, he became known as the “Gendarme of Europe” for his willingness to repress revolutions beyond his own borders (notably in Poland in 1830 and Hungary in 1848).

Ironically, although Russia reached a peak in its role and reputation in the West under Alexander I and Nicholas I between 1815 and 1854, its defeat in the Crimean War (1854–1856) exposed Russia’s fundamental weaknesses: an agrarian economy that was inadequate to support a modern Great Power and an autocratic political system that alienated the educated elite. Alexander II (1854–1881) realized this and was determined to pull Russia through a program of systemic reform. This resulted in the Great Reforms of 1861–1866. The greatest of the reforms was the emancipation of the serfs in 1861. Unfortunately, the terms of the emancipation did not provide the means for newly emancipated serfs to progress economically, and by the end of the century most Russian peasants were materially worse off than ever. Other reforms, including reforms of the army, the judiciary, and provincial administration, were aimed at creating a modern rule-based state on the Western model, short of a constitution. Repeated attempts on the tsar-liberator’s life in the 1860s as well as an uprising in the Polish part of the empire soured Alexander II on reform. His assassination in 1881 confirmed his successor, Alexander III, as a thoroughgoing reactionary. Alexander III, as well as his successor, Nicholas II, embraced the three pillars of Orthodoxy, Autocracy and Nationality even as they pursued economic modernization and industrialization.

When the alienated educated elite (the intelligentsia), the alienated, uneducated, and impoverished peasantry, the alienated non-Russian nationalities of the empire, and the small but growing proletariat all turned against the state by the end of the nineteenth century, the autocracy was largely isolated. In that condition, there was little it could do to stave off the disasters of the Russo-Japanese War and the Revolution of 1905.

—Anita Shelton

Bibliography

- Hosking, Geoffrey. *Russia: People & Empire, 1552–1917*. London: Fontana, 1998.
- Hosking, Geoffrey. *Russia and the Russians: A History*. Cambridge: Belknap Press of Harvard University Press, 2001.
- Rogger, Hans. *Russia in the Age of Modernization and Revolution, 1881–1917*. London: Longman, 1983.

Liberalism

Liberalism in the nineteenth century was a movement that carried forth the ideals of the early moderate phase of the French Revolution. It was strongest in the United States, Britain, and France, but movements calling themselves liberal were found in many places. It had a generally positive orientation to the future. Liberals often assumed that social and political problems are caused by the persistence of archaic institutions such as serfdom, noble privilege, economic overregulation, or religious persecution. Problems could be solved by rationally examining those institutions and abolishing things that no longer worked. Liberalism is often identified with the middle classes, or bourgeoisie, but not all liberals were middle class, nor were all members of the middle-class liberals. English liberalism in particular had a substantial aristocratic presence, the legacy of the Whig Party of the eighteenth and early nineteenth centuries. However, many aristocrats left the Liberal Party in the late nineteenth century as it moved leftward.

Liberals believed in a government of defined and limited powers, with some division of executive and legislative authority. Whether a government took the form of a republic or a monarchy was less important, and many liberals supported constitutional monarchy, a combination of hereditary monarchy and limited powers. The Orleans monarchy that ruled France between 1830 and 1848 was heavily influenced by liberalism. Government needed to be responsible to an electorate, but most liberals were not democrats; they believed that the franchise should be restricted to property holders, those who had a stake in society. Different liberals drew the line in different places, and the general tendency in the nineteenth century was for

LIBERALISM IN CHILE

Parties calling themselves liberal appeared in many places in Latin America in the nineteenth century. In some cases, the party's "liberalism" was limited to the use of the name: the short-lived Mexican Liberal Party of Ricardo Flores Magon (1874–1922), founded in 1906, was a radical anarcho-syndicalist group fomenting the revolutionary overthrow of dictator Porfirio Diaz (1830–1915). One Latin American party somewhat closer to the liberal mainstream was the Partido Liberal of Chile, founded in 1849. Like many Latin American liberals, the Partido Liberal derived much of its energy from anticlericalism in an area where the Roman Catholic Church remained a powerful religious monolith. In other areas, the party's policies were not that different from those of its main opponent and sometime ally, the Chilean Conservative Party, founded in 1851. The Chilean Liberals used corruption and shunned the electoral appeals to the masses made by some European liberals. Factionalism was a problem, and the Partido Liberal went through a dizzying array of splits and mergers, spawning such entities as the Liberal Democratic Party (1875–1876), the Independent Liberal Party (1885–1930, 1931–1933), the second Liberal Democratic Party (1893–1933), and the United Liberal Party (1930–1933). In 1966 Partido Liberal merged with the Conservatives to form the National Party.

—William E. Burns

liberals—and sometimes their opponents—to admit larger numbers of people to the vote. Very few nineteenth-century male liberals believed in admitting women to the franchise, however; the most notable exception was the English philosopher and politician John Stuart Mill (1806–1873).

Liberals supported the "science" of political economy as it developed in Britain in the late eighteenth and early nineteenth centuries. Liberals, particularly in England, supported free trade, an idea endorsed by political economists such as David Ricardo (1772–1823). Free trade became the ideological center of the British Liberal Party, although the agriculturally protectionist Corn Laws were actually abolished in 1846 by the conservative Sir Robert Peel (1788–1850). In less economically developed areas, liberals sometimes

supported protection to enable their countries to build their own industrial sectors. This was seen as a temporary measure. Liberals believed that the division of society into economic classes was permanent. They opposed the privileges of the aristocracy and supported “careers open to the talent,” the eligibility of every qualified man, regardless of his class background, for every job. The self-made man was an icon of liberalism. Liberals were individualists, believing that the best way to elevate people was not to raise the status of the classes they belong to but instead to encourage the good habits that lead people to rise as individuals and discourage the bad habits. Liberals were generally suspicious of the poor and the working class because the poor did not have property, the precondition of social responsibility, and liberals despised a paternalistic attitude to the poor, which they associated with the aristocracy of the old regime. Some liberals argued that measures to alleviate the plight of the poor actually increased human misery, as they decreased the incentive for individuals to rise via hard work. The lives of the unemployed poor should be made as unpleasant as possible to discourage laziness. The English Poor Law of 1834, the work of a liberal government, set up a system of workhouses—with tedious, unproductive labor; deliberately unpleasant food; and the separation of families—to discourage poverty.

Organizations of workers using their collective power to get a better deal—labor unions—were considered by many, but not all, liberals as an illegitimate interference with the individual’s right to sell his labor, although liberals supported other forms of worker organizations such as mutual aid societies. The attraction of the poor and working class to socialist parties later in the century would add to liberal hostility. On the European continent, liberals were often willing to make alliances with traditional conservatives against the menace of radical democracy and socialism, particularly after the revolutionary outburst of 1848. In Britain, where socialism was relatively weak, liberals remained in a loose alliance with labor to the end of the nineteenth century.

Liberals supported freedom of the press, although they were much less enthusiastic about freedom for the socialist and radical press than

for the liberal press. Liberals strongly supported freedom of religion and believed in paring back, or perhaps entirely eliminating, the prerogatives of state churches. The poor, like women, were uneducated and were believed to be under the sway of the churches, another reason for excluding them from politics. Secular education was a great liberal cause particularly in France, where liberal politicians François Guizot (1787–1874) and Jules Ferry (1832–1893) were responsible for expansions of the public education system. Civil marriage, which took marriage out of the hands of the church and put it in the hands of the liberal state, was another liberal cause. Religious minorities—Protestants in France, Protestant Dissenters in England, Jews throughout Europe—were more likely to support liberalism as a way of ending prejudice and discrimination toward them. Protestants were more liberal than Catholics, and liberal Catholics often had difficulty reconciling their political and religious positions, particularly as the papacy was always strongly opposed to liberalism. Those liberals who were religious often kept their religious commitment out of politics. England, with a tradition of liberal Evangelicalism, was a partial exception.

After the revolutions of 1848, liberals, already powerful in Britain, played an increasing role in the government of other European states. Although European liberals supported the abolition of slavery, liberalism was compatible with racism, and liberal statesmen like Ferry often supported imperialism. Liberal imperialists considered the establishment of colonies and emigration from Europe as an alternative to socialism for solving social problems, which grew particularly acute with the economic depression of the late nineteenth century.

—William E. Burns

Bibliography

- Fitzpatrick, Matthew P. *Liberal Imperialism in Germany: Expansionism and Nationalism, 1848–1884*. New York: Berghahn Books, 2008.
- Gould, Andrew. *Origins of Liberal Dominance: State, Church and Party in Nineteenth-Century Europe*. Ann Arbor: University of Michigan Press, 1999.
- Kahan, Alan S. *Liberalism in Nineteenth-Century Europe: The Political Culture of Limited Suffrage*. New York: Palgrave Macmillan, 2003.

Conservatism—French Revolution to WWI

Conservatism is a set of political and philosophical ideas and attitudes that values the traditions and ways of the past and resists most political change, especially change brought about by violence or force. French royalists, particularly Chateaubriand (1786–1848), first used the term conservatism to describe their opposition to the French Revolution. The opponents of the Revolution explained their stance by saying they wished to conserve the traditions of the past that they valued such as the monarchy and the church.

In England, the most important early apologist for conservatism was Edmund Burke (1729–1797), whose *Reflections on the Revolution in France* (1790) is regarded as one of the founding statements of conservative political philosophy. Burke wrote that change by violent revolution would always end in tragedy because societies behave according to habits and traditions that are developed over long periods of time. Lasting and valuable change, he argued, cannot be imposed by fiat; due to the complexity of society, change can only be accomplished incrementally over generations. In England, the conservative party, known as Tories, also arose in opposition to a revolution, the Glorious Revolution of 1688, but it did not assume the title of “conservative” until a century later, after the French Revolution. The English Tories, like the French royalists, also revered the monarchy and the established church. Throughout the nineteenth century Tories resisted political changes such as the Great Reform Bill of 1832 and subsequent reform measures that would, by 1920, transform the British government into an elective democracy with nearly universal adult suffrage.

In much of continental Europe, the Conservatives also resisted democratic change, often attempting (as did the Tories in Britain) to protect the privileges of the nobles and the rulers, but also those of the established churches (whether Catholic, Protestant or Orthodox). The conservative governing classes of Europe attempted to restore the status quo as it was before the French Revolution and the Napoleonic Era, but the Congress of Vienna (1815) system they established became abraded by a series of radical

revolutions, the most important of which were the Revolutions of 1848. The near success of these democratic revolutions frightened many European conservatives, who, led by Russian czar Nicholas I (r. 1825–1855), suppressed some by military force.

Some European conservative leaders, particularly Prime Minister Benjamin Disraeli of Britain (Prime Minister, 1868–1870, 1874–1881), Chancellor Otto von Bismarck (Prime Minister of Prussia 1862–1898, Chancellor of German Empire 1871–1898), and Alexander II of Russia (r. 1855–1881) were subtler. These men attempted to beat the liberals at their own game by stealing their thunder. Disraeli startled the British Conservatives by securing the passage of the 1867 Reform Bill, which substantially broadened the franchise in Britain. Bismarck, the father of the German Empire, insisted on universal manhood suffrage in the German Imperial Reichstag (Parliament), and later, passed universal health care and other social welfare measures, making Germany the first European state to do so. And Czar Alexander II issued a series of reform measures, including, importantly, the Emancipation Manifesto abolishing serfdom, thus freeing about 33 million peasants from the control of the landlords. The Emancipation of the Russian serfs (1862) is coeval with the freeing of the slaves in United States. Alexander II remarked that he preferred “revolution from above” to revolution from below.

The continental European conservatives in Catholic countries, such as Italy, Spain, Portugal, France, Austria-Hungary, and South Germany were especially interested in maintaining the social primacy of the Catholic church, arguing for church control of education, the special privileges of the clergy, as well as (in Italy and Spain) imposing specific disabilities on Protestants and other non-Catholics. In some countries, such as Spain and some of the Spanish American republics, as well as the French Catholic Province of Quebec, the church maintained and taught its lay congregants that the church was superior to secular authority and that a Catholic’s highest loyalty should be to the Pope, rather than to secular rulers. This teaching, sometimes called ultramontanism, inspired political turmoil in several Catholic lands, such as France, Spain,

Mexico and Quebec in the late nineteenth century and early twentieth century.

In much of Latin America, during the nineteenth century, there was a protracted political struggle between the Liberals, also known as the *Colorados* (Reds), and the Conservatives, who were called *Blancos* (Whites). In some republics, such as Uruguay, Paraguay, Colombia, and Mexico, savage civil wars raged between the two factions. Almost always these civil wars were resolved by the emergence of a dictator (*caudillo*). Some Latin American caudillos were Blanco, but many were Colorado.

In Latin America the Conservatives were the champions of the colonial past: they supported the prerogatives of the church (including the church's position as the chief landowner in some countries) and the social position and political privileges of the Europeans (*criolos*), especially as large landowners. The Liberals, also mostly *crioles*, were more secular. They commonly tried to undercut the exalted political and economic position of the church, advocated the secularization of lands held by the church, called for religious freedom, and supported free trade and the laissez-faire economic policies of the British liberals. Neither the Latin American conservatives nor liberals valued the lower class mestizos and Indians except to serve in the armies and die in their frequent civil wars.

In their zeal to find value in the traditions of the past, conservatives often constructed interpretations of the past that supported their views. Such were the Russian conservatives known as the slavophiles, who thought they discovered idyllic village democracy in the peasant village council, the *mir*. The slavophiles were reacting to the program of change being advocated by the westernizers, who wished to change Russia into a European-style capitalist constitutional democracy. The westernizers especially wished to abolish serfdom and dismantle the autocratic government of the czars. (This was the mainstream of the westernizers; a minority faction, from whom the Bolsheviks developed, simply wished to use western technology but not political democracy.) The conservative slavophile reacted against the westernizers' program by emphasizing their devotion to czarist autocracy and Orthodox Christianity.

Many cultures reacted against the changes brought about by the growth of European colonial empires by turning to their past traditions to find strength to resist. The many Muslim groups, in particular, determined to conserve the traditions of their past glories to regain their freedom from the colonial empires that had conquered them. Among these, the Deobandi were perhaps the most effective of these conservative Muslim movements. Named after a madrasah (religious school) founded in Northern India in 1866, the Deobandi teach an austere and puritanical form of Islam. Their message is that the present states in which the Muslims dwell are ephemeral and should not be the focus of Muslims' loyalty. The devout Muslim, they hold, should be loyal only to the worldwide Muslim community (*umma*). From their religious schools in Northern India, the Deobandi sent missionaries throughout the Muslim world to teach the duty of struggling (*ji-had*) to bring about the political unity of Dar al Islam (the Muslim world). The Deobandi persist as a small, but very dedicated minority among Muslims.

As indicated above, conservatism is a political stance which started out in resistance to change ("conserving" the traditions of the past) but which has sometimes developed into a drive for change from a perceived lamentable present to a golden age of an imagined past.

—Wilfred J. Bisson

Bibliography

- Honderich, Ted. *Conservatism*. Boulder: Westview Press, 1990.
- Muller, Jerry Z., ed. *Conservatism: An Anthology of Social and Political Thought from David Hume to the Present*. Princeton: Princeton University Press, 1997.
- O'Sullivan, Noel. *Conservatism*. New York: St. Martin's Press, 1976.

Republicanism

Republicanism is the belief in government, direct or representative, by a citizen class, with no hereditary or sacred monarch. The citizen class may be defined on either a broad or a narrow basis, although many republicans were suspicious of democracy, which they feared allowed participation by persons who lacked the virtue

or social responsibility to participate as citizens. The general tendency in the nineteenth century was for republicanism to become more democratic among males, although republicans often opposed the enfranchisement of women, who were viewed as lacking the public virtue necessary for republican citizens. A radical ideology in the Enlightenment, republicanism became more mainstream in the nineteenth century, but republican regimes were still uncommon in Europe in 1914. However, over the same period republicanism established near-total domination of the Americas and spread to Africa and Asia.

Enlightenment republicanism drew from both the experience of contemporary republics and the example of ancient ones, particularly Sparta and the Roman Republic. It was also influenced by the social and political thought of Jean-Jacques Rousseau (1712–1778), himself a citizen of the Republic of Geneva, a source of pride to him throughout his life. Rousseau associated republicanism with male virtue and believed that it was best limited to small city-states like Geneva or early republican Rome. The appeal of republicanism in the Enlightenment was limited by the fact that Europe's historic republics such as Geneva, the Dutch Republic, and Venice were declining, as was the most republic-like monarchical government, that of Poland. The reputation of republicanism as an effective form of government was saved by the American Revolution and the establishment of republican governments in the former British colonies. The United States also demonstrated that it was possible for a republic to cover a large area, something that many, including Rousseau, had doubted. However, many Europeans believed that while republican government might be successful in a country of "virtuous" independent landowners like America, Europe was too "corrupt" and commercial for republicanism.

Republicanism emerged as a dynamic force in Europe during the French Revolution. The revolutionaries not merely overthrew the monarchy and established a republic, they also spread republicanism by force of arms, establishing new republics such as the short-lived Cisalpine and Parthenopean republics in Italy while destroying the Dutch, Genevan, and Venetian republics. The restoration of monarchical government by

➤ JOSEPH MAZZINI'S REPUBLICAN CREED

In exile in England following the failure of the Roman Republic, Mazzini wrote an apologia for the rebellion. Mazzini sought English support but avowed that his own republicanism was more suited for Italy than the liberal monarchical and aristocratic system of Britain.

"I have said that the subject of the following writings is the National Italian Cause. I ought perhaps to have said the Republican Italian Cause. They tend, in fact, to show, by evidence, what the Republican Party has done in Rome, and to explain its conduct elsewhere. For in Italy, the Republican Party and the National party are one and the same thing. . . .

I am by principle a Republican, that is to say, rationally speaking, there are for me but two legitimate masters, God, in heaven, and the People—the country guided by the best among them, upon earth. The system which, instead of seeking to acknowledge power where it really exists, that is to say, wherever God has given the highest amount of genius and of virtue, places it arbitrarily in aristocratic privilege or hereditary royalty, is to me but the materialism of chance substituted to an enlightened choice."

—William E. Burns

Source

Joseph Mazzini, *Royalty and Republicanism in Italy* (London: Charles Gilpin, 1850), iv–vi.

Napoleon Bonaparte (1769–1821), with his proclamation as emperor in 1804 and the replacement of revolutionary France's satellite republics with satellite monarchies ruled by members of Napoleon's family, again marginalized republicanism. A further blow to European republicanism was Napoleon's defeat at Waterloo and the subsequent "Vienna settlement," which restored many of Europe's monarchies but only one of its republics, the Swiss republic, now including Geneva.

At the same time republicanism was marginalized in Europe, however, it was triumphant in the Americas, as the disintegration of the old

Spanish empire led to the formation of numerous republics. Attempts to establish monarchies in postcolonial Latin America, most notably Augustin Iturbide's (1783–1824) proclamation as emperor of Mexico in 1822, were short-lived failures. Iturbide's empire lasted less than a year. The one major exception was Brazil, which separated from Portugal under a prince of the Portuguese royal house as emperor, but even Brazil became a republic in 1889.

In post-Vienna Europe, republicanism was often allied with another revolutionary force, nationalism. One of Europe's leading republicans, Giuseppe Mazzini (1805–1872), was best known as the champion of Italian nationalism, hoping to end foreign domination and unite Italy's numerous states and territories into a republic. The second burst of revolutionary republicanism after the French Revolution was the revolutions of 1848. The overthrow of monarchical authority led to the formation of numerous short-lived republics, such as Mazzini's Roman Republic, formed after chasing the pope out of Rome. However, the reassertion of power by Europe's traditional rulers snuffed out most of these republics. The exception was France, whose Second Republic was overthrown from within by Napoleon's nephew Louis Bonaparte (1808–1873). He established the Second Empire, with himself as emperor, in 1852.

The fulfillment of the Italian and German national agendas in the late nineteenth century did not represent triumphs of republicanism. Italian and German nationalists compromised with traditional rulers for those countries to achieve unity and independence under monarchies, while Hungary, also a country of strong republican nationalism, established national self-determination under the existing Habsburg monarchy. Republicanism remained central to the nationalist agenda for some movements that had not attained their national goals, such as Irish and Polish nationalism, but the great triumph of republicanism was the establishment of the French Third Republic, born out of the defeat of the empire in the Franco-Prussian War. The republic was not born from a surge of republican enthusiasm, however, as monarchism was very strong, and a French king could have been

restored had it not been for difficulties with coming up with a settlement acceptable to the royal claimant. Although established by default, the Third Republic was the longest-lasting regime in post-Revolutionary French history, demonstrating that a large European state could survive and prosper under republican government. But unlike the First and Second French Republics, born of revolution, it inspired no imitators and did not seek to promote republicanism in other countries until after the First World War.

By the end of the nineteenth century, republicanism had spread to China, where there was widespread resentment of the Manchu Qing dynasty. Chinese nationalists like Sun Yatsen (1866–1925) identified republicanism with Western modernity, including industrial development and a public education system to replace the antiquated Confucian academies. The overthrow of the Manchu emperor in 1911 was quickly followed by the proclamation of a Chinese republic rather than a new dynasty, although there would be an abortive attempt to restore the empire in 1915.

Late-nineteenth-century republicanism, like other political ideologies, was frequently defined in racial terms, as whites in settler republics like the United States, the short-lived Confederate States of America, or the Boer Republics of South Africa claimed that nonwhite peoples, incapable of governing themselves, could not be equal citizens in a republic with white men.

—William E. Burns

Bibliography

- Honohan, Iseult, and Jeremy Jennings, eds. *Republicanism in Theory and Practice*. New York: Routledge, 2006.
- Mack Smith, Denys. *Mazzini*. New Haven, CT: Yale University Press, 1994.
- Rahe, Paul A. *Republics Ancient and Modern*. Chapel Hill: University of North Carolina Press, 1994.
- Saxton, Alexander. *The Rise and Fall of the White Republic: Class Politics and Mass Culture in Nineteenth-Century America*. New York: Verso, 2003.
- Wingrove, Elizabeth Rose. *Rousseau's Republican Romance*. Princeton, NJ: Princeton University Press, 2000.

Utopian Socialism

Utopian socialist movements, which reached their peak of popularity in the 1830s and 1840s in western Europe and the United States, made important contributions to modern social democratic and communist movements as well as modern feminism. The most popular and influential were the Owenites in England and the Saint-Simonians and the Fourierists in France; all, however, had numerous followers in the United States. Similarly, their message was carried across Europe to Russia and across the Mediterranean to Egypt.

At the end of the 1820s some social and political reformers first used the word “socialist” to distinguish themselves from radical democrats of the French Revolution era. Early socialists criticized the revolution because of its association with violence and terror, a consequence, they maintained, of its encouragement of selfish individualism. Democratic radicals were criticized for focusing too narrowly on such “political” questions as the form of the regime (monarchy vs. republic and who had the right to vote or to govern). In contrast, socialists would create a new social order by better regulating relations between employers and workers and women and men. Their strategy was to create alternative communities where cooperation, rather than self-interest, would prevail and where the absolute rights of private ownership would yield to the “social good,” being either collectively owned or at least subject to public regulation. Moreover, by constructing these alternative communities, utopians would not only create cooperative social structures but also provide a peaceful means for revolutionary change. Merely by observing the utopian life, people would be won over to join with utopians and create more of these alternative communities.

Utopians differed not only from “political” radicals of the revolutionary era but also from feminist writers of the seventeenth and eighteenth centuries and from feminist activists of the revolutionary period who had focused mainly on individual rights of citizenship, including political rights. Utopians thought that these concerns were too individualistic; they

would focus instead on new ways of organizing both production and enduring social networks (e.g., intimacy, sexuality, and reproduction) to ensure sexual equality and sexual liberation.

Charles Fourier (1772–1837) was the first of the utopian socialist feminists. Writing in the first decade of the nineteenth century, he envisioned an ultimate stage of human progress whereby women and men would be equal and equally free and productive. A unique education system would scrupulously treat girls and boys alike. Fourier even demanded that the two sexes dress the same in recognition of the variety of ways that socialization may affect equality. In his utopia women would not be excluded from any social or economic function, “not even from medicine or teaching,” or from his corps of professors, the expected leaders of his community. Fourier proposed the organization of new communities (“phalansteries”) based on associations that would organize production, households, housekeeping, and even sexual experience in new ways. All work would be collectivized. Because Fourier viewed the work of the home, including both the socialization of children and housekeeping tasks, as productive work, it also would be collectivized. He held that isolated households and permanent marriages enslaved both women and men. Love alone should bind couples, and their union should last only so long as their “passionate” attraction joined them.

Although Fourier worked in isolation for most of his life, the utopian socialist movements, whose developments he so significantly shaped, became immensely popular in the 1830s. Their work was mainly propagandistic, and hundreds of people reportedly attended their lectures in cities throughout Europe and the United States. In Paris in the early 1830s Saint-Simonians, followers of the French thinker Henri de St. Simon (1760–1825), lectured daily to hundreds of interested women and men of the working and middle classes. In London at the same time Owenites, followers of the British social reformer Robert Owen (1771–1858), lectured three times a week. Owenite “stipendiary lecturers” and Saint-Simonian “missionaries” fanned out to cities throughout England and France and to other countries as well. Significant numbers

of women were active as speakers, organizers, and directors of the movements' many projects.

Not all of their work was propagandistic, however; utopians did actually establish some alternative communities. Owenites set up 7 such communities in England between 1821 and 1845 and about 15 in the United States. New Harmony in Indiana was probably the most famous U.S. Owenite community. Saint-Simonians established several collective *maisons de famille* ("family houses"), each directed by one male and one female (a "brother" and a "sister"), in Paris in the early 1830s, and those who lived together pooled their financial resources. Meals were collectively prepared and served for an even larger group of adherents. Associationists (as the followers of Fourier began calling themselves in the late 1830s) set up a community in France in Guise (construction began in 1859), and also set up over 30 such communities in the United States between 1840 and 1860. Brook Farm in Massachusetts was probably the most famous U.S. Associationist community.

Most communities were short-lived, however. Beginning in the 1850s, the utopian strategy gave way to more "scientific" forms of socialism that emphasized class struggle and the ultimate victory of the proletariat. Voices proclaiming concern for both workers' emancipation and women's emancipation were nearly drowned out. That class struggle and sex struggle were once united in utopian socialism was nearly forgotten. In the 1830s and 1840s, however, utopian socialists envisioned the transformation of all aspects of social life, not just economic and political relations. For them, a new relationship between women and men figured as prominently as a new relationship between workers and capitalists.

—Claire Goldberg Moses

Bibliography

- Beecher, Jonathan. *Charles Fourier: The Visionary and His World*. Berkeley: University of California Press, 1986.
- Carlisle, Robert B. *The Proffered Crown: Saint-Simonianism and the Doctrine of Hope*. Baltimore: Johns Hopkins University Press, 1987.
- Grogan, Susan K. *French Socialism and Sexual Difference*. New York: Macmillan, 1992.

Moses, Claire Goldberg. *French Feminism in the Nineteenth Century*. Albany: State University of New York Press, 1984.

Moses, Claire Goldberg, and Leslie Wahl Rabine. *Feminism, Socialism, and French Romanticism*. Bloomington: Indiana University Press, 1993.

Taylor, Barbara. *Eve and the New Jerusalem: Socialism and Feminism in the Nineteenth Century*. Cambridge: Harvard University Press, 1983.

Marxism

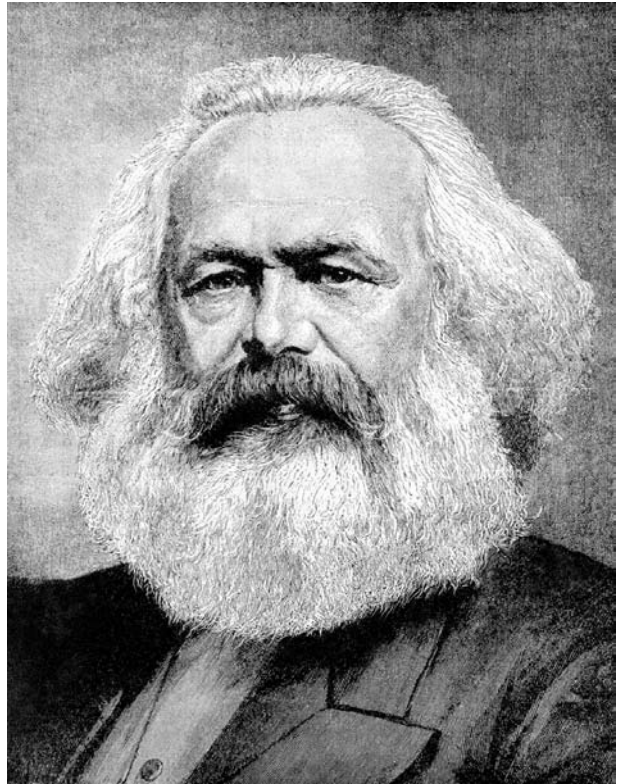
The term "Marxism" refers to both the philosophical and economic theories developed in the writings of Karl Marx (1818–1883) and Friedrich Engels (1820–1895) and the underlying ideology of socialist political parties from the late nineteenth century to the present. In *The Communist Manifesto* (1848) and *Capital* (1867), Marx presented a critique of the dominant bourgeoisie—members of the middle class who controlled the means of production—and the capitalist economic system that afforded them power through the exploitation of the proletariat, or laboring poor. Marx combined a unique theory of history—historical materialism—with wide-ranging economic and sociological research to postulate a utopian communist society that would succeed the bourgeois, capitalist order of the mid-nineteenth century. The proletariat would implement this change through violent revolution and would benefit from the ousting of their bourgeois masters. In industrialized nations of Europe and the United States, Marxism served as a major ideological underpinning for prolabor socialist political parties and trade unions.

Marx, born in the German city of Trier, attended the University of Berlin in the late 1830s and while there was shaped by an intellectual debate concerning the dialectical theory of history described by the recently deceased German philosopher G. W. F. Hegel. Like other Left Hegelians, Marx admired the progressive dialectical theory but found Hegel's formulation overly idealist and detached from lived experience. Thus, Marx applied praxis (practical experience) in the form of social scientific research to the dialectical method in his theory of history. This

historical method was influenced by humanist philosophy, utopian socialist politics (although Marx also had misgivings regarding the lack of praxis among utopian socialists), and a profound distaste for the dominant European socioeconomic order of his time. The resulting philosophy suggested a new world order in which the ultracompetitive atomized society of the capitalist system would be surpassed by a socially harmonious communist utopia.

To understand the situation of the modern worker, Marx turned to history. For him, all history was the history of class struggle. According to Marx, during the French Revolution the mistreated bourgeoisie rose against the oppressive monarchical political order and feudal economic order to abolish the inequality of the established systems. Once the bourgeoisie were in power, they seized the means of production and governed according to their capitalist mode of production. The bourgeois order was based on property, speculation, and labor exploitation. Correspondingly, Marx suggested that it was now the working class that would rise to destroy the unequal system that served the interests of the bourgeoisie. Competition, private property, and classes would no longer exist once the workers seized the means of production, and Marx's communist utopia would be realized. Late in his life, Marx theorized a socialist "dictatorship of the proletariat" as the penultimate stage of human history. This dictatorship would guide the transition between capitalism and communism, when state power would no longer exist.

As with previous utopian socialists, Marx deplored the condition of the worker within the capitalist system. The capitalist goals of profit and economic growth placed a premium on the production of commodities, devaluing and alienating the worker. In the capitalist system, argued Marx, inanimate objects were assigned more value than the workers who created them. Workers no longer possessed an intrinsic value but instead became a means to an end: the production of commodities. The worker was further alienated due to the division of labor. Whereas an ancient farmer or a preindustrial craftsman was able to develop a product from start to finish, the capitalist division of labor assigned each



Karl Marx was more than an important figure in nineteenth-century Europe. His status as the founder of modern communism has placed him among the most influential people in the history of the modern world. (Library of Congress)

worker a menial task, destroying the worker's creativity and sense of self-worth. On the contrary, according to Marx's labor theory of value, products only had value equal to the labor expended to create them. The bourgeois-capitalist order alienated the proletariat, who could wrest power from the entrenched ruling classes only through violent revolution. The working class had nothing to lose and everything to gain by seizing the means of production and ousting the exploitative capitalist system.

Marx's economic theories represent a critique of classical political economists such as Adam Smith and David Ricardo, whose ideas provided the theoretical underpinnings of capitalism. The classical economists considered capitalism a beneficent economic system, arguing that a laissez-faire approach to the economy would ensure economic growth and benefit society as a whole, while a division of labor would allow for increased production and profit. Marx

➤ “WORKING MEN OF ALL COUNTRIES, UNITE!”

Marx and Engels end *The Communist Manifesto* with this call to arms. It is thus apparent that the *Manifesto* was not only a philosophical and economic critique of capitalism but also a political program. The work was commissioned by the politically active Communist League in 1847 and was published at the moment of the 1848 revolutions across Europe, which pursued both socio-economic and national aims. This famous quote also provides insight into Marx’s understanding of class consciousness. As argued in *The Communist Manifesto*, “the working men have no country” because the proletariat, regardless of nationality, shares in the experience of exploitation. Like religion, which was famously dismissed as “the opium of the people” in the 1843 *Critique of Hegel’s Philosophy of Right*, nationalism obscures the true interests of the working class and serves to divide the “universal class” on the basis of relatively trivial linguistic and cultural differences. Thus, Marxism proffers an internationalist vision of a communist utopia that will abandon the divisions of nation and state as relics of the bourgeois/capitalist order. Committed Marxists attempted to realize this postnational vision of Marxism through the formation of the First International (1864–1876) and the Second International (1889–1916) as organizations to guide the development of international socialism.

—Andrew Denning

countered that the abstract nature of market capitalism and the greed inherent in the capitalist system destroyed social relationships, leading to an atomized society rife with class antagonisms.

Marx’s theories applied only to societies that had undergone industrialization. According to Marx’s understanding of history as a progression of stages, the workers could seize control of the means of production only in an industrialized nation. Thus, before 1914 Marxism was most prominent among socialist political parties and trade unionists in Europe and the United States, notably from the early 1870s through the beginning of World War I.

The reception of Marx’s ideas was muted in the aftermath of the failed 1848 revolutions across Europe that ushered in two decades of

conservative retrenchment. By 1870, however, increasing urbanization and industrialization, especially in Western Europe, allowed socialists to tap into a large segment of the population alienated by their governments’ increasingly antilabor policies. The 1871 Paris Commune set up a short-lived communist society that would be studied intently by subsequent Marxists such as Vladimir Lenin and Mao Zedong. The German Social Democratic Party (SPD) gained steadily in popularity from the 1870s until 1912, when Social Democrats held a plurality of seats in the parliament. In the United States, socialist candidate Eugene V. Debs ran for president in every election between 1900 and 1912. Socialists of this era were plagued by internal dissent, however, as the parties split ideologically over whether to follow Marx’s call for revolutionary action or, alternately, to institute reforms within the existing system. In Germany the intense debates around the turn of the century between revolutionary Rosa Luxemburg and reformer Eduard Bernstein shows that the socialists of this era, while popular at the voting booth, were not united behind a coherent Marxist ideology.

—Andrew Denning

Bibliography

- Bottomore, Tom, ed. *Interpretations of Marx*. Oxford, UK: Blackwell, 1988.
- Kolakowski, Leszek. *Main Currents of Marxism*. 3 vols. Oxford, UK: Clarendon, 1978.
- Torrance, John. *Karl Marx’s Theory of Ideas*. Cambridge: Cambridge University Press, 1995.

Socialist Revisionism

The term *revisionism* refers to the first of the efforts to transform the original Marxian framework. The intention was to bring that theory into accord with evidence about advanced capitalist nations, evidence that had accumulated by the end of the nineteenth century. This effort occurred within the German Social Democratic Party (SPD), which was the world’s largest socialist party as measured in terms of members, size of organization, number of voters, and share of the electorate. Marx and Engels had given much attention to that party, seeing it as the principal agency for their political practice.

With considerable income from membership dues, the party was able to support many newspapers and journals and that, in turn, meant it had a large “staff” of intellectuals. The combination of organization and intellectuals gave the SPD a unique position among the world’s socialist parties. The SPD was dominant within the Second International. The other socialist parties looked to the Germans for guidance.

The leading figure in the revisionist struggle was Eduard Bernstein, a friend and coworker of Engels. At one time a member of the party’s left wing, he later changed position, the revisionist argument being basically moderate or reformist. The original English translation of his major work was given the title *Evolutionary Socialism*. The argument was still heavily focused on class and class dynamics. In contrast to the original, however, a different nomenclature and a different set of classes were indicated. The predictions about the growth, decline, and transformation of the classes were much changed. And the predictions about class-specific outlooks were significantly altered. The most important of these was the claim of a dwindling revolutionary potential within the working class.

The Social Democratic presence within Germany had major implications for German scholarship, particularly for the social sciences and history. Many German academics were forced to confront the issues raised by socialist intellectuals. The subject of class, accordingly, occupied a central place in German scholarship, and capitalism also became a major theme. The work of Werner Sombart, Max Weber, and Theodor Geiger provide the most obvious examples.

Some important elements of the revisionist critique:

1. Petty bourgeois persistence: In opposition to the Marxian expectation that the small firms, the artisans, producers, and proprietors, would be driven out by competition with more efficient giant firms (the ex-proprietors then being forced into the proletariat), Bernstein showed this class continuing to have a significant numerical presence at the turn of the century.

2. Growth of the salariat: Drawing on census data, the revisionists pointed to the rapid growth of the salaried white-collar employees. Those people were not owners, hence were

not part of the bourgeoisie. They were different from the proletariat in that, typically, they had better pay, greater job security, and greater chances for advancement. All of these differences of social condition, it was thought, would lead them to differ also in their politics. They would hold moderate or centrist political views. This new class has generally been referred to as the “new middle class.”

3. Relative decline of the proletariat: Given the stability of the old-middle-class segments and the growth of the new or salaried middle class, it followed that the working class would experience a relative decline. Contrary to a central Marx-Engels prediction, the proletariat was not growing. It would not become the “immense majority.”

4. Growing affluence: The advanced capitalist societies were becoming richer. Real living standards were increasing. This brought an important transformation within the working class; by the turn of the century, the signs were unmistakable. The development was most obvious among the skilled workers. They were able to adopt a middle-class living standard. The argument, put simply, was that those “affluent” workers would adopt reformist or centrist outlooks.

5. Social mobility: The basic Marxian prediction was one of downward mobility. The lower middle class would lose out; its members would “fall into the proletariat.” The revisionist argument challenged that claim. The persistence of the two old-middle-class segments and the growth of the new middle class meant a change in direction; more people would move up into the middle class than down into the working class.

Three general developments, the persistence of the old middle class, the growth of the new middle class, and the appearance of affluent workers, stood in the way of direct revolutionary confrontation. The principal conclusion, a prescriptive judgment, followed from these empirical findings: It was the need for a reformist policy. The revisionist arguments were addressed to Europe’s socialist parties, beginning with the German Social Democrats. The majority of voters in modern societies, so it was argued, were destined to be reformist in outlook. To gain the votes of that majority, of the working-class

and new-middle-class moderates, socialist parties would have to develop reformist programs.

To appreciate the importance of the revisionist critique, one must know something of the context. The Social Democrats first officially adopted a Marxist program in 1891 at the Erfurt Congress.

The statement opens with a claim about the development of bourgeois society leading with natural necessity to the destruction of small firms. The means of production, it stated, would increasingly be monopolized by capitalists and large landholders. The proletarian numbers would be ever larger, all of this leading to a sharp opposition of exploiters and exploited. Those pages, the “theoretical” statement, were written by Karl Kautsky, the party’s leading theorist and defender of “orthodox” Marxism. The subsequent revisionism, in effect, declared that the party, its leaders, intellectuals, and the approving party congress, were mistaken on all major points. The party dealt with the challenge politically. Revisionism was rejected, by overwhelming majorities, in subsequent party congresses.

Bernstein’s claims, on the whole, are better supported than the Marxist originals. The man, in short, made an important, serious contribution to the understanding of nineteenth- and twentieth-century social developments. Nevertheless, Bernstein is, curiously, treated rather deprecatingly in the literature. That is, perhaps, understandable in the heavily partisan literature of the left. But a similar tendency, somewhat more restrained, is found in scholarly sources.

—Richard F. Hamilton

Bibliography

- Gay, Peter. *The Dilemma of Democratic Socialism: Eduard Bernstein’s Challenge to Marx*. New York: Columbia University Press, 1952.
- Guttsman, W. L. *The German Social Democratic Party, 1875–1933: From Ghetto to Government*. London: George Allen and Unwin, 1981.
- Sasson, Donald. *One Hundred Years of Socialism: The West European Left in the Twentieth Century* (New York: New Press, 1996).
- Stenson, Gary P. *After Marx, before Lenin: Marxism and Socialist Working-Class Parties in Europe, 1884–1914*. Pittsburgh: University of Pittsburgh Press, 1991.

Stenson, Gary P. *Karl Kautsky, 1854–1938: Marxism in the Classical Years*. Pittsburgh: University of Pittsburgh Press, 1978.

Steger, Manfred B. *The Quest for Evolutionary Socialism: Eduard Bernstein and Social Democracy*. New York: Cambridge University Press, 1997.

Tudor, Henry, and J. M. Tudor, eds. and trans. *Marxism and Social Democracy: The Revisionist Debate, 1896–1898*. Cambridge: Cambridge University Press, 1988.

Anarchism

The basic tenet of anarchism is that people flourish best without imposed authority and external coercion. As a social philosophy and a way of life, anarchism may be traced back to the Daoists in ancient China. As a coherent political ideology, however, anarchism first emerged in late-eighteenth-century Europe. It developed primarily in opposition to centralized states and industrial capitalism and by the end of the nineteenth century was a mass revolutionary movement attracting millions of adherents.

Nineteenth-century anarchism has been described as a creative synthesis of its ideological cousins and political rivals, liberalism and socialism, and there is some truth in this claim. Like nineteenth-century liberals such as John Stuart Mill (1806–1863), anarchists emphasized the value of individual liberty and advocated freedom of thought, expression, tastes, pursuits, and association. Like nineteenth-century socialists, most anarchists emphasized the values of social equality and social solidarity and embraced the vision of a postcapitalist society. What chiefly distinguishes anarchism from both liberalism and socialism is its total rejection of the state, either as a feature of a free society or as a means to achieving that end. Indeed, unlike Marx and his followers in the nineteenth and twentieth centuries, most anarchists consistently emphasized that means cannot be separated from ends and rejected the idea of a dictatorship of the proletariat as a prelude to a stateless society.

Like liberalism and socialism, anarchism is a highly diverse political ideology, encompassing a number of different currents of thought. In the nineteenth century, four were particularly

THE KILLING OF A PRESIDENT

On September 6, 1901, the self-professed anarchist Leon Czolgosz shot President William McKinley at the Pan American Exhibition in Buffalo, New York; the president died eight days later. The assassination helped launch the progressive era in U.S. politics by catapulting Theodore Roosevelt to the presidency. It was also a key event in the era of anarchist terrorism, 1880–1914, when anarchists set off many bombs, killing innocent bystanders and taking aim at monarchs, presidents, prime ministers, and other government officials with unprecedented intensity and success. Many anarchists rejected terrorism as inimical to anarchism's goal of social justice, while others saw it as the most effective weapon to fight against repressive governments. In the popular mind, however, terrorism and anarchism were synonymous.

Born in Detroit, Michigan (not in Alpena, Michigan, as was once thought), in 1873 to Polish immigrant parents, Czolgosz considered McKinley an agent of imperialism in the Philippines and a

pawn of wealthy businessmen who exploited American workers. Although not a member of any anarchist organization, the reclusive Czolgosz spent hours reading both mainstream and anarchist newspapers that recounted the deeds of European assassins. On September 6, 1901, he sought to follow in their footsteps.

The assault on McKinley signaled a new phase in anarchist terrorism, which was now becoming a global phenomenon. The German and Russian governments called for an international antianarchist agreement, but the United States refused to join. McKinley's assassination also led to greater safeguards for the president, with the Secret Service made legally responsible for his protection. New York, New Jersey, and Wisconsin passed antianarchist laws, and in 1903 Congress banned anarchists from entering the United States. After McKinley's death, the antianarchist backlash frightened and demoralized many anarchists in America. Anarchist terrorism did not resume until 1908.

—Richard Bach Jensen

significant: individualism, mutualism, collectivism, and communism. While the adherents of all these schools rejected hierarchical and compulsory forms of authority such as laws, churches, and states, they had different views about the socioeconomic arrangements that would characterize a free society. Individualist anarchists such as Max Stirner (1806–1856) in Germany and Benjamin Tucker (1854–1939) in the United States defended the primacy of individual sovereignty and conceived social relationships primarily in terms of nonbinding contracts between self-interested individuals. Mutualist anarchists such as Pierre-Joseph Proudhon (1809–1865) in France, who was also the first known thinker to refer to himself as an anarchist, endeavored to synthesize the institutions of private property and collective ownership in a way that would avoid the drawbacks of both. Collectivists such as the Russian-born Michael Bakunin (1814–1876) combined Proudhonian politics and Marxian economics in a revolutionary program in which the means of production were to be owned in common by labor groups and free communes. Whereas

collectivist anarchists generally assumed that reward would be proportional to labor, anarchist communists such as Peter Kropotkin (1842–1921) and Errico Malatesta (1853–1932) envisaged stateless societies in which each person would make use of common resources according to need. According to Kropotkin, harmony in such a society would be achieved not by submission to law or obedience to any authority but by free agreements concluded between territorial and professional groups freely constituted for the sake of production and consumption as well as the satisfaction of the infinite variety of needs and aspirations of a civilized being.

Contrary to popular belief, anarchism is much more than an ideal. Current anthropological research confirms that the state is a recent development in human history and that for at least 40,000 years people have organized themselves without government and law in peaceful and productive ways. In the modern world, the most conspicuous example of anarchism in practice unfolded in Spain. For 70 years, from the 1860s to the 1930s, Spanish anarchism developed

into a viable alternative to the state. While the experiment was ultimately brutally cut short by the combined forces of fascism and communism, anarchism remains a living ideology at the dawn of the twenty-first century. It experienced a resurgence in the social movements and counterculture of the 1960s and has exercised a profound influence on such diverse contemporary movements as ecologism, pacifism, and feminism. Anarchism thrives today in the decentralized networks of the alternative globalization movement as well as in countless experiments in collective living, alternative media and art, and cooperative production and distribution.

—Laurence Davis

Bibliography

- Marshall, Peter. *Demanding the Impossible: A History of Anarchism*. London: Fontana, 1993.
- Woodcock, George. *Anarchism: A History of Libertarian Ideas and Movements*. New York: Meridian, 1962.

The Changing Face of Nationalism, 1870–1914

Nationalism in the late nineteenth and early twentieth centuries changed from a strong positive attachment toward one's own political nation or ethnic group to a much more exclusionary feeling of political or ethnic solidarity. The period before 1870 was an age of nation building and nationalist feeling that included possibilities of civic (political) and ethnic (cultural) nationalism. However, the rise of social Darwinism coupled with new economic and political challenges led to the prevalence of ethnic-based and exclusionary nationalism from 1870 to 1914. Ethnic nationalism was frequently used in conjunction with earlier support for nationalism and nation building before World War I.

As stated above, the rise of social Darwinism contributed to the changing nature in nationalism from 1870 to 1914. Social Darwinism suggested that human survival was based on a sociocultural biological struggle among peoples and therefore justified international and domestic strife. In domestic affairs, minorities became more widely discriminated against throughout Europe. Mass media, especially popular journals,

in France, Germany, and Russia propagandized against Jews. A prime example is the Dreyfus Affair in the 1890s in which Alfred Dreyfus, the first Jewish military officer to serve in the French General Staff, was falsely accused and convicted of selling secret documents to the German government. Dreyfus was not fully exonerated until 1906, and the Dreyfus Affair deeply divided the French public, as supporters of the army, royalists, and anti-Semites were pitted against republicans and socialists. Likewise in Germany socialists, Catholics, Jews, Poles, and other minorities were repeatedly discriminated against by the government and attacked in the media for their supposed lack of Germanness.

New economic and political challenges also led to fierce competition among European nation-states. Following the Franco-Prussian War of 1870–1871, German military and political leaders declared the founding of a new German empire in the Hall of Mirrors at Versailles on January 18, 1871. This embittered the French, who considered Versailles an important symbol of France's national identity, and thus severely hampered future French-German relations. In addition, Europeans responded to industrial progress in the late nineteenth century by competing against one another for the acquisition of



Suspected French Army spy Alfred Dreyfus is condemned to prison during a secret military trial in 1894. The controversy over his conviction turned the Dreyfus Affair into a cause célèbre at the turn of the twentieth century, firmly dividing liberals and conservatives in French politics. (Library of Congress)

new markets and raw materials. Inspired by the precepts of social Darwinism and what they promoted as their own superior civilization, European nations engaged in a struggle for territories in Africa and Asia. In fact, latecomers to the imperialist enterprise such as Germany demanded their own colonial spoils, and all of the great European powers equated overseas empires with national greatness.

Social Darwinism and contemporary political and economic affairs transformed the way that many Europeans viewed nationalism. Nations that had been founded during the initial growth of nationalism before the nineteenth century, especially France and Great Britain, did retain some form of civic nationalism, which constituted a strong allegiance to a political boundary and included fairly liberal political and civil rights. Nevertheless, France and Great Britain increasingly discriminated against minorities and featured some troubling exclusionary tendencies. More recently founded European nation-states such as Germany developed a much more ethnic-based nationalism in the late nineteenth and early twentieth centuries. Ethnic nationalism was based on a powerful emotion toward a particular race or ethnic group, placed a far greater emphasis on common cultural values than on liberal democracy, and consisted of a more exclusivist type of nationalism than that of civic nationalism.

Ethnic nationalism was often utilized by advocates of nation building to achieve their objectives. Ethnic minorities in Austria-Hungary, disgruntled by their treatment under the rule of the German Habsburg dynasty, advocated equal rights or more often sought national independence. Many of these minorities, such as Czechs, Croats, Serbs, and Slovenes, formed national movements and often resorted to political violence in hopes of breaking away from Habsburg rule and creating their own nation-states. One such nationalist, Gavrilo Princip, a 19-year-old Bosnian Serb, assassinated the heir to the Austrian throne, Archduke Franz Ferdinand,

➤ GERMAN CATHOLIC CENTER PARTY

The German Catholic Center Party played a crucial role in German politics and national identity from 1870 to 1914. The Center Party was formed in December 1870 to represent the large German Catholic minority, most of whom lived in southern Germany and suddenly found themselves living in a largely Protestant state after the unification of Germany in 1871. The party program called for local autonomy, the protection of Catholic schools, and the establishment of civil rights for all German minorities, not only Catholics. In 1872 German chancellor Otto von Bismarck launched the *Kulturkampf* (cultural struggle), a government campaign that abolished Catholic schools, placed Catholic seminaries under state control, gave the federal government the power to dismiss clergy, and outlawed the Jesuits. Moreover, Bismarck labeled German Catholics “enemies of the state,” accusing them of being loyal to the pope rather than the German state. Although the *Kulturkampf* was largely revoked in 1878, Bismarck’s discriminatory policies solidified the Center Party as a national minority.

—Jake Hamric

on June 28, 1914, in Sarajevo. Instead of leading to Bosnia’s independence from Austria-Hungary and incorporation into a greater Serbian state, the assassination of Franz Ferdinand had an even greater impact, resulting in the outbreak of World War I when Austria declared war on Serbia one month later on July 28, 1914.

—Jake Hamric

Bibliography

- Craig, Gordon. *Europe, 1815–1914*. Chicago: Holt, Rinehart and Winston, 1971.
- Greenfeld, Liah. *Nationalism: Five Roads to Modernity*. Cambridge: Harvard University Press, 1992.
- Smith, Helmut Walser. *German Nationalism and Religious Conflict: Culture, Ideology, Politics, 1870–1914*. Princeton, NJ: Princeton University Press, 1995.

■ Introduction: Political Developments in the Americas to 1914

From 1750 to 1914, an era of deep and pervasive political change, no part of the world experienced greater political transformations than the Americas. In 1750 this vast region was controlled by a handful of European states, including Spain, Portugal, Great Britain, France, and the Netherlands (which controlled Dutch Guyana, a tiny colony on South America's Caribbean coast). North America's European inhabitants were still concentrated on the Atlantic coast, with most of the rest of the continent populated by Native American tribes that were self-governing, even though they lived on territory claimed by France, Britain, or Spain. Although colonial legislatures existed in Britain's Thirteen Colonies and exercised some authority over local issues, throughout Latin America and areas of European settlement in North America, vital decisions affecting taxes and economic policy all were made in European capitals and carried out by governors and other officials appointed by European kings.

In contrast, by the early 1900s, North and South America consisted of 17 sovereign states that varied in size from giants such as Brazil, Canada, and the United States, which together made up almost 65 percent of North and South American territory, to tiny states such as the 7 states of Central America, which were crowded into the small land bridge linking Mexico and Colombia between the Caribbean Sea and the Pacific Ocean.

The political experiences of the new American states had some similarities but also differed in many respects. Independence was won in colonial Latin America and Britain's Thirteen Colonies through rebellion and war, but in Canada, where the rebellions of 1837–1838 involved small numbers and were easily suppressed, it was achieved by legislation and compromise. After independence the new states adopted republican constitutions except Brazil, which had an emperor until 1889, and Canada, whose citizens technically remained subjects of the British Crown even after achieving self-government in 1840. In Canada and the United States democracy flourished, but in Latin America republican government meant

rule by a small elite of white planters, mine owners, merchants, and army officers whose interests also were served by the military strongmen (*caudillos*) who frequently seized power.

Canada and the United States expanded across the North American continent to become the two largest states in the Americas, while other nations shrunk. Mexico lost half its territory to the United States after the Mexican-American War of 1846–1848, while Paraguay lost 55,000 square miles (142,500 square kilometers) of territory to Brazil and Argentina after the War of the Triple Alliance (1864–1870). Large nations such as Canada, Mexico, Brazil, and the United States all faced the challenge of reconciling the powers of central governments with those of states, provinces, and regions. Secessionist movements challenged Canada and caused the American Civil War, the bloodiest war in the nation's history. Canadian and U.S. expansion, along with policies adopted by Argentina and Chile in the 1860s, meant territorial losses for the indigenous populations and frequently relocation and resettlement to reservations where their traditional cultures withered away. While only a few American nations expanded territorially, virtually all experienced growth in population, spurred in many cases by immigration. Canada and the United States attracted a steady stream of immigrants throughout the nineteenth century, with most coming from Britain and Germany. They, along with the rest of the region, received a flood of immigrants from the 1880s onward, with the arrival of millions of new immigrants from Italy, eastern Europe, and parts of Asia.

Many American nations experienced racial and ethnic tensions. In Canada, French-speaking Quebec never totally reconciled itself to being part of largely Anglophone Canada, and friction between the Ottawa-based government and Métis (people of mixed Indian and French-Canadian descent) caused disputes and conflict as the nation spread west in the 1870s and 1880s. Slavery was gradually outlawed in the hemisphere and ended completely after Cuba abolished it in 1886 and Brazil did so in 1888.

How to integrate former slaves into society proved a great challenge, however, especially in the United States, where ex-slaves were denied political rights and subjected to discrimination in many forms. Throughout Latin America, the spread of pseudo-scientific racial theories in the nineteenth century strengthened the conviction of pure-blood whites of their fitness to rule and created new obstacles for social advancement among blacks, Indians, mestizos, and mulattos.

Political leaders also had to make decisions about their nations' economic futures. Tariff policies were hotly debated. In the United States, tariffs on imported manufactured goods were raised during the American Civil War and never went down appreciably in the following decades despite the stated commitment of the Democratic Party to lowering them. In this and other ways the government subsidized American businesses but did little to regulate them. Canada also adopted a program of high tariffs on imported manufactured goods beginning in 1879, along with a program of public subsidies for building a transcontinental railroad. In contrast, throughout most of Latin America governments favored free trade to keep down the costs of imported European manufactured goods and encourage the export of the region's metals, hides, fertilizers, and agricultural products. Such policies encouraged economic growth and helped integrate Latin America into the international economy but discouraged the development of manufacturing. The region would pay the price for such policies during the economic turbulence of the twentieth century.

—*James H. Overfield*

U.S. Territorial Expansion

In the decades following its War of Independence, the United States underwent rapid territorial expansion. The Treaty of Paris (1783) awarded the new nation immense territory, much of it west of the Appalachian Mountains. By the mid-nineteenth century, the country extended from the Gulf of Mexico and the Rio Grande in the south to the Great Lakes and the 49th parallel in the north. The Alaska Purchase in 1867 rounded out America's continental scope. The active pursuit of territory reflected

the country's evolving economic interests and geopolitical concerns. Land was acquired through various methods that dislodged European powers from the continent and displaced Native Americans from their lands.

In order to expand west after the Revolution, American policy sought entitlement to all Indian lands between the Appalachians and the Mississippi River. U.S. citizens began to settle the Ohio River and Tennessee River valleys in the 1780s. The government issued the Northwest Ordinances, which laid out the process for the sale and settlement of these lands, marking a concerted effort to expand inland. At first, U.S. officials negotiated land cession treaties with the Indians very heavy-handedly. Mounting Indian resistance in the late 1780s, however, forced a policy shift to purchasing lands instead. By 1811 these piece-by-piece initiatives secured a considerable part of the Old Northwest and pushed the Indians farther west of the Mississippi River.

The Mississippi River was an increasingly important waterway for commerce as settlements grew. Access to the mouth of the river at New Orleans became crucial, and after several unsuccessful attempts to purchase New Orleans

SEWARD'S ICE BOX

Manifest Destiny was a powerful idea among supporters of American territorial expansion during the mid-nineteenth century. However, America's expansionary impulse waned in the 1860s as it became embroiled in the Civil War. The federal government made one more major land purchase after the war, acquiring Alaska where American and Russian commercial interests had coexisted since the 1790s but with increasing conflict. Russia recognized the difficulties in retaining the area against an expanding United States and sold reluctantly in 1867 for \$7.2 million. Many Americans who viewed the purchase as a prodigious purchase for useless land quickly dubbed Alaska "Seward's Icebox" after Secretary of State William H. Seward, who pursued the deal. Opposition was quelled in the 1890s when the Klondike gold rush drew new people and resources to this final American frontier.

—*Helen Bao*



from the French, U.S. officials seized the opportunity in 1803 when Napoleon offered to sell the entire Louisiana Territory. Under the administration of President Thomas Jefferson, Robert Livingston and James Monroe negotiated a total purchase price of \$15 million for 827,000 square miles (2,141,920 square kilometers) of land, approximately 3.5 cents per acre. The Louisiana Purchase more than doubled American territory and established an expansive frontier that

captured the American imagination. It also strengthened the young republic both in its self-perception and its status as a sovereign nation.

The boundary between the new Louisiana Territory and Spanish lands in both Texas and Florida quickly led to disputes. The United States always coveted Florida for its navigation routes in the Gulf of Mexico and to prevent its use as a military launch base against the United States by foreign powers. Florida was subject to frequent

hostile incursions by private American citizens in the early nineteenth century to force the president's hand to annex the region and to demonstrate, as elsewhere, that the United States could ultimately seize the territory if it desired. In 1819, taking advantage of a weakened Spain, the United States acquired all of Florida through the Adams-Onís Treaty. In it Spain relinquished all land claims north of the 42nd parallel, while the United States ceded its claims to Texas west of the Sabine River.

The American drive for Texas as well as the California coast, however, did not subside. In 1836 Texas petitioned to join the United States after it successfully revolted against Mexico. Opposition to admitting Texas as a slave state stalled annexation for nearly a decade. The annexation of Texas contributed to the Mexican-American War, which broke out in 1846. The Treaty of Guadalupe Hidalgo, signed two years later at the end of the war, marked the largest U.S. territorial gain in its history. The United States compensated Mexico \$15 million for nearly 1 million square miles (2.6 million square kilometers) of land in what became California, New Mexico, Nevada, and Arizona. Meanwhile, thousands of Americans went west to Oregon Country in the 1840s, a territory jointly held by the United States and Great Britain since 1827. Both sides fought hard to claim it, particularly for the major harbor at Puget Sound. After extensive negotiations, the two sides signed the Oregon Treaty in June 1846 that extended the existing 49th parallel boundary in the northeast all the way to the Pacific Coast.

After the purchase of Alaska from Russia in 1867, America entered the twentieth century as a continental nation with tremendous territorial reach. The contours of an empire emerged that foreshadowed expansion beyond North America. At the same time, memories of a lopsided victory in the Mexican-American War, sentimental accounts of the vanishing American Indian, and embitterment from the Civil War left many Americans feeling uneasy about how the nation was forged. These experiences in territorial expansion contributed to a burgeoning national identity to be further shaped in the years to come.

—Helen Bao

Bibliography

- Brogan, Hugh. *The Penguin History of the United States of America*. 2nd ed. London: Penguin, 1999.
- Joy, Mark S. *American Expansionism, 1783–1860: A Manifest Destiny?* New York: Pearson/Longman, 2003.
- Kushner, Howard I. *Conflict on the Northwest Coast: American-Russian Rivalry in the Pacific Northwest, 1790–1867*. Westport, CT: Greenwood, 1975.

Sectional Conflict and the Origins of the Civil War

Sectional conflict over slavery between the northern and southern United States led to the Civil War. The abolition of slavery in the North in the eighteenth century and the perpetuation of bondage in the South divided these regions into separate societies. Exacerbating this division were differences in the economy, with the North moving in the nineteenth century toward manufacturing and the South retaining an emphasis on agriculture.

As in much of the world, slavery arose in the American colonies as a way of securing workers in an era of scarce labor and too little money to attract what labor there was. Although slavery



Map illustrating the Missouri Compromise of 1820. Under terms hammered out by Congress, Missouri entered the Union as a slave state, while Maine entered as a free state. Slavery was banned in the remainder of the territory north of the southern border of Missouri. (North Wind Picture Archives)

➤ A CALL FOR JUSTICE FOR THE SOUTH

In March 1850, at the height of the debate about slavery in the territories recently won from Mexico, the South Carolina senator John Calhoun appealed to the North for justice in a speech delivered to the Senate.

“Having now shown what cannot save the Union, I return to the question with which I commenced, How can the Union be saved? There is but one way by which it can with any certainty; and that is, by a full and final settlement, on the principle of justice of all the questions at issue between the two sections. The South asks for justice, simple justice, and less she not ought to take. . . .

But can this be done? Yes, easily; not by the weaker party, for it can of itself do nothing—not even protect itself—but by the stronger. The North has only to will it to accomplish it . . . to cease the agitation of the slave question, and to provide for the insertion of a provision in the Constitution, by an amendment, which will restore to the South, in substance, the power she possessed of protecting herself before the equilibrium between the sections was destroyed by the action of the Government. . . .

If you, who represent the stronger portion, cannot agree to settle them on the broad principle of justice and duty, say so; and let the States we both represent agree to separate and part in peace. If you are unwilling we should part in peace, tell us so; and we shall know what to do, when you reduce the question to submission or resistance.”

—Christopher Cumo

Source

John C. Calhoun, “On the Slavery Question, delivered in the Senate, March 4, 1850,” in *The Works of John C. Calhoun*, Vol. 4, ed. Richard K. Crallé (New York: D. Appleton and Co., 1888), 571–573.

was legal in all 13 colonies, it took hold chiefly in the South where plantation slaves shouldered the burden of growing cash crops for export. In the North slavery had sunk only shallow roots, and after the American Revolution the northern states abolished it. The perpetuation of the United States as two societies, one slave and

the other free, might not have threatened the Union but for the nation’s westward expansion. The Louisiana Purchase (1803) and the Treaty of Guadalupe-Hidalgo following the Mexican War (1846–1848) gave the United States vast expanses of land west of the Mississippi River. As Americans settled these territories and organized them for admission to the Union, the question was whether these states should allow slavery. The admission of Louisiana, the first state west of the Mississippi River, had in 1812 posed no problem. Its geography led no one to dispute Louisiana’s status as a slave state.

Missouri, however, was another matter. In the center of the United States rather than squarely in the North or South, Missouri was not easy to categorize as slave or free. It bordered both Illinois, a free state, and the slave states Kentucky and Tennessee. Moreover, Missouri had some 10,000 slaves in 1819, the year it petitioned to join the Union as a slave state. The United States then had 11 slave states and 11 free states; Missouri’s admission as a slave state would tip the balance of states and the Senate toward slavery’s supporters. To prevent this, New York congressman James Tallmadge Jr. proposed an amendment to the Missouri statehood bill requiring that the new state import no more slaves and gradually abolish slavery altogether. The amendment was defeated. In 1820 Maine applied for statehood, giving Speaker of the House Henry Clay of Kentucky an opportunity to push through a series of measures that came to be known as the Missouri Compromise. Maine as a free state and Missouri as a slave state were to be admitted to the Union together, thus preserving the balance in the Senate between proslave and antislave states. In addition, the Missouri Enabling Act of 1820 prohibited the creation of new slave states north of latitude 36°30’, and in this form the Missouri Compromise quieted sectionalism.

The Mexican War, however, renewed sectionalism by adding to the United States land not subject to the Missouri Compromise. In 1846 Pennsylvania congressman David Wilmot urged Congress to ban slavery from any land the United States took from Mexico. Others favored an extension of the southern border of Missouri to the Pacific, with land south of the line slave and land

to the north free. Still others believed that the new territories themselves rather than Congress should decide whether they wished to be slave or free. The issue of slavery unresolved, California in 1849 heightened sectionalism by seeking admission as a free state. Congress obliged in 1850 but in an attempt to forge a broad compromise yielded to southern demands that Congress not prohibit slavery elsewhere in the land taken from Mexico. Although Congress banned the slave trade in the District of Columbia, it left intact slavery and, in deference to slave owners, passed a new law obliging Northerners to return fugitive slaves to their masters.

This Compromise of 1850 did not end sectionalism. In 1855 Kansas degenerated into civil war between proslavery and antislavery partisans. In 1856 South Carolina congressman and slavery advocate Preston Brooks beat unconscious Massachusetts senator and abolitionist Charles Sumner, and in 1857 the U.S. Supreme Court ruled in *Dred Scott v. Sanford* that Congress and the states could not abridge the right of slave owners to hold property, including slaves. Moreover, the Court ruled that the Constitution conferred no rights on blacks. The Republican Party opposed the expansion of slavery into the North, which the *Dred Scott* decision seemed to imply, and in 1860 its candidate Abraham Lincoln won the presidency. Fearful that Lincoln intended to abolish slavery, 11 states in the South seceded from the Union in 1860 and 1861.

The crisis of secession sparked the Civil War. At first Lincoln and Congress did not intend to abolish slavery. They fought only to return the seceding states to the Union and to restrict slavery to the South. The duration and ferocity of the war, however, moved Lincoln to enlarge it into a crusade to end slavery, and in 1862 he issued the Emancipation Proclamation, freeing on January 1, 1863, all slaves in states that continued to fight the Union. The Union victory in 1865 marked the triumph of abolition. That year Congress passed and the states ratified the Thirteenth Amendment, ending slavery in the United States. In the short term the Civil War ended sectionalism. In 1877 President Rutherford B. Hayes withdrew the Union army from the South, allowing white Southerners to strip blacks of their rights without interference from the North. The

Civil War thus failed in the long term to end the racism that slavery had engendered.

—Christopher Cumo

Bibliography

- Foner, Eric. *Free Soil, Free Labor, Free Men: The Ideology of the Republican Party before the Civil War*. New York: Oxford University Press, 1995.
- Freehling, William W. *The Road to Disunion: Secessionists at Bay, 1776-1854*. New York: Oxford University Press, 1991.
- Hamilton, Holman. *Prologue to Conflict: The Crisis and Compromise of 1850*. Lexington: University Press of Kentucky, 2005.
- Stampp, Kenneth M. *America in 1857: A Nation on the Brink*. New York: Oxford University Press, 1992.

Political Ramifications of the American Civil War

From 1865 to the 1890s, American politics were dominated by Reconstruction as well as concerns related to the rise of corporations and the growth of industry and commercialism. Reconstruction, or the great variety of policies designed to reimpose civil order, reunite the North and South, and address the issues related to the end of slavery, first began during the Civil War in 1863, when the North created a Southern stronghold in Louisiana. Reconstruction as federal policy throughout the defeated Southern states went into force at the end of the Civil War and ended with the Bargain of 1877, when the North agreed to remove troops from the South and allow the Southern states to return to home rule.

Throughout Reconstruction, Americans debated its purpose: to reunite the country or to emancipate and protect African Americans. In January 1865 General William T. Sherman had issued Special Field Order 15, confiscating Southern planters' lands in South Carolina and Georgia to provide what has since been termed "forty acres and a mule" to 40,000 freed slaves. This radical move was quickly reversed. Lincoln was assassinated that spring, and by the summer interim President Andrew Johnson pursued a much more moderate version of Reconstruction that restored property (excluding slaves) to Southern whites who took an oath of allegiance to the federal government. Special Field Order

15 was rescinded. At the same time, Southern state legislatures were passing Black Codes that severely limited the freed slaves' citizenship: permitting freedmen to marry and own property but not to vote, testify against whites in court, or serve on juries or in militias.

As the repressiveness of the Black Codes became clear, Radical Republicans (who had earlier pressed for the abolition of slavery) began to joust with President Johnson over his mild policies that favored states' rights over human rights. In 1867 the Radical Republicans gained the upper hand. While the 1867 Reconstruction Act did not redistribute land, the act divided the South into five military zones, disenfranchised thousands of former Confederate loyalists, and forced the Southern states to ratify the Fourteenth Amendment and guarantee full suffrage to African Americans before being readmitted into the Union. This legislation gained public approval during the 1868 presidential elections. Ulysses S. Grant won the presidency against his Democratic opponent Horatio Seymour, who had labeled Reconstruction unconstitutional and painted African American suffrage as un-American.

The period of Radical Reconstruction lasted from 1867 to 1877. During this period as many as 2,000 African Americans gained public office (including 2 blacks elected to the U.S. Senate), indicating a seismic shift for the South. Nevertheless, white officeholders remained dominant in the South except in South Carolina, where the population was 60 percent black. The new state governments in the South also shifted patronage patterns, empowering what were later to be called "carpetbaggers," often Northern entrepreneurs in the South. Many of these carpetbaggers were former Union soldiers as well as investors involved in the commercial development of the South. In addition, many Southern white "Scalawags" joined forces with the new state governments. Public schools were created throughout the South in this period; railroads and other infrastructure improvements were encouraged. Displaced elites, the Democratic Party, and resentful white Southerners painted all such Reconstruction efforts as corrupt, inefficient, and farcical. Vigilante groups such as

the Ku Klux Klan, with strong ties to the Democratic Party, imposed a new reign of terror on freed blacks and white Republican supporters; not only solitary lynchings but even large armed conflicts ensued. By 1871 federal response was strong, with soldiers dispatched and hundreds of Klansmen arrested.

Nevertheless, white Southern revulsion to Reconstruction and to growing federal power struck a chord in the North. In the 1870s the Liberal Republican faction argued that with Constitutional protections of African Americans in place, the nation should now focus on issues such as corruption within the Grant administration. As a result, in the 1872 presidential election the Liberal Republican platform advocated various economic reforms, free trade, civil service reform, and home rule in the South. Despite the challenge, Grant won reelection. The Liberal Republicans disbanded after the election, yet their critique of Reconstruction permeated U.S. society. In response to the Liberal Republicans' goals, Congress passed a general amnesty act for Southern Confederates, reduced tariff levels, and enacted mild civil service reform in 1872. The Panic of 1873, a major economic depression, provided further incentive to focus on America's financial problems rather than social equality. The economic crisis enabled the Democrats—firmly aligned with displaced Southern elites and white supremacists—to retake the House in 1874, the first time since before the Civil War.

While military Reconstruction continued until the Bargain of 1877, which granted Rutherford B. Hayes the disputed presidency in exchange for the removal of federal troops from the South, united Republican attempts to achieve racial equality had already been abandoned. As Northern antipathy grew toward African American equality, many of the social, economic, and political improvements gained by African Americans dissipated. For instance, in the early years of Radical Reconstruction (1867–1877), African American voting rights were protected by federal troops, leading to the election of 16 African Americans to Congress. The power shifted to Southern Democrats. In Mississippi in 1875, for example, white rifle clubs murdered Republicans and drove African Americans

from voting places. However, as Northern concerns shifted to other issues, Southern violence toward former slaves continued to rise. There were as many as 1,000 lynchings between 1900 and 1915. “Redeemers,” white Southern Democrats who resented Reconstruction, assumed political control. By the end of the century, African Americans faced increased disenfranchisement and economic enslavement (sharecropping) in addition to a segregated Southern society.

Authors Mark Twain and Charles Dudley Warner dubbed the period from 1865 to 1900 the “Gilded Age” to describe its rampant commercialism, ostentatious displays of wealth, growing class divide, and corruption. Gilded Age political campaigns were highly competitive and were supported on all levels of government by the rewards of political patronage. The period was marked by the rise of large political party “machines” in urban centers and on the state level. On the federal level, the Grant administration was lampooned for its patronage-based corruption. The assassination of President James A. Garfield by a turned-down aspirant for a patronage position inspired Garfield’s vice president, Chester Arthur, to undertake civil service reform when he assumed the presidency. Civil service reform, that is, requiring testing and qualifications for bureaucratic and governmental jobs, also became a touchstone in Theodore Roosevelt’s political career.

American industrialization and the growth of corporations, the primary phase of which was from 1865 to 1900, shaped Gilded Age politics and society. At the beginning of this period there were few corporations besides railroads; by 1904, 300 corporations controlled 40 percent of all manufacture in the United States. Initially America’s economic transformation was not matched by political regulation. As a result, instability and corruption ensued. For instance, in the late 1860s U.S. congressmen were bribed to cover up the Union Pacific railway’s fraudulent contracts with the construction company Crédit Mobilier. Competition and the pursuit of profits led to shoddy labor practices, and thousands of labor strikes occurred throughout these decades and well into the twentieth century. There were no social safety nets for the poor except what was offered by the political machines and their

“bosses,” who relied on the votes and loyalty of new immigrant populations in exchange for jobs, food, and medical and other temporary aid. Even as great corporations grew, economic instability marked the period. Credit was difficult to obtain for small businesspeople and farmers. Farmers rejected a gold standard in favor of silver production and paper currency to loosen credit. Galvanized by this and other issues, the Farmer’s Alliances formed in the 1870s, a precursor to the Populist Party of the 1890s.

What has been termed the Gilded Age merged into the Progressive reform movements of the turn of the century, as social reformers and politicians of both political parties attempted to address the issues of growing corporate strength and monopolistic practices, political machine corruption, and the poverty, disease, and growing discontent of the laboring class.

—Kassi Klinefelter and Fred Nadis

Bibliography

- Boyer, Paul S. *Urban Masses and Moral Order in America, 1820–1920*. Cambridge: Harvard University Press, 1978.
- Calhoun, Charles W. *Conceiving a New Republic: The Republican Party and the Southern Question, 1869–1900*. Lawrence: University Press of Kansas, 2006.
- Foner, Eric. *Reconstruction: America’s Unfinished Revolution, 1863–1877*. New York: Harper and Row, 1988.
- Richardson, Heather Cox. *The Death of Reconstruction: Race, Labor, and Politics in the Post-Civil War North, 1865–1901*. Cambridge: Harvard University Press, 2001.
- Seip, Terry L. *The South Returns to Congress: Men, Economic Measures, and Intersectional Relationships, 1868–1879*. Baton Rouge: Louisiana State University Press, 1983.
- Trachtenberg, Alan. *The Incorporation of America: Culture & Society in the Gilded Age*. New York: Hill and Wang, 1982.

Canadian Westward Expansion

The Canadian west stretches from the grasslands of present-day Manitoba to the Pacific shores of British Columbia. The vast space in between experienced a history of settlement and expansion

► THE DOUKHOBOURS IN CANADA

The Doukhobours, who came to Canada in the late nineteenth century, were an offshoot of the Russian Orthodox Church treated as heretics for their simple faith, which rejected what they considered the idolatry and opulence of the Church. Led by Peter Verigin, 7,500 Doukhobours settled in present-day Saskatchewan in 1899. Their settlement exemplifies the great lengths that the Dominion government was willing to go to encourage groups to migrate to Canada. Sir Wilfrid Laurier and Clifford Sifton promised the group that they would be free to follow their religious practices, would not be conscripted, and could organize themselves according to their belief in communal property. Each male migrant was given 160 acres (65 hectares) of land. Changes made by the Dominion government to the rules governing communal

property rights in 1906–1907 split the community. The largest faction followed Peter Verigin to British Columbia. Others chose to adapt to the government's new policies that divided properties into homesteads. The most extreme group, the Sons of Freedom, protested the changes. They organized demonstrations (often demonstrating while naked) and destroyed property, resulting in frequent confrontations with Canadian authorities. The community declined after Peter Verigin died in a 1924 train bombing incident, the causes of which have not been determined. The federal government arranged for his son to come from Russia in 1927 to lead the community in British Columbia, but his radicalism and antiauthoritarianism made him an ineffective leader.

—*Laura Madokoro*

that is as diverse as the geography it covers. Three distinct, if somewhat overlapping, periods characterize westward expansion from 1750 to 1914: contact and trade among European explorers and native peoples (1750s–1860s), construction of and settlement along the transcontinental railway (1880s), and large federal immigration schemes (1896–1905). Each of these phases left an indelible mark on the development and character of the Canadian west.

When the first European traders penetrated the west in the 1730s, the prairie regions of Canada were home to hundreds of native tribes, with total populations estimated to range from 17,000 to 60,000. French and English traders competed for trade until the French were forced to cede their territorial claims in Canada in the wake of their defeat in the Seven Years' War (1756–1763). The Hudson's Bay Company monopolized British trade, thanks to a charter received from Charles II in 1670. Its expanding trade routes led to early settlements concentrated around trading posts such as those at Cumberland House and Lake Athabasca, in present-day Saskatchewan. By 1804 there were over 400 posts in the western region of Rupert's Land, the vast territory over which the company was *de facto* ruler, compared to 17 in 1774. In contrast, the early settlement of British Columbia was largely restricted

to Vancouver Island and the coast until the early nineteenth century, when explorers David Thompson and Simon Fraser established trading posts in the Rocky Mountains in 1811 and 1806–1808, respectively.

The 1840s mark a transition point in the history of westward expansion. As the fur trade declined, agriculture grew in importance, and the prairies began to attract homesteaders from eastern Canada and Europe. After confederation in 1867, the federal government played an increasingly active role in shaping and controlling the region's development. It negotiated treaties with native leaders so that by 1877 native territories were officially reduced to the spaces confined within seven reserves. To further consolidate its territory the government purchased Rupert's Land from the Hudson's Bay Company for £300,000 in 1869 and prepared settlement schemes to discourage possible U.S. expansion. Surveyors were dispatched to partition and allocate tracts of land to potential homesteaders. As more settlers moved into the region, conflict with the native peoples and Métis (people with European and native ancestry) increased. It culminated in 1869–1870 during the Red River Rebellion led by Louis Riel, head of a self-proclaimed provisional government. To resolve the conflict, the federal government passed the

Manitoba Act, which established the province of Manitoba in 1870 and gave legal title to the Métis for the lands they farmed.

The completion of the transcontinental railway in 1885 encouraged further westward migration. Under the government of Prime Minister Wilfrid Laurier, Clifford Sifton, minister of the interior from 1896 to 1905, developed ambitious plans to settle the west by promoting immigration from the United States, Great Britain, and continental Europe. Publicity campaigns in Europe promised prosperous and fertile lands, describing Canada's west as a Promised Land or a Garden of Eden. Thousands came from Eastern Europe, but the largest immigrant groups were Germans (100,000) and Scandinavians (170,000). Migrants received subsidized travel and land grants in return for their commitment to farm the land. The federal government also offered additional incentives to particular ethnic groups. Mennonites, Icelanders, Doukhobors (a persecuted Russian religious sect), and hundreds of Ukrainians were promised the right to settle as ethnic blocs and were granted freedom from military conscription (which they feared or in some cases opposed for religious reasons). Thousands of settlers also came north from the United States. Others came from the west, such as the Chinese migrants who came to Canada to build the railway in the late nineteenth century or the thousands of migrants who made their way from California and Asia upon news of gold strikes in the Yukon in 1897. Many Chinese remained in cities along railroad routes, where they started their own small businesses or worked as manual laborers.

The railway and the promotion of the Canadian west caused the populations of British Columbia, Alberta, Saskatchewan, and Manitoba to increase from 1.7 percent of total Canada's population in 1871 to 23.8 percent in 1911. Cities also became a prominent feature of the western landscape. At the end of the nineteenth century, Winnipeg (population 26,000 in 1891) was a major financial and trade center, while Calgary (population 4,000 in 1891) was home to many businesses tied to the cattle industry, including stockyards, abattoirs, and tanneries, and later became an important manufacturing center. Upon the completion of the Panama Canal in

1914, Vancouver (population 155,000) became the most important port in western Canada.

Yet the outbreak of war in 1914 interrupted migration flow from Europe and altered the nature of the western economy, marking a distinctive break in the early years of westward expansion and the period of industrialization and natural resource exploitation that followed.

—Laura Madokoro

Bibliography

- Brown, Robert, and Ramsay Cook. *Canada, 1896–1921: A Nation Transformed*. Toronto: McClelland and Stewart, 1974.
- Cavanaugh, Catherine, and Jeremy Mouat, eds. *Making Western Canada: Essays on European Colonization and Settlement*. Toronto: Garamond, 1996.
- Francis, Douglas, and Chris Kitzen. *The Prairie West as Promised Land*. Calgary: University of Calgary Press, 2007.
- Friesen, Gerald. *The Canadian Prairies: A History*. Toronto: University of Toronto Press, 1984.
- Palmer, Howard, ed. *The Settlement of the West*. Calgary: University of Calgary Press, 1977.

Self-Government in Pre-Dominion Canada—The Durham Report

Completed in January 1839, Lord Durham's *Report on the Affairs of British North America* made effective self-government in the colonies of Lower Canada (Quebec) and Upper Canada (Ontario) possible. One of the main recommendations of Durham's *Report* was "responsible government," the notion that any government needed the support of the majority of the elected members of the colonial parliament in order to remain in power. This idea had been in the air for years in the two Canadian colonies. However, because of the political turmoil created by Durham's other key recommendation that the French Canadian majority in Lower Canada should be transformed into English Canadians and the British government's own doubts about the viability of responsible government in its overseas territories, colonial politicians were unable to bring that measure into effect until 1848.

Lord Durham's *Report* would have been unnecessary had it not been for the failure of the

THE REBELLION LOSSES BILL, 1849

Self-government was put to the test in the united colony of Canada between February and April 1849. The government of Robert Baldwin and Louis-Hippolyte Lafontaine, which had pushed for colonial autonomy for much of the 1840s, was determined to pass the Rebellion Losses Bill, legislation that would have compensated anyone whose property had been damaged during the Lower Canadian rebellion in 1837, including the rebels themselves. Colonial Tories were equally determined to kill the bill, seeing it as a disloyal measure.

The Tories appealed to the governor-general of Canada, Lord Elgin, to stop the bill's passage. Lord Elgin disappointed them. Following the rules of responsible government, he refused to veto the Rebellion Losses Bill, since the Baldwin-Lafontaine government had the support of a majority of the members in the colonial assembly. In response, a Tory mob gathered in Montreal, the colony's capital, to protest the bill. They harassed Lord Elgin and his family, attacked Lafontaine's house, and burned down the Parliament building. Baldwin and Lafontaine, however, did not back down. The Rebellion Losses Bill became law, with the blessings of the governor-general and the British state.

—Todd Webb

first British attempt to establish a system of self-government in Lower and Upper Canada. In 1791, the Tory government of William Pitt the Younger passed the Constitutional Act. This legislation was meant to correct the flaws in colonial government that Pitt and his fellow conservatives believed had been responsible for the outbreak of the American Revolution in 1776. Pitt's government aimed to curb the role of the colonists' directly elected representatives in the governments of Lower and Upper Canada. The Constitutional Act created a political system in which a British-appointed executive could act independently of the elected assembly in most matters. Not surprisingly, this constitutional arrangement led to constant conflicts between the executive and the assembly in both colonies. During the mid-1830s, those battles resulted in the paralysis of the political system, with a discontented majority in the assemblies demanding

greater political power and the members of the executive in each colony digging in their heels to protect their own interests and to prevent what they saw as the danger of an American-style revolution in Lower and Upper Canada.

Still, the situation in the two colonies was not quite as bleak as this picture of political deadlock suggests. Moderate political reformers had been arguing in favor of a new form of government since the 1820s. Two English Canadians, William Warren Baldwin and his son Robert, embraced the idea of responsible government. Before the Baldwins could bring about change peacefully, however, radical reformers in Upper and Lower Canada launched a series of armed efforts to overthrow the existing political regime in the autumn of 1837. The colonial governments in Lower and Upper Canada responded by crushing the uprisings. Things had gone badly for the radical reformers, but in the aftermath of the rebellions British statesmen were forced to reevaluate colonial policy. In January 1838, the Whig government appointed Lord Durham as high commissioner and governor-general of British North America to investigate the situation and to suggest measures that might restore peace.

Durham, one of the most progressive thinkers in the Whig Party, was well suited to the task. His support for the Reform Bill of 1832, which expanded the British electorate, earned him the nickname "Radical Jack." He was willing to entertain any new ideas that would keep Lower and Upper Canada in the British Empire. However, Durham's time in the Canadian colonies was short and not without controversy. He sent several rebel leaders into exile without a trial, and his actions were criticized in the British House of Commons. Angered by what he believed was a lack of support from the prime minister, Durham returned to Britain in May 1838, having seen enough of the colonies to write his *Report*.

Durham's *Report* recommended sweeping changes in the government of the Canadian colonies. True to his progressive background, he adopted the William Warren and Robert Baldwin idea of responsible government and made it his own. Durham also suggested, however, that responsible government could not work

in colonies divided along ethnic lines between English and French settlers. He therefore called for the union of Lower and Upper Canada in an effort to assimilate the French Canadians who, under this new arrangement, would be outnumbered by the English Canadians. The Whig government in Britain was keen to adopt Durham's policy of assimilation, but it proved wary of responsible government. The Whigs feared that the colonists would use any newly acquired political power to transform the united province of Canada into an independent state. Durham himself did not live to see what his fellow Whigs did with his *Report*. He died of tuberculosis on July 28, 1840.

The mixed message and partial implementation of Durham's recommendations led to eight years of political conflict in Canada. The British government sought to hold responsible government at bay and promote the absorption of the French Canadians by the English Canadian majority. Simultaneously, however, Robert Baldwin formed an alliance with the leader of the French Canadians, Louis-Hippolyte Lafontaine, in an effort to gain a full measure of political autonomy in the colony and to preserve French Canadian culture. While ignoring Durham's call for ethnic unity, Baldwin and Lafontaine pointed to his support for responsible government to bolster their own case. After all, no one could accuse Lord Durham of seeking to break up the British Empire. Faced with the growing electoral strength of the Baldwin-Lafontaine alliance, the British finally bowed to colonial pressure in 1848. It abandoned the policy of assimilation and adopted his call for responsible government. Within a year, self-government became a working reality in the united province of Canada.

—Todd Webb

Bibliography

- Buckner, Phillip A. *The Transition to Responsible Government: British Policy in British North America, 1815–1850*. Westport, CT: Greenwood, 1985.
- Craig, Gerald M., ed. *Lord Durham's Report*. Montreal and Kingston: McGill-Queen's University Press, 2007.
- Craig, Gerald M. *Upper Canada: The Formative Years, 1784–1841*. Toronto: McClelland and Stewart, 1963.

Martin, Ged. *The Durham Report and British Policy: A Critical Essay*. Cambridge: Cambridge University Press, 1972.

Politics in Postconfederation Canada, 1867–1914

Four founding provinces, Upper Canada (Ontario), Lower Canada (Quebec), Nova Scotia, and New Brunswick, entered the Canadian Confederation in 1867 after several years of negotiations and conferences between Canadian and British representatives culminated in the approval of the British North America Act by the British Parliament. From this starting point, Canada grew in the late nineteenth and early twentieth centuries to closely resemble what it is today, a country of ten provinces and three territories. The ten provinces include the original four plus Manitoba (1870), British Columbia (1871), Prince Edward Island (1873), Alberta (1905), Saskatchewan (1905), Newfoundland (1949), and Labrador (1949). Territories (which only have powers delegated to them by the federal government rather than the constitution) include the Northwest Territories (1870), Yukon (1898), and Nunavut (which was part of the Northwest Territories until 1999).

Canada's constitution established a parliamentary form of government modeled on that of Great Britain. Its Parliament consists of the House of Commons, whose members are elected by the populace, and the Senate, whose members are appointed by the governor-general (the representative of the British Crown) with the advice of the Canadian prime minister. Originally the House of Commons had 181 members, each representing constituents in districts known as ridings. The distribution of ridings is based largely on population, and Ontario, because of its large population, has always had significant political influence in Canada. The Senate has the power to approve or reject bills but rarely goes against the will of the democratically elected House of Commons.

The prime minister is Canada's head of government and sits in the House of Commons. He/she is leader of his/her party and has no term limit. Two major parties, the Liberal Party of Canada and the Conservative Party of Canada (known officially as the Liberal-Conservative

► BECOMING THE DOMINION OF CANADA

Many Canadians, including prominent politicians involved in negotiations leading up to the British North America Act of 1867, supported the idea of calling the new nation “The Kingdom of Canada,” a name that emphasized its continuing ties to Great Britain and its traditions. This was opposed by the British Foreign Office, which feared that such a step would antagonize the United States, many of whose leaders were still angry over Britain’s support for the South during the U.S. Civil War. New Brunswick premier Samuel Tilley is thought to have suggested the name “dominion,” a term then used to refer to lands held by the monarch and, more generally, Britain’s colonies. He supposedly was inspired by several biblical passages, especially Psalms 72:8: “He shall have dominion also from sea to sea, and from the river unto the ends of the earth.” Thus it was that the preamble to the Canadian constitution described the new state as a “Dominion under the Crown of the United Kingdom of Great Britain and Ireland, with a Constitution similar in Principle to that of the United Kingdom.” According to John A. Macdonald, Canada’s first prime minister, a great opportunity had been missed.

—Glenn Duerr

Party prior to 1873), have dominated politics in Canada. In fact, all of Canada’s 22 prime ministers have been from one of these two parties.

Even after confederation, many opposed the new union. In 1867 and 1868 voters in New Brunswick and Nova Scotia, fearing a loss of power and independence, elected anticonfederation representatives to the federal and provincial legislatures. The unity of Canada was seemingly jeopardized. However, after 1869 the intensity of secessionism decreased in the face of British refusal to reconsider the British North America Act and the fear that Canadian disunity would invite U.S. interference and possible annexation.

Other issues confronting postconfederation Canada resulted directly from its territorial expansion. In 1868 the British Parliament approved the sale of Rupert’s Land, which had been controlled by royal charter by the Hudson’s Bay Company since 1670. For £300,000 Canada

in 1870 took control of the vast territories that include present-day Manitoba, most of Saskatchewan, southern Alberta, southern Nunavut, and the northern parts of Ontario and Quebec. The purchase sparked two rebellions led by Louis Riel, a Métis (people of mixed First Nations and European, mainly French, ancestry) leader who sought to protect the rights of the indigenous people in Manitoba and Saskatchewan from the loss of power to the new Canadian government. The first rebellion of 1869–1870, known as the Red River Rebellion, was put down by the Royal Canadian Mounted Police, but the issue of land claims among the indigenous population remained a potent issue. The Northwest Rebellion of 1885 also centered on conflicting land claims, in this case farther west in the area of present-day Saskatchewan. The Northwest Rebellion also was suppressed, and in its wake Riel was brought to trial and hanged for treason in 1885.

Economic policy, especially as it related to tariffs, was another major issue in postconfederation Canada. In the 1870s when Canada was plunged into an economic recession, tariffs were raised from 15 percent to 17.5 percent, mainly as a means to raise revenues. As the recession deepened, the Conservative Party, under the leadership of John A. Macdonald, formulated its National Policy, which called for federal assistance for railroad construction, federal control of land policy, and even higher tariffs on imported manufactured goods to protect Canada’s nascent manufacturing industries. On taking power in 1879, the Conservatives raised tariffs on U.S. manufactured goods to 30, 35, and even 45 percent. Supporters credited the National Policy for bringing about the revival of Canada’s economy in the early 1880s, but as economic stagnation set in later in the decade, critics in the Liberal Party called for tariff reduction. On taking power in 1897, the Liberals sponsored tariff reforms that provided for preferential treatment for Great Britain, most of its colonies, and many of its trading partners. In 1911 its proposal to reduce some tariffs on U.S.-manufactured goods was rejected in the House of Commons and subsequently by the electorate, which returned the Conservatives to office.

Another major issue in postconfederation Canada was immigration policy. From the 1880s

onward Canadian governments encouraged immigration, mainly by northern Europeans interested in farming. Many Canadians became concerned when thousands of Chinese migrated to Canada to work on the Canadian Pacific Railroad. In 1885 the government passed the Chinese Immigration Act, which imposed a head tax on all Chinese immigrants. The amount of the tax was raised in 1900 and 1903. In 1923 the Chinese Immigration Act banned all Chinese from entering the country except diplomats, children of Canadians, students, and certain businessmen.

—Glenn Duerr

Bibliography

- Archer, Keith, et al. *Parameters of Power: Canada's Political Institutions*. 2nd ed. Toronto: Nelson Thomson Learning, 1999.
- Berger, Carl. *The Sense of Power: Studies in the Ideas of Canadian Imperialism, 1867-1914*. Toronto: University of Toronto Press, 1970.
- Creighton, Donald. *Canada's First Century, 1867-1967*. Toronto: Macmillan of Canada, 1970.
- Hardy, W. G. *From Sea unto Sea: Canada, 1850 to 1910; The Road to Nationhood*. Garden City, NY: Doubleday, 1960.
- Moir, John, and D. M. L. Farr. *The Canadian Experience*. Toronto: Ryerson, 1969.

Conservatism and Liberalism in Nineteenth-Century Latin America

Almost all of Latin America achieved independence from European powers in the first quarter of the nineteenth century. With the notable exception of Brazil, these became independent republics following European and U.S. models of governance. Disagreements between the literate and politically active elite of these new nations erupted, and soon there emerged two ideological camps, commonly referred to as Conservatives and Liberals. Conservatives argued for minimal social change, while Liberals were interested in bringing “progress” to the region by imitating economic and cultural developments in Europe and the United States. While most Latin Americans remained Catholics, Liberals generally sought to limit the role of the Church in civic affairs. For example, in midcentury Mexican

Liberals passed a series of acts restricting the right of churches to own property and abolishing *fueros*, or special exemptions for clergy.

After their victories in the wars of independence, Latin American intellectuals and political leaders, including the liberator Simón Bolívar, were unsure of the wisdom of extending democracy to their entire societies. At first some argued for the creation of monarchies, and in fact there were some experiments along this line, such as that of Brazil and the brief monarchical claim of Agustín I of Mexico in 1823. Generally, Liberal successes meant that some limited form of democracy gained support, although neither Liberals nor Conservatives were interested in turning over power to the masses. Conservatives at first ensured that many colonial

KEY DIFFERENCES BETWEEN LIBERALISM AND CONSERVATISM

Summarized below are some of the differences between the Liberal and Conservative perspectives in nineteenth-century Latin America:

Liberal	Conservative
Urban	Rural (many large landowners)
Anti-church control	Pro-church
Replicate Europe	Maintain traditional values
Progress	Stasis
Free trade	State control
Equality	Patriarchy
Individualism	Paternalism
Federalism	Centralism

These are only general patterns. For example, liberals in Argentina favored a centralized form of government, probably because they were mostly located in the capital city of Buenos Aires and did not trust whom they perceived as the less civilized Argentines elsewhere. Yet generally these patterns persisted across the region, including within Brazil even though a monarchy prevailed there until 1889. In fact, other conservative leaders besides the Brazilian monarch were influenced by Liberalism, including Emperor Maximilian of Mexico, who had been put in power after the French invasion.

—Rick Warner

institutions and practices continued, such as special privileges (*fueros*) connected with lands owned by churchmen, religious institutions, and military men, and centralized control of the economy as opposed to free trade. Socially, Conservatives defended the “corporate status” of certain groups including the Church and indigenous communities, placing them outside civil law. Liberals sought to replace these traditions with social and economic systems drawn from the United States and western Europe.

Since the struggles between the two camps culminated in the triumph of Liberalism at the end of the nineteenth century, the story of the conflict is often described as the “rise of Liberalism.” In several countries, such as Mexico and Argentina, the two groups fought a series of wars through the middle of the nineteenth century, while in other places, such as Brazil, the disagreements were pursued within the existing political system. The conflict in Mexico caused constant unrest, as heads of state changed frequently and the young nation was easily attacked by the United States and France as a result of the dissension.

The roots of Liberalism are the European Enlightenment, the American Revolution, and the French Revolution. Although Latin Americans continued throughout the nineteenth century to adhere to Roman Catholicism, their view of the Church changed drastically, just as it had for French intellectuals in the previous century. While the colonial-era Church maintained power over the lives of individuals with special privileges and significant landholdings, the more secularist Liberals worked to eliminate these advantages. Later in the nineteenth century Liberals were strongly influenced by the philosophy of positivism, as espoused by the French thinker Auguste Comte (1798–1857). Positivism was a theory of progress in human history that extolled scientific thought. An intellectual culture entered Latin American governance, evidenced, for example, by the role of the *científicos* (scientific ones), federal ministers of the Mexican regime of Porfirio Díaz.

Although not all countries experienced the same level of conflict, Conservative-Liberal disagreements dominated political discourse all over the region until the last quarter of the century. In the twentieth century Latin American

political leaders, some of whom were educated as economists in the United States, turned to neoliberalism, a modern reinvention of Liberalism that supports free trade in the new era of globalization through pacts such as the North American Free Trade Agreement (NAFTA).

—Rick Warner

Bibliography

- Burns, Bradford. *The Poverty of Progress: Latin America in the Nineteenth Century*. Berkeley: University of California Press, 1980.
- Bushnell, David, and Neill MacAulay. *The Emergence of Latin America in the Nineteenth Century*. New York: Oxford University Press, 1994.
- García Marquez, Gabriel. *One Hundred Years of Solitude*. 1967; reprint, New York: Harpers, 1994.

Nineteenth-Century Latin American Politics—Centralists versus Federalists

After achieving independence from Spain in the early 1820s, the new republics of Latin America began the difficult process of writing constitutions and establishing national governments. In many countries there were conflicts between advocates of centralism, which endorsed the principle of a strong central government, and federalism, whose proponents supported a system of government in which power was divided between the central or national government and regional authorities, often in the form of states or provinces. Federalism in Latin America was modeled primarily on the U.S. Constitution but also incorporated concepts from ancient and modern European examples. Generally, proponents of centralism were conservatives, whereas supporters of federalism were labeled liberals. However, these distinctions were often blurred.

Simón Bolívar, the “liberator” of much of South America, opposed federalism because he viewed it as a weak system unsuitable for the cultural and historical realities of Latin America. Despite Bolívar’s opposition, three of the largest Latin American countries—Argentina, Mexico, and Brazil—eventually adopted the federal system and continue to use it today.

The conflict between centralism and federalism was particularly acute in Argentina in the

aftermath of independence. Unlike other parts of Latin America, the federalists in Argentina were represented by conservative elements based in the interior provinces. Centralists in Argentina were known as the Unitarios, and their greatest influence was in Buenos Aires, the capital. Argentina's Constitution of 1819 was a victory for the Unitarios, as it created a strong central government and granted little autonomy to the provinces. The feud continued with the election of Bernardino Rivadavia, a liberal and Unitario, to the presidency in 1824. Rivadavia brought much-needed reform to Argentina and attempted to unite the country. Conservatives in the provinces opposed his reforms, and he resigned in July 1827, whereupon conditions in Argentina became chaotic. In 1835 Juan Manuel Rosas became dictator of Argentina. A strident federalist, Rosas used his absolute power to rid Argentina of the Unitarios. Ironically, Rosas established a strong central government and used the support of both loyalist gauchos from the provinces and the Catholic Church as the basis of his powerful dictatorship. Rosas was overthrown in 1853, and his ouster opened the way for a modified federal system under a new constitution.

In Mexico, centralism was synonymous with conservatism, mainly supported by wealthy oligarchs who held the indigenous population in virtual serfdom on large feudal estates and favored the union of church and state, a strong army, and education for the elite only. The Liberal Party stood for separation of church and state, public education, and a federal system of government. Conflicts between centralists and federalists raged in the first four decades of the Mexican Republic. In the end, Mexico selected a federal system as indicated by the constitution of 1857 and continued under the constitution adopted in 1917. An outward expression of Mexico's federalism is the official name of the country, Estados Unidos Mexicanos (United Mexican States).

Brazil did not experience the tension between centralism and federalism, as it was a monarchy until 1889. Brazil became a republic under the Constitution of 1891, which resembled the U.S. Constitution, and adopted a federal system. Federalism's dominance is reflected in Brazil's official name, Estados Unidos do Brasil

(United States of Brazil). Colombia also experimented with centralism and federalism throughout the nineteenth century. When liberals were in control, Colombia usually had a federal system. An example was the Constitution of 1863 that gave extraordinary powers to the states, including their own armies and postage stamps.

The small republics of Central America have always opted for centralism, as have Paraguay and the Dominican Republic. Other Latin American nations experimented with forms of both federalism and centralism in the nineteenth century. With the exception of Mexico, Brazil, and Argentina, many of the nations of Latin America blended aspects of the two systems. Another interesting outcome of the conflict between federalists and centralists was that in time political differences came to be focused less on fundamental constitutional issues and more on the personalities of leaders and the loyalty of their followers.

—George Lauderbaugh

Bibliography

- Busnell, David, and Neill Macaulay. *The Emergence of Latin America in the Nineteenth Century*. 2nd ed. New York: Oxford University Press, 1994.
- López-Alves, Fernando. *State Formation and Democracy in Latin America: 1810–1900*. Durham, NC: Duke University Press, 2000.
- Safford, Frank. "Politics, Ideology, and Society in Post-Independence Spanish America." In *Cambridge History of Latin America*, Vol. 3, *From Independence to c. 1870*, edited by Leslie Bethell. Cambridge: Cambridge University Press, 1985.

Church-State Relations in Latin America after Independence

While some of the leadership for the Latin American independence movement came from the clergy, most notably Father Miguel Hidalgo and Father José María Morelos in Mexico, the relationship between the Roman Catholic Church and the newly independent republics was largely antagonistic. There were two reasons for this conflict: the Church's support of the Spanish Crown during the wars of independence and the basic tenets of Liberalism, the ideology to which most of the rebel leadership subscribed.

During the wars of independence in Venezuela, Church officials used the 1812 earthquake, which devastated areas held by rebel forces but left areas under royal control unscathed, as a sign that God opposed independence. The Church also condemned much of the leadership for its involvement in Freemasonry, an anathema to Catholic dogma. In Mexico, Hidalgo and Morelos were branded as heretics, excommunicated, and sentenced to death by the Inquisition.

Liberals, most of whom were drawn from the ranks of the educated and well-to-do, envisioned secular states in which individuals would have the opportunity to achieve their full potential and to make use of their natural creativity to benefit themselves and society as a whole. They favored constitutional republics based on rationalism, the free exchange of ideas, and economic freedom. They tended to view the Roman Catholic Church, with its vast wealth, dominance of education, and undue influence in banking and other financial services, as an impediment to achieving these ideals. They also believed that the Church represented an outmoded ideology based on theological obscurantism, superstition, and archaic rituals rather than the rationalism and science of the modern age.

With the achievement of independence, some Church officials saw an opportunity to expand their power in Latin America since Spain's defeat meant the end of the Patronato Real (Royal Patronage) by which the Crown had controlled ecclesiastical appointments in its colonies. The new republics, however, soon assumed control not only over appointments but also over the collection of tithes. Several states under Liberal leadership confiscated Church property and undertook efforts to take over functions that in colonial times had been performed by the Church. These included education, recording of vital statistics, charitable and social services, and even maintenance of burial grounds. While most Liberals continued to profess their personal religious belief as Roman Catholic, they also wanted to reap some of the benefits of Protestant evangelism and to maintain friendly relations with the United States. Therefore, many of the new constitutions had the contradiction of declaring Roman Catholicism as the official religion of the republics while at the same time containing

clauses that proclaimed religious liberty and freedom of conscience.

Not surprisingly, the Church took the side of conservative political factions as the nineteenth century unfolded. Conservatives viewed Catholicism as useful in maintaining civil order by providing a moral dimension for strong central government. Therefore, they promoted the unity of church and state as a means to maintain law and order. The alliance of Conservatives and the Catholic Church had negative implications for the Church. The Church was often identified as opposing progress and condoning the repressive regimes of caudillos who used the support of the Church to maintain power. In 1864 Pope Pius IX formalized Rome's vehement opposition to the ideas of rationalism and liberalism when he published the *Syllabus of Errors*, a pronouncement that condemned lay education, freedom of thought, religious toleration and the separation of Church and state. Liberal governments ignored the *Syllabus*, and Conservatives applauded it. In Ecuador, President Gabriel García Moreno dedicated the nation to the sacred heart of Jesus and invited the Jesuits to return. However, by the end of the nineteenth century the Liberals had largely prevailed, and the influence of the Catholic Church in education, social services, and politics had been greatly diminished in Latin America.

—George Lauderbaugh

Bibliography

- Lynch, John. "The Post Colonial Church." In *Problems of Modern Latin American History: Sources and Interpretations*, edited by John Charles Chasteen and James A. Wood. Wilmington, DE: SR Books, 2004.
- Mecham, J. Lloyd. *Church and State in Latin America*. Chapel Hill: University of North Carolina Press, 1934.
- Pike, Frederick B. *The Conflict between Church and State in Latin America*. New York: Knopf, 1964.

Caudillos

As regional leaders who successfully attained national power (often by force), *caudillos* have held pivotal roles in the histories of several Latin American nations. Historians and social scientists have engaged in debates concerning the

➤ RAFAEL NÚÑEZ—FROM LIBERAL TO CAUDILLO

Rafael Núñez began his political career in Colombia in 1848 as a liberal associated with the anti-clerical faction. As a young politician he signed a constitution that reduced Catholic power in the country. Núñez, however, gradually grew disillusioned with the radical liberal forces in the country for their failure to bring unity and order to the nation. He was to the presidency elected as a moderate in 1879 and began to institute his program of reform designed to stabilize and centralize the country. Not a caudillo yet, he stepped down per the requirements of the constitution and waited two years to again run for the

presidency. His alliance of moderates and conservatives alarmed the radical liberals in the country, who revolted. Though the rebellion was put down, Núñez determined that it proved that necessary changes in government could not be made through constitutional means, and he assumed increasingly autocratic powers to enact his plan of centralization. Caving to the conservative interests, he reconciled himself with the Church and effectively ran the country until his death in 1894. The instability of Latin American governments often turned liberals such as Núñez into caudillos.

—Gerrit Dirkmaat

characteristics of caudillos, particularly as they tended to be controversial figures, sometimes hailed for protecting national interests, sometimes vilified for their damaging authoritarian rule. Caudillos possessed common characteristics, including a propensity for charismatic leadership, recourse to coercion, and dictatorial practices that circumvented established norms of governance. Caudillos also secured access to and control over economic and political resources, and relied on the support of loyal followers who benefited from systems of patronage.

The term extends back to the Latin word *caput* (meaning “head” or “person”), and old explanations for the rise of caudillos assumed a cultural orientation and continuous tradition of authoritarianism that extended back to Roman times. Recent scholarship has moved away from notions of caudillos as expressions of cultural character and has instead emphasized the importance of historical circumstances in their rise to power. The absence of formal political power and legitimacy facilitated the rise of caudillos, as did weakness in state institutions and political parties, especially in regions far from political centers. Caudillos might also gain power by drawing support from patron-client relationships. A certain generality surrounds the term “caudillo,” as shown in its occasional confusion with the term “cacique.” Contemporary usage sometimes proved vague, with a leader being described as a caudillo because of the way he wielded power in relation to public office,

constitutional arrangements, and notions of legitimacy as conferred through institutions.

Following the conquest of Mexico and Peru, Spanish *encomenderos* (individuals who received so-called *encomiendas*, grants of Indian tribute and labor), including Hernando Cortés, are said to have assumed characteristics of caudillos. Similarities to caudillos have also been observed among *hacendados* (owners of large landed estates) in the late colonial period. With independence, caudillos rose in prominence as the colonial system collapsed, assuming power with the help of personal armies.

Historians have identified two types of caudillos. With the instability of emerging nation-states between 1800 and 1870, “classic” caudillos assumed power by using force and gaining popular peasant support. Caudillos of this period included Antonio López de Santa Anna (1794–1876) in Mexico, Juan Manuel de Rosas (1793–1877) in Argentina, and José Antonio Pérez (1790–1873) in Venezuela.

Subsequent “modern” caudillos have included the Mexican dictator José de la Cruz Porfirio Díaz (1830–1915), who promoted strong nationalist tendencies and came to power at a time of increased political stability. Modern caudillos encouraged the institutionalization of authoritarian practices based on the state’s monopoly on force. Historians debate whether the leaders of the Mexican Revolution displayed the characteristics of caudillos, and a few historians suggest that the postrevolutionary generation of politicians in the

1920s, like some contemporary North American politicians, embodied new forms of *caudillismo*. The postrevolutionary Mexican state, some have asserted, succeeded in completing the process of institutionalizing caudillismo.

—Richard Conway

Bibliography

- Brading, David A., ed. *Caudillo and Peasant in the Mexican Revolution*. New York: Cambridge University Press, 1980.
- Hamill, Hugh M., Jr., ed. *Caudillos: Dictators in Spanish America*. Norman: University of Oklahoma Press, 1992.
- Lynch, John. *Caudillos in Spanish America, 1800–1850*. Oxford: Clarendon Press, 1992.
- Wolf, Eric R., and Edward C. Hansen. “Caudillo Politics: A Structural Analysis.” *Comparative Studies in Society and History* 9 (1966–1967): 168–179.

La Reforma in Mid-Nineteenth-Century Mexico

The Reform, or La Reforma, refers to an important period of political, social, and cultural change in Mexico from the mid-1850s to the mid-1870s. After Mexico achieved independence from Spain in 1821, two ideologies, Liberalism and Conservatism, dominated Mexican politics. Conservatives, representing the landowning and mining aristocracy, members of the Church hierarchy, high military officers, and some merchants and manufacturers, sought the continuation of many of the policies of the colonial period that favored the Church and the upper classes. Liberals, representing provincial landowners, professionals, artisans, and the lower ranks of the clergy and military, sought to limit the power and privileges of the upper class and the Church. The Liberals were divided between the more conservative *moderados* and the *pueros*, who favored rapid and sweeping changes.

Conservatives under Antonio López de Santa Anna ruled Mexico for the greater part of the 20 years between 1834 and 1854, during which time they implemented policies that favored the upper classes and the economic interests of the heavily populated central core of Mexico centered in the cities of Mexico City, Puebla, and Veracruz. Their neglect of other regions, the loss of Texas in 1836, and defeat in the Mexican War

in 1847 paved the way for a succession of moderate administrations in the late 1840s and early 1850s. However, a Conservative revolt in 1853 led to the restoration of Conservative government under Santa Anna. He ruled as a dictator until he too was overthrown in 1854 as a result of a Liberal revolt led by Juan Alvarez, a politician from Guerrero, and Ignacio Comonfort, a moderate general. Their Plan de Ayutla called for the end of the dictatorship and elections for a constitutional convention. After Santa Anna went into exile in 1855, Liberals took control of the government, and La Reforma began.

Three laws in particular defined La Reforma. The Ley Juárez, promulgated by the minister of justice Benito Juárez, eliminated the institution of the *fueros*, special rules from the colonial period that benefited the clergy and military personnel. The law narrowed the power of the special courts that had served these populations. The Ley Lerdo, named for the minister of the treasury, Miguel Lerdo de Tejada, barred the Church from owning land or real property that was not necessary for ordinary religious purposes. This was significant, since the Church was a major landowner (and moneylender) dating back to the colonial period. Finally, the Ley Iglesias, passed in 1857, restricted the right of the Church to charge excessive fees for providing sacraments. In sum, the three laws all targeted the social and economic power of the Catholic Church.

Another major step in La Reforma was the writing of a new constitution by a constitutional convention in 1857. The constitution affirmed the previous Reforma Laws and guaranteed the freedoms of speech and assembly. Capital punishment and cruel and unusual punishment were banned, as was the right of ecclesiastical corporations to own land. A single house replaced Mexico's bicameral legislature. In some regards, the constitution was more progressive than those of Western democracies of the day.

Tensions between Conservatives and Liberals continued, and after the promulgation of the new constitution, a Conservative rebellion resulted in a civil war, the War of the Reform, from 1857 to 1861 in which two parallel governments were established. Although Conservative forces dominated the early fighting, by mid-1860 the

Liberals, led by Benito Juárez, gained the upper hand and prevailed in 1861.

Further trouble followed when Mexico defaulted on debts owed to European powers. Spain, Great Britain, and France agreed to invade Mexico to force collection of the debts. Eventually only France carried through on the threat, partly at the invitation of Conservative forces within Mexico. The French army was defeated on May 5, 1862 (later celebrated as Cinco de Mayo) at Puebla by the forces of the young general Porfirio Díaz. The French eventually prevailed, however, and were able to install the Austrian Maximilian on the throne. Mexican conservatives at first supported the new emperor, but ironically he was considered too liberal for many Conservatives, causing their disaffection. Juárez, who had led a parallel state during the reign of Maximilian, returned to the capital in 1867. Maximilian was taken to nearby Querataro and executed.

Juárez, the hero of Mexican resistance to Maximilian, resumed the presidency in 1867. Despite the damage caused by years of civil war and rebellion, he committed resources to the expansion of the public school system and the construction of an important railroad line from Veracruz through Puebla to Mexico City. His land policy focused on the introduction of capitalism in rural areas at the expense of indigenous communities, much of whose lands fell into the hands of wealthy hacienda owners.

Historians mark the end of La Reforma at 1876, when Porfirio Díaz, the hero of Cinco de Mayo, began his long rule. The Díaz period, or Porfiriato, was a time of increasing oppression of the masses and ended with the Mexican Revolution of 1911. However, many of the changes of La Reforma remained in place, especially secular control of Church affairs.

—Rick Warner

Bibliography

- Hamnett, Brian. *Juárez*. London: Longman, 1994.
- Meyer, Michael C., et al. *The Course of Mexican History*. 7th ed. New York: Oxford University Press, 2003.
- Sinkin, Richard N. *The Mexican Reform, 1855–1876: A Study in Liberal Nation Building*. Austin, TX: Institute of Latin American Studies, 1979.

Mexico Under Porfirio Díaz

Dictator of Mexico from 1876 to 1911, Porfirio Díaz (1830–1915) is generally considered a villain in Mexican history. His manipulation of the political system, use of strong-arm tactics to control the Mexican people, and economic policies that promoted foreign dominance and worked to the detriment of most Mexicans, encouraged dissent. In 1910, this dissent resulted in the Mexican Revolution.

Díaz, of Mixtec Indian and Spanish heritage, was born into a poor family in the state of Oaxaca in 1830. After several years of study in the local seminary, Díaz rejected the priesthood and enrolled in the Institute of Arts and Sciences of Oaxaca. There he experienced a curriculum influenced by the liberal philosophy that attracted the likes of Benito Juárez and that emphasized the rule of law and constitutional freedoms. Mexico's volatile political situation, however, ultimately settled Díaz on a military career. As a soldier, Díaz quickly distinguished himself as both a good commander and a staunch supporter of liberalism. He gained fame as a member of the liberal forces that fought in the 1850s War of Reform, and he participated in the campaign against the French invasion of Mexico in the 1860s.

Díaz's liberalism soon turned him into a rebel. In 1871, after Benito Juárez manipulated elections to allow himself another term as president, Díaz staged the Revolt of La Noria. Failing to gain military or popular support, Díaz briefly retired to Veracruz. When Juárez's successor, Miguel Lerdo de Tejada, likewise attempted to continue in office, Díaz led another revolt. The 1876 Rebellion of Tuxtepec, which took as its slogan "Effective Suffrage, No Reelection," succeeded, ushering in a thirty-five-year period known as the "Porfiriato."

Although Díaz revolted under the banner of constitutionalism and democratic rule, he was soon convinced that economic development supervised by a strong central government was the key to Mexico's future. Ultimately, he relegated political democracy to a backseat as he sought to create a stable country conducive to economic modernization. Similarly, Díaz (who coined the phrase "Poor Mexico, so far from God and so close to the United States") rejected the



Mexican dictator Porfirio Díaz, a towering figure in Mexican history who ruled from 1876 until being deposed in the Mexican Revolution of 1910. (Library of Congress)

antiforeign sentiments of many Mexicans and embraced foreign investment as a key to economic growth. The Díaz system stressed peace, order, and stability while pursuing policies designed to make Mexico a modern industrial state.

Individual Mexican states provided the key to the Porfirian political system, as Díaz sought to rule through local elites while playing them against each other. He also encouraged regional military leaders to serve as a counterbalance to local political machines. From Mexico City, Díaz directly intervened in state affairs, helping to fashion electoral slates and rigging elections. He also amended the Constitution to allow the central government to intervene in states in the event of a “breakdown” of order. *“Pan o palo”*—bread or the stick—is often used to describe the Díaz political system. While Díaz preferred a conciliatory approach toward potential rivals,

he was willing to use force against enemies and troublemakers.

As a career military man, Díaz used the army as a tool of coercion, offering promotions and economic incentives to soldiers who helped put down rebellions and otherwise maintained order. The *Rurales*, a federal police agency established under the Juárez regime, continued to be used to control banditry and other forms of criminal activity in the Mexican countryside. Through the widespread use of the *“Ley de Fuga”* or law of flight, by which troublemakers and suspected enemies were summarily executed, the *Rurales* sought to intimidate Mexicans into submission. A final tool in the Díaz arsenal was the *Bravi*, a presidential bodyguard and intelligence service.

The philosophy of Positivism reinforced the Porfirian quest for order and progress in Mexico. Developed in France during the mid-nineteenth century, Positivism embraced a scientific view of things and looked forward to a golden age in which the laws of science would be used to govern and regulate society. In Mexico, President Díaz was surrounded by a group of Positivists, known as *científicos*—the “scientific ones.” Many Mexican *científicos* also adopted social Darwinism, arguing that certain sectors of society (most notably the poor and the Indian population) were destined to die out. The racism and classism inherent in Mexican Positivism prevented a serious consideration of some of Mexico’s most pressing social problems during the Porfiriato and ensured that they would become issues in the Mexican Revolution.

Foreign capital held the key to the Porfirian dream of economic development in Mexico. In addition to providing a stable environment in which to invest, Díaz courted foreigners in a variety of ways. In 1884, a new mining code reversed the old colonial practice that prevented private ownership of subsoil resources. The new law encouraged foreign investment in mining and in the young Mexican oil industry. Porfirian land policies also increased the foreign presence in Mexico’s economy. Díaz began a policy of surveying, dividing, and selling public lands to private owners. In some areas of Mexico, ensuring real estate speculation that adversely affected smallholders, who found themselves cut off from the

resources needed for survival. Díaz also presided over a great era of railroad building in Mexico. Here, too, foreign investment was crucial, and the major Mexican railroad lines linked Mexico to outside markets. Finally, Díaz smoothed relations with the United States by addressing the issue of the volatile border region, agreeing to a pact that allowed American forces to cross the international line in hot pursuit of outlaws.

Porfirian economic policies helped Mexico develop its infrastructure and achieve a degree of financial stability. Porfirian growth, however, did not benefit all Mexicans. In fact, Díaz's policies favorably affected only a fraction of the Mexican people, and some even experienced a decline in living standards as a result of the displacement that accompanied many Porfirian programs. The export orientation of the new economy made Mexico vulnerable, and, coupled with the lack of foreign investment in agriculture, actually caused a decline in Mexico's ability to feed its people.

On the eve of the Mexican Revolution of 1910, the Porfirian system was increasingly out of touch with a country that had experienced significant changes during Díaz's six terms as president. The aging Díaz slipped into the role of elder statesman, while the *científicos* controlled the country. Political dissent grew among all sectors of society. Local elites, including Francisco I. Madero of Coahuila, who had experienced persecution under the Díaz regime, chafed under the restrictive political system. Mexico's nascent middle class protested its lack of political clout, and members of the lower class grew restless as the benefits of Porfirian policies continued to

elude them. An international recession complicated the picture and exposed the vulnerability of Mexico's export-oriented economy. On the eve of the 1910 elections, Díaz himself added more confusion when he hinted to American journalist James Creelman that he might relinquish power and that he would welcome competition for the position of president.

Díaz's words were taken seriously by Madero, who advanced himself as a presidential candidate. Madero's arrest, followed by the predictable rigged elections that awarded Díaz yet another term, served as a catalyst for revolt. By 1911, many areas of Mexico were in a state of rebellion. With the capture of the border town of Ciudad Juárez in June of that year, Díaz finally relinquished power. Although he went quietly into exile in Paris, where he died in 1915, Díaz's presence continued to be felt in the persistence of a Porfirian bureaucracy and army and in the survival of an economic system with a life of its own. Indeed, the Mexican Revolution, particularly in its early phase, was largely a struggle to undo the legacy of Porfirio Díaz.

—Suzanne B. Pasztor

Bibliography

- Ballard Perry, Laurens. *Juárez and Díaz: Machine Politics in Mexico*. DeKalb: Northern Illinois University Press, 1978.
- Beals, Carleton. *Porfirio Díaz: Dictator of Mexico*. Philadelphia: J. B. Lippincott, 1932.
- Pasztor, Suzanne B. "Díaz, Porfirio (1830–1915)." In *Mexico: An Encyclopedia of Contemporary Culture and History*, edited by Don M. Coerver, Suzanne B. Pasztor, and Robert M. Buffington. Santa Barbara, CA: ABC-CLIO, 2004.

■ Introduction: The Ottoman Empire, Egypt, and Persia in the Nineteenth Century

The Ottoman empire, Persia, and Egypt, a virtually independent state within the Ottoman empire, differed in many ways, but their rulers all faced a similar challenge in the nineteenth century. They all needed to devise and implement policies to withstand growing

pressures from Europe, whose armies threatened their territories, whose businessmen threatened to take control of their economies, and whose ideas threatened many of their values. All of these rulers were involved in a race against time. Their states needed to be strengthened, and quickly, if

they were to avoid the fate of India, where the efforts of India's princes and once-powerful Mughal emperors failed to prevent a British takeover of the subcontinent. As the entries in this section show, rulers in these three states worked hard to respond to the European challenge and, despite many obstacles, accomplished a great deal. By 1914, however, Egypt was a British protectorate, most of Persia was controlled by Russia and Great Britain, and the Ottoman empire had only a few more years of existence before it collapsed.

For all three states the priority was military reform. Ottoman and Persian defeats by Russia in the late eighteenth and early nineteenth centuries and Napoleon's invasion of Egypt between 1798 and 1801 all revealed the gap between the well-armed and well-disciplined European armies and the poorly trained and frequently mutinous troops who opposed them. In response, the Ottoman sultans Selim III (r. 1789–1807) and Mahmud II (r. 1808–1839) as well as Crown Prince Abbas Mirza of Persia (1789–1833) sought to establish “new order” armies trained by European officers, outfitted in European-style uniforms, and armed with modern guns and artillery. Muhammad Ali, the Albanian general who ruled Egypt as an independent state within the Ottoman empire from 1805 to 1848, went further. Beginning in the 1820s he set about creating a large conscript army trained according to European methods. Ottoman reformers in the 1830s followed his model by reorganizing the army, imposing conscription, and increasing the army's size from 24,000 to 120,000.

Such reforms faced resistance. Many Ottoman and Persian religious leaders opposed any military changes modeled on Christian Europe, and soldiers and officers were comfortable with the status quo. Thousands of conscripted Egyptian peasants expressed their displeasure with Muhammad Ali's army (and its brutal discipline) with their feet, by deserting. Such reforms also were costly. Weapons needed to be purchased, military and engineering schools needed to be founded, subsidies for officer training in Europe needed to be provided, soldiers' salaries needed to be paid, barracks needed to be built, and new government agencies had to be created to oversee and administer the military.

Meeting these costs was a formidable challenge. In the 1830s Muhammad Ali took control of Egypt's agrarian economy by requisitioning approximately half of Egypt's arable land and turning it over to the cultivation of indigo, sugar, flax, and, above all, cotton for sale abroad. He also required peasants to grow these same crops and sell them to the government at artificially low prices. Egypt's commercial importance attracted European investment in banks and railroads, which in turn gave rise to a large European community in Alexandria and Cairo. Economic development was slower in Ottoman lands, where European investors worried about the empire's political instability and poor credit rating. It was slower still in Persia, where foreign investment could be attracted only by granting concessions to European businessmen, who gained exclusive rights to profits in various economic enterprises (banking, tobacco, insurance, construction, and food production, among others) in return for one-time payments and a small share of earnings that went to the Persian government.

Military modernization and economic development faced many obstacles. Large numbers of Ottoman subjects, Egyptians, and Persians were indifferent or hostile to reform, and many government officials, military officers, and religious leaders who favored reform disagreed about what exactly reform meant. Was it a matter of strengthening the military and nothing else, or should it go further to embrace European notions of law and constitutional government? Meanwhile, immediate challenges in the form of wars, rebellions, religious dissent, indifferent rulers, and pressures from Western diplomats and businessmen had to be faced. In the end, however, it was the inability of Ottoman, Egyptian, and Persian regimes to meet the costs of military modernization that doomed them to collapse or subservience to the West.

Egyptian finances spiraled out of control during the reign of Muhammad Ali's grandson Ismail (r. 1863–1879), who borrowed enormous sums from European bankers to pay for the completion of the Suez Canal, new palaces, Egypt's sugar industry, an opera house and theater in Cairo, a postal service, an expanded army, and a war with Ethiopia. In the mid-1870s he was

forced to sell the government's shares in the Suez Canal to the British government for one-fourth of their value. He also had no choice but to relinquish control of government revenues and expenses to English and French officials, who cut expenditures to the bone and allocated 60 percent of all expenditure to debt service. This set in motion a chain of events that led to the forced removal of Ismail from office in 1879, a nationalist rebellion led by Colonel Ahmad Urabi between 1879 and 1882, and finally the suppression of the rebellion and the establishment of a British protectorate in 1882.

Ottoman indebtedness forced Sultan Abdulhamid II (r. 1876–1909) to accept the Ottoman Public Debt Administration, an organization run by European bankers to collect taxes and make sure that interest was paid to European debt holders. Forced cutbacks in the army, the inability of the government to pay officers' salaries on time and pay any salaries at all to the soldiers, and its failure to provide the army with the resources needed to suppress rebellions in Armenia and Macedonia turned many officers against the sultan. A series of army mutinies in 1908, collectively known as the Young Turk Revolution, led to the deposition and exile of Abdulhamid, the last sultan to exercise meaningful authority over what was left of the Ottoman empire.

In Persia, where the economic prospects were bleaker and the forces of decentralization stronger, Shah Nasir ad-Din (r. 1848–1896) and his successors relied on concessions to European businessmen to finance their reform programs, but once the shahs and their entourage took their cuts, money from concessions was never enough to support more than a small poorly trained army unable to resist foreign threats or deal with internal dissent. Worse, foreign concessions deeply angered growing numbers of religious leaders, merchants, government employees, and journalists, whose demonstrations and defiance of the shah led to a brief period of constitutional government in 1906, counter-revolution and civil war in 1907 and 1908, and the partition of the country between Russia and England in 1908. Like Egypt and the Ottoman empire, Persia ran out of time in the race to avoid collapse and subjugation.

—James H. Overfield

Persia under the Zand and Qajar Dynasties to 1900

During the periods of rule by the Zand (1750–1794) and Qajar (1794–1925) dynasties, Persia evolved from a collection of tribal territories that emerged during a period of political turmoil in the early 1700s to a state ruled by Qajar monarchs, who in the nineteenth century took the first steps to modernize Persian society and government. Their efforts had only limited success, and the first years of the twentieth century were marked by revolution, political conflict, and the imposition of British and Russian control over much of the country.

After creating an empire stretching from Iraq to Afghanistan, Persia's ruler, Nadir Shah (1688–1747), was assassinated in 1747, resulting in the collapse of his domains. Following a period of tribal conflict, Karim Khan Zand (r. 1760–1779), a tribal leader and general under Nadir Shah, unified most of Persia and, after taking the title of "regent" of the people" (*vakil-al-ra'aya*), established his capital in Shiraz. A beneficent ruler and political reformer, Karim established a reasonably efficient system of administration, with his relatives, local nobles, and tribal chieftains collecting taxes and carrying out his decisions. He subsidized food prices, kept taxes low, and used state revenues for infrastructure projects such as constructing state granaries. However, Karim's failure to designate a successor led to a new series of tribal conflicts upon his death in 1779.

The chief of one of the Qajar tribes, Agha Mohammad Khan, seized power in 1794, declared himself shah in 1796, and made Tehran the new capital. Qajar power was consolidated by his successor Fath Ali Shah (r. 1797–1834), who, like the Zands, at first relied on princes and local tribal leaders to collect taxes and raise troops. Many provincial leaders resisted Qajar rule, and during the nineteenth century efforts were made to transfer administrative responsibilities to provincial officials appointed by the central government. Nonetheless, throughout the Qajar period the central government's control over the provinces remained weak, and abuses and corruption remained widespread.

The Qajars also had to cope with threats from European powers. Fath Ali fought a

► TURKIC RULE IN PERSIA

Persia is usually associated with ethnic Persians and their language. However, beginning in the mid-eleventh century, its rulers were predominantly ethnic Turks from the Oghuz tribal federation. The Turkic tribes known as the Qizilbash were behind the founding of the Safavid empire in 1501, under which most Persians were converted to the Shia branch of Islam. In the late eighteenth century Persia was ruled by the non-Turkic Zands, who were ethnic Luris, a people related to the Kurds. The Qajars, on the other hand, came from one of the Qizilbash tribes. The general trend in Iranian statecraft during the Zand and Qajar period was that of Turkic or Luri tribal forces in control of the central government, with some of their domains administered by Persian officials. The person who ended Qajar rule, Reza Khan Pahlavi, was from the province of Mazandaran, whose people are related to ethnic Persians but have their own language, known as Manziki.

—*Ibrahim Al-Marashi*

disastrous war with Russia from 1804 to 1813, resulting in the loss of the northern Caucasus. Despite the efforts of Crown Prince Abbas Mirza to modernize the military, defeat in the second Russo-Persian War (1826–1828) resulted in further losses in the Caucasus. Russian successes prompted countermeasures by the British, who provided counsel to the Persians in their negotiations with the Russians and intervened in Persian politics by providing military force to bring to power Abbas Mirza's son, Mohammad Shah. They also provided Mohammad Shah with subsidies during his reign from 1834 to 1848. Their goal was to block Russian influence in the region and thereby protect their interests in India.

Efforts to modernize Persian society began during the long reign of Naser al-Din Shah (r. 1848–1896). This period witnessed the introduction of a postal system, a telegraph system, and the country's first newspapers; planning for a limited railway system; and the founding of the polytechnic school Dar al-Funun in 1851 to train upper-class Persian youths in medicine and engineering. The military created the Persian

Cossack Brigade, modeled on the Russian army and trained by Russian officers. Efforts of Naser al-Din's ministers Amir Kabir and Mirza Hussein to reform the bureaucracy by tackling corruption were resisted from those who benefited from the status quo. Overall, reform and modernization in Qajar Persia had limited results.

Both Naser al-Din and his successor Mozaffer al-Din Shah (r. 1896–1907) faced severe budgetary shortfalls, in part the result of the six visits to Europe undertaken by the two rulers. This resulted in increased reliance on concessions to European businessmen, who in return for making a lump sum payment, promising to pay a share of anticipated profits, and providing the requisite bribes received control over various segments of the Persian economy. The concessions were deeply resented by the Persian people, who in 1892 responded to a recently granted tobacco concession by boycotting all tobacco products until the concession was withdrawn. In 1908 oil was found in the south of Persia, and managed under a concession to the Anglo-Persian Oil Company (APOC). This gave Britain another stake in Persian domestic affairs, as oil would become crucial for its navy, particularly during World War I.

By the early 1900s opposition to Qajar rule was widespread, and in 1905 a revolt staged by merchants in Tehran set off a series of events that resulted in a Persian constitutional revolution and the election of the first Persian parliament in 1906. During the turmoil that followed, Russia and Great Britain announced the Anglo-Russian Entente, by which Russia laid claim to influence in northern Persia and Great Britain laid claim to southeastern Persia. Qajar rule effectively ended when Reza Khan Pahlavi, commander of the Persian Cossack Brigade, took control of the government in 1921 and sent the reigning Qajar shah into exile in 1923. The Qajar era officially ended when the Persian parliament declared Reza Khan shah in 1925.

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Bibliography

Banuazizi, Ali, and Myron Weiner. *The State, Religion, and Ethnic Politics: Afghanistan, Iran, and Pakistan*. Syracuse, NY: Syracuse University Press, 1986.

Foran, John. *Fragile Resistance: Social Transformation in Iran from 1500 to the Revolution*. Boulder, CO: Westview, 1993.

Kamrava, Mehran. *The Political History of Modern Iran: From Tribalism to Theocracy*. Westport, CT: Praeger, 1992.

Keddie, Nikki R. *Modern Iran: Roots and Results of Revolution*. New Haven, CT: Yale University Press, 2006.

The Tanzimat Era in the Ottoman Empire

Two reforming decrees of the Ottoman central government, the Rose Garden (Gülhane) Decree of 1839 and the Imperial Rescript of 1856, became landmarks of administrative, social, and economic policy in the empire. These decrees aimed to win continued western European economic and political support, articulate principles for the conduct of administrative reform of the Ottoman government, and establish the ongoing commitment of the Ottoman government to economic and social development. The Rose Garden Decree declared that the sultan guaranteed the life, property, and honor of all Ottoman subjects and the equality of all before the law, regardless of religious affiliation. The decree also announced a system of conscription for the Ottoman Army and the abolition of tax farming, with a system of rational taxation to replace it.

The period from the issuing of the Rose Garden Decree by Sultan Abdulmejid I in 1839 to the suspension of the constitution by Sultan Abdülhamid II in 1878 is often referred to as the era of the Tanzimat ("Reorganization"). Political initiative for the changes in this era typically lay less with the sultans—Abdülmecid (r. 1839–1861), Abdulaziz (r. 1861–1876), Mustafa IV (r. 1876) and Abdülhamid II (r. 1876–1909)—than with the leading officials of the Ottoman civil bureaucracy, the "men of the Tanzimat." Hence the term "Sublime Porte" is often used as a synonym for the Ottoman government in this era. The term was a translation of Bab-ı Âlî, the name of the building where the offices of the Ottoman administration were housed, as contrasted with the palace, the residence, and offices of the sultan.

The ascendancy of the civil bureaucracy is evidence of the almost complete inability of the

Islamic ulema to provide leadership for the empire during this time. In an age calling for visionary thinking to meet new and unprecedented challenges, their obsolete intellectual preparation seemed to leave the ulema paralyzed. Even more surprising was the eclipse, for the moment, of the military leadership in directing the reform movement. The weak performance of the Ottoman military in the 1820s and 1830s showed up inadequacies not only of military administration but also of officer training, which would take two generations to reform. By 1876, Ottoman armies could defeat weaker Balkan states and, in the early stages of the Russian war in 1877, achieve moderate success against the Russian Army. It was not until the turn of the twentieth century, however, that a competent officer corps reemerged in the Ottoman empire.

Mustafa Rashid Pasha, a young career administrator who had served as ambassador to Paris, led the Council of Justice. A creation of Mahmud II, now revised, enlarged, and given consultative and quasi-legislative functions, the Council of Justice was led by the men of the Tanzimat who spearheaded the reform movement in its initial phase. Mustafa Rashid Pasha served as grand vizier six times before his death in 1858, and he or one of his protégés Ali Pasha and Fuad Pasha held the powerful post of foreign minister continuously until 1871 except for a brief period in the 1840s.

The Council of Justice began a reorganization of provincial government and revenue collection in 1840. Taxation was simplified. The main taxes, the tithe on Muslims, a poll tax on non-Muslims, and a group of other fees were to be collected by government officials; tax-farming, contracting, and franchising were abolished. Meanwhile a general conscription began, and the state sponsored the building of factories for the production of military supplies and clothing. Although direct taxation and conscription fell far short of expectations due to a shortage of trained officials, experimentation with ways of improving central control of the provinces—including a brief trial of a representative provincial council in 1845—continued until 1858.

Legal changes accompanied these efforts. A new penal code and a new commercial code were issued in the early 1840s. The commercial

code, revised periodically throughout the 1850s and 1860s, was designed to accommodate the economic and commercial liberalism of the Tanzimat. Commercial tribunals composed of mixed boards of judges, Muslim and Christian, including Europeans, administered it after 1847. The Ottoman Bank, founded in 1841, channeled European investment in the empire. In spite of its name, it was not Ottoman-owned.

The second phase of the Tanzimat era began with the Imperial Rescript of 1856, which reiterated the principles of 1839 and added some new measures. After the death of Mustafa Rashid Pasha in 1858, the dominant figures were his pupils Ali Pasha and Fuad Pasha. The Council of Justice continued to evolve, being at first divided into two bureaus in 1856, one a specifically legal body and the other called the High Council of the Tanzimat, with Fuad Pasha as president. The two bureaus merged in 1860 and then were once again divided in 1868, one becoming a nascent Ministry of Justice under the important scholar and jurist Ahmed Cevdet Pasha, the other a State Council on which sat both Muslims and Christians. Cevdet Pasha became the principal author of a new civil code, usually called simply the Mecelle, promulgated between 1869 and 1876. Cevdet represented a slightly different strain of Tanzimat thinking, being less apt to distinguish imperial law from Islamic law than Rashid Pasha, who had once responded to a question about the relationship of his civil code to Sharia (Islamic holy law) that “this has nothing to do with sharia.” Significantly, he had titled the 1840 penal code *kanun*, evoking the classical Ottoman ideology of the parallel authority of Islamic and sultanic law. Cevdet’s interest was in exploring the integration of faith with various aspects of imperial life. Under his authorship, the Mecelle was essentially a codification and rationalization of Islamic law for imperial purposes. It laid the foundation of all subsequent Ottoman, Turkish, and Middle Eastern legal reform.

The status of non-Muslims in the empire became increasingly ambiguous during the era of the Tanzimat. In pursuit of the aim of the equality under the law of all Ottoman citizens, the Imperial Rescript of 1856 abolished the poll tax

on non-Muslims. Now non-Muslims were subject to military conscription, but they could pay an exemption fee, which became essentially the equivalent of the old poll tax.

—Douglas A. Howard

Bibliography

- Cleveland, William L. *A History of the Modern Middle East*. Boulder, CO: Westview, 1994.
- Davison, Roderic H. *Reform in the Ottoman Empire, 1856–1876*. Princeton, NJ: Princeton University Press, 1963.
- Findley, Carter V. *Bureaucratic Reform in the Ottoman Empire: The Sublime Porte, 1789–1922*. Princeton, NJ: Princeton University Press, 1981.
- Findley, Carter V. *Ottoman Civil Officialdom: A Social History*. Princeton, NJ: Princeton University Press, 1989.
- Mardin, Şerif. *The Genesis of Young Ottoman Thought: A Study in the Modernization of Turkish Political Ideas*. Princeton, NJ: Princeton University Press, 1962.
- McCarthy, Justin. *The Ottoman Turks: An Introductory History to 1923*. New York: Longman, 1993.
- Yapp, M. E. *The Making of the Modern Near East, 1792–1923*. New York: Longman, 1988.

The Young Ottomans

The Young Ottoman movement, which consisted of a loose coalition of Muslim intellectuals and literary figures, arose between 1865 and 1867 in response to the failure of the Tanzimat reforms. These mid-nineteenth-century reforms aimed at liberalizing and modernizing the Ottoman state to prevent the continuing European economic and military penetration of Ottoman lands. Young Ottoman thinkers wanted to combine state-strengthening Tanzimat reforms with Western political ideas and Islamic political traditions. They believed that Islam was compatible with modernization and protested against what they perceived to be the insular inner circle that controlled the Ottoman empire.

Although the Young Ottomans wanted to adopt certain Western political ideas, they believed that such reforms must respect Islamic tradition. Therefore, they did not call for democracy or the cessation of the sultanate. Rather, they argued that Islamic tradition called for

consensus and consultation between the sultan and his top Islamic advisers. They also called for a constitution that would provide checks on the sultan's absolute power and bring the empire more in line with their perceptions of a proper Islamic state. In this way the Young Ottomans hoped to force the sultan to consider the opinions of Islamic thinkers outside his household.

The most important Young Ottoman thinker was Namik Kemal (1840–1888), a poet and journalist. Kemal called for greater equality between men and women in the context of Islamic tradition and also was one of the first advocates for Pan-Islamism. Later thinkers adopted his concept of Pan-Islamism and argued that the Muslim world needed to unite, if not politically then at least in spirit, against Western encroachments on their sovereignty. Kemal and his Young Ottoman colleagues were aided by the spread of newspapers in the Ottoman world during the 1860s, a development that allowed them to disseminate their ideas.

Many Young Ottoman thinkers were forced into exile in Europe in the late 1860s because of their antigovernment sentiments. Although they were allowed to return in the early 1870s, their movement had been stifled. In reality, they had never threatened to gain actual political power. While Young Ottoman thinkers, including Kemal, took part in the constitutional assemblies in the 1870s, their ideas were drowned out by other voices, who also wanted a constitution but disagreed with the path that the Young Ottomans envisioned. The Ottoman sultan Abdulhamid II allowed the creation of a constitution in 1876, but it lacked the specific Islamic emphasis that the Young Ottomans had demanded and was, for all intents and purposes, suspended within two years.

The Young Ottomans were the first serious intellectual Ottoman group that protested against the inherent weaknesses of the Tanzimat reforms. Although they never gained political power, they had a great influence on later Ottoman history. Their emphasis on maintaining the territorial integrity of the Ottoman empire later impressed Young Turk thinkers, while their ideas on Pan-Islamic solidarity influenced later figures such as Jamal ad-Din al-Afghani (1838–1897)

and Muhammad Abduh (1849–1905). One of the main weaknesses of Young Ottoman thought was its inability to harmonize the emphasis on Islamic solidarity with Ottoman nationalism. Thus, later thinkers adopted some of their ideas but looked for other nationalist ideas to ensure the survival of the Ottoman state.

—Jonathan Sciarcon

Bibliography

- Findley, Carter Vaughn. "The Advent of Ideology in the Islamic Middle East (Part II)." *Studia Islamica* 55 (1982): 147–180.
- Kayali, Hasan. *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire, 1908–1918*. Berkeley: University of California Press, 1997.

The Era of Abdulhamid II

The era of Sultan Abdulhamid II (r. 1876–1909), the last sultan to wield absolute power in the Ottoman empire, represented in part a continuation of the reforms initiated in the Tanzimat era during the reigns of Mahmud II and Abdulmejid I. It also, however, represented a departure for the era of reform. Abdulhamid II's reign built on the Tanzimat by continuing to guarantee citizens' rights, regardless of religious affiliation, and strengthening the power of the state over the provinces. It also continued many of the earlier efforts to modernize the Ottoman economy and military. This era saw a break from the recent Ottoman past, however, in the sultan's emphasis on the Islamic aspect of Ottoman society and his rejection of constitutional reform.

Abdulhamid II assumed the sultanate in the tumultuous year of 1876, when no fewer than three different sultans held the throne. During the brief reign of Murad V, who was forced out of office in August because of a nervous breakdown, Ottoman reformers under the direction of Grand Vizier Midhat Pasha had written a constitution for the empire that included a provision for an elected parliament. Abdulhamid II at first supported the constitution, but in 1877 after the first parliament met for a few weeks, the sultan adjourned it and suspended the constitution. His rejection of constitutionalism paved the way for

four decades of autocratic rule but tarnished his image among intellectuals and reform-minded army officers.

During Abdulhamid's reign the Ottoman empire became less diverse and more Islamic. Following a disastrous war against the Russian empire and the political settlement of the Treaty of Berlin in 1878, the Ottomans were deprived of most of their European Balkan provinces. The result was that the Ottoman empire lost most of its Christian subjects and became a predominantly Islamic empire. Partly for this reason, the sultan began to emphasize his role as caliph, or leader of the worldwide Islamic community. Although his predecessors had viewed the title of "caliph" as minor and basically honorific, Abdulhamid, a devout Muslim, viewed the new emphasis on his role as caliph as a way of gaining support from his Muslim subjects and thereby strengthening his rule. Although this policy was a reversal of the secularism of the Tanzimat era, in other respects Abdulhamid's reign saw the weakening of certain Islamic traditions. Girls, for example, gained access to the public schools created during his reign, and approximately one-third of all girls were attending primary school by 1900. In addition, in the major cities upper-class women began wearing lighter, thinner veils in public.

Abdulhamid faced a severe financial crisis in the 1870s when the Ottomans were unable to make payments on the government's foreign debts. Defaulting was not an option, both to avoid humiliation and to continue to attract the investments needed to maintain the government's programs for military reform and economic development. Thus, in 1881 the Ottomans accepted the Ottoman Public Debt Administration, which was European-run, and ensured that Ottoman revenue was first and foremost used to repay European loans. Although this saved the Ottoman state from bankruptcy, it was an embarrassment to many Ottoman subjects and a painful reminder that European powers had come to dominate much of the Ottoman economy.

The Ottoman state made substantial economic progress during the reign of Abdulhamid II. A major goal of the administration was railway construction, much of which was financed and controlled by Europeans, but the Hijaz railroad, which linked Syria and western

Arabia, was financed by the Ottomans themselves. Despite such examples of economic progress, the perceived weaknesses of the Ottoman state and the suppression of the Constitution of 1876 resulted in growing opposition to Abdulhamid's rule, with the Young Turks becoming the most important opposition group. The Young Turk movement, which began in 1889, initially attracted the support of young professionals and military men who believed that Abdulhamid's oppressive rule was stifling Ottoman development. The Young Turks also were concerned with further divisions within the Ottoman state and fiercely opposed nascent Armenian nationalism. After being forced underground during the 1890s as a result of government oppression and harassment, the Young Turks gained prominence in the early years of the twentieth century, establishing a political organization known as the Committee of Union and Progress in 1906. Young Turk leaders gained positions of command throughout the Ottoman military, most notably in Ottoman Macedonia. Following Abdulhamid's refusal to reinstate the constitution in 1908 amid Young Turk threats, the Macedonian Army marched on Istanbul. Abdulhamid II restored the constitution but was deposed the following year, effectively ending the approximately 600-year period of near-absolute rule, at least in theory, of the Ottoman sultans.

—Jonathan Sciarcon

Bibliography

- Hanigoglu, M. Sükrü. *A Brief History of the Late Ottoman Empire*. Princeton, NJ: Princeton University Press, 2008.
- Kayali, Hasan. *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire, 1908–1918*. Berkeley: University of California Press, 1997.
- Quataert, Donald. *The Ottoman Empire, 1700–1922*. 2nd ed. Cambridge: Cambridge University Press, 2005.

Napoleon in Egypt

In 1798 Napoleon Bonaparte and his troops landed in Egypt, forever changing Egypt's political history and adding fuel to the British-French military, economic, and political rivalry. Bonaparte's army was accompanied by a group

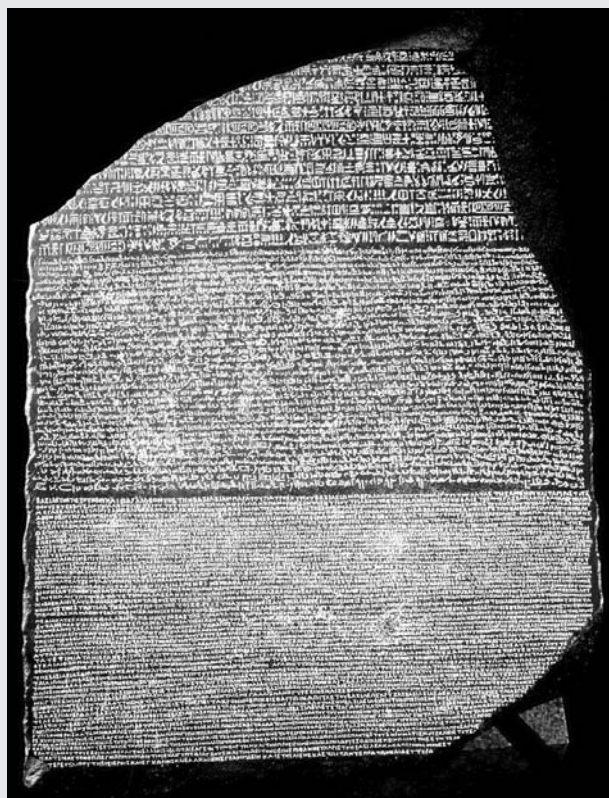
THE ROSETTA STONE

One of the most famous finds of Bonaparte's soldiers was the large basalt Rosetta Stone, discovered by accident in 1799 while soldiers were digging the foundations for a fort. In 1801 the stone became British property and was installed in its current home in the British Museum. The French were only allowed to keep a copy of the stone.

The inscription on the stone, composed around 200 BCE, is written in Greek, Demotic (a cursive Egyptian script), and hieroglyphs. While scholars could easily read Greek, knowledge of hieroglyphs had been lost.

Two individuals, Thomas Young and Jean-François Champollion, raced to become the first to be able to read and understand the ancient Egyptian hieroglyphs. The victory went to the Frenchman. In September 1822 Champollion realized that the Egyptian royal names were encircled within a cartouche (an oblong enclosure with a horizontal line at one end), allowing him to compare the names in the Greek and hieroglyph sections. This enabled him to understand the phonology of the hieroglyphs. From there, he applied his knowledge of Coptic (the latest stage of the Egyptian language) to create a rudimentary but monumentally important grammar of ancient Egyptian.

According to legend, Champollion went sleepless for several days working on the decipherment, then burst into his brother's office the morning of September 14 to announce, "Je tiens l'affaire! [I've got it!]," before collapsing and remaining in bed for nearly a week. Although he died in 1832 at the age of 42, his contributions to Egyptology were immense. Once Egyptian hiero-



The Rosetta Stone, found by Napoleon I's soldiers in 1799 and later translated by Jean-François Champollion, was the key to deciphering Egyptian hieroglyphics. It has the same passage inscribed in Greek, Egyptian demotic, and Egyptian hieroglyphics. (Jupiterimages)

glyphics were understood, the study of ancient Egypt made rapid strides.

—Tracy Musacchio

of approximately 150 savants—scientists, engineers, naturalists, physicians, and artists—who as a reflection of Bonaparte's Enlightenment ideals were given the task of studying Egyptian topography, culture, and ancient monuments. Militarily, the French three-year expedition into Egypt ended in defeat for Bonaparte, but his career thrived nonetheless. In addition, the French cultural legacy in Egypt and its impact on the study of Egypt by the West endure.

The reasons for Bonaparte's invasion of Egypt were both political and personal. Ostensibly, the

Directory (the five-man executive board that held executive power in France between 1795 and 1799) approved Bonaparte's invasion of Egypt because the Isthmus of Suez and the Red Sea provided strategic access to India, where Great Britain had established its political authority since the 1750s. The French also envied Britain's overseas holdings and considered Egypt a potentially profitable economic base for trade in the Middle East. For his part, Bonaparte, only 28 years old in 1798, anticipated that such an endeavor would bolster his image and further

his career at a time when his successful Italian campaign was winding down. Finally, Bonaparte recognized Egypt as a powerful symbol: having been a colony of the Roman empire, French control of Egypt would be a metaphor of imperial strength.

Egypt at the time of Bonaparte's arrival was a part of the Ottoman empire but was ruled by the Mamluks (a military group who had seized power in Egypt in the thirteenth century), and it would be the Mamluks, still perceived by many Egyptians as foreigners despite several centuries of control, whom Bonaparte would have to defeat. Bonaparte arrived in Alexandria on July 1, 1798, having briefly stopped en route in Malta to claim it for the French. Alexandria fell within a few hours of the French arrival, and his troops advanced toward Cairo. Once there, they met the Mamluks in two crucial battles in July: the Battle of Shubrakhit on July 12 and the Battle of the Pyramids on July 21. The Mamluk troops had no experience with square battalions like those of the French army and were no match for Bonaparte, who tested his skills against the Mamluks at Shubrakhit and subsequently won a resounding victory at the Pyramids.

Bonaparte's success was short-lived, however. Not two weeks after the Battle of the Pyramids, the French met the British in naval combat at the Battle of the Nile. The British, under the leadership of Horatio Nelson, had pursued the French from Italy to Malta and finally caught up with them in Egypt on August 1 near Abu Qir Bay. The two sides battled overnight; by the morning of August 2, the British had won a decisive victory in a battle in which 1,700 French sailors lost their lives. Four French ships escaped, but the remaining ten were either captured or were destroyed by fire.

Learning of the French defeat, the Ottoman sultan Selim III saw this as a chance to attack the weakened French forces in order to reassert his authority over Egypt. He sent two armies to Egypt, and in response Bonaparte headed north into Syria with nearly 13,000 troops. The two sides met at Jaffa, a city on the Mediterranean coast in present-day Israel. The French besieged the city and brought it under French control in early March. After making the controversial decision to execute several thousand enemy troops,

Bonaparte ordered his troops to advance toward the Ottoman fortress at Acre. Bonaparte's troops, weakened by hunger, abnormally wet and cold weather, and a plague epidemic, conducted seven large-scale assaults but were unable to take the fortress. After a failed assault on May 10, Bonaparte ordered a retreat. To hasten the retreat, he abandoned approximately 2,000 of his wounded or plague-stricken men. Two thousand more died in the retreat to Egypt. By the time he returned to Egypt, he was increasingly focused on the political situation in France. In August 1799 he returned to France, and in November he led the coup that overthrew the Directory and elevated him to first consul.

Bonaparte from the outset had conceived his invasion of Egypt as a military and scientific venture. The savants who accompanied him organized their mission into the Commission des Sciences et Arts d'Égypte, which later became the foundation for the Institut de l'Égypte (modeled after the Institut de France, France's premier learned society). The Institut de l'Égypte was made up of four sections: mathematics, physics, political economy, and literature and art. In addition to aiding Bonaparte and his troops in practical matters of warfare, including mapmaking, they collected data on Egypt's monuments (modern and ancient), people, customs, flora, and fauna. Their masterwork was *Description de l'Égypte*, which fueled an eager European public's desire for detailed and accurate information on the exotic Orient. The *Description* was a massive undertaking, resulting in the publication of nine volumes of text, ten volumes of plates, and one volume of description of the plates between 1809 and 1826. The *Description* was later published in several different editions ranging from 20 to 37 volumes, all of which are notable for their beautiful and detailed engravings and some of which are notable for their size: one edition measures 39 inches by 31 inches (99 centimeters by 79 centimeters). Although the decipherment of hieroglyphs rendered many of the text volumes obsolete, Egyptologists today still consult the *Description* for its accurate depictions of the temples and monuments as they were before European looting removed, damaged, or destroyed many of the antiquities.

The cultural impact of the French invasion was still felt years after Egypt gained its independence. For instance, France created and maintained Egypt's antiquities service (well into the twentieth century) to control and regulate ancient artifacts as well as modern archaeological expeditions, all of which were conducted by foreign missions. In another example, Egyptian civil laws today are still based on French codes. While Bonaparte may not have achieved his immediate military goals in Egypt, his legacy has been long-lasting.

—Tracy Musacchio

Bibliography

- Al-Jabarti, Abd al Rahman. *Napoleon in Egypt: Al-Jabarti's Chronicle of the French Occupation, 1798*. Translated by Shmuel Moreh. New York: Markus Wiener, 1993.
- Burleigh, Nina. *Mirage: Napoleon's Scientists and the Unveiling of Egypt*. New York: HarperCollins, 2007.
- Cole, Juan. *Napoleon's Egypt*. New York: Palgrave Macmillan, 2007.
- Herold, J. Christopher. *Bonaparte in Egypt*. New York: Harper and Row, 1962.

Modernization in Egypt— Muhammad Ali and Ismail

Muhammad Ali, an Ottoman soldier from Albania, first came to Egypt with an Ottoman-British force sent to end the 1798–1801 French occupation. He obtained Ottoman approval to rule Egypt in 1805 and consolidated his control such that his heirs were in power through 1952. Muhammad Ali's rule of Egypt marked the start of almost 80 years of state-led modernization, continuing through his grandson Ismail's deposition in 1879.

Muhammad Ali was a transitional figure, as he is the father of modern Egypt, yet in many ways also a Turkish-speaking Ottoman-style ruler. He ended Mamluk rule and influence and aimed to make Egypt as independent as possible from both Ottoman and European forces. This required a European-style army and the revenue to support it. He significantly limited or abolished tax farms and *waqfs* (religious endowments) and created a state monopoly on the sale of agricultural goods. He founded a number of

factories and boosted agricultural production by introducing long-staple cotton and carrying out irrigation projects.

Education was central to Muhammad Ali's reform efforts, as he needed military officers and civil servants with new skills. He created a system of civil schools to run in parallel with existing religious schools to produce graduates with the mathematics and science skills necessary for careers in the army and administration. He also created a military academy (1821) as well as advanced schools for administration (1829), medicine (1829), surveying (1816), midwifery (1832), technical training (1834), and language and translation (1835). These schools were supported by a secondary school (1825) and several primary schools (1833) that provided a limited number of students with preliminary training. He also instituted legal reform, bringing civil law codes and courts into existence alongside traditional Islamic Sharia courts.

Muhammad Ali's reformed army and navy were called into service by the Ottomans during 1811–1818 in the Hijaz against the first Wahhabi-Saudi state, and during 1822–1823 and 1825–1828 in Crete, Cyprus and mainland Greece in opposition to Greek rebellion against Ottoman rule. He held the Ottomans responsible for the complete destruction of his navy at Navarino in October 1827, and eventually negotiated a withdrawal from Greece with Britain in 1828 against Ottoman wishes. He subsequently ordered the invasion of the Ottoman province of Syria in 1831. Egyptian forces returned to Sudan, subject of an 1820–1821 campaign, in 1840 and 1846.

European powers, who sought to preserve the territorial integrity of the Ottoman empire, were uneasy about Muhammad Ali's reforms. After the Ottomans failed to drive the Egyptian army out of Syria, the European powers intervened to force Egyptian troops to leave, which they did in 1841. Muhammad Ali was subsequently forced to pull out of the Hijaz (but not the Sudan) and limit the size of his military, but his family rule over Egypt within an Ottoman framework was guaranteed. This led to a significant scaling back of internal Egyptian reform, as Muhammad Ali was also forced to recognize the terms of the 1838 Anglo-Turkish Convention, which forbade monopolies and lowered import

THE SUEZ CANAL AND EGYPTIAN BANKRUPTCY

Construction of the Suez Canal appreciably affected Egyptian affairs in the nineteenth century. Said Pasha granted Frenchman Ferdinand de Lesseps the right to build a canal across the Suez isthmus in 1854 and gave his Suez Canal Company a 99-year lease on the land for the canal in 1856. The project's success was initially uncertain, as Britain initially attempted to block its construction, while others were certain that it would never turn a profit. Its construction ran for 10 years (instead of the predicted 7 years), starting in 1859. Khedive Ismail spent lavishly to impress European dignitaries at its opening in November 1869.

The canal's construction was costly, despite the initial use of Egyptian forced labor, and came at a time when Egypt's debt was mounting. Egypt did not draw lasting benefits from its investment because the canal did not turn a profit for its shareholders until 1872, and financial difficulties led Khedive Ismail to sell all of Egypt's shares to Great Britain for only 4 million pounds in 1875.

Given the increasing profitability of the canal, Britain drew significant benefit from its investment. Protecting its strategic interest in the canal as a route to India was one factor behind Britain's 1882 military intervention in Egypt, an action that reduced it to semicolonial status in 1882.

—Hilary Kalmbach

duties, thereby significantly decreasing state revenue and quashing local industry.

Foreign influence in Egypt increased significantly throughout the nineteenth century. Despite the restrictions placed on Egyptian economic and military growth after 1841, Muhammad Ali significantly limited state debt and foreign influence for most of his reign. His successors were less successful and were eventually forced to cede economic and then political control to Europeans in the late 1870s and early 1880s.

Ibrahim Pasha took over the reins of government from his senile adopted father in 1848 but died in the same year and was replaced by a grandson, Abbas Pasha. While Abbas neglected his grandfather's reformist agenda, he did give a British engineer a concession to create rail links between Alexandria and both Cairo and Suez. Muhammad Said Pasha, one of Muhammad Ali's

younger sons, took over in 1854 and is most remembered for giving Ferdinand de Lesseps the Suez Canal concession. While this concession enabled a major development project, it ended up contributing to Egypt's loss of financial and political independence.

Ismail Pasha, Muhammad Ali's grandson through Ibrahim, came to power in 1863 and launched social, economic, cultural, and administrative reforms. Ismail laid out a major new quarter in Cairo between the Islamic city and the Nile River, significantly improved public works (mainly in the new quarter), and reestablished and expanded Muhammad Ali's educational projects, all with the help of Minister of Education and Public Works Ali Mubarak Pasha. Under Ismail's rule the Suez Canal was completed, a postal service was instituted, new sugar and textile factories were built, and the railroad and telegraph networks were expanded.

Ismail returned from Paris's Universal Exposition of 1867 determined to transform Cairo into a modern city before the grand opening of the Suez Canal. He mapped out new streets using a grid system, planned several arteries that would cut through the fabric of the old city (only one was completed), and built both an opera house and a new road to the Giza Pyramids. With respect to education, Ismail reinstated the Ministry of Schools, revamped the civil higher education system, and vastly expanded civil primary and secondary schools in order to increase the number of students qualified to enter the higher schools.

Ismail also sought to increase Egyptian territory and sovereignty. He launched military campaigns in Sudan, Ethiopia, and Uganda. His extravagant spending was not only aimed at impressing Europeans but also was directed at Ottoman officials, who gave Ismail greater independence (including a larger army and the right to negotiate with Europeans on commercial and financial matters), the title of "khedive," and a new succession law based on primogeniture. Expanding his influence through bribery instead of military might, as Muhammad Ali had done, only decreased Egyptian independence in the long run.

Ismail's massive projects ground to a halt as Egyptian debt, which had begun to increase

under Abbas and spiraled under Said and Ismail, mounted in the 1870s. A European commission seized control over Egyptian finances in 1876 and 1878 and forced Ismail to retire in favor of his son Taufiq in 1879.

The state-led modernizations of 1805–1879 laid the groundwork for the society-driven modernization of the subsequent 50 years. The military, educational, and administrative reforms of this period gradually brought native Egyptians into the highest levels of government service and created an Arabic-speaking Egyptian middle class alongside the Turkish-speaking elite. This new educated group would play a major role in subsequent modernizations, nationalist movements, and the *nahda*, or renaissance, of Arabic language and thought. The transition of power between Turkish and Arabic-speaking groups was not entirely smooth, however, as shown by the role of disgruntled Arabic-speaking army officers in the 1881 Urabi Revolt.

—Hilary Kalmbach

Bibliography

- Cuno, Kenneth M. *The Pasha's Peasants: Land, Society, and Economy in Lower Egypt, 1740–1858*. Cambridge: Cambridge University Press, 1992.
- Fahmy, Khaled. *All the Pasha's Men: Mehmed Ali, His Army and the Making of Modern Egypt*. Cambridge: Cambridge University Press, 1997.
- Hunter, F. Robert. *Egypt under the Khedives, 1805–1879: From Household Government to Modern Bureaucracy*. Cairo: American University in Cairo Press, 1999.
- Lawson, Fred H. *The Social Origins of Egyptian Expansionism during the Muhammad Ali*. New York: Columbia University Press, 1992.
- Marsot, Afaf Lutfi al-Sayyid. *Egypt in the Reign of Muhammad Ali*. Cambridge: Cambridge University Press, 1984.

British Colonialism in Egypt

Technically part of the Ottoman empire, nineteenth-century Egypt enjoyed de facto independence since Muhammad Ali (1769–1848) became its viceroy in 1805. Under his grandson Ismail (1830–1895), the nation accumulated a tremendous foreign debt that peaked at £91 million in 1875. Even after negotiations reduced this amount, Ismail had to allocate 66 percent of

government revenues to paying back European banks and bondholders.

Desperate for ready cash, Ismail sold Egypt's share of the newly opened Suez Canal to Great Britain in 1875. This was hardly enough to cover even a year of expenditures but greatly increased England's interest in Egypt. Four years later, in 1879, Britain and France forced Ismail to accept Dual Control, under which a British and French administrator supervised the collection and disbursement of all Egyptian revenues. His resistance to this loss of sovereignty led to Ismail's replacement by his son Tewfik (1852–1892) during the same year.

Under Tewfik, Egypt sought to appease the Great Powers by paying down the debt as quickly as possible. This entailed massive cutbacks in government spending and a significant increase in the number of French and British “advisers” to the Egyptian government. A nationalist reaction fueled the rise of the army officer Ahmad Urabi (1841–1911), whose 1881 coup briefly established a new government. As crowds yelled “Egypt for the Egyptians” and with Urabi's regime suggesting renegotiation of the debt, Britain intervened, landing troops at Alexandria and Suez.

Urabi's “revolution” ended when the Egyptian army was defeated by a larger British force at Tel el-Kebir (September 13, 1882). Foreign rule ensued, with England dominating Egypt from September 1882 until June 1956. The period of 1882–1914 is often referred to as the “veiled protectorate,” when Britain controlled Egyptian affairs behind a screen of Egyptian politicians and civil servants. This “veil” lifted at the beginning of the Great War, when Great Britain openly declared its domination of Egypt.

The “veil” provided useful diplomatic cover for England, as France, Italy, and Germany sought a diplomatic rationale to inject their own authority over Egypt. Outright colonial status for Egypt, without the support of at least one other Great Power, would have placed Britain in a difficult position. The fiction that Egypt was still part of the Ottoman empire and that British officials were simply advisers allowed room to maneuver in the complex world of late-nineteenth-century diplomacy. It also diffused local opposition, thus necessitating a garrison of only 5,000 soldiers.

► THE DINSHAWAY INCIDENT

Many European colonial officials were devoted sportsmen. Hunting was especially popular and was viewed not only as a source of enjoyment but also as a way to improve shooting and riding skills. British military men were no exception; their memoirs seldom omit references to their hunting exploits.

The Egyptian garrison focused on bird hunting, which explains why four or five British officers were shooting pigeons near the village of Dinshaway (Denshawai) on June 13, 1906. Either unaware or uncaring, the group managed to kill pigeons kept by the villagers as a source of meat, eggs, and manure and also set fire to grain on the threshing floor. The villagers had already lost pigeons to another hunting party and, brandishing clubs, confronted this group. The officers opened fire, wounding a woman. Overwhelmed by the large crowd, several officers attempted escape.

Captain Seymour Bull, already wounded, ran until he died from sun stroke or heat exhaustion. An Egyptian peasant who came to the aid of Bull was shot when discovered by British troops, who presumed that he had murdered the Englishman.

Evelyn Baring, the British proconsul, already bothered by nationalist complaints, overreacted and demanded stiff penalties for what he saw as calculated violence against the British occupation. Arrests followed by a special tribunal resulted in 4 villagers executed and 2 sentenced to life imprisonment, while the remaining 46 received jail time or flogging.

Egyptian reaction was swift, uniform, and angry. The Dinshaway incident united town and country, elites and farm labor, Coptic Christian and Muslim, against the British occupation.

—John Dunn

Britain's success is also attributed to a string of energetic proconsuls: Evelyn Baring, Lord Cromer (1841–1917); Eldon Gorst (1861–1911); and Horatio Kitchener (1850–1916). Challenged with paying off the debt by cutting government expenditures while supporting economic expansion and maintaining order, this trio was markedly successful. The three men focused on expanding agricultural production through improved irrigation plus a strenuous anticorruption campaign. By 1889 the Egyptian government produced a surplus; six years later this reached the very considerable figure of £1 million. The debt crisis was over.

Despite economic improvement, Britain's hold over Egypt was never popular outside select financial circles and certain non-Muslim groups. Egyptian Muslims were at best neutral and more frequently were hostile. Native opposition to British domination centered on Abbas II Hilmi (1874–1944) and his protégé, Mustafa Kamil (1874–1908). The former was Egypt's khedive, heir to Tewfik, but very much under the thumb of Baring, Gorst, and Kitchener. The latter, an up-and-coming lawyer, became a powerful nationalist leader and editor of a popular newspaper, *Al-Liwa* (The Standard).

Egyptian nationalists were drawn mainly from the ranks of the Egyptian elites: educators, lawyers, writers, and government officials. While divided by competing visions for an independent Egypt, most could agree on the need to end British control. Mustafa Kamil argued this was best accomplished via nonviolent opposition and diplomacy. The latter tactic involved seeking support from France. After 1904's Entente Cordiale, when Britain swapped its interests in Morocco for a similar cession of French interests in Egypt, the focus shifted to the Ottoman empire.

In a peculiar move for a nationalist leader, Mustafa Kamil convinced his supporters to side with Ottoman authorities over the Taba boundary question (1906), even though Ottoman success would take Egyptian territory. Mustafa Kamil argued that opposing the boundary that the British supported was an act of solidarity with fellow Muslims that was worth the cost of some Sinai desert. Other Egyptian nationalists, unwilling to travel that road, formed rival political groups: the Party of the Nation and the Constitutional Reform Party. Mustafa Kamil's own Nationalist Party survived Taba but not his death, splintering over leadership issues.

Divided over foreign policy, Egyptian nationalists were also split on the position of Abbas II, who had reduced his support for nationalists while becoming more accommodating to the British. Both Gorst and Kitchener fueled this division, allowing limited political power to a Legislative Assembly that they hoped would pit the *khedive* against nationalists. The assassination of pro-Abbas prime minister Butros Ghali (1846–1910) made this separation violently clear.

—John Dunn

Bibliography

- al-Sayyid-Marsot, Afaf Lutfi. *Egypt and Cromer: A Study in Anglo-Egyptian Relations*. London: John Murray, 1968.
- Hunter, F. Robert. *Egypt under the Khedives, 1805–1879: From Household Government to Modern Bureaucracy*. Cairo: American University in Cairo Press, 2000.
- Sonbol, Amira, trans. and ed. *The Last Khedive of Egypt: Memoirs of Abbas Hilmi II*. Reading, UK: Ithaca Press, 1998.
- Tignor, Robert L. *Modernization and British Colonial Rule in Egypt, 1882–1914*. Princeton, NJ: Princeton University Press, 1966.
- Tollefson, Harold. *Policing Islam: The British Occupation of Egypt and the Anglo-Egyptian Struggle over Control of the Police, 1882–1914*. Westport, CT: Praeger, 1999.

Arab Nationalism before 1914

Arab nationalism before 1914 is best highlighted by the major contributors to its formation and articulation. These contributors include Muhammad Ibn Abd al-Wahhab (1703–1791), who is considered the father of Wahhabism. He sounded a call for the Arabs to rise up and restore the original purity and prominence of the Arabic-based religion. Muhammad Ali (1769–1849) and his son Ibrahim Pasha (1789–1848) sought to establish an Arab-based state in the regions of Egypt and the Levant after Napoleon's 1798 invasion of Egypt. Napoleon's invasion, though ultimately failing to establish French rule, had broken Ottoman hold over the region, making way for Ali and Pasha to assert their rule.

The writings of the French-educated Egyptian Rifa'a al-Tahtawi (1801–1873) express aspirations for the development of Arab identity. The

Syrian-Lebanese Christian Nasif Yazeji (1800–1871) drew inspiration for an Arab vision from classical Arabic literature. The Persian-Afghan scholar Jamal ad-Din ad-Afghani (1839–1897) and his disciple Muhammad Abduh (1849–1905) together coedited the modernist-oriented journal *Al-Urwa Al-Wuthqa* in Paris as a mouthpiece of Islamic and Arab renewal. The Syrian Rashid Rida (1865–1935) argued for the special status of the Arabs as leaders in the Islamic world. Abd al-Rahman al-Kawakibi (1849–1902) was, like Rida, a Syrian Muslim. Al-Kawakibi lived his final four years in Egypt, ultimately contributing two widely referenced volumes calling for Arab ethnic, cultural, and linguistic unity as distinguished especially from the Turks. Those volumes were *Taba'i al-Istibdad (The Characteristics of Tyranny)* and *Umm al-Qura*, with the latter being an alternative name for Mecca. Finally, Negib Azoury (d. 1916), an Ottoman Christian who studied in Paris, echoed arguments similar to those of al-Kawakibi in *Le reveil de la nation arabe (The Awakening of the Arab Nation)*.

The distinguishing features and emphases of Arab nationalism in the pre-1914 period can be further drawn out by focusing on the change in historical conditions that occurred for the Arab peoples with the onset of World War I. The outcome of the war resulted in the division of the Arab domains of the Ottoman empire among Britain, France, and Italy. Just before the outbreak of the war, Arab nationalist political leaders and intellectuals foresaw these impending political changes and became concerned over their implications for Arabs. This concern was given lucid expression in 1913 at the first Arab Congress in Paris, where delegates asserted their need to break from Ottoman dominion.

There were four primary reasons for this shift in political thinking among Arab nationalists. First was the failure of the Ottomans to protect the Arabs from the imperial ambitions of the West European powers. The second reason was the attempt of the Ottoman Turks to save the empire by asserting centralized control under the Committee of Union and Progress. This centralization occurred despite the 1839 and 1856 Ottoman edicts promising rights of equality to all peoples under their domain and resulted in significant restrictions on Arabs and

➤ SAYYID JAMAL AD-DIN “AL-AFGHANI”

Jamal ad-Din al-Afghani (1838–1897), was born into a Turkic-speaking Shia family in Persia. After theological training there, in 1855 he traveled to India, where he witnessed—then nearly 20 years of age—the 1857–1858 uprising of Indian nationals against British imperialism. This served as a foundational experience that shaped his lifelong vision of Pan-Islamism and his hope of uniting all Muslims against the Western imperial powers, who were increasingly intruding into Middle Eastern affairs during the course of the nineteenth century. Al-Afghani’s ideas and efforts subsequently influenced anti-imperialist movements across the Muslim Middle East, including those of Egypt, Turkey, and Iran and reaching even into the Russian empire. He appears to have been a determined, charismatic figure who found audiences among sultans, kings, and other national and religious leaders. His zeal for his cause brought him into regular conflict with many dignitaries and clergy, leading to his expulsion from Ottoman domains in 1871, Egypt in 1879, and Persia in 1892, when he was placed half-naked on horseback in midwinter and sent off to die. He somehow survived and returned to the Ottoman court, where he lived out his days as a guest of Sultan Abdulhamid II, stirring up opposition against the shah of Iran from afar and contributing to the Ottoman Pan-Islamic cause. Al-Afghani died of cancer at approximately age 60, and his burial place, although believed to be in Istanbul, was never disclosed. In 1944 what are thought to be his remains were transferred to Afghanistan at the request of the Afghan government, which awarded him official status as a national hero.

—R. Charles Weller

other non-Turkish groups within the empire. Third, the centralization efforts were accompanied by a rise in Turkish nationalism and an assertion of Turkish linguistic and cultural domination. Fourth was an increasingly perceived need among the Arabs to restore Islamic purity as well as social and political integrity through their own leadership in the face of what they saw as Turkish-led Ottoman corruption and failure; the Arabs tended to view themselves as the

original recipients of and thus proper guardians of the Arabic-based religion. This thinking was especially manifest in Wahhabism. Whatever the precise factors leading up to the shift in political thinking, Arab aspiration for independence only intensified with the shift from Ottoman to West European dominance in the region after World War I.

Most scholars suggest therefore that until the outbreak of World War I most Arab nationalists envisioned Arab nationhood more along linguistic-cultural lines, seeking to promote its development within the political framework of the Ottoman empire. If this interpretation is correct, it would mean that until the Ottoman empire began to crumble through the encroachment of the European powers in the late nineteenth century, the majority of Arab nationalists supported Ottomanism as part of their vision for Arab nationhood as opposed to calling for political secession and the founding of some type of Pan-Arab state. This support for developing the Arab nationalist agenda within instead of outside the framework of the Ottoman empire was based in both pragmatic social and political reasons as well as the fact that both the Arabs and Turks shared the Islamic faith.

The Arab nationalist movement must nonetheless be viewed in close connection to other nationalist independence movements within the Ottoman empire in the pre-1914 era. These nationalist independence movements included those in southern Greece, Bulgaria, Montenegro, Romania, and Serbia, all of which had broken free from Ottoman rule by 1878. Viewing the Arab nationalist movement in this broader context would support a more political interpretation (as opposed to ethnic or religious motivations) of Arab nationalism in the pre-1914 era. Indeed, traces of political nationalist thought are discernable among the foundational contributors to Arab nationalism highlighted above. Be that as it may, the question of how explicitly they framed and expressed their political aspirations in the pre-1914 era forms a central point of debate over whether those figures and their contributions should be technically defined as nationalist or not. Opinion on that question remains divided.

—R. Charles Weller

Bibliography

- Duri, 'Abd al-Aziz. *The Historical Formation of the Arab Nation: Study in Identity and Consciousness*. Translated by L. I. Conrad. New York: Routledge, 1987.
- Farah, Tawfic, ed. *Pan-Arabism and Arab Nationalism: The Continuing Debate*. Boulder, CO: Westview, 1987.
- Khalidi, Rashid, Lisa Anderson, Muhammad Muslih, and Riva Simon, eds. *The Origins of Arab Nationalism*. New York: Columbia University Press, 1991.
- Smith, Anthony D. *The Nation in History: Historiographical Debates about Ethnicity and Nationalism*. Hanover, NH: University Press of New England, 2001.
- Tibi, Bassam. *Arab Nationalism: Between Islam and the Nation-State*. 3rd ed. Hampshire, UK: Palgrave Macmillan, 1997.

Armenians in the Ottoman Empire

Armenians lived in the religiously, ethnically, and linguistically diverse Ottoman empire from the fifteenth to the twentieth centuries in relative peace and security as one of the empire's four main autonomous communities, known as *millet*s. Before the eighteenth century, the Armenian community was headed by the patriarch in Istanbul, who had legal autonomy and authority over the Armenians in the empire. Armenians were mostly peasants integrated with Muslims and non-Muslims (mainly Turks and Greeks) and inhabited the same towns and villages all over Anatolia. Their position began to change in the eighteenth century when growing numbers became bankers, purveyors of luxury goods, and long-distance traders. A wealthy class of people called *amiras* then emerged and challenged the traditional leadership of the Armenian community. Another challenge came from the Mekhitarist Catholic religious order aimed at the development of education and culture among Armenians under Turks. These two groups initiated an Armenian cultural revival.

The changes in the traditional structure of the Armenian community were in fact part of the changes in Ottoman society at large under the influence of Europe. The French Revolution

and the rise of nationalism inspired similar nationalist sentiments among Ottoman ethnic minorities, while European industrialization and growing military power pointed out the need of the Ottoman state to reform its administration and laws. Such reforms heightened expectations among the empire's minorities, including the Armenians.

A series of reforms was undertaken by the Ottoman government in the nineteenth century to keep the empire strong and united. The Imperial Rescript of 1839, issued by Sultan Abdulmejid, marked the beginning of the period of reform known as the Tanzimat Era (1839–1876) and also the beginning of the Armenian national awakening. Armenians were allowed to serve in the Ottoman public administration and enter Ottoman administrative and professional schools, such as the Imperial School of Administration, medical schools, and veterinary schools. These schools gave Armenians the opportunity to gain new professions and skills, engage in public affairs, and improve their social standing.

The Imperial Rescript of 1856, also issued by Sultan Abdulmejid, promised to all Armenians and other non-Muslim communities various immunities and privileges. The result was the Code of Regulations, a document drafted mainly by educated Armenians influenced by nationalist ideas and put into force in 1863 to form the basis of the political structure and representation of the Armenian community. Other non-Muslim communities, including Greeks and Jews, also had their own regulations. The regulations recognized the right of all members of the community to have a voice in determining its affairs, circumscribed the powers of the patriarch and other community rulers, and granted greater educational access to ordinary people. The regulations also institutionalized a high degree of autonomy for Armenians and thus provided further momentum to the Armenian nationalist movement. After 1863 Armenians began to make demands for further rights and privileges, which the Ottoman state was unable or unwilling to meet.

Armenians made short-term gains in the Constitution of 1876, which provided for Armenian

ARMENIAN NATIONAL CONSTITUTION

The first efforts to draft an Armenian National Constitution were rooted in the Reform Decree of 1856, which conferred a range of freedoms and privileges on all subjects of the Ottoman empire. A special committee of Armenian intelligentsia made up of educated nationalist Armenians drew up a draft regulation in 1856. It was not, however, accepted by the Ottoman government, which found the regulation too liberal and said that “no state can be within another state.” After some revisions the government approved the constitution in 1860. Although Armenians called the new regulations the “National Constitution,” Ottomans called it the “Code of Regulation of the Armenian Community.” The regulation defined the powers of the patriarch and the newly established National Assembly and stimulated education, which contributed a great deal to awakening national conscience among the younger generation.

The regulation was abolished by Sultan Abdulhamid II in 1896 due to an Armenian rebellion but was restored in 1908 by the Young Turks and was valid until the establishment of the Turkish Republic in 1923. The regulation is still used by the Armenian communities in diaspora, particularly for religious issues.

—Fatma Acun

representation in the multiethnic Ottoman parliament, where they could voice their demands and join the administration. However, the constitutional era lasted only two and a half years, and the parliament was dissolved. Another turning point in Armenian-Ottoman relations was the Congress of Berlin (1878), a meeting of European diplomats and statesmen called by German chancellor Otto von Bismarck to reconsider the treaty arrangements following the Ottoman defeat in the Russo-Turkish War (1887–1888). The meeting provided a forum for the Armenians to present their demands to a European audience. Although the delegates ignored most of the Armenians’ specific demands, Article 61 of the Treaty of Berlin stated: “The Sublime Porte [Ottoman government] undertakes to carry out, without further delay, the improvements and reforms demanded by local requirements in the

provinces inhabited by Armenians. . . . It will periodically make known the steps taken to this effect to the powers, who will superintend their application.”

After the congress, European powers (mainly Russia and Britain) increasingly became involved in the protection and freedoms of the Ottoman Armenians, which strengthened the Armenian independence movement. Despite financial difficulties, the Ottomans implemented many of the promised reforms, such as building new schools, roads, and bridges and improving security and living conditions. Life in the eastern provinces improved. However, the changes demanded by some Armenians and the Great Powers in the name of reform aimed first at local autonomy and then at independence. Reforms therefore contributed to the acceleration of the nationalist movement and the formation of proindependence political parties such as the *Social Democrat Hunchakian Party* (1887), the *Armenian Revolutionary Federation-Dashnak* (1890), and *Armenakan* (1885).

Armenian discontent was apparent. The history of Ottoman Armenians from the final decade of the nineteenth century up to the start of the First World War (1914) was the history of uprisings and rebellions against the state, followed in some cases by strong government response, including the Kumkapı Demonstrations (July 15, 1890), the First Sasun Uprising (August 13, 1894), the Van Rebellion (June 15, 1895), the Zeytun Rebellion (September 16, 1895), the Ottoman Bank Incursion (August 16, 1896), the Second Sasun Uprising (1903), and the Yıldız assassination attempt against Sultan Abdülhamid II (July 21, 1905). All of these contributed to a buildup of tension between the Armenians and the Ottoman state.

The Young Turk revolution restored constitutional and parliamentary government to the Ottoman state. Young Turk leaders believed that Armenian demands should be met in a system of representative government in which Armenians could participate in power sharing and thus become loyal citizens. However, while the Young Turks wanted a united Ottoman empire, many Armenians still sought a unified greater Armenia consisting of Ottoman, Russian, and

Persian Armenians. During the Balkan Wars (1912–1913) extensive disorders involving Armenians took place in many parts of Anatolia. When the First World War started in 1914 some Armenians fought in the Ottoman army, but others saw the war as an opportunity to push for independence. Ottoman leaders, for their part, were deeply concerned about Armenian collaboration with the Russians. The stage was set for the tragic events that followed, as the government ordered much of the Armenian population to relocate from their homes to the desert regions of Syria.

—Fatma Acun

Bibliography

- Braude, Benjamin, and Bernard Lewis, eds. *Christians and Jews in the Ottoman Empire: The Functioning of a Plural Society*. 2 vols. New York: Holmes and Meier, 1982.
- Krikorian, Mesrob K. *Armenians in the Service of the Ottoman Empire, 1860–1908*. London: Routledge; Boston: Kegan Paul, 1997.
- Şasmaz, Musa. *British Policy and the Application of Reforms for the Armenians in Eastern Anatolia, 1877–1897*. Ankara: Türk Tarih Kurumu, 2000.
- Sonyel, Salahi Ramsdan. *The Ottoman Armenians: Victims of Great Power Diplomacy*. London: K. Rustem and Brother, 1987.

■ Introduction: East Asia

In April 1895 in the Japanese coastal city of Shimonoseki, Chinese and Japanese statesmen signed the Treaty of Shimonoseki after China conceded defeat to Japan in a nine-month war, the Sino-Japanese War of 1894–1895. China had suffered 35,000 dead or wounded, twice as many as Japan, and its powerful Beiyang Fleet, made up of warships purchased from Germany and Great Britain, had been annihilated. According to the treaty, Korea, which had been a source of tension and conflict between China and Japan for more than a decade, was nominally recognized as a sovereign state but in fact became a Japanese protectorate. China also ceded to Japan Taiwan, the Liaodong Peninsula, and the Penghu Islands, a chain of small islands off Taiwan's west coast. In addition, China had to open four more treaty ports to external trade and pay an indemnity of 200 million taels (approximately eight tons of silver), a sum that was raised to 230 million taels after Japan agreed to relinquish control of the Liaodong Peninsula under pressure from Russia, Great Britain, and Germany.

The Sino-Japanese War was only one of four major wars China lost in the nineteenth century, and the Treaty of Shimonoseki was only one of a dozen treaties in which China gave away rights and territories to other powers. But this defeat and this treaty were especially galling. Even

after earlier defeats at the hands of Europeans, the Chinese still could take comfort in their centuries-old status as the dominant power in East Asia. Now this too was lost. They had lost influence in Korea and had been defeated by Japan, which had lived in the shadow of mighty China for centuries and had been dismissed by generations of Chinese as “a tiny dwarf state.”

In the wake of the Sino-Japanese War, China's fortunes continued to plummet. With its weaknesses fully revealed, the Western powers scrambled to advance loans to the cash-strapped Qing government in return for economic concessions and naval bases on Chinese territory. After they suppressed the antforeign Boxer Rebellion in 1901, seven Western powers and Japan forced China to accept the Boxer Protocol, which required China to pay reparations of 450 million taels of silver, with interest, over a 39-year period. Meanwhile, Japan went on to affirm its status as Asia's leading power after defeating Russia in the Russo-Japanese War of 1905.

Explanations for Japan's and China's starkly different experiences in the nineteenth century include long-standing cultural and political differences, dissimilar views of the outside world, and disparities in the extent and gravity of the problems they faced. In the short run, however, the roots of Japan's victory over China in

1894–1895 can be traced back to the years between the early 1850s and early 1870s, when the two nations responded to mounting foreign pressures and growing domestic problems. In Japan the catalyst was the arrival in 1853 of American warships under the command of Commodore Matthew Perry, who demanded that Japan end its seclusion policy by opening two ports to foreign trade. In 1854 the shogun's government acceded to Perry's demands and embarked on a policy of strengthening the nation's defenses until Japan was powerful enough to deal with the Western powers on equal terms. Support for this policy and the Tokugawa regime crumbled after the government was forced to make further concessions to the Western powers in the late 1850s and early 1860s. Activists known as *shishi* ("men of high purpose") launched assassination campaigns against foreigners and Tokugawa officials, disgruntled samurai and others called for reinstating the powers of the previously ceremonial emperor, and leaders of various domains ignored the shogun's authority and launched attacks on foreign ships. By 1866 the Chōshū domain, at the far western tip of Honshū and a hotbed of support for the emperor, was in full rebellion against the shogun, and when joined by Satsuma, another powerful domain in southern Kyūshū, and a number of smaller domains, this coalition defeated the shogun's army in October 1867 and formally seized power in January 1868. Although shogunal forces fought back (with the Tokugawa navy surrendering only in May 1869), a new era, called the Meiji era after the reign name ("enlightened rule") adopted by the newly restored emperor, had begun. Ruling in the emperor's name, Japan's new leaders broke with the nation's feudal past and set Japan on a path of reform that not only transformed the nation's army and navy but also introduced sweeping educational, social, cultural, and economic changes.

In China the crisis was deeper, but the response was more conservative and deliberate. Military defeats at the hands of Great Britain and France in the First and Second Opium Wars (1839–1842 and 1856–1860) had forced China to open its ports and borders to Western merchants and missionaries. The defeats also forced the Chinese to recognize the superiority of Western weaponry. In addition, midcentury

China was convulsed by three major rebellions, one of which, the Taiping Rebellion, lasted from 1850 to 1864, cost 20 million to 30 million lives, and nearly brought about the demise of the Qing dynasty.

In contrast to the bold plans of Japan's Meiji leaders, the Chinese response was cautious and ultimately inadequate. Prodded by a small core of scholar-officials, China embarked on a program of self-strengthening, which called for the introduction of Western science, weaponry, and technology but otherwise affirmed longstanding traditions of imperial rule, Confucianism, the role of scholar-officials, and the primacy of agriculture over commerce and industry. Self-strengthening resulted in the founding of arsenals to manufacture European weapons, the translation of European scientific books into Chinese, modest industrialization, and the start of a navy. But even this conservative approach to reform was opposed by hard-line Confucianists and received only tepid support from the imperial court. Even after the brief Sino-French War of 1884–1885 resulted in the destruction of China's Fujian fleet and revealed the inadequacies of its system of independent regional armies, reform lacked urgency. Army and navy officers routinely embezzled funds to line their pockets or curry favor at court, and the Dowager Empress Cixi, the *de facto* ruler of China in the late 1880s, famously diverted funds allocated to the navy to building projects at the Imperial Summer Place outside Beijing. Only after defeat by Japan in 1895 and the suppression of the Boxer Rebellion in 1901 did scholar-officials and even Cixi (who had scuttled a reform movement championed by her son the Guangzū emperor in 1898) concede that reform had to go beyond self-strengthening. In the first years of the twentieth century, as educated Chinese debated the nation's future in books and newspapers, provincial officials and the imperial court sought to create a new China along Japanese and Western lines. Increasing numbers of Chinese were convinced that such a transformation never would be achieved until the Qing dynasty was overthrown and imperial rule ended. They achieved their goal in 1911, but the result was four decades of turmoil, not the national renewal they had yearned for.

—James H. Overfield

The Nian Rebellion

The Nian (Nien) Rebellion was one of four major rebellions that wracked the Qing empire during the 1850s and 1860s. The rebellion had deep roots in the Huaibei region (the area north of the Huai River) in the provinces of Anhui, Henan, Jiangsu, and Shandong. It lasted from 1851 to 1868 and was led by a motley crew of salt smugglers, local strongmen, bandits, and disaffected peasants. The rebellion began as a localized rebellion that had no ideological or religious inspiration. Poverty and social inequities drove many to rebellion, while a disdain toward the Manchu ruling class also contributed. The rebellion was eventually suppressed by the Qing government but not before it had seriously threatened the region around the imperial capital, Beijing.

“Nian” was a term used to refer to any number of groups that arose in the Huaibei region. The earliest references go back to 1791 and were connected to illegal activities, referring to either the band that formed these groups, the torches they carried when they robbed their victims, or a type of turban they wore to disguise themselves. Before the 1850s, various groups in this region were struggling to survive through a number of illegal activities: salt smuggling, raids, robberies, kidnapping, and other clandestine activities. These groups had no central organization. They were bands of men, often connected through clan affiliation, who supplemented family incomes through illegal activities. In the 1850s these groups provided the Nian with many of their members. However, not all of these groups became Nian, and some of those who did would later stop being Nian when it was opportune to do so.

The Nian grew quickly after 1851, a year when a series of ecological disasters began that included droughts, floods, plagues, famines, and earthquakes. The worst disaster occurred in 1855 when, after several years of flooding, the Yellow River broke its bank and shifted course several hundred miles to the north. The land of this region was not good to begin with; it was generally overworked and provided a poor return to farmers and landlords alike. Coupled with the disasters, these conditions drove many desperate farmers into the arms of the growing Nian groups.

➤ ZHANG ZONGYU'S LAST DAYS

From the end of 1867 through the spring of 1868, Zhang Zongyu led his western Nian army through Shandong Province and approached both the capital in Beijing and the important port city of Tianjin. The imperial armies successfully turned back the Nian and then went on the offensive. In battle after battle they defeated the Nian, killing many of Zhang's leaders and soldiers. On July 31 the imperial forces soundly defeated the Nian and then proceeded to hound them through the countryside. The Nian were exhausted from lack of sleep and were weak from hunger. Their army began to dissolve, with many soldiers surrendering to the government, abandoning their brothers-in-arms, or dying in the ditches. Zhang refused to surrender but was unable to escape. When he tried to swim across the Tuxie River to get back to the open plains, a hail of bullets kept him from advancing. The situation was hopeless, so on August 16, bidding farewell to his eight remaining followers, he drowned himself in the river.

—Ihor Pidhainy

In 1851 after the Taiping had established themselves as a state ruling much of southern China, the Nian groups began to declare their existence openly. The Taiping were of a very different order than the Nian: the Taiping were intent on establishing a religious state and driving the Manchu “devils” out of China. The Nian did not have any such pretensions but used this opportunity to establish themselves. In 1852 there was a general meeting of various Nian groups, and Zhang Luoxing, a salt smuggler and warlord, was recognized as their leader. Zhang led Nian armies throughout the region, capturing and looting towns and then fleeing and evading government forces sent to suppress the movement. The Nian were also cooperating with the Taiping, whom they imitated in a number of ways: the Nian organized their troops on a similar banner system and adopted the appearance of Taiping flags and uniforms. The Nian leaders also accepted titles that the Taiping granted them. However, the Nian were distinctly independent of the Taiping leaders and often frustrated the Taiping on account of a lack of coordination among themselves.

The Nian had only between 30,000 and 50,000 soldiers, but these were veterans, many of whom were cavalymen. Although Zhang was captured and executed in 1863, the rebellion continued, and he was replaced as leader by his nephew, Zhang Zongyu. It was under his command that the Nian posed the greatest threat to the Qing dynasty, as he led marauding armies that almost reached the capital. Coincidentally, after the Taiping had been defeated in 1864, a number of their leaders joined the Nian forces, bringing additional vigor to the Nian cause.

The Qing government had consistently downplayed the importance of the Nian, but when it finally recognized the Nian as a problem in the early 1850s, the government was in the midst of a terrible war with the Taiping. It was with the death in 1865 of Senggelinqin, one of the Qing's leading generals, that the government became serious about destroying the Nian. In May 1865 the court appointed Zeng Guofan, a Chinese general who had successfully recaptured Nanjing in 1865 from the Taiping, to fight the Nian. Together with Li Hongzhang, Zeng pursued a plan of trapping the remaining Nian armies in smaller and smaller areas until they could be easily slaughtered.

Zhang Zongyu, along with other generals, wielded a formidable force in battling the Qing armies. However, their greatest asset was their cavalry, which they moved freely across northern China. The Qing forces were unable to chase them down, so the Qing resorted to their plan of encirclement. Aware of the dangers of Zeng's plan to trap them, the Nian broke through the lines several times at crucial junctures. In October 1866 the Nian armies divided into an eastern and western branch so as to extend their reach, split up the government forces, and make contact with Muslim rebels in northwestern China. Unfortunately this decision proved to be a great mistake, as the two Nian branches were never able to reunite. Over the next two years, Zhang's branch moved over great swaths of territory and made a final assault that found them 4 miles (6.4 kilometers) outside of Tianjin and in striking distance of the capital. Yet the government forces were able to defeat the rebels, and Zhang drowned while attempting to cross a river in 1868.

The final defeat of the Nian was a result of a number of factors: the decimation of the Nian forces and their lack of access to supplies from their home bases; the government's successful encirclement of the Nian armies in the late 1860s; the government's use of superior weapons, purchased from Western powers; and the assistance of these same powers in patrolling the waterways.

The Qing government's successful suppression of the Nian Rebellion together with that of the other three major rebellions extended the life of the dynasty. The vigorous leadership of Li and Hong also brought into government worthy Han leaders who took over positions of authority from the Manchus. Though the Nian Rebellion was put down, its root causes were not adequately dealt with, and this region experienced further rebellions that eventually led to the end of dynastic rule in China.

—Ibor Pidbainy

Bibliography

- Chiang, Siang-Tseh. *The Nien Rebellion*. Seattle: University of Washington Press, 1954.
- Liu, Kwang-Ching. "The Ch'ing Restoration." In *The Cambridge History of China*, Vol. 10, Pt. 1, *Late Ch'ing, 1800–1911*, edited by John K. Fairbank. New York: Cambridge University Press, 1978.
- Lone, Steward, ed. *Daily Lives of Citizens in War-time Asia: From the Taiping Rebellion to the Vietnam War*. Westport, CT: Greenwood, 2007.
- Perry, Elizabeth J. *Rebels and Revolutionaries in North China, 1845–1945*. Stanford, CA: Stanford University Press, 1980.
- Teng, S. Y. *The Nien Army and Their Guerrilla Warfare, 1851–1868*. Paris: Mouton, 1961.

Taiping Revolt

The Taiping Revolt (1851–1864), a militant quasi-Christian religious movement in China, became one of the greatest popular rebellions in human history. Led by a charismatic visionary named Hong Xiuquan (1814–1864), the Taiping organization attracted millions of poor and disaffected Chinese who waged a civil war against the ruling Manchu Qing dynasty. The uprising plagued authorities for more than a decade until the Taiping order finally collapsed, leaving an estimated

20 million dead. Its repercussions contributed to the end of both the Qing dynasty and China's traditional imperial order.

Hong Xiuquan grew up in a rural farming community near the treaty port of Guangzhou in southern China. Although he aspired to join the Qing imperial bureaucracy, he repeatedly failed the civil service examinations that tested one's knowledge of the Confucian classics. In despair and frustration, Hong lapsed into a prolonged illness during which he dreamed that he ascended into heaven. In the dream two men appeared to him, one with a golden beard and the other his son, who presented Hong with a sword and urged him to slay the demons. It was only when Hong consulted a Christian tract six years later that he decided these dreams were actually visions of God and Jesus Christ and that he himself was Jesus Christ's younger brother. Hong interpreted their message as a divine command to wage war against China's Manchu rulers and establish a new heavenly kingdom on earth.

Many Chinese, especially in the south, were already frustrated with Manchu leadership. Inept handling of natural disasters, the burgeoning opium trade, and a humiliating defeat by the British in the Opium War (1839–1842) all invited criticism of Qing authority. But in addition to preaching opposition to the Manchus, Hong advocated abstinence from opium, alcohol, promiscuity, and other vices; the destruction of pagan temples and idols in accord with his understanding of Christianity; and the abolition of private property, social classes, and foot binding. Hong's radical ideas were slow to catch on, but after relocating to remote and impoverished Guangxi Province, the movement, renamed the God Worshipers' Society, quickly grew among Hong's fellow Hakka, a Chinese minority group with whom he shared a unique dialect and culture.

In 1851 imperial forces, fearful of the movement's growing strength, attacked the God Worshipers Society but were soundly defeated. This emboldened Hong to directly challenge imperial authority by proclaiming the establishment of the Heavenly Kingdom of Great Peace (Taiping Tianguo), with Hong himself as the heavenly king. Taiping forces then began moving northward, capturing hundreds of towns and gaining converts by the tens of thousands. The Taiping

➤ TAIPING REVOLT CHRONOLOGY

- 1814—Hong Xiuquan born
- 1836—Hong fails first exam
- 1837—Hong again fails exam and experiences vision
- 1843—Hong fails exam again, reads Christian tract and begins proselytizing
- 1844—Hong and followers relocate to Guangxi
- 1847—God Worshipers' Society formed
- December 1850—God Worshipers defeat Qing forces
- January 1851—Hong proclaims Taiping Heavenly Kingdom
- 1853—Taiping rebels move northward
- March 1853—Nanjing falls to Taiping forces
- July 1864—Qing troops recapture Nanjing

—Clayton Brown

succeeded in subduing much of southern and central China, and in 1853 after a bloody struggle they occupied Nanjing, converting the city into their new heavenly capital.

In the decade that followed a number of challenges weakened the revolt. Internecine feuds developed among Taiping leaders, imperial armies modernized, and foreign powers sided with the Qing. In 1864 imperial forces infiltrated the city and exterminated its 100,000 Taiping residents. Although the organization and its ideology did not survive, effects of the revolt endured. Having shifted military power from centralized imperial leadership to regional commanders, the throne undermined its own position and paved the way for the warlord era of the twentieth century. Ethnic prejudices kindled by the Taiping later inspired nationalist revolutionaries, including another Hakka by the name of Sun Yatsen, who helped finally overthrow the Manchu dynasty in 1911.

—Clayton Brown

Bibliography

- Reilly, Thomas H. *The Taiping Heavenly Kingdom: Rebellion and the Blasphemy of Empire*. Seattle: University of Washington Press, 2004.
- Spence, Jonathan D. *God's Chinese Son: The Taiping Heavenly Kingdom of Hong Xiuquan*. New York: Norton, 1996.

The Self-Strengthening Movement

The first major indication that a sense of crisis was brewing within the elite in China was the so-called Self-Strengthening Movement, or Foreign Affairs Movement, of the 1870s and 1880s. The Self-Strengthening Movement was basically aimed at creating a national effort, led by the government, to introduce Western industry and communications into China. Its leader was Li Hongzhang, a former aide to the military leader Zeng Guofan. Li rose to prominence during the battles against the Taipings. In 1870 Li became governor-general of the strategically placed province in which Beijing is located. He remained in the post for 25 years and from there presided over the efforts at economic development.

The self-strengtheners generally represented the highest levels of the Chinese government, and Li himself was probably the most powerful official in the nation. At the same time, they often seemed narrowly concerned with China's foreign problems. The movement therefore cannot properly be called part of the developing opposition. Nevertheless, those involved were deeply aware that China stood at a crucial turning point in its history and by no means advocated a simple continuation of the status quo. "An exhausted situation leads to change," they were fond of quoting from the *Yijing* (the *Classic of Changes*), "and this change then leads to success." As a result, their work had a critical flavor and, in particular, showed a basic dissatisfaction with the *laissez-faire* economic arrangements of the *junxian* model, in which governmental power vested in the center and the country divided up into local units administered through bureaucrats appointed by the monarch. The *junxian* system is contrasted with *fengjian*, which is decentralized rule under a hereditary lord. The movement looked back even further to early phases in the development of the *junxian* system, when *fengjian* influences were still strong and the government had assumed a far more active role in economic life than it did later on. Thus, the most famous slogan of the movement, "Enrich the State and Strengthen the Military," is particularly associated with the Qin dynasty (b. 221 BCE), which had brought the ancient *junxian* phase to completion, and with

Wang Anshi (1021–1086), the Neo-Confucian statesman of the early Song, at the start of the later *junxian* era. Indeed, the term "self-strengthening" had first been used in its economic sense in the Song, when an official concerned with border defense used it to suggest that the government initiate economic policies aimed at resisting the nomad incursions that were then engulfing the nation.

In a similar vein, the immediate goal of the self-strengtheners was to meet the Western onslaught by encouraging the material developments that had made the West a threat to China. In addition to their foreign concerns, the self-strengtheners also hoped that economic development, by raising the living standards of the people, might also provide a way of solving China's internal problems. Another common theme of the movement was *fu min* or *li min* (to enrich the people, to improve their livelihood). It was for this reason, for example, that Xue Fucheng (a leading figure in the movement) called Western technology and the possibilities it presented for human progress "a most wonderful phenomenon in the universe."

Overall, however, the self-strengtheners were not broadly concerned with reform aside from their desire to involve the government in economic development. They had little or no interest in directly attacking the injustices of society or its rampant corruption and debilitating moral vacuity.

Indeed a final purpose of the movement was to strengthen the Qing government so as to keep down rebellion. There was, in fact, a noticeable decline in popular unrest in the 1870s and 1880s. This was to some extent simply a matter of timing. One wave of rebellion had been defeated, and another had not yet gathered force. In addition, the death and desolation of the vast midcentury revolts may have reduced population pressures and left unused resources available for exploitation. However, the fact that from the restoration onward those in power had foreign arms that gave them a tremendous edge over rebels also played an important role. The self-strengtheners, deeply committed to social order, worked to maintain the advantage.

The Self-Strengthening Movement did succeed in opening a few modern arsenals,

factories, and mines and in establishing some railway and telegraph lines. However, it made almost no dent in China's basic economic problems, let alone improving the lives of the people or resisting imperialism. The plans failed partly for sheer economic reasons: China's huge poverty-stricken population left little surplus available for investment. In addition, manpower was cheap and, at least in the short run, depended on traditional ways of doing things for employment.

Difficulties also arose in administering the program. These sprang to a considerable extent from the laissez-faire traditions of the late junxian era. There was little experience with governmental activism in the economy and often scant support for it, a situation made all the worse by the corrupt character of the late Qing bureaucracy and the general problems of society. The self-strengtheners found it hard to raise taxes for their projects, and considerable tension developed as they searched for an effective relationship to the private sector. On the one hand, businessmen complained repeatedly of excessive interference on the part of officials and, on the other, of lack of support from them. At the same time, the officials involved were often accused of embezzlement or protecting their bureaucratic bailiwick rather than fostering development. Li Hongzhang in particular earned a reputation for extensive corruption. The accusations seem to have had a basis in fact. However, they were also partly the product of those who, viewing the Self-Strengthening Movement from within the laissez-faire traditions of the time, saw an effort to "enrich the state" as only an effort to enrich government functionaries.

Although the Self-Strengthening Movement represented those in power and failed to make a direct impact on China's problems, it contributed to the general sense that the nation required fundamental change and even to the *datong* direction that elite opposition was eventually to take. Critics of the existing order built on the accomplishments of the movement in paving the way for the acceptance of public effort on behalf of economic progress. At the same time, they picked up the idea that the West could provide inspiration for such effort not only in terms of new techniques but also as examples of governments

actively committed to developing and maintaining effective and powerful societies.

—John E. Schrecker

Bibliography

- Feuerwerker, Albert. *China's Early Industrialization: Sheng Hsuan-huai and Mandarin Enterprise*. Cambridge: Harvard University Press, 1958.
- Hao, Yen-ping, and Erh-min Wang. "Changing Chinese Views of Western Relations." In *The Cambridge History of China*, Vol. 11, *Late Ch'ing, 1800-1911*, Part II, edited by John K. Fairbank and Kwang-ching Liu. New York: Cambridge University Press, 1980.
- Kuo, Ting-yee, and Kwang-ching Liu. "Self-Strengthening: The Pursuit of Western Technology." In *The Cambridge History of China*, Vol. 10, *Late Ch'ing, 1800-1911*, Part I, edited by John K. Fairbank. New York: Cambridge University Press, 1978.
- Schrecker, John E. *The Chinese Revolution in Historical Perspective*. 2nd ed. Westport, CT: Praeger, 2004.

The Hundred Days' Reform

The Hundred Days' Reform (*wuxu bianfa* or *bairi weixin* in Chinese) was a failed 103-day reform movement (June 11 to September 21, 1898), undertaken by the Guangxu emperor (r. 1875-1908) and his supporters, including his advisers Kang Yuwei (1858-1927), Tan Sitong (1865-1898), and Liang Qichao (1873-1929), and aimed at making sweeping social and institutional changes in China. The movement ended in a coup d'état led by Empress Dowager Cixi and powerful conservative circles in which the emperor was placed under house arrest and became a figurehead. Although some reform measures were subsequently put into effect by the court, the failure of the reform movement provided the impetus for revolutionary forces to eventually overthrow the monarchy in 1911.

Earlier Chinese military defeats by Western powers along with clear signs of mass discontent as evidenced by the incidence of lawlessness and rebellion had shown that some kind of transformation was needed to meet the new challenges. The Self-Strengthening Movement (1860s to 1890s) sought to strengthen the nation through the establishment of industry and

➤ KANG YOUWEI—FROM RADICAL TO POLITICAL OUTSIDER

Kang Youwei was born into a wealthy family of scholar-officials on March 19, 1858, in Guangdong Province. He was an accomplished Confucian scholar and a famous calligrapher who as a young man increasingly turned to issues related to political reform. In 1895 following the Sino-Japanese War, Kang led hundreds of fellow scholars in a demonstration to protest the terms of the treaty with Japan and to urge reforms that would strengthen China. Kang favored an end of traditional Chinese family structures and, as an opponent of foot binding, was regarded as an advocate for women's rights. A major figure in the Hundred Days' Reform, he fled to Japan when the movement failed. After the founding of the Republic of China in 1912, Kang advocated constitutional monarchy and was the mastermind of a failed coup d'état in 1917 intended to restore the empire. As a result, Kang's reputation changed; while he was seen as a radical in 1898, he became an anachronistic outsider in 1917.

—Monika Lehner



Determined from his youth to apply his learning to China's salvation, Kang Youwei enjoyed a brief, brilliant moment of political influence during the Hundred Days of Reform in 1898. (Library of Congress)

commerce. The movement focused on the study of Western science, military technology, and production modes but was committed to supporting China's traditional Confucian culture and government institutions.

After the galling Chinese defeat in the Sino-Japanese War of 1894–1895, however, the Guangxu emperor ordered a series of reforms to promote social and institutional changes. One of the leading reformers, Kang Youwei, submitted ideas directly to the emperor. According to Kang, the preconditions for reform were modernization of the traditional examination system, elimination of sinecures, creation of a modern system of education, and bureaucratic reform. Kang and other reformers were convinced that China needed more than self-strengthening and that all measures must be accompanied by both ideological and institutional changes.

On June 11, 1898, the Guangxu emperor issued an edict to announce reform as the national policy of the country, and by September 21 more

than 100 imperial decrees had been issued. The reforms faced strong opposition from conservatives, who considered the reforms far too radical or too threatening to their entrenched positions in government. They rallied around the empress Dowager Cixi. On September 21, 1898, the empress, with the open support from top Manchu military commanders Ronglu and Yuan Shikai, headed a coup d'état. The reform-minded young emperor was forced into seclusion, and Cixi, acting as regent, took over the administration.

The sudden end of the Hundred Days' reform was accompanied by a number of new edicts. Six of the reform's leading figures were arrested and executed on September 28, 1898: Tan Sitong, Kang Guangren (a brother of Kang Youwei), Lin Xu, Liu Guangdi, Yang Rui, and Yang Shenxiu. Two other principal leaders, Kang Youwei and Liang Qichao, found refuge in Japan. Liang was actively involved in publishing reformist periodicals, while the two of them together founded the Protect the Emperor Society.

Despite the conservatives' victory in 1898, reforms did not end. After the Boxer Uprising (1898–1901) the Confucian-based examination system was abolished, and military and educational reforms based on the Japanese model followed. Military reform included the establishment of the New Army as part of a decentralized military system based on military organization on the provincial level. These New Army units later gained importance during the 1911 revolution when the majority of them cooperated with the revolutionaries.

The 1898 failure was an important impetus for revolutionary forces both within China and the overseas Chinese community. Convinced that the changes implemented by the Qing government under Cixi were inadequate, they became increasingly convinced that only the overthrow of China's imperial regime could save the nation.

—Monika Lebner

Bibliography

- Karl, Rebecca, and Peter Zarrow, eds. *Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China*. Cambridge: Harvard University Press, 2002.
- Kwong, Luke S. K. *T'an Ssu-t'ung, 1865–1898: Life and Thought of a Reformer*. Leiden, Netherlands: E. J. Brill, 1996.
- Kwong, Luke S. K. *A Mosaic of the Hundred Days: Personalities, Politics, and Ideas of 1898*. Cambridge: Council on East Asian Studies, Harvard University, 1984.
- Tan, Sitong. *An Exposition of Benevolence: The Jenhsüeh of T'an Ssu-t'ung*. Hong Kong: Chinese University Press, 1984.
- Zarrow, Peter. "The Rise of Confucian Radicalism." In *China in War and Revolution, 1895–1949*, edited by Peter Zarrow, 12–29. New York: Routledge, 2005.

Boxer Rebellion

The Boxer Rebellion (1898–1901) was the climax of antiforeign hostility in China that had been building up for much of the nineteenth century. Internal weaknesses of the Qing dynasty hampered the government's ability to respond effectively to natural disasters and imperialistic incursions by other nations. In the summer of 1898 the Yellow River broke through dikes and

flooded about 2,000 villages. The huge indemnities being paid to Great Britain and France in the wake of the Opium Wars, in combination with the financial damage caused by major mid-century rebellions, left the Qing government without the resources to respond. A secret Chinese society formed in the coastal province of Shandong called the *Yihequan*, or Society of the Righteous Harmonious Fists, believed that China could only be saved by eliminating corrupting influences. The society, called Boxers by Europeans, attempted to drive foreigners out of China. Expeditionary forces composed of regiments from the United States, Russia, Great Britain, France, and Japan finally defeated them.

The Boxer Rebellion was triggered by anger about the behavior of German Protestant missionaries, who had taken the position that Chinese converts were under German jurisdiction and could not be held accountable in Chinese courts. It was a very unfortunate time for Europeans to place themselves and their Chinese favorites above Chinese law. Millions of peasants were struggling to survive, their homes and crops having been ruined by the floods of 1898. Small groups began pillaging the property of the missionaries and the Chinese under their protection. Once begun, the violence spread quickly.

Members of the *Yihequan*, which had evolved from earlier secret societies, mobilized to support peasant resistance. The group trained intensively in the martial arts, focusing on discipline and self-control. Regional governors were generally able to control Boxer activities, and as a result, the rebellion centered around Beijing. Although the activities of the German missionaries had been a trigger, the Boxers considered all Christian missionaries to be dangerous to traditional Chinese beliefs. Much of the rebels' frustration and hostility was directed toward missionaries, churches, and Chinese converts. The Empress Dowager Cixi at first believed that the society might be instrumental in ridding China of foreign interference and aided them with imperial troops. With that assistance, the Boxers captured the Foreign Legation quarters during the early summer of 1900.

In August an expeditionary force of 18,700 troops, including 4,800 Russian, 3,000 British, 2,500 U.S., and 800 French troops, reached

THE BOXER REBELLION AND THE OPEN DOOR POLICY

The Open Door policy of the late 1800s was spawned by a perception among American leaders that China was weakening and that the United States stood to benefit from that situation. They saw in China not so much an opportunity for empire but rather a chance to expand economically and commercially. Other nations were also pressuring China's weak government for special trade and political concessions.

In September 1899, U.S. secretary of state John Hay directed a set of notes to the major European powers with economic interests in China. These notes—which formed the basis of what would later be known as the Open Door policy—specifically requested that the Europeans keep the Chinese ports they controlled open to all nations; further, Hay asked them not to grant special privileges to traders from their own countries. The six nations he addressed gave noncommittal responses to his requests, but this did not dissuade Hay from announcing that the notion of an “Open Door” to U.S. business had been accepted. The Open Door policy, when coupled with the Monroe Doctrine, reflected the U.S. quest for “informal empire,” in

contrast to the direct acquisition favored by the other imperial powers.

The Boxer Rebellion further weakened China's governmental structure. In 1900, John Hay, fearing a total collapse in China that would allow the imperial powers to carve up the country, issued a second and more important set of Open Door notes. In them, he reaffirmed the principle of free and open trade and made a further announcement of the U.S. determination to preserve China's territorial integrity. The Open Door policy was proactive well into the 1930s, when Japanese expansionism threatened China's survival. Hay's policy helped fashion the U.S. response, which included verbal pressure but no military efforts to get the Japanese out of China.

—Penny M. Sonnenburg-Willis

Bibliography

Sonnenburg, Penny M. “Open Door Policy.” In *Colonialism: An International Social, Cultural, and Political Encyclopedia*, edited by Melvin E. Page. Santa Barbara, CA: ABC-CLIO, 2003.

Beijing, where they freed the hostages in the Foreign Legation and began punitive activities. The Russians occupied Manchuria. The Chinese defeat brought great dishonor to Cixi, who was forced to accede to all allied demands. The Boxer Protocol of September 1901 laid an additional crushing burden on China, including an indemnity of approximately \$750 million. Repayment of that indemnity lasted into the 1940s.

—Carolyn Neel

Bibliography

Bickers, Robert A., and R. G. Tiedemann. *The Boxers, China, and the World*. Lanham, MD: Rowman and Littlefield, 2007.

Harrington, Peter. *Peking 1900: The Boxer Rebellion*. Westport, CT: Praeger, 2005.

Preston, Diana. *A Brief History of the Boxer Rebellion: China's War on Foreigners, 1900*. London: Robinson, 2002.

Xiang, Lanxin. *The Origins of the Boxer War: A Multinational Study*. London and New York: Routledge Curzon, 2003.

Sun Yatsen and the Beginnings of China's Revolutionary Tradition

Sun Yatsen (pinyin: Sūn Zhongshān) (1866–1925) was one of many revolutionary leaders and thinkers who advocated the modernization of China and the overthrow of the Qing dynasty in the late nineteenth and early twentieth centuries. Born in Cuiheng in southern Guangdong Province of peasant parents, he joined his prosperous older brother Sun Mei in Hawaii in 1879. There Sun received an education at Iolani, an Anglican missionary school, and later at Oahu College. Returning to Cuiheng in 1883, he was sent to study in Hong Kong, where he converted to Christianity. In 1887 Sun enrolled at the College of Medicine for the Chinese in Hong Kong, graduating in 1892 and becoming a physician.

Unlike Sun, the great Confucian scholar Kang Youwei (1858–1927) and his student Liang Qichao (1873–1929), as well as Huang Zunxian (1848–1905), were representatives of

a “reformist” tradition, typically referred to as “monarchists” by later historians of the People’s Republic of China. The reformists, or reformers, supported the modernization of China under the auspices of a constitutional monarchy, fearing that a full-scale revolution would weaken China and lead to its dismemberment by major European powers. The defeat of China in the Sino-Japanese War of 1894–1895 especially underscored the need for the empire to adopt wholesale reforms. Kang Youwei led the 1898 Hundred Days’ Reform of the Guang Xu emperor (r. 1875–1908), but this effort was quickly overturned by the coup d’état of the empress dowager. Although Kang, Liang, and other reformers were forced to flee China, they nevertheless remained committed to the idea of a constitutional monarchy. Kang, for instance, founded the Society to Protect the Emperor (Baohuanghui) in Canada in 1899.

The failure of the 1898 reforms was one of many turning points of the revolutionary movement. Sun’s awakening came earlier, however. Following China’s humiliating defeat by France in the Sino-French War of 1884–1885, Sun was convinced that the foreign Qing dynasty (1644–1911) had to be overthrown. Subsequently, he spent much of his life traveling around the world and raising funds on behalf of fomenting revolts in China, especially from the wealthy “overseas Chinese” communities, including that of Hawaii. There in Honolulu in November 1894, he created the Revive China Society (Xingzhonghui), whose Hong Kong branch planned an aborted insurrection in Canton in 1895. Fleeing to Macao, Hong Kong, Japan, Hawaii, the continental United States, and later to England, Sun was taken captive by Chinese officials in London in 1896 but released. He subsequently published *Kidnapped in London* (1897), a work that helped to make him an international celebrity. In the same year he moved to Japan. In 1898 he met the reformist leader Kang Youwei, who had fled to Japan via Hong Kong after the crackdown on the 1898 reforms. The differences between the two separate camps, of the reformists on the one hand and the revolutionaries on the other, prevented the two leaders from collaboration.

➤ THE THREE PEOPLE’S PRINCIPLES

In his autobiography, Sun Yatsen recalled that he formulated the initial framework for his Three Principles of the People—nationalism, democracy, and socialism—in 1897. In reality, these Three People’s Principles evolved slowly over the years, from the founding of the Tongmenghui (United League) party in 1905 to their greater articulation in the early 1900s by Huang Xing, Zhang Binglin, and others in the *People’s Journal* and to Sun’s 1920s rapprochement with Soviet Russia. Nationalism focused on expelling the Qing (Manchu) dynasty (1644–1911), regarded as foreign usurpers of the throne, and restoring the rule of China to the Chinese. Democracy concentrated on the gradual transition to a republican form of government. Revolutionary writers, drawing upon a rich tradition of Chinese collectivistic thought and classical studies, also cited the works of Westerners like Montesquieu and Rousseau to justify republicanism. The third principle, socialism, was called “the people’s livelihood” after 1905. It argued that a social revolution must accompany a political one if China was to avoid some of the economic problems experienced by Western nations. In this regard, Sun and other early revolutionary leaders were most influenced by the American Henry George (1839–1897), whose “single tax” on the “unearned increment” of land speculation was seen as a method of equalizing wealth.

—Paul Tenkotte

In 1900 the secret society of the Boxers staged the Boxer Rebellion (the Yi He Tuan Movement); it was subsequently suppressed by the Eight-Power Allied Forces. Humiliated by the intervention of foreign troops in the capital of Beijing, the imperial government slowly launched a series of reforms over the next decade designed to lead to some modicum of modernization. These included the termination of the old Confucian examination system; the establishment of a modern educational system; the creation of a Westernized “New Army”; the encouragement and even subsidy of Chinese students to study abroad, especially in Japan; and the commissioning of an official delegation to study political institutions in Japan, the United

States, and Europe. The latter returned to China, and a committee of 12 scholars studied their findings, recommending a very gradual transition to a constitutional form of government. Despite the reform efforts, the revolutionary movement continued unabated.

In 1900 Sun collaborated with the southern Chinese secret society of the Triads to lead an aborted rebellion in Huizhou, with the intention of establishing a republic in southern China. Additional Chinese defeats, including Russia's continuing occupation of Manchuria in 1903, rallied Chinese students in Japan to the revolutionary cause. Among these was Huang Xing (1874–1916). Likewise, Chinese students returning from Japan to the mainland began to integrate their activities with the anti-Manchurian sentiments of China's network of secret societies. For example, Huang Xing organized the Society for China's Revival (Huaxinghui) in Changsha in 1903. The organization collaborated with the secret Society of Elder Brothers and the Restoration Society (Guangfuhui) of Shanghai (also founded by returning Chinese students) to foment an uprising in 1904. The Changsha uprising failed, and Huang fled to Japan, where he met Sun. There in 1905 the Revive China Society, the Society for China's Revival, and the Restoration Society were merged in 1905 as the Revolutionary Alliance (Tongmenghui, or the United League), which supported the Three People's Principles. With the help of Huang as vice president of the party, Sun led the new party as its president. In the period 1907–1911 Sun was associated with eight unsuccessful revolts in southern China, aimed at the establishment of a separate republic. The Revolutionary Alliance, meanwhile, experienced factionalism, exacerbated by Sun's frequent travels abroad to raise funds.

When the Chinese government nationalized the railroads in May 1909, protests led by those financially affected by the move evolved into a revolutionary fervor joined by secret societies, peasants, and students. On October 10, 1911 (the "double ten," i.e., the tenth day of the tenth month), the Wuchang Uprising began in the province of Hubei along the Yanzi River. Neither Sun, who was in the United States, nor Huang

seemed to have had any direct institutional association with the Wuchang insurrection, the opening volley of China's 1911 Revolution. The Revolution of 1911 spread throughout the empire, and in its wake swept away the Qing dynasty (the emperor abdicated in February 1912) and led to the creation of the Nanjing Provisional Government under the presidency of Sun, who had hurried back to China and was inaugurated on January 1, 1912. Quickly the situation deteriorated nationally, and the military general Yuan Shikai (1859–1916) seized power. The March 1913 assassination (presumably on orders of Yuan) of Song Jiaoren, the revolutionary leader, founder of the Guomindang party (1912) and prime minister designee, underscored the growing extent of the violence. A "Second Revolution" erupted in July 1913 but was suppressed by September. Sun, Huang, and other revolutionary leaders fled China for Japan, where in July 1914 Sun fashioned a new organization titled the Chinese Revolutionary Party. Disagreements between Sun and Huang led to the disaffection of Huang and many other revolutionaries, who refused to join the new party. Meanwhile, in China the parliament was dissolved in January 1914, ushering in decades of decentralization and civil war.

—Paul Tenkotte

Bibliography

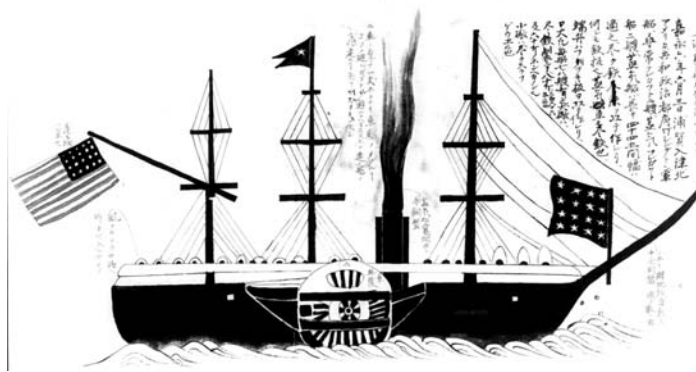
- Bergère, Marie-Claire. *Sun Yatsen*. Translated by Janet Lloyd. Stanford, CA: Stanford University Press, 1998.
- Chesneaux, Jean, Marianne Bastid, and Marie-Claire Bergère. *China from the Opium Wars to the 1911 Revolution*. New York: Pantheon Books, 1976.
- Gasster, Michael. *Chinese Intellectuals and the Revolution of 1911*. Seattle: University of Washington Press, 1969.
- Hsieh, Winston. *Chinese Historiography on the Revolution of 1911*. Stanford, CA: Hoover Institution Press of Stanford University, 1975.
- Hu, Sheng, and Danian Liu. *The 1911 Revolution: A Retrospective after 70 Years*. Beijing: New World Press, 1983.
- Schiffman, Harold Z. *Sun Yatsen and the Origins of the Chinese Revolution*. Berkeley: University of California Press, 1970.

Commodore Perry and the Opening of Japan

The phrase “opening of Japan” assumes that it was once closed. Japan has often been portrayed as being isolated from the rest of the world from the early seventeenth century until Commodore Perry exercised gunboat diplomacy in the mid-nineteenth century. During this time, Japan cut relations with European nations out of fear that Christianity might challenge the authority of the Tokugawa regime, and missionary groups might pave the way for foreign invasion. However, Japan maintained relations with the Dutch, who eased Japanese suspicion by refraining from all religious discourse, and with the Koreans, Chinese, and Ryukyu Islanders. Although the Japanese successfully rejected Western attempts in the late eighteenth and early nineteenth centuries to begin official relations, they could not ignore Perry’s gunships. Nevertheless, the Japanese were able to play a weak hand well, avoiding colonization, warfare, and the importation of opium that plagued China.

As early as the 1790s Americans attempted to gain access to Japan, sometimes chartering Dutch ships to enter the port of Nagasaki and conduct trade or sailing into other ports to rescue shipwrecked sailors. In the nineteenth century the United States became a Pacific presence. Several events led to increased western migration, such as the discovery of gold in California, and the acquisition of land along the West coast from Great Britain and Mexico. Moreover, the expanding whaling industry in the Pacific and a commercial treaty signed between the United States and China in 1844 resulted in more Americans sailing through the seas near Japan.

In the mid-nineteenth century several American politicians and naval commanders, including Commodore Mathew Perry, began pressing the government to send an expedition to Japan. As early as 1851 he realized that in order to secure the journey for ships along the great circle route, the shortest distance from California to Shanghai, ships needed to pass through the waters near northern Japan. Likewise, the southern shipping lane that left from Panama for Shanghai also traveled through Japanese waters, but



U.S.S. Susquehanna, Commodore Perry's flag ship, from a Japanese scroll depicting Perry's expedition to Japan, 1853. (Library of Congress)

to the south between the Ryukyu Kingdom and Japan. Perry wanted to secure from the Japanese the right to establish a coal depot for refueling, a source of supplies for crews, and a safe haven for ships in distress or for shipwrecked sailors. He never intended to lead the expedition he had been planning himself, but President Fillmore eventually charged Perry with leading the expedition.

Fillmore sent Perry to Japan in 1852 with broad diplomatic powers and four warships to demonstrate American naval might. Even before Perry arrived, the Japanese learned of the expedition from the Dutch, but the appearance of the “black ships” in Edo Bay on July 8, 1853 caused much panic among samurai officials. Perry issued a letter to representatives of the shogun which demanded the safety of shipwrecked whalers and the opportunity to buy coal and open trade. He reassured the Japanese that Americans would not interfere with their religion.

When Perry returned a year later in 1854, he signed the Treaty of Kanagawa, which opened up two regional ports in addition to agreeing to the demands made in Fillmore’s letter. In 1856, a small consulate opened in Shimoda, a port city close to the capital of Edo but far enough to allow the Tokugawa shogunate time to stall diplomatic interaction with Townsend Harris, the American diplomat assigned to Japan. His treaty (1858) expanded the number of ports, set an unfavorable exchange rate, and granted extraterritoriality to the United States.

Acquiescing to the United States sent shockwaves throughout the ruling elite. Many samurai and daimyo lords criticized the shogunate for not expelling the Americans from Japan and ignoring the wishes of the emperor to do so. Moreover, the Tokugawa regime established a new precedent by asking politically marginalized daimyo for their opinions on the American arrival. Perry's arrival and the controversies that arose from the treaties with the United States and other western states exacerbated problems that had already been facing the Tokugawa regime, which culminated in the regime's eventual downfall in 1868.

—*Michael Wert*

Bibliography

- Schroeder, John. *Matthew Calbraith Perry: Antebellum Sailor and Diplomat*. Annapolis, MD: Naval Institute Press, 2001.
- Toby, Ronald. *State and Diplomacy in Early Modern Japan: Asia in the Development of the Tokugawa Bakufu*. Princeton, NJ: Princeton University Press, 1984.
- Wiley, Peter Booth. *Yankees in the Land of the Gods: Commodore Perry and the Opening of Japan*. New York: Viking, 1990.

Political Tensions in Pre-Meiji Japan

The political system by which the Tokugawa shogunate (*bakufu*) had ruled Japan since the early seventeenth century experienced increasing stress in the latter years of the eighteenth century and the early decades of the nineteenth century from sources both inside and outside Japan. The decentralized balance of power that had kept Japan united for over two centuries as well as the policy of seclusion underwent severe challenges from both inside and outside of Japan. These challenges were impossible to overcome, and as a result the seclusion policy was abandoned in the 1850s, and the Tokugawa shogunate itself was overthrown in 1868.

The challenges came from two sources. First, the growing frustration and impoverishment of the samurai coupled with the steady growth of a market economy and the emergence of new social classes were creating great strains on the traditional social and institutional order. Second, the Tokugawa shogunate was rapidly losing its

grip on power due to its deteriorating financial position and the growing power of several larger domains (*han*) that enacted successful financial reforms in the early to mid-1800s.

The shogunate recognized the extent of its financial problems in the late 1700s and imitated a number of new policies collectively known as the Kansei Reforms to increase revenues and reduce spending. The reforms accomplished little, however, and during the economically troubled Tempō era (1830–1844) the bakufu's financial weakness led to further futile initiatives known as the Tempō Reforms. Famines in the early 1830s reduced the amount of rice being sent to the major cities, which led to revolts in and around the city of Osaka in 1837 that laid waste to the nation's commercial center. Efforts by the shogunate to centralize its authority and to expropriate *han* in the Kanto (now Tokyo) and Kansai (Osaka) regions met increased nationwide resistance by young samurai dissidents, merchants, and peasants who were now emboldened by the government's apparent weakness. The bakufu's failure to better organize its finances in contrast to the large remote (*tozama*) domains such as Satsuma and Chōshū began tilting the balance of power away from Edo.

A number of intellectual movements also fostered challenges to shogunal rule. The movement for Western learning was embraced by scholars who advocated the study of Western science and technology and who therefore wanted Japan to open its doors to the West. A rival nativist National Learning school (*kokugaku*) emphasized the glory of Japan's early Golden Age and urged a restoration of divine imperial rule. This in turn inspired a loyalist movement in support of a return to imperial rule that led many samurai in the 1850s and 1860 to become political activists devoted to the emperor and hostile to the shogunate for its weakness and its alleged usurpation of imperial power. They were inspired by their slogan, *sonno jōi* ("restore the emperor, expel the barbarian"), which called for the overthrow of the weak old shogunate and the installation of a strong new imperial government that would stand up to the West.

Many historians speculate that these stresses were pushing Japan toward radical if not revolutionary change, but there are other scholars who

believe that these dissidents were not strong enough on their own to overthrow the shogunate. These growing internal sources of stress, however, were suddenly overwhelmed by a major shock from outside Japan. Russian and British ships had made several unsuccessful attempts to open Japan as early as the late 1700s. However, it was the decision by the United States and other Western powers to use their military might in the mid-1850s to force Japan to abandon its treasured policy of seclusion and open itself to the outside world that provided the spark that led to the collapse of the Tokugawa regime.

The Tokugawa government's signing of a treaty with the United States in 1854 to open Japan to the West was a highly pragmatic decision by a regime that was well aware of the power of the West and the fact that the resistance of the Chinese in the Opium War (1839–1842) had led to disaster. But the failure of the bakufu to protect Japan from the hated foreigners clearly revealed the weakness of the regime. This raised the ire of leading Japanese who began to demand the overthrow of the shogunate and the creation of a new government more able to defend the nation.

The arrival of the American fleet led by Commodore Matthew Perry in 1853 set off a series of events that resulted in the ultimate collapse of the shogunate in 1868. Abe Masahiro, then senior councilor for the shogun, quickly realized that his government had neither the strength nor the legitimacy to take on the West unaided. His decision in 1853 to ask the advice of domainal lords (daimyo) was an attempt to gain support among Japan's governing elite, but his ploy failed to deliver clear answers. Shogunal authority was seriously undermined.

Between 1853 and 1860 the bakufu abandoned its policy of national seclusion by opening several ports to Western ships. When it signed trade treaties with the Western powers in 1858, it sought approval from the imperial court, but the emperor, backed by growing numbers of antishogunal forces at his court, refused to accommodate the shogun. Rebuffed, the shogunate infuriated imperial loyalists by ratifying the treaties without imperial approval. Angry loyalists struck back by assassinating the shogunate's leading councilor, Ii Naosuke, in 1860.

YOSHIDA SHOIN

Yoshida Shoin (1830–1859) was a low-ranking samurai from Choshu who as a teacher and radical thinker greatly influenced such future important Meiji-era leaders as Prime Minister Ito Hirobumi and Takasagi Shinsaku. An intense nationalist, Yoshida was fascinated from an early age with the power and advanced technology of the West. Even before the Perry expedition arrived at Edo in 1853, Yoshida had shown early concern for Japan's foreign threat by traveling the country to study the state of its weak coastal defenses. Yoshida was also deeply critical of the weakness of the Tokugawa shogunate in its dealings with the West.

Yoshida was in Edo when Commodore Perry's ships returned there in 1854 to enact the treaties that opened Japan to the West. Yoshida made an unsuccessful attempt to board Perry's ships in 1854 and was arrested and jailed by shogunal authorities. He soon realized that Japan must both study and emulate the West if it hoped to survive Western aggression. At the same time he felt that he and other like-minded samurai must destroy the shogunate and create a new government of national unity led by the emperor. This new government would build Japan's strength by studying the means of Western power.

Yoshida's call for the overthrow of the shogunate and the assassination of Tokugawa officials led Edo authorities to arrest and execute Yoshida in 1859. However, his ideas served as both a blueprint and an inspiration to other young samurai who led the Meiji revolution, which in turn made Japan a major power.

—Daniel Métraux

Opposition to the Edo shogunate was led by young samurai in the outlying domains of Choshu and Satsuma. These young rebels, strong supporters of the sonno joi movement, were outraged at what they regarded as the shogunate's weak surrender to the West. They believed that the only way that Japan might avoid the loss of its independence was for the creation of a new vigorous government under the rule of the emperor that could stand up against the West. A series of fiscal reforms in Satsuma and Choshu instigated in the 1840s had left these provinces

with enough resources to finance a joint military expedition to overthrow the shogunate in 1868.

Starting in 1860 the shogunate attempted to create a coalition government in which the shogun and his daimyo supporters would work together with court nobles and *tozama* daimyo, but their efforts were rebuffed by the emperor and his advisers. The shogunate offered to terminate its policy of *sankin kotai* (whereby daimyo were required to spend a great deal of money and time visiting Edo on a regular basis and keeping their families as virtual hostages of the shogun) in 1862 and even launched a punitive expedition against upstart Choshu. Unfortunately for the shogunate, all these efforts failed to enhance its power.

During the early 1860s the antishogunate forces gained in power and prestige. The two large “outside” domains of Choshu and Satsuma, along with leading figures at the imperial court, were brought together in an alliance against the bakufu by young loyalist samurai. Increasingly exasperated at the growing weakness of the shogunate in its dealing with the West, troops from Satsuma, Choshu, and their ally Tosa marched on Kyoto and seized the imperial palace on January 3, 1868. They drove shogunal forces from Kyoto and declared an end of the Tokugawa shogunate. The former shogun was branded a rebel, and his family lands were confiscated. The newly constituted imperial army then marched on Edo, quickly defeated shogunal forces there, and installed the emperor in the shogun’s palace. The Tokugawa family was allowed to return to its traditional lands, while the new government began the process that led to the Meiji Revolution and the emergence of Japan as a modern nation in the late 1800s.

—Daniel Métraux

Bibliography

- Bellah, Robert. *Tokugawa Religion: The Values of Pre-Industrial Japan*. Glencoe, IL: Free Press, 1957.
- Borton, Hugh. *Peasant Uprisings in the Tokugawa Period*. 2nd ed. New York: Paragon Book Reprint, 1968.
- Hall, John W., and Marius B. Jansen, eds. *Studies in the Institutional History of Early Modern Japan*. Princeton, NJ: Princeton University Press, 1968.

Totman, Conrad D. *Politics in the Tokugawa Bakufu, 1600–1843*. Cambridge: Harvard University Press, 1967.

Webb, Herschell. *The Japanese Imperial Institution in the Tokugawa Period*. New York: Columbia University Press, 1968.

The Meiji Restoration

The Meiji Restoration, narrowly defined, was a coup d’état instigated by antishogunal forces led by two domains in western Japan, Satsuma (now Kagoshima Prefecture) and Choshu (now Yamaguchi Prefecture). Their soldiers seized the Imperial Palace in Kyoto on January 3, 1868, and announced the return of political power to the emperor from the Tokugawa shogunate (1600–1868). In a larger sense the Meiji Restoration represents a political, economic, and social revolution whereby the Japanese transformed their nation from a weak isolated agricultural state into a modern centralized industrial and military power during the Meiji era (1868–1912). Japan’s new leaders replaced the traditional decentralized shogunal (*bakuban*) system with a highly centralized modern government under the symbolic rule of the emperor. The 45 years of the Meiji (“Enlightened Rule”) emperor also marked the start of the rise of Asia and the start of Asian resistance to Western domination of the region.

The Meiji Restoration theoretically returned sovereign power to the emperor, who since 1600 had been little more than a political symbol. The 16-year-old crown prince Mutsuhito, who ruled Japan from 1868 until his death in 1912, was in fact the front person for a group of officials who ran the country and inaugurated all of the reforms in his name.

The Meiji Restoration occurred at a time when the Tokugawa shogunate faced many problems, including efforts of the Western powers to end Japan’s more than two-centuries-old policy of national isolation. A growing number of rural uprisings brought on by famines and high taxation were evidence of increasing restlessness and frustration throughout the land. Reform programs initiated by the Tokugawa shogunate in the 1830s and 1840s to centralize its power and increase its revenues met little

➤ FUKUZAWA YUKICHI

Fukuzawa Yukichi (1835–1901) was a major writer, teacher, political theorist, and founder of Keio University. His ideas about Japan's political and social institutions and customs played a major role in shaping the thinking of many of Japan's leaders throughout the Meiji era. The son of a minor samurai, Fukuzawa early on recognized the power and importance of the West. He began Dutch studies as a teenager but later realized the importance of English as the key language of the West. After the opening of Japan in the early 1850s, Fukuzawa traveled to Western settlements in Japan to study Western ways. He traveled to California on a brief shogunal mission in 1860 and upon his return became an important translator for the Tokugawa government.

Fukuzawa became one of the great writers and philosophers of the Meiji period and a key advocate of the Westernization of the country. He firmly believed that the success of the West rested not only in the education of many of its citizens but also in its emphasis on the development of the

individual and the freedom that the individual had to pursue his own dreams. His multivolume *Gakumon no Susume* (An Encouragement of Learning) advocated his most important teaching of “national independence through personal independence.” Japan could only become strong through the hard work and education of its people, and this could only occur if every person, however rich or poor, was given the chance to study and to excel. Success in life could only come from personal effort, an idea that Fukuzawa stressed through his motto “heaven helps those who help themselves.”

Fukuzawa was successful in instilling a sense of purpose and personal confidence in many young people in the early Meiji period and in inspiring its leaders to modernize Japan through a sound educational system. His most lasting contribution, however, may have been his founding of Keio University in the late 1800s, then and now Japan's leading private university.

—Daniel Métraux

success in marked contrast to domainal reforms in Satsuma and Choshu, which had allowed them to increase their power at the expense of the national government.

The arrival of the American fleet of Commodore Matthew Perry in 1853 commenced a chain of events that led to the collapse of the shogunate in 1868. The central government's decision to open Japan to the West exposed its own weakness and encouraged key figures in the imperial court and young activist samurai in Choshu, Satsuma, and elsewhere to question the legitimacy of shogunal rule. These loyalist forces professed their supreme allegiance to the emperor and growing disdain for the shogunate, which they criticized for its weak response to the West and its usurpation of imperial power.

The crisis reached its peak in early 1868 when forces from Satsuma, Choshu, and Tosa (now Kochi Prefecture), having proclaimed themselves the imperial army, routed shogunal forces in Kyoto and Edo and seized control of the country. A few months later the new government and the emperor moved from Kyoto to

Edo, now renamed Tokyo, and began a reform process that led to the modernization of Japan.

The Meiji Restoration was revolutionary in that the new Meiji government fomented a so-called revolution from above that changed almost every aspect of Japanese society. The Charter Oath of April 1868 set the tone for the new government. It stressed the need to abolish all vestiges of feudalism and “evil customs of the past.” There would be social equality so that commoners as well as people from the former high classes could “pursue their own calling.” Japan's new leaders also pledged to “seek knowledge throughout the world in order to strengthen the foundations of imperial rule.”

The Meiji government soon adopted the term *fukoku kyobei* (“enrich the country, strengthen the military”) as its national slogan. The slogan expressed the determination of the government to modernize and strengthen the country through a program of rapid industrialization and the building of a formidable modern military. The overarching goal was to protect Japan's independence from foreign encroachment

at a time when the rest of Asia was rapidly falling under Western domination.

Japan's new leaders quickly removed the pillars of the bakuhan system when in 1871 they converted the daimyo (feudal lord) domain system into a centralized prefectural system, declared social equality by abolishing the samurai class, and in 1873 created a modern property tax system. The government quickly realized the importance of modern Western education and by the early 1870s decreed the building of a national educational system in which all young Japanese had to attend school. Setting a goal of universal literacy, the government divided the nation into higher school districts, each of which had its own network of middle and lower schools. A major university (now Tokyo University) became the apex of higher education. Japan's new and highly successful educational system created generations of highly literate and disciplined citizens who transformed Japan into a major power.

The Meiji government created a modern military starting in late 1872, when it announced a system of universal male conscription. Newly constructed armories and shipyards provided for the material needs for the military, while foreign advisers and Japanese who had studied abroad helped the government in the organization of its new army and navy.

The government also played a major role in Japan's rapid industrialization. The Japanese government provided the necessary capital for the construction of several modern factories but soon realized the need to involve private enterprise. The eventual result was a distinctly Japanese combination of public and private enterprise efforts that led to the eventual rise of major financial and industrial combines (*zaibatsu*) that have dominated the nation's economy ever since.

The new government quickly realized the need for the importation of foreign knowledge. The Japanese government sent a large mission led by government minister Iwakura Tomomi (1825–1883). The Iwakura mission group traveled for two years (1871–1873) throughout the United States and Europe with the purpose of renegotiating unequal treaties and gathering information to help effect the modernization of Japan.

The experience abroad and the information gathered by the mission played a key role in Japan's subsequent modernization. The government soon thereafter hired several thousand foreign teachers and technicians (*oyatoi gaikokujin*) to advise Japan in the modernization of the country. Hundreds of other young Japanese studied in the United States and Europe to gain Western knowledge. Many of these students later became major figures in the modernization of Japan.

By the end of the Meiji era, Japan had become a major industrial and military power that had defeated China in the first Sino-Japanese War (1894–1895) and Russia in the Russo-Japanese War (1904–1905). The rise of Japan as the first modern Asian power inspired nationalists throughout Asia and sparked the more recent economic and military gains of many other Asian states.

—Daniel Métraux

Bibliography

- Beasley, William J. *The Meiji Restoration*. Stanford, CA: Stanford University Press, 1972.
Jansen, Marius B., ed. *The Emergence of Meiji Japan*. Cambridge: Cambridge University Press, 1995.

Government and Politics in Meiji Japan

The goal of the leaders who overthrew the Tokugawa shogunate in 1868 was the creation of a powerful centralized government that would realize the slogan *fukoku kyōhei* (“enrich the country—strengthen the military”). Aware that virtually every other part of Asia had fallen to the West, these leaders were determined to preserve their nation's independence by modernizing the state and building a powerful military.

The government that came to power in 1868 was essentially a coalition of revolutionary factions from the imperial court and the western domains of Satsuma, Choshu, and Tosa. They were a small group of men, many from the samurai class, who did not represent a significant cross section of society and lacked broad support. They were united by a common enemy, the Tokugawa shogunate, but once they eliminated their foe, they began to struggle among themselves over policy and for power. The highest-ranking officials in the early government

➤ SAIGO TAKAMORI, THE LAST TRUE SAMURAI?

Saigo Takamori (1828–1877) is one of the most beloved and respected figures in Japanese military history. He was the son of a low-ranking samurai in the Kyushu city of Kagoshima, then a part of the Satsuma domain. By the 1860s when Satsuma, together with Choshu, was preparing to militarily overthrow the floundering Tokugawa shogunate, Saigo had become one of the domain's leading military figures. Saigo led imperial forces in the overthrow of the shogunate in 1868 and became an important figure in the new Meiji government.

Saigo became disenchanted with the new government in 1873 when it refused his request to send a punitive expedition against Korea. He felt that such an adventure would bolster Japan's international prestige and give idle samurai something to do, but other Meiji leaders felt that the new government was still too weak for such conquest. Frustrated, Saigo resigned his government posts and returned to Kagoshima.

By the mid-1870s, when the Meiji government sought to bring about true social equality in Japan by abolishing the samurai class, thousands of disaffected samurai gathered with Saigo in Kagoshima and launched a military revolt against the new government. Saigo led a force of 40,000 samurai and supporters, but the government countered with a well-armed conscript army of 300,000 men. The fighting was fierce, but in due course the government forces prevailed, and Saigo committed suicide.

The government's victory over Saigo's forces marked the last major military challenge to the government as well as the end to the privileged samurai class. Since then Japan has evolved into being one of the world's most socially equal societies.

—Daniel Métraux

were court nobles such as Iwakura Tomomi and Sanjo Sanetomi, but the real decision making lay in the hands of middle- and lower-ranking officials, including Okubo Toshimichi, Saigo Takamori, Kido Koin, and other former officials from Satsuma, Choshu, and Tosa. Several others recruited for their knowledge of the West included Okuma Shigenobu, Eto Shimpei, and Yokoi Shonan.

While these men agreed on the need of a strong unified state, they differed over how much of the old feudal society should be removed. At the center of debate were the futures of the samurai class and domains governed by daimyo (lords). Traditionalists such as Saigo opposed any real changes in the old regime, while younger officials such as Prime Minister Ito Hirobumi and military chief Yamagata Aritomo wished to push ahead with the dismantling of the old regime, which they saw as necessary to achieve national unity and strength. They believed that keeping the old institutions of government would keep Japan weak and divided.

By the early 1870s those favoring the centralization and modernization of the government prevailed completely. By late 1871 they had

abolished the domains, terminated administrative localism and domain armies, and divided the country into prefectures. They instituted a uniform land tax across the country to improve government revenues in 1873 and formed a modern military based on universal male conscription. The creation of this new conscript army and a declaration that henceforth there would be no distinct social classes brought an end to the samurai class in the mid-1870s.

If the centralization of power was the main political goal of the imperial government in the 1870s, its key economic goal was the building of industrial and commercial power. The government developed a policy of state capitalism in which it served as the principal entrepreneur, manager, and financier of modern industry. The ultimate goal of the government was not permanent involvement in the economy but instead the growth of a private enterprise economy run by citizens selected by the government who would run their respective industries in close cooperation with the government.

There was significant opposition to government policies in the mid-1870s. Many peasants rioted when faced with heavy taxes, military

conscription, and local political reforms. More dangerous were the traditionalist samurai, horrified over their loss of privilege. There were several samurai revolts, the most deadly of which was the 1877 Satsuma rebellion in Kyushu led by Saigo Takamori. It took many months of hard fighting for imperial forces to finally defeat Saigo's large rebel force.

Other protests against the authoritarian centralized Meiji government came in the form of a popular rights movement begun in 1874 by such liberal political activists as Itagaki Taisuke, Eto Shimpei, and Goto Shojiro. They urged radical political reforms to reduce the "tyranny" of the small coterie of officials controlling the government. They demanded a formal constitution and a powerful national assembly selected by a broad electorate. After a slow start the movement for popular rights gained increased support from a number of quarters including intellectuals, journalists, and wealthier peasants.

By the late 1870s and early 1880s government officials determined that Japan should have a constitution that provided for some form of national assembly. They hoped to not only counter the rising popularity of the popular rights groups but also demonstrate to the West that Japan was a modern nation based on the rule of law. They hoped that such a constitution would bolster Japan's requests for the elimination of unequal treaties with the West. Former U.S. president Ulysses S. Grant, who acted as an informal but quite influential adviser to the Meiji government during his three-month visit to Japan in 1879, urged the government to maintain its strong authoritarian control over the country and to only gradually grant increased rights to the people. Democracy, mused Grant, must mature slowly and deliberately. Grant approved of the fact that real power in Japan was in the hands of a small group of leaders—the *genro* (oligarchs)—who worked behind the scenes as advisers to the emperor but who in fact governed in the name of their sovereign.

The government determined that even with a constitution, the fundamental state structure would be monarchical, centering on the imperial institution, and that the constitution would be presented as a gift to the people from the emperor. The Meiji Constitution, officially

promulgated in 1889, featured a national assembly (Diet) chosen by a narrow wealthy electorate as well as a House of Peers appointed by the emperor. Nevertheless, most powers were in the hands of the emperor. The preamble clearly stated that the emperor had inherited "the right of sovereignty of the State" from his imperial ancestors. The central decision-making body was a cabinet, first created in 1885, led by a prime minister appointed by the emperor.

The constitution gave the Diet the power to debate and approve the annual government budget with the proviso that if a budget was not approved, the budget from the previous year would go into effect. The rising cost of government in the 1890s and early 1900s at a time when Japan was expanding its military and fighting wars against China (1894–1895) and Russia (1904–1905) over control of Korea and parts of Manchuria gave Diet politicians a powerful political weapon.

Gradually Diet members began to organize themselves into political parties that were often allied with government officials such as Ito Hirobumi. By the start of the twentieth century the oligarchs surrendered some of their power by allowing the formation of party cabinets. By the end of the Meiji period in 1912, Japan appeared to be well on the way toward establishing a constitutional monarchy. It was also the first independent Asian state to inaugurate a constitutional government based on the rule of law with a popularly elected national assembly.

—Daniel Métraux

Bibliography

- Akita, George. *Foundations of Constitutional Government in Modern Japan, 1868–1900*. Cambridge: Harvard University Press, 1967.
- Craig, Albert M. *Chōshū in the Meiji Restoration* 1961; reprint, Lanham, MD: Lexington Books, 2000.
- Duus, Peter. *The Rise of Modern Japan*. Boston: Houghton Mifflin, 1976.
- Ike, Nobutaka. *The Beginnings of Political Democracy in Japan*. Baltimore: Johns Hopkins University Press, 1950.
- Smith, Thomas C. *Political Change and Industrial Development in Japan: Government Enterprise, 1868–1880*. Stanford, CA: Stanford University Press, 1955.

■ Introduction: The Formation of New Empires

The era of world history between 1750 and 1914 was an era of revolution, but it also was an era of imperialism. This was true in the mid-eighteenth century, when France, Great Britain, Spain, and Portugal had empires in the Americas and the Caribbean islands and these same states along with the Netherlands had territorial holdings in the Philippines, the East Indies, and parts of Africa and India. It was still true in the early twentieth century. Despite the demise of Europe's American empires, in 1914 a small handful of European states, joined in the 1890s by Japan and the United States, controlled all of Africa (except Liberia and Ethiopia), southern and Southeast Asia (except Thailand), parts of South America (the Guyanas), hundreds of Caribbean and Pacific islands, and Korea and Taiwan in eastern Asia. Thus at any point in time between 1750 and 1914, much of the world was part of an empire occupied or dominated by a foreign power.

The history of western empire building since 1500 has typically been divided between the "old" and "new" imperialism. Old imperialism refers to the period from the early 1500s to the 1700s, when European maritime powers carved out overseas empires in the Americas and the West and East Indies, along with smaller territorial holdings in coastal Africa and Asia. The number of imperialist powers was small, limited to Great Britain, France, Spain, the Netherlands, and Portugal, and their motives were straightforward. All sought commercial advantage. According to mercantilism, the prevailing economic doctrine of the day, colonies served the interests of the colonizer by providing markets for finished products; sources of raw materials; certain agricultural goods such as tobacco, sugar, and spices; and, in the case of Spain's holdings in the Americas, the windfall of gold and silver. The Catholic powers of Spain, Portugal, and France also were motivated by religion. Empires provided opportunities to spread Christianity to pagans and other nonbelievers. Most historians find the motto "Gold, Glory, and God" sufficient for explaining Europe's early imperialist thrust.

No simple formula has emerged to explain the phenomenon of the "New Imperialism," which refers to the intense period of empire building, mainly by European powers, that occurred between the mid-1870s and 1914 and was directed toward Africa, Asia, and the Pacific rather than the Americas.

Viewing this outburst of empire building as a sharp departure from the presumed indifference to overseas empires in the preceding half century, historians have tended to seek the origins of the New Imperialism in specific changes occurring at the time in Europe itself. Diplomatic interpretations see the new imperialism as growing out of the intensive new rivalries among the Great Powers after the unification of Italy and especially Germany, which inevitably spilled over into competition for territorial holdings in Africa and Asia. Economic explanations also have been popular. Although differing in purpose and detail, both J. A. Hobson's *Imperialism* (1902) and Lenin's *Imperialism, the Highest Stage of Capitalism* (1916) argued that imperialism was a response to crisis in industrial capitalism. In their view, only by finding and guaranteeing access to new markets, new sources of raw materials, and new areas for investment outside of Europe could industrial and commercial growth be maintained and the capitalist system be saved from collapse. In his widely read *The Tools of Empire* (1981) and his recently published *Power over Peoples: Technology, Environments, and Western Imperialism, 1400 to the Present* (2009), Daniel Headrick has emphasized the means rather than the motives for imperialism. His studies of imperialism emphasize the key role of Europe's technological superiority in empire building.

Much recent debate about the causes of imperialism has centered on the work of two British historians, John Gallagher and Ronald Robinson, who proposed a new interpretive framework in their widely cited article "The Imperialism of Free Trade" in 1953 and their book *Africa and the Victorians: The Official Mind of Imperialism* (1961). They argued, first of all, against the idea that after decades of indifference and even

hostility to empire building, imperialism suddenly burst upon the scene with new vigor in the 1870s and 1880s. They point out that Great Britain consistently employed its power to break into new trading markets in Southeast Asia, the East Indies, parts of Africa, and above all India from 1815 onward. They also argue that the drive for colonies in the late nineteenth century was precipitated not by new circumstances or developments in Europe but rather by events in the “periphery,” that is, Africa and Asia. British policy, centered on promoting and enforcing free trade in world markets, remained constant throughout the 1800s. What sparked the scramble for formal colonies were events in Asia and Africa, where “local crises” forced Britain to intervene and establish formal political control.

Gallagher and Robinson’s theories continue to have an important place in the historiography of imperialism, although most historians now argue that the continuity they saw in imperial policy over the course of the nineteenth century may apply to Britain but not to other major powers. Imperialism did change in the 1870s, and there was such a thing as “New Imperialism.” New players entered the race for colonies, new areas such as Africa and the Pacific islands became objects of expansion, and new arguments were advanced to justify overseas expansion. Against a backdrop of an economic slowdown and rising tariffs, in the 1870s and 1880s economic arguments that promised a secure source of raw materials and food, markets for exports, and a steady level of profit and investment opportunities made sense to many people. In an atmosphere of growing nationalism, the idea that having colonies was a sign of national strength and virility also had strong appeal. Arguments based on considerations of national security—for example, that colonies on remote Pacific islands were needed as naval coaling stations or that British control of Egypt was necessary to protect their control of the Suez Canal—also were convincing. So too were the claims of missionary organizations and humanitarians that colonization would result in conversions to Christianity and the moral improvement of “backward” peoples. Every supporter of imperialism could draw upon the views of increasing numbers of historians, scientists, and social scientists whose studies “proved”

that whites were superior to dark-skinned races and hence were justified in governing them. All these factors combined still would not have resulted in the great imperialist land grab if it had not been for the technological chasm that by the late 1800s had opened up between the West and the rest of the world. Without steamships, railroads, breech-loading rifles, machine guns, international telegraph networks, and new techniques for battling tropical diseases such as yellow fever, there would have been no age of imperialism. On this, at least, historians can agree.

—James H. Overfield

Eighteenth-Century Chinese Imperialism in Mongolia, Nepal, Burma, and Tibet

In the eighteenth century, the Kangxi (1661–1722), Yongzheng (1723–1735), and Qianlong emperors (1736–1796) launched wars of conquest that more than doubled the size of the Manchu empire, taking possession of all the lands now within the borders of the People’s Republic of China, Mongolia, parts of Kazakhstan, and parts of Siberia. Less successful expeditions against the Ghurkas of Nepal (1790–92) and the Konaung dynasty of Burma (1765–69) aimed not at significant territorial gain but at establishing secure borders. However, borders remained porous, and Tibetans lived in Sichuan in the regular Chinese-administered area, Mongols lived in Xinjiang, Chinese lived in Burma, and Nepalese in Tibet. Such conditions of interhabitation were both a product of and a stimulus for trade.

Until quite recently historians of China had argued that the Manchus became Sinicized—more and more Chinese—during their rule. But Manchu and Mongolian sources tell a story of a multiethnic empire that rivaled the Ottoman empire and Romanov Russia. The Qing adopted Chinese methods to rule China proper while expanding upon Manchu military organization (the Banner system) to rule in Inner and Outer Mongolia. The Qing also used their patronage of Tibetan Buddhism, especially of the Yellow Hat sect of the Dalai Lama, to divide and control Mongolians and Tibetans. Such methods, however, could not lead to a conquest of the semiautonomous peoples of the Burma border

region. Despite losses in Burma, the Qianlong emperor's propaganda claimed success in ten major military campaigns during his reign.

Control of Mongols and other nomadic border peoples who had for centuries threatened agrarian China was one of the claims to Qing legitimacy as a Chinese dynasty. To accomplish this, the Qing emperor claimed the title of "Great Khan" as well as other simultaneous Inner Asian ruling titles. The Qing emperors managed the Mongols through the incorporation of local rulers (*khans*) into the Manchu Banner system and by the tea-for-horses exchange that kept a steady supply of horses for the imperial armies and agricultural products for the Mongols. In the Banner system, eight Mongol banner families were considered on par with Manchu banner families. Yet the western Zunghar Mongol empire, which controlled large parts of Xinjiang, Inner and Outer Mongolia, and parts of Qinghai, Tibet, and Kazakhstan, remained a major threat until it was finally wiped out by the Qianlong emperor in the 1760s. Under Kangxi in the 1690s the pursuit of the Zunghar leader Galdan in three major campaigns over thousands of miles went beyond strategic necessity to the level of personal vengeance.

Tibet was not a united entity, nor did it have a unified religion despite the dominance of the Yellow Hat sect of the Dalai Lama in Lhasa. The Zunghar Mongol invasion of Tibet in the Kangxi and Yongzheng reigns convinced Qing emperors to repeatedly occupy Lhasa and eastern Tibet although withdrawing troops each time. Qing emperors gradually increased control over Tibet by assigning governors who eventually outranked the Dalai Lama in relation to the imperial government. The Tibetan view, however, was that the Qing emperor was merely the secular patron of the Dalai Lama. Beginning in 1757 after the passing of the seventh Dalai Lama, regents were appointed to rule until subsequent Dalai Lamas came of age. Qing support of the Panchen Lama as a secondary ruler was a further measure to control Tibetan affairs, as was the institution of a lottery system in 1793 to choose the Dalai Lama from among commoners rather than the ruling classes.

In 1788 and 1792 Qing armies were sent to Tibet to repel the invasions of Gurkha armies from Nepal. Qianlong's propaganda said that the

THE QIANLONG EMPEROR'S REASONING FOR WAR-MAKING IN THE NORTHWEST

The Kangxi emperor had launched an unsuccessful initiative to eliminate the danger posed by the Zunghar Mongols to China's borders. His son and successor, the Yongzhen emperor, continued the effort, which was at last successful under the reign of Kangxi's grandson, the Qianlong emperor, in the 1760s. Qianlong wrote of his efforts:

"The Zunghars have caused trouble on the northwestern border for over four hundred years. My grandfather and father solidified the frontier against Galdan and Galdan Tseren. . . . Now these barbarian tribes have become disaffected and their minds have gone astray, offering an opportunity for revolt. How can I sit back and let them be lost? Would I not be laughed at by later generations? How could I face my grandfather and father in the afterlife? This is why we made careful plans and toiled to do the unavoidable; it was not out of a temporary love of glory, but to prevent border unrest and diligently make long-term plans."

—David Luesink

Source

Peter Purdue, *China Marches West* (Cambridge: Harvard University Press, 2005), 286–287.

war was to protect the timid Tibetans from the Gurkha money changers, so he subsequently installed a government mint to ensure unitary Qing currency dominance.

Yet control of Lhasa was not control of all Tibetan peoples. Two wars, in 1747–1749 and 1771–1776, were waged to suppress the Golden Stream Tibetan peoples of western Sichuan to bring them under the bureaucratic state system. These people were practitioners of the indigenous Tibetan Bon religion and the Red Hat sect of Tibetan Buddhism, a competitor to the Yellow Hat sect of which Qianlong was a patron. Despite comprising only 30,000 people, the Golden Stream people repulsed the Qing armies from their mountain fortresses. In the larger second war, Qianlong finally defeated them and incorporated these areas of Sichuan into the imperial state.

Qianlong's Burma campaigns of the 1760s sought to humble the Burmese king and clarify the double allegiance of a Shan state on the border of Yunnan and Burma yet instead demonstrated the limits of Qing military power. When King Hsinbyushin of Burma demanded tribute from the Shan state, the Qing governor-general attacked and was defeated. Second, third, and fourth attempts by successive Qing commanders were also stopped. Finally, other military commitments of the Burmese king in Laos and Siam led to an uneasy truce with the Qing. Both the Golden Stream wars and the Burmese war were largely funded by Chinese salt merchant capital.

Three interrelated issues are essential to understanding the massive expansion of the Qing empire in the eighteenth century. First, it was a Manchu empire, not a Chinese empire, that was successful in pacifying the northern steppes, and it was successful to the degree that it could create legitimacy in a multiethnic realm. Second, the Qing differentiated between protectorates incorporated into the empire such as Mongolia and Tibet and tributary states such as Nepal and Burma that sent tribute missions to Beijing to allow merchants to trade across the borders. Third, Chinese merchant activity across Qing borders was as important as Manchu diplomacy in expanding the power of the Qing state.

—David Luesink

Bibliography

- Crossley, Pamela. *The Manchus*. Cambridge, MA: Blackwell, 1997.
- Perdue, Peter C. *China Marches West: The Qing Conquest of Central Eurasia*. Cambridge: Harvard University Press, 2005.
- Woodside, Alexander. "The Ch'ien-lung Reign." In *The Cambridge History of China*, Vol. 9, *The Ch'ing Dynasty to 1800, Part One*, edited by Willard J. Peterson. Cambridge: Cambridge University Press, 2002.

The Causes of Europe's New Imperialism

"New imperialism" is a term used to describe the sudden mania for expansion and conquest that gripped Western powers in the late nineteenth century. Although Western expansionism dates back to the Middle Ages, during the

final two decades of the century, the European powers and, to a lesser degree, the United States demonstrated an unprecedented enthusiasm for expansion. The rapidity of their conquests and their focus on the tropical regions of Asia and Africa—which had previously remained outside of the imperial orbit of Europe—encouraged scholars to identify the trend as new imperialism.

As late as the 1870s, most Western governments opposed the idea of conquering and administering new territories. In the 1860s the Parliament of Great Britain, the world's premier imperial power, went so far as to debate a plan to abandon the nation's tiny colonies on the west African coast. The doctrine of free trade appeared to promise British manufacturers and merchants everything they needed from the non-Western world, without the expense of conquest and administration. In the colonies with large white settler populations, such as South Africa, Canada, and Australia, the British government was moving toward encouraging greater autonomy and independence.

Such sentiments had limits, however, and European powers did not consider abandoning possessions that they considered crucial to national interests. French Algeria, British India, and the Dutch Indies were tropical colonies viewed as economically valuable to the metropole and whose non-European populations could not be trusted with self-government.

Attitudes toward imperialism changed rapidly in the 1870s due to a convergence of trends in Europe and in the non-Western world. One key development was the changing balance of power in Europe. The creation of the new nations of Italy and Germany in the 1860s and 1870s challenged the traditional supremacy of Great Britain and France in Africa and Asia. As new powers, Germany and Italy saw imperial expansion as a way to legitimize their status within Europe. France, whose defeat in the Franco-Prussian War (1870–1871) had opened the door to German unification, looked to foreign conquest as a way to offset the nation's humiliation. The desire to gain status through imperial ventures inspired Italy to conquer the economically marginal regions of Libya and Somalia, while France became master of the arid Sahara region. The imperial fervor of those new powers caused concern among

British politicians and businessmen, who feared that such conquests would jeopardize global free trade. Such fears deepened after an industrial depression arose in 1873. In the context of high unemployment and slow economic growth, workers and manufacturers in Britain and elsewhere pressured governments to secure new markets for industrial products and new sources of raw materials for domestic consumption.

In France as in other Western nations, such issues had important political ramifications in an era of growing democratization. Imperial competition became a favorite subject of a nationalistic popular press, and the rise or fall of a political administration could be tied to the success or failure of imperial ventures. Imperial lobbying groups pressured politicians to undertake new colonial ventures.

Moreover, new imperialism proved more palatable to Western governments in the 1870s because the dangers and expenses of tropical empire had dropped dramatically since the 1860s. By midcentury, European medicine had developed prophylaxis for malaria, the most severe impediment to white rule in tropical Africa, and thus allowed explorers, soldiers, missionaries, and merchants to survive on the continent. The Second Industrial Revolution of the 1860s and 1870s also had developed a set of “tools of empire” that made imperial conquest less hazardous. Whereas British troops had campaigned in India in the 1840s using weapons and artillery that were at times inferior to those of their opponents, by the 1880s steamships, exploding artillery shells, machine guns, and the telegraph gave European forces an overwhelming advantage over Asian and African armies.

Foremost among the proponents of new imperialism were missionaries, who expected colonialism to provide them with a safe forum for spreading their message. Christian missionaries had been active in Asia and Africa since the sixteenth century, but their work was limited by the regions’ often hostile rulers. Evangelical Protestant and Catholic groups expected that Western rule in Africa and Asia would aid their efforts to win converts, and many missionaries worked closely with soldiers and administrators to prepare the conquest of new regions. It is also worth noting that many missionaries

championed the independence of African and Asian states and worked to stave off imperial encroachment. Overall, however, missionary organizations played an important role in pressuring European governments to conquer new territories, and many facilitated the expansion and administration of those areas.

Intellectually, new imperialism was accompanied by a weakening of Western faith in the universal equality of humanity. That idea had developed during the Enlightenment of the eighteenth century and had played an important role in the abolition of the transatlantic slave trade. The assault on that notion began with the writings of the British naturalist Charles Darwin. Though Darwin himself repudiated the racism of many of his followers, his ideas of human evolution and natural selection appealed to supporters of imperialism. Many social Darwinists were paternalists like the British writer Rudyard Kipling, whose poem “The White Man’s Burden” viewed colonialism as the responsibility of all “white” nations. Others saw imperial expansion as a part of a ruthless struggle between races. In such a view, European peoples had to either conquer or submit to the non-Western peoples of the world. By the era of new imperialism, versions of social Darwinism and related pseudoscience ideologically justified the conquest of African and Asian peoples.

New imperialism also had its roots in the non-Western world, where political and economic changes placed pressure on European strategic and commercial interests. In Egypt, a revolt against European influence in the internal affairs of the state seemed to threaten European investment in the Suez Canal and led to a British invasion in 1881. In western Africa, competition between African and European merchants on the Niger River inspired the British Royal Navy to intervene in the name of free trade. In many regions of tropical Africa and Asia, instability threatened to disrupt Europe’s access to markets. Some African and Asian leaders also looked to Europeans as powerful outsiders who could shore up their authority or protect them from hostile neighbors. New imperialism therefore should be seen as a process inspired in part by the pull of the non-Western world.

Despite the rising enthusiasm for imperialism expressed in many Western nations, there

were also significant forces working against imperial expansion. Some clergymen regarded it as immoral, while businessmen and taxpayers deplored the costs of empire and were skeptical of its potential profitability. Thus, the early stages of new imperialism were dominated by chartered companies. Those privately owned entities attracted investors by receiving official state support for their activities. They created private armies, made treaties with local rulers, and carved out independent territories in Africa, Asia, and the Pacific. The British South Africa Company, the Royal Niger Company, the German East Africa Company, and the British North Borneo Company are examples of organizations that undertook the conquest and administration of tropical colonies with official support but at no cost to taxpayers. The most notorious of those private ventures was King Leopold II's Belgian Congo, funded by his private fortune. With no oversight from other European powers or the Belgian Parliament, Leopold used ruthless tactics to exploit a vast private estate in central Africa.

The use of chartered companies reflects the ambivalence of European governments toward imperial expansion as late as the 1890s. However, the era of such companies was short-lived, as the costs of empire swamped the resources of the investors. Wars of conquest in southern Africa overwhelmed the British South Africa Company, while the moderate profits of the east African trade threatened to bankrupt the German East Africa Company. In those and similar cases, European governments were forced to step in and take over for the private companies, which brought vast tropical regions under official imperial control.

In conclusion, new imperialism shaped the political geography of the modern world and hastened the diffusion of Western culture and technology around the globe. However, after virtually all of Africa and much of Asia had been conquered by 1900, some Europeans began to lose interest in their empires. While the activities of explorers and soldiers in the empire had seemed of national consequence in the 1890s, by 1903 imperial issues attracted little public attention. The new colonies were given autocratic administrations and were integrated into the economies of the metropole. As the wave of

imperial enthusiasm passed, the new colonies received little investment or attention from Europe.

—James Burns

Bibliography

- Headrick, Daniel R. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. New York: Oxford University Press, 1981.
- Packenham, Thomas. *The Scramble for Africa*. New York: Random House, 1991.
- Wesseling, H. L. *The European Colonial Empires: 1815–1919*. Harlow, UK: Pearson Education Limited, 2004.
- Wesseling, H. L. *Imperialism and Colonialism: Essays on the History of European Expansion*. Westport, CT: Greenwood, 1997.
- Wright, Harrison M., ed. *The “New Imperialism”: Analysis of Late Nineteenth-Century Expansion*. 2nd ed. Lexington, MA: Heath, 1976.

France in Algeria

Algeria, a former province of the Ottoman empire, was invaded by France in 1830 and became France's most important overseas territory by the late nineteenth century. Situated in the Maghreb (northwestern coast of Africa), also known as the Barbary Coast in nineteenth-century accounts, Ottoman Algeria encompassed the northern coast, not the more arid desert regions to the south. It was ruled by a governor, or *dey*, who reigned quasi independently from the capital in Algiers. The population totaled 3 million and included Arabs, Berbers, Jews, and Turks. The economy was based on agricultural products such as grain and olives but was supplemented by state-sanctioned piracy in which the Barbary states preyed on European and American ships in the Mediterranean. The abduction and enslavement of American sailors prompted the United States to fight the inconclusive First Barbary War against Morocco and Tripoli (1801–1805) and then the Second Barbary War (1812–1815), which resulted in the defeat of Algeria, Tunisia, and Tripoli and put an end to U.S. tribute payments. In 1816 an Anglo-Dutch squadron forced the Algerian dey to stop enslaving Christians.

France's own involvement in Algeria began when two Algerian Jews accused the French

government of reneging on a debt. The dispute seemed trivial, but the dey hit the French ambassador with a flyswatter as they quarreled over the case. French king Charles X (r. 1824–1830) ordered a blockade of Algiers to avenge the insult (1827) and then sent the French army to take Algiers (1830). Charles had hoped that the quick victory would boost his sagging popularity, but he was overthrown in July 1830 and replaced by the more liberal Louis-Philippe (r. 1830–1848).

Louis-Philippe had opposed the invasion of Algeria, which had been accompanied by rape and the desecration of mosques, but he also feared that withdrawing troops would damage national prestige and would allow England to take over Algeria. Louis-Philippe officially annexed the conquered territories in 1834. France had conquered all major Algerian cities by 1837.

From 1832 to 1847 France faced a determined rebellion in western Algeria led by Abd al-Qadir (1807–1883), a pious Muslim from a prominent family, who controlled over half of Algeria by the late 1830s. France sent in 100,000 men led by General Thomas Bugeaud de la Piconnerie, who deliberately destroyed villages and orchards to deny Qadir supplies. Qadir surrendered in 1847, though rebellions broke out sporadically in Berber areas, most notably in 1871.

European settlers, called colons or *pieds noirs*, arrived from France, Italy, Spain, Malta, and Alsace-Lorraine after the latter was invaded by Germany in 1870–1871. By buying or taking Muslim tribal lands, the most successful settlers created large agricultural estates producing wine, cotton, grain, and tobacco for the European markets. Others made a modest living as farmers and bureaucrats. Muslims were deprived of many of their lands and generally formed a destitute majority. Land disputes frequently sparked clashes between the land-hungry colons and the military Arab Bureaus defending Muslim peasants' claims.

Algeria was first ruled by a military regime (*régime du sabre*), though an 1845 royal ordinance created *communes de plein exercice*, towns where there were enough European migrants to elect self-governing councils. In 1848 the regions of Algiers, Oran, and Constantine were reorganized into three *départements* (regions) under civilian control. Military

government returned under Napoléon III (1852–1870) before the Crémieux decrees allowed Algerians to elect deputies to the National Assembly (1870). Full citizenship rights, however, were limited to Europeans, Jews, and the few Algerians (called *évolués*) who had obtained French citizenship in exchange for renouncing certain provisions of Islamic law. Only in 1947 were Muslims allowed to vote for a local assembly, and even then they collectively had no more votes than the European minority.

—Philippe Girard

Bibliography

- Ageron, Charles Robert. *Modern Algeria: A History from 1830 to the Present*. Translated by Michael Brett. 1964; reprint, Trenton, NJ: Africa World, 1991.
- Fanon, Frantz. *The Wretched of the Earth*. Translated by Constance Farrington. 1961; New York: Grove, 1965.
- Stora, Benjamin. *Algeria, 1830–2000: A Short History*. Translated by Jane Marie Todd. 1991; reprint, Ithaca, NY: Cornell University Press, 2004.

Berlin Conference

The Berlin Conference (also known as the Berlin West Africa Conference) was a meeting among representatives of 12 European states as well as the United States and the Ottoman empire held in Berlin from November 15, 1884, to February 26, 1885, for the purpose of preventing conflict between European colonial powers over African territory. The meeting was more a symptom than a cause of the rising “new imperialism” of the late nineteenth century, in which the quest for commercial markets and strategic territory was veiled by the rhetoric of humanitarian ventures such as combating slavery or an alleged “civilizing mission.” The immediate causes of the conference are best understood in the context of European economic and political rivalries.

Due to a growing European interest in opening up central Africa to trade, an earlier international conference was held in Brussels in 1876. It established the International African Association under the leadership of Belgian king Leopold II with supposed humanitarian and scientific interest in Africa. Both Belgium and France organized covert missions to the Congo under Henry

➤ KARL PETERS

Karl Peters (1856–1918) was a German explorer who was instrumental in founding German East Africa (modern Tanzania) and bringing Germany into the Scramble for Africa. While working in London in the early 1880s, Peters was impressed with the methods and results of British imperialism. Upon his return to Berlin in 1884, he founded the Society for German Colonization and proceeded to eastern Africa to conclude treaties with local rulers. He returned to Germany near the conclusion of the Berlin Conference and presented his treaties to Bismarck as a *fait accompli*. Bismarck initially refused to recognize Peters's actions and declined to extend official protection to this territory. However, Bismarck changed his mind when Peters threatened to offer the concessions to Belgian king Leopold, who was interested in expanding the territory of his Congo Free State. With Bismarck's reluctant support, German East Africa was formed, and Peters returned to Africa to expand his claim.

—William Mengel

Stanley and Pierre de Brazza, respectively, to lay claim to key locations on the Congo River and present the other conference members with a *fait accompli* of acquired territory. Portugal, which had previously made claims to the Congo region, responded to the Belgian and French actions by negotiating a treaty with Great Britain in 1884. The Anglo-Portuguese Treaty supported earlier Portuguese claims at the mouth of the Congo River and created a joint commission to control river traffic. It was immediately opposed not only by France and Belgium but also by the Netherlands and the United States, which made arguments in favor of free trade in the region. The critical moment came when German chancellor Otto von Bismarck refused to support the treaty but offered to host an international conference at Berlin to resolve the dispute.

The Berlin Conference focused on five main political issues: free trade in the Congo basin, freedom of navigation on the Congo and Niger rivers, the status of Leopold's International Association, the territorial boundaries of the Congo "Free State," and the definition of "effective occupation" for the purposes of claiming African

territory. Of these, the last was the most significant, as it set the rules for the subsequent "Scramble for Africa" during the last decades of the nineteenth century. The recognition of Leopold's International Association as a sovereign state, subsequently defined as the Congo Free State, laid the foundation for creation of a harsh regime based on slave labor and rubber extraction. The humanitarian issues that were supposedly the basis for the conference were almost completely absent from the negotiations.

The Berlin Conference did not divide Africa between European powers, but it opened the door for European imperialism by setting the rules for expansion with minimal conflict between European powers. The conference established procedures for making and recognizing territorial claims and set the precedent for further agreements among European states. Although the conference did not specifically cause the partition of Africa, it accelerated the acquisition of colonies, as imperial powers could now claim African territories with a reduced risk of conflict with other European powers. Some controversy remains regarding the interpretation of European intentions in the conference. While the idea of humanitarian ideals as a significant motivating factor has long been rejected, there is still some question as to whether the goal of the conference was to establish a means for the partition of Africa or to create a structure that enabled penetration of Africa without the cost of a colonial empire.

—William Mengel

Bibliography

- Förster, Stig, Wolfgang J. Mommsen, and Ronald Edward Robinson, eds. *Bismarck, Europe, and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*. London: Oxford University Press, 1988.
- Pakenham, Thomas. *The Scramble for Africa: White Man's Conquest of the Dark Continent from 1876 to 1912*. New York: Random House, 1991.

Scramble for Africa

The term Scramble for Africa defines a period from 1884 to 1914 during which European nations engaged in a race to carve up Africa and

create formal colonial empires. Only 10 percent of Africa was under European control before the scramble; by 1912 the entire continent, except Liberia and Ethiopia, had been devoured.

After the American Revolution, European powers were generally reluctant to take on new colonies, preferring to rely on free trade and informal economic control in the belief that it was more profitable, more flexible, and less likely to lead to foreign entanglements. Notable exceptions included the British expansion in India and the French conquest of Algeria, but these were not part of a grand colonial scheme. In Africa, Europeans contented themselves with a handful of longstanding fortified trading stations. Disease, punishing terrain, and potential African resistance made expansion inland difficult, dangerous, and expensive. It was also unnecessary because African middlemen willingly brought goods that European merchants wanted to coastal trading ports.

In the 1870s, however, the situation began to change. European industrialization and intensified international economic competition tarnished the allure of free trade and convinced supporters of imperialism that colonies would help guarantee access to markets and raw materials. Others believed that colonies promised domestic political stability by distracting the masses from low wages and poor working conditions. For newly unified Italy and Germany, having colonies was proof of Great Power status. Other nations sought colonies to improve their strategic position, protect investments, or to spread Christianity.

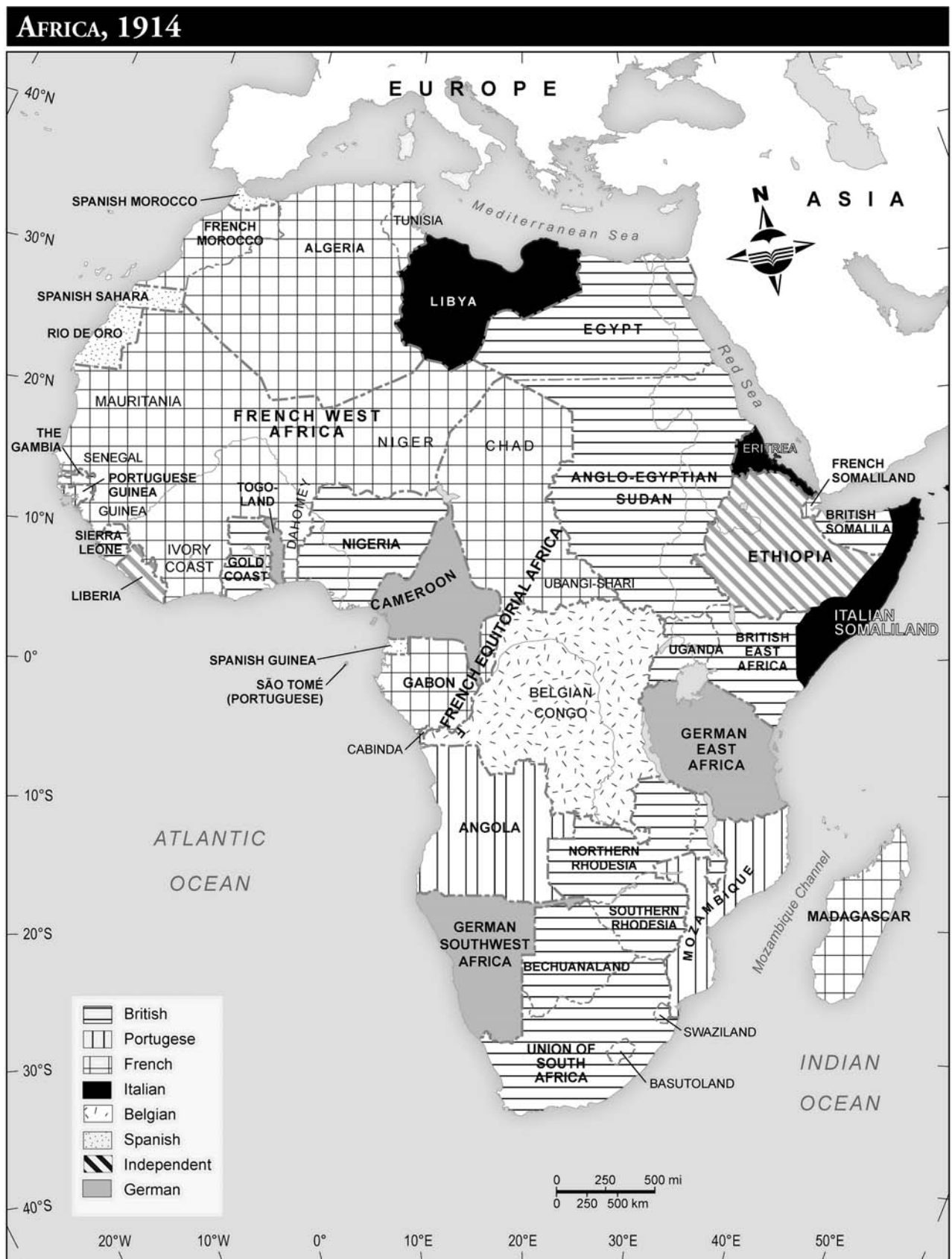
Although pro-imperialist sentiment was growing in much of Europe, it was Leopold II of Belgium who set these impulses into motion. Chafing under the restrictions imposed by his status as a constitutional monarch, Leopold opted to make a name and fortune for himself in Africa. The privately funded International African Society was ostensibly founded in 1878 to explore the Congo River basin and engage in “humanitarian” work. However, Leopold used it to hire the Welsh-American explorer Henry Morton Stanley and send him on a mission lasting from 1879 to 1884 to sign treaties with African chieftains that granted Leopold political authority and trading rights along the southern bank of the Congo River.

When news of Stanley’s activities leaked out, the French, who had possessions in nearby Gabon, sent Savorgnan de Brazza to negotiate treaties on their behalf along the northern bank of the Congo. This upset Britain, concerned that in the wake of its takeover of Egypt France was seeking revenge by trying to secure a monopoly over the Congo River trade. Consequently, in late February 1884, the British government recognized Portugal’s historic claims to the Congo delta to ensure that a friendly power would control access to the Congo basin.

Even before it had been ratified by the British parliament, the Anglo-Portuguese treaty infuriated the rest of Europe, as it settled bilaterally what was thought to be an international issue. German chancellor Otto von Bismarck seized the opportunity to steal the diplomatic limelight and to placate France by joining prime minister Jules Ferry in demanding that the matter be submitted to an international conference. The need for such a conference was further underscored by Germany’s announcements in April and July 1884 that it had established protectorates over southwest Africa, Cameroon, and Togo. As paper partitions, Germany’s claims created a dangerous precedent and raised the possibility that rival nations could claim the same piece of territory or even that one country could claim the entire continent. During the Berlin Conference of 1884–1885 participants agreed to recognize existing German and Belgian holdings, yet insisted that all future territorial claims in Africa had to be officially announced and substantiated by actual occupation.

With the ground rules set, the race for African territory was on. In the Congo, Leopold confined his expansion to the occupation of areas already claimed on paper before the conference. Similarly, in Togo, Cameroon, and southwest Africa, the Germans sought only to make good on their paper partitions by occupying the interior. The rest of Africa, however, was a different matter.

Britain, which had enjoyed informal control over the East African coastline dating back to 1840, was forced to formalize its claims in the region as a result of Germany’s announcement days after the Berlin Conference that it had established a protectorate in East Africa. Thereafter British and German officials raced to sign



additional treaties with interior peoples and establish formal occupation of their respective protectorates. This rivalry ended in 1890 with the signing of an Anglo-German Treaty.

Eager to establish credentials as a world power, Italy also sought colonies in East Africa by transforming its small protectorate in Somalia into a larger formal empire by intervening in the internal politics of Ethiopia. When Ethiopia resisted, the Italians invaded but were crushed at the Battle of Adowa in 1896. In the peace settlement, Ethiopia allowed Italy to retain Eritrea and expand its holdings in Somalia. Humiliated, the Italians redirected their attention to the Ottoman province of Libya. They got their chance in 1911 when unrest inside the Ottoman empire created a pretext for a successful invasion and the creation of an Italian colony.

The principal architect of British expansion in South Africa was Cecil Rhodes, prime minister of the Cape Colony from 1890 to 1896 and head of the De Beers diamond mining operation. Rhodes pushed relentlessly to create an unbroken band of British territory united north to south by a Cape-to-Cairo railroad. He forcibly annexed several African kingdoms and sought to topple the Boer republic in the Transvaal in an effort to secure control of additional rumored gold fields and to create a single block of British territory. His activities helped trigger the Second Boer War (1899–1902), which led to the creation of a South African federation uniting the Cape Colony and the Boer Republics under the Union Jack.

In west and central Africa, France, shut out of Egypt, resolved to expand its existing holdings to surround and contain nearby British territories. The French hoped to expand across Africa in an effort to seize the headwaters of the Nile and force Britain out of Egypt altogether. Britain initially ignored this threat to concentrate on expanding into the interior of Nigeria and the Gold Coast, but the 1896 expedition by the French explorer Jean-Baptiste Marchand forced London to reassess French goals. Marchand's plan was to drag a small steamship in pieces from the Congo to the Sudan, where he and his compatriots would reassemble it to sail down the Nile claiming everything they saw. Desperate to prevent this, Britain dispatched an army from Egypt to recapture the Sudan, which

had fallen under the control of the Mahdi and his successors, and keep the source of the Nile out of French hands. Although the French beat them to the tiny riverside village of Fashoda in 1898, the British, having arrived with an army and a railroad, forced the French to withdraw, precipitating a short-lived diplomatic crisis.

Although the colonial powers continued to negotiate periodic border adjustments to their newly acquired holdings until the outbreak of World War I, by the early 1900s, the scramble for Africa had largely given way to the tasks of governing, extracting resources and, in the colonial powers' view, uplifting subject African populations.

—Kenneth J. Orosz

Bibliography

- Betts, Raymond F., ed. *The "Scramble" for Africa: Causes and Dimensions of Empire*. Boston: D. C. Heath and Co., 1966.
- Chamberlain, Muriel. *The Scramble for Africa*. 2nd ed. New York: Longman, 1999.
- Cook, Scott B. *Colonial Encounters in the Age of High Imperialism*. New York: Longman, 1996.
- Orosz, Kenneth J. "Africa, Scramble for." In *Encyclopedia of the Age of Imperialism: 1800–1914: A–K*, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.
- Pakenham, Thomas. *The Scramble for Africa: White Man's Conquest of the Dark Continent, 1876 to 1912*. New York: Harper Collins, 1991.

Japanese Imperialism in the Meiji Era

Japanese imperialism emerged from Japan's humiliating experience of having been forced, in the mid-nineteenth century, into unequal treaties with Western powers. In a series of agreements following the Treaty of Kanagawa with the United States in 1854, Japan had been required to accept restrictions on imposing tariffs and to recognize the imposition of foreign jurisdiction. In response to Western attempts to colonize or otherwise dominate Asia, the ex-samurai warriors who initiated the Meiji Restoration in 1868 sought to create a modern state with power and prestige under the slogan of *fukoku kyōhei* (rich nation, strong army). From a geographical point of view, securing independence from foreign domination required not only integrating Hokkaido and the

► DATSUA-RON—THE INTELLECTUAL BASIS OF JAPANESE IMPERIALISM

Datsua-ron (a theory of leaving Asia) served as a powerful social norm that promoted nineteenth-century Japanese imperialism. The thesis of de-Asianization was first advocated in 1885 by a famous Japanese liberal intellectual, Fukuzawa Yukichi. In contrast to *koa-ron* (a theory of Asian unity and prosperity), Fukuzawa insisted that the modern civilization of Western countries was indispensable to the independence of Japan. He wrote, “One who befriends an evil person cannot avoid being involved in his notoriety. In spirit, then, we break with our evil friends of Eastern Asia.”

—Ryoko Nakano

Ryukyu Islands but also gaining control over Korea. Saigo Takamori, one of the leaders of the Meiji Restoration, insisted on the necessity of opening a diplomatic relationship with Korea, which was resistant toward opening its borders to foreign trade. Although his *Sei-Kan ron* (Movement for a Korean Expedition) gained wide support from former samurai who faced hardship under the new regime, the planned expedition did not materialize, and disagreements with the government over the idea led to civil war in 1877.

However, the government’s constant attention to the peninsula, as well as efforts to cultivate the reform faction of Korean ministers, demonstrated Japan’s continued interest in gaining control over Korea to bolster its political and economic position. Yamagata Aritomo, the prime minister, argued in the first Imperial Diet (1890) that Korea was a strategic buffer zone to protect Japan from invasion. When Korea demanded China’s intervention to suppress the armed insurgents called *Tohngnaks*, Japan also sent troops to Korea in response to China’s expedition. This eventually triggered the Sino-Japanese War (1894–1895). From the Japanese viewpoint, this war was a legitimate effort to end Chinese influence over Korea.

Japan’s victory against China in 1895 paved the way for its entry into world politics. In the Treaty of Shimonoseki, China approved the Japanese acquisition of Taiwan and of the Pescadores.

It also agreed to recognize the independence of Korea and to pay Japan reparations. The sudden rise of Japan alarmed the Great Powers, especially the Russians, who maintained economic interests in northern China (Manchuria). When Russia, Germany, and France demanded that Japan return the Liaotung Peninsula to China, Japan succumbed to this Tripartite Intervention. Even Britain, which had agreed in 1894 to revise the Anglo-Japanese Treaty of Amity and Commerce of 1858 (known as an unequal treaty) in consideration of balancing Russia, showed no interest in coming to Japan’s aid. Nevertheless, the Japanese government, backed by the army high command and business conglomerates (*zai-batsu*), managed to obtain railway concessions from the Korean government in the late 1890s.

The Tripartite Intervention ultimately did not deter Japan’s efforts to expand its empire. Though Britain abstained in the dispute over the Liaotung Peninsula, it officially recognized Japan’s political and economic interest in Korea in 1902 with the Anglo-Japanese alliance. Shortly thereafter, in 1904, Japan engaged in war with Russia in order to prevent Russian interference into Korean affairs and thereby protect its national interest in Korea. The Peace of Portsmouth (1905), which ended the Russo-Japanese War, recognized Japan’s interest in Korea, which facilitated Japan’s annexation of Korea in 1910.

—Ryoko Nakano

Bibliography

- Beasley, W. G. *Japanese Imperialism, 1894–1945*. Oxford, UK: Clarendon, 1987.
- Duus, Peter. *The Abacus and the Sword: The Japanese Penetration of Korea, 1895–1910*. Berkeley: University of California Press, 1995.
- Iriye, Akira. “Japan’s Drive to Great-Power Status.” In *The Cambridge History of Japan*, Vol. 5, *The Nineteenth Century*, edited by Marius B. Jansen. Cambridge: Cambridge University Press, 1989.

The United States as an Imperial Power

Although the United States was an imperial power in North America throughout the nineteenth century, only in the closing decade of the 1800s did it acquire overseas territories with

substantial populations. American expansionists had long sought to push beyond the borders of U.S. territory obtained by the Treaty of Guadalupe Hidalgo (1848) following the Mexican-American War, especially in the Pacific and the Caribbean. However, prior to the Civil War, U.S. military efforts were primarily focused on subduing the Native American tribes in territories over which the United States claimed sovereignty. While such efforts continued following the American Civil War, the United States also sought control of several Caribbean islands, specifically Cuba, Haiti, and the Dominican Republic. Manifest Destiny, an ideology that held that the United States was both unique and destined by God to expand its territory in North America, fueled expansionist sentiments and arguments. Some expansionists believed that it was only a matter of time before the whole of North America as well as Mexico and much of Central and South America was annexed by the United States.

William H. Seward (1801–1872), secretary of state under presidents Abraham Lincoln and Andrew Johnson and one of the chief expansionists of his day, facilitated the purchase of Alaska from Russia in 1867. Also in 1867, the United States formally annexed Midway, two tiny uninhabited islands halfway across the northern Pacific that had been discovered and claimed by the United States in 1859 as a source of guano. Still, anti-imperialists rejected efforts made by the United States to expand into the Pacific and Caribbean. Many argued that it was contrary to the nature of the United States, as a beacon of democracy, to subjugate other peoples. Others feared an influx of territories with darker-skinned peoples who could not be readily assimilated. President Ulysses S. Grant attempted on several occasions to annex the Dominican Republic and Haiti or at least obtain control of key port facilities, but these measures were all rebuffed by the Senate, as was a negotiated purchase of the Virgin Islands from Denmark in 1867.

As the nineteenth century drew to a close, the United States took an increasingly militant stand against European interests in Central and South America because the United States sought to replace European powers, especially Britain, as the dominant economic and military power in the region. The United States deployed troops

to prevent a British incursion into Nicaragua and backed the caudillo regime of Joaquín Sinforiano de Jesús Crespo in Venezuela in 1895 in its border dispute with British interests in Guyana.

In the Pacific, the United States had long sought to tap into the vast market in China as well as expand and maintain its lucrative whaling industry. To facilitate this, coaling stations and overseas ports became necessary for whalers and U.S. naval forces. To this end, the United States extended its influence over Samoa in the late 1880s and by 1889 secured from local native leaders rights to use the excellent harbor at Pago Pago, even in the face of German and British claims to portions of the island group. Despite these incidents, the United States had not meaningfully joined the ranks of the European colonial powers. This would change in the late 1890s.

A combination of factors led to American expansion at the close of the decade. The Panic of 1893 led many to believe that the United States required new protected markets abroad for surplus manufactured and agricultural goods. Protestant missionary societies also pushed for U.S. expansion in areas where they were active. Social Darwinism, which held that stronger, fitter nations were justified in exerting control over backward peoples, also fueled expansionist rhetoric. Nationalism also played a role. President Theodore Roosevelt, for example, saw U.S. expansion overseas as essential to establishing and projecting American power in the world and placing it on par with the European powers.

Following the Spanish-American War in 1898, the United States secured Puerto Rico, Guantánamo Bay in Cuba, the Pacific island of Guam, and the Philippines. These acquisitions met with staunch resistance from anti-imperialists, especially when nationalist Filipinos, led by Emilio Aguinaldo, engaged U.S. forces in a bloody and protracted insurrection. However, expansionists overcame their opposition by claiming that the United States had merely taken up the white man's burden, as Rudyard Kipling had encouraged them to do in his 1899 poem, and were civilizing, Christianizing, and educating the native Filipinos.

Additionally, the United States also annexed the independent nation of Hawaii in 1898.

American missionaries had been operating in the islands for decades and had secured large landholdings and subsequent economic and political power. American planters, led by Sanford B. Dole, himself the son of Protestant missionaries, had fomented a bloodless revolt against the Hawaiian monarchy in 1893 with the help of American naval troops and had since then been demanding U.S. annexation. President Grover Cleveland had rebuffed such demands, but President William McKinley, in the midst of the war with Spain, pressed for the annexation and received congressional approval.

In the early twentieth century, U.S. imperialism continued in the form of interventions in Latin America. President Roosevelt, for example, gained control of the Colombian territory he needed to build the Panama Canal by helping foment a revolt by a small Panamanian separatist movement and then using the navy to make sure Colombian forces could not land to prevent the rebellion. Consequently, Colombia lost the entire isthmus to a newly formed pro-American government of Panama. Roosevelt further legitimized U.S. interventions in the Caribbean by issuing the Roosevelt Corollary to the Monroe Doctrine in 1904. Concerned about potential European intervention in nations that defaulted on their debts, Roosevelt declared that the United States alone would assume the role as policeman and occupy these nations if necessary to ensure debt payments or guarantee stability. Such was the pretext of the American intervention in the Dominican Republic in 1905 and a continuing justification for their presence, along with protecting American interests and promoting stability, in Nicaragua and Cuba throughout this time period.

—*Gerrit Dirkmaat*

Bibliography

- Anderson, Fred, and Andrew Cayton. *The Dominion of War: Empire and Liberty in North America, 1500–2000*. New York: Viking, 2005.
- Cohen, Warren, ed. *The Cambridge History of American Foreign Relations*. New York: Cambridge University Press, 1993.
- Gardener, Lloyd, Walter F. LaFeber, and Thomas J. McCormick. *Creation of the American Empire*. Chicago: Rand McNally, 1973.
- Morris, Edmund. *Theodore Rex*. New York: Random House, 2001.

New Russian Territories in Central Asia

Although the boundaries of the region that we know as central Asia are not uniformly defined, most historians and geographers define it as follows: all territory to the east of the Caspian Mountains as far as the Tien Shan range and bounded by the Russia-Kazakhstan border in the north and the Afghanistan-Pakistan border in the south. From the time of Ivan the Terrible (r. 1553–1584), the Russian empire had pushed toward this vast stretch of land, and by the early 1700s a lively trade had developed between Russia and some of the Muslim city-states of central Asia. The century between 1750 and 1850 witnessed a steady expansion by Russia into the region.

The Russian push into central Asia was accomplished primarily through military conquest, although in several instances the tsar's authority was welcomed with little resistance.

From the time of Peter the Great, Russian policy was directed at bringing the nomadic Kazakhs, living between the Caspian Sea and Lake Balkhash, under the “protection” of the Russian court. A devastating series of campaigns by invading Jungars (Kalmyks) in the southern steppe followed by incursions by Chinese forces in the early eighteenth century reinforced Russian ambition to control the region. During the 1760s Catherine the Great established a line of forts across the northern part of present-day Kazakhstan, and over the following century this frontier was steadily pushed toward the south, eventually encroaching on the territory of three city-states lying along the route of the old Silk Roads: Khiva, Bukhara, and Kokand.

The steady extension of Russian authority into central Asia alarmed the British government, which saw Russia as a potential threat to its holdings in southern Asia. By 1810 the era of geopolitical intrigue known as the Great Game had opened, with central Asia as the prize. For a century both empires jockeyed for geopolitical advantage in the region, and the final result was the creation of Afghanistan as a buffer state between Russian-controlled central Asia and British colonial India. At the conclusion of the nineteenth century Russian control would extend to

the north bank of the Amu Darya, meaning that the historical development of those parts of central Asia falling under Russian jurisdiction would differ radically from the area that would eventually encompass Afghanistan, lying to the south.

When the Russian government established protectorates over several Kyrgyz tribes in the middle of the nineteenth century, the stage was set for an eventual showdown between the tsar's forces and those of the khan of Kokand. Russian generals began peeling away portions of the khanate's territory, capturing Tashkent in 1865 and taking most of the Fergana Valley in 1875. The following year the Russians simply absorbed what remained of the chaotic khanate into its new province of Turkistan, thereby placing almost all of the central Asian peoples living to the immediate west of the Tien Shan under Russian rule. Some of the indigenous groups, including those led by Kurmanjan Datkha, whom the Russians considered a Kyrgyz "queen," joined the Russians in ousting the Kokand government.

Tsarist administration brought many changes to traditional life in the region. The lifestyle of seasonal migration was weakened by the arrival of commercial agriculture and a market economy. Expansion of the transportation and urban structures disrupted the traditional nomadic system and expanded trade both with Russia and other locations in central Asia, resulting in many central Asians abandoning the herding and hunting activities of their forefathers and becoming tradesmen, merchants, or farmers. Land ownership, always a somewhat vague and indefinite concept among the nomadic Kazakhs and Kyrgyz of the central Asian steppe, became concretely defined under Russian law, undermining the ability of such peoples to follow their herds. The social fabric of traditional central Asia life was thus slowly but inevitably unraveled.

Absorption into the Russian empire not only brought social and economic changes but also altered the cultural and ethnic landscape, as thousands of settlers from other corners of the empire arrived in the northern steppe lands of Kazakhstan at the invitation of the region's new rulers. Groups of Russian settlers had established farming communities in Kazakhstan and Kyrgyzstan as early as the 1860s, and by the 1890s numerous Slavic and German farming settlements

➤ GENERAL KONSTANTIN PETROVICH VON KAUFMAN

Konstantin von Kaufman served as the first governor-general of Russian Turkestan from 1867 to 1882, during the height of Russian expansionism in central Asia. An unabashed imperialist, von Kaufman's aggressive policies of conquest initiated several decades of strategic maneuvering between the Russian and British empires in the heart of Asia. This struggle for territory and influence, known to history as the Great Game, foreshadowed the geopolitical and ideological contests of the twentieth century. Von Kaufman's greatest legacy, however, lies in the cultural imprint that his policies left on the vast lands he ruled in the tsar's name. The emergence of a native Russianized elite, the development of an industrialized economy and expanded agricultural production, and the advancement of modernization were all key components of von Kaufman's vision for Russia's central Asian colonial holdings. The character of the central Asian states today, for better or for worse, owes much to the ambitions and governance of Russia's longest-serving military governor.

—Reuel Hanks

Bibliography

- Allworth, Edward, ed. *Central Asia: 120 Years of Russian Rule*. Durham, NC, and London: Duke University Press, 1989.
- Crews, Robert D. *For Prophet and Tsar*. Cambridge: Harvard University Press, 2006.
- Soucek, Svat. *A History of Inner Asia*. Cambridge: Cambridge University Press, 2000.

dotted the "unclaimed" lands in the region. A second and larger migration of Slavs into central Asia took place in the first decade of the twentieth century. Three hundred thousand settlers arrived in the decade between 1895 and 1905, and by 1916 1.5 million immigrants had moved into the region. Not only did the new migrants turn lands that had previously been pasture into cropland, but they also helped accelerate the cultural changes that were already under way.

Not all central Asians passively accepted the dramatic changes to their way of life. Rebellions against tsarist authority periodically erupted throughout the nineteenth century. Among the Kazakhs, Kenesary Khan, a leader of the Middle

Horde, successfully fought Russian troops for nearly a decade in the late 1830s and 1840s, but by the 1860s insurrection on the steppe lands had come mostly to a halt, as the numbers of Slavic settlers swelled and the colonial administrative structure was imposed and enforced by both the tsar's bureaucrats and soldiers.

Ironically, while the influx of both Russian control and Russian homesteaders sapped the foundations of traditional culture, these new elements in central Asian life also had the effect of crystallizing ethnic identity among indigenous groups. Advances in literacy, including instruction in native languages as well as Russian, allowed a literature to appear for the first time among some peoples. The great epic poem *Manas*, a paean to a legendary *batyr*, or Kyrgyz warrior, had been passed through generations of Kyrgyz orally, but rising literacy made the story more accessible. *Manas* and other epic tales were a central element of Kyrgyz identity and served to unify the Kyrgyz when many of their traditions were threatened by the encroachment of Russian civilization. Other ethnic groups reacted in a similar fashion to the changes wrought by colonization.

In the densely settled regions of irrigated agriculture in the river valleys of the south, tensions frequently ran high between the Russian government and natives. Under such conditions of rapid social and cultural change, conflict between central Asians and the newcomers was probably unavoidable. Friction arising from religious differences was especially acute, since those central Asians who would eventually take the identity of modern Uzbeks and Tajiks were much more devout Muslims than the nomadic peoples to the north. One of the most serious uprisings was led by a Muslim leader in 1898. The Andijan Uprising began with the call to arms by a sufi in the Fergana Valley city of the same name who declared a jihad (holy war) against the Russian government and settlers. The majority of those carrying the fight to the Russians may have been ethnically Uzbek and Tajik, but it is clear that significant numbers of Kyrgyzs joined the rebellion too before it was forcefully suppressed. Local Russian officials were surprised by the level of disaffection among their central Asian subjects and in the aftermath of

the uprising instituted changes designed to placate local grievances.

The violence of 1898 would not be the last episode of open rebellion by the tsar's restive central Asian subjects. In 1916 a more serious insurrection erupted as a result of a conscription decree. Central Asians reacted ferociously in an armed rebellion that involved most of the region. The government responded with a scorched earth policy, and thousands of central Asians attempted to flee the fighting by escaping across the Tien Shan to China. Large numbers of refugees perished from exposure and starvation. Over 100,000 indigenous central Asians died as a result of the violence, raising discontent with the status quo to a fever pitch and setting the stage for a political upheaval that would sweep the imperial government from power.

—Reuel Hanks

The “Great Game”

The Great Game is the name attributed to the nineteenth- and early-twentieth-century competition for colonial territory in central Asia. Tsarist Russia and Great Britain were the primary actors in this ongoing diplomatic, political, and military rivalry. The term Great Game was first widely popularized in Rudyard Kipling's novel *Kim* (1901). British Captain Arthur Connolly, however, was believed to have coined the phrase in his *Narrative of an Overland Journey to the North of India* in 1835. It should be noted that Russian speakers did not refer to this period as the Great Game. To them, it was the “Tournament of Shadows.”

The Great Game is generally accepted to date from the early nineteenth century until the 1907 Anglo-Russian Convention (also referred to as the Convention of Mutual Cordiality or the Anglo-Russian Agreement), although some scholars date its conclusion to later in the twentieth century. The convention gave formal unity to the Triple Entente powers, consisting of France, Great Britain, and Russia, which would fight the Triple Alliance, consisting of Austria-Hungary, Germany, and Italy in World War I. The agreement also confirmed existing colonial borders. Great Britain and Russia agreed not to invade Afghanistan, Persia, or Tibet, but were allowed

certain areas of economic or political influence within those regions.

The roots of the Great Game were planted in a period of sustained mutual fear and mistrust on the part of Britain and Russia. British and Russian leaders feared that the other side would encroach on their territorial holdings and would establish dominance in the central Asian region. It was widely believed that this would escalate into a war between the two powers at some point, but this never happened. Russia and Britain, however, did engage in a considerable number of military ventures against various peoples of central Asia. The conflicts ranged from diplomatic squabbles to shows of military force to full-blown wars.

During the early 1800s, Russia became increasingly interested in solidifying its southern borders. The Russians gained allegiance from various Kazakh hordes during the late eighteenth and early nineteenth centuries. They still faced opposition from many Kazakhs, however, including Kenesary Kasimov, who led a sustained rebellion of Kazakhs against Russia from 1837 to 1846. Much of the early-nineteenth-century Russian activity in central Asia was directed toward quelling Kazakh resistance and securing southern borders for the empire. By 1847, the Russians finally succeeded in bringing the Greater, Middle, and Lesser Kazakh hordes under Russian control.

In response to its defeat in the Crimean War (1854–1856), Russia redirected its military attention away from the Ottoman empire and the Caucasus toward eastward and southward expansion in central Asia. The terms of the 1856 Treaty of Paris effectively forced Russia to relinquish its interests in Southwest Asia, spurring a new round of imperial interest in central Asia. Russian advances in central Asia were both offensive and defensive moves, as they conquered the only areas left to them and hoped to position themselves against future British encroachment.

The British government became increasingly alarmed over the southward movement of the Russian armies throughout the nineteenth century. Russian conquest of the Kazakh steppe was followed by mid-century attacks on the central Asian oasis empires of Khokand, Khiva,

and Bukhara. The Russians began a new wave of conquests in 1864 by conquering the cities of Chimkent and Aulie Ata. Khokand was defeated in 1865 and with the unexpected Russian attack and conquest of Tashkent in 1865, Russia was positioned to launch a string of attacks in the late 1860s and 1870s that struck fear in the hearts of the British. The Russians then conquered the Bukhara state in 1868 and the Khiva khanate in 1873. Both Bukhara and Khiva were granted the status of Russian protectorates in 1873.

The Turkmen of central Asia put up strong resistance to Russian conquest during a long period of fighting between 1869 and 1885. As with most of the other areas, the Russians considered controlling the Turkmen and their territory essential for resisting possible British incursions. The Russian victory over the Turkmen at the Battle of Göktepe in 1881 was crucial. The final Russian territorial acquisition in central Asia was at the oasis of Merv in 1884. The Russians considered this conquest important because of its proximity to Afghanistan.

As the Russian advances continued, British colonial officials became fearful of the security of India. Although India was not a formal British colony until 1858, when the government ended the authority of the British East India Company, Britain enjoyed strong commercial and political influence over the area throughout the nineteenth century. For their part, Russians feared British interest in areas they considered to be in their own colonial backyard—especially Afghanistan, Persia, and Tibet.

The Great Game included two major wars between the British and the leaders of Afghanistan, with disastrous results for the British. The British hoped that Afghanistan could serve as a buffer state against Russian advances toward India. In the First Anglo-Afghan War (1839–1842), the British attempted to replace the Afghan leader Dost Muhammad Khan with a leader more amenable to British control, Shuja Shah. The Second Anglo-Afghan War was fought from 1878 to 1880, again over issues of British political and diplomatic influence in Afghanistan. In both conflicts the British faced strong opposition in Afghanistan; however, after the second conflict, they were able to establish considerable control over Afghan politics by placing Abdur

Rahman Khan in power. Abdur Rahman Khan ruled Afghanistan until 1901, largely in service of British interests in the region. Perhaps his biggest test came in 1885 in Panjdeh, in northern Afghanistan. Panjdeh was an oasis area, which the Russians wished to claim. After much diplomatic wrangling, the dispute was resolved and the Russians and Afghans agreed to a border at the Amu Darya River, ceding Panjdeh to the Russian empire.

During the early 1890s, the Russians attempted to continue a southward push through the Pamir Mountains to India's frontier of Kashmir. At this point mutual fears had reached a crisis situation, but they were temporarily resolved through the work of the Pamir Boundary Commission in 1895. This agreement paved the way for the formal acknowledgment of Russian and British colonial possessions in central Asia through the 1907 Anglo-Russian Convention. The Pamir Boundary Commission of 1895 set the definitive boundaries for the Russian empire in central Asia.

The Russians faced two major setbacks in the early twentieth century, the Russo-Japanese War of 1904–1905, and the Revolution of 1905. As a result of these reversals and against the backdrop of an emerging alliance system among the major European powers, the Russians became interested in resolving their disputes with Great Britain. In 1907, both sides agreed to a cessation of the Great Game competition by agreeing to the Anglo-Russian Convention on August 31. Under the terms of this agreement, both sides settled their disputes over territories in central Asia—including Afghanistan, Persia, and Tibet—and forged a military and diplomatic alliance that they would carry into World War I.

—Scott C. Bailey

Bibliography

- Bailey, Scott C. "Great Game." In *Encyclopedia of the Age of Imperialism, 1800–1914: A–K*, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.
- Hopkirk, Peter. *The Great Game: The Struggle for Empire in Central Asia*. New York: Kodansha International, 1994.
- Morgan, Gerald. *Anglo-Russian Rivalry in Central Asia: 1810–1895*. London: Frank Cass, 1981.

Siegel, Jennifer. *Endgame: Britain, Russia, and the Final Struggle for Central Asia*. London: I. B. Tauris Publishers, 2002.

Soucek, Svat. *A History of Inner Asia*. Cambridge: Cambridge University Press, 2000.

The Beginnings of British Rule in India

From trading post to empire, the eighteenth-century expansion of British power in India was not the consequence of government policy but rather the product of the political and commercial opportunism of ambivalent imperialists. Granted a private monopoly of trade in 1600 by Elizabeth I, the East India Company arrived in India in 1608, established friendly relations with the Mughal emperor, and built trading posts at Bombay (present-day Mumbai), Madras, and Calcutta (present-day Kolkata) after 1615. They also gained the right from the Crown to acquire territory and raise an army in 1670. By 1700, the East India Company had successfully manipulated the traditional rivalries between competing Indian states—Muslim and Hindu—to emerge as the dominant military power in southern India.

Company intervention in Indian politics in the seventeenth and eighteenth centuries led directly to the unintended creation of a British Empire in India after 1748. Before 1700, the East India Company employed the customary authority of weak Mughal emperors to advance its political and trade interests and did not seek the protection of the British Crown. With the decline of the Mughal empire and the rise of regional Indian states, the growing importance of the East India trade to the British economy, and the continuing French threat on the subcontinent, the British began to intervene in Indian politics more frequently after the Peace of Aix-la-Chapelle in 1748. The ebbing power of the Mughal empire after 1700 permitted warring Indian states to exploit imperial rivalries between Britain and France to garner support for their regional political ambitions and weaken their tribal and religious enemies. The British and French East India companies built opposing military alliances with these fledgling Indian powers in pursuit of trade and military advantage. The defeat of the Franco-Bengali alliance by Robert Clive at the Battle of Plassey in 1757 resulted in the

establishment of a British protectorate in Bengal directly under the rule of the East India Company. In 1760, Sir Eyre Coote completed the defeat of the French at the decisive Battle of Wandiwash. A decade of Anglo-French conflict in India ended in 1763 with the establishment of British imperial dominance on the subcontinent of India.

For the East India Company, however, this new empire proved a costly burden, as substantial military expenditures threatened its financial stability. The Anglo-French contest for India, a growing public consciousness of the importance of the India trade, and parliamentary concern for the expanded role of the East India Company led to calls for the supervision of Indian affairs by Parliament. Lord North's Regulating Act of 1773 and the younger William Pitt's India Act of 1784 granted the British government control over the East India Company. Although the East India Company was subject to parliamentary control, the new British Empire in India remained a quasi-private enterprise until the establishment of the Raj after the Indian mutiny of 1857–1858.

—Brian Refford

Bibliography

- Bayly, C. A., ed. *The Raj: India and the British, 1600–1947*. London: National Portrait Gallery Publications, 1990.
- Bowen, H. V. *The Business of Empire: The East India Company and Imperial Britain*. New York: Cambridge University Press, 2006.
- Chaudhuri, K. N. *The Trading World of Asia and the East India Company, 1660–1760*. Cambridge: Cambridge University Press, 1978.
- Marshall, P. J. "The British in India: Trade to Dominion." In *The Oxford History of the British Empire*, Vol. 2, *The Eighteenth Century*, edited by P. J. Marshall. Oxford: Oxford University Press, 1998.
- Marshall, P. J. *East Indian Fortunes: The British in Bengal in the Eighteenth Century*. Oxford: Oxford University Press, 1976.
- Ray, Rajat Kanta. "Indian Society and the Establishment of British Supremacy, 1765–1818." In *The Oxford History of the British Empire*, Vol. 2, *The Eighteenth Century*, edited by P. J. Marshall. Oxford: Oxford University Press, 1998.
- Watson, Ian B. *Foundation for Empire: English Private Trade in India, 1659–1760*. New Delhi: Vikas, 1980.

■ Introduction: Colonial Rule in Africa to 1914

When German chancellor Otto von Bismarck convened the Berlin Conference in 1884 to settle a number of Africa-related disputes, the "scramble for Africa" had already begun. In the 1870s and early 1880s, King Leopold II turned the huge Congo basin into his personal domain; Germany established the colonies of Cameroon, Togoland, Southwest Africa, and East Africa; Britain established a protectorate over Egypt; France claimed Tunisia; and France and Britain both extended their territorial claims from Africa's west coast into the interior. The delegates to the Berlin Conference, representing 12 European states, the Ottoman empire, and the United States, assumed that the African land grab was just beginning and accordingly laid down ground rules for further colonization: No nation could simply claim possession of a colony without first informing other

potentially interested nations of its intent, and once having made a claim it actually had to enter into agreements with local chiefs, fly the flag, and have administrators on the ground. After Berlin, the scramble became even more intense and hectic. Most of the continent was under European control by the late 1890s, but the scramble did not end until 1912, when Morocco was divided between France and Spain. Only Liberia and Ethiopia, comprising less than 4 percent of Africa's landmass, remained independent states.

For Europeans the conquest had provided excitement and swelled national pride, but colonial rule itself brought with it sobering responsibilities and immense challenges. The amount of new territory to administer, much of it unmapped and unexplored, was enormous. French claims amounted to just over 3.75 million square miles (9.7 million square kilometers) and those

of the British to just over 2 million square miles (5.18 million square kilometers). The new colonies had no developed transportation systems, presented an endless variety of terrains and climates, and were populated by an equally endless variety of African communities. In this complex and unfamiliar environment, administrators on shoestring budgets were expected to impose law and order, stamp out slavery where it still existed, encourage economic development, and provide an environment in which missionaries could carry on their work.

Not surprisingly, this period of early colonialism was one of trial and error. Policies changed over time and varied from region to region depending on the governing philosophies of the colonial powers and the degree to which these philosophies could be applied in different circumstances and environments. Colonial administrations did share a number of things in common, however. For one, they all excluded Africans from any significant role in policy making and legislation. Once-powerful African kingdoms were fragmented, marginalized or simply ceased to exist. Native Africans had no meaningful voice in the legislative councils installed in several British colonies, and, with the exception of a tiny number of propertied Africans in the Cape Colony, were denied voting rights when Britain granted its four south African colonies the right to elect legislatures with actual decision-making powers. Blacks in Senegal's "four communes" (St. Louis, Dakar, Rufisque, and Gorée) for a time voted alongside whites and mulattoes in elections for local officials and their representative to the French Chamber of Deputies. Between 1907 and 1914, however, they were gradually denied these rights of citizenship. Africans in the rest of France's sprawling African empire lived under militarized authoritarian governments.

Although colonial administrations denied Africans political rights, they all relied on them to carry out the day-to-day business of government. The prime example of such a policy is the British system of indirect rule, whose principles were announced by the colonial administrator Frederick Lugard and applied most completely in Nigeria and Uganda. In this system, the traditional local power structure was kept intact and local chiefs were given the responsibility

of carrying out the directives of the central administration in the villages. German and French administrators relied less on chiefs to carry out their policies, but they were no less dependent than the British on Africans to serve as soldiers, clerks, policemen, porters, revenue collectors, and labor recruiters.

Africa's new colonial masters all sought ways to generate wealth from their colonies, both to create profits for European businessmen and also to increase tax revenues. In Portuguese Africa, this meant continued trafficking in slaves. Even after Portugal succumbed to British pressure and ended the slave trade, it continued to collect service fees for the many thousands of Mozambique Africans recruited every year to work in the gold mines of South Africa. In the case of the Congo Free State, actually the private kingdom of King Leopold II of Belgium, it meant turning all uncultivated land into state property, which then was viciously exploited through the use of conscripted African labor. Once revealed, the atrocities in the Congo forced the Belgian government to strip Leopold of his holdings and assume administrative responsibility for the colony in 1908. German administrators in southwestern Africa turned over confiscated native lands to German settlers and in other parts of their empire forced Africans to grow cotton and other crops that were valuable for German industry. Such policies were abandoned only after the Herero Rebellion in southwestern Africa in 1904 and the Maji Maji Rebellion in German East Africa in 1905. French and British economic policies varied from region to region. Although the British government's investment in the building of the Uganda Railroad (the "Lunatic Line," to its opponents) is a notable exception, both European powers relied on private enterprise to develop the continent's economic potential. In West Africa, this meant encouragement of native cultivators to shift to exportable crops such as cotton, peanuts, and coffee. In most of Africa, however, it meant granting European businesses concessions to establish plantations and extract minerals and then devising policies to ensure that these businesses had a steady source of cheap African labor. In the French Congo 40 such concessions were granted in the 1890s to French companies, some of which instituted

polices no less brutal than those employed by the agents of Leopold II.

By 1914 it was clear that Africa was no treasure trove whose riches would pour forth once the magic wand of colonialism was waved over the land. Many concessionary businesses failed or pulled out of Africa after failing to generate profits. Even the richly capitalized Royal South Africa Company, organized by Cecil Rhodes to exploit the gold mines and farmlands of south-central Africa in 1889, was unable to pay dividends to its shareholders until the 1920s. Colonial administrations, which rarely collected enough tax revenues to match expenditures, had little or nothing to spend on infrastructure projects or the construction of schools and medical clinics. Just as Africa's economic development was handed over to concessionary companies, the task of bringing learning, enlightenment, and modern medicine to Africa—the so-called white man's burden—was left to missionaries and the missionary societies that supported them.

—*James H. Overfield*

Italian Empire—Building in Africa

Although it would seem that the pursuit of an overseas empire would be a low priority for the newly unified Italian state, with its lack of internal integration, serious border disputes with Austria, and a general paucity of resources, Rome still sought this objective in competition with the other major powers of the nineteenth century. Through the quest for empire, Italy sought to achieve international prestige, potential markets, and an outlet for its excess population that would still be under Rome's political control. A particular impetus for Italian expansion was the resonance of the very name Rome with empire.

While allowed by the British government to gain a foothold in what is now Somalia, Italian efforts to create a protectorate over the Ethiopian Empire failed. Despite losing to feudal levies at Dogali in 1887, Rome signed the treaty of Wichale with Emperor Menelik II in 1889. The emperor believed he had signed a treaty recognizing his sovereignty. The Italian government felt they had cleverly bound the Ethiopians with

an admission of overlordship. When Menelik came to understand the true meaning of the treaty, he repudiated the document in 1893 and went to war.

The climax of this campaign was the disastrous Battle of Adowa in 1896, though the Italians were also fought to a standstill at Amba Alagi (1895) and Macalle (1896). Essentially, the Italo-Ethiopian conflict had become a proxy fight between London and Paris over control of the Sudan, with the result that the Ethiopian military, while essentially a feudal horde, had access to modern French and Russian weapons. When added to the raw numbers and traditional warrior ferocity of Menelik's army, the result was a crushing Italian defeat. Rome was unable even to mount a retaliatory campaign to exact revenge for the worst humiliation ever visited by a traditional state on a modern Western army.

The second major effort by the Italians came in North Africa, as the Agadir Incident encouraged Rome to try to turn its area of influence in Cyrenica and Tripolitania (modern Libya) into a formal colony, mostly from fear of French aggrandizement. This move led to the Italo-Turco War (1910–1911), which, although a war between organized armies, was mostly about securing colonial possessions in compensation for other governments' gains.

Once the Turks had stepped back from their confrontation with the Italians, mostly to deal with the Balkan War, Rome found itself locked into a long-running guerrilla war with the Senussi, a culture of desert nomads with no intention of compromising their traditions for the sake of Rome's economic and political aspirations. With encouragement from Turkey and Germany, the Senussi (under their emir Idris) were able to fight the Italians to a standstill; by 1919 Rome was forced to grant the nomads autonomy.

Italy's empire-building in Africa reached a climax in October 1935, when the Italian dictator Benito Mussolini declared war on Ethiopia, after deliberately exploiting a number of minor provocations that arose in its relations with Ethiopia. They declared victory in May, 1935, thereby avenging their defeat at Adowa, four decades earlier.

—*George R. Shaner*

Bibliography

- Gooch, John. *Army, State and Society in Italy, 1870–1915*. London: Macmillan, 1989.
- Mack Smith, Denis. *Mussolini's Italian Empire*. New York: Viking Press, 1976.
- Tripodi, Paola. *The Colonial Legacy in Somalia: Rome and Mogadishu from Colonial Administration to Operation Restore Hope*. New York: St. Martin's Press, 1999.

The British and Indirect Rule in Africa

Through much of the British Empire a policy of indirect rule—a method of administering local government—was adopted in many colonies. Indirect rule rested on the assumption that European and African cultures were different, and the best way to govern local communities was through the political system that Africans evolved on their own. Above the local government was a central government. Each colony was administered as an autonomous unit, divided into a number of provinces. The governor headed the central administration, aided by executive and legislative councils. The executive councils included only British officers. The legislative councils contained a few Africans, but the power of each council was limited to the colony. The governor was powerful within the colony,

but he still obeyed instructions from London. A province was divided into districts, where the system of indirect rule operated.

The British administrator most famous for implementing this idea (in the Sudan and Nigeria) and developing the best manual on it was Lord Frederick Lugard (1858–1945), author of *The Dual Mandate in Tropical Africa* (1922). Early in the twentieth century, Lugard faced the task of administering the huge area of Northern Nigeria, formerly part of the extensive Sokoto caliphate, which had a highly developed political system under a sultan and emirs. The British would have required a large number of people and extensive resources to govern such a huge area. What they chose to do was to control the sultan and emirs, who would in turn control their own people. Indirect rule in Northern Nigeria became a model for other places. The system was later extended to other areas in Nigeria and other colonies such as the Gold Coast, Sierra Leone, and the Gambia.

Under indirect rule, existing institutions were modified to meet the needs of the colonial administration. Chiefs, kings, and their officials were used for local administration to carry out the policies of the colonial government. Indirect rule reduced the cost and numbers of foreign personnel by using Africans to administer themselves. However, many of the Africans involved

► LORD LUGARD'S INSTRUCTIONS TO HIS POLITICAL OFFICERS

The following passage is taken from a list of instructions drawn up by Lord Frederick Lugard for the British political officers who interacted with Nigerian chiefs. In it he describes the officer's responsibility to instruct the chiefs in the principles of ethical behavior and good government:

"In those parts of the Provinces which are under the immediate authority of a Chief of the first or second grade, the primary . . . object of the Political Officer will be to educate them in the duties of Rulers according to a civilized standard; to convince them that oppression of the people is not sound policy, or to the eventual benefit of the rulers; to bring home to their intelligence, as far as may be, the evils attendant on a system which

holds the lower classes in a state of slavery . . . to impress upon them the advantage of delegating the control of districts to subordinate chiefs, and of trusting and encouraging these subordinates, while keeping a strict supervision over them; to see that there is no favouritism in such appointments; and to inculcate the unspeakable benefit of justice, free from bribery and open to all."

—James H. Overfield

Source

Frederick Lugard, *Political Memoranda: Revision of Instructions to Political Officers on Subjects Chiefly Political and Administrative, 1913–1918*, 2nd ed. (London: Warterlow and Sons, 1919), 10.

owed their appointments to the British officers, who could also remove them. They were expected to carry out instructions, performing the unpopular duties of collecting taxes and recruiting labor for the government. To return to the example of Northern Nigeria, the British officer, a resident or district officer, supervised and advised the local emir, instructed him on how to reform and modernize local institutions, and ensured the collection of taxes. The emir was the head of the Native Administration—he appointed district heads, village heads, and tax collectors.

Indirect rule experienced a number of problems and can be criticized on several grounds. Chiefs and kings in many areas actually gained more power than before, thus creating tension between them and their people. Indirect rule proved unsuitable to areas that were previously used to powerful kings and their officials. In areas without established centralized institutions or strong kings, as among the Igbo of Nigeria or the Swahili of Tanganyika, powerful chiefs were created for them. Known as “Warrant Chiefs” among the Igbo, they were given wide powers, they carried out unpopular decisions, and they could be individuals of low social status without much respect in the community.

In the attempt to protect traditional chiefs and institutions, as in Northern Nigeria, the British gave little encouragement to the spread of Christianity and Western education. In some cases, European officers would blame African chiefs for lack of progress, wrongly accusing them of not initiating modernization. In the quest to preserve existing institutions, some officers actually prevented rapid changes, arguing that traditions needed to be preserved at all cost. Finally, where a new African educated elite emerged, indirect rule excluded them from power. The exclusion of the educated Africans from power created a lasting hostility between them and the Europeans.

—Toyin Falola

Bibliography

- Crowder, Michael. *West Africa under Colonial Rule*. Evanston, IL: Northwestern University Press, 1968.
- Falola, Toyin, ed. *Africa*. Vol. 3, *Colonial Africa, 1885–1939*. Durham, NC: Carolina Academic Press, 2001.

Falola, Toyin, ed. *Britain and Nigeria: Exploitation or Development?* London: Zed, 1987.

Falola, Toyin. *Key Events in African History: A Reference Guide*. Westport, CT: Greenwood Press, 2002.

Lugard, Frederick Dealtry. *The Dual Mandate in British Tropical Africa*. London: W. Blackwood and Sons, 1922.

Rodney, Walter. *How Europe Underdeveloped Africa*. Washington, DC: Howard University Press, 1974.

French Colonial Policy in Africa, 1750–1900

Initially limited to trading posts in Senegal, the French colonial presence grew in the nineteenth century to include Algeria and then much of northern, western, and central Africa.

France first obtained trading posts on the Senegal River (1638) and in St. Louis (1659) and Gorée (1679). These were captured by Great Britain during the Seven Years' War (1756–1763) and the Revolutionary and Napoleonic Wars (1793–1815) and then were restored to France under the 1815 Treaty of Paris. The French had little presence in the interior and limited themselves to exports of gum, ivory, and slaves. The latter item grew in importance with the development of France's Caribbean colonies in the eighteenth century.

Colonial rule changed dramatically with the advent of the Second Republic (1848). Slavery was abolished permanently, and inhabitants of Gorée and St. Louis (and later Rufisque and Dakar) were allowed to vote in French parliamentary elections. Louis Faidherbe (governor 1854–1861, 1863–1865) fought Arab warlords and expanded the French presence into the interior.

In North Africa in 1798, French forces landed in Egypt to block off British access to India. Despite initial successes, the expedition was hampered by epidemics, military setbacks in the Levant, and Britain's naval victory at the Battle of the Nile (1798). The French left in 1801, and Egypt became a British protectorate (1882). France's main remaining asset was the Suez Canal, built by Ferdinand de Lesseps during 1859–1869 and owned by a majority-French company until 1956.

Algeria (nominally a province of the Ottoman empire) was one of the infamous Barbary States that preyed on Mediterranean shipping, but the French invasion of Algeria was initially motivated by more prosaic events. A financial dispute led to a diplomatic incident with the *déy* (governor) of Algiers, leading to a French blockade of the city (1827). French king Charles X, afraid of the political repercussions of the ineffective standoff, sent French troops to occupy Algiers in 1830. His successor Louis-Philippe fought the Abd El-Kader Rebellion and occupied all of Algeria (1830–1847).

Settlers (the *pieds noirs*) came from France, Italy, Malta, and Spain and acquired vast estates where they produced tobacco, wine, and grain. Military rule was phased out as the European population increased, and three *départements* (administrative units under civilian rule) were created in 1848. Jews, along with a few Muslims who had forsaken some tenets of Islam (the *évolués*), were granted full French citizenship, but most Muslims complained of losing their lands and of being denied equal rights.

France battled rival Italian, Spanish, and German ambitions to establish a protectorate over Tunisia (1881) and most of Morocco (1911). Morocco was pacified under the governorship of Louis Lyautey (1912–1916, 1917–1925).

In sub-Saharan Africa, French colonies were long limited to the coast and the Indian Ocean islands of Réunion (1664), Mauritius (1718), and Comoro (1841). The French presence grew considerably, however, when the Berlin Conference (1884–1885) granted France vast tracts of Africa.

The Afrique Occidentale Française (French West Africa, AOF) was created in 1895 and headquartered in St. Louis and then Dakar. The federation included Côte d'Ivoire (Ivory Coast), Dahomey (Benin), Guinea, Mali, Mauritania, Niger, and Upper Volta (Burkina Faso) in addition to Senegal. In central Africa, Savorgnan de Brazza (1852–1905) explored Gabon and the Congo (1874–1875) and founded Brazzaville (1880). Thanks to his efforts, the Afrique Equatoriale Française (French Equatorial Africa, AEF) was created in 1910 and headquartered in Brazzaville. It included Chad, the French Congo (Congo-Brazzaville), Gabon, and Ubangi-Shari (Central African Republic).

France established a protectorate in Djibouti (1885), conquered Madagascar (1895–1896), and gave up its ambitions in the Sudan after the Fashoda Crisis (1898). France ceded part of Cameroon to Germany in 1911 in exchange for Morocco, then regained the entire colony at the Treaty of Versailles (1919), along with Togo.

Appraisals of the French presence in Africa vary considerably. Critics view French colonial rule as an example of naked greed, marked by land appropriations, racial discrimination, theft of local resources, forced labor, and disregard for local customs. Others point to France's civilizing mission (*mission civilisatrice*), the creation of infrastructures, the eradication of slavery, health and education projects, and the work of philanthropists such as Albert Schweitzer in Gabon (1875–1965).

—Philippe Girard

Bibliography

- Conklin, Alice. *Mission to Civilize: The Republican Idea of Empire in France and West Africa, 1895–1930*. Stanford, CA: Stanford University Press, 2000.
- Klein, Martin, ed. *Slavery and Colonial Rule in French West Africa*. Cambridge: Cambridge University Press, 1998.
- Manning, Patrick. *Francophone Sub-Saharan Africa, 1880–1995*. Cambridge: Cambridge University Press, 1999.
- Pyenson, Lewis. *Civilizing Mission: Exact Sciences and French Overseas Expansion, 1830–1940*. Baltimore: John Hopkins University Press, 1993.

The Congo under Leopold II and Belgium

The territory known today as the Democratic Republic of the Congo was officially recognized as the private estate of King Leopold II of Belgium in 1885 following the Conference of Berlin, after which Leopold manipulated world powers into granting him personal control over this vast swath of central Africa. Leopold dressed his interest in this region in the guise of philanthropy, claiming that he wished to eradicate slavery and bring the blessings of European civilization such as free trade and Christianity. In reality his reign over this land, known during the time of his control as the Congo Free State, came to be

recognized as a period of unparalleled brutality and exploitation.

Leopold's real interests in the Congo lay in personal aggrandizement and enrichment. He wanted Belgium to have the prestige of being a player in the colonization of Africa, and he wanted to make huge personal profits. Both of these aims he accomplished but only by compelling the Africans in the Congo Free State to provide the resources of this rich region through forced labor of the worst kind. Leopold poured his own personal fortune into the Congo and in return eventually reaped tremendous profits from exporting rubber, which was in high demand in the late nineteenth century due to the development of the pneumatic tire for bicycles and cars.

Depraved methods were used to force Africans to tap the rubber vines that grow wild in the Congo's rain forests. Because Africans were paid little or nothing for harvesting this commodity and thus had no incentive to collect it, the white agents of the concessionary companies that were responsible for extracting rubber from the Congo and sought to maximize profits turned to increasingly repressive tactics to coerce the laborers. The agents dictated rubber quotas for individuals and villages, and if a quota went unfulfilled the agents called upon members of the concessionary company militias or the Force Publique, Leopold's army of African soldiers led by white, mainly Belgian, officers, to imprison or even destroy families and entire villages. Additional tactics included beatings, floggings administered with the deadly *chicotte* (hippopotamus-hide whip), torture, mutilation, rape, and murder. To prove that no bullets had been wasted while meting out reprisals, soldiers severed one hand from each person killed and presented the hands to company agents. Occasionally hands would even be removed from the living as part of the reign of terror. Forced population movements and ecological disruptions led to outbreaks of disease, particularly sleeping sickness, adding to the misery and mortality. Significant depopulation in the Congo was one outcome of these factors as well as of the decision of many to flee these depredations.

Eventually these horrors came to the attention of the international community, first through the writings of two black Americans:

➤ AN EYEWITNESS TO ATROCITY

Reverend John B. Murphy, an Irish member of the American Baptist Missionary Union who served in the Congo Free State, was among the first missionaries to publicly decry the horrors of forced labor. Missionary dependence on King Leopold for permission to operate in the Congo led many others to remain mute about what they had witnessed until public sentiment had already turned against Leopold. Their private writings, however, sometimes detail their earlier dismay.

"I . . . have been to the interior and have seen the ravages made by the State in pursuit of this iniquitous trade. . . . [Rubber] has reduced the people to a state of utter despair. Each town in the district is forced to bring a certain quantity to the headquarters of the commissaire every Sunday. It is collected by force. The soldiers drive the people into the bush. If they will not go they are shot down, and their left hands cut off and taken as trophies to the commissaire. . . . These hands, the hands of men, women, and children, are placed in rows before the commissaire, who counts them to see that the soldiers have not wasted the cartridges. The commissaire is paid a commission of about 1d. a pound upon all the rubber he gets. It is therefore to his interest to get as much as he can."

—Victoria Tashjian

Source

"The Congo Free State." *The Times*, London, November 18, 1895.

the journalist and historian George Washington Williams, who traveled to the Congo in 1890, and Reverend William Sheppard, who four years later brought to a shocked world's attention the severing of hands. In 1896 Reverend E. V. Sjöblom, a Swedish missionary who was a member of the American Baptist Missionary Union, wrote an exposé widely circulated in the international press, while Roger Casement, an Irishman and British consular officer who toured the Congo in 1903, reported in detail on the atrocities. Simultaneously, Edmund Dene Morel, who worked for the Liverpool-based Elder Dempster shipping company that handled Congolese imports and exports, realized that the rubber must

be the product of unfree labor, since little of value went to the Congo while rubber poured out of it. He transformed individual concerns into a worldwide campaign of condemnation, in 1904 founding Britain's Congo Reform Association and, in the United States, the American Congo Reform Association that made effective use of the press and firsthand missionary accounts to mobilize the public. Pressure grew for Belgium to end the atrocities, and in 1908 Leopold agreed to turn his private fiefdom over to the country of Belgium. Subsequently the Congo Free State became the Belgian Congo, under the control of the Belgian government until attaining independence in 1960. The worst excesses associated with King Leopold's time were reined in, though the use of forced labor for activities such as road building continued.

—Victoria Tashjian

Bibliography

- Grant, Kevin. *A Civilised Savagery: Britain and the New Slavery in Africa, 1884–1926*. New York: Routledge, 2005.
- Hochschild, Adam. *King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa*. Boston: Houghton Mifflin, 1998.
- Hunt, Nancy Rose. *A Colonial Lexicon of Birth Ritual, Medicalization, and Mobility in the Congo*. Durham, NC: Duke University Press, 1999.
- Morel, Edmund Dene. *Red Rubber: The Story of the Rubber Slave Trade Flourishing on the Congo in the Year of Grace 1906*. 1906; reprint, New York: Negro Universities Press, 1969.
- Packenham, Thomas. *The Scramble for Africa: The White Man's Conquest of the Dark Continent from 1876 to 1912*. New York: Random House, 1991.

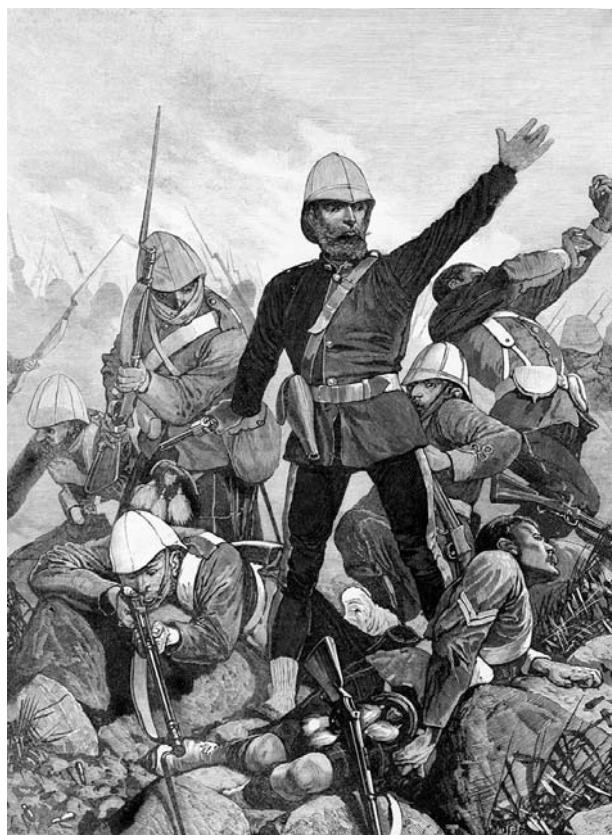
British Policy in South Africa

In the late nineteenth century, Britain sought to unify its colonies in southern Africa into a single self-governing dominion in order to fully integrate the region into the British Empire. However, this ambition clashed with the wishes of the Boers, Afrikaans-speaking descendants of seventeenth-century Dutch farmers who intermingled with later European settlers to the region and who controlled two Boer republics, the Transvaal and the Orange Free State. The struggle between the British and the Boers culminated in

the Boer (South African) War (1899–1902), which paved the way for the unification of South Africa.

In 1867 diamonds were discovered near the confluence of the Orange and Vaal Rivers, and in 1886 massive gold fields were discovered in the Transvaal. These two discoveries transformed the economy of southern Africa. Thousands of new migrants poured into the region to work the diamond and gold mines, while trade flourished and railways were constructed to connect the port towns with the interior. Seventy-five million pounds was invested in the Transvaal gold mines by 1899, and the Transvaal soon became the largest producer of gold in the world.

The substantial economic opportunities had a significant impact on British administration in the region. There was an increased willingness



British general Sir George Colley leads a charge at the Battle of Majuba Hill, just prior to his death. The Boers defeated British forces at this 1881 battle and regained their independence. The Battle of Majuba Hill was a major setback for the British forces in the First Boer War and the cry "Remember Majuba" was to become famous among South African soldiers fighting the British in the Boer War of 1899–1902. (Library of Congress)

to expand British territorial holdings in southern Africa, as symbolized by the annexation of Griqualand West (location of the first diamond discoveries) in 1871. The British South Africa Company, led by Cecil Rhodes and chartered in 1889, was commissioned to secure control over what would become Southern Rhodesia in the hope that significant mineral deposits would be discovered there. The scramble for Africa also spurred British expansion. The German colonization of Southwest Africa in 1884 caused the British to annex Bechuanaland, which had otherwise been deemed worthless, so that they could maintain northern access to central Africa.

A primary focus of British efforts in southern Africa during the late nineteenth century was the federation of its colonies into a single self-governing entity, similar to the Dominion of Canada. It was believed that such a dominion would cement the region within the British Empire. The major impediment to this goal was the two Boer republics, the Orange Free State and the Transvaal. The Boers valued the independence of their republics, which the British had effectively acknowledged in the early 1850s, and did not wish to place themselves any further under British rule. In 1877 when the Transvaal was faced with bankruptcy due to long wars with neighboring Africans, the British annexed the country to further the project of federation. In order to cement the alliance, the British invaded and conquered Zululand in 1879. The effect on the Boers, however, was the opposite of what the British had hoped. Early British defeats at the hands of the Zulus had convinced the Boers that the British could be defeated militarily, while the ultimate defeat of the Zulus removed a major threat to the republics, allowing them to focus on the British. The result was the Transvaal War (1880–1881) between the British and the Boers, and after the latter achieved an important victory at Majuba Hill on February 27, 1881, the British entered into negotiations with the Boers, which resulted in the convention of Pretoria (1881). Through this agreement the independence of the Transvaal was assured, although the British retained a theoretical claim of suzerainty over the Boers.

The Transvaal War ultimately did not resolve the relationship between Britain and the

➤ CECIL RHODES

One of the leading proponents of British imperialism, Cecil Rhodes (1853–1902) arrived in southern Africa in 1870 and quickly made his fortune in the Kimberley diamond mines. In 1880 he formed the De Beers Mining Company, which became the leading diamond mining and trading firm in the world. In the following year he entered politics as a member of the Parliament of the Cape Colony and became prime minister of the colony in 1890. Throughout his career he advocated the expansion of British territory. He also formed the British South African Company to annex what became Southern Rhodesia and aspired to construct a Cape-to-Cairo railway to unify British colonies in Africa. The failure of the Jameson Raid was a severe setback for Rhodes and forced his resignation as premier of the Cape Colony. Illness plagued him for much of his life, and he died in 1902. His will established the Rhodes Scholarships for study at Oxford University.

—Wesley Ferris

two Boer republics. The discovery of gold in the Transvaal in 1886 coupled with the realization in the early 1890s that no significant mineral deposits existed to the north in Southern Rhodesia only amplified the importance of the Boer republics to British hopes of a unified southern Africa. By the mid-1890s a significant number of foreigners, known as Uitlanders, had moved to the Boer republics to work the gold mines. The Boers, anxious to maintain their political dominance of the republics, denied them political rights. The cause of the Uitlanders was championed by Rhodes and other British imperialists and became central to the public case against the Boers in Britain. In 1895 an uprising by Uitlanders was planned, intended to coincide with an armed intervention of soldiers in the employ of the British South African Company. The uprising collapsed, and the raiders were quickly rounded up. The fiasco of what became known as the Jameson Raid embarrassed Rhodes and the British government but did not fundamentally alter the desire of the British for supremacy in southern Africa. For the Boers, it demonstrated that the British would stop at nothing to dominate their independent

republics. The new high commissioner for South Africa, Alfred Milner, urged an aggressive stance against the Boers to the point of war. By 1899 both sides had come to see conflict as the only way out of their confrontation.

The resulting Boer War ended in the defeat and annexation of the two Boer republics by the British, fulfilling British goals for a unified South Africa. However, the Boers, having reconciled themselves to British rule, were able to achieve primacy within the new dominion and ensure that it conformed to Boer ideals.

—Wesley Ferris

Bibliography

- Davenport, T. R. H., and Christopher Saunders. *South Africa: A Modern History*. 5th ed. London: Macmillan, 2000.
- Keppel-Jones, Arthur. *Rhodes and Rhodesia: The White Conquest of Zimbabwe, 1884–1902*. Kingston and Montreal: McGill-Queens University Press, 1983.
- Roberts, Brian. *Cecil Rhodes: Flawed Colossus*. London: Hamish Hamilton, 1987.
- Schreuder, D. M. *The Scramble for Southern Africa, 1877–1895*. Cambridge: Cambridge University Press, 1980.

The Founding of the Union of South Africa

After the conclusion of the Boer War (South African War) in 1902, the British were able to finally achieve their goal of creating a self-governing dominion in southern Africa with the formation of the Union of South Africa in 1910. This new dominion was integrated into the British Empire and reflected the reconciliation between the British and the Boers, Afrikaans-speaking descendants of seventeenth-century Dutch settlers of South Africa who subsequently intermingled with other European settlers. It came, however, at the expense of the rights of the majority African population.

Since the late 1860s the British had aimed at the formation of a self-governing federation of the British colonies in southern Africa, anchored in the British Empire. With the annexation of the two Boer republics, the Orange Free State and the Transvaal, in 1902, the project of federation could be advanced. Alfred Milner, the high commissioner for South Africa, believed that for

South Africa to be fully integrated and secure in the British Empire, significant British migration would need to occur in order to overwhelm the Boer population. Efforts to achieve this failed, though, as most British migrants were attracted to the better land available in other settler colonies. Indeed, Chinese indentured laborers had to be imported beginning in 1904 to work in the gold mines, which proved politically embarrassing to the Unionist government in Britain and contributed to the Liberal election victory of 1906. Thus the Boers remained the most numerous non-African demographic, but this did not prove to be a significant impediment to federation. Most of the Boers quickly reconciled themselves to a place within the British Empire and realized that the creation of a self-governing dominion for South Africa offered the prospect of significant Boer self-determination.

A critical component of Boer domination of an independent South Africa was the franchise, and it would be on this issue that the African inhabitants of South Africa would be bitterly disappointed. They had initially welcomed the victory of the British over the Boer republics, hoping that it would result in greater political rights. However, a provision of the Treaty of Vereeniging, which had ended the Boer War, stipulated



The signing of the Treaty of Vereeniging at Melrose House in Pretoria, at the end of the Second Boer War, May 31, 1902. Boer general Christiaan de Wet signs the treaty, watched closely by the British commander Horatio Herbert Kitchener. British colonial governor Sir Alfred Milner sits to the left of Kitchener, while Boer general James Barry Munnik Hertzog (to the right of de Wet) talks to Captain Henley, secretary to Milner. A painting by Sydney P. Hall from eyewitness accounts. (Hulton Archive/Getty Images)

► SOUTH AFRICAN NATIVE AFFAIRS COMMISSION

In 1903, High Commissioner Alfred Milner appointed the South African Native Affairs Commission to make recommendations regarding common policies toward Africans in what would become the Union of South Africa. Presided over by Sir Godfrey Lagden, it reported in 1905. The most important of its recommendations was that territorial

segregation of whites and Africans should be a basic principle of land ownership. Similar recommendations were made for the segregation of Africans in urban areas as well as in politics. These proposals would form an important basis of the future policy of apartheid in South Africa.

—Wesley Ferris

that the question of the franchise would be deferred until self-government had been granted to the former Boer republics. Once self-government was granted, there was no possibility of the Boers extending the franchise to the Africans.

In 1908 a National Convention met to discuss the terms of union, and in 1909 it forwarded to London a proposed constitution for what would become the Union of South Africa. Despite the race-based franchise, the British government felt that it could not reject the constitution without jeopardizing the entire project of federation. The proposed constitution was approved, and in 1910 the Union of South Africa came into existence. Through the limited franchise and other racial measures, the British handed authority for South Africa over to a white minority dominated by the Boers. Thus the creation of South Africa further entrenched the racial hierarchy in that country and was another step towards the apartheid of the later twentieth century.

—Wesley Ferris

Bibliography

- Davenport, T. R. H., and Christopher Saunders. *South Africa: A Modern History*. 5th ed. London: Macmillan, 2000.
- Legassick, Martin. "British Hegemony and the Origins of Segregation in South Africa, 1901–14." In *Segregation and Apartheid in Twentieth Century South Africa*, edited by William Beinart and Saul Dubow. London: Routledge, 1995.

German Colonial Policy

The German colonial empire in Africa—comprising Togo (and the eastern part of present-day Ghana), Cameroon (and some territory in present-day eastern Nigeria), Southwest Africa

(present-day Namibia), and East Africa (present-day Tanzania, Rwanda, and Burundi)—originated in uncoordinated activities of several adventurer-entrepreneurs (merchant companies, explorers, and missionary societies) during the heyday of the so-called European scramble for Africa. The German government guaranteed the interests of these groups with letters of protection (*Schutzbrieife*) in 1884–1885, a move that marked the legal beginning of German colonial rule. The state remained, for a time, uninvolved in the actual establishment of a colonial administration and the development of an infrastructure for the economic exploitation of the newly annexed territories and instead delegated these tasks to the private enterprises that would profit most from the exploitation of colonial lands. By the late 1880s and early 1890s, however, the failure of colonial governance by chartered companies had become glaringly apparent and forced the creation of a state-run colonial administration.

Neither a formal colonial civil service nor a definitive colonial philosophy existed at this time. Indeed, institutions of education for colonial service, which sought to emulate British and French examples, were not established until the beginning of the twentieth century. In 1898 the privately run German Colonial School began instructing future colonial settlers at Witzenhausen in Hesse; a college for future colonial administrators did not come into being until 1908 with the foundation of the Colonial Institute at Hamburg. Moreover, the number of government agents dispatched remained minuscule compared to the vast territories they were supposed to rule. Even in 1914, for example, the administration of Cameroon, a colony roughly the same size as metropolitan Germany, included fewer

> BERNHARD DERNBURG

When Germany belatedly created an independent colonial ministry in 1907, the man appointed to serve as its first cabinet-level secretary seemed a surprising choice. Bernhard Dernburg (1865–1937) was neither a politician nor a career bureaucrat but instead was a banker. Moreover, in the still largely aristocratic and conservative halls of government, a half-Jewish liberal, upper-middle-class bourgeois with an educational background in economics and business administration was an anomaly. Nevertheless, he seemed the right person to reform the inefficient crisis-ridden colonial administration. Dernburg, who had made his name as a “Mr. Fix-It” for various businesses teetering on the brink of bankruptcy, initiated an era in German colonial policy shaped by an almost technocratic approach to colonial administration and development. At the heart of his reform program lay the idea that indigenous peoples ought not to be regarded as annoyances or hindrances to economic progress but rather as one of a colony’s greatest assets. As the first chief colonial officer to visit the empire himself, he also fostered a greater domestic understanding and perhaps popularity of colonial questions in Germany itself.

—Daniel Becker



(Library of Congress)

than 100 civil servants. Colonial governors and their subordinates thus often felt compelled to rely on the cooperation of indigenous political elites—some of whom the Germans created because they could not find willing collaborators among traditional leaders—for the maintenance of the colonial order.

These vagaries of colonial administration, in combination with a dearth of concrete policy directives from Berlin, resulted in a system in which spontaneous short-term measures in response to local events took precedence over any far-sighted master plan of colonial policy and development. Moreover, colonial policies differed significantly from one colony to another, often depending on the temperaments and philosophies of individual colonial administrators. In general, conditions imposed on the indigenous population were harsher and more exploitative where the colonial military or white settlers

dominated everyday governance. Where the colonial civil service succeeded in enforcing its theoretical superiority in decision making over private or military interests in practice, German policy usually proved more benign, even if it still had a significant and often destructive impact.

Not until the uprisings against German colonial rule in Southwest Africa and East Africa in 1904 and 1905 exposed the considerable problems of this laissez-faire approach did metropolitan policy makers embark on creating a more rigorous and focused set of general principles and guidelines. Under the aegis of Bernhard Dernburg, the first cabinet-rank colonial secretary appointed in 1907, and his successors, German colonialism shifted toward policies of more sustainable economic development. The construction of roads and railways was accelerated, a more consistent (though not necessarily less abusive) system of indigenous taxation

and labor service was introduced, and volumes of production and trade with the colonies increased. While these reforms were beginning to show some fruits of success within a few years, the outbreak of World War I cut any truly significant progress short. Between 1914 and 1916 most of the colonies fell into enemy hands, and Germany was forced to cede its overseas possessions to the victors of the war in the Treaty of Versailles in 1919. After this ignoble end of the colonial empire, German nationalists unleashed a concerted propaganda campaign to whitewash their country's colonial record, creating the myth of a particularly benevolent and successful German colonial policy that remains strong in contemporary popular discourse despite a growing body of historical research to the contrary.

—Daniel Becker

Bibliography

- Gann, Lewis H., and Peter Duignan. *The Rulers of German Africa*. Stanford, CA: Stanford University Press, 1977.
- Smith, Woodruff D. *The German Colonial Empire*. Chapel Hill: University of North Carolina Press, 1978.
- Steinmetz, George. *The Devil's Handwriting: Precoloniality and the German Colonial State in Qingdao, Samoa, and Southwest Africa*. Chicago: University of Chicago Press, 2007.

African Resistance to Colonial Rule

Between 1750 and 1914, Africa went from complete independence to near-complete colonial domination, with the most rapid change occurring during “the scramble for Africa” of the late nineteenth century. African resistance to the imperial powers was extensive but rarely successful. Decentralized African states lacked the power and economic resources to maintain large armies and keep them in the field for extensive campaigns. Although many African armies used firearms, their weapons were inferior to those used by European troops and the native troops whom the Europeans hired and trained. As a result, by the start of World War I only Liberia and Ethiopia were still independent.

None of this was clear at the start of the nineteenth century. In 1769 Moroccan soldiers

drove the Portuguese from Mazagão (al-Jadida), a fortress occupied since 1502. Spain surrendered Oran to the dey of Algiers in 1792. Fort Amsterdam, a Dutch trading post on the Gold Coast (in present-day Ghana), surrendered to the Ashanti army without firing a shot in 1806, while a year later a British army was defeated and forced to retreat from the Egyptian city of Rosetta (al-Rashid) by troops under the command of Egypt's future ruler, Muhammad Ali. Another British defeat, at the Battle of Nsamankow (January 24, 1824) during the First Anglo-Ashanti War, is more instructive, however. Following their defeat the British recruited a large force of African auxiliaries from the Fante, Ga, Akim, and Denkyera people, all of whom were hostile to Ashanti hegemony. At Katamanso in 1826, the Ashanti faced superior numbers and superior technology. The battle's turning point came when the British unleashed a barrage of Congreve rockets. These notoriously inaccurate weapons created a ferocious series of random explosions that unnerved the already hard-pressed Ashanti and caused their rout.

Katamanso serves as a model for the challenges facing Africans resisting colonial forces. The imperialists could lose a battle, but they rarely lost a war. Europe had the resources to build more armies and larger armies, in most cases with African troops. They also equipped them with modern weapons. African forces, supported by weak economies, could not be so easily replaced, were often smaller than the force pool available to their enemies, and seldom employed state-of-the-art technology.

Despite these handicaps, resistance was fierce across the continent. The British fought five wars with the Ashanti (1826–1831, 1863–1864, 1873–1874, 1894–1896, 1900). In southern Africa, they suffered a famous disaster at Isandhlawana (January 22, 1879), where Zulu *impis* (regiments) outflanked and nearly annihilated a mixed force of British regulars and native allies. To put Isandhlawana in perspective, more British officers died there than against Napoleon at Waterloo.

French imperialists also faced stiff wars in North and West Africa. After initial success during their invasion of Algeria (1830), they struggled to defeat a skillful guerrilla campaign conducted by Abd al-Kadir (1808–1883). This took nearly 12 years, and even with Abd

al-Kadir's defeat, French military efforts to dominate North Africa were not concluded until the mid-1930s. An equally hard-fought war in western Africa featured Samori Ture (1830–1900), who as head of the Wassoulou directed a 12-year struggle against French invaders.

In the Horn of Africa, Sayyid Muhammad Abdille Hasan, referred to as the “Mad Mullah” by the British, led Somali clans in a 20-year struggle against British, Italian, and Ethiopian imperialists. During the 1880s Muhammad Ahmad, recognized by Sudanese Muslims as the *mahdi*, created a *jihadi* state that fought Egyptians, Ethiopians, Italians, Belgians, and the British. In the end, both Somali and Sudanese resistance were crushed.

It was the same in southern Africa. German imperialists faced opposition from the Maji Maji revolt that swept through East Africa during 1905–1907. The revolt was put down with great loss of African lives. Simultaneously, in a notorious campaign of total war, German troops nearly obliterated the Herero and Nama people of South-West Africa. In the Horn, as in the north, fanatical bravery was no match for modern weaponry.

Exceptions to this pattern of African defeats are southern Africa's Basotho Kingdom and Ethiopia. The Basotho, united under Moshoeshoe (1786–1870), faced Zulu, Boer, and British enemies. They embraced firearms, used mounted troops and horses, and practiced guerrilla warfare. Taking advantage of the kingdom's rugged terrain, Basotho warriors repeatedly battled invaders to a standstill. These tactics worked again when British authorities annexed Basotho lands and attempted to confiscate native-owned firearms. Basotho resistance and the resulting Gun War (1880–1881) led to a settlement in which

Basutoland became a Crown colony, but with its chiefs maintaining much of their power. Ethiopia benefited from a series of skillful leaders: Tewodros II (1818–1868), Yohannes IV (1831–1889), and Menelik II (1844–1913). Each recognized his country's pressing need not just for modern weaponry but also for additional revenues and diplomatic connections with the Great Powers. Menelik skillfully played off the disparate agendas of the United Kingdom, France, and Italy. He conducted his own imperialism, pushing southward to draw more resources into his empire, and he spent nearly all government revenues importing firearms, ammunition, and artillery. Combined with a large army and good leadership, these policies led to the resounding triumph over Italian invaders at Adwa (March 1, 1896). Unlike previous African victories, this time there was no European comeback, at least not until the 1930s, when Italy under Mussolini conquered Ethiopia. Nonetheless, Adawa became an iconic symbol for twentieth-century Africans resisting colonialism.

—John Dunn

Bibliography

- Crowder, Michael. *West African Resistance: The Military Response to Colonial Occupation*. Teaneck, NJ: Holmes and Meier, 1971.
- Headrick, Daniel. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. Oxford: Oxford University Press, 1981.
- James, Lawrence. *The Savage Wars: British Campaigns in Africa, 1870–1920*. London: Hale, 1985.
- Porch, Douglas. *Wars of Empire*. London: Cassell, 2000.
- Vandervort, Bruce. *Wars of Imperial Conquest in Africa, 1830–1914*. Bloomington: Indiana University Press, 1998.

■ Introduction: South Asia, Southeast Asia, and Oceania in the Nineteenth Century

One word summarizes the major theme in the histories of South Asia, Southeast Asia, and thousands of Pacific islands in the nineteenth century: colonialism. Before

1750, most Pacific islands still were unknown to Europeans, and the sole European colony was Guam, used by Spain as a source of water and provisions for galleons making the so-called

Acapulco Run between Acapulco, Mexico, and the Philippines. Europeans had been trading in the Indian Ocean and the South China Sea since the early 1500s, but with the exception of the Spanish Philippines and Portuguese and later Dutch holdings in the East Indies, Europeans controlled only a few scattered coastal outposts in the region. This changed between the 1750s, when the British took control of the northeast Indian state of Bengal, and the years around 1900, when the last few Pacific islands were claimed by one of the European powers or the United States. After a century and a half of Western imperialism, throughout South and Southeast Asia and the vast region of the Pacific Ocean, only Thailand remained independent.

A new phase in the history of imperialism in these regions began in India, where in the mid-eighteenth century the worldwide military and economic competition between Great Britain and France was played out between two trading companies, the British East India Company and the French East India Company. The result was French defeat and relegation to a minor position in India, while the British took over Bengal. Over the next half century the armies of the East India Company, with support and encouragement from the British government, extended British authority over one Indian state after another, partly in pursuit of economic gain and partly to protect the conquests they already had made. With the conquest of the Punjab in 1849, India consisted of territories directly ruled by the British and hundreds of mostly small independent princely states whose rulers collaborated with British authorities. Imperialism unfolded more slowly in Southeast Asia and the Pacific. The Dutch expanded their holdings in the East Indies in the 1870s, the French completed their conquest of Vietnam in 1884, and the British established control of all of Burma at the conclusion of the Third Anglo-Burmese War in 1886. The British also turned their three trading centers on the Strait of Melaka—Singapore, Penang, and Melaka—into the Straits Settlements in 1867 and extended their authority over the princely states of the Malay Peninsula with the formation of the Federated Malay States in 1895. The Western takeover of the Pacific islands took place from the mid-1870s to the early 1900s.

As was true with imperialism in Africa, imperialism in Asia and Oceania had various motives. Colonies provided markets for manufactured goods and access to tropical regions where marketable crops such as sugarcane, coffee, tea, coconuts, cotton, rice, pineapples, and indigo could be grown; they also provided access to minerals such as Malaysian tin and Pacific island phosphates, nickel, and copper. More than economics was involved, however. The French intervened in Vietnam to protect Roman Catholic clergy and native Christians from government persecution while simultaneously boosting national pride after their devastating loss in the Franco-Prussian War of 1870–1871. In the Pacific only a few territories were formally annexed by Western powers until the 1870s, despite extensive commercial and missionary activity in the region dating back to the early 1800s. In the last three decades of the 1800s, Western powers gradually took over one island group or island after another, sometimes because the islands had some economic or strategic importance but often because of the need to intervene in local political conflicts or to prevent a rival from making a territorial gain. In the case of Hawaii, annexation by the United States occurred in 1898 after a small group of American planters and businessmen overthrew the Hawaiian queen in 1893 and established the Republic of Hawaii, whose major purpose was to encourage a U.S. takeover.

Methods of governing the new colonies in Asia and Oceania varied, but in every case (except the U.S.-ruled Philippines, which had an elected legislature) general policy was set by officials in European capitals, with no significant input from the colonized peoples. In some cases, such as Burma, precolonial rulers were deposed or marginalized, while in others, such as in the British Straits Colony and many Pacific island colonies, traditional rulers were maintained and used as instruments of indirect rule. While the British and Dutch were willing to utilize native elites to carry out policy at the village level, the French in Indochina preferred to use French nationals. Not surprisingly, the most elaborate administrative structure was developed in India, especially after the British replaced government by the East Indian Company with direct colonial

rule after the Indian Rebellion of 1857. General policy was set by the London-based secretary of state for India and a 15-member Council of India. In India itself, administration was under the authority of a governor-general, or viceroy, under whom served provincial governors, commissioners, residents, agents, and approximately 1,500 largely British members of the India Civil Service. Indians filled the lowest ranks of the colonial administration as clerks and minor officials and provided the soldiers for the 200,000-man Indian Army. This was a far cry from the tiny number of officials dispatched by the Western powers to administer their new colonies in the Pacific.

How the people of Asia and Oceania responded to their new colonial status differed over time and from colony to colony. The first anticolonial nationalist movement developed in the Philippines, where festering discontent with Spanish rule erupted into revolution in 1896 and the founding of a short-lived independent Philippines in 1898. Filipino nationalists continued to fight for independence after the U.S. annexation in 1899. By the late nineteenth and early twentieth centuries, nationalist movements were gaining strength in India, where disenchantment with British rule was growing among all social groups and Hindus and Muslims alike, and in Vietnam and Burma, where significant numbers had never reconciled themselves to the imposition of European rule. Ethnic and religious differences and low educational levels meant that nationalists in the Dutch East Indies had few followers before World War I. In British Malaya and the French protectorates of Laos and Cambodia, where colonialism was perceived as having brought certain economic benefits and traditional rulers were preserved, there was no concerted nationwide opposition to colonial rule until well into the twentieth century. The same is true in the Pacific islands, where frustration with colonialism expressed itself in non-cooperation, infrequent strikes and boycotts, and a few instances of rebellion, such as the Sokeh Revolt on German-controlled Pohnpei Island in 1911. But among these recently colonized peoples, few in number, isolated, and traumatized by epidemics, forced labor, and social disintegration, independence movements could

hardly have been expected to begin, let alone flourish, before 1914.

—James H. Overfield

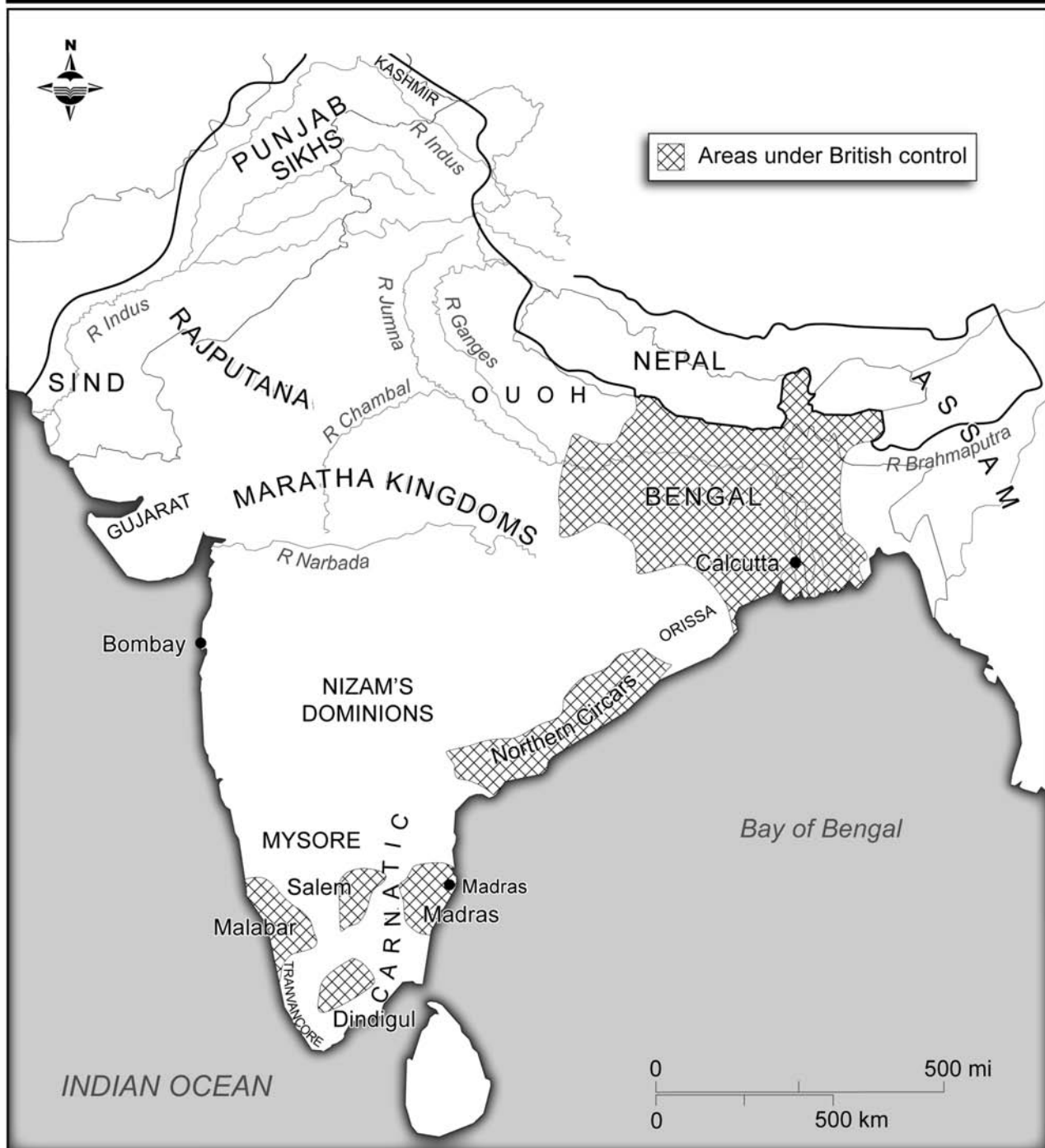
British Administration in India, 1756–1858

The creation of a British administration system in India in its first century of control was done in an ad hoc manner, as the British East India Company attempted to bring administrative order to the various areas it controlled. Financial administration was the first consideration, followed by the need for imposing a uniform legal system. The administrative measures that it took reflected these priorities.

On August 12, 1765, the Mughal emperor issued an edict proclaiming the East India Company the *diwan* (civil and revenue administration) for Bengal, Bihar, and Orissa. As a result, the British were transformed from traders to rulers in India. Robert Clive (1725–1774), commanding the forces of the British East India Company, had laid the foundation for British rule by his military conquest of Bengal in 1757. The diwan was the first step in the creation of British *raj* (rule) in India, although at this point the company was unready to assume complete administrative responsibility. It employed Indian agents to collect revenue, and the provinces of Bengal, Bihar, and Orissa remained under the jurisdiction of Mughal governors, who maintained judicial authority.

In 1767, corruption by its officials and wars prevented the company from paying its annual tax of £400,000 to the British treasury even though many company officials who came to be known as nabobs were acquiring vast fortunes. The company's request for a government loan led to an official inquiry and the passing of the Regulating Act of 1774, which was the first step in the gradual extension of the British government's authority over the East India Company's possessions in India. Warren Hastings (1732–1818) was designated governor-general with powers over the presidencies of Bombay (Mumbai) and Madras, and a supreme court was created in Calcutta (Kolkata). Hastings reorganized the Revenue Department and extended company administration in Bengal. The India Act of 1784 provided for

INDIA UNDER CORNWALLIS



further control of the company's actions by the British Parliament. A Board of Control appointed by the British government could now send secret orders to the governor-general, thus undermining company directives. The company's directors

retained patronage rights to make appointments of officials, but the board could recall anyone in the company. Hastings resigned in the face of his loss of authority, as he could no longer act in the independent manner he had in the past, and

Lord Cornwallis (1738–1805) became not only the governor-general but also commander in chief of the Indian Army.

Cornwallis enacted the Code of Forty-Eight Regulations (also known as the Cornwallis Code) in 1793, which set enduring standards for the administrative services, revenue collection, and the courts. His Permanent Zamindari Settlement introduced the concept of alienable private property into Bengal. Relationships between landowners and cultivators had traditionally been a reciprocal one, a communal relationship. Under the Zamindari Settlement, land became merely private property and hence could be bought and sold by anyone, irrespective of the person's ties to the community. Cultivators who could not pay their debts were simply evicted. This new principle of landownership in India tore apart traditional *zamindar* (landowner)-cultivator relationships and created a new class of absentee landlords, many of them bankers who embraced Western education and became loyal to the British.

Cornwallis also created provincial circuit courts presided over by British magistrates who had both police and also judicial functions. These new provincial courts introduced English common law to India. Cornwallis's regulations also established the office of collector, who was responsible for all aspects of administration within the districts in the provinces. The code also gave the British the right to abolish all traditional taxes and impose their own. Cornwallis also made the sale of salt and opium a company monopoly. In addition to these administrative changes, Cornwallis also waged war in Mysore, thereby extending British territory and its administrative system in the south.

Most elements of this new administrative system were extended to other parts of India after the British fought the Anglo-Mysore Wars (1767–1799), the Anglo-Maratha Wars (1775–1819), and the Anglo-Sikh Wars (1845–1849), although in Madras a settlement directly with the cultivators, the Ryotwari Settlement, was introduced instead of the Zamindari Settlement. In 1809 the company founded the East India College at Haileybury to train British administrators to carry out these administrative reforms.

It produced some 2,000 administrators over the next 50 years.

The company's administrative practices came under intense parliamentary scrutiny during the debates over the renewal of the company's authority in India in 1793, 1813, 1833, and 1853. Although the Charter Acts passed in these years extended company rule, they also included a number of administrative changes. In 1813, for example, the company lost its trade monopoly except in salt and opium. Missionaries were admitted to India, and Western education expanded in India with a direct grant from the company for schools. In 1818 the first public library was opened, and traditional Indian education and Western education were offered. In 1833, the company was required to discontinue all commercial operations as a result of the victory of free trade principles in England, and the company governed India on behalf of the Crown through the governor-general and his counselors. These officials were given control of the finances of Bombay and Madras, which had previously been administered independently. In 1853 the law member, who was responsible for the British legal system in India, became a member of the Governor-General's Council, and the central government increased its control of the legal system through the country. These were all measures that led to the eventual liquidation of the company in 1858 after the Indian Mutiny.

Between 1756 and 1858 the British brought administrative order to a country that in all its history had never had strong central control before or been governed in a uniform manner with one administrative, legal, or financial system. In 1756 it found inchoate governing practices in imperial cities, rural districts, and tribal areas that were based on a bewildering array of different caste, regional, customary, tribal, and religious practices. Slowly but surely, as the company added territory almost every decade to its empire in India, it created and spread an administrative system to all of the territories it controlled. In 1858 it handed over to the British government an administrative system that became the basis of the British raj in India.

—Roger Long

Bibliography

- Bayly, C. A. *Indian Society and the Making of the British Empire*. Cambridge: Cambridge University Press, 1988.
- Bowen, H. V. *The Business of Empire: The East India Company and Imperial Britain, 1756–1833*. Cambridge: Cambridge University Press, 2006.
- Misra, B. B. *The Central Administration of the East India Company*. Manchester, UK: Manchester University Press, 1959.

The Indian Mutiny

The Indian Mutiny of 1857–1858 was a determined, if disorganized, effort mainly undertaken by Indian soldiers, or sepoys, who served in the Bengal army, the largest of the three armies maintained by the British East India Company in India. Their goal was to end the company's dominance over India. The word "mutiny" was first used by British historians in the nineteenth century to indicate an illegal action against British authority, but many scholars, especially Indians, tend to characterize the rebellion as an act of resistance to foreign rule and hence refer to it as India's First War of Independence.

Many factors led to this event. Many Indians had suffered economically under British rule. The flourishing Indian cotton textile industry had almost been destroyed by British policies of protecting their own markets and using India as a captive market for its own products. The agricultural revenue structure introduced by the British in some parts of India through the Permanent Settlement Act of 1793 increased the burden of taxes on the peasants and made tax collection more ruthless. The British encouragement, if not coercion, of Indian peasants to cultivate commercial crops such as cotton, jute, tea, indigo, and opium rather than food products led to food scarcities and, when exacerbated by drought, widespread famine. Finally, there was the gradual drain of wealth from India that, in many ways, depleted India for the benefit of Britain. The only groups that benefitted economically from company rule were the comprador bourgeoisie (trading and commercial classes who profited from their association with the British), the *zamindari* classes (the new land-owning gentry that British agricultural policies

created), and those who directly entered company service.

In addition, the assumption of new administrative responsibilities by the British and their expansion into new territories in the early 1800s alarmed many Indians. The British gradually evolved from being traders to being tax collectors, providers of law and order, and eventually direct administrators of different provinces. The older Mughal administrative elite felt progressively marginalized, and the emperor himself eventually became little more than a cultural token with only partial jurisdiction over a city. Moreover, the British were acquiring territories either through outright conquest (Sind in 1845 and Punjab in 1849) or through the application of the Doctrine of Lapse enunciated by Lord Dalhousie, governor-general of India during 1848–1856, that allowed the company to annex any Indian princely state (e.g., Satara, Jhansi, Oudh) that did not have a direct male successor after the death of a local ruler or was simply considered to be incompetently administered.

Christian missionary activity also generated concern among many Indians (particularly Muslims), while certain social reforms supported by the British, such as banning widow self-immolation and child marriage, were perceived as threats to native religious traditions. In addition to the growing unease about British rule in the general population, the company faced growing dissatisfaction in the ranks of the Indian army. The armies of the company were overwhelmingly native. By 1856, there was a total of about 43,000 British troops and more than 223,000 Indian soldiers in the company forces. However, Indian soldiers were poorly paid and shabbily treated, and they complained about pensions and promotions and were resentful of being deployed outside of India.

Military and religious resentment became explosively intertwined with the introduction of the new Lee-Enfield rifles in 1857. It was widely believed that the cartridges, which had to have the ends bitten off before being loaded, were greased with fat from pigs (considered unclean by Muslims) and cows (deemed sacred by the Hindus). In February 1857 the troops of the Bengal infantry refused to use these cartridges, and in March

THE LAST MUGHAL RULER

Emperor Bahadur Shah was the last Mughal ruler of India and the person who lent his symbolic authority to the rebellion, even though his experience and temperament were completely unsuited to that role. Born in 1775 to Emperor Akbar Shah and to his Hindu mother Lalbai, Bahadur ascended the throne in 1838. His coronation titles certainly did not reflect his limited power. He was an enlightened man of refined manners, authored many romantic and mystical poems (under the name of Zafar, which, ironically, means “victor”), and was an enthusiastic patron of the arts. He encouraged a rich and vibrant cultural life in Delhi. In 1857 he agreed to become the nominal leader of the mutinous troops in 1857 by agreeing to lend his symbolic authority to the rebellion, even though his expectations were unclear. After the rebellion he was found guilty of treason by British authorities and exiled to Rangoon, where he lived in undignified conditions in British custody (with vivid memories of some of his own children and grandchildren gruesomely killed by British forces). He died in Rangoon (present-day Yangon, Myanmar) and was hastily and unceremoniously buried by imperial troops.

—Ahrar Ahmad

a native soldier named Mangal Pandey fired on a British officer to register his protest. Finally, in April in Meerut, the Indian soldiers, joined by some townspeople, rose up in open revolt, massacred most of the British, and marched toward Delhi. They took the capital in May, killed all the British residents and soldiers who could not escape, and proclaimed the Mughal ruler the emperor of India. These events were spearheaded by Indian troops, often led by rulers and elite of the princely states and vestiges of the Mughal nobility, and received enthusiastic, if sporadic and localized, support from ordinary people.

It should be pointed out that the rebellion was mainly focused on the upper Gangetic plains, which constitute parts of present-day Uttar Pradesh, Bihar, northern Madhya Pradesh, and the Delhi region. Most of the Bombay and Madras presidencies and much of the country did not join in this effort. While the fighting was most intense in some of the princely

states (particularly those where the rulers had been deposed), many other such states (Hyderabad, Mysore, Travancore) remained aloof. Even the Bengal Army, which formed the core of the uprising, did not represent a united front in its opposition to the British, and some segments of the military, such as the Punjab and Gurkha regiments, actually supported the British. Also, solidarity and resolve were eroded by disagreements among the Indians over tactics, leadership, and jurisdictions, which led to dissension among Shia and Sunni, Hindu and Muslim, and easterners and westerners. Nonetheless, as a direct challenge to British rule, the event acquired huge symbolic significance and later inspired much romantic lore and patriotic sentiment.

The superior strategy, weaponry, and organization of the British ultimately prevailed over the spontaneity and passion of the Indians. Delhi was retaken by the British in September 1857, while other centers of rebellion were pacified with vengeful authority. British operations were carried out with a merciless zeal (particularly in Delhi) that was both overwhelming and horrific. The events had several consequences. Parliament terminated the operations of the East India Company, and the Crown assumed jurisdiction over India. The Doctrine of Lapse was renounced, and new understandings were reached with the princely states. Mughal rule formally ended. The Bengal Army was all but disbanded, new units were recruited, and new arrangements of command and control were instituted. The British administrative and financial system in India was also incrementally reorganized, and more attention was paid to education, employment, and the participation of Indians in their own governance through their gradual incorporation into the Indian civil services and as participants in the Indian legislative councils.

—Ahrar Ahmad

Bibliography

- Dalrymple, William. *The Last Mughal: The Fall of a Dynasty, Delhi 1857*. New York: Knopf, 2007.
- Pati, Biswamoy. *The 1857 Rebellion*. New Delhi: Oxford University Press, 2007.
- Pramod, Nayar, ed. *India 1857: The Great Mutiny*. New Delhi: Penguin, 2007.
- Saul, David. *The Indian Mutiny*. London: Penguin, 2003.

British Administration in India, 1858–1914

The British government assumed formal responsibility for the administration of India after the Mutiny of 1857, and the East India Company, which for some years had governed India in name only, was liquidated. By the Government of India Act of 1858, a new secretary of state for India assumed direct responsibility for administering India on behalf of the Crown. He was assisted by a Council of 15 members, 8 of whom were appointed by the British government and 7 of whom were elected, first by the outgoing East India Company to ensure some semblance of continuity and then by the Council members. The Crown was represented by a viceroy, who was also the governor-general. As the British believed that the mutiny had been caused by interference in Indian social and religious affairs, they avoided direct socio-religious reforms for three decades. However, British administrative control extended in area and depth, with each of India's 235 districts headed by a British administrator. Such departments as Accounts, Archaeological Survey, Customs, Education, Forests, Geological Survey, Jails, Meteorological Survey, Mint, Opium, Pilot Service, Post Office and Telegraph, Police, Public Works, Registration, Salt, and Survey, operating directly or through local dignitaries or village headmen, took British ideas of good government even to the villages.

In 1861 the government passed the first of a number of Indian Councils Acts that entrenched the British form of administration in India. Legislative power was handed to Madras and Bombay, and new councils were created for Bengal (1862), the North-West Frontier Province (1886), and Burma and the Punjab (1897). These councils were all confined to legislative matters whose laws had to be approved by the governor-general. In 1861, the governor-general's Executive Council was expanded from 4 to 5 members with the addition of a jurist. A commander in chief was an extraordinary member of the Council. Cabinet government was introduced through an expansion of the governor-general's Legislative Council, which consisted of up to 12 members, half of whom were government officials serving in one of the administrative services,

and were nominated for two years. Without consent of this council, the governor-general could issue ordinances valid for six months only. Indians were appointed by the governor-general to the newly created Legislative Council. This system was mostly replicated in the provinces under a governor assisted by an advocate-general and a council of 4 to 8 members, half of whom were local government officials. This system expanded British administration into almost every facet of Indian life and remained in place until the end of British rule in 1947. In 1886 the Public Service Commission was appointed and led to the creation of the Provincial Public Service, which supplemented the Indian Civil Service. Both were opened up to Indians, although only 69 Indians were employed in the Indian Civil Service by 1886.

In the Indian Councils Act of 1892 the governor-general's Legislative Council was expanded to 16 members, who were to be nominated by municipalities, university senates, and trade associations. This system was emulated in the provinces, where each council had a maximum of between 15 and 20 members. The governor-general's council also received Indian representation. Indirectly, the act introduced the elective principle into India. Its effect was to expand Indian representation in the councils where officials were required to defend administrative measures. It made administration in India more sensitive to local feeling, although control remained firmly in official British hands.

In 1908 the British Parliament appointed a commission to study the relationship between the provinces and the central government in Calcutta (Kolkata) in order to simplify administrative control and further extend central executive power into the provinces. This led to the Government of India Act of 1909, known as the Minto-Morley Reforms, after the governor-general Lord Minto (1845–1914), viceroy during 1905–1910, and John Morley (1838–1923), secretary of state for India during 1905–1910. It enlarged the Indian Legislative Council to 60 members and the provincial assemblies to 50 members; it also required that in the provincial assemblies nonofficials would be in the majority for the first time. Separate electorates were created for Muslims, landholders, chambers of

commerce, and universities. Legislatures were given the right to discuss budgets, and as a result, spending on local administration came under the purview of Indians. This was the basis of the Government of India Acts of 1919 and 1935 and the system of administration that the governments of India and Pakistan inherited in 1947 and administered through the Indian Civil Service and the Pakistan Civil Service.

—Roger Long

Bibliography

- Gopal, S. *British Policy in India, 1858–1905*. 1965; reprint, Cambridge: Cambridge University Press, 2008.
- Metcalf, Thomas R. *The Aftermath of Revolt: India, 1857–1870*. Princeton, NJ: Princeton University Press, 1964.
- Moore, R. J. *Liberalism and Indian Politics, 1872–1922*. London: Edward Arnold, 1966.
- Spangenberg, Bradford. *British Bureaucracy in India: Status, Policy and the I.C.S. in the Late 19th Century*. Columbia, MO: South Asia Books, 1976.

The Beginnings of Indian Nationalism

For centuries, Hinduism had given a sense of unity to some Indians. So too did the shared experiences of Mughal and British rule, and the nineteenth-century improvements in communications. These bases of unity were now joined by Indian nationalism.

Nationalism is based on the idea that individuals are part of a group called a nation, united by a common history, language, and culture. It originated among eighteenth-century European intellectuals, who argued that the ideal country was built around a nation rather than a dynasty or a church. In the following century, nationalism spread across Europe, where it led to the unification of Italy and Germany and to calls to dismantle the multinational Austrian and Russian empires.

Familiarity with Western political thought introduced nationalism to English-educated Indians. Some saw separate nations in speakers of each Indian language and wanted political boundaries to reflect this. For example, Oriya nationalists demanded a homeland for speakers of their language, who were spread across

three provinces. The British granted this request when they established the province of Orissa in 1936. Many speakers of Dravidian languages in South India came to see themselves as a nation, oppressed by the Hindu religion of the North and its Brahmin agents.

Subcontinental nationalism had a problem in that India lacks the common language or culture that defined nations in Europe. Some nationalists sought to bind the Indian people with a shared commitment to political liberalism, which they believed could only be instilled by continued British rule. Others looked to the very diversity of India as the basis for the nation and found among their compatriots a unique tolerance that allowed different cultures to coexist and to enrich one another in a composite Indian civilization. For example, *Jana Gana Mana*, now the national anthem of India, was written by modern India's greatest poet, Rabindranath Tagore. Rabindranath, the son of Debendranath Tagore of the Brahmo Samaj, was the winner of the 1913 Nobel Prize in Literature. *Jana Gana Mana* celebrates the common Indianness of the whole subcontinent: Punjab, Sindh, Gujarat, Maharashtra, the South, Orissa, Bengal; the Vindhya, the Himalayas, the Yamuna, the Ganges; the waves of the Indian Ocean.

Opposing these secular nationalisms, Hindu nationalists asserted that Hinduism was a foundation for not merely the cultural unity of the subcontinent but a modern Indian nation. The differences among all these strains of nationalists are illustrated in their attitudes to the seventeenth-century Maratha king Shivaji. To non-Brahmins, Shivaji was a valiant enemy of upper-caste privileges. To Maharashtrian regionalists, he fought for the independence of Maharashtra. Secular nationalists saw him as an Indian patriot, and Hindu nationalists as the founder of a Hindu state.

With its assumption that a country is tied together by its inhabitants, nationalism implies that the people have a shared interest in the country and are therefore entitled to a say in its government. In the 1860s, Indians were admitted to the formal structures of government in British India with the establishment of local boards. These had the power to impose taxes, and spend them on schools, drains, and other local purposes.

Their members were mostly Indians, initially named by the government but from the 1870s elected by men wealthy enough to pay the property tax. The boards served as a safety valve, giving Indians real power but at a level where they could not threaten British interests.

English-educated Indians, including many nationalists, wanted more than control of local boards. One of their concerns surrounded the highest level of government employment, the Indian Civil Service or ICS. ICS officers enjoyed good salaries and considerable prestige. The British parliament had banned discrimination against Indians in government appointments in 1833, but there were practical barriers. Since 1855, the ICS had recruited officers with an examination that was offered only in London. A greater hurdle came when the maximum age for taking the examination was lowered to 23 in 1858 and to 19 in 1876. This was intended to let successful candidates attend a British university before going on to India. However, the examination was based on the English school curriculum, and anyone who had not spent several years at school in England found it difficult to pass. The lower the age, the harder it was for Indians to obtain the necessary prior education.

The educated also wanted a part in lawmaking in British India. By the early 1860s, the viceroy and provincial governors each had legislative councils to discuss proposed new laws. All their members were chosen by the viceroy or governor. Most were British government officials, but there were also a few private citizens or “unofficial members.” These included princes, landowners, and urban community leaders. Many educated Indians felt that nominated unofficial members did not represent them. They wanted “unofficials” to be elected, and to enjoy the right to initiate legislation as well as discuss it.

The power to reform the councils and the ICS lay with the central government in Calcutta and the British parliament in London. In 1866, a group of Indians in Britain founded the East India Association to discuss Indian affairs and bring their grievances before the British authorities. In India, such bodies as the Poona Sarvajanik Sabha or Association of All the People of the city of Poona petitioned the government on the ICS, the councils, and other issues.

In 1883, the government of India unveiled the Ilbert Bill, a proposal to rescind the right that Europeans in rural Bengal enjoyed not to be tried by an Indian judge if they landed in court. Bengal’s British businessmen and planters were outraged, claiming that Indian judges did not share Western conceptions of right and wrong. They launched a campaign of petitions, speeches, and lobbying, until the government watered down the Ilbert Bill to their satisfaction. The episode showed Indians the power of public opinion, if it was channeled properly.

In 1885, members of the educated elite from all over India met in Bombay to discuss means of bringing pressure to bear on the government. They called themselves the Indian National Congress, or Congress, and from then on met in a different city each year during the Christmas vacation. Indian nationalism had reached a new and important stage in its development.

—John McLeod

Bibliography

- Bayly, Susan. *Caste, Society and Politics in India from the Eighteenth Century to the Modern Age*. New York: Cambridge University Press, 1999.
- Bose, Sugata, and Ayesha Jalal. *Modern South Asia: History, Culture, and Political Economy*. 2nd ed. New York: Routledge, 2004.
- Brown, Judith M. *Modern India: The Origins of an Asian Democracy*. 2nd ed. Oxford: Oxford University Press, 1994.
- McLeod, John. *The History of India*. Westport, CT: Greenwood Press, 2002.

The Founding of the Indian National Congress

By the end of the nineteenth century, a growing middle class of educated Indians began to advocate for a larger role in the political and economic administration of India. In response, several groups were organized that sought to achieve this goal, but the Indian National Congress (INC), which first met in Bombay (Mumbai) in 1885, was by far the most important. Initially the INC was encouraged by retired British civil servant Allan Octavian Hume, politician and economist Dadabhai Naoroji, and a number of middle-class Indian businessmen and

➤ DADABHAI NAOROJI

Dadabhai Naoroji, a Parsi (Zoroastrian Indian) born in southern Gujarat in 1825, was one of the influential founding members of the Indian National Congress. Naoroji was a well-educated businessman concerned with the future of Indian spirituality and the ethics of Indian politics as well. Having attained a prestigious academic position at the Elphinstone Institution in 1850, the first Indian to ever do so, Naoroji went on to become a member of Cama and Company, the first Indian merchant company to establish offices in Britain. Naoroji helped to open an office in Liverpool but resigned in 1858, citing ethical concerns. In 1859 he established his own cotton trading company while also taking a position at the University College of London. In the early 1860s Naoroji

returned to India to help establish a voice for Indians in the running of their own country. In 1867 he established the East India Association, a forerunner of the Indian National Congress (INC). Naoroji was elected president of the INC in 1886. The remainder of Naoroji's life (he died in 1917) was spent traveling between Great Britain and India. In 1892 he won election to Parliament, the first Indian to do so, for Finsbury Central. Later, in 1906, he was reelected president of the INC. Politically Naoroji was a moderate, seeking to find compromise among the various factions within Indian politics, having worked alongside the Muslim leader Muhammad Ali Jinnah and Mahatma Gandhi.

—*Maryanne Rhett*

intellectuals. Unlike most other organizations, the INC, under Hume's guidance, strove to be multiethnic and secular. At first the INC's goals focused on protecting the economic and political interests of India's growing educated middle class, not (as was the later case) developing a universally democratic body for the protection of Indian rights more broadly nor advocating Indian independence from Great Britain. However, by the turn of the twentieth century, as imperial structures came to be seen as increasingly intolerant and racist, the INC was transformed into a mouthpiece for native democratic tendencies.

The initial structure of the INC offered a small well-to-do number of Britain's Indian subjects an organization through which they could present grievances and raise issues to the British Crown in an organized and systematic manner. The outlet offered by the INC's annual meetings was considered an ideal resource, if not a crucial resource, for venting their frustrations and anxieties. In particular, the question of racial equality between well-educated Indians and Europeans was central to the INC's early concerns. The controversy surrounding the 1884 Ilbert Bill was perhaps the most important testing ground for the questions of racial equality and Indian politics. The bill rectified a loophole in the judicial system that had disallowed native Indian judges from trying cases involving Anglo-Indians

(Britons living and working in India). Anglo-Indians reacted vehemently against the Ilbert Bill. At the heart of this reaction was the implied question of Indian abilities at self-governance: If an Indian judge is fit enough to try a European, why then is he not fit enough to run his own country? India's educated middle class, many of whom had been educated in European Enlightenment ideals, became increasingly convinced that the institutionalized racism of British imperial policy needed to be changed.

Amid the upheaval of the Ilbert Bill crisis, Allan Octavian Hume campaigned among the graduates of Calcutta (Kolkata) University for the creation of an organization that would work toward ending such unfair and unequal treatment of Indians. Hume, the "Father of the Indian National Congress," was born in 1829 in Kent, England, and joined the Bengal Civil Service in 1849. His service in India was marked by his ideals for political reform. Aside from his role in the founding of the INC, Hume was active in establishing free schools and encouraging political activity among his many Indian contacts.

In comparison to the later divisions that defined the INC after the turn of the twentieth century, the early years were marked by caution, moderation, and secularism. The INC met regularly and spoke out on a number of important matters concerning Indian politics and economics

but tended toward a moderate political agenda, its largest concern eventually becoming the creation of a functioning Indian parliament, one that would work *within* the superstructure of the British Empire. However, while this period of seemingly flexible and moderate growth had its advantages, attaining an Indian parliament would have failed had it not been for the aid of activists and lobbyists in London.

The year 1892 proved to be an important turning point for the INC. For the first time in British history, an Indian, Dadabhai Naoroji, who was president of the INC in 1886, was elected to Parliament and served in the House of Commons between 1892 and 1895. During his lifetime Naoroji worked to help secure the future of the INC. Naoroji's Indian National Association, based in Calcutta, merged with the Bombay-based INC in the 1880s, and Naoroji is generally credited with being a founding member of the INC. Also in 1892, the India Councils Act, first established in 1861, was updated to strengthen the ties between the office of the viceroy and the Indian populace. The most notable change was the increase in the number of Indian representatives appointed to counsel the governor-general on matters relating to budget and the administration of the Indian civil service. This step increased native Indians' participation in running their own state and helped strengthen the movement to establish an Indian parliament. Finally, 1892 marked the departure of the INC's founding father, Allan Hume, who returned to England. While the events of 1892 did not actually lead to immediate self-rule, the INC was strengthened by the liberalizing tone of British imperial policy and the increased participation of well-educated and well-to-do Indians, if increasingly Hindu in majority.

Although Hume had encouraged Muslim attendance at the INC, his final exit marked a shift in the thinking among Muslims and their relationship with the INC. In the 1890s new INC leaders appeared, most notably Bal Gangadhar Tilak, who in 1894 resurrected Hindu festivals in his region of Maharashtra to encourage Indian national consciousness. Tilak's involvement in the INC and the eventual debate over home rule led the INC into a period distinctly different from its founding phase. Further splits,

evidenced throughout India but noted among the politics of the INC, developed when prominent Islamic leaders such as Sayyid Ahmed Khan spoke in opposition to the INC's largely Hindu membership and urged Muslims not to join. For Khan and other Muslim leaders, membership in the INC did not reflect the nature of the religious structure of India. Similarly, dissent from non-Muslims swelled in the late 1890s in reaction to the perception that the INC, with its limited and private membership, was an elitist and largely Anglophone organization out of touch with the desires of the majority lower-class Indians. The resentment toward the INC, carried by various groups throughout India, indicated the future trends in the party's existence, particularly as global events accelerated changes in imperial structures in the early decades of the twentieth century.

—Maryanne Rbett

Bibliography

- Johnson, Gordon. *Provincial Politics and Indian Nationalism: Bombay and the Indian National Congress, 1880 to 1915*. 1973; reprint, New York: Cambridge University Press, 2005.
- Low, D. A., ed. *The Indian National Congress: Centenary Hindsight*. New York: Oxford University Press, 1988.
- McLane, John. *Indian Nationalism and the Early Congress*. Princeton, NJ: Princeton University Press, 1977.
- Sisson, Richard, and Stanley Wolpert, eds. *Congress and Indian Nationalism: The Pre-independence Phase*. Berkeley: University of California Press, 1988.

European Colonialism in Oceania

Island Oceania stretches from the eastern Australian and New Zealand seaboard to the South American coast, encompassing the three main island groups of Micronesia, Melanesia, and Polynesia. Mainland Oceania includes Australia and Papua New Guinea (the eastern half of the island). In the nineteenth century this vast area was subjected to colonial rule by the Western powers: Great Britain, France, Germany, Spain, and the United States.

Australia (the Aboriginal groups did not have a specific name for this continental landmass)

was claimed for Great Britain in 1770 by James Cook. British colonialism took the form of penal colonies there from 1788 onward; few other strategic motives were advanced at the time. European (mostly British) emigration took hold in the nineteenth century, and in 1901 after federation, which gave birth to the Commonwealth of Australia, effective British colonial influence in the area declined, although New Zealand remained a British possession until 1947. In New Zealand no coherent bureaucratic or military mode of colonization was put into effect until the appointment of James Busby in 1832 as first official British resident. Until then, missionaries such as Samuel Marsden had attempted to secure religious footholds in New Zealand from 1814 to 1837, and these efforts and various commercial ventures eventually culminated in the territory's recognition as a British colony in 1839. Settler colonization took root after the acceptance in 1840 of the Waitangi Treaty, which transferred ownership of Maori lands to the British Crown.

European colonialism in the Pacific islands began with the Spanish annexation of Micronesian island groups in the sixteenth and seventeenth centuries. These Spanish colonizers retained control over the Marianas (today called the Commonwealth of the Northern Mariana Islands, of which Saipan, Rota, and Tinian are the main islands) and the Carolines (today called the Federated States of Micronesia, of which Yap, Chuuk, Pohnpei, and Kosrae are the most heavily populated) for just over 350 years. After the Spanish-American War, Guam (Guahan) came under U.S. control in 1898 after the Treaty of Paris was signed. Spain had granted trading rights in the area to Germany in 1885, and after the war the Marianas and the Carolines were sold to Germany in 1899. The Spanish had not intensively colonized this area, and when Germany took over, trade was the principal concern. The German initiatives were short-lived, however, as World War I and the Japanese-British alliance put an end to Germany's hold on the Micronesian territories in 1914.

Western colonialism came later to the island groups in the Melanesian chain. The Spanish, Germans, and British successively laid claims to the Solomons. Spanish navigator Álvaro de Mendaña discovered the islands in 1568, but

because they were inaccurately mapped they were lost to the world until the late eighteenth century. Germany had already colonized mainland New Guinea and went on to annex the northern Solomons (including Bougainville and Buka islands) in 1885, again with a view to consolidating their trading interests (for example, the recruitment of plantation workers by labor traders). Settler colonization (as in Australia in the mid-nineteenth century) did not occur, but plantations were set up, and missionaries (Anglicans, Catholics, Methodists) established permanent missions from the end of the nineteenth century onward when Germany and Great Britain agreed to joint administration of the island group in 1886. In 1894 the first British resident commissioner, Charles Woodford, was dispatched to the Solomons (N'gela). His major preoccupations were pacification and facilitating exports of rubber and copra.

Another Melanesian island, New Caledonia, was discovered and claimed for Britain by James Cook in 1774 but did not become a British colony. The London Missionary Society (active in Polynesia) did little to introduce missionaries in the area. In 1853 the island was annexed by France in an attempt to attenuate widespread British influence in the Australian and New Zealand colonies. A penal colony was established there in 1864, and land grant policies in favor of convicts encouraged cultivation of the land. From the 1860s onward the appropriation of Kanak lands intensified, and huge tracts were conceded to individual settlers. The number of incoming colonizers grew significantly after World War II.

Portuguese explorer Fernandes de Queirós headed a Spanish expedition across the Pacific and discovered Vanuatu in 1606 and claimed it for Spain. He thought that he had set foot on the great South Land. More than a century later Vanuatu was rediscovered by the French (Bougainville in 1768) and later the British (James Cook in 1774), who subsequently divided up these islands between themselves. From the 1840s onward British and French missionaries consecutively set up missions there. British (from Australia) and French (from New Caledonia) settler colonialism took hold, but tensions between these two European communities and between the Europeans and the islanders led to

DISCOVERY OF FIJI

William Bligh had been set adrift in a longboat with 18 others after the mutiny on HMS *Bounty* led by Fletcher Christian on April 28, 1789. This passage describes the first sighting of Fiji as recorded by William Bligh in 1789 in the journal he kept in the launch that was published in 1792 along with the narrative of the voyage to Tahiti.

“Thursday 7th May, 1789

The land in the west was distinguished by some extraordinary high rocks, which, as we approached them, assumed a variety of forms. . . . [W]e observed two large sailing canoes coming swiftly after us along shore, and, being apprehensive of their intentions, we rowed with some anxiety, fully sensible of our weak and defenceless state. . . . Being constantly wet, it was with the utmost difficulty I could open a book to write, and I am sensible that what I have done can only serve to point out where these lands are to be found again, and give an idea of their extent. . . . Only one of the canoes gained upon us, which by three o'clock in the afternoon was not more than two miles off,

when she gave over chase. If I may judge from the sail of these vessels, they are of a similar construction with those at the Friendly Island, which, with the nearness of their situation, gives reason to believe that they are the same kind of people. Whether these canoes had any hostile intention against us must remain a doubt, perhaps we might have benefited by an intercourse with them; but in our defenceless situation, to have made the experiment would have been risking too much. I imagine these to be the islands called Feejee, as their extent, direction, and distance from the Friendly Islands, answers to the description given of them by those islanders.”

—Sandhya Patel

Source

William Bligh, *A Voyage to the South Sea, Undertaken by Command of His Majesty for the Purpose of Conveying the Bread-Fruit Tree to the West Indies* (London: Published by Permission of the Lords Commissioners of the Admiralty, 1792), 182–183.

the establishment in 1906 of an Anglo-French Condominium, which ensured joint administration of Vanuatu and put in place land tenure arrangements.

Fiji was sighted by William Bligh in 1789 on his longboat journey across the Pacific after the mutiny on the *Bounty*. These islands were officially declared a British colony much later, in 1874. The purpose was to prevent any tribal warfare that might have compromised trading interests.

The Polynesian island groups include French Polynesia, Wallis, Hawaii, Easter Island, Samoa, the Cook Islands, Tokelau, and Pitcairn. The Polynesian islands were claimed by Samuel Wallis (1767) and James Cook (1768 onward) for Great Britain and served as a convenient stopover in subsequent voyages across the Pacific. Catholics and Protestants set up missions there, and the islands were annexed by France in 1842 with little protest from the British. However, no policy of settlement by French nationals was adopted at

the time except some tentative plans to set up penal colonies. Gradually, after much debate in France, French settlement of the islands got under way, and the various archipelagos are today known as French Polynesia.

The Wallis archipelago (named and claimed by British explorer Samuel Wallis in 1767) also became a French protectorate in 1842, and there was little reaction on the part of the British as France annexed these islands. Again, the French authorities did not institute any specific mode of colonization or settlement (except missions). Today, Wallis is still an overseas French territory. As far as the Hawaiian archipelago (called the Sandwich Islands on discovery by James Cook in 1778) was concerned, annexation by the United States took place in 1898. Hawaii became a territory in 1900 and a full-fledged state in 1959. From the beginning of the eighteenth century onward, the Samoan islands were successively and sometimes very briefly Dutch, French, German, and American.

The European scramble for the South Pacific and Oceania as a whole ended in the independence of many island nations from the 1960s onward. Nevertheless, France, the United States, Australia, and New Zealand still exercise considerable influence in the area thanks to direct control over some territories and to historic links with former colonies.

—*Sandhya Patel*

Bibliography

- Lansdown, Richard. *Strangers in the South Seas: The Idea of the Pacific in Western Thought*. Honolulu: University of Hawaii Press, 2006.
- Matsuda, Matt K. *Empire of Love: Histories of France and the Pacific*. New York: Oxford University Press, 2005.
- Thompson, Roger C. *Australian Imperialism in the Pacific: The Expansionist Era, 1820–1920*. Carlton, Australia: Melbourne University Press, 1980.

French Imperialism in Southeast Asia

French imperial ambition in Southeast Asia extends back to the seventeenth and eighteenth centuries, though it was during the nineteenth century that French ambition yielded territorial concessions and the eventual creation of French Indochina. The colony of French Indochina included the present-day states of Vietnam, Cambodia, and Laos. French imperial ambition was driven by a combination of religious, humanitarian, and economic motives as well as a desire to restore national prestige. The French created a complex administrative structure that co-opted local political institutions and applied a policy that shifted from one of assimilation to association with the native peoples.

French Indochina was an entirely artificial imperialist creation. It combined inhabitants with distinct cultures, histories, and societies whose people never accepted an Indochinese identity. France established its foothold in Southeast Asia with the acquisition of six provinces, known as Cochinchina, in southern Vietnam between 1858 and 1867. Through a series of military expeditions in the north and a war with China, France secured protectorates over Tonkin (northern Vietnam) and Annam (central

Vietnam) by 1885. In Cambodia, the French established a protectorate in 1867. Laos, which had only united at the end of the seventeenth century, formed the fourth French protectorate in 1893.

French administration in Indochina varied from region to region. Cochinchina, the first French colony, was directly administered by a governor and French colonial officials who answered to the colonial and naval ministries in Paris. Meanwhile, Tonkin, Annam, Cambodia, and Laos constituted separate protectorates and maintained *residents superieurs* under the authority of the French Foreign Ministry. After 1887 all five regions were brought under the local authority of a single governor-general based in Hanoi. In the protectorates, French officials maintained a parallel bureaucracy and ruled through the veneer of traditional indigenous institutions. For example, the Nguyen dynasty emperor continued to issue edicts that would be carried out by local mandarin officials. In reality, the French resident superieur approved all drafts of edicts, and French officials oversaw the bureaucratic functions of Vietnamese officials. By the 1890s the French governor-general appropriated the political power of the Nguyen emperor and his officials, leaving a corrupt and moribund institution.

French motives for imperial expansion in Southeast Asia were as varied as the political structure of the colony. The *mission civilisatrice* (civilizing mission) reflected the hope of Christianizing and “civilizing” the inhabitants. French Jesuit missionary activity in the region dates back to the seventeenth century. The preservation of Catholic lives, either missionaries or converts, or punishment for their deaths was a recurring pretext for French military expeditions that secured territorial acquisitions in Vietnam. French prime minister Jules Ferry (1832–1893) also espoused economic motives for imperial expansion. He argued that France’s future economic development required new colonial possessions for raw materials, vast potential export markets, and outlets for French investment. However, economic development in French Indochina came late and never produced the benefits touted by Ferry. Some French historians argue that imperial expansion was driven

by the idea of empire and a need for the restoration of national pride in the wake of the humiliating defeat at the hands of Prussia in 1870. The colonial endeavor thus glorified French civilization and culture, revived French pride, and provided economic fortunes that would be critical in a future rematch with Germany.

French policy toward their Indochinese subjects vacillated between assimilation and association. The original policy of assimilation intended to create Frenchmen out of Indochinese. Assimilation sought to impose French customs, French language, and French institutions upon the diverse inhabitants of the colony without consideration of their historical, cultural, or political traditions. Over time, the policy of association replaced assimilation. The policy of association implied that the colonies, though under the control of French officialdom, would gain a measure of political and economic independence. Furthermore, traditional indigenous institutions would remain and would retain their integrity. For example, the French decided to retain Vietnamese mandarins as local and provincial officials rather than remove all vestiges of the Vietnamese political structure.

French Indochina was an artificial creation with various internal complexities. During the twentieth century inconsistent political leadership hampered the development of the colony, and worldwide economic turmoil frustrated French control over the colony. Japanese occupation of French Indochina during the 1940s further weakened French prestige and provided the opportunity for an uprising under the leadership of Ho Chi Minh and his Viet Minh organization. After a sustained conflict during 1945–1954, the French defeat at Dien Bien Phu led to a complete French withdrawal from the region and the dissolution of the French Indochina colony.

—Thomas McGrath

Bibliography

- Cooper, Nicola. *France in Indochina: Colonial Encounters*. Oxford, UK: Berg, 2001.
- Power, Thomas F., Jr. *Jules Ferry and the Renaissance of French Imperialism*. New York: Octagon Books, 1966.
- Steinberg, David Joel, ed. *In Search of Southeast Asia: A Modern History*. Rev. ed. Honolulu: University of Hawaii Press, 1987.

Resistance to French Imperialism

Resistance to French imperialism in Africa and Southeast Asia can be divided into primary resistance, or confronting French conquests, and secondary resistance, or avoiding French colonial rule. Major wars in Algeria, West Africa, and Vietnam demonstrated how distinct indigenous traditions influenced local resistance to the imposition of French colonial rule. After France established colonial regimes, indigenous populations resorted to well-established methods to avoid colonial intervention and maintain some measure of autonomy in their lives. Confrontation necessitated a near continuous state of armed resistance to French intervention and subsequent rebellions during the period of French rule. Avoidance provided a nonconfrontational alternative to armed resistance that eventually ended in defeat for the indigenous states, which lacked internal cohesion, powerful allies, and modern military technology. This strategy of resistance included refusing to obey the orders of colonial officials, flight from French colonies, refusal to recognize French-appointed authorities and French policies or taxes, sabotage, and efforts to propagandize against French rule through print media or popular theater.

France's first determined effort to reestablish its overseas empire in the nineteenth century led to a protracted bloody conflict over Algeria in North Africa. Driven by a dispute over trade, France launched an invasion of Algeria in 1830 and easily defeated the Algerian dey. The conquest of the coast ignited a jihad, or holy war, by the Arab Berber population. Under the leadership of Abd al-Qadir, the fiercely independent rival clans temporarily united to resist French intervention. The clans shared a common language, religion, and culture and felt threatened by the imposition of a foreign religion, culture, and legal system. During the war, France resorted to scorched earth tactics, including destroying animals, firing crops, and massacring villagers, and began to exploit the fragile unity of the rival clans supporting Abd al-Qadir, who was finally captured and exiled in 1847. The conflict then transformed into a sustained rebellion as the French struggled to pacify the interior regions populated

by an elusive opponent who fled deeper into the desert rather than submit to French colonial rule. France declared victory in 1879.

In West Africa during the 1880s, French efforts to extend their trading interests farther inland led to a confrontation with the expanding Tukulor empire under Ahmadu Seku and the recently founded Mandinka empire under Samori Toure. Both Samori and Ahmadu initially pursued diplomacy to avoid confrontation. When diplomacy failed, the two African empires pursued independent policies. Ahmadu concluded an alliance with the French, who he believed would respect the integrity of the Tukulor empire. The French, however, had no intention of respecting the treaty and took advantage of an internal dispute to topple the Tukulor empire in 1893. Samori had built the Mandinka empire on the strength of this 30,000-man army, which used imported foreign weapons and maintained a strong sense of Mandinka nationalism. Yet he had no desire to confront the French Senegalese army with its heavy artillery and machine guns. To escape French pressure, Samori withdrew to the east, established a new base for his Mandinka empire, and sought protection from the British in vain. French forces, after suffering several defeats, eventually captured Samori in 1898. The inability of independent African states to overcome their rivalries and unite against the French as well as find powerful foreign patrons guaranteed their downfall.

In Southeast Asia, France slowly acquired control over Vietnam, Cambodia, and Laos, forming the colony of French Indochina. In securing this colony, France faced not only indigenous resistance but also international intervention. As French control of Vietnam extended to the Red River in the north, a Chinese pirate force known as the Black Flag Army arrived in 1882. This irregular army opposed French imperialism on behalf of Vietnam. When the Black Flags were driven out in 1883, the Qing dynasty in China responded by sending troops to the frontier where fighting erupted between the French and Chinese, leading to the Sino-French War in 1884. Resistance to French imperialist ambitions in Indochina not only combined indigenous forces but also incorporated an international dimension with the support of Qing China. However,

this support was insufficient to maintain Vietnam's independence.

In contrast to these examples of primary resistance to French imperialism, subject peoples struggled to resist French colonial regimes through nonconfrontational methods. The simplest form of avoidance resistance witnessed peasants moving away from French colonial footholds. As French territorial control expanded, flight became more difficult, and some resorted to refusing to accept French rule and the authority of French-appointed officials. This might take the form of failure to acknowledge or pay new taxes established by the French. In the early twentieth century, anti-French propaganda could be found in print media in Africa and expressed in popular theatrical productions in Vietnam. Slowly, these forms of resistance, both primary and secondary, would coalesce and enable the subject peoples to unify and overthrow French colonial rule.

—Thomas McGrath

Bibliography

- Adas, Michael. "From Avoidance to Confrontation." In *Colonialism and Culture*, edited by Nicholas B. Dirks. Ann Arbor: University of Michigan Press, 1992.
- Dunn, Ross E. *Resistance in the Desert: Moroccan Responses to French Imperialism, 1881-1912*. London: Croom Helm, 1977.
- Maddox, Gregory, ed. *Conquest and Resistance to Colonialism in Africa*. New York: Garland, 1993.
- Shillington, Kevin. *History of Africa*. Rev. ed. New York: St. Martin's, 1995.

Reform and Innovation in Siam (Thailand)

As with China and Japan, the two major Asian countries not to have been directly colonized by the West, Siam (now Thailand) faced three challenges beginning in the mid-nineteenth century: keeping colonialism at bay, strengthening the country by learning from the West, and retaining what were considered the essential attributes of the society. In Siam it was the royal family rather than intellectuals or military men who managed the country's efforts to modernize.

According to King Chulalongkorn (r. 1868–1910), who formulated the blueprint for reforms,

the traditional institutions of government had become inefficient and corrupt. Noble families had entrenched themselves in territorially defined offices, living off the labor and taxes of the people while failing to provide justice and security of livelihood. The king thus moved to dismantle their power bases by introducing a modern bureaucratic system based on functional differentiation, fully accountable to the minister and in turn the monarch. These pivotal reforms have long been understood, in Chulalongkorn's terms, as the demarcation between old and new Siam, the long-drawn-out battle between the conservatives and modernizers in which the latter eventually triumphed. Had they been defeated, the argument went, Siam would undoubtedly have been colonized along with the other Southeast Asian countries, as the Western powers were intent on supplanting rulers and systems that were opposed to open markets and modern administrations.

Chulalongkorn's reforming zeal was not only a response to the threat of colonialism or a legacy of poor administration; to him, both could only be addressed with the revival of the fortunes of the Chakri royal family. The dynasty had lost out in relative strength to the powerful noble families, in particular the Bunnag, who were instrumental in the selection of Mongkut (r. 1851–1868), then a monk for 27 years, to the throne upon the death of his half brother King Nangklao (1824–1851), and whose scion Chuang was regent for 5 years until 1873, when Chulalongkorn turned 20.

Chulalongkorn's mark as a modernizer had actually been stamped during the regency. In 1871–1872 Chuang Bunnag arranged for him to visit Java, the Straits Settlements, British Burma, and India to acquaint him with the workings of the colonial possessions. These visits marked the first time that a Siamese monarch had ventured abroad. In 1874 Chulalongkorn announced that all children born into debt slavery at the beginning of his reign who had not been redeemed earlier would be free when they were 21 years old. The colonial powers did not fail to take note of this dramatic though long-drawn-out rupture with what they considered one of the worst features of an uncivilized society. At the same time, the control of labor services as the key to resource

extraction was growing anachronistic, for the open-market economy functioned on wage rather than *corvée* labor, and monetization meant that taxation became the key source of state revenue.

With the creation of the functional ministries in 1892, the Ministry of Finance had charge of revenue collection and the expenditures of the kingdom, allocating funds for infrastructure development that aimed at the centralization of power, which would also facilitate the operations of the Western businesses. The intertwined interests were manifested in the appointment of foreign advisers not only for their technical skills but also for their policy recommendations: British (financial, British companies having the largest economic interest in Siam); French, Belgian, and Japanese (legal codes); Danish (navy and the *gendarmerie*); and German (railways and the post office).

The monarchy consolidated its rule through the reforms, in particular those of the Ministry of Interior, which enforced edicts from Bangkok in remote and autonomous regions such as forest resource-rich Chiangmai (Chiang Mai). The extension of a uniform taxation system to the subsistence economy of the northeast erupted in millenarian uprisings in 1902 that were put down by the modernized army dispatched on newly built railways.

Chulalongkorn tightly controlled the scope and pace of the modernization program, rejecting a petition in 1885 from a group of princes and officials for a constitutional monarchy and a parliamentary system. The king deemed that the small number of educated Siamese and the urgency of the colonial threats meant that political and legislative reforms were premature. Similar calls for reforms made by commoners through the press up to the 1932 overthrow of the absolute monarchy also went unheeded.

—Hong Lysa

Bibliography

- Brailey, Nigel. *Two Views of Siam on the Eve of the Chakri Reformation*. Arran, Scotland: Kiscadale, 1989.
- Brown, Ian. *The Elite and the Economy in Siam, c. 1890–1920*. Singapore: Oxford University Press, 1988.
- Hong, Lysa. "Reforms and Modernization in Siam." In *Southeast Asia: A Historical Encyclopedia from*

Angkor Wat to East Timor, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

Tej Bunnag. *The Provincial Administration of Siam, 1892–1915*. Kuala Lumpur: Oxford University Press, 1977.

Wyatt, David. *Thailand: A Short History*. New Haven, CT: Yale University Press, 1984.

The Dutch East Indies

Since the seventeenth century, Dutch interests in the Malay Archipelago were represented by the United Dutch East India Company (VOC), a joint stock company that established a lucrative commercial network in the region but little territorial control. After the VOC went bankrupt in 1796, its charter was allowed to lapse in 1800 and the Dutch government assumed its responsibilities and rights in the region. Between 1808 and 1811, the territories were administered by Willem Daendels, who was appointed by Napoleon after the French emperor created the Kingdom of Holland and placed his brother Louis on the throne. In 1811, the British conquered Java and appointed Thomas Stamford Raffles to serve as governor. He remained in office until 1816, at which time the newly created Kingdom of the Netherlands was awarded control of the VOC's former territories in Indonesia in return for relinquishing to Britain Dutch claims to territory in India and the Malay Peninsula. These arrangements were affirmed by Anglo-Dutch treaties in 1814 and 1824.

Besides tiny possessions on the Moluccas and Sulawesi, the VOC had successfully established direct rule only on Java, the future center of the new colony. There the Dutch continued developing the infrastructure, especially in road building and harbor development, but also strengthened its rule by military action. During the Java War (1825–1830), one of the bloodiest of all colonial wars, the Dutch defeated the opponents from the Javanese nobility and succeeded in placing the whole island under their control. On the so-called Outer Islands, colonization took much longer. On Sumatra the Dutch gained control in the 1860s except for Aceh, the Batak lands in the interior, and some small independent enclaves. Ultimately in Aceh colonial power was seized only in the early twentieth century

after the protracted Aceh War (1873–1904). In the eastern archipelago events were similar; starting from coastal possessions, colonial control gradually spread to the interior. But only systematic efforts during the first years of the twentieth century consolidated Dutch authority. The Toraja people on Sulawesi were brought under Dutch control in 1905–1906, Bali was conquered in several campaigns by 1908, and on Borneo western regions remained independent until 1916. Dutch expansion was slowed by ongoing resistance such as in the region of the Aceh War. Furthermore, the colonial administration had little interest in economically marginal regions such as Bali or outlying islands such as Irian Jaya.

The key difference between Dutch government rule and rule by the VOC was the official attempt to establish direct administrative control over the region. But Dutch colonial rule showed a dual structure since, to a certain extent, it continued the system of contracts between Dutch and indigenous authorities established by the VOC. As a result, the Dutch East Indies appeared as a composition of three types of colonial arrangements: territories directly administered by Dutch officials; regions administered by indigenous local committees, consisting of members of the regional nobility, under direct Dutch control (*inlandsche gemeentebestuur*); and states ruled by indigenous sovereigns with indirect “counselling” by Dutch residents (*zelfbestuurde landschappen*).

Dutch economic policy focused on growing cash crops for the world market. Coffee plantations on Java had existed since the early eighteenth century and on Sumatra since the late nineteenth century. Other colonial cash crops were sugar (since the seventeenth century on Java), tea (since 1825 on Java, expanding in western Java and northern Sumatra since 1870), rubber (since the 1880s on Sumatra), and palm oil (since the 1850s on Java and the 1910s on Sumatra). The plantation economy was dominated by Dutch and Chinese entrepreneurs, partly via joint stock companies. The indigenous private economy—mainly agriculture and small-scale handicraft—centered around the traditional village, which the colonial administration chose as the second main pillar of its economic policy

➤ SUICIDE ON BALI

The incorporation of Bali into the Dutch East Indies is one of the best examples of the difficulties of colonial consolidation and the cultural misunderstandings that accompanied it. For the United Dutch East India Company (VOC) and initially for the Dutch colonial administration, Bali was of minor interest. Since the 1830s the Dutch signed contracts with the traditional elites to establish indirect rule over Bali. But the Balinese did not regard these contracts as a transfer of sovereignty. Thus, permanent resistance against Dutch colonial and economic claims flared up and led to Dutch military expeditions. Their final campaign started in the early 1900s after Balinese raja had rejected compensation payments for the plundering of wrecked Chinese ships. In 1906 and 1908 two so-called *puputans* (basic meaning: “finishing”) occurred in the kingdoms of Badung and Klungkung; in a ritual procession the whole royal house-

hold and administration met soldiers and committed ritual suicide in which the majority were killed by Dutch bullets and others, being wounded, were killed by the Balinese themselves. From the Dutch perspective a *puputan* was an irrational rampage; from the Hinduistic view of the Balinese it was the honorable way to end a royal dynasty. The *puputan* enabled the royal family to preserve its spiritual integrity. The events caused a worldwide uproar. In Western understanding only explainable as a massacre, these incidents threw a disadvantageous light on colonial policies in Indonesia. Thus, the *ethiek politie*, or welfare interventionism, which was strengthened by the central Dutch government but in the beginning was avoided by several colonial officials in Asia, was fostered by new ethical arguments in the public debate on the Bali suicides.

—Jürgen Nagel

next to the plantations. Between 1830 and 1870 the cultivation system (*kultuur stelsel*) on Java forced rural villages to produce cash crops (mainly coffee, sugarcane, and tea) through a system of land taxes, regulations, and monopolization. In the Netherlands, perceived abuses of the culture system led to increased economic and humanitarian criticism of the monopoly of the Dutch Trading Company (Nederlandse Handel-Maatschappij, NHM), of the company's hindrance to free entrepreneurship, and of its use of force and coercion.

In 1870 the Dutch government abolished the cultivation system. Nevertheless, in some regions forced cultivation remained until 1890, and the state monopoly in coffee survived until 1915. After 1915 the Dutch administration followed a policy of *laissez-faire* that set the stage for the beginnings of the epoch of plantation agriculture. Increasing public debates on colonial politics and exploitation led to the implementation of the new “ethical policy,” a policy of so-called welfare interventionism (*ethiek politie*) in 1901. This Dutch version of a civilizing mission relocated the focus of colonial policy to a more morally legitimized treatment of indigenous societies and led to significant improvements in

infrastructure, transportation, and communication facilities accompanied by some efforts in education.

Ironically, such welfare interventionism engendered new forms of resistance and the beginnings of Indonesian nationalism. Traditional indigenous antagonists of colonialism had been defeated in the nineteenth century during the colonial wars. Now nationalist, socialist, and Islamic groups benefited from growing tolerance, political participation, and education. Dutch efforts to suppress the varying anticolonial parties finally strengthened the radical nationalists led by Sukarno and Mohammad Hatta. In 1942 the Japanese invasion factually terminated Dutch colonialism. Japan's capitulation enabled Sukarno in 1945 to declare the independent Republic of Indonesia. The Dutch attempted but failed to reestablish colonial rule during the Indonesian War of Independence (1946–1949).

—Jürgen Nagel

Bibliography

- Cribb, Robert. *Historical Atlas of Indonesia*. Richmond: Curzon, 2000.
- Dick, Howard, Vincent J. H. Houben, J. Thomas Lindblad, and Thee Kian Wie. *The Emergence of a*

National Economy: An Economic History of Indonesia, 1800–2000. Crows Nest, Australia: Allen and Unwin, 2002.

Gouda, Frances. *Dutch Culture Overseas: Colonial Practice in the Netherlands Indies, 1900–1942.* Amsterdam: Amsterdam University Press, 1995.

Ricklefs, Merle C. *A History of Modern Indonesia since c. 1200.* 4th ed. London: Palgrave Macmillan, 2008.

Vickers, Adrian. *A History of Modern Indonesia.* Cambridge: Cambridge University Press, 2005.

The End of Spanish Rule in the Philippines

Filipino opposition to Spain's control of the Philippines grew steadily from the eighteenth century onward. Following the loss of its Latin American territories in the early 1800s, Spain's administrative presence became increasingly intrusive and onerous for Filipinos. Forms of opposition varied, however, and even as emerging groups of middle-class Filipinos demanded legal and economic reforms, sporadic peasant protests occurred. Initially, leading opponents of Spanish rule rarely supported independence, but by the late nineteenth century it had become clear that Spain was no longer able to contain the recurrent violence and demands for change.

The vulnerability of Spanish control had been demonstrated in September 1762 when a hostile British naval squadron appeared in Manila Bay with over 1,000 troops onboard. The unprepared defending troops from Spain (and the viceroyalty of New Spain) surrendered, having been unaware of Spain's involvement in the Seven Years' War. The British withdrew in 1764, but sporadic Filipino resistance to Spanish rule continued in the Ilocos, Pangasinan, and Bohol regions. Filipino grievances in these areas ranged from the imposition of tribute payments to activities of Roman Catholic religious orders and the Church's attempts at religious control.

The British occupation had revealed the need for increased revenues to pay for the defense of the Philippines. Spain's economic interests had been largely focused on Manila, which served as an entrepôt for luxury Asian goods and Mexican silver. In accordance with Spain's mercantilist policies, the goods were sent annually

by galleon from Manila to Acapulco in New Spain. In return, the Viceroyalty of New Spain sent galleons laden with silver to Manila each year to sustain the Philippine treasury. Following the occupation, however, local exports were steadily increased to improve the isolated colony's capacity for defense. Tobacco was exported successfully along with sugar, indigo, and hemp. Accompanied by increasing numbers of Chinese merchants, this fueled an expanding cash economy and an emergent Filipino middle class.

Mexican independence in 1821 signaled a new period of economic and administrative change in the Philippines, as administrators sought to compensate for the loss of New Spain's support. From the 1840s, policies encouraged the construction of new roads, canals, and harbors to improve the islands' commercial potential and economic viability. Concerned by the Mexican precedent, Spanish administrators attempted to exclude criollos from positions of authority. New regulations excluded them from military office, prompting the mutiny led in 1823 by the army officer Andres Novales. The same year, Luis Rodríguez Varela and José Ortega were among a number of intellectuals exiled to Spain for having written pamphlets and novels that protested increased discrimination. Varela's pamphlets urged loyalty to the king but demanded that criollos be given the same rights as Iberian Spaniards.

Demands for reforms to education and the law became increasingly widespread among both criollos and Filipinos. From 1863, a series of liberal reforms sought to emulate the wave of liberalism then current in Spain. The rise of Spanish liberalism encouraged a belief that similar changes were possible in the Philippines. New policies sought to improve standards in education and to correct the Church's progressive encroachment of state prerogatives. Despite rising expectations, it became clear that conservative administrators and clergymen would frustrate any sustained effort at liberal reform.

The privileged and influential position of Spanish friars had become increasingly contentious during the nineteenth century. Indigenous hostility to Spanish clergy was long-standing, as religious orders had appropriated indigenous peoples' lands. Filipinos increasingly lived in

municipalities, however, where friars' influence on daily life was wide ranging and extended from schools to public order. Moreover, friars vigorously defended their autonomy from local bishops' supervision. Middle-class Filipinos were particularly concerned by friars' reactionary sentiments and attempts to deny Filipinos the education necessary for empowerment and change. Apolinario de la Cruz (1815–1841), a Catholic priest who had founded a religious order for Filipinos called the Confraternity of St. Joseph after having been denied membership in the Dominican order by Spaniards, had inspired the Confradia Revolt in 1841 that protested the effects of the Spaniards' religious control. Yet colonial administrators generally supported the friars, fearful that an empowered indigenous priesthood might lead to further revolts. One attempt to allocate additional parishes to Spanish friars prompted Father Pedro Peláez, the Filipino archbishop of Manila, to galvanize local clergy's resistance in 1861. Despite his failure, Filipino clergy continued to play a central role in maintaining opposition to Spaniards and tempered the more anticlerical elements of growing dissent.

The period of liberal reforms and public debate ended in 1872 with the repression that followed the Cavite Mutiny. Initially led by criollo officers at the Cavite naval base in January 1872, a wage dispute escalated as Filipino workers and soldiers hoped that other garrisons would join their mutiny. Fearful of further rebellions, Spanish authorities instigated a widespread repression and a number of exemplary executions. Instead of pacification, the Spanish response unified Filipino and criollo anger at racial prejudice and social injustice. Public opinion expressed a sense of enagement at the decision to execute three prominent liberal Filipino priests: José Burgos, Mariano Gómez, and Jacinto Zamora. In an effort to avoid the repression and to access better education, increasing numbers of wealthy Filipinos sent their children to be educated in Europe. From Europe's major cities, men such as the novelist José Rizal (1861–1896) instigated the literary movement known as the Propaganda Movement and demanded further legal and administrative reform.

By the early 1890s it was becoming obvious that Spain would not instigate the reforms that

THE PROPAGANDA MOVEMENT

The Propaganda Movement (1880–1895) exercised a formative influence on the emerging expression of Filipino nationalism. The movement aimed to secure for Filipinos and criollos the same rights that Spaniards possessed in the peninsula, such as representation in parliament. Yet the Propagandists instead fueled the rise of a self-conscious Philippine identity. From cities throughout Europe, they circumvented censorship and engaged in literary publications that ranged from books to pamphlets and newspaper articles.

The most famous Propagandist, José Rizal, occupies a seminal position in Philippine nationalism. Rizal demanded administrative and religious reforms, which would strengthen the Philippines' relationship with Spain. His novels, *Noli Me Tangere* and *El Filibusterismo*, extolled the history and characteristics of the Philippine nation and carefully distanced it from the corrupt habits of Spanish friars. He also liaised with European intellectuals, such as his close friend Ferdinand Blumentritt, and wrote numerous articles for the Propagandists' newspaper *La Solidaridad*.

Spanish authorities within the Philippines considered Rizal's works highly seditious, and he was obliged to live in Europe and Hong Kong for much of his life. Although literacy rates among the Philippine population were generally low, Rizal rapidly acquired a heroic status that was used by others in the Katipunan to justify overt military resistance to Spanish rule. Aware of his vulnerability after his return to the Philippines in 1892, Rizal sought to serve in the Spanish army in Cuba. He was recalled, however, and executed for fomenting insurrection in December 1896.

—Robert Mason

many Filipinos demanded. In response, the Katipunan secret society was founded in 1892 in order to expel the Spanish. By 1895 the Katipunan was led by Andrés Bonifacio and was organized according to a network of secretive local chapters. As an organization it urged Filipinos to cooperate and support one another, emphasizing a single united nation. Alarmed at its growth, in 1896 the Spanish governor ordered troops to quash the Katipunan. In response and after extensive debate, Katipunan members resolved to begin

the long-planned armed revolution. The ensuing “Cry of Balintawak,” referring to the shouts that accompanied the tearing up of Spanish-required residency/tax certificates, has subsequently been taken to mark the beginning of the violent revolution to oust the Spanish from the Philippines.

—Robert Mason

Bibliography

- Cushman, Nicholas P. *Spain in the Philippines: From Conquest to Revolution*. Quezon City, Philippines: Ateneo de Manila University, 1971.
- Schumacher, John N. *The Making of a Nation: Essays on Nineteenth-Century Filipino Nationalism*. Manila: Ateneo de Manila University Press, 1991.
- Schumacher, John N. *The Propaganda Movement, 1880–1895*. Manila: Ateneo de Manila University Press, 1997.

Philippine Revolution, 1896–1898

The Philippine Revolution was a struggle for independence by a group of Filipino revolutionaries spearheaded by the Katipunan, which launched an uprising against the Spanish colonial government in 1896 that rapidly spread throughout the archipelago. The revolution was the culmination of Filipino nationalist aspirations during the last quarter of the nineteenth century originating from the Propaganda Movement to the founding of the revolutionary Katipunan. Despite failing to attain independence, the revolution heightened the nationalist consciousness that was witnessed during the Philippine War of Independence (1899–1902), when Filipinos fought the newly installed U.S. colonial regime.

Anti-Spanish revolts prior to the mid-nineteenth century were characterized by parochial dissatisfaction toward harsh or unjust treatment at the hands of local Spanish officials or friars. The Muslim Moros had long waged a protracted struggle of resisting Spanish control ever since the inception of Spanish rule over the rest of the archipelago from the late sixteenth century. During the nineteenth century two events had a deep impact on Filipino attitudes toward the Spanish colonial regime. The tragedy of Tayabas in 1840 reflected the oppressive attitude of the Spanish authorities, who were hand in

glove with the friars. Racial discrimination was the rule within the clergy: despite their education, Filipino priests were allocated only subordinate positions in the church hierarchy. When Father Apolinario de la Cruz (1814/1815–1841) sought permission to start the confraternity of San José in Tayabas, he was denied because the Dominicans felt threatened. Nonetheless, Cruz went ahead to found his order, with followers coming from Tayabas, Laguna, and Batangas. In 1841 during a meeting at Tayabas, Spanish troops killed many adherents, including Cruz. The following year, Filipino soldiers in Tayabas staged a mutiny; they were ruthlessly suppressed.

Then in 1872, Filipino troops in Cavite mutinied; the mutiny was swiftly suppressed. The Spanish friars, especially the Dominicans, feeling that Filipino intellectuals and clergy had criticized them, convinced the Spanish colonial government to take severe measures, including the arrest, imprisonment, or exile of those intellectuals. Still dissatisfied, the Dominicans demanded the execution of the Filipino priests Jose Burgos, Mariano Gomez, and Jacinto Zamora; the three were executed by garroting.

The Tayabas and Cavite episodes stirred the general population to indignation but also exhibited their impotence at taking further action, owing to the repressive Spanish regime. Meanwhile, a group of Filipino students—the *ilustrados*—from well-to-do families living and studying in Spain began what became known as the Propaganda Movement, which sought to convince the Spanish home government to institute reforms in the colonial administration of the Philippines. Through the columns of the newsletter *La Solidaridad*, these reformers proposed moderate demands such as freedom of speech, equality before the law, Filipino representation in the Spanish Cortes, Filipinization of the clergy, and assimilation. The influence of the Propaganda Movement was limited; some Spanish, especially fellow intellectuals, sympathized with the Propaganda Movement, but the Spanish government showed lack of interest. Not allowed to air their reformist views in the Spanish language, the reformers needed support from the majority of their untutored countrymen at home. However, it was not the intention of the

reformers to rouse the peasant masses to revolt; their objective was to move the Spanish government to take measures to improve the colonial system.

José Rizal (1861–1896), who came from a wealthy family, was an active advocate of reform. His novel *Noli Me Tangere* (1887) and its sequel *El Filibusterismo* (1891) sought to expose the evils of the colonial regime. Rizal was a reformer, not a revolutionary, despite the strong language and damaging criticism he leveled at the Spanish colonial government in his second novel. In *Noli*, his protagonist agitated for reforms utilizing peaceful means. But in *Fili*, the same protagonist was forced to abandon peaceful measures owing to their futility and turned to radical action, including violence, to achieve his ends. Rizal returned to the Philippines in 1892. He discussed his plans for reform with Eulogio Despujol, governor during 1891–1893, and Despujol showed interest. In July Rizal formed La Liga Filipina, an organization that strove for the betterment of the Filipinos. But on July 6 Rizal was arrested and banished to Dapitan, Mindanao.

Rizal's writings, including his two novels, were banned in the Philippines but enjoyed a wide readership among intellectuals. Andres Bonifacio (1863–1897), born of plebeian background, was greatly influenced by Rizal and his works, in particular *El Filibusterismo*, in which force and radical solutions are advocated. Bonifacio and others revived La Liga Filipina. Its objectives were to explore all peaceful ways and legal means to convince the Spanish colonial regime to introduce reforms. When the colonial government did not pay heed to their appeals, La Liga Filipina again disbanded. Two groups emerged: the *Compromisarios* continued to advocate reforms through the support of La Solidaridad, and those led by Bonifacio formed the Katipunan ng mga Anak ng Bayan (Society of the Sons of the People).

Witnessing the futility of peaceful means and the fruitless emphasis on reform, the Katipunan raised the standard of armed revolt. Through its underground newspaper *Kalayaan* (Freedom), edited by Emilio Jacinto (1857–1899), the Katipunan's cause was expressed: expulsion of all Spaniards from the Philippines and complete independence. An armed revolution was called for.

Only the peasants heeded Bonifacio's and the Katipunan's call for revolution. But support from the moneyed class was lacking; consequently funds were low, retarding efforts to procure arms. Therefore, an armed revolution in 1896 was premature. In July 1896 when told of the Katipunan's plans for a revolution, Rizal decried its limited resources and its timing and predicted its inevitable failure.

But when the Katipunan's revolutionary plans were betrayed to the Spanish authorities and thousands were arrested and executed, Bonifacio launched the Philippine Revolution on August 30, 1896, with the Battle of San Juan Del Monte as the first clash of arms between the Katipunan-led revolutionaries and the Spanish colonial army. A month later at Binakayan, Cavite, the revolutionaries tasted their first significant victory.

When the revolution broke out, Rizal was on his way via Spain to Cuba, where he intended to volunteer his medical services. The island colony was in the midst of the Cuban War of Independence (1895–1898), led by the writer and patriot José Martí (1853–1895).

Rizal was arrested upon his arrival in Spain and shipped back to Manila. Tried, convicted, and then executed on December 30, 1896, Rizal was transformed into a martyr for the nationalist struggle.

Meanwhile, for want of arms and strong leadership the revolutionaries faced repeated setbacks on the battlefield. What is more, within the Katipunan dissension came to the fore. Despite an agreement reached on March 12, 1897, members were split between followers of Bonifacio and those of Emilio Aguinaldo (1869–1964), a proven military strategist. In May, Aguinaldo had Bonifacio arrested and executed.

The Pact of Biaknabato (December 1897) witnessed a brief cease-fire. In return for Aguinaldo's exile, the Spanish side agreed to grant amnesty to all Filipinos who gave up their arms and indemnify them for war damages. The Filipinos, however, were dissatisfied, as fundamental demands were not addressed: equality, representation in the Spanish Cortes, secularization, and the granting of human rights and civil freedoms. Bad faith on both sides led to renewed

hostilities. Francisco Makabulos, a revolutionary leader, achieved some success in central Luzon.

The Spanish-American War broke out in 1898. At the Battle of Manila Bay (May 1898), the U.S. Asiatic Squadron under Commodore George Dewey (1837–1917) destroyed the Spanish fleet. A U.S.-Philippine alliance was formed to defeat the common foe, Spain. On June 12, 1898, Aguinaldo declared the independence of the Philippines. By the end of June, Aguinaldo and Makabulos had secured most parts of Luzon and had laid siege to Manila. Major General Wesley E. Merritt attacked and seized Manila on August 13, 1898. Fearing a massacre, Dewey persuaded Aguinaldo and the revolutionaries not to enter Manila when the Americans launched the assault. Diego de los Rios, Spanish governor in 1898, surrendered to Dewey. On December 10, 1898, the Spanish-American Treaty of Paris witnessed Spain's ceding the sovereignty of the Philippines to the United States in exchange for US\$20 million. Double-crossed and cheated, the Filipino revolutionaries turned on their former allies in February 1899, starting the Philippine War of Independence (1899–1902).

The Filipino revolutionary government did not recognize the U.S. acquisition of the Philippines. Instead, on January 20, 1899, Aguinaldo became the president (1899–1901) of the Philippine Republic. A Congress of Representatives was convened in Malolos (October–November 1899) whereby a constitution drafted by Apolinario Mabini (1864–1903) was adopted.

Reflecting on the revolution, including Aguinaldo's resistance to the U.S. takeover, Schumacher noted: "The Revolution of 1896–1902 was indeed a nationalist revolution in which all classes of society participated. But beneath that common surge of national feeling, a complexity of motives and forces were at work, which no monolithic framework can adequately explain."

—Ooi Keat Gin

Bibliography

- Agoncillo, Teodoro A. *The Revolt of the Masses: The Story of Andres Bonifacio and the Katipunan*. Quezon City: University of the Philippines, 1954.
- Corpuz, O. D. *The Roots of the Filipino Nation*. 2 vols. Quezon City: Aklahi Foundation, 1989.
- Ileto, Reynaldo Clemená. *Pasyon and Revolution: Popular Movements in the Philippines, 1840–*

1910. Quezon City: Ateneo de Manila University Press, 1979.

Quibuyen, Floro. "Rizal and the Revolution." *Philippine Studies* 45(2) (1997): 225–257.

Reyes Churchill, Bernardita, ed. *Determining the Truth: The Story of Andres Bonifacio*. Manila: Manila Studies Association, 1997.

Schumacher, John N. *The Making of a Nation: Essays on Nineteenth Century Filipino Nationalism*. Manila: Ateneo de Manila University Press, 1991.

Schumacher, John N. *The Propaganda Movement: 1880–1895*. Manila: Solidaridad, 1973.

Schumacher, John N. *The Revolutionary Clergy: The Filipino Clergy and the Nationalist Movement, 1850–1903*. Quezon City: Ateneo de Manila University Press, 1981.

Sturtevant, David R. *Popular Uprisings in the Philippines, 1840–1940*. Ithaca, NY: Cornell University Press, 1976.

Wolff, Leon. *Little Brown Brother: How the United States Purchased and Pacified the Philippine Islands at the Century's Turn*. New York: Doubleday, 1961.

Philippine War of Independence, 1899–1902

The Philippine War of Independence started on February 4, 1899, when U.S. soldiers in Manila fired at Filipino troops surrounding the city. When General Emilio Aguinaldo (1869–1964) noticed that the Americans intended to attack his troops, he declared war on the United States. The war that erupted was viewed differently by the two warring parties. The Philippine side considered the conflict a "war of independence" because they had proclaimed an independent republic and saw the Americans as imperialists, bent on occupying their country. The United States did not recognize the Philippine Republic and considered itself the legitimate sovereign of the islands, after Spain had transferred the colony to the United States. Consequently, the United States spoke of the war as the Philippine Insurrection and saw the Filipino freedom fighters as rebels.

The Spanish-American War (1898) concluded with the Treaty of Paris on December 10, 1898. Spain had agreed to cede Cuba, the Philippines, Guam, and Puerto Rico to the United States, and the United States had promised

to pay the sum of \$20 million to Spain for the transfer of the Philippines. By that time it had become clear that the U.S. government was bent on acquiring the Philippines as a colony. On December 21 U.S. president William McKinley delivered a proclamation claiming jurisdiction over the Philippines and announcing the intention to rule the islands in accordance with the principle of “benevolent assimilation.”

This went against the wishes of the Filipino revolutionaries, who had proclaimed an independent Philippine Republic, with the center of government at the town of Malolos, and had adopted a constitution for the new state. On January 21, 1899, Aguinaldo proclaimed the constitution as the supreme law of the republic, and the next day he was formally inaugurated as president of the new republic. What would later be called the First Republic or the Malolos Republic was now a fact.

When war broke out, the Americans had gathered a sizable army in the islands and were prepared to attack the Filipino troops and conquer the islands. General Aguinaldo had prepared his forces for conventional warfare and had put up lines of defense to block the advancing U.S. troops. However, time and again the Filipino troops were defeated; they had to abandon their positions and retreat. The Americans advanced to the north because they thought that if they could conquer the town of Malolos, the Filipino revolutionaries would give up their resistance. Malolos fell in May, and Aguinaldo's troops continued their retreat to the north. As a result of the retreat, the Filipino army disintegrated. In November, by which time little was left of the Filipino army, Aguinaldo and his generals decided to shift to guerrilla warfare. From then on, small Filipino units carried out attacks against U.S. troops.

The U.S. Army was at a level of 40,000 men in the first year and reached 70,000 in 1900. Initially the soldiers were equipped with outdated rifles, but later they acquired newer ones. The Filipino side probably counted between 80,000 and 100,000 men in regular units, armed with standard European rifles, but they were short of ammunition. The Americans were better trained than the Filipinos. As historian Glenn Anthony May wrote in 1987, difference in weapons,

however, was not the decisive reason why the United States had the upper hand. The main reasons why the Americans won the war were that they were better trained and that General Aguinaldo stuck to the principle of conventional warfare instead of using guerrilla tactics at an early stage of the war. Moreover, the Philippine population was lukewarm in its support for Aguinaldo and his army. In addition, ethnic conflicts and personal rivalry weakened the Philippine military effort. In June 1899 General Luna, a competent military leader, was assassinated, probably with the knowledge of General Aguinaldo, who feared him as a rival.

Fighting continued throughout 1900. In early 1901 many Filipino commanders had been killed or captured or had surrendered. South of Manila in the province of Batangas, U.S. forces conducted a harsh campaign against Aguinaldo's men, causing large numbers of civilian casualties.

General Aguinaldo had withdrawn to the northeast coast with a small group of Filipino soldiers. In a surprise attack by the Americans, assisted by Filipino auxiliary troops, General Aguinaldo was captured on March 23, 1901, in Palanan, Isabela Province. The Americans brought him to Manila. In April, Aguinaldo issued a statement acknowledging and accepting the sovereignty of the U.S. government over the Philippines and calling upon his fellow countrymen to lay down their weapons. After having taken the oath of allegiance to the U.S. government, Aguinaldo returned to private life. Three Filipino generals continued fighting in the provinces to the south of Manila, but they surrendered in the early part of 1902. On July 4, 1902, the U.S. government declared that the “Philippine Insurrection” was over and that a state of peace existed in the islands. The United States proclaimed a general amnesty for all those who had fought against the Americans. In 1901 the Americans had replaced the military government with a civilian administration. Many Filipinos from the educated stratum and the elite had offered their services to the U.S. administration in the Philippines.

However, the war was not yet over. A number of Filipino commanders along with their soldiers refused to take the oath of allegiance and continued fighting against the U.S. occupation.

The U.S. government now considered them criminals who could no longer count on amnesty but could receive the death sentence if captured. In several places cultist sects with politico-religious beliefs rebelled against the Americans. The U.S. government created the Constabulary, a military police force, to deal with these law-and-order problems. By 1906 the Philippines had been brought under U.S. control except for the Muslim provinces in the south, which took another decade to pacify.

—Willem Wolters

Bibliography

- Agoncillo, Teodoro. *Malolos: The Crisis of the Republic*. Quezon City: University of the Philippines, 1960.
- Corpuz, O. D. *The Roots of the Filipino Nation*. 2 vols. Quezon City: Aklahi Foundation, 1989.
- May, Glenn Anthony. *Battle for Batangas: A Philippine Province at War*. Quezon City: New Day, 1993.
- May, Glenn Anthony. "Why the United States Won the Philippine-American War, 1899–1902." In *A Past Recovered*, edited by Glenn Anthony May. Quezon City: New Day, 1987.
- Shaw, Angel V., and Luis H. Francia, eds. *Vestiges of War: The Philippine-American War and the Aftermath of an Imperial Dream, 1899–1999*. New York: New York University Press, 2002.

European Imperialism in the Pacific

Although the Spanish, Portuguese, and Dutch had been exploring and conquering parts of the Pacific since the sixteenth century, it was only between 1760 and 1914 that the whole of the Pacific region, with the exception of Japan, came under the domination of foreign powers. By the outbreak of World War I, Great Britain, France, Germany, the Netherlands, and the United States controlled vast numbers of island territories and dramatically altered the demographic, political, and economic landscape of the indigenous inhabitants.

Nineteenth-century European expansion occurred in the Pacific for several reasons. Eighteenth-century scientific and cartographical missions gave way to the economic interests pursued by merchants and the inroads made by missionary societies that were very active in the

Pacific. Securing bases for whalers and sealers and rapidly expanding navies also gave impetus to expansion. Especially in the late nineteenth century, national power rivalries and social Darwinist thinking also played a major role in inspiring imperialism in this and other regions.

The British, who had achieved worldwide maritime dominance by the mid-eighteenth century, were nevertheless slow to expand into the Pacific compared to their Spanish and Dutch rivals. However, they eventually exerted imperial control from Tasmania and New Zealand in the south to the Gilbert Island chain in the east. Despite the knowledge of the area that Captain James Cook's voyages secured, British extension of imperial power did not begin in earnest until the latter decades of the eighteenth century. In 1788 a penal colony for British convicts, many of them Irish, was established in Australia in New South Wales. Another penal colony was established on the island of Tasmania in 1803. By 1829 the whole of the Australian continent had been claimed by Britain. Most British migration to the Pacific flowed throughout the nineteenth century to Australia and New Zealand.

While most British efforts were directed at trade and the subjugation and settlement of Australia and New Zealand, France was also acquiring colonial possessions in the mid-nineteenth century. In 1842, after decades of competing with English interests on Tahiti, the French admiral Abel Aubert Du Petit-Thouars (1793–1864) declared the island's annexation to France, a move formalized by the Anglo-French Treaty in 1847. Du Petit Thouars also established French control over the Marquesas and Society Islands, as well as the small islands of Wallis and Fortuna, where French missionaries had already been active for several years. In 1843 French missionaries, with Du Petit's aid, claimed the large island of New Caledonia, a move formalized in 1853 by Napoleon III. Following the British model, thousands of convicts were sent to penal colonies on the island. While some would eventually be granted small parcels of land, thousands would also die in the harsh environment of New Caledonia. Although subsequently the French did not substantially expand their Pacific island holdings except for the acquisition of New Hebrides, they did solidify their holdings, making formal annexations

➤ MUTINY ON THE *BOUNTY* AND PITCAIRN ISLAND

In 1789, Captain William Bligh, an officer in the British Royal Navy, suffered the famous mutiny at the hands of his crew after a difficult voyage to Tahiti. The mutineers left him and 18 loyal crew members adrift in a tiny launch in the open sea. Through amazing feats of navigation and endurance, Bligh and the surviving crew eventually arrived at the Dutch island of Timor after stopping at Tofua, an island in the Tongan grouping, where the islanders attacked and killed one crew member. The mutineers returned to Tahiti, but certain that they would be punished by death and that the British Royal Admiralty would hunt them down,

they settled with their Tahitian companions on remote Pitcairn Island in 1790. Internal strife, sickness, and murder took their toll on the inhabitants. By 1808, when the island was found by an American vessel, only one of the original male inhabitants remained, with dozens of women and children. The island became formally incorporated into the British Empire in 1838. The population grew so large that it had to be moved to the larger Norfolk Island closer to New Zealand in 1856, though a portion of the refugees returned to reestablish their lives on Pitcairn Island.

—Gerrit Dirkmaat

of islands that had previously been nominally governed as protectorates, a situation that implied at least some level of local autonomy.

The British, enabled by their naval superiority, continued to gain island possessions throughout the nineteenth and early twentieth centuries. Although trading contacts with various islands were maintained, full British domination over many of them did not occur until the last quarter of the nineteenth century, with the British dominating Fiji (1874), northwestern Borneo (1888), the Phoenix Islands (1889), the Gilbert Islands (1892), the Ellice Islands (1892), and the Solomon Islands (1893). Although Britain had long dominated aspects of Tongan society, a treaty guaranteeing that island's local autonomy and the suzerainty of the British over foreign affairs was reached in 1900. New Hebrides, or Vanuatu, came under joint British and French control in 1887, which was formalized by treaty in 1906. In addition to formal British imperialism in Oceania, British colonies in the region themselves exercised imperial authority, with Australia dominating the southeastern portion of New Guinea (1883) and New Zealand exercising control over Rarotonga and the Cook Islands.

Germany was the last of the European powers to colonize the Pacific. German merchants and missionaries pressed the German government to annex northeastern New Guinea, or Kaiser-Wilhelmsland, in 1884. Germany also

announced protectorates over New Britain (New Pomerania), New Ireland (New Mecklenburg), Bougainville, several islands in the Northern Solomons and the Marshall Islands, and Nauru. Otto Von Bismarck orchestrated the purchase of the Caroline Islands and the Marinas Islands from Spain in 1899 after the latter sought to divest itself of the scattered islands following its losses in the Spanish-American War of the Philippines and Guam. German, American, and British interests in Samoa nearly led to conflict, but Germany was granted the western portion of the island group by treaty in 1899.

While the “white” colonies of Australia and New Zealand would be granted self-government within the British Commonwealth shortly after the turn of the century, most of the smaller Pacific island possessions remained under European control until well into the twentieth century. Following the German defeat in World War I, its Pacific holdings were divided among the victors, with Japan, Britain, and New Zealand all making substantial gains.

While initial economic interests centered mainly on establishing trading contacts with the various islands and with sealing and whaling stations and obtaining the aromatic and highly prized sandalwood, greater levels of exploitation soon followed. Fiji was converted into a plantation society with massive sugar, coconut, and even short-lived cotton plantations. Some islands were valued for their mineral wealth, such as

the phosphate deposits on Nauru. Copra production gained prominence in many European colonies in the Pacific, as the highly prized coconut oil gained markets as a substitute for whale oil.

European contact had devastating effects on the native inhabitants of the Pacific through the introduction of European diseases and confiscation of native lands and resources. For example, the British supplied arms to natives, such as the Maoris in New Zealand, who then conducted more brutal internal wars fought between various tribal factions. To facilitate plantation labor, the British, French, and German colonizers imported thousands of contract laborers to various islands. In other island groupings, such as New Hebrides, the indigenous workers were often compelled to become contract workers themselves, with thousands going to Australia. Both of these practices deeply disturbed the populations and cultures of the Pacific islands, with lasting impacts. Some island groups, like the

Marquesas, were almost completely depopulated by disease and forced deportations, while others such as Fiji found that imported contract laborers from India soon made up more than 30 percent of the island's population. Few efforts were made by the European powers to raise the standard of living of their colonial subjects in any of the Pacific colonies.

—Gerrit Dirkmaat

Bibliography

- Barclay, Glen. *A History of the Pacific from the Stone Age to the Present Day*. New York: Taplinger, 1978.
- Campbell, I. C. *A History of the Pacific Islands*. Berkeley: University of California Press, 1989.
- Frost, Alan. *The Global Reach of Empire. Britain's Maritime Expansion in the Indian and Pacific Oceans, 1764–1815*. Carlton, Australia: Miegunyah, 2003.
- Quinn, Frederick. *The Overseas French Empire*. Westport, CT: Praeger, 2000.

Economics and Trade

In 1750 the world economy was dominated by three large regions, Europe, India and China, which were more or less equal in terms of economic development, level of technology, and the standard of living and life expectancy of their populations. Each of these regions produced approximately 23 percent of the world's gross domestic product, and together the three regions produced just short of eighty percent of the world's manufactured goods, with China leading the way with 33 percent and India and Europe each producing 23 percent. These percentages had not appreciably changed by 1800, but by 1900, a spectacular transformation had occurred, resulting in an unprecedented situation in which one region, Europe, along with its offshoot the United States, had achieved dominance of the world's economy. In 1900 Europe produced 60 percent of the world's manufactured goods, and the United States, 20 percent, with China's share dropping to 7 percent and India's to just under 2 percent. An immense economic gap between the West and the rest of the world had opened up, contributing to equally imposing gaps in many other areas. Around 1900 the people of Europe, the United States and colonies of European settlement such as Canada, Australia, and New Zealand were richer, better fed, better educated, lived longer, and received better medical care than Asians, Africans, and most people living in Latin America. The West's economic ascendancy was directly linked to its equally impressive political power: the Europeans' take-over of Africa, India, Southeast Asia, and the Pacific Islands was motivated by a perceived need to secure markets and access to raw materials for their manufactured goods, while the conquest and maintenance of overseas empires would have been impossible without the weapons and warships manufactured in Western factories and the financial resources generated by the expanding Western economies.

What explains the West's meteoric rise to world economic dominance between 1800 and 1900? The simple answer is that Europe and the United States experienced what has come to be known as an industrial revolution, or rather several industrial revolutions, and no other part of the world did. Although there is some debate about the origins of the term "industrial revolution," its first use is generally credited to the English economic historian and social reformer Arnold Toynbee, who lived from 1853 to 1883, and is not to be confused with the better known Arnold Toynbee (1889–1975) who wrote the popular twelve-volume history of civilization, *The Study of History*. In early 1882 the lesser-known Toynbee delivered a series of lectures titled "The Industrial Revolution in England," which were published posthumously in 1884. This revolution, he argued, was a unique English phenomenon,

occurring between 1760 and 1830; its “essence” was the “substitution of competition for the medieval regulations which had previously controlled the production and distribution of wealth.” Although few historians accept the details of his arguments (coming as they did before industrialization had fully taken hold in continental Europe, the United States, and Japan), few quibble with his basic point: industrialization was a profound turning point in human affairs, comparable in importance to the great political revolutions of the eighteenth and nineteenth centuries and perhaps as important as the discovery of agriculture thousands of years earlier.

First and foremost, industrialization is characterized by a momentous increase in human productivity, brought about by the use of machines, the introduction of new sources of energy, including coal, petroleum, and electricity, and the increased scale of enterprise in most industries, with factories employing hundreds or thousands of unskilled and semiskilled workers. Having begun in England in the 1760s, industrialization remained largely a British phenomenon until

the early 1800s, when it began to take root in the Austrian Netherlands (after 1830, Belgium) and later spread to France, Germany, and the United States. Japan and Russia launched successful industrialization campaigns in the 1880s and 1890s, but other government-sponsored programs of economic modernization such as those of the Egyptian ruler Muhammad Ali (r. 1805–1841) and the Chinese advocates of “self-strengthening” in the late 1800s were largely failures. In the first half of the twentieth century the spread of industrialized economies slowed in the

Japan and Russia launched successful industrialization campaigns in the 1880s and 1890s, but other government-sponsored programs of economic modernization such as those of the Egyptian ruler Muhammad Ali (r. 1805–1841) and the Chinese advocates of “self-strengthening” in the late 1800s were failures.

face of war and the Great Depression of the 1930s, but in the century’s closing decades, Taiwan, South Korea, Brazil, India, and China all emerged as important industrial powers.

Throughout its history, industrialization has been driven forward by continuous technological innovation. Britain’s industrialization was set in motion by technological developments in three areas: a series of devices and machines that transformed the age-old tasks of spinning and weaving; the development of the first commercially viable steam engines that supplemented and then largely replaced windmills and water mills as inanimate sources of power; and the discovery of a new method of smelting iron using coke (essentially baked coal), which freed iron makers from their dependence on charcoal. Beginning in the 1830s, advances in machine making and metallurgy, combined with refinements in the design and manufacture of steam engines, set off a boom in railroad construction that increased demand for iron and coal, created new industries and factories to produce locomotives and rolling stock, generated new jobs in carriage making, upholstery, and glass production, and spurred major construction projects involving the laying of rails and the building of tunnels, bridges, and stations.

From the 1860s to the onset of World War I, industry and many aspects of everyday life were transformed by a profusion of technological developments that make these five decades the most innovative and inventive in history to that point. Following the invention of the electric telegraph in the 1830s, the telephone was invented in the 1870s and the radio in 1899. New machines were developed for making paper, rope, guns, bicycles, leather goods, tin cans, farm equipment, sewing machines, tools, typewriters, and countless other machines and products. New methods of steel production reduced the price of steel by half and caused machine makers, railway men, shipbuilders, and builders of bridges and skyscrapers to switch from iron to steel. Whole new industries were developed as a result of discoveries in chemistry and the science of electricity. By the 1890s, houses were wired so homeowners could take advantage of Thomas Edison's incandescent light bulb, which began to be marketed in 1879. In factories, belts, pulleys, drive shafts, and gears needed to transfer energy from a waterwheel or steam engine were replaced by wires connected to electric motors that could drive machines wherever they were needed on the factory floor. New industrial processes such as the production of aluminum from bauxite depended on electrical power, as did the tramways and subway cars installed in many of the Western world's major cities.

The potential of petroleum as an energy source was hinted at by the invention of a four-stroke gasoline-fired internal combustion engine in the 1880s by two Germans, Gottfried Daimler and Karl Benz, and the development in 1897 of a compression-ignited engine that burned heavy liquid fuel by another German, Rudolf Diesel. The development of the first gas-powered automobiles in the late 1880s, the use of a gas-powered engine for the world's first heavier-than-air flight in 1903 at Kitty Hawk, North Carolina, the production of the first Model-T Ford in Dearborn, Michigan in 1908, and the decision of the British Royal Navy in 1912 to convert from coal to oil all were signs that the twentieth century would be an age of petroleum rather than steam and coal.

An endless stream of statistics could be cited to show how industrialization increased human productivity from the 1760s to the early twentieth century. To cite several examples: in Great Britain, between 1750 and 1900 cotton production increased more than 700 times, coal production by more than 50 times, and pig iron by more than 300 times. In that same period, steam engine usage in Great Britain increased by nearly 2,000-fold, producing 10 million horsepower in 1900 compared to 5,000 in 1750. In Germany, whose industrial take-off began in the 1870s, steel production increased from 240,000 tons in 1879 to 20.5 million tons in 1913. Growth in steel production was even more spectacular in the United States, which produced 40,000 tons in 1870 and 34.4 million tons in 1913, making it the world's leading steel producer.

Manufacturing was not the only aspect of the world economy that was transformed in the late eighteenth and nineteenth centuries. In the world's industrialized regions, the relative economic role of agriculture declined, as did the percentage of the population devoted to agricultural pursuits. In advanced industrial societies such as England and Belgium, by 1900 a majority of the population lived in cities. Nevertheless,

during this period there was an upsurge in agricultural productivity as a result of new methods of crop rotation, the introduction of farm machinery, increased use of fertilizer, changes in land tenure, increased irrigation, and above all, the opening of new lands to farming and stock-raising in the Americas, Australia, parts of Africa, and New Zealand. In the United States alone, wheat production increased from 175 million bushels in 1866 to 655 million bushels in 1900. Such gains in agricultural productivity were the main reason for the increase in the world's population from approximately 900 million in 1800 to 1.6 billion a century later.

World trade also expanded. For the world as a whole the volume of trade per capita increased twenty-five-fold between 1800 and 1913, with the most rapid growth occurring between the early 1840s and the early 1870s, when the total amount of trade increased on average by 6 percent a year, five times as fast as population growth and three times as fast as the increase of production. Many factors contributed to this impressive increase in world trade, including overall population growth, the demands of industrialized nations for food and raw materials, the worldwide demand for European manufactured goods, the general lowering of tariffs, the near universal adherence to the gold standard, and the decrease in the cost of land and water transportation as a result

of improvements in sailing ships, the development of the steamship, and above all the building of railroads.

For much of Latin America, the late nineteenth and early twentieth centuries brought little industrialization but nonetheless were a golden age of economic expansion based on the export of rubber, tobacco, sugar, guano, hides, beef, wheat and a host of other basic commodities.

The industrialized nations of the West were not the only beneficiaries from these economic changes. For much of Latin America, the late nineteenth and early twentieth centuries brought little industrialization but nonetheless were a golden age of economic expansion based on the export of rubber, tobacco, sugar, guano, hides, beef, wheat and a host of other basic commodities. West African farmers

profited from the sale of peanuts, coffee, and cacao on the global market, as did small numbers of Indian and Egyptian cotton growers and Indonesian plantation owners who specialized in sugar production.

On the whole, however, one is struck by the one-sidedness of global economic relationships in this new industrial age. In colonial Africa and Asia, European businessmen, with the backing of colonial administrators, took over diamond mines, gold fields, and vast tracts of prime agricultural land, and encouraged (or forced) farmers to shift from growing food crops to products such as sugar and cotton that could be sold in the world market. In China, the Middle East, and Latin America, Western businessmen monopolized railroad-building, major construction projects, the banking and insurance industries, and the manufacture and marketing of many popular consumer products. Great industrial powers such as India were “deindustrialized” after England flooded the Indian market with inexpensive cotton goods manufactured in the

industrial centers of northern England. In the new global economy, India, like so much of Africa, Latin America, and the rest of Asia was reduced to being a producer of raw materials and a market for Western manufactured goods.

What explains these stunning economic transformations? How did a world in which Europe was an important but not dominant player become a world in which Europe's economic ascendancy radiated to every corner of the globe? Why did industrialization take root in Europe but not in Asia? Why did an industrial revolution first occur in Great Britain, and why did it begin in the eighteenth century? Such questions have intrigued historians, economists, and social theorists for better than a century and continue to be the subject of ongoing and often heated debates in the early twenty-first century.

Until recently, almost all efforts to explain industrialization and the attendant rise of Europe to world dominance have focused on Europe itself. Scholars have focused on one or several key factors that contributed to Europe's distinctive economic development, and then have gone on to claim that these factors appeared in Europe first or were more prevalent there than anywhere else. Their basic premise is that by the eighteenth century European society already was distinct and "exceptional," fully primed to make the leap into a new age of industrialization. Europe's tradition of political pluralism, its openness to technological innovation, its broad acceptance of commercial values, the rise of modern science (which encouraged rationality and technological innovation), its commitment to "industriousness" and the ethic of hard work, its legal protections of property rights, and its entrepreneurial spirit all set Europe apart from the "oriental despotisms" and social rigidities of Asia. So too did Europe's pattern of delayed marriage and smaller families, which by slowing population growth encouraged capital formation and kept wages high in comparison with other parts of the world (thus promoting both consumption and also the adoption of labor-saving machinery). Recent examples of such an approach are Eric Jones's *The European Miracle, Environments, Economies and Geopolitics in the History of Europe and Asia* (1981, 1987, 2003) and David Landes's *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (1998).

Other scholars have a darker view of European exceptionalism. Immanuel Wallerstein (*The Modern World System*, 3 volumes, 1974, 1980, 1989) has argued that European economic hegemony can be traced back to the sixteenth century, when there emerged a "modern world system" based on the exploitation by the European "core" of an African, Latin American and Asian "periphery," which supplied agricultural products, cheap labor, and mineral resources in return for European manufactured goods. Others have focused more narrowly on Europe's involvement in the slave trade, the profits from which provided capital for England's early factories.

Such Eurocentric views have been vigorously challenged in the last twenty years. Andre Gunder Frank, although an early disciple of Wallerstein, rejected the idea that Europe dominated the world economy in

the early modern period in his *Reorient: Global Economy in the Asian Age* (1998). In his view, the world economy had not one “center,” but several, of which China was the most important. Europe’s role in the world economy was hampered by its inability to manufacture goods that the rest of the world wanted, and it retained a place in Asian markets only because of its access to American silver. R. Bin Wong’s *China Transformed: Historical Change and the Limits of European Experience* (1997), and Kenneth Pomeranz’s *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (2000) down-

Both authors warn of the dangers of making broad comparisons between large entities such as “Europe” and “China,” since each of these areas had a great deal of regional variation.

play the differences between China and Europe as late as the eighteenth century. Both authors warn of the dangers of making broad comparisons between large entities such as “Europe” and “China,” since each of these areas had a great deal of regional variation. A more productive approach in their view is to make comparisons between northwestern Europe and

England, the heartland of Europe’s early industrial revolution, and a similar region in China, the lower Yangzi delta. Here they find more similarities than differences in terms of life expectancy, levels of commercialization, rates of fertility, real wages, attitudes toward work, the consumption of luxury goods, and the expansion of handicraft industries and agriculture. Both regions in the eighteenth century were experiencing increased pressures from expanding population, and faced shortages of prime agricultural land.

If China and Europe were more similar than different in the 1700s, what then explains the “great divergence” between the two societies after 1800? Wong believes politics played a key role. The relatively small competing states of Europe were better able to adapt to economic growth and development, while the leaders of China’s unified empire were more committed to preserving the status quo. Pomeranz emphasizes the importance of Europe’s American empire, which became a market for Europe’s manufactures, a safety valve for excess population, a source of precious metals, and producer of profit from plantation-grown crops such as sugar, cotton, and tobacco. Both authors agree that Europe’s industrialization depended on a fluke of nature, namely the rich coal deposits that stretch from northern England and Scotland to northern France, Belgium, and northwestern Germany, Europe’s industrial heartland. The availability of coal allowed Europeans to escape from the “biological old regime” and the age-old dependence on wood, wind, and water as sources of power. China, in contrast, had large coal deposits, but in concentrations that were difficult to mine and were far distant from China’s most economically advanced regions. Thus geological accident is a major part of these two historians’ story of how and why human societies and economic relations were so utterly changed in the modern industrial age.

—James H. Overfield

■ Introduction: Agriculture

Agriculture is yet another human activity that underwent revolutionary changes in the eighteenth and nineteenth centuries. Millions of acres of previously uncultivated land in every continent were opened to farming. In some parts of the world new farming methods, new machinery, and new fertilizers were introduced. Major irrigation projects were undertaken in the American West, India, Sudan, and Egypt. Agriculture became ever more commercialized as large and small farmers began growing crops that were carried by steamships and railroads to markets as many as thousands of miles away. As a result, although the world's population increased from approximately 700–750 million in 1750 to 1.2 billion in 1900, food production increased at an even faster rate, despite the fact that many millions of acres were turned over to the production of nonfood items such as cotton and “nonessential” consumer goods such as coffee, sugar and tea. As a result, by 1900, despite catastrophic famines in India, China, and Japan, most people were eating more and better food for less money than their forebears had a century and a half earlier. So great was the increase in agricultural productivity that beginning in the 1870s agricultural prices plummeted, and farmers, especially in Canada, the United States, and Europe, faced the unprecedented problem of overproduction of wheat, corn, and other basic farm products.

Although the broad picture of world agricultural production between 1750 and 1900 is clear enough, there was a great amount of regional variation. In Europe, for example, increased agricultural production partly resulted from the enclosure of common land and the introduction of new methods of crop rotation. Specifically this meant the abandonment of the fallow system, in which a half or one-third of a farmer's land was allowed to revert to pasture in any given year in favor of rotating grain crops with fodder crops such as turnips or soil-enriching legumes such as clover. Such innovations were uniquely suited to the climate, soils, and farming patterns of northwestern Europe but had little effect on

agricultural practices in the rest of Europe and other parts of the world.

Much the same thing can be said about the role of mechanization. During the nineteenth century inventors and tinkerers in Europe and the United States developed hundreds of labor-saving devices that affected every phase of the agricultural cycle, including soil preparation, seeding, hoeing, ridging, fertilizing, weeding, harvesting, and threshing. By midcentury, steam engines mounted on wheels were introduced to drive mechanical farm machinery by way of flexible belts and wire cables, and in 1892 John Froelich produced the first gasoline-powered tractor in Charles City, Iowa.

The mechanization of agriculture was a major contributor to increased agricultural productivity in parts of Europe, the Americas, and certain areas of European settlement such as Australia. The vast majority of world's farmers, however, continued to use traditional technologies. Even in Europe and North America, investment in major machinery made little economic sense unless a farm was larger than 40 or 50 acres (16–20 hectares). This meant that even in Europe, mechanization proceeded slowly in the nineteenth century. In France, for example, where small farms predominated, in 1900 out of more than 5 million farms, only 200,000 had introduced the newly developed reversible Brabant plow, and only 50,000 were using mechanized reapers.

Mechanical innovations in agriculture were almost totally lacking in most of Africa and Asia, except in those instances where Europeans had invested in large farms designed to produce goods for export. In Japan and China, where the average farmer's plot was between 2 and 3 acres (0.8 and 1.2 hectares), agricultural output increased in the 1800s, but this resulted mainly from more intensive farming through careful soil preparation, seed selection, irrigation, fertilization, weeding, insect control, and better methods of storage. Increases also were achieved through the farming of new lands, especially in Japan, where during the Meiji period

the large northern island of Hokkaido began to be farmed to produce wheat, potatoes, and beef.

Even if many of the specific features of the West's agricultural revolution (new methods of crop rotation, mechanization, selective breeding of livestock, and the use of new fertilizers) left most of the world untouched, Europe and the United States indirectly affected world agriculture because of their ever greater demands for food for their growing populations and their need for agricultural raw materials for their industries. The explosion of sheep raising in New Zealand and Australia was a direct response to the European demand for wool and meat. Similarly, in Latin America the opening up of new lands for agriculture mainly resulted from European demands for beef, mutton, sugar, coffee, tobacco, wheat, and bananas. Cotton became a major cash crop in India, Africa, and the American South to meet the demands of European textile mills.

Even more directly, Europe put its stamp on worldwide agriculture through imperialism. Colonial administrators were universally committed to encouraging agricultural development as a way of increasing tax revenues and simultaneously producing commodities for export or industrial use in the home country. Thus, they invested substantial sums (often from taxes on their colonial subjects) on irrigation projects in addition to road building and railroad construction to bring agricultural products from the interior to coastal ports. Where it was feasible, they were willing to rely on domestic farmers to produce the goods they needed. In Africa major success stories took place in Senegal, where peasant farmers shifted to peanut culture; in Uganda, where small-scale native cultivators dominated cotton production after the introduction of the railroad; and in the Gold Coast, where many thousands of small farmers turned to growing cocoa, making the colony the world's largest exporter of cocoa by 1914.

When local farmers were unwilling or unable to make the transition to growing cash crops, colonial regimes resorted to various forms of coercion. Beginning in 1830, for example, the Dutch government required each village in Java and other parts of the Dutch East Indies to set aside 20 percent of its land for the production of

indigo, sugar, coffee, tea, tobacco, or pepper. In German East Africa, beginning in 1902 colonial authorities required each village to meet quotas for cotton production, a policy that was bitterly resisted; in 1905 it led to the Maji-Maji Rebellion and the deaths of as many as 200,000 insurgents and innocent victims. In other parts of Asia and Africa, land was expropriated and either handed over to European corporations or purchased by European firms at favorable rates. Although such arrangements largely failed in Africa, they proved successful in India, where British-owned plantations made India the world's largest producer of tea by the early 1900s. In the British colonies of Kenya and Southern Rhodesia, regions with soil conditions and climate similar to those in Europe, the best land was handed over to white farmers from Europe or South Africa. Native cultivators were relegated to marginal native reserves, excluded from growing crops for export, and were expected to provide cheap labor for the white landowners. Agricultural productivity in these white settler colonies grew but at the cost of poisoning African-white relations throughout the colonial period and beyond.

—James H. Overfield

African Agriculture

In the short run, colonial rule in Africa opened new economic opportunities and offered a vast increase in trade for African peasant farmers. Although many prospered, their success had by 1914 sown seeds for the future ruin of African agriculture.

In the white settler colonies of Algeria, Kenya, Rhodesia, and South Africa colonial rule from the beginning was accompanied by seizure of fertile African land. Nevertheless, enough land was left for the expansion of African peasant farms, many of which were not far from the main European markets and railway lines. As a result, there were substantially more positive and successful responses by African agriculturists to market opportunities than has usually been indicated, and hundreds of thousands of African peasants successfully adapted their existing farming methods to the new conditions rather than becoming wage laborers for white colonists. In Rhodesia bags of maize fetched

30–40 shillings at the turn of the twentieth century. Many people in southern Africa found livestock trade an easy way of meeting their financial obligations. Thus in southern Africa in general and South Africa and Rhodesia in particular, major agricultural changes took place, with new crops such as market vegetables being grown as demand rose. Similarly, produce in Kenya accounted for more than half of Kenya's exports before 1914. Taking advantage of opportunities offered by colonial rule, the Luo were successful in growing groundnuts, sesame, and maize, all of which were carried by the railway from Kisumu to Mombasa and exported.

In West Africa peasant farmers introduced major innovations, such as the shift to new crops for export. Exports of palm products recovered from the 1880–1900 slump and expanded after 1900. Between 1892 and 1911 exports of cocoa from the Gold Coast grew from nothing to 40,000 tons. In Senegal the production and export of groundnuts (peanuts) rose between 1885 and 1914 at an annual average rate of growth of 8.8 percent. During 1884–1885 export of groundnuts reached 45,000 tons. Railway building in the 1880s boosted the production of groundnuts by causing producers to extend the areas under cultivation. By 1914 groundnuts had also become an important export from northern Nigeria. The successful production of export crops in the nineteenth century by African peasant producers kept white planters out of West Africa. Arguably, African enterprise made European enterprise unnecessary.

The growth in African agriculture by 1914 was beginning to decline. In settler colonies, white farmers slowly forced the African peasants off their fertile land, either by direct evictions or by imposing such a battery of financial and other burdens that the peasantry elected to go into reserves. The period from 1900 to 1914 saw the decline in cereal production in Algeria and Tunisia as a consequence of seizure of the natives' best land. Concentrating on the years 1870–1914, the historian Colin Bundy has argued that the initial rise of South African peasantry was followed by their well-documented fall as a consequence of living on eroded and overcrowded land. In Rhodesia, African agriculture was steadily undermined from roughly

DEVELOPMENT AND UNDERDEVELOPMENT OF AFRICAN AGRICULTURE TO 1914

Only recently have historians offered a complex description of the effects of colonialism on African agriculture and land use. One early interpretation, from historian Walter Rodney, stressed the destructive impact of colonial rule on traditional African agriculture, telling a story of continuous depression and disintegration. More recently, relying on data from Kenya, Rhodesia, and West Africa, two historians have challenged the underdevelopment thesis put forward by Rodney. Paul Mosley argues that there is little statistical support for the view that colonial policy crippled the growth of indigenous African agriculture, while A. G. Hopkins argues that colonialism brought impressive economic growth in West Africa, especially in colonies that developed export crops. Earlier historians had overlooked and underestimated a phenomenon to which more recent historians have drawn attention: an initial period of early prosperity in peasant production followed only later by the symptoms of agrarian decay and underdevelopment.

—Takafavira Zhou

1908 onward when settlers turned to agriculture and pushed Africans into reserves. Successful agriculture in precolonial Africa was based on land rotation cultivation, which became difficult once Africans were brought under rigid European control. Once settled in the increasingly overcrowded reserves, the Shona and Ndebele in Rhodesia could aspire to become little more than subsistence cultivators and migrant laborers. Similarly, by 1914 thousands of Kikuyu, Luo, and Luyia in Kenya had settled on the coast to work in coconut or sisal plantations.

In West Africa, cash crop production was promoted in ways detrimental to the long-term benefits of the African economy. The overemphasis on groundnuts in Senegal and Gambia led to a dangerous dependence on one crop and to a decline in the production of food crops. Between 1906 and 1914 Senegal and Gambia had to import rice from India and China. The Ivory Coast became heavily dependent on rubber and cocoa up to 1914. Dahomey's economic growth

declined under French colonialism. The Dahomeyan farmers were given detailed instructions on what crops to cultivate and where, when, and how to sow, harvest, and store them. Cotton production in Portuguese East Africa and Tanganyika in the period up to 1914 undermined African agriculture, as cotton was meant for export and disturbed local food production. Thus by 1914 the basis for the future ruin of African agriculture had been established, and its viability and sustainability had increasingly come under threat.

—*Takafavira Zhou*

Bibliography

- Bundy, Colin. *The Rise and Fall of South African Peasantry*. London: Heinemann, 1979.
- Hopkins, Anthony G. *An Economic History of West Africa*. London: Longman, 1973.
- Mosley, P. *The Settler Economies: Studies in the Economic History of Kenya and Southern Rhodesia, 1900–1963*. Cambridge: Cambridge University Press, 1983.
- Rodney, Walter. *How Europe Underdeveloped Africa*. Harare: Zimbabwe Publishing House, 1972.

Indian Agriculture under British Rule

British rule led to significant changes in Indian agriculture. The colonial administration's main goal was to increase revenue from agriculture through increased production as well as the standardization and improved collection of taxes. The intended and unintended consequences of these efforts included the transformation of systems of landownership and the occurrence of several severe famines.

Beginning under the East India Company in Bengal and later extended to the rest of India, efforts were made to standardize landownership and tax rates on land so that tax revenue on land could be increased and collected more efficiently. In precolonial India, land had been subject to different systems of collective ownership and control, and the British sought to replace these with a new system that reflected British ideas of proper landownership. With the establishment of the Permanent Settlement, an agreement between the East India Company and the Bengali landlords, many peasants were left

landless after zamindars were established as the new landlord class. One effect of the replacement of collective ownership with individual ownership was that land became a commodity for sale, and the zamindars could be dispossessed of their land if they failed to produce sufficient revenue for the state.

In addition, Indian agricultural production was subject to the British imperial preference system in terms of what crops were grown. The government promoted the cultivation of cash crops such as opium, tea, indigo, and cotton for export, which reduced the amount of land available for food crops. Up to 1860, Bengal was a major supplier of rice to the British colony of Sri Lanka, but exports declined as the population in Bengal grew. The importance of revenue can be seen in the creation by the government of India of the Revenue and Agriculture Department in 1881. The department attempted to introduce improvements in agriculture, but the emphasis was on the collection of revenue. In the late nineteenth century the government invested in an expansion of irrigation and agricultural research. The government built large canals for irrigation, including the Ganges Canal and the Betwa Canal in the United Provinces in northern India and the Nira Canal in what is now the west Indian state of Maharashtra. The government also brought new land into cultivation by clearing land and providing irrigation facilities to settlers. The prime example of this was the Canal Colonies of Punjab, now part of Pakistan. With its numerous rivers, Punjab had numerous irrigation works built over several centuries, but the decision to build the Canal Colonies was partly political. The Canal Colonies were a reward to loyal Punjabi soldiers who had been instrumental in suppressing the Indian Mutiny (Sepoy Rebellion) of 1857 centered in the province of Oudh. As a result, the province became one of the most prosperous in the country.

The British government also invested in agricultural research with the creation of the Imperial Agricultural Research Institute at Pusa in 1905. The institute was relocated to Delhi after a major earthquake in 1934. The institute developed new varieties of wheat, rice, and other crops and conducted thousands of field experiments, but it is unclear to what extent

► FAMINE IN INDIA

During British rule, India faced numerous serious famines. Major famines occurred during 1769–1770, 1832–1833, 1837–1838, 1865, 1868–1869, 1876–1878, 1889, 1892, 1897, and 1899–1900. In some cases, government policies inadvertently or unthinkingly exacerbated food shortages or otherwise increased the misery of the population.

One notorious example is the famine of 1769–1770 that devastated Bengal. Approximately one-third of the population (or ten million people) died, but despite this the government, through the use of force, managed to collect more tax revenue in 1781 than it did in 1768.

The government attempted to prevent famines through improvements in agriculture by investing in irrigation, but these efforts were piecemeal, and the famines continued. In response to the famine of 1837–1838 in which some 800,000 people died, the government initiated construction of the Ganges Canal, but construction was delayed several times and plagued with construction flaws. Following the famine of 1876–1878 the government created the Famine Relief and Insurance Fund, which paid for several new canals in Punjab, the United Provinces, and Maharashtra.

—Eric Strahorn

this benefited Indian agriculture. The new seed varieties were sometimes more productive than older varieties, but there was no extension system through which they could be distributed to farmers. Moreover, this research did not address the basic problems of Indian agriculture, which included inadequate and antiquated irrigation facilities, inefficient small holdings, and a heavy tax burden.

—Eric Strahorn

Bibliography

- Latham, A. J. H. *Rice: The Primary Commodity*. Routledge Studies in the Modern World Economy. London and New York: Routledge, 1998.
- Pray, Carl E. "The Impact of Agricultural Research in British India." *Journal of Economic History* 44(2) (1984): 429–440.
- Randhawa, M. S. *A History of Agriculture in India*. 4 vols. New Delhi: Indian Council of Agricultural Research, 1980–1986.
- Stone, Ian. *Canal Irrigation in British India: Perspectives on Technological Change in a Peasant Economy*. London: Cambridge University Press, 1984.

The Cultivation System in the Dutch East Indies

The Cultivation System, or *Cultuurstelsel*, was a revenue system implemented by the Dutch colonial government, mainly in Java, in 1830. It forced farmers to use part of their existing

farmland or to bring land under cultivation for the production of cash crops, the sale of which would enable them to pay the land tax.

The system was introduced by Governor-General Johannes Van den Bosch to bolster the depleted economy of the Dutch East Indies after the Java War (1825–1830) and took over practices of indigenous rulers, who taxed their people in the form of forced deliveries of agricultural products. In areas of Java under direct colonial rule, rural villages were compelled to use a maximum of one-fifth of their land to produce cash crops that would be delivered to government officials; they also had to provide *corvée* labor for a maximum of one-fifth of the year. In return, until 1836 villages were exempted from the land tax and other taxes in kind if a sufficient amount of produce was delivered. After 1836 the land tax was levied in full, and farmers received full payment for their produce. Van den Bosch believed that the system would encourage Javanese farmers to produce export crops beyond what they needed to pay the land tax.

Junior officials of the colonial government (the *controleurs*) implemented the system through local rulers: the *bupati* (regents) and *camat* (district heads). They determined the crops to be grown and the amount of land to be set aside or newly cultivated. They also requisitioned the unpaid labor to maintain, harvest, and transport the crops. The orders were passed to village heads, who then secured the cooperation

of villagers. These officials arranged payment for the deliveries at predetermined prices and levied the land tax at the time of crop payments. Any surplus from the sale of produce above the land tax was credited to the farmer. Both colonial and Javanese officials had an interest in making the system work because they received a percentage of the revenues.

After establishing the Cultivation System, Van den Bosch became minister of colonial affairs during 1834–1839 and designed the positive net revenue (*batig slot*) policy. Under the policy, the government of the Dutch East Indies would be expected to generate budget surpluses for remittance to the treasury in the Netherlands. The Cultivation System achieved many of its goals. Indigo and sugarcane were the first crops to be produced; coffee, tea, tobacco, and pepper were later added. Government revenues increased, and by the 1870s the colonial government remitted approximately one-third of the Dutch government's budget.

Despite its financial benefits, in the Netherlands the Cultivation System had harsh critics. One group opposed it because of the burden it placed on Javanese farmers, who were forced to grow unfamiliar crops and neglect the production of food crops. This in turn caused food shortages. Some blamed the system for the famines in central Java in 1849 and 1850, and others cited instances of torture and other harsh punishments when villagers failed to meet their quotas.

The benefits that Dutch firms drew from the system also provoked controversy. Sugar contractors operated with guaranteed and generous margins set by the colonial government. The Nederlandsche Handel-Maatschappij (Netherlands Trading Society), which had received a monopoly on the transport and sale of agricultural exports in 1824, became the biggest private company in colonial Indonesia. Both the Netherlands Trading Society and the shipping companies it paid to transport Cultivation System products were tacitly allowed to charge above-market rates for their services.

Private entrepreneurs, excluded from most of rural Java as a result of the state monopoly, also objected to the Cultivation System. They mobilized public opinion and members of

Parliament to support opening up Java to private enterprise. Beginning with the passage of the Agrarian Law in 1870, the Dutch Parliament gradually phased out the Cultivation System. This law allowed foreign investors to negotiate short-term leases with indigenous landholders or purchase unoccupied land from the colonial government under long-term leases. The compulsory cultivation of sugarcane also was abolished in 1870. Forced cultivation of perennial crops continued, although tea and coffee estates were gradually handed over to villages. In 1915 the last government-owned coffee plantations were abandoned.

—Pierre van der Eng

Bibliography

- Elson, R. E. *Village Java under the Cultivation System, 1830–1870*. Sydney: Allen and Unwin, 1994.
- Fasseur, C. *The Politics of Colonial Exploitation: Java, the Dutch, and the Cultivation System*. Ithaca, NY: Southeast Asia Program, Cornell University, 1994.
- van Baardewijk, F. *Changing Economy in Indonesia*, Vol. 14, *The Cultivation System, Java, 1834–1880*. Amsterdam: Royal Tropical Institute, 1993.
- van der Eng, Pierre. "Cultivation System (Cultuurstelsel)." In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

White Settler Farming in Africa

White settler farming changed the economic, social, and political history of both Kenya and Southern Rhodesia. In Kenya, settler agriculture emerged out of the bankruptcy of the Imperial East Africa Company following the construction of the Mombasa-Kisumu railway line between 1896 and 1901. The company decided to attract white settlers in order to develop export agriculture. Similarly, the British South Africa Company's failure to find a Second Rand (i.e., a valuable gold mine) in Rhodesia forced white settlers to turn to agriculture by 1908.

In both colonies the state took a proactive policy to promote the growth and expansion of white settler farming. The appropriation of fertile African land in the high veld (elevated open grasslands) and near transport networks from the inception of colonialism in 1890 for

Rhodesia and in the period 1901–1905 for Kenya was the basis for the successful white settler agriculture in both areas. The 1902 Crown Lands Ordinance made settlement in Kenya attractive, as it established the legality of selling, granting, and leasing unoccupied land and allowed land to be leased for 99 years at a nominal rent per acre. By 1914, 4.5 million acres (1.8 million hectares) had been leased to about 1,000 settlers.

Similarly in Rhodesia, the Estates Department was set up in 1908 specifically to promote European settlement. In the same year the Department of Agriculture was reorganized to enhance its ability to place a wide range of extension facilities at the disposal of the new white settler farmer, and in 1910 the department took over the grading of maize for export. The company itself developed an interest in tobacco, citrus, and ranching. A Land Bank was set up in 1912 with a share capital of £250,000 to make credit available for persons of European descent only. The bank was the driving force behind successful settler agriculture in Rhodesia and induced white farmers particularly in Kenya (where one was not established until 1930) to demand something comparable.

The agricultural achievements of the white settlers before 1914 were considerable in both Kenya and Rhodesia. In Kenya, settlers pioneered many new crops. Coffee of high quality was first planted in 1899 near Nairobi, became an important crop after 1910, and by 1920 was the most important crop in Kenya. Sisal and tea were first planted and grown at Thika and Limuru in 1904, respectively. The crops became important after 1914, with sisal becoming the country's second most important plantation crop. In the period up to 1914 rubber was tapped and was an important export. Lord Delamere (1870–1931), an English aristocrat who held a lease for a 100,000-acre (40,469-hectare) farm for which he paid £200 per year for rent, played a leading role in fostering the growth of white settler farming in Kenya. He succeeded in growing wheat in spite of rust disease, and in 1909 a flour mill was opened in Nairobi. Through his agricultural experimentation, cures to livestock illnesses were discovered, and the foundations of the dairy, beef, and sheep industries were laid down.

COMPETITION AND FRICTION BETWEEN WHITE SETTLERS AND AFRICAN FARMERS

Prior to the rapid expansion of European farming in Kenya and Rhodesia, white landowners had very little reason to turn Africans off their land since they could extract from them crops, rents, or labor as desired. African farmers also played a vital role in food production. The expansion of white settler farming in Kenya and Rhodesia in the early 1800s changed the situation. By 1914 competition and friction between white farmers and Africans forced many Shona and Ndebele into reserves in Rhodesia, as was the case with the Kikuyu, Luo, Luyia, and Maasai in Kenya. Thus by 1914 a strong foundation for successful white settler agriculture had been established in Kenya and Rhodesia, while indigenous groups were displaced.

—Takafavira Zhou



Africans work on a tobacco farm under the eye of a white owner or overseer in Rhodesia, between 1890 and 1925. (Library of Congress)

Similarly, settler agriculture in Rhodesia revolutionized the production of maize, tobacco, and cattle ranching during the period under review. Maize production rose dramatically from 45,815 bags in 1903–1904 to 634,133 bags in 1913–1914. Exports, mostly to Britain, rose from 11,442 bags in 1909 to 202,105 bags in 1914. Tobacco, which was to develop into the mainstay of European farming and a major support of the Rhodesian economy, also registered tremendous growth. European farmers began to grow the crop avidly, especially in Mashonaland, and production rose swiftly from 132,310 pounds (about 60,000 kilograms) in 1909–1910 to more than 3.1 million pounds (1.4 million kilograms) in 1913–1914. Cattle ranching expanded over much of the Matabeleland high veld. Cattle looted from the Shona and Ndebele were upgraded by crossbreeding with bulls imported from northern Rhodesia, Nyasaland, and South Africa, which helped to add weight and quality to the existing durability. Some 33,000 head of cattle were imported in the years 1909–1913, and the number of European-owned cattle rose sharply from 38,611 in 1907 to 341,878 in 1914.

White settler farming in Kenya and Rhodesia inevitably gave rise to conflict and competition between European farmers and Africans. Thus by 1914 the Shona and the Ndebele in Rhodesia, like the Kikuyu, Kamba, and Maasai in Kenya, were locked in conflict and competition with white settlers over markets, cattle, and land.

—*Takafavira Zhou*

Bibliography

- Berman, B. J., and J. Lonsdale. *Unhappy Valley: Conflict in Kenya and Africa*. Oxford, UK: James Currey, 1992.
- Kennedy, D. *Islands of White: Settler Society and Culture in Kenya and Southern Rhodesia, 1890–1939*. Durham, NC: Duke University Press, 1987.
- Mosley, P. *The Settler Economies: Studies in the Economic History of Kenya and Southern Rhodesia, 1900–1963*. Cambridge: Cambridge University Press, 1983.
- Palmer, R. *Land and Racial Domination in Rhodesia*. London: Heinemann, 1977.
- Phimister, I. R. *An Economic and Social History of Zimbabwe, 1890–1948*. Harlow, UK: Longman, 1988.

Farming in Meiji Japan

While there was some technological innovation in agriculture during the Meiji period, farming techniques remained quite unchanged. Predominantly a function of the family, farming involved the cooperation of the entire community to maintain the extensive irrigation systems that flooded and drained the rice paddies at the required times. Land plots, which had been partitioned among descendants, were generally too small to utilize the mechanized devices of the industrial revolution, and Japanese agriculture continued to be labor-intensive through the end of the Second World War.

Although there were few technological changes, there were many social changes that impacted Japanese farming. Industrialization led to increased urbanization and factory-produced textiles. In preindustrial Japan, farming families heavily supplemented their income by producing homespun textiles; however, the factories of cities such as Osaka could produce a better product more inexpensively. To compensate for this loss of income, many daughters from farming families were sent to work in the textile mills or brothels of the cities. While these factory girls experienced low wages and many hardships, the journals of many of them compared conditions in the cities favorably to their existence in the countryside. The attraction of urban life and the poverty of rural Japan left a lasting impact on Japanese society that can still be seen in the early twenty-first century.

Japan's farmers experienced many economic changes in the Meiji period as well. With administrative centralization, local control of taxes, based on traditionally established levels of agricultural productivity, was replaced by a national land tax. Initially, this provided individual ownership for lands previously controlled by military aristocrats, but when farmers were unable to pay the assessed taxes, they lost their land, and the rate of tenant farming increased dramatically. A growing disparity between absentee landowners and tenant farmers emerged. The government in turn used tax revenue to promote urban industrialization and Japan's growing military. It was not until the development of party politics toward the end of the period that rural interests were

► FARMING IN HOKKAIDO

One area of Japan that stands as an anomaly with regard to agriculture is the northernmost island of Hokkaido. Largely unpopulated until colonization efforts of the Meiji government, the vast areas were divided utilizing a basic grid pattern of approximately 12-acre (5-hectare) rectangular lots. Undoubtedly the influence of U.S. advisers to the Meiji government had much to do with the devel-

opment of Hokkaido's agricultural base. Not only are farms bigger, but they are not centered on an agricultural village. Rather, they are dispersed similarly to the midwestern United States. The climate and seasons stipulate very different crops as well, and wheat, barley, rye, and potatoes are common crops.

—David Rands

able to exert influence over some measure of the national budget. Through most of the Meiji period, farmers suffered extreme poverty. The necessity of selling all the rice produced meant that the rural population rarely ate the white rice so commonly associated with agrarian Japan.

Thus, while the techniques of farming in Japan changed little over the centuries, the Meiji period and industrialization brought dramatic social and economic changes. Migration to urban centers increased, and rice, which had been the economic foundation of the archipelago, was replaced by a land tax that was not nearly as accommodating for the agrarian population. Farmers who were peasants under the Tokugawa system became petty landowners under the new Meiji system and then tenant farmers as their land was transferred to the more wealthy absentee landlords. Unlike many industrializing countries, however, the collectivization of land into large farms never occurred, and families farming their individual plots of land are a continuity that makes the agriculture in the Meiji period so similar to everything that came before it.

—David Rands

Bibliography

- Jansen, Marius B., ed. *The Emergence of Meiji Japan*. New York: Cambridge University Press, 1995.
- Nagatsuka, Takashi. *The Soil: A Portrait of Rural Life in Meiji Japan*. Translated by Ann Waswo. Berkeley: University of California Press, 1989.
- Smith, Thomas C. *The Agrarian Origins of Modern Japan*. Stanford, CA: Stanford University Press, 1959.
- Trewartha, Glenn Thomas. *Japan: A Geography*. Madison: University of Wisconsin, 1965.

The Opening of the American Great Plains

During the nineteenth century immigrants streamed across the breadth of America's vast hinterland, where a new life awaited them in the Great Plains. Although they were preceded by Native Americans, who had lived in the region for centuries, and more recently arrived cattlemen, it was the farmer/settler who truly transformed this land.

Climate and vegetation, rather than any specific boundary, separates the prairies and the Great Plains. In particular, the Great Plains is drier, with only meager rainfall of between 15 and 20 inches (38 and 51 centimeters) per year. In terms of vegetation, bunch grasses predominate in the Great Plains region.

Much of the region became U.S. territory as a result of the Louisiana Purchase under President Thomas Jefferson, who looked to the day when it would be populated by hearty American farmers. To achieve such a goal, Congress passed legislation to place much of the land of the West in hands of settlers of modest means. The Preemption Act of 1841 (and subsequent amendments) allowed settlers to file a claim for up to 160 acres (65 hectares) at a purchase price per acre established by the federal government. This act's purpose was in part to prevent speculators from purchasing western lands and pushing up prices. Another step that encouraged the settlement of the American West, and by extension the Great Plains, was the Homestead Act of 1862. This act enabled settlers to gain ownership of 160 acres if they resided on the property for five successive years and became a U.S. citizen

► BLACK KANSAS

The end of Reconstruction led to increased oppression for African Americans throughout the South. Many came to see Kansas, where John Brown had begun his campaign in the cause of abolition, as a place of refuge from oppression. Henry Adams, a former slave from Georgia, became an advocate of the exodus of blacks from the South in 1877. Along with perhaps 500 others, he formed a committee that subsequently sent out a group of approximately 100 investigators to Kansas and other parts of the Great Plains to determine if conditions might be suitable for African Americans to relocate. The result was the Great Exodus (1879–1881), the westward migration of perhaps 15,000 to 20,000 African Americans from throughout the South to the Great Plains. Soon black communities sprang up in Kansas towns such as Dunlap (1878), Morton City (1877), and Nicodemus (1879). The migration was motivated by dreams of freedom from oppression. In reality, those who migrated experienced varying degrees of integration, segregation, and exclusion depending upon the location where they finally resided and the time period involved. However, their greatest challenge was making a livelihood. Many encountered crop failures and financial ruin much like their white counterparts. A large number of the Exodusters, as they came to be called, remained in Kansas, while many others went farther west, and still others returned to the South.

—*John Leiby*

if foreign-born. While settlement of Kansas and Nebraska began in earnest in the 1840s and the 1850s, the region saw its largest influx of population in the 1870s and beyond.

The Great Plains was a region of demographic contrasts. The Native Americans were eventually subdued and marginalized to reservations. The railroads, which crisscrossed the Great Plains by the 1880s, provided incentives for settlement by selling land adjacent to their tracks and encouraging the slaughter of buffalo, the Plains Indians' chief food source. Throughout the region most immigrants were German speakers, not only from Germany itself but also from Alsace, Switzerland, Austria, and German-speaking Russia. English, Scots, Welsh, Irish, and

Canadians constituted the next largest contingent of immigrants. Most of the people who settled the region were not immigrants at all, but were U.S. citizens who had moved west.

The Great Plains' farming economy after 1870 is a story of boom and bust. This region's climate is characterized by harsh winters and hot summers. An example of these extremes is the experience of Glendive, Montana, in 1893, when there was a 164-degree differential between its winter low of 47 degrees below zero and a summer high of 117 degrees. In addition to dealing with these temperature extremes, settlers also had to endure blizzards and droughts. Because the region lacks major rivers, irrigation was not an option. Consequently, most Great Plains farmers took up dry-farming techniques, which involved plowing deeply in the fall and packing down the subsoil, then during the summer plowing repeatedly to produce a dust mulch. Moreover, many left parts of their lands fallow to retain moisture, while others planted drought-resistant varieties.

Any success for a Plains farmer in the late nineteenth century came from mechanization. All sorts of machines appeared, especially during the 1880s and 1890s, to make farming more productive and potentially profitable. To afford these machines, however, most farmers had to mortgage their land. Periods of drought or the appearance of grasshoppers could bankrupt a Plains farmer, forcing him to abandon farming and leave the region. On the other hand, periods of bounty such as occurred during most of the 1880s allowed farmers to pay off their debts and even set aside some savings. The 1880s was a banner decade for Plains farmers, as there was a large demand worldwide for corn and wheat. Problems began in 1889 as a result of drought and increased world competition and continued during much of the 1890s. By the turn of the century the standard 160-acre homestead was proving to be too small to be profitable. To address this problem Congress passed the Kincaid Act, which enabled settlers to obtain homesteads of up to 640 acres, except on lands deemed suitable for irrigation. However, many farmers had failed, and many towns had been depopulated before the Kincaid Act could bear fruit. Only after 1900, when rainfall was ample and the size

of farms increased, did Plains farmers return to prosperity.

—John Leiby

Bibliography

- Billington, Monroe Lee, and Roger D. Hardaway, eds. *African Americans on the Western Frontier*. Niwot: University Press of Colorado, 1998.
- Billington, Ray Allen, and Martin Ridge. *Western Expansion: A History of the American Frontier*. 5th ed. New York: Macmillan, 1982.
- Painter, Nell Irvin. *Exodusters: Black Migration to Kansas after Reconstruction*. New York: Norton, 1976.
- Paul, Rodman W. *The Far West and Great Plains in Transition, 1859–1900*. New York: Harper and Row, 1988.

Changes in Agricultural Technology

Following centuries in which the tools and methods of agriculture underwent few appreciable changes, after 1750 farmers, especially in Europe and the United States, adopted new technology to increase production. As Europeans colonized Australia and parts of Asia and Africa, they introduced new technology in these continents, changing the way some people farmed. In some instances indigenous people resisted European innovations, preferring to improve agriculture by more intensive farming and opening up new lands to cultivation. Thus the pace of technological change varied across continents and across countries.

Farmers used technology to ease or quicken tasks such as breaking ground, planting seeds, cultivating the soil to remove weeds, harvesting crops, and processing crops for consumption or sale. Since antiquity farmers had used the plow to break ground. After 1770 the wooden plow with iron shares gave way to an all-iron plow, first in England and then on the continent. In 1797 New Jersey inventor Charles Newbold patented an iron plow, which spread throughout the northern United States and less rapidly in the South. In 1833 Illinois blacksmith John Lane attached steel strips to the moldboard, and in 1837 Illinois inventor John Deere patented a plow with steel shares for cutting the sod of

the Midwest and West. Eager to modernize, Japanese officials coaxed peasants in the 1870s to replace their traditional scratch plow with a deep-tillage plow. Such a plow was difficult to use, however, and after 1900 Japanese peasants adopted a plow intermediate between the scratch and deep-tillage plows, one that worked well on wet soils.

Methods of planting also experienced rapid changes. Originating in England, the seed drill replaced broadcasting by hand throughout the country and in parts of the United States by 1850. The seed drill made it easier to plant crops in straight rows, allowing farmers to cultivate between rows. After 1830 farmers in the United States adopted a single-row cultivator and after 1840 a two-row cultivator.

New irrigation projects were undertaken to feed crops where rainfall was scant. In Europe and the United States, steam engines were used to pump water from streams and lakes into fields. Embarking on a plan of rapid modernization during the Meiji era, Japan adopted Western technology, irrigating its fields with water pumped from canals by steam engines in the 1890s. In contrast, to boost cotton production in Egypt the modernizing Egyptian ruler Muhammad Ali (1769–1849) spurred farmers to adopt the *saqqaya*, a wheel that carried water from canal to field and had been used in the Middle East for centuries. By the mid-nineteenth century, Egypt had exported the *saqqaya* to Sudan for irrigating fruits and vegetables.

Once ripe, a crop was ready to harvest. Short of labor, Europeans replaced the sickle (a curved steel blade fitted into a handle) with the scythe (a long, curving blade with a sharp edge, made fast to a long handle, called a snath, that is bent into a form convenient for use) for cutting grain after the Napoleonic wars. In 1833 Ohio inventor Obed Hussey (1792–1860) patented a mechanical reaper, and the next year Virginia inventor Cyrus McCormick (1809–1884) patented his own reaper, although McCormick always claimed priority. McCormick toured Europe to demonstrate his reaper and in the 1860s began to increase sales, particularly in England. In 1900 the reaper cut 80 percent of grain in England, a percentage the United States had reached 30 years earlier. By contrast, French farmers cut

➤ CYRUS MCCORMICK INVENTS THE REAPER

Cyrus McCormick described his invention as follows:

“Very soon after my father abandoned his machine, I first conceived the idea of cutting upon the principle of mine, viz., with a vibrating blade operated by a crank and the grain supported at the edge, while cutting, by means of fixed pieces of wood or iron projecting before it. . . . A temporary experimental machine was immediately constructed and the cutting partially tried with success in cutting, without a reel, a little wheat left standing for the trial; whereupon the machine was improved and the reel, which I had in the meantime discovered, attached; and soon afterwards (the same harvest) a very successful experiment was made with it in cutting oats in a field of Mr. John Steele, neighbor of my father.

The machine at the time of this experiment contains all the essential parts that were embraced in the patent of June 21, 1834. It had a platform; the straight sickle with a vibrating action by a crank; the fingers or stationary supports to the cutting, at the edge of the blade and projecting forward into the grain (the double and counter action from the crank, as patented, was abandoned on being further tested); the reel; and the



Cyrus McCormick invented the first practical grain reaper, and went into large-scale production of the farm machines in the 1840s. (Jupiterimages)

general arrangement by which the machine was (about) balanced upon two wheels.”

—Christopher Cumo

Source

Cyrus McCormick, quoted in Norbert Lyons, *The McCormick Reaper Legend: The True Story of a Great Invention* (New York: Exposition Press, 1955), 77–78.

only 11.5 percent of grain by reaper in 1892, and Germany tallied only 6 percent by reaper in 1895. Perhaps the quickest adoption of the reaper was in South Australia, where as early as 1867 it cut 89 percent of wheat. McCormick’s company, International Harvester, sold the first reapers to farmers in Manchuria in 1909, and by 1912 the company was selling in Manchuria several hundred reapers a year along with mowers, seed drills, harrows, and rakers.

Once harvested, a crop was ready to process. Before 1750, grain farmers used the flail, a manual threshing device consisting of a long wooden handle or staff and a shorter free-swinging stick attached to its end, to separate the grain from the chaff. After 1750 farmers in Europe adopted the winnowing machine for this process. Originating in Scotland in 1786, the threshing machine spread to England, where farmers threshed half

their wheat by machine by 1850. By 1880 the thresher had supplanted the flail everywhere in England, although progress on the continent was slow. By 1900 farmers threshed only one-third of grain in Poland and flailed the rest. By 1907 the thresher had at last replaced the flail in Germany, although steam powered only one-third of these machines and horses the rest. In the United States inventors Hiram and John Pitt in 1836 patented a steam thresher, which in the 1840s spread throughout the East and Midwest. In the 1840s American farmers began to adopt combines, which both harvested and threshed grain. Combines were large, required enormous teams of horses to pull them, and were suited only to the vast tracts of the prairie.

Grain was not the only crop to process. In 1793 inventor Eli Whitney (1765–1825) patented the cotton gin for removing seeds from lint,

easing and quickening a job that had been monotonous and slow by hand. In the nineteenth century the cotton gin spread with cotton culture from Georgia to Texas, and in 1893 the Chinese civil servant Zhang Zhidong imported the cotton gin to China's Hubei and Hunan provinces. More than China, India was a case of technological imperialism. The British imported into India the two-roller mill for extracting juice by crushing sugarcane between rollers. Between 1874 and 1891 India built 250,000 mills. The jewel of British efforts was the sugar factory in Kanpur, India. Built in 1884, the factory had mills to extract juice from cane, evaporators and boiling pans to drive off water from the uncrystallized syrup, and centrifuges to separate sugar from syrup. By 1914 Kanpur had 7 such factories. The Sanuki-Shido Factory in Japan was in 1878 the first to use steam to power the mills and centrifuges. By 1895 Taiwan had roughly 1,000 sugar factories, and in 1900 the Philippines had 1,075.

A constant in agriculture for centuries, the horse gave way in the twentieth century to the tractor. In the 1890s the first tractors were steam-driven. The heavy tractors bogged down in mud, although under ideal conditions the steam tractor could harvest 100 acres (40 hectares) a day. By 1900, U.S. companies were manufacturing some 5,000 steam tractors a year. In 1901 Iowa inventors Charles Hart and Charles Parr attached a gasoline engine to the frame of a tractor and in the first decade of the twentieth century halved the weight of their tractor from 10 to 5 tons while increasing horsepower to 30. By 1909 American firms were manufacturing 2,000 tractors a year.

In raising the productivity of agriculture, technology coaxed a surplus of food from the land. This surplus fed more mouths, spurring an increase in population. At the same time technology decreased the demand for labor. The farm became unable to absorb the increase in population. People streamed into the cities, creating a reservoir of labor for industry.

—*Christopher Cumo*

Bibliography

Cochrane, Willard W. *The Development of American Agriculture: A Historical Analysis*. Minneapolis: University of Minnesota Press, 1993.

Craig, G. M., ed. *The Agriculture of Egypt*. New York: Oxford University Press, 1993.

Craig, G. M. *The Agriculture of Sudan*. New York: Oxford University Press, 1991.

Francks, Penelope. *Technology and Agricultural Development in Pre-War Japan*. New Haven, CT: Yale University Press, 1984.

Grigg, David. *The Transformation of Agriculture in the West*. Cambridge, MA: Blackwell Science, 1992.

Robb, Peter, Kaoru Sugihara, and Harauka Yanagisawa, eds. *Local Agrarian Societies in Colonial India: Japanese Perspectives*. Richmond, Surrey, UK: Curzon, 1996.

Agriculture and Science

The application of science to agriculture grew out of the Enlightenment conviction that science could improve the lives of ordinary people. Because most people farmed, it was natural for scientists, many of them inspired by humanitarian ideals, to use their knowledge to help farmers grow more food. Into the nineteenth century, however, many farmers resisted efforts by scientists to undertake ambitious programs of experiments related to agriculture. Such skeptics believed that farmers themselves could increase production by comparing the yield of different crop varieties or trying out different rotations of crops. Such critics felt that scientists should limit their activities to policing the notoriously unscrupulous fertilizer industry by analyzing fertilizers for truth in labeling. Scientists countered, however, that only they were trained to do the systematic and controlled experiments necessary to achieve reliable results.

Governments responded by creating agricultural experiment stations to satisfy both farmers by analyzing fertilizers and scientists by giving them money and facilities for experiments. Wealthy entrepreneur John B. Lawes (1814–1900) created the first experiment station in Rothamstead, England, in 1837, and the German principality of Saxony, using Rothamstead as its model, funded the first government-sponsored experiment station in German-speaking lands in 1851. From England and the German principalities, experiment stations spread throughout Europe and the United States.

➤ JUSTUS VON LIEBIG ON SCIENCE AND AGRICULTURE

The German chemist Justus von Liebig (1803–1873) helped pioneer the field of organic chemistry, founded a company that produced the “Oxo” beef bouillon cube, and was an early proponent of the scientific study of agriculture. He analyzed the effects of various chemical nutrients on crops, with a particular interest in nitrogen, and helped devise early commercial fertilizers.

“Perfect Agriculture is the true foundation of all trade and industry—it is the foundation of the riches of states. But a rational system of Agriculture cannot be formed without the application of scientific principles; for such a system must be based on an exact acquaintance with the means of nutrition of vegetables, and with the influence of soils and action of manure upon them. This knowledge we must seek from chemistry, which teaches the mode of investigating the composition and of studying the characters of the different substances from which plants derive their nourishment.”

—Christopher Cumo

Source

Justus von Liebig, *Chemistry and Its Application to Agriculture and Physiology* (Philadelphia: T. B. Peterson and Brothers, 1840), 3–4.

From the outset, scientists, sure that they could do more than police the fertilizer industry, chafed at their regulatory duties. Yet such duties increased in the 1870s when governments in Europe and the United States required scientists at the experiment stations and other public agencies to analyze the contents of insecticides for truth in labeling. Some scientists, eager to retain the goodwill of farmers and government, complied, but others put their energies into the emerging sciences of agricultural chemistry, plant pathology, and entomology. German chemist Justus von Liebig (1803–1873) in his *Chemistry and Its Application to Agriculture and Physiology* (1840) inspired scientists to search for the laws of soil fertility, much as the great English scientist Isaac Newton (1642–1727) had

discovered the laws of gravity. No less important in spurring ties between agriculture and science was the Irish Potato Famine of the 1840s. The catastrophe spurred scientists to seek its cause, and in 1861 German botanist Anton de Bary (1831–1888) identified the culprit, the fungus *Phytophthora infestans*. De Bary's insight that fungi can cause disease preceded the work of the French chemist Louis Pasteur and the German bacteriologist Robert Koch. In 1874 a farmer in Japan proposed that a species of leafhopper transmits a pathogen to rice, causing Rice Stunt Disease. The insight that insects can harbor pathogens preceded the discoveries that malaria and yellow fever are mosquito-borne diseases.

In California, a world away from the potato fields of Ireland and the rice paddies of Japan, farmers battled a different problem. The cottony cushion scale is an insect that damaged citrus so that fruit was unsuitable for sale. Rather than spray groves with insecticides, entomologists at the U.S. Department of Agriculture searched the world for an insect that would prey on the scale, finding the Vandalia Beetle in New Zealand. Its release in 1888 in California's citrus groves diminished the population of the scale and the losses it caused.

To spread scientific knowledge to farmers, Denmark in the 1880s began dispatching scientists to the countryside. England created the Advisory Service in 1912, and the United States founded the Cooperative Extension Service in 1913. In the short term the application of science to agriculture restored fertility to soils and kept insects and pathogens in check. Over the long term agricultural science spread hybrid corn around the globe and fueled the Green Revolution. The application of science to agriculture has averted a Malthusian crisis by expanding the food supply apace of population increase.

—Christopher Cumo

Bibliography

- Cochrane, Willard W. *The Development of American Agriculture: A Historical Analysis*. Minneapolis: University of Minnesota Press, 1993.
- Grigg, David. *The Transformation of Agriculture in the West*. Cambridge, MA: Blackwell Science, 1992.
- Rossiter, Margaret W. *The Emergence of Agricultural Science: Justus Liebig and the Americans*. New Haven, CT: Yale University Press, 1975.

■ Introduction: The Energy Revolution

The first and second Industrial Revolutions of the period 1750–1914 depended upon an accompanying Energy Revolution. The world was gradually transformed from animal and wind power to a new age of hydropower, steam, coal, electricity, and petroleum. In terms of hydropower, the early nineteenth century witnessed the construction of a vast network of canals. Further, water-powered mills of all types, particularly for the manufacture of textiles, flourished during the First Industrial Revolution. Likewise, water-powered gas compressors (trompes) produced compressed air for a variety of needs, including blast iron furnaces. In France and Switzerland, where water was abundant, hydropower was a major source of energy. The Frenchmen Jean-Victor Poncelet (1788–1867) and Benoît Fourneyron (1802–1867) were important contributors to the science of hydraulics. Poncelet's undershot waterwheel of the 1820s, with curved blades and an angled sluice gate, was the most efficient of his day, and Fourneyron's invention of a water turbine was the first of its kind. By 1837 an improved Fourneyron turbine, a mere 1 foot (30.5 centimeters) in diameter, spun 2,300 times per minute and produced 60 horsepower.

The nineteenth century became the age of steam. Steam engines revolutionized manufacturing, steam-operated printing presses led to greater literacy, and railroads, steamships, and steamboats altered transportation and communication in profound ways. Steam engines designed by Thomas Savery (ca. 1650–1715), Thomas Newcomen (1663–1729), James Watt (1736–1819), Matthew Boulton (1728–1809), and others ushered in the new era. To fuel the engines, coal became the preferred energy source. By the early twentieth century the United States, Britain, and Germany led the world in coal production. Coal-fired factories and mills meant that manufacturing could locate in areas far removed from sources of water power. Coal gas illuminated cities, and coal began to be used to power steam turbines to produce electricity.

Innovations in electromagnetism by Christian Oersted (1777–1851) and Michael Faraday

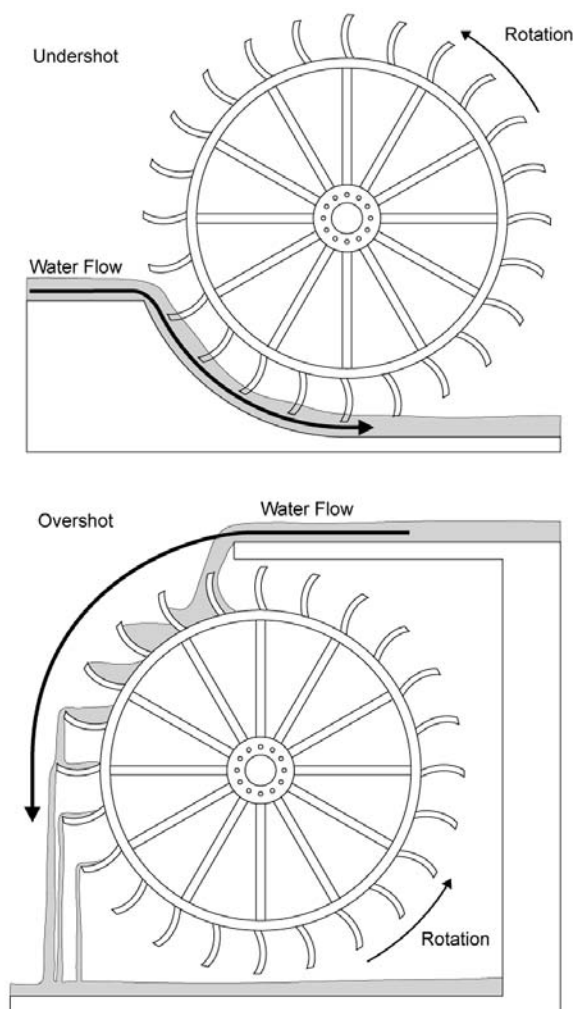
(1791–1857) led to developments in electricity by Thomas Edison (1847–1931), Nikola Tesla (1856–1934), Joseph Swan (1828–1914), and Werner von Siemens (1816–1892). Individuals such as Samuel Insull (1869–1938) and companies such as General Electric and Westinghouse democratized electricity by making it available to a wide range of consumers. The marvels of electricity were celebrated at world's fairs everywhere. Steam turbines powered by coal, petroleum, and natural gas produced electricity worldwide. Water power, through a series of innovations in turbines such as by the Holyoke Water-Power Company in Massachusetts, was harnessed for hydroelectricity.

The use of petroleum as an energy source burgeoned in the twentieth century. The late nineteenth century had witnessed the introduction of kerosene lamps as well as the world's first oil well. The Nobel and Rothschild families, along with companies such as Standard Oil, the Royal Dutch Company, Shell Transport and Trading Company, and the Anglo-Persian Oil Company, developed multinational corporations for the drilling and refining of petroleum. The invention of internal combustion and diesel engines enabled oil to fuel ships, locomotives, trucks, automobiles, motorcycles, and airplanes. The twentieth century's mobility was clearly tied to petroleum, an observation underscored by Henry Ford's introduction of a moving assembly line in 1914 to manufacture his Model T automobiles.

—Paul Tenkotte

Advances in Waterpower

Waterpower is significant for its versatility in initially providing mechanical advantage and then for generating electricity. Waterwheels have been used to grind corn and grind grain into flour since antiquity. Watermills were built alongside rivers with a large wheel comprised of blades sitting partly submerged. This design was called the undershot waterwheel. As the wheel turned from the flow of the water, mechanical advantage obtained from spinning gears moved stones that did the grinding.



Early waterwheel designs. (By Jeff Dixon after an illustration by Robert Karl Koslowsky)

The first undershot wheel was described by the great Roman engineer Vitruvius 2,000 years ago after people observed that a river current would turn a partially submerged wheel when paddles were affixed to its perimeter. From here, introduction of the more efficient overshot wheel dominated waterpower installations in England and France up until the nineteenth century. In this configuration, water is directed over a flume, falling into buckets mounted on the circumference of the wheel's rim. The water's weight and its small drop from the flume provided the force to rotate the wheel. Typically these wheels rotated a few revolutions per minute. The greater efficiency (65 percent vs. 25 percent) of the overshot wheel gives it the ability to produce more

power. It too gained widespread acceptance in Europe and America, where sites were plentiful for capturing elevated flows of channeled water in millraces.

As trade increased and businesses expanded during the Middle Ages, industry gravitated around factories built near sources of flowing water. The Industrial Revolution, which began with water-powered textile mills, owes much of its success to John Smeaton (1724–1792), Britain's "father of civil engineering," who built massive waterwheels constructed of cast-iron. Besides grinding grains, waterwheels found a number of uses in crop irrigation, supplying drinking water to communities, and driving the sawmills, forge bellows, pumps, looms, and trip and tilt hammers of industry.

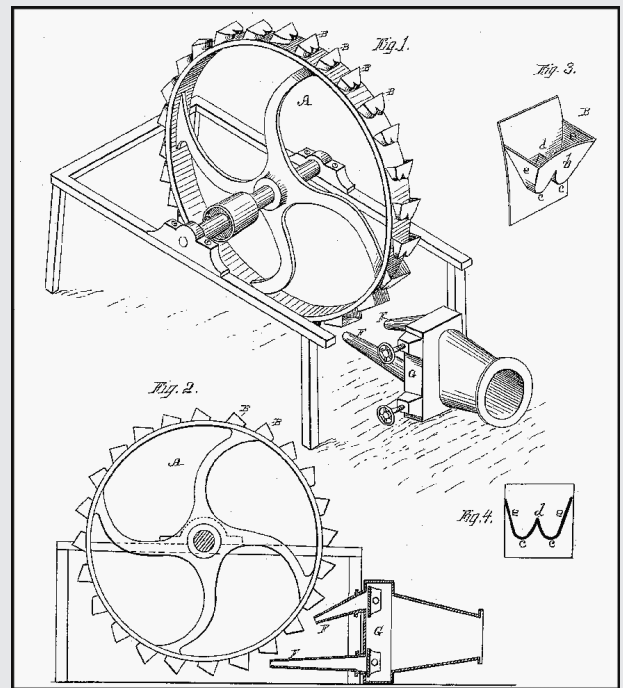
Waterpower played an important role in America's early development. Although the steam engine was fully developed in the 1800s, coal was scarce and wood unsatisfactory as a fuel in the expanding United States. Rotating waterwheels powered the nation's first industrial cities—the textile mills operating in Pennsylvania, New York, and New England—until the opening of canals brought cheap coal to the steam-powered mills of the Midwest in the mid-nineteenth century. In contrast, during this period waterpower prevailed at the Mississippi River fall line at Saint Anthony Falls, enabling Minneapolis to emerge as a grain-milling center. This set the stage for Minneapolis to later adopt hydroelectric power and become the leading U.S. producer of flour up until 1930. In other cases, waterpower took priority over transportation, and dams superseded canals. The Embrey Dam built in 1855 near Fredericksburg, Virginia, was constructed to turn waterwheels and produce mechanical power to drive machinery. The Fredericksburg Water Power Company sold lots along the canal system and rented waterpower privileges calculated by horsepower. The wooden crib dam was eventually replaced by a concrete one in August 1909 and produced about 8,000 horsepower of hydroelectric power for the community. The dam remained in operation until the early 1960s, when the last electric generating plant on the canal system was closed. Both the Minneapolis and Fredericksburg examples reflect the advance of

THE PELTON WATER WHEEL

During the California gold rush, Lester Pelton, a young mining engineer, invented a waterwheel that took on his name and can be considered an early form of turbine. Up until this point, waterwheels had been used on larger rivers to power mills of various types. They did not perform as well in the faster-moving mountain streams and waterfalls where mining operations took place. Pelton's newer water turbine worked better. It was an impulse turbine featuring high-speed jets of water striking cups mounted along the wheel's perimeter. These water jets forced the turbine to spin rapidly and operate at high efficiency.

The ensuing practice of hydraulic mining became dominant as a result of technological advances such as Pelton's wheel. However, mining operations caused rivers in California's Central Valley to become clogged with sediment. This was the state's first major environmental catastrophe and led in 1884 to the Sawyer Decision that effectively ended hydraulic mining. The ruling stopped the destructive practice of dumping mining wastes, including poisons such as mercury, into California rivers.

Pelton's device, which generated twice the power as other waterwheels, won a competition in 1883 for the most efficient water wheel turbine. Pelton established the Pelton Water Wheel Company, which sold the product the world over. Ultimately, large power utilities using abun-



Patent for Lester Pelton's water wheel, 1880. (U.S. Patent Office)

dant fossil fuels to generate electricity displaced the waterwheel, and Pelton went out of business in 1954.

—Robert Koslowsky

waterpower, from mechanical waterwheels to electrical generation, as technological innovation raised the amount of power that could be generated through gains in efficiency.

Waterwheels had limitations. Many applications used elaborate systems of ropes or belts to transfer the mechanical power of the spinning wheels to numerous machines and tasks. Generally, these large wheels were most inefficient compared to water turbines. Furthermore, low water flows during the summer and fall months, coupled with water freezing during the winter months, made the availability of steady power output unreliable. As coal became the fuel of choice, steam-produced power took hold, even surpassing hydroelectric power generation in

many countries, including the United States. Consequently, waterwheels were abandoned as sources of both mechanical energy and alternating current, which demanded at least 1,800 rotations per minute, and water turbines became the hydropower source of choice in the early twentieth century.

—Robert Koslowsky

Bibliography

- Gies, Frances, and Joseph Gies. *Cathedral, Forge, and Waterwheel: Technology and Invention in the Middle Ages*. New York: HarperCollins, 1994.
- Major, J. Kenneth. "Water, Wind, and Animal Power." In *An Encyclopedia of Technology*, edited by Ian McNeil. New York: Routledge, 1990.

Sherman, Josepha. *Hydroelectric Power*. Mankato, MN: Capstone, 2004.

Singer, C., E. J. Holmyard, A. R. Hall, and T. L. Williams, eds. *A History of Technology*, Vol. 4, *The Industrial Revolution, c. 1750–c. 1850*. Oxford, UK: Clarendon, 1958.

James Watt and the Steam Engine

James Watt was born on January 19, 1736, in Greenock, Scotland, the fourth of five children. His father, James Watt Sr., was a carpenter, instrument maker, and merchant. The younger Watt spent most of his teenage years studying mathematics and working in his father's shop, learning metalworking, woodworking, and instrument making. Although he never completed a brief apprenticeship he began with an instrument maker in London, when Watt moved to Glasgow, Scotland, where friends found him a position as an instrument maker for

the University of Glasgow, which was exempt from guild restrictions. While at the university, he made friends with faculty members John Robison, a mathematician and physicist, and Joseph Black, a chemist, who introduced him to the technology of steam engines and helped him with scientific issues through much of his career.

In order to understand Watt's contributions, it is necessary to know what a steam engine is. A steam engine boils water to make steam, injects the steam into a cylinder to move a piston back and forth, and connects the piston to another machine that needs power, such as a pump, a textile machine, a mill, or a conveyor belt. The components of the engine are a boiler, a cylinder containing the piston, a condenser to turn the steam back into water, and levers, wheels, and beams to connect the piston to the machinery. In early steam engines, the piston was moved by condensing the steam directly in the cylinder to create a vacuum that pulled the piston down. In modern steam engines, high-pressure steam is alternately injected into each side of the piston in the cylinder, which produces more power without having to create a vacuum in the cylinder or provide a condenser. Watt was the link between the early and the modern engines.

The first steam engines were designed by Thomas Savery (c. 1650–1715) late in the seventeenth century, and were improved by Thomas Newcomen (1664–1729) early in the eighteenth century. Used for pumping water out of coal mines, they proved to be awkward and unreliable machines. They did, however, demonstrate the potential of steam as a source of power.

Watt made his first improvement to the steam engine in 1765 while working at the University of Glasgow. Using the Newcomen engine as a model, he removed the condensing step from the cylinder with the piston and put the condenser in a separate chamber, which made the steam engine much more powerful and reliable. Another of his inventions alternately injected steam into each side of the piston so that it was powered in both directions. This almost doubled the power produced. Those two developments revolutionized the steam engine.

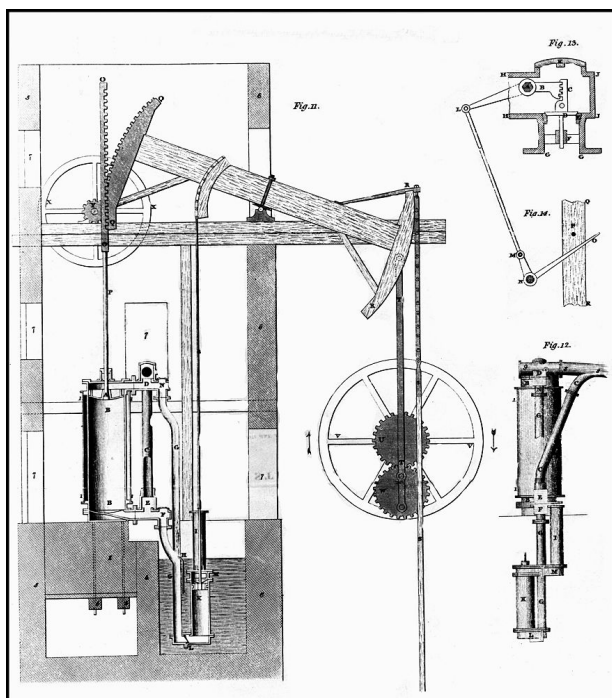


Illustration of James Watt's condensing steam engine. Watt was not the first to develop the steam engine, but his innovations almost doubled the steam engine's power and improved its reliability. (Library of Congress)

In 1766 Watt resigned from the university and started an engineering company to concentrate on research for the steam engine. In 1769 he filed a patent on the separate condenser and brought in a partner, John Roebuck (1718–1794), to manufacture the condensers and other products he invented. During that period Watt invented other ways to improve the steam engine's efficiency, including a governor to control the engine's speed, an indicator to show the steam pressure, and novel ways to convert the motion of the piston to drive different types of machines.

After Roebuck withdrew his backing, another investor, Matthew Boulton (1728–1809), bought out Roebuck's share of the partnership. Watt moved to Birmingham, England, where Boulton was located, in 1775. They built a new factory in the Soho district to build steam engines. The resulting company, called the Boulton & Watt Company, became an immensely successful business that manufactured steam engines to provide power for many industries. During the next 25 years, the partners sold more than 500 engines.

Watt and Boulton's partnership lasted until 1800, when they transferred their shares of the business to their sons, James and Matthew, respectively, and both of the older men retired. Although Watt did not invent or manufacture steam engines for such movable uses as locomotives, the technology he developed for his stationary engines was crucial to the nineteenth-century development of steam engines for tractors, trains, and ships.

In 1785 Watt was elected to Britain's prestigious Royal Society of London, an organization dedicated to scientific inquiry. In 1806 he was awarded an honorary doctorate from the University of Glasgow. The British government also offered him the title of baronet, but he graciously declined. Watt died on August 25, 1819, in Heathfield, England. In later years, a unit of electrical power was named the watt in his honor.

—Elizabeth Dubrulle

Bibliography

Briggs, Asa. *The Power of Steam: An Illustrated History of the World's Steam Age*. Chicago: University of Chicago Press, 1982.

Hart, Ivor Blashka. *James Watt and the History of Steam Power*. New York: H. Schuman, 1949.

Von Tunzelmann, G. N. *Steam Power and British Industrialization to 1860*. New York: Clarendon, 1978.

Coal Production and Its Uses

Although coal has been mined for millennia, extraction was traditionally carried out on or near the surface of the earth on a small scale, using relatively primitive techniques. This changed during the late eighteenth and nineteenth centuries as a result of the Industrial Revolution, which began in Great Britain and later spread to continental Europe, the United States, Japan, and other parts of the world. Coal was the fuel of industrialization, and it was this increase in demand that spurred innovation. Yet the history of coal mining during this period was also marked by the physical dangers and exploitation of labor characteristic of industrialization.

By the 1700s, overharvesting had made wood—the traditional fuel source for both household and commercial use—a scarce commodity in Britain. Imported wood from New England, Sweden, and Russia was prohibitively expensive, but coal was cheap, plentiful, and close at hand. Coal also proved to be a much more efficient fuel; wood is only about 53 percent combustible carbon, while bituminous (soft) coal is 88 percent carbon, and anthracite (hard) coal is 94 percent carbon. The process of coking, in which coal is heated in airless ovens at high temperatures to drive out water, coal tar, and coal gas, increased its energy output even more.

In Britain, rich coal deposits were located in Scotland, northern England, the Midlands, and South Wales. Before the development of an effective canal system, however, it was difficult and expensive to transport the coal to other regions. As a result, industry and mining communities grew up around the coal beds, dramatically shifting the nation's demographics. This trend would be repeated around the world as new coal deposits were discovered and tapped. In 1700 Britain mined approximately 2.6 million short tons (that is, the U.S. ton of 2,000 pounds) of coal annually. By 1800 production

had quadrupled to 10 million short tons, and by the turn of the twentieth century that number had skyrocketed to 236 million short tons.

As with other aspects of the Industrial Revolution, the coal industry developed somewhat later in other parts of the world. But by 1850, anthracite coal had replaced wood as the fuel of choice for heating in cities in the United States. Lucrative coal industries developed in a number of states, particularly Pennsylvania, West Virginia, Illinois, and Ohio. In Germany large-scale commercial mining began earlier, in the mid-eighteenth century, spreading to the Ruhr region by 1815. The first permanent mine in Poland was established at Szczakowa in 1767. In the early 1800s, large coal deposits were discovered in New South Wales, in Australia, and near the Meuse River in Belgium. Countries like France that could not mine enough coal domestically to meet their needs imported it from other coal-rich nations. By the early 1900s, the world's top three coal producers, as shown in annual figures, were the United States (350.8 million short tons annually), Britain (236.1 million short tons), and Germany (121.3 million short tons). The largest non-Western coal producers included Japan (10.1 million short tons) and the Transvaal (2.4 million short tons).

Coal had a number of uses in rapidly industrializing societies. Commercially, dirty but cheap bituminous coal could be used to power formerly water-dependent mills and factories, meaning that these no longer had to be located near rivers or other bodies of water. Coal-fired steam engines on steamships and locomotives increased and cheapened transportation options for both individuals and businesses. Coal also provided the high heat necessary to separate metals from their ores, allowing for large-scale production of iron and steel. In the household, clean-burning anthracite coal could be used for lighting, heating, and cooking. In 1792 Scottish engineer and inventor William Murdoch (1754–1839; his name also appears as Murdock) developed a method for purifying and storing the gaseous mixture of hydrogen and methane given off during the coking process. Known as coal gas or town gas, this by-product was soon the ubiquitous fuel source in urban households, piped in by utility companies. Beginning in the

late 1800s, coal was also used to generate electricity for residences and businesses.

As the demand for coal increased, easily accessible deposits were soon exhausted, forcing miners to dig deeper into the earth. Adit mines, horizontal shafts dug into hillsides, soon gave way to bell pits, which consisted of a vertical shaft that was enlarged into a bell-shaped chamber at the coal seam. These in turn gave way to deep-shaft mines by the end of the eighteenth century. These mines utilized a long vertical shaft that extended for hundreds or even thousands of feet into the earth before branching off into horizontal tunnels along the coal seam.

The deeper miners dug, the more problems they encountered. Bell pits, for instance, were known as “suicide pits” because the unsupported rock overhanging the bell chamber was prone to collapse. Flooding during heavy rains could also lead to collapses. As workers moved farther and farther from the surface, ventilation became an issue. Dust explosions, however, were the most pressing concern. Deep mines often contained pockets of firedamp—flammable gasses such as methane and carbon monoxide—that could easily ignite the highly combustible coal dust suspended in the air. Stray sparks or even friction were enough to trigger a massive explosion. Europe's deadliest coal mine disaster took place at the Courrières Mine in northern France on March 10, 1906, when a coal dust explosion killed 1,099 workers. The October 14, 1913, Senghenydd Colliery Disaster—Britain's worst coal mine disaster—resulted in 439 deaths. On October 22 of that same year, the United States experienced its most serious explosion when 263 miners were killed at Stag Canon No. 2 in Dawson, New Mexico. Around the world, thousands of miners died each year from explosions, cave-ins, asphyxiation, and mining-related injuries and illnesses.

Primitive early solutions for combating these problems often created new problems. To meet the need for fresh air deep in the mines, for example, miners would set fires at the base of the vertical shaft. While the heat from the fire would suck fresh air into the mine, it was also apt to ignite pockets of firedamp. Series of trapdoors that could be opened and closed to circulate air were also utilized, but their

➤ CANARY IN A COAL MINE

As methods for extracting coal became more advanced and mine shafts grew deeper, workers were increasingly at risk of coming into contact with pockets of methane, carbon monoxide, and other toxic gasses. These could cause asphyxiation or could ignite coal dust suspended in the air, triggering a massive explosion. Because these gasses are colorless and odorless, it was difficult to detect their presence until it was too late.

To solve this problem, miners began bringing caged male canaries with them into the mines. Canaries are particularly sensitive to gas levels, and even a small amount of methane or carbon monoxide is fatal. The birds thus acted as an early-warning system for the miners. If the canary stopped singing (male canaries are renowned for singing almost constantly), was seen swaying unsteadily on its perch, or was found dead on the bottom of its cage, it was a clear indication that the levels of toxic gasses were rising. Miners

would then evacuate and wait for the gasses to dissipate.

Canaries were not the only animals used in this manner; workers also brought caged mice into the mines. Mice, however, were not as useful. They were less susceptible to the effects of methane and carbon monoxide and did not display as many symptoms of gas poisoning as did canaries. Without the benefit of a canary's bright yellow color and easily audible singing, mice had to be more closely observed to notice their reactions to changes in air quality.

Although this low-tech solution was eventually replaced by more sophisticated methods of gas detection, the use of canaries in coal mines persisted well into the twentieth century. In fact, canaries were not phased out of British coal mines until 1987. Today, the expression "canary in a coal mine" is used to describe something that acts as an advance warning of impending crisis or catastrophe.

—Maxine Taylor

effectiveness was limited. Later innovations, however, proved more beneficial. Wooden pit props, used to support mine ceilings and shore up shaft walls, were introduced in 1800. In 1807 John Buddle (1773–1843) developed an air pump that achieved better air circulation, and British chemist Sir Humphrey Davy (1778–1829) introduced a safety lamp in 1815 that provided light but, thanks to a mesh of metal gauze, would not trigger an explosion.

In addition to being hazardous, mining during this period was also profoundly exploitative. As with factory work, the demand for labor was high, wages were low, hours were long, and working conditions were poor. Children as young as five years old were employed as trap-door operators in 12-hour shifts, while slightly older girls and boys and even pregnant women were used to transport heavy loads of coal out of the mine. In Britain, Scottish coal miners were enslaved to their employers until the passage of the 1775 *Colliers and Salters Act*.

The first major piece of mining reform legislation, the *Mines Act of 1842*, was passed by Parliament after a Royal Commission created by

Lord Shafesbury (1801–1885) brought to light many of the industry's abuses. It forbade women of all ages and boys under age 10 from working underground. A law passed in 1860 raised the minimum age to 12, and another in 1872 required mine managers to be properly trained and certified. In 1908 the workday in British mines was shortened to eight hours.

In the United States, coal miners' strikes, led by labor unions such as the National Federation of Miners and Mine Laborers (NFMML), the Industrial Workers of the World (IWW), and the United Mine Workers (UMW), were the main vehicle for labor reform during the late nineteenth and early twentieth centuries. The UMW, founded in January 1890 and led by John L. Lewis, orchestrated the failed Bituminous Coal Miners' Strike of 1894 and the more successful Coal Strike of 1902. Although unions were eventually able to win concessions for better pay, shorter hours, and safer working conditions from industry management, strikes sometimes ended in violence. In the September 10, 1897, Lattimer Massacre, for instance, 19 immigrant mine workers were killed by local authorities during a strike

in Hazleton, Pennsylvania. Similarly, during the Ludlow Massacre of April 20, 1914, Colorado National Guardsmen shot 19 striking miners.

Physically dangerous and socially fraught though it was, coal mining has remained an economic mainstay of industrial, and even postindustrial, nations.

—Maxine Taylor

Bibliography

- Binder, Frederick Moore. *Coal Age Empire: Pennsylvania Coal and Its Utilization to 1860*. Harrisburg: Pennsylvania Historical and Museum Commission, 1974.
- Chandler, Alfred. "Anthracite Coal and the Beginnings of the 'Industrial Revolution' in the United States." *Business History Review* 46 (1972): 141–181.
- Flinn, Michael W., and David Stoker. *History of the British Coal Industry, Vol. 2, 1700–1830: The Industrial Revolution*. Oxford, UK: Clarendon, 1984.
- Freese, Barbara. *Coal: A Human History*. Cambridge, MA: Perseus Books Group, 2003.
- Saward, Frederick Edward. *The Coal Trade*. 46th Annual Edition of *The Coal Trade Journal*. New York: Frederick Saward, 1919.

Harnessing Electricity in the United States

After the development of the battery in 1800, a reliable source of direct current electricity was available. Hans Christian Oersted (1777–1851) demonstrated in 1819 that a magnetic field operates around the flow of current, while Michael Faraday (1791–1867) showed in 1831 how current flowing in one wire electromagnetically induces current in another wire. These discoveries allowed scientists in England and Germany to prove in the 1840s that electric circuits adhere to the law of conservation of energy. Fifty years later, current flowing through wires was put to commercial use to illuminate residences and businesses.

Experimenters first used battery-produced direct current to develop communication systems such as the telegraph and telephone based on its steady low-current output. Inventors such as Thomas Edison (1847–1931) developed higher direct current systems for commercial lighting.

Dynamos, or electric generators, were concurrently developed to produce electric energy, and methods of transmission were established to deliver this energy to the point of consumption.

In 1879 Edison introduced direct current electric light by improving generators, establishing wiring for power distribution, and developing the first electric meter for recording customer consumption. With this comprehensive approach he determined how much to charge customers for electric service. Electrical distribution was becoming big business. Nikola Tesla (1856–1943), Edison's employee, understood the pitfalls of direct current transmission and fought to introduce an alternating current approach in which electrical power could be transmitted over hundreds of miles. In addition to lighting, alternating current could also be used for powering residential appliances and industrial machinery.

Tesla ultimately defected from Edison's employ to pursue his vision that commercial electrical systems should be based on alternating current, which has the advantage of being easily stepped up to a higher voltage or stepped down to a lower voltage with coils of wire or transformers. This enabled networks of electrical systems to be established across many states, provinces, and countries during the early twentieth century. Tesla believed that his cost-effective alternating current motor would liberate many laborers from the toil of thousands and thousands of hours of manual labor. In some ways Tesla was the forerunner of the democratization of energy, just as Henry Ford was for transportation.

The Tesla phase of electrical innovation gave rise to alternating current, which changes its direction of flow for a defined number of times per second. Electric power found in American homes today experiences 60 reversal cycles every second. Electrical applications proliferate not only in residences but also in the industrial, transportation, and lighting sectors. In fact, alternating current can produce direct current for those devices that operate better without voltage variations. Furthermore, to overcome the mass of electric batteries needed for power, the electric motor and generator were perfected for

their continuous operation. Since direct current motors are easier to run at a variety of speeds, they are commonly found on subway and light-rail systems.

Electric power can be sent more economically and efficiently over long distances in the form of higher-voltage alternating current. Consequently, power companies use alternating current motors. The ability to transmit electricity over great distances ended the need to locate power plants close to where products were produced. Industries were liberated from the proximity of their prime movers—wood, coal, petroleum, and flowing water—and could therefore attract a better workforce. This aspect of power generation spelled the end of the era of the waterwheels used to generate power locally.

Samuel Insull (1859–1938) made the widespread integration of America’s electrical infrastructure possible. Originally one of Edison’s managers, Insull became an advocate for Tesla’s method of alternating current production and distribution after Insull moved to Chicago and established his own electric utility company, Commonwealth Edison, in 1907. Insull leveraged economies of scale to overcome market barriers by cheaply producing electricity with large steam turbines. This technology, coupled with an innovative two-tier billing scheme, made it easier to put electricity into American homes. Insull drove demand for electricity by charging for the user’s share of peak demand at one rate and for kilowatts used during off-peak hours at another rate. Incentives were employed to encourage and promote load management to ensure a high level of continuous consumption to match the turbines’ steady generating power. His legacy was the democratization of electricity in America during the early twentieth century.

Harnessing electricity requires a prime mover, such as water or steam turbines, that in turn drives an electric generator. Water turbines are used in hydroelectric plants or tidal generating stations. Steam turbines are utilized when a heat source can effectively boil water to produce steam. Up until the start of World War I, wood, coal, petroleum, and natural gas all were used to create steam for the turbines.

THE AMERICAN THIRST FOR ENERGY

America thrives on energy, a need that was satisfied by the abundance of wood from colonial times through the latter half of the nineteenth century. Wood’s primary uses were for cooking and heating, with the day being governed by the rising and setting of the sun. Coal then emerged as the dominant source of energy until the start of the First World War. The concurrent widespread use of shipping and railway networks allowed coal from Virginia and Ohio to be delivered to most of the American population. Coal was the only prime mover that could be produced in quantity to satisfy demand for energy.

Coal accounted for more than 70 percent of energy production by 1899 and was used to propel locomotives and drive steam turbines for electricity. One billion metric tons of coal were produced at the start of the twentieth century, while only 100 million barrels of petroleum were consumed. Coal became synonymous with electric power production for the next three decades until a diversity of prime movers moderated coal’s influence.

Hydroelectric, petroleum, and natural gas were also employed to produce electricity for America’s burgeoning energy demand. Electricity became the currency of energy exchange and was the solution to the relative immobility of large generating plants needed to deliver energy. People demanded more material goods, better communication, more public transportation, and even more light. Electricity proved to be the answer. The physical energy derived from heat and water when converted into electricity to do work freed humanity and beasts of burden from using their muscle power. This availability of electricity, coupled with electric light, extended the length of a day for work and social activities alike. Life had finally become independent of the rising and setting of the sun.

—Robert Koslowsky

Cost-effective generation of Tesla’s alternating current electricity and Edison’s electric light bulb changed the quality of life for millions of Americans. Inexpensive and safe light, brought to the home as alternating current, replaced unsafe flame from candles and noxious fumes from gas. Home construction costs plummeted with

lower ceilings, since no extra vertical headroom was needed to collect and vent gas. Corporations formed to both drive and serve the demand for increasing consumption of electricity. Westinghouse, founded in 1886, and General Electric, founded in 1892, focused primarily on the kitchen. Both promoted convenience through ceiling fans (1882), desk fans (1886), coffee-pots (1891), electric stoves (1893), and toasters (1909), to name a few. Convenience bolstered consumption, and these corporations thrived by serving the customer. Today, electric energy is found almost everywhere. Its ease of production, distribution, and consumption led to the rise of the twentieth-century electronics industry and the proliferation of electrical devices taken for granted in the twenty-first century.

—Robert Koslowsky

Bibliography

- Crosby, Alfred W. *Children of the Sun: A History of Humanity's Unappeasable Appetite for Energy*. New York: Norton, 2006.
- Jonnes, Jill. *Empires of Light: Edison, Tesla, Westinghouse and the Race to Electrify the World*. New York: Random House, 2003.
- Koslowsky, R. K. *A World Perspective through 21st Century Eyes*. Vancouver: Trafford, 2004.
- Miller, E. Willard, and Ruby Miller. *Energy and American Society*. Santa Barbara, CA: ABC-CLIO, 1993.

Petroleum and the Petroleum Industry

Petroleum is a complex hydrocarbon, which when distilled (boiling and condensation) and refined (treatment to remove impurities and odors) yields a variety of products. At the light end are gases such as butane, in the middle are fuels such as gasoline and diesel, and at the bottom are heavier products such as lubricating oils and asphalt.

Uses of petroleum products as a source of illumination, medicines, wall coating, pitch, and fire weapons can be traced back to antiquity, but only in the nineteenth century did they begin to play a major economic role. By 1850 a small industry had developed in eastern Europe based on the mining of oil (through a

process similar to coal mining) and distilling it into kerosene. Burned in the newly developed Vienna lamp, kerosene gave off a bright flame, produced little smoke or odor, and was fairly stable. In comparison to the most prized illuminant of the day, whale oil, kerosene was considerably less expensive. At about the same time, Abraham Genser, a Canadian, and Samuel Downer, an American, developed the technology to distill kerosene from coal or bitumen. Both organized American firms to begin large-scale kerosene production in the mid-1850s. Also in the mid-1850s, a group of Connecticut promoters led by George H. Bissell and James M. Townsend hit upon the idea of drilling for oil using a process similar to that used in drilling for salt and then refining the crude oil into kerosene. They dispatched “Colonel” Edwin L. Drake to drill for crude oil in Titusville, Pennsylvania, where he and his crew struck oil in 1859, pioneering the world’s first oil well.

Drake’s well set off an oil boom. Petroleum-based kerosene was quickly embraced as an illuminant across the United States and Europe. Existing alcohol-distilling and coal-oil refining technologies were easily transferable to oil refining, making it easy to increase production. Oil refiners were also able to sell through existing marketing networks for coal and other oils. Furthermore, kerosene’s usefulness in lights and lanterns, its price, and the public’s familiarity with the basic technology of coal oil and whale oil lamps contributed to the quick shift to petroleum-based kerosene. Despite these advantages, petroleum had drawbacks. Crude oil is a fairly volatile liquid, with light elements such as butane vaporizing and producing explosive gases. Many refined products such as gasoline are highly flammable. Explosions and fires plagued the industry at every stage, from drilling to end use.

Nonetheless, the price and performance of American petroleum created demand far beyond the United States, and American refiners began exporting their products in 1861. By 1865 exports outpaced domestic consumption, and refined oil, mostly kerosene, outpaced crude exports. By 1866 refined oil made up 84 percent of the nearly 1.7 million barrels of petroleum products sold abroad. It was the country’s leading

manufactured export. Although most of the oil exports went to Europe, Asia and South America also were important markets.

Several individuals played key roles in petroleum's development as an energy source. One of the most important was a Cleveland merchant, John D. Rockefeller (1839–1937), who transformed a \$4,000 investment in an oil refinery in 1863 into the world's first great oil company, Standard Oil (founded in 1870). Central to this success was Rockefeller's understanding of cost control and of economies of scale: as the volume of the crude oil refined increased, the cost per refined oil barrel fell. This combined with Rockefeller's ruthless competitiveness made Standard the dominant force in the industry's first decades. His early success also was based on continual reinvestment to expand refinery capacity and reduce refining costs. Rockefeller also integrated vertically (outside of oil refining) into transportation, packaging, and marketing to reduce those costs. In addition, Standard was quick to adopt innovations such as the newly developed tank rail car to haul oil from fields to refineries. Through horizontal integration, Rockefeller joined Standard with oil refiners. By 1873 Standard Oil was the world's largest oil refiner, controlling 40 percent of the industry's capacity. By the time the Standard Oil Trust was formed in 1882 the company was a virtual monopoly, with control of 90 percent of the U.S. refining capacity and major oil pipeline and rail freight firms.

The petroleum industry quickly expanded from its U.S. roots. The introduction of modern oil drilling, refining, and marketing techniques to Russia by the Swedish Nobel and French Rothschild families in the 1870s broke Standard's and Pennsylvania's monopoly on the world's supply of crude and refined oil. The Nobels and Rothschilds followed the Rockefeller model, but they tended to be more innovative than Standard, developing new refining and shipping technologies. By 1890 these American and European firms had become true multinational companies that explored, drilled, refined, and sold crude and refined products around the world.

In the 1890s these firms were joined by new competitors. The Royal Dutch Company of the

THE PROFESSOR'S PROPHECY

In 1855, rock oil promoters George H. Bissell and James Townshend asked noted Yale University chemist and mineralogist Benjamin Silliman Jr. to analyze a petroleum sample from northwestern Pennsylvania. Silliman concluded his analysis with the observation that “it appears to me that there is much ground for encouragement in the belief that your Company have [*sic*] in their possession a raw material from which, by simple and not expensive process, they may manufacture very valuable products. . . . [N]early the *whole* of the product may be manufactured without waste, and this by . . . one of the most simple of all chemical processes.” Bissell, Townshend, and Silliman had discovered the value of petroleum. John D. Rockefeller doubtless would have agreed. In 1913 his petroleum-based fortune peaked at \$900 million, making him one of the world's richest men.

—John Paul Rossi

Source

Benjamin Silliman Jr. to George H. Bissell and others, New Haven, April 16, 1855, in *The Early and Later History of Petroleum* . . . , ed. J. T. Henry (Philadelphia: J. B. Rodgers, 1873), 53–54.

Netherlands (founded in 1890) exploited new oil finds in the Dutch East Indies, while the Shell Transport and Trading Company of Britain began producing oil in the Dutch Borneo in 1895. They were followed by oil discoveries in Persia (today Iran) by the Anglo-Persian Oil Company (British) in 1908. These and other firms continued to expand the petroleum industry through the discovery and development of new fields. The British London and Pacific Company, organized in 1889, tapped oil fields in Peru. A major American development was the discovery of oil in Texas, starting with the Spindletop field in 1901. Production in Mexico followed when U.S. oil interests under Edward L. Doheny drilled successful wells there in 1906.

Petroleum's dominance in lighting declined at the end of the nineteenth century with the

invention of the electric lightbulb by Thomas Edison. With improvements in engine design and the development of internal combustion engines, however, petroleum found new uses as a fuel.

Since heavier grades of refined oils were cheaper, cleaner, and easier to handle than coal, they were used as fuel for railroad locomotives and ship engines at the end of the nineteenth century. These trends were accelerated by the development of an efficient diesel engine in 1897. More important was the adoption of gasoline as the fuel for automobiles and airplanes. American Henry Ford's development of mass production with the Model T in 1908 created widespread demand for gasoline and lubricating oils.

—John Paul Rossi

Bibliography

- Black, Brian. *Petrolia: The Landscape of America's First Oil Boom*. Baltimore: Johns Hopkins University Press, 2000.
- Hidy, Ralph W., and Muriel E. Hidy. *The American Automobile: A Brief History*. Chicago: University of Chicago Press, 1965.
- Hidy, Ralph W., and Muriel E. Hidy. *Pioneering in Big Business, 1882–1911: History of Standard Oil Company (New Jersey)*. New York: Harper and Brothers, 1955.
- Williamson, Harold F., and Arnold R. Daum. *The American Petroleum Industry*. 2 vols. Evanston, IL: Northwestern University Press, 1959, 1963.
- Yergin, David. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Simon and Schuster, 1991.

■ Introduction: The Industrial Revolution in the West

The era of the Industrial Revolution in the West, conventionally dated from 1750 to 1914, can be divided into three stages: protoindustrialization, the Early Industrial Revolution (sometimes called the First Industrial Revolution), and the Second Industrial Revolution. These stages occurred at varying times in nations and regions, depending on a host of social, cultural, political, and economic factors. In some places the process of change was more gradual, while in others it was more rapid. Generally, the three stages are differentiated by specific indicators. Protoindustrialization is marked by what is variously termed cottage industry, the domestic system, or the putting-out system (in which raw materials are “put out” to “cottagers” in private homes for completion as semifinished or finished goods). An example was the woolen textile industry, in which merchants contracted with cottagers to spin wool into yarn and weave yarn into cloth. In contrast, the First Industrial Revolution was characterized by the first factories powered by water and, increasingly, steam. Other key developments were more efficient steam engines, the increased use of coal as an energy source, and new methods for producing iron, which along with textiles was the most im-

portant product of the First Industrial Revolution. The Second Industrial Revolution, usually associated with the mid to late nineteenth century, was distinguished from the two earlier stages by further technological innovation: new methods for the production of steel, developments in the field of industrial chemistry, the full development of the railroad industry, the use of electric power, and new communication technologies such as the telegraph and radio. While the First Industrial Revolution was centered on iron and textile production using steam power, the Second Industrial Revolution revolved around steel, railroads, electricity, and chemicals. Another characteristic of the Second Industrial Revolution involved changes in the nature of production, with the large conglomerates replacing the small family-owned firms of earlier decades.

The roots of the Industrial Revolution in the West are generally associated with Great Britain in the mid to late eighteenth century. There, supplies of coal, iron, and labor, coupled with a stable government, a vast colonial empire, and solid transportation network of roads and canals, set the stage for industrial growth. The First Industrial Revolution was also closely

tied to other related movements, including enclosure (the privatization of common land), the agricultural revolution of the early to late eighteenth century, and the commercial revolution. The commercial revolution made London, Liverpool, and other port cities centers of foreign trade and helped make London a powerhouse in investment banking. Contemporaneous to the First Industrial Revolution, Britain increasingly adopted the policy of free trade as spelled out in Adam Smith's *Inquiry into the Nature and Causes of the Wealth of Nations* (1776) and as represented by the repeal of the Corn Laws in 1846. The First Industrial Revolution is also remembered for its inventions, many of which were important to the cotton industry, including the flying shuttle of John Kay, the spinning-jenny of James Hargreaves, the water frame of Richard Arkwright, and the power loom of Edmund Cartwright. The vastly improved steam engines of Matthew Boulton and James Watt, the first iron-hulled ship of John Wilkinson, the first working locomotive of Richard Trevithick, the first public steam railroad (the Stockton and Darlington), and the puddling and rolling process of Henry Cort advanced the transportation and iron industries. The First Industrial Revolution arrived later in continental Europe and in the United States. Nevertheless, by 1860 the United States already ranked second to Great Britain in industrial production.

Henry Bessemer's 1855 British patent of a process to decarbonize liquid steel with blasts of air is perhaps the most famous example of an invention that helped usher in the Second Industrial Revolution of the mid to late nineteenth century and the early twentieth century. Other innovations came from many quarters of the world: the open-hearth furnace of the Siemens and Martin families of Germany and France, respectively; the "basic process" to neutralize phosphorous in iron for steel production of Sidney Thomas and Percy Gilchrist (Britain); the steam turbine of Charles A. Parsons (Britain) and Gustav de Laval (Sweden); the incandescent electric lamp of Joseph Swan (Britain) and Thomas Edison (United States); and the electric streetcar of Werner von Siemens (Germany). Further advances in electricity and chemistry and inventions like the telegraph, the telephone,

the phonograph, the motion picture camera, the internal combustion engine, the all-electric starting motor, and the first manned heavier-than-air flight all stimulated industrial production. The Second Industrial Revolution was also marked by new business and marketing techniques such as vertical integration, horizontal integration, and scientific management.

By the 1880s the United States surpassed Great Britain in industrial production, and in the first decade of the twentieth century Germany, in turn, displaced Britain for second place. By 1914 when Henry Ford of the United States introduced a moving assembly line to manufacture his Model T automobiles, the groundwork had been laid for a profound transformation of industry to be marked thereafter by a steadily increasing division of labor and mass-production techniques.

—Paul Tenkotte

Industrial Organization before the Industrial Revolution

"Protoindustrialization" is the term commonly used to describe industrial organization before the Industrial Revolution. Traditionally marked by "cottage industry" and nonmechanized production, protoindustrialization is generally distinguished from the First or Early Industrial Revolution, which was characterized by mechanization of production within factories powered by waterpower or steam engines. There are several cautionary notes to make, however. In many places, protoindustrialization and industrialization existed side by side. Furthermore, in some areas a de-industrialization stage intervened between protoindustrialization and industrialization. In other areas, a gradual integration of domestic industries into factories occurred. Studies of specific geographic regions have also discovered that the relationship of protoindustrialization to demographic factors such as marriage rates, birthrates, caloric intake, and life expectancy is inconclusive. The variant strands of protoindustrialization have also cast doubt on whether it was a consequence of the decline of manorialism/serfdom or a precipitant to the commercialization of agriculture. Clearly, no single model applies across the board worldwide.

Scholars have long debated the relationship of protoindustrialization to later industrialization, especially whether surplus capital and/or surplus labor of the earlier period fed later development. This viewpoint has led to a parallel search for how protoindustrialization in Europe metamorphosed into rapid industrialization in the nineteenth century, while the same did not occur in China and other places worldwide. More recent historians, in particular Kenneth Pomeranz in *The Great Divergence*, has stood this investigation on its head by shifting the debate from that of a rising Europe and a declining Asia to claiming that both continents were experiencing “ecological bottlenecks” to their growth in terms of “land and energy” in the eighteenth century. Europe’s pursuit of certain solutions (e.g., fossil fuels, intercontinental trade, and an increasing dependence upon colonialism and imperialism) produced a so-called Great Divergence that expressed itself in rapid industrialization in the West during the nineteenth century but not in China.

Skilled artisans in European cities and towns had long produced textiles and other finished goods in their shops. Regulated by guilds, which exercised great political and economic influence, these artisans controlled prices as well as access to their trades. Eventually they met with competition. For example, in medieval Flanders, merchant guild members called drapers began to buy wool that they then sent to rural cottagers to perform specialized tasks, such as spinning the wool into yarn, weaving the yarn into cloth, and cleaning and softening the cloth by fulling. These cottagers were peasant farmers who supplemented their incomes by working in their own homes, principally during the off-seasons that did not require laborious planting and harvesting. They were generally paid by piecework, that is, by a set price per piece. This early phase of industrialization, known variously as a cottage industry, the domestic system, or the putting-out system (because the raw materials were “put out” to the cottagers), became increasingly prevalent in textile and other industries during the eighteenth century as Europe emerged from the crisis of the seventeenth century. In addition, water-powered mills, often

in rural locations, were used for fulling textiles from medieval times throughout the period of protoindustrialization.

As in Europe, Chinese farm families also relied on cottage industries, such as spinning and weaving, to supplement their livelihoods. These subsidiary enterprises, however, differed from the European putting-out system in one substantial way. In Europe, merchants provided the raw material to cottagers to spin and weave, whereas in China, merchants advanced money to farmers, who then purchased their raw materials at nearby markets.

Protoindustrialization lasted longer in central and eastern Europe than in England and northwestern Europe. Disrupted by nearly three centuries of warfare (1618–1914), the German states were politically and economically fragmented up until the late nineteenth century. Industrialization remained subordinate to agriculture, which still employed more than 80 percent of the German population by 1800. Regional agricultural differences likewise complicated matters. West of the Elbe, there were many free farmers; however, east of the Elbe, in Silesia and Saxony, “second serfdom” held sway from the sixteenth century forward. Large landowners controlled the timber forests and, as late as the nineteenth century, the Silesian textile industry.

Industrial organization during protoindustrialization was characterized at first by animate labor in craft industries and the cottage system and by water-powered mills. It gradually evolved into concentrated production in larger factories. Although historians debate the very definition of the term “factory,” with some arguing that it must entail mechanized production, it is clear that by the late eighteenth century in Europe textile and other forms of production were being concentrated under one roof, where laborers could be supervised by an employer. The reasons for this change in organizational structure were many. Some scholars posit that it was more efficient, less susceptible to embezzlement of materials, more flexible to the changing patterns of supply and demand, more profitable for merchants, and more likely to produce better-quality goods. The evolution from craft and cottage production to larger-scale enterprises—whether

you prefer to call them factories or not—was also related to the growing networks of trade worldwide and to the competition that such trade engendered. Regardless, industrial organization was clearly changing in size and scope before the First Industrial Revolution powered its factories by steam machinery.

—Paul Tenkotte

Bibliography

- Elvin, Mark. *The Pattern of the Chinese Past: A Social and Economic Interpretation*. Stanford, CA: Stanford University Press, 1973.
- Gutmann, Myron P. *Toward the Modern Economy: Early Industry in Europe, 1500–1800*. New York: Knopf, 1988.
- Landes, David S. *The Unbound Prometheus: Technological Change in Western Europe from 1750 to the Present*. London: Cambridge University Press, 1969.
- Ogilvie, Sheilagh, and Marcus Cerman, eds. *European Proto-Industrialization*. New York: Cambridge University Press, 1996.
- Pomeranz, Kenneth. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton, NJ: Princeton University Press, 2000.

Great Britain and Its Continental Competitors in the Early Industrial Revolution

The beginnings of the Industrial Revolution in Great Britain can be dated from the 1750s, when the first factories appeared, or from the 1770s, when the rate of technological innovation began to increase. Why these developments occurred first in Great Britain has likely attracted more attention than any other question in the field of economic history. This question is important in its own right but also informs more general discussions of the causes of industrialization or modern economic growth. Yet economic historians are still far from consensus.

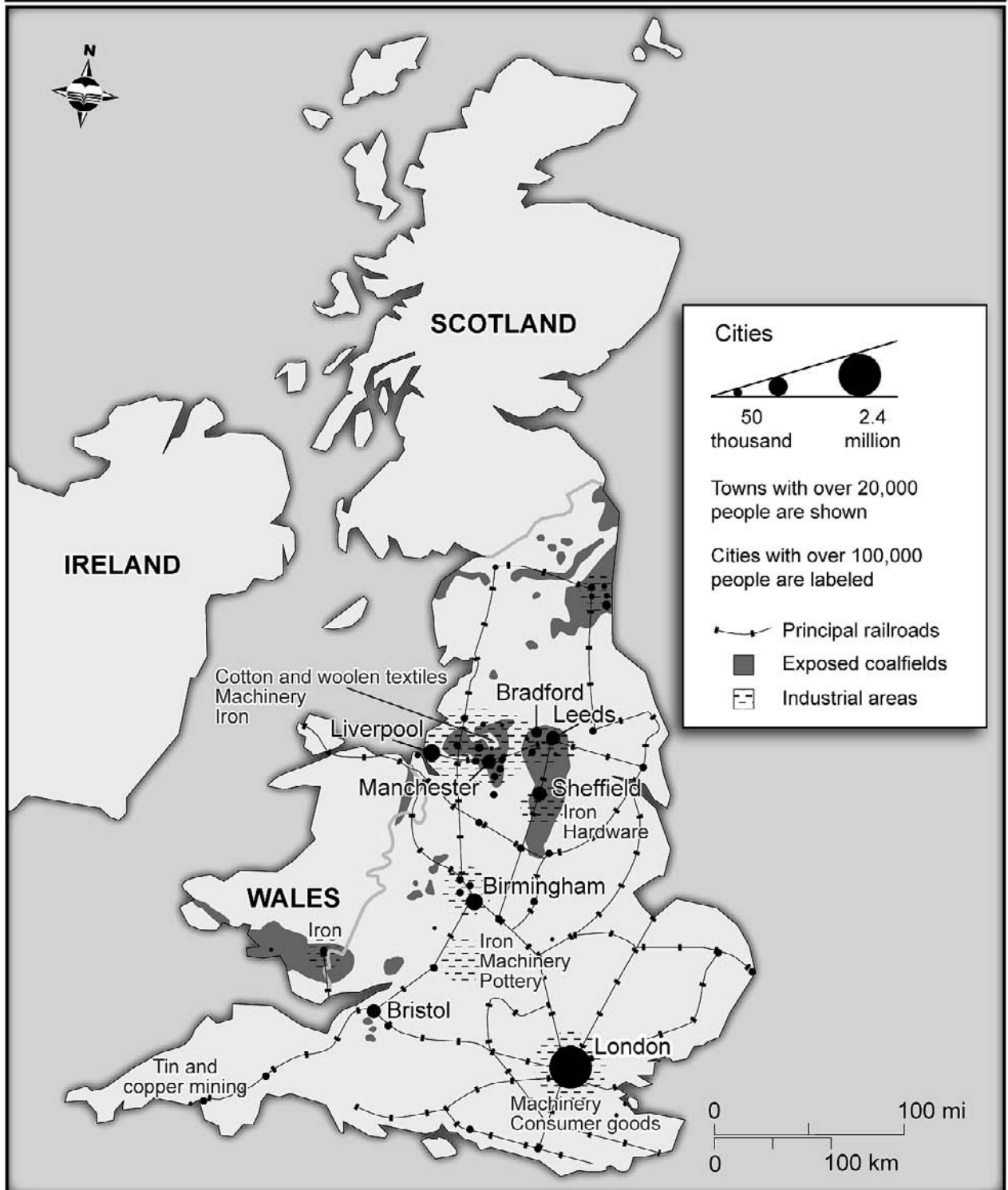
Perhaps Britain was just lucky. The prominent British economic historian Nicholas Crafts famously argued that the experience of the British Industrial Revolution hinged on a few key innovations in textile manufacture, and these might have happened anywhere. Most historians

would agree that technological innovation as well as the establishment of factories were key factors in Britain's early industrialization but reject the argument that such changes could just as easily have happened elsewhere. Britain, so it is argued, was unique in one of several respects, and this uniqueness explains Britain's primacy in industrialization. Several key arguments, each open to question, are surveyed here.

Did Britain have an advantage over other European countries in the area of science? British science was not obviously superior to French or German science during this period, but possibly British science was more practically oriented than was continental science. To be sure, there were several British learned societies, especially the Royal Society of London (usually referred to as the Royal Society), in which scientists and practical men interacted. Yet the French Royal Academy of Sciences also evinced an interest in both science and technology. The academy sponsored the publication between 1761 and 1788 of the multivolume *Descriptions des Arts et Métiers* (Descriptions of the Arts and Crafts), which described with written text and illustrations numerous handicraft and manufacturing processes. Moreover, it is unclear that the link between scientific progress and technological innovation was important. The new spinning and weaving machines in textile manufacture required no scientific knowledge, and there is no strong evidence to suggest that James Watt benefited from his knowledge of physics in developing a better steam engine. Even the advances in iron-making largely preceded any comprehension of the scientific principles involved. Still, the very idea of careful experimentation and recording of results may have usefully been transferred from scientists to practical tinkerers.

Separated from the continent by the English Channel and the North Sea, Britain had not faced a military invasion since 1066. This security may have encouraged a slightly greater willingness to make investments in factories or machinery. England also was reasonably flat and well watered, which facilitated the movement of both goods and people, but these natural advantages meant little before the transport improvements of the early eighteenth century. Britain

INDUSTRIAL REVOLUTION IN ENGLAND, CA. 1850



had some advantageous raw materials: coal, iron ore, other metals, and clay for pottery, among others. Yet many areas of the continent had similar resources, and Britain imported all of its cotton and much of its iron ore.

It has been argued that Britain benefited from moving to coal more quickly than other countries. Such a transition, it has been argued, mainly resulted from dwindling wood supplies rather than the falling cost of coal due to technological and transport improvements. Coal could produce higher heat than charcoal, and thus advances in iron-making and steam engines (but not most innovations in textiles) were more likely in a coal-based economy. France, Germany, Belgium, and other European countries also possessed large coalfields and dwindling forests, so the difference between countries is one of degree.

The British system of parliamentary government, dominated by wealthy men of property, may have contributed to industrialization because it resulted in greater confidence in the inviolability of private property and thus greater willingness to invest in factories or technology. Yet as the novels of Charles Dickens and others attest, the ability of the British courts to enforce contracts was limited. The British system of patent protection was likely better than the French custom of royal rewards for innovation but, again, was far from perfect: John Kay, who invented the flying shuttle, and Edmund Cartwright, who developed the mechanized loom, were both ruined by litigation. Britain differed less from the continental countries than is often imagined in terms of regulations prohibiting changes in technology or organization of production but appears to have been far less diligent in enforcing these regulations; this, however, might have been a reaction to rapid change rather than a cause. In terms of taxes, tax rates in Britain were on average double those in France, and this should have discouraged investment.

The British government was more decentralized and less bureaucratic than most European governments. This may have worked against the enforcement of regulations, as localities sought to attract industrial employment. Special

➤ THE FACTORY AND TECHNOLOGICAL INNOVATION

Which came first, the modern factory or modern rates of technological innovation? Surprisingly, the factory came first. In the 1750s British entrepreneurs began to draw workers together under one roof and supervise them in textiles, nail making, and a range of other industries in which workers had previously worked in their homes. The upswing in the rate of technological innovation is generally dated only to the 1770s.

While the first factories used the same technologies employed in cottages, innovators later developed large powered machines suited only to the factory setting. Thereafter, the factory and technological innovation were mutually supportive. The factory allowed entrepreneurs to watch the production process for the first time and thus encouraged innovation. The factory also facilitated the division of labor and thus mechanization. The development of machines suited to the factory environment further enhanced the advantage of the factory.

—Rick Szostak

interests hoping to deter innovation could lobby central governments on the continent but would find such a strategy less helpful in Britain. Decentralization also had an impact on transportation infrastructure: continental countries lavished funds on a few routes from the capital, while locally based turnpike trusts and river improvement and canal corporations created a national network of roads and waterways in Britain.

Britain in the late 1700s possessed the largest overseas empire in the world, especially after Britain's victory over France in the Seven Years' War (1756–1763). Some scholars have argued that profits earned in the empire were invested in industry. Others have countered that profits have been exaggerated and, furthermore, that there was no strong link between merchants and industrialists in terms of finance. Another hypothesis is that Britain benefited from privileged access to raw materials, but it seems that the continental countries could obtain many imported goods at comparable prices. With respect to markets, most industrial goods were consumed

within Britain, though there are exceptions: half of cotton goods were exported, though only a fraction of exports went to the empire.

British society was more meritocratic than continental societies in which titled nobles enjoyed many real and honorific privileges. Still, most successful British business families dissipated some of their wealth in purchasing landed estates and titles. There may nevertheless have been a greater social incentive in Britain to earn money in industry and even to reinvest much of it in industry. With respect to workers, some scholars have suggested that the English system of Poor Laws discouraged not only work effort but also geographical mobility, for the unemployed could be sent back to their home parish. Others have argued conversely that a social safety net may have actually encouraged workers to take a chance on leaving the countryside for jobs in urban industry, especially since industrial parishes rarely expelled poor migrants.

British industries became regionally concentrated during the eighteenth century. The cotton industry was concentrated in Lancashire, wool was concentrated in Yorkshire, various metal trades existed around Birmingham, steel was concentrated in Sheffield, and pottery was concentrated in Staffordshire. Innovators and entrepreneurs could thus learn from each other and could also more readily appreciate the potential advantages of any innovation.

Regional specialization in turn encouraged division of labor. If one worker performed several tasks, any specialized machine would lie idle while other tasks were performed. The possibilities and advantages of mechanization were much clearer if each worker performed one task. As industries became regionally concentrated, specialized machine-making firms emerged to serve these. While specialized machine makers are most often discussed with respect to textiles, it is worth noting that steam engine manufacture after Watt was also a task for such firms. These firms competed on the basis of the quality and effectiveness of their machines and thus had a powerful incentive to innovate.

In the mid-eighteenth century, turnpikes, river improvements, and canals gave Britain by far the best transport system in Europe. As noted

above, this encouraged regional specialization and division of labor. As well, entrepreneurs in many industries moved from personally selling goods at fairs to selling by sample or catalogue and shipping goods by road carrier. This not only freed up entrepreneurial time to devote to production but also created a strong incentive for mechanized factory production of standardized goods. Individual workers in their own homes using general-purpose tools could not produce the sort of standardization that a consumer ordering from a catalogue demanded. Some industries also pursued mechanization in order to respond quickly to changes in fashion. Others were encouraged to innovate in order to incorporate a wider range of raw materials into their product.

The fact that economic historians have not yet agreed on the factor or factors that caused Britain to have the first Industrial Revolution has encouraged some scholars to downplay the uniqueness and significance of the Industrial Revolution. Yet the widespread adoption of the factory and the occurrence of important technological innovations across several industries suggest otherwise. Moreover, from at least 1820 onward, Britain experienced sustained levels of economic growth never previously seen in the world. The search for consensus will thus likely continue, and the factors above will likely remain the focus of debate.

—Rick Szostak

Bibliography

- Berg, Maxine. *The Age of Manufactures*. 2nd ed. London: Routledge, 1994.
- Crafts, N. F. R. "Industrial Revolution in England and France, Some Thoughts on the Question, 'Why Was England First?'" *Economic History Review* 30 (1977): 429–441.
- Floud, Roderick, and Paul Johnson, eds. *The Cambridge Economic History of Modern Britain*, Vol. 1, *Industrialisation, 1700–1860*. Cambridge: Cambridge University Press, 2000.
- Hudson, Pat. *The Industrial Revolution*. New York: Arnold, 1992.
- Mokyr, Joel. *The British Industrial Revolution: An Economic Perspective*. Boulder, CO: Westview, 1999.
- More, Charles. *Understanding the Industrial Revolution*. London: Routledge, 2000.

Musson, A. E., and Eric Robinson. *Science and Technology in the Industrial Revolution*. Manchester, UK: Manchester University Press, 1969.

Szostak, Rick. "The Organization of Work: The Emergence of the Factory Revisited." *Journal of Economic Behavior and Organization* 11 (1989): 343–358.

Technology and the Early Industrial Revolution

How widespread was technological innovation in the last half of the eighteenth century, and what were its effects on England's early industrialization? A handful of innovations in textiles, iron manufacture, and steam engines are the best known. James Watt (1736–1819) dramatically increased the efficiency of steam engines in the 1770s and 1780s. John Kay's flying shuttle (1733), James Hargreaves's spinning jenny (1764), Richard Arkwright's water frame (1769), and Samuel Compton's spinning mule (1779) all contributed to increased production of cotton textiles. Henry Cort's puddling and rolling process (1784) used coal rather than charcoal as a fuel in both the furnace and forge and produced cheaper, better, and much more standardized iron sheets than was previously possible. It was no accident that these inventions occurred in England. Watt, Cort, and Arkwright were not isolated geniuses but instead built upon decades of experimentation undertaken by many other British inventors.

Moreover, this handful of major innovations was far from the whole story of innovation in the late eighteenth century. In textiles manufacturing, every stage of production—carding, spinning, weaving, bleaching, dyeing, and printing—witnessed important innovations during the latter half of the eighteenth century. Improved bellows in the iron industry were encouraged by Cort's innovation but also reflected decades of experimentation. The various trades that fashioned iron and other metals into finished goods also were innovative: machines for stamping and pressing metal sheets were invented in the 1760s, and slitting mills and wire works were developed to produce rods of the appropriate size for nail makers and needle

makers, respectively. The development by Benjamin Huntsman (1704–1776) of a technique for producing higher-quality steel in 1751 set the stage for the dramatic growth of the Sheffield steel industry. Methods of digging and draining coal mines were improved, and underground transport of coal advanced dramatically (with technology later adapted for the first railroads). Josiah Wedgwood (1730–1795) and others revolutionized the quality and price of Staffordshire pottery in the second half of the eighteenth century with developments in mixing clay, forming it, and painting it.

Each of these innovations required the effort and energy of many individuals. Watt's steam engine would have been impossible to build before about 1770, when techniques for planing valves to withstand the pressure of steam were developed. Moreover, Watt needed a very tight fit between piston and cylinder. He was ecstatic when John Wilkinson (1728–1808) developed a boring device capable of accuracy to within the width of a penny.

The British Industrial Revolution is celebrated because it led to an increase in the rate of economic growth. From at least 1820 onward, British per capita incomes began to rise by 2 or 3 percent per year. This was fast enough to be noticeable. Moreover, this growth in incomes occurred despite rapid population growth, thus overturning the famous prediction of Thomas Malthus (1766–1834) that poverty could never be erased because population would inevitably grow faster than output.

While economic historians have tended to celebrate the eventual impact of technology on economic growth, they have also recognized that not all workers benefited at the time. Social historians have shown greater concern for the plight of workers replaced by machines and the more general de-skilling of labor that followed from division of labor and mechanization. Workers could no longer take artisanal pride in the finished product. Workers in the early stages of industrialization occasionally protested violently against the introduction of machines. But the children of such workers saw little alternative to factory work.

—Rick Szostak

Bibliography

- Berg, Maxine. *The Age of Manufactures*. 2nd ed. London: Routledge, 1994.
- Mokyr, Joel. *The British Industrial Revolution: An Economic Perspective*. Boulder, CO: Westview, 1999.
- Szostak, Rick. *The Role of Transportation in the Industrial Revolution*. Montreal: McGill-Queen's University Press, 1991.
- Von Tunzelman, Knick. *Steam Power and British Industrialization to 1860*. Oxford: Oxford University Press, 1978.

Textile Manufacturing in Eighteenth-Century England

Textiles—materials made by weaving threads of animal or plant fibers together—are one of the oldest manufactured products, easily predating the rise of civilization. For centuries, both spinning and weaving were tedious and time-consuming, making fabric a relatively expensive commodity. In the late eighteenth and early nineteenth centuries a series of inventions mechanized both trades, profoundly changing the nature of clothing and in the process touching off the Industrial Revolution.

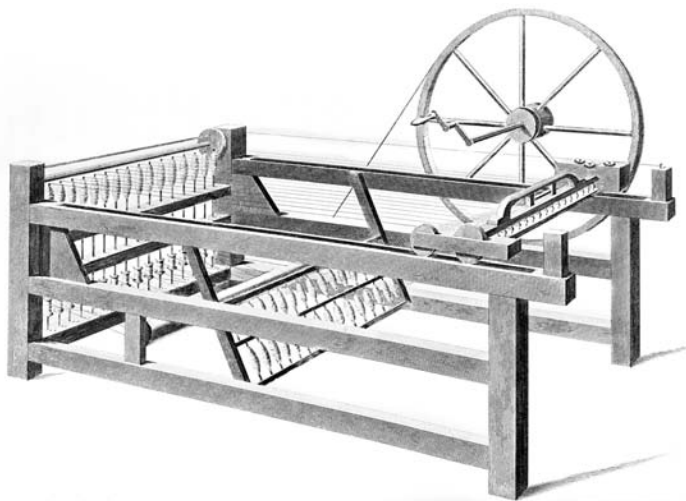
At the dawn of the industrial era, textiles were manufactured using a decentralized method called the putting out system. This involved entrepreneurs who contracted the labor

of spinning and weaving to individuals working at home, periodically picking up the finished product, dropping off more raw materials, and paying for the labor. As such, it was a staple income for many farm families. Early machines were intended to improve production in this traditional cottage industrial system.

Such was the spinning jenny, developed by James Hargreaves in the 1760s and patented in 1770. It mechanized the process of thread (yarn) spinning, which had been the bottleneck in cloth production. The initial model was hand-cranked and allowed the operator to make eight threads where one had been made before. The yarn was of poor quality, though, and there was room for improvement. The next innovation came close on its heels, with the development of the waterframe in 1771 by Richard Arkwright, which produced a stronger and more uniform thread. Thread manufacture was further enhanced with the creation of the spinning mule, a hybrid that in 1775 combined the better features of the waterframe and the jenny. It also proved capable of expansion; by 1790 some mules boasted 400 spindles. Yarn production for the moment vastly outstripped weaving capacity.

Weaving also underwent drastic changes during the eighteenth century. The first step toward mechanization came with the invention of the flying shuttle by John Kay in 1733. Although it sped the weaver and allowed the production of a wider bolt of cloth, true innovation did not come until after thread production outstripped the capacity of existing looms after midcentury. In 1787 Edmund Cartwright introduced the power loom, fully mechanizing the weaving process. It had some initial flaws that were not fully worked out until the 1820s.

During this interim of roughly a generation when spinning had been mechanized and weaving was still working out the bugs of the power loom, the numbers of hand weavers increased drastically. They commanded good wages and bitterly resented the loss of jobs due to the gradual mechanization of their trade as the problems of the power loom were solved. Calling themselves Luddites (after their fictional commander, General Ned Ludd) some of these displaced workers engaged in machine breaking



The spinning jenny was an important invention in the textile industry in that it was the first machine to use multiple spindles simultaneously. It was invented by James Hargreaves in 1764. (Library of Congress)

➤ COTTON VERSUS WOOL

Textile manufacture is generally one of the first sectors to experience factory organization and mechanization as countries develop. Textile technology is relatively simple, and a mass market in textiles exists even in poor countries. During the British Industrial Revolution, it was not the large woolen industry that first innovated but rather the much smaller and newer cotton industry. Cotton fibers appear to have been better suited to mecha-

nization. Cotton textiles were originally more expensive, as raw cotton had to be imported from warmer climes (particularly the U.S. South), but the price of cotton goods fell dramatically due to mechanization and factory production. Cotton textiles were generally easier to clean and more comfortable than woolen textiles and were quickly adopted by farmers and workers.

—Rick Szostak

and terroristic attacks on mill owners and managers. Their efforts did not stem the tide of industrialization.

The industrialization of textile manufacturing saw the birth of the modern factory system. The early hand-operated machines were superseded by larger models that required more than muscle power and were more expensive than a small weaver could afford. Entrepreneurs set a new pattern in which they centralized the means of production under one roof; instead of bringing the work to the laborer, they forced the laborer to come to the work. Water power replaced muscle power, dictating that the facilities be located on rivers at the fall line. These new factories offered the owners and managers a greater degree of control over the workforce and a consequent increase in productivity. The adoption of steam power further increased productivity and was not affected by drought or cold.

Working conditions in these new factories were brutal, and living conditions in the new towns that grew up around them were squalid. There was a surplus of labor at the turn of the nineteenth century as agriculture became less labor-intensive. Employers thus could and did offer low wages and demand long hours from the workforce, forcing them into a subsistence economy. The housing provided for them was crowded and unsanitary. These conditions prompted attempts to organize labor and government efforts to regulate industry, both with varying degrees of success but with the cumulative effect of gradually bettering the lot of the working classes.

—Melvin Smith

Bibliography

- Chapman, S. D. *The Cotton Industry in the Industrial Revolution*. Basingstoke, UK: Macmillan, 1987.
- Harte, N. B., and K. G. Ponting, eds. *Textile History and Economic History*. Manchester, UK: Manchester University Press, 1973.
- Jenkins, David, ed. *The Cambridge History of Western Textiles*. Cambridge: Cambridge University Press, 2003.

Early Industrial Revolution in Continental Europe

The early Industrial Revolution (sometimes called the first Industrial Revolution) occurred slightly after and somewhat contemporary to the agricultural revolution of the early-to-late eighteenth century. By the late eighteenth century, the early Industrial Revolution was well under way in England and in parts of continental Europe; however, it should be noted that it was not a unipolar event experienced simultaneously by multiple regions. Rather, the transition from an agriculturally based economy to a more mechanized industrial and urban one was gradual, uneven, and multifaceted. Furthermore, the early Industrial Revolution was dependent upon a whole range of political, cultural, and social conditions that differed from place to place, further affecting its appearance, relative strength, and growth.

Skilled artisans in European cities and towns had long produced textiles and other finished goods in their shops. Regulated by guilds, which exercised great political and economic influence,

these artisans controlled prices as well as access to their trades. Eventually they met with competition. For example, in medieval Flanders, merchant guild members called drapers began to buy wool that they then sent to rural cottagers to perform specialized tasks, such as spinning the wool into yarn, weaving the yarn into cloth, and cleaning and softening the cloth by fulling. These cottagers were peasant farmers who supplemented their incomes by working in their own homes, principally during the off-seasons that did not require planting and harvesting. They were generally paid by piecework, that is, by a set price per piece. This early phase of industrialization, known variously as protoindustrialization, cottage industry, the domestic system, or the putting-out system (because the raw materials were “put out” to the cottagers), became increasingly prevalent in textile and other industries during the eighteenth century as Europe emerged from the “crisis of the seventeenth century.”

Protoindustrialization, marked by cottage industry, is distinguished from the first or early Industrial Revolution, which was characterized by mechanization of production within factories powered by water and steam. By the late eighteenth century, England was the leader of the early Industrial Revolution, based on its deposits of raw materials such as coal and iron ore and its colonial empire, stable government, and network of canals and roads. Nevertheless, France was close behind, as were pockets of the German states, Switzerland, northern Italy, Flanders, Spain, and Austria.

The early Industrial Revolution was based on the steam engine and the production of coal and iron. The steam engine gradually made water-powered mills outdated, as steam-operated machinery powered factories where groups of employees worked on specialized tasks. Likewise, the steam engine changed the course of transportation in its application to steamboats, steamships, and steam railroads. Steam-operated pumps drained coal mines. Reciprocally, coal typically powered steam engines. Indeed, European coal reserves were essential to this early period of industrialization, as Europe’s forests were being depleted for fuel and building materials. Even iron smelting (removing iron from its ore

through intense heating) had long relied upon charcoal, a by-product of charred wood. In the early Industrial Revolution coke, a waste product of coal, was instead used to fire iron furnaces. Iron, of course, was utilized in the manufacture of machinery, tools, locomotives, and ships. Improved transportation featuring railroads and steamships, in turn, enabled the transfer of coal and finished products, spurring international trade as well as emigration from Europe.

Each of the nations of continental Europe had political, cultural, and social conditions that either impaired or propelled the early Industrial Revolution. France remained largely agricultural, a consequence of the strengthening of the rural peasant class during the French Revolution and thereafter. France benefited, however, from a core of highly trained artisans who concentrated on the manufacture of luxury goods that became known worldwide for their quality. Napoleon’s Continental System attempted to close continental Europe to British imports, contributing to a temporary acceleration in continental industrialization. His defeat, however, removed this blockade and flooded the continent with inexpensive British goods. Further, Britain clearly ruled the seas as well as overseas trade after the wars. Indeed, France had already suffered great colonial losses at the end of the earlier Seven Years’ War (1763). Finally, France had less developed transportation links than industrializing Britain. In the mid-nineteenth century, the French government sought to reverse this condition as it undertook state-sponsored railroad construction that, in turn, began to foster a national market and industrialization.

The German states were politically and economically fragmented until the late nineteenth century. The resultant proliferation of customs duties hampered trade. Prussia, in alliance with other states, reformed the system somewhat in 1834 when it created a unified customs trading zone called the Zollverein. Nevertheless, industrialization remained subordinate to agriculture, which still employed more than 80 percent of the German population in 1800. Regional agricultural differences likewise complicated matters. West of the Elbe, there were many free farmers; however, east of the Elbe, in Silesia

and Saxony, “second serfdom” held sway from the sixteenth century on. Large landowners controlled the timber forests and, as late as the nineteenth century, the Silesian textile industry. Nonetheless, pockets of industrial centers existed throughout the German states, including the coal-and-iron-rich Ruhr and Rhine valleys. Arriving late to industrialization did prove beneficial in some ways, however, as Germany relied upon Britain for imports of machinery, including railroad equipment. Like France, Germany undertook a massive and largely government-financed railroad-building era in the mid-nineteenth century.

Other European regions experienced the Early Industrial Revolution. Switzerland’s industrial capacities concentrated on clock making as well as cotton and silk textiles. Northern Italy was known for its silk mills, Lombardy for its cotton industry, Biella for its woolens, and Tuscany for its straw hats. Flanders gained an early advantage in the production of textiles, exporting some 195,000 pieces annually by 1780–1785 to the New World via Spain. The nineteenth century, however, witnessed increasing competition for Flanders and smaller profit margins. In Spain, the region of Catalonia became noted for its textile manufacturing. By the 1780s in fact, Barcelona had the largest European concentration of cotton operations, totaling more than 100. In Austria, Empress Maria Theresa (r. 1740–1780) initiated the Haugwitz Reforms, freeing export industries from the intervention of local officials. The Habsburg lands of the Stryian countryside engaged in iron production, Lower Austria engaged in cotton textiles, the Alpine areas engaged in iron production, and Bohemia engaged in cotton and wool textiles and glass-making. In addition, Bohemia had rich coal deposits. Suffering an economic depression after the Napoleonic Wars, the Habsburg realms gradually revived, and in 1851 the empire established a customs union over all its territory.

The Early Industrial Revolution eventually evolved into a Second Industrial Revolution of the mid-to-late nineteenth century, of which steel, electricity, oil, chemicals, and an increasing division of labor became the hallmarks.

—Paul Tenkotte

Bibliography

- Cameron, Rondo. *France and the Economic Development of Europe, 1800–1914*. Princeton, NJ: Princeton University Press, 1961.
- Deane, Phyllis. *The First Industrial Revolution*. 2nd ed. Cambridge: Cambridge University Press, 1979.
- Good, David F. *The Economic Rise of the Habsburg Empire, 1750–1914*. Berkeley: University of California Press, 1984.
- Gutmann, Myron P. *Toward the Modern Economy: Early Industry in Europe, 1500–1800*. New York: Knopf, 1988.
- Kemp, Tom. *Industrialization in Nineteenth-Century Europe*. 2nd ed. London: Longman, 1985.
- Landes, David S. *The Unbound Prometheus: Technological Change in Western Europe from 1750 to the Present*. 2nd ed. Cambridge: Cambridge University Press, 2003.
- Mathias, Peter, and M. M. Postan, eds. *The Cambridge Economic History of Europe*, Vol. t, Pt. 1, *Britain, France, Germany, and Scandinavia*. Cambridge: Cambridge University Press, 1978.
- O’Brien, Patrick. *Railways and the Economic Development of Western Europe, 1830–1914*. New York: St. Martin’s, 1983.
- Ogilvie, Sheilagh, and Marcus Cerman, eds. *European Proto-Industrialization*. New York: Cambridge University Press, 1996.
- Trebilcock, Clive. *The Industrialization of the Continental Powers, 1780–1914*. London: Longman, 1981.

The Second Industrial Revolution in Europe and the United States, 1850–1914

The term “second Industrial Revolution” is often used to refer to a series of technological and organizational changes that transformed industrial activity in Europe and the United States from approximately 1850 to 1914. These innovations changed the scope and nature of manufacturing and also produced significant changes in Western societies and in the relationship between the West and other parts of the world. Among these changes were the rise of new industries, often based on the use of scientific principles and methods to discover or develop new products; the growth of enormous industrial concerns organized as joint-stock companies; the development of associations such as cartels and trusts

to control prices or output; the emergence of modern forms of advertising and marketing that, along with other developments, promoted the growth of new white-collar occupations; and increased economic interdependence between Europe and other parts of the world, with the latter increasingly subordinated both economically and politically to the former.

As in the first Industrial Revolution, a significant change associated with the second industrial revolution was the development of new technologies. Steel, for example, had been too expensive for mass use before the 1850s. However, the invention of the Bessemer converter in the 1850s and the Siemens-Martin open hearth furnace in the 1870s made the production of high-quality steel much cheaper and led to an enormous growth in steel output. As cheap, abundant steel became available it was used to make stronger, lighter, and more efficient machinery and larger and stronger buildings, ships, bridges, and other structures. The Eiffel Tower, erected in Paris in 1889, was a symbol of the widespread adoption of steel for new uses. Steel also facilitated the expansion of railroads throughout the world. Steel was used not only for rails but also for locomotives, rolling stock, bridges, repair yards, and auxiliary facilities. In turn, railroads helped create larger and more unified markets and lower costs for raw materials and finished goods.

The second Industrial Revolution also saw the creation of a number of new industries. The potential economic importance of electricity had been suspected since the start of the nineteenth century, following Michael Faraday's invention of a rudimentary electric motor and dynamo in the 1820s and 1830s. However, it was not until the 1860s and 1870s that the means for transmitting and converting electricity into light, heat, and power at the receiving end were developed through the inventions of Nikola Tesla (1856–1943) and Thomas Edison (1847–1931). Moreover, Edison and his counterpart in Germany, Werner von Siemens (1816–1892), combined inventiveness with entrepreneurial spirit and organizational talents to create large firms that propelled the growth of electrical networks. By the early 1900s electricity was being used to light businesses and homes, power machines in factories, and run streetcars.

Another new industry was the chemical industry, which expanded dramatically after 1850. German chemists and engineers were responsible for breakthroughs in areas such as dyestuffs, pharmaceuticals, photochemicals, fertilizers, and synthetics. By 1914 Germans dominated world chemical markets, thanks to a combination of systematic research and development, efficient productive organization, and aggressive marketing.

Germans also laid the foundation of the automobile industry. In the 1880s and 1890s Gottfried Daimler (1834–1900) and Carl Benz (1844–1929), working independently of each other, built practical internal combustion engines using a gasoline and air mixture. Although subsequently many individuals made technical improvements and additions, including pneumatic tires, the radiator, the steering wheel, and so forth, Henry Ford (1862–1947) made the automobile widely available through mass production. Ford combined interchangeable parts and continuous flow production, both of which had evolved previously in the production of firearms, harvesters, typewriters, sewing machines, and bicycles, to create that prototypical symbol of modern industry, the assembly line.

Mass production made an increasing stream of affordable goods available to consumers. Thus, while the first industrial revolution had done little to raise per capita living standards, the second industrial revolution spread the benefits of industrialization to broad segments of the European and North American populations and raised the overall standard of living. Indeed, more and more firms established specialized sales and marketing departments with networks of agents, dealers, franchisees, and retailers to promote their products. These salesmen and accountants swelled the ranks of the white-collar workforce that grew alongside the industrial working class.

Another feature of the second Industrial Revolution was the growth of new forms of business organization. Because many of the new industries required enormous amounts of capital, most of them became limited liability joint-stock companies from which stock was bought not only by individual investors but also by banks and other companies. To protect these huge

investments and ensure profitability, owners and managers bought up subsidiary suppliers, which created large vertically integrated firms that controlled everything from raw materials to finished products. In addition, they also frequently entered into formal and informal agreements with similar companies, creating gigantic horizontally integrated enterprises that sought to limit competition or divide up markets.

The era from the 1880s to World War I was the golden age of trusts and cartels such as Krupp, U.S. Steel, General Electric, Siemens, Bayer, Ford Motors, and Standard Oil. Scholars sometimes describe this as an era of organized capitalism to distinguish it from the more competitive laissez-faire capitalism of the early 1800s. As the names listed above indicate, this trend was particularly pronounced in the United States and Germany, whose industries challenged and often surpassed those of England. For example, while England's share of global industrial output fell from 32 percent to 14 percent between 1870 and 1913, Germany's output rose from 13 percent to 16 percent, and that of the United States jumped from 23 percent to 36 percent.

The second Industrial Revolution reinforced the dominance of the West in the global economy. Not only did the new military, transportation, communication, and medical technologies make it easier and cheaper for European states and, to a lesser degree, the United States to colonize other parts of the world, but the very nature of industrial development made colonization seem more necessary to many Western leaders. While Europe and America had been largely self-sufficient in raw materials during the first industrial revolution, many of the new industries relied heavily on raw materials from other parts of the world, especially tropical and subtropical regions. This perceived need to ensure access to imported goods led Europeans, especially the British, to invest huge amounts of capital overseas from 1870 to 1914. It also frequently contributed to a heightened desire among Europeans to physically occupy and colonize overseas territories.

—Craig Patton

Bibliography

Headrick, Daniel. *Tools of Empire: Technology and European Expansion in the Nineteenth Century*. New York: Oxford University Press, 1981.

Hounshell, David A. *From the American System to Mass Production, 1800–1932*. Baltimore: Johns Hopkins University Press, 1985.

Landes, David S. *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*. 2nd ed. New York: Cambridge University Press, 2003.

Mokyr, Joel. *The Lever of Riches: Technological Change and Economic Progress*. New York: Oxford University Press, 1990.

Stearns, Peter. *The Industrial Revolution in World History*. 2nd ed. Boulder, CO: Westview, 1998.

Industrialization in Russia

The industrialization of Russia between 1750 and 1914 took place in two phases. In the first, from 1750 to 1860, industrial growth was slow but relatively steady, while in the second, from 1860 to World War I, industrialization accelerated and showed significant innovation.

The beginnings of Russian industrialization can be traced back to the reign of the Westernizing tsar Peter the Great (r. 1682–1725), who had made economic development a key part of his plan to modernize Russia and elevate it to the status of a great power. Peter promoted the development of mining, metallurgy, and textiles primarily to meet the needs of his revamped army and the new Russian navy. Although most of his successors through Catherine the Great were more interested in Western fashions and culture than in technology or business organization, the need to maintain Russian military power led them to continue government support for heavy industry, especially mining and metallurgy. Much of the increased production was located in the Urals and western Siberia, whose mineral wealth was becoming increasingly evident as Russian migration to the region continued. By 1800, Russia was the leading producer of finished iron in the world, just ahead of Great Britain. However, Russia's primacy was short-lived. By 1820, the British, using new technologies and methods of production, surpassed the Russians, and by 1860 as the Industrial Revolution spread, a half dozen other states had done the same.

While mining and metallurgy stagnated in the early 1800s, the number, size, and output of textile factories increased steadily, and by 1860

cotton textiles were the most dynamic sector of the Russian economy. A considerable part of this increase was due to the gradual mechanization of production in the 1830s and 1840s, including the use of steam power in some of the larger enterprises. Sugar refining, especially in Ukraine, was another industry where production rose significantly as a result of technological and organizational innovation.

Under Peter, most industrial enterprises had been owned and operated by the state. Over the course of the eighteenth century, many of these operations were sold or given over to private industrialists, most of whom were nobles, since only they (as owners of serfs) had a ready supply of labor. However, in the late 1700s and early 1800s nonnobles were able to acquire or establish factories as well, using privately owned serfs or state peasants who had received permission from their landlords to hire themselves out for wages. The reliance of all industrial employers on serf labor in one form or another was a distinctive feature of early Russian industrialization and contributed, at least in part, to its unevenness.

Industrialization was also handicapped by the relative scarcity of capital and Russia's inadequate transportation system. Prior to the late 1800s, most capital came from domestic sources. Direct government investment was extremely important in the early 1700s, but after 1750 industrial enterprises were increasingly financed by private capital, especially with the growth of privately owned banks during the reign of Catherine the Great. Although the government under Catherine and Alexander I made some effort to improve both road and canal networks, these were not enough to overcome the huge distances separating the country's major economic regions. Likewise, before 1850 railroads were too few to have a significant economic impact. While a short line was built between St. Petersburg and the imperial residence at Tsarskoe Selo in 1836, a commercial rail link between St. Petersburg and Moscow was not constructed until 1851.

Russia's defeat in the Crimean War (1854–1856) led both the government and also much of the educated public to recognize the importance of industrialization. Alexander II (1855–1881)

was instrumental in laying the groundwork for industrialization by emancipating the serfs to create a somewhat freer labor force and by creating a more rational legal and administrative system conducive to commercial and manufacturing activity. However, the greatest industrial progress occurred during the reigns of Alexander III and Nicholas II between 1881 and 1914. The Ministry of Finance played a crucial role in this process. Under the leadership of men such as Nikolai Bunge and Sergei Witte, who served as finance ministers during 1881–1886 and 1892–1903, respectively, the Finance Ministry adopted a coordinated approach to industrial growth that centered on railroad construction that was financed through extensive foreign investment, large-scale grain exports, and protective tariffs. While the government invested directly in railroads, it also granted generous subsidies to private entrepreneurs in industries such as metalworking and machine building, which provided goods to the railroads. The results were dramatic. Over 45,000 miles (72,420 kilometers) of track were constructed between 1859 and 1914, with the Trans-Siberian railroad alone covering nearly 4,000 miles (6,500 kilometers). Unfortunately, there were few improvements in other means of transport. The country's canal and road networks were largely neglected during the railroad boom.

Among other industries, the cotton industry continued to perform the best, helping make Russia the world's fourth-largest producer of cotton goods in 1910. While some industries flourished and others lagged, overall annual industrial growth averaged about 6 percent a year, with major new centers of production arising in the Ukraine and the Transcaucasia region (although Moscow and St. Petersburg remained the most important industrial regions). For the expanding industrial workforce, which numbered almost 4 million by 1914, working and living conditions were extremely harsh, and all forms of labor organization were forbidden. Moreover, the policy of financing industry through massive grain exports and high taxes aggravated the economic hardships of the peasantry, contributing to the revolutionary crises of 1905 and 1917.

—Craig Patton

Bibliography

- Blackwell, William L. *The Industrialization of Russia: A Historical Perspective*. 3rd ed. Arlington Heights, IL: Harlan Davidson, 1994.
- Crisp, Olga. *Studies in the Russian Economy before 1914*. New York: Barnes and Noble, 1976.
- Portal, Roger. "The Industrialization of Russia." In *Cambridge Economic History of Europe*, Vol. 6, *The Industrial Revolution and After*. Cambridge: Cambridge University Press, 1965.
- von Laue, Theodore H. *Sergei Witte and the Industrialization of Russia*. New York: Columbia University Press, 1963.
- Weiss, Roger, ed. *Russian Economic History in the Nineteenth Century*. Chicago: University of Chicago Press, 1989.

Industrialization in the United States

From the eighteenth century through the early 1900s, the United States passed through several stages of industrialization. As part of Britain's colonial empire, the 13 colonies were subject to Britain's policy of mercantilism. The colonies did, however, embark upon a period of proto-industrialization in colonial times during which merchants utilized the labor of farmers in their "cottages" to manufacture textiles and other goods. Called a cottage industry or the putting-out system (because the raw materials were "put out" to cottagers), this economy evolved into the early (or first) Industrial Revolution in the early to mid-nineteenth century and into the second Industrial Revolution in the late nineteenth and early twentieth centuries. By 1860 the United States ranked second to Britain in industrial production in the world, and by the early 1880s the United States surpassed Great Britain.

During the colonial period, the 13 colonies were expected to fulfill two important economic roles: (1) as a supplier of raw materials to Britain, especially timber, cotton, grain, tobacco, rice, and indigo; and (2) as a market for finished British goods. In mercantilist fashion, Parliament passed a number of navigation acts that regulated international trade. For example, all export and import goods had to be carried in English or colonial ships, manned by crews composed of three-quarters Englishmen (including

colonial Americans). Furthermore, nearly all imports from continental Europe to the colonies had to pass through England first, where they were taxed. Some colonial exports from America had to be shipped to Britain before being sent elsewhere, including tobacco. Finally, Parliament forbade the colonists from building certain industrial enterprises, especially those related to iron production, as this would compete directly with England. For a time, the British government did not rigorously enforce many of these regulations but left the colonies to what has been termed "salutary neglect." Following Britain's victory in the French and Indian War (the Seven Years' War) in 1763, however, the situation changed. Facing the need to finance a large standing army to protect their vast territorial gains in North America, the British passed legislation to raise colonial taxes. These taxes and stricter enforcement of the Navigation Acts increasingly fettered the colonies economically and helped to lead to revolution.

During the American Revolution, infant American industry experienced growth. The revolutionary army depended on these industries and protected them, as in the case of General George Washington wintering at Valley Forge, the location of important iron-making facilities. After the Revolution, American industry failed to grow at the pace of its British counterpart. Unlike Britain, which had a plentiful labor supply and a compact nation with well-developed transportation links, the United States had plenty of land available for agriculture and hence few laborers for industrial purposes. Furthermore, transportation was difficult. Alexander Hamilton, secretary of the treasury under President Washington, encouraged manufacturing, but the results were limited. American industry benefited again during the Napoleonic Wars, especially following President Thomas Jefferson's Embargo Act of 1807. Francis Cabot Lowell, for example, opened a large cotton factory in Massachusetts in 1813. Employing farm girls, he built dormitories to house them and provided them with good wages. Following the cessation of the wars in 1815, however, international trade resumed, and the British dumped finished goods onto the American market, often below prices charged

in Britain itself. Foreign competition and the disagreement between northern merchants and southern planters on the issue of tariffs created an economic climate not conducive to industrial growth. By 1820, for instance, the city of New York counted only 35 companies employing ten or more workers.

Gradually the construction of important transportation links transformed the United States into a fertile field for the growth of manufactures. These included the National Road from Cumberland, Maryland, to Wheeling, Virginia (now West Virginia; 1818), and the 363-mile (584-kilometer) Erie Canal (1825) between Albany and Buffalo, New York. By 1840 the nation had 3,326 miles (5,353 kilometers) of canals. The first steamboat (*New Orleans*) appeared on the Ohio and Mississippi rivers in 1811, and the first railroad (the Baltimore and Ohio) opened in 1828. By 1860 there were 30,626 miles (49,288 kilometers) of railroads in the United States, increasing to 93,262 miles (150,091 kilometers) by 1880. In 1861 the first transcontinental telegraph began operation, followed by the first transatlantic telegraph in 1866 and the first transcontinental railroad in 1869. Immigrants to the United States, largely drawn by the promise of economic opportunity, flooded into the nation from the 1840s onward, especially Irish and Germans. By 1855 more than 60 percent of the employees of the Lowell cotton mills were Irish.

With plentiful supplies of coal, copper, cotton, grain, iron, livestock, and oil, industry in the United States grew rapidly during the second half of the nineteenth century. Cities like Birmingham, Cleveland, Buffalo, and Pittsburgh became centers of steel production; Cincinnati and Chicago became centers of meatpacking; and Milwaukee became a center of brewing. Buffalo, Chicago, Cleveland, Erie, Milwaukee, and Toledo benefited as ports along the Great Lakes. Detroit became home to the nascent automotive industry.

American technology also contributed to industrialization. The U.S. Patent Office granted 31,000 patents in the period 1790–1860 and 1.5 million from 1860 to 1930. Eli Whitney's cotton gin (1793), although important, paled in comparison to his perfection of the use of interchangeable parts for manufacturing. Called the "American system," the use of interchangeable

parts was applied to clock making by Eli and Seth Thomas, to gun making by Samuel Colt, and in nearly every other conceivable industry. American inventiveness expressed itself in the steel plow, the safety pin, the air brake, the telephone, the incandescent electric lightbulb, the sewing machine with a lockstitch design, the cash register, the phonograph, the film camera, the motion picture camera, the all-electric starting motor, and the first manned heavier-than-air flight.

The United States also proved innovative in new business and marketing techniques, especially during the Gilded Age of the late nineteenth century. Andrew Carnegie pioneered in vertical integration of business from raw materials to manufacturing to transportation. John D. Rockefeller perfected horizontal integration, forming trusts and holding companies. Bankers like J. P. Morgan financed railroads and corporations like General Electric and U.S. Steel. Frederick Winslow Taylor's scientific management theories led to greater efficiencies in factories, and Henry Ford introduced a moving assembly line in 1914 for the manufacture of his Model T automobile.

While industrialization in the United States produced a number of negative effects, which populists, progressives, and labor unions opposed, it nevertheless transformed the nation from an agricultural base to an urban industrial one. By 1914 the U.S. economy had grown to twice the size of Great Britain's.

—Paul Tenkotte

Bibliography

- Heilbroner, Robert, and Aaron Singer. *The Economic Transformation of America, 1600 to the Present*. Fort Worth, TX: Harcourt Brace, 1999.
- Kasson, John F. *Civilizing the Machine: Technology and Republican Values in America, 1776–1900*. 1976; reprint, New York: Penguin, 1986.
- Klein, Maury. *The Genesis of Industrial America, 1870–1920*. Cambridge: Cambridge University Press, 2007.
- Laurie, Bruce. *Artisans into Workers: Labor in Nineteenth-Century America*. Urbana: University of Illinois Press, 1989.
- Mathias, Peter, and M. M. Postan. *The Cambridge Economic History of Europe*, Vol. 7, Pt. 2, *The Industrial Economics Capital, Labour, and Enterprise: The United States, Japan, and Russia*. Cambridge: Cambridge University Press, 1978.

The Organization of Industry— Division of Labor, the Factory, and Interchangeable Parts

Three transformations—the division of labor, factories, and interchangeable parts—were closely related and together transformed the nature of industrial production. In 1750, most industrial work was still performed in the home or in workshops, where artisans produced finished goods in their entirety. Each item crafted was necessarily unique in some respects, for the worker never quite wielded hammer or chisel in precisely the same way. By 1900 industrial production in Britain, the United States, and other industrialized or industrializing nations was concentrated in factories. Workers tended to perform only a single task in the production process. Output was highly standardized, so that a part from one product could generally replace the same part from an identical product with little difficulty.

The division of labor came first. Indeed, a degree of division of labor occurred even among hunters and gatherers. The maker of the spear was not necessarily the thrower of the spear, and the hunter was usually not the cook. Yet through most of human history men and women had to learn to perform a variety of tasks in order to obtain their subsistence. As the industrial sector grew, it became possible for artisans to specialize in particular stages in production.

In 1776 Adam Smith, often hailed as the founder of modern economics, already appreciated that the degree of division of labor was limited by the size of the market. As he noted in *The Wealth of Nations*, if one pin maker fulfilled the entire local market for pins, there was little scope for division of labor. If the market grew, then it became possible for different pin makers to specialize in different tasks. One worker could stretch the wire, and another could cut it the desired length; still others could fashion the head. Smith rejoiced in the cost savings: workers needed only to master one task, could perform a task for which they were particularly well suited, and need not move from one workstation to another or set down one tool to pick up another. In addition, the flow of materials from one worker to another encouraged a steady work effort. Smith mentioned but likely underestimated a further advantage of division of

labor: it both encouraged and allowed the mechanization of individual tasks.

While the increasing division of labor encouraged the move to factories, it did not require this. For centuries, yarn had moved from cottage-based spinner to weaver. In at least one English village, workers built two-way cupboards between their row houses to facilitate the movement of unfinished goods from one workstation to the next. Indeed, the development of complex linkages between cottage workers, often organized by a “putting-out” entrepreneur, is often termed “proto-industrialization.”

Still, the division of labor presented challenges. There was, most obviously, the physical cost of moving goods from cottage to cottage. There was also a monitoring problem: if an entrepreneur delivered raw materials to one worker and picked up finished goods from another several steps down a chain of production, it was difficult to attach any defects in quality to a particular worker. In a long chain of production, there was also the risk that one worker through sickness or malfeasance would fail to do his or her work, and others would be forced into idleness. In a factory setting where workers were gathered under one roof and supervised, such a worker could more easily be disciplined or replaced.

By gathering workers together and supervising them, as occurred in many British industries from the 1750s onward, factory masters encouraged further division of labor. It might not have made sense to carry an intermediate good to a different cottage for the performance of one hammer blow, but it might make sense to have a factory worker hit thousands of pieces in the same way each day. Moreover, the entrepreneur watching such a worker might wonder if he or she could be replaced with a machine.

With the division of labor, different (sets of) workers often produced different parts. Whereas a skilled artisan might build different parts of a gun so that they fit well together, parts emanating from different workers tended to need a great deal of filing in order to fit. Careful supervision within the factory could achieve a better fit. Still, the same parts produced by different workers tended to be far from identical.

The ideal of interchangeable parts, where one gun barrel would fit as well as the next,

would only be achieved with mechanization. As noted above, both the division of labor and the factory encouraged mechanization. Lathes, stamping machines, and milling machines were developed in the early nineteenth century, often in American armories, and this allowed the manufacture of fairly standard parts. As a result, the process of fitting different parts together became much easier. These machines thus provided one of the preconditions necessary for the development of the assembly line.

These specialized machines naturally provided a further reinforcement of factories and division of labor. They were generally only feasible in a factory setting. And a different worker tended each machine. Notably, these workers usually needed few skills. Machines and unskilled laborers thus replaced the skilled artisan, though skilled labor was still necessary for the design and construction of these machines.

—Rick Szostak

Bibliography

- Chapman, S. D. *The Early Factory Masters*. Newton Abbot, UK: David and Charles Publishers, 1978.
- Cross, Gary, and Rick Szostak. *Technology and American Society: A History*. 2nd ed. Upper Saddle River, NJ: Prentice Hall, 2004.
- Habakkuk, H. J. *American and British Technology in the Nineteenth Century*. Cambridge: Cambridge University Press, 1962.
- Hounshell, David. *From American System to Mass Production*. New York: Cambridge University Press, 1984.
- Rorabough, W. J. *The Craft Apprentice: From Franklin to the Machine Age in America*. New York: Oxford University Press, 1986.

Scientific Management

The goal of scientific management was to arrange factory layouts and simplify each worker's task to promote increased industrial productivity. Popularized by Frederick W. Taylor, scientific management was also known as Taylorism, and it stimulated considerable change in both manufacturing techniques and labor utilization in the early twentieth century.

As the nineteenth century drew to a close, many American industrial enterprises were consolidating into larger and larger units. Plant managers and foremen operating in behemoth

factories faced unprecedented problems in organizing production flow and motivating workers. While many changes developed through natural evolution, a few visionaries believed that the same sort of scientific and technical thinking that helped foster these industrial giants could be applied to the task of making them more efficient.

The leading exponent of this scientific management approach was Frederick W. Taylor. As a teenager, he had worked as an apprentice pattern maker at the Enterprise Hydraulic Works in Philadelphia. Pattern making required very precise drafting and modeling skills, both of which matched Taylor's talents. When he moved on to the Midvale Tool Co. he became intrigued with improving the performance of tool steel implements.

In the early 1880s he began using a stopwatch to evaluate workers' behaviors. Much of his subsequent work was in line with that of a developing group of professionals who used time and motion studies to increase worker productivity. Indeed, Taylor collaborated closely with two of the most well-known time-and-motion experts of the time, Frank B. Gilbreth Sr. and Lillian Moller Gilbreth. This couple put their professional skills into practice in raising a family of 12 children. Two of their children, Ernestine Gilbreth Carey and Frank B. Gilbreth Jr., co-wrote the book *Cheaper by the Dozen* which became a best-seller and was made into a popular film.

Taylor was an outspoken advocate of a piecework wage system to encourage individual workers. His goal was to break each job into small steps, simplifying the task and eliminating wasted motions. This process also encouraged hiring unskilled workers as opposed to skilled craftsmen. He conducted "scientific" studies to determine an optimum output for each job and then proposed higher pay scales for those workers who exceeded these quotas on a daily basis. Not surprisingly, many workers found these quotas difficult to maintain and resented being reduced to "cogs in the machinery."

Managing the activities of individual workers required new supervisory skills as well. Taylor pioneered the concept of functional foremen whose duties, like those of the workers they managed, were also simplified and focused. Specialists like speed bosses, quality inspectors, and other narrowly focused functionaries replaced

the highly skilled generalists who had previously overseen factory operations.

On a broader level, reorganizing the flow of work on a factory floor was also seen as an essential factor in increasing productivity. To meet Taylor's quotas, workers had to have ready and continuing access to the tools, parts, and supplies needed for each task. While Taylor had no direct role in the factory-wide moving assembly line that Henry Ford and his colleagues established in 1913, the new system exploited many principles of Taylorism.

Scientific management became very popular with industrialists and plant managers. It even won some support among the Progressives, a political movement that lauded the participation of experts in government. At the same time, Taylorism roused strenuous opposition from labor organizers who ran the gamut from the highly skilled craft-union spokesmen of the American Federation of Labor to the committed socialists of the International Workers of the World.

Although Taylor died in 1915, the concepts and techniques he advocated continued to win converts. The remarkable increase in workers' productivity that helped fuel the bull market of the 1920s stemmed in large measure from the application of scientific management principles. Industrialists around the world adopted Taylorism to increase their factory efficiency as well. All modern manufacturing enterprises contain some elements of the scientific management doctrine.

—John Dobson

Bibliography

- Dobson, John. *Bulls, Bears, Boom, and Bust: A Historical Encyclopedia of American Business Concepts*. Santa Barbara, CA: ABC-CLIO, 2007.
- Gabor, Andrea. *Capitalist Philosophers*. New York: Times Business, 2000.
- Kanigel, Robert. *The One Best Way*. New York: Viking, 1997.
- Wrege, Charles D., and Ronald G. Greenwood. *Fredrick W. Taylor, the Father of Scientific Management*. Homewood, IL: Business One Irwin, 1991.

Fordism

Named after Henry Ford (1863–1947), Fordism refers to the method of industrial management characterized by the mass production of inexpensive,

uniform products, the use of interchangeable parts and the assembly-line in production, the gaining of employee loyalty through wages, and management hostility to unionism and employee participation in the decision-making process. Fordism, which revolutionized the production and purchase of automobiles, led the way to mass production of more goods, and, as a consequence, helped usher in the modern age.

The first automakers had envisioned the car as a luxury item for the wealthy few, but Henry Ford priced automobiles within the means of large numbers of Americans in order to profit from a higher volume of sales despite a narrower margin. To meet demand, Ford automated and accelerated production, reducing the control that workers had over the pace of work. In 1908 Ford introduced the Model T at \$850; by 1914 it sold for only \$490. Ford achieved this savings by making every phase of production efficient. Somewhat apocryphally, to indicate this focus on thrift, Ford is quoted as saying that consumers could choose a Model T in any color as long as they wanted black. (The original Model T was actually available in several colors, and the "black only" policy was not introduced until 1914.)

Ford's obsession with efficiency and cost transformed working conditions throughout industry. In 1910 Ford began manufacturing the Model T in a single factory in Highland Park, Michigan, and in 1913 he began building cars on the assembly line. Rather than move workers from place to place, as had been the usual case in manufacturing, Ford moved partially built automobiles to the workers—this was a process first pioneered in the meatpacking industry's "disassembly lines." Workers performed a small number of tasks that they endlessly repeated during the course of their working lives. Efficiency increased: whereas a single worker needed twenty minutes to build a magneto (electric generator), a group of workers, each doing one task, could produce a magneto every five minutes. Wherever possible, Ford mechanized production, and in doing so transformed workers from craftsmen into machine operators. As a result, the assembly line set the pace of work.

The assembly line never slowed down, and it offered workers only fifteen minutes for lunch and use of the bathroom. The assembly line's demands wore workers down. Labor turnover was

➤ FORD AS PHILOSOPHER

Ford's great success in revolutionizing daily life and production made him a hero to many and the subject of many interviews in which he was treated as an authority on all things. The following excerpt shows the somewhat tortured way in which he defends the impact of mass production on workers:

"It has been asserted that machine production kills the creative ability of the craftsman. This is not true. The machine demands that man be its master; it compels mastery more than the old methods did. The number of skilled craftsmen in proportion to the working population has greatly increased under the conditions brought about by the machine. They get better wages and more leisure in which to exercise their creative faculties."

Source

Henry Ford. *My Philosophy of Industry*. New York: Coward-McCann, 1929.

so high that in 1913 Ford hired 52,000 workers just to staff his factory with 13,600 workers. Automakers and other businesses that employed factory workers favored workers in their twenties and early thirties. Employers were less eager to hire assembly line workers in their forties. As their productive abilities decreased they became less valuable to an employer and once laid off they had trouble finding new jobs. In contrast, skilled workers, automobile painters for example, had greater job security and longevity.

To create a stable labor force amid turnover, Ford hired Americans that other employers shunned: blacks, Latinos, ex-convicts, and the moderately disabled. In contrast to other manufacturers, who paid a subsistence wage, Ford raised wages to \$5 a day, double the prevailing rate; he also reduced the workday from nine to eight hours in 1914. Workers still had to toil six months before being eligible for \$5 a day, and even then this pay was not guaranteed. Ford established a "sociology department" in his plant to monitor worker behavior and to enforce his ideal of clean living at home as well as at work. Only workers who lived up to the values of hard work, self-reliance, and thriftiness that Henry Ford had prized since childhood earned \$5 a day.

By increasing production and raising wages, Fordism made America prosperous during the 1920s. Over the long term mass production techniques spread from the making of cars to other industries, while the mass-produced automobile became a transformative technology.

—Christopher Cumo

Bibliography

- Brinkley, Douglas. *Wheels for the World: Henry Ford, His Company and a Century of Progress*. New York: Viking, 2003.
- Ford, Carin T. *Henry Ford: The Car Man*. Berkeley Heights, New Jersey: Enslow, 2003.
- Shores, Erika L. *Henry Ford: A Photo-Illustrated Biography*. Mankato, Minnesota: Bridgestone Books, 2004.
- Wood, John C., and Michael C. Wood, eds. *Henry Ford: Critical Evaluations in Business and Management*. New York: Routledge, 2003.
- Zarzycki, Daryl. *Henry Ford: Cars for Everyone*. Hockessin, Delaware: Mitchell Lane, 2005.

■ Introduction: Industrialization in Africa, Asia, and Latin America

Industrialization in Africa, Asia, and Latin America during the nineteenth and early twentieth centuries lagged behind that of Britain, continental Europe, and the United States. Nevertheless, at least before the Napoleonic Wars these continents retained, more or less, a level of

competitiveness in what still remained a largely preindustrial economic order. Cottage industries such as spinning and weaving flourished worldwide. The American historian Kenneth Pomeranz has demonstrated, for example, in his book *The Great Divergence* that both Europe and China

were experiencing ecological bottlenecks to their growth, in terms of “land and energy,” in the eighteenth century. Europe’s pursuit of certain solutions (e.g., fossil fuels, intercontinental trade, and an increasing dependence upon colonialism and imperialism) produced a so-called Great Divergence that expressed itself in rapid industrialization in the West during the nineteenth century but not in China.

Great Britain, home of the First Industrial Revolution, developed textile machinery that reduced the price of cotton yarn from 38 shillings per pound in 1792 to 5.5 shillings in 1812. After the Napoleonic Wars, Britain marketed its inexpensive manufactured goods, especially textiles, globally. Facing competition from abroad, the handicraft industries of many regions suffered a decline. Latin American nations experienced independence following the Napoleonic Wars, offering a hope that they might escape the mercantilistic shackles of Spain. To the contrary, however, the young Latin American republics found it difficult to compete with inexpensive British goods, lacked financial capital of their own to develop industries, and, suffering from political instability, failed to attract sufficient foreign capital. As a result, Latin America entered an era of neocolonialism in which it became an exporter of food and industrial raw materials and an importer of European manufactured goods and capital. Likewise, neocolonialism thrust much of Africa and Asia in 1914 into roles deeply dependent upon foreign investment and global trade, furnishing raw materials for factories in more developed nations. One of the great exceptions to this pattern, of course, was the rapid industrialization of Japan during the Meiji period.

General patterns of textile production, closely tied to international competition, can be traced in India, the Ottoman empire, and Persia. For centuries, family laborers and artisans had produced textiles in these areas. After the Napoleonic Wars, British machine-manufactured textiles provided a lower-cost alternative. The results were twofold. First, the rest of the world began buying British textiles, contributing to a decrease in the export (and hence production) of textiles from India, the Ottoman empire, and Persia. Second, British textiles began to compete with domestic markets in those empires,

albeit more gradually, as the infiltration of interior markets required the construction of better transportation routes. At the same time, political developments in these regions compounded economic pressures. Regional warfare accompanied the spread of British authority in India, the Ottoman empire was losing territory, and Persia was recovering from a series of unsuccessful wars with Russia. Despite such challenges, all three areas were able to at least somewhat reverse their downward trend by the late nineteenth century. Indian and Ottoman textile manufacturers began buying inexpensive British yarn to weave in their own factories into finished textiles. In addition, some foreign investors began to establish textile mills in these countries, employing native workers. Finally, native manufacturers began to focus on special niche markets. These included labor-intensive industries such as carpet making in the Ottoman empire and Persia. Some native businessmen, such as the Tata family from western India, used textile manufacturing to generate other more diversified industries.

Industrialization in Africa, Asia, and Latin America often depended upon foreign investment. In particular, European merchants gained concessions to build and operate railroads, factories, and mines in all of these regions. In China, the race among European powers for concessions led to extraterritoriality and to other limitations of Chinese sovereignty. Persia benefited little from concessions; in fact, China witnessed no major railroad construction whatsoever during the nineteenth century. In the Ottoman empire the opposite was true. British, French, and German companies capitalized on concessions to build railways and to open mines, and by 1914 Germany had overtaken Britain in foreign direct investment there. In Latin America, investors from Europe and the United States built railroads, opened mines, drilled for petroleum, and harvested cash crops. Latin America, especially Argentina, also attracted a substantial number of European immigrants in the late nineteenth and early twentieth centuries, drawn to opportunities in agriculture, business, and nascent industries. In Africa, meanwhile, British, French, Portuguese, Dutch, Belgian, Italian, German, and other powers exploited the mineral resources of the continent, built railroads, settled

immigrants on confiscated land, forced the cultivation of cash crops, and divided the continent among themselves. Economic imperialism, by the time of the Great War, had fashioned a world economy consisting of nations and colonies providing raw materials and those using them to produce manufactured goods.

—*Paul Tenkotte*

Cotton Textile Production in Colonial India

In 1750, India produced one-quarter of the world's industrial output and exported cotton and silk textiles to a number of countries, including Britain. By 1830, however, India mainly sold agricultural goods in international markets and imported British yarn and cloth. This shift in India's industrial profile has prompted a vigorous debate about the reasons for the decline of Indian handicraft production, one that is closely tied to disagreements about the consequences of British colonialism in India.

In the seventeenth and early eighteenth centuries, India had a well-developed tradition of household and artisanal textile production, particularly in Punjab, Gujarat, Bengal, and the Coromandel Coast. Rural households mostly produced simple articles for domestic or village use, while artisans wove complicated designs and fine cloth. Indian merchants engaged in long-distance trade within Asia and with Africa, while Dutch and English trading companies carried on the bulk of trade with Europe. European companies advanced money to Indian merchants, who contracted with weavers over which goods to supply, price, and the time of delivery. The system provided weavers with bargaining power, as they could seek out the best price and secure what was essentially interest-free credit to produce goods.

By the middle of the eighteenth century, India's position as a principal textile exporter began to weaken. The dissolution of the Mughal empire into smaller states increased political insecurity and disrupted trade. Political instability reduced agricultural productivity, which raised the cost of grain and therefore labor costs. This in turn made Indian exports less competitive in the decades between 1760 and 1810.

Furthermore, European traders gained greater control over weavers in the second half of the eighteenth century as their agents displaced Indian merchants, whose financial position weakened as Mughal state officials withdrew from inter-Asian trade. As the British East India Company assumed increasing political authority, it introduced new legal sanctions, such as fines for incomplete orders; imposed increasingly rigorous quality standards for Indian products; and used threats of taxes and military service to compel weavers to supply textiles at below-market prices. Domestic demand for luxury goods, including textiles, declined as local rulers' influence waned in the wake of Britain's rising political power. In the early 1800s, European imports of Indian textiles fell, as industrialization, British tariffs, and trade disruptions caused by the Napoleonic Wars undermined India's position in international markets. Although the volume of Indian exports declined only slightly between 1790 and 1830, their value fell by about two-thirds, from £2,430,000 to £902,000.

Competition intensified in the nineteenth century as Indian producers battled with British products not just in export markets but in the domestic market as well. After the East India Company lost its monopoly on trade with India in 1813, Lancashire-based firms exported machine-made yarn and cloth, and India became a net importer of cloth by 1830. The expansion of railway networks cut the cost of transportation, permitting British goods to compete with local products. As a result, British imports took their greatest toll, at least in central and southern India, after 1865–1870. The value of Indian yarn imports rose from £300,000 in 1820 to £4 million in 1920; imports of cloth climbed from £1.1 million to £29.1 million over the same period. Under colonial rule, British textile mills had privileged access to the Indian market, as Indian tariffs were kept deliberately low until the 1920s, when rising Indian nationalism, competition from Japanese textiles, and the contribution of Indian industry to the First World War effort caused Britain to re-evaluate its policies toward Indian industry.

By the late 1800s, Indian artisans faced more competition from the Indian textile mills in Bombay and Ahmedabad. India's mill sector expanded after the 1870s and emerged as a

► COTTON TEXTILES IN THE INDIAN NATIONALIST MOVEMENT

From handspun cloth to the spinning wheel, textiles provided powerful images and symbols for India's nationalist movement. Many middle-class intellectuals and nationalist leaders, such as the Bengali economic historian Romesh Chunder Dutt (1848–1909) and the political leader Jawaharlal Nehru (1889–1964), used the narrative of impoverished Indian weavers to criticize Britain's deindustrialization of India and therefore British rule. The destruction of Indian handicrafts was a popular nationalist theme, with the result that a number of leaders saw Indian industrial development as a path to self-sufficiency and independence. By the late nineteenth century, nationalist thinkers advanced the idea of *swadeshi* ("one's own land"), calling for industrialization and the promotion of Indian rather than foreign products. In 1905, the

social base of *swadeshi* politics broadened as nationalists campaigned for the widespread boycott of British goods, particularly textiles, to protest the partition of the province of Bengal. In the 1920s, Mohandas K. Gandhi helped to turn *khadi* (homespun cotton cloth) and the spinning wheel into symbols of Indian nationalism. The coarse, white, handspun cloth effectively became a uniform for members of India's Congress Party, as *khadi* was identified with a universal Indian identity that could obliterate differences of class, caste, and religion. At the same time, Gandhi's emphasis on *khadi* reflected his desire to promote village and cottage industries rather than the large-scale industrialization model envisioned by leaders such as Jawaharlal Nehru.

—Caroline Arnold

significant provider of yarn and cloth for the domestic market and as a major exporter of yarn. The cotton textile mills were mostly founded by Indians and were increasingly managed and staffed by them as well, although the industry imported British machinery. This permitted India to regain its prominence in international markets: by 1913, India was the world's second-largest yarn exporter, as Indian cotton mills emerged as a major supplier of yarn to Japan and China. This, however, was short-lived, at least for Bombay's mills, as the rise of Chinese and Japanese spinning mills in the 1920s replaced Indian yarn with indigenous products and as Japan began exporting yarn to India.

The fate of traditional Indian textile producers varied according to what they produced. Spinners suffered more than weavers, as British imports and then Indian textile mills replaced hand-spinning. Between 1880 and the early 1920s, the use of handspun yarn in domestic cloth production fell from 50 percent to 15 percent. Britain's share of the Indian cloth market rose from 10 percent to 60 percent between 1850 and 1880, and an estimated equivalent of 2 million to 6 million Indian jobs were lost. Weavers had to compete with British cloth but benefited from rising demand for coarser cloth in the domestic market beginning in the early 1900s.

Current scholarship emphasizes that Indian handicraft production rebounded in the second half of the nineteenth century and the first half of the twentieth century. Scholars such as Tirthankar Roy and Douglas Haynes have argued that shifting market conditions prompted handicraft producers to change technologies, adopting the fly shuttle and beam warping; to use dyes imported from Europe; and to reorganize production into small units that employed wage labor. As weavers accumulated capital, better-off weavers began to replace handlooms with used power looms. After 1900, weavers, particularly in western India, founded small factories that adapted to changing local demand.

—Caroline Arnold

Bibliography

- Clingingsmith, David, and Jeffrey G. Williamson. "Deindustrialization in 18th and 19th Century India: Mughal Decline, Climate Shocks and British Industrial Ascent." *Explorations in Economic History* 45 (2008): 209–234.
- Haynes, Douglas E. "Artisan Cloth-Producers and the Emergence of Powerloom Manufacture in Western India, 1920–1950." *Past and Present* 172 (2001): 170–198.
- Roy, Tirthankar. *The Economic History of India, 1857–1947*. New Delhi: Oxford University Press, 2006.

Twomey, Michael J. "Employment in Nineteenth Century Indian Textiles." *Explorations in Economic History* 20 (1983): 37–57.

Indian Industrialization under British Rule—Tata and Tagore

Domestic industrialization in India under the British Raj has always been a controversial issue. British colonial rule, in fact, has been often accused of favoring a process of gradual de-industrialization by destroying Indian indigenous industries, mostly the textile industry. Although the idea that colonial domination was not conducive to a full-fledged economic growth has been challenged and in some cases rejected, the issue is still debated.

The industrial enterprises launched by the Tata and Tagore families in the nineteenth and early twentieth centuries provide a lens through which Indian industrialization under British rule can be approached. Besides being one of the most successful examples of family business in India, these families significantly contributed to

Indian industrialization. They represent two different ways of conceiving and carrying out industrial activities based on differing perceptions of the role of India within the British Empire.

The Tagore family was wealthy because of extensive landholdings and became involved in business activities in the eighteenth century and especially the nineteenth century. Dwarkanath Tagore (1794–1846) gave the Tagore family its stable and long-standing financial foundations. He successfully became involved in business in the early nineteenth century, when he began to work in conjunction with European agency houses (enterprises that represented British companies in the Indian market) based in Calcutta. In 1834 he launched the first Anglo-Indian partnership, Carr, Tagore & Co., that played a significant role in the economic life of British India. The firm came to own and manage several enterprises such as the Bengal Salt Company, the Steam Ferry Bridge Company, and the Bengal Coal Company, among others. Dwarkanath Tagore was a farsighted entrepreneur and was able to diversify his economic interests by entering new businesses such as coal mining and producing and manufacturing silk, indigo, and sugar. As a businessman, he believed that the connections established with Great Britain were beneficial to India. In fact, he envisaged the material and spiritual progress of his country under the protective umbrella of British colonial rule. Apparently he never thought of the British colonial domination as a major drawback for his country's economic growth. His son, Debendranath Tagore (1807–1905), led the family after Dwarkanath's death and continued the family's entrepreneurial activities.

Unlike the Tagore family, which was from Bengal, the Tata family was from western India. The founder of the present-day Tata Group—an international conglomerate with interests in different industrial sectors and in many countries—was Jamsetji Nusserwanji Tata, a Parsi businessman from Gujarat. He started his entrepreneurial activities while working in his father's banking firm and eventually established his own branch in Hong Kong in 1868. In 1871 he launched the Central Indian Spinning, Weaving and Manufacturing Company, Limited, taking advantage from the Indian cotton boom

➤ TATA EXPERIMENTAL SILK FARM

In 1895, Jamsetji N. Tata established a modern silk farm in Mysore (present-day Karnataka) as part of his business in textile production and manufacture. His idea was to support the raw silk industry in that area through an experimental project based on the technical improvement of the local sericulture. The silk industry was languishing because of the lack of state support and the outbreak of *pebrine*, a disease that mortally affected silkworms. The Tata silk farm, located 2 miles (3.2 kilometers) away from Bangalore, was placed under the management of a Japanese silk expert who trained students and cultivators in the modern techniques of rearing silkworms and reeling silk. To hire experts from abroad especially from Italy or Japan, which were at the forefront of technical innovations in sericulture, was a widespread practice in those years. In 1910 the Tata Experimental Silk Farm was taken over by the Salvation Army, which continued the activities started by J. N. Tata.

—Antonella Viola

subsequent to the American Civil War, which made it more difficult for Great Britain and other cotton-consuming countries to get cotton supplies from the United States. In 1877 he opened the Empress Mill in Nangpur, and soon his firm began to gain a reputation in the Indian textile manufacturing sector. While carrying out his businesses, Tata, who was an avowed nationalist, became involved in the Indian National Congress. He was deeply aware of the importance of domestic industrial growth for India's future and became a champion of Indian self-industrialization and self-sufficiency. Unlike Dwarkanath Tagore, Tata believed that the colonial condition in which India found itself was detrimental to the country's development because of the economic and political constraints that British rule implied.

The input given by the Tata family to India's industrial takeoff during and after British rule is impressive. Under the leadership of its founder, the Tata firm grew remarkably and diversified into a number of industrial activities, ranging from electric power plants to hotels. In 1905 the firm was taken over by Dorab Tata, one of Jamsetji's two sons, who founded the Tata Iron and Steel Company. The first three decades of the twentieth century were years of further expansion, diversification, and consolidation. In 1932 under the management of J. R. D. Tata, the Tata Aviation Service was successfully started. In the years after India's independence the Tata group continued to grow and nowadays is one of the leading enterprises in the world.

In spite of the differences that characterized their economic activities, both Tagore and Tata gave impulse to a process of industrialization that was crucial to India's domestic growth and must be recognized as leading actors in the country's economy.

—Antonella Viola

Bibliography

- Dobbin, Christine E. *Asian Entrepreneurial Minorities: Conjoint Communities in the Making of the World-Economy 1570-1940*. Richmond, Surrey, UK: Curzon, 1996.
- Kumar, Dharma, ed. *The Cambridge Economic History of India*, Vol. 2. Hyderabad, India: Orient Longman in association with Cambridge University Press, 2005.

Misra, Maria. *Business, Race and Politics in British India, c. 1850-1960*. Oxford: Oxford University Press, 1999.

Roy, Tirthankar. *The Economic History of India, 1857-1947*. New Delhi: Oxford University Press, 2000.

Tripathi, D. *The Oxford History of Indian Business*. New Delhi: Oxford University Press, 2004.

Egyptian Economic Development under Muhammad Ali

Muhammad Ali, the modernizing ruler of Egypt during 1805-1848, developed Egyptian industry as part of his efforts to increase Egyptian political, military, and economic strength, and therefore Egyptian autonomy, from both the Ottoman empire and Europe. He first arrived in Egypt as part of the British-Ottoman military expedition to remove French forces from Egypt in 1801, an experience that exposed him to European military planning and organization. After coming to power as governor of Egypt in 1805, he set about developing a similar military for Egypt, an effort that would require additional state revenue, increased agricultural production, new schools, and mechanized industry.

Egyptian agricultural and industrial development under Muhammad Ali rested on improving upon and restoring old practices and introducing new technologies, often with the assistance of European advisers, engineers, and machinery. He built upon one of the strongest areas of Egypt's economy—agriculture—by centralizing rural tax collection and the sale of agricultural produce. He increased production (and therefore government revenue) by introducing new crops, most notably long staple cotton in 1821; improving the irrigation system; and, in some cases, introducing centralized processing facilities. Increasing cotton production and the capacity to process it into finished textiles was essential to increasing Egypt's economic independence by reducing imports of cotton from Syria and finished textiles from Europe.

Initially, Muhammad Ali focused on developing a state monopoly over the sale of both raw materials and finished products of the craft guilds, especially those producing textiles. Between 1807 and 1809, a shipyard was opened in

► A TRAVELER'S IMPRESSION OF MUHAMMAD ALI AND HIS COURT IN ALEXANDRIA

In 1832 the English journalist and author James Augustus St. John (1795–1875) embarked on a year-long journey to Egypt and northern Sudan. He was able to visit the 63-year-old Muhammad Ali and conversed with him in Arabic. St. John described his impressions in his two-volume book *Egypt and Mohammed Ali, or Travels in the Valley of the Nile*.

“Mohammed Ali is a man of middling stature, robust and stout in his make, exceedingly upright, and, for a man of sixty-five [*sic*], hale and active. His features, possessing more of the Tartar cast than is usual among European Turks, are plain, if not coarse; but they are lighted up with so much intelligence, and his dark grey eyes beam so brightly, that I should not be surprised if I found that persons familiar with his countenance thought him handsome. . . . [H]e has . . . a certain dignity in his manner, which, in the estimation of many, even borders upon majesty. But this dignity seems almost inseparable from the possession of power: the man who can do much good or harm, whatever may be his stature, form, or features, will always appear to exhibit it; as the scorpion, in size no larger than a snail, is viewed with awe, because he is supposed to carry death in his sting.”

—Hilary Kalmbach

Source

James A. St. John, *Egypt and Mohammed Ali: Or, Travels in the Valley of the Nile* (London: Longman, Rees, Orme, Brown, Green and Longman, 1834), 58–59.

Bulaq, a district of Cairo on the Nile River, to enable Egypt to expand its military and economic power in the eastern Mediterranean and the Red Sea. A second shipyard and arsenal was opened a decade later in Alexandria.

After 1815, Muhammad Ali forced guild producers of textiles out of business and centralized production of goods in factories using European technical advice and machinery. Meeting the needs of the military was initially the primary focus of industrial production. Between 1815 and 1830, the government opened iron foundries,

munitions and weapons factories, gunpowder factories, and wool factories to provide material for the army and navy. Other industrial development centered on production of sugar and rum, cotton, silk and linen textiles, indigo, soap, oil, glass, leather, paper, and chemicals such as saltpeter and sulphuric acid. Centralizing and mechanizing Egyptian industry, especially in the textile arena, clashed with British interests because these textiles competed with British textiles in eastern Mediterranean markets, and their production decreased the amount of cotton available for export.

Scholars disagree about the extent to which industrial developments under Muhammad Ali were dependent on protective tariffs that increased the cost of foreign-made goods. Some argue that Egyptian textiles were protected by embargoes against cheap European textiles by the 1820s. Others claim that protection for Egyptian goods was minimal before 1830 and that local producers were able to compete with more efficient European producers because they had access to raw materials at very low prices.

After 1830, industrial expansion and centralization slowed. Muhammad Ali began loosening centralized control of agricultural and industrial development and production and attempting to decrease dependence on European technical advisers and equipment. Increasing government spending on modernization projects and extensive military operations led to additional measures to increase revenue, such as issuing and manipulating the exchange of paper currency assignments, levying new taxes, and increasing pressure on those owing back taxes. These measures further burdened an Egyptian population that had already been hit hard by drought, cholera and plague, exploitative monopolies, and forced work for the military, industry, or public works projects. These burdens as well as inefficiencies in the centralized system, lack of Egyptian managerial and technical expertise, and lack of local sources of power contributed to a decline in Egypt's agricultural and industrial sectors.

In the 1840s, European powers supported Ottoman efforts to evict Egyptian forces from Syria and the Hijaz. A subsequent agreement limited the size of the Egyptian army required Ottoman approval of foreign treaties, and required

Egyptian compliance with Ottoman laws and agreements, including the 1838 Anglo-Ottoman Convention. The treaty forbade agricultural and industrial monopolies and protective tariffs and opened up the Ottoman empire to British textile imports. While some authors argue that the Egyptian industrial sector had already been weakened to the point that it did not threaten European producers, this development ensured its demise in the face of cheaper European imports.

—Hilary Kalmbach

Bibliography

- Barbour, K. M. *The Growth, Location and Structure of Industry in Egypt*. New York: Praeger, 1972.
- Cuno, Kenneth M. *The Pasha's Peasants: Land, Society, and Economy in Lower Egypt, 1740-1858*. Cambridge: Cambridge University Press, 1992.
- Farah, Nadia Ramsis. *Egypt's Political Economy: Power Relations in Development*. Cairo: American University in Cairo Press, 2009.
- Marsot, Afaf Lutfi al-Sayyid. *Egypt in the Reign of Muhammad Ali*. Cambridge: Cambridge University Press, 1984.
- Rivlin, Helen A. B. *The Agricultural Policy of Muhammad Ali in Egypt*. Cambridge: Harvard University Press, 1961.

Early Industrialization in China

Historically, China has been recognized for its scientific and technological innovations, spanning thousands of years, as scholars Joseph Needham, Robert Temple, and others have amply demonstrated. As early as 1313, for instance, the Chinese had developed a 32-spindle machine to spin hemp into thread. During the eighteenth century, Chinese manorialism and serfdom both disappeared. Furthermore, imperial China's transportation network of canals and roads, including the 1,400-mile-long Grand Canal, was well developed by 1800. Hence, China's limited industrialization in the nineteenth century—contrasted at least with the rapid industrialization and imperialism of Europe—proves both problematic and intriguing.

Industrialization in China between 1750 and 1914 was influenced by a variety of demographic, economic, cultural, and political factors. Demographically, China's population increased from 300 million in 1800 to over 400 million a mere

50 years later (1850). As increasing agricultural yields became less possible and new land became less available, Chinese farm families relied on cottage industries, such as spinning and weaving, to supplement their livelihoods. These subsidiary enterprises, however, differed from the European putting-out system in that in Europe, merchants provided the raw material to cottagers to spin and weave, whereas in China merchants advanced money to farmers who then purchased their raw materials at nearby markets. While some peasants engaged in subsidiary labor such as spinning and weaving, millions of other Chinese immigrated to Southeast Asia or to North and South America in search of economic opportunity. China therefore had an abundant labor supply that, some scholars argue, inhibited innovations in labor-saving technology and resultant industrialization.

Other scholars, such as Mark Elvin and R. Bin Wong, have shifted the emphasis from labor to the supply of raw materials. Elvin used the example of cotton textile production to explain his assertion of China's "high-level equilibrium trap." Rice and grain cultivation, necessary to feed an increasing population, competed with cotton growing, thereby limiting the amount of cotton available for textile production. The problem, Elvin proposed, was that technological innovations are often intimately related to supply and demand. China, however, had achieved equilibrium between supply and demand in certain industries by the end of the eighteenth century, thereby trapping its industrial advance.

In addition to cotton textiles, China had well-developed ceramic, silk, and tea industries. Its export of porcelain worldwide was so well known as to earn its ceramics the name of "china" in English. The final processing of tea, including roasting, blending, and packing for shipment, generally took place in Chinese factories. By the nineteenth century, high-grade silk production for export was performed by laborers in a putting-out system similar to Europe, whereby contractors provided peasants with silk and looms.

While earlier historians argued that China lacked the capital, financial institutions, or merchant firms to launch an industrial revolution, that hypothesis has also been challenged. Before

the 1890s, except for occasional deficits, China had a favorable balance of trade with the rest of the world. This was especially true in the eighteenth century when China was infused with Spanish silver dollars in exchange for its export of silk to South America by way of Manila in the Philippines. In addition, China had a fairly efficient bimetallic monetary system, with copper coins being used for small transactions and silver bullion for larger ones. During the eighteenth century, a whole series of banks called the Shanxi developed. They made financial remittances possible across the Chinese empire, issued their own paper currencies, and even opened branches in Singapore, Russia, and Japan. China also had countless examples of large merchant firms, some of which operated for centuries. In the province of Shaanxi, for example, large lumbering operations employed 3,000–5,000 workers each by the nineteenth century.

During the second half of the nineteenth century, new industrial enterprises emerged in China in conjunction with the Self-Strengthening Movement (*zi-qiang*), an effort to reconcile traditional Confucianism with modernization. In the 1860s the government supported the establishment of factories producing armaments and ships, largely for reasons of defense. By 1872 the government shifted to a model of government-merchant partnerships (*guandu shangban*) and joint-stock companies (*gongsī*), the first of which was the China Merchants' Steam Navigation Company, founded by Li Hongzhang (1823–1901). Li, a provincial governor-general who had helped to suppress the Taiping Rebellion, became one of China's best-known statesmen. He also established China's first modern coal mine at Kaiping in 1876, and his Chinese Railway Company completed a line to Tianjin in 1888 and to outlying Beijing in 1896. That railroad was a success, unlike China's first line, the Shanghai-Wusong (1876), which was purchased and dismantled by the governor-general of Nanjing. In the late nineteenth century, the Chinese also invested in a series of telegraph lines, and in 1890 Zhang Zhidong opened his massive Han-yang Iron Works.

By the time of the Sino-Japanese War (1894–1895), the Chinese government increasingly turned to foreign loans, which totaled £92

million between 1894 and 1911. The Treaty of Shimonoseki (1895) resulted in the Japanese annexation of Taiwan as well as the Japanese right to operate factories in Chinese treaty ports and to obtain railroad and mining concessions. Because of most-favored-nation clauses based on earlier negotiations with European powers, this meant that these concessions were automatically extended to European powers as well. A race for concessions developed—sometimes referred to as “carving up the melon”—with Germany, Russia, and Great Britain securing important leases of Chinese territory in 1898. By 1900 antiforeign feelings erupted into the Boxer Rebellion, during which 20,000 European troops secured the capital of Beijing. Revolution erupted in 1911, by which year foreign interests owned 41 percent of the railroad mileage in China and had financed many of the remaining government-sponsored railroads. A republican form of government was established in 1912. By 1913 China had an estimated 549 Chinese-owned mines and factories, 96 foreign-owned ones, and 40 joint ventures. By 1914 foreign investment in China totaled over an estimated \$1 billion, led by the British and Japanese.

—Paul Tenkotte

Bibliography

- Ebrey, Patricia Buckley. *The Cambridge Illustrated History of China*. Cambridge: Cambridge University Press, 1996.
- Elliott, Mark C. *Emperor Qianlong: Son of Heaven, Man of the World*. New York: Longman, 2009.
- Elvin, Mark. *The Pattern of the Chinese Past: A Social and Economic Interpretation*. Stanford, CA: Stanford University Press, 1973.
- Feuerwerker, Albert. *China's Early Industrialization*. Reprint ed. New York: Atheneum, 1970.
- Moulder, Frances V. *Japan, China and the Modern World Economy: Toward a Reinterpretation of East Asian Development, ca. 1600 to ca. 1918*. Cambridge: Cambridge University Press, 1977.
- Needham, Joseph. *Science in Traditional China*. Hong Kong: Chinese University Press, 1981.
- Pomeranz, Kenneth. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton, NJ: Princeton University Press, 2000.
- Richardson, Philip. *Economic Changes in China, c. 1800–1950*. Cambridge: Cambridge University Press, 1999.

Temple, Robert. *The Genius of China: 3,000 Years of Science, Discovery and Invention*. New York: Simon and Schuster, 1986.

Japan—Industrialization during the Meiji Period

Japan during its Meiji period (1868–1912) transformed itself from an isolated agricultural state into a modern industrial and military power. At the time of the Meiji Restoration in 1868, Japan had a largely agriculturally based economy, with approximately 70 percent of the population engaged in farming or related pursuits. By the turn of the century, however, the Japanese had established a sufficiently strong industrial base and military strength to defeat one of the world's great military powers, Russia, in the Russo-Japanese War (1904–1905).

The opening of Japan to foreign trade in 1859 exposed the Japanese to the advanced industrial technology and the modern political and economic systems of the West. Alarmed that their country might become a colony of one or more Western states, the new Meiji government inaugurated a series of policies and activities

beginning in the early 1870s designed to bring about the economic, military, and industrial transformation of the nation. The Meiji government played a critical role as the major planner, promoter, and coordinator of the industrialization process.

Despite the relative backwardness of its economy in the 1860s, Japan had several distinct advantages as it embarked on its drive to industrialize: a young and highly educated workforce, a surplus of agricultural workers, and a strong central government dedicated to modernization. A highly developed tax system based on tax payments made by farmers provided revenue that the government used to modernize the country.

The Meiji government took the first steps to promote industrialization in the early 1870s by establishing a new uniform currency with decimal denominations and a banking system based on the U.S. model. The government modernized the nation's infrastructure and communications systems by initiating the construction of state-managed railways and postal and telegraph services and subsidizing several shipbuilding concerns that quickly increased Japan's shipping capacity. By the late 1870s and early 1880s the

➤ EARLY HISTORY OF MITSUBISHI

Mitsubishi was begun in the early 1870s by Iwasaki Yataro. An ambitious, intelligent entrepreneur, Iwasaki became manager of a semipublic trading and shipping firm owned by the former Tosa Domain (now Kochi Prefecture). Through his political connections and great business acumen, Iwasaki transformed the firm into a private company that he named Mitsubishi in 1873.

When the Japanese government launched a naval invasion of Taiwan in 1874, it hired Mitsubishi to ferry the troops. The government donated several more ships to Mitsubishi's small fleet to speed the transport of more military personnel to Taiwan. In 1877 the government again gave Iwasaki more ships and a generous subsidy in return for transporting marines to suppress the Satsuma Rebellion in Kyushu. Thus, by the late 1870s Mitsubishi controlled virtually the entire Japanese commercial fleet.

Starting in the mid-1870s, Iwasaki quickly diversified his enterprise and laid the foundation

of a financial and industrial empire. Mitsubishi bought rich coal and copper mines, opened a chain of profitable banks, and became heavily involved in real estate activities. It also acquired the massive Nagasaki shipyards from the government, which permitted Mitsubishi to become a major builder of Japan's commercial and military ships. When the government, desperate for cash in the late 1880s, sold Mitsubishi a large tract of land in front of the Imperial Palace in Tokyo, the company built the city's core Marunouchi Business District.

By 1917 Mitsubishi had grown so large that its managers spun off seven subsidiaries: shipbuilding and engineering, iron and steel, mining, trading, banking, marine and fire insurance, and warehousing. Later spinoffs in the 1920s included Mitsubishi Aircraft and Mitsubishi Electric Corporation. By 1928 Mitsubishi had emerged as one of Japan's major business conglomerates.

—Daniel Métraux

government also had become involved in various mining and armaments industries. By 1881 the state was running nine coal mines as well as an iron mine and produced most of the gold and silver mined in Japan. During the 1870s the government also built a wide range of factories that manufactured such things as tools, cement, glass, and bricks.

The key industry of the early Meiji era, however, was textiles. To reduce Japan's dependency on textile imports from Britain, the United States, and other Western states, the Meiji government played a prominent role in the financing and construction of model pilot mills for silk reeling, cotton yarn spinning, and woolen goods. The most famous of these was the Tomioka Silk-Reeling Mill, completed in 1872. At first the government hired a number of foreign technicians to provide the technical know-how for the running of the mills and bought ten cotton yarn spinning machines from the British.

Although the Meiji government played a key role in the first stages of Japanese industrialization, the private sector ultimately made the greater contribution. Some of the early entrepreneurs were members of the wealthy merchant families of the late Edo period (1600–1867), but in time most business leaders came from samurai, peasant, or less-wealthy merchant families who sought personal wealth while strengthening the nation. The government often assisted their firms with subsidies, technical advice, and the sale of industrial equipment at or below cost. For example, the government eventually sold the cotton yarn machines from Britain interest free to Iwasaki Yataro (1835–1885), which helped him become Japan's first major shipping magnate and the founder of the Mitsubishi conglomerate.

There was a vast expansion of Japanese industry in the late 1800s and early 1900s. By 1900 there were as many as 70 cotton spinning mills in the country as well as a vast number of silk reeling and woolen textile establishments. Other major industries included papermaking, shipbuilding, flour milling, and mining. By the end of the Meiji era, Japan was the world's third-largest shipbuilder. Japan also became a major producer of iron and steel with the opening of the government-run Yawata Iron and Steel

Works in 1901. There was a vast expansion of railways when in 1906 the government nationalized all private rail lines. The Meiji period ended just before the start of World War I, and by that time Japan had become a major industrial and military state that rivaled the West.

—Daniel Métraux

Bibliography

- Duus, Peter. *Modern Japan*. New York: Cengage Learning, 1997.
- Francks, Penelope. *Japanese Economic Development: Theory and Practice*. 2nd ed. London: Routledge, 1999.
- Hadley, Eleanor. *Antitrust in Japan*. Princeton, NJ: Princeton University Press, 1970.
- Hirschmeier, Johannes, and Tsunehiko Yui. *The Development of Japanese Business, 1600–1973*. London: Allen and Unwin, 1975.
- Ito, Takatoshi. *The Japanese Economy*. Cambridge, MA: MIT Press, 1991.

Industrialization in Latin America before 1914

The economy of Latin America before 1914 centered on the production of agricultural products and minerals for export, as had been the case for nearly three centuries while the region was part of the Spanish and Portuguese empires. Little changed with independence, as the economies of the new republics suffered from a lack of capital and stagnant domestic markets. In fact, the end of the Spanish mercantile trading system had devastating effects. In the early 1820s foreign trade flourished, as mostly British consumer goods, including china, clocks, furniture, clothing, wine, beer, and other liquors were exchanged for agricultural commodities and, more importantly, for gold and silver. However, by the mid-1820s the Latin American demand for these products had been satisfied, and the market evaporated, resulting in excess inventories of products that eventually were liquidated at prices far below the cost of manufacture. This resulted in a panic in London, the financial center of international commerce at the time, and foreign investment decreased. The opening up of foreign trade also impacted local manufacturing. For example, Mexico in the 1840s and 1850s had developed small but inefficient workshops

(*obrajes*) that produced cotton textiles for local consumption. These enterprises were soon put out of business by the flood of lower-priced and higher-quality British textiles. The exception was the guano trade in Peru. It was not until 1850 that foreign capital increased for Latin American industrialization projects. Political chaos and the rise of unpredictable dictatorships further inhibited industrial development in much of the region.

By midcentury much of Latin America began to experiment with liberalism and positivism, political philosophies that encouraged states to foster industrialization. Even some conservative governments, such as the administration of Gabriel García Moreno in Ecuador, took on the mantle of modernization by promoting infrastructure improvements. Railroad construction resulted in lower transportation costs, increased the exportation of agricultural products, and generally stimulated the growth of industrialization. Technical experts, known as the *científicos*, were recruited in Europe and the United States to oversee the myriad modernization schemes. Lucrative contracts were granted to European or North America companies to exploit the natural resources of Mexico, Chile, and other countries. In some instances, particularly Mexico, foreign companies obtained ownership of land, mines, and petroleum fields. The liberals also improved education and encouraged immigration of skilled workers from Europe, thus upgrading the labor pool. Additional capital was made available in some countries when the communal holdings of various indigenous groups were confiscated and then sold to foreign investors. Another source of capital used to promote industrialization came from the expansion of agricultural exports. Profiting from a boom in exports of cacao (from which cacao is derived), Ecuador used its improved trade balance to build the Guayaquil and Quito Railroad, among other internal improvements. Brazil used coffee revenues to establish small factories that manufactured the bags the coffee was shipped in. The accumulation of surplus capital in the industrialized nations provided another source for industrial development in Latin America.

From the middle of the nineteenth century until the start of World War I in 1914, economic

growth in Latin America was tied to agricultural exports. The industry that did develop was small and used low technology. Most industrial enterprises manufactured products for local consumption or prepared agricultural products for export. Industrial output was a very small part of all Latin American nations' gross domestic products, which were dominated by primary products such as sugar, coffee, crude oil, bananas, and cacao. Nevertheless, the foundation was laid for industrial expansion in the latter portion of the twentieth century. This included the development of an urban labor class and the establishment of industrial organizations such as the Industrial Union of Argentina in 1887 that promoted a favorable business climate. Not surprisingly, the countries that experienced the greatest amount of industrial growth in this period were rich in natural and mineral resources. By 1901, Mexico was producing steel, and Argentina, Brazil, and Chile had emerging industrial centers.

—George Lauderbaugh

Bibliography

- Beatty, Edward. *Institutions and Investment: The Political Basis of Industrialization in Mexico before 1911*. Stanford, CA: Stanford University Press, 2001.
- Busnell, David, and Neill Macaulay. *The Emergence of Latin America in the Nineteenth Century*. 2nd ed. New York: Oxford University Press, 1994.
- Gwynne, Robert N. *Industrialization and Urbanization in Latin America*. Baltimore: Johns Hopkins University Press, 1986.
- Weaver, Frederick Stirton. *Class, State, and the Industrial Sector: The Historical Process of South American Industrial Growth*. Westport, CT: Greenwood, 1980.

Mines and Mining in Africa

Africa's mineral wealth attracted and intrigued Europeans for centuries. Ashanti gold found its way across the Sahara, the Portuguese traded in the gold of Monomotapa, and Katanga copper was traded throughout the continent and as far as China as early as the tenth century. In the colonial era, gold and other minerals were both the primary attraction for people seeking wealth and the basis of the general insistence that imperial territories should ultimately finance their

own exploitation. By far the greatest amount of capital investment in colonial Africa was to develop mining and build the railways necessary for importing equipment and mine stores.

In the nineteenth century, Ashanti gold continued to be the object of European interest, but the real scramble for gold, diamonds, and other minerals took place farther south. In 1866 a pebble that turned out to be diamond was found at Kimberley. Other diamonds were found, setting off a major rush. Soon the search was on for the pipes, the source of these alluvial stones, and one important pipe was found farther north under the De Beers farm. This, with financial support from the Rothschilds, became the basis of Cecil Rhodes's fortune, De Beers Consolidated.

In the meantime, gold was discovered on the Witwatersrand (also known as The Rand). Rhodes was slow to take an interest, but using De Beers' profits and further, albeit reluctant, help from Rothschild, he established a foothold with Consolidated Gold Fields and started the group system of mine ownership that was to characterize the South African mining industry. The Rand deposits made up in extent what they lacked in the quality of the ore, making The Rand the focal point of South Africa's gold mining industry well into the twentieth century.

Hopes of finding a "Second Rand" in Mashonaland never materialized. In 1889 Rhodes, seeking more gold and a way to restrict the Boer Transvaal Republic's northward expansion, secured a British government concession to administer and commercially develop the area that became Southern and Northern Rhodesia. Rhodes's British South Africa Company (Chartered) found gold, but Rhodes and his colleagues made more money from share manipulation and speculation than they did from working gold deposits. The only other mineral deposits that proved valuable in the shorter term were the Wankie coalfields, which produced great quantities of high-quality coal. In the meantime, Chartered reluctantly agreed to build a rail line to the Katanga border, where it was subsequently to be connected to the developing copper mines there.

In the aftermath of the Berlin West Africa Conference of 1884–1885, Leopold II of Belgium

peremptorily included Katanga within the territory of his Independent Congo State. The conference participants knew little about the region's potential, and it was generally thought preferable to have "neutral" Leopold there than any of the rival imperial powers. Still looking for more gold, Rhodes thought that he could take the area if he secured a treaty with M'siri, the local ruler. Rhodes might have been right, but Leopold's expedition got there first and his soldiers killed M'siri, and no one further contested Leopold's claim. Hopes of finding gold proved futile, however, and Leopold proved unwilling to invest the capital necessary to exploit the region's copper. Because of Belgian reluctance to invest in the Congo, a large proportion of that capital came initially from British financiers.

In 1895 George Grey, employed by Robert (later Sir Robert) Williams, acting at Rhodes's request on behalf of a syndicate including one of the Prince of Wales's mistresses, Daisy, Countess of Warwick, explored one end of what was to become the Northern Rhodesian Copperbelt. Clandestine visits across the border convinced Grey that Delcommune had been wrong. Urged by Williams, Leopold agreed to the formation of the Union Minière du Haut Katanga in 1906. Technical difficulties meant that full-scale production only began in 1912; ultimately Katanga became one of the world's major sources of copper.

1906 also saw the formation of the Société Internationale Forestière et Minière (Forminière) to work Kasai's extensive diamond deposits. Financial support came primarily from the American-British-Irish mining engineer Alfred Chester Beatty (later Sir Chester). Kasai diamonds are, for the most part, of industrial rather than gem quality but nonetheless have been a valuable export commodity for the Congo. After Congolese independence, diamond smuggling was largely tolerated, as it helped limit the effective devaluation of the Congolese franc on the parallel ("black") currency market. Forminière itself became a holding company and advised on other enterprises in the region. More recently, it became a target for outsiders from Zimbabwe and elsewhere to gain an economic and political foothold in the region.

Diamonds were found in many parts of Africa: Angola, Namibia, Sierra Leone, etc. Virtually all came to be linked to the Anglo-American Corporation and De Beers, which continued to control the volume of diamonds actually reaching the market. It was Rhodes who first operated the system whereby the number of diamonds reaching the market was severely limited; only in this way could a high price be maintained. To this day, no one has been able to successfully challenge De Beers's dominance of the market.

—Simon Katzenellenbogen

Bibliography

- Katzenellenbogen, Simon E. "The Miner's Frontier, Transport and General Economic Development." In *Colonialism in Africa, 1870-1960*, Vol. 4, *The Economics of Colonialism*, edited by Peter Duignan and L. H. Gann. Cambridge: Cambridge University Press, 1975.
- Katzenellenbogen, Simon E. *Railways and the Copper Mines of Katanga*. London: Oxford University Press, 1973.
- Newbury, C. W. *The Diamond Ring: Business, Politics and Precious Stones in South Africa, 1867-1947*. Oxford, UK: Clarendon, 1989.

■ Introduction: International Trade

Spectacular, unprecedented growth marked the history of world trade in the nineteenth century. In 1913 the volume of world trade per capita was 25 times higher than it had been in 1800, a statistic made even more impressive by the fact that in the 1800s the world's population increased from approximately 978 million to 1.8 billion. The most rapid growth in trade occurred from the early 1840s to the early 1870s, when international commerce grew on an average of 6 percent a year, five times faster than the rate of population growth and three times faster than the actual increase in population. Only somewhat less remarkable was the degree to which world trade in the nineteenth century was dominated by Europe, which accounted for 60-67 percent of all imports and exports even though Europeans made up only 20 percent of the world's population. If one adds North America, which in 1913 accounted for approximately 13 percent of world trade, "the West" accounted for 75 percent of world trade compared to 11.1 percent for Asia, 7.6 percent for Latin America, and 3.7 percent for Africa.

Many factors contributed to the expansion of world trade. Population growth, much of it occurring in cities, increased demand for food, other basic commodities, and "luxury" items such as coffee, tea, sugar, tobacco, and cacao. Industrialization required an ever-increasing quantity of raw materials that ranged from basic fibers such

as wool and cotton to sisal for making rope and twine and palm oil for making soap and lubricating machines. The near-universal acceptance of the gold standard as the basis for the international money system encouraged trade by making it possible to carry on transactions in many different currencies, all of which could be converted to a set amount of gold. Late-nineteenth-century imperialism, by which Europeans gained access to the mineral wealth of their African and Asian colonies and were able to encourage or force their colonial subjects to grow crops that could be sold on the world market, also played a role in the expansion of global commerce.

By far the most important factor was the removal of two obstacles, one artificial and one natural, that had hampered the flow of goods through trade. The artificial obstacles were government-imposed tariffs on imports and exports and the outright prohibitions on the import of certain goods. They also included policies of countries such as Japan, which beginning in the 1600s permitted only one Dutch trading ship a year to transact business in Japan, and China, which restricted trade with Europeans to one port and only at certain times of the year. Beginning in the mid-seventeenth century, British navigation acts restricted the use of foreign shipping between its colonies and Great Britain. Although French physiocrats and the Scottish philosopher Adam Smith advanced powerful arguments in

favor of free trade in the eighteenth century, Great Britain, the world's economic powerhouse, committed itself to free trade only in 1846, when Parliament abolished the Corn Laws, which since 1804 had protected British farmers by placing high tariffs on imported grains. France adopted free trade in 1860, and other countries, with the notable exceptions of the United States and Canada, followed suit. During the nineteenth century European states abolished or lowered tariffs in their colonies and forced Japan and China to keep tariffs low through provisions of the unequal treaties they imposed on both states. In response to the economic slump of the 1870s, several European states raised tariffs but not enough to erect true trade barriers. Until after World War I, the world economic system was marked by the extreme mobility of goods across political borders.

Before the nineteenth century the greater obstacles to international commerce were the high cost of transportation, especially land transportation, and the difficulties of communicating over long distances. In 1800 a letter from London to India took five to eight months to be delivered depending on the season; by 1870 a message sent by electric telegraph took just five hours. In the area of transportation, the era began with a flurry of canal and road building in Europe and the United States, but truly revolutionary changes began only after inventors found ways to utilize steam engines as a source of power for land and water transportation. The first steamboat appeared in England in 1812, and by the 1860s virtually all new British ships were powered by coal-burning steam engines. By 1913 only 2 percent of British shipping was being carried on sailing ships, and a trip from Liverpool to New York took only ten days. The opening of the Suez Canal in 1869 shortened the voyage from London to Bombay (Mumbai) by half and to Singapore by almost a third. The introduction of refrigerated transport ships made it possible to export frozen meat and other perishable goods from as far away as South America, New Zealand, and Australia. The most important technological breakthrough for world commerce was the railroad. The first commercially viable railway line opened between Liverpool and Manchester in 1830. With amazing speed railways spread to the rest of the world,

where they revolutionized personal travel and military planning. In the area of world trade the railroads' main contribution was to provide an inexpensive, reliable means of transporting minerals and agricultural goods from interior regions to coastal ports, where these products were loaded on steamships and carried to buyers around the world.

—James H. Overfield

World Trade— A Statistical Overview

States have long seen international trade as an important source of prosperity and tax revenues. As a consequence, they have been recording the value of their external trade for a long time. Historians have been able to use these records to track the evolution of world trade. The value of world trade in gold increased dramatically between 1750 and the First World War. Available data underestimate trade among Asian countries in the eighteenth century. Hence, the growth rate that one can compute (2.5 percent a year, or a multiplication by more than 50 in 163 years) is probably an overestimate of the actual growth rate.

From a purely descriptive point of view, the increase in the value of world trade can be attributed to three mechanisms. First, the purchasing power of gold declined by half. Second, the real size of the world economy increased over fivefold between 1750 and 1913 as a result of the Industrial Revolution and the increase in the world's population. Third, international trade became more important to the world economy: the ratio between world merchandise trade and world production was multiplied by approximately five.

The rise of trade in the world economy was not a continuous phenomenon. During the eighteenth century, intercontinental trade increased steadily as Britain, France, the Netherlands, Portugal, and Spain played important roles as centers for world trade. They imported goods from their American and Asian empires while exporting goods from Europe to their empires. Furthermore, they also controlled trade from America to Asia (precious metals and luxuries). Colonial empires were central in the system. American empires yielded precious metals that were used by Europe to pay for imports from

Asia. American empires produced goods such as sugar, tobacco, coffee, cotton, or furs, which were in high demand in Europe. African trading posts allowed the slave trade that was integral to the production of plantation goods in the Americas. Asian empires and trading posts allowed the partial control of regional Asian trade and the gathering of goods produced in both dependent and independent parts of Asia for European consumption (china, cotton cloth, spices).

This system was swept away by the Napoleonic Wars and the Industrial Revolution. The Dutch, French, Portuguese, and Spanish empires were severely weakened, and Britain became the dominant trading power. Exotic foodstuffs became a smaller share of world consumption as the consumption of industrial goods increased following the Industrial Revolution. Newly independent nations (including the United States) and European nations adopted protectionist policies to protect their industries from British competition. While there was no absolute decline of trade, it declined relative to the size of the world economy up to the 1830s.

World trade rebounded after the 1830s due to the transportation and communication revolution, including the diffusion of railroads, steamships, refrigeration, and the telegraph and the construction of intercontinental canals (Suez and Panama). Railroads were important to world trade. Although they were not very important links between countries, they were very important in linking the interior of countries (especially the United States and Russia) with their seaports, easing trade in bulky merchandise.

During the nineteenth century, international trade commerce also was encouraged by the increasing acceptance of free-trade policies. It was symbolized by the abolition of the Corn Laws in Britain in 1846 and the network of free-trade treaties inaugurated by the Cobden-Chevalier Treaty between France and the United Kingdom in 1860 (however, tariffs had already been declining in the 1850s). It was less important to the increase of world trade than the transportation revolution. European imperialism again played a role in the rise of trade. For example, the British fought the Opium Wars to force China to accept opium imports from India. The renewed wave of colonization in the nineteenth century

was associated with the opening of colonial markets to European products. The growth of world trade stalled during the economic depression from 1873 to 1896 and the rise of agricultural protectionism in Europe. But it took off again before the First World War.

Trade made the convergence of commodity prices between different continents possible, as the decline of trade costs helped traders to arbitrage, buying goods in low-price areas for sale in high-price areas. Commodity price convergence was not very important in the eighteenth century, but prices for some products began to approach convergence later in the nineteenth century. For example, between 1870 and 1913, the wheat price gap between Liverpool and Chicago fell from 57.6 percent to 15.6 percent. The London-Rangoon rice price gap fell from 93 percent to 26 percent, and the Liverpool-Bombay cotton price gap fell from 57 percent to 20 percent.

The decline in transport costs was accompanied by a growing trade in bulkier commodities. Whereas eighteenth-century trade was centered on expensive exotic goods that could not be produced by their importing consumers (e.g., sugar in the United Kingdom), nineteenth-century trade saw the rise of trade in goods that competed with Europe's agricultural products. Manufactures represented only 36 percent of world trade in 1913, minerals (including coal, oil, and iron) represented 14 percent, and agricultural goods (both foodstuffs and raw materials) represented 50 percent. Europe was a net importer of primary products and a net exporter of manufactures. The rest of the world, including North America, had a deficit in manufactures and a surplus in primary products.

During this whole period, Europe dominated world trade. In 1913, more than half of world trade flows had Europe as the exporter, the importer, or both. Europe as a whole, and the United Kingdom in particular, imported more goods than it exported. This was compensated both by revenues from external capital investments and by the export of business services. All other regions in the world exported more goods than they imported. They exported raw materials to Europe to pay for European manufactures, services, and investments.

—Guillaume Daudin

Bibliography

- Maddison, Angus. *The World Economy: A Millennial Perspective*. Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001.
- Mulhall, Michael G. *The Dictionary of Statistics*. 4th ed. London: G. Routledge and Sons, 1899.
- O'Rourke, Kevin, Leandro Prados de la Escosura, and Guillaume Daudin. "Trade and Empire, 1700–1870." In *Unifying the European Experience: An Economic History of Modern Europe*, Vol. 1, 1700–1870, edited by Stephen Broadberry and Kevin O'Rourke. Cambridge: Cambridge University Press, 2010.
- Yates, P. Lamartine. *Forty Years of Foreign Trade: A Statistical Handbook with Special Reference to Primary Products and Under-developed Countries*. London: Allen and Unwin, 1959.

The First Great Depression, 1873–1896

The Great Depression (also known as the "Long Depression") of the 1870s and 1890s describes a sharp economic downturn that was experienced to some degree by most industrializing countries. The economic downturn was caused by a combination of national and global developments. When several of the leading economic powers began to experience disruptions in growth during the 1870s, they had already grown connected so closely through flows of capital and commodities that the causes, characteristics, and consequences of this depression have to be framed within an international context. The disruption of economic development was felt with particular severity because it fell between two periods of economic expansion and optimism, the first between 1850 and 1870 and the second between the late 1890s and World War I. The 23 years in between came to be known by the term Great Depression, coined by contemporaries in Great Britain. The phrase is today often used to describe the situation there as well as in France and Germany. Although the United States went through two severe economic slumps after 1873 and 1893 and experienced a brief economic fall in the 1880s as well, the term is rarely applied to the era of U.S. history designated as the Gilded Age.

The year 1873 witnessed a series of panics at financial markets in Europe and the United

States ignited by speculative investments in booming industrial sectors during the previous years. The economic slump that followed was marked by three distinct downswings in the global economy with brief periods of moderate recovery. After the initial shock, most of the affected countries experienced a sharp decline in economic growth, which reached its trough in the late 1870s. The second phase of decline followed during the first half of the 1880s but did not affect all major economies as severely as the preceding crisis. For example, while the German economy as well as the economies of the Benelux countries did not significantly shrink during this decade—as measured by per capita gross domestic product (GDP)—France and Great Britain as well as the United States and Australia went through periods of negative growth during the mid-1880s. Most economies started to recover in the late 1880s, but the return to earlier levels of economic growth was delayed by a third downswing in the early 1890s. The beginning of a fresh and prolonged period of economic growth is generally dated to 1896.

Economic failure in the Great Depression can be linked in part to specific features of the individual economies affected and, in part, to the process of globalization. Prior to the Great Depression, decades of rapid economic growth in the Western Hemisphere, groundbreaking improvements in ship and rail transport as well as in communication, a broad acceptance of the gold standard, and the predominance of free trade policies had linked national markets to a world economy. While national production, especially in industry, increased steadily, rising national but especially international competition fueled by technological and organizational progress put more and more businesses under the pressure of comparative cost advantages. For example, in the global market for agricultural products, European producers were undercut by competitors from as far away as the United States and Australia, which were able to offer wheat at a far lower price than in Europe. At the same time, the agricultural sector lost its predominant weight in the economies of the industrializing countries and was thus hit extraordinarily hard by such events. Similar transitions to international markets can be traced in other

economic sectors, for instance the trade in iron and steel (crude and processed), which contributed to the succession of Great Britain as the world's leading steel producer first by the United States in 1890 and later by Germany in 1894.

Surprisingly, the economies of the 16 most-developed countries, a group formed by the industrial countries of Western Europe, the United States, and Canada as well as Australia and Japan, did not on average actually shrink but instead grew through the period of the Great Depression. Therefore, the Great Depression can be viewed as merely a slowdown in economic expansion with erratic fluctuations. According to estimates by the economist Angus Maddison, the growth of national GDPs in the industrialized countries was an average of 3.1 percent from 1850 to 1872 and from 1897 to 1913 but only 2.4 percent from 1873 to 1896.

Why then was a rather moderate slowdown perceived as a Great Depression by many contemporaries? On the one hand, the diminished economic expansion coincided with a sharp decline in prices caused by a relatively slow growth in the volume of money as compared to economic output. On the other hand, the adverse effects of the transition to a globalizing economy had to be swallowed in the midst of the transitory process from preindustrial to industrial economies and societies in many countries, which in itself was a disturbing experience for many people. The Great Depression can therefore only be understood by considering its national peculiarities as well as its complex economic, cultural, social, and political context. The study of the Great Depression thus provides an example of discrepancies between the empirical and psychological dimensions of a historic event.

Among the many consequences of the Great Depression, three were particularly important. First, many European countries turned away from free trade policies and returned to protective tariffs to shield their economies from international competition. In addition, the creation of controlled economic spheres through colonial expansion gained new momentum. Second, the Great Depression gave impetus to the formation of trade associations, labor unions, and industrial pressure groups; it also strengthened

➤ THE GREAT DEPRESSION—MYTH OR REALITY?

The First Great Depression (also known as the Long Depression) has been a subject of debate in economic and social history. The term was again revived and made prominent by the economic historian Hans Rosenberg in the 1960s to describe the coincidence of an economic crisis and the spread of economic pessimism, political extremism, and social conflict that seemed to mutually amplify each other throughout Germany in the late nineteenth century. Rosenberg linked the rise of anti-Semitism in Germany directly to the experience of the Great Depression, which he thought paved the way for the rise of Nazism and the Third Reich. Later research has demonstrated that in Germany, as in other countries such as France or the United Kingdom, the economic dimensions of the Great Depression have been exaggerated. Furthermore, the transformation of traditional anti-Semitism into an ideology of racial superiority through National Socialism has been shown to have been fueled by a much more complex set of factors. While the Great Depression has even been called a myth by its critics, the term is still widely used to describe those decades as a period of tremendous social and economic transformations from a contemporary perspective.

—Christoph Rass

the emergence of cartels and trusts as economic actors tried to cope with the uncertainties of modern markets. Third, the Great Depression accelerated technological progress in many areas as economies struggled to improve their competitiveness on the international stage. It thus contributed to the formation of the second generation of leading economic sectors such as chemical, electrical, and machine construction industries.

—Christoph Rass

Bibliography

- Engermann, S. L., ed. *The Cambridge Economic History of the United States*, Vol. 2. New York: Cambridge University Press, 2000.
- Maddison, A. *Monitoring the World Economy, 1820–1992*. Washington, DC: OECD, 1995.
- Maddison, A. *Phases of Capitalist Development*. New York: Oxford University Press, 1982.

Mathias, P. *The First Industrial Nation: An Economic History of Britain, 1700–1914*. New York: Routledge, 2001.

Shields, R. E. *Economic Growth with Price Deflation, 1873–1996*. New York: Arno, 1977.

Suppression of the African Slave Trade

The suppression of the African slave trade was one of the most impressive developments of the nineteenth century. The enslavement of humans and commerce in human slaves had existed in most societies for thousands of years. Slavery was a normal and accepted feature of almost all civilizations, venerable in age and hallowed by the scriptures of most religions. In the last quarter of the eighteenth century, the egalitarianism implicit in much of the European Enlightenment, coupled with intense evangelical Protestant publicity, impelled the British Parliament to pass in 1807 the Act for the Abolition of the Slave Trade. The slave trade did not end with the passage of this act, however. More than seven decades of continuous agitation by missionary groups as well as vigorous efforts on the part of the British Royal Navy and British diplomatic and economic pressure occurred before slavery was suppressed.

The Royal Navy launched patrols to intercept slave traders on both sides of the Atlantic, especially after the end of the Napoleonic Wars. In 1820 the American Congress defined slave trading as piracy and decreed for it a sentence of death, a sentence that was only once carried out (in 1862). In 1824 the British also declared the slave trade a form of piracy and decreed the death penalty. From the end of the Napoleonic Wars until after the American Civil War, a large part of the Royal Navy was employed in suppressing the slave trade. The Royal Navy detailed a fleet, called the West Africa Squadron, to patrol the West African coast from which a majority of slave cargos originated. Before 1819 the West Africa Squadron consisted of only six ships, but by the middle of the century about a sixth of the ships and several thousand of the sailors and marines of the Royal Navy were employed in this duty. This is in addition to over 1,000 African sailors who worked with the Royal Navy.

During the Napoleonic Wars, the British interpretation of the doctrine of belligerent rights allowed the Royal Navy to board and search the ships of any nation, but when peace emerged the British needed diplomatic cover to continue boarding and searching foreign ships. Great Britain used its economic power and diplomatic muscle to persuade, cajole, and pressure other nations to suppress their parts in the international slave trade. In 1831 the French government banned the internal slave trade (but not slavery) in its possessions. By the 1840s British diplomats had signed treaties with almost all European states, including Prussia and Russia, that allowed the Royal Navy to board their merchant ships if they had reason to suspect that they carried slaves.

After 1819 the West Africa Squadron used Freetown, Sierra Leone, as its main base. Freetown had been founded in the late eighteenth century by freed Afro-American slaves who had supported the British in the American Revolution. Freetown, which became a British Crown colony in 1806 and later was the capital of British West Africa, was the place where the slaves who were rescued from the slave ships captured by the West Africa Squadron were settled. In total, the West Africa Squadron settled about 160,000 rescued captives there.

The Royal Navy's activity in seizing slave-trading ships led to an arms race with the slavers. The slavers began to use faster craft, such as American clipper ships, to outrun the navy. The West Africa Squadron's response was to use faster side-paddled steamships and craft that had a shallow draft so they could pursue the slavers up rivers. Also, the British began to cut the slavers off at the source, blockading the African coast and landing marines to seize the baracoons (compounds) where enslaved captives were held for boarding the slave traders' vessels.

The British also tried other methods to shut down the supply of slaves such as pressuring and even threatening African rulers. In the 1820s the British began occupying the trading posts on the Gold Coast (now Ghana), but they did not eliminate this area as a supplier of slaves until the British fought the first of four wars against the Ashanti during 1863–1864. In 1851

British troops occupied the Kingdom of Lagos, the major supply in Yoruba land. Ten years later the British would annex Lagos, and it would become the capital of Nigeria. Thus, the drive to suppress the slave trade led to the establishment of the British West African empire.

In East Africa, the British campaign against the slave trade was later than on the west coast but followed a similar pattern. Protestant missionaries, such as David Livingstone, explored the hinterland where the Arab and Swahili slave traders acquired their “merchandise” and publicized the horrors of the East African slave commerce through missionary literature and, in Livingstone’s case, the Royal Geographic Society. The British used naval and diplomatic pressure to force the sultan of Zanzibar, who claimed jurisdiction over much of the coast including the towns of Mombasa and Dar es Salaam, to sign treaties limiting the trade. To enforce these treaties, the British established in 1890 the British Protectorate of East Africa, which included Zanzibar and Mombasa but not Dar es Salaam.

Brazil was the largest importer of slaves in most of the nineteenth century. Although Brazil legislated against the trade in 1831, the enforcement of anti-slave trade laws was negligible, and slave importation doubled over the following ten years. In 1845 British legislation declaring the slave trade to be piracy authorized British naval vessels to pursue slave traders in Brazilian ports. British actions in Brazilian ports impelled a reluctant Brazil to effectively end slave imports in 1850. Cuba was the other large-scale destination for nineteenth-century slave cargos, and in spite of British and American pressure, the last Africans were imported to the island as late as 1866. The major problem with ending the slave trade to Cuba was that American ships, which the Royal Navy after the War of 1812 did not molest, carried on much of the trade to Cuba. The United States was the main exception on the list of seagoing countries that refused to sign a treaty allowing the Royal Navy to board its ships looking for slaves. Instead, the Americans by a treaty of 1819 and another treaty (the Webster-Ashburton Treaty) in 1842 promised to have their own navy patrol the coasts of Africa and police its own merchant marine. The United

➤ ECONOMIC FORCES AND THE ENDING OF THE SLAVE TRADE

For many years it had been argued that the slave trade and slavery came to an end because of economic reasons. In the middle of the twentieth century, the interpretation accepted by the majority of historians was that slavery was not as profitable as free labor, so the institution, especially in the British West Indies, was declining. Likewise, these historians believed that the international slave trade would have also proved unprofitable in the face of the mass transatlantic migration of European free whites. More recently, economic historians, such as Robert Fogel in *Without Consent or Contract: The Rise and Fall of American Slavery* (1989), have pointed out that the most prosperous decades in the history of the slave trade were the two just prior to the suppression of the trade. And Seymour Drescher, in *Econocide: British Slavery in the Era of Abolition* (1979), calls the suppression of the slave trade and slavery “econocide.” He and other historians maintain that the suppression of the slave trade was not caused by economic forces but instead was accomplished in spite of these forces.

—Wilfred J. Bisson

States did maintain a few ships patrolling off the coasts of Africa, but its efforts in enforcing the ban on the slave trade were largely ineffectual until the American Civil War.

The suppression of the African slave trade was a result of a fortuitous chain of contingencies. First, a small group of religious dissenters were able, by riding the wave of increased religious fervor, to affect the policy of the world’s leading superpower, Great Britain. Second, that superpower used its economic and political influence as well as its naval power to impose that policy on a global scale.

That the slave trade, a cultural practice that had existed nearly unchallenged since the beginning of sedentary human history, would be destroyed in such a brief time could not have been predicted when the movement to abolish the slave trade began. The success of that movement marked a milestone in the growth of a new conception of human equality.

—Wilfred J. Bisson

Bibliography

- Bethell, Leslie. *The Abolition of the Brazilian Slave Trade: Britain, Brazil and the Slave Trade Question, 1807–1869*. Cambridge: Cambridge University Press, 1970.
- Carey, Brycchan. *British Abolitionism and the Rhetoric of Sensibility: Writing, Sentiment and Slavery, 1760–1807*. Basingstoke, UK: Palgrave, 2005.
- D'Anjou, Leo. *Social Movements and Cultural Change: The First Abolition Campaign Revisited*. New York: Aldine de Gruyter, 1996.
- Eltis, David. *Economic Growth and the Ending of the Transatlantic Slave Trade*. New York: Oxford University Press, 1987.
- Lewis, David Levering. "Competing Interpretations: Ending the Atlantic Slave Trade Traffic." Washington: National Archives, <http://www.archives.gov/nae/news/featured-programs/slave-trade-symposium/Slave-Trade-Keynote-Address.pdf>.
- Oldfield, John. "The Abolition of the Slave Trade." The Schomburg Center for Research in Black Culture, <http://abolition.nypl.org/essays/abolition>.

Trade and Commerce in Southeast Asia

Around 1750, trade and commerce in Southeast Asia as a whole were still of marginal significance because of transport impediments. Some

areas depended on foreign trade, but local communities were self-sufficient to a high degree. Given the cost of transport, goods traded over longer distances tended to be luxury products with a high price-to-weight ratio such as spices (pepper, nutmeg, cloves, mace, etc.), silk, and cotton cloth. Southeast Asia benefited from its location, as trade routes between India and China passed through the region. Some basic commodities such as rice, dried fish, and salt were also traded, mainly within the region.

Most of Southeast Asia's trade around 1750 was conducted by Asian merchants, who had been joined for this purpose by European-chartered trading companies, particularly the Vereenigde Oost-Indische Compagnie (VOC, Dutch East India Company). The Spanish were active only in the Philippines (which was an entrepôt for shipments of silver primarily from Mexico to China and of silk and porcelain from China to Europe). The Portuguese, English, and Dutch had established trade strongholds throughout Asia. During the nineteenth century an increasingly dense shipping network spanned the region, with the ports of Rangoon, Belawan, Penang, Singapore, Bangkok, Cholon, Danang, Haiphong, Manila, Makassar, Banjarmasin, Tanjung Perak, and Tanjung Priok as nodes.

In the late nineteenth century, industrialization in western Europe and North America spurred world trade as the export of commodities to these continents became more important than intra-Asian trade, and production for export itself diversified. Southeast Asia's exports increased beginning in the mid-nineteenth century, but the per capita level was still low by 1914 compared to Western countries, and Southeast Asia still occupied a marginal position in global trade. The impact of foreign trade on economic development was further limited by the fact that most countries had a trade surplus. The surplus paid for the overseas remittances related to the accumulating inflows of foreign direct investment and loans as well as the employment of foreign nationals before World War II. This is often referred to as the "colonial drain."

After 1870 the export mix of Southeast Asia changed toward bulk products. Facilitating this shift was a decline in long-distance transport costs as a consequence of the construction of railways and of increasingly larger steamships.

PER CAPITA VALUE OF MERCHANDISE EXPORTS (F.O.B.)

Current U.S. Dollars (Ten-Year Averages)

	1850s	1870s	1890s	1910s
Burma	—	4	5	11
Thailand	1	1	1	5
Indonesia	1	2	2	6
Malaysia*	—	16	14	82
Indochina**	—	1	1	4
Philippines	2	3	3	7

Note: Converted to U.S. dollars with official exchange rates.

*Malaya (excluding Singapore) before World War II.

**Laos, Cambodia, and Vietnam together.

Source: Pierre van der Eng. "Trade and Commerce of Southeast Asia." In *Southeast Asia: A Historical Encyclopedia, from Angkor Wat to East Timor*, ed. Ooi Keat Gin (Santa Barbara, CA: ABC-CLIO, 2004).

—Sophal Ear and Pierre van der Eng

The opening of the Suez Canal in 1869 reduced the need to ship goods around the Cape of Good Hope. The Suez Canal also benefited trade with North America, most of which went to America's eastern seaboard via Europe until the construction of transcontinental railways in the United States and the opening of the Panama Canal in 1915.

The increasing trade of bulk produce—such as rice from Burma (Myanmar), Siam (Thailand), and South Vietnam; sugar and copra from Indonesia and the Philippines; and rubber from Malaya—benefited more from technological changes in shipbuilding and organizational changes in the international shipping industry. The shift from sailing ships to ships propelled by steam increased the speed of travel. Ships no longer depended on the wind or on the season of the year (important for crossing the Indian Ocean). Steam engines became so powerful that they could propel increasingly larger steel ships, which soon replaced wooden vessels on long hauls. By 1914, international shipping costs had declined to about one-fifth of their 1850 level.

—Sophal Ear and Pierre van der Eng

Bibliography

- Golay, F. H. "Southeast Asia: The 'Colonial Drain' Revisited." In *Southeast Asian History and Historiography*, edited by C. D. Cowan and O. W. Wolters. Ithaca, NY: Cornell University Press, 1976.
- Latham, A. J. H. "The Dynamics of Intra-Asian Trade, 1868–1913: The Great Entrepôts of Singapore and Hong Kong." In *Japanese Industrialization and the Asian Economy*, edited by A. J. H. Latham and H. Kawahatsu. London: Routledge, 1994.
- Van der Eng, Pierre. "Trade and Commerce of Southeast Asia." In *Southeast Asia: A Historical Encyclopedia, from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.
- Wong, Lin Ken. "Singapore: Its Growth as an Entrepot Port, 1819–1941." *Journal of Southeast Asian Studies* 9 (1978): 50–84.

The Macartney Mission/Embassy to China

In September 1792 an embassy from Great Britain under George Viscount Macartney (1737–1806) set sail from Portsmouth for China with the hope

of making agreements with the Chinese emperor to establish diplomatic relations and increase trade. After nine months at sea the entourage of 95 people landed at Macao, then a Portuguese territory, and proceeded north, eventually reaching Jehol, the imperial retreat, where Macartney would have an audience with the Qianlong emperor (r. 1736–1795) on September 14, 1793. The embassy remained in China until the end of the

› GIFTS FOR THE EMPEROR



James Gillray's satirical print, "The Reception of the Diplomatique and His Suite," was published in 1792, a week before Macartney's actual departure for China. (Hulton-Deutsch Collection/Corbis)

The gifts that Macartney would present to the Chinese emperor on behalf of George III were the subject of serious consideration, as they were designed to introduce British ingenuity to the Chinese. The final cost was a staggering £16,000, well above the initial budget of £10,000. These gifts became well known through the popular press. In 1792 James Gillray satirized the anticipated meeting between Macartney and the Qianlong emperor in his *Diplomatique and His Suite at the Court of Peking*, which was published one week before the embassy sailed. Here Gillray depicts an eager ambassador on bended knee presenting not objects that represented significant scientific and technological achievements but rather trivialities—such as a badminton racquet and shuttlecock—to a mildly interested emperor lounging on a cushion and smoking a long, slender pipe.

—Cathy Pagani

year, arriving back in England in September 1794. The main aims of the embassy were to negotiate a treaty that would allow a representative of the king of England to reside in Beijing, obtain a piece of land near the tea- and silk-producing areas in southern China where British merchants could establish a permanent year-long residence under British jurisdiction, and open new ports for trade, particularly in northern China, where British goods—most notably woolens—could be sold. In addition, Macartney had been charged with obtaining as much information as possible about the Chinese and their relations with other nations. He was also to create a favorable impression of the British with the Chinese ruler not only through the ambassador's good conduct but also by demonstrating Britain's ingenuity in scientific and technological achievements. This was one of a number of European embassies sent to the Chinese court in the eighteenth century and was the first embassy sent by Great Britain. An important part of the embassy was the choice of gifts for the emperor on behalf of King George III. Owning to the embassy's significance in establishing diplomatic relations, much attention was spent on the selection, care, and reception of the gifts. The clocks, terrestrial and celestial globes, muskets, woolens, and other items were designed to impress upon the Chinese the superiority of British manufactures—and, by extension, British cultural superiority—and to create a market for them in China. The emperor remained unimpressed and in his letter to George III wrote that he had “never valued ingenious articles” nor did he have “the slightest need” for Britain's products.

While Macartney was successful in meeting with the Qianlong emperor, the embassy overall was regarded as a failure and a national embarrassment. Not only did Macartney fail to reach his goal of increasing trade with the Chinese, but he alienated the Chinese ruler during the infamous Kowtow (*ketou*) Incident by refusing to prostrate himself before the emperor during his first audience with him. The embassy failed to understand that the kowtow was an important part of Chinese court protocol; the Chinese considered this a sign of disrespect that reinforced their view of the British as arrogant and ill-mannered. The British were, to the Chinese, ignorant barbarians.

In the end, the Macartney embassy did little to change the Qianlong emperor's perception that Britain was nothing more than a tributary nation that was sending a congratulatory entourage in honor of his 80th birthday. More importantly, it served to highlight the cultural misunderstandings that existed between the British and the Chinese at the end of the eighteenth century.

—Cathy Pagani

Bibliography

- Bickers, Robert A., ed. *Ritual and Diplomacy: The Macartney Mission to China, 1792–94*. London: British Association for Chinese Studies, 1993.
- Hevia, James L. *Cherishing Men from Afar: Qing Guest Ritual and the Macartney Embassy of 1793*. Durham, NC: Duke University Press, 1995.
- Macartney, George. *An Embassy to China: Being the Journal Kept by Lord Macartney during His Embassy to the Emperor Ch'ien-lung, 1793–1794*. Edited by J. L. Cranmer-Byng. London: Longmans, 1962.
- Staunton, Sir George. *An Historical Account of the Embassy to the Emperor of China, Undertaken by Order of the King of Great Britain; Including the Manners and Customs of the Inhabitants; and Preceded by an Account of the Causes of the Embassy and Voyage to China*. London: John Stockdale, Piccadilly, 1797.

Opium War and Trade with China

The Opium War of 1839–1842, one of the most dramatic encounters between China and the West, resulted from the Qing government's efforts to end the British-controlled opium trade. For the British, the war was not simply the result of trade disputes but also served as a means of asserting superiority over China after the failure of the embassies of Lord Macartney (1737–1806) in 1792–1793 and then Lord Amherst (1773–1857) in 1816. The Chinese were no match for British firepower and were handily defeated. The war ended on August 29, 1842, with the signing of the Treaty of Nanjing, which expanded the Westerners' control of the China trade.

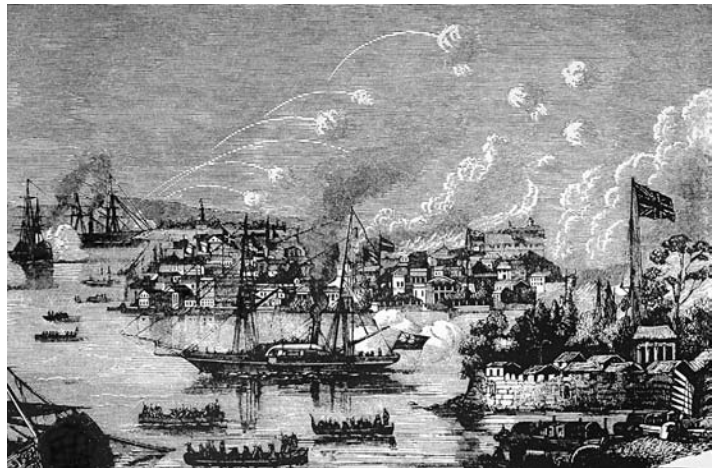
Opium is a highly addictive narcotic that comes from the opium poppy, *Papaver somniferum*, and was first used in China as a medicine as early as the eighth century. In the late

seventeenth century the Chinese began to smoke tobacco steeped in opium and by the late 1760s were smoking pure opium. The habit grew rapidly, affecting all strata of Chinese society. Although China produced its own opium, smokers preferred the stronger foreign product grown in the Indian regions of Bengal and Malwa.

Opium became an important product in the trade involving England, India, and China. England had developed an insatiable demand for Chinese teas that was not counterbalanced by the Chinese need for British goods. In the eighteenth century the Honourable East India Company, which had traded with China since 1600, began to help finance its purchases of tea with Indian opium grown in areas under British control. In the late eighteenth century China was importing about 1,000 chests of opium annually (a chest weighs approximately 133 pounds or 60 kilograms); by 1838, imports totaled around 40,000 chests. Estimates put the number of smokers in the early 1830s between 2 million and 10 million. This profitable business soon attracted private traders at Guangzhou (Canton) as well.

The Chinese government made several attempts to stop the trade in opium. An edict of 1729 prohibited the selling and smoking of opium, and in 1796 the government prohibited its importation and domestic production. These edicts were ineffectual and instead encouraged smuggling of the drug, as foreign dealers were loath to give up the trade's high profits.

In 1839 the emperor appointed Lin Zexu (1785–1850) as imperial high commissioner at Guangzhou to deal with the opium situation. Lin's orders to stop the smuggling were ignored by the foreign dealers; in one final attempt to control the situation, Lin cut off food and water supplies to the foreign factories and destroyed 20,000 chests of opium. The British fled from Guangzhou, moving first to Macao and then to the largely uninhabited island of Hong Kong, where they would continue trading with other Chinese ports. On November 3, 1839, following a fierce confrontation between Chinese junks and British warships, Britain declared war. The Chinese were outmatched by the British naval forces, which quickly took command of strategic locations along the coast and formed a blockade of the Guangzhou estuary. When the British



British ships bombard Guangzhou Harbor during the First Opium War, which started after the Chinese resorted to force to halt the importation of opium by British traders. (Hulton Archive/Getty Images)

➤ SMOKING OPIUM

Smoking opium required special paraphernalia. The primary pieces of equipment were the opium pipe, the lamp, a spoon-headed needle, and a box to hold the treacle-like prepared opium. The opium pipe had a long stem with a detachable bowl in the shape of a flattened sphere. To take opium, the smoker had to lie down with his (or her) head resting on a pillow. Using the needle, the smoker would take a pea-sized ball of opium and hold it over the flame of the lamp. Once the drug began to bubble, it was quickly placed into the small opening of the pipe and inhaled in one long breath.

—Cathy Pagani

took Shanghai and threatened to attack Nanjing in mid-1842, the Chinese admitted defeat. With the signing of the Treaty of Nanjing on August 29, 1842, the Chinese were forced to cede Hong Kong to England, open Guangzhou and other ports for trade, and pay more than 21 million dollars in silver to the British to cover the cost of the destroyed opium. With Britain in control of the trade, great quantities of opium continued to be imported into China until the end of the nineteenth century. It was not until 1997 that Hong Kong was returned to Chinese governance.

—Cathy Pagani

Bibliography

- Collis, Maurice. *Foreign Mud: The Opium Imbroglia at Canton in the 1830's & the Anglo-Chinese War*. 1947; reprint, New York: New Directions, 2002.
- Gelber, Harry Gregor. *Opium, Soldiers and Evangelicals: Britain's 1840–42 War with China and Its Aftermath*. New York: Palgrave Macmillan, 2004.
- Waley, Arthur. *The Opium War through Chinese Eyes*. Stanford, CA: Stanford University Press, 1958.

Western Traders and the Opening of China

In the mid-eighteenth century, Chinese trade with western Europeans was a very small part of the rapidly expanding Chinese commercial networks. Existing interstate trade was thriving. Caravans carrying Russians, Swedes, Manchus, Mongols, and Chinese crossed through the steppes even during wars. China had complex trade relations with many Asian states, such as Japan, Korea, Burma, Thailand, Vietnam, and the Ryukyu Islands. In 1796 there were over 1,000 oceangoing junks based in Amoy alone.

The armed traders from western Europe did not fit easily into the Chinese networks, but the “red-haired barbarians” were persistent. In the mid-seventeenth century British ships joined other Europeans, trading from Guangzhou (Canton), Xiamen (Amoy), and Zhoushan (Chusan). By 1699, British trade operations centered in Guangzhou. The Qing relaxed restrictions on coastal trade for a while beginning in the late seventeenth century. In the absence of strict government control, in 1720 the Chinese merchants of Guangzhou organized in an effort to manage foreign trade and protect their interests. This sort of organization was becoming common in China by the early eighteenth century. Chinese guilds (perhaps more appropriately described as trade associations) existed at least by the sixteenth century. Europeans knew the merchant guilds as *hongs* or *cohongs*. The term *hong* (*huang* in Pinyin) refers to the association, and the term *cohong* (the British pronunciation of the *gonghuang*) indicates that the Qing bureaucracy officially recognized the group. In 1754 the Qing made the Guangzhou association

responsible for ensuring that Europeans paid transit dues. The Qing also held the Guangzhou *gonghuang* responsible for making restitution for any damages that might arise from foreign merchants' behavior.

The British East India Company (EIC) held a monopoly on the British trade in Asia and maintained military forces, including warships. They could also generally expect support from the British Royal Navy if necessary. The dynastic and trade wars of Europe spilled over to the European merchants in Asia. By the mid-eighteenth century the EIC was clearly dominant in the area, although very mistrustful of the Portuguese and French Jesuits ensconced in the Qing court. The strong European market for Chinese imports inspired traders to push hard on China's door. In 1759 the EIC tried to better its position in trade matters by sending a Mandarin-speaking company trader, James Flint, to carry to the court requests for an expanded access and to present their grievances about Chinese merchants. He sailed up the coast in a small ship and gained an audience with the Qianlong emperor through ingenuity and a certain amount of bribery. At first the Qianlong emperor seemed to be receptive to Flint's arguments and agreed to investigate the conditions in Guangzhou. As Flint embarked on an overland return to Guangzhou, the emperor reconsidered the case—perhaps at the urging of the minister of commerce—and ordered Flint arrested. Ultimately Flint's trip accomplished little other than irritating the court and resulted in his imprisonment for three years. In 1760 Qianlong confined all European trade to Guangzhou.

The British resented the restrictions, but the “China Trade” was becoming increasingly important in Great Britain. In the early days silk was the most important trade item, supplemented by porcelain and small amounts of tea, but the tea trade escalated rapidly. In 1701, 120,000 pounds (54,430 kilograms) of tea were imported in Britain; in 1721 over 1 million pounds (453,000 kilograms) were imported; and by 1790 the number had soared to some 20 million pounds (9.1 million kilograms) and continued escalating, reaching 25 million pounds (11.3 million kilograms) by 1800. Drinking tea had become an important social ritual in Great Britain, gradually replacing

ale as the preferred drink with breakfast and midday meals. Tea gardens and such events as tea dances became popular with the upper classes, but tea drinking itself transcended class lines. In fact, some were concerned about laborers drinking tea rather than calming ales during their workdays. Tea drinking (and taxation associated with the sale of tea) spread throughout the British Empire. The American colonists' 1773 protest over tea taxes, the Boston Tea Party, is an important feature of American lore.

The very success of the trade became a problem. There was a small erratic market for British metals and cotton fabrics, and British jewelers briefly tempted the Chinese with ornate music boxes, but within a short time the limited market for such novelties was satisfied. The Chinese were primarily interested in acquiring silver. Both China and Great Britain had monetized economies and depended on silver for large-scale transactions. The Chinese required silver for payment of taxes. Competition for silver and the British traders' search for other trade items set the two states on a collision course. For many years the value of silver bullion in China exceeded the mint price in Britain, meaning that there was a greater incentive for people to invest their silver in trade with China than to sell their silver to the British for coinage. Rather unscrupulous entrepreneurs further devalued British coinage by shaving silver from the edges of coins. They melted the scrap silver for sale in the Chinese markets.

The EIC finally found a trade item interesting to the Chinese when they conquered the opium fields of Bengal in 1756. The Qing had already prohibited opium importation in 1729, but the ban did not deter the EIC, which contracted with country traders (non-EIC merchants licensed to trade in the region) to actually carry the opium to China. The Qing intensified the penalties in 1796 and again in 1813 but to little avail. EIC records indicate that the annual opium trade with China in 1790 amounted to about 4,050 chests (approximately 133–135 pounds [60 kilograms] each). By 1838 that amount had grown to an estimated 20,620 chests annually. Prior to the emergence of the opium trade, silver constituted fully 90 percent of China's imports from European sources. In the early nineteenth century,

opium from Bengal tipped the balance in favor of the British; in 1836, the Chinese spent nearly 10 percent more silver on opium imports than they earned from exporting goods.

British concern about maintaining a favorable balance of trade was the driving force for the two nineteenth-century wars declared against China by the British, the Opium War (1839–1842) and the Arrow War (1856–1858). Among other provisions, the Treaty of Nanjing (1842) after the Opium War resulted in the abolition of the cohong system in Guangzhou and opened five new treaty ports. The volume of British trade doubled. A few years later a new series of treaties followed the Arrow War. In the final version of the Treaty of Tianjin (1858), foreign diplomats of Britain, France, and the United States gained the right to travel to Beijing. Traders and missionaries from those countries could move about freely in the interior of China. Ten additional ports opened to foreign ships, the opium trade was legalized, and Chinese citizens working with foreigners gained the right to be tried under the laws of their employers' courts rather than under Chinese laws. In the Treaty of Aigun (1858), China granted Russia vast territories in eastern Siberia and navigation rights along several internal rivers. This series of treaties and concessions between 1842 and 1860 opened China to foreign traders and largely left those traders and their associates outside Chinese control. The Qing court considered them temporary accommodations, but the foreign governments did not.

—Carolyn Neel

Bibliography

- Melancon, Glenn. *Britain's China Policy and the Opium Crisis: Balancing Drugs, Violence, and National Honor, 1833–1840*. Hampshire, UK, and Burlington, VT: Ashgate, 2003.
- Richardson, Philip. *Economic Change in China, c. 1800–1950*. New Studies in Economic and Social History. New York: Cambridge University Press, 1999.
- Wang, Gungwu. *Anglo-Chinese Encounters since 1800: War, Trade, Science, and Governance*. New York: Cambridge University Press, 2003.
- Wong, Roy Bin. *China Transformed: Historical Change and the Limits of European Experience*. Ithaca, NY: Cornell University Press, 1997.

Thinking about Trade—Free Trade and Protectionism

The terms “free trade” and “protectionism” refer to two different economic policies about international trade. Specifically, the term “free trade” indicates a policy that advocates the free exchange of goods between countries. Conversely, the term “protectionism” refers to a system designed to protect domestic economies by means of tariffs on imports and subsidies to produce goods for export.

The roots of the doctrine of free trade can be traced back to Adam Smith (1723–1790), the Scottish moral philosopher and political economist. In *The Wealth of Nations*, published in 1776, Smith provided the intellectual foundations for the doctrine’s premises and future developments. Through a reexamination of mercantilism, the economic system that had prevailed in Europe since the sixteenth century, and a critique of government regulation and control of economic affairs, Smith concluded that a system of free trade would bring about the best results for both the consumer and the producer

and would ensure the most advantageous use of society’s resources.

Smith’s views about trade were developed and further elaborated on by David Ricardo (1772–1823), the English political economist, in his *Principles of Political Economy and Taxation* (1817). In his well-known “law of the competitive advantage,” Ricardo took as a point of departure Smith’s considerations of the natural advantages that one country has over others in producing specific goods. The economic system suggested by Ricardo was a system of complete free trade in which each country employed its natural resources to produce those commodities that could give it an advantage over other competing countries in the international market.

The doctrine of free trade as enunciated by Smith and Ricardo was applied in Great Britain during the debates on the Corn Laws, which peaked in the 1840s. The Corn Laws, approved by Parliament in 1815 and 1828, imposed a duty on imported corn (the British term for any cereal crop). Supporters of free trade organized themselves into the Anti-Corn Law League, led by Richard Cobden (1804–1865), a manufacturer and politician, and John Bright (1811–1889), a Liberal member of Parliament. From this organization stemmed the so-called Manchester School, a name given to the group of economists, businessmen, and lobbyists who campaigned in England in the mid-nineteenth century for free trade. The repeal of the Corn Laws in 1846 is usually considered the beginning of an era of free trade in Great Britain. However, the first signs of a shift toward a more liberal economic policy had already occurred in the previous decades. For instance, the abolition of the East India Company’s monopoly over Indian trade in 1813 and Chinese trade in 1833 both anticipated the shift toward free trade.

During the nineteenth century many countries followed Britain’s lead in adopting economic policies based on free trade. In France the so-called French Liberal School promoted, on the basis of the theory proposed by Jean Baptiste Say (1767–1832), economic policies focused on free trade. This school can be considered the French equivalent of the Manchester School. France officially adopted free trade in 1860, and other countries soon followed. Beginning in the late 1870s a number of European countries, with

➤ RICHARD COBDEN—ADVOCATE OF FREE TRADE

Richard Cobden (1804–1865) was a prominent English businessman and politician best known as a fervent supporter of free trade and a member of the Anti-Corn Laws League. He advocated economic and trade policies that bolstered free exchange of products and reduced tariff walls by lowering customs duties. Cobden used Adam Smith’s work as a point of reference to theoretically support his views and ideas about international trade. Cobden was also the promoter of the trade agreement between France and Great Britain, generally known as the Cobden-Chevalier Treaty (1860), that aimed at bringing down trade barriers and fostering the exchange of goods between the two countries. Apart from his involvement in the free trade movement, Cobden supported and patronized a number of important social and cultural initiatives both nationally and internationally. He was a convinced pacifist who openly deplored war and promoted the reduction of armaments.

—Antonella Viola

the exception of Great Britain, the Netherlands, and Belgium, reestablished protective tariffs during a period of economic recession. But the tariffs tended to be modest and did not present a serious impediment to the exchange of goods across European borders.

In much of Asia, free trade accompanied European colonialism. Britain imposed free trade on its Indian colony, and Britain and other Western powers forced Japan, Korea, and China to maintain low tariffs through a series of “unequal treaties” imposed in the nineteenth century. Most Latin America states, with their economies based on the export of agricultural products and raw materials and the import of European-manufactured goods, also became wedded to free trade from the 1860s onward.

In the United States free trade had less support than in Europe. In 1791 Alexander Hamilton (1757–1804), then secretary of the treasury, in his “Report on Manufactures” proposed to safeguard U.S. industry and trade by means of tariffs and duties. Protectionism remained the guiding principle in the United States until World War I and beyond. Canada also adopted a high-tariff policy in 1879, when the government of the Conservative leader John A. Macdonald implemented its National Policy. Beginning in the late 1890s Canada, New Zealand, Australia, and South Africa adopted a two-tiered tariff system in which Great Britain and trade partners within the British Empire received preferential treatment.

In the 1920s tariff protection basically remained at the same levels as in the pre-World War I economy, but this changed with the onset of the Great Depression. The passage of the Smoot-Hawley Tariff by the United States in 1930 led to a storm of foreign retaliatory measures that prolonged the depression by causing a drastic decline in international trade. After World War II, international economic planners and government leaders sought to correct the problems stemming from the protectionism of the interwar years. Multilateral trade agreements and other forms of economic cooperation led to the General Agreement on Tariffs and Trade (1947) and laid the foundation for the World Trade Organization (1955), designed to supervise and liberalize international trade.

—Antonella Viola

Bibliography

- Dormois, J. P., and P. Lains, eds. *Classical Trade Protectionism 1815–1914: Fortress Europe*. London: Routledge, 2006.
- Irwin, Douglas. *Against the Tide: An Intellectual History of Free Trade*. Princeton, NJ: Princeton University Press, 1997.
- Magnusson, L., and C. Sugiyama, eds. *Free Trade: 1793–1886*. London: Routledge 1997.

Latin America's Export Boom in the Late Nineteenth Century

In the late nineteenth century, Latin America's economy experienced an unprecedented export expansion in response to the growing demands for food and raw materials from industrialized Europe and North America. To supply the increased demand for rubber, sisal fiber, bananas, sugar, coffee, cotton, frozen meat, and grains as well as minerals such as nitrates, copper, tin, and silver, European (chiefly British) and North American commercial interests entered and became the dominant factors in the economies of Latin American countries. These commercial interests built railroads and established steamship lines to efficiently move these products to Latin American ports and from those ports to North American and European markets; acquired land and established plantations to produce sugar, bananas, coffee, and other tropical foods; developed mines to extract not only metals and nitrates but also guano (for fertilizer); built company towns to house and control their workforces; used their size and power to influence and frequently corrupt policies of Latin American governments; supported the overthrow of governments and the installation of other governments friendlier to their policies; and used their economic power and political influence to control diplomatic and military relations between the producing countries of Latin America and the consuming nations of North America and Europe.

The late-nineteenth-century export boom illustrates all of these developments. Tropical America had exported sugar since the early sixteenth century. Sugar production had constantly increased decade after decade until, by the mid-nineteenth century, sugar comprised a large part

➤ EXPORTS, DEPENDENCY THEORY AND WORLD SYSTEMS

Latin American economies (except for that of Brazil in recent years) were characterized as colonial economies because the crucial decisions that affected their economies were made in the United States and Europe. Exports from Latin America were products of their farms and mines; their imports were finished manufactured goods. With their economies dependent on the economies of the United States and Europe, Latin Americans had little control over the prices of the goods and commodities they sold or bought. Latin America's historical economic dependence inspired some scholars, such as Andre Gunder Frank (*Capitalism and Underdevelopment in Latin America*; London: Penguin Books, 1971), to develop Dependency Theory, a set of ideas that complement World Systems Theory (see Immanuel Wallerstein, *The Modern World System: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century*; New York: Academic Press, 1974). World Systems Theory holds that the modern economic world is divided into a developed, relatively wealthy Core (North America, Western Europe) and the less wealthy Periphery (Latin America, Africa, most of Asia). The world economic system, according to both Dependency and World Systems theories, is so structured that wealth flows from the undeveloped Periphery to the developed Core. The Periphery finds it difficult to escape its endemic poverty.

—Wilfred J. Bisson

of the caloric intake of North Americans and Europeans. By the mid-nineteenth century Cuba was the leading exporter of sugar, followed by Brazil. In the 1870s Cuban and, to a lesser extent, Brazilian sugar production came to be dominated by heavily capitalized *centrales*, enterprises that contracted with plantation operators (*colonos*) to buy their cane and produce the refined sugar in huge steam-driven crushers. The plantations were often connected to the *centrales* by narrow-gauge railroads and were obliged to sell their product at prices dictated by the *centrales*. The production of sugarcane provided only seasonal employment for most of the plantation laborers; in the rainy season (the

tiempo muerte), poverty and unemployment stalked the sugar-producing regions. By the 1890s many of the Cuban *centrales* were owned by North American interests, and the United States was the largest market for Cuban sugar. In the early twentieth century U.S. customs regulations gave Cuban sugar a favored place in the U.S. market.

North American interests came to dominate Latin American production of bananas and other tropical fruits in a similar fashion. Here the major but not the only North American enterprise was the United Fruit Company. United Fruit evolved from a company that had been compensated by the Costa Rican government for the construction of a railroad (1870s) by the grant of about half a million acres (200,000 hectares) of idle land. This erstwhile railroad company established banana plantations, company towns, and shipping facilities. By the turn of the century, United Fruit operated plantations on millions of acres in many Central American countries as well as in Colombia and Ecuador. During the U.S. military occupation of Cuba (1898–1901) United Fruit acquired half a million acres in Cuba. To protect its vast landholdings from taxation and to ensure assistance of local governments in the control of labor, United Fruit actively intervened in the politics of many Latin American countries, which then acquired the epithet “banana republics.”

Henequen (a type of agave plant) as a source for sisal fiber became the principal export of Yucatan during the 1890s, when the demand for a cheap and durable binder twine for wheat harvesters on the North American plains grew. Special steam-driven machines used to strip the sisal fiber from the henequen leaves were established in large central haciendas. The production of sisal was, for a time, a Yucatan monopoly and caused an economic boom in and near the city of Merida around the turn of the twentieth century. The care and harvesting of the henequen plants was difficult and labor-intensive. To ensure a steady supply of cheap labor in the henequen fields, the regime of Porfirio Diaz conscripted Yaqui Indians from northern Mexico for forced labor, akin to slavery, in the Yucatan henequen fields. Mexico lost its monopoly in sisal production when German scientists early in

the twentieth century, using stock from Florida, introduced henequen cultivation to Tanganyika (then in German East Africa). After the great haciendas were broken up following the Revolution of 1911–1920, Mexican production diminished rapidly.

The rubber boom in Brazil mirrored the sisal boom in Mexico. The rubber tree, the sap of which, latex, is the raw material for rubber, is native to the American tropics. In the 1870s American and German chemists developed processes by which rubber became the ideal material for use in rubber tires. With the proliferation of bicycles and automobiles, rubber came to be in high demand, and the Amazon basin of Brazil was the easiest place to get it in quantity. Brazilian merchants controlled the production end of the commerce. They employed immigrants from the poverty-stricken northeast of Brazil, sending them into the Amazon jungle to tap the widely scattered rubber trees. The tappers were employed in a system that was a form of debt peonage resembling slavery, but the rubber barons who controlled the commerce grew extremely wealthy. The Amazon ports of Manaus and Belem became large sophisticated cities with conveniences such as electric streetcars and streetlights that were rare in most other Brazilian cities. But the prosperity of the rubber boom was ephemeral. By 1912 the British had developed rubber plantations in their colonies in Southeast Asia that could produce rubber less expensively and with a more consistent quality. This spelled the end of the Brazilian rubber boom.

Southern Brazil's economy expanded with the boom in coffee, and São Paulo, in the heart of the coffee-producing region, became the largest city in South America. But the prosperity in coffee became a depression as overproduction caused the price of coffee to plunge. Brazil's cotton and other agricultural crops were likewise exposed to the vagaries of the boom and bust cycles in the fluctuating world market.

Argentina and Uruguay's late-nineteenth-century prosperity, like that of Brazil, was also fueled by agricultural exports, mostly beef but also wheat and maize. Shipping refrigerated beef to Europe began in 1876, leading to a significant improvement in and expansion of the livestock industry of the Argentine and Uruguayan

pampas. This expansion was accompanied by the injection of large amounts of British capital to build railroads and shipping facilities. Large-scale immigration, mostly involving Italians and Spaniards but also Germans, British, and Irish, flowed in, making Argentina and Uruguay the most "European" of all the Latin American republics.

Latin America's export of minerals also soared in the late nineteenth century, with tin dominating Bolivian trade and nitrates and copper playing a similar role in Chile. The competition for the nitrates of the Atacama Desert, avidly sought by fertilizer and munitions manufacturers in Europe and North America, contributed to causes of the War of the Pacific (1879–1884). In this war Chilean armed forces seized from Bolivia and Peru most of the 43,000-square-mile (111,370-square-kilometer) Atacama. Chile won the control of the nitrate beds, but the prosecution of the war in the Atacama produced strains in Chilean politics that plunged Chile into one of its rare civil wars.

The late-nineteenth-century Latin American export boom led to the development of large cities to serve as ports. The boom also brought the conveniences of late-nineteenth-century urban living to some of the population in these growing port cities and stimulated a great wave of European immigration, especially by Iberians, Italians, and Germans, to Argentina, southern Brazil, and Cuba. But the export boom, by increasing the power of European and North American capital in Latin America, kept the Latin American economies in a state of dependence to North American and European interests.

—Wilfred J. Bisson

Bibliography

- Bucheli, Marcelo. *Bananas and Business: The United Fruit Company in Colombia, 1899–2000*. New York: New York University Press, 2005.
- Bulmer-Thomas, Victor, John H. Coatsworth, and Roberto Cortes-Conde, eds. *The Cambridge History of Latin America*, Vol. 2, *The Long Twentieth Century*. Cambridge: Cambridge University Press, 2006.
- Farcau, Bruce W. *The Ten Cents War: Chile, Peru and Bolivia in the War of the Pacific, 1879–1884*. Westport, CT: Praeger, 2000.

- Packenham, Robert A. *The Dependency Movement: Scholarship and Politics in Development Studies*. Cambridge: Harvard University Press, 1992.
- Weinstein, Barbara. *The Amazon Rubber Boom, 1850–1920*. Palo Alto, CA: Stanford University Press, 1993.

The Global Diamond Trade

The idea that gem-quality diamonds are articles of priceless value and peerless emblems of natural beauty, purity, and rarity is relatively new. Prior to the seventeenth century, the diamond trade was negligible in East Asia, sub-Saharan Africa, the Americas, Russia, and northern Europe. Although China was familiar with the commodity, diamonds were not valued beyond their ability to engrave and shape jade. This remained the case up until the late nineteenth century. In South Asia and the Middle East, however, diamonds as well as rubies, enamels, precious metals, emeralds, and other minerals had been an important part of elite material culture since the times of antiquity. Rulers adorned themselves with these items to create an image of power, wealth, and status. European elites appropriated these techniques of creating spectacles of authority and along with them veneration for precious gems. By the medieval period in Europe, diamonds were known to be among this pantheon of esteemed minerals, but not until the late eighteenth century did

diamonds come to be viewed as the undisputed “monarchs” of the gem world.

In 1750 David Jeffries, a merchant and jeweler based in London, identified a crisis in the diamond market. Before the 1730s, Golconda, in south-central India, was known as the only source of diamonds. Indian monarchs controlled production levels to balance demand with supply for favorable prices; during the seventeenth century, Indian production reached its zenith. The diamond market changed after 1728, when diamonds were discovered in Brazil. After New World stones flooded the market, diamond prices plummeted. By 1750 Jeffries had concerns that the market would never recover, but he rightly anticipated how interested wealthy and powerful Europeans were in a commodity that was relatively cheap and had an aura of luxury while at the same time celebrating European dominance in South Asia, notions of ancient privilege, and the modern science of light and diamond-cutting technology.

European monarchs and aristocrats covered themselves in diamonds. Catherine II of Russia, a self-styled Enlightenment monarch, had crafted for herself the Great Imperial Crown, composed of 4,936 diamonds. Large diamonds famous in Indian histories were particularly prized as European monarchs scrambled to assemble for themselves seemingly ancient crown jewels. Britons in India, many of them servants of the East India

► THE KOH-I-NOOR

In 1850, the East India Company gifted the Koh-i-Noor or “Mountain of Light” Diamond, an artifact previously held by the defeated Sikh leader Ranjit Singh, to Queen Victoria of Britain. During the months it took to transport the diamond to London from the Punjab, the British press tantalized readers with tales of how the piece had figured prominently in Indian and Persian histories. Rumors emerged about its immense worth and talismanic or cursed nature: it was said that whoever possessed the diamond was unconquerable or, conversely, doomed. The diamond went on public display in 1851 at the Great Exhibition as a celebration of Britain’s monarchy and imperial conquest of India. Crowds rushed to see it and were summarily disappointed; the piece did not

conform to British imaginings of how it would look. People complained that it was too small and too dull and was not cut in keeping with European diamond fashions. The unveiling turned out to be an embarrassment, and Albert, the prince consort, had the large diamond recut in European style, a process that removed about half its size. Instead of figuring prominently in the Crown of State for Victoria, the diamond was kept as one of many in the crown jewels, most of which were acquired in the nineteenth century. Despite postcolonial claims made on it by India and Pakistan, the Koh-i-Noor remains the property of the British monarchy today, usually reserved for the use of the ruler’s (female) consort or mother.

—Danielle Kinsey

Company, remitted gems back to London to pay off personal debts; soon London was the capital of the diamond trade, a position that arguably it has never lost.

Events such as the French Revolution in 1789 and the impeachment of Warren Hastings, the first governor-general of Bengal, for alleged corruption in 1787 evoked a popular criticism of diamond consumption as emblematic of debauched government. Likewise, influential economists such as Adam Smith condemned diamond production and consumption as irrational. As elites moved to sell their jewels during the Napoleonic Wars (1799–1815), prices plummeted. This downward swing in the market coincided with the exhaustion of Indian mines; after 1820 Brazil was the world's only major producer of uncut diamonds, although most Europeans continued to associate them with “the Orient.”

The market changed forever after 1869 with the discovery of diamonds in South Africa. Miners seasoned by gold rushes in the Americas and Australia converged on Kimberley in the 1870s, producing quantities of diamonds as never before. European and now American markets were able to absorb great quantities of diamonds during this time largely because the appetite of “respectable” middle classes for midmarket jewelry had been cultivated by dozens of international exhibitions, beginning with London's Great Exhibition of 1851.

In South Africa in 1881 Cecil Rhodes and other partners formed the De Beers Mining Company; by 1889 it controlled 90 percent of the world's uncut diamonds and had created what remains the most successful cartel in history. By assuming leadership positions within the British colonial government and cultivating support within the imperial government in London, Rhodes channeled the development of South African politics and infrastructure toward

bolstering the diamond industry. This is seen in the “illicit diamond buying” legislation in both South Africa and Europe, which illegalized much of African participation in the market, as well as in the development of diamond mining compounds, facilities that interned mine workers 24 hours a day. Recent scholarship has revealed how these compound labor policies eventuated in South African apartheid politics.

By the close of the nineteenth century, diamonds had become an acceptable part of middle-class material culture. Diamond jewelry was particularly associated with wedding rituals, especially as wedding gifts and engagement rings. By 1914 American consumers commanded the major market share, while Asian and South American markets emerged. The De Beers Company maintained its monopoly and in the 1930s unveiled what was to become one of the most successful advertising strategies in history, the “Diamonds Are Forever” campaign alongside De Beers's diamond engagement ring.

—Danielle Kinsey

Bibliography

- Lenzen, Godehard. *The History of Diamond Production and the Diamond Trade*. Translated by F. Bradley. New York: Praeger, 1970.
- Pointon, Marcia. “Jewellery in Eighteenth-Century England.” In *Consumers and Luxury: Consumer Culture in Europe, 1650–1850*, edited by Maxine Berg and Helen Clifford. Manchester, UK: Manchester University Press, 1999.
- Turrell, Robert. *Capital and Labour on the Kimberley Diamond Fields, 1871–1890*. Cambridge: Cambridge University Press, 1987.
- Worger, William. *South Africa's City of Diamonds: Mine Workers and Monopoly Capitalism in Kimberley, 1867–1895*. New Haven, CT: Yale University Press, 1987.
- Yogev, Gedalia. *Diamonds and Coral: Anglo-Dutch Jews and Eighteenth-Century Trade*. New York: Leicester University Press, 1978.

■ Introduction: Money and Banking

Innovations related to money and banking helped transform the world's economy between 1750 and 1914. Nations and empires benefited from the establishment of stable cen-

tral banks, such as the Bank of England, and by the lending capital of large and influential investment banks, some family-owned banks like Rothschild and others joint-stock banks such as

the *Crédit Mobilier* (1852, France). Likewise, the nineteenth- and early-twentieth-century popularity of mortgage banks, savings banks, and post office saving banks served a growing market of the working class. The period 1750–1914 also witnessed serious cycles of economic depression, the consequence of numerous factors including the internationalization of trade and resultant price fluctuations as well as fledgling monetary systems that unwittingly but ironically contributed to economic disequilibrium. For example, the United States remained committed to a bimetallic system of silver and gold throughout the nineteenth century, whereby the standard mint ratio versus the prevailing market ratios of specie heightened the susceptibility of the economy to periodic booms and busts. Finally, public perceptions of monetary and banking policies could likewise lead to political and social discontent and reform, as demonstrated in the United States by Populism, the Sherman Silver Purchase Act (1890), and William Jennings Bryan’s famous “Cross of Gold” speech (1893).

As a medium of exchange, money can assume many forms, varying from coins made of precious metals such as silver and gold to paper instruments such as banknotes, bills of exchange, and checks. The amount of money in circulation versus the amount held in reserve by banks to cover their debts has varied throughout the course of time by national legislation. Likewise, nations have regulated the creation of particular types of banks, ranging from central and national to joint stock and private. These variations make generalizations about money and banking imprecise; however, it is safe to state that many aspects of the modern economic system—as reflected in monetary and banking policies—had their origins in the period 1750–1914. The growing strength of central banks, like that of the Bank of England, is a prime example.

The Bank of England, and other similar central banks, assumed mature form in the nineteenth and early twentieth centuries. Chartered by state governments, they became “lenders of last resort,” to use a phrase of the economist Walter Bagehot (1826–1877). The significance of central banks can be summarized in three general statements. First, they typically became the

official issuers of a nation’s banknotes, pegging their national currencies against gold specie or other regulated standards. Second, central banks set the bank rate, or discount rate, charged to commercial and other banks for loans. These bank rates, in turn, affected the rates of interest that commercial banks charged to their customers. Third, central banks often bought and sold government securities. By manipulating these devices, namely the contraction or expansion of the money supply via banknotes, bank rates, and securities, central banks provided a semblance of order to an economic system that was susceptible to periods of recession and inflation. Leading the way internationally were the Bank of England and the British pound sterling, the latter becoming the preferred method of exchange in international trade in the latter half of the nineteenth century. Also important were the Federal Reserve System of the United States (1913), as well as the *Banque de France* (1800), the *Reichsbank* (1875), and the *Swiss National Bank* (1907).

By 1914, banking and monetary policies had matured considerably but remained conservatively tied to the gold standard. Even the world’s most stable bank of the period, the Bank of England, kept its bullion reserves well above the issuance of its banknotes from the mid-1890s until World War I. World War I necessitated changes, however. To finance the war, the Bank of England and other central banks issued banknotes greater than their gold reserves. After World War I, the impact of the worldwide Great Depression and the influence of economists like John Maynard Keynes would further alter the monetary and banking landscapes.

—Paul A. Tenkotte

English Banks in the Era of the Industrial Revolution

During the Industrial Revolution, banks existed in several different forms and conducted a wide array of activities, including, though not limited to, receiving deposits, making loans, buying and selling bills of exchange, discounting notes, and providing financing to the government. Some types of banks also issued their own banknotes that could circulate as a medium of exchange.

The Bank of England, which served as the banker to the British government, was the most important British banking institution of the era. Founded in 1694, the Bank's primary role was providing short- and long-term financing to the government. The bank engaged in some private banking activities (such as discounting bills of exchange for merchants), but these activities were secondary. The Bank of England's prominence in the banking system was based on holding Britain's gold reserves and the use of its banknotes as the primary means of payment for large transactions in London. During the nineteenth century the bank acquired some of the characteristics associated with a so-called banker's bank, but it could not yet truly be considered a central bank. It had to wait until the late 1870s before it received a monopoly on the issuance of banknotes, and its role as a lender of last resort during the era of the Industrial Revolution is a subject of some debate.

Private bankers were a second type of banking institution in London during the Industrial Revolution. These banks often were founded by persons in professions in which financial intermediation occurred somewhat naturally, including goldsmiths (e.g., Hoare's Bank and Barclays), merchants (e.g., Barings), and scriveners (notaries). It is estimated that between fifty to one hundred such banks existed in the late eighteenth and early nineteenth centuries. These banks performed such functions as providing loans or credit to the upper classes, obtaining loans for governments, and helping finance commerce mainly through the issuance and discounting of bills of exchange. They also served as correspondent agents for country banks outside of London, performing such services for them as discounting bills and holding excess funds.

Country banks, which are similar to the private banks of London, sprang up throughout England and Wales beginning in the mid-eighteenth century. Many of these banks were founded by persons engaged (either currently or previously) in trade (e.g., the slave trader Thomas Leyland established a successful bank in Liverpool), manufacturing (e.g., Lloyds of Birmingham), or tax collecting. Country banks were usually small, but they also were plentiful, with close to 700 existing at their peak. They served as financial

intermediaries between agrarian landowners and small, local manufacturers. The banks also often issued banknotes which could be used as a local medium of exchange. Country banks long have had a reputation of instability and high failure rates during economic crises, such as the crisis of 1825–1826, during which almost ten percent of country banks failed.

The country banks' small size and the inexperience of their managers were seen as the main causes of this instability. For example, many country banks failed for liquidity reasons when bankers holding illiquid long-term assets (such as mortgages) found themselves unable to repay their short-term liabilities. Recent research, however, suggests that the instability and failure of many country banks may have resulted from their practice of intentionally holding relatively risky, illiquid, and somewhat undiversified portfolios in the hopeful expectation that such portfolios would earn higher returns than other safer assets.

During the nineteenth century joint-stock banks (banks owned by stockholders holding transferable shares) began to appear in England, and over time they came to replace the country banks. With the exception of the Bank of England, these banks had been prohibited until 1826, when Parliament allowed them to be established outside of a 65-mile (105-kilometer) radius from London. Typically, joint-stock banks obtained funds through deposits and then used these funds to extend short-term credit to borrowers.

The savings bank was another type of bank that appeared in England early in the nineteenth century. Founded primarily as philanthropic endeavors to encourage thrift among the poorer classes, these banks attracted deposits from the lower and lower-middle classes that were then used to finance government debt.

The size of the country's banking sector grew rapidly during the Industrial Revolution. Bank assets in England and Wales have been estimated to have grown from £20.5 million in 1775 to £54.8 million in 1800 to £80.0 million in 1825, reaching £139.0 million in 1844. Relative to the overall English economy, these figures represent 15.2 percent, 27.9 percent, 29.6 percent, and 34.4 percent, respectively, of annual

English national income—indicating that not only were banks growing larger but that their relative importance in the overall economy also was increasing.

To what extent did banks foster industrialization? Banks typically played little direct role in providing long-term financing of fixed capital assets such as buildings and machines for Britain's industrializing enterprises. In the early stages of the Industrial Revolution, entrepreneurs were able to fund their business primarily by reinvesting retained earnings in the firm or by obtaining personal loans from friends and family. What funding banks did provide was generally short-term credit because banks, without a lender of last resort to whom to turn in times of crises, needed to keep their assets liquid in case deposits were withdrawn or banknotes were returned for redemption. This emphasis on short-term credit should not necessarily be interpreted to mean that banks were not helpful in financing industrialization. The provision of short-term credit for circulating capital (raw materials, works in progress, etc.) freed the owners' own funds that could then be used for long-term, fixed-capital investment. It also was not uncommon for short-term credit to be rolled over, in essence making it longer-term credit, and banks sometimes made loans that were designated to be long-term from the beginning. Additionally, it should be noted that a number of banks did participate directly in industrial undertakings, especially in the iron, brewing, and textile industries. Some banks seem to have been opened specifically to provide financial services for these affiliated firms. The banking system also was instrumental in transferring savings from agrarian regions to industrial areas where they were used to finance the construction of canals, railways, and factories.

—Daniel C. Giedeman

Bibliography

- Cameron, Rondo, with Olga Crisp, Hugh T. Patrick, and Richard Tilly. *Banking in the Early Stages of Industrialization*. New York: Oxford University Press, 1967.
- Collins, Michael. *Banks and Industrial Finance in Britain: 1800–1939*. Cambridge: Cambridge University Press, 1995.

Giedeman, Daniel C. "Banking." In *Encyclopedia of the Age of the Industrial Revolution*, Vol. 1, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.

Kindleberger, Charles P. *A Financial History of Western Europe*. 2nd ed. New York: Oxford University Press, 1993.

Mokyr, Joel, ed. *The British Industrial Revolution: An Economic Perspective*. Boulder, CO: Westview, 1993.

Sylla, Richard, Richard Tilly, and Gabriel Tortella, eds. *The State, the Financial System, and Economic Modernization*. New York: Cambridge University Press, 1999.

Investment Banks

Investment banks of the eighteenth and nineteenth centuries, outgrowths of a financial revolution, were the economic engines of the period 1750–1914. In particular, European banks provided the capital necessary to finance communications, industrial, mining, and transportation innovations and infrastructures not only in Europe but also in Africa, Asia, Australia and Oceania, the Middle East, and North and South America. This was the era of Europe's premier banking families (Baring, Hambro, Hope, Rothschild, Schröder, and Warburg); of U.S. bankers Jay Gould and J. S. and J. P. Morgan; of Britain's "Big Five" joint-stock banking companies (Barclays, Lloyds, Midland, National Provincial, and Westminster); of Germany's Darmstädter, Deutsche, and Dresdner Banks; of France's Crédit Mobilier; of Switzerland's Crédit Suisse; and of Japan's *zaibatsu* banks like Mitsui. In addition, many banking families flourished, including Benson, Bethmann, Bontoux, Fruehling, Germain, Glyn, Goschen, Gurney, Haber, Hansemann, Heine, Hoare, Kaulla, Kleinwort, Lafitte, Lazard, Loeb, Malet, Metzler, Oppenheim, Ouvrard, Overend, Parish, Peabody, Péreire, Raphael, Samuel, Sassoon, Schaaffhausen, Schiff, Seligmann, Speyer, Stern, von Erlanger (later changed to d'Erlanger), and Worms.

Many investment banks had either offices or affiliates in London, which after the Napoleonic Wars supplanted Amsterdam as the principal center of international investment. London's financial importance grew stronger after the

Crimean War and continued unabated until World War I. During the late nineteenth century, the British pound sterling reigned supreme in international trade. European, and in particular British, suzerainty in finance had widespread political, military, and social implications, as Europe gained control of 85 percent of the world's landmass by 1914. Foreign investment assets, totaling \$44 billion by 1913, anchored this imperialism. Great Britain led the investors, followed by France, Germany, and the United States.

Investment banks often traced their origins to a variety of older commercial activities carried on by money changers, goldsmiths, and wholesale traders/commission merchants, all of whom loaned capital to others as a supplement to their original businesses. Some of these merchants eventually began to specialize in banking, giving

rise to the name “merchant bankers.” Religion also played a role in the formation of some of the investment banks. The disfavor of usury, the loaning of money at interest, by both Christianity and Islam had influenced a number of Jewish families to undertake banking. These included the Haber, Oppenheim, Pereire, Rothschild, Schiff, Speyer, Warburg, Worms, and, before their conversion to Christianity, Seligmann and von Erlanger families.

Investment banks of the period should not be confused with the general commercial banks of the twenty-first century that feature a broadly based clientele. Nor were they the savings banks of the nineteenth-century middle class. Rather, investment banks catered to customers ranging from governments and royalty to corporations and wealthy individuals. Their offices

➤ A “WIDGET MAKER” USES THE INVESTMENT BANKING SYSTEM

Imagine that you are a nineteenth-century British manufacturer of widgets. You would like to sell £5,000 (wholesale value) of your widgets to customers all over the world but lack the international contacts to do so. So, you engage a commission merchant in London who agrees to sell on commission your widgets internationally. The commission merchant will handle all of the details for you, buying your widgets and shipping them abroad with goods of his other clients. The commission merchant draws up a bill of exchange or draft (similar to a cheque or check), whereby he (the drawer) agrees to pay a certain sum of money to you (the payee) through his banker, Erlangers in London (the drawee), on a specified date, perhaps three months in the future. You would like some of your money now, however, since you have to pay your factory workers as well as the suppliers of your raw materials. So you take the bill of exchange to Erlangers Bank in London, where the bank accepts the draft. Since the bill is not yet due, Erlangers buys it at a discount from you. Although you do not receive the full £5,000, you are satisfied with the arrangements. You only need a small amount now for current expenses and decide to invest the rest in shares of stock that Erlangers is issuing for one of the railroad subsid-

aries of Cecil Rhodes's British South Africa Company. The bill of exchange, which Erlangers bought from you, can now be resold by the bank to another investor, as its due date is still three months in the future.

In the meantime, your £5,000 of widgets is multiplying money and credit throughout the world. A buyer, or consignee, in British India intends to purchase the widgets and has obtained a letter of credit from his bank proving that he has the financial wherewithal to pay the amount due. This letter of credit is sent to Erlangers in London on behalf of the beneficiary, that is, the London commission merchant. Separate drafts negotiated for payment of the widgets will then be drawn upon this letter of credit and properly endorsed. In three months, or sooner at a discount, the London commission merchant may draw his money from Erlangers and, like you, arrange to have Erlangers invest some of it for him. Meanwhile, the Indian merchant may extend credit to his retailers, who in turn may extend credit to their buyers, many of whom desperately want to buy your widgets. A whole cycle of activity has evolved whereby £5,000 circulates throughout the economy a multiple number of times.

—Paul Tenkotte

were located in the major financial centers of Europe and the United States, namely Amsterdam, Berlin, Brussels, Frankfurt, Geneva, Hamburg, London, New York, Paris, Vienna, and Zurich. Within these cities themselves, the investment banks were centered in financial districts like the City in London and Wall Street in New York.

Investment banks specialized in international trade, government bonds, corporate stock, and bullion/currency trading. They also provided private banking services but mainly as a favor to their customers. Their primary business remained investing and international finance, which hinged upon such fiduciary instruments as letters of credit and bills of exchange as well as stocks, bonds, and loans. For example, Nathan Mayer Rothschild made a fortune issuing British government bonds during the Napoleonic Wars. Rothschild's success depended in part upon his vast network of familial and collegial connections throughout Europe and abroad. His family's bank, like others, floated on a sea of worldwide connections, tied together by their own branch banks in financial centers around the world or by working agreements with affiliate or correspondent banks.

In their financing of governments' territorial acquisitions including the Louisiana Purchase, colonial companies such as the British South Africa Company, canals like the Suez, railroads such as the Baghdad, mines (e.g., coal and diamond), industries (e.g., steel and oil), shipping companies, transoceanic telegraph lines, and trade in commodities ranging from precious metals to textiles to rubber and coffee, investment banks were economic linchpins of nationalism and imperialism. Waxing and waning during periods of prosperity and depression, they were visible markers of an economic system that had evolved during the period 1750–1914 from mercantilism to free trade.

—Paul Tenkotte

Bibliography

- Born, Karl Erich. *International Banking in the 19th and 20th Centuries*. New York: St. Martin's, 1983.
- Cameron, Rondo, et al. *Banking in the Early Stages of Industrialization: A Study in Comparative*

Economic History. New York: Oxford University Press, 1967.

Cassis, Youssef. *Capitals of Capital: A History of International Financial Centres, 1780–2005*. Cambridge: Cambridge University Press, 2006.

Chapman, Stanley. *The Rise of Merchant Banking*. 1984; reprint, Milton Park, UK: Routledge, 2006.

Chernow, Ron. *The House of Morgan: An American Banking Dynasty and the Rise of Modern Finance*. New York: Atlantic Monthly Press, 1990.

Chernow, Ron. *The Warburgs*. New York: Random House, 1993.

Ferguson, Niall. *The Ascent of Money: A Financial History of the World*. New York: Penguin, 2008.

Kindleberger, Charles P. *A Financial History of Western Europe*. 2nd ed. New York: Oxford University Press, 1993.

Joint Stock Banks

While historically rooted in seventeenth-century England, modern joint stock banks began to play a decisive role during the nineteenth century. They can be seen as one of the essential institutional innovations that, in combination with technological progress, made the Industrial Revolution possible. As a new way of banking, the unique feature of joint stock banks or incorporated banks, as they are called in the United States, is the way in which they raise their capital. While banks traditionally relied on the personal wealth of the banker, worked with the deposits of their customers, or took out loans themselves, joint stock banks raised their capital mainly by issuing shares. Joint stock banks also introduced several institutional innovations of joint stock companies into the banking world of the seventeenth century: a corporate body, a management structure headed by a director and a board, limited stock owner liability, and the transferability of stock ownership.

Joint stock banks provided mechanisms to mobilize, concentrate, and invest money, thus bridging the gap between available capital and investment opportunities while distributing the risk among a large number of shareholders. At the same time, joint stock banks did not limit their activities to financing new industries but instead began to offer a complete set of banking services, making them available to a broad range of clients through their branch banks. Today,

joint stock banks have become the predominant type of bank and constitute the largest banks worldwide. Thus, joint stock banks can be seen not only as the nucleus of central banks and a key innovation of the period of the Industrial Revolution but also as a cornerstone of modern-day banking services.

There are two main reasons for the invention and spread of joint stock banks. First, joint stock banks were prompted by the financial requirements of early modern states. For example, the first joint stock bank, the Bank of England, was founded in 1694 to manage public debt. In the United States, the Bank of North America, chartered in 1781 by the State of Pennsylvania, became the first incorporated bank and was followed by the Bank of the United States in 1791. Both proved essential for supplying the young republic with money by issuing banknotes circulated as paper currency. Second, an increasing demand for capital spawned by the Industrial Revolution created the need for new instruments of capital accumulation and risk management. Providing loans to private businesses became the main activity of the Bank of Scotland when it was chartered in 1695. In comparison, loans to the government were only allowed under strict conditions. During the late eighteenth century and the first half of the nineteenth century, private commercial banks in the form of joint stock banks evolved in every major industrial country.

Incorporated banks chartered by either individual states or the federal government spread quickly in the United States after the 1790s. Great Britain passed two laws, in 1826 and 1833, that promoted joint stock banks in England and Wales by ending the Bank of England's monopoly as the only joint stock bank and facilitating the creation of such banks all over the country. While joint stock banks were created in Belgium at about the same time, France did not follow until several decades later due to the strict regulation of joint stock companies until 1867 and the strong private banking sector that curbed their expansion. In Prussia, joint stock companies were almost exclusively chartered to promote railway construction before 1870. After that, regulations were relaxed, and joint stock banks began to appear in Germany in large numbers to finance the growth of German industry.

➤ JOINT STOCK BANKING IN ANTEBELLUM AMERICA

Prior to the American Revolution, the British colonies in North America had only possessed a rudimentary banking system. When financial institutions had to be created after the Declaration of Independence, the sale of stocks to accumulate funds proved vital for the infant banking sector of an economy plagued by a chronic scarcity of capital. In 1781 the Bank of North America became the first private joint stock bank with a charter from the Congress of the Confederation, the governing body of the United States from 1781 to 1789. Given that the Bank of North America was a private enterprise bestowed with the functions of a central bank, the antagonism between national and state banking in antebellum American banking can be traced back to this original charter. Based on the ideas of Alexander Hamilton, the First Bank of the United States (1791–1811) and the Second Bank of the United States (1816–1836), the first joint stock banks possessing a federal charter, continued to act as national banks. During the 1830s opposition to their power and influence led by Andrew Jackson terminated national banking. Subsequently, a fast-growing number of state-chartered banks dominated American banking until 1862. As a result, a state-centered banking sector largely consisting of joint stock banks but plagued by bank failures and unsolved currency problems evolved in the United States before the Civil War.

—*Christoph Rass*

Although the ascent of joint stock banks depended in part on the national traditions of banking and specific circumstances, there was a connection between the growing importance of such banks and the spread of the Industrial Revolution.

During this first phase of their growth, individual joint stock banks sprang up in large numbers. Due to a lack of oversight, as was the case during the largely unregulated issue of charters to state banks in the United States between 1811 and 1813 and again between 1834 and 1837, this included a number of ill-managed or even fraudulent enterprises. Beginning in the mid-nineteenth century, therefore, the banking industry experienced consolidation, with only a small number of joint stock banks managing to grow into large

enterprises with networks of branch banks. Joint stock banks also carried new risks. Because joint stock banks in most countries combined limited liability with investing in joint stock companies, financing private companies, and issuing their own banknotes, they risked overstretching their financial capacity and accumulating precarious investments in their portfolios. This became another strong incentive for governments to further develop regulatory controls in the second half of the nineteenth century in an effort to ensure that the free banking system remained viable. Such regulations raised the amount of capital needed to found a new joint stock bank and mandated controls of their business activities through the inclusion of mandatory external members to their boards or the requirement to periodically publish reports.

—*Christoph Rass*

Bibliography

- Alborn, T. L. *Conceiving Companies. Joint-stock Politics in Victorian England*. London: Routledge, 1998.
- Cameron, R., ed. *International Banking, 1870–1914*. New York: Oxford University Press, 1991.
- Markham, Jerry W. *A Financial History of the United States*. Vol. 1, 1492–1900. London: Sharpe, 2002.
- Pohl, M., ed. *Handbook on the History of European Banks*. Aldershot, UK: E. Elgar, 1994.

Gold Standard

Under a gold standard, the value of a unit of currency, such as a dollar, is defined in terms of a fixed weight of gold, and banknotes or other paper money is convertible into gold accordingly. Although the monetary systems of individual countries have been based on the gold standard at times, all the economically advanced countries of the world were on the gold standard for a relatively brief time roughly from 1870 to 1914, sometimes called the period of the classic gold standard.

At the opening of the nineteenth century, no European country was on a gold standard or had developed a gold standard system. England and other countries coined both gold and silver and set the conversion ratio at which gold could be exchanged for silver. England was still officially

on a sterling silver standard, but in the eighteenth century the English government overvalued gold relative to silver, causing an outflow of silver and an inflow of gold and lifting gold to a position of preeminence in England's monetary system.

In normal times, banks redeemed paper money out of reserves of specie (precious metal coinage), but during the wars with revolutionary France and Napoleon, the Bank of England suspended the redemption of its banknotes in specie. After Napoleon's defeat in 1815, Parliament turned its attention to the resumption of specie payments and passed the Coinage Act of 1816. This act placed England definitely on the gold standard, while the rest of Europe remained on a silver or bimetallic standard. In 1819 Parliament passed the Act for the Resumption of Cash Payments, which provided for the resumption by 1823 of the convertibility of Bank of England banknotes into gold specie. By 1821 the gold standard was in full operation in England. Except for England, most countries operated bimetallic systems until the 1870s. Under a bimetallic system, both gold and silver coins circulated as legal-tender mediums.

The English banking system evolved toward the use of Bank of England banknotes as reserves for commercial banks, and the Bank of England became the custodian of the country's gold reserves. The Bank of England learned to protect its gold reserves by adjustments in interest rates, using its bank rate and open market operations to raise interest rates and stem an outflow of gold. Higher interest rates attracted foreign capital that could be converted into gold, and lower interest rates had the opposite effect. Low interest rates were the natural results of a gold inflow.

By the end of the 1870s, France, Germany, the Netherlands, Russia, Austria-Hungary, and the Scandinavian countries were on the gold standard. The bimetallic system became awkward because official conversion ratios between gold and silver often differed from the ratio that existed in the precious metals market. Gold discoveries in California and Australia flooded markets for precious metals, and gold began to replace silver as the circulating medium in France and other European countries. The wars

► THE CRIME OF '73 AND THE CROSS OF GOLD

The Coinage Act of 1873, which informally dropped the bimetallic standard in the United States in favor of the gold standard, caused hardly a political ripple when it passed. However, as deflation gathered force in the late 1800s, the act incurred the wrath of debtors and western farmers and was dubbed the “Crime of ’73.” Debt-ridden farmers and unemployed workmen saw something sinister in removing silver from the monetary standard without a public debate. With vast holdings of silver in western states, coinage of silver could have infused additional monetary reserves in the economy, raising prices and easing pressure on debtors.

The discontent caused by economic depression and the erosion of the bimetallic standard was captured by Illinois congressman William Jennings Bryan in his famous “Cross of Gold” speech at the 1896 Democratic Convention. Bryan’s oratory lifted him from relative obscurity to winning the 1896 Democratic presidential nomination:

“There are those who believe that if you will only legislate to make the well-to-do prosperous, their prosperity will leak through to those below. . . . If they dare to come out in the open field and defend the gold standard as a good thing, we will fight them to the uttermost. Having behind us the producing masses of this nation and the world . . . we will answer their demand for a gold standard by saying to them: You shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold.”

The discovery of new sources of gold in Alaska, Canada, Australia, and South Africa in the late 1890s effectively defused the silver protest, and the Crime of ’73 faded into oblivion. Yet the Crime of ’73 was integrated into the folklore of the United States, including references to it in L. Frank Baum’s *The Wonderful Wizard of Oz*.

—Charles Larry Allen

and revolutions of the mid-nineteenth century again forced governments into issuing inconvertible paper money. Governments often restored convertibility by establishing the gold standard.

If the gold standard had a Golden Age, it was between 1870 and 1914 when it acted as a brake on the issuance of paper money. If prices in Country A rose faster than prices in Country B, residents of Country A would start buying more goods from Country B. Gold would flow out of Country A into Country B, increasing the money supply in Country B and decreasing it in Country A. These money-supply changes lowered prices in Country A and raised prices in Country B. These adjustments restored equilibrium, eliminating the need for further gold flows and stabilizing prices at an equilibrium level.

World War I brought an end to the gold standard, partly because the export of gold was not feasible after 1914 and partly because governments wanted the freedom to print extra paper money to finance the war effort. The end of World War I set the stage for an international scramble for gold as countries tried to

reestablish national gold standards. Britain and France kept their currencies overvalued in terms of gold, hurting the competitiveness of their export industries in foreign markets and causing recessions at home. The classic age of the gold standard had come to an end.

—Charles Larry Allen

Bibliography

- Allen, Charles Larry. *The Encyclopedia of Money*. Rev. ed. Santa Barbara, CA: ABC-CLIO, 2009.
- Bordo, Michael D., and Forrest Capie, eds. *Monetary Regimes in Transition*. Cambridge: Cambridge University Press, 1993.
- Davies, Glyn. *A History of Money: From Ancient Times to the Present Day*. Cardiff, UK: University of Wales Press, 1994.

Money Supply

Many aspects of the modern economic system, particularly relating to money supply, had their origins in the period 1750 to 1914. First, it is important to state that money can assume many forms, varying from coins made of precious

metals such as silver and gold to paper currency such as banknotes, bills of exchange, and checks as well as beads, shells, and yams. Second, the amount of money in circulation versus the amount held in reserve by banks to cover their debts has varied throughout the course of time by national legislation. Third, nations have regulated the creation of particular types of banks, ranging from central and national to joint stock and private. In particular, perhaps the most important development affecting money supply during the period 1750 to 1914 was the development and maturation of central banks, like the Bank of England.

The Bank of England, although chartered by Parliament as a private bank in 1694, took more than a century to mature into a central bank. Throughout the second half of the eighteenth century, banks in England issued their own banknotes that were susceptible to periodic runs by creditors demanding conversion of their banknotes for Bank of England notes. The Bank of England, in turn, converted its notes into gold, draining its specie reserves and causing the suspension of specie payments in 1797 (Restriction Act). The 1819 resumption of payment in specie was of international monetary significance, particularly in its recognition that a bank such as the Bank of England could have a tremendous impact on trade, foreign exchange, and the entire economy of a nation. Following an economic depression in the United States and France in 1837 (to which the Bank of England loaned money to avert an international calamity), a bad harvest in England in 1838, and the collapse of a number of British banks in the 1840s, the Bank of England again faced new challenges. In 1844 Parliament divided the Bank of England into two departments: banking and issuing. Further, for all practical purposes, it essentially made the Bank of England the principal issuer of banknotes in Britain. Gradually the Bank of England began to assume powers that made it a central bank in the modern sense, a “lender of last resort” as economist Walter Bagehot elucidated in *Lombard Street: A Description of the Money Market* in 1873. As a central bank, the Bank of England could respond to economic crises through expansions or contractions of the money supply, as the situation dictated. Its tools

were the setting of the bank rate (or discount rate) that it charged other banks as well as open-market operations, by which the Bank of England could buy or sell some of its governmental and other securities on the open market. In the tradition of David Ricardo, the British adopted the “gold specie standard” in 1821, and by the latter half of the nineteenth century, the British pound sterling (redeemable in gold, not in sterling silver as in medieval times) reigned supreme in international trade.

Other nations followed the lead of Britain and established banks that gradually assumed the tasks of central banks. These included the Banque de France (1800), the Banco Español (reorganized 1829, Spain), the Banque Nationale de Belgique (1850, Belgium), the Reichsbank (1875, Germany), the Bank of Japan (1882), the Austrian-Hungarian National Bank (reorganized 1887), the Swiss National Bank (1907), and the Federal Reserve System in the United States (1913). Some nations adopted the gold specie standard, while others pegged their silver currencies to stable ones, such as the British pound sterling, in what was called a gold exchange standard. The United States officially adopted the gold standard in 1900.

By 1914, monetary policies had matured considerably but remained conservatively tied to the gold standard. Even the world’s most stable bank of the period, the Bank of England, kept its bullion reserves well above the issuance of its banknotes from the mid-1890s until World War I. Not until after the war would the impact of the worldwide Great Depression and the influence of economists like John Maynard Keynes alter the monetary landscape.

—Paul Tenkotte

Bibliography

- Born, Karl Erich. *International Banking in the 19th and 20th Centuries*. New York: St. Martin’s, 1983.
- Cameron, Rondo. *A Concise Economic History of the World: From Paleolithic Times to the Present*. 3rd ed. New York: Oxford University Press, 1997.
- Ferguson, Niall. *The Ascent of Money: A Financial History of the World*. New York: Penguin, 2008.
- Galbraith, John Kenneth. *Money: Whence It Came, Where It Went*. Rev. ed. Boston: Houghton Mifflin, 1995.

Kindleberger, Charles P. *A Financial History of Western Europe*. 2nd ed. New York: Oxford University Press, 1993.

Weatherford, Jack. *The History of Money: From Sandstone to Cyberspace*. New York: Crown, 1997.

Bimetallic Monetary System

In the United States, a bimetallic monetary system led to many complications. Alexander Hamilton, the first secretary of the treasury, wanted the United States placed on a gold standard but was unable to do so for lack of sufficient gold reserves. Hence, the U.S. Congress established a bimetallic system in 1792 at a mint ratio of 15:1. That is, a silver dollar was to weigh 15 times as much as a gold dollar, reflective of the rates of exchange of that time. In the 1830s further congressional acts changed this ratio to 16:1. The U.S. Mint practiced unlimited coinage of both metals, meaning that persons could bring their gold or silver to the mint to be made into coins. In addition, the mint allowed convertibility; that is, anyone could convert silver to gold or vice versa at the mint. Unfortunately, the fixed mint ratio did not reflect the fluctuations of the prices of gold and silver in the marketplace, or the market ratio. This was largely because the government could not simply melt down its coins and mint new ones every time the prices of precious metals changed in the marketplace.

The fixed mint ratio and the fluctuating market ratio affected the money supply. If new silver reserves were discovered or new silver mines opened, resulting in a glut of silver in the marketplace, the price of silver, in relation to gold, would fall. If the market ratio fell to 17:1 but the U.S. mint ratio was still at 16:1, then silver would pour into the mint. The scenario would unfold as follows. Wise investors would take their silver to the mint, where they could convert it to more gold (since silver was overvalued at the mint), which in turn they could return to the marketplace and exchange for more silver. They could then repeat the process by returning to the mint to convert this silver to gold, etc. In each transaction, they would be making money at the expense of the mint. Meanwhile, silver would be flowing into the mint, and gold would be draining out of the mint. Interestingly, though, gold

would not be leaving the mint as coins. Why is that? Gresham's law states something rather amazing: the overvalued coinage at the mint (in this case silver) tends to drive the undervalued coinage (in this example gold) out of general circulation. Why does this happen? Several reasons can account for the phenomenon. First, people would not be taking their gold to the mint to make into coins, especially when they could trade it for more in the marketplace. Second, the general population would tend to hoard the higher-valued gold coins as a safety net or investment. Third, banks would likewise retain the gold coins in payment of their own bank notes to their customers. Fourth, gold coins would be exported to pay for imports. Eventually, few gold coins would be minted.

In U.S. history, bimetallism produced some strange results. Between 1792 and 1834 silver was overvalued at the mint, leaving little gold in circulation. In the period 1834 and 1862 the reverse occurred, as gold was overvalued at the mint, and little silver coinage remained in circulation. This situation was exacerbated by the 1849 discovery of gold in California, whereby the market price of gold was further devalued and its mint ratio overvalued. In fact, no silver was brought to the U.S. Mint to be minted into coins between 1849 and 1873. From 1862 (in response to the American Civil War) until 1879, the United States assumed a paper standard, called the greenback period. In 1873 an economic depression ensued, which many citizens blamed on the so-called Crime of '73 (Fourth Coinage Act) whereby the U.S. Congress ended the unlimited coinage of silver. That is, one could no longer bring one's silver to the mint to be made into coins. Supporters of soft money, or inflationists, decried the act and lobbied for the government to mint silver coins. Their influence resulted in the passage of the Bland-Allison Act of 1878, instructing the U.S. Treasury to buy up to \$5 million worth of silver and to mint it into coins. Likewise, the Sherman Silver Purchase Act of 1890 allowed legal tender to be redeemed in either silver or gold.

When the Depression of 1893 began, the silver purchase provision of the Sherman Act was repealed. Between April and December 1893 U.S. gold reserves fell phenomenally, from \$96

million to \$11 million. The presidential election of 1896 became a stage for debates on the issue of money supply between the candidates William McKinley (Republican) and William Jennings Bryan (Democrat). Bryan's famous "Cross of Gold" speech entered the annals of history: "You shall not press down upon the brow of labor this crown of thorns. You shall not crucify mankind upon a cross of gold." McKinley won the election, and in 1900 the United States abandoned the bimetallic system for the gold standard. In 1913 the U.S. Congress established the Federal Reserve system.

—Paul Tenkotte

Bibliography

- Redish, Angela. *Bimetallism: An Economic and Historical Analysis*. Cambridge: Cambridge University Press, 2000.
- Wilson, Ted. *Battles for the Standard: Bimetallism and the Spread of the Gold Standard in the Nineteenth Century*. Aldershot, UK: Ashgate, 2000.

Banks and Banking in the Middle East

Modern banks and banking systems were first established in the Arab Middle East in the 1840s—when most of the region was under Ottoman rule—by European merchant houses. During this time, Alexandria, Beirut, and Constantinople became important international commercial centers for foreign companies and local economies. The very first local banks were established in Alexandria by the French and Italian merchant shipping houses of Pastré and Tozzizza as modern alternatives to more traditional banking practices of money lending and money exchange on which the entire financial system was then based. The financial activities of these local banks, however, were limited only to commercial trading between specific parties (often foreign companies). Indeed, it was not until 1856, when the British-owned Bank of Egypt (owners included the London-based East India Company, the Westminster Bank, the Oriental Banking Corporation, and the British Treasury) was established, that modern banking was firmly established in the Middle East. Soon thereafter, the

Anglo-Egyptian Bank was established in 1864 as a competitor to the Bank of Egypt.

In 1867 the Ottomans hastily sought to establish a foothold in Egypt by establishing the Ottoman Bank, which opened its first branch in Alexandria in 1867. It did not, however, enjoy the same level of prestige and influence in Egypt as other foreign-owned banks since its dealings were mainly confined to commercial trading and were distantly controlled from Constantinople. By the 1870s, as the Ottoman Empire became increasingly indebted financially to the European powers, the spread and control of foreign-owned banks grew almost exponentially. The Tokyo-based Yokohama Specie Bank opened its first branch in Port Said in 1870, as did the Paris-based Crédit Lyonnais in 1875. Another French-based institution, Crédit Foncier, started its operations as a mortgage or land bank in Cairo in 1880. Still, a number of locally owned banks did exist in some parts of the region. In Beirut, there was the Banque Alexander P. Haddad, Faroun and Shiha, Robert Sabbagh and Co., and George Trading and Co., while in Damascus, Banque Asfar, Sara and Co., Banque Ernest Asfar, and Siouffi and Sabbagh handled local operations. These local ventures, however, did not possess the resources and capacities of the foreign-owned national institutions and therefore remained largely marginal.

The spread of foreign-owned banking was not just limited to the Arab Middle East, however. In Iran, for example, as British political interests grew, so did the influence of British banks and companies. In 1888 the British-owned New Oriental Bank was the first modern bank to start operations in seven major cities in Iran: Tehran, Mashhad, Tabriz, Rasht, Isfahan, Shiraz, and Bushehr. Shortly thereafter, however, the bank was replaced by the Imperial Bank of Persia in 1889, but its latest incarnation soon expanded operations in the rest of the country and as a result became an important financial institution until the 1950s. The National Bank of Iran (Bank Melli Iran) was the first indigenous bank established in Iran by the order of Majlis (the Iranian Parliament) in 1927. Similarly, in Egypt the National Bank, established in 1898, first emerged as a purely British venture by Lord Cromer and

did not have the power and prestige of a central bank. It was not until 1919 that a group of Egyptian shareholders, led by the prominent financier Mohammed Talat Harb, established a truly indigenous financial institution named Bank Misr (Bank of Egypt).

During this time, most local financial transactions in other parts of the Arab Middle East were still handled by foreign-owned institutions. In French-administered Syria and Lebanon the Banque de Syrie et du Grand Liban simply took over the operations of the by then defunct Ottoman Bank in 1919. The growth and successes of the Egyptian and Iranian banking models, however, served as an inspiration to local pioneers in other Arab and Muslim countries in the

early 1920s. In 1929 a joint delegation of Syrian and Lebanese bankers was dispatched to Cairo to study the successes of Bank Misr. Under the recommendations of the delegation and in cooperation with Bank Misr, the first modern Pan-Arab financial institution, the Banque Misr Syrie Liban, was established in 1930.

—Hussein Banai

Bibliography

- Issawi, Charles. *An Economic History of the Middle East and North Africa*. New York: Columbia University Press, 1982.
- Owen, Roger. *The Middle East in the World Economy, 1800-1914*. London: Methuen, 1981.
- Wilson, Rodney. *Banking and Finance in the Arab Middle East*. New York: St. Martin's, 1983.

■ Introduction: Labor in Industrial Societies

Industrialization brought about not only a revolution in manufacturing methods but also a social revolution as well, as emerging industrialists harnessed new technologies and shaped a new kind of labor force to attain their goal of maximizing output and profit. This process began in the late eighteenth and early nineteenth centuries in Britain and the United States in textile mills that were still water-powered. Textiles and other industries soon turned to coal power, and mechanized factories no longer needed to be situated near rivers, waterfalls, and engineered millraces to provide power. Yet the pattern of drawing labor from poor rural families, not able to sustain themselves, continued with rural migration to cities and new industrial sites worldwide. While manufacture had previously relied on the guild system and the know-how of craftsmen, the Industrial Revolution removed such a crafts-based approach to production. While the workplace still required skilled technicians, the overall trend was toward the deskilling of labor. Over the course of the eighteenth century guild-controlled production gave way to wage labor and the imposed discipline of the workplace.

During the nineteenth century the new industrial order spread through much of Europe, the Americas, and other industrializing regions such as Japan. As the Industrial Revolution progressed, workers had less and less control over design and the pace of work. Crafts-based industry gave way to the repetition of specialized tasks, a goal fully realized in the early twentieth century at the Ford assembly lines in Michigan. Along the way, management wrested nearly total control of production from workers. Industrialists such as Henry Ford could respond to charges of loss of worker autonomy, tedium, and exploitation with the argument that they paid wages that allowed workers to enjoy many of the spoils of the developing consumer society. Nevertheless, unfettered capitalism, with its underlying drive for profits, created an enormous conflict between industrialists and workers that often led to open violence.

Industrial labor, ostensibly a form of free labor, developed against a backdrop of various forms of unfree labor such as slavery, indentured servitude, the apprentice system (essentially a form of indentured labor of apprentices and even journeymen), workhouses, forced

prostitution, and the immigrant work gangs of the *Padrone* system (which drew from Italian, Greek, and Slavic immigrants to the Americas) and coolie labor systems that relied on contracted Asian labor. Free wage laborers often worked in equally oppressive conditions and had little legal recourse. Traditional law favored the rights of business proprietors over employees in matters such as workplace safety, with the burden of risk taking on the worker for entering into a contract of his or her own free will.

Almost universally, industrial laborers worked long hours and six-day weeks with few breaks. Textile factory owners preferred to hire young women who were viewed as easier to discipline. These young women were usually from poor rural areas, unmarried, and “on loan” from their families. This practice was common to the mills of Lowell, Massachusetts, whose owners prided themselves on their paternal protection of their workers, and later in the century the silk mills of Japan, stocked with teenage girls from poor farming families. The silk mill workers in Japan often worked behind barbed wire and were deeply in debt to their employers for transport, housing, and recruiting advances. Immigrant labor often had only narrow semblance of free labor. European miners, recruited as part of the *Padrone* system, for example, worked the copper mines in the western United States, lived in isolated company housing, and were in debt to the *Padrones* who had contracted their labor. Chinese work gangs were treated as dispensable in the building of great public works projects such as canals and railroads. Similarly, as Japan industrialized during the Meiji period, small-scale mining entrepreneurs were forced out of business; mine laborers for newer large-scale industrial concerns slept in crowded sheds with mats and boards set on the bare ground.

Such economic practices contradicted the ideology of the Enlightenment, fostered in documents such as the French Declaration of the Rights of Man and of the Citizen and the United States Constitution, which nurtured an ideology of human rights. The notion of free labor and the right to dignity as well as the obvious spurs of poverty and starvation fueled many of the labor struggles mounted against industrial leaders. When they appeared, labor unions and the

tactics of collective bargaining to improve work conditions and wages were suppressed. For example, as early as 1721 the first of the *Combinations* acts in Britain forbade journeyman and apprentice tailors from collective bargaining over hours and wages, and in 1800 another *Combinations* act made all labor unions illegal, an act that remained in effect until 1824. In the face of such suppression, labor activists nevertheless forged trade unions, and some combined to form larger federations such as the Trades Union Congress (TUC) in 1868 in Britain and the American Federation of Labor (AFL) in 1886 in the United States. Over the course of the nineteenth century, two major labor pushes were for the establishment of a ten-hour workday in the early nineteenth century and then the eight-hour workday.

The de-skilling of labor was not a peaceful process. Sabotage of industrial machinery (infamous during the Luddite riots between 1811 and 1813 in Britain) and anarchist bombings were few but much publicized. Violent strikes were also numerous. The infamous Haymarket Riot in Chicago in 1886 began when police advanced on a peaceful labor protest rally and a bomb was thrown, possibly by an agent provocateur, possibly by a radical worker; the bomb killed eight policemen. In the aftermath somewhat at random, eight anarchist leaders went on trial, none of whom could be directly connected to a specific conspiracy to commit violence, yet four were hung, and one committed suicide via dynamite in his cell. While many trade unions, such as the Knights of Labor in the United States, sought concessions from industrialists, they also promoted themselves as peaceful and patriotic. The Industrial Workers of the World (IWW, or Wobblies), founded in 1905, was avowedly more radical. Leaders such as Big Bill Haywood noted that open warfare existed between workers and company-hired enforcers, legitimating the use of force.

Amid the class warfare depicted by observers and participants such as Karl Marx, Bill Haywood, and middle-class reformer Jacob Riis, gains were made for labor, some through legislation. Throughout the nineteenth century there was concern, for example, over child labor. As early as 1802 the First Factory Act in Britain,

which provided little enforcement, touched on child labor, limiting child labor, for example, to a 12-hour day. A stronger Factory Act in 1833, in Britain, limited child labor to a 9-hour day, prohibited night work for children, and placed other regulations on industrial work. By the 1870s some of the first laws in the United States were on the books regulating workplace safety, and most forms of child labor were banned in the early twentieth century. In Japan the Factory Act of 1911 set the minimum age for workers at 12 and limited workdays to 12 hours for women and children. Living conditions for workers also were improved through the establishment of housing cooperatives and credit unions in Germany, Britain, and, later, the United States, a cause first championed in the 1840s by the Rochdale Society in England.

With universal suffrage came other slow gains for labor. The labor movement gained greater legitimacy with the forging of socialist and/or labor parties in Australia, New Zealand, Britain, Europe, and the Americas; at the same time, mainstream politicians emerged who pursued reform on the premise that ameliorative legislation was preferable to social revolution. The Bolshevik Revolution of 1917 and the founding of the Soviet Union gave physical embodiment to socialism as a form of government. As an aftermath to this revolution, in many countries there was a strong antilabor backlash.

—*Fred Nadis*

Luddites

Luddite is a term commonly used to refer to someone who opposes technical change. It derives from a period of labor upheaval in early-nineteenth-century Britain when a group following their imagined leader General Ludd or King Ludd (possibly inspired by a Ned Ludd or Ned Lud, a weaver from Anstey who smashed two knitting frames in 1779) were responsible for scattered outbreaks of machine breaking. These outbreaks took place in the period between 1811 and 1816 in some of the textile-producing areas of the Midlands and northern England.

Occasional machine breaking was not new, either in England or in other European countries, and in England had a history going back

to the seventeenth century. It has been referred to as collective bargaining by riot, as it was used mainly to pressure employers when other forms of action were unavailable or were unavailing, and it was probably not done to try to prevent industrial progress in the form of labor-saving machinery, as only certain types of machines were broken. The early-nineteenth-century period was one of general unrest. The outbreak of the French Revolution in 1789 was followed by a period of general European warfare that lasted until 1815. In the early 1800s Napoleon instituted his Continental System to disrupt British trade, which was further affected following the U.S. embargo on trade with Britain in 1812. British manufacturing consequently lost many of its important export markets, which caused significant unemployment and wage cuts by manufacturers. In addition, poor harvests resulted in rising prices for food, and food riots often accompanied or were set off by Luddite action. Because labor unions were prohibited (the Combination Acts were not repealed until 1824), there was no legal outlet for worker discontent.

The industries and occupations most affected by Luddism were not those at the leading edge of the Industrial Revolution. Rather, they were those organized on an out-work or cottage-industry basis, such as hosiery or lace making, in village locations in Lancashire, Yorkshire, Nottinghamshire, Derbyshire, and Leicestershire. Although machine breaking came to symbolize Luddite action, workers in these different areas had specific concerns that had not been resolved by other means and came to a head in the depressed circumstances of 1811–1812. What began the violence was the failure of an attempt by some Nottinghamshire hosiery firms to prevent their pieceworkers from accepting work from their competitors at lower rates, especially those using cut-up frames to produce inferior-quality stockings. When this failed, these firms cut their own rates; the workers, unable to prevent this decline in income, then started to break machines. In Yorkshire, the concern was less to prevent the fall in wage rates and more directly concerned with preventing the introduction of powered machinery—specifically the gig mill and the shear-frame—which would mechanize the process of cloth finishing and eliminate their craft.

➤ A LUDDITE WARNING

During the height of the machine breaking in 1811 and 1812, dozens of mill owners received letters threatening violence unless steps were taken to remove their recently installed machines. The letters were signed by fictional “leaders” of the Luddites, with fanciful names such as “King Ludd,” “Joe Firebrand,” or, in this case, “General Justice.” The following letter was addressed to Thomas Garside, a mill owner from the town of Stockport in northwestern England, in April 1812:

“We think it is our Boundin Duty to give you this notice that is if you doo not Cause those Dressing Machines to be Removed Within the Bounds of Seven Days from the above Date your factory and all it contains Will and Shall Surely Be Sit on fire Remember We have given you fare Warning and if your factory is Burned, it is your own falt . . . it is Not our Desire to doo you the Least Injury But We are fully Determined to Destroy Both Dressing Machines and Steam Looms. . . . We neither Regard those that keeps them Nor the Army for We Will Conquer Both or Die.”

—James H. Overfield

Source

“Letter from ‘General Justice’ to Thomas Garside, Stockport,” in *Writings of the Luddites*, edited by Kevin Binfield (Baltimore: Johns Hopkins University Press, 2004), 172.

Because outbreaks were localized, unbiased information was difficult to come by, and rumors and misinformation were rife. Many of the county magistrates who were responsible for law and order relied on informants, who were often anxious to exaggerate and thus increase their own importance. For example, building on fears of French aggression, some informants reported that French agents were providing financial support to the Luddites. It is difficult also to estimate exactly how many Luddites there actually were, but it is accepted that there was a considerable amount of popular support for them.

Luddites did not set out to cause personal injury, but in April 1812 when a factory owner

had his men open fire in defense of his establishment, two of the assailants were killed. Several deaths on both sides occurred in other outbreaks. Troops were called to restore order, but the country areas were difficult to patrol adequately. The leaders were caught and tried in 1813, however; some were hanged or transported. Apart from a brief resumption of machine breaking in 1816, Luddism ended, most likely because, by this time, the conditions that originally had led to it had improved.

—Michael Meinberg

Bibliography

- Bronowski, Jacob, and Bruce Mazlish. *The Western Intellectual Tradition: From Leonardo to Hegel*. New York: Harper & Row, 1960.
- Ergang, Robert. *Europe since Waterloo*. Boston: D. C. Heath, 1954.
- Meinberg, Michael. “Luddites.” In *Encyclopedia of the Age of the Industrial Revolution, 1700–1920*, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.
- Thomis, Malcom I. *The Luddites: Machine-Breaking in Regency England*. New York: Schocken Books, 1970.

Conditions of Labor in England’s Early Industrial Revolution

The conditions under which workers in England’s early Industrial Revolution labored were essentially unregulated, leading to harsh exploitation and highly unhealthy and unsafe conditions. Industrial work went on in many environments, from homeworking to artisanal shops to factories, or mills. Although the growth in factory work was the most striking feature of early industrial England to many observers, factories never employed a majority of workers. Factory workers were generally the least powerful members of the working class, required to work long hours for relatively poor wages and accept a tightly disciplined workplace. The extensive use of the labor of women and children in early factories also diminished both the pay and the status of factory labor in addition to altering the gender dynamics of many English working-class families. Traditional artisanal workers often looked down on factory workers as unskilled and

lacking the manly independence of the true Englishman. The Industrial Revolution also fostered growth in other trades, such as coal mining.

Until the passage of the first Factory Acts in the early nineteenth century, factory owners were free to set the hours and conditions of labor. The workweek lasted six days, and a workday often lasted 13 hours, with days of 14, 15, and even 16 hours not unknown. (Campaigners for laws limiting working hours and improving conditions frequently compared factory labor to the slavery practiced in the British West Indies.) During periods of heavy demand, overtime was required, and factory clocks could be manipulated by dishonest employers to squeeze out even more time. Workers arriving even a minute after the factory whistle blew to announce the start of the day were subject to harsh fines and penalties. Children who shirked their work, in the judgment of the overseer, could receive harsh physical punishment. Meal breaks were short, 15 minutes to a half an hour, and the standard practice was to offer only one break throughout the entire workday. Some factories indeed offered no meal breaks. Workers often worked from before sunup until after sundown, depriving them entirely of sunlight during the working day. (The pallor of factory workers was frequently remarked upon.) Factories and workshops were often poorly ventilated, hot, and dirty, particularly given the extensive use of coal-powered steam engines, which contributed to chronic coughing and lung disease. The poor air of factory towns was a byword. Little care was taken to maintain safety around machines or design safe machines, and accidents were common.

Factory work also challenged the work habits of many English laborers, who were used to the shifting seasonal rhythms of the agricultural year with a workday governed by the sun. Work at factories was often highly repetitive and required staying in the same position for many hours at a time. The monotony of carrying out a single task also contrasted with the variety of tasks carried out during a traditional agricultural or artisanal workday. Adjusting to work regulated by the clock and the unvarying pace of machines was particularly difficult for those whose habits had been formed in a very different labor regime.

Neither employers nor the British state took particular responsibility for unemployed workers, and the country's system of poor relief, designed for an earlier and much more agricultural British economy, was ill-suited to the demands of industry. In addition to unemployment caused by fluctuations in demand as a result of the business cycle or the failures of individual enterprises, unemployment was also caused by technological obsolescence as different handicraft trades were replaced by machines. The most notorious case is that of the handloom weavers. Handloom

➤ FRIEDRICH ENGELS ON NIGHT WORK

German businessman Friedrich Engels, best known for his intellectual partnership with Karl Marx, was a keen observer of England, where he lived for many years. Engels's *The Condition of the Working Class in England in 1844* (1845) was a passionate denunciation of the cruelty of the factory system. The following passage examines night work:

"Hence the manufacturers introduced the shameful system of night-work. Some of them employed two sets of operatives, each numerous enough to fill the whole mill, and let one set work the twelve hours of the day, and the other twelve hours of the night. It is needless to picture the effect upon the frames of young children, and even upon the health of young persons and adults, produced by permanent loss of sleep at night, which cannot be made good by any amount of sleep during the day. Irritation of the whole nervous system, with general lassitude and enfeeblement of the entire frame, were the inevitable results, with the fostering of temptation to drunkenness and unbridled sexual indulgence. One manufacturer testifies that during the two years in which night-work was carried on in his factory, the number of illegitimate children born was doubled, and such general demoralisation prevailed that he was obliged to give up night-work."

—William E. Burns

Source

Friedrich Engels, *The Condition of the Working Class in England in 1844*, translated by Florence Kelley Wischnewetzky (New York: J. W. Lovell Company, 1892), 152.

weaving was practiced in households by outworkers who contracted individually with cloth merchants to be paid on a piecework basis. The increased supply of cotton yarn produced by mechanized spinning both attracted workers to the trade and drove up weavers' wages. However, the trade then crashed after the introduction and spread of power looms in the early nineteenth century, producing masses of underpaid, unemployed, and desperate workers. (Power looms were a principal target of the Luddite campaign of machine breaking.) Unemployed workers and their families in England's industrial cities could suffer severe malnutrition, increased vulnerability to epidemic disease, and even starvation.

Despite the harshness of working conditions, factory and other industrial work often paid more than agricultural labor. Workers were drawn from the villages and even from Ireland to fill the new industrial cities, such as Manchester, that quickly expanded with the growth of working-class neighborhoods with shoddy housing and poorly devised, unsanitary infrastructure. The new cities were warrens of disease. Many foreign visitors remarked on the contrast between the wealth and economic dynamism of Britain as a society and the misery of its workers.

British employers justified their harsh treatment of their workers on competitive grounds, claiming that an employer who shortened work hours would not be able to compete with more exploitative businesses. Despite this competitive ideology, employers frequently worked together to hold down wages and limit workers' bargaining power in response to the growing organization of workers in specific trades. They blacklisted workers whom they believed to be troublemakers. The Combination Acts of 1799 and 1800, passed through Parliament after lobbying by employers, essentially forbade workers from organizing for collective bargaining with employers. (The Combination Act also forbade collective action by employers, but despite demands by employees these provisos were never enforced.) The impact of the Combination Act varied by region and trade but was greater in large-scale industry, whether organized by factories or by outworking, than in artisanal workshops. However, the acts were not employers' only legal weapon. Most prosecutions of

workers' organizations in the ensuing years took place under other laws, such as prosecutions for conspiracy under common law. The acts were repealed in 1824 after a campaign led by London artisans rather than industrial workers. In response to a wave of strikes, a milder Combination Act was passed the following year. Regulation of the workplace through a series of Factory Acts would follow in the 1830s.

—William E. Burns

Bibliography

- Clark, Anna. *The Struggle for the Breeches: Gender and the Making of the British Working Class*. Berkeley: University of California Press, 1995.
- Rice, John, ed. *British Trade Unionism, 1750–1850: The Formative Years*. London: Longman, 1988.
- Thompson, E. P. *The Making of the English Working Class*. New York: Pantheon, 1963.

Child Labor and Child Labor Laws in Early Industrial Great Britain

Child labor during the British Industrial Revolution was not a new phenomenon. The first documentation of child labor dates back to the medieval era, when children would help their parents outside on the farm or inside with the family enterprise. The nature of child labor, however, dramatically changed during the Industrial Revolution when children began to work outside the home for strangers in factories and mines. Child labor played a key role in the manufacturing of cotton, wool, flax, silk, lace, dyeing, and coal mining and made up approximately half of the workforce in textile mills and one-quarter of the workforce in coal and metal mines. As the Industrial Revolution spread, Belgium, France, Germany, and the United States also used child labor in key industries. In all of these countries, children became independent wage earners who worked long hours in hot, stuffy factories and cold, damp coal and metal mines, with only a few short recesses.

Initially parents and society believed that the employment of children was necessary to help poor and working-class families survive. Gradually, however, many began to feel that it was essential for children to be protected from exploitation by constructing restrictive

labor legislation. The first child labor laws were passed in Great Britain in the early 1800s. The passing of such legislation was preceded by an intense debate over the nature, extent, and effects of child labor. To substantiate their claims of abusive practices, sympathizers in Parliament established commissions to collect evidence from the textile factories and mines. The first of these, called the Blue Books or Sadler Reports, interviewed children, parents, overseers, factory owners, and doctors on the conditions of employment in textile factories. The testimony revealed a considerable amount of abuse in which children were beaten, had their ears torn off, and were kicked if they talked, fell asleep, or were too slow. Critics, however, dismissed some of their conclusions, claiming that they exaggerated the extent and conditions under which children worked. Rather than representing the typical case, they argued that the factory inspectors and inspectors of the mines focused on the worst examples of abuses to make the strongest case for Parliament. They argued further that working conditions in the factories and mines were no worse than what had existed for centuries in the home and that children needed to work to prevent idleness, develop a trade for adulthood, and contribute to the family purse. A number of alternative theories have been offered to explain why child labor increased during the British Industrial Revolution. Some scholars argue that the supply of child labor increased due to poverty, population growth, custom, and the absence of schooling options. Other scholars claim that the demand for child labor increased due to low wages, technological change, and unenforceable child labor laws. It is also clear that some parents wanted their children to work because it was part of their development in becoming self-sufficient adults. Informal education (e.g., apprenticeships, learning by doing, and on-the-job training) rather than formal education was essential for children to become skilled artisans, craftsmen, or tradesmen. Society sanctioned the employment of children because there was a very strong belief that idleness bred crime and immorality.

An increasing number of scholars are convinced that demand played an important role in increasing the number of children employed.

They argue that the demand for child labor increased because children were paid lower wages than adults and had special attributes that made them more productive and easier to discipline than adults.

Great Britain's First Factory Act of 1802, which set maximum hours for children at 12 and improved working conditions in cotton mills, had little impact on the textile mills because there was no mechanism for enforcement. Similarly, the Cotton Factories Regulation Act of 1819, which set the minimum working age at nine and the maximum working hours to 12, and the 1825 bill, which attempted to prevent evasions of the 1819 act, were ineffective. Parliament passed the Regulation of Child Labor Law in 1833, which set maximum working hours at 9, prohibited night work, and allowed for inspections. This law had the potential to deter employers because inspectors were hired and fines were established for violations. Unfortunately, employers quickly realized that the chances of getting caught were negligible because there were too few inspectors for the growing number of textile mills. In addition, even if they were caught, the fines were small relative to the profits that owners made by hiring children, £1.5 per offense and £3 in the case of a second offense. Consequently, the decline in child labor was smaller than reformers had hoped.

The findings of a parliamentary commission on children and women labor employment in coal mines was so shocking that Parliament quickly passed the Mining Act of 1842, which prevented women and girls from working in mines. The next significant child labor law, the Ten Hours Bill of 1847, was passionately debated between reformers and factory owners. The bill, by limiting work hours to 10 for women and young persons, was thought to jeopardize the textile industry's competitiveness worldwide. Subsequent acts were passed that attempted to prevent evasions (1850), extend coverage to include children (1853), and cover all manufacturing (1867) by the 1847 Ten Hours Bill. The gallant efforts of the Tories, humanitarians, and evangelicals on behalf of the factory children were admirable yet often resulted in laws lacking effective implementation.

—Carolyn Tuttle

Bibliography

- Ashton, T. S. *The Industrial Revolution, 1760–1830*. New York: Oxford University Press, 1948.
- Cruikshank, Marjorie. *Children and Industry*. Manchester, UK: Manchester University Press, 1981.
- Hobsbawm, E. J. *Labouring Men: Studies in the History of Labour*. New York: Anchor Books, 1967.
- Hopkins, Eric. *Childhood Transformed: Working Class Children in Nineteenth Century England*. Manchester, UK: Manchester University Press, 1994.
- Tuttle, Carolyn. *Hard at Work in Factories and Mines: The Economics of Child Labor during the British Industrial Revolution*. Boulder, CO: Westview, 1999.

Factory Acts

The term “factory acts” refers to laws passed in Great Britain and other industrialized societies in the nineteenth and twentieth centuries to regulate working conditions in factories, especially for women and children. The general consensus among scholars is that these laws had relatively little effect on reducing child labor. In Great Britain, France, Belgium, the United States, and Germany, child labor laws were routinely ignored. Employers found loopholes in the laws, were reluctant to follow them for ideological reasons, or recognized that child labor served *de facto* as an antipoverty policy. The laws also were resisted by parents of working children.

Not surprisingly, the first factory act—the “Act for the Preservation of the Health and Morals of Apprentices and Others Employed in Cotton and Other Mills, and Cotton and Other Factories”—was passed in 1802 in Great Britain, where the Industrial Revolution began. The bill was a response to a series of epidemics that had swept through the laboring population in Manchester and especially affected large numbers of child apprentices, mainly pauper children from the rural south who were sent to the northern counties to work in factories. The act required that all mills employing 3 or more apprentices, or 20 other persons, wash the mill walls with quicklime and water; provide windows, sufficient bedding, clothes, and religious instruction for children; limit working hours to 12 per day; and prohibit all work between 9:00 p.m. and

6:00 a.m. This act applied to apprenticed workers only (not to children residing in the neighborhood) and provided for no enforcement.

During the 1800s members of Parliament continued to hotly debate the issue of female and child labor. Eventually the reformers were successful in passing 14 restrictive labor laws in addition to the Factory Act of 1802. The process was neither swift nor smooth.

Supporters of protective legislation believed that the nature of the employment in the factories and mines was severely damaging to children’s physical, psychological, and emotional development. Collectively, they worried about creating a future generation of workers who would be weak, deformed, sickly, and uneducated. Critics of restrictive legislation argued that the regulation of children’s hours would reduce exports and profits, thereby eliminating Britain’s competitive edge in world markets. Furthermore, as *laissez-faire* capitalists, they opposed the legislation on ideological grounds because they believed that the government should not intervene in family matters or in business operations.

Despite passing the first child labor law early and following up with a number of laws meant to prevent children from working long hours in dangerous conditions, Parliament was not successful in reducing child labor. None of the Factory Acts passed before 1833 included any type of enforcement mechanism. This created the illusion that the government was concerned about the use of child labor while giving factory owners free rein to conduct operations using child workers. The Cotton Factories Regulation Act of 1819 reiterated the 12-hour maximum dictated by the 1802 act and established a minimum working age of nine. Following this act the 1825 bill was passed, which attempted to prevent evasions of the 1819 act by parents and employers. Such evasions included requiring children to work 14 hours a day but breaking it up so that technically they did not violate the law. Many parents, moreover, lied either about their children’s ages or paid doctors or government officials to falsify age documents.

The first effective Factory Act was passed in 1833, the Regulation of Child Labor Law that

set maximum work hours at 9, prohibited night work, and allowed for inspections. This was the first law with any teeth, in that factories were to be subjected to regular inspections.

Mining also had come under public scrutiny when the working conditions of miners became public knowledge. The Mining Act of 1842 was passed after Parliament read the evidence presented from the Commission of the Mines, which documented that youths and women were underground in coal mines hauling coal through cold, damp tunnels. The real shock came when the commissioners produced sketches of scantily dressed boys, girls, and women in animal-like positions, with chains around their necks and waists, pulling wagons of coal. The Mining Act, as it is called, prohibited women and girls from working in the mines, although a number of females put on men's clothing to sneak down and continue working.

The next most important Factory Act was passed in 1847, the Ten Hours Bill. This bill was long debated before it was passed because factory owners argued that they would have to shut down their mills when children were absent because they played an essential role in the production process. The bill limited hours worked by young persons and women to ten hours a day in textile factories, where the exploitation was thought to be the worst. Subsequent bills in 1850, 1853, and 1867 were passed to close loopholes in the 1847 law and to extend its coverage to all manufactories.

From 1833 to 1853 there was a decline in the employment of young children, although many scholars are skeptical that the decline was caused by child labor laws.

The laws of 1833, 1847, and 1850 established improved enforcement by imposing fines on factory owners and increasing the number of factory and mine inspectors, but there were two major problems: too few inspectors and the small size of the fines. The decline in child labor may have had more to do with reduced demand for child labor due to technological change and reductions in the supply of child labor due to rising real income of the father.

Most European countries followed Britain by passing child labor laws early in the

industrialization process. Their effectiveness is also a subject of scholarly debate.

The first law in Belgium was the Royal Decree of 1842, which King Leopold I established to protect children working in manufacturing. The law was largely ignored by factory owners because no one was responsible for enforcing the law. Subsequent decrees that set minimum working ages (Royal Decree of 1884 and Royal Decree of 1889) and maximum working hours (Law of December 1889, Royal Decree of 1892, and Royal Decree of 1893) also were inconsequential because there was no enforcement mechanism. Fifty-three years later with the Royal Decree of October 1895, Belgium appointed inspectors to enforce the laws.

The first child labor law in France was passed in 1841 but was poorly enforced. Despite good intentions of moving quickly to protect children from long hours and dangerous conditions, it took 33 more years to pass a law with teeth. The law of 1874 established a minimum work age of 12 for mines and industries and a 12-hour workday. It also prohibited night work for boys younger than 16 and girls younger than 21. By this time, however, child labor had declined significantly.

Germany's factory acts were unique because of their emphasis on education. A Prussian law of 1839 established 9 as the appropriate minimum age for work and limited work hours to 10 with two 15-minute breaks and 1 hour for meals. In addition, children had to complete three years of schooling before they could work. This law was more extensive than any other country's first law, but it was just as ineffective because there was no enforcement mechanism. The Statute of 1853 established inspections and also increased the minimum working age to 12 and reduced the maximum hours of work to 6. Although an improvement on previous legislation, it was not consistently enforced. Prussia did not pass a truly effective law until the late stages of industrialization, when child labor had already begun to decline. The Statute of 1878 made factory inspections mandatory.

In the United States child labor legislation was very slow and fragmented. Initially the first laws were established on a state-by-state basis.

Eventually reformers appealed to the federal government to pass legislation that would be consistent nationwide. In 1904 the National Child Labor Committee was formed by philanthropists, clergy, reformers, and politicians committed to exposing the abuse of child workers. The committee managed to introduce the first federal child labor law in 1906, but it was soundly defeated. Subsequent laws fell victim to a similar fate. The first effective and enduring federal child labor law was the Fair Labor Standards Act of 1938. Child labor had already largely disappeared during the Great Depression, however, when thousands of workers lost their jobs.

—Carolyn Tuttle

Bibliography

- Hindman, Hugh. *Child Labor: An American History*. New York: M. E. Sharpe, 2002.
- Kirby, Peter. *Child Labour in Britain, 1750–1870*. New York: Palgrave Macmillan, 2003.
- Nardinelli, Clark. *Child Labor and the Industrial Revolution*. Bloomington: Indiana University Press, 1990.
- Tuttle, Carolyn. *Hard at Work in Factories and Mines: The Economics of Child Labor during the British Industrial Revolution*. Boulder, CO: Westview, 1999.
- Ward, J. T. *The Factory Movement, 1830–1855*. London: Macmillan, 1962.
- Weissbach, Lee Shai. *Child Labor Reform in Nineteenth Century France*. Baton Rouge: Louisiana State University Press, 1989.

Trade Unions

With the advent of the Industrial Revolution in the eighteenth century, the stage was set for the emergence of trade unions with the conversion of many Western European nations from agrarian-based economies emphasizing craft production to those organized around new systems of factory manufacturing, resulting in growing numbers of unskilled and semiskilled employees concentrated in one workplace. Also referred to as labor unions, trade unions can be defined as organizations of wage earners whose major objective is the maintenance or improvement of employment conditions. Although the structure and legal status of trade unions varied from country to country, these labor organizations often engaged in one or more of four popular types

of collective activities to achieve membership goals: providing members with an array of benefits; collective bargaining; organizing and engaging in industrial actions; and political activities.

With regard to member benefits, early trade unions often protected members against spells of unemployment, periods of sickness, and old age. In addition, unions engaged in collective bargaining whereby they negotiated contracts with employers covering wages, working hours, and other employment conditions. In order to pressure employers to address employee problems, whether they were connected with collective bargaining or not, trade unions organized strikes such as the 1842 General Strike in Britain over the cotton manufacturers' attempts to slash wages by 25 percent. Other forms of industrial action at the work site include work slowdowns, work-to-rule actions, and picketing. Finally, trade unions engaged in political activities including the lobbying for proworker legislation, such as the implementation in Britain of the 1871 Trade Union Act that provided unions with protection under the law and the 1874 Factory Act that limited the workday to ten hours and endorsed, worked for, and financially backed candidates and political parties that they believed were sympathetic to labor or workers as an economic class. To this end, in many countries trade unions directly affiliated themselves with political parties that they viewed as pro-working class and that often were socialist in orientation such as the Labor Party in Great Britain, which was formed in 1901, or the German Social Democratic Party, the biggest of the European workers' parties, established in 1863.

One particular type of trade union, the craft union, an organization of skilled workers found in a particular trade, had formed in the United States by the final two decades of the eighteenth century and in Britain by the first half of the nineteenth century. However, it was not until the latter half of the nineteenth century that trade union federations, groups of trade unions, emerged in Britain with the Trades Union Congress (TUC) in 1868 and in the United States with the American Federation of Labor (AFL) in 1886.

The TUC took advantage of the franchise's extension to higher-waged urban male workers in 1867 by adopting, in part, the role of a

➤ U.S. LABOR HISTORY TIMELINE—SIGNIFICANT INCIDENTS

Significant events influencing the development of the U.S. labor movement from its emergence in the late eighteenth century until the onset of World War I are contained in the timeline below.

Late 1700s—Formation of local craft unions in East Coast cities such as New York and Philadelphia.

1842—In *Commonwealth v. Hunt*, the Massachusetts Supreme Court determines that workers have the legal right to join together in order to pursue lawful goals by utilizing lawful tactics.

1869—The Knights of Labor is established.

1886—The American Federation of Labor is organized with Samuel Gompers elected president.

1892—The Homestead strike occurs when the Amalgamated Association of Iron, Steel & Tin Workers leads a work stoppage in Andrew Carnegie's steel mills.

1905—The Industrial Workers of the World is created.

1908—In *Loewe v. Lawlor*, the U.S. Supreme Court rules that the United Hatters' Union national product boycott violates the Sherman Anti-Trust Act.

1911—In New York City, 146 clothing workers die in the Triangle Shirtwaist Company fire, which draws national attention to the dangerous working conditions confronting industrial workers.

1913—The U.S. Congress establishes the U.S. Department of Labor with the head of the department, the secretary of labor, becoming a member of the cabinet.

—Victor Devinatz

Source

William H. Holley Jr., Kenneth M. Jennings, and Roger S. Wolters, *The Labor Relations Process*, 8th ed. (Mason, OH: Thomson/South-Western, 2005), 70.

parliamentary pressure group. In 1871 the TUC established its Parliamentary Committee, which helped to pass prolabor legislation. By 1888, 750,000 workers were trade union members in Britain. With trade unionism expanding to include new groups of workers, this industrial militancy encouraged the revitalization of socialism. By the end of World War I, a mass labor movement had emerged with a membership of 6.5 million.

In the United States, the AFL was led by Samuel Gompers, a Jewish immigrant and former Marxist, who had been active in the Cigar Makers' Union. By the time Gompers assumed the AFL presidency in 1886, he had jettisoned his Marxism for pure and simple unionism and was committed to building the craft union federation along these lines. This meant that the AFL's major goal was to improve the wages and working conditions of members in the here and now through collective bargaining as opposed to using trade unions as a vehicle for implementing socialism. Additionally, the AFL endorsed the principles of voluntarism, preferring that its members remained dependent on the trade unions for the



Members of the Industrial Workers of the World (IWW) demonstrate in New York City in April, 1914. The IWW was founded in 1905 in Chicago by anarchists, socialists and radical trade unionists. (Library of Congress)

improvement of wages and working conditions rather than obtaining such benefits through government involvement. However, fearing that industrial production could be disrupted through strikes during World War I, federal government

intervention through the War Industries Board and the War Labor Board resulted in the AFL unions receiving substantial benefits, such as the granting of the eight-hour workday and the submission of industrial disputes to arbitration.

—Victor Devinatz

Bibliography

- Greene, Julie. *Pure and Simple Politics: The American Federation of Labor and Political Activism, 1881–1917*. New York: Cambridge University Press, 1998.
- Hattam, Victoria Charlotte. *Labor Visions and State Power: The Origins of Business Unionism in the United States*. Princeton, NJ: Princeton University Press, 1993.
- Price, Richard. *Masters, Unions and Men: Work Control in Building and the Rise of Labour, 1830–1914*. Cambridge: Cambridge University Press, 1980.
- Webb, Sidney, and Beatrice Webb. *The History of Trade Unionism*. Rev. ed., extended to 1920. New York: Longmans, Green, 1920.

Industrial Unions in the United States

Industrial unions seek to organize skilled, semi-skilled, and unskilled workers found in one industry or jurisdiction, or related industries or jurisdictions, as opposed to craft unions, which organize one group of skilled workers found in a particular trade such as plumbers, carpenters, electricians, etc. In the United States and throughout the world, craft unions were organized prior to industrial unions and emerged first during the eighteenth and nineteenth centuries due to the homogeneity of the skilled membership's interests with regard to wages, benefits, and working conditions. Although industrial unions are composed of a more heterogeneous group of workers than those found in craft unions, these organizations possess greater collective bargaining power vis-à-vis employers due to the vast quantity of workers represented by the union at one workplace.

With the advent of the Industrial Revolution in the United States in the 1850s combined with the refinement of mass-production technologies after the Civil War (1861–1865), large groups of semiskilled and unskilled employees were gathered together in factories in large numbers for

the first time. The low wages, minimal benefits, and poor working conditions offered by these employers created the conditions for establishing the first industrial (and national) union in the United States, the Knights of Labor (KOL). Created in 1869 as a secret society and remaining a clandestine organization until 1882, the KOL achieved a membership of 700,000 by 1886 when the media reported favorably on the KOL for challenging railroad magnate Jay Gould's wage cuts after KOL members had initiated an unsanctioned strike on Gould's railroads.

The KOL sought to alter labor-capital relations through diminishing the negative effects of depersonalized mass production and attempted to improve the morals of employees and society. In order to achieve these objectives, the KOL's program called for the education of employees and employers with respect to each party's wants and interests, the abolition of child and prison labor, equal wages for women, and public control of companies that supplied indispensable utilities (water and energy). Specific strategies that the KOL adopted for achieving this program included political action, the promotion of producer and consumer cooperatives, utilizing work stoppages as a last resort, and education of KOL members concerning the problems of industrial society. Because all workers regardless of skill level were negatively impacted by the evils of the existing industrial system, the KOL promoted a "one big union" membership approach, calling for all workers to affiliate with the labor body regardless of occupation or skill level.

Although the KOL survived until 1917, by 1890 membership had fallen to 100,000 when its strategies proved unsuccessful in realizing the organization's goals. Although the craft union-oriented American Federation of Labor (AFL) remained the dominant U.S. trade union federation in the early twentieth century, a second industrial union, the Industrial Workers of the World (IWW), also known as the Wobblies, was created in 1905 for organizing all workers, irrespective of skill, race, ethnicity, and gender. In opposition to the AFL's approach of recruiting predominantly white, skilled, native-born American workers, the Wobblies organized workers traditionally ignored by the craft union federation into one large industrial union.

PHILOSOPHIES OF THE KNIGHTS OF LABOR AND THE INDUSTRIAL WORKERS OF THE WORLD IN THEIR OWN WORDS

In the United States, the Knights of Labor was the first labor organization that was not organized according to craft or limited to skilled laborers but that represented general industrial laborers. Its membership increased until the middle of the 1880s before declining rapidly. Although the Knights' aims were somewhat conciliatory, the Industrial Workers of the World (IWW) was a much more militant organization, founded in 1905. Many of its members espoused an anarcho-syndicalist philosophy and viewed society in terms of open class warfare; the IWW was involved in many violent strikes and suffered from antilabor reprisals at the hands of veterans groups, vigilantes organized by industrial and agricultural leaders, and the government.

"[The Knights of Labor] must base its claim for labor upon higher ground than participation in the profits and emoluments, and a lessening of the hours and fatigues of labor. These are only physical effects and objects of a grosser nature, and, although imperative, are but the stepping-stone to a higher cause, of a nobler nature. The real and

ultimate reason must be based upon the more exalted and divine nature of man, his high and noble capability for good."

Source

Uriah Stephens, quoted in T. V. Powderly, *Thirty Years of Labor: 1859 to 1889* (Columbus, OH: Excelsior Publishing House, 1889), 163.

"The working class and the employing class have nothing in common. There can be no peace so long as hunger and want are found among the millions of working people and the few, who make up the employing class, have all the good things in life.

Between these two classes a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production, and abolish the wage system."

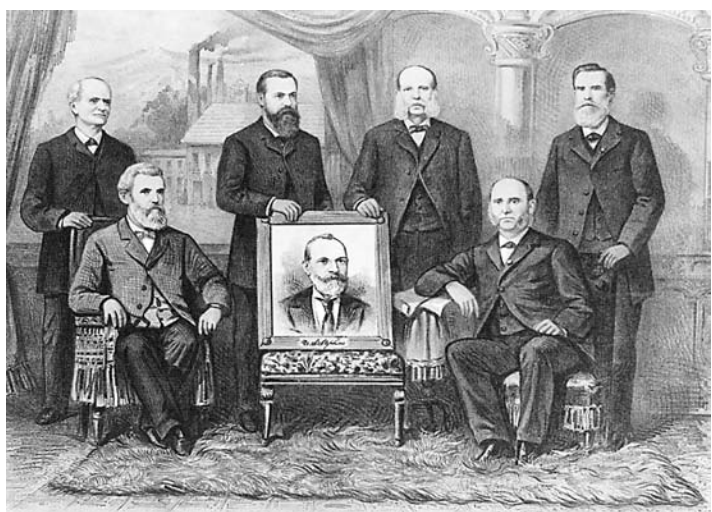
Source

Preamble to the IWW Constitution (1908).

—Victor Devinatz

Tactically, the IWW encouraged the practice of revolutionary syndicalism, or the utilization of direct action tactics on the shop floor as a training ground for the conducting of a worldwide general strike in order to overthrow capitalism and to implement socialism. Successfully leading a couple of major strikes in the United States, including the 1912 Lawrence Textile Strike that included 23,000 workers, emboldened the organization. However, the IWW's opposition to U.S. involvement in World War I and its promotion of strikes in war-related industries led to the federal government's repression of the labor body during the war. Continuing government harassment after the war, for all intents and purposes, led to the IWW's downfall by 1920. Nonetheless, the IWW served as an important forerunner to the Congress of Industrial Organizations, which adopted the Wobblies' syndicalist tactics in constructing successful, stable, and viable industrial unions during the second half of the 1930s.

—Victor Devinatz



Founders of the Knights of Labor pose in 1886, honoring founder Uriah Stephens (shown in portrait) who died in 1882. (Library of Congress)

Bibliography

- Dubofsky, Melvyn. *We Shall Be All: A History of the Industrial Workers of the World*. Chicago: Quadrangle Books, 1969.
- Fink, Leon. *Workingmen's Democracy: The Knights of Labor and American Politics*. Urbana: University of Illinois Press, 1983.
- Renshaw, Patrick. *The Wobblies: The Story of Syndicalism in the United States*. Garden City, NY: Doubleday, 1967.
- Weir, Robert E. *Beyond Labor's Veil: The Culture of the Knights of Labor*. University Park: Pennsylvania State University Press, 1996.

The Labor Movement in Australia and New Zealand

The Australian and New Zealand labor movements were characterized by a close relationship or common community of labor. Men born in one country often rose to prominence in the labor movement of the other or were labor activists in both countries. This relationship also existed in the trade union movement, especially among seamen, shearers, and miners. The bonds were strengthened by mutual isolation and exposure to the same ideologies such as utopian socialism, popularized by the novel *Looking Backward, 2000–1887*, written by the American journalist and lawyer Edward Bellamy.

The Australian Labor Party (ALP), the world's oldest labor party, was formed simultaneously in Queensland and New South Wales in 1891. The bitter defeats of the strikes among maritime, shearing, mining, and other workers, which occurred in 1890, 1891, 1892, and 1894, convinced unionists of the need to use Parliament to achieve a more equitable society. By 1899 there were ALP branches in every Australian colony. Weekly labor newspapers, the *Westralian Worker*, the *Australian Worker*, and the *Worker*, flourished in Kalgoorlie (later Perth), Sydney, and Brisbane.

There had been limited labor representation in the Australian colonial parliaments. The Melbourne Trades Hall Council, formed in the 1850s, consisted of skilled craftsmen (many of British origin)—including engineers, stonemasons, and carpenters—who protected their interests by successfully restricting entry

through the apprenticeship system, establishing appropriate wages and working conditions and creating insurance funds to assist workers in cases of unemployment, sickness, or death. Trades and Labor Councils were formed in Sydney (1871), Hobart (1883), Auckland (1876), and Wellington and in other Australian and New Zealand cities in the 1880s and 1890s. Carpenters in Wellington (1840) and Victorian stonemasons (1856) were the first workers in the world to secure an eight-hour workday. These victories were facilitated in part by the fact that skilled craftsmen were in high demand in Australia and New Zealand. In addition, the discovery of gold deposits in Victoria in the 1850s fostered a population and economic boom that enabled skilled craft unions to negotiate with employers to obtain high standards of wages and working conditions, although many less-skilled or female workers were not beneficiaries. Miners themselves gained the right to vote and enter the Legislative Assembly as a consequence of the 1854 Eureka Rebellion in which armed soldiers fired upon and killed a number of gold miners at Ballarat.

Acts legalizing trade unions were passed in South Australia (1876), New South Wales (1881), Victoria (1884, 1886), Queensland (1886), and Western Australia (1902). In the 1890s colonial governments in New South Wales, Victoria, and Queensland passed factory acts. These acts set a minimum weekly wage at two shillings and six pence, prohibited children under 13 years of age from working, granted women and children under 16 years of age a maximum workweek of 48 hours, and stipulated minimum health and sanitation requirements. Other industrial legislation included the Employers' Liability and Workers' Compensation Acts of 1897 and various mining regulation acts. Because New Zealand was settled only from the 1840s—over half a century later than Australia—and significant migration did not occur until the 1870s and 1880s, few labor laws were enacted until the 1890s. However, the exchange between the two countries that was evident in the labor movement also influenced the governments of both countries. For example, the redrafted Victorian Shops and Factories Act (1896) drew upon earlier legislation enacted in New Zealand.

As trade unions secured greater legal protections for workers in both countries, union membership increased, especially in Australia. By 1915 when Australia's total workforce numbered more than 1.4 million workers, some 528,000 workers (36 percent) were trade union members. The vast majority of these were males. In New Zealand in 1915 unionized workers made up 27 percent of the workforce.

Aside from enacting laws protecting workers, both countries adopted systems of arbitration and conciliation. The Industrial Conciliation and Arbitration Act (1894) created the New Zealand Court of Arbitration. It was comprised of a Supreme Court judge, a union representative, and an employers' representative who heard industrial disputes, made and interpreted awards, set minimum standards of employment, and set and adjusted wages. The Australian Commonwealth Arbitration Court, established in 1904, as well as state courts also held the dual roles of arbitration and conciliation; these courts settled industrial disputes and regulated wages, conditions, and margins for skilled workers. Trade unions and employer associations registered with the court, and their advocates put the case to the judge. In 1907 Justice H. B. Higgins's ruling in the *Harvester* case led to the establishment of an Australian national wage system. Higgins ruled that employers must pay their workers a basic wage, which would enable a married man with two children to live in "frugal comfort." Skilled workers were paid margins above the basic wage; margins were awarded in the Arbitration Court. The basic wage received annual increments, which were determined by the cost of living.

In 1904 the ALP, under the leadership of John Christian Watson, who was raised in New Zealand, formed the world's first national Labor government, which governed for less than four months in Australia. New Zealand took somewhat longer to establish a united labor party, with the New Zealand Labour Party (NZLP) forming in 1916. Although the maritime strike of 1890 had crossed the Tasman Sea, it did not have the same outcome. Union defeats in Australia led to the early establishment of the ALP, a party eschewing alliances with other political parties through the next century. However, in New Zealand

➤ EDWARD BELLAMY AND *LOOKING BACKWARD*

Edward Bellamy (1850–1898) was a Massachusetts lawyer and journalist whose novel *Looking Backward, 2000–1887*, inspired the formation of a number of utopian communities in the United States and was widely read in the Australian colonies.

Bellamy became aware of the suffering of the urban poor while studying in Germany. He was also influenced by the works of Laurence Gronlund, a Danish immigrant who wrote and lectured on socialism in the 1880s. *Looking Backward, 2000–1887*, was published in 1888 and sold over a million copies. The novel is about Julian West, who is transported from Boston in 1887 to Boston in the year 2000, where he encounters a utopian city. The pressing issue of West's era had been labor unrest. His host in 2000 explains that the labor problem was solved when all industries were taken over by the government. In this society there are no wars, and instead of military service, all citizens between the ages of 21 and 55 perform "industrial service," according to ability and interest. Each worker receives an equal credit to be used for purchasing goods and services.

Before writing the novel, Bellamy was not associated with any socialist groups. However, socialists were very inspired by the ideal world depicted in the novel. After its publication, Bellamy began speaking publicly about his ideas. Over 150 Nationalist Clubs, dedicated to discussing and propagating Bellamy's ideals, formed all over the United States to promote the idea that industries should be owned and operated by the government.

—Jyotsna Sreenivasan

an alliance between labor representatives in Parliament with the more social reformist-oriented New Zealand Liberal Party delayed the formation of a separate labor party.

The ALP's emergence as a separate party prior to federation and the existence of a federal system—rather than the unitary system of government adopted by New Zealand—contributed to the Australian party's success. By 1914 the ALP was established as the alternative Commonwealth government to the Liberal

Party and had already formed one or more administrations in every state except Queensland, where it was about to enter a period of 14 years in government. By 1935 when the NZLP first formed a government, the ALP had held office in five separate federal administrations, totaling nine years in Parliament.

—*Bobbie Oliver*

Bibliography

- Kimber, Julie, and Peter Love, eds. *The Time of Their Lives: The Eight Hour Day and Working Life*. Melbourne: Australian Society for the Study of Labor History, 2007.
- Macintyre, Stuart. *A Concise History of Australia*. 2nd ed. Cambridge: Cambridge University Press, 2004.
- Markey, Raymond, and Kerry Taylor, eds. "Trans-Tasman Labor History." Special issue, *Labour History* 95 (2008): 1–3.
- McMullin, Ross. *The Light on the Hill: The Australian Labor Party, 1891–1991*. Oxford: Oxford University Press Australia, 1991.
- Sreenivasan, Jyotsna. *Utopias in American History*. Santa Barbara, CA: ABC-CLIO, 2008.

Labor Management Clashes from 1870 to 1914

Developing capitalist economies such as those of Great Britain, Germany, France, Japan, and the United States experienced frequent clashes between labor and management at the turn of the century, caused mainly by transformations in the labor process. The term "labor process" describes the way things are made, how work is performed, and how production is organized. During this period, emerging industrial and manufacturing enterprises endeavored to maximize output by controlling every aspect of production. This required dismantling the craft basis of manufacturing and the centuries of knowledge and independence embodied in artisanal labor. While the industrializing nations developed differently, this common transition in the labor process altered economic relationships and facilitated the emergence of modern, urban, and industrial societies. However, this transformation, which involved the "de-skilling" of labor, did not go unchallenged, and organized labor emerged.

Management control over the labor process was achieved through ownership of property, manipulation of market pricing, and the systematic integration of supervision into all phases of production. When industrialists combined technological advances in machinery with what was termed "scientific management," which emphasized the ideal of efficiency, they attained the kind of productivity increases and economies of scale that made mass production of complex durable goods possible. The chief advocate of scientific management in the United States was Frederick Winslow Taylor, who developed revisions to the organization of work and introduced wage incentives to increase worker output. Drawing on Taylor's ideas, engineers at the Ford Motor Company mechanized work processes and found workers to tend their machines. With the invention of the assembly line, industrial workers were effectively reduced to mere cogs in the machine, which brought regularity to mass production.

During this time, labor itself was commodified. Businessmen, committed to the ideology of the market, believed that wages should be paid at the lowest possible price. During downturns in the economy, employers frequently cut wages and discharged workers to make room for technological advances in production. Industries were often aided by the coercive authority of governments, which protected domestic business by imposing high tariffs on foreign-manufactured goods and facilitated access to markets by developing infrastructure such as railroads. Governments were also on hand to authorize the use of state militias or federal troops to intervene in strikes as industrial violence escalated throughout this period.

Workers resisted their employers and this transformation in the labor process through a variety of means. Employees could informally slow the pace of work and thus enforce some degree of control over the job. Major clashes between labor and management often revolved around union recognition, but the pressing issues of wages, hours, and working conditions remained central to workers' demands. Once organized, workers appealed to the larger community by urging consumers to purchase goods with union labels and adhere to boycotts.

➤ THREE MAJOR STRIKES OF THE LATE NINETEENTH AND EARLY TWENTIETH CENTURIES

At the turn of the twentieth century, strikes became more frequent in many parts of the world as laborers sought to improve working conditions and obtain higher wages. Many became violent. What follows is a sampling of the era's numerous strikes.

Haymarket Riot in Chicago, 1886. On May 1, coordinated strikes and demonstrations were held in many U.S. cities to demand an eight-hour workday. Three days later several thousand workers gathered at Haymarket Square in Chicago to support striking workers at the McCormick Reaper Works. When police moved in to disperse the crowd a bomb was thrown, and in the following melee seven policemen and a number of workers were killed. The violence caused widespread shock and outrage in Chicago and nationwide. Although the bomb thrower was never identified, eight labor leaders were tried and convicted for fomenting violence. Four were hanged, one committed suicide, and three had their sentences commuted by Illinois governor John Peter Altgeld in 1893.

Australian Shearers' Strike, 1891. The Australian Shearers' Strike, one of Australia's most important

labor disputes, began in reaction to wool companies' demands that shearers accept contracts that would require them to work side-by-side with nonunion workers. Centered in Queensland, the strike involved thousands of workers who formed armed camps outside of towns. Troops were enlisted to protect strikebreakers and arrest labor union leaders. The standoff lasted from February to May, when the strike was broken and 13 union leaders were arrested; they were later tried and imprisoned. The strike contributed to the foundation of the Labor Party in 1891.

Cananea Strike, 1906. The Cananea strike took place in the Mexican border town of Cananea in June 1906, when several thousand Mexican copper miners struck over their low wages in comparison to those of American workers. The strike was eventually suppressed by Arizona posses and U.S. federal troops, who crossed the border on the invitation of Mexican authorities after the lynching of the American owners of the mine. It was a sign of the growing discontent in Mexico on the eve of the 1911 revolution that overthrew the dictator Porfirio Díaz.

—Abraham Mendoza

Although several governments placed limitations on organized labor's use of boycotting, the politics of consumption were central to industrial conflict and working-class organization. Less common but nonetheless prevalent throughout this period were the dramatic strikes as workers organized to deny their employers the use of their labor. In the United States, coal miners, garment-district workers, railway workers, and factory workers struck for better pay, shorter hours, and better working conditions. The four most dramatic strikes were the General Railroad Strike of 1877, in which railway workers across the country struck in response to a 10 percent cut in pay; the Haymarket Square demonstration in Chicago in 1886, when a rally in support of the eight-hour workday and workers locked out of the McCormick Harvester plant resulted in the deaths of eight policemen and the ensuing trial and conviction of eight anarchists, four of

whom were executed; the Carnegie Steel Strike in Homestead, Pennsylvania, in 1892 in which 6,000 troops of the state militia intervened; and the Pullman Palace Company Strike in Chicago in 1894 in which President Grover Cleveland called out federal troops to suppress the strike. In England, dockworkers struck in London in 1889 and Southampton in 1890, and matchgirls carried on a widely publicized strike in 1888. Notable strikes also occurred in Sweden, Wales, and Australia before World War I.

As workers began to organize in increasingly class-conscious ways, industrialists and social reformers alike directed their attention to the community life and work patterns of their employees. Employers recognized a need to do more than simply increase worker's productivity and began to endow reform movements that sought to dissipate class tensions through social and moral uplift. The emergence of welfare

► PULLMAN'S COMPANY TOWN

As a means of alleviating mounting class antagonisms, employers such as George Pullman sought to keep a close eye on their employees by centralizing production in model towns; he also hoped to impose morality on his employees. The Pullman Palace Car Company established Pullman, Illinois, and encouraged employees to live in company-supplied housing and to purchase goods from a company store. The town included over 1,000 homes, a grand hotel (which included the only bar), an artificial lake, a church, a theater, a school, and a library. The town was a tourist attraction, drawing reform-minded visitors daily. Inhabitants were not allowed to purchase their homes, and their lodgings were subject to company inspection tours. Rents were 20–25 percent higher than comparable lodgings in Chicago. During an economic downturn, Pullman laid off many of his workers and reduced the wages of those who remained without, however, reducing rents or utilities. Employees struck in 1894, turning to the American Railway Union and its charismatic leader Eugene V. Debs for support, and sympathy strikes soon crippled national rail service. Although the strike was lost after government intervention, this incident discredited Pullman's attempts at employer paternalism.

—Benjamin Pottruff

states did not resolve all of the tensions between labor and management but provided some protections for workers and made the tensions manageable. By the outset of World War I, mobilization of mass production for the wartime economy signaled a new era of cooperation between industries, governments, and workers who were now accustomed to the transformation of the labor process. While the market had governed relations between management and labor throughout this turbulent period, increasingly governments had a hand in addressing, not simply repressing, industrial disputes.

—Benjamin Pottruff

Bibliography

Braverman, Harry. *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press, 1974.

Glickman, Lawrence B. *A Living Wage: American Workers and the Making of Consumer Society*. Ithaca, NY: Cornell University Press, 1997.

Montgomery, David. *Workers' Control in America: Studies in the History of Work, Technology, and Labor Struggles*. Cambridge: Cambridge University Press, 1979.

Salvatore, Nick. *Eugene V. Debs: Citizen and Socialist*. Urbana: University of Illinois Press, 1982.

Cooperatives

Credit unions, workers' cooperatives, and housing cooperatives emerged as alternative forms of economic organization in nineteenth-century Western Europe and spread from there to many other parts of the world. Cooperatives were founded on the economic principle of communal property (each member was to acquire a share in his cooperative) and the political principle of one man, one vote.

In their economic organization, cooperatives were based on a true socialization of the means of production (collective ownership of stores, apartment buildings, banks, and factories as opposed to their private ownership). This economic transformation went hand in hand with political and cultural aspirations toward a society that values equality in the political and social sphere. Championed by liberal and socialist leaders, cooperatives (particularly consumer and housing cooperatives) were increasingly linked with socialist reform concepts and alternative visions for the economic, social, and cultural reorganization of industrial society. In the case of Germany, for instance, the consumer cooperative movement was part of the socialist movement and was dominated by Social Democratic officials.

The cradle of the cooperative movement was England, where in 1844 the Rochdale Society of Equitable Pioneers was founded by weavers and socialist activists. Even though it was not the first cooperative in England, the Rochdale Society became the prototype for cooperatives created in England and abroad from 1844 onward. The Rochdale cooperative was a consumer cooperative that developed the basic principles of cooperative organization (the Rochdale Principles). These principles included

open membership, democratic organization, administration of the cooperative by its members, distribution of dividends among its members, and exclusion of credit (all purchases had to be done in cash).

The Rochdale Pioneers inspired liberals and socialists alike to apply the concept of cooperation to various sectors of the economy, from the construction of healthier housing to the production of goods and farming. Victor Aimé Huber (1800–1869) was the first to suggest the formation of housing cooperatives and inspired the creation of the first German housing cooperative in Berlin in 1848. This cooperative united the concept of philanthropy with self-help. Since Huber realized that workers would not be able to accumulate all the funds needed for the construction of apartment buildings, he suggested that well-off citizens would provide these funds. Renters of these apartments, however, were expected to gain ownership of their apartments over a period of 30 years. In addition, they were to form renter cooperatives for the purpose of administering the housing cooperative (rent collection, maintenance, etc.) and for the purpose of a consumer cooperative. Huber's main goal was to transform workers without property into working property owners and thus to stabilize capitalist society. Hermann Schulze-Delitzsch (1808–1883) and Friedrich Wilhelm Raiffeisen (1818–1888) introduced credit unions in Germany during the 1850s and 1860s. While Schulze-Delitzsch saw cooperatives as a means to help and protect artisans and shopkeepers, Raiffeisen created credit cooperatives for farmers around Neuwied, a district in the Rhenish Palatinate. He applied the basic ideas of cooperation to these new credit unions, namely that those receiving financial assistance from credit unions should also be its members and oversee the operations of these cooperatives. Raiffeisen insisted that the directors were to serve in voluntary positions and that only the cashiers received a very small stipend.

As cooperatives emerged in divergent sectors, a new model of economic organization based on mutual ownership and profit sharing was being created that in the twentieth century became a significant aspect of industrial societies all over the world. From Europe, the model

➤ THE CONSUMER COOPERATIVE IN LEIPZIG-PLAGWITZ

The Consumer Cooperative was founded in Plagwitz in 1884 by Social Democrats who wanted to create a business venture that would compete with local shopkeepers who, they were convinced, exploited their position by overcharging for their goods and cheating customers with regard to weights and quality of the products sold. At the time, Plagwitz was a suburb west of Leipzig and was integrated into the city of Leipzig in 1891. It housed many factories and thus was a breeding ground for the emerging Social Democratic movement.

In return for a 50-mark membership fee, members were allowed to shop in the cooperative's stores. In addition, each member annually received a share of the cooperative's profits, determined by the amount of money spent with the cooperative. In 1899, the consumer cooperative counted 76 stores and nearly 33,000 members. The business had become a city-wide operation with its own production facilities, including a mechanized bakery, distilleries, breweries, and a coffee bean roasting house. It maintained a dairy operation, a coal retailing business, a department store, and its own credit union. After just 16 years, the consumer cooperative had become a large enterprise with over 1 million marks in sales per month. It forced shopkeepers to improve the quality of their products and lowered the living expenses for working-class families, who were the primary instigators and beneficiaries of this new organization.

—Thomas Adam

of cooperation spread, especially after World War II, to countries as far away as Israel, Tanzania, Laos, Peru, and India (to name just a few). In Africa, cooperatives were introduced in the colonial era by European settlers who were inspired by the Rochdale Pioneers and Raiffeisen.

In Australia, cooperative movements began in the 1830s with the application of some of Robert Owen's (1771–1858) ideas about villages of cooperation among emancipated convicts in the Hunter Valley. Owen envisioned the creation of agricultural communities in which the members would live in communal housing and work the land (as he tried to realize in New Harmony,

Indiana). With the arrival of free immigrants, new forms of cooperation were transplanted to Australia: consumer cooperatives, housing cooperatives, and farming cooperatives. In the United States, Oliver Hudson Kelley (1826–1913) founded the Grange Movement in 1867 to help farmers in the Upper Mississippi Valley battle railroad and grain elevator monopolies that controlled the transport and marketing of agricultural products. This movement supported the founding of local farmers' cooperatives, cooperative stores, grain elevators, banks, and farm equipment manufactories.

In the case of Japan, a newspaper article on the topic of the Rochdale Pioneers published in 1878 sparked the creation of consumer cooperatives. Only after World War I, however, did the cooperative movement in Japan thrive. The Christian reformer and labor activist Toyohiko Kagawa (1888–1960) promoted the creation of consumer co-ops as well as of agricultural and fishing cooperatives. By 1920 there were 13,442 cooperatives, with more than 2 million members.

The impact of cooperatives on society was never limited to the economic sphere. In general, the founders of cooperatives and of cooperative movements pursued the goals of social, cultural, and in some cases political change. From Robert Owen to Oliver Hudson Kelley, leaders of cooperative movements saw education as an intrinsic element for changes in society. Cooperatives represent an alternative way of economic organization and often also a counter-cultural movement.

—Thomas Adam

Bibliography

- Birchall, Johnston. *The International Co-operative Movement*. Manchester, UK, and New York: St. Martin's, 1997.
- Fairbairn, Brett. "Self-Help and Philanthropy: The Emergence of Cooperatives in Britain, Germany, the United States, and Canada from Mid-Nineteenth to Mid-Twentieth Century." In *Philanthropy, Patronage, and Civil Society: Experiences from Germany, Great Britain, and North America*, edited by Thomas Adam. Bloomington: Indiana University Press, 2004.

■ Introduction: Systems of Forced Labor—Slavery and Indentured Servitude

By the nineteenth century, slavery was one of humanity's oldest institutions, existing across a variety of cultures and fulfilling many different social and economic functions. In one form or another, slavery was found in most civilizations outside Europe and Japan. In the Caribbean, Brazil, and the southern United States, agricultural slavery was the principal mode of economic production. In some of these areas, slaves composed 90 percent of the population. Slavery in these areas and the rest of the Americas was also highly racialized, with slaves identified as African and African-descended peoples, and owners, with a few scattered exceptions, as European and European-descended. The conditions of slavery varied. Generally, Catholic areas such as Brazil saw heavier involvement by the legal system in regulating relations between slave

and master and slightly ameliorating the harshness of slavery than did British colonies.

Slavery in areas such as New England and the Islamic world was less oriented to economic production and more to household service. Slaves outside the Atlantic area were also often of a different ethnicity than their masters, and the Indian Ocean trade of slaves from East Africa to the Islamic world continued in the nineteenth century. However, slavery outside the Atlantic area lacked the strong racial overtones of slavery in the Americas.

Slavery faced increasing opposition beginning in the late eighteenth century. It was criticized on humanitarian grounds, and frequently seen as in opposition to the capitalist world of free wage labor. In the decades following American independence, American slavery was

considered by many to be a declining institution that might eventually simply wither away. However, slavery in the United States received a new lease on life with the Industrial Revolution, despite the move to the abolition of the slave trade in the nineteenth century, which preceded the abolition of slavery itself by decades. The rising demand for cotton helped establish “King Cotton” as the U.S. South’s dominant crop, and the large, slave-worked cotton plantation as the basis of Southern economic, social and political power. The abolition of American slavery would eventually require a bloody civil war. Although many of the sugar islands of the Caribbean abolished slavery, from Haiti following the revolution of 1791 to Jamaica and the other British colonies in 1834, they proved unable to establish a viable sugar economy using free labor. The remaining Caribbean slave islands, such as the Spanish colony of Cuba, were actually economically strengthened as they moved into a new position as sugar producers.

The enslaved labor supply following emancipation was in large part replaced by contract workers, “indentured servants” from India and China as well as other places. Although the indentured servant had a very different legal position than the slave, the techniques used to recruit laborers were so deceitful, the work so onerous, and the indentured servant’s rights protecting against his or her employer’s abuses so few and difficult to enforce that nineteenth-century indentured servitude is sometimes referred to by scholars as “second slavery.” Chinese and Indian indentured servants were particularly important in the Pacific region and Oceania, as European colonial powers moved to exploit the area’s resources, such as guano and phosphates, on a massive scale.

By the late nineteenth century, opposition to slavery had become a mark of Euroamerican civilization, and traditional systems of slavery in Africa and other colonized areas were frequently abolished by imperial rulers. Ironically, suppressing slavery was often used as a justification for annexing territory by imperial rulers, such as Leopold of the Congo, who imposed far harsher systems of coerced labor than traditional African slavery.

—William E. Burns

Slavery in the Thirteen Colonies

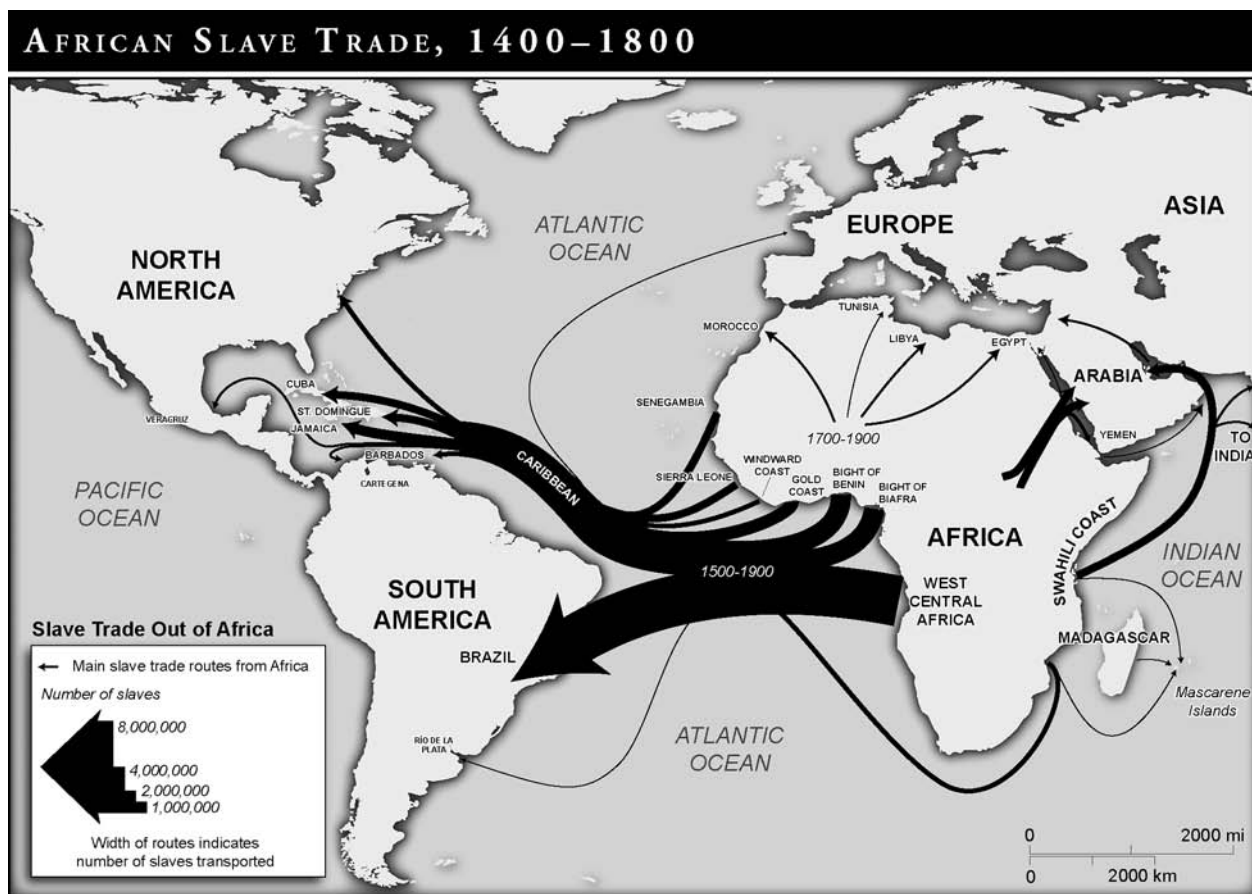
Slavery arose in the American colonies to meet the demand for labor in growing cash crops for export. Slavery was racial in its confinement to blacks and hereditary in consigning the child of a slave mother to slavery. Moreover, slavery was a lifetime condition. A person born into slavery remained a slave until death unless he or she received manumission.

In 1750 the American colonies had some 2.4 million slaves, mainly concentrated in the South. Less than 3 percent of the population in New England and less than 8 percent in the Middle Colonies in 1750 were slaves. By contrast, roughly 40 percent of the population in Virginia and Maryland were slaves. The concentration of slaves was greatest in rice-growing areas, where blacks outnumbered whites 2 to 1 in the late colonial era. Dependent on the cultivation of rice, South Carolina and Georgia had populations in which more than 50 percent were slaves.

By 1780 the number of slaves in the colonies had risen to 5.7 million, with much of the increase due to reproduction rather than import. Although mortality reached 50 percent of new arrivals and men outnumbered women 2 to 1 as immigrants, many of those who survived produced children. African women had an average of 3 children; their descendents, native-born women, had an average of 6 children. Whereas



Early illustration of slaves sealing tobacco barrels on the Virginia waterfront, 1751. Scene from a map of Virginia drawn by Joshua Fry and Peter Jefferson in 1751. (Library of Congress)



in 1750 one-third of slaves in Maryland and Virginia were imports, in 1770 only one-tenth were imported. Even in South Carolina, where the import of new slaves had long outpaced the reproduction of slaves, native-born slaves outnumbered new arrivals after 1770. With the number of slaves growing apace of the demand for labor, Virginia and Maryland imported few slaves after 1770. In 1778 the Virginia House of Delegates, certain that Virginia could maintain its population of slaves by reproduction, banned their import.

A fixture in the South and present in the North, slavery nonetheless did not escape the critique of the Enlightenment, which branded it wasteful, contrary to the tenet of progress, and in violation of human rights. To this criticism the Society of Friends added that slavery contradicted the ethics of Christianity. Although Thomas Jefferson, himself a slave owner, included a sentence against slavery in a draft of

the Declaration of Independence, he removed it from the final copy at the wishes of others at the Continental Congress. Some Americans saw the contradiction between the document's idealistic rhetoric and the realities of slavery. The Revolutionary War sharpened this contradiction as the Continental Army enlisted blacks in defense of independence. For their part the British promised freedom to slaves who joined them, although this gesture stemmed from a desire to weaken the planters rather than religious or Enlightenment ideals. Some 80,000 slaves, taking advantage of the upheavals of the war, fled to freedom.

The Revolution did not abolish slavery but rather restricted it to the South. In 1777 Vermont passed a law emancipating its slaves, albeit gradually. Pennsylvania followed in 1780 and Rhode Island and Connecticut in 1784. The Northwest Ordinance in 1787 forbade slavery in the Northwest Territory. Yet the ordinance accommodated

➤ JOHN WOOLMAN, *SOME CONSIDERATIONS ON THE KEEPING OF NEGROES*, 1754

John Woolman was a Quaker merchant in New Jersey who wrote his antislavery tract *Some Considerations on the Keeping of Negroes* in 1754. This and his other writings were widely read in the northern colonies, especially within the Quaker community of New Jersey and in western Pennsylvania. An excerpt from this tract is provided below.

“All nations are of one blood. We all spend a short time on earth & we are all subject to the same illnesses, infirmities, frailties, temptations & death judgment before God. We are all brothers. . . . God’s love is universal so man must open his heart to others. If we were in their place for generations, without the benefit of civilization, wouldn’t we be

like them? Constant oppression affects their behavior. . . . Calling someone a slave & keeping him in low estate, fixes the notion that they are lower than we. Then we lose our capacity to judge & govern. When we demand hard labor from others without pay, we become severe in our judgments of them & we brutalize them for criminal behavior. One evil leads to another & true Friends [Quakers] will feel concern on this account.”

—Christopher Cumo

Source

Oscar Reiss, *Blacks in Colonial America* (London: McFarland, 1997), 161–162.

slave owners by letting them reclaim fugitives who had fled to the Northwest Territory. Although the United States ended the import of slaves in 1808, the Constitution counted each slave as three-fifths of a person, giving the South a larger voting bloc in the House of Representatives than would have been possible had the Constitution deemed slaves mere property. Having survived the Revolution, slavery would persist until the end of the Civil War.

—Christopher Cumo

Bibliography

- Berlin, Ira. *Many Thousands Gone: The First Two Centuries of Slavery in North America*. Cambridge: Harvard University Press, 1998.
- Morgan, Kenneth. *Slavery and Servitude in Colonial North America*. Washington Square: New York University Press, 2000.
- Reiss, Oscar. *Blacks in Colonial America*. Jefferson, NC: McFarland, 1997.

Slavery in the Caribbean

Slavery in the Caribbean began with the arrival of the Spanish in 1492 and continued well into the nineteenth century. Spain’s colonization of the Caribbean islands was followed by the presence of the Dutch, British, and French. Major

commodities such as tobacco, coffee, and especially sugar fueled Caribbean slavery. During the eighteenth century the slave trade brought in more than 4 million slaves to the region, including more than 2.532 million slaves who were taken to the British islands, more than 1.180 million who were taken to the French islands, 350,000 who were taken to the Dutch islands, and more than 200,000 who were taken to Spain’s island of Cuba.

Most of these slaves were imported during the eighteenth century when the demand for sugar, one of the first luxuries consumed by the masses in Western societies in the eighteenth century, reached new heights. Sugar was one of the most labor-intensive crops. Sugarcane was harvested year-round and took up to a year and a half to mature. It also needed large amounts of fertilizer. Slaves, therefore, were forced to carry baskets of manure on their heads to fertilize the soils, a difficult and exhausting task on the steep hillsides in the Caribbean. Slaves also suffered from burns from the process of boiling juice and mutilation from the vertical rollers used to squeeze out the juice from sugarcane.

The long hours, brutal treatment, and intense heat contributed to high mortality rates. Death rates among slaves in the Caribbean were one-third higher than those of slaves in the

THE BAPTIST WAR

The Baptist War, also known as the Christmas Uprising or the Great Jamaican Slave Revolt of 1831–1832, was a slave rebellion that began as a result of the House of Commons' campaign to completely abolish the institution of slavery throughout the British Empire. Planters and slave owners who were aware of this campaign became infuriated and created a countercampaign of protest to keep slavery alive. As these debates and campaigns went on, slaves began to anticipate their freedom. In addition, economic distress as well as a six-month drought followed by heavy rains devastated the harvest and exacerbated the slaves' discontentment.

Sam Sharpe, a domestic slave and Baptist minister who worked on Montego Bay, was a literate, intelligent, and charismatic leader who attempted to spearhead a slave revolt. Motivated

by the teachings of white missionaries on abolitionism and nonviolence, Sharpe's plan was to have slaves peacefully resist work starting Christmas Day until they were freed and given wages for their work. Unfortunately, slave resistance was unsuccessful and spawned a massive riot on Christmas Day, 1831. The ten-day rebellion rallied as many as 60,000 slaves of Jamaica's 300,000 slave population. The aftermath was devastating. Six hundred twenty-six people were tried, and 312 people were executed for their involvement or supposed connection to the event. This number included Sharpe and white missionaries suspected of being allies to the enslaved. The rebellion, though unsuccessful, demonstrated the political awareness of the slaves and hastened the emancipation of slaves in the British islands in 1833.

—Kellie Jackson



Haitian general Toussaint L'Ouverture leads the revolt against French forces in Saint Domingue to abolish slavery and win native control over his country. (Hulton Archive/Getty Images)

American South, and suicide rates were also higher. The average life expectancy of a Caribbean slave was seven years after arrival. Planters believed that it was more cost-effective to simply purchase more slaves than to breed slaves, as was the practice in the United States. Their rationale was that it would take roughly

14 years before a newborn male would become a valuable worker in the field. Thus, purchasing new male slaves and working them to death was more profitable.

These conditions caused numerous rebellions, many of them sparked by newly arrived slaves from Africa who fiercely resisted their captors. Jamaica had an especially large number of slave revolts and a high incidence of sabotage, arson, and theft. In 1831 a major slave revolt in Jamaica, referred to as the Baptist War, prompted the emancipation of slaves in the British Empire. Smaller islands such as Barbados, Antigua, and Saint Kitts experienced fewer rebellions because sugar production took up so much land that rebellious slaves had few places to hide or set up maroon communities. The only successful rebellion was the Haitian Revolution (1791–1804) in which Toussaint L'Ouverture led the enslaved and free people of color to defeat the French and their allies, Spain and Britain. As a result, Haiti won its independence and became the first free black nation in the Western Hemisphere.

Insurrections were more common in the Caribbean than in the United States for many reasons. First, the ratio of slaves to white people was much greater in the Caribbean islands, where slaves often made up as much as 90

percent of a colony's population. Second, the Caribbean slave population was made up of a larger proportion of African-born slaves. Rebellions were most common when large numbers of native-born Africans were brought into an area at one time. By contrast, assimilated American slaves tended to be less likely to revolt. Third, because slavery in the Caribbean was practiced on relatively small and separated islands, it was difficult to organize military force to suppress rebellions.

The slave rebellions along with abolitionist movements in Europe contributed to the fall of slavery in the Caribbean. In 1807 Great Britain and the United States outlawed the slave trade. In 1833 Britain emancipated more than 800,000 slaves in its colonies while paying its planters 20 million pounds in compensation. In 1848 France and Denmark abolished slavery. However, the Caribbean slaves received nothing but freedom, and no attempts at reconstruction or reparations were made.

—Kellie Jackson

Bibliography

- Dunn, Richard. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624–1713*. New York: Norton, 1972.
- James, C. L. R. *The Black Jacobins: Toussaint L'Ouverture and the San Domingo Revolution*. New York: Vintage Books, 1963.
- Mintz, Sidney W. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin, 1985.
- Price, Richard. *Maroon Societies: Rebel Slave Communities in the Americas*. Garden City, NY: Anchor, 1973.
- Rogozinski, Jan. *A Brief History of the Caribbean: From the Arawak and Carib to the Present*. New York: Plume, 2000.

Slavery in Brazil

African slaves were first brought to the captaincies of Pernambuco and São Vicente in 1550. From these colonial centers slavery eventually spread to all areas of Brazil. It is estimated that between 3.5 million and 4 million Africans arrived in Brazil in the three centuries of slave importation, the majority coming from West and West-Central Africa. Another significant source of Brazilian slaves was Angola, while

Mozambique and other areas of East Africa provided lesser numbers of slaves.

In the sixteenth century sugar plantations, known in Brazil as *engenhos*, were established and manned by slaves. In addition, slaves were used in a variety of functions to support the plantation system, including farming, ranching, and the transport of sugar to ports for export. The use of slaves to support the sugar plantations and related enterprises grew from a few thousand in 1570 to over 30,000 by 1600. As the sugar economy flourished in the seventeenth century, an estimated 500,000 additional Africans were imported by 1640. Slaves worked both the large plantations, where hundreds labored, and the smaller holdings, *lavadores de cana*, that were worked by smaller numbers. In addition to sugar, slaves were used in the production of a variety of other export crops such as tobacco, rice, coffee, and cotton. Africans were also utilized on small farms that produced corn, fruit, manioc, chickens, hogs, and goats for sale in local town markets.

In the nineteenth century coffee production rose dramatically, and this led to a resurgence of slavery on the coffee plantations of São Paulo, Minas Gerais, and Goiás at the very time it was being abolished in other parts of Latin America. Not all slaves worked on plantations. Some found less-harsh conditions in cattle and goat raising or as teamsters. Africans also worked as deep-sea fishermen and whalers and were used in nearly all facets of maritime activity.

In Minas Gerais, Goiás, and Mato Grosso slaves worked in the gold mines or panned for gold and diamonds in the rivers. Young African women were brought in to serve as cooks and domestic servants in the camps and towns. Slave women were able to trade foodstuffs for gold, which they often used to purchase their own or their children's freedom.

Slaves performed all sorts of domestic functions in their masters' households, where women prepared food, cleaned, tended to children, mended cloths and did the laundry, while functions such as coachmen, footmen, stablemen, and sedan chair porters were performed by men. Slaves skilled in the trades including cobblers, seamstresses, and woodworkers were often hired out as *negros de ganho*, and their wages went to

➤ LUIS DA GAMA—AFRICAN BRAZILIAN ABOLITIONIST

Many elite Brazilians of African descent refrained from publicly opposing slavery or taking part in the abolitionist movement before it gained widespread acceptance in the 1870s. One notable exception was Luis Gonzaga Pinto da Gama (1830–1882). The child of an African-born mother and an aristocratic father of Portuguese descent, Gama was sold into slavery by his father to pay a gambling debt. Gama gained his freedom by obtaining documents that proved his enslavement to be illegal and eventually worked his way into a position of a clerk at a law office. There, he learned the fundamentals of law and used his knowledge to advance the cause of abolition. Gama's efforts in the courtroom gained freedom for hundreds of slaves and earned him considerable notoriety within the growing abolitionist movement. He also challenged Brazilian racial hierarchy through his literary work. In his most famous poem, "The Herd of Goats," he criticized the valorization of whiteness in Brazil by emphasizing that all Brazilians are "goats," an epithet used against African-descent multiracial Brazilians, due to centuries of racial mixture. Though active in the abolitionist cause in Brazil, Gama would not live to see the official end of slavery in 1888.

—Josef Castaneda-Liles

their owners. Young slave women were often the first sexual partner for sons of slave owners.

Slaves also played an important role in the conquest and settlement of the Brazilian littoral. Due to a shortage of Portuguese soldiers, colonists used armed slaves to defend against Indian, French, and Dutch attacks. Slave-soldiers were also used in offensive operations to pacify the coastal areas.

Slavery began to decline when Brazil abolished the slave trade in 1850. Another factor was the diversification of the economy. Manumission became common in the second half of the nineteenth century, as owners found that free labor was less costly and more efficient. Children born of slaves were granted freedom under the provisions of the Rio Branco Law of 1871. In 1885 a new law gave freedom to all slaves over the age of 60. Complete emancipation came with the

passage of the Golden Law in 1888. The Golden Law had but two articles:

Article 1: From this date, slavery is declared abolished in Brazil.

Article 2: All dispositions to the contrary are revoked.

Brazil became the last nation in the Western world to abolish slavery. The passage of the Golden Law had broad support, but it was opposed bitterly by some slave owners. Their resistance was one of several factors that led to the overthrow of the monarchy by the military in 1889 and the beginning of republican Brazil.

—George Lauderbaugh

Bibliography

- Daniel, G. Reginald. *Race and Multiraciality in Brazil and the United States: Converging Paths?* University Park: Pennsylvania State University Press, 2006.
- Freyre, Gilberto. *The Masters and the Slaves: A Study in the Development of Brazilian Civilization*. Translated by Samuel Putnam. 2nd ed. New York: Knopf, 1946.
- Levine, Robert M. *The History of Brazil*. New York: Palgrave Macmillan, 2003.
- Mattoso, Katia M. De Queirós. *To Be a Slave in Brazil, 1550–1888*. Translated by Arthur Goldhammer. New Brunswick, NJ: Rutgers University Press, 1986.
- Prado, Caio, Jr. *The Colonial Background of Modern Brazil*. Translated by Suzette Macedo. Berkeley: University of California Press, 1967.

Slavery in the United States

Nearly as soon as the British created a permanent settlement in North America at Jamestown, slavery was introduced. Although its growth was at first minimal, slavery soon became central to American politics, economics, and social relations. Slavery was a defining factor in early American history and in the lives of African American slaves.

A Dutch sale of 20 slaves to Jamestown colonist John Rolfe in 1619 marked the first instance of slavery in British North America. For the first 50 years, Africans and white settlers worked alongside each other. But as dependence on

indentured servants lessened and as tobacco became central to the Virginian economy, African slavery became entrenched and was soon legally mandated as an inheritable lifelong condition. By the end of the seventeenth century, statutes passed by colonial legislatures decreed that children born to slave mothers would also be enslaved, and by 1750 African slaves numbered upwards of 144,000 in the Chesapeake. Two in 5 Virginians were enslaved. Another 40,000 slaves lived in Georgia and South Carolina. It is not altogether clear whether white racism toward Africans led to slavery or if enslavement fostered racist beliefs, but it is clear that racism and slavery grew together in the New World. The historian Edmund Morgan points out that in colonial Virginia, paradoxically, slavery and racism became the ideological basis for American commitment to freedom and equality for all whites.

As the United States expanded and grew, slavery evolved, becoming more important and more diverse. The importance of slavery to the American economy grew as new cash crops such as rice, indigo, and especially cotton were introduced. The historian Ira Berlin identifies four distinct slave communities that developed during the first 200 years of slavery: the North; the Chesapeake; the coastal low country of Georgia, South Carolina, and Florida; and the lower Mississippi Valley. Each possessed its own unique terrain, crops, and patterns of labor. On the eve of the American Revolution, the dependence on slavery was such that one out of five Americans was enslaved.

In the nineteenth century, slavery became largely a Southern phenomenon. While racism continued to thrive in the North, the region lacked a sustainable cash crop like tobacco that created a demand for slave labor. As a result, the institution of slavery became marginal. Between 1777 and 1804, states from Vermont to New Jersey passed laws to gradually abolish slavery. In the decades following the signing of the U.S. Constitution (which had protected slavery) the institution of slavery appeared to be waning in the South as well, but the invention of the cotton gin in 1793 brought a new cash crop to the southern and southwestern United

➤ **FREDERICK DOUGLASS, A FAMOUS AMERICAN SLAVE**

Born in 1818, Frederick Douglass became perhaps the most famous ex-slave in American history. In 1838 Douglass claimed freedom for himself by escaping to New York. In 1845 he published the first of three autobiographies, *Narrative of the Life of Frederick Douglass, An American Slave*. In it he detailed his childhood and his experiences as a slave, using his personal history to stir readers to action against slavery.

As an abolitionist speaker and writer (in addition to his books he published an antislavery newspaper, the *North Star*), Douglass worked to convince Americans that slavery was incompatible with American liberty and the ideals upon which the country was founded. Speaking in Rochester, New York, on the Fourth of July in 1852, Douglass questioned, "What to the American slave is your Fourth of July?" He then thundered, "I answer, a day that reveals to him more than all the other days of the year, the gross injustice and cruelty to which he is the constant victim." Throughout the 1850s Douglass continued to agitate against slavery, and long after the American Civil War ended he fought for African American equality and challenged Americans to fulfill the promise of the Thirteenth, Fourteenth, and Fifteenth amendments.

—Bonnie Laughlin-Schultz

States: cotton. The cultivation of cotton dramatically increased Southern reliance on slave labor and its commitment to the maintenance of the so-called peculiar institution. Fueled by cotton, southwestern territorial expansion, and the natural reproduction of a growing African American population, the number of slaves in the United States rose rapidly, from 1.5 million in 1820 to 4 million in 1860. One million slaves moved west with the expansion of cotton-growing terrain. By 1840 Southerners grew 60 percent of the world's cotton, stimulating the Northern textile industry and supplying countries as far as Russia.

On plantations (where many, but not all, slaves lived and worked), planters employed violent coercion to maintain control. Slaves learned

how to resist slavery in large and small ways, from running away to insurrection to everyday acts such as working slowly or breaking tools. Families, at times, provided a refuge and protective circle from the violence and degradation. While many slave families were split apart by sale and the lives and labor of slaves were very difficult, African Americans created a distinct culture that could be a refuge for them as they worked to create lives for themselves and their kin.

As the United States gained territory in the southwest, first with the Louisiana Purchase and later with the Mexican Cession, the question of whether slavery should be extended arose, and out of this discussion emerged competing definitions of freedom. To the abolitionist movement that arose in the 1830s and grew in the decades that followed, freedom and slavery were irreconcilable opposites; thus, antislavery activists like William Lloyd Garrison declared that slavery must be immediately abolished. Many Northerners, on the other hand, felt that freedom entailed being able to work in the new territories like Kansas and Nebraska without competing with slave labor or slave owners. In contrast, many Southerners became persuaded that freedom entailed the right to own and transport slave property within the South and beyond. Multiple conflicts over slavery's future throughout the 1840s and 1850s ultimately propelled the North and South to war. It took four years of violent war to accomplish the destruction of slavery, and in 1865 the Thirteenth Amendment abolished slavery once and for all throughout the United States.

—Bonnie Laughlin-Schultz

Bibliography

- Berlin, Ira. *Many Thousands Gone: The First Two Centuries of Slavery in North America*. Cambridge: Harvard University Press, 1998.
- Blassingame, John. *The Slave Community: Plantation Life in the Antebellum South*. New York: Oxford University Press, 1972.
- Davis, David Brion. *Inhuman Bondage: The Rise and Fall of Slavery in the New World*. New York: Oxford University Press, 2006.
- Kolchin, Peter. *American Slavery, 1619–1877*. 1st rev. ed. New York: Hill and Wang, 2003.
- Morgan, Edmund S. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. 1975; reprint, New York: Norton, 2003.

White, Deborah Gray. *Ar'n't I a Woman? Female Slaves in the Plantation South*. New York: Norton, 1985.

Slavery in Pre-Colonial African Societies

Slavery in Africa has a long history, predating the European arrival by several centuries and lasting even into the twentieth century. As historian Paul E. Lovejoy has noted, scholars consider slavery a “central institution in many parts of Africa” and know that Africa was the chief supplier of slaves for “ancient civilizations, [the] Islamic world, India and [the] Americas.” A vigorous two-way slave trade between Africans and Arab peoples existed from initial contacts in the ninth century, a trade in which Africans both imported and exported human beings. Slavery was not considered a badge of inferiority, and many slaves were people of great skill and even of great learning.

Europeans arriving in West Africa discovered a well-developed, operational slave-trading system. The trans-Saharan slave trade started as part of the overall trade of salt and other minerals for food that was essential for survival in desert communities. This trade declined after Moroccans conquered the Songhai empire, but the slave trade again increased when gold trading declined.

Initially, African rulers perceived the European slave trade as simply a continuation of the trade they conducted with Arabs. Arab trade routes had connected the Sahel region, the northern Sudan, and the eastern coast into an Islamic trade network from medieval times. Africans purchased salt, horses, cloth, glassware, and metalware from Arab traders, and in return, provided gold and slaves. These two items comprised 90 percent of Africa's exports, and ivory made up most of the balance in trade goods.

Although Arabs found uses for slaves—mostly females for domestic service—the Portuguese initially had to sell slaves within Africa, mainly to Moroccans. Slowly, the Portuguese began finding use for slave labor—mostly male—on their sugar plantations on the Cape Verde Islands, Madeira, São Tomé, and Príncipe. During

the sixteenth century, they extended this trade to Portuguese possessions in the Americas.

The fact that African kingdoms participated in the slave trade is not surprising considering that slavery has had a long history in many world societies. Slavery had long been part of the normal order of things in Africa, and African rulers deemed European interest in the trade comparable to Arab interest. Only when this trade became insatiable and replaced all other legitimate commerce, even providing guns for humans, did the slave trade inflict its destructive effects on Africa, particularly West Africa.

Scholars have formulated theories about the basis for slavery in West Africa among the Ashanti, the Yoruba, and the Bini, as well as the rulers of Dahomey. One anthropologist, Melville Herskovitz, has noted that “essentially agricultural, all these societies manifest a considerable degree of specialization, from which are derived the arrangements for the exchange of goods that take the form principally of stated markets, wherein operations are carried on without the aid of a monetary system which, in pre-European days, was based on the cowry shell to facilitate the expression of values.” This highly organized economic system produced a surplus, and that surplus supported a highly differentiated class system, including the institution of slavery. In Dahomey, plantation slavery existed while in other coastal West African systems it does not appear to have done so. Slavery in other coastal West African areas was part of the highly elaborate labor specialization of the distributive system. In other kingdoms, slavery appears to have been of the domestic sort, with many slaves being reserved for the ruler’s use. Rulers could use these slaves to obtain European goods or for ritual sacrifice.

Each of the three stages of the slave trade (1350–1600, 1600–1800, and 1800–1900) was marked by slavery’s spread over ever-larger geographic areas, slavery’s increasing role in the economy of African polities, and transformation of the political and economic order. Scholars note a strong link between gold production and trade and the slave trade, especially in five areas of important production—three in West Africa and two in East Africa. There was also, of course, a regional trade in luxuries that included slave trading.

Several interesting characteristics marked African slavery. Slavery was one of many types of dependency in Africa, and it was enmeshed in the kinship system, the dominant form of social organization in most African societies. In slavery’s earliest forms, no separate slave class existed in Africa. Political influence in small-scale, kinship-based societies depended on the size of a person’s kinship group. Many, if not most, of these societies allowed slaves to become full members of the kinship group. Alternately, they might be retained as dependents whose welfare was joined with that of their owners and a relevant kinship group. Slaves formed only one type of dependency group. Early African society was not based on slavery as a central institution, but as it grew more important many African societies became slave societies.

In contrast to Islamic slavery, which expanded slowly and essentially retained many traditional African features while adding the stamp of training in a universal religion, the beginning of the transatlantic slave trade marked an explosive growth in slave trading. This expansion caused major changes in those African societies that it touched. Slavery expanded to vast areas in a short time and it did so intensely. From 650 to 1600, approximately 3.5 million to 10 million people were removed from Africa by the slave trade. This is a considerable number, but it averages to transporting 5,000–10,000 people per year over six Saharan routes and two major East African ones. These figures should be contrasted with numbers taken from 1650 to the end of the Atlantic slave trade where estimates range from just over 11 million to more than 20 million.

Clearly, there was much money to be made in the trade, and many African polities became slave societies. Little could be gained economically or militarily by opposing European traders’ desires, since their home countries often backed them. Some African rulers became so secure in their positions that they relaxed control of their court slaves. In the 1800s Sultan Bangassou, of what is now the Central African Republic, became so enriched by the slave trade and the support of Europeans involved in it that he raised the status and personal freedom of his court’s slave women.

Scholarly studies make it clear that slavery's growth could just as easily have proceeded from internal or external factors or an interaction of both. Indicative of this fact are slavery studies conducted on the Julas and other similar Islamic commercial groups. As historian John Thornton has noted, the Julas inhabited an area of the western Sudan and had "a chain of villages worked by their slaves who provided them with provisions and served as carriers on their commercial expeditions." Village heads in these settlements formed a type of minor nobility in the region. Thornton's conclusion is that "the development of commerce and of social mobility based on commerce was intimately linked to the growth of slavery, for slaves in villages performing agricultural work or carrying goods in caravans or working in mines under private supervision were essential to private commercial development."

Slaves also measured the political elite's wealth. They could be used to generate private armies, rule client areas, or produce wealth through labor or investment. For example, Sudanese empires used slave armies and administrators to check the feudal nobility's power, and studies indicate that slavery also performed the same function in other African regions. In the case of the Congo, kings collected their slaves into a central area, Mbanza Kongo, and turned them into the capital needed to consolidate power. Many of these slaves owned estates, and their combined wealth enabled rulers to resist tendencies to fragment the area into smaller and weaker political units. Similarly, the nearby Ndongo kings used slaves as administrators to combat the power of independent-minded nobles.

Not surprisingly, Europeans entering Africa in the fifteenth and sixteenth centuries found a ready source for the slave trade. A thriving market for such transactions existed, and slaveowners, merchants, and state officials were the very people Europeans made contact with. The nature of African society was such that transferring rights in people was intimately bound with the legal construction of wealth and obligation. John Thornton notes, "This legal structure made slavery and slave marketing widespread and created secondary legal mechanisms for securing and regulating the sale of slaves, which Europeans could use as well as Africans."

The conclusion appears inescapable. A well-developed system of slavery and a slave trade existed before Europeans arrived in Africa, although the rapid increase of slave exports suggests the diversion of internal routes to external ones. As John Thornton has argued, "the institution of slavery was widespread in Africa and accepted in all the exporting regions, and the capture, purchase, transport, and sale of slaves was a regular feature of African society." Seemingly, "This preexisting social arrangement was thus as much responsible as any external force for the development of the Atlantic slave trade."

—Frank Salamone

Bibliography

- Herskovits, Melville J. *The Myth of the Negro Past*. Boston: Beacon Press, 1958.
- Klein, A. Norman. "Slavery and Akan Origins." *Ethnohistory* 41 (1994): 627–656.
- Lovejoy, Paul E. *Transformations in Slavery*. Cambridge: Cambridge University Press, 1983.
- Thornton, John. *Africa and Africans in the Making of the Atlantic World, 1400–1680*. Cambridge: Cambridge University Press, 1992.

Slavery in the Middle East

In the eighteenth century and much of the nineteenth century, slavery was practiced throughout the Islamic Middle East, as it had been for centuries. Islamic law required that neither Muslims nor any free non-Muslim living in the Abode of Islam (Dar al-Islam; any territory, land, or country under Islamic authority) could be enslaved. Slavery could be imposed on prisoners of war and children of slaves, and those who were enslaved were to be treated humanely. The freeing of slaves was considered a good deed and was practiced often in the wills of deceased individuals or in case of the birth of a child. In many cases, slaves lived and worshipped with their master's families but were denied the right to marry. As Muslims, slaves were considered equals to their Muslim masters but were relieved of some religious duties, such as the payment of the *zakat* (religious almsgiving tax).

The high demand for slaves was met by slaving expeditions into the Abode of War (Dar al-Harb), non-Islamic territories directly

► EUNUCHS AND HAREMS

For many years, the Western image of the Middle East was reduced to that of a palace where a polygamous Muslim ruler held sex slaves in his harem, which was guarded by a huge, castrated black man, the eunuch. The sultan of the Ottoman empire, who maintained a large harem with many wives, concubines, female relatives, and eunuchs, was seen as the epitome of this character. Of course, such arrangements were rare in Muslim society, where most families lived together and polygamy was uncommon.

But eunuchs had a special place in society. Some lived as guards and servants at sacred sites, such as the Prophet's Mosque in Medina, while others were employed by wealthy Muslims who could afford a harem. The eunuch's duty was to protect and organize his owner's private, domestic areas. The term "harem" describes something sacred or taboo. The custom to seclude female family members in private rooms appeared early in Islam, probably under Byzantine influence. The harem included up to four wives,

daughters, unmarried sisters, and the older women of the family. Access was granted only to the *mahram*, a close blood relative, normally the husband or the husband's brother, son, or father. Female servants and slaves lived and worked in the harem, while eunuchs guarded them and communicated with the outside world. This rigorous form of separation could only be maintained in the harems of wealthy merchants, ministers, or the rulers.

Turkey abolished polygamy and the harem system in 1926. However, echoes of the old harem system remain. Many private homes still maintain a section that is reserved for the family, while visitors usually remain in the guest area. Thus, the idea of gender seclusion as an important cultural feature continues and is enforced, not by eunuchs but instead by social pressure and local customs. As for eunuchs, some still exist and maintain their other essential duties as mediators and guardians of sacred places.

—Sebastian Maisel

contiguous to the Abode of Islam. This meant that most slaves came from sub-Saharan Africa, central Asia, and eastern Europe. Many larger cities had slave markets, where slave traders, often Christians and Jews, sold slaves for various purposes and to different customers. Although the idea is contested, it is believed that slaves were classified according to their race and thus had to fulfill certain duties and work.

Slaves were sold to upper- and middle-class households, where they served as domestic servants, cooks, or guards. Others were bought to entertain their masters as singers, dancers, or educators. Since sexual relations with female slaves were permitted by Islamic law, in some societies Muslim men kept slaves as concubines. If a female slave gave birth to a child, she was often freed after the death of her owner. The child was considered free.

Muslim rulers customarily maintained a secluded area for their families called the harem, or sanctuary, that was administered, occupied, and guarded by servants, eunuchs, and

concubines, all of them slaves. Furthermore, since only small-scale industry or farming was common in most of the Middle East, relatively few slaves performed hard physical labor.

Of special importance was the use of slaves in armies and as guardians for rulers. Such slaves, as they gained military prowess, often expanded their influence over their masters and at times even surpassed them and established their own dynasties, such as the Mamluks in Egypt. Until 1826 the Janissaries, former Christian slaves who were trained as warriors and administrators, were the military and governmental elite of the Ottoman empire. Slave soldiers were employed in many wars until the end of the nineteenth century.

During the nineteenth century, strong pressure was brought to bear on the Ottoman government by Western powers to abolish slavery. In response, in 1830 Sultan Mahmud II liberated all white slaves, mostly Circassians, who routinely sold their children into slavery, and some Greeks. In 1858 the trade in black slaves was

banned throughout the empire, but the order was routinely ignored, and existing black slaves were not given their freedom. Thus in 1880, under British pressure, Abdulhamid II signed a treaty that abolished slavery and the slave trade throughout the Ottoman empire. The illegal traffic in slaves continued on a limited basis, however, until after World War I.

—*Sebastian Maisel*

Bibliography

- Lewis, Bernard. *Race and Slavery in the Middle East*. Oxford: Oxford University Press, 1994.
- Marmon, Shaun, ed. *Slavery in the Islamic Middle East*. Princeton, NJ: Markus Wiener, 1999.
- Toledano, Ehud. *Slavery and Abolition in the Ottoman Middle East*. Seattle, London: University of Washington Press, 2000.

The Decline in the West African Slave Trade

The Atlantic slave trade, which expanded and developed over nearly four centuries, did not end abruptly when Britain and the United States outlawed the participation of their citizens as of 1808. In fact, nearly 4 million captive Africans—more than 30 percent of the entire volume of the Atlantic slave trade—were forcibly transported to the Americas in the nineteenth century. Yet concerted British diplomatic and naval actions, along with a shift toward legitimate trade between Africans and Europeans, finally brought the slave trade from West Africa to an end in the 1860s.

After Great Britain's government banned its citizens' participation in the Atlantic slave trade, it attempted to force other nations to do the same. At the end of the Napoleonic Wars, British diplomats secured treaties by which France and other major continental powers agreed to abolish their slave trades. Portugal protected its extensive slave traffic between Angola and Brazil, however, by agreeing only to end slave trading north of the equator. Subsequent treaties with Spain and Brazil, which became independent from Portugal in 1822, were ineffective, and hundreds of thousands of African captives continued to flow to Brazil and Cuba for decades. This illegal trade was highly lucrative, and it

involved capital, ships, and sailors from a variety of countries including Britain, the United States, Cuba, Brazil, Spain, and Portugal.

In 1819 British lawmakers established a naval squadron to intercept slave ships that was stationed off the African coast until the end of the century. The United States and France set up small anti-slave-trade squadrons as well. Ultimately antislavery squadrons seized more than 1,500 ships carrying roughly 160,000 African prisoners. The fates of such ships and their human cargoes were determined by so-called courts of mixed commission, comprised of British and other officials and located at various sites in Africa and the Americas. Such courts released thousands of captives to face uncertain futures in Havana, Rio de Janeiro, and St. Helena (an island in the South Atlantic). But the most important site where British personnel freed ex-captives was on the African coast, at Sierra Leone.

Previously settled by black refugees from Britain and the Americas, Sierra Leone became a Crown colony as of January 1, 1808. Thereafter, the British government decided that Sierra Leone should be the relocation destination for slaves intercepted by British naval squadrons regardless of these slaves' origins and regardless of the opinions of Africans who already lived there. By 1814 there were 10,000 recaptives (that is, people rescued from slave ships) in the colony, mostly in Freetown. Over the next half century, about 3,000 new recaptives were landed at Sierra Leone per year, eventually numbering more than 150,000 and speaking over 120 separate languages. Missionaries and other reformers set up churches and schools for them, hoping to promote Christianity and Western culture in Africa. Over time, recaptives and their descendants influenced other Africans both in the vicinity of Freetown and as far away as the Bight of Benin, where thousands of Yoruba-speaking Saro (as Sierra Leonians in Nigeria were called) migrated in the middle decades of the nineteenth century.

As the European and American demand for captives slowly declined in the first half of the nineteenth century, West Africa's foreign trade in agricultural and mineral products expanded dramatically. Legitimate trade, or trade

in commodities other than slaves, responded to changing international markets and gave African elites continued access to European trade goods. The most important of the new African exports were palm products from the bights of Benin and Biafra (modern Nigeria) and groundnuts from Senegambia, both of which yielded oil used as lubricants in industrial machinery. In the 1840s, palm oil exports from the Niger River delta averaged 15,000–20,000 tons a year, equivalent to about three-quarters of total oil imports into the UK. By the mid-nineteenth century palm oil had become West Africa's major overseas export. Reformers particularly from Britain supported such legitimate trade along with missionary attempts to spread Christianity as efforts to atone for the slave trade and “redeem” Africa. Yet ironically, legitimate trade often expanded slavery within West Africa. Declining foreign demand put African slaves—still supplied through robust inland trading networks—within the purchasing power of local elites, who could put them to profitable work in commodity production.

British treaties and interceptions greatly reduced the volume of slave trafficking in the North Atlantic, especially from the West African coastal areas stretching from Senegambia to the Gold Coast. In the bights of Biafra and Benin slave exports continued, though in reduced numbers, as legitimate trade expanded. But in the South Atlantic, the slave trade was barely affected by abolition measures. West Central Africa, with its strong ties to Brazil, remained the most significant slave-exporting region in Africa, while Southeast Africa (principally Mozambique) became an important transatlantic slave exporter only in the nineteenth century. Over 2 million captives were forcibly transported from West Central Africa to Brazil in the nineteenth century, more than half of them between 1825 and 1850. The other major African slave-exporting regions—the Bight of Benin, the Bight of Biafra, and Southeast Africa—each sent nearly 400,000 captives to the Americas between 1808 and the end of Atlantic slave trading in the 1860s.

The transatlantic slave trade ceased for good after international pressure finally brought its effective prohibition in Brazil and Cuba. In 1850

➤ SAMUEL AJAYI CROWTHER

Samuel Ajayi Crowther was about 12 years old when his household was caught up in regional warfare in Yorubaland, today's southwestern Nigeria. Taken prisoner and enslaved in March 1821, he spent the next nine months bound to several different masters and walking toward the coast. At Lagos he was sold to Portuguese traders, who in April 1822 loaded him and 186 others onto a ship bound for Brazil. But to his surprise, only a day or two later two British men of war accosted the ship on which Crowther was imprisoned. The British Royal Navy seized the ship and brought it, along with its captive cargo, to Sierra Leone. There, Crowther and the others were freed by the British government. Over the succeeding years, Crowther was educated by British missionaries and became a devout Anglican. In the 1840s he worked with British missionaries to spread Christianity in the territory that became Nigeria, partly among his own Yoruba people. A gifted linguist who had studied Latin and Greek, Crowther translated the Bible into Yoruba and produced other works codifying the Yoruba, Igbo, and Nupe languages. In 1864 Crowther was ordained as the first African bishop of the Anglican Church. He died in 1891.

—Lisa Lindsay

the British Royal Navy blockaded Brazilian ports—a move that was technically illegal—although there was no public defense of slave trading either within Brazil or internationally. A Brazilian law of the same year outlawed slave importation from Africa and was effectively enforced by Brazilian and British authorities. Spanish Cuba terminated its slave trade in 1866 after a treaty and naval action involving both Britain and the United States. Though slavery itself continued to exist in Brazil and Cuba, the Atlantic slave trade finally came to an end.

—Lisa Lindsay

Bibliography

- Curtin, Philip D. *The Atlantic Slave Trade: A Census*. Madison: University of Wisconsin Press, 1969.
- Lindsay, Lisa A. *Captives as Commodities: The Transatlantic Slave Trade*. Upper Saddle River, NJ: Pearson Prentice Hall, 2008.

Lovejoy, Paul. *Transformations in Slavery: A History in Africa*. 2nd ed. New York: Cambridge University Press, 2000.

Morgan, Kenneth. *Slavery and the British Empire: From Africa to America*. New York: Oxford University Press, 2007.

Indian Indentured Servitude— India, Africa, Caribbean, Southeast Asia

Indian indentured servitude was a system of contract labor introduced during the nineteenth and early twentieth centuries by planters and overseers in various British, French, and Dutch colonies. Indian indentured laborers were contracted to work on the tea plantations of Assam in India and on the plantations and public works projects in Natal and the Transvaal in South Africa. In Southeast Asia they were recruited for plantations in Malaysia, Fiji, and Singapore. In the Caribbean the abolition of African slavery

in 1834 created the need for a regular and relatively cheap labor supply for the perpetuation of the plantation system of agriculture. Indian indentured laborers were employed mainly on the sugarcane plantations of Trinidad, British Guiana, Jamaica, Grenada, St. Lucia, St. Vincent, Martinique, Guadeloupe, and Surinam.

The contracts for indentured workers stipulated the number of years of work and the nature of the work as well as the medical care and housing facilities to be given to the laborers. In some colonies the contracts also dealt with return passages and settlement in the colony. The specific stipulations varied over time and according to estate and colony. Colonial government policies and the fluctuating demands for labor led to regular changes in the logistics of the scheme. Generally, an indentured laborer in one of the sugar colonies agreed to work for five years on the plantations. In most cases the laborers were required to work for a minimum of 45 hours a week with payment of 25 cents a day, or

➤ A WARNING TO WORKERS

The following is a copy of a pamphlet in English that was circulated in the districts of recruitment in order to prevent Indians from registering as indentured servants.

ESCAPE FROM DECEIVERS
ESCAPE FROM THE DEPÔT PEOPLE
Beware! Beware! Beware!

It is not service. It is woe.

Do not fall into their snare. They will ruin you.

You will weep your life along.

Instead of rupees, rubbish will fall (on you).

They are taking you across the Sea!

To Mauritius, to Demerara, to Fiji, to Jamaica, to
Trinidad, to Honduras.

They are not islands; they are hell.

Do not go by mistake. By exciting your greed for money they will destroy your caste. There you will have to break stones. On board ship people only get one seer of water in twenty-four hours. At stations, on pilgrimages, in Dharmasalas, in the bazaar they will ask you if you want employment. They have no employment to give. They will take you to Calcutta where by contract

They will sell you into the hands of the Sahibs.

These men are given money to deceive people.

They delude them with sweet words and
sweetmeat.

Fall not into their snare.

Do not listen to their words. These men are to be
found everywhere. Proclaim this loudly in all
villages.

The petitioner Purshottam Das, Vaishnav

Muzaffarpur (let anyone who wishes, ask for
this notice Free of Charge)

Every literate brother is prayed to read to his
illiterate brethren and sisters. It will be as meritori-
ous as a *yajna*.

—Radica Mahase

Source

Recorded by the Government Emigration Agent,
Benares to the Colonial Office, July 23, 1914,
*Proceedings of the Department of Commerce
and Industry*, December 1915, n.p.

they were paid per task work. In all cases they were supposed to be given allowances for clothing and food. The employers were responsible for the provision of medical care and housing facilities. In the Caribbean, the individual was given a certificate of residence after five years and was allowed to return to India upon completion of ten years' residence in the colony. In Mauritius they were required to return to India after five years.

For the colonies in Africa, Southeast Asia, and the Caribbean, the system worked as follows. The interested planters in the colony informed their relevant colonial governments of the number of laborers they required for the year. The colonial government informed the Colonial Office in London of the required number, the cost of importing this number, and the source(s) of funding. Directives were then issued to the India Office and the colonial government in the relevant presidencies in India. A government official in Calcutta would hire subagents, who hired recruiters to venture to the districts and villages to persuade laborers to register for the scheme. Once laborers were recruited, they were transported to the main depots in Calcutta and Madras and remained there until coolie ships were ready to depart. These ships were commissioned by the British imperial government to transport laborers to the colonies and were legally required to follow rigid regulations to curtail sickness and mortality during the journey.

A combination of factors led to Indians becoming contracted laborers. Internal migration within India was not unknown, and laborers were accustomed to moving from one area to another in times of severe weather or economic difficulties. With the introduction of the plantation system of agriculture by British colonizers and the large-scale cultivation of sugarcane, jute, and tea, a sizable and affordable labor supply was needed. Indentureship provided secure employment opportunities for a fixed period of time, and laborers affected by severe climatic conditions grasped these opportunities.

The emigration of Indians for overseas colonies was also a result of various factors. Internal migration, the negative impact of British colonial policies, socioeconomic conditions in India, and the development of the plantation

systems in British colonies are key factors that influenced emigration. Historians in the past have focused on two main arguments. One argument is that the socioeconomic situation in India forced the laborers to seek employment opportunities overseas, while the other is that conditions in the colonies led to the development of the system. The former emphasizes unemployment and impoverishment, droughts and famines, rapid increases in population growth, social evils such as prostitution, and restrictions on widows' remarriage in India. The latter examines the plantation system of agriculture and the extent to which it provided an opportunity for Indian laborers to obtain steady employment on the sugarcane, cocoa, and tea plantations of the Caribbean and Southeast Asia.

A more recent trend of scholarship (an Indian nationalist perspective) presents a combination of these two arguments. It attributes the large-scale emigration of Indian laborers to the coercive policies of the British imperial government in India (which led to the intensification of poverty). At the same time, British imperial policies in other colonies led to the transportation of labor from one part of the British Empire to other parts.

The Indian indentureship system faced numerous problems. Despite the British government's efforts to regulate the system, it was perceived as another form of slavery by humanitarian groups in India and Britain and throughout the colonies that recruited labor. In some colonies, the emerging Indian middle classes and cocoa and coffee planters were opposed to the labor scheme on social and economic grounds. By 1915, a massive campaign against Indian emigration and indentureship had developed in India, where individuals and organizations agitated against the system in the districts of recruitment. They conducted public meetings, distributed pamphlets, and hindered the operations of the recruiters and the depots. They called for the termination of the system on the basis that it was degrading to Indians and India. Their agitation against Indian emigration represented one small aspect of an ongoing struggle against British rule and colonialism in India whereby Indian emigration and the inferior status of Indians within the British Empire

were emphasized. They were aided by the complaints of repatriated indentured laborers, government officials, and a vocal press in India and the colonies. These combined to put pressure on the British imperial government and led to the termination of the recruitment of indentured laborers for overseas colonies on March 12, 1917. The system came to a complete end when all indentured contracts were officially terminated on January 1, 1920.

—Radica Mahase

Bibliography

- Laurence, K. O. *A Question of Labour: Indentured Immigration into Trinidad and British Guiana, 1875–1917*. Kingston, Jamaica: Ian Randle, 1994.
- Northrup, David. *Indentured Labour in the Age of Imperialism*. Cambridge: Cambridge University Press, 1995.
- Prakash, Jeevan, ed. *Autobiography of an Indian Indentured Labourer: Munshi Rahman Khan (1874–1972)*. Translated by Kathinka Sinha-Kerkhoff, Ellen Bal, and Alok Deo Singh. Delhi: Shipra Publications, 2005.
- Saha, Panchanan. *Emigration of Indentured Labourers (1834–1900)*. Delhi: People's Publishing House, 1970.
- Tinker, Hugh. *A New System of Slavery*. London: Hansib Publishing, 1993.

Labor Recruitment in Nineteenth-Century Oceania

As legal slavery was outlawed in most of the world during the nineteenth century, many plantation owners, mine owners, and others met their need for labor through apprenticeship programs, sharecropping, or indentured servitude (labor contracted for a limited period to pay for a debt, transportation to a certain locale, or food and lodging). The resulting labor conditions often differed little from slavery, even though the laborers were legally free. As the need for labor increased in regions bordering the Pacific, from the 1840s through the early 1900s labor recruiters came to Oceania, most notably from Peru and Australia, to seek workers. In addition, many Pacific islanders were recruited to work elsewhere in Oceania, notably Fiji, Vanuatu, and New Caledonia. Recruiters targeted people in all

parts of Oceania. The exact number of recruited laborers is disputed but was certainly in the many tens of thousands. The laborers typically worked in sugar production, in mining (nickel and guano), or as domestic servants.

Some laborers (estimates suggest just under one-third) signed honest contracts. Most of these laborers received what they had been promised, and most were able to return home once their labor obligations had been met. Just over a third of workers found, however, that they had been deliberately deceived. Mostly illiterate, these workers were unable to read their contracts and were surprised to find that their work, wages, contract length, or destination was different from what the recruiter had promised. Most of these individuals returned home but only after great hardship.

Just over one-third of the workers experienced outright kidnapping, known by the racist term “blackbirding,” and experienced working conditions similar to slavery. This occurred most frequently in the 1860s, especially with Australian and Peruvian “recruiters.” Blackbirding became more common for several reasons. In Fiji recruitment increased to provide labor for cotton plantations. Because of the American Civil War, almost all cotton exports from the United States ceased. European planters in Fiji capitalized on this opportunity, creating their own cotton industry. In order to do so labor was needed, and blackbirding began in earnest in Vanuatu and the Solomon Islands. In Queensland, a self-governing British colony in northeast Australia until 1901, laborers were recruited (by trickery or kidnapping) from Vanuatu, Papua New Guinea, the Solomon Islands, and New Caledonia to work in the sugar industry in the 1860s. It is thought that approximately 62,000 workers were brought to Queensland in the second half of the nineteenth century.

Blackbirding began to subside in the 1870s, in part because targeted peoples found ways to resist or avoid it. In some places chiefs outlawed recruitment, while in others the people hid when a ship came near. In addition, British and French authorities stepped up patrols in the Pacific to prevent illegal methods of labor recruitment. Another key step was taken when Australia passed the Pacific Island Labourers Act

THE FATE OF NIUE

The island of Niue in central Polynesia was visited by three recruiting vessels (two Peruvian and the third Spanish). The first, *Trujillo*, in 1862 took aboard 50 men. The first missionary in Niue, Reverend George Lawes, wondered whether all those placed under guard even had time to give a response before being hustled belowdecks, suggesting that they were captives more than volunteers. The second, *Rosa Patricia*, came in 1863. When a few dozen Niueans went on board hoping to trade, the captain simply sailed away. The ship then sailed to the other side of the island

and repeated the process, kidnapping 40 total. The third, *Rosa y Carmen*, arrived in 1863, already crowded with Easter, Cook, and Tokelau islanders. Under the guise of requesting dysentery medicine, the ship sailed off with the medicine and the Niueans who delivered it. The three ships took away 109 men, leaving Niue with twice as many women as men. Instances such as this were not atypical for smaller islands, especially in the mid-nineteenth century when blackbirding was at its peak.

—Joel Tishken and Allison Sellers

in 1901 as part of the White Australia Policy, requiring the deportation of approximately 7,500 Pacific islanders. The same act prohibited Pacific islanders from entering Australia after 1904.

Melanesia managed to demographically weather labor recruitment due to its larger populations. Yet for Polynesia, where populations were smaller, kidnappings were demographically devastating. Polynesians had been targeted by Peruvian recruiters for the strenuous guano industry. Kidnappers visited every inhabited island chain of Polynesia except Hawaii. Some peoples suffered a demographic disaster from which they never recovered. The population of many of the islands of Tuvalu, for example, was reduced by two-thirds.

Oceania's nineteenth-century labor experiences did increase connections between Oceania and the edges of the Pacific. Many Oceanians interacted with peoples they would not have

otherwise encountered. New pidgin languages and cultural and religious options emerged as a result. Nonetheless, some parts of Oceania entered the twentieth century depopulated and demoralized as a result of blackbirding.

—Joel Tishken and Allison Sellers

Bibliography

- Churchward, William Brown. *Blackbirding in the South Pacific: Or, the First White Man on the Beach*. London: Swan Sonnenschein and Co., 1888.
- Horne, Gerald. *The White Pacific: U.S. Imperialism and Black Slavery in the South Seas after the Civil War*. Honolulu: University of Hawaii Press, 2007.
- James, David. *Roaring Island: Adventure in Blackbirding Days on the Island of Niue*. 1868; reprint, London: Edinburgh House, 1935.
- Maude, H. E. *Slavers in Paradise*. Suva, Fiji: Institute of Pacific Studies, 1981.

Introduction: Consumerism

In the 1600s and 1700s Europeans and colonial Americans were spending ever greater amounts of money on the purchase of goods and services that clearly went beyond their basic needs for clothing, food, and shelter. Evidence for such a change in consumption patterns is provided by literary references, art and fashion

history, commentary by moralists and religious leaders, debates among philosophers about the effects of luxuries on a person's character, the emergence of coffeehouses and restaurants, the expansion of the book industry, the increase in the number of fashionable shops, and the ever-rising demand for overseas products such

as sugar and tobacco. Further evidence is provided by the recent work of historians who have examined probate inventories, the legal documents that list a deceased person's worldly goods so they can be passed on to his or her heirs. Evidence from France, the Netherlands, England, Scotland, Belgium, France, Germany, New England, or the Chesapeake region all lead to the same conclusion: from generation to generation, individuals across the social spectrum in the 1600s and 1700s were acquiring possessions in greater number, range, quality, and cost. A new age of consumerism was beginning.

Long before the seventeenth and eighteenth centuries, the world's rich, especially those who lived in cities, spent money on jewelry, expensive clothes, exotic foods, home furnishings, scents, and finely crafted weapons. In many societies, however, such spending was held back by a number of factors. The range and variety of goods available were limited, and fashions remained constant from one generation to the next, so there was no need to discard possessions and replace them with up-to-date new ones. More importantly, many religious traditions and secular philosophies discouraged self-indulgence and the amassing of possessions. Christianity, Buddhism, and Hinduism all idealized poverty. Islam taught that the performance of religious obligations, such as pilgrimage and charitable giving, was a better use of wealth than the amassing of worldly goods. Furthermore, many governments discouraged some forms of consumption through sumptuary laws, which imposed restrictions on the purchase of certain types of clothing, food, and luxury goods to maintain social distinctions and prevent wealthy individuals from impoverishing themselves and thus damaging their ability to support their families and pay taxes.

As consumerism in the United States and Europe accelerated in the nineteenth century, traditional religious arguments about its dangers continued to be made, but in an increasingly secular age, they did little to discourage people from flocking to department stores, buying goods on credit, and ordering from mail-order catalogues, all to fill their homes and wardrobes with ever greater quantities of goods. In the United States, where consumer spending lagged behind that

of England and France in the early nineteenth century but soon caught up and passed it, the production of men's and women's ready-made clothing, costume jewelry, clocks, and watches all doubled between 1890 and 1900; glassware and lamp production grew from 84,000 tons in 1890 to 250,563 tons in 1914. In 1904 approximately 374,000 pianos were sold in the United States, compared to only 32,000 in 1890.

Every explanation for the growth of consumerism in Western societies begins with the fact that beginning in the late seventeenth century prosperity was increasing on both sides of the Atlantic. Europe's and America's expanding roles in world commerce, increased agricultural production (which reduced food prices), and industrialization meant that ever-increasing numbers of people had disposable income to spend. This increase in prosperity took place at a time when a host of new products on which to spend one's money became available. In the seventeenth and eighteenth centuries, the most important consumer goods in Europe were foreign imports: tobacco, tea, coffee, chocolate, Indian cottons, and above all sugar, which by 1800 Europeans were consuming at the rate of 18 pounds (8.2 kilograms) a year. The number and variety of new products on which to spend money multiplied in the nineteenth century as a result of the Industrial Revolution. The West's mills and factories not only produced high-quality and less expensive versions of items for which there had been long-term demand (glassware, mirrors, utensils, tablecloths, draperies, carpets, clothing, musical instruments, shoes, clocks, etc.) but also a stream of brand new "must-have" products (telephones, toasters, cook stoves, electric lamps, vacuum cleaners, cameras, and equipment for newly popular sporting activities such as golf, tennis, bicycling, and baseball).

Businessmen also played an important role in encouraging consumer spending. By the end of the nineteenth century successful manufacturers and retailers had large advertising budgets, made it possible for customers to buy goods on credit, and created a new type of shopping venue, the department store. The first department store was the brainchild of Aristide Boucicaut, a Parisian fabric salesman who in the early

1850s transformed his dry goods shop *Le Bon Marché* into a store that sold mainly clothing but also furniture, kitchenware, toys, and musical instruments. His store and its many imitators occupied handsome center-city buildings with lavish window displays, had aisles and carefully arranged displays to encourage browsing, sold goods at a fixed price, and allowed exchanges and refunds. Going shopping became a popular leisure-time activity, especially for women.

Consumerism in the nineteenth century was not an exclusively Western phenomenon. The first Russian department stores were opened by French businessmen in St. Petersburg and Moscow in the 1850s. In Meiji Japan, demand for Western-style clothes, umbrellas, shoes, and musical instruments grew in the 1880s and 1890s, and Misukoshi, Tokyo's first department store (modeled by its founder Takahishi Sadao on Wanamaker's store in Philadelphia) opened in the early years of the 1900s. In the Middle East, wealthy residents of Istanbul and Cairo showed increased interest in Western clothing styles and certain Western household items such as sewing machines, but the bazaar and the small specialized shop, not the department store, remained centers of buying and selling. For many centuries, merchants on Africa's east coast had found ready buyers for imported textiles and other goods from the Middle East, and during the era of the transatlantic slave trade, Africans avidly sought European tools, weapons, alcoholic beverages, chocolate, tea, and cloths in addition to cowry shells as payment for slaves. During the colonial era British manufactures had some success marketing soaps, lotions, clothing, and household goods among their African subjects.

Nowhere outside the West, however, was there anything close to a consumer revolution. New fashions and new goods, most of them imports from Europe or the United States, attracted small numbers of wealthy individuals, but the strength of traditional value systems and the absence of major social change discouraged consumer spending. More importantly, the overwhelming majority of people in Latin America, Asia, and Africa were simply too poor to purchase anything beyond their basic needs.

—James H. Overfield

Consumerism in Africa

Since the 1700s, Eurocentric writers have considered Africa a place historically lacking in complex and dynamic economies, fashions, and populations that valued the acquisition of goods above and beyond what people need to subsist. In other words, they considered Africa—in all its vastness and diversity—a place that until very recently was devoid of consumerism. Recent scholarship has revealed not only the problematic bias in this way of thinking but also, more importantly, a rich history of consumerism on the continent that predates European imperialism in Africa.

From the tenth century onward, trade with the Middle East by way of northern and eastern Africa circulated a diversity of goods as well as Islamic religious beliefs. By the middle of the eighteenth century, the distinctiveness and attractiveness of a person's material possessions was an important way of measuring local social status. In Zanzibar by 1800 the type and variety of a person's clothing, such as the head scarf, was fundamental in establishing and negotiating political, social, religious, and gender

CONSUMERISM AND ZIMBABWE

Nineteenth-century colonial ideas of hygiene depicted African bodies in racist ways, as “barbaric,” “uncivilized,” and inferior. Africans were thought to be inherently “dirty” or unhygienic; their clothing and hairstyle fashions, not reflecting European ideas of what “respectable” men and women looked like, were seen as socially subversive. While Africans, particularly those in large cities, began to consume European items of hygiene and fashion increasingly from the 1890s onward, they did not simply emulate European consumer habits. Instead, foreign products were often incorporated into preexisting hygienic strategies. In Zimbabwe, for example, some groups adopted Vaseline, a brand of petroleum jelly, to smear on their bodies after washing instead of the more traditional mixture of soil and animal fat.

—Danielle Kinsey

differences. In this way, consumption of foreign goods became an essential part of East African culture and society.

The Atlantic slave trade focused the development of consumerism in Africa, particularly along the continent's west coast. European slave traders noticed that by the beginning of the eighteenth century consumer tastes in slaving ports had become extremely cosmopolitan, fickle, and diverse. West African traders' demands included some 40 varieties of cloth, tea, coffee, chocolate, sugar, tobacco, alcohol, precious metals, and tools. By 1800, guns and ammunition were highly valued commodities to exchange for slaves, as West African leaders came to rely more heavily on gunpowder weaponry to maintain their local authority, capture slaves, and, more and more as the nineteenth century wore on, procure ivory to exchange with Europeans. The West African royal courts often derived cultural legitimacy from possessing a variety and abundance of foreign goods, once again revealing how important consumerism was to African politics and society.

Southern Africa went through a series of precious metal and diamond rushes beginning in the 1860s that prompted Europeans to formally colonize the continent in what is referred to as the "scramble for Africa." Britain came to value southern Africa as not only a place of mineral wealth but also of potential customers for the products of British manufacture. On the diamond mining compounds in Kimberley in the 1890s, African miners were obliged to spend their wages on the compounds at mining company-owned stores. Colonialism also worked to create and attract African consumers in subtler ways: missionaries and colonial governments preached a "civilizing mission" that, among other things, encouraged Africans to adopt European ideas of hygiene, domesticity, and aesthetics by purchasing European soaps, lotions, beauty products, clothing, and other everyday household items.

Throughout the twentieth century and particularly after World War II, Western companies continued to try to open up the African market and orient consumers to their products. Advertising campaigns, product supply, and the opening of shops has happened unevenly across the

continent, creating major consumer differences between regions as well as between rural and urban areas.

—Danielle Kinsey

Bibliography

- Allman, Jean, ed. *Fashioning Africa: Power and the Politics of Dress*. Bloomington: Indiana University Press, 2004.
- Burke, Timothy. *Lifebuoy Men, Lux Women: Commodification, Consumption and Cleanliness in Modern Zimbabwe*. Durham, NC: Duke University Press, 1996.
- Eltis, David. "The Relative Importance of Slaves and Commodities in the Atlantic Trade of Seventeenth-Century Africa." *Journal of African History* 35(2) (1994): 237–249.
- Stearns, Peter N. *Consumerism in World History: The Global Transformation of Desire*. London: Routledge, 2001.

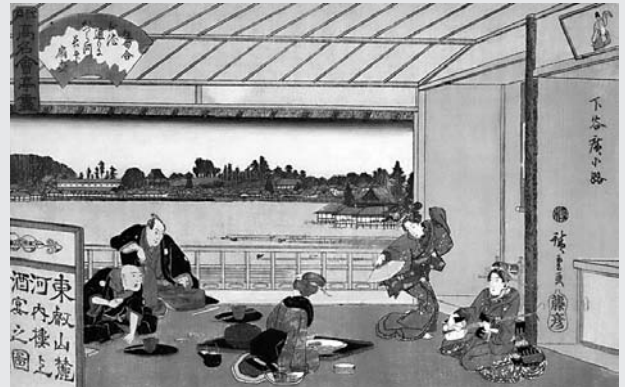
Consumerism in Late Tokugawa and Meiji Japan

As a legacy of the sixteenth century, when Japan was racked by nearly constant civil war, Japan's warrior aristocracy favored policies of self-sufficiency that were necessary in times of warfare. Commerce was limited, and merchants were consigned to the bottom tier of the class system. With peace and improvements in transportation, commerce began to flourish in the seventeenth century. This, coupled with financial requirements of the alternate attendance system, by which daimyo (feudal barons) alternated between living in their home domain and in Edo (present-day Tokyo) on an annual basis, inspired daimyo to concentrate on growing cash crops such as sugar and indigo rather than striving for self-sufficiency within each domain. The alternate attendance system also led to improvements in transportation and the development of nationwide trade, and the city of Osaka became the principal market for goods. By the Genroku period (1688–1704), the merchant houses of Osaka had become wealthy, and consumption extended beyond the samurai class. Increasingly well-to-do peasants, artisans, and merchants became involved in conspicuous consumption that led to inflation and the government's eventual revaluation of the coinage.

▶ WOODBLOCK PRINTS AND CONSUMERISM

One of the main aspects of Japanese consumerism is found in the print culture that dates back to the 1600s and gained world attention during the Meiji period. Most widely known are the woodblock prints that were used to publicize famous courtesans and actors and the pleasures of life in cities. Beginning in the late eighteenth century, artists such as Hokusai (1760–1849) and Hiroshige (1797) made popular the depiction of landscapes, produced for the consumption of commoners rather than elites, and in the Tempo Reforms of 1842 the depiction of courtesans and actors was banned altogether as a means of improving public morality. After the increase of trade with Europe during the Meiji Era, interest in photography and new printing techniques undercut the market for traditional Japanese woodcuts. While the Japanese were often wrapping porcelain for export with old woodblock prints, famous European artists such as van Gogh and Monet were influenced by the prints and popularized the genre in Europe.

—David Rands



A woodblock print by Utagawa Hiroshige depicts a drinking party at the teahouse Kawachiro, with women dancing and playing musical instruments for two men. Hiroshige's prints were in high demand in nineteenth-century Japan. (Library of Congress)

In the eighteenth century, however, because the daimyo were limited to taxing agriculture and not commerce, they found themselves under ever increasing economic burdens. With a fixed tax base and rising inflation, they were forced to borrow money from financially successful merchants, and by the end of the Tokugawa period, the government was advocating austere spending practices for the daimyo it oversaw. Consumerism was not absent at the end of the Tokugawa period, however, and merchants continued to engage in conspicuous consumption as they found their purchasing power far above their social status. While not specifically regulated to the level of written sumptuary laws on a national scale, the four-class social order prohibited merchants, the bottom social class, from the luxuries of those above them. Thus, a merchant might have worn a cotton kimono as an outer garment while wearing silk clothing underneath. Conversely, a member of the samurai class would be consigned to wear a silken kimono as an outer garment while wearing cotton underclothing. Economic realities were not reflected in the social hierarchy.

The Meiji Restoration led to changes in the nature of Japanese society that greatly affected consumerism. The class hierarchy of the Tokugawa period was dismantled, and samurai, who had been prohibited from engaging in commerce, became active participants in Japan's industrialization. As the isolationist policies of the Tokugawa were replaced by more liberal trading practices, men from all former social classes began to engage in trade with the West. The increase in social mobility, industrialization, and new freedoms for financial pursuits among samurai fueled Japanese consumerism.

Among the many factors giving rise to an increase in consumerism, none was more important than the government's policy of adopting Western practices. Known as *bunmei kaika*, this represented a dramatic change in thinking. The government no longer advocated austerity but rather advocated the adoption and mastery of capitalistic business practices. In Japan the samurai took the lead in the liberalization and modernization of the Japanese economy by adopting Western ideals. Japanese fashion was

replaced by Western attire, and wealth was displayed through the accumulation of consumer goods as symbols of social status. Significant to this was the development of the Japanese department store, the first of which began in 1908 with the Daimaru Department Store in Kyoto. Multistoried and carrying a wide variety of consumer goods, these stores represent the apex of consumerism that grew from the end of the Tokugawa through the Meiji periods.

From the Genroku period, consumerism became an important part of Japanese society. At times relegated to specific social classes, it nevertheless continued to have a place in the Japanese economy. When Tokugawa political control collapsed, the social order ceased to be a constraint on consumerism, and people from all social classes saw economic success as a means of gaining prestige. This increase in social mobility, based on conspicuous consumption, allowed consumerism an even greater role in the Japanese economy through the end of the Meiji period.

—David Rands

Bibliography

- Hauser, William B. *Economic Institutional Change in Tokugawa Japan: Osaka and the Kinai Cotton Trade*. London: Cambridge University Press, 1974.
- Hirschmeier, Johannes. *The Origins of Entrepreneurship in Meiji Japan*. Harvard East Asian Series, 17. Cambridge: Harvard University Press, 1964.
- Jansen, Marius B., ed. *The Emergence of Meiji Japan*. New York: Cambridge University Press, 1995.
- Totman, Conrad D. *The Collapse of the Tokugawa Bakufu, 1862–1868*. Honolulu: University Press of Hawaii, 1980.

Consumerism in North America and Europe

Consumerism, or the acquisition of material goods beyond subsistence for the purpose of satisfying desires, forming identities, and displaying social position, developed in two stages. In the first stage, industrialization and the expansion of the commercial economy in the eighteenth and early nineteenth centuries heralded a consumer revolution in which more people than ever before could enjoy the possibilities of buying consumer goods. This remained restricted primarily to the wealthy and the new middle class, leaving

peasants and the working class either producing for themselves or concerned instead with basic subsistence and survival. In the second stage, mass consumerism, which only emerged in the later nineteenth century, took hold as new approaches to marketing and a wider variety of inexpensive products transformed life for all social classes. No longer focused on bare subsistence, almost everyone could participate in the consumer economy.

The process of industrialization, which emerged first in Britain in the latter half of the eighteenth century, introduced new production techniques and technologies that brought less expensive and more plentiful goods to the marketplace. Most famously, cotton textiles were among the first mass-produced, machine-produced commodities. Produced in large mills, particularly in the north of England, cotton fabric was both durable and took dye well. In addition to wealthier markets, fabric was also sold abroad to the poor and even to the factory workers who produced it. In the last years of the eighteenth century the production and sale of cotton fabric brought vast profits to England's middle-class entrepreneurs and factory owners, encouraging class competition and social emulation whereby individuals sought to identify and maintain their class position through the purchase and display of consumer goods. This sustained a middle-class economy of "things," identified by the eager purchase of material goods, including luxury items such as Wedgwood china and glassware; household items including pewter, cutlery, and tea equipment; and personal products such as watches, shaving goods, and perfumes. These material goods took on ever-increasing prominence, as the list of items now deemed "necessities" continued to grow and take on ever more powerful emotional significance.

The growth of eighteenth-century consumerism is also characterized by the expansion of shops and the development of early marketing techniques. Producers and shopkeepers realized that the purchase of goods was not limited just to goods needed for subsistence and basic well-being; rather, wants and needs could be expanded almost indefinitely to meet expectations of class position and comfort. The number of retail shops grew throughout Europe, and early advertising

in the form of posters, trade cards, and window displays emerged at this time as well. Shoppers were further encouraged to consume by the extension of credit, the promotion of bargain items, and even the sale of some goods at a loss.

This first stage of consumerism was not a pronounced feature of early North America outside of Southern landowners and the urban middle-class of the northeastern United States. While some wealthier Americans sought to emulate European fashions and trends through the purchase of clothes, furniture, and ceramics, others, particularly at times of tension with Britain, avoided consuming “British baubles.” In the eighteenth century, moreover, many Americans still relied upon barter rather than a cash economy, and the limited number of shops, the largely rural population, and nationalist feelings that often disparaged European influences all limited the growth of a consumer economy.

The second stage of consumerism took off on both sides of the Atlantic from about 1850. This stage is characterized by increasing numbers of retail shops (and later the development of the department store), a focus on visual display rather than textual advertisements, and a new emphasis on large consumer durables, notably household appliances and the automobile in the early twentieth century. By the time of the American Civil War (1861–1865), mass consumerism was developing in the United States as increased urbanization, immigration, and wealth contributed to larger markets that could sustain significant economic growth. Increased competition and a series of economic depressions in the last quarter of the nineteenth century later encouraged producers to place emphasis on managing sales and demand rather than on production.

Larger markets and greater competition also promoted the transformation of small shops, the mainstay of traditional consumption, to grand department stores. Whiteleys (London), the Bon Marché (Paris), Marshall Field’s (Chicago), Wanamaker’s (Philadelphia), and others expanded or opened across Europe and the United States in the second half of the nineteenth century. These consumer emporiums coordinated the sale of diverse goods and sold the experience of shopping as an activity worthy in its own right. The department store came to be a place not just

➤ JOSIAH WEDGWOOD

One of the first entrepreneurs to recognize and harness the power of consumerism was Josiah Wedgwood (1730–1795). Responding to a demand for expensive Chinese porcelain, which far exceeded the supply available in Britain, Wedgwood introduced production and marketing techniques to promote his products. His division of labor process efficiently produced large numbers of ceramics whereby workers and artists were responsible for only small parts of the final product. Wedgwood also recognized that business and amusement were intertwined in the consumer economy, so he introduced elaborate London showrooms to display his wares and attract the attention of wealthy middle-class patrons. Finally, he actively sought out aristocratic patronage, carefully publicizing royal use of his products such as his Queen’s Ware line used by Queen Charlotte. These early endorsements were designed to appeal to a consuming public eager to replicate the tastes and styles of their social superiors.

—Justin Bengry

to see the phenomenal range of material goods available to consumers but also to be seen participating in the consumer economy.

For many women, the space opened up by these new urban shopping venues offered new experiences of the modern metropolis and sites where they could enjoy the pleasures of modern life away from what was often seen as the stifling confines of the middle-class home. Women had long organized family purchasing decisions and the household economy, yet by the late nineteenth century the female shopper was increasingly characterized as irrational and gullible. Even the term “kleptomania” was coined to describe women so consumed with desire for commodities and social emulation that they stole items they did not actually need.

By the early twentieth century, mass consumerism was a widely accepted feature of life across Europe and North America. Consumer debt increased relative to savings compared to the previous century. Marketing and advertising were becoming professional areas of expertise, seeking to segment and analyze markets based

on gender, age, class, and ethnicity to better understand desires and buying habits. Producers and retailers of material goods were relying upon this expertise to understand their markets and modify products. But they also began to modify products in the interest of planned obsolescence to encourage consumption of newer products to replace those that no longer satisfied consumer desires. Most importantly, an overall increase in wealth and the ability of working-class consumers to purchase more material goods than ever before made mass consumerism virtually universal in the twentieth century.

—Justin Bengry

Bibliography

- McKendrick, Neil, John Brewer, and J. H. Plumb. *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England*. Bloomington: Indiana University Press, 1982.
- Rappaport, Erika D. *Shopping for Pleasure: Women and the Making of London's West End*. Princeton, NJ: Princeton University Press, 2000.
- Stearns, Peter N. *Consumerism in World History: The Global Transformation of Desire*. 2nd ed. New York and London: Routledge, 2006.

Development of the Department Store

The department stores that emerged in Europe and the United States in the mid- to late nineteenth century aided the shift in industrialized

nations from economies of production to economies of consumption. This economic transformation inspired a shift in values as the buying public was encouraged to reject older notions of thrift and industriousness and instead to develop a taste for leisure and luxury. One historian, William Leach, has argued that the department store was an incubator of an emerging consumerist “land of desire.”

The forerunners of the large department stores of the turn of the century were large wholesale establishments that included a well-stocked shop floor where retail customers could roam among product displays rather than having to stand at a counter and place orders. Most notable were A. T. Stewart’s Marble Palace (1846) and Stewart’s larger Iron Palace (1862) in New York City as well as Aristide Boucicaut’s Bon Marché, which opened in Paris in 1869. Such establishments revolutionized the retail process and transformed shopping into a leisure activity. By the early twentieth century most large Western cities featured large, elaborate department stores, as did major cities in Japan.

The large department stores that appeared in this era, including Macy’s in New York, Marshall Field’s in Chicago, Wanamaker’s in Philadelphia, and Harrods of London were architectural extravaganzas filled with opulent spectacles, overloading the senses and encouraging in the common citizen a taste for luxury. For its 1902 opening in Chicago, for example, Marshall Field’s, had six orchestras playing and 39 marble-floored lavatories available. The new stores were meant to appeal, in particular, to middle-class women who were active agents in the creation of consumer culture. These stores offered women an entry to the public sphere where they could treat shopping as a new pastime. The department stores were social centers that featured concerts, facilities for child care, restaurants, art exhibits, fashion shows, lavish window displays, theaters, quiet rooms, luxurious washrooms, and pageantry.

The stimulation of consumerist desire was carefully choreographed. Innovations such as revolving doors, sidewalk entrances without stoops, and escalators made it easy for customers to enter and circulate throughout the building. Buying also was made easy. Credit was



Pedestrians look at Marshall Field's window, Chicago, 1909. (Bettmann/Corbis)

➤ A NEW KIND OF STORE

John Wanamaker opened his New Kind of Store in Philadelphia in 1877, one year after Philadelphia's Centennial Exposition of 1876, the first world's fair held in the United States. The fair had inspired him, as an early biographer said, to create a "store that would in itself be a great exposition." Joseph Appel's *The Business Biography of John Wanamaker Founder and Builder, America's Merchant Pioneer from 1861 to 1922* (1930), listed the following Wanamaker firsts:

- 1876—First restaurant in a general store.
- 1878—Grand Illumination of Store (no goods sold) from 7:30 to 10:00 in the evening; "Simply an opportunity to promenade and see the sights of the store." (November 11)
- 1880—Bargain Room opened.
- 1882—First soda fountain installed.
- 1883—Dairy restaurant opens, with pastry and ice cream made on the premises.
- 1883—Rolling chairs provided for those visitors who could not walk around.

- 1884—Bureau of Information and Post Office opened in Arcade, "where 50,000 people pass to and fro in a day."
- 1886—First exhibition of fashion after manner of Paris stores.
- 1887—Celebration of the Centennial of the adoption of the Constitution of the United States. "Women are dressed in Revolutionary costumes spinning flax, and there are old time shoemakers and other industrial exhibits."
- 1890—"Never outside of Paris has so great a quantity of muslin underwear been sold in so brief a time."
- 1892—Paris Salon paintings first brought to America for exhibition in the store.
- 1893—A miniature world's fair in the store, with its exhibits later shown at the Chicago Exposition.
- 1896—Main aisle arrayed as a reproduction of the Rue de la Paix in Paris.

—Fred Nadis

offered as well as installment payment plans, charge accounts, money-back guarantees, and free delivery. Department stores also flooded turn-of-the-century newspapers with advertisements to encourage business. Owners sought to promote their stores as cultural centers. For example, John Wanamaker, a devout Christian, channeled the Christian notion of service to the consumer experience; his employees were to treat all customers with deference, while the store itself was positioned as serving the wider community. In this sense the department store helped forge a new mass culture in which class distinctions began to blur, while links to older ethical principles remained.

By the late nineteenth century large retailers had emerged not only in the United States and Europe but also in Japan. Takashimaya, which began as a kimono retail store in Kyoto in the nineteenth century, by 1901 had branch stores in Tokyo, Yokohama, Osaka, and Kobe. With the popularity of Japanese art and handicrafts of the late nineteenth century in full force in Europe,

Takashimaya opened a branch store in Lyons, France, in 1899 and exhibited at the Paris Exposition of 1900.

By the early twentieth century the department store had emerged as an important new economic and cultural institution. Consumption became not only an acceptable leisure activity but also a form of duty, as consumers reciprocated the idea of service that emanated from department stores such as Wanamaker's.

—Fred Nadis

Bibliography

- Leach, William. *Land of Desire: Merchants, Power, and the Rise of a New American Culture*. New York: Pantheon, 1993.
- Goodman, Douglas J., and Mirelle Cohen. *Consumer Culture: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2004.
- Sapin, Julia. "Merchandising Art and Identity in Meiji Japan: Kyoto Nihonga Artists' Designs for Takashimaya Department Store, 1868-1912." *Journal of Design History* 17 (2004): 317-336.

Mail Order Merchandising— The Sears Catalog

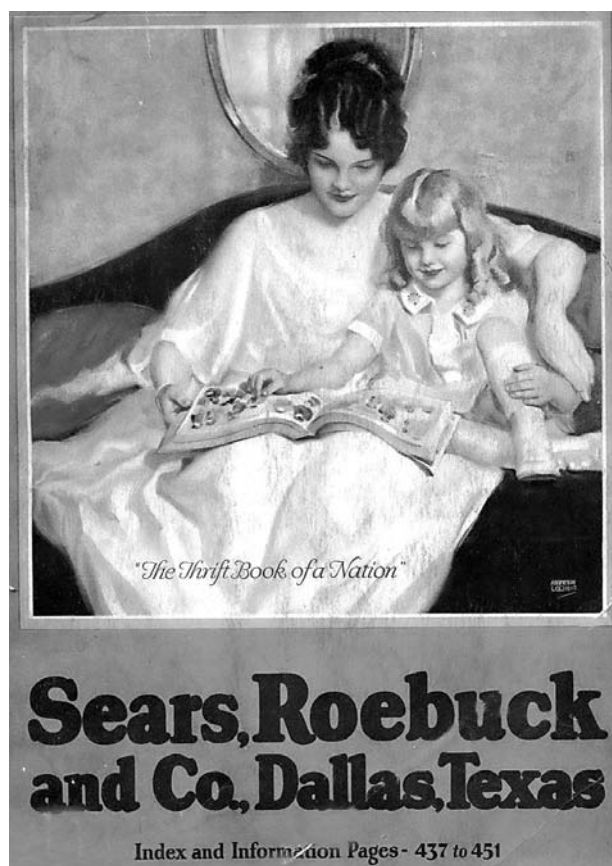
Along with giant department stores that catered to urban crowds, the mail order catalogs that sold to rural areas of the United States were important adjuncts to the rise of consumerism at the turn of the twentieth century. Federally mandated delivery services such as Rural Free Delivery and Parcel Post helped to nurture mail order businesses.

The modern mail order business began in 1872 when A. Montgomery Ward started his catalog, offering “all kinds of merchandise” to rural customers. He called his business “the Original Grange Supply House” and gained endorsements from officials of the Grange Halls that then served as mutual support societies for farmers. By 1886, the Ward’s catalog had as many as 280

pages listing up to 10,000 items. That same year, Richard Warren Sears began his own company. Sears had been a railroad station agent who had experimented with selling goods, particularly watches, via other station agents in rural Minnesota while relying on cut-rate railway shipping fares. In 1886 he opened the R. W. Sears Watch Company in Minneapolis and in 1887 moved the booming business to Chicago, closer to the nation’s manufacturing and railroad centers. He re-incorporated the business under the name Sears, Roebuck and Co. in 1893.

Sears was a skilled promoter with a gift for crafting advertisements that appealed to rural residents. While his first advertisements were simple fliers offering watches, jewelry, and silverware, by 1893 the Sears catalog included items such as firearms, sewing machines, bicycles, cream separators, women’s clothing, books, and seeds. Despite the company’s growth, Sears’s irresponsible business practices made his original partner, the watch repairman Alvah Roebuck, nervous. In 1896, after Roebuck left the firm, Chicago garment manufacturer Julius Rosenwald, a gifted businessman, joined the company. Under Rosenwald’s guidance, the company’s strategy changed. Rather than simply selling whatever was on hand as in the past, they attempted to become a dependable supply house for American farmers, offering any goods that rural Americans needed. They offered reasonable prices and “money back guarantees” while gaining profits through high-volume sales. Sales increased from \$750,000 in 1895, the year before Rosenwald joined, to \$10 million in 1900, the year that Sears became more profitable than Montgomery Ward’s. By 1907, Sears’s sales reached \$50 million.

In keeping with the turn of the century vogue for “scientific management,” Rosenwald encouraged high-efficiency operations. In 1906, under Rosenwald’s direction, Sears built an enormous new headquarters and warehouse, covering 40 acres (16 hectares) of Chicago’s west side, with easy access to railroads and equipped within and without with modernized warehouse equipment. In 1909 Sears, already a wealthy man, stepped down as an active partner and eventually sold his share of the company to speculators. Business—and the catalog—continued to expand. In 1908 over 3 million copies of the



In 1906, Sears expanded its catalog and warehouse operations from its Chicago base to Dallas and began to issue a separate catalog for Texans. This 1923 catalog cover offered an idealized vision of domesticity. (Sears, Roebuck and Co., Dallas, Texas, 1923)

Sears catalog were distributed, and the catalog company's merchandise included not only all the items needed to furnish a house or farm but also mail order houses as well. Over the next three decades, Sears shipped as many as 100,000 mail order houses to customers, who, with a few simple tools and construction know-how, could follow the plans to build homes in numerous styles and at a range of costs below market prices.

Sears, with its high-volume sales and its high-profile catalog—standard equipment in most farm homes—became a cultural icon at the turn of the century. While farm children might fondly remember the Sears catalog as their first reader, silent film comedian Buster Keaton's *One Week* (1920) featured Keaton and his bride disastrously attempting to build a mail order house. Sears, a big business based on mass manufacture, relied on its "folksy" image for its mass marketing. At the turn of the twentieth century, mail order businesses such as Sears and Montgomery Ward offered an enticing consumer lifestyle and big-city tastes to rural homes.

—Fred Nadis

Bibliography

- Weil, Gordon L. *Sears, Roebuck, U.S.A.: The Great American Catalogue Store and How It Grew*. New York: Stein and Day, 1977.
- Worthy, James C. *Shaping an American Institution: Robert E. Wood and Sears, Roebuck*. Urbana and Chicago: University of Illinois Press, 1984.

The Advertising Industry

The modern advertising industry, with its focus on visual advertisements designed by specialized professionals, emerged only in the late nineteenth century. Earlier advertising was instead produced and distributed by individual manufacturers and business owners. Only in the last century have advertising professionals and firms emerged to become part of an organized industry. This is the result of competition among manufacturers, retailers, and advertising agents as well as the mid-nineteenth-century expansion of the press.

The emergence of advertising as a serious business strategy is linked to late-eighteenth-century industrialization in Britain and the consumer revolution it spawned. New technologies and investments in machinery increased

production, making high volumes of inexpensive consumer goods available for the first time. Improved transportation infrastructure, including railway transport from the mid-nineteenth century, also meant that goods could be distributed more widely and also encouraged competition on a larger regional and national scale.

Because the American economy remained largely rural and agrarian until after the American Civil War, industrialization would not fully develop until the last half of the nineteenth century. The comparatively later expansion of the U.S. railway and transportation infrastructure in the last quarter of the nineteenth century further slowed the development of a consumer economy. As in Europe earlier in the century, however, markets, distribution, and competition all eventually expanded and encouraged the growth of national advertising, brand names, and product differentiation.

➤ IMPERIALISM AND ADVERTISING

At the height of British imperialism before the First World War, even the most familiar domestic commodities, such as soap, were used to promote the colonial project. Soap advertisements in particular cast colonial peoples as savage and backward. Many showed Africans' skin—particularly that of children—washed white and pure by the civilizing influence of their product.

—Justin Bengry



(Mary Evans Picture Library/The Image Works)

Eighteenth- and early-nineteenth-century businesses relied on a variety of methods that offered limited local advertising. These included bill posting, trade cards, and even apprentices yelling into the street before widespread newspaper and magazine advertisements were possible. Print advertisements appearing at this time in local newspapers remained small and were grouped together with similar products. Imagery was usually restricted to a simple woodcut identifying a group of ads rather than any specific product.

As distribution widened and competition increased, producers needed knowledgeable experts to help promote products. Newspapers also needed to be sure that potential advertisers would pay for advertising space. Early-nineteenth-century advertising agents filled these roles and were generally paid commissions by newspapers for the advertisements they supplied. Other agents would buy advertising space and then sell it to businesses at a profit. Some of these advertising agents began to write ad copy, and by midcentury some even published their own lists of newspapers, circulation, and publication information, thereby beginning the process of centralizing advertising and publicity activities within a professional group.

The newspaper and magazine industry also played a key role in the development of modern advertising on both sides of the Atlantic. In England, taxes on both paper and advertisements had slowed the expansion of the newspaper and advertising industries. Their abolition in the 1850s promoted the rapid expansion of the press. In the United States, preferential postal rates for magazines helped to expand the national press. Widely distributed consumer magazines directed to women, such as *Harp-er's Bazaar* and the *Ladies' Home Journal*, as well as cheap penny publications, including the *Penny Illustrated Paper*, emerged at this time, allowing ads to be seen by millions of potential consumers.

In Britain, London agents provided access to the major national daily newspapers and mass-circulation magazines that were based in the capital. In the United States, a similar concentration of agents clustered around Park Row in New York. As the use of advertising expanded in the

twentieth century, these agents, no longer mere brokers of advertising space, expanded their activities both to compete with other agents and to answer the demands of advertisers. Many grew to become full-service agents offering outdoor and media advertising, ad layout and design, placement, and copy services. Competing with one another and increasingly identifying themselves as a professional body, twentieth-century advertising agents were part of a new industry closely related to the powerful forces of consumerism, marketing, and mass media.

—Justin Bengry

Bibliography

- McClintock, Anne. *Imperial Leather: Race, Gender, and Sexuality in the Colonial Conquest*. New York: Routledge, 1995.
- Nevett, T. R. *Advertising in Britain*. London: Heinemann, 1982.
- Norris, James D. *Advertising and the Transformation of American Society, 1865–1920*. New York: Greenwood, 1990.
- Richards, Thomas. *Commodity Culture of Victorian England: Advertising and Spectacle, 1851–1914*. Stanford, CA: Stanford University Press, 1990.

Kleptomania

Why were comfortable middle- and upper-class women stealing with a seemingly wanton impulsiveness from the display tables of the new department stores in Paris, London, and New York in the late nineteenth century? This riddle came to preoccupy medical and judicial authorities, writers, and even the public at large. Kleptomania emerged as a widely accepted diagnosis and explanation for this new wave of shoplifting, one that located the cause of these incongruous acts in the presumed frailty of woman's nature. The poor might steal out of need, the thinking ran, but these women were stealing because they could not control themselves.

The setting for the kleptomaniac's crimes—real and imagined—was the modern department store, an innovation of the mid-1800s. In addition to representing a new business model based on economies of scale, the department store offered its shoppers a more enticing environment of display and consumption. With its window displays luring passersby inside, its free entry

to encourage noncommittal browsing, and its calculated deployment of natural and artificial light and staging of goods, the department store enabled a far freer and more active interaction with available goods than had previous retailing. Department store entrepreneurs aimed in particular at providing a “Ladies’ Paradise,” to borrow the title of the French writer Emile Zola’s famous 1883 department store novel, an environment where women’s needs and desires could be fully and even criminally indulged.

For Zola as for others who wrote about kleptomania in these years, it was indeed female desire that seemed to be the root of the problem. The growing authority of scientific medicine was quickly brought to bear on the question, with doctors in Europe and America commonly seeking out the explanation for such motiveless theft in woman’s unique physiological constitution. Mixing scientific and quasi-scientific findings with Victorian conventions about natural gender difference, medical opinion in Europe and America cast women’s thefts as a temporary impairment of the will, brought on by the desire-stimulating environment of the department store. Presumed to be inherently vulnerable and unstable in the face of such desire, middle- and upper-class women were made in the kleptomania diagnosis (and legal defense) to seem more sick than criminal.

With more than 4,000 arrests for shoplifting in Paris in 1883 alone and a spate of very public trials there as well as in London, New York, and other cities, the kleptomaniac remained an object of study and public fascination through the turn of the century. In historical perspective, the kleptomania controversy is important in revealing the tensions and anxieties that accompanied the rise of consumer society and the shift from a bourgeois ethic of thrift to one grounded in pleasure and consumption. As women’s roles evolved to include a greater public presence in

➤ FROM EMILE ZOLA, *THE LADIES’ PARADISE*

“Madame de Boves did not reply. Then her daughter, looking round with her podgy face, saw her mother with her hands deep in the lace and in the act of making some flounces of Alençon disappear up the sleeve of her coat. Blanche did not seem surprised, and moved forward instinctively to hide her when Jouve (the department store guard) suddenly appeared between them. He leaned forward and murmured politely in the Countess’s ear:

“Would you be so kind as to follow me, madam”? . . . She cast a rapid glance around her, her face contorted with anguish. Then, recovering her haughty bearing, she submitted, and walked beside him like a queen who deigns to entrust herself to the care of an aide-de-camp. Not a single customer had even noticed the scene.”

—Patrick Young

Source

Emile Zola, *The Ladies’ Paradise*, trans. Brian Nelson (Oxford: Oxford University Press, 1995), 420–421.

the new commercial spaces and a freer public expression of desire, the invention of kleptomania as a uniquely female syndrome gave voice to worries over the potentially disruptive social and cultural impact of consumer modernity.

—Patrick Young

Bibliography

- Abelson, Elaine. *When Ladies Go A-Thieving: Middle Class Shoplifters in the Victorian Department Store*. Oxford: Oxford University Press, 1989.
- O’Brien, Patricia. “The Kleptomania Diagnosis: Bourgeois Women and Theft in Late Nineteenth Century France.” *Journal of Social History* 17 (Fall 1983): 65–77.

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World History Encyclopedia

Era 7: The Age of Revolutions, 1750–1914 ■ Volume 16

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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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War and Diplomacy

On July 1, 1916, two years into World War I, British, British Commonwealth, and French troops launched a massive attack against German lines along a 12-mile front north and south of the Somme River in northern France. In preparation they had subjected the German enemy to a week-long artillery bombardment in which they launched 1.7 million shells; they also had planted 17 mines in tunnels under German trenches, the largest of which contained 21 tons of explosives. On the first day of the attack the British suffered 57,540 casualties, including 585 prisoners of war, 2,152 missing in action, 35,493 wounded, and 19,240 killed. After three days, British battlefield deaths were three times higher than the number killed in 15 years of fighting in the Napoleonic Wars. When the offensive ended in mid-November, French, British, and German casualties numbered close to 1.3 million, making it to that point the bloodiest military campaign in history.

The war in which the Somme offensive took place was a testament to the achievements of countless scientists, engineers, inventors, businessmen, military planners, and government officials in the design, manufacture, and deployment of deadly and efficient instruments of warfare. Armies that had fought in the Napoleonic Wars of the early nineteenth century used weapons, ammunition, and uniforms handmade by skilled artisans and received orders from officers who communicated by shouts, bugles, and messages carried by courriers on horseback. The most advanced artillery could fire two to three rounds a minute and were lethal at no more than 800 yards. Front-loading flintlock guns, standard issue for European armies since the late 1600s, took 26 steps to load, could be fired two to three times a minute, and were accurate up to 100 yards. In World War I, soldiers fought with guns capable of firing 20 rounds a minute with an effective range of 550 yards. They were called rapid-fire guns but paled in comparison to newly developed machine guns, which could be fired 450 to 600 times a minute and had a range of 4,500 yards. Artillerymen now had a variety of guns, howitzers, and mortars to choose from, including the famous German railroad gun introduced in 1918 that was capable of shelling Paris from 80 miles away. Armies made use of barbed wire, land mines, poison gas, wireless radios, tanks, and airplanes. During the Somme Campaign, the Royal Flying Corps of Great Britain lost 782 aircraft and 576 pilots.

Navies underwent a similar transformation in the 1800s. The great ocean battles between England and France in the Napoleonic era were decided by ships of the line, most of which were 170–180 feet (51–55 meters) in length and carried around 75 guns capable of shooting solid

iron shot weighing up to 42 pounds. In World War I, naval fleets included submarines and steam-driven boats of many sizes and purposes but were dominated by dreadnoughts, named after a British battleship launched in 1906. The *Dreadnought* was protected by 1-foot-thick steel armor, was propelled by coal-fired steam turbines, was 527 feet long, and was armed with 5 submerged torpedo tubes, 11 turret mounted guns, and 27 smaller guns.

These were not the only changes in European and U.S. armies and navies in the nineteenth century. All the major powers established or expanded special academies for the training of officers, improved medical services for wounded and retired soldiers, developed systems for housing and provisioning troops, and maintained ministries whose sole responsibility was the military. Armies also increased in size, especially from the 1870s onward, when all the Great Powers except Great Britain introduced conscription systems in which young men served on active duty for several years and then entered the reserves. On the eve of World War I, Russia maintained 4.5 million active and reserve troops, France maintained 4.017 million, Germany maintained 4.5 million, Italy maintained 1.251 million, and Great Britain maintained 975,000. For Europe's Great Powers, military expenditures consumed 25–30 percent of their budgets.

Only one non-Western state, Japan, underwent a military transformation as profound and thoroughgoing as that of Europe. In the early nineteenth century Japan had no national army or navy. The Tokugawa shoguns, ruling from Edo, had their own army, but so too did the aristocratic lords of Japan's 260 provinces. Commoners were barred from bearing weapons, so fighting was the monopoly of the nobility, or samurai. During the long years of Tokugawa peace, however, the samurai became courtiers, administrators, and bureaucrats rather than warriors, and the matchlock guns and smoothbore cannon of Japan's armies became increasingly antiquated. Confrontations with Western powers, culminating

In the early nineteenth century Japan had no national army or navy. The Tokugawa shoguns, ruling from Edo, had their own army, but so too did the aristocratic lords of Japan's 260 provinces.

in the arrival of the American fleet under Commodore Matthew C. Perry in 1853 and the leveling of the Satsuma domain's forts at Kagoshima by the British Royal Navy in 1862, fully revealed the inadequacy of Japan's military. After the overthrow of the shogunate in 1867, Japan's new leaders made military modernization their priority. In 1873 in what is probably the most important step in the modernization of Japan, they ended the military monopoly of the samurai and introduced conscription. By this step, the Meiji government undermined the foundations of Japan's traditional class system and provided itself with the means to indoctrinate its new recruits with the values of nationalism and loyalty to the emperor. Meiji leaders at first relied heavily on Western expertise and weaponry. They made massive purchases of European weapons and recruited European officers to provide instruction on matters of training, recruitment, and strategy. To their credit, Japanese leaders realized that such steps by themselves were not enough to make Japan

a military power. Other fundamental changes—government centralization, the establishment of a nationwide educational system ranging from primary schools to the prestigious University of Tokyo, and rapid industrialization—also were needed. In all, these endeavors by the Japanese were remarkably successful. In 1905 they stunned the world with their victory over Russia in the Russo-Japanese War.

The transformations of European and Japanese armies and navies were not the only important military developments between 1750 and 1914. At the beginning of the period, the diffusion of firearms continued into regions such as northwestern North America, New Zealand, Hawaii, and various regions of Africa. In southern Africa the Zulu leader Shaka (ca. 1787–1828) introduced a new weapon (a short stabbing spear) and new tactics (based on the use of a crescent formation) and fielded an army made up of disciplined troops led by effective officers. His armies set off a military explosion in southern Africa that resulted in the creation of a short-lived Zulu kingdom.

Elsewhere, many states sought to strengthen their military by purchasing or learning to manufacture European weapons and introducing features of European military organization and strategy. These include the Indian kingdom of Mysore in the mid-eighteenth century, the Maratha Confederation in the late 1700s, and the Punjab empire in the early 1800s; Egypt under Muhammad Ali (r. 1805–1848); the Ottoman empire and Persia through much of the nineteenth century; Ethiopia in the late 1800s; and China, from the beginning of the era of Self-Strengthening through the early twentieth century.

Not one of these efforts was successful in the long run. Ethiopia's modernized army defeated its would-be European conqueror, Italy, in 1896 but succumbed to the same foe four decades later. The Indian states, despite their military reforms, were defeated by British East India Company troops and incorporated into the British raj. Egypt's military buildup was scuttled in the 1840s by the European powers, who feared that a strong Egyptian army would be too much of a threat to the Ottoman empire. In Persia, efforts to modernize the military fizzled out as a result of indifferent leadership from the shahs and a weak economic base. Chinese military reformers were hindered by the mistaken dogma of the Self-Strengthening Movement that building a powerful army required importing Western weaponry but no changes in the traditional Confucian political and social order. In 1911 frustrated military officers who recognized the need for more fundamental changes in Chinese society played a key role in the revolution that overthrew the Qing dynasty. Nationalist army officers in the Ottoman empire also played a key role in the events of the Young Turk Revolution, which in 1906 limited the power of the authoritarian sultan Abdulhamid II and in 1909 replaced him with a figurehead, Mehmed V. Like the Chinese revolutionaries, the fiercely nationalist Young Turks were incensed and frustrated by the failures of their leaders to overcome Ottoman military weakness despite more than a century of effort. On taking power they examined all the institutions of their society and sought to change those that stood in the way of strengthening the state. Time was not on their side, however. The regime survived losses in the Ottoman-Libyan War of

1911–1912 and the Balkan War of 1912 but not its defeat in World War I. Like its two allies, Austria-Hungary and Germany, it paid the price for defeat at the Paris Peace Conference. Having been forced to accept the punitive Treaty of Sèvres, the government of Sultan Mohammed VI was overthrown by Turkish nationalists in 1922, thus ending more than 600 years of Ottoman rule.

Whether modernized or antiquated, armies and navies exist to fight, and between 1750 and 1914 they had many opportunities to do so. Hundreds of wars were fought for the same reasons wars have been fought throughout history: to win or defend territory, to realize commercial advantage, to advance a religious principle or political ideology, to uphold national honor, or to fulfill individual ambitions. Each war brought death and misery, some more so than others. The wars of the French Revolution and the Napoleonic era were fought by armies of unprecedented size. Before 1789 the French army had 200,000 soldiers. By September 1794 it had 1.2 million soldiers, of which approximately 800,000 were armed and ready for combat. Napoleon raised 1.3 million conscripts between 1800 and 1811 and 1 million more during 1812–1813 alone. This enabled him to send an invading army of more than 600,000 troops into Russia in June 1812, of whom 40,000 survivors returned to France less than six months later. Napoleon's 600,000-man invading force was larger than the total population of Paraguay when it declared war on its neighbors Brazil, Uruguay, and Argentina in 1864 and 1865. When the War of the Triple Alliance ended in 1870, Paraguay's prewar population was reduced from 525,000 to about 221,000, of which only about 28,000 were men.

After the defeat of Napoleon, the two bloodiest wars of the nineteenth century were the American Civil War, in which 618,000 soldiers died from combat and disease, and the much shorter Franco-Prussian War (1870–1871), in which 184,000 troops were killed and over 400,000

After the defeat of Napoleon, the two bloodiest wars of the nineteenth century were the American Civil War, in which 618,000 soldiers died from combat and disease, and the much shorter Franco-Prussian War (1870–1871), in which 184,000 troops were killed and over 400,000 wounded.

wounded. Both wars strengthened the convictions of American and European peace advocates, who dreamed of a day when nations would put away their arsenals of weapons and settle their disputes by arbitration. Their efforts, backed by individuals from all walks of life and political persuasions, culminated in two peace conferences held in The Hague, Netherlands. The first, called by Tsar Nicholas II of Russia, took place in 1899, and the second, called by the U.S. president Theodore Roosevelt, took place in 1907. By the end of the second conference, which was

attended by 256 delegates representing 44 nations, signatories agreed to prohibit the dropping of projectiles or explosives from dirigibles or airplanes for a five-year period, adopted conventions for the protection of neutral states during war, and agreed not to begin hostilities without a formal declaration of war. The conference failed, however, to pass a resolution requiring nations to submit disputes to a Permanent Court

of Arbitration, and on the issue of disarmament, delegates could agree only that it required further study.

Meanwhile, between 1899 and 1914 the Boer War, the Spanish-American War, the Russo-Japanese War, two Balkan Wars, the Libyan-Ottoman War, the Philippine-American War, and the Yaqui Indian War all were fought, in addition to civil wars in South America and armed rebellions in various colonies. The arms race continued, with the main event being the naval competition between Great Britain and Germany. Nationalist passions intensified. Political

leaders sought security by entering alliance systems that turned Europe into an armed camp, with Britain, France, and Russia on one side and Germany, Austria-Hungary, and Italy on the other. Each year brought a new crisis, and generals made elaborate plans for the great war that everyone anticipated. Then, on June 28, 1914, the Archduke Ferdinand and his wife Sophie were assassinated by a Serb nationalist while visiting Sarajevo in the Austrian-controlled province of Bosnia. In this crisis diplomacy failed, and one month later World War I began.

—James H. Overfield

■ Introduction: Planning and Organizing for War in Western Societies

In the early 1900s, armies and navies in the Western world had the same purpose as those that had fought in the Seven Years' War (1756–1763) some 150 years earlier. They existed to provide the force deemed necessary to achieve the economic and political goals of the states that organized them. In almost every other way, however, the armies and navies of the early twentieth century differed from their eighteenth-century predecessors. Significant changes began in the 1790s during the wars of the French Revolution and Napoleon and accelerated in the 1800s with the introduction of new military technology, new approaches to organization and recruitment, and new thinking about strategy and tactics.

The Seven Years' War was the last in a series of limited wars that had been the norm in Europe since the end of the religious wars of the sixteenth and seventeenth centuries. Wars in the late seventeenth century and the eighteenth century were fought by relatively small professional armies that followed cautious strategies to achieve specific territorial or economic gains rather than some religious or ideological goal. Soldiers, many of whom had dubious backgrounds as prisoners, debtors, or minor criminals, were recruited mainly from rural households. Their officers were drawn from the

ranks of the titled nobility, who trained their troops to fight with muskets to which bayonets were attached. In battle, two lines of infantry advanced toward one another, with the forward troops unleashing a massive volley and then retreating to the rear to reload while another line of troops took their place. There was a similar formality in naval tactics, with ships entering battle arranged against one another in long lines so they could fire broadsides at the enemy without damaging their own ships. Of the two major naval powers, France and Britain, French admirals adopted a conservative strategy designed to avoid pitched battles that might increase Britain's advantage in terms of the number of ships.

Armies and tactics both changed dramatically between 1792, when the revolutionary government in France went to war with Austria and Prussia, and 1815, when the Napoleonic Wars ended. The most significant change occurred in 1793, when the French National Assembly, faced with internal and foreign threats, declared a *levée en masse*, which resulted in the conscription of all single men between 18 and 25 years of age for military service. The revolutionary government also established new armament factories, ordered the collection of scrap metal to forge new weapons, and imposed wage

and price controls. This was a far cry from the limited wars that Europe had fought in the eighteenth century.

The concept of a nation in arms was only one of the innovations introduced by the French. The idea that military command was something reserved for members of the titled nobility gave way to a new approach that awarded commissions and promotions on the basis of talent rather than age and social background. The army itself was organized differently. The eighteenth-century practice of maintaining separate units of infantry, cavalry, and artillery gave way to a new structure, the division, a force of from 10,000 to 12,000 men that included units of all three branches. Such a configuration provided a number of logistical advantages and gave commanders greater flexibility in planning campaigns and fighting battles. The increased use of light mobile field artillery and the abandonment of arranging infantry soldiers in long lines in favor of arranging them in columns gave rise to a distinctive new French school of warfare characterized by speed, aggressiveness, and flexibility.

These changes all had been introduced before the French armies came under the command of one of the most extraordinary and successful generals in history, Napoleon Bonaparte. Between 1796, when he assumed command of the Army of Italy at age 27, and 1815, when he fought his last battle at Waterloo, he led the French army in over 50 battles and lost only seven. Such a record became the subject of study and analysis not only by rival generals but also by countless nineteenth-century military theorists who sought to understand the reasons for his success. Following the argument developed in the theoretical and historical works of the Swiss-born Antoine-Henri Jomini (1779–1869), most military thinkers, including the widely read Carl von Clausewitz (1780–1831), concluded that along with high troop morale, accurate intelligence, speed of movement, and aggressiveness, the key to battlefield victory was to bring mass forces against the enemy's weak point in one decisive blow. Napoleon had written in 1804: "Remember these three things: unity of forces, urgency, and firm resolution to perish in glory. These are the three great principles of the military art that have brought me success."

In the immediate aftermath of the Napoleonic Wars, Europe's armies were reduced in size, mass conscription was abandoned, and leadership once more became an upper-class monopoly. Prussia was the one exception to the practice of maintaining long-service professional armies in which those who volunteered or were drafted could expect to serve a minimum of anywhere from 8 to 25 years. In Prussia a much larger percentage of the population was drafted, but a new recruit served only two years in the regular army before passing into the reserves.

Beginning in the 1830s, military planners were forced to come to terms with rapidly changing technologies. Improvements in firearms and artillery meant that hardly a decade passed without armies having to discard their outdated weapons and purchase new ones. Navies also changed rapidly. The abandonment of sails for steam engines and developments in naval ordnance increased navies' offensive capabilities and inevitably led to innovations in defense, including an emphasis on armor and new hull designs. Naval arms races occurred after the French launched *La Gloire*, a propeller-driven iron-plated warship, in 1859 and after the Germans embarked on a program of naval expansion in the late 1890s.

Further changes followed the rapid growth of railroad and telegraph networks in the 1850s and the decisive Prussian victories over the Austrians in the Austro-Prussian War of 1866 and over the French in the Franco-Prussian War of 1870–1871. The Germans' ability to move troops rapidly to the front according to meticulously planned schedules confirmed the importance of railroads. The Prussian victory also marked the demise of the small long-service professional armies that had been the norm since 1815. The new model was the Prussian system of an army made up of short-service conscripts and reserves under the leadership of highly trained general staff officers who directed troop movements, planned logistics and communications, and developed overall strategy. The Prussian victories also underscored the importance of numbers. When the war with France began, Prussia could field an army of 1.2 million soldiers, making possible the encirclement and defeat of the French army at the decisive Battle of Sedan.

The stage was now set for the rapid developments of the late nineteenth and early twentieth centuries. Armies grew in size, governments spent increasingly enormous sums on new weapons and ships, and diplomats hammered out alliances in anticipation of major war that was considered inevitable. Staff officers devised detailed plans for mobilization and opening campaigns in preparation for the same expected war. Having studied Napoleon and the Franco-Prussian War and having read the books of Jomini and Clausewitz, they all agreed that bold offense, massive numbers of troops, and a quick decisive battle would lead to victory. When war came in 1914, however, not a single one of these assumptions proved true.

—James H. Overfield

European Armies in the Old Regime

The period between the end of the Thirty Years' War in 1648 and the rise of the *levée en masse* during the French Revolution was unique in military affairs, seeing the rise of dynastic armies of the Old Regime and an unprecedented level of formality in the conduct of campaigns. The new armies arose from the absolute monarchs' desire for centralization and a general rejection of the excesses of the wars of religion. They were standing armies, built around gunpowder-based infantry units and subject to rigid codes of discipline and conduct both in garrison and on campaign. The expense of equipping and training these forces made kings reluctant to risk them in pitched battles, resulting in a style of warfare based on maneuver and siege.

The Thirty Years' War was a laboratory of early modern military science, demonstrating both the wanton destructiveness of unreliable mercenary forces paid through plunder and the advantages of long-service troops under Crown discipline. Increasingly during the latter half of the seventeenth century kings played variations on the theme introduced by the Swedes and the Dutch Republic by creating standing armies of professional soldiers. These forces were particularly attractive to absolute monarchs, not only as tools of defense and state expansion but also as tools of internal coercion and diplomatic intimidation.



The Battle of Maxen was fought in the German state of Saxony in 1759, during the Seven Years' War. It was a crushing defeat for the Prussians who were outnumbered by the enemy Austrians and forced to surrender their entire army. (Erich Lessing/Art Resource, NY)

Armies became progressively larger as kings developed the bureaucracies needed to supply and finance them. Louis XIV of France fielded an army of almost 400,000 men during the War of the Spanish Succession (1701–1714), and Frederick the Great put 163,000 men (some 3 percent of Prussia's total population) in uniform during the Seven Years' War (1756–1763). Most of these troops manned elaborate fortresses constructed along frontiers and principal waterways. Field armies were limited in size to about 50,000 men due to the logistics of supply and the limitations of forage opportunities.

The armies of the Old Regime represented the highest and lowest ranks of society. The officer corps was staffed from the hereditary nobility with the exception of the technical fields of engineering and artillery, which drew their officers from the educated middle classes. The rank and file were recruited or conscripted from the lowest rungs of the socioeconomic ladder. Pay was low, often late, and subject to stoppages for upkeep and equipment expenses. Living conditions in the barracks were often below the standards mandated by law for prisons. The troops were subject to ruthless discipline designed to produce instant obedience to orders and stoic indifference to casualties. This harsh discipline and the brutal conditions of service made desertion a constant problem, so much so that some commanders avoided night marches, extensive

THE EXCEPTION OF ENGLAND

While the absolute monarchs of the continent created armies that were extensions of the royal will, England pursued a different pattern. England had rejected absolutism with an axe on January 30, 1649, with the execution of Charles I and had emphasized the point with the almost bloodless Glorious Revolution in 1688, getting rid of James II. In addition to kings who exhibited absolutist tendencies, England had also endured the virtual military dictatorship of Lord Protector Oliver Cromwell during the Interregnum. These experiences left Parliament wary of the coercive power of a standing army. Although Parliament left the command of the army to the Crown, they claimed the power of the purse in military affairs and voted only a modest annual budget for the army. The army thus became the stepchild of the state, unloved, often neglected, and generally resented unless there was an unpleasant task to be done.

—Melvin Smith

foraging operations, and even pursuit of a fleeing enemy as they offered too many opportunities for absconding.

The infantry was the core of the armies of the Old Regime, supported by artillery and cavalry. The artillery of the day was cumbersome and once emplaced was rarely moved during a battle. Cavalry was useful for scouting and for pursuit of a broken enemy, but cavalry could not break well-led infantry. Thus the infantry weapons of the era dictated tactical deployment of an army. The standard sidearm was a smoothbore flintlock musket that had a lethal range of about 150 yards (137 meters) but lacked any kind of accuracy at any range. It was tipped with a socket bayonet. The most effective use of the weapon was volley fire at close range delivered from (by modern standards) tightly packed formations. With two armies blazing away and then closing with the bayonet, heavy casualties were not uncommon.

Because these armies represented a substantial investment for any king, they were generally reluctant to risk them in a set-piece battle. Campaigns consisted of elaborate maneuvers to achieve surprise or local superiority. Often the

objective was not to seek out the enemy army but instead to threaten his lines of supply or lay siege to his fortresses. A successful campaign could be reckoned as a season spent foraging off the enemy's territory without firing a shot.

—Melvin Smith

Bibliography

- Addington, Larry H. *The Patterns of War since the Eighteenth Century*. Bloomington: Indiana University Press, 1984.
- Doughty, Robert A., and Ira Gruber. *Warfare in the Western World*. Lexington, MA: D. C. Heath, 1996.
- Fuller, John Frederick Charles. *The Conduct of War 1789–1961*. New Brunswick, NJ: Rutgers University Press, 1961.
- Wilson, Peter. "Warfare in the Old Regime 1648–1789." In *European Warfare, 1453–1815*, edited by Jeremy Black. New York: St. Martin's, 1999.

European Navies in the Old Regime

European navies came into being as European economies became increasingly involved in maritime trade in the fifteenth century. By 1700 these navies had evolved from a form of seagoing militias into professional services with specialized vessels. The capital outlay to build and maintain such navies was an enormous and ongoing expense that made true blue-water fleets an option open only to the strongest of the maritime economies. For financial and geographic reasons Britain became the primary European naval power by the end of the Napoleonic Wars.

Following the Ottoman capture of Constantinople in 1453, European maritime trade gradually shifted west. This trend accelerated with the discovery of the New World and establishment of direct trade with Asia, and the value of the cargoes increased exponentially. National economies were built on spices and tea from the Orient and gold, silver, and furs from the Americas. Protecting these merchantmen became a priority, and preying upon the trade of an enemy nation became an accepted tool of warfare. Both required armed ships.

The initial navies were composed of a core of state-owned vessels augmented in time of war with armed merchantmen and privately owned

warships issued with letters of marque, which allowed them to legally prey on enemy shipping as a sort of seagoing militia. The merchantmen and privateers often proved reluctant to press home an attack when a battle hung in the balance. As a result, nations turned to professional fleets with purpose-built warships.

By 1700 three distinct types of warship were commonplace. Line of battle ships, or ships of the line, had at least 60 guns on at least two gun decks, with the largest carrying more than 100 guns. These largest first rates carried a crew of 800 to 1,000 men. Frigates, with 32 to 38 guns on a single gun deck, were the workhorses of any navy, serving as fleet scouts, commerce raiders, and convoy escorts. Sloops of war were the smallest naval vessels, armed with about 20 guns mounted on the open-weather deck.

Building a navy represented a tremendous capital outlay, and unlike raising a land army, the expense was a long-term investment. While most of a crew could be paid off at the end of hostilities, the ship still required upkeep even if mothballed, and some of the specialists in the crew could not be readily hired and fired. Naval dockyards and port facilities became more specialized along with the evolution of the ships they served. Only states with a significant merchant marine could justify the cost of an ocean-going blue-water fleet, and only the most solvent of governments could afford one.

Navies represented a significant drain on skilled and specialized nautical manpower, so much so that even in intensively maritime states there were not enough sailors to meet the demands of the fleet, the merchantmen, and the privateers. As service in the latter two paid better and was not as dangerous, governments were hard-pressed to provide warship crews. Thus the volunteer core of the navy was leavened in time of war with sailors press-ganged from ports or seized from merchant ships stopped at sea and filled out with unskilled landmen scraped from inland jails. The commissioned ranks in the navy were less landed and aristocratic than in the army; life at sea was harsh and technically demanding for the officers as well.

Britain generally maintained naval supremacy throughout the eighteenth and nineteenth centuries. Following the reverses of the



Captain Charles Brisbane's quartet of Royal Navy frigates surprise the Dutch defenders at Willemstad, Curaçao, on January 1, 1807, during the Napoleonic Wars. (David Marley)

> HORATIO HORNBLOWER AND "LUCKY JACK" AUBREY—FICTIONAL HEROES OF NAPOLEONIC NAVAL CAMPAIGNS

The last great fleet engagements of the navies of the old regime took place during the Napoleonic Wars. Two series of historical novels set in this age capture the exuberant essence of life at sea in the King's Navy. The older series by C. S. Forester chronicles the career of the socially awkward but militarily valiant Horatio Hornblower from midshipman to admiral. The more recent series was penned by Patrick O'Brian and traces the travels and exploits of "Lucky Jack" Aubrey and his doctor (and sometime spy) Stephen Maturin. Both dashing captains have made it to film, with Hornblower first being played by Gregory Peck on the big screen (1951) and later by Ioan Gruffudd in a made-for-television miniseries (1998–2003). Russell Crowe played Aubrey opposite Paul Bettany as Maturin in *Master and Commander: The Far Side of the World* (2003). All the novels are worth reading, and all the films are worth seeing.

—Melvin Smith

American Revolution, fully 40 percent of the budget was devoted to rebuilding the navy in 1784–1785. Britain was willing to make these expenditures because so much of its national economy was based on maritime trade, and in turn the strength of that economy provided the revenues needed. Britain's unique insular nature

allowed it to concentrate on naval affairs rather than building up land forces for defense, and the location of the British Isles provided an excellent base of operations for projecting power along the Atlantic coast of Europe.

—Melvin Smith

Bibliography

- Addington, Larry H. *The Patterns of War since the Eighteenth Century*. Bloomington: Indiana University Press, 1984.
- Harding, Richard. "Naval Warfare 1453–1815." In *European Warfare, 1453–1815*, edited by Jeremy Black. New York: St. Martin's, 1999.
- Howard, Michael. *War in European History*. Oxford: Oxford University Press, 1976.
- Lincoln, Margarette. *Representing the Royal Navy: British Sea Power, 1750–1815*. Aldershot, UK: Ashgate, 2003.
- Rodger, N. A. M. *The Command of the Ocean: A Naval History of Britain, 1649–1815*. London: Penguin, 2004.

The “Nation in Arms” — The French Army and the French Revolution

Once the revolutionaries in France proclaimed a republic in 1792 and executed King Louis XVI in January 1793, they were faced with the problem of defending the revolution from a hostile

coalition comprising almost all of the other Great Powers of Europe. In response, the revolutionaries resorted to a radical new approach to army organization. Unlike the small professional armies that opposed them, they proclaimed a *levée en masse*, or mass conscription, in August 1793. For the first time in history, conscription was used to raise the entire armed forces of a country, and this new French army had an immediate and decisive impact on the Revolutionary Wars of the 1790s.

The *levée en masse* comprised a conscription of the entire French society for war. In addition to forcing young bachelors into the army, the measure forced other men to work creating the weapons of war, while women and children made the uniforms, sacks, and other equipment required of the troops. Even the elderly were conscripted to preach to the people the virtues of the revolution and hatred of their enemies. Through such propaganda, the revolutionary leadership sought to encourage war enthusiasm and nationalism and thus unite the entire country behind the war effort. The result of the *levée en masse* was that unlike its enemies, every segment of French society was focused on the one objective of defeating its opponents. By 1794 the army numbered 800,000, dwarfing the smaller armies in the rest of Europe.

The imposition of conscription was not without problems. Opposition to conscription was particularly widespread among the peasantry, and many failed to report for duty or deserted after joining the army. In the early 1790s the desertion rate reached 200,000 per year, and some of those opposed to conscription joined counterrevolutionary forces in France. However, with France's large population, these deserters could be easily replaced. In battle the new French army suffered significant numbers of casualties, as the new tactics adopted by the generals normally involved bayonet charges. Although the French losses were great, dead or wounded soldiers could be replaced, while those of their enemies could not. The sheer size of the French army allowed it to overwhelm its opponents. At battles such as Jemappes and Valmy in the early 1790s, the conscripted French army proved its superiority to the professional armies it faced. The victories won by the conscripts of France



The Battle of Jemappes, near Mons, Belgium, November 6, 1792. The French Revolutionary Army defeated the greatly outnumbered Austrian Army, the first victory by a mass republican French army. (William M. Sloane, The Life of Napoleon Bonaparte, 1909)

LAZARE CARNOT, ORGANIZER OF THE *LEVÉE EN MASSE*

Lazare Carnot (1753–1823) was a French politician and mathematician who became a delegate to the National Convention in 1792 and a member of the Committee of Public Safety in 1793. In this post he organized the *levée en masse* and oversaw the operations of the French armies on the battlefield. His numerous successes in this role earned him the sobriquet “Organizer of Victory.” Politically a moderate, he was one of the

original five members of the Directory but was dismissed in 1797 and took refuge in Geneva. In 1800 he was appointed minister of war by Napoleon, but his republican sympathies were increasingly out of step with Napoleonic France, and he retired from public life. After the restoration in 1815, Carnot went into exile and died in Magdeburg.

—Wesley Ferris

ensured the survival of the revolution and laid the foundations for the expansionism of the late 1790s and the Napoleonic era.

—Wesley Ferris

Bibliography

- Bertaud, Jean-Paul. *The Army of the French Revolution: From Citizen-Soldiers to Instrument of Power*. Translated by R. R. Palmer. Princeton, NJ: Princeton University Press, 1988.
- Blanning, T. C. W. *The French Revolutionary Wars, 1787–1802*. London: Arnold, 1996.
- Watson, S. J. *Carnot*. London: Bodley Head, 1954.

Recruitment and Conscription

The French Revolution showed the value of mass conscription to modern warfare, but it was the Franco-Prussian War of 1870–1871 that conclusively demonstrated the importance of a large army comprised of well-trained and skilled conscripts. In the aftermath of the Franco-Prussian War, most of the Great Powers of Europe remodeled their armies along the lines of Prussia, with significant consequences for subsequent military history.

Universal conscription first appeared in Europe during the 1790s as part of the military reforms adopted by Revolutionary France in order to defend the French Revolution and defeat the monarchies of Europe. It allowed France to field an army that dwarfed the small professional armies of its rivals and was an important component of the victories won by France during the Revolutionary and Napoleonic periods. In response, France’s enemies reformed their armies

and incorporated many of the reforms made by France including conscription, which aided the eventual defeat of France in 1815.

Although the European states abandoned conscription and returned to smaller armies after the Napoleonic Wars, Prussia again demonstrated the value of conscription in the 1860s. Among the many military reforms that Prussia adopted in the 1860s was conscription, which allowed this emerging German state to field a 1 million-man army after the Austro-Prussian War of 1866. Prussia’s crushing victory over France in the Franco-Prussian War of 1870–1871 was seen in the rest of Europe as a vindication of Prussia’s military reforms, including conscription.

Between 1871 and 1914 almost all of the Great Powers of Europe adopted some form of conscription, leading to mass armies that in some cases numbered in the millions. Even smaller nations such as Sweden and Belgium adopted universal service. Only the United Kingdom did not impose peacetime conscription, in large part due to its reliance on its navy for defense, although pressure for conscription increased even in the United Kingdom after the failures of the Boer War.

Conscription and the size of the armies it created became a critical focal point in the international rivalry that preceded World War I, as military prowess came to be measured by the size of a country’s army. For example, in the years prior to 1914, a declining birth rate was of increasing concern to the French government, as it indicated a decrease in the number of future conscripts in comparison to its German

➤ ALBRECHT GRAF VON ROON

Albrecht Graf von Roon (1803–1879) was a lifelong officer in the Prussian army who, after serving on the General Staff, was appointed war minister in 1859. In this post he carried out, over the widespread objections of Prussian liberals, a comprehensive reform of the Prussian army, arguing that modern warfare required professionalism and thoroughly trained soldiers. To achieve this von Roon instituted universal conscription, which doubled the size of the Prussian army by 1862. In addition, he subordinated the Landwehr, a middle-class national guard that had its origins in the militias raised in 1813 to fight Napoleon, to the regular army. These reforms greatly strengthened the Prussian army and were an important contribution to the Prussian victories over the Austrians in 1866 and the French in 1871. Kaiser Wilhelm I made von Roon a count in 1871 and promoted him to field marshal in 1873, a year after his retirement.

—Wesley Ferris



(Hulton Archive/Getty Images)

rival. When war came in 1914, the near-universal implementation of conscription ensured that the armies of the major combatants would be the largest ever seen.

—Wesley Ferris

Bibliography

- Frevert, Ute. *A Nation in Barracks: Modern Germany, Military Conscription and Civil Society*. Oxford, UK: Berg, 2004.
- Gooch, John. *Armies in Europe*. London: Routledge and Kegan Paul, 1980.
- Kitchen, Martin. *A Military History of Germany*. London: Weidenfeld and Nicolson, 1975.
- Moran, Daniel, and Arthur Waldron. *The People in Arms: Military Myth and National Mobilization since the French Revolution*. Cambridge and New York: Cambridge University Press, 2003.

Europe's Arms Race before World War I

During the four decades preceding the start of World War I in 1914, European nations engaged in a multifaceted arms race, building larger armies and navies and eagerly seeking new or improved weapons. Industrialization and new manufacturing techniques not only allowed the development of new weapons systems, but the efficiency they produced also allowed nations to create larger standing armies without reducing industrial output. Rising populations also contributed to the size of European armies. As empires expanded and territorial competition intensified on the continent and abroad, many industrialized European nations adopted a conscription and reserve system, giving them a pool

of trained military personnel who could be mobilized rapidly at the onset of war.

During the latter half of the nineteenth century great advances took place in science and industry. Better metallurgy provided stronger steel and more economical methods of producing it, allowing the construction of more powerful artillery and rifles. Better steel also spurred the design of larger warships with thicker armor and heavier guns. Precision machining techniques produced weapons that packed more punch, delivered that punch at greater ranges, and put that punch on target with greater accuracy. Germany led the way in the newly developed chemical industries, which provided stronger explosives and propellants for the new weapons. By 1910 quick-firing artillery, magazine rifles firing smokeless powder cartridges, and machine guns were standard issue in European armies. In many cases these acquisitions were the result of a sort of positive feedback loop: if Country A developed a new technology, Countries B and C would either follow suit to keep up or develop some other counterforce to negate Country A's advantage. Country A would respond by seeking to reestablish superiority, setting off another round of mutual military increases. Competition grew fierce as the turn of the century approached, and the size of an army or fleet became an important consideration during negotiations between the Great Powers.

In addition to adopting new weapons, European militaries expanded their numbers radically during the quarter-century preceding the war. Populations had grown due to better medicine and agriculture, and new manufacturing techniques were more efficient and less labor-intensive. These factors gave European governments the ability to place more men in uniform than ever before. Most nations (with the exception of Britain among the Great Powers) adopted some form of conscript and reserve system in which young men were drafted, trained, and, after a brief term of active duty, passed on to reserve formations. This system created truly massive armies on the continent. In 1914 Germany could call up 4.5 million men, while France fielded a standing army and reserve of just over 4 million. Russia's massive population provided an army of 5.9 million men, and Austria-Hungary faced them

THE KAISER'S FLEET

The most visible aspect of the European arms race centered on building battleships. These massive heavily armored and armed ships were technological marvels and were seen as an indication of the wealth and industrial might of the nations that possessed them. Britain had been the leading naval power for decades as the century drew to a close, but in Germany both Kaiser Wilhelm II and Admiralty secretary Alfred Tirpitz had visions of building up the German fleet to establish parity with the British in the Atlantic. The German Fleet Laws of 1898 and 1900 provided massive funding for a naval building program that would double the number of German battleships by 1916. Kaiser Wilhelm and Tirpitz expected that the fleet increase would benefit Anglo-German relations, forcing the British to respect Germany's potential as an enemy and court Germany as an ally to counter France and Russia, Britain's main colonial rivals. The British reaction was the exact opposite, driving public opinion further toward outright alliance with Russia and France. It touched off an increase in naval building in British shipyards and generated a revolution in battleship design with the launch of the all big-gun HMS *Dreadnought* in 1906.

—Melvin Smith

with 3 million. Italy, aspiring to Great Power status, had 1.251 million men trained in 1914.

More impressive than the raw numbers themselves are the percentages they represent. Lightly industrialized Italy had a 1911 population of 35.4 million; its army represented 3.5 percent of the total population. Russia had a 1910 population of 160.7 million, meaning that some 3.7 percent of Russia was in uniform when the war began. Slightly more industrialized Austria-Hungary claimed a 1910 population of 51.4 million; it was able to train and equip 5.8 percent of the population by the time war broke out. Germany, with a 1910 population of 64.9 million, fielded an army that represented 6.9 percent of the nation. Despite later derision of Prussian militarism, the ratio in France was even higher. France's 1901 population stood at 38.5 million. Even allowing for some population increase by 1914, this meant that its army of 4.017 million



The German battleship *Kaiser Wilhelm der Grosse*, about 1903. (Naval Historical Center)

men army comprised more than 10 percent of the total population. Considering that half the population was female and that roughly half of the male population was too young or too old to be in uniform, these figures indicate that by 1914 more than 60 percent of Frenchmen of military age were in the military, either on active duty or in the reserves. Europe had become an armed camp of mutually antagonistic alliances and counteralliances, primed for a massive conflict.

—Melvin Smith

Bibliography

- Henig, Ruth. *The Origins of the First World War*. London: Routledge, 2002.
- Mombauer, Annika. *The Origins of the First World War: Controversies and Consensus*. New York: Longman, 2002.
- Steiner, Zara S., and Keith Neilson. *Britain and the Origins of the First World War*. New York: Palgrave Macmillan, 2003.

Naval Strategy in Europe, 1750–1800

During the last half of the eighteenth century, the “age of fighting sail” reached its climax. In these decades, the Royal Navy of Great Britain was challenged by the navies of other western

European countries in three major wars. However, by the early 1800s, when Admiral Horatio Nelson (1758–1805) defeated a combined French and Spanish fleet at the Battle of Trafalgar, the British established a nearly complete control over the oceans.

In 1750, Great Britain, without a large standing army, maintained the world’s largest navy, used mainly to protect its position in worldwide commerce. France, the leading military power in Europe, maintained a navy about one-third the size of Britain. The other major naval powers were Spain and the Netherlands, whose navies were smaller still. Other European countries had only minor naval establishments.

The relative power of each nation was based mostly upon the ships of the line each could place at sea, along with smaller supporting vessels. The training and abilities of the officers and men in each navy also played an important role. The British ships of the line were large warships capable of fighting line battles, in which two columns of opposing ships maneuvered to most effectively bring to bear their broadside guns on the enemy. In such battles it was generally thought that larger ships had the advantage, although designers had to strive for a balance between size and firepower on the one hand and maneuverability on the other. In the eighteenth century most ships of the line were “74s,” referring to the number of guns they carried. While British ships were not materially superior to their opponents, the Royal Navy was much more aggressive than their opponents. Line battles tended to be indecisive, with few ships lost, but British commanders were more likely to take chances to break their opponents’ lines of battle, resulting in decisive victories. French and Spanish commanders used more conservative, defensive strategies.

Conflicting claims between Britain and France in North America resulted in open warfare in 1754. The French and Indian War, as it was known in North America, was subsumed in the Seven Years’ War that broke out in 1756. At sea, this war was fought mostly in the waters near the North American and Caribbean colonies of Britain and France. British squadrons kept a close watch on French ports and tried to intercept French squadrons as they attempted to convey men and supplies to the American

colonies. Despite considerable losses, the British largely succeeded in their task. When the British and American colonists took the French fortress of Louisbourg in 1758, the French squadron was trapped there and destroyed. The Royal Navy also played an important role in the capture of Quebec in 1759 and Martinique in 1761. When the Spanish entered the war in 1762, the Royal Navy also captured Havana and destroyed most of the Spanish ships stationed in the Americas.

The Treaty of Paris ended the Seven Years' War on February 10, 1763. Great Britain received Canada and other territorial concessions, and its navy was regarded as supreme. France and Spain, however, sought revenge, and both countries began to rebuild their navies. For their part, British governments neglected to maintain the fleet or to build new ships. By 1778, the French could place nearly as many ships of the line at sea as the British, and the Spanish navy was nearly as large.

Between 1775 and 1778, the Royal Navy's major duty was to support the British army's attacks on American rebels. A comprehensive blockade of American ports was not enforced, allowing French military supplies to reach the Americans. In July 1778, the French openly entered the war, and within a year, the Spanish also declared war on Great Britain. In the summer of 1779, a Franco-Spanish fleet of 66 ships of the line seized control of the English Channel, and a much smaller British squadron was forced to take shelter in harbor. The allies were unable to use their advantage to invade England, but the Royal Navy was unable to maintain command of the sea. When the Netherlands joined Britain's enemies in December 1780, the Royal Navy was forced to commit ships and men to guard against the Netherlands' fleet.

Thanks to French sea power, the American and French armies forced the surrender of Cornwallis at Yorktown in October 1781. From that point, American independence was virtually certain. A British victory over the French at the Battle of the Saintes on April 12, 1782 managed to preserve British Caribbean possessions. The net result, however, was to turn the naval war into a draw rather than a British defeat.

The final conflict of the period was the series of wars between revolutionary and Napoleonic



The decisive British victory at the battle of the Nile left Napoleon's army stranded in Egypt in 1798. The battle for control over the seas between Great Britain and other European states culminated in the French Revolutionary and Napoleonic wars with complete victory for the British. (James Stanier Clarke and John McArthur, The Life and Services of Horatio, Viscount Nelson ... from His Lordship's Manuscripts, 1840)

France and Great Britain. War broke out between Great Britain and France in 1793. The French Navy had declined greatly from its zenith in 1783. The officer corps had been depleted by the loss of its noble officers, and many ships of the line had been lost when in August 1793 the French port of Toulon was seized by counterrevolutionaries and the Royal Navy and held until late in the year. At first, however, the British failed to capitalize on their advantages. The French took the initiative and gained an ally when Spain joined the French in 1796. The outnumbered Royal Navy concentrated on home defense. More aggressive tactics resulted in victories over the Spanish at the Battle of Cape St. Vincent and over the Dutch at Camperdown in 1797. The following year, Nelson virtually wiped out the French Mediterranean fleet at the Battle of the Nile. These victories combined and an improved blockade strangled French commerce. The Peace of Amiens in 1801 allowed a brief respite to France, but when war broke out again in 1803, the Royal Navy was prepared materially and doctrinally to exert real control over the sea. French and Spanish colonies around the world were captured by the British. A last serious effort to break the British stranglehold in 1805 failed when a combined Franco-Spanish fleet was defeated off Trafalgar by Horatio Nelson's squadron. Although Nelson was killed in the victory,

Trafalgar ended any serious naval challenge to Great Britain for most of the nineteenth century.

—*Timothy J. Watts*

Bibliography

- Adkins, Roy. *Nelson's Trafalgar: The Battle That Changed the World*. New York: Viking, 2005.
- Herman, Arthur. *To Rule the Waves: How the British Navy Shaped the Modern World*. New York: Harper Collins, 2004.
- Ireland, Bernard. *Naval Warfare in the Age of Sail*. New York: Norton, 2000.
- Lavery, Brian. *Nelson's Navy: The Ships, Men, and Organization, 1793–1815*. Annapolis, MD: Naval Institute Press, 1989.
- Lincoln, Margarette. *Representing the Royal Navy: British Sea Power, 1750–1815*. Burlington, VT: Ashgate, 2002.

Theories of Land Warfare, 1750–1789

There was no great revolution in military affairs between 1750 and 1789, but there were minor innovations and refinements. The armies of the Old Regime reflected the states that they served: rigid, hierarchical, and thoroughly regimented. War was a formal exercise of the strength and will of kings, an extension of dynastic ambitions. The most important and prolific military writer of the age was Prussian king Frederick the Great; other writers either followed his lead or devised ideas to counter his innovations. It was the epitome of the age of limited warfare.

The new technologies of war introduced during the seventeenth century had thoroughly redesigned the military paradigm in Europe. Gone were the pike formations that had dominated the battlefields of the wars of religion. Cavalry was no longer the decisive arm, having been demoted by the rise of a musket-and-bayonet infantry. Artillery was becoming less of an art and more of a science. There was no introduction of a new military technology that forced a massive shift in tactics or strategy during the period in question. What happened instead was a refinement of tactics and strategy as the limits of the available technology and formations it required were explored and exploited.

The armies of the day were a reflection of the absolutist states that produced them. Officers

were drawn from the hereditary nobility and were the only members of the military who had any vested interest in maintaining the system they served. The other ranks were drawn from the lowest social orders, often through conscription. For them war was a profession, a business; they did not enlist out of a sense of duty to the state or to a cause.

The most successful commander of the era was Frederick the Great. Ruling a nation of limited resources, he sought efficiency at all levels of military affairs. He called for short and lively wars seeking a speedy decision of the conflict. But at the same time, actual battle was a chancy proposition; the army had to be rigorously trained and rigidly disciplined to be an extension of the commander's will, but that discipline and control could evaporate in the heat of a major battle. Thus, the objective of a campaign was not to seek the decisive battle to annihilate the enemy's main field force but rather to force the enemy to move, to yield a position of advantage. War was an exercise of position, of complex maneuvers, and of the subtle acquisition of incremental gains close to the frontier, not of deep penetrations and pitched battles.

France was on the losing side of both the War of the Austrian Succession and the Seven Years' War, and as the latter involved significant territorial losses, a rethinking of French doctrine seemed to be in order. Artillery, which Frederick the Great ranked as an "auxiliary rather than an 'arm'" (although he did have a lot to say about its proper employment and mobility), underwent a dramatic change in France following 1763. Artillery chief Jean-Baptiste de Gribeauval designed lighter cannon with bored (rather than cast) barrels, producing a weapon that was more mobile, more accurate, and more powerful. Chevalier Jean du Teil drafted plans to group cannon into larger batteries that were to concentrate on savaging the enemy's infantry rather than on counterbattery duels.

France also sought innovation in infantry tactics. Where Frederick the Great believed in the *ordre mince*, a tightly controlled line of three ranks that optimized infantry firepower, France experimented with *ordre profond*, infantry arrayed in dense columns. Ultimately, the French armies of the revolution employed the

ordre mixte, first proposed by Comte Jaques-Antoine de Guibert in 1772, that combined the mobility of columns with the firepower of the line and offered a variety of options for the commander on the field. France also embraced the use of skirmishers, light infantry that fought in open order, as opposed to Frederick's massed battalions.

France also laid the groundwork for the adoption of the division as a primary military unit. Pierre de Bourcet theorized on breaking an army into smaller subdivisions that marched separately along different routes to concentrate on an objective for mountain campaigns. Marshal Victor-François de Broglie put the theory into practice during the Seven Years' War, although when peace returned the divisions disappeared. All of these ideas, however, found their way into France's military by 1795 and provided the basis for Napoleon Bonaparte's stunning successes as he fine-tuned these basic ideas and introduced a few new concepts of his own.

—Melvin Smith

Bibliography

- Addington, Larry H. *The Patterns of War since the Eighteenth Century*. Bloomington: Indiana University Press, 1984.
- Doughty, Robert A., and Ira Gruber. *Warfare in the Western World*. Lexington, MA: D. C. Heath, 1996.
- Palmer, R. R. "Frederick the Great, Guibert, Bulow: From Dynastic to National War." In *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, edited by Peter Paret. Princeton, NJ: Princeton University Press, 1986.
- Parker, Geoffrey. *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800*. Cambridge: Cambridge University Press, 1988.

Napoleon as a Military Strategist

Few names loom larger in the history of warfare than that of Napoleon Bonaparte, the Corsican of the lesser nobility who rose to command France and conquer most of Europe during the first 15 years of the nineteenth century. Much of his success came from his ability to integrate existing ideas into a uniform military doctrine. He also introduced his own refinements and concepts

that produced a potent military that almost defied the collective might of the rest of Europe. That Napoleon had talent is evident. That he had ambition is undeniable. That he was a great revolutionary in military affairs is a subject of debate.

Napoleon's career began when he entered the Royal Military School at Brienne at age 9. After graduation he entered the École militaire in Paris, completing the two-year course of study in a single year (graduating 42nd out of 58 students). In 1785 the 16-year-old second lieutenant reported to his first posting with the La Fere artillery regiment. In 1788 he came under the tutelage of master artillerist Baron Joseph du Teil. During all of these years Napoleon read voraciously on military affairs, embracing the Prussian king Frederick the Great's emphasis on central position, de Broglie's concept of the division as an operational unit, and Guibert's theories on flexibility and mobility in war. Napoleon also studied the writings of Pierre de Bourcet,

➤ NAPOLEON'S HEROES

Although Napoleon never wrote a treatise on his formula for military success, he often commented on military planning and strategy in his voluminous correspondence. In this passage from one of his letters he singled out for praise four "great captains" he admired.

"No great actions are the product of chance and luck; they must always proceed from calculation and genius. Rarely does one see the great men fail in their most perilous enterprises. Consider Alexander the Great, Caesar, Hannibal, Gustavus Adolphus, and the other Great Captains. They always succeeded. Is it because they were lucky that they thus became great men? No! But being great men, they knew how to master chance. When one desires to study the sources of their success, he is quite astonished to see that they have done everything to obtain it."

—Melvin Smith

Source

Jay Luvaas, ed. and trans., *Napoleon on the Art of War* (New York: Touchstone, 1999), 30.

whose treatise on mountain campaigns provided the genesis of Napoleon's success.

In August 1793 Napoleon was a captain of artillery. Two and a half years later he was commander of the French army in northern Italy. Using many of the ideas of Bourcet, Napoleon divided his forces into divisions that marched separately toward an objective and combined forces for battle. His divisions lived largely off the land by requisition and waged an aggressive war of movement, as envisioned by Guibert. By April 1797 as a result of Napoleon's campaigns, Piedmont had been defeated, and Austria had been driven from the war.

Napoleon's greatest strength as a strategist was the ability to translate theory into practice and create a unified whole from disparate parts. He held some advantages over earlier commanders. He was a military prodigy with an ability to grasp an enemy's intent quickly, and he possessed an appreciation of the impact of terrain on both battle and strategic movement and the flexibility to adapt to new situations and seize a sudden opportunity. That being said, the armies he commanded were of a different mold than the dynastic armies of the previous century. The French Revolution introduced a patriotic element into the rank and file that had not existed before. While the armies of Frederick the Great were likely to dissolve through desertion had he relied on foraging, Napoleon could count on most of his men coming back when sent to requisition supplies. For the same reason, Napoleon could exploit a victory with a destructive pursuit of the broken enemy, a feat that the Prussians could not accomplish.

It did not hurt matters that Napoleon was in supreme command of France. This allowed him to impose changes from above rather than fight an entrenched bureaucracy. Where de Broglie had experimented with divisions, Napoleon institutionalized the system and imposed it on the French military as a whole. He developed the concept a step further, introducing the *corps d'armée*. A corps consisted of several divisions under the command of a small staff. It was self-contained, with its own infantry, cavalry, artillery, and support units, and fully capable of independent operations. Mutually supporting corps advancing along parallel tracks gave

several advantages to a commander and were an integral component of Napoleon's basic strategy. Since the corps advanced through separate areas, they could depend on requisition for much of their consumables, reducing the logistical tail and increasing speed and mobility. Napoleon's armies could penetrate deeply into an enemy state and bring about a decisive battle.

During the eighteenth century, wars were protracted affairs of maneuver, with the risky pitched battle being a rare thing. Napoleon sought the exact opposite, preferring to march an army deep into enemy territory, threatening some vital asset to bring the enemy's forces to battle. Once the main force of the enemy's field army had been defeated, the emperor could impose terms on his opponent. He was not one to seek the incremental victories of Frederick the Great. Warfare was an integral part of Napoleon's diplomacy, and the best position from which to negotiate a settlement was with one's boot on the enemy's throat.

—Melvin Smith

Bibliography

- Addington, Larry H. *The Patterns of War since the Eighteenth Century*. Bloomington: Indiana University Press, 1984.
- Doughty, Robert A., and Ira Gruber. *Warfare in the Western World*. Lexington, MA: D. C. Heath, 1996.
- Fuller, John Frederick Charles. *The Conduct of War, 1789–1961*. New Brunswick, NJ: Rutgers University Press, 1961.
- Luvaas, Jay, ed. *Napoleon on the Art of War*. New York: Simon and Schuster, 1999.

Admiral Nelson and the New Naval Warfare

Prior to the Revolutionary War and the Napoleonic Wars, naval warfare in the eighteenth century had in most cases been indecisive, as admirals were wedded to conservative tactics that discounted maneuverability. Instead it favored set-piece battles in which each opposing fleet formed its ships into a single line facing the opponent, and each ship fired on its corresponding number in the enemy line. These tactics were increasingly displaced at the turn of the century by a more fluid and offensive mind-set on the part of the British Royal Navy, a movement that

THE BATTLE OF TRAFALGAR, OCTOBER 21, 1805

The Battle of Trafalgar was the decisive naval battle of the Napoleonic Wars and one of the most important naval battles in history. When French vice admiral Pierre-Charles de Villeneuve's Franco-Spanish fleet of 33 warships sortied from the Spanish port of Cadiz, it was attacked by a British fleet of 27 warships under the command of Admiral Nelson. Nelson's plan was to split his fleet into two columns that would pierce the Franco-Spanish line at two points, thus allowing for each segment of the enemy fleet to be defeated thoroughly. A combination of Franco-Spanish inexperience and

British competence and self-assurance meant that this plan worked to perfection. By the end of the battle the Franco-Spanish fleet had been utterly vanquished, having lost two-thirds of its warships. Although Nelson was fatally wounded by a French sharpshooter at the height of the battle, he lived long enough to hear of the extent of his victory and exclaimed "Thank God I have done my duty." The British victory at the Battle of Trafalgar ended the threat of a French invasion of the British Isles and cemented British naval supremacy for a century.

—Wesley Ferris

was led by Admiral Lord Horatio Nelson (1758–1805). Nelson had a profound impact on naval warfare, not only in the Napoleonic Wars but also in the decades after his death.

He had an aggressive attitude toward naval warfare, emphasizing the advantages of attacking the enemy. Believing in the superiority of British warships and seamen, he argued that no British captain could go wrong by sailing his warship toward the enemy and engaging them. Tactically, Nelson focused on the value of maneuverability. Unlike traditional tactics, he was willing to divide his forces and attempt to bring the preponderance of his firepower against isolated sections of the enemy fleet. An important component of this emphasis on maneuverability was the latitude that Nelson gave his ship captains. Once a general battle plan was sketched, he left it to his captains to maneuver their warships to take advantage of the opportunities that battle presented to them. This trust in his subordinates made Nelson incredibly popular with his captains and seamen, and the Nelson touch, which brought out the best in those who served with him, also contributed to his success.

These new attitudes toward naval warfare were not exclusively pioneered by Nelson, as glimpses of them could be seen at the battles of Camperdown (1797) and St. Vincent (1797). However, Nelson was the most famous and most effective practitioner of them. At the Battle of the Nile (August 1, 1798), he destroyed a



British admiral Horatio Nelson's overwhelming triumph over the combined Franco-Spanish fleet at the Battle of Trafalgar ensured Great Britain's protection from invasion for the remainder of the Napoleonic Wars. (Print after W. L. Wyllie, 1905, from the collection of Philip Haythornthwaite)

French squadron at anchor and ruined Napoleon's scheme to invade Egypt. At the Battle of Copenhagen (1801) Nelson deliberately ignored an order to disengage in order to execute a difficult maneuver that resulted in the destruction of the Danish fleet. His most famous victory was the decisive Battle of Trafalgar (1805), although it also cost him his life. In the years that followed Nelson was lauded in the United Kingdom as one of its greatest heroes. Moreover, naval strategy in the decades to follow revolved around the idea of implementing his strategies.

—Wesley Ferris

Bibliography

Hayward, Joel. *For God and Glory: Lord Nelson and His Way of War*. Annapolis, MD: Naval Institute Press, 2003.

Popock, Tom. *Horatio Nelson*. London: Brockhampton, 1987.

Nineteenth-Century Military Theory—Clausewitz and de Jomini

In the aftermath of the Napoleonic Wars, military theorists attempted to unlock the secrets of Napoleon's success and to understand the nature of war in light of the changes that those years had wrought. If Napoleon's genius could be understood, it was hoped, it could be emulated, and future generals could achieve the same victories. Explanations for Napoleon's success came to be broadly divided into two groups, whose leading theorists were Antoine-Henri de Jomini (1779–1869) and Karl von Clausewitz (1780–1831).

Jomini, born in Switzerland, served in Napoleon's army as a staff officer under French Marshal Michel Ney from 1802 until 1813, when he defected to the Russian army and was given the rank of lieutenant general prior to the Battle of Leipzig. Jomini's theories on war were distilled in his most famous work, *Précis de l'Art de la Guerre* (*Summary on the Art of War*), published in 1838, although his ideas had changed little from his first writings on military strategy in 1803. He argued that wars could be explained rationally and that they could be understood by a simple formula that he felt was derived from Napoleon's methods of warfare. The key to victory was offensive action to combine superior forces against weaker enemy forces at a decisive point. For Jomini, war was a scientific enterprise best understood on scientific principles. Such a focus excluded social, political, and logistical factors and also ignored the human component of war, such as the potential for human error. For Jomini, war was a limited exercise that would be decided by simple decisive actions in battle. Thus, any country could match Napoleon's success simply by adopting his methods on the battlefield. Jomini's theories had an appeal to the conservative states that reasserted themselves

after 1815, as they were eager to learn the secrets of Napoleon's military success without having to also adopt the social and political changes that the French Revolution had set in motion.

Clausewitz was a Prussian officer who, after a series of Prussian defeats at the hands of Napoleon, was a leading reformer of the Prussian army between 1807 and 1811. When King Frederick William III of Prussia bowed to Napoleon's demands for assistance with his invasion of Russia, Clausewitz and other reformers resigned their commissions to assist the Russians. After aiding the liberation of Prussia, Clausewitz was made the director of the Prussian war academy, a post he held until 1830, a year before his death in 1831. His most famous work, *Vom Kriege* (*On War*), was published posthumously by his widow in 1832.

Clausewitz's theories were in many ways fundamentally opposed to those of Jomini. Whereas Jomini narrowly focused on the battlefield, Clausewitz argued that war could not be separated from social, political, and cultural factors. No longer could war be the exclusive preserve of a narrow band of professionals. The Napoleonic Wars had shown that war would now involve the common people of the country as well through nationalist enthusiasm and mass recruitment. Since war now had a greater capacity for escalation and involved entire populations clashing with each other, it was imperative that political leaders enter into war with specific objectives. War itself was not to be seen as an end but rather as the means to the achievement of political goals. Moreover, in contrast to Jomini's scientific and rational principles, Clausewitz emphasized modern war's chaotic nature. Wars and battles were uncertain and unpredictable and were waged by men who were subject to the full range of human flaws, to say nothing of the fog of war itself. Thus the morale of soldiers and officers was vital in order to push forward to victory despite the human errors and confusion that could occur on the battlefield. According to Clausewitz, although war should only be entered into with specific objectives, once it began it had to be waged thoroughly and ruthlessly. The enemy's armies had to be confronted and destroyed, the enemy's capital occupied, and its government and people brought to their knees.

In essence, modern warfare involved unlimited means to limited ends.

In the first decades after the Napoleonic Wars, Jomini's theories held sway over military strategists, influencing the generalship in such conflicts as the American Civil War. However, the string of Prussian victories in the late 1860s and early 1870s, culminating in the triumph over France in 1870–1871, saw the emergence of Clausewitz. Field Marshal Helmuth von Moltke (1800–1891), the Prussian chief of the General Staff and the architect of Prussia's victories, had been a student of Clausewitz at the Prussian war academy and had adopted Clausewitz's theories in his strategies and in his reorganization of the Prussian army. By training officers to think independently and to act as they felt appropriate to further the overall strategic aim, each element of the army would be able to coordinate actions without explicit direction from the high command. This decentralization of the command structure was a means by which the disorder of the battlefield could be overcome. The other major powers were eager to unlock the key of the Prussian victories and turned to Clausewitz's theories on war. Thus since the 1870s Jomini's theories have been almost entirely forgotten, while Clausewitz has remained at the forefront of thinking on war into the twenty-first century.

—Wesley Ferris

Bibliography

Gat, Azar. *The Development of Military Thought: The Nineteenth Century*. Oxford, UK: Clarendon, 1992.

Paret, Peter. *Clausewitz and the State*. Oxford, UK: Clarendon, 1976.

Mahan and the Role of Sea Power

Alfred Thayer Mahan (1840–1914) played an important role in the development of naval theory and strategy at the end of the nineteenth century and was also a strong supporter of American imperialism. His belief that naval and commercial power required a powerful navy influenced many leaders in Europe and the United States. Mahan was the son of Dennis Hart Mahan, a West Point instructor responsible for initiating

the study of military theory in the United States. The younger Mahan was appointed to the Naval Academy and graduated second in his class in 1859. During the Civil War he served in the blockade of southern ports. Following the war Mahan continued his naval career, but his real interest was in history and its lessons. In 1883 he published *The Gulf and Inland Waters*, a book about Union naval operations during the Civil War. The book established his academic reputation and earned him an appointment to the Naval War College at Newport, Rhode Island. Mahan gathered his lectures and in 1890 published them as *The Influence of Sea Power upon History, 1660–1783*. The book made a case that commercial and political power rested upon naval power. Only a strong navy, with battle squadrons that could seize control of the seas, would secure a country's future.

The book had little impact at first. Mahan, however, did his best to raise interest in his work. He sent copies to naval and political leaders in the United States and Great Britain, including Senator Henry Cabot Lodge of Massachusetts and Theodore Roosevelt, the future president. When Mahan visited Great Britain, he was celebrated and received honorary degrees from both Cambridge and Oxford. Kaiser Wilhelm of Germany was so impressed that he ordered that a copy of Mahan's book be made available on every ship of the German Navy.

Mahan followed his book with articles calling for an American navy second to none. Improved funding for the Naval War College was one priority. Other priorities included cooperation (although not an alliance) with Great Britain. Mahan directly attacked the isolationist



Alfred Thayer Mahan was an author, naval officer, and educator whose book *The Influence of Seapower upon History*, argued that the nation that controls the oceans maintains its supremacy in times of peace and war. (Library of Congress)

► SEA POWER AND THE U.S. ROLE IN THE WORLD

In the following excerpt from Mahan's most famous book, *The Influence of Sea Power upon History, 1660–1783* (1890), the author draws a link between naval power and colonial possessions.

“Undoubtedly under this second head of warlike preparation must come the maintenance of suitable naval stations, in those distant parts of the world to which the armed shipping must follow the peaceful vessels of commerce. The protection of such stations must depend either upon direct military force, as do Gibraltar and Malta, or upon a surrounding friendly population, such as the American colonists once were to England. . . . Such friendly surroundings and backing, joined to a reasonable military provision, are the best of defenses, and when combined with decided preponderance at sea, make a scattered and extensive empire, like that of England, secure. . . . Colonies attached to the mother-country afford, therefore, the surest means of supporting abroad the sea power of a country.”

—Timothy J. Watts

Source

Alfred Thayer Mahan, *The Influence of Sea Power upon History, 1660–1783*, 14th Edition (Boston: Little, Brown, and Company, 1898), 82.

attitude prevalent in the United States in his day. He called for the annexation of Hawaii as vital to national security. Bases in the Caribbean and a U.S.-controlled canal through Central America were also important. In his view, additional coaling stations throughout the world would be needed to provide supplies for squadrons protecting merchant ships.

As American commercial interests grew, Mahan believed that it was important to create a modern navy to protect them. Contemporary naval doctrine limited the navy's role in wartime to raiding enemy commerce and defending the American coasts. Instead, Mahan believed that only squadrons of battleships able to assert control over the sea would help the United States assume its rightful place among nations. A concentrated battle fleet would discourage enemy attacks and provide for the national defense.

Mahan served as president of the War College from 1886 to 1893 and commanded the cruiser *Chicago* from 1893 to 1896. He also wrote a number of books, including *The Influence of Sea Power upon the French Revolution and Empire, 1793–1812* (1892) and articles that appeared in influential journals. Mahan criticized the quality of the existing American warships and continued his call for quantitative and qualitative improvements. Many Americans were displeased that a serving naval officer was interjecting himself into politics, but Mahan found many allies and supporters. The most influential was Theodore Roosevelt, who regularly met with Mahan. As assistant secretary of the navy during the Spanish American War, Roosevelt arranged for the American Asiatic Squadron to attack the Philippines, in accord with Mahan's thinking. The peace treaty with Spain reflected the expansionist ideas of Mahan, with new acquisitions—the Philippines, Guam, and Puerto Rico—to serve as naval outposts.

Mahan retired from the navy in 1896 but was recalled to serve on the Naval War Board when the Spanish American War broke out. He was one of five American delegates to the Hague Peace Conference in 1899. In 1906 Mahan was promoted to rear admiral while on the retired list. He served as president of the American Historical Association in 1902 and continued to write about naval matters until his death in 1914.

—Timothy J. Watts

Bibliography

- Livezey, William E. *Mahan on Sea Power*. Norman: University of Oklahoma Press, 1947.
- Puleston, W. D. *Mahan: The Life and Work of Captain Alfred Thayer Mahan*. New Haven, CT: Yale University Press, 1939.
- Seager, Robert. *Alfred Thayer Mahan: The Man and His Letters*. Annapolis, MD: Naval Institute Press, 1977.
- Turk, Richard W. *The Ambiguous Relationship: Theodore Roosevelt and Alfred Thayer Mahan*. New York: Greenwood, 1987.
- Zimmermann, Warren. *Five Great Triumphs: How Five Americans Made Their Country a World Power*. New York: Farrar, Straus, and Giroux, 2002.

Military Academies and Military Professionalism in Europe and the United States

National military academies are a relatively recent development in military affairs, most dating from the early decades of the nineteenth century. The traditional method of training young officers was through practical experience in the regiment. It took quite some time for the concept of the military academy to take root. Several nations founded specialist schools for artilleryists or engineers during the eighteenth century but still relied on the older regimental systems for the training of most of the officer corps. Even after the introduction of general academies, most officers were commissioned through alternative methods. The early academies did not enjoy the elite status that most enjoy today.

The primary method of training officers before the rise of service academies was learning by doing. A young man was commissioned, primarily based on social acceptability, directly into his regiment. There the new officer learned drill, discipline, tactics, and the fundamental customs of the officer corps. All later learning was through pure experience, although more ambitious officers supplemented experience with study.

The development of formal military academies was a lengthy affair. John of Nassau, cousin to the more famous Maurice, opened a military academy at Siegen in 1619. This was not so much a national academy but instead was a for-profit operation, training officers from a variety of nations. Frederick William I of Prussia created a cadet school in Berlin in 1717 that provided about one-third of the officer corps, with the rest rising through the traditional regimental system. Russia opened a military academy in 1731. The British joined the trend in 1741 with the establishment of the Royal Military Academy at Woolwich to train artillery and engineering officers. The Austrian Theresian Military Academy inducted its first class in 1751, unique in that it admitted 100 noble and 100 common officer candidates. France also inaugurated an academy system in 1751.

These eighteenth-century academies were limited in scope. Most were dedicated to specialist skills like artillery and engineering and sought to inculcate and reinforce the culture of

the nobility. They were merely an alternative—and not necessarily an elite one—to the existing regimental system.

The military schools of the nineteenth century initially followed the same model. Britain established the Royal Military College in 1800 to train staff officers in response to reverses suffered in the early years of war with Revolutionary France. The initial role of the college was expanded in 1802 to include a Junior Department to train cadets as line officers. The college moved to a new location at Sandhurst in 1812. The cadets paid tuition, boarding, and uniform fees, as at a civilian public school, and were not subject to military discipline. The college developed a reputation for disorderly behavior, rioting, and bullying similar to the public schools of the era as well. Cadets received only rudimentary instruction in practical military skills, often outdated and usually useless in the field. Simultaneously, the traditional purchase system, which required no formal military training, remained the primary avenue of commission: between 1834 and 1838 only 86 of the 397 commissions given in the line infantry went to graduates of Sandhurst. Only after the abolition of the purchase system in 1870 did Sandhurst become the normal route to a commission.

The United States Military Academy (USMA) was also founded in 1802 and likewise had a low reputation during its first 15 years of operation.

> NAPOLEON ON MILITARY EDUCATION

Napoleon was a great believer in a formal military education and, unlike most of his contemporaries, believed that it went beyond the mechanics of laying guns or building fortifications. Whereas most nations were content to focus on the technical skills in their service schools, Napoleon stated: “Tactics, the evolutions, the science of the engineer and of the artilleryist can be learned in treatises, much like geometry, but the higher art of war is acquired only through the study of history of the wars and battles of the Great Captains, and from experience.” The formal study of military history thus became a central theme in the service academies of the empire.

—Melvin Smith

President Thomas Jefferson pushed for the creation of an academy to train American officers in artillery and engineering. The first two superintendents, hampered by both engineering duties that constantly called them away from USMA and a sense of privilege that often put them at odds with national authority, failed to instill a sense of duty and professionalism into the corps of cadets. Not until the tenure of Sylvanus Thayer (1817–1833) did the academy develop a sound and broad curriculum of military and civil engineering, leadership, and liberal arts. He also laid the groundwork for the key academy values of “Duty, Honor and Country” that became the official motto of the institution in 1898. Unlike its European counterparts, the USMA provided the vast majority of American officers in the nineteenth century and was for a number of years the only engineering school in the nation.

—Melvin Smith

Bibliography

- Crackel, Theodore. *West Point: A Bicentennial History*. Lawrence: University Press of Kansas, 2002.
- McDonald, Robert, ed. *Thomas Jefferson's Military Academy*. Charlottesville: University of Virginia Press, 2004.
- Smyth, John George. *Sandhurst*. London: Weidenfeld and Nicolson, 1961.
- Strachan, Hew. *Wellington's Legacy: The Reform of the British Army, 1830–1854*. Manchester, UK: Manchester University Press, 1984.

Triple Alliance

The Triple Alliance was a secret treaty of mutual assistance between Germany, Austria-Hungary, and Italy in effect from 1882 to 1915 and a diplomatic manifestation of the dissatisfaction felt by Italian imperialists. In May 1882, Italy, angered by the establishment of the French protectorate in Tunisia (1881), joined the Austro-German Dual Alliance. According to the treaty, the three powers were to support each other if the French should attack. Additionally, Germany and Austria-Hungary promised to help Italy acquire Tunisia (from the French) and Tripoli (from the disintegrating Ottoman empire).

The coordination of the Austria-Hungarian and Italian policies in the Balkans within the

framework of the Triple Alliance was instrumental in establishing and maintaining the de facto Austrian protectorates in Serbia (1881–1895) and Romania (1883–1916). After 1895, the three powers successfully concerted their opposition to the Japanese expansion and coordinated their policies in China. Nevertheless, the immediate Italian territorial ambitions in the Mediterranean and the Balkans remained unfulfilled. Additionally, Germany from 1899 to 1902 clearly shifted the focus of its alliance policy while trying to create a bloc with Russia and France and set the limits to British overseas expansion.

Dissatisfied, Italy turned to Paris and recognized, in 1900, the French protectorate in Tunisia and claims in Morocco in exchange for being given a free hand in Tripoli and Cyrenaica. At the beginning of World War I, Italy refused to support Germany and Austria-Hungary, stressing that France was not the aggressor. In 1915, Italy's entry into the war on the side of the Triple Entente (an alliance between Great Britain, France, and Russia that commenced in 1907) formally liquidated the Triple Alliance.

—Peter Rainow

Bibliography

- Hurst, Michael. *Key Treaties for the Great Powers, 1814–1914*. Vol. 2. New York: St. Martin's Press, 1972.
- Langer, William L. *European Alliances and Alignments, 1871–1890*. New York: Vintage Books, 1964.
- Rainow, Peter. “Triple Alliance.” In *Colonialism: An International Social, Cultural, and Political Encyclopedia*, edited by Melvin C. Page. Santa Barbara, CA: ABC-CLIO, 2003.

Triple Entente

The Triple Entente was an international collaboration among Great Britain, France, and Russia from 1907 to 1917 that developed from the settlement of their long-standing and intense colonial conflicts and differences. The earlier Anglo-French Entente, out of which the Triple Entente grew, was based on several conventions concluded on April 8, 1904. These agreements provided that France would recognize the priority of the British in Egypt in return for its own predominance in Morocco. France and England

agreed that no fortification in Morocco should be erected that would menace Gibraltar and that the Spanish claims in northern Morocco should be recognized. France surrendered its ancient exclusive fishery rights on the shores of Newfoundland in return for British territorial concessions on the borders between Gambia, Nigeria, and the French possessions in Africa. Additionally, Britain and France settled their disputes over spheres of influence in Siam, the customs regime in Madagascar, and control over the New Hebrides.

Another core treaty that led to the Triple Entente was the Anglo-Russian Entente, which was based on a bilateral convention concluded on August 31, 1907. The agreement sought to prevent the German penetration in the Middle East and envisaged the division of Persia into spheres of influence: Russian (northern), British (south-western), and a neutral zone between them. Additionally, Russia acknowledged Afghanistan and Tibet as being in the British sphere of influence.

Although the earlier Franco-Russian defense alliance of 1894 dealt primarily with the European strategic situation, the two powers successfully coordinated their attitudes and policies in the Middle East and China as well. Additionally, the Anglo-Russian and Anglo-French agreements had a broader international impact.

The Anglo-Russian Entente was instrumental in the Russo-Japanese rapprochement over their imperial interests in the Far East (in 1911). The Moroccan crisis of 1906 stimulated the development of military cooperation within the Anglo-French Entente.

During World War I, the Triple Entente finally developed into a multilateral military and political alliance. In 1915 and 1916 Britain, France, Russia, and Italy reached an agreement about the future partition of the Ottoman Empire. The entente powers also pledged to compensate Italy in case the German colonial empire was partitioned, but the entente powers did not fulfill this promise. After their victory, England and France managed to obtain control over German and Ottoman possessions through the League of Nations mandate system, but the revitalized controversies over colonial issues contributed to the final breakup of the entente in the 1920s.

—Peter Rainow

Bibliography

- McCullough, Edward E. *How the First World War Began: The Triple Entente and the Coming of the Great War of 1914-1918*. Montreal and New York: Black Rose Books, 1999.
- Taylor, A. J. P. *The Struggle for Mastery in Europe, 1848-1918*. Oxford: Oxford University Press, 1980.

■ Introduction: War and Warfare in Europe

By 1900, European states supported the largest, best-equipped, and most widely imitated armies and navies in the world. It is surprising therefore to find that the number of wars fought in Europe between 1750 and 1914 was comparatively small in comparison to the frequency of wars in other parts of the world and in previous periods of European history. Only the Seven Years' War (1756-1763) and the wars during the French Revolution and the Napoleonic era were general wars in which coalitions of European states fought one another. In the case of the Seven Years' War, only the fighting between Prussia and its two major oppo-

nents, Austria and Russia, took place in Europe itself. Great Britain, the ally of Prussia, and France, the ally of Austria, fought one another mainly on the seas and in India and North America.

After Napoleon's defeat at Waterloo in 1815, Europe was free of warfare until midcentury, when a coalition of Great Britain, France, and Ottoman Turkey fought against Russia in the Crimean War (1853-1856), which took place on the northeast coast of the Black Sea, far from Europe's major population centers. Between 1859 and 1871 four wars were fought in connection with the unification of Italy and Germany.

In 1859 France and its Italian ally Piedmont defeated Austria in a war that resulted in all of Italy coming under the control of Piedmont except the Papal States and Venetia. Between 1864 and 1871 Prussia fought three successful wars against Denmark, Austria, and France, the last of which, the Franco-Prussian War (1870–1871), led directly to the unification of Germany and the elevation of Prussian king Wilhelm I of the House of Hohenzollern to the position of German emperor. Prussia's wars also helped nationalists bring about the final unification of Italy. In the Austro-Prussian War of 1866, Italy allied with Germany and took Venetia; during the Franco-Prussian War, Italy gained control of the Papal States, while France, the papacy's protector, was focused on fighting the Germans. Europe had no further wars until 1914.

Although European armies and navies in the nineteenth century fought relatively few wars on European soil, they were busy in other ways and in other parts of the world. Troops were used to suppress domestic resurrections and revolutions in several parts of Europe in 1830 and 1848, in France in 1871, and in Russia in 1905. Armies and navies also played a key role in Europe's imperialist expansion in Africa and Asia. Russia fought successful wars against Persia, the Ottoman empire, and the khanates and emirates of central Asia but lost to Japan in 1905, when the two states went to war over conflicting claims in Korea and Manchuria. France went to war in Algeria, Morocco, sub-Saharan Africa, Vietnam, and China. Great Britain, with the largest empire, also was involved in the greatest number of imperialist wars, more than 50 between 1815 and 1914.

European armies and navies and their supporters were victorious in fighting another type of campaign, one that was political rather than military. This victory resulted in an unprecedented increase in military spending, especially between 1870 and 1914. The combined military expenditures of the six major powers (Britain, France, Russia, Italy, Austria-Hungary, and Germany) were four times higher in 1914 than they had been 44 years earlier. Such commitments were both a symptom and a cause of the antagonism and insecurities that characterized

European diplomacy in an age of imperialist rivalries, economic competition, and nationalist fervor.

—James H. Overfield

Seven Years' War, 1756–1763

The Seven Years' War was the third war between Austria and a rising Prussia for control over Silesia, the culmination of the long Anglo-French struggle for colonial supremacy, and the last major conflict before the French Revolution to involve all the traditional great powers of Europe. There were three principal theaters of this war. Great Britain helped support Frederick of Prussia in battling Austria, France, and Russia and their allies: British finances helped purchase mercenary troops to augment Prussia's army. The British navy battled the French navy in the Atlantic and Indian Oceans as well as the Mediterranean and Caribbean Seas. Finally, augmented by colonial militia, the British made a determined and ultimately successful effort to destroy French power in North America. When the Seven Years' War ended, Frederick gained Silesia, though with significant manpower losses; the British gained territory in India and all of French Canada (save for tiny St. Pierre and Miquelon Islands off the Newfoundland coast).

When hostilities erupted in North America after British general Edward Braddock's disastrous effort in 1755 to take Fort Duquesne, British king George II sought a treaty with Frederick II of Prussia to guarantee the state of Hanover, where George's family had ruled before moving to England. This friendship eventually led Austria to ally with France and Russia (and Saxony and Sweden and very much later Spain) against Prussia, England, and later Portugal.

Two years later, the European fighting, mostly to the east and south of the Kingdom of Prussia, began. When Czarina Elizabeth joined the Austrian-French alliance, Frederick, who understood the advantages of interior lines, believed strongly in the initiative, and was an aggressive, tactically oriented commander, attacked Saxony to take that kingdom out of the opposing alliance. In spring 1757, he invaded Bohemia and defeated the Austrians at Prague.

Then he laid siege to Kolin and, dividing his forces to retain the siege and meet a large relief army, lost one-third of them in the resulting five-hour battle against Austrian count Leopold von Daun in June. Thereafter, Frederick retreated.

At this point, Frederick demonstrated his understanding of interior lines and of the proper use of audacity. He faced the French advancing onto Hanover, which he was pledged to defend, the Swedes on his north, the Russians to his east, and the Austrians from the southeast. He fought a larger French-led army at Rossbach in the state of Thuringia and won a two-hour battle, and a month later, in early December, he defeated the Austrians in Silesia near the town of Leuthen.

The victory at Leuthen was remarkable. Frederick hurried 170 miles in 12 days to take command of a defeated Prussian army and expel the Austrians, who occupied a sound defensive position about 5 miles long on a north-south axis. Frederick's forces approached, and then, as several oblique hills hid his advance, he moved the bulk of his smaller army—infantry and cavalry—to his right. When he attacked, his force greatly surprised and eventually overwhelmed the Austrian left. Despite the efforts of Austrian prince Charles to reestablish his line on an east-west axis, when nightfall came, the Austrians had fled the field, having suffered major casualties heading into winter quarters.

This victory may well have marked the high tide for Prussia during the conflict. Although Prussian forces initially defeated the Russians in a costly battle at Zorndorf in the summer of 1758, Frederick was defeated by a combined Austrian-Russian army at Kunersdorf in the summer of 1759, losing some 18,000 men in six hours of battle. Frederick crossed the Oder River near Frankfurt and attacked the larger allied army, seeking to envelop its flanks, but his forces became disorganized, attacked in piecemeal fashion, and suffered grievously. Later, Prussia lost a detachment at Maxen before going into winter quarters.

In 1760, the main fighting occurred in Silesia, although there were battles elsewhere. In the fall of 1760, the Russians seized Berlin, the Prussian capital, although Frederick soon defeated von Daun at Torgau. It was a bloody and

costly victory, however, where Frederick lost one-third of his attacking force.

In 1761, William Pitt stepped down as British prime minister, and his policy of subsidizing Frederick's European land campaigns to free British power to seize France's overseas empire ended. This development led more to campaigns of maneuver and countermaneuver in Europe. Still, before the weight of the Austrian-based alliance could overwhelm Prussia, Elizabeth of Russia died and was succeeded by Peter III, who greatly admired Frederick, agreed to an easy peace, helped arrange peace between Prussia and Sweden, and helped Frederick push Austrian forces out of Silesia. In the ensuing peace treaties, Austria lost Silesia to Prussia; otherwise, territorial borders remained mostly unchanged.

The conflict between Great Britain and France was more decisive. Called the French and Indian War in North America, it was the last of four great colonial conflicts on that continent and across the globe, and it resulted in a great British victory. Prime Minister William Pitt planned financially to support Prussia to contain the French on the European continent while he concentrated British power on conquering French colonial possessions. Despite some fits and starts and perhaps less than ideal cooperation by American colonial governments and militia, the British ultimately triumphed over the French in North America while defeating the French in India and thus paving the way for the vast British empire on the subcontinent.

Pitt put the wealth of Britain into the war effort. He sent large armies transported by huge navies to the New World; he purchased supplies from colonial purveyors; and he engaged colonial militia and rangers. And he kept his focus on the objective—winning Quebec. Similarly, he sought to defeat the French fleet and to take French possessions on the Indian subcontinent.

By 1758, the weight of British (and colonial) power began to be felt in the conflict. Pitt brought focus and determination to the conflict. The British under General John Forbes again attacked Fort Duquesne, this time advancing from western Pennsylvania in the fall. The attack succeeded, the French retreated, and the British cut off Quebec from French Louisiana. Also, that

year, another offensive commanded by General Jeffrey Amherst sailed from Halifax, Nova Scotia, to attack Louisbourg, a French fort on Cape Breton Island, guarding the entrance to the Gulf of St. Lawrence and the St. Lawrence River, the route connecting Quebec and France. Amherst landed west of Louisbourg and brought up siege weapons, and the fort surrendered. However, an attack against Fort Ticonderoga on Lake George did not fare as well, and the British rather unexpectedly retreated when the French commander expected a continuation the next day and he in turn contemplated retreat.

The victories of 1758 were completed by greater victories in 1759. General Amherst gained control over Ticonderoga, which the French had mined and exploded before abandoning. Meanwhile, General James Wolfe sailed to Quebec, approached the city from the western side, engaged in a battle on the Plains of Abraham against the French commander, Louis-Joseph de Montcalm-Gozon, the Marquis de Montcalm de Saint-Véran, and the British compelled the surrender of the citadel. Both opposing commanders died in this pivotal battle.

In 1760, Amherst compelled the surrender of Montreal, and the French had lost their colony in Quebec. The war would drag on for another several years as the conflict expanded to include the Spanish and Cuban and Gibraltar areas of operation.

Meanwhile, the British defeated the French in India. After the British won at Wandiwash in early 1760, they pushed the French back upon their main base at Pondicherry in southern India. British control of the seas guaranteed the attackers adequate supplies, while the French defenders weakened. Finally, some months later, the British began a siege bombardment in January 1761, and the French garrison surrendered five days later. Thereafter, the British East India Company, through diplomacy, trade, bribery, and force, managed to expand British power along the coast from the Tamils in the south to north of Madras to the east and north. Thereafter, the British engaged in four so-called Mysore Wars against local rulers to solidify their growing empire that developed from the fighting of the Seven Years' War. In the end, this world war of a sort led to Britain gaining French Canada,

Minorca, and Florida; France ceding Louisiana to Spain; and Prussia keeping Silesia.

—Charles M. Dobbs

Bibliography

- Dobbs, Charles M. "Seven Years' War (1756–1763)." In *Ground Warfare: An International Encyclopedia*, edited by Stanley Sandler. Santa Barbara, CA: ABC-CLIO, 2002.
- Furieux, Rupert. *The Seven Years War*. London: Hart-Davis MacGibbon, 1973.
- Hall, Ronald Acott. *Frederick the Great and His Seven Years War*. New York: E. P. Dutton, 1915.
- Popock, Tom. *Battle for Empire: The Very First World War, 1756–63*. London: M. O'Mara, 1998.

French Revolutionary Wars, 1792–1802

From the outset, the French Revolution aroused the hostility of European royalty, who feared that revolutionary ideas could spread beyond France to stir up upheavals in their own countries. Likewise, French émigré nobles added fuel to the war fervor by urging European rulers to intervene and suppress the revolution. Friction with Austria intensified when King Louis XVI and Queen Marie Antoinette tried in vain to flee abroad in June 1791 and join the revolution's enemies. Finally, the Pillnitz Declaration issued by the Austrian and Prussian rulers on August 27, 1791, made it clear they would intervene and restore royal power if other European powers would join them. The French interpreted the declaration as an act of interference in their internal affairs, and it was the French who first declared war. When Austria and Prussia concluded a military convention in February 1792, the Legislative Assembly declared war on Austria on April 20, 1792.

At the beginning, French troops suffered a series of setbacks. Although the army had numbers and enthusiasm, it lacked discipline and experienced officers. An attempt to invade Belgium ended in disaster. Meanwhile, Austro-Prussian forces under the Duke of Brunswick advanced toward Paris. On July 25, 1792, the duke issued the famous Brunswick Manifesto, threatening to raze the capital if the royal family was harmed. The Legislative Assembly proclaimed France in danger, and revolutionaries accused King Louis

of conspiring with the Austrians. Tension grew when a Parisian crowd stormed the Tuileries palace on August 10, 1792, and arrested and imprisoned the royal family. In September the new legislature, the National Convention, abolished the monarchy and proclaimed a republic. The Girondins, a moderate republican group, and the Jacobins, a radical revolutionary faction, dominated the Convention, which had the immediate task of continuing a war that was going badly. Verdun surrendered on September 2, 1792; Lafayette with his troops had already deserted to the Austrians.

The Convention decreed the enlistment of new volunteers, reorganized and equipped the army, and placed it under the command of Generals Charles Dumouriez (1739–1823) and François Kellermann (1735–1820). The republican army won its first victory over the Duke of Brunswick at Valmy on September 20, 1792. The engagement, not important militarily, was nevertheless a victory of the revolutionary army and a turning point in the war. In late 1792 the French continued the offensive. The Prussians evacuated Verdun, and General Adam Custine (1740–1793) occupied Mainz and Frankfurt. Dumouriez defeated the Austrians at Jemappes, took Brussels, and occupied the Austrian Netherlands, roughly present-day Belgium. French troops entered Savoy and Nice, and their patriots requested annexation to France.

Meanwhile, the execution of King Louis in January 1793 and the annexation of Belgium and most of the Rhineland forced Britain to form the First Coalition, consisting of Russia, Austria, Prussia, Spain, Holland, and Sardinia. In response, the Convention boldly declared war on Britain, Holland, and Spain in February 1793. The Austrians pushed the French out of Belgium and at the Battle of Neerwinden defeated General Dumouriez, who soon abandoned his troops and also defected to the Austrians. In southeastern France, the British besieged and captured the port of Toulon. The troops of the republic had once again been pushed back on all fronts.

In Paris, the Jacobins took control of the government on June 2, 1793. Facing a dangerous war situation and widespread antigovernment outbreaks throughout the country, the Jacobins set up the Committee of Public Safety and instituted the Reign of Terror to win the war and

suppress the revolts of the Girondins, royalists, and Catholic clergy. On August 23, 1793, the Convention declared universal conscription of all single men ages 18 to 25 to defend France. The revolutionary army employed new tactics emphasizing the use of artillery and rapid mobility of the cavalry. Promotion was based on merit. In December 1793 the republican army took the offensive against the Coalition armies, forcing them to retreat across the Rhine, while the young Colonel Napoleon Bonaparte helped wrest the city of Toulon from the British.

In Paris, leadership passed to revolutionary idealist Maximilien Robespierre, who would dominate the Convention until July 1794. Robespierre dreamed of establishing a Republic of Virtue through the Reign of Terror. He cracked down on the Hebertists, who wanted to carry the economic revolution further, and guillotined the Dantonists, who called for an end to the Terror. After General Jean Jourdan's victory at Fleurus against the First Coalition armies in June 1794, the initiative on the Continent favored France, and terror seemed increasingly unnecessary. Reacting to the excesses of Terror, moderates in the Convention and Robespierre's opponents in the Committee of Public Safety brought him down in July 1794 and beheaded him. Political changes followed. The rule of the Thermidorians, lasting from July 1794 to the autumn of 1795, brought the dismantling of the apparatus of Terror and the closing of the Jacobin clubs. In 1795 the Thermidorians drafted a new constitution and set up the Directory (1795–1799), a political body of five directors jointly responsible for conducting France's domestic and foreign affairs.

In the war against the European Coalition, the army of the Directory drove the Austrians out of Belgium and occupied Holland in December 1794. Prussia, financially exhausted, withdrew from the war and concluded the Treaty of Basel in March 1795. Soon Spain and Holland made peace. The Polish revolt forced Russia to leave the Coalition. Only Britain and Austria remained at war with France. The war against Austria continued during 1796–1797. Jourdan invaded southern Germany, while Napoleon attacked the Austrians in Italy. Although the German campaign ended in failure, in the Italian

campaign Napoleon defeated the Austrians at the battles of Millesino, Lodi, Castiglioni, Roveto, Bassano, and Arcola in 1796. He struck at the Sardinian army at Mondovi, knocked it out of the war, and occupied the fortresses of Mantua and Milan in January 1797. He advanced toward Rome, but the pope hastily signed the Treaty of Tolentino. In April 1797 Napoleon crossed the Alps and forced the Austrians to conclude an armistice. Six months later they signed the Treaty of Campo Formio, by which they ceded Belgium and the Rhineland to France but retained Venice, Istria, and Dalmatia. The Italian campaign effectively ended the First Coalition, and Britain alone remained at war with France.

Napoleon now decided to strike at Britain. He organized the Egyptian expedition, ultimately hoping to deprive the British of India, a most unlikely prospect in view of British sea power. In May 1798 he sailed for Egypt with 350 ships, more than 30,000 troops, and a corps of scientists. He defeated the Mamluk cavalry at the Battle of the Pyramids near Cairo in July. Admiral Horatio Nelson (1758–1805), however, destroyed Napoleon's fleet at the Battle of the Nile, cutting him off from Europe. In early 1799 Napoleon set out to take Palestine and Syria but failed. He returned to Egypt in May and smashed an Ottoman force at the Battle of Abukir. This victory left him free to consider his return to France. In August he sailed from Egypt, leaving General Kléber in command of the French army.

In Europe, Britain formed the Second Coalition (December 1798), which included Austria, Russia, Naples, Portugal, and the Ottoman empire. In 1799 coalition armies defeated the French at the Battle of Magnano, while at the Battle of Cassano the Austrian general Melas and the Russian army under Marshal A. Suvorov (1729–1800) won a major victory. Suvorov overcame another French army at the Battle of Tiberia in June, while at the Battle of Novi he and Melas routed the French. Only General André Masséna was successful over the Russians, driving them out of Zurich, while General Guillaume Brune defeated an Anglo-Russian force in Holland. But soon the Second Coalition began to fall apart. In October 1799 Russia withdrew and made peace with France when Tsar Paul I changed sides and revived the Armed Neutrality against Britain.

Back from Egypt, Napoleon staged a coup d'état on November 9, 1799; set up the Consulate; and proclaimed himself first consul. After the allies rejected his peace offering, in early 1800 Napoleon renewed his campaign in northern Italy against the Austrians. Marching through the most difficult snow-covered terrain, he crossed the St. Bernard Pass, attacked the Austrians, and took Milan. On June 14 he fought an obstinate battle against the troops of General Melas at Marengo, turning a likely French disaster into an Austrian rout. The Austrians then asked for an armistice, but only after a French victory at Hohenlinden (December 1800) and a French invasion of Austria (January 1801) did the emperor negotiate the Treaty of Lunéville on February 9, 1801. By its terms, France annexed Belgium and southwestern Germany, while Austria recognized the Helvetian (Swiss), Batavian (Dutch), Ligurian (Genoese), and Cisalpine (Lombardy) republics, which became French dependencies.

Britain still remained at war with France until 1802. But both countries were now eager for a breathing spell. On March 27, 1802, they negotiated the Treaty of Amiens, which ended Anglo-French hostilities. For the first time in ten years, Europe was at peace. Yet the peace of Amiens proved to be a brief truce. A year later a second round of wars, the Napoleonic Wars, would begin.

—James Farsolas

Bibliography

- Bertaud, Jean-Paul. *The Army in the French Revolution*. Princeton, NJ: Princeton University Press, 1988.
- Doyle, William. *The Oxford History of the French Revolution*. New York: Oxford University Press, 1990.
- Schama, Simon. *Citizens: A Chronicle of the French Revolution*. New York: Random House, 1990.

Napoleonic Wars, 1803–1815

The Napoleonic Wars were a continuation of the French Revolutionary Wars that began in 1792 and ended with the conclusion of the Anglo-French Treaty of Amiens in 1802. But the peace of Amiens turned out to be temporary. Soon territorial disputes between France and Britain brought them into a new confrontation, and

Napoleon encamped an army around the port of Boulogne on the English Channel in anticipation of an invasion of Britain. In response, the British declared war on France on May 26, 1803, and set about organizing a new alliance, the Third Coalition, that included Austria, Russia, and Sweden.

Napoleon hastily removed his troops from the English Channel and sent them to the Rhine and northern Italy. Having assumed command of the armies in Germany, he routed the Austrians at the Battle of Ulm (October 1805) and took 30,000 Austrians prisoner. Almost simultaneously, the British Royal Navy under Admiral Horatio Nelson destroyed the French fleet at Trafalgar on October 21, thus breaking France's naval power and confirming Britain as the mistress of the seas.

While Britain dominated the seas, Napoleon continued the conquest of central Europe. He occupied Vienna, while Russian armies under General Kutuzov and Tsar Alexander arrived at Olmütz, a city in Moravia, to join the Austrians in an attempt to stop the French advance. On November 29, 1805, Napoleon's army took position at Austerlitz, where his army of 73,000 men faced a combined Austro-Russian army numbering 86,000. On December 2 in what is sometimes called his masterpiece, he defeated the Austro-Russian armies, and in the wake of the defeat Emperor Francis II of Austria accepted the humiliating Treaty of Pressburg, ceding territories to France's German allies and Napoleon's Italian kingdom. Napoleon's brother Joseph became king of Naples, while another brother, Louis, was proclaimed king of Holland. Napoleon also dissolved the Holy Roman Empire in August 1806, replacing it with the Confederation of the Rhine, consisting of 16 German states with himself as its protector. He also ordered Francis II to abandon his imperial crown of Holy Roman Emperor for the more restricted title of Francis I, emperor of Austria.

Napoleon still faced Britain and Russia, however, and soon had a new enemy in Prussia, whose leaders felt threatened by the creation of the Confederation of the Rhine and the presence of French troops throughout Germany. The Prussians on October 1, 1806, delivered an ultimatum to Paris demanding the withdrawal of French troops to the west of the Rhine and simultaneously invaded Saxony. In response,

Napoleon launched his own lightning campaign and routed the Prussians in two simultaneous battles at Jena and Auerstädt in October 1806.

Napoleon next turned against Britain and tried to destroy the "nation of shopkeepers" (his term) by imposing an economic blockade known as the continental system. His Berlin Decree (November 1806) banned trade and the importation of British goods into continental Europe. Russia, however, continued to pose a threat to Napoleon's grandiose designs even after the disaster at Austerlitz. After fighting an indecisive battle against the Russians on the ice and snow at Preussisch-Eylau in February 1807, he routed the Russians at the Battle of Friedland in June. Alexander concluded an armistice, and in early July 1807 the two emperors and King Frederick William of Prussia met on a raft on the Nieman River and concluded the Treaties of Tilsit, by which Alexander and Napoleon agreed to divide Europe between them: Russia recognized Napoleon's dominance in western and central Europe, and France supported Russia's claims in eastern Europe and Ottoman territories. Alexander also agreed to join Napoleon's economic blockade.

Napoleon had reached the zenith of his power by 1808. He created new republics, deposed dynasties, established the French empire, set up dependencies ruled through relatives or close friends, and ruled 70 million people. Russia maintained friendly relations with him. Only Britain, Sweden, and the Ottoman territories in the Balkans remained outside French influence. But soon his power began to fade, as the rise of nationalism among the defeated nations and Britain's persistent opposition turned the tide against him.

Nationalism was most evident in Portugal and Spain, which Napoleon invaded after Portugal defied Napoleon's ban and opened trade with Britain. Although he was successful at first, a Spanish guerrilla war, which the British financed, tied down 200,000 French troops. After several years of hard fighting, Napoleon's brother Joseph, who had been installed as king after Ferdinand VII had been deposed, relinquished the throne and fled Madrid in 1812. The Peninsular War was Napoleon's first major defeat.

In 1809 Austria announced, rather prematurely, a "war of liberation" of the German

EUROPE IN 1810



people and sent an army of 170,000 into Germany. Napoleon left Spain and again took command of the French army against the Austrians. He defeated them at the Battle of Wagram (July 5–6) and compelled them to sign the Treaty of Schönbrunn, depriving them of considerable territory and population.

Relations between France and Russia also began to deteriorate. After Alexander lifted the economic blockade and opened Russian ports to British trade, Napoleon, furious, embarked on his invasion of Russia. On June 24, 1812, he crossed the Nieman River with his multinational Grand Army of 500,000 men. The army advanced rapidly, but the Russians evaded a pitched battle and allowed the French to press on through burning villages, towns, and cities. On September 7 Napoleon engaged the Russians at Borodino, where despite repeated French attacks the Russian defense held. Finally the two

armies retired toward the evening to their earlier positions after between 75,000 and 90,000 troops had been killed or wounded.

The next day, preferring the loss of Moscow to the loss of his army, the Russian general Mikhail Kutuzov decided to withdraw his troops beyond Moscow, allowing the French to enter the city. On September 14 the last Russian detachment left Moscow, and virtually the entire population followed. Napoleon's vanguard entered a deserted city where mysterious fires broke out, burning it to the ground and devouring supplies and everything upon which the enemy had depended for shelter and subsistence.

Napoleon offered Alexander a truce but, after waiting five weeks without an answer, ordered what proved to be a catastrophic retreat as swarms of soldiers and peasants harassed and attacked his army, committing horrific atrocities upon the starving, freezing, and dying soldiers.

The Russian army made surprise attacks on the French at the battles of Tarutino, Maloyaroslavets, and Vyazma. At the crossing of the Berezina River, the Russians caused thousands of French soldiers to drown or freeze to death. Napoleon, seeing the destruction of his Grand Army, abandoned it on December 5, 1812, and returned to Paris to raise another army.

Early in 1813, Napoleon returned to meet the Russians in Germany. This time, however, he confronted not only the Russians but also a new European coalition as well, the Sixth, that began with the Russo-Prussian alliance to wage the “war of liberation” in Germany. In a series of battles during the spring of 1813, Napoleon defeated the Prussians and Russians at Lützen and Bautzen, and even after Austria joined the coalition, Napoleon again overwhelmed the allied armies at the Battle of Dresden, his last major victory. At the Battle of Leipzig (October 16–19), however, the allies destroyed Napoleon’s forces, and once more Napoleon was forced to retreat. Five months later, on March 31, 1814, Tsar Alexander entered Paris at the head of the allied armies and dictated the terms of surrender. Napoleon abdicated, and Louis XVIII became king of France.

Napoleon’s captors exiled him to the island of Elba, assigning it to him as a sovereign principality and allowing him to retain the title of emperor. The French treasury provided him with an annual income of 2 million francs. In February 1815, however, Napoleon escaped from Elba aboard a small ship and landed in southern France. Received enthusiastically by the French people, he entered Paris on March 20 and began his ephemeral Hundred Days rule. The alarmed allies, meeting at the Congress of Vienna, raised an army under Arthur Wellesley, Duke of Wellington. Napoleon also gathered an army, marched to the north, and repelled the Prussian attack under General Gebhard Blücher at Ligny. On June 18 the Battle of Waterloo ensued. At one point in the battle it seemed that the French would carry the day, but when Blücher returned and joined Wellington with reinforcements, the French army disintegrated. The Napoleonic Wars had finally ended.

Napoleon was exiled to the distant volcanic island of St. Helena, off the west coast of Africa,

where he arrived on October 15, 1815. Here he remained until his death on May 5, 1821.

—James J. Farsolas

Bibliography

- Connelly, Owen. *Blundering to Glory: Napoleon’s Military Campaigns*. Wilmington, DE: Scholarly Resources, 1987.
- Esdaile, Charles. *Napoleon’s Wars: An International History, 1803–1815*. New York: Viking, 2008.
- Farsolas, James J. “Napoleonic Wars (1803–1815).” In *Ground Warfare: An International Encyclopedia*, edited by Stanley Sandler. Santa Barbara, CA: ABC-CLIO, 2002.
- Nosworthy, Brent. *With Musket, Cannon and Sword: Battle Tactics of Napoleon and His Enemies*. New York: Sarpedon, 1996.
- Riehn, Richard K. *Napoleon’s Russian Campaign*. New York: McGraw Hill, 1990.
- Riley, Jonathon P. *Napoleon as a General*. New York: Hambledon Continuum, 2007.

The Crimean War

Waged between 1853 and 1856, the Crimean War pitted imperial Russia against the allied forces of the Ottoman empire, Great Britain, France, and Piedmont-Sardinia. The first European war since Napoleon’s defeat in 1815, the Crimean War resulted from failed diplomacy over European powers’ rival interests in the Middle East. Remembered as a useless and bloody war, the Crimean War has been described as the first modern war due to technological innovations, including ironclad warships, tactical use of the electric telegraph, the railroad, the minié ball, and trench warfare. It also was the first war that was photographed and was covered by war correspondents “in the field.” Primarily fought on the Black Sea’s Crimean Peninsula, the war ended in a decisive and humiliating defeat for Russia.

By the mid-nineteenth century, Britain’s and Russia’s competing visions for the European balance of power and dominance in the eastern Mediterranean focused on the Ottoman empire and led to an international conference in London, where the Straits Convention was signed in 1841. The convention forbade the passage of foreign warships through either the Dardanelles or the Bosphorus as long as the Ottoman empire was at peace. Although the agreement effectively

> FLORENCE NIGHTINGALE

Credited as the founder of modern nursing, Florence Nightingale (1820–1910) symbolized patriotic duty in Great Britain during the Crimean War. When the British public learned at the war's outset that sick and wounded soldiers were not properly cared for, Nightingale organized a group of nurses who, under her command, battled the filth, pestilence, disorder, and overcrowded conditions found at the British military hospital in Scutari. Popularly known as “the lady with the lamp” for her hospital rounds by lamplight, Nightingale championed the ordinary soldier, leading a national campaign for the improvement of soldiers' health and living conditions that continued after war's end.

—Brigid O’Keeffe

Known the world over as the “The Lady with the Lamp,” Florence Nightingale rose to fame during the Crimean War for introducing the first female nurses to military medical facilities. (Library of Congress)



blocked Russia's access to the Mediterranean, it protected Russia's position in the Black Sea unless it was itself at war with Turkey.

In 1844 Russian tsar Nicholas I met with the British foreign secretary, Lord Aberdeen, to discuss the Ottoman empire's future. Already convinced of the Ottoman empire's imminent dissolution, Nicholas I departed, confident that Russia and Britain would cooperate in overseeing the partitioning of Ottoman lands in the event of the empire's demise. Britain, however, remained committed to upholding the territorial integrity of the Ottoman empire and to blocking Russia's imperial ambitions in the Mediterranean.

In 1853 an ongoing dispute between Catholic and Orthodox Christians over guardianship of the Palestinian holy places provoked renewed conflict between the Ottoman and Russian

empires. When the Ottoman government bowed to the pressure of French emperor Napoleon III and sided with Catholics in Jerusalem, Nicholas I defended the interests of Orthodox Christians. He demanded that the Ottoman government uphold Orthodox interests in settling the Holy Land dispute and recognize Russia as the protector of the Ottoman empire's Orthodox Christian subjects. When the Ottomans refused, Nicholas I ordered Russian forces to occupy the Ottoman-controlled Danubian Principalities in May 1853. Britain and France, both opposed to Russian expansion in the eastern Mediterranean, dispatched naval forces to Besik Bay, just to the south of the Dardanelles, on Turkey's northwest coast.

After a series of failed diplomatic efforts, fighting erupted between Russian and Ottoman forces in October 1853. Russia enjoyed an

initial victory in sinking the Ottoman naval fleet off Sinope, in the Black Sea, in November, but the British decried the battle as a massacre. In March 1854 Britain and France, later joined by Piedmont-Sardinia in 1855, allied with the Ottomans and declared war on Russia. Austria claimed neutrality and forced Russia to withdraw from the Danubian principalities. The allies confronted Russia along the Russo-Turkish border in the Caucasus and in a series of naval attacks on the Black, Azov, Baltic, Bering, and White seas but ultimately decided to center their offensive on Russia's naval base at Sevastopol in the Crimea. The Siege of Sevastopol began on October 17, 1854. Meanwhile, following the Anglo-French victory at Alma (September 20, 1854), the Russians claimed victory at the Battle of Balaklava (October 25, 1854) in which British troops charged down a narrow valley that was flanked by Russian guns on both sides. Of the close to 700 British troops who attacked, 110 were killed, 129 were wounded, and another 32 were wounded and taken prisoner, all in a battle that lasted only 20 minutes. The name of the British unit was the Light Brigade, inspiring the famous Tennyson poem "The Charge of the Light Brigade."

Sevastopol fell to the allies on September 9, 1855, and by early 1856 the combatants were ready to negotiate peace. The war had claimed an estimated 256,000 Russian and 252,000 allied lives, with a high proportion of deaths resulting from disease rather than military action. Meanwhile, the reform-minded tsar Alexander II had succeeded Nicholas I upon his death in March 1855.

By the Treaty of Paris, signed in March 1856, Russia surrendered territories (Moldavia, Wallachia, and Serbia) in the Danubian principalities that it had gained in previous wars, abandoned its demands for recognition as protector of the Ottoman empire's Orthodox subjects, and joined the other signatories in renouncing further interference into the Ottoman empire's internal affairs. The treaty turned the Black Sea into a neutral zone and guaranteed the territorial integrity of the Ottoman empire. Britain and France had succeeded in containing Russia's expansionist ambitions, and Piedmont-Sardinia had garnered support in its pursuit of Italian independence from Austria. Russia's status among

European powers shrunk, while reformers at home interpreted the war as evidence of Russia's need for critical reforms. Russia turned to domestic reforms for the next two decades and withdrew from international politics, which facilitated German and Italian unifications.

—Brigid O'Keeffe

Bibliography

- Arnold, Guy. *The Historical Dictionary of the Crimean War*. Lanham, MD: Scarecrow, 2002.
 Ponting, Clive. *The Crimean War*. London: Chatto and Windus, 2004.
 Riasanovsky, Nicholas V., and Mark D. Steinberg. *A History of Russia*. New York: Oxford University Press, 2005.

Franco-Prussian War

The Franco-Prussian War of 1870–1871 was the third of three wars of German unification. Prussia's victory allowed its minister-president, Otto von Bismarck (1815–1898), to create the German Empire and thereby complete the process begun by the Danish War of 1864 and the Austro-Prussian War of 1866.

The Franco-Prussian War's immediate origins lay in the so-called Hohenzollern Candidature. In early 1870 the Spanish, having overthrown Queen Isabella II, offered their crown to Prince Leopold Hohenzollern-Sigmaringen, Prussian King William I's south German Catholic cousin.



Prussian infantry advance at the Battle of Sedan in September, 1870, during the Franco-Prussian War. The battle was a decisive victory for the Germans, who defeated and captured the sole remaining French field army, along with Napoleon III. The defeat led directly to Napoleon's overthrow and the end of the Second French Empire. (Henry Guttman/Getty Images)

► FIELD MARSHAL HELMUTH VON MOLTKE THE ELDER

Helmuth von Moltke the Elder (1800–1891), chief of the Prussian General Staff during 1857–1888, organized and oversaw the German triumph over France. His preparations for war in the late 1860s, which gave the Prussian army strategic and tactical command methods to fight on broad fronts, enabled Prussia and its German allies to mobilize with an unprecedented speed and efficiency in the war with France. This combined with superior tactics and artillery provided an advantage that the French could not overcome. Von Moltke also oversaw actual field operations, including the siege of Paris. His clashes with Bismarck about the actual role of the civilian leadership in wartime offered a foreshadowing of far more serious civil-military clashes among German leaders during World War I.

—Bruce DeHart

Pressured by Bismarck, Leopold accepted Spain's offer in late June, but when news reached Paris, Emperor Napoleon III's government, fearing Hohenzollern encirclement, threatened war on July 6. Although Leopold withdrew his acceptance, the French government pressed the issue, demanding that William promise that the Hohenzollern candidacy would never be renewed.

Confronted by French ambassador Vincente de Benedetti (1817–1900) at Bad Ems on July 13, William politely rejected the demand, subsequently telegraphing to Berlin an account of what had transpired. To create a crisis with France, Bismarck made public an altered version of the king's telegram that implied that William and Benedetti had exchanged insults. Bismarck's Ems Dispatch inflamed public opinion in both Germany and France, and on July 19 the French declared war.

Superior leadership and organization allowed Prussia and its German allies to mobilize rapidly and seize the initiative. Invading France through the Lorraine gap, German armies won a series of hard-fought victories (Spichern, Vionville, Mars-la-Tour, Gravelotte, and St. Privat) in early and mid-August, demonstrating superiority both in tactics and artillery. They then

bottled up one of the two main French armies, Bazaine's Army of the Rhine, in the fortress city of Metz (August 19) and defeated the second main French force, MacMahon's Army of Chalons, at Sedan (September 1–2). The defeat at Sedan resulted in the capture of Napoleon III and 100,000 French soldiers.

In Paris, French leaders proclaimed a republic and established a Government of National Defense that raised half a million soldiers to continue the war. After Sedan, however, the war's outcome was never in doubt, as the fighting revolved around German efforts to pacify conquered provinces and to force an encircled Paris to capitulate. On January 28, 1871, with Parisians on the verge of starvation, French leaders accepted an armistice. The Treaty of Frankfurt, adopted in May, required France to surrender Alsace and part of Lorraine, pay an indemnity of 5 billion francs, and accept an army of occupation until the indemnity was paid.

Arousing nationalism throughout the German states, the Franco-Prussian War created circumstances in which the leaders of Baden, Bavaria, and Württemberg consented to join with the states of the Prussian-dominated North German Confederation (1867) to form the German Empire on January 18, 1871. Prussia's victory and German unification signaled a new balance of power in Europe, while the harsh peace poisoned Franco-German relations for the immediate future.

—Bruce DeHart

Bibliography

- Carr, William. *The Origins of the Wars of German Unification*. London: Longman, 1991.
- Howard, Michael. *The Franco-Prussian War*. New York: Routledge, 1989.
- Wawro, Geoffrey. *The Franco-Prussian War*. Cambridge: Cambridge University Press, 2003.

War Memorials in Nineteenth-Century Europe

War memorials in nineteenth-century Europe reflected two central concerns that developed out of the French Revolutionary and Romantic eras: recognizing the individual and nationalism. Monuments developed over the course of the century to reflect ever more muscular nationalism

➤ ARC DE TRIOMPHE

The most notable monument of the nineteenth century is the massive Arc de Triomphe, standing over 164 feet (50 meters) high in the center of a traffic hub designed by Baron Haussmann that anchors the Champs-Élysées avenue in Paris. In 1806, to honor his victory at Austerlitz, Napoleon commissioned architect Jean-François Chalgrin to begin the project, completed in 1836. The triumphal arch has ancient antecedents, such as the Ishtar Gate in Babylon, and Roman arches, such as that of Constantine in Rome. A traditional triumphal arch only works if approached from the front or rear, so Chalgrin designed this monument wide enough to have side arches, allowing for the arch effect from all directions. The Arc de Triomphe features large relief friezes of the Napoleonic era, including the departure of the Marseillaise volunteers in 1792 (also celebrated in the French national anthem), the Triumph of 1810, the Resistance of 1814, and Peace. Higher up are depictions of General Marceau's funeral, the Battle of Aboukir Bay, the capture of Alexandria in Egypt, and the passage of the Arcole Bridge during Napoleon's Italian campaign. Chiseled into the walls are the names of hundreds of battles and heroic French soldiers. The flame of the unknown soldier was not added until after the First World War.

—Douglas McGetchin



(James Steidl/Dreamstime)

and an increasing focus not just on the generals and leaders but also on the sacrifices of the common soldier.

Early in the nineteenth century, the Napoleonic Wars received the greatest attention for the construction of war monuments, which ignored the individual soldier. Until the latter part of the century, battlefield dead were tipped into mass graves, and then a tumulus, an artificial mound, was constructed over it. At Waterloo, Dutch king William I had a large mound, the Lion's Hillock, built and crowned with a stone structure featuring a statue of a lion. A noteworthy French monument there is the Wounded Eagle (L'Aigle blessé), marking the spot where Napoleon's Imperial Guard made its last stand. In the course of the nineteenth century, the desire to have individual burials developed. The American Civil War was the first modern war to have its dead buried in

cemeteries. The practice had spread to Europe by the time of the Franco-Prussian War (1870–1871). The introduction of large cemeteries in the nineteenth century reflected the pressures of population growth, especially in urban centers; the increased political consciousness of the masses; and the desire of the wealthy to mark social distinction through their tombs.

Promoting nationalism was another important motivation for constructing war memorials. Germans, for example, developed monuments to affirm their national identity through their defeat of Napoleon. During the struggle against Napoleon, Crown Prince Ludwig of Bavaria (1786–1868) developed the idea of a temple dedicated to great Germans and collected busts and statues of famous Germanic rulers, cultural figures, and generals, including August von Gneisenau, Gerhard von Scharnhorst, and Gebhard von Blücher, all of

whom were Prussian generals in the Napoleonic Wars. To house them, he built Walhalla (1830–1842) overlooking the Danube River outside Regensburg. Modeled on the Athenian Parthenon by the neoclassical architect Leo von Klenze (1784–1864), its name taken from the Norse mythical hall for fallen warriors, it depicts a battle on one frieze. Near Walhalla in Kelheim is the Befreiungshalle (Hall of Liberation, 1842–1863), also designed by von Klenze, explicitly to celebrate the German victory over Napoleon. The exterior features allegorical figures representing German provinces, while the interior commemorates victorious battles, generals, and fortresses.

Another monument to nineteenth-century German nationalism is the Hermannsdenkmal (Monument to Hermann, or Arminius), commemorating the victory of Arminius leading the German Cherusci tribe over three Roman legions in 9 CE in the Teutoburg Forest. The project, begun in 1841, was the brainchild of Ernst von Bandel, an architect in Hanover and Berlin who spent his own personal fortune on the project and received other funding from a national subscription organized by schoolchildren and from the Prussian state. The project was not completed until 1875, four years after German unification, and has been interpreted not only as an inspiration to Germans to defend their nation but also as a symbol of emerging German power.

Nineteenth-century war memorials took a variety of forms, including designs from European and Egyptian antiquity. Memorials were designed to withstand the test of time through the construction of massive structures. The Völkerschlachtdenkmal (Memorial for the Battle of the Nations, 1813) was constructed in Leipzig, Germany, between 1894 and 1913. It included a monumental pyramid base rising to a ring of warrior statues and a surrounding landscape planted with oak trees and featuring open space where nationalistic gymnastic competitions could take place. Nelson's columns in Trafalgar Square, London, and in Dublin (now destroyed) harkened back to classical models such as Trajan's column in Rome. Another important form was the arch, most famously the Arc de Triomphe in Paris. Other nineteenth-century arches include the Bavarian Siegestor (Victory Gate, 1852), crowned with a lion-drawn chariot, and London's Marble Arch, designed

by John Nash in 1828. Another structure used for war memorials was the obelisk, such as Sir Robert Smirke's massive Wellington Testimonial (1861) in Phoenix Park, Dublin, the second largest obelisk in the world. At the base of the Wellington obelisk are large bronze friezes depicting the life of Wellington and the Battle of Waterloo. Some nineteenth-century monuments included a curved wall, such as the Victor Emmanuel monument (1885–1911) in Rome built to commemorate Italian unification.

Although after the Napoleonic era the wars fought in Europe were less frequent, commemorated conflicts included the German wars of unification and the Crimean War. In Berlin, the Siegessäule (Victory Tower) was designed after 1864 by Heinrich Strack to memorialize the war with Denmark over Schleswig-Holstein, but by the time it was built, Prussia had also defeated Austria and France, so officials of the newly united German empire inaugurated the tower in 1873. It features three rings of gold-gilded captured cannons for each war, an observation deck at the top, and is crowned with Friedrich Drake's design of a large golden winged victory holding a wreath with an outstretched hand. The ancient practice of displaying captured enemy weapons occurred on other nineteenth-century monuments, including Sir Richard Westmacott's statue of Achilles (1822) in Hyde Park for Wellington and John Bell's Guards Memorial (1859) in Waterloo Place in honor of those who fought in the Crimean War, cast in the bronze from Russian cannons captured at Sebastopol.

During the era of imperialism, Europeans commissioned monuments in honor of their colonial wars as well. In 1889, statues by Sir William Hamo Thornycroft of General Gordon, killed by the Madhi's army in Khartoum in the Sudan in 1885, appeared in Trafalgar Square (now at Victoria Embankment), London, and near Parliament House, Melbourne, Australia.

These nineteenth-century war memorials reveal an increasing sense of the importance of common soldiers, an awareness that corresponded to the individual empowerment of nonelites who were gaining greater access to suffrage, democratic ideas, and the political process. While monuments were built to exalt nationalism and the power of the state as a beacon for citizen sacrifice, their implicit focus

on loss and mourning also kept open the possibility of viewers' questioning the high cost and even the validity of war itself. The legacy of nineteenth-century memorial sculpture continued well after the First World War.

—Douglas McGetchin

Bibliography

- Borg, Alan. *War Memorials: From Antiquity to the Present*. London: Leo Cooper, 1991.
- Curl, James. *A Celebration of Death: An Introduction to Some of the Buildings, Monuments, and Set-*

tings of Funerary Architecture in the Western European Tradition. New York: Scribner, 1980.

Curl, James Stevens. *Death and Architecture: An Introduction to Funerary and Commemorative Buildings in the Western European Tradition, with some Consideration of Their Settings*. New rev. ed. Stroud: Sutton, 2002.

Mosse, George. *The Nationalization of the Masses*. Ithaca, NY: Cornell University Press, 1975.

Winter, J. M. *Sites of Memory, Sites of Mourning: The Great War in European Cultural History*. Cambridge: Cambridge University Press, 1995.

■ Introduction: War and Warfare in Africa

Warfare played an important role in precolonial African societies, but it differed from the warfare that was common in other parts of the world. On a continent where a great part of the population lived in decentralized societies and even the few large bureaucratic kingdoms that did exist were weak by Eurasian standards, large standing armies were rare. Except in the Sudan, mounted troops also were rare. The prevalence of trypanosomiasis, a disease transmitted by the bite of the tsetse fly, makes it impossible to raise horses in much of Africa. Flintlock guns, most purchased from Europeans and some made by African blacksmiths, were used by fighters in West Africa and Ethiopia, but cannons did not exist, and overall, firearms were less important than they were in Europe or Asia. Most communities had something akin to militia systems in which all able-bodied men were part-time warriors, prepared to protect their homeland and raid neighbors as needed but otherwise were herders or farmers. As a result, conflict in Africa rarely involved large, decisive battles but instead took the form of raids and counterraids among neighboring peoples, with the goal of acquiring livestock, foodstuffs, women, and children rather than territory. Although dismissed by some authors as something less than “true war,” such raiding wars were fought by individuals with a strong warrior tradition, could last for generations, and often brought devastation to the defeated party. Since little distinction was made between combatants and noncombatants, these wars resem-

bled what came to be known in the nineteenth century as “total war.”

In the first part of the nineteenth century, military innovations occurred in several parts of Africa. In the Sudan, religion led to a series of jihads, or holy wars, originally led by the charismatic scholar/reformer Usman dan Fodio (1754–1817) and his son Muhammad Bello (1780–1837). Their army of infantry archers and elite cavalry troops defeated local Hausa rulers, laying the basis for the founding of the large theocratic state known as the Sokoto Caliphate. Their success inspired similar jihads farther to the east later in the century.

In southern Africa, Shaka, a brilliant leader of the Mthethwa, a confederation of Nguni-speaking Zulu tribes, created a new type of state-supported army consisting of approximately 4,000 full-time soldiers who were divided into age-based regiments, housed in barracks, given distinctive uniforms, and underwent systematic training in tactics and weapons use. Shaka's conquests, known as the Mfecane (“Crushing”), led to the formation of a large Zulu empire and disrupted broad swaths of eastern and central Africa, where a number of newly formed kingdoms attempted to imitate the Zulu military system.

Throughout the continent firearms became more available, mainly as a result of increased trade with Europe, whose manufacturers shipped an estimated 16 million firearms to Africa in the 1800s. These weapons, which included modern breech-loading rifles from the 1850s onward, were used to outfit soldiers in

established states such as Dahomey, Ashanti, the Zulu kingdom, and Ethiopia. Many, however, fell into the hands of roving caravan armies involved in slaving or mercenary bands controlled by warlords and given to banditry and extortion.

In the 1870s African military history took a dramatic turn, as the continent became a target for the imperialist ambitions of Great Britain, France, Germany, and Italy, all of which were forced to use military force to make good their territorial claims. In the many wars that ensued, the European powers had superior weaponry (repeating rifles, machine guns, and artillery) and greater financial resources, which allowed them to establish military units specifically designed for colonial service (the French Foreign Legion and the Chasseurs d'Afrique) and recruit large numbers of African soldiers to serve in their colonial armies. They also were adept at taking advantage of the many ethnic and political rivalries among the Africans. Although the Africans won a few spectacular victories, most notably the Zulu defeat of the British at the Battle of Isandhlwana in 1879 and the Ethiopian victory over the Italians at Adowa in 1896, by the early 1900s they had little chance for success against the European invaders. With the exception of Liberia and Ethiopia, by 1914 all of Africa was under colonial rule.

With the onset of colonialism, independent African armies were abolished, and raiding, especially raiding for slaves, was suppressed. Colonial armies, made up overwhelmingly of African infantry troops but officered by Europeans, were established to maintain law and order, guard borders, and protect European business interests. They were small in size. The Royal West African Frontier Force, founded in 1898, had less than 10,000 troops spread over four British colonies: Nigeria, the Gambia, Sierra Leone, and the Gold Coast. The King's East African Rifles, also created by the British, had only 2,400 soldiers in 1913. A larger force was the Force Publique, which under Belgian officers policed Leopold II's Congo Free State. Its 20,000 soldiers had a well-earned reputation for brutality. Unlike the Indian Army, which the British freely used in campaigns outside India, their African colonial armies stayed in Africa itself.

French thinking was different. In the early 1900s, desperate for manpower to face Germany

in what was considered an inevitable war, they began to augment their West African army, the Tirailleurs Sénégalais (Senegalese Riflemen). In 1910 French general Charles Mangin wrote a book, *La Force Noire*, arguing that black Africa could provide France with an inexhaustible number of fighters unspoiled by modern civilization and less sensitive to pain because of their less developed nervous systems. In 1912 France imposed conscription on its West African colonies and continued to do so once World War I began. In all, close to 200,000 black African troops saw action on the Western Front, and 30,000 died.

—James H. Overfield

African Armies, 1750–1900

In 1750 African armies included the massed warriors of stateless societies and chiefdoms, armies of age-set regiments (warriors of a similar age), armies divided by class (cavalries of nobles and infantries of commoners), armies of slave soldiers employed by estate owners, and large standing armies composed of conscripts, slaves, and mercenaries. During the nineteenth century growing trade gave rise to warlord armies that sought slaves and ivory, served as mercenaries, and established new states. Limited war waged by amateurs with handmade clubs, spears, and bows was replaced by devastating wars waged by professionals armed with mass-produced muskets and rifles. However, between 1890 and 1915 better-armed and regularly paid European colonial armies defeated most African armies and established colonies.

In North Africa Mamluk “slaves” trained to be professional soldiers served as troops for Egyptian sultans and became large landowners for centuries before Mamluk leaders were defeated by the Ottoman officer Muhammad Ali in the early nineteenth century, after which Egyptian armies combined peasant conscripts, slave soldiers, and mercenaries, including Americans and Europeans in the 1870s. In northeastern Africa, Ethiopia's modernizing army defeated an Italian force of about 20,000 troops at Adowa in 1896 and thus delayed its colonization by a European power until the 1930s.

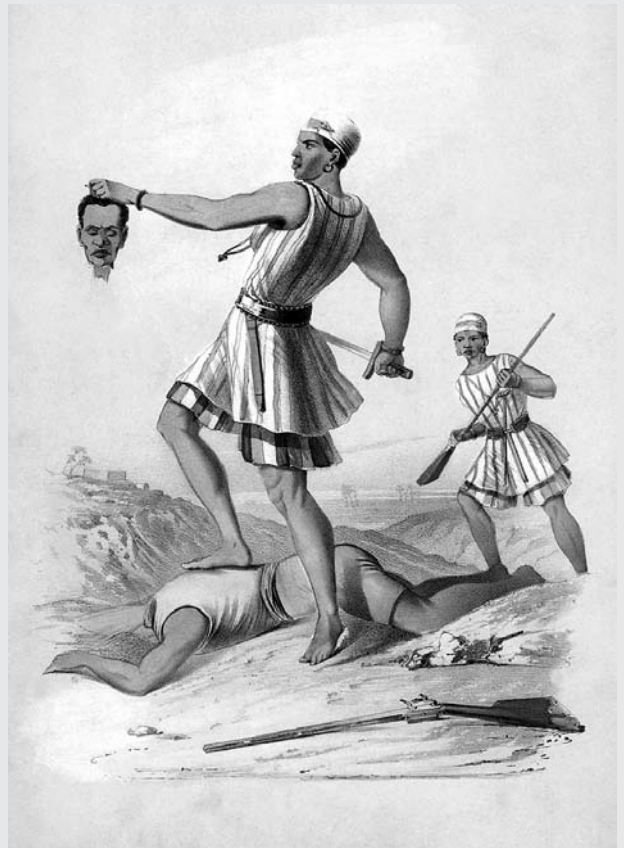
In eastern Africa the sultan of Zanzibar's army included Arab, Baluchi, and eventually British mercenaries. Warlords such as Mirambo, the

► DAHOMEY'S WOMEN WARRIORS

During the eighteenth century in Dahomey (now Benin) a band of female elephant huntresses and bodyguards were transformed into an effective fighting force. Under King Ghezo (r. 1818–1858), this unit of female warriors, called Amazons by Europeans due to their alleged similarity to the Amazons of ancient Greece, were strictly trained, provided with uniforms, and armed with Danish firearms. At one point they were estimated to include between 4,000 and 6,000 warriors and to constitute about a third of Dahomey's standing army. Some of these women enrolled voluntarily, while others were forcibly drafted. They were not allowed to marry or to have children while serving in the army. During the Dahomey War (1889–1894), some French soldiers were said to have hesitated before shooting or stabbing these female warriors. During an attack on a French column in October 1892, Dahomey's female fighters advanced without fear and even after they were bayoneted and disarmed continued to fight with their fists, feet, and teeth.

This female corps was disbanded by King Agoli Agbo (r. 1894–1900), but the veterans of this regiment continued to enjoy great prestige and were often photographed and painted. The last surviving member of these famous warriors died in 1979.

—Richard Bradshaw and Ibrahim Ndzesop



*Female warrior of Dahomey beheads an enemy, 1851.
(Mary Evans Picture Library/The Image Works)*

“African Napoleon” of Tanzania, and Nyungu of Kenya used *ruga-ruga* bands of migrating South African mercenaries, while the Swahili-Zanzibari warlord Tippu Tip used an army of clients, slaves, and mercenaries. Pastoralist Maasai armies, composed of age-set units under the control of elders, were transformed into more centralized armies controlled by prophet-diviners, some of whom served in other African and European armies.

In West Africa, Ashanti and Dahomey had armies of professionals, slaves, and female warriors, while Mossi states had cavalries of nobles and infantries of commoners. The army of the Segou Bamana empire in Mali consisted of bachelor associations of warriors with elected leaders. The Rwandan army was composed almost exclusively of Tutsi warriors and was used to dominate the Hutu people, who constituted a large majority of the kingdom's inhabitants.

In central Africa, Muslim states in Cameroon, Chad, and the Sudan sent troops into pagan territories in search of slaves, some of whom were incorporated into these armies. States in the Congo basin employed Chokwe hunters and other mercenaries. Arab and African warlords and their troops ravaged the Congo until defeated by the Belgian king Leopold II's Force Publique, a brutal army that employed many displaced warlord soldiers and was inherited by the Belgian Congo in 1906.

In southeastern Africa, large Chikunda slave soldier armies of Portuguese African estate holders in the Zambezi Valley often defeated warrior bands of nearby polities without standing armies. In the 1870s new warlords arose who recruited former Chikunda slaves and clients to form formidable standing armies. These states were defeated by Portuguese armies and local auxiliaries

only with great difficulty. In southern Africa (ca. 1820) the South African warlord Shaka expanded a disciplined army of youth regiments with assimilated captives to form a highly militarized Zulu state. His soldiers, strictly disciplined, used stabbing spears and envelopment tactics. To his north, the Swazi and Sotho welcomed refugees and built armies that fought off African and Boer rivals and survived as states under British protection. During the South Africa War (ca. 1900) Boer (Afrikaner) guerrilla militias were defeated with great difficulty by a huge British army, the largest ever employed in Africa.

Between circa 1880 and 1915 European colonial armies (French *tirailleurs*, British African Rifles, Portuguese *sepias*, and Belgian Force Publique), using mercenaries and auxiliaries, defeated most rival African armies. The imposition of monopolies on the use of force by colonial armies eventually reduced or eliminated slave raiding and pillaging by warlord armies, but these armies were then often employed to impose forced labor on conquered peoples rather than to defend colonial borders. Colonial armies thus served foreign rulers rather than local peoples or polities.

—Richard Bradshaw and Ibrahim Ndzesop

Bibliography

- Killingray, David, and David Omissi, eds. *Guardians of Empire: The Armed Forces of the Colonial Powers*. Manchester, UK: Manchester University Press, 1999.
- Kurimoto, Eisei, and Simon Simonse, eds. *Conflict, Age and Power in North East Africa*. Oxford, UK, and Athens: James Currey and Ohio University Press, 1998.
- Ogot, Bethwell A., ed. *War and Society in Africa*. London: Frank Cass, 1972.
- Thornton, John K. *Warfare in Atlantic Africa, 1500–1800*. London: University College Press, 1999.
- Welch, Claude E., Jr. “Continuity and Discontinuity in African Military Organisation.” *Journal of Modern African Studies* 13(2) (1975): 229–248.

Military Changes in South Africa during the Early Nineteenth Century

Historians once believed that Shaka, founding ruler of the Zulu Kingdom from circa 1815 to 1828, introduced a number of military innovations that revolutionized warfare in Southern

Africa. It was believed that prior to Shaka, African conflicts were characterized by limited warfare and minimal loss of life. Shaka supposedly introduced a short stabbing spear that was better for hand-to-hand fighting, developed more aggressive encircling tactics, created a new system of age regiments that promoted military cohesiveness, and generally promoted something akin to total warfare. Most historians now believe that most of these changes preceded Shaka and that the Zulu kingdom, though an important new state, was not at the center of events in early-nineteenth-century southern Africa. Therefore, the most significant military changes were in how Africans adapted their military methods to more effectively resist early European colonial intrusion.

During the late eighteenth century, the sporadic frontier warfare in the eastern part of the Cape lacked any decisive result as the Xhosa had the advantage of superior numbers, which the Boers compensated for by the firepower and mobility provided by guns and horses. However, neither group could field a large standing army capable of fighting for a protracted period since Xhosa and Boer men had to abandon raiding and return to their productive duties at home. The permanent British takeover of the Cape Colony in 1806 shifted the balance of power toward the colonial side as a standing army was developed that could be supplied by the settler community. In 1811 a combined force of British soldiers, including artillery and cavalry, and Boer militia drove the Xhosa east across the Fish River, which was then proclaimed the new colonial border. In 1819 the Xhosa of Ndlambe, inspired by the millenarian prophecies of Nxele, launched a daylight assault on the colonial district capital of Grahamstown but were slaughtered by firearm-equipped soldiers and settlers hiding behind improvised barricades.

Learning from this disaster, the Xhosa, during the rest of their many nineteenth-century wars against colonial forces, made increasing use of firearms and attempted to minimize the colonial advantages of firepower and mobility by only fighting in the rough terrain of mountains and forests. During the Cape-Xhosa wars of 1834–1835, 1846–1847, and 1850–1853, the Xhosa employed elusive hit-and-run tactics that concentrated on attacking British supply lines. The British countered this by ignoring the Xhosa

warriors and destroying the fields and herds that supported them. In the 1850–1853 conflict, the Xhosa leader Maqoma attempted to distract the British from attacking the productive center of Xhosa society in the Amatola Mountains by taking a small band of fighters, including some Khoikhoi mutineers from the colonial army, into the Cape Colony. There, he established a stronghold in the thick forest of the Waterkloof highlands from which he attacked settler farms. This strategy was only successful for a time. The Xhosa could not change the nature of production in their society, and in all these conflicts they surrendered because of widespread hunger.

The Kingdom of Lesotho provides another good example of African military adaptation in this period. Basotho people rallied around the leader Moshoeshe in the early 1820s and established a defensive state among the flat-topped mountains of the Drakensburg range. Lesotho was harassed by the migrant Ndebele and Ngwane, who were bought off by gifts of cattle, but far more serious was raiding by the mixed-race Griqua, who employed horses and guns to capture livestock and slaves for trade to the settlers of the Cape Colony. Eventually, the Basotho acquired enough guns and horses to develop a cavalry-based army that was able to defeat a British invasion in the early 1850s. However, constant warfare with Boer settlers in the late 1850s and 1860s resulted in loss of agricultural lowlands and prompted Moshoeshe to bring his state under British protection in 1868.

Despite its martial reputation, one of the least successful examples of military adaptation was the Zulu kingdom. It was one of a number of new African powers to emerge in this region during the early nineteenth century but was easily defeated by Boer settlers, who employed guns, horses, and impromptu fortifications, at the Battle of Blood River in 1838. The Zulu proved unable to learn from this calamity and did not incorporate firearms into their military system in any significant way.

—Tim Stapleton

Bibliography

- Eldredge, Elizabeth. *A South African Kingdom: The Pursuit of Security in Nineteenth Century Lesotho*. New York: Cambridge University Press, 1993.
- Hamilton, Carolyn, ed. *The Mfecane Aftermath: Reconstructive Debates in Southern African His-*

tory. Johannesburg: Witwatersrand University Press, 1995.

Milton, John. *The Edges of War: A History of Frontier Wars (1702–1878)*. Cape Town: Juta, 1983.

Omer-Cooper, John. *The Zulu Aftermath*. London: Longmans, 1966.

Stapleton, Timothy J. *Faku: Rulership and Colonialism in the Mpondo Kingdom, c. 1780–1867*. Waterloo: Wilfrid Laurier University Press, 2001.

Stapleton, Timothy J. *Maqoma: Xhosa Resistance to Colonial Advance*. Johannesburg: Jonathan Ball, 1994.

Colonial Armies in Africa

Armies were organized by the colonial powers in Africa as the primary means to conquer territory and maintain order. Because of limited budgets and climate, relatively few Europeans served in Africa. Instead, the colonial powers depended mostly upon native people recruited and trained for the purpose.

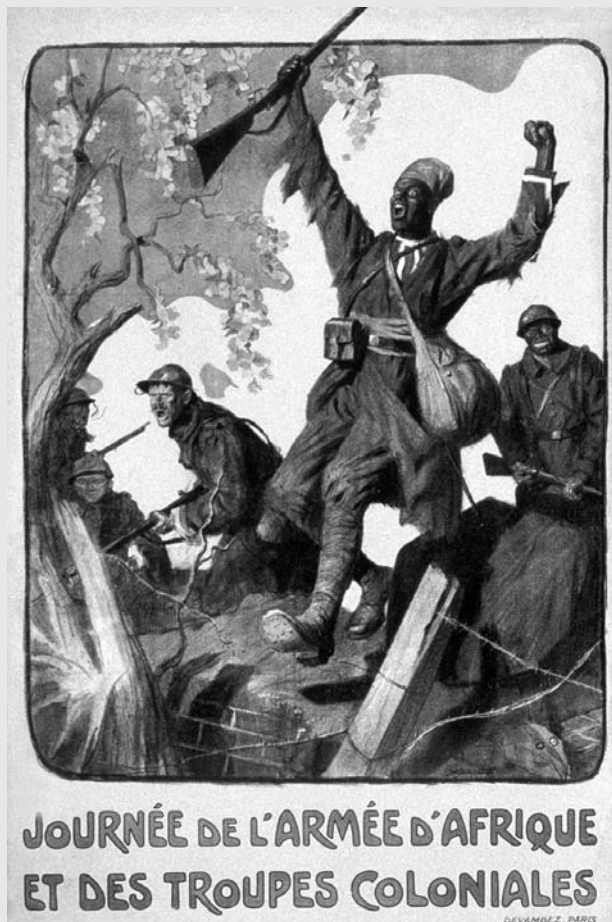
The development of colonial armies was similar throughout most of Africa. Before the European conquest, professional standing armies did not exist. Most armies were raised to meet specific crises, and each adult male was responsible for taking up weapons and serving as assigned. Nobles, for example, might serve as cavalry, while commoners were restricted to infantry auxiliaries. Discipline was nearly nonexistent, as were logistics. Warriors were armed with traditional weapons and followed the same leaders who controlled the civil society. Campaigns were short and usually limited to the dry season so that men could return for planting.

As some African societies became more developed, their armies changed as well. Firearms were introduced, thanks mostly to Muslim traders from North Africa. Standing armies were organized in some states and were composed mostly of slaves. These slaves were most often outsiders who had no ties to the communities in which they served. Some armies served to maintain social order, with combat playing only a minor role.

The arrival of Europeans, beginning with the Portuguese in the 1500s, changed this pattern. European forces upset traditional balances with superior armor and weapons. Some African rulers recognized their value and allied themselves with the invaders. Europeans played the

➤ AFRICAN COLONIAL TROOPS DURING WORLD WAR I

This poster commemorates the involvement of African colonial troops who served with the French army during World War I. The caption reads “The Day of the Army of Africa and Colonial Troops.”



Poster shows French soldiers with African soldiers from the French colonies, 1917. Colonial African soldiers fought side by side with their white French counterparts on the Western Front during World War I. Allied and German propagandists tried to make the most of their supposed savagery. (Library of Congress)

role of heavy infantry and proved decisive in battle. For centuries, however, European control in Africa was limited. They found the climate unhealthy, and thousands died of disease. Governments were also unwilling to pay large sums to maintain armies in foreign lands.

Conditions changed in the nineteenth century, however, as European countries began

competing for the control of Africa. Climate and budgets continued to limit the number of European soldiers who were sent, so the colonial powers began to recruit Africans in their colonial armies. The nineteenth century was a time of great internal flux among the African states, so the European powers were often able to take advantage of local disputes to gain footholds in various regions. The same upheavals made available many African men who were willing to serve in colonial armies. As a result, the armies that conquered colonial empires in Africa were overwhelmingly African.

Africans who enlisted in the colonial armies held a number of advantages over the African armies opposing them. First, they were armed with up-to-date military technology, including magazine rifles, machine guns, and artillery. The training was superior to anything the African states could provide, with the emphasis on the effective use of firepower. Logistics was another significant advantage for European-trained forces. Although the colonial armies were usually smaller than the opposing armies, they rarely were defeated.

Known by names such as *tirailleurs sene-galais* or *askaris*, African soldiers were usually organized into units no larger than a battalion. Most were armed as light infantry, since that was the most versatile and economical type of unit. Specialized or technologically advanced troops, such as communications units, were not provided or were left to Europeans. Naval and flying units were closed to Africans as well. After colonial empires were established, most native troops were used to keep order among the populations. They were stationed in the interior and often developed a reputation for brutality against other Africans. Recruits were drawn from specific tribes considered to be more martial or aggressive. Units were rarely stationed among their own ethnic groups, and fraternization with civilians was discouraged. Unlike pre-colonial days, the military was separated from the society in which the troops lived.

Colonial armies were characterized by the openly racist prejudices and attitudes of the officers. All officers were white, as were most noncommissioned officers. Even when Africans managed to reach the noncommissioned officer

rank, they were paid less and received fewer benefits than their white counterparts. Even so, a military career provided a good standard of living for most Africans. Obedience to authority was the one quality stressed above all others, and during the colonial period few African units ever rebelled against their colonial masters.

Most European governments viewed the colonies as manpower pools in the years before World War I. When war broke out, the French in particular called over 180,000 African soldiers to serve on the Western Front. This proved to be a turning point for many African soldiers, some of whom were exposed to new political ideas and lost their servile attitude toward whites. The African soldiers understood that they had the ability to fight against white men and win. Although it took decades, the veterans of the colonial armies took their places among the leaders of independence movements in Africa.

—Timothy J. Watts

Bibliography

- Echenberg, Myron. *Colonial Conscripts: The Tirailleurs Senegalais in French West Africa, 1857-1960*. Portsmouth, NH: Heinemann, 1991.
- Edgerton, Robert B. *Africa's Armies: From Honor to Infamy; A History from 1791 to the Present*. Boulder, CO: Westview, 2002.
- Kiernan, V. G., and Harvey J. Kaye. *Imperialism and Its Contradictions*. New York: Routledge, 1995.
- Vandervort, Bruce. *Wars of Imperial Conquest in Africa, 1830-1914*. Bloomington: Indiana University Press, 1998.

Ethiopia's Army under Menelik

Under Emperor Menelik II (1889-1913), Ethiopia became a relatively modern, independent, and centralized state, recognized by European colonial powers. One of the most important tools Menelik used to achieve this goal was the Ethiopian army. During his rule, the army transitioned from a feudal force into a professional outfit armed with modern weapons.

Ethiopia has maintained a national identity for thousands of years. Isolated to a certain extent by mountains and deserts, it was rarely attacked by outside invaders. During the nineteenth century, however, Ethiopia's existence was threatened by the rush of European

colonization. To survive, the country's rulers recognized that they needed to move from a feudal society to one more in keeping with the European model. The first great modernizer was Tewodros, who came to power in 1855. His reforms failed to last because they lacked any economic and technological base. Tewodros tried to develop a national army by organizing units with men from all across Ethiopia. He also tried to instill greater discipline. Tewodros imported as many European arms as possible and created the first armory in Ethiopia at Maqdala to manufacture weapons. Johannes IV, the successor of Tewodros, continued his modernizing efforts. Johannes hired British sergeant John Kirkham to provide military advice and to train his troops and also instituted a system of regular pay and discipline. Johannes's army defeated European-trained and -armed units from Egypt that invaded in 1875 and Italian forces in 1887.

Of all these reformers, Menelik was the most successful. As hereditary ruler of Shawa in southern Ethiopia, Menelik consolidated his power and extended his control over regions to the south and west. Emperor Johannes became concerned that Menelik might overthrow him and in 1878 led a force against Shawa. To avoid a protracted war, Menelik recognized Johannes's authority. Johannes continued to strengthen his army by exporting products to European markets and buying weapons. The Italians were his best suppliers, loaning him money to buy arms.

Menelik proclaimed himself emperor when Johannes died. Other claimants quickly submitted to Menelik, thanks to his powerful army. As emperor, Menelik created a standing national army and by 1896 had imported over 70,000 modern rifles with magazines, along with 5 million cartridges. Provincial forces existed, but Menelik controlled the number of modern weapons available to them. Campaigns were timed so that soldiers could return to their homes between June and September to plant and harvest crops. Troops were paid through the Geber Madriya system, in which soldiers received grants of land and the payment of food, drink, and other essentials in exchange for their service. This system allowed Menelik to raise large armies for service within Ethiopia without having to provide hard currency. In 1902, a military parade through

Addis Ababa included 600,000 armed soldiers. A small Corps of Gunpowder and Shell was established by Menelik to control artillery.

Under Menelik, a treasurer of finances and other officials supervised logistics for the army. Supply depots were established, especially in regions that suffered from famines. When surrounding regions were conquered and incorporated into Ethiopia, military garrisons and bureaucrats maintained order and helped integrate them into the system.

Menelik's greatest military challenge came in 1895–1896, when Italy invaded the province of Tigre. Pacifying the region took nearly ten months, months during which Menelik established supply depots and imported arms. He proclaimed a national mobilization in September 1895. The national army of 80,000 men was joined by smaller groups of soldiers under regional governors. By the time he met the Italians at Adowa on March 1, 1896, Menelik had over 100,000 well-armed soldiers. To the Italians' surprise, the Ethiopian forces proved to be their technological equals and inflicted an overwhelming defeat on them. Menelik's victory and his army confirmed his importance as the founder of modern Ethiopia.

—Timothy J. Watts

Bibliography

- Marcus, Harold G. *The Life and Times of Menelik II: Ethiopia, 1844–1913*. Oxford, UK: Clarendon, 1975.
- Prouty, Chris. *Empress Taytu and Menelik II: Ethiopia, 1883–1910*. Trenton, NJ: Red Sea, 1986.
- Zewde, Bahru. *A History of Modern Ethiopia, 1855–1974*. Athens: Ohio University Press, 1991.

Cape Frontier Wars

The Cape Frontier Wars were nine interconnected conflicts that took place in southern Africa between 1779 and 1878. These wars, also called the Kaffir Wars (from the denigrating generic term for all blacks, meaning “infidel” in Arabic), were caused generally by Boer (Dutch colonist) expansion and encroachment upon frontier indigenous tribes, with the British being frequently drawn in to protect the colonists.

The British first occupied the Cape of Good Hope area in South Africa in 1795. Initial conflict

took place as the Boers spread eastward and encroached on Xhosa land, and a cycle of reprisals, generally involving land and cattle, began. Later conflicts focused on the ever-expanding eastern frontier of Cape Colony, around the Great Fish River and the Amatola Mountains. Cape Frontier Wars were fought in 1779, 1793, 1799–1802, 1811–1812, 1818–1819, 1834–1835, 1846–1847, 1850–1853, and 1877–1878.

The Sixth Cape Frontier War (1834–1835) began when Chief Maqoma of the Gaika tribe attacked Cape Colony at the end of 1834. White settlers retreated to Grahamstown and other defended posts. When word of the invasion reached the capital, Cape Town, the military commander, Lieutenant Colonel (later Lieutenant General Sir) Harry G. W. Smith, rode 600 miles in six days with a single orderly and arrived in Grahamstown on January 6, 1835. Smith organized and led the defense of Grahamstown and with mainly local troops, including 3,000 Boers, drove Maqoma's force from the frontier. Governor Sir Benjamin D'Urban, with Smith as his second-in-command, led a four-column force into Xhosa territory in March 1835. After a brief conflict, the Xhosa returned cattle they had stolen and accepted a peace arrangement.

The War of the Axe is another name for the Seventh Cape Frontier War (1846–1847) because it reportedly started when indigenous locals were caught stealing an axe at Fort Beaufort. The thief was sent to Grahamstown for trial, but the escort was ambushed and the prisoner freed. After the Xhosa refused to return the prisoner, the British sent a force to punish and destroy a Xhosa settlement, but this force was repulsed. The British sent a mounted column that defeated the Xhosa at Guanga on June 7, 1846. Other engagements took place, and the Xhosa chiefs eventually surrendered. By December 1847 when Smith returned as governor and commander in chief of Cape Colony, the war was basically over. Cape Colony's territory was extended to the Orange and Keiskamma rivers, and the area between these rivers was annexed as British Kaffraria on December 23.

Numerous cross-border engagements took place during the Eighth Cape Frontier War (1850–1853), which ended after a war of attrition basically destroyed the crops and cattle of the Xhosa.

The power of the Xhosa was finally crushed in the Ninth Cape Frontier War (1877–1878). The last British commander in this later war was Lieutenant General (later General) Frederick A. The-
siger (later Second Baron Chelmsford), who may have thought that the feeble resistance of the Xhosa characterized the fighting abilities of all African tribes. He would learn during the Zulu War (1879) that this was not true.

—Harold Raugh

Bibliography

- Featherstone, Donald. *Victorian Colonial Warfare: Africa*. London: Cassell, 1992.
- Haythornthwaite, Philip J. *The Colonial Wars Source Book*. London: Arms and Armour, 1995.
- James, Lawrence. *The Savage Wars: British Campaigns in Africa, 1870–1920*. New York: St. Martin's, 1985.
- Mostert, Noel. *Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People*. New York: Knopf, 1992.
- Raugh, Harold E., Jr. *The Victorians at War, 1815–1914: An Encyclopedia of British Military History*. Santa Barbara, CA: ABC-CLIO, 2004.

The Wars of Shaka

During the early 1800s people in southern Africa experienced a period of upheaval characterized by increased violence, long-distance movement of peoples, the destruction of old states, and the emergence of new larger kingdoms. Historians once believed that this had been caused by the emergence of an aggressive and expansionist Zulu Kingdom under the leadership of Shaka. Since the late 1980s, revisionist historians have argued that these events were caused by various forms of colonial raiding originating from different parts of the region. Shaka's allegedly central role was created and exaggerated by colonial writers who wanted to deflect attention from their own unsavory activities. While the debate over this issue has never been fully resolved, most historians today do not accept the old view that Shaka's Zulu caused the period of turmoil once known as Mfecane (Crushing).

For many years historians were confident that they knew the story behind the turbulence of early-nineteenth-century southern Africa. Shaka had given his new Zulu state military

superiority over other African groups by inventing a new short stabbing spear that was particularly effective in hand-to-hand combat, introducing new battlefield tactics of encirclement, and creating a system of organization based on age regiments. From around 1815 to the late 1820s Shaka led the Zulu in a series of wars against neighboring Africans who were either incorporated into the new kingdom or driven away. For example, Sotho people rallied under their new leader Moshoeshoe in the mountain sanctuary of the Drakensberg. Mzilikazi, formerly an ally of Shaka, took his Ndebele group into the central part of what is now South Africa, where they used new Zulu military methods to dominate that area until attacked by Boer settlers in the late 1830s. Allegedly, the Mpondo Kingdom of Faku lost all its cattle to raids from the neighboring Zulu and had to abandon almost half its territory. Refugees fled along the Indian



King Shaka was the founder of the Zulu Empire in South Africa. By unifying the northern Nguni people of Natal, he built one of the most powerful states in nineteenth-century Africa and held it together through intimidation and terror. (National Library of South Africa [Cape Town])

Ocean coast, were eventually taken into Xhosa society as the Mfengu or Fingo (from Ukumfenguza, meaning “to seek work”), and were supposedly rescued by the British Army in 1835, when they were brought into the Cape Colony under the protection of Christian missionaries. Central to this view of history was that Shaka’s wars had depopulated much of the central part of what is now South Africa, which made it easy for Boers to expand into that area during the Great Trek of the late 1830s and 1840s. Although colonial historians of the early twentieth century viewed Shaka as a monstrous savage and later African nationalist historians saw him as a revolutionary nation-builder, the basic history remained the same.

Revisionist historians claimed that the violence and turmoil of early-nineteenth-century southern Africa had not been caused by Shaka but rather by violent colonial intrusion. The Portuguese at Delagoa Bay and British privateers at Port Natal sponsored slave raiding into the interior. The Griqua, a frontier society of raiders with horses and guns, attacked Africans in the interior and traded captured cattle and slaves to the settlers of the Cape Colony. Along the eastern frontier of the Cape Colony, settlers and British soldiers organized raiding parties to attack the neighboring Xhosa and other groups. African leaders such as Moshoeshoe, Mzilikazi, Shaka, and Faku were responding to the threats and sometimes opportunities brought by these new forces. All of Shaka’s supposed military innovations existed before he had been born, but what he did was create a larger state that could more effectively respond to the new situation.

New evidence, including recorded Zulu oral history, clearly illustrates that the Mpondo of Faku were not the hapless victims of the Zulu and launched their own predatory attacks on smaller groups. The only successful Zulu raid against the Mpondo occurred in the late 1820s when Shaka cooperated with European-led gunmen from Port Natal. The so-called Mfengu were actually Xhosa-speaking captives and collaborators who were taken into the Cape Colony to serve as a steady supply of labor for settler farms. The central part of what is now South Africa had not been depopulated by Shaka but instead was

conquered by expansionist Boers who would later claim it as a promised land given to them by God. Earlier colonial historians had created the myth of the wars of Shaka in order to blame inequity of land ownership on so-called black-on-black violence rather than on colonial dispossession.

Some historians claim that this revisionist theory removes African initiative from history and places too much emphasis on colonial actions. There are questions about exactly when the Portuguese slave trade started at Delagoa Bay and if it was early enough to have caused these events. There has been considerable objection to the accusation that missionaries, in the age of abolitionism, played a role in colonial labor raiding.

—Tim Stapleton

Bibliography

- Etherington, Norman. *The Great Treks: The Transformation of Southern Africa, 1815–1854*. New York: Pearson, 2001.
- Hamilton, Carolyn. *Terrific Majesty: The Powers of Shaka Zulu and the Limits of Historical Invention*. Cambridge: Harvard University Press, 1998.
- Hamilton, Carolyn, ed. *The Mfecane Aftermath: Reconstructive Debates in Southern African History*. Johannesburg: Witwatersrand University Press, 1995.
- Omer-Cooper, John. *The Zulu Aftermath*. London: Longmans, 1966.
- Wylie, Dan. *Savage Delight: White Myths of Shaka*. Pietermaritzburg: University of Natal Press, 2001.

Ashanti Wars

The brief conflicts known as the Ashanti Wars (1873–1874, 1895, 1900) were the result of British commercial involvement in the tribal affairs of the Gold Coast in West Africa. The wars resulted in the subjugation of the Ashanti Kingdom to the British Empire.

The British were primarily interested in maintaining open trade routes, a goal complicated by the rivalry that existed between the coastal Fante and the more powerful Ashanti inland. The basic British policy involved dealing with the Fante directly and signing a series of (rapidly ignored) treaties with the Ashanti. In

1871 the Fante tried to form a coastal confederation to unite their clans against the Ashanti. Despite a quick and decisive British rejection of the idea, as the effort was seen as an attack on British control of the area, the move provoked an Ashanti offensive on the coast to smash Fante pretensions to power in 1873. If the British had been unwilling to allow the Fante to govern themselves, they certainly were not going to allow the Ashanti to do so.

A British force of 2,500 men under the command of Major General Sir Garnet Wolseley was dispatched to the Gold Coast. His British regulars formed the core of a column that marched inland to the Ashanti capital of Kumasi. Early in April 1874, Wolseley sacked and burned Kumasi and forced the Ashanti to accept a treaty renouncing all claims of coastal authority. They were also forced to pay a large fine in gold dust, pledge to keep the roads to the interior open, and promise to give up the practice of human sacrifice.

Despite the decisive defeat, the Ashanti remained troublesome to the British. During the 1880s and 1890s, the Ashanti showed signs of planning a move against the coastal clans again, prompting a British accusation that they had broken the provisions of the treaty imposed in 1874. British authorities demanded that the kingdom accept status as a British protectorate in 1895; when the demand was ignored, British forces again marched on Kumasi, installing a resident at bayonet point and exiling the royal family to the Seychelles. Five years later the governor demanded that the Ashanti surrender the Golden Stool, the symbol of their sovereignty, provoking a final Anglo-Ashanti war. The kingdom was annexed in the aftermath as a Crown colony.

—Melvin Smith

Bibliography

- Chandler, David, and Ian Beckett, eds. *The Oxford Illustrated History of the British Army*. Oxford: Oxford University Press, 1994.
- Hatch, John. *The History of Britain in Africa*. New York: Praeger, 1969.
- Smith, Melvin C. "Ashanti Wars." In *Colonialism: An International Social, Cultural, and Political Encyclopedia*, edited by Melvin E. Page. Santa Barbara, CA: ABC-CLIO, 2003.

French Conquest of Algeria, 1830–1857

On the eve of the French invasion of 1830, Hussein Dey (1765–1838) governed the Ottoman regency of Algiers. He and his *diwan* (governing committee) administered a multiethnic, hierarchical, and decentralized North African state extending to the Sahara that comprised three regions (*beyliks*), each with substantial autonomy. Hussein and Ottoman provincial representatives (*beys*) engaged in reciprocal and often contested relationships with local leaders and assemblies, and legal codes varied. France was ruled at the time by an authoritarian and increasingly unpopular King Charles X, who ordered an invasion of the regency under the dubious pretext of Hussein's swatting of a French diplomat with a flywhisk in 1827. In fact, the invasion was motivated by a number of factors, including the debt owed by France to the regency (in terms of financial loans as well as its supplying France with wheat during the Revolutionary period) and the desire to divert attention from domestic instability by reviving the glories of Napoleonic conquest.

Having landed at Sidi Ferruj on June 14, 1830, French troops supported by naval bombardment reached Algiers by July shortly before Charles X was deposed in France during the July Revolution. Hussein evacuated the Casbah, or citadel, of Algiers and shortly thereafter surrendered. French forces plundered the regency's treasury. The initial objectives of the invasion were punitive rather than a permanent occupation. French governments after 1830, unwilling or unable to extricate France from Algeria, pursued a hesitant and often ambivalent policy of formal occupation and colonization, which would eventually result in the annexation of Algeria as French territory in 1848.

Despite the victory in 1830 over Hussein and the deportation of Turkish administrators and merchants, most of the regency's territories remained independent of French control. Local and regional elites pursued negotiation and cooperation with or armed resistance against the invaders. In some cases, faced with the dissolution of Ottoman rule, local leaders elected

representatives to administer their territory and fight the French. In the eastern beylik of the province of Constantine, Ahmed Bey's council proclaimed him pasha (governor). He organized resistance with the support of Kabyle troops. From his capital in Constantine, Ahmed Bey's initiatives included the uniting of many extended families in the region, petitioning Britain to protest the French invasion, and the printing of currency to maintain administrative and economic control. Ahmed Bey's forces repulsed the French expedition under General Bertrand Clauzel in 1836. In 1837, 20,000 French troops finally succeeded in occupying Constantine after inflicting heavy casualties on its population.

The most sustained resistance to the French invasion was led by Abd al-Qadir, who would become a national figure of resistance. The son of an influential religious leader and a scholar himself, in 1832, at the age of 24, Abd al-Qadir was appointed emir (commander) by a congress of notables. He engaged in military campaigns but also negotiated a number of treaties with the French (including the Treaty of Tafna, signed in 1837 after suffering a defeat against General Thomas Robert Bugeaud). After a brief cessation of hostilities, warfare broke out again in the 1840s. Under Bugeaud, the French pursued a policy of collective reprisals, including massacres, the suffocation of entire communities hidden in caves, the destruction of crops and villages, and the forced resettlement or internment of hundreds of thousands of people. Abd al-Qadir's *smala*, or mobile government and retinue, was seized in 1843, and his substantial library of manuscripts was burned. In late 1847 he surrendered and was eventually exiled. Although the French initially estimated that 10,000 troops would be sufficient to pacify Algeria, by 1847 more than 100,000 troops were struggling to control a population of approximately 3 million. Algerian casualties of war in the first 45 years of the French conquest, not including deaths due to famines exacerbated by the French seizures of land and suppression of public charities, has been estimated at 825,000.

Kabylia, one of the last strongholds against the French conquest, finally succumbed in 1857. Although 1857 is the conventional date for the end of the conquest, the southern regions of

modern-day Algeria remained formally independent, and insurrections continued until independence in 1962.

—Christopher Churchill

Bibliography

- Ageron, Charles-Robert. *Modern Algeria: A History from 1830 to the Present*. London: Hurst, 1991.
- Clancy-Smith, Julia. *Rebel and Saint: Muslim Notables, Populist Protest, Colonial Encounters (Algeria and Tunisia, 1800–1914)*. Berkeley: University of California Press, 1994.
- Stora, Benjamin. *Algeria, 1830–2000: A Short History*. Translated by Jane Marie Todd. Ithaca, NY: Cornell University Press, 2001.

French Wars of Conquest in West Africa

In 1854, French possessions in West Africa, like those of other European powers, were minuscule coastal and riverine trading enclaves, more or less under African control. In that year, however, taking advantage of their exclusive possession of the navigable lower and middle Senegal River, the French military began to intervene forcibly among the Senegalese states in order to impose favorable terms of trade for French merchants. The French conquest of West Africa had begun.

These first French actions against their Woloff, Mauritanian, and Toucouleur neighbors drew inspiration from the French conquest of Algeria that, having begun in 1830, offered a model of apparently successful military colonialism. Ambitious infantry and artillery officers adopted this model, including the willful manipulation of military reports and multiplication of campaigns, in order to earn rapid promotions by extending French domination. In addition, these officers exploited the bogey of militant Islamic opposition to French rule to justify actions to eliminate Muslim rulers. After 1871, French officers and civilian administrators would additionally become imbued with Jacobin-influenced republican ideals that would move them to reject most power sharing with West African traditional rulers, Muslim or non-Muslim, except as temporary expedients. Eventually most African rulers and their states were eliminated.

Two periods (1854–1861 and 1861–1863) during which General Louis Faidherbe, an engineer officer with Algerian experience, governed Senegal served as a prelude to post-1878 French conquests. Adapting orders from Paris to local realities, Faidherbe led a series of limited river- and land-based operations against the Mauritanian, Woloff, Toucouleur, and Sarakhollé states of the Senegal River valley, resulting in French military control of the banks of the navigable western portion of this river. Faidherbe's forces undertook similar actions along the Atlantic coast south of Saint-Louis and inside the navigable reaches of the Saloum and Casamance rivers. Faidherbe's campaigns also forced the Toucouleur state builder, El Hadj Omar, to move his center of operations to Ségou on the middle Niger River.

In 1857, Faidherbe created the first companies of Senegalese Riflemen, a model of native African military recruitment that French commanders would replicate as they moved inland. Native levies and the warriors of African allies would provide the bulk of French military manpower in West Africa.

The fabled (but mythical) wealth of Timbuktu, to which was added the assumed strategic value of Lake Chad, constituted the magnets that attracted French expansion inland from the upper Senegal as well as from Algeria and the coastal points that would become Guinea, Côte d'Ivoire, Dahomey (Benin), and Gabon. The decision taken in 1880 to open a series of fortified posts and to build a railway linking Kayes, at the head of navigation on the Senegal River, to Bamako, on the middle Niger River (occupied in 1883), led to armed conflict with the Toucouleur empire, ruled since 1864 by El Hadj Omar's eldest son, Ahmadou, and with the empire of the Dioula state builder, Samori Touré.

To successive French commanders of this region, particularly Gustave Borgnis-Desbordes (1880–1883), Joseph Simon Galliéni (1886–1888), and Louis Archinard (1888–1891 and 1892–1893), the Toucouleur empire, because it blocked the way to Timbuktu, had to be destroyed. This task, completed in 1893, was accompanied by lesser campaigns against former Bambara, Toucouleur, Sénoufo, and other African allies who were no longer needed.

➤ KÉNIÉDOUGOU—BETWEEN SAMORI AND THE FRENCH

Kéniédougou, a Sénoufo/Dioula successor state of the eighteenth-century empire of Kong, made valiant attempts to resist conquest by both Samori Touré and the French. Kéniédougou's ruler, Fama Tiéba, who had strengthened the kingdom during the 1870s, established his capital at Sikasso in what is now southeastern Mali. In 1887–1888 Sikasso successfully resisted a 16-month siege initiated by Samori.

The French military leadership in the western Sudan, then technically at peace with Samori but preparing the next campaign against him, encouraged Tiéba to resist Samori, even providing him with arms and ammunition and persuading his envoys to sign a vague French protectorate treaty.

In 1898 when the French commander of the western Sudan, Lieutenant-Colonel H. M. Audéoud, decided to station a French garrison in Sikasso, Fama Babemba, Tiéba's successor since 1893, flatly rejected the idea. Consequently, Audéoud's forces attacked Sikasso.

After a short but violent siege, Audéoud's artillery pierced the town's three concentric mud-clay walls. After violent house-to-house combat on May 1, 1898, the French forces sacked and burned Sikasso. Fama Babemba committed suicide before he could be captured. Samori, very demoralized by this French success where he had failed, was captured by Captain Gouraud less than four months later.

—Leland Barrows

As the French communication lines linking the upper Senegal and the upper and middle Niger regions grazed the northern rim of the area where Samori Touré was building his empire, a clash occurred at Keniéra, south of the Niger River, in February 1882. Later, periods of hostilities alternated with periods of uneasy peace, as Samori, attempting to avoid the French, shifted his area of state building from upper Guinea to northern Côte d'Ivoire. In September 1898 Captain Henri-Joseph Gouraud, commanding a small detachment of mostly African troops, captured Samori inside Liberian territory.

While the French were combating these African adversaries, they were also contending

with instances of dissidence among presumed allies and suppressing numerous rebellions. The establishment of this region as an autonomous military command in 1880 was a stimulus to independent actions on the part of its commanders. The French occupation of Timbuktu in 1894 was one such action.

The eastward-moving struggle against Samori offered the French an impetus to link the French enclaves farther down the West African coast to the interior. This process sped up and expanded after the 1885 Berlin West Africa Conference established rules for the effective European occupation of African territory.

In 1899 French columns from Algeria, the western Sudan, and the French Congo converged near the southern shore of Lake Chad, at Kousséri. Here the combined forces defeated the Sudanic state builder Rabah Zoubeir. Although this battle is often viewed as marking the close of the era of the French conquest of West Africa, French forces, for many more years, would fight smaller campaigns in outlying areas, such as the region of southern Côte d'Ivoire. As a kind of afterthought, France began the pacification of Mauritania in 1905, a task that would drag on until 1938.

—Leland Barrows

Bibliography

- Daughton, J. P. *An Empire Divided: Religion, Republicanism, and the Making of French Colonialism, 1880–1914*. New York: Oxford University Press, 2006.
- Kanya-Forstner, A. S. *The Conquest of the Western Sudan: A Study in French Military Imperialism*. Cambridge: Cambridge University Press, 1969.
- Porch, Douglas. *The Conquest of the Sabara*. 2nd ed. New York: Farrar, Straus, and Giroux, 2005.

Italian-Ethiopian War

The Italian-Ethiopian War of 1895–1896 is one of the few occasions in modern times in which non-Europeans decisively defeated a European power bent on conquest. The war capped years of efforts by the Italians to create an empire in eastern Africa. These Italian ambitions came into conflict with Ethiopian claims of sovereignty over Eritrea, an area controlled by feudal

warlords who often did not accept any higher authority. The superior weapons and greater number of troops led to an Ethiopian victory over a demoralized Italian army that suffered from the local conditions.

After Italy's unification in 1861, many Italians were eager to establish their country as a major power among the European states. Some Italians believed opportunities to do so existed in the Red Sea region, especially by establishing a colony in Eritrea. Italian penetration into the region began when the Italian Società di Navigazione Rubattino (Rubattino Shipping Company) purchased Assab, a port on the Red Sea near the straits leading into the Indian Ocean, from local rulers in November 1869. Assab was the main gateway for products going to and from Ethiopia. On July 5, 1882, the Italian government took possession of Assab, raising Ethiopian fears of further Italian penetration. These fears were heightened three years later when Italian troops occupied the important Eritrean port of Massawa, 400 miles to the north of Assab.

Ethiopian and Italian troops clashed briefly in 1887 along the disputed border between Eritrea and Ethiopia. To prevent further conflict, the governments negotiated and signed the Treaty of Wichale on May 2, 1889. The Italians agreed to recognize Menelik II as emperor of Ethiopia in return for his acceptance of their presence in Eritrea. The Italian copy of the treaty, however, indicated that Italy would control Ethiopian foreign relations. Menelik soon became aware of this clause and committed himself to challenging the Italian claim. Over the next four years, he consolidated his power and continued to import modern weapons. In 1893 he repudiated the treaty, setting the stage for war.

At the time, General Oreste Baratieri was the Italian colonial governor and commander of the military forces in Eritrea. He had little respect for Ethiopian military abilities and spoke publicly of bringing Menelik to Italy in a cage. An opportunity to expand Italian power into Ethiopia occurred in December 1894 when Batha Agos, chief over Okule Kasai, a province claimed by both Ethiopia and Eritrea, imprisoned several Italians. Soldiers sent by Baratieri killed Batha Agos, but his followers fled to the Ethiopian province of Tigre. When the governor

► THE IMPACT OF THE BATTLE OF ADOWA

The Italian defeat at Adowa had far-reaching effects. War with Ethiopia divided Italian society. Many Italians, especially the socialists, had opposed imperial expansion in eastern Africa, convinced that the money used could be better spent in Italy. Many working-class Italians also opposed the war since their sons were conscripted for duty. The slaughter of Italian boys at Adowa resulted in riots in several large Italian cities, including Pisa and Milan. The Crispi government fell and was replaced by that of Liberal Conservative Antonio Starabba. Internationally, Adowa was an embarrassment to Italy. Anxious to prove itself as a major power, Italy was the only European

power defeated by a native army. The hundreds of Italians who were taken prisoner at Adowa were humiliated to have been captured by black men. The myth of racial superiority was exposed. For some Italians, the experience led to a desire for revenge. Benito Mussolini, the founder of fascism and after 1922 the dictator of Italy, claimed that he was completely engrossed by the thought of wiping out the humiliation of Adowa. Mussolini eventually invaded Ethiopia on October 3, 1935. His modern forces used poison gas and terror bombing to break the Ethiopian resistance. Within two years, Ethiopia was conquered.

—Timothy J. Watts

refused to give them up, Baratieri invaded Tigre in January 1895, and the war began.

The Italians quickly defeated the local forces and occupied Tigre. Baratieri spent the next ten months consolidating his position and encouraging rebellions against Menelik. Menelik spent the time importing additional arms and encouraging an antiwhite attitude among Ethiopians. When Baratieri began to march on Addis Ababa in October 1895, Menelik mobilized 150,000 men to meet him.

Clashes at Amba Alagi in December 1895 and at Mapele in January 1896 resulted in Ethiopian victories. Baratieri responded by repositioning his army near Adowa in February. He was confident that the Ethiopians did not have the logistical support to maintain a large army for very long. By delaying a battle, he hoped that Menelik's army would melt away. Baratieri's army, however, suffered from supply shortages due to a lack of transport animals. Many of his soldiers, recent conscripts from Italy, were in poor health because of the heat and dry conditions around Adowa.

Baratieri's strategy of delay was upset, however, by pressure from Rome. Italian prime minister Francesco Crispi considered it an embarrassment to be stymied by an African force and ordered Baratieri to force a battle. While Baratieri had more than 20,000 men, nearly half were *ascaris*, native troops serving Italy. They were armed with older single-shot rifles, while



Italian officers pose before the Battle of Adowa, a conflict that occurred on March 1, 1896, during the Italian-Ethiopian War. (Library of Congress)

the Italian soldiers had modern magazine-fed rifles. Baratieri believed that his inferiority in numbers would be outweighed by a qualitative edge. He ordered a surprise attack for March 1, 1896. Menelik's army had dwindled to 100,000 men, but most were armed with modern French repeating rifles, and his artillery was qualitatively superior to that of the Italians as well.

For the Italians the attack went badly from the start. Italian guides and maps were unreliable, and four columns of troops ended up in the wrong positions. At dawn the Ethiopians attacked. The Italian left-hand column had

advanced farther than the others and was cut off and destroyed. The Ethiopians then attacked each of the other columns in turn. Baratieri, who was hampered by the loss of his glasses and could not see the action, ordered a retreat at midday, but it quickly turned into a rout.

Nearly 8,000 Ethiopians died in the fighting, proportionately far fewer than the Italians, who lost 70 percent of their army. More than 4,000 Italians and 2,000 African *ascaris* were dead, while another 3,200 were wounded or captured. For the first time in modern history, an African army had defeated a European one. The results of the battle shocked the Italian people. Baratieri was replaced by General Antonio Baldissera, who rebuilt his forces and maintained Italian control over Eritrea. Crispi's government fell as a result of the defeat. On October 26, 1896, Ethiopia and Italy signed a peace treaty in which Italy recognized Ethiopia's full independence.

—*Timothy J. Watts*

Bibliography

- Berkeley, G. F.-H. *The Campaign of Adowa and the Rise of Menelik*. 1902; reprint, New York: Negro Universities Press, 1969.
- Marcus, Harold G. *A History of Ethiopia*. Berkeley: University of California Press, 1994.
- Regan, Geoffrey. *The Brassey's Book of Military Blunders*. Washington, DC: Brassey's, 2000.

British Conquest of the Sudan

Sudan in the late nineteenth century was a dependency of Egypt, and so when Britain

occupied Egypt in 1882 it also assumed responsibility for the Egyptian occupation of Sudan. Thus when a religious uprising resulted in the annihilation of the Egyptian army in November 1883 and the capture of Khartoum, the capital of Sudan, in January 1885 Britain felt compelled to intervene, not only to restore order but also to forestall other colonial powers from assuming control of the country.

The religious uprising began in the early 1880s when the Arab minority in Sudan coalesced around Mohammed Ahmad, a self-proclaimed Mahdi (the messianic leader who will restore justice and order to the Islamic faithful) who declared holy war on the Egyptian administration of the country. This uprising was increasingly popular and successful, and the initial reaction of the British government was to send Charles Gordon to the Sudan to evacuate the remaining Egyptian garrisons. Upon his arrival he declared that evacuation was impossible and instead requested reinforcements. The British government under Gladstone delayed in sending a major expedition up the Nile River to Khartoum, where Gordon was besieged by the Mahdi's forces. However, public pressure forced the dispatch of a relief force, which arrived at Khartoum two days after the fall of the city and the death of Gordon. With the Sudanese capital under the Mahdi's control, Egyptian and British forces evacuated the rest of the Sudan, while the failure to relieve Gordon was a significant factor in the fall of Gladstone's government in 1885.

► BATTLE OF OMDURMAN

The Battle of Omdurman (September 2, 1898) was the decisive engagement of the British conquest of Sudan. The battle was fought just north of the city along the Nile River. Kitchener's Anglo-Egyptian force was for most of the battle on the defensive against the numerically superior Mahdist army. The battle demonstrated the superiority of modern European weaponry, including machine guns and artillery, particularly in contrast to the muskets and spears used by the Mahdists. Although the Mahdists repeatedly charged the Anglo-Egyptian lines,

the superior firepower of Kitchener's troops enabled them to withstand every attack and inflict horrific casualties. Having suffered more than 10,000 killed and many more wounded, the Mahdists eventually broke and retreated, allowing Kitchener to occupy Omdurman and later Khartoum. In contrast, the Anglo-Egyptian force suffered only 51 casualties. The battle also included one of the last large-scale cavalry charges of the British army.

—*Wesley Ferris*

The Mahdi died on June 22, 1885, and was succeeded by Abdullah, known as the Khalifa. The Mahdist regime, as it was known, ruled Sudan for the next 13 years and instituted strict Islamic rule. Mahdist and Egyptian forces skirmished on the Egyptian-Sudanese frontier in the late 1880s and early 1890s, but no serious effort was made by either side to invade the other. However, the British government increasingly came to fear that other European powers might attempt to secure control over the Sudan in Britain's absence. The appointment of Herbert Kitchener as sirdar, or commander in chief, of the Egyptian army in 1892 signaled a renewed determination to defeat the Mahdists, avenge the death of Gordon, and regain control of the Sudan.

The British invasion of the Sudan began in 1896 with the occupation of Dongola. In the advance up the Nile toward Khartoum, logistics and supply were as important as battles, and the construction of railways across significant stretches of desert allowed Kitchener to maintain supplies to his Anglo-Egyptian force. The invasion of the Sudan culminated at the Battle of Omdurman, just to the north of Khartoum, on September 2, 1898, and resulted in a decisive British victory. Khartoum was reoccupied, and the last of the Mahdist forces were defeated by the end of 1899. The Mahdist regime had coincided with periods of drought and famine and had ruthlessly persecuted adherents of other faiths, so the British were generally welcomed after the defeat of the Mahdists. An Anglo-Egyptian agreement in 1899 formally restored Sudan to Egypt, but in practice the British ruled the country. The British reoccupation of the Sudan came just in time, as a small French force that had been sent to the Nile farther upriver at Fashoda to advance French claims to the region was forced to withdraw by Kitchener's much larger force.

—Wesley Ferris

Bibliography

- Keown-Boyd, Henry. *A Good Dusting: A Centenary Review of the Sudan Campaigns, 1883–1899*. London: Leo Cooper, 1986.
- Ziegler, Philip. *Omdurman*. London: Collins, 1973.



British forces under Lord Kitchener take possession of the city of Khartoum following a decisive British victory over the Sudanese in the Battle Of Omdurman, September 2, 1898. (Hulton Archive/Getty Images)

The Boer War

The Boer War (also known as the Anglo-Boer War or the South African War) of 1899–1902 pitted the British Empire against the Boer people of southern Africa. The Boers, descendants of Dutch settlers, tried to defend the independence of their republics, the Transvaal and the Orange Free State, against British intrusion. The Boers won some initial military successes but were eventually worn down and forced to surrender after a bitter guerrilla war that is often seen as an example of twentieth-century total war.

At the end of the Napoleonic wars the Dutch colony at the southern tip of Africa, known as the Cape Colony, was taken by the British. To escape British rule the Dutch settlers, known as Boers, moved farther inland in the 1830s and established two independent republics, named the Orange Free State and the Transvaal. In 1880–1881 during the First Boer War, the Boers successfully maintained their independence against the British. However, the discovery of gold in the Transvaal in 1886 sparked an influx of British miners and settlers into the Boer republics. Again the Boers felt that their independence was being threatened.

Boer fears were realized in 1895 with the Jameson Raid, an inept small-scale raid by

► “THE FROG WHO TRIED TO BE AS BIG AS A BULL”

Political cartoons were used effectively for political attacks and protest in Europe from the time of the French Revolution. The British became especially adept at their use during the turmoil of the Industrial Revolution. Political cartoons became a permanent part of British magazines and newspapers after Punch’s display, “Cartoons,” appeared in 1843. The example here is a pro-British cartoon commenting on the Boer War by showing Paul Druger, president of the South African republics of Transvaal and the Orange Free State, as a frog. Nearby is British foreign secretary Joseph Chamberlain as a bull. By the second half of the century, the use of political cartoons had spread across Europe and into Asia.

—Paul Doerr



“The Frog Who Tried to Be as Big as a Bull.” Illustration in Puck, April 11, 1900. (Library of Congress)

British irregulars from South Africa on Boer territory. The raiders were all captured, and evidence suggests that they were sponsored by British authorities at some level. Powerful British interests in South Africa, including the South African prime minister and diamond merchant Cecil Rhodes (1853–1902), wanted control over Boer minerals. Tension continued to build over the next four years until the Boers sent an ultimatum demanding that the British cease all warlike preparations on their borders. When the ultimatum was ignored, the Boers declared war on October 11, 1899.

The Boer army initially numbered about 40,000 troops, mostly on horseback. They were highly mobile and were excellent sharpshooters. The Boers had rifles that used new smokeless powder and a few modern artillery guns. British forces numbered about 30,000, mostly poorly trained local militias. The Boers invaded the Cape Colony and the neighboring province of Natal and laid siege to the towns of Ladysmith, Kimberley, and Mafeking. British relief columns sent to raise the sieges were defeated in three disastrous battles (Stormberg, Magersfontein, and Colenso) during the Black Week of December 10–15, 1899. The Boers fought skilled defensive battles and made full use of their sharpshooting and mobility to humiliate the British army.

Despite early successes, the Boers were unable to follow up. None of the besieged towns was ever captured. Black Week inspired the British to shake up their command and take the war seriously. Massive numbers of troops and supplies were shipped to South Africa, and soon the British army numbered more than 200,000, commanded by Field Marshal Frederick Sleigh Roberts (1832–1914). The British took the offensive in early February 1900. Kimberley and Ladysmith were soon relieved (February 15 and 28, respectively). The Boer army suffered a major defeat at Paardeberg during February 18–27, 1900. Moving slowly over difficult parched terrain, the British occupied the Boer capitals of Bloemfontein in the Orange Free State in March and Pretoria in the Transvaal in June. The relief of Mafeking on May 17 after a 217-day siege prompted wild celebrations in Britain. Colonel Robert Baden Powell, who had led the defense of Mafeking, became a national hero and later founded the Scout movement based on his experience in South Africa.

Following the relief of Mafeking, Boer organized resistance appeared to be at an end, and Boer leaders fled into exile. Lord Roberts, assuming that his job was done, left for home. However, the Boers refused to give up and waged a guerrilla campaign until May 1902. This second phase of the war proved especially bitter. Boer

guerrillas, known as commandos, made use of their mobility to harass British garrisons and ambush British columns. The British tried to defend a huge territory, and the Boers could pick and choose their targets at will. The new British commander, Lord Kitchener (1850–1916), realized that the commandos were dependent on the Boer civilian population for food, supplies, rest, and medical care. He decided to separate the commandos from their support network by rounding up Boer civilians and placing them in what the British referred to as concentration camps, the unfortunate origin of that term.

The camps lacked clean water, food, and adequate medical care. An estimated 116,000 Boer civilians, of which 95,000 were women and children, were incarcerated in the camps. Perhaps 28,000 Boer civilians died of disease or starvation. The British initially refused to admit that there was a problem, instead blaming the Boer women for poor housekeeping and hygiene skills. The truth eventually leaked out, blackening Britain's reputation around the world.

In addition to the concentration camps, Kitchener covered the Boer countryside with blockhouses designed to obstruct Boer mobility. Boer farms and crops were burned, and livestock was slaughtered. On May 31, 1902, the exhausted Boers were forced to surrender and sign the Peace of Vereeniging. Casualty figures vary, but an estimated 7,792 British troops were killed in combat, with another 14,000 dying from wounds and disease. The Boers may have lost 6,000 killed in battle.

Black Africans also participated and suffered in the war. Blacks served in British forces, although their contribution to British victory was ignored when the war ended. Blacks also served in the Boer army, mainly in a support role. The British retaliated by imprisoning black families in separate concentration camps, where as many as 20,000 may have perished. As with the British, the Boers ignored the black contribution after the war ended.

The Boer War is often seen as an example of total war. It blurred the distinction between combatant and civilian, especially on the Boer side. Because Boer civilians contributed directly to the Boer war effort according to the British, they were therefore considered targets

of retaliation. The Boer rural economy was destroyed, and civilians imprisoned in concentration camps suffered terribly. The war was also marked in Britain by prowar propaganda campaigns. The British general election campaign of November 1900 is known as the Khaki election because of the dominance of war issues.

—Paul Doerr

Bibliography

- Cuthbertson, Greg, Albert Grundlingh, and Mary-Lynn Suttie, eds. *Writing a Wider War: Rethinking Gender, Race, and Identity in the South African War, 1899–1902*. Athens: Ohio University Press, 2002.
- Farwell, Brian. *The Great Anglo-Boer War*. Toronto: Fitzhenry and Whiteside, 1976.
- Lowry, Donal, ed. *The South African War Reappraised*. Manchester, UK: Manchester University Press, 2000.
- Omissi, David, and Andrew Thompson, eds. *The Impact of the South African War*. Basingstoke, UK: Palgrave Macmillan, 2002.

Barbary Wars

The Barbary Wars were two wars (1801–1805 and 1815) fought between the United States and the North African states in the early 1800s. Americans traded extensively in the Mediterranean before the War of Independence from Britain, but following that war the British Royal Navy no longer protected American shipping in the Mediterranean, and consequently American ships soon fell prey to the four Barbary states of North Africa: Morocco, Algiers, Tunis, and Tripoli. These states were soon seizing U.S. merchant ships and holding their crews for ransom. As early as 1786, U.S. minister to Paris Thomas Jefferson suggested that diplomacy and payment of tribute would be unsuccessful and that the only real course for the United States was to build a navy.

Late in 1793 a truce between Portugal and Algiers mandated the release of Algerian warships into the Atlantic, where they took a dozen American merchant ships. As a consequence, in March 1794 Congress authorized building six frigates: the 44-gun *United States*, *Constitution*, *President*, and *Chesapeake* and the 36-gun *Constellation* and *Congress*. These were the

first ships of the U.S. Navy. Work on them was to stop if a treaty could be concluded. This was accomplished in September 1795, and in March 1796 the Senate approved the treaty. The United States agreed to pay \$525,000 to ransom 100 prisoners. In addition, the United States agreed to provide Algiers an annual gift of naval stores worth over \$21,000 and a completely equipped frigate, the *Crescent*, that was delivered to Algiers in February 1798.

This settlement led to demands from other North African states. Richard O'Brien, a captain captured in 1785, negotiated treaties with Tunis and Tripoli, paying Tunis \$107,000 and Tripoli some \$56,000 not to attack American ships.

In 1801 Yusuf Karamanli, the pasha of Tripoli, demanded a new treaty worth \$250,000, annual payments of \$20,000, and recognition of Tripoli's equality with Algiers. President Jefferson refused, and on May 14, 1801, Tripoli declared war on the United States. Jefferson ordered Captain Richard Dale to the Mediterranean with the frigates *President*, *Philadelphia*, and *Essex* and the schooner *Enterprise* to protect American merchant ships. On August 1, 1801, the *Enterprise* engaged in a long battle with the *Tripoli*, killing 50 of the 80 crewmen. No Americans were killed.

Captain Richard V. Morris replaced Dale, arriving at Gibraltar on May 25, 1802, in the *Chesapeake*. Morris remained in the Mediterranean until June 1803 convoying merchant ships and occasionally blockading Tripoli but doing little else. On June 17, 1802, Tripoli captured an American brig, which Richard O'Brien, American consul to Algiers, paid to release. Morris unsuccessfully attempted to land at Tripoli in February 1803 and made a futile attempt to negotiate in May. In June he was called home to answer for his lack of accomplishment.

Commodore Edward Preble on the *Constitution* arrived in August to take action against Tripoli. Preble planned to use the frigates *Constitution* and *Philadelphia* to keep Tripoli under constant blockade. On October 31, 1803, however, the *Philadelphia* ran aground near Tripoli, and Captain William Bainbridge and his 307 men were taken prisoner. Preble feared that Tripoli would then fit the *Philadelphia* for

service against his own squadron, but on February 16, 1804, Lieutenant Stephen Decatur and 74 men sailed into Tripoli Harbor on the *Intrepid*, a captured Tripolitan ketch; boarded the *Philadelphia*; and set it on fire. They then withdrew without losing a man.

Congress learned in March 1804 of the *Philadelphia's* capture and planned to send out an increased naval force. Preble did not wait. With a force of 1,000 men aboard the *Constitution*, 3 brigs, 3 schooners, and 6 gunboats and 2 bomb boats borrowed from Naples, he attacked Tripoli, which was protected by 25,000 men, 115 cannon, 19 gunboats, 2 galleys, 2 schooners, and 1 brig.

After failed attempts to negotiate, Preble launched five attacks, on August 3, 7, and 25 and September 3 and 4. He sank several gunboats, captured others, and bombarded Tripoli. Some 30 Americans died in the attacks, 13 of them in the premature explosion of the *Intrepid*, which was fitted as a fireship to destroy shipping in the harbor.

On September 10, 1804, Commodore Samuel Barron arrived with five frigates to relieve Preble, who sailed home. Barron's ill health and bad weather prevented further assaults. With Barron came William Eaton, who had a plan to install Yusuf's deposed older brother, Hamet, in power in Tripoli. Eaton, with two midshipmen and seven marines, located Hamet in Egyptian exile and signed a convention with him in February 1805. Eaton was named commander of the expeditionary force that departed Alexandria on March 6 and consisted of 10 Americans, 300 Arab horsemen, and 1,000 camels. The force marched 500 miles across the Libyan Desert to Derna, assaulting that city on April 27 with artillery support from the American brigs *Argus*, *Hornet*, and *Nautilus* under Captain Isaac Hull. Hamet and Eaton then took control of the town, and marine captain Presley O'Bannon raised the American flag for the first time over a conquered foreign city. Tripolitan forces failed in two attempts to retake the city on May 8 and June 10.

Meanwhile, on June 10 Yusuf agreed to peace. He accepted a \$60,000 ransom for the release of the American prisoners but renounced tribute from the United States. The

Constellation then evacuated Eaton and the other Americans as well as Hamet Karamanli, to whom the United States paid a small annual stipend, although his brother later installed him as governor of Derna.

Algiers captured five American ships between 1807 and 1815, but the 1808 American embargo and the war with England prevented American retaliation. In March 1815 Congress declared war on Algiers, and President James Madison sent two squadrons to the Mediterranean. Decatur reached Algiers in the *Constellation* on June 28, 1815, with two captured Algerian warships. Algiers then released its American prisoners, renounced tribute from the United States, and agreed not to attack American merchant vessels. Decatur continued on to Tunis and Tripoli, which reaffirmed their peaceful intentions. He then sailed from Tripoli on August 9, 1815,

having secured safe passage for American trade in the Mediterranean.

—Robert J. Allison

Bibliography

- Allison, Robert J. "Barbary Wars." In *Naval Warfare: An International Encyclopedia*, edited by Spencer C. Tucker. Santa Barbara, CA: ABC-CLIO, 2002.
- Allison, Robert J. *The Crescent Obscured: The United States and the Muslim World, 1776–1815*. Chicago: University of Chicago Press, 2000.
- Irwin, Ray W. *Diplomatic Relations of the United States with the Barbary Powers, 1776–1816*. Chapel Hill: University of North Carolina Press, 1931.
- Naval Documents Related to the United States Wars with the Barbary Powers*. 6 vols. Washington, DC: U.S. Government Printing Office, 1939–1944.
- Whipple, A. B. C. *To the Shores of Tripoli: The Birth of the U.S. Navy and Marines*. Annapolis, MD: Naval Institute Press, 2001.

■ Introduction: War and Warfare in South, Central and Southwest Asia

During the eighteenth and nineteenth centuries India became a British colony, Crimea and the Caucasus came under Russian rule, the Ottoman and Persian empires lost territory and prestige, and much of central Asia became part of the Chinese or Russian empires. Many factors contributed to these developments, but the most important was warfare.

This certainly was the case with central Asia, a region stretching from the Caspian Sea in the west to the Gobi Desert in the east and from Siberia in the north to Persia and Afghanistan in the south. A land of arid grasslands, deserts, and few cities, central Asia's migrations and conquests and the economic activities of its peoples, mainly Turkic-speaking nomads, had played key roles in the history of Eurasia for many centuries. The political fortunes and the importance of the region began to decline in the 1400s and 1500s, however, as a result of the region's political disunity following the breakup of the Mongol empire in the thirteenth and fourteenth centuries,

the declining economic importance of the Silk Road after an ocean route was opened between East Asia and Europe, and, most importantly, the spread of gunpowder weapons, which shifted the military advantage away from steppe horsemen to settled peoples with the capacity to manufacture the new weapons and maintain larger armies in the field.

This decline culminated in the events of the 1700s and 1800s, when the steppe peoples of central Asia lost their political independence to Eurasia's two largest empires, China and Russia, and in a much more limited way to Great Britain. In a series of conquests during the reigns of three emperors—Kangxi (1661–1722), Yungzheng (1722–1735), and Qianlong (1735–1796)—Chinese armies conquered the Mongol and Turkic peoples of eastern central Asia and incorporated them into the Qing empire. A century later, as its prospects for further expansion at the expense of Persia and the Ottoman empire dimmed, Russia turned its attention to the western and middle

portions of central Asia, which it brought under its control between the 1860s and 1880s. The only political entity in the region to retain a measure of independence was Afghanistan, which was more an aggregation of fiercely independent tribes than a true state. The Afghans held their own in two wars with the British, but at the conclusion of the Second Anglo-Afghan War (1878–1880) the Afghans were forced to accept British direction of their foreign policy.

In South Asia the key event between 1750 and 1860 was the British conquest of India. In the mid-eighteenth century merchants of the British East India Company carried on their business from a few fortified coastal enclaves while carefully avoiding political entanglements. A little over a century later the British dominated the subcontinent with an Indian army of 250,000 men, which they used to sustain their power in India itself and extend it in other parts of the world. This was achieved through dozens of wars that the British fought against the French, the Mughul empire, and numerous Indian regional powers, including Bengal, Oudh, Mysore, the Maratha Confederacy, and the Sikh kingdom of Punjab. The British also fought a war against rebellious army units and their supporters in the Indian Rebellion of 1857–1858.

In explaining the British success, military historians long ago abandoned the nineteenth-century theory that the superior fighting quality of British troops was the deciding factor. Most of these historians also are skeptical of the argument that better-quality British technology was the key. Many Indian rulers employed European military experts who provided advice about the manufacture and use of firearms, cannon, and artillery that were on par with those of the British. British superiority in weaponry was established only from the mid-1850s onward, by which time most of the continent had been subdued. Recent accounts tend to offer two other explanations for the British success. First, the British had much greater financial resources than those of their Indian opponents as a result of the taxes they collected from their Indian subjects and the capital they could raise from Indian financiers. Such resources provided funds to win allies through bribes, hire and train large

numbers of native troops to fight for them, and keep their armies in the field until victory was achieved. The British also benefited from the fact that their opponents often were politically fragmented and lacking allies. A prime example is the conflict with the Maratha Confederacy, whose troops matched those of the British on the battlefield but whose overall effort was damaged by a lack of coordination among armies representing the confederacy's various parts.

With the British victory in the Sikh Wars (1845–1846, 1849–1850) and the suppression of the Indian Rebellion in 1857, the military history of India shifts from being a story of conquest and more or less continual war to one of consolidation and relative peace in India itself. The British merged the armies of the Bengal, Madras, and Bombay presidencies into a centrally controlled Indian army, which in 1900 consisted of approximately 157,000 native troops and 74,000 English. During World War I the Indian army expanded to over one million troops, 100,000 of whom were killed or wounded in the fighting.

In contrast to India, the military challenge facing the Ottoman and Persian empires was to halt territorial losses on their peripheries and suppress internal rebellions. For the Ottoman empire the Treaty of Karlowitz (1699), which ended a war with European powers dating back to 1683, set a pattern of military defeat and territorial losses that continued in the eighteenth-century wars against Austria and Russia. Over a century the empire lost control of Hungary, the Dalmatian coast, parts of Crimea, and present-day Ukraine. Persia lost control of its eastern provinces to the new Afghan state in the mid-1700s and ceded its territories in the Caucasus to Russia after defeats in the Russo-Persian wars of 1804–1813 and 1826–1828. In both states these defeats generated efforts to reform their armies.

In the Ottoman empire Selim III (r. 1789–1807) established colleges to teach European military sciences, issued new regulations for the artillery and transportation units, and hired European officers to advise the Ottoman army and train a special new unit known as the “new order army.” Conservatives blocked these reforms when they forced Selim to resign in 1807 and then murdered him in 1808, but beginning in the

1820s upgrading the army again became a priority under Mahmud II (1808–1839) and his successors. Progress was made on many fronts, but the Ottomans still needed Russian help to repulse an Egyptian invasion of Syria in 1832–1833 and Anglo-French help in the Second Turko-Egyptian War (1839–1841), when Ottoman efforts to win back territories from the Egyptians led to a series of early disasters. Thanks to their British and French allies, the Ottomans were on the winning side in the Crimean War but were badly beaten in the Ottoman-Russian war of 1877–1878. The postwar treaties resulted in the independence of Serbia, Romania, and Bulgaria, a status gained by Albania after the Ottomans lost yet another war in 1912–1913 to a coalition of Serbia, Greece, Romania, and Bulgaria. Despite its record of military futility, the Ottoman empire was recruited as an ally by the Germans in World War I. This time, military defeat led to more than territorial losses. It led to the Ottoman empire's demise.

Military reform in Persia had a similarly unsatisfactory result. In the 1820s Crown Prince Abbas Mirza created a “new army” trained by European officers and equipped with updated firearms and artillery. He used these troops effectively in suppressing rebellions in eastern Persia before his death in 1833, but when Persia sought to recapture territories in Afghanistan in 1836–1838 and 1856–1858, the new army performed poorly, and Persia was beaten in both instances. Faced with debts, mediocre leadership, Russian and British meddling, and a backward economy, the Persian government made military reforms a low priority for the rest of the century. The army became a laughingstock and was one of the many reasons why in the early 1900s the country descended into the chaos of revolution, civil war, and unchecked foreign intervention.

—James H. Overfield

Indian Armies under Colonial Rule

The Indian Army was formed in 1748 by the East India Company (EIC) and consisted of mostly Indian troops led by a European officer and a noncommissioned officer corps. The force was raised to support the company against native

principalities that were at war with each other or that were opposed to the EIC itself. The Indian Army was used by Robert Clive, the EIC's chief military officer, to eliminate French competition to the EIC in India during the Seven Years' War, including the French ally in Bengal, Siraj Ud Daulah, at the Battle of Plassey in 1757. The battle is considered the point when the company became a major force on the subcontinent.

Three regional armies were raised by the respective presidencies in areas of regional control created to aid in the administration of the territories controlled by the EIC. These were located in Bengal, Bombay (present-day Mumbai), and Madras, but they were under the orders of the commander in chief, who was superseded in authority only by the governor-general (created by parliamentary act in 1773) in India. The composition of the force gradually changed throughout the nineteenth century, with more natives assuming noncommissioned officer positions. The rank-and-file soldiers were almost exclusively Indian or Afghani, although poor Irish and English soldiers occasionally enlisted. The organization was broken into the usual divisions of infantry, cavalry, artillery, and support regiments.

The Indian army saw constant action in skirmishes throughout the eighteenth century and was the main force in major combat in



Sikh officers and soldiers of the British Fifteenth Punjab Infantry regiment, shortly after the Indian Rebellion (also known as the Indian Mutiny), 1858. (Felice Beato/Hulton Archive/Getty Images)

ARMIES OF THE NATIVE PRINCES

The Indian Army was not the only armed force on the subcontinent. British control of India was never truly complete, and native princes held almost a third of the area of India in political entities that could be as small as a few square miles or as large as the vast areas of Hyderabad or Kashmir, both larger than England. The largest states held nominal administrative and legislative sovereignty as well as their own armies. These armies were still ostensibly loyal only to their rulers, and even after 1895 when their forces were made Imperial Service Troops and adjunct to the main Indian Army, they were commanded by their respective rulers.

—Scott Rhymer

Afghanistan (1842) and two campaigns against the Sikhs between 1845 and 1849. The Indian Rebellion (1857–1858), in which troops throughout the Bengal Army rebelled against the British occupation, marked the end of the company-run Indian Army. The troops mutinied over a number of issues, from racial and religious tensions between native and white troops to personal and national aspirations of the Indian gentry. Following the mutiny, India was administered as a crown colony directly from London. The army was reformed along the regimental system of the British Army, which was based on the system used in the counties of Britain, but this could not be well replicated. Instead, many of the Indian units were based on the ethnicity or religious affiliation of the natives. The size of the Indian Army was usually somewhere around a quarter of a million men under arms.

Indians joined the army for various reasons, but patriotism was rarely among them. These soldiers were paid well and received pensions and death benefits, providing the troops and their families more stability than was typically possible in civilian life. Discipline, while strict during the nineteenth century, was more lenient for native troops than for those from Great Britain. British troops could be flogged until army reforms of the 1870s, but this was not an option when dealing with the natives, mostly for fear of creating enmity toward the British officers.

Natives were excluded from the officer corps until the first decades of the twentieth century, with the first Indian officers being doctors.

—Scott Rhymer

Bibliography

- Farwell, Byron. *Armies of the Raj: From the Great Indian Mutiny to Independence, 1858–1947*. Norton: London, 1991.
- Farwell, Byron. *Mr. Kipling's Army*. London: Norton, 1981.

Ottoman Military Reforms in the Reigns of Selim III and Mahmud II

Selim III (r. 1789–1807) and Mahmud II (r. 1808–1839) launched reforms of the Ottoman military in the late eighteenth and early nineteenth centuries after a century of halfhearted reform efforts. The impetus for the reforms was the poor performance of the Ottoman military in wars against the Austrian Habsburgs and Russians in the late 1700s. Neither ruler reached his goal of creating a modern military, but their limited successes helped revitalize the empire and gave later reformers a foundation on which to build.

Selim sought reforms in three areas. First, he sought to reorganize and reequip the established army corps, including the famed Janissary corps, once the elite infantry fighters of the Ottoman army but by the eighteenth century consisting of poorly trained and unmotivated soldiers mainly devoted to protecting their privileges. Second, he established the Nizam-ı Cedid (New Regiment or New Order), around which a modern European-style military could be created. Initially, this new unit consisted of Russian- and German-speaking deserters and prisoners during the Ottoman-Habsburg-Russian War (1787–1791), who were turned into a company-size infantry unit and armed with captured weapons. After the war, this unit was stationed out of public view and was reinforced with recruits from the urban unemployed. The British embassy provided some weapons and equipment, and several French soldiers of fortune were hired as trainers and advisors. Soon additional foreign experts and weapons were introduced. The third part of Selim's plan was the establishment of the first modern military

school of the empire in 1795, the Imperial Military Engineering School.

The Nizam corps quickly grew, with the first regiment established in 1795 and the second one in 1799. Despite their effective performance in the Ottoman-French War of 1798–1802, the Nizam troops were bitterly opposed by established Janissary units, who saw the new corps as a threat to their many privileges, and by some members of the Islamic clergy, who were against the use of non-Muslim European advisors and any reform inspired by foreigners. Their case was strengthened when several of the provincial Nizam regiments performed poorly in the opening stages of the Russo-Turkish War (1806–1812). In May 1807 a small disorder within the guards of the Istanbul straits defenses turned into a full-scale rebellion against Selim, who sought to appease the rebels by executing a number of reformist officials and some of his close friends. This simply encouraged the rebels, who massacred Nizam soldiers and forced Selim to abdicate in favor of his cousin, Mustafa IV. In 1808 Mustafa himself was overthrown and replaced by his younger brother, Mahmud II.

Like Selim, Mahmud was convinced of the need for military reform, but after the Janissary rebellions of 1807 and 1808, he bided his time, gaining allies and purging conservative officials in preparation for a strike against the Janissaries. This came in 1826, when the Janissaries rebelled after Mahmud announced plans to reorganize the corps. With the support of loyal Janissary officers, elements of the regular army, and some Islamic leaders, Mahmud acted aggressively against the rebels on June 15, 1826. During this so-called *Vaka-i Hayriyye* (Auspicious Event), hundreds of Janissaries were killed. Two days later Mahmud disbanded the Janissary corps and its allied and affiliated corps.

Mahmud was now confident that his goal of founding a modern military was within reach, but he had no concrete ideas and no able advisors. Consequently, he was compelled to follow the blueprints of the defunct Nizam project of Selim III. The decree ordering the establishment of the new military, the *Asakir-i Mansure-i Muhammediye* (Victorious Soldiers of the Prophet Muhammad), was a slightly altered copy of the old Nizam regulations. Mahmud managed to

raise three new regiments, now known as *Mansure* regiments, but the lack of expertise among officers made it difficult to teach the soldiers even rudimentary military skills. The reform initiative reached a turning point with the appointment of Mehmed Hüsrev Pasha as the commander in chief of Mansure troops in May 1827. Hüsrev created a private staff of foreign experts, translators, and other personnel, which gradually became the model for an official military staff for the commander in chief.

The Ottoman-Russian War of 1828–1829 caught the empire in the first stages of overhauling its military system, so there were only 2 combat-ready elite regiments and 33 poorly trained regular regiments. Mahmud decided to use the elite regiments for the defense of Istanbul, so he had no choice but to recruit as many volunteers, mercenaries, and tribal warriors as he could. Even though this makeshift army inflicted serious casualties and mounted a stiff defense for a year, it was unable to resist the Russians, who reached Edirne city, the very heart of the empire, on August 19, 1829. Another setback followed in 1831, when the Egyptian ruler Muhammad Ali rebelled against his Ottoman overlord by invading the Ottoman province of Syria and pushing into Anatolia, where his army defeated the Ottomans on December 21, 1832. Mahmud had no choice but to seek help from his archenemy, Russia. The arrival of Russian troops as well as British diplomatic intervention stopped the Egyptian advance, but the Ottomans were forced to cede Syria to Muhammad Ali.

With the empire near collapse, Mahmud introduced yet another set of proposals for military reform. Its centerpiece was the establishment of an educational institution for the training of future officers according to European models. Mahmud and his commanders were aware of the superior performance of Muhammad Ali's army but were especially impressed by the performance of its officers. This led to the foundation of the Turkish Military Academy in 1834, which became the most enduring of Mahmud's military reforms and a turning point in the history of Ottoman modernization. However, the effects of the new academy were not felt immediately. The Ottoman army suffered another humiliating defeat against the Egyptian army on June 29, 1839,

before the first academically trained officers were commissioned. Mahmud died two days later without learning of the defeat.

—Mesut Uyar

Bibliography

- Aksan, Virginia H. *Ottoman Wars, 1700–1870: An Empire Besieged*. Harlow, UK: Pearson Longman, 2007.
- Berkes, Niyazi. *The Development of Secularism in Turkey*. London: Routledge, 1998.
- Shaw, Stanford. *Between Old and New: The Ottoman Empire under Sultan Selim III, 1789–1807*. Cambridge: Harvard University Press, 1971.

Anglo-French Wars in South Asia

The Anglo-French Wars in South Asia, also known as the Carnatic Wars because much of the fighting took place in the Carnatic region of southeastern India, took place in 1744–1748, 1749–1754, and 1756–1763. They were part of the long-standing struggle between France and Great Britain for colonial possessions and worldwide commercial dominance, a struggle that in India mainly was carried on by the French and English East India companies. As a result of the wars, Great Britain became the paramount European power in South Asia.

By the 1740s, the cooperation that had marked earlier European commercial activity in India had given way to the tensions of commercial, political, and personal rivalries, as the French made dramatic inroads into British political influence and profits, especially after the appointment of Joseph François Dupleix as superintendent of French affairs in Chandernagore in 1730 and governor-general of Pondicherry in 1742. The rivalry had reached the point that when the War of the Austrian Succession broke out in Europe in 1740, it was assumed that England and France would be on opposite sides and that the conflict would spread to India and the Indian Ocean. As it turned out, however, war between the two states was not declared until 1744, the year in which the first Carnatic War began.

The first major encounter of the war took place in July 1745, when the British dispatched four ships to Pondicherry, the city on the Coromandel Coast that was the center of French political and commercial power in India, to attack

French merchant ships. In response, Dupleix called for help from the French Indian Ocean naval fleet under the command of Mahé de La Bourdonnais. After arriving off the Coromandel Coast in July 1746, La Bourdonnais met the British in a bloody but indecisive battle off the coast of Nagapattinam and in September captured Madras, the major center of British commercial activity in India. Although the admiral favored returning Madras to the British in return for a large ransom, Dupleix recommended maintaining control of the city as a way of extending French political power and crippling British commercial activity. Dupleix prevailed, and in November La Bourdonnais returned to his fleet headquarters in the Indian Ocean after storms destroyed two of his largest ships.

Also in November, Anwarrudin, the nawab (native governor) of Arcot, who claimed authority over Madras, with British encouragement sought to expel the French with an attack of his 10,000-man army. A small French garrison defeated the nawab's forces, and Madras remained under French control until 1749. Indecisive fighting continued in 1748, when the French failed to take Fort St. David, located 100 miles south of Madras in Cuddalore, and the British siege failed to take Pondicherry. The War of the Austrian Succession, as well as the First Carnatic War, ended in the fall of 1748. Under the terms of the Treaty of Aix-la-Chapelle, the French returned Madras to the British in return for the return of Louisburg (in present-day Nova Scotia), the major French fort in North America that had been taken by the British in 1745. In effect, the treaty maintained the status quo ante in India.

Although Aix-la-Chapelle brought peace to Europe, conflict between the French and British trading companies in India resumed in late 1749, when they backed rival claimants in succession disputes over the thrones of the *nizam* (provincial governor) at Hyderabad and the nawab of the Carnatic. In this, the Second Carnatic War (1749–1754), the French under Dupleix had the original advantage, when in 1750 their allies made good their claims to rule in both states. At this point, however, Robert Clive, the 25-year-old East India Company official and captain in the company's army, emerged as a formidable opponent of the French. He was able to undermine

French success in particular at Arcot, where he overthrew Chanda Sahib, the French-supported nawab, in September 1751 and replaced him with the British ally, Muhammad Ali Walajah. Clive's relief of Arcot and subsequent military expeditions in support of the newly installed nawab accounted for the increased respect and admiration of his military skills and leadership. This led to his appointment as governor of Fort St. David in 1755 and Calcutta in 1757.

Meanwhile, Dupleix received grants of land and titles from his client Muzaffar Jang, the nizam of Hyderabad. The expansion of French commercial and revenue rights in the northern Circars, on the Coromandel Coast, and the interior areas of the southern Deccan appeared to solidify the company's place in India. But Dupleix was unable to take advantage of his newly won territories, a result of failed military alliances, especially that with Chanda Sahib at Arcot, and massive indebtedness to native rulers and moneylenders. In 1753 the French government, in a move endorsed by the directors of the French East India Company, recalled Dupleix as governor-general, replacing him with Charles Godeheu upon his arrival at Pondicherry in August 1754. A treaty of peace recognizing the British-allied Muhammed Ali Khan as nawab of Arcot followed soon thereafter. This second "peace" marked the beginning of the end of Dupleix's dreams to establish and expand the French empire in India. However, whereas Dupleix failed in his endeavor to establish a profitable method to extract revenue from his native allies and to elicit support from Paris for his plans to secure French power in India, the British East India Company utilized a similar scheme of revenue farming but with crucial support from home, to its benefit.

The British East India Company faced significant turmoil in the 1750s, however. The British, fearing a French assault on Calcutta, had begun fortifying the town in violation of its treaty with Siraj ud-Daula, the nawab of Bengal, and ignored his entreaties to discontinue expanding the fortifications. On June 20, 1756, Siraj ud-Daula's forces seized Calcutta and Fort William. On that same night, ud-Daula's troops imprisoned several dozen company servants and natives in a small prison adjacent to an army barracks. In

what came to be known as the infamous Black Hole of Calcutta, some 40 people may have died of thirst and heat exhaustion. In response, Clive was dispatched to Calcutta from Madras with a force of European troops and sepoys who restored the company at Calcutta by January 1757. Clive's forces then seized the French fort at Chandernagore (Bengal) in March 1757. In June of that year, the British defeated and killed Siraj ud-Daula at the Battle of Plassey. The terms of the peace treaty provided the British East India Company with revenue collection rights to a large portion of the Bengal region (24 *parganas*, or districts) and laid the foundation for British colonial rule in India.

Meanwhile, the British declared war against France on March 15, 1756, in what became the Seven Years' War (1756-1763). In India, the first outbreak of the Third Carnatic War, aside from Clive's attack at Chandernagore, was the French seizure of Fort St. David in May 1758. Later that year the French, under the command of Lally, besieged Madras, which the British successfully defended. The British scored a decisive victory against the French at the Battle of Wandiwash (Vanavasi) in 1760. By 1761, the British had captured Pondicherry (1761) and most other French settlements in India.

When the Seven Years' War ended in 1763, the Treaty of Paris, signed on February 10, allowed a minor French presence in India at Pondicherry and Chandernagore, with the stipulation that France could not fortify them. The British, in contrast, were well positioned to succeed the Mughals as the dominant power on the Indian subcontinent.

—John R. Pincince

Bibliography

- Bayly, C. A. *Indian Society and the Making of the British Empire*. Cambridge: Cambridge University Press, 1988.
- Bryant, G. J. "British Logistics and the Conduct of the Carnatic Wars." *War in History* 11(3) (2004): 278-306.
- Dirks, Nicholas. *The Scandal of Empire: India and the Creation of Imperial Britain*. Cambridge: Harvard University Press, 2006.
- Manning, Catherine. *Fortunes à Faire: The French in Asian Trade, 1719-48*. Brookfield, VT: Ashgate, 1996.

- Marshall, P. J. *The Making and Unmaking of Empires: Britain, India, and America, c. 1750–1783*. New York: Oxford University Press, 2005.
- Marshall, P. J. *Trade and Conquest: Studies in the Rise of British Dominance in India*. Aldershot, UK: Variorum, 1993.
- Prakash, Om, ed. *French in India*. New Delhi: Anmol, 2002.

Anglo-Mysore Wars

The Anglo-Mysore Wars were a series of four conflicts fought between 1767 and 1799 that involved the Mysore Kingdom of southwestern India and the British East India Company. The result was the establishment of British supremacy in the Deccan and southernmost regions of India.

The First Mysore War (1767–1769), however, hardly anticipated any such British triumph. The East India Company was concerned with the growing power of Haidar Ali, the ruler of Mysore, whose territories bordered the Carnatic coast and thus threatened British trading stations at Madras and Cuddalore. To counter this perceived threat, the British entered into an alliance with the Nizam of Hyderabad, who, however, soon reversed himself and joined forces with Haidar. The British won important victories in the first war, but agreed to end the war in April 1769, when Haidar's forces managed to lift the British siege of Bangalore and came within 5 miles (8 kilometers) of Madras. The resulting treaty called for the restitution of all conquests and the promise of mutual aid and alliance in any defensive war.

The failure of the British to come to Haidar's aid when Mysore was attacked by the Maratha Confederacy in 1771 drove Haidar into an alliance with the French, and when warfare broke out between Britain and France in 1778 over French support for the American revolutionaries, Haidar joined the conflict. The Second Mysore War (1780–1784) opened with Haidar's invasion of the Carnatic with 80,000 men and 100 guns. Taking Arcot, Haidar destroyed a British force at Pollilur (September 10, 1780), forcing his enemies to flee to Madras. Despite this initial success, Haidar was unable to capture Madras before Eyre Coote arrived with a relieving force from Calcutta. In 1781 the British defeated the Mysore

forces at the battles of Porto Novo (July 1), Pollilur (August 27), and Sholingur (September 28), but victory proved elusive. Haidar's son, Tipu, defeated the British at Annagudi (February 17–18, 1782), and a French squadron under Admiral Pierre du Suffren captured Trincomalee (August 30, 1782). The Treaty of Versailles (January 20, 1783) ended the war between Britain and France (and the United States), and Haidar Ali himself had died late in 1782. It was therefore hardly surprising that his son Tipu was amenable to peace, especially as the Treaty of Mangalore (March 11, 1784) restored the pre-war status quo.

Following the war, Tipu strengthened and modernized his army and continued to maintain close ties with the French, despite misgivings about their failure to give adequate support in the war between 1780 and 1784. The British under Governor-General Cornwallis countered the Mysore threat by entering into alliances with the Marathas, Hyderabad, and a number of other Indian states. When Tipu attacked one of these allies, the rajah of Travancore in late 1789, the Third Anglo-Mysore War (1790–1792) began. The war opened with General Sir William Medows invading Malabar with some 30,000 men. After Tipu successfully avoided Medows's forces, Cornwallis himself assumed command in January 1791, while Maratha forces attacked on Tipu's northern frontier. Losing his capital of Mangalore to the British (March 21, 1791), Tipu fell back on Seringapatam. After Cornwallis captured the citadel of Seringapatam, following a protracted siege, Tipu was forced to accept the Treaty of Seringapatam (March 16, 1792), in which he ceded half his territory to the British.

Despite this defeat, Tipu's abilities as an administrator ensured a quick recovery of Mysore. The continued threat from Mysore seemed all the greater to the British when Napoleon invaded Egypt in 1798. Fearing a French invasion of India in support of Tipu, Richard Wellesley, Lord Mornington, governor of India, ordered a force of 42,000 to invade Mysore (February 14, 1799). Tipu lost decisively, partly as a result of the defection of his three senior generals. Defeated at Siddeswara (March 5) and again at Malavalli (March 25), Tipu fell back on Seringapatam. There, having refused the exorbitant demands of General George Harris, Tipu died

defending his citadel from the final British assault (May 4). With Tipu's death, Mysore's territory was distributed to Britain's Indian allies, but the British maintained control over Mysore itself, thus ensuring its dominion in southern India.

—Adam Lynde

Bibliography

- Keay, John. *India: A History*. London: Harper Collins, 2000.
- Lynde, Adam Norman. "Mysore Wars (1767-1799)." In *Ground Warfare: An International Encyclopedia*, edited by Stanley Sandler. Santa Barbara, CA: ABC-CLIO, 2002.
- Mehra, Parshotam. *A Dictionary of Modern Indian History*. Oxford: Oxford University Press, 1987.

Maratha Wars

The Maratha Wars were three wars of the late eighteenth and early nineteenth centuries (1775-1782, 1803-1805, 1817-1818) occasioned by the encroachment of the East India Company against the territory and authority of the Maratha Confederacy of south-central India. The result was the destruction of the confederacy and the establishment of British rule over most of the subcontinent.

The Maratha kingdom emerged in the mid-seventeenth century during the reign of Shivaji (1630-1680), with the fortified citadel of Raigad as its capital. The kingdom reached its peak in the 1750s, when it controlled much of northern and central India. But in the wake of defeat by the Afghans at the Third Battle of Panipat in 1761, expansion ceased, and the peshwa (hereditary ruler) of the empire lost power. The empire became a loosely governed confederation dominated by five Maratha dynasties.

In the First Maratha War, the East India Company involved itself in a succession crisis of the Maratha leadership yet was defeated at the Battle of Telagaon in January 1779 and forced to sign a treaty relinquishing all territory and revenue it had taken from the Maratha since 1775. The governor-general of Bengal, Warren Hastings, rejected the treaty and renewed its campaign in 1780 with a larger force. Despite their successes, in 1782 the British accepted the Treaty of Salbai. The Marathas regained control of territories conquered by the British in return for joining the

British in their war with the Mysore kingdom in the Second Anglo-Mysore War and prohibiting French settlements in their territory.

Renewed conflict within the confederacy 20 years later again tempted British intervention, initially in the form of the Treaty of Bassein in which the company agreed to support the peshwa Baji Rao II against his rival Jaswant Rao Holkar by stationing company troops on his domain in return for revenue-yielding authority within the territory. Three Maratha clans, however, promptly raised forces to eject the British, so on August 7, 1803, the company declared war and deployed two armies—one under General Gerard Lake, the other under Major-General Arthur Wellesley, later the Duke of Wellington—and inflicted a series of defeats on the Maratha, the most important at Assaye and Laswari. Ultimately the Maratha forces were chased into the Punjab, and the Treaty of Sarji Anjangaon, dictated at bayonet point, ceded additional territory between the Jumma and Ganges rivers to the company.

In the Third Maratha War the company was prompted by raids by freelance Pindari horsemen into company territory—horsemen the Marathas were by treaty obliged to restrain yet often indulged or encouraged—as reason enough to eliminate what remained of Maratha power. The company fielded an army of more than 20,000 men to mop up the Pindaris before bringing the Maratha to battle for a final defeat at Mahidpur in December 1817. The war dragged on into April 1818, but at the end of it the company was in possession of all of Baji Rao's territory.

—Carl Cavanagh Hodge

Bibliography

- Hodge, Carl Cavanagh. "Maratha Wars (1775-1782, 1803-1805, 1817-1818)." In *Encyclopedia of the Age of Imperialism, 1800-1914*, Vol. 2, L-Z, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood, 2007.
- James, Lawrence. *Raj: The Making and Unmaking of British India*. New York: St. Martin's, 1997.
- Keay, John. *The Honourable Company*. London: HarperCollins, 1991.
- Kincaid, C. A., and Rao Bahadur D. B. Parasnis. *History of the Maratha Peoples*. 3 vols. New York: Oxford University Press, 1925.

Sikh Wars (1845–1846, 1848–1849)

The Sikh Wars were two short but brutal wars waged by British forces against the army of the Sikh-dominated state of Punjab, which under Ranjit Singh (r. 1801–1839) built a large well-equipped army with the help of European advisors. It was the last large Indian state not under British control, and when it fell after the Second Sikh War, British control of the subcontinent was complete.

The First Sikh War followed hot on the East India Company's failed effort in Afghanistan between 1838 and 1842. The British presence in Afghanistan and annexation of Sind in 1843 provoked first apprehension and then a preemptive response from the Sikh court in Lahore, which quite rightly feared a British attack. A force estimated between 12,000 and 20,000 men crossed the Sutlej River into British India on December 11, 1845, and seized Ferozepore two days later. When it pressed its offensive further southward, it was met and defeated by an Anglo-Indian force of 10,000 under General Sir Hugh Gough at Mudki. Gough's army then attacked and captured in bitter fighting Sikh entrenchments at Ferozeshah, after which the Punjabi army withdrew across the Sutlej. When in January 1846 the Sikhs again crossed the frontier, the British forces were ready. They won victories at Ludhiana and Aliwal before capturing the village of Sobraon near Lahore. Hostilities ended with a treaty signed at the Sikh capital on March 11, 1846, whereupon the Punjab became a British protectorate and the Sikhs were forced to pay an indemnity of £1.5 million. The overwhelmingly Muslim province of Kashmir was given to Gulab Singh, a Hindu chief who had deserted his Sikh allies and joined the British side before the Battle of Sobraon.

The second war was the product of the conviction on the part of Punjabi army that it had never been truly defeated and the ambition on the part of Lord Dalhousie, the new governor-general of India, to annex the Punjab outright. Both sides, in other words, were hankering for a return bout when the killing of two British officers at Lahore provided Dalhousie with appropriate outrage to invade the Punjab protectorate.

After a bloody but indecisive engagement at Chilianwala in January 1849—the battle cost 2,300 British casualties and prompted a call to replace Gough as commander-in-chief in India—the British force captured Multan and then shattered a combined Sikh-Afghan force of 50,000 with his artillery at Gujarat. Gough, who thereby concluded the war and made himself a hero before he could be fired, described Gujarat as “a victory, not over my enemies, but over my country.” The Punjab was annexed on March 30.

—Carl Cavanagh Hodge

Bibliography

- Bruce, George. *Six Battles for India: The Anglo-Sikh Wars, 1845–6, 1848–9*. London: Arthur Baker, 1969.
- Farwell, Byron. *Queen Victoria's Little Wars*. New York: W. W. Norton, 1972.
- Hodge, Carl Cavanagh. “Sikh Wars (1845–1846, 1848–1849).” In *Encyclopedia of the Age of Imperialism, 1800–1914*: Volume 1, A–K, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.

Anglo-Burmese Wars in the Nineteenth Century

The British and Burmese fought three wars during the nineteenth century, in 1824–1826, 1852–1853, and 1885. They were caused largely by territorial disputes, the British interest in promoting commerce, and Anglo-French rivalry. As a result of each of these conflicts, the Burmese increasingly ceded territory and sovereignty to the British. Burma (present-day Myanmar) was located to the immediate east of British India, bordering the states of Bengal and Assam. King Bagyidaw (r. 1819–1837) inherited and continued an expansionist policy as a result of which the Burmese had seized Tenasserim from Siam in 1766; subjugated the Kingdom of Arakan in 1784; conquered Manipur, near the Surma Valley, in 1819; and completed the invasion of Assam (which had begun in 1817) in 1823. After the conquest of Assam, Burma's western border touched on British India's eastern frontier, and the British feared that it could become a platform for an invasion of Bengal. As a result, the ill-defined border area between Burma and British India provided a constant source of friction.

THE BURMESE ARMY

The Burmese army evolved considerably during the Anglo-Burmese Wars. In 1824 the army consisted of only about 3,000 trained soldiers, mainly members of the royal palace guard. The army could be increased considerably on short notice by a royal order to provincial viceroys to provide a precise number of men at a designated location on a certain date. These conscripts, poorly trained and harshly disciplined, were usually issued either an old musket with ten rounds of ammunition or a sword, a spear, and an entrenching tool. These conscripts, numbering 10,000 to 20,000 or more in a conflict, preferred to attack rather than defend. Their tactics consisted of getting as near the objective as possible. While the musket men provided cover, the spear men dug a series of foxholes in a line. In the dark, the spear men would dig ever closer to the enemy objective until they got close enough to rush and overwhelm their adversary. During this operation, the musketeers would continue to fire on the enemy, and during the final assault they would charge with bayonets fixed. In defensive operations, the army

built strong teakwood stockades, frequently with walls up to 17 feet (5 meters) high and surrounded by deep ditches filled with sharpened bamboo stakes.

One significant feature of the Burmese military was its use of strong and sturdy war boats manned by marines. These boats were up to 100 feet (30 meters) long and 8 feet (2.4 meters) wide with a low draft and were made from the solid trunk of teak. They were manned by 50–60 oarsmen armed with swords and spears, and each boat carried a number of musket men. A small cannon was usually mounted on each vessel's bow. About 500 war boats were available on short notice, and these played a key role in a country laced with rivers.

The Burmese forces possessed more firearms during the Second Burma War, when their army was said to number 50,000. By the Third Burma War, Burmese soldiers were apparently less disciplined and motivated, and their army was only about 15,000 to 20,000 strong.

—Harold Raugh

One issue involved refugees. Thousands of Arakanese and later Assamese refugees abandoned their homes and fled to British India to escape Burmese enslavement. The Burmese considered the refugees to be their property and made a number of forays into British areas to find them. For their part, the British occasionally entered Burmese territory in pursuit of robbers.

The First Burmese War (1824–1826) was precipitated by a Burmese attack on a British military detachment on the Chittagong frontier in the fall of 1823 and the Burmese invasion of Cachar, an area under British protection, in 1824. The British declared war in March 1824. A British expeditionary force attacked and defeated Burmese forces at cities up the Irrawaddy River, including Rangoon and Kemmendine. During the summer monsoon period, a 60,000-man Burmese force surrounded the British at Rangoon, but in early December 1824, the British counterattacked and defeated the Burmese.

The British continued their advance northward and entered Prome on April 25, 1825, and

remained there during the summer. By September 1825, while negotiations were ostensibly being conducted, a Burmese army surrounded the British in Prome. In early December 1825, the British attacked and caught the Burmese off guard, then continued with their attacks to defeat Burmese units piecemeal. With victory in their grasp, the British continued their advance toward Ava, the Burmese capital. Under a flag of truce, Burmese envoys approached the British on December 27, 1825, to negotiate a peace treaty.

After the truce and a period of negotiations, however, it appeared the Burmese were preparing to continue the war. On January 18, 1826, the British renewed hostilities and followed the Burmese, who retreated toward Ava. After the British fought and routed a large Burmese force near Pagan on February 8, King Bagyidaw surrendered to prevent an attack on Ava. He agreed to pay an indemnity of £1 million, ceded Arakan and Tennasserim to the British, and renounced claims to Assam and other border regions. The Treaty of Yandabo was signed and concluded

the war in February 1826, and a reciprocal commercial treaty was signed in November.

Tension between the British and Burmese increased after Pagan Min became king of Burma in 1846. The Burmese ignored those parts of the 1826 treaty that guaranteed the protection of British merchants and commerce. Burmese officials were accused of harassing and overtaxing British merchants and unlawfully imprisoning two British mariners. The British sent a naval squadron under Commodore Lambert to Rangoon to investigate the situation. Lambert, however, went further when he seized the king's yacht and blockaded the Rangoon River. The British then provoked the Burmese to open fire on the blockading ships, and events spiraled out of control. The British issued an ultimatum to the Burmese king with terms that he could not possibly accept.

When the ultimatum expired, two British Indian Army brigades bombarded and captured Martaban and returned to Rangoon by April 8, 1852. After desultory operations, British reinforcements arrived at Rangoon in September 1852. British ships sailed upriver, bombarded the Burmese stockade at Prome, and occupied the deserted position in October. The British captured the town of Pegu the following month and then annexed the province of Pegu in January 1853. After overcoming continuing Burmese resistance in the region, the British marched on Ava. King Pagan was then deposed by his brother Mindon, who wanted to end the war. The British took advantage of the situation by demanding hundreds of additional square miles of land that included valuable teak forests. While no formal peace treaty was signed, a cease-fire ending the Second Burmese War was declared on June 30, 1853.

Burma was now effectively reduced to the area around Ava, and its foreign policy was basically determined until 1879 by a British resident. In 1879, however, the British agent was withdrawn in a diplomatic spat, and the Burmese sought closer ties with France. The Burmese sent a delegation to France in 1883 to observe French industry and possibly negotiate a commercial treaty. The British were wary that the French, who had fought and defeated the Chinese in 1884–1885 and had gained control of northern Vietnam, would also be supplying weapons to

the Burmese. These concerns were heightened when the French were given the contract to build a railway from Mandalay to the Indian frontier and establish a Burmese state bank.

In August 1885, the council of ministers in Mandalay levied a substantial fine on the British-owned Bombay-Burma Trading Company for allegedly exceeding their quota of teak logs and failing to pay for them. This was the excuse to go to war. The British issued an ultimatum in October 1885 demanding that Burma accept a British envoy and British control of Burmese foreign relations, among other items. Burmese king Thibaw rejected this ultimatum, so the British dispatched a three-brigade force that advanced on Ava before the Burmese had time to organize their defenses. Mandalay was occupied, and the Third Burma War (1885) was over in less than one month.

On January 1, 1886, the British formally annexed Upper Burma and proclaimed Burma a province of British India. Some Burmese soldiers who had fled into the jungle frequently became rebels or *dacoits* (bandits) and harassed the British and attacked their outposts. After four more years of fighting, the Burmese rebellion was suppressed in 1890.

—Harold Raugh

Bibliography

- Bruce, George. *The Burma Wars, 1824–1886*. London: Hart-Davis, MacGibbon, 1973.
- Ferguson, Niall. *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books, 2004.
- Hall, D. G. E. *Europe and Burma*. Oxford: Oxford University Press, 1945.
- Jones, Martin D. W. “‘The War of Lost Footsteps.’ A Re-assessment of the Third Burmese War, 1885–1896.” *Bulletin of the Military Historical Society* 30 (August 1989): 36–40.
- Sewell, E. “The Burma Expeditionary Force.” *Soldiers of the Queen* 43 (December 1985): 1–3.

Russian-Ottoman Wars of the Late Eighteenth Century, 1768–1792

The Russian-Ottoman wars of the late eighteenth century underlined the change in the balance of power in the Northern Caucasus and Crimea

regions. The Russian-Ottoman confrontation in 1768–1774 was largely caused by the ever accelerating expansion of Russian territory and influence in both the eastern and southern frontiers under Catherine II (r. 1762–1796). Following a series of clashes between Russian and Ottoman forces, Sultan Mustafa III declared war on Russia in September 1768. The declaration of war was triggered by a border incident in which a small contingent of Russian Cossacks entered the city of Basra in Ottoman territory and allegedly massacred civilians while searching for members of the Bar Confederation, a group in opposition to the Polish king, Stanislaus Augustus Poniatowski. In the ensuing conflict, the superiority of the Russian navy was clearly revealed. The Russian fleet was dispatched from the Baltic Sea around France and Spain to the Greek archipelago, where it dealt a devastating blow to the Ottoman fleet and destroyed virtually all of its seaborne communication installations at the Bay of Cheshme in July 1770. Ottoman forces and their Polish-Lithuanian allies were handily defeated under the command of Alexander Vasilyevich Suvorov, an instrumental figure during the 1787–1792 Russian-Ottoman war.

The Ottomans were constrained by a series of rebellions in the Arab provinces of Egypt and Syria in 1771. The unwelcome combination of domestic disarray and external defeat forced the Ottomans to capitulate and sign the Treaty of Küçük Kaynarca on July 20, 1774. Under the terms of this treaty, Russia formally gained direct access to the Black Sea through two key ports in the Crimean and Caucasus regions, the Ottoman empire was ordered to pay a hefty sum in war reparations (4.5 million rubles), and the Crimean Khanate was declared independent (which, in effect, brought it under the Russian sphere of influence).

The second major Russian-Ottoman war of the late eighteenth century resulted from ongoing conflict over Ottoman territories in Europe. The Ottomans were interested in winning back lands lost in the first Russo-Turkish War, while Catherine the Great of Russia, who had made a secret alliance with Emperor Joseph II of Austria in 1781, was interested in further conquests. The French, British, and Prussians gave encouragement to the prowar party in the sultan's court in Istanbul. With tensions rising, in

August 1787 the Russians declared war over alleged Ottoman violations of the Treaty of Küçük Kaynarca. The Ottomans responded by imprisoning the Russian ambassador, Yakov Bulgakov, but misread the extent of the Russo-Austrian alliance. Austria entered the war on the side of Catherine II almost immediately, and Austria's assistance proved invaluable, as the Ottomans were now constrained on multiple fronts. The Russians attempted to repeat the success of their naval operations, which had brought them victory during the 1768–1774 conflict, albeit this time without the explicit support of either the British or the French. However, Austria signed a separate peace with the Ottomans in 1791 in response to pressure from Prussia and concerns of the new emperor, Leopold I, over the possibility of revolution spreading to its territories in the Austrian Netherlands.

Neither Austria's departure nor the outbreak of war between Russia and Sweden affected the outcome of the war. Poor leadership and mutinous troops led to the Ottoman loss of Belgrade, Ismail, and Anapa. With the failure of an Ottoman effort to retake the city of Ochakiv, Selim III sought peace in December 1791 and signed the Treaty of Jassy in 1792. Under terms of the treaty, Yedisán was transferred to Russia, the Dniester became the official Russian-Ottoman frontier in Europe, and the annexation of the Crimean Khanate by Russia was formally recognized.

The two Russo-Turkish wars expanded Russian territory and set the stage for further conquests at the expense of the Ottomans in the 1800s. For the Ottomans, the wars affirmed the empire's military decline and helped inspire the military and administrative reforms sponsored by Selim III during the remainder of his reign.

—Hussein Banai

Bibliography

- Christian, David. *Imperial and Soviet Russia: Power, Privilege and the Challenge of Modernity*. New York: Palgrave Macmillan, 1986.
- LeDonne, John P. *The Russian Empire and the World, 1700–1917: The Geopolitics of Expansion and Containment*. Oxford: Oxford University Press, 1997.
- Lieven, Dominic. *Empire: The Russian Empire and Its Rivals from the Sixteenth Century to the Present*. New Haven, CT: Yale University Press, 2001.

Russo-Turkish War, 1877–1878

The fourth armed conflict between the Russians and the Turks in the nineteenth century, the Russo-Turkish War was a pivotal turning point in the history of the “Eastern Question” (the contest for control over former territories of the declining Ottoman empire). It resulted in independence for Serbia, Romania, and Montenegro. It also led to Austrian occupation of Bosnia and Russian dominance in Bulgaria.

After Turkish troops had ruthlessly suppressed revolts by Orthodox Christian subjects in Bosnia and Bulgaria in 1875–1876, Serbia and Montenegro declared war against Turkey. Although the Russian government stood aside, Russian military volunteers, including General Chernaiev, a Russian war hero from the central Asian campaigns, flocked to join Serbian forces to aid in the fight against the Turks. By 1876, these forces had failed miserably and the tsarist government stepped in diplomatically to preserve Serbian autonomy from Turkish repression. When the Turks proved resistant to administrative reforms proposed by Russia, Austria, and Germany, the tsarist government prepared for war. To gain Austrian acquiescence, Russia promised to allow Austrian occupation of Bosnia in return for Austrian recognition of a small Bulgaria under Russian protection. Austria pledged its neutrality in the event of a Russo-Turkish conflict by signing the Treaty of Budapest on January 15, 1877. By February 1877, Russian forces were massing for an offensive out of the south through Rumania. The Rumanians granted Russia permission to transit through their country on April 4, 1877, and they offered Rumanian troops to join in the fight. Russia rejected the offer of Rumanian military assistance, but did cross through Rumania after officially declaring war on Turkey on April 24.

The military campaigns were fought in two theaters, Bulgaria and the Caucasus, and lasted until the armistice on January 31, 1878. The Russians advanced to the Danube River on June 22, and the Turks began to retreat. The largest body of Turkish troops regrouped at the fortress of Plevna, which guarded the western approach to Sofia. At Plevna, Ottoman armies under the command of Osman Pasha and armed

with American-made repeater rifles and German steel artillery held off superior Russian numbers through two assaults and forced the Russians to look to Rumania for additional troops. In the Third Battle of Plevna in September 1877, combined Russian and Rumanian forces totaling 118,000 failed to take the fortress by storm, and the Russians abandoned the attack for siege operations. In December the Turks at Plevna finally surrendered, clearing the way for a Russian advance to the outskirts of Constantinople.

—Jonathan Grant

Bibliography

- Breyfogle, Nicholas B. *Heretics and Colonizers: Forging Russia's Empire in the South Caucasus*. Ithaca, NY: Cornell University Press, 2005.
- Geyer, Dietrich. *Russian Imperialism: The Interaction of Domestic and Foreign Policy, 1860–1914*. New York: Berg, 1987.
- Grant, Jonathan. “Russo-Turkish War (1877–1878).” In *Encyclopedia of the Age of Imperialism, 1800–1914: Volume 2, I–Z*, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.
- Macfie, A. L. *The Eastern Question, 1774–1923*. London: Longman, 1996.
- Seton-Watson, Hugh. *The Russian Empire, 1801–1917*. Oxford: Clarendon, 1967.

Afghan Wars (1838–1842, 1878–1880)

The Afghan Wars were two nineteenth-century conflicts occasioned by British fears of the threat posed by Russia to British interests in India and the Persian Gulf.

In the first the East India Company invaded Afghanistan to return to power the deposed emir, Shah Shuja-ul-Mulk (also known as Shuja Shah Durrani). A British army of 15,000 with 30,000 followers captured Kandahar without resistance and occupied Kabul in August 1839. British forces were unable to control the countryside, however, and this seemingly easy victory turned into a rout when, in 1841, the Afghans struck back and turned the British retreat into a massacre in which 4,500 troops and 12,000 civilians were killed by Afghan raiders and the bitter winter weather of January 1842. A punitive expedition returned to Afghanistan, defeated the Afghans in a series

of small engagements, and, in an act of retribution, burned the Great Bazaar in Kabul. Still, the initial purpose of the British campaign was thwarted when Dost Muhammad Khan, a self-proclaimed emir friendly to Russia, returned to power in Kabul shortly after the British army returned to India and reigned for 20 years.

In the Second Afghan War, British forces invaded after Tsar Alexander II annexed the Central Asian Khanates of Bukhara, Khiva and Samarkand to the Russian Empire, and Shere Ali, son and heir of Dost Muhammad, renewed the Afghan policy of friendliness toward Russia. The campaign began in November 1878 and quickly chalked a series of victories leading to the capture of Jalalabad and Kandahar early in 1879. Shere Ali died and was succeeded by his son, Yakub Khan, who signed a treaty ceding the Khyber Pass, Kurram, Pishin, and Sibi to Britain and agreed to receive a British agent in Kabul. The peace was shattered almost immediately, however, as the entire British mission was slaughtered by mutinous Afghan soldiers shortly after their arrival in Kabul. A punitive expedition led by General Frederick Roberts took Kabul, and some 100 Afghan deemed responsible for the massacre of the British mission were hanged.

In December 1879, Roberts then beat back an attack by a large Afghan force in the Battle of Sherpur. Abdur Rahman, grandson to Dost Muhammad, then led a new Afghan army equipped

with modern Russian rifles into northern Afghanistan. Rather than oppose him, the British offered him the throne. When a rival claimant to the throne, Ayub Khan, defeated a British army of 20,000 men in the Battle of Maiwand and forced a retreat to Kandahar, the settlement was imperiled until Roberts marched 10,000 men from Kabul to Kandahar—313 miles (504 kilometers) in 22 days—and defeated Ayub Khan in the Battle of Kandahar. When the victorious British withdrew to India, Ayub Khan seized Kandahar but this time was defeated by Abdur Rahman.

Afghanistan was now within Britain's sphere of influence in Central Asia, but the brutality of the fighting there helped to defeat the government of Disraeli in the British general election of 1880.

—Carl Cavanagh Hodge

Bibliography

- Farwell, Byron. *Queen Victoria's Little Wars*. New York: W. W. Norton, 1972.
- Heathcote, T. A. *The Afghan Wars, 1839-1919*. Staplehurst, England: Spellmount, 2003.
- Hodge, Carl Cavanagh. "Afghan Wars (1838-1842, 1878-1880)." In *Encyclopedia of the Age of Imperialism, 1800-1914: Volume 1, A-K*, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.
- Tanner, Stephen. *Afghanistan: A Military History from Alexander to the Fall of the Taliban*. Karachi: Oxford University Press, 2003.

■ Introduction: War and Warfare in East and Southeast Asia

Eighteenth-century armies in East and Southeast Asia showed tremendous variation in size, weaponry, and organization. Not surprisingly, China's army, made up of 800,000 to 850,000 troops, was the largest and most successful. Despite setbacks in Vietnam and Burma, China's seizure of Xinjiang between 1756 and 1759 and its victory over the Gurkhas in Tibet in 1790 show the Chinese military's ability to sustain major campaigns over vast distances in enemy territory. Japan, a country with a strong military tradition, had many armies, the

largest of which was maintained by the Tokugawa shoguns, who since the early 1600s ruled Japan on behalf of the emperor. But each of Japan's 250 domains had its own army of samurai warriors, many of whom during the long period of Tokugawa peace had abandoned military training and fighting for careers as administrators. Smaller armies were maintained by Burma, Vietnam, and Thailand, and smaller armies still were maintained by the sultanates of the Malay Peninsula and the kingdoms of island Southeast Asia. China maintained a small navy,

but it was a pale version of the massive fleet assembled in the early Ming era or the 300-ship flotilla commanded by Admiral Shi Lang to take Taiwan in 1683.

In the nineteenth century these armies and navies, different in so many ways, did share one thing in common: the task of defending their country's territory and sovereignty from the aggression of Western imperialists. With the exceptions of Japan, which had breathing space at the end of the century to plan, equip, and train a powerful army and navy, and Thailand, which parlayed accommodation and clever diplomacy to maintain its independence, they all failed. Burma became a British colony after losing to the British the wars of 1823–1826, 1852–1853, and 1885–1886. Vietnam became a part of French Indochina after losing the wars of 1858–1862 and 1882–1884. Java, Aceh, and Bali all came under Dutch control after armed struggles. The people of the Philippines won their independence from Spain in 1898 but then immediately lost it after defeat in a war of independence against the United States between 1899 and 1902. China never lost its independence, but its defeats in the Opium War (1839–1842), the Arrow War (1856–1860), the Sino-French War (1884–1885), and the Sino-Japanese War (1894–1895) resulted in territorial losses, huge indemnity payments, the opening of the country to Western traders and missionaries, and profound humiliation.

The Western powers brought to these conflicts a number of advantages. For example, the Western powers had greater financial resources than their opponents did. At a time when fiscal constraints were making it difficult for the Chinese to maintain troop levels, weaponry, and training regimens, the British, Dutch, and French had the resources to hire and train native troops to do much of their fighting and keep armies in the field until victory was achieved. Western armies also benefited from the domestic rivalries and divisions faced by their opponents. In the First French-Vietnamese War, for example, the Vietnamese emperor surrendered in 1862 when he had to divert troops from the south, where he was fighting the French, to the north, where he faced a rebellion from a dynastic rival. Diponegoro, the leader of Javanese forces in the Java War against the Dutch,

capitulated in 1829 after two of his principal lieutenants crossed over to the enemy.

Western armies and navies also brought to these conflicts clear-cut technological advantages. Although even the smallest armies in the region had firearms and artillery, their weapons lacked the range, accuracy, and speed of fire of those used by Europeans and Americans. Because there was a great range of when and where they were manufactured, they also were difficult to repair. Steam-powered gunboats were first used effectively by the British against the Chinese in the Opium War (1839–1842), and subsequently naval power played an important role in the Anglo-Burmese wars and the French victory in the Sino-French War of 1884–1885.

The small kingdoms and sultanates of Southeast Asia had no chance of closing the technological gap between themselves and the Western armies they faced. They had essentially abandoned domestic gun and gunpowder manufacture in the eighteenth century, choosing instead to rely on imports from Europe. With little hope for victory in set-piece battles or the defense of cities, the Burmese, Vietnamese, Achenese, and Javanese were most successful in jungle guerrilla warfare, in which European rifles and artillery were less of an advantage. China and Japan, in contrast, both embarked on ambitious plans to match the West in terms of weaponry. China's efforts began in the early 1860s, when after its defeat in the Opium Wars and at the end of its struggle to end the Taiping Rebellion, it embarked on a program of self-strengthening in which it sought to draw on Western technology and science to build its military while preserving the traditional Confucian order. China purchased foreign ships and weapons, hired foreign advisers, and built arsenals and shipyards, but the effort was hindered by financial constraints, poor planning, foreign interference, and only sporadic support from the imperial court. Defeats by the French in the 1880s, the Japanese in the 1890s, and a coalition of Western powers in the early 1900s further undermined support for the Qing government, which was overthrown by revolution in 1911.

Meanwhile, China's smaller neighbor, Japan, pursued a different path toward military modernization. After the overthrow of the Tokugawa

shogunate in 1867, Japan's new leaders also purchased foreign weapons and drew on the expertise of foreign military advisers. But they went much further. They mandated wide-ranging social, political, educational, and economic reforms that provided the foundation for the support and maintenance of an army and navy that shocked the world with victories over China in 1895 and Russia in 1905.

—*James H. Overfield*

Chinese Military in the Late Qing Era, circa 1750–1820s

At the end of the eighteenth century, the Chinese military was comprised of a widely dispersed multiethnic army entering a period of declining effectiveness. The Chinese military, which had successfully expanded Qing territory and confronted external threats earlier in the century, had lost its ability to quell internal revolts and preserve the security of the dynasty. The Eight Banners and the Army of the Green Standard constituted the two main divisions of the Chinese military.

The Eight Banners had been created by the Qing dynasty founder, Nurhaci (1558–1626). The descendants of the original Manchu conquerors comprised the Eight Banners, while Mongols and Han Chinese who had supported the dynasty prior to 1644 maintained their own 8 banners, for a total of 24 banners. Membership was hereditary, with fathers serving until their sons came of age. Officer positions were filled through appointment, and distinguished service could result in a bannerman being elevated to officer status, even senior officer positions. Manchu and Mongol banners served primarily as cavalry forces, while the Han Chinese banners provided infantry and artillery units. Approximately half of the banner force was stationed near the capital at Beijing, serving a dual role as the dynasty's military reserve and main striking arm. Banner garrisons were widely dispersed along the western frontier, in key cities, and along strategic internal waterways such as the Yangzi River and the Grand Canal. These garrisons rotated with the capital garrisons. Manchu bannermen, who were forbidden to intermarry with local inhabitants or undertake alternative

employments in their garrison communities, remained segregated from the local Han Chinese communities.

The soldiers of Chinese military commanders who joined the Manchus during or immediately following the conquest formed the Army of the Green Standard. Recruitment to fill positions in the army focused on the sons and relatives of serving soldiers, and those who enlisted did so voluntarily for long-term service. Green Standard garrisons functioned as a constabulary force and thus were even more widely and thinly dispersed throughout the country to maintain law and order and quell small-scale disturbances. To prevent a potential mutiny, this deployment pattern limited the size of any force under the command of a single military or civil official to 5,000 men, though most detachments were much smaller. During major campaigns, Green Standard soldiers, along with banner troops, could be drawn together and placed under the command of a special commissioner appointed directly by the Qing emperor. Green Standard soldiers also were socially segregated, though less formally, due to their poor standard of living and the antimilitary bias of Chinese society. A Chinese adage demonstrates the disdain that Chinese society had for military men: "Good iron is not made into nails, good men are not made into soldiers." The Army of the Green Standard was equipped with the matchlock rifle, which was inferior to firearms used in Europe at the time but was equivalent or superior to its adversaries' arms. The Green Standard was about 600,000 soldiers strong during the late eighteenth century, compared to 300,000 for the Eight Banners.

The Army of the Green Standard also served as the Chinese naval force tasked with antipiracy activities. This naval force operated small patrol craft, mounting small cannons, and effectively maintained the peace on major inland waterways. As for coastal security, large pirate gangs outclassed this rudimentary naval force. When confronted by these large pirate operations, Qing leaders preferred to incorporate pirate forces into the navy rather than openly confront them.

During the eighteenth century the Chinese military enjoyed considerable success expanding the empire in Mongolia and Tibet and asserting

tributary status in Burma and Nepal. However, a process of corruption and decay combined with a series of internal uprisings, including the Miao Revolt (1795–1806), the White Lotus Rebellion (1796–1805), and the Eight Trigrams Rising (1813), seriously weakened the Qing military. The White Lotus Rebellion alone required ten years to suppress; it involved crippling financial expenditures and reliance upon locally recruited self-defense militias. Yet the standard military formations remained fundamentally unaltered and entirely incapable of meeting the emerging foreign threats and major internal rebellions of the mid-nineteenth century.

—Thomas McGrath

Bibliography

- Elleman, Bruce A. *Modern Chinese Warfare, 1795–1989*. New York: Routledge, 2001.
- Kuhn, Philip A. *Rebellion and Its Enemies in Late Imperial China: Militarization and Social Structure, 1796–1864*. Cambridge: Harvard University Press, 1980.
- Lococo, Paul, Jr. “The Qing Empire.” In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.

Military Modernization in the Late Qing Era

During the nineteenth century, China experienced repeated humiliating losses to Western powers and devastating internal rebellions that threatened the continued existence of the Qing dynasty. Thus, the early focus of the Self-Strengthening Movement (1860–1895) was the modernization of the Qing military. These reforms enjoyed qualified success during the Sino-French War (1884–1885) and in the process of suppressing internal revolts such as the Taiping Rebellion (1850–1864). However, military reforms remained decentralized, carried out by regional officials, and were limited to strictly military technology. The inherent weaknesses of the Qing military modernization were revealed with China’s humiliating defeat in the Sino-Japanese War (1894–1895).

After China’s defeat by Great Britain in the Opium War (1839–1842) and by Great Britain and France in the Arrow War (1856–1860), Qing officials recognized the critical need to develop

modern Western-style military technology. The earliest exponent of the superiority of Western weapons was Commissioner Lin Zexu (1785–1850), who had triggered the Opium War. He initiated the purchase of foreign-made cannons to protect Guangzhou and ordered the translation of foreign gun-making manuals. Subsequent regional officials such as Zeng Guofan (1811–1872), Li Hongzhang (1823–1901), and Zuo Zongtang (1812–1885), who rose to national prominence leading regional armies against the Taiping Rebellion, all supported the use of Western-style infantry firearms, artillery, and steamships.

During the 1850s and 1860s the regular military formations, the Eight Banners and Army of the Green Standard, demonstrated their nearly total inability to quell internal and external threats. Qing regional officials and their armies began to utilize foreign weapons after witnessing their effectiveness on the battlefield. In addition to adopting Western weaponry and steamships, Li Hongzhang recommended the adoption of Western knowledge, the establishment of translation offices, and the creation of institutions where Chinese students could study Western sciences in order to modernize the Qing military. Yet Qing officials made little or no effort to thoroughly study and employ Western training and organization in their military formations.

To produce Western weapons and steamships, regional officials established a number of arsenals and shipyards, forming the basis of a fledgling modern armaments industry. The most renowned of these modern institutions were the Jiangnan Arsenal and the Fuzhou Navy Yard. Zeng Guofan sponsored the early establishment of what would become the Jiangnan Arsenal in 1865. This arsenal utilized American-made machinery to manufacture rifles, ammunition, and artillery and even developed a limited shipbuilding component. The Fuzhou Navy Yard was established in 1866 under the sponsorship of Zuo Zongtang. Two Frenchmen directed the operations of the yard, which produced 40 ships before 1884. In addition to building steamships, the Fuzhou Navy Yard trained students in foreign languages, shipbuilding, and navigation. Additional arsenals were founded throughout the country. However, these domestic firearms and steamships were more expensive to produce

and were technologically inferior to their Western counterparts.

The effectiveness of these military modernizations remained limited. Qing officials, relying upon regional armies utilizing modern weapons, suppressed the Taiping Rebellion, the Nian Rebellion (1851–1868), the Muslim Revolt in Yunnan (1855–1873), and the Northwestern Muslim Rebellions (1862–1877). The efforts to modernize the Qing military displayed mixed results in the Sino-French War. The Qing southern fleet was easily destroyed near Fuzhou by a French naval squadron. On land, Qing soldiers successfully defended Danshui on the island of Taiwan against a French landing force. At Lang Son in northern Vietnam, Qing forces defeated the French and advanced toward Hanoi. The ultimate failure of Qing military modernization occurred when Japanese army and naval forces humiliatingly destroyed the Qing dynasty's best armies and northern fleet during the Sino-Japanese War.

Many factors contributed to the failure of China's Self-Strengthening Movement and its military modernization efforts in particular. Qing officials appreciated Western military technology but dismissed Western training and organization, which were necessary to make full and effective use of the technology. Chinese conservatives hampered the reforms by stressing proper ethics over foreign technical skills. In addition, underlying social attitudes denigrating military careers undermined any thoroughgoing reform effort. Military modernization remained in the hands of regional officials and thereby suffered from a lack of centralized planning and direction. Finally, officials relied too heavily on foreign experts for the operation of modern sophisticated military armament industries. The French directors of the Fuzhou Navy Yard had no experience building ships, and the English director of the Jiangnan Arsenal was a medical doctor. Chinese unwillingness to engage in fundamental political and social reform in tandem with military technological modernization doomed the military dimension of the Self-Strengthening Movement.

—Thomas McGrath

Bibliography

Elleman, Bruce A. *Modern Chinese Warfare, 1795–1989*. New York: Routledge, 2001.

Horowitz, Richard S. "Beyond the Marble Boat: The Transformation of the Chinese Military, 1850–1911." In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.

Kuo Ting-Yee. "Self-strengthening: The Pursuit of Western Technology." In *The Cambridge History of China*, Vol. 10, Pt. 1, edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Meiji Japan's New Army and Navy

The Meiji Restoration (1868) ended almost a millennium of feudal rule in Japan and marked the onset of extensive modernization under a seemingly restored imperial rule. The young Emperor Mutsuhito adopted Meiji (Enlightened Rule) as the name of his reign, which lasted until 1912. During this era the newly formed Japanese Imperial Army and Navy were turned into a modern and highly efficient military machine, enabling Japan to fulfill its imperial aspirations in East Asia.

Following the restoration, the new Japanese oligarchy resolved to disband the numerous feudal militias and to establish a national army. Believing that a strong army would be the foundation of a strong nation, it issued the first conscription law in 1872, requiring all men between 17 and 40 years of age to enlist for military service. Unable to recruit all of them, the new army consisted at the end of that decade of only about 30,000 men and an additional 40,000 men in reserve. Initially the army chose the French army as a model, but its defeat in the Franco-Prussian War affected a shift to the Prussian system.

The transformation to the new model took more than a decade and was boosted in 1885 by the arrival of the German officer Klemens Meckel, who assisted in building a national Japanese army in its modern form. One of his most important contributions was the notion of the independence of the supreme command, which took deep root in modern Japan. The army acquired its first significant combat experience in the First Sino-Japanese War (1894–1895), emerging from this conflict as a modern and motivated force. In the next decade the army grew

➤ MARESUKU NOGI

Maresuke Nogi (1843–1912) is probably the most famous army officer of the Meiji era, recognized both in Japan and abroad. He was born in Edo (now Tokyo) to a samurai family and fought against the shogunal forces during the Meiji Restoration. He was commissioned in the new Imperial Army as a major and took part in quelling the Satsuma Rebellion in 1877, where his unit lost its colors to the enemy. Disgraced, Nogi offered to commit suicide, but the notion was rejected by the emperor. In the next decade Nogi was sent to study in Germany. He then returned to command a brigade in the First Sino-Japanese War, during which he captured the Chinese fortress at Port Arthur at the cost of only 16 of his soldiers. Although he went into virtual retirement in 1901, when the Russo-Japanese War broke out Nogi was called again. He was soon appointed commander of Third Army and assigned to recapture Port Arthur. After a long siege during which he lost his two sons, Nogi, by now a full general, fulfilled his mission but at an extremely heavy cost in casualties. He was then made a count and appointed president of the Peers' School; however, on the death of Emperor Meiji in 1912, Nogi and his wife committed suicide. This act made them a living symbol of bushido (warrior) spirit and won Nogi nationwide fame throughout the following decades.

—Rotem Kowner



*Japan's Maresuke Nogi was the capable, if unimaginative, officer who conducted the successful siege of Port Arthur during the Russo-Japanese War of 1905. (Michael J. F. McCarthy, *The Coming Power*, 1905)*

substantially and prepared for confrontation with Russia. It also began to produce its own field guns, rifles, and most of its ammunition, although it still purchased machine guns and heavy howitzers abroad.

The Russo-Japanese War (1904–1905) was the greatest test of the Japanese army of the Meiji era. The army, which initially consisted of about 850,000 troops (including reserves), proved a tough adversary with a strong fighting spirit. It did not lose a single battle throughout the war and consequently was considered the strongest force in East Asia. The legacy of that war served as the point of departure for all military plans and thoughts during the next four decades.

Compared with its rival service, the Japanese Imperial Navy had a remarkably short history, which had both merits and drawbacks. Despite

being an island nation, Japan had a limited naval tradition, and for most of the premodern era the shogunal regime forbade sailing beyond Japanese coastal waters. After the restoration the Meiji oligarchy regarded a strong navy as a basis for maintaining the sovereignty of Japan, and in 1872 the Ministry of the Navy was established, separate from the Ministry of the Army. The navy leaders decided to emulate the British Royal Navy, but during the 1870s the navy took second place in the national defense policy, and its level remained low. During the 1880s, however, the navy discarded its old vessels and began to purchase British-built warships.

The war against China boosted the navy's new sense of confidence, providing it with significant operational activities. Consequently, the navy announced a ten-year expansion program

aimed against a large foreign navy, such as the Russian Pacific Fleet. Equipped with six modern battleships, the Japanese navy was the sixth largest in the world in 1904. During the Russo-Japanese War it performed extremely well and annihilated two of Russia's three fleets. After the war the navy announced another expansion program through which it became a mighty seagoing force, respected by all its peers.

—Rotem Kowner

Bibliography

- Evans, David C., and Mark R. Peattie. *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887-1941*. Annapolis, MD: Naval Institute Press, 1997.
- Harries, Meirion, and Susie Harries. *Soldiers of the Sun: The Rise and Fall of the Imperial Japanese Army, 1868-1945*. London: Heinemann, 1991.
- Kowner, Rotem. *Historical Dictionary of the Russo-Japanese War*. Lanham, MD: Scarecrow, 2005.
- Peattie, Mark R. "The Last Samurai: The Military Career of Nogi Maresuke." In *Princeton Papers in East Asian Studies*, edited by Marius B. Jansen and Henry D. Smith II. Princeton, NJ: Program in East Asian Studies, Princeton University, 1972.
- Presseisen, Ernst. *Before Aggression: Europeans Prepare the Japanese Army*. Tucson: University of Arizona Press, 1965.

Chinese Wars in Mongolia, Tibet, Nepal, and Burma

Chinese wars in Mongolia, Tibet, Nepal, and Burma countered the Inner Asian nomadic threat, expanded the Qing empire to its largest territorial extent in the west, and imposed tributary status on two neighboring states. The Manchus, with their Mongol allies, fought the powerful Zunghars for control over Mongolia and to stop the Inner Asian invaders who had historically threatened Chinese dynasties. In Tibet the Qing dynasty fought to retain control over the succession of the Dalai Lama and his vital religious-political influence and to protect Tibet from Nepalese invaders. With Burma and Nepal, military invasions led to the resumption of tributary relations between the Qing dynasty and its neighboring states.

The Zunghars, a confederation of Mongolian, Tibetan, and Turkish peoples under the

leadership of Galdan (r. 1661-1697), represented an authentic threat to the Manchu hold on China in the late seventeenth and early eighteenth centuries. When Galdan threatened Mongolia in 1690, the Kangxi Emperor (b. 1654, r. 1661-1722) personally led the first expedition to break Galdan's power and force his withdrawal to Zungharia. This first encounter ended with a negotiated settlement between Kangxi and Galdan, mediated by representatives of the Dalai Lama. Zunghar forces retreated to western Mongolia, where they were protected by the vastness of the Mongolian steppe and the limitations of Qing logistics. When Kangxi later plotted the destruction of Galdan, he made elaborate preparations to supply his armies and draw Galdan's forces closer to Manchu power centers in eastern Mongolia. When Galdan again ventured eastward in 1696, Kangxi dispatched three armies totaling over 100,000 men to trap and destroy the Zunghars. Qing forces crushed Galdan at Jao Modo, and subsequent campaigns harried Galdan to his death in 1697.

Galdan's defeat and death did not completely destroy the power of the Zunghar state. Incapable of expanding eastward, Zungharia remained safe due to its remoteness from the centers of Qing power. In 1717 the Zunghars launched an invasion of Tibet in a dispute over the succession of the Dalai Lama. Tibet was important not because of its military or strategic location but rather because of its spiritual significance in the person of the Dalai Lama and the Tibetan Lamaist faith. The Zunghars sought to control the Dalai Lama and use his religious-political influence to undermine Lamaist Mongol support for the Manchus. Mongol princes provided critical support to the Qing dynasty, occupying strategic locations and supplying significant contingents of troops along China's western frontier. Thus, Kangxi responded vigorously to this Zunghar threat to his influence over his Lamaist Mongol supporters. The Chinese invasion of Tibet began in 1718, with one army marching via Kokonor toward Lhasa and another force originating in Sichuan Province. This latter force faced minimal Zunghar opposition and arrived in Lhasa in 1720. The Zunghars concentrated their efforts against the Kokonor army, which was nearer; threatened

their line of retreat; and included the legitimate Dalai Lama, who was greeted along his route by supporters offering their homage, gifts, and support. The Kokonor army also reached Lhasa in 1720, ending the Zunghar occupation of Tibet and securing Qing claims to a protectorate over Tibet.

The final blows against the Zunghars were landed by three massive campaigns during 1755–1760 launched by the Qianlong Emperor (b. 1711, r. 1735–1796). Internal strife led to a division within the Zunghar state that prompted Qianlong to act. These campaigns destroyed the Zunghar state and extended Qing conquests westward. The success of these campaigns in Mongolia and Tibet demonstrated the early martial vigor of the Qing military and Qing recognition of the potential nomadic threat from Inner Asia.

China once again intervened on behalf of Tibet in a conflict with Nepal. In a dispute over trade relations and control of mountain passes between Nepal and Tibet, the Gurkhas raided Tibet in 1788 and again in 1791. In 1792 a Chinese army easily expelled the Gurkhas from Tibet and marched on the Nepalese capital at Kathmandu. Under this threat the Gurkhas signed a treaty revoking their trading privileges in Tibet and requiring Nepal to accept tributary status and send tribute mission to the Qing emperor once every five years.

Chinese military success in Mongolia, Tibet, and Nepal must be tempered by their unmitigated failure in Burma. During 1765–1770 four annual invasions of Burma met with total disaster. The motivations for the invasions lay in China's concern over the growing military power of the Konbaung dynasty in northern Burma; the destruction of Ayuthia (in modern Thailand), a tributary state of China; and a desire to reimpose tributary status on Burma. Burmese forces repeatedly outmaneuvered, outfought, and destroyed Qing armies severely weakened by disease. After the defeat of the fourth expedition, the Burmese and Chinese generals negotiated a settlement that restored trade relations and stipulated that decennial tributary missions be sent to China, preserving the fiction of Burma returning to its vassal status.

—Thomas McGrath

Bibliography

- Dai, Yingcong. "A Disguised Defeat: The Myanmar Campaign of the Qing Dynasty." *Modern Asian Studies* 38 (2004): 145–189.
- Lococo, Paul, Jr. "The Qing Empire." In *A Military History of China*, edited by David A. Graff and Robin Higham. Boulder, CO: Westview, 2002.
- Perdue, Peter C. "Military Modernization in Seventeenth and Eighteenth-Century China, Russia, and Mongolia." *Modern Asian Studies* 30 (1996): 757–793.
- Petech, L. *China and Tibet in the Early 18th Century*. Westport, CT: Hyperion, 1973.

The Opium War (1839–1842)

The Opium War, also known as the First British War, was fought between Great Britain and China after the Qing government sought to curtail the importation and sale of opium in China. The first defeat of China by a European power, the war had far-reaching repercussions. The ensuing Treaty of Nanjing, which forced China to lower its tariffs, cede Hong Kong to the British, and pay a substantial indemnity, was the first unequal treaty imposed on China by a Western power.

The war was the culmination of a series of disputes over trade, especially in opium, between the Qing government and the British going back to 1773, when the British East India Company established a monopoly over opium cultivation in India and began granting licenses to "country traders" who sold the opium in Guangzhou (the only Chinese port open to Western merchants) in return for silver. The silver then was deposited with company agents, who used it to purchase tea, silks, and other Chinese goods for resale, mainly in Europe. Chinese merchants sold the opium to Chinese customers, some of whom became addicted. Imports of opium grew from approximately 1,000 chests of opium (each chest weighing between 125 and 150 pounds or between 56 and 68 kilograms) in 1773 to 32,750 chests in 1832. After the East India Company lost its trade monopoly in 1833, new trading groups entered the Chinese market, and sales grew further. The outflow of silver to pay for opium purchases and increased levels of addiction had been matters of concern for the Qing government since the early 1800s, and 1838 the Daoguang emperor

decided to abolish the opium trade altogether. To enforce the edict, he appointed as commissioner the respected official Lin Zexu (1785–1850), who in 1839 launched a campaign against opium use and ordered an end to all trade with the West unless Western merchants surrendered the opium in their warehouses. In response, the Western merchants gave over 20,000 chests of opium, which were then destroyed.

This did not bring an end to tensions, however. In July 1839 a group of drunken British and American sailors killed a Chinese civilian at Kowloon, a provisioning point near Hong Kong. The Chinese demanded that the British surrender the murderer, but after the British superintendent of trade Charles Elliot refused to comply, they forced all British merchant ships to retreat to Hong Kong (then a minor outpost). HMS *Volage*, a 28-gun frigate, joined the British merchant ships anchored off Hong Kong on August 31, and four days later when British merchant ships attempted to land at Kowloon for supplies and were attacked by Chinese junks (warships), the *Volage* returned fire, damaging several junks. Soon a number of other British warships joined the *Volage* in protecting British trade interests.

During an uneasy truce, interrupted by further disagreements and sporadic clashes between Chinese and British ships, the London government ordered the East India Company to raise at government expense a fleet and an army to force the Chinese to pay damages and other concessions. This force, consisting of 15 men-of-war, 5 armed East India Company steamers, and about 4,000 British and Indian troops, landed at Macao in June 1840. Sailing north, on July 5 the British bombarded and seized the main town on Zhoushan Island (at the entrance to Hangzhou Bay). The British fleet also blockaded Guangzhou, a number of other ports, and the mouth of the Yangzi River.

Negotiations followed, and an agreement was reached in January 1841 wherein the Chinese agreed to open additional ports to trade, pay an indemnity for the destroyed opium, and cede Hong Kong to the British. Enraged at the terms, the emperor rejected the agreement, and the war continued. British operations under Major General Hugh Gough took place sporadically

➤ CHANCELLOR LIN'S LETTER TO QUEEN VICTORIA

In the summer of 1839 as tensions with the British over the opium trade continued, Lin Zexu wrote a letter to Queen Victoria (r. 1837–1901) imploring her to intervene and halt the British trade in opium. An excerpt follows in which Lin Zexu attempts to illustrate China's objections to the opium trade:

“Suppose there were people from another country who carried opium for sale to England and seduced your people into buying and smoking it; certainly your honorable ruler would deeply hate it and be bitterly aroused. . . . We have further learned that in London, the capital of your honorable rule, and in Scotland, Ireland, and other places, originally no opium has been produced. Only in several places of India under your control . . . has opium been planted from hill to hill, and ponds have been opened for its manufacture. For months and years work is continued in order to accumulate the poison. The obnoxious odor ascends, irritating heaven and frightening the spirits. Indeed you can eradicate the opium plant in these places, hoe over the fields entirely, and sow in its stead the five grains. . . . For this, Heaven must support you and the spirits must bring you good fortune, prolonging your old age and extending your descendants. All will depend on this act.”

Source

Ssu-yu Teng and John K. Fairbank, *China's Response to the West: A Documentary Survey, 1839–1923* (Cambridge: Harvard University Press, 1954), 26.

until May 1841, when the British decided to attack Guangzhou. The main force, totaling about 2,400 soldiers and sailors, was landed on May 24, 1841, and captured the city's western forts. Gough's force was poised to attack the city itself the following morning when the Chinese requested a truce. After a number of skirmishes in which about 15 British soldiers were killed and 112 were wounded, the force returned to Hong Kong a few days later.

The British then decided to shift their operations northward up the coast of China to the

Yangzi River. Gough's 2,700-man force began operations on August 20, 1841. Amoy, on the Chinese coast opposite Taiwan, was captured on August 26. Chinhai was captured on October 10, and Ningbo was captured three days later, after which the British force, due mainly to administrative and logistical shortcomings, went into winter quarters.

After fruitless negotiations, the Chinese counterattacked on March 10, 1842, but were easily repulsed. The British then recommenced their northward offensive, capturing Zhapu (south of Shanghai) on May 18 and Shanghai on June 29. The British continued up the Yangzi River, fighting their hardest battle at Zhenjiang, in which they suffered 34 dead, 107 wounded, and 3 missing, on July 21. With the British then threatening Nanjing, the Chinese "southern capital," the Chinese sued for peace, and hostilities ended on August 17, 1842. On August 28 the British and Chinese signed the Treaty of Nanjing in which the Chinese opened five ports for foreign trade, paid an indemnity of 21 million Mexican silver dollars, and ceded Hong Kong to the British. The opium trade, the ostensible cause of the First China War, was not mentioned in the Treaty of Nanjing, so the sale of opium continued.

—Harold Raugh

Bibliography

- Chang, Hsin-Pao. *Chancellor Lin and the Opium War*. Cambridge: Harvard University Press, 1964.
- Gelber, Harry Gregor. *Opium, Soldiers and Evangelicals: England's 1840–42 War with China, and Its Aftermath*. New York: Palgrave Macmillan, 2004.
- Janin, Hunt. *The India-China Opium Trade in the Nineteenth Century*. Jefferson, NC: McFarland, 1999.
- Raugh, Harold E., Jr. *The Victorians at War, 1815–1914: An Encyclopedia of British Military History*. Santa Barbara, CA: ABC-CLIO, 2004.
- Waley, Arthur. *The Opium War through Chinese Eyes*. London: Allen and Unwin, 1958.

Guangzhon Arrow War

On October 3, 1856, a Chinese force in Guangzhon inadvertently sparked a war between China and Great Britain when it boarded the Chinese-built, Chinese-owned vessel *Arrow* to capture

criminals spotted among the crewmen. The French, incensed over the murder of a French missionary earlier in the year, quickly joined Britain in the war. The United States and Russia did not participate as combatants but used the war to wrench concessions of their own from China. The war was spread over a four-year period and was fought in two distinct phases.

The immediate trigger for the first phase of the war seemed to the Chinese to be a simple matter of law enforcement. Chinese authorities conducted a raid after receiving notice that pirates were among the crew. In all, they arrested 12 Chinese crewmen. The *Arrow* was a European-style schooner outfitted with Chinese sails and rigging and was owned by a Chinese subject named Fong Ah-Ming. The Treaty of Nanjing had granted certain immunities to Chinese employed by or closely associated with the Europeans in China. A number of Chinese merchants, including Fong, took the precaution of registering ships with the Crown colony of Hong Kong, ostensibly to gain British protection against coastline pirates. The commission issued by the colonial office, which expired before the ship reached Guangzhon, gave the *Arrow* permission to fly the British flag, although it is a matter of dispute whether or not the flag was flying at the time the ship was boarded. Like the owner, the entire crew was Chinese except for the captain, an Irishman named Thomas Kennedy who admitted to only nominal authority and was not on board at the time of the incident.

The governor of Hong Kong, John Bowring, doubted that the ship could rightfully fly the flag and claim the protection after the commission had lapsed but was unable to halt the violence. In retaliation for the incident, Harry Parkes, the British consul at Canton, ordered the seizure of a Chinese war junk and began to bombard Guangzhon. The Chinese released the arrested men, but Parkes demanded an apology and admission of wrongdoing and continued shelling the city. Ye Ming-Zhen, the governor of Guangzhon, ordered a military response. The people of Guangzhon supported Chinese forces by attacking and destroying foreign factories.

In Great Britain, parliamentary leaders were very critical of Parkes for initiating the war but pursued the war because of their continuing

dissatisfaction with continuing Chinese restrictions on British traders. Ultimately, the British considered the Arrow War to be a defense of its right to free trade and pursued the hostilities until the summer of 1857, when an Indian uprising diverted them throughout the autumn. British and French troops captured Guangzhou soon after bombardment resumed in December. By May, the Chinese were ready to negotiate. The 1858 Treaty of Tianjin opened more ports to foreign trade, allowed freedom of movement for Europeans in China, provided for diplomatic missions in Beijing, and forced the Chinese to abandon their prohibition of the opium trade. Under the Most Favored Nation Doctrine, France, Russia, and the United States received the same concessions.

Hostilities recommenced in 1860, the result of disagreements over the provision of the Tianjin treaty permitting British diplomatic missions to the imperial court in Beijing. For Britain, this involved more than national pride. British merchants had long complained about their mistreatment by corrupt local officials. Unfortunately, the Chinese negotiator, Gueiliang, made the concession without the emperor's approval. The Xianfeng emperor was appalled, believing that the treaty lessened China's exalted position by reversing traditional relationships between China and foreign tributary states. He also suspected that the foreigners wanted access to install spies. Further talks with the British representative, Lord Elgin, led Gueiliang to believe mistakenly that Britain would settle for a permanent residence in Shanghai. When the British envoy arrived in China, the delegation was notified that ratifications would be exchanged at Shanghai, that the river leading to Tianjin had been blockaded, and that the forts on the shores would permit no passage.

The British responded by sending a second military expedition to China under Lord Elgin's command. They were again joined by the French. By August 1860, European forces pushed north and threatened Beijing. Parkes again became involved in the fray when during a meeting he insulted Qing Prince Yixin, who responded by ordering Parkes's arrest. Elgin retaliated by charging into Beijing, at first intending to burn all the imperial buildings to the ground. Russian and

➤ THE LOOTING OF THE SUMMER PALACE

The Qing Summer Palace was looted by the French and British armies in the last days of the Arrow War. Before the British burned the palace, their army attempted to justify their large-scale theft by forming a prize commission. All looted items were collected and then sold in auctions, which resulted in raising the not unsubstantial sum of £26,000. The profits were distributed to soldiers according to their rank. (Indian soldiers were excluded from the prize commission. They did not receive money and were not forced to turn over their loot.) Among items pilfered by the foreign troops were imperial robes and armor, jade scepters, throne cushions, a jade-covered book with Confucius's sayings, and a Pekinese dog, renamed "Looty." Some nonauctioned items, like Looty, were given to Queen Victoria, while others became regimental trophies. Today many of the looted items can be found in museums labeled "from the Summer Palace of the Emperor of China."

—Kassi Klinefelter

French diplomats convinced him to abandon the plan, but British forces destroyed the beautiful Summer Palace in a senseless punitive gesture.

The humiliated Qing dynasty ratified the Treaty of Beijing on October 24, incorporating the provisions of Tianjin and additionally ceding Kowloon, opening Tianjin to foreign commerce, and agreeing to a crushing indemnity. The United States and Russia again received the same concessions. The French also agreed to a separate treaty with a stipulation giving French Catholic missions landownership rights. Within a week of the British departure, Russia secured territorial concessions for lands east of the Ussuri River, now the border between eastern Russia and Manchuria. As foreign troops withdrew, Prince Yixin began formulating a plan for dealing with foreigners that was known as the Self-Strengthening Movement. This reform program, together with the defeat of the Taiping rebels, made it appear for a time that the Qing fortunes had been restored, but such was not the case. Although nominally in power for the next half century, the Qing dynasty never recovered.

—Carolyn Neel

Bibliography

- Fairbank, John King. *Trade and Diplomacy on the China Coast: The Opening of the Treaty Ports, 1842–1854*. Stanford, CA: Stanford University Press, 1969.
- Hurd, Douglas. *The Arrow War: An Anglo-Chinese Confusion, 1856–1860*. New York: Macmillan, 1968.
- Wong, J. Y. *Deadly Dreams: Opium, Imperialism, and the Arrow War (1856–1860) in China*. Cambridge and New York: Cambridge University Press, 1998.

The French Conquest of Vietnam

European powers came to Vietnam in their quest for religious converts, trade, and naval facilities. The first lasting contact between Vietnam and Europe resulted from the 1535 arrival of Portuguese explorer Antonio da Faria at Faifo (Hôian). Subsequently, both the Portuguese and Dutch established rival trading posts in Vietnam.

Steadily Southeast Asia began to attract more European attention.

By the late eighteenth century a Catholic priest, Pierre Pigneau de Behaine, became influential in Vietnam. He helped secure European mercenaries and military equipment crucial in enabling Nguyen Phuc Anh (from 1802, Emperor Gia Long) to reunify Vietnam. The French mercenaries brought with them numerous Western technological advances, including improved engineering and metallurgical techniques.

Emperor Gia Long (r. 1802–1820) welcomed Western military and technological assistance, but he was not interested in advancing Western religion. During Gia Long's reign, the European powers were too embroiled in the Napoleonic Wars to pay much attention to Vietnam. His successors, Minh Mang (r. 1820–1841), Thieu Tri (r. 1841–1847), and Tu Duc (r. 1848–1883), were much less successful than he was in meeting Western pressures. They were forced to deal with reawakened European imperialism; Gia

▶ PHAN THANH GIAN'S LAST LETTER TO EMPEROR TU DUC, 1867

Having gained control of Saigon and three surrounding provinces in 1862, the French sought to extend their authority in Cochinchina (their name for southern Vietnam) in 1867 by invading three more provinces to the west, based on their claim that political disturbances in the area threatened French claims to Cambodia. The appointed governor of these provinces, Phan Thanh Gian (1796–1867), who had visited France and was fully aware of French military strength, saw no alternative to capitulation. In shame, he sent the following letter to Emperor Tu Duc and then took his life.

“The empire of our king is ancient. Our gratitude toward our kings is complete and always ardent; we cannot forget them. Now, the French are come, with their powerful weapons of war to cause dissension among us. We are weak against them; our commanders and our soldiers have been vanquished. Each battle adds to our misery. . . . The French have immense warships, filled with soldiers and armed with huge cannons. No one can resist them. They go where they want, the strongest ramparts fall before them. . . . I have

raised my spirit toward Heaven and I have listened to the voice of reason. And I have said, ‘It would be as senseless for you to wish to defeat your enemies by force of arms as for a young fawn to attack a tiger.’ . . . I have thus written to all the mandarins and to all the war commanders to break their lances and surrender the forts without fighting.

But, if I have followed the Will of Heaven by averting great evils from the head of the people, I am a traitor to our king in delivering without resistance the provinces which belong to him. . . . I deserve death. Mandarins and people, you can live under the command of the French, who are only terrible during battle, but their flag must never fly above a fortress where Phan Thanh Gian still lives.”

—Carolyn Neel

Source

Alfred J. Andrea and James H. Overfield, *The Human Record: Sources of Global History*, 5th ed. (Boston: Houghton Mifflin, 2005), 2:367.

Long himself would probably have been little more successful in resisting it.

The Vietnamese emperors regarded Catholicism, Buddhism, and Daoism as threats to the Confucian concept of order and harmony. The attempts by the nineteenth-century Vietnamese emperors to root out Christian missionaries provided the excuse for French intervention. Unfortunately for the Vietnamese, they had shown little interest in the vast improvements in armaments that had occurred in the half century since the reunification of their country. They were at a great disadvantage when the inevitable collision with the West occurred.

Missionary fervor was not the only factor pushing the French to intervene in Vietnam; trade may have been a more powerful force. In the 1840s the British had taken the lead in obtaining trading concessions in China. The French were fearful of being left out and soon followed suit, using their China squadron as a military means of applying pressure on Vietnam. The French hoped that Vietnam might provide access to the interior of China by means of the Mekong and Red rivers.

Alleged mistreatment of Catholic missionaries was the excuse for French intervention. In 1845 and again in 1846, French warships were sent to Vietnam to secure the release of Monseigneur Dominique Lefèvre, who had been imprisoned on imperial order for refusing to leave the country. During the second intervention, French warships sank four Vietnamese warships that they regarded as presenting a hostile intent.

Emperor Tu Duc (r. 1847–1883) began rigorously enforcing the ban on Christianity, executing a Spanish bishop in 1855. Napoleon III joined the Spanish in a military venture, ostensibly to protect missionaries but with the additional French objective of obtaining commercial rights. On August 31, 1858, a Franco-Spanish squadron of 14 ships and 3,000 men (500 Spanish) commanded by Admiral Charles Rigault de Genouilly arrived at Tourane (Da Nang) and anchored there. The next day a landing party went ashore. Tourane proved no prize, and the expedition soon moved southward. On February 18, 1859, the French took Saigon. Then a sleepy little fishing village, it had promise of being an excellent deepwater port.

In 1862 Emperor Tu Duc was obliged to sign a treaty confirming the French conquest. It was no accident that the French chose to penetrate southern Vietnam first; it was the most recently acquired part of the country.

—*Spencer Tucker*

Bibliography

- Buttinger, Joseph. *The Smaller Dragon: A Political History of Vietnam*. New York: Praeger, 1958.
- Chapuis, Oscar. *The Last Emperors of Vietnam: From Tu Duc to Bao Dai*. Westport, CT: Greenwood, 2000.
- Nguyen, Khac Vien. *Vietnam: A Long History*. Hanoi: Gioi Publishers, 1993.
- Thompson, Virginia. *French Indo-China*. New York: Macmillan, 1937.
- Tucker, Spencer C. *Vietnam*. Lexington: University Press of Kentucky, 1999.

Sino-French War, 1884–1885

The Sino-French War formally began on August 26, 1884, as a result of French ambitions to extend their colonial protectorate in Vietnam and the Qing dynasty's intervention, after much indecision, to protect its vassal state. French prime minister Jules Ferry sought to extend French colonial holdings, sever Chinese claims to Vietnam, and discover an avenue for opening China's internal markets. The Qing dynasty, citing its long cultural and political influence in Vietnam, refused to recognize French claims and was drawn into the war as a result of governmental infighting.

In 1882, French military officers occupied Hanoi and Haiphong in northern Vietnam, which led to increased Chinese support for irregular anti-French forces in the north. Within the Qing government, two distinct factions emerged. One faction supported negotiations, while the other supported a belligerent stance. Li Hongzhang, a powerful regional official, favored a negotiated settlement over a war that China was unlikely to win. Better than most officials, he knew that China's military modernization program remained incomplete. A group of young scholars opposed Li's policy of so-called appeasement and argued that China was honor-bound to defend its tributary state.

Repeated negotiation attempts foundered on the question of shared suzerainty. In 1884,

Li Hongzhang met with French naval captain F. E. Fournier, and together they hammered out the Li-Fournier Convention. This agreement called upon China to withdraw its forces from Vietnam and recognize French treaties regarding Vietnam. France would not ask for an indemnity or conclude a treaty that would annul former Chinese treaties with Vietnam. Ferry's government scorned the convention and objected to the retention of implied Chinese suzerainty in Vietnam. Li's desire for peace led him to conceal certain aspects of the convention from his own government, with disastrous consequences.

In June 1884 a French detachment encountered a Chinese garrison near Bac le on the Sino-Vietnamese frontier. The French officer ordered the Chinese garrison to withdraw as stipulated in the Li-Fournier Convention, which had yet to be ratified by either government. The Chinese garrison commander politely dismissed the demand for a Chinese withdrawal. He knew of the Li-Fournier Convention but had not received orders to withdraw to Chinese territory. Fighting broke out, and the Chinese forces were badly mauled. However, they held their position, and the French force withdrew.

The French accused the Qing government of bad faith and widened the scope of the conflict. A French naval squadron shelled the port of Jilong on Taiwan and landed troops, only to be repulsed by Chinese defenders. The Qing court appointed Li's political rivals to key defense posts in the south but did not formally declare war on France. This indecisiveness would prove costly for China. On August 23, a French naval squadron freely entered the port at Fuzhou, as no formal hostilities existed, and opened fire on the Chinese southern fleet. In less than an hour, French naval fire destroyed both the Chinese fleet and Fuzhou Navy Yard. China declared war three days later.

By December, the indecisive nature of the war sapped French popular and political support for a costly and faraway conflict. In China, anticipated foreign support failed to materialize; more ominously, concern mounted over potential Russian and Japanese advances in the north. Negotiations resumed in 1885 based upon the terms of the Li-Fournier Convention. These negotiations were aided at the last moment by

a Chinese victory at Lang Son, where a larger though poorly trained and led Qing army defeated a French expeditionary force. This victory allowed the Qing dynasty to negotiate from a position of parity and deflated any remaining French support for the war. It also led to the resignation of Jules Ferry on March 30 with the treaty unsigned. Hurried negotiations led to an armistice in April, and the final treaty was concluded on June 9, 1885.

The final treaty affirmed the French protectorate over all of Vietnam and severed China's tributary relationship. France also gained limited commercial and railway development rights in southern China. The Sino-French War must be seen as a French victory, as France gained its primary goal and detached Vietnam from China's tributary system. Though not a victory for China, the war exhibited a much-improved Chinese military compared to earlier conflicts. China had fought France to a stalemate on land and did not pay an indemnity for the first time in a war against a Western power.

—Thomas McGrath

Bibliography

- Eastman, Lloyd E. *Throne and Mandarins: China's Search for a Policy during the Sino-French Controversy, 1880–1885*. Cambridge: Harvard University Press, 1967.
- Elleman, Bruce A. *Modern Chinese Warfare, 1795–1989*. New York: Routledge, 2001.
- Power, Thomas F., Jr. *Jules Ferry and the Renaissance of French Imperialism*. New York: Octagon Books, 1966.

Sino-Japanese War, 1894–1895

The Sino-Japanese War grew out of conflict between China and Japan for supremacy in Korea. The war marked the emergence of Japan as a major power in East Asia and highlighted the deterioration of the Chinese empire.

Korea's geostrategic position and coal and iron resources had put Korea, long a tributary state of China, in the focus of Japanese strategies. In 1875 Japan had pressured Korea to agree to the Treaty of Kanghwa, which forced Korea to open itself to Japanese trade and to proclaim independence from China. During the 1880s,

pro-Japanese reformers attempted to overthrow Korea's Joseon dynasty, but the attempt failed because Chinese troops intervened. War between China and Japan was avoided by the Tianjin Convention (1885), which required both sides to withdraw their forces, to not send military instructors, and to notify the other before it deployed troops to Korea.

Relations deteriorated in 1893, however, after Kim Ok-kyun, a pro-Japanese Korean revolutionary, was killed in Shanghai, supposedly by Chinese agents. Further tensions emerged later that year when the Korean emperor requested Chinese military aid to suppress the nationwide peasant revolt known as the Tonghak Rebellion. Chinese troops under General Yuan Shikai (1859–1916) were sent to Korea in accordance with the Tianjin Convention. However, Japan considered this action a violation and sent a Japanese expeditionary force to Korea. In July the Japanese seized the imperial palace and replaced the emperor with a pro-Japanese puppet. After the Chinese refused to recognize the new emperor, war was declared on August 1.

The demoralized and poorly equipped Chinese army was no match for the Japanese, whose army and navy had undergone significant modernization during the Meiji period. The Japanese forces defeated the Chinese Beiyang Army in a series of battles and pushed farther north into Manchuria, while the Chinese navy suffered defeat off the mouth of the Yalu River. Following the fall of Weihaiwei (February 2, 1895), Japanese forces moved forward into southern Manchuria and northern China and subsequently controlled sea approaches to the Chinese capital.

Facing defeat, China entered negotiations with Japan and signed the Treaty of Shimonoseki on April 17, 1895. China agreed to accept full independence of Korea; ceded the Liaodong Peninsula (then part of Fentian Province, present-day Liaoning Province), the Pescadores, and Taiwan to Japan “in perpetuity”; had to pay 200 million taels in reparations; had to open the Yangtze (Changjiang) River to Japanese ships; and had to open four more treaty ports.

Although the treaty proved that Japan was the dominant power in East Asia, the Triple Intervention (Russia, France, and Germany)

➤ A CONVERSATION BETWEEN LI HONGZHANG AND ITO HIROBUMI

While negotiating the Treaty of Shimonoseki in 1895, Li Hongzhang, a leading Chinese statesman and strong advocate of modernizing China, and Ito Hirobumi, Japan's prime minister, had the following exchange:

“Li: ‘China and Japan are the closest neighbors, and moreover we have the same writing system. How can we be enemies? We ought to establish perpetual peace and harmony between us, so that our Asiatic yellow race will not be encroached upon by the white race of Europe.’ Ito replied, ‘Ten years ago I talked to you about reform. Why is it that not a single thing has been changed or reformed?’ Li could only say, ‘Affairs in my country have been so confined by tradition that I could not accomplish what I desired. . . . I am ashamed of having excessive wishes and lacking power to fulfill them.’”

Source

J. K. Fairbank, *The Great Chinese Revolution* (New York: Harper and Row, 1986), 119.

hindered major Japanese territorial gains in Manchuria and proceeded to seize territories for themselves. This intervention embittered Japan and sowed the seeds for the Russo-Japanese War of 1904–1905.

—Monika Lebner

Bibliography

- Dorwart, Jeffery M. *The Pigtail War: American Involvement in the Sino-Japanese War of 1894–1895*. Amherst: University of Massachusetts Press, 1975.
- Lone, Stewart. *Japan's First Modern War: Army and Society in the Conflict with China, 1894–1895*. New York: St. Martin's, 1994.
- Mutsu, Munemitsu. *Kenkenroku: A Diplomatic Record of the Sino-Japanese War, 1894–95*. Edited and translated with historical notes by Gordon Mark Berger. Tokyo: University of Tokyo Press, 1982.
- Paine, Sarah C. M. *The Sino-Japanese War of 1894–1895: Perceptions, Power and Primacy*. Cambridge: Cambridge University Press, 2002.

Java War

The Java War was fought between the Dutch and rebel forces led by Prince Diponegoro of the sultanate of Yogyakarta between 1825 and 1830. This was not the first conflict between the Dutch and native peoples since the Dutch United East India Company (Vereenigde Oost-Indische Compagnie, or VOC) arrived in 1602. However, no previous conflict resulted in so many casualties or had such important consequences.

The war's roots go back to the early 1800s, when dynastic disputes, increased European interference in Javanese affairs, and growing peasant discontent ended a half century of relative political stability between the VOC, which controlled the western part of the island, and the kingdoms of Yogyakarta and Surakarta, which controlled the central and eastern regions, respectively. With the bankruptcy and liquidation of the VOC in 1799, its assets were taken over by the Dutch government, which then was controlled by France as a result of the French occupation during the Revolutionary wars. In 1808 the French-dominated government charged the newly appointed governor-general of Java, Herman W. Daendels, with expanding Dutch authority throughout the island. His efforts alienated Javanese lords in Dutch-controlled territory by reducing their incomes; he also angered the rulers and aristocrats of Surakarta and Yogyakarta by asserting Dutch sovereignty over both kingdoms. In 1811, as part of the Napoleonic wars, the British occupied the Dutch colonies in the Indies, including Java. Under British lieutenant governor Stamford Raffles, conflict with the Javanese kingdoms continued. In 1812 a European-sepoy army conquered the forces of the king of Yogyakarta Hamengkubuwana II and temporarily replaced him with his son Hamengkubuwana III. In 1816 Java was returned to the Dutch, who continued these harsher policies toward the Javanese kingdoms.

In the midst of these growing tensions, the peasants' situation deteriorated. In central Java large tracts of land were rented out by aristocrats to Chinese and European entrepreneurs, who forced villagers to work on their plantations and ignored the peasants' traditional rights. Further hardship resulted from new taxes on

the transport and sale of rice from one area to another and the requirement that peasants pay taxes in money rather than in kind.

Two events led directly to the war. In 1823 the Dutch governor-general further angered members of the aristocracy when he abolished the leasing of land to Chinese and Europeans. The aristocrats not only lost this source of revenue but also had to compensate the leaseholders for capital improvements they had made on the land. Then in 1825 a clash broke out over a Dutch road-construction project that would have destroyed the tomb of a Muslim saint. The owner of the land, a Yogyakarta prince, Pangeran Diponegoro, refused the Dutch permission to build the road and raised the banner of rebellion.

The popular Diponegoro, the son of Hamengkubuwana III, had twice been passed over for the kingship, in part as a result of the machinations of European officials. A devout Muslim, he had traveled widely to Java's holy sites and had come to be viewed by many as the *ratu adil* (righteous king), who they believed would reign justly after a short period of war. His call to rebellion, which he couched in terms of a jihad (holy war), gained support from at least half of the aristocracy, many devout Muslims, as well as many villagers.

By the end of 1826 Diponegoro controlled the countryside in central Java, but a year later the tide had turned against him with the arrival of Dutch reinforcements. The Dutch general H. M. de Kock developed the *benteng* (fortress) system in which small mobile columns operated independently of a growing network of strategic fortified posts. Throughout 1828, many of Diponegoro's followers defected or ceased to support the rebellion. The surrender of his uncle Mangkubumi and his commander Sentot in 1829 made his situation hopeless. In early 1830 Diponegoro met with de Kock, demanding recognition as ruler of a free state and the head of Javanese Muslims. Instead Diponegoro was arrested and exiled to Makassar, where he died in 1855.

The war had cost the lives of 15,000 government soldiers and about 200,000 Javanese, mostly as a result of famine and disease. The end of the war ushered in a new era in which the power of the Dutch colonial state increased at

the expense of the local authority of the Javanese aristocracy.

—Elly Touwen-Bouwsma

Bibliography

- Carey, Peter, ed. *Babad Dipanagara: An Account of the Outbreak of the Java War (1825–30)*. Kuala Lumpur: Oxford University Press, 1981.
- Carey, Peter, ed. *The Power of Prophecy: Prince Dipanagara and the End of the Old Order in Java*. Leiden: KITLV Press, 2007.
- Kumar, Anne. *Java and Modern Europe: Ambiguous Encounters*. Richmond, UK: Curzon, 1997.
- Touwen-Bouwsma, Elly. "Java War (1825–1830)." In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.

Aceh Wars

Beginning in 1873, the contest for the former sultanate of Aceh was emblematic of the struggle for Islamic independence in the Indonesian archipelago. The Aceh Wars, also referred to as the Achinese War, were the longest conflict in which the Dutch became embroiled in Indonesia and formally lasted until 1903, although fighting persisted well into the following decade.

Aceh had long served as one of the principal centers for the study of Islam and as a gateway for the pilgrimage to Mecca. By the late sixteenth century, it had become the most powerful state in Sumatra, reaching its apogee under Sultan Iskandar Muda (r. 1607–1636). This state exercised control over territories in the west of present-day Indonesia and Malaysia and forged formal links with the Ottoman empire. The following centuries, however, witnessed a decline in Acehnese fortunes, though the region persisted as an independent kingdom.

The 1824 Treaty of London divided insular Southeast Asia into British and Dutch spheres while recognizing Acehnese sovereignty. Anxiety about the intervention of a third power in the region led Great Britain and the Netherlands to conclude a new agreement in 1871, allowing for Dutch intervention. The Dutch alleged, with little evidence, that the Acehnese were seeking to negotiate with the United States. On the pretext that the sultanate was sponsoring piracy in the Straits of Melaka, they sent an expedition to

north Sumatra in March 1873. This poorly prepared force did not even locate the royal residence and was forced to retreat after the death of its commander, General Köhler.

A massive expedition, better planned and equipped, was mounted in late 1873. This time, the palace was captured and the sultanate was declared at an end; on January 31, 1874, General van Swieten proclaimed Aceh a part of the Netherlands Indies. This proved to be a hollow victory. The young successor to the throne, Muhammad Dawot (Muhammad Daud), was taken to safety while a key adviser to the late sultan, Habib Abd al-Rahman al-Zahir (1833–1896), continued to press for Ottoman aid from Istanbul. Such aid was not forthcoming, but the continuing resistance of the Acehnese served as a source of inspiration for many of the Muslims of the Netherlands Indies and the Malay Peninsula and among the Southeast Asian community in Mecca.

Effective resistance to Dutch incursions now passed briefly to the various petty lords (*ulëëbalang*). Subsequently, opposition was undertaken by the religious leaders, the ulama. Key ulama such as Teungku di Tiro (1836–1891) enjoyed popular support bolstered by widely disseminated texts equating the struggle with a holy war, a *jihad* (Arab) or *perang sabi* (Aceh). In 1876 and after two years spent gathering support from the British port of Penang, Abd al-Rahman al-Zahir returned to Aceh to coordinate the resistance. He soon fell out with the local leadership and submitted to the Dutch in 1878 in exchange for a lifelong pension in Mecca. The war dragged on regardless.

With an uncertain foothold on the coast and beset regularly by cholera and dysentery, the Dutch would opt to fortify their position as a base from which to launch incursions into the surrounding territory. This state of affairs prevailed for several years, being formalized with the so-called line of concentration, inaugurated under General van Pel (d. 1876). Thereby, the capital was surrounded by a series of fortified posts connected by an armored tramway. This policy worked to the advantage of the Acehnese leadership. The vast majority of Greater Aceh was still impassable for the Dutch.

A third campaign to complete the pacification of the province was begun in 1884. But with

the Indies in recession and the ongoing campaign causing substantial hardship in Java, where most colonial revenues were raised, the morass persisted. Criticism of the war from within Dutch and Indies society led to the appointment of an Aceh veteran, J. B. van Heutsz (1851–1924), as military governor in 1898. With the advice of Christiaan Snouck Hurgronje (1857–1936), whose studies had identified the uléëbalangs as potential clients and who counseled the vigorous prosecution of guerrilla tactics against the ulama, van Heutsz engaged in a series of successful campaigns, advancing Dutch control across Pedir (1899–1901) and Daya (1898–1903) and pushing into the Gayo highlands by 1903. In each territory, the local uléëbalang, on submission, was obliged to sign “the short declaration,” a document drafted by Snouck Hurgronje that pledged allegiance to the Dutch sovereign and her agents.

Victory finally seemed complete in 1903, with the submission of the aspirant sultan Muhammad Dawot. But the conflicts were by no means over: fighting continued until the taking of Alas (1907), and indeed scattered resistance

occurred until as late as 1912. Furthermore, Dutch rule, as enforced under van Heutsz and his successor van Daalen, was barely accepted, being accomplished by the use of extreme violence. The Aceh campaign would continue to haunt the Dutch in Indonesia, and its incorporation within the Java-centered Netherlands Indies would be a source of instability in the future nation of Indonesia.

—M. F. Laffan

Bibliography

- Laffan, M. F. “Aceh (Acheh) Wars (1873–1903).” In *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*, edited by Ooi Keat Gin. Santa Barbara, CA: ABC-CLIO, 2004.
- Reid, Anthony. *The Contest for North Sumatra: Aceh, the Netherlands and Britain, 1858–1898*. Kuala Lumpur: Oxford University Press, 1969.
- Siegel, James T. *The Rope of God*. Berkeley: University of California Press, 1969.
- Snouck Hurgronje, C. *The Achehnese*. Translated by A. W. S. O’Sullivan and indexed by R. J. Wilkinson. Leiden, the Netherlands: E. J. Brill; London: Luzac, 1906.

■ Introduction: War and Warfare in the Americas

Battlefield victories and defeats played important roles in the histories of Canada, the United States, Mexico, and Central and South America between 1750 and 1914. The Thirteen Colonies of North America and the Spanish and Portuguese colonies of Latin America both gained their independence through wars. The American War of Independence (1776–1783), fought mainly by a single army formed by the Continental Congress and led by General George Washington, resulted in the creation of a single new republic, the United States of America. In contrast, the more protracted Latin American wars of independence (1808–1826) were fought on several fronts under regional commanders and resulted in the formation of a dozen new states whose early histories were marked by social conflict, regionalism, and political turmoil. For Canada, the British victory over France in the Seven Years’

War (1756–1763), in which key battles were fought at Montreal and Quebec City, forced a French withdrawal from North America and set Canada on a new course as a British colony. Canada’s political independence from Great Britain, which came with the passage of the British North America Act of 1867, was achieved through discussion and diplomacy rather than warfare, but military considerations also played a role. Those who supported Canada’s independence and the merging of its four provinces into a single unified state cited mutual defense against U.S. expansion as an argument in favor of such a step.

As a British colony between 1763 and 1867, Canada’s defense was provided mainly by units of the British army, which did most of the fighting along with a few Canadian militia units against invading American forces in the War of 1812. After the war the British maintained fortresses at

Halifax, Quebec City, and Kingston with a force that ranged from a low of 4,000 to a high of 18,000 in the 1860s, when fears of an American invasion heightened during the U.S. Civil War. After British troops withdrew following Confederation, even though all males between the ages of 18 and 60 were liable for conscription, responsibility for defense was given over to a small number of professional soldiers who garrisoned the forts inherited from the British and a larger “active militia,” a volunteer force that ranged between 30,000 and 40,000 part-time soldiers who attended summer training camps and were liable for active duty as necessary. Some militia units saw service in the suppression of the Métis Rebellion of the 1880s, but when Canada was called upon by Britain to provide troops in the Second Boer War (1899–1902), it sent regiments formed from the regular army and even one unit, Lord Strathcona’s Horse, that was recruited and paid for by a private individual, a wealthy Scots-born Canadian fur trader, financier, and railroad investor, Donald Alexander Smith. All told, 7,400 Canadians served in the war, and of these 242 died in combat or from disease. In its first half century of existence as an independent state, Canada relied on the British Royal Navy for maritime protection, but in 1910 Canada’s Parliament passed the Naval Services Act, which created the Royal Canadian Navy. Almost 600,000 Canadians enlisted, and over 400,000 served with distinction on the Western Front in World War I, but of all the dominions in the British Empire, Canada was probably least prepared when hostilities started.

In Latin America, armed violence continued to be an important part of the region’s history after the wars of independence, but much of the fighting took place in connection with civil wars, regional disputes, coups d’état, liberal-conservative conflicts, and power grabs by political strongmen. Such fighting was a symptom of the internal weaknesses of the region’s new states. It also was one of the reasons why international wars in the region were less common and generally less lethal than those in other parts of the world. Even the three largest states—Argentina, Brazil, and Mexico—lacked the resources and inclination to maintain large armies, and no state had the money or sufficient popular

support to carry on large-scale campaigns or protracted conflicts. The international wars that did take place were for the most part fights over territory, especially in the Rio de la Plata region in the south, which was fought over by Brazil, Argentina, Uruguay, and Paraguay, and also on the Pacific coast, which was the scene of two wars in which Chile fought Bolivia and Peru. Mexico’s two major wars were against the United States and France. The longest and most lethal war was the War of the Triple Alliance (1864–1870) in which Paraguay fought for six years against Brazil, Argentina, and Uruguay even after major battlefield defeats, enormous casualties, and great civilian hardship. The decision to persevere was made by Paraguay’s dictator, Francisco Sancho López, who is still celebrated as a national hero in Paraguay but was probably insane toward the war’s end. In terms of significance, the Mexican-American War (1846–1848) was the region’s most important nineteenth-century conflict. Brought about by the U.S. annexation of Texas, which Mexico still viewed as legally theirs despite the Texas Revolution of 1836, the war resulted in a Mexican defeat and the addition of 500,000 square miles of territory to the United States. The last major war of the nineteenth century was the War of the Pacific (1879–1884) in which Chile defeated Peru and Bolivia and solidified its claim as the region’s most powerful state at the cost of only 2,800 killed in action over five years of fighting. After the mid-1880s, violence continued: civil wars took place in Argentina, Chile, Paraguay, Bolivia, Peru, and Ecuador; rulers, including the emperor of Brazil, were overthrown; private armies and brigands destabilized rural areas in Brazil, Central America, and elsewhere; British, German, and Italian warships blockaded Venezuelan ports to force the government to pay its debts; and the United States sent marines into Nicaragua and encouraged rebellion in Panama against Colombia. But there were no more international wars.

The United States between 1783 and 1914 fought international wars against the Barbary States of North Africa, Great Britain, Mexico, Spain, dozens of Indian tribes, and the Republic of the Philippines. The United States also dispatched troops to Cuba, the Dominican Republic, Haiti, Chile, Argentina, Panama,

Nicaragua, and China to protect its political and economic interests. The nation's most deadly war, however, was one in which Americans fought one another, the United States Civil War. In all the other wars the United States fought between the winning of independence and its entry into World War I, it suffered a total of approximately 6,531 combat deaths. In the U.S. Civil War, approximately 7,863 soldiers lost their lives in just three days of fighting at Gettysburg, and a total of approximately 680,000 soldiers died on the battlefield or from disease in four years of fighting.

Given the fact that the United States faced no hemispheric threats, the country maintained a small standing army except in times of actual warfare throughout the nineteenth century. Numbering only 7,000 men at the beginning of the War of 1812, the army increased to 34,000 men during the fighting but then was reduced to 6,000 once the war ended. Before the Mexican-American War the army stood at 8,000 men, reached a peak of 104,000 during the war, and then fell back to around 15,000 in the 1850s. During the American Civil War both sides resorted to conscription, and over three million served, but in 1867 the army was reduced to 25,000, a smaller force per capita than had existed in 1810. Despite its small numbers, efforts were made to maintain the army's professionalism: its troops were supplied with new weapons as military technology changed, and the United States Military Academy at West Point and the Army Corps of Engineers were founded in 1802 and 1821, respectively. Nonetheless, the army did not perform particularly well in the Spanish-American War or the Philippine-American War, leading to a flurry of actions to reorganize, re-equip, and enlarge the army in the opening years of the twentieth century.

Neglected in the immediate aftermath of the U.S. Civil War, the navy gained support in the mid-1880s with the growth of U.S. trade, the rise of imperialism, and the influence of the American naval strategist and educator Albert Thayer Mahan, who in his *The Influence of Seapower on History, 1660–1783*, argued that strong navies made great powers. Between 1883 and 1899 Congress authorized the construction of more than 30 modern warships and in the early 1900s

supported U.S. participation in the worldwide naval arms race by approving funds for the construction of 14 battleships. By 1914 the United States was the world's third-largest naval power, behind Great Britain and Germany.

—James H. Overfield

American-Indian Wars, 1750–1914

Native Americans, colonists, and Europeans fought numerous wars in North America between 1750 and 1914, and although they are often called the Indian Wars, these conflicts differed in causes, participants, and scope. Native Americans fought newcomers in some cases, but in others they allied with French, English, or other warring factions. Native Americans usually made decisions for war or peace as villages, although some individuals acted on their own. Often only a faction of the nation or tribe engaged in a particular war. Many indigenous communities had ongoing feuds with other Native Americans, and these rivalries shaped their relations with the various governments. Land is often considered the primary motive for warfare involving indigenous groups in the United States, but historians increasingly stress local relationships between communities and officials.

France fought Great Britain in the Seven Years' War (the French and Indian War, 1754–1763 in North America, 1756–1763 in Europe), and local allies conducted parallel wars, fighting common enemies, while maintaining considerable autonomy. As in subsequent wars in the eastern United States, combatants often directly targeted communities and ambushed opponents. European troops without Native American auxiliaries were vulnerable while marching in the woods. During this larger war, Cherokees attacked Virginia and South Carolina because colonists continued to squat on their land. In 1763 France surrendered its empire in North America to the British with the exception of Louisiana, which was given to Spain. Many Native Americans asserted that France could not transfer its claims to Great Britain and, aggravated by a host of other grievances, began Pontiac's War against the British around the Great Lakes in 1763. Although little fighting occurred after the first year

► PONTIAC'S WAR

As the Seven Years' War ended, many Native Americans around the Great Lakes remained hostile to the British because the conflict had not settled their grievances. Many resented their recent treatment. Furthermore, the irritant of British squatters remained, and for at least a generation Native American prophets had urged them to abandon European connections and ways. Before the official European peace, the British withheld presents they had formerly given to maintain favor, occupied French forts against some locals' wishes, and assumed that former French claims over Native American lands were subsequently conveyed to the British. On May 9, 1763, an Ottawa chief, Pontiac, and his allies attacked Fort Detroit. Others captured forts Sandusky, Miami, St. Joseph,

Ouatenon, Michilimackinac, Venango, Le Boeuf, and Presque Isle. But forts at Detroit, Pitt, Ligonier, and Bedford survived sieges, while Niagara was not directly attacked. Native Americans killed about 2,000 colonists, and in December retaliatory mobs of colonists killed peaceful Conestogas in Pennsylvania. Fighting lulled that winter, and British officials reached understandings with some friendly chiefs in 1764 and 1765. Pontiac's War was the first significant multiracial conflict in which Native Americans forced Britain to accommodation. However, despite renewed British concessions, major grievances remained, and many Native Americans were still openly hostile. Fighting resumed with the American Revolutionary War.

—Glenn Walker

and British officials continued to placate many chiefs, rumblings of war in the region continued.

Native Americans fought on both sides in the American Revolution. Factions of the Six Nations (or Iroquois), who lived south of Lake Ontario, were allied with the Patriots and fought other Iroquois who were aligned with the British. Overall, more Native Americans aided the Crown than the rebels during the American Revolution and had not been subdued by the end of the war. In 1783 the British Crown surrendered its American claims south of the Great Lakes and west to the Mississippi. The new U.S. government engineered several treaties that would not have been binding by the standards of a contract or an international diplomatic agreement with Native Americans in western New York and Ohio. Many chiefs denounced these treaties, but the United States defeated their confederacy at the Battle of Fallen Timbers in 1794 during the Northwest Indian War. The United States then forced them to cede significant tracts around the Ohio River.

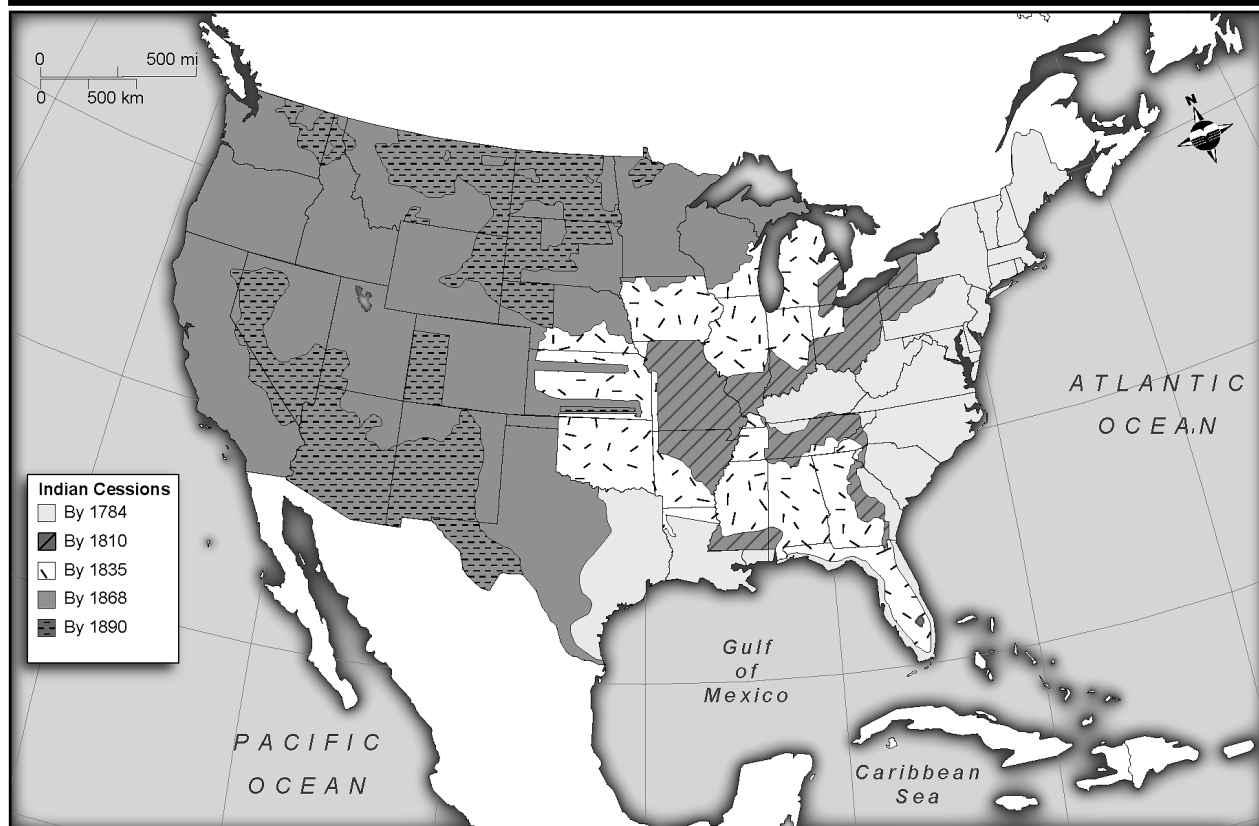
In the nineteenth century the United States fought many wars to dispossess Native Americans. President Andrew Jackson's Removal Act in 1830 forced groups of Indians to migrate west of the Mississippi. The Cherokees resisted



Aftermath of the Wounded Knee Massacre at the Pine Ridge Agency in South Dakota, 1890. The massacre, in which 150 Sioux were killed and 50 wounded, marked the end of 400 years of organized Indian resistance to white culture. (Library of Congress)

by taking the government to court but were forced from their homes at bayonet point. Factions of the neighboring Creeks and Seminoles in Florida fought a bitter irregular war, prompting the United States in 1842 to concede the remaining Seminoles' right to stay. Defeat in the

INDIAN CESSION OF LANDS IN THE UNITED STATES



1832 Blackhawk War pushed Sauks and Foxes out of Illinois and Wisconsin. By the 1830s some Americans already lived beyond the Mississippi, and steady infiltration of Native American lands caused wars farther west, including the Rogue River War (1855–1856), the Apache and Navajo War (1860–1868), the Modoc War (1872–1873), the Apache War (1876–1886), the Nez Perce War (1877), the Ute War (1879), and the Sioux Wars (1862, 1876–1877, and 1890–1891). A massacre of Lakotas at Wounded Knee in 1890 is often called the end of the Indian Wars and the closing of the American frontier, although violence continued.

These wars were disastrous for many people. Civilians were targets as much as warriors, thousands died, villages were burned or looted, and economies were uprooted. Removal forced Native American communities to start anew in unfamiliar surroundings at enormous human cost. About 20–25 percent of the Cherokees died in captivity or on the Trail of Tears, a forced

march west to Oklahoma. By seizing their land and imposing a system of reservations, the United States assumed a degree of responsibility over Native Americans' lives. Despite sincere efforts of many Americans and Europeans to improve Native Americans' lives, the results were often unsatisfactory. Almost always, attempts to help indigenous groups live as Americans fell far short of giving an equal degree of material prosperity. Many Native Americans continued to value their cultural practices and questioned whether they wanted to learn American ways.

—Glenn Walker

Bibliography

- Axelrod, Alan. *America's Wars*. New York: Wiley, 2002.
- Calloway, Colin. *Crown and Calumet: British-Indian Relations, 1783–1815*. Norman: University of Oklahoma Press, 1987.
- Grenier, John. *The First Way of War: American War Making on the Frontier, 1607–1814*. Cambridge: Cambridge University Press, 2005.

French and Indian War

The conflict known in the United States as the French and Indian War was part of a global struggle between France and England (the Seven Years' War) that also was fought in Europe, India, Africa, and the Philippines. In North America the war was caused by conflicting French and British claims to the Ohio Country, a territory that stretched westward from the Appalachians to the Mississippi River and from the Great Lakes to the Gulf of Mexico. Fighting lasted from 1755 to 1763, with war officially declared in May 1763. Native Americans fought for both sides but mainly for the French. The war was catastrophic for France, which ceded to Great Britain all of North America east of the Mississippi, including Nova Scotia and Canada. However, Britain's victory paradoxically led to new strains between the London government and the 13 colonies, escalating tensions that would ignite the U.S. War for Independence.

The war was initiated by a series of clashes in the Ohio River valley between French forces and Virginians. The Virginians sought to dislodge the French from Fort Duquesne, the site of present-day Pittsburgh, in order to open up the territory to British settlement and enrich land speculators. When their efforts failed, Britain committed itself to a large-scale war in 1754 and

sent a sizable army to North America under the command of General George Braddock.

The French dominated the opening stages of the war. As early as 1754, a young George Washington distinguished himself in an unsuccessful attempt to capture Fort Duquesne. In July 1755, a force of 1,400 British regulars under Braddock was ambushed and routed by the French and their Indian allies. British casualties were heavy, and Braddock himself was killed. The Ohio Valley Indians, concerned with the growing threat of settlements, used Braddock's defeat as an opportunity to strike English settlements the following year. In August 1756 a French and Indian force captured Fort Oswego on Lake Ontario; in 1757 they took Fort William Henry, situated at the foot of New York's Lake George. The French were unable to stop the subsequent massacre by their Indian allies of the British garrison as its soldiers marched out of the fort, despite assurances of honorable treatment as prisoners of war.

The 1757 appointment of William Pitt to lead the war effort as secretary of state was the turning point in the war. One of Pitt's first steps was to dispatch to North America 20,000 regular troops. Combined with colonial militias, this created a fighting force of 50,000 men. He placed them under the command of new able generals and instituted a stronger policy regarding the employment of Indian allies. Here, the

► THE DEATH OF GENERAL WOLFE

This painting by Benjamin West commemorates the epic Battle of Quebec that resulted in the surrender of Quebec by French forces. Both General James Wolfe and his French adversary, General Louis-Joseph de Montcalm, perished on the Plains of Abraham. West's painting depicts Wolfe as a Christ-like martyr who died to free America from French tyranny.



The death of General James Wolfe at Quebec during the French and Indian War. Painting by Benjamin West, 1769. (Library of Congress)

BRITISH NORTH AMERICA AFTER THE TREATY OF PARIS (1763)



tireless efforts of Sir William Johnson to convince the Iroquois to remain neutral at last bore fruit. The Iroquois, in turn, persuaded the Delaware to cease warfare against the British.

During the summer of 1758 a British force failed to take Fort Ticonderoga (Fort Carillon to the French), but that failure was offset by the capture of Louisbourg, on Cape Breton Island in Nova Scotia, and Fort Frontenac, located in present-day Kingston, Ontario. British fortunes also improved in the south, where General John Forbes managed to enlist strong Indian support to capture Fort Duquesne. In return, the British provided certain financial considerations and promised to withdraw from the Ohio River country. Surrounded and unable to be supplied, the French abandoned Fort Duquesne, which Forbes occupied and renamed Fort Pitt.

In 1759, British regulars and Iroquois allies took Fort Niagara. Sensing the vulnerability of their position, the French abandoned Fort Carillon (Ticonderoga) and Crown Point and withdrew to Canada. In September, British general James Wolfe's defeat of the French army, commanded by Louis-Joseph de Montcalm, on the Plains of Abraham resulted in the surrender of Quebec. The deaths of the two generals, Wolfe and Montcalm, made this one of the epic battles of history.

In 1760, the British took Montreal and forced the French governor to surrender the whole of New France. This victory essentially marked the end of the French and Indian War, although fighting continued on other fronts until the Treaty of Paris, signed in 1763, officially ended the Seven Years' War. Britain was now the world's leading imperial power, although within just two decades it would lose its 13 American colonies after its defeat in the American Revolution.

—Jerry Keenan

Bibliography

- Hurt, R. Douglas. *The Ohio Frontier: Crucible of the Old Northwest, 1720–1830*. Bloomington: Indiana University Press, 1996.
- Leach, Douglas. *Arms for Empire: A Military History of the British Colonies in North America, 1607–1763*. New York: Macmillan, 1973.
- Steele, Ian K. *Warpaths: Invasions of North America*. New York: Oxford University Press, 1994.

American Revolution— Military Campaigns

When American rebels fired upon British soldiers on April 19, 1775, in what became known as the Battles of Lexington and Concord, British authorities decided to crush the rebels using armed force. British strategy was fourfold. It involved isolating the New England colonies by seizing the line of the Hudson River northward to Lake Champlain; isolating the central colonies, the main food-producing region, by occupying the line of the Chesapeake Bay and lower Susquehanna River; controlling the southern colonies by capturing Charleston and Georgetown, South Carolina, and holding the line of the Santee River; and blockading the coast to stop weapons and supply flows. Ultimately, disagreement over and resistance to the strategy meant that the British would fail to exercise sufficient military power, even after hiring some 30,000 German mercenaries (Hessians).

The war's first phase involved the siege of Boston by the British. Rebels flocked to Boston, digging trenches and fortifying artillery sites on Breed's Hill. Though the British successfully captured the hillside in the Battle of Bunker Hill on June 17, 1775, they suffered heavy losses. On July 2, 1775, George Washington assumed command of the newly inaugurated Continental Army. As the army consisted of militia with brief terms of service, Washington had to spend the remainder of the year raising and training a new patriot army. The rebel army's defensive efforts were bolstered when Colonel Henry Knox transported artillery captured at Fort Ticonderoga to Boston. Thereafter, Boston would remain in rebel hands.

Meanwhile, General Richard Montgomery and Colonel Benedict Arnold led a two-pronged American invasion of Canada. American political leaders mistakenly believed that the Canadians would happily shed their allegiance to England. The Americans seized Montreal on November 13, 1775, and attacked Quebec on December 30, 1775, but lacked the strength to capture it. In the spring, British reinforcements quelled the invasion.

In 1776 British General Henry Clinton's first attempt to capture Charleston, South Carolina, failed. Thereafter, in August, General William

➤ GEORGE WASHINGTON CROSSING THE DELAWARE

Memorialized in this famous painting by Emanuel Leutze, George Washington crosses the Delaware River to attack the British in Trenton, New Jersey, in December 1776. One of the oarsmen shown battling the massive chunks of ice is an African American believed to be Prince Whipple, a slave who was emancipated during the war and a bodyguard to Gen. William Whipple, an aide to George Washington.



(Bettman/Corbis)

Howe began a campaign to capture New York City. During this campaign, Howe outmaneuvered the inexperienced Washington, and well-trained British soldiers proved superior to the poorly trained rebels. By November, the British were chasing Washington's army through New Jersey. With his army about to dissolve because its terms of enlistment were ending, Washington decided to launch an offensive. Washington's army crossed the Delaware River on Christmas Eve and defeated the Hessians at Trenton, which galvanized the struggling rebel forces.

In 1777, a British force invaded through Canada led by General John Burgoyne. Meanwhile, Howe's army marched on Philadelphia. Burgoyne's army captured Fort Ticonderoga and continued to the Hudson River near Albany, New York. However, the challenge of coordinating columns separated by miles of wilderness and controlled from London would unravel the British campaign. Burgoyne erroneously thought that Howe would advance from New York to help him. Desperate for supplies, Burgoyne sent

a column toward Bennington, Vermont, where it was defeated. Burgoyne persisted toward Albany but was defeated and forced to surrender to a larger American army (led by General Horatio Gates) in two battles around Saratoga, New York. Saratoga was a turning point in the war because France allied with the rebel cause and enabled an otherwise uncertain victory.

While the rebels were winning in the north, Washington suffered more setbacks around Philadelphia. The British drove the Americans from their capital into bleak winter quarters at Valley Forge, where they suffered from hunger and disease. Yet organizational and administrative improvements, the inculcation of drill and discipline by Baron von Steuben, and Washington's iron will strengthened the Continental Army as it emerged from winter quarters in 1778.

Meanwhile, Howe's replacement, General Henry Clinton, elected to abandon Philadelphia and retreat to New York. By July, both armies had returned to roughly the same positions that they had occupied two years earlier. For the remainder of the war there were no more significant battles north of the Potomac River.

Unable to achieve decisive results in the north, the British focused on the southern colonies, believing that many American southerners were Tories (British loyalists). In December 1778, the British captured Savannah. The following October, a combined American and French force tried unsuccessfully to recapture it due to problems in coordinating American land forces with the French navy and army. Still, the presence of a French fleet in North American waters restrained British operations.

In January 1780, Clinton and General Charles Cornwallis directed a campaign against Charleston, South Carolina, resulting in the largest surrender of American troops during the entire war. Cornwallis rapidly exploited this victory. Meanwhile, Congress handed over command in the south to Gates. However, Gates's army was routed at the Battle of Camden on August 16, 1780. Cornwallis aggressively tried to occupy numerous important posts throughout the Carolinas. Yet one of his detachments became separated from his main army and was annihilated at the Battle of Kings Mountain on October 7, 1780, the turning point in the south.

For the remainder of the war, rebels and Tories fought a brutal civil war in the south. Gates's replacement, General Nathanael Greene, kept the small Continental Army alive. Cornwallis lacked the strength both to defeat Greene and control the countryside. Because he could not offer security to the Tories, they did not fight as vigorously as British strategists had hoped.

Thwarted in the south, Cornwallis marched north to Virginia. Meanwhile, a French army commanded by Count Rochambeau had joined Washington in White Plains, New York. When Washington learned that the French fleet would appear in the Chesapeake Bay, he conceived the daring strategy to bypass Clinton in New York and trap Cornwallis in Virginia. In the war's decisive naval engagement, the French fleet prevented the British fleet from helping Cornwallis. After about a three-week siege, on October 19, 1781, Cornwallis surrendered at Yorktown, thus virtually ending the war for American independence.

—James R. Arnold and Roberta Wiener

Bibliography

- Boatner, Mark M., III. *Encyclopedia of the American Revolution*. 3rd ed. Mechanicsburg, PA: Stackpole, 1994.
- Dupuy, T. N., and Gay M. Hammerman. *The Military History of Revolutionary War Land Battles*. New York: Watts, 1970.
- Dupuy, T. N., and Grace P. Hayes. *The Military History of Revolutionary War Naval Battles*. New York: Watts, 1970.
- Griffith, Samuel B., II. *The War for American Independence: From 1760 to the Surrender at Yorktown in 1781*. Urbana and Chicago: University of Illinois, 2002.
- Wood, W. J. *Battles of the Revolutionary War, 1775–1781*. New York: Da Capo, 1995.

War of 1812

The Anglo-American War (1812–1815), commonly known as the War of 1812, was triggered by a long series of outstanding grievances between Britain and the United States, which were largely connected with the former's contemporaneous war against Napoleonic France. From the American perspective, Britain's insatiable demand for sailors to man the Royal Navy had

for years led to the impressment of American seamen. Further, American neutral vessels attempting to trade with the European continent—largely controlled by Britain's rival, France—had led British vessels to seize such ships on the dubious basis that their cargoes fell under the loose British definition of contraband. American motives were not, however, entirely blameless. Many in the United States sought expansion into British Canada and refused to allow the repatriation of Royal Navy sailors who had deserted and enlisted aboard American merchant vessels with papers claiming American citizenship.

War commenced in June 1812 when a small American militia force of 2,500 men under General William Hull briefly crossed the Canadian border and were held back by an equally small British force. Hull then withdrew to Detroit. A British and Indian force then crossed the frontier, took Fort Dearborn (now Chicago) on August 15, and captured Hull's force. The Americans launched a second invasion of Canada but in October were defeated along the Niagara

➤ "THE STAR-SPANGLED BANNER"

On September 13, 1814, Francis Scott Key, who was on a flag-of-truce ship in the Baltimore Harbor, watched as English ships bombarded Fort McHenry well into the night. When morning came, Key was overcome with joy to see the American flag, seemingly untouched, still flying gallantly above the battered fort. Unknown to Key, before dawn soldiers had taken down the tattered flag that had flown during the battle and replaced it with an enormous 30- by 42-foot (13-meter) flag with 15 stars and 15 stripes. Key wrote a poem commemorating the event entitled "The Defense of Fort M'Henry" that became enormously popular and was set to the tune of an English drinking song, "To Anacreon in Heaven." The song became known as "The Star-Spangled Banner." Though it did not become the U.S. national anthem until 1931, the army and navy had started using it as their anthem in the 1890s. Furthermore, at the first modern Olympic Games in Athens in 1896, when American James Connolly won the triple jump and became the first man ever to receive an Olympic gold medal, it was the "The Star-Spangled Banner" that played as the U.S. flag was raised.

SOUTHERN THEATER OF OPERATIONS, WAR OF 1812



River at Queenston Heights. Approximately 1,600 American troops captured and set fire to York (now Toronto) in April 1813, but these forces under General Pike were later driven off at Stony Creek on June 6.

In the autumn, General William Henry Harrison crossed Lake Erie with 7,000 American troops, in the wake of the defeat of an opposing

naval flotilla on September 10, and forced British General Proctor from Detroit on September 29. In the follow-up action at the Thames River on October 5, Proctor was again defeated. Meanwhile, with the British having failed in their amphibious attack in May on Sackett's Harbor on Lake Ontario, the Americans launched a new offensive under General James Wilkinson, who

hoped to take Montreal. This attempt, and attacks elsewhere, failed, and at year's end the British captured Fort Niagara.

From the opening of hostilities, the British Royal Navy had continued its blockade of the American coastline, causing economic disruption, especially in New England, which had never supported the war. In the summer of 1814, a new American commander, General Jacob Brown, launched another incursion toward Niagara, which took Fort Erie and defeated the British at Chippewa on July 5. At Lundy's Lane on July 25, both sides fought to a standstill before the Americans finally withdrew.

By this time the war in Europe had ended, and British reinforcements began arriving, the majority in the form of an expedition to Chesapeake Bay. General Robert Ross defeated American militia at Bladensburg on August 24, entered Washington the next day, burned its public buildings, and then withdrew, although he failed to take Baltimore near which he was himself killed. At about the same time, a British thrust down Lake Champlain by General George Prevost failed as a result of an American naval victory at Plattsburgh on September 11.

At sea, the tiny American navy, consisting of nothing larger than frigates, acquitted itself remarkably well but was unable to loosen the enemy blockade or prevent amphibious landings, at least not one consisting of 14,000 Peninsular veterans under General Pakenham, which landed in the Mississippi delta on December 13. Neither side was aware that a treaty of peace was concluded in Belgium on Christmas Eve, and when Pakenham's forces needlessly confronted those under Andrew Jackson near New Orleans on January 8, 1815, they were disastrously repulsed. The war ended as a stalemate, with the territorial situation virtually unchanged and, with the Napoleonic Wars over, impressment a dead issue.

—Gregory Fremont-Barnes

Bibliography

- Borneman, Walter. *1812: The War That Forged a Nation*. London: Harper Collins, 2004.
- Fremont-Barnes, Gregory. "Anglo-American War (1812-1815)." In *Encyclopedia of the Age of Imperialism, 1800-1914*, Volume 1, A-K, edited by Carl Cavanagh Hodge. Westport, CT: Greenwood Press, 2007.

Hickey, Donald R. *The War of 1812: A Forgotten Conflict*. Urbana: University of Illinois Press, 1989.

Hitsman, J. Mackay. *The Incredible War of 1812: A Military History*. Toronto: University of Toronto Press, 1965.

Stagg, J. C. A. *Mr. Madison's War: Politics, Diplomacy, and Warfare in the Early American Republic, 1783-1830*. Princeton, NJ: Princeton University Press, 1983.

Wait, Eugene M. *America and the War of 1812*. Comack, NY: Kroshka Books, 1999.

American Civil War

The deadliest conflict in U.S. history, the American Civil War pitted the Union against the Confederate States of America. Determined to perpetuate slavery, the South claimed independence so that it would be master of its own affairs. The North initially fought only to preserve the United States, but as the war widened in scope President Abraham Lincoln in 1862 declared an end to slavery in the states still in rebellion, transforming the war into a crusade to abolish slavery. Northern victory gave slaves their freedom, though they faced racism and discrimination in the postwar South, where most of them continued to live.

Unable to resolve their dispute over slavery, the Union and the Confederacy went to war on April 12, 1861, when Confederate artillery attacked the Union garrison at Fort Sumter, South Carolina. From the outset the Union had demographic and economic advantages. Its population of 20 million more than doubled the South's 9 million, only 5.5 million of whom were white. The Northern states generated three-quarters of America's wealth. Seventy percent of railroads were in the North, which in 1860 had 110,000 factories to only 18,000 in the South. Northern states produced 97 percent of America's firearms, 81 percent of its wheat, and two-thirds of its corn.

Southern leaders did not expect the war to last long enough for these advantages to be significant. They believed that the South would need only to fight a defensive war, whereas the North would need to invade the South and conquer territory. Indeed, in this view the South did not need to win any victories but instead only

THE GETTYSBURG ADDRESS

President Abraham Lincoln delivered this famous speech on November 19, 1863, during a ceremony to dedicate a cemetery built for the fallen soldiers of the Battle of Gettysburg fought in July 1862. The entire text of this speech is provided below.

“Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.”

—*Christopher Cumo*

needed to maintain an army in the field. Moreover, the Confederacy assumed that its cotton crop would bring Britain, whose textile mills depended on foreign cotton, to its aid. Others, convinced of the superiority of Confederate army officers and soldiers, called for a more aggressive strategy. The Confederate president Jefferson Davis ultimately decided on a synthesis, which he called an “offensive-defensive” strategy, in which

Southern forces were dispersed across the South to defend the homeland but would use interior lines of communication to concentrate forces in case of a Northern invasion; it also would seize opportunities to go on the offensive, even invading the North if conditions were favorable.

A hero of the Mexican-American War, Union general-in-chief Winfield Scott devised what came to be known as the Anaconda Plan to defeat the South. First, knowing that the Confederacy depended on imports of machinery and armaments, Scott counseled Lincoln to blockade the Southern coastline. Second, Scott recommended that the Union gain control of the Mississippi River, thus dividing the Confederacy in two. Scott also counseled patience. Believing that support for the Confederacy was tepid and that secessionists were in the minority, he envisioned support for the war withering away. Lincoln agreed with the first two points of the Anaconda Plan, but knowing that the Confederate government would gain legitimacy the longer it lasted, he did not wish to delay action. He ordered a thrust toward Richmond, Virginia, the Confederate capital. In 1861 and 1862 Confederate forces repulsed Union invaders as they advanced toward Richmond. Emboldened by his success against Union commanders, Confederate general Robert E. Lee invaded Maryland in 1862, only to lose that September at Antietam, a ghastly battle that counted 5,000 dead and 20,000 wounded.

In the Western theater, where Union forces were to take control of the Mississippi River, General Ulysses S. Grant rose to prominence, capturing Fort Henry on the Tennessee River and Fort Donelson on the Cumberland River in February 1862. A surprise attack at Shiloh in April 1862, however, nearly cost Grant his army. The Union counted more than 13,000 casualties and the South more than 10,000. These losses from a single engagement exceeded the total casualties from the War of Independence, the War of 1812, and the Mexican-American War. As in the East, in the spring of 1862 neither side could claim a decisive victory.

As the war lengthened, finding ways to finance it became critical. Each side taxed its citizens. By war's end the North derived 21 percent of its budget from taxation, whereas the South derived only 1 percent. Both sides also raised

money by selling war bonds. The North sold \$2 billion of bonds by war's end. Southerners, fearing that bonds would be worthless if the South lost, were less eager to buy bonds. Both North and South printed paper currency to supplement taxes and the sale of bonds. In August 1861 the Confederacy printed \$100 million in paper money, and in January 1862 the Union issued \$150 million in greenbacks. The printing of paper money caused inflation. In the North food prices rose 80 percent in 1863, forcing families to go hungry. In Richmond civilians rioted for food, breaking into stores to steal what they could not afford. In New York City civilians rioted for three days in July 1863. Initially rioters protested the draft, but as the riot degenerated into racial conflict, whites lynched blacks. As prices rose, pay fell. Whereas in 1861 the Union government paid seamstresses 17 cents per shirt, in 1865 pay fell to 15 cents per shirt. Private companies paid as little as 8 cents per shirt.

The war made women, whose husbands and sons were in uniform, the managers of farms and workers in factories. In the North, hundreds of women became nurses. Life in the army was no better than civilian life. The single blanket issued to soldiers was not enough to protect against the cold in winter, and the woolen uniforms were hot in summer. Lice-ridden troops suffered from diarrhea and other diseases. In the South some soldiers went barefoot, so short was the Confederacy of necessities. With the desertion rate high and volunteers unwilling to enlist, the South resorted to conscription in March 1862, and the Union followed suit in July 1862. Conscripts totaled only 6 percent of Northern soldiers but nearly one-third of Southern troops.

Initially committed only to preserving the United States, Lincoln in 1862 endowed the war with a greater purpose: freeing the slaves. On September 22, 1862, he issued the Emancipation Proclamation, declaring that slaves in rebellious states would be free on January 1, 1863. The proclamation said nothing about the status of slaves in the border states or in portions of the South already conquered, but at least symbolically it went a long way toward ending slavery in the United States.

As early as 1861 the Union had accepted blacks into the army but only as cooks, laborers,

and carpenters. In 1863, however, the Union began using blacks in combat. By war's end blacks comprised 10 percent of the Union Army. Nevertheless, discrimination remained widespread, and black soldiers were paid less than white soldiers.

After two years of stalemate, in 1863 the Union won two decisive victories. In May 1863 Grant besieged Vicksburg, Mississippi, the last Confederate stronghold on the Mississippi River, prompting Lee to invade Pennsylvania in his quest for a decisive victory. There he lost a three-day battle at Gettysburg. On July 4, 1863, the day after Lee's defeat, Vicksburg fell to Grant. The victory led Lincoln to appoint Grant commander of all Union forces. Waging war against Southern armies and the businesses and farms that supported them, Grant and General William T. Sherman decided to grind down the Confederate armies. The Union armies slaughtered livestock, burned crops, and destroyed railroads.

The war's end came in the spring of 1865, when the Army of Northern Virginia under Robert E. Lee was forced to retreat from Petersburg, Virginia, and abandon its defense of Richmond, two cities that had been fought over for close to a year. On April 9, 1865, Lee surrendered to Grant, and on May 26 the last Confederate troops surrendered. Six hundred thousand soldiers had died in the bloodiest war in U.S. history. Slaves at last won their freedom when the Thirteenth Amendment was adopted on December 6, 1865. The United States had been preserved.

—Christopher Cumo

Bibliography

- Doughty, Robert A., et al. *The American Civil War: The Emergence of Total War*. Lexington, MA: D. C. Heath, 1996.
- Olsen, Christopher J. *The American Civil War: A Hands-on History*. New York: Hill and Wang, 2007.
- Woodworth, Steven A. *American Civil War*. Detroit: Gale Cengage Learning, 2008.

Photography in the American Civil War

The American Civil War was the first war to be documented by photography. Photographers brought the war to Americans with a graphic reality that no other contemporary medium



This photograph, shot by Timothy O'Sullivan in July 1863, captures the casualties on the battleground of Gettysburg. Entitled "A Harvest of Death," it was one of the numerous photographs included in Alexander Gardner's Photographic Sketchbook of the War, published in 1865-1866. With regard to the photograph, Gardner comments, "Such a picture conveys a useful moral: It shows the blank horror and reality of war, in opposition to its pageantry. Here are the dreadful details! Let them aid in preventing such another calamity falling upon the nation." (Library of Congress)

possessed. The demand—from both the public and the military—for views of the war remained steady, at least in the North. Nonetheless, the photographic report was incomplete and had little impact on military strategy.

The main limitation to comprehensive photographic coverage of the war was the technology itself. Equipment was cumbersome and expensive. Long exposure times (10 to 30 seconds) limited photographers to stationary or posed scenes. Furthermore, a photographer working in the field needed a portable darkroom, since after a plate was coated with chemicals and exposed it needed to be rushed to the darkroom while still wet to be developed. Not surprisingly, battle images are virtually nonexistent. Most images were produced days after fighting subsided, showing corpse-strewn fields, shattered buildings, and marred countryside. Moreover, most campaigns went unrecorded, as only theaters of war within fairly easy reach were extensively documented.

Generally, outdoor photography focused on inanimate objects such as buildings, weapons, ships, and camps. In addition, the U.S. Army Medical Department had photographs taken

of extraordinary injuries, medical operations, or peculiar amputations. More than 90 percent of the war images, however, were portraits, either of individuals or groups of soldiers. It is estimated that anywhere from several hundred thousand to over 1 million images were produced during the four-year struggle.

The Civil War provided a great opportunity to enterprising photographers. Some followed the armies, erected tents or makeshift studios next to army camps, and offered to take photographs of soldiers to send home as mementos. Others waited until the war came to their hometowns to offer their services. Although a list compiled by the National Archives identifies some 300 photographers who were approved by the federal military to work in and around encampments, the actual number of photographers documenting the war was considerably larger. Up to 1,500 men and a few women took pictures of the war for the public, the press, and in a few cases the military.

The Confederacy produced the first photographers of the war. After a few months, however, supply shortages curtailed the production of most photographers in the South, resulting in fewer images from their point of view. Among the photographers from the North, the most famous was Mathew Brady, but Alexander Gardner, George N. Barnard, and Timothy O'Sullivan also did important work. A few photographers had semiofficial status by carrying out assignments for the military. Only one photographer, Captain Andrew Joseph Russell, had official status. He held a commission from the Bureau of the U.S. Military Railroad to record engineering problems created by the field activities of the army.

Contemporaries were willing to believe that the images were as "truthful as the records of heaven," as phrased in a catalogue of Brady's photographs. Yet the images seen in galleries or later reproduced as engravings in newspapers might have been carefully staged scenes or at best represented the subjective views of the photographers. Nevertheless, war photography deeply moved Americans and sometimes shocked them, as in the case of Brady's first pictures of battlefield dead. The public would never again be able to shut its eyes to the reality of war.

—Angela Schwarz

Bibliography

- Carlebach, Michael L. *The Origins of Photojournalism in America*. Washington, DC: Smithsonian Institution Press, 1992.
- Davis, Keith F. "A Terrible Distinctness': Photography of the Civil War Era." In *Photography in Nineteenth-century America*, edited by Martha A. Sandweiss. Fort Worth, TX: Amon Carter Museum; New York: Abrams, 1991.
- Davis, William C., ed. *The Image of War, 1861-1865*. 6 vols. Garden City, NY: Doubleday, 1981-1984.
- Heidler, David S. *Encyclopedia of the American Civil War*. Santa Barbara, CA: ABC-CLIO, 2001.
- Trachtenberg, Alan. *Reading American Photographs: Images as History, Mathew Brady to Walker Evans*. New York: Hill and Wang, 1989.

The Spanish-American War

In 1898 the United States defeated Spain in a four-month war, thus destroying the last remnants of what was once a vast empire. This marked a turning point in American history. The United States emerged as an assertive participant in world affairs, with many consequences within the United States and elsewhere.

The Spanish-American War began in Cuba. There, in 1895, nationalists rebelled. Spain responded with a heavy hand. General Valeriano Weyler, already experienced in suppressing Cuban and Filipino independence movements on behalf of his government, garrisoned the island, forced Cubans into concentration camps, and adopted scorched-earth tactics. Hundreds of thousands died. U.S. newspapers further sensationalized this bleak situation. This reporting

directed Americans' attention to the very real humanitarian crisis and inflamed public opinion over "Spanish barbarism" at the same time, thereby pressuring the United States government to intervene.

The United States had already interposed itself between conservative European powers bent on reconquest and the American republics via the Monroe Doctrine in 1823. No other American state could play this role, although the threat of European intervention remained. However, U.S. motives in Cuba exceeded mere altruism. American investors had much at stake in Cuban sugar, for example. Also, Britain, France, Germany, Japan, and others were busily seizing vast areas of the globe, from Africa to the Pacific Rim. This threatened to exclude the United States from strategic markets and trade routes especially in East Asia, where all eyes had turned. Washington's motives and concerns, then, were complex.

In early 1898 the United States dispatched the armored cruiser USS *Maine* to Havana to project power and to secure American interests. On February 15 the ship exploded and sank, taking the lives of 264 servicemen. Subsequent investigations failed to discover exactly what had happened, although the evidence suggests that spontaneous combustion in the coal bunkers started a chain reaction that caused the explosion. Whatever the cause, the *Maine's* unexpected destruction created a *casus belli* in American eyes. Many believed that Spanish treachery explained the incident.

President William McKinley presented the Spanish government with a series of ultimata,

► THE INFLUENCE OF MAHAN ON NAVAL WARFARE

The U.S. Navy easily defeated the decaying and obsolete Spanish naval forces in actions at Manila and Santiago de Cuba. Rear Admiral Alfred Thayer Mahan (1840-1914) partly deserves credit for the navy's rapid growth and modernization. By 1900 it had become the third most-powerful navy in the world.

In 1890 Mahan published *The Influence of Sea Power upon History*. In it he stressed the importance of developing and employing a blue-water navy to patrol strategic sea lines of communica-

tion and to generally project national power abroad, wherever it might have been needed. Before this the U.S. Navy's mission concerned mere coastal defense.

Mahan published several other works on naval warfare. His writings were very influential in their time not only with American leaders like Theodore Roosevelt but also with European leaders like Kaiser Wilhelm II, who decided to launch his own naval program.

—James Lockhart

including a demand that Spain recognize Cuban independence and submit to U.S. mediation. Spain declined. McKinley mobilized U.S. forces; in response, Spain severed relations with Washington. The United States then blockaded Cuba. Official declarations of war followed in April.

The U.S. decisively defeated Spain in quick naval and ground actions in Cuba and the Philippines, another Spanish possession. U.S. forces also seized Puerto Rico. On August 12, 1898, Spain signed an armistice at the White House and withdrew from the Western Hemisphere. Many Latin Americans had watched with conflicting sympathies for both Spain, as their mother culture, and the Cuban nationalists, whose aims they supported. But the easy U.S. victory and the post-war agreements codified in the Treaty of Paris and later the Platt Amendment shocked them.

The United States annexed the Philippines, Guam, and Puerto Rico, and in addition to claiming basing rights at Guantánamo Bay, the American government reserved the right to intervene in Cuban affairs. These and other moves in the Pacific placed the United States in control of a far-reaching series of naval bases and coaling stations that would facilitate American access to East Asian and Latin American markets. A few years later, U.S. construction of the Panama Canal completed this global transportation and communications system.

Thus, the United States had consciously and deliberately assumed an influential role in world affairs by the end of the nineteenth century. The United States claimed the Caribbean Basin as its sphere of influence and asserted its authority over the Philippines. These events marked the beginning of a domestic struggle between internationalists and isolationists—a debate, among other things, over imperialism—that would continue until U.S. entry in the Second World War. And as U.S. power continued to expand, many in Latin America suspected Washington's motives and adopted what would eventually crystallize into full-blown anti-Americanism.

—James Lockhart

Bibliography

Davis, Harold Eugene, John J. Finan, and F. Taylor Peck. *Latin American Diplomatic History: An Introduction*. Baton Rouge: Louisiana State University Press, 1977.

Mahan, Alfred Thayer. *The Interest of America in Sea Power, Present and Future*. Boston: Little, Brown, 1911.

McCartney, Paul T. *Power and Progress: American National Identity, the War of 1898, and the Rise of American Imperialism*. Baton Rouge: Louisiana State University Press, 2006.

McCormick, Thomas J. *China Market: America's Quest for Informal Empire, 1893–1901*. Chicago: Quadrangle Books, 1967.

The Mexican War

The war between the United States and Mexico commenced on April 25, 1846, when Mexico attacked American troops along the southern border of Texas. The major causes of the war were the U.S. annexation of Texas (followed by Texas joining the Union in 1845) and the ambition of the United States to expand its territory to the Pacific Ocean, both of which fueled deteriorating Mexican-U.S. relations in the late 1830s and 1840s. The war lasted until 1848 and concluded with the signing of the Treaty of Guadalupe Hidalgo in which Mexico recognized the U.S. annexation of Texas and ceded the territory that presently comprises California and the southwestern United States.

In the 1820s and 1830s U.S. settlers in Mexico's northern province of Texas became increasingly disgruntled with the Mexican government's policies, including its ban on slavery and its efforts to limit further immigration by U.S. citizens. In 1836 the Texans rebelled and, after defeating an army under the Mexican president Antonio López de Santa Anna, proclaimed the Republic of Texas with a constitution that legalized slavery. Although the United States, France, Belgium, and Great Britain recognized Texas as a new republic, Mexico refused to acknowledge Texan independence. In the early 1840s Mexico and the Republic of Texas engaged in bitter frontier fighting, which caused many in the United States to develop an increasingly negative view of the Mexicans and their government.

By the early 1840s, the United States was experiencing expansionist fever. Many in the United States began to speak of Manifest Destiny, the idea that the United States had a divinely inspired mission to expand across the

continent, spreading democracy and freedom. Believers in such a mission, along with supporters of slavery who feared that growing British influence in Texas affairs might lead to abolition, were strong supporters of the annexation of Texas. Expansionism became a major issue in the election of 1844 when James K. Polk, the Democratic candidate, pledged to acquire the Republic of Texas if elected. With the election of Polk, the outgoing administration under the proexpansionist President John Tyler secured a joint resolution of both houses of Congress in favor of Texas annexation. After a period of international intrigue, the Republic of Texas rejected offers of peace from Mexico and mediation from Great Britain and voted to join the Union in December 1845.

December 1845 also marked the arrival of the American diplomat John Slidell in Mexico City to win Mexican recognition of the Rio Grande as the U.S.-Mexican border and to purchase as much Mexican territory in New Mexico and California as possible. When the embassy failed, President Polk sent troops in January 1846 under the command of General Zachary Taylor to the Rio Grande to provoke Mexico. After a small skirmish between Mexican and U.S. troops in April, Polk claimed that the United States had been attacked, and Congress responded with a declaration of war in early May.

U.S. forces coordinated a two-front attack on Mexican territory. General Stephen W. Kearny led a cavalry force, backed up by the U.S. Navy, to invade western Mexico from Fort Leavenworth. Meeting little effective resistance, he won the battles of San Gabriel and La Mesa and took control of San Diego and Los Angeles. In January, Mexican resistance in California ended. Two other forces, one under General John E. Wool and the other under Taylor, were ordered to advance south and occupy the city of Monterrey. After taking the city early in 1847, U.S. forces secured their conquest by repulsing a Mexican army under General Santa Anna at the Battle of Buena Vista in February 1847. In March, President Polk dispatched an army under General Winfield Scott to invade central Mexico. After performing the first major amphibious landing by a U.S. force, Scott took the coastal city of Veracruz and then marched westward to take the

cities of Puebla in May 1847 and Mexico City on September 14, 1847.

On February 2, 1848, the United States and Mexico signed the Treaty of Guadalupe Hidalgo. Among other provisions, it specified that Mexico recognize the Rio Grande as the U.S.-Mexico border and cede to the United States the territory that comprises the present-day states of California, Arizona, New Mexico, Nevada, and Utah as well as portions of Colorado and Wyoming. The United States agreed to give Mexico \$15 million as compensation and assume up to \$3.25 million in Mexican government debts to U.S. citizens.

The U.S. victory intensified the debate on slavery. During the war David Wilmot, a Democratic congressman from Pennsylvania, introduced an amendment that stipulated that any territories gained in the war would not include slavery. A four-year debate on this issue fought along sectional lines resulted in the Compromise of 1850, which admitted California to the Union as a free state and organized the rest of the Mexican cession into two territories, New Mexico and Utah, without restrictions on slavery. Although the compromise averted an immediate crisis, it did little to halt the republic's descent into sectionalism and further bitter conflict over slavery.

—Jaime Olivares

Bibliography

- Bauer, K. Jack. *The Mexican War, 1846–1848*. Lincoln: University of Nebraska Press, 1993.
- Eisenhower, John S. D. *So Far from God: The US War with Mexico*. New York: Random House, 1989.
- Griswold del Castillo, Richard. *The Treaty of Guadalupe Hidalgo: A Legacy of Conflict*. Norman: University of Oklahoma Press, 1990.

The War of the Triple Alliance

The War of the Triple Alliance (also known as the Paraguayan War) was fought between Paraguay and an alliance composed of Brazil, Argentina, and Uruguay between 1864 and 1870. It is known as the bloodiest war in Latin American history. Although its immediate cause was the decision of Paraguay's dictator Francisco Solano López to declare war on Brazil for intervening



The Paraguayan cavalry attacks the combined forces of Brazil, Argentina, and Uruguay during the War of the Triple Alliance, which began in 1865. As a result of the five-year conflict, one of the bloodiest wars in Latin American history, one out of two Paraguayans was killed and Paraguay lost vast amounts of territory to Argentina and Brazil. (Library of Congress)

in a civil war in Uruguay, its deeper origins lie in decades of feuding among the southern cone nations of South America over economic rights, borders, politics, and regional hegemony. Its causes also include the ambitions of the Paraguayan dictator Solano López, who expanded and modernized the Paraguayan military and dreamed of annexing Brazilian territory to give his nation access to an ocean port.

The war's immediate origins date to 1864, when Brazil sent troops into Uruguay to oust the Blanco Party, with ties to Paraguay, and replaced it with the Coronado Party, traditionally sympathetic with Brazil. Angered by the ousting of his Uruguayan political allies as well as by Brazil's support of the new regime, Solano López invaded the Brazilian province of Mato Grosso in November 1864. He declared war on Argentina in March 1865 after Argentina refused to grant safe passage for Paraguayan troops so they could attack the Brazilian province of Rio Grande do Sul. The decision of Uruguay, still ruled by the pro-Brazil Colorado Party, to declare war on Paraguay led to the formation of the Triple Alliance, dedicated to the destruction of the Solano López government and the death of Solano López himself.

At the war's outset Paraguay, as a result of its recent military buildup, had the advantage. Its army numbered around 60,000, compared to 8,500 for Argentina, 2,000 for Uruguay, and 16,000 for Brazil. By late 1865, however, Brazil's naval superiority and the allies' larger population from which to recruit soldiers tilted the balance against Paraguay. Although the allies were fighting a Paraguayan enemy fanatically devoted to its leader and encountered difficulty in taking key Paraguayan forts at Tuyuti, Curuzu, and Curupaity, they gradually wore down Paraguayan resistance until the major cities all had been taken by 1869. For another year, however, Solano López continued to fight a guerrilla war in the mountains northeast of Asunción, where he was killed fleeing the enemy.

Although the exact number of casualties is disputed, it is estimated that Brazil lost 50,000 men, while Argentina lost 1,600 men and Uruguay lost 3,100 men. Paraguay had combined military and civilian losses of 300,000. Paraguay, with a population of 525,000 before the war, in 1871 had a population of only 221,000, 28,000 of whom were men. Furthermore, Paraguay lost 55,000 square miles of territory, mainly to Brazil and Argentina, and experienced extensive industrial and agricultural devastation. The war was also costly for the victors. Brazil and Argentina accrued major debts from British financiers to pay for the war, and these massive debts were not paid off until well into the twentieth century.

—Jaime Olivares

Bibliography

- Bethell, Leslie. *The Paraguayan War (1864–1870)*. London: Institute of Latin American Studies, 1996.
- Warren, Gaylord. *Paraguay and the Triple Alliance: The Postwar Decade*. Austin, TX: Institute of Latin American Studies, 1978.

War of the Pacific

The War of the Pacific, also known as the Chile-Peruvian War or the Ten Cents War, was fought between Chile and Bolivia (with Peru joining the conflict as an ally of Bolivia) between 1879 and 1883. The war was a result of a long-standing dispute between Chile and Bolivia over the control of part of the Atacama Desert. The dispute over borders in the desert took on new urgency

in the 1840s when rich deposits of guano, a valuable fertilizer, and saltpeter, a key component of gunpowder, were discovered in the region. In 1866 the two nations agreed to set the border at the 24th parallel and share the tax revenues on mineral exports from the region between the 23rd and 25th parallels.

Although the arrangement was modified to Bolivia's benefit in 1874, Bolivia became increasingly dissatisfied with the growing dominance of Chile and Britain over nitrate exports in the region. In 1878 the Bolivian government, under President Hilarión Daza, unilaterally raised taxes on the Chilean companies and, when one of them refused to pay, seized the company and announced that the government would sell it by auction in February 1879 in the city of Antofagasta. When 200 Chilean troops occupied the city to prevent the auction, Bolivia declared war on March 1, 1879, and invoked an earlier secret alliance with Peru. Although committed to honoring its treaty obligations to Bolivia and concerned over Chilean expansion in the region, Peru sought to mediate the dispute but failed. Chile declared war on the two allies in early April 1879, and the war began.

Chile's more professional, less politicized army and modern navy dominated battles on both land and sea. The Chilean navy controlled

the sea after cornering and capturing the Peruvian ironclad *Húascar* at the Battle of Anagamos in October 1879. Although the Peruvians achieved an impressive victory over the Chileans at the Battle of Tarapacá on November 27, 1879, this had no lasting effect on the war's ultimate outcome. By mid-1880 the Chileans had effectively occupied most of Peru. After an unsuccessful mediation effort by the United States to end the war in October, the Chileans occupied the Peruvian capital of Lima in January 1881. Peruvian resistance continued for three more years. The war finally came to an end when Peru and Chile signed the Treaty of Ancón in 1883, and Bolivia and Chile and Bolivia signed a truce in 1884. Chile acquired the province of Tarapacá from Peru and Antofagasta from Bolivia. Bolivia was cut off from the sea, while Chile gained control over nitrate exports. These exports dominated Chile's economy until the 1920s and would transform Chile into the dominant power in the region.

—Jaime Olivares

Bibliography

- Farcau, Bruce W. *The Ten Cents War: Chile, Peru, and Bolivia in the War of the Pacific*. Westport, CT: Praeger, 2000.
- Sater, William F. *Chile and the War of the Pacific*. Lincoln: University of Nebraska Press, 1986.

■ Introduction: International Cooperation, Pacifism, and Peace Movements

Internationalism is the idea that nations should cooperate to solve common problems and prevent national disputes rather than pursue primarily their national interests. Internationalism became an increasingly strong ideology as the nineteenth century progressed and has become a dominant ideology of the twentieth century. Modern internationalism traces its roots to the eighteenth-century Enlightenment, when thinkers such as Immanuel Kant (1724–1804), Voltaire (1694–1778), and Jean-Jacques Rousseau (1712–1778) argued for the universalism of human values and interests. Kant, in his

Perpetual Peace: A Philosophical Sketch (1795), even envisioned a form of world government. Romantic nationalism, which emerged in the early nineteenth century as a reaction to the materialism of many Enlightenment thinkers, also played a role in advancing internationalism. Following the French Revolution, Greeks, Belgians, Italians, Poles, Czechs, Hungarians, and Germans all sought to form their own nation-states, in which a single ethnic population would have its own state. The widespread revolutions of 1848, however, also reflected a broad international desire for nationalism. These movements, many of

which eventually succeeded as the nineteenth century wore on, helped create a larger community of nations, which eventually became the basis for an international community.

Conflicts between and among nations were common, but so too was a desire to cooperate and preserve peace. These were the goals of the Concert of Europe, the agreement struck among the victorious powers after the Napoleonic Wars to regularly consult each other on issues of perceived common interest. They also were the goals of the new international organizations that began to form in the 1860s and 1870s, including the Universal Postal Union and the International Telegraph Union.

Internationalism also gained strength below the state level. International organizations such as the International Olympic Committee and the International Red Cross, the latter formed in 1864 through the inspiration of the Swiss doctor Jean Henri Dunant, were private organizations that, although they worked with national governments, reflected a spirit of individual amity. Working people also embraced internationalism as a new and potentially revolutionary ideology. The First International, also known as the International Working Men's Association, was founded in London in 1864 under the leadership of Karl Marx. Its aim was an international socialist revolution, and it worked to generate cooperation between socialist groups in different nations. The First International attracted both communist and non-communist socialist organizations, but it eventually split apart over the question of whether revolution was a short- or long-term goal, a division mirrored in the personal animosity between Marx and Mikael Bakunin (1814–1876), the Russian anarchist and fellow leading international socialist. The Second International was formed in Paris in 1889 and pursued more reformist goals. It broke apart in 1914 over the war, with members choosing nationalism over internationalist goals. Before then, however, international socialism represented a major ideological challenge to imperialism during the half century before World War I.

Internationalism also entailed the unprecedented increase in trade and social interaction that especially marked the period from 1870 to 1914. The period witnessed a marked rise in

international cooperation and investment. The British writer and Labour Party member of Parliament Norman Angell, reflecting the temper of the age, wrote in his 1910 book *The Great Illusion* that any future war, regardless of who won, would in fact harm all participants through the damage it would cause to international trade. In the same spirit, European nations pledged support for international cooperation at The Hague Conferences of 1899 and 1907, inspired by the Russian tsar Nicholas II.

Internationalism, however, remained stronger as an ideal than as a reality. National rivalries remained and were particularly intense regarding imperial competition in Africa and Asia, economic protectionism, and arms production. Internationalism also remained largely a European idea. The United States remained largely isolationist, while much of the rest of the world was excluded because of unequal economic development and colonial paternalism. Nonetheless, although World War I proved a serious setback for internationalism, the idea reemerged after the war in the form of the League of Nations.

—Daniel Gorman

Congress of Vienna

The Congress of Vienna was an international meeting of European leaders to redraw the map of Europe after the defeat of Napoleon. In September 1814 representatives of virtually all European states and those of a number that had passed out of existence began gathering at Vienna for one of the important diplomatic assemblies of modern times. Two emperors—Alexander I of Russia and Francis I of Austria—were present along with the kings of Prussia, Bavaria, Württemberg, and Denmark. However, the real work of the congress was carried out by their first ministers, although Tsar Alexander retained full authority. The key players were Count Klemens von Metternich of Austria; Robert Stewart, Viscount Castlereagh of Britain; King Frederick William III of Prussia and his chief minister Prince Karl August von Hardenburg; and Charles Maurice de Talleyrand-Périgord, the representative of King Louis XVIII of France.

A serious split soon developed between Austria and Britain on the one side and Prussia and

EUROPE IN 1815



Russia on the other. Russia sought all Poland in a reconstituted Kingdom of Poland with Alexander as its ruler, while Prussia, supported by Russia, wanted all Saxony. Austria, Britain, and France, fearful of the increase in Russian and Prussian influence, opposed such a plan and in January 1815 at the suggestion of Talleyrand formed a defensive alliance. News of the alliance along with Napoleon's return to France from exile on Elba in March 1815 caused the allies to compose their differences. Russia and Prussia backed down,

and in the ensuing compromise approved in May, Prussia received two-fifths of Saxony, and a new Polish state (Congress Poland) was created with much the same territory as Napoleon's former Grand Duchy of Warsaw, with Tsar Alexander as its king. The result was that Russian influence advanced 250 miles (400 kilometers) farther west.

In the Act of the Congress of Vienna of June 8, 1815, Austria received Lombardy and Venetia, the Illyrian Provinces (former French kingdoms

of Illyria and Dalmatia), and Salzburg and the Tyrol (Tirol), both from Bavaria. Austria, however, gave up the Austrian Netherlands. Prussia secured about two-fifths of Saxony, Posen and Danzig (Gdansk), Swedish Pomerania and Rügen (for which Denmark received Lauenburg). Prussia also gained additional territory in Westphalia as well as Neuchâtel. In return Prussia gave up Ansbach and Baireuth to Bavaria, East Friesland to Hanover, and part of its Polish territory before 1807 to Russia.

In order to offset any future French threat to the northeast, the Dutch Republic was awarded the former Austrian Netherlands (Belgium), with the new enlarged state called the Kingdom of the Netherlands. Metternich also hoped that this step would enhance the possibility of future cooperation between France and Austria. The Kingdom of the Netherlands was, however, characterized by strong religious and linguistic difficulties.

One of the most difficult problems to resolve at Vienna was that of the Germanies, where Napoleon had consolidated some 350 German states into a tenth that number. German nationalism, so evident in the German War of Liberation of 1813, was deliberately set aside in favor of a loose-knit German Confederation of 39 states, including 5 free cities, with Austria as its president. The Act of Confederation was signed on September 8, 1815.

Russia secured most of the Grand Duchy of Warsaw, established as the Kingdom of Poland with the Russian tsar as its king. Tsar Alexander granted Poland a liberal constitution (which Russia did not have), with Polish as the official language and with its own army. Cracow (Krakow) became a free state under the protection of Russia, Austria, and Prussia.

Sweden gained Norway, acquired in the Treaty of Kiel of January 14, 1814, with Norway receiving a guarantee of its rights and a separate constitution. In the Act of Union of 1815 Norway was confirmed as an independent kingdom, merely united with Sweden under the same ruler. Denmark was compensated by receiving Lauenburg, while Switzerland was reconstituted as an independent confederation of 22 cantons. Spain, Sardinia (which received Genoa),

Tuscany, Modena, and the Papal States were all reconstituted. The duchies of Parma, Modena, Lucca, and Tuscany were given to members of the Habsburg family. The Bourbons were not reestablished in the Kingdom of Naples until 1815 (then the Kingdom of the Two Sicilies), since its king, former Napoleonic marshal Joachim Murat, deserted Napoleon. In Italy as in Germany nationalism was deliberately stymied, with Habsburg predominance reestablished. Although the Congress of Vienna preserved a balance of power in Europe, it failed to check revolutionary sentiment throughout Europe.

—Spencer Tucker

Bibliography

- Dallas, Gregor. *The Final Act: The Roads to Waterloo*. New York: Henry Holt, 1997.
- Kissinger, Henry A. *A World Restored: Metternich, Castlereagh and the Problems of Peace, 1812–22*. Boston: Houghton Mifflin, 1957.
- Zamoyski, Adam. *Rites of Peace: The Fall of Napoleon & the Congress of Vienna*. New York: HarperCollins Publishers, 2007.

Holy Alliance and the Concert of Europe

The Holy Alliance refers to a compact created by the Russian emperor Alexander I (r. 1801–1825) and signed on September 26, 1815, by Francis I of Austria and Frederick William III of Prussia. The compact called on the signatories to rule according to the Christian principles of love, justice, and mercy and called for mutual assistance among the three monarchs. The alliance affirmed that the Romanov, Hohenzollern, and Habsburg dynasties ruled by divine right and therefore shared a common interest in defending the territorial governments and autocratic rule of other European empires. All three monarchies utilized the religious arguments of the treaty to justify assisting the repression of nationalist and liberal movements within the signatory empires, but the religious principles of the Holy Alliance were largely abandoned after the death of Alexander I. The 1814 Quadruple Alliance among Great Britain, Prussia, Austria, and Russia proved to be more effective than the Holy Alliance, incorporating France in 1818 to form

the Quintuple Alliance during the Congress of Aix-la-Chapelle. The Great Powers would meet on three subsequent occasions—at the Congress of Troppau in 1820, the Congress of Laibach in 1821, and the Congress of Verona in 1822—but disagreements among the signatories undermined the alliance.

One of the main causes of the failure of the Holy Alliance and the Quintuple Alliance was the different systems of government among the signatories. Although Alexander invited Great Britain to join the Holy Alliance at its inception, the future King George IV argued that the nature of the treaty was incompatible with British parliamentary government. Prime Minister Viscount Robert Castlereagh, British emissary to the Congress of Vienna, privately mocked the religious basis of the treaty, calling it “a piece of sublime mysticism and nonsense.” While Great Britain did not maintain an enduring alliance with the more repressive regimes in central and eastern Europe, it often appeared unwilling to challenge Prussian, Austrian, and Russian policies elsewhere in Europe. The Polish nationalists never received the British support that they expected, and Great Britain never condemned the Habsburg empire’s use of Russian troops to suppress the Hungarian rebellions of 1848. France experienced numerous changes of government during the same period with the overthrow of the legitimist Bourbons in 1830 and the Orleans monarchy in 1848, resulting in a focus on internal affairs and its own borders instead of broader European intervention.

The Congress System collapsed in the mid-nineteenth century because Prussia and the Habsburg empire feared that Russian expansion into the Slavic provinces of the crumbling Ottoman empire would undermine their own interests in the region. These tensions eventually erupted in the Crimean War. During this conflict the Habsburg empire occupied the Danube territories that Russia sought to include within its own dominions. The Habsburg dynasty faced future domestic rebellions without the assistance of Russian military personnel.

The Concert of Europe emerged from the same series of congresses that fostered the Holy Alliance, the Quadruple Alliance, and the Quintuple

PHILOSOPHICAL ANTECEDENTS TO THE HOLY ALLIANCE

Alexander I was not the only prominent figure of the early nineteenth century to suggest that the European balance of power should be maintained through adherence to religious principles. Royalist writer François René de Chateaubriand, one of the critics of Napoleon Bonaparte, argued in his work *Génie du Christianisme* that a close relationship between politics and religion was the only means of preventing future outbreaks of European hostilities. German philosopher and theologian Franz von Baader shared Chateaubriand’s views, arguing that God should be treated not as an abstract concept but rather as a dynamic force in human activities.

—Carolyn Harris

Alliance in the immediate aftermath of the Napoleonic Wars. The terms of the Second Treaty of Paris, signed on November 20, 1815, provided the foundation for a new political order, which recognized the conditions of post-Napoleonic Europe. The treaty recognized that while France was no longer a major military power, the current political leadership of France and the smaller nations at its borders were essential to the political stability of Europe. The concert established buffer states at France’s borders to prevent French expansion and attempted to maintain the security of these states while reintegrating France into this broader diplomatic consensus.

In the years immediately following the Congress of Vienna, the Concert of Europe addressed the security needs of both the Great Powers and small powers, creating an accord in which the smaller powers accepted the general hegemony of the Great Powers in exchange for guarantees of their independence and internal autonomy. Although conflicts occurred among the Great Powers during the nineteenth century, most significantly the Crimean War, the understanding among the signatory powers of the Congress of Vienna provided the foundation for a period of relative stability in Europe, which lasted until the 1914 outbreak of the First World War.

—Carolyn Harris

Bibliography

- Elrod, Richard B. "The Concert of Europe: A Fresh Look at an International System." *World Politics* 28(2) (1976): 159–174.
- Hartley, Janet M. *Alexander I*. London: Longman, 1994.
- Mearsheimer, John J. *The Tragedy of Great Power Politics*. New York: Norton, 2001.
- Rich, Norman. *Great Power Diplomacy, 1814–1914*. Boston: McGraw-Hill, 1992.
- Schroeder, Paul W. *The Transformation of European Politics: 1763–1848*. Oxford, UK: Clarendon, 1994.

The Hague Peace Conferences of 1899 and 1907

The Hague Peace Conferences of 1899 and 1907 were unique events that witnessed the gathering of the world's leading dignitaries and diplomats to discuss and negotiate fundamental international issues including disarmament, the

regulation of warfare, and arbitration. The general aim of the conferences was to develop strategies to avoid or mitigate war and conflict. The conferences inaugurated an era of multilateral discussions and agreements, which became integral to international relations in the twentieth and twenty-first centuries. The conferences also established key international laws of warfare and neutrality, known as The Hague Conventions, as well as regulations for international arbitration. As a result of the 1899 conference, the Permanent Court of Arbitration, an institution dedicated to conflict resolution, was established. In 1913 it was housed in the Hague Peace Palace, which was built for this purpose.

Inspired in part by a growing worldwide peace movement and fears of the impact of industrialization on the conduct of war, the young Tsar Nicholas II of Russia publicly invited the world to a conference in 1898 to discuss limitations on armaments production. Nicholas

THE PEACE PALACE IN THE HAGUE

At the end of the First Hague Peace Conference in 1899, the need for a building to house the newly established Permanent Court of Arbitration became apparent. Andrew Carnegie, the Scottish-American philanthropist, donated US \$1.5 million for a palace of peace, including an extensive international law library, to be situated in The Hague. The Peace Palace represents the first effort to erect a building dedicated to the foundation of peace through international law. It remains a living museum, not only a historical location for peaceful endeavors of the past but also a functioning institution for the alleviation of conflict and the administration of international law. The French architect Louis Cordonnier designed the palace after winning an international competition in 1906, although his grand design was simplified before construction began. The first stone was laid during the Second Hague Peace Conference in 1907, and the building was completed in 1913. Its gardens were planned by renowned English landscape architect Thomas Mawson. The construction process was an international cooperative enterprise, and the palace's interior and exterior incorporate gifts from around



Peace Palace at the Hague, about 1910. (Library of Congress)

the world. Aside from the Permanent Court of Arbitration, the palace houses a world-renowned international law library and academy and, since 1923, the International Court of Justice, today administered by the United Nations.

—Maartje Abbenhuis-Ash

It's manifesto urged a halt in the acquisition of massive arsenals by all nations for fear that they would push each other into a devastating war. The manifesto surprised most observers. While international peace groups and agitators were wild with hope, most diplomats and government officials were distrustful of the usefulness of the enterprise and cynical of the tsar's motivations. Russia was a large and powerful state but had not industrialized as quickly or as impressively as its Western neighbors and would certainly lose an arms race. The major powers were also distrustful of each other's commitment to the cause of peace. For these reasons but also because a meeting of this magnitude had never been attempted, governments were slow to respond to the tsar's invitation. The protocol to be followed was unclear (because it did not exist), as was settling on an appropriate location. The Hague, the political capital of the Netherlands, was finally decided upon. This country was an appropriate choice. It was not so insignificant in international status to be deemed an affront to the attending dignitaries and was also inoffensive due to its neutral position in world affairs. Furthermore, the Netherlands had nurtured the great humanists and forerunners of international law, Erasmus and Grotius.

Neither conference managed to enforce any real commitment to disarmament. However, the achievements of both conferences were substantial. In all, 17 conventions and 5 declarations covering the rules governing the settlement of international disputes, the rights and duties of neutral countries in warfare, and the laws and customs of warfare on land, at sea, and in the air were passed. They still form the basis of international law and arbitration developments today.

Because of the success of the 1899 event, another conference was organized in 1907. This second congress was better planned and attended. The eyes of the world seemed to be fixated on The Hague. Hundreds of requests for topics of discussion as well as suggestions for implementing permanent peace from interested third parties (forerunners of today's nongovernmental organizations, or NGOs) were fielded by the attending representatives and the

Dutch government and queen. Given the context of the deepening arms race in Europe, crises in the Balkan region, and growing tensions between the world's great powers, the meetings at The Hague in 1907 inspired a belief that an era of peace and reasonableness could subdue and alleviate the fears of war. Rather ironically, a third Hague Peace Conference was planned for 1914. The outbreak of the First World War in July of that year, however, put those plans permanently to rest.

—Maartje Abbenhuis-Ash

Bibliography

- Best, Geoffrey. *Humanity in Warfare*. New York: Columbia University Press, 1980.
- Davis, Calvin DeArmond. *The United States and the First Hague Peace Conference*. Ithaca, NY: Cornell University Press, 1962.
- Davis, Calvin DeArmond. *The United States and the Second Hague Peace Conference: American Diplomacy and International Organization, 1899-1914*. Durham, NC: Duke University Press, 1975.
- Eyffinger, Arthur. *The 1899 Hague Peace Conference "The Parliament of Man, The Federation of the World."* The Hague: Kluwer Law International, 1999.

Pacifism and Pacifist Movements

The word "pacifism" comes from the Latin *pax* or *pacis*, which means "peace," and *facere*, which means "to make." Pacifists believe that nations should settle their conflicts as peacefully as possible and are often opposed to participating in military activity. Even though peace and justice are the objectives of all pacifists, the degree and circumstances of nonviolence vary from person to person and circumstance to circumstance. Although absolute pacifism declares that violence is wrong always and in every situation, most pacifists are on a moral and ethical continuum as it relates to force. For example, some pacifists refuse to enter the military service in any capacity, whereas others find their witness for peace as unarmed army medics. Thus, much of the writing of those advocating peace debates under what circumstances nonviolence should be national, group, or individual policy and the degree

of coercive or disciplinary violence that should be used to achieve social or personal goals.

The roots of pacifism are as old as war itself and can be traced to Asia, especially to Buddhism, several of the indigenous peoples of the Americas, and the writings of Greek philosophers such as Plato. Pacifism as a dominant form of philosophy emerged in Western thought with first-century Christianity. After hearing passages like Jesus's Sermon on the Mount, most early Christians believed that Christ called for nonviolent resistance to pagan political power and the ways of the world. Christianity did not change its stance toward violence until the third century, when it increasingly gained followers in power in the Roman empire, particularly Emperor Constantine. By the fifth century Christian thinkers, particularly St. Augustine, developed a "just war" theory. Although no longer the dominant strain of thought, pacifism still held power in many ecclesiastical circles and later reappeared in the sects founded during the Protestant Reformation. Often called the "peace churches," the groups that elevated nonresistance to doctrinal position included Mennonites, Anabaptists, Friends (or Quakers), Moravians, Brethren, and Dukhobors, a Christian group of Russian origin. Leaders from these groups have been the heart of most peace societies founded after 1815 and have been the most vocal in the cause of peace. More philosophical advocates of pacifism can be found in the writings of the sixteenth-century humanist Erasmus of Rotterdam, the eighteenth-century German philosopher Immanuel Kant, the nineteenth-century American Christian reformer Adin Ballou, and the American philosopher and psychologist William James (1842–1910). Modern pacifism began with the founding of peace societies in Massachusetts (1815), New York (1815), and England (1816); France, Switzerland, and other countries soon followed suit. William Ladd (1778–1841), the most prominent early American pacifist, brought many of these groups together in the United States, establishing the American Peace Society in 1828. These groups advocated various strategies to smooth relations between nations. Yet many of these societies or individuals, like William Lloyd Garrison (1805–1879), the most prominent American abolitionist, allowed for some degree of violence, particularly

in support of the antislavery cause. In 1843 the first peace congress met in London, and momentum seemed to be building for pacifistic reform in international relations until the American Civil War shattered the peace movement in the United States. While American peace societies were rebuilding during the latter half of the nineteenth century and European efforts were set back by the Crimean War and the wars of Italian and German unification, Sir William Randal Cremer (1838–1908) of Great Britain and Frédéric Passy (1822–1912) of France spearheaded efforts to establish the Inter-Parliamentary Union in 1889, which brought members of national electoral bodies together in periodic conferences. The same year the International Peace Bureau was founded in Bern, Switzerland. Alfred Nobel (1833–1896), the Swedish inventor of dynamite, established the Nobel Peace Prize to recognize and reward work for peace and humanitarian causes.

During the mid-1860s socialist thinkers such as César de Paepe (1841–1890) developed the International Workingmen's Association, or First International (founded in 1864), an organization of socialists, pacifists, and union supporters who believed that the cause of peace was almost impossible until private property and class inequality could be abolished. A Second International was founded in 1889, and its members advocated general strikes in case of war, arbitration treaties, arms-reduction proposals, and an end of colonialism. Militants such as Gustave Hervé (1871–1944) urged sabotage in the cause of pacifism. Vladimir Lenin (1870–1924) urged the dissolution of international boundaries as the only means of true peace. Still, most peace societies were ethnocentric and nationalistic in their viewpoint, and the association with socialism (and vegetarianism, antivivisectionism, and other "fads") in the public's mind would hurt their efforts in the twentieth century.

The high points of pre-World War I pacifism were the two International Peace Conferences held at The Hague in the Netherlands in 1899 and 1907. The first conference, the brainchild of Tsar Nicolas II of Russia, was attended by delegates from 26 nations who made no progress on the topic of disarmament, but they did approve a convention for the Pacific Settlement of

Disputes, which resulted in the establishment of the Permanent Court of Arbitration. In addition, they produced a document titled "Laws and Customs of War on Land," known as "The Hague Convention," that was one of the first international statements of the laws of war and war crimes. The second Hague Conference was convened by U.S. president Theodore Roosevelt and was attended by the representatives of 46 nations. The delegates debated but made no progress on the subjects of disarmament and the establishment of a world court. However, another meeting was planned for 1914, and many pacifists believed that an end to war was within sight. World War I shattered these illusions, but pacifist sentiment quickly reappeared with the conclusion of the war, with many peace advocates supporting the League of Nations as the forum to settle international disputes.

—T. Jason Soderstrum

Bibliography

- Brock, Peter. *Freedom from War: Nonsectarian Pacifism*. Toronto: University of Toronto Press, 1991.
- Brock, Peter, and Nigel Young. *Pacifism in the 20th Century*. Syracuse, NY: Syracuse University Press, 1999.
- Martin, David A. *Pacifism: An Historical and Sociological Study*. New York: Schocken Books, 1966.

The Red Cross and Red Crescent Movement

The International Red Cross and Red Crescent Movement is a humanitarian movement consisting of three parts: the National Red Cross and Red Crescent Societies, the International Federation of Red Cross and Red Crescent Societies, and the International Committee of the Red Cross (ICRC). It is an independent, neutral movement, devoted to ensuring humanitarian protection and assistance for victims of war and other situations of violence.

The Red Cross movement began in June 1859 when Swiss businessman Henry Dunant (1828–1910), during a trip to Italy to visit with the French emperor Napoleon III concerning his business dealings in French-controlled Algeria, happened on the Italian town of Castiglione della Stiviere after the Battle of Solferino in the Austro-Sardinian War. It was a battle in which

6,000 men were killed and another 42,000 were wounded, many of them French troops fighting as allies of Sardinia. Many of the wounded had found their way to Castiglione, and about 500 had taken refuge in the Chiesa Maggiore, the town's church, where Dunant collected volunteers to render aid. He was appalled at the French military's lack of supplies and personnel and later described his experience in his widely read book, *Un Souvenir de Solferino* (A Memory of Solferino), published in 1862. He sent copies of his book to the leading statesmen and military leaders in Europe, urging their support for national voluntary relief organizations to treat wounded soldiers and civilians.

In 1863, the prominent Genevan lawyer Gustave Moynier (1826–1910) helped Dunant organize the International Committee for the Relief of Wounded Soldiers, composed of other prominent citizens of Geneva, including Commander of the Swiss Army General Guillaume-Henri Dufour (1787–1875), with the goal of establishing a series of national relief committees. The group called an international conference in Geneva in October 1863 which included 36 attendees and 18 official delegates from 14 countries. Among the proposals from that group was the suggestion that volunteer medical personnel from all countries should wear a white arm band with a red cross (a reverse of the Swiss national flag) which had been designed by Dufour. Within a year, nine national societies had been formed.

Dunant also thought that all medical personnel on the battlefield should be treated as neutrals, and, to that end, a second conference was convened in the Swiss capital, which drafted the Geneva Convention of August 22, 1864, for the Amelioration of the Condition of the Wounded in Armies in the Field. The convention's 10 articles called for, among other changes, universal use of the red cross emblem and protection of medical personnel, hospitals, and wounded or sick combatants.

Although the red cross was never intended as a religious symbol, Islamic countries found it objectionable. During the 1876 Russo-Turkish War, the Ottoman Society for Relief to the Wounded chose a red crescent on a white background, and that emblem was subsequently adopted by the majority of Muslim nations.

The Geneva Convention elevated rules regarding care and protection of the sick and wounded from ad hoc agreements to the status of international law. The conventions were expanded in 1899, 1906, 1907, 1929, 1949, and 1977 and currently comprise four conventions and a collection of additional protocols. Dunant's committee, renamed the International Committee of the Red Cross, is the protector of the conventions and is also responsible for admitting new national societies to the movement.

In 1919, Henry Davison, the head of the American Red Cross, called an international conference to associate the various national societies. That conference resulted in the League of Red Cross Societies, subsequently renamed the International Federation of Red Cross and Red Crescent Societies in 1991. In 1928, the League, the International Committee of the Red Cross, and the various national societies joined as the International Red Cross which was renamed the International Red Cross and Red Crescent Movement in 1986.

—*Jack E. McCallum*

Bibliography

- McCallum, Jack E. *Military Medicine: From Ancient Times to the 21st Century*. Santa Barbara, CA: ABC-CLIO, 2008.
- Vassallo, D. J. "The International Red Cross and Red Crescent Movement and Lessons from the Experience of War Surgery." *Journal of the Royal Army Medical Corps* 140 (1994): 146–154.

The Nobel Peace Prize—Establishment and Early Winners

The Nobel Peace Prize recognizes the contributions made by individuals and groups toward promoting and achieving peace. The prize was instituted by Alfred Nobel (1833–1896), a Swedish engineer and chemist who generated a large fortune as the owner of Bofors, which he transformed from an iron manufacturer to an armaments maker. Controversy attended Nobel's decision to bequeath part of his fortune to fund this and other awards immediately after his death in December 1896. Legal challenges and opposition to the will's provisions by relatives and other interested parties prevented the

prize—along with others in chemistry, physics, medicine, and literature—from being presented until 1901. Even then, the Nobel Committee's decision to divide the first award between two recipients caused consternation in some circles. Other precedents established during the first few years of the Nobel Peace Prize's existence have influenced its development down to the present.

Nobel composed his will without the aid of a lawyer, which resulted in ambiguities in jurisdiction, language, and details. The Norwegian legislature (the Storting) and the scientific institutions that were intended to assume the responsibility of selecting recipients had never been consulted, for instance, which made ensuring their collaboration and devising the means for them to do so just one of many problems that the will's executors had to resolve. Despite seemingly insurmountable difficulties, the Nobel Foundation was established in June 1900 to carry out Nobel's wishes, at least insofar as these had been determined amid the maelstrom of negotiations, compromises, and legal actions undertaken after his death.

The will had called for a prize to be awarded to a person "who shall have done the most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses." This concern reflected the influence of Bertha von Suttner, a friend of Nobel's who was a well-known peace activist. During the nineteenth century, especially after 1889, a peace movement with an agenda echoed in Nobel's will grew in size and influence among a liberal middle-class constituency convinced that the benefits of science, industry, and political reform could guide the world to a future free from war. Peace advocates in peace societies whose local and national efforts were coordinated through an International Peace Bureau lobbied for international treaties of arbitration, institutions to foster greater international cooperation, and even gradual steps toward disarmament.

The Nobel Committee's decision to select two recipients for the first award in 1901 demonstrated how flexibly it interpreted its mandate. Frédéric Passy had been a leader in the

international peace movement for decades and represented exactly the kind of activist many believed Nobel had in mind as he drew up his will. The choice of Henry Dunant, founder of the International Committee of the Red Cross (ICRC), to share the award with Passy irritated many peace activists, who pointed out that the ICRC sought not to abolish war itself but to alleviate some of the suffering that it created. Dunant had never worked in the ranks of the peace movement, nor had he been consistently involved with the ICRC for decades, considerations that marked him as undeserving to many peace activists. Others argued that Dunant's initiative contributed substantially to the goal of "work[ing] for fraternity between nations" articulated in Nobel's will. An enduring result of this decision and the rationale behind it has been the recognition of humanitarians, human rights activists, and others involved in diverse but indirect ways toward addressing a host of factors and issues associated with peace. Such a liberal approach to interpreting Nobel's will can also be seen in the committee's choice to present the award to organizations, such as the Institute of International Law (1904) and the International Peace Bureau (1910), rather than an individual "person" as stated in the will.

Most other recipients awarded the Nobel Peace Prize in the period before 1914 fit a conventional profile of peace activists and internationalists of the time: leaders of peace organizations, such as Élie Ducommun (1902) and Ernesto Moneta (1907); diplomats committed to international cooperation, such as Paul Henri d'Estournelles de Constant (1909) and Elihu Root (1912); and international jurists who contributed to the agreements reached at the two Hague Conferences (1899 and 1907) and the work of the Permanent Court of Arbitration, such as Louis Renault (1907) and Auguste Beernaert (1909). Objections were raised when U.S. president Theodore Roosevelt received the award in 1906, given his generally aggressive foreign policy. Similar objections have been occasionally voiced as statesmen with less than stellar records in the cause of peace have been awarded the prize for singular instances of international conciliation. This too is a custom that

➤ BERTHA VON SUTTNER—THE WOMAN BEHIND THE NOBEL PEACE PRIZE

The Nobel Peace Prize might never have been established had an Austrian countess not attempted to flee from a love affair. Bertha, Countess Kinsky, fell in love with Albert von Suttner, the youngest son of a Viennese family who had hired her as a tutor for their daughters. When Albert's parents objected to the relationship, Bertha left Vienna and ended up in Paris in 1876, where she found employment as Alfred Nobel's secretary. She held onto this position only briefly before returning to Vienna to elope with Albert.

In 1889 Bertha von Suttner published a best-selling novel with an antiwar message, *Lay Down Your Arms!*, which has sometimes been described as the *Uncle Tom's Cabin* of the peace movement. Although von Suttner had not been directly involved in the peace movement until then, she quickly emerged as an influential figure, organizing an Austrian peace society in 1891. Having continued to correspond with Nobel ever since 1876, she persuaded him to leave part of his fortune to fund the famous peace prize. In 1905 von Suttner's contributions were recognized when she was named the first woman Nobel peace laureate.

—Michael Clinton

first emerged in the early years of the prize and has continued ever since.

—Michael Clinton

Bibliography

- Abrams, Irwin. *The Nobel Peace Prize and the Laureates: An Illustrated Biographical History, 1901-2001*. Nantucket, MA: Science History Publications/USA, 2001.
- Cooper, Sandi E. *Patriotic Pacifism: Waging War on War in Europe, 1815-1914*. New York: Oxford University Press, 1991.
- Holl, Karl, and Anne C. Kjelling, eds. *The Nobel Peace Prize and the Laureates: The Meaning and Acceptance of the Nobel Peace Prize in the Prize Winners' Countries*. New York: Peter Lang, 1994.
- Josephson, Harold, ed. *Biographical Dictionary of Modern Peace Leaders*. Westport, CT: Greenwood, 1985.

Gandhi and the Philosophy of Non-Violence

Born Mohandas Karamchand Gandhi, Mahatma (or “Great Soul”) Gandhi (1869–1948) is a twentieth-century icon of nonviolence. His philosophy of *ahimsa*, or noninjury to any living being, was a concept he shaped and experimented with throughout his life. Frequently used as a synonym for pacificism, *ahimsa* consists of an expression of the deepest love for all humans, including one’s opponents. In Gandhi’s mind, nonviolence was not simply a political tactic used solely for liberating people but instead was a method of self-purification and an instrument for attaining social and political change. In his nonviolence, Gandhi incorporated elements from Eastern and Western systems of thought while he

studied and practiced law in India, England, and South Africa. Therein lie its global appeal and its relevance to conflict resolution in different parts of the world.

Born at Porbander, Gujarat, in western India on October 2, 1869, Gandhi deeply absorbed the ideals of noninjury from Jain and Buddhist beliefs prevalent in the region. Although a Hindu by birth and upbringing, Gandhi did not worship idols or in temples but instead drew much of his understanding of life and truth from ancient Hindu texts such as the Bhagavad-Gita and his ethics from Buddhist scriptures.

The notion of truth, or *satya*, is central to nonviolence. Gandhi saw truth as being multifaceted and therefore unable to be grasped in its entirety by any one individual. We all carry pieces of truth, he believed, but need pieces of other truths in order to pursue the greater truth. As there was uncertainty in discovering these truths, he termed his moral quests “experiments with truth.” Therefore, *satya* implies honesty and fairness, and *ahimsa* entails nonviolence with tolerance for a degree of suffering.

Nonviolence does not mean avoiding conflict but instead means gravitating toward the heart of it in order to resolve a contentious issue. Gandhi practiced this as a *karmayogi*, or a follower of action, as early as the age of 13, when he tried to overcome the existing father-son conflicts so typical in Indian society. By tenderly nursing his strict sick father after an accident during Gandhi’s wedding in 1883 and overcoming his resentments toward his father, Gandhi came to the belief that a strong adversary could be challenged nonviolently and conquered through love and care.

A greater part of Gandhi’s understanding of nonviolence was formulated while he was abroad and tested considerably by the time he returned to India in 1914. The London years (1888–1891) were crucial for his intellectual growth and moral conviction. It was here that Gandhi began his experiment with diet, so essential to *ahimsa*, when he joined the London Vegetarian Society. And it was through this organization also that he was introduced to the ideas of two writers who later influenced his own work: the Russian aristocrat Leo Tolstoy and the Victorian moralist John Ruskin. Tolstoy’s *The Kingdom of God Is Within You*, which Gandhi

➤ GANDHI ON HOME RULE

“I would say to the extremists: ‘I know that you want Home Rule for India; it is not to be had for your asking. Everyone will have to take it for himself. What others get for me is not Home Rule but foreign rule; therefore, it would not be proper for you to say that you have obtained Home Rule if you have merely expelled the English. I have already described the true nature of Home Rule. This you would never obtain by force of arms. Brute-force is not natural to Indian soil. You will have, therefore, to rely wholly on soul-force. You must not consider that violence is necessary at any stage for reaching our goal.’ I would say to the moderates: ‘Mere petitioning is derogatory; we thereby confess inferiority. To say that British rule is indispensable, is almost a denial of the God-head. We cannot say that anybody or anything is indispensable except God. Moreover, common sense should tell us that to state that, for the time being, the presence of the English in India is a necessity, is to make them conceited.’”

—Rajini Pani

Source

Mahatma Gandhi, “Indian Home Rule,” in *The Gandhi Reader: A Source Book of His Life and Writing*, Vol. 1, edited by Homer A. Jack (Bloomington: Indiana University Press, 1953), 117.

read in Durban in 1894, was instrumental in confirming his belief in nonviolence. For Gandhi, ahimsa then appeared as evidence of the divine nature innate in all humans and therefore was the very embodiment of truth and God. Significantly, Gandhi formulated his concepts and initiated his actions for the first time in South Africa, as he himself proclaimed: "That God-forsaken continent where I found my God."

In South Africa for the first time Gandhi put to practice Henry David Thoreau's idea of civil disobedience. The equivalent technique that Gandhi developed was his *satyagraha*, or "power of truth." Specifically devised as a practical extension of ahimsa and love, it meant a nonviolent non-cooperation with evil. A challenge to this belief came in 1893 when Gandhi experienced racial discrimination. He was pushed out of a first-class railway compartment in the province of Natal, in spite of possessing a valid ticket. From this incident, Gandhi decided that one must firmly stand on principles, without hatred. This

incident was indicative of an effective resistance to apartheid, which later became part of Gandhi's wider struggle against colonialism. It also brought into focus his neat blend of morality with politics. Gandhi's participation in the Transvaal Civil Rights campaign between 1907 and 1913 became a precursor in many ways of the larger nonviolent noncooperation effort that he launched against British rule on his return to India.

—*Rajini Pani*

Bibliography

- Choudhary, Ramakrishna P. *Mahatma Gandhi: A Comparative and Critical Study of the Gandhian Concept of Non-Violence*. Tirupathi: Department of Philosophy, Sri Venkateshwara University, 1989.
- Markovits, Claude. *The Un-Gandhian Gandhi: The Life and Afterlife of the Mahatma*. London: Permanent Black, 2003.
- Nanda, B. R. *In Search of Gandhi: Essays and Reflections*. New Delhi and Oxford: Oxford University Press, 2002.

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Thought and Religion

In an era of political upheaval, scientific discovery, economic change, and ever-greater interaction among the world's peoples, significant changes in the areas of thought and religion were inevitable. Intellectuals were forced to reconsider ancient verities about justice, political power, morality, human nature, humankind's place in the universe, and a host of other issues. Similarly, religious leaders, theologians, and countless individual believers were forced to come to terms with a rapidly changing world. Although challenged by science, secularism, and states determined to limit its role in education and public life, religious belief remained a powerful force in the lives of millions of human beings and a prism through which intellectuals sought understanding of the world and humankind's place in it.

Religion remained important even in Europe, a region where many historians have discerned a decline in religious commitment from the eighteenth century onward. True, between 1750 and 1914 European states no longer went to war because of Catholic-Protestant conflict, and universities no longer saw their role mainly as one of protecting orthodoxy and serving the interests of organized churches. Enlightenment writers in the eighteenth century castigated organized religions for their intolerance, hypocrisy, and conservatism; French revolutionaries briefly replaced Christianity with a religion of reason; and republican and socialist political parties in the nineteenth century tended to be anticlerical. During the 1800s the papacy was forced to relinquish its authority over the Papal States and the city of Rome, and new systems of publically funded schools broke the churches' monopoly on education. Christian churches also faced major intellectual challenges from new approaches to biblical scholarship, new theories about the age of the earth, and Charles Darwin's theories of evolution.

Despite such setbacks and difficulties, the level of religious devotion among most Europeans remained high. Overall church attendance in Europe seems to have declined somewhat, but this is counterbalanced by the increasing demand for printed Bibles and religious literature of all sorts, the construction of large numbers of new churches and synagogues, the upsurge of support for foreign missions, and the growing cult of miracles and devotion to the Virgin Mary among Catholics. Organized churches and religious individuals led campaigns on behalf of temperance and the abolition of slavery and provided charitable support for hospitals, orphanages, Sunday schools, sports clubs, and organizations such as the Salvation Army, which worked among alcoholics and prostitutes.

Outside of Europe, religious sentiment remained strong. In Latin America, despite the anticlericalism of liberal politicians, popular devotion to Roman Catholicism did not waver. And in the United States,

as many foreign visitors noted, religious enthusiasm was a distinctive feature of American life. Three out of four Americans in the nineteenth century were church members, and many of the unchurched were drawn to the preaching of itinerant revivalists or attended camp meetings, where visitors would gather for days or weeks to sing hymns and hear nonstop sermons urging repentance and surrender to Jesus. The so-called Second Great Awakening, which took place from the 1790s through the 1840s, was a period of evangelism and religious enthusiasm that contributed to movements for social reform and was the seedbed from which Mormonism took root in the 1820s.

One expression of religiosity in Europe and areas of European settlement had worldwide repercussions. Missionary zeal in the nineteenth century took hold of Protestants and Catholics alike, and by the

Missionary zeal in the nineteenth century took hold of Protestants and Catholics alike, and by the late 1800s missionaries were active in Oceania, Africa, China, India, and even the Middle East.

late 1800s missionaries were active in Oceania, Africa, China, India, and even the Middle East. Measured in terms of converts to Christianity, all this missionary activity was not very successful. An exception was Oceania, where large numbers of Maori in New Zealand and inhabitants of hundreds of other Pacific islands converted to Christianity. In Africa, new

Christian communities were created in Liberia, Sierra Leone, Buganda, Madagascar, the Congo, and parts of southern Africa. But Christianity's spread in Africa mainly took place in the twentieth century and was more the work of African evangelists than foreign missionaries. In India, China, Southeast Asia, and the Middle East, missionaries had an impact disproportionate to the small number of converts. As educators, translators, providers of health care, and critics of competing belief systems and customs, they were vehicles through which the values and accomplishments of the West were introduced to Asians and Africans. Furthermore, although less important than European emigration and overall population growth, new conversions contributed to the worldwide increase in the number of Christians from approximately 205 million in 1800 to 558 million in 1900.

Religion's continuing importance can be measured in other ways. New religions such as Mormonism, founded by Joseph Smith in upstate New York in the 1820s, and the Baha'i Faith, which originated in mid-nineteenth-century Persia, took root and gained large followings. Reform and revivalist movements energized many faiths, including Hinduism, Islam, Judaism, and Christianity. Religion also continued to be a major force in politics. Islam inspired a series of jihads in the 1800s that redrew the religious and political map of Africa from the Hausa states in the west to Sudan in the east. It also contributed to rebellions in western China between 1855 and 1873 and along with Hinduism contributed to the outbreak of the Indian Rebellion in 1858. Christianity made an important contribution to the ideology that fueled the massive Taiping Rebellion in China between 1850 and 1864. Traditional African religion inspired events such as the Xhosa Cattle Killing of 1856, in which a young girl prophesied that the Xhosa should kill their cattle

and abandon their fields so that a new Xhosa nation could arise. It also played a central role in the Maji-Maji Rebellion of 1905–1907 in which a spirit medium convinced the people of German East Africa that they were destined to drive out the Germans and would be protected from German bullets by a special medicine.

Religion also was deemed sufficiently important to be utilized and manipulated for political purposes. Meiji reformers in Japan in the 1870s launched a brief campaign to promote Shintoism, Japan's traditional religion, as a way of encouraging proper civic behavior and respect for the emperor and nation. Ottoman sultan Abdulhamid II (r. 1876–1909) sought to gain support from his largely Muslim subjects by emphasizing his devotion to Pan-Islamism and his role as caliph, the successor of Muhammad as the head of the worldwide Muslim community. From the 1880s onward, Russian tsarist officials did little to discourage and in some instances promoted the anti-Jewish riots that swept through southwestern Russia as a way of directing popular discontent from the government to a convenient scapegoat.

Just as organized religions were challenged by the relentless pace of change between 1750 and 1914, so too was the relatively small but important group of writers, political commentators, philosophers, scholars, journalists, theologians, and social critics who are collectively lumped together as intellectuals. What it meant to be an intellectual varied from one society to another. In China, intellectual life was dominated by scholar-officials who immersed themselves in Confucian philosophy, historical research, and literature in addition to serving in the imperial bureaucracy. In the Islamic world, intellectual and religious thought was dominated by the *ulema*, religious scholars who served as jurists, mosque officials, educators, and advisers to rulers. Until the nineteenth century, Hindu learning was a monopoly of a small group of *pandits*, scholars and teachers of literature and philosophy drawn mainly from the Brahmin caste who had mastered the ancient language of Sanskrit and committed parts of the Vedas to memory. In Europe and areas of European settlement, intellectuals might be journalists, writers, academics, scientists, or religious leaders.

In contrast to India and the Islamic world, where all intellectual matters were intertwined with religion, in the Western world intellectual discourse was largely secular. In Europe, intellectuals in the 1800s abandoned the biting anticlericalism of the eighteenth-century Enlightenment and left the discussion of religious issues to a small number of academic theologians. Scientists pursued their studies and published their findings, even on controversial subjects such as the age of the earth and evolution, with scant regard for their religious implications. Karl Marx dismissed religion as an illusion designed to encourage docility among the poor and spent little time discussing its role in human affairs; Freud asserted that religion was an expression of underlying neurosis and psychological distress.

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Representative philosophies of the era were pragmatism, whose largely American disciples believed that the usefulness and practicality of ideas and policies defined their merit, and positivism, whose founder Auguste Comte (1798–1857) argued that humanity had passed through three stages: the Religious (in which knowledge was based on tradition and revelation), the Metaphysical (in which people began to reason and speculate but with little factual knowledge), and finally the Positive or Scientific (in which any and all conclusions pertaining to business, government, and society would be based on facts and facts alone). He coined the term “sociology” for the fact-based study of society. Comte’s influence and the scientific spirit of the age can be seen in the proliferation of other new “social sciences,” including political science, economics, anthropology, psychology, and the “new history” championed by the German Leopold von Ranke (1795–1886), who argued that history must be based on facts derived from primary sources and written to describe the past “as it really was.”

For most Western intellectuals the nineteenth century was a time of growing confidence in science and the soundness of Western values and institutions. For thinkers and intellectuals in the Islamic world, India, and East Asia, however, it was a time of self-doubt, self-scrutiny, and debate in the face of new and unsettling realities. The expansion of Western power throughout the world made a mockery of the Muslims’ conviction that devotion to Allah guaranteed political and military success. It had a similar effect on the Chinese belief in the superiority of their values, institutions, and achievements. The key question became how to respond to the Western threat. Some conservatives sought salvation in religious reform, renewed dedication to historic principles, and efforts to recapture the practices of a previous golden age. Most, however, concluded that at least some borrowing from the West was needed, but such a conclusion only led to more questions. What needed to be borrowed, and, more importantly, how much could be borrowed without destroying essential features of the society or civilization that one was trying to preserve?

Acceptance of Western institutions, ideas, and technologies inspired fewer debates and less resistance in India and Japan than in China and the Islamic world. Japan had no entrenched religious establishment to oppose Westernization and fewer reservations about borrowing from foreigners, since much of its culture and many of its values had been modeled on those of its continental neighbors, mainly China. Furthermore, many writers had subjected the Tokugawa regime to increasing criticism from the 1770s onward, and most Japanese were convinced that the regime had responded ineffectually to Western pressures following the arrival of Commodore Perry in 1853. Except for a small number of disgruntled samurai, once the Meiji Restoration ended the Tokugawa shogunate, no group or individual was interested in defending the defunct dynasty’s policies and practices. This left the way open for Meiji reformers to bring in Western consultants of all sorts, revamp the educational system, provide a European-style constitution, and embrace industrialization. Journalists, academics, and other writers debated the relative merits of Japanese and Western cultural norms and

the extent to which Japanese history and literature should be taught in schools and universities. Although the debate was not without extremists, most argued that Japan should pursue a middle course that meshed indigenous and alien elements. This of course was precisely the policy of the Meiji state.

In India, Hindu intellectual life had languished during centuries of Muslim rule but came to life under the British. The introduction of modern printing presses gave rise to a publishing industry that made available to a broader audience a wide variety of texts, including versions of the Vedas and other sacred writings, and made possible a flourishing newspaper industry. More importantly, the British established a system of education made up of universities, training colleges for teachers, high schools, and vernacular elementary schools. Although shunned by Muslims and conservative Hindus, many Hindus flocked to the new schools, which taught a Western-style curriculum, usually in English. Education opened the door to employment with the East India Company and the Indian Civil Service and was considered a mark of prestige for middle- and upper-class families. By 1900 a new type of Indian intellectual, one who wrote in English and was well versed in Western history, literature, and philosophy, had come into existence.

A few of these Anglicized Indians became Christians, but most remained Hindus dedicated to reviving and strengthening Hinduism against the claims of Christian missionaries that Hinduism was a pagan and idolatrous religion burdened with superstitions and barbarous practices. A prime example is Rammohun Roy (1774–1833), a leader of the Hindu Renaissance and the “father of modern India.” A prolific author and founder of a school for girls, newspapers, and an organization of learned individuals for the discussion of religion and social reform, Roy attacked idolatry, child marriages, and the suppression of women; he also defended Christian ethical teachings and the compatibility of science and Hinduism. India’s intellectuals not only inspired reforms within Hinduism but also provided leadership for India’s nationalist movement. In 1885 they played a key role in the founding of the Indian National Congress, the organization that under Mohandas Gandhi, another product of British schools, led the struggle for independence in the twentieth century.

The reaction of Islamic religious leaders and intellectuals to European influences and European expansion differed from region to region but on the whole was decidedly more negative than that of their Japanese and Indian counterparts. For some, Western science, politics, and legal theories were fundamentally incompatible with Islam. For others, centuries of conflict with Christian Europe made it difficult to admit that there was anything worth imitating from the West. Thus, throughout much of the nineteenth century many Islamic religious leaders resisted efforts by Ottoman, Egyptian, and Persian rulers to modernize their armies, legal systems, and economies along Western lines. By the end of the 1800s, however, with the Ottoman empire near collapse, Egypt under British control, and the Mughal empire in India abolished, debate about the future of the Islamic community intensified. Jamal ad-Din al-Afghani (1838–1897) and his disciple Muhammad Abduh (1849–1905) became spokesmen of what came to be known as Islamic

modernism. Although Abduh was an Egyptian and Jamal-ad-Din was by birth a Persian, their writings addressed all Muslims, urging them to resist European imperialism but only after Islam had come to terms with modern science and rationalism. Other writers advocated Turkish

or Arab nationalism, defended further secularization, called for renewed religious devotion, or dedicated themselves to specific projects such as improving the status of women. Consensus about Islam's future was notably lacking as the twentieth century began.

No intellectuals had more difficulty responding to the challenges of the nineteenth century than those of China. As had been true for centuries, to be an in-

tellectual was to be a student of Confucianism, a body of writings and commentary that for two millennia had been the focus of education and scholarly endeavor. Since the sixth century CE, Confucianism also was the material on which students were tested as part of China's civil service examination system, through which successful candidates gained access to positions in the imperial bureaucracy ranging from offices in local districts to the inner circles of the imperial court. In such roles China's Confucian scholar-officials had successfully maintained China's position as the center of Asian civilization, and their success engendered strong feelings of Chinese superiority. Such smugness, along with Confucianism's inherent conservatism, made it difficult for the Chinese to respond to the Western challenge with the decisiveness of the Japanese or the openness of India's Hindus.

The long reign of Emperor Qianlong (r. 1735–1796) had been a glorious time for Chinese economic and political fortunes and for Confucian scholarly endeavors, but at the end of the reign and in the early nineteenth century a number of Confucians were disquieted by evidence of corruption and other signs of dynastic decline. In response, some searched “new texts” to find meaning relevant to China's political problems, others shifted their attention from speculative philosophy to current needs and administrative principles, while still others reflected on the possibility of change within a Confucian context. The inadequacy of such strategies was fully revealed by midcentury rebellions and a string of military defeats. Until the late 1890s, most intellectuals sought China's revival through a strategy of self-strengthening, based on selective borrowing of Western technology, especially weaponry, and the restoration of sound Confucian government by reforming the civil service examinations, reopening Confucian academies, reprinting Confucian texts, and directing scholarly activity to practical questions. Only after another military defeat (this time to Japan) in 1895, the failure of the One Hundred Days Reform in 1898, and the suppression of the Boxer Rebellion 1901 did scholars inside and outside of government conclude that saving China was more important than saving Confucianism. They threw their support behind plans to revamp the Chinese educational system along Western lines, introduce constitutional government, reorganize

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the military, and reform the administration. A decisive step was taken in 1905 when the civil service examination system, which for centuries had guaranteed the supremacy of the Confucian-trained elite, was scrapped. Whether the government's program could have replicated Japan's transformation in the Meiji era is impossible to know. In 1911 a revolution led by nationalist army officers overthrew the Manchu emperor, and this time the mandate of heaven was not passed on to a new dynasty. China's imperial age had ended. Chinese intellectuals along with their

countrymen faced an uncertain future without the guidance of Confucianism, rule by scholar-officials, and the authority of the emperor.

The intellectuals of China were not the only ones whose assumptions and values were shaken in the twentieth century. Two fearsome world wars, economic collapse in the 1930s, revolution in Russia, the horrors of the Holocaust, and the obliteration of Hiroshima and Nagasaki by atomic weapons ensured that this would be the case.

—James H. Overfield

■ Introduction: Islam

In many respects, the years between 1750 and 1900 brought nothing but disaster for the worldwide Muslim community. By the mid-eighteenth century, of the three once-powerful Islamic states of the early modern era, Safavid Persia had been overrun, the Mughal empire in India was disintegrating, and the Ottoman empire was falling behind the West militarily and economically. In the following decades Western imperialists took advantage of Muslim political weakness so that by 1900, 80 percent of all Muslims—approximately 161 million believers—lived under the political control of some Western power. Of the two major independent Islamic states, both Qajar Persia and the Ottoman empire had been forced to accept the presence of Christian missionaries, extensive European investment in their economies, and foreign control of their finances. In 1895 the Moroccan historian Ahmad ibn Khalid al-Nasiri al-Salawi wrote the following:

It is known that at this moment the Christians have reached the apogee of their strength, and that the Muslims—may God lead them together and put them on the right track—are as weak and disorderly as they could be. We are, they and we, like two birds, one with wings, who can go wherever he pleases, the other with clipped wings who keeps falling back to earth without being able to fly.

Throughout these difficult decades, there is no sign that Islam lost its vitality or its centrality in the lives of its followers. It remained the prism through which intellectuals and political leaders sought to understand the reasons for the Muslim world's declining fortunes. It also provided guidance and inspiration for revival and renewal. The result was an extraordinary period in the history of the faith, one marked by intellectual ferment, new perspectives, frequent controversy, the appearance of charismatic leaders, and the proliferation of reform movements. No part of the Islamic world was unaffected.

Throughout Muslim history, there always have been individuals and groups who took it upon themselves to reform the community. Reform movements varied in terms of inspiration, leadership, and methods, but all of them were oriented toward the past in that they sought to restore legal principles, beliefs, and rituals modeled on practices established by Muhammad and the earliest Muslim community. Many also sought to restore the early uncorrupted Muslim state in the face of perceived threats of pagan backsliding or non-Muslim rule. Some resorted to jihad, or holy war, to achieve their goals.

The eighteenth and nineteenth centuries saw a number of reform movements that resembled earlier efforts of renewal and therefore are referred to as examples of “traditional” or even “archaic” reform. At first they were primarily

related to local circumstances and had little to do with the impact of the West, but as the nineteenth century unfolded, efforts to restore pristine forms of Islam were frequently linked to resistance to European colonialists.

An early example of traditional reform is provided by the movement inspired by the Indian scholar Shah Wali Allah (1703–1762), whose many writings called for the revival of Indian Muslim learning the end of divisions among Muslims and the purification of Islamic practices. Better-known traditional reform movements took place in Arabia and West Africa. In Arabia, Muhammad Ibn Abd al-Wahhab (1703–1792) denounced other Muslims for “polytheism” and their devotion to forms of piety such as saint worship and veneration of saints’ tombs. Supported by a local Arab tribal chief, the Wahhabis took control of Medina and Mecca in the early 1800s before being expelled by an Egyptian army dispatched to the region by the Ottoman sultan. Equally important was the jihadist movement inspired by the West African scholar Usman dan Fodio (1754–1817). Deeply disturbed by the corruption and halfhearted devotion to Islam exhibited by the region’s rulers, he inspired a series of holy wars that led to the establishment of the Sokoto Caliphate in the northern part of present-day Nigeria. His example inspired several other jihadist movements that redrew the political and religious map of Sudanic Africa in the 1800s.

As the nineteenth century progressed, a number of traditionalist Islamic reform movements inspired resistance to colonial rule. In North Africa, the scholarly reformer ‘Abd al-Qadir (1808–1883) led the resistance to French rule in the 1830s and 1840s until he was defeated and forced into exile in 1847. Several other anticolonial movements were led by self-styled *mahdis*, divinely chosen individuals who aimed to restore the original purity of the Islamic faith and polity. In Sudan, Muhammad Ahmad (1884–1885) proclaimed himself Mahdi in 1881, promising to purify Islamic belief and practice while resisting oppressive practices of Egyptian and then British administrators. He died, probably of typhus, in 1885, but his Mahdist state survived until its army was overwhelmed by a British force in 1898. In other areas, Islamic reformers led resistance movements against Dutch rule in

Java and Aceh and Russian rule in the Caucasus and Inner Asia.

In contrast to traditionalist reformers, all of whom sought to restore religious practices of Islam’s early decades, Islamic modernists sought another path to revival. Like the traditionalists, they venerated the Muslim intellectual tradition but were committed to reconciling this tradition with distinctly modern values emanating from the West. These values included constitutionalism, scientific investigation, modern-style education, women’s rights, freedom of religious interpretation, and reason as a basis for intellectual judgment. These modernists were not secularists; they did not seek to eliminate the role of Islam from law and public life. They were convinced, however, that Islam had a bleak future unless it accommodated itself to certain modern, that is, Western ideas and values. Unlike traditionalist reform movements, which drew their leadership mainly from scholars or leaders of Sufi religious orders, Islamic modernists also included journalists, government officials, and former military men, many of whom had studied or traveled in Europe.

The best-known Islamic modernist was Sayyid Jamal ad-Din al-Afghani (1838–1897), who traveled across much of the Middle East and northern Africa advocating educational reform, the adoption of modern science by Muslims, and the unity of all Muslims under a single state. Al-Afghani’s disciple, Mohammad Abduh (1849–1905), devised plans for the reform of Egypt’s schools, the Arabic language, the education of girls, and the curriculum at Al-Azhar, the center for advanced Islamic studies in Cairo. In India the aristocratic Ahmad Khan (1817–1898), disturbed by the perceived backwardness of Muslims in the eyes of British officials and many educated Hindus, founded the Muhammadan Anglo-Oriental College at Aligarh, which offered courses in English on European arts and sciences in addition to Islamic studies. Its goal was to educate Indian Muslims capable of finding positions in the Indian Civil Service.

These and other Islamic modernists sought to achieve a balance between revelation and reason, tradition and innovation and religion and science. Their many critics warned of the dangers of such compromises, which they feared

would open the door to secularism and a weakening of the faith. Their worst fears seemed to be confirmed in the 1920s, when Turkey's nationalist leader Mustafa Kemal aggressively attacked reduced Islam's role in public life. As the twentieth century unfolded, however, it became clear that for many Muslims the centuries-old goal of achieving pure Islamic societies based on timeless ancient practices had lost none of its appeal.

—James H. Overfield

Bibliography

Schulze, Reinhard. *A History of the Islamic World*. New York: New York University Press, 2000.

Origins and Early History of Wahhabism

Wahhabism—the Islamic movement founded by Muhammad Ibn Abd al-Wahhab—emerged in the oases of central Arabia in the mid-1700s. Its followers prefer to be referred to as Monotheists or Unitarians, as its central tenet is a definition of monotheism that explicitly excludes popular religious practices such as Sufism and devotion to saints. Its conditional sanction of attacks upon individuals who engage in these practices contributed significantly to the rise of three emirates under the leadership of the Saud family.

Muhammad Ibn Abd al-Wahhab was born in the early 1700s in the central Arabian town of Uyayna in Najd into a family of religious scholars. He returned to Najd after studying and preaching abroad, possibly in the Hijaz and Iraq, and began his religious revival in earnest after his father's death in 1740.

In Abd al-Wahhab's view, most Muslims were ignorant of proper Islamic practice and morality. Declaring one's faith in a single God was not enough to make one a Muslim; anyone engaged in practices that drew religious devotion away from God was an idolater and open to attack. Seeking help or intercession from anyone other than God (including angels, prophets, saints, or inanimate objects) was not acceptable in his eyes, which led to condemnation of Sufis and Shias, for whom making pilgrimages to saints' tombs was an important part of their religious devotion. Most significant for the subsequent spread of the movement was the teaching that

➤ IBN ABD AL-WAHHAB'S USE OF ISLAMIC TEXTS

The following excerpt is from the first chapter of Muhammad Ibn Abd al-Wahhab's treatise on monotheism, *Kitab al-Tawhid* (The Book of God's Oneness). The book's chapters begin with quotations from Islamic source texts—either hadiths or Quranic verses—that are then elaborated with a brief discussion and a list of issues for further consideration. Hadiths are sayings of the Prophet Muhammad that were passed down orally until gathered into written compilations in the ninth century. A tradition is referred to as *sahih* when it appears in more than one hadith and when its *isnad*—or list of individuals who orally transmitted it—is considered sound. The two most authoritative collections of hadith, those of Bukhari and Muslim, are often referred to as the two *Sahihs*, where *Sahih* is shortened from the title *al-Jami al-Sahih*.

“Muadh ibn Jabal related: ‘I was riding behind the Prophet—[may peace be upon him]—when he said to me: “O Muadh! Do you know what is due to Allah from His creatures, and what is due them?” I responded: “Allah and His Prophet know best.” He continued: “What is due to Allah from His creatures is to serve Him alone and never to associate any other being with Him. What is due them is not to punish any person who does not associate aught with Him.”’ The foregoing *hadith* is reported in the two *Sahihs*.”

Ibn Abd al-Wahhab quotes this tradition, generally accepted as authoritative, as part of a larger argument justifying his interpretation of monotheism in Islam. He uses passages such as this one to argue for two main tenets: that Muslims must refrain from showing devotion to anyone other than God and that those who fail to do this are eligible for punishment.

—Hilary Kalmbach

Source

Muhammad Ibn Abd al-Wahhab, *Kitab al-Tawhid: Essay on the Unicity of Allah, or What Is Due to Allah from His Creatures*, trans. Ismail Raji al-Faruqi (Riyadh: IFFSO, 2005), 4.

Muslims who rejected calls to conform to these beliefs could be attacked.

Ibn Abd al-Wahhab preached for several years in Uyayna, at the invitation of its chief, but was later turned out due to pressure from the regional tribal chief, supposedly after being approached by scholars who objected to Abd al-Wahhab's teachings. In 1744 he moved to Diriyya, whose tribal leader, Muhammad al-Saud, pledged to support him as long as he remained loyal to Saudi rule. By the time of Abd al-Wahhab's death in 1792, all of central Arabia was under Saudi control, an expansion aided significantly by policies condoning and even encouraging attacks on those who did not fall inside Abd al-Wahhab's limited definition of Islam.

Critics of the Wahhabi movement, which included Ibn Abd al-Wahhab's brother Sulayman, objected to its violent behavior and austere beliefs, which included razing tombs and enforcing strict punishments for moral transgressions. They argued that its founder was not sufficiently trained to issue such a thorough reinterpretation of Islamic sources. They particularly criticized the destruction of tombs and attacks on individuals who declared their belief in Islam but not the teachings of Wahhabism. However, Wahhabi ulama obtained a monopoly on religious interpretation in Najd by both driving ulama who opposed their ideas out of Najd and forbidding contact with all outside of the Wahhabi movement.

Abd al-Wahhab's approval of attacks against those outside of the Wahhabi movement enabled the Wahhabi-Saudi alliance to expand its control across Arabia, conquering Ottoman-controlled Hijaz in 1803 and 1804. Capturing the holy cities, Mecca and Medina, threatened Ottoman prestige and security, so the Ottoman sultan sent the newly modernized Egyptian army to intervene. Egyptian forces under Ibrahim Pasha, Muhammad Ali's son, landed in 1811 and by 1818 had destroyed the Saudi capital at Diriyya and sent the surviving Saudi and Wahhabi leaders to imprisonment in Cairo.

This seemingly complete destruction did not last long. Saudi and Wahhabi forces regrouped to form a second emirate, with Turki ibn Abdullah ruling much of central and eastern Arabia from 1824 to 1834. Turki's son Faysal succeeded him, yet was sent into exile after a second Egyptian

invasion installed relative Khalid Ibn Saud in 1937. The Egyptian army was forced to pull out in 1841. Turki escaped and ruled a smaller and less aggressive Saudi polity from 1843 to 1865. Succession disputes between two of his sons, Abdullah and Saud, threw the region into chaos. The Rashid family ended Abdullah's rule in 1887 and forced the family to flee to Kuwait in 1891.

This second emirate set important precedents with respect to restraining the attacks of Wahhabi supporters on foreign territories, an effort expanded by the founder of modern Saudi Arabia, Abd al-Aziz ibn Saud (r. 1902–1953). Starting in 1902, Ibn Saud campaigned to wrest back control of Arabia from the Rashidis and Ottoman-backed Hashimites, culminating with his declaration of the Kingdom of Saudi Arabia in 1932. He astutely balanced the pressure to spread Wahhabi religious ideas with political concerns, especially the need for good relations and cooperation with foreign entities.

—Hilary Kalmbach

Bibliography

- Commins, David. *The Wahhabi Mission and Saudi Arabia*. London: Tauris, 2006.
- Cook, Michael. "The Expansion of the First Saudi State: The Case of Washm." In *The Islamic World from Classical to Modern Times: Essays in Honor of Bernard Lewis*, edited by C. E. Bosworth. Princeton, NJ: Darwin, 1989.
- DeLong-Bas, Natana J. *Wahhabi Islam: From Revival and Reform to Global Jihad*. Oxford: Oxford University Press, 2004.

The Baha'i Faith

The Baha'i Faith is a religion founded in Persia (present-day Iran) in the mid-nineteenth century by Mirza Hosayn Ali Nuri (1817–1892), who is known as Baha'ullah (Glory of God). It grew out of the Babi Faith, also founded in nineteenth-century Iran, by Mirza Ali Muhammad (ca. 1819–1850). The principal tenets of the Baha'i faith are the essential unity of all religions, the oneness of humanity, and equality between the genders. Much of Baha'i teaching is about social ethics, and its disciples devote themselves to the abolition of racial, class, political, and religious prejudices. The faith has no priesthood and does not observe ritual forms of prayer or worship.

Every Baha'i is obligated to pray daily; abstain from cigarettes, drugs, and alcohol; practice monogamy; obtain the consent of parents prior to marriage; and participate in the Nineteen-Day Fast between March 2 and March 21, during which they abstain from eating and drinking from sunrise to sunset. The Baha'is use a calendar in which the year is divided into 19 months of 19 days each. The year begins on the first day of spring, March 21, which is one of several holy days in the Baha'i calendar. The Baha'i faith unreservedly accepts the validity of other faiths. Baha'is believe that Abraham, Moses, Zoroaster, Buddha, Krishna, Jesus, and Muhammad are all equally authentic messengers of one God. But Baha'is believe that the messengers of God have come progressively: each revelation from God is more complete than the one preceding it, and each prepares the way for the next. In this view, Islam, as the most recent of the prior religions, constituted the immediate historical preparation for the Baha'i faith.

The Baha'i religion originally grew out of the Babi faith, or sect, which was founded in 1844 by Mirza Ali Muhammad in Persia, who assumed the title of the Bab (meaning "Gate"). He proclaimed a spiritual doctrine emphasizing the forthcoming appearance of a new prophet or messenger of God who would overturn old beliefs and usher in a new era. These beliefs originated in Shia Islam, whose followers believe in the return of the Twelfth Imam (successor of the Prophet Muhammad), who will guide and reward the faithful. The Bab's ideas were opposed by orthodox Muslims, and he was imprisoned and eventually executed in 1850. Subsequently his remains were smuggled out of Persia and brought to Palestine, where they were interred in present-day Haifa, Israel. One of the Bab's earliest disciples and strongest exponents was Mirza Hosayn Ali Nuri, who assumed the name of Baha'ullah. The Baha'is believe that Baha'ullah is the messenger announced by the Bab. They also believe that Baha'ullah is the Twelfth Imam expected by the Shia Muslims. Baha'ullah was arrested for his religious beliefs in 1852 and jailed in Tehran, where according to Baha'i belief he became aware that he was the prophet. He was released in 1853 and exiled to Baghdad, where his leadership revived the Babi community.

In 1863 shortly before being exiled to Constantinople, Baha'ullah declared to his fellow Babis that he was the messenger of God foretold by the Bab. An overwhelming majority of Babis acknowledged his claim and thenceforth became known as Baha'is. Before Baha'ullah died in 1892, he appointed his eldest son, Abd ol-Baha (1844–1921), to be the leader of the Baha'i community and the authorized interpreter of his teachings. Abd ol-Baha actively administered the movement's affairs and spread the faith to North America, Europe, and other continents. Presently, the faith has more than 150 national spiritual assemblies (national governing bodies) and about 20,000 local spiritual assemblies.

—Cherie Taraghi

Bibliography

- Cole, Juan Ricardo. *Modernity and the Millennium: The Genesis of the Baha'i Faith in the Nineteenth-Century Middle East*. New York: Columbia University Press, 1998.
- Smith, Peter. *The Babi and Baha'i Religions: From Messianic Shi'ism to a World Religion*. Cambridge: Cambridge University Press, 1987.

Islamic Modernism

The number of Muslim intellectuals espousing distinctly modern views of religion and politics was growing over the course of the nineteenth century. However, the development of the movement that has come to be known as Islamic Modernism is most often traced to the figure of Sayyid Jamal ad-Din al-Afghani (d. 1897), whose career as a Muslim reformist and anticolonial activist in many ways set a new paradigm for Muslim leadership. Jamal ad-Din's origins remain



Sayyid Jamal ad-Din "al-Afghani" was a tireless advocate of pan-Islamic reform as part of a cultural and political strategy to unite all Muslims against Western imperialist encroachment during the second half of the nineteenth century. (UCSB Davidson Library)

➤ MODERNISM ACROSS THE MUSLIM WORLD

Islamic Modernism is often associated with developments centered on Egypt in the late nineteenth and early twentieth centuries. However, it was in fact an intrinsically transnational movement even at its very inception. The first major journal espousing such ideas, *Al-Urwa al-Wuthqa*, was published by two Muslims from different parts of the Middle East working together in Paris in 1884. Its more influential successor, *al-Manar*, was published under Egyptian and Syrian editorship but came to influence Muslims worldwide through its circulation beyond the Middle East to various parts of Africa and Asia at the turn of the century and throughout the early decades of the twentieth century. During this same time other journals such as *Sirat-i Müstakim/Sebilürresad* (Ottoman Turkish), *Sura* (Tatar), *al-Imam* and *al-Munir* (Malay), and *Yuehua* (Chinese) professing similar reformist agendas began appearing all around the Muslim world in Arabic and other languages. While the historical moment of Islamic modernism had reached its zenith by the mid-twentieth century, the ideas first disseminated in *al-Manar* and other journals of its kind have had a considerable impact on later developments, including significant aspects of the global Islamic resurgence of the last decades of the twentieth century.

—R. Michael Feener

Source

Stéphane A. Dudoignon, Komatsu Hisao, and Kosugi Yasushi, *Intellectuals in the Modern Islamic World: Transmission, Transformation, Communication* (London: Routledge, 2006).

obscure, and it appears that he deliberately kept them thus. By midlife, however, he had emerged as a highly visible and globally mobile individual working for the advancement of Islamic political agendas in places such as London and Paris as well as Cairo and Istanbul. During Jamal ad-Din's lifetime, rapid progress in travel and communications technologies were allowing Muslims to receive and locally reinterpret ideas originating elsewhere. These exchanges of ideas and innovations fostered the creation of a wide variety of new conceptions of what it meant to be Muslim in the modern world.

Primary among Jamal ad-Din's causes were the unification of Muslims worldwide in a Pan-Islamic movement of resistance against European imperialism and demonstration of the compatibility of Islam with modern science. Jamal ad-Din's agenda of promoting rationalism in modern Islamic thought was more elaborately developed in the works of the Egyptian reformer Muhammad Abduh (d. 1905). Abduh called for a radical reappraisal of Islam's religious and intellectual heritages, and he became a proponent of a new wave of religious thought that championed a return to the foundational sources of the Quran and Sunna combined with a renewed emphasis on the place of human reason in their interpretation. Abduh expressed his mission in a fragmentary autobiography as understanding "religion as it was understood by the elders of the community before dissension appeared; to return, in the acquisition of religious knowledge, to its first sources, and to weigh them in the scales of human reason, which God has created in order to prevent excesses or adulteration in religion, so that God's wisdom may be fulfilled and the order of the human world preserved; and to prove that, seen in this light, religion must be accounted a friend to science."

His ideas became known throughout the Muslim world through the publication of influential periodicals under his editorship: *Urwa al-Wuthqa* (which he published with Jamal al-Din in exile at Paris in 1884) and later *al-Manar* on which he collaborated with his younger Syrian colleague, Rashid Rida (d. 1935).

Rida's reformism, however, was somewhat more conservative than that of Abduh and is often associated with the Salafi movement. During the late nineteenth century in Rida's native Syria, an active group of Salafi ulama attracted to the radical reformist thought of the fourteenth-century Hanbali scholar Ibn Taymiyya were already developing aspects of his medieval reformist ideas in new, more modern directions. Rida's own place in the further development of modern Salafism signaled a new turn in which Islamic modernism became more open to influences from a revived twentieth-century Wahhabism. Rida added to Abduh's modernist project a reinvigorated Salafi understanding of returning to the Quran and Sunna that became influential in the development of the

Egyptian Muslim Brotherhood and other Islamist movements all across the Muslim world in the twentieth century. In the lands of the former Ottoman Empire and beyond, Salafis set themselves up as strident critics of what they viewed as the weakening of Islam in the face of incursions from the modern West, which they perceived in the persons of secularizing Muslims as well as in the institutions of European colonial governments in the lands of Islam.

—R. Michael Feener

Bibliography

- Commins, David Dean. *Islamic Reform: Politics and Social Change in Late Ottoman Syria*. New York: Oxford University Press, 1990.
- Hourani, Albert. *Arabic Thought in the Liberal Age, 1798–1939*. New York: Cambridge University Press, 1993.
- Kurzman, Charles, ed. *Modernist Islam, 1840–1940: A Sourcebook*. New York: Oxford University Press, 2002.
- Voll, John O. *Islam: Continuity and Change in the Modern World*. Boulder, CO: Westview, 1982.

Jihads in the Western Sudan

The first half of the nineteenth century witnessed the outbreak of three religious wars, also known as jihads, in the western Sudan. The most famous and influential began in Hausaland in 1804 under the leadership of Usman dan Fodio. It was followed by jihads in Massina under Seku Ahmadu (Ahmad Lobbo) in 1818 and in the Futa Jallon area under al-Hajj Umar Tall in 1851. Caused by a combination of religious zeal and economic and political grievances, these movements had a lasting impact on the region.

Despite the spread of Islam in the region, in the eighteenth century whole areas still remained non-Muslim. Even in professed Muslim states, Islam was largely a religion of the towns, the ruling elite, and merchants. Although most of the ruling dynasties, especially in Hausaland, were Muslim, these dynasties were not strictly observant, and many unorthodox practices contrary to Islam such as illegal taxation, enslavement of Muslims, and unlawful seizure of property were common. Islamic and non-Islamic religious customs and practices existed side by side or were even blended. Revival of Islamic

brotherhoods such as Qadiriyya (which emphasized that salvation came through study and intellectual activity) in the second half of the eighteenth century also strengthened the belief in the coming of a Mahdi (savior) and aroused great expectations.

Nonreligious factors also contributed to the outbreak of the jihads. Politically, by the beginning of the nineteenth century no single large centralized state had emerged in the region. Many of the rulers of the western Sudanese states, especially the Hausa and Bambara kings, were petty tyrants widely despised for their favoritism and self-indulgence. Town-dwelling Fulani, many of whom were devout Muslims, despised their rulers for the luxury and sinfulness of court life as well as for their mistreatment of commoners. Merchants, peasants, and herders all complained over what they perceived as exorbitant taxation. One Fulani group in particular, the Torodbe or Toronkawa clan, was especially outspoken in its criticism of political and religious conditions in the region. Devout Muslims with a long tradition of religious scholarship but little access to political power, members of the clan resented their subordinate position and the fact that they took orders from their lukewarm Muslim and illiterate rulers. By the beginning of the nineteenth century, communities led by the Torodbe clan and individual scholars and preachers were found throughout the western Sudan preaching reform.

The most famous wandering scholar was a Fulani from Gobir, Usman dan Fodio, who was born in December 1754 into an old scholarly family of the Torodbe. After years of study, dan Fodio began to teach and preach in the Hausa states of Kebbi, Zamfara, and Gobir. He attacked non-Islamic religious practices, condemned corrupt and unjust governments and illegal taxes, advocated education for women, and insisted on complete acceptance of the spiritual and moral values of Islam. He soon attracted student disciples, many of whom returned to their homes to teach and preach in Hausaland and beyond.

In the late 1780s, Usman appears to have won the support of Sultan Bawa of Gobir, with whom he signed an agreement that granted Muslims freedom of religion and guaranteed respect for Islam. Taxation was decreased, and Muslims

➤ USMAN DAN FODIO'S CALL FOR HOLY WAR

In 1804 Usman dan Fodio called for jihad against the rulers of Hausaland. Such a war, he argued, was obligatory “by assent,” that is, the consensus of the Muslim community. The passage below is taken from a document attributed to this leader titled “Dispatch to the Folk of the Sudan and to Whom So Allah Wills amongst the Brethren.”

“Know then, my brethren:

That the commanding of righteousness is obligatory by assent. . . .

And that to make war upon the heathen king, who will not say ‘There is no God but Allah’ is obligatory by assent. and that to take the government from him is obligatory by assent. . . .

And that to make war on the king who is an apostate . . . and who has abandoned the religion of Islam for the religion of heathendom is obligatory by assent. . . .

And to make war against the king . . . who has not abandoned the religion of Islam as far as the

profession of it is concerned, but who mingles the observances of Islam with the observances of heathendom, like the kings of Hausaland for the most part—is (also) obligatory by assent, and that to take the government from him is obligatory by assent. . . .

And to make war on any backsliding Muslims who do not own allegiance to any of the Emirs of the faithful [lieutenants of Usman] is obligatory by assent. . . .

And that to enslave the freeborn amongst the Muslims is unlawful by assent, whether they reside in the territory of Islam, or in enemy territory.”

—James H. Overfield

Source

A. D. H. Bivar, “The Wathiqat Ahl Al-Sudan: A Manifesto of the Fulani Jihad,” *Journal of African History* 2(2) (1961): 239–240.

imprisoned for religious reasons were released. The agreement also allowed Muslim men to wear turbans and women to wear veils, both of which became hallmarks of Usman’s followers. Still dissatisfied, Usman in the mid-1790s began to raise the possibility of jihad, or holy war. In response, Bawa’s successor, Nafata, withdrew the privileges and outlawed new conversions to Islam. Nafata’s successor, Yunfa, also determined to check the growing power of dan Fodio, captured and imprisoned some of Usman’s followers in December 1803. When Usman liberated the captives at Degel and repeatedly refused to hand them over, Yunfa threatened to attack Degel itself. This led to the *bijra* (flight) of dan Fodio and his followers from Degel to Gudu on February 21, 1804. At Gudu, he raised the standard of revolt by attacking the nearby town of Gobir and then, having been proclaimed commander of the Believers, proclaimed a jihad against the rulers of the Hausa states. Various Fulani rose up in rebellion in the other states, and many Tuareg and Hausa peasants also joined the cause. Within a decade, all the principal Hausa states had been conquered. In the next two decades Nupe, parts

of the Oyo empire (Ilorin), and Borno (Katagum and Gombe) were added to the Fulani empire, with its new capital of Sokoto.

Usman’s success resulted in part from the weaknesses of the Hausa states, which had been divided by internecine wars for much of the eighteenth century. Oppressive rule, economic hardships, and social ills rallied Fulani and non-Fulani behind Usman. The zeal and determination with which he was able to infuse his followers by his preaching, coupled with the military ability of Abdullahi and Bello, his brother and son, respectively, were also important factors.

Other important jihads followed. Between 1818 and 1844, Seku Ahmadu (b. 1775), Usman’s disciple, unified a number of smaller Bambara, Arma, and Songhai kingdoms and principalities to establish the highly centralized Fulani theocratic state of Masina. In 1852 under al-Hajj Umar (1794–1863), a Tukulor, another jihad was directed not only against western Sudanese rulers but also against the French, who had begun their imperialist drive in the region of the Senegambia. Although he died in 1863 before he created an effective administrative machinery,

Umar created a Tukulor state that lasted until its overthrow by the French in 1893.

These jihads had far-reaching political, economic, and social consequences. They brought about fundamental political changes in which larger kingdoms replaced petty states. Usman's jihad led to the establishment of a single Fulani state in place of the many competing states in Hausaland. The state, known as the Sokoto Caliphate, was the largest political unit in nineteenth-century West Africa. Political centralization decreased the number of wars in the region, which in turn stimulated agricultural and handicraft industries, particularly in Hausaland. Trade increased, with Kano becoming the hub of commercial growth in Hausaland. All three jihads led to the Islamization of the region and in consequence a revival of Islamic scholarship and education.

—*Takafavira Zhou*

Bibliography

- Adam, H. *The Hausa Factor in West African History*. Ibadan, Nigeria: Oxford University Press, 1978.
- Ajayi, J. F. Ade, and M. Crowder, eds. *History of West Africa*. London: Longman, 1985.
- Boahen, A., A. Ajayi, and M. Tidy. *Topics in West African History*. London: Longman, 1997.
- Hiskett, M. *The Development of Islam in West Africa*. London: Longman, 1984.

The Mahdiyya Movement in Sudan

In Sudanese history, the Mahdiyya (from Mahdi, “guided one,” in Arabic) refers to a revolutionary movement that overthrew the Ottoman-Egyptian regime in the early 1880s and established a government in Sudan that lasted until 1898. The Ottoman province of Egypt, which had gained increasing autonomy under the rule of Muhammad Ali (1805–1848), had conquered Sudan in 1820–1822. Muhammad Ali and his successors sought the country's supposedly abundant mineral and human resources to finance Egyptian modernizing projects, help create a new army, and develop both agricultural and industrial enterprises.

After six decades of foreign rule, large sections of the Sudanese population were restive for various reasons. First, they disliked the government's growing reliance on European Christians

such as Samuel Baker, governor (1869–1873) of Equatoria (an Upper White Nile region that would henceforth become the most southern province of Sudan), and Charles George Gordon, governor (1874–1876) of Equatoria and governor-general (1877–1880) of Sudan. These British officers were appointed by the Egyptian khedive Ismail Pasha (1863–1879) to spread Ottoman-Egyptian control over the upper reaches of the White Nile and fight against the slave trade. Second, heavy taxation resulted in famine, depopulation, and migration, whereas the growth of cities such as Khartoum and El Obeid posed an economic challenge to the older urban centers of Sennar, Wad Medani, and Shendi. Third, many Sudanese—above all merchants from the Dan-aqla and Jaliyyin tribes who had moved to the province of Kordofan because of fiscal pressure and riverine farmers of the Nile Valley relying on slave labor—opposed governmental efforts to suppress the lucrative slave trade. Finally, Sufi leaders resented the presence of Azharite ulemas (al-Azhar was and remains the world's leading center of Sunni Islamic learning) in Sudan's judicial and educational institutions, which challenged their own authority. Adhering to Sufi orders such as the Sammaniyya, the Khatmiyya, the Ismailiyya, and the Majdhubiyya, the Sudanese population felt alienated by the more doctrinaire Islam preached by Egyptian ulemas.

Hence, when Muhammad Ahmad bin Abdallah (born on August 12, 1844, in the Dongola district and died on June 22, 1885, in Omdurman) publicly proclaimed himself the Mahdi on June 29, 1881, at Aba Island (White Nile), large numbers of Sudanese joined his cause and prepared to fight against the Ottoman-Egyptian government. According to Sunni doctrine, which largely prevails in Sudan, the Mahdi should appear at the end of time to restore true religion and spread social justice throughout the world. Muhammad Ahmad's reputation as a Sufi sheikh of the Sammaniyya order as well as widespread expectations of the Mahdi linked to the approaching Islamic year 1300 (1882–1883 CE) contributed to popularizing the Mahdiyya among the Sudanese. In less than four years the movement managed to take control of nearly the whole of Sudan, occupying the capital of Khartoum on January 25, 1885. In these same critical

► HOW DID MUHAMMAD AHMAD LEGITIMIZE HIS AUTHORITY?

Muhammad Ahmad claimed to be the successor of Prophet Muhammad on the basis of a prophetic vision. While Ahmad's reputation as a sheikh of the Sammaniyya order certainly helped him gain disciples, the central strategy he used to legitimize his authority was the modeling of his movement on the historical heritage of the Prophet and the first caliphs. Like the Prophet, Ahmad sought to establish a unified community and required his disciples to swear an oath of allegiance (*baya*). Naming them Ansar in reference to the Prophet's first followers in Medina, he migrated to Jabal Qadir (November 1881), reenacting the Prophet's flight from Mecca to Medina (*hijra*). Ahmad appointed three *khalifa* among his close supporters, who were to represent the successors of the first caliphs of Islam. His successor as ruler of the Mahdiyya, Abdullahi al-Taaishi, was thus associated with Abu Bakr, believed by Sunnis to be the first caliph. The Mahdi's actual numerous military victories against governmental troops were perceived as further evidence of his mission's validity.

—Iris Seri-Hersch

years, Ottoman Egypt was shaken by the Urabi protonationalist revolt (September 1881), subsequent British occupation (September 1882), and the loss of Sudan (January 1885).

The Mahdiyya's territorial expansion was accompanied by the establishment of various administrative, military, and judicial institutions. Several governors were selected by the Mahdi to manage the provinces of the emerging Mahdist state. The army was divided into three commands, a treasury was constituted, and a chief judge (*qadi al-Islam*) was appointed. After the fall of Khartoum (January 25, 1885), the Mahdist capital was founded at Omdurman, just across the White Nile. Muhammad Ahmad centralized all decision-making powers in his hands. He banned the existing Sufi orders, condemning them as divisive and useless once the encompassing rule of the Mahdiyya had been established. He also abolished the traditional Islamic schools of thought (*madhabib*), recognizing

three exclusive sources for Mahdist law: the Sunna, the Quran, and prophetic inspiration (*ilham*). Independent judgment (*ijtihad*) became his exclusive right. New laws included the prohibition of pilgrimages to tombs of saints; the banning of alcohol, tobacco, and music; and the confining of women to the private sphere.

The Mahdi died on June 22, 1885, only five months after the collapse of the Ottoman-Egyptian regime. His successor, Abdullahi al-Taaishi (1846–1899), completed the transformation of the Mahdiyya into a state structure. His 13-year-long rule (1885–1898) was characterized by mounting internal and external challenges. The Ashraf opposition (relatives and supporters of the Mahdi belonging mostly to Danaqla and Jaliyyin tribes), which did not recognize him as the legitimate successor of the Mahdi, organized two great rebellions against the regime (in 1885–1886 and 1891). Fearing for his personal and political survival, Abdullahi became increasingly autocratic. He forced fellow Taaishi nomads to emigrate from western Sudan and resettle in Omdurman so as to strengthen his power base. With regard to foreign affairs, he attempted to continue expanding the Mahdiyya eastward and northward. Border warfare brought Sudan into conflict with Ethiopia for a few years (1885–1889), until the Ethiopian emperor Yohannes IV was killed at the Battle of al-Qallabat (March 9–10, 1889). Although Mahdist jihad primarily targeted British-occupied Egypt, physical and political obstacles prevented any attack until the summer of 1889. Sudanese forces were then overwhelmed by Anglo-Egyptian troops at the Battle of Tushki (August 3, 1889), which definitively crushed Mahdist territorial ambitions toward Egypt. In the 1890s, European progression into the Nile Valley, the Red Sea, and central Africa significantly pressured Sudan. While the British fought the Mahdist forces from Egypt (mainly from Suakin), the Italians advanced westward from their Eritrean colony. In the south, Belgian expeditions sent from the Congo Free State threatened the Upper Nile and Bahr al-Ghazal Sudanese provinces. After two years of southward progression along the Nile, Anglo-Egyptian armies eventually overthrew the Mahdist state in the Battle of Karari (September 2, 1898). The Condominium Agreement (January 19, 1899) formally established joint

Anglo-Egyptian rule over Sudan until the country gained independence on January 1, 1956.

—*Iris Seri-Hersch*

Bibliography

- Holt, Peter M. *The Mahdist State in the Sudan, 1881–1898: A Study of Its Origins, Development and Overthrow*. Oxford: Clarendon, 1970.
- Ibrahim, Ahmed Uthman. “Some Aspects of the Ideology of the Mahdiya.” *Sudan Notes and Records* 60 (1979): 28–37.
- Layish, Aharon. “The Mahdi’s Legal Methodology as a Mechanism for Adapting the Sharī‘a in the Sudan to Political and Social Purposes.” *Revue des Mondes Musulmans et de la Méditerranée* 91–94 (July 2000): 221–238.
- Warburg, Gabriel R. *Islam, Sectarianism and Politics in the Sudan since the Mahdiyya*. London: C. Hurst, 2003.

The Aligarh Movement

The Aligarh Movement was one of the responses of Indian Muslims to the failure of the Indian Rebellion of 1857 (in which Muslims had played a major role) and the demise of the Mughal empire in 1857 (thus bringing to a formal end centuries of Islamic rule in India). Many Muslims retreated into the folds of religious fundamentalism, while some felt the need to modernize and reform. The Aligarh Movement became the champion of the latter group.

The movement reflected the dreams and efforts of Sir Sayyid Ahmad Khan (1817–1898), who came from an aristocratic Muslim family that had served the Mughal court with dedication and distinction. Educated at home by tutors and learned family members, he joined the East India Company as a clerk in the judicial department in 1839 and later rose to the position of a judge. During the mutiny he remained loyal to the British and had little sympathy for the rebellion’s tactics or jihadi rhetoric. After the mutiny, he tried to convince the British and Muslims alike that they were not natural enemies and that past differences grew out of ignorance and erroneous stereotypes.

Khan’s message to the Muslims was provocative. He attributed the Indian Muslim community’s spiritual, educational, and economic stagnation to its parochialism and its

indifference and even hostility to science. He suggested that the meaning and application of the *shariat* (religious law) should be based on reason and attuned to modern times. He also held that future progress of Muslims in India depended on cooperation with the British and not confrontation.

Khan traveled widely to promote his modernist agenda through lectures, meetings, and conferences. He also spearheaded the formation of translation societies, literary associations, and scientific organizations to engage as many Muslims as possible. Khan started newspapers and journals both in Urdu and English (the *Mohammadan Social Reformer*, the *Aligarh Institute Gazette*, and others) that promoted and publicized his ideas of educational reform, the liberalization of Islam, and Muslim-British accord. He also contributed to the founding of schools that reflected his ideas. His learning, energy, and charisma inspired many supporters and some detractors as well.

Khan’s greatest achievement, and a symbol of everything he stood for, was the founding of the Mohammadan Anglo-Oriental College in 1875 in Aligarh, which offered a modern

➤ THE ANTI-ALIGARH SCHOOL—DAR AL-ULUM

If Aligarh reflected Islamic modernism and reform, the theological seminary Dar Al-ulum (The House of Learning) formed by some *ulema* (learned scholars of Islam) in Deoband in 1866 was the opposite in its orientations and interests. Unlike a typical madrasa (religious school), it followed modern pedagogical techniques; depended on private donations; published books, pamphlets, and legal opinions on many Islamic issues; and designed a comprehensive syllabus for rigorous and sophisticated Islamic learning. The school acquired fame and moral authority for the quality of its education, scholarship, and public service, and its message and practices were emulated by other Islamic institutions. Its reading of the Islamic texts and traditions, although scholarly and coherent, were very conservative and traditional and stood in sharp contrast to the liberal sentiments of Aligarh.

—*Ahrar Ahmad*

curriculum through Western pedagogical techniques. Modeled on Oxford and Cambridge, with instruction in English and at first led by an English headmaster, its purpose was to produce refined, progressive, and aristocratic Muslims. It depended on private donations and some financial support from the British government. This college became Aligarh University in 1920.

The college mostly catered to the Urdu-speaking Muslim elite from northern India. But for Muslims throughout India, it symbolized educational enlightenment, a rationalist orientation toward Islam, and religious tolerance (among Muslims and Christians and Hindus). However, and perhaps ironically, Khan and the Aligarh Movement may have contributed to the divisions between the Hindus and Muslims that had lasting consequences.

In 1885, mostly Hindu leaders formed the Indian National Congress, an organization that reflected nationalist sentiments and demanded democratic reforms. Concerned that supporting such an organization would anger the British and fearful that Muslims would suffer under Hindu majorities in any future democratic arrangement, Khan strongly opposed Muslim participation in the congress. The idea that Muslim interests were different from those of the Hindus led to the idea of Muslim separatism, encouraged the formation of exclusively Muslim organizations and political parties, and eventually led to the demand for an independent Muslim state. Consequently, while the Aligarh Movement was not political, its message played a role in the formation of Pakistan in 1947.

—*Abrar Ahmad*

Bibliography

- Ansari, Asloub. *Sir Syed Ahmad Khan: A Tribute*. New Delhi: Adam Publishers and Distributors, 2001.
- Hasan, Tariq. *The Aligarh Movement and the Making of the Indian Muslim Mind*. New Delhi: Rupa, 2006.
- Jain, M. S. *The Aligarh Movement: Its Origins and Development, 1858–1906*. Agra, India: Sri Ram Mehra, 1965.
- Lelyveld, David. *Aligarh's First Generation: Muslim Solidarity in British India*. Princeton, NJ: Princeton University Press, 1978.

The Faraizi Movement

The Faraizi movement was a movement of religious reform with socioeconomic overtones that began in the 1830s and was centered in several districts of the province of Bengal in eastern India. It gradually faded in the 1860s with the deaths of its main leaders. It represents a rare example of religious extremism among South Asian Muslims.

The initiator of the movement was Haji Shariatullah (1781–1840) from the Faridpur district in Bengal. He came from a family of small farmers and attended religious schools. He went to Mecca for his pilgrimage when he was 18 years old, stayed there for the next 20 years, and studied under a master called Tahir Sambhal. Shariatullah fashioned a simple theology emphasizing *taubid* (the unity and singularity of God), *tauba* (being penitent and seeking forgiveness for past sins), and a notion of the *ummah* (the faithful) that stressed the egalitarian message of Islam and the brotherhood of all Muslims. Upon his return to Bengal, he was pained and disgusted at the many local (un-Islamic) customs and traditions that were part of Muslim practice. In response, he called on Muslims to abandon the rites and rituals that it had absorbed from Hinduism (for example, celebrations and ceremonies surrounding marriage, birth, and death) and to eradicate some Shia and Sufi influences, such as the worship of saints, the veneration of shrines, and the commemoration of the murder of the Prophet's grandsons. Shariatullah emphasized a rigorous adherence to the observances required of all Muslims (called the *Farz*, or "one's duty," hence the name Faraizis) through a strict devotion to the real teachings of the Quran and Hadith as embodied in the virtues and practices of original (i.e., early) Islam.

Shariatullah also embraced some populist themes. He denounced the exploitation of poor peasants by the *zamindars* (landowning classes), who imposed whatever taxes and exactions they wanted on the peasants, and commercial groups who forced them to cultivate cash crops such as jute, cotton, indigo, and opium and paid them poorly. Shariatullah challenged the cruelties and inequities inherent in the

► THE PERMANENT SETTLEMENT ACT OF 1793

The East India Company became the land revenue collectors of the province of Bengal in 1765. In 1793, Governor-General Lord Cornwallis decided to fix the annual revenue amounts payable to the company in perpetuity (hence the Permanent Settlement Act) and gave the Indian contractors responsible for making these payments proprietary rights over the land. The assumption was that these new landowners (*zamindars*) would develop their properties and that this would rationalize land revenue collections. Unfortunately, it created absentee landlords

and generated a system of subinfeudation (a multitiered hierarchy of subtenant farmers). This system increased the exploitation of the peasants through arbitrary taxes because the landlords charged their subtenant farmers amounts in excess of the fixed payments due to the company. In eastern Bengal many of the new landlords were Hindu, while most of the peasants were Muslims. Hence, both class and faith were sometimes interwoven in peasant uprisings such as the Faraizi movement.

—Ahrar Ahmad

system, which led to the victimization of peasants by usurious moneylenders.

Consequently, on the one hand, the movement mobilized the faithful by declaring the region as a *Dar al-Harb* (abode of war) in which the Muslims must be militantly engaged in protecting their faith and identity from hostile forces (the British and Hindus). On the other hand, it encouraged the Muslim peasants to resist the collection of taxes and *abwabs* (assessments) imposed by the *zamindars* as well as the exploitative demands and practices of the commercial and money-lending groups. Confrontations were inevitable, and sporadic skirmishes lasted through the 1840s. By then leadership had passed to Shariatullah's son Muhsinuddin Ahmed (popularly known as Dudu Mian), under whom the movement assumed a stronger opposition to the landowners. He trained groups of *lathiyals* (people who could fight with bamboo staves and clubs) so they could defend the community from the armed men (sometimes the local constabulary) serving the zamindars and traders. Some of his followers desecrated Hindu temples by killing cows and destroying images of Hindu deities. As the movement became more defiant and better organized, it faced more aggressive and determined retaliation from its opponents, both

through increasing physical force and also harassing lawsuits charging them with insubordination, violence, and nonpayment of taxes.

Dudu Mian was imprisoned by the British during the Sepoy Mutiny in 1857, released in 1861, and died a year later. The movement sputtered and gradually died down. While the actual impact of the Faraizi movement is difficult to establish, there is no doubt that its symbolic effect continued to linger in the folk narratives of the region and remains a significant event in the evolution of peasant activism in India.

—Ahrar Ahmad

Bibliography

- Choudhury, Nurul H. *Peasant Radicalism in Nineteenth Century Bengal: The Faraizi, Indigo, and Pabna Movements*. Dhaka: Asiatic Society of Bangladesh, 2001.
- De, Amalendu. "The Social Thoughts and Consciousness of the Bengali Muslims during the Colonial Period." *Social Scientist* 23 (April-June 1995): 16-37.
- Khan, Ahmed Muinuddin. *History of the Faraidi Movement*. Karachi: Asiatic Society of Pakistan, 1965.
- Mallick, A. R. *British Policy and the Muslims in Bengal, 1757-1856*. 2nd ed. Dacca: Bangla Academy, 1977.

■ Introduction: Native Religions in Africa, the Americas, and Oceania

Although the nineteenth century was a time of revival for Hinduism, intellectual ferment in Japanese and Chinese Confucianism, and geographical and numerical expansion for Islam, Judaism, and Christianity, it was also a time when many religions lost followers and coherence. Some religions disappeared altogether. Such was the experience of many of the numerous “traditional” religions practiced by the native peoples of Africa, North America, and Oceania. These religions, which varied from island to island in Oceania and tribe to tribe and village to village in Africa and North America, had lent meaning to the lives of millions of human beings over many centuries. Their creation myths offered profound truths about the qualities of their gods, the nature of the universe, and mankind’s place in it. Their sacred ceremonies provided a means to draw on supernatural and divine powers to prevent disasters and promote the success, stability, and prosperity of the community. Chiefs, elders, shamans, diviners, healers, ritual experts, and prophets provided religious guidance and inspiration for people for whom even the most mundane events of daily life were suffused with religious meaning. In the nineteenth century all of these beliefs and practices faced new and unprecedented challenges as a result of Western imperialism and the westward expansion of Canada and the United States.

These challenges came in many different forms. Forced relocation and forced changes in traditional ways of life (for example, the loss of hunting grounds and the relocation of Indians to reservations) rendered meaningless place- and activity-bound ceremonies and sacred rites. Contacts with Western medicine undermined confidence in ancient healing rituals; military defeats weakened faith in the powers of ceremonies, leaders, and divinities that once had brought success in warfare. Most directly, traditional religions were threatened by Christian missionaries who in large numbers worked among American Indians, Africans, and Pacific islanders in the 1800s. The lessons taught in their schools and the doctrines propounded in their sermons all

conveyed the same message: native peoples were backward and uncivilized and would remain so until they abandoned their false religious beliefs.

Demoralization and conversion to Christianity were two responses to the devastation faced by native peoples in the nineteenth century. A third was to draw on traditional religious beliefs and charismatic religious leadership to reverse their declining fortunes either by revitalizing religious practices through new ceremonies and practices or by inspiring armed resistance to the invaders of their lands. Religiously inspired resistance movements to colonialism were not limited to “traditional religions.” The Javanese prince Diponegoro, who led the armed struggle against the Dutch in the Dutch-Javanese War (1825–1830), was a religious visionary and devout Muslim whose followers believed that he was the Ratu Adil, the long-awaited savior king who had been part of Javanese beliefs for centuries. Later in the century Muhammad Ahmad bin Abdallah, a self-taught Muslim leader in Sudan, proclaimed himself to be the Mahdi—the successor of Muhammad and restorer of the faith—who founded the Madiyah (Mahdist regime), a state run according to strict Islamic principles (and his self-glorification) after leading a successful rebellion against Ottoman/Egyptian rule. Both movements ended badly. The Javanese suffered as many as 200,000 casualties in a losing cause, and Diponegoro was exiled to Sumatra. The Mahdist state came to an end in 1898 in the wake of the Battle of Omdurman, in which the army commanded by the Mahdi’s successor, Abdullah al-Taashi, sustained 27,700 killed, wounded, or captured, compared to British losses of 47 killed and 240 wounded.

The entries in this section describe five examples of the many native resistance movements inspired by prophets and spirit cults connected with traditional religions among native peoples. Two took place in Africa, two in North America, and one in New Zealand. They all show the continuing power of religion among peoples in desperate circumstances, but they also show the

inability of religious devotion alone to reverse their followers' fortunes and drive away the hated white man.

—*James H. Overfield*

Xhosa Cattle-Killing Episode

By the mid-nineteenth century, the Xhosa people in what is now present-day South Africa were experiencing serious social and economic crises. From 1779 to 1853, the Xhosa had been involved in eight wars (known as the Cape Frontier Wars or Kaffir Wars) with Dutch colonial (or Boer) and British settlers. By 1855, their cattle herds, which formed the basis of their economy, began to become infected with lung disease, which had slowly made its way into Xhosa territory from the European settlements at the Cape. Over the next several years, the disease killed 100,000 Xhosa cattle. In that atmosphere of defeatism and with the threat of famine, news began to spread among the Xhosa of the defeats suffered by Great Britain in the Crimean War. Those reports gave the beleaguered Xhosa a sense of hope and expectation that was perhaps exaggerated.

It was in that environment of ferment that Nongqause, the teenage niece of Mhlakaza, a respected prophet among the Xhosa, experienced her mystical vision. In April 1856, while Nongqause was attending to the corn fields near her uncle's cattle pen, she had been visited by several strange men, who identified themselves as her ancestors. They informed her that if the Xhosa destroyed all of their cattle and stopped planting new crops, the British would be expelled from Africa, and new, healthy cattle herds would replace those lost. The ritual sacrifice of the wealth of the Xhosa would thus usher in a new millennium. She reported that experience to her uncle Mhlakaza. He was skeptical initially but became convinced when the voices of the ancestors (one of whom was his own deceased brother) began speaking to him through his niece.

At the time, Mhlakaza was the most important religious figure among the Gcaleka Xhosa and an adviser to their chief, Sarili. In the early 1850s, he had left the Gcaleka community and traveled as a guide and interpreter for the eccentric English clergyman Nathaniel James

Merriman. The two had developed a close bond, and Merriman taught Mhlakaza (who briefly adopted the name Wilhelm Goliat) the basics of Christian theology. When those men eventually had a falling out, Mhlakaza returned to his village in 1853. However, his experience with the Christian missionary had inspired in him a zeal to become an influential preacher. It had also left him with a belief, influenced by both Christian and Xhosa concepts of salvation, that through the intervention of his ancestors, the tribulations of the Xhosa would soon end.

At the time of Nongqause's vision, Mhlakaza was under pressure from Chief Sarili to do something about the encroaching white colonists. After hearing his niece's story, he began killing his own cattle and instructing his followers to do the same. With the support of Chief Sarili, Mhlakaza's example inspired a wave of cattle killing and crop destruction throughout the Xhosa villages. Mhlakaza's command resonated with many Xhosa because it conformed to several of their strongly held spiritual beliefs. Within the Xhosa belief system, it was assumed that the travails of the community were the result of some malevolent force, which had to be countered by some supreme act of sacrifice. The Xhosa belief that the dead do not really die also promised that the sacrifice would not be in vain. Indeed, Nongqause was not the first Xhosa prophet to instruct her followers to slaughter their cattle as a way of relieving the woes of the people.

By the time Nongqause's followers had finished sacrificing their animals in July 1857, approximately 400,000 cattle had been slaughtered. The Gcaleka and their neighboring Xhosa communities were devastated with nearly 40,000 people starving to death, and an additional 35,000 fleeing the region. Nongqause herself escaped to the Cape out of fear of retribution. She was apprehended by the British, who imprisoned her ostensibly for her own protection. Mhlakaza perished in the turmoil unleashed by the mass killings in 1857. The death and departure of so many Xhosa from the region made their community even more vulnerable to colonial encroachment. The Xhosa were ultimately defeated in the ninth Cape Frontier War (1877–1878).

—*James Burns*

Bibliography

- Beck, Roger B. *The History of South Africa*. Westport, CT: Greenwood Press, 2000.
- Mostert, Noël. *Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People*. New York: Knopf, 1992.
- Peires, J. B. "The Central Beliefs of the Xhosa Cattle-Killing." *Journal of African History* 28, no. 1 (1987): 43–63.
- Price, Richard. *Making Empire: Colonial Encounters and the Creation of Imperial Rule in Nineteenth-Century Africa*. Cambridge: Cambridge University Press, 2008.
- Wenzel, Jennifer. *Bulletproof: Afterlives of Anticolonial Prophecy in South Africa and Beyond*. Chicago: University of Chicago Press, 2009.

The Maji Maji Movement

In July 1905, rebellion broke out in the southeastern region of what was then the colony of German East Africa. Inspired by both internal peasant politics and the widespread rejection of German agricultural policies, the Maji Maji Rebellion grew into a social movement that encompassed much of the territory, posing one of the greatest threats to European colonial rule on the African continent. Spirit mediums, who were among the main organizers of the rebellion, initiated participants into the movement by distributing a medicine known as *maji* (Kiswahili for "water") that was believed to protect followers

from harm and turn enemy bullets into water. By 1907, the Germans repressed the movement in a scorched earth campaign that resulted in massive displacement, environmental catastrophe, and a devastating famine.

The motivations of participants in the Maji Maji Rebellion were rooted in the realities and politics of peasant life. In the decades prior to the German conquest, Tanzanian peasants practiced a system of agriculture designed for a complex ecological environment. Peasant households diversified their agricultural investments by cultivating their fields with a wide variety of crops, an approach that ensured that even in the worst of years at least one or two crops would survive. Chiefs organized communal labor parties to clear and burn brush in order to reduce the threat of pests such as wild pigs, locusts, and tsetse flies. In ideal circumstances, farmers turned over a portion of their surplus to a chief in exchange for protection and leadership. The chief held the surplus grain in storage and could redistribute it in times of shortage.

Colonial policy undermined the ability of East African societies to maintain this agricultural system and the social and political relationships it supported. The Germans, who sought to bolster their textile industry at home, forcibly conscripted labor for work on collective cotton plantations. The redirection of labor toward the cotton plantations meant that less work could

THE POLITICAL LEGACY OF MAJI MAJI

Immediately after the repression of the Maji Maji rebellion, many East Africans resented the movement's organizers for having led people into a disastrous losing battle. However, by the 1950s Tanganyikan nationalists, who were agitating for political independence, found inspiration in the memory of Maji Maji. Julius Nyerere, who later became Tanganyika's first president, addressed the following words to the United Nations in 1956:

"The people fought because they did not believe in the white man's right to govern and civilize the black. They rose in a great rebellion not through fear of a terrorist movement or a superstitious oath, but in response to a natural call, a call of the

spirit, reigning in the hearts of all men, and of all times, educated or uneducated, to rebel against foreign domination. It is important to bear this in mind . . . in order to understand the nature of a nationalist movement like mine. Its function is not to create the spirit of rebellion, but to articulate it and show it a new technique."

—Emily Callaci

Source

Julius K. Nyerere, Statement to the U.N. Forth Committee, December 20, 1956, in *Freedom and Unity* (Dar es Salaam: Oxford University Press, 1966), 40–41.

be devoted to the community task of clearing brush and ridding the land of pests. On the eve of Maji Maji, many farmers bitterly noted the return of pests that in previous decades had been kept at bay. Moreover, the imposition of taxes redirected grain surpluses to the colonial regime and away from community famine reserves.

Women were particularly burdened by German colonial policy, for as men were removed from the rural economy and conscripted for cotton cultivation, women were left to run the family farms on their own, performing the household labor of both men and women. Because of their grievances, women were often at the forefront of struggles associated with the Maji Maji rebellion.

In July 1905, Kinjikitile Ngwale was possessed by the spirit Hongo, a subordinate spirit of Bokero, who was venerated at shrines in the Matumbi Hills of present-day southeastern Tanzania. Kinjikitile built a hut from which he distributed a medicine called *maji*, which was believed to protect the movement's members and turn the enemy's bullets into water. Activists and intellectuals transported the *maji* medicine throughout the region, bringing many different groups—both states and stateless societies—into revolt. At times, acts of revolt targeted the German colonial state directly, while in other cases they attacked local chiefs and officials who worked with the Germans.

One of the remarkable aspects of the Maji Maji Rebellion was its geographic scope. The *maji* medicine and the message of Hongo started out as a means of organizing political action based on the shared cosmology of the Bokero cult. However, as the *maji* medicine traveled along long-distance networks of trade and migration, people who were not associated with Bokero joined the rebellion as well. The expansion of Maji Maji was due to the work of local intellectual leaders, who translated the *maji* ideology of rebellion into local idioms so that it could address a wide range of local grievances.

By October 1905 Gustav Adolf von Götzen, the German colonial governor in East Africa, deployed troops throughout German East Africa to put down the rebellion. Götzen's approach privileged the destruction of food reserves and infrastructure over direct military confrontation,

and in addition to executing thousands of leaders and participants, German forces burned and looted the villages and granaries of those who took part in the rebellion. This led to long-term economic and ecological devastation throughout the region that would later become the modern nation of Tanzania. Estimates for the number of deaths caused by the repression of the Maji Maji Rebellion range from 75,000 to 300,000.

—Emily Callaci

Bibliography

- Iliffe, John. *A Modern History of Tanganyika*. Cambridge: Cambridge University Press, 1979.
- Monson, Jamie. "Relocating Maji Maji: The Politics of Alliance and Authority in the Southern Highlands of Tanzania, 1870–1918." *Journal of African History* 39 (1998): 95–120.
- Sunseri, Thaddeus. *Vilimani: Labor Migration and Rural Change in Early Colonial Tanzania*. Portsmouth, NH: Heinemann, 2002.
- Wright, Marcia. "Maji Maji: Prophecy and Historiography." In *Revealing Prophets: Prophecy in East African History*, edited by David Anderson and Douglas Johnson. London: James Currey, 1995.

The Religious Vision of Tenskwatawa, the Shawnee Prophet

Tenskwatawa, also known as the Shawnee Prophet, was born in western Ohio in 1775. His widowed mother left the family when the boy was still young, and he grew up in the household of a sister whose family regularly ignored him in favor of his brothers, particularly Tecumseh. Awkward and unskilled at hunting, considered clumsy and obnoxious by other Shawnees, Tenskwatawa eventually became an alcoholic.

By 1805, when Tenskwatawa began his new life as a prophet, 150 years of European contact had led to physical, cultural, and social displacement. Christian missionaries challenged traditional spiritual and religious leaders and beliefs. In response, nativist spiritual leaders such as the Neolin (Delaware tribe) and Handsome Lake (Seneca tribe) advocated moral and social reform, intertribal unity, abstinence from alcohol, and an end to land cessions. They called for a return to older spiritual ceremonies and traditions but also exhibited European influences.

THE BATTLE OF TIPPECANOE

By 1811 the village of Prophetstown on the Tippecanoe River in present-day Indiana had become the center of Tenskwatawa's and Tecumseh's efforts to forge a powerful confederation of Native American tribes dedicated to Tenskwatawa's nativist movement. In November 1811, with Tecumseh absent on a recruiting mission to the south, Governor William Henry Harrison, fearful of a new Indian menace, gathered approximately 1,000 troops on the outskirts of Prophetstown. Tenskwatawa assured his followers that the Master of Life would protect them from American weapons and ensure a victory for the Native Americans. Early on November 7, Native American forces launched their attack.

The Battle of Tippecanoe marked a turning point. After stiff resistance, the Native Americans briefly retreated to Prophetstown before abandoning the village. Entering the deserted village on November 8, Harrison's troops set fire to it after tearing up the burial ground and scattering the corpses. The discredited Tenskwatawa fled to Canada. Although he remained influential, Tecumseh would never see his dream of a unified Native American confederacy fulfilled.

—Kimberly Hogeland

Tenskwatawa's conversion experiences thus fit well into this pattern of nativist movements.

In the early spring of 1805 Tenskwatawa began preaching a new religion based on a near-death experience and a series of visions. In his visions a Master of Life presided over heaven, a paradise for virtuous Native Americans, as well as an eternal fire reserved for those who did not repent their sins. As in older Shawnee traditions, a Great Serpent symbolized evil, but Tenskwatawa added a political dimension, identifying the serpent with white settlers in the Ohio Valley region.

Tenskwatawa urged his followers to turn away from destructive behaviors such as intertribal violence and alcohol abuse and to focus on traditional ways. Native Americans should use bows and arrows instead of guns, reject imported animals and goods, and dress according to traditional styles and materials. Adherence to such doctrines would bring about the return of



Portrait of the Shawnee prophet Tenskwatawa, by George Catlin. (Smithsonian American Art Museum, Washington, DC/Art Resource, NY)

dead relatives and the game that had been disappearing from the forests.

The popularity of the Prophet's message caused concern among government officials. In 1806 Indiana governor William Henry Harrison challenged Tenskwatawa to produce a miracle, hoping to discredit him. Having learned of a summer eclipse from scientific parties in the area, Tenskwatawa called his followers together to announce that on June 16 the Master of Life would produce a black sun in affirmation of Tenskwatawa's power. The successful prediction only increased the Prophet's reputation.

The prominence of Tecumseh, the Prophet's brother, grew along with Tenskwatawa's. The western Great Lakes region proved particularly susceptible to Tecumseh's attempts to build an Indian confederacy. Although the region had few U.S. settlers, Native Americans saw proof of American encroachment to their south and east. Tensions between the brothers and American officials culminated in the Battle of Tippecanoe in November 1811. After his defeat, Tenskwatawa fled to Canada and died in obscurity. Tecumseh

continued as the leader in the confederacy and continued to fight against the Americans until his death in battle in 1813. Although Tenskwatawa never again played a dominant role in tribal affairs, his influence should not be underestimated. Tecumseh is generally credited as the driving force behind the native resistance movement in the early nineteenth century, but Tenskwatawa's religious teachings played a large role in drawing native people together.

—*Kimberly Hogeland*

Bibliography

- Dowd, Gregory Evans. *A Spirited Resistance: The North American Indian Struggle for Unity, 1745–1815*. Baltimore: Johns Hopkins University Press, 1992.
- Edmunds, R. David. *The Shawnee Prophet*. Lincoln: University of Nebraska Press, 1983.
- Prucha, Francis Paul. *The Great Father: The United States Government and the American Indians*. Lincoln: University of Nebraska Press, 1984.
- White, Richard. *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815*. Cambridge: Cambridge University Press, 1991.

Wovoka and the Ghost Dance Movement

By the end of the nineteenth century, war, disease, dispossession, and forced migration had caused catastrophic damage to Native American populations in the United States and strained traditional systems and practices. Periodic messianic movements held great appeal for tribal people trying to navigate these tumultuous times. Charismatic prophets taught that adherence to traditional practices and repudiation of European goods and ways would reverse the effects of recent upheavals.

Two such movements directly influenced the 1890 Ghost Dance. On the Columbia plateau, in the present-day state of Washington, the Wanapum religious leader Smoholla emphasized the relationship between people and the earth. He specifically preached against signing away or dividing up the earth. Smoholla's teachings spread and fueled the popularity of another movement, the 1870 Ghost Dance. Fearful of white encroachment, Wodziwob, a Northern

Paiute prophet in present-day Nevada, drew heavily on regional ceremonies and taught that through the traditional circle dance, adherents could bring about the return of ancestors and a renewal of the land. His movement spread to California and Oregon but lost support when his prophecies did not come true.

In 1890 the Ghost Dance movement was revived as a result of the teachings of another Northern Paiute man, Wovoka, who came from Nevada's Walker River reservation. Born around 1858 to one of Wodziwob's apostles, Wovoka (also called Jack Wilson, having spent much of his childhood on the nearby Wilson ranch) also spent time in Washington and Oregon, where he was exposed to Smoholla's teachings. On January 1, 1889, Wovoka fell ill during a solar eclipse and experienced his Great Revelation. During this episode, Wovoka claimed that he received instructions from God: if Indians would

WOUNDED KNEE

Forced onto reservations, denied access to their traditional activities, and provided insufficient rations, the Lakota proved receptive to the revitalization promised by the Ghost Dance. The movement's popularity provoked rampant rumors among the local non-Indian population, and by the late 1890s the government stationed half of the U.S. Army on the reservations. On December 15 Sitting Bull, a powerful and influential leader known for his role in the Battle of the Little Big Horn and his opposition to white encroachment, died in a shootout between his followers and reservation police forces at Standing Rock reservation, which only added to the tension.

On December 28 the Seventh Cavalry found a band of Lakota led by Big Foot. Greatly outnumbered and plagued by cold weather, illness, and a lack of supplies, Big Foot's people readily surrendered and were settled into rough camps along Wounded Knee Creek. For reasons that remain unclear, on the morning of December 29 soldiers opened fire on the Indian encampment, killing nearly 300 people. The event signaled the end of large-scale celebration of the Ghost Dance; for many people, it also signals the close of the Indian Wars.

—*Kimberly Hogeland*

abstain from fighting and alcohol, work cooperatively with the white man, and dance the traditional round dance, they would be granted material rewards and equality in the next life. In a time when economic and cultural stress predominated among native groups, the message of the Ghost Dance found a receptive audience and rapidly spread east from Nevada through the Cheyenne, Arapaho, Sioux, Kiowa, and Caddo tribes.

Naturally, each group that adopted the Ghost Dance adjusted it for its specific political and cultural situation. The most famous interpretation came to be the one advanced by the Lakota, a Native American group centered in North and South Dakota. After a Lakota delegation visited Nevada in 1890, the movement quickly became popular among a people who had recently been confined to some of the most desolate reservations in the nation in western South Dakota. At the height of the movement, 3,000 Lakota from the Pine Ridge and Rosebud reservations gathered to dance. They believed that by dancing and wearing special shirts—which were supposed to deflect bullets—they could induce visions and bring about a world renewal that would restore the life they had lost. The whites and the reservations would be gone, and in their place would be resurrected ancestors and buffalo. Ironically, this version of the Ghost Dance was much more in line with the 1870 religion preached by Wodziwob than with Wovoka's vision, which emphasized nonviolence and cooperation.

The scale of the movement alarmed the federal government, and efforts to suppress the Ghost Dance led to the massacre at Wounded Knee in 1890. While the Ghost Dance largely disappeared from public attention, it did survive in isolated pockets throughout the twentieth century.

—Kimberly Hogeland

Bibliography

- Hittman, Michael. *Wovoka and the Ghost Dance*. Edited by Don Lynch. Expanded ed. Lincoln: University of Nebraska Press, 1997.
- Mooney, James. *The Ghost Dance Religion and the Sioux Outbreak of 1890*. 1896; reprint, Chicago: University of Chicago Press, 1965.

Smoak, Gregory E. *Ghost Dances and Identity: Prophetic Religion and American Indian Ethnogenesis in the Nineteenth Century*. Berkeley: University of California Press, 2006.

Prophetic Leaders among the Maori

European missionaries first permanently settled in the northern part of New Zealand in 1814, but it was not until the 1830s that significant numbers of Maori began to identify with the Christian faith. However, the nature of their conversion was in many instances limited. Christianity did not so much replace existing beliefs as became blended with them, and the religion was remolded in uniquely Maori terms. Depopulation and land dispossession following British colonization provided fertile grounds for a number of prophetic leaders promising deliverance from the increasingly difficult circumstances that the Maori people found themselves in during the mid-nineteenth century.

The written word that followed the missionaries introduced Maori to a wider world. Many Maori strongly identified with the Old Testament and its story of loss and exile. Papahurihia, from the northernmost region of North Island, was a prophet who gained many followers from the early 1830 and was the first of many Maori spiritual leaders to identify Maori as Jews. Although he rejected the missionaries and their teachings, aspects of the Christian faith were readily incorporated into Papahurihia's beliefs. This mixture of Christian, Judaic, and Maori influences was followed by many later prophets.

By the 1850s most Maori were at least nominally Christian. Introduced diseases to which Maori had no immunity took a heavy toll on the population in many districts, prompting a number of localized faith healing movements. Meanwhile, plummeting Maori numbers and a significant increase in European immigration after formal British annexation of New Zealand in 1840, but especially from the 1850s, prompted a crisis in British-Maori relations by the end of the decade. The loss of land and increasing exclusion of the Maori from a share in administering the affairs of the country were resented by many

Maori leaders. Some Maori blamed the missionaries for failing to prevent these outcomes and began to assert a more independent outlook in religious and other matters.

Warfare between the government and Maori communities followed, first in Taranaki from 1860 and then spreading to Waikato by 1863 and other parts of the North Island until 1872. Sweeping confiscations of Maori land provoked further resistance and resulted in the emergence of a number of new prophetic leaders with strongly millennial messages of hope, peace, and prosperity ahead.

In the Taranaki district Te Ua Haumene's Pai Marire ("good and peaceful") faith emerged following an 1862 vision in which the archangel Gabriel was said to have spoken to Te Ua. Maori were once more identified with the Jews, and a return to their lands was promised for those who followed the faith. Pai Marire attracted significant support from Maori in those areas most affected by war and confiscation but was condemned by the government as fanatical after the murder of several Europeans and was consequently suppressed where possible. Te Ua himself died in 1866 some months after being taken into custody by European authorities and paraded around the country in an effort to break his influence.

On the east coast of the North Island the Ringatu ("upraised hand") religion of Te Kooti Arikirangi Te Turuki gained many followers. Te Kooti and more than 300 other men and their families had been imprisoned without trial on the faraway Chatham Islands for nearly two years while arrangements were made to confiscate their lands. They organized a successful escape back to the mainland in July 1868. Pursued by government troops, Te Kooti and his followers struck back in November of that year, attacking the settlement of Matawhero and killing more than 50 people. He later espoused peaceful means of gaining redress for the grievances of the Maori people and was formally pardoned by the government in 1883 but continued to be stigmatized as a dangerous fanatic by many Europeans long after his death in 1893.

In the rugged and remote Urewera district, which had provided sanctuary to Te Kooti while

➤ TE WHITI-O-RONGOMAI AND TOHU KAKAHI

The Maori settlement of Parihaka became an important center of peaceful opposition to land confiscations from the late 1860s and was home to two great prophetic leaders, Te Whiti-o-Rongomai and Tohu Kakahi. Both men led a long-running campaign of passive resistance, plowing confiscated fields and pulling out survey pegs. Te Whiti and Tohu attracted many Maori supporters, and as a result Parihaka came to be viewed as an embarrassment by the government.

On November 13, 1881, nearly 1,600 armed Constabulary invaded the settlement. Far from offering resistance, the inhabitants of Parihaka welcomed the troops. Parihaka was nevertheless destroyed, its inhabitants dispersed, and Te Whiti and Tohu imprisoned for a lengthy period without trial. Both prophets continued to lead peaceful campaigns following their release in 1883 and their return to Parihaka. They died within months of one another in 1907.

Te Whiti's pacifist ideals and steadfast pursuit of justice have sometimes been compared with figures such as Martin Luther King Jr. and Mahatma Gandhi. The white albatross feather that became the symbol of Te Whiti's movement today continues to be worn by many Maori in Taranaki.

—*Vincent O'Malley*

he was being pursued by government forces before 1872, Tuhoe prophet Rua Kenana was believed by some to be Te Kooti's successor. Rua's semiautonomous settlement at Maungapohatu was invaded by police forces in 1916, and the prophet was seized and arrested. Two Maori were killed during the raid, and the prophet was imprisoned with hard labor for resisting arrest, prompting an unprecedented protest at the harshness of his sentence from the jury that had convicted him.

Prophetic leaders continued to emerge during the early twentieth century including the prophetess Mere Rikiriki, whose teachings not only gave birth to the Maramatanga faith but also inspired her relative Tahupotiki Wiremu Ratana. The Ratana faith drew mass support from many poor and dispossessed Maori after 1918.

From the mid-1920s Ratana focused increasingly on political goals aimed at improving the plight of Maori. The religion he founded continues to attract many followers today.

—Vincent O'Malley

Bibliography

Clark, Paul. *'Haubau': The Pai Marire Search for Maori Identity*. Wellington, New Zealand: Oxford University Press, 1975.

Elsmore, Bronwyn. *Mana from Heaven: A Century of Maori Prophets in New Zealand*. Auckland: Reed Books, 1999.

Rosenfeld, Jean E. *The Island Broken in Two Halves: Land and Renewal Movements among the Maori of New Zealand*. University Park: Pennsylvania State University Press, 1999.

Sinclair, Karen. *Prophetic Histories: The People of the Maramatanga*. Wellington, New Zealand: Bridget Williams Books, 2002.

■ Introduction: Judaism in the Age of Emancipation

More so than any of the major world religions, Judaism underwent profound changes between 1750 and 1914. After their expulsion from their Palestinian homeland by the Romans in the first century CE, Jews scattered across Asia, Africa, and Europe, where they maintained their identity as a people despite living in hostile environments and suffering frequent persecution. By the mid-1600s, however, the number of Jews in the world had been reduced to less than a million, equally divided between eastern Europe and the Ottoman empire. At that point the number of Jews gradually began to increase, reaching 2.5 million in 1800, roughly 7.5 million in 1880, and more than 13 million in 1914. Equally dramatic demographic changes took place as a result of Jewish migration. In 1914 Judaism still was centered in eastern Europe, with 5.5 million Jews in the Russian empire, slightly more than 2.5 million in Austria-Hungary, and 300,000 in Romania, but there now were 2.5 million Jews in the United States; 600,000 in Germany; 250,000 in England; 100,000 in France, Argentina, and the Netherlands; 85,000 in Palestine; 75,000 in Canada; 50,000 in South Africa; and 20,000 in Australia. Unlike the situation in the 1600s, when most Jews lived in small villages, by 1900 Judaism had become a religion of large towns and cities. No fewer than 1.35 million Jews lived in New York City, 350,000 in Chicago, 175,000 in Philadelphia, and 150,000 in London. Major urban centers for Judaism in Europe were Warsaw, with 350,000, followed by Budapest, Odessa, Vienna, and Lodz.

The increase in Jewish numbers worldwide resulted in part from the new freedoms and economic opportunities afforded to Europe's Jews. Beginning in the 1500s as the religious passions of the late medieval and Reformation eras slowly cooled, Jews who had fled western Europe slowly began to return; some who had converted to Christianity or become crypto-Jews (Jews who secretly adhered to the faith while publically adhering to Christianity) began to openly practice their faith. Jewish communities once more emerged in the Netherlands, England, and commercial cities such as Livorno, Hamburg, and Bordeaux. Small Jewish communities in Germany and Italy continued to live under many legal restrictions, but under the protection of princes and some Catholic ecclesiastics, they no longer feared mob violence or expulsion. A turning point in modern Jewish history came during the French Revolution, when in 1791 the National Assembly granted full citizenship to all French Jews, who at that point mainly lived in Bordeaux and Alsace-Lorraine. In the 1790s legal equality also was extended to the Jews of Germany and Italy after conquests by the French revolutionary armies.

Setbacks soon followed, however. In 1808 Napoleon issued what Jews came to call his "Infamous Decree," which among other things forbade Jews from settling in certain areas of France, regulated Jewish loans, and forced Jews to attain special permits to engage in trade. After Napoleon's defeat, Jewish emancipation decrees in most parts of Germany and Italy were

rescinded, and ghettos were reinstated in dozens of cities. Similar restrictions were enforced in Austria-Hungary. Despite lobbying from Jewish leaders and sympathetic liberals, complete Jewish equality was attained only later in the century. In England, Jews gained full equality when they were permitted to sit in Parliament in 1858; in France, Germany, Italy, Austria-Hungary, and Switzerland, full equality was attained in the 1860s and 1870s. Living in these new circumstances, western and central European Jews in the late nineteenth and early twentieth centuries made outstanding contributions to journalism, the arts, medicine, business, and politics.

Change came more slowly in Asia and eastern Europe. In the Ottoman empire, Jews benefited from the reforms of the midcentury Tanzimat era, which accorded Jewish and Christian minorities equal rights with Muslims. In addition, as a result of pressure from the European powers, Romania and other Balkan states granted full civil rights to Jews after they achieved independence from the Ottomans in the 1870s. In most respects, however, continuity, not radical change, characterized Jewish life in Ottoman and former Ottoman lands.

The Russian empire stood out as the one great exception to the pattern of gradual Jewish emancipation. Russian tsars had virtually no Jewish subjects until the late eighteenth century, when the three partitions of Poland added hundreds of thousands of Jews to the Russian empire. Barred from entering Russia itself, Jews from the 1790s to 1917 were restricted to living in the Pale of Jewish Settlement, a region mainly consisting of recently annexed Polish and Lithuanian territory. Tsar Nicholas I (r. 1825–1855) sought to Russify his Jewish subjects by subjecting them to conscription in the army, where they were often pressured to convert, and by forcing them to accept government-trained rabbis as liaisons between their communities and the state. Despite such restrictions and pressures, many Russian Jews held out hope for emancipation, especially after the ending of serfdom under the liberal tsar Alexander II (r. 1855–1881).

Such changes in the Jews' political and social status had inevitable consequences for Jewish thought and practice. In western and central Europe, the late eighteenth century and the

nineteenth century were characterized by efforts to gain legal and civic equality, increased acceptance into mainstream European life, and the abandonment of certain features of Jewish tradition and practices. The latter was expressed in movements such as the Haskalah, or Jewish Enlightenment, whose supporters (known as Maskilim) encouraged Jews to study secular subjects, embrace rationalism, learn European languages, enter fields such as agriculture and handicrafts, and adopt the aspirations and manners of the non-Jews among whom they lived. Such ideas inspired the beginnings of Reform Judaism, which advocated changes in Jewish religious observance such as using vernacular languages rather than Hebrew in the liturgy, allowing men and women to sit together during services, introducing music, and shifting the Sabbath from Friday to Sunday. Such practices were resisted by the supporters of Orthodox Judaism, who advocated the meticulous observance of Jewish laws and customs. In the United States at the turn of the twentieth century as new waves of Orthodox Jews from eastern Europe settled in cities with Reform populations made up of earlier emigrants from Germany, many leaders turned to the Conservative Jewish movement that had first emerged in Germany; they regarded it as a conciliatory movement that might unify Orthodox and Reform Jews. In eastern Europe and the Ottoman empire, Jewish life was largely unaffected by such divisions, although even in these regions reformism and Haskalah had their advocates.

No matter where they lived, Jews were affected by the dark clouds of anti-Semitism in the latter decades of the nineteenth century. The growth of nationalism, new racial theories, anxiety over the rapid pace of social and economic change, resentment over Jewish prominence in business and the arts, and the revival of ancient religious prejudices all fueled this movement. Anti-Semitism in western and central Europe gave rise to right-wing anti-Semitic political parties, the proliferation of anti-Jewish books, and episodes such as the Dreyfus Affair, when France was convulsed by controversy in the 1890s after a Jewish army officer, Alfred Dreyfus, was accused of and convicted of treason for selling military secrets to the Germans on the basis of forged documents. In Russia, anti-Semitism

found a deadlier expression. Between 1881 and 1884 a rash of anti-Jewish rioting, set off by the assassination of Tsar Alexander II and festering resentment over debts to Jewish moneylenders, resulted in thousands of deaths and the destruction of many hundreds of Jewish homes. Tacitly supported by local police, many of the tsar's officials, and perhaps Tsar Alexander III himself, the pogroms were followed by the promulgation of the May Laws, which restricted areas where Jews could settle, outlawed Jewish leasing or management of agricultural estates, and prohibited Jews from conducting business on Sunday and Christian holy days. In the 1890s Jews were barred from living in Moscow and St. Petersburg and entering the legal profession.

In the face of heightened anti-Semitism, Jews in western and central Europe fought back by suing their slanderers, responding to their false allegations, and publicizing positive Jewish contributions to their countries and communities. The Jews' predicament also provoked more extreme responses. In Russia it sparked an upsurge of emigration, with no fewer than 2.5 million Russian Jews emigrating between 1881 and 1914. Pogroms and anti-Semitism also gave rise to the Zionist movement, which sought to encourage Jewish migration from Europe to Palestine with the goal of establishing a new Jewish homeland. Originally centered in Russia as a response to the 1881 pogroms and the May Laws, Zionism gained a broader following after the Vienna-based journalist Theodor Herzl convened the first Zionist Congress in Basel in 1897 after he was shocked by the outpouring of anti-Semitism in France during the Dreyfus Affair. After World War II the Zionists reached their goal with the founding of the independent State of Israel but only after Europe's Jews experienced the unspeakable horrors of the Holocaust.

—James H. Overfield

Origins and Spread of Hasidism

The Hasidim, a Hebrew term meaning “pious ones,” belong to a special movement within Orthodox Judaism. At its height in the first half of the nineteenth century, the movement claimed the allegiance of millions of Jews in eastern and central Europe, perhaps a majority of the

East European Jews. Hasidism was founded in eighteenth-century Padolia, a region in the central and southwest portions of present-day Ukraine by Israel ben Eliezer (1698–1760), who also became known under the title Baal Shem Tov, or “Master of the Good Name.” Hasidism emerged at a time of growing tensions within the sizable community of Polish-Ukrainian Jewry in the face of large-scale massacres, sporadic anti-Jewish violence, and growing dissatisfaction among lower-class Jews with what they considered the strict rigidity and formalism of Rabbinic Judaism and its stress on the study of the Talmud.

After the death of the Baal Shem Tov, the single most important characteristic of the movement became the leadership role of the Zaddik (Righteous One), the charismatic leader. Each Hasidic sect had its Zaddik, who determined virtually every aspect of his followers' spiritual and personal lives. In many instances miracles and/or extraordinary intellectual capabilities were attributed to a particular Zaddik. After the Zaddik's passing, leadership was usually passed from father to son. In its infancy the movement met fierce opposition from such figures as Rabbi Elijah ben Solomon, the Gaon (Sage) of Vilna (1720–1797), who objected vehemently to the Hasidic practices of ecstatic prayer and visions, belief in miracles attributed to Hasidic masters, and their denigration of traditional Torah study. The animosity grew to such an extent that in 1772 the Jewish community of Vilna disbanded the congregation (*minyan*) formed by the Hasidim and issued a ban (*cherem*) of excommunication against them.

In the late eighteenth and early nineteenth centuries the schism between Hasidim and the *mitnagdim* (opponents of Hasidism) widened. Both sides frequently denounced each other even to governmental authorities and engaged in heated polemics. Some degree of reconciliation did take place in the nineteenth century in response to the Haskalah (Jewish Enlightenment), which vehemently opposed both Hasidim and mitnagdim in favor of a secularized Judaism. Between 1815 and 1848, the struggle between the *maskilim* (followers of the Jewish Enlightenment) and the Hasidim, especially in Galicia, reached a fever pitch. Previous clashes between the various Hasidic dynasties gave way to a

solidarity within the Hasidic camp in response to the spread of the Haskalah. Unity of purpose among the various Hasidic groups became a major tenet during this time.

The initial spread of Hasidism came to an end by the 1830s, at which point a majority of Jews in the Ukraine, Galicia, and central Poland as well as smaller followings in Hungary and Belorussia-Lithuania became adherents of one or another Hasidic Rebbe (Hasidic leader). In the wake of the Haskalah and the increasing secularization of Jewish life in Europe, the dynamics of Orthodoxy changed. Opposed to all manifestations of modernity and secularization of Judaism, the Hasidim went on the defensive. Hasidic leaders castigated the newly emergent political Zionist movements, Jewish socialist workers' organizations, and radical political parties. While the number of Hasidim remained constant at this juncture, the appeal of the movement to attract more followers diminished.

Hasidism had become a strong and viable movement in eastern Europe by the third generation of Hasidic leaders in Galicia, now part of the Austrian Empire, Hungary, the Ukraine, central Poland, and Russia. In addition to the initial practices of ecstatic prayer and focus on the Rebbe, various schools of Hasidic thought also emerged by the nineteenth century. Several Hasidic groups such as Chabad (Lubavitch) in Lithuania as well as Gur (Gora Kalwaria) and Kotsk in Poland now emphasized intellectual pursuits and the serious study of biblical and rabbinic texts and legal codes. In the 1860s, Rabbi Abraham Bornstein of Sochotchov (Poland) founded the first yeshiva (school) under Hasidic auspices. However, the success of Hasidism resulted in open tensions between the different, often competing, sects during this period.

With the outbreak of violent anti-Jewish pogroms and implacable poverty in eastern Europe, Hasidic Judaism came to western Europe and then to the United States during the large waves of Jewish immigration in the 1880s. At the end of the nineteenth century and into the twentieth century, Hasidism expanded its influence to the political realm, thereby determining the direction of several important Jewish organizations and political parties in Israel and America.

—Steve Garrin

THE AVNEI NEZER

Rabbi Abraham Bornstein of Sochotchov (Poland) was a nineteenth-century Hasidic leader who is known by the title of one of his commentaries on the Torah: the *Avnei Nezer* (The Stone of the Crown). In that work he discusses the unifying effect of Torah study:

"In our present exile, as in the Babylonian, the Jews are dispersed among the nations, whereas in Egypt they lived together in Goshen. The reason is: before we received the Torah there was no force strong enough to bind the Jewish people together as a special nation, and therefore the Almighty decreed that they should all dwell in one territory. Today, however, our study of the Torah serves as the rallying point to unite us in our dispersion."

—Steve Garrin

Source

Abraham Bornstein and Holocaust-Era Judaic Heritage Library, Library of Congress, Hebraic Section, *Avnei Nezer* (Pietrkov, 1912).

Bibliography

- Buber, Martin. *Hasidism and Modern Man*. New York: Horizon, 1958.
- Hundert, Gershon David, ed. *Essential Papers on Hasidism*. New York: New York University Press, 1991.
- Jacobs, Louis. *Hasidic Thought*. New York: Behrman House, 1988.
- Scholem, Gershom. "Hasidism: The Latest Phase." Chapter 9 in *Major Trends in Jewish Mysticism*. 1941; reprint, New York: Schocken Books, 1995.
- Wiesel, E. *Souls on Fire*. New York: Touchstone, 1972.

Reform Judaism in the Nineteenth Century

Judaism's Reform branch first appeared in nineteenth-century Germany in response to Jewish emancipation, which had effectively removed the existing legal impediments to Jewish participation in the political, social, and cultural life of Germany. In 1810 Israel Jacobson (1768–1828) conducted a Reform service in the town of Sessen in Westphalia. By 1818 a Reform "temple"

THE PITTSBURGH PLATFORM

The following is an excerpt from the 1885 statement of beliefs of American Reform Judaism:

“We recognize in the Mosaic legislation a system of training the Jewish people for its mission during its national life in Palestine, and today we accept as binding only its moral laws, and maintain only such ceremonies as elevate and sanctify our lives, but reject all such as are not adopted to the views and habits of modern civilization. . . . We hold that all such Mosaic and rabbinical laws as regulate diet, priestly purity, and dress originated in ages and under the influence of ideas entirely foreign to our present mental and spiritual state. . . . We recognize, in the modern era of universal culture of heart and intellect, the approaching of the realization of Israel’s great messianic hope for the establishment of the kingdom of truth, justice, and peace among all men.”

—Steve Garrin

was founded in Hamburg by the local headmaster of the Jewish school.

Initially, Reform Judaism sought to institute standards of decorum and ritual in the synagogue service and a corresponding liturgy that reflected the contemporary aesthetics of Protestant Church practice. To this end the founders of Reform Judaism introduced nondoctrinal changes to synagogue worship such as abbreviated prayers and the use of the vernacular in liturgy and pulpit sermons as well as choral and orchestral accompaniment to synagogue worship. These Reform leaders, all laymen, did not intend to break away from normative and traditional Jewish practice or create a separate sect within Judaism. But as a new generation of university-educated German Reform spiritual leaders emerged in the second half of the nineteenth century, a more significant departure from traditional Jewish practices and beliefs began. Motivated by the scientific and academic study of the Bible and committed to fully realizing the promise of social and political integration into German life, the second generation of Reform clergy held the position that Jewish practices must adapt to the times. They justified

their call for change by contending that throughout its history Judaism had evolved in order to accommodate the various and disparate geographic, political, and social contexts in which Jews found themselves.

In the early years of the nineteenth century there was no consensus among the Reform leaders concerning the scope of innovation. Even among themselves the leadership of the Reform movement varied in their degree of attachment to tradition. The outstanding personality at that time was Abraham Geiger (1810–1874), a native of Frankfurt, a graduate of the universities of Heidelberg and Bonn, a rabbi, and a distinguished contributor to Jewish scholarship. Geiger was radically opposed to Orthodoxy, which he regarded as outdated, irrelevant ritual incapable of satisfying the cosmopolitan and acculturated Jewish citizens of modern Europe. To be sure, he did wish to construct a new form of Judaism but only by using materials to be found in the historical and normative Judaism (*halacha*) of the past. Geiger concluded from his academic study that Judaism is a constantly evolving organism. Just as biblical Judaism was not identical to classical rabbinic Judaism, so too the modern age calls for further evolution consistent with the changed political, social, and economic circumstances of post-Enlightenment European Jewry.

His approach was far less radical than that of his Berlin colleague Samuel Holdheim (1806–1860). Holdheim did not believe in the evolutionary character of Judaism. For Holdheim, only revolutionary change and a dramatic break with the practices and beliefs of the past could salvage contemporary Judaism. He maintained that the end of the ancient Hebrew commonwealth invalidated all of Judaism’s ceremonial law; only monotheism and the moral components remained. To be sure, Holdheim represented an extreme voice even in the context of Reform, but he remained an adherent of the movement.

For virtually all the early Reformers, the messianic idea and its concomitant notion of a return to Zion were no longer viable. They considered the Bible alone as authoritative; the Talmud and rabbinic law were essentially cast aside. Instead, Reform Judaism introduced the concept of the universal “mission of Israel,” replacing the wish for a return to Zion and adherence to rabbinic

enactments. The Reformers believed that Jews were a religious community that could accomplish its historical mission only in the Diaspora. Judaism existed not solely to worship the Lord in accordance with rabbinic law but rather to spread the rational faith in one God and His moral law to the world at large.

In Europe the radical platform of Holdheim was accepted only in the Berlin *Reform-gemeinde*, which Holdheim served as rabbi, and by a short-lived fringe group in Hungary. The Reform Rabbinic Conferences of the 1840s and the synods of 1869 and 1871 were sparsely attended, and by the last quarter of the nineteenth century in Germany the Reform movement lost its appeal due to the growing success of neo-Orthodoxy and the emerging new Conservative wing of Judaism.

In America, however, Holdheim's revolutionary reform took root and provided the ideological framework for American Reform Judaism. To be sure, not all Reform leaders in the New World were inclined to adopt so extreme a position, but by the end of the nineteenth century Holdheim's philosophy defined the movement ideologically. It was set forth in the so-called Pittsburgh Platform of 1885, the doctrinal credo of nineteenth- and early-twentieth-century Reform Judaism in America.

—Steve Garrin

Bibliography

- Kaplan, Dana Evan. *American Reform Judaism: An Introduction*. New Brunswick, NJ: Rutgers University Press, 2005.
- Meyers, Michael. *Response to Modernity: A History of the Reform Movement in Judaism*. New York: Oxford University Press, 1988.
- Neusner, Jacob, ed. *The Reformation of Reform Judaism*. New York: Garland, 1993.
- Plaut, W. Gunther. *The Rise of Reform Judaism*. New York: World Union for Progressive Judaism, 1963–1965.

Orthodox Judaism

Orthodox Judaism as it is known today is not the same Judaism that existed before European emancipation of Jews. In its own way, it is also revolutionary and, like Reform Judaism, first gathered strength as a reaction to the

Enlightenment. Later, it reacted against the Reform movement specifically.

From the beginning of the nineteenth century, the goal of most Jewish leaders and rabbis in Europe was to stop the defection of Jews from Judaism. With the opening of the Jewish ghettos and the emancipation of individual Jews in the evolving nation states of Europe, it was becoming possible, for the first time, for Jews to live outside the Jewish community. They could accomplish this either through conversion to Christianity or simply by living a secular life, something that was not possible before the eighteenth century. While the new Reform movement claimed that making Jewish life easier and more modern could halt the trend away from Judaism, traditionalists saw these kinds of reforms as an imitation of Christianity and a step toward total assimilation. They searched for another way.

One of the early leaders of the Orthodox movement was Rabbi Samson ben Rafael Hirsch (1808–1888), a German Jew born in Hamburg who later worked in Frankfurt. Hirsch's father, Rafael, was an active opponent of the new Reform synagogue in Hamburg, and Samson took a similar position. Although he was not against certain changes to the service—in fact, during his younger years, he had been a friend of Abraham Geiger, the founder of Reform Judaism—he strongly objected to any rejection of Jewish law and to any questioning of the principles of Jewish faith. It was not Judaism, insisted Hirsch, but Jews, that needed reform.

One of Rabbi Samson Hirsch's first books was called *Nineteen Letters on Judaism*. This work, written in the form of letters between two young Jews, laid out his ideas on Jewish education and contained many innovations. Although many Jewish communities, especially those in central and eastern Europe, concentrated only on study of the Talmud, Hirsch believed in the study of the Bible as well. He also encouraged young Jews to get a university education so they could function successfully in the secular world. But he was not ready to compromise on the study or the observance of Judaism.

"Torah with *derekh erez*" was Hirsch's watchword. *Derekh erez* means, literally "the way of the land"; and this quote, originally found in the *Sayings of the Fathers* (*Pirkei Avot* 2:2),

➤ CONSERVATIVE JUDAISM IN THE UNITED STATES

Conservative Judaism, conceived in Germany—as was Reform Judaism—was an attempt to find a middle way between the Reform and Orthodox movements. Originally called Historical Judaism, this philosophy stressed the progressive interpretation of Jewish law throughout the ages but insisted on retaining all of the law. This idea contrasted with the Reform view that certain laws were no longer relevant and could be ignored.

The principal founder of the historical school was Zacharias Frankel (1801–1875), who was born in Prague but served in German cities for most of his rabbinical career. He believed that reform was needed in Judaism, but he wanted only reforms that did not conflict with the spirit of Historical Judaism. He also argued for continued use of the Hebrew language in the prayer book, and for retaining a belief in the Messiah and a hope for a return to Zion. Although he failed to establish a strong movement in Germany, Frankel set the

standard for modern rabbinical training that was adopted by a group of American Jews in the late 1800s. Isaac Leeser (1806–1868), an American rabbi, educator, and writer, was its first proponent, but others soon joined him. Most of these men had been educated in Germany, and all were traditionalists who advocated some change. They organized a rabbinical school in 1887 to train American rabbis. That school came to be known as the Jewish Theological Seminary. The Seminary's philosophy of "tradition and change" was attractive to eastern European Jews who were coming to the United States in the late 1880s. These immigrants sought a traditional synagogue that also made allowances for modern life. They felt comfortable in the new Conservative congregations where men could read the prayers in the familiar Hebrew, but were able to sit together with their wives and children and hear sermons in English.

—Emily Taitz

the last book of the Mishnah, implied that a person should be educated in Torah (that is, Jewish law as it was written in the first five books of the Hebrew Bible) and also in secular studies. Jews could study at a university and be enlightened citizens and still maintain loyalty to the laws of Judaism. Hirsch and his followers refused to accept the Reformists' idea that biblical law was developed over time to meet the needs of society. God gave the Torah in one revelation, they believed, and therefore individuals were not free to choose which laws to follow.

Although other factions among the traditionalists disagreed with various aspects of Hirsch's philosophy, they did agree on two main points: the God-given nature of the Torah and the laws, and the authority of the rabbis who interpreted those laws. They rejected the new concept of a science of Judaism, explaining that observance of all the 613 commandments (statements and principles of law and ethics contained in the Torah or Five Books of Moses) must come before speculation, before the objective study of those commandments.

Eventually, Reform and Orthodox split and formed two separate branches of Judaism.

Encouraged by the Orthodox faction, the two groups agreed that if a Jew wanted to leave the congregation because of differences of religious principle, that Jew could do so without leaving Judaism. This ruling was passed in Hungary in 1868 and in Germany in 1876. From that time on, synagogues were labeled either Reform or Orthodox.

Orthodox Judaism was sometimes referred to as neo-Orthodoxy to emphasize its differences from the earlier mainstream traditionalists. It spread west from Germany into France and England and was brought into the United States by German immigrants. It also spread eastward, capturing the imaginations of many of the more enlightened traditionalists of eastern Europe. The Hasidim did not join forces with neo-Orthodoxy. They remain separate, maintaining their own organizations and leaders and their own schools.

—Emily Taitz

Bibliography

Ben Sasson, H.H., ed. *A History of the Jewish People*, Part 6, "The Modern Period." Cambridge, MA: Harvard University Press, 1976.

- Gurock, Jeffrey S. *Orthodox Jews in America*. Bloomington: Indiana University Press, 2009.
- Plaut, W. Gunther. *The Rise of Reform Judaism*. New York: World Union for Progressive Judaism, 1963.
- Vital, David. *A People Apart: The Jews in Europe, 1789–1939*. Oxford: Oxford University Press, 1999.

Anti-Semitism

Anti-Semitism, which gained increasing numbers of adherents in Russia and the Western world in the nineteenth century, is a durable, but not a unitary phenomenon, with the persistence of hostility to Jews as remarkable as the variety of justifications given for it. Anti-Semitism also varies in terms of its consequences. In the early Middle Ages, for example, the Jews were often bitterly denounced. But the Jews' function as a living witness to Scriptural truth meant that they must be preserved, not exterminated. Hence many popes and princes tried to protect Jews from popular violence.

In the High and Later Middle Ages, however, Europe's Jews were demonized. From the 1150s onward, Christian belief in the blood libel, which alleged that Jews stole Christian children to drink their blood at Passover, became widespread. Jews were popularly associated with the Devil, heretics, and imaginary witches. This development has been ascribed to the expansion of the medieval state, which sought to classify society and define outsiders as objects of persecution. During the Reformation Era, these images were combined with classical and theological stereotypes to license the persecution of Jews, who easily provided scapegoats for the schisms within Christianity. Martin Luther (1483–1546) notoriously denounced the Jews as haters of Christ, proponents of a theology of works rather than faith, and unwilling to work in honest professions.

Luther's charge of idleness is a sign of the rise of economic anti-Semitism. In the Middle Ages, many financial dealings such as lending money at interest, frowned upon by the Church, were entrusted to Jews (though not exclusively: banks developed, especially in Italy), who thus became indispensable but unpopular. Having been forbidden to practice crafts or agriculture, Jews were blamed for concentrating on

unproductive work. Many Gentiles encountered Jews as peddlers, supplying goods to isolated communities, or as middlemen buying and selling farm produce. With the growth of an international capitalist economy, and eventually with multinational banks like that of the Rothschilds, which rose to prominence in the eighteenth and nineteenth centuries, Jews were associated with money and, hence, with calculation, greed, and excessive rationality.

Within theological anti-Semitism, the Jews' supposed rationality was explained also from their adherence to an essentially intellectual law that was subjected to analysis in the Talmud. Secularization in the Enlightenment period juxtaposed this image of the overly rational Jew with a contradictory image, based on Jewish religious practice, of the Jew as addicted to irrational superstition and therefore unfit to enter enlightened society. Thus, Voltaire (1694–1778) describes the Jews in his *Essai sur les Moeurs et l'Esprit des Nations* (1753) as “always superstitious, always greedy for others' property, always barbarous, servile in misfortune, and insolent in prosperity.” More sympathetic Enlightenment thinkers thought Jews could enter civilized society by wholly abandoning what had long become a fossil religion: thus, Immanuel Kant (1724–1804) in his *Der Streit der Fakultäten* (The Conflict of the Faculties) claimed that “The euthanasia of Judaism can only be achieved by means of pure, moral religion and the abandonment of all its old legal regulations.” Hence, once theological barriers had fallen, the complete surrender of Judaism might admit Jews to enlightened European society.

Another barrier, however, was already appearing in the nineteenth-century form of modern nationalism. A nation (*Volk*) was defined by its territory, its physical character, and, above all, its language, which was the source of its creativity and the expression of its collective soul. Johann Gottfried Herder (1744–1803), the ideological founder of modern nationalism, judged the Jews by this standard to be merely a parasite on settled nations. Although Jews benefited in the late eighteenth and nineteenth centuries from emancipatory legislation, they also encountered a backlash that denied that they could really become members of national communities.

If nationhood was defined by language, then the Jews, it was alleged, could never truly master modern European languages. Either a distinctively “Jewish” intonation was always detectable or else Jews, however perfectly and indeed brilliantly they might write, revealed their difference by the sheer brilliance of their writing and by the overly intellectual irony they introduced. These charges were especially leveled at German poet, journalist, and essayist Heinrich Heine (1797–1856) by conservatives irritated by his politically subversive journalism. Heine, born a Jew, converted to Christianity as a young man, but always considered himself and presented himself as a Jew.

Nationalist anti-Semitism was radicalized by the famous composer Richard Wagner (1813–1883) in his immensely influential essay “Das Judentum in der Musik” (“Judaism in Music,” 1850). Wagner insists that Jews can speak European languages only as foreigners. Their real language, Hebrew, survives only as a dead, liturgical language. Hence they lack the creativity that comes from a living language spoken by a national community. Their excessive rationality also debars them from song, the language of the emotions. Synagogue music is merely fossilized, like the Jewish religion. Jews can acquire European culture only superficially, by buying into it, thanks to their commercial success, which is bringing about the Judaization (*Verjudung*) of Europe.

These stereotypes required only the spurious authority of “racial science” for full-scale racial anti-Semitism to be born. Racial anti-Semitism is based on the discounted theory that Semitic peoples, which includes the Jews, are inherently different from and inferior to the so-called Aryan people who supposedly first populated Europe. Since being Jewish was now considered to be a matter of blood rather than religious belief, conversion to Christianity could not erase the Jews’ many negative characteristics: laziness, greed, selfishness, cunning, and lack of patriotism. The aristocratic French writer Arthur de Gobineau (1816–1882) is often viewed as the first proponent of race-based theories of history. His *Essay on the Inequality of the Human Races* (1853–1855) divided the world’s peoples into three races (black, white and yellow),

among whom whites were superior, although the other races had some positive qualities. He believed history taught that chaos and decline resulted when the races mixed. Gobineau’s theories were not blatantly anti-Jewish, unlike those expressed in *The Foundations of the Nineteenth Century* (1899) by Houston Stewart Chamberlain, an Englishman who married Wagner’s daughter. Chamberlain’s book evokes an apocalyptic picture of pure, emotionally profound races (like the Germans) beleaguered by swirling masses of mongrels and groups of shallow, hyper-rational Jews. An equally apocalyptic message was propagated in the fraudulent *Protocols of the Elders of Zion*, first published in Russia in 1905. It purports to be a Jewish plan for taking over the world.

Unfortunately, late-nineteenth-century anti-Semitism expressed itself in more than the written word. As some Europeans began to look on Jews as a scapegoat to explain their personal or national failures and others came to view Jews as objects of jealousy for their success in business and the professions, public attacks on the Jews increased. From the 1880s to the early 1900s many thousands of Jews died or were expelled from their homes as a result of mob attacks in Russian Poland. In 1894 the French Jewish military officer Alfred Dreyfus was falsely convicted of selling secrets to the Germans and was sent to Devil’s Island before being exonerated after a series of politically divisive court challenges. In 1897 the virulently anti-Semitic politician Karl Lueger (1844–1910) was elected mayor of Vienna and served until 1910. Between 1905 and 1913, young Adolf Hitler lived in Vienna, where he was deeply influenced by the racist views of the city’s mayor.

—*Ritchie Robertson and James H. Overfield*

Bibliography

- Gilman, Sander L., and Steven R. Katz, eds. *Anti-Semitism in Times of Crisis*. New York: New York University Press, 1991.
- Oberman, Heiko A. *The Roots of Anti-Semitism in the Age of Renaissance and Reformation*. Translated by James I. Porter. Philadelphia: Fortress Press, 1984.
- Poliakov, Léon. *History of Anti-Semitism*. 4 vols. Translated by Miriam Karlin. New York: Vanguard Books, 1974–1977.

Robertson, Ritchie. "Varieties of Anti-Semitism." In *Encyclopedia of the Jewish Diaspora: Origins, Experiences, and Culture*, edited by M. Avrum Ehrlich. Santa Barbara, CA: ABC-CLIO, 2008.

Motives of Jewish Migration

Much of the story of Jewish migration in Europe from the mid-eighteenth century to the outbreak of World War I was a result of deportation, forced migration, and flight from persecution and violence. Jewish migration in this time period was overwhelmingly a process of leaving Europe altogether, though some did relocate to other areas in Europe. Nearly 3 million Jews, mostly from eastern Europe and Russia, left the continent of Europe for other destinations. Indeed, most Jewish migration within Europe in the 150 years before World War I was a process of moving through Europe and on to other places.

Jews in most European states had been granted emancipation (full civil equality by law) by the late nineteenth century. Emancipation came in 1789 in France with the French Revolution, in 1871 in Germany, in 1867 in Austria-Hungary, and fully in Great Britain in 1890. However, emancipation did not come before World War I in the Russian empire (which included most of modern Poland) or Romania, where the large majority of European Jews lived. They were under the constant threat of deportation and violence. In 1791 almost all Jews living in the Russian empire were forced by the imperial government to live in a restricted area called the Pale of Settlement, located mostly in what had previously been Poland. By the nineteenth century, Jews within the Pale were forbidden to live in rural areas except for certain villages and were forced to live in crowded cities. A census taken in 1897 revealed that all but 200,000 of Russia's Jewish people lived in the Pale of Settlement. Eventually, about two-thirds of the 20,000 Jews who remained in Moscow were viciously expelled from the city. At the same time, violence against Jews in the Russian empire was on the rise. Pogroms (anti-Jewish riots), many of them state-sponsored or supported by the state, became more frequent against Russian Jews.

Millions of east European Jews saw emigration as the only solution to the increasingly

> VIOLENCE AND JEWISH MIGRATION

Violence is what led nearly 2.5 million Jewish people to leave Eastern Europe during the late nineteenth and early twentieth centuries. Most of this violence came in the form of pogroms, or anti-Jewish riots. In the Russian Empire, pogroms were usually government-instigated, supported, or allowed. These pogroms, numbering in the hundreds, made life increasingly unbearable for Russia's Jewish population.

Serious violence against Russia's Jews began to emerge following the assassination of the Russian emperor Alexander II in March 1881. More than a hundred pogroms occurred under the approval of the Russian minister of the interior. One of the worst outbursts of violence occurred in April of the following year in the city of Balta. More than 1,000 Jewish homes and business were destroyed, 40 Jews were killed, and more than 20 women reported being raped. These pogroms caused much criticism from Western Europe, and for a time the Russian government tried to stop subsequent pogroms. However, Russia's Jews would have to bear more in the form of a well-planned pogrom in 1903 in the town of Kishinev. The outbreak of murder, torture, rape, defiling of sacred objects, and property damage lasted for three days until the Russian government ordered it stopped. In the end, 45 Jews (men, women, children, and even babies) were killed, nearly 600 were wounded, and more than 1,500 homes and shops were ruined.

—Philip Flowers

intolerable situation in the Russian empire. This sentiment was best expressed by a prominent German rabbi, Zacharias Frankel, who said that "for the Russian Jews there is only one way out; to leave Russia and settle under a sky where the law recognizes human rights." For some, western Europe became the final destination of migrations. Tens of thousands of Jews settled in west European countries such as France, Germany, Holland, and Great Britain. Nevertheless, even as early as the 1880s European countries began to either stop or greatly restrict the immigration of Jews from eastern Europe.

Because of these restrictions, for most Jews western Europe was only a stepping stone for

immigration to other parts of the world. Most Jewish migrants would have to travel overland to reach seaports on the Black, Baltic, or North seas. Many would have to travel by land out of Russia into Austria-Hungary, Germany, or Holland before they could reach a seaport. Jewish communities of western Europe even started organizations to help Jews as they migrated across Europe trying to reach their final destination. Approximately 1 million Jewish migrants passed through Great Britain alone before World War I on their way to other destinations.

For over 80 percent of the Jews who migrated out of Europe during the nineteenth and early twentieth centuries, the United States was their final destination, and over 2 million Jews, mostly from eastern Europe, migrated through and out of Europe and on to North America. Over 100,000 Jews immigrated to South America, and about 65,000 went on to Palestine. Other destinations for Europe's Jews were Argentina and South Africa.

—Philip Flowers

Bibliography

- Barnavi, Eli, ed. *A Historical Atlas of the Jewish People: From the Time of the Patriarchs to the Present*. New York: Knopf, 1992.
- Gribetz, Judah, et al. *The Timetables of Jewish History: A Chronology of the Most Important People and Events in Jewish History*. New York: Simon and Schuster, 1993.
- Margolis, Max L., and Alexander Marx. *A History of the Jewish People*. New York: Meridian Books, 1963.

Zionism

Zionism holds that Jews constitute a people and a nation. As a political movement, it supports the creation of a homeland for the Jewish people. Zionism began in the late nineteenth century, arising out of the general movement of nationalism and increased anti-Semitism. It soon became a well-organized and well-funded settlement movement focused on Palestine, which many Jews believe was the ancient homeland granted them by God. Zionism eventually contributed directly to the formation of the State of Israel

and continued to influence the politics of Israeli Jews for the rest of the twentieth century.

The word “Zionism” derives from Mount Zion, the high ground in Jerusalem just south of the Temple Mount and the traditional burial place of King David. The term was first used in 1890 by Austrian Jew Nathan Birnbaum. Zionists found justification for their movement in the Hebrew Bible (and Christian Old Testament) account of God giving the land of Israel to the Israelites in perpetuity and from the long-standing belief of Diaspora Jews that they would one day return to the Holy Land. Zionism also grew out of the rise of nationalism in the nineteenth century, as various European nations developed national identities and political systems. Many Jews at that time had a secular view of their Judaism. They abandoned their religious practices but embraced the concept of Jews as a people and a nation that deserved a national homeland. Other ideas, such as socialism and rationalism, also influenced early Zionists. Zionism was fueled by the persecution of Jews in many places in Europe, most notably the Russian empire. Jews came to believe, with some justification, that only a Jewish state could protect them.

Although other locations were suggested, Palestine seemed to be the obvious choice for the establishment of a Jewish nation. It had biblical connotations, and many Jews believed that it was their historical homeland. In 1862 Moses Hess wrote *Rome and Jerusalem*, which urged Jews to settle in Palestine in an agrarian socialist state. Hess and other writers, such as Ber Borochov and Nahum Syrkin, believed that Jews had become weak and downtrodden as a result of their centuries of working as merchants and pawnbrokers and that they needed to redeem themselves with healthful outdoor labor and socialism. Zionism and socialism often went hand in hand in the late 1800s and early 1900s. Many Jews looked on the creation of a Jewish state as an opportunity for them to build an ideal society, a religious community founded on the principles of socialism. This belief coalesced in a movement known as Labor Zionism, which held that the creation of a Jewish state must necessarily be part of a class struggle in which Jews

would become agriculturists, living on collective socialist farms known as *kibbutzim*.

From the late 1870s through 1882 some Russian Jews went to Palestine, then a part of the Ottoman empire, there to establish small farms in a movement that became known as the First Aliya. Beginning in 1882, thousands of Russian Jews immigrated to Palestine, fleeing from pogroms and Tsar Alexander III's 1882 anti-Semitic May Laws. These settlers called themselves *Biluim*, after a verse from the book of Isaiah. Their goal was to establish a Jewish national homeland in the land they called Israel. These first settlers nearly starved during their attempt to support themselves on land without adequate freshwater, and many of them left. Baron Edmond de Rothschild provided the remaining settlers with money to establish a winery, which soon became successful. The settlers also used his money to found the town of Zichron Yaakov.

In 1894 the Dreyfus Affair in France, which triggered an explosion of anti-Semitism in that country, persuaded many European Jews that anti-Semitism was a growing problem, even in the supposedly enlightened Western Europe. Theodor Herzl, a Jewish-Austrian journalist who covered

the trial, became a staunch supporter of Zionism in the course of the Dreyfus Affair. In 1896 Herzl wrote *Der Judenstaat* (*The Jewish State*), in which he called for the Jews to create their own homeland either in Palestine or in Argentina.

In 1897 Herzl organized the First Zionist Congress in Switzerland. It created the Zionist Organization (ZO), the goal of which was to raise money and buy land in Palestine so that Jews could settle there. Herzl was the group's first president. The group spent the next 52 years purchasing land and creating governmental procedures for the new Israeli state. It was later renamed the World Zionist Organization (WZO).

All Jews were allowed to join the ZO. People from countries all over the world came to the group's congresses, which were held every two years between 1897 and 1946. Members assembled in delegations according to ideology instead of geographic origin. Some Zionists were ardent socialists or communists. Many were vehemently secular or even atheists. Others had more religious leanings.

The ZO organized the Jewish Colonial Trust to handle financial matters. The Jewish National Fund, created in 1901, took responsibility for

➤ THE DREYFUS AFFAIR

In 1894 Alfred Dreyfus (1859–1935), a French army officer and a Jew, was accused of passing military secrets to the Germans on the basis of circumstantial evidence and an analysis of Dreyfus's handwriting. Although Dreyfus maintained his innocence, he was convicted by a secret court-martial and exiled to the French penal colony on Devil's Island in French Guyana. Over the next two years key documents disappeared, and the new chief of army intelligence, Colonel Georges Picquart, presented evidence that the incriminating documents had been written by another officer, Ferdinand Walsin Esterhazy, a noted anti-Semite. Refusing to reopen the case, the army reassigned Picquart to a post in Tunisia and acquitted Esterhazy in a military court despite strong evidence against him.

The famous novelist Émile Zola (1840–1902) came to Dreyfus's defense in January 1898 with the

publication of an open letter titled *J'accuse* (I accuse), to the French president. Zola accused the army and the government of anti-Semitism and complicity in a judicial cover-up. The French political Right and the Church hierarchy defended the army, warning of a Jewish conspiracy to undermine France. When Dreyfus was granted a new trial (only to have his conviction upheld), mobs gathered outside the courtroom chanting anti-Jewish slogans. Dreyfus received a presidential pardon in 1900 but was restored to his military rank only in 1906. For European Jews, however, this was a severe blow to any hope they had to assimilate fully into European culture. Theodor Herzl, the father of modern political Zionism, was living in Paris as a correspondent for a Viennese newspaper during the Dreyfus Affair, an experience that helped undermine his faith in the Jews' future in Europe.

—James King

purchasing land. The Anglo-Palestine Bank, established in 1903, provided financial services for settlers. Gradually the group created an infrastructure for the Jewish homeland that made the process of settling in Palestine easier than it had been in the 1800s.

In the early years of the twentieth century, Zionists debated whether Palestine was the ideal location for the Jewish homeland. In 1903 the British government proposed a Jewish homeland in parts of present-day Kenya and Uganda. This plan was known as the British Uganda Programme. Herzl suggested this to the Sixth Zionist Congress as a temporary safe haven for Russian Jews, but the Russian Jews themselves disliked the idea, and the Seventh Zionist Congress abandoned the idea in 1905. The Jewish Territorialist Organization wanted to create a Jewish homeland wherever it could, but it disbanded in 1917. In the 1930s the Soviet Union created a Jewish Autonomous Republic in the Far Eastern Federal District, but few Jews wanted to move there. For the most part, Palestine remained the sole focus of the Zionist movement.

During the early 1900s, many small groups of settlers went to Palestine. A number arrived there following the 1905 Revolution in Russia. Leaders such as Joseph Baratz and other settlers pooled their money, added to it contributions from Jews all over the world, and founded kibbutzim on plots of land that they lived on and farmed collectively. By 1914 there were kibbutzim throughout Palestine. Residents shared all work and all profits and governed themselves democratically.

—Amy Blackwell

Bibliography

- Blackwell, Amy. "Zionism." In *The Encyclopedia of the Arab-Israeli Conflict: A Political, Social, and Military History*, Vol. 3, edited by Spencer C. Tucker. Santa Barbara, CA: ABC-CLIO, 2008.
- Hertzberg, Arthur, ed. *The Zionist Idea: A Historical Analysis and Reader*. Philadelphia: Jewish Publication Society, 1997.
- Herzl, Theodor. *The Jewish State*. Mineola, NY: Dover, 1989.
- Laqueur, Walter. *A History of Zionism: From the French Revolution to the Establishment of the State of Israel*. 1972. Reprint, New York: Schocken, 2003.

Pappe, Ilan. *A History of Modern Palestine: One Land, Two Peoples*. Cambridge: Cambridge University Press, 2003.

Rose, John. *The Myths of Zionism*. London: Pluto, 2004.

Jews under Ottoman Rule

For Ottoman subjects, religious affiliation was the primary form of identification and community. Jews were second-class citizens; however, their treatment as non-Muslims in the Islamic state was comparable to that of other non-Muslim minority groups. Generally, the relationship between Muslim and non-Muslim communities was characterized by a mutually tolerant contempt in which each community kept to itself. Not until the nineteenth century, with the decline of the Ottoman empire, did Muslim hostility against non-Muslim minorities become common.

From the days of the Prophet Muhammad, Islamic rulers are recorded as dealing peaceably with non-Muslim minorities within their territory. This precedent was set by Muhammad, who recognized the rights of the other monotheists, in this case the Jews of Medina, so long as they acknowledged Islamic sovereignty. As with other non-Muslim minorities in a Muslim state, Jewish men were expected to pay the *jizya* tax, a tax for those who were not permitted to perform military service. Theoretically, non-Muslims, *dhimmis*, were technically prohibited some of the privileges granted to Muslim subjects, but during the sixteenth through eighteenth centuries the Turks rarely enforced these prohibitions. In practice, however, only in times of increased Muslim resentment against dhimmis, usually periods of economic hardship, were the laws forbidding dhimmis from riding horses, owning slaves, or selling wine actually enforced. In such periods, Christians typically bore the brunt of any hostilities.

However, the lesser status of dhimmis, Jews among them, in the Ottoman empire was clearly apparent in some respects. Since dhimmis could not testify against Muslims in court, they needed a Muslim to testify on their behalf. For this reason, Jews rarely appear in Turkish court

documents. Where they do appear, their names are often spelled incorrectly by the Muslim scribes, and their religion is noted to antagonistically denote their lower status. Overall, however, Jews had more rights as minorities during the height of the Ottoman empire (during the sixteenth and seventeenth centuries) than they did in European Christendom.

At the height of the Ottoman empire at a time when the activity of the Inquisition in Spain was peaking, a large number of Sephardic Jews migrated to Ottoman territories. This proved beneficial both for the Turks and the Jews. The Jewish communities brought with them connections to social and commercial networks in Europe, knowledge of European languages, and recent European technological advances such as medicine and movable type. The Turks trusted these new immigrants because they, unlike their Christian counterparts, had no religious or political ties with the emerging European states. Often the Turks brought, and at times even compelled, Sephardic Jews into newly conquered Christian lands for strategic and political reasons, offering them diplomatic protection in exchange for this relocation. This ultimately benefited the larger Ottoman Jewish community by providing it with an edge over other subjects both financially and through higher status.

It is not surprising, then, that the Jewish population and the Ottoman empire experienced a decline at approximately the same time, during the nineteenth century. These declines were in part the result of the rise of the European nation-states. European commercial interests favored, protected, and enriched local Christians. This strained the Ottoman empire economically, while other European advancements would eventually strain it politically and militarily. The midcentury reforms of the *Tanzimat* era were intended to modernize the empire with new taxation rules, universal citizenship, and conscription. The economically depressed Muslim majority resented the taxes and the new equalities granted to non-Muslims, who could pay an additional tax to avoid service. Hostilities increased dramatically and now focused on Jews rather than Christians. Further fueling these hostilities was the importation

➤ MILLET

With the *tanzimat* reforms of the nineteenth century, the Ottomans permitted each *millet*, or religious minority under their protection, to select a local cleric with authority over the community's laws and internal concerns. In truth, the Ottomans were more concerned with collecting taxes from each millet than with the cleric who ruled it. Previously, the term "millet" had connotations of sovereignty and thus did not properly apply to the Jews, who were not sovereign anywhere. However, the new nineteenth-century millet concept not only changed the current Ottoman policy toward non-Muslim minority groups but also inspired revisionist histories within Jewish communities. As a result, narratives about community leaders who predated the millet reform were told to reflect a greater sense of civil authority than they ever actually held. Thus, the tradition arose that the Jewish millet began in 1453, when Mehmed the Conqueror recognized Rabbi Moses Capsali as leader over all of the Jews in the Ottoman empire. Historically, however, Capsali had no jurisdiction beyond his Constantinople community.

—Spencer Allen

of European anti-Jewish animosity, including blood-libels.

The rapid Jewish decline also had internal causes, however. Not only did Jewish immigration cease, but those who could afford to leave the empire did, leaving the poor and the uneducated behind. Without European medical innovations, Jewish physicians native to the empire were no better trained than their non-Jewish counterparts. Advantages were lost in other fields as well, among these the loss of knowledge of European languages as native-born children learned the local languages, which further decreased the strategic value of Jews to the empire.

—Spencer Allen

Bibliography

- Braude, B., and B. Lewis, eds. *Christians and Jews in the Ottoman Empire: The Functioning of a Plural Society*. New York: Holmes and Meier, 1982.
- Courbage, Y., and P. Fargues. *Christians and Jews under Islam*. Translated by J. Mabro. London: I. B. Tauris, 1997.

- Levy, A., ed. *Jews, Turks, Ottomans: A Shared History, Fifteenth through the Twentieth Century*. Syracuse, NY: Syracuse University Press, 2002.
- Lewis, B. *The Jews of Islam*. Princeton, NJ: Princeton University Press, 1984.
- Masters, B. *Christians and Jews in the Ottoman Arab World: The Roots of Sectarianism*. New York: Cambridge University Press, 2001.
- Simon, R. S., M. M. Laskier, and S. Reguer, eds. *The Jews of the Middle East and North Africa in Modern Times*. New York: Columbia University Press, 2003.

Judaism in the United States

From the time of their first arrival in 1654, Jews have consistently experienced more tolerance and freedom in North America than was enjoyed by their counterparts in any other part of the world. Religious freedom, however, was both a boon and a bane to American Jews. Tolerance came with pressure to assimilate and give up much of what distinguished them as Jews. Jews consciously adopted American culture and

style, yet they also sought ways to hold on to their Jewish identities. Threading the path between assimilation and Jewish identity, Jews in the United States continuously defined and redefined what it meant to be an American Jew.

Between 2,000 and 3,000 Jews maintained a toehold in the eastern colonies and then the newly independent states after 1776. They primarily lived in port cities—New York, Philadelphia, Savannah, Charleston, and Newport, Rhode Island—associated as many of their families were with the transatlantic commerce that bound the Americas to Europe and Africa. Many of these first Jewish Americans traced their roots to Portugal, so when they worshipped they followed Sephardic (Iberian) practice. This remained true even after the Ashkenazi (Jews from Germany, Poland, Austria, and eastern Europe) outstripped them in numbers at the beginning of the 1700s. The bitterness that divided the Ashkenazim and the Sephardim in Europe did not generally carry over to British North America. Still, by the early 1800s Ashkenazi Jews were founding their own congregations and building their own synagogues.

A wave of Jewish immigrants began arriving in the United States from across central Europe in the 1820s. These new arrivals shifted the basis of defining American Jewish identity from the ethnic accommodation between the Sephardim and the Ashkenazim to outright conflict between those who would modernize Jewish practice and those who sought to maintain older Jewish rituals and customs. Modernization included such things as rejecting dietary restrictions, ending the practice of requiring women to perform ritual purification at the end of their menstrual cycles, and doing away with the *mechitza*, the barrier that separated the sexes during religious services.

Influenced by ongoing pressure to assimilate, many American Jews were already prepared to accept modernization, including the growing embrace of Reform Judaism. But resistance to such change was strong and widespread. A well-known story featured Louis Spanier, the president of the Bethel synagogue in Albany, New York, in an altercation with Rabbi Isaac Mayer Wise in 1847. In a dispute over the speed with which Wise was liberalizing synagogue practice

► JEWISH MERCHANTS AND THE DEVELOPMENT OF THE AMERICAN WEST

Well into the twentieth century the major enterprises of the American West involved hide and agricultural production, trade, and the extractive industries (mining, logging, and oil production). Starting in 1849, Jewish merchants arrived in the American West from central Europe, where limits on their economic opportunities had forced them to learn to work with people from many different backgrounds and cultures. Their experience fitted them naturally to the role of cultural and economic go-between in the multicultural West. They began by building much-needed stores near the mines and logging camps or within ranching communities. Often the “Jew store” would be the only institution in a community and so would become its social and economic center. From these small beginnings Jews in the American West developed trade networks, chains of mercantile enterprises, and banks, supporting new American Jewish communities and contributing vital economic building blocks to the development of the American West.

—Warren Wood

and ritual, Spanier struck Wise and knocked off his cap. After Wise left and formed a separate congregation, his career as the great champion of American Reform Judaism really began.

Another wave of Jewish immigration began in the 1880s, when millions of eastern European Jews began to sweep across the Atlantic. They came, as previous waves of Jewish immigrants had come, seeking to escape poverty brought on by anti-Jewish social and legal proscription. Their religious orthodoxy and village sensibilities made them seem intractably foreign to both Christian and Jewish Americans. Their numbers quickly surpassed those of established and Americanized Jews, who feared—justifiably it turned out—that their growing presence would give rise to greater anti-Semitism in America. The forces of assimilation would eventually cause most of the new immigrants to temper their orthodoxy, but it would be decades before Jewish America could entirely integrate its eastern European cohort. Meanwhile, a

faltering economy and growing nationalistic fervor and anti-Semitism would cause Americans to shut the door on Jewish immigration in the 1920s, helping to set the stage for destruction of European Jewry after the rise of the Nazis in 1933.

—Warren Wood

Bibliography

- Diner, Hasia R. *A Time for Gathering: The Second Migration, 1820–1880*. The Jewish People in America Series. Baltimore: Johns Hopkins University Press, 1992.
- Faber, Eli. *A Time for Planting: The First Migration, 1654–1820*. The Jewish People in America Series. Baltimore: Johns Hopkins University Press, 1992.
- Sachar, Howard M. *A History of the Jews in America*. New York: Vintage Books, 1992.
- Sorin, Gerald. *A Time for Building: The Third Migration, 1880–1920*. The Jewish People in America Series. Baltimore: Johns Hopkins University Press, 1992.

■ Introduction: Christianity

The entries in this section focus mainly on Roman Catholicism and Protestantism, two branches of Christianity centered in Europe and America, and as such, the first Christian churches to face the unique challenges created by the industrialization, social change, scientific progress, and political revolutions of the modern era. Although the new age brought with it a diminished political role for both churches and increased skepticism and secularism, especially among intellectuals, Christianity retained the allegiance of most Americans and Europeans. In the United States, Christianity had a stronger following in 1900 than in 1800. The number of Roman Catholics and Protestants in the world grew dramatically between 1750 and 1900 as a result of the tripling of Europe's population and even more dramatic population increases in the Americas. Protestantism and Catholicism also were beneficiaries of Western imperialism in Africa, Asia, and Oceania. Under the protection of

largely sympathetic colonial governments, Protestant and Catholic missionaries made relatively few converts in the short run, but they planted the seeds for the growth of Christianity in Africa in the twentieth century and, as educators, introduced countless Asians, Africans, and Pacific islanders to Western thought and values.

Changes and challenges were not, however, limited to Protestant and Roman Catholic Christianity. Developments within the Orthodox churches of eastern Europe and Africa are outlined in the remainder of this introduction. In addition, information about Christian missionary efforts in Africa and Asia is provided in the section that follows this one, "Christian Missionary Endeavors in Africa and Asia."

In southeastern Europe, Eastern Orthodox Christians were little affected by industrialization or science, but their religious lives were changed dramatically by the new ideology of nationalism. Taking advantage of the declining

power of the Ottoman empire, under which they had lived for three to four centuries, Greece, Serbia, Bulgaria, and Romania all won their political independence from the Ottoman empire and their religious independence from the Ecumenical Patriarch, who along with members of the Greek community in Istanbul (the Phanariots) had overseen the religious affairs of the sultan's Christian Orthodox subjects. A key step was taken in 1833, when in newly independent Greece the Church declared itself "autocephalous" ("self-headed," or autonomous), to be governed by a Holy Synod of bishops appointed by the king. In time, Eastern Orthodoxy came to be divided into several national churches, each dependent on its own national government but still in communion with other Orthodox churches and acknowledging the nominal primacy of the Ecumenical Patriarch.

As it declined, the Ottoman empire lost many of its old tolerances despite government efforts to improve the legal standing of the sultan's Christian and Jewish subjects. In the midst of the bitterly fought Greek War of Independence (1821–1830), Greek attacks on mosques and Turkish civilians resulted in savage Ottoman reprisals, including the massacre of the Christian Greek population of Istanbul in 1821, when a thousand clergy, including the Ecumenical Patriarch, were killed. Later in the century when Armenian Christians living in Anatolia began to demand greater independence within the empire, they became victims of a series of massacres in the Caucasus and farther south during the 1890s, including the burning alive of several thousand Armenians in their cathedral in Urfa in 1895.

For the Orthodox Church in Russia, the nineteenth century produced no developments comparable to the traumatic events of the early modern era, which saw both the split between the "Old Believers" and the established Church and also the takeover of Church affairs by the imperial government during the reign of Peter the Great (r. 1682–1725). Devotion to the Orthodox Church remained high among villagers and city-dwellers alike; holy men who wandered the land while practicing extreme asceticism had wide followings. Cults of many kinds continued to attract small numbers of fervent followers. They

included the *skoptye*, who castrated themselves to kill their sexual urges; the *khylists*, who gave themselves over to sexual debauchery after becoming possessed by the Holy Spirit; the *dushtels* ("stranglers"), who killed the terminally ill; and the *dhukobors*, pacifists who denied the divinity of Christ and influenced the great Russian author Leo Tolstoy. Members of the clergy participated in the many nineteenth-century debates about Russia's future and its relationship with the West. Although most Church leaders were Slavophiles who opposed Western influence on Russia, by the 1880s many parish clergy were beginning to question tsarist autocracy and side with one of the several illegal political parties then taking shape. It was a St. Petersburg parish priest, Father Georgii Gapon, who in 1905 led the mass demonstration of unarmed workers whose demands for social and political reform sparked the Russian Revolution of 1905.

In Africa, the venerable Coptic Church experienced a substantial revival in the nineteenth century. By the late 1700s after many centuries of Ottoman and Mamluk rule, the once large community of Coptic Christians in Egypt had dwindled in size and vitality in the face of legal restrictions, high taxation, and occasional persecution. Not surprisingly, many Copts joined forces with the French when Napoleon invaded Egypt in 1798. They paid dearly for their support of the French when Egypt returned to Ottoman control in 1801, but they saw their fortunes rise after the Albanian Muslim adventurer Muhammad Ali seized power in 1805 and established an independent Egyptian state. Although a Muslim, Muhammad Ali was single-mindedly focused on building Egypt into a modern state, and he chose the most qualified men for his administration irrespective of their religion. As a result, many Coptic Christians were chosen for high administrative posts, and the Copts were able to develop their skills in business and other professions. After Muhammad Ali's death, the Copts' situation continued to improve. During the pontificate of Cyril IV (1854–1861), the Copts rebuilt churches, reopened a number of monasteries, and founded several schools, including the Coptic Patriarchal College, which taught mathematics, science, Arabic, French, Italian, and English. Paradoxically,

the “Coptic Enlightenment” ended once the British took control of Egypt in 1882. The British bent over backwards to please Egypt’s Muslim majority and tended to favor them over the Copts in most matters. As a result, the Copts were strong supporters of Egyptian independence from Britain.

Recovery also marks the history of the Ethiopian Eastern Orthodox Church, which like the Coptic Church, had fallen on hard times in the years around 1800. In this case it was the result of a series of ongoing theological disputes and the political disintegration of Ethiopia itself, which had resulted in the loss of its southern provinces to the pagan/Muslim Oromo people. Ethiopia was reunited, and Ethiopian Orthodoxy was preserved as a result of the actions of three Ethiopian rulers: Tewodrus II (r. 1855–1868), Yohannes IV (r. 1872–1889), and Menelik II (r. 1889–1913), all of whom were dedicated to the country’s ancient faith. Tewodrus II enlisted Protestant missionaries to help craft artillery pieces that he put to good use against the Oromo and domestic enemies before using one of them to commit suicide in 1868. Yohannes IV brought a semblance of doctrinal unity to the Church when he convened a Church council in 1878 to settle a number of theological issues and continued his predecessor’s efforts to consolidate his power and defend Ethiopian territory. This set the stage for the exploits of the modernizing Menelik II, whose armies crushed the invading Italians in 1896 at the Battle of Adowa. The event, celebrated across Africa, was a triumph of authentically African Christianity and was yet another example of the ability of Orthodox religions to maintain their fidelity to their ancient rites and doctrines despite hardships and conflict.

—James H. Overfield

The Enlightenment’s Critique of Religion

One of the most prominent features of the eighteenth-century Enlightenment was the hostility of many of its thinkers to organized religion. This opposition varied from fighting for religious tolerance to outright atheism. Hostility to religion also varied between different countries.

Generally, England saw the least hostility between the Enlightenment and the Church, and France saw the most. Opposition to religion tended to be stronger in those societies with a powerful institutional Church.

Belief in religious tolerance was a distinguishing mark of the Enlightenment, shared by nearly everyone connected to it. The killing of persons for following the wrong faith epitomized everything that Enlightenment thinkers detested about the power of organized religion. The era of religious wars in the sixteenth and seventeenth centuries had demonstrated the destructiveness of religious conflict. Although British and French wars of religion had ended by the eighteenth century, religious intolerance could still kill, as in the famous Calas case of 1761. Marc-Antoine Calas, from a French Protestant family, committed suicide. His father, Jean Calas, was charged with having murdered him for wanting to convert to Catholicism. Jean Calas was tried, tortured, convicted on flimsy evidence, and executed. Other members of the Calas family were banished. The case attracted the attention of Voltaire, who believed that Jean Calas had been falsely executed and championed his rehabilitation. Jean Calas was exonerated in 1765, and the family was reinstated. This was one of several cases of religious persecution that attracted the attention of Voltaire and other French thinkers at this time. Voltaire started using the slogan in his correspondence *écrasez l’infâme*, or crush the infamy, referring either to Christianity or to religion.

Opposition to religious intolerance grew into a broader anticlerical critique of the economic, cultural, and institutional power of Christian churches. Enlightenment thinkers did not invent anticlericalism, which had a long history in Europe, and anticlericalism was limited by the fact that many Enlightenment philosophers themselves were Catholic priests or Protestant ministers. However, many aspects of clerical power, such as censorship, the repression of sexuality, and hostility to the theater, were targets of criticism.

Enlightenment thinkers did not just criticize the actions of churches, though; they also criticized the philosophical basis of religion itself, particularly those religions they were most

DAVID HUME ON RELIGION AND POLITICS

The Scottish philosopher David Hume's *Dialogues on Natural Religion* contains some of the strongest antireligious arguments of the Enlightenment:

"Is there any maxim in politics more certain and infallible, than that both the number and authority of priests should be confined within very narrow limits; and that the civil magistrate ought, for ever, to keep his fasces and axes from such dangerous hands? But if the spirit of popular religion were so salutary to society, a contrary maxim ought to prevail. The greater number of priests, and their greater authority and riches, will always augment the religious spirit. And though the priests have the guidance of this spirit, why may we not expect a superior sanctity of life, and greater benevolence and moderation, from persons who are set apart for religion, who are continually inculcating it upon others, and who must themselves imbibe a greater share of it? Whence comes it then, that, in fact, the utmost a wise magistrate can propose with regard to popular religions, is, as far as possible, to make a saving game of it, and to prevent their pernicious consequences with regard to society?"

—William E. Burns

Source

David Hume, *Dialogues concerning Natural Religion and the Natural History of Religion*, ed. J. C. A. Gaskin (Oxford and New York: Oxford University Press, 1993), 123.

familiar with, Christianity and Judaism. The Bible was attacked as the superstitious work of ancient savages, far inferior to modern writings as well as the works of the pagan Greeks and Romans. As science developed the idea of a rationally ordered world, less and less credibility could be given to miracles. The Scottish philosopher David Hume argued that not only was there insufficient testimony for miracles to be believed, but it was always more likely that a person would lie or be mistaken than that a miracle, a violation of the laws of nature, would actually occur. This argument, unlike previous Protestant attacks on Catholic miracle accounts, was directed against the miracles of Jesus and

other biblical accounts as well as more modern ones. (Hume's argument was not pressed with such vehemence as to prevent him from being friends with leaders of the established Presbyterian Church of Scotland.)

The Enlightenment critique of religion was not restricted to negative attacks but also included positive alternatives. Deism was a popular alternative to Christianity, and attracted many of the French and English philosophes and, less publicly, several of America's founding fathers. Deism was the belief in a single God (Deists denied the Christian Trinity), all powerful and all good. Deists believed that the necessary truths about God could be discovered through reason rather than the scriptural revelations of the Jewish and Christian Bibles. Deistic religion would reach its height in the Cult of the Supreme Being established in the French Revolution. Theism was embraced by a small minority among Enlightenment thinkers, the most prominent being Baron d'Holbach. Many philosophers found the argument from design, the claim that the universe itself could not have come into existence by chance, to be convincing proof of the existence of a God even if the philosopher's God bore little resemblance to the God of Christianity. Atheism was forbidden in European countries, and so it had to be expressed in anonymous or pseudonymous tracts. Atheism was closely allied with philosophical materialism, the belief that the physical world is all that there is. Materialists denied the existence of a soul as well as of God.

Much of the Enlightenment critique of Christianity was elitist, not intended to influence behavior beyond the social elite. Some Enlightenment philosophers endorsed religion as a way to regulate the behavior of the lower classes or women. They idealized those purportedly non-religious civilizations such as China or ancient Greece and Rome whose governing elites did not share in the superstition of the people.

—William E. Burns

Bibliography

- Gay, Peter. *The Enlightenment: An Interpretation*. New York: Knopf, 1969.
- Hume, David. *Dialogues concerning Natural Religion and the Natural History of Religion*. Ed-

ited with an introduction and notes by J. C. A. Gaskin. Oxford and New York: Oxford University Press, 1993.

Kors, Alan Charles. *D'Holbach's Coterie: An Enlightenment in Paris*. Princeton, NJ: Princeton University Press, 1976.

Methodism

Methodism refers to a religious movement arising in England in the mid-eighteenth century as a reaction against the formality of the established Church of England and the intimidating doctrines of Calvinist denominations. The egalitarian doctrines of Methodism taught that salvation was available to all who sought it systematically through prayer, Bible study, and virtuous behavior. Initiated by John Wesley and Charles Wesley, Methodism spread rapidly among factory workers and managers in the emerging industrial economy and spread to many parts of the world as a result of English emigration to the United States, Canada, Australia, New Zealand, and South Africa, as well

as English missionary efforts in colonial Asia and Africa.

Brothers John Wesley (1703–1791) and Charles Wesley (1707–1788) first began to formulate the theological principles of Methodism while in residence at Oxford University, undergoing personal conversion experiences and participating in informal worship with comrades. After ordination as ministers in the Church of England, they left Oxford in 1735 to embark on remarkable careers of itinerant preaching, authorship, and hymn composition.

Wesleyan theology focused on a system of methodical spiritual cultivation that they believed would lead to conversion and salvation if followed devoutly. Methodism diverged from the Church of England's structures, dispensing with formal church membership, rituals, liturgy, and maintenance of clerical and social hierarchies in favor of personal conversion, self-discipline, and active participation in Bible study, prayer, and worship. Although some critics called their approach puritanical, the Methodists differed significantly from seventeenth-century Puritans in

➤ JOHN WESLEY—THOUGHTS UPON SLAVERY, 1774

Methodists in England and the United States became leaders in many areas of social justice, including prison reform and the abolition of the slave trade. Abolitionists drew on the writings and sermons of John Wesley, who in 1774 wrote a widely read pamphlet, *Thoughts upon Slavery*. In the following passage he addresses the captains of the slave ships.

“Are you a *man*? Then you should have an [*sic*] *human* heart. But have you indeed? What is your heart made of? Is there no such principle as compassion there? Do you never *feel* another's pain? Have you no sympathy? No sense of human woe? No pity for the miserable? When you saw the flowing eyes, the heaving breasts, the bleeding sides and tortured limbs of your fellow-creatures, was [*sic*] you a stone, or a brute? Did you look upon them with the eyes of a tiger? When you squeezed the agonizing creatures down in the ship, or when you threw their poor mangled remains into the sea,

had you no relenting? Did not one tear drop from your eye, one sigh escape from your breast? Do you feel no relenting *now*? If you do not, you must go on, till the measure of your iniquities is full. Then will the great GOD deal with *You*, as you have dealt with *them*, and require all their blood at your hands. And at that day it shall be more tolerable for Sodom and Gomorrah than for *you*! But if your heart does relent, though in a small degree, know it is a call from the GOD of love. . . . Today resolve, GOD being your helper, to escape for your life. Regard not money! All that a man hath will he give for his life? Whatever you lose, lose not your soul: nothing can countervail that loss. Immediately quit the horrid trade: At all events, be an honest man.”

—James H. Overfield

Source

John Wesley, *Thoughts upon Slavery* (London: R. Hawes, 1774), 25. (Italics as in the original text.)

their rejection of the notion of election. Spiritual conversion, they believed, was not restricted to an elect; rather, grace would be dispensed to any individuals who devoted themselves to prayer and the pursuit of holiness through their thoughts and behavior.

The Methodists' belief that salvation was not limited to the elect predestined by God was conducive to social egalitarianism. The Wesleys and their fellow travelers actively evangelized among people neglected by the established church: workers in the new industries of the Industrial Revolution, including factory hands and coal miners. Early Methodist worship often included lay preaching and prayer leading, sometimes by people who would not be admitted to Church of England ministry, including women, slaves, and people with limited formal education. Methodist evangelists avoided complex theological wrangling. Although John Wesley taught that the Bible was the sole reliable source of guidance for Christians, Methodist preachers seldom engaged in analysis of obscure passages, relying instead on simple parables, clear directives, exhortations to avoid sin, and congregational hymn singing to draw great numbers to the faith. Methodists were urged to avoid intoxicants, swearing, and levity; they were to wear simple and modest clothing and not indulge in extravagance or wastefulness. As the movement evolved into several denominations, the Methodist chapels drew congregants from impoverished or struggling communities who felt unwelcome at exclusive Anglican churches or intimidating cathedrals. The lack of ceremony and emphasis on moral discipline led some observers, including Charlotte Brontë and Charles Dickens, to depict Methodists as dour and humorless. Methodism has splintered into many different communities; more than forty denominations worldwide identify themselves as Methodist, and many others have some historical relationship to the Wesleyan movements.

—Jane Weiss

Bibliography

Cracknell, Kenneth, and Susan J. White. *An Introduction to World Methodism*. New York: Cambridge University Press, 2005.

Warner, Wellman J. *The Wesleyan Movement in the Industrial Revolution*. New York: Russell & Russell, 1967.

Weiss, Jane. "Methodism." In *Encyclopedia of the Age of the Industrial Revolution*, Vol. 1, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.

The Religion of Reason in Revolutionary France

Along with the Reign of Terror, the introduction of a so-called Religion of Reason was one of the most controversial and important aspects of Year II (1793–1794) of the French Revolution. In the space of a few months, the revolutionaries, led by Jacques-René Hébert (1757–1794) and Pierre-Gaspard Chaumette (1763–1794), tried to uproot France's historical adherence to Catholicism and to promulgate an alternative to Christianity. As part of the general state-sponsored de-Christianization campaign, which included the rationalization and secularization of a society where religion occupied a central place in daily life, this cult of reason involved an attempt by the state to suppress Christianity and replace it with a new revolutionary culture. Cult supporters sought to eradicate all the institutions, practices, and beliefs of the ancien régime—which they characterized as a society based on fanaticism, superstition, injustice, inequality, and privilege—and to replace them with a new system based on reason, liberty, equality, and fraternity. The origins of this rational religion stemmed from the Enlightenment's critique of religion and the Church and its characteristic attachment to reason as well as from the schism caused by the Civil Constitution of the Clergy (1791).

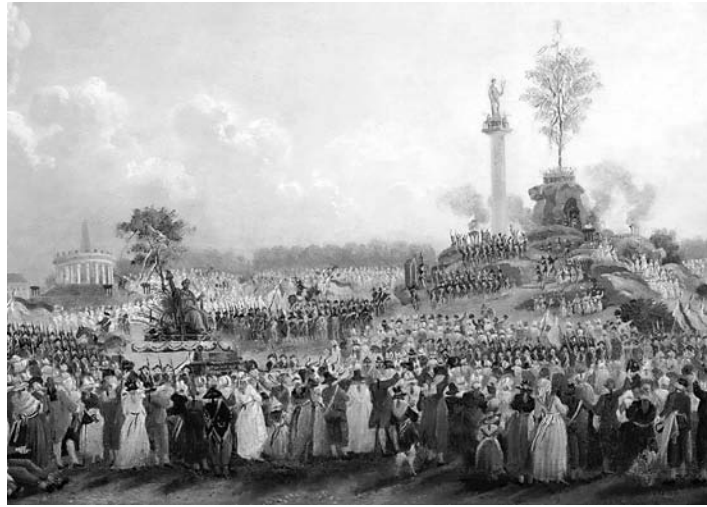
At the urging of Chaumette, in November 1793 the Paris Commune ordered churches of all denominations to be destroyed or to be closed and converted into arms repositories, schools, granaries, or municipal buildings. After being thus purified of their Christian associations, some were turned into Temples of Reason, where, according to its proponents, the formation of loyal citizens would take place. The most notable example of this is Notre Dame

cathedral, which served as a food warehouse and had many of its treasures stolen or destroyed. It was also converted into a Temple of Reason and later hosted the Festival of Reason on November 10, 1793.

Through a series of festivals designed to entertain and to reeducate the citizenry through the inculcation of republican and patriotic values, the revolutionaries created their own sacred spaces by drawing upon revolutionary ideology. Saints were replaced by revolutionary martyrs such as Jean-Paul Marat (1743–1793) and Louis-Michel Lepeletier de Saint-Fargeau (1760–1793). Other religious imagery was replaced by revolutionary symbols, including the tricolor flag, Liberty trees, and the red Phrygian cap, a symbol of freedom and the search for liberty. Church bells and other valuables were melted down for the revolutionary cause, while crosses, statues of saints, and confessionals were burnt at bonfires.

With this quasi-religious adherence to reason came the introduction of the new revolutionary calendar. Although adopted on October 5, 1793, by the National Convention, this new dating system retroactively established September 22, 1792 (1 Vendémiaire Year I), as its starting point to commemorate the proclamation of the French Republic and to inaugurate the new Republican Era. The Gregorian calendar was discarded and replaced with one that emphasized reason, nature, and agriculture; rationally divided the newly renamed 12 months into three ten-day units (*décades*); replaced Sunday with the Tenth Day (*décadi*); and eliminated saints' names and Christian feasts. The republican calendar survived until January 1, 1806, when it was abandoned by Napoleon. A similar process also involved the renaming of people, streets, and geographical locations so that all Christian references were replaced with the names of heroes of antiquity and the revolution.

Maximilien Robespierre (1758–1794) believed that these excesses destabilized the republic and would lead to unwarranted opposition. He responded by introducing an official cult of the Supreme Being, that drew on elements of Jean-Jacques Rousseau's (1712–1778) theistic civil religion. Robespierre hoped that



The Festival of the Supreme Being at the Champ-de-Mars, July 8, 1794, by Pierre-Antoine Demachy. The Cult of the Supreme Being was part of the de-Christianization campaign sponsored by Robespierre and the Jacobins. The intent was to make it the state religion of France, but the experiment was abandoned following the fall of the Jacobins in 1794. (Gianni Dagli Orti/Corbis)

➤ THE CULT OF REASON

The Culte de la Raison (Cult of Reason) was epitomized in the Festival of Reason held in the cathedral of Notre Dame on November 10, 1793. Although the cult had many local variations, it was a civic, naturalistic religion centered on the worship of liberty and reason. It featured women impersonating goddesses of Reason and was devoid of any Christian association. It was viewed by the devout as atheistic, Jacobin revelries. The cult also focused on defending the nation, the Revolution, and popular sovereignty. It emphasized the importance of civic rights and duties and the need to obliterate the memory of the past. Reason was depicted as the destroyer of fanaticism and superstition.

—Joan Gonzalez

this new moderate cult would help restore political and religious stability. The Cult of Reason was thus officially ended, and Hébert and Chaumette were subsequently guillotined in the spring of 1794. Temples of Reason were gradually replaced by Temples of the Supreme Being, and the Festival of the Supreme Being was

held on June 8, 1794. The establishment of this new religion partly contributed to Robespierre's downfall and the end of the Terror.

De-Christianization was spread by the sans-culottes, representatives on mission, citizen armies, and members of clubs and patriotic societies, yet it had little success because the average French person was not interested. This was especially true of women, who by keeping religious rituals alive became the leading opponents of de-Christianization and the Cult of Reason. While unsuccessful and disastrous in the short term, this episode permanently altered the relationship between church and state and greatly affected religious life and practice in France for the next two centuries.

—Joan Gonzalez

Bibliography

- Aston, Nigel. *Religion and Revolution in France, 1780–1804*. Washington, DC: Catholic University of America Press, 2000.
- Ozouf, Mona. *Festivals and the French Revolution*. Translated by Alan Sheridan. Cambridge, MA, and London: Harvard University Press, 1988.
- Vovelle, Michel. *The Revolution against the Church: From Reason to the Supreme Being*. Translated by Alan José. Columbus: Ohio State University Press, 1991.

The Established Churches in Nineteenth-Century Europe

Also called state churches, established churches are officially recognized and subsidized by the government of a nation. After the French Revolution, the established Catholic churches in France and Spain reorganized to adjust to the decline of their social and political influence. In England and Germany, evangelical revivals challenged the spiritual monopoly of the established Protestant churches. And the Orthodox churches of Russia and Greece gained autonomy from the traditional leader of Orthodoxy, the patriarch of Constantinople.

In France, the prerevolutionary Gallican Church was wealthy, powerful, and closely allied with the monarchy. During the French Revolution the Civil Constitution of the Clergy (1790) required clerics to take oaths of loyalty to the state, abolished monastic orders, and provided

for the popular election of bishops. The Concordat of 1801 signed between Napoleon and Pope Pius VII (r. 1800–1823) governed postrevolutionary relations between France and the Church. Although the Concordat acknowledged Catholicism as the religion of the French people, it did not recognize Catholicism as the official religion of France. After the Bourbon Restoration of 1814, church-state relations continued to be governed by the Concordat. For the remainder of the century France pursued a policy of *laïcité*, or complete separation of church and state. During the Third Republic, the principle of *laïcité* was fully realized with a 1905 law that precluded the French state from recognizing or subsidizing any religion.

The early-nineteenth-century Spanish Catholic Church was associated with the absolutism of Ferdinand VII (r. 1813–1833). Upon assuming the throne, Ferdinand set aside the Constitution of 1812, which set limits on the monarch's power, and revived the Inquisition with the backing of the Church. After suffering serious political and financial losses in the Peninsular War of 1815, Spanish monasteries fell into disrepair, and the Spanish Church was too poor to maintain its traditional social responsibilities. The ineffectiveness of the Church and its association with absolutist monarchy provoked anticlericalism and further weakened the social authority of the Church.

Evangelical revivals challenged the established Anglican Church in England. English revivals promoted puritan behavior, missionary work, and Bible reading. These revivals were typically led by nonconformist congregations, including Baptists, Methodists, Presbyterians, Quakers, and Unitarians. Referred to as low churchmen, nonconformists were denied civic rights enjoyed by orthodox Anglicans. The orthodox high-church Anglicans sought to preserve the status and privileges of the Anglican Church as a national institution amid calls for emancipation of the nonconformists and the disestablishment of the Church. Campaigns for emancipation led to a repeal of the Test and Corporation Acts in 1828 and the passage of the Catholic Relief Act in 1829, allowing nonconformists and Catholics to hold public office. At the same time, the Oxford Movement

was initiated by John Keble (1792–1866), Edward B. Pusey (1800–1882), and Richard Hurrell Froude (1803–1836) to reintroduce Catholic traditions into the Anglican Mass. The movement was academic and clerical, finding little resonance among the laity. But it did lead to the establishment of Anglican religious orders and a renewal of the liturgy. Several supporters of the movement, notably John Henry Newman (1801–1890), eventually left the Church of England and converted to Catholicism.

The Lutheran Church was established in the German states and Scandinavian countries. In Prussia, King Friedrich Wilhelm III (r. 1797–1840) combined the Lutheran and Reformed churches into a single Evangelical Christian Church in 1817, which produced dissent among both Lutheran and Reformed congregations. Similar unions were effected in the Rhineland-Palatinate (1818), Baden (1821), Hesse (1822), and Württemberg (1827). Churches in the German states witnessed revivals that lasted into the 1840s. Inspired by the Lutheran spiritual movement known as Pietism, these revivals advocated individual piety, spiritual inwardness, and righteous living in reaction to the Enlightenment rationalization of religion and an ossified orthodox Lutheranism. Pietism and the nineteenth-century German revivals influenced the theologian Friedrich Schleiermacher (1768–1834), who posited religion as a feeling of absolute dependence and emphasized the personal experience of religion over its objective elements, such as ritual and morality. Schleiermacher's liberal theology engendered a cultural Protestantism whose proponents sought to accommodate Protestant Christianity to nineteenth-century German bourgeois culture.

The nineteenth-century Orthodox Churches were nationally administered but maintained a common profession of faith. Since the reign of Peter the Great (r. 1682–1725) the Russian Orthodox Church had been administered by a Holy Synod, whose procurator was a layman appointed by the tsar. Eastern Orthodox subjects of the Ottoman empire were under the pastoral care of the patriarchate of Constantinople. As Greece won its independence, the Greek Orthodox Church severed itself from the authority of the patriarch and adopted a Holy Synod. As their

POPULAR PIETY IN NINETEENTH-CENTURY EUROPE

Church attendance declined in European cities during the nineteenth century, especially among the urban working class. Despite this decline, European Christians expressed their devotion by joining extraecclesiastical lay organizations, confraternities, student Christian associations, and missionary societies. Institutions of Christian sociability such as the YMCA (1844), the YWCA (1894), and the Salvation Army (1878) appeared in nineteenth-century English cities and combined evangelism, social work, sport, prayer, and Bible study. Missionary societies such as the English Baptist Missionary Society (1792) and the British and Foreign Bible Society (1804) ministered to the working class at home and to non-Christians in the European colonies. Over the course of the century women were also increasingly accepted as missionaries. This coincided with the increasingly prominent role that women were taking in their parishes and congregations. This rise in female piety corresponded with the growth of Marian devotion and Rosary societies among nineteenth-century Catholics. Marian devotion was facilitated by the Catholic Church's dogmatization in 1854 of the Immaculate Conception of Mary. Pilgrimages to the sites of Marian apparitions in Lourdes (1858) and Marpingen (1876) testify to the level of popular Marian devotion. Declining church attendance during the nineteenth century did not necessarily imply a secularization of European religion. Instead, it may underscore the new and diverse extraecclesiastical means by which Europeans could manifest their spirituality.

—Stan Landry

nations won independence, Orthodox Churches in Bulgaria, Romania, and Serbia also claimed autocephaly.

—Stan Landry

Bibliography

- Aston, Nigel. *Christianity and Revolutionary Europe, 1750–1830*. Cambridge: Cambridge University Press, 2002.
- Latourette, Kenneth Scott. *Christianity in a Revolutionary Age*. 5 vols. New York: Harper, 1958–1962.
- Vidler, Alec R. *The Church in an Age of Revolution: 1789 to the Present Day*. London: Penguin, 1974.

Catholic Cults of Miracles in France, Italy, and Spain

The nineteenth-century cult of miracles was part of a revival of popular Catholicism that took root after the French Revolution and the Napoleonic wars. Long in decline, the cult of miracles provided an outlet for Catholics to articulate a range of local, regional, and transnational concerns on their own terms. Varying in size, pilgrimages to sacred shrines and the veneration of relics and saints were a dramatic and public expression of the faith that helped focus discontent with trends of secular rationalism. Frequently a threat to secular and ecclesiastical authority, popular devotion brought about new forms of cooperation and oversight between clerics and laypersons and helped transform the Church from one based on territorial sovereignty to one based on popular support.

Though connected to important changes in both the Church and society throughout Europe, the cult of miracles was centered mainly in Italy, Spain, and France, where revolutionary upheaval, anticlericalism, and the shifting political fortunes of the Church were particularly acute. In Italy, the cult of St. Philomena, said to be a young Greek princess martyred in the fourth century, was revived when the discovery of the catacombs under Rome in 1802 supposedly led to the discovery of her bones and an alleged vessel containing her blood. In Spain, Marian

devotion helped provide an important antidote to those who saw anticlericalism as an instrument of modernization. But it was at Lourdes in France that the cult of miracles made its most dramatic reappearance. In 1858, Bernadette Soubirous went out with her sister and friend to collect wood. Falling behind her companions, Bernadette stopped to rest in a grotto near the Gave de Pau River. There she claimed to see the radiant figure of a young girl who, over the course of 18 such appearances, declared herself to be the Immaculate One conceived without sin and told Bernadette to build a chapel on the site of a hidden underground spring.

Part of a wave of similar apparitions that swept across Europe involving young girls in rural areas who claimed to be conduits for warnings about the poor moral state of society, Lourdes became an international pilgrimage site for millions who believed that its waters have healing powers. It has also become a focal point of attack for those who criticize the Church for promoting superstition. Lourdes nevertheless also represents an enduring symbol of Catholicism's complex adaptation to the modern world. As an icon of suffering, Mary is an especially powerful symbol among the poor and oppressed, whose devotion was encouraged by no less a figure than Pope Pius IX (r. 1846–1878). By dogmatizing Mary's Immaculate Conception on December 8, 1854, he legitimized the cult of miracles and promoted a renewed commitment to religious life

➤ CATHÉRINE LABOURÉ AND THE “MIRACULOUS MEDAL”

In 1830, the Parisian nun Cathérine Labouré claimed to have been visited by the Virgin Mary after eating a small piece of cloth that belonged to Saint Vincent, the founder of her order, the Daughters of Charity. The event struck a deep chord in French society and inspired an outpouring of Marian devotion. It was the first Marian apparition in almost 300 years and inaugurated the modern era of Marian apparitions. That Mary was also said to have announced her own birth “free from sin” in these apparitions gave a powerful impetus to the movement to dogmatize her

immaculate conception in 1854. In 1832, commemorative medals depicting the event were struck and were credited with saving people from cholera and with inspiring conversions. On the medal Mary is surrounded by the words “O, Mary, conceived without sin, pray for us who have recourse to thee.” On the reverse side below the large “M,” supported by a cross with a bar at its base, are shown the Sacred Heart of Jesus crowned with thorns, and the Immaculate Heart of Mary pierced with a sword.

—Richard Schaefer

that manifested itself in an explosion in religious orders across Europe. The centrality of Mary and the fact that the overwhelming number of the new religious devotees were women were part of a feminization of religion that involved a decided preference for female iconography and increased female participation in religious life in the nineteenth century.

—Richard Schaefer

Bibliography

- Atkin, Nicholas, and Frank Tallett. *Priests, Prelates and People: A History of European Catholicisms since 1750*. Oxford: Oxford University Press, 2003.
- Blackbourn, David. "The Catholic Church in Europe since the French Revolution." *Society for Comparative Study of Society and History* 33 (1991): 778–790.
- Clark, Christopher, and Wolfram Kaiser, eds. *Culture Wars: Secular-Catholic Conflict in Nineteenth-Century Europe*. Cambridge: Cambridge University Press, 2003.
- Harris, Ruth. *Lourdes. Body and Spirit in the Secular Age*. New York: Penguin, 1999.
- Kselman, Thomas A. *Miracles and Prophecies in Nineteenth-Century France*. New Brunswick, NJ: Princeton University Press, 1983.

Catholic Responses to Modernity—Pius IX, the *Syllabus of Errors* and the Vatican Council of 1870

As the modern principles of liberalism, nationalism, and democracy threatened to undermine the social and political influence of the Roman Catholic Church, the papacy responded by consolidating its ecclesiastical power with the creation of new dogmas and the condemnation of false doctrines. Hallmarks of this campaign included the elevation of the doctrine of the Immaculate Conception of Mary to dogma in December 1854 and the promulgation of the *Syllabus of Errors* in 1864. Pius IX (r. 1846–1878) completed this program by decreeing the dogma of papal infallibility at the Vatican Council of 1869–1870.

Pius IX began his pontificate by introducing liberal reforms to the Papal States. Although

OLD CATHOLICS

Founded in Munich in 1871 and led by the German theologian and historian Johann Joseph Ignaz von Döllinger (1799–1890), Old Catholics professed adherence to Catholicism but asserted independence from papal authority, seeking to maintain the historic traditions of the early Church in the face of modern innovations such as the dogmas of the Immaculate Conception and papal infallibility. Old Catholics elected bishops by vote of priests and the congregation, held services in German, and allowed clerics to marry.

—Stan Landry

sympathetic toward reform and Italian nationalism, he alienated republicans and liberals by refusing to concede to further political demands, such as granting a constitution to the Papal States. A republican-inspired revolution reached Rome in November 1848, and Pius fled the city. He returned in April 1850, restored by French forces.

As a result of his personal experience of the revolutions of 1848, Pius judged liberalism and its principles—freedom of speech, freedom of religion, separation of church and state, and representative government—as grievous threats to the Church. In December 1864 Pius condemned these principles in the *Syllabus of Errors*, a summation of 80 principal errors and false doctrines that had been censured in previous papal encyclicals. It included condemnations of rationalism, socialism, communism, secret societies, Bible societies, religious toleration, freedom of conscience and speech, and the separation of church and state. One article condemned the notion that the pontiff should reconcile himself to “progress, liberalism, and modern civilization.” The syllabus was received with zeal by strong Catholic supporters of papal authority and with malicious delight by freethinkers and the republican press. In it the latter found proof of the backwardness of the papacy. The syllabus caused indignation among non-Catholics and confusion among Catholics living in liberal-democratic states who found it difficult to exercise their civic rights and remain obedient to the Church.

The Vatican Council met from December 1869 until September 1870, when the council adjourned without reconvening after an Italian national army entered the city to complete the unification of Italy. Pius opened the council with an address warning of the dangers of liberalism and reaffirming that his temporal authority over Rome was necessary for the maintenance of the Church. Although some feared that the council had been convened to elevate the *Syllabus of Errors* to dogma, the paramount agenda concerned the ecclesiastical authority of the pope. Despite minor opposition from some bishops, the council codified the dogma of papal infallibility. Representing the triumph of ultramontanism, an ideology committed to elevating the authority and power of the pope within the Church, this dogma protected the pope from error when defining any doctrine relating to faith or morals. While the pope was helpless to retain his temporal power in the face of nineteenth-century social and political movements such as liberalism, nationalism, and democracy, his articulation of new dogmas, condemnation of errors and false doctrines, and consolidation of ecclesiastical power ensured the spiritual vitality of Catholicism into the next century.

—Stan Landry

Bibliography

- Bury, J. B. *History of the Papacy in the Nineteenth Century: Liberty and Authority in the Roman Catholic Church*. New York: Schocken Books, 1964.
- Hasler, August. *How the Pope Became Infallible: Pius IX and the Politics of Persuasion*. Translated by Peter Heinegg. Garden City, NY: Doubleday, 1981.
- Jodock, Darrell, ed. *Catholicism Contending with Modernity: Roman Catholic Modernism and Anti-Modernism in Historical Context*. Cambridge: Cambridge University Press, 2000.

Catholic Responses to Science and Industrialization—Leo XIII and *Rerum Novarum*

During the nineteenth century, the theory of evolution challenged the faith of Roman Catholics by contradicting the literal account of the

book of Genesis and seemingly questioning the singular importance of the human species. New doctrines such as positivism challenged religious faith by claiming that science and sense experience alone were the only paths to knowledge. At the same time, industrialization focused attention on working-class poverty, deepened class antagonism, and gave rise to the revolutionary ideologies of socialism and communism. To reconcile Catholic thought to modern science and address the social question, Pope Leo XIII (r. 1878–1903) offered Catholic solutions that mediated between the extremes of positivism and antiscience on the one hand and unrestricted capitalism and socialism on the other. His two most important encyclicals, *Aeterni Patris* (1879) and *Rerum Novarum* (1891), suggested how Catholics might engage science and the social question while remaining faithful to the Church.

Aeterni Patris (Of the Eternal Father) encouraged the revival of the Scholastic philosophy of Thomas Aquinas (1225–1274) as a system that could reconcile the Church to modern science. The encyclical described science as a secondary branch of metaphysics and as meaningless outside of its metaphysical context. Scholasticism provided this context by positing God as the ultimate cause of all phenomena and underscoring the belief that scientific investigation and discovery illustrated the magnificence of God's creation. Science was not an end in itself but a means of apprehending and glorifying God. Accordingly, the encyclical maintained that there was no scientific truth that could be inconsistent with the Catholic faith.

Rerum Novarum (Of New Things) addressed the condition of the poor and the working class in industrial society and became the foundation for modern Catholic social thought. The pope condemned both unchecked capitalism and communism, rejecting the former for its amorality and the latter for fomenting class antagonism and for its ultimate goal of the common ownership of property. Although Leo maintained that the state was responsible for ensuring the social welfare of its citizens, he rejected state paternalism as a form of state socialism destructive to the family. He countenanced trade unions and the general



Pope Leo XIII, elected to the papacy in 1878, sought to redefine certain Church teachings to bring them in line with the rapid social, economic and political developments of the nineteenth century. (Library of Congress)

strikes as a last resort but not violence or class war. The encyclical also enumerated the duties of individuals to each other, including patience, fairness, and charity. It also sought to remove the social stigma of poverty, a stigma reinforced by nineteenth-century bourgeois associations of poverty with immorality. Leo reminded laborers of the dignity of work and that poverty was no disgrace in God's eyes. For his sympathy and efforts on behalf of the poor and laboring classes, Leo earned the title of "worker's pope."

Leo's willingness to reconcile science to Catholicism ensured a continuing and fruitful engagement between modern science and the Church. His proposal of a Catholic solution to the social question offered an alternative between ideological extremes and inspired Christian democratic movements that are extant today. Overall, the reforms of Leo XIII helped to

➤ CHRISTIAN DEMOCRACY

This European social and political lay movement, dedicated to improving conditions of the poor and working classes, was founded in response to *Rerum Novarum*. Animated by the Christian duty to realize social justice and to ameliorate poverty, Christian Democracy represented an alternative to liberalism and socialism. Emphasizing the importance of community but acknowledging the worth of the individual, Christian Democrats affirmed the dignity of work and professed respect for law, order, and property rights. European Christian Democrats rejected violence, class warfare, and revolution as means of social reform. Although they accepted social hierarchies, Christian Democracy was open to all members of society regardless of class or confession.

—Stan Landry

usher the Roman Catholic Church into the modern world.

—Stan Landry

Bibliography

- Chadwick, Owen. *A History of the Popes, 1830–1914*. Oxford: Oxford University Press, 1998.
- Gargan, Edward T. *Leo XIII and the Modern World*. New York: Sheed and Ward, 1961.

Dutch Reformed Christianity and Afrikaner Identity in South Africa

Afrikaners have been described by various authors as the "white tribe of Africa" in order to reflect both their European origins and their rootedness in Africa. As the offspring of seventeenth-century European colonists—mainly Dutch, French, German and British—who today have no other homeland than Africa, they lead an often ambivalent existence, between African and European. The Dutch, French, and German colonists were welded through intermittent intermingling with indigenous African people into the Afrikaner population of today.

THE CHURCH AT WAR

The Second Anglo-Boer War took place from 1899 to 1902. The British forces could not subdue the Boer commandos who fought a guerrilla war. The Dutch Reformed Church went to battle with the Afrikaner forces in this war. Many Dutch Reformed ministers voluntarily either served as chaplains or actively took part in the fighting. Shared experiences during this war truly welded church and volk (“people”) together as one. Dutch Reformed chaplains also went with the Boer captives to prisoner-of-war camps in Ceylon and India for several years, drawing church and volk, Dutch Reformed Christianity and Afrikaner identity, even closer together.

—Willem Saayman

Yet their lighter skin color and unique language have remained as a reminder of their ambivalent existence. Incipient racism characterized European colonization of the Cape Colony in 1652. European colonists considered themselves to be superior to the indigenous inhabitants as a result of cultural ethnocentrism (determining factors were Christian belief, standards of civilization, and education). Over time a variety of historical factors changed that ethnocentrism into full-blown racism. Thus, racism had been alive and well in South Africa long before the Afrikaners achieved political power over the whole of South Africa in 1910. The first legislative measures that instituted the racist ordering of South African society were indeed formulated and introduced by the colonial government already in the nineteenth century upon instigation by the mining conglomerates, whose ownership was mainly non-Afrikaans. Blacks did not volunteer to work in the mines in sufficient numbers, so measures such as the poll tax had to be instituted to force them into the cash economy. This led to the development of a huge racist, migrant labor industry, which necessitated racist socioeconomic ordering of movement and housing.

Afrikaners also enthusiastically embraced the racist ordering of society, as was especially reflected in the dominant Afrikaner church, the

Dutch Reformed Church. The Dutch Reformed Church instituted racially separated churches for its members and converts toward the middle of the nineteenth century. In Afrikaner minds therefore, racial separation had practical as well as divine sanction. There is thus an inherent correlation between Dutch Reformed Christianity and Afrikaner identity. The racist structuring of the political economy in South Africa was therefore simpler than political expediency; it was considered also as a divine imperative. The already intimate link between the Dutch Reformed Church and Afrikaner people (“volk”) was immensely strengthened as a result of the suffering of Afrikaner people during the Second Anglo-Boer War (1899–1902). This war was intimately linked to the struggle for political hegemony over the mineral resources of southern Africa. In order to win the war, the British forces applied a scorched-earth policy, destroying Afrikaner farmsteads and herding women and children into barbaric concentration camps, where 28,000 (a huge proportion of the Afrikaner population at the time) died. This led to huge losses also in possessions and fixed properties, and it is estimated that Afrikaners in general and the Dutch Reformed Church in particular retained only 5 percent of their farms, manses, and church land. After these traumatic events the Dutch Reformed Church and Afrikaner people were basically one in mind and spirit. The Dutch Reformed Church became the guarantor of the Afrikaans language (with Afrikaans replacing Dutch in church services) and culture (especially Christian National schools). When South Africa became the independent dominion of the Union of South Africa in 1910, it was therefore impossible to describe Afrikaner identity without reference to Dutch Reformed Church spirituality. This link was to grow much stronger in the ensuing decades of the twentieth century.

—Willem Saayman

Bibliography

- Giliomee, Hermann Buhr. *The Afrikaners: Biography of a People*. Charlottesville: University of Virginia Press; Cape Town: Tafelberg Publishers, 2003.
- Templin, J. Alton. *Ideology on a Frontier: The Theological Foundation of Afrikaner Nationalism, 1652–1910*. Westport, CT: Greenwood, 1984.

Mormonism—Founding and Early History

Emerging from the sectarian strife of the Second Great Awakening, the religious revival that swept through much of the United States from around 1800 through the 1830s, the Church of Jesus Christ of Latter-day Saints became the first new religious tradition founded in the United States. It was inspired by Joseph Smith Jr. (1805–1844), whose family moved from Vermont to western New York shortly after his birth. Concerned about finding God’s true church among the contending denominations, as a 14-year-old he retreated to a forest in Palmyra, New York, where he claimed to have a vision of God and Jesus Christ, who instructed him that he would become the instrument by which Christ’s primitive church would be restored to the earth.

Smith claimed to have received additional visions in which he was led to an ancient book of scripture composed of unusual hieroglyphics engraved upon pages of beaten gold. It came to be known as *The Book of Mormon*, named after the ancient Native American prophet who compiled it. Smith dictated a translation of these hieroglyphics over the course of three months. The exact nature of his translating abilities remains controversial. Witness accounts record Smith making translations while looking into a hat that contained a peep stone or seer stone, a folk divination practice once popular in the eastern United States.

The publishing of *The Book of Mormon* in 1830 created immediate controversy with mainstream Protestant sects, which considered his claims heretical. Nonetheless, Smith recruited enough converts to formally establish his “Church of Christ” in April of that year. Eight years later he expanded the name to “The Church of Jesus Christ of Latter-day Saints” to differentiate it from Jesus’s original church. Enemies of the movement took to calling its members Mormons. Despite its pejorative roots, today the church widely accepts the term.

Early Mormon doctrines included a belief that Native Americans were descended from the Tribes of Israel and that Jesus Christ would soon return to America to establish his kingdom

on earth. Latter-day Saints were charged with preparing the way for that return through proselytizing and gathering together to build the utopian City of Zion in Missouri.

Smith’s missionary efforts bore fruit when a community of Christian communalists in Kirtland, Ohio, Alexander Campbell’s Disciples of Christ, converted nearly en masse to Smith’s church during the winter of 1830–1831. Smith in turn embraced the converts’ cooperative economic system and made it a part of his evolving theology. When persecution in New York threatened the fledgling church, Smith moved his community to Kirtland. He then used Ohio as a base to settle near Independence, Missouri. For several years the Latter-day Saints lived in both states.

Smith’s doctrines and practices alienated many Americans. In addition, the Mormon practice of gathering the membership of the church together into distinct communities challenged both the political power and goodwill of the Mormons’ neighbors. They soon found themselves under attack in both Ohio and Missouri. In Missouri, violence peaked in 1838 when Governor Lilburn Boggs declared the Mormons to be in a state of rebellion and ordered them to leave or face extermination. In the ensuing violence, Missouri militia killed all the males of one Mormon community and arrested Smith and other church leaders. Smith and his colleagues escaped execution but were kept for several months in an underground jail in the town of Liberty.

While Smith was in jail, the church moved to a swampy parcel of land on the Illinois bank of the Mississippi River. In 1839, Smith and other leaders escaped from jail and joined the main body of the church in this new town, which they called Nauvoo. In Nauvoo, Smith planned to build his utopia. After securing a town charter from the state legislature, he began to build his dream. Nauvoo flourished, and thousands of converts made their way up the Mississippi River to join the Latter-day Saints. The Mormons continued to attract opposition, however, especially because of their teachings on polygamy. The doctrine of plural marriage had been stated by Smith as early as 1831, although initially

Mormons practiced polygamy in secret and limited its practice to the leadership of the church. When Smith expanded the practice in Illinois, citizens and politicians in Illinois came to view the Mormons as threats to Christianity, family structure, and the social-political order. The Mormons once again faced forced expulsion.

In the spring of 1844, Smith considered Texas, California, and the Oregon Territory as places to relocate his church outside the reach of the federal government. Before any plans could be solidified, Smith destroyed the press of an opposition newspaper that threatened to expose Mormon polygamy. In the ensuing controversy, state militia prepared an assault on Nauvoo to arrest Smith for treason. He surrendered to Illinois authorities in an attempt to deflect violence against his congregation, but while in custody a mob killed the 38-year-old Smith and his brother.

After Smith's death, a succession crisis threatened the survival of the church. Brigham Young, the leader of Smith's Quorum of the Twelve Apostles, eventually assumed leadership. Other leaders also stepped forward, however, and the church splintered. In the winter of 1846, the state militia forced the last Mormons out of Illinois. A majority of the church followed Young into the Salt Lake Valley, which in 1847 was in Mexican territory but in 1848 became part of the United States after the Mexican War. Young and subsequent leaders continued to resist federal authority in the modern state of Utah into the twentieth century. Much of Smith's family remained in the Midwest and reorganized the church under the leadership of Smith's eldest son, Joseph III. This branch of Mormonism recently renamed itself the "Community of Christ" and maintains headquarters in Independence, Missouri.

—Michael Van Wagenen

Bibliography

- Arrington, Leonard J., and Davis Bitton. *The Mormon Experience: A History of the Latter-day Saints*. 2nd ed. Urbana: University of Illinois Press, 1992.
- Bushman, Richard Lyman. *Joseph Smith: Rough Stone Rolling*. New York: Knopf, 2005.
- Compton, Todd. *In Sacred Loneliness: The Plural Wives of Joseph Smith*. Salt Lake City: Signature Books, 1997.

Shipps, Jan. *Mormonism: The Story of a New Religious Tradition*. Urbana: University of Illinois Press, 1987.

Muscular Christianity

Muscular Christianity was an international religious movement that helped shape modern ideas of the body, race, and masculinity around the world. Indeed, the popular movements of physical culture, social Darwinism, urban progressivism, and eugenics owe a great deal to this Christian philosophy.

The term "muscular Christianity" first appeared in the 1850s in England to describe the writings of novelists such as Thomas Hughes, who argued that asceticism and effeminate sentimentalism had weakened the Anglican Church. By the turn of the century, muscular Christianity had spread throughout the United States thanks to leaders such as the Social Gospel minister Josiah Strong (1847–1916). The movement's proponents argued that Christians needed to cultivate not only their spiritual and mental strength but also their physical health. To glorify the body was to glorify God. In particular, Anglo-Saxon Christian men had a special responsibility to develop their physiques for the battles of modern life.

The muscular Christianity movement was in large part a cultural response to the social changes of the late nineteenth and early twentieth centuries. In countries such as Britain and the United States, this religious movement stemmed from widespread anxieties over urbanization, industrialism, immigration, and imperial expansion. The increasing movement of rural folk into the cities, as they became the wage-labor workforce for factories, inspired popular theories about the relationship between urban living and the deterioration of human health. Many Christian progressives blamed the high population densities, poor ventilation, rundown housing, and inadequate sanitation of urban areas for sicknesses such as tuberculosis.

Muscular Christianity also addressed the vexing problem of maintaining racial, ethnic, and gender hierarchies in the modern world. Many intellectuals feared that overcivilized white men

► THEODORE ROOSEVELT, “MUSCULAR CHRISTIAN STATESMAN”

At the turn of the twentieth century, Theodore Roosevelt's public words and actions elevated the profile of muscular Christianity by linking ideas of political strength with rugged masculinity in the popular consciousness. Roosevelt had a long-standing fascination with competitive sport and exercise from his days as a Harvard student to his terms as the governor of New York and the president of the United States. After the July 1898 victory over Spanish troops at San Juan Hill, stories of his courageous military leadership of the Rough Riders made him an icon of American manhood. As

a statesman, his interest in physical fighting techniques became intertwined with his views on race and foreign affairs. In the wake of Russia's defeat in the Russo-Japanese War (1904–1905), Roosevelt developed a fascination for the Japanese art of jiu-jitsu. An avid boxer, Roosevelt took lessons from trainer Mike Donovan and even invited World Champion prizefighters for visits to the White House. Roosevelt believed that a national commitment to physical fitness was central to the international future of the United States.

—Theresa Runstedtler

were physically degenerating. G. Stanley Hall, a turn-of-the-century psychologist known for his preoccupation with the decline of old-stock Americans in the face of non-Anglo-Saxon immigration, touted the importance of regular exercise in addition to book learning. Furthermore, many prominent statesmen believed that the white race was literally in danger of dying out, as the population growth of Europe and North America lagged behind that of Asia and Africa. During imperial conflicts such as the Boer War (1899–1902) and the Spanish-American War (1898), the need for robust fighting men became a top priority for Britain and the United States. American president Theodore Roosevelt, an avid sportsman and advocate of the strenuous life, contended that the maintenance of global white control hinged on the development of rugged, virile men.

This cultural climate contributed to the idea that the strength of any nation was dependent on the strength of its individual citizens. White boys and men were encouraged to revisit the primitive elements of physical exertion, competitive sports, and outdoor living. This inspired the expansion of organizations such as the Boy Scouts and the Young Men's Christian Association alongside the first state programs for public health and physical education. Muscular Christianity also laid the foundation for the modern fitness industry. By the early 1900s the profitable business of physical culture had its own

publications (Britain's *Health & Strength* and America's *Physical Culture*) along with its own celebrities, such as German strongman Eugene Sandow and U.S. bodybuilder and publishing magnate Bernarr MacFadden.

—Theresa Runstedtler

Bibliography

- Bederman, Gail. *Manliness and Civilization: A Cultural History of Gender and Race in the United States, 1880–1917*. Chicago: Chicago University Press, 1995.
- Budd, Michael Anton. *The Sculpture Machine: Physical Culture and Body Politics in the Age of Empire*. New York: New York University Press, 1997.
- Hall, Donald, ed. *Muscular Christianity: Embodying the Victorian Age*. Cambridge: Cambridge University Press, 1994.
- Ladd, Tony, and James Mathisen. *Muscular Christianity: Evangelical Protestants and the Development of American Sport*. Grand Rapids, MI: Baker Books, 1999.
- Putney, Clifford. *Muscular Christianity: Manhood and Sports in Protestant America*. Cambridge: Harvard University Press, 2001.

Young Men's Christian Association

The Young Men's Christian Association (YMCA) originated in the mid-nineteenth century as a voluntary association to bolster the faith and mold the character of Protestant men and boys

and then evolved into a fee-based membership organization run by paid staff that provided varied services, including physical training, to both sexes and all ages. George Williams formed the first Young Men's Christian Association in 1844 in London, England, banding his fellow clerks together to preserve their faith amid urban temptations. During the early 1850s similar associations sprang up in North American cities, offering prayer meetings, Bible classes, libraries, and literary societies. Although the associations federated at the state and international (U.S. and Canada) levels, each level raised its own budget and remained independent, permitting the wide diversity of local programming that has characterized YMCAs to this day. Since in the nineteenth century even youths in white-collar jobs commonly worked at ages when their twentieth-century counterparts would have been schoolboys, early YMCAs admitted boys in their early teens as full members. By the 1870s, however, as the original members grew older, many YMCAs required a minimum age, usually sixteen.

At first predominantly evangelistic in their approach, YMCA men soon compromised between revivalist and antirevivalist Protestants, continuing to seek conversions but stressing the gradual growth in character preferred by antirevivalists. YMCAs of the 1860s and 1870s broadened their programs, erected buildings to house them, hired professional staff (known as "secretaries"), and defined their mission as improving young men mentally, socially, and physically, as well as spiritually. As a cult of muscular Christianity took hold among white-collar workers who wanted to be good, Christian, respectable, and yet manly, by the 1890s gymnasiums became the main attraction. There young clerks could work off troubling energies and strengthen a sense of masculinity that many argued was diminished by sedentary work, submission to a boss's orders, and the advent of female coworkers. In search of group activities less regimented than calisthenics, YMCA men invented two gymnasium games, basketball in 1891 and volleyball in 1895.

Early YMCA workers held weekly religious meetings and Bible study, often judging success by the numbers of boys who accepted Christ.

On the theory that character required control of all errant impulses, YMCA men put the boys through long gymnastic drills. In the 1890s, though, with the advent of team sports and swimming, recreation began to outweigh disciplinary training. Though both remained important into the 1920s, the balance shifted from conversion toward character building. This developmental approach gained strength around 1900 as boys' work specialists discovered adolescence. The new term, popularized by students of the psychologist G. Stanley Hall (among them Luther Gulick), gave concerns about youth a scientific-sounding rationale. Though a time of crisis when sexual and other new instincts flooded in upon teenagers, adolescence in Hall's view was also an era of great promise when religious conversion and idealistic enthusiasm were natural.

Most YMCA junior members were sons of the middle class. They could afford fees to use the gymnasium and pool, and most were promising recruits for the parent association, since the YMCA's founding fathers had restricted full membership to members of evangelical churches, defined in 1869 to mean orthodox Protestant denominations. Except in smaller northern cities in the United States where African Americans were few, YMCAs were racially segregated, with separate branches operating under black leadership. Despite their anger at white racism, college-educated elites commonly supported black YMCAs as safe public spaces free of white control and devoted to advancement of the young. Starting around the 1920s, the focus of YMCA programming grew more diffuse as local associations enrolled non-Protestants, women and girls, and young boys in addition to the teenage boys and the men of all ages who formed the YMCA's more traditional constituency.

—David I. Macleod

Bibliography

- Gustav-Wrathall, John Donald. *Take the Young Stranger by the Hand: Same-Sex Relations and the YMCA*. Chicago: University of Chicago Press, 1998.
- Hopkins, C. Howard. *History of the Y.M.C.A. in North America*. New York: Association Press, 1951.

- Johnson, Elmer L. *The History of YMCA Physical Education*. Chicago: Association Press, 1979.
- Macleod, David I. *Building Character in the American Boy: The Boy Scouts, YMCA, and Their Forerunners, 1870–1920*. Madison: University of Wisconsin Press, 1983.
- Macleod, David I. “Young Men’s Christian Association.” In *Boyhood in America: An Encyclopedia*, edited by Priscilla Ferguson Clement and Jacqueline S. Reinier. Santa Barbara, CA: ABC-CLIO, 2001.
- Mjagkij, Nina. *Light in the Darkness: African Americans and the YMCA, 1852–1946*. Lexington: University Press of Kentucky, 1994.

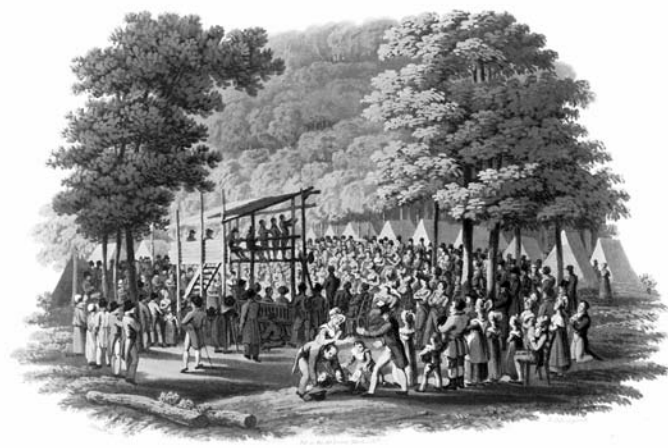
The Second Great Awakening

The First Great Awakening, the wave of religious revivalism of the 1730s and 1740s, had challenged the social order of New England, especially the established clergy, and provided the colonists with a common vocabulary of evangelicalism and millenarianism. By the 1770s much of the evangelical fervor had been subsumed into Patriot rhetoric, a conflation of political rebellion with assurances of God’s favor. Although the revival had sputtered by the middle of the eighteenth century and through the era of the American Revolution, evangelical enthusiasm continued during the final decades of the eighteenth century in the Maritime Provinces of Canada under the direction of Henry Alline and other revivalists. The Second Great Awakening, a series of revivals in the decades surrounding the turn of the nineteenth century, served to further ensconce evangelical Protestantism as the religion of the people. The Second Great Awakening convulsed three regions of the new nation: New England, especially northwestern Connecticut; the Cumberland Valley of Kentucky; and western New York, a region opened to settlement by the Erie Canal.

The religious revival in each region contributed to the Protestant tradition in America. The awakening in the South, also known as the Great Revival, made the camp meeting into an American institution. Building on the Scottish tradition of sacramental seasons, extended gatherings meant to foster piety, camp meetings provided both religious exhortation and social interaction for widely dispersed settlers. Usually marked by

religious enthusiasm, they became (and remain) commonplace, and by 1845 B. W. Gorham even published a camp-meeting manual on how to organize and conduct the events.

The Second Great Awakening in western New York fundamentally recast Protestant theology in America. Whereas the Puritans of New England had been Calvinists firmly committed to the doctrine of predestination, Charles Grandison Finney (1795–1875), a Presbyterian minister in Rochester, New York, and leader of the Second Great Awakening, taught a different theological scheme known as Arminianism, which the Puritans had regarded as heresy. Finney and his followers rejected the notion that God had elected some for salvation and that there was nothing individuals could do on their own to gain entrance into heaven. According to Finney, everyone had equal access to salvation, and salvation itself was merely a matter of individual choice or volition. Finney and other revivalists of his era took it upon themselves to convince and cajole their audiences to convert to evangelical Christianity, something that the Protestant preachers of an earlier era would have found heretical. Among a people who had recently taken their political destiny into their own hands, however, Finney’s assurance that they controlled their spiritual destiny as well proved to be enormously attractive. Revival preachers ever since—from Dwight L. Moody to Aimee Semple McPherson, from Billy Sunday to Billy



A Methodist camp meeting typical of the evangelism of the Second Great Awakening. (Library of Congress)

► CHARLES GRANDISON FINNEY, “WHAT A REVIVAL OF RELIGION IS”

In 1834 Charles Finney delivered a sermon on the need for “religious excitement” as a way to inspire individuals to commit themselves to Christianity. A brief excerpt follows:

“It is altogether improbable that religion will ever make progress among *heathen* nations except through the influence of revivals. The attempt is now making to do it by education, and other cautious and gradual improvements. But so long as the laws of mind remain what they are, it cannot be done in this way. There must be excitement sufficient to wake up the dormant moral powers, and roll back the tide of degradation and sin. And precisely so far as our own land approximates to heathenism, it is impossible for God or man to promote religion in such a state of things but by powerful excitements.—This is evident from the fact that this has always been

the way in which God has done it. . . . For instance, how many there are who know that they ought to be religious, but they are afraid if they become pious they shall be laughed at by their companions. Many are procrastinating repentance, until they are settled in life, or until they have secured some favorite worldly interest. Such persons never will give up their false shame, or relinquish their ambitious schemes, till they are so excited that they cannot contain themselves any longer.”

—Randall Balmer

Source

Charles Grandison Finney, *Lectures on Revivals of Religion*, Andover-Harvard Theological Library, Harvard Divinity School (New York: Leavitt, Lord, 1835), 11.

Graham—have (whether they acknowledged it or not) used Arminian theology to persuade sinners of their need for repentance.

Another legacy of the Second Great Awakening was social reform, a movement associated to some degree with all three theaters of the Awakening but especially with New England. The revival unleashed a great deal of optimism about the perfectibility not only of individuals but also of society. Protestants believed that they could bring on the millennium (1,000 years of righteous rule, predicted in the book of Revelation) through their own efforts. If they worked hard to reform the ills of society—drunkenness, the scourge of slavery, low rates of female literacy—then the millennium would begin here on Earth and, more particularly, in America. Thus, the Second Great Awakening helped inspire feminist, antislavery, and temperance movements, all three of which put their stamp on the development of the new republic.

—Randall Balmer

Bibliography

Balmer, Randall. *Blessed Assurance: A History of Evangelicalism in America*. Boston: Beacon, 1999.

Hatch, Nathan O. *The Democratization of American Christianity*. New Haven, CT: Yale University Press, 1989.

Heyrman, Christine Leigh. *Southern Cross: The Beginnings of the Bible Belt*. New York: Knopf, 1997.

Schmidt, Leigh Eric. *Holy Fairs: Scottish Communion and American Revivals in the Early Modern Period*. Princeton, NJ: Princeton University Press, 1989.

Stout, Harry S. *The Divine Dramatist: George Whitefield and the Rise of Modern Evangelicalism*. Grand Rapids, MI: Eerdmans, 1991.

Social Gospel

Social Gospel was a movement within late-nineteenth- and early-twentieth-century Protestantism that placed pastoral emphasis on social reform. It was largely a response to the formation of large corporations and the accompanying class antagonism. The Social Gospel (also referred to as “social Christianity” or “Christian Socialism”) derived from an intellectual shift within American Protestantism. Prior to the American Civil War, many mainstream

denominations of evangelical Protestants supported an individualistic social ethic and laissez-faire economic policies. The impact of industrial expansion, urbanization, and immigration in the Gilded Age, however, prompted several influential members of the clergy to place less emphasis on creeds, doctrine, and the private, individual salvation of the soul and more emphasis on true charity to address the nation's growing social problems. In part the Social Gospel was an effort to enhance the appeal of Protestantism in large cities where the Catholic Church was popular among the growing immigrant population. The movement also addressed the emerging labor movement and was a response to accusations that religious organizations were more sympathetic to capital than to labor.

The Social Gospel was intellectual in its origins, as liberal church leaders brought the teachings of Jesus to the social and economic questions of the day. The poverty resulting from the Panic of 1873 and the violent strikes during 1877 concerned church people; however, most still viewed trade unions with suspicion and feared state interference in the economy. A moderate approach to change was largely espoused in the book *Working Men and Their Employer* (1876), written by Washington Gladden (1836–1918), a minister who was the first major figure in the Social Gospel movement. He called on workers to unify under Christianity and originally believed that the application of the Golden Rule could bridge the growing divide between capital and labor.

Gladden would eventually advocate state-regulated capitalism, and he would be joined by several dynamic clerical and lay figures who would make the Social Gospel a national movement. Key figures include Josiah Strong, whose book *Our Country: Its Possible Future and Present Crisis* (1885) encouraged Protestants to participate in missionary work to the nation's inner cities and in the American West. The economics profession became part of the Social Gospel movement with the publication of Professor Richard Ely's *The Labor Movement in America* in 1886. Ely was a strong advocate of the right of workers to organize and founded an organization in 1885 rooted in the ideals of

the Social Gospel—the American Economic Association.

Several Social Gospel advocates toured the nation and lectured extensively on labor and social reform, most notably George Herron and William Dwight Porter Bliss. Herron gained fame for a sermon titled “The Message of Jesus for Men of Wealth” (1890). This sermon vilified the acquisition of wealth in the United States. Eventually Herron completely lost confidence in industrial capitalism and established The Kingdom Movement, a brand of social Christianity aimed at establishing “the Kingdom of God” on earth. Bliss, who supported the Knights of Labor, was among the many clergymen influenced by the Nationalist movement spurred by Edward Bellamy's utopian novel *Looking Backward, 2000–1887* (1888). He founded the Society of Christian Socialists and served as the editor of its publication *The Dawn*. The issues addressed in the teachings and writings of Social Gospel supporters were the abolition of child labor, higher wages, a shorter workweek, a living wage, and prison reform.

The Social Gospel fit well with the spirit of the Progressive Era, and its ideas were often reinforced by the exposés of corporate America and the urban slum by the muckraking journalists of the period. In the 1890s, however, the movement began to weaken. The Depression of 1893 led to more radical strains in the Social Gospel movement, and social Christians became more circumspect as labor violence intensified. But before the Social Gospel became passé, its strongest voice would be heard: Walter Rauschenbusch.

A Baptist minister who worked to ease the suffering in New York's Hell's Kitchen, Rauschenbusch eventually gained a reputation as one of America's greatest theologians. His major work, *Christianity and the Social Crisis* (1907), sought to define the role of the church in American society and took the social implications of Christianity to a higher level. Among the ideas advocated by Rauschenbusch were public ownership of utilities and transportation and redistribution of land to improve housing conditions for workers. Rauschenbusch's ideas brought about renewed interest in the Social

Gospel and prompted most mainline Protestant churches to adopt the *Social Creed of the Churches* in 1908. This document committed the churches to work in support of a wide range of reforms on behalf of the working class. The Social Gospel declined as the curtain fell on the Progressive Era and with the passing of Rauschenbusch and Gladden in 1918; however the spirit of the movement lived on in the twentieth century in the work of many social reformers.

—Mark A. Noon

Bibliography

- Curtis, Susan. *A Consuming Faith: The Social Gospel and Modern American Culture*. Baltimore: Johns Hopkins University Press, 2001.
- Gorrell, Donald K. *The Age of Social Responsibility: The Social Gospel in the Progressive Era, 1900–1920*. Macon, GA: Mercer University Press, 1988.
- Hopkins, Charles Howard. *The Rise of the Social Gospel in American Protestantism, 1865–1915*. New Haven, CT: Yale University Press, 1940.
- Noon, Mark. “Social Gospel.” In *Class in America: An Encyclopedia*, edited by Robert E. Weir. Westport, CT: Greenwood Press, 2007.

■ Introduction: Christian Missionary Endeavors in Africa and Asia

By the late 1700s the surge in missionary activity that had accompanied Europe’s worldwide expansion in the sixteenth and early seventeenth centuries had run its course. Around 1800 only a few missionaries were active in China, India, the East Indies, and the Pacific islands, and none at all were active in Japan, Korea, and the interior of Africa. Much changed in the next 100 years. In 1910, 1,200 delegates representing 160 Protestant missionary boards and societies attended the World Missionary Conference in Edinburgh, Scotland; their slogan was “the evangelization of the world in this generation.” The delegates heard a series of upbeat reports on the activities of thousands of well-funded and highly educated missionaries who had founded mission stations, schools, and medical clinics throughout Africa and Asia, translated the Bible into all the world’s major languages and many minor ones, and had converted hundreds of thousands to Christianity. Considering that Roman Catholics and Russian Orthodox Christians also experienced an upsurge in missionary activity in the nineteenth century, the hope of “evangelizing the world in a generation” might have been somewhat less unrealistic than it might seem.

The origins of the modern missionary movement can be traced back to eighteenth-century

Protestant evangelical movements that resulted in the founding of the Methodist Church in England, the Great Awakening in the United States, and the growth of Pietism among Lutherans in Germany and other parts of northern Europe. These movements all emphasized the gospels as a source of inspiration and the centrality of personal conversion (being “born again”) in the life of Christians. Having experienced transformation in their own lives, evangelicals were eager to share the “good news” of Christ with others. Many also became social activists. Quakers, Methodists, Baptists, and evangelicals in the Church of England, for example, were the driving force behind the abolitionist movement in England beginning in the 1780s.

The result was an upsurge of missionary activity in the 1790s and the first decade of the 1800s. In England, the Baptist Missionary Society was founded in 1792, followed by the London Missionary Society (1795) and the Church Missionary Society (1799). State missionary societies founded in New York, Connecticut, and Massachusetts came under the umbrella of the American Board for the Commissioners of Foreign Missions in 1810. German Lutherans founded a school in Berlin for training missionaries in 1800 and formed the Basel Mission in 1815. By then, missionaries supported by these

societies had taken up their work in India, China, the East Indies, and parts of Africa.

Enthusiasm for missionary work was not limited to Protestants. The upsurge in Catholic piety following the French Revolution inspired a rededication to missions work on the part of older religious orders such as the Franciscans, Benedictines, and Jesuits (reestablished in 1814 after having been dissolved in 1773); it also led to the founding of many new religious orders specifically dedicated to missionary work. Even the Orthodox Church of Russia increased its missionary activity, with its missionaries active in Siberia, China, Japan, the Middle East, Alaska, and California.

Missionaries are sometimes depicted as little more than cat's-paws for nineteenth-century imperialists, who used them to provide moral cover for what was essentially an exercise in power politics and economic exploitation. True, the French government used the persecution of Catholics and Catholic missionaries as a pretext for their invasion of Vietnam in 1858. And it is also true that missionaries and missionary societies strongly supported colonial enterprises. They benefited from the protection offered by colonial administrations and the favorable treaties that Western imperialists imposed on foreign governments. But missionaries received little in the way of government subsidies; their efforts were sustained mainly by large and small donations from countless individuals who dreamed of winning the world for Christ.

The missionaries' efforts, which took them to places as different as China, the Muslim Middle East, and tribal New Guinea, varied greatly but they shared a number of common characteristics. Many missionaries translated the Bible into foreign languages, not a few of which were obscure by European standards. William Carey, an English cobbler who became the first British missionary to India in 1793, translated the Bible into Bengali and no less than 24 other Indian languages and dialects. Women played key roles in nineteenth-century missionary work, both at home, where they often were leaders of their congregations' missionary societies, and in the field, where as missionary wives, single women, or members of Catholic religious orders they served as teachers, nurses, and active

missionaries. Many missionaries experienced great hardship. In rural areas mission stations at first often amounted to little more than a simple cottage, a few outbuildings, a chapel, and perhaps a medical facility and a school. Missionaries suffered from disease, homesickness, frustration, and hostility; not a few were murdered by those they sought to convert. They were, however, unwavering in their conviction that they were doing God's work, not only by converting nonbelievers but also by drawing them away from heathen practices and civilizing them by introducing Western ideas of proper dress and acceptable sexual behavior.

If the missionaries' goal was indeed to "win the world for Christ," then of course they failed. They made few converts among Muslims in either Africa or Asia, and although many upper-class Japanese, Indians, and Chinese eagerly took advantage of the education offered by missionary schools, relatively few converted. In 1890 there were 1,600 Protestant missionaries in China but only 37,000 Chinese Protestants compared to a half a million Chinese Catholics. In India, those who converted largely were drawn from the lowest castes or tribal peoples who had never been absorbed into Hindu culture. Some estimates for the early 1900s place the number of Christians in India at two million Catholics and one million Protestants, but these figures include regions where Christianity had been established before the 1800s and are probably inflated. In terms of percentages, the missionaries' greatest success rate came in Oceania, where small island populations, made smaller by Western diseases and exploitation, often were brought into the fold after the conversion of a major chief or king. In the long run, the missionaries' greatest achievement came in Africa, where Christianity today is the majority religion in most countries south of the Sudan. In 1900, however, a religious map of Africa would have shown that outside Muslim areas, most Africans still adhered to traditional religions despite Christian gains in the Gold Coast, Liberia, Sierra Leone, Uganda, and South Africa. African Christianity's growth came mainly in the twentieth century.

Wherever they went, missionaries had an impact beyond the sphere of religion.

Protestant missionaries in the Congo Free State played a key role in revealing the atrocities of Belgian king Leopold II's regime in the 1890s and early 1900s. Many worked to improve the status of women and girls by lending support to movements to end foot binding in China, sati in India, and female circumcision in Africa. In many regions, medical missionaries provided improved care and introduced modern ideas about sanitation and personal hygiene. Above all else, they served as educators. They founded many hundreds of schools and colleges that provided students training in subjects ranging from basic literacy and farming techniques to Western science, foreign languages, and history. Not all students became Christians, but all were transformed by their newly learned skills, and perspectives.

—James H. Overfield

Protestant Missions in Africa

The second half of the eighteenth century witnessed a dramatic increase in missionary activities in sub-Saharan Africa, where efforts over the following century or more were closely linked with European trade and colonialism. The evangelical revival movement among English and German Protestants in the eighteenth century intersected with the abolitionist work of Christian and other philanthropic groups, contributing to greater interest in Africa and the world. Yielding relatively few converts in their early efforts, the missionaries nonetheless had a large impact, shaping African cultures and societies during tumultuous times.

The missionary presence made early and important inroads in West Africa among the populations of recaptured slaves transported into Sierra Leone beginning about 1792. From its base in Sierra Leone, the Church Missionary Society (more commonly known as the Church Mission Society, or CMS) disseminated evangelized Africans to other regions in the nineteenth century. Among the slaves on a Portuguese ship captured by the British Royal Navy in 1821, Samuel Ajayi Crowther was taken to Freetown, Sierra Leone, where he was released and eventually converted to Christianity. Crowther was educated by the Church Missionary Society and eventually moved to London for further education. In 1841 he accompanied the missionary J. F. Schon on an expedition to the Niger. Crowther was ordained a priest in 1843. In addition to his evangelical work, he studied several African languages, translated the Bible into Yoruba, and eventually established a mission at Abeokuta, his native town. He became the first African bishop in 1864.

Missionaries often arrived in Africa at the invitation of foreign merchants and their governments. The network of mission stations furthered the demand for and distribution of imported goods. Missionaries built houses on leased land and modeled the moral behavior they derived from European cultural backgrounds. Their efforts were financially supported from overseas donations, grants from colonial governments, and local collections.

Transatlantic connections played a special role after the abolition of the slave trade by Great Britain and the United States (1807) and the

SCOTTISH PRESBYTERIAN MISSIONARY MARY SLESSOR

The Nigerian novelist Chinua Achebe, the son of a teacher in a missionary school, credits the missionaries in his classic novel *Things Fall Apart* (1959) for having brought not only religion but also government to Nigeria. Some foreign missionaries, such as Mary Slessor, who worked in southeastern Nigeria between 1876 and 1915, were convinced that their efforts both benefited from and contributed to colonialism. Slessor's

knowledge of local languages and cultures allowed her to play an intermediary role between the British colonial officers and Africans even to the extreme of being given a judicial appointment in the native court system. Yet after the first 15 years of missionary work, Slessor could count only 7 adults and 11 children as baptized converts.

—Candice Goucher and Cherri Wemlinger

founding of the American Board of Commissioners for Foreign Missions (1810). Fueled by Pan-African radicalism, the later evangelical efforts of some Africans helped transform Christianity and the continent in the twentieth century. John Chilembwe (1871–1915) was an independent church leader, attending first a Presbyterian mission in central Africa and later a black Baptist seminary in Lynchburg, Virginia. Chilembwe eventually established the Providence Industrial Mission in Chiradzulu (Malawi) and inspired anticolonial resistance (1914–1915) from which Malawi nationalism emerged.

Both medical institutions and Western schools were pioneered by Protestant missionaries, who introduced and fostered formal education on the African continent in South Africa (1803), Gambia (1826), and Nigeria (1842). Education, viewed as a primary mechanism for gaining converts, was initially aimed at African men. When women were permitted to attend mission schools, their curricular content differed markedly, with its emphasis on domestic ideals. The focus eventually shifted to children, with the Basel Mission and Wesleyans building more than 400 schools prior to 1910, when the first colonial government schools opened. In general, the evangelical path that began with the nineteenth-century translation of the Bible, hymnals, and scripture not only contributed to the forces of Westernization but also furthered African agency.

—Candice Goucher and Cherri Wemlinger

Bibliography

- Hastings, Adrian. *The Church in Africa: 1450–1950*. New York: Oxford University Press, 1994.
- Isichei, Elizabeth. *A History of Christianity in Africa*. Grand Rapids, MI: William B. Eerdmans, 1995.

Theological Debates in Ethiopian Christianity

During Africa's long period of contact with Europe, Ethiopia, along with Liberia, remained politically independent from Western powers. Ethiopians also sought to preserve the unique theological perspectives of their Christian faith. One of the original centers of Christianity, the Ethiopian Church is historically monophysite ("one nature"), maintaining that Jesus of Nazareth had only a divine nature and not an

additional human nature. Theologians argued that while Jesus of Nazareth was composed of two natures, at the Incarnation his "finite drop" of humanity was swallowed up by the "infinite ocean" of his deity. Opposed by the ecumenical formula framed at the Council at Chalcedon (451) that Jesus was "one person *in* two natures," the Ethiopian Church broke away from Western Christianity and asserted its own orthodoxy. The resulting Ethiopian Orthodox Church remained unaffected by Western religion until the controversies provoked by eighteenth-century Jesuit and nineteenth-century Protestant missionaries, from which emerged fertile soil for new developments in the twentieth century.

For the Roman Catholic Jesuits, who were active as missionaries in Ethiopia from 1555 until they were expelled in 1634, eliminating the Ethiopian Christological divergence was a major goal. But the endeavor backfired, further entrenching the majority of Ethiopian Christians in Tewahedo (official Monophysitism) and stimulating two sizable splinter groups to formulate new Christologies that understood Jesus in ways that differed from Tewahedo and Chalcedon. The Qebat ("Anointing") Christology, devised by teachers from the province of Gojjam, alleged that a solely divine Jesus became a perfect man and perfect Savior when the Holy Spirit anointed him at his baptism. Hence, the Qebat school instructs adherents to pattern their lives upon Jesus's public ministry, thereby empowering them to perform such miraculous healings and exorcisms as the Gospels report. Conversely, Gondar Christology, named for its city of origin and attaining popularity in monastic centers, claimed that Christ was only human by nature until he was deified at the Jordan River through a special act of divine grace. Here the religious motive was moral imitation, leading to transformation: by leading the same type of virtuous yet normal human life that the prebaptismal Jesus led, one will likewise attain conversion of one's nature and receive divine sonship. Despite their differences, both the Qebat and Gondar schools leave open a "purely human window" at some stage of Jesus's career, thus affording Ethiopians a model for daily living unavailable with the exclusively divine and so inimitable Christ of the Ethiopian Orthodox.

The nineteenth-century Protestant missionaries' emphasis on original sin and salvation by grace through faith alone counterproductively pushed a native Church desiring freedom from foreign domination to opposite ends of the theological spectrum. From its inception the Ethiopian Orthodox Church had found no need to fashion precise doctrines of human sinfulness or salvation but affirmed both as generalities to be given substance by each believer. However, reacting against the Protestant encounter, the Church objected to any interpretation of Genesis or the Pauline Epistles promoting original sin or absolving individuals of responsibility for their own wrongdoings. Similarly distancing itself from the Protestant focus on faith, the Church argued that although Christ's death was necessary for humanity to be redeemed from damnation, anyone desiring salvation must then appropriate Christ's atonement by keeping the Ten Commandments. Consequently, a marriage of orthopraxy ("right action") and orthodoxy emerged by the turn of the twentieth century, which has led some historians to profitably compare Ethiopian Christianity to the diversity of Anabaptist groups that analogously responded to Protestantism in the sixteenth century.

—Kirk MacGregor

Bibliography

- Doctrine of the Ethiopian Orthodox Tewahedo Church.* Washington, DC: Debre Selam Kidest Mariam Church, 2003.
- Dowley, Tim, ed. *Introduction to the History of Christianity.* Rev. ed. Minneapolis: Fortress, 1990.
- Hastings, Adrian. *The Church in Africa: 1450–1950.* Oxford, UK: Clarendon, 1994.
- Isaac, Ephraim. *The Ethiopian Church.* Boston: Henry N. Sawyer, 1968.

Christian Missionary Efforts in India under Company Rule—Late 1700s to Mid-1800s

As the East India Company solidified its power in India, company officials were confronted by British Christian missionaries who wanted to convert Indians in company territory. Christianity had long been part of India's religious diversity. Thomas or Syrian Christians believe themselves

to be descendents of St. Thomas, one of Jesus's 12 disciples, who they claimed arrived in southern India around 52 CE. However, with the arrival of Europeans in the fifteenth century, efforts to spread Christianity greatly intensified. At the end of the eighteenth century an evangelical movement was sweeping Britain and the United States. In Britain, William Carey (1761–1834), the "Father of the Modern Missionary Movement," argued that Christians were obligated to spread the gospel even to the most remote areas of the world. In response, several missionary societies, including the Baptist Missionary Society, founded in 1792, and the Missionary Society, founded in 1795 (later the London Missionary Society), formed and sent missionaries around the world. Despite this religious fervor in England, company officials were concerned that missionary activity in India would engender hostility among the Indian populace and thus threaten profits and security, so they barred missionaries from India, stirring debates about the role of religion in the territories that the company controlled.

British missionaries were eager to join Portuguese, Dutch, and German missionaries who already had found some success in southern India. However, the company, keenly aware that its power hinged on the support of Hindu elites, would not allow missionaries into its territory. The company feared that missionaries would stir up religious hostility, leading to violence and unrest that would compromise its profits and authority. British missionaries wishing to proselytize were only able to gain entry to company territory by subterfuge or with the help of sympathetic Christians in the company.

At the turn of the nineteenth century missionary societies and powerful men in Parliament and on the Court of Directors (the East India Company's executive body of 24 directors elected from and by shareholders) united to change company policy. They argued that Christianity would not threaten company rule; rather, Christianity would strengthen company rule by making Indians more susceptible to British influence. These directors gained a powerful ally in Parliament member William Wilberforce (1759–1833), who also worked to abolish the British slave trade. In 1813 when the company's charter

came up for renewal, the new Charter Act included a “Pious Clause,” which granted missionaries entry into company territory. However, the company was still apprehensive of missionaries’ presence. To neutralize the threat, the company ignored calls by missionaries to abolish the indigenous practices of widow burning and child marriage. Still, missionaries continued to arrive in India, founding schools, colleges, and hospitals and advocating women’s rights.

Missionary efforts under company rule had mixed results. Missionaries found success among tribal groups not yet reached by Hinduism or Islam and among lower castes whom missionaries promised to save from what Europeans perceived as Hindu oppression. Despite these successes, company fears about missionaries were not unfounded. In 1806 sepoys (Indian soldiers in the employ of the East India Company) stationed at the fortress of Vellore revolted against British officers. We cannot be certain about the origins of this revolt, but many company officials believed that the violence was in part a response to changes in the Code of Military Regulations—specifically the design of a new turban (which included leather) as well as the belts on the uniform front that resembled a cross in addition to regulations concerning facial hair and a ban on caste marks and earrings—all of which the public interpreted as an attack on traditions combined with an apparent embrace of and possible forced conversion to Christianity.

The debate about missionaries in India reveals the ambiguity about the roles of religion and the company in India. Evangelicals insisted that Christianity bolstered company authority, while company officials believed that Christianity endangered British rule. Nevertheless, despite the company’s grave concerns about religion, it appears that secular forces largely destroyed company power. In England debates surged about whether the primary purpose of the company was profit, the salvation of Indians, or the acquisition of new territories and natural resources. Dissatisfaction with the company’s conduct and expenditures and growing concerns about who should regulate the company’s actions helped lead to the British Crown dissolving the company in 1858 following another far

➤ WILLIAM CAREY

William Carey, the “Father of the Modern Missionary Movement,” helped ignite evangelic fervor in Britain at the turn of the nineteenth century. In 1792 Carey published *An Enquiry into the Obligations of Christians to Use Means for the Conversion of Heathens*, which led to the formation of the Baptist Missionary Society. Because the East India Company would not allow missionary activity in its territory, Carey stealthily gained entry to India aboard a Danish ship in 1793. There he taught Indian languages at Fort William College in Calcutta and translated the Bible into Bengali. Carey helped establish the modern missionary movement’s emphasis on spreading Christianity throughout the world in colloquial tongues.

—Meghan Davison

more serious sepoy mutiny in 1857, sparked in part by rumors that the rifle cartridges (bullets) issued to soldiers were greased with pork and beef fat.

—Meghan Davison

Bibliography

- Frykenberg, Robert E., ed. *Christians and Missionaries in India: Cross-Cultural Communication since 1500*. Grand Rapids, MI: Eerdmans, 2003.
- Kitzan, Laurence. “The London Missionary Society and the Problem of Authority in India, 1798–1833.” *Church History* 40 (1971): 457–473.
- Walsh, Michael, ed. *Dictionary of Christian Biography*. Collegeville, MN: Liturgical Press, 2001.

Christian Missions in Nineteenth-Century China

One of the most remarkable cross-cultural exchanges in nineteenth-century China resulted from the increased presence of Catholic and Protestant missionaries. The Italian Jesuit missionary Matteo Ricci began the first Catholic mission in China in the 1580s. Ricci and other Jesuits sought to impress the Chinese elite with their knowledge of geography, science, engineering, and mathematics and were willing to allow Chinese converts to continue some of their traditional Confucian rites. Later, in the seventeenth century, members of the Franciscan and

▶ TIMOTHY RICHARD

Timothy Richard (1845–1919), a Baptist Missionary Society missionary to China, was born in south Wales. In 1870 he worked in Shangdong province (China), where he developed theories of evangelism that depended on social gospel rather than direct preaching. He was secretary of the Christian Literature Society in 1891. The literary output of the society was so prodigious that it influenced leading Chinese reformers Kang Youwei and Liang Qichao. Through personal friendships with them, Richard was able to persuade the Qing court to launch the 1898 Reform Movement. He retired in 1915, but his Chinese name, Li Ti-motai, remained on people's lips throughout China.

—Yuen Lee

Dominican orders took their message directly to the common people and required those who converted to abandon any rite or ceremony connected with Confucianism. In the eighteenth century, in response to the squabbling among the Catholic orders, decisions by the pope in 1715 and 1742 to side with Dominicans and Franciscans on the issue of rites, and the hostility of a number of Confucian intellectuals, the Qing government began to suppress Christianity and limit missionary activity.

In the 1800s, however, missionary activity revived. The first Protestant missionary, Robert Morrison of the London Missionary Society, arrived in Guangzhou and Macao in 1807, and in 1830 the first American missionaries, sponsored by the American Board of Commissioners for Foreign Missions, arrived in Guangzhou. Before the 1840s, however, Christian missionary activity remained illegal.

This changed after the Chinese defeat in the Opium War (1839–1842), as a weakened Chinese government was forced to gradually lift its ban on foreign missionary work. Many Protestant denominations, both American and European, sent missionaries to China, but they numbered only approximately 350 by 1870 and had made fewer than 6,000 converts. Reflecting its much longer presence in China, by the 1870s the Catholic Church claimed approximately 400,000

converts. By 1900, however, the number of Protestant missionaries had grown to 3,445.

Christianity's growing presence in China led to opposition especially among members of the scholar-gentry class, who believed that the missionaries' doctrines threatened Confucian beliefs; they also considered the missionaries themselves as competitors in the functions such as famine relief, teaching, and orphan care that traditionally had been the gentry's responsibility. Many Chinese also came to view Christianity as politically dangerous especially after the Taiping Rebellion (1851–1864), whose leader Hong Xiuquan drew some of his teachings from his understanding of Christianity. Others believed in charges that Christians indulged in promiscuous sex and committed atrocities such as gouging out the eyes of dying persons for use in magic. Conservatives resented some missionaries' criticisms of social customs such as foot binding, polygamy, fortune telling, and child marriages. Ongoing tensions resulted in attacks on missionaries, such as the Tianjin Massacre (1870) in which a mob destroyed a Catholic mission and murdered 21 foreigners, including 10 nuns. Anti-Christian hostility also contributed to the Boxer Rebellion (1889–1901) in which thousands of Christian converts were killed.

Despite the missionaries' efforts, by 1910 only about 1 million Chinese had converted to Christianity, and many of these were so-called rice Christians, who supposedly converted only so they could receive handouts of food. Nonetheless, missionary activities had wide-ranging impact. Their schools and medical clinics helped introduce Western science and learning to China, and many Chinese nationalist leaders of the early twentieth century were graduates of mission schools.

—Yuen Lee

Bibliography

- Bays, Daniel H., ed. *Christianity in China: From the Eighteenth Century to the Present*. Stanford, CA: Stanford University Press, 1996.
- Cohen, Paul A. "Christian Missions and Their Impact to 1900." In *The Cambridge History of China*, Vol. 10, edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Whyte, Bob. *Unfinished Encounter: China and Christianity*. Harrisburg, PA: Morehouse Publishing, 1988.

Christian Missions in New Zealand and Australia

After an initial period of failure in the late eighteenth century, Protestant and Catholic missionaries created a number of Christian congregations among the natives and the British settlers of Australia and New Zealand. The leaders of the various churches in Britain and the United States expected to see their version of Christianity transplanted in those colonies. Between 1788 and the 1880s, however, the conditions that the missionaries encountered in the Antipodes laid the groundwork for a unique religious culture.

The first Christian minister came to Australia in 1788 with the First Fleet, the initial contingent of administrators, soldiers, and convicts who settled in New South Wales. The experiences of that Church of England (Anglican) minister, Richard Johnson, were representative of the trials faced by many of the early Protestant

missionaries in the colony. Johnson found it difficult to make much of an impact on either the convicts or their keepers. Regular church services were poorly attended, and in the early 1790s some convicts burned down the settlement's first chapel. For their part, the Aborigines, suffering from European diseases and violence, were wary of the settlers. As a result, Johnson gained little, if any, understanding of Aboriginal culture, and because his other duties in the new colony kept him from embarking on sustained missionary work, he had no success in converting them to Christianity.

This situation began to change when Johnson's successor, Samuel Marsden, arrived in Australia in 1794. Marsden threw himself into mission work, particularly among the Aborigines and the Maori of New Zealand. He adopted an Aboriginal boy and hired several of the boy's tribesmen as servants in the belief that contact with British society would lead to conversion. The plan failed, and the Aborigines eventually returned to their former way of life. Not easily discouraged, Marsden turned his attention to the New Zealand Maori. With the help of the Church

► WILLIAM WHITE AND THE MAORI

The career of the British Wesleyan missionary William White makes one point clear: Christian missions in New Zealand involved more than Europeans imposing their beliefs on the natives. A stubborn and temperamental man, White arrived in New Zealand in 1823 not well suited to the work of converting the Maori. He was unwilling to compromise and flew into rages when he encountered opposition. White's personality contributed to the failure of the first Methodist missions in the colony. After a trip to Britain, he returned to New Zealand in 1830. Then the real trouble began. Maori leaders at the Methodist mission at Hokianga asked White to help keep at bay a group of land-hungry settlers who wanted to exploit the area's rich timber resources. In response White, who believed that the settlers and their alcohol were bad influences on the Maori, decided to ignore the British Methodist Church's rules against missionaries buying land and engaging in commercial activity. Using his own

money, he purchased the best land around the mission, returned it to the Maori, and attempted to recoup his investment by selling timber cut by native converts. The settlers were outraged by this Maori-missionary alliance. The affair ended badly. White, with the support of 500 Maori, threatened to impose a set of laws of his own devising on the settlers that would restrict their access to any remaining land around Hokianga. The settlers responded by complaining to the Methodist authorities in Britain, charging that White had committed adultery with Maori women. The Methodist Church in Britain, bowing to pressure from the settlers, recalled White and removed him from the ministry, though less due to the allegations of adultery, for which there was little proof, than for his land purchases and commercial activity on behalf of the Maori. A little Christianity had turned out to be a dangerous thing in New Zealand.

—Todd Webb

Missionary Society in Britain, he established a mission in New Zealand at the Bay of Islands in 1814. Missionaries from other denominations, both Protestant and Catholic, followed Marsden's lead: the Methodists came in 1823, and the Roman Catholics came in 1838. Unlike the Aborigines, the Maori proved open to the preaching of the newcomers. The Maori gods seemed helpless in the face of British diseases and weapons. Many converts hoped that the Christian God would serve them better. They also adapted Christianity to their own purposes. Beginning in 1864, for example, the King Movement, led by Te Ua Haumene, drew on Christian ideas to rally the Maori in an effort to resist the confiscation of their land, proclaiming that angels would drive the European settlers out of New Zealand.

As the missions to the Maori forged ahead after 1814, the religious landscape of Australia became more complex. Other Protestant denominations, besides the state-supported Church of England, began putting down roots in the colonies. The Methodists, for example, attempted to establish missions among the Aborigines in the 1820s and again in the 1840s, though neither effort proved successful. The Methodists had a more significant impact among those convicts and former convicts who distrusted the Church of England's connection with the state that had consigned them to Australia. Methodism offered such men and women the opportunity to be Protestant without being Anglican. For the growing number of Irish Catholic convicts, however, neither of those options was appealing. In 1820 the British government responded to that section of the colonial population by permitting Governor Lachlan Macquarie to appoint Catholic chaplains, but not priests, from among its ranks. A legally sanctioned form of religious pluralism had been established in Australia almost a decade before it came into existence in Britain.

Religious diversity in Australia increased as the nineteenth century progressed. The papacy appointed its first English bishop since the sixteenth century to oversee the growing Catholic population in Australia. In the 1830s and 1840s, at the urging of colonial politicians, the British state passed a series of Church Acts that provided financial support not just to the Church of England, as was the case in the home country,

but to all the mainstream Christian denominations in Australia, including Roman Catholicism. The Mormon Church, which was officially established in Australia in 1851 with the arrival of two missionaries from the United States, did not share in this largesse. Due to the vicious attacks that newspapers made on Mormon doctrine, which editors considered heretical, Mormonism grew slowly in the colony. Mormon missionaries, working in pairs, had more success in New Zealand. They established a mission there in 1854 and converted 811 Maori between 1881 and 1884 thanks to an 1881 native prophecy that foresaw the arrival of ministers preaching the word of God in teams of two. By the last decades of the nineteenth century, the story of Christianity in Australia and New Zealand was dominated by the development of denominations that were shaped by both their local contexts and the efforts of missionaries from overseas.

—Todd Webb

Bibliography

- Atkinson, Alan. *The Europeans in Australia: A History*, Vol. 1, *The Beginning*. New York: Oxford University Press, 1997.
- Atkinson, Alan. *The Europeans in Australia: A History*, Vol. 2, *Democracy*. New York: Oxford University Press, 2004.
- Belich, James. *Making Peoples: A History of the New Zealanders*. London: Penguin Books, 1996.
- Breward, Ian. *A History of the Churches in Australasia*. Oxford: Oxford University Press, 2001.
- Gittos, M. B. "White, William 1794–1875." In *Dictionary of New Zealand Biography*. <http://www.dnzb.govt.nz/>.

Christian Missions in the Pacific Islands

Christian missionary efforts in Oceania date back to the 1600s, when Spanish Jesuits sought converts in the Mariana Islands. Christianity made little progress in the region until the nineteenth century, when not just Catholics but also Protestants from both sides of the Atlantic and Mormons from the United States entered the region in large numbers. With protection from newly established colonial administrations and the support of missionary societies in Europe and the United States, they made Christianity

the dominant religion in the Pacific islands and had a lasting influence on culture and education.

There were several primary Catholic agencies responsible for missionary activity in the Pacific region. The Congregation of the Sacred Hearts of Jesus and Mary (the members of this order who were priests were known as the Picpus Fathers), which was founded in Paris in 1800, was given oversight of the eastern Pacific in 1835. Also in 1835 the Society of Mary, which had been founded in Lyons in 1816, was given oversight of the western Pacific. The Missionaries of the Sacred Heart of Jesus, which was also founded in nineteenth-century France, arrived at New Britain (now part of Papua New Guinea) in 1881. Key Protestant organizations included the London Missionary Society (although founded in 1795 by evangelical Anglicans and dissenting Protestants, the London Missionary Society is not affiliated with a single church), the Church Missionary Society (founded by the Anglican Church in 1799), the Wesleyan Methodist Missionary Society (founded in 1786), and the American Board of Commissioners for Foreign Missions (begun in 1810 and chartered in 1812 by American Congregationalists, though it operated as an interdenominational agency). The Church of Jesus Christ of Latter Day Saints (Mormons) began their missionary effort in the Pacific in 1844. While there was some competition among the denominations, no major conflicts occurred. In fact, the Protestant missionary agencies generally allowed each other separate regions of influence with some cooperative effort across agency lines (e.g., William Ellis of the London Missionary Society leaving Tahiti to spend time in Hawaii working with missionaries of the American Board of Commissioners for Foreign Mission in the 1820s).

A key element in achieving conversions was the ability to translate the message of Christianity into the language of the people. This required the reduction of purely oral languages into written texts that allowed the Bible (especially for the Protestants) and other liturgical materials (especially for the Catholics) to be published on the printing presses brought by the missionaries. This move toward literacy required the Protestants, Catholics, and Mormons to set up schools to teach reading and writing as well as religion. American and European

MISSIONARY MOTIVATION

Missionaries had many different motivations. Here one American Board of Commissioners for Foreign Missions missionary, Sheldon Dibble, who went to Hawaii in 1831 and died there in 1845, explains his motivation to potential missionary candidates back home:

“Both Scripture and common sense, then, concur in establishing the sentiment: *that if our fellow men are perishing, and we neglect to do what we can to save them, we are guilty of their blood.* But, if this doctrine be true, its application to Christians, in the relation which they sustain to the heathen world, is irresistibly conclusive and awfully momentous. The soul shudders, and shrinks back from the fearful thought: IF SIX HUNDRED MILLIONS OF OUR RACE ARE SINKING TO PERDITION, AND WE NEGLECT TO DO WHAT WE CAN TO SAVE THEM, WE SHALL BE FOUND ACCOUNTABLE FOR THEIR ETERNAL AGONIES.”

—Gene Mills

Source

Sheldon Dibble, *Voice from Abroad, or Thoughts on Missions, from a Missionary to his Class-mates* (Lahainaluna, HI: Press of the Mission Seminary, 1844), 31–32.

missionaries both believed that spiritual conversion went hand in hand with the task of “civilizing” the native society. To their understanding, a civilization that looked much like Europe or the United States with literate populations, rational philosophies, and technologies built upon empirical science was the natural outcome of the presence of Christianity. They also believed that the “primitive” cultures represented on the islands were evidence of the spiritual darkness of the islanders, which had to be transformed by teaching not just literacy but also Western agricultural methods, carpentry, and the printing trade. In some cases, especially evident at the Chiefs’ Children’s School in Hawaii, Western political theory was wedded to Protestant Christianity in an effort to train the future island leaders to reign within a global society.

The missionaries in cooperation with the converted indigenous leaders also banned certain cultural elements that were considered

pagan, offensive, or primitive. For example, the hula in Hawaii was banned for both its connection with religious practice and for its sensuality. Likewise, restriction and cultural transformation came regarding dress and sexual mores. The European explorers and seamen of the first generation of contact were routinely greeted by mostly naked island women swimming to their ships with the hope of garnering some of the personal *mana* (spiritual power) of the visitors through sexual relations. Missionaries steeped in Victorian morality and puritanical religion could not abide by these practices and manipulated the acceptance of Euro-American dress styles and the decline of the socially accepted free practice of sexuality. While much of the traditional cultures remained under the surface, with traditional healing rituals conducted by *kahunas*, shamans, or priests continuing in the remote villages, the public life of most Pacific islanders was one of compromise and cultural attrition.

In many cases the missionaries sought first to convert island leaders, believing that if they converted, the majority of the people would follow. This practice achieved a measure of success, with the capstone being the Sandwich Islands Mission in Hawaii, where the missionaries developed close relationships with the *ali'i*. For example, in the 1820s Kaahumanu, the queen regent, and Kalanimoku, the prime minister, gave the missionaries immediate inroads into the broader community, especially as the leaders came to the defense of the missionaries and their moral laws concerning dress style, the ban of alcohol, and chastity. Christian missionary work in the Pacific was not limited to Europeans and Americans but also included Pacific islander converts, who were also welcomed as assistants to the white missionaries as well as pastors on their own in limited circumstances. Prime examples of this are the

missions in the 1850s of the Protestants from Hawaii to the Marquesas and Micronesia, where native Hawaiians worked with the American clergy to both evangelize and serve as pastors. In the Pacific, the Catholics engaged the local people as *katekita* (catechists) and *minita* (ministers). In 1822 Auna and Matatore were sent from Huahine to the Marquesas as missionaries, in part because of the skill of their wives in the ministry. Since the 1870s hundreds of South Sea Islander Christians have journeyed to Papua New Guinea as missionaries.

During the second half of the nineteenth century missionary societies gradually withdrew as the predominant presence of Christianity in the Pacific islands. Nevertheless, due to their efforts Christianity became the most prevalent religion in the Pacific, as the self-supporting churches of the white settlers remained, as did the numerous indigenous-led churches that were similar to them in form and doctrine in varying degrees.

—Gene Mills

Bibliography

- Garrett, John. *Footsteps in the Sea: Christianity in Oceania to World War II*. Suva, Fiji: Institute of Pacific Studies and World Council of Churches, 1992.
- Garrett, John. *To Live among the Stars: Christian Origins in Oceania*. Suva, Fiji: Institute of Pacific Studies and World Council of Churches, 1982.
- Grimshaw, Patricia. *Paths of Duty: American Missionary Wives in Nineteenth-Century Hawaii*. Honolulu: University of Hawaii Press, 1989.
- Gunson, Niel. *Messengers of Grace: Evangelical Missionaries in the South Seas, 1797–1860*. Melbourne: Oxford University Press, 1978.
- Lange, Raeburn. *Island Ministers: Indigenous Leadership in Nineteenth Century Pacific Islands Christianity*. Christchurch, New Zealand, and Canberra, Australia: MacMillan Brown Centre for Pacific Studies and Pandanus Books, 2006.

■ Introduction: Thought and Religion in South and East Asia

The period from 1750 to 1914 was an era of deep, wide-ranging changes in Asian thought and, to a somewhat lesser degree, religion. Although all of Asia was affected, the changes were most profound in China and

India, the world's two most populous polities, and in Japan, which suddenly emerged in the late 1800s as a regional and emerging world power. Many factors contributed to the region's intellectual and religious transformations, but

the most important was the influence of the West, whose representatives came as threats, conquerors, and a source of new ideas.

Intellectual and religious stirrings are first detectable in India, especially those parts of the subcontinent that came under British East India Company rule. From the time the Company gained control of Bengal in 1760s, its officials realized that its ability to administer their lands and collect revenues depended on knowledge of local customs and legal codes. This in turn created a need to learn Persian, the administrative language of the Mughal empire, and Sanskrit, the ancient language of India in which its legal codes and major religious texts were written. Warren Hastings, the first governor-general of Bengal, encouraged collaboration between Hindu and British scholars and was instrumental in founding the Asiatic Society of Bengal, which in 1784 became the first scholarly society of India. William Jones (1746–1794), who mastered Sanskrit, Arabic, and Persian, and became a great admirer of ancient India, a civilization he considered the near equal of ancient Greece, became the most prominent British “Orientalist.” Indian scholars collaborated with British teachers and students as faculty members at Fort William College, founded in 1800 by the company, to introduce company functionaries to India’s languages and cultural heritage. They also played a role in the founding in 1817 of the Hindu College in Kolkata (Calcutta), which taught upper-class Bengal children some traditional Indian subjects but mainly concentrated on Western literature, history, and science. These were the beginnings of what is often referred to as the Hindu Renaissance.

Unlike the British Orientalists, who had a positive view of Indian culture, the European missionaries who began arriving in the 1790s thought differently. They saw Hinduism as a hodgepodge of superstitious beliefs and practices that consigned Indians to perpetual backwardness. Despite such reservations, the missionaries contributed to India’s intellectual and religious development in a number of ways. They established printing presses in many cities and encouraged the use of vernacular languages by translating the Bible and other works into Indian tongues. They also made a major contribution in the area of education by founding numerous primary and secondary schools. These

missionary schools laid the foundation for the technological schools and universities founded under the auspices of the colonial administration from the 1850s onward. Finally, the criticism leveled at Hinduism by missionaries (and some British officials) caused Hindu intellectuals to launch a spirited and productive reexamination of India’s religious rites and values, with some of them freely drawing on beliefs and ethical values of Christianity and others staunchly defending ancient traditions.

The result was a century of intellectual ferment that was a world removed from the eighteenth century, when intellectual activity was limited to small numbers of learned pandits who produced abstruse and largely unoriginal commentaries on ancient Sanskrit texts. In the nineteenth century those intellectuals who discussed religious topics were familiar with other world religions, addressed the growing reading public by writing in vernacular languages, and organized dozens of regional and national societies to discuss and promote their views. There also emerged a large class of university-educated Hindus and smaller numbers of Muslims who were fluent in English and well versed in Western history and literature. Not all of these individuals were “intellectuals” who wrote books and articles and engaged in public debate. But they made up an audience for such writers, who addressed a wide range of issues that included by the end of the century the timing and circumstances of Indian independence.

China’s intellectual history was unique in that its scholars and philosophers were also the empire’s administrators and the key advisers to the emperor. This had been the case ever since the seventh century CE, when the civil service examination system was established. By the Qing era, China’s educational system was geared to preparing young men for the examinations, which tested their knowledge of writings attributed to Confucius and some of his early followers and a small number of approved commentaries.

The eighteenth and early nineteenth centuries were a glorious period in Chinese scholarship, one that produced lively exchanges among different schools of Confucianism and important research in the fields of linguistics, calligraphy, mathematics, astronomy, and geography. But the

scholar-officials who ran the government and advised the emperor were slow to react to the Western threat to China and for the most part resisted changes in the country's intellectual culture or system of government. Well into the nineteenth century the prevailing attitude, even among the reform-minded, was that little could be learned from Westerners except a few mechanical skills. The scholar-officials showed little interest in foreign travel or the subject matter taught in missionary schools. Many viewed missionaries as rivals and sought to stir up opposition against them. Only after military defeats by the Western powers in the Opium War (1839–1842) and the Arrow War (1856–1860) and the eruption of major rebellions across the empire in the 1850s did a small number of scholar-officials embrace a movement of self-strengthening by promoting the study of foreign languages, Western science, and mathematics and learning Western military technology. And only after another stinging military defeat in the Sino-Japanese War (1894–1895) and the imposition of another harsh treaty after the suppression of the Boxer Rebellion (1898–1901) did conservatives at the imperial court concede that drastic action was necessary.

By the end of the nineteenth century, despite official indifference, new ideas from the outside world gradually began to influence many Chinese, especially those living in the treaty ports. Sizable numbers took advantage of educational opportunities provided by the missionaries. Others were introduced to Western history and literature by the availability of translations into Chinese. Still others corresponded with family members and friends who were part of the expanding numbers of overseas Chinese. After 1895 tens of thousands of young Chinese studied in Japan, where they could see firsthand how another Asian nation had reversed its fortunes by radically breaking with its past. Small numbers of Chinese became ardent democrats and nationalists and formed revolutionary organizations dedicated to overthrowing the Qing. Organized into the Revolutionary Alliance by the Christian, Hawaii-educated Sun Yatsen in 1905, these groups prepared the ground for the overthrow of the Qing in the Revolution of 1911.

As in China, Confucianism dominated intellectual life in Tokugawa Japan. Confucianism

was supported by the shoguns and taught in Japan's many private and state-supported academies. Confucian scholars, drawn mainly from the samurai class, wrote histories, analyzed texts, and entered into many of the same debates that were exercising the minds of Confucianists in China. Confucianism in Japan, however, did not enjoy an intellectual monopoly. In the 1700s advocates of "Dutch Learning" learned Dutch so they could read European texts, especially on medicine, science, and mathematics. Other scholars connected with the National Learning Movement rejected Chinese influence and Confucianism altogether and looked to Shintoism and Japan's ancient imperial past as the source of Japan's unique strengths and virtues.

All of these groups took part in the debates of the first half of the nineteenth century, when Japan faced increasing foreign pressures and mounting social tensions. Many Japanese advocated a continuation of Japan's policy of isolation and backing it up by political unification and military reform. Others advocated opening Japan to Western ideas, technologies, and even trade. Still others embraced a Japanese version of self-strengthening, represented in the thought of Sakuma Shozan, who coined the phrase "Eastern ethics and Western science." These debates reached a fever pitch in the years following the "opening" of Japan by Commodore Matthew Perry in 1853 and then subsided with the Meiji Restoration of 1867–1868.

After the overthrow of the shogunate, Japan's new leaders revealed themselves as supreme pragmatists, supporting whatever doctrine or policy would make Japan a stronger and more united state. In the 1870s, for example, in the hope of strengthening reverence for the emperor and devotion to Japan's unique religious heritage, the government sponsored a revival of Shintoism. This policy was quietly abandoned by the early 1880s, but the more important policy of "seeking knowledge throughout the world" was not. In the 1870s the government sponsored foreign studies for young men, imported hundreds of Westerners to fill administrative positions and teaching jobs, and encouraged the translation of Western books into Japanese. The government's most important contribution to Japanese thought was its encouragement of

education. By 1905, 95 percent of all children of statutory school age were in school. This increased demand for newspapers, journals, magazines, and books in which Japan's thinkers were able to discuss politics, foreign relations, women's rights, and a host of other issues facing the new Japan.

—James H. Overfield

The Brahmo Samaj Movement

The Brahmo Samaj (Society of Worshipers of One God) was founded in 1828 by Raja Rammohun Roy in Calcutta, India. It began as an attempt at religious and social reconstruction in response to the challenges posed by Christian missionary work and the Western ideas that entered India in the wake of British colonialism. As part of the Bengal renaissance, the movement aimed to reform Hinduism, purging it of its idolatry, caste system, and other features deemed to be debasing while preserving its higher elements of truth, spirituality, and essential religion. The Brahmo Samaj stands firmly on theism, the worship of a single omniscient and omnipotent God. Although distinctly Hindu in its origins, the Brahmo Samaj adopted concepts from other religions, especially Unitarianism that affirmed the existence of One God, applying reason in religion and working out one's salvation with diligence. The Brahmo Samaj believes that all truth is of God and respects the prophets of all religions. Raja Rammohun Roy (1772–1833), Debendranath Tagore (1817–1905), Keshub Chunder Sen (1838–1884), and Sivanath Sastri (1847–1919) were key figures in shaping the Brahmo Samaj.

Rammohun Roy, born into an orthodox Brahmin family in the eastern state of Bengal, became multilingual, learning Sanskrit, Arabic, Persian, and English. He also acquired an intimate knowledge of Hinduism, Islam, and Buddhism, developing a zeal for religious reform derived partly from Hindu and Muslim thought and later from Unitarian ideas. He rejected worship of religious images as indicative of prejudice and superstition and contrary to common sense. He also rejected the practice of sati, which was perpetrated in the name of religion and involved the burning of widows on their husbands' funeral pyres. Roy and his followers formed the Brahmo Sabha

(later Brahmo Samaj) to reform society through promoting these ideals. They met regularly for religious services during which passages from the Upanishads were read, sermons were delivered, and hymns were sung. After Roy's death the Brahmo Samaj went into decline.

In 1838 Debendranath Tagore, father of the famous Indian poet Rabindranath Tagore, revived and reorganized the Samaj. However, Tagore did not share Roy's cosmopolitan vision and opposed Christian missions. Tagore staunchly believed in the infallibility of the Hindu scriptures and developed the Samaj in accordance with his beliefs. Under his guidance and leadership the Samaj became an active Hindu missionary organization, drawing adherents from among educated Hindus and establishing branches in several towns in Bengal and other Indian states.

Keshub Chunder Sen was the third major figure to impact the Samaj, albeit in a mixed



Rammohun Roy was a leading social and religious reformer of early-nineteenth-century India and has been called the father of modern India. (R. N. Samaddar, Raja Ram Mohun Roy, 1911)

➤ KUCH BEHAR CONTROVERSY, 1878

In 1878 a new crisis arose in the Brahmo Samaj when Keshub Chunder Sen announced the marriage of his underage daughter to the youthful Maharaja of Kuch Behar. Many of his followers criticized him for his decision because they believed that the marriage was in violation of the Indian Marriage Act of 1872, which banned child marriage; that Keshub had arranged the marriage to gain material benefits and social status; and that the marriage would feature idolatrous ceremonies that went against Brahmo principles. When Keshub justified his decision on the basis of divine revelation and proceeded with the marriage, many of his erstwhile followers, led by Sivanath Sastri, withdrew from the Brahmo Samaj of India to form the Sadharan Brahmo Samaj. Keshub continued as the leader of the Brahmo Samaj of India, which in 1880 became the Navavidhan Samaj, or Church of the New Dispensation.

—Abhi Janamanchi

manner, leading ultimately to its fragmentation into three factions. Sen rejected the caste system and child marriage and promoted women's education and the remarriage of widows. Drawing on world scriptures, he gave the Samaj a universal character. However, by 1865 differences between him and other members of the Brahmo Samaj became sufficiently acute that he split off from the parent group and formed the Brahmo Samaj of India. A further schism resulted from the marriage of his underage daughter to the maharaja of Kuch Behar. Sen's claims that the marriage was in accordance with God's will disenchanted some of his associates, who in 1878 responded by founding the Sadaran Brahmo Samaj. Sen continued as leader of the Brahmo Samaj of India, and in 1881 his group adopted the name the Navavidhan Samaj, or Church of the New Dispensation.

Sivanath Sastri became one of the prime movers of the Sadaran Brahmo Samaj, the largest Brahmo group in existence today. While maintaining traditional Brahmo characteristics of faith in a personal God, congregational worship, and condemnation of idol worship, the Sadaran Samaj also emphasized universal brotherhood,

opposed caste distinctions, and promoted a well-ordered organization.

Today the Brahmo Samaj is a very small minority with a mostly hereditary membership. Although unable to purge Hinduism of what it saw as idolatry and superstition, it did provide a rational critique of religious thought and practice that contributed to the establishment of a secular, democratic Indian society.

—Abhi Janamanchi

Bibliography

- Janamanchi, Abhi P. "Brahmo Samaj." In *Religions of the World: A Comprehensive Encyclopedia of Beliefs and Practices*, edited by J. Gordon Melton and Martin Baumann. Santa Barbara, CA: ABC-CLIO, 2002.
- Kopf, David. *The Brahmo Samaj and the Shaping of the Modern Indian Mind*. Princeton, NJ: Princeton University Press, 1979.
- Lavan, Spencer. "The Brahmo Samaj: India's First Modern Movement for Religious Reform." In *Religion in Modern India*, edited by J. L. Baird. New Delhi, India: South Asia Publications, 1981.
- Lavan, Spencer. *Unitarians and India: A Study in Encounter and Response*. Chicago: Exploration Press, 1991.
- Sastri, Sivanath. *History of the Brahmo Samaj*. 2nd ed. Calcutta, India: Sadharan Brahmo Samaj, 1974.

Nineteenth-Century Hindu Reformers

Both Christian missionary educators such as William Carey (1761–1834) and Alexander Duff (1806–1878) and secular Orientalist scholars such as John Muir (1810–1882) and Max Muller (1823–1900) helped arouse the reforming spirit within Hinduism in India. In the case of the Christian missionaries, they did so through their promotion of a combined package of Christianity and Western education. Orientalist scholars aroused the reforming spirit through their promotion of Hindu traditions and texts that were translated and made available for the first time in their history to the broader general public in both India and around the world.

First among the Hindu reformers was Ram-mohun Roy (1772–1833), a religious teacher from the Brahmin caste who was regarded as "the father of modern India" even though his

► WORLD HISTORICAL CONTEXT OF NINETEENTH-CENTURY HINDU REFORMERS

Nineteenth-century Hindu reformers must be understood within their broader world historical context. Similar religious, cultural, and national reform movements were taking place all across Asia in response to Western imperialism. Muslims in the Ottoman empire were spearheading various overlapping reform movements, including Pan-Islamism, Pan-Arabism, and Arab nationalist reforms, which both cooperated with and competed against Turkic nationalist reform efforts. These two main Ottoman groups, the Arab and Turkish Muslims, in turn influenced the Turkic Muslims of the Russian empire in their Jadidist (New Method) reform movement, which emphasized both Pan-Islamic and Pan-Turkic ideas within the Russian political context. Among the Japanese the Meiji Restoration (1868–1912) was under way, with participation by state-supported Shinto priests, among others. And China too, with its Confucian tradition, was experiencing its first stirrings of anti-Western Chinese nationalism.

In all these contexts of Asian-Western contact and exchange, the basic underlying question was the same: How should the Asian traditions respond to the Western challenge and, with it, Western influence upon their historic cultures? In general, three main responses were developed: wholesale rejection of “foreign” Western influence with a reversion to “pure” Asian ways, an attempted synthesis between Asian and Western ways, and the admiration and acceptance of Western “superiority” and, with it, adoption of predominantly Western ways in place of former Asian ones. All three of these tendencies are evident among nineteenth-century Hindu reformers. In both the second and third cases, the response sometimes involved conversion to Christianity as the Western religion. More often than not, however, it meant reform of the Asian religious tradition borrowing from Western Christianity as a model, which might include incorporation of Christian ideas and practices into the Asian religious tradition.

—*R. Charles Weller*

movement is considered to have originally been more Bengali than Indian. Roy founded a society named the Brahmo Sabha in 1828 to help facilitate his reform efforts. In 1841 it was renamed the Brahmo Samaj under his successor. Roy was educated in classical Hinduism, Islam, and Christianity, with working knowledge of Sanskrit and Persian as well as biblical Hebrew and Greek. He followed a comparative religious approach that sought to draw from all major world religious traditions subsumed under a reformed universalist Hinduism grounded in human reason and morality. This is reflected in the English name of his group, Fellowship of Believers in the One True God. Additionally, like his contemporary the Christian missionary William Carey, Roy was active in socioreligious reform, including opposition to the Hindu tradition of sati, the burning alive of widows of certain castes with their husbands upon their death. Debendranath Tagore (1817–1905), who created Brahmo Samaj in 1843 by merging his Tattwabodhini Sabha with Roy's Brahmo Sabha, was Roy's spiritual successor. Brahmo Samaj had spread into all corners of India

by the turn of the century. A sectarian offshoot of Roy's group was started by Keshub Chunder Sen (1838–1884). It drew heavily on Judeo-Christian language, imagery, and ritual, including baptism, communion, and a Trinitarian conception of God resulting in a Hindu-Christian synthesis.

Some 50 years later, in 1875, another Brahmin teacher, Swami Dayananda Saraswati (1824–1883), emerged to establish the Arya Samaj society in Bombay and Lahore. In some respects Arya Samaj may be viewed as a conservative reaction to the Brahmo Samaj. Dayananda rejected Western influence as well as both Christianity and Islam as impure foreign threats that aimed to undermine Hinduism. He insisted that among the Hindu scriptures only the four Vedas held infallible authority. He sought to transcend caste and nationality, offering equal access to all within the Hindu vision he espoused. In spite of his rejection of Western ideals and values, some have seen traces of Western and Christian missionary influence in his socioreligious activism. He strongly opposed Hindu-Indian customs such as child marriage, the idea of being “untouchable,”

and the subjugation of women, among other customs. On the latter point Dayananda was, for his time, a pioneer in his granting of full rights of membership and participation to women within his society. The Arya Samaj has had a long, deep impact upon Hindu and Indian society down to the present day, particularly through its high schools and colleges, leaving likewise its mark upon Indian politics, especially via members of the Bharatiya Janata Party.

A third significant Hindu reform movement was the Ramakrishna Mission named after Sri Ramakrishna Paramahansa (1834–1886), who also was a Bengali. His approach can be called mystical and ecumenical, based in meditation and trance experiences drawing primarily from tantric and bhakti Hindu traditions. In this respect, his movement can be compared with other mystical devotion-oriented movements in world religious history. The life and teaching of Ramakrishna came to the world's attention through his closest and best-known disciple, Narendranath Datta, better known as Swami Vivekenanda (1863–1902). Vivekenanda not only spread Ramakrishna's message throughout India, but he also successfully represented Hinduism at the 1893 World Parliament of World Religions in Chicago, engaging also in lecture tours across North America and Europe. Perhaps in part as a response to Christian missionary efforts in South Asia, the Ramakrishna Mission came to represent its vision of Hinduism as the hope of humanity, the vehicle for the salvation of the world, believing it to be the purest and most accurate expression of belief and devotion among the world's religions.

The two leading figures of Hindu reform who followed these pioneers were Rabindranath Tagore (1861–1941)—who is not to be confused with Debendranath Tagore mentioned above in connection with the Brahmo Samaj—and Mahatma Gandhi (1869–1948). But the core of their legacy lies within the early twentieth century, serving as a point of closure for the discussion of nineteenth-century Hindu reformers, with all of them contributing not only to religious but also to social and national reform in India and broader South Asia in response to the challenge of Western expansionism.

—R. Charles Weller

Bibliography

- Anderson, Sir Norman, ed. *The World's Religions*. 1950; reprint, London: Intervarsity, 1975.
- Aydin, Cemil. *The Politics of Anti-Westernism in Asia: Visions of World Order in Pan-Islamic and Pan-Asian Thought*. New York: Columbia University Press, 2007.
- Esposito, John L., Darrell J. Fasching, and Todd Lewis. *Religion and Globalization: World Religions in Historical Perspective*. New York: Oxford University Press, 2007.
- Johnson, W. J. *A Dictionary of Hinduism*. New York: Oxford University Press, 2009.

Kang Yuwei and the New Text Movement in China

Kang Yuwei (1858–1927) was a brilliant and highly influential reformist thinker in the last two decades of the Qing dynasty (1644–1911) and an advocate of imperial restoration in the period after the fall of the Qing. An ardent student of Confucianism, raised in a family of scholar-officials, in his struggle to pass the civil service examinations he took up Buddhist meditation as a form of relaxation to balance and deepen his studies. A period of contemplative retreat in 1878 led to an enlightenment experience in which he perceived the unity of his self with Heaven, Earth, and all things and saw himself as a sage destined to “set in order all under Heaven.”

After attending the metropolitan examinations in Beijing in 1882, on his return he passed by Shanghai, where he was impressed by the cleanliness and orderliness of the foreign concessions. He also purchased books about Western political institutions and natural science. He became determined to lead the reform of China's institutions, and by 1888 he was memorializing Emperor Guangxu about the national crisis and the need for a thorough reform of government and the institutional system.

In 1891, back in his native Guangdong, he founded an academy where he began to teach promising young students and develop the theory necessary to carry out his reform. His most important theoretical work, *Datong shu* (The Book of the Great Unity), begun in 1894, listed the many forms of human suffering and described an ideal socialist society and classless

world order wherein all these problems would be solved. Though his vision of the abolishment of property and of the traditional family system to be replaced by government nurseries and schools and by equality and freedom between men and women was idealistic in the extreme, it was accompanied by a progressive concept of three stages of human civilization in which the highest ideals would be realized only in the final stage. Unlike most Chinese scholars of his time, Kang recognized that science and technology were essential for advancing the welfare of mankind, though he had no use for capitalism.

In April 1895 Kang was in Beijing along with examination candidates from every province, all of whom were indignant when they heard about the cession of Chinese sovereignty required by the treaty of Shimonoseki that the Qing government was about to sign with Japan after China's defeat. Kang spent several nights drafting a long memorial to the emperor, after which he called a meeting of 1300 candidates to get their support for the petition, which demanded that the Qing government reject the treaty, move the capital, and initiate a major program of reform that would turn it into a constitutional monarchy dedicated to promoting commerce and industry. Kang organized a study society dedicated to investigating how to make the country strong. His memorials continued, and in spite of increasing opposition from conservatives, his efforts deeply moved Emperor Guangxu, who eventually agreed to undertake the "Hundred Days of Reform" in 1898. Unfortunately, real power was in the hands of the Empress Dowager Cixi, who in league with the conservative factions in the government soon moved to crush the reform movement and execute those of its leaders who were unable to escape (six were executed). Kang managed to flee to Hong Kong and then went into exile in Japan with his famous student Liang Qichao, later travelling to many countries where he worked to rally support for his vision of reform among overseas Chinese in competition with Sun Yatsen's revolutionary faction.

The indigenous ideas that Kang used as the basis of his reform program were taken from the "New Text" school of Confucianism that had been the ideological basis of government in the Later Han dynasty (25–220 CE), in competition

➤ CONFUCIUS AND THE DOCTRINE OF PROGRESS

In the following passage, from Kang Yuwei's commentary on the Analects of Confucius, Kang draws on Confucius to support his theory of human progress.

"Confucius was the founder of a doctrine. He was a godlike sage king. He complements Heaven and earth and nurtures the myriad things. All men, things, and principles are embraced in the Great Way of Confucius. He is, therefore, the most accomplished and perfect sage in the history of mankind. . . . The Way of Confucius embraces the evolution of the Three Sequences and the Three Ages. . . . The eras of Xia, Shang, and Zhou represent the succession of the Three Sequences, each with its modifications and accretions. By observing the changes in these three eras one can know the changes in a hundred generations to come. For as customs are handed down among the people, later kings cannot but follow the practices of the preceding dynasty; yet, since defects develop and have to be removed, each new dynasty must make modifications and additions to create a new system. . . . There will be a day when everything throughout the earth, large or small, far or near, will be like one. There will no longer be any nations, no more racial distinctions, and customs will be everywhere the same. With this uniformity will come the Age of Great Peace. Confucius knew this in advance."

—Barry Steben

Source

From *Lunyu zhu* 2:11a–12b. Translated by Chester Tan, in W. T. de Bary and Richard Lufrano, comps., *Sources of Chinese Tradition*, 2nd Edition (New York: Columbia University Press, 2001), 266–67.

with the "Ancient Text" school whose texts became the basis of the later schools of Confucianism of the Sui-Tang period and the Song, Yuan and Ming dynasties. By returning to the interpretations and world-view of the New Text school (whose texts were actually older and more authentic than those of the "Ancient Text" school, many of which Kang argued had been forged during the short Xin dynasty from 9–24 CE),

Kang found a sophisticated ideological weapon he could use to gain the support of Confucian-educated officials and counter the arguments of conservatives. For the New Text school had a vision of Confucius as the founder of a religion and as a great reformer who had actually authored the Confucian classics, claiming their ancient provenance only to gain authority for his actually very new teachings. New Text Confucianism emphasized cosmic forces not only in history but in all aspects of life, regarding Heaven as a consciously acting power watchful over human affairs. “Adjustment to circumstances” was one of the keystones of the New Text philosophy, referring to an act contrary to the normal standards of conduct or to the constants of life but ultimately for the good. As scholar Jack Dull noted, “The New Text scholar official had a certain amount of freedom of action in any given situation, but the Old Text philosophy taught that in all circumstances the official had only one route to follow: loyalty and subordination to the ruler. . . . In place of the emperor to whom the official owed complete loyalty, the New Text scholar-officials felt that they were ultimately answerable to the God on High [*Shangdi*] or to Heaven. . . . Their world was one in which the ultimate source of power was not the throne but Heaven; they lived in a divine world whereas the Old Text scholars lived in one that was eminently human and governed by man’s history.” Here we are presented with an image of Confucius and Confucianism drastically different from the one that has come down to us—and the one that constituted the ideology of the old system, but it was just what Kang needed if he was going to radically reconstruct China’s political system to fit the world of the twentieth century.

—Barry Steben

Bibliography

- Chai, Winberg. *The Political Thought of K'ang Yu-wei: A Study of Its Origin and Its Influence*. Ann Arbor, MI: University Microfilms International, 1985.
- Chang Hao. “Intellectual Change and the Reform Movement, 1890–1898.” In *The Cambridge History of China*, Vol. 11, “Late Ch'ing, 1800–1911,” Part 2. Edited by Denis Twitchett and John Fairbanks. Cambridge: Cambridge University Press, 1980.
- Dull, Jack L. “History and the Old Text–New Text Controversy in the Han.” June 1966. <http://libweb.uoregon.edu/ec/e-asia/read/dulltext.pdf>. Quotations from pp. 12–13.
- Hsiao, Kung-Ch'üan. *A Modern China and a New World: K'ang Yu-wei, Reformer and Utopian, 1858–1927*. Seattle: University of Washington Press, 1975.
- Karl, Rebecca, and Peter Zarrow. *Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China*. Cambridge, MA: Harvard University Press, 2002.
- Lo, Jung-pang. *K'ang Yu-wei: A Biography and a Symposium*. Tucson: University of Arizona Press, 1967.
- Thompson, Laurence G. *Ta Tung Shu: The One-World Philosophy of K'ang Yu-wei*. New York: Routledge, 2005.

Confucian Scholars Confront the West—Kang Yuwei and Liang Qichao

Seeking to synthesize Confucianism with new ideas from the West, Kang Yuwei (1858–1927) has been called by many the last great Confucian theorist, including by his greatest student, Liang Qichao (1873–1929). Both men saw the need to allow Western learning to revive Confucianism through reform. The lives of these two great Confucian thinkers and political activists can be divided by the dramatic events of the One Hundred Days Reform of 1898, when they had direct access to the emperor and effected rapid changes at the highest levels of government before a conservative palace coup reversed the reforms. Escaping execution, both Kang and Liang fled to exile in Japan and then to overseas Chinese communities of Hawaii, Canada, the United States, Europe, and Southeast Asia, and for over a decade they lived in exile honing their use of Western-inspired tools of nationalism. While both men were prolific writers of serious, if controversial, Confucian scholarship, their most important work was arguably appropriating from the West modern mass journalism to disseminate new ideas of constitutional governance, science, and nationalism beginning in 1895. Some historians have focused on the thought of Kang and Liang and others on their involvement in the reform movement. Both must be understood together.

In 1888 Kang Yuwei, still a commoner unsuccessful in the highest level of bureaucratic exams, attempted to memorialize the emperor to encourage reform. Discouraged by his failure, Kang turned to scholarship and in 1891 published a book challenging the authenticity of some of the most important "old texts" of the Confucian canon, borrowing another scholar's thesis without acknowledging it. The book was criticized by his peers and banned by imperial decree several years later. At this time Kang met Liang Qichao, his junior in years but more advanced in the official degree system. Liang nonetheless became Kang's pupil and helped Kang set up a school that mixed preparation for the official exams with study of Western science and military drill. With the help of Liang and other students, in 1897 Kang published a book in which he claimed that Confucius was a reformer, misrepresented by centuries of conservatives.

Repeated Qing defeats at the hands of European and Japanese imperialists motivated Kang and Liang to devote their lives to writing and political action urging reform. The German seizure of the Qingdao region of Shandong in 1897 and other incursions further impelled Kang and Liang to action. In 1898 Kang's memorials started getting through to the emperor, and reforms were issued from Beijing in rapid succession. Conservative elements, led by the emperor's aunt, Dowager Empress Cixi, imprisoned the emperor and reversed the reforms, while Kang and Liang fled separately to Japan. Impressed by the success of Japan's own Meiji Reforms, Kang and Liang redoubled their efforts by continuing to publish periodicals in the treaty ports of China. Kang indignantly refused offers from the Western-educated revolutionary Sun Yat-sen to cooperate, but Liang flirted Sun's concepts of republicanism and revolution. Liang returned firmly to Kang's constitutional monarchy camp before the 1911 Revolution. After the revolution eliminated the Qing monarchy, Liang's star rose while Kang's fell. Liang returned to China to take various political positions in the quick succession of governments, at first supporting president Yuan Shikai and then fighting Yuan's 1915 attempt to make himself emperor. By the end of World War I (1918) Liang again traveled

the world and realized the inherent weaknesses of materialistic Western civilization that had led to the war's slaughter and destruction. His writings during the last decade of his life reflected disillusionment with Western culture and science, with the political situation in China, and even with his former teacher Kang Yuwei's excesses of scholarship. Both men, but especially Liang, left a strong imprint on Chinese journalism, government, education, language reform, and historiography.

—David Luesink

Bibliography

- Boorman, Howard, ed. *Biographical Dictionary of Republican China*. New York: Columbia University Press, 1967–1971.
- Levenson, Joseph. *Liang Qichao and the Mind of Modern China*. Cambridge: Harvard University Press, 1953.
- Liang, Qichao. *Intellectual Trends in the Ch'ing Period*. Translated by Immanuel C. Y. Hsu. Cambridge: Harvard University Press, 1959.
- Tang, Xiaobing. *Global Space and the Nationalist Discourse of Modernity: The Historical Thinking of Liang Qichao*. Stanford, CA: Stanford University Press, 1996.

The End of Official Confucianism

The political role of Confucian academies in China diminished in the early Qing period. Manchu emperors, aware of the role of the academies in the fall of the Ming dynasty, suppressed the political activism of academies such as the Donglin Academy, which had been revived in 1604 by scholars and officials to protest the many shortcomings of public life under Ming rule. The Confucian academies did retain control of the educational system and the rigid written examinations through which scholars attained civil service positions in the imperial bureaucracy. Passing the highest-level *jinsbi* examination was the ultimate goal of years of study. Scholar officials from a rural gentry class of literati elites populated the Qing government at every level.

However, by the late nineteenth century the examinations were providing far more degree holders than there were available government positions. As a result, traditional advancement

THE IMPERIAL EXAMINATIONS

The Imperial Examinations trace back to the Han dynasty (206 BCE–220 CE). In theory the examinations gave everyone in the empire, regardless of social status, the opportunity to become an official in the government. Due to the expense involved in preparation for the exams, most graduates came from a privileged gentry background. There were three levels: *shengyuan*, offered annually; *juren*, offered at the provincial level every three years; and *jinshi*, offered in the imperial capital every three years. The examinees were identified by number, not by name, and the examinations lasted between 24 and 72 hours. The exams were abolished in 1905.

—John Harney

in the civil service was blocked for many classically trained scholars. This issue was exacerbated by defeats at the hands of Western powers beginning with the Opium War (1839–1842) and the shock of the Taiping Rebellion (1851–1864). The psychological impact of the West's demonstrable technological dominance was immense. Western intellectual achievements also created a challenge for the basic principles of the Neo-Confucian order of the Qing state. The self-strengthening movement, originating in the 1860s, was an early attempt to adapt Western advances to a Chinese intellectual base, but the movement was scattered and uncoordinated.

In the late 1880s and early 1890s Kang Yuwei (1858–1927), an ambitious scholar from Guangzhou, began to agitate for reform. Kang, like many of his compatriots, felt humiliated at Chinese obeisance to foreign powers. He believed that radical reform could revitalize China. Kang and his one-time student Liang Qichao (1879–1923) saw Meiji Japan as an example for Chinese modernization; Japan was an Asian country that had successfully adapted Western ideals to modernize the state. Modernization itself was a new concept, derived from Western influence and the Enlightenment ideal of a progressive form of history, based on the acceptance that a linear path existed between an unsophisticated past and an improved future. This was at odds with the cyclical analysis of

history prevalent in imperial China and in Confucian circles. Kang and Liang argued that the periodization of history along progressive lines could be justified in Confucian terms. This was a direct challenge to reforming Chinese intellectual thought.

Kang and Liang were both interested in reforming state education, still dominated by Confucian academies and grueling written examinations. The 1898 Hundred Days Reform, in which Kang has long been considered a central figure, abolished the eight-legged essays, so long a fixture in the written examinations. The education system was not reformed further, typical of the limited immediate effects of the Hundred Days. By 1901, however, the conservative officials responsible for stifling the Hundred Days Reform had accepted reform as inevitable. The Qing government's New Policies set up a hierarchy of modern schools throughout China based on a Japanese model alongside the classical examination system. The two systems proved incompatible, and in 1905 the classical examinations were abolished, rendering obsolete the Neo-Confucian gentry elite who had provided the backbone of the old system.

—John Harney

Bibliography

- Karl, Rebecca E., and Peter Zarrow. *Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China*. Cambridge: Harvard University Asia Center, 2002.
- Kwong, Luke S. K. *A Mosaic of the Hundred Days: Personalities, Politics, and Ideas of 1898*. Cambridge: Council on East Asian Studies, Harvard University, 1984.
- Zarrow, Peter Gue. *China in War and Revolution, 1895–1949*. New York: Routledge, 2005.

Japanese Influence on China, 1890s–1914

The centuries of relations between Japan and China had been largely beneficial to both states, but the Sino-Japanese relationship underwent a fundamental change for the worse in the late nineteenth and early twentieth centuries. As China crumbled under the weight of age and opium, Japan flexed its new reformist muscle and began to bring portions of China into its

imperial orbit. During 1894–1895, sparked by rivalries in Korea, Japan attacked China, gaining victory in the Sino-Japanese (or Jiawu) War, a conflict that resulted in Japanese control of Taiwan for the next 50 years.

Japan was nevertheless a magnet to Chinese intellectuals and reformers from the 1890s to 1914. Japan's attractions were deeply tied to domestic developments in China, where the Qing dynasty held a death grip on reform. Chinese reformers, frustrated with Qing immobility, saw in Japan a model for Asian modernization. The unbending traditionalism of the Qing court in Beijing, headed by the old Manchu empress dowager, was unmoved by Japan's rapid ascent since 1868. The Qing alienated students and intellectuals, rendering Japan's economic buoyancy and Western technology all the more fascinating. During the closing years of the Qing era and the warlord period that followed, thousands of Chinese students traveled to Japan, by far the most popular destination for overseas Chinese students. The writer and reformer Lu Xun (1881–1936) and the poet Guo Morou (1892–1978) each spent significant time in Japan, as did the future Chinese communist diplomat Zhou Enlai (1898–1976). Before Japan repelled these men through glorification of empire in the 1930s, each of them responded to Japan with poetry and nostalgia.

Not only Chinese intellectuals, artists, and future statesmen flocked to Japan; so too did revolutionaries seeking to overturn the Manchu dynasty. Sun Yatsen (1866–1925), the founder of the Chinese Nationalist Party (Guomindang), was one such revolutionary. Sun was an admirer of Japan, and his years in Tokyo stimulated dreams of a Pan-Asian modernity enabled by intense Sino-Japanese cooperation.

The growth of Japanese influence and its appeal for Chinese revolutionaries such as Sun Yatsen was matched and eventually overcome by apprehension toward Japan due to its attacks on Chinese soil. Having laid out a “periphery of advantage” that ran squarely through Manchuria, the Japanese increased their economic privileges in Chinese port cities and expanded control along the trunks of the Manchurian railways. These privileges increased and Japanese modernization of portions of Manchuria and the Chinese mainland accelerated after Japanese

YAMAGATA ARITOMA'S VIEWS OF SINO-JAPANESE RELATIONS

On the eve of World War I the distinguished Meiji statesman and military leader expressed these views concerning cooperation between China and Japan.

“The principal aim of our plan should be to improve Sino-Japanese relations and to instill in China a sense of abiding trust in us. . . . If the colored races of the orient hope to compete with the so-called culturally advanced white races and maintain friendly relations with them while retaining their own cultural identity and independence then China and Japan, which are culturally and racially alike, must become friendly and promote each other's interests. . . . If we fail to dissipate China's suspicion of us, she will rapidly turn against us and turn more and more to America. Our politicians must be sternly warned against raising the issue of radicalism . . . it would be more prudent not to raise the issue of a league of colored people. . . . China must be won over by hints and suggestions . . . before we can realize our plans.”

—Adam Cathcart

Source

Yamagata Aritoma, quoted in Marius B. Jansen, *Japan and China: From War to Peace, 1894–1972* (Chicago: Rand McNally College Publishing, 1975), 202.

victory in the Russo-Japanese War (1904–1905). For China, Japan was a fierce and often dominant rival for regional influence in Northeast Asia. Participation in the bloody eight-power response to the Boxer Rebellion (1899–1901) enhanced Japanese global prestige but confirmed suspicions among the Chinese that in spite of its Pan-Asian rhetoric, Japan was but a predatory power in the European mold.

The destruction of the Qing dynasty in 1911 opened the door to increased Japanese influence in China. The outbreak of World War I in August 1914 brought new Japanese assertiveness in China. In particular, the seizure of the German base at Qingdao aggravated Chinese nationalistic sensibilities. The Okuma government's “21

Demands” of China, accepted by warlord Yuan Shikai’s government in Beijing, were the most notorious example of Japan’s disdain for China. The pragmatic Japanese attitude toward the mainland, including financial and military relationships with local Chinese warlords, soured the views of more Chinese toward Japan. On May 4, 1919, the full-scale anti-Japanese demonstrations erupted in Beijing, portending both China’s proud refusal to submit to Japanese imperatives and the sanguine holocaust of the second Sino-Japanese War.

—Adam Cathcart

Bibliography

- Fogel, Joshua. *The Role of Japan in Liang Qichao’s Introduction of Modern Western Civilization to China*. Berkeley: Institute of East Asian Studies, University of California Berkeley, Center for Chinese Studies, 2004.
- Howland, D. R. *Borders of Chinese Civilization: Geography and History at Empire’s End*. Durham, NC: Duke University Press, 1995.
- Jansen, Maris B. *Japan and China: From War to Peace, 1894–1972*. Chicago: Rand McNally College Publishing, 1975.
- Sun Yat-Sen. *China and Japan: Natural Friends—Unnatural Enemies; A Guide for China’s Foreign Policy*. Edited by T’ang Leang-Li. Shanghai: China United Press, 1941.

Dutch Learning in Japan

“Dutch Learning” is the term for European knowledge brought to Japan by Dutch traders and propagated by samurai scholars during the Edo period (1600–1868). The dissemination of Dutch Learning, or *rangaku*, was the primary means by which Japanese scholars and political officials stayed abreast of world events during Japan’s long period isolation, or *sakoku*.

Merchants from the Netherlands began trading with Japan in 1609. Because the Protestant Dutch were more interested in commerce than in missionary activity and were openly hostile to their Portuguese and Spanish rivals, Japan’s anti-Catholic Tokugawa rulers were generally tolerant of their presence. When shoguns Hidetada (r. 1605–1623) and Iemitsu (r. 1623–1651) began expelling European missionaries and merchants from Japan in the 1620s, only the Dutch were

allowed to remain. They were confined, however, to a small facility on the man-made island of Dejima in Nagasaki Bay, and only one Dutch ship per year was permitted to offload its cargo.

Besides distributing silks, spices, porcelains, and other European and Asian goods, the Dutch trading post was a rich source of European knowledge in art, medicine, mathematics, astronomy, shipbuilding, and economics. The Tokugawa allowed a restricted number of scholars to study Dutch for the purpose of communicating with the foreign traders and for studying their books. The trade agreement with the Netherlands also required the captain-general of the Dutch East India Company to appear before the shogun each year and present a formal briefing of world news, with rangaku scholars serving as interpreters at these audiences.

While the content of Dutch Learning often differed from the orthodox teachings of Tokugawa Neo-Confucianism and was considered dangerous by many traditionalists, the expansion of European knowledge between the seventeenth and nineteenth centuries attracted the attention of scholars such as Honda Toshiaki (1744–1821) and Kaiho Sieryo (1755–1817). In the late eighteenth century as corruption and inefficiency took their toll on the Tokugawa political economy, these and other rangaku scholars used Dutch Learning to criticize the Edo regime. Observing that several European nations had surpassed Japan in wealth and power and posed a growing military threat, rangaku scholars urged the government to embrace European technologies, if only for the purpose of achieving material and military parity. Progressive scholars such as Maeno Ryotaku (1723–1803) publicly speculated that European civilization might be superior to Japan’s, and criticisms of the centuries-old isolation policy became prominent in national debates.

In the early 1800s Russian, British, and American vessels began to appear in Japan’s coastal waters, and their captains grew increasingly persistent in their demands for access to Japanese ports. In 1844 King William II of the Netherlands warned Shogun Ieyoshi (r. 1837–1853) that if Japan continued to refuse requests for trade, it would likely suffer the fate of Qing China, recently humiliated in the Opium War.

➤ HONDA TOSHIAKI—A SECRET PLAN FOR GOVERNMENT, 1798

In the late eighteenth century Honda Toshiaki and other *rangaku* scholars championed Dutch Learning (European knowledge brought to Japan by Dutch traders) to criticize the Edo regime. Criticism of the centuries-old isolation policy became prominent in national debates. The following is an excerpt from Honda Toshiaki's *A Secret Plan for Government*.

"There is no place in the world to compare with Europe. It may be wondered how this supremacy was achieved. In the first place . . . they have delved deep into the beauties of the arts, and have divined the foundations of government, and have

established a system based on a thorough examination of the factors that make a nation prosperous. Because of their proficiency in mathematics, they have excelled also in astronomy, calendar making, and surveying. They have elaborated the laws of navigation such that there is nothing simpler for them than to sail the oceans of the world."

—Eric Cunningham

Source

Donald Keene, *The Japanese Discovery of Europe* (Stanford, CA: Stanford University Press, 1969), 193.

The question of realm defense took on new urgency, and Dutch Learning offered revised military tactics and provided the technology that allowed new fortifications, munitions, and shipyards to be built in Japan. Pragmatic activists such as Sakuma Shozan (1811–1864) called for a synthesis of "eastern ethics and western science" as a means of building material strength while preserving Confucian values, but time ran out on the possibility of using Western learning to hold Western powers at bay. In 1854 U.S. Navy commodore Matthew C. Perry's flotilla of "black ships" forcibly opened Japan to Western trade. In the following decades, traditional Dutch Learning yielded to an explosion of cultural, scientific, and technological exchange with the West.

—Eric Cunningham

Bibliography

- Goodman, Grant K. *Japan and the Dutch*. 2000; reprint, London: Routledge Curzon, 2002.
- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.
- Wakabayashi, Bob Tadashi. *Anti-Foreignism and Western Learning in Early-Modern Japan: The New Theses of 1825*. Cambridge: Harvard University Press, 1986.

The National Learning Movement

The National Learning Movement, or Nativist Learning, was a school of Japanese thought during the Edo period (1603–1868) that looked to

ancient mythology, poetry, and religion for the essential core of the Japanese spirit. By asserting the unique qualities of native tradition found in classical literature and the Shinto religion, scholars of National Learning, or *kokugaku*, helped shape an emerging Japanese national identity. While the movement has been traced to early Tokugawa court scholars who tried to separate the founding of their regime from Chinese historical tradition after the collapse of the Ming dynasty (1368–1644), National Learning evolved into a complex and even revolutionary expression of Japanese protonationalism.

Kokugaku took shape in the early eighteenth century when nativist intellectuals sought to define a spiritual identity that transcended such "foreign" philosophical constructs as Neo-Confucianism, the official ideology of the Tokugawa regime, and Buddhism, which for centuries had been the popular religion of Japan. Scholars such as Kado Azumamaro (1669–1736) and Kamo Mabuchi (1697–1769) sought to assert the superiority of Japanese culture by elevating Shinto over Buddhism and reviving awareness of Japan's rich heritage of stories, songs, and mythologies. Perhaps the most influential proponent of National Learning was Motoori Norinaga (1730–1801), a merchant scholar whose commentaries on the *Manyōshū* anthology (759 CE) and the *Tale of Genji* romance (1000 CE) described these texts as embodiments of an ideal native spirit. Norinaga's massive study on the

➤ KAMO MABUCHI, FROM *A STUDY OF THE IDEA OF THE NATION*

“In ancient days, Japan was governed in accordance with the natural laws of Heaven and earth. There was never indulgence in such petty rationalizing as marked China, but when suddenly these teachings were transmitted here from abroad, they quickly spread. . . . In Japan, generation after generation . . . had known prosperity, but no sooner were these Confucian teachings propagated here . . . than a great rebellion occurred. Later . . . the palace, dress, and ceremonies were Chinesified, and everything acquired a superficial elegance; under the surface, however, contentiousness and dishonesty became more prevalent.”

—Eric Cunningham

Source

Kamo Mabuchi, “A Study of the Idea of a Nation,” in *Sources of Japanese History*, edited by David Jon Lu (New York: McGraw-Hill, 1974), 254.

myth-history *Kojiki* (Records of Ancient Matters) celebrated the archaic language of these chronicles as an aesthetic expression of the moral values that informed the Japanese soul.

In the late eighteenth century as Japan's economy began to stagnate and the samurai-led polity proved increasingly incapable of responding to social changes, dissatisfaction with the Tokugawa dynasty became widespread. National Learning, with its concern for the moral welfare of the Japanese people, became an intellectual bridge between the aspirations of ethical nationalists and the criticisms of Tokugawa detractors. With the work of Hirata Atsutane (1776–1843), kokugaku reached beyond the domain of literary studies and into the domains of religion and politics. Hirata's writings on Shinto appealed to both popular sentiment and nationalism, as they described the “way of the gods” as the unique relationship between the people in their day-to-day lives and a cosmic realm whose divine inhabitants favored the Japanese among the peoples of the earth. The revival of Shinto led to new articulations of the role of the emperor,

who was traditionally seen as both a direct descendant of the primordial gods and a living deity in his own right.

In the latter decades of the Edo period, scholars of the Mito School such as Tokugawa Nariaki, a member of the Tokugawa clan but a critic of the shogunate, argued that the emperor, not the shogun, ought to hold supreme power in Japan. These scholars cited the failures of the Tokugawa rulers to defend the realm against Western encroachment as evidence of the shogunate's inadequacy. As reform-minded scholars, disgruntled samurai, and angry peasants joined the chorus of *sonno joi* (“revere the emperor, expel the barbarian”), the discourses of kokugaku added philosophical weight to a political ideology that increasingly rejected the legitimacy of the Tokugawa shoguns and sought to restore power to the imperial throne.

While the Meiji Restoration of 1868 ultimately set Japan on the path toward modernization, several key elements of kokugaku thought were carried into the modern era and were even institutionalized in the Meiji Constitution of 1889. Among these were the doctrine of imperial divinity, the promotion of Shinto as a state religion, and the validation of native mythology as national history.

—Eric Cunningham

Bibliography

- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.
- Totman, Conrad. *A History of Japan*. 2nd ed. Malden, MA: Blackwell, 2000.
- Wakabayashi, Bob Tadashi. *Anti-Foreignism and Western Learning in Early-Modern Japan: The New Theses of 1825*. Cambridge: Harvard University Press, 1986.

Late Tokugawa Confucianism

The dominant form of Confucianism during Japan's Tokugawa or Edo period (1603–1867 CE) was Neo-Confucianism, which developed in China during the Song dynasty (960–1279 CE) and dominated Confucianism in China during the Qing era (1644–1912). The followers of Neo-Confucianism combined aspects of Buddhism and Daoism with traditional (or Classical) Confucianism. Neo-Confucian scholars emphasized

moral cultivation, which made it appealing to Chinese emperors interested in the recruitment of government officials; by the end of the Song era, they gave Neo-Confucianism the status of orthodoxy, making mastery of its tenets essential for those preparing for the civil service examinations. Zen Buddhist monks, who traveled to China from Japan during this time, brought Neo-Confucianism with them on their return to Japan, where its study was limited to temples and monasteries. Beginning in the sixteenth century, Zen monks and priests introduced Neo-Confucianism to a wider audience, and it quickly became an important political ideology for samurai warlords.

An important scholarly family of the time, the Hayashi, the head of which was the former Zen monk Razan, eventually succeeded in having Neo-Confucianism elevated to the status of orthodoxy by the middle of the seventeenth century during the reigns of the third and fourth Tokugawa shoguns, Iemitsu and Ietsuna, respectively. The chief appeal of Neo-Confucianism for these shoguns was the emphasis on the benevolence and virtue of the ruler; thereafter, shoguns ruled for reasons of their values and character rather than their overwhelming military might. A key difference between Japan and China (as well as Korea and Vietnam), however, was the absence of civil service examinations in Tokugawa Japan. This meant that the Neo-Confucian orthodoxy did not have the same importance that it had in China, and scholars increasingly ignored it over the course of the eighteenth century. Many scholars turned to variant forms of Confucian learning such as Ancient Learning, a form of Confucian scholarship reminiscent of Classical Confucianism (i.e., pre-Neo-Confucianism). In addition, rival forms of scholarship such as Mito Learning, Dutch Learning, and National Learning developed. At the end of the eighteenth century, the head of the Tokugawa government, Matsudaira Sadanobu (1758–1829), a chief adviser and later a shogunal regent, sought to revive Neo-Confucian orthodoxy. Sadanobu viewed Neo-Confucianism as a way of preparing for government service able samurai warriors who would have the moral character to resist the lure of corruption. To this end, he revived the shogunal academy and

➤ “THE PROHIBITION OF HETERODOX STUDIES,” 1790

Matsudaira Sadanobu sent this document, known as the Kansei Edict, to the head of the Hayashi family requiring them to root out forms of Confucianism other than Neo-Confucianism from their school.

“[To the Hayashi family]: The teaching of Chu Hsi [(1130–1200), the chief systematizer of Neo-Confucian thought] has had the full confidence of successive shoguns since the Keicho era [1596–1615] . . . and your family generation after generation has been entrusted with the duty of upholding and expounding this teaching. It has been expected, therefore, that orthodox studies would be pursued without remiss and your students trained in accordance with it. Lately, however, various new theories have been put forward, heterodox teachings have become popular, and social standards have been broken down. Indeed, since it points to a complete decline in orthodox studies, this is a matter for the most profound regret and concern. Even among your own students, we have heard from time to time of those whose thinking is not pure and correct. . . . Not only in your own school, but in all others as well, you are advised to see to it that the orthodox doctrine alone is taught as the basis for the training of men for public service.”

—Mark McNally

Source

Masudaira Sadanobu, “The Prohibition of Heterodox Studies,” in *Sources of Japanese Tradition*, Vol. 1, edited by Ryusaku Tsunoda et al. (New York: Columbia University Press, 1958), 493–494.

changed its curriculum back to an emphasis on Neo-Confucianism. These efforts were the centerpiece of his larger social and political agenda known as the Kansei Reforms. His efforts resulted in a resurgence of Neo-Confucianism, but the other forms of scholarship endured until the end of the Edo period.

The situation that Sadanobu inherited with regard to the status of Neo-Confucianism was as follows. At the shogunal academy in Edo, where the Hayashi family had established the

orthodoxy of Neo-Confucianism in 1640, the Neo-Confucian curriculum fell out of favor. It was replaced by a rival form of Confucianism, Ancient Learning, represented chiefly by Ito Jinsai (1627–1705) and Ogyu Sorai (1666–1728). Jinsai taught his students to develop a moral practice that resulted in real, ethical conduct rather than simply applying abstract norms gleaned from the Confucian classics to everyday life. The sources for his moral teachings were those same classical works, but his emphasis was on practice and not simply theory, which he believed characterized Neo-Confucianism. Sorai was skeptical of all moral teachings, believing that they had nothing to do with ordering society and bringing peace to the realm. Both Jinsai and Sorai were critical of the Neo-Confucian orthodoxy led by the Hayashi family, and their books found their way into the shogunal academy. For scholars who did not study in the shogunal academy, the appeal of non-Confucian forms of scholarship was strong during the eighteenth century. The three most important of these were Mito Learning, National Learning, and Dutch Learning. Mito Learning originated in the Mito domain, an important territory administered by one branch of the shogunal family, the Tokugawa. The scholars of Mito Learning did not completely reject Neo-Confucianism, as did Jinsai and Sorai. Instead, Mito scholars sought to blend Neo-Confucianism with the indigenous religion of Japan, Shinto. For this reason, they focused on classical Japanese literature and imperial histories—the scriptural sources for Shinto—in their attempt to domesticate Neo-Confucianism. The scholars of National Learning agreed with their Mito counterparts on the importance of Shinto but de-emphasized Neo-Confucianism. They sought to define and articulate a unique Japanese cultural identity, and in this effort they focused on the classical literature of the era before the significant importation of continental cultural institutions had begun (pre-eighth century CE). While National Learning was mostly a literary phenomenon during the eighteenth century, its scholars shifted to an emphasis on Shinto religious beliefs and practices during the nineteenth century. Finally, the eighteenth

century saw the rise of European science in the form of Dutch Learning. With the support of the eighth shogun, Yoshimune (1684–1751), scholars began to study the Dutch language with the goal of translating scientific texts (mostly dealing with astronomy, medicine, navigation, and gunnery) into Japanese. These scholars translated dozens of important texts by the end of the eighteenth century.

Faced with the emergence of these competing forms of scholarship, Matsudaira Sadanobu promulgated his Ban on Heterodox Studies in 1790. The ban restored the centrality of Neo-Confucianism within the curriculum of the shogunal academy and forbade the teaching of all other forms of learning (including the Confucian studies of Jinsai and Sorai). The success of the ban, however, was limited. By reasserting the importance of Neo-Confucianism in the shogunal academy, the ban influenced schools in the provinces to do the same during the nineteenth century. These schools served functions similar to the shogunal academy, with the exception that their students were prepared for service in domainal governments. As Neo-Confucianism returned to the central position that it had enjoyed in the seventeenth century, its adherents and critics alike began to identify it with the shogunal government of the Tokugawa family. Thus, despite the ban, Mito Learning, National Learning, and Dutch Learning continued to thrive, especially as forms of scholarship appealing to opponents of the government. In fact, Mito Learning and National Learning became influential ideologies that supported the overthrow of the Tokugawa government in 1868.

—Mark McNally

Bibliography

- Maruyama Masao. *Studies in the Intellectual History of Tokugawa Japan*. Translated by Mikiso Hane. Princeton, NJ: Princeton University Press, 1974.
- Ooms, Herman. *Charismatic Bureaucrat: A Political Biography of Matsudaira Sadanobu, 1758–1829*. Chicago: University of Chicago Press, 1975.
- Sakai, Naoki. *Voices of the Past: The Status of Language in Eighteenth-Century Japanese Discourse*. Ithaca, NY: Cornell University Press, 1992.

Late Tokugawa Shintoism

Shinto, or the “way of the gods,” is the indigenous religion of Japan. Throughout its long history, it has shaped the development of Japanese aesthetics, society, and politics, especially in recent centuries. In the late Edo period (1603–1868), Shinto was instrumental in destabilizing the Tokugawa shogunate and helped prepare the way for the Meiji Restoration of 1868.

Shinto is practiced locally in the popular veneration of clan deities, mythical figures, and regional natural phenomena. It is also a formal religion, with liturgies, scriptures, shrines, and seasonal rituals performed by ordained priests. At the national level Shinto is a cultural artifact, intimately connected with state power and the cult of the imperial household. Traditionally, Japanese emperors have been revered as Shinto high priests and deities in their own right. Owing to the customarily fluid nature of Japanese religious practice, the “way of the gods” has tolerated and even aided the proliferation of foreign religions such as Buddhism and Confucianism, but of Japan’s three major religious traditions, Shinto always has been the one most closely linked to ethnic nationalism.

Tokugawa Ieyasu (1542–1616) used the doctrines of the Yoshida Shinto sect to help unify a fragmented Japan. While the political regime he founded was in practical terms a Neo-Confucian order, Ieyasu acquired imperial legitimacy through his investment as shogun (generalissimo) and was careful to have himself enshrined as a Shinto deity. In this way, he was able to exploit indigenous custom in order to secure his dynasty’s supremacy despite the fact that shoguns technically served under the emperor. Ironically, nativist thinking centuries later worked to undermine the legitimacy of the Tokugawa regime, as scholars of National Learning worked to revitalize the divine sovereignty of the imperial house. Hirata Atsutane (1776–1843) was instrumental in reviving Shinto practice in the early nineteenth century, and those who embraced Shinto came to openly question the spiritual legitimacy of the shoguns. The Tokugawa position was also damaged by the fact that the regime had been ineffective in dealing

FROM HIRATA ATSUTANE, OUTLINE OF THE ANCIENT WAY

Hirata Atsutane (1776–1843) was one of the scholars instrumental to the revival of Shintoism in the early nineteenth century; this revival encouraged the restoration of the emperor and rejection of shogunal rule. The following is an excerpt from one of Atsutane’s writings:

“People of the world without fail point to our country and call it the country of gods. . . . Our country was procreated by the gods by the special grace of the heavenly deities, and its difference from all other foreign countries is as wide as the distance between heaven and earth. Our country is so precious that it is beyond comparison. The fact that our country is a country of gods is not open to dispute, and even the lowest of men and women are unmistakably descendants of gods. However, pitiful indeed are those who do not know our glorious heritage.”

—Eric Cunningham

Source

David John Lu, *Sources of Japanese History*, Vol. 1 (New York: McGraw-Hill, 1974), 259.

with deteriorating domestic and foreign problems, chief of which was the aggressiveness of Western traders demanding access to Japanese ports. After 1845, Shinto became an integral part of a political ideology that sought both the restoration of the imperial house in favor of the shogunate and stronger resistance to the West.

The most forceful of the anti-Western restorationists were the midlevel samurai who called themselves *shi shi*, or “men of high principle.” Led by radicals such as Yoshida Shoin (1830–59) and united by the rallying cry “*sonno joi*” (“revere the emperor, expel the barbarian”), these men sought to establish a new political order centered on the person of the emperor and were willing to use violence to achieve their goals. Members of the religious arm of this movement, Fukko Shinto (Restoration Shinto), believed that imperial restoration would also reestablish the primacy of Shinto among Japan’s various religions.

The forced opening of Japan by the United States to Western trade in 1853–1854 triggered the political crisis that eventually led to the Meiji Restoration in 1868. From this event through the end of World War II, an innovation known as State Shinto (Kokka Shinto) played an ever-expanding role in defining Japanese power and identity. Using the imperial throne as the locus of state sovereignty, Emperor Mutsuhito and his inner circle invoked Shinto and the cult of the divine emperor to unify the Japanese people, to exhort them to ever greater achievements in their work, and, if need be, to sacrifice themselves in war for the good of the state.

—Eric Cunningham

Bibliography

- Hardacre, Helen. *Shintô and the State, 1868–1998*. Princeton, NJ: Princeton University Press, 1989.
- Kitagawa, Joseph M. *Religion in Japanese History*. New York: Columbia University Press, 1990.
- Totman, Conrad. *Early Modern Japan*. Berkeley: University of California Press, 1993.

Shintoism during the Meiji Period

During the Meiji period (1868–1912), Shintoism in Japan became more than a religion in a conventional sense as a result of its connection with emperor veneration. After the Meiji Restoration of 1868 when the imperial court was restored, the focus of Shintoism moved from local deities and nature worship to ancestor worship and reverence for the emperor. It became a quasi religion in that for many Japanese, worshipping the emperor was a matter of unquestionable patriotic duty rather than a personal faith that they could choose or not choose to develop. Through state rituals and education, Shintoism provided a sense of unity and national solidarity and contributed to the stability of the government throughout the imperial period.

Just as the Meiji Restoration occurred in response to the weakness of Tokugawa feudalism, the revival of Shintoism was a reaction to the chaotic situation in early Meiji Japan. Disruptive forces such as social turmoil, competing indigenous ideas, and the introduction of Western ideologies such as liberalism and individualism demanded that the Meiji leaders create a basis for unity and solidarity for the Japanese. They found

a powerful model for Japanese spiritual life in the teachings of the eighteenth-century National Learning scholar Motoori Norinaga (1730–1831), who rejected Chinese Confucianism and sought inspiration in Japan's ancient literary and religious heritage. Given that the emperor was considered the direct descendant of the supreme deity Amaterasu Omikami, the government used the emperor's divinity to cultivate a sense of patriotic responsibility for the ruler. The Japanese Imperial Constitution (1889) made it clear that the emperor was the state sovereign and a "sacred and inviolable" entity.

Shintoism gained its suprareligious character because of the failure of the Great Promulgation Campaign (1870–1884) in which Shinto priests, elevated to the status of officials in the Department of Divinity, aimed to establish a state religion based on Shintoism. The government abolished the department and its plans to reformulate Shintoism, primarily because it faced popular riots and uprisings of Buddhist monks against the campaign. In 1900 Shintoism gained the special legal privilege of having direct supervision and coordination from the Bureau of Shinto Shrines in the Department of Home Affairs. In contrast, religions such as Buddhism, Christianity, and sectarian Shinto came under the jurisdiction of the Bureau of Religions.

Shintoism was made inseparable from government and education, as exemplified by the term *saisei icchi* (the unity of rites and politics). Although there was no formally accepted textbook on Shintoism, the Imperial Rescript to Soldiers and Sailors (1882) and the Imperial Rescript on Education (1890) instead became the moral doctrine for students and soldiers. Shinto teaching permeated family life, school, rites, and rituals. The government put almost all aspects of Shintoism under national and local supervision, from the appointment of Shinto priests to the permission to build *torii* (the gateway to Shinto shrines). Throughout Japan, various locally enshrined Shinto gods were united in the name of the national faith. Shrines were classified into 12 grades, the highest of which was the Ise Grand Shrine enshrining Amaterasu Omikami.

The basis of divinity originated in the imperial bloodline rather than political power or moral philosophy. This ideology encouraged the

subordination of non-Japanese ethnic nations such as Taiwan and Korea, despite the official claim that they had received the equal benevolence of the emperor. Through the cult of the divine ruler, the Meiji government extended its hand abroad to create cultural hegemony, which nonnative Japanese were forced to accept.

—Ryoko Nakano

Bibliography

- Hardacre, Helen. *Shinto and the State: 1868–1988*. Princeton, NJ: Princeton University Press.
- Holtom, D. C. *Modern Japan and Shinto Nationalism: A Study of Present-Day Trends in Japanese Religions*. New York: Paragon Book Reprint Corp., 1963.
- Ross, Floyd Hiatt. *Shinto, the Way of Japan*. Westport, CT: Greenwood, 1983.

YASUKUNI SHRINE

Under the command of Emperor Meiji in 1879, the Yasukuni Shrine, originally known as Tokyo Shōkokusha, was reconstructed for commemorating the war dead. During the Meiji period, the shrine gained a patriotic significance of honoring the spirit of Japanese war dead in civil wars, the Sino-Japanese War, and the Russo-Japanese War. The commemoration of Class A war criminals convicted in the Tokyo Tribunal (1946–1948) as well as the visits to the Yasukuni Shrine by cabinet members places the shrine at the center of controversy, particularly in diplomatic relationships with China and South Korea.

—Ryoko Nakano

■ Introduction: Trends in European Thought

In the mid-1700s, the European intellectual movement known as the Age of Enlightenment was beginning to reach its peak. In 1749 the Baron de Montesquieu published his *Spirit of the Laws*, in which he introduced the concept of the separation of powers as a safeguard for liberty; Voltaire, Europe's best-known writer, produced a steady stream of essays, criticism, histories, and novels, including his best-selling *Candide* in 1759; in 1761 Jean-Jacques Rousseau published *Émile*, at once a novel and a groundbreaking treatise on education, and a year later published his *Social Contract*, which set forth the idea of popular sovereignty as the only basis for legitimate government; in 1764 the Italian Cesare Beccaria published *On Crime and Punishments*, a scathing attack on the cruelties and injustices of Europe's legal systems; and in 1776 the Scotsman Adam Smith published *The Wealth of Nations*, which defended individual economic freedom and free trade. Between 1750 and 1765 editors Denis Diderot and Jean d'Alembert oversaw the completion of the multi-volume *Encyclopédie ou dictionnaire raisonné des sciences, des arts et des métiers*, a collective enterprise involving many dozens of writers. It was simultaneously a source of factual informa-

tion, a critique of eighteenth-century society, and a statement of the Enlightenment's fundamental principles.

These principles, set forth in the writings of the *philosophes* (philosophers), the somewhat inaccurate name used to describe the Enlightenment's leading figures, were inspired by the achievements of Europe's scientific revolution, in particular the work of Isaac Newton, whose *Mathematical Principles of Natural Philosophy* (1787) set forth the law of universal gravitation and affirmed the power of human reason to understand the natural laws that governed the universe. Newton's laws suggested to the *philosophes* that equally spectacular results could be achieved if reason could be applied to a whole range of human endeavors other than science. In their eyes, eighteenth-century government, economic policy, education, legal systems, agriculture, and systems of labor, to name a few, were corrupt, unfair, immoral, and cruel. But if these institutions and practices could be brought in line with their underlying "natural" principles, then progress would occur. For Voltaire, progress meant small victories in the battle against religious bigotry, warfare, and various forms of human cruelty. For others such as the Marquis

de Condorcet (1743–1794), the author of *The Progress of the Human Mind*, progress meant a utopian future of peace, equality, robust health, and prosperity for every part of the world. In any case, according to the philosophes, human beings no longer were consigned to passively accept the status quo.

The Romantic movement of the late eighteenth and early nineteenth centuries was a product of the emotional upheavals connected with the era of the French Revolution and Napoleon and a reaction against the Enlightenment. Its proponents challenged the “shallow rationalism” of the philosophes, emphasizing instead the importance of imagination, emotion, and personal perspective in the creative process. The Romantics also celebrated individual differences rather than universal laws and viewed history as a source of inspiration rather than a useless relic to be overcome and forgotten. Romantic poets and artists had a wide following on both sides of the Atlantic in the early 1800s, and their interests and convictions inspired important scholarly work in the study of languages, folklore, and history, especially of the Middle Ages. Romanticism also lent support to the deepening of religious sentiment among many Americans and Europeans in the early nineteenth century.

Even in the heyday of Romanticism, however, the Enlightenment’s faith in science, reason, and progress persisted. The Enlightenment era’s debates on politics, which were intensified by the American Revolution, the French Revolution and the conservative reaction that followed, continued but became more refined and systematic. In contrast to the philosophes’ search for the universal principles underlying just government, writers of the early 1800s were determined to defend particular points of view. The words “liberalism,” “conservatism,” “radicalism,” “republicanism,” “socialism,” “constitutionalism,” “monarchism,” and “nationalism” all were coined between 1819 and the 1840s as writers discussed their attributes and pros and cons. The Enlightenment’s humanitarianism and faith in progress (along with the energy provided by evangelical Christians) can be seen in the movements on behalf of abolition, temperance, women’s rights, and public sanitation in the early 1800s. The Enlightenment’s influence

also can be seen in the writings of Robert Owen, Charles Fourier, and Henri de St. Simon, all of whom were “utopian” socialists with dreams of perfectly organized and perfectly just societies.

Most of all, the strength of the Enlightenment tradition can be seen in the ongoing progress of science. Important discoveries were made in the study of heat, chemistry, electricity, and geology. Scientific and mathematical research became a focus of university education in Germany, France, and other parts of Europe. Writers in the early 1800s sought to apply the principles of scientific research to the study of human society. This can be seen in the “positive” philosophy of Auguste Comte (1798–1857) and the “utilitarian” philosophy of Jeremy Bentham (1748–1832), who devised a system of “felicific calculus,” based on 12 human pains and 14 pleasures to determine the moral value of any action or political policy. Most famously, Karl Marx was determined to separate his “scientific” socialism from earlier utopian socialists by carefully basing his theories on history and economic theory.

The works of Marx, who wrote the *Communist Manifesto* along with Friedrich Engels in 1848, his magnum opus *Capitalism* in 1864, and numerous other works, along with the writings of Charles Darwin, *On the Origin of Species* (1859) and *The Descent of Man* (1871), were turning points in the history of nineteenth-century thought. Aside from Marx’s critique of capitalism, his theories of class conflict and economic determinism provided a controversial new perspective on history, politics, and human behavior. His theories of revolution set off passionate debates within the socialist camp, with anarchists, evolutionary socialists, Christian socialists, and democratic socialists all departing from Marxian orthodoxy. Darwin’s theory of evolution, which was based on the struggle for existence and the principle of natural selection, provoked immediate opposition from certain religious groups that upheld the biblical account of creation. More importantly, Darwinism, when applied to social issues, lent support to a host of movements including free trade, imperialism, eugenics, nationalism, militarism, and “scientific” theories of race.

In the 1890s and early 1900s, certain discoveries in physics, especially Albert Einstein’s

theory of relativity and various physicists' work on radioactivity, cast doubt on long-held scientific views of cause and effect, space and time, and matter. Sigmund Freud's writings on the role of the subconscious in human behavior cast doubt on the Enlightenment's faith in humans' basic rationality. But the astounding scientific, medical, and technological breakthroughs of the late nineteenth century, along with rising standards of living, the spread of public education, and the expansion of Western power across the globe, gave further strength to the Enlightenment idea of progress. It took the slaughter of World War I, the misery of the Great Depression, the Nazis' mass murder of Europe's Jews, and the astounding casualties and cruelties of World War II before this Enlightenment article of faith came to be doubted and widely abandoned.

—James H. Overfield

Romanticism

Romanticism is the theory of art, music, or literature that values emotion above reason and finds spiritual growth in simple, immediate responses to ordinary phenomena, especially natural phenomena. It arose in the late eighteenth century in direct reaction to the Enlightenment, which the early romantics saw as too singularly devoted to reason and analysis. There were two main romantic movements, English and German. They had very little to do with each other. English romanticism had almost no influence on the German variety, but some of the middle figures in German romanticism, notably the philosopher Friedrich Wilhelm Joseph von Schelling (1775–1854), influenced the later English romantics through the works of poet and critic Samuel Taylor Coleridge (1772–1834).

Besides Coleridge, the major exponents of English romanticism were artist and poet William Blake (1757–1827); poet John Keats (1795–1821); poet Percy Bysshe Shelley (1792–1822) and his wife, novelist Mary Wollstonecraft Shelley (1797–1851); poet George Gordon, Lord Byron (1788–1824); and poet William Wordsworth (1770–1850). Among the best-known works of the English romantics are Blake's *Songs of Innocence and Experience*, Keats's "Ode on a Grecian Urn," Mary Shelley's *Frankenstein*, Coleridge's "Rime

of the Ancient Mariner," Byron's *Childe Harold*, Percy Shelley's *Queen Mab: A Philosophical Poem*, and Wordsworth's 1807 two-volume collection of his poems. Like all romanticism, the English variety is profound in its respect for nature. As such, romantic writers are progenitors of the environmentalist activism of the late twentieth and early twenty-first centuries.

German romanticism was more diverse, longer lived, and arguably, outside the English-speaking world, more important than its English counterpart. Among its founders in the 1790s was the greatest author of German classicism, Johann Wolfgang von Goethe (1749–1832), who had also been instrumental in founding the Sturm und Drang (storm and stress) movement in the 1770s. Goethe and his close friend, poet and dramatist Johann Christoph Friedrich von Schiller (1759–1805), collaborated in 1797 to



A page from *Songs of Innocence*, written and illustrated by British artist William Blake. (North Wind Picture Archives)

➤ “FOREST LONELINESS” AND THE GERMAN ROMANTICS

Among the most important romantic notions was what the Germans called *Waldeinsamkeit* (pronounced “vahl-INE-zahm-kite”). The word literally means “forest loneliness,” but the idea behind it is not easily translatable. It refers to the exalted feeling of freedom that reflective individuals get when calmly alone, as when wandering deep in the woods. Individualism, autonomy, and personal freedom were all part of Enlightenment thought as well, notably in the ethical works of German philosopher Immanuel Kant (1724–1804), but in German romanticism these concepts truly flourished. *Waldeinsamkeit* is evident in Friedrich’s paintings and Thoreau’s *Walden*. Tieck, Heine, many other contemporary German poets, and even Emerson each wrote a poem titled “*Waldeinsamkeit*.”

—Eric v.d. Luft

publish *Xenien*, a controversial series of 207 epigrammatic couplets. Other early German romantics include philosopher Johann Gottlieb Fichte (1762–1814), theologian Friedrich Daniel Ernst Schleiermacher (1768–1834), poet Friedrich Hölderlin (1770–1843), and scholars August Wilhelm von Schlegel (1767–1845) and his brother Friedrich (1772–1829). All of these writers were champions of individual freedom.

Folklore was a major influence on the development of German romanticism. Ludwig Tieck (1773–1853) became famous for fantasies such as *Blond Eckbert*. Clemens Brentano (1778–1842) and Ludwig Achim von Arnim (1781–1831) collected stories in *The Boy’s Horn of Wonder*. The anthropologist brothers Jakob (1785–1863) and Wilhelm Grimm (1786–1859) offered their famous anthology of fairy tales. The stories of Ernst Theodor Amadeus Hoffmann (1776–1822) furnished the material for the opera *Tales of Hoffmann* by French composer Jacques Offenbach (1819–1880). Comedic fictional characters, such as Adelbert von Chamisso’s (1781–1838) Peter Schlemihl, Joseph von Eichendorff’s (1788–1857) Ne’er-Do-Well, and Heinrich von Kleist’s (1777–1811) Adam in *The Broken Jug*, became new folk heroes and antiheroes.

Religious tradition and cultural nationalism also exerted strong influence. Much German romanticism expresses intense yearning (*Sehnsucht*) for return to an imagined golden era of ages past. Poet and essayist Friedrich von Hardenberg (1772–1801), known as Novalis, craved the golden era of medieval Roman Catholicism in which the Holy Roman Empire and a common spiritual culture unified Europe.

French and American manifestations of romanticism were latecomers. French leaders include poet and novelist Victor Hugo (1802–1885); novelists Henri Beyle (1783–1842), known as Stendhal, and Alexandre Dumas Sr. (1802–1880); and poets Alphonse de Lamartine (1790–1869) and Alfred de Musset (1810–1857). American leaders include poet Henry Wadsworth Longfellow (1807–1882), transcendentalist philosophers Henry David Thoreau (1817–1862) and Ralph Waldo Emerson (1803–1882), and novelists James Fenimore Cooper (1789–1851), Nathaniel Hawthorne (1804–1864), and Herman Melville (1819–1891).

Important romantics who excelled in fields other than literature include German composer Ludwig van Beethoven (1770–1827), French composer Hector Berlioz (1803–1869), Hungarian composer Franz Liszt (1811–1886), Polish composer Frédéric Chopin (1810–1849), German painter Caspar David Friedrich (1774–1840), Spanish painter Francisco Goya (1746–1828), French painters Eugène Delacroix (1798–1863) and Théodore Géricault (1791–1824), and English painter Joseph Mallord William Turner (1775–1852).

German philosopher Georg Wilhelm Friedrich Hegel (1770–1831) found merit in both the Enlightenment emphasis on reason and the romantic emphasis on emotion. He attempted to reconcile these two apparently contradictory ways of thinking in order to create an absolute idealism that would recognize the indispensability of both reason and emotion for the human spirit. Influenced by Hegel’s philosophy of history, poet and social critic Heinrich Heine (1797–1856), who is often regarded as Germany’s first political poet, was the bridge between romanticism and the liberal, nationalistic Young Germany movement of the 1820s and 1830s.

—Eric v.d. Luft

Bibliography

- Curran, Stuart, ed. *The Cambridge Companion to British Romanticism*. Cambridge: Cambridge University Press, 1993.
- Engell, James. *The Creative Imagination: Enlightenment to Romanticism*. Cambridge: Harvard University Press, 1981.
- Riasanovsky, Nicholas Valentine. *The Emergence of Romanticism*. New York: Oxford University Press, 1992.
- Ziolkowski, Theodore. *German Romanticism and Its Institutions*. Princeton, NJ: Princeton University Press, 1990.

Positivism

Positivism is a broad movement of thought that marked the second half of the nineteenth century in Europe. The name derives from the fact that thinkers returned to the appreciation of positive facts so as to restore the world of nature, which the idealists had reduced to a mere representation of the ego. Positivism placed greater stress on immediate experience and on the positive data obtained through the senses.

Positivism emerged in France under Auguste Comte (1798–1856), evolving from English empiricism, which argued that experience was the only source of human knowledge. The new school of thought held that reality mechanically evolves from inferior forms until it attains consciousness in humans. According to Comte, historical observations on the process of human society show that humans have passed through three stages: first is the theological state, in which nature was mythically conceived, and the individual sought the meaning of natural phenomena from supernatural beings; second came the metaphysical stage, in which nature was conceived of as a result of obscure forces, and the individual sought the explanation of natural phenomena from them; third came the positive stage, in which all abstract and obscure forces are discarded, and natural phenomena are explained by their constant relationships. Comte extended the law of the three stages to include all reality.

Comte elaborated a political philosophy designed to simultaneously promote order and progress. He announced the development of a new religion of humanity to provide an emotional and spiritual foundation for his philosophy.

To promote order and progress, Comte suggested the individual be subordinated to society. He also posited the desirability of gradual social change. He believed that political problems should be subject to the same procedures that scientists used to resolve scientific questions. That is, politics should be in the hands of experts and technicians who could form expert opinions and thereby mediate between people and their rulers. In other words, he wanted to create a technical elite of political experts, who were above politics and, hence, above the blind desires of “the public.”

European positivism influenced both politics and economics. An extreme form of democracy arose, proclaiming absolute rule of the people. Freedom was understood as the full liberty of the individual, as long as there was no harm to the rights of others. The laissez-faire doctrine in economics led to Manchesterism, a theory based on the liberal principle of economic freedom, which arguably allows employers to pay the lowest possible wages without any moral responsibility toward the worker.

Positivism in the second half of the nineteenth century became an important social and political philosophy in Latin America, where it played a more progressive role than it did in Europe. People who embraced it believed that it would bring technical progress such as railroads and industrialization to their countries. It met the needs of many Latin American intellectuals who rejected Spanish and Portuguese culture and were trying to prove their independence by adopting French ideas. They considered Catholicism to be a tool of Spanish imperialism, which had kept Latin America in a state of amoral, chaotic backwardness. Positivism in Latin America introduced new methods in religion, philosophy, and especially politics and education. Scientific knowledge became the main objective of educational reform. In the field of politics, Latin American positivism was derived from its application to political problems, with solutions involving a utilitarian and pragmatic approach.

—Henry F. Carey

Bibliography

- Carey, Henry F. “Positivism.” In *Iberia and the Americas: Culture, Politics, and History*, edited by

- J. Michael Francis. Santa Barbara, CA: ABC-CLIO, 2005.
- Lenzer, Gertrude, ed. *Auguste Comte and Positivism: The Essential Readings*. 1975. Reprint, New Brunswick, NJ: Transaction, 1998.
- Scharff, Robert C. *Comte after Positivism*. Cambridge: Cambridge University Press, 1995.
- Singer, Michael. *The Legacy of Positivism*. New York: Palgrave Macmillan, 2005.
- Wernick, Andrew. *Auguste Comte and the Religion of Humanity: The Post-theistic Program of French Social Theory*. Cambridge: Cambridge University Press, 2001.
- Woodward, Ralph Lee, Jr., ed. *Positivism in Latin America, 1850–1900: Are Order and Progress Reconcilable?* Lexington, MA: Heath, 1971.

Social Darwinism

Social Darwinism is the political theory that English philosopher Herbert Spencer (1820–1903) developed in the 1850s, based on then current ideas of biological evolution. Its first important expression was Spencer's "Progress: Its Law and Causes" in the April 1857 issue of the *Westminster Review*. To call it any kind of Darwinism is anachronistic, since Spencer's article predated by two years Charles Darwin's (1809–1882) *On the Origin of Species*, the first and central text of Darwinian evolution. It is called social Darwinism because Darwin's biological analysis and Spencer's politics fit together well and mainly because Darwin remains more famous than Spencer. That label was never used by anyone contemporary with the movement but was coined in the 1930s by its detractors. Spencer himself called his theory social evolution.

The basic tenet of social Darwinism is that what happens in society ought to be analogous to what happens in nature. According to the biological theory of natural selection, the strongest, best-adapted, and most clever animals and plants survive, procreate, and evolve into even stronger, better-adapted, and more clever species, while weaker, less intelligent, and less well-adapted members die and allow their species to become extinct. Spencer maintained that human governments ought to allow similar life-or-death competition rather than intervene to help anyone disadvantaged physically, mentally,

or economically. Other social Darwinists went even further, claiming that to help the poor or the weak was morally wrong. Inferior people should be left alone so that they would either die or toughen up and survive.

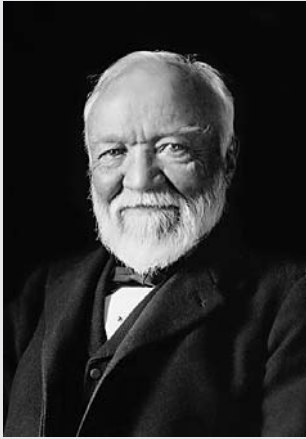
Social Darwinism in its time appealed alike to conservatives and liberals, although nowadays it would be taken as a mostly conservative viewpoint. Its adherents saw it as a logical extension of the classic natural law theory of St. Thomas Aquinas (ca. 1225–1274) and Hugo Grotius (1583–1645). It sharply opposed the utilitarian positive law theory of Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873). As incorporated in the writings of American economist William Graham Sumner (1840–1910), it frankly supported laissez-faire capitalism.

Both Darwin and Spencer were influenced by Thomas Robert Malthus (1766–1834), whose 1798 book *An Essay on the Principle of Population* argued that the Earth can only feed a certain number of people and that war, poverty, famine, disease, and other apparent evils are actually beneficial because they check population growth.

The motto of those who encouraged natural selection in human society was "survival of the fittest," a phrase coined by Spencer, not Darwin. Their goal was to relieve the so-called white man's burden by eliminating undesirable individuals and families from breeding populations. Relating Darwinian biology to political and ethical theory was easy for imperialist thinkers of the Victorian era, who believed in the innate superiority of Europeans. Rather than care for the domestic poor or provide humane, respectful colonial policies, the moral duty of powerful white Europeans was to exploit native peoples to the greatest possible extent and thus further enhance European culture. In 1872 English economist Walter Bagehot (1826–1877) wrote in *Physics and Politics* that cultured nations evolve only through their innate strength.

In 1883 Darwin's cousin Francis Galton (1822–1911) coined the term "eugenics" from two Greek words meaning "well born." Galton founded both eugenics and medical genetics on Darwinian principles, envisioning a future world in which only strong, intelligent whites would reproduce. He was a major influence on

➤ ANDREW CARNEGIE



(Library of Congress)

Scottish American industrialist and philanthropist Andrew Carnegie (1835–1919), a friend of the prominent social Darwinist thinkers Herbert Spencer (1820–1903) and William Graham Sumner (1840–1910), was a zealous advocate of social evolution. Carnegie believed that the rich were morally obliged to give away their money, not to help the poor but to improve society. His philanthropy was never in the form of handouts, which might encourage

sloth and social deterioration, but always in the form of incentives for intelligent people to work hard to better themselves. To promote self-education, he established 2,509 libraries. In 1910 the Carnegie Foundation for the Advancement of Teaching published *Medical Education in the United States and Canada*, known as the Flexner Report. The report branded over half of American medical schools as inadequate and caused them to close.

—Erik v.d. Luft

Marie Stopes (1880–1958), a conservative, anti-Semitic, British eugenicist who advocated birth control, involuntary sterilization, and abortion as means of social control to prevent so-called inferior women from reproducing. The eugenicist extremes of social Darwinism are evident in the excesses of Nazism and other flagrantly racist atrocities of the twentieth century.

Spencerian social evolution informed the works of English author Rudyard Kipling (1865–1936) and American novelist Edgar Rice Burroughs (1875–1950), creator of the *Tarzan of the Apes* series. They all believed that innate virility would carry white men through the toughest environmental challenges and enhance their natural superiority over other races.

—Eric v.d. Luft

Bibliography

- Dickens, Peter. *Social Darwinism: Linking Evolutionary Thought to Social Theory*. Buckingham, UK: Open University Press, 2000.
- Rubin, Paul H. *Darwinian Politics: The Evolutionary Origin of Freedom*. New Brunswick, NJ: Rutgers University Press, 2002.
- Stack, David. *The First Darwinian Left: Socialism and Darwinism, 1859–1914*. Cheltenham, UK: New Clarion, 2003.
- Wilson, Edward O. *On Human Nature*. Cambridge: Harvard University Press, 2004.

Darwinism and Religion

When Charles Darwin published *On the Origin of Species* in 1859, very few people—among the public and scientists alike—were concerned about a serious rift between science and a religious point of view. When such conflicts would arise, attempts were made to reconcile the two fields of knowledge. As Benjamin Silliman, a scientist and popular lecturer in the United States in the 1840s pronounced, “Truth is always truth. . . . And no one truth can ever be in conflict with any others.” Numerous scientific contemporaries of Silliman, such as Michael Faraday, a key figure in the development of the theory of electricity, were highly pious. Indeed, many of the era’s natural historians, including Darwin, had training or livelihoods as clergymen.

Throughout most of the nineteenth century, even after the publication of Darwin’s theory, the standard point of view on the relationship between science and religion, as offered in public lectures, articles, and books that treated the topic, involved the “argument from design,” which simply stated that scientific discoveries of the intricate workings of nature only further revealed the genius of the Creator. The complexities of nature indicated purposive structures or designs in the world that implied a designer. The

world was not dead matter but rather a creation. Such a point of view had been posited, to great success, in works such as William Derham's *Physico-Theology* (1713) and a century later in William Paley's *Natural Theology* (1802). Following this approach, by the late nineteenth century, as the shock of evolutionary theory subsided, versions of "theistic evolution" became popular that welded Darwin's theory to the argument from design by suggesting that a divine force somehow guided the evolution of species.

Yet such attempts at harmonizing the two fields required a gradual rejection of a biblical literalist viewpoint. In 1650, Archbishop James Ussher (1581–1656) published *The Annals of the Old Testament*, a work that placed the biblical date of creation at October 26, 4004 BCE. In the eighteenth century, Bibles published in Britain often included Ussher's chronology. New theories about geology and evolution brought such literalism into question. In 1778 Georges-Louis Leclerc, Comte de Buffon (1707–1778), published *Les Époques de la Nature*, which stretched the age of the earth from the approximately 6,000 years posited by Ussher and other biblical literalists to 75,000 years. Assuming that the earth had been cast off from the sun, Buffon estimated its rate of cooling to calculate its age. As such theories were assessed, many men of learning sought to reconcile scripture with the geological record, and alternative theories of geology contended and purported to reveal, for example, the truth of the biblical flood. To explain the fossil record and its gaps, the French naturalist and zoologist Georges Cuvier (1769–1832) proposed a model of catastrophism, which stated that the earth had gone through many epochs, each with its unique flora and fauna that had eventually perished in a cataclysm. Charles Lyell (1797–1875), in his *Principles of Geology* (1830–1833), proposed a theory of uniformitarianism whereby slow geologic processes had steadily reshaped the earth's surface and features. The earth was immensely old, perhaps millions of years old. Lyell's theory did not lend itself easily to biblical literalism. Grappling with the idea of the earth as millions of years old led many to argue that the Bible's six days of creation referred to very long phases that could be thought of as metaphorical days. Biblical literalism could not

be salvaged easily, but a school of "scriptural geologists" continued to produce works such as that of the evangelical vicar William Galloway (1811–1903), whose *Science and Geology in Relation to the Universal Deluge* (1888) was just one of many pamphlets he wrote attempting to reconcile biblical and geological accounts.

Darwin's theory, as published, was not avowedly atheistic; he was content to show that a slow process involving the transmutation of species made more sense than a theory of the separate creation of each species as final and distinct. Yet he notes that his theory takes off from some distant event when life was first "breathed"—a phrase he uses several times—into one or perhaps a few primordial life forms. Beyond that, Darwin insisted that natural forces such as the struggle for survival and chance variations in species could explain the development of all the earth's flora and fauna. Unlike the earlier evolutionary theory first published in 1809 by Jean-Baptiste Lamarck (1744–1829), there was no guiding principle, no teleology to the process. Adaptations occurred not purposefully but instead from chance variations subject to random population dynamics. While Darwin did suggest a development of simple to complex life forms, he did not see this as evidence of intention or purpose; chance variations and their possible usefulness, not a designer's intent, led to the variety and growing complexity of life on the planet. Furthermore, Darwin's theory indicated that humans had no unique position as the pinnacle of creation on earth but instead were shaped by the same forces as other species (a point argued much more crisply in Darwin's *The Descent of Man* [1871]). Darwin's theory, as stated, spoiled the premise of the argument from design.

Some of Darwin's defenders took on an openly materialistic and atheistic worldview and engaged in great debates with defenders of the faith, but others offered a version of evolution that involved reconciliation. Herbert Spencer (1820–1903), for example, insisted that evolution and the idea of progress were interlinked, lending support to the laissez-faire social and political view popularized as social Darwinism: the struggle for wealth would bring about society's perfection, just as evolution led to the

creation of higher species. Botanist Asa Gray (1810–1888), Darwin's great defender during the nineteenth-century debates in the United States, presented the "theistic evolution" position that natural selection was guided by a divine hand.

Given the popularity of such approaches as Spencer's and Gray's—which harmonized Darwin's insistence on variations and the transmutability of species with the possibility of a guiding divine force—serious clashes between religion and science awaited the time that biblical literalists again would become a social force to reckon with. Rather than turn to biblical literalism or even to the bible as metaphor, many Christian modernists sidestepped the issue and chose a stance with antique pedigree: the truths of religion and those of science were of different orders and did not need to be reconciled. This rankled many in the Christian fundamentalist movement that developed in the late nineteenth and early twentieth centuries in Britain, Australia, and the United States. The tenets of fundamentalism, which included biblical literalism and a clear-cut moral vision, were committed to print in a series of pamphlets called *The Fundamentals* between 1905 and 1915. A serious clash became even more imminent following World War I when biblical literalism was mixed with an ethical critique of social Darwinism and its excesses such as the eugenics craze and social Darwinism's purported influence on German militarism. The religious promptings of constituents, a populist bent, and genuine ethical concerns led William Jennings Bryan to argue the case for banning the teaching of the theory of evolution in the State of Tennessee in 1925.

—Fred Nadis

Bibliography

- Armstrong, Patrick H. *All Things Darwin: An Encyclopedia of Darwin's World*. Westport, CT: Greenwood, 2007.
- Greene, John C. *Darwin and the Modern World View*. Baton Rouge: Louisiana State University Press, 1961.
- Hodge, Jonathan, and Gregory Radick. *The Cambridge Companion to Darwin*. 2nd ed. Cambridge: Cambridge University Press, 2009.
- Larsen, Edward. *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion*. New York: Basic Books, 1997.

Ruse, Michael. *The Evolution Wars: A Guide to the Debates*. Santa Barbara, CA: ABC-CLIO, 2000.

Thomson, Keith Stewart. *Before Darwin: Reconciling God and Nature*. New Haven, CT: Yale University Press, 2005.

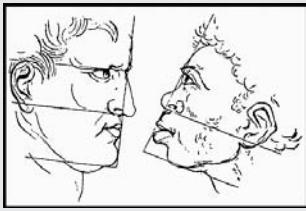
Theories of Race

Scientific ideas of racial classification occupy the dangerous middle ground between impartial scholarly anthropology and the social blight of racism and prejudice. Anthropology began in Germany and Britain in the late eighteenth century and immediately formulated what the British called scientific racism. The plan was to categorize various human types according to a system such as that of Swedish botanist Carolus Linnaeus (1707–1778). Against this plan, German philosopher Johann Gottfried von Herder (1744–1803) asserted in 1784 that the concept of race was not applicable to the human species. American Presbyterian clergyman Samuel Stanhope Smith (1750–1819) argued that there was only one human race and that differences in skin color and other distinguishing racial characteristics could all be attributed to environment. English physician Charles White (1728–1813) polemicized against Smith, claiming that the natural differences among human races were nearly tantamount to definitions of separate species. Both science and popular opinion overruled Herder and Smith for the next 200 years.

The motivation for classifying humans was as much prejudice as science. Early anthropologists sought to bolster the popular bias that the white European male was the ideal human type and that all other humans were deviations from this norm. They claimed that their classification was natural and inexorable, not imposed or arbitrary. Even Herder and Smith, who each believed that humans could not be classified in a Linnaean way, still recognized human physical differences and agreed with that goal.

The systematic concept of race is post-Linnaean and was not discovered as a biological reality but was developed or almost invented by white European and American male scientists as a social construct. The ancient Greeks, Romans, and Hebrews were equally prejudiced against certain groups, but they identified individuals

CHARLES BELL'S ANATOMICAL COMPARISON OF RACES



(Charles Bell. *The Anatomy and Philosophy of Expression as Connected with the Fine Arts*, 1877)

Charles Bell's anatomical/physiological argument for race as a biological reality and for the natural superiority of the white European male is epitomized in this inset illustration from his 1806 book, *Essays on the Anatomy of Expression in Painting*.

Bell's drawing shows Marcus Vipsanius Agrippa (ca. 63–12 BCE) facing an unnamed, perhaps composite, African. Bell argues in the accompanying text that God designed the European's mouth primarily for oratory but the African's primarily for eating. Darwin's 1872 book *The Expression of the Emotions in Man and Animals* disagreed with Bell about God's intelligent design but credited Bell's study of facial expressions with contributing to racial theory.

—Eric v.d. Luft

by their distinct colors, hairstyles, modes of dress, habits of speech, and other external signs, and they did not classify. Strict racial partition was a new idea in the wake of intellectual Europe's fascination with the Linnaean system and subsequent obsession with classification. Classificatory racism was an outgrowth of the Enlightenment. It received a significant boost in 1798 through the publication of *Essay on the Principle of Population* by English political economist Thomas Robert Malthus (1766–1834).

Scientific racial theory began with Dutch comparative anatomist Petrus Camper (1722–1789) and was furthered by Swiss theologian Johann Kaspar Lavater (1741–1801), German anthropologist Johann Friedrich Blumenbach (1752–1840), and Scottish anatomist and surgeon Charles Bell (1774–1842). Camper originated racial classification based on measurements of bones, especially skulls, rather than color.

English physician James Cowles Prichard (1786–1848) was the leading theorist of race

between Blumenbach and English naturalist Charles Darwin (1809–1882). But Prichard did not begin to publish on race until 1813, expanding upon his 1808 medical dissertation, and by that time much of the medical, anatomical, and anthropometric basis of racial theory had already been established by Camper, Blumenbach, and Bell. In this tradition, Darwin argued that pure races existed, with some superior to others, according to their evolved characteristics.

English physician and neurologist Thomas Laycock (1812–1876) acknowledged two works of the Scottish painter, architect, and interior designer David Ramsay Hay (1798–1866) as having influenced his conception of ideal human heads and faces and their various defective forms. Hay's views resembled and perhaps were derived from Bell's. Laycock used Hay to liken the African head to that of the “degenerate European.” English physician John Langdon Haydon Down (1828–1896), also influenced by Bell's version of scientific racism, correlated various levels of observed mental deficiency with various racial types. Down himself called “Mongolian idiocy” what is currently called Down syndrome. He also identified idiots by their apparent similarities to Malays, Ethiopians, and American Indians.

These rigid views of race pervaded the nineteenth century and remained mostly unchallenged until Anglo-American anthropologist Ashley Montagu (1905–1999) began investigating race in the 1920s.

—Eric v.d. Luft

Bibliography

- Bernasconi, Robert, and Tommy Lee Lott, eds. *The Idea of Race*. Indianapolis: Hackett, 2000.
- Brantlinger, Patrick. *Dark Vanishings: Discourse on the Extinction of Primitive Races, 1800–1930*. Ithaca, NY: Cornell University Press, 2003.
- Eze, Emmanuel Chukwudi, ed. *Race and the Enlightenment: A Reader*. Cambridge, MA: Blackwell, 1997.
- MacMaster, Neil. *Racism in Europe, 1870–2000*. New York: Palgrave, 2001.

Racism—Theory and Practice in the United States

There is some debate as to the origins of racism in the United States. Some scholars argue that

colonial distinctions were made between Christians and “heathens” rather than between different races, while others maintain that race was always an important distinguisher in America. Those who believe that religious distinctions were primary maintain that slavery was not originally a race-based system and that racism developed after the institution was established in order to dehumanize slaves and rationalize the practice. Others, however, argue that racism predated slavery and was central to the establishment of the institution. Regardless of whether or not racism existed among colonial Americans, there is little doubt that by the turn of the nineteenth century distinctions were made between racial groups and that these distinctions were thought to be meaningful.

By the early 1800s most Americans believed that a person’s race determined a great deal about not only their physical traits and capacities but also their intellectual, emotional, and spiritual traits and capacities. There was, they believed, a hierarchy of races, determined by the various races’ inherent and unchanging qualities. This theory was supported by the development of so-called scientific racism during the nineteenth century. Many intellectuals took Darwin’s theory of evolution and applied it to human societies, claiming that Europeans were more advanced in terms of their evolutionary development, which was evidenced by their superior social and intellectual capacities. This became known as social Darwinism.

Science was not the only tool upon which racists drew, however. Religion was also used to justify prejudice, and religious explanations for racial hierarchies were also popular. One such explanation was based on a biblical story of Ham, one of Noah’s sons. The ninth book of Genesis says that Noah cursed Ham’s son Canaan after Ham saw his father drunk and naked. Many Americans believed that Africans were the cursed descendents of Ham, which provided religious justification for their persecution and enslavement. Another popular religious justification for racism was the theory of polygenesis. According to this theory, the story of Adam and Eve only described the creation of white people. Consequently, other races were created at a different time or when God created the animals,

and those people were therefore not created in God’s image. This meant that nonwhites were inferior and did not deserve equal consideration. Although these explanations for the origins of racial differences were common in the nineteenth and early twentieth centuries, by the mid-1900s they were largely abandoned.

The most easily identifiable form of racism in American history has existed between European Americans and African Americans. Not only did the institution of slavery further racist assumptions that people of African descent were inherently different and inferior, but racism toward blacks also continued long after emancipation. Well into the twentieth century there were laws in the United States that limited the rights of African Americans. These restrictions became known as Jim Crow laws after the popular nineteenth-century song “Jump Jim Crow,” which was performed by whites in blackface and stereotyped African Americans. Jim Crow laws were state ordinances that required whites and blacks to remain segregated in public places, and in many parts of the country schools, restaurants, restrooms, and public transportation remained segregated until the 1960s.

Although American racism is most closely associated with white-black prejudice, other groups have also been affected. For instance, Jews have long been discriminated against in American society. Although some argue that this treatment was a result of religious differences, many Americans have considered Jews a distinct race and have therefore thought of them in racialized terms. Beginning in colonial America, Jews were generally barred from holding public office and voting. Stereotypes that Jews were dishonest, greedy, and immoral have been common in the United States since the colonial period. For example, in 1862 General Ulysses S. Grant issued an order expelling all Jews from Kentucky, Tennessee, and Mississippi over concern that they were involved in dishonest economic activities. Social Darwinism also affected American Jews and led to an increase in anti-Semitism in the nineteenth century.

Asian Americans have also been the victims of racism, especially in the American West. In the nineteenth century Chinese immigration to the United States increased as a result of the gold

rush and as jobs with railroads became available. During this time a number of state laws and local ordinances were put into place that discriminated against the Chinese. For example, mid-nineteenth-century California laws forbade Chinese immigrants from testifying against European Americans, denied them the right to marry whites, required them to pay special taxes, and refused to grant them citizenship. During this time there were also attempts to drive Chinese Americans out of California, Oregon, Washington, Wyoming, Nevada, and Colorado. In 1875 the federal government also became involved in passing the Page Act, which barred nearly all Asian women from immigrating to the United States, and the 1882 Chinese Exclusion Act and its renewals suspended Chinese immigration until well into the twentieth century.

—Monica Reed

Bibliography

- Fredrickson, George M. *Racism: A Short History*. Princeton, NJ: Princeton University Press, 2002.
- Haller, John S. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859–1900*. Carbondale: Southern Illinois University Press, 1971.
- Levy, Richard. *Antisemitism: A Historical Encyclopedia of Prejudice and Persecution*. Santa Barbara, CA: ABC-CLIO, 2005.
- Pfäelzer, Jean. *Driven Out: The Forgotten War against Chinese Americans*. Berkeley: University of California Press, 2008.
- Vaughan, Alden T. *Roots of American Racism: Essays on the Colonial Experience*. New York: Oxford University Press, 1995.

Late-Nineteenth-Century Irrationalism

Philosophical irrationalism is the belief that emotion, instinct, will, or faith, but not reason, is and should be the final determiner of truth, meaning, and reality. It claims that the universe is essentially without reason, that paradox and contradiction characterize reality, and that existence may even be absurd. Extreme forms of irrationalism hold that there is no truth, meaning, or reality. Nineteenth-century irrationalists, through their general pessimism, were forerunners of twentieth-century existentialism.

The fountainhead of late-nineteenth-century irrationalism was German pessimist philosopher Arthur Schopenhauer (1788–1860). However, its roots can also be traced to the first Christian existentialist, Danish theologian Søren Kierkegaard (1813–1855); German Romantics such as Friedrich Schlegel (1772–1829), Friedrich Daniel Ernst Schleiermacher (1768–1834), and Friedrich Wilhelm Joseph von Schelling (1775–1854); and German critics of the Enlightenment such as Johann Georg Hamann (1730–1788) and Friedrich Heinrich Jacobi (1743–1819). Schopenhauer remained mostly unknown until the last decade of his life but became one of the most celebrated Western philosophers from about 1860 until the third decade of the twentieth century. His influence extended not just to philosophy but also to literature, art, music, general intellectual life, and even popular culture.

German irrationalist philosopher Eduard von Hartmann (1842–1906) created a peculiar synthesis of absolute idealism and Schopenhauerian voluntarism that he published in several works, beginning with his 1869 *Philosophy of the Unconscious*. Schopenhauer, who strongly opposed absolute idealism and personally detested its main exponent, Georg Wilhelm Friedrich Hegel (1770–1831), would have been appalled at any attempt to unite his philosophy of the blind will with any kind of rationalism, especially Hegel's. Nevertheless, von Hartmann's work proved influential, notably on the psychoanalytic theories of Viennese neurologist Sigmund Freud (1856–1939) and Swiss physician and philosopher Carl Gustav Jung (1875–1961).



Arthur Schopenhauer is one of the most acclaimed philosophers of the nineteenth century. He rejected the rationalism of Kant and Hegel and argued that human behavior is motivated by the individual's basic desires, or will. He took a pessimistic view of existence, concluding that individual physical and emotional desires can never be fulfilled. (Bettmann/Corbis)

The major irrationalist of this era was French philosopher Henri Bergson (1859–1941), who eschewed analysis, rejected dualistic subject/object epistemology, and claimed instead that knowledge is possible only through an intuition of the duration of an object. The intuited object disappears into the knower's feeling of it so that the duality of knower and known is overcome, and the knowledge thus gained is deeper and richer than if the object had remained a traditional object for a subject. Bergson's influence on philosophy has been sporadic, but his influence on art and literature has remained steady and profound.

Irrationalism had immediate ramifications in literature, drama, poetry, and art. Norwegian Henrik Ibsen (1828–1906) wrote wild, poignant dramas of realistic psychological conflict. Influenced by Ibsen, Swedish dramatist August Strindberg (1849–1912) loaded his plays with neurotic, pessimistic, and hauntingly incongruous themes. Irish playwright Oscar Wilde (1854–1900) also found inspiration in Ibsen. Alfred Jarry (1873–1907), the first absurdist playwright, premiered his *Ubu Roi* (King Turd) in 1896. This play, full of puns and obscenities, satirized William Shakespeare and depicted a foul old man bent on conquering Poland. Novelists who were informed by Schopenhauer's pessimism included Thomas Hardy (1840–1928) and Lev Tolstoy (1828–1910).

English illustrator Aubrey Beardsley (1872–1898) championed the art nouveau movement and its philosophical counterpart, aestheticism, that extolled meaningless beauty over beautiful meaning. Other prominent aestheticists were Wilde, English critic Walter Pater (1839–1894), and American expatriate painter James Abbott McNeill Whistler (1834–1903). Aestheticist attitudes also appeared in France, in the poetry of decadents such as Charles Baudelaire (1821–1867) and symbolists such as Stéphane Mallarmé (1842–1898), who were each influenced by American poet, mystery writer, and critic Edgar Allan Poe (1809–1849). Aestheticism was also evident in the postimpressionist painting of Paul Cézanne (1839–1906). Mallarmé and Cézanne influenced the spiritual poetry of Rainer Maria Rilke (1875–1926).

—Eric v.d. Luft

➤ NIETZSCHE AN IRRATIONALIST?

Many interpreters of the philosophy of Friedrich Nietzsche (1844–1900), especially his detractors, label him an irrationalist. This interpretation does not withstand scrutiny, since reason plays an important and productive role in Nietzsche's thought. While Schopenhauer's influence on Nietzsche in the 1860s and 1870s cannot be denied, Nietzsche outgrew pessimism in the 1880s to develop a program for using both reason and emotion to build toward the high cultural creativity of the world historical future. Where Nietzsche seems to attack reason, his target is not reason as such but rather the misuse of reason for acquisitive, ignoble, or nonartistic ends. He was particularly harsh on the reason that enslaves people, exalts militarism, or promotes base values.

—Eric v.d. Luft

Bibliography

- Berlin, Isaiah, and Henry Hardy. *The Magus of the North: J. G. Hamann and the Origins of Modern Irrationalism*. New York: Farrar, Straus, and Giroux, 1993.
- Guerlac, Suzanne. *Thinking in Time: An Introduction to Henri Bergson*. Ithaca, NY: Cornell University Press, 2006.
- Jacquette, Dale. *The Philosophy of Schopenhauer*. Montreal: McGill-Queen's University Press, 2005.
- Janaway, Christopher. *The Cambridge Companion to Schopenhauer*. Cambridge: Cambridge University Press, 1999.

Freud and Freudianism

Sigmund Freud's impact on modern thought and culture is difficult to overemphasize. He is most famous for founding the theories and methods of psychoanalysis, which revolutionized modern conceptions of consciousness, therapy, and culture. He investigated the psychological mechanisms of the unconscious mind, focusing on sexual desires as a central, though repressed, source of human motivation, a common contemporary assumption that was popularized in part through his work.

Freud was born in 1856 in Freiburg, Moravia, then part of the Austrian empire, and moved

with his parents to Vienna at age four. After receiving a medical degree from Vienna University, in 1881 he began work at the Vienna General Hospital and in 1885 was appointed as a university lecturer in neuropathology. With the help of Wilhelm Fliess, Freud experimented in the clinical uses of electroshock therapy, hypnosis, and cocaine, with sometimes disastrous results. Joseph Breuer and Freud published together on the subject of hysteria and trauma. Using free association, a technique that Freud developed, he also began to treat patients for neurosis, that is, the patients' unconscious and unresolved conflicts manifested as emotional or physical disturbances. This formed the kernel of the theories and practices that he would call psychoanalysis.

Freud achieved the fame he sought with his landmark publication, in 1900, of *The Interpretation of Dreams*, in which he argued that the unconscious mind is driven by often-contradictory libidinal desires limited by the constraints of one's conscious everyday life. He argued that with free association, it was possible to help patients uncover these latent dream desires and that this in turn would enable them to understand the causes of their neuroses. He insisted that these neuroses were produced during specific conflicts in an individual's infancy and youth. After the publication of *The Interpretation of Dreams*, Freud became increasingly explicit in how his theories applied not only to neurotics but also to supposedly well-adjusted people, a distinction that he both drew and blurred in his writings. Fame and controversy followed the rest of his life's work.

In 1908, along with Alfred Adler and Carl Jung, Freud organized the first International Congress of Psychoanalysis in Salzburg, Austria. A lecture series that Freud and Jung gave in the United States in 1909 added to Freud's rapidly growing international reputation. Among the early psychoanalysts of the Vienna Psychoanalytic Society, arguments led to expulsions, and expulsions led to polemics: Adler started his own school of psychoanalysis in 1911, and Jung followed suit in 1914.

Freud was versed in classical and modern works of literature, art, science, and philosophy. His interest in anthropology led to his analysis of so-called primitive cultures in *Totem and Taboo*

(1913). He turned his attention again to culture and religion with works such as *Civilization and Its Discontents* (1930) and *Moses and Monotheism* (1939). Despite his own professed atheism, political anti-Semitism continued to constrain his life and, for some, define his works: in 1933 Hitler came to power in Germany, and Freud's books were among those burned in Nazi bonfires. With the German annexation of Austria in 1938, Freud fled to London, where he would remain until his death in 1939, finally succumbing to excruciating cancers of the mouth and jaw.

Freud's theories of psychoanalysis developed and changed over time. His initial writing on dream analysis argued that the mind is driven by libidinal desires, but the self attempts to suppress their manifestation in everyday waking life. Just as a censor acts to distort information in a closed society, an individual's unconscious mind censors and displaces the latent meaning of a dream into the less objectionable manifest content remembered and reconstructed upon waking. One's repressed wishes are nonetheless decipherable, if encrypted, in one's dreams. The goal of psychoanalysis was to work with the patient backwards, through this manifest dream content, with the free associations of the patient until the hidden latent meaning was revealed.

Freud is most famous for his analysis of the self, comprised of forces known as the Ego, the Super-Ego, and the Id. The Ego attempts to realize one's desires through acceptable social norms. Thus, one's desire for sex can be sublimated, or transformed, into other more socially acceptable creative and generative acts; one's death drive can likewise be sublimated into less violent pursuits. The Super-Ego is the internalization of social norms and controls that become an integral part of the individual; its censoring demands are negotiated by the Ego. The Id is the locus of libidinal desires, for sex and violence, creation and death, which is constantly demanding satiety. Libidinal energies are shaped and focused during an individual's early life by particular challenges faced in different stages of childhood development. For example, in the phallic stage, the male child negotiates the sexual desire he feels for his mother with his fear of castration at the hands of his father, known as the Oedipus complex. Women, he

added, have their own corresponding Elektra complex. Freud's stages of development assume a hierarchy of normality and deviance depending on their successful resolution by a maturing individual.

Freud also wrote about culture and society. He analyzed the works of artists like Feodor Dostoevsky and Leonardo da Vinci. Ancient and modern civilizations were the subjects of *Totem and Taboo* and *Civilization and Its Discontents*, respectively. In the latter work, Freud examined a seemingly intractable problem of modern society: the more developed the civilization, the more repressed an individual's desires will be in order to conform. In other words, civilization itself becomes neurotic in time, as the sex and death drives of individuals' libidos are increasingly constrained by social mores.

Though many of Freud's theories have fallen into disrepute, his analytic approaches are still widely influential and have been internalized in both academic and popular culture. Some feminists and other contemporary theorists, reworking a number of his gendered and cultural assumptions, continue to use his work productively.

—Christopher Churchill

Bibliography

- Gay, Peter. *Freud: A Life for Our Time*. New York: Norton, 1998.
- Lear, Jonathan. *Freud*. New York: Routledge, 2005.
- Schorske, Carl. *Fin-de-siècle Vienna: Politics and Culture*. New York: Vintage Books, 1981.
- Sulloway, Frank J. *Freud: Biologist of the Mind*. New York: Basic Books, 1979.

Beginnings of Anthropology

Anthropology is the comparative science of the social behavior, physical characteristics, environmental relations, and geographic origins of either humans in general or humans in cultures other than that of the scientist. When scientists study only their own culture in this way, they are usually doing sociology.

Three major types of anthropology emerged in the late eighteenth and early nineteenth centuries. Physical or biological anthropology studies the quantifiable facts of human types relative to one another. It began as racial classification

and anthropometry but expanded to include evolutionary theory, ecology, medical anthropology, and genetics. Cultural or social anthropology describes and evaluates what humans have established as various societies, ethnicities, religions, customs, and institutions and includes ethnography, archaeology, and linguistics. Philosophical anthropology, as practiced by the German philosophers Immanuel Kant (1724–1804) and Johann Gottfried von Herder (1744–1803), is the speculative science of how rational humans would likely behave in various moral, social, religious, or political dilemmas.

Anthropology began in the wake of Swedish botanist Carolus Linnaeus's (1707–1778) developing an adequate classification system for plants. The impetus grew to apply the Linnaean system to other living things, including humans. Influenced by Linnaeus and the human bone measurements of Dutch comparative anatomist Petrus Camper (1722–1789), the German physician Johann Friedrich Blumenbach (1752–1840) founded physical anthropology in the 1770s.

Cultural anthropology arose in response to the European intelligentsia's newfound curiosity about African, Asian, and Native American cultures, particularly their religions and mythologies. The first cultural anthropologists did

➤ ANTHROPOLOGY AND RELIGION

The anthropology of religion, an essential aspect of cultural anthropology, started slowly in the early nineteenth century with German and British translations of sacred Hindu and Buddhist texts. It began in earnest when the literal truth of the Bible was first seriously challenged, in a series of *Encyclopaedia Britannica* articles in the 1870s by Scottish scholar William Robertson Smith (1846–1894). Smith's *The Religion of the Semites* (1889), along with *The Legends of Genesis* (1901) by German professor of Old Testament studies Hermann Gunkel (1862–1932) and *The Elementary Forms of Religious Life* (1912) by French sociologist Émile Durkheim (1858–1917), established that scholars could study the Judeo-Christian tradition objectively on a par with the religious traditions of other cultures.

—Eric v.d. Luft

not themselves travel into the lands they studied but instead depended on information brought back by missionaries, soldiers, sailors, explorers, and merchants. Thus nineteenth-century anthropology was generally tainted by the condescending attitude of the conqueror. This problem was not remedied until the American anthropologist Margaret Mead (1901–1978) visited Samoa in the 1920s.

An important task of cultural anthropology is to record stories, especially oral tradition. The German brothers Jakob (1785–1863) and Wilhelm Grimm (1786–1859) collected and published northern European folklore. The American bank clerk Thomas Bulfinch (1796–1867) compiled popular collections of Western mythology in his spare time.

The founder of modern systematic cultural anthropology was Oxford University Museum curator Edward Burnett Tylor (1832–1917). Three of his books, *Researches into the Early History of Mankind* (1865), *Primitive Culture* (1871), and *Anthropology* (1881) remain standards in the field. Scottish anthropologist James George Frazer (1854–1941) contributed *The Golden Bough: A Study in Magic and Religion* (1890). Classic works such as *Totem and Taboo* (1913) by the Viennese psychoanalyst Sigmund Freud (1856–1939) and *The Rites of Passage* (1908) by the Dutch anthropologist Arnold van Gennep (1873–1957) relied on the groundwork laid by Tylor and Frazer.

—Eric v.d. Luft

Bibliography

- Moore, Jerry D. *Visions of Culture: An Introduction to Anthropological Theories and Theorists*. Walnut Creek, CA: AltaMira, 2004.
- Stocking, George W. *Victorian Anthropology*. New York: Free Press, 1987.
- Zammito, John H. *Kant, Herder, and the Birth of Anthropology*. Chicago: University of Chicago Press, 2002.

Origins of Sociology

Sociology is the scientific study of society, especially the social behavior and relations evident in one's own culture. Sociology emerged from cultural anthropology, specifically through the realization that the same observational, metric,

and analytic techniques by which scientists studied other cultures could also be used to study their own.

The French positivist philosopher Auguste Comte (1798–1857) founded sociology in the 1830s and coined the term in 1839 in his *Course of Positive Philosophy*, which appeared in six volumes from 1830 to 1842. By the 1850s both the philosophy of positivism and its offspring, the science of sociology, were well established in European intellectual circles. Comte's main thesis was that social relationships and structures are determined by natural law. This idea is corollary to positivism's central claim that natural science should govern both philosophy and social theory because humanity is ultimately subject to natural law. Not all subsequent sociological theory was positivist, and since the early twentieth century Comte has been more a figure of historical interest than a viable thinker in the continuing sociological conversation.

The English philosopher Harriet Martineau (1802–1876) translated Comte into English in 1853. Several of her books, especially *Society in America* (1837), are precursors of sociological thought and added substantially to the political, economic, and sociological analysis of women and marriage. Despite Martineau's work, Herbert Spencer (1820–1903), who wrote many popular books and articles on sociology from the 1870s to the 1890s, is considered to be the founder of sociology in Britain. Both Martineau and Spencer drew heavily from the political and economic theory of Thomas Malthus (1766–1834).

The German philosopher Georg Wilhelm Friedrich Hegel (1770–1831) can be regarded as the godfather of sociology. Despite Comte's misunderstanding of Hegel and despite Hegel's aversion to positivism, Hegel had strong influence on most other early European sociologists. Hegel believed that humanity is best understood in terms of its ever-changing spiritual progress through distinct but dialectically related historical phases. Georg Simmel (1858–1918), rejecting empiricists such as Spencer, preferred to follow Hegelian dialectical lines of sociological reasoning. Another Hegelian, Karl Marx (1818–1883), best known as a philosopher of economics and politics, also made significant contributions to sociology.



A brilliant mathematician, Auguste Comte participated in the scientific intellectualism of the nineteenth century. He is best known for developing the philosophy of positivism and as the founder of sociology. (Library of Congress)

German sociologists, each with a keen knowledge of Hegelian thought, originated many of the basic concepts of sociology. Wilhelm Dilthey (1833–1911) eschewed Comte’s positivistic approach to sociology and instead developed *Geisteswissenschaft* (cultural science), which used psychology, philosophy, art history, and many other disciplines to gain a broad understanding of the human spirit and its progress. In 1887 Ferdinand Tönnies (1855–1936) introduced the contrasting ideas of *Gemeinschaft* (community), an organization that expects its members to surrender their individuality to the group, and *Gesellschaft* (society), a free association of individuals who retain their individuality as members of the group. These German terms have entered the standard English sociological vocabulary.

In France, Émile Durkheim (1858–1917) studied social integration and introduced to sociology the idea of anomie, the breakdown of society. His most noteworthy books are *The Division of Labor in Society* (1893), *The Rules of Sociological Method* (1895), *Suicide* (1897), and *The Elementary Forms of Religious Life* (1912). Durkheim is credited with making sociology a genuine science.

—Eric v.d. Luft

Bibliography

- Barnes, Harry Elmer, ed. *An Introduction to the History of Sociology*. Chicago: University of Chicago Press, 1948.
- Mills, Charles Wright, ed. *Images of Man: The Classic Tradition in Sociological Thinking*. New York: Braziller, 1960.
- Swingewood, Alan. *A Short History of Sociological Thought*. New York: St. Martin’s, 2000.

Turner, Stephen P., ed. *The Cambridge Companion to Weber*. New York: Cambridge University Press, 2000.

The Study of History

Historiography, the writing of history, changed little from the time of Herodotus and Thucydides, the fifth-century BCE Greek inventors of this discipline, until the end of the eighteenth century. It was mostly just storytelling with little academic rigor. Even the most famous historical work of the eighteenth century, *The Decline and Fall of the Roman Empire* by Edward Gibbon (1737–1794), belongs to this narrative genre despite its speculative interpretation of the rise of Christianity.

The impetus for developing history into a scholarly discipline came mainly from the Germans, notably philosophers Johann Gottfried von Herder (1744–1803), Wilhelm von Humboldt (1767–1835), and Georg Wilhelm Friedrich Hegel (1770–1831). Herder’s speculations on the origins of cultural phenomena began to lead history away from narrative and toward analysis. His *Ideas toward the Philosophy of Human History*, which appeared in four parts from 1784 to 1791, proved to be tremendously influential. Humboldt advocated documenting underlying historical ideas as well as overt historical facts. Hegel detected in the natural course of events a rationality and a logic that made history a dialectical science. His dictum that what is real is rational influenced his fellow professor at the University of Berlin, Leopold von Ranke (1795–1886), the world’s first professional systematic historian. Ranke was not a Hegelian but absorbed enough Hegelianism to try in his books to provide an overarching reason for the succession of historical events.

Among von Ranke’s critics was his student Jacob Burckhardt (1818–1897), who believed that von Ranke saw history too much in terms of the actions of the upper classes. Burckhardt founded *Kulturgeschichte* (“history of culture”), which studied broad movements such as industrialization, nationalism, mercantilism, and individualism. In contrast to von Ranke’s conservative optimism, Burckhardt’s interpretation of European history was starkly pessimistic and

► THOMAS CARLYLE AND HISTORY

The most famous historian in the nineteenth century was Thomas Carlyle (1795–1881), a Scottish author. His frankly subjective, pro-British interpretation of the French Revolution became very popular, colored further interpretations, and largely prevented more objective assessments until the middle of the twentieth century. Along with his friend and correspondent of 50 years, American essayist Ralph Waldo Emerson (1803–1882), Carlyle argued that history is nothing but biography, or a concatenation of biographies, and that world historical events are nothing but the actions of “great men.” In so doing, they exploited the German concept of *Lebensgeschichte* (“life history”).

—Eric v.d. Luft

often chillingly accurate in predicting wars and social upheavals.

Much of the technical historiographical vocabulary has come into English from untranslatable German terms coined in the nineteenth century. *Heilsgeschichte* (“salvation history”) denotes the interpretation of events through the lens of Christian theology. *Geistesgeschichte* (“history of spirit”) refers to historical methods characterized by highly interpretative, psychological, or even romantic approaches. Wilhelm Dilthey (1833–1911) was interested in ascertaining what constitutes valid historical knowledge and how it may be acquired. His method of *Geisteswissenschaft* (“science of the spirit”) attempted to understand human culture by investigating its psychological, emotional, artis-

tic, and philosophical causes rather than just its political, economic, or military factors.

The new historiography was not without ulterior motives. English politician Thomas Babington Macaulay (1800–1859) wrote a five-volume history of England to suit his Whig Party. Wilhelm von Giesebrecht (1814–1889), another student of von Ranke, wrote a six-volume history of medieval Germany that was explicitly designed to inspire patriotism. By contrast, German legal scholar Theodor Mommsen (1817–1903) wrote a history of ancient Rome that encouraged readers to distrust nationalism, state power, and central authority.

In the second half of the nineteenth century German historiographical methods dominated academia throughout the West. Gabriel Monod (1844–1912) brought these methods to France and in 1876 founded *Revue Historique*. Herbert Baxter Adams (1850–1901), cofounder of the American Historical Association in 1884, made Johns Hopkins University the center of American historiography in the late nineteenth and early twentieth centuries.

—Eric v.d. Luft

Bibliography

- Bentley, Michael. *Modern Historiography: An Introduction*. London: Routledge, 1999.
- Iggers, Georg G., and James M. Powell, eds. *Leopold von Ranke and the Shaping of Historical Discipline*. Syracuse, NY: Syracuse University Press, 1990.
- Kelley, Donald R. *Faces of History: Historical Inquiry from Herodotus to Herder*. New Haven, CT: Yale University Press, 1998.
- Sältzer, Rolf. *German Essays on History*. New York: Continuum, 1991.

Science and Technology

As much as any political revolution, economic change, or social transformation, developments in technology and science were a driving force in human history between 1750 and 1914. Scientific discoveries provided new answers to age-old questions about the nature of matter, the causes of disease, the age of the earth, the origins of humankind, and the properties of heat, electricity, and light. So spectacular were its findings and so certain were its methods that by the late 1800s, science seemed capable of creating a future in which mystery and human misery would both disappear. Technological innovation had an even greater impact. It initiated and drove the process of industrialization, transformed communications and travel, created new wealth and weapons, and affected even the most mundane aspects of everyday life. These scientific and technological advances took place almost exclusively in Europe and the United States, and taken together, they largely explain the rise of Western global dominance in the nineteenth century.

Europe had a strong scientific tradition well before the eighteenth and nineteenth centuries. In the Middle Ages and the Renaissance, university professors and their students pored over the works of Aristotle, Galen, Ptolemy, and other ancient Greek thinkers to better understand the natural world and the God who created it. In the sixteenth and seventeenth centuries, the era of the Scientific Revolution, the heritage of ancient science was rejected by learned men who offered new insights into the earth's place in the universe, the movements of planets and stars, the nature of terrestrial motion, optics, anatomy, and the circulation of the blood. Published in 1687, Isaac Newton's *The Mathematical Principles of Natural Philosophy*, in which he demonstrated the law of universal gravitation, was a monument to the powers of human reason and an inspiration for the hopes and dreams of writers who contributed to the eighteenth-century Age of Enlightenment.

Europe also had a long tradition of technological innovation. In the Middle Ages, drawing on Roman antecedents and borrowing from Asia, Europeans adopted gunpowder and the astrolabe; invented eyeglasses, mechanical clocks, the blast furnace, vertical windmills, buttons, the hourglass, and the mirror; and improved water mills, construction methods, farming techniques, and ship design. The Renaissance fostered refinements in shipbuilding, the making of gunpowder weapons, and the techniques for paper making and printing, and the era of the Scientific Revolution saw the invention of the telescope and microscope. The theoretical speculations of university-trained scientists had little to do with these technological advances, which were the work

of craftsmen and tinkerers with little or no advanced academic training. Even the discoveries of the Scientific Revolution had no practical effects. The knowledge that the earth orbited the sun and that planets moved in elliptical, not circular, orbits did not improve navigational techniques; the discovery of the circulation of the blood by William Harvey (1578–1657) did not improve medical practice; and the investigation of the properties of magnets by William Gilbert (1544–1603) had no practical applications.

The separation between the worlds of the inventor and the scientist continued in the first century of Europe's industrialization. Abraham Darby (1678–1717), a farmer's son who developed a method for producing high-grade iron in a blast furnace fueled by coke (scorched coal) rather than charcoal (scorched wood), was a maker of iron pots. Henry Cort (1740–1800), who invented the puddling process for refining pig iron, was an ironmaster. Neither man drew on scientific theory to make his invention, yet their work revolutionized iron production. Of the men whose inventions revolutionized the textiles industry in the eighteenth century, John Kay (the inventor of the flying shuttle) was a manufacturer of parts for handlooms; Richard Arkwright (the inventor of the water frame) was a wigmaker turned entrepreneur; James Hargreaves (the inventor of the spinning jenny) was a weaver and carpenter; and another John Kay (who helped Arkwright in the development of the water frame) was a clockmaker. The steam engine, the most important single invention of the age, resulted from the work of Thomas Newcomen, an ironmonger and lay preacher, and James Watt, an instrument maker. Although Watt plied his trade at the University of Glasgow and was honored with memberships in several

Although Watt plied his trade at the University of Glasgow and was honored with memberships in several scientific societies, he had no scientific training, and even if he had, it would have taught him nothing that he could have applied to his work.

scientific societies, he had no scientific training, and even if he had, it would have taught him nothing that he could have applied to his work. The first scientific study of steam engines, Sadi Carnot's *Reflections on the Motive Power of Heat*, was published only in 1824, when thousands of steam engines already were in operation worldwide. Only in the mid-nineteenth century did scientific theory begin to advance technology, a process that accelerated as the century drew to a close.

Many factors contributed to scientific progress and the attendant acceleration of technological development in the nineteenth century. Most importantly, the field of science was redefined and expanded. In addition to astronomy, mechanics, mathematics, and optics, which had been the focus of scientific inquiry since antiquity, there developed a number of "new" sciences, including meteorology, geology, chemistry, and the study of electricity, heat, and magnetism. Older subjects of inquiry were redefined. The term "biology," for example, first used in 1802, came to be applied to the laboratory-based and experimental approach to investigating the chemistry and physiology of plants and animals. A new understanding of physics also emerged. The term "physics"

came to mean the study of matter and energy and their interactions, with subfields of astronomy, mechanics, optics, acoustics, electricity, magnetism, and radiation. Chemistry received a new nomenclature, theoretical basis, and methodology through the work of Joseph Black (1728–1799) on chemical reactions and the nature of carbon dioxide, Joseph Priestley (1733–1804) on oxygen and other gases, and Antoine Lavoisier (1743–1794), who stated the first version of the law of conservation of mass, recognized and named oxygen and hydrogen, explained combustion, helped devise the metric system, and drew up the first extensive list of elements. By midcentury the term “scientist,” coined in 1840, entered common parlance as referring to a trained professional dedicated to the study of nature through observation and experiment.

The professionalization of science changed how science was organized and taught. Traditional learned societies such as the Royal Society of London and the French Academy of Sciences, which drew their memberships from accomplished individuals in all branches of science, continued to exist, but they lost their role as a primary vehicle for the presentation of research. This role instead was assumed by organizations specializing in astronomy, geology, chemistry, mathematics, and other subdisciplines. Specialized journals also proliferated.

Important changes also took place in the teaching of science and the emerging new profession of engineering in schools and universities. Beginning in the eighteenth century, the French monarchy underwrote the founding of specialized academies, separate from the country’s several universities, dedicated to training select students in engineering (a word derived from the Latin root *ingeniare*, “to devise”). They included the École nationale des ponts et chaussées (National School of Bridges and Roads), founded in 1747; the École Nationale Supérieure des Mines (Advanced National School of Mines), founded in 1780; and the École centrale des travaux publics (Central School for Public Works), founded in 1794 and renamed the École Polytechnique one year later. The latter served as a model for numerous technical schools in the United States and Europe.

During the 1800s science attained a place in the curricula of German universities, where original research, not the transmission of inherited knowledge, became the focus. A key figure was Justus von Liebig (1803–1873), whose much-imitated program for training chemists at the University of Giessen included laboratory work, original research, seminars, and colloquia. The model of the research university spread to England, where Oxford, Cambridge, and the newly founded University of Manchester built laboratories and introduced a rigorous scientific curriculum; it also took hold in the United States, where graduate programs proliferated from the late 1870s onward. Important scientific and technical research also took place in large urban hospitals and the industrial research laboratories that many businesses sponsored beginning in the late 1800s.

It would take many pages to describe the astounding results of nineteenth-century science and the many ways that science transformed technology and industry. Among them, several stand out. Research

conducted on current electricity between the 1780s and the 1840s gave rise to the telegraph, the telephone, electric lights, household appliances, and a totally new industry dedicated to the generation of electricity. The emergence of chemistry resulted in new materials, dyes, fertilizers, and pharmaceuticals; it also led to new methods for producing steel and gunpowder, processing food, and refining petroleum. The theoretical work of James Maxwell (1831–1879) on electromagnetic waves led to the development of the wireless by Heinrich Hertz (1857–1894) and the discovery of X-rays by Wilhelm Roentgen (1845–1923). The growth of applied science went beyond physics and chemistry. In medicine, the introduction of anesthesia in dentistry and surgery

in the 1840s and the development of antiseptic measures in the 1870s both had untold benefits. So too did the discovery of the role of bacteria in causing disease, which made possible the development of vaccines for the prevention of anthrax, rabies, and other diseases.

By the end of the nineteenth century science had become part of popular culture in Europe and the United States. Botanical gardens and zoos as well as museums of science and natural history proliferated.

By the end of the nineteenth century science had become part of popular culture in Europe and the United States. Botanical gardens and zoos as well as museums of science and natural history proliferated.

Botanical gardens and zoos as well as museums of science and natural history proliferated. “Scientists” were frequently featured in print advertisements to testify about the purity and benefits of products ranging from chocolate to patent medicines. Beginning in the early 1900s, children from middle-class families received science kits and toy microscopes as gifts.

Science and technology not only changed how people lived but also changed how people thought. For most Europeans and Americans the new discoveries and inventions encouraged their belief in progress and the superiority of Western civilization. Discoveries about the age of the earth and Darwin’s theories of evolution disturbed many religious persons because they seemed to contradict the biblical account of creation. On the other hand, Darwin’s ideas of the “struggle for existence” and the “survival of the fittest” were used by others to justify imperialism, militarism, laissez-faire capitalism, nationalism, and the disparity between the rich, who had proved themselves “fit” in the struggle for existence, and the weak and feckless poor.

As European economic influence and political power spread across the globe, so too did its new technologies. Railroads traversed Siberia, crisscrossed India, and linked Africa’s interior to the coast. Telegraph lines were strung across land and ocean floors to connect every continent but Antarctica. Irrigation projects were undertaken in India, and the Suez Canal was constructed to link the Mediterranean Sea and the Indian Ocean by way of the Red Sea. All of these projects were designed and overseen by European engineers and used machines and materials produced in European factories. Asia, Latin America, and Africa also attracted the interests of European scientists. With research subsidized by scientific societies and governments, scientists collected botanical specimens, observed animal life, prepared maps, investigated

geological structures, and published their findings in scholarly journals. More importantly, Western engineering skills and scientific knowledge gradually were imparted to small numbers of non-Europeans.

Interest in Western science and technology in other parts of the world predates the nineteenth century. As early as the 1400s, Asian rulers employed European experts to teach the skills of manufacturing artillery and guns. Beginning in the late sixteenth century, Chinese emperors welcomed Jesuit missionaries to the imperial court, where they served as astronomers, mapmakers, mathematicians, and teachers of clock making, surveying, and glass making. Even after the Kangxi emperor prohibited missionary work in 1717, a few Jesuits and ex-Jesuits continued to be employed at the imperial court. In Japan, even during its period of isolation, Dutch merchants were required to report annually to the shogun in Edo on recent political and scientific developments in Europe, and in the eighteenth century small numbers of Japanese studied Western science, especially anatomy, after the ban on importing Western books was lifted after 1720.

In the nineteenth century the diffusion of Western science, technology, and technical know-how accelerated. Political leaders of independent states in Asia and Latin America all made efforts to provide opportunities for technical and scientific training to close the economic and military gap between their countries and the West. Japan was notably successful in these efforts. By the early 1900s, it had four universities with programs in science, medicine, and engineering, all taught by Japanese professors rather than imported European scholars. The government also supported agricultural experiment stations, the Industrial Experiment Laboratory, the Electrochemical Laboratory, the Railways Research Institute, and a number of colleges and other institutes for the study and teaching of veterinary science, forestry, sericulture, and meteorology. The government also funded foreign study (for almost 3,000 students between 1888 and 1912) and several scientific societies and scientific journals.

Elsewhere, however, political uncertainty, financial constraints, intellectual inertia, and religious opposition hindered scientific progress. In China, where Protestant missionaries had promoted the study of Western science and medicine beginning in the 1840s, the Qing government did not fully commit itself to a program of scientific and technical training until after China's defeat by Japan in the Sino-Japanese War of 1895. The government then outlined a broad program for educational reform but had just begun to implement it when the government was overthrown in the Revolution of 1911. Between 1898 and 1911 only 200 students graduated with scientific degrees from the newly founded Imperial University in Beijing.

In the Middle East, the ambitious plans of Muhammad Ali, the ruler of Egypt from 1805 to 1849, to promote Western science and engineering through foreign study, a government-sponsored translation program, and new schools lost momentum after his death in 1849 and the establishment of the British protectorate in 1882. In Persia and the Ottoman empire, government schools to train military personnel in medicine and engineering were founded in the early 1800s, and efforts were

made to establish European-style universities. Persia's Dar al-Funun, founded in 1851 with a faculty of Europeans and European-educated Persians, offered instruction in foreign languages, mathematics, and the sciences, but it was poorly funded and attracted small numbers of students. Plans to found a similar institution in Istanbul were first made by Ottoman officials in the 1840s, but after three failed attempts, instruction began only in 1900. In the empire's Arab provinces, two missionary schools, the Syrian Protestant College and St. Joseph's University, both founded in 1866 in Beirut, made important contributions to the teaching of Western science and medicine. By 1900 the number of graduates in medical and scientific fields at the two institutions numbered around 2,000.

In the colonized areas of Asia and Africa, the diffusion of Western science, medicine, and engineering varied widely. At one extreme was India, where the British sponsored schools, colleges, and universities at which science, medicine and engineering were taught. They also subsidized museums and botanical gardens and underwrote scientific societies. For the British, promoting science had the benefits of spreading the benefits of Western civilization, affirming the superiority of Western learning to that of India, and, most importantly, helping Britain administer its giant colony by educating Indians for jobs in the Indian Medical Service and the Indian Civil Service. All of these efforts were well received by the Hindu population and attracted significant financial support from Indian princes, landowners, and industrialists. In fact, from 1878 onward, in Bengal private aid to education, including scientific education, exceeded the amount provided by the government.

Outside of India, colonial powers did little to encourage education, let alone advanced education in science and engineering. Paradoxically, one of the reasons was to avoid what had developed in India, which by the end of the nineteenth century had a sizable and vocal number of educated natives dissatisfied with their vocational prospects and critical of India's colonial status. This was behind the thinking of Sir Frank Swettenham, governor of Britain's Federated Malay States, who wrote in the 1890s that "Whilst we teach children to read and write and count in their own languages . . . we are *safe*. Beyond that, I should like to see the boys taught useful industries and the girls weaving, embroidery, and mat-making." In Africa, education was left to missionaries, most of whom agreed that most Africans were incapable of grasping literary and scientific subjects. The instruction that the missionaries offered rarely went beyond religion, personal hygiene, arithmetic, and basic literacy. More educational opportunities were provided in the twentieth century, but it continued to be believed that Africans should be trained to become mechanics, carpenters, blacksmiths, and masons, not chemists or biologists. After independence, the shortage of engineers, scientists, and science teachers was one of many challenges faced by the new African states.

—James H. Overfield

■ Introduction: Technology and Industry

During the period 1750–1914, technology and industry deepened their connection with a vast number of inventions that increased productivity, sparked the first and second Industrial Revolutions, and developed worldwide trade to a level never seen before. Of course, technological developments were interwoven with other segments of society as well. The relationship between labor and capital underwent vast changes, spawning a host of economic, cultural, political, and social movements varying from trade unions to suffrage to utopianism and socialism. Steamships, telegraphs, and railroads shrunk distances, promoted regional specialization, and changed the course of how wars were fought. By 1914 a new industrial, technological, and urban world order was in place.

In textile manufacturing, the process of spinning raw materials into thread was aided by the invention of the spinning-jenny, the water frame, and the mule, while weaving was augmented by the flying shuttle and the power loom. The development of the steam engine and its application to steamboats, steamships, steam locomotives, and steam-operated industrial machinery transformed the world in ways unfathomed. So too did the inventions of the electric streetcar, the internal combustion engine, and, later, the automobile. Distance mattered less and less.

Industrialization also depended upon cheap and available supplies of energy. Coal, coke, electricity, and oil literally and figuratively ignited the world. Gas lighting, and later electric lighting, illuminated the night skies. The electromagnetic experiments of Michael Faraday, Thomas Edison, Oliver Lodge, Nikola Tesla, and Guglielmo Marconi led to such achievements as the first successful electric lightbulb as well as wireless communications. Fantastic electric displays fascinated crowds at many of the world's fairs of the time period. Visitors to international exhibitions marveled at new inventions such as the telegraph, the air brake, the telephone, and the wireless. World's fairs also celebrated technological feats of architecture, such as the Eiffel Tower of the 1889 Exposition Universelle in

Paris and the enormous Ferris Wheel at the 1893 Columbian Exposition in Chicago.

In steel production, the inventions of Henry Bessemer, Robert Mushet, Sydney Thomas, Percy Gilchrist, and Charles William Siemens improved both output and quality. In science, Joseph Priestley, Antoine Lavoisier, Charles Goodyear, Louis Pasteur, William Henry Perkin, Fritz Haber, and others laid the groundwork for advances in industrial chemistry. Academic and industrial research laboratories generated new innovations in hygienic products and fertilizers, improving the quality of life.

Literacy was enhanced by inventions in printing ranging from steam-powered cylinder presses to rotary presses to stereotypes. Typesetting was enhanced by linotype and monotype machines, and illustrations were enhanced by lithography, half-tones, and offset. Daily newspaper reading, featuring international news transmitted by transoceanic telegraph cables, became common among the growing middle class of the nineteenth century.

The middle class of industrial societies also had access to inventions that became increasingly affordable. These included the automobile. By 1914, when Henry Ford of the United States introduced a moving assembly line to manufacture his Model T automobiles, the groundwork was laid for further advances in industrial productivity.

—Paul Tenkotte

Innovations in Textile Manufacturing—Eighteenth Century

During the eighteenth century, a number of technological innovations initiated a period of revolutionary change in the history of textile manufacturing. The introduction of new machinery, first powered by water-driven engines and later by steam engines, radically modified the existing patterns of textile production and marked the passage from cottage industry to the factory system.

THE JACQUARD LOOM

The Jacquard loom, designed and patented in 1801 by Joseph Marie Jacquard, resulted from the modification and improvement of already-existing systems designed by Basile Bouchon, Jean Falcon, and, above all, Jacques de Vaucanson (also known for his ingenious automats). On the basis of Vaucanson's models, Jacquard designed an apparatus that greatly simplified the weaving of textiles with complex patterns. The machine's operations were controlled by punch cards. The punch cards in the Jacquard loom were pieces of paper containing digital information that was transmitted by patterns of holes. The presence or absence of holes on the paper conveyed to the mechanical apparatus the sequence of the pattern to be reproduced on the textile. In the silk-weaving industry the introduction of the Jacquard loom marked a new era. The Jacquard loom's use and dissemination in Europe, which took a couple of decades, simplified the weaving of richly decorated luxury textiles.

—Antonella Viola

These innovations first occurred in Great Britain. In 1733 John Kay patented the flying shuttle, which was attached to a loom and made possible the initial automation of the weaving process. In 1764 James Hargreaves invented a multispool spinning wheel, which was called the spinning jenny. This invention reduced the amount of labor needed for spinning. In the same year Richard Arkwright designed the so-called water frame, an improvement of the already-existing spinning frame that was unique in its employment of water to drive the spindles. A water wheel set the apparatus in motion, and the power generated by the wheel reduced labor and increased production. Samuel Crompton then developed new machinery that incorporated both the spinning jenny and the water frame. Like many other machines invented in that period, Crompton's muslin wheel, also known as the spinning mule, was initially utilized in the cotton industry, which also benefited from another new apparatus, the cotton gin. Specifically designed to separate cotton fibers from the seeds, the new machine,

patented by Eli Whitney in America, speeded up and simplified the cleaning process.

Although early innovations affected spinning, one of the main technical advances occurred in the weaving process when the first mechanized looms were introduced. The power loom was patented by Edmund Cartwright between 1784 and 1785. The power to move the loom was initially generated by water but soon came from steam.

The technological innovations that were first introduced in the cotton-manufacturing industry were gradually applied to other textiles. The silk industry, for instance, did not gain remarkable advantages from the improvements in spinning because silk is already a continuous filament that does not need to be spun (spinning occurred only in the production of silk waste). Therefore, the mechanization of the silk industry mainly involved the introduction of mechanical looms later in the nineteenth century. But in the eighteenth century the reeling process (the process of unwinding silk filaments from the cocoon) underwent significant modifications. By the turn of the century, there was a gradual introduction of steam power in the filatures (factories in which silk is reeled). The main innovations involved the mechanization of the rotation of the reeling frame. The use of a steam-driven machine allowed the operator to use both hands to reel silk thread. Steam was also employed to heat the basins in which silk cocoons were dipped for softening. In 1805 Ferdinand Gensoul patented the first steam-powered system to heat water in the basins and reel the silk threads. Furthermore, mechanization occurred in the twisting process with the introduction of a system that allowed the simultaneous intertwining of many silk threads while eliminating water. In this way silk's natural glue, sericin, made filaments stick to each other and form a single silk thread.

Most of the innovations in silk production occurred in countries other than Great Britain, which never had a tradition of sericulture but used to import raw silk to be manufactured domestically. Innovations in silk reeling led within a few decades to the establishment of fully mechanized filatures that used steam-powered machinery. Remarkable changes also occurred in the silk-weaving industry after the

introduction of mechanical looms. Joseph Marie Jacquard in 1801 invented a new mechanical loom that came to be known as the Jacquard loom. This innovation simplified the weaving process of those textiles that had complex patterns such as brocades or damasks. The Jacquard loom, which used programming cards to initiate different designs and as such was a forerunner of the modern computer, was soon extensively used in silk embroidery.

The growth of textile production in Western countries expanded the market for textiles, especially for cotton and silk. Moreover, the technical innovations in the textile industry had numerous socioeconomic consequences: Western textile industries became relatively more competitive, new supplies of raw materials were necessary, patterns of consumption began to change, and with changes in labor patterns, traditional modes of life were shattered. The technological innovations of the eighteenth century encouraged, in the following century, the definitive consolidation of the factory system and the spread of factories that replaced the system of the cottage industry.

—Antonella Viola

Bibliography

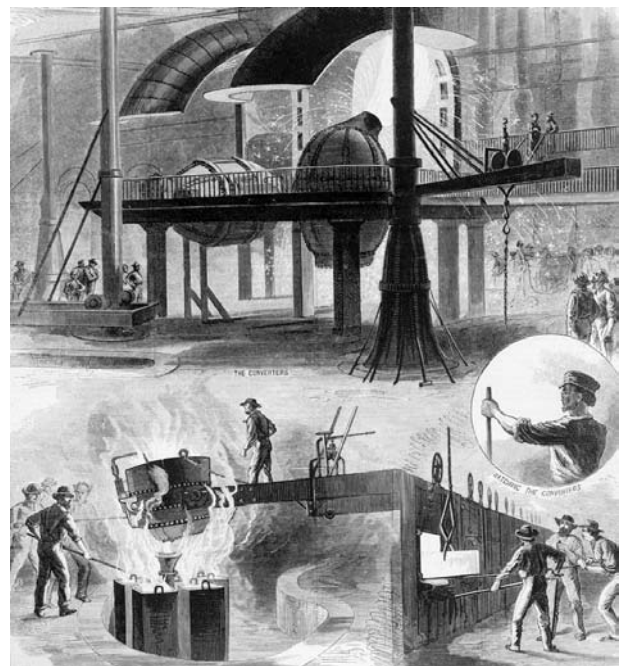
- Landes, David S. *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*. Cambridge: Cambridge University Press, 1960.
- McClellan III, James E., and Harold Dorn. *Science and Technology in World History*. Baltimore and London: Johns Hopkins University Press, 1999.
- Payson Usher, A. *A History of Mechanical Inventions*. Cambridge: Harvard University Press, 1954.
- Singer, Charles, et al., eds. *A History of Technology*. 8 vols. Oxford, UK: Clarendon, 1954–1984.
- Zanier, Claudio. *Where the Roads Met: East and West in the Silk Production Processes (17th to 19th Century)*. Kyoto: Istituto Italiano di Cultura, 1994.

Steel

Steel is an alloy of iron and carbon in its simplest form and has long been known as a superior tool and weapon metal. With a carbon content between 0.2 and 1.5 percent, it occupies a position between low-carbon wrought iron (.02 to

.08 percent) and high-carbon pig iron (3 to 4.5 percent). Until the nineteenth century the difficulty and expense of the manufacture of steel relegated it to limited use. During the latter half of the nineteenth century breakthroughs in manufacturing allowed the mass production of steel. Steel has since become a primary structural material.

Steel has been known since antiquity, but the processes used to manufacture it were expensive and inefficient. Before 1856 the primary methods of making steel were the cementation and crucible processes. The former involved layering bars of wrought iron and powdered charcoal in a stone box and heating it for several days. The resulting blister steel was broken up and run through the process again. It was then subjected to forging to create a more consistent texture. The crucible process was used to refine blister steel, melting it in clay crucibles with a special flux to remove minute bits of slag deposited during cementation. This process produced high-quality steel, but it was prohibitively expensive. As a result, steel was only used for small items and when nothing else would do.



Harper's Weekly illustration of the Bessemer steel process. English inventor Henry Bessemer's process for purifying low-quality iron made it possible to produce steel more cheaply and quickly. (Library of Congress)

➤ LIGHTING UP THE SKY

The following is a description of a Bessemer converter in action from *McClure's Magazine*, 1894.

“Out of each pot roared alternately a ferocious geyser of saffron and sapphire flame, streaked with deeper yellow. From it a light streamed—a light that flung violet shadows everywhere and made the gray outside rain a beautiful blue. A fountain of sparks arose, gorgeous as ten thousand rockets, and fell with a beautiful curve, like the petals of some enormous flower. Overhead the beams were glowing orange in a base of purple. The men were yellow where the light struck them, violet in shadow. . . . The pot began to burn with a whiter flame. Its fluttering, humming roar silenced all else. . . . A shout was heard, and a tall crane swung a gigantic ladle under the converting vessel, which then mysteriously up-ended, exploding like a cannon a prodigious discharge of star-like pieces of white-hot slag. . . . Down came the vessel, until out of it streamed the smooth flow of terribly beautiful molten metal. As it ran nearly empty and the ladle swung away, the dropping slag fell to the ground exploding, leaping viciously, and the scene became gorgeous beyond belief, with orange and red and green flame.”

—Melvin Smith

Source

Hamlin Garland, “Homestead and Its Perilous Trades—Impressions of a Visit.” *McClure's Magazine* 3, no. 1 (June, 1894): 14.

This changed in 1856 when Henry Bessemer patented a new process that used compressed air blasted through a crucible of molten pig iron. The oxygen in the air burned off the excess carbon in an operation described as volcanic in appearance. It was not perfect; initial batches had too little carbon and too much oxygen. This problem was solved by Robert Mushet, who discovered that adding a compound called spiegeleisen, an alloy of iron containing approximately 15 percent manganese and small quantities of carbon and silicon, after the initial blast

removed the excess oxygen and replaced the deficient carbon. The Bessemer converter was also incapable of processing iron made from high-phosphorus ores, a problem solved in 1878 by Sydney Thomas and Percy Gilchrist. They introduced a basic (as opposed to acid) liner and added lime as a flux to bond with the phosphorus. The resulting slag had the serendipitous quality of being a good fertilizer.

Despite the Bessemer converter's ability to produce tons of steel in a matter of minutes rather than days, there was room for improvement. The Siemens-Martin process was invented in 1868 by Charles William Siemens. Also called the Open Hearth process, it used a rectangular brick chamber heated by coke to melt a mix of pig and wrought iron along with a flux to carry off impurities as slag. Although it took considerably longer—7 to 12 hours as opposed to 30 minutes—it had several advantages. Quality could be controlled with a greater degree of precision and could be adjusted during the heating process. The Siemens-Martin process yielded a superior product and in the long run proved more efficient than the Bessemer converter. When combined with the Thomas-Gilchrist innovation the Siemens-Martin process became omnivorous, consuming iron-made low-grade and high-grade ores, scrap iron, and scrap steel. By 1904 it had become the dominant method of steel making on the European continent and in northern England, where high-phosphorus ore predominated.

The impact of cheap steel was tremendous, as exemplified by the effect on rail production. In 1867 the United States produced 460,000 tons of wrought iron rails that sold for \$83 per ton. In that same year 2,550 tons of Bessemer steel rails were manufactured, selling at up to \$170 per ton. By 1884 wrought iron rails had virtually disappeared from the market, replaced by 1.5 million tons of steel rails selling at \$32 per ton. By the end of the century Andrew Carnegie's factories were turning out steel rails for \$14 per ton. During that same period the average life of a rail went from two years for wrought iron to ten years for steel, and the weight that the rail could bear increased from 8 tons to 70 tons.

—Melvin Smith

Bibliography

- Carr, J. C., and W. Taplan. *A History of the British Steel Industry*. Oxford, UK: Basil Blackwell, 1962.
- Chard, Jack. *Making Iron and Steel: The Historic Processes, 1700–1900*. Ringwood, NJ: North Jersey Highlands Historical Society, 1995.
- McHugh, J. *Alexander Holley and the Makers of Steel*. Baltimore: Johns Hopkins University Press, 1980.

Industrial Chemistry

Industrial chemistry traces its beginnings to the 1740s with the emergence of gas chemistry, in which reactions began to be explained in terms of elements and atoms. Joseph Priestley (1733–1804), Carl Scheele (1742–1786), and Antoine Lavoisier (1743–1794) set the stage for the chemical revolution in the latter half of the nineteenth century with their initial steps to quantify chemical reactions and make chemistry a science. The subsequent coupling of the science of chemistry and business led to the need for the discipline of chemical engineering and the rise of chemical companies in the nineteenth century, many of which still exist today.

Chemical engineering appeared during the latter part of the eighteenth century in the form of dedicated chemistry classes, separate from their traditional pairing with the study of medicine. Journals in the late 1700s, such as the German *Chemisches Journal* (founded in 1778) and the French *Annales de chimie* (founded in 1789) also contributed to chemistry's growth as a scientific discipline. Then in 1845 the British established the Royal College of Chemistry to understand the chemical properties of materials just as the Industrial Revolution was creating a demand for compounds used in manufacturing. To this point dyes, soaps, perfumes, and medicines were produced by numerous craftsmen to satisfy local consumer demand for colored fabrics, cleanliness, luxuries, and health, respectively.

As small chemical shops with technicians gave way to a developing chemical industry in the nineteenth century, demand was created for engineers who possessed technical knowledge relating to chemical reactions, controls, and



Famous as the accidental inventor of the sulfur vulcanizing process for rubber, Charles Goodyear has had an incalculable impact on American society and the world in general. Goodyear improved natural rubber and it is now used in everything from automobile tires to paint to diving suits. (Hayward Cirker, and Blanche Cirker, eds. Dictionary of American Portraits, 1967)

processes and who could improve the efficiency of distillation, evaporation, absorption, and drying techniques. Chemical research laboratories were linked to the chemical companies during the nineteenth century and became more tightly linked as technological innovations were rapidly made with a scientific basis to bolster them. Germany took the lead in the competitive field of industrial chemistry for two reasons. First, the Germans developed an excellent system of scientific and engineering education. Second, German chemical companies established industrial research laboratories to complement established academic research labs.

There are many examples of how chemistry led to the development of new products in the nineteenth century. Joseph Priestley, better known for his work on gases, used a flexible material to erase or rub out pencil marks, hence the term “rubber.” Rubber also found practical uses as raincoats, or mackintoshes, and as wheels produced through Charles Goodyear's (1800–1860) process of vulcanization, which heats a mixture of rubber and sulfur. With the development of the automobile, the need for tires doubled the world's consumption of rubber at the beginning of the twentieth century. As rubber prices soared, manufacturers sought synthetic alternatives to the Malayan rubber tire. By World War I, acetone was being transformed to produce synthetic rubber and offset world demand for rubber hovering around 100,000 tons annually.

Through Louis Pasteur's (1822–1895) work on microorganisms, the fermentation and soap

➤ INDUSTRIAL CHEMISTRY AND COAL TAR

Coal tar, a waste product from distilling coal, enabled an entire new field of chemistry to emerge. As academics studied separation techniques of this flexible hydrocarbon, industry was pushing scientists to derive more useful products in the 1850s. Consequently, coal tar became a target for a synthetic version of quinine, a rare but effective treatment for malaria. While investigating this problem, Sir William Henry Perkin (1838–1907) failed to synthesize quinine but produced a synthetic dye instead. His purple liquid, called mauveine, dyed fabrics such as silk an attractive color. Perkin's color, now known as mauve, caught on with Queen Victoria and found favor with the court of Napoleon III. Perkin's mauve was the first aniline dye and the first popular synthetic color derived from coal. Today, there are more than 2,000 artificial colors derived from coal tar's aniline and other products such as anthracene, toluene, and benzene. Perkin's work inspired rapid advances in a wide range of fields, including medicine, food, perfumery, explosives, and photography. In photography, coal tar colors improved the sensitivity of photographic emulsion.

—Robert Koslowsky

industries benefited from the demand created by public awareness of the importance of personal hygiene. The resulting demand for soap led to greater demand for alkali. Demand was satisfied in part through the production of synthetic alkali introduced by large companies such as the British firm United Alkali Company, formed in 1890. The Leblanc alkali process, used to produce soda ash for the soap, paper, glass, and textile industries, was wasteful, only achieving a six-to-one ratio of raw materials to useful product. This level of inefficiency and attendant environmental damage that the Leblanc plants caused gave way to the adoption of the Solvay ammonia-soda process, with a 70 percent cost improvement. Coupled with the British Alkali Act of 1863, an attendant environmental solution to hydrochloric acid being released into the atmosphere was found by the chemical industry. Charcoal to absorb the gas in the smokestacks was used to ensure that no more than 5

percent of the hydrochloric acid was vented into the atmosphere. By 1900 the Solvay process accounted for 90 percent of the world's soda production, which was dominated by the British. In the 1870s, 200,000 tons of soda were produced each year, more than all of that produced by the other nations combined.

Chemistry applied to the coal industry led to discoveries of new products. By heating coal without air, coke is made for its value as a reducing agent for metal ores. Two by-products result: coal gas, a flammable gas, and coal tar, a thick black liquid. Initially considered waste, both by-products found useful homes. Coal gas illuminated houses and lit street lamps in the early 1800s and also provided the fuel in Bunsen's burner. Coal tar was employed as a wood preservative and later became the feedstock for a whole host of aromatic organic compounds. Distillation and manipulation of coal tar yielded compounds such as benzene, naphthalene, and the phenols used to develop a wide array of synthetic compounds. The creation of a pharmaceutical industry, development of synthetic fibers, the rise of the explosives industry, and emergence of plastics as the preferred manufacturing material all have their roots in the evolution of organic chemistry.

Such discoveries of synthetic material were significant for another reason. Chemists and academic researchers realized that chemistry could make them rich, and many were thus motivated by the prospect of financial gain. Such considerations led to the development of the field of organic chemistry. Manufacture of synthetic dyes and incorporation of factory production techniques coupled with the use of electricity replaced the traditional craftsman. The textile industry in part drove the need for chemical companies to produce tons of product, and they did.

The nineteenth century saw the foundation of many large chemical companies. In 1802 the DuPont Company was founded by Eleuthère Irénée du Pont, a recent immigrant from revolutionary France. Gunpowder, DuPont's initial product, helped open the American frontier in the nineteenth century. During the latter half of the nineteenth century Germany assumed leadership in the industrialization of organic

chemistry by exploiting the dye-making process. Bayer (1863), BASF (1865), and AGFA (1867) targeted the textile industry with lower-cost synthetic dyestuffs. Prior to World War I, Germany produced almost 300 million pounds (136 million kilograms) of dyes and held an almost 90 percent share of the world market. Bayer developed in-house research facilities to ensure its competitive edge, while advances made by BASF led to the Haber process. Between 1908 and 1912 the synthesis of ammonia pioneered by Fritz Haber (1868–1934) led to new fertilizers and the ability to wage chemical warfare. American innovation in industrial chemistry was exemplified by Dow (1897) with its production of bleach and potassium bromide products, which displaced the traditional European sources. These American rivals to European suppliers triggered a battle for international dominance of the global industrial chemical business early in the twentieth century.

—Robert Koslowsky

Bibliography

- Florman, Samuel C. *The Civilized Engineer*. New York: St. Martin's, 1987.
- Garfield, Simon. *Mauve: How One Man Invented a Color That Changed the World*. New York: Norton, 2000.
- Koslowsky, R. K. *A World Perspective through 21st Century Eyes: The Impact of Science on Society*. Victoria: Trafford, 2004.
- Taylor, Graham T., and Patricia E. Sudnik. *DuPont and the International Chemical Industry*. Boston: G. K. Hall, 1984.

Paper

The ancient craft of papermaking was twice transformed in the nineteenth century, emerging as the modern pulp and paper industry. The first Industrial Revolution, which introduced mechanization, eliminated human speed and stamina as prime constraints on the productive process but created a new bottleneck in papermaking: adequate supplies of raw materials. The second Industrial Revolution introduced new mechanical and, more importantly, chemical methods of utilizing wood, allowing paper to be produced in prodigious quantities in a growing number of applications.

Although the pulping process had been partially mechanized in the late seventeenth century with the introduction of hollanders (pulping engines), papermaking remained a manual process. Papermakers placed a wooden mold (frame) with a mesh or screen attached to it in a vessel filled with pulped fibers suspended in water. They moved the mold from side to side so that the fibres would be deposited evenly on the screen. The mold would then be taken out, and the wet sheet of paper was removed and dried. The traditional papermaking material was “rags,” scraps left over from textile manufacture. The introduction of the papermaking or Fourdrinier machine in the first decade of the nineteenth century revolutionized this process. The concept for such a machine, first invented in France by Louis-Nicolas Robert in 1799, was brought to England, where it was perfected by mechanic Bryan Donkin with funding from the Fourdrinier firm of stationers.

The great increase in the speed of papermaking plus growing demand for paper and paper products created a crisis in the supply of rags by the middle of the nineteenth century. A variety of materials including straw and esparto grass were pressed into use, but these only represented stop-gap measures. The basis of a solution appeared in 1843 when F. G. Keller invented the technique of mechanically grinding wood pulp with a revolving stone. Commercial use followed in the next decade, beginning first in Germany. This was followed by a trio of methods for chemically pulping wood, dissolving away the noncellulose components of the wood. Soda (alkali) pulp first appeared in the 1850s, then sulphite pulping appeared around 1870, and sulphate pulping appeared a decade later.

With the supply of paper now constrained only by the ecological limits of the world's softwood (spruce, balsam, hemlock, and later pine) forests, the pulp and paper industry grew phenomenally in the early twentieth century. While fine grades of writing and book paper remained important and new packaging and sanitary products entered the market, newsprint was the engine of this growth. The ability to supply the seemingly endless demand for cheap newsprint benefited the economies of the Scandinavian countries, the United States, and especially

Canada. After the 1913 repeal of the U.S. tariff on newsprint, Canada came to supply almost two-thirds of world export markets for the product.

—James Hull

Bibliography

American Paper Institute. *Dictionary of Paper*. New York: American Paper Institute, 1980.

Hunter, Dard. *Papermaking: The History and Technique of an Ancient Craft*. New York: Dover, 1978.

McGaw, Judith A. *Most Wonderful Machine*. Princeton, NJ: Princeton University Press, 1987.

Sutermeister, Edwin. *The Story of Papermaking*. Boston: S. D. Warren, 1954.

Printing and Publishing

The history of printing and publishing between 1750 and 1914 is intertwined with complex networks of production, dissemination, and consumption of printed materials, including such factors as economics, technology, education,

and cultural and social contexts. The equipment and procedures for letterpress printing did not change much from the fifteenth through the eighteenth centuries. Books were expensive relative to income. Most people, especially the poor, lacked adequate education for effective reading. In 1750 the commissioning, production, and distribution of books were still largely concentrated in the hands of printers. Most books were sold in sheets (i.e., as folded, unstitched bundles of paper), which the purchaser would pay a bookbinder to bind. Publishing firms, subcontracting such tasks as printing and illustration to production specialists and selling finished case-bound books through retailers, came into being and flourished in the nineteenth century.

The century also witnessed revolutions in industrialized production. Iron presses replaced wooden presses. The German Friedrich Koenig developed steam-powered cylinder presses (1811) that rolled sheets on revolving cylinders onto flat beds of type. At 1,100 sheets per hour, Koenig's invention (first used commercially in 1814 by the *London Times*) tripled the speed of previous presses. In the United States Richard Hoe (1846) invented the rotary press (revolving cylinders held type as well as the paper to be printed and could produce 20,000 sheets per hour), and William Bullock (1865) developed a high-speed web rotary press that used continuous rolls of paper.

John Baskerville (England, 1754) designed improved and more legible types, which greatly influenced the appearance of the printed page. By 1830 stereotypes (metal casts of pages of type made from papier-mâché molds) freed loose type for reuse and allowed whole books to be set in type before printing began. The plates could be stored in anticipation of future printings of the same work. Electrotyping (after 1837) similarly produced facsimiles of pages of set type. A wax mold was coated with graphite and submerged with copper in an acid bath. Copper ions, attracted by an electrical charge to the surface of the matrix, built an electroplate facsimile that could be reinforced and used for printing. Movable type was set by hand by compositors until 1884, when Ottmar Mergenthaler, a German immigrant to the United States, devised the linotype machine, allowing

▶ WILLIAM MORRIS AND THE PRIVATE PRESS MOVEMENT

William Morris (1834–1896) was an English author, artist, and printer who deplored the ways in which craftsmanship was being supplanted by machinery in the mid- to late nineteenth century. He was a principal influence on the arts and crafts movement and founded the Kelmscott Press. Such private presses produced hand-printed books (ca. 1890–1940) in small runs as a response to the overall decrease in book-production standards, which started around 1800 but accelerated in the mid-nineteenth century because of mass production. Painstakingly produced books such as the Kelmscott edition of *The Works of Geoffrey Chaucer*, printed by hand on handmade paper and lavishly illustrated by pre-Raphaelite artist Edward Burne-Jones, are monuments to the private press movement's rebellion against slipshod production. Private press proprietors typically created beautiful objects instead of books that were convenient to read, but the movement had positive influence, reminding commercial publishers that more attention should be paid to design and quality.

—Jeffrey Mifflin

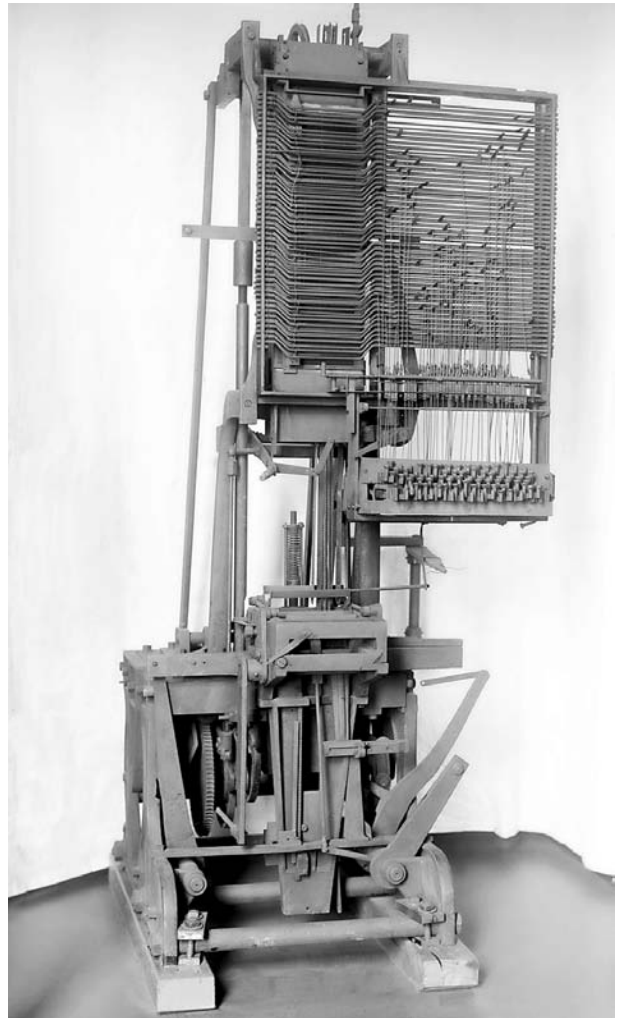
keyboard operators to cast whole lines of type in one slug. Other key developments included the American Tolbert Lanston's Monotype machine (1887).

Improved technology for printing illustrations included the development of wood engraving (Thomas Bewick, England, perfected the technique, ca. 1790), lithography (Alois Senefelder, Austria, 1798), photolithography (Alphonse Louis Poitevin, France, 1855), and the halftone screen (Louis and Max Levy, United States, in the 1880s). Around 1905 the American Ira Rubel perfected offset printing on paper, whereby inked images were transferred first to a rubber-covered cylinder and then printed from cylinder to paper, a technique widely adopted in the early twentieth century.

By the late 1800s the printing, publishing, and reading communications network was predicated on interlocking components such as printers, publishing houses, producers of newspapers and magazines, booksellers, lending libraries, writers, readers, and transportation. The Industrial Revolution's machines required at least some workers with sufficient reading ability to understand printed instructions. Wider public education engendered more and better readers. Trade unions won increased leisure for workers, and demand followed for a variety of affordable reading materials. Newspapers, general interest magazines, scholarly journals, religious tracts, serial novels, and other publications proliferated. Steam-powered printing, machine-made wood pulp paper (replacing expensive but more durable rag-based paper, ca. 1850), faster typesetting, education, improved distribution, and public libraries led to increased access to information for a larger proportion of the population and expansion of public awareness, including wider political and cultural sensibilities. Best-selling authors such as Mark Twain and Charles Dickens spearheaded campaigns for legislation that eventually led to more effective protection of copyrights against pirated editions in the late nineteenth century.

By 1914 the availability of radio equipment for receiving wireless signals foreshadowed the radio broadcasts that would soon compete with print for the public's attention.

—Jeffrey Mifflin



Ottmar Mergenthaler's linotype machine. (Library of Congress)

Bibliography

- Altick, Richard D. *The English Common Reader: A Social History of the Mass Reading Public, 1800-1900*. 2nd ed. Columbus: Ohio State University Press, 1998.
- Casper, Scott, Joanne D. Chaison, and Jeffrey D. Groves, eds. *Perspectives on American Book History: Artifacts and Commentary*. Amherst: University of Massachusetts Press, 2002.
- Darnton, Robert. "What Is the History of Books?" *Daedalus* 111 (Summer 1982): 65-83. Reprinted in David Finkelstein and Alistair McCleery, eds., *The Book History Reader* (London: Routledge, 2001).
- Gaskell, Philip. *A New Introduction to Bibliography*. New Castle, DE: Oak Knoll, 1995.

Internal Combustion Engine, 1798–1897

The invention of the internal combustion engine is commonly confused with the building of the first automobile, but the invention of the first actually predates the latter by almost a century. An internal combustion engine is defined as one in which the fuel is burned internally (usually in a cylinder) and the force of the heated gases is used to power the machine.

One of the earliest of these machines is reported to have been developed in 1798 by the American inventor John Stevens (1749–1838). While little is known about Stevens's machine, it is believed to have functioned by igniting alcohol in a chamber, which in turn drove a piston upward. Over the next several years Stevens made a number of improvements in the design. However, it is unclear whether this machine was used for any purpose other than demonstrations. Alcohol was not the only fuel attempted in the early part of the nineteenth century. Coal gas and gunpowder were also experimented with as a method of driving the pistons. One of the more interesting ideas was invented in 1820 by the Englishman William Cecil (1792–1882). Cecil used hydrogen gas as the fuel for his internal combustion engine.

► THE ROTARY ENGINE

The four-cycle gas-powered engine was not the only design for an internal combustion engine that was attempted in the nineteenth century. One alternative form of engine was the rotary engine, which attempted to reduce the waste of force associated with the up-down movement of the four-stroke engine by attaching the cylinders in such a manner that they rotated around a central axis. Because of engineering challenges this design was never very successful in the nineteenth century, although a number of manufacturers have attempted to design similar engines since then. One notable designer is Felix Wankel, who spent decades developing a rotary engine that several automobile manufacturers experimented with beginning in the 1960s.

—Michael Windelspecht

Multiple designs for internal combustion were explored in the mid-nineteenth century. In 1860 a Belgian inventor named Etienne Lenoir (1822–1900) developed a prototype of the internal combustion engine that most closely resembles the modern version. Lenoir's engine was powered by gasoline, a fuel that was gaining popularity in the mid-nineteenth century; however, the earlier forms of these machines did not use gasoline. Lenoir's machine used a form of a spark plug that was connected to a battery. By the 1860s battery technology had progressed to the point that batteries were reliable and powerful enough to be used as an external energy source, although due to the lack of a generator Lenoir had problems keeping the batteries charged. He also pioneered the effective use of a distributor that delivered the electric power from the battery to the cylinders to allow for a sequential means of igniting the fuel. Lenoir's first machines had an estimated output of four horsepower.

Lenoir produced a number of variations of the internal combustion engine, but he is most often recognized for inspiring the work of the German inventor Nicholas Otto (1832–1891), who along with his team of engineers developed the four-cycle engine (ca. 1876). This does not refer to the number of cylinders but rather to the sequence of events in a cycle of a single cylinder. In the first part of the sequence the piston in the cylinder compresses the fuel-air mixture at the top of the cylinder. Next, a spark is delivered to ignite the fuel, and the expansion of the gases drives the piston downward, generating the force to do the work. In the third step the piston once again moves upward to expel the waste products of combustion (exhaust). Finally, the piston moves downward again, this time creating a vacuum that draws additional fuel into the cylinder. The problem with this process is that the cylinder is only working a fraction of the time, but if multiple cylinders are connected together and the ignition is alternated among them, as is the case on most modern engines, then the machine can provide a constant supply of power. From this point onward engineers in Europe and the Americas worked on improving the basic design of the multicylinder four-stroke engine.

In 1897 the German inventor Rudolf Karl Diesel (1858–1913) designed a form of internal combustion engine that did not utilize a spark to ignite the fuel but instead utilized the direct compression of the gas. Diesel recognized that as the volume of a gas decreased and the pressure increased, the temperature of the gas increased. He reasoned that it should be possible to use that heat as an ignition source. These machines tended to be very large, but they delivered a significantly higher-power output than the spark-ignited engines. In the nineteenth century these engines usually used kerosene, but in the twentieth century a special grade of petroleum called diesel fuel was designed to maximize their output. By the turn of the century the diesel engine was being used in a number of factories in the United States, and the first prototypes and production models for motorcycles and automobiles were being developed by inventors such as Karl Benz and Gottlieb Daimler in Germany and Frank and Charles Duryea in the United States.

—Michael Windelspecht

Bibliography

Hardenberg, Horst O. *The Middle Ages of the Internal Combustion Engine, 1794–1886*. Warrendale, PA: Society of Automotive Engineers, 1999.

Holt, Daniel J., ed. *100 years of Engine Developments*. Warrendale, PA: Society of Automotive Engineers, 2005.

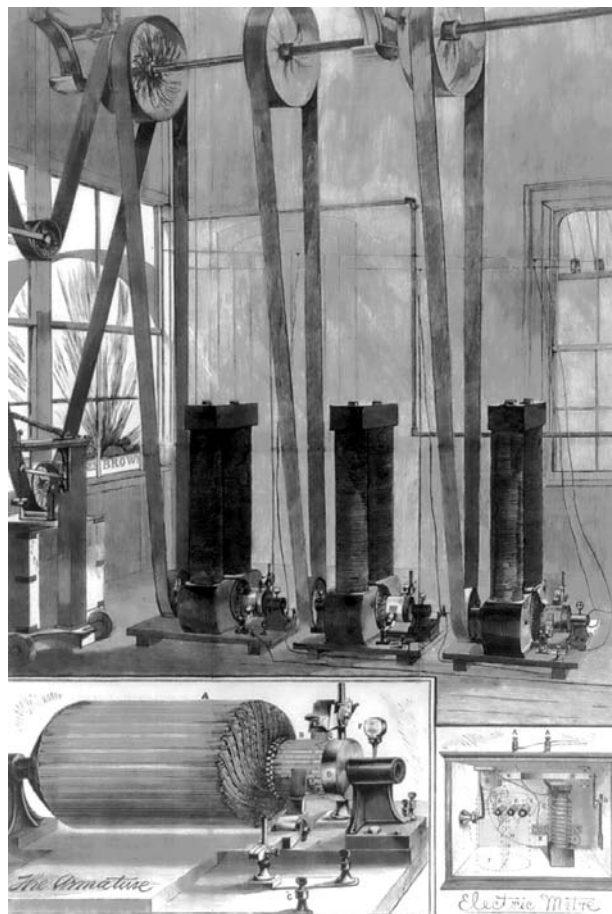
Electricity and Its Uses

The process by which electricity was transformed from a scientific curiosity to a powerful technology can be traced back to the 1820s and 1830s. During this period a series of discoveries and observations concerning electrical current and magnetism by the Danish physicist Hans Christian Oersted (1777–1851), the French physicist André Marie Ampère (1775–1836), and the French physicist François Arago (1786–1853) prepared the way for the groundbreaking discoveries of the Englishman Michael Faraday (1791–1867).

In 1821 Faraday discovered electromagnetic rotation, the tendency of a current and a magnet pole to rotate about each other, and in 1831 he discovered electromagnetic induction by

showing that a rotating magnet could induce an electric current in a copper wire. Faraday's discoveries made it possible to generate electricity mechanically, and his work along with that of his contemporaries led to the development of the electric generator, the electric motor, and the transformer. For the next half century, however, methods of producing electricity were so expensive that its uses were limited to tasks for which it was uniquely suited, such as the telegraph and electroplating. Major breakthroughs in electricity use occurred in the 1870s and 1880s, caused in part by the development of new and cheaper methods of electrical generation and in part by soaring demand.

The humble lightbulb plays a key role in this story, for it provided the first mass market for electricity. Spurred by developments in electric generation and the example of the carbon



Edison's system for generating electricity, including the generator, armature and electric meter. Illustrated in *Harper's Weekly*, January 3, 1880. (Library of Congress)

THE VACUUM TUBE

While Marconi recognized the commercial use for wireless, he did not imagine the possibility of mass entertainment. He was thus not too concerned that the spark transmitters he used could only send Morse Code. Others turned their attention to the possibility of continuous transmission. Two promising avenues of research—the alternator, which generated electromagnetic waves while transforming direct to alternating current, and the arc transmitter, which generated waves by passing a current through gas—proved inappropriate despite considerable efforts by industrial research laboratories. The early vacuum tubes looked like lightbulbs, as they were grounded in scientific curiosity about the pattern of discoloration observed in lightbulbs. Edison and others had tried to eliminate this discoloration by inserting a second electrode. John Fleming, an English scientist who had collaborated

with Marconi and also with lightbulb interests, recognized that electrons moved only in one direction between electrodes. The American inventor Lee De Forest (1873–1961) in 1906 inserted a third electrode, apparently as part of trial-and-error experimentation. This third electrode controlled the flow of electrons between the other two, thus allowing the vacuum tube to serve as an electronic valve. Interestingly, De Forest thought that it was ionized gases rather than electrons moving between electrodes and thus did not fully appreciate the importance of the vacuum. Decades of further research at the laboratories of Bell and General Electric were needed before the vacuum tube could be used reliably in radio transmission and reception, telephone transmission, and a variety of other uses.

—Rick Szostak

arc lamp used in lighthouses, several inventors experimented with smaller electric lights suited to home and office. The American Thomas Alva Edison (1847–1931) produced the first commercially feasible lightbulb in 1879. Convinced that the lightbulb could succeed only with a unified system of electricity generation, transmission, metering, and use, he developed such a system in New York City, with coal-fired generators providing electric lighting to thousands of consumers. Similar systems soon were developed in most American and Western European cities. Although Edison favored direct current, it was soon recognized that alternating current suffered less power loss when transmitted long distances. Power loss was no problem for Edison's urban systems but became an important issue with the advent of hydroelectric generation in 1895 at Niagara Falls for distant markets. The American Nikola Tesla (1856–1943) developed an effective alternating current transmission system, and when the Westinghouse Corporation purchased his patent in 1885 this ensured the eventual victory of alternating current.

Once electricity was readily available, innovators developed other uses for it. The first electric streetcar was introduced in Richmond, Virginia, in 1888, and within two years

one-sixth of all American streetcars were electrified. Adoption of electric streetcars was delayed by about a decade in Europe, due largely to concerns over aesthetics and overhead electrical wires, but by 1901 all major European cities had electric streetcars that were quicker, cleaner, and cheaper than the horse-drawn carriages they replaced. Home appliances such as toasters and irons were introduced. Industrial machinery was developed, and industrialists recognized over the next decades that electricity not only freed them from the noise and dirt associated with internal combustion engines connected to machines by belts, but also allowed them much greater freedom in the location and speed of individual machines. These additional uses for electricity were important in that they spread demand more evenly through the day. Lightbulbs were used for a few hours during the evening, and thus generation facilities at first largely lay idle until then. Urban railways, industrial machinery, and home appliances created demand during the day. Electric generation companies soon recognized the advantages of serving diverse uses and actively encouraged daytime and nighttime use of electricity.

As electricity use expanded, a host of advances were made in cables, meters, switches,

fuses, and generators. The efficiency of the lightbulb itself increased significantly. As noted above, electricity had in its earliest days been applied to uses such as the telegraph or electroplating where no other power source could compete. Soon, however, new devices were invented that relied on electricity alone. These included the telephone, whose spread was facilitated by developments in electricity generation, and the first phonograph, which was developed by Edison in 1877. The telephone and phonograph set the stage for advances in radio, television, and a host of other electronic devices. But electronics also depended on continued advances in scientific understanding. Indeed, radio technology flowed directly from scientific efforts to understand the behavior of electromagnetic waves. The English scientist Oliver Lodge (1851–1940) exhibited the first wireless transmitter as a scientific curiosity in 1894. By 1901 the Italian Guglielmo Marconi (1874–1937) had not only produced a practical device for ship-to-shore communication but also transmitted messages from Wales to Newfoundland. The vacuum tube was developed at first to make continuous wireless transmission possible. It was the basic electronic device until the invention of the transistor.

—Rick Szostak

Bibliography

- Aitken, Hugh. *The Continuous Wave*. Princeton, NJ: Princeton University Press, 1989.
- Hughes, Thomas P. *Networks of Power: Electrification in Western Society, 1890–1930*. Baltimore: Johns Hopkins University Press, 1983.
- Melosi, Martin. *Thomas A. Edison and the Modernization of America*. Reading, MA: Addison, Wesley Longman, 1990.

Hydroelectric Power

The Greek word *hydro* means “water,” and hydroelectricity is electricity made from moving water. To produce electricity, a dam is first built across a river to hold rainwater or melting snow in a reservoir. Pipelines called penstocks, which regulate water drop from the high point of the reservoir to a low point downstream of the dam, provide a steady volume of flowing water. This difference in elevation and the flow volume

define the generating capacity of the power plant. Falling water passes through turbines, and the resulting mechanical motion is converted to electricity by generators. The realization that moving water could produce not only mechanical power but also electrical power, coupled with the ease of transmitting it over great distances with little loss of energy, helped spur the second Industrial Revolution.

The first hydroelectric power plants appeared in the late nineteenth century. One such facility was the Wolverine Chair Factory of Grand Rapids, Michigan, where in 1880 16 electric lights were powered. Another such plant, built across the Fox River in Appleton, Wisconsin, began operating in 1882 and generated 12 kilowatts of power, enough to power 250 electric lights. The long-distance transmission of hydroelectric power was first demonstrated at the Munich Electrical Exposition in 1882. Direct current of 2,400 volts was generated at Miesbach, Germany, and the power was transmitted to Munich, 37 miles (60 kilometers) away. The first European hydroelectric plant was developed in 1883 along the Bush River at Portrush in Ireland. The power was generated by a Siemens dynamo, which in turn provided motive force for the electric tramcars of the Giants Causeway Tramway. Advances in Europe, Canada, and the United States led to the globalization of electricity. By 1889, 200 hydroelectric plants were in operation in the United States, primarily providing light to extend working hours.

Hydroelectric power plants became larger after utility companies began to promote centralized power generation based on the principle that bigger was better. This design philosophy became the model for the building of all electrical power systems throughout the world. The introduction of high-voltage transmission and the invention of the electric transformer provided the impetus for hydroelectric designers to adopt alternating current instead of direct current technology. Credibility for this approach came by way of the Niagara Falls hydroelectric project, built by George Westinghouse (1846–1914) in 1896 for the Niagara Mohawk Power Company. Westinghouse showed the superiority of transmitting power using electricity as the medium rather than mechanical translation

THE WINNIPEG RIVER

In Canada, Quebec and Manitoba are pioneers in hydroelectric power development and generation. In Manitoba, the Winnipeg River was the first waterway harnessed for its energy content. In 1906, electric power flowed from the historic Pinawa Station. Pinawa Station took three years to build and cranked out power for more than 45 years until it was abandoned in 1951 to make way for a more efficient site. Visitors to the site were struck by its similarity to an ancient Roman ruin. The Winnipeg River descends 272 feet (83 meters) in a series of falls and rapids and offered great potential for future electric production. This proved prophetic, as the second hydroelectric plant, Pointe du Bois, was built by the city of Winnipeg in 1911. Five more such power plants were built to exploit the full hydroelectric potential of the river. As energy demands grew across the province, energy planners expanded their sites northward to the mighty Nelson River. World-leading direct-current high-voltage transmission technology was developed as a result.

—Robert Koslowsky



Aerial view of Pinawa Generating Station on the Winnipeg River. (Manitoba Hydro)

using ropes with waterwheels; the company also demonstrated the transmission advantages of alternating current as advocated by Nikola Tesla (1856–1943) over direct current, advocated by Thomas Edison (1847–1931). The significance of placing generating stations at the falls, 20 miles (32 kilometers) from the main consumption center, Buffalo, validated the practice of long-distance electrical transmission. Westinghouse convincingly used the Niagara project as a model for centralized power generation, standardizing the generator size for the era and providing electricity for a diversity of uses including electric rail, lighting, and machine power.

Westinghouse conversely proved that small local hydro developments could not meet the increasing demand for power. Whereas public utilities had been early advocates of both large and small hydro developments, Westinghouse's large-scale technological approach and Sam Insull's (1859–1938) fervor led to massive generating units and the selection of hydroelectric sites with the potential to achieve significant economies of

scale. Meanwhile, Tesla's insistence on using an alternating current of 60 cycles per second was based on practical considerations of operating efficiency and remains the standard to this day.

The view that energy independence was essential for economic growth and security for a nation led to government intervention in the electric power industry. In the case of the United States, the military was chosen to ensure the widespread adoption of electrical power. Among the early tasks of the U.S. Army Corps of Engineers, major river systems, like the Ohio and Mississippi, were to be kept open for navigation. This meant clearing waterways of snags and sandbars. From this early mission, the Army Corps of Engineers' role expanded to include management of hydroelectric power generation. In 1909 a dam on the St. Mary's River in Michigan became the first hydroelectric facility acquired by the federal government. The U.S. Congress recognized that electric power was important for industrial growth and subsequently passed legislation authorizing the Corps of Engineers to evaluate the

suitability of the nation's hydroelectric sites. By 1916 the first hydroelectric project was completed by the Corps of Engineers, and from there many more large-scale installations were established, one of which was the Tennessee Valley Authority (TVA) in the 1930s. By this time hydroelectric power accounted for 40 percent of the country's total electric power generation, and the budding national electric grid propelled both the Second Industrial Revolution and America's rise to global industrial leadership.

—Robert Koslowsky

Bibliography

- Crowe, Jo-Anne. "The Winnipeg River." Information Series No. 6. Winnipeg: Research Branch, Environmental Management Division, Province of Manitoba, 1972.
- Miller, G. Tyler. *Environmental Science: Working with the Earth*. 8th ed. Pacific Grove, CA: Brooks/Cole, 2001.
- Parkyn, Neil. *Superstructures: The World's Greatest Modern Structures*. London: Merrell, 2004.

Rubber

Rubber is an elastic, waterproof material derived from the sap (latex) of tropical trees. In the late nineteenth century, the Amazon Basin experienced an economic boom owing to rubber's emergence as a world commodity, and the subsequent bust after 1910 has placed rubber prominently in the larger debate concerning Latin America's failure to develop.

For centuries, the indigenous inhabitants of Latin America employed rubber in a variety of products: it formed the balls of Mesoamerica's ancient games, and Amazonian tribes used it to waterproof textiles and mold containers. But it was not a product of immediate value to Europeans. Charles-Marie de La Condamine introduced rubber to Europe only in the 1740s, but while its unique properties impressed Europeans, even by the 1830s it was employed only in limited applications such as mackintosh raincoats and erasers (the latter the source of the English term "rubber"). Natural rubber's inconsistent texture over a small range of temperatures limited its utility. When cold, raw rubber was brittle and prone to crack; when warm, it formed a malodorous sludge. Only with Charles Goodyear's

1839 discovery of vulcanization, which stabilized rubber chemically by the introduction of sulfur, did rubber find a sustainable market.

Pneumatic tires for bicycles and automobiles and the need for electrical insulation created the spike in world demand for rubber at century's end. Of the variety of natural sources, *Hevea brasiliensis*, found along the southern tributaries of the Amazon River, was of the highest quality. The region, from Brazil to Peru and Bolivia, was linked to the wider world for the first time by steam navigation and rail. Rubber barons in the cities of Belém, Manaus, and Iquitos controlled rubber production through a network of debt with traders and tappers and, with their growing wealth, built stately homes and imported European delicacies. Remote Manaus, at the Amazon Basin's geographic center (or 620 miles [1,000 kilometers] from the mouth of the Amazon), enjoyed electric lighting and trolleys before most European cities.

In the forests, however, rubber collection remained primitive. Isolated tappers wandered



Weighing rubber on a Brazilian rubber plantation, early twentieth century. (Library of Congress)

► GOODYEAR'S BREAKTHROUGH

Charles Goodyear's discovery of vulcanization created a revived rubber industry almost overnight. Although there was great interest in rubber products in the 1830s, the inherent qualities of rubber limited its use. Goodyear found that rubber, when heated with sulfur, became more durable and thus more useful. When Goodyear's process was patented in 1844, he received commendations from prestigious people in government, including Andrew Jackson. However, the ease with which his process could be duplicated caused others to infringe upon his patents. Although Goodyear's lawyer, Daniel Webster, won a victory in a patent infringement case in 1852, Goodyear continued to suffer business reverses and died in debt. Frank Sieberling named his company the Goodyear Tire and Rubber Company in 1898 in homage of Goodyear.

the upland forests, tapping scattered trees in the morning to return and collect the latex in the afternoon. In this extensive mode, the region's supply could not match world demand, and the price of rubber rose at rates that inevitably invited competition. As early as 1876, British adventurer Henry Wickham smuggled 70,000 rubber seeds to London's Kew Gardens. Once germinated, the seedlings were replanted in tidy, efficient plantations in Asia. By 1913, Asian plantations, which had produced almost no rubber in 1905, matched the Amazon's entire production; by 1919, the volume of Asian rubber exports exceeded the Amazon's by more than seven times. The price of rubber fell below the Amazon's costs of production, and the consequences for the region's economy were catastrophic.

To understand the bust, scholars have attempted to explain why the Amazon region did not develop a plantation system. Many researchers have focused on the structural relations of tappers, traders, barons, and foreigners, some of whom emphasized the role of dependency in limiting local capital accumulation. Others point to a lack of interest by the local elite who enjoyed massive profits by restricting supply, and yet others highlight the resistance of tappers and local traders who preferred their independent lifestyle over the perceived strictures of a plantation regime. Still others have investigated environmental limitations; an endemic disease, South American leaf blight, defeated every significant attempt to establish plantations, including heavily capitalized ventures by capable entrepreneurs such as Henry Ford. Rubber tapping remains a minor extractive activity in the Amazon and has been a recent victim of the expansion of ranching.

—Shawn Miller

Bibliography

- Coomes, Oliver T., and Bradford L. Barham. "The Amazon Rubber Boom: Labor Control, Resistance, and Failed Plantation Development Revisited." *Hispanic American Historical Review* 74(2) (May 1994): 231–257.
- Dean, Warren. *Brazil and the Struggle for Rubber: A Study in Environmental History*. Cambridge: Cambridge University Press, 1987.
- Miller, Shawn. "Rubber." In *Iberia and the Americas: Culture, Politics, and History*, edited by J. Michael Francis. Santa Barbara, CA: ABC-CLIO, 2006.
- Weinstein, Barbara. *The Amazon Rubber Boom, 1850–1920*. Stanford, CA: Stanford University Press, 1983.

■ Introduction: Technologies to Communicate and Record

The entries in this section provide information about the electric telegraph, telephone, and wireless, three inventions that transformed communications; they also discuss the phonograph and still and motion picture cameras, which enabled human beings to record the

sights and sounds of life with unerring accuracy. All of these breakthroughs were made by European or American inventors, some working more or less independently and some as part of laboratory research teams. Unlike technological breakthroughs of earlier eras, which were made by

inventors with little scientific knowledge or training, these inventions all were made possible by basic scientific research in the nineteenth century. The research of Michael Faraday (1791–1857) on electromagnetic induction made possible the telegraph, the telephone, and indirectly the phonograph and the cameras and projectors for making film. The work of James Clark Maxwell (1831–1879) and Heinrich Hertz (1857–1894) on electromagnetic waves paved the way for Marconi's development of the wireless. Advances in chemistry contributed to the development of photography and the making of moving pictures.

Of the new technologies covered in this section, the electric telegraph, although soon to be pushed aside by the telephone and radio, was the most important in the nineteenth century. The electric telegraph made possible the safe scheduling and dispatching of trains, gave generals a powerful instrument to control troop movements before and during battles, and enabled European officials and businessmen to monitor events and issue orders across the globe. Still photography, like the electric telegraph, also was developed early in the century, and by the early 1900s was an established part of journalism, an art form, and, after the invention of the inexpensive Kodak camera in 1888, a source of enjoyment for millions. The phonograph, the radio, moving pictures, and the telephone were developed relatively late in the nineteenth century and reached their potential in terms of popularity and usefulness in the twentieth century, when they too became part of the fabric of modern life.

—*James H. Overfield*

Invention of the Telegraph

Telegraphic systems have been common throughout human history and have been employed in various forms, including smoke signals, semaphore, pigeon carriers, and the signal towers used by Claude Chappé during the French Revolution (1789–1799). The earliest electric telegraph systems emerged over several decades in the context of broader advances in science and technology associated with the Industrial Revolution.

The practical implementation of the electric telegraph was dependent upon three discoveries

in electrical engineering. In 1800 Alessandro Volta (1745–1827) invented the voltaic pile, which used stacks of silver and zinc discs to generate small amounts of electricity. These rudimentary batteries were soon developed further, allowing the electrical charges being transmitted through telegraph lines to be sent over longer distances, thereby solving the problem of signal loss through poor insulation. In 1819 Hans Oersted (1777–1851) pioneered the theory of electromagnetism by showing that electric current held in a coiled wire caused a magnetized needle to orient itself in relation to the wire, allowing the development of electromagnetic telegraph receivers that could record telegraphic messages. Finally, in 1827 George Simon Ohm (1787–1854) published his law of electrical circuits, proving that the voltage of any circuit was both proportional to the charge going through it and varied in relation to the resistance levels of the circuit, allowing electrical engineers to begin to calculate the specific requirements of proposed electric telegraph networks.

The first public system was demonstrated in 1837 by William F. Cooke and Charles Wheatstone in England on the Euston to Camden railway. By 1839 Paddington and West Drayton were connected, and by 1843 the line had been extended to Slough. These early telegraph systems tended to be used for government purposes, but in 1846 Cooke and Wheatstone formed the Electric Telegraph Company and began installing more than 6,000 miles (9,656 kilometers) of line across Britain, allowing the extension of the service to the wider public. By the late 1840s Britain's telegraph network consisted of overhead lines composed of single strands of copper wire strung on poles and underground lines insulated with tarred cotton. Electrical impulses moved needles, which pointed to letters of the alphabet printed on cards.

In the United States Samuel Morse had been experimenting with telegraphy since 1832, unaware of the work by Cooke and Wheatstone. Morse developed and patented a quite different system, using electromagnetic signals to make impressions on paper in a code composed of dots and dashes. The use of code enabled messages to be greatly compressed and therefore transmitted at greater speed; the receiving method increased

THE TAWELL MURDER

The electric telegraph was used to apprehend a murderer only a few years after it was first established by Cooke and Wheatstone. A man named John Tawell had poisoned his lover on New Year's Day 1845 and was later noticed boarding a train at Slough. A telegraph was sent to Paddington station, where police identified and arrested Tawell.

The story captivated Victorian England and was widely reported in newspapers and popular magazines. Tawell was tried and convicted and was hanged in front of a crowd of 10,000 people. For some time afterward, Londoners referred to the telegraph as “the cords that hung John Tawell.”

—James Smithies

Source

Geoff Millar, “Famous Murderer Caught by the Wire,” *Pharmaceutical Journal* 269 (December 2002): 907.

efficiency further still. Morse also invented a relay system that re-created the original signal for further transmission after 20 miles (32 kilometers), thus extending the range of the system. In September 1837 Morse demonstrated the first American line. Congressional and public apathy meant that the first public line (Washington to Baltimore) did not come into regular service until 1844. In the United States Morse Code became the standard cipher used in telegraphy in 1845, and by 1852 there were more than 18,000 miles (nearly 29,000 kilometers) of line over the eastern third of the United States. The Western Union Telegraph Company was established in 1851, and telegraphic coverage extended rapidly, only held in check by the problem of traversing oceans.

After many difficulties developing adequate technology, long-distance submarine telegraphy was established with the successful laying of the Atlantic Cable in 1866. Over the next decades the world telegraph system extended rapidly through a combination of private enterprise and government subsidies and was not supplanted until several decades after Guglielmo Marconi transmitted the first wireless signal across the

Atlantic on December 12, 1901, establishing wireless telegraphy as an emergent technology.

—James Smithies

Bibliography

- Beauchamp, Ken. *A History of Telegraphy*. London: Institution of Electrical Engineers, 2001.
- Derry, T. K., and Trevor I. Williams. *A Short History of Technology*. Oxford, UK: Clarendon, 1960.
- McNeil, Ian, ed. *An Encyclopaedia of the History of Technology*. London and New York: Routledge, 1990.

World Telegraphy, 1850–1914

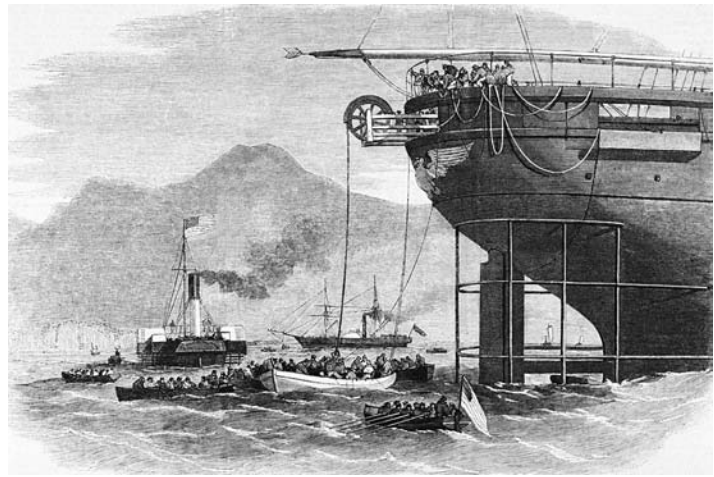
The world telegraph system of the late nineteenth and early twentieth centuries formed part of a broader communications network composed of shipping, railways, canals, and port cities. Telegraphic communication connected distant societies and was crucial to early-twentieth-century developments in economics, culture, and diplomacy. On January 21, 1871, a contributor to *Notes and Queries* referred to the network as “the nerves of the earth,” and many commentators were startled by the way in which the telegraph altered conceptions of time and space.

Although basic electric telegraph systems were in existence from the beginning of the nineteenth century, they were not fully established until the 1850s. The technology was quickly diffused worldwide, however, and by 1862 the world's telegraph system was almost 150,000 miles (241,500 kilometers) in length. Truly international telegraphic communication depended on the development of reliable submarine cables that could withstand conditions on the sea floor and provide adequate insulation for long-distance transmissions, as batteries could not be used to extend the signals. The German Werner von Siemens laid the first successful underwater cable across the Rhine River in 1847 and in Kiel Harbor later. Rapid developments were made during the 1850s as governments competed to improve their communications systems. Early cables used tarred cotton as insulation, but this insulation proved unreliable and was replaced with gutta-percha (a form of rubber) and high-conductivity wire. London was

linked to Dover in 1846 and France in 1851. A number of failures led to stricter engineering standards, and in 1857–1858 the American Cyrus W. Field, under the Anglo-American Telegraph Company (1852), successfully laid a transatlantic cable before an operator inadvertently disabled it by sending 2,000 volts down it. The cable was not repaired until 1866, after the American Civil War, but eventually gave excellent service and effectively connected the United States with Britain and continental Europe. Financial markets responded positively to the virtually instantaneous flow of information available, and telegraphic entrepreneurs and governments immediately saw the possibility of commercial gain in extending the network further still. The International Telegraph Union was established in Paris in 1865.

Extension of the world telegraph network was extremely competitive, expensive, and financially volatile. High costs per message meant that the majority of telegrams sent and received were from commercial and government sources, and the technologies used were not entirely reliable until the early twentieth century. Many lines suffered outages of several months, and small companies found it difficult to compete. This led to the development of several major companies devoted to extending the world telegraph system, including Siemens and Halske Telegraph Construction Company of Germany (1847), Western Union Telegraph Company of the United States (1851), and the dominant Eastern Telegraph of Britain (1872). Myriad smaller companies and subsidiaries of the major companies developed over the years as new telegraph lines were requested from governments and private individuals. Large cable manufacturing companies also evolved, such as the Telegraph Construction and Maintenance Company (Telcon, later Cable and Wireless), controlled by John Pender, the British telegraph magnate who was also chairman of Eastern Telegraph and its various associates, thus cornering the operational, construction, and maintenance markets.

The bulk of the world's telegraph lines were constructed by British interests. As the dominant industrial and commercial center of the late-nineteenth-century and early-twentieth-century



The American steamship Niagara lays the telegraphic cable that would run from the Atlantic coast of Ireland to St. John's, Newfoundland, from The Illustrated London News, August, 1857. (Corbis)

world, Britain had the infrastructure and financial power to achieve major technological projects such as the development of a world telegraph network. As ruler of a vast empire, stretching from Africa to Oceania, Britain also had the necessary motivation to extend the telegraph system. In the context of ongoing tensions with continental powers and extensive commitments in the colonies, British strategists suggested that the empire required an “All Red Route” of telegraph lines that circumnavigated the world and only touched on British-controlled territory. This would unite the far-flung empire and allow fast deployment of military personnel and equipment when necessary, with the utmost security of information.

This goal was achieved remarkably quickly. By 1876 the British Empire was connected by cable as far as New Zealand in the South Pacific, and by 1902 the 6,900-mile (11,104-kilometer) Pacific Cable completed a full circumnavigation of the globe. By the twentieth century 60 percent of the world's cables were British. Multiple Eastern Telegraph lines reached from Britain to Russia, the Middle East, India, Asia, Africa, the United States, Canada, Australasia, and South America, allowing communications that previously took weeks or even months to be achieved in only minutes or hours as the messages were relayed across stations. As demand rose the

NEWSPAPERS AND TELEGRAPHY

The world telegraph system was of fundamental importance to the expansion of the press and associated media industries. The advent of a world telegraph network led to the development of major news distribution organizations that serviced readerships across the world, in particular Havas (1835) based in France, Wolff (1849) based in Germany, and Reuters (1851) based in England. The three organizations worked together as a cartel to control the industry and block other entrants to the market. In the United States, a demand for news of the Civil War (1861–1865) led to the expansion of the telegraph network by both commercial and military interests, but this did not initially prompt expansion into the world market. The control of European news distribution organizations over cable news information on the world telegraphy circuit and their close associations with large telegraph companies ensured their continued dominance until American companies such as the Associated Press and United Press International entered the world market after World War I. The exponential increase in up-to-date information prompted an acceleration in the internationalization of culture. Financial markets responded to the new sources of information immediately because it offered entrepreneurs, farmers, and merchants instant access to prices of grain and stocks in distant markets, offering more efficient production and exchange.

—James Smithies

companies added additional cables to the same routes so that in many instances telegraph routes were serviced with multiple lines.

Areas of the world without the industrial and financial backing of Britain found it more difficult to connect to the world system. Attempts to build a Russian telegraph network across Siberia and into the Far East took almost 20 years and eventually reached Japan in 1872. However, efforts to connect North and South America failed repeatedly due to lack of funds and only succeeded in the early 1880s. British dominance waned after World War I, as the United States began to adopt a less insular worldview and extended its control over the cable network and as wireless telegraphy became a reality.

—James Smithies

Bibliography

- Baark, Eric. *Lightning Wires: The Telegraph and China's Technological Modernization, 1860–1890*. London: Greenwood, 1997.
- Headrick, D. *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940*. New York: Oxford University Press, 1988.
- Huurdeman, A. *The Worldwide History of Telecommunications*. New York: Wiley, 2003.
- Manuel, J. “Telegraph Wires: ‘The Nerves of the Earth.’” *Notes and Queries* s4-VI(139) (1870): 174.
- Read, Donald. *The Power of News: The History of Reuters, 1849–1989*. Oxford: Oxford University Press, 1992.

The Phonograph

The phonograph is an instrument that permanently records sound onto some medium. The invention by Thomas Edison (1847–1931) of the phonograph, which dates from the 1870s, was the product of a number of advances from earlier in the nineteenth century. The work of Michael Faraday and others had started to define the properties of electromagnetism, and in the 1830s it became possible to use the properties of electromagnetism to send messages by wire over long distances using the telegraph. Almost immediately after the invention of the telegraph, scientists and inventors began to envision a means of transmitting sound over a distance. In the 1870s this resulted in the invention of the telephone, which sparked Edison's interest in aspects of recording and transmitting sounds. The results were refinements in the telephone that greatly increased transmission strength and the invention of the phonograph.

Edison's phonograph was not the first instrument capable of recording sound. In 1857 the French printer and inventor Édouard-Léon Scott de Martinville had designed a device called a *phonoautograph* that could create visual images of sound but lacked the ability to play back its recordings. Other inventors had designed ways of representing sounds on punch cards as a means of programming organs and other musical instruments. Edison's invention grew out of work in the 1870s to design a method of permanently recording signals sent over telegraph lines. To do this he designed a cylinder covered with wax

paper. The incoming signal from the telegraph was transferred mechanically to a blunt needle, which made small depressions in the surface of the wax paper as the cylinder turned. When the process was reversed and played back through a speaker, the operator could hear the original Morse code. Although the device failed (the wax paper did not allow a great enough distinction between the Morse code's dots and dashes), during the trials Edison noticed that as the cylinder was rotated, a distinct humming sound was emitted from the speaker.

In 1877 Edison, along with a group of assistants at the laboratory in Menlo Park, New Jersey, designed the first phonograph for the playback of sound. With tin foil replacing wax paper, as the cylinder turned a needle made small impressions in the tin foil. On playback the needle would vibrate from these indentions, reproducing the sound. The sound quality was poor, but nonetheless Edison received a patent for the device in February 1878, the same year he founded the Edison Speaking Phonograph Company to publicize and market the new machine. Edison at this point was not interested in using the phonograph for music but instead saw it as a time-saving aid for office work such as dictation or as a way to produce speaking books for the blind. However, by the end of the century the Edison Phonograph Company, while still marketing the device for use in business offices, was also competing with several other companies by selling wax cylinders (which replaced tin cylinders in the early 1880s) with two-minute recordings of marches, ballads, blatantly racist "coon songs," hymns, and other music to the general public. Beginning in the 1880s, Edison and other inventors refined the machines and the cylinders to improve quality. In 1901 a method was devised for producing duplicate copies of cylinders by using a harder wax and a molding process rather than a stylus.

Edison's machines were all based on cylinders, but in 1887 the modern form of the phonograph was introduced by the German American inventor Emile Berliner (1851–1929). Berliner's phonograph used a flat disc, often made of hardened rubber. He founded the Berliner Gramophone Company in the United States in 1895, with affiliates in England, Germany, and Canada

to follow. Disc phonographs began to eclipse cylinder phonographs in popularity by the first decade of the twentieth century, and the Edison Company began selling disc phonographs by 1912. The last "disc record" was manufactured in 1929.

—Michael Windelspecht

Bibliography

- Karwatka, Dennis. *Technology's Past: America's Industrial Revolution and the People Who Delivered the Goods*. Ann Arbor, MI: Prakken Publications, 1996.
- Read, Oliver, and Walter L. Welch. *From Tin Foil to Stereo: Evolution of the Phonograph*. Indianapolis: Howard W. Sams, 1976.
- Van Dulken, Stephen. *Inventing the 19th Century: 100 Inventions That Shaped the Victorian Age, from Aspirin to the Zeppelin*. New York: New York University Press, 2001.
- Welch, Walter L., and Leah B. S. Burt. *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry, 1877–1929*. Gainesville: University Press of Florida, 1994.
- Windelspecht, Michael. *Groundbreaking Scientific Experiments, Inventions, and Discoveries of the 19th Century*. Westport, CT: Greenwood, 2003.

The Telephone and Its Usage before World War I

"Be it known that I, Alexander Graham Bell, of Salem, Massachusetts, have invented certain new and useful improvements in telephony, of which the following is a specification." This is how Bell introduced his famous telephone patent filed to the U.S. Patent Office on February 14, 1876. Improving an earlier invention, he employed a vibratory current of electricity and a new additional apparatus for producing electrical undulations upon the line wire. This was the accidental result of Bell's earlier experiments, assisted by the machinist Thomas Watson, to improve his "harmonic telegraph," a device for distinguishing between musical tones and making possible the transmission of several messages simultaneously on a single wire.

Just a few hours later Elisha Gray, Bell's competitor in the race to invent the telephone, filed his own preliminary application for a patent that gave the inventor an additional 90 days to file

WOMEN OPERATORS

By the late 1800s, the number of telephone users in the United States had increased so dramatically that all companies faced several technological challenges, the most important of which was line switching. The solution was the employment of human operators who could manually connect the caller to the person receiving the call by plugging the right wires into a switchboard. The first operators were usually young boys with experience as telegraph clerks and messengers. However, they soon proved to be unreliable, impatient, and rude. Telephone companies soon realized that young, single, and educated women could be ideal in keeping their business going. They were available in large numbers, were thought to possess the inherent qualities of courtesy and patience, and could be paid less than men. Before World War I the telephone operator became an exclusively female occupation, enforcing gender stereotypes for the use of technology.

—*Maria Rentetzi*

the actual patent. Despite the suspicious similarities of the two patents, within a few days, on March 7, 1876, Bell was issued his patent which became a matter of legal dispute when Western Union, the company that controlled telegraphy in the United States and was Gray's financier, realized the potential economic value of the telephone.

On March 10 the first crucial experiment took place at Bell's workroom, proving that indeed the new device was ready to transmit the human voice. An amateur inventor, not a scientist, Bell immediately sensed his invention's economic potential. In May 1876 he exhibited his device at the Centennial Exposition in Philadelphia and spent most of the next year giving demonstrations around the country. By the end of 1877 the telephone was ready for commercial use. Bell and his backers, Gardiner Hubbard, a Boston-based lawyer and financier and Bell's father-in-law, and Thomas Sanders, a Boston businessman and father of one of Bell's students, established the Bell Telephone Company (later to be American Telephone and Telegraph), which soon proved to be a triumphant monopoly. Even though Western

Union tried to compete by locating telegraph offices almost everywhere, controlling competing telephone patents, and continuing the legal contest with Bell's company, the latter prevailed in court. Western Union was forced to sell its telephone interests to the Bell Company in return for 20 percent of all Bell's net profits.

Within two years of Bell's patent award there were about 10,000 Bell telephones in the United States. Subscribers were encouraged to make their own electrical connections and string their own wires, although the company would carry out these jobs for them for an additional fee. Between 1880 and 1884 the number of telephones tripled, even though the typical telephone system was difficult to use. The telephone consisted of a set of three boxes, one containing a battery, another containing the receiver and speaker, and the third containing a magneto generator, a crank, and a bell. The whole system depended on a switchboard, a box where all the telephone lines in a local area terminated. When the caller turned the crank, a light, a bell, or some other signal alerted the operator, a person who manually answered the call and used wires and plugs in the switchboard to connect the caller with the person he or she was seeking. Other problems included weak transmission, noise on the line, and unsuitable signaling systems. In 1881 the Bell Company standardized telephone technology by gaining control of the Western Electric Company, which became the sole manufacturer of Bell's telephone instruments. Despite all the difficulties, the number of telephones reached 228,000 in 1890.

During Bell's monopoly, telephone service consisted of an individual line for which a customer paid an annual flat fee, allowing unlimited calls within the exchange area. On expiration of the original Bell patents in 1893–1894, the company's financial position became increasingly fragile as many independent companies sprang up and claimed shares in profits, especially in rural areas that Bell had largely ignored. By 1900 there were over 6,000 telephone companies, and by 1907 Bell had lost at least half the market. In order to face the competition, Bell telephone rates dropped dramatically, and new sales strategies included the charge by call and the long-distance service. Bell's company was rescued

under the new management of Theodore Vail. Instead of price competition, Vail bought out smaller independent companies, most of which would not expand their long-distance lines. By 1912 Bell owned 58 percent of U.S. telephones, which were now much easier to use because of technological improvements.

In Europe Bell's invention at first attracted little interest, even though Bell himself traveled to Britain and France to promote the invention. In both of these countries, telephone services became state monopolies in 1889, a decision that slowed the acceptance of the technology. In contrast, telephone usage expanded quickly in Germany, where Bell had failed to register his patent and where the inventor and businessman Ernst Werner von Siemens (1816–1892) became the main producer of telephones. The German government also had a monopoly in providing telephone services but successfully established a well-run network open to public access. In 1880 there still were only 1,900 telephones in all of Europe. The number had increased to about 800,000 ten years later. By 1910, however, Germany alone had more than 1 million telephones, and Great Britain had 649,000 connections.

—*Maria Rentetzi*

Bibliography

- Brooks, J. *Telephone, the First Hundred Years: The Wondrous Invention That Changed a World and Spawned a Corporate Giant*. New York: Harper and Row, 1975.
- Fischer, C. *America Calling: A Social History of the Telephone to 1940*. Berkeley: University of California Press, 1992.
- Hoddeson, L. "The Emergence of Basic Research in the Bell Telephone System, 1875–1915." *Technology and Culture* 22 (1981): 512–544.
- Hounshell, D. "Elisha Gray and the Telephone: On the Disadvantages of Being an Expert." *Technology and Culture* 16 (1975): 133–161.
- Lipartito, K. "When Women Were Switches: Technology, Work and Gender in the Telephone Industry, 1890–1920." *American Historical Review* 99 (1994): 1075–1111.

The Wireless

When American inventor Samuel F. B. Morse sent a message by telegraph between Washington and Baltimore in May 1844, few people

imagined that someday messages would be sent without telegraph wires. Yet by the late 1890s, that was exactly what inventors had achieved. The journey that led to wireless telegraphy began in the 1830s, when British physicist Michael Faraday (1791–1867) performed experiments involving electricity and electromagnetic forces. His insights led to further work by Scottish physicist James Clerk Maxwell (1831–1879). Maxwell showed in the 1850s and 1860s that electric and magnetic fields travel through space in waves that are equivalent to the speed of light. Building on Maxwell's theories, in the late 1880s German professor Heinrich Hertz (1857–1894) discovered radio waves; these "Hertzian waves" of electricity finally enabled inventors to transmit messages through the air electronically. As this new technology proved successful, by 1901 the English-speaking press began using a shorter name for it: wireless. And in France, where several inventors were using the new technology, it became known by its initials: le TSF (*telegraph sans fil*), the French words for "wireless."

Most Americans have been taught that Italian-born Guglielmo Marconi (1874–1937) invented wireless, but several inventors were involved in its development. In 1897 scientific magazines were following the exploits of a competitor, Nicola Tesla (1856–1943). The Hungarian engineer came to the United States in the early 1880s hoping to meet his hero, Thomas Edison. Although Edison did not want to hire him, Tesla decided to remain in the United States, where he soon became fascinated by wireless telegraphy. By 1897 he was able to transmit a signal over a distance of 20 miles (32 kilometers). As he sought to get investors and attention from the press, supporters of U.S. inventor Mahlon Loomis (1826–1886) were insisting to newspapers that Loomis had conducted successful wireless experiments since the late 1860s, long before Tesla began his.

As for Marconi, by the late 1890s he was conducting wireless experiments in England. By 1899, Marconi had transmitted a signal across the English Channel, and then in December 1901, a colleague in the Poldhu wireless station in England transmitted the Morse code letter "S" to him at a receiving station in St. John's, Newfoundland, Canada.

▶ REGINALD FESSENDEN'S AMAZING ACHIEVEMENT

Until Reginald Aubrey Fessenden began doing his experiments, wireless was associated entirely with Morse code. But Fessenden believed that wireless could also send voice, and he was determined to prove it. Born in Canada, he came to the U.S. to work with Thomas Edison but then branched out. While working for the Weather Bureau in 1901, Fessenden did his first voice experiments, and by 1905 he was transmitting messages between his home in Brant Rock, near Marshfield, Massachusetts, and a tower in Scotland. Then in December 1906, he performed a public exhibition of voice and music. Some sources say that it occurred on December 21 while others say it occurred on Christmas Eve, but what is not in dispute is the importance of what Fessenden did. By successfully sending voice and music, he created wireless telephony, setting the stage for radio broadcasting.

—Donna Halper

Marconi's success totally overshadowed the achievements of other inventors. Tesla suddenly found himself ignored by the press, but so did Danish inventor Valdemar Poulsen (1869–1942), who was also doing wireless experiments throughout the late 1890s. Poulsen had invented the telegraphone, a rudimentary way of recording sound, and by 1902 he invented his own wireless transmitter called the Poulsen Arc. The German inventor Adolphus Slaby (1849–1913) also did wireless experiments during the late 1890s, and his system had received favorable reviews in scientific journals. In France, Edouard Branly (1844–1940) invented a device called a coherer that could detect Hertzian waves; by 1898, the French entrepreneur Eugène Ducretet (1844–1915) was putting Branly's work to good use, sending wireless messages from the Eiffel Tower. And in Russia at this time, Alexander Popov (1859–1905) did important experiments using an antenna to detect radio waves.

But the public was not so worried about who invented the wireless; what mattered was what it could do. The telegraph had already changed society by making communication much faster. This especially helped journalists and businesspeople, who needed to send

and receive information the same day. But there had often been problems with telegraph wires, which came down during bad weather, and the telegraph could not send messages to the ships at sea. At a time when transoceanic travel was very important, there was a need for reliable ship-to-shore broadcasting. Wireless telegraphy enabled the ships to receive weather reports and other important messages. And in an era before reliable long-distance telephone service, wireless telegraphy was the next best thing. It became so popular that major department stores installed public sending stations, allowing anyone to have a message sent across the country. Meanwhile, a Canadian inventor, Reginald Fessenden (1866–1932), demonstrated as early as 1906 that voice and music, not just Morse code, could be sent by wireless. By 1909, Charles "Doc" Herrold and his wife Sybil were doing a program once a week from San Jose, California; they played phonograph records and even took requests. These experiments would lead to what became known as radio.

—Donna Halper

Bibliography

- Halper, Donna L., and Christopher M. Sterling. "Fessenden's Christmas Eve Broadcast: Reconsidering an Historic Event." *Antique Wireless Association Review* 19 (2006): 119–138.
- Hong, Sungook. "Marconi and the Maxwellians: The Origins of Wireless Telegraphy Revisited." *Technology and Culture* 35(4) (1994): 717–749.
- Lodge, Sir Oliver. "A Retrospect of Wireless Communication." *Scientific Monthly*, December 1931, 512–521.
- Seitz, Frederick. "The Cosmic Inventor: Reginald Aubrey Fessenden." *Transactions of the American Philosophical Society* 89(6) (1999): 1–77.
- Sterling, Christopher M., and John Michael Kittross. *Stay Tuned: A History of American Broadcasting*. Mahwah, NJ: Lawrence Erlbaum, 2002.

Photography

Photography is the process of using light or other radiation to form an enduring image on a light-sensitive surface. Photography's roots go back many years. The principle of the camera obscura, a darkened room (or box) where viewers observed inverted images of brightly lit

scenes projected on a flat surface by light rays admitted through a small aperture, was known in the Middle Ages, and such devices were used as visual aids by seventeenth-century painters such as Jan Vermeer. The camera obscura, light-sensitive surfaces to record images, and chemical techniques to develop and prevent deterioration of pictures were all essential to the invention of practical methods of photography.

In 1802 Thomas Wedgwood (1771–1805), the son of the famous English potter Josiah Wedgwood, experimented with paper soaked in silver nitrate. When decorated glass was laid on top of the paper and exposed to sunlight, the design was copied on the paper but could only be preserved in the dark. Joseph Nicéphore Niepce's experiments during 1816–1833 in France with the effects of light on treated surfaces were promising but less than satisfactory. Parisian artist and diorama entrepreneur Louis Jacques Mandé Daguerre collaborated with Niepce (from 1829 until the latter's death in 1833), sharing information about chemicals and techniques that eventually led to commercially viable photography. Daguerreotypes (first publicly announced in 1839) used highly polished silver sheets, iodized for sensitivity to light. Light from the subject passed through the camera's aperture, creating a latent image on a silver sheet that was developed (brought out) by mercury fumes and fixed (made permanent) by immersion in hyposulfite of soda. Hypo (sodium thiosulphate), discovered by the English scientist John Herschel in 1819, could be used to fix residual salts, an essential stage in the stabilization of photographic images, which otherwise would continue to darken when exposed to light. Almost simultaneously, the English scientist William Henry Fox Talbot announced the success of his negative-positive photographic process, which proved more influential than Daguerre's invention.

The subsequent technical evolution of photography before 1914 is the story of increased light sensitivity (speed) of plates or film, improved emulsions, and greater convenience. Wet collodion plates (1851), gelatin-silver bromide plates (or dry plates, 1871), and celluloid roll film (1889) for use in the American George Eastman's inexpensive and easily portable Kodak



Self-portrait of photographer Robert Cornelius, one of the first daguerreotypes, 1839. (Library of Congress)

cameras are all significant landmarks. Images were printed on treated papers (or other supports such as metal or glass lantern slides, catering to consumer demand) using a variety of processes and formats. Stereographs for insertion in 3-D stereoscopic viewers were popular parlor amusements in middle-class homes. *Cartes de visite*, cabinet cards, and tintypes were common portrait formats. Prints on hand-coated albumen paper were predominant between 1855 and 1895 but gradually gave way to machine-produced continuous-roll emulsion papers. By the 1890s photography, no longer limited to professionals, had become relatively simple, inexpensive, and convenient, enabling families to create a visual record of their lives.

Other pre-1914 developments include photojournalism (e.g., photographic documentation of war by Roger Fenton in the Crimea and Matthew Brady's firm in the American Civil War); documentation of late-nineteenth- to early-twentieth-century social conditions by reformers such as Jacob Riis and Lewis Hines; expanding awareness through photography of distant landscapes

► WILLIAM HENRY FOX TALBOT

W. H. Fox Talbot (1800–1877) experimented independently with photography in England while Daguerre and Niepce were researching in France. Talbot soaked sheets of paper in weak solutions of salt and dipped them, when dry, in silver chloride, a light-sensitive chemical. By 1835 he was using such paper in small cameras to record pictures of his estate, but the images were fleeting. Herschel told Talbot about hyposulfite of soda in 1839, enabling him to fix residual salts on the exposed paper, stabilizing the image and resulting in a practical method of producing paper photographic negatives. Waxing the paper to make it transparent facilitated its use in a negative-positive process. Sunlight passed more readily through less darkened areas of the negative, leaving positive contact prints (calotypes) on silver chloride paper placed beneath. Daguerreotypes are visually stunning traces of the past, but nearly all predigital modern photography stems from the process first introduced by Talbot.

—Jeffrey Mifflin

and cultures (e.g., the work of John Thomson in Asia, Félix Bonfils in the Middle East, and Timothy O'Sullivan in the recently surveyed American West); pictorialism and the Photo-Secession group, led by Alfred Stieglitz, that promoted the photograph's potential for artistic expression; and the development of various means for mass-producing photographic images (e.g., photogravure and letterpress halftone) in books, newspapers, and advertisements.

Photographs have had numerous applications in science, medicine, historical documentation, travelogues, journalism, advertising, cinema, art, and portraiture in addition to serving as personal and family mementos. Once thought by Victorians to be an objective record of reality, photography's subjectivity and potential for manipulating meaning have subsequently been better understood. It has been enormously influential in swaying public opinion, creating a demand for products and services, and molding perceptions. Our view of world history may well be divided into two epochs: the photographic era (wherein photographs help shape our

concepts of the past) and the prephotographic era (before 1839).

—Jeffrey Mifflin

Bibliography

- Frizot, Michel, ed. *A New History of Photography*. Cologne, Germany: Könemann, 1998.
- Henisch, Heinz K., and Bridget A. Henisch. *The Photographic Experience, 1839–1914: Images and Attitudes*. University Park: Pennsylvania State University Press, 1994.
- Newhall, Beaumont. *Latent Image: The Discovery of Photography*. Albuquerque: University of New Mexico Press, 1983.
- Trachtenberg, Alan, ed. *Classic Essays on Photography*. New Haven, CT: Lett's Island Books, 1980.

Cinema

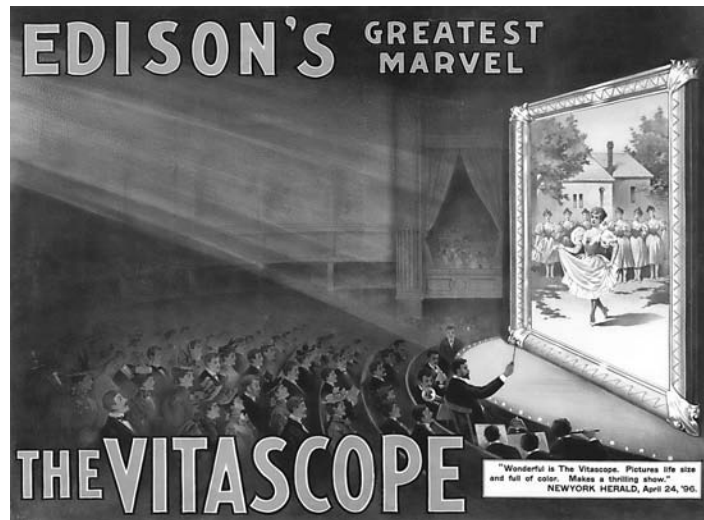
Cinema, also known as film, motion pictures, the movies, and, in earlier years, photoplay, is an art form in which a sequence of still images is projected or otherwise shown for viewing at a speed that creates an illusion of continuous movement. The viewer's brain retains each image for a fraction of a second longer than the eye, transforming discontinuous pictures into fluid motion through persistence of vision. The development of cinema has stemmed from improvements in technical equipment for recording and projecting movies, increased sophistication in the handling of subject matter, and changes in the film industry's manufacturing and marketing practices.

Cinema's emergence in the late nineteenth century was preceded by various optical toys and machines also predicated on persistence of vision. By the 1850s exhibitors had learned how to project the apparent movement of figures on a rotating Phenakistiscope disk through a magic lantern (a candle-powered slide projector) onto a screen. Improvements in the speed at which still photographs could be exposed, the locomotion studies (sequences of still photographs taken at short intervals to analyze how humans and animals move while running, climbing, leaping, etc.) conducted by Étienne-Jules Marey in France and Eadweard Muybridge in the United States, and the invention of celluloid roll film were important factors leading to the development of motion pictures. George Eastman perfected

celluloid film for use with Kodak cameras between 1884 and 1888. W. K. L. Dickson, who headed motion picture research at Thomas Edison's New Jersey laboratory, used Eastman's film with a newly devised apparatus to photographically record movies of real-life activities as early as 1890. Edison secured patents in 1893 for his Kinetograph (camera) and Kinetoscope (peephole viewer). By 1894 he was marketing his invention to Kinetoscope parlors, where patrons paid for individual viewing of unedited films lasting about half a minute, typically showing street scenes from foreign countries or staged entertainment such as juggling.

Louis and Auguste Lumière in France improved on Edison's peepshows by advancing sprocket-wound film one frame at a time through a projector, stopping each image for a fraction of a second before showing the next (intermittent movement). They found that 16 frames per second was the optimum speed for viewing. Their Cinématographe could make movies as well as project them. The first public demonstration of projected movies took place in a Parisian café in 1895. Unprepared audiences were so alarmed by the verisimilitude of the images on the silver screen that many attendees scrambled to dodge a train that seemed to be hurtling toward them. Early films, shot in black and white, were silent, having no recorded sound track to play with the visual track. Plot developments and essential lines of dialogue printed on intertitle cards were projected for the audience to read. Musicians often played live music reflecting the mood of each scene. Films were typically shown as part of a theater's larger program of live entertainment.

In 1908 ten producers and distributors formed the Motion Picture Patents Company (also known as the Movie Trust) to assert control over the industry in the United States. The Movie Trust's tactics included attempts to restrict the supply of film stock, keeping patented equipment out of the hands of rival companies, and guarding the identity of actors (because popular idols could demand higher salaries). The U.S. Supreme Court eliminated the Movie Trust in 1917, but one of its lasting effects was a shift of independent film companies from the eastern United States to California, where Hollywood became a center of film production.



An advertisement for Edison's Vitascope motion picture device, 1896. The Vitascope was the name Edison gave to his patented version of the Kinetoscope. (Library of Congress)

➤ D. W. GRIFFITH

Soon after 1900 filmmakers started producing fictional stories portrayed by hired actors. Georges Méliès in France introduced the artificially arranged scene. Edwin S. Porter in the United States furthered storytelling techniques by breaking scenes into individual shots, each of which contributed to a more meaningful whole and could be selected, combined, and arranged in a significant order to help audiences become emotionally engaged. Porter's *The Great Train Robbery* (1903) was a seminal achievement. However, the greatest advances in the evolution of cinema were made by the American D. W. Griffith (1875–1948), the father of the movies, at the Biograph studios in the years before 1914. Griffith invented film language in collaboration with cameraman Billy Bitzer by employing such devices as backlighting, fades, flashbacks, cross-cutting, long shots, and close-ups to heighten drama, manipulate tempo, and depict psychological development. His genius as a filmmaker, however, has often been overshadowed by the racist implications of his influential masterpiece *The Birth of a Nation* (1915), which glorified the Ku Klux Klan.

—Jeffrey Mifflin

Appealing actors, identified and promoted in the press, became the first movie stars. High-profile stars emerged in the 1910s, including such enduring icons as Mary Pickford and Charlie Chaplin, who before long became the most recognizable man in the world. World War I (1914–1918) disrupted the European film industry, paving the way for a period of unrivaled American dominance. Feature films grew in length as well as sophistication. Movies, no longer short supplements to live vaudeville shows, became main attractions.

Movies played an important role in depicting and interpreting life for early-twentieth-century audiences. The overall effect that cinema has had in molding behavior, providing

role models, and influencing the aspirations of viewers has not been adequately explored.

—Jeffrey Mifflin

Bibliography

- Fulton, A. R. *Motion Pictures: The Development of an Art*. Rev. ed. Norman: University of Oklahoma Press, 1980.
- Henderson, Robert M. *D. W. Griffith: The Years at Biograph*. New York: Farrar, Strauss and Giroux, 1970.
- Jacobs, Lewis. *The Rise of the American Film*. New York: Columbia University Teachers College Press, 1968.
- Sanderson, Richard A. *A Historical Study of the Development of American Motion Picture Content and Techniques Prior to 1904*. New York: Arno, 1977.

■ Introduction: Technology and Transportation

During the period from 1750 to the early twentieth century, revolutionary changes were implemented in the ways human beings moved themselves and the goods they grew, mined, and made. Canal building linked coal mines with factories in industrializing England, the Great Lakes with coastal cities in early-nineteenth-century America, and, once the Suez Canal was completed in 1869, Europe and Asia. In Europe and the Americas, advances in road construction made overland travel faster and more comfortable and prepared the way for the automobile age. The application of steam power to land transportation began when the English engineer Richard Trevithick mounted a steam engine on wheels at an ironworks in Wales and successfully pulled ten tons of iron, five wagons, and 70 men 9.75 miles (15.7 kilometers) in 4 hours and 5 minutes, an average speed of approximately 2.4 miles (3.9 kilometers) per hour. This was the beginning of the railroad age in which thousand of miles of railways were constructed on every continent, with locomotives and their cars traveling close to 100 miles (160 kilometers) per hour by the beginning of the twentieth century. Steam engines initially best

served river vessels carrying goods for inland trade. However, by the second decade of the nineteenth century, steam-powered ships were crossing the Atlantic Ocean and by 1900 were reducing the travel time from several weeks to a matter of days. At the end of the period, the first automobiles and the first successfully flown airplanes, both powered by the newly invented internal combustion engine, were spectacular technological breakthroughs but made their impact felt mainly in the years after 1914.

Advances in transportation technology between 1750 and 1914 tightened the webs of global communication and increasingly allowed for the transference of goods and people across the oceans and around the world. They helped create the industrial revolution and the increasingly globalized world economy of the late nineteenth century. Without them the mass migrations of the nineteenth century would never have occurred. Railways and steamships allowed people to move about countries and continents and across oceans searching for work and supplying labor to industrialized areas. At the same time, populations such as those of the Plains Indians in North America were displaced by the

expansion of the railroad and the ensuing movement of migrants into their lands. Steamboats allowed for the opening up of the interiors of Africa, Asia, and the Americas to European travel and conquest, facilitating the “new imperialism” of the late nineteenth century, with railways consolidating those conquests. Finally, with Thomas Cook and Son, in the 1840s, realizing the potential of these developments in transportation technology, tourism emerged as a major multinational business.

—Rodney McCaslin

The Development of the Railroad

The most important technological development of the Industrial Revolution was that of the railroad. Other devices or machines revolutionized individual trades with secondary effects over a wider segment of society, but railroads had an impact over the entire spectrum of the economy and profound effects on society. Locomotives went from George Stephenson’s Rocket that blazed down the track at a blistering 12.5 miles per hour (mph) in 1829 to the Great Western Railway’s City of Truro, which claimed to break the 100-mph mark during a special run in 1904. Railroads went from a single operational commercial line of some 32 miles in 1830 to networks that spanned entire continents by the end of the century. This surge of construction drove the development of heavy industries, providing first the needs of the railroads and later the industrial base for further economic expansion.

George Stephenson (1781–1848), the English engineer who built the first steam-driven public railway, did not invent the idea of rail transportation. The concept of moving heavy loads using railed tramways appears as early as 1556 in Georgius Agricola’s *De re metallica*. Nor did Stephenson invent the locomotive, an honor generally accorded to Welsh inventor Richard Trevithick (1771–1833) and his series of road and rail engines starting in 1801. Nor was Stephenson the only man developing more powerful locomotives during the 1820s. But he is widely hailed as the father of the railroad. His strength was the promotion of the idea and boundless confidence in his abilities. He managed to convince

the directors of the Stockton to Darlington railroad that his steam engine could out-perform the horses they planned to use and proved it. Whereas a horse could move 10 tons at 2.5 mph on rails, his locomotive hauled an estimated 90 tons at an average of about 8 mph on the first trip (September 27, 1825). His later locomotive, Rocket, won the Rainhill Trials held in 1829 by the directors of the new Liverpool to Manchester railway, the first route to offer scheduled passenger service. Ten locomotives were initially entered in the competition, but only five showed up; of those, three actually took part. Stephenson’s locomotive successfully hauled a load three times its own weight at a speed of 12.5 mph. Without a load he astounded the spectators by hitting upwards of 30 mph. This victory won him a £500 prize and a contract to produce engines for the railroad and tied his name inextricably to the development of early railroad technology.

That technology exploded after the success of the Liverpool and Manchester railway. The directors of the route had hoped to make £50,000 per annum on freight charges. In their first year they made £80,000 on freight and £101,829 from passenger fares and paid an 8 percent dividend to their investors. Objections to railways, mostly from competing shipping methods, evaporated, and investors and engineers came together to create the first railway construction boom. By 1840 Britain boasted almost 1,500 miles of track, and in other nations entrepreneurs had started driving spikes of their own. By 1860 the continent had laid more than 20,000 miles of track, the British had increased their rail network to more than 9,000 miles, and in the United States, where vast distances separated population centers, more than 30,000 miles of track were in service. Plans for a transcontinental railroad in the United States were hampered by the American Civil War, but in 1869 the ambitious plan to link the Atlantic and Pacific coasts by rail was accomplished. This rapid growth is even more remarkable in light of the technology available to the builders in the first half of the nineteenth century: these lines were built largely with manual labor, without the benefit of steam shovels or jackhammers.

THE BRAVE LITTLE SHE-DRAGON

Actress Fanny Kemble described her experience as a guest aboard an early locomotive driven by George Stephenson.

“You cannot imagine how strange it seemed to be journeying on thus without any visible cause of progress, other than the magical machine with flying white breath and rhythmical unvarying pace, between these rocky walls that are already clothed with mosses ferns and grasses . . . swifter than a bird flies. You cannot conceive what that sensation of cutting the air was. . . . When I closed my eyes this sensation of flying was delightful, and strange beyond description; yet strange as it was, I had a perfect sense of security, and not the slightest fear. At one time, to exhibit the power of the engine, having met another steam engine, which was unsupplied with water, George Stephenson caused it to be fastened in front of ours; moreover, a waggon laden with timber was also chained to us, and thus propelling the idle engine and dragging the loaded waggon which was beside it, and our own carriages full of people behind, this brave little she-dragon of ours flew on.”

—Melvin Smith

Source

John Pendleton, *Our Railways: Their Origin, Development, Incident and Romance*, Vol. 1 (London: Cassell, 1894), 64.

This surge of railway growth had its problems. It was ragged and uneven, much given to speculation that created a series of booms and busts, and lacked any form of standardization. From a technical standpoint, the latter problem was the most vexing. Aspiring engineers were working in largely unexplored territory as they experimented with locomotive configuration, rolling stock design, and track-building methods. Early railroads were a hodgepodge of differing gauges (the width between the rails) from line to line, which meant that anything traveling a long distance might have to be loaded and unloaded several times as it moved from one company's area to another. Standardized national gauges were soon developed.

Standardization became a key issue with the railroad. Before railroads, time was strictly a local affair; there was no need to synchronize clocks in London and Liverpool or in New York and Newark. Scheduling trains was crucial, however, both to maximize utilization of the rail line and to avoid horrendous accidents. As a result railroads adopted a standard time structure, first in Britain, which adopted Greenwich Mean Time as the national standard in December 1847. Time standardization came to North America in 1883 along with the concept of time zones due to the width of the continent.

Railroads not only standardized time but also changed the very concept of time and distance. “Near and far” took on new meanings as locomotives became faster and rail networks linked distant points. Journeys that would have taken days before the railroad became short trips measured in hours, with typical average speeds for long-haul trains ranging around 50 mph. This had the concrete effect of modifying the relationship between consumer and producer at all levels of the economy from raw material to finished product. Manufacturers gained access to supplies from increasingly distant sources and were able to market their wares to an increasingly broad segment of the national population. Farm surpluses found their way to larger markets as well, as did more exotic foodstuffs from foreign producers.

In a more abstract way the railroad could create a sense of national identity. While more people did travel greater distances, even people who never left home were affected. The railroad brought information of the greater world with it; newspapers, magazines, and catalogs reinforced the sense of being a part of a greater whole.

Railroad construction was a macroengineering proposal, an economy of scale. A typical rail of the 1880s weighed 80–100 pounds to the yard. This means that a mile of single track consumed between 140 and 176 tons of steel in rails alone. Between 1880 and 1890 American railroads laid 36,473 miles of new track, thus consuming somewhere between 5.1 million and 6.5 million tons of steel in that decade just to provide the rails. This figure did not include the steel needed for spikes, bridge plates, or the locomotives and cars themselves. In addition to steel, tons of gravel had to be quarried as ballast.

Forests of trees had to be converted into 8-foot-long cross ties. Tons of copper had to be drawn into wire for the telegraph to coordinate schedules. Thousands of workers had to be mobilized to create the components and thousands more to carry out the construction. Capital had to be raised to pay for it. In short, the construction of a railroad system required the construction of an industrial base.

—Melvin Smith

Bibliography

- Faith, Nicholas. *The World the Railways Made*. New York: Carroll and Graf, 1991.
- Hastings, Paul. *Railroads: An International History*. New York: Praeger, 1972.
- McDermott, Edward. *Railways*. London: Methuen, 1904.
- Ritchie, Robert. *Railways: Their Rise, Progress, and Construction, with Remarks on Railway Accidents, and Proposals for Their Prevention*. London: Longman, Brown, Green, and Longmans, 1846.
- Stover, John F. *American Railroads*. Chicago: University of Chicago Press, 1997.

Europe's Railway Network by World War I

In the period 1750 through 1914, Europe's railway network matured from horse-drawn tramways to steam-locomotive railroads. The extension of railways was inextricably tied to other aspects of the first and second Industrial Revolutions. Technological innovations, financing arrangements, military objectives, economic development, and cultural conditions were catalysts as well as beneficiaries of railroad development.

Technological innovations in Britain led the way for railway development. The transformation from tramways, operated with horse-drawn vehicles over wooden rails, to steam locomotion was a logical progression. Early privately owned tramways were often used to haul coal from mines. The first tramway charging tolls for public use, with users providing their own horse-drawn vehicles, was that of the Surrey Iron and Oystermouth tramway line, opened in England in 1803. The perfection of the steam engine by James Watt and others led to experimentation with steam-driven carriages. Richard

Trevithick's design of a blast pipe, allowing the simultaneous venting and drafting of a steam engine, was applied to what is generally regarded as the first steam locomotive. In 1804 Trevithick's locomotive—with one cylinder, a flywheel, and traction dependent upon the wheels against the tracks—carried 70 passengers and 10 tons of iron over a distance of 9 miles along the Penydarran Tramway in Wales. The heavy weight of this and other locomotives, however, required periodic and expensive track replacement. In 1811 John Blenkinsop, a coal mine operator, hired Matthew Murray to design a lighter locomotive with toothed wheels for traction; it operated with two cylinders, thereby obviating the need for a flywheel. The venture was a success.

George Stephenson and his son Robert were among the foremost designers of locomotives in England in the early nineteenth century. George was the surveyor and engineer of the Stockton and Darlington railway, also called the "Quakers' Line." Completed in 1825, it tied the port city of Stockton-on-Tees with the coal town of Darlington in England. Winner of the famous Rainhill locomotive trials in 1829, Robert Stephenson was the engineer of the 1830 Liverpool and Manchester railway, the first line to carry the royal mail. Subsequently, George and Robert Stephenson designed a 350-mile railroad network for Belgium. By 1886 Britain's railway network was extensive, totaling over 19,000 miles. The six largest lines accounted for nearly half of the total mileage: Great Western, Great Eastern, Great Northern, London & Northwestern, Midland, and North British.

The financing of European railways included private and state means. Private enterprise was the pattern in Britain. In 1839 Nicholas I of Russia sent officials on a fact-finding tour of railroads in Europe and the United States. Returning to Russia with a number of American experts, the delegation began construction of the Great Nicholas Railway between St. Petersburg and Moscow, opened in 1847. Later Alexander II of Russia pursued the development of railroads between the Baltic and Black seas. In France, a public-private partnership ensued. In 1842 the French National Assembly passed legislation for the construction of a rail network

radiating in seven great lines from Paris. The government agreed to defray the costs of the infrastructure (track bed, bridges, tunnels, etc.) for the railroads, while private enterprise laid the track, built stations and buildings, bought the locomotives and cars, and managed the operations. In Belgium the government initially financed the railway network, but later private financing assumed greater control. In some German states the government subsidized railroad construction, as occurred initially in Baden, Bavaria, Hannover, and Württemberg. Originally the Prussian state did not underwrite railroad construction, but after the 1848 revolution the government undertook a line between Berlin and Königsberg. The Austrian empire, with the financial support of the great banking families of Rothschild and Péreire, also pursued railway construction.

European powers realized the importance that railways could play in warfare. Prussia used railroads to transport troops and supplies to suppress a revolt in Polish Krakow in 1846. During the Crimean War (1854–1856), Great Britain was the first nation to build a military railroad. During the Austro-Prussian War of 1866 (also called the Seven Weeks' War) and the Franco-Prussian War, Prussia victoriously used railroads to deploy troops and supplies.

The construction, operation, and maintenance of railways were catalysts for many national economies. Although many nations initially relied upon the importation of locomotives and equipment from Britain and the United States, they often quickly developed their own factories for the production of rails and locomotives. Railways also served to connect source regions of raw materials with industrializing cities, leading to agglomerations of industry. For example, the Ekaterininsky Railway, completed in Russia in 1884, tied the iron mines of Krivoi Rog to the Donets coal district, contributing to the industrialization of the Ukraine. In Germany, the Ruhr River valley became another conglomeration of coal mines and the iron industry. Similarly, railroads proved important to the Italian industrial triangle of Genoa, Milan, and Turin. Although largely in the Asian section of Russia, the nearly 5,800-mile-long Trans-Siberian

Railway, connecting Moscow to Vladivostok, opened up settlement in Siberia. Economists have utilized interindustry structure to examine both the backward linkages (i.e., between railways and their suppliers) and the forward linkages (i.e., between railways and their customers) associated with railways. For example, railroads used coal, but they also counted coal mines among their transport customers. Likewise, while railways were purchasers of iron products, they conveyed both iron ore and finished iron products.

Political, military, and cultural conditions either influenced or dissuaded railway development. In the early years of railroad construction in Britain, for example, canal, road, and agrarian interests often opposed the approval of rail lines by Parliament. In France, followers of Saint-Simon viewed railways positively, while other Frenchmen denigrated them as aristocratic. As with any new technology, acceptance of railroads took time.

The World Almanac and Encyclopedia of 1914 noted, based on a 1912 report of the Prussian Ministry of Public Works, that Europe's railway mileage totaled 207,432 miles. Germany led Europe with 37,995 miles, followed by Russia's European mileage at 37,008 (not counting its Asian mileage). Third and fourth places were taken by France at 30,686 miles and Austria-Hungary at 27,570 miles. Great Britain held fifth place at 23,350 miles, followed by Italy, Spain (9,316 miles), Sweden (8,687 miles), Belgium (5,287 miles), and Switzerland (2,921 miles). The remaining nations had between 68 and 2,238 miles each. The largest percentages of state-owned railroads were Germany at 91 percent, Bulgaria at 89 percent, Romania at 88 percent, Italy at nearly 84 percent, Norway at 81 percent, and Austria-Hungary at about 80 percent.

—Paul Tenkotte

Bibliography

- Dale, Rodney. *Early Railways*. Oxford: Oxford University Press, 1994.
- Harter, Jim. *World Railways of the Nineteenth Century: A Pictorial History in Victorian Engravings*. Baltimore: Johns Hopkins University Press, 2005.

O'Brien, Patrick. *Railways and the Economic Development of Western Europe, 1830–1914*. New York: St. Martin's, 1983.

Westwood, John. *The Historical Atlas of World Railways*. London: Cartographica, 2008.

The World Almanac and Encyclopedia, 1914. New York: Press Publishing Co. (The New York World), 1913.

Early Railways in India

Railroads for India were proposed initially in the mid-1830s. Fifteen years of promotion and debate ensued until key decisions in favor of the Great Indian Peninsula Railway (GIPR) and the East Indian Railway (EIR) were made in March 1849. Thus, finally, railroad building in Britain's largest imperial possession began in 1850. In 1853, the governor-general of India, Lord Dalhousie (in office 1848–1856), laid out a comprehensive plan for the development of the trunk lines.

Dalhousie's influential, lengthy memorandum—a “minute” in the language of the day—deserves close study. It provided justifications and guidelines for the system of railroads that was developed in South Asia under British auspices in the third quarter of the nineteenth century. The governor-general emphasized the political and military benefits railroads would provide. “Immeasurable” advantages would accrue to a colonial administration composed of a “comparative handful” of British administrators and soldiers scattered over the subcontinent. Railroads would enable Britain “to bring the main bulk of its military strength to bear upon any given point in as many days as it would now require months, and to an extent which at present is physically impossible.”

Dalhousie also noted the “commercial and social advantages” of railroads. These advantages included an increase in trade between India and Britain: more Indian “produce,” including raw cotton, would be transported to Britain, and more manufactured British goods would be sold in India. Railroads would encourage enterprise, multiply production, facilitate the discovery of latent resources, increase national wealth, and encourage “progress in social improvement”

similar to that which occurred in Europe and the United States of America.

The hardheaded Dalhousie stressed the political, military, and economic benefits accruing largely to Britain, to the Anglo-Indian connection, and to the colonial regime. He sought to influence calculating decision makers in London: his political masters, and also potential British investors from whom the bulk of the financing for India's railroads had to be obtained.

Thus, in the 1850s and for many decades, India's railroads were conceived and executed as a colonial project. British authorities, with little input from Indians, decided when and where lines would be built—and a good deal more. India's railroads were meant to serve British interests first and foremost, among which military and

➤ AN INDIAN CRITIQUE OF THE RAILROADS

Gandhi was not the only Indian who had reservations about the massive railway construction undertaken by the British. In 1884 V. J. Joshi, a schoolteacher and one of India's leading economic writers, bemoaned the lack of jobs provided by the railways for Indians. The following excerpt is from his article “The Economic Results of Free Trade and Railway Extension.”

“The railway establishments in all the higher grades are a closed preserve for the foreigner and even the lower duties of collecting or clipping tickets are entrusted to hands other than those of the natives of the country. A few native guards and drivers and fitters are all that the companies can show in the way of training the people for higher work and the position and status of these people are anything but comfortable. Everything for the people and nothing by the people [was said by Napoleon] . . . and in no country in the world has it been more vigorously carried out than in India, where the foreigner does everything for the people, who look upon all they see with rustic amazement.”

Source

From V. J. Joshi, *Writings and Speeches* (Poona: Arya Bhushan, 1912), 688–689.

administrative security and economic benefits were central. The interests of Indians were incidental, although, as represented in the writings of Dalhousie and many Britons, the progressive consequences of the railroads for India were viewed as a self-evident truth. This assertion was accepted then as later by many Indians even though Gandhi wrote in *Hind Swaraj* (1921) about the railroads' contribution to the British control of India. Gandhi, in fact, went further. He denounced railroads as "evil" since "good travels at a snail's pace."

The template Dalhousie established in 1853 called for a system of great trunk lines best suited (1) to "maximize political and commercial advantages" along (2) specific routes providing favorable engineering conditions and (3) well situated for the subsequent construction of subordinate lines. First, Dalhousie advocated a line over 1,500 miles long heading north from Calcutta, then northwest up the Gangetic valley to Allahabad, on to Delhi, then deep into Punjab to Lahore, and onward to the Jhelum River. Second, he recommended two lines out of Bombay: one line in a northeasterly direction to tap cotton growing tracts in western India and to link up with the line in the Ganges valley, thus effectuating a through connection between Bombay and Calcutta; a second line to Poona and onward to the southeast to join up with a line built in a northwest direction from Madras. The latter junction required construction through the largest of the princely states ruled by the Nizam of Hyderabad, of whom, Dalhousie wrote, he "is a foreign potentate, but wholly helpless in our hands." Third, Dalhousie recommended the lines to be built outward from Madras. These were the northwest line just mentioned, and a line to the south, and then west through Coimbatore, and on to the west coast with a branch line to Bangalore (site of an important cantonment of British troops).

The period from the early 1850s to the early 1870s encompassed the pioneering two decades of railway building and operation in India. Many difficulties and hardships had to be overcome; many lessons, some involving considerable human or financial cost, had to be learned; triumphs great and small, and tragedies

with general consequences and/or individual loss occurred often. Great bridges were built and some fell down; thousands of construction workers died within days as gusts of epidemic diseases hit the assembled workforces; a young child laboring alongside his or her parents died because of an accident. Nonetheless, the engineers, contractors, colonial officials, skilled workers, and huge numbers of coolie laborers pressed on.

By 1861, 1,587 route miles of track were in operation and an additional 1,295 miles were under construction. The comparable figures in 1871 were 5,074 and 775. Estimates suggest that over a quarter of a million people were involved in railway construction in South Asia in 1861 with the total for the last half of the nineteenth century exceeding 10 million.

By 1871 the railroads had made a substantial impression on India and had become a prominent, new feature on the maps of the subcontinent. But their impression went far beyond cartographic representation. In the reporting year 1871, India's railroads employed 68,517 permanent employees, transported 19,283,000 passengers, and carried 3,542,000 net tons of goods. The railroads that reshaped India's landscapes also had considerable effects on India's society and economy.

—Ian J. Kerr

Bibliography

- Awasthi, Aruna. *History and Development of Railways in India*. New Delhi: Deep & Deep Publications, 1994.
- Headrick, Daniel R. *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940*. New York: Oxford University Press, 1988.
- Kerr, Ian J. *Engines of Change: The Railroads That Made India*. Westport, CT: Praeger, 2006.
- Kerr, Ian J. *Building the Railways of the Raj 1850–1900*. Delhi: Oxford University Press, 1995.
- Khosla, G. S. *A History of Indian Railways*. New Delhi: GOI, Ministry of Railways (Railway Board), 1988.
- Misra, Bhubanes, ed. *Railway Construction in India. Select Documents*, Vol. II: 1853–1873. New Delhi: Northern Book Centre for the Indian Council of Historical Research, 1999.

Railways in Africa

Railways played a major role in European domination and exploitation of sub-Saharan Africa. Colonial powers built lines linking the coast and interior to consolidate territorial claims, support administration, and move troops to quell resistance. In the British colony, the Gold Coast, the line into Ashanti territory was built initially at the behest of mining interests but was also strategically important in connection with the later Ashanti Wars. In Nigeria the line into the interior was built primarily for strategic purposes but also promoted subsequent mining development. In East Africa the Germans and British built lines to the interior entirely for strategic reasons. As elsewhere, the often-expressed claim that railways would generate local traffic that would help the economy did not really mean much. Agriculture and general commerce did benefit from the railways, but particularly in the absence of mine-related traffic, railways could not sustain high enough freight charges to generate sufficient profits to achieve economic viability.

In southern and central Africa most lines were built primarily to support mining development, not so much to export the minerals as to import heavy machinery and supplies. Many of these lines were built by private companies rather than government. The greatest interest was aroused by Cape diamonds and Witwatersrand gold, but other areas subsequently attracted private investment, with returns on investment sometimes disappointing. Virtually all of these lines were direct links to seaports accessing European manufacturers and markets; no effort was made to create a transport infrastructure that could promote wider economic development. Such mining ventures were crucial to railway construction. The discovery of diamonds at Kimberley in 1866 led to the construction of a line from Cape Town. When the Witwatersrand gold fields opened in 1886, further links were created to Port Elizabeth and, largely due to political pressure, East London. Politics also resulted in another line through Natal to Durban. The Transvaal government resisted the entry of the Cape lines until the completion of the line through Mozambique to Lourenço Marques

➤ AFRICAN RAILWAY FANTASIES

The lure of mythical African wealth—Prester John, King Solomon, and Witwatersrand gold—led to many ideas for railways that bordered on the fantastic. The most famous was Cecil Rhodes's Cape-to-Cairo dream. Why anyone would have wanted to board a train in Cairo and emerge days later in Cape Town when they could have a much more comfortable journey by sea along either of Africa's coasts was never explained. The French talked of a Trans-African line to parallel the Cape-to-Cairo line and of a Trans-Saharan that would link Senegal to France's North African territories. The Portuguese also sought to tap into the diamond trade from the Rand and Kasai through lines from the Angolan coast into the interior, but the lines did not get very far. The lines that were completed fulfilled the strategic and economic interests of empire; no other lines made any sense.

—Simon Katzenellebogen

(present-day Maputo), the shortest route to the coast. The Portuguese only secured substantial traffic for the line by linking its use to the recruitment of Mozambican workers essential for the Rand gold and coal mines. By 1895 the mines were served by more lines than they needed.

The British South Africa Company (Chartered) financed the building of rail lines farther north: one from Beira, Mozambique, to Salisbury (present-day Harare) to tap gold fields that did not live up to expectations and then on to Bulawayo to connect with the second line coming north through Bechuanaland from the Cape. The line then went north to the Wankie coal fields and Victoria Falls and across the Zambesi River. After a delay, the line was extended to Broken Hill to serve the zinc and lead deposits. Because the zinc and lead ores could not be separated, this venture was not profitable, leaving the railway companies in serious financial difficulty. The South Africa Company reluctantly agreed to construct a line to the Katanga border where the Katanga Railway Company completed the link to the Katanga copper mines.

At Lobito Bay, Angola, another railway was to run via Benguela to the Katanga border (only

completed in 1928) and then on to the mines. This line was in theory the most economical line for Katanga copper but has never been used to its full potential. The Belgians preferred to serve their own purposes by using the Bas-Congo to Katanga line to Kasai, then going by water and rail to the coast. The line via Wankie to Beira continued to carry substantial amounts of traffic as part of arrangements to ensure coal supplies for smelting. After World War I when technological developments made it possible to exploit the Northern Rhodesian Copperbelt sulfide deposits, only a short length of line was needed, and sub-Saharan Africa's railway system was essentially in place.

After African independence from colonial powers, additions were made to the system, but no real effort was made to create an infrastructure integrating African's economy. The most spectacular failure was the line linking the Zambian railways to Dar es Salaam on the Tanzanian coast. Built with Chinese help but paid for entirely by Zambia, the line proved totally inadequate for all-season heavy traffic. The imperial rail system continues to reflect European dominance of African interests.

—Simon Katzenellebogen

Bibliography

- Katzenellenbogen, Simon E. "The Miner's Frontier: Transport and General Economic Development." In *Colonialism in Africa 1870–1960*, Vol. 4, *The Economics of Colonialism*, edited by Peter Duignan and L. H. Gann. Cambridge: Cambridge University Press, 1975.
- Katzenellenbogen, Simon E. *Railways and the Copper Mines of Katanga*. London: Oxford University Press, 1973.
- Raphael, Lois A. C. *The Cape-to-Cairo Dream: A Study in British Imperialism*. New York: Columbia University Press, 1936.

Railways in Russia

Russia's enormous size, harsh climate, and diverse terrain long made transportation a pressing concern for its government and people. Yet prior to the mid-1830s, there were no railways to help bridge Russia's vast distances except for a few horse- and steam-powered mine and factory

lines. Goods and passengers traveled by horse-drawn carts and sledges, barges, and boats; in winter, frozen rivers and lakes served as temporary roads. But rapids, shallows, and ice hindered water transport, and some areas lacked usable rivers; major roads were scarce, rarely paved, often in poor repair, and impassable seas of mud during the spring thaw. This slow, unreliable, and expensive transport system hindered economic development.

Russia entered the railway age under Tsar Nicholas I (r. 1825–1855). Although a reactionary and repressive ruler whose fear of revolution led him to stifle Russian social and intellectual life, the tsar was open to new technology that might enhance Russia's economic and military strength. Thus, overriding Minister of Finance Egor Kankrin's (1774–1845) objections that railways would waste public funds, endanger carters' and barge-haulers' livelihoods, and encourage social instability by increasing the population's mobility, in March 1836 Nicholas authorized the Austrian engineer Franz Anton von Gerstner (1793–1843) to construct Russia's first railway, a 17-mile (27-kilometer) line between St. Petersburg and Tsarskoe Selo, which housed one of the royal palaces and many noblemen's summer residences. When the railway opened on October 30, 1837, eight carloads of curious passengers made the 28-minute one-way journey from the capital.

Subsequently, Nicholas I ordered the construction of a 403-mile-long line between St. Petersburg and Moscow (1843–1851), and in 1852 work began on lines connecting Warsaw in Russian-ruled Poland with St. Petersburg and Vienna. Yet by 1855 only 653 miles of track had been laid (less than one-tenth the length of Great Britain's rail network at the time). Most rails had to be imported since the few Russian factories capable of producing them lay far from the construction sites and since Russian engine and car production was still in its infancy. These shortcomings helped ensure Russia's defeat by Britain, France, and the Ottoman empire in the Crimean War (1853–1856) since Russia could not move men and equipment to the front by land as quickly as its enemies could by sea.

The defeat in the Crimean War highlighted Russia's economic, military, and social

backwardness, and the next ruler, Alexander II (r. 1855–1881), launched a reform program that emancipated the serfs and modernized Russia's military, administration, schools, and courts. At the same time, he encouraged entrepreneurs to expand Russia's railways. By the end of his reign, Russia boasted 14,544 miles (23,406 kilometers) of track and more factories to produce engines, cars, and rails. But the generous contracts he awarded to railway firms were enormously expensive (railway costs were one factor behind Russia's sale of Alaska to the United States in 1867), while lax oversight and the state's guarantee of their profits discouraged cost effectiveness; private railroads owed the state over 1 billion rubles by 1880! Consequently, Russia's railways and industry still lagged behind the rest of Europe (as shown in the 1877–1878 Russo-Turkish War, in which railway bottlenecks slowed down troop movements).

To remedy these problems, the state took a more active role in railroads under Alexander III (r. 1881–1894) and Nicholas II (r. 1894–1917), whose reigns saw the climax of Russian railway expansion. In the early 1890s, Finance Minister Sergei Witte (1849–1915) launched an ambitious campaign of rapid industrialization in which railway expansion, especially in Siberia, played a key part.

By the eve of World War I, the Russian empire's railways had 48,600 miles of track, 16,234 freight and 3,823 passenger engines, 475,000 freight and 31,000 passenger cars, and 815,500 railway workers. Railroads annually carried 158 million tons of freight and handled 144 million passenger journeys. Despite these achievements, fuel shortages, equipment failure, transportation bottlenecks, and the deterioration of rolling stock hampered the Russian war effort and played a major role in Russia's generally poor performance in World War I, thereby helping to set the stage for the monarchy's collapse in 1917.

—Robert Montgomery

Bibliography

Haywood, Richard Mowbray. *The Beginnings of Railway Development in Russia in the Reign of Nicholas I, 1835–1842*. Durham, NC: Duke University Press, 1969.

THE TRANS-SIBERIAN RAILROAD

Siberia holds over 5 million square miles (13 million square kilometers) of Russian territory. Rich in minerals, coal, oil, and timber, in the late nineteenth century Siberia lay dangerously close to a powerful Japan. Yet beyond a few minor railroads in western Siberia, only rivers and a rough postal road linked it to the center. Building a railway here was a vital economic, military, and political necessity. Thus, on May 19, 1891, the future Nicholas II ceremonially dug a shovelful of earth in the Pacific port of Vladivostok, officially commencing the Trans-Siberian Railroad's construction.

Stretching 5,500 miles (8,850 kilometers) from the Urals to Vladivostok, the Trans-Siberian was the world's longest railroad. Over 70,000 men had to lay tracks across forests, swamps, mountains, gorges, and rivers (over 50 bridges crossed the Angara River alone) and ram pilings deep into permafrost. By the fall of 1900 most of the line was in operation, but tracks through rugged terrain along Lake Baikal and the Amur River were not completed until 1904 and 1916.

—Robert Montgomery

Haywood, Richard Mowbray. *Russia Enters the Railway Age, 1842–1855*. Boulder, CO, and New York: East European Monographs, 1998. Distributed by Columbia University Press.

Lincoln, W. Bruce. *Conquest of a Continent: Siberia and the Russians*. New York: Random House, 1994.

Marks, Steven G. *Road to Power: The Trans-Siberian Railroad and the Colonization of Asian Russia, 1850–1917*. Ithaca, NY: Cornell University Press, 1991.

Tupper, Harmon. *To the Great Ocean: The Taming of Siberia and the Building of the Trans-Siberian Railway*. Boston: Little, Brown, 1965.

Westwood, J. N. *A History of Russian Railways*. London: Allen and Unwin, 1964.

Railways in North America

Railway construction began in North America at the end of the 1820s, a time when most of the population and industry were concentrated on or near the Atlantic coast. Railways had a dramatic impact on the continent, facilitating the

JAMES J. HILL

Born in Upper Canada, James J. Hill (1838–1916) moved to St. Paul, Minnesota, at the age of 18. After being involved in the steamboat business, the coal business, and banking, he bought the St. Paul and Pacific Railway in 1873, operating it with Donald Smith and George Stephen, both of whom were to later play vital roles in the Canadian Pacific Railway. In 1879 Hill formed the St. Paul, Minneapolis, and Manitoba Railway, which expanded significantly in Minnesota, Manitoba, and Dakota Territory during the 1880s. It was renamed the Great Northern Railway, and Hill extended it across the continent to the Pacific. The Great Northern was the only American transcontinental railway built without public money or land grants and would be the only such railway not to go bankrupt.

—*Wesley Ferris*

settlement of the interior and the expansion of industry and trade. By the early twentieth century, the rail network in the United States had grown to be the largest national rail network in the world, while in Canada railways had played a vital role in the unification of the country.

The first interest in railways in the United States was in those cities that lacked other clear transportation links such as rivers or canal networks to the growing interior. Thus, one of the first railways in the United States, the Baltimore and Ohio, was formed by leading merchants and bankers in Baltimore and had linked to Harpers Ferry and Washington, D.C., by the late 1830s. Railway construction quickly began in other major cities, and by 1840 there were over 2,800 miles of track in 22 of the 26 states then in the Union. Construction continued to accelerate, with a particular focus on connecting to the city of Chicago, which in the 1850s became a central hub of the railway network in the old Northwest. By 1860 there were over 30,000 miles of track, and the fact that less than a third of this mileage was in the South was a decided advantage for the North in the American Civil War (1861–1865).

After the Civil War, a major focus of railway construction was the completion of a

transcontinental railway, linking the Pacific coast with the Atlantic. The Pacific Railway Act (1862) formed the basis of the construction of these lines, which included generous land grants and government loans. The first transcontinental railway was constructed by two companies: the Central Pacific, building eastward from Sacramento, California, and the Union Pacific, building westward from Omaha, Nebraska. The two railways met at Promontory Summit, Utah, in 1869, linking east and west. In the years that followed other transcontinental railways were completed, including the Northern Pacific, the Great Northern, the Southern Pacific, and the Atchison, Topeka, and Santa Fe. Rapid railway expansion continued in the late nineteenth century. By 1870 there were 52,900 miles of track, increasing to 93,200 miles by 1880. Expansion continued until the American rail network reached its maximum mileage of just over 250,000 in 1916.

Railways transformed the United States. They facilitated the settlement of the American West while also contributing to the decline of the Native American peoples west of the Mississippi River. Railways drastically reduced transportation time and were a crucial component of the rapid industrialization of the United States, particularly after the Civil War. The coming of the railway was not, however, without difficulty. Railway companies were often financially hazardous enterprises, and cut-throat competition often existed between different companies serving the same cities. The failure of the banker and railway financier Jay Cooke triggered a national economic crisis that became the Panic of 1873, while the Panic of 1893 resulted in bankruptcy for a quarter of the railways in the United States. Indeed, all but one of the great transcontinental railways had gone bankrupt at some point by the end of the nineteenth century. By 1906, mergers and acquisitions, particularly of bankrupt railways, led to a situation in which two-thirds of the American rail network belonged to seven groups. Railway workers also began to organize in the late nineteenth century, and management-labor confrontations such as the Railroad Strike of 1877 increased. Many farmers who lived in the

American West criticized the rates charged by railways, and their discontent played a leading part in the rise of the Grange movement. Such criticisms also resulted in the creation of the Interstate Commerce Commission in 1887 to regulate railways, which were also often a target for antitrust legislation.

The first railway in Canada, the Champlain and St. Lawrence Railway, was completed outside Montreal in 1836, but significant railway growth did not begin until the 1850s. Railway construction rapidly escalated through the 1850s in Upper and Lower Canada, including the completion of the Grand Trunk Railway. Railways were to play a critical role in the political unification of Canada. New Brunswick and Nova Scotia were encouraged to join the Confederation in 1867 with the promise of a railway, eventually the Intercolonial Railway, linking them to Ontario and Quebec. British Columbia was promised a transcontinental railway in 1871 as part of its decision to join Canada. After several fitful starts and the Pacific Scandal of 1873, which saw the collapse of the Conservative government, the Canadian Pacific Railway began construction in 1881 and was completed by 1885. The Canadian Pacific opened up the Canadian West to large-scale migration and became one of the largest and most influential companies in the country. Later efforts at transcontinental railways in Canada were undertaken by the Canadian Northern and Grand Trunk Pacific railways, but financial difficulties caused by World War I forced their acquisition by the Canadian government and merger into the Canadian National Railway in 1923.

—Wesley Ferris

Bibliography

- Berton, Pierre. *The Impossible Railway: The Building of the Canadian Pacific*. New York: Knopf, 1972.
- Gordon, Sarah H. *Passage to Union: How the Railroads Transformed American Life, 1829–1929*. Chicago: Ivan R. Dee, 1996.
- Martin, Albro. *James J. Hill and the Opening of the Northwest*. New York: Oxford University Press, 1976.
- Stover, John F. *American Railroads*. Chicago: University of Chicago Press, 1961.

Railways in Latin America

The first railroad in Latin America was built in Cuba in 1837. Railroad development began in South America with the first railroad line in Chile in 1852. The Panama Railroad, financed by North Americans led by William Henry Aspinwall (1807–1875), the founder and president of the Pacific Mail Steamship Company, was completed in 1855, linking the Atlantic and Pacific oceans across the Isthmus of Panama. Railroad construction was initially hampered by chronic political instability and limited capital. By 1914, however, Latin America had approximately 51,726 miles of railways, with most concentrated in four nations: Argentina, with 19,796 miles; Mexico, with 15,907 miles; Brazil, with 15,370 miles; and Chile, with 5,013 miles. Colombia and Venezuela had only just over 600 miles of track, a major impediment to economic growth. In the Caribbean region, Cuba had the largest rail network, with 2,331 miles, while in Central America, Guatemala had the largest network, with 613 miles.

Railroad expansion had its most profound impact on the open pampas of Argentina. Using British capital, lines spread out from Buenos Aires into the hinterland. As was also the practice in the United States in the same era, the Argentine government helped ensure profitability by granting the railroads lands along the roadbeds. By 1880 Argentina had just over 6,000 miles of track, an increase from 24 miles in 1860. In 1876 Argentine beef began to be shipped to Europe aboard refrigerated cargo vessels, and meatpacking soon became a booming industry. Argentina became an economic colony of Britain and, to a lesser extent, France, providing meat, grain, and leather in exchange for manufactured goods. But Argentina witnessed a growth rate of 5 percent a year from the 1870s to 1914, to which the railroad made a major contribution. Only in 1948 did Argentina purchase its railway system from its British and French owners, at a price of \$600 million.

Mexico was another country in which railroads played a significant economic role. Plans to introduce railroads began in the 1830s, when the government granted a concession to build a

➤ RAILROAD CONSTRUCTION IN LATIN AMERICA—RISKS AND CHALLENGES

Besides the usual financial risks of building railroads in Latin America in the late nineteenth century, terrain and climate often presented unique challenges. The mortality rate for workers was high. In building the 50 miles (80 kilometers) of the Panama Railroad in the 1850s, for example, it is estimated that over 6,000 workers died, mostly from yellow fever and cholera. Supposedly some of the corpses were preserved and sold by the Panama Railway company to medical schools and research hospitals, and the income was used to pay for the company's hospital, where workers

were treated. Seven thousand workers died constructing the Central Railroad in the Peruvian Andes, where altitudes rose 15,000 feet (4,572 meters) in 78 miles (126 kilometers), requiring endless V-shaped switchbacks to keep grades to a manageable 4 percent. On the Arequipa-Mollendo line in Peru, engineers had to construct an 85-mile (137-kilometer) pipeline just to bring the water needed for the locomotive steam engines down to Mollendo on the waterless desert coast.

—Timothy Neeno

line between Mexico City and Veracruz on the Gulf of Mexico. Political instability and lack of capital, however, delayed the beginning of work on the project until 1864, when under the rule of Emperor Maximilian the Imperial Mexican Railway Company began construction. After a decade, in 1873, the Veracruz-to-Mexico City line was inaugurated as part of a plan to build a railway from Veracruz through Mexico City and then to the Pacific coast. President Sebastián Lerdo de Tejada and his successor Porfirio Díaz both strongly supported railway construction, which they encouraged through land concessions and government subsidies. During the long period of relative political stability under Díaz, American, French, and mainly British investors provided capital for railway projects. Railroads fueled the development of northern Mexico, allowing the development of copper, zinc, and lead mines. Silver exports jumped by 150 percent between 1876 and 1910, during which time Mexico maintained an annual growth rate of 8 percent.

In Brazil the first railroad line was constructed in 1854 from Rio de Janeiro to the imperial mountain resort of Petropolis, a distance of approximately 40 miles. But it was coffee and sugar plantations that encouraged the flow of British capital. In 1874 Brazil had just 800 miles of track. By 1889 it had 6,000 miles of track, linking 14 out of 20 provinces. By World War I

there were 16,000 miles of railroads. Development remained uneven. More than half the mileage was in the three southeastern states of São Paulo, Minas Gerais, and Rio de Janeiro. The São Paulo to Santos line was wildly profitable due to its monopoly on transport from the main coffee plantations. It yielded annual dividends of 50 percent on a regular basis. By 1910 Brazil was producing 77 percent of the world's coffee.

In Brazil in particular but also in many other Latin American countries, railroad development centered on the movement of crops and raw materials from interior regions to coastal cities for export. Hence, railroads tended to reinforce the region's dependence on export specialization rather than encourage diversification. There is no question, however, that railroads contributed to overall economic growth. Towns and villages sprang up along rail lines. Railroad construction and development fed the growth of a skilled labor force and an educated middle class. Workers in once-isolated rural areas could more easily seek jobs in cities. At the same time, corporate-government connections led to corruption, and foreign ownership of the rails led to increased economic dependency.

—Timothy Neeno

Bibliography

Bulmer-Thomas, Victor. *The Economic History of Latin America since Independence*. Cambridge: Cambridge University Press, 2003.

Halsey, Frederic Magie. *Railway Expansion in Latin America: Descriptive and Narrative History of the Railroad Systems of Argentina, Peru, Venezuela, Brazil, Chile, Bolivia*. New York: Mossy Book Co., 1916.

Summerhill, William R. *Order against Progress: Government, Foreign Investment, and Railroads in Brazil, 1854–1913*. Stanford, CA: Stanford University Press, 2003.

New Ships for Ocean Travel

During the two centuries before the Industrial Revolution, ocean transport had been carried on by wooden sailing ships that usually had a length of 100 feet or less and rarely exceeded 200 feet. They carried approximately 100 tons of cargo and had crews of 20 to 30 men. Ownership of these ships usually was divided into fractional shares: one-half, one-quarter, one-sixteenth, and so on. These shares were usually owned by individual merchants or partnerships of merchants, with a minority share of ownership frequently held by the ship's captain and officers. Most of the cargo space was devoted to the merchant-owners' goods, and any unused space was rented out to other merchants. Ships sailed when their holds were filled, with no scheduled arrival or departure dates and few set routes.

Most ocean transport was concentrated in the North Atlantic, either between European coastal nations or between Europe and the American colonies. European nations also carried on a smaller amount of waterborne trade with Africa, the Middle East, and Asia. Non-European empires and states had few seafaring vessels, mostly concentrated in the coastal states bordering the Indian Ocean.

The first technological innovation of water transport resulting from the Industrial Revolution was the adaptation of steam engines for propulsion. Initially, steamboats ran only on the inland waters of rivers, lakes, and canals. By the 1820s and 1830s, however, steamships were beginning to cross the Atlantic. Transatlantic voyages of sailing ships took between three weeks and three months, depending on winds and weather. Coal-burning steamships

could make the voyage in two weeks. Further advances in steam-engine technology and the adoption of the screw propeller in place of wooden paddles increased steamships' speed and shortened the crossing time by the late 1800s to less than a week.

During the mid-1800s, advances in metallurgy led to the replacement of ships' wooden hulls with iron and later steel. Metal was more expensive than wood and required more energy-intensive methods of preparation, but metal ships were more durable and safer. Metal ship construction also led to the construction of much larger ships. The largest possible wooden ship was 300 feet in length, as a result of structural weaknesses caused by the pounding of waves. Ships constructed of iron and steel, however, could withstand the impact of waves, so there was no structural limit upon their size. By the late 1800s, the largest metal steamships were nearly 1,000 feet (305 meters) long.

The Industrial Revolution also fostered a new type of business organization, the shipping line. The increased costs of constructing and

➤ CUNARD SHIPPING LINE

In 1840 Samuel Cunard (1787–1865) launched the *R.M.S. Britannica* from Glasgow, Scotland, beginning the Cunard shipping line. The *Britannica*, primarily a ship for carrying mail between Liverpool and Halifax, Nova Scotia, was a hybrid of sail and steam like most of the Cunard ships built until the 1890s. The ship's success was followed by other Cunard ships, including the *Caledonia* (1840–1851), the *Hibernia* (1843–1868), the *Persia* (1856–1872), the *Russia* (1867–1902), and many more that grew in luxury to appeal to wealthy travelers. Many of these ships also carried cargo as well as immigrants (from 1860–1900), and as British-owned ships were pressed into wartime service as troop transports. In 1893 the *Campania* (1893–1918) and the *Lucania* (1893–1909) were launched. These two luxury liners were “wonder ships.” They were the first of the Cunard ocean liners to be screw-propelled without any sails, crossing the Atlantic in six to seven days.

—Jack Waskey

running steamships were beyond the capacity of any single merchant or partnership. This led to the creation of corporations that specialized in owning and operating steamships. The competitive advantage of providing frequent service caused these firms to acquire multiple steamships, allowing several departures each week for major seaports. This increased the shipping lines' need for capital investment and eventually led to the consolidation of most of the industry into a small number of large firms.

Most of the large shipping lines were British and had started operations during the 1830s and 1840s. Samuel Cunard pioneered steamer service between Britain, Canada, and the United States, and his Cunard Line soon dominated North Atlantic routes. Its major British competitor was the White Star Line, owner of the *Titanic*. The Peninsular and Orient Navigation Company (P&O) became a major line on routes to the Middle East, Asia, and Australia. Most other industrial nations soon developed major shipping lines, frequently using subsidies for carrying the mail and other forms of government assistance. France had *Compagnie Generale Transatlantique* (also known as the French Line), the Netherlands had the Holland America Line, and Germany had the Hamburg America Line. The latter had the largest number of ships (126) in 1910.

The United States was the only industrial nation without a major shipping line. High labor costs and other factors led the nation's investors and entrepreneurs interested in transportation to focus upon railroad companies and continental land development rather than international shipping. U.S. shipping lines either focused upon the nation's coastal trade, which was limited by law to U.S. ships manned by U.S. crews, or were adjuncts of larger corporations such as the United Fruit Company.

The Japanese government gave a high priority to the development of steamships and shipping lines after the Meiji Restoration. The government fostered the consolidation of smaller lines into the Japan Mail Steamship Company in 1885. This line soon expanded its operations to seaports in India and then to Europe and the United States in the 1890s.

The development of metal steamships resulted in a steady decline in the cost of ocean shipping and an accompanying growth in the volume of waterborne international trade. By the end of the century, the annual volume of international trade (most of which was carried by ships) was nearly twenty times greater than at the beginning of the century. This in turn facilitated the growth of factories and other aspects of industrialization in Britain, northwestern Europe, and North America by bringing raw materials to industrialized nations and taking manufactured products to less developed regions.

In addition to their economic impact, advances in ocean transport played a key role in many other significant developments in the nineteenth century. They include late-nineteenth-century imperialism, large-scale migrations, military planning, the spread of diseases, and increasing cultural interaction among the world's peoples.

—Stephen G. Marshall

Bibliography

- Boyce, Gordon. *Information, Mediation and Institutional Development: The Rise of Large-Scale Enterprise in British Shipping, 1870–1919*. Manchester, UK: Manchester University Press, 1995.
- Fox, Stephen. *Transatlantic: Samuel Cunard, Isambard Brunel, and the Great Atlantic Steamships*. New York: Harper, 2004.
- Hugill, Peter J. *World Trade since 1431: Geography, Technology, and Capitalism*. Baltimore: Johns Hopkins University Press, 1995.
- Marshall, Stephen G. "Ocean Transportation." In *Encyclopedia of the Age of the Industrial Revolution, 1700–1920*, edited by Christine Rider. Westport, CT: Greenwood Press, 2007.
- O'Rourke, Kevin H., and Jeffrey G. Williamson. *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*. Cambridge, MA: MIT Press, 2001.
- Starkey, David J., and Gelina Harlaftis, eds. *Global Markets: The Internationalization of the Sea Transport Industries since 1850*. St. John's, NF: International Economic Maritime History Association, 1998.
- Sugiyama, Shinya. *Japan's Industrialization in the World Economy, 1859–1899: Export Trade and Overseas Competition*. Atlantic Highlands, NJ: Athlone Press, 1988.

Canal Building in Asia

The nineteenth century saw significant canal building projects in Asia as colonial powers attempted to increase agricultural productivity and exploit the ability of canals to transport goods. Large-scale canal building was not a new phenomenon in Asia. The oldest sections of China's Grand Canal, which today links Hangzhou and Beijing, date back to the fifth century BCE; the Ling Qu Canal, which links the Xang and Lijiang rivers, was begun in the third century BCE. In addition, irrigation canal works were widely used by farmers throughout Asia long before 1750. Nineteenth-century canal projects, however, were notable for their scale, their connections to colonialism, and their use of technical knowledge developed during Europe's eighteenth-century canal-building boom.

In 1750 China's Grand Canal was Asia's most significant canal, connecting China's agricultural south with its northern cities. The canal ran roughly north-south and connected China's major rivers, which tend to run west to east. In 1793 George Macartney, the British envoy sent to China to negotiate a new trade treaty with the Qianlong emperor in Beijing, spent 72 days traveling the 1,096-mile length of the canal, some sections of which were already 2,000 years old. However, the canal was in decline despite concerted government efforts to maintain it. Because of problems of erosion and siltation around the region of the Yellow River, the canal became unusable for large boats; some sections were completely impassable. These problems also caused damage to the canal's infrastructure, such as dykes. In 1855 the Yellow River completed one of its periodic shifts in course, abandoning its previous delta and connections with the Grand Canal. From 1878 food traveled by sea rather than the Grand Canal, and in 1899, 8.4 miles of the canal south of the Yangtze was dry for a period of four months. Thus, in China a significant canal system was ruined, and goods that had been transported by inland waterway shifted to sea transport.

Elsewhere in Asia increasing contact with Europe led to increased canal building. In Sri Lanka the Dutch East India Company completed

CHINA'S GRAND CANAL

The Grand Canal of China was well established by the time George Earl of Macartney spent 72 days traveling down it in 1793. Macartney was returning from an unsuccessful diplomatic mission to Beijing, and his party consisted of 40 vessels and about 1,000 people.

While the length of the canal (1,096 miles, or 1,764 kilometers) and its age were impressive, its technology was not. Locks consisted of granite-sided sections with wooden planks placed across the canal to maintain a difference in water level. When boats needed to pass, the planks were removed; the release of water swept the boats downstream. The uncontrolled rush of water was difficult to navigate, and vessels were likely to be damaged. Similarly, slipways where the canal joined rivers made navigation difficult. Bridges across the canal were low and had steps at either end. Boats had to lower their masts to pass beneath, and wheeled transport could not cross above. Macartney's boats were powered by men walking along a path beside the canal. Furthermore, Macartney's voyage was troubled by low water levels: ongoing siltation continued to reduce the usefulness of the Grand Canal.

—Claire Brennan

significant canal construction near the west coast of the island by 1795. Earlier indigenous irrigation work was extended and improved upon by the Dutch. Once they overcame difficulties of dealing with the infiltration of seawater, the new canal structures provided both irrigation and transport. Later the British maintained the system established by the Dutch and extended the system of canals around the capital, Colombo.

In India and Indochina, European colonial powers undertook various irrigation projects. French colonial rule in Vietnam led to the planning and construction of several canal projects after 1894. In Java the Dutch extended and improved preexisting indigenous irrigation networks with the introduction of the Cultivation System in the 1830s. But irrigation works developed haphazardly until the General Irrigation

Plan for Java was completed in 1890. This plan included 19 different projects that would cover close to 990,000 acres, most of which were complete by 1920.

Neither the French nor the Dutch could equal the British in terms of canal building. During the nineteenth century British army engineers constructed the largest artificial irrigation system in the world at the time in northern India. Between 1817 and 1901, 3,407 miles of main channel and 18,195 miles of smaller channels were constructed, first by the British army and then by the Public Works Department established in 1854. The main channels of British irrigation works also could serve as waterways for boats, but the smaller channels only distributed water to rice paddies and other agricultural land. The Upper Ganga irrigation project was completed between 1836 and 1854, while the over 3.7 million-acre Indus Valley irrigation project was completed in 1849. There were also large-scale developments in other river deltas such as the Krishna, Godavari, and Cauvery from the middle of the nineteenth century onward. This period of canal building was not without its problems. Engineers often failed to design drainage systems for irrigation water, and this in turn caused environmental problems in irrigated areas such as waterlogging and salination.

Some European and American canal-building technology was adopted by Asian engineers. In Thailand, which had canals for centuries, Thai engineers designed and built European-style locks from 1890 onward. The canalization of the Young Delta of the Chao Phraya from the middle of the nineteenth century created a new transport route, new arable land, and a reliable water supply. As a result of such irrigation projects, Thailand's rice exports increased from 120,000 tons in 1870 to 1.5 million tons in 1929. In Japan, canals were built following North American models. Sakuro Tanabe, engineer of the Biwako canal, was inspired by a visit to the United States, particularly to a hydroelectric plant in Aspen, Colorado. The Biwako canal was built to supply Kyoto with water from Lake Biwa and also acted as a means of transport and electricity generation. The canal, completed in 1894, is 6.8 miles in length and includes a roughly 22-mile change in height.

In 1750 Asia already had a significant number of canals, but further networks were developed as changes in colonial policy led to extensive canal works in some parts of Asia during the late nineteenth century. As a result of European colonial involvement some existing canal systems were extended, and techniques for water control and canal building were exported from Europe and North America to Asia. However, irrigation tended to predominate over transportation in the building of Asian canals, and the Grand Canal of China stagnated rather than prospered.

—Claire Brennan

Bibliography

- Kaida, Yoshihiro. "Irrigation and Waterscapes in the Rice Land of Tropical Asia." *Southeast Asian Studies* 28(4) (1991): 124–135.
- Leonard, Jane Kate. *Controlling from Afar: The Daoguang Emperor's Management of the Grand Canal Crisis, 1824–1826*. Ann Arbor: Center for Chinese Studies, University of Michigan, 1996.
- Murray, Martin J. *The Development of Capitalism in Colonial Indochina (1870–1940)*. Berkeley: University of California Press, 1980.
- Ravesteijn, Wim. "Controlling Water, Controlling People: Irrigation Engineering and State Formation in the Dutch East Indies." *Itinerario* 31(1) (2007): 89–118.
- Stone, Ian. *Canal Irrigation in British India: Perspectives on Technological Change*. Cambridge: Cambridge University Press, 1984.

Canal Building in Europe

The years after 1750 saw a significant burst of canal building, first in Britain and then across Europe, as Dutch engineering techniques spread and industrialization created new demand for cheap and reliable ways to move raw materials and finished products. For centuries Europeans had been altering the course of rivers to aid transport. Such alterations usually involved straightening the course of a river or deepening it to help the passage of boats. The process was known as canalization, and the waterways created were often referred to as navigations.

The completion of the Bridgewater Canal, designed and constructed to carry coal from

the estate of the third Earl of Bridgewater to the industrial center of Manchester (completed in 1761), marked the beginning of a new phase of canal construction involving completely artificial waterways. This canal defied a river's need to flow from source to ocean, lake, or another stream. It did this by staying at the same height for all its length, including the use of an aqueduct to cross nearly 39.3 feet above the Irwell River and tunneling to carry it directly into the duke's coal mine. It also included a tow path—a canal boat was typically powered by a horse walking alongside the canal and was pushed through tunnels by men lying on their backs on the boat and “walking” along the tunnel walls, a process called “legging.”

The success of the Bridgewater Canal in moving coal directly from mine to city inspired a boom in the building of privately financed canals that lasted until 1790. To reduce the cost of construction, these canals were narrow and no longer than absolutely necessary to transport the products of mines to market. They were owned and built by landowners with mineral resources on their estates, and they supplied the mills and factories of the Industrial Revolution with their raw materials in the form of coal and minerals. By 1790 a system of small privately built canals covered much of Britain, and the so-called Silver Cross of natural and artificial waterways linked the mouths of the four large rivers—the Mersey, Humber, Thames, and Severn—that carried shipping deep into southern Britain. A second canal-building boom overlapped the first, starting in 1789 and ending in 1798, as larger canal works were undertaken by companies financed by the public sale of shares. In 1760 England and Wales had contained 1,483.2 miles of inland waterways (mostly rivers). By 1790 there were 2,310.2 miles, and by 1810 there were 3,999.7 miles. Early canals were extremely energy-efficient and easier to build and maintain than networks of high-quality roads, but canal transport was slow, and in Britain the coming of the railway with its promise of cheap and speedy inland transport ended the era of canal-building booms. Ship canals were still built to allow large oceangoing vessels to reach inland ports, but internal transportation came to rely on roads and rail rather than water.

➤ KEEPING WATER IN CANALS

Canals need to contain water to be useful, but because they are unnatural waterways, water tends to seep away into the surrounding soil, particularly where canals lie above ground level.

In Britain in the 1700s the most common way to watertight a canal was puddling, lining the canal with clay that was then trampled by livestock, forming a watertight barrier. This method was also used with aqueducts, requiring them to hold 3–4 feet of clay as well as water. As early as 1796 iron was beginning to be used in the construction of canal channels and aqueducts, and thus seemingly shallower aqueducts were able to contain a greater depth of water, as the iron was watertight without clay.

In France, canals and aqueducts had continued to be constructed using hydraulic cement, which was able to harden while underwater. This material had been widely used by Roman engineers, but elsewhere in Europe its use had been lost. The development of Portland cement in 1824 made concrete widely available. By the early twentieth century concrete was used to waterproof canal channels, and reinforced concrete had become the standard material for constructing canal aqueducts.

—*Claire Brennan*

The canal-building boom had allowed British engineers to develop expertise in moving ships from one level of water to another and develop improved locks, sluices, weirs, and lifts. This expertise was then exported to other regions of Europe (and North America) as ship canals were built there. France, Spain, Prussia, and Russia all created state-controlled canal networks, although the French Revolution and its aftermath delayed canal building in France. Sweden, Denmark, Finland, Bavaria, and the Netherlands all participated in the new European enthusiasm for canal building to a lesser degree. In Europe, the limitations of the early narrow British waterways were recognized, and continental canals were wider than those of Britain because they provided secure inland routes that allowed seagoing vessels to avoid hostile navies and bad weather. For example, the Kiel Canal in Germany, completed in 1895, carried warships from the Baltic Sea to the

North Sea. The significance of European ship canals for oceangoing vessels protected them from direct competition with railways. The connection of canal building to the Industrial Revolution resulted in new economic opportunities and social change as a result of those opportunities. The new network of canals forged connections between cities and their hinterlands and between ocean basins and provided pathways for ocean shipping to reach inland ports.

—*Claire Brennan*

Bibliography

- Boughey, Joseph. *Hadfield's British Canals*. 8th ed. Stroud, Gloucestershire, UK: Alan Sutton, 1994.
- Hadfield, Charles. *World Canals: Inland Navigation Past and Present*. New York: Facts on File, 1986.
- Mukerji, Chandra. "Tacit Knowledge and Classical Technique in Seventeenth-Century France: Hydraulic Cement as a Living Practice among Masons and Military Engineers." *Technology and Culture* 47 (2006): 713–733.
- Trinder, Barrie. *The Making of the Industrial Landscape*. London: Dent, 1982.

North American Canals of the 1800s

The original purpose for canal building was to make water transport of freight possible in areas where land transport was difficult and slow. For example, in the late eighteenth century, the transport of goods weighing 1.5 tons from Philadelphia to Pittsburgh (350 miles) could take up to a month. However, by linking natural waterways—the St. Lawrence, Hudson, Ohio, Illinois, and Mississippi rivers and the Great Lakes with canals, the movement of freight was more predictable, and faster; it made possible the economic development of previously inaccessible places in the Midwest. In 1845, before Chicago was connected with the Illinois River (a tributary of the Mississippi) by canal, it was a small town with fewer than 200 inhabitants but grew rapidly after the canal was completed. New York City was also a beneficiary of improved trading links because the Erie Canal, completed in 1825, linked Buffalo on Lake Erie with Albany on the Hudson River, allowing goods from Midwest farms to be transported cheaply and efficiently to New York.

Since the time of the early explorers, water routes were sought to the sea or for further trading opportunities. The St. Lawrence River caused difficulties for travelers because of blockages in the form of rapids and waterfalls. To deal with this problem, the Lachine Canal was completed in 1824 in the city of Montreal, Canada to allow ships to travel from the Atlantic to the Great Lakes. While the canal is just under 9 miles long, it rises a total of 50 feet. Other canals were built to cope with the different obstacles. New developments included the Soulanges Canal (1899), Beauharnois Canal (1845), Cornwall Canal (1842), and finally the Rideau Canal (1832) between Ottawa and Kingston. Further west the Welland Canal was constructed to provide a route to avoid Niagara Falls. Built between 1824 and 1833, it is 27 miles long and rises 326 feet by means of locks.

Financing for canal building was generated from state government, the federal government, and private investors. The Erie Canal was built with \$7 million from the state of New York. The Chesapeake and Cumberland Canal, which linked the waters of the Delaware River with those of Chesapeake Bay when it opened in 1829, was financed by the states of Pennsylvania (\$100,000), Maryland (\$50,000), Delaware (\$25,000), the U.S. government (\$450,000), and the remainder from private investors.

When facing challenging terrain and the demand for more efficient transportation, the availability of funding encouraged engineers to be innovative. Most notable was the Sandy and Beaver Canal in Ohio. Privately financed by the Sandy and Beaver Canal Company, and completed in 1848, it operated for only four years, but is notable for its canal engineering, including the Big Tunnel, the longest canal tunnel in America—1,060 yards blasted out of solid rock. It also has another tunnel through hard shale and coal. Another engineering marvel is the connection between Philadelphia and Pittsburgh, built in response to New York's Erie Canal, which was weakening Philadelphia's standing as the leading U.S. port. In eight years, Pennsylvania state canals were combined with a 36-mile portage railroad using steam-operated inclines, which resulted in the opening of 394 miles of Main Line in 1834.

While canals were often built for access and trading routes, they were also built to harness vital water supplies. The building of the Chicago Sanitary and Ship Canal in 1887 was motivated by a health crisis from polluted waters in Lake Michigan. Chicago's chief engineer decided to cut through a ridge between the lake and the Mississippi River; a canal 28 miles long was built that reversed the flow of the Chicago River. By controlling the flow with locks, Chicago gained control of the draining wastes from its northern suburban communities.

By 1850 the burgeoning canal network in North America faced competition from the railway, and the boom in canal construction ended. The New York State Barge Canal, which replaced the Erie Canal in 1918, was the one exception. While some canals have gained a new life, there are those that suffered a quick demise. The Alexandria Canal linked Alexandria, Virginia and Washington D.C. when it opened in 1843, but its operations came to an end in 1886. An example of new life for a canal is provided by the Whitewater Canal, which runs from Lawrenceburg, Indiana on the Ohio River upstream to Hagerstown, Indiana, 76 miles in length. It was closed and sold to a railroad in 1866, but there is a remaining small section now restored for boat trips. The recreational use of canals is in evidence elsewhere as well. The Dismal Swamp Canal, built between 1793 and 1805, joined the Elizabeth River near Norfolk, Virginia to the Pasquotank River in North Carolina. It originally took logs from the swamp, but is now a recreational waterway for viewing wildlife.

Official recognition of the role that canals have played in the history of the infrastructure of North America has been given to canals such as the Delaware Canal, which was part of the canal system linking Pittsburgh and Philadelphia, running 60 miles in length between Bristol and Easton, Pennsylvania. It was completed in 1832, and with a fall of 165 feet, it required 23 locks. The canal was used to transport coal from the northeast to the cities in the east, with over a million tons of coal a year moved on this route prior to the Civil War. Traffic declined and the last paying boat was in 1931. However, the canal was designated as a National Historic Landmark

in 1978, resulting in the best preserved towpath canal in America.

Recreational waterways, like the Trent-Severn Waterway, is a river-lake-canal route from Trenton, Lake Ontario to Port Severn, Georgian Bay, Lake Huron. While it was started in 1833, and built to carry lumber, settlers and freight crossed central Ontario with 36 conventional locks, two staircase or flight locks, two hydraulic lifts or lift locks, and a marine railway. It is now a 240-mile cruising route that has grown in popularity after an enthusiast's society was started in 1982.

—Julia Fallon

Bibliography

- Edwards-May, D. *North American Waterways and Map Index*. Seyssinet, France: Euromapping, 2005.
- Fallon, Julia. "North American and Central American Canals." In *Seas and Waterways of the World: An Encyclopedia of History, Uses, and Ideas*, edited by John Zumerchik and Steven L. Danver. Santa Barbara, CA: ABC-CLIO, 2009.
- Hadfield, C. *World Canals*. London: David and Charles, 1986.
- Perry, K., and T. Cash. *Canals*. London: A & C Black Publishers, 1990.
- Pick, C. *Canals and Waterways*. London: MacDonald Educational, 1981.
- Vince, J. *River and Canal Transport*. Vol. 7 of *Approaches to Environmental Studies*. London: Blandford Press, 1970.

Canal Building—The Suez Canal

The French invasion of Egypt in 1798 and the increase in European-Asian trade in the nineteenth century sparked new interest in a canal linking the Mediterranean Sea and the Indian Ocean by way of the Red Sea. The route followed by the Suez Canal was surveyed by the French during Napoleon's invasion of Egypt (1798–1801). However, the survey actually discouraged plans for the canal because it overestimated the difference in sea level between the Red Sea and the Mediterranean, thereby making the canal appear to be a greater engineering challenge than it was. French interest in the region and the possibility of a canal remained,

➤ FERDINAND DE LESSEPS

Ferdinand de Lesseps was born in 1805 to a privileged French family. He was well educated, briefly studying law, but had no training in engineering. His early career was as a diplomat, and it was as a French diplomat quarantined in Alexandria in 1832 that he first read a memorandum, written for Napoleon, that discussed linking the Red Sea with the Mediterranean by canal. When Lesseps's diplomatic career ended (due to the volatility of French politics), he began work on creating the Suez Canal.

After spending decades building the Suez Canal, Lesseps sought another grand scheme and found it in a proposal for a canal across the Panamanian isthmus. Lesseps died in 1894 after the failure of his Panama Canal Company had severely damaged his reputation and that of his eldest son. After his death his widow and dependent children (he had married a second time late in life, and his last child was born in 1885) were given financial support by Suez Canal shareholders, as Lesseps had not become wealthy from his canal ventures.

—*Claire Brennan*

sultan in 1866. Even before that confirmation Lesseps had founded La Compagnie Universelle du Canal Maritime de Suez (Universal Company of the Maritime Suez Canal) in 1858 to build the canal. This was a private company that would build the canal, operate it, and then transfer ownership to the government of Egypt after 99 years. The proposed route made use of natural lakes in the region rather than pursuing the shortest possible course between the seas. While the lakes required deepening and stabilizing, their utilization reduced the work necessary to produce the canal.

Work on the canal began in 1859. It did not present insurmountable technical difficulties, but progress on the canal was slowed by political wrangling between Britain and France and between the Ottoman government and Egypt. Britain had reservations about building the canal because it would be under the control of a French company. The rulers of the Ottoman empire were constrained by British interests and by concerns that a successful and profitable canal would encourage Egyptian independence. These tensions made it difficult for the canal company to obtain Ottoman permission for the work to continue, raise funds in Europe, and obtain the necessary local labor. All this resulted in significant construction delays.

Working in a desert also presented some difficulties. It was necessary to dig another canal running eastward from the Nile near Cairo to the south end of the Suez Canal. Complete by 1862, this canal, known as the Sweetwater Canal, was dug parallel to the course of the Suez Canal, ran for half the length of the Suez Canal itself, and was navigable by small boats. It provided water to the workers, a means of moving materials to the work site, and a means of irrigating previously arid land, creating new wealth in the desert even before the completion of the ship canal. The canal also required the construction of a seaport. The first work undertaken on the canal was at the site of the future Port Said. As the port was built on shifting sand, 530,000 cubic feet of stone was brought from 150 miles west to build two stone jetties to stabilize the coastline; later 327,000 cubic yards of locally made concrete was used to stabilize the harbor floor.

as indicated by the 1833–1835 visit by the social reformer Prosper Enfantin and other members of the Saint-Simonian movement who sought to promote French science and industry. Enfantin and his followers investigated the possibility of building a canal and commissioned further engineering studies that indicated that the sea-level difference might not be as great as had been predicted. However, they failed to interest the Egyptian ruler, Muhammad Ali. When a plague epidemic struck Cairo they returned to France, where they continued to seek support for the construction of the canal.

The construction of the Suez Canal was finally undertaken by the Frenchman Ferdinand de Lesseps, a childhood friend of the Egyptian viceroy Said Pasha. Using new engineering studies, Lesseps was able to convince the viceroy of the viability of constructing the canal. In 1854 Said granted Lesseps the concession necessary to dig a canal across Egypt, and the concession was confirmed by the decree of the Ottoman

Until 1864 work on the canal was carried out by conscripted Egyptian labor, with up to 20,000 men, mostly peasants, each working for a month at the canal. Under diplomatic pressure from Great Britain, the use of conscripted labor was abandoned, and large steam-driven machines for dredging and digging were introduced. In addition, the French engineer overseeing the work, Alexandre Lavalley, invented two types of chutes to deposit dredgings directly on shore, doing away with the need for barges. The dredging machines were expensive, requiring £20,000 worth of coal per month, but between 1865 and 1869, 78.5 million cubic yards of material was dug from the course of the canal. Before the steam-driven machinery was introduced, between 1861 and 1864 only 20 million cubic yards had been dug by the Egyptian workers. The finished canal was 101 miles long, 32 feet in depth, and a minimum of 144 feet wide. Ships up to a maximum of 5,000 tons could use the canal.

The French empress Eugénie officially opened the canal in 1869 as part of a celebration that cost £1.3 million. Despite British obstruction during the building of the canal, once it was open it became an important route to India. As a result, in 1875 the British government seized the opportunity to buy canal shares held by the financially strapped Egyptian ruler and thus become co-owner of the waterway. The canal was very successful as a shipping route. As steam continued to replace sail, the canal could be used despite the difficult winds of the Red Sea. Although in 1870 only 486 ships, totaling less than 500,000 tons, used the canal, by 1882 the canal was operating at capacity. In 1908, 3,795 ships, with a total weight of more than 19.11 million tons, used the canal to shorten the voyage between Europe and Asia. The popularity of the canal led to the use of electric headlights from 1887 to allow ships to use the canal at night and to the widening of the canal to allow increased traffic.

—Claire Brennan

Bibliography

Haddad, Emily A. "Digging to India: Modernity, Imperialism, and the Suez Canal." *Victorian Studies* 47(3) (2005): 363–396.

Headrick, Daniel R. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. New York: Oxford University Press, 1981.

Kinross, Patrick Balfour. *Between Two Seas: The Creation of the Suez Canal*. London: Murray, 1968.

Canal Building—Panama Canal

One of the two most important artificial waterways in the world, the Panama Canal cuts across the isthmus between North and South America in a series of locks and lakes extending 51 miles, allowing ships to pass between the Atlantic and Pacific Oceans and thereby shortening the voyage by approximately 8,000 nautical miles. Founded in 1879 by Ferdinand de Lesseps, the French *Compagnie Universelle du Canal Interocéanique* commenced excavation of the proposed sea-level channel only to encounter financial, technological, and medical difficulties during construction. On the verge of bankruptcy, owners of the French company offered their shares to the United States in exchange for \$40 million. Negotiations with the Colombians over the long-term rights to the project ended in their rejection of the U.S. offer of \$10 million and an annual payment of \$250,000 in rent, as agreed to in the proposed Hay-Herran Treaty.

President Theodore Roosevelt, anxious to secure U.S. control over the project, supported a Panamanian-led revolution, recognized the fledgling country, and authorized his secretary of state, John Hay, to negotiate the Hay-Bunau-Varilla Treaty, which granted the United States the sole right to control and operate the Canal Zone. Social and political unrest resulted in U.S. intervention in 1908, 1912, 1918, and 1925. In 1936, the United States relinquished the right of intervention by ratifying the Hull-Alfaro Treaty. During World War II, Panama granted U.S. requests for additional defense sites to protect the canal, many of which reverted back to Panama immediately after the conflict but some of which the United States continued to control for decades.

By the 1980s, a disputed election resulted in the imposition of sanctions and the withholding of the annual payment to Panama by President

Ronald Reagan. Continued tensions led to the loss of U.S. life, with a quick retaliation that ended with the capture and extradition of Panama's leader, Manuel Noriega, to Florida, where he was tried and sentenced to prison on drug-trafficking charges. By a treaty signed in 1977, Panama gradually assumed control over the Canal Zone, with the United States relinquishing all control by December 31, 1999.

—Cynthia Northrup

Bibliography

- LaFeber, Walter. *The Panama Canal: The Crises in Historical Perspective*. New York: Oxford University Press, 1979.
- Northrup, Cynthia. "Panama Canal." In *Colonialism: An International Social, Cultural, and Political Encyclopedia*, edited by Melvin E. Page. Santa Barbara, CA: ABC-CLIO, 2003.

Human Flight—From Hot Air Balloons to Kitty Hawk

Humanity has long had a fascination with flight, although the quest for flight involved far more than a contest to see who could build the first airplane. By the Middle Ages, humans had a firm grasp on various technologies that involved flight or manipulating air: sails, kites, helicopter-like toys, and primitive rockets, among others. Concepts for lighter-than-air balloons were developed in the seventeenth century, and balloons themselves appeared in the eighteenth century. During the late eighteenth and early nineteenth centuries, applications for balloons in both war and science appeared in the development of steerable airships. British, German, and French glider experiments in the 1890s provided a foundation for the Wright brothers' triumph in 1903, the first successful controlled, powered, heavier-than-air human flight.

In the second century CE the Chinese discovered that an evacuated eggshell would rise into the air if heated, and they later created miniature globe lanterns made of paper that flew like hot air balloons. The first person to actually fly a test balloon, however, was a young Brazilian-born priest named Bartolomeu de Gusmão, whose flight took place in 1709. The first successful manned balloon flight, which used a hot air balloon designed by the Montgolfier brothers, did

not take place until November 21, 1783. Their balloon reached an altitude of about 500 feet above Paris and managed to cover 5.5 miles in 25 minutes. A balloon invented by Jacques Charles that used hydrogen for buoyancy was flown shortly thereafter on December 1, 1793. Balloons using hydrogen or other lighter-than-air gases had greater lift and could be flown longer than balloons using heated air and soon came to dominate ballooning.

Recognizing the limitations of nonsteerable balloons, many inventors began trying to develop a steerable flying machine. The first engine-powered and controlled balloon, which came to be called a dirigible, was flown by Henri Giffard on September 24, 1852. Giffard flew almost 17 miles from Paris to Trappes, France, and proved that a lighter-than-air aircraft could be steered and controlled. Giffard's craft inspired a Golden Age of Airships, with many types of airships being invented over the next 50 years. An extremely successful type of rigid airship was pioneered by Count von Zeppelin in 1900. The term "zeppelin" eventually came to be applied to all types of rigid airships.

Balloons came to be used for a variety of civilian and military purposes. The first use of a balloon for military purposes was a Montgolfier brothers-designed aerostat (a balloon tethered to the ground) used for aerial reconnaissance by the French at the Battle of Fleurus in 1794. During the late nineteenth century balloons also were used for military purposes in the U.S. Civil War as well as in several British campaigns in Africa.

While successful lighter-than-air flying machines had been tested since the 1790s, it was not until the Wright brothers' efforts that a heavier-than-air flying machine flew successfully. On December 17, 1903, Orville and Wilbur Wright successfully tested their design for a controlled, powered, heavier-than-air aircraft. Over the next two years the brothers refined their invention into the first practical fixed-wing aircraft. The Wrights were able to achieve their breakthrough because of their invention of three axis-control, which allowed an aircraft pilot to steer effectively and maintain equilibrium. This technique has since become a standard feature of modern fixed-wing aircraft.

► DECEMBER 17, 1903, AT KITTY HAWK, NORTH CAROLINA

After several weeks of delays at Kitty Hawk caused by mechanical problems, the Wright brothers finally took to the air on December 17, 1903, making two flights each into a freezing headwind. The first flight of the day, by Orville, lasted only 12 seconds and covered 120 feet. The fourth and final flight of the day, by Wilbur, was the most successful; it covered 852 feet and lasted 59 seconds, achieving a top speed of just under 10 miles per hour at an altitude of about 10 feet. Unfortunately, this turned out to be the last flight for the first successful flying machine; after Wilbur landed, a strong gust of wind rolled the aircraft over and over along the ground, badly damaging it. It was never flown again.

—Andrew Byers



The Wright Brothers' first flight in the Kill Devil Hills near Kitty Hawk, North Carolina on December 17, 1903. Orville Wright is at the controls, while Wilbur stands to the right. (Library of Congress)

The Wrights did not design their first flying machine in isolation. On the contrary, they were aware of the many successful and unsuccessful efforts of other early aviation pioneers in Europe and America. Sir George Cayley, considered the father of modern aviation, produced dozens of glider designs, some as early as 1804, and made the first scientific studies of aerodynamics. Jean-Marie Le Bris made the first powered flight in 1856 in a glider pulled against the wind by a horse. John J. Montgomery later made the first controlled flight in a glider in 1883, as did a number of other aviators around the same time. Clément Ader also designed and built several self-powered but uncontrolled aircraft in the 1890s. The Wright brothers' aircraft was the first well-documented sustained flight in what is now considered an airplane rather than a glider or animal-assisted flying

machine. The Wrights were gifted engineers, although they lacked formal training, and integrated various technologies into their successful design to create the world's first airplane capable of powered, sustained, and controlled flight.

—Andrew Byers

Bibliography

- Crouch, Tom D. *Wings: A History of Aviation from Kites to the Space Age*. New York: Norton, 2003.
- Harrison, James P. *Mastering the Sky: A History of Aviation from Ancient Times to the Present*. New York: Sarpedon, 1996.
- Hellion, Richard P. *Taking Flight: Inventing the Aerial Age from Antiquity through the First World War*. New York: Oxford University Press, 2003.
- Heppenheimer, T. A. *A Brief History of Flight: From Balloons to Mach 3 and Beyond*. New York: Wiley, 2001.

■ Introduction: Technology and Weapons

That the period from 1750 to 1914 saw numerous technological innovations in the design and manufacture of weapons is an understatement. At the onset of World War I in 1914, soldiers were equipped with rifles accu-

rate up to 2.5 miles, 20 times the range of muskets used in the Napoleonic Wars; some soldiers also were trained to use machine guns, capable of firing 400 to 600 small-caliber rounds per minute, numbers that were doubled by war's

end. Artillery crews had weapons that had undergone similar advances, especially after the introduction of recoil mechanisms and lyddite (picric acid) and TNT (trinitrotoluene) as ammunition in the 1890s and early 1900s. The maximum range of cannons and howitzers in the Napoleonic wars was less than 3,280 feet. Siege guns in World War I could fire almost 8 miles, and the freakishly large German Paris Gun, used at the end of the war, could fire a 210-pound shell 25 miles in the air with a range of 80 miles. By the early 1900s, a brigade of 3,000 soldiers could fire more artillery and rifle rounds in a single minute than the entire British army of 60,000 in the daylong Battle of Waterloo in 1815.

Advances in the design and manufacture of firearms, bullets, shells, gunpowder, and artillery played an important part in the history of nineteenth-century warfare, but other technological advances played equally significant roles. Many of the new weapons would have been impractical without the increased availability of cheap steel following the development in the 1850s of the Bessemer process, which allowed for the mass production of steel from molten pig iron. Steel was a key component of the new artillery pieces that began to pour from the factories of European armament makers from the 1870s onward. Steel also was used for armor plating on naval vessels and in the manufacture of armor-penetrating steel-cored bullets.

Advances in food preservation and preparation also had military ramifications. When techniques to produce canned meat, powdered milk, evaporated milk, and margarine were developed in midcentury, such products were quickly adopted by navies and armies. They improved the overall health of soldiers and sailors and made it possible for them to campaign or sail for longer periods without exhausting their provisions. Command and control capability was revolutionized by developments in communications. Until the 1790s all orders and reports were sent by ship or mounted messengers, methods that were both slow and unreliable. The first semaphore system, installed between Lille and Paris (a distance of approximately 120 miles) on orders of the French Legislative Assembly in 1792, consisted of a series of towers 5–10 miles apart

on which attached arms could be manipulated to represent 196 different symbols. Napoleon became an avid supporter of semaphore “telegraphy,” and on his orders semaphore systems were installed between France and cities in Germany, Italy, and the Netherlands to help him rule his empire, receive intelligence, and send orders. The semaphore system lost ground at midcentury to the electric telegraph, which was superior in terms of range and speed. The semaphore was first used in the Crimean War (1853–1856), enabling the French ruler Napoleon III to send orders and advice to his commanders 1,500 miles away. The next advance was the development of the wireless radio. After Guglielmo Marconi transmitted a radio signal across the Atlantic in 1901, the British Royal Navy became his best customer.

Perhaps the greatest changes in military planning and tactics resulted from the use of steam engines for land and sea transportation. European navies in the early nineteenth century, despite changes in ship design and armaments, basically were built according to designs first introduced in the 1500s. Beginning in the 1830s, however, ship design began to change when the first auxiliary steam engines were added to sailing ships. The British *Nemesis*, an iron-hulled naval vessel propelled by sails and two steam engines, was built in Manchester in 1839 and had its baptism of fire in the Opium War in 1841. In January the *Nemesis* defeated a fleet of Chinese war junks in the Pearl River and later contributed to the capture of Guangzhou. In the 1880s sails were abandoned for coal-burning steam engines, and steel replaced iron in ship construction. The era ended with a competition among the major powers over which could build the most formidable battleship. In 1905 the British launched the *Dreadnought*, a gigantic heavily armed steel-armored battleship powered by the latest steam turbine engines. Its design was copied by Germany (1907), Russia and Japan (1909), France (1910), and other powers (by 1914).

Regarding land warfare, the Crimean War was the first nineteenth-century conflict in which railroads played a role. In the winter of 1855 an 8-mile railroad was built between the British-controlled Black Sea city of Balaklava and

the location of the British and allied troops besieging Sevastopol, a heavily fortified Russian naval base. Constructed in less than three weeks at cost by the British railroad construction firm owned by Samuel Morton Peto, the Grand Crimean Central Railway contributed to the fall of Sevastopol in September 1855.

Railroads played a much more important role in the American Civil War. In the war's opening battle, fought at Manassas/Bull Run outside of Washington, D.C., the South won the battle when reinforcements under the command of Brigadier General Joseph E. Johnston arrived by rail from the Shenandoah Valley in western Virginia. Throughout the war the South continued to rely on railroads to move troops from one area to another as needed. In 1862 after Congress passed the Railways and Telegraph Act, the North established the U.S. Military Railroad, which under the command of General Herman Haupt had the authority to take over and run railroads when military needs dictated. Troops were specially trained by both sides for the task of repairing railroad lines damaged in battle or by guerrillas, and during General William T. Sherman's march through Georgia in November–December 1864, troops were ordered to cause irreparable destruction to the region's railroads. Rails were heated red in giant fires of railroad ties and then twisted around trees to make them totally useless and irreparable. When General Ulysses S. Grant began the Richmond-Petersburg Campaign in the summer of 1864, he set up an enormous rail depot at City Point, a town overlooking the James and Appomattox rivers, from which he provisioned his army. Railroads thus played a key role in the events leading to the Southern surrender at Appomattox in April 1865.

In Europe, railroads played an increasingly important role in military thinking, especially for Prussia and, after 1870, the newly united Germany. General Helmuth von Moltke (1800–1891), who served as chief of the Prussian and later German general staff for 30 years, was an avid student of the military possibilities of railroads as early as the 1840s and used them to good effect in the three Prussian victories over Denmark, Austria, and France between 1864 and 1871. As chief of the German general staff,

he devised war plans in which railroads could be utilized to concentrate forces at the start of a war for one decisive battlefield victory or to move troops and supplies to key areas in case of a longer defensive war. With the German rail system under state control, the army had veto power over the construction and modification of lines and required that railroad cars be designed so they could easily be converted to troop or weapons carriers. Railroads played a key role in the complex war plans drawn up by the general staffs of the major European states from the 1890s onward, and according to some historians of World War I, the generals pushed for war in the summer of 1914 before all diplomatic possibilities were exhausted mainly because they feared that any delay would ruin their elaborate plans for mobilization and deployment.

Von Moltke once told Kaiser Wilhelm I, "Build no more fortresses, build railways." Von Moltke also is quoted as saying that "No battle plan survives first contact with the enemy." This was borne out in World War I, in which the fighting on the Western Front turned into a war of attrition, with the two sides dug in behind trenches that stretched from the North Sea to Switzerland. With railway and telegraph lines destroyed by artillery, homing pigeons and trained dogs were employed to carry messages, and millions of horses and mules were used to carry supplies and weapons to the front. Some horses and dogs were fitted with gas masks, and many thousands were treated in veterinary hospitals. Nonetheless, as many as 2 million horses may have died.

—James H. Overfield

Semaphore System (Télégraphique) during the French Revolution

As Revolutionary France struggled against foreign threats, the French government was anxious to establish an efficient nationwide system of communication for political and military purposes. Among various proposals was that of Claude Chappé (1763–1805) who, together with his brothers Abraham, Ignace, and Pierre, spent several years experimenting with aural,

EXPANSION OF SEMAPHORE SYSTEM DURING THE FRENCH REVOLUTION AND THE FIRST EMPIRE

Date of Construction	Connecting Cities	Distance in Miles	Distance in Kilometers	Duration
1794	Paris to Lille	118	190	1794–1847
1794	Paris to Landau/Strasbourg	80	128	1798–1852
1798	Lille to Dunkerque	40	64	1798–1801
1798	Paris to Brest	130	210	1798–1853
1799	Strasbourg to Huningue	60	96	1799–1800
1803	Lille to Brussels	60	96	1803–1814
1803	Lille to Boulogne	50	80	1803–1816
1804	Paris to Lyon (via Dijon)	230	370	1804–1852
1804	Lyon to Turin	155	250	1807–1814
1804	Turin to Milan	62	100	1809–1814
1805	Lyon to Toulon	190	305	1805–1821
1809	Brussels to Antwerp	25	40	1809–1813
1809	Antwerp to Vlissingen	45	72	1809–1811
1810	Antwerp to Amsterdam	80	128	1810–1813
1810	Milan to Venice	150	241	1810–1814
1813	Metz to Mainz	140	225	1813–1814

—Alexander Mikaberidze

mechanical, and electric telegraphs. Ultimately they settled on a semaphore system that involved a series of signal towers within binocular range of each other. The resulting network was a forerunner of the electrical telegraph systems that emerged several decades later.

After experimenting with a synchronized system that relied on both sound and visual cues, the Chappé brothers settled on a purely optical method that promised greater speed and clarity. On March 2, 1791, they built two telegraphs (in fact, two synchronized pendulum clocks that communicated through the sound of a bell) about 10 miles apart between the towns of Brûlon and Parcé and successfully communicated their first message: “If you succeed you will soon bask in glory.”

Not satisfied with their first prototype, Claude Chappé experimented with different designs, including a rectangular wooden frame with five sliding panels that could be displayed or obscured individually with pulleys to create coded sequences. By 1793, he suggested

constructing a series of telegraph stations, each consisting of a mast 16.4 feet and carrying a 14.7-foot movable cross-beam (regulator) with two 6.5-foot arms (indicators) fixed at each end. Indicators could be formed in different positions at intervals of 45 degrees, while the regulator itself had four orientations. In practice, these could be manipulated in various ways to signal alphabetic, numeric, or other coded signals between stations. On July 12, 1793, the semaphore system passed its first official test, and on July 26 the government decided to establish a state telegraph line and authorized construction of the first line between Paris and Lille. It was officially opened on July 16, 1794, and in August it was used to successfully report news of French victories within hours after they took place, which ensured the government’s continued support of the telegraph system.

However, the system was not without its problems. The time to transmit messages was longer than expected, and poor visibility and bad weather often caused transmission errors

and service interruptions. To address these issues, Chappé constructed auxiliary stations at shorter distances that could operate in low visibility. The size of the regulator cross-beam was increased to 49.2 feet to improve its visibility. Lanterns were used to allow transmission at night and in light fog. The mathematician Gaspard Monge (1746–1818) was consulted and suggested increasing the number of indicators from two to seven to increase code space and speed of transmission; this design, however, was hardly ever used.

Instead, Chappé developed a new coding scheme that allowed the telegraph system to transmit one character in about 30 seconds depending on conditions. The semaphore messages were encrypted, and a telegrapher in the receiving tower would simply read the signals through a telescope and retransmit them to the following tower. The telegrapher in the previous tower would check to see that the following tower copied his signals exactly. If not, he would signal an error. The process was repeated until the message was delivered to its final destination. Due to the encrypted nature of transmission, the operators were not privy to transmitted information, and only the directors of the system and inspectors could interpret the code. Each signal had to be recorded as a pictogram in a logbook as soon as it was received. Operators in each signaling tower, however, knew the limited set of control codes used to indicate errors, corrections, and so on.

By 1800, the telegraph network was at its early stages. After coming to power, Napoleon Bonaparte showed particular interest in developing the communication network and ordered the construction of four main branches extending from Paris and connecting the capital to major cities. With each station within telescopic sight of the next, the telegraph network included numerous stations, with over 50 between Paris and Strasbourg alone. By the mid-nineteenth century, some 500 semaphore stations, spanning about 3,106 miles, had been installed throughout France. The French system also inspired the British Admiralty, led by Lord George Murray (1761–1803), to develop a visual telegraph system using holes closed manually by movable wooden shutters. About 15 stations

were constructed between London, Deal, and Portsmouth. Several decades later, the British would become leaders in the electric telegraph industry.

—Alexander Mikaberidze

Bibliography

- Burns, Russell W. *Communications: An International History of the Formative Years*. Stevenage, UK: Institution of Electrical Engineers, 2004.
- Sterling, Christopher. *Military Communications: From Ancient Times to the 21st Century*. Santa Barbara CA: ABC-CLIO, 2007.
- Winston, Brian. *Media Technology and Society: A History from the Telegraph to the Internet*. New York: Routledge, 1998.

The Development of the Submarine

Man has dreamed of traveling under the sea since at least the Classical Era. Various inventors produced different designs in the seventeenth and eighteenth centuries, but all were vexed by the problems of submerged propulsion and methods of attacking enemy ships. These problems continued into a more intensive phase of experimentation during the American Civil War and were finally overcome by the turn of the twentieth century. Submarines were rapidly incorporated into the world's navies after 1900.

In 1624 Cornelius Drebbel astounded the court of James I with a submersible boat operating in the River Thames. In the 1680s Frenchman Denis Papin built a submersible boat for the Landgrave of Hesse-Cassel, but seeing as Hesse-Cassel was landlocked, there was no immediate application for the vessel. Submarine warfare had its advent on September 6, 1776, when Sergeant Ezra Lee piloted a one-man submersible called the *Turtle*, designed by David Bushnell, to attack HMS *Eagle* in New York Harbor. Bushnell's design incorporated several features similar to Papin's. The *Turtle* was moved by a hand-cranked screw propeller and was armed with a gunpowder mine. Although Lee managed to maneuver the *Turtle* to his target, he failed to attach the mine to the hull.

Problems of propulsion and armament continued into the nineteenth century. In an effort

WILHELM BAUER'S EARLY SUBMARINES

Bavarian submarine pioneer Wilhelm Bauer built his first boat, *Der Brandtaucher*, in 1850. He became the first submariner to discover crush depth (at which pressure will collapse the hull), doing so the hard way during trials off Kiel on February 1, 1851. Fortunately, he and his two crewmen managed to escape the stricken vessel after allowing the internal and external pressures to equalize, earning another first: the first successful escape from a disabled submarine. Bauer's sources of German finance dried up, so he moved east to build a new submarine for the Grand Duke Constantine of Russia, *Le Diable-Marin* (or *Seeteufel*), in 1855. Capable of diving to 100 feet (30 meters), it provided yet another first: an underwater concert on September 5, 1856, as chamber musicians played to celebrate the accession of Alexander II.

—Melvin Smith

to break the Union blockade, the Confederate Navy commissioned a number of “Davids,” steam-powered semisubmersibles armed with spar torpedoes (an explosive charge at the end of a boom) with limited success. Their fate was often the same as that of CSS *Hunley*, a true submersible powered by a hand-cranked propeller and sporting a spar torpedo. On February 17, 1864, the *Hunley* sank USS *Housatonic* off Charleston but was lost with all eight hands in the process. The wreck of the submarine was raised in the summer of 2000, causing new debate as to the exact sequence of events that led to its loss.

A series of technological innovations in the late nineteenth century overcame the perennial problems of submarine navigation. Working for the Austrian Navy, British inventor Richard Whitehead developed a self-propelled torpedo in 1866. Spanish pioneer Isaac Paral used batteries and an electric motor to propel his experimental submarine in the 1880s. Also making its advent in the 1880s was the practical internal combustion engine, offering an alternative to steam engines.

These elements came together in the designs of Irish American inventor John P. Holland. He progressed from his first pedal-powered 1877

model through a series of improvements that incorporated the emerging technologies to produce the *Holland VI* in 1897. Commissioned into the U.S. Navy in 1900 as USS *Holland*, it was 54 feet long, was powered by a 50-horsepower gasoline engine while surfaced and by batteries while submerged, and was armed with a single torpedo tube. It served as the test bed for further submarine design for the next decade.

Holland's success at securing a naval contract sparked a bitter rivalry with a competing submarine developer, Simon Lake of Bridgeport, Connecticut. Lake began building submarines in 1894, wheeled designs that were more crablike than fishlike and were intended for civilian salvage and shellfish harvesting operations. Holland's contract inspired him to build his own submersible torpedo boat, the *Protector*, launched in November 1902. Unable to interest the U.S. Navy, Lake ultimately sold the submarine to Russia in 1904. Lake went on to a long and distinguished career as a submarine designer and innovator, building submarines for European buyers and several commissioned by the U.S. Navy.

France commissioned its first submarine, the diesel-electric *Aigrette*, in 1900. Britain followed suit in 1901, launching a submarine built under Holland license by Vickers. Germany borrowed ideas from both Holland and Lake to launch its first Krupp-built submarine in 1906. The Germans saw the submarine as a way to neutralize British naval superiority, a view that had grave consequences during the First World War.

—Melvin Smith

Bibliography

- Fontenoy, Paul E. *Submarines: An Illustrated History of Their Impact*. Santa Barbara, CA: ABC-CLIO, 2007.
- Garrett, Richard. *Submarines*. London: Weidenfeld and Nicolson, 1877.
- Hutchinson, Robert. *Jane's Submarines: War beneath the Waves*. London: HarperCollins, 2001.

European Navies in an Age of Steam and Steel

European navies transitioned gradually from wood and wind to steam and steel during the nineteenth century. Early steam engines and

propulsion methods were not ideally suited to warship design, nor were iron and steel eagerly accepted as alternatives to wood for military hull construction before the mid-nineteenth century, retarding the adoption of these new technologies. Advances in gun design and improvements in machinery gradually swayed naval opinion, ushering in a period of rapid ship-design evolution culminating with the launching of HMS *Dreadnought* in 1906. Doctrine had to evolve with technology as nations decided the most economical use of the expensive new units.

Advances in naval gun design took place between 1815 and 1853. Two key innovations were introduced: (1) guns capable of firing explosive shells that greatly increased the damage inflicted on the target vessel and (2) rifled barrels that increased the likelihood of actually hitting the target vessel. These innovations spelled the demise of the wooden-hulled warship. At the same time, steam made its advent at sea.

First-generation maritime steam engines were neither powerful nor fuel-efficient, limiting the operational range and speed of a warship. They were also lacking in reliability, thus forcing the design of hybrid steam and sail vessels. These engines were coupled to side paddlewheels that took up a significant amount of space on either side of the ship's hull, limiting the space available for the broadside battery of guns. More reliable, powerful, and efficient engines evolved as the century progressed, and these engines, when coupled with the development of the screw propeller in the 1840s, eliminated these basic problems. Vulnerable propulsion systems could be placed below the waterline, farther out of harm's way, and no longer took up valuable armaments space.

European navies experimented with iron plate armor with varying degrees of success in the 1830s and 1840s but did not adopt any designs until the construction of armored floating batteries for the close-inshore work of shelling Russian fortifications during the Crimean War. From the success of these experimental expedients, France commissioned the iron-clad FS *La Gloire* in 1859, and Britain commissioned the iron-hulled HMS *Warrior* in 1860. However, neither ship ever fired a shot in combat. The actual test of the iron-clad steamship in battle took place with the 1862

THE LOGISTICS OF EMPIRE

The latter half of the nineteenth century saw an explosion of imperial expansion for a variety of reasons, religious, political, and economic. One of these motivating factors was linked intimately with the development of a steam and steel navy. In the days of sail ships, naval squadrons and individual ships could and did operate for months at a time far from home ports, their endurance limited only by the needs of water and victuals. Repairs required only wood and hand tools for the most part and could be accomplished in even the most primitive of settings. Steel hulls and steam engines, however, required substantial machine shops for maintenance and vast stores of coal for fuel. Any nation wishing to project power on a global basis had to establish naval repair and coaling stations on a global basis as well. As a result, previously discounted bays and tiny islands suddenly became eagerly sought imperial properties.

—Melvin Smith

confrontation between USS *Monitor* and CSS *Virginia* at Hampton Roads. Although the battle was inconclusive, with neither ship able to sink the other, it did demonstrate the potential of armored ships and provided justification for the advocates of steam and steel. Warship design underwent a radical shift during the subsequent decades of the nineteenth century with the development of even larger guns, better armor, and more powerful engines. Building large and heavily armored battleships was expensive, but new and cheaper technologies such as the torpedo and underwater mine were pioneered. These cheaper alternatives led to differing schools of thought as to fleet design and purpose.

In France Admiral Theophile Aube developed the *Jeune École* (Young School), the idea of which was that France could not hope to out-build their traditional British rival. The *Jeune École* argued that instead of trying to build capital ships and seek a fleet engagement, the French navy should concentrate on fast torpedo boats to negate enemy battleships and other light units to carry out a *guerre de course* against enemy commercial shipping.

Across the Atlantic, American naval theorist and historian Alfred Thayer Mahan introduced his concept of command of the sea in his seminal book *The Influence of Sea Power upon History* (1890). Mahan argued that the greatest nations in history had become such by establishing command of the sea. This command was gained by creating a fleet capable of destroying that of the enemy, thus giving friendly merchant shipping freedom of movement while denying that freedom to the enemy. His views were eagerly accepted in Britain and Germany and contributed to their naval arms buildup around the turn of the twentieth century.

A third school of thought emerged with the publication of *Some Principles of Maritime Strategy* by Sir Julian S. Corbett in 1911. A lecturer at the British Royal Naval College, Corbett pointed out that it was almost impossible for a war to be decided by naval operations alone. While it could be beneficial to pursue a *guerre de course* and certainly prudent to maintain a strong fleet, a proper maritime strategy was one subordinated to the needs and realities of land warfare. This view, although controversial among his contemporaries, actually came closest to describing the way that navies were actually used in the decades before 1914.

—Melvin Smith

Bibliography

- Grove, Eric. *The Royal Navy*. Basingstoke, UK: Palgrave Macmillan, 2005.
- Sondhaus, Lawrence. *Naval Warfare 1815–1914*. London: Routledge, 2001.
- Tucker, Spencer. *Handbook of 19th Century Naval Warfare*. Annapolis, MD: Naval Institute Press, 2000.

Firearms

Handheld man-portable weapons date from the discovery of gunpowder, the first propellant known to man. Gunpowder is a coarse mixture of saltpeter, charcoal, and sulfur. The earliest firearms were muzzle-loaded. The barrel of the weapon was a simple smooth tube, with a small aperture near the closed end to allow the firing spark access to the gunpowder charge. Firearms were not common until about 1375. The earliest firing method was by means of the matchlock:

simply a length of fuse held in a clamp that could be moved into the firing position by the musketeer when he chose. Naturally, such a firing method required the musketeer to keep his fuse alight, not an easy task in rain or wind. The next developed firing mechanism was the wheel lock, followed by the snaphaunce, the flintlock, and the miquelet. All worked on the principle of causing sparks to be generated by a flint that lit a powder train, the train in turn firing the main charge. In terms of time, from the development of the wheellock to the development of the next stage of ignition—the percussion system—a period of 300 years elapsed.

Firearms were inevitably rough weapons until the middle of the nineteenth century simply because every maker had his own standards and methods of measurement. This meant that calibers were erratic, even when makers were in the same town or even on the same street. Furthermore, bullet makers were equally nonstandardized, so it was lucky that the main projectile was the lead ball, which could be adjusted reasonably easily in the field.

During the nineteenth century, there was a complete change in the technical aspects of firearms. The Reverend Dr. Alexander Forsyth (1749–1818) patented the percussion system in 1807. This system still operated in a muzzle loader, but the ignition charge was sealed in a percussion cap that the firer placed over a nipple, which was connected to the main charge. When the trigger is pressed a hammer hits the cap, causing a high-pressure explosion that ignites the propellant.

Pistols developed in exactly the same way as muskets, and the calibers of all weapons up to the mid-nineteenth century was large in comparison with today's firearms. This was due to problems in barrel making, for no effective method had been found to make barrel steel capable of withstanding the propellant explosion except by thickness of the barrel; furthermore, gunpowder was so weak in its explosive effect that large amounts were needed to propel the ball down the barrel and on to the target. This insoluble circle was broken with the invention of nitrocellulose powders in the nineteenth century, together with the development of standards and gauges by the Englishman Joseph Whitworth

(1803–1887) and the invention of the cartridge and rifling.

The rate of fire of standard military firearms did not increase fundamentally until the same time. In 1812 Dean Pauly invented the first cartridge-loaded breech-loading rifle, and then Emile Lefauchaux invented the pin-fire cartridge. At last the igniter, the propellant, and the bullet were combined into one unit. This was of fundamental significance to Samuel Colt (1814–1862) when he invented the first repeating firearm, which enjoys great status today as the first true modern firearm.

By the second half of the nineteenth century, firearms were beginning to operate in the same way as they do today. The breech-loaded weapons were firing a unitary cartridge, and the barrels were rifled, enabling sights to become things of accuracy rather than indicators of the possible final resting place of the projectile.

The next development was even more significant: single-shot rifles were standard issue until the bolt action was invented. Single-shot weapons were loaded by means of rolling blocks, falling blocks, or lever or breaking action. This meant that only a slow rate of fire was possible, although this was a much higher rate than that ever achievable by the muzzle loader. The bolt action, however, allowed the rifleman to reload his weapon by means of a mechanical device that would eject the spent cartridge from his last shot and load a fresh cartridge into the chamber from the magazine. Military rifles were now capable of firing from 5 to 15 aimed rounds per minute. Machine guns were the next logical step. One of the earliest firearms that has seen ubiquitous use is the pistol. The small, often concealed, hand weapon is for local protection only, but it has a long history. Its technical development has mirrored that of the rifle, and so flintlock pistols marched side by side with flintlock muskets. By the early part of the twentieth century there were automatic pistols, however, that were well in advance of rifle technology of the time.

One aspect of the firearm that leads the way in development is the cartridge. Since all-in-one cartridges were first invented, the caliber of the military round has diminished considerably. Snider-rifled muskets fired rounds of .577-inch

caliber, while the Martini rifle fired rounds of .45-inch caliber. World War I saw weapons of calibers around 8 millimeters, or about 0.3 inches.

—David Westwood

Bibliography

Allen, Major W. G. B. *Pistols, Rifles and Machine-guns*. London: EUP, 1953.

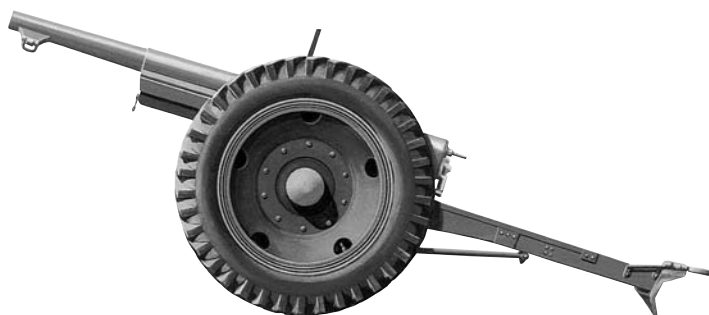
Ezell, Edward C. *Small Arms of the World: A Basic Manual of Small Arms*. Harrisburg, PA: Stackpole; London: Guns and Armor, 1983.

Jane's Infantry Weapons. London: Jane's, 1975.

Artillery in the Nineteenth Century

Artillery, the king of battle in the European military tradition, was first introduced into warfare in the 1300s and rose to prominence as a service arm during the 1600s. As a technology it underwent gradual minor improvements and innovations that did not radically alter the basic design for centuries before the mid-1800s. Advances in materials and manufacturing produced a rapid evolution of artillery during the latter half of the nineteenth century. Armament manufacturers in Europe, such as British Vickers, German Krupp, and Austro-Hungarian Skoda, developed numerous innovations to artillery pieces that increased their potential for use on the battlefield in terms of shell sizes, accuracy, and ease of use.

Preindustrial nineteenth-century artillery consisted of smoothbore muzzle-loaded guns charged with black powder, essentially a line-of-sight weapon with an effective range of 1,000–2,000 yards. Military organization generally divided artillery into two classes: garrison artillery, the large guns housed in fixed fortifications, and field artillery, the lighter weapons on



Canon de 75 Modél 1897, France. (Courtesy of Art-Tech)

► THE GUNS OF AUGUST

The culmination of nineteenth-century innovation in artillery came with the start of World War I in August 1914. German plans for invading France called for an advance through Belgium by force if the request for free passage was refused. Belgium had built a series of heavy forts at Liège and Namur in the wake of the Franco-Prussian War and defied German demands. The Germans used massive Krupp 420-millimeter (mm) (nicknamed “Big Berthas”) and Skoda 305-mm (nicknamed “Slim Emmas”) artillery pieces to crack these forts one by one during the first ten days of the war. At Fort Loncin outside Liège a round from a Big Bertha penetrated the main magazine, causing a shattering detonation that destroyed the fort almost entirely and killed over half of the 550 defenders. That explosion announced that World War I would be a war dominated by the guns.

—Melvin Smith

mobile horse-drawn mounts that accompanied the army on campaign. The guns could fire a variety of projectiles, from solid shot for battering fortifications to grape shot (and later canister shot) for close-in antipersonnel work and exploding shells (later replaced by shrapnel shells) for more distant antipersonnel targets. The rate of fire was slow; a well-drilled gun crew could fire about two rounds per minute. Accuracy was more of an art than a science for a number of reasons. The cumbersome muzzle-loading drill aside, each time the weapon fired the recoil sent it rolling back several feet. Before it could be fired again it had to be rolled back up into position and resighted. Even if a master gunner laid the piece on target, a round ball fired from a smooth barrel wobbled in flight, making a direct hit a matter of luck rather than design.

The second Industrial Revolution provided a number of crucial innovations that led to a rapid evolution of artillery. Improvements in metallurgy moved the artillery tube from bronze or brass to iron and ultimately to steel construction capable of withstanding much larger propellant charges. The size of artillery pieces increased, with the weight that the gun carriage could bear being the only effective limit. The emerging chemical

industries provided high-explosive propellants and bursting charges, while advances in machine tooling provided methods of rifling cannon barrels and, along with the introduction of fixed ammunition, allowed the development of effective breech-loading systems. As a result of these innovations, guns could fire a heavier shell more than twice as far and more accurately than ever before, plus the shells carried far more destructive force downrange. Breech loading increased the rate of fire, but the problem of recoil and the necessity of resighting the gun after each shot still limited the effective speed of the weapons to about six rounds per minute.

Recoil was not tamed until the very end of the century with the introduction of the French M1897 75-millimeter field gun in 1897. The French 75, as it came to be known, used an oil-air compression system that absorbed the recoil energy of firing and then recycled that energy to return the barrel to firing position, all without moving the carriage. Since the carriage did not move, only minute adjustments were needed between rounds to keep the gun on target. With a good crew, it was capable of 20 to 30 rounds per minute. Once the effectiveness of this weapon was demonstrated during the suppression of the Boxer Rebellion in 1901, other nations developed their own quick-firing guns in very short order.

—Melvin Smith

Bibliography

- Hogg, Ian. *A History of Artillery*. London: Hamlyn, 1974.
- Hughes, Basil Perronet. *Firepower: Weapons Effectiveness on the Battlefield*. New York: Scribner, 1975.
- Kinard, Jeff. *Artillery: An Illustrated History of Its Impact*. Santa Barbara, CA: ABC-CLIO, 2007.

The Machine Gun

The machine gun is a weapon that fires cartridges automatically as long as the trigger is pressed. Rapid-fire weapons had long eluded inventors until nineteenth-century technological developments made them possible. The modern machine gun was invented by Hiram Maxim in the 1880s and was quickly followed by a variety of weapons designed by other inventors. By 1914

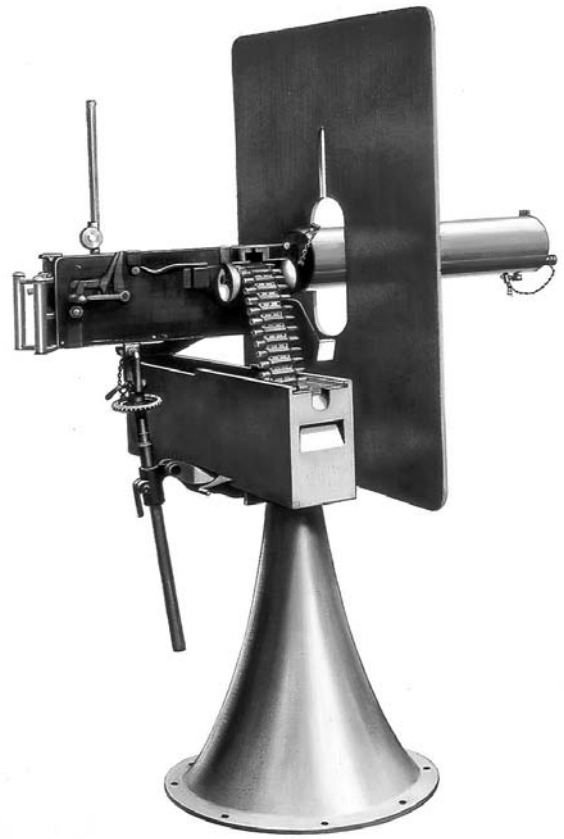
the machine gun had been integrated into European militaries and was one of the reasons for the stalemate of the Western Front.

The greatest obstacle to early rapid-fire weapons was how to get bullet, propellant, and the ignition source to work automatically. Although weapons such as the 1718 Puckle Gun may have worked, they relied on multiple individually loaded barrels or chambers and flintlock ignition. Only after the development of the metallic cartridge that incorporated bullet, powder, and primer into a single unit during the mid-nineteenth century did rapid-fire weapons become a useful technology. The most famous of these early quick-fire weapons was that of Richard Gatling, who patented his gun in 1862.

The Gatling gun and its competitors, the Gardener and Nordenfelt guns, were multiple-barreled weapons that were operated by the gunner turning a crank or pulling a lever that loaded and fired each barrel in turn. As such, they mechanized the firing process without exactly being automatic weapons, making it a point of debate among historians as to whether or not they qualify as machine guns. Regardless of semantics, they were all large and cumbersome weapons and had a reputation for jamming at inopportune moments.

The fully automatic machine gun was patented in 1883 by Hiram Maxim, an American electrical inventor who was at the time residing in England. Maxim's design used the recoil energy of the cartridge as it fired to operate the bolt, ejecting the spent cartridge and loading a new round. Unlike earlier weapons that required continual operation of the crank, this process repeated automatically as long as the trigger was depressed until the weapon ran out of ammunition. Furthermore, the Maxim gun used a looped cloth belt of cartridges, whereas earlier weapons relied on gravity-fed magazines. Maxim also insisted on tighter manufacturing standards for ammunition, which reduced the problem of jamming. With a single barrel cooled by a water jacket, the Maxim gun was much less cumbersome than previous weapons but was still a heavy crew-served weapon.

Other designers followed the trail blazed by Maxim as the century drew to a close, developing different operating, cooling, and feed



The first fully automatic machine gun, developed by Hiram Maxim in 1883, weighed 60 pounds, with a length of 42.5 inches, and was capable of firing 550 rounds per minute. Maxim later introduced a second design in 1885 that was used unchanged by armies all over the world until World War II. (Art-Tech)

mechanisms. John Browning's first production design, the 1895 Colt Potato Digger, tapped off a portion of the expanding gasses behind the bullet to operate his mechanism; the Franco-American Benet-Mercie (called the Hotchkiss in British service) was likewise gas operated but used cartridges fitted in a metal strip instead of a belt feed. Both were air cooled and more portable than the Maxim but remained tied to tripod mounts. The first real man-portable machine gun was designed by American Isaac N. Lewis in 1911. Adopted by the British in 1915, the air-cooled gas-operated Lewis Gun was fed by a 47-round drum magazine and weighed 26 pounds.

Although European governments were quick to acquire the Maxim gun or produce their own indigenous equivalent, European

commanders were slow to integrate the weapon into their tactical doctrines. The defensive potential of the machine gun was underestimated, which contributed greatly to the development of the stalemate of the Western Front in the First World War.

—Melvin Smith

Bibliography

- Ellis, John. *The Social History of the Machine Gun*. Baltimore: Johns Hopkins University Press, 1986.
- Smith, Anthony. *Machine Gun*. New York: St Martin's, 2003.
- Willbanks, James H. *Machine Guns: An Illustrated History of Their Impact*. Santa Barbara, CA: ABC-CLIO, 2004.

Land Mines

A land mine is a self-contained explosive device placed on the ground or underground that explodes when tripped or stepped on by a soldier, animal, or vehicle. Land mines were known for most of their history as “infernal machines” or some other uncomplimentary term. Soldiers feared and despised them because their victims had no chance to defend themselves or strike back. Land mines reached their technical maturity on the eve of World War I but did not see widespread use until World War II. In the twenty-first century, they provide a cheap and indiscriminate method for poorer countries and groups to strike their enemies.

Ancestors of modern land mines can be traced back at least 1,000 years. Chinese armies in the third century CE and Roman legions both sought to impede attackers by placing spikes in holes in the ground and covering them with a thin layer of dirt. During the European Middle Ages, armies made use of devices called caltrops, or crows’ feet, four-pronged spikes that were scattered aboveground. These early devices were intended not to kill but instead to slow down an assault and to force it into areas covered by missile-firing weapons.

With the invention of gunpowder, the land mine became a weapon designed to kill. By 1530 CE, the first explosive mines appeared. Known as *fougasses*, they consisted of chambers dug into a fortress’s defenses. A charge was placed in the chamber, and rocks, broken glass, or pieces of metal were packed on top of it. When the charge was set off, the material flew upward or horizontally, depending on how the chamber was oriented. These first land mines had weaknesses, however. If the powder became damp, it would not fire; similarly, powder fuses, necessary to detonate the device, would not work in rainy or windy weather. As a defensive weapon, they continued to be used through the period of the Napoleonic Wars.

The self-contained mine known as the *flad-dermine* was invented by the German military engineer Samuel Zimmerman in the 1570s. Flad-dermines used flintlock mechanisms connected

➤ A UNION SOLDIER’S VIEWS OF LAND MINES

Calvin Mehaffey, from Lancaster, Pennsylvania, was a junior officer in the Union Army; his letters home are preserved in the University of Michigan’s Schoff Civil War Collections. After the Confederate retreat from Yorktown in 1862, he had this to say about the enemy’s use of land mines, which he referred to as “torpedoes”:

“Where they are designed to kill a Division or Regt in their charge upon fortifications it is proper [to leave torpedoes], but when an army retreats, thereby acknowledging that they are afraid to fight and hides a few shells to kill the individual who treads on them, it is down right murder for the killing

of one or a dozen of men in that manner does not in the least determine their victory or our defeat. If in so doing they could kill fifty thousand men it would be perfectly fair and not inconsistent with warfare, but to blow up a telegraph boy in the pursuit of his calling is both murderous & barbarous.”

—Timothy J. Watts

Source

Calvin D. Mehaffey to family, 11 May 1862, Calvin D. Mehaffey Papers, Schoff Civil War Collections, William L. Clements Library, University of Michigan.

to surface trip wires to set off a charge of gunpowder packed into barrels, pots, or other waterproof containers. During the nineteenth century, these self-contained mines adopted the percussion fuses used in firearms to set off their charges. The mines were usually buried just below the surface and were set off by tripwires or by someone stepping on them. Unlike the fougasses, self-contained mines did not need to be set off by an observer. For the first time, land mines became indiscriminant killers.

The most widespread early use of land mines took place during the American Civil War. Confederate general Gabriel James Rains, who had worked since 1840 to develop a practical land mine, developed a reliable pressure-sensitive fuse. During the Union advance on Richmond in the spring of 1862, Rains planted his first mines while stationed at Yorktown. On May 4 a Union cavalryman was blown up by a mine, and his puzzled comrades found more mines buried nearby. Near Williamsburg, more soldiers were killed by Rains's mines. The army's advance was held up for three days while soldiers searched for more "infernal machines." Fear and loathing of the mines was general even though casualties were generally light. Defensive mines were used in other locations by the Confederacy and were effective in channeling attacking Union forces into certain areas and helping break up assaults. When Richmond finally fell in April 1865, Union troops found nearly 1,300 mines buried on the roads. Five of Rains's mines were found near Mobile in 1960 and were still in working condition.

Other armies adopted land mines during the late 1800s. British soldiers manufactured explosive devices for use against the Mahdi army in Sudan during the 1880s. They also used mines in South Africa during the South African (Boer) War to protect railroads and at river crossings. During the Russo-Japanese War, the Russians used land mines to protect Port Arthur. Some of their mines used pressure to complete electric circuits for ignition, a significant technological advance. In response, the Japanese organized volunteer suicide squads to throw themselves on the Russian mines.

In 1912 the Germans began to manufacture a pressure-sensitive mine. Only a small number were available when World War I broke out.

When combat on the Western Front turned into trench warfare, many of these mines were placed among the barbed-wire entanglements. German troops, usually on the defensive, also made many improvised devices. They buried artillery shells, with the fuses exposed, in no-man's land. These fuses were specially made and replaced the original ones. They could be set off by wires or small rods. Later, the Germans developed antitank mines to break the tracks of the Allied tanks. Nearly 3 million land mines had been produced by the end of the war in 1918.

—Timothy J. Watts

Bibliography

- Croll, Mike. *History of Landmines*. Barnesly, UK: Pen and Sword, 1998.
- Perry, Milton F. *Infernal Machines: The Story of Confederate Submarine and Mine Warfare*. Baton Rouge: Louisiana State University Press, 1965.
- Schneck, Major William C. "The Origins of Military Mines: Part I." *Engineer* 28 (July 1998): 49-55.
- Schneck, Major William C. "The Origins of Military Mines: Part II." *Engineer* 28 (November 1998): 44-49.

Barbed Wire

Barbed wire was invented in the 1800s to prevent cattle from wandering the vast American plains. During World War I, however, it contributed to the deadlock on the Western Front, and tangles of wire came to symbolize the industrialized nature of the war and the inhumanity of its violence.

Humans in antiquity made wire to make jewelry and later made use of it for practical purposes such as the manufacture of pins and wool cards, brushlike devices for combing wool fleece. Demand for wire increased in the industrial era, especially after the invention of the telegraph. During the American Civil War, both sides used telegraph wire for military purposes. In addition to communications use, soldiers strung telegraph wire between trees, stumps, and rocks to trip up attackers and break up formations. The tactic was moderately successful but failed to have a major impact on military planning and strategy.

In 1874, a 60-year-old Illinois farmer, Joseph F. Glidden (1813-1906), patented the first successful



Soldiers during World War I contend with barbed wire. Barbed wire contributed to the deadlock on the Western Front. Tangles of wire came to symbolize the industrialized nature of the war and the inhumanity of its violence. (National Archives)

barbed wire. He recognized that the lack of trees on the American plains made it impossible to control livestock with traditional wooden fences. Glidden used a coffee grinder to make barbs that were placed at regular intervals on a wire. Another wire was then twisted with the original strand to keep the barbs from slipping. The result was a lightweight fencing material that could be used anywhere. The demand for barbed wire was coupled with the simultaneous development of cheaply produced steel. In 1901, the United States produced over 135,000 tons of barbed wire, and the open range was no more.

Military leaders soon recognized barbed wire's value in defensive positions. In 1888, British military manuals recommended its use. During the Spanish-American War, American troops used strands of barbed wire to defend their camps from surprise Spanish attacks. One of the most controversial uses of the fencing materials was during the South African (Boer) War. During that conflict, British forces used lines of blockhouses and barbed-wire fences to cut off Boer forces from their civilian supporters. Both black and white South Africans were herded into concentration camps and fenced in. In the Russo-Japanese War of 1904–1905, Russian forces defending Port Arthur used multiple lines of barbed-wire obstacles to blunt Japanese assaults.

The Russo-Japanese War was a rehearsal for World War I in many ways. By November 1914, warfare on the Western Front settled into a deadlock of trench lines from Switzerland to the English Channel. Specially produced military barbed wire, with larger barbs, was strung in thick belts by both sides to protect the trenches. When coupled with machine guns, the wire was an almost impenetrable obstacle. Special pickets to hold the wire consisted of two flat pieces of steel, formed into an “L” shape. Slots on the side held the wire in place. The pickets were either driven into the ground or had a screw attachment for silent emplacement. Attempts to cut the wire with artillery shells were usually unsuccessful. The flexible wire either sprang back to its original position or was blown into the air and landed in a more impenetrable mess than before. Too many times, infantry who attacked enemy trenches were stopped by wire with no gaps and cut down by machine guns.

Attacking infantry usually had to force their way through the wire on their own. Wire cutters were used to create gaps, but it was slow work and usually attracted enemy fire. Grappling hooks were sometimes used to drag the wire out of place, with limited success. Other methods included covering the wire with boards, blankets, or human bodies to allow soldiers to run across. Explosives, such as Bangalore torpedoes (explosive devices placed at the end of a long expandable tube), were sometimes used to blow holes in the wire. The need to overcome the combination of barbed wire and machine guns led directly to the invention of the tank by the Allies. Tanks were able to crush the wire or drag it out of the way of following infantrymen.

Barbed-wire obstacles became one of the most enduring images of trench warfare. Small parties of men slipped out of the trenches at night to put up or repair their own wire or to cut the enemy's. In the aftermath of attacks, dead or seriously wounded soldiers were often left on the wire. Their bodies, slowly decomposing, became one of the many horrors of the war.

—*Timothy J. Watts*

Bibliography

Dupuy, Trevor N. *The Evolution of Weapons and Warfare*. Indianapolis: Bobbs-Merrill, 1980.

- Krell, Alan. *The Devil's Rope: A Cultural History of Barbed Wire*. London: Reaktion, 2002.
- McCallum, Henry D., and Frances Tarlton McCallum. *The Wire That Fenced the West*. Norman: University of Oklahoma Press, 1965.
- Netz, Reviel. *Barbed Wire: An Ecology of Modernity*. Middletown, CT: Wesleyan University Press, 2004.
- Rezac, Olivier. *Barbed Wire: A Political History*. New York: New Press, 2002.

The Armament Makers—Krupp, Skoda, and Schneider-Creusot

During the nineteenth century a variety of manufacturing sectors experienced the vast changes in production and organization collectively known as the Industrial Revolution. Military production was no exception, and as in a number of other industries, tremendous arms conglomerates formed. Although these massive companies—Vickers Limited, Schneider et Cie, Skoda

Werke, and the giant Krupp works—had their respective national identities, they marketed their wares aggressively on a global basis, often selling or licensing the production of weapons to enemy nations. In the wake of the First World War the makers of the weapons themselves came under fire as one of the principal reasons for both the outbreak of the war and the shocking casualty figures thereof.

All of these companies sprang from humble and completely nonmilitary origins. The Vickers Company in Britain serves as an excellent example. The company got its start in Sheffield as a steel foundry in 1828, diversified into producing marine shafts and propellers in the 1860s and 1870s, and only ventured into arms production with artillery in 1890. Following the acquisition of the Barrow Shipbuilding Company and its subsidiary, Maxim Nordenfeldt Guns and Ammunition Company, in 1897, the company became Vickers, Sons and Maxim, producing everything

➤ CONDEMNING THE “MERCHANTS OF DEATH”

In 1934 the U.S. Senate convened a special committee to investigate the role of munitions manufacturers in American entry into the First World War. Although the Nye Committee as it came to be known focused primarily on American firms, its findings in 1936 condemned the entire international arms manufacturing system.

The following is from the report of the Nye Committee:

“The committee finds, further, that the intense competition among European and American munitions companies with the attendant bribery of governmental officials tends to create a corrupt officialdom, and thereby weaken the remaining democracies of the world at their head.

The committee finds, further, that the constant availability of munitions companies with competitive bribes ready in outstretched hands does not create a situation where the officials involved can, in the nature of things, be as much interested in peace and measures to secure peace as they are in increased armaments.

The committee finds also that there is a very considerable threat to the peace and civic prog-

ress of other nations in the success of the munitions makers and of their agents in corrupting the officials of any one nation and thereby selling to that one nation an armament out of proportion to its previous armaments. Whether such extraordinary sales are procured through bribery or through other forms of salesmanship, the effect of such sales is to produce fear, hostility, and greater munitions orders on the part of neighboring countries, culminating in economic strain and collapse or war.”

The Nye Committee had enormous impact on public and lawmakers’ opinions, encouraging a steadfast sentiment of isolationism in the United States in the 1930s, as major companies moved away from arms production and only after fierce debates did the United States enter World War II.

—Melvin Smith

Source

SEN74A-F27, “Report of the Special Committee on Investigation of the Munitions Industry,” February 24, 1936, National Archives, Washington, D.C.

from rifle cartridges to warships. Further diversification came after the turn of the century, with Vickers Limited (as it became in 1911) producing machine guns, artillery, airships, submarines, and aircraft.

Krupp had similar beginnings, starting as a small Essen steel manufacturer in 1812 and not producing even a prototype weapon until 1847; until that point the company's bread and butter had been precision dies and castings. By the turn of the century Krupp produced heavy artillery and warships for the kaiser. Banker Joseph Eugene Schneider bought a defunct iron foundry in Creusot in 1833, but the firm's only indirect contribution to arms building was in the form of marine steam engines until 1870, when they began a line of artillery. Despite becoming the premier artillery producer of France, Schneider remained a major (if not the major) civil engineering firm of the nation. Skoda Werke in Austria likewise began as a small civilian metallurgical concern in the 1860s and remained a diversified producer of civilian goods after the introduction of a munitions line.

The reason for the fame of these companies was, however, the production of munitions and weapons of war. In the uncertain years surrounding the turn of the twentieth century, vast fortunes were accumulated by these companies. Armies grew larger, technological innovations rendered older weapons systems obsolete in rapid succession, and nations with little or no industrial base turned to established companies to provide new weapons. This bred cutthroat competition between the arms makers, who often resorted to playing on the fears of their customers, sabotaging the demonstrations of their rivals, and outright bribery of government officials. The tremendous fortunes generated by these sales gave the companies that commanded them significant political clout, particularly when the numbers of their employees and their diverse nonmilitary output are taken into account. Companies could and did argue that what was good for Krupp (or Vickers or Schneider or . . .) was good for Germany (or Britain or France or . . .), as they were significant drivers of their national economies.

As a very visible part of the old order, the munitions makers were the target of a lot of

popular discontent and disillusionment in the postwar political environment. The aggressive marketing techniques employed during the two decades before the start of the First World War were roundly condemned in the wake of the war but in fact reflect little more than the standard, if shady, business practices of the day.

—Melvin Smith

Bibliography

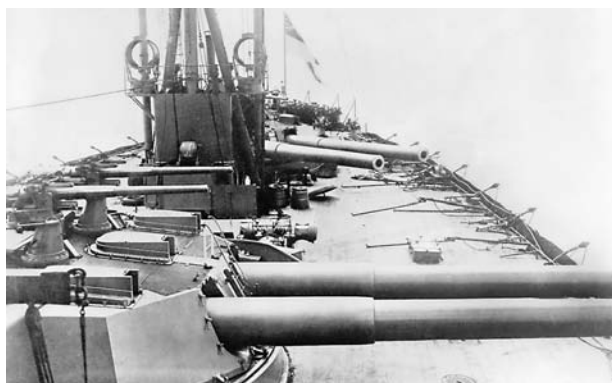
- Manchester, William. *The Arms of Krupp, 1587–1968*. Boston: Little, Brown, 1968.
- Mason, Peter. *Blood and Iron*. New York: Penguin Books, 1984.
- Pearson, Maurice. *Diplomacy, War and Technology*. Lawrence: University Press of Kansas, 1984.

Dreadnoughts

The British battleship HMS *Dreadnought*, launched in 1906, represented a revolutionary new design of battleship, featuring an armament of all heavy guns that transformed naval warfare. The *Dreadnought* was so advanced that it rendered all other battleships obsolete. Unfortunately the design was easily copied, and soon other countries, especially Germany, Britain's most serious naval rival, were building their own dreadnoughts. This initiated the naval race between Germany and Britain that preceded the First World War, during which both countries built increasingly powerful and expensive dreadnoughts.

The idea for the *Dreadnought* was pursued by Admiral Sir John Fisher, who became first sea lord of the British Admiralty in 1904. Fisher wanted to build high-speed battleships that would carry all heavy guns and minimal armor so that it could sink enemy cruisers and battleships alike. Opposition within the Royal Navy meant that he had to accept a design that carried more armor. The ship's top speed was lowered as a result.

Fisher insisted that construction of the *Dreadnought* be carried out as quickly as possible. The normal construction period for a battleship was three years, but the *Dreadnought* was built in much less time. The keel of the *Dreadnought* was laid down in Portsmouth on October 2, 1905. It was launched on February 9, 1906, and sailed for the first time on October



Deck of the HMS Dreadnought (Library of Congress)

3, 1906. The ship was completed by December 1906 at a cost of £1.7 million.

Previous battleships had carried 4 heavy-caliber guns with an assortment of medium- and smaller-caliber guns. The *Dreadnought* carried 10 12-inch guns in double turrets, of which eight could be fired on a broadside. The *Dreadnought* also carried 18 12-pound guns for defense against enemy torpedo boats and 5 18-inch torpedo tubes.

The *Dreadnought* was powered by steam turbine engines that gave a top speed of 21.5 knots on trial. The *Dreadnought* was therefore at least three knots faster than its competitors. The ship displaced 21,845 tons fully loaded and carried a crew of 773. It was 526 feet long with a beam of 82 feet. The *Dreadnought* carried 4 inches of armor on the deck, 11 inches on the turrets, and 4 to 11 inches on the ship's belt, meaning the armor on the side of the hull. The *Dreadnought* had superior firepower to any other comparable battleship with sufficient speed to ensure that its enemies could be caught.

Other countries such as the United States were soon constructing dreadnought designs, but Germany caused the British the greatest concern. The naval race, the building by Germany and Britain of increasingly complex and expensive dreadnoughts, reached a peak between

ARMAMENT OF THE HMS DREADNOUGHT

Unlike earlier battleships that carried a mix of different-caliber guns, HMS *Dreadnought*, completed in 1906, carried a main armament made up exclusively of heavy guns. As a completely new design of warship, the *Dreadnought* revolutionized naval warfare and rendered older types obsolete. Between 1906 and 1914 all leading naval powers frantically began construction of their own versions of dreadnoughts. The naval race between Britain and Germany contributed to tensions that led to war in 1914.

—Paul Doerr

1908 and 1910. Britain's greater number of dockyards and larger skilled workforce ensured that Britain entered the First World War with more dreadnoughts than Germany.

By 1914, however, the *Dreadnought* itself was obsolete and too slow to keep up with the main fleet. The *Dreadnought* never fired its guns at the enemy, although it did sink a German submarine, the U-29, by ramming on February 18, 1915, the only instance of a battleship sinking a submarine in naval history. The *Dreadnought* served most of the war as the flagship of the Third Battle Squadron but missed the Battle of Jutland in 1916. The ship was paid off, or retired, from the Royal Navy, in 1920 and broken up for scrap in 1922.

—Paul Doerr

Bibliography

- Marder, A. *From the Dreadnought to Scapa Flow: The Royal Navy in the Fisher Era, 1904-1919*, Vol. 1, *The Road to War, 1904-1914*. London: Oxford University Press, 1961.
- Massie, R. *Dreadnought: Britain, Germany and the Coming of the Great War*. New York: Random House, 1991.
- Roberts, John. *The Battleship Dreadnought*. Annapolis, MD: Naval Institute Press, 1992.

■ Introduction: Science and Scientific Activity, 1750–1820

Science shared in the revolutionary transformation of world society in the period 1750–1820. This transformation was both internal, as various branches of science expanded their content and methods, and external, as science occupied a more central place in culture. Scientific developments seemed more closely related than ever to obvious technological advances, contributing to the Enlightenment and the revolutionary ideal of progress.

An important development in science was the rise of state sponsorship of specific scientific projects and scientific institutions with narrowly defined utilitarian goals. The late eighteenth century saw a vastly increased coordination between science and state power, often mediated through institutions like Revolutionary France's First Class of the Institute and Britain's Royal Society. These efforts included the creation of the metric system and the spread of botanical gardens for agricultural research. Not only governments saw science as pragmatically useful. Scientists, particularly in Great Britain, also contributed to the expansion of private capitalist enterprise in the era of the Industrial Revolution, and capitalists, engineers, and scientists often worked closely together.

Western science became increasingly global along with Western empires. Science was an important part of imperial control and administration, and the period saw numerous scientific expeditions such as those of Captain James Cook in the South Pacific and Spain's Royal Botanical Expedition to Mexico. French scientists accompanied Napoleon's expedition to Egypt. The newly independent nations of the Americas continued this process, as the United States under President Thomas Jefferson sponsored Lewis and Clark's expedition over North America, part of whose mission was the gathering of natural history specimens and geographical information. Scientific societies cooperated in making and recording observations on a global basis, as in the famous transits of Venus across the face of the sun in 1761 and 1769.

The growth of the scientific sector led to an increase in the number of scientific professionals.

Professionalization narrowed the range of voices participating in science, as a pronounced division between "amateur" and "professional" scientists began to emerge. The ideal of the "amateur" scientist persisted longer in England, lacking either the German and Scottish university culture or the French scientific bureaucracy. However, even the Royal Society, a bastion of scientific amateurs, was feeling the pressure of professionalization by the early nineteenth century. Some entire populations found themselves barred from the new scientific professions, the most obvious example being women and persons of non-European descent. Scientific professionalization along with the growing volume of knowledge that a budding scientist had to absorb also led to a growing gap between working scientists and scientific popularizers.

Scientific societies and government agencies were more important for science than universities in most countries. Partial exceptions were Scotland and Germany, where many leading scientists were university professors. The leading scientific societies outside Britain and France included the Berlin Academy, the Imperial Academy of Sciences of St. Petersburg, the American Philosophical Society of Philadelphia, and the Royal Swedish Academy of Sciences in Stockholm. Informal groups, such as the Lunar Society of Birmingham and France's high-powered Society of Arcueil (1807–1813), were also important in the development of science.

Although scientists were growing more removed from the general population, science and scientific innovation began to attract more broad cultural attention. Enlightenment and the belief in progress provided powerful motivations for the popularization of science. Electrical science, which underwent several advances in this period including Alessandro Volta's invention of the battery, was particularly suited for dramatic experiments and presentations. Although the practice of European science remained heavily dominated by male Christians, its audience at least broadened considerably during the Enlightenment. Scientists, particularly those like the English chemist Humphry Davy

who possessed a flair for showmanship, could both inspire and capitalize on popular celebrity. Even less creative scientists could make careers for themselves as popularizers.

The general popularity of science in the Enlightenment was challenged by the rise of romanticism. Conservative Romantics like Joseph de Maistre believed that arrogant scientism helped cause the disasters of the French Revolution. Another Romantic critique of science emerged in Britain in response to the early Industrial Revolution. The destructiveness and economic injustice of early industrialism was blamed on the habits of mind—rational, calculating, selfish—fostered by science. This Romantic mistrust of technology, science, and scientists was memorably expounded in Mary Shelley's classic *Frankenstein* (1818), whose hero's inability to combine his scientific genius with understanding of the heart leads to his doom.

In 1750, French scientists possessed by far the most formidable apparatus for the support of science in Europe's most powerful and wealthy state. French was the language of international scientific communication, although it had not entirely displaced Latin. Paris, the home of the Royal Academy of Sciences and many other scientific associations and institutions, was the capital of European science. Much of this predominance was lost with the French Revolution of 1789. The revolutionaries eliminated many scientific institutions, including the Royal Academy of Sciences. Some important French scientists lost their lives in the revolution, most notably the chemist and tax farmer Antoine-Lavoisier.

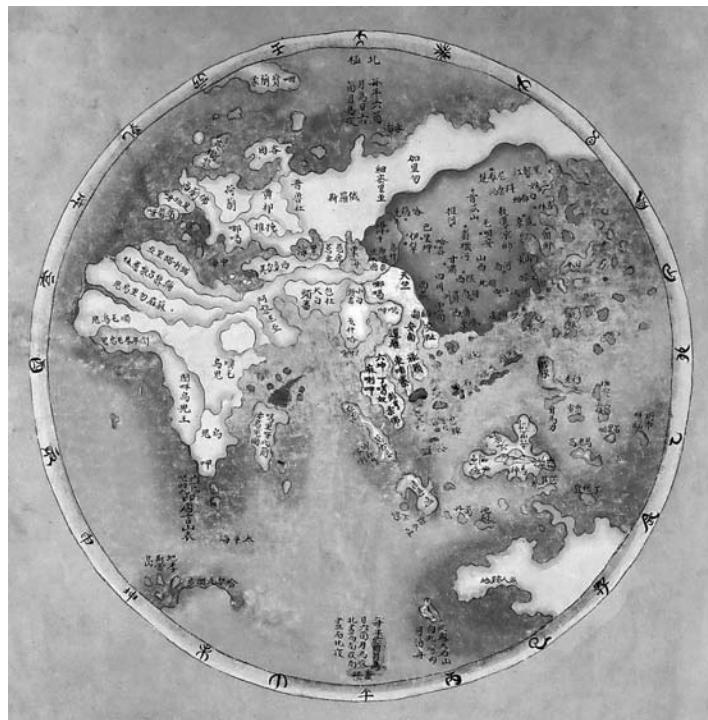
However, the revolution was more of an interruption in the French predominance than its downfall. Lavoisier's execution did not stop the triumph of his theories. The revolutionaries, and their successors in the Napoleonic period, did provide much employment for physical scientists in practical concerns, from the vast project for creation of new weights and measures, which resulted in the metric system, to supervising the manufacture of gunpowder for the revolutionary armies. The revolutionaries founded new institutions, including the Institute of France, the Museum of Natural History, and the Ecole Polytechnique, a European center of

mathematical research. Paris under Napoleon bloomed again as an international scientific capital, as in addition to French scientists such as the mathematician and cosmologist Pierre-Simon Laplace Napoleon actively recruited foreigners such as the American Loyalist physicist Benjamin Thompson, Count Rumford. The social mobility opened up by the revolution also paved the way for many younger scientists, including the zoologist Georges Cuvier and the chemist Joseph-Louis Gay-Lussac. Even cooperation with scientists in hostile nations did not entirely disappear, thanks in large part to Joseph Banks, head of the Royal Society from 1780 to 1820.

—William E. Burns

Science in China in the Eighteenth Century

Science in China, as in Europe, evolved along lines that reflect the ideological and material interests of those with the time to pursue it and the money to fund it. In eighteenth-century China, scientific knowledge, or what might be better identified as natural studies, developed from



Chinese map of the Eastern hemisphere, made for the Qing court, 1790. (Bildarchiv Preussischer Kulturbesitz/Art Resource, NY)

THE QIANLONG EMPEROR AND TECHNOPHOBIA

At the end of the eighteenth century the English king sent an embassy that was received by Qianlong. George III asked for expanded trade, and Qianlong answered in the form of a letter delivered by Lord Macartney. In the letter the emperor replied, “We have never valued ingenious articles, nor do we have the slightest need of your country’s manufactures.” This quote has been used by Europeans to demonstrate Chinese xenophobia and a nonprogressive attitude toward the technology and the science of Europe. But Qianlong wrote these words at the end of his life after conquering massive territories in central Asia with the help of European Jesuit cartographers and weapons experts. Qianlong, a Manchu emperor of a Chinese civilian state, was unwilling to admit interest in foreign technology since it would demonstrate weakness both domestically and internationally. Moreover, most of the manufactures brought as gifts in 1793 were not marketable in China, and the advanced weapons technology that would have interested Qianlong was excluded. Many Chinese and European documents from the eighteenth century demonstrate an ongoing exchange of technical and scientific information between China and Europe.

—David Luesink

Source

Joanna Waley-Cohen, “China and Western Technology in the Late Eighteenth Century,” *American Historical Review* 98(5) (1993): 1525.

three interrelated factors: the long, expansive reign of the Qianlong emperor (1736–1796); the diminishing but still important European Jesuit presence as court mathematicians, astronomers, and cartographers for Qing imperial expansion; and the growth of an empirical scholarly community that moved away from moral studies toward evidential studies (*kao zheng xue*) of classical texts, philology, mathematics, and astronomy. Nonmilitary technological advances in China, as in Europe, were usually made by semiliterate clerks and craftsmen on the margins of society who could not read the texts written by elites.

The emperor supported astronomical research because making an accurate calendar that

governed plantings and harvest prevented famine and peasant uprisings that would threaten his rule. Mapmaking enabled administrators to govern and generals to wage the wars of conquest and consolidation that nearly doubled the area of the empire during the century. Qianlong’s generals brought Jesuits with technological expertise on many of their military expeditions, taking advantage of their skills in cartography and weapons-casting technology to oversee the use of heavy artillery. At the beginning of the eighteenth century, the missionary work of the Jesuits was proscribed by the Qing emperors, but a small number, together with their Chinese converts, dominated the Astro-calendric Bureau and the Academy of Mathematics until the Jesuit order was suppressed by the pope in 1773.

Chinese court scholars such as mathematician Mei Wending (1633–1721) and encyclopedist Chen Yuanlong (1652–1736) incorporated Jesuit Western learning (*Xixue*) into Chinese learning, revived the study of China’s own ancient mathematical and medical traditions, and made significant claims for Chinese origins of Western learning in books such as Chen’s *Mirror Origins of Scientia* (1735). In 1715 the Kangxi emperor banned questions about astronomy, astrology, and music in the imperial examinations, encouraging two related trends. Scholars in the extremely competitive examination system focused on exacting research in phonology, paleography, and etymology to seek truth from facts in the classic Confucian texts, while the growing number of scholars in the rich South Yangtze region who could not attain official positions developed a world of independent scholarship that continued to touch on scientific topics. This work of official and nonofficial exacting scholarship continued under further generations of evidential studies scholars such as Dai Zhen (1724–1777), Qian Daxin (1728–1804), and Ruan Yuan (1764–1849). One of the most interesting products of this century was Qian and Ruan’s *Biographies of Astronomers and Mathematicians* (1799), which summarized the works of 280 scientists, including 37 Westerners such as Nicolaus Copernicus (1473–1543) and missionaries to China such as Jesuit Matteo Ricci (1552–1610). This book demonstrated the integration of science with evidential studies at the end of

the century and laid the foundation for the next great contact between Chinese and Western learning in the nineteenth century.

Chinese scholars in the eighteenth century assimilated learning from the West with caution, partly because seventeenth-century Jesuits had misrepresented the heliocentric astronomy of Copernicus and Galileo for religious reasons. Galileo's version only reached China in the mid-eighteenth century, causing confusion. While this miscommunication may have led to limits in the development of science in China, it is far more interesting to ask what did happen in natural studies and technology, separated as their centers of activity were, than it is to ask the old question of why a scientific revolution did not happen in China.

—David Luesink

Bibliography

- Elman, Benjamin. *On Their Own Terms: Science in China, 1550–1900*. Cambridge: Harvard University Press, 2005.
- Lach, Donald. *Asia in the Making of Europe*. 3 vols. Chicago: University of Chicago Press, 1965.
- Needham, Joseph, et al. *Science and Civilization in China*, Vol. 7, pt. 2, *General Conclusions and Reflections*. Edited by Kenneth Robinson. Cambridge: Cambridge University Press, 2004.
- Sivin, Nathan. "Copernicus in China." In *Science in Ancient China: Researches and Reflections*. Collected Studies Series, CS 506. Aldershot, UK: Variorum, 1995.
- Waley-Cohen, Joanna. "China and Western Technology in the Late Eighteenth Century." *American Historical Review* 98(5) (1993): 1525–1544.

Scientific Academies in Europe

Academies and scientific societies dominated institutional science in the eighteenth century more than ever before or since. Virtually every male scientist of importance was a member or correspondent of at least one scientific society. (Women, with very few exceptions, were barred from membership.) Society memberships were an important way of establishing one's standing as a member of the scientific community and were frequently listed after the author's name on the title pages of their books.

A scientific society's formal chartering often occurred after years of informal meetings rather

than simply being created by a government. Academies differed from informal gatherings in that they had written rules, a fixed meeting schedule, defined membership, and their own quarters. They usually had libraries and collections of curiosities and scientific implements. Scientific academies were often charged with government functions such as overseeing observatories or advising the government on scientific and technological questions. Major societies and many minor ones also sponsored periodical publications such as the Royal Society's *Philosophical Transactions* and prize competitions. Scientific societies were only part of Europe's growing array of learned institutions, and often a scientific society existed as one part of a large academy devoted to other topics as well, such as literature and industry. Groups exclusively devoted to science were usually found where there was a large concentration of resources, such as the national capitals of Europe's most powerful states. Other specialized societies, such as societies for medicine, technology, and economic development, also had scientific interests.

The two most important scientific societies were the oldest, Britain's Royal Society and France's Royal Academy of Sciences, both founded in the 1660s. They presented strikingly different organizational models. The Royal Society did not have a fixed number of members, was open to full membership by nonscientists, and lacked an internal hierarchy among its fellows, all of whom were theoretically equal and none of whom were paid. The Royal Academy had a limited membership, and salaried members were divided into a hierarchy of classes. The Royal Society supported its activities through dues and other internal sources, while the Royal Academy was supported by the state. Most European scientific societies were organized like the Royal Academy. Close behind these two in the institutional hierarchy were the Imperial Academy of St. Petersburg, the Berlin Academy, and the Royal Swedish Academy of Sciences.

Academies formed a network with overlapping memberships and exchanges of periodicals and information. Serious cooperation between scientific academies in joint scientific endeavors began in the 1750s and 1760s with programs to observe the transits of Venus across the face

➤ JOSEPH BANKS

Joseph Banks (1743–1820), explorer, collector, and president of the Royal Society for more than four decades, dominated the public face of late-eighteenth-century and early-nineteenth-century English science. From a rising family of lawyers and gentry, Banks made his scientific reputation by accompanying Captain James Cook in the *Endeavour* voyage in the South Pacific from 1768 to 1771 as a natural historian and representative of the Royal Society. Banks made enormous collections and kept a voluminous journal of his observations, not published until the twentieth century. (Banks published very little, mostly because of his own reluctance.) On his return to England he became the great celebrity of the voyage.

In 1778 Banks was elected president of the Royal Society, a position he held the rest of his life.

He was a successful but controversial president. His strengths were his conscientious devotion to duty and an amazing capacity for work. The letters he wrote and received in his presidency number well over 100,000. His greatest achievement as a scientific statesman was maintaining connections between British and Continental scientists during the Revolutionary War and the Napoleonic Wars. On occasion he intervened to procure the release of British savants held by the French and French scientists held by the British. Banks's weakness, which increased with age and gout, was an autocratic temperament. He was also seen as an obstacle by people who wanted to reform the Royal Society to make it a strictly professional group composed only of scientists.

—William E. Burns

of the sun from various positions all over the world. The second set of transit observations, in 1769, was particularly noteworthy for the participation of Philadelphia's American Philosophical Society, the first successful effort to transplant the scientific academy across the Atlantic.

Although many societies had lost vitality by the late eighteenth century, what ended the age of scientific societies was the French Revolution, which boldly abolished the Royal Academy of Sciences along with every other academy in Paris and the provinces in 1793. The objection to the academies was that they were aristocratic and elitist and kept knowledge from the people. The Royal Academy was restored two years later in the form of the first section of the Institute in France, but the provincial academies were not revived until after Napoleon's fall in 1815 and never regained their prominence. The Revolutionary War and the Napoleonic Wars with their accompanying devastation also forced several continental scientific societies to close their doors, either temporarily or permanently. Another long-term menace was the rise of smaller specialized societies. Such societies created in the early nineteenth century included France's Society of Arcueil, an elite but short-lived group specializing in physics and chemistry, and Britain's Geological Society, founded in 1807 by

British geologists who believed that the Royal Society was insufficiently attentive to their science. Despite Royal Society opposition, the new society proved a great success.

—William E. Burns

Bibliography

- Gascoigne, John. *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture*. Cambridge: Cambridge University Press, 1994.
- Hahn, Roger. *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666–1803*. Berkeley and Los Angeles: University of California Press, 1971.
- McClellan, James E., III. *Science Reorganized: Scientific Societies in the Eighteenth Century*. New York: Columbia University Press, 1985.
- Sorrenson, Richard. "Towards a History of the Royal Society in the Eighteenth Century." *Notes and Records of the Royal Society* 50 (1996): 29–46.

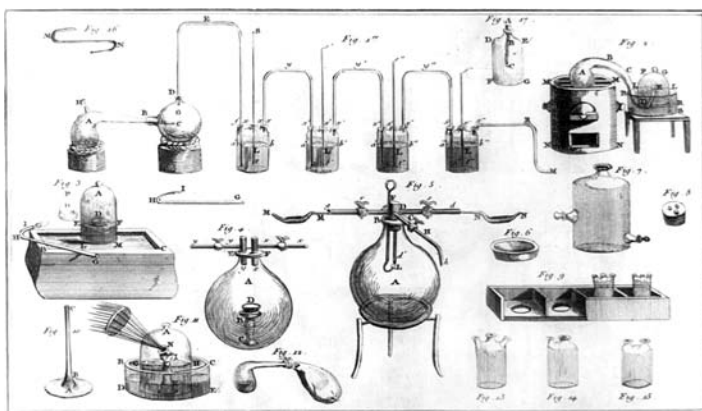
European Advances in Chemistry

Chemistry underwent the most profound changes of any science during the Enlightenment. Its vocabulary, subject matter, range of available procedures, and fundamental theories all were vastly altered, and its position within the world of science moved from marginal to central.

The most important development in the mid-seventeenth century was the chemical analysis of the air. Traditionally, air had been considered a single element. The center of the new research into pneumatic chemistry was Great Britain. The first distinct air to be separated and identified was carbon dioxide, which the Scottish professor Joseph Black produced in a series of experiments he performed on magnesium carbonate and called fixed air. Henry Cavendish isolated hydrogen (inflammable air) in 1766 and also devised a way of holding gases over liquid mercury rather than water, ending the problem of their dissolution in water. Daniel Rutherford (1749–1819) identified nitrogen in 1772. Joseph Priestley discovered many types of air, the most important being dephlogisticated air, later named oxygen by Antoine-Laurent Lavoisier.

Lavoisier is associated with the revolutionary discovery that combustion was a combination of fuel with oxygen rather than a release of phlogiston. Along with Cavendish, Lavoisier also introduced more precise weight measurement and mathematical rigor into chemistry. He began to reform chemical terminology into a more rational system based on elements and championed the idea that any substance with enough heat could become a gas, or the theory of the gaseous state. Lavoisier also introduced several new pieces of equipment, such as the calorimeter to measure heat.

Lavoisier's theory vanquished its rivals by the close of the eighteenth century, and chemistry continued its rapid development. Romantics, both British and Continental, promoted chemistry, seen as a science of dynamic and mysterious forces, as compared to deterministic physics and mechanics. Important early-nineteenth-century developments included the refutation of Lavoisier's theory that oxygen was the cause of acidity, the rise of electrochemistry, and John Dalton's chemical atomism. The Italian Alessandro Volta's generation of electricity by the juxtaposition of different metals (silver and zinc) in 1800 led to the science of electricity becoming more closely allied to chemistry. The English experimenter Humphry Davy adapted the newly invented voltaic pile, or battery, to chemical analysis. His first great triumph was the decomposition of water into hydrogen and oxygen in 1801. Dalton's



Apparatus used by Antoine Laurent Lavoisier to study chemical reactions in the combustion of substances, 1789. (Library of Congress)

➤ ANTOINE-LAURENT LAVOISIER

Unlike many aspiring scientists, the French aristocrat Antoine-Laurent Lavoisier (1743–1794) was not driven by financial ambition. Already very wealthy, he invested in the Farmers-General, a group that subcontracted tax collection from the government. The most important contribution that the Farmers-General made to Lavoisier's scientific life was a Farmer's daughter, Marie-Anne Pierrette Paluze (1758–1836), whom he married in 1771. Madame Lavoisier was useful as an assistant, an illustrator of his books, and a translator; despite his interest in British chemistry, Lavoisier never learned English.

Lavoisier's most important chemical discovery was that combustion was the combination of the burning substance with a gas he called oxygen. His *Elementary Treatise of Chemistry* (1789) set forth his controversial theories. Lavoisier's capacity for work was astounding. In addition to his experiments and many tasks for the Academy of Sciences and the Farmers-General, he was appointed to several government commissions and ran his estate at Frechines as an experimental farm. Lavoisier originally supported the French Revolution and fought long and hard, but ultimately in vain, to save the academy from the revolutionary government. He was executed for his role in the unpopular Farmers-General, which the revolution had abolished.

—William E. Burns

New System of Chemical Philosophy (1808) asserted that all basic elements were composed of tiny particles, or atoms, and that they combined in fixed ratios to form compounds. Elemental atoms were both indestructible and could not be created, and they could not be transmuted into another element. Atoms of different elements had different weights. The atoms of elements combined to form what Dalton called compound atoms and what we now call molecules.

—William E. Burns

Bibliography

- Brock, William H. *The Norton History of Chemistry*. New York: Norton, 1993.
- Golinski, Jan. *Science as Public Culture: Chemistry and Enlightenment in Britain, 1760–1820*. Cambridge: Cambridge University Press, 1992.
- Knight, David. *Ideas in Chemistry: A History of the Science*. New Brunswick, NJ: Rutgers University Press, 1992.
- Poirer, Jean-Pierre. *Lavoisier: Chemist, Biologist, Economist*. Translated by Rebecca Balinski. Philadelphia: University of Pennsylvania Press, 1996.

Biology in the Age of Reason

Eighteenth-century European scientists described and classified living things to an unprecedented degree but also questioned the nature of life and reproduction itself. Numerous life forms from all over the world were cataloged, and many found a place in Europe's expanding system of botanical gardens and zoological collections. By the early 1800s the term "biology" had been coined for the science of living things.

Botany evolved in the eighteenth century from a branch of medicine principally concerned with plants' medicinal uses to an independent science. Botanists were particularly challenged by the thousands of new plants and plant descriptions reaching Europe from explorers and botanical expeditions all over the globe. The necessity of finding a place for all of this information made a workable system of plant classification, for which scientists had been striving since the sixteenth century, even more urgent. The Swedish botanist Carl Linnaeus became one of the most influential scientists of the century by inventing a popular classification scheme, the sexual system of Linnaeus, based on the number and arrangement of a plant's sexual organs. Linnaeus's disciples applied his system to plants in many countries. His system was rivaled by natural classification, a predominantly French technique that looked at the whole plant. The natural classifiers had the support of the powerful French Royal Botanical Gardens. In the early nineteenth century natural classification displaced Linnaean classification among professional botanists. Classification was not the only area of botanical advance. Plant sexuality, still controversial at the dawn of the eighteenth century, became better understood, as did plant physiology, the study of how plants absorb nutrition from the air and ground.

Zoology did not attract as much interest as botany. The most important zoologists were French, including the Comte de Buffon and Georges Cuvier and Jean-Baptiste Lamarck at the Paris Museum of Natural History in the

LAZZARO SPALLANZANI REFUTES SPONTANEOUS GENERATION

The Italian cleric and university professor Lazzaro Spallanzani (1729–1799) was the most meticulous and creative biological experimenter of the Enlightenment. His concern for experimental technique enabled him to refute the English experimenter John Turberville Needham's defense of spontaneous generation. Needham boiled beef broth for a few minutes, then put it in a flask sealed with cork. He claimed that boiling killed any germs in the broth, and sealing prevented other germs from entering. When the flasks were opened later and

microscopic examination found living organisms, they were proof of spontaneous generation. Spallanzani showed that by boiling it for a longer time and using hermetically sealed glass, the broth or any other liquid remained free of organisms, thus disproving spontaneous generation. However, Needham and his supporters claimed that prolonged boiling destroyed the liquid's ability to generate life, and the controversy remained unsettled.

—William E. Burns

Revolutionary and Napoleonic periods. The great systematic works of Cuvier and Lamarck provided a superior organizational scheme for information about animal species. Scientists debated whether it was possible for a species to become extinct or to evolve. Animal anatomy, or comparative anatomy, was no longer practiced mainly by physicians hoping to better understand human anatomy but instead became an autonomous enterprise. Cuvier, the first major comparative anatomist without a medical education, also broadened the science by studying fossils as well as living species.

The nature, or even the existence, of the distinction between living and nonliving things presented many problems as the old debate over whether living things could be spontaneously generated from nonliving material continued. The question of whether animals reproduced by forming a new individual from scattered parts (epigenesis) or whether each began as a fully formed miniature in its mother's egg or father's sperm (preformationism) also provoked passionate controversy.

—William E. Burns

Bibliography

- Delaporte, François. *Nature's Second Kingdom: Explorations of Vegetality in the Eighteenth Century*. Translated by Arthur Goldhammer. Cambridge, MA: MIT Press, 1982.
- Hankins, Thomas L. *Science and the Enlightenment*. Cambridge: Cambridge University Press, 1985.
- Pinto-Correia, Clara. *The Ovary of Eve: Egg and Sperm and Preformation*. Chicago and London: University of Chicago Press, 1997.

Scientific and Technical Education under Napoleon

One of Napoleon's most long-lasting legacies to France was his reorganization of the educational system. The French Revolution had destroyed the old Church-dominated educational system but put little in its place. The creation of the most centralized system of education the world had ever seen began with the promulgation of the law on public instruction in 1802. This created a system of elite secondary schools called lycées controlled from Paris. At these schools boys were taught a traditional curriculum built



Napoleon visiting the École Polytechnique in Paris, nineteenth-century illustration. (Photo12/The Image Works)

around the classics and mathematics. Napoleon's centralization of education continued with the founding of the Imperial University in 1807. The term "university" is misleading, as the Imperial University was actually a centralized bureaucracy charged with overseeing all instruction in France. Several of France's leading scientists, particularly the chemist Antoine-François de Fourcroy and the naturalist Georges Cuvier, helped devise the reformed educational system or worked in it. However, the reformed system was criticized for its traditional curriculum based on the classics and French literature with comparatively little emphasis on science and mathematics. Much of this was due to the influence of the first master of the university, Louis de Fontanes, who as a conservative Catholic and opponent of the Enlightenment promoted the study of Greek and Latin over science and mathematics.

The density of educational and scientific institutions in Paris and the practice of one scholar holding multiple positions at different institutions enabled the city to support a remarkably large number of both senior and junior scientists. The elite Parisian institutions incorporated into the new educational system included the Ecole Polytechnique, Europe's leading mathematical and engineering institution, founded in 1794 and relocated and made into a military institution by Napoleon in 1805. (Numerous military academies, including the United States

▶ NAPOLEONIC ESTABLISHMENT OF LYCÉES

Excerpt from Title IV of the law on public education promulgated in 1802 setting up the lycées:

“9. Lycées shall be established for instruction in letters and the sciences. There shall be at least one lycée for each tribunal of appeal district.

10. Instruction shall be given in the lycées in the ancient languages, rhetoric, logic, ethics, and the elements of the mathematical and physical sciences.

The number of professors in the lycée shall never be less than eight; but it can be increased by the government, as well as the number of the subjects of instruction, according to the number of pupils who shall attend the lycées.

11. There shall be in the lycées, study masters, and masters of drawing, military exercises, and of accomplishments.”

—William E. Burns

Military Academy at West Point, founded in 1819, would be modeled on the École Polytechnique.) Distinguished professors at the Polytechnique included the mathematicians Gaspard Monge and Joseph Fourier.

Napoleon and the educational elite took little interest in the education of women, who

they believed should be educated only enough to function as wives and mothers. What little science and technology was formally taught to women was oriented to the household. The one exception was the first national institute anywhere for teaching midwives, founded in 1807 and headquartered in Paris, that taught herbal medicine and vaccination as well as midwifery.

Like previous French rulers, Napoleon hoped that science could contribute to economic development. Among his ideas was a system of institutions to train 100 chemists in improved means of extracting sugar from sugar beets, hoping to make France self-sufficient in sugar. Napoleon fell from power before these institutions were set up, and France went back to importing cane sugar.

—William E. Burns

Bibliography

Bergeron, Louis. *France under Napoleon*. Translated by R. R. Palmer. Princeton, NJ: Princeton University Press, 1981.

Daston, Lorraine. “Nationalism and Scientific Neutrality under Napoleon.” In *Solomon’s House Revisited: The Organization and Institutionalization of Science*, edited by Tore Frangsmyr. Canton, MA: Science History Publications, 1990.

Gillispie, Charles Coulston. *Science and Polity in France: The Revolutionary and Napoleonic Years*. Princeton, NJ: Princeton University Press, 2004.

■ Introduction: Europe’s “Second Scientific Revolution”

Europe’s first scientific revolution is conventionally dated from 1543, when the Polish astronomer Nicolaus Copernicus in his *On the Revolution of the Heavenly Spheres* challenged the geocentric theories of the universe set forth in antiquity by Aristotle and Ptolemy. This scientific revolution came to a climax in 1687, when the English mathematician and scientist Isaac Newton outlined his theory of the law of universal gravitation in his *On the Mathematical Principles of Natural Philosophy*. In the century and a half between the publication of these two books, mathematicians developed

coordinate geometry and calculus (infinitesimal and differential) and made important breakthroughs in the areas of probability theory, number theory, algebra, and mathematical notation. Physicists discovered the laws of mechanics, astronomers confirmed the reality of heliocentrism, and “building on the shoulders of giants” Newton showed how the physical laws determining earthly motion and the laws determining planetary motion were two different expressions of the same law, that of universal gravitation. In the words of Alexander Pope, England’s greatest eighteenth-century poet,

"Nature and Nature's laws lay hid in night.
God said, Let Newton be! And all was light."

To the thinkers of the eighteenth-century Enlightenment there was no more convincing proof of the regularity of the laws of nature and the power of human reason than the achievement of seventeenth-century science.

A second scientific revolution took place in Europe in the nineteenth century. Progress in physics, astronomy, and mathematics continued, but more rapid and impressive strides were made in chemistry, biology, geology, genetics, and the study of electricity, magnetism, and heat. Scientists carried on their research in new institutional settings. The leading figures of the first scientific revolution were self-taught in the sense that universities and schools offered little in the way of scientific and mathematical training. Many scientists worked in isolation, with their memberships in a small number of scientific societies providing the only opportunities for sharing their findings through publication. Beginning with the foundation of the *École Polytechnique* in revolutionary France in 1794, a number of states founded special institutions where experts in their fields trained future scientists. Beginning in the 1820s, German universities paved the way by offering scientific training not only for professional scientists but also for future pharmacists, teachers, physicians, and civil servants. As the German model spread, university laboratories became important centers of scientific research, the results of which were published in journals sponsored by new professional societies linked to specific subdisciplines.

Another feature of science in the nineteenth century was the new bond between the sciences and technology. Despite the invention of the telescope by Galileo and of the microscope by von Leeuwenhoek, the breakthroughs in the first scientific revolution had not been dependent on new instrumentation or equipment. Furthermore, although the discoveries of the age had profoundly affected the perceptions of intellectuals, they had had little impact on how humans lived their daily lives. Nineteenth-century science relied on more accurate instruments for measuring time, weight,

heat, electrical currents, magnetic force, the chemical composition of materials, and radiation. More importantly, science contributed to the many technological innovations of the period. Basic scientific research made possible the telegraph, the telephone, chemical fertilizers, a host of electrical devices, countless new industrial processes, and new medical techniques and treatments.

Science in the nineteenth century continued to affect how humans perceived their world. Just as the acceptance of Newtonianism in the eighteenth century had strengthened the belief in human reason and the idea of a mechanical universe running according to a few basic principles, Darwinism in the nineteenth century focused attention on the importance of change, raised unsettling religious issues, and affected political and social ideologies. It also reinforced the idea of progress.

Then around 1900 the second scientific revolution came to an end. After a decade in which many assumptions about matter, energy, light, and the universe were called into question by new observations and experiments, science entered another period of rapid change in which concepts such as curved space, relativity, special relativity, a fourth dimension, and the space-time continuum forced scientists and laypersons to discard long-held conceptions. A new revolution, the Einsteinian Revolution, had begun.

—James H. Overfield

The New Physics—The Curies, Rutherford, Maxwell, Planck, and Einstein

Physics, the branch of science that deals with matter and energy and their interactions, underwent fundamental changes and achieved spectacular results in the nineteenth century. Discoveries relating to the nature of light, heat, electricity, magnetism, and the makeup of matter itself resulted not only in new theoretical insights but also in practical discoveries that served the commercial, military, and political needs of an increasingly industrialized society. The most spectacular breakthroughs occurred at the close of the nineteenth century and the beginning of the twentieth century, but these



James Maxwell was a Scottish physicist who is best known for his formulation of electromagnetic theory and for his research on electricity and magnetism. (Oxford Science Archive/StockphotoPro)

achievements were based on foundations laid earlier in the 1800s.

A key advance occurred in the 1830s when the British physicist Michael Faraday (1791–1867) demonstrated that electricity and magnetism are two aspects of the same phenomenon. Following up his insight, Scottish physicist James Clerk Maxwell (1831–1879) observed, as had Faraday, that magnetism does not end at the edge of a magnet but instead travels through space to attract, for example, an iron nail. If it were linked with magnetism, electricity must likewise travel through space and not just through a metal or an ionic solution. Moreover, Maxwell demonstrated in a series of papers in the 1860s that electricity and magnetism, electromagnetic radiation, were a type of light. It was obvious that light travels through space, but Maxwell did not consider this space empty. A tenet of physics held that light was a wave. Maxwell knew that sound also was a wave and that it did not travel through a vacuum. Rather, sound needed a medium (air, for example) through which to travel. Light must by analogy also need a medium through which to travel. Following convention, Maxwell identified this medium that permeated all space as the ether.

In revolving around the sun, Earth must move through the ether, causing a drag analogous to the drag one experiences in pedaling a bicycle into a headwind. A wave of light moving into the ether should slow down from the drag, yet all efforts in the late nineteenth century failed to detect a reduction in the speed of light. No matter in which direction it traveled, light held a constant speed.

This led Swiss physicist Albert Einstein (1879–1955) in 1905 to deny the existence of the ether and to assert that the speed of light is

always constant. Tame as these claims may seem, the second of them revolutionized the concepts of time, space, and matter. Time, Einstein calculated, ticks slower the nearer one approaches the speed of light until at light speed it stands still. The length of an object decreases the nearer one approaches light speed, whereas paradoxically its mass increases. At light speed the mass of an object is infinite, implying that infinite energy is necessary to accelerate an object to light speed. Because it is impossible to harness infinite energy, an object cannot reach light speed, which must therefore be the maximum speed in the universe. In Einstein's physics, time, space, and matter are not the absolutes that common sense supposes them to be but instead are relative to the observer who measures them.

The impossibility of harnessing infinite energy did not prevent Einstein in a second paper in 1905 from quantifying a new relationship between energy and matter. He calculated that energy and mass (the measure of matter) are interconvertible, according to the equation $E=mc^2$. Because c^2 equals 90 million billion meters per squared second, a tiny mass yields enormous energy.

In a third paper in 1905 Einstein returned to an old problem of thermodynamics, blackbody radiation. In the late nineteenth century German physicist Gustav Robert Kirchhoff (1824–1877) conceived of an object (a blackbody) that radiates all the energy it receives as heat. Kirchhoff and other physicists were puzzled that mathematical equations could approximate but could not describe with precision the energy released as heat in experiments. In 1900 German physicist Max Planck (1858–1947) harmonized experiment and equation by assuming that a blackbody absorbs energy and radiates heat not as a continuum but in discrete units that he called quanta. In 1900 Planck may have viewed quanta as nothing more than a mathematical convenience, but Einstein was quick to apply the new quantum theory to light. Einstein demonstrated that light could knock electrons from a metal with some multiple of a quantum in energy. He interpreted this phenomenon as evidence that light radiates energy in quanta and thus is a composite of particles, each a quantum. In addition to being a wave, light was also a particle.

► PIERRE CURIE DESCRIBES THE DISCOVERY OF RADIOACTIVITY

This excerpt comes from Pierre Curie's 1905 Nobel lecture in Stockholm. The lecture was delivered two years after Pierre and Marie Curie had won the Nobel Prize in Physics (along with Antoine Henri Becquerel), as the Curies were not able to come to Stockholm in 1903 due to teaching obligations and poor health.

"Becquerel discovered in 1896 the special radiating properties of uranium and its compounds. Uranium emits very weak rays which leave an impression on photographic plates. These rays pass through black paper and metals; they make air electrically conductive. The radiation does not vary with time, and the cause of its production is unknown.

Mme. Curie in France and Schmidt in Germany have shown that thorium and its compounds possess these same properties. Mme. Curie also showed in 1898 that of all the chemical substances prepared or used in the laboratory, only those containing uranium or thorium were capable of emitting a substantial amount of the Becquerel rays. We have called such substances *radioactive*. . .

Mme. Curie has studied the minerals containing uranium or thorium, and in accordance with the views just stated, these minerals are all radioactive. But . . . she found that certain of these were more active than they should have been according to the content of uranium or thorium. Mme. Curie then made the assumption that these substances contained radioactive chemical elements which were as yet unknown. We . . . have sought to find these new hypothetical substances in a uranium ore, *pitchblende*. By carrying out the chemical analysis of this mineral and assaying the radioactivity of each batch separated in the treatment, we have . . . found a highly radioactive substance with chemical properties close to bismuth which we have called polonium, and then . . . a second highly radioactive substance close to barium which we called radium."

—Christopher Cumo

Source

Nobel Lectures, Physics, 1901–1921 (Amsterdam: Elsevier, 1967), 73–74.

Einstein and Planck were two of many physicists to focus on energy. In 1896 French physicist Antoine-Henri Becquerel (1852–1908) had discovered that uranium spontaneously emits energy. In 1898 Polish physicist Marie Curie (1867–1934) identified thorium as likewise radioactive, and later that year she and her husband Pierre (1859–1906) added polonium and radium to the roster of radioactive elements. In 1902 British physicist Ernest Rutherford (1871–1937) discovered that a radioactive element emits, in addition to energy, two types of particles, helium nuclei and electrons, alpha and beta particles, respectively. In releasing an alpha particle a radioactive element transmutes into a lighter element. Uranium, for example, degrades into thorium.

Rutherford was interested not only in radioactivity but also in the structure of an atom. His assistant Johannes Hans Geiger (1881–1945) demonstrated that an atom could deflect an alpha particle fired at it. This result led Rutherford in 1911 to envision an atom as largely empty space

except at the core, which was a nucleus containing nearly all the mass of an atom. Electrons must occupy the empty space and in some fashion revolve around the nucleus. This nuclear model of the atom replaced the view that an atom was a more or less uniform distribution of matter.

These advances in physics ushered in the nuclear age in the twentieth century. During World War II physicists in the United States would use $E=mc^2$ to calculate the energy released in a nuclear explosion. After the war the equation would describe the energy that a nuclear plant produces and that the sun radiates to sustain life on Earth.

—Christopher Cumo

Bibliography

- Brush, Stephen G. *The History of Modern Science: A Guide to the Second Scientific Revolution, 1800–1950*. Ames: Iowa State University Press, 1988.
- Capria, Marco Mamone, ed. *Physics before and after Einstein*. Amsterdam: IOS Press, 2005.
- Supplee, Curt. *Physics in the 20th Century*. New York: Harry N. Abrams, 1999.

Biology

In 1750 the activities of those who studied life were too diverse to lend a simple definition to what they did. The term “biology” did not exist. To be sure, the disciplines of botany and zoology had long existed, but they comprised only part of the modern science of biology. In 1750 the term closest in meaning to biology was “natural history,” which in the eighteenth century united the scientists, philosophers, physicians, clerics, and amateur enthusiasts who studied life. Often indistinct from natural theology, natural history had in 1750 emancipated itself from neither theology nor geology. It was an eclectic science that included people who studied nature to clarify the relationship between God and his creation, those who studied rocks and the fossils, and others who studied life for the purposes of medicine or physiology.



Gregor Mendel, the nineteenth-century Augustinian friar known as the “father of genetics,” proved that the inheritance of traits follows particular laws. These laws, known as Mendel’s Laws of Inheritance, became the cornerstone of genetic research in the early twentieth century. (William Bateson, *Mendel’s Principles of Heredity: A Defence*, 1902)

The Enlightenment began to drive a wedge between natural history and natural theology and in doing so asserted the independence of natural history. French philosophe Denis Diderot (1713–1784) rejected the claim of spiritualists that a vague vital force animated life and asserted that life is the sum of purely physical processes. Affirming Diderot and taking their cue from the work of Italian physician Luigi Galvani (1737–1798), who caused muscular contractions in frogs’ legs by applying static electricity, some nineteenth-century scientists theorized that electricity was the physical force that animates life.

The casting out of vitalism began to transform natural history into a secular pursuit. Conscious of this development, French evolutionist Jean Baptiste Lamarck (1744–1839) in 1801 coined the term “biology” for the activities that had once gone by the rubric of natural history. Important as the change in terminology was, it could not separate biology, at least in the short term, from its past as an endeavor of amateurs. Charles Darwin (1809–1882), the century’s greatest biologist, remained all his life an amateur naturalist with no formal connection to a museum or university. Gregor Mendel (1822–1884), the famed Austrian botanist who discovered the basic laws of heredity, also was an amateur. A member of the Augustinian religious order, Mendel based his studies on peas in his monastery’s garden and gave up science altogether when he was chosen abbot of his monastery in 1868.

Both Darwin and Mendel figured prominently in the development of biology. Darwin had been one of many scientists in the nineteenth century to cast about for the source of variation in life. It had been plain for millennia that two organisms are seldom alike in every particular. Even identical twins manifest differences in behavior. Yet while Darwin and legions of others puzzled over why organisms vary, the answer was close at hand. In 1865 Mendel published the results of experiments in crossbreeding peas. Mendel asserted that peas are bundles of units, what biologists now call genes. These genes code for characteristics: the height of pea plants and the color of peas, for example. Pea plants vary from one another because they differ in their genes. An important corollary is that pea plants with the same genes should be identical.

➤ MENDEL'S DISCOVERIES ARE DISCOVERED

The following is a quotation from *Heredity and Sex* by Thomas Hunt Morgan (1913) about the discovery of Mendel's research after decades of obscurity.

"The modern study of heredity dates from the year 1865, when Gregor Mendel made his famous discoveries in the garden of the monastery of Brunn. For 35 years his paper on heredity, embodying the splendid results of his work, remained unnoticed. It suffered the fate that other important discoveries have sometimes met. In the present case there was no opposition to the principles involved in Mendel's discovery, for Darwin's great work on 'Animals and Plants' (1868), that dealt largely with problems of heredity, was widely read and appreciated. . . .

In 1900 three botanists were studying the problem of heredity. Each obtained evidence of the sort Mendel had found. Happily, Mendel's paper

was remembered. The significance of his discovery now became apparent. De Vries, Correns, and Tschermak brought forward their evidence in the same year (1900). Which of the three first found Mendel cannot be stated, and is of less importance than the fact that they appreciated the significance of his work, and realized that he had found the key to the discoveries that they too had made. From this time on the recognition of Mendel's discovery as of fundamental importance was assured. Bateson's translation of his paper made Mendel's work accessible to English biologists, and Bateson's own studies showed that Mendel's principles apply to animals as well as to plants."

—Christopher Curno

Source

Thomas Hunt Morgan, *Heredity and Sex* (New York: Columbia University Press, 1913), 73–75.

The environment must be responsible for differences in pea plants with the same genotype. Mendel's work implied that although the environment can affect the characteristics of a pea plant, the environment cannot change a gene. (Mendel did not allow for mutation.) Constant in coding for characteristics, genes pass from parents to offspring through reproduction and are thus the material of heredity. Mendel's insights are the foundation of genetics, but biologists in the late 1800s ignored him, perhaps because he published little.

Ignorant of Mendel, biologists approached the problem of heredity from cytology. In 1887 Belgian cytologist Edouard Beneden discovered meiosis. Whereas somatic cells double the number of chromosomes before they divide, a process called mitosis, the cells that produce gametes hold the number of chromosomes constant before they divide. In dividing, therefore, these cells halve the number of chromosomes. A gamete, having half the number of chromosomes in a somatic cell, unites with another gamete in fertilization to restore the full number of chromosomes.

Beneden's discovery of meiosis focused attention on the chromosomes and implied that

they had a role in heredity. The issue crystallized in 1900 when three botanists independently rediscovered Mendel's paper on pea hybridization. Quick to infer the link between chromosomes and genes, American cytologist Walter Sutton in 1903 and German zoologist Theodor Boveri in 1904 asserted that chromosomes and genes are not identical structures. Instead chromosomes contain genes.

The organization of genes on a chromosome remained murky until American embryologist Thomas Hunt Morgan (1866–1945) and his students at Columbia University in 1909 began crossbreeding fruit flies. Their discovery that genes for eye color are on a sex chromosome led Morgan to envision a gene as a particle and to seek to fill in the places of these particles on a chromosome. Further experiments confirmed that a chromosome is a linear arrangement of genes. In this work Morgan united the gene and chromosome theories.

Morgan's achievements underscore the degree to which biology had changed between the mid-nineteenth and early twentieth centuries. By the early twentieth century the days had passed when a lone amateur such as Darwin or

Mendel could make fundamental contributions to biology. Biology now was a profession of specialists. Rather than the lone individual, the biologist had by the early twentieth century come to command a laboratory and graduate students. The institutionalization of biology placed biologists in the university, a particularly happy circumstance in the United States, where the land-grant colleges grew to absorb biologists in several specialties. Utilitarian in their function, these colleges called on biologists to conduct practical instead of theoretical research. Rather than constrain biology, the dictum of practicality yielded the discovery of Vitamin A and the breeding of hybrid corn by World War I.

—*Christopher Cumo*

Bibliography

- Baumel, Howard B. *Biology: Its Historical Development*. New York: Philosophical Library, 1978.
- Mayr, Ernest. *The Growth of Biological Thought: Diversity, Evolution, and Inheritance*. Cambridge: Harvard University, 1982.
- Serafini, Anthony. *The Epic History of Biology*. New York: Plenum, 1993.

Theories of Evolution before Darwin

The idea of biological evolution has a long history. Pre-Darwinian evolutionary theories differed from Charles Darwin's in being more likely to view evolution as aiming at a specific goal. In the eighteenth century the debate was couched in terms of those who upheld the idea of fixity of species (that a species could not change) versus those who believed that it could. Defenders of the latter idea included Charles Darwin's

grandfather, Erasmus Darwin, whose massive two-volume *Zoonomia* (1794, 1796) Charles read as a young man.

The most scientifically significant pre-Darwinian evolutionist, however, was the French naturalist Jean-Baptiste Lamarck. Lamarck's theory of evolution was based on the idea that living things responded to environmental changes by changing their forms, although he also drew on the idea of living things possessing an innate drive to perfection. He included the human species in his evolutionary scheme. Although the belief that acquired characteristics could be passed down to an organism's descendants became identified as Lamarckianism, this was a belief that Lamarck shared with others and was not central to his thinking. For both scientific and religious reasons, Lamarck's theory attracted few followers and many opponents. Lamarck showed little actual evidence of its operation, and there was much evidence against it, such as the lack of transitional forms in the fossil record. Some opposed what they saw as the theory's materialism and its denial of the necessity of a divine designer and creator.

The principal opponent of evolutionary theory in early-nineteenth-century France was the great comparative anatomist Georges Cuvier, a believer in the fixity of species. Cuvier, a master scientific politician, not only prevented Lamarck's theory from having much influence but also marginalized the other significant French supporter of evolution, Etienne Geoffroy Sainte-Hilaire.

In the early nineteenth century the spread of the geological idea that the Earth had existed for millions of years helped make evolutionary changes more intellectually acceptable. Evolutionary theory influenced by Lamarck was presented in Great Britain in the anonymous work *Vestiges of the Natural History of Creation* (1844), whose author was not a trained scientist but the Scottish publisher Robert Chambers, although his identity only became known after his death. The scheme of *Vestiges*, which sold many copies and provoked enormous controversy, incorporated cosmology and geology along with biology and the study of human society in a vast picture of a constantly progressing universe.

—*William E. Burns*



Jean-Baptiste Lamarck was a botanist and naturalist who proposed an early theory of evolution based on the doctrine of inheritance of acquired traits. Though Lamarck's evolutionary theory is now considered invalid, Charles Darwin, the father of modern evolutionary theory, credited Lamarck with laying the foundation for a new understanding of evolution. (Library of Congress)

► CHAMBERS ON EVOLUTIONARY PROGRESS

The following is an excerpt from Robert Chambers's anonymously written *Vestiges of the Natural History of Creation* (1844):

"In pursuing the progress of the development of both plants and animals upon the globe, we have seen an advance in both cases, along the line leading to the higher forms of organization. Amongst plants, we have first sea-weeds, afterwards land plants; and amongst these the simpler (cellular and cryptogamic) before the more complex. In the department of zoology, we see zoophytes, radiata, mollusca, articulata, existing for ages before there were any higher forms. The first step forward gives fishes, the humblest class of the vertebrata; and, moreover, the earliest fishes partake of the character of the next lowest sub-

kingdom, the articulata. Afterwards come land animals, of which the first are reptiles, universally allowed to be the type next in advance from fishes, and to be connected with these by the links of an insensible gradation. From reptiles we advance to birds, and thence to mammalia, which are commenced by marsupialia, acknowledgedly low forms in their class. That there is thus a progress of some kind, the most superficial glance at the geological history is sufficient to convince us."

—William E. Burns

Source

Robert Chambers, *Vestiges of the Natural History of Creation* (London: John Churchill, 1844), 148–149.

Bibliography

- Chambers, Robert. *Vestiges of the Natural History of Creation*. London: John Churchill, 1844.
- Corsi, Pietro. *The Age of Lamarck: Evolutionary Theories in France, 1790–1830*. Translated by Jonathan Mandelbaum. Berkeley, Los Angeles, and London: University of California Press, 1988.
- Secord, James A. *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation*. Chicago: University of Chicago Press, 2000.

Darwinism

Darwinism, named after English naturalist Charles Darwin (1809–1882), is one of several theories of evolution. Darwin's books *On the Origin of Species by Means of Natural Selection* (1859) and *The Descent of Man and Selection in Relation to Sex* (1871) brought evolution to the forefront of scientific, theological, and popular debate. The ensuing controversy soon polarized along liberal and conservative lines, with scientists, empiricists, and freethinkers generally accepting evolution while traditional religious thinkers rejected it in favor of either biblical creationism or intelligent design theory.

The first important theorist of evolution was French naturalist Jean-Baptiste Lamarck

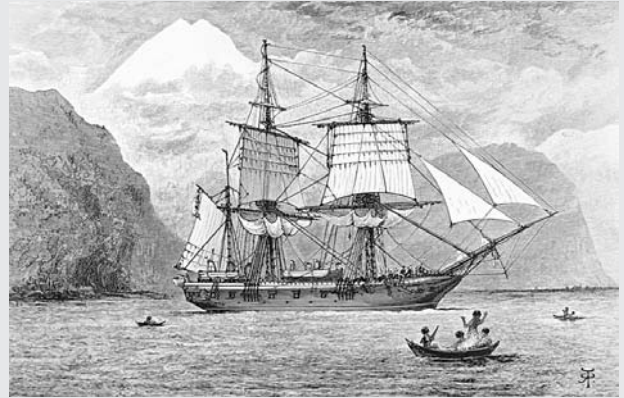
(1744–1829). Lamarckism is the belief that environment determines inheritance. Individuals acquire characteristics by responding to their environment and then pass these characteristics to their offspring, thus creating mutations and eventually new species. Scottish geologist Charles Lyell (1797–1875) aroused British interest in evolution in the 1830s with his vigorous refutation of Lamarckism in his three-volume *Principles of Geology*. Lyell at first opposed all evolutionary theory as irreligious, but in the 1860s he became an advocate of natural selection and a strong ally of Darwin. Natural selection is the process by which stronger and better-adapted individuals live longer and reproduce more successfully than weaker or less well-adapted individuals. Darwin's theory of natural selection was the final blow to Lamarckism.

English naturalist Alfred Russel Wallace (1823–1913) discovered natural selection independently of Darwin while in Indonesia and Malaysia from 1854 to 1862. Wallace sent Darwin a copy of his unpublished paper on natural selection in 1858. Darwin realized that he would have to act fast lest Wallace gain the credit for this discovery. Darwin enlisted Lyell and botanist Joseph Dalton Hooker (1817–1911) to present both his and Wallace's views on natural selection at the July 1858 meeting of the Linnean Society of

► CAPTAIN FITZROY, DARWIN, AND THE VOYAGE OF THE *BEAGLE*

From December 1831 until October 1836 Darwin sailed aboard a British Navy ship, HMS *Beagle*, on a scientific voyage to the Pacific. Original plans were that the *Beagle* should circumnavigate the world in two years, but Captain Robert Fitzroy's detailed survey of the west coast of South America extended the voyage to nearly five years. As the direct result of his extensive research on this voyage, especially in the Galapagos Islands in 1835, Darwin had his first inklings of the theory of natural selection in 1838 but kept it to himself until Wallace forced his hand. The irony is that Fitzroy was a fundamentalist Christian who later felt ashamed that many turned away from Christianity because of what Darwin did under his command.

—Eric v.d. Luft



An 1890 painting of the HMS *Beagle* in the Straits of Magellan. It was during the journey of the HMS *Beagle* that Darwin collected much of his scientific data that he later used to formulate the theory of evolution through natural selection. (Bettmann/Corbis)

London. Meanwhile Darwin began writing *On the Origin of Species*. Wallace did not mind Darwin preempting him, and they remained friends. Later Wallace advised Darwin to use the phrase “survival of the fittest,” coined by English philosopher Herbert Spencer (1820–1903), as a slogan to make natural selection easier to understand.

Probably the strongest contemporary scientific data supporting natural selection was gathered by English entomologist Henry Walter Bates (1825–1892). From 1848 to 1859 Bates studied insects in the Amazon River basin; Wallace accompanied him for the first four years of this expedition. Bates noticed that some weak, harmless, or edible insect species resembled strong, fierce, or inedible species. He surmised that the former group imitated the latter and that this was a natural development to protect the former. The defenseless insects that looked defenseless would be killed and eaten, but the defenseless ones that looked formidable would survive. As soon as Bates returned to England and learned about Darwinism, he began to correlate what he read in *On the Origin of Species* with what he had observed in Brazil. He published his results in 1862, coining the term “mimicry” to describe the aspect of natural selection that he had discovered.

German physician, zoologist, and comparative anatomist Ernst Heinrich Philipp August Haeckel (1834–1919) read *On the Origin of Species* in its first German translation in 1860. He immediately abandoned his medical career to devote himself to developing and promulgating a synthesis of Darwinian and Lamarckian evolutionary theories. Influenced by the romanticism of Johann Wolfgang von Goethe (1749–1832), the absolute idealism of Georg Wilhelm Friedrich Hegel (1770–1831), and the spirituality of German philosophy in general, Haeckel tried to understand the natural creativity behind evolution. Nevertheless, the explanations he provided for all evolutionary phenomena were grounded in physical and mechanical causes.

Swiss zoologist and cell biologist Albert von Kölliker (1817–1905) supported Darwinism but argued that evolution occurs in abrupt jumps, not gradually. Against Darwin's gradualism, Kölliker published his theory of catastrophism in 1864. It inspired many European scientists, particularly Dutch botanist Hugo de Vries (1848–1935), who claimed that sometimes evolution is so sudden that the next generation is a new species.

Part of Darwin's theory was pangenesis, the idea that particles from each cell in an individual collect in the gonads and transmit genetic

information to offspring. Darwin's first cousin English anthropologist Francis Galton (1822–1911) used statistics, biometrics, and environmental studies to bolster Darwinism in general and pangenesis in particular. Yet pangenesis acquired little support among scientists. Kölliker established in 1885 that each cell nucleus is the locus of inheritance. Thereafter the theory of pangenesis fell apart.

—Eric v.d. Luft

Bibliography

- Gould, Stephen Jay. *The Structure of Evolutionary Theory*. Cambridge: Harvard University Press, 2002.
- Hodge, Jonathan, and Gregory Radick, eds. *The Cambridge Companion to Darwin*. Cambridge: Cambridge University Press, 2003.
- Larson, Edward John. *Evolution: The Remarkable History of a Scientific Theory*. New York: Modern Library, 2004.
- Shanahan, Timothy. *The Evolution of Darwinism: Selection, Adaptation, and Progress in Evolutionary Biology*. Cambridge: Cambridge University Press, 2004.

Mathematics

Between the mid-eighteenth century and the early twentieth century, advances were made in several branches of mathematics. One of the earliest fields to benefit from scrutiny was the study of probability. Before the 1770s mathematicians had confined probability theory to games of chance. Between 1774 and 1812 French mathematician, physicist, and astronomer Pierre Simon Laplace (1749–1827) published a series of papers that culminated in his *Analytical Theory of Probabilities* (1812) in which he expanded the study of probability to new areas. He used probability to estimate the longevity of France's population if smallpox disappeared, to determine the likelihood that the current sex ratio in France would continue for 100 years, and to calculate the magnitude of error in observation. An estimate of a tree's height, for example, will surely be imprecise, and Laplace used probability theory to gauge the size of error. French mathematician Simeon-Denis Poisson (1781–1840) took probability to questionable extremes in his *Recherches sur la probabilité des jugements en matières*

criminelles et matière civile (1837), using it, for example, to calculate the probability that a defendant would be acquitted or convicted of a crime. Poisson believed that he could make sound calculations without knowing the charge against the defendant or the evidence against him.

In addition to probability theory, mathematicians, in one of the significant developments of the era, united mathematics and science. This was not a new development. Mathematics and science had been closely related since the time of Archimedes, but since the late eighteenth century the closeness of this relationship became a defining feature of mathematics and science. In the early nineteenth century German mathematician Johann Gauss (1777–1855) regarded mathematics as the “Queen” of the sciences, and in 1881 American mathematician Benjamin Peirce classified mathematics as a science. Laplace made the greatest contribution to the fusion of mathematics and science, publishing in five volumes between 1799 and 1825 his *Celestial Mechanics*, a synthesis that describes in mathematical

➤ JOHANN CARL FRIEDRICH GAUSS

The son of a mill foreman, Johann Carl Friedrich Gauss was born April 30, 1777, in Braunschweig, Brunswick-Lüneburg. A prodigy, Gauss at age three corrected an error in his father's financial calculations. Given the task of adding all the numbers between 1 and 100, Gauss astonished his teacher by calculating the answer in seconds. Despite his precocity, his father wanted Gauss to be a mason. His mother, however, had more sympathy for Gauss's ambitions and encouraged him in his studies. The duke of Braunschweig, aware of Gauss's abilities, financed his education, first at Collegium Carolinum and then at the University of Göttingen. Gauss was originally interested in the study of languages, but interest in geometry drew him to mathematics. In 1799 he received a PhD from Göttingen. During his career Gauss worked in virtually every branch of mathematics. He was, according to one authority, the last generalist. After Gauss, the study of mathematics grew too large for any one person to know all the tenets of the discipline. Gauss died on February 23, 1855, in Göttingen, Hannover.

—Christopher Cumo

equations all that science knew about the motion of objects in the solar system. Laplace derived all motion in the solar system from Isaac Newton's fundamental equation of gravity.

Arguably the greatest contribution to mathematics during this era was the development of non-Euclidean geometry. Mathematicians had long questioned Euclid's fifth postulate, namely that given a line and a point, only one line can be drawn through the point and parallel to the line. This postulate was suspect because Euclid had not derived it from the other postulates. For centuries mathematicians had tried to vindicate Euclid by proving the postulate, but all attempts failed, leading a group of mathematicians to deny the postulate and to derive a new geometry. As early as 1792 Gauss had concluded that more than one line could be drawn through a point and parallel to a line. In Gauss's geometry the sum of the angles of a triangle was less than 180 degrees. These ideas were counterintuitive, and for fear of ridicule Gauss did not publish them. Instead, the Russian mathematician Nicolai Lobachevsky (1792–1856) became the first to publish a non-Euclidean geometry. In 1829 he attempted to prove, in violation of Euclid, that one could draw infinitely many lines through a point and parallel to a line. Like Gauss, Lobachevsky derived a geometry in which the sum of the angles of a triangle was less than 180 degrees. In 1832 Hungarian mathematician John Bolyai (1802–1860) derived a geometry similar to Lobachevsky's.

Perhaps German mathematician Bernhard Riemann published the most counterintuitive geometry. In 1868 he proposed that observation of space did not confirm the existence of parallel lines; therefore, Euclid's fifth postulate was invalid. In contrast to Gauss, Lobachevsky, and Bolyai, Riemann asserted that no parallels

may be drawn through a point. All lines must intersect, some of them at more than one point. Further, the sum of the angles of a triangle was greater than 180 degrees. While Riemann and others were creating a new geometry, German mathematician Moritz Pasch sought in the 1880s to define Euclid's postulates with a new rigor. For example, he refused to use the word "line" because no one had ever seen a line. Instead he preferred the phrase "line segment" because it corresponded with reality.

In addition to the greater fusion of mathematics and science, in the nineteenth and twentieth centuries mathematicians unified mathematics and logic. In *Investigation of the Laws of Thought on Which Are Founded the Mathematical Theories of Logic and Probabilities* (1854), British mathematician George Boole asserted that algebraic symbols need not stand for numbers. Rather, they could stand for words and even assertions. Boole's logic foreshadowed the logical structure of computer programs. In 1901 British mathematician and philosopher Bertrand Russell equated logic and mathematics. He also asserted that mathematics was derived from logic.

Between the late eighteenth and early twentieth centuries mathematics covered new terrain and developed new applications in probability, science, geometry, and logic. These centuries were a heady time to be a mathematician.

—Christopher Cumo

Bibliography

- Burton, David M. *The History of Mathematics: An Introduction*. Boston: McGraw-Hill, 2007.
- Eves, Howard. *An Introduction to the History of Mathematics*. New York: Reinhart, 1953.
- Gray, Jeremy. *Plato's Ghost: The Modernist Transformation of Mathematics*. Princeton, NJ: Princeton University Press, 2008.

■ Introduction: Scientific and Technological Education

Scientific and technological education existed long before the Scientific Revolution. Ancient civilizations, beginning with those of ancient Mesopotamia, passed on practical knowledge and ideas about the natural world to

succeeding generations and in doing so employed forms of scientific and technical education. In Europe, medieval and Renaissance universities taught sciences based on the works of the ancient Greek philosopher Aristotle. For

mal instruction in modern, as opposed to ancient science, and technology began to appear in the mid-eighteenth century as Western universities and technical schools absorbed the expansion of knowledge created by the Scientific Revolution. The absorption was limited, however, as curricular changes were more dramatic at newly established technical schools than at centuries-old universities, still dedicated to a classical curriculum consisting of Latin, Greek, rhetoric, logic, mathematics, and philosophy. While eighteenth-century Harvard, Yale, Oxford, and Cambridge continued to teach vestiges of Aristotelian cosmology, technical schools in France and Germany introduced students to Newtonian physics.

Several developments from the late eighteenth century to the mid-nineteenth century inspired a demand for scientific and technological education. The new technologies themselves generated enthusiasm for practical studies. The British steam engine, the American cotton gin, the European rail system, the telegraph, and other new technologies reconfigured space and time in unprecedented ways. Popular interest in newly emerging technologies—along with their problems and promise—put pressure on educational institutions to respond to these developments. In addition, social changes connected with the Industrial Revolution encouraged formal scientific and technical training. With the decline of guilds and the gradual disappearance of training through apprenticeships, mechanics' institutes and institutes of technology were established in their place by laborers, educators, and manufacturers. Finally, European military demands contributed to the rise of polytechnic institutions. In 1808 Napoleon reorganized the French technical school system, in part to produce educated officers trained in military and civil engineering. Similar engineering instruction crossed the Atlantic with the establishment of academies and polytechnic institutions in North America, where as a result of western expansion, the demand for engineers who could survey land, develop turnpikes, chart canal ways, and build railroads increased dramatically in the nineteenth century.

Although newly formed independent institutes, academies, and technical schools supplied

much of the technical and scientific instruction in the 1800s, colleges and universities also responded by adding new courses and establishing new divisions or new academic units in engineering and science. Traditional institutions of higher learning increased course offerings in natural philosophy and natural history in the required and elective curriculum. When the expansion of course offerings crowded the undergraduate course of study, parallel degree programs were introduced to offer special training in scientific and technological education. Freed from the traditional requirements, students in these programs could draw from one or more areas in the sciences without taking courses that were part of the classical curriculum. Separate schools emerged partly out of dissatisfaction with the incoherence of selected courses or lack of prestige of parallel programs. Examples include Harvard's Lawrence Scientific School and Yale's Sheffield Scientific School, both of which were founded in 1847 and offered scientific and technical training.

From the mid-nineteenth century to the early 1900s, distinctions between technical schools and colleges and universities became blurred. Emphasis on Latin and Greek began to fade and was replaced with undergraduate and graduate instruction in the liberal arts, sciences, and practical studies. Traditional institutions of higher learning expanded offerings in technical studies, while advanced technical schools incorporated humanistic studies and foreign languages. In the case of the Massachusetts Institute of Technology (f. 1861), engineering and general science students received humanities and language instruction as part of their required studies.

Through colonization from the mid-nineteenth century onward, Western models of scientific and technical education spread to other parts of the world. British colonial higher education in Australia and India followed the pattern of the University of London and Ireland's Queen's University rather than Oxford or Cambridge. The curriculum consisted of traditional classical studies as well as scientific courses, including botany, chemistry, physical geography, zoology, and natural philosophy. In Australia, the model appeared at the University of Sydney (1850) and the University of Melbourne (1853). In India, the

University of Calcutta (1854) had as its focus the propagation of British culture and the training of future government officials, although it also offered degrees in medicine and civil engineering. In Africa, the work of missionaries and British policy contributed to the development of industrial training and technological studies. Technical institutes or departments at established schools were founded in Freetown (1896), Accra (1898), and Lagos (1899). Emphasis in these programs was on the practical work in such areas as manufacturing processes and botany.

Asian and Latin American higher learning followed a less direct process of importation of scientific and technical education. Western mathematics in China appeared with the arrival of Jesuit missionaries in the mid-seventeenth century, but formal systems of technical instruction first were established with the Fuzhou Shipyard (1866), followed by Nanyang College (1896) in Shanghai, which offered physics and other basic sciences. Latin American institutions of higher education, some of the oldest in the Americas, focused on the preparation of elites for political and legal administration until the late nineteenth century and the early twentieth century. At the turn of the twentieth century, the founding of mining and engineering institutions appeared throughout Central and South America.

—A. J. Angulo

Technical Schools

Technical schools first began to appear in mid-eighteenth-century Europe. They differed from previous forms of technical education in that they were independent institutions of higher learning that offered formal, systematic

instruction in practical and scientific studies. These institutions were established and received greatest support in regions that sought to expand military capacities, were experiencing rapid industrialization, and had existing scientific and mathematical expertise. The worldwide development of technical schools can be traced along three periods: origins (1750–1820), consolidation (1820–1870), and expansion (1870–1914).

Technical schools originated in Paris, where educational institutions such as the École des Ponts et Chaussées (1747), École Polytechnique (1794), and École Central des arts and manufactures (1829) provided models for technical school development elsewhere. The École des Ponts et Chaussées offered the first organized program of civil engineering in the modern world. Courses in its three-year curriculum included mathematics, physics, chemistry, architecture, and field assignments for the application of scientific knowledge. This and later French institutions formed a coordinated system of technical education that prepared engineers for military, civilian, mining, mechanical, and other needs. Institutions influenced by the Parisian schools included the United States Military Academy at West Point (1802); Rensselaer Polytechnic Institute (1824) in Troy, New York; the Massachusetts Institute of Technology (1861) in Boston; and such Germanic institutions as Berlin's Vereinigte Artillerie und Ingenieurschule (1788), Bauakademie (1799), and Karlsruhe's Polytechnische Hochschulen (1825). Early though less influential Russian technical instruction can be traced back to Peter the Great's founding of the Moscow School of Mathematics and Navigation.

In Western societies the consolidation of technical schools gave these new institutions a

► MORALITY AND TECHNICAL STUDIES

During the early to mid-nineteenth century Great Britain underwent a period of transformative industrialization, colonial expansion, and technological innovation. Despite similar forces that contributed to the establishment of technical schools elsewhere, the British fell behind European neighbors in organizing formal technical studies. Much of the nation's applied and practical instruction was left to Mechan-

ics' Institutes that aimed physics, chemistry, mathematics, earth and life sciences, phrenology, and drawing at the working classes. Leaders of the Mechanic Institute movement believed that scientific education for the working class would serve the purposes of moral improvement, curbing drunkenness, debauchery, and promiscuity.

—A. J. Angulo

secure footing within the higher education landscape. This occurred within a confluence of social, political, and cultural forces. Social forces fueling consolidation centered primarily on the rise of industry and the decline of the apprenticeship system, popular interest in scientific and technological advances, and the organization of the scientific professions. Independent technical institutions arose as a result of the lack of attention to science and technological studies in traditional higher education. Political forces also provided the impetus for the founding and expansion of technical schools. In the United States, for example, the Land Grant Act of 1862 strengthened the technical school movement by funding institutions offering agricultural and mechanical instruction through the sale of lands on the western frontier. There was a substantial increase in the number of American technical schools (from 6 to 70) between 1862 and 1870. Despite the increase in schools established and their funding, a divide between shop culture and school culture persisted. Shop culture, composed of those who learned on the job, resisted the influence of school culture represented by those who received formalized instruction in practical, engineering, scientific, and mathematical studies.

By the start of the expansionist period, technical school culture had begun to professionalize and spread its values around the world. Australia's Industrial and Technological Museum led the nation in offering technical studies in 1870. Japan's Imperial College of Technology (later Tokyo University) opened in 1872 as a Western-styled technical school under the direction of Scottish engineer Henry Dyer (1848–1918). Calcutta's Indian Association for the Cultivation of Science (1876) assisted regional colleges and universities in the expansion of technical studies. The expansion continued during the late nineteenth and early twentieth centuries, from the Middle East (i.e., Iran's secular Dar Al-Funun) to Latin America (i.e., Colombia's School of Engineering of the National University). The formation of technical schools was impeded in regions with lesser-developed centralized governments, militaries, industries, literacy rates, and scientific and mathematical communities. In such regions,



Painting of the Bauakademie, by Eduard Gaertner, 1868. The building, constructed in Berlin between 1832 and 1836, housed the Royal Technical High School, the forerunner of the Technical University, founded in 1879. (Preussischer Kulturbesitz/Art Resource, NY)

students interested in scientific and practical studies sought instruction abroad.

—A. J. Angulo

Bibliography

- Firth, Ann. "Culture and Wealth Creation: Mechanics' Institutes and the Emergence of Political Economy in Early Nineteenth Century Britain." *History of Intellectual Culture* 5 (2005): 1–14.
- Fox, Robert, and George Weisz, eds. *The Organization of Science and Technology in France, 1808–1914*. Cambridge: Cambridge University Press, 1980.
- Lundgreen, Peter. "Engineering Education in Europe and the U.S.A., 1750–1930: The Rise to Dominance of School Culture and the Engineering Professions." *Annals of Science* 47 (1990): 33–75.
- Shapin, Steven, and Barry Barnes. "Science, Nature and Control: Interpreting Mechanics' Institutes." *Social Studies of Science* 7 (1977): 31–74.

Engineers as a New Professional Group

The roots of engineering as an organized profession lie in eighteenth-century Europe and were dominated by two contrasting models. In continental Europe, the engineer was the recipient of professional training at a school, often

➤ RICHARD TREVITHICK IN PERU

The career of Cornish engineer Richard Trevithick (1771–1833) in Peru indicates both the opportunities and the perils that foreign travel could offer an engineer. Trevithick was a self-taught mining engineer who worked on steam engines and locomotives, devising many innovations but never earning much money. In 1816 he set out for Lima to supervise the installation and operation of engines he had designed for Peruvian silver mines. Trevithick was initially welcomed, but his South American enterprises failed because of rivalries with local businessmen and disruptions caused by the Latin American wars of independence from Spain. In 1827 Trevithick, broke, had a rare stroke of luck in encountering a fellow British locomotive engineer, Robert Stephenson, in Cartagena. Stephenson lent Trevithick 50 pounds to return to England. Although Trevithick continued to register patents, his English career never recovered from his absence, and he died a poor man.

—William E. Burns

affiliated with the government, while British engineers trained through a system of informal apprenticeship.

France, the world's leader in engineering education in the eighteenth century, treated the engineer as a servant of the state. As in other countries, the engineering profession was closely allied with the military, a bond that grew even tighter after the French Revolution with the founding of the Polytechnic School in 1794. (The term “engineer” was originally used in the military context to refer to management of sieges and the construction of fortresses.) The French also excelled in civilian engineering, particularly after the founding of the School of Bridges and Roads in 1747. Other continental countries followed the French model, with the founding of institutions modeled on the Polytechnic in Berlin in 1799, Prague in 1805, and Vienna in 1815. The U.S. military academy at West Point also drew heavily from the polytechnic model and was originally under the direction of the Army Corps of Engineers. Mining was particularly important in training German engineers, with numerous mining academies scattered through the German lands.

British engineers were more likely to work for private industry than for the government, although Britain maintained a faculty to train military engineers at the Royal Military Academy at Woolwich. Scotland, with its excellent educational system and a poverty that rendered it unable to support all of its own population, became particularly famous as a nursery of engineers, a reputation that it would keep into the twentieth century. The British civil engineer was not a state functionary like his counterpart in France but instead was a contractor who worked for different clients, the state being only one among them. The United States mostly followed the British model. The U.S. institutions of higher education outside West Point taught little engineering until the founding of the Massachusetts Institute of Technology in 1865 and the establishment of the land-grant colleges in the late nineteenth century. Although British and American engineers lacked the French experience of passing through training together, they had an increasingly strong sense of themselves as part of a profession, with the founding of the Institution of Civil Engineers in Britain in 1818. The American Society of Civil Engineers, the oldest engineering society in the United States, was founded in 1852.

The Industrial Revolution and the railway age increased the importance of engineers throughout the world and also opened many job opportunities beyond the military. Engineers spread over the world with the growth of industry and imperialism, building bridges, establishing factories, and building and maintaining engines for many uses. The growth of entire new areas of technology, such as electrical power and the chemical industry, also made engineering more intellectually demanding and the teaching of engineering a greater priority.

By the late nineteenth century German engineering had become a world leader, with the foundation of the system of technical high schools that were the envy of many other countries along with the excellent German universities. Much of the German rise to industrial leadership rested on the skills of its engineers. The British were increasingly aware of the poor quality of their technical education infrastructure, but despite frequent and increasingly

desperate calls for reform to keep up with the Germans, little was actually done.

Throughout the industrial world engineers were admired and in some cases, notably with British engineer Isambard Kingdom Brunel and the self-taught American Thomas Edison, even became celebrities. Engineers were set forth as role models for boys, as in the works of the Victorian biographer Samuel Smiles. Engineering was increasingly seen as the key to technological and economic progress, with the creation of engineering programs and institutions in countries wishing to catch up with the developed world of Europe and the United States. This process went back to the founding of the Naval Engineers School in Ottoman Turkey in 1773. The British established the Thomason College of Civil Engineering (later the Indian Institute of Technology) in India in 1847, and Zionists founded the Techicum (later the Israel Institute of Technology) in Haifa in 1912. The Tokyo College of Technology was founded in 1890. The engineer became a symbol of modernity and a new cultural hero, often contrasted with traditional religious leadership.

The engineering profession was highly masculine. As women attempted to batter down the barriers that kept them out of other professions such as medicine and law, there was relatively little pressure to make engineering less male-dominated.

—William E. Burns

Bibliography

- Alder, Ken. *Engineering the Revolution: Arms and Enlightenment in France, 1763–1815*. Princeton, NJ: Princeton University Press, 1997.
- Cardwell, Donald. *The Norton History of Technology*. New York: Norton, 1994.
- Jacob, Margaret. *Scientific Culture and the Making of the Industrial West*. New York and Oxford: Oxford University Press, 1997.

Scientific and Technological Education in Meiji Japan

During the Meiji period (1868–1912), Japan experienced an unprecedented emphasis on science and technology in education led by former Tokugawa domains that had already started developing new technology in the nineteenth

century and also by the new oligarchy under Emperor Meiji (1852–1912). Japan's Ministry of Education was created in 1871, and in 1872 the Fundamental Code of Education was promulgated, stating that universal primary education should be extended to all citizens. Previously in the Tokugawa period (1600–1868), attending schools had been a privilege for children of the samurai class only. The term that would become the word for “science” in Japanese, *kagaku*, was first understood to mean “classified learning,” which referred to a number of subjects, not just science exclusively. The first use of the term “*kagaku*” in an essay, in 1871, has been attributed to the statesman Inoue Kowashi, who later drafted the Proposals on Education for Prime Minister Ito Hirobumi, who in turn presented these ideas to the emperor.

Interest in science and technology in Japan preceded the Meiji era. Although relations with foreign powers during the Tokugawa period were strictly regulated, the port of Nagasaki in Kyushu served as a conduit for knowledge from the outside world, including new ideas regarding astronomy, cartography, medicine, and military

➤ KITASATO SHIBASABURO

Kitasato Shibasaburo (1852–1931) was the leading Japanese bacteriologist during the Meiji period. On a foreign study program at the Koch Institute in Berlin, Germany, he succeeded in identifying the bacterium that caused tetanus in 1889. In 1894 at the urging of Japan's Bureau of Public Health, Kitasato went to Hong Kong during a plague epidemic. His work there, in tandem with Aoyama Tanemichi, led to the isolation of the bubonic plague bacillus. This achievement, announced in the medical journal *The Lancet*, brought Kitasato to international attention and highlighted the scientific progress of Japan. His own career evidenced the tension between individual scientific endeavors and the need for institutional loyalty. Kitasato's career was influenced by a variety of educational institutions, mentors, and colleagues, but he preferred placing faith in the technical expertise of trusted friends rather than adhering to the unswerving loyalty that many Meiji governmental organizations and schools demanded.

—Christopher Dewell

science from the Dutch and innovations in agriculture, mathematics, and traditional medicine from China. In 1811 the Tokugawa government founded the Bansho Wage Goyo, or Office for Translating Barbarian Books, for the express purpose of bringing Western learning to the Japanese. With few exceptions, however, such as Ogata Koan's private academy the Tekitekisai Juku, established in Osaka in 1838, there was no systematic approach to the study of science.

Tokugawa domains like Satsuma and Choshu, geographically removed from the shogunate's capital at Edo (present-day Tokyo) and nearer to China, were influenced by the encroachment of Western imperialists, particularly after the effectiveness of European weaponry was demonstrated in the First Opium War (1839–1842) between China and Britain. By the 1860s they both were acquiring Western military technology. These two domains later joined forces in 1867 to fight for the overthrow of the Tokugawa government, which they held accountable for failing to resist growing Western imperialism in Japan.

As the Meiji government embarked on its campaign to educate all Japanese children, science and technology were emphasized. At the equivalent of primary school, fully one-third of the curriculum was given over to mathematics and science teaching in the 1870s and 1880s, and in higher grades the focus expanded to two-thirds. Among Tokyo University graduates in the 1880s, 85 percent had concentrations in a scientific field, and a large proportion of these students came from samurai family backgrounds. These graduates fueled the drive for industrialization initiated by the Meiji government, as they

helped develop railway, mining, and factory operations as technicians and engineers. To aid in acquiring new technical knowledge, foreign experts from China and Western countries had been hired in the final years of the Tokugawa period, a practice that continued under the Meiji government. Now, however, with newly minted Japanese university graduates in the sciences, there was a steady supply of indigenous manpower to take the place of these foreign technicians once they returned home.

While innovations in the Tokugawa period had provided a foundation for many of the changes that took place during the Meiji era, the acquisition of science and technology became state-centered priorities under the Meiji government. This new emphasis also contributed to a sense that these formerly separate geographic regions were increasingly linked by shared interests in promoting the economy and the state. This focus on science and technology was integral in producing the first industrialized nation in Asia.

—Christopher Dewell

Bibliography

- Bartholomew, James. *The Formation of Science in Japan: Building a Research Tradition*. New Haven, CT: Yale University Press, 1989.
- Morris-Suzuki, Tessa. *The Technological Transformation of Japan: From the Seventeenth to the Twenty-first Century*. Cambridge: Cambridge University Press, 1994.
- Nakayama, Shigeru. *Academic and Scientific Traditions in China, Japan, and the West*. Translated by Jerry Dusenbury. Tokyo: University of Tokyo Press, 1984.

■ Introduction: Medicine

For most of history the human effort to prevent disease, cure the sick, and mend the injured is a story of flawed theories and depressingly meager results. This changed in the nineteenth century when, it is safe to say, more progress was made in the art of healing and the science of disease prevention than in all of human history to that point. The advance of

medicine was a uniquely European accomplishment, and Europeans and people of European descent were its first beneficiaries. Ultimately, however, it had worldwide consequences, not just for millions of individuals but also for the human species as a whole, whose dramatic increase in numbers in the twentieth century rested on the foundations of increased agricul-

tural production, higher incomes, and better medicine.

Medicine and the related discipline of anatomy had been intensively studied in Europe since the Middle Ages. Most medieval universities had faculties of medicine where students studied in Latin translation the works of Galen (129–199/217 CE) on anatomy, Hippocrates (ca. 460–370 BCE) on medical practice and diagnosis, and their Islamic commentators. During the Renaissance and the early modern period, dissection of human cadavers became a part of the study of anatomy at a number of universities; William Harvey (1578–1657) accurately described the circulation of blood; and a number of new procedures, including the use of forceps in childbirth, were introduced. But no real progress was made in treating the sick. In this regard the poor, who relied on prayer and folk remedies, were probably better off than the well-to-do, who shortened their lives by paying academically trained physicians prescribe purgings, bleedings, cold-water baths, treatments with magnets, and a variety of dubious pills, powders, and elixirs. Significantly, two medical advances before the nineteenth century—the use of cinchona bark to treat malaria and the practice of variolation to prevent smallpox—were both imports, the former from South America and the latter from the Ottoman empire, where the woman who first promoted the practice in Europe, Lady Mary Montagu (1689–1762), observed it.

Modern medicine was a creation of the nineteenth century. It began in the hospitals of Paris, recently removed from the control of the Catholic Church during the French Revolution, where in the 1790s and early 1800s thousands of aspiring physicians were taught to put away their books and look for the causes of disease in the bodies of the sick and recently dead. Autopsies became the focus of research and teaching, resulting in new understanding of the pathology of heart disease, strokes, cancer, tuberculosis, and other maladies. This Parisian drive to find the internal causes of disease in 1816 gave birth to Jean Nicholas Corvisart's invention of the stethoscope, an instrument that gave physicians the ability to “see” into the body by hearing the sounds of breathing, the heartbeat, and the workings of intestines. The French model of

systematic and scientific hospital-based medical training had many imitators. By midcentury it had spread to Vienna, Edinburgh, Dublin, London, and other European cities.

While the sick bed and morgue was the center of the pathological research of the Parisians, in Germany the laboratory took center stage. Benefiting from improvements in the microscope and the development of a host of new instruments and techniques for weighing, measuring, and testing, German university laboratories made important discoveries in microscopic anatomy, cell structure, the chemistry of digestion, and metabolism. Laboratory-based chemists also made strides. During the first half of the nineteenth century they extracted the active ingredient from many plant substances long used in medical practice and by doing so made it possible to regulate the purity and dosage of medications such as morphine, codeine, quinine, colchicine (for the treatment of gout), and others.

At the end of the century the laboratory gave birth to the most important single development in the history of nineteenth-century medicine: the new discipline of bacteriology. The theory that diseases were caused by tiny invasive beings was not new, but until the late nineteenth century this theory made little progress against the competing theory that disease was caused by miasma, a noxious form of “bad air” filled with small particles or vapor from decomposing matter. This changed as a result of the work of two men, Louis Pasteur (1822–1895) and Robert Koch (1843–1910). Pasteur set forth his ideas in a groundbreaking speech before the French Academy of Medicine in 1878 in which he spelled out his conviction that microorganisms were responsible for putrefaction, fermentation, and disease; that only specific organisms caused specific diseases; and that once the disease-causing microorganism was known, vaccines to prevent the disease would be possible. His work resulted in vaccines for anthrax, chicken cholera, and rabies, and research carried out at the Pasteur Institute, founded by Pasteur in 1887, led to the discovery of the bacillus that causes plague and contributed to the development of an antitoxin for treating diphtheria. Koch made equally important contributions. He and his students developed new bacteriological techniques, including

the use of agar-agar, an extract from Japanese seaweed, as a culture medium; they also discovered the bacilli that cause tuberculosis and cholera. Not all bacteriological discoveries led to cures or effective vaccines. Koch's much-heralded cure for tuberculosis, "tuberculin," proved to be worthless, and the causes of scarlet fever baffled researchers until after World War I. Nonetheless, the work of Pasteur, Koch, and others fundamentally changed how sickness was understood and treated.

During the nineteenth century, many other significant changes occurred. Once the connection between urban filth and disease epidemics was clearly established in the 1830s and 1840s, governments took on new responsibilities for public health through the construction of sewers and clean water systems. In 1847 the Hungarian physician Ignaz Semmelwies discovered that the simple act of having midwives and physicians wash their hands in a chlorinated lime solution caused a dramatic fall in the incidence of childbed fever, a major cause of death among new mothers. Surgery was transformed by the development of anesthetics and the gradual acceptance of antiseptic practices in the operating room. In addition to the stethoscope, new devices were invented to measure patients' blood pressure, temperature, respiration, and pulse. Chemical tests were developed to diagnose diabetes and diseases of the kidneys. Hospitals, viewed in the eighteenth century as places where the sick and poor went to die, were transformed into respected medical institutions for teaching, research, surgery, and the treatment of the sick. In this transformation, the elevation of nursing to a respected skilled profession for women played a key role. The founding of specialty hospitals for the treatment of children or specific diseases of the skin, eyes, colon, bones, and nervous system was symptomatic of the development of specialization within the medical profession itself.

These revolutionary changes were not completely limited to Europe and areas of European settlement. Medical missionaries introduced some practices of modern medical treatment to their patients in European colonies and the Middle East; British army doctors trained Indians to serve in the Indian Medical Service; European academics helped establish the first

Western-style medical schools in Japan and the Middle East; and European bacteriologists and physicians made breakthroughs in the understanding and treatment of tropical diseases such as malaria, yellow fever, and African sleeping sickness. Nonetheless, what was true in terms of wealth, technology, education, and military power also applies to medicine and health: as a result of nineteenth-century developments, the gap between the West and the rest of the world became immeasurably wider.

—James H. Overfield

Colonialism and Public Health

As Europeans became the colonial rulers of much of Africa and southern Asia in the nineteenth century, they naturally became concerned with matters of health and disease in their colonies. In fact, the field of tropical medicine was created largely as a response to European exposure to tropical diseases in Africa and Asia. The legacy of colonial medicine had both positive and negative aspects. While colonization often disrupted and devalued traditional ways of life and reinforced the power and preeminence of the colonial rulers, it also introduced scientific medicine and public health practices to areas earlier than might otherwise have been the case.

The main purpose of colonial health services was to protect primarily the health of European soldiers and administrators, followed by that of European settlers and their families, and finally that of the native population whose ill health could limit their productivity and spread disease to the Europeans. Health services in the colonies were generally concentrated in areas where Europeans lived, so native peoples living in cities were much more likely than those living in the countryside to benefit from medical and public health services. Colonial health services were also typically segregated by race, with Europeans, for example, receiving better rooms and care in hospitals.

Public health measures such as vaccinations, quarantines, and port controls were instituted in some colonies. However, the sanitation revolution taking place in nineteenth-century America and Europe, which improved the health of city dwellers through provision of municipal water,

the construction of sewage systems, and other reforms, came to the colonies much later. Living conditions for natives in colonial cities often remained appalling well into the twentieth century, and conditions in colonial health institutions for the native population were often remarkably bad. For instance, the annual death rate in the lunatic asylum of Singapore in 1900 was reported to be 683 per 1,000.

Some aspects of colonial rule certainly worsened the health of the native population. For instance, the construction of needed infrastructure to provide clean water and treat sewage in cities that were administrative or commercial centers rarely kept pace with the rapid population growth. New diseases such as measles and influenza were introduced to populations without immunity, and venereal diseases were spread through the creation of a sexual marketplace. Sometimes the health of native peoples suffered when they were forced to move to areas they had previously avoided because diseases such as malaria were known to be endemic there. The imposition of cash-crop agriculture often forced native peoples to change their diets to less nutritious foods. In the Philippines, outbreaks of beriberi, a disease caused by a vitamin B deficiency, resulted from the U.S. introduction of machine-milled white rice in the early 1900s.

Colonial rulers gradually became aware, however, that the health of native people was their concern because infectious diseases could spread from natives to Europeans and also because natives who were constantly ill were less-productive workers. Additionally, it was part of the colonial ideology to bring the benefits of Western medicine to so-called backward natives, which also provided an extension of government control into people's lives. By the early twentieth century, many colonial powers began to introduce public health programs intended to benefit the native peoples, including the introduction of systems for the sanitary disposal of sewage and for the provision of clean water.

—Sarah Boslaugh

Bibliography

De Bevoise, Ken. *Agents of Apocalypse: Epidemic Disease in the Colonial Philippines*. Princeton, NJ: Princeton University Press, 1995.

➤ YELLOW FEVER IN WEST AFRICA

Sir Rupert Boyce, an English physician and founder of the Liverpool Yellow Fever Bureau, noted the connection between economic development in West Africa and the spread of yellow fever by mosquitoes in an article written in 1911:

"It [the mosquito] is not a swamp, gutter, or puddle breeder; it is essentially the mosquito which breeds in *all receptacles* which happen to contain clean water. . . . Hence it comes to be the mosquito of all discarded tins [cans], bottles, &c., &c. Hence it is most abundant where there are traders, and is least abundant in the interior, where there is less trade. . . . Increased trade and commercial activity provide an increase of odd water-containers of all kinds, and therefore . . . a greater liability of Yellow Fever."

—Sarah Boslaugh

Source

"The Discussion of the Distribution and Prevalence of Yellow Fever in West Africa at the Society of Tropical Medicine and Hygiene." *Journal of Tropical Medicine and Hygiene* 14 (March 1911): 357.

Watts, Sheldon. *Epidemics and History: Disease, Power and Imperialism*. New Haven, CT: Yale University Press, 1997.

Modern Surgery

Surgery is the active and deliberate physical intervention into the body for the purpose of curing disease or healing injury. Surgical operations cause bleeding and pain and put the patient at risk for infection and death. Therefore, complex effective surgery was not possible until three conditions were met: control of pain, prevention of infection, and control of bleeding. All three of these problems were solved in the last 60 years of the nineteenth century.

The single most important event in the history of medicine was Ether Day, the successful introduction of sulfuric ether as general anesthesia at Massachusetts General Hospital on October 16, 1846. Nearly two years earlier,



An illustration showing the first administration of ether during surgery in 1846. The scene at Massachusetts General Hospital shows William T. G. Morton, at left, administering anesthesia to Gilbert Abbot while John Collins Warren operates. (Bettmann/Corbis)

on January 31, 1845, at Harvard Medical School, dentist Horace Wells (1815–1848) and surgeon John Collins Warren (1778–1856) attempted to anesthetize a dental surgery patient with nitrous oxide but failed, causing the patient much suffering. Wells despaired and committed suicide, but Warren persisted.

One of Wells's dental students, William Thomas Green Morton (1819–1868), collaborated with physician and chemist Charles Thomas Jackson (1805–1880) to produce *Letheon*, a mixture of sulfuric ether and several inert compounds included to mask ether's unique odor. Morton offered *Letheon* to Warren, who agreed to test it. Warren had a patient named Gilbert Abbott who needed to have a vascular abnormality removed from his neck. After Warren prepared the patient in the operating theater on the top floor of the Bulfinch Building at Massachusetts General Hospital, Morton used a glass inhaler to anesthetize Abbott with *Letheon*. Warren then made a deep 3-inch incision and performed the surgery without complication. Abbott did not fall completely asleep. He remained groggy throughout the procedure but felt no pain. He later said that he felt only

slight discomfort in his neck, as if he were being scratched. This was Ether Day.

Over the next few weeks Morton served as anesthesiologist for several other Boston surgeons and achieved similar triumphs. A surgeon who was present at the first four anesthetic operations, Henry Jacob Bigelow (1818–1890), published "Insensibility during Surgical Operations Produced by Inhalation" in the *Boston Medical and Surgical Journal* on November 18, 1846. This was the first report of successful surgical anesthesia. On March 30, 1842, four and a half years before Ether Day, Crawford Williamson Long (1815–1878), a country doctor in Jefferson, Georgia, first used sulfuric ether for a minor surgical procedure. Because Long did not publish his results until 1849 and because the Boston surgeons published their results immediately in 1846, Morton and Warren get the credit for revolutionizing surgery.

The second condition for modern surgery, control of infection, has two aspects: antisepsis (the killing of microorganisms) and asepsis (the maintenance of a sterile environment). Hungarian obstetrician Ignaz Philipp Semmelweis (1818–1865) discovered antisepsis when he noticed in 1847 that new mothers had better survival rates from puerperal fever when obstetricians washed their hands between patients. American physician Oliver Wendell Holmes (1809–1894) learned of these results in 1855 and immediately began promoting Semmelweis's campaign for hospital cleanliness. American gynecologist James Marion Sims (1813–1883) began using clean silver sutures in the mid-1850s. English surgeon Joseph Lister (1827–1912) first used carbolic acid spray to disinfect his operating room on August 12, 1865, and published his results in 1867. Around the same time French biochemist Louis Pasteur (1822–1895) began advocating heat sterilization of surgical instruments.

Many prominent doctors, notably American surgeon Samuel David Gross (1805–1884), were skeptical of Semmelweis, Holmes, Sims, Lister, and Pasteur. That generation of surgeons had to die out before antisepsis would be accepted. Antiseptic methods became firmly established as surgical routine only after American surgeon William Stewart Halsted (1852–1922) began wearing rubber gloves in the operating room

at Johns Hopkins Hospital in the early 1890s. Following Halsted's lead, research teams in the twentieth century learned how to create asepsis for the duration of a surgical procedure.

The final condition for being able to perform long and complex surgical procedures was achieved in the 1890s when American surgeon George Washington Crile (1864–1943) gradually discovered how to manage bleeding to prevent blood loss and surgical shock. He published his methods in three books: *An Experimental Research into Surgical Shock* (1899), *Blood-Pressure in Surgery* (1903), and *Hemorrhage and Transfusion* (1909).

—Eric v.d. Luft

Bibliography

- English, Peter C. *Shock, Physiological Surgery and George Washington Crile: Medical Innovation in the Progressive Era*. Westport, CT: Greenwood, 1980.
- Fenster, Julie M. *Ether Day: The Strange Tale of America's Greatest Medical Discovery and the Haunted Men Who Made It*. New York: Harper-Collins, 2001.
- Gaw, Jerry L. "A Time to Heal": *The Diffusion of Listerism in Victorian Britain*. Philadelphia: American Philosophical Society, 1999.
- Wangensteen, Owen Harding, and Sarah D. Wangensteen. *The Rise of Surgery: From Empiric Craft to Scientific Discipline*. Minneapolis: University of Minnesota Press, 1978.

The Rise of Pathological Anatomy

Pathological anatomy is the scientific postmortem comparison of diseased or deformed tissue with healthy or normal tissue in order to learn the structural differences between them. The practical, clinical advantage is that the knowledge gained from this study enables physicians to correlate what they observe in living patients with what they have seen in the anatomical laboratory, thus enabling them to diagnose more accurately and treat more effectively.

The first medical scientist to correlate specific lesions with specific diseases, and thus the earliest progenitor of pathological anatomy, was Giovanni Battista Morgagni (1682–1771), professor of anatomy at the University of Padua. As

ANESTHESIA REACHES ENGLAND

Before anesthesia, patients tried opium, marijuana, alcohol, ice, hypnotism or mesmerism, prayer, chanting, acupressure, and "biting the bullet" as pain killers. None were effective, so the best surgeons were the fastest. The less time they spent cutting, the less the patient suffered. The world's most renowned surgeon in the era just before Ether Day was Sir Robert Liston (1794–1847), a Scotsman who could do a full amputation in about six seconds. Liston decided to try ether on December 21, 1846, at University College Hospital in London to perform the first anesthetic operation outside the United States. He worked slower than usual to amputate Frederick Churchill's leg at the thigh. The operation took 28 seconds. When Churchill awoke and asked Liston when he was going to begin, the surgeon was so pleased that he is reported to have exclaimed, "This Yankee dodge, gentlemen, beats mesmerism hollow."

—Eric v.d. Luft

the founder of the modern science of pathology and author of *De sedibus et causis morborum per anatomen indagatis* (*On the Origins and Causes of Disease as Investigated through Anatomy*), Morgagni was among the first to recognize that the treatment and cure of any disease depends in large measure on an understanding of its causes.

Most of the pioneer work in pathological anatomy was done in London or Paris. The most important results in England were achieved by Scots. Matthew Baillie (1761–1823), Scottish-born physician to King George III, produced several major texts on morbid or diseased anatomy and also produced the first good pathological atlas. Scottish surgeon, anatomist, and artist Sir Charles Bell (1774–1842) explored the nervous and circulatory systems and accurately described and illustrated many pathological conditions, including Bell's palsy (unilateral facial paralysis). In 1838 another Scot, Robert Carswell (1793–1857), published his monumental atlas *Pathological Anatomy: Illustrations of the Elementary Forms of Disease*, which contained the first description of multiple sclerosis.

THE INVENTION OF THE STETHOSCOPE

Laënnec invented the stethoscope on the spur of the moment, almost by accident. Not all physicians in his time chose to listen to the heart and lungs, but those who did, including Laënnec, would put an ear directly on the chest of the patient. One day he was frustrated using this method to try to hear the heart of an unusually obese and large-breasted woman. Instinctively he rolled a few sheets of paper into a tight cylinder and put it between her chest and his ear. He then heard the heart clearly. This was the first stethoscope. He named the instrument from two Greek words that suggest “seeing into the chest.”

—Eric v.d. Luft

René Laënnec prepares to use his stethoscope on a patient, from a painting by Théobald Chartran, 1819. (National Library of Medicine)



Viennese physician Leopold Auenbrugger (1722–1809) developed useful techniques to hear chest sounds and diagnose chest diseases in the 1750s and 1760s, but little improvement in medical practice resulted from this discovery until Napoleon Bonaparte’s physician, Baron Jean-Nicolas Corvisart des Marets (1755–1821), translated Auenbrugger’s 1761 book from Latin into French in 1808. Corvisart and his students compared Auenbrugger’s descriptions of living sounds with what they found in cadavers. Among Corvisart’s students at the Collège de France and l’Hôpital de la Charité in Paris was René-Théophile-Hyacinthe Laënnec (1781–1826), who invented the stethoscope in 1816. In addition to being a diagnostic tool, the stethoscope enabled a wider variety and a deeper subtlety of sounds that were heard inside the patient to be later correlated with physical findings at the patient’s autopsy.

The research of French comparative anatomist Marie François Xavier Bichat (1771–1802) shifted the focus of pathology from the organ to the tissue. Bichat identified and described 21 different kinds of living tissue, thus founding histology, the systematic study of tissue structures. Moreover, by examining these tissues in both their healthy and diseased states, he founded the clinical science of histopathology, the study of diseased tissues, 30 years before good microscopes became available.

Baron Guillaume Dupuytren (1777–1835), a French surgeon, established pathological anatomy as both the confirmation of successful surgical procedures and the guide for future procedures. He was so convinced of its value in his surgical practice that he bequeathed 200,000 francs to the University of Paris to create a professorship of pathological anatomy. His student Jean Cruveilhier (1791–1874) was the first

to hold this chair. Cruveilhier's gigantic two-volume atlas *Anatomie pathologique du corps humain* (*Pathological Anatomy of the Human Body*), which appeared gradually in 40 fascicles from 1829 to 1842, remained state of the art for 50 years until cellular pathologists were able to correct his errors in the late nineteenth century with advanced microscopes.

The most prominent clinician to break new ground by using pathological anatomy in his medical practice was another Frenchman, Pierre Charles Alexandre Louis (1787–1872), whose studies of tuberculosis, other respiratory diseases, and typhoid contributed not only to the understanding of these diseases but also to epidemiology and preventive medicine.

—Eric v.d. Luft

Bibliography

- Duffin, Jacalyn. *To See with a Better Eye: A Life of R. T. H. Laennec*. Princeton, NJ: Princeton University Press, 1998.
- Haigh, Elizabeth. *Xavier Bichat and the Medical Theory of the Eighteenth Century*. London: Wellcome Institute for the History of Medicine, 1984.
- Rifkin, Benjamin A. *Human Anatomy: Five Centuries of Art and Science*. New York: Harry N. Abrams, 2006.

The Germ Theory of Disease

The germ theory of disease is that microorganisms cause some diseases and that certain microorganisms are specific to certain diseases. Until German pathologist Robert Koch (1843–1910) developed his ideas of infectious diseases in the late nineteenth century, physicians could only guess about what caused them and what might be done to prevent them. Koch's work replaced these conjectures with science. He won the 1905 Nobel Prize in Medicine for discovering the bacillus that causes tuberculosis.

The science of microbiology, the study of microscopic life, arose in the seventeenth century through the work of Dutch lens grinder Anton van Leeuwenhoek (1632–1723) and English general scientist Robert Hooke (1635–1703). Microbiology did not have any pathological implications until the middle of the nineteenth century. Four events led scientists to suspect that microorganisms might have some

connection with disease. First, in 1847, Hungarian obstetrician Ignaz Philipp Semmelweis (1818–1865) observed that new mothers got sick less often when their doctors had clean hands. Second, in 1859, French biochemist Louis Pasteur (1822–1895) disproved spontaneous generation, the traditional idea that microscopic life and even animals as large as flies, mice, and frogs arise spontaneously from non-living matter. Third, in 1862, Pasteur discovered that heating foodstuffs below the boiling point, a process later called pasteurization, prevents fermentation and spoilage. Fourth, in 1865, English surgeon Joseph Lister (1827–1912) reduced

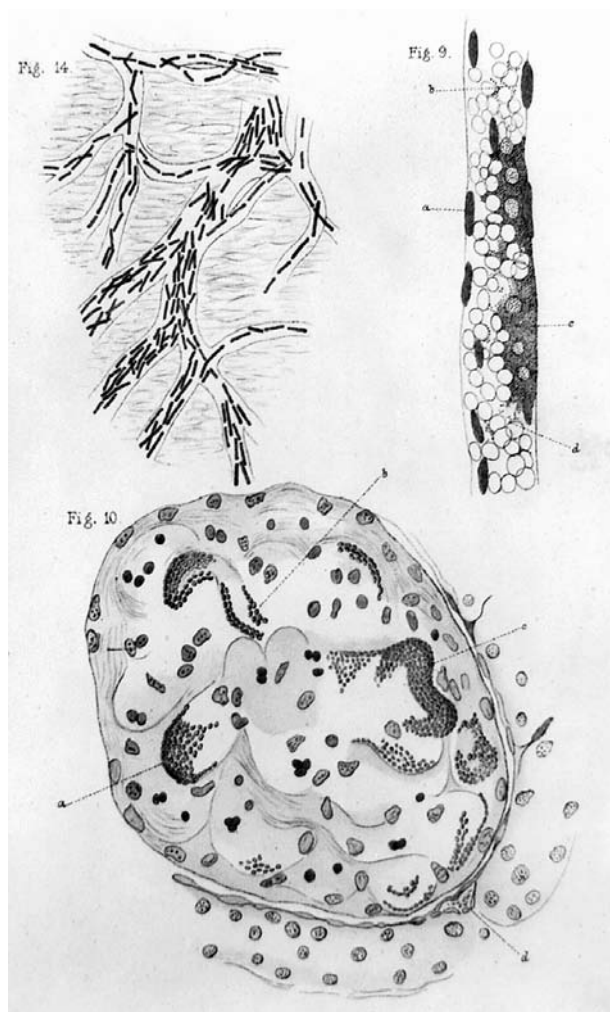


Illustration of bacteria from Robert Koch's *Investigations into the Etiology of Traumatic Infective Diseases*, 1880. Koch was a physician who received a Nobel Prize in 1905 for identifying the bacillus that causes tuberculosis. (Library of Congress)

THE BEGINNINGS OF MODERN EPIDEMIOLOGY

Medical statistics are essential in the fight against infectious diseases. This fact was not generally recognized until the nineteenth century but became important evidence toward accepting germ theory. Among the pioneers in the practical application of medical statistics was English physician John Snow (1813–1858). In August and September 1854 a cholera epidemic hit London. Snow noticed that 127 people died in three days within a small radius of a well on Broad Street. He did not know what caused cholera, but on September 8 he had the well disabled by removing the pump handle, thus dramatically reducing cholera deaths in that area of London. The incident of the Broad Street pump marks the beginning of modern epidemiology.

—Eric v.d. Luft

the incidence of infection among his patients by spraying carbolic acid in his operating room.

As Koch began to suspect that bacteria caused disease, he formulated four principles to guide his research. Known as Koch's Postulates, these principles define a rigorous scientific method to correlate each disease with its particular microorganism and remain important for all epidemiological investigations. First, the suspect microorganism must be present whenever the disease occurs. Second, the microorganism must be isolated from the diseased host and grown in a sterile culture. Third, the pure culture of the microorganism must create the same disease when inoculated into a healthy, susceptible host. Fourth, the microorganism must be isolated from the second host and demonstrated to be identical with that from the first host. Koch published his postulates in 1882 in the same paper that announced his discovery of the tuberculosis bacillus.

Norwegian microbiologist Gerhard Hansen (1841–1912) published his discovery of the leprosy bacillus in 1874. This was the earliest definite correlation of a microorganism with a disease. Dozens of similar discoveries soon followed. Bacilli were identified for anthrax by Koch in 1876, gonorrhea by German physician Albert Neisser (1855–1916) in 1879, typhoid

fever by German physician Karl Joseph Eberth (1835–1926) in 1880, diphtheria by German pathologist Theodor Klebs (1834–1913) in 1883, cholera by Koch in 1884, tetanus by German physician Arthur Nicolaier (1862–1942) in 1884, meningitis by Austrian pathologist Anton Weichselbaum (1845–1920) in 1887, bubonic plague by Swiss bacteriologist Alexandre Yersin (1863–1943) in 1894, and dysentery by Japanese bacteriologist Kiyoshi Shiga (1871–1957) in 1898.

More general discoveries were staphylococcus by Scottish surgeon Alexander Ogston (1844–1929) in 1881, streptococcus by German American surgeon Friedrich Fehleisen (1854–1924) in 1882, and salmonella by American veterinarian Daniel Elmer Salmon (1850–1914) in 1886. Scientists discovered so many infectious bacteria in the last quarter of the nineteenth century that this era is known as the Golden Age of Bacteriology.

Most of the first pathogenic, or disease-causing, microorganisms to be discovered were bacteria, but some protozoans, parasites, and viruses were also discovered to be infectious. In 1880 French physician Charles Louis Alphonse Laveran (1845–1922) discovered plasmodium, the unicellular parasite that causes malaria. Russian botanist Dmitri Iwanowski (1864–1920) founded the science of virology in 1892 by announcing that he had discovered an extremely tiny microorganism that could infect tobacco plants but did not behave like a bacterium. Pasteur coined the term “virus,” after the Latin word for “poison,” to describe such agents. In 1898 Dutch engineer and bacteriologist Martinus Willem Beijerinck (1851–1931) confirmed Iwanowski's results and isolated the tobacco mosaic virus.

—Eric v.d. Luft

Bibliography

- Absolon, Karel B., ed. *Anthrax—The Glorious Past: Robert Koch—Louis Pasteur*, Vol. 1, *A Sourcebook*. Rockville, MD: Kabel, 2002.
- Brock, Thomas D. *Robert Koch: A Life in Medicine and Bacteriology*. New York: Springer, 1988.
- Debré, Patrice Louis. *Pasteur*. Baltimore: Johns Hopkins University Press, 1998.
- Metchnikoff, Elie. *The Founders of Modern Medicine: Pasteur, Koch, Lister*. New York: Walden, 1939.

Cell Theory and Cellular Pathology

Cells are the microscopic living units of biological tissue. Because their outer membranes give them each a clearly demarcated shape, English scientist Robert Hooke (1635–1703) coined the term “cell” in *Micrographia* (1665) to describe them. For the next 173 years scientists studied cells meticulously and made accurate observations of their structure but formulated no plausible account of their origin, growth, or purpose. Highlights of this era include German biologist Karl Ernst von Baer (1792–1876) discovering the ovum in 1827 and Scottish botanist Robert Brown (1773–1858) naming the nucleus in 1833.

Working together, German botanist Matthias Schleiden (1804–1881) and German physiologist Theodor Schwann (1810–1882) founded modern cell theory in 1838, when they proposed that cells are simultaneously both distinct living entities and the components of all larger living things. Schleiden and Schwann built their theory on the observations of Hooke, Dutch microscopist Anton van Leeuwenhoek (1632–1723), Brown, and German naturalist Lorenz Oken (1779–1851). Although revolutionary, their work was full of mistakes. Schleiden thought that the cell wall was rigid and solid rather than a permeable membrane and that the nucleus was attached to it. The major flaw in their system was that they continued the old belief that cells arose by spontaneous generation from nonliving matter.

With microscopes steadily improving, knowledge of cell structure increased rapidly throughout the nineteenth century. In 1837 German anatomist Friedrich Gustav Jakob Henle (1809–1885) described the epithelium of various tissues, that is, the cell structure of their mucous membranes. He also pioneered classifying tissues according to their cell structure. Yet scientists in the early nineteenth century made little headway toward understanding cell chemistry or physiology.

Czech anatomist and physiologist Jan Evangelista Purkinje (1787–1869), the first to use the microtome, an instrument used to cut biological specimens into very thin segments for microscopic examination, discovered the ganglionic cells in the cerebellum that are named for him and coined the term “protoplasm.” German



Rudolf Virchow was a nineteenth-century German pathologist, regarded today as the founder of cellular pathology. (Library of Congress)

➤ “ALL CELLS COME FROM CELLS”

Virchow’s famous dictum “All cells come from cells” derives from Remak’s rejection of the belief that cells could freely arise from either tissue or environment. The concept is known as either Virchow’s law or the Remak-Virchow law. The Latin phrase itself, “*Omnis cellula est cellula*,” was coined in 1825 by French chemist François Vincent Raspail (1794–1878). Virchow developed his cell theory as a professor of pathological anatomy at Würzburg from 1849 to 1856 and was chiefly influenced by Scottish anatomist John Goodsir (1814–1867), to whom Virchow dedicated his 1858 magnum opus. Virchow, rather than Remak, gets most of the credit for the insight because he analyzed and synthesized previous theories into a coherent whole.

—Eric v.d. Luft

botanist Hugo von Mohl (1805–1872) continued Purkinje’s research on protoplasm. Oken’s student, Swiss botanist Karl Wilhelm von Naegeli (1817–1891), studied its chemistry. German zoologist Maximilian Schultze (1825–1874) demonstrated in 1861 that protoplasm in any kind of cell is essentially the same. In 1867 German biochemist Moritz Traube (1826–1894) published on osmosis and cell membrane permeability.

Cell division as the means of cell reproduction was discovered gradually by many scientists working independently of one another. Mohl described cell division in 1851. Polish physiologist Robert Remak (1815–1865) made several important discoveries, mostly concerning embryonic and nervous system cells. In 1852 he published his theory that cell division causes tissue

growth. German physician Walther Flemming (1843–1905), who coined the terms “chromatin” and “mitosis,” was among the first to use dyes to study cell structures. He wrote a classic account of cell division in 1879, as did German botanist Eduard Adolf Strasburger (1844–1912) in 1880. Swiss zoologist Albert von Kölliker (1817–1905) was the first to apply cell theory to embryology. He showed that spermatozoa are cells and later postulated the cell nucleus as the locus of heredity.

Cellular pathology is the study that correlates diseases with changes in cells. German physician Rudolf Virchow (1821–1902), the greatest pathologist since Giovanni Battista Morgagni (1682–1771), founded this study in 1858 by publishing *Die Cellularpathologie in ihrer Begründung auf physiologische und pathologische Gewebelehre* (*Cellular Pathology Based on Physiological and*

Pathological Histology), one of the most influential books in the history of medicine. Virchow defined health and disease respectively as the normal and abnormal states of cells.

—Eric v.d. Luft

Bibliography

- Ackerknecht, Erwin Heinz. *Rudolf Virchow: Doctor, Statesman, Anthropologist*. Madison: University of Wisconsin Press, 1953.
- Harris, Henry. *The Birth of the Cell*. New Haven, CT: Yale University Press, 1999.
- Malkin, Harold M. *Out of the Mist: The Foundation of Modern Pathology and Medicine during the Nineteenth Century*. Berkeley, CA: Vesalius Books, 1993.
- Rather, L. J., Patricia Rather, and John B. Frerichs. *Johannes Müller and the Nineteenth-Century Origins of Tumor Cell Theory*. Canton, MA: Science History Publications U.S.A., 1986.

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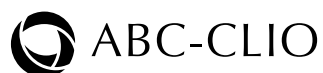
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 8 Crisis and Achievement, 1900–1945

The period between 1900 and 1945 was a half century of remarkable achievement, with widespread advances in science, technology, and medicine as well as general economic growth and expansion, but it was also a half century of crisis characterized by total war, genocide, global economic depression, and the oppression of millions by totalitarian regimes and colonial exploitation. The twentieth century opened with a period of western European dominance as well as one of scientific breakthroughs and new social and intellectual possibilities. Europeans entered World War I with a sense of exhilaration, but a very different mood emerged afterward. The brutality of mechanized warfare shocked the intellectual elite, inspiring unsettling trends in art and an intense interest in the “new science” of psychology, especially psychoanalysis. The new physics introduced by Albert Einstein, Max Planck, Werner Heisenberg, and others made the world feel somewhat less solid, while advances in nuclear technology, particularly in weaponry, made it more tense. The disaster of World War I and the economic changes brought about by financial systems of growing complexity added to the sense that the world was entering into a new age. The implied philosophy of modernism, with its uneasy relationship with the technological age, accompanied accelerating industrialization, consumerism, and popular culture. Advertising reinforced the sense of dynamic change with its message that old values (such as thrift and self-denial) should be left behind in favor of the quenching of desires.

Western European Hegemony

During this period, Europe rose to its zenith of power in global affairs. Europe was in political and economic control of 85 percent of the earth's surface by 1914 via colonization and the development of transnational commercial networks. However, by 1945 this European hegemony was in tatters, reeling from the aftermath of two world wars, a global economic depression, political and social revolutions, and the diffusion of new ideological movements. To a lesser extent, the United States and Japan also entered the fore as global powers in the late nineteenth century. However, it was Britain, France, and Germany that held imperial dominance over much of the world through the establishment of vast overseas empires, effectively establishing a European-centered world system.

The other two major eastern European Great Powers, Russia and Austria-Hungary, also held on to the vestiges of power in spite of their long-term decline. Tsarist Russia maintained a contiguous land empire that straddled most of Inner Eurasia and vast portions of eastern Europe

and the Far East. Habsburg Austria-Hungary was reluctant to relinquish its hegemony in central Europe and the Balkans but had to contend with the rise of Slavic nationalism that sparked World War I. Other European powers, such as Italy, Belgium, the Netherlands, and Spain, also held lands abroad, if only to maintain the trappings of imperial prestige despite their relative decline in relation to the ascendancy of the Great Powers.

In 1900 much of East Asia, Africa, the Middle East, and Latin America were under either direct or indirect forms of European dominance. Forced treaties, extraterritoriality, and gunboat diplomacy ensured that the Ottoman empire and China were vulnerable to European economic dominance. Indirect economic control of the Latin American republics made countries such as Mexico, Argentina, and Brazil dependent on decisions made in the financial centers of Europe. Direct political control, through either proxy states or colonial governments directly accountable to European authorities, characterized European hegemony in much of Southeast Asia, Oceania, and sub-Saharan Africa. The most notable example, the British Raj in India, ruled over millions of Indians with a British bureaucracy in the tens of thousands, with levels of autonomy that ensured that the system worked with the compliance of local authorities. European institutions and culture influenced much of the world in terms of fostering technological development, consumer cultures, and other facets that characterized European civilization, albeit at varying levels throughout many of the world's regions. Exceptions, such as Thailand, Japan, and Turkey, were able to maintain their nominal independence by accommodating themselves to the existing European international system. Regardless, the exploitation of labor and the expropriation of raw materials were central elements of European dominance, something not lost on European educated elites of these colonial domains who were to figure in anticolonial struggles, such as Mahatma Gandhi, Franz Fanon, and Ho Chi Minh.

Despite rapid technological, scientific, and philosophical innovations in much of the Atlantic world, the convulsions of this period ushered in a new era no longer primarily shaped by European developments and expansion.

However, by 1945 European hegemony had been depleted with its vast colonial edifice gradually crumbling amid the stirrings of revolution, nationalism, and warfare. Two world wars, a global economic depression, and the onset of ideological movements such as nationalism, fascism, socialism, and communism that encouraged belligerence as well as anticolonial movements all eroded the global dominance of the European Great

Powers. World War I was effectively a European civil war fought on a global scale, including in colonial holdings and with colonial troops in Europe. In World War II, the Japanese drive for supremacy in Asia and the Pacific, when added to the imperialist designs of Nazi Germany and fascist Italy, was an additional source of destruction and widespread human misery. Despite rapid technological, scientific, and philosophical innovations in much of the Atlantic world, the convulsions of this period ushered in a new era no longer primarily shaped by Eu-

ropean developments and expansion. By the end of World War II, the United States and the Soviet Union emerged as the major world powers. With the collapse of European colonialism, new powers such as China, India, and Brazil also began moving into international prominence. Western European dominance over world affairs ended, although the region would again become a major economic force in the 1960s and beyond.

Ideology

The history of this period can also be understood by examining the ideological forces that influenced world events, specifically the many varieties of nationalism; the faith in technology and modernization; the contrasting political ideologies of liberalism, fascism, and communism; and the many varieties of the philosophy of modernism.

Nationalism, which had been born as Europeans forged new political relationships, now shaped European conceptualizations of the relationship between the nation and the state, focusing attention on the bonds between a people and its governing apparatus. In European nationalism, this bond was largely defined via the terms of shared culture, race, and institutions. Such notions—with their abilities to unite and to isolate—also spread over Europe’s vast empires abroad. While other factors, such as economic competition, colonial disputes, and arms races, fueled the European drive into World War I, nationalism played a significant role in uniting populations in support of conflicts that resulted in the loss of tens of millions of lives. Nationalism, both as a contributing cause and a direct result, played a part in the Russian Revolution, the German Revolution, and the collapse of the last bastions of the Old Regime in eastern Europe and southwest Asia. National identities, supporting a concept of a collective identity, sometimes supported and sometimes came into conflict with Lockean liberalism and its focus on the rights of the individual.

During this period, the economic and social philosophy of liberalism, which had accompanied the rise of free trade and capitalism as well as the free exchange of ideas in scientific communities, came under fire. Liberalism also underpinned notions of representative government and the worth of the individual in such polities. The Bolshevik Revolution and its idealistic underpinnings, inherent critique of social inequities (i.e., class conflict), and positive initial presentation by elites in other countries made communism a viable alternative to economic liberalism and even more attractive during the Great Depression of the 1930s, when capitalism appeared to some as a god that had failed.

In addition to communism, during the interwar period fascism also emerged as a major ideological force contesting liberalism and the failings of laissez-faire capitalism when not harnessed specifically to a state apparatus. As with communism, fascism became attractive during the economic disaster of the 1930s. States such as Britain and the United States avoided political revolution, while these emerging ideologies transformed countries such as Germany, Russia, and Italy. National Socialism

(Nazism) in Germany, fascism in Italy, and Marxism-Leninism in Russia (the Soviet Union after 1922) became models for much of the rest of the world to follow, with many backers and true believers. Imbued with ardent nationalistic fervor, fascists and Nazis advocated a strong state, militarization, and a vast regimentation of the national population. Similarly, communists sought to bring an end to the capitalist domination over Europe and to create a dictatorship of the proletariat, while the Comintern promoted communist movements abroad.

Nationalism fueled anticolonial struggles across the globe. The Chinese Republic of 1911 replaced the Qing dynasty, but no faction was able to establish clear leadership or deal effectively with regional power centers or the Japanese. The Chinese Communist Party, eventually led by Mao Zedong, also emerged as a major contender for power in China. Similarly, the Mexican Revolution of 1910 eroded the authoritarian regime of Porfirio Diaz but in subsequent decades lost its momentum as it succumbed to one-party rule. Indian nationalism in British-ruled South Asia was driven by British reluctance to allow for greater self-rule or outright independence. During the interwar period, much of the colonized world was imbued with a greater sense of national identity as European- and American-educated elites returned with the ideological lessons learned in universities and political parties. World War I and the Great Depression further stirred anticolonial sentiment. Nazi Germany, fascist Italy, imperial Japan, and the Soviet Union sought allies by promising economic, diplomatic, and military assistance to counter European domination in the colonized world.

Bolstered by breakthroughs in science and technology, modernization also became one of the new faiths of this period. Modernization encompassed a general ideology of progress based on the introduction of new technologies as well as medical and scientific advancements, all of which, when spread, could improve quality of life and transform a region and its peoples. Modernization included the introduction of new forms of production (industrialization and its infrastructure of railroads, roads, improved port facilities, communication networks, and educational institutions), new products and forms of entertainment, and new weapons systems. Initially associated with the ideologies of liberalism and imperialism, modernization was also embraced by fascists and communists, all of whom promised the benefits of modernization without any of the social malaise they associated with decadent liberalism.

In the colonized and developing worlds, modernization was part of imperialism in both its direct or indirect forms. Nevertheless, most nationalists, from the Americas to eastern Asia, viewed modernization as a necessary means toward economic independence from Europe and thus co-opted it as part of their drive toward national independence and autonomy. In this context, the project of modernization developed into different trajectories in various world regions related to ideological or national liberation movements. The Soviet model of modernization and its cheery representations by true believers, when contrasted with the collapsing economical structures of Europe and the United States (which despite the New Deal was struggling well into the beginning of World War II), proved to be an attractive model to follow for much of the world

struggling with a global economic crisis. Depictions of the massive industrialization that followed Stalin's Five-Year Plans, designed to accelerate national development under socialism, suggested the new possibilities of modernization in countries freed from European colonialism and financial domination. However, domestic developments in the Soviet Union (including the Russian Civil War, forced collectivization, the Great Terror, and mass starvation in Ukraine, among other major catastrophes) were far grimmer than the illusion of a socialist paradise promoted by socialists and communists abroad.

Rapid modernization from 1900 to 1945 reshaped society and culture. Revolutionary innovations such as the discovery of the X-ray (1895), electrification via alternating current, the development of the assembly line and mass production, and the development of the automobile, the airplane, the telephone, and the radio as well as scientific breakthroughs such as Albert Einstein's theory of relativity, Edwin Hubble's discovery that the universe was expanding, and the early rumblings of quantum physics bedazzled the public, intellectuals and laypeople alike. The philosophy or aesthetic movement of "modernism" that coalesced in this period in the arts, thought, and literature had several major trajectories. One trajectory, aligned with liberalism and clearly expressed in architecture, embraced the new possibilities and methods of construction of the machine age and encouraged a rationalization in building design and in urban and industrial planning. Another trajectory, primarily aesthetic—and therapeutic, as seen in the Dada and later Surrealist movements in art and literature—expressed a revulsion against World War I and its killing fields and a rejection of the machine and industrial automation as dehumanizing. Instead, the proponents of Dadaism and Surrealism embraced notions of the subconscious, the irrational, and spontaneity. Modernism was also reinforced by the development of mass culture. Mass advertising encouraged a free-floating desire and the rejection of traditional restraint on behavior. A new taste for thrills and pleasure accompanied the Jazz Age and its new entertainment forms, such as automobile racing and joy rides, the exhibitions of aerial daredevils in airplanes, and roller-coaster rides at amusement parks. This embrace of the machine not for its rationality but for its thrill factor and its new possibilities for individual identity also figured in an important variant of modernism. This modernism rejected the liberal project, including the sanctity of the individual. The modernist vision was expressed early in the Futurist movement, with its proponents, particularly Filippo T. Marinetti, expressing a taste for fascism and a future in which humans and machines could blissfully fuse. This rejection of liberal individualism had another important adherent in the later thought of psychologist B. F. Skinner, who posited that the ideal society must be engineered to lessen conflict. Other authors, however, expressed their apprehensions regarding the emergent

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new world. Such fears are reflected in the works of authors such as George Orwell, Franz Kafka, and Aldous Huxley, who presented grim pictures of future dystopias in which political ideologies and modernization would completely shape humanity's destiny, with little to no regard for human life or liberty.

The following discussion looks at how the changes of the period from 1900 to 1945 unfolded in key world regions and, in particular, at the interplay between political change and ideological forces. An emphasis on military affairs is unavoidable given the eruption of two world wars in this period.

Sub-Saharan Africa

From 1900 to 1945 the vast portion of sub-Saharan Africa was under the direct rule of Britain, France, Italy, and Germany (until 1918 when Germany's colonies were seized). Following the European Scramble for Africa in the late nineteenth century, sub-Saharan Africa effectively became a chessboard for European diplomacy, with Germany seeking to gain territories at the expense of Britain and France. However, it was France with its immense French West Africa and French Equatorial Africa domains and Britain with its vast north-south expanse from Egypt to South Africa that characterized much of sub-Saharan Africa during this period. Africa was a critical element of Europe's global empires in terms of its vast natural resources and its large labor pool. The Boer War (1899–1902) was effectively a British attempt to ensure its hegemony in its dominions in South Africa (Union of South Africa after 1910) after skirmishes over the diamond trade and inland trade routes. This conflict illustrates the importance of Africa to European markets and Europe's strategic objectives in this period. Allowing this region to become autonomous would have created the potentiality of it falling into German influence, something the British could not allow, as this was a valuable strategic chokepoint on the sea-lanes to British India.

The campaigns in Africa during World War I were very different from those in Europe. While great armies vied in Europe, in Africa most engagements were more limited, fought by companies rather than divisions. Artillery was not as important in African fighting. Within Africa, most of the troops, especially those used by Germany, were native Africans. Overall, more than one million African soldiers participated in military campaigns. With the end of the war European colonial authorities returned, in fact increasing their domains by taking over German lost territories under the League of Nation's convention of mandate rule. The most profound and long-lasting impact on Africans may have been the realization that they could fight Europeans as equals, if given adequate arms, and thereby destroy the carefully cultivated mythology of European invincibility.

The global economic depression of the interwar period had a much more limited impact on the economies of this region insofar as European economic dependence was manifest. Many Africans found themselves at the whim of the European economic world system, with their lifeways

and livelihood dependent on events occurring in Europe. Italian attempts to conquer Ethiopia were ultimately successful (though short-lived) due to Italian technological advantage, but stubborn Ethiopian resistance, despite its technological and military disadvantage, characterized this conflict. In World War II, Africa was important not only because it was a source of materials and manpower but also because of its strategic locations, such as the Suez Canal. Most of the actual fighting in this war took place in the French colonies of North Africa. Mussolini's troops invaded Egypt from Libya, but the Axis forces were finally defeated in Africa in May 1943. There were no theaters of operations in South Africa during this time.

By 1945, assertive emergent nationalist leaders were aware of the weakened and economically devastated European powers. Regardless, decolonization would not begin in full force until the decades following the end of the war. However, British and French colonial structures were already on the decline, with many European-educated Africans demanding greater autonomy in recognition of their efforts in assisting in the war effort. Nationalist movements, often with ideological support from the Soviet Comintern, sought and worked toward the dismemberment of European imperialism and eventual national independence.

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The Mediterranean Basin

From 1900 to 1918, the Ottoman empire faced a long-term decline and was the object of European colonial ventures directed at its extensive domains along much of the eastern and southern Mediterranean littoral. The Balkan states of Greece, Serbia, and Bulgaria sought to gain the Ottoman empire's remaining European territories, which were effectively seized in two Balkan wars. Britain, France, and Italy had already acquired many of the Ottoman empire's former North African provinces, allowing it only nominal authority in these regions. Increasing German influence, due in part to the planned construction of the Berlin-to-Baghdad railway to ensure German access to Middle Eastern oil, led to the Ottoman empire joining with the German-led Central Powers in World War I.

The Turkish state—installed by the Young Turks to replace the collapsing Ottoman empire—lost the war but outlasted the Ottoman regime. While Turkish troops fought bravely against better-equipped British, British commonwealth, and British Indian troops, a surprising Turkish victory at Gallipoli was instrumental in launching the career of Mustafa Kemal (1881–1938). During this time, the Young Turks orchestrated the Armenian genocide to create a more ethnically homogenous Anatolia in the midst of war. After the fighting concluded, arrangements concerning the Ottoman Turkish homeland were complex. The treaty called not only for the loss of Balkan and Arab lands but also for the surrender of much

of the Anatolian homeland. Kemal, the Turkish hero of Gallipoli, organized an army that drove British, French, Greek, and Italian forces out in 1920 and established the Republic of Turkey. In 1935 the National Assembly gave him the honorific “Ataturk,” which means “Father of the Turks.” As for the other Ottoman lands, at the end of World War II the question was referred to the newly created League of Nations. Great Britain and France were assigned the Ottoman Arab territories through mandates, under the terms of which they would control these former Ottoman territories until their populations were ready for self-rule.

Disregarding promises of independence to Arab nationalists in exchange for assistance against the Ottoman military, British and French authorities sought to divide the former Ottoman Middle East between themselves, having already established oil companies to exploit much of the region’s wealth. Furthermore, the establishment of a Jewish homeland under British auspices in Palestine stirred tensions in the region. Palestinian Arabs viewed this as a form of colonialism, as large numbers of Zionists settled in the interwar period. Turkish Anatolia and Thrace, however, were able to maintain sovereignty despite European ambitions to carve up remaining Turkish territories. However, the interwar Middle East was now part of the European world system, shaped mostly by the British-French rivalry in the region as well as Zionism.

With the onset of World War II, North Africa and the Middle East became pivotal battlefields for the major belligerents, with National Socialist Germany and fascist Italy seeking support among nationalist leaders who wished to resist British and French colonial rule. Notwithstanding their independence in 1932, Iraq and Iran were put under indirect British and Russian control, respectively, to prevent them from coming under German influence. The Middle East remained solidly under Allied control throughout the war despite diplomatic flirtations between Arab and fascist leaders, most notably the mufti of Jerusalem’s infamous meeting with Adolf Hitler in 1941. Various battles were fought in North Africa between Allied forces seeking to break German general Erwin Rommel’s tank forces. Large numbers of Arab and Maghreb colonial troops fought with British, American, and Free French forces in North Africa and Europe, seeking greater autonomy after the war. Arab nationalists were encouraged at their prospects after observing their European colonial overlords as vulnerable both at home and abroad. By 1945 much of the region remained under European dominance, although weakened and facing increasing demands on the home front. As a result the ebbing of European hegemony was already evident, and decolonization was soon to follow, albeit creating further instability in the region when the British vacated Palestine in 1948, leaving the Arab-Israeli issue unsettled.

South Asia

From 1900 to 1945, most of South Asia was under British domination through both indirect and direct colonial control. British India (which constitutes modern India, Bangladesh, and Pakistan), Ceylon (modern Sri Lanka), and the Maldives were integral elements of the British empire. The British Raj was considered the “jewel” of the British empire,

as it ensured control of a large market for British manufactured goods as well as a viable pool of labor for the British economy. Through varying degrees of political and economic control, British colonial authorities were able to maintain power over a vast region, utilizing regional resources such as Indian troops while maintaining a minimal bureaucracy. However, British authorities confronted an increasingly resentful Hindu, Sikh, and Muslim population. Despite efforts by the British to weaken the anticolonial movement in India by supporting the Muslim League against the Hindu-majority Indian Congress, Indian nationalists, such as Mahatma Gandhi, pressed British authorities for outright independence.

During World War I, British Indians fought for the British empire, mostly in the Middle Eastern theater of operations and to a limited extent on the western front. In spite of their efforts, however, British Indians were still considered mere adjuncts of the British empire and not in any way ready for independence. As a result, interwar

British India was plagued with discord and frustration, as both Hindus and Muslims became active in seeking greater autonomy from Britain. With the world thrown into economic instability during the Great Depression, some Indian nationalists found the ideologies emerging from Europe, such as fascism and communism, attractive alternatives to British colonialism. Moreover, Japanese overtures and descriptions of a Japan-dominated “Asia for the Asians” made South Asians realize that collusion with Japan’s Greater East Asia Co-Prosperity Sphere was a viable course of action. Despite British efforts to counter such external attempts to encourage Indian nationalist ambitions, resentment of the British fostered a significant number of political movements aimed at independence. With the widespread repression of nationalist leaders in British India in the interwar period, most notably Gandhi and other Quit India movement leaders, most Indians came to view British colonialism with increasing resentment, and resistance increased.

During World War II, as with World War I, most Indians aligned themselves on the side of Britain, this time against Germany and Japan, hoping that such allegiance would gain India independence from Britain at the war’s end. With the severe weakening of Britain as a result of the war, Indian and Ceylonese nationalists worked toward their independence ever more fervently. However, the rivalries between Hindus and Muslims in India created a new set of issues that would affect how eventual independence would play out in the period immediately following the end of the war in 1945.

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East Asia

At the dawn of the twentieth century, Qing China remained nominally independent. The growth of European spheres of influence, extraterritoriality, and unequal treaties—which had resulted from the Opium

Wars in which China fought unsuccessfully against Britain—hampered this independence. British, French, German, Russian, and Japanese extractions of territory and economic concessions from China led to increasing resentment among the rank and file of the Chinese population toward the Europeans and the Manchu Qing dynasty in power. Rising nationalism was evident in new social movements aimed at both overthrowing the Qing and driving out the Europeans. Most notably, this was evident in the Boxer Rebellion, an effort to confront European colonialism, that ended in 1902 when European, Japanese, and U.S. troops quashed Chinese nationalist efforts in Beijing.

In contrast to China, Meiji Japan managed to escape European colonial domination and to create its own empire in East Asia at the expense of China, Korea, and Formosa (present-day Taiwan). Japan's standing increased after its military victory over a European Great Power, Russia, in 1905. Following the Meiji Restoration of the late nineteenth century, Japanese authorities had found it expedient to modernize, industrialize, centralize power, and foster a heightened sense of national identity in order to counter European encroachments on Japanese sovereignty, especially in light of developments in China.

In 1911 Chinese nationalists under the leadership of Sun Yatsen were successful in overthrowing the Qing dynasty and established a nominally republican government under the leadership of Yuan Shikai. Yuan declared himself emperor in 1915, but the new government fell apart at this death in 1916. Despite Sun Yatsen's efforts at national unification and modernization, China's provinces remained outside of the political center of Beijing and managed to maintain varying levels of power under various warlords, creating instability across much of the country and leaving it at the whims of European colonialism. However, the outbreak of World War I, for which China provided laborers to as-

sist the Allied effort, led to Germany's loss of former domains in China. The Chinese had expected those lands to be reincorporated into China proper, but they were awarded to Japan. The student protests over that, known as the May Fourth Movement, was the first dynamic expression of Chinese nationalism. Nevertheless, after the war Japan became more aggressive in its foreign policy vis-à-vis China, seeking to gain control of Manchuria. Humiliated

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by European and American attempts to control Japanese naval expansion, Japanese military authorities sought to expand in the politically unstable China.

Intra-Chinese fighting between the Nationalists (Guomindang, or GMD), under the leadership of Jiang Jieshi (Chiang Kai-shek), and the Communists, under various leaders until Mao Zedong emerged as a clear leader in 1935, added a further layer of complexity to the instability of China. The Great Depression created an economic justification for expansion that propelled Japanese militarists to plot against China by staging a series of incidents designed to provoke war and so seize terri-

tories. Viewing European protectionist measures and closing markets as threatening to the Japanese economy, Japanese militarists deemed territorial expansion necessary. The establishment of the state of Manchukuo (1931) in Manchuria and Inner Mongolia and alliances with Chinese warlords against the central authority of Jiang Jieshi allowed Japan to trigger the Pacific War (1937–1945), which would become one of the two main theaters of World War II.

During World War II, in tandem with its war against China, Japan expanded at the expense of French, Dutch, and U.S. colonies in Southeast Asia and created the Greater East Asian Co-Prosperity Sphere under Japanese hegemony. The vastness of Chinese geography prohibited the conquest of the entire country and offered a refuge from which resisting Chinese troops could continue the struggle. In addition, tenuous cooperation between Nationalists and Communists during the war helped them maintain a level of national cohesion to resist Japan. After the entry of the United States into the war following the Japanese attack on Pearl Harbor in 1941, Allied assistance also helped prevent Japanese advances into mainland China.

With the Japanese surrender of 1945, the Pacific War was effectively over, but the Chinese Civil War effectively resumed as the Nationalists and the Communists vied for control of the country (given that initial hostilities had begun in 1927 and were merely placed on hiatus as a result of Japanese aggression). Japan, following surrender, lay in utter ruin and was occupied by Allied forces. With the end of World War II, most of East Asia was characterized by physical ruin and political instability brought on by decades of warfare. Moreover, the region faced yet another war, in Korea (from 1950 to 1953), until a United Nations agreement established an artificial demarcation at the 38th Parallel, effectively creating two Korean states.

Southeast Asia

The vast expanse of Southeast Asia was mainly under European and U.S. colonial domination during this period. French Indochina (Vietnam, Laos, and Cambodia), British Malaya (Malaysia), Burma (Myanmar), Singapore, the Dutch East Indies (Indonesia), and the American-ruled Philippines were all under direct domination of Western colonial authority. At the beginning of the century, the United States had fought a war of attrition (1898–1902) against Filipino nationalists after having ousted the Spanish from the Philippines in the Spanish-American War (1898). Thailand was a clear exception, given its geographical location as a buffer between British and French territories. World War I played a minimal role in events in Southeast Asia, as these countries were far from the battlefronts. However, the Great Depression and interwar ideological influences, primarily from Japan, had a significant impact in Southeast Asia. Despite frustrated efforts at greater autonomy after the Wilsonian promise of national self-determination was not extended to the nonwhite nations of the world, nationalist leaders such as Vietnam's Ho Chi Minh maintained relationships with the Soviet Comintern

revolutionary movement abroad to ensure funding and clandestine activity against the European colonial authorities.

World War II drastically altered the colonial structures of Southeast Asia as the Japanese ousted French, British, Dutch, and American forces from the region. Notably, the Vichy French, as a satellite of Nazi Germany, handed over control of Indochina to Japan. While Japan attempted to allay the fears of these countries by promising them a place in its Great East Asian Co-Prosperity Sphere, exploitation and military excesses illustrated Japanese racist preconceptions regarding fellow Asians. However, some nationalists, such as Indonesia's Sukarno, were able to use the Japanese occupation as a means to maintain greater autonomy than that known under European control. While many Southeast Asians fought with the Allies against the Japanese, after having seen their former European colonial masters ousted and having seen a fellow Asian power rise to prominence in the region they were reluctant to allow the postwar return of European colonial rule. As a result, with the widespread development of nationalism in the region and with varying levels of Soviet influence and aid, Southeast Asia became a hotbed of rebellion and revolution in the next several decades.

Inner Eurasia

In 1900 much of Inner Eurasia was under the direct political domination of tsarist Russia. From the Russian Far East through the steppes of Central Asia and Siberia to the Caucasus and the Baltic littoral, Russian authorities ruled a vast state of myriad ethnicities and religions. However, the political fragmentation, exacerbated by the Russo-Japanese

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War of 1905, led to ever more resistance against the tsar. The Russian Revolution of 1905, while quelled with fierce repression and false promises of greater liberalism, did not upset the Russian autocracy but did inflame social and political movements toward the removal of the existing regime. Russian ambitions in Europe and its growing involvement in Balkan affairs led to its involvement in World War I. However, the lack of viable stores of

weapons, depleting morale, and growing tensions in the countryside and the cities led to ever-growing resentment against the autocracy.

Despite a series of victories against the Germans and the Habsburgs late in 1916, the Russian empire fell apart in February (March in the Gregorian calendar) 1917. The February Revolution created the Provisional Government in lieu of the abdicated tsar, with the prospect of continuing Russia's participation in World War I and maintaining stability amid deteriorating conditions. In the interim the Bolsheviks plotted its overthrow, which they successfully executed in October 1917, thus completing the Russian Revolution that replaced an autocratic regime with a "dictatorship of the people" that aimed at rebuilding society along com-

munist lines. The promises of peace and bread were subsequently maintained under the leadership of Vladimir Lenin, as Russia made terms for ending the conflict with Germany. The Treaty of Brest-Litovsk of 1917, which ceded vast portions of the former Russian empire to Germany, was seen as a necessary first step to ensure peace for socialist Russia.

However, the forces of reaction would not go quietly, and the Russian Civil War (1917–1923), which pitted the reactionary Whites against the revolutionary Reds, affected most of Russia's Inner Eurasian dominions. Regions in Central Asia and Ukraine that had attempted to create sovereign states amid the civil war were forcibly conquered by the Russian Red Army and were coerced to comply with economic and ideological institutions. While foreign assistance by the Allies to the Whites proved of no consequence, the communist Reds correctly viewed this as an attempt by global capitalism to reverse their gains. With the end of the Russian Civil War, the Red Army was able to regain all the former territories of the Russian empire with the exception of Poland and the Baltic countries. With the establishment of the Union of Soviet Socialist Republics (USSR) in 1922, all these regions came under the political, economic, and ideological control of the Communist Party of the Soviet Union (CPSU). While the USSR economic model sufficed to ensure the provisioning of the Red Army and the day-to-day functioning of the nascent socialist state during the war, Lenin established the New Economic Policy (NEP) in 1921 as a mixed economy of state industries and varying levels of free enterprise in order to rebuild the shattered war-torn Soviet economy.

With Lenin's death in 1924, disagreements over the economic policies of the Soviet Union erupted among the top Bolsheviks. Josef Stalin, the general secretary of the CPSU, was able to oust his opponents and end the NEP in 1928. In its place he enacted vast industrialization state plans and collectivized agriculture. His firm grip over the state police organs and the establishment of a prison system that spanned the Soviet Union allowed Stalin to create an oppressive regime that forcibly coerced citizens to do his bidding. Despite the human cost and the waste created by Stalin's Five-Year Plans and the Great Purges, the Soviet Union was able to industrialize rapidly while destroying the vestiges of the autocracy and eliminating "class enemies." While relationships with western Europe and the United States were contentious amid the suspicions harbored about Soviet machinations through the Comintern and its directives to foreign communist parties, the Soviet Union was able to rejoin the community of nations. The Soviet Union gained admission into the League of Nations in 1933 and also gained a gradual diplomatic recognition by most of the world's nation-states.

Soviet interventions in diplomatic affairs abroad, such as its support of the Spanish Republic during the Spanish Civil War, its invasions of Finland and eastern Poland, and its controversial 1939 Nazi-Soviet Pact with Nazi Germany, raised suspicions of its intentions in global affairs. Following the German invasion in 1941, the Soviet Union entered into a titanic struggle to free its territories from German forces. The eastern front of World War II was characterized by fierce battles between the Soviet Red Army and the German *Wehrmacht* across vast geographic spans and clashes between hundreds of thousands of troops. The Great

Patriotic War, as World War II is referred to in Russia, was the main theater of operations for the Allies as the greatest concentration of Axis forces faced the Red Army from Leningrad to Stalingrad. In coordination with the British and American forces in western Europe, the Red Army was able to close in on Germany through the eastern front, ultimately capturing Berlin in 1945. However, having fought such a bloody conflict at such a high cost, the Soviets were unwilling to give up their gains in eastern Europe.

Moreover, adjacent regions, such as Persia (Iran) and Afghanistan, came under significant Soviet influence during the war. As objects of colonial interest during the preceding period of the Anglo-Russian “Great Game,” during World War II Iran was occupied in the north by the Soviet Union and in the south by Britain to ensure its stability in the face of potential German influence. While these countries were able to maintain their nominal sovereignty, increasing European influence through the interwar period and World War II hindered their foreign relations and domestic affairs to a significant extent. The establishment of British oil concerns in Iran would also foster economic domination based on petroleum profits and the establishment of a pro-British Iranian elite.

Eastern Europe

In the beginning of the twentieth century, the majority of the states of eastern Europe, with the exception of Serbia, Romania, and Bulgaria, were under the control of the Austro-Hungarian empire, the German empire, or the Russian empire. Most of these countries were characterized by rural hinterlands that retained vestiges of feudalism. The major cities were often hotbeds of political revolution and social movements geared at replacing the existing reactionary monarchy and in some instances working for national independence, most notably in the Austrian province of Bosnia-Herzegovina. With the defeat of the Central Powers at the end of World War I, a series of buffer states—Latvia, Estonia, Lithuania, Poland, Hungary, Austria, Czechoslovakia, and Yugoslavia—was established by the Entente Powers to separate western Europe from the Soviet Union. The latter two were artificial constructions composed of myriad ethnic groups that would prove resistant to the development of national identities.

Large numbers of Germans and Jews resided in many of these states, fueling concerns that their otherness was a threat to unified nationalist identities. Nationalist movements, under the influence of fascist Italy and Nazi Germany during the interwar period, fostered anti-Semitic propaganda encouraging countries to remove their Jewish citizens. Moreover, Nazi Germany used German citizens in eastern Europe as an excuse to intervene in the affairs of the region. With the onset of World War II, many of these eastern European states either became German satellites or were forcibly occupied as part of the Third Reich. With the implementation of the Final Solution throughout the Third Reich, the Jews of eastern Europe were removed and initially placed in urban ghettos and

then transported to death camps, where they were shot or gassed en masse or exploited as forced labor for German war production. The large number of eastern European collaborators in the Holocaust during this period is indicative of the prominence of anti-Semitic and anti-Soviet sentiment in the region. With the Soviet conquest of the region during 1945, many of these states came under the ideological control of the Soviet Union via puppet regimes that the Soviet military presence helped establish as “Peoples’ Republics.”

Western Europe

In the beginning of the twentieth century, western Europe, along with its institutions, culture, and ideologies, was the prominent world region in terms of the global economy. Through rapid industrialization, urbanization, and modernization as well as scientific and technological innovations, Britain, France, and Germany were the world’s foremost world powers. While other countries, such as Italy, Spain, the Netherlands, Belgium, and the Scandinavian countries, were second-tier powers, they participated in much of the economic successes of western Europe. While colonial conflict and intra-European rivalries shaped the relationships among Britain, France, and Germany, it was not until the outbreak of World War I that the edifice that had been gradually built over the past century began to fracture.

World War I pitted the economic and demographic resources of the Entente and Central Powers, particularly evident in the western front that straddled the countryside from southern Holland to southern France. Countless artillery barrages ensued, and troops clashed from 1914 to 1918 on an almost daily basis amid squalor and disease. As national economies were directed to the purpose of war, the production of civilian goods was all but halted, leading to shortages of consumer goods and to malnutrition and near starvation on both sides in their respective home fronts. With the end of the war in 1918 and the subsequent vindictiveness enacted through the Treaty of Versailles in 1919, Germany was dismembered, humiliated, and saddled with debt via war reparations demands. Britain and France both struggled to meet their war debts to the United States as well as to pay huge amounts of veteran pensions. At the same time, German economic growth was stagnant, leading to the polarization of politics to the fringe Left and the fringe Right in Germany.

Interwar efforts to buttress the German economy by the United States through the Dawes Plan were undercut by the onset of the Great Depression, which severely gripped western Europe. The postwar popularity of communist, social democratic, and fascist parties was further exacerbated by the severity of the economic collapse. The success of the Russian Revolution inspired many and caused consternation in others. Fascist parties in Italy, Germany, Hungary, and France were able to

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make respectable electoral wins in various elections, partly in reaction to fears of Bolshevism. Ultimately, fascist Italy and National Socialist Germany were able to establish revolutionary regimes endorsing egalitarian “classless” dictatorships that embraced nationalism. National Socialism in particular embraced anti-Semitism as a central element of its ideology. Under the leadership of Adolf Hitler, Nazi Germany sought to regain all the losses of World War I for Germany and to wreak havoc on the Jews of Europe. A weakened France and an overstretched Britain were reluctant to engage Germany and thus chose to implement doomed diplomatic policies of appeasement. However, Hitler was intent on war, and World War II began when the pledge to protect Poland on the part of Britain and France was challenged by the German invasion of 1939.

From 1939 to 1943 Germany held the initiative in World War II, making tremendous gains in the first years through the strategy of blitzkrieg (lightning war), which aided in the capture of Poland, France, Belgium, the Netherlands, Greece, and vast portions of the Soviet Union. Britain and the United States, along with the British commonwealth and colonial forces, were able to open major fronts in North Africa and in France, in tandem with strategic aerial bombardment of German targets. Ultimately, in coordinated efforts the Allies were able to defeat the Axis Powers although destroying most of western Europe in the process. Moreover, the former Great European Powers were militarily and economically exhausted, with Germany effectively destroyed and Britain and France unable to maintain their power projection abroad to the same degree as before. As a result, World War II eroded the remnants of European power, making European overseas empires vulnerable to the stirrings of nationalism.

The Americas

Despite their soil being largely untouched by the world wars, the Americas were directly affected by global affairs such as the Great Depression and the relative decline of Europe. The expansion of the United States on the world stage after the Spanish-American War of 1898 was an instance of its growing influence in international affairs. Direct, though delayed, U.S. involvement in World War I was significant in ensuring victory for the Entente Powers. Under the leadership of President Franklin D. Roosevelt, the New Deal was implemented to establish economic growth. Other programs, such as social security, began as a way of alleviating poverty and quelling social unrest. The rapid industrialization and economic mobilization that followed the U.S. entrance into World War II, not to mention the vast workforce reserves in the United States, aided the U.S. recovery from the Great Depression and the country’s engagement on two fronts in World War II. With the end of the war, the United States found that it was a global superpower with a strong economic foundation, a stark contrast with its position at the beginning of the conflagration. Similarly, Canada also emerged from the war as a rising power, having devolved itself from British hegemony

in 1931. As an equal partner in the British commonwealth and no longer a dominion, Canada had benefited from industrial production in the war as well as from its close relationship with the United States in fostering an integral trade relationship.

In contrast, Latin America, while able to benefit from the economic growth fostered by war, found itself under the gradually growing economic domination of the United States as European power waned. In the early twentieth century, Latin American resistance against its neocolonial relationship with Europe and the United States, most notably in the Mexican Revolution, was expressed in myriad ways. However, despite the influence of foreign ideologies, the Latin American republics remained under the grip of their elites, who were bent on repressing foreign ideologies that threatened their wealth and their power. Brazil, Argentina, and Chile established themselves as foremost economic regional powers while maintaining their dependence on foreign markets for their financial stability, relegating them to semiperipheral appendages of the international economy based in the Atlantic world system. Mexico, despite its attempt to break economic domination as facilitated by internal elites by nationalizing its oil industry, nonetheless fell under the domination of a one party-state well until late in the twentieth century. Through much of this period the states of Central America and the Caribbean were vulnerable to U.S. gunboat diplomacy that ensured economic arrangements in line with the interests of U.S. investors. However, with the end of World War II and the establishment of the World Bank and the International Monetary Fund, new economic organs would continue to direct Latin American economic development, fostering a growing dependence on Europe and the United States to a significant extent.

Oceania

Australia and New Zealand experienced vast changes from 1900 to 1945. With their status as commonwealth dominions at the beginning of the century, they both became integral to British military strategy in World War I. The Australian and New Zealand Army Corps (ANZAC) was deployed in the Middle Eastern theater of operations, most notably in the failed operation at Gallipoli. This defeat cemented both Australian and New Zealand national identity. Through the Great Depression, both Australia and New Zealand established welfare states and diversified their economies to meet the demands of the transforming world economy, given their vast natural resources and growing populations. During World War II, despite British disapproval, both Australia and New Zealand worked under nominal U.S. command in the Pacific theater of operations. At war's end, Australia and New Zealand were staunch American allies and were no longer mere pawns in British global interests.

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Environment and Population

The period from 1900 to 1945 ushered in massive environmental changes. Population growth, urbanization, mechanized agriculture, and the impact of new technologies such as the automobile, along with the oil and steel industries, revised landscapes. In this period about 600 million acres of rain forest were deforested to make way for farm and grazing land. Water, air, and land pollution became intense throughout industrialized belts, while efforts at abatement were primarily aimed at sewage and drinking water. Elite support for nature encouraged a wilderness preservation movement. The linkage between consumerism, fashion, and species protection became clear in the popular movement to ban the use of feathers from egrets, herons, and other exotic birds in women's hats. The Audubon societies that began with a national chapter in 1886 gained popularity in the outrage over the decimation of bird populations. National forests were set up in the United States, Brazil, Argentina, Chile, Japan, and several European countries. Britain also established preservation societies that oversaw its colonial holdings. The field of ecology was growing in importance, with Germany an important center of ideas. The British Ecological Society was established in 1913, and the Ecological Society of America was established in 1915. By the 1930s the global economic depression, along with the farming disaster of the Dust Bowl in the United States, caused governments to turn toward ecologists as planners. In the United States, for instance, the Soil Erosion Service, established in 1933, in tandem with workers from the Civilian Conservation Corps, attempted massive reengineering of the landscape, ordering land to remain fallow, putting in windbreaks, and instituting other measures to lessen erosion caused by drought, the plowing of marginal (arid) land, and wind.

Issues related to population were of greater interest than issues related to environment. The first half of the twentieth century was the era of statistics and social engineering as far as collecting and analyzing data regarding society and the environment are concerned and also represented attempts to control natural resources and modify human behavior. Governments and corporations started to collect data on practically all human activities, beginning with infant mortality rates and ending with crop yields. Countries, especially the industrialized ones, created bureaus of statistics as government agencies that were given the task of collecting information. For example, Australia created its Bureau of Statistics in 1905, Canada's was created in 1918, and so on. European countries started earlier, while colonies and colonial possessions began later. Population censuses, occasionally taken since the eighteenth century in Britain, now became a regular occurrence every several years. Denmark began to count its own population regularly

beginning in 1901 and every five years thereafter. In Germany the first regular census was held in 1895, while the French statistical office began to study the consumption habits of the population in 1907. Enormous combat efforts during two world wars made it necessary for governments to catalogue their human and natural resources even further in their metropolises and colonies. Elsewhere in Asia and Latin America, developing nation-states also found it expedient to acquire quantitative data for the purposes of economic development and expansion. A new approach to warfare required that military commanders know at any given time what human and material resources they had available. The management of two world wars was social engineering on an unprecedented scale.

The introduction of statistics and the use of applied social sciences as a political tool to solve community problems represented a paradigm shift. Laws of averages and deviations suddenly became paramount in a struggle to define and alleviate social and environmental problems. Critics asserted that by looking at averages and standard deviations, the individual is dismissed. As the amount of information collected increased, computers, invented during the first half of the twentieth century, with their ability to perform millions of numerical operations in a split second changed not only the statistical methods but also the way societies collect and analyze information. Despite the advent of the use of science for what was deemed progress, ideological movements, such as National Socialism and Marxism-Leninism, also applied their own interpretation to support their specific agenda for the purpose of reordering their own societies along ideological lines.

The use of numbers to explain human society could be traced back to the founding of modern applied social science and the desire to understand the changes among the population and in the environment and to manipulate them for humanity's benefit. Sociologist Emile Durkheim achieved fame by using and perfecting the new method of analyzing numbers in order to explain social phenomena. He studied no particular person of flesh and blood but rather an "average man," an idealization among many who suffered from the same social illness. In 1897 he published his study of suicide among a range of social groups. Durkheim, one of the fathers of applied social science, studied the numbers indicating that, on average, suicide occurs more often among widowed or divorced individuals than among married individuals and more often among Protestants than among Catholics. He popularized the modern concept of anomie, a term used to indicate a lack of social integration, and concluded that the less an individual is incorporated into society, the more likely he or she is to commit suicide. Durkheim's kind of study of numbers, which aimed at finding a causal connection to explain the data, became the norm of the newly created applied social sciences, such as criminology.

In the first half of the twentieth century, studies and popular discourse began to focus on the "average man." For example, societies started to measure the "average wealth" of its citizens, expressed as gross domestic product divided by the number of inhabitants living in a state. With the founding of the International Monetary Fund and the

World Bank in 1944, these measurements were finally taken to a global scale in a very systematic fashion. Advocates said that the measurements of population and resources available in nature were used to improve the lot of humankind, increase food production, reduce hunger, and alleviate larger social problems in general. Undoubtedly this was the case. Better measurement and classification of human and natural resources is and was a precondition for their better management. Still, statistics could be very deceiving. On average, two individuals eat meat and potatoes, even if one of them just eats the meat while the other just the potatoes all the time. Despite ideological notions of progress as advocated by ideologues of all stripes, the Great Depression shattered illusions of economic advancement without state tutelage.

Demographic data are the most basic statistical information necessary for any further social and economic analysis. Whereas at the beginning of the twentieth century the population of the world is estimated to have been around 1.7 billion, by 1950 it had reached 2.5 billion. The trend of population growth, though on the rise for centuries, picked up dramatically in the twentieth century. With industrialization, especially the second wave associated with the mass production of consumer goods, the speed of growth increased. In addition to improved incomes and spending powers due to industrialization, declining death rates caused by improvements in sanitation and medical care also contributed to this growth. The pace of growth was awe-inspiring in comparison to preindustrial eras. The earth's population reached its first billion in the 1800s and its second billion in 1930. Even the catastrophic casualties of the two world wars could not reverse the trend. At the end of the twentieth century, there were over six billion people on earth. Population did not grow on all continents at the same pace. In fact, estimates are that the European share of the world population dropped from around 25 percent at the beginning of the twentieth century to approximately 22 percent at midcentury. This drop can be explained primarily by declining birthrates in industrialized areas due to malnutrition and war casualties. All the other continents registered substantial growth during the same period.

No human activity is more closely related to the environment than agriculture. Agricultural activity in the first half of the twentieth century is characterized by a process called intensification, the application of chemical and mechanical aids in order to increase crop yields. For centuries, the population growth of the world was matched by increasing the area of land cultivation. This usually meant clearing up forests. Deforestation in the northern temperate zone (North America and Eurasia) reached its peak by the end of the nineteenth century. Intensification was largely absent because it required modern inventions such as tractors and chemical fertilizers. Predictably, deforestation had its limits and could not be continued indefinitely, especially in very densely populated

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areas of eastern Asia, the Indian subcontinent, and Europe. Therefore, by and large societies managed to meet the demands of a growing world population by using chemical fertilizers, building dams to develop sources for irrigating fields, and using tractors, combines, and other agricultural machines to prepare soil and plant and harvest crops.

Urbanization was the most important social process affecting the lives of millions. The United Nations defined urban areas as settlements with populations larger than 20,000 people. Worldwide, the proportion of urban dwellers grew from 13 percent in 1900 to 29 percent in 1950. People moved to cities because of the economic opportunities they provided, but these obvious advantages were offset by the resulting environmental and social problems found in all large metropolitan areas. The classic German science-fiction film *Metropolis*, directed by Fritz Lang and released in 1927, captured some of the urban anxieties characteristic of the times. The film depicted a lack of communication, inhumane living conditions, alienating technology, a growing gap between rich and poor, and a tendency toward unrest and occasional violence. Even though *Metropolis* was a work of fiction, it reflected the concerns about conditions faced by urban dwellers in the early part of the twentieth century. It is no surprise that Lang was inspired to create his film after he visited Manhattan, one of the most densely populated areas in the world. Moreover, cities in the colonial and developing worlds were also experiencing unprecedented levels of growth as a result of economic investment and the diversification of the global economy in the midst of depression and war.

Governments responded to these increasing social problems in various ways. During World War I, it became obvious that governments would have to effectively mobilize human and natural resources. One way to deal with poverty in particular was to mandate compulsory elementary education. The reasoning was fairly simple. Elementary education was aimed at achieving full or functional literacy, and it would be easier for a literate person to find employment. In many countries this move toward mandatory elementary education happened after World War I, when governments were actively seeking to solve social problems exacerbated by the conflict. As a result, illiteracy rates began to drop gradually all over the world. Left-leaning political and social movements the world over were particularly active in this area, believing that the eradication of illiteracy would lead to better social conditions for the poor. In the Soviet Union of the 1920s, literacy campaigns were turned into veritable crusades, aimed at not only eradicating poverty but also at creating a new “Soviet Man.” Overall, this increased emphasis on mass education had very positive long-term effects on the population. However, this was not the case in many of the regions under European colonial authority, as huge swaths of the population were relegated to performing labor and were deprived of essential education. Despite this, missionary schools and colleges were designed to create a professional class in the colonial movement, with many elites sending their children to the European metropolises for their education.

Local governments were particularly active in solving the health and sanitation problems of modern cities. These local efforts focused on mu-

nicipal water and sewage, which improved and prolonged the lives of many urban dwellers. These advances were, of course, slow in coming. Even today, one-sixth of the world's population lacks access to safe water supplies, and an estimated three million people die each year from waterborne diseases. Industrialized countries, as expected, again led the way. For instance, the city of Tokyo built a municipal water supply in 1889 and a sewage treatment system in 1922. These infrastructural improvements allowed for the reduction of disease and ensured the prevention of epidemics related to pollution.

Two world wars had especially disastrous effects on the population and the environment. Casualty figures were staggering, and they were especially shocking during World War I because it was the first modern war that brought about such a scale of destruction. Chemical warfare was first introduced at Ypres, in northern France, on April 22, 1915. The effects of these weapons were not so significant in terms of casualties, even though those were substantial. The introduction of such weapons indicated a symbolic change for the relatively respectable ethics of war based on honor and chivalry. Again, the new applied social sciences came to play a crucial role. The victory at war depended not on the ideas that the combatants defended or on the dedication and commitment of soldiers to their cause but rather on the cruel laws of statistical averages. Germany did not lose the war on the front as a result of a decisive military victory. Germany actually achieved enormous victories on the eastern front and brought Russia to a complete collapse in tandem with the Russian Revolution. It could be argued that the war was lost for Germany because of unfavorable numbers: its submarines did not manage to sink a sufficient number of Allied supply ships. The blockade of German ports, strictly enforced toward the end of and after the war, brought the defeated Reich completely to its knees, because under those circumstances the state was not able to feed the "average citizen." National war machines fully mobilized their economies and colonies to fight to an unprecedented scale in terms of geographical expanse and available manpower.

While poison gasses were aimed at destroying enemy combatants, other chemicals and methods were used to change and destroy the environment. One of the main casualties of the two world wars was European timber forests. As European forests were being devastated during World War I and World War II, industrial powers began to import timber and other woods from Asia, Africa, and Latin America. Again, everything was in the numbers, and those who could import larger numbers on a consistent basis could better provide for a common soldier and an average citizen. The victory, even though slow in coming, was inevitable. The ability to acquire raw materials and logistically organize such items en masse for the purpose of war was something that would definitively change the level and scope of global economies in the next half century.

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There were some completely unexpected consequences of the chemicals used for war. The synthetic pesticide DDT (dichlorodiphenyl-trichloroethane), invented in 1887, was used by the armies to clear up and protect front lines located in malaria-infested regions of Africa and Asia even before it began to be used for agricultural production. At the time, it seemed reasonable to overlook the side effects in order to save the lives of millions of soldiers in the tropics. As time went by, it became more obvious that the costs of its usage far outweighed the benefits. DDT was put out of use only after millions of people suffered enormous personal consequences.

Something very cruel and devoid of basic human compassion takes place when wars are fought over numbers, statistics, and export and import quotas and when the casualties and losses on the battlefield are labeled “collateral damage.” Dropping the atomic bombs on the Japanese cities on Hiroshima and Nagasaki in August 1945 clearly illustrates the effect of war on both people and the environment. Hundreds of thousands died, and even more suffered the devastating consequences of exposure to radiation. Agriculture in the affected areas was wiped out for decades. The counterargument was that the dropping of the atomic bombs actually helped to save lives by making the invasion of Japan unnecessary. According to most military estimates at the time, the amphibian invasion of the four Japanese islands would have caused over one million dead and wounded. Still, the moral dilemma at the core of a modern civilization that deals with individuals on the basis of the “average man” cannot be addressed satisfactorily.

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■ Introduction: Environmental Events

Agriculture is by definition an interaction between humans and nature. Between 28 and 38 percent of the earth’s land surface is used for agricultural production, with roughly one-third of that being used to grow plant food and fiber crops and the remaining two-thirds being used to pasture livestock for fiber, meat, and milk. The activity of agriculture therefore creates the single largest human impact on the natural world.

Through breeding, growing, and harvesting plant and animal crops, humans attempt to mold and alter nature for their own purposes. Because agriculture as an activity combines elements of ecology and society, it affects and is affected by both natural conditions and social factors. Im-

portant political factors shaping agriculture and thereby nature might include, for example, laws regarding the ownership of farmland, acts promoting European settlement in the western United States, or legislation affecting soil erosion and conservation. Economic factors, such as international trade agreements, price supports, and world market prices for agricultural products, produce environmental effects by expanding or contracting the demand for various farm products. Ecological factors, such as climate and soil, also dictate much about farming, but soil quality and climate are also affected by human activities. In short, when thinking about agriculture, it is never possible to separate human factors from natural ones.

One hundred years ago farming was considered an environmentally benign activity that brought people closer to the land. Since that time agriculture has changed, as have attitudes toward farming. Far more often, modern agriculture is seen as ecologically destructive. The entries in this section demonstrate the immense human capacity to alter the natural environment, for better and for worse. Increasing deforestation to create ever more crop and pasture land, reduced species diversity in agricultural areas, soil erosion, and water pollution via runoff pesticides, fertilizers, and animal waste are all examples of negative impacts of modern agriculture. Increasing areas of abandoned or damaged farmland, tremendous levels of water used for irrigation, and decreasing water supplies create increasingly important impacts as well. On the whole, agriculture accounts for 70 percent of contemporary global water use.

Modern agricultural technology is often seen as a major cause of environmental destruction. Historians actively debate the extent to which technology should be seen as an independent cause of change in agricultural history. Some feel that technology is an important factor in and of itself, while others emphasize that technologies are created by people and societies and thus merely reflect the goals and values of their creators. Similarly, climate and geography may be presented as the root causes of the environmental effects of agriculture by some authors, while others see these factors just as possible triggers or contributors to events already set in motion by human politics, economics, and culture. For instance, explanations for an event such as the U.S. Dust Bowl of the 1930s differ in their emphases: Should we consider the root cause to be the human technology of the plow, the climatic event of a drought, the economic pressures of production for a capitalist market, or cultural convictions that rainfall would come if land was turned into farm fields?

How we understand the cause-and-effect relationship between agriculture and environmental change in the past will lead us to different solutions for current problems. Do we prioritize working on new technology, new economic structures and incentives, or new attitudes toward land, farming, and nature?

—*Eva-Maria Swidler*

Agriculture and Environment

Between 1850 and 1945, vast improvements were made to increase crop yield, including more efficient farm machinery, greater application of chemical fertilizers, and usage of genetically modified and engineered seeds, gasoline-powered equipment, and electrification. These factors contributed to the growing impact that agriculture had on the environment during the period 1900 to 1945. Demand for farm produce grew as more of the ever-expanding population lived in urban areas. Some historians have argued that improved efficiency of agriculture promoted rapid population growth, which put pressure on the environment.

Tens of thousands of miles of railroads connected farms, food-processing plants, and busy ports to create a global marketplace for agricultural products. Abundance of crops drove prices down, which in turn increased demand for land. At the same time, as populations grew in Asia, Africa, South America, and Russia, the pressures to open new land for subsistence farming also increased. In the United States, Canada, and western Europe, farms were beginning to shift in ownership from smaller units owned by individuals to large-scale corporation-run enterprises. In the United States, Europe, West Africa, India, Egypt, and parts of Latin America, farms specializing in a single cash crop, such as cotton,



Coffee plantation in Monte Alegre, Brazil, early twentieth century. (Library of Congress)

➤ COFFEE AS A CASH CROP

Coffee was one of the major cash crops of the early twentieth century. In Brazil, large swaths of the Amazon River forest were cleared to make land for the growing number of coffee plantations. Like other cash crop systems, Brazilian coffee plantations allowed economic power to become concentrated in the hands of a few wealthy families. The work was performed by poorly compensated laborers. Many were contract farmers who rented land in a manner similar to tenant farming. Others were wage laborers. In either case, they possessed little political power and remained trapped in an intergenerational cycle of poverty.

—Gregory J. Dehler

Coffee berry pickers in Brazil, 1900–1923. (Library of Congress)



fruits, vineyards, tea, cocoa, wheat, rubber, coffee, and maize (corn), replaced diversified land usage. As a consequence of these changes, widespread deforestation began to occur in, for example, Southeast Asia with the expansion in acreage of large rubber plantations and in South America with the expansion of the coffee plantations. Such large-scale conversion to cash crops made greater demands for resources, caused more damage to the land, and made pest invasions, such as the boll weevil of the southern United States, more difficult to control.

The ever-growing supply of farm produce often outpaced demand, and peasant and tenant farmers had a difficult time earning adequate incomes and sustaining a living. As the number of farmers increased, wetlands were drained, forests were cut, and grasslands were plowed under to provide more acreage. In doing so, natural climatic regulators were destroyed, and the soil moisture content was dramatically altered. Farming also required significant amounts of irrigation, which washed away valuable topsoil. Forest loss, wind damage, and drought caused further

stress on the soil, and overgrazing by livestock further exacerbated the problems.

Dramatic episodes of soil erosion, called dust bowls, took place in the 1930s. The most dramatic of these occurred on the Great Plains of the United States. The damage was so widespread that it displaced 3.5 million people, who left their land because it could produce no crop. Oftentimes violent dust storms raged for hours, carrying soil as far away as New York City. In the 1930s, similar dust bowl conditions were common in China and in the Sahel region of Africa as the Great Sahara Desert moved southward. At the same time, the loss of watersheds led to flooding when the eroded soil could not absorb above-average rainfall, which in turn accelerated soil exhaustion. As a consequence, farm runoff from soil, fertilizers, and animal waste fouled the nearby waterways.

Governmental policies designed to combat environmental problems caused by agriculture varied in effect. During the New Deal of the 1930s, the U.S. government enacted a series of laws and programs designed to foster soil con-

servation, albeit with moderate success. Not all land-use reforms were as successful. In the Soviet Union, inefficient small-scale farms were forcibly collectivized at the cost of millions of lives due to starvation. European colonial agricultural policy in Africa and Asia was often confused and based more on the needs of the imperial governments than the colonial farmers or the natural environment.

Between 1900 and 1945 global patterns of agriculture had changed. This change was most clearly marked by the rise of single cash crop farming, increased reliance on chemical fertilizers and seeds, centralized government planning, and growing access to a global marketplace.

—Gregory J. Debler

Bibliography

- Gadgil, Madhav, and Ramachandra Guha. *This Fissured Land: An Ecological History of India*. New York: Oxford University Press, 1992.
- Hughes, J. Donald. *An Environmental History of the World: Humankind's Changing Role in the Community of Life*. London: Routledge, 2001.
- McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.
- Worster, Donald. *Dust Bowl: The Southern Plains in the 1930s*. New York: Oxford University Press, 1979.

Forced Collectivization of Agriculture

The implementation of agricultural collectivization in the Soviet Union in 1928, under the regime of Josef Stalin, resulted in the displacement of millions of peasants, the starvation of millions of Soviet citizens, and the destruction of the livelihoods of households that had depended on the land for sustenance. From 1928 to 1933 the Stalinist regime introduced socialism to the Soviet countryside through collectivization under the Five-Year Plan, which sought to increase agricultural production for the purposes of selling produce abroad in order to raise capital to invest in industrialization. Through massive grain confiscations and forced removals of peasants to large state-owned collective farms (*soukhoz'y*), the actual consequences of collectivization were



Soviet poster illustrating the importance of agriculture to the strength of the Soviet state, about 1931. (Library of Congress)

the reduction of total grain output and livestock, thereby resulting in major famines in 1932 and 1933 that decimated the Soviet population.

As Stalin consolidated his power at the top echelons of the Communist Party of the Soviet Union as general secretary in the late 1920s, he sought to move away from the limited private enterprises allowed by his predecessor, Lenin, and encourage the implementation of socialist economic policies known as the New Economic Program (NEP). Stalin advocated a centrally planned economy based on large-scale plans that encompassed the agricultural and industrial sectors, thus allowing for the creation of a fully socialist state. The end of the Russian Civil War in 1923 had resulted in the end of war communism and had allowed for the NEP in order to rebuild the tattered and devastated Soviet economy. By 1928 Stalin viewed the time as ripe to steer the state back into a socialist economic framework.

► DEKULAKIZATION

Dekulakization is known as the Soviet campaign aimed against alleged kulaks, which consisted of widespread arrests, deportations, and executions of millions of suspected peasants and their families from 1929 to 1932. Prosperous peasants, considered class enemies by the state, were labeled as kulaks. Approximately 1.8 million peasants were deported between 1930 and 1931 as alleged kulaks. Soviet officials claimed that it was necessary to destroy the kulaks, as they were counterrevolutionaries and thus a danger to the spread of socialism in the countryside. The destruction of the kulaks was seen as a necessary step for the purposes of state collectivization of agriculture, as they were the ones responsible for widespread hoarding and black marketeering.

On December 27, 1929, Josef Stalin announced a directive calling for the “liquidation of the kulaks as [a] class,” making dekulakization a state-sanctioned policy resolution. The directive called for the execution of certain kulaks responsible for leading resistance efforts against the state, the confiscation of their property and goods, and the forced deportation of millions of other suspected kulaks and their families to forced labor camps in Central Asia and the frozen stretches of Siberia. However, since the label of kulak could extend to anyone possessing any property or showing any resistance to the state, many poor peasants also suffered the trepidations of their respective class enemies.

—Abraham O. Mendoza

In 1928 there was growing demand for grain due to the expansion of Soviet industrial urban centers and the growing needs of the Red Army. However, supplies available to the state were lacking. Stalin alleged that grain supplies were being hoarded by kulaks (wealthy farmers) for speculative purposes. The Soviet authorities immediately authorized a massive requisition of grain from the Russian countryside by police and military authorities. However, grain seizures further discouraged the peasants, leading to reduced grain production during 1928 that, in turn, resulted in further requisitions. By 1929 resistance to the seizures became widespread, with some episodes of violence on the part of authorities in response to massive hoarding and

black markets. The situation became so desperate for the state that anyone caught committing these offenses was subject to the death penalty. Given the situation, the Soviet government under Stalin decided on implementing collectivization in order to break the alleged grip of the kulaks over Soviet agriculture and introduce socialism to the countryside.

In November 1929 the Central Committee decided to implement accelerated collectivization in the form of *kolkhozy* (collective-owned farms) and *sovkhozy* (state-owned farms). This essentially ended the NEP, which had allowed peasants to sell their surpluses on the open market. The state had alleged kulaks transported to collective farms in distant places to work in agricultural labor camps in order to end their alleged influence over poor peasants. However, the criterion for being a kulak was typically anyone hoarding for subsistence or defending their property, which, in fact, meant most peasants. Many peasants, along with their wives and children, perished in transit to or amid the atrocious working conditions within these labor camps. As a result, many peasants began to resist the encroachments of the party and the state police, often by slaughtering their livestock or destroying their crops, thereby resulting in further losses to total agricultural output.

Initially, the collective farms relied on voluntary labor from the countryside as encouraged by the state. However, growing peasant resistance resulted in the coercion and dislocation of millions of Soviet peasants from their villages to *kolkhozy* by Soviet authorities and party officials, thereby destroying communities and local ties. As collective farms began to produce huge quantities of grains, increasing government requisitions for the purposes of dumping the product abroad in exchange for the capital needed for investment in the industrial sector caused the system to become strained, as peasants had little to eat and thus were not willing or able to produce. The result was growing discontent among the peasants, resulting in increased hoarding for subsistence. Ultimately, collectivization resulted in the dislocation of millions of peasants from their home communities, starvation en masse in places such as the Ukraine, and the forced relocation of kulaks to the Gulag in

Siberia (where thousands died) without improving agricultural production for full domestic consumption.

—*Abraham O. Mendoza*

Bibliography

- Fitzpatrick, Shelia. *Stalin's Peasants: Resistance and Survival in the Russian Village after Collectivization*. New York: Oxford University Press, 1996.
- Lewin, Moshe. *Russian Peasants and Soviet Power: A Study of Collectivization*. New York: Norton, 1975.
- Malia, Martin. *The Soviet Tragedy: A History of Socialism in Russia, 1917-1991*. New York: Free Press, 1994.

Agricultural Technology and the Environment

A cursory look at early-twentieth-century agriculture suggests continuity with traditional patterns of high levels of farm employment and, outside the USSR, minimal shifts in land concentration. The long era of extensification—in which food production increased as a proportional result of more land being farmed—was, however, beginning to reach its limits, except in the tropics. In Europe, North America, and Japan, more intensive use of the land was accelerating. The traditional, often direct, relationship between the amount of land under cultivation and human population levels gave way to a new agricultural regime. Larger, more elaborate irrigation systems and chemical fertilizers combined in some areas with mechanization to boost crop yields to unprecedented levels. The detrimental environmental consequences of such new techniques were not fully experienced, much less fully understood, during this era. The experience of the Dust Bowl in the United States was an exception; billowing clouds of dust exposed the results of mechanized farming on the semiarid southern plains, where farmers left vast acreages of fallow land unprotected by shelterbelts and suffered the consequences during the sustained droughts of the 1930s.

Irrigation is the oldest known method for raising yields, and it took on impressive dimen-

INDUSTRIAL NITROGEN

The industrial production and application of nitrogen to field crops may have allowed for more twentieth-century population growth than any other agricultural advance. The Haber-Bosch process of extracting nitrogen from air by synthesizing ammonia and thereby allowing the mass production of nitrates revolutionized agriculture. Today's intensive farms rely on synthetic nitrogen for 60–80 percent of the nutrient. Unfortunately, about half of this applied nitrogen escapes to the atmosphere and groundwater before it can be taken up by plant tissues. Entering many terrestrial and marine ecosystems, nitrogen can curtail photosynthesis and cause eutrophication in shallow waters. In the long run, only the stabilization of human population growth and maintenance (or adoption) of grain-based diets over nitrogen-intensive meat-based diets will help curb the use of synthetic nitrogen.

—*Tamara Whited*

sions in the twentieth century beginning with the efforts of British engineers who completed low-level barrage dams such as the one on the Indus River in 1932. Through the benefit of the 66 sliding gates that allowed the level of Indus River water to conform to water levels in seven connecting canals, India became home to one-quarter of the world's irrigated land by 1940. By contrast, the United States led in the construction of high reinforced concrete dams. Boulder (later Hoover) Dam, completed in 1935, culminated the federal government's 1902 decision to finance dam building.

Tractors had been around for decades before most farmers could afford them. Rarely manageable on the smaller farm fields of Japan and Europe, the gasoline tractor gained popularity among American farmers after 1910 and among Canadian, Australian, British, and Soviet farmers in the 1930s. Stalin launched the collectivization of Soviet agriculture in 1928, and by 1940 over 500,000 tractors were operating across the immense Soviet farmland, a sixfold increase from 1932. Harvesting combines, available in the 1920s, became agents of change as farmers began to adopt monocultures appropriate for

mechanical harvesting. Mechanized equipment eliminated the need for animal traction, which freed up cropland for human foods and eliminated manure that, in turn, further heightened the need for chemical fertilizers. At the same time, monocultures required pesticides and tailored the applications of chemical fertilizers.

With the twentieth century, scientists began to eclipse farmers in creating the conditions for bumper crops. The fields of agrochemistry and soil microbiology antedate 1900, and the three macronutrients—nitrogen, phosphorus, and potassium—were already known by the turn of the century. Chemists sought ways to synthesize these nutrients or at least extract them from treated rock (as with the production of superphosphate) or industrial wastes. The greatest breakthrough came with German chemist Fritz Haber's creation of usable nitrogen from synthesized ammonia, an achievement for which he won the Nobel Prize in Chemistry in 1918. Scientists were in turn stimulated to research micronutrients (iron, boron, manganese, zinc, and molybdenum), often depleted by massive use of industrial macronutrients.

The utilization of mechanized harvesting and the increase in chemical fertilizers also led to agriculture's thorough dependence on fossil fuels, and farmers were increasingly forced to select from a narrowing array of plant varieties that responded well to chemical treatments. Plant breeding, not surprisingly, followed the new dictates: the advances in crossbreeding of the 1920s and 1930s to produce dwarf varieties of rice and wheat paved the way for the postwar Green Revolution.

As the advances in technology changed the agricultural patterns, the consequences of these changes were only starting to emerge. The disruption of the natural cycles of nitrogen, phosphorus, and potassium led in turn to water and soil pollution. After World War II, the new irrigation techniques worked in powerful concert with Green Revolution crops but also encouraged salinization. In addition, dams altered hydrology, invited the buildup of silt, and threatened fish populations, concerns that would be voiced in the postwar era as well.

—Tamara Whited

Bibliography

- McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.
- Smil, Vaclav. *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production*. Cambridge, MA: MIT Press, 2001.
- Vasey, Daniel E. *An Ecological History of Agriculture: 10,000 B.C.–A.D. 10,000*. Ames: Iowa State University Press, 1992.

Dust Bowl and the Americas

The Dust Bowl was a region on the western edge of the Great Plains of the United States composed of 100 million acres in the states of Colorado, Kansas, Nebraska, Oklahoma, and Texas that suffered from extreme drought and severe dust storms in the period from 1930 to 1939.

The immediate seeds of the Dust Bowl were sown during the 1920s, when above-average rainfall, commodity prices, and easy credit led many farmers to plow up the tough prairie grass to make room for their crops. When drought struck in 1930, the topsoil calcified and turned to dust in the subsequent summers of intense heat. Crops rotted in the fields, and livestock wasted away. With the crops and native vegetation gone, there was nothing to hold the topsoil to the ground. While the drought was a global phenomenon, with its effects felt in East Asia, South America, and sub-Saharan Africa, the Dust Bowl was an event unique to the United States.

The first dust storm struck on September 14, 1930. Unlike the small dust storms that were traditional on the Great Plains, this storm was regional in size and covered hundreds of miles. The largest and most violent dust storm took place on April 14, 1935, and earned the nickname "Black Sunday," as it lifted and dumped over 300,000 tons of soil on the region. The dust storms of the 1930s were massive rolling black storms that broke windows, knocked men over, generated enough static electricity to short out an automobile, and coated everything in dust. The stronger storms had such intensity that they carried dust to the eastern seaboard and even deposited a layer on ships traveling the Atlantic Ocean.

► CHRONOLOGY OF IMPORTANT EVENTS LEADING UP TO THE DUST BOWL OF THE 1930s

1862—The Homestead Act was passed, and the U.S. government offered 160-acre parcels of land at very low cost in an effort to settle the west.

1878—John Wesley Powell reported to Congress that much of the trans-Mississippi West was too arid for farming. He suggested that the traditional 160-acre plots be abandoned in favor of communal farms or ranches that were larger than 2,000 acres.

1887–1888—Severe drought followed by a massive blizzard forced many ranchers to abandon their land. This led to the creation of more farms.

1902—The Newlands Reclamation Act was passed, creating a fund from which the federal government subsidized irrigation projects.

1914–1918—World War I created a spike in commodity prices that encouraged even more farming in the West.

1927—The great Mississippi River flood led to shortages of grain and induced even more planting on the Great Plains.

1930—Drought and the first dust storms usher in the Dust Bowl.

—Gregory J. Dehler

Storms paralyzed entire communities as businesses shut down and schools dismissed children. Dust and dirt blew into buildings through any crevice and covered the interior, including furniture, walls, pictures, books, and food. It was impossible to avoid breathing in the dust, and the worst cases led to debilitating respiratory ailments.

The economic toll was severe. The drought and storms prevented the Dust Bowl farmers from making payments on loans and mortgages, precipitating a total regional economic collapse. By 1938, living in such environmental and economic conditions caused the majority of the Dust Bowl families to seek some form of public assistance. Most families, however, stayed in the area, and of the approximately 220,000 migrants to California in the 1930s, only 16,000 were from the Dust Bowl itself.

An ardent conservationist and a believer in the progressive model of an activist government, President Franklin D. Roosevelt (1933–1945) dedicated federal agencies to combating the Dust Bowl. The Agriculture Adjustment Act of 1933 provided subsidies to farmers to leave fields fallow, thus removing the incentive to plow every available acre. Created in 1933, the Soil Erosion Service (renamed the Soil Conservation Service in 1935) led the federal effort against the

Dust Bowl. Working with the states, they formulated plans for shelterbelts of trees and furrowed soil contours to alleviate the wind and soil erosion that caused the dust storms. The young men of the Civilian Conservation Corps supplied the labor for this ambitious project, dubbed “Operation Dust Bowl.” The Soil Conservation Service worked closely with Department of Agriculture experimental stations in developing drought-resistant crops and more drought-sustainable farming techniques. Scientists from Africa, Australia, South America, and Europe traveled to the Dust Bowl to observe the operations and report back to their own countries.

The conditions began to improve when rain returned in 1938, although large and severe dust storms persisted for the next year and a half. In the fall of 1939, significant regionwide rainfall ended the drought and the Dust Bowl.

—Gregory J. Dehler

Bibliography

- Egan, Timothy. *The Worst Hard Time: The Untold Story of Those Who Survived the Great American Dust Bowl*. Boston: Houghton Mifflin, 2006.
- Hurt, R. Douglas. *The Dust Bowl: An Agricultural and Social History*. Chicago: Nelson-Hall, 1981.
- Worster, Donald. *Dust Bowl: The Southern Plains in the 1930s*. New York: Oxford University Press, 1979.

■ Introduction: Industrialization and Natural Resources

Industrialization, which continued at a rapid pace throughout the period from 1900 to 1945, had an obvious deleterious impact on natural resources. Land, water, and air were all polluted from coal-fired factories, steel foundries, railroad engines, automobile exhaust (including lead additives to petroleum), mining operations, deforestation, and chemical runoff from large-scale farming operations. While concerns over the overall “ecological” health of ecosystems were not common and such a vocabulary did not circulate at large except in the growing specialized field of ecologists, concerns for public health did arise, often focused on providing clean drinking water untainted by sewage or industrial discharge as well as some efforts focused on smoke abatement. The wilderness preservation movement had been gathering momentum since the late nineteenth century as wilderness and wildlife enthusiasts observed the effects of deforestation and mining, including erosion and the poisoning of pristine streams with mercury and other chemicals. Although logging operations slowed in the northern temperate zone during the first half of the twentieth century, deforestation continued unabated in the tropics as the region’s populations grew and demand mounted for new agricultural land and for the commodity of tropical wood, such as teak.

—*Fred Nadis*

Industrial and Water Pollution

In 1900 industrial pollution was not yet a global phenomenon, although in the 200 years between industrialization and the end of World War II, the ecological damage caused by those industrial waste products that tend to spread globally, such as carbon dioxide, increased three-digit percentages in certain parts of the world.

In most nations, even in the comparatively early industrial regions of Europe and North America, the immediately visible industrial pol-

lution was mainly concentrated in conurbations or special centers of production. More specifically, these were areas that offered raw materials such as iron, coal, and paraffin oil and areas that provided access to technologies or to chemical or mechanical production like Detroit (United States) and the Ruhr (Germany). Early industrial pollution affected large cities with rapidly increasing populations who were forced to live under severe health conditions. As a result of the early exploitation of the key raw materials, northern Europe (particularly Britain) and eastern North America suffered from pollution relatively early, while the changes of environmental circumstances in larger parts of Asia (except for some regions in East Asia), Africa, and Latin America were still primarily caused by agrarian and other means of production not associated with modernization.

Agrarian, commercial, and municipal sewage caused the main pollution of water cycles in many places until well into the twentieth century. In the areas surrounding the industrial centers, water, air, and ground pollution reached such a disastrous level at the close of the nineteenth century that more and more voices were calling for official intervention to protect the environment, such as establishing emission controls. However, for decades a lack of turning ideas into action predominated. Around 1900, some experts in industrial mining determined the content of salt in industrial sewage by tasting the water, which of course did not lead to reliable results. Moreover, critical studies of industrialization describe a withdrawal from a so-called moral economy toward an unscrupulous exploitation that many claimed to be typical during this period of industrialization in the Western Hemisphere.

Increasingly critical voices from several academic fields started to protest against unrestricted consumption of resources and excessive industrial pollution. These protests were sometimes followed by the establishment of corresponding special institutions such as the Pennsylvania Water Board, which tried to carry through a standardization in dealing with raw sewage. In 1925, Alice Hamilton wrote her rele-

vant study on industrial poisons in the United States; however, the different ways to purify sewage were still very controversially discussed among experts. At the same time, evidence illustrates that in regions where filtration systems were already in use, the rate of waterborne diseases decreased notably.

In addition to water pollution, it was generally industrial air pollution that harmed the quality of the environment in the United States and Europe in the years immediately before and after World War I. In addition, people had to deal with consequential emissions of harmful substances into the ecological system on a large scale as well as local noise pollution. Measures of relief, such as the extension of the sewage infrastructure, did not take place in the United States until the New Deal. At the same time, inhabitants in the Ruhr area in Germany—the largest industrial area of the world at the time—who complained about air pollution were told that measures against exhaust-gas pollution were simply too expensive. A special kind of pragmatism suggested to the inhabitants of the affected areas that they should instead adapt to the facts as they were and therefore cultivate only extremely robust plants, for instance.

In cities that were characteristically surrounded by an agrarian countryside, an argument rich in tradition took place between health authorities and farmers' representatives that continued until the early twentieth century. For example, in 1912 most of the supervisors responsible for the health of the population in the United States disapproved of sewage farming, a system in which sewage was not disposed or filtered but was used as fertilizer for the fields. Instead, these health authorities emphasized the dangers of sewage discharges into the water cycle. Nevertheless, even after 1930, cities were registered in more than a dozen states of the western part of the United States in whose rural surroundings sewage farming was still in practice.

During the first half of the twentieth century, both the possibilities for the disposal and the reprocessing of sewage in the Western industrial nations and the public and official sensitivity with regard to the still-growing problem developed considerably. Despite such progress, which varied considerably from place to place,

➤ AIR POLLUTION

Air pollution, in contemporary consciousness, is generally associated with the exhaust produced by traffic and factory smokestacks. The era of automobile use on a massive scale started about 1920, while factories blew their smoke into the atmosphere of Europe without having to comply with minimum standards for filtering the exhaust gases. The oil industry has also affected the environment to a considerable degree, having greater impact on certain local areas. For example, at the beginning of the twentieth century, oil refineries in cooperation with the steel industry were occupying whole districts of Hamilton in Canada to such an extent that a well-ordered town planning became absolutely necessary to avoid the increasing collapse of the socially and ecologically pressured seaside town. During the first decades of the twentieth century, many community planners perceived a different issue as the even bigger problem: the smoke of the trains that mainly transported travelers and industrial goods. Accordingly, authorities that were created to handle the trains' smoke were already in place by 1910 in some towns. In some industrial cities, such as Pittsburgh, certain smoke emissions were tolerated only for several minutes per day around 1940, given their high volume and the concentration of multiple industries in one conurbation.

—Lutz Hengst

an extensive and effective limitation of increasingly global industrial pollution remained a distant wishful goal of environmental activists.

—Lutz Hengst

Bibliography

- Duke, David Freeland. *Canadian Environmental History*. Toronto: Canadian Scholars' Press, 2006.
- Simmons, I. G. *Global Environmental History, 10,000 BC to AD 2000*. Edinburgh, UK: Edinburgh University Press, 2008.
- Tarr, Joel A. *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective*. Akron, OH: University of Akron Press, 1996.
- Uekoetter, Frank. *The Age of Smoke: Environmental Policy in Germany and the United States, 1880–1970*. Pittsburgh: University of Pittsburgh Press, 2009.

Industrial Landscapes—Rapid Industrialization in the Soviet Union and Its Impact on the Environment

In the interwar Soviet Union, Marxist-Leninist ideology interpreted the natural environment as something to be conquered and tamed for the benefit of reaping rewards for socialist society under the aegis of the Soviet state. As part of the Second Five-Year Plan, the Soviet state under the leadership of Josef Stalin planned for the rapid development and expansion of heavy industry in the Soviet Union in tandem with the establishment of large state-run collectivized farms. As part of this pursuit of rapid industrialization, the state encouraged the relocation of millions of Soviet citizens into the Urals region in order to develop industrial cities in regions not vulnerable to a feared European invasion. As a result, vast new regions were opened for Soviet industrial and infrastructural development in the Urals, Siberia, and the Russian Far East. However, many of these newly opened regions were severely damaged: their environments suffered immensely as a result of the rapid rate of industrialization.

As the Soviet industrialization drive encouraged massive development in the Urals, Siberia,

and the Arctic regions, it also contributed to the rapid reshaping of the Soviet landscape. Previously undeveloped lands, which had remained untouched even late in the days of the tsarist regime, were lastly brought into development for the purpose of “building socialism.” Immense industrial complexes, such as the Ural city of Magnitogorsk, created new urban centers around large resource-extraction regions and mining centers. The result of these ventures was the large-scale development of huge, often highly polluting, factory towns fraught with air and chemical pollutants. Large-scale infrastructural projects, such as the irrigation canals diverting water from the Aral Sea to Soviet Central Asia, created the potentially huge ecological disasters in pursuit of water sources for large agricultural areas. Furthermore, such projects used forced labor from the Gulag (Chief Administration of Corrective Labor Camps and Colonies), often without the use of mechanical tools, and forced laborers to use manual labor for large-scale projects, such as the almost useless White Sea–Baltic Sea Canal. Such projects not only diverted state resources but also led to the destruction of natural habitats.

Much of the industrial development in the Soviet Union made prior to World War II resulted in the massive expansion of the socialist state in relation to much of the capitalist West, currently fraught with the effects of the Great Depression. However, much of this rapid development was done at the expense of the untapped natural resources of the Russian landscape. In terms of Marxist-Leninist ideology, the environment was merely something to be exploited and used for the benefit of industrial and economic expansion, not to be conserved for the purpose of ensuring the prosperity of future generations. As a result of this ideology, the Soviet Union continued many of these destructive policies throughout much of the history of their state, creating gigantic polluting industrial complexes, diverting rivers at the expense of maintaining fragile water ecosystems, and experimenting with nuclear and biological weapons, all the while polluting their once pristine natural environment and landscapes.

—Abraham O. Mendoza

► WHITE SEA-BALTIC SEA CANAL

The White Sea–Baltic Sea Canal, or *Belomorkanal*, was a ship canal constructed by convict-slave labor during the First Five-Year Plan, specifically from 1931 to 1933. The canal was constructed as a way to connect the Baltic Sea with the White Sea by connecting Lake Onega and Lake Vygozero by digging shipping lanes. Much of the work was done by human labor rather than by modern digging equipment, many of them “class enemies” being reeducated through work. Freezing temperature, deplorable working conditions, and brutality on the part of the NVKD (People’s Commissariat for Internal Affairs) led to an estimated 10,000 deaths. The end result was a shallow canal that could not accommodate the majority of shipping vessels and therefore remained essentially useless.

—Abraham O. Mendoza

Bibliography

- Fitzpatrick, Shelia. *Everyday Stalinism: Ordinary Life in Extraordinary Times; Soviet Russia in the 1930s*. New York: Oxford University Press, 1999.
- Kotkin, Stephen. *Magnetic Mountain: Stalinism as a Civilization*. Berkeley: University of California Press, 1995.

Deforestation

Deforestation, the removal of forest cover so thoroughly as to inhibit regeneration, was one of the most significant ways in which human beings transformed earth's surface in the years between 1900 and 1945. Human population growth accelerated during this period, yet we cannot establish a simple causal relationship between that growth and deforestation. Population growth, the expansion of both peasant and plantation agriculture, and the developed world's growing demand for tropical hardwoods were all factors that drastically reduced forest cover in the first half of the twentieth century. During this period, forest clearance in the tropical zones surpassed that in the temperate zones, reversing the pattern in place over the preceding two centuries.

In the North Temperate Zone (from 23.5 degrees north latitude to 66.5 degrees north latitude), a forest transition from net loss to net gain of forest was under way, though hardly visible, in 1900. This transition followed the steady deforestation in Europe and North America that was evident by the late eighteenth century. In the United States, wasteful logging and cutting for fuel and farmland had reduced the pre-Columbian forest by approximately half. Wood also had novel purposes such as pulp, packaging, and plywood; its use would not peak in the United States until 1907. The production of railroad ties in the developed world alone reportedly accounted for the destruction of more than 2 million hectares (approximately 5 million acres) of forest per year between 1888 and 1915.

By the end of the nineteenth century predictions of timber famine and its dire consequences had become common. Yet several transitions acted in concert to first stabilize forest loss then

> DEFORESTATION, 1900–1945

- 1900—Amount of forest cut for railroad ties peaks at 8.4 million acres (3.4 million hectares).
- 1900–1914—The United States doubles its imports of tropical woods for cabinetwork.
- 1914–1918—World War I creates high demand for wood for railroads, barracks, artillery shelters, and trenches.
- 1917—Chainsaws first manufactured.
- 1920 on—Eastern woodlands of North America are in full comeback, and total forest cover stabilizes.
- 1920–1949—The rate of forest clearance in the tropics accelerates from 7.4 million acres (3 million hectares) per year between 1850 and 1919, to 28.5 million acres (11.5 hectares) per year.
- 1923—Russian-born Raphael Zon's *The Forest Resources of the World* identifies population growth in the tropics as a growing cause of deforestation.
- 1928—Centralized planning in Stalin's Soviet Union ushers in forest mismanagement.
- 1929—The Great Depression causes international trade in wood to drop.
- 1935 on—Use of wood for fuel declines rapidly in North America.

—Tamara White

actually expand forest cover. These include the demographic transition, that is, the transition to low birth and death rates that helped stabilize population growth, along with rapid urbanization, abandonment of less productive farmland, substitution of new energy sources for wood, and the growth of scientific forestry. Meanwhile, developed countries began to import tropical wood and agricultural products on a greater scale, shifting the stress to tropical environments.

Growing population was also a major factor in the deforestation of the tropics. More than half a billion people were added to this area between 1900 and 1950. The accompanying demand for food played a major role in the removal of forest cover in two ways: first, forested land constituted the remaining areas capable of conversion to farmland, and second, carving farmland from forest provided a windfall of forest products, which

often stimulated further cutting. It is estimated that 235 million hectares (nearly 600 million acres) of tropical forest were cleared between 1920 and 1950, more than 70 percent of it for farmland with the rest transformed into grassland for grazing.

The increasing commercialization of tropical peasant agriculture was even more significant to the destruction of forests. According to John F. Richards and Richard P. Tucker in *World Deforestation in the Twentieth Century* (1988), population growth transformed tropical forests less than First World demand for both timber and agricultural products. Western imperialism, whether formal or economic, led to the development of tea plantations in Assam, India; cotton and peanut production in the African savannas; and sugar and coffee farming in coastal Brazil. All of this was at the expense of forest land. Demand for teak in Western markets reached a prewar peak in 1913, and Western governments facilitated the extraction of tropical timber by building or upgrading railroads and ports.

The two world wars and the Great Depression temporarily slowed the flow of tropical woods, but the belligerent nations needed much wood and traded with allies or neutral countries to obtain it. Timber in occupied tropical regions, such as the Philippines during World War II, quickly became war matériel. Forests were obliterated in war-torn zones of France and Germany, yet most damage proved temporary. A more significant outcome of the wars for temperate zone forests was the trend toward even-aged, single-species forests managed with pesticides and fertilizers. This trend led to the globalization of fast-growing, resistant tree species, such as the American Lodgepole pine. These managed forests contrasted with the tropical forests that continued to be felled for farmland or for cash.

—Tamara Whited

Bibliography

- Richards, John F., and Richard P. Tucker, eds. *World Deforestation in the Twentieth Century*. Durham, NC, and London: Duke University Press, 1988.
- Williams, Michael. *Deforesting the Earth: From Prehistory to Global Crisis*. Chicago: University of Chicago Press, 2003.

Impact of Fossil Fuel Extraction and Use

The environmental impact of fossil fuel use and extraction in the period between 1900 and 1945 included deforestation, air pollution, water pollution, and widespread contamination by lead and other toxic substances. In addition to the environmental consequences, there were also health and safety implications of fossil fuel extraction and production.

In the twentieth century coal, petroleum, and natural gas powered private homes, vast industrial complexes, and transportation. Of the three, coal was the most widely used in 1900, while petroleum was mainly distilled into kerosene to provide lighting in private homes. For the most part, natural gas was rarely used before 1945.

Coal dust coated many populated areas in the world with soot and grime. At times, coal dust made the air so dark that day looked like night. London, England, Pittsburgh, Pennsylvania, Osaka, Japan, and the Ruhr region of Germany were notorious for pollution by coal-powered industry. Coal pollution blocks vitamin D from the sun, leading to widespread disease such as rickets. Lung ailments, including tuberculosis, bronchitis, and pneumonia were also common and often fatal illnesses caused or worsened by smoke pollution.

Before 1950, only in the United States and some parts of continental Europe did electricity replace coal as the main source of power for homes. Even so, coal-fired power plants supplied most of the electricity and produced sulfur dioxide and nitrogen oxide leading to acid rain, which polluted waterways and soil. To obtain coal, mining operations left lasting scars on the land, including fouled waterways, deforestation, soil erosion, and contamination from toxic substances.

The internal combustion engine created great demand for gasoline, which by 1910 had replaced kerosene as the leading petroleum product. In 1921 lead was added to gasoline in order to improve engine performance, thereby causing engines to discharge the toxin through exhaust fumes. Lead does not break down and accumulates over time. Furthermore, in cities especially in the United States, gasoline-powered

THE BREAKER BOYS

Coal mining was dangerous and dirty work. Boys as young as eight began a life in the mines working as breaker boys, sorting coal from other rocks as the material came down chutes. Typically breaker boys were poorly paid, lacked protective clothing such as gloves or face masks, and worked long hours. Many breaker boys went on to become miners as they got older. Long-term exposure to coal dust led to a crippling condition known as black lung that took the lives of many who worked in the coal mines.

—Gregory J. Dehler



Young coal miners enveloped in a cloud of coal dust in a Pennsylvania mine, 1911. (Library of Congress)

buses replaced electric trolleys as the mainstay of mass transit, increasing exhaust emission levels. Demand for tires led to forest clearing in Southeast Asia, as trees were felled to make way for rubber plantations. Competition to control some of the world's most productive oil fields, especially in the Middle East and Southeast Asia, helped to cause wars.

The demands of two world wars, industrialization, and new modes of travel led nations to continue to aggressively seek new sources of fossil fuels. New technologies, such as better drills, aerial photography, and seismography, allowed more oil fields to be opened. To get at the oil and clear the way for pipes, forests were cut down. When petroleum prices dropped, as they did in the early years of the unstable oil market, it was common for operators to pump the crude directly into nearby rivers instead of shutting down the wells. As a result, rivers, harbors, and wetlands became saturated with clumps of petroleum. There were also oil spills during transportation. In addition, oil refineries that broke down the crude petroleum into gasoline contributed markedly to air and water pollution through the refining process.

Some attempts were made, however, to moderate the ill effects of fossil fuels. Smoke-abatement programs were common in the United States,

England, and western Europe, and occasionally they had some local success by calling attention to the need for more efficient stoves and power plants. In the early 1920s the United States and Great Britain enacted regulations to limit the dumping of petroleum in waterways, although when the United States hosted an international convention (1926) to discuss limiting the amount of petroleum dumped in the ocean, it had minimal success.

The extraction of fossil fuels from the turn of the century until the end of World War II posed an ever-present threat to ecosystems throughout the world, leading to a heightened awareness of the need to regulate the negative environmental impact of fossil-fuel exploration and use.

—Gregory J. Dehler

Bibliography

- Freese, Barbara. *Coal: A Human History*. Cambridge, MA: Perseus, 2003.
- Hughes, J. Donald. *An Environmental History of the World: Humankind's Changing Role in the Community of Life*. London: Routledge, 2001.
- McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.
- Yergin, D. *The Prize: The Epic Quest for Oil, Money & Power*. New York: Free Press, 1993.

■ Introduction: Societal Responses to Environmental Pressures

World recognition of the importance of the environment can be dated to the Renaissance. The rebirth of knowledge and the beginning of a steady increase in the world's population caused many to think about the role of nature in the world. Not until the nineteenth century, however, were real efforts made to protect and preserve the environment, and actions did not take place on a global scale until almost a century later.

In the United States, environmental concern came to the forefront of national attention after the release of the 1890 U.S. Census Bureau report, which declared that after centuries of settlement and development, the U.S. frontier had officially disappeared. The announcement came as a shock to many Americans, who had long viewed the country's land and natural resources as inexhaustible. Public concern about an impending resource famine sparked the formation of government agencies to regulate and conserve the nation's remaining land, wood, and water and preserve wild land in a completely undeveloped form.

Despite the establishment of the U.S. Forest Service and the U.S. National Park Service, neither conservation nor preservation remained high priorities in the United States. In fact, the 1920s saw unprecedented economic growth and urbanization, with little regard for the environment. The stock market crash of 1929 then ushered in the era of the Great Depression and U.S. president Franklin D. Roosevelt's New Deal legislation, which funded huge public works projects that helped the nation recover from the depression but often damaged the environment. In addition, the drought of the Dust Bowl, which devastated large portions of the midwest and south in the 1930s, highlighted the toll that sustained farming took on the land. European environmental movements during the twentieth century reflected the American experiences. Acid rain heavily affected the industrialized Ruhr region in Germany, and the spread of the automobile caused the growth

of road networks and air pollution, which led to such environmental responses as *Britain and the Beast* (1937), written by John Maynard Keynes.

World War II left a legacy of environmental consequences around the world, and concern over chemical pollution and the dangers of radiation were noted in many countries. The rapid development of industry came with a severe environmental cost: the contamination of water, air, and soil with a new generation of nonbiodegradable toxic materials. The cause of environmentalism entered the mainstream as one of many issues during the 1960s that prompted activism.

—Timothy J. Watts

Conservation and Preservation

In the early twentieth century, a variety of private clubs, leisure groups, individual landowners, and scientific organizations around the world successfully persuaded their governments to establish national conservation and preservation policies managed by trained professionals working out of government bureaucratic institutions. While conservation placed its emphasis on managed use and measured the value of natural resources mainly in economic terms, preservation focused on the aesthetic, moral, and emotional benefits of nature.

By 1900, Russia had created large forest reserves; Australia, Canada, Mexico, New Zealand, and South Africa had established national parks; and the United States had established both forest reserves and national parks. In the first decade of the twentieth century, President Theodore Roosevelt (1901–1909) advanced the United States far ahead of other countries in the implementation of conservation policies, primarily through the creation of bird and big game refuges, the expansion of the national forest system, federally funded reclamation, the establishment of the National Forest Service (a national

resource inventory), the National Monuments Act (which allowed for the protection of such scenic wonders as the Grand Canyon), and additions to the national park system. Roosevelt cast conservation as a democratic movement to reclaim the benefits of the natural wealth for the good of the many over the profit of the few.

Between 1910 and 1930, other nations followed the example of the United States. Several countries, including Argentina, Chile, Japan, Italy, Sweden, Switzerland, and the German state of Prussia, established national parks. Unlike the United States where national parks functioned mainly for recreation, European governments used national parks to test, practice, and showcase conservation regulations and good scientific practices.

The Great Depression and the growing nationalist movements of the 1930s combined to push conservation to the forefront of public policies. President Franklin D. Roosevelt gave conservation a prominent place in his New Deal program, which included the Civilian Conservation Corps, regional development plans, and soil conservation. Germany adopted many advanced conservation policies and became the first European nation to establish nature preserves. Brazil enacted its first conservation laws, national parks, forest codes, and the like during the 1930s. In scale, however, the United States vastly exceeded the efforts of other countries due to its greater territorial expanse. It would not be until after World War II that Britain, France, and many of the other European countries enacted conservation policies similar to Germany and the United States.

In terms of imperial management, European colonial powers implemented conservation in their overseas territories as a means to maximize profit from natural resources as well as control native populations by limiting their access to hunting, forests, and valuable agricultural lands. Through the India Forest Act (1878) and the Indian Irrigation Commission (1900), the British were able to effectively deprive Indians of the ability to use the forests for fuel or to farm on traditional lands. As a result, the population was increasingly encouraged to farm on submarginal land, which led to serious problems stemming from soil erosion in the 1930s. The Dutch in the East Indies, the French in Northwest Africa, the

➤ HETCH HETCHY CONTROVERSY

Although conservationists and preservationists joined forces against the despoilers of nature, they could become embroiled in bitter conflict among themselves. After the devastating earthquake of 1906, the city of San Francisco demanded another water reservoir. In 1908, the U.S. government approved construction of a dam in the Hetch Hetchy Valley of Yosemite National Park. John Muir rallied preservationists across the nation in opposition to the project. He argued that national parks, once created, were inviolate natural sanctuaries. Muir also spoke eloquently on the unique beauty of Hetch Hetchy Valley. Conservationist supporters of the dam project, on the other hand, argued that human needs came before nature and even claimed that an artificial lake in Hetch Hetchy would vastly improve the aesthetic qualities of the valley. Despite the spirited opposition of the preservationists, the law to dam Hetch Hetchy passed both houses of Congress and received presidential approval in 1913.

—Gregory J. Dehler

Germans in East Africa, and the Belgians in the Congo all followed similar imperial conservation policies. In 1940, Britain enacted a comprehensive conservation policy for its empire, but World War II delayed its implementation.

Conservation often transcended national boundaries. In 1900 and 1933, Britain hosted conferences devoted to African conservation, which led to the adoption of several policies that all colonial powers uniformly practiced. It should be noted, however, that Africa was not the only continent affected by conservation diplomacy. In the early twentieth century, fur seals, migratory birds, and oceanic fish stocks were regulated by international treaties and subjected to conservation controls. Between 1900 and 1945, several international conferences addressing conservation were held around the world.

—Gregory J. Dehler

Bibliography

Fox, Stephen. *John Muir and His Legacy: The American Conservation Movement*. Boston: Little, Brown, 1982.

Kupper, Patrick. "Science and the National Parks: A Transatlantic Perspective on the Interwar Years." *Environmental History* 14 (January 2009): 58–81.

McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.

Rajan, S. Ravi. *Modernizing Nature: Forestry and Imperial Eco-Development, 1800–1950*. Oxford, UK: Oxford University Press, 2006.

Development of Ecology as Discipline and Impact on Political Thought

The field of ecology emerged slowly in the last quarter of the nineteenth century. The term "ecology" was first used in 1866 by German biologist Ernest Haeckel to describe the interaction between the various scientific disciplines and the environment. However, it was English naturalist Charles Darwin who inspired the growth of the field by depicting nature as a

space where interconnected species conflicted and interacted with each other and their environments on a continuous basis. Some of the earliest ecological studies, such as Stephen Forbes's lake studies in the 1880s and Henry Cowles's sand dune studies in the 1890s, were direct inquiries into the ecological mechanics of Darwinian nature. Most of the contributions to the development of ecology between 1900 and 1945 originated in Britain and the United States.

During most of the period between 1900 and 1945 two rival explanatory models polarized ecologists. American botanist Frederic Clements argued that an orderly and systematic nature in which large plant communities formed, grew, climaxed, and declined and were replaced by new plant communities better adapted to the environment represented the norm. Henry Gleason of the New York Botanical Garden, on the other hand, argued that nature represented less the formation of recognizable, stable communities and more the struggle of individuals against their environment. Both men inspired many followers and students, who took this argument into their field research in attempts to prove their case. Partisans of the two schools of thought could be found on both sides of the Atlantic dividing academic meetings, faculty discussions, and professional organizations, including the British Ecological Society (1913) and the Ecological Society of America (1915).

During the mid-1930s, several important ecologists expanded the discussion beyond Clements's and Gleason's dichotomy of community formation versus individual adaptation. Seeking a new unit of measurement to accommodate Clements's unwieldy and ill-defined plant community, Arthur Tansley, a British botanist, first applied the term "ecosystem" to scientific studies. Tansley further distanced himself from Clements by arguing that there was no one single model of plant community succession. American zoologist Charles Elton and South African ecologist G. Evelyn Hutchinson, who worked out of Yale University, introduced the concepts of energy flow and ecosystem metabolism through the food chain into debates on ecology. This had an important implication because the U.S. government was spending millions of dollars every year killing predators, such as wolves,

» ELLEN SWALLOW RICHARDS

"What touches my neighbor, touches me," wrote pioneer ecologist Ellen Swallow Richards (1842–1911) in *Sanitation in Daily Life*, published in 1907. This quote captures her view that humans interacted with both their environment and each other in the modern, industrial, urban society. Whereas Frederic Clements, Henry Gleason, and most of the men of the first generation of ecologists focused their attention on plant formations, Richards was concerned about endemic pollution, stunted children, rising disease rates, and malnutrition. She devoted herself to the causes of cleaner living, better food preparation, improved sanitation, and sewage disposal, all in the name of promoting a greater individual responsibility for the shared environment. Richards taught at Massachusetts Institute of Technology, where she had earned her degree, for over 30 years, held classes outside the academic setting, and wrote several books and articles in an effort to convince others to follow her standards of ecological living.

—Gregory J. Dehler

on federal lands. By arguing that there was a metabolism or food chain, Elton and Hutchinson gave an ecological value to predators. A community missing one part of the food chain was a broken community. By the end of the decade, the U.S. government ceased killing predators in national parks lands, although the extermination program continued on other lands that were also leased for livestock grazing. In *Game Management* (1933), Aldo Leopold of the University of Wisconsin provided practical measures to establish wildlife-friendly habitats in order to restore animal populations to both large and small areas. Any unit of government, indeed any landowner, could use this book to provide a more ecologically sound habitat for deer, turkey, birds, and other species. Over the nearly two decades between *Game Management* and his death in 1949, Leopold carried this concept of ecology forward to include the principle of biotic citizenship in which all species are equal members.

Ecology moved out of the university and into the realm of public policy in a dramatic fashion during the Great Depression. The Dust Bowl, an extreme example of human mismanagement of land, touched four states in the U.S. Great Plains. Years of damaging and exploitative farming techniques created the first environmental catastrophe since the formation of ecology as a science. Ecologists took the lead in offering solutions to federal agencies and encouraged the planting of trees for a shelterbelt, the practice of better soil conservation and irrigation methods, and the improvement of individual land management through the Agricultural Adjustment Acts. In addition, President Franklin D. Roosevelt employed ecologists to design the Tennessee Valley Authority regional development plan.

One offshoot of ecology applied the principles to urban planning. Patrick Geddes of Scotland thought that large sprawling metropolises were culturally and ecologically unsustainable. In the 1920s, Geddes designed model villages in accordance with ecological concepts. In the following decades, one of his disciples, Lewis Mumford of the United States, applied similar planning models to larger urban communities.

In 1942 Raymond Lindeman wrote a paper synthesizing scientific developments in the field of ecology. The 27-year-old scientist added his

own theories to those already established by Clements, Elton, Hutchinson, and Tansley. Lindeman's resulting work revolutionized the conceptualization of the ecosystem and set ecology on a new course for the postwar period.

—Gregory J. Dehler

Bibliography

- Bramwell, Anna. *Ecology in the 20th Century*. New Haven, CT: Yale University Press, 1989.
- Hagen, Joel. *An Entangled Bank: The Origins of Ecosystem Ecology*. New Brunswick, NJ: Rutgers University Press, 1992.
- Newton, Julianne Lutz. *Aldo Leopold's Odyssey*. Washington, DC: Island Press, 2006.
- Worster, Donald. *Nature's Economy: A History of Ecological Ideas*. 2nd ed. New York: Cambridge University Press, 1994.

Water Management in the Americas

Across the globe, water management practices changed significantly during the first half of the twentieth century. The construction of large dams, dams over 49 feet (15 meters) high, is one of the most visible symbols of this change. As engineers began to better understand the science behind dams, construction techniques changed and improved, leading to larger structures, the creation of multipurpose projects, and more federal intervention including increased regulation and standardization. These changes in water management practices, especially mounting federal involvement and peoples' increasing ability and willingness to transport water over large distances, allowed for the growth of large cities, lush suburbs, and irrigated farms regardless of the natural environment.

The first half of the twentieth century marked a general shift in population density in the Americas. Between 1920 and 1940, the urban population in the United States increased from 54.2 million to 74.4 million, and similar patterns occurred in South America. Rural life became less attractive as industrial growth expanded, creating new opportunities in the rapidly growing cities. But these exploding urban areas required a larger water supply for homes and industry, and growing populations worldwide

➤ HOOVER DAM—THE “GREAT PYRAMID OF THE AMERICAN DESERT”

The Hoover Dam, dedicated in 1935, marks the beginning of federally funded, large-scale, multi-purpose water development projects in the United States. Originally named the Boulder Dam, the arch gravity dam built across the lower Colorado River, about 25 miles southeast of Las Vegas, impounds two years of the river’s average flow. Constructed under the aegis of the Reclamation Service (today’s Bureau of Reclamation), the dam stands 726 feet high, at the time making it the largest dam in the world by almost 300 feet. As a multipurpose project, the dam provides hydroelectric power, water for irrigation and urban use, and protection against flooding.

The dam became an important symbol of American ingenuity, technological prowess, and the ability to harness nature during the Great Depression. In addition, it also provided thousands of temporary jobs at a crucial time in American history. Though the labor was dangerous and conditions were harsh, with summer temperatures soaring to well over 100 degrees, workers and their families flocked to the inhospitable desert canyon from across the nation looking for employment in a faltering economy.

Boosters accurately labeled water as the factor limiting expansion in the Southwest, and the dam acted to stimulate economic growth throughout the region. Today, Colorado River water supports communities across the Southwest, providing water and hydroelectric power that allows Southwestern cities to grow beyond what local resources can support.

—*Eliza Layne Martin*

necessitated the expansion of irrigated acreage for food crops. Likewise, the continued westward migration of Americans into the arid and semiarid regions acted to heighten the pressures on local water supplies. To support and drive forward development, water needed to be imported into these growing arid areas.

The politics of water management matured in this period as federal governments became increasingly involved in water development. In the United States, the creation of the Bureau of Reclamation in 1902 marked a turning point,

placing the federal government in charge of massive irrigation projects. Up to this point, irrigation had primarily been funded by individuals, private companies, and municipalities. New methods of mixing and pouring concrete during the first half of the twentieth century impacted dam development and water management, making both larger and more structurally complex edifices possible. Yet these projects’ scope and expense made it difficult for smaller bodies or private entities to fund them.

With federal involvement we start to see the first multipurpose dams, meaning dams that are built to serve more than one function. Proponents of multipurpose dams promised that their hydraulic projects would bring water for irrigation and growing cities, protect from floods, and produce hydroelectricity to drive forward a growing economy. Though some of these aims are at odds with one another—for instance, to protect from floods you want a dam’s reservoir to be empty, while to produce hydroelectricity you want it as full as possible—dams promised to tame nature for human needs and to allow deserts to flower and cities to blossom.

One of the most famous early multipurpose projects is the Hoover Dam, built across the Colorado River in the 1930s. Modern hydraulic engineering arguably began with Hoover. As the world’s first superdam, Hoover stood as a symbol of Franklin D. Roosevelt’s New Deal and the promise of American technological prowess. Next came the Grand Coulee on the Columbia River, to be followed by a slew of multipurpose high dams across the world, each taller and more impressive than the last. Many of these dams were important as symbols of modernism, economic development, and human control over an unpredictable natural world. Though the majority of U.S. government-sponsored projects were in the trans-Mississippi West, the Tennessee Valley Authority is a prime example of multipurpose water development in the East during this period. Meanwhile, engineers built similar large-scale projects around the globe, such as the Guarapiranga Reservoir in Brazil.

Just like North America, South American countries such as Brazil aimed to increase industrial growth and agricultural output. To do this, they turned to electricity and irrigation. Lacking

in coal, the fuel of choice at the time, though rich in running water, hydroelectric seemed an obvious solution to Brazil's power needs. A significant spate of Brazilian dam building occurred during the early 1920s, yet much of the large dam development in South America did not take place until the second half of the twentieth century. While Brazil was one of the early leaders in water development on the continent, Argentina, in particular, has embraced large dam building since the 1970s.

Throughout this period, hydrological engineers, especially from western Europe and the United States, traveled across the globe helping to build dams in developing countries. Dam building played a special role in the imperial project; for example, dam building in many developing areas fostered an expansion of irrigated agriculture, leading to the growth of more cash crops. Imperial powers viewed these crops grown for the global market, especially cotton, as an important source of revenue for their empires.

Though these dams and their accompanying infrastructure provided many advantages and are awe-inspiring examples of human technical prowess, not everyone benefited from them. Large water projects can flood extensive areas, displacing entire communities. Access to irrigation also changes cropping patterns. In order to pay for the more expensive imported water, farmers tend to grow cash crops for export instead of traditional subsistence crops, drawing farmers more firmly into the world economy and making them more vulnerable to downturns in distant markets. Extensive water management also creates unintended environmental consequences. Dams make irrigated agriculture possible but threaten productive farmland by blocking the passage of silt and depositing salt in the fields, leaving the soil unsuitable for crops. Finally, dams can block fish from spawning and ruin wetland and riparian habitats.

—Eliza Layne Martin

Bibliography

- Billington, David P., and Donald C. Jackson. *Big Dams of the New Deal Era: A Confluence of Engineering and Politics*. Norman: University of Oklahoma Press, 2006.
- Billington, David P., Donald C. Jackson, and Martin V. Melosi. *The History of Large Federal Dams:*

Planning, Design, and Construction in the Era of Big Dams. Denver: U.S. Department of the Interior, Bureau of Reclamation, 2005.

McCully, Patrick. *Silenced Rivers: The Ecology and Politics of Large Dams*. New York: Zed Books, 2001.

Stevens, Joseph E. *Hoover Dam: An American Adventure*. Norman: University of Oklahoma Press, 1988.

Urbanization and Suburbanization

The explosion of cities from the mid-eighteenth century continued into the twentieth century. Trends begun in Europe spilled outward to the Americas and urban centers in Asia and Africa, where European trade links and cultural influence were significant. Industrialization affected ever more cities, drawing more and more people from rural areas whose agriculture was being transformed by the chemicals and machinery produced in urban and suburban plants, lessening the amount of labor necessary for farming. Transportation networks grew denser, first as trains and trams spread out from more and more city centers, linking satellite towns and villages to urban hubs and to each other and more urban hubs to one another. Diesel and electricity replaced horses and steam as sources of energy on urban and interurban routes, and by 1900 gasoline engines and the automobiles they powered were making their mark, increasing individual and family mobility for the middle and upper classes.

While rail lines had produced tendrils of development that snaked out of urban centers into the countryside, it took the automobile, with the independence of movement it provided, to open up wide swaths of exurban land to development. In American cities this often meant that existing rail lines went underused or were shut down, and often newly developing cities had little in the way of mass transit. This had the effect of stranding the less wealthy who worked in cities in rings around the industrialized or commercial city centers, while middle-class families could afford to move farther out. This suburbanization was fed by the relocation to cheaper land outside the center by lighter industries and service providers as well as retailers who served family

▶ LOS ANGELES CONTEMPLATES URBAN SPRAWL, 1926

“Is it inevitable or basically sound or desirable that larger and larger crowds be brought into the city’s center; do we want to stimulate housing congestion along subway lines and develop an intensive rather than an extensive city; will rapid transit spread the population anywhere except along the new right of way; is it ultimately desirable to have an area of abnormally high land values with its consequent demand for the removal of building restrictions; must all large business, professional and financial operations be conducted in a restricted area; must the worker be transported through the heart of the city to get to work; as a matter of fact are not all of these assumptions, which were controlling in the past generation, being severely arraigned by thoughtful students? . . . [T]he city of the future ought to be an harmoniously developed community of local centers and garden cities in which the need for rapid transportation over long distances will be reduced to a minimum.”

—Joseph P. Byrne

Source

Clarence Dykstra [Los Angeles efficiency director of the Department of Water and Power], “Congestion Deluxe—Do We Want It?” *National Municipal Review* 15 (1926): 397.

needs. Older European cities and towns did little during the period to adapt to the automobile since it and its fuel remained luxury items. In Europe, newer development took place along or near existing or planned public transportation routes, creating generally high-density suburban use. American developments, on the other hand, needed little more than a single trunk road and low density; large-lot residential areas became a norm even around older cities.

As World War I drew millions of men from European countries, colonial lands, and the United States, there were internal migrations to the industrial centers where the belligerents and their allies produced their war matériel. Women also entered the urban workforce in large numbers, requiring housing and changing the social landscape of many cities. In the United States, many southern blacks were drawn northward to

industrial centers such as Detroit, Pittsburgh, and Chicago, changing the racial landscape of America’s urban industrial north in what would continue—especially during the Great Depression—as the Great Black Migration.

In the postwar 1920s, cities around the world increased in size and population densities as steel-frame high-rise structures replaced older forms of residential architecture. Subways and surface mass transit appeared in older centers like Moscow to carry people in and out of the central city. Dictatorships in countries such as the Soviet Union, Germany, Italy, and Japan used their resources to reshape their capitals and provide social efficiencies such as the Autobahn in Germany.

The Great Depression of the 1930s affected manufacturing and trade in cities throughout the world. The resulting unemployment drove many out of their urban homes and back to the countryside, while governments sought to provide for the destitute. Government programs, among which were rearmament and military recruitment in most countries, eventually helped stabilize urban flight. From the outset of World War II in 1939, belligerents targeted enemy cities with bombs, land forces, and even rockets. Urban centers throughout Europe and in China, Japan, and the Philippines were scarred or reduced to rubble, while cities in ancillary regions such as the Americas and Australia continued to grow in size and importance.

—Joseph P. Byrne

Bibliography

- Chudacoff, Howard, Peter C. Baldwin, and Thomas Paterson. *Major Problems in American Urban and Suburban History*. Boston: Houghton Mifflin, 2004.
- Pinder, David. *Visions of the City: Utopianism, Power and Politics in 20th-Century Urbanism*. Edinburgh, UK: Edinburgh University Press, 2005.

Health and Sanitation

In the United States and western Europe, the first half of the twentieth century saw some of the most basic problems of public health and sanitation largely solved through municipal ef-

forts, thus greatly improving the health of citizens in those countries. Foremost among these reforms were the development of municipal water and sewage systems, efforts that have proven so successful that potable water is an expectation in most industrialized countries. In addition, the concept of health as a public good and a basic level of health care as a human right became firmly established in much of the industrialized world. Unfortunately, these benefits are not universal: more than 1 billion people in the world lack access to safe drinking water, and an estimated 3 million people die from waterborne diseases worldwide each year. The access to minimal levels of health care varies widely not only between countries but also within many countries, depending primarily on an individual's ability to pay.

A number of breakthroughs in microbiology in the late nineteenth century, including the identification of the microorganisms responsible for cholera, typhoid fever, tuberculosis, and diphtheria, led to the acceptance of the germ theory of disease and to the increased interest in improving public health through sanitation. Much of this effort was focused on cities, because crowded living quarters provided the ideal conditions for the spread of communicable disease. In addition, in cities the rich and poor often come into contact with each other, and the proximity of rich and poor has meant that an epidemic that began in the slums could quickly spread to the wealthiest neighborhoods. Many cities established boards of health in the second half of the nineteenth century, starting with New York City in 1866. Even before there were effective treatments (such as antibiotics) for many infectious diseases, these boards of health helped contain disease outbreaks through inspections, immediate case reporting, and rapid investigation.

The new emphasis on sanitation represented a shift in philosophies on two fronts: the causes of illness were attributed to poor social and environmental conditions, and protecting public health became a societal rather than a private responsibility. Recently acquired knowledge about the causes of diseases also encouraged a shift to a more long-term view focused on preventing diseases rather than curing them. For instance, filtration of drinking water, a municipal process,

> LILLIAN D. WALD

Lillian D. Wald (1867–1940) was a pioneer public health nurse and social worker in New York City. She invented the concept of the public health visiting nurse and founded the Henry Street Visiting Nurse Service, which provided house calls to patients, many of them recent immigrants to the United States, living in tenements. Wald was also involved in many health-related social causes including improved tenement living conditions, fire safety in factories, and the abolition of child labor.



(Library of Congress)

—Sarah Boslaugh

in the early twentieth century greatly decreased the number of cases of typhoid fever, an individual consequence. In 1908, 35 American cities had death rates from typhoid of more than 15 per 100,000. After filtration systems were added to municipal water supplies, only three cities had rates that high.

State and city health departments also took on a number of other tasks to combat disease. One was the establishment of disease registries. A second was the establishment of public clinics that offered both education and health care, often focused on a particular disease (such as tuberculosis) or demographic group (such as children). A third was the establishment of visiting nurse services, which took health care to people in their homes, and led to further recognition of the connections between poverty, unsanitary living conditions, and disease.

Improvements in public health and sanitation came more slowly and unevenly outside the Western industrialized world. In fact, the sanitation revolution is only today reaching some parts of the developing world. However, some Asian countries were early adopters of sanitary

reforms. For instance, Tokyo constructed a municipal water supply in 1889 and a sewage treatment system in 1922. In other cases, sanitary improvements were instituted by colonial ruling powers, for instance in the British colonies of Singapore and Cape Town, South Africa. Such municipal improvements were sometimes a mixed blessing to the native population because they were often instituted primarily to benefit members of the colonial ruling class. Ruling elites also sometimes relied on sanitary reforms as a pretext to instill or reinforce racial segregation.

—Sarah Boslaugh

Bibliography

- Coss, Clare, ed. *Lillian D. Wald: Progressive Activist*. New York: Feminist Press, 1989.
- Institute of Medicine. *The Future of Public Health*. Washington, DC: National Academy Press, 1988.
- Porter, Dorothy, ed. *The History of Public Health and the Modern State*. Amsterdam: Editions Rodopi, 1994.

Brazilian Environmentalism

Between 1920 and 1940, the Brazilian political-intellectual scene was charged with intense nationalism and with an urge to modernize both social and political institutions. These themes influenced reflections about industrialization, political institutions, law, the arts, cultural heritage, and the protection of nature.

In the field of nature protection, a small group of scientists and intellectuals was devoted to the goal of saving the Brazilian natural heritage. They became the founders of Brazilian environmental awareness, although they are not duly acknowledged as such. Their impact is in part explained by the connections that they made between the protection of Brazilian nature and the construction of the nation's identity. They were scientists, but they argued politically that Brazil should attach its identity to its wealth of natural resources and landscapes, both for economic and aesthetic reasons.

The Museu Nacional do Rio de Janeiro (MNRJ), a museum specializing in natural history and anthropology, was the group's major institutional base.

Likewise, the First Brazilian Conference for Nature Protection, held in Rio in April 1934, was

a cradle of Brazilian environmentalism and a rallying point for these scientists and hundreds of other citizens interested in the matter. The event was promoted by several civic groups with MNRJ support. The annals of the meeting show that the bulk of the participants conceived nature as an organic entity involving all forms of life, including humans. Nature should be used but also admired and cared for as part of the Brazilian national identity. However, participants were aware that this notion had to be nurtured by public education at all levels so that citizens, particularly children, would learn about the importance and the beauty of animals, plants, and landscapes.

Large-scale tree plantations, composed of both native and exotic species, were suggested for commercial purposes, for the recovery of degraded lands, and for watershed protection. In addition to recommending that aesthetic landscaping be widely practiced to create nature gardens, the group promoted the idea that selected areas be set aside for preservation, aesthetic appreciation, and scientific research. At the same time wilderness, or unspoiled nature existing beyond frontier settlements, was defended for its own sake. Conference attendees, aware that the management of tropical forests still lacked a scientific basis, proposed research programs. Other conference recommendations were international cooperation in the area of nature protection, the selection of areas to be protected, environmental education, and more cautious use of natural resources.

The conference also reflected the concerns and stimulated the continuing activity of a group of MNRJ scientists: Alberto José Sampaio (1881–1946), chief botanist at the MNRJ and one of the most important Brazilian botanists of all time; Armando Magalhães Corrêa (1889–1944), sculptor, painter, writer, and self-taught naturalist and renowned sketch artist of plants, animals, and landscapes; Cândido de Mello Leitão (1886–1948), Brazil's leading zoologist and a professor at the museum; and Frederico Carlos Hoehne (1882–1959), a self-taught naturalist who became an expert in ecology, biogeography, and botany.

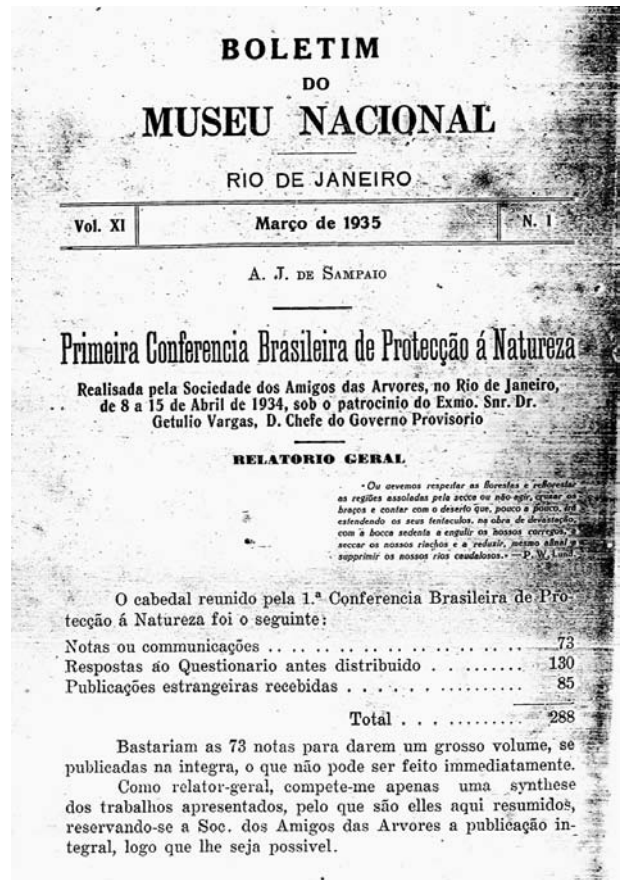
The 1934 outpouring of natural resource legislation, such as Brazil's first Forest Code, was largely shaped by Sampaio's findings, proposals,

and goals. He fought for the creation of a national forest service, which would deal with logging permits as well as require sustainable-yield use of forests and commercially planted forests. In addition, his biogeographical research helped in the selection of areas to be preserved. In general terms, Sampaio considered the wise use of natural resources to be compatible with respect and love for nature.

Corrêa, studying nature and humans in the rural outskirts of Rio de Janeiro in the late 1920s, brought the issue of the Brazilian open frontier (*sertão*) and its vast natural resources to the Brazilian urban elites. Less than 32 miles (50 km) from downtown Rio in the 1920s, he found people who lived off the land as fishermen, hunters, collectors, loggers, charcoal producers, and small farmers. He showed that the outback actually started close to the national capital. People living there were immersed in a fragile low-productivity, natural resource economy, apart from the realm of modern political and social rights, just as remote Amazonians lived at the time and still live today. Sometimes, he argued, these "forsaken" people helped conserve nature, but many other times their poverty made them destroy their own resource base. These people could remain, he thought, in touch with nature but must also be brought into the realm of citizenship, institutions, and the national state in order to lead a better life, one less dependent on nature.

Mello Leitão argued that there was a positive relation between investments in scientific research, appreciation of nature, and national consciousness. He was an evolutionist who considered cooperation to be more important than competition for the survival of individuals, populations, and species. On a different note, he considered biology to be a doorway into the secrets of nature and its revelations for all people. He was a harsh critic of short-term wasteful uses of the land and its resources.

Hoehne was an early defender of parks and preserves. He was concerned with faraway landscapes but was also an ardent defender of remnant forests inside the perimeter of the city of São Paulo. Not a strict preservationist, he favored the wise use of resources in a manner that could well be coupled with the notion of sustained



Cover of the annals of the First Brazilian Conference for Nature Protection, held in Rio de Janeiro in April 1934. Compiled by the botanist Alberto José Sampaio, it records papers, proposals, and motions presented at this founding event of Brazilian environmentalism. (Museu Nacional do Rio de Janeiro)

yield. He argued, however, that in a broader sense there was a moral balance to be achieved between utility and aesthetics in human relations with nature. Humans should seek harmonic relations with nature, knowing and admiring it. In his extensive field trips to several parts of the Brazilian territory, he had a special eye for discriminating the parts of the land that should be used for production from other parts to be set aside for conservation and preservation. Hoehne's close relations with São Paulo politicians allowed him to exert some influence over conservative farmers and their farming practices. He was active also in the creation of the first Brazilian national parks. The São Paulo Botanical Gardens, created by Hoehne, became a model institution for research and education.

Writing from the 1920s to the 1940s, these scientists laid the foundations of a scientific conservation movement in Brazil. Although they also achieved some influence over natural resource policies, conservation did not become a mainstream concern of Brazilians during their careers. Much to the contrary, Brazilian political leaders, farmers, industrialists, and the general population believed above all, during most of the twentieth century, in development at all costs. Nonetheless, the findings and the proposals of these pioneering conservation scientists remain relevant to the present-day paradigm of

reconciling growth with environmental quality, as the belief in development at all costs lingers on in many segments of Brazilian society.

—José Luiz de Andrade Franco
and José Drummond

Bibliography

- Dean, Warren. *With Broadax and Firebrand: The Destruction of the Brazilian Atlantic Forest*. Berkeley: University of California Press, 1995.
- Drummond, José. "Brazil." In *Encyclopedia of World Environmental History*, edited by Shepard Krech III, J. R. McNeill, and Carolyn Merchant, 161–169. New York: Routledge, 2004.

■ Introduction: Warfare, Population, and Environment

The moon crater landscape of the western front of World War I and the aftermath of the dropping of the atomic bomb on Hiroshima in Japan at the conclusion of World War II stand as two of the most extreme cases of the effect of warfare on the environment. From 1900 to 1945 the destructive impact of the two world wars on population and environment was monumental in terms of numbers and scale. In tandem with large-scale genocides, most notably the Holocaust, and political famines, such as the Ukrainian famine of 1932–1933, this period led to military and civilian deaths in the tens of millions. Moreover, the new nature of warfare, on a far more vast geographical scale and characterized by new technologies, allowed for the destruction of cities, ecosystems, and entire landscapes.

—Abraham O. Mendoza

Impact of War on the Environment

At the beginning of the twentieth century, warfare had become a prominent factor in global ecology. Rapid advancement of science and technology not only afforded developed states the ability to go to war for longer periods of time and at a greater distance, but the advent of chemical warfare and nuclear weaponry also al-

lowed them to inflict exponentially greater damage on enemy forces and ecologies.

During World War I military strategies of both the Entente and Central Powers focused sharply on trench warfare, devastating large segments of the European landscape particularly in northern France. While trench warfare had been a significant military strategy since the Napoleonic Wars, the increased power of munitions caused greater damage to the ecology, both directly as a result of deployment on the battlefield and indirectly as factory mass-production of munitions consumed larger amounts of raw materials.

The largest global ecological impact of World War I was on timber. Other than the forests of Russia, which resided in predominantly inaccessible regions, European forests endured heavy exploitation as nations rushed to fuel the war machine. With the local wood supply dwindling, timber was imported into Europe from forests in North America and South Asia, causing ecological decline in those regions. In the postwar years, governments took more direct control over their forests, and while new trees were planted to replace their felled counterparts, single-species tree plantings took the place of naturally diverse forests.

Chemical warfare was first employed in World War I when German forces unleashed chlorine gas near Ypres, France, on April 22, 1915. World War I has been commonly referred

to as the chemists' war. Although Germany may have introduced the world to chemical warfare, the rest of the world quickly followed. By the end of the war, clouds of mustard gas, chloropicrin, hydrogen cyanide, diphenylchloroarsine, and arsenic drifted over Europe. While scientists helped create chemical weapons, they also engineered civilian usages for these chemicals, such as insecticides, after noting how battlefield regions were emptied of insects.

As the world became increasingly industrialized moving toward World War II, the pressure on the global ecology was heightened. An increased reliance on aerial bombing raids in World War II was the largest in-war impact on the European ecology, but the ever-greater need for timber devoured forests in Norway, Poland, British Columbia, Oregon, and Washington state, which in turn led to postwar civilian expansion into previously unsettled or lightly populated regions.

Chemicals played their role, too. Created in 1873, Dichlorodiphenyltrichloroethane (DDT) was not used as a pesticide until shortly before World War II. In the war, DDT helped ensure greater control over battlefield ecology, helping to kill malaria-transporting mosquitoes and typhus-transmitting lice. These short-term benefits led to long-term ecological harm, however, as DDT has been linked to cancer in humans and the near-extinction of several species, including the bald eagle.

The signature event of World War II was the dropping of the atomic bomb, first on Hiroshima on August 6, 1945, and then on Nagasaki three days later. While the bomb devastated the two cities and their inhabitants, the ecological impact has proven to be dramatically less harmful. Within days of the detonations, residual radiation had dissipated to nonthreatening levels, and flora and fauna survived, if not thrived, in the immediate aftermath. While the animals caught in the blast certainly died, mosquitoes, flies, fish (in deep water), rats, and earthworms in the vicinity all managed to survive. Remarkably, these organisms suffered little long-term health risks associated with the blast. Trees also sprouted new twigs within months. While human victims suffered the consequence of exposure to radiation and fallout for decades to come,



French soldiers launch a gas and flame attack on German trenches in Belgium during World War I. (National Archives)

➤ THE PLANNED POSTWAR DESTRUCTION OF GERMAN FORESTS

At the Potsdam Conference of August 1945, Allied Forces divided a defeated Germany into four military occupation zones. As part of the postwar policy, Allied plans called for both the exploitation and destruction of German resources. This plan was not implemented in a united manner due to Cold War antagonisms. One United States government plan proposed:

"In accordance with this policy, a forestry program has been initiated in the U.S. Zone to furnish timber to satisfy current military and essential civilian needs, to provide exports, and to build up stockpile for future requirements. Approximately 23,500,000 fest meters of timber (about 200 percent of annual growth), will be cut in the year ending 30 September, 1946. . . . As a basis for developing a future program looking toward total control and ultimate destruction of the war potential of German forests, a complete inventory of forest resources in U.S. Zone is being made."

—Mark Bousquet

Source

United States Office of Military Government of Germany. *Year of Potsdam: The German Economy Since the Surrender*. Arthur Settler, ed. (Office of Military Government. Economics Division, 1946), 69–70.

the ecosystems in Hiroshima and Nagasaki recovered much more rapidly than was initially expected.

—Mark Bousquet

Bibliography

Tsutsui, William M. "Landscapes in the Dark Valley: Toward an Environmental History of Wartime Japan." In *Natural Enemy, Natural Ally: Toward an Environmental History of War*, edited by Richard P. Tucker and Edmund Russell. Corvallis: Oregon State University Press, 2004.

Tucker, Richard P. "The Impact of Warfare on the Natural World: A Historical Survey." In *Natural Enemy, Natural Ally: Toward an Environmental History of War*, edited by Richard P. Tucker and Edmund Russell. Corvallis: Oregon State University Press, 2004.

Interwar Global Depopulation

Depopulation patterns in the period following World War I resulted from large-scale famine, war, and disease in many of the world's regions, particularly in Europe and Asia. The onset of the

destruction brought about by the Great War led to the upheavals and dislocations that transcended the war, such as the Armenian Genocide, the Russian Civil War, the Greek and Turkish population transfers, and the British blockade of Germany, all of which resulted in significant casualties in Europe. In Asia, large-scale famine and endemic warfare took their toll, particularly in interwar China. Global depopulation during the interwar period (1919–1939) was a staggering phenomenon, with warfare, economic chaos, and a major postwar outbreak of the Spanish flu as the major contributing factors.

Interwar European depopulation was directly related to the aftermath of World War I. Political efforts to rid Turkey of its Armenian population led to the estimated deaths of 1.5 million Armenians through genocide at the hands of the Turkish military. The British naval blockade of Germany, instituted to force the German leadership to sign the Treaty of Versailles, led to the deaths of approximately 750,000 Germans. In the Greek-Turkish War (1919–1922) and during the population transfer that followed, mutual ethnic hatred and chaos led to the deaths of thousands of civilians and combatants on both sides. During the population transfer, approximately 1.5 million Greeks and an estimated 500,000 Turks shifted between Greece and Turkey. The Russian Civil War, which ravaged much of European Russia from 1918 to 1922, led to the deaths of 20 million combatants and civilians. Along with the hardships imposed by the global economic depression in the 1930s during which the birthrate dropped, European population patterns somewhat stabilized in spite of all these events before the onset of World War II.

Events in interwar China, stemming from the conflicts between the Guomindang or Nationalist Party of China (KMT) and the Chinese Communist Party (CCP) and their mutual adversaries, the Japanese, along with the economic and political instability unleashed by endemic warfare, led to millions of deaths across much of the region in the 1920s and 1930s. Endemic warfare between the KMT and its persecution of the CCP in the 1920s led to the deaths of tens of thousands of Chinese combatants and civilians. Japanese attacks on Chinese cities and the invasions of Manchuria, Jehol, and Nanking led to the estimated

► FRENCH FIN-DE-SIÈCLE POPULATION FEARS

Prior to World War I, prenatal policies in France were geared toward addressing the issue of a declining French population, particularly that of males. While Germany's population steadily grew in the period following the Franco-Prussian War (1870–1871), the French population's birthrate had experienced a steady decline. Both French conservatives and republicans blamed French women and feminism for this phenomenon. French government policies addressed this by arguing that French women had the duty to provide the Republic with babies and offered some incentives. Economic incentives and suggestions for prenatal health care, among other policies, were discussed by the French government as a way to encourage pregnancy. Concerns over the virility of the French Republic in the early twentieth century vis-à-vis growing German world power contributed to this sense of malaise. Until the outbreak of World War I, French depopulation was a top political concern.

—Abraham O. Mendoza

deaths of millions of Chinese combatants and civilians. Due to conflicting reports by historians, there is no way to arrive at an accurate number of total casualties incurred during the whole interwar period in China, but estimates are that approximately 20 million Chinese died from the Sino-Japanese War (1937–1945), which constitute a significant portion of the approximately 70 million deaths (both combatants and civilians) during the whole of World War II.

Although other world locations were not spared the economic dislocations caused by the Great Depression, they were spared the warfare that characterized the interwar period in Asia and Europe. Nevertheless, the Spanish flu outbreaks of 1918 did lead to the estimated deaths of anywhere between 20 million and 100 million people the world over. Given the lack of reliable estimates of the global population during the interwar period, the approximate number of deaths and lowered birthrates suggest that the global population either declined or merely stabilized significantly in contrast with the period before 1914, which was characterized by steady growth.

—Abraham O. Mendoza

Bibliography

- Gilbert, Felix, and David Clay Large. *The End of the European Era: 1890 to the Present*. 6th ed. New York: Norton, 2009.
- Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.

Total War and Population— Civilian Deaths in World War II

The level of destruction of World War II affected civilian populations on a scale unknown up to that time. Through attacks on civilians, combat deaths, the toll of concentration and death camps, ubiquitous starvation, and disease, World War II resulted in the deaths of an estimated 50 million to 70 million people. The home front was as significant a target as the battlefield given the view that it was strategically important to strike at the economic capacity of the

> BANALITY OF EVIL AND TOTAL WAR

In her book *Eichmann in Jerusalem* (1963), philosopher Hannah Arendt examines the case of SS-Obersturmbannführer, a top Nazi official responsible for the coordination of Jewish population transfers from the Eastern occupied territories to concentration and death camps. Arendt argues that Eichmann, as a bureaucrat responsible for the deaths of millions by signing orders, gradually became detached from the responsibility of the Final Solution. Eichmann believed that he personally was not involved in murder, as he was “following orders” from above while others were carrying out the “actual” work. The concept of the “bureaucrat” as a dispassionate murderer illustrates the level of detachment that characterized modern total war, as soldiers, civilians, and government officials made decisions on a day-to-day basis that led to the deaths of millions.

—Abraham O. Mendoza

other side to wage war. With the exception of the United States, most of the major belligerents in World War II were exposed to attacks on their civilian populations. In the initial years of the war, Germany and Japan devastated their respective enemy populations through massive military invasions, the destruction of major urban centers, and the persecution of racial or political enemies. In kind, the British and U.S. forces, through major strategic bombing attacks, leveled major urban centers, aiming to destroy not only industrial centers but also their adjacent populations. The Soviets extracted extreme retribution as they beat the German forces back into the Reich, enacting vengeance on German civilian populations.

While prior wars, such as the Napoleonic Wars, the American Civil War, and World War I, were arguably examples of total war, World War II is by far the most definitive example of mass civilian involvement, as technological advances helped blur the distinction between the battlefield and the home front and as civilians became viable targets by their respective antagonists. Prior conflicts, which had high levels of state involvement and economic mobilization of civilians, did not place the majority

MANHATTAN PROJECT, ATOMIC PRODUCTION, AND ENDANGERED CIVILIANS

With the pressures of World War II and its attendant crisis mentality, safety standards for domestic labor in the war industries became of lessened importance. In this sense “total war” extended not only to the enemy but to domestic populations of civilians. One of many examples involves the use of approximately 125,000 civilians at the scattered sites of the Manhattan Project, the U.S. military’s code name for its secret effort, begun in 1942, to develop the atomic bomb. In addition to the Los Alamos, New Mexico, site where physicists and engineers worked on the theoretical aspects of creating and assembling the bomb, other large facilities included an Oak Ridge, Tennessee, site dedicated to processing uranium and a Hanford, Washington, site dedicated to plutonium processing.

None of the Manhattan Project’s 125,000 workers knew the precise nature of the project or the health risks. While the industrial standards for handling hazardous materials were enforced, these measures were far from sufficient for work with

radioactive materials. According to historian Peter Hales, in addition to unintended worker exposure to radioactive materials, at least 50 subjects (including patients admitted to hospitals for other symptoms) were intentionally and secretly exposed to plutonium to gather data on its effects.

The plutonium processing in Hanford, Washington, which began in 1943 and continued throughout the Cold War led to extensive radioactive pollution of the region. In 1989 the U.S. Environmental Protection Agency concluded that 230 square miles of ground water in the Hanford Reservation area were unfit for any human use.

—Fred Nadis

Bibliography

Hales, Peter. *Atomic Spaces*. Urbana: University of Illinois Press, 1997.

Stenehjem, Michele A. “Pathways of Radioactive Contamination.” *Environmental Review* 13(3–4) (1989): 94–112.

of the civilian population in harm’s way. New weapons, including tactical bombers—such as British Lancasters and U.S. B-17 Flying Fortresses—equipped with blockbuster and incendiary bombs, brought death and destruction to the enemy directly. British, Soviet, German, and Japanese populations felt the brunt of bombing attacks on their urban populations, particularly those adjacent to industrial areas pivotal for war production. So-called morale bombing, justified by the premise that civilian populations would turn against their respective government authorities, proved to be ineffective, although it was continued by all sides. The dropping of the atomic bomb on Hiroshima and Nagasaki in August 1945 remains the culminating example of the bombing of civilians as a main target in total war.

The displacement of large numbers of people, through military liquidations, forced migrations to ghettos, concentration camps, death camps, and slavery, also contributed to the megadeaths of World War II. In Nazi-occupied Europe, as millions of Jews, homosexuals, communists,

and other “misfits” were persecuted and subject to incarceration, upwards of approximately 10 million died (with an estimated 6 million of them being Jews) under German and collaborationist authorities. As the Allied armies closed in from both sides, Axis civilians were exposed to acts of retribution at the hands of their enemies now on the offensive. Particularly on the eastern front, the Red Army subjected German populations to rape, murder, and starvation, justified as vengeance for similar acts committed by the German Wehrmacht and Waffen-SS in the formerly Nazi-occupied Soviet territories. Upwards of 11 million Germans were expelled westward into the Reich, with approximately 2 million dead through shootings, starvation, and other acts of retribution from 1945 to 1948. Former collaborators or people suspected of collaboration were also subject to murder by locals under the jurisdiction of Allied occupational authorities who permitted such actions by turning the other way, particularly in France (with such casualties estimated in the tens of thousands).

—Abraham O. Mendoza

Bibliography

- Arendt, Hannah. *Eichmann in Jerusalem: A Report on the Banality of Evil*. New York: Viking, 1963.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.
- Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

Restoring the Landscape— Clearing Up Battlefield Damage

Along the western front, the battles of World War I destroyed millions of acres of formerly productive agricultural land. Previous military engagements, characterized by bayonet charges and short-range artillery fire, resulted in the deaths of thousands in battle but had relatively little impact on the actual terrain. What was left following World War I was a virtual moonscape created by artillery barrages, pounding hundreds of thousands of shells for thousands of square miles, mostly in the French northeast and southeast and along the Belgian border with Germany. The large battlefields of the Somme, Verdun, and Ypres were vast landscapes of destruction fraught with ubiquitous shell holes, barbed wire, destroyed pillboxes, and shattered trenches. Adjacent surroundings, such as forests, pasturelands, and villages, also were affected. As German troops retreated in the last year of the war, they poisoned wells, burned villages, and destroyed infrastructure, further contributing to the damage. The reclamation and reconstruction of these moonscapes took a considerable amount of time and conscripted labor to accomplish.

Battlefield damage in the Somme, Verdun, and Ypres, in addition to other smaller battle sites on the western front put millions of valuable acreage out of production during the war. Efforts by the French government and the British Expeditionary Forces to assist local farmers struggling to continue their livelihood in the midst of the war were unsuccessful. Following the war, German prisoners of war, Chinese coo-

➤ SUBMARINE WARFARE AND OCEAN POLLUTION

While ship sinkings characterized naval warfare before World War I, the volume of large convoys running between North America and the British Isles and the incidences of submarine attacks during World War I increased such incidents dramatically. German naval authorities recognized that Britain relied on its foodstuffs from overseas and viewed its supply as a viable war target to provoke starvation and thereby surrender. As a result, in addition to loss of human lives, untold amounts of destroyed British and American ships littered the routes between Britain and the United States, polluting the ocean with debris, petroleum, and other wastes. This practice continued in World War II on a greater scale, generating far more ocean pollution. To this day, sunken vessels continue to rot away and spill fuel, illustrating the continuing impact of war on the oceans.

—Abraham O. Mendoza

lies, and other bonded labor were conscripted to aid in the restoration of the land, working with French and Belgian military authorities in the removal of shell casings, barbed wire, duds, and destroyed structures along the miles of trenches. This was dangerous work given the large number of unexploded shells that could be easily triggered during reclamation efforts. The scale of these efforts was enormous due to the vast terrain, which had been affected by hundreds of miles of trenches with their requisite structures and adjacent battle damage. The cost of this entire undertaking was added to the reparations imposed on Germany in the Treaty of Versailles of 1919. Ninety years later, unexploded shells are still found by French farmers, illustrating the continuing danger from World War I's implementations of war.

—Abraham O. Mendoza

Bibliography

- Gibson, Craig. "The British Army, French Farmers and the War on the Western Front 1914–1918." *Past and Present* 180 (2003): 175–240.
- Howard, Michael. *The First World War: A Very Short Introduction*. New York: Oxford University Press, 2007.

National Socialism and Environmentalism

The implementation of environmental regulations under the National Socialist regime has supposedly sustained a myth about the green policies enacted in Nazi Germany and how the Nazis might have perhaps been the forbearers of the modern Green movement. There is some credibility to the underpinnings of this scenario: National Socialist ideology did invoke the importance of sustaining the German landscape, but it did so in tandem with the idea that it was vital for the purpose of upholding the racial purity of the Aryan race. The paradigm that blood and soil were inextricably tied played an important role in the adoption of environmental policies within the Third Reich from 1933 well into World War II. However, there is also evidence to suggest that while some Nazis were eager to preserve the environment and use scientific

management for soil and forestry, as the regime mobilized for a total war economy environmental policies became mere rhetoric and were gradually ignored.

While environmental organizations did exist in both Wilhemine and Weimar Germany, they were mostly at the grassroots level and active within individual German states (*Länder*). Most of these were nature protection groups (*Naturschutz*) or youth hiking clubs (*Wandervogel*) that advocated the protection of the natural environment from industrialization and urbanization. The group membership believed that the German landscape was vital for the preservation of German culture and history, which was threatened by increased modernization. Most of the rhetoric espoused by these groups mirrored the type of language used by advocates of the *völkisch* (“folk”) movements, who mixed ethnic nationalism with nostalgia for the preindustrial German past. Many of these advocates argued that the purity of the German people was tied to the fate of the German landscape and that the threat by “foreign” species and the destruction of the natural environment by the process of modernization (which was associated with Americanization or consumer culture) was akin to the threat to the German race by the influx of foreigners. The analogy between blood and soil emerged out of this relationship between these various groups.

When the National Socialist regime came into power in 1933, some top Nazis were responsible for enacting environmental legislation as they co-opted the agenda of the various German environmental organizations. The Reich Nature Protection Law of 1935, put in place under the National Socialist regime, enacted national environmental legislation throughout Germany and thereby took initiative that was formerly left to the various states. Scientific management of forests, as advocated by Nazi leader Hermann Göring, was implemented for the conservation of Germany’s forests (*Dauerwald*). As a hunter, Göring was an advocate for the preservation of the natural environment and game. First minister of agriculture Richard Walther Darré, seen as a proto-Green by some historians, utilized the term *Blut und Boden* (“blood and soil”) to identify and advocate sustainable agricultural prac-

➤ MORGENTHAU PLAN (1944)

As the Grand Alliance closed in on Nazi Germany, the Allies were planning for the eventual defeat of Germany and its postwar configuration. At the Second Quebec Conference in 1944, British and American officials agreed on the Morgenthau Plan, proposed initially by U.S. secretary of the treasury Henry Morgenthau Jr., to dismember and de-industrialize Germany, thereby making it “a country primarily agricultural and pastoral in its character.” This punitive proposal was based on the premise that Germany’s ability to wage war could only be destroyed by the removal of industry and the division of Germany into two states, with many regions either under international control or annexed by neighboring countries. While top U.S. and British officials initially supported this policy, they were convinced by military commanders that it would ensure resistance in the German population, not to mention remove the de facto economic industrial center of Europe in a time of expected economic hardship. A more moderate policy was enacted in the postwar period, and the Germanies (West and East) remained formidable industrial powers rather than the pastoral state envisioned by Morgenthau.

—Abraham O. Mendoza

tices throughout the Reich. Other policies under the Nazi regime, such as air pollution control, autobahn landscaping, and the extensions of environmental policies into the conquered territories, were upheld by various Nazi officials.

Some historians argue that Adolf Hitler's co-optation of all national organizations under the National Socialist umbrella convinced him that environmental policies were a good way to gain support for all the regime's policies. Nevertheless, as Nazi Germany mobilized for total war, many of these conservationist policies were ignored, as the use of natural resources was seen

as pivotal in the production of munitions and matériel.

—Abraham O. Mendoza

Bibliography

- Bramwell, Anna. *Blood and Soil: Richard Walther Darré and Hitler's "Green Party."* Buckinghamshire, UK: Kensal, 1985.
- Bruggemeier, Franz-Josef, Mark Cioc, and Thomas Zeller, eds. *How Green Were the Nazis? Nature, Environment, and Nation in the Third Reich.* Athens: Ohio University Press, 2005.
- Schama, Simon. *Landscape and Memory.* New York: Knopf, 1995.

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Society and Culture

From 1900 to 1945 throughout much of the world, the social landscape was altered by the onset of modernization. Mass production, improvements in transportation and communication, and other new technologies altered daily life and attitudes. Such technological offshoots of the accelerating Second Industrial Revolution manifested mostly in Europe, North America, and Japan but followed in other areas with comparable levels of economic development. An accompanying growth of consumer culture, mass media, and advertising also characterized these developments, again primarily in the developed West. Many embraced the promises of modernity, while others, seeing traditional ways threatened, rejected the altered landscape. Modernization and its critique along with nationalism and its many variants (including anticolonialism) were important culture shapers in this period. World events, including World War I, the Great Depression, and World War II, channeled these forces as they swept through and transformed much of the world.

Once-peripheral political ideologies such as communism, socialism, and fascism, with their accompanying political, economic, and social models of organization, gained traction during this period. While many of these ideological movements had existed before this period, the collapse of social and economic order in the interwar period allowed them to capture significant levels of popularity within the mass of society. Nationalism, which invariably accompanied the development of the modern nation-state, intensified in response to the disorder and anxieties of the period from 1900 to 1945, most notably communism and fascism.

Rigid class distinctions between the middle class and the working classes still characterized much of the social structure in Europe and other industrialized areas in this period, albeit with a continued decline in the influence of the hereditary aristocracy. Despite the rise of new commercial, military, and political elites, the middle class continued to gain influence in government and society. During the world wars, greater proportions of the population of several European countries gained political agency under republican forms of government.

Workers also sought increased autonomy but with limited success. The triumph of the communist-inspired Bolshevik Revolution in Russia as well as the generally exploitative conditions imposed on industrial and agricultural laborers led to a powerful worldwide labor movement during this period in which bitter animosity, general strikes, and violent confrontations were common. Labor gains tended to be strengthened during the economic crisis of the 1930s as governments sought to quell social unrest and lessened when nationalistic concerns tempered

labor demands during the book-ended war years. The emerging global nature of industrial production encouraged the strengthening of international associations of labor unions.

During this period there were significant advances in the position of women in many areas. Suffrage movements led to the franchise for

Advertising in Europe and North America

heralded images of the “New Woman,” often thin, athletic, glamorous, free-spirited, and shown in the driver’s seat of an automobile.

women in Europe, the United States, and Canada and in much of Latin America and Asia as well. Advertising in Europe and North America heralded images of the “New Woman,” often thin, athletic, glamorous, free-spirited, and shown in the driver’s seat of an automobile. Contrary to these images, in most parts of the world—consumer havens included—women were

still socially and legally subordinate to their fathers and husbands. Nonetheless, new educational opportunities for women and new clerical professions allowed for women’s increased participation in the job market. The need to ensure an adequate domestic workforce during the world wars also brought many women into industry, as most of the men had gone off to fight. Government advertising encouraged women to join the workforce as a patriotic duty, wedding nationalistic fervor to emancipation and generating such mythic figures as “Rosie the Riveter” on posters in the United States during World War II. Within this context, women gained a degree of independence within society.

Racial hierarchies were also reinspected, challenged, and reinvented. The Black Freedom movement in the United States included such efflorescences as the New Negro Movement of the 1920s and the Harlem Renaissance of the 1920s and 1930s. Under the leadership of W. E. B. Du Bois, the first Pan-African Congress was held in Paris in 1919. Delegates to the congress underlined the parallels between the oppression built into colonial regimes and other societies. Negritude, the literary movement that began in the 1930s among North African expatriates in France, took inspiration from the African American literature of pride and protest and its accompanying exploration of identity. At the same time, throughout Asia literary and artistic movements explored how the imposition of Western cultural standards and colonial racial hierarchies affected traditional local identities. Efforts to promote a Pan-Asian style under Japanese leadership foundered as Japanese ultranationalism and Japan’s military campaigns to carve out the “Greater East Asia Co-Prosperity Sphere” revealed clear imperial ambitions that did not mesh with its anticolonial rhetoric.

The degree to which colonialism shaped the populations of much of southern Asia, Southeast Asia, and Africa is a matter of scholarly debate. In some areas, such as Hawai’i, colonial powers ruled through the local power structures. In other areas, particularly in Africa, they established direct rule, taking responsibility for functions such as collecting taxes and maintaining order. While the traditional organization of many of these societies survived colonialism, the military might of the colonial power was always a factor. Native elites were generally heavily influenced by the colonial homeland culture and were often educated in Euro-

pean universities. These well-educated colonial subjects typically served colonial authorities but eventually became the major source of dissent, and many were to become leaders of movements demanding greater autonomy and outright independence. Their numbers included Mahatma Ghandi, Jawaharlal Nehru, Jomo Kenyatta, Sun Yixian (Sun Yatsen), and Mao Zedong. These well-traveled educated men often brought home nationalistic fervor as well as new political and social ideologies (such as socialism and communism), contributing to a growing sense of national identity and a desire to end foreign imperial dominance.

States outside European control but within European economic hegemony, particularly those in Latin America, the British Dominions, and China, while able to retain much of their traditional social structure, were nonetheless exposed to change. The Latin American republics, nominally independent but subject to European and U.S. economic domination, experienced the rapid modernization of their major cities, in contrast with the provincialism of their traditional rural hinterlands. The clash between the modern urban centers and the traditional rural countryside shaped much of the political dynamics of Mexico, Argentina, and Brazil. The liberal cities, heavily influenced by European culture and ideas, found themselves confronted by the lingering political influence of landowners who wished to maintain their control over the economy and social order. The British Dominions, most notably Canada, Australia, and New Zealand, also were shaped by this conflict between their modernizing metropolitan centers and their vast agricultural interior lands.

To a significant extent, countries such as the United States, Japan, France, and China also faced these “culture wars,” which pitted the “traditional” against the “modern.” The reaction often took the form of a grassroots nativism antagonistic to immigrants or outsiders. Notable in the United States was the rebirth in the 1920s of the racist and nativist Ku Klux Klan, whose members defended what they viewed as a “pure” Anglo-Saxon Protestant identity and purported to uphold traditional values against the perceived forces of modernity and social change. Elites also took part in such nativist and racist backlashes. For example, the eugenics movement, embraced by elites in Europe and the United States, proposed a genetic theory of the superiority of certain races and directly led to legislation limiting immigration and to some sterilization campaigns.

Such ideas took a particularly ugly turn in Germany after World War I. Disillusioned Germans, believing themselves to have been betrayed, embraced extremist political positions, leading to the rise of the National Socialist Workers Party of Germany (Nazi Party). Caught up in the romantic mythology of a racially pure tribal past, Nazi Party members reordered German society along ideological lines. Their goal was to eliminate the racially defective or impure—such as Jews, Gypsies, homosexuals, and deformed persons—from social and civic life. The Nazis expropriated the properties of these “impure” persons and confined them to work camps, which ultimately became death camps. The Nazis created institutions that attempted to militarize the entire society and channel it to their ideological goal of forging a racially pure Third Reich.

To this end, German media and propaganda promoted the invented category of the Aryan as a racial ideal. For example, in the “mountain films” directed by Arnold Fanck, actress Leni Riefenstahl and other healthy young comrades climbed boldly to the purifying summits of mountains. In the documentary *Olympiad*, Riefenstahl, as a director, glorified the 1936 Olympics in Berlin and highlighted German athletes

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and their muscular bodies. According to German National Socialism, much of modern art, thought, literature, and science was condemned as degenerate, damned by its association with Jewishness. The Nazi ideology of ethnic “purity” underpinned Germany’s military expansion and led to the deaths of millions.

This dramatic restructuring of society along totalitarian lines also occurred in the Soviet Union. As in Nazi Germany and ultra-Nationalist Japan, new institutions were forged and new traditions invented that ensured centralized control and local obedience. An idealistic arts community in Russia had first welcomed the Bolshevik Revolution and seized upon modernist experimentation to celebrate the new era. Figures such as the poets Vladimir Mayakovsky and Anna Akhmatova, filmmakers Sergei Eisenstein and Dziga Vertov, Constructivist artists Vladimir Tatlin and Kasimir Malevich, and fiction writer Isaac Babel all celebrated the dynamism of the revolution in their art. Many later despaired, were killed in purges, committed suicide, or grudgingly adjusted as Soviet arts ossified into a wing of party propaganda.

The United States in this period also, but to a far lesser extent, went through a period of social “reinvention.” Faced with economic collapse and social unrest, the United States was able to establish a welfare state along liberal lines and increase the role of the federal government. New Deal legislation and institutions established greater government intervention in the economy to offset abuses and shortcomings in the free market, left unchecked by a lack of regulation. While less ideological than the Soviet or Nazi models of political domination of social institutions, the New Deal was decisive in changing American expectations of the responsibilities of government. At the same time the New Deal had its own nationalistic trimmings such as the National Recovery Act (NRA) flags that draped streets and the “Blue Eagle” poster that appeared in the windows of cooperating stores. New Deal programs also helped fund the arts and literature, shaping public works, public sculpture, and architectural adornment. The Great Depression also engendered a new aesthetic that heralded the common man and American folkways in art and literature. Fiction and nonfiction studies of the abominable living conditions of sharecroppers, hoboes, agricultural workers on the new “factory farms,” and the struggles of factory workers became common.

Worldwide, architecture, design, literature, and the arts absorbed the modernist impulse. Ultimately, modernism offered a new sense of style for cultural products packaged for mass audiences. Modernism

had two main streams—both inspired by the revolution in scientific knowledge of the late nineteenth and early twentieth centuries—and the accompanying overturning of inherited “truths.” The first stream of modernism, which might be termed “rationalist,” sought to apply a machine age aesthetic to the built environment. Architects, designers, and planners rejected the revivalist approach of recycling classical forms and instead searched out new forms made available via new mechanical means and materials; the underpinning ideology was to organize and ennoble society via technocratic means. The second stream of modernism might be described as “antirationalist” or “therapeutic.” Repulsed by World War I’s carnage and the stultification of industrial labor, artists seized upon the Freudian theory of the subconscious—a fascination with the dream, spontaneity, and the so-called “primitive”—to reject all tradition, particularly Western tradition, and to move to more abstract or confrontational art forms. This impulse could be seen, for example, in the development of atonal music, which rejected the authority of former theories of harmony and composition.

To the extent that it fit the needs of the emerging consumer society—give or take a few opening night riots—modernism was hardly a

disruptive force. During the 1930s, manufacturers sought ways to redesign products and stimulate consumption; as one direct result, industrial design, an offshoot of modernism, came of age. Streamlining in architecture and design—the effort to render buildings, lobbies, automobiles, trains, roadside diners, pencil sharpeners, and toasters with curvilinear lines and smooth surfaces that suggested aerodynamic designs—became prevalent in the 1930s, seized upon by both totalitarian and democratic states. The modernist rejection of constrictive social codes regulating sexuality and leisure also fit the new commercial age. More libertine norms became common; former “vices” such as smoking offered big business opportunities as advertisers sought to sell to new market segments, such as cigarettes designed specifically for the sophisticated “new woman.” Through the 1930s and 1940s jazz lost its low-culture association, and the big band jazz sound became a soundtrack to accompany the rise of the middle class. Just as modernists had explored the subconscious and dreams, the mass arts as expressed through film, radio, phonograph records, and industrial design reforged the daily lives and dream scripts of millions worldwide.

—H. Micheal Tarver, Abraham O. Mendoza,
and Fred Nadis

■ Introduction: Class and Gender

In various cultures gender and class relate in different ways, and during the Industrial Revolution they became linked in a very specific manner. Although “working class” women labored in the factories or entered into “service” as maids, cooks, or nannies, having a wife at home was an important status marker for the middle class. The separation between public and private spheres, institutionalized by the new economic and social realities, created an even greater division between the middle class male and female spheres. Going to work in the morning, trading vigorously in the stock market, and competing in the men’s world of the imperial free market, men were expected to be active, as-

sertive, dominant, and domineering. On the other hand, women, staying at home cooking, taking care of children, cleaning the house, doing the laundry, and preparing the table for their husbands’ guests, were expected to be passive, shy, submissive, and docile. These socially constructed gender differences were perceived as the natural order. Men like Sigmund Freud, who made a habit out of shocking the prudish Victorian society, believed that this was a natural or biological order of things. A few feminists today are still outraged at his idea of phallus envy as the key to a woman’s personality, while others recognize it as “power envy.” In that sense, Freud was a typical early-twentieth-century bourgeois

▶ PERFORMING FEMININITY

“A woman of [30 years old] often frightens us by her psychical rigidity and unchangeability. . . . [I]t is as though . . . the difficult development to femininity had exhausted the possibilities of the person concerned. . . . If you want to know more about femininity, enquire from your own experiences of life, or turn to the poets, or wait until science can give you deeper and more coherent information.”

—Sigmund Freud, founder of psychoanalysis

“The reader may now ask how I define womanliness or where I draw the line between genuine womanliness and the ‘masquerade’. My suggestion is not, however, that there is any such difference; whether radical or superficial, they are the same thing.”

—Joan Riviere, Freud’s translator and patient, herself also a psychoanalyst

—Judith Kegan Gardiner

Sources

Elisabeth Young-Bruehl, ed., *Freud on Women: A Reader* (New York: Norton, 1990), 47; Catherine Belsey and Jane Moore, eds., *The Feminist Reader: Essays in Gender and the Politics of Literary Criticism*, 2nd ed. (Malden, MA: Blackwell, 1997), 166.

except for the fact that he expressed typical bourgeois ideas in a typically provocative Freudian manner.

On the other hand, the history of gender relations and gender identity in the first half of the twentieth century developed in sharp contrast to the perceived prudery of the Victorian period. Periods of sexual prudery were nothing new in history, but in the Victorian period sexual mores were not just religious or cultural customs. Their love affair with new ideas about science led them to link their perceptions of sexual propriety with scientific medicine of the time. For example, it was widely believed that masturbation caused tuberculosis. For the Victorians, breaking the code of proper gender behavior became not just a social indiscretion but also a socially subversive behavior. Many people tested the boundaries of Victorian sexual moral-

ity, which promoted, at least in public, the view that sex outside marriage, including adultery, masturbation, premarital sex, and prostitution, were unhealthy perversions. This hostility to societal norms was especially popular among the left-leaning circles, which saw Victorian sexual mores as part of the bigger picture: a repressive and exploitative economic-social system. Then suddenly, at the beginning of the twentieth century, physicians such as Freud started arguing that sexual abstinence and repression cause medical and psychological problems.

The stage was thus set for several waves of sexual revolution of the twentieth century and the enduring conflict between the traditional and the modern view of sex and gender. The most important gender-driven conflict in this era occurred during the Roaring Twenties. Right after World War I, gender became a cultural battlefield from Puritan America to Soviet central Asia. Many women pursued liberation from traditional restraints; many others were pushed by popular or even political culture to embrace modernity. The Soviet Union of the 1920s tried to “emancipate” women, with some success. Some were “emancipated” by force, such as was the case in central Asia. The gender revolution in Russia was put in check by Josef Stalin. While Hollywood did not try to remove the veil from traditional women by force, it put forward a prototype of the femme fatale or “modern woman.” That prototype was based on the flapper, the typical liberated woman of the Jazz Age who ignored social conventions. But the type was also a male fantasy, and through the new medium it exerted social pressure on millions of young women, who tried to live up to an impossible standard.

Women first achieved political liberation; gender equality was slower to follow. The suffragette movement, active since the middle of the nineteenth century in all industrial countries, finally triumphed after World War I. As originally promised by the Enlightenment, the wave of giving women their inalienable voting rights traveled the globe. By the time of World War II, a sexy working woman in overalls—Rosie the Riveter—became not just an American icon but a global icon.

Political equality, however, does not imply gender equality. The crucial contributions to-

ward gender equality were made gradually. At the end of the first half of the twentieth century, the book *The Second Sex*, published in 1949 by Simone de Beauvoir, attempted to explain what it meant to be a woman. The partner of French existential philosopher Jean-Paul Sartre, de Beauvoir noted “one is not born, but rather becomes a woman,” emphasizing the difference between biological sex and socially constructed gender. De Beauvoir’s book became the basis for subsequent sexual and gender revolutions that occurred in the later half of the twentieth century. The book helped create feminism, and even though it affected feminists largely in the later part of the twentieth century, it summarized the experiences of a woman living through the first half of the century. *The Second Sex* became a worldwide best-seller primarily because it said something essential about how gender and class were constructed during the era.

—Alexander Mirkovic

The Middle Class

Defining the middle class in world history is problematic not only because of the varying levels of wealth present within the class but also because the middle class rose in different countries at different times. In western Europe and the United States, the middle class rose as a result of the Industrial Revolution, which took place during the late eighteenth and early nineteenth centuries. Until this time, artisans and skilled craftsmen had labored in the home or workshop with their families to produce goods. This cottage industry had required no formal payroll, overseers, time clocks, or machinery. Following industrialization, goods were manufactured rapidly in large factories by unskilled workers. Artisans lost out completely and were often forced to join the workmen in the factories. In addition, foremen and managers were also needed to oversee production and to monitor breaks and tardiness. These managers and foremen became some of the earliest members of the middle class. The modern working class was also forged by this transformation.

Leisure culture also developed as the middle class emerged, leading to a wider variety of busi-

THE MIDDLE CLASS AND CONSUMER CULTURE

The formation of a middle class greatly influenced the growth of consumer culture in the late nineteenth and early twentieth centuries. Middle-class respectability hinged on society’s perceptions of a family’s behavior, clothing, and homes. The typical middle-class home was expected to have books, tasteful artwork, and elegant furniture. To make this possible, a portion of the family budget was spent on comfortable furnishings, clothing, and books. Department stores allowed middle-class women to do much of their shopping in one place, which was both convenient and tempting. Many women were criticized during this time period for overspending and running up charge accounts. This lack of frugality drew criticism from the upper classes and angry husbands. Entertainment was also important to middle-class families. Many such families traveled frequently, and a number of them even took yearly vacations, which led to a steady growth of the tourist industry. Middle-class people of all ages made up a large percentage of moviegoers in the early twentieth century as well. Amusement parks also had a large number of middle-class customers. Overall, the middle class spawned whole new arenas of consumerism because they had the expendable cash to do so, unlike their working-class contemporaries.

—Christi McCallum

nesses such as department stores, amusement parks, and dance halls. Consequently, this too increased the ranks of the middle class by providing even more jobs. In East European countries, the development of the middle class as a separate culture was somewhat delayed by industrialism’s late start, and in many of these areas it was the end of the nineteenth century or the beginning of the twentieth century before a separate middle-class culture evolved.

Industrialism and imperialism had expanded the West European and American middle classes and made them quite wealthy during the course of the nineteenth century. At the same time, the middle class had dominated politics and set social norms during what some historians have called the century of the middle class, or the period between the beginning of the French Revolution (1789) and the beginning of World War I

(1914). The middle class from its inception had embraced the political ideas of liberalism and nationalism. However, the late nineteenth and early twentieth centuries were a time of class struggle as well. The middle class's dominance would come to be challenged by working-class labor movements in western Europe in the years preceding World War I.

Generally, the middle class at the turn of the century had fewer children, and the family unit had become very close. The ideal middle-class family at this time included the mother as nurturer, father as breadwinner, and well-mannered boys and girls who went to school on a regular basis. Gender roles were rooted in Victorian ideologies concerning the so-called cult of domesticity, the belief that women's place was in the home. Women were considered important as wives and mothers and held some informal authority as such. However, the repression of such structures would also spawn women's movements, most notably suffrage and philanthropic movements that would be most popular with the middle class. Homes of the middle class became increasingly located on the outskirts of cities in the suburbs or even completely removed from the city in the countryside. At the same time, morals and religion were generally important to the middle classes, although this shifted increasingly following the late nineteenth century as middle-class intellectual and cultural values were challenged by new social ideologies, such as Sigmund Freud's psychological studies, and scientific theories, such as Darwin's theory of evolution. Due to greater access to books and education in the universities, the middle class would be influenced more by these intellectuals than would the working-class individuals, who were generally much more caught up in the struggle for survival and, as a result, were often more religious or superstitious in nature.

Overall, World War I served to unify nations, and many of the social conflicts were displaced onto the battlefield. Many upper- and middle-class soldiers had not experienced manual labor alongside poorer members of society before fighting beside them in World War I trench warfare. The war, far from being the quick victory imagined by the middle and upper classes, was lengthy, bloody, and destructive. Moreover, World War I

unbalanced the economies of many European countries, which resulted in changes to the boundaries between classes and genders.

In most European countries, World War I resulted in a narrowing economic gap between the middle and lower classes. At the same time, the war led to increased animosity between the middle class and the working class, as the middle class struggled to maintain a separate class identity. In addition, many women had entered the workforce for the first time during World War I and this combined with the achievement of women's suffrage that followed the war was a threat to the idealistic middle-class family structure. However, many middle-class families of the 1920s and 1930s could not afford to keep women home any longer because of gross inflation and lack of employment.

Economic crises across Europe in the 1920s were exacerbated by the collapse of the U.S. stock market in 1929. In the United States, the Great Depression left many middle-class families as poor as the working classes. In Britain and France, the lines between the middle class and lower classes generally disappeared, leaving a simpler class system, with the rich who did not lose their assets at the top and the rest of the countryside at the bottom. While many other European countries were plunged into economic despair, Britain recovered by implementing the national government (a blend of three domestic governments, including the labor government) in 1931. This effectively ended class struggle in Britain by uniting conservatives, liberals, and labor parties. The middle class in England had not lost everything as the German middle class had during World War I, and this kept fascism and other such ideological threats at a minimum in England. In other countries the middle classes sometimes turned to fascism, although it only became the dominant middle-class ideology in Italy, Germany, and parts of South America. Nationalism would remain more important than any other movement in Europe and the United States and in Asian countries.

The middle class in many countries were in favor of a stronger return to imperialism because it had always been profitable for middling sorts such as the merchants and entrepreneurs. It is in part this newfound lust for imperialism that led

to World War II, which would cause even greater problems for the middle class. Once again, men of all classes were fighting alongside each other.

Following World War I the middle class only slowly recovered, having once more taken a great economic blow from 1939 to 1945. Middle-class merchants, importers, and exporters lost great capital after decolonization. The horrors of the war and the ensuing Cold War would finally create an age of consensus for many countries in which fascism and other revolutionary ideas would die out. Legislation would create welfare states in many countries, and this would equalize the classes somewhat. The middle class would only begin to reemerge in most countries in the 1950s.

—Christi McCallum

Bibliography

- Blumin, Stuart M. *The Emergence of the American Middle Class: Social Experience in the American City*. Cambridge: Cambridge University Press, 1989.
- Cooper, Frederick, and Ann Laura Stoler, eds. *Tensions of Empire: Colonial Cultures in a Bourgeois World*. Berkeley: University of California Press, 1997.
- Kocka, Jurgen, and Allan Mitchell, eds. *Bourgeois Society in Nineteenth Century Europe*. Oxford, UK: Berg, 1993.
- Pugh, Martin. *The Making of Modern British Politics, 1867–1945*. Oxford, UK: Blackwell, 2002.

Women in Central Asia

Soviet Central Asia has always been home to women of many nationalities, including women from the European parts of Russia. The term “Central Asian women,” however, currently includes only women of indigenous and titular groups of Central Asia, such as Kazakhs, Uzbeks, Tajiks, Kyrgyzs, and Turkmens. The discourse over the place of Central Asian women in Soviet society and their emancipation became of primary importance for the early Soviet regime and its efforts at restructuring Central Asian society. Changes in the status of women came to symbolize the successes and failures of Soviet attempts to create a modern communist worker regardless of gender.

In the early years of its existence, the Soviet regime attempted to modernize Central Asia, which it saw as feudal and backward mostly due to its heavy Muslim influence. The overall goal of the Soviet government in all parts of the Soviet Union was to create a *sovetskii chelovek* (Soviet person), a worker, a communist, and an antireligious fighter devoid of any attachments to a clan or region. The Bolsheviks launched a massive antireligious campaign across the Soviet Union in an attempt to secularize the newly formed Soviet society. In Central Asia, Islam was attacked for its alleged hypocrisy and rigid dogmas, and the Soviet government abolished religious educational institutions and the Islamic legal system based on Sharia (Islamic canon law) and *adat* (customary law). The Bolsheviks attempted to create their *sovetskii chelovek* in Central Asia by replacing Arabic script with the more modern Latin script for Central Asian languages, by creating new territorial delineations for the Central Asian peoples, and by establishing new cultural amenities such as museums, available to all.

To support its effort at creating a new and independent woman equal to a man in Central Asia, the Soviet government introduced compulsory education, first at primary level and then at secondary level for both genders. New medical and social welfare networks tailored especially to women’s needs as mothers were established, and the government attempted to involve women in industrial and agricultural jobs. At the same time, legal reforms were undertaken that sought to protect women’s rights by making undamaged marriages illegal and by giving women a share of property after divorce. Along those lines, Zhenotdel, a Soviet bureau for women’s issues, attempted to improve women’s position by abrogating the Muslim practices of arranged marriages, *kalym* (bride price), and polygamy. Zhenotdel workers also promoted a change from the traditional Central Asian dress of *parandja* or *parandzha* (a full-body robe draped over the head) and *chachvan* (a waist-length horse-hair veil) to a more Western dress.

However, the Bolsheviks became disappointed with the successes of their early campaigns at women’s emancipation. By the mid-1920s they began to hope that they could achieve a

➤ THE VEIL AND INTERNATIONAL WOMEN'S DAY

The first major public unveilings of Central Asian women occurred on March 8, 1927, and coincided with International Women's Day, a global socialist holiday. The Soviet authorities chose this day to launch the *hujum* (official policy of unveiling) against what they saw as the subjugation of Central Asian women in an effort to portray their actions in the region as part of a worldwide effort to liberate all women from social and cultural oppression. In the Soviets' eyes, the symbol of this oppression in Central Asia took the form of the head-to-toe horsehair and cotton veil that women were required to don at age ten. Conversely, the Soviets' focus on the veil as a symbol of oppression and patriarchy also elevated the veil as a symbol of resistance among traditionalists. The unveilings took the form of large public ceremonies, sponsored by the Soviet government, in which several thousand women would theatrically discard their veils and cast them onto a burning pile. While the number and the willingness of the participants have since been questioned, such ceremonies became essential in forming the Soviet narrative of liberation.

wholesale revolutionary change if they could change Central Asian women in more radical ways. In 1926 Moscow decided to intensify the emancipation campaign. This new intensive campaign was quickly labeled by the Uzbek word *hujum*, which means "an attack." Although each republic had its own version of the *hujum* aimed at eradicating various subjugating gender practices, its key goal was de-veiling, and its key target areas were the cities where the practice of wearing veil was most visible and deeply entrenched. Party officials, mainly Europeans, saw the loss of veil as a symbol of female liberation from the chains of enslavement in the strictly patriarchal society, a sign of female integration into the public sphere, and the beginning of the civilization and modernization of the broader Central Asian community.

The first large-scale public unveiling took place during the celebration of the International Women's Day of March 8, 1927. Presumably, several thousand women ceremoniously burned

their veils, although the number of women who participated in this event is still disputed. In the late 1920s and early 1930s some women even joined the newly created Godless League to combat Muslim traditions and influences. Surprising to the Soviet authorities, not all Central Asian women eagerly and willingly accepted the de-veiling campaign, and some women opposed it vigorously. Local populations, mostly pro-Islamist and raised on different norms and values, argued that the loss of veil for women meant the loss of Islamic virtue for a female and Islamic identity for the community. Many women believed that the veil protected rather than restricted them, while others feared violence by men if they unveiled.

In the short term, the results of the emancipation campaign in Central Asia seemed very promising. Whereas in 1926 less than one percent of Central Asian women were literate, the literacy rate had increased to 56 percent by 1939. Women were represented in significant numbers in various professions and skilled occupations, and they often entered the market force as paid employees in the public sector. Cultural changes were significant as well. For example, by the mid-1930s it became rare to see a fully veiled woman in urban centers. Although in the countryside many women substituted the veil with large scarves and continued to cover their heads, the first Soviet generation of Central Asian women began to see the veil as old-fashioned and primitive. Many women also embraced the values and norms of antireligious Soviet civil society and became disconnected from Islam.

Other campaigns had mixed results. By the mid-1930s women were involved both in factory work and agricultural production of such items as cotton. However, Central Asian women still lagged behind in public employment compared to other Soviet nationalities. This fact was mostly explained by high birthrates among Central Asian women. In the 1920s when the Soviet government made abortion legal and easily accessible, Central Asian women were too new to Soviet ideology to change their family traditions, which always welcomed many children and especially sons. But in 1936 the policy of the government changed to pronatalist. To support its efforts to sustain and increase the birthrate, the Soviet government improved the existing social

welfare system by establishing new birth clinics, women's health clinics, children's clinics, and daycare outlets; allowing for a mandatory maternity leave of 16 weeks; and offering substantial financial rewards to women with many children. These measures ensured the persistence of high birthrates among Central Asian women despite rapidly growing literacy rates.

—*Irina Mukhina*

Bibliography

- Massell, Gregory J. *The Surrogate Proletariat: Moslem Women and Revolutionary Strategies in Soviet Central Asia, 1919-1929*. Princeton, NJ: Princeton University Press, 1974.
- McLeish, John. "The Soviet Conquest of Illiteracy." *Alberta Journal of Educational Research* 18 (1972): 307-326.
- Michaels, Paula. "Motherhood, Patriotism, and Ethnicity: Soviet Kazakhstan and the 1936 Abortion Ban." *Feminist Studies* 27(2) (Summer 2001): 307-333.
- Northrop, Douglas. *Veiled Empire: Gender and Power in Stalinist Central Asia*. Ithaca, NY: Cornell University Press, 2004.

Women's Rights

Throughout history, law, religion, political ideology, and custom dictated a subordinate role for women. Many factors led to gradual changes in women's status in many Western and Westernizing nations. These included women's improved educational opportunities, the growth of a middle class, the influence of liberalism with its emphasis on individual rights, and development of social and political movements focusing on human rights, modernization, and, in colonized nations, independence.

Few women could vote before 1900, although many women and men had been agitating for suffrage. Developing a unified movement that involved women from all walks of life was impossible in most countries. Women's movements in Western nations such as the United States and Australia tended to exclude women of color. Fearing internal division, American suffragists acceded to the demands of white Southern women to bar African Americans. Middle-class women were unable to identify with the needs and prob-

lems of the poor. An anti-immigrant bias permeated the American suffrage movement, with some prominent native-born women arguing that their votes would counter the votes of ignorant immigrant men.

The British and American women's suffrage movements served as models for and gave impetus to movements in many nations, especially in Europe and India. By the mid to late 1800s, as a leisured middle class developed, many women joined charitable and other organizations that centered on liberal reforms, including legal reform, education, political participation, child welfare, public health, and suffrage. In the United States and India, public health was a major stimulus. Women with a more conservative background also often seized on temperance as an issue from which to promote women's rights. The Women's Christian Temperance Union (WCTU), founded in 1874, promoted social change to aid family well-being. American representatives visited Australia in the mid-1880s and spread the movement there.

In the United States the suffrage movement had splintered after the American Civil War into conservative and progressive camps. In 1890 the two splintered groups reunited under the umbrella of the National American Woman Suffrage Association (NAWSA). Under the leadership of Carrie Chapman Catt, the NAWSA provided much of the impetus for an international organization that would work for woman suffrage. Delegates from 11 countries, for example, attended the NAWSA annual meeting in 1902.

Women divided over the best ways to achieve their goals. Many women in nations like the United States and Great Britain were uncomfortable with radical rhetoric and tactics. In Great Britain, Millicent Garrett Fawcett's moderate National Union of Women's Suffrage Societies engaged women of all classes. In an opposing camp, the Women's Social and Political Union (WSPU), founded in 1903 by Emmeline Pankhurst and her daughters Cristabel and Sylvia, favored hard-line tactics with its motto, "Deeds, Not Words." Clad in green, white, and purple, they harassed politicians, chained themselves to public buildings, damaged property, marched en masse on Parliament, and, when arrested for rioting, engaged in hunger strikes. Arrests and

mistreatment of suffragettes generated public sympathy. After decades of struggle in Great Britain, some women gained the right to vote in local elections because local government focused on home and family issues, but the Liberal government refused to grant the vote nationally.

American suffragists began to adopt militant tactics around 1910. Harriet Stanton Blatch organized protest marches in New York and established an alliance with the working-class Women's Trade Union League. Alice Paul organized 10,000 women to march in Washington, D.C., the day before Woodrow Wilson was inaugurated as president in 1912 and announced her intention to pressure the Democratic Party until all American women could vote. The NAWSA expelled her in 1915 because they favored a more moderate strategy and believed that universal suffrage would follow after more states granted the vote to women.

World War I temporarily divided the international women's movement over the question of pacifism. In many countries suffrage supporters, like many in the WSPU, suspended their activities in favor of war work. In 1915 pacifists created a new organization, the Women's International League for Peace and Freedom.

The international suffrage movement faced many obstacles. Women in some Latin American countries organized, although the culture dictated gender-, race-, and class-based segregation. The Catholic Church and many politicians opposed universal suffrage. Some governments imprisoned suffrage supporters, yet women pressed on. In Mexico suffrage agitation followed the revolution in 1910, although universal suffrage did not come until 1947 and women were not able to run for office until 1953. In 1929 Ecuador became the first Latin American nation to grant women the right to vote, followed by several of its neighbors in the 1930s and 1940s.

India and Japan were the only two Asian countries with women's movements. In India, a nation with a Hindu majority, Mahatma Gandhi both supported women's rights and enlisted women as participants in protests. However, the Muslim minority opposed women's rights.

The rise of socialism divided the international movement. The Soviet Union gave women equal rights, turned marriage into a civil proce-

dure in 1918, dropped barriers to divorce, and in 1920 became the first European nation to legalize abortion. This led many Europeans to identify socialism with women's suffrage. Socialist women's groups were unable to make common cause in European nations outside of Great Britain and Scandinavia.

Both world wars played a role by bringing many women out of the home and into the workplace. British women over the age of 30 gained the right to vote in 1918, and American women gained the right to vote on the same basis as men in 1920 due in part to their contributions during World War I. In 1928 British women won the same voting rights as British men. Women gained the right to vote in Spain, Germany, Denmark, Sweden, Austria, Czechoslovakia, Poland, Romania, Turkey, and the Soviet Union after World War I.

By 1945 women in many Western nations had some degree of legal and political equality. But women in many developing nations, often illiterate and isolated, made no progress. Their status would not change until after independence later in the twentieth century, if it changed at all.

—Carol Sears Botsch

Bibliography

- Anderson, Bonnie S., and Judith P. Zinsser. *A History of Their Own: Women in Europe from Prehistory to the Present*. Vol. 2. New York: Harper and Row, 1988.
- Daley, Caroline, and Melanie Nolan, eds. *Suffrage and Beyond*. New York: New York University Press, 1994.
- Hymowitz, Carol, and Michaela Weissman. *A History of Women in America*. New York: Bantam Books, 1978.
- McQuiston, Liz. *Suffragettes to She-Devils: Women's Liberation and Beyond*. London: Phaidon, 1997.

Chinese Women—The End of the Qing Dynasty to the Early Twentieth Century

By the beginning of the century, rocked by increasing demands from European industrial powers, all aspects of Chinese society were under intense scrutiny. Questions regarding the proper place of women in Chinese society were central

to most of the societal and national issues that the Chinese faced. Many Chinese intellectuals came to believe that the place of women in Confucian philosophy—with its emphasis on maintaining existing hierarchies—had weakened China, making it vulnerable to European intrusion. The Chinese ideal of sequestered women, with tiny bound feet, became a source of embarrassment rather than a source of pride. As an aside, in truth Chinese women had never been as passive as tradition implies. There had been several female rebel leaders during the civil wars that led to the Qing ascension, and there were regiments of women who fought during the Taiping Rebellion. Nevertheless, the law and traditions of China were centered on a strictly patriarchal ideal.

Even during the later days of the Ming dynasty (1368–1644), many scholars supported increasing educational opportunities for women, believing that educated mothers would be able to instill a greater understanding of Confucian ethics in young people. The first Qing emperors had been appalled at the practice of foot binding and the cult of widow chastity, wherein widows were expected to commit suicide and follow their husbands to the grave or, at the very least, to remain faithful to his memory for the rest of their lives. The Qing's attempts to abolish either practice were unsuccessful; indeed, perpetuating them became a point of honor in the name of preserving Han culture until confrontations with European, U.S., and Japanese armies shocked the Chinese into reevaluating China's place in the world.

By the beginning of the twentieth century, the Chinese were in the midst of a tumultuous period of self-examination at every level. The Self-Strengthening Movements of the 1860s and 1870s had focused on adopting Western technology and science while preserving Chinese culture. Students were sent to study in the United States, France, Germany, and Great Britain even as the number of Europeans in China swelled. By the end of the nineteenth century it had become apparent that the approach was fatally flawed. These overseas students did study science, but they were also exposed to European philosophers such as Georg W. F. Hegel, Montesquieu (Charles de Secondat), and J. S. Mill. Exposure to European-based culture inspired close examina-

➤ WOMEN AS PEASANT ORGANIZERS

Although no one would ever describe Chairman Mao Zedong as a feminist, he was among those who believed that China had been left vulnerable to outsiders in part because it had failed to employ the abilities of women. He wrote approvingly:

“As to the authority of the husband, it has always been comparatively weak among the poor peasants, because the poor peasant women, compelled for financial reasons to take more part in manual work than women of the wealthier classes, have obtained more right to speak and more power to make decisions in family affairs. In recent years rural economy has become even more bankrupt and the basic condition for men's domination over women has already been undermined. And now, with the rise of the peasant movement, women in many places have set out immediately to organize the rural women's association; the opportunity has come for them to lift up their heads, and the authority of the husband is tottering more and more every day. In a word, all feudal and patriarchal ideologies and institutions are tottering as the power of the peasants rises.”

—Carolyn Neel

Source

Mao Zedong, “Report on an Investigation of the Hunan Peasant Problems,” in *Sources of Chinese Tradition: Introduction to Asian Civilizations*, 2nd ed., edited by William Theodore De Bary, Wing-tsit Chan, and Joseph Adler (New York: Columbia University Press, 2000), 410.

tion of the Chinese dynastic worldview and convinced many Chinese intellectuals that their culture needed a complete overhaul. Women's issues were central in the dialogue following Japan's success in the 1895 Sino-Japanese War.

For the first time in China, there was a sense of urgency about gaining maximum benefits from women's intellects as well as their physical labor. By 1900 the anti-foot binding movements were well established. There was a sense that China could be strengthened only if the population as a whole became productive; women with broken or deformed feet were not as likely to contribute to the well-being of their societies. It was

doubted that they could even give birth to really healthy babies. There was actually some truth to the assertion; women with bound feet often developed early-onset osteoporosis and other bone maladies that could in fact have an adverse impact on childbirth and infant health. Strengthening both minds and bodies was considered essential to China's survival. Women lacking training and education were unable to participate in strengthening China. Many Chinese women were active in the reform movements, working closely with foreigners and enthusiastically promoting education for women and an end to concubinage. By 1905 Chinese women were studying in Japan, where they were learning about concepts such as human rights. The idea of educating women caught hold, and schools were started for girls, who were expected to study foreign languages, mathematics, geography, chemistry, and physics in addition to more traditional pursuits, such as calligraphy, home economics, sewing, and music. There were relatively few of these schools—only about 13,000 young women were enrolled in schools throughout China itself—but the impact was great.

Educated young women formed support groups and were often encouraged by parents and family in the movement to abandon the practice of foot binding, which now symbolized traditional restrictions on all young people. Confucianism itself came under attack as a small but influential number of young activists attributed China's failures to the reverence for elders and duties of filial piety imposed by Confucianism. They believed that emphasis on perpetuating the ideals on the past had prevented China from meeting the industrial and technological challenges needed to meet Europeans on their own terms. The New Culture Movement, which emerged during the collapse of the Qing dynasty, had the purpose of destroying the vestiges of Confucianism. An increasing number of women became active in opposition movements. One woman, Qiu Jin, attempted to lead a rebel group against the Qing dynasty and was executed for sedition.

Through the last years of the Qing dynasty, women had become more assertive about securing civil rights. Women participated in ousting the last Qing emperor in 1912 and expected a

role in the new republican government. Led by a Beijing suffragist, Tang Junying, they lobbied for the vote. When their efforts failed, they stormed the government chambers, shouting slogans and breaking windows. They were violently expelled, and their demands were ignored. However, by 1919 opposition leaders such as Mao Zedong had taken the position of earlier literati who argued that China could not be strengthened sufficiently to face the foreign imperialists unless the intelligence and energy of Chinese women were harnessed. The revolutionary movements began recruiting women; the first women were admitted to Beijing Normal University in 1920 as a direct result of the May Fourth protesters.

Chinese women began adopting figures such as Joan of Arc, Florence Nightingale, and Harriet Beecher Stowe as role models. By the time of the May Fourth Movement, both male and female students had become fascinated with Henrik Ibsen's play *A Doll's House*. They admired the heroine, Nora, for her realization that she had a duty to herself that transcended her obligations as a wife and mother. Young men joined women in the cause of feminism, believing that the prevailing Confucian relationships prevented them from developing the individuality necessary to reach their highest potential and meet the challenges of the day. Many educated young men began to refuse to marry uneducated women or women with bound feet.

The Guomindang came to power through a coup in 1927, facing economic upheaval, famine, and eventually civil war. Women's emancipation was featured in the rhetoric of both the communists and the nationalist Guomindang; however, in many ways the intellectuals of the Left were more comfortable with the issues at hand and began training women for leadership roles. Mao instituted a new marriage law in areas under his control—Jiangxi and parts of Hunan—prohibiting arranged marriages if either party objected and gave women the right to initiate divorce proceedings (unless their husbands were on active military status). During the Japanese occupation and civil war the May Fourth ideals persisted, although survival was a more pressing issue for both Chinese men and women. Nevertheless, even under the Guomindang, women

were able to pursue careers in education, law, and journalism. The Guomindang granted women the right to vote in 1947, although the benefits were eclipsed by the Chinese Civil War. In 1949 after the communist victory over the Guomindang on mainland China, Mao instituted a program guaranteeing equal rights to women. The path forward was never smooth, but the idea of equality between males and females endured.

—Carolyn Neel

Bibliography

- Brownell, Susan, and Jeffrey N. Wasserstrom. *Chinese Femininities, Chinese Masculinities: A Reader*. Berkeley: University of California Press, 2002.
- Ebrey, Patricia Buckley. *Women and the Family in Chinese History: Critical Asian Scholarship*. London and New York: Routledge, 2003.
- Hershatter, Gail. *Women in China's Long Twentieth Century*. Berkeley: University of California Press, 2007.
- Ko, Dorothy. *Cinderella's Sisters: A Revisionist History of Footbinding*. Berkeley: University of California Press, 2005.
- Ko, Dorothy, JaHyun Kim Haboush, and Joan R. Pigott. *Women and Confucian Cultures in Pre-modern China, Korea, and Japan*. Berkeley: University of California Press, 2003.

Women's Roles in Developing Nations

Gender and class were variables seldom considered in development discussions during the first half of the twentieth century. Many of what we now consider developing nations were colonies of European powers from 1900 to 1945. Economic statistics gathered by colonial powers ignored women's economic roles, their contributions to the running and functioning of households, and their work in the informal agricultural sector. Included in this was the growing of food for household consumption and informal market trading, which ensured diversity of diet and at times provided funds to pay hut taxes or school fees. Since women were seldom part of the paid workforce, their economic roles were undervalued.

However, notions of class and gender are critical variables when reflecting on women's roles in developing nations. As nineteenth-century imperialism and colonialism became twentieth-century globalization, modernization theories stipulated that gender and class inequalities would decline with increased development. This belief was a major rationale for colonization. The underlying assumption of this approach was that economic growth would create financial opportunities for men and women that would gradually eliminate extreme poverty. Additional assumptions were that gender and class inequalities would be reduced as a result of modernization, training, education, and the incorporation of women into the paid labor force within the global economy.

Instead, colonialism created an exploitative international division of labor and helped situate women into subordinate positions in developing countries as traditional social, economic, and political practices were swept away by European ideologies and economic practices that were imposed on local populations. Recent examinations of class and gender in developing nations revealed systems of inequality and subordination of individuals within societies. An analysis of class and gender exposes both the social relationships between men and women and their varying levels of access to resources and demonstrates the systematic subordination of women and the poor in developing countries. When examined within an international context, this subordination enabled a higher standard of living for women and men of



Women picking tea in the Himalayan foothills, about 1910. (Library of Congress)

➤ GENDER AND DEVELOPMENT

Twentieth-century European sensibilities conceived of men as farmers and women as helpers. This Eurocentric position undermined women's social and economic roles in developing countries. Indigenous women's status as farmers and food producers was undermined, as European administrators introduced only indigenous men to mechanized farming and cash cropping. One illustrative example comes from Uganda, where in 1923, despite the fact that women were successfully growing cotton, the European director of agriculture determined that this export cash-earning crop was too important to be left to women. Within ten years men usurped growing cotton, and women lost access to cash earnings. In order to promote gender equity, the United Nations Charter called for gender equity in 1945.

—Lorna Lueker Zukas

all classes in developed nations and for middle- and upper-class individuals in developing nations.

In general, the social position of men and women in any society is strongly related to their relative economic power. Colonialism and patriarchal kinship systems in developing nations ensured male domination and structured gender inequality as socially normal. Women had no independent access to land, and they had limited access to their own income. Without control of economic resources—that is, access to land or the ability to control monetary income—women were subordinated to men economically, politically, and socially.

As colonial development proceeded, unequal rewards reaped as a result of class and gender domination were touted as natural and deserved. The poor and women, often blamed for their own poverty, were viewed as powerless and without agency. The use of coercion to compel labor ensured the unequal distribution of resources. Economic rewards flowed toward men and members of the upper class, while women and those in poverty eked out survival on a daily basis.

The disparity of wealth and opportunity across class and gender lines was the result of uneven development imposed by colonialism and the ways in which societies accessed—and

were integrated into—commodity markets and the global system of capitalism. Colonial practices and the vast need for labor in newly emergent market economies fundamentally altered existing class and gender relations in developing nations. Dual economic spheres were created. The first was a formal wage-earning sector in which men worked and earned an income. The second was an informal sector in which women operated. The informal sector received less pay and was based on trade and barter. Poor and rural women were expected to work as they had always done, but their right to use land was taken from them. Their work burden shifted as colonial agriculture and industrial development created a pattern of labor migration. This migration took men away from home and into the paid labor force, thereby leaving women in rural subsistence economies as unpaid labor or forced into the urban informal sector. Often men migrated to urban areas to work, and frequently women were not allowed to migrate. If they were allowed, it was only in support roles as prostitutes and companions to keep workers happy or to run illegal beer houses that sold alcohol.

While generally deleterious to the position of indigenous women, colonization enhanced the position of European women in the twentieth century. The status of European women was improved in the colonies: color elevated class status in favor of whites, and even poor white women in the colonies had greater social status than existed for them in Europe. In the colonies, European women advanced socially through marriage and through the opportunity to work and minister to indigenous women. These opportunities were buoyed by the exploitation of indigenous women and men. However, European women engaged in the same paternalistic and ethnocentric behavior, including racism and national chauvinism, as did European men.

Women's oppression and exploitation in developing countries were inextricably bound to accumulation and growth of European and American capitalism and the exploitation and subordination of colonies. The exploitation and subordination of women, nature, and colonies accompanied capitalist development and resulted in uneven development between nations and their populations.

In the first half of the twentieth century a common theme emerged as a result of class- and gender-based analysis. Women and men had differential access to education, health care, and economic opportunity. Women had limited access to the protection of laws and legal recourse, as they were generally considered jural minors. Women were generally seen only in purely relational roles to men: women were only mothers, wives, sisters, and daughters. Class-based systems and poverty exacerbated gender disparities, and poor and disadvantaged women were limited in their ability to participate in later post-colonial national development.

Colonial development helped some countries to modernize and some women to advance, but uneven development left countries poor and robbed of natural resources while enriching the West. Women gained access to employment and remunerated labor opportunities; however, far more women sank into poverty and barely eked out a living, leading to the coalescence of gender and class in the feminization of poverty. Realizing the deep connection between class, gender, and national development, the United Nations Charter in 1945 recognized the principle of gender equity, and this principle was reaffirmed in the Universal Declaration of Human Rights in 1948.

—Lorna Lueker Zukas

Bibliography

- Boserup, Ester. *Woman's Role in Economic Development*. London: George Allen and Unwin, 1970.
- Fraser, Arvonne, and Irene Tinker. *Developing Power: How Women Transformed International Development*. New York: Feminist Press at the City University of New York, 2004.
- Mies, Maria. *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour*. London: Zed Books, 1996.
- Strobel, Margaret. *European Women and the Second British Empire*. Bloomington: Indiana University Press, 1991.

Women's Roles in Developed Nations

Women's roles in developed countries changed rapidly during the early twentieth century. The prevalent belief concerning gender roles at the

beginning of the twentieth century is often described as the ideology of separate spheres. Society, especially in the middle classes, dictated that men were the breadwinners who worked in the public sphere outside of the home, while women controlled the private sphere inside the home in their roles of wife and mother. This idea had begun in the nineteenth century among the middle and upper classes, although lower-class women and widows were unable to conform to this standard. Further challenges to the notion that a woman's only proper role was in the domestic sphere would also come in the form of the suffrage and women's rights movements.

The nineteenth-century ideas of childbearing and child rearing as women's most important functions were further reified by psychological studies and governmental legislation in the late nineteenth and early twentieth centuries. The influential new theories of Sigmund Freud and other psychologists caused parents, especially mothers, great anxiety about child rearing. The idea that a child's relationship to his or her parents was essential to the child's well-being and development made many women feel that they must remain at home or risk damaging their child's psychological state. At the same time, many countries were anxious about population decline at the turn of the century, although these fears regarding decline were greatly overestimated. Nationalism, nativism, racism, and other movements regarding superiorities of countries, races, or ethnicities certainly led to many campaigns to increase birth rates. The two world wars and the loss of life sustained in them continued to feed this hysteria throughout the first half of the century. Governments often saw population decline and families with fewer children as a threat to the status quo. In England and the United States particularly, women were encouraged to have large families, and their status as childbearers was the subject of much governmental propaganda.

Women's sexuality was also strictly regulated in most Western countries. Most nations had effectively banned birth control during the nineteenth century, fearing that it would lead to depopulation and sexual immorality. These same countries banned abortion in increasing numbers in the early twentieth century. Employers

THE NEW WOMAN

In late nineteenth-century Europe, literature began to focus on the internal life of women and their suffering under Victorian mores. These stories often included protagonists who ended their lives or ran away to escape an oppressive relationship to a husband or family. The term “New Woman” was used to describe women who attempted to free themselves from societal norms during the late nineteenth and early twentieth centuries. To protest Victorian standards, they cut their long hair, often bobbing it, and wore shorter skirts or dresses. These New Women attended college or held down jobs to maintain their freedom from oppressive family models. Social and economic freedoms were two main goals of this movement, and independent careers were considered a necessity to achieve independence. These women also embraced sexual freedom. Emma Goldman, Margaret Sanger, and other new feminists began agitating for the legalization of birth control for the purpose of family planning and also to advance the cause of sexual freedom. A lesbian subculture also arose within this context. Sometimes these New Women engaged in other so-called shocking behavior, such as going to dance halls, smoking, and drinking hard liquor. In the 1920s, New Women in America came to be called flappers due to the stylized short dresses they wore.

—Christi McCallum

would even keep single women workers in company-provided housing where they could be carefully monitored. Prostitution was perhaps the best indicator both of a sexual double standard and fears of women’s sexuality. Many countries passed laws allowing prostitutes—but not their male patrons—to be inspected for venereal diseases. Social workers also attempted to keep these women off the streets using a wide variety of methods, including abduction and forced labor.

Despite these factors, many women did not conform to the societal standards. Increasing numbers of women began to work outside the home. While some of these women worked out of necessity, others worked to maintain their independence or to save money for a better standard of living after marriage. Women of different

classes did different work. Women of the upper and middle classes frequently did unpaid charity work, while lower- and middle-class women who had to work for their living usually became teachers or governesses or secretaries as the twentieth century progressed. At the same time, working-class women became factory workers, sales clerks, or waitresses. While many of these women chose to work for pocket money or were forced to work by economic necessity, many female workers became political actors seeking to remedy sexual inequality as much as possible. Some of these were women who sought university education, which had become accessible for women by the early 1900s in most countries; others wished to avoid marriage or desired the freedom to be a part of the suffrage and women’s rights movements that had sprung up during the period from the 1850s through the 1910s.

The women’s suffrage movements originated in the nineteenth century but had grown much larger by the dawn of the twentieth century. The more militant suffrage movements began in the 1900s in many countries. These militant women would disrupt political meetings, break windows, and in some cases burn public property to prove their point. However, militant suffragettes were at the margins of the movement, as most women were moderates who sought reform in a peaceable manner with large-scale marches, public meetings, and pamphleteer campaigns. The suffrage movement was put on hold as World War I threw the United States and most European countries into crisis.

World War I forced many women to work outside the home for the first time. Industrial conscription meant that women were called on to fill munitions jobs and the factory work that men had left behind. Women also became nurses and Red Cross workers on the fields of World War I; small numbers even took up fighting roles in a few countries. Since so many suffragists as well as common women had put aside their previous work and lives to aid the state during the war, most countries granted women’s suffrage by the 1920s. One notable exception was France, which did not grant suffrage to women until 1944.

Aside from suffrage, women’s political and labor activities were varied. Class, race, and many

other social factors led to differing political agendas. Some conservative women were satisfied with the vote alone, while the women of the labor movement continued to be very vocal. Female trade unionists and strikers had many goals, including equal pay (since they made less than the men), better working conditions, and protesting certain job barriers regarding gender (women were banned from certain jobs and others forced them to leave when they married). Many of them continued to use the roles of wife and mother to demand equality, claiming that they needed these changes to care for their families properly.

During World War II, women would once again fulfill many different roles on the home-front and the battlefield; however, this time many refused to give up their jobs at the end of the war. World War II had shown women that there were many inequalities to be corrected. While they could vote and work outside the home, women were not protected from discrimination or harassment, nor could they gain access to birth control in many countries. Only in the 1960s and 1970s would women's issues be addressed more completely.

—Christi McCallum

Bibliography

- Bock, Gisela, and Pat Thane, eds. *Maternity and Gender Politics*. London: Routledge, 1991.
- McGerr, Michael. "Political Style and Women's Power, 1830–1930." *Journal of American History* 77 (1990): 864–885.
- Thebaud, Francoise, ed. *A History of Women: Toward a Cultural Identity in the Twentieth Century*. Cambridge, MA: Harvard University Press, 1996.
- Tickner, Lisa. *The Spectacle of Women: Images of the Suffrage Campaign, 1907–1914*. Chicago: University of Chicago Press, 1988.

Feminism in the Middle East

Women's issues emerged as a topic of discussion and debate as Middle Eastern societies modernized at the hand of reformist rulers and social activists early in the twentieth century. Reform-minded rulers introduced women's edu-

ISLAM AND MIDDLE EASTERN FEMINISM

Islam has been part of debates on women's rights in the Middle East throughout the twentieth century, with both reformers and conservatives using Islamic principles to justify their positions. Opposition to changing women's social roles and to abandoning Islam as the primary framework of reference emerged early in the history of Middle Eastern women's activism. In Egypt, Zaynab al-Ghazali founded the Muslim Women's Association in 1935 to fight against social inequality from within a conservative Islamic framework. She encouraged women to play active roles in public, especially in Islamic renewal movements. She herself was an active leader who eschewed motherhood and would not let marriage interfere with her activism. However, she did not dispute the conservative Islamic teaching that a woman's primary duty is to her husband and children.

The tension between secular and Islamic approaches to women's rights has not disappeared and continues to influence debates on women's issues in many Muslim countries.

—Hilary Kalmbach

cation by edict from above, while activists founded movements to improve the position of women socially. Questions about the authenticity of secular approaches to gender equality have constantly dogged Middle Eastern women's movements despite the local women involved in their leadership. Egypt, Persia (Iran after 1935), and Turkey are three Middle Eastern countries in which contexts of modernization led to the emergence of independent feminist movements that were subsumed into the apparatus of centralized states by midcentury.

Women's rights activism rose out of modernization discussions, dominated by Middle Eastern men, of the late nineteenth century. Although reformists of both genders focused on improving women's education and increasing their public presence, they did not encourage women to break out of the traditional roles of wife and mother. In general, these discussions were part of larger efforts to strengthen the nation by modernizing the family, as educated and modern

women would be best able to assist modern and upwardly mobile men in building stable nuclear families based on monogamous companionate marriages. Egyptian nationalist Qasim Amin's book *The Liberation of Women* (1899) is an early work in this vein. In parallel, women in Turkey, Egypt, and Persia were claiming the right to contest the way that both European and local patriarchal discourses portrayed them. Beginning in the 1890s in Turkey and Egypt and the 1920s in Persia, publications written by and for women played an important role in creating and maintaining communities interested in women's issues.

The Ottoman state expanded women's rights, especially with respect to education, after the 1908 Young Turk Revolt. Between 1908 and 1916, women's organizations began to advance both charitable causes and women's issues. Women became active participants in society during the post-World War I Independence War, and the Turkish Republic, founded in 1923, granted women equal legal rights, especially in the areas of education and suffrage. Even with these rights, however, women were not allowed to form political parties, and the organization that they founded instead, the Turkish Women's Union, was disbanded almost immediately after the 1935 Istanbul Congress of the International Federation of Women, supposedly because the state had already granted women all the rights they required.

Egyptian gender reform also began through the state, with nineteenth-century governments attempting—often unsuccessfully—to recruit women into schools as teachers and medical professionals. Women's groups stood in solidarity with men's groups calling for independence from British rule after 1919, yet they were disappointed after independence in 1922 when their cause was abandoned by men, who neither granted them political rights nor supported their increased public presence. In 1923, Huda Sharawi founded the Egyptian Feminist Union in order to improve women's legal rights and opportunities to work and study. The membership of the organization would take part in international conferences and play a major role in regional feminist activity. In the 1940s, a new generation of middle-class women's rights activists in Egypt reached out to a broader portion

of the population and incorporated other ideologies, such as that of class struggle.

Women's organizations in Persia emerged as early as 1906, with numerous groups working for both women's rights and the national cause. During the constitutional period (1909–1920), Persia caught up with Istanbul and Cairo with the opening of women's schools and a teaching college, though women would not enter universities until 1936. The Pahlavi regime addressed women's rights with the 1935 opening of the Ladies Center under Reza Shah's daughters Ashraf and Shams and the 1936 Unveiling Act that required women to unveil in public.

Despite the leadership of local women in the women's movements, critics have questioned the cultural authenticity of feminism, often portraying it as a foreign innovation that would weaken Muslim society. The quasi-feminist policies of colonial administrators such as Lord Cromer in Egypt, who was a staunch opponent of women's rights in Britain, further developed the connection between feminism and foreign power. Authenticity problems and the prominent role that Islam plays in Middle Eastern society explain efforts by women's rights advocates, both historical and contemporary, to engage and challenge Islamic teachings on women instead of calling only on more secularized notions of universal human rights. These issues also partially explain why Middle Eastern gender activists have in many periods refrained from calling themselves feminists.

—Hilary Kalmbach

Bibliography

- Badran, Margot. *Feminists, Islam, and Nation: Gender and the Making of Modern Egypt*. Princeton, NJ: Princeton University Press, 1995.
- Kandiyoti, Deniz. "End of Empire: Islam, Nationalism, and Women in Turkey." In *Women, Islam, and the State*, edited by Deniz Kandiyoti. Philadelphia: Temple University Press, 1991.
- Keddie, Nikki, and Lois Beck, eds. *Women in the Muslim World*. Cambridge, MA: Harvard University Press, 1978.
- Najmabadi, Afsaneh. "Hazards of Modernity and Morality: Women, State and Ideology in Contemporary Iran." In *Women, Islam, and the State*, edited by Deniz Kandiyoti. Philadelphia: Temple University Press, 1991.

Masculinities

With the loss of autonomous labor and the subsequent collapse of the separate spheres, men and women increasingly associated masculinity with the ideal of a rigorous lifestyle. The twentieth century brought with it social and cultural transformations that recast men's roles, and the physical and sexual characteristics associated with men changed as well. Where masculinity had once been associated with independent and even savage manliness, as urban centers grew in the twentieth century, women and men interacted more frequently in public arenas, and fewer men worked as their own bosses. As a consequence, masculinity became entwined with the contemporary ideas about civilization and class.

As the relationship between men and women evolved during the late nineteenth century, the conception of masculinity changed as well. The effects of the industrial revolution and the rise of piecemeal factory work ate away at the agrarian economy. Technological advances—such as improvements in transportation, the invention of the automobile, and the need for factory workers to produce it and other goods—created jobs in the cities and reduced the dependence on independent craftsmen and artisans. As a result, more men found themselves working for others and, consequently, having to give up their own autonomy and accept someone else's rules. These changes in turn challenged the masculine ideal of the independent man, since men increasingly depended on someone else's authority—the boss or the corporation—for their livelihoods.

Technology also transformed the way in which people conducted their daily lives. Men who now needed to travel for business—particularly those who visited urban centers—could encounter men and women who frequently interacted and who held modern ideas about the proper role of women. In this way such ideas could be disseminated (and oftentimes attacked) throughout the country as men brought these modern concepts back home. In addition, the influx of immigrants, whose values and traditions differed from native-born Americans, weakened the traditional Victorian household rules that had cast women as the domesticators of the sup-

posed unruly savage male. With single women increasingly entering the labor market and married women spending more time in the marketplace of goods and ideas, men and women spent more time together outside of the home, and the separate spheres that had long divided men and women began to collapse.

Consequently, some men at the turn of the century feared that masculinity was in danger of feminization from the increased exposure to women. With more fathers traveling on business, some worried about the undue influence that mothers might have on their sons, and with more children being schooled in mixed groups and under the care of female teachers, some felt that boys might end up as sissies. As a result of such anxieties, the early twentieth century witnessed the creation of many gender-segregated institutions, including men-only clubs and the Boy Scouts, an organization founded by Lord Robert Baden-Powell in 1907 in England that expressly excluded the participation of females. These types of masculine membership groups arose as a means of maintaining and imposing the Victorian notion of masculinity.

At the same time, Americans started to envision a revised masculine script that encouraged men to take a more active role in the home. Men found personal space just for themselves—hence the rise of the den, the basement office, the workshop, and so on—where they could be at home but be free from the domesticating influences of their wives. Popular magazines and guides urged men to participate in household chores and to be more involved in their children's lives. While few women enjoyed true equality in the home at this time, many men took the first tentative steps toward balancing this reality during the period.

With the heroics and horrors of World War I came a troubled sense of what it meant to be a man. Out of the war arose the so-called Lost Generation, best exemplified by writers such as F. Scott Fitzgerald and Ernest Hemingway, who depicted their male protagonists as tortured and imperfect men who felt alienated by both traditional cultural expectations and postwar attitudes regarding manliness. Unlike their Victorian predecessors who seemed to enjoy certain autonomy as men, many authors of the 1920s depicted

postwar men as tools or victims of a newly mechanized society that had little use for the self-made man of American lore.

After the stock market crashed in 1929, some 10 million men found themselves unable to fulfill one of the basic expectations of that era's conception of masculinity: the ability to provide for the family. The failure of the economic and political system to enable so many men the opportunity to earn a living radicalized many Americans, and the meaning of masculinity changed once again. During the decade leading up to World War II, communism and the ideology of the workers' rights gained a strong foothold in American culture. The most radical interpretations of communism stimulated a modern vision of society in which all men and all women were equals in every sense: politically, economically, and sexually. This construction rejected the contemporary conception of masculinity. Men might be tough or gentle, brutes or intellectuals; these qualities were no longer solely attributed to one gender.

Although most men and women would reject the reality of egalitarian relations between the sexes for decades to come, some modernists and radicals, such as Emma Goldman, actually lived out these theories, eschewing marriage, speaking freely about sex in public, and demanding equality in all aspects of public and private life. Many governments associated sexual radicals with political radicals, and many—such as Goldman—were imprisoned and even deported. However, their ideas eventually percolated throughout Western societies and inspired women and men alike to insist on a fairer society, thus again transforming, little by little, the meaning of masculinity.

—Joel Silverman

Bibliography

- Connell, R. W. *Masculinities*. 2nd ed. Berkeley: University of California Press, 2005.
- Hantover, Jeffrey P. "The Boy Scouts and the Validation of Masculinity." In *The American Man*, edited by Elizabeth H. Pleck and Joseph H. Pleck. New York: Prentice Hall, 1978.
- Kimmel, Michael. *Manhood in America: A Cultural History*. New York: Free Press, 1996.
- Rotundo, E. Anthony. *American Manhood: Transformations in Masculinity from the Revolution to the Modern Era*. New York: Basic Books, 1993.

Femininity

Femininity refers to what a society wants women to be as well as to what it believes women actually are. The early twentieth century saw dramatic changes and debates about women's rights and roles. Freudian psychology, world wars, advertising, mass media, and celebrity culture were major influences on changing images of femininity. The nurturant femininity of the fruitful mother tended to be connected with nationalism and religious traditions, while the seductive femininity of the single young woman was associated positively with freedom and independence and negatively with fears of uncontrollable female sexuality.

Popular notions about femininity were deeply influenced by Freud's theories throughout much of the twentieth century. Freud claimed that normal femininity was characterized by passivity, masochism, and narcissism, all traits that would be pathological in men. Thus active and assertive women, including feminists and professional women, were often judged as being unfeminine, a viewpoint that restricted women's occupational opportunities during the period and sent many women to therapy. However, Freud's first translator, Joan Riviere, who was also a patient of Freud's and an analyst herself, claimed that femininity or womanliness was always a masquerade, not an expression of an inner nature but an accommodation to a male-dominated society.

In contrast, motion pictures and advertising highlighted changing images of desirable femininity. "America's sweetheart" Mary Pickford and petite Lillian Gish, who played vulnerable innocents who needed male rescuers in silent films, gave way to provocative vamps such as Theda Bara. It was perhaps as much the celebrated allure of Dutch dancer Mata Hari (Margaretha Zelle) more than her espionage activities that led to her execution as a German spy in 1917.

Freer images of femininity appeared after World War I in many countries. For James Joyce, the feminine was embodied in the portrait of his wife Nora as Molly Bloom in *Ulysses* (1922). Associated with sexuality, nature, and the body and antithetical to abstract reasoning, Molly is the voice of the eternal "yes I said yes I will Yes." Daisy Buchanan represents the ultrafeminine flapper to F. Scott Fitzgerald's social-climbing

male innocent in *The Great Gatsby* (1925). She is beautiful, wealthy, charming, and callous to the point of manslaughter. Such fictional femininities are defined through contrasts with dominant male values: Daisy is desirable but immoral; Nora's sexual allure is based on her irrational alignment with nature.

But if feminine women in fiction are often desirable but dangerous, unfeminine women such as Stephen Gordon, the mannish lesbian of Radclyffe Hall's *Well of Loneliness* (1928), are tragic figures, as are the protagonists of Nella Larsen's books of the Harlem Renaissance, which show the difficulties of U.S. women of color in achieving an acceptable femininity within a racist society: tainted by prejudices about oversexed or unwomanly women of color, they are estranged from their own desires. In contrast to these polarities, in *A Room of One's Own* (1929), Virginia Woolf describes both masculinity and femininity ideally melding in Shakespeare's androgyny.

The Great Depression of the 1930s brought images of spunky and independent women to the fore such as the journalists and athletes portrayed in the movies by Katherine Hepburn and Rosalind Russell and by real-life celebrity aviator Amelia Earhart. More ominous was the Nazi regime's glorification of "*kinder, küche, und kirche*" (children, kitchen, and church) as the only concerns for properly feminine women. By World War II the glamorous pinup girl faced posters of Rosie the Riveter, a tough but attractive model of working-class femininity devoted to the war effort in the United States, while Soviet women were similarly idealized as brave workers on tractors.

Not only were the glamorous images on the silver screen beyond most women's reach, but beginning in the 1920s advertising and mass marketing increased women's insecurities about their femininity and promised to sell them products to enhance it. Magazines displayed gleaming appliances to make happy homemakers as well as fashionable cosmetics, perfumes, hats, and gowns that would bring women men's attention and other women's envy.

Throughout much of the globe in the early twentieth century, images of femininity were closely tied to battles over women's rights. In many countries feminist agitation sought equality

➤ JOAN CRAWFORD

Joan Crawford (1904–1977), as shown in this 1928 photograph, is the perfect example of the jazz baby flapper of the late 1920s, the epitome of femininity and worldly sophistication in a decade marked by roaring excess. The heavy affectation and recklessly liberated demeanor of Crawford's late-1920s heroines, invariably depicted as pretty young damsels full of an incredible zest for life and ready to take on the world, made her an exciting symbol and role model for millions of young women who vicariously lived out their dreams through her.

—Carlos Marquez



(Library of Congress)

for women in civic participation, particularly through the vote, and increased access to education and paid employment. New images of women as professionally competent, sexually self-determined, and politically active vied with older images of nurturing mothers, obedient wives, and devoted and patriotic sisters.

Internationally, movements for women's rights produced alternative and embattled femininities, juxtaposing, for example, the seductively cloistered women of Orientalist fantasy with the newly unveiled secular and Islamic women of the Middle East. At the same time, nationalist and anticolonial heroines might either retain traditional costumes and customs or assert modernist independence by switching to Western apparel. Still another archetype filtered from Japan, where geisha entertained and flattered rich, powerful men, setting a standard of femininity that was artistic and decorative rather than sexual or nurturing. In China the Confucian subordinate and obedient wife was revolutionized into the communist heroine, carrying a gun while holding up "half the sky."

After World War II the cultural assumptions that Betty Friedan eventually labeled "the feminine mystique" connected images of domestic femininity with a burgeoning consumer culture, beckoning women to early marriage and suburban child rearing. The discontents of this ideal, as well as its impossibility for many working-class women and women of color, helped spur the Western women's liberation movement of the 1960s and 1970s. This movement attacked symbols of restrictive femininity, whether girdles and high heel shoes, popular Freudian ideology, the sexual double standard, or restrictions on women's education and occupational choices.

—Judith Kegan Gardiner

Bibliography

- Freud, Sigmund. *New Introductory Lectures on Psycho-analysis: Lecture III*. New York: Norton, 1933.
- Gardiner, Judith Kegan. "Femininity: The Missing Term, the Uncritical Crisis." *Revista Canaria de Estudios Ingleses: Special Issue on Feminist Theory* 48 (April 2004): 31–44.
- Riviere, Joan. "Womanliness as a Masquerade." *International Journal of Psychoanalysis* 10 (1929): 35–44.

Homosexuality

Although same-sex sexual (and ritual) contacts have occurred throughout history, it was not until the mid- to late-nineteenth century that those who were sexually attracted to the same gender were defined as "homosexual." As the construction of homosexuality changed from same-sex behavior to sexual identity, medicalization, particularly in the form of psychoanalysis, joined criminalization as typical societal responses. The twentieth century, not coincidentally, also witnessed the emergence of the homosexual rights movement, as gay men and lesbians began organizing to rescind laws and change medical opinions. Nevertheless, in some Middle Eastern countries same-gender sexual contact still can result in the death penalty and homosexuality was only recently depathologized in Japan, South Korea, and China. Relatively few countries prohibit discrimination on the basis of sexual orientation or sanction same-sex marriage.

The modern homosexual emancipation movement began in 1897, when Magnus Hirschfeld, a Berlin doctor, founded the Scientific and Humanitarian Committee. The group presented a petition to the German Parliament for repealing Paragraph 175 of the Penal Code, enacted in 1871, prohibiting sexual conducts between men. This political movement spread throughout Europe and North America. In the Netherlands, J. A. Schorer, a liberal jurist, established the Dutch Scientific Humanitarian Committee to repeal Article 248, an anti-vice bill that criminalized homosexuality, enacted in 1911. Edward Carpenter, a homosexual activist, was active in the British Society for the Study of Sex Psychology, founded in 1914 under Hirschfeld's influence.

After World War I, the number of homosexual associations such as Freundschaft (friendship) and Klub der Freunde und Freundinnen (male and female) friends clubs increased, while the first state-chartered (albeit short-lived) Chicago Society for Human Rights was established in 1924 by Henry Gerber, who had visited Berlin following the war. There, too, was an increase in gay and lesbian novels, most notably *The Well of Loneliness* written in 1928 by Radclyffe Hall, an English novelist. Banned in many cities and countries, her novel was based on the theories

of Richard von Krafft-Ebing, a German psychiatrist, and Havelock Ellis, an English sexologist.

In contrast to many Western societies, there had been no prohibition of homosexuality in most Eastern societies. In countries such as Thailand, those engaged in same-sex behavior were not considered deviant or persecuted. In Japan, same-sex sexual intercourse was not considered abnormal until at least the late-nineteenth century (under the influence of European colonialism).

The worldwide Great Depression and the rise of fascism in Germany and other countries severely impacted the fledgling gay and lesbian movement, which largely ceased to exist by the mid-1930s. Oppressed liberality, together with the economic crisis, also restricted women's freedom to live and love as they liked. In 1933, Germany, though efforts to repeal Paragraph 175 a few years earlier nearly succeeded, banned homosexual-rights organizations, and Hirschfeld's Institute of Sexual Science was demolished with its valuable collection mostly destroyed. However, communities of homosexuals and social groups continued to flourish in Europe, Asia, and the Americas.

Studies into homosexuality continued throughout the twentieth century. Sigmund Freud suggested that sexual inversion including homosexuality was not innate, but a matter of object-choice in a psychic mechanism, which resulted in the treatment of homosexuals through extensive psychotherapy. However, unlike most medical authorities of the time, Hirschfeld argued that homosexuality originated from prenatal biological factors as did Havelock Ellis, in his book *Sexual Inversion*, which helped frame the arguments of the gay and lesbian movement. In 1948, *Sexual Behavior in the Human Male* had a worldwide impact. Alfred Kinsey, an American biologist, reported that 4 percent of white males were exclusively homosexual throughout their lives, 10 percent of the males were more or less exclusively homosexual, 30 percent had at least incidental homosexual experience or reactions over at least a three year period, and 37 percent of the total male population had at least some homosexual experience to the point of orgasm. Five years later, the companion volume, *Sexual Behavior in the Human Female*, disclosed that 2 percent of the females were exclusively homo-

sexual, between 2 and 6 percent of the unmarried females and less than 1 percent of the married females had been somewhat exclusively homosexual, and 13 percent of the females had homosexual experience to orgasm.

Scientific studies such as those by Kinsey, the development and distribution of new forms of birth control, more permissive attitudes toward sexuality in general, and the efforts of groups courageously demanding social equity for minorities, including lesbians and homosexuals, all underpinned the later advances of the modern feminist and gay liberation movements of the 1970s.

—Akibiko Komiya

Bibliography

- Brandhorst, Henny. "From Neo-Malthusianism to Sexual Reform: The Dutch Section of the World League for Sexual Reform." *Journal of the History of Sexuality*, Vol. 12, No. 1 (2003): 38–67.
- Komiya, Akihiko. "Homosexuality." In *The Greenwood Encyclopedia of Love, Courtship, and Sexuality through History, Volume 6: The Modern World*, edited by James T. Sears. Westport, CT: Greenwood, 2007.
- LeVay, Simon. *Queer Science: The Use and Abuse of Research into Homosexuality*. Cambridge, MA: MIT Press, 1996.
- Mackay, Judith. *The Penguin Atlas of Human Sexual Behavior*. New York: Penguin Putnam, 2000.
- Murray, Stephen O., and Will Roscoe. *Boy-Wives and Female Husbands: Studies of African Homosexualities*. New York: St. Martin's, 1998.
- Sullivan, Gerald, and Peter Jackson. *Gay and Lesbian Asia: Culture, Identity, Community*. Binghamton, NY: Harrington Park Press, 2001.
- Swidler, Arlene. *Homosexuality and World Religions*. Valley Forge, PA: Trinity Press International, 1993.
- Tamagne, Florence. *A History of Homosexuality in Europe*. New York: Agora, 2004.
- Whitaker, Brian. *Unspeakable Love: Gay and Lesbian Life in the Middle East*. Berkeley: University of California Press, 2006.

Birth Control and the Birth Control Movement

The term "birth control" was coined by advocate Margaret Sanger in 1914. Birth control is the practice of preventing pregnancy through

THE MALE CONDOM

The male condom, an artificial means of birth control by which the penis is sheathed in a protective material that prevents the sperm from reaching the egg, has been one of the most popular artificial means of birth control since ancient times. Initially made of linen, leather, or animal entrails, condoms were used around the world, including Africa and Europe, for protection against sexually transmitted diseases with moderate success. Their ability to protect against pregnancy was not realized until much later, however.

In the United States, condoms have been produced since 1840 and gained immense popularity after World War I in a campaign to prevent venereal disease. The widespread use of condoms after the war was bolstered by their acceptance by even the most fundamental Christians. Although these groups claimed to accept this form of contraception, it was only due to the condom's ability to protect against disease. As a result, the condom remained one of the most popular methods of birth control well into the late twentieth century, when even better methods were made available.

—*Katherine Ellison*

various methods and devices. Since ancient times, women have employed a variety of processes to avoid, control, and end pregnancy. The most common types of birth control are contraceptives, or methods that prevent the fertilization of the ovum (egg) by sperm, and abortion, the process of terminating a pregnancy. The first half of the twentieth century saw new advances in birth control methods as well as controversy. Birth control remained illegal in many countries, although the period saw the rise of the birth control movement in countries such as Germany, Japan, France, and Mexico. In the United States, distributing birth control and information about birth control was illegal.

The first intrauterine devices (IUD) to prevent pregnancy appeared around 1900 in Germany. Around 1919 Ralph Richter, a German physician, developed the first modern IUD in which a bronze-aluminum wire spiral was inserted into the uterus. When latex was invented during World War I (1914–1918), condoms, dia-

phragms, and cervical caps became more popular. The rhythm method, a calendar-based means of avoiding pregnancy, was also developed in the early twentieth century. Theodoor Hendrik van de Velde, a Dutch gynecologist, discovered in 1905 that women ovulate (during which time they are fertile) only once per month. In the 1920s Hermann Knaus, from Austria, and Kyusaku Ogino, from Japan, independently discovered that ovulation occurs about 14 days prior to a woman's next menstrual cycle. While this information was invaluable to women who were trying to get pregnant, it also provided women with a means to avoid pregnancy.

The Comstock Laws, passed in 24 states beginning in 1873, made the distribution of information and materials considered to be “lewd” or “obscene” illegal. This included not only contraceptives but also the dissemination of information about birth control methods and practices. Although the Comstock Laws are currently still in effect, the ban on contraceptives was declared unconstitutional in 1936, although some state laws restricting birth control and abortion continued until later in the twentieth century.

The movement toward legal birth control in the United States developed during the first half of the twentieth century. During that period, particularly from the turn of the century to the Great Depression, many families could not afford to have more children. Although churches, especially the Catholic Church, opposed contraceptives, some denominations slowly began accepting birth control. Activists such as Emma Goldman and Margaret Sanger sought to educate women about birth control as a way of improving women's lives. Goldman was Sanger's mentor, and they campaigned for reproductive rights and free speech in opposition to the Comstock Laws. Both activists were imprisoned several times for illegally distributing birth control information.

Goldman was born in Russia and in 1885 immigrated to the United States, where she became an anarchist and activist. During the 1890s she worked as a midwife and nurse among immigrant workers in New York, becoming convinced that birth control was the key to providing economic and sexual freedom for women. By 1915 she was frequently lecturing about the move-

ment and published her speeches and essays in her book *Anarchism and Other Essays*.

Sanger was influenced by her mother, who was pregnant 18 times, delivered 11 children, and died of cervical cancer and tuberculosis. She was also impacted by her own experiences as a mother and nurse, working with poor women who suffered from repeated pregnancies and childbirth as well as damaging (and often deadly) self-induced abortions. Sanger was passionate that women be allowed to decide when to be pregnant. In 1914 she published a monthly newsletter, *The Woman Rebel*, that promoted contraception. In 1916 she opened the first U.S. birth control clinic in Brooklyn (New York), although it was shut down by police and she was arrested. Sanger finally opened a permanent clinic in New York City in 1923. She was also instrumental in organizing the National Birth Control League with Mary Coffin Ware Dennett (1915) and the American Birth Control League (1921) that eventually became Planned Parenthood in 1942.

Some birth control activists of the period, including Sanger, had motives other than avoiding pregnancy for legalizing contraceptives. The social philosophy of negative eugenics advocated the use of birth control to stop reproduction among those considered undesirable and dysgenic or possessing inferior and defective genes. The eugenics movement was more than just a philosophy. The United States engaged in a sterilization program in Puerto Rico in 1938 in which around one-third of women of childbearing age in Puerto Rico were sterilized. During the 1920s, Native American and African American women were also targeted for sterilization.

The availability and use of birth control crossed international lines. The birth control movement arrived in Latin America during the Mexican Revolution (1910–1920). The push for birth control in Mexico was more about revolutionary ideology, human rights, and political conflict with the Catholic Church than limiting pregnancy. Mexican women did not embrace birth control for several reasons, including low birth weights, high infant mortality, and adherence to Church teachings.

Sanger traveled and lectured extensively, especially in Europe and Asia. She learned much

➤ PLANNED PARENTHOOD

Birth control advocate and crusader Margaret Sanger founded the American Birth Control League in 1921 and the Birth Control Clinical Research Bureau in 1923 to provide contraceptives and to study the effectiveness and safety of birth control methods. The organizations served a variety of purposes, including educating the American public and organizing and opening clinics to provide women with birth control. In 1939 the organizations merged to form the Birth Control Federation of America, and in 1942 the name was changed to the Planned Parenthood Federation of America. Today the organization is the International Planned Parenthood Federation and has over 800 clinics in the United States that provide birth control services to over 3 million people.

—Kim Kennedy White

from the French about their contraceptive methods during her visit to Paris in 1913. Two years later she visited the Netherlands and learned about the widespread use of the diaphragm among the Dutch. During the 1920s Sanger visited Japan and mentored Japanese birth control supporter Ishimoto Shizue, who went on to become a pioneer and leader in developing Japan's family planning organizations. German birth control advocates also pushed for reform from 1920 until World War II.

—Kim Kennedy White

Bibliography

- Baer, Judith A., ed. *Historical and Multicultural Encyclopedia of Women's Reproductive Rights in the United States*. Westport, CT: Greenwood, 2002.
- Coates, Patricia Walsh. *Margaret Sanger and the Origin of the Birth Control Movement, 1910–1930: The Concept of Women's Sexual Autonomy*. Lewiston, NY: Edwin Mellen, 2008.
- McCann, Carole R. *Birth Control Politics in the United States, 1916–1945*. Ithaca, NY: Cornell University Press, 1994.
- Meyer, Jimmy Elaine Wilkinson. *Any Friend of the Movement: Networking for Birth Control, 1920–1940*. Columbus: Ohio State University Press, 2004.

Rosen, Robyn L. *Reproductive Health, Reproductive Rights: Reformers and the Politics of Maternal Welfare, 1917–1940*. Columbus: Ohio State University Press, 2003.

Cosmetics and Shifting Beauty Ideals

The female face in Western culture is as much a product of cultural ideals as it is of nature. The use of cosmetics can be traced to the ancient Egyptians and to ancient Greeks and Romans. As a marker of social status, cosmetics not only heightened features but lightened the skin; in particular, a woman's light skin signified her leisured lifestyle and reliance on servants or slaves to run her errands out of doors. Makeup could also conceal the grim realities that crossed class lines. For instance, in eighteenth-century France, aristocratic women and men applied lead-based white cream to their faces and attached small decorative leather patches not just for the sake of fashion but to conceal smallpox scars. In the next century, however, Victorians associated facial makeup of any kind with prostitution.

By the early twentieth century, however, the commercial cosmetics industry in America and Europe used mass-marketing techniques to reach out to women of all classes. The first company, L'Oreal, was founded by Eugene Schueller in 1909 as the French Harmless Hair Coloring Company, followed by American companies Elizabeth Arden, Helena Rubinstein, and Max Factor in the 1910s. These firms were joined by Revlon just before World War II and Estée Lauder just after the war, and their immediate financial success was matched by their power to determine norms of beauty.

Advertisements circulated by the cosmetics industry promised women that through diet, exercise, and the proper use of makeup, they could achieve physical perfection. The advent of cinema and the Hollywood star also impacted early twentieth-century beauty ideals, as teenage and adult women copied the styles of their favorite movie actresses. The vamp actress Theda Bara, for example, inspired a craze for darkly shadowed eyes and reddened lips, connoting the sex-

ually liberated female of the post-World War I era. Max Factor and Helena Rubinstein, who designed makeup for Hollywood actresses, also mass-marketed such new products as mascara to ordinary women who could purchase these products in the dime stores of the 1920s. In sharp contrast to her corseted and pale Victorian predecessor, the carefree flapper bobbed her hair short, tweezed her eyebrows, tanned her now exposed skin, and painted her lips ruby red. World War II surprisingly provided another boon to the cosmetics industry. As American and British women assumed new masculine roles at home or in munitions factories, propaganda reminded them that "Beauty Is Your Duty", and lipstick and nail polish were deemed essential to maintaining a feminine appearance despite grueling work hours. Elizabeth Arden even created a lipstick called Montezuma Red to match the red on the uniforms of women in the armed forces. It should be noted that despite a brief tanning craze in the 1920s, for much of the twentieth century cosmetics advertising still linked whiteness with social superiority, and such middle-class African American magazines as *Ebony* promoted skin-bleaching products.

While the commercial success of the cosmetics industry (today a multibillion dollar industry) illustrates the increased purchasing power of women, feminist historians question the accompanying changes in feminine ideals of beauty as a sign of female liberation. Although the twentieth-century woman celebrated rather than denied her sexuality, the emphasis on her physical appearance may have represented a new form of corset. In addition to cosmetics, the proliferation of beauty pageants, salons, and the diet industry turned women's focus onto the self, distracting them from other political and social goals. However, the cosmetics industry also has empowered women, providing professional opportunities, as several of the most successful companies, such as Helena Rubinstein and Elizabeth Arden, were started by women.

—Julie Taddeo

Bibliography

Angeloglou, Maggie. *A History of Make-up*. London: Macmillan, 1970.

Brumberg, Joan Jacobs. *The Body Project: An Intimate History of American Girls*. New York: Random House, 1997.

Peiss, Kathy Lee. *Hope in a Jar: The Making of America's Beauty Culture*. New York: Metropolitan Books, 1998.

■ Introduction: Cultural Shapers

In addition to the major “isms” of this period (nationalism, imperialism, anticolonialism, fascism, communism, capitalism), other forces shaped culture in this period—most obviously the new media that permitted the rise of mass culture—and what would eventually be recognized as a new “ism,” consumerism. In addition to mass-circulation newspapers and magazines, the development of the phonograph, radio, television, and recorded messages provided new communication media for news, entertainment, and propaganda. Mass production underpinned this system, as it provided the actual devices and the motive for such a communications infrastructure: sales. The growth of the department store in the late nineteenth century directly correlates to the rise of the great daily newspapers, as department store advertisements underwrote those ventures. While some of the new media were nationalized and underwritten by governments, revenues otherwise came from advertising, thus allowing commercial forces to shape radio and television as entertainment media with standardized programming. The advertising industry propelled consumerism, while public relations grew behind the scenes as a power broker and opinion maker, as politicians, corporations, and governments increasingly turned to public relations experts to help shape attitudes of the public and of policy makers. Propaganda, whether to sell government war bonds, demonize military rivals, or strengthen dubious ideological messages of cultural or ethnic superiority, also gained a great boost from the new media and their possibilities. Mass education aimed at social cohesion also became widespread in this period, as did public health campaigns, the settlement house movement to aid dwellers in impoverished urban areas, and a va-

riety of campaigns to stamp out social ills, whether alcohol abuse, narcotics, prostitution, or venereal disease. While visual arts, literature, and performing arts are covered under other topics, the articles that follow examine the general forces shaping culture in this period.

—Fred Nadis

Alcohol and Other Drugs

In the first half of the twentieth century the peoples of the world consumed a huge variety of psychoactive drugs, both legal and illegal: alcohol, nicotine, and caffeinated drinks as well as opium- and coca-based and synthetic drugs. The social context in which these substances were used, whether drunk, smoked, chewed, swallowed, or injected, helps explain their popularity. For instance, the ritual of the Japanese tea ceremony and the English custom of afternoon tea afforded a social significance to the beverage that made it more than a drink. Context also helps to explain the behavior of groups within the larger society. For example, it is difficult to imagine jazz musicians without alcohol and tobacco and perhaps even illegal drugs. Drugs that governments defined as “illegal” could occupy a respected place for certain minorities, such as the smoking of ganja (marijuana) by members of the Rastafarian religious movement in Jamaica and elsewhere.

In the period between the two world wars, the process of drug globalization was far advanced. People around the world enjoyed drugs that had originated thousands of miles away. For instance, millions of Chinese learned to smoke cigarettes. In 1934 a Chinese journalist observed

➤ MYTHS ABOUT NATIONAL PROHIBITION

The most common misconception about National Prohibition in the United States (1920–1933) is that it failed to reduce drinking in the United States. Popular images of bootlegging, speakeasies, and gangsters get in the way of the facts. It is true that in northern cities such as Chicago federal law was only halfheartedly enforced. It is also true that even prohibitionists seemed less concerned with expensive enforcement than with establishing the principle that drinking was a crime. However, despite the numerous violations of alcohol prohibition (similar to the numerous violations of drugs prohibition today), the actual consumption of alcoholic drinks in the United States as a whole fell drastically in the 1920s and early 1930s. Another myth is that Americans alone were eccentric enough to regard prohibition as a solution to the drink problem. In fact, around the time of World War I, many countries adopted a version of prohibition or at least seriously considered doing so. Most famously, under the tsars Russia instituted vodka prohibition, and after the Bolshevik Revolution the new communist regime continued it for several years. Finally, statewide prohibition continued in parts of the United States



New York City Deputy Police Commissioner John A. Leach, right, watches agents pour liquor into the sewer following a raid during Prohibition, 1921. (Library of Congress)

long after the repeal of National Prohibition, and prohibition in localities such as towns and precincts survives even today.

—David Fahey

that villagers who could not identify the nationalist leader Sun Yatsen knew about Ruby Queen cigarettes. Yet at midcentury, globalization remained incomplete. Unlike Americans, few Chinese drank coffee or colas, and by Central European standards their consumption of beer was modest. There are many other examples of the limits to globalization. Russians rarely drank bourbon, and the inhabitants of Kentucky and Tennessee rarely drank vodka. European elites seldom were teetotalers, while Indian elites, other than the Parsis, seldom drank alcohol. Nonelite Indians who drank alcohol consumed toddy-wine or arrack, intoxicating beverages unknown in Europe.

In addition to consumption, production became more globalized. Coffee was grown in Africa as well as in Latin America. In 1933 the Gold Coast (later Ghana) acquired its first brewery. The Dutch East Indies (Indonesia) was a major

producer of wrapper tobacco. Yet globalization of production had its limits. For instance, the growing of opium was slow to spread beyond Asia, while West Africa continued to dominate the production of cocoa.

Tastes also continued to shift. As an example, India had been a major producer of tea for centuries, but it was only in the years between the world wars that Indians became big drinkers of tea. The popularity of tea in India, Russia, and Britain as well as in East Asia made it the most sought-after beverage in the world other than water. During the 1920s cocaine disappeared as a major drug in the United States, while marijuana, introduced from Mexico by migrant laborers, began its popularity. About the same time, many Scotch whiskey distilleries merged in response to shrinking markets. The wine allowance that the French government provided soldiers during World War I encouraged men

from the cider- and spirits-drinking northern districts to remain wine drinkers during peacetime. During World War II Americans lacked access to the green tea previously imported from China and Japan, so American tea drinkers became almost exclusively drinkers of black tea imported from India.

Arguably, the most dramatic stories about for drugs in this period were about efforts to ban or criminalize many of these substances. The United States and Europe attempted to restrict the production of opium and coca to medical purposes, such as for making morphine. Beginning in 1914, the federal government in the United States criminalized narcotic drugs such as opium and coca. Britain outlawed cannabis (marijuana) in 1928. With the help of multinational conventions, the League of Nations restricted the international opium trade. Inconsistently, many European colonial empires profited from the drug trade, although France outlawed hashish in Lebanon in 1926.

China became the world's principal producer of opium, with Shanghai perhaps the world's most important center for opium-related drugs. In the 1930s most of the heroin smuggled into the United States came from China. Although the Nationalist government legislated against opium cultivation and consumption, it was heavily dependent on revenues from opium traffickers, so the Chinese antiopium laws existed principally to appease international opinion. During its wars with China, Japan encouraged opium consumption there but discouraged its consumption in its Manchukuo (Manchuria) puppet state.

The World War I-era attempts to ban the production and sale of alcoholic beverages are well known, particularly national prohibition in the United States from 1919 to 1933 and the concurrent illegal production of liquor and the bootlegging operations that gangsters often controlled. In Russia, under both the tsarist and communist regimes, vodka was outlawed from 1914 to 1925. A few other countries instituted prohibition, and many more restricted the alcoholic drink trades. For example, France banned the anise-flavored spirit absinthe in 1914. Diversion of grain from brewing to baking caused beer consumption in Germany to fall by nearly two-thirds during World War I. Led by Mahatma

Gandhi, the nationalist movement in India demanded prohibition, and in 1949 independent India's constitution declared prohibition of alcoholic drink and habit-forming drugs a national objective. In the end, alcohol prohibition on a national scale survived in only a few Muslim countries such as Saudi Arabia, but most societies recognized the reality that alcohol constituted a serious multisided problem. As one example of addressing the seriousness of its impact, Alcoholics Anonymous was organized in the United States in the 1930s.

During the interwar period, tobacco companies spent huge sums on advertising. Cigarette sales increased, making nicotine one of the world's most widespread drugs. The cinema also glamorized smoking, for instance in the films in which stars such as Joan Crawford and Humphrey Bogart frequently smoked. As early as 1923, Americans purchased 73 billion cigarettes. Even Great Depression poverty failed to depress cigarette demand significantly. Women became smokers in many countries, but men smoked the most. President Franklin Delano Roosevelt reportedly smoked as many as four packs a day. By 1945 the popularity of cigarettes had neared its peak in the United States, and three-quarters of adult males in Australia smoked. There was little public concern that smoking tobacco posed a health risk. As an exception, medical researchers in Nazi Germany worried about the connection between tobacco and cancer. In part for this reason and in part because Adolf Hitler despised smoking, Germany restricted the supply of cigarettes to its troops during World War II. In contrast, chain smoking was a part of daily life in most armies of the time.

Synthetic drugs also were commonplace for the military. It is well known that during World War II Japan provided its soldiers and aviators with the synthetic drug methamphetamine (a derivative of amphetamine), but so did other countries. For instance, the United States supplied 200 million methamphetamine or amphetamine pills and tablets to its troops to overcome fatigue.

The period 1900–1945 witnessed the consolidation of the popularity of Coca-Cola and other caffeinated soft drinks among male and female Americans of all ages, blacks and whites, and all socioeconomic classes. By 1940 Coca-Cola

already was bottled in 40 countries, and World War II decisively accelerated its global expansion: Coke followed American soldiers to Europe and Asia.

—David Fahey

Bibliography

- Blocker, Jack S., David M. Fahey, and Ian R. Tyrrell, eds. *Alcohol and Temperance in Modern History: An International Encyclopedia*. 2 vols. Santa Barbara, CA: ABC-CLIO, 2003.
- Courtwright, David T. *Forces of Habit: Drugs and the Making of the Modern World*. Cambridge, MA: Harvard University Press, 2001.
- Standage, Tom. *A History of the World in 6 Glasses*. New York: Walker, 2005.

The Phonograph as Cultural Shaper

The development of the phonograph—also known as the “talking machine,” gramophone, record player, and turntable—not only impacted entertainment but also shaped culture and the diffusion of music across space and time. At the turn of the twentieth century, for the first time listeners could record and play back music and make personal selections as to what to hear and when.

The term “phonograph” comes from the Greek and means “sound writer.” The first phonograph was developed by American Thomas Edison in 1877 when he invented the telegraph and the telephone. He used a needle to record sounds by etching vibrations onto a cylinder. Edison’s National Phonograph Company manufactured phonographs for home use, although these early phonographs only recorded for a couple of minutes and could not be mass duplicated. These early devices used a floating stylus needle and wax cylinders that began to be mass-produced in 1901. The popularity of the cylinder peaked in 1905, at which time the discs began to dominate the market.

Edison’s phonographs competed with many other companies, particularly Columbia Records and the Victor Talking Machine Company. Columbia Records, founded in 1888 and one of the earliest record labels in the United States, developed a catalog of cylinders that recorded popu-

lar music at the time. In 1891, Columbia’s musical catalog was ten pages long. Columbia Records became the first to produce and sell prerecorded records for home use, introducing a molded brown wax “XP” record in 1902 and the black wax record in 1903. In 1912, the company abandoned cylinders and focused on disc records. The Victor Talking Machine Company was founded in 1901 by Eldridge R. Johnson. The company’s early phonograph and famous trademark logo of a record player attached to a large horn with the famous fox terrier, “Nipper” the dog, listening intently for “His Master’s Voice” is still well known. The horn was rather cumbersome and unsightly to many, and in 1906 the company developed the internal-horn Victrola that sold for \$200.

Phonograph discs proved extremely popular. In 1905 Victor sold 65,591 records, and by 1908 the company sold over 107,000 phonograph players. After some years of economic downturn, sales boomed. Victor sold 125,000 phonographs in 1911, 252,000 in 1912, and 560,000 in 1920.

The 1920s brought phonograph companies major competition from radio and its improved technologies. However, strong phonograph sales continued, especially as consumers had more choices in styles, sizes, and console cabinets in which to house them. By the 1930s, portable wind-up phonographs were readily available. Companies also began to experiment with long-playing records (LPs) in order to make them more appealing to consumers, although the LP was not available until 1948. The 78 rpm (rotations per minute) record was the most popular. The 10-inch (25-centimeter) discs could hold about three and a half minutes per side, and the 12-inch (30-centimeter) discs could hold more than five minutes.

German companies pioneered the music “album.” In 1908 Deutsche Grammophon, founded in 1898, produced a complete recording of the opera *Carmen*; in 1909 Odeon, founded in 1904, released four double-sided discs of the *Nutcracker Suite*. Throughout the next several decades countless recordings were created and sold particularly in the United States, bringing multiple genres of music to households everywhere.

In 1925 Columbia began recording “Vivatonal” records from Western Electric that produced unequalled tone and clarity during the 78-rpm era. Also in that year, Columbia acquired Okeh Records and developed an impressive list of jazz and blues artists, including Bessie Smith and Louis Armstrong. In 1928 the company began recording America’s most well-known orchestra leader, Paul Whiteman. Victor Records, too, recorded famous artists of the time and sold “celebrity” recordings called “Red Seal” records. The records were single-sided until 1923, when they became double-sided.

As discs and phonographs improved in quality, both Columbia and Victor set out to record some of the most prominent folk singers and musicians of the era. In 1928 Columbia executive Frank Buckley Walker pioneered “hillbilly” and country music recordings, including the legendary “Fiddlin” Charlie Bowman. Victor also recorded several legends of country music including Jimmie Rodgers, known for his traditional yodeling style, and the Carter Family, one of the most famous country music groups. Victor first recorded these artists in August 1927 in Bristol, Tennessee, and each embarked on successful recording careers, bringing regional music to the masses.

The 1920s and 1930s also saw the rise of “race music” as U.S. record companies found a new market, particularly in the 1.5 million African Americans who migrated out of the South and who longed for Southern sounds. “Race music” refers to a catalog of recordings in developing genres of African American music: blues, jazz, gospel, and comedy. These “race records” were initially marketed to African Americans, but white Americans began purchasing them as well.

The development of the phonograph brought a variety of musical genres, including traditional folk music, into consumers’ homes, music that they would never have had a chance to hear without these technological developments. Generally transmitted orally, folk music often exists in multiple versions, with its composers generally unknown. Folk songs cover many genres including blues, bluegrass, and country music and reflect the cares and concerns of everyday people. Recordings brought these treasures into homes everywhere and preserved folk culture

➤ THE ROLE OF THE PHONOGRAPH IN DOCUMENTING TRADITIONAL CULTURES

In an effort to preserve and document traditional culture, anthropologists, folklorists, and ethnographers—scholars who document human cultures—used phonographs to record music performances, stories, and myths. Most of the recordings from the first half of the twentieth century in the United States were from Native American tribes, but ethnographers also made recordings in regions such as Haiti, for example, of Hoodoo (“voodoo”) ritual music. Anthropologist Jesse Walter Fewkes was one of the first to make phonograph recordings of traditional cultures, capturing some of the first recordings of the Hopi tribe in the U.S. Southwest and the Passamaquoddy tribe in the U.S. Northeast.

Ethnographers typically spend extended periods among the peoples they are studying. These researchers are participant-observers, as they live among the people, learn the language and customs, and participate in daily life. The phonograph allowed ethnographers to record and preserve these rare and important glimpses into Native American life.

The U.S. Library of Congress American Folklife Center created the Federal Cylinder Project in 1979 in order to share the Native American phonograph recordings that were recorded between 1890 and 1941 with descendants of the tribes. The collection includes more than 10,000 recordings.

—Kim Kennedy White

for generations to come. Many recordings made their way into archives and aided in later revivals of nearly lost styles such as the Jewish klezmer music of eastern Europe.

The cultural impact of the phonograph is immeasurable. As phonograph players and records increased in popularity, availability, and affordability, the average citizen had immediate access to the greatest music of the time. Inhabitants of even the smallest town could listen to the famous Italian opera tenor Enrico Caruso, and rather than traveling across the country to attend expensive theaters, people could enjoy the classical musicianship of Sergei Rachmaninoff from the comfort of their homes. Traditional American

folk music owes its legacy in part to the longevity of phonograph recordings.

—Kim Kennedy White

Bibliography

- Brady, Erika. *A Spiral Way: How the Phonograph Changed Ethnography*. Jackson: University Press of Mississippi, 1999.
- Fabrizio, Timothy C., and George F. Paul. *Discovering Antique Phonographs*. Atglen, PA: Schiffer Publications, 2000.
- Frow, George L. *The Edison Disc Phonographs and the Diamond Discs: A History with Illustrations*. Los Angeles: Mullholland, 2001.
- Welch, Walter L. *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry, 1877–1929*. Gainesville: University Press of Florida, 1994.

Creation of Mass Culture

Mass culture emerged in America as manufacturers, performers, and the media began to locate, create, and communicate with an increasingly interconnected national audience. From the 1880s onward, newspapers, magazines, department stores, stage entertainments, and amusement parks began introducing innovations in their marketing, business practices, and format with the aim of reaching this audience. The mass scope and scale of these forms were expanded

by moving picture shows in the 1910s, broadcast radio in the early 1920s, and, later, network television. Mass culture's growth was facilitated in part by advertisers who sponsored its production and targeted its audiences. This codependent relationship with commerce along with the erosion of local cultures and the creation of new visual and verbal idioms are among early mass culture's defining characteristics.

The first decades of the twentieth century saw the rise of national magazines including *Ladies' Home Journal*, *Collier's Weekly*, and *The Saturday Evening Post* as well as the expansion of advertising agencies such as J. Walter Thompson and N. W. Ayer. The *Post* claimed a circulation of 1 million copies per week by 1909, with this figure rising to nearly 3 million by the late 1920s, while national expenditure on advertising soared and advertisers became increasingly professional, artful, and sophisticated in their techniques.

New industrial processes facilitated mass production, while improved transport links expanded geographical distribution. Manufacturers therefore needed to connect to new markets, and advertising facilitated this exchange. Advertisers provided new revenue for magazines that enabled them to offer more color images, more big-name writers, and often simply more pages. The mix of fictitious, glamorous images and lifestyle journalism presented by the magazines affirmed the advertisers' message that consuming was the key to success, while the colorful, often witty advertisements contributed to the publications' appeal.

Through magazine advertisements, billboard campaigns, and sponsorship of radio programs, branding established Quaker Oats and Coca-Cola as household names and made Uneeda and Kodak synonymous with biscuits and cameras, respectively. As cultural historian Susan Strasser observes, the quality and provenance of an item were no longer assured by personal contact between storekeeper and customer but instead through the brand manufacturer's reputation and advertised guarantees. It may also be argued that the spread of mass-market products displaced local producers, creating an increasingly homogenous nation in which store-bought goods all looked, smelled, and tasted alike.



Advertisement for Uneeda Biscuits, 1916.
(Library of Congress)

Alongside developments in advertising and the media, other forms of culture became increasingly mass-orientated. Starting out as the proprietor of a Boston curiosity museum, Benjamin Franklin Keith built a vaudeville empire that, by the early 1910s, comprised a chain of northeastern theaters. Vaudeville shows typically included dancers, comedians, magicians, and one-act plays. Keith's innovations included the continuous format that ran nonstop throughout the day, scaled-down popular-price performances of successful shows from the upmarket stage, and various measures to distance his venues from earlier variety theater's association with lewd performers and rowdy audiences. These practices attracted passing trade and lunch-hour crowds, tapped into the aspirations of the lower middle classes, and, by conforming to the era's standards of female propriety, made the theater socially acceptable for unaccompanied women.

Keith employed a stable roster of acts in his theaters, thus centralizing power in a manner similar to the Hollywood star system of the 1920s. In other ways too, the motion picture industry developed from—and eventually superseded—vaudeville. The technology developed rapidly, from the unveiling of Edison's Kinetoscope at the 1893 World's Fair through the Lumière Brother's Cinematograph to the large-screen picture houses that were commonplace in American cities by the early 1900s. The motion picture was initially viewed as a technological marvel, and its entertainment potential was only gradually realized.

Edwin S. Porter's 1903 film *The Great Train Robbery*, which introduced narrative by combining connected scenes and striking images to tell a simple story, established the form in which cinema would gain widespread popularity. The 1910s saw the emergence of the two figures central to the silent era, the director D. W. Griffith and the comedian Charlie Chaplin. While such individual pioneers made significant contributions, it was Hollywood's system of stars and genres, its publicity machine, and its production infrastructure that made film the dominant form of pre-World War II American mass culture. Whereas vaudeville theaters were dependent on the physical presence of the performer, a Chaplin movie could reach a truly international mass

➤ A BEHAVIORIST IN THE ADVERTISING AGE

In 1920 a sexual scandal forced John B. Watson, one of the leading psychologists of the early twentieth century and a leader of the behaviorist school of thought in psychology, to leave his position at Johns Hopkins University. He became an advertising man. Watson was an expert in both experimental and applied psychology. Perhaps one of his most infamous behaviorist experiments as an academic involved his research on "Albert B." Watson and his assistants conditioned a nine-month-old boy, via negative stimulus (striking a metal bar near his ear to create a loud noise) to be afraid of a white rat, a rabbit, a dog, a fur coat, cotton wool, and a Santa Claus mask.

After leaving academia, Watson found work in advertising. His theories of human behavior and his way of looking at humans as simple organisms easily conditioned by stimuli such as fear and desire made him an ideal figurehead for the advertising industry. At J. Walter Thompson, Watson quickly became a vice president, working actively on ad campaigns, including for Pond's facial cream as well as Maxwell House Coffee. More significantly, Watson applied his expertise and behaviorist theories to marketing research and sales training. While advertisers likely would have flourished without the help of academic experts in conditioning such as Watson, the association was a powerful one. If advertising seemed to mimic behaviorist beliefs, it is more likely that it was mass culture and its new social realities that influenced the priorities and beliefs of psychologists such as John Watson.

—Fred Nadis

audience, playing simultaneously at as many picture houses as the studio could supply prints to.

As with other forms of massification, selling music to mass audiences led toward homogeneity and the concentration of cultural power. However, the history of early popular music tells other stories too. For example, while eventually assimilated into the mainstream, the emergence of ragtime in the first years of the twentieth century offered a brief window of free expression to African American performers. In the following decades, black bandleaders such as Count Basie and Duke Ellington more fully combined

popularity with autonomy and artistic innovation. Bringing mass entertainment into the private sphere, the radios and record players—popular by the early 1920s—brought new freedom of choice. Historian Lizabeth Cohen has shown that for the working-class residents of Chicago, jazz records and ethnic radio programs, such as Italian-language broadcasts, fostered local communities and specialized cultural practices.

The Great Depression of the 1930s and the onset of World War II engendered responses that demonstrated the power and significance of mass culture. Franklin Roosevelt’s “Fireside Chat” radio broadcasts, Frank Capra’s 1936 comedy *Mr. Deeds Goes to Town*, John Steinbeck’s best-selling novel *The Grapes of Wrath* (1939), and Norman Rockwell’s 1943 *Four Freedoms* series (based on a Roosevelt speech and used to advertise war bonds) all relied on mass media to communicate powerful political messages.

—John Fagg

Bibliography

- Cohen, Lizabeth. “Encountering Mass Culture at the Grassroots: The Experience of Chicago Workers in the 1920s.” *American Quarterly* 41(1) (1989): 6–33.
- Nasaw, David. *Going Out: The Rise and Fall of Public Amusements*. New York: Basic Books, 1993.
- Ohmann, Richard. *Selling Culture: Magazines, Markets, and Class at the Turn of the Century*. London: Verso, 1998.
- Strasser, Susan. *Satisfaction Guaranteed: The Making of the American Mass Market*. Washington, DC: Smithsonian Institution Press, 1989.

Mass Culture, Advertising, and Propaganda

The term “mass culture” and theorists’ concerns about a populace easily manipulated via the media and advertising did not emerge fully until after the rise of totalitarian regimes in Europe. Similar concerns, however, were triggered by the propaganda campaigns of World War I. While novelist John Dos Passos (1896–1970) depicted public relations and advertising men as among the chief villains of the age, other intellectuals such as Walter Lippman argued that democracy would flounder if experts did not step

in to manipulate and unite public opinion for rational goals.

The public relations industry came of age in the early twentieth century, serving as an elite adjunct of the already-established advertising business. Experts in advertising and public relations such as Bruce Barton and Edward Bernays, borrowing from behaviorist theories of psychology, studied new ways to sell positive images not only of products such as corn flakes but also of powerful clients such as corporations, statesmen, and business leaders.

Radio, which emerged in the 1920s, proved to be another medium, like newspapers, that was ideal for saturation advertising and image making. With Edward Bernays in charge, for example, the American Tobacco Company launched a radio advertising campaign in 1928 in the United States for Lucky Strike cigarettes, and in a two-month period sales increased by 47 percent. Bernays also mounted events to change public perceptions of cigarettes, particularly to make them more appealing to women. When he determined that women did not like the green package of Lucky Strike cigarettes, rather than change the color he slowly persuaded women that green was fashionable by mounting a “Green Fashion Luncheon” and a “Green Charity Ball” and by convincing lead designers to rely more on green. In 1942, however, the green background did give way to the current white.

The connection of advertising, public relations, and propaganda became a topic for debate during the 1920s. In the aftermath of World War I, people slowly became aware of the extent to which Great Britain’s Ministry of Information and Enemy Propaganda Department had orchestrated war news to inflame patriotism and gain allies. Journalist Walter Lippman’s *Public Opinion* (1922), which drew many of its examples from events surrounding World War I, argued that inevitably, individuals live in a “pseudo-environment” clouded by self-interest and misinterpretation and that democracy required a class of experts to guide public opinion and “manufacture consent.”

Edward Bernays, who had served on the Committee on Public Information in the United States that devised propaganda for the U.S. war effort, wrote two books during the 1920s, *Crys-*

► BARTON'S CLIENTS

Bruce Barton (1886–1967) was one of the major advertising and public relations men of the 1920s. Like Edward Bernays, Barton had worked with the U.S. government's World War I propaganda unit, the Committee on Public Information. Following the war, Barton crafted articles and strategies that helped elect Calvin Coolidge president. Barton also consulted with General Motors (GM) and aided the giant holding company in crafting a new public and internal image as a family, aiding GM president Alfred P. Sloan Jr.'s efforts to centralize and unite GM's many holdings.

Barton, however, is best known to historians for his curious effort to turn Jesus into one of his clients. In 1925 Barton published the best-seller *The Man Nobody Knows*. A fervent Christian and fervent booster for business, he attempted to reconcile these two worlds. He repositioned Jesus as a supreme businessman and advertising man. Jesus's message, according to Barton, included

the idea that the greatest sin was to repress oneself. Jesus was cheerful, fit in well with crowds, had a pleasant smile, and knew how to offer great quotes. Barton's long career included the writing of several other religious-inspired books; he also served as a congressman from New York and made a failed bid for the U.S. Senate. Barton remained head of the advertising firm BBDO into the 1960s.

—Fred Nadis



Advertising pioneer Bruce Barton in the 1920s. (Library of Congress)

tallizing Public Opinion (1923) and *Propaganda* (1928). In the latter, he remarked that propaganda is the “executive arm of the invisible government” and argued, like Lippman, that such techniques were important to create “order out of chaos.” The possibility of linking modern advertising techniques to politics also was not lost on Adolf Hitler. In *Mein Kampf* (1925), he argued that the public, easily malleable, needed “simple and consistent” messages. The results, as he correctly predicted, “are almost beyond our understanding.” In 1933 the Nazis, after coming to power, created as their first new institution a Ministry of Propaganda.

—Fred Nadis

Bibliography

- Cull, Nicholas J. *Propaganda and Mass Persuasion: A Historical Encyclopedia, 1500 to the Present*. Santa Barbara, CA: ABC-CLIO, 2003.
- Lippman, Walter. *Public Opinion*. New York: Harcourt, Brace, 1922.
- Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920–1940*. Berkeley: University of California Press, 1985.
- Marchand, Roland. *Creating the Corporate Soul: The Rise of Public Relations and Corporate Imag-*

ery in American Big Business. Berkeley: University of California Press, 1998.

Radio, Shaper of Culture

Radio, as a communications medium, had its beginnings in the early twentieth century, and its impact on shaping world cultures and populations was significant in the period from 1900 to 1945. As a communications medium, radio took on an industry structure of its own. There were two identifiable segments: the communications medium providers and the communications medium audience. Communications medium providers encompassed all aspects of transmission and content of the varied forms of communications they provided, which included maritime, military, and public communications. The communications medium audience included all cultures and populations of the world capable of receiving radio-based communications. Forms of communications such as propaganda, special events, news, and entertainment distributed by radio would affect people locally as well as

worldwide, thus providing a significant departure from communications in the nineteenth century.

Telephone and telegraph communications existed before 1900 but were primarily communications over hardwire facilities. Signals were transmitted point to point over landline and undersea cable facilities principally by Morse code, but later some signals were transmitted by voice. Guglielmo Marconi, an Italian inventor and electrical engineer, identified and pursued the need for wireless communications and experimented with the transmission of Morse code telegraph signals via radio transmission in 1895. Lee De Forest, a U.S. inventor, developed a three-electrode vacuum tube amplifier by 1906, which provided the technology for radio transmission to include speech and music. The emphasis of radio communications would change to include public communications, which would be point-to-multipoint communications with signals originating from a central radio transmitter and accessible by anyone with a radio receiver. This new medium of radio communications would continue to grow, impact, and shape the peoples of the world in the early decades of the twentieth century.

The first decade of the twentieth century saw maritime communications expanding with the addition of a communications site, called the radio shack, aboard the ships at sea that provided a link for shore-to-ship, ship-to-ship, and ship-to-shore wireless telegraph communications. The safety of maritime shipping increased, which benefited both commercial and military transport of goods. World War I military communications were enhanced through radio and wireless telegraphy, which provided instantaneous communications between military commanders and their subordinates. Radio also served as a governmental tool for the dissemination of propaganda and special events; furthermore, it saw the beginnings of news distribution to major world centers. The events of the war captured the attention and concerns of participants and nonparticipants as well. Radio communications, with increased transmission power and increased receiver sensitivity, made war news readily available to a concerned and antici-

pating world audience. Radio had truly come of age as a communications medium.

The 1920s witnessed increased emphasis on providers' capabilities and audience participation. World War I had instituted technological changes in wireless communications, which enabled providers to reach masses of people simultaneously, a significant improvement over previous hardwire communications. Lower receiver cost made radio accessible to a large majority of the audience base. The providers' response to meet this increased audience availability led to a networking of radio transmission stations, which were usually within countries. However, provider structure, programming, and program content came into question, while many questioned whether broadcasting via radio communications should be a cultural force and whether it should be controlled.

The United States, the Soviet Union, and Britain took different approaches to content, control, and financing. The United States opted for a free enterprise approach, with content being primarily entertainment and news, competition rather than government control, and financing supported by advertising revenues. The Soviet Union favored political and news content with centralized government control and financing. Britain deemed more appropriate a public service approach with mixed programming content, some government control, and financing based on revenues of license fees levied on receiver owners. At this time, the audience had little or no say as to what broadcast content they would receive. In Britain, the British Broadcasting Corporation (BBC), incorporated in 1927, had as its goal entertainment, information, and education of its audience. This approach would expand and become a model for broadcasting in the British empire and elsewhere in the world. Varied locations and forms of radio communications resulted in a unifying effect as well as a cultural guidance in the audience base. The impact and effects of radio communications would significantly rise as the twentieth century progressed.

The third decade of the twentieth century, known as the Golden Age of Radio, saw radio communications and broadcasting proliferate

throughout the world. As a tool for providing news and informational, educational, and entertainment programming, radio broadcasting would immensely affect audiences culturally. Australia, with its vast openness, used radio as the vehicle to provide children with at-home educational training; in addition, Australia's radio broadcasting was fashioned on the BBC model. The Great Depression induced audiences to seek relief from their downtrodden circumstances. Radio broadcasting in the United States recognized this opportunity and incorporated diversity and new genres (westerns, detective stories, dramas, soap operas, comedies, romances, and variety shows) into programming. Serializations such as *The Lone Ranger* provided a weekly opportunity for audiences to follow the adventures of their favorite radio characters. Broadcasts of live performances of variety shows as well as band and orchestra performances made the audience feel like real participants; listening in felt just like being there. Furthermore, in the United States, sponsored programs and later the selling of commercial time became methods of revenue generation and part of the programming packages. This allowed businesses and their products to directly influence the radio audience as well as their way of life.

An example of the effect that broadcasting had on the cultural aspects of the radio audience became very apparent on October 30, 1938, when Orson Welles broadcast an adaptation of H. G. Wells's *The War of the Worlds*. A large proportion of the radio audience believed the drama to be an actual news report of a Martian invasion of earth, and many panicked even though a disclaimer had been announced at the beginning of the program. Another example of radio's impact on daily life occurred on September 3, 1939, when a number of news reports were communicated around the world by radio. First, Britain declared war on Germany. Then, King George VI of Britain notified the members of the British empire that Britain had declared war on Germany; hence, in the face of these events, Canada broadcast that it would stand with its mother country, Britain. However, President Franklin Delano Roosevelt had a message broadcast that the United States would remain neutral.

World War II began in Europe via radio broadcasts; thanks to radio communications, a world radio audience experienced the changing world events as they happened. The world had grown smaller and more connected through the medium of radio communications.

During the first half of the 1940s the world was at war, and politicians quickly recognized the power of radio communications to reach the masses with their message in a timely and cost-effective manner. President Roosevelt utilized radio in his famous fireside chats in order to present his views directly to the American people. Adolf Hitler, Fuhrer of Germany, through his multimedia propaganda campaign during World War II also used radio to convey his vision of what the Third Reich should and/or could be for the German people. Radio during World War II played an important role in both the military as well as civilian segments of the worldwide population. Radio became the backbone of military communications, with new provider equipment supporting the military mission and its specific military audience. Additionally, radio broadcasting provided a crucial link between the military in the field and the home front. Civilian radio broadcasting during this period continued to provide current events, news programming, and expanded versions of the genres of the 1930s. In the decades that followed, much of this format was transferred to the new medium of television. Radio communications and radio broadcasting were indeed forces that significantly motivated and changed world populations and were cultural shapers during the first four decades of the twentieth century.

—Delbert Danielson and Robin Danielson

Bibliography

- Lichty, Lawrence W., and Malachi C. Topping. *American Broadcasting: A Source Book on the History of Radio and Television*. New York: Hastings House Publishers, 1975.
- Seldes, Gilbert. *The Great Audience*. 1950; reprint, Westport, CT: Greenwood Press, 1970.
- Short, K. R. M., ed. *Film & Radio Propaganda in World War II*. Knoxville: University of Tennessee Press, 1983.

Disease and Society— The Influenza Pandemics

The influenza pandemics, perhaps the deadliest pestilence in contemporary history, ran rampant throughout much of the world in 1918–1919 and had a tremendous social impact in all world regions. The constant contact between multitudes of troops from various regions of the world in the trenches of the western front during World War I spread the influenza virus, a condition that was exacerbated upon the return of the troops to their countries of origin. The Spanish flu, as it was known at the time, spread in places as far as Australia, South Africa, and the United States to European colonies in sub-Saharan Africa, South Asia, and China. In the course of roughly two years, the Spanish influenza pandemics claimed an estimated 30 million to 50 million lives. The Spanish flu depleted the human organism, particularly the respiratory system, making it vulnerable to other respiratory diseases such as pneumonia. This made it particularly deadly to people with poor health who were also exposed to unsanitary conditions, such as soldiers on the front lines or people living in poverty. However, the disease did not distinguish between gender, ethnicity, class, or religion as it swept throughout the world indiscriminately. The Spanish flu pandemic manifested itself in three major waves

lasting from March 1918 well into June 1920. National, regional, and local governments the world over responded as best they could to quell the catastrophe, often resorting to severe measures or oftentimes futile experiments.

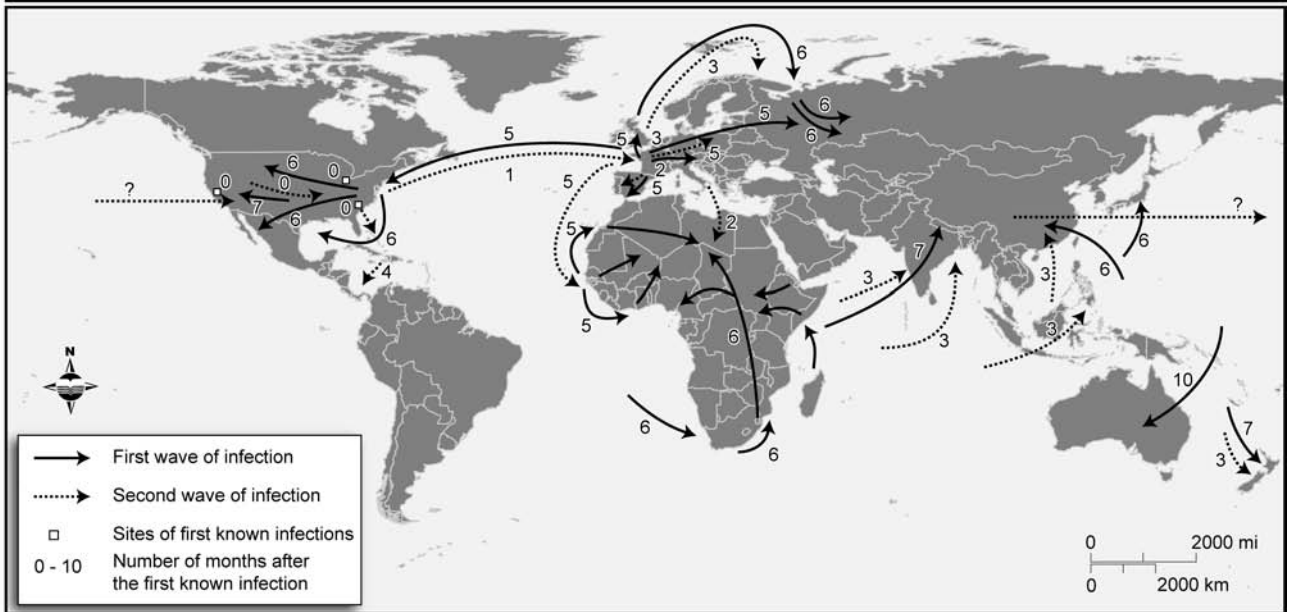
In early 1918 many army camps in the United States began reporting (starting with Fort Riley, Kansas) the outbreak of grippe and/or severe cold among conscripted recruits. The severity of the outbreaks was a cause for alarm, as it led to an increasing number of deaths among the troops. The U.S. Army was responsible for training American doughboys en masse for deployment to the European theater of war along the western front. The reluctance of the federal government to quarantine the troops due to the perceived necessity of sending them overseas increased the incidence of influenza among the scattered army camps in the United States. The outbreak of influenza among the troops in camps and in transit led to the gradual outbreak of the disease in urban centers, particularly in East Coast cities. American soldiers and sailors in transport ships sailing across the Atlantic were prone to the disease, as they were gathered en masse in small areas. Thousands did not survive the voyage to the western front, and those who did spread the disease into Europe.

Gradually, the outbreaks of influenza cases placed a heavy strain on municipal governments across the United States, as they were unable to cope with the increasing numbers of cases and deaths. In cities such as New York, Philadelphia, and Boston an overload in hospitals, morgues, and other medical institutions, due to the large amount of influenza cases, created a situation whereby impoverished people already exposed to the disease and living in squalor died within days. Furthermore, large Liberty Loan rallies to encourage civilian sponsorship of war financing brought large numbers of people together in public spaces, further spreading the virus. The City of San Francisco required the use of gauze masks as a means to quell the disease, imposing hefty fines on those who refused or were caught not wearing them. City governments, while actively intervening by providing medical care and social services, ultimately stressed their own capabilities as city workers, doctors, and nurses became ill themselves. However, many



Soldiers of the 39th Regiment wear protective masks as they march through the streets of Seattle during the influenza epidemic of 1918, prior to departing for France. (American Red Cross)

INFLUENZA PANDEMIC 1918-1919



volunteers filled their ranks as needed in acts of altruism.

The contact between troops from the various Allied nations, colonial troops, and even their Central Powers enemy rapidly spread the disease. Given the increased movement of troops across oceans, the disease rapidly spread into Europe, Oceania, Africa, and Asia. Civilian governments in Europe, much like their counterparts across the Atlantic, had to cope with the increasing amount of people contracting the disease and then expecting their governments to care for them. However, given the exigencies of war and the needs of the troops at the front, European governments of both the Allied and Central Powers did not respond adequately. In the midst of the Russian Revolution and subsequent civil war, droves of Russian troops and civilians on both sides fell ill to influenza. Outbreaks in other world regions, such as Asia (particularly China), Australia, and Africa, were also prevalent, and their civilian governments proved unable to cope with the large numbers of dead and ill. Australia imposed a maritime embargo to cut itself off from contact, but this proved futile because the disease had already spread domestically. Waves of outbreaks ebbed and flowed, causing governments either to

➤ TYPHUS AND WORLD WAR I

Even as the Spanish flu swept across the world in the last year of World War I, typhus had already led to hundreds of thousands of deaths amid the slaughter of the trenches. The squalor and filth of the trenches made these locales ideal for the spread of lice, which carried the disease. Many troops on both the western and eastern fronts were exposed to typhus, leading to the deaths of thousands of soldiers already exposed to shell and machine gunfire. Fatalities from typhus were typically 10–40 percent of the cases of infection. Moreover, typhus was a major cause of death for those nursing the sick, leading to a considerable mortality rate among nurses and medics. From 1918 to 1922 typhus was responsible for approximately 3 million deaths out of an estimated 20 million to 30 million cases. Large populations of refugees and displaced peoples living under unsanitary conditions after the war were also exposed to the disease. However, the use of DDT by authorities to wipe out lice prevented the widespread incidence of death from this disease.

—Abraham O. Mendoza

become complacent when the danger subsided or to nearly panic when it returned.

As the guns fell silent on November 11, 1918, and the armistice ended hostilities, the Spanish flu continued to rage throughout the world. As multitudes celebrated the end of World War I with large parades and celebrations, they continued to spread the virus. The Paris Peace Conference and its continuous meetings in 1918 and 1919 led to the illness of various delegates, most notably French premier Georges Clemenceau and U.S. president Woodrow Wilson. The demobilization of millions of troops back to their countries of origin immediately set the course for further outbreaks as well. However, newspaper reports of influenza outbreaks were subsumed under headlines of peace and the end of the war. In the United States the outbreaks killed an estimated 500,000 to 675,000 people. Britain had an estimated 250,000 dead, and France had approximately 400,000. In Canada approximately 50,000 died, and Australia had nearly 12,000 dead from influenza.

Outside the West, particularly in China and Africa, the disease had already claimed millions of lives given the social and economic conditions of those countries vis-à-vis Europe and the United States. Whole villages in isolated regions in Africa died after exposure to the disease. In the West, those most vulnerable to the disease, particularly the poor, the elderly, and children, already weakened by the dearth of food and widespread destitution, were exposed to the illness, and a significant number died. People with access to better health care were more likely to survive influenza. However, local governments in Sydney, Australia, and in various municipalities in Japan were able to quarantine and prevent the spread of the disease through restrictive health regulations that prevented movement and helped to establish resources for providing services to those who needed it the most. Exact numbers of total dead can only be estimated, but they range anywhere from 30 million to 50 million worldwide, killing more people than World War I.

—Abraham O. Mendoza

Bibliography

Barry, John M. *The Great Influenza: The Epic Story of the Deadliest Plague in History*. New York: Penguin, 2004.

Crosby, Alfred W. *America's Forgotten Pandemic: The Influenza of 1918*. New York: Cambridge University Press, 1989.

Phillips, Howard, and David Killingray, eds. *The Spanish Influenza Pandemic of 1918–19: New Perspectives*. New York: Routledge, 2003.

Impact of Modernization on the Family

In the first half of the twentieth century, many nations around the world emphasized progress as a key social goal. Countries in Europe, Asia, and North America looked specifically to modernization as a way to achieve social progress in this era. In some countries, progress through modernization centered on social reform or new technological tools that improved working conditions and everyday life. In other parts of the world, revolution became an important feature of modernization and social progress.

Modernization refers to the process of becoming modern, or up-to-date. Modernized societies tend to utilize and support the newest tools and ideas available and usually have industrialized economies. By 1900 many states around the world had become industrialized and relied on automated systems for production and transportation systems. With the potential of these new tools to improve people's lives, many around the world believed that the twentieth century would be an era of unprecedented opportunity—or progress—for all.

The changes that modernization brought influenced family life in various ways. In the early twentieth century marriage signaled the beginning of family life in most nations and empires. Often, married couples would continue to live with parents or grandparents even after having their own children, but no matter how many generations lived in a household, marriage was the core of the family. Patriarchy, the idea of the father as the family head, remained an ideal in many Western and Eastern countries. In the Western world companionate marriage based on love began to be more commonplace, while in Eastern Asia and some industrializing parts of the world arranged marriages still dominated.

Before industrialization, many individuals worked out of their homes or had shops near

their homes, and often all family members participated in work efforts daily. As countries became more industrialized and modernized and factories became the primary place where goods were produced—from clothing to meat packing—people's homes became less connected with their employment. In middle- and upper-class families, gender roles reflected this separation between home and work: women remained in charge of domestic life, and a woman's ability to avoid paid employment became a mark of privilege and class status. In lower-class families, however, women worked throughout their lives, doing paid work in their homes or in separate workplaces in addition to their domestic duties.

In the twentieth century women began to work more either before or after marriage, which helped them develop expendable income for leisure activities if they were middle or upper class or provided income necessary to sustain a family. Feminism emerged as an important movement in Europe and the United States as women fought for voting rights and limits on working hours to improve workers' health. In the Soviet Union and China where communist revolutions changed the face of those countries, women were granted at least token equality. Divorce also began to increase in the first half of the twentieth century, although in small numbers, with the emergence of more lenient divorce laws.

The growth of industrialization and transportation networks (such as railroads) in the nineteenth century helped stimulate the expansion of cities in industrialized countries around the world. The availability of both skilled and unskilled labor helped many men and women find jobs and thus be able to afford marriage. Rumors of new opportunities elsewhere led many individuals and families to migrate to cities and even other countries, where they hoped to build new and better lives. While such migration was not new, migrants in the early twentieth century usually ended up in heavily populated urban areas, where low-paying, unskilled factory jobs or domestic labor dominated. Because so many jobs provided low wages, family poverty became a major urban issue. The settlement house movement, begun in Britain and later adapted in the United States, sought to assist lower-income and

➤ FAMILY LIFE UNDER THE NEW IMPERIALISM

Through World War II, much of Africa and Asia remained under foreign imperial rule. These and other less-industrialized regions of the world experienced far fewer changes as a result of modernization than did their imperial rulers. Because places such as India, Kenya, and Ghana were ruled by other nations, railroads and other technological advances did come to these places but in very limited ways.

In the most rural or distant parts of such colonies, far from urban centers of colonial power, family life continued as it had for many years with little influence from the West. Colonization brought missionaries who tried to change indigenous people's lives, to make them more Western and therefore "better" or more progressive. The largest influence perhaps came in colonies where rulers forced colonists into military support roles, such as in Kenya and in western Africa, where the British and the French conscripted men to serve in colonial militaries, particularly during the world wars.

In large cities in particular, African and Asian men and women witnessed the changes that industrialization and modernization brought, sometimes through access to new work opportunities but often simply through increased contact with imperial rulers who were themselves trying to implement modern ideas and tools.

—Tanya L. Roth

immigrant families by providing both formal and life skills educational opportunities. At the same time, the upper-class men and women who led such social reform movements often sought to impart their own vision of family roles to the individuals they helped.

Although most Latin American countries had obtained independence from foreign imperial powers by the mid-nineteenth century, movement toward industrialization remained uneven in the first part of the twentieth century. Some cities, such as Rio de Janeiro or São Paulo, Brazil, experienced economic and social progress similar to that in Europe or the United States. In more rural areas, however, preindustrial family patterns continued, with an emphasis on family labor to produce farm goods. Many families in Latin American countries remained under the influence

of Western nations such as the United States as well as the Roman Catholic Church. Because of Latin America's heavy export trade to the rest of the world, relationships with former European imperial powers such as Spain persisted to varying degrees. Through these relationships, Latin Americans gained exposure to emerging Western ideas of gender roles and family structure. The construction of the Panama Canal and the U.S. acquisition of Puerto Rico further increased American political and cultural influence.

Two key events of the first half of the twentieth century made particularly strong impacts on family life. World War I and World War II disrupted family life temporarily as men (both fathers and sons) left home to fight for their countries. Women entered jobs previously held only by men in order to continue the nation's economy during wartime. The absence of men from the home front for periods of up to seven years especially changed women's and children's lives. During the two world wars, women's employment rose dramatically as women entered wartime production work and helped to build all sorts of support materials for military use in national defense. At home during the wars families also learned to make do with fewer resources, but in general, despite the absence of husbands and fathers, family life continued. Marriage ages lowered during the wars, particularly World War II.

The deaths caused by the wars reshaped family life for many years. In Britain after World War I writers spoke of the "surplus one million" women who would never marry because of the number of men killed by the war. After the dis-

ruptions these wars wreaked on family life, many nations sought to reestablish traditional family ideals. Women's roles as mothers and wives grew to be of immense importance to various countries' efforts to make up for the population loss of war and to return to normalcy. By the end of World War II, although modernization had changed the family in many ways, many nations around the world harkened to the importance of the traditional family structure founded on marriage. In the first half of the twentieth century families gained greater access to contraception or family planning knowledge, and in many areas of the world family sizes had begun to decline. Women continued to move into the workplace before and after marriage, while children moved increasingly out of paid jobs and spent more time in school and youth activities instead.

—Tanya L. Roth

Bibliography

- Calvert, Peter, and Susan Calvert. *Latin America in the Twentieth Century*. New York: St. Martin's, 1990.
- Coleman, Marilyn, Lawrence H. Ganong, and Kelley Warzinik. *Family Life in 20th-Century America*. Westport, CT: Greenwood, 2007.
- Hershatter, Gail. *Women in China's Long Twentieth Century*. Berkeley: Global, Area, and International Archive, University of California Press, 2007.
- Higonnet, Margaret Randolph, et al., eds. *Behind the Lines: Gender and the Two World Wars*. New Haven, CT: Yale University Press, 1987.
- Overy, R. J. *The Inter-War Crisis, 1919–1939*. 2nd ed. Harlow, UK: Pearson Education Limited, 2007.

■ Introduction: Colonialism in Shaping Society and Culture

The creation and collapse of empires is not a phenomenon of modern history alone but instead is a theme revisited time and again throughout human experience. By the end of the nineteenth century, European powers used their burgeoning industrialization as an excuse for collecting colonies in the hope that the usurpation of raw materials would maintain eco-

nomic growth. Meanwhile, colonies also served as a ready locale for undesired members of society, as was the case for Australia, for example. Nations were also motivated by those reasons for empire as well as enhanced national rivalries in the face of British success.

The most obvious location of European imperialist rivalry can be seen in the events surround-

ing the scramble for Africa, which took place between 1871 and 1912. In this short period of time, the bulk of the African continent was occupied and claimed by the British, French, Belgian, Dutch, Portuguese, and German governments. Native populations, which were largely devastated by military, missionary, and economic intervention in their social, political, and cultural lives, had no influence on the partition of their lands. Driving the desire to possess Africa was not only the hope that immense natural wealth would result but also increasingly racist pseudo-scientific beliefs in the superiority of white people over people of color. The theory of social Darwinism (which was never put supported by Charles Darwin) and a variety of religious doctrines were used by imperialist politicians to justify white rule in Africa and throughout the non-European world. Such ideologies prompted theories of Orientalism, which classified knowledge about native peoples in ways that essentialized their cultures and made their societies easier for colonial governments to control. That coupled with the military superiority of Europeans made successful resistance to imperialism difficult to mount.

The expansion of Europeans throughout the globe turned a European political scuffle in the Balkans into World War I in 1914. With the defeat of the Ottoman empire in 1918 and its subsequent dismantling, along with the defeat of Germany and its loss of imperial prestige in the Treaty of Versailles (1919), Britain and France gained even more colonies particularly in the Middle East, where they had already exerted great influence for several decades.

In Palestine a new major European colonial movement—Zionism—had been flourishing, with British support, since the late nineteenth century. From the 1880s, Jews from Europe had acquired land and established settlements with the goal of creating a Jewish nation-state in Palestine, the ancient land of Israel. When the British took control of Palestine at the end of World War I, Jewish settlement increased, but that caused major strife in the region because the vast majority of the population consisted of Arabs who feared losing control of their nation to European colonists. Although the British tried to curb Jewish immigration in 1939 after serious

strife between Jews and Arabs left them fearful of losing access to petroleum reserves in the Middle East, the monumental destruction of European Jewry during World War II coupled with the superior military organization of the Jews in Palestine and open support from the United States led to the creation of a Jewish state in 1948. For Jews, the founding of the State of Israel was a relief from a world riddled with anti-Semitism, but for most Middle Easterners this was a new form of European colonialism at a time when many colonies were calling for independence.

—Nancy Stockdale

Colonialism in Africa

While there are examples of colonialism that date back to the ancient world, and while colonial empires in the Western Hemisphere played an integral part in Europe's economic development from the fifteenth through eighteenth centuries, the term "colonialism" in reference to Africa is generally used to refer to the expansion of European power and influence in the late nineteenth century, during a time often referred to as the Age of Imperialism. The demands of the industrial revolution placed increased pressures on European nations to secure sources of raw materials, markets for manufactured goods, and new opportunities for investment. European nations looked outside their borders to secure what they needed for continued prosperity.

As a result of industrialization, European nations were no longer interested in negotiating with sovereign African states but rather sought to exert direct political and economic control of resources and markets. Moreover, by the end of the nineteenth century, industrialization had given European nations the military means they needed to ensure their interests were served in Africa. The last barrier to European expansion into Africa fell in the 1850s when European medical advances decreased the impact of malaria. However, by 1880 there were no real indications of Africa's susceptibility to European power. An overwhelming majority of Africans enjoyed a sovereign existence, and so what happened in the next 20 years was in many

ways surprising and sudden. Between 1880 and 1900, 90 percent of Africa was occupied by Britain, France, Germany, Belgium, Portugal, Spain, and Italy; only Ethiopia and Liberia escaped colonization.

Nineteenth-century Europe was characterized not only by the profound economic transformation caused by the industrial revolution but also by the development of nationalism often expressed in an exaggerated promotion of a country's prestige. European nations sought not only economic and political security but also recognition, and overseas colonies became status symbols for their influence. The influence of nationalism cannot be underestimated in the expansion of the colonial system. Colonies not only ensured necessary elements for continued economic development but also determined status within Europe's community of nations.

The other element in Europe's new relationship with Africa centered on the moral justification for colonialism—the civilizing and Christianizing mission, the so-called “White Man's Burden.” The moral justification centered on the belief that colonialism elevated the colonized, that European control of Africa would provide the economic, political, and social infrastructure necessary for the development and modernization of the continent and its peoples. Such attitudes exhibited the overt ethnocentrism that is inherent in colonialism. But if the social and religious justifications for European colonial control over Africa were insufficient, the words of French poet Hilaire Belloc illustrate the European attitude toward Africa on the eve of colonization: “Whatever happens we have got; the Maxim gun and they have not.”

As European states sought to extend their presence in Africa, concern arose among the European powers of the potential for conflict that the “Scramble for Africa” could cause. So to decrease the potential for clashes, representatives of all major European powers met at the Berlin West Africa Conference in November 1884 to determine the “rules of the game.” There were no African representatives in attendance. The Berlin Conference proved effective in keeping European conflict to a minimum during the era of colonial expansion, but now the practical questions of how to oversee the new colonies

quickly emerged. Generally, two systems, indirect and direct rule, were established to administer the colonies. The British implemented the policy of indirect rule, developed by F. J. D. Lugard, high commissioner of the British Protectorate of Northern Nigeria. Britain ruled through existing tribal authorities where possible. These authorities continued to oversee the population using traditional systems and customary laws; the British simply administered from above. This system required the least effort and cost and preserved African political traditions, thus having moral benefits as well as practical ones. In areas where strong, highly centralized states existed, indirect rule preserved traditional tribal community structures, but in areas where cultural identities were more complex and fluid, the British had to create authority structures where none were thought to exist. As a result, colonial powers created artificial communities and authority structures that necessitated rigid ethnic identities and sowed the seeds for future conflict. Generally, however, the system of indirect rule left indigenous customs and practices undisturbed—although the activities and demands of Christian missionary organizations did not. Where there were no obvious indigenous political elites, the British created them, and where local elites proved uncooperative, the British removed and replaced them.

Those local elites who cooperated were rewarded, as the British confirmed their authority and often unwittingly removed restrictions on a chief's power by abolishing traditional systems of checks and balances. Local authorities were expected to maintain order, collect taxes, and organize labor and military drafts. They were under the supervision of British district officers who served as intermediaries between local authorities and the central colonial administration. While the British system of indirect rule appeared to function with little disruption of traditional authority, in actuality, local authorities often found their legitimacy challenged as they were seen as simply implementing and enforcing British desires and as being complicit in the maintenance of a colonial system that denied opportunities to the African population.

Most other European powers initially used direct rule, a model of governance most associ-

ated with the French. Using the model established in France, the French divided up their colonies into districts, assigned a French commissioner to oversee them, and appointed a governor-general to administer all the districts in a single colony. Colonial administrative boundaries were often established to divide up powerful tribes to weaken their resistance to French policy, and powerful African leaders were undermined or replaced with more cooperative figures. The French commissioners were responsible for tax collection, labor and military drafts, overseeing public and social works, acting as a local judiciary, and enforcing the decisions of the governor-general. Africans had access to positions in the lower levels of the French bureaucracy but generally had to be considered assimilated into French culture and fluent in the French language. The French generally had two policies for the African population, assimilation and association, and they vacillated between the two throughout the colonial era. Assimilation of the African was the stated goal of French colonial policy as they sought to transform the African in the Western image. This policy rested on the assumption of the superiority of French culture above all others and to a certain extent on the legacy of the Enlightenment's ideals of the universality of man. For those not capable of assimilation, the French established association, a kind of collaboration with locals. As the colonial era wore on, the French increasingly embraced elements of indirect rule. Direct rule was too costly, required too much manpower, and was not as effective in dealing with local customs and communities.

After World War I most colonial powers implemented elements of indirect rule, although the timing varied throughout the continent and was often determined by the nature of the colonies' populations. The colonial system was expanded as administration extended into rural areas usually under the direction of a district official and small native army under European command. Colonial policy matured, and while the development of natural resources continued to be a focal point of the system, colonial authorities attempted to extend social services and opened up some limited mobility to Africans within the colonial bureaucracies as a

growing Westernized and educated African class emerged. In some colonies the expanded opportunities for Africans within the system were met with segregation and increased race consciousness among the European settler elite. But ultimately the impact of the two world wars resulted in the transformation of the colonial system into a type of "sacred trust" that was to be managed by Europeans until Africans were capable of self-government. Labor unions and young political activists in Africa, influenced by socialism, began pressuring the colonial systems to change. By the late 1940s colonial occupation was seen as costly and was increasingly criticized; by the 1950s African nationalist movements started sweeping the continent.

There has been great debate about the impact of colonialism on Africa. In the grand scheme of the continent's history, the colonial era lasted a short time—less than a century. Most early accounts of the colonial period were written by Eurocentric scholars who emphasized the positive impact of colonization by focusing on the civilizing mission, the introduction of new technology and medical advances, and the onset of modernity. But the era of African nationalism resulted in the emergence of Afrocentric and Marxist analyses of the colonial era that were hardly sympathetic to the European point of view. Generally, these studies concluded that the colonial era interrupted Africa's natural development and condemned the continent to stagnation and continued exploitation. It is clear that African nations emerged as artificial creations of colonial powers with populations often burdened with rigid, artificially created ethnic identities. While European political institutions were established with the intent to develop forms of representative democracy, the lack of African participation and access to those institutions during the colonial era undermined their legitimacy even after the colonial system was dismantled and Africans took control of the executive, legislative, and judicial branches of government.

In the arena of social impacts, those who promote the benefits of colonialism often refer to the introduction of modern medicine and the new economic opportunities and modern amenities provided by urbanization. Such arguments are often countered by the criticism that these

benefits were limited in number and access. Other critics comment on the negative impact of colonialism on women, who often found themselves pushed into domestic activities and out of traditional economic activities and social roles.

But the topic most debated on the social and cultural legacies of colonialism is that of the impact of Christianity. The introduction of Christianity and its adoption by some Africans introduced new social tensions into African society. Converts adopted European behaviors and dress, gained access to modern medicine and European education, and as a result abandoned traditional practices. African societies split into two groups: a small, Christian European-educated Africa elite and a larger traditional, predominantly rural and illiterate group. The adoption of Christianity meant undergoing Westernization and resulted in many Africans being alienated from both cultures. They were no longer traditional, and in fact often openly condemned anything traditional, but neither were they allowed, despite their dress, education, and behavior, to be European. It was in this transformation that the seeds of colonialism's dismantling were planted. For it was out of the Westernized, European-educated African elite that movements for Africa's independence would grow. The colonial era came to an end with the emergence of independence movements in Africa. The century of European domination and colonialism was an extremely important era in Africa's history, one whose legacy continues to impact and direct the continent's present and future.

—Heather Thiessen-Reily

Bibliography

- Achebe, Chinua. *Things Fall Apart*. New York: Anchor Books, 1994.
- Adu Boahen, A. *African Perspectives on Colonialism*. Baltimore, MD: Johns Hopkins University Press, 1989.
- Adu Boahen, A. *Africa under Colonial Domination 1880–1935. Vol. VII, General History of Africa*. Abridged ed. Berkeley: University of California Press, 1990.
- Falola, Toyin, ed. *Africa*. Vol. 3, *Colonial Africa 1885–1939*. Durham, NC: Carolina Academic Press, 2001.
- Oliver, Roland. *Africa since 1800*. Cambridge: Cambridge University Press, 2005.

Packenham, Thomas. *Scramble for Africa*. New York: Harper Perennial, 1992.

Robinson, Ronald, and John Gallagher. *Africa and the Victorians*. New York: St. Martin's, 1967.

Thiessen-Reily, Heather. "Colonialism." In *Africa and the Americas: Culture, Politics, and History*, edited by Richard M. Juang and Noelle Morrisette. Santa Barbara, CA: ABC-CLIO, 2008.

African Cities in the Age of Colonialism

Africa contained vibrant urban societies long before European colonialism. For centuries, cosmopolitan towns such as Mombasa on the East African coast or the inland Sahel city of Timbuktu linked Africa with the rest of the globe through long-distance trade. Beginning in the late nineteenth century, African cities underwent a period of momentous change as a result of colonialism. In less than a century urban populations grew exponentially, many new cities emerged, and diverse cultures from the African continent and abroad struggled for a place in an expanding urban environment. Colonial policies encouraged Africans to come to the city as migrant workers but failed to recognize them as equal members of the urban social order. As a result, cities were some of the most contested spaces in colonial Africa.

By the beginning of the twentieth century, nearly the entire African continent was under European colonial rule, with economics serving as the primary motivating factor. In order to develop and exploit the continent's agricultural and mineral resources, infrastructure and new centers for trade and administration were constructed using massive amounts of African labor. The European-controlled colonial governments passed new taxes and used forced-labor tactics to compel Africans to join the workforce. In colonies with large white settler populations such as Rhodesia and South Africa, the best farmland was taken from Africans, leaving many with little choice but to look for work away from their homes. Coercive policies across the continent forced thousands of workers, especially young men, away from their homes and families to towns and cities.

COLONIAL NAIROBI

Founded as an administrative capital in 1899 when the Uganda railway reached central Kenya from the coast, Nairobi grew to become the principal center for European settlement in East Africa. Africans were encouraged to come to Nairobi as casual laborers and not permanent residents. With only a few thousand residents at the beginning of the twentieth century, Nairobi reached a population of 267,000 by the end of colonial rule in 1963. Nairobi represented the oppressive policies of a society dominated by European settlers. Housing was segregated, and in many cases Africans were not allowed to own homes within the city. Pass laws were enacted by the 1930s, requiring Africans to have permission to leave their rural homelands and restricting families from settling in the capital. By 1939 there was a large gender imbalance of nearly eight men for every woman in the city. These cruel policies ultimately created a source for violent resistance to colonial rule. By the 1950s disenfranchised urban residents supported populations in



Street in Nairobi, Kenya, about 1900. (Library of Congress)

the rural forests of central Kenya in a four-year guerrilla war against British rule that would ultimately bring an end to colonialism in Kenya.

—Matthew Carotenuto

Existing trading towns grew in size. Completely new cities such as Lusaka and Johannesburg emerged as well, built to house the growing mining industries of southern Africa. Other smaller cities, such as Arusha in northern Tanzania, were built as garrison towns to house the new colonial administration and demonstrate the force of European authority. On a continent that was overwhelmingly rural before the twentieth century, population shifts occurred; by 1920, an estimated 4.8 percent of Africans lived in cities, with that number rising to more than 14 percent by 1960. Dakar, for instance, grew from a meager 18,000 residents in 1908 to an estimated 383,000 in 1960. During the same period, Leopoldville (present-day Kinshasha) expanded from 5,000 to 420,000 residents.

The massive growth of African towns during the colonial era had drastic consequences. Population levels outstripped the infrastructure of most cities, creating difficult living conditions for residents. Wages for African workers in towns were low and unequal, and countless workers were denied advancement due to discrimination on the basis of race. Many cities, such as Cape

Town and Dar es Salaam, were segregated and unequally developed, with policies enacted to discourage families of urban laborers to join them in the city. In various colonies vagrancy laws were passed that made it a crime to be unemployed in a town away from one's rural homeland. Overall, the view from the colonial administration's perspective was that the city was a place for Europeans to live and Africans to work.

With concentrated populations of frustrated workers, cities became focal points of resistance against colonial rule. In most colonies, direct African political representation was not permitted; however, this did not stop Africans from organizing mutual aid societies, sports clubs, and labor unions that became mediums for voicing discontent. After 1945 when the majority of the continent began the slow struggle for independence, political movements and conflict against the colonial state often manifested themselves in the cities. Large-scale labor strikes were common in the 1940s and 1950s as Africans fought for greater rights. Political protests, sometimes met with violent resistance, were also prevalent in the cities, where urban populations were instrumental in

winning the struggle for independence from European colonial rule.

—Matthew Carotenuto

Bibliography

- Anderson, David, and Richard Rathbone, eds. *Africa's Urban Past*. Portsmouth, NH: Heinemann, 2000.
- Burton, Andrew, ed. *The Urban Experience in Eastern Africa c. 1750–2000*. Nairobi: British Institute of Eastern Africa, 2002.
- Freund, Bill. *The African City*. New York: Cambridge University Press, 2007.
- White, Luise. *The Comforts of Home: Prostitution in Colonial Nairobi*. Chicago: University of Chicago Press, 1990.

Colonialism in Africa South of the Sahara

In Africa south of the Sahara from 1900 to 1945 the foundations of European colonial rule during the twentieth century were established. After 1885, commercial relations with Africa were replaced by direct political control. During the Africa Conference in Berlin in 1884–1885, the different European nations determined that a territory on the African coast could only be recognized as a protectorate if there was a real occupation. During the following years, numerous treaties were concluded with rulers and local chiefs that permitted the European powers to establish protectorates. There were various struggles on frontiers between France, Great Britain, and Germany; between Portugal and Great Britain; and between Germany and Great Britain. Treaties between the European powers fixed new frontiers. African populations resisted, but they were opposed to an enemy armed with modern guns while the African populations only possessed arrows and bows. Colonial rulers had to negotiate with native rulers, who required reforms and a sharing of power. Former traditional authorities tried to maintain their power as participants in the British system of indirect rule or as collaborators in other colonial systems.

Colonial administrations were developed as a reaction to local systems and metropolitan (British, French, German, and so forth) policies. They varied, although their goals were similar. Above

all, colonial administrations had to avoid financial burdens and minimize their staffs. Everywhere, a dual system could be found with a central administration in the capital, composed of the governor, high police, army officers, councilors, lawyers, and civil servants. This level executed directions and orders received from Europe. On a secondary level, local administrations existed that included African political institutions.

The British colonial system was characterized by its administration of British colonies as separate countries, ruled by a governor nominated by London and under the control of the Ministry of Colonies. The governor was the head of the central administration, composed of an executive council, a committee that had only little power, while a local legislative council introduced laws that had to be accepted by the governor. The African elite sought to be represented in the executive councils and in later years required public elections of its members. The basic principle of local administration, indirect rule, was introduced in many territories with varying successes. It was based on the assumption that African kings and local chiefs could best rule African populations. From 1900 to 1906, Lord Lugard introduced this system in northern Nigeria. The region was known for its powerful rulers and numerous civil servants. This system was accompanied by direct taxes that were often rejected. The system also was introduced in the Gold Coast (today Ghana), simultaneously in Sierra Leone and Gambia. Indirect rule required the division of a territory into several provinces that were administered by a white resident under the control of the government. Each province was divided in districts administered by district officers who were Europeans responsible to the resident. The district officers supervised and counseled local kings and rulers. If local rulers were ready to collaborate there were rarely problems; instead, there was a relationship of mutual respect. European civil servants did not learn local languages and thus depended on interpreters. The Africans themselves undertook unpopular measures (e.g., to raise taxes) to the satisfaction of the British rulers. Local rulers gained privileges and were inclined to satisfy their foreign rulers even if they neglected the interests of their populations.

OTA BENGA

For a brief time in 1906 the most popular exhibit at the Bronx Zoo was a 23-year-old Bachichiri pygmy named Ota Benga. While he was free to roam about the zoo as he wished, Benga was encouraged to spend much of his day in the Monkey House, where he would entertain upwards of 40,000 patrons a day by shooting his bow and arrow, showing off his sharply filed teeth, and playing with an Orangutan. Reflecting the realities of the time that often dehumanized human beings, Benga was purchased out of slavery in the Congo Free State in 1904 by American explorer Samuel Phillips Verner and was brought to the United States for a special display of the world's tribesmen at the St. Louis Exposition. Opting not to return to Africa, Benga stayed in the United States and eventually ended up under the care of the Bronx Zoo. Despite his popularity, his exhibit was quickly shut down due to protests from both anti-Darwinists and a group of vocal African American ministers. Benga was later relocated to Lynchburg, Virginia, where he lived until his death on March 20, 1916, when, sadly, he took his own life in the woods just outside of town.

Bibliography

Bradford, Phillips Verner, and Harvey Blume. *Ota Benga: The Pygmy in the Zoo*. New York: St. Martin's, 1992.

With the racism common to ethnological exhibits of the day, Ota Benga, from the Congo, was displayed at the Bronx Zoo in 1906. (Library of Congress)



The French colonial system was different. The French united colonies into federations; for example, the federation of French Western Africa was composed of eight colonies. A general governor supervised the federation; separate governors administered each colony. Even if these civil servants were very powerful, their decisions had to be approved by the French gov-

ernment, and all laws were enacted in Paris. A council of largely European civil servants met once a year. The French also pursued a policy of assimilation, allowing some African subjects to become French citizens with all their rights and duties. Colonies were considered parts of the French overseas territories. Assimilation took place in four Senegalese towns, whose

inhabitants were French citizens, Catholic, and educated in schools similar to those in France. Moreover, blacks and mixed people could attain high positions in state administration, the army, and commerce. These four towns also elected a deputy for the French National Assembly. Assimilation permitted educated Africans to attain an equal status with the French.

Outside of these four towns and until 1939, only 500 Africans became French citizens. This was a result of the selection criteria: aspirants to citizenship had to be proficient in French, had to have worked for ten years for the French, and had to have served in the army. Assimilation also presumed the superiority of French culture over African cultures. Africans had to abandon their traditional cultures, a fact that would later lead to the movement of *négritude*, which favored the idea of African identity.

In other French colonies, a system of association was implemented: Africans were subjects with limited rights and numerous duties (taxes, military service, and forced labor). A colony was divided in cercles, subdivisions, and cantons. African rulers had limited power but had to levy taxes, muster soldiers, and collaborate with colonial administrations.

The German colonial empire (in Togo, Cameroon, and parts of Southwest Africa and East Africa) existed only until World War I. These colonial administrations depended on the form of settlement or on local conditions. Congo was the only Belgian colony in Africa, which experienced different phases of administration: first, as the property of the Belgian king (until 1908); second, as a territory administered by the Belgian state with the assistance of local rulers nominated by the colonial power (until 1919); and third, as a territory subject to larger administrative units that required Belgian civil servants.

The Portuguese colonies in Africa were Angola, Mozambique, Guinea-Bissau, Sao Tome, and Principe and the Islands of Cape Verde. The Portuguese introduced forced labor and assigned territories to commercial societies with unlimited power. They sent thousands of young people to Africa and practiced a system of apartheid. English and French colonial territories saw the end of colonialism mainly during the last years of the 1950s and the beginning of the 1960s,

whereas the Portuguese colonial system finished in the 1970s.

—Ulrike Schuerkens

Bibliography

- Boahen, A. Adu. *African Perspective of Colonialism*. Baltimore: Johns Hopkins University Press, 1987.
- Falola, Toyin, ed. *Tradition and Change in Africa: The Essays of J. F. Ade Ajayi*. Trenton, NJ: Africa World Press, 1999.
- Shillington, Kevin, ed. *Encyclopedia of African History*. 3 vols. New York and London: Fitzroy Dearborn, 2005.

Literacy in Sub-Saharan Africa

Though often assumed to be nonliterate and to rely solely on oral tradition, many African societies were using writing—or at least were in contact with it—at the beginning of the twentieth century. Some ancient scripts, drawing back to the earliest times of the spread of writing such as the Ethiopic script, were likely in use. The Arabic script, introduced along the routes of the spread of Islam on the eastern coast and in West Africa since the eighth century, was used not only for writing Arabic but also several African languages such as Malagasy, Swahili, and some West African languages. Its influence went far beyond the literate centers, especially through the magical uses of the written word. The Roman script, introduced by Western missionaries and colonizers, also played its part. In Africa, Roman script had long been used for European languages for political and commercial purposes by colonizers as well as by Africans, such as the Kongo chiefs in present-day Angola, beginning as early as the sixteenth century. African languages also were gradually written down in the Roman script through a process implying language description and codification. Alternatively, a series of inventions of African scripts occurred in the nineteenth century (the earliest known is the Vaï syllabary script, invented around 1833) and continued in use in the early twentieth century.

This general pattern can be described as restricted literacy, referring to the fact that the uses of literacy were limited to parts of the population. This changed with the establishment of

THE BAMUM SCRIPT

In the very last years of the nineteenth century, King Njoya in western Cameroon invented a script for the Bamum language. The first system was logographic (each sign representing one word) and evolved to a syllabary in its last version of 1903. If the report of the invention follows the general pattern of African script invention, with the genius inventor having an inspired dream, what makes the Bamum case stand apart is that it led to an effective if short development of literacy in the script. Njoya had a political desire to strengthen its uses. He initiated the mapping of his kingdom and the writing down of its history, developed administrative uses of the script, and created a body of literature. The whole project came to an end in the 1920s when the colonial authorities (French by that time) decided to close the schools where the script was taught and dismissed Njoya, who died in 1933.

“Indigenous” African scripts have been viewed as instances of an authentic African aptitude to invent writing. Against this approach, Konrad Tuchscherer has defended a view that acknowledges the creativity of the inventors while taking seriously the amount of evidence that suggests a diffusion of the idea of writing and the borrowing of some features from other scripts. His genealogy of the Bamum script locates it in a cultural environment where Islamic culture was present, links Bamum invention to the presence of Vai script in



"King Njoya teaches the first symbols of his script to leading citizens" (translation of top line of the picture). (Courtesy Palace Museum, Foumbam)

this part of Cameroon, and suggests that Vai script itself has one of its sources in the Cherokee syllabary. Countering vexed debates on authenticity, such an approach to African scripts testifies to the insertion of the continent in global circulations of knowledge and arts as well as creative human agency in combining borrowed and local forms.

—Aïssatou Mbodj-Pouye

European colonial rule at the turn of the twentieth century. At first, writing served as a means of taking hold of cultures and peoples through the use of maps, lists of ethnonyms, reports, and so forth. Once areas were settled, colonial administrations relied on a ruling technology to which writing was integral. Bureaucratization required the systematic recording of persons and belongings, and the use of documents in courts implied that individuals had to keep written pieces of evidence throughout their lives. Colonial power, especially indirect rule, provided a strong impulse for the writing down of local histories. In some areas this work had already been undertaken by scholars literate in Arabic, but the colonial enterprise differed from these existing chronicles by its more immediate political implications.

Along with this process of imposition, literacy was more deeply rooted into African societies through schooling. Although schooling had been introduced earlier—often by missionaries—in the first half of the twentieth century, it became a common agenda of the colonizing governments. A growing need for auxiliaries in the administration and for skilled and literate manpower in the workplace favored the development of elementary schooling, though in contrasted ways under the different colonial rulers.

In French West Africa until the Brazzaville Conference (1944), metropolitan and colonial systems were distinct, with the latter providing restricted access to postprimary schooling. This pyramidal system aimed at creating a small elite of civil servants through schooling in French. At the same time, an attempt at controlling Muslim

education was made by establishing *médersas* (madrasahs), with the first French *médersa* in West Africa founded in 1906. Though of limited enrollment, this initiative was important in setting up a system that was to be later taken over by African Muslims besides enduring traditional Islamic learning.

The history of education in the English-speaking colonies departs from the French-speaking colonies on the issue of language. The linguistic policy of the British ruler relied on both local languages and English. Debates arose on the choice of the vernacular. A lingua franca, such as Swahili in Kenya, could be imposed on communities whose mother tongue was different, such as the case of Kikuyu, thus creating intense discussions. English often became the written language of the new African intellectual along with a few African languages whose description had progressed.

The uses of African languages in print relied upon the ongoing work of linguistic codification, and during the early twentieth century the main issue was that of standardization. An important step in that direction was the publication in 1927 by the International Institute of African Languages and Cultures in London of *Practical Orthography for African Languages*, proposing an alphabet suitable for all African languages.

Even in Ethiopia, a country that long stood apart from European colonization and had its own age-old literate tradition, drastic changes occurred during this time. Religious and historical literacy in Geez was challenged at the end of the nineteenth century by the written use of Amharic, which was written in an adapted form of the Ethiopic script. But it was not until the development of modern schooling in the twentieth century that written culture in Amharic really started. For other Ethiopian languages, competition arose between the Ethiopic, the Arabic, and the Roman scripts, but literacy in these languages remained scarce.

When first introduced, schooling was often resisted, avoided, or confined to minority groups; however, it eventually made its ways into African societies. It provided the basis for a wider development of literacy. In colonial settings a class of intermediaries developed, and in

the 1930s an entire African subelite emerged. The diffusion of a print culture and the development of sociability through newspapers and reading circles was a prominent cultural feature of this group, which would play a major role in the various nationalist movements following World War II.

—Aïssatou Mbodj-Pouye

Bibliography

- Barber, Karin ed. *Africa's Hidden Histories: Everyday Literacy and Making the Self*. Bloomington: Indiana University Press, 2006.
- Dalby, David, ed. *Language and History in Africa*. New York: Africana Publications, 1970.
- Fabian, Johannes. *Language and Colonial Power*. Cambridge: Cambridge University Press, 1986.
- Goody, Jack, ed. *Literacy in Traditional Societies*. Cambridge: Cambridge University Press, 1968.
- Hawkins, Sean. *Writing and Colonialism in Northern Ghana: The Encounter between the Lo-Dagaa and "The World on Paper," 1892–1991*. Toronto: University of Toronto Press, 2002.
- Peterson, Derek R. *Creative Writing: Translation, Bookkeeping, and the Work of Imagination in Colonial Kenya*. Portsmouth, NH: Heinemann, 2004.
- Tuchscherer, Konrad. "Recording, Communicating and Making Visible: A History of Writing and Systems of Graphic Symbolism in Africa." In *Inscribing Meaning: African Arts of Writing and Inscription*, edited by E. Harney, C. Mullen Kreamer, and P. Nooter Roberts. Milan: 5 Continents Editions, 2007.

Colonialism in Africa North of the Sahara

Morocco's loss of independence in 1912 was a final step in the wider division of Africa north of the Sahara, also known as the Maghrib, by European powers. Previously, European penetration and colonial expansion had eliminated the Ottoman claims over much of Mediterranean Africa beginning with France's 1830 invasion of Algeria through the 1881 declaration of a French protectorate over Tunisia and then again in Italy's 1911 invasion of the long-coveted Libyan coast. Resistance and European "pacification" campaigns continued, but by the time of World War I, European powers had claimed the whole of the Maghrib.

➤ MESSALI HADJ (1898–1974)

Messali Hadj was a prominent early advocate of independence for France's North African colonies. Born into a family of artisans in Tlemcen, Algeria, he served with hundreds of thousands of other young colonial soldiers in France during World War I. In the postwar era, he returned to Paris as part of a new wave of colonials seeking work in metropolitan France. He married a French woman and, in the mid-1920s, emerged as the leader of the communist-influenced Étoile Nord-Africaine (North African Star), the first group to openly advocate independence for Algeria. Forced underground, Hadj's movement in the 1930s reflected its leader's growing split with Marxist thinking and rising interest in Pan-Arab nationalism. At about the same time, it began to spread from its metropolitan seedbed back into Algeria itself. Capitalizing on the opening provided by the French Popular Front's call for reform in Algeria, Hadj spurred the nationalists forward and founded the Parti du Peuple Algérien (Algerian People's Party) in 1937.

Despite being repeatedly arrested through World War II, Hadj saw his influence among the masses grow, sometimes at the expense of rival opposition figures and groups. Near the war's end, wary French colonial officials deported him to the French Congo, helping to galvanize the popular opposition that erupted in the bloody Sétif Uprising in 1945. Released from internment, Hadj began a new phase of political and clandestine military organizing, creating the Mouvement pour le Triomphe des Libertés Démocratiques (Movement for the Triumph of Democratic Freedoms) and, in the mid-1950s, the Mouvement National Algérien (Algerian National Movement). Deep divisions between the latter and the emerging Front de Libération Nationale (National Liberation Front) distanced Hadj from the main currents of the revolutionary struggle, and he remained in France after Algerian independence until his death in 1974.

—James P. Mokhiber

As colonial policies, administrations, and societies in North Africa took shape, they assumed a variety of forms. In the Moroccan protectorate, Resident-General Hubert Lyautey trumpeted a supposedly more enlightened colonial policy inspired by French military doctrine in the wider empire, experience in the Tunisian protectorate, and emerging British “indirect rule” policy in Africa and Asia. Lyautey's application of “association” policy sought to preserve a shell of “traditional” indigenous institutions and officials through which the French would rule. In this way, policy in French Morocco was framed as a reaction to conditions in Algeria, where the powerful settlers—“French” in status but drawn from diverse Mediterranean roots—dominated as they sought to radically remake their society along European lines. A similar settler-dominated society began emerging in Libya, where in the 1920s and 1930s the government promoted more intensive colonization on what the fascists would come to celebrate as Italy's “Fourth Shore.”

In many ways, however, the effects of European colonial control were similar across North Africa throughout the early twentieth century.

These included the accelerating alienation of land in favor of “modern” agriculture and European interests, an emphasis on crops (such as citrus and wine grapes) intended for export, and the development of a transportation infrastructure focused upon bringing agricultural products and valuable raw materials to the coast. At the same time, the colonial powers maintained tariff regimes that favored industrial imports, undermining North African artisanal production. The establishment of unequal tax and credit regimes enshrined the privileges of the European population, as did prejudicial legal systems that sometimes divided indigenous North African groups on ethnic or religious grounds. Even where they high-mindedly claimed to preserve “tradition,” colonial cultural policies transformed North African arts, religious practices, educational systems, and languages. Growing European-style cities, sapping the power of the remaining old medinas, drew an exodus of rural North Africans into their orbit while simultaneously testifying to the power, wealth, and confidence of the imperial powers through their design, experimental architecture, and colonial monuments.

During the twentieth century, colonialism also reoriented North Africans' exposure to global forces and thought. Some North African students began seeking the education unavailable to them at home by turning to Europe, where Leftist intellectuals and Arab nationalist newspapers circulated through the cafes. Thousands more sought work in European fields, mines, and factories, sending crucial remittances home and mixing with labor organizers and communists. In the 1930s the global economic depression affected North Africans of all classes, revealing their connections to world markets even within protected colonial spheres. Over 300,000 North African conscripts and volunteers joined other French colonial troops on World War I's battlefields, while thousands more crossed the Mediterranean to replace European workers.

With the return of peace, new forms of resistance and organized opposition to colonialism took a more discernible shape, especially as political and economic conditions became more acute. Many mark this transition by pointing to a trio of events in 1930—the staging of grandiose celebrations of the centennial of the French conquest of Algiers, the announcing of the divide-and-conquer Berber *dahir* in French Morocco, and the holding of a Christian Eucharistic Congress in Tunis—that outraged a wide range of North Africans at the time.

However, anticolonial resistance during the interwar period sprang from diverse and deep roots and took many forms. Elite-based movements, inspired by prewar groups such as the Jeunes Tunisiens (Young Tunisians) and Jeunes Algériens (Young Algerians), continued to call for greater equality and political participation for North Africans within reformed colonial systems. The Paris-based Maghribi workers' organization Étoile Nord-Africaine (North African Star), founded in 1926, drew on the alienation experienced by expatriates in the metropole to sharpen its demands for independence at home. In eastern Libya, local religious leaders and forces—particularly the powerful Sanusiyya order—drew on their political authority to tenaciously challenge Italian rule into the interwar period. Elsewhere, North African Islamic reformers, tapping deeper into international intel-

lectual currents like the Salafiyya movement, decried popular local Sufi “superstitions” and sought to undercut European claims to superiority through their call for religious and cultural revival. Labor crises and political organizing drew others into the nationalists' ranks and parties, including Habib Bourguiba's Neo-Destour (New Constitution) party in Tunisia. The bloodiest resistance against the colonial powers occurred in Morocco's Rif Mountains, where Abd al-Krim's revolt evolved into a sophisticated republic that the French and Spanish strained to put down in 1926. In the face of this increasing organization, rising expectations, and recurring crises, the foundering of the French Popular Front government's plan for reform in North Africa in the later 1930s appeared particularly meaningful.

The repercussions of the ensuing World War II were deeply felt in North Africa. The aura of stability that the colonial governments had long labored to create was undermined by the quick Nazi defeat of France in 1940. Both the 1942 Anglo-American invasion known as Operation Torch and tank battles in Libya and Tunisia brought the war to North Africa, while the wider conflict took hundreds of thousands of Maghribi soldiers and laborers to Europe once again. The war also brought propaganda and a new wave of political ideas to North Africa, sharpening political discourse as the Allies overturned the Vichy French and fascist Italian regimes there. Amid such political fluidity, nationalists' aspirations began to crystallize, and they issued manifestos and reconstituted themselves into new parties, such as Morocco's Istiqlal (Independence) party in late 1943. International events, such as the founding of the Arab League and the creation of the United Nations, further fed nationalists' hopes. A premonition of the tumultuous struggles and days to come, however, came on V-E Day in eastern Algeria when celebratory parades turned into anticolonial protests and riots, which the French government harshly suppressed. Indeed, the postwar era would usher in a new period of upheaval as North Africans struggled to achieve independence and began to confront the challenges of the postcolonial world.

—James P. Mokhiber

Bibliography

- Pennell, C. R. *Morocco since 1830: A History*. New York: New York University Press, 2000.
- Perkins, Kenneth. *A History of Modern Tunisia*. New York: Cambridge University Press, 2004.
- Ruedy, John. *Modern Algeria: The Origins and Development of a Nation*. 2nd ed. Bloomington: Indiana University Press, 2005.
- Vandewalle, Dirk. *A History of Modern Libya*. New York: Cambridge University Press, 2006.

Colonialism in the Middle East

The modern Middle East is a product of various movements with long-lasting consequences to its current geographic composition. With both internal and external actors and influences, colonialism in the Middle East diverged from other related conquests throughout the globe. Regional and nonregional powers played a crucial role in the mapping of the modern Middle East and often delineated the region's governments and regimes. With a number of imperial colonial powers—namely the Ottoman Empire, Britain, and France—shaping its current geographic makeup, most countries came to be independent nation-states during the early and latter parts of the twentieth century, predominantly during the decolonization era of the 1940s and 1950s.

As an imperial power, the Ottoman Empire (roughly 1300 to 1922) encapsulated much of the Middle East under a pluralistic mode of economic and political control spanning present-day Iraq, Kuwait, Syria, Lebanon, Palestine, Egypt, Jordan, Saudi Arabia, Oman, Bahrain, and parts of Algeria. Ottoman expansion began as early as the fourteenth century with the conquest of Hungary and the Balkans around 1350. Countering the force of the Byzantine Empire, the Ottoman Empire became a tenacious force, one that would dominate the Arab world for four centuries only to be toppled by its dissolution during World War I. Although lacking a cohesive system of governance, the empire's primary mode of control was the instillment of administrative systems of control over much of the Middle East.

The decline of Ottoman rule throughout the region can be attributed to the rise of Mamluk rule in major metropolitans, namely Egypt, Iraq,

and Syria; the rise of Wahhabi Saudis in central and eastern Arabia; and the insubordination of the Bedouin tribes. The empire's slow dissolution throughout the nineteenth and early twentieth centuries resulted in two interrelated outcomes: the solidification of Arab states throughout its former territories followed by the subsequent European colonization of strategic countries primarily by Britain and France.

The dissolution of the Ottoman Empire created a surge of European interests in the region. This is evidenced by its division and subsequent devolution into smaller countries, as promulgated in the Treaty of Sevres in 1920 by key European powers, primarily France and Britain. Although difficult to pinpoint the precise time frame of European colonization of the Middle East, the French colonization of Algeria in 1830 symbolized the beginning of a long-standing resistance to European occupation and control.

Accordingly, the nineteenth century marked the emergence of European colonial expansion and annexation of North Africa and subsequently the Middle East. This was evidenced by the French colonization of Algeria in 1830 and Tunisia in 1881 and the conquest of Morocco in 1912 as settler states. This was followed in 1882 by the British occupation of Egypt, formally declared a colony during World War I. This was followed by the occupation of Syria and Iraq under the French and British mandate system.

Following World War I, the League of Nations mandate system authorized the occupation of territories formerly under the dissipated Ottoman Empire by European Allied Powers. Consequently, the formation and imposition of the Mandatory system resulted in the distribution of former Arab Ottoman provinces to Britain and France. Its primary function was to facilitate the transition of newly formed states following the collapse of the Ottoman Empire and countries emerging out of centuries of European colonization, particularly Africa, into independent nation-states. Territories that were deemed in need of assistance on the road to full independence were placed under Class A Mandate, to be administered by the League of Nations. For the Middle East, former territories emerging out of the Ottoman Empire were divided among two European powers in 1920. Whereas Iraq,

► DRAWING UP BORDERS—ETHNIC MINORITIES IN THE INTERWAR MIDDLE EAST

The mapping of the Middle East by successive colonial powers resulted in the creation of nation-states out of otherwise multiethnic territories. The oppression of ethnic minorities gave strength to various secessionist movements that continue to the present. Arbitrary borders drawn based on economic divisions for colonial powers rather than along ethnoreligious and linguistic lines created a proverbial powder keg of tension, especially among groups initially promised territory and later left out. Kurds, Druze, Berbers, Assyrians, Yezidis, and others found themselves in hostile environments detached from their brethren who now fell under the jurisdiction of other countries and governments, which would come to create scenarios that would resonate throughout the Middle East. It is therefore of no surprise that since the creation of these states, minority issues have continued to plague the development of cohesive multicultural, multireligious, and multiethnic states. Due to the imbalance of power in the Middle East left by the withdrawal of European powers, previously disenfranchised groups sought alternate means of obtaining national recognition and inclusion in an otherwise predominately Arab society. This saw the Assyrian quest for recognition and autonomy in Iraq followed by their indiscriminate massacre, dubbed the Simele Incident, in 1933; Berber demands for recognition in Morocco; and various Kurdish demands for autonomy including armed resistance in Iraq, Iran, and Turkey.

—Sargon George Donabed and Shamiran Mako

Palestine, and Transjordan were mandated under British rule, Lebanon and Syria were the sole responsibility of France. To further colonial control over the region, the Sykes-Picot Agreement of 1916 awarded Britain and France control over post-Ottoman states to ensure greater economic control of newly emerging Arab states by the two contending European powers.

Accordingly, the Balfour Declaration of 1917 became an instrumental British policy stance in favor of the creation of a homeland for the Jewish people in Palestine. The declaration conformed with the immigration policy of the Zionist movement, which sought the return of

Diaspora Jews to Palestine. The rise of anti-Jewish sentiment in Europe created a surge of Jewish immigration to Palestine during the latter part of the nineteenth century and the early twentieth century. Although the initial immigration wave appeared inconsequential, Jewish immigration was met with fervent discontent and animosity from Arab inhabitants following World War II and resulted in the creation of the State of Israel in 1948. Thus, colonial powers were key actors in this historic endeavor for strategic, geopolitical, and economic reasons.

Economic and political incentives were the bedrock of European interest in the Middle East both prior to and following the collapse of the Ottoman Empire. At the onset, European economic and political influence in the region was solidified by the promulgation of specific treaties known as capitulations by Ottoman officials that bestowed European merchants with special privileges, including the right to be governed by their home state laws while administering business endeavors in the region. Guilds were formed to sustain European mercantilism, which ensured a steady market for European exports, manufacturing, production, and services.

The nineteenth and twentieth centuries witnessed an increase in economic activity between Europe and the Middle East. Investments in infrastructure development and economic liberalization in Egypt, Syria, Lebanon, and Iraq ensured a constant flow of trade in goods and services and the revitalization of the manufacturing industry between the two continents. The discovery of oil in Iraq and Iran intensified the scope of European colonial interests in the region, namely with the establishment of the Anglo-Persian Oil Company, renamed the Anglo-Iranian Oil Company in 1935 and later the British Petroleum Company. Similarly, Britain's long-standing economic ties with Iraq, both pre- and post-mandate, were directly related to the discovery of Iraqi oil fields during the late 1920s, which led to the establishment of the Iraq Petroleum Company, formerly the Turkish Petroleum Company. In addition, economic and political endeavors also facilitated a transformation in social and religious structures of the territories in question, particularly with the increase in missionary activity stimulated by Western societal contact and influence.

The search for political and economic independence from West European powers resonated throughout various anticolonial movements in Africa, Latin America, and the Middle East. The decolonization period of the 1950s witnessed the demise of colonialism in the Middle East, a movement parallel to the rise of Arab nationalism in the region. The early termination of the British Mandate in Iraq led to its independence in 1932, with the appointment of King Faisal I of Hashemite ancestry, while Egypt gained its independence in 1936. Syria and Lebanon gained independence from France in 1945 and 1946, respectively. The struggle for independence from France for Morocco, Tunisia, Libya, and Algeria was a pivotal process for many North African states, often leading to violent revolt and great death tolls throughout the 1950s and 1960s.

—*Shamiran Mako*
and *Sargon George Donabed*

Bibliography

- Choueiri, M. Youssef, ed. *A Companion to the History of the Middle East*. Malden, MA: Blackwell, 2005.
- Cohen, J. Michael, and Martin Kolinsky, eds. *Demise of the British Empire in the Middle East: Britain's Responses to Nationalist Movements, 1943–55*. Portland, OR: Frank Cass, 1998.
- Cole, R. I. Juan. *Colonialism and Revolution in the Middle East*. Princeton, NJ: Princeton University Press, 1993.
- Fisher, Sydney Nettleton, and William Ochenwald. *The Middle East: A History*. 4th ed. New York: McGraw-Hill, 1990.
- Jabbour, George. *Settler Colonialism in Southern Africa and the Middle East*. Khartoum, Sudan: University of Khartoum, 1970.

Colonialism and Nationalism in Southeast Asia— Cultural Aspects

Colonial control of Southeast Asia, which by 1914 was almost complete, impacted the people of the region not just politically but also economically and culturally. Diverse peoples were brought together to form colonial entities. Economies were run for the benefit of distant colo-

nial powers and for foreign business concerns, seldom for the betterment of indigenous populations. Southeast Asians reacted to this foreign presence on a cultural level in a wide variety of ways. Ironically, Western cultural influence may have been instrumental in ending colonial rule.

Initial resistance to imperial rule was seldom successful, due in large part to the great imbalances in terms of technology. Clashes between Southeast Asian and European armies were generally one-sided affairs, as, for example, when Dutch forces armed with modern weapons destroyed much of the Balinese aristocracy in 1908. Subsequent resistance was often aimed at restoring an idealized version of the precolonial order. Messianic figures would draw on rural discontent and lead poorly armed followers against the colonial authorities with the apparent goal of turning back the clock and reestablishing traditional kingdoms and religious institutions. A late example of this was the unsuccessful Saya San rebellion in Burma (1935–1937). Saya San, a former monk, used religious symbolism—including the construction of a makeshift palace—in an attempt to establish a Buddhist kingdom free from British control.

Saya San's movement was essentially backward looking. The Southeast Asian individuals and organizations that would eventually succeed in ending colonial rule would look to a different set of inspirations. They would also be motivated by the idea that European rule was neither inherently benevolent (as colonial apologists argued) nor inevitable. The 1899 Boxer Rebellion against the Western presence in China evoked sympathy throughout Asia. The 1911 revolution against the Manchu dynasty and the activities of Sun Yatsen and the Guomindang Party pointed to the possibility of reforming corrupt autocratic Asian regimes in order to meet Western challenges. The Indian National Congress, under the leadership of Mahatma Gandhi, provided similar encouragement, especially in the years before World War II, whereby some real progress was being made in winning over political power from the British. Grassroots organization, noncooperation campaigns, and cultural authenticity were all elements of the Indian national struggle that were of interest to other Asians. The most spectacular of the Asian

influences was that of Japan, which in 1905 scored a military victory over Russia. Not only was European invincibility called into question, but a model was also provided of an Asian country building up its economic strength, modernizing its society, and defeating foreign armies and navies while retaining its Asian identity. Such sentiments would remain strong as Japan expanded its Asian sphere of influence. Japan saw itself as the natural leader of Asia, and many Southeast Asians were initially comfortable in seeing Japan in this role if it meant an end to European domination.

Modern Southeast Asian nationalists were also heavily influenced by their colonial rulers, often having attended European-style schools, speaking European languages, and practicing the European professions of engineering, teaching, journalism, and political activism. Such concepts as democracy, rule of law, constitutional government, secularism, socialism, and communism fed the minds of young Southeast Asian leaders who questioned colonial rule and wondered whether Western ideologies were universal or whether they applied only to Europeans. Woodrow Wilson's Fourteen Points, which called for the self-determination of subjected peoples, was, as Ho Chi Minh discovered while petitioning the 1919 Versailles Conference, not intended for colonial subjects. Western talk of justice and equality stood awkwardly in opposition to the reality of a colonial system that classified, organized, judged, and even paid its subjects using racial criteria. Despite the overwhelming advantages possessed by colonial authorities, which allowed them to crush uprisings with relative ease and to jail and exile opponents, Southeast Asian nationalists persevered and organized mass and cadre movements along generally Western lines. Their aim was to seize control of the modern administrations created by the Western colonial powers rather than to restore a lost indigenous past. When Western technological and military superiority were rendered meaningless by the Japanese invasion of Southeast Asia in 1941–1942, nationalists were able to take advantage of the situation either by cooperating with the Japanese or through armed resistance in anticipation of an Allied victory.

Stepping into the power vacuum created by Japan's surrender, Southeast Asian nationalists put forward new national identities that would eventually be the basis of independent nation-states, although in the cases of French Indochina and the Dutch East Indies this was only accomplished after fierce armed struggles.

Southeast Asian nationalism cannot be seen as a mere imitation of its Western counterparts. When this did occur, as in the case of King Rama VI of Thailand (r. 1910–1925), who adopted the trappings of a modern Western state with little of its substance, the results were seldom lasting. Southeast Asian nationalists freely mined their own history and traditions in order to construct narratives in which their peoples would emerge from colonial control without abandoning their culture. Thus, the Trung sisters, who battled the Chinese domination of Vietnam (40–43 CE), could be portrayed as the embodiment of resistance to foreign conquerors. Sukarno (1901–1970), the first president of Indonesia (1945–1967), described his country as having a glorious past under the Srivijaya and Majapahit empires, as suffering under a Dutch Dark Age, and as being destined to soon emerge into a glorious independent future. Such independence would not be achieved by becoming Westerners but rather by studying the West, the reasons for its success, and even its own stories and methods of resistance and adapting them to local conditions (the American, French, and Russian revolutions inspired many).

Asian traditions were themselves not free of Western influences. It was Dutch historians and archaeologists who had “rediscovered” the Majapahit culture praised by Sukarno. French archaeologists excavated and restored the ruins of Angkor Wat and used it as a justification for colonial rule by downplaying the site's indigenous origins. It was later to be a key symbol for Cambodian nationalists of all stripes. In the 1920s, Western artists such as the painter Walter Spies studied Balinese art forms and popularized them for European consumption. The Balinese, in turn, adopted particular media—such as landscape painting—that they had never utilized before and made it a basis of a tourist industry that has thrived to the present day. Art, which in Ba-

lines society always had some degree of religious motivation, was tailored to a foreign clientele in order to allow for the preservation of many other aspects of traditional life.

—Michael Wood

Bibliography

SarDesai, D. R. *Southeast Asia: Past and Present*. 5th ed. Boulder, CO: Westview, 2003.

Sukarno. *Indonesia Accuses! Soekarno's Defence Oration in the Political Trial of 1930*. Edited, translated, and annotated and with an introduction by Roger K. Paget. Kuala Lumpur: Oxford University Press, 1975.

Tarling, Nicholas, ed. *The Cambridge History of Southeast Asia*, Vol. 2, *The Nineteenth and Twentieth Centuries*. Cambridge: Cambridge University Press, 1992.

■ Introduction: Imperialism

European empires in the late nineteenth and early twentieth centuries were often based on a sophisticated form of racism, epitomized by the phrase “white man’s burden.” The phrase originated from Rudyard Kipling’s 1899 poem that came to symbolize the notion of a European responsibility to take care of “half-devilish, half-childish races.” A sophisticated imperial racism was achieved through pseudoscientific underpinnings. Because empires, by definition, encompass multiethnic populations, crude and blunt forms of racism are actually counterproductive. The newly established pseudoscientific discipline of a natural history of humanity, or racial history as it was known at the time, explained the natural hierarchy of races, which justified the imperial enterprise and poisoned the social and cultural fabric of Europe for decades. According to racial history, cultures of the world are found in various stages of evolution, and this is a biological process, not a social process. The more “advanced” races are tasked with the need to take care of “childish” races.

Imperial structure reflected this hierarchy of races or nations. The British empire could serve as an excellent illustration because its system was the best developed. However, other imperial powers had similar systems. British imperial territories were divided into dominions, colonies, and protectorates. Dominions were the highest in the colonial hierarchy, particularly because they had the largest percentage of white Anglo-Saxon settlers; Canada, Australia, New Zealand, and Newfoundland were dominions, as

were the British possessions in the present-day United States before independence. Dominions had a substantial degree of internal autonomy, mainly because Anglo-Saxon “races” were considered mature enough for self-government. Representatives of self-governing dominions would gather occasionally for conferences in Britain, especially on the occasion of the coronation of the new monarch, who was at the same time the head of state of all British dominions.

Colonies, on the other hand, had a much lesser degree of autonomy and were actually divided into several categories. First, there were colonies that were ruled in consultation with an elected representative body, although usually with a fairly limited franchise. Second, there were colonies that were ruled in consultation with an appointed body or council. And third, there were colonies that were ruled directly by an appointed governor. The protectorates, another form of colonial status, were formally independent states that “voluntarily” surrendered some of their vital functions to the British empire. Usually this included financial, military, and foreign affairs, like in Egypt. While the British system of the racial hierarchy of rule was the best developed, other imperial powers followed similar procedures, such as the United States in Puerto Rico. In the French empire, some territories with a large French population would technically be part of France, but only the white French would be enfranchised and allowed to vote, such as in Algeria.

The colonies definitely proved their value to the metropolis during World War I and World

War II because they offered decisive military supplies and manpower, a crucial advantage over the blockaded Germany. Furthermore, during World War II Charles de Gaulle's Free France was organized primarily in the French colonial possessions. As the war progressed, more and more French colonies sided with de Gaulle and against the Nazi-controlled Vichy regime. Consequently, the French colonies managed to preserve for France its great power status.

Economic benefits of empire seemed obvious to many, but there were acrimonious debates about how profitable the colonies actually were. Some, especially in the French Third Republic, persistently argued that the empire cost too much. In the newly unified Germany (1871), Otto von Bismarck believed that colonies were a waste of money, and he was not alone in that opinion, even when in the beginning of the twentieth century Germany tried to increase its own empire. It is important to note that colonies brought both costs and benefits. The costs were most obvious when there were disturbances and rebellions. Sending a sizable army halfway across the world was never cheap. On the other hand, the benefits of colonies were most obvious to white people who served the empire in the colonies. Coming mostly from the lower middle class, during the course of their service in the colonies these individuals normally acquired considerable wealth and connections far beyond their social peers in the metropolis. Upon their return to England, France, Germany, Holland, or Belgium, these families would regularly climb up the social ladder.

Finally, the colonial experience had some positive consequences on the imperial capitals. Colonialism made a greater number of people aware of the diversity of world cultures. Comparative studies of all kinds became very popular, and new disciplines, such as musicology, ethnography, and anthropology, originated as intellectual reflections on the encounters between different world cultures. Crucial links developed between the progressive critics of imperialism in the metropolis and the colonial elites, who often sent their sons and daughters to study at imperial universities. It is important to note that the leaders of the anticolonial struggles, which in earnest started after World War II, had per-

sonal friends and political supporters among the progressives in the metropolis. There was also genuine—as well as superficial—interest in the arts of the colonial people, and this influenced many early-twentieth-century artistic movements, most importantly Cubism.

—*Alexander Mirkovic*

Japanese Imperialism

By the end of the nineteenth century, Japan had moved from a nation of relatively marginal influence to a dominant place in Asia. The most important focus of Japanese overseas activity in the 1870s and 1880s was the Korean peninsula. In 1876 Japan employed gunboat diplomacy to force the Treaty of Kanghwa on Korea, which opened three ports to trade with Japan and gave the Japanese extraterritorial jurisdiction within Korea. Japanese traders sharply expanded exports to Korea primarily by reselling European-manufactured goods first imported into Japan. Both the process and the end result were little different from the criticized techniques pursued by American commodore Matthew C. Perry in opening Japan to the West two decades earlier.

The Chinese imperial government also kept advisers in Korea to reform the Korean military and Korea's communications network. Meanwhile, Russian diplomats won increased influence at the Korean court, where some Koreans viewed them as offsetting the increasing Chinese and Japanese influence. With foreign powers pressing from all directions, Korea's own leaders desperately maneuvered to gain some breathing space and independence, although this proved impossible. In the early 1890s, long-simmering peasant anger at economic distress and the foreign presence erupted in a major uprising, the Tonghak Peasant Revolution (Tonghak Nongmin Undong). In 1894 this led directly to a war between China and Japan, fought in Korea. The ensuing Sino-Japanese War consisted primarily of naval engagements and ended in a complete Japanese victory by April 1895. In the peace treaty concluded at the Japanese port of Shimonoseki, Japan made clear its aspirations for an area of influence well beyond Korea. Japan won control of Taiwan, some nearby islands, the



Liaodong peninsula, and railroad building rights in southern Manchuria. The Southern Manchurian Railway later became the foundation of an expanding Japanese presence in Manchuria that lasted until the end of World War II.

Japanese leaders sought above all to solidify the nation's hegemony in Korea. By February 1904 the Japanese government had decided to secure its position in Korea—as well as Manchu-

ria—by force and declared war on Russia. This began the Russo-Japanese War, Japan's second major military struggle over Korea in a decade. This conflict was also the first time that a non-Western power defeated a major Western nation. Japan won a string of land battles as it advanced north on the Korean peninsula toward Manchuria. The Japanese Army also prevailed in January 1905 in a half-year siege of Port Arthur at the tip

THE SOUTH MANCHURIAN RAILWAY COMPANY

The South Manchurian Railway Company, also known by its initials SMR or Mantetsu in Japanese, was a multifaceted enterprise that blurred the line between blatant military imperialism and the cultural imperialism of the larger colonial project in Japanese Manchuria. Though the SMR was a separate operation from the Japanese Kwantung Army stationed in the region, its operations clearly benefited from the protection provided by the Japanese military. Established in 1906 after gaining the spoils of Russian railway lines in the aftermath of the Russo-Japanese War (1904–1905), the SMR encompassed far more than just trains and railway tracks up until its end in 1945. Calculated by overall capital and revenue garnered, the SMR constituted Japan's largest corporation. Company planners skillfully cultivated and distributed soybeans as the main cash crop in Manchuria so that by 1927 half of the world's supply came from the area. In addition to the lucrative freight and passenger lines operated by the SMR, the company ran iron and steel factories, machine workshops, flour milling operations, electric light companies, hospitals, schools, harbor facilities, hotels, and hot springs resorts. Moreover, the extensive research staff employed at the SMR comprised one of the largest think tanks of its time.

—Christopher Dewell

of the Liaodong peninsula. In May 1905 the Japanese Navy destroyed the Russian fleet off the coast of Korea.

However, the Japanese could not rout the Russian forces completely, and their own human and material losses were high. The Russians also desired to end the fighting, as they feared that a continued war abroad would incite revolutionary movements back home. In May 1905 the Japanese oligarchs secretly asked the American president, Theodore Roosevelt, to mediate. A treaty of peace was negotiated at Portsmouth, New Hampshire, and signed on September 5, 1905. The Japanese gained control of Russian railway lines in southern Manchuria and took over Russian leases in two Manchurian ports as well. They also won recognition of their exclusive rights to Korea. But aside from territorial rights on the southern half of the virtually unin-

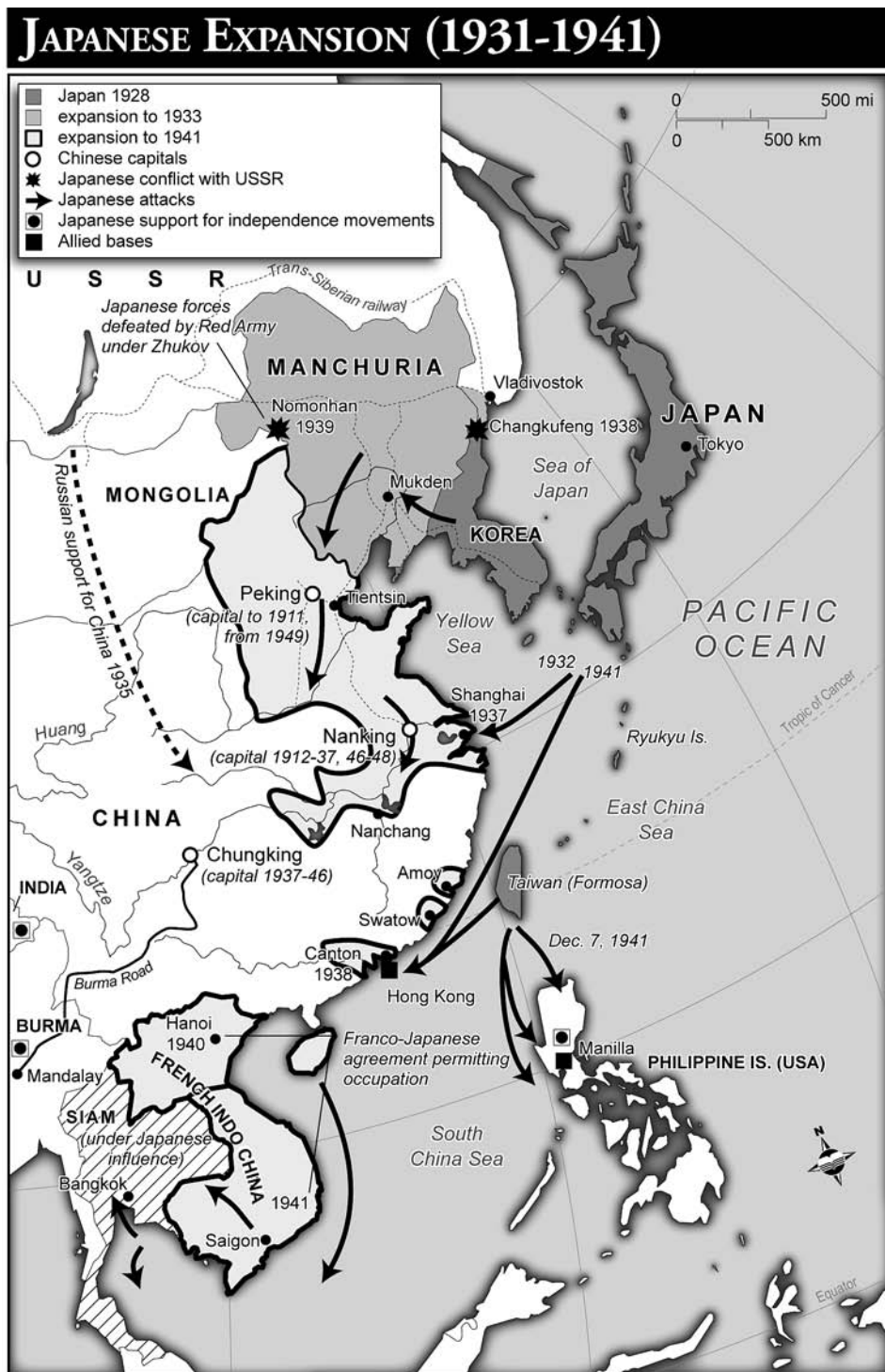
habited Sakhalin Island, Japan emerged with no outright gains of land and no financial compensation. Public opinion at home indicated severe disappointment.

Nonetheless, Japan was now clearly in control of Korea. The Japanese Army, through the office of resident general, administered Korean foreign relations. The resident general increased his power in 1907 when Japan forced Gojong, the Gwangmu emperor (r. 1863–1907), to resign and disbanded the Korean Army. Three years later, Japan annexed Korea outright as a colony. Until 1945, the offices of the governor-general of Korea, appointed by the Japanese emperor, held complete military, judicial, legislative, and civil authority.

Back home in Japan, policies related to imperialism continued to shape domestic politics, in large part because such policies were expensive. Beginning in 1896, the government consistently sought new taxes to enforce Japan's foothold on the Asian mainland. Expansion of heavy industry, beginning around the turn of the century, was financed in part by the fruits of empire, such as the demand for arms production and the Sino-Japanese War indemnity, which subsidized steelmaking and shipbuilding.

Japan had now become a substantial colonial power. However, when the Meiji emperor died on July 29, 1912, the era of formal empire came to an end, giving way to the era of Taisho democracy. This democratic ferment took shape particularly during the 1920s but eventually became linked with nationalism, and the emphasis gradually shifted from democracy back to expansionism. During World War I, Japan seized German installations and investments in the Chinese province of Shantung, which included the leased territory of Kiaochow and a naval base at Tsingtao. Japan also occupied German island possessions in the western Pacific north of the Equator. Japanese occupation of the Pacific Islands (the Mariana, Palau, Caroline, and Marshall groups) continued after the Versailles treaties under the guise of a League of Nations mandate.

In September 1931 officers of Japan's Guangdong Army blew up a section of the South Manchuria Railway near Mukden (present-day Shenyang) that they were supposed to be guarding. They blamed the explosion on local Chinese



troops and then used the alleged guilt of the troops as a pretext for launching an attack upon them. This seizure of Manchuria (and its subsequent transformation to Manchukuo) marked a new stage in Japan's imperial development and conduct of international relations. Manchuria

was formally incorporated into the Japanese Empire, which signaled a reversion to the policy of formal expansion, a policy that was to culminate, once again, in war with China and then, disastrously, with America and the Allied Powers.

—Luke Nichter

Bibliography

- Beasley, W. G. *Japanese Imperialism, 1894–1945*. Oxford, UK: Clarendon Press, 1987.
- Benson, John, and Takao Matsumura. *Japan, 1868–1945: From Isolation to Occupation*. Harlow, UK: Pearson Education Limited, 2001.
- Tsuzuki, Chushichi. *The Pursuit of Power in Modern Japan, 1825–1995*. New York: Oxford University Press, 2000.

Belgian Imperialism

Despite its small size (11,600 square miles or 30,000 square kilometers), Belgium was a major imperial power from the 1880s to the 1960s, most notably in the central African nations of Congo (Zaire), Rwanda, and Burundi. Belgium in the late nineteenth century was a relatively new country. Originally ruled by the Netherlands, it had declared its independence in 1830, a move that received international backing at the Lon-



Leopold II, king of Belgium from 1865 until his death in 1909, is largely remembered for his expansion of Belgian power onto the African continent that came to be known as the Belgian Congo. (Library of Congress)

don Conference in 1831. The Dutch recognized Belgium's independence in 1839, the same year Belgium was declared a perpetually neutral country at a second London conference.

Motives for imperial expansion were numerous in the late nineteenth century. Among them were a belief in the racial superiority of the white man, a desire to civilize and Christianize allegedly inferior peoples, the need to find new markets and raw materials in the wake of the Industrial Revolution, and the desire to enhance a nation's prestige. In Belgium's case must be added the personality of King Leopold II (r. 1865–1909), who frequently complained that his small kingdom could not satiate his boundless ambitions and financial needs. Leopold successively considered acquiring colonies in Ethiopia, the Nile Delta, Argentina, Formosa (Taiwan), and Fiji before settling on the Congo. (His sister Charlotte also served as empress of Mexico from 1864 to 1867.)

The Congo was an ideal target for imperial takeover because it was divided into 250 distinct ethnic groups whose internecine wars had multiplied due to the international slave trade (sixteenth–nineteenth centuries). Most of the Congo remained terra incognita to Europeans until British explorers David Livingstone and Henry Morton Stanley (aka John Rowlands) explored the Congo basin in the 1860s and 1870s. Back in the Congo in 1879 as an agent of Leopold II, Stanley founded Léopoldville (now Kinshasa) near the mouth of the Congo River and then Stanleyville (now Kisangani) upriver. He also signed 450 treaties in which local chiefs surrendered much of their sovereignty to Leopold. Meanwhile, Leopold tried to portray himself as a humanitarian whose main goals were to Christianize the Congolese and to combat the slave trade through his International African Association (founded in 1876) and sponsorship of an antislavery conference in Brussels (1889).

The United States was the first to recognize Leopold's sovereignty in the Congo (1884). His claim was confirmed during the Berlin Conference (1884–1885) in which much of sub-Saharan Africa was apportioned between the various European powers. The colony, known as the Congo Free State, was run by a private company under the personal authority of Leopold himself, not under that of the Belgian state.

The Congo Free State (1885–1908) was one of the cruelest instances of European imperialism. Leopold's agents forcibly enrolled porters for the difficult trek around the rapids that lined the portion of the Congo River between Léopoldville and the Atlantic Ocean, then again resorted to forced labor when they needed workers to build a railroad along this route. Farther inland, the Congolese were obliged to deliver quotas of tropical products such as ivory and rubber. As late as 1906, the Congo Free State only had 1,500 European agents to administer a country 76 times as large as Belgium, so Leopold relied extensively on force and local allies to compel the Congolese to meet their quotas. He relied on native auxiliaries (or *capitas*) and created the Force Publique, an army officered by Europeans and manned by Congolese soldiers. The soldiers were known to hit recalcitrant workers with the *chicotte* (a whip made of hippopotamus hide), destroy villages when local leaders would not cooperate, jail relatives of workers sent to harvest rubber, and cut the hands of those who did not meet the quotas. It is estimated that the Congo's population dropped from 20 million to 10 million between 1885 and 1908, in part because of atrocities committed by Leopold's agents and in part because of a lower birth rate and famine caused by the requirement that healthy men focus solely on harvesting rubber.

Leopold's reputation as an antislavery activist was shattered in the 1890s when news about the atrocities started leaking out of the Congo. African American historian George Washington Williams wrote an *Open Letter* (1890) denouncing Leopold's rule. That same year, Joseph Conrad (aka, Józef Konrad Korzeniowski) briefly worked for the Congo Free State Company, an experience that formed the basis for his *Heart of Darkness* (1902). Another company employee was Englishman Edmund Morel, who was so horrified by the company's reliance on forced labor that he resigned and founded the *West African Mail* to publicize the atrocities. British consul Roger Casement, sent by the House of Commons to investigate the allegations, collaborated with Morel to create the Congo Reform Association. Mark Twain's *King Leopold's Soliloquy* (1905) and graphic photos of mutilated workers also helped spread popular outrage.

➤ MARK TWAIN ON KING LEOPOLD

Mark Twain was a vehement opponent of imperialism and often lent his pen and sharp wit to the anti-imperialist cause. He lashed out at the Congo Free State in his biting satire *King Leopold's Soliloquy* (1905), which provides a tongue-in-cheek defense of King Leopold's rule. The following is an excerpt:

"These meddlesome American missionaries! these frank British consuls! these blabbingblabbing Belgian-born traitor officials!—those tiresome parrots are always talking, always telling. They have told how for twenty years I have ruled the Congo State not as a trustee of the Powers, an agent, a subordinate, a foreman, but as a sovereign—sovereign over a fruitful domain four times as large as the German Empire—sovereign absolute, irresponsible, above all law; trampling the Berlin-made Congo charter under foot; barring out all foreign traders but myself; restricting commerce to myself, through concessionaires who are my creatures and confederates; seizing and holding the State as my personal property, the whole of its vast revenues as my private "swag"—mine, solely mine—claiming and holding its millions of people as my private property, my serfs, my slaves; their labor mine, with or without wage; the food they raise not their property but mine; the rubber, the ivory and all the other riches of the land mine—mine solely—and gathered for me by the men, the women and the little children under compulsion of lash and bullet, fire, starvation, mutilation and the halter."

Source

Mark Twain, *King Leopold's Soliloquy: A Defense of His Congo Rule*. 2nd ed. Boston: P. R. Warren, 1905.

International criticism eventually prompted the Belgium government to purchase the company from Leopold in 1908. The colony, renamed Belgian Congo (1908–1960), was administered by a Belgian governor-general in Boma who took his orders from the colonial ministry in Brussels. During World War I (1914–1918), all but a small corner of neutral Belgium was invaded and occupied by Germany. Belgium allied itself with

France and England and invaded the German colony of German East Africa (present-day Tanzania) in 1916. Following Germany's defeat (1918), the Treaty of Versailles (1919) awarded Belgium some territories along the German border (Eupen and Malmédy) along with Ruanda-Urundi, a small colony carved out of German East Africa (present-day Rwanda and Burundi). Ruanda-Urundi was held as a League of Nations mandate and became a United Nations (UN) trust territory in 1946.

Cases of forced labor and racism persisted under the new colonial administration, but the overall pattern was one of misguided paternalism more than naked greed and violence. Belgian administrators alleged that the Congolese were not mature enough for self-rule and ought to be ruled by foreigners. Accordingly, whites continued to serve as military officers and top bureaucrats, racial segregation was the norm, and blacks were prohibited from purchasing liquor. Democratic institutions were nonexistent until communal councils were created three years before independence in 1957. As a counterpart, Belgium built facilities to benefit the Congolese, including a network of primary and vocational schools manned by Catholic, and more rarely Protestant, clergymen (higher education was almost nonexistent). Hospitals multiplied, leading to the eradication of sleeping sickness and a notable rise in life expectancy. Typical of the new Belgian mentality was Governor-General Pierre Ryckmans, who ruled the colony from 1934 to 1946 and summarized Belgium's mission in a 1932 book as "dominer pour servir" (to dominate in order to serve).

Belgium and its colonies sided with the United States in both World War II and the Cold War in which Congo's primary role was to supply strategic materials such as rubber and, increasingly, uranium. The colony's mineral riches made it one of the more prosperous in Africa, but the racism inherent in the colonial structure led to ever louder calls for independence by Congolese leaders such as Joseph Kasavubu and Patrice Lumumba. Following a series of demonstrations, the Belgian Congo obtained its independence in June 1960. It changed its name to Zaire under the rule of Mobutu Sese Seko (1965–1997) and is now known as the Democratic Re-

public of the Congo. Rwanda and Burundi obtained their independence in July 1962.

—Philippe R. Girard

Bibliography

- Edgerton, Robert. *The Troubled Heart of Africa: A History of the Congo*. New York: St. Martin's, 2002.
- Hochschild, Adam. *King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa*. New York: Houghton Mifflin, 1998.
- Nzongola-Ntalaja, Georges. *The Congo: From Leopold to Kabila*. New York: Zed Books, 2002.
- Twain, Mark. *King Leopold's Soliloquy*. 1905; reprint, New York: International Publishers, 1970.

British Imperialism

During the years 1900–1945 the British empire reached its greatest geographical extent. It included self-governing white colonies known as dominions and a variety of territories with non-white populations called the dependent empire.

In recognition of the virtual independence of the dominions (for instance, Canada and New Zealand), the term "Empire" often was softened to become the British empire–Commonwealth and eventually the British commonwealth of Nations.

In the territories with nonwhite populations, the British ruled either autocratically, such as in Gibraltar and Hong Kong, or through traditional local rulers such as princes in parts of India, emirs in northern Nigeria, and sultans in Malaya. By far the most important part of the dependent empire was India over which a British viceroy ruled. India's army made Britain a great land power in the East. In 1900 Egypt nominally was part of the Ottoman Turkish Empire and later had its own king, but it was considered part of the British formal empire and was usually so noted on maps. A large informal empire of independent states whose economies Britain dominated also existed and included such areas as Argentina and southern China.

This half-century also was a period when the future appeared uncertain. The fate of the British empire was entwined with British status as a great power. Although Britain's empire was

► BRITISH EMPIRE TIMELINE, 1900–1945

- 1901—Federation of Australian colonies.
- 1902—End of Anglo–South African or Boer War.
- 1910—Federation of South African colonies.
- 1914—British empire, including self-governing (white or white-dominated) dominions, actively supported Britain in World War I.
- 1916—Easter Uprising in Ireland against British rule.
- 1917—Balfour Declaration called for a Jewish homeland in Palestine, then a Turkish province inhabited by Arabs.
- 1919—Peace treaties gave Britain formerly Turkish provinces and assigned Britain and several dominions German colonies as mandates (a kind of euphemism for colonies).
- 1919—British general ordered a massacre of unarmed Indians at Amritsar, an event that persuaded Indian nationalists to call for complete independence.
- 1919–1921—Irish nationalists fought guerrilla war against British government. The war ended with Irish partition, British acceptance of a self-governing Irish Free State, and home rule powers within the United Kingdom for Northern Ireland.
- 1920—Dominions separately represented in new League of Nations.
- 1926—A. J. Balfour definition of independent dominion status; Britain and the dominions thereafter often styled the Commonwealth in contrast with the British empire colonies that lacked self-government.
- 1931—Statute of Westminster; British Parliament renounced right to legislate for dominions.
- 1932—Ottawa Agreements, bilateral treaties that encouraged trade within the British empire–Commonwealth.
- 1935—Government of India Act offered Indians partial self-government.
- 1939—British empire and Commonwealth largely supported Britain in World War II, but Ireland remained neutral, and the major political movement in India, the Indian National Congress, refused to support Britain except at the price of complete self-government.
- 1941–1942—Japanese conquered Hong Kong, Malaya, Borneo, Burma, and, most importantly, Singapore, and invaded northeastern India and New Guinea.
- 1947—Partition of India created the independent states of India and Pakistan.

—David Fahey

a maritime empire defended by the Royal Navy, the British economy was the true foundation of British power. Relative to several other countries, British economic strength waned from the late nineteenth century onward, and pride in empire and a sense of crisis coexisted uneasily.

In 1900 Britain was at war with the Boers in South Africa. At the same time, the various Australian colonies united to form a federal state. After the British won the South African war, they quickly sought to reconcile the defeated Boers to a place in the empire. Britain united the Cape and Natal colonies and the former Boer republics, the Transvaal, and the Orange Free State in a confederation dominated by those Boers who were willing to cooperate with the British. This reconciliation of the white minorities came at the expense of the black majority. Organized by Mahatma Gandhi, the Indian minority in South Africa obtained minimal concessions from the

new white government. The status of the Indians as British subjects did them little good.

During World War I, the white dominions rallied to the side of Britain, although the French minority in Canada was unenthusiastic, and a few Boers in South Africa attempted a military rebellion. The heavy losses of Australian and New Zealand troops at Gallipoli brought about a new memorial day for their countries, Anzac Day, to honor members of the Australian and New Zealand Army Corps, or ANZAC. For its part, India supplied troops who played a major role in the campaign against Ottoman Turkey.

In the decades between the world wars the British empire was dominated by two stories: the codification of dominion status and the growth of Indian nationalism led by Gandhi. In practice, by the eve of World War I the dominions were independent states, although they seldom had their own ambassadors at foreign capitals. When the

League of Nations was formed, the dominions obtained representation there separate from that of the United Kingdom. In 1926 under the leadership of A. J. Balfour, dominion status was vaguely defined as “autonomous communities within the British empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown and freely associated as members of the British commonwealth of Nations.” In 1931 Parliament renounced any right to legislate for the dominions in the Statute of Westminster. In India, events such as the Amritsar Massacre and Gandhi’s nonviolent mobilization of the masses turned the Indian National Congress into a popular movement for independence. The British vainly offered concessions, especially in the Government of India Act of 1935 that gave Indians a dominant position in provincial government and a substantial say in the central government. As a result of fears about Hindu domination and personal ambitions, the Muslim League demanded recognition as the representatives of the entire Muslim minority and began to speak about an Islamic state.

There were other important interwar stories: the Balfour Declaration calling for a Jewish national home in Palestine, insurrection, partition, and dominion status for the Irish Free State, and the development of would-be white settler dominions in Kenya and southern Rhodesia. Moreover, in 1932 Britain attempted in the Ottawa agreements to establish economic unity with the dominions through a system of tariffs combined with imperial preference.

During World War II the dominions and the dependent empire for the most part again rallied to the support of Britain, but the Irish Free State remained neutral, and the Indian National Congress refused its support so long as Britain denied India immediate independence. In addition, a few Indians who were prisoners of war of the Japanese joined a revolutionary Indian army that fought as allies of the Japanese against the British. In contrast, a huge Indian army served Britain. The fall of the great naval fortress of Singapore undermined British prestige in the East. As a practical matter, Australia turned to the United States as its main ally in the Pacific war. Britain was fighting for its life against Germany in Europe. Al-

though Britain lacked the resources to defend all of its empire, the empire contributed mightily to the war effort. For instance, West African troops fought for Britain in distant Burma.

After the war concluded, the British empire quickly came to an end in South Asia. What had been India was partitioned between a Hindu-majority but officially secular India and the Islamic state of Pakistan (later divided between Bangladesh in the east and what remained of Pakistan in the west). Ceylon (Sri Lanka), like India and Pakistan, remained in the Commonwealth after securing independence. Burma became a republic outside the Commonwealth, as did Israel in the Middle East. The Irish Republic also withdrew from the Commonwealth. Vast parts of the old informal empire such as, for instance, the cities of Shanghai and Canton and the rest of southern China after the Chinese communists established the People’s Republic of China, were lost too.

Britain emerged from World War II as an exhausted victor, only nominally the equal of its more powerful allies, the United States and the Soviet Union, but still regarded itself as a great power. Few people in Britain expected that its empire in Africa and in the Caribbean would come to a rapid end. In 1950 despite the loss of India, the end of the British empire seemed distant, beyond the lifetime of the youngest British child.

—David Fabey

Bibliography

- Johnson, Robert. *British Imperialism*. London: Palgrave Macmillan, 2003.
- Nasson, Bill. *Britannia’s Empire: Making a British World*. Stroud, UK: Tempus, 2004.
- Porter, Bernard. *The Lion’s Share: A Short History of British Imperialism, 1850–2004*, 4th ed. London: Pearson Longman, 2004.

French Imperialism

At its peak in the first half of the twentieth century, the French colonial empire was second only to Great Britain’s and stretched from Africa to the Middle East, Southeast Asia, the Pacific, and the Caribbean. Even though the empire grew quite popular after World War I (1914–1918) and

influenced the realms of art and popular culture, the French military difficulties during World War II (1939–1945) set the stage for a movement of decolonization in the decades that followed.

The French Third Republic (1870–1940) drastically expanded the size of France's empire, creating what is known as the Second Empire. Contrary to its prerevolutionary predecessor, this empire was centered in Africa and Indochina, not India and North America. Motives for building the empire were varied: belief in the scientific racism inspired by Charles Darwin, the aspiration to spread French civilization (*mission civilisatrice*), the need for markets and raw materials in the wake of the Industrial Revolution, and the desire to offset France's defeat during the Franco-Prussian War (1870–1871). France faced no overpopulation crisis, and immigration rates to the empire remained low outside of Algeria.

France expanded in Southeast Asia at the behest of Jules Ferry (premier during 1880–1881 and 1883–1885). France took Tonkin and Annam (Central and North Vietnam, 1883), then Laos (1893); these, in addition to Cochinchina and Cambodia, were integrated into French Indochina (1887). The International Conference of Berlin (1884–1885) granted France large tracts of Africa. French presence in or even geographical knowledge about the African interior was almost nil at the time, but in the following decade France succeeded in enforcing its territorial claims. In West Africa, France gained Côte d'Ivoire (Ivory Coast), Dahomey (Benin), Guinea, Mali, Mauritania, Niger, and Upper Volta (Burkina Faso) in addition to Sénégal. These formed the Afrique Occidentale Française (French West Africa, AOF) in 1895. In Central Africa, France obtained Chad, the French Congo (Congo-Brazzaville), Gabon, and Ubangi-Shari (Central African Republic). These formed the Afrique Equatoriale Française (French Equatorial Africa, AEF) in 1910. France also obtained Madagascar and Djibouti. France hoped that a French-dominated Sudan would link Djibouti to the AEF and AOF but abandoned this project after the Fashoda incident with Great Britain (1898).

In the Arab world, France established a protectorate in Tunisia (1881) and Morocco (1911), the latter following a conference in Algieras (1906) and a series of crises with Germany

(1905, 1908, 1911). The Ottoman Empire's breakup after World War I added Syria and Lebanon to an already considerable empire. Germany's defeat in the same war also gave France parts of Togo and Cameroon. During the interwar years, the empire peaked at 4.767 million square miles (12.347 million square kilometers), not including metropolitan France.

The colonies were ruled according to a variety of statuses based on the alleged maturity of the local races, on the size of the European population, and on how long the territory had been in French hands. Colonies proper (such as most of sub-Saharan Africa) were administered by a white administrative hierarchy selected in Paris. In protectorates (such as Morocco), local rulers remained in place; they continued to administer internal affairs but had to defer to French consuls for matters such as foreign policy and defense. Syria and Lebanon were held as League of Nations mandates and were thus nominally entrusted to France temporarily before these countries could achieve full independence. In 1848 parts of Algeria were turned into *départements* (a French administrative unit) and were thus legally considered an integral part of France. Martinique, Guadeloupe, Réunion, and Guyana gained this status in 1946.

Inhabitants of the colonies were also separated between full-fledged citizens of France (with full voting and legal rights) and mere subjects of the empire. In Algeria religion was the main dividing line, as settlers of European descent, Jews, and a few secular Muslims were allowed to vote in national elections, while the vast majority of Muslims were disenfranchised and subjected to Muslim law. In West Africa, black inhabitants were allowed to elect deputies to the French national assembly only when, as in Sénégal's Saint-Louis and Gorée, they had been assimilated after lengthy membership in the empire.

Prior to World War I, France used its empire primarily to obtain raw materials such as nickel (New Caledonia), rubber (French Congo and Indochina), cocoa (Ivory Coast), and sugar (Guadeloupe and Martinique). The overall profitability of the empire remains in dispute, for France financed infrastructure and health projects as part of its civilizing mission. The French public

remained ambivalent as nationalists such as Paul Déroulède complained that imperial expansion was a ploy to divert the public attentions away from the recovery of Alsace and Lorraine.

During World War I, access to raw materials, overseas ports, and colonial conscripts gave France and Great Britain a noticeable edge over colonies-deprived Germany. France thus enlarged its empire at the expense of Germany and the Ottoman Empire and organized a colonial exhibition (1931) whose popularity with the French public matched that of the empire. The empire also had a notable artistic influence, as avant-garde artists present in France, such as Pablo Picasso and the cubists, expressed their admiration for the naive or primitive style of sub-Saharan African statues. The empire's strategic value was proven again following France's surrender to Germany in 1940. Most and eventually all of France was occupied or annexed by Germany, but Philippe Pétain's Vichy France kept control of the navy and the empire. Vichy France and Charles de Gaulle's rival Free French subsequently competed for the loyalty of the colonies. The African colonies also provided troops and a starting point for Philippe Leclerc de Hautecloque's campaign against Nazi Germany.

Ironically, the colonies' key wartime role also marked the beginning of the decolonization movement. In Brazzaville (French Congo), de Gaulle promised eventual emancipation to incite colonies to contribute to the war effort (1944). In Indochina, the Japanese occupation made it difficult for France to reassert its authority after the war and led to a war for independence (1945–1954).

—Philippe R. Girard

Bibliography

- Aldrich, Robert. *Greater France: A History of French Overseas Expansion*. New York: St. Martin's, 1996.
- Conklin, Alice. *Mission to Civilize: The Republican Idea of Empire in France and West Africa, 1895–1930*. Stanford, CA: Stanford University Press, 2000.
- Marseille, Jacques. *Empire colonial et capitalisme français: Histoire d'un divorce*. Paris: Albin Michel, 1984.
- Quinn, Frederick. *The French Overseas Empire*. 1998; reprint, New York: Praeger, 2001.

German Imperialism

Compared to Britain, France, Spain, Portugal, and the Netherlands, Germany acquired its overseas colonies quite late and held onto them for a much shorter time. After 1900 Germany attempted to fundamentally alter the culture and economy of the regions it conquered in an effort to make them attractive to German settlers or investment. The government, however, was faced with large-scale colonial rebellions as a result of its policies and actions. In fact, uprisings in two of the German-held colonies from 1904 to 1907 were the largest anticolonial rebellions in sub-Saharan Africa up to that time. In response, all major and minor insurgencies were ruthlessly suppressed by German arms. In the wake of these revolts and other colonial scandals, German leaders sought to reform their colonial system but with limited success.

German colonies covered more than 656,373 square miles (1.7 million square kilometers) with a population of around 13 million inhabitants. In comparison, this was about three times the size of Germany in 1914 (approximately 208,495 square miles, 540,000 square kilometers), which had a population of about 68 million people. The German Reich's largest and most important colonies were in Africa: Togo, Cameroon, South-West Africa (present-day Namibia), and German East Africa (present-day Tanzania). The remainder of Germany's empire encompassed the Pacific archipelagos (the Bismarcks, the Marshalls, the Carolines, the Marianas), northeastern New Guinea, part of Samoa, and Kiaochow in China.

South-West Africa supplied cattle, copper, and diamonds for Germany; German East Africa produced coffee and cotton; Togo and Cameroon exported palm oil, cacao, cotton, rubber, and coconuts; and Samoa cultivated copra, the dried meat of the coconut. Compared to the colonial possessions of Britain and France, Germany's colonies were small and nonlucrative.

The failure of private chartered firms such as the German East Africa Company to govern and exploit the German protectorates effectively caused the German government to assume direct administrative control of the colonies in the late 1890s, install governors, and establish mili-

tary and civil service structures. Administration of the colonies had thus become an economic burden on the German state and was greatly politicized. Despite the wide variations in indigenous economic development, resources, and political organization that the colonies possessed, German authorities faced the same dilemma everywhere: how to make a colony profitable and therefore attractive to German settlers, traders, and investors. The key to attracting capital and settlers (usually German) lay in solving problems of land, labor, and sovereignty in the colonies. Such attempts, however, brought colonial administrators into direct contact and often conflict with indigenous peoples.

Given budgetary constraints, the colonial administration's preference was to govern indirectly using established indigenous political structures if paramount chiefs and headmen acknowledged German suzerainty. This was the cheapest and most efficient way to maintain peace, but German authorities would also play indigenous political units against each other and preserve tensions between them so that the German state was the final arbiter of internal politics. However, settlers became an economic element in some colonies that could not be accommodated by a native policy that validated indigenous political structures and economic rights.

The two colonies that had large-scale rebellions, South-West Africa and German East Africa, were the ones with the most German settlers, and both colonies had undergone the most drastic economic and political transformations. According to official estimates, in 1912 South-West Africa had 14,816 white inhabitants, German East Africa had 4,886, Cameroon had 1,537, and Togo had 345. Some settlers purchased land from the natives, while others simply occupied land or had it granted to them by the colonial government. In South-West Africa, most settlers engaged in cattle ranching, which directly competed with native people's livelihood and often displaced their herds, causing great tension. In German East Africa, Europeans took land for rubber and cotton plantations, again displacing some of the local clans. In all colonies, labor was needed to work the ranches, farms, and plantations that the Europeans had established, and finding sufficient labor was seldom easy. In general, the colonial adminis-

tration resorted to taxes to compel Africans and Pacific Islanders to work outside the traditional economic sectors. One option was that the locals had to take jobs that paid wages so they could pay taxes, such as the hut tax, in cash. The other option was to perform a *corvée*, which was a tax paid by direct labor on roads, installation, and farms. Native peoples resented both forms of coerced participation in the colonial economy and the state that enforced them. These policies wrecked the indigenous economy, as men and women neglected their own animals and fields to labor elsewhere. Resentment against forced labor sparked the 1905 Maji Maji Revolt in German East Africa, and anger toward a system of wage labor, indebtedness, and tribal reserves in South-West Africa led to the Herero and Nama wars of 1904–1907. The revolts were directed at ending German power and reasserting indigenous political and economic systems. In response to these uprisings, the Germans conducted genocidal warfare. They destroyed all indigenous economic and political structures in the rebellious areas, thereby creating a landless African proletariat from the survivors whose only source of income would be their labor in European-controlled enterprises.

In Togo, Cameroon, and Samoa, native structures had already adapted to commercial capitalism and international markets, and native life was far less disrupted by colonialism. Togo was considered Germany's model colony because it provided trade surpluses and methods of governance that integrated Africans into the colonial economy in ways that enhanced colonial and peasant profitability. The Germans brought scientific cultivation to Togo's main export crops and developed its transportation infrastructure to the highest level in Africa. Even these colonies, however, were arenas for forcible exploitation in which the European position was maintained through violence or the threat of violence.

The German government's resort to violence to regulate affairs with indigenous peoples caused a major crisis in German politics in 1906. The violent campaigns against the Hereros, Namas, and peoples of southern German East Africa as well as the constant reports of ill treatment of indigenes in virtually every German colony since 1895 caused the German Reichstag (parliament) to reject a bill in December 1906 to allocate

additional funds to finance military operations in South-West Africa. After new elections in 1907 vindicated the government's policy, the chancellor, Bernhard von Bülow (1849–1929), appointed Bernhard Dernburg (1865–1937) to head the Colonial Office and initiate reforms to make the colonies profitable by developing their resources scientifically and by treating the native peoples with greater respect. His reforms included the founding of specialized agricultural research stations to promote the cultivation of particular products such as cotton and tobacco, the abolition of forced labor (except on public works), and the reduction in the use of corporal punishment on indigenes. Even so, the labor regulations were hard to enforce in the colonies since planters and farmers were opposed to them.

Germany's colonial possessions were becoming more valuable to the nation as a result of greater investment and exploitation after 1907. Total colonial trade quadrupled from 60 million marks in 1902 to 260 million marks in 1912;

however, the proportion of colonial trade to total German trade grew to only 1.2 percent.

Germany lost its overseas colonies during the course of World War I when Allied troops conquered the Pacific islands (August 1914), Togo (August 1914), South-West Africa (July 1915), Cameroon (February 1916), and German East Africa (November 1917). The loss of the German imperial possessions was ratified by the Treaty of Versailles in 1919.

—Alexander M. Zukas

Bibliography

- Henderson, W. O. *The German Colonial Empire, 1884–1919*. London: Frank Cass, 1993.
- Kitchen, Martin. *A History of Modern Germany, 1800–2000*. London: Blackwell, 2006.
- Stoecker, Helmuth, ed. *German Imperialism in Africa: From the Beginnings until the Second World War*. Atlantic Highlands, NJ: Humanities Press, 1986.
- Wehler, Hans-Ulrich. *The German Empire, 1871–1918*. New York: Berg, 1997.

■ Introduction: Nationalism in Shaping Society and Culture

The idea of the nation-state—a well defined geographical area populated by people who believe they are bound together through commonalities in background, language, and culture—became important in the nineteenth century, and was the dominant political identity by 1900. Many colonial territories and cultural enclaves actively agitated for self-determination. The drive toward nationalism was encouraged when U.S. president Woodrow Wilson included “national self-determination” as one of the Fourteen Points he proposed in a speech before a joint session of the U.S. Congress that, in part, outlined his vision for the postwar world. Wilson's Fourteen Points were widely distributed and encouraged many that Wilson's principles would inform the basis of a treaty after Germany's surrender ended World War I. Although little of Wilson's idealism survived the diplomatic process, as representatives met to forge the Treaty of Versailles, the hope for national sovereignty increased across much

of the world. The treaty resulted in the establishment of new sovereign states and mandates (quasi-colonial holdings) established from the former Ottoman, Austro-Hungarian, and Russian empires, and encouraged nationalistic hopes across the globe, notably in Southeast Asia, the Middle East, and Africa. The ambition to create ethnically, linguistically, and culturally homogeneous states had a significant impact on political and social developments, shaping national institutions, cultural activity, and traditions, as well as triggering new conflicts.

—Abraham O. Mendoza
and Carolyn Neel

Pan-Africanism

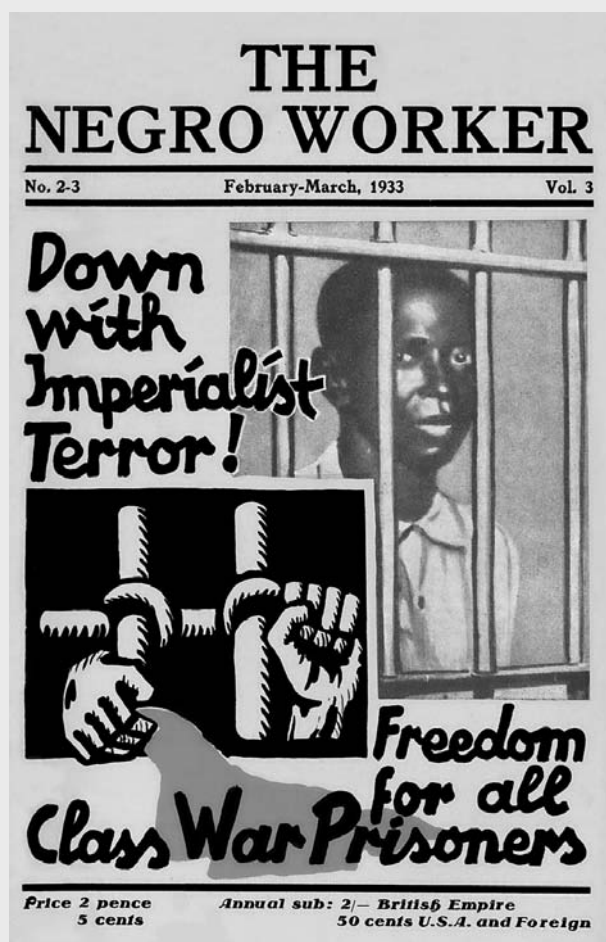
Pan-Africanism, an intellectual and social movement, developed simultaneously inside and outside of Africa toward the end of the nineteenth century as a reaction to slavery and the impact of

► GEORGE PADMORE

George Padmore (ca. 1902–1959), a potent intellectual with fiery dedication to socialism, Pan-Africanism, and African nationalism, counseled many young Africans who led their countries to independence. Born Malcolm Ian Meredith Nurse, he transformed himself between 1927 and 1933 into George Padmore, powerful member of the Profintern or Red International of Labor Unions (RILU) and an international revolutionary. He wrote *Life and Struggles of Negro Toilers* and edited the monthly journal *The Negro Worker*. From 1935 until 1957 Padmore developed his Pan-African ideology and published extensively, including *Pan-Africanism or Communism: The Coming Struggle for Africa* (1956). He mentored Kwame Nkrumah (Ghana), educating him in Marxist philosophy and economic theory. In 1956 Padmore attended Ghana's independence celebrations and became Ghana's adviser for African affairs.

—Lorna Lueker Zukas

Cover from a 1933 edition of *The Negro Worker*, edited by Pan Africanist George Padmore. (postersforclassrooms.com)



European colonialism on Africa. Pan-Africanism was theorized as an African pride movement that stipulated that black people everywhere should be proud of Africa's history and heritage and struggle against racism, colonialism, and white oppression. Pan-Africanism developed as an inclusive ideology linking peoples of African descent around the world to the continent of Africa. For African and African American intellectuals and activists, Pan-Africanism was a call for nationalism and self-determination. Pan-African ideologies united the struggles against colonialism in Africa and against racial hierarchies in the Americas. An underlying principle was that African self-determination was necessary for the true development of Africa and for the development of humankind.

Early Pan-African theories can be traced to the work of William Edward Burghardt (W. E. B.) Du Bois (1868–1963), Edward Wilmot Blyden (1832–1912), Alexander Crummell (1819–1898), Martin R. Delany (1812–1885), and Marcus Garvey (1887–1940). Henry Sylvester Williams (1869–1911), a London barrister born in Trinidad, organized the first Pan-Africanist conference in 1900 in an effort to develop a working plan for a program of African self-determination.

In Africa, both James Africanus Beal Horton (1835–1883) and James “Holy” Johnson (1836–1917) were early Pan-Africanist and supporters of African nationalism. Both men were European-educated Christian Africans who were committed to development, Christianity, and Africa. They mistrusted imperial powers and

believed that the only way to rid Africa of imperialist rule was to create autonomous African nation-states with black majority rule. They helped form African churches and associations as a means to cultural nationalism and economic self-determination. The goal was to provide blacks in Africa and the diaspora dignity and an end to oppression.

Never a coherent doctrine, Pan-Africanism in the first half of the twentieth century was shaped by the work of two very different men, Marcus Garvey and W. E. B. Du Bois. Despite working toward the common goals of dignity and self-determination for black people worldwide, these men were dissimilar in style and approach to the implementation of Pan-Africanism. Garvey, born in Jamaica, moved to New York in 1916 and founded the Universal Negro Improvement Association (UNIA). His talk of black pride resonated with the African American population in New York and abroad. In 1920 he organized an international convention known as the First Black Parliament, with delegates from 25 nations meeting in New York City. As part of this convention Garvey arranged a march in Harlem in which 50,000 people reportedly participated. Garvey promoted the ideas of Africans moving back to Africa in order to create an “Africa for Africans.” He believed that the key to ending discrimination and oppression was the development of black self-pride, black nationalism, and black economic self-determination. Garvey owned numerous business ventures including Black Star Lines, an international commercial and passenger steamship line. His other business concerns included the African Commercial League/African Factories Corporation, which ran small businesses in Harlem; the Liberian Construction Loan, a fund-raising scheme to promote development of Liberia; and Liberty University, a vocational training school. In the 1920s, Garveyism was the most popular form of Pan-Africanism among diasporic blacks in Europe, the United States, and the West Indies as well as within Africa.

W. E. B. Du Bois was, in many ways, Garvey’s opposite. Du Bois was an intellectual whose activism was grounded in meticulous scholarship about the social and cultural circumstances of black Americans. He was cofounder of the Na-

tional Association for the Advancement of Colored People (NAACP) and served as editor for *The Crisis*, the NAACP newsletter, from 1910 to 1934. Du Bois formulated a global perspective to the problems of black Americans and Africans. To this end, he organized a series of Pan-African Congresses that spanned three decades. In Paris, the 1919 congress coincided with the Versailles Peace Conference at the end of World War I. Du Bois attempted to persuade world leaders that the self-determination fought for by Europe in the war should be applied to Africans as well as Europeans. The Second Pan-African Congress in 1921 developed the *Declaration to the World* or *The London Manifesto*. The manifesto noted the failure of the British empire to educate Africans, promote self-sufficiency, or enable Africans to govern themselves. In 1923 and 1927 the successive congresses adopted resolutions calling for the development of Africa for Africans, majority rule in the colonies, the end of white hegemony in Africa, and, finally, an end to lynching and mob rule in the United States.

These congresses provided few political gains, and within a few years, under the influence of Harlem Renaissance writers and artists such as Zora Neal Hurston, Langston Hughes, Claude McKay, and Paul Robeson, Pan-Africanists in the Americas focused their attention on cultural issues. They looked to precolonial Africa for new sensibilities, a proud heritage, and an unshackled sense of self.

In Europe and Africa, other Pan-Africanist organizations arose. Perhaps the most important of these was the negritude movement, identified with nationalists and intellectuals from France’s Caribbean and African colonies. Léopold Senghor and Aimé Césaire founded the movement in Paris in 1933. The fundamental idea behind this movement was that people of African heritage everywhere possessed an African personality. The movement supported the cause of African nationalism, particularly within the French colonial context.

It was the Fifth Pan-African Congress, held in Manchester, England, in 1945, that ushered in the era of revolutionary change that would follow. The most radical of the congresses, it was attended by numerous African activists including Peter Abrahams for the African National

Congress, and a number of future African political leaders served as delegates: Hastings Banda of Malawi, Kwame Nkrumah of Ghana, Obafemi Awolowo of Nigeria, and Jomo Kenyatta of Kenya. Du Bois and Trinidadian radical George Padmore, the Pan-Africanist leader who encouraged black nationalism in Africa and who was Nkrumah's mentor, were also present. The 1945 congress opened the door for workers to have a voice in the Pan-African movement. The attendees had a clear mission to end colonial rule and racial discrimination in Africa. They were determined to carry forth a global human rights agenda, overcome imperialism, and press for economic opportunities and equality for workers around the world.

—Lorna Lueker Zukas

Bibliography

- Geiss, Imanuel. *The Pan-African Movement: A History of Pan-Africanism in America, Europe and Africa*. London: Methuen, 1974.
- Legum, Colin. *Pan-Africanism: A Short Political Guide*. New York: Praeger, 1962.

Arab Nationalism

Arab nationalism, a social and political movement that sought to unite the Arabs on the basis of a common language and history, underwent broad changes between the start of the twentieth century and World War II. The foundations of Arab nationalism are largely found within the Islamic revivalist movement of the late Ottoman period during which Arabism was predominantly a cultural movement seeking to strengthen the Ottoman state against the encroachments of the European powers and local administrative autonomy within the Ottoman Empire. By the 1940s Arab nationalism would take on numerous strands, generally from either the liberal Hashemite-led extreme to the radical Pan-Arab unionist extreme led by activists such as Michel Aflaq and Salah al-Din al-Bitar and their Baath Party.

The period directly preceding the advent of Arab nationalism was an era of tremendous institutional change within the Ottoman Empire. The loss of large tracts of Ottoman territory and an overall weakness in comparison to the European powers led to a series of Western-influenced ad-

ministrative and educational reforms called the Tanzimat period. The roots of proto-nationalist Arabism, a cultural movement that did not conflict with the state ideology of Ottomanism, came into existence during this period. Early research on the subject of Arab nationalism has tended to emphasize the importance of the Arab literary *nahda*, or renaissance, centered around the missionary schools of Beirut. The importance of this activity cannot be totally refuted, especially in regard to the modernization of the Arabic language. Recent scholarship, however, has effectively shown that the movement that would become Arab nationalism was largely a product of late-nineteenth-century Islamic revivalism.

Arabism largely grew out of the Ottoman Empire's inability to keep up with the developments in the Western states and developed out of the attempts to modernize the Ottoman state through an Islamic framework. Islamic revivalism was premised on the doctrine of Salafi Islam, the notion that true Islam is based upon the religious and social beliefs advocated by the first generation of Muslims. A central figure in this movement was the Egyptian scholar Mohammed Abduh. Abduh's protégé, Abd al-Rahman al-Kawakibi, continued in this tradition during the first decade of the twentieth century. Al-Kawakibi proscribed that it was necessary for the Ottoman Empire to have an Arab caliph, separate from the Turkish Ottoman sultan, presiding over the religious affairs of the empire.

In 1908 the Young Turk Revolution, led by the İttihad ve Terakki Cemiyeti (Committee of Union and Progress, CUP), ushered in the second constitutional period of the Ottoman Empire along with a renewed focus on Ottomanism. Under the leadership of the CUP, a great emphasis was placed on the need for a strong central power within the empire and a move away from traditional Ottoman administrative autonomy for the various religious and ethnic groups. The standardization of the use of the Turkish language within all Ottoman administrative offices, secondary schools, and courts and the increase in the amount of Turks holding high state offices led to allegations that centralization was more akin to Turkification. The lack of CUP action toward curtailing Zionist settlement in Palestine, the 1911 Italian occupation of Libya, and the

concession to the British Lynch Company on the Tigris and Euphrates rivers led the Arab political class to shift toward anticentralization. In response to the CUP administrative measures, various Arabist organizations and societies started to sprout. The two most prominent of these secret societies were the civilian-led al-Fatat (Young Arab Society) and the Ottoman military officer-led al-Ahd (Covenant).

Of particular interest to the study of Arab nationalism's development would be the connections that these two secret societies would have with the Hashemite family in the al-Hejaz (Hijaz, Hedjaz). The Hashemite family was led by Sharif Hussein, the emir of Mecca, whose sons Feisal and Abdullah would become key intermediaries between their father and the Arab nationalists in Syria. During the early phase of World War I, Hussein had committed the al-Hejaz-based forces under his command to assist the Ottoman effort. Correspondence was later initiated in 1915 between Hussein and the British high commissioner at Cairo, Sir Henry McMahon, through which it was agreed that the emir of Mecca would align with the British and revolt against the Ottoman Empire in exchange for promises of postwar Arab independence with a Hashemite-ruled monarchy. Consequently, in 1916 the Arab Revolt was initiated against the Ottoman Empire, the result of which would be the empire's loss of all its remaining territories and the occupation of these territories by British-, French-, and Hashemite-led forces. It should be noted that Arab nationalism was a minority movement before World War I, and until the Arab Revolt the regions where Arab nationalism was strongest, such as Syria and Iraq, never revolted against the Ottoman Empire. Nevertheless, the Arab Revolt did more to advance Arab nationalism than any other factor, as it made Ottomanism an unworkable ideology after the empire's defeat in the war.

Along with the end of Ottoman rule over the Arab territories and the rise of Arab nationalism to ideological supremacy during the period between the two world wars, there was also an increased consideration given to defining secular theories of Arabism. The chief theorist of Arab nationalism, Sati al-Husri, put forward the notion that language and history were the critical bonds that held together a nation. The Syrian academic

Qustantin Zurayq wrote on the necessity of achieving an Arab national consciousness, while during the 1930s and into the 1940s the French-educated Syrian teachers Michel Aflaq and Salah al-Din al-Bitar began to foster among their students the foundations of what would become the Arab Baath Party. The Baath Party was a Pan-Arab nationalist movement that professed socialism, anti-imperialism, and the belief in the Arab mission. In addition, French and British imperialism were major factors in the strengthening of the Pan-Arabist movement.

During the first years of the post-Ottoman period, the political leadership of Arab nationalists rested in the hands of the Hashemites. They believed that through the McMahon-Hussein correspondence Britain had promised their family the kingship over the Arabs. However, due to the secret 1916 Sykes-Picot Agreement between the French and the British, the Arab countries were mostly divided into regions of French and British influence. An exception to this process was the al-Hejaz, which was conquered by Ibn Saud and annexed into his kingdom in 1924. Feisal was the monarch of a short-lived (1918–1920) Arab state based in Syria, but his state was eventually conquered by the French. In 1921 British authorities appointed Abdullah as the emir of Transjordan, while his brother, Feisal, became king of Iraq. Both Abdullah and Feisal reigned under the indirect rule of the British. These appointments did not curb Hashemite ambitions, and the brothers ultimately sought to expand their rule by promoting their respective Arab confederation proposals. The creation of the Arab League in 1945 was the only tangible realization of Pan-Arabism during this period. With British assistance, the Arab League was created for the coordination of affairs between the Arab states and its seven founding members: Egypt, Saudi Arabia, Syria, Lebanon, Iraq, Transjordan, and Yemen.

—Mohammed Elghoul

Bibliography

- Dawn, C. Ernest. *From Ottomanism to Arabism: Essays on the Origins of Arab Nationalism*. Urbana: University of Illinois Press, 1973.
- Kayali, Hasan. *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire, 1908–1918*. Berkeley: University of California Press, 1997.

Khalidi, Rashid, et al., eds. *The Origins of Arab Nationalism*. New York: University of Columbia Press, 1991.

Tibi, Bassam. *Arab Nationalism: A Critical Enquiry*. 2nd ed. Edited and translated by Marion Farouk Sluglett and Peter Sluglett. New York: St. Martin's, 1990.

Indian Nationalism

Indian nationalism can broadly be defined as the ethnically, politically, socially, and economically derived desire for the creation of an independent Indian nation-state. Indian nationalism has been difficult to define because the country and the nationalist desires within the subcontinent are physically and metaphorically vast, encompassing the great variety evident in language, cultural tradition, historical experience, and economic hierarchy.

Although the first examples of modern nationalist sentiment came from European and neo-European locales such as North America, the rhetoric of nationalism quickly spread to all corners of the world. Modern nationalism defines the term “nation” as a unified community bound together by one overarching political structure. This Enlightenment-era philosophy entered India via the imperial enterprise in the manner of imperial control and the structure and concepts offered by imperial education. Paradoxically, nationalist movements derived inspiration and motivation from historical identifiers, typically predating European expansion and imperialism and other modern developments. The nation, as the unit of analysis in a premodern sense, is defined less by unity in governance and more by symbols and traditions, which anthropologists refer to as “primordial.” Primordial national identity is based on culture, ethnicity, religion, and linguistics. Nationalism on the subcontinent of India, in the era of European imperialism, developed and evolved through the incorporation of various facets of both modern and primordial nationalist traditions, resulting in the heterogeneous national makeup of the region. Although Indian nationalism appeared prior to the first meeting of the Indian National Congress (INC) in 1885, it was the INC that represented the first viable group organized with a modern national-

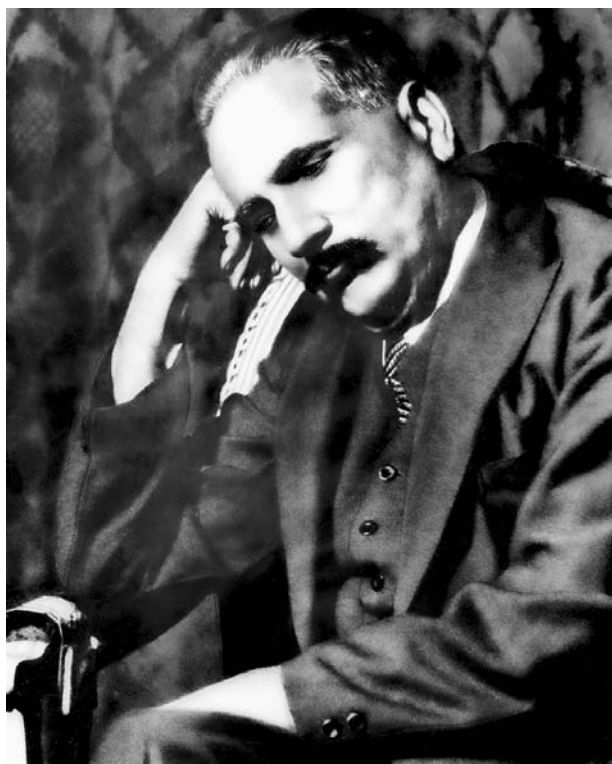
➤ RASHTRIYA SWAYAMSEVAK SANGH

The Rashtriya Swayamsevak Sangh (National Volunteers' Union (RSS) was founded by Keshava Baliram Hedgewar (1889–1940) in 1925. As an organization, the RSS advocated a culturally defined nationalism built on the regeneration of Hindu traditions and principles. Early RSS tenants focused on overtly anti-Muslim and anti-Christian messages. Before independence, the RSS purposefully followed an apolitical path, focusing instead on cultural and social transformation guided by Hindu values. A strong component of the social preservation advocated by the RSS was an emphasis on physical strength and military grandeur. As a consequence, RSS rhetoric encouraged comparisons between this form of Hindu nationalism and its contemporary European fascism. The later Bharatiya Janata Party, a right-wing Hindu political party, integrated much of the RSS agenda into its political platform, including the anti-Muslim and anti-Christian rhetoric.

—Marianne A. Rhett

ist ethos. This form of nineteenth-century Indian nationalism called for unity among the general populace of the subcontinent. It was clear that subjects of the subcontinent spoke universally about wanting an independent self-regulated state. What form this state should take, however, created rifts within the region. Divisions manifested in debates about Great Britain's role in the transition of the subcontinent to an independent Indian state.

As the nineteenth century waned, not only did questions of British involvement cause disunity in the nationalist cause, but definitions of what was “Indian” also fractured the larger movement. As primordial nationalist rhetoric took a greater role in motivating the populace, who was to be included as Indian was questioned in particular, but certainly not solely, by religiously centered Hindu and Islamic nationalists who advocated a redefinition of the Indian nation. While the bulk of Indian nationalism continued to be channeled through the auspices of the INC, minority groups and disenfranchised factions, who believed that the INC did not speak directly for their own causes, took up a



Sir Muhammad Iqbal, the poet-philosopher, was an early advocate of an independent Muslim state on the Indian subcontinent. (Pakistan Mission to the United Nations)

more pointed and typically more primordial national rhetoric.

Muhammad Ali Jinnah, an early advocate of the unity between Muslims and Hindus who later became the future governor-general of Pakistan, had by the 1920s split with the INC and began to advocate a platform seeking to safeguard Muslim rights in an independent India. By 1919 portions of the Indo-Muslim population became involved in the Khalifat movement, which was desirous of casting out British imperial rule but was also distinctly Islamic, even Pan-Islamic in message and procedure. The Khalifat movement in essence focused on strengthening the political position of the minority Islamic community in the subcontinent, also uniting that same community with the global Islamic community, the *umma*. Attentive to the future of the spiritual leadership of the *umma* and the role of the Islamic caliph, then seated in Istanbul, Khalifatists developed their political agendas at the Aligarh University in Uttar Pradesh.

Sir Muhammad Iqbal (1877–1938), Indian poet, philosopher, and politician, began his political career much as Jinnah had with a view toward Indian independence. Gradually, however, his ambition changed as he began to argue for an Indo-Islamic nationalism that sought to protect the rights of India's Islamic minority. He maintained that nationality was not determined by language or geographic location but rather by people advocating the same spiritual worldview. Iqbal believed that Islam offered alternative models to European concepts, in particular nationalism. Membership in a given nation was, according to Iqbal, dependent upon the uniting precepts of the community, in this case religion.

Not long after Indo-Islamic nationalism appeared, Indo-Hindu nationalism found its footing too. In his 1923 pamphlet *Hindutva: Who Is Hindu?* V. D. Savarkar contended that Hindus constitute a nation by virtue of their blood relation, common heritage, and tradition. Much like Islamic nationalism elsewhere in India, *Hindutva* (*Hinduness*) focused on a culturally derived Hindu-centric concept for an Indian nation-state. In political activity *Hindutva* found its voice through the Rashtriya Swayamsevak Sangh (RSS), founded in 1925. Savarkar's work called upon Hindus to take up the mantle of cultural custodians for India's identity. Despite the efforts of the INC to unify the Indian populace under the guise of decolonization and governmental cohesion, the RSS promoted a nationalist rhetoric that highlighted the tensions between the Hindu and Islamic communities.

Although a general sense of Indian nationalism, particularly one centered on ending imperial rule, continued to be the sustaining force across the subcontinent, under the guidance of Mahatma Gandhi and the INC in the 1930s and 1940s, the reality of a nation's definition within India was far more complex. The fracturing of nationalist rhetoric marked by primordially defined differences created rifts across the subcontinent. In 1947 India and Pakistan were partitioned, creating a predominantly Hindu India and an Islamic state, Pakistan.

—Maryanne A. Rhett

Bibliography

Esposito, John L. *Voices of Resurgent Islam*. New York: Oxford University Press, 1983.

- Minault, Gail. *The Khilafat Movement: Religious Symbolism and Political Mobilization in India*. New York: Columbia University Press, 1982.
- Savarkar, Vinayak Damodar. *Hindutva: Who Is a Hindu?* Bombay: Veer Savarkar Prakashan, 1969.
- Seal, Anil. *The Emergence of Indian Nationalism: Competition and Collaboration in the Later Nineteenth Century*. Cambridge: Cambridge University Press, 1968.

Chinese Nationalism

The history of modern nationalism in China is inextricably linked to the advent and increasingly severe threat of Western imperialism. Traditionally, Chinese rulers and intellectuals conceived their polity as a universal empire, primarily defined by culture and civilization rather than borders and ethnicity. With the arrival of the European powers, especially in the aftermath of the devastating defeat to the British in the Opium Wars (1839–1842 and 1856–1860), Chinese leaders started to accept the centrality of the nation-state within the realm of international relations. Under the direction of Prince Gong (1833–1898), the Zongli Yamen (the Office for the Management of the Business of All Foreign Countries) was opened in 1861 to handle negotiations with foreign powers. In the international arena China was moving, albeit haltingly, away from the universal empire model and toward that of the nation-state.

The opening of the twentieth century, however, proved that adopting European models of nation-state diplomacy would be easier than instilling a united sense of nation among the inhabitants of the Qing empire. While this difficulty was certainly based in China's status as a vast agrarian land inhabited by illiterate farmers, perhaps a more fundamental problem was defining "China" as a coherent entity. The Qing dynasty, founded by Manchus from the northeast, was considered by many ethnic Han Chinese to be an alien regime that had to be removed in order for China to develop as a modern nation. Thus, the radical intellectual Zou Rong (1885–1905) wrote *The Revolutionary Army* (1903), hoping to convince his readers

> NATIONAL DRESS

During the early twentieth century, traditional Chinese forms of dress were increasingly seen as inappropriate for a modern Chinese nation. But what forms of dress best suited a new China? For men, in the early twentieth century the most popular style of dress for elites was the *changshan* (long shirt), a long flowing robe that was usually paired with a short riding jacket. Due to the desire to express a more modern sensibility, Western styles became popular with elite men. But given the strong anti-imperialist leanings of the time, such Westernization was an ill fit for many Chinese. The fashion compromise was the Zhongshan suit, introduced by Sun Yatsen, commonly known as Sun Yatsen. A blend of Western and Chinese styles, it became the standard dress for Chinese leaders until the end of the Maoist era. Similarly, Chinese women faced a fashion dilemma during the early twentieth century. The dominant style of dress for elite women was a full jacket paired with a pleated skirt, under which was a pair of loose trousers. Much as had been the case with men, Western styles soon became the rage, but by the 1920s there was a sense that this style of dress was not appropriate for Chinese women. The result was the *qipao*, which took cues from Chinese garb but utilized a one-piece form that drew on Western fashion and emphasized femininity.

—Brian James DeMare

that the Manchus were bandit outsiders and responsible for the slaughter of countless Han Chinese during their invasion. For the young Zou Rong, China as a nation was synonymous with the Han Chinese ethnicity; any Han Chinese who dared to support the Qing rulers were considered traitors to their race and nation.

The disconnect between radicals such as Zou Rong and the vast population of agrarian China had already effectively been demonstrated in the 1901 Boxer Uprising. This pro-Qing uprising originated in the northern China plain during a period of drought and its resulting fears of famine. Linking the drought to the increasing presence of European (particularly German) missionaries, villagers lashed out violently against

the missionaries and their Chinese converts. Violent xenophobia meshed with local traditions of shamanism and martial arts, allowing the spread of the Boxers United in Righteousness across the northern China plain. The arrival of the Boxers in Beijing, where they carried out a lengthy siege of the foreign legation quarters, resulted in the dispatching of an expeditionary relief force by a number of Western nations. Significantly, Japanese troops joined the relief column, suggesting their future role as an imperialist power within China.

The failure of the Boxers and regular Qing forces to defend the capital from the relief force firmly underscored the weakness of the Qing regime. While the Qing rulers attempted to carry out reforms to strengthen the dynasty, each reform seemed to create more dissatisfaction with the conception of a Chinese nation ruled by the Manchu. The elimination of the Imperial Exam System (*keju*) in 1905, for example, destroyed the strongest bond between Chinese elites and the imperial state. With the 1911 Revolution, the imperial system was overthrown and replaced by a republican system of government, but the nascent Republic of China proved unworthy as a state for the Chinese nation. Soon China was divided among several warlords, most of whom were focused on retaining their own power as opposed to unifying China or resisting imperial aggression. It would be imperial aggression, however, that would inspire an ever-growing sense of nation among the Chinese people.

This was particularly the case with the May Fourth Movement of 1919, a moment when the frustrations of the Chinese nation were powerfully exposed. The movement, spurred by news that the Versailles Conference closing World War I had ceded the Shandong Peninsula to Japan, proved to be a crucial moment in the forming of a Chinese nation. While the main protesters were students and intellectuals, May Fourth leaders saw the importance of spreading their message of national liberation to as wide an audience as possible. Countless journals and newspapers were founded, with most of these publications focusing on building a “New China.” As the sense of crisis spread, new emphasis was given to Chinese culture, most notably literature but even cultural markers such as dress.

While the May Fourth generation looked down at the Boxers for their superstition, seeing them as emblematic of everything that was wrong with China, many Chinese still viewed them as nationalist heroes. In 1924, under the direction of Sun Yatsen, the day of the signing of the Boxer Protocol that had ended the uprising was transformed into an annual National Humiliation Day, suggesting the importance of imperialist aggression in creating a sense of nation for the Chinese people. Also in 1924, Sun Yatsen changed the national anthem for the Republic of China, introducing a new tune that stressed loyalty to his political party, the Guomindang (KMT). If imperialism had provided the spark for the spread of nationalism in China, the one-party state would provide the institution that would seek to contain and control Chinese nationalism.

By 1927 the Guomindang, now under the control of Jiang Jieshi (Chang Kai-shek), had a state that could provide direction to the Chinese nation. But the reach of the state was severely limited, and in the countryside life continued as it had during imperial times. Even in areas controlled by the Chinese Communist Party (CCP), the question remained the same: how to instill a sense of nation in the peasantry. The answer was provided with a new round of imperialist aggression, this time at the hands of the Japanese Army. With the outbreak of all-out war in 1937, the horrors of foreign aggression were brought home to an ever-widening number of Chinese peasants. This was particularly true in northern China, where an attempt to break the links between the communists and the peasantry through harsh military campaigns had the opposite effect, instead turning peasants into nationalists who saw the CCP as the one organization that could repel the Japanese.

The close of the Anti-Japanese War was quickly followed by the Chinese Civil War, and the CCP’s nationalist credentials from engaging Japanese troops were of no small importance in propelling them to victory. The ties between nationalism and anti-imperialism, as well as the linking of Chinese nationalism with a one-party state, would have important consequences in the post-1949 era.

—Brian James DeMare

Bibliography

- Finnane, Antonia. "What Should Chinese Women Wear? A National Problem." *Modern China* 22, no. 2 (1996): 99–131.
- Fitzgerald, John. *Awakening China: Politics, Culture, and Class in the Nationalist Revolution*. Stanford, CA: Stanford University Press, 1996.
- Johnson, Chalmers. *Peasant Nationalism and Communist Power: The Emergence of Revolutionary China*. Stanford, CA: Stanford University Press, 1962.
- Schwarcz, Vera. *The Chinese Enlightenment: Intellectuals and the Legacy of the May Fourth Movement of 1919*. Berkeley: University of California Press, 1986.

Japanese Nationalism

Central to the formation of Japanese nationalism—more appropriately, ultranationalism during the period 1900–1945—was the Shinto myth that the emperor was a descendant in the direct line of the sun-goddess Amaterasu; that the Japanese people were also of divine descent, though from lesser gods; and that between the emperor and the people there was a mystical bond superior to anything of the kind to be found elsewhere in the world. From the turn of the twentieth century through the 1910s, three groups in particular—the Home Ministry, the Japanese Army, and the Ministry of Education—responded with initiatives to generate greater nationalism and greater loyalty to the state and to authority in general.

The Home Ministry took steps to dramatically reorganize the system of local government beginning in the 1890s. By the end of the Russo-Japanese War (1904–1905), the ministry ordered the nation's 76,000 small hamlets to merge into just 12,000 larger villages. Fewer villages, the government believed, would be easier to control from the center. The Home Ministry, for similar reasons, ordered the merger of 190,000 Shinto shrines—often tiny sites maintained by villagers in the absence of a priest—to just 12,000 officially recognized shrines as part of the state-administered Shinto network created in 1900.

The Home Ministry also sought to involve women as well as men in a variety of centrally

controlled bodies, such as rural credit societies, to promote a collective spirit under a central umbrella. In 1901, the ministry created a Ladies' Patriotic Association, and the group grew during the Russo-Japanese War to include 500,000 members nationwide. After the war, the Home Ministry drew together scattered local Gratitude Societies (Hotokukai) into a national network with official sponsorship. These groups had been founded in the early Meiji era (1868–1912) and honored the spirit of a famous agrarian moralist of Tokugawa times, Ninomiya Sontoku (1787–1856). A set of Women's Gratitude Societies was launched in 1907.

The Japanese Army, for its part, founded the Imperial Military Association (Teikoku zaigo gun-jinkai) in 1910. Its members were volunteers, recruited from among young men who had passed the conscription exam. By 1918, the group had branches in virtually every village in Japan and boasted over 2 million members. Its founders wished to raise military preparedness among men who might be called to active duty in an emergency. They also had a more general goal of reinforcing social order in turbulent times.

The Ministry of Education joined the drive to promote nationalism and respect for authority by adding two years to compulsory education in 1907. This helped to further stabilize school finances and to enforce curriculum shifts that emphasized nationalism and the role of the emperor more heavily. The ministry also boosted the status of teachers by stressing their role as national servants and local leaders.

In the early twentieth century, this wide range of government campaigns, implemented through the leadership of local elites, reinforced social order and central control. These campaigns sought to transfer peoples' loyalties away from independent social groups on the hamlet level and link them instead to groups on the village and town levels controlled by the state. By the time World War I came to pass, many ties bound the Japanese people to the state. In theory, these included the ties of dutiful soldiers in reserve associations, obedient wives and daughters in women's groups, respectful tenant farmers in gratitude societies or credit associations, pious villagers supporting local shrines, and earnest students in youth groups.

After World War I, the promotion of military fascism by Kita Ikki (1883–1937) as a panacea for Japan's social and economic ills became an important prelude to the rise of ultranationalism. He was also in favor of Japan's continental expansion policy, which eventually led to the creation of the Greater East Asia Co-prosperity Sphere. Of all of the extreme nationalists, none equaled Kita in influence. He was a dreamer in his youth, attaching himself to the revolutionary activities of the Chinese nationalists, and when its leader, Sun Yatsen, failed to live up to his promise of building an anti-imperialist, socialist state, the disillusioned Kita withdrew to Shanghai and wrote pamphlets advocating reforms of Japan.

Kita's *General Outlines of Measures for the Reconstruction of Japan* first appeared in mimeographed form in 1923. Even though it was banned in Japan, Kita was able to gain adherents among young military officers. He urged that the emperor suspend the Constitution and place the country under martial law. These measures, he argued, were intended to give the emperor complete freedom to suppress reactionary movements by the wealthy and their peers. Destruction of the status quo would be accompanied by the establishment of a socialist state that would control the national economy in the interest of the entire nation.

The appeal of Kita lay in his relentless attack, perhaps not justified, on the status quo symbolized by the oligarchy and private wealth. Since the beginning of modernization, the Japanese government consistently aided industry by imposing an undue tax burden on peasants and urban workers. While the rich became richer, many peasants and urban workers maintained living standards not much better than those of preindustrial days. Young officers, many of whom came from poverty-stricken areas, saw in Kita's outcry for reform a panacea for all ills. A close affinity was discernible between Kita's doctrine and several assassination attempts and military coups staged by young officers during the 1930s.

Kita was implicated in a revolt of February 26, 1936, and was executed along with other conspirators. However, his idea of internal reform and external expansion lived on and remained especially appealing for military officers.

The February 26 incident helped create a climate under which the Japanese government was forced to accept as its own the policies advocated by the army. At that point, Japan's ultranationalism became inseparable from its militarist policies.

—Luke Nichter

Bibliography

- Axelbank, Albert. *Black Star over Japan: Rising Force of Militarism*. New York: Hill and Wang, 1972.
- Beasley, W. G. *Japanese Imperialism, 1894–1945*. Oxford, UK: Clarendon, 1987.
- Colegrove, Kenneth W. *Militarism in Japan*. Boston: World Peace Foundation, 1936.
- Story, Richard. *The Double Patriots: A Study of Japanese Nationalism*. Boston: Houghton Mifflin, 1956.
- Tankha, Brij. *Kita Ikki and the Making of Modern Japan*. Kent, UK: Global Oriental, 2006.

Vietnamese Nationalism

A sense of national identity among Vietnamese during the first half of the twentieth century grew from their experiences with foreign colonialism. French forces completed their conquest of Vietnam in 1895, beginning a period of social and economic change. Vietnamese people, mainly urbanites, encountered new technologies and ideas that transformed their society. In the early twentieth century, participation in a new national political culture as citizens (*công dân*) rather than subjects of the king and an expanding public sphere changed Vietnamese lives, albeit within boundaries created by the French colonial administration.

The French introduced new industries to Vietnam; mining (mainly anthracite) and rubber plantations grew rapidly between 1924 and 1929. Some 200,000 Vietnamese people worked in deplorable conditions for low wages on rubber plantations in the Central Highlands; 90,000 factory workers and 40,000 Vietnamese miners of both genders had similar experiences. Peasants faced hardships working on colonial roads, railroads, bridges, and waterworks begun by Governor-General Paul Doumer in 1901.

Rice cultivation increased from 1.282 million acres (518,000 million hectares) in 1880 to

5.45 million acres (2.2 million hectares) in 1939; however, French export policies left less rice for individual households. Conditions hit bottom in 1944–1945; nearly 2 million people starved when the Vichy government, urged by the Japanese Army, which had seized control in 1941, increased rice exports, stockpiled rice, and produced large quantities of rice ethanol, resulting in major food shortages.

The Vietnamese countryside gradually converted to a cash economy, as the colonial administration levied head taxes, land taxes, conscripted *corvée* labor, and mandated salt and alcohol purchases from government monopolies at exorbitant prices. Salt prices increased fivefold between 1899 and 1909, while licensed alcohol prices were 900 percent above cost. Heavy taxation caused many small landowners to default; by the end of the colonial period a handful of people owned the majority of farmland.

Vietnamese officials sent to collect levies in the countryside were cursed, criticized, or assaulted by villagers unless protected by soldiers. Colonial rule reinforced traditional patterns of Vietnamese village solidarity; the destruction of evidence, the refusal to testify against fellow villagers, and more serious acts of resistance such as brewing contraband liquor and refusal to pay taxes in full were commonplace. In addition to economic conditions, general French disregard for Vietnamese people, such as when the resident superior of An Nam pillaged Emperor Tu Duc's tomb in 1913, drove radicalization of the Vietnamese population.

The quality of life for the more than 80 percent of Vietnamese people living in the countryside declined substantially under French rule. Education levels and literacy declined between 1880 and 1920, and only 13 percent of villages had a school in 1921. Traditionally, village teachers trained to take the Confucian civil service examinations; however, with the end of these exams in 1919 and difficult economic conditions, there were fewer people with the time to study. And though traditional arts such as *cheo* and *cải lương* stage remained popular, there was less time for artistic pursuits as people struggled to earn their living. Harsh conditions under colonial rule increased interest in Buddhism, Daoism, Catholicism, and traditional Vietnamese religious

➤ FRENCH VIETNAM

- 1895—Mandarin Phan Dinh Phung's resistance movement defeated by French colonial troops. All Vietnam now under firm French control.
- 1897–1902—Paul Doumer is governor-general. Expansive public works program undertaken.
- 1907—Tonkin Free School opened in Hanoi. Quoc Hoc Academy opened in Hue; students include future national leaders Ngo Dinh Diem, Vo Nguyen Giap, and Ho Chi Minh.
- 1914—More than 100,000 Vietnamese laborers and artisans were sent to serve France in World War I, where they were radicalized through their contact with European society.
- 1917—French Secret Police (*Sûreté*) reorganized with a large network of informants; Vietnamese elite put under surveillance.
- 1919—Bui Quang Chieu launches the Constitutionalist Party (*Dang Lap Hien*). State Confucian Examinations ended.
- 1927—Vietnamese Nationalist Party (*Viet Nam Quoc Dan Dang*, VNQDD) organized.
- 1930—VNQDD under Nguyen Thai Hoc lead major uprising in Yen Bay, 70 miles (113 kilometers) north of Hanoi.
- 1931—Vietnamese communists lead uprisings in Nghe An and neighboring Ha Tinh provinces.
- 1936—French Popular Front government abolishes censorship in Indochina.
- 1937—Nationwide Association for the Dissemination of Quoc Ngu Study organized. Widespread literacy classes offered to 59,827 students by 1944.
- 1941—Japanese Imperial Army seizes control of Indochina and governs through the Vichy French regime.

—Martin Loicano

practices. Two new major sects, the syncretic Cao Dai and Huynh Phu So's Hoa Hao Buddhist sect appeared and grew rapidly in the colonial era. At the same time, new technologies introduced by the French, such as bicycles and electric lights, brought a wider world to villagers in a limited way. Public health and sanitation improved with the widespread availability of soap and increased construction of Western medical facilities, while the explosion of urban print culture began to slowly expand rural Vietnamese perspectives.

In Saigon and Hanoi, Vietnamese society underwent significant changes between 1900 and 1930. Most of the 20,000 resident French in Vietnam lived in one of the two major cities, and so Western cultural influences were at their strongest in these two areas. Many urban Vietnamese people adopted Western dress and language, while cuisine and social behaviors were influenced by the French presence. In the 1920s a growing middle class—composed of groups such as merchants, clerks and secretaries, technicians, schoolteachers, and journalists—and an urban elite that included many who imitated French habits, learned the French language, and adopted popular French pastimes such as tennis and soccer took part in a nationwide scouting movement, went to newly built beach resorts, read Western literature, bought bicycles or motor scooters, and in some cases studied in France. French influence on Vietnamese print and intellectual culture was particularly strong; the Confucian-dominated scholarship of the past gave way to Western-influenced alternatives that ultimately undermined the French colonial project.

Members of the Vietnamese elite, such as Nguyen Van Vinh, who collaborated with the French, and later communist leader Vo Nguyen Giap worked to expand literacy and to popularize the use of the Romanized national script, Quoc Ngu, in place of the earlier system based on Chinese characters, Chu Nom. This change made the Vietnamese language a great deal easier to learn. In the 1930s and after, literacy movements were launched that reversed the declining literacy of prior decades; by 1939 approximately 1.8 million, or 10 percent of the Vietnamese population, attained literacy, often taught by friends, relatives, or members of the growing Vietnamese political parties. These movements continued the work of the Tonkin Free School in Hanoi and Ngo Dinh Kha's Quoc Hoc (National Study) Academy in Hue city in the first decade of the twentieth century.

The Vietnamese public sphere grew substantially in cities after 1907; the numbers of publications in Quoc Ngu grew rapidly between 1920 and 1930, covering diverse subjects such as politics, women's rights, hygiene, the value of Westernization, the question of Vietnamese independence, the role of Vietnamese tradition in

the changing society, and large amounts of more traditional publications on religion, moral behavior, and popular fiction. Vietnamese political leaders, visual artists, and authors were conflicted by decisions about how and whether or not to combine traditional and Western forms of expression throughout the colonial era.

Readers of publications such as *Phu Nu Tan Van* (*Women's News*) and Nguyen An Ninh's *Le Cloche Felee* (*The Broken Clock*) encountered ideas and literature from notable Vietnamese and Western authors that contributed to the awareness of colonial life's shortcomings. For example, in 1937 there were only five Vietnamese medical doctors employed by the National Health Service. Vietnamese people were further constrained by the pervasion of collaborators and French Secret Police informants and state restrictions on travel. Vietnamese participation in labor unions and various political parties increased substantially, from Bui Quang Chieu's Constitutionalist Party and the Vietnamese Nationalist Party based on China's Guomindang to the Indochinese Communist Party of the then little known Ho Chi Minh.

—Martin Loicano

Bibliography

- Bousquet, Gisele, and Pierre Brocheux, eds. *Vietnam Exposé: French Scholarship on Twentieth-Century Vietnamese Society*. Ann Arbor: University of Michigan Press, 2002.
- Jamieson, Neil. *Understanding Vietnam*. Berkeley: University of California Press, 1993.
- Marr, David G. *Vietnamese Tradition on Trial, 1920–1945*. Berkeley: University of California Press, 1984.
- McHale, Shawn Frederick. *Print and Power: Confucianism, Communism and Buddhism in the Making of Modern Vietnam*. Honolulu: University of Hawaii Press, 2004.

Latin American Nationalism

Nationalism as a common identity that all citizens of a nation or region could relate to did not develop fully in Latin America until the early twentieth century. Identities based on ethnicity such as Spanish, Creole, Indian, mestizo, or

black were much more prevalent during most of the region's history than were national or regional associations. A restrictive racial and class hierarchy that caused friction and isolation prevented the formation of a cohesive sense of unity. Nationalism first emerged during the independence wars from Spain and Portugal (1810–1825) as Creoles in the colonies used nativism to promote patriotic sentiments. Nativism, the notion that colonialists shared an identity with each other that was separate from that of those born in the motherland, was seen as a means to unite the population in the fight against Spain and Portugal. However, in reality the elite Creoles who had instigated the independence movements had more in common with the colonialists they were fighting than with the indigenous, black, and mestizo population. It is therefore not surprising that these nationalistic sentiments subsided soon after independence, leaving the colonial order intact with the white minority holding economic and social power.

The development of a common identity was further hampered by the infringement of foreign powers on the region soon after their independence from Spain and Portugal. North American and European investments, exploitive trade relations, and military interventions led to economic dependency and an encroachment on the region's sovereignty. Turn-of-the-century emphasis on progress exasperated divisions in the population. The stress on urbanization as a means to meet Western standards of modernity alienated Latin Americans living in the countryside. Official racism supported by Social Darwinism reinforced the racial hierarchy, denigrated the region's indigenous and African heritage, and further polarized Latin Americans. Furthermore, cultural emulation of the United States and Europe hampered the development of a distinctive and valued Latin American culture.

Turn-of-the-century modernization projects geographically and socially transformed many Latin American capitals, among them Havana, Buenos Aires, and São Paulo. Urbanization fostered the growth of an educated middle class that rejected the social hierarchy of the early republic, one that had changed little since the colonial era. Middle-class professionals throughout Latin America, among them Mexico, Cuba, and Brazil,

➤ DIEGO RIVERA

Born in 1886, Mexican Diego Rivera became a world-renowned muralist in the 1920s and 1930s. His work is exemplary of the nationalist movement in Mexico in that it was about, and for, the Mexican people. As a means to expose his art to the majority of the population and not just the rich, Rivera painted massive murals in public buildings. His highly politicized work addressed historical and social issues of oppression. He often incorporated themes relating to the exploitation of the indigenous and mestizo population, including those of the Aztecs during the conquest and contemporary Mexican workers and peasants. Furthermore, his nationalistic emphasis brought to life many of the revolutionary themes of the Mexican Revolution. The controversy surrounding Rivera was often tied to his inclusion of communist symbolism and messages in his murals. Nevertheless, as a prominent artist he called attention to the plight of poor Mexicans and gave credence to the existence of a distinctive Latin American culture.

—*Lizabeth Martinez-Lotz*

spouted nationalist rhetoric, demanded social reform, and rejected U.S. imperialism. Their reformist agenda calling for a more inclusive social system had wide appeal among the lower classes. In Mexico, peasants took these messages of nationalist reform to heart by fighting a revolution that lasted for nearly two decades. The Mexican Revolution garnered nationalistic sentiments throughout Latin America by provoking a desire for governments that served the masses. Political leaders calling for economic reform and public welfare programs gained popular support throughout the region. Numerous nationalist governments came to power during the first half of the twentieth century. Batlle y Ordóñez (1903–1907, 1911–1915) in Uruguay, Cárdenas (1934–1940) in Mexico, and Vargas (1930–1935) in Brazil are among the more notable nationalist presidents of the region. These nationalist governments made drastic economic changes, including nationalizing public utilities, banks, and industries; passing tariffs to protect small businesses; and promoting industrial development. The break from economic dependency and

underdevelopment became possible after the Great Depression with the immediate decline in international trade. It was only then that import-substitution industrialization, the manufacturing of goods for internal consumption, became a reasonable and realistic goal.

Nationalism was not simply a political movement; in fact, it had a great social and cultural impact on Latin American society. In cities throughout the region, social issues such as education, welfare programs, and women's suffrage were at the forefront of public policy and intellectual debates. The desire to create a modern and sovereign nation for all its citizens generated discussions on nationhood. It became necessary to cultivate national identities that were distinctive in and of themselves and not simply in opposition to North American and European imperialism. A rejection of their racial identity and a desire for whitening (socially passing as white by means of upward mobility through marriage, education, etc.) had led to a divided Latin American society. It therefore became imperative under nationalism for Latin Americans to not just accept their mixed race heritage but embrace it. *Indigenismo* and Afrocentric movements developed as the region celebrated its synthesis of Spanish, Indian, and African culture. Nativism in art, literature, music, and dance was a breakaway from North American and European measures of culture and a creation of distinct Latin American styles. Folk art, costumes, music, and dance became stylish, not only within Latin America but also internationally. Artists, musicians, and writers attained international acclaim by calling upon their indigenous and African heritage. Notable among them are Mexican muralist Diego Rivera, Mexican painter Frida Kahlo, Cuban novelist Alejo Carpentier, Peruvian novelist Ciro Alegria, Guatemalan novelist Miguel Angel Asturias, and Brazilian classical composer Heitor Villa-Lobos. The success of nationalism in fostering a distinctive Latin American cultural identity did not by any means eradicate racism. The goal of whitening was no longer publicly embraced, but social status and economic power were still largely based on ethnicity. Furthermore, industrialization, nationalist governments, and urbanization did not develop in all regions of Latin America. And in the sec-

ond half of the twentieth century, many of the benefits of nationalism seemed to dissipate as grave problems arose as a result of overpopulation in urban centers, unemployment, and unsuccessful industrialization.

—*Lizabeth Martinez-Lotz*

Bibliography

- Castro-Klaren, Sara, and John Chasteen. *Beyond Imagined Communities: Reading and Writing the Nation in Nineteenth-Century Latin America*. Baltimore: Johns Hopkins University Press, 2003.
- Chasteen, John. *Born in Blood and Fire: A Concise History of Latin America*. Chapel Hill: University of North Carolina Press, 2001.

Pan-Slavism

The oldest of the macronationalist movements, Pan-Slavism has never been a coherent or distinct ideology and has never had a stable organizational structure. Pan-Slavism has been constituted instead by a rough grouping of ideas calling for cultural unity among Slavic peoples. Yet despite its appeal to unity across national boundaries, the movement has never attracted a very large following. Although initially intended to draw Slavs together, Pan-Slavism eventually took on extremist characteristics and, on the whole, has been politically unsuccessful.

The origins of Pan-Slavism are tied in many ways with the work of Johann Gottfried von Herder (1744–1803), a German intellectual and a prominent figure in the Romantic movement. Herder was influential in the formation of German national consciousness, in part by asserting that language was critical to the development of a sense of national identity. Although Herder's work was important to German nationalism, it also helped shape the emergence of Pan-Slavism. In his *Ideas for the Philosophy of the History of Mankind*, Herder praised the Slavs for their peaceful disposition and their love of music and literature. A follower of Jean-Jacques Rousseau, Herder contrasted the idyllic rural life of the Slavs with the artificial urban life of Germans. Herder's work detailed how the Slavs had been oppressed by German wars against them and argued that the Slavs would again rise to greatness

in the nineteenth century. He encouraged Slav intellectuals to study their own language rather than adopting French or German and also urged them to collect the folklore and folk songs of their culture to develop their own history. Herder hoped that with a fuller appreciation for their own history and language, the Slavs would unite and work to improve the human condition.

Although Herder's work was idealistic and lacked any particulars about how best to achieve unity, his glowing assessment of Slavic culture inspired many Polish, Czech, and other Slavic intellectuals to direct their efforts toward unification. The first notable proponent of this new Pan-Slavism was the Czech historian and politician Frantisek Palacky.

Influenced by Herder, Rousseau, and Immanuel Kant, Palacky called for the establishment of independent and equal Czech nations within the Austrian empire that would counterbalance German and Russian influence. Palacky was concerned about German expansionism, Russian domination, and expanding Magyar nationalism, and thus he argued for Slavs in the Austrian empire to take a leading role in determining their own future. Although Palacky supported several proposals for Slavic federation within the Austrian empire, none came to fruition in his lifetime.

Palacky did, however, take part in some of the major events during the emergence of Pan-Slavism, most notably the Pan-Slavic Congress at Prague in 1848. At Palacky's invitation, 341 delegates gathered in Prague to encourage cooperation among all Slavs. Following the revolutions of 1848 that swept across Europe, the meeting had the advantage of a progressive and hopeful context. The primary aim of the congress was to unify western Slavs (i.e., Czechs, Moravians, and Slovaks), eastern Slavs (i.e., Poles and Ukrainians), and southern Slavs (i.e., Slovenes, Croatians, and Serbians). Although intended to include all Slavs, the congress was not attended by many non-Austrian Slavs, including Russians and Bulgarians. The absence of the Russians would prove to be especially problematic, and the congress eventually took on a distinct anti-Russian tone. After some debate, the congress issued three declarations—one to the Austrian emperor, one to all Slavs, and one to European nations—all more or less asserting the democratic rights of Slavic peo-

ple and their desire to live in peace and equality with other nations. Those statements, however, produced few discernible results, and deep fissures persisted among the diverse Slavic groups. The major accomplishment of the congress was to move Pan-Slavism from an idealistic philosophical perspective to a distinctly political movement dedicated to furthering the goals of Slavs.

The Russians were very unhappy after being excluded from the Prague Congress, and many involved in Pan-Slavism believed that the movement should be unified under the leadership of Russia, which was, after all, the largest and strongest Slavic nation. The czarist Russian government favored that position, and Russia itself had its own precursor to Pan-Slavism, known as Slavophilism. Like Pan-Slavism, Slavophilism was influenced by Romanticism and called for a return to past religious, cultural, and political traditions. Unlike Pan-Slavism, though, Slavophilism was anti-Western in its orientation and resisted the role of reason over emotion that prevailed in western European thought. Slavophilism also had a strong religious component and argued for Russia to assert itself as the only home for the one true religion, orthodoxy. For Slavophiles, Russians were clearly God's chosen people, who stood in sharp contrast to Westerners corrupted by materialism. Slavophilism thus undergirded the aggressive and expansionist form of Pan-Slavism developed in Russia that called for a unified Slavic nation running from the Baltic Sea to Constantinople and governed under Russian leadership. The two most prominent advocates for that kind of Pan-Slavism in Russia were the anti-Darwinist scientist Nikolai Yakovlevich Danilevsky and the famous novelist Fyodor Dostoyevsky.

With the development of a different strain of Pan-Slavism in Russia and splits within the previously dominant form of Pan-Slavism, leadership of the movement shifted toward Moscow in the early 1860s. In 1867 the Society of Friends of Natural Science at Moscow University organized a meeting of various Slavs that became the Second Pan-Slavic Congress. Several non-Russian Slavs were invited and attended, including Palacky, but Poles were excluded. As in the first congress, splits emerged in the second congress, most notably between the Russians and all other Slavs. The Russians insisted that Russian become

the official language of all Slavs and argued that Russia had created the Polish nation, which meant that it could never be independent. While other Slavs argued for mutuality and equality among all Slav nations, Russians saw Pan-Slavism as a movement for the supremacy of orthodoxy, the Russian language, and Russian culture. As in Prague, the differences within and confused goals of Pan-Slavism meant that the Moscow congress produced few practical results. Although plans were made for the next congress to be held in Belgrade in two years, the next Pan-Slavic meetings were not held until the early twentieth century.

The internal divisions of Pan-Slavism in the final decades of the nineteenth century led the movement to stall. Although Pan-Slavism thrived in Russia, opinions about the movement in the Balkans were deeply divided over the role of Russian influence. Some resented the fact that Pan-Slavism had basically become the doctrine for Russian imperialism, while others looked to Russia for guidance. In Poland, Pan-Slavism was threatened by the Pan-Polish ideal that called for a larger united Polish nation. The Czechs, however, continued to keep the earlier strand of Pan-Slavism alive and saw it as an effective counter to German expansionism. Karel Kramar, a Czech politician, promoted a more liberal form of Pan-Slavism called Neo-Slavism. The next Pan-Slavic Congress was held in Prague in 1908, followed by another in Sofia in 1910. As in past meetings, divisions among Slavs made progress virtually impossible. At the same time, the Russians held their own meeting in 1909. Pan-Slavism was then overshadowed by the Balkan Wars of 1912–1913, which pitted Slavic nations against each other.

The end of World War I brought the fulfillment of some of the demands of the early Pan-Slavism movement, namely the establishment of three new nations: Czechoslovakia, Poland, and Yugoslavia. Yet the states themselves were fairly weak, and rivalries persisted among them. The apparent decline of Pan-Slavism was underscored by the Russian Revolution of 1917, and the new Soviet government denounced Pan-Slavism as reactionary ideology.

Although Pan-Slavism seemed dead, it was resurrected by the Soviets themselves in the 1940s as a way to unite Slavs against the Nazi re-

gime. Pan-Slavism conferences were held in Moscow during World War II. Congresses for people of Slavic descent were also held in North America and South America during the war in an effort to find ways to support the struggle of Slavs in Europe. After the war, the Soviets continued to invoke Pan-Slavism and sought to merge it with their communist ideology. Like other Pan-Slavic efforts of the past, however, that effort failed to unify the Slavs, as splits arose between Josef Stalin and Yugoslavia's Josip Broz Tito.

For the most part, however, Pan-Slavism has been unsuccessful in achieving its political and cultural goals. The Slavs are geographically separated, and different Slavic groups have had very different historical experiences. The religious differences among Slavs are also substantial; the rift between Roman Catholic Slavs of the west and Orthodox Slavs of the east runs very deep. Most problematic, however, the transformation of Pan-Slavism into simply a synonym for Russian and Soviet political ideologies has limited its appeal to Slavs of other nations. All of those factors combined have meant that Pan-Slavism has been unable to achieve the goals of Slavic unity and liberation articulated so eloquently in the early nineteenth century.

—Carol Pech

Bibliography

- Kohn, Hans. *Pan-Slavism: Its History and Ideology*. 2nd rev. ed. New York: Vintage Books, 1960.
- Maxwell, Alexander. *Choosing Slovakia: Slavic Hungary, the Czechoslovak Language and Accidental Nationalism*. New York: Tauris Academic Studies, 2009.
- Snyder, Louis L. *Macro-Nationalisms: A History of the Pan-Movements*. Westport, CT: Greenwood, 1984.

Indonesian Nationalism

At the turn of the twentieth century, the Netherlands East Indies was an odd imperial entity. Rapid territorial expansion in the second half of the nineteenth century had brought together a wide array of islands and populations that had little in common apart from their Dutch colonial

masters. Even on the island of Java, the economic heart of the East Indies with the largest population, differences in ethnicity, religious outlook, language, regional identity, and strong social differentiation made it unclear on what basis a nationalist project might be successful. Eventually, territorial nationalism aiming to capture the territory of the colonial state, rather than ethnic nationalism aiming to unite an ethnic group with a common history, would emerge.

Those opposed to Dutch domination realized that earlier models of anticolonial action (usually conservative with the aim of restoring the old feudal order, an Islamic polity, or a millenarian society) failed to provide a good guideline for independence. They had generally been localized and unsuccessful, whether led by sultans and rajas, or ulamas and other leaders. Modern technologies offered the promise of the invention of new organizational vehicles and symbols, and the exploration of novel ways of communicating and coordinating collective action. Yet the social construction of a new political community remained a tortuous process.

Under the initially benevolent eyes of the colonial administration, which in 1901 had adopted what was popularly termed the “Ethical Policy” that aimed to provide a modicum of welfare and education to the “natives,” various organizations began to blossom. Key figures in this elite- and reform-driven “national awakening” were Dutch-educated “natives,” Javanese batik entrepreneurs, devout modernist Muslims, Eurasians, and some Dutch socialists. Given the restrictive political space permitted by the Dutch colonial state, most of these organizations aimed for political or socioeconomic reforms, though some articulated plans for eventual independence and radical change. Three broad and sometimes interconnected streams were to emerge: Islamic reform, Socialism-Marxism, and secular nationalism.

The official genealogy of modern reform usually begins in 1908 with the Budi Utomo (Noble Endeavour), an organization set up by Dutch-trained students, many of them from the Training School for Native Doctors (STOVIA). Their ambitious plans for social reform in Java, and eventually on other islands, quickly ground to a halt when the organization was taken over by

more conservative members of the aristocracy dedicated to the preservation of Javanese values.

More successful were Javanese batik traders who in 1912 established the Sarekat Islam (SI). Within a very short time, the organization had set up branches throughout Java and beyond and would soon claim a mass following of several hundred thousand to two million. A catch-all movement that tried to appeal to the rural masses, whether the more purist Islamic *santri* or more syncretic *abangan*, but also to conservative and reform-minded aristocrats, the SI opted for a cooperative rather than a confrontational approach. Among its key leaders was Raden Umar Sayed Tjokroaminoto (1882–1934), a charismatic Dutch-trained aristocrat regarded by many Javanese as the *ratu adil* (just king). This did not go unchallenged by other SI members who favored a reformist and modernist Islam. Also founded in 1912 was the Muhammadiyah, another Islamic reform movement that largely preferred social reforms rather than nationalist activism.

Far bolder were the leaders, many of them Eurasians, of the short-lived Nationale Indische Partij (1912) who demanded socioeconomic justice, and racial equality, and explicitly asked for eventual independence of the Netherlands East Indies. The organization was wrapped up by the colonial authorities within a year and its top leaders Ernest Douwes Dekker (1879–1950), Suwardi Suryadiningrat (1889–1959), and Tjipto Mangunkusumo (1884–1942) temporarily exiled in the Netherlands. Repatriation or prison was also the fate of the leaders and activists of the Indies Social Democratic Association (ISDV), which had been set up in 1914 by Dutch socialists under the leadership of Hendricus Sneevliet (1883–1942), after it had instigated Dutch sailors and soldiers in Surabaya to mutiny and form soviets (workers’ councils).

The ISDV nevertheless survived and gained a foothold among the native masses through membership in the SI. After transforming into the Communist Party of Indonesia (PKI) in 1920 and a leadership challenge to the SI, the PKI managed to take over half its membership. A series of strikes in 1925 led to a crackdown on the party and the exile of party leaders such as Tan Malaka (ca. 1896–1949). Despite this setback, a

series of Communist revolts erupted in 1926 and 1927, most severely affecting areas in Bantam (West Java) and Minangkabau (West Sumatra). Leaders who escaped the resulting crackdown fled overseas or went underground, only to re-emerge in 1945.

In contrast, the Indonesian Nationalist Association (PNI), formed in 1927, articulated a secular nationalist alternative to Islamic reform and Communism. Upon the initiative of the Study Club of Bandung, of which the recently graduated engineer Ahmad Sukarno or Sukarno (1901–1970) was a member, its membership included politically talented Netherlands-trained members such as Mohammad Hatta (1902–1980) and Sutan Sjahrir (1909–1966) and a younger generation of more confrontational students who had become politicized in the East Indies' study clubs. When Sukarno's speeches for what had by then become the Indonesian Nationalist Party (PNI) became increasingly incendiary, the authorities detained him and others in late 1929. The PNI dissolved in 1931, and successor organizations were short lived or ineffective after further Dutch repressions against noncooperating organizations. By the mid-1930s, Governor-General Bonifacius Cornelis de Jonge confidently stated that it would take another three hundred years to grant some autonomy.

The legacy of the late 1920s' nationalist movement was an agreement on nationalist symbols such as a red-and-white flag, an anthem entitled "Indonesia Raya," the advocacy of Indonesian (based on the archipelago's lingua franca, Malay, rather than Javanese or Dutch) as the nationalist language, and a new name for the Dutch East Indies and its capital Batavia: Indonesia and Jakarta, respectively. The Youth Pledge (*sumpah pemuda*) of the second Indonesian Youth Congress of 1928 hence exhorted the "sons and daughters of Indonesia to acknowledge one motherland," "one nation," and to "respect the language of unity, Indonesian." The First Indonesian Women's Congress of December 1928 also made it clear that women wanted to be part of the Indonesian nationalist project.

By this time, Dutch hopes to contain indigenous political aspirations through the Volksraad (People's Council, 1916–1942), a multiracial uni-

cameral parliament comprised mostly of conservative Indonesians frequently with a civil service background, as well as Europeans and "foreign orientals" had largely failed. As the Governor-General was not accountable to it, the Volksraad had extremely limited power and hence offered little prospect of any significant change in the colonial relationship. With immunity guaranteed to the Volksraad members, some were encouraged to articulate the grievances and hopes of the population after the last noncooperative organizations had been emasculated. The last serious attempt in the Volksraad, a 1936 petition initiated by Sutardjo Kartohadikusumo toward self-government in a Dutch commonwealth was rejected two years later, thus seriously weakening any Dutch chances of prevailing against Japanese imperial ambitions.

The Japanese occupation of the Dutch East Indies in the first half of 1942 gave new lease of life to Indonesian nationalist aspirations. The defeat of the Dutch by an Asian power was psychologically important, and various Japanese policies allowed for a reawakening of Indonesian nationalism. Key leaders such as Sukarno, Hatta, and Sjahrir were liberated and the former two participated in a Japanese-Indonesian advisory council, Putera. Japanese-sponsored propaganda events gave in particular Sukarno the opportunity to address mass rallies in major Javanese cities. In addition the Japanese gave the archipelago's Muslims a voice by sponsoring the formation of Masjumi, the Consultative Council of Indonesian Muslims. In 1943, Japanese officers set up a paramilitary group, the Defenders of the Fatherland (PETA), and also encouraged the mass mobilization of youth, the "pemudas," both of which would feed into the armed nationalist resistance against reimposition of Dutch colonial rule. The Japanese surrender of 1945 and the resulting power vacuum gave Sukarno and Hatta the opportunity to proclaim Indonesia's independence only a few days later on August 17, 1945, thus opening a new chapter in Indonesian history in which not only the Dutch but also ethnonationalist and Islamic movements would challenge the secular territorial nationalism of the Indonesian Republic.

—Tobias Rettig

Bibliography

- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Rev. ed. London: Verso, 2006.
- Blackburn, Susan. *The First Indonesian Women's Congress of 1928*. Translated from the Indonesian and with an introduction by Susan Blackburn. Clayton, Australia: Monash University Press, 2008.
- Dahm, Bernhard. *Sukarno and the Struggle for Indonesian Independence*. Translated from the German by Mary F. Somers Heidhues. Ithaca, NY: Cornell University Press, 1969.
- Dijk, Kees van. *The Netherlands Indies and the Great War, 1914–1918*. Leiden: KITLV Press, 2007.
- Kahin, George McTurnan. *Nationalism and Revolution in Indonesia*. Ithaca, NY: Cornell University Press, 1952.
- Kratoska, Paul, and Ben Batson. "Nationalism and Modernist Reform." In *The Cambridge History of Southeast Asia, Volume Two, Part One, From c. 1800 to the 1930s*, edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1992.
- Lebra, Joyce Chapman. *Japanese-trained Armies in Southeast Asia: Independence and Volunteer Forces in World War II*. 1977; reprint, Singapore: Institute of Southeast Asian Studies, 2010.
- McVey, Ruth T. *The Rise of Indonesian Communism*. Ithaca, NY: Cornell University Press, 1965.
- Ooi, Keat Gin, ed. *Southeast Asia: A Historical Encyclopedia from Angkor Wat to East Timor*. 3 vols. Santa Barbara, CA: ABC-CLIO, 2004.

■ Introduction: Workforce and Workplace

In the period 1900–1945, larger segments of the world's population shifted from agricultural to industrial labor. Efforts to standardize labor via scientific management and other efficiency regimens extended from the workplace to regimented education systems offered to larger segments of the population. At the same time, industrial growth propelled the development of a clerical labor force and a managerial middle class. As occurred throughout the nineteenth century, in the period from 1900 to 1945 numerous strikes, often violent, broke out worldwide as workers sought better wages and working conditions. Ironically, the creation of the Soviet Union led to the decline of the union in that nation as an effective agent of change; centralized planning and propaganda that heralded the heroism of the laborer did not make up for grueling working conditions or quotas. In the 1930s, unions such as the American Federation of Labor (AFL) gained strength in the United States when the New Deal's National Industrial Recovery Act recognized union organizing, strikes, and collective bargaining as legal tactics. Some white-collar trades also unionized in this period, with the creation of unions such as the American Newspaper Guild and the British Railway Clerks Association.

In this period, the efforts of unions, labor activists, and journalists prompted many legislative efforts to enforce workplace safety, particularly in dangerous trades such as mining and railroads. Industry representatives tended to make the argument that the burden was on the worker not the employer for ensuring safety. As a consequence, work safety in industrial occupations was abysmal, though small gains were made during this period.

Both world wars offered new employment opportunities to women, as the war efforts drained industrial manpower. African Americans also made gains when protests led by union organizer A. Philip Randolph led to Franklin Delano Roosevelt's decision to issue Executive Order 8802, which required firms with federal contracts to hire interracial workforces. Forced labor was also a way of life throughout this period, whether in some forms of forced prostitution, in the prison chain gangs common in the southern United States, in the coolie labor system in the British empire that continued to contract for Asian indentured servants to labor in colonial outposts through World War I, in the Gulags in the Soviet Union, in the forced labor of Japanese prisoners of war,

or in the work and death camps set up under Nazi Germany's control.

—*Fred Nadis*

Post-World War I Growth in White-Collar Labor

When World War I came to an end in November 1918, white-collar workers across the industrialized world found themselves in a changed environment. Though differences existed at the national level, several general trends mark this period. Both government- and service-sector bureaucracies expanded significantly in the interwar period, increasing both the size and importance of the white-collar workforce. Labor agitation during the war led to a more favorable institutional and cultural situation, allowing for greater union activity. In spite of these shifts, however, industrial (or blue-collar) unions made significantly greater advances in comparison to their fellow white-collar workers. Increased unionization secured collective bargaining rights, which in turn raised wages and improved working conditions.

► WHITE-COLLAR IDENTITY

One of the interesting issues in the literature concerning white-collar workers centers on the status and deskilling of the workforce. As the service sector grew, an increasing number of unskilled jobs became available. Workers who no longer enjoyed the economic or social benefits historically associated with white-collar status filled these jobs. Historians and sociologists continue to engage in debate over how long this trend existed and how it impacts perceptions of class and social position. Such issues have a particularly important impact on the nature of white-collar unionism. Over time, greater connections between white- and blue-collar unions often homogenized the working-class movement, blunting the distinctions between the two groups. Further complicating the issue is the tension between class and gender, as female white-collar workers face increasing marginalization.

—*Tavis Harris*

One of the chief reasons white-collar workers fell behind the manual sector was a general resistance to organizing. During the interwar period, service-sector employees commonly enjoyed a higher degree of education or specialized skills training, which led to perceptions of distinctiveness and superiority as compared to laborers. In general, white-collar employees were more likely to identify with management and have a clear sense that career advancement was possible without recourse to organization. Given this sense of superiority, white-collar workers were generally hesitant to associate themselves with laborers. Several early white-collar unions structured themselves as professional associations rather than trade unions, often resisting efforts by groups such as the American Federation of Labor (AFL) or the Congress of Industrial Organizations (CIO) in the United States. This resulted in a lack of effective organizational capacity, and lacking wider support several fledgling white-collar unions were easily quashed by management. Connecting white-collar issues with the wider working class was a slow process that only came to the fore after World War II. However, throughout the 1920s and 1930s, white-collar workers increasingly realized that at least they shared common interests, and organization earnestly began.

The unionization of white-collar workers was significantly lower in numbers than trades or unskilled laborers, although government employees, clerks, and railway workers began to organize in significant numbers. This was especially prevalent in businesses where white- and blue-collar workers intermingled, thus illustrating the benefits of unionization. For example, unionized blue-collar workers often managed to secure better conditions and higher pay than the more socially prestigious clerical staff.

In spite of these structural and ideological issues, several lasting white-collar unions were created in the interwar period. In 1933 the American Newspaper Guild (ANG) was founded in Chicago. After early difficulties, the ANG moved toward a trade union model, associating with the CIO and partaking in a bitter struggle with the Hearst newspaper chain over issues of overtime and pay. Though formed in the late nineteenth century, the British Railway Clerks'

Association (RCA) enjoyed significant growth after 1918, as the majority of railway clerks supported the RCA as it pushed for industry-wide representation of clerical workers. Strike action secured this right, and the RCA continued to pressure management for better pay and working conditions throughout this period. The white-collar sense of respectability remained, while their unions increasingly reflected trade union tactics such as a series of white-collar strikes that plagued both the British government and employers in the interwar years.

—Tavis Harris

Bibliography

- Bailey, Peter. "White Collars, Gray Lives? The Lower Middle Class Revisited." *Journal of British Studies* 38(3) (1999): 273–290.
- Hyman, Richard, ed. *The New Working Class? White-Collar Workers and Their Organizations*. London: Macmillan, 1983.
- Mills, C. Wright. *White Collar: The American Middle Class*. New York: Oxford University Press, 1951.
- Oppenheimer, Martin. *White Collar Politics*. New York: Monthly Review Press, 1985.

Unionism

By the turn of the twentieth century, unions in the same trades and industries across the globe came to see themselves as sharing similar interests and experiences. As such, these labor organizations united in International Trade Secretariats (ITs) to further their interests in a world that was becoming increasingly internationalized. ITs emerged among employees in a wide range of occupations including boot and shoe workers (1889), clothing workers (1893), diamond workers (1905), and hairdressers (1907), among others.

Most of these secretariats' national affiliates were socialist in orientation, as were the ITs that called for replacing capitalism with socialism. However, the majority of the secretariats' work was pragmatic and focused on improving the wages and working conditions of the world's workers through activities such as distributing information concerning wages and working conditions, thwarting intercontinental strikebreak-

ing attempts by employers, and providing financial support to unions during periods of intense industrial conflict. By 1914, nearly 30 ITs had been established, with the majority of them headquartered in Germany.

In August 1901 the International Secretariat of National Trade Union Centres (ISNTUC) was created among largely European trade union confederations in order to encourage the formation of national federations throughout the industrialized world. Upon the recommendation of the American Federation of Labor (AFL) in the United States at the ISNTUC's last conference prior to World War I in 1913, the ISNTUC unanimously changed its name to the International Federation of Trade Unions (IFTU). The war, however, seriously hampered international trade union unity, with the labor movement of each country patriotically supporting its own government's war efforts. Thus, it was not until after the war's conclusion (1919) that the IFTU was reconstituted.

Nevertheless, a second rupture in the unity of the international labor movement occurred with the formation of the Red International of Labor Unions (RILU) when delegates from 38 countries met in Moscow in 1921. Motivated by the 1917 Russian Revolution, the RILU was a communist-led trade union international organized to lead the global proletariat in overthrowing capitalism in a manner similar to that adopted by the Bolsheviks. While expressing implacable hostility to the IFTU and its members, the RILU affiliates, which, for the most part, represented minority movements within their own national trade union federations, worked within the latter organizations in order to capture them for the RILU.

By 1928 the RILU argued that the national trade union federations had become social fascist and advocated the creation of revolutionary dual unions under communist control when and where possible. However, with the ascendancy of Nazism in Germany in 1933 and the threat of fascism's expansion to other European countries during 1934–1935, the RILU called for the abandonment of their revolutionary unions and a return to working within the national trade union movements in order to create united fronts between communists and socialists in defending the trade unions and political democracy within

MEMBER ORGANIZATIONS OF THE INTERNATIONAL SECRETARIAT OF NATIONAL TRADE UNION CENTRES (WITH DATE OF FOUNDATION)

1868	Great Britain	Trade Union Congress
1880	Switzerland	Swiss Trade Union Confederation (<i>Schweizerischer Gewerkschaftsbund</i>)
1883	Canada	Trades and Labour Congress of Canada (TLC)
1886	United States	American Federation of Labor (AFL)
1888	Spain	General Workers' Union (<i>Union General de Trabajadores [UGT]</i>)
1890	Germany	General Commission of Free Trade Unions of Germany (<i>Generalkommission der Freien Gewerkschaften Deutschlands</i>)
1893	Austria	Imperial Trade Union Commission (<i>Reichsgewerkschaftskommission</i>)
1895	France	General Confederation of Labour (<i>Confederation Generale du Travail [CGT]</i>)
1897	Czech Lands	Czechoslovak Trade-Union Confederation (<i>Cekoslovanske odborove sdruzeni</i>)
1898	Belgium	Trade Union Commission (<i>Commission Syndicale</i>)
1898	Sweden	National Organization (<i>Landsorganisationen i Sverige [LO]</i>)
1898	Denmark	Trade Union Confederation (<i>Det Samvirkende Fagoforbund i Danmark [DSF]</i>)
1898	Hungary	Trade Union Council (<i>Szakeszervezeti Tanacs</i>)
1899	Norway	National Organization (<i>Landsorganisasjonen</i>)
1903	Serbia	Central Workers' Union (<i>Glavni Radnicki Savez [GRS]</i>)
1904	Bulgaria	General Workers Trade Union Federation
1906	The Netherlands	Dutch Confederation of Trade Unions (<i>Nederlandsch Verbond van Vakvereenigingen</i>)
1906	Italy	General Confederation of Labour (<i>Confederazione Generale del Lavoro [CGL]</i>)
1906	Romania	General Commission of Trade Unions (<i>Comisia Generala a Sindicatelor</i>)
1907	Finland	Confederation of Finnish Trade Unions (<i>Suomen Ammattiliittojen Keskusjärjestö [SAK]</i>)
1911	Greece	Panhellenic Labour Federation

—Victor G. Devinatz

Source

Michel Dreyfus. "The Emergence of an International Trade Union Organization (1902–1919)." In *The International Confederation of Free Trade Unions*, ed. Anthony Carew et al. (Bern, Switzerland: Peter Lang, 2000), 28–29.

the industrialized capitalist countries. After an IFTU delegation visited Moscow and rejected the RILU's demands for fusion in November 1937, the RILU was formally dissolved on December 27, 1937.

From 1919 to 1939 the IFTU hoped to utilize parliamentary democracy in combination with trade union action as the methodology for establishing socialism. Nonetheless, for all practical purposes, it sought to improve the lives of union members and workers by ameliorating the worst aspects of capitalism through the passing of protective labor laws, the reduction of working

hours, and the fight to end unemployment. The IFTU also called for the introduction of industrial democracy through the creation of national economic councils with trade union participation as well as factory and shop councils. The IFTU's 1939 congress in Zurich, during which it adopted motions opposing war and fascism, became its last.

Upon the end of World War II, the international trade union movement was united once more with the formation of the World Federation of Trade Unions (WFTU) in Paris in October 1945. At the founding congress, statements were

issued denouncing fascism, war, colonialism, discrimination, and racism, while proposals were made for extending unions' rights, improving working and living conditions, and restricting and eliminating monopolies. This unity, however, was short-lived due to programmatic differences between the Western trade unions and the communist-led union federations, leading to the formation of the Western-led International Confederation of Free Trade Unions (ICFTU) in 1949 by the noncommunist federations. The WFTU and the ICFTU remained divided due to ideological differences, as represented by Cold War thought that came to dominate political discourse throughout much of the second half of the twentieth century.

—Victor G. Devinatz

Bibliography

- Dreyfus, Michel. "The Emergence of an International Trade Union Organization (1902-1919)." In *The International Confederation of Free Trade Unions*, edited by Anthony Carewet et al. Bern, Switzerland: Peter Lang, 2000.
- Goethem, Geert Van. *The Amsterdam International: The World of the International Federation of Trade Unions (IFTU), 1913-1945*. Aldershot, UK: Ashgate, 2006.
- Tosstorff, Reiner. "Moscow versus Amsterdam: Reflections on the History of the Profintern." *Labour History Review* 68 (2003): 79-97.
- Windmuller, J. P. *The International Trade Union Movement*. Deventer, Netherlands: Kluwer, 1980.

Industrialization and the Working Class

By 1900, the process of industrialization had reached maturity in western Europe and North America but was just emerging elsewhere. In the United States, the world's most industrialized nation, new organizational developments led to further production gains in the early years of the century. At the same time, every industrialized country inundated their satellite countries and possessions with technology to help extract natural resources. A few countries like Russia, Italy, and Japan greatly improved their economic position through rapid industrialization. However, two world wars and a global depression

➤ EMPLOYEE-REPRESENTATION PLANS

Employee-representation plans were organizations created by employers to stave off the spread of trade unions in their facilities. Known as company unions in the United States because many were management-dominated, these organizations became a means for employers to improve workers' lives in response to the unfavorable conditions that industrialization created for workers around the world. The first employee-representation plan to receive worldwide attention was the Rockefeller Plan at the Colorado Fuel and Iron Company. Championed by John D. Rockefeller Jr., it spread quickly to Canada through the Rockefeller-owned Imperial Oil Company. In Britain, a government commission proposed the creation of similar organizations, known as Whitley Councils, during the First World War. The United States banned company unions in 1935, but other industrialized countries remain friendly to the idea of communication through such organizations in the workplace to this day.

—Jonathan Rees

changed the course of economic development nearly everywhere.

Because industrialization spread unevenly throughout the world during these years, the working-class response to it varied greatly. In many places working-class concerns were intimately connected to the politics of the time, whether it was the nationalization of industries in the Soviet Union or the Roosevelt administration's decision to pass the National Labor Relations Act in 1935. The success of governments at quelling discontent over the effects of industrialization depended largely on their system of government and the extent of the threat to the survival of any particular nation.

Two figures greatly affected the course of American industrialization during this period: Henry Ford and Frederick W. Taylor. Ford's assembly line in 1914 popularized the idea of mass production, which brought down the cost of automobiles and other products whose manufacturers became influenced by Ford's vision. The ability to buy consumer goods at cheaper prices helped limit the dissatisfaction of middle-class

workers in the United States and other developed nations. Taylor, like Ford, was influential all over the world. Taylor's vision of scientific management led to considerable strife among skilled workers who did not like losing control over the production process. This is best symbolized by the famous 1911 strike at the Watertown Arsenal in Massachusetts, but many workers upset by the standardization associated with Taylor's ideas were probably too frightened of losing their jobs to protest in this manner.

When World War I broke out, West European countries were just beginning to emulate the American model of industrialization. The Krupp Steel Works and the Linde Company (in the chemical industry), to name two German examples, became world leaders in manufacturing and technology during the prewar era. However, two catastrophic conflicts not only set back the course of industrialization in Europe but ultimately hindered the organization of workers in most belligerent nations. There were significant strikes during the interwar years, such as the English General Strike of 1926 in Britain, but European trade unions generally collaborated with their governments when the lives of their nations hung in the balance. Discontent during the war years was generally channeled into other forms of protest like food riots. The Nazis successfully banned independent trade unions in 1933 and replaced them with a single National Socialist trade union, the Deutsche Arbeitsfront (German Labor Front), which suggests the greater importance of nationalism over class consciousness within Germany. After the Bolshevik Revolution in November 1917, trade unions became part of the Soviet state, ultimately hindering their ability to improve the lives of workers at state-owned factories.

Latin American countries had economies based primarily upon the export of crops and natural resources during this period, such as Brazilian coffee, Guatemalan bananas, and Venezuelan petroleum. Although food processing and textiles were the most important industries in the region before the 1930s, a spike in industrialization during that decade gave rise to new industries like chemicals, metals, and papermaking throughout the region. Workers were kept mostly in check during this era by political sys-

tems that did not give them enough freedom to organize themselves. More importantly, these economies remained overwhelmingly agricultural and with labor so cheap that businesses had little incentive to industrialize.

—Jonathan Rees

Bibliography

- Bulmer-Thomas, Victor. *The Economic History of Latin America since Independence*. New York: Cambridge University Press, 1994.
- Cronin, James E., and Carmen Sirianni, eds. *Work, Community and Power: The Experience of Labor in Europe and America, 1900–1925*. Philadelphia: Temple University Press, 1983.
- Frieden, Jeffrey A. *Global Capitalism: Its Fall and Rise in the Twentieth Century*. New York: Norton, 2006.
- Landes, David. *The Unbound Prometheus*. New York: Cambridge University Press, 1969.

Domestic Work Forces during Wartime

The mobilization of entire economies for the war effort in the great conflagrations of the twentieth century, particularly during World War II, reflected the ability of states to harness the productivity of their respective workforces for the purpose of engaging in total war. The modern concept of total war, characterized by the mobilization of the entire national economy for the purpose of engaging in warfare, along with new weaponry capable of destroying vast amounts of property and life, made the civilian workforce vital to the war effort, as they were responsible for producing war matériel and munitions. Through various forms of government incentive, coercion, and persuasion, masses of both male and female workers put in endless hours at incredible toil and strain to keep their military forces equipped, sometimes amid aerial bombardments. The mass conscription of recruits, along with these new weapons, made governments in Europe and the United States capable of amassing gigantic forces of men and equipment to engage comparable forces on the opposing side.

During World War I (1914–1918) the gradual escalation of the conflict due to the stalemate on

the western front forced both the Allies and the Central Powers to mobilize their civilian workforces for their respective war economies. Imperial Germany mobilized its economy under the military dictatorship of Field Marshall Erich Ludendorff in 1916 after the civilian government under Kaiser Wilhelm II proved unable to cope with the economic strains of a two-front war. Compromises struck with the Socialist Party (SPD) quelled the potential for strikes and worker unrest. However, German war production of matériel soared, while food and consumer goods for civilians were in short supply. German workers had to cope with a poor diet and long shifts for poor pay. Both Britain and France attempted to mobilize their economies for total wartime production while hoping that ensured production and consumer goods would continue to help sustain morale among troops and civilians. Civilian governments set up near-dictatorial authority in terms of economic planning and the conduct of the war, both seen as crucial to the entire war effort. Workers on both sides were showered with patriotic and nationalistic propaganda and persuaded to invest much of their earnings in war bonds and loans. However, long hours, poor diet, and little to no access to consumer goods characterized the plight of most workers across Europe. The increasing centralization of national governments and the precedent for economic planning also characterized World War I's effect on economic mobilization for total war.

The Russian Empire suffered extreme hardships due to the strains of the war front and the workplace. Russian workers were forced into long hours with little to no incentive to work for what was deemed a lost cause. However, the Russian Revolution of 1917 raised the expectations of workers to create their own state. The Bolshevik coup in October 1917 finally led to the end of the war on the eastern front. However, the subsequent Russian Civil War (1917–1922) allowed the Bolsheviks to centralize their authority over the Russian economy through war communism. Taking a page from Ludendorff's total war economic mobilization, the Bolsheviks nationalized all industries within their sphere of control and, through incentive and coercion, mobilized Soviet industry for war and for the



A woman works in one of Moscow's factories in 1941. During World War II, millions of women worldwide became laborers to replace the men that were off fighting. (Library of Congress)

purposes of building socialism. Many Soviet workers, imbued with ideological fervor and motivated by the success of the Revolution, worked toward the victory over the whites (reactionary forces).

World War II (1937–1945) led to the total war mobilization of all the belligerents involved, now also including the United States and Japan. Total war mobilization during World War II, building on precedents from World War I, included more centralized political control over the war economy. Consumer goods and food were rationed for civilian use, and ration coupons and queues for goods become the norm. Countries subjected to aerial bombardment prepared their civilian workforces through drills and salvage work to ensure that production would be up and running as soon as possible. The infusion of women into the industrial workforce was ubiquitous in all countries except in

EXECUTIVE ORDER 8802

Executive Order 8802, also known as the Fair Employment Act, was signed into law by U.S. president Franklin D. Roosevelt on June 25, 1941. It was enacted partly in response to the demands of African American activists, such as A. Philip Randolph, who advocated legislation barring racial discrimination in war industries. Moreover, it was representative of the federal government's efforts to recognize the importance of African American labor to the war effort. It strictly prohibited racial discrimination in the national defense industry and was the first effort to promote equal opportunity and prohibit employment discrimination in the United States, particularly for African Americans. The order explicitly required federal agencies involved with war production to make sure that training and educational programs were administered without discrimination with respect to race, creed, and national origins. Furthermore, defense contracts were to be imbued with restrictions on discrimination. While race riots ensued in some industrial areas, African Americans gained opportunities previously denied. Executive Order 8802 was significant not only in that it recognized the importance of black labor in the United States but also in that total war mobilization created the opportunity for labor to exact demands from government in recognition of its importance to the war economy. Such concessions to labor were not available to workers in the authoritarian realms of the Axis and Soviet-controlled spheres.

—*Abraham O. Mendoza*

National Socialist Germany, which grew to rely increasingly on slave labor. In the United States, Britain, and the Soviet Union, war production ran at full capacity, churning out tanks, planes, artillery pieces, shells, and bullets and exceeding the capacity of the Axis Powers.

During World War II the civilian workforces of both the Allies and the Axis Powers were subjected to sacrifices, shortages, and—with the exception of the United States—the danger of aerial bombardments. Britain was able to produce an increasing amount of war matériel amid bombing attacks by the German Luftwaffe. Both Japan and Germany also managed to maintain adequate levels of war production amid aerial

bombing attacks by the Allies, but these decreased toward the end of the war as firebombing raids increased in intensity. Soviet war production, forced beyond the Ural Mountains by the German advance, increased its total output of tanks, planes, and artillery pieces through worker discipline and sacrifice and sometimes also through coercion. Soviet workers who did not comply with government demands faced time in forced-labor camps in Siberia, but many were nonetheless motivated by patriotism and vindictiveness toward the Germans. Both Germany and Japan, having conscripted most of their available manpower for the military, were increasingly forced to use slave labor from across their conquered territories in addition to children and the elderly. Workers in the Axis and the Soviet-controlled areas were subject to coercion and spying and could be arrested if seen engaging with suspected saboteurs. Long hours and a poor diet also took a toll on productivity, which was slowly placed on slave labor, particularly in German-controlled Europe and Japan's East Asian Co-Prosperity Sphere.

U.S. and British mobilization for war was a result of a coordinated effort between business and labor groups through government committees. War production and economic-resource allocation were coordinated centrally, ensuring the logistical efficiency of the entire war economy. Workers, both men and women, earned large wages and were provided incentives for higher output through overtime pay. African Americans played a large role in the civilian workforce, as unofficial racial hiring bans in war industries were lifted by governmental fiat and as demand outstripped labor supply. Many African Americans moved in droves to production centers in Seattle, Oakland, and New Jersey. Irish workers as well as many workers from the British empire flooded to England to work in Britain's factories as English men were conscripted to fight in Europe and North Africa. Many Allied laborers saved much of their earnings in war bonds and loans, which made a hefty profit for them in the postwar period. In contrast with the scarcity in the Axis and Soviet zones, both the United States and Britain were assured both guns and butter (both war and consumer goods), although Britain also received

many of its war goods through the U.S. Lend-Lease program, as did the Soviet Union.

—*Abraham O. Mendoza*

Bibliography

- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.
- Weinberg, Gerhard. *The World at Arms: A Global History of World War II*. New York: Cambridge University Press, 1995.

Workplace Safety in the United States

In the United States it was not until the 1870s that the first state workplace safety laws were passed. Common law and laissez-faire economic policies in force throughout the nineteenth century put the burden of safety not on the employer but the worker. During the later part of the nineteenth century, a coalition of organized labor and social reformers successfully lobbied for two political reforms. First, the factory law movement persuaded several state governments to pass workplace safety laws requiring that dangerous machine parts, cogs, and belts be guarded. Massachusetts was the first of many states to pass a factory law in 1877. However, enforcement was usually plagued by small budgets, an insufficient number of inspectors, and employer opposition.

Second, many states repealed or reformed their employer liability laws, and juries began granting injured workers more liberal damage awards. Fearful that juries might continue granting larger awards, a coalition of major corporations lobbied for a system of workers compensation legislation that would make standardized but lower payments in lieu of a worker's right to sue. In 1908, Congress passed the first workers compensation law in the United States, but it only covered federal employees. Eleven states passed workers compensation laws in 1911, but it would be 1948 before all states had passed workers compensation statutes.

The limitations of dealing with workplace safety problems that were complex and national in scope at the state level were revealed by state

workers compensation plans. Many states weakened or omitted provisions deemed objectionable to the business community and the courts. As a result, the range of hazards covered, the types of workers covered, and the benefits given varied from state to state. Although the existence of many occupational diseases were known at the time, virtually all state laws excluded compensation for them. Office, agricultural, small business, nonprofit, and domestic workers were commonly excluded from most state plans, as were consultants and those engaged in interstate commerce. Although forty states and territories had enacted workers compensation laws by the end of 1917, 40 percent of workers were legally excluded.

The federal government took its first steps toward the regulation of workplace safety when it passed laws during the 1890s covering two of the most dangerous occupations: railroads and mining. In 1891, Congress passed its first coal mine safety law, which mandated ventilation standards and prohibited child labor under the age of twelve in the federal territories. However, it did not apply to the states, which generally had weaker standards.

Despite the fact that coal mining has been consistently ranked as one of the most hazardous jobs, it has usually taken a major mining disaster to get Congress to tighten up safety regulations. In December 1907, 600 miners were killed in two mine accidents that occurred within a two-week span, but lobbying by the Bituminous Coal Operators Association (BCOA) prevented Congress from establishing the U.S. Bureau of Mines until 1910. Even then, pressure from the BCOA precluded giving the bureau the power to regulate state mining conditions or even to enter mines. The coal operators' lobby was so effective that the federal government was not able to establish the authority to set and enforce safety standards and make black lung a compensable disease until the passage of the Coal Mine Health and Safety Act of 1969.

In 1910, the U.S. Bureau of Labor reported how the use of poisonous white phosphorus in the match industry caused phosphorus necrosis, or "phossy jaw," a deadly disease in which the jaw bone is eaten away. Known in Europe to be an occupational hazard as early as 1838, the use

of white phosphorus was banned throughout most of the industrialized world by 1910. Nevertheless, it was still widely used by the U.S. match industry because it was slightly cheaper than its nontoxic substitute. It took three years of pressure and President William Howard Taft's endorsement to convince Congress to act. In 1912, it placed an onerous tax on the export, import, or interstate shipment of matches containing the deadly substance.

One of the most common causes of railroad accidents during the late nineteenth century was the manually operated, link-and-pin system of coupling cars. According to conservative estimates, this practice accounted for 16 percent of workers killed and 36 percent of injuries in train-related accidents in 1893. Although the automatic coupler had been shown to be safe and effective by 1885, the American Railway Association (ARA) blocked the passage of federal legislation until 1893. Frustrated by congressional inaction, several states passed their own coupler bills. Alarmed at the prospect of having to comply with a variety of state coupler safety standards (some of which exceeded the ARA's proposals), the ARA reversed itself and lobbied Congress to impose uniform but loosely worded federal standards.

In 1893, Congress passed the Federal Safety Appliance Act, which required that trains engaged in interstate commerce be equipped with standardized automatic couplers, power brakes, grab irons, ladders, running boards, and hand brakes. Subsequently, the ARA twice persuaded Congress to extend the deadline for compliance with the law's two most important requirements: automatic couplers and power brakes. As a result, the law did not go into effect until 1900, but it was not until 1903 that Congress required at least half the cars of any train engaged in interstate commerce to be equipped with power brakes. Congress gave the Interstate Commerce Commission (ICC) the power to increase the required percentage, but it did not do so until 1910, when the minimum was raised to 85 percent.

In 1936, Congress took its first step toward the establishment of national safety standards by passing the Walsh-Healey Public Contracts Act. It mandated that any company doing more than \$10,000 worth of business with the federal gov-

ernment comply with the state safety standards where the work was being done. It also imposed child labor restrictions and mandated the eight-hour day and forty-hour week. However, enforcement of the Walsh-Healey Act was virtually nonexistent.

Business groups made two arguments against the act. First, the federal government was usurping a policy function that was best left to the states. But state regulation alone was unable to control the increasing variety and magnitude of industrial hazards that a technologically advanced economy, based on interstate commerce and giant corporations, produced. Moreover, a century of experience with state workplace safety standards demonstrated that they varied greatly in effectiveness and enforcement from state to state. Second, business interests maintained that workers, not employers, were the cause of most accidents. Business interests have espoused this view since the nineteenth century and have perpetuated it through the National Safety Council's "safety first" campaign that placed the primary burden for safety on the worker, not on management. The phrase "accident proneness" was first used to connote worker error in a 1919 study of industrial accidents and soon entered the popular lexicon as part of a public relations campaign to define the terms of the workplace safety debate.

—Vernon Mogensén

Bibliography

- Ashford, Nicholas A. *Crisis in the Workplace: Occupational Disease and Injury*. Cambridge, MA: MIT Press, 1976.
- Berman, Daniel M. *Death on the Job: Occupational Health and Safety Struggles in the United States*. New York: Monthly Review Press, 1978.
- Claybrook, Joan, et al. "The Health and Safety of Workers." In *Retreat From Safety: Reagan's Attack on America's Health*. New York: Pantheon, 1984.
- Kazis, Richard, and Richard L. Grossman. *Fear at Work: Job Blackmail, Labor, and the Environment*. New York: Pilgrim Press, 1982.
- Kolko, Gabriel. *Railroads and Regulation, 1877–1916*. New York: W. W. Norton, 1965.
- Mogensén, Vernon. "Workplace Safety." In *Work in America: An Encyclopedia of History, Policy, and Society*, edited by Carl E. Van Horn and Herbert A. Schaffner. Santa Barbara, CA: ABC-CLIO, 2003.

Changing Societal and Cultural Roles for Women in the Workforce

Women became employed in a wide range of occupations in the first half of the twentieth century, primarily as a result of two world wars. Prior to the twentieth century, women were limited to a handful of occupations such as teaching, domestic work, and factory jobs. Many female workers were young and single or were widowed. Middle-class women worked in their family's shop or business performing a variety of tasks. Some women worked out of the home as seamstresses, laundresses, or nursemaids. Women also handled most household tasks, although their work was unpaid and not highly valued. In rural areas women produced much of the food. Women's education often focused on domestic skills. In Western nations women gradually gained educational opportunities, but few doors opened in the work world prior to World War I.

Laws supported the assumption that women could not or should not do certain types of work, but many women did work. About 20 percent of the American workforce was female in 1900, with about two-fifths employed in domestic work. Factory work ranked second, and as immigration increased during the next decade, many more women entered the workforce. In Great Britain prior to World War I, almost one-third of all women were employed in jobs that ranged from factory work to running boardinghouses. About 400,000 Mexican women were employed in factories and domestic work by 1900, and women were hired as clerks and office workers. Most Japanese women did not work outside the home, but the government encouraged young women from poor families to work in the textile mills for the good of the nation as the country industrialized. Women comprised about 60 percent of Japan's industrial workforce between 1894 and 1912, with many young women spinning and weaving silk and cotton. More than 80 percent of

► INTERVIEWS WITH WOMEN ABOUT WORK

In the 1930s Franklin Roosevelt's Federal Writers Project hired many workers to interview Americans about their lives, documenting a wide range of careers. Many women worked hard doing domestic work or in factories for little money. The Writers Project archives indicate that Mrs. B's experience was not unusual: "My first job up in Maine was washing dishes in a boarding house. I got my room and board, and \$8 a week. . . . Then I went to work in a paper bag factory; I operated a press that printed the bags—I used to feed the machine."

Margaret Hawley, a packinghouse worker, described conditions in the sausage department: "They have the old women hauling on the trucks. The young ones wouldn't do that heavy work. . . . I worked in there where they put up pressed ham in cans. I packed pressed ham that was full of worms. They know."

Henrietta C. Dozier, an architect who wondered "whether my life history will be of any interest," was far more unusual. "How did I happen to take up architecture—an unusual occupation for a woman? Well, even in my childhood I wanted to study architecture, and have drawn plans since I

was seven." She also said, "I have always had to compete with men, yes. In submitting designs, plans, bids, I have never asked any consideration at any time because I happened to be a woman; I put all my cards on the table in fair and honest competition, and ask only consideration on the same basis. For the most part I have been treated fairly." But in one instance, officials told her, "We are sorry, Miss Dozier, but we cannot give it to you because you are not a voter."

The comments of Mrs. Blount, a dressmaker, are also instructive: "Today, every woman who is eligible is expected to vote and is considered unpatriotic if she doesn't. . . . Now we have women evangelists, lawyers, doctors, nurses, congresswomen and others. Women now practically run the churches and other religious organizations. . . . And today we even have ladies flying." She exclaimed, "I wonder what next."

—Carol Sears Botsch

Source

Library of Congress, Manuscript Division, WPA Federal Writers' Project Collection.

the silk and cotton workers were women when the industry peaked in the 1920s.

World War I's labor shortages allowed many women to assume jobs that had traditionally been held by men. In addition to rolling bandages and nursing the wounded, women worked in factories and other war-related industries, although wages were lower than men's, and child care was often unavailable. American women worked in textile mills making military uniforms and in the steel and oil industries. In Great Britain, the number of employed women increased by 22 percent, with the greatest increases occurring in the transport, banking, and munitions industries as well as in white-collar office and civil service positions. However, when the war was over, most women lost their jobs. Both British and American women workers resumed the more traditional occupations they had held in the prewar years, usually at much lower wages than men.

Women around the world held mostly traditional women's jobs in the postwar years. Even in Italy where a postwar government had removed most legal limits on women's employment, most females held physically demanding and low-paying jobs, often in agriculture and by the 1930s in industry and services. As the American economy prospered in the 1920s, more women became teachers and nurses, and law and medical schools established quotas for the number of women admitted.

With the Great Depression unemployment rose dramatically, and there were fewer opportunities for women to find work. Even so, some employers chose to employ females because of the lower wages, despite public hostility. In addition, many public and private sector institutions created antimarried women policies in an effort to keep men in jobs, with about three-fourths of school boards refusing to hire married women. European economies were depressed as early as the 1920s, and these nations also responded by discouraging women from working. Many European women did housecleaning, laundry, and other tasks that earned some money for their families, although they were not counted among the employed. In Italy where more than half of women workers were employed in agriculture and nearly a quarter

worked in factories in 1931, the government encouraged women to stay home, at least until World War II intervened. The Nazis in Germany attempted to relegate women to home and family, although many were employed as teachers, nurses, and domestic workers during the 1930s. With a worldwide depression, many Chinese women who had worked in silk factories and Japanese women who worked in silk and cotton mills lost their jobs.

In the Soviet Union after the Russian Revolution, better education permitted women to prepare for a range of new kinds of jobs. But as improved living conditions decreased necessity, less than 25 percent of women were employed by the late 1920s. Following the push to industrialize in the 1930s, laws that protected women workers were abolished so that more women could be employed in factories. Many Soviet women held jobs as scientists or academics by the mid-1930s, and the number of women physicians had increased more than 20 times to 42,000. But these jobs were not valued as highly as positions in the industrial sector.

Attitudes about women's workforce participation quickly changed as World War II began. Many women entered the workforce either out of patriotism or under governmental pressure to relieve labor shortages. In Nazi Germany women were needed to support the war effort both in the factories and on the farms. About half a million German women were employed in the defense industry during the war years, at first as clericals and telephone operators and then later in jobs that ranged from nursing to fire fighting to driving trucks. British women ages 18 to 50 were required to register for military duty, and single women between the ages of 20 and 30 were drafted from 1941 onward. By 1943 most married and single British women were serving in the military in a wide range of occupations or were working in industry, although salaries and compensation for war wounds were lower than those for men. By 1945 women comprised nearly half of the Soviet workforce. Many Soviet women also served in the military on active duty and saw combat. Six million American women joined the workforce, with about one-third employed in offices and one-third in heavy industry. Women comprised

40 percent of the workers in aircraft plants and 12 percent of those in shipyards. Women performed a host of nontraditional jobs ranging from drill press operators to truck drivers to gas station operators, usually earning higher salaries than they had made before. With the war's end, many women workers lost their jobs to the returning men and were forced back into traditional women's work, although women's labor force participation would continue to grow as the century progressed.

—Carol Sears Botsch

Bibliography

- Anderson, Bonnie S., and Judith P. Zinsser. *A History of Their Own: Women in Europe from Prehistory to the Present*, Vol. 2. New York: Harper and Row, 1988.
- Hunter, Janet. "Japanese Women at Work, 1880–1920." *History Today* 43 (May 1993): 49–56.
- Hymowitz, Carol, and Michael Weissman. *A History of Women in America*. New York: Bantam Books, 1978.
- Pyecroft, Susan. "British Working Women and the First World War." *The Historian* 56(4) (Summer 1994): 699–711.

Forced Labor

Although slavery was officially abolished throughout most of the world in the nineteenth century, it survived through much of the twentieth century in the form of state-managed forced labor camps. The roots of the Soviet system of forced labor can be traced back to the tsarist period, which operated forced labor groups for punishment of criminals and forced exile to work areas for peasants. Almost immediately following the 1917 Russian Revolution and communist takeover, the Soviet government began the systematic imprisonment of political prisoners in concentration camps. The year 1929 marked a major turning point in the Soviet camp system, because Josef Stalin decided to implement forced labor in order to enhance the nation's economy and accelerate industrialization. The camps came under control of the Soviet secret police, and from there the whole Soviet system of forced labor commonly came to be called the Gulag. The term "Gulag" is an acronym from

➤ JAPANESE FORCED LABOR

Imperial Japan also utilized forced labor on a large scale during the twentieth century. During World War II, Japan supplemented shortages in its labor force by compelling prisoners of war (POWs) and civilians of captured territories into slavery. Although the numbers vary, estimates are that more than 140,000 Allied POWs, at least 1 million Chinese and Indonesians, and more than 600,000 Koreans were used for various slave-labor projects in Japan and throughout the Japanese Empire. Another infamous form of slavery was compulsion of thousands of Korean women and girls into forced prostitution. Commonly referred to as comfort women, they were, in most cases, sexual slaves.

Similar to German corporations, it was Japanese companies that asked for and chose to use slave labor during the war. Companies more than Mitsubishi and Nippon actually paid the Japanese military to use POWs in their factories and mines. In general, slave laborers were treated harshly and usually fed just enough to keep them alive. Estimates are that more than 30,000 Allied prisoners of war who were used for forced labor did not survive the conflict, of which at least 11,000 were American.

—Philip Flowers

the Russian words *Glavnoe Upravlenie Lagerei* (Main Camp Administration).

The Gulag became a massive state system of forced labor as political dissidents, aristocrats, ordinary criminals, army officers, prisoners of war, intellectuals, minorities, and common citizens were arrested and sent to serve sentences in the camps. Forced labor was used for a myriad of different activities such as food production, mining, construction projects, manufacturing, and timbering. One of the earliest and most infamous forced labor projects was the White Sea Canal. Stalin ordered this 141-mile (227-kilometer) canal, linking the White Sea and Baltic Sea, to be excavated by prison laborers using the most primitive of tools. Beginning work in 1931, more than 100,000 workers with hand tools completed the canal in less than two years, with the loss of more than 10,000 lives.

Conditions in the forced labor camps varied greatly depending on a camp's location, the type



Workers inside a Soviet forced labor camp in the Archangelsk region of Russia, between 1921 and 1941. (SV-Bilderdienst/The Image Works)

of prisoners, the type of work being done, and the overall economic and political situation of the time. For example, the outbreak of war, a wave of arrests, a nationwide famine, or other factors could have an adverse effect on the conditions of laborers. Despite these variances, overall the majority of forced laborers tended to lack necessary medical care and were underfed, underclothed, and overcrowded in primitive barracks. Most prisoners were subjected to long hours of physical labor. Punishments could be severe, and mistreatment by guards was not uncommon. Women especially faced the threat of rape or sexual exploitation.

From 1929 to Stalin's death in 1953, an estimated 18 million to 20 million people became forced laborers, with as many as 5 million in the Gulag system at any given time. At least another 6 million were forcibly resettled for work in remote areas that they were not permitted to leave. At the system's height, there were hundreds of camp complexes with thousands of individual subcamps throughout the Soviet Union and eastern Europe. There is no clear agreement regarding the number of deaths caused by the Soviet system of forced labor, but it certainly reached the millions. After Stalin's death the Gulag system began to be dismantled, and a mass release of prisoners began. However, forced labor did not disappear. Some camps were still used as prisons for criminals and political dissidents, and forced labor colonies still operated for decades.

Although the Nazis established their first concentration camp in 1933, the organized use of forced labor essentially began with the German invasion of Poland in 1939. The Nazis viewed the peoples of eastern Europe and the Soviet Union as a vast pool of available slave labor. Inmates in already-established concentration camps were used for labor, and the Nazis created additional labor camps and forced civilians, especially Jews, in newly occupied areas into labor battalions. Some labor camps fell under the administration of the Schutzstaffel (SS)—also in charge of the concentration camps and eventually the death camps—while the Deutsche Arbeitsfront (German Labor Front) operated others. German forced labor during the war essentially had two different goals: use captured populations to strengthen wartime production, and use labor as a means to kill Jews by working them to death. As the war began to turn against the Germans in 1942 and as labor shortages increased, slave labor became an even more integral part of the war economy.

The Nazis used forced labor for many different types of work, including agriculture, construction, and the armament industry. In addition, inmates were forced to perform various domestic duties within the individual camps for the guards, including cooking, washing, tailoring, playing music, and gardening. One of the especially brutal labor assignments was carrying huge rocks up the steps of the quarry at the Mauthausen camp. Thousands of women from eastern Europe and the Soviet Union became maids for German families and were usually treated little better than slaves.

Many private German companies made the voluntary decision to utilize slave labor during the war. This was a choice made not by Nazi officials but rather by corporate executives. Some of the largest companies that used forced laborers during the war included Siemens, BMW, I. G. Farben, Daimler-Benz, Krupp, and Messerschmitt. One of the most notorious examples of private use of slave labor was the immense petrochemical plant built near the huge Auschwitz camp complex. I. G. Farben invested the equivalent of millions of dollars in this plant, where productive labor was done by slaves who were either worked to death or sent to the gas chambers when they became unable to work.

Accurate numbers are difficult, but estimates are that at least 7 million people were forced into slavery by the Nazis. This number included civilians from occupied areas such as Poland, Italy, and the Soviet Union; prisoners of war; and Jews. Approximately half of the civilians pressed into labor by the Nazis were women. Although some laborers who were of those races that the Nazis regarded as higher received wages and benefits, those from what were considered lower races were paid little or nothing and were fed little. Jewish laborers were treated the worst, as work was seen as another means of annihilation. If conditions in the Soviet Gulags were terrible, the circumstances for many forced laborers

under the Germans were unimaginably worse. Unlike in the Soviet Union where forced laborers were serving a sentence, to the Nazis most laborers were viewed as little more than an expendable resource.

—Philip Flowers

Bibliography

- Applebaum, Anne. *Gulag: A History*. New York: Doubleday, 2003.
- Berenbaum, Michael. *The World Must Know: The History of the Holocaust as Told in the United States Holocaust Memorial Museum*. New York: Little, Brown, 1993.
- Yahil, Leni. *The Holocaust: The Fate of European Jewry*. New York: Oxford University Press, 1990.

■ Introduction: Social Upheavals and Social Change

During the first half of the twentieth century, grassroots mobilization led to the dismantling of authoritarian power in the form of monarchies, dynasties, and colonial regimes, or the dismantling of oppressive practices while otherwise preserving the state. Social movements often involve a cultural dimension, which not only provides a basis of solidarity and collective identity among social movement participants, but in turn becomes part of the greater social transformation realized in the struggle for rights and resources. To trace a social movement historically is to disclose a template of the way inherited ideas, institutions, and social practices are challenged through cultural productions, actions, and the forging of new institutions. If successful, marginal ideas move from the periphery to the center.

Suffrage for women and minorities is one example of a social reform movement that slowly gathered momentum in the eighteenth and nineteenth centuries until what had once been “laughable” instigated major political, economic, and social changes in the early twentieth century for most of the industrial world. Often such reform efforts, always tied to ethical notions, had roots in religious thought and scripture—as was generally the case among leaders of the

nineteenth-century abolitionist movements in Europe and the Americas. In the twentieth century, the nonviolence and social vision espoused by Mahatma Gandhi also had clear underpinnings in religious thought. Other social movements stemmed from people’s spontaneous reactions to current events. The participants in the May Fourth Movement in China, for example, reacted in anger to news of the terms of the Paris Peace Conference near the end of World War I. From such amorphous beginnings came new leaders and the prompting to forge more lasting political changes.

Quit India was the polar opposite of an unorganized or spontaneous upheaval, instead involving many preexisting organizations, including labor unions and schools to choreograph the uprising. Yet, as with the May Fourth Movement, many of Quit India’s street-level participants were young people, willing to take risks to usher in change and end colonial domination. Although Gandhi’s strategy called for nonviolent tactics of protest and passive resistance, this mass upheaval also included violence and sabotage of property. Yet the movement’s participants were able to present their cause to the world as principled and just and to dislodge an occupying empire with no military maneuvering.

The entries that follow inspect the historical conditions under which social upheavals can lead to lasting social and political change.

—Josef Castañeda-Liles
and Fred Nadis

Nonviolent Resistance

Nonviolent resistance is a method employed by numerous movements for social or political change and can involve the use of picketing, boycotting, and pamphleteering as well as other methods of resistance devoid of physical violence. This particular form of resistance has been used throughout the modern era by feminists, socialists, labor, nationalists, and numerous marginalized groups. These movements have met with differing success depending on variations within economic structures, governmental systems, public opinion, and the particular movement's size and fervor.

In the Western world, nonviolent models have frequently been rooted in Christianity, ethical beliefs, and political analysis. Other world religions have also led to the development of nonviolent resistance movements based upon religious tenets such as with the Taoists, who believe in the concept of *wu wei* (effortless action). One of the most famous proponents of nonviolent action was Leo Tolstoy. Tolstoy was famous

for a number of novels, including his great 1894 manifesto on nonviolence, *The Kingdom of God Is within You*. This work was based on the Sermon on the Mount in which Jesus advocated with the phrase “turn the other cheek” nonviolence even when violence was inflicted upon a person. Tolstoy's text has provided leadership for nonviolent movements worldwide since its publication.

The most famous mass movement involving nonviolent resistance occurred in India in the 1920s when Mahatma Gandhi led the multi-phased Non-cooperative Movement against the British empire. Boycotts were first lodged against everything from imported British goods to schooling under a British imperialist educational system. In addition to this, Indians boycotted the visit of the Prince of Wales, Edward David Windsor, on November 17, 1921, by refusing to throw parades or offer celebrations; instead, Indians cleared the streets and closed the shutters on their windows. Other acts of civil disobedience, including the nonpayment of taxes, marked this era. This phase in the struggle for Indian independence came to an end in 1922 due to the eruption of violence surrounding the movement.

Gandhi led several successful acts of nonviolent resistance, a philosophy that he termed satyagraha that was the synthesis of the Sanskrit words for “truth” and “firmness” or “persuasion.” Gandhi increasingly became the face of the Non-cooperative Movement and led the Salt March of 1930. In protest of the British Salt Tax, Gandhi and many of his followers marched to Dandi where they threw thousands of bags of salt into the ocean. Gandhi also urged his fellow countrymen in other areas of India to violate the Salt Law, which outlawed the sale or production of salt by anyone but the British government. British officials deemed this movement as being very dangerous and quickly crushed it. Finally, Gandhi led the Quit India movement during 1942–1945, a movement that began in July 1942 when the Indian National Congress issued a document asking British forces to leave India. The document also warned that if their demands of independence were not met, a widespread civil disobedience movement would begin and engulf the entirety of India. The Indians were forced to



Indian proindependence leader Mahatma Gandhi and 78 of his followers march 240 miles to Dandi in March 1930 to protest the doubling of the salt tax by the British. (Library of Congress)

enact their plan, but this time they were successful, and the Quit India movement was followed by Indian Independence in 1947.

Most countries experiencing anti-imperialist struggles in the first half of the twentieth century attempted nonviolent resistance before turning to violence. Most of these movements, such as those in Ireland, Poland, and Finland, were marked by the boycotting of goods from the imperial powers or dominant ethnic group, the publication of banned newspapers or periodicals, the rejection of the nonnational language, and the proliferation of the traditional literature of the protesting ethnic group or minority.

Feminist movements have also relied on nonviolence to promote their agenda since the nineteenth century. Women's rights groups and suffragists across the globe often used public speeches, mass meetings, picketing, the disruption of political meetings, and hunger strikes throughout the early twentieth century. Many women died as a result of either hunger strikes or force feeding by the government when the hunger strikes gained too much publicity for suffragists.

Labor movements have also used nonviolent resistance, and the most famous of these movements that used strikes, boycotts, and civil disobedience was the People's Strike, better known as the Russian Revolution of 1905. The Russian Orthodox priest Georgi Gapon (1870–1906) drew up a petition for the people asking for better working conditions, higher wages, eight-hour workdays, and an end to the Russo-Japanese War (1904–1905). Gapon and a large number of workers marched to the palace of Tsar Nicholas II in order to present their petitions. However, the tsarist troops fired upon the workers as they approached the palace, killing 100 marchers and wounding 300 more. This event, which came to be called Bloody Sunday, was followed by massive strikes across Russia that included university students, middle-class doctors, lawyers, and other professionals. In October, the railway workers went on strike and paralyzed Russia.

Nicholas II and his chief minister, Sergei Witte, decided that the only way to end the nightmare was to offer some concessions to the people. The tsar created the Duma (a parliamentary body to ratify laws), granted free speech

➤ GEORGI GAPON (1870–1906)

Father Georgi Gapon was born to a peasant family in 1870. While training in the seminary for the Russian Orthodox priesthood, he was expelled due to his revolutionary ideas. He eventually went to St. Petersburg, where he worked among the poor and became acquainted with the cause of labor. As a consequence, Gapon developed a genuine sympathy for the workers and the many hardships they endured under industrialization. Although he was known for leading illegal trade unions and other workers' organizations from about 1903 onward, Gapon became famous following his role in the 1905 Russian Revolution in which he led a nonviolent protest of workers marching to the Winter Palace in order to present a petition to Tsar Nicholas II. The march ended in the massacre known as Bloody Sunday. Gapon escaped with the help of followers and decried the imperial actions from afar until his assassination in 1906. Despite his untimely death, Gapon's leadership combined with the general discontent of Russian society prior to the revolution led to a greater public outcry for reform. Nicholas II was forced to grant several reforms, the most important being the formation of the Duma, a governmental body of elected representatives.

—Christi McCallum

and assembly, and guaranteed the right to a trial before imprisonment. The 1905 Russian Revolution is considered a great success for nonviolent resistance, even though the tsar later revoked many of his newly granted concessions.

Numerous groups in the latter half of the twentieth century, including the civil rights organizations in the United States and antiapartheid movements in South Africa, used nonviolent methods similar to those that nationalists, socialists, and feminists had relied on during the first half of the twentieth century.

—Christi McCallum

Bibliography

- Ackerman, Peter, and Jack DuVall. *A Force More Powerful: A Century of Nonviolent Conflict*. New York: St. Martin's, 2000.
- Helvey, Robert. *On Strategic Nonviolent Conflict: Thinking about the Fundamentals*. Boston: Albert Einstein Institution, 2004.

Powers, Roger, and William Voge, eds. *Protest, Power and Change: Nonviolent Action from Act-Up to Women's Suffrage*. New York: Garland, 1997.

Schwarz, Solomon. *The Russian Revolution of 1905: The Workers' Movement and the Formation of Bolshevism and Menshevism*. Chicago: University of Chicago Press, 1967.

May Fourth Movement

The Chinese students' patriotic movement of 1919, better known as the May Fourth Movement, is a significant hallmark in the history of twentieth-century China. Greatly discontented with the terms of the Paris Peace Conference following World War I, Chinese university students provoked mass demonstrations in Beijing on May 4, 1919. The students hoped to restore externally China's sovereignty in Shandong Province and resist internally warlord govern-

ments. The origins and influences of the movement transcended the political dimension to include both immediate and far-reaching societal and cultural transformations. Such transformations continued to impact the development of China through the 1940s.

The May Fourth Movement stemmed from a number of internal and external factors. After China was opened by the West in the mid-nineteenth century, its agrarian economy was subjected to rapid changes prior to World War I. Foreign investment in China stimulated the expansion of its industrial, commercial, and financial enterprises, and these in turn contributed to the rise of industrialists, merchants, and urban workers within Chinese society. At the same time, the power of landlords in traditional agricultural enterprise diminished, while a new intelligentsia with knowledge of the modern West emerged in society. This intelligentsia was more sensitive to China's political development than other social groups within the empire.

Many of the intelligentsia had been educated in the West and upon their return to China responded to the political conditions both domestic and abroad, especially after 1915. The political changes in Europe, the rise of women's suffrage, and the policies of the Japanese government toward China provided favorable conditions for the outbreak of the movement. Some intellectuals used the media as a strategy to arouse the Chinese national consciousness in the hope of rejuvenating China. The journal *Xin qingnian* (*New Youth*) aimed to build a new China by destroying Confucian tradition, whereas *Xinchao* (*New Tide*) attempted to foster the effective intellectual and social development of modern China. Both journals, founded by Beijing University professors and students, adopted the vernacular style, which made the movement easily accessible to the masses.

When the news of the transfer of Shandong Province from Germany to Japan reached China in early May 1919, Beijing University students, inspired by their radical-minded professors through teaching and publications, provoked mass demonstrations, boycotts, and street lectures. With the support of the media, the movement rapidly spread to other groups, including industrialists, merchants, and urban workers. While the move-

► CAI YUANPEI (1868–1940)

Cai Yuanpei, protector of the Chinese students' patriotic movement of 1919, came from a mercantile family in Zhejiang Province of China.

Educated abroad, he was one of the radical-minded Chinese intellectuals of his time. In 1902 Cai founded two Patriotic Schools for boys and girls in Shanghai. He

was also involved in antidynastic revolutionary activities in 1900s' China. When Cai returned to China from abroad in 1916, he became chancellor of Beijing University, a known political center of student activism. Cai believed that university students should devote their efforts to learning and not to protest. However, when the May Fourth Movement broke out in May 1919, some students were imprisoned, and Cai launched a rescue campaign.



(Library of Congress)

—Yuen Ting Lee

ment was also embraced by students in other cities, Beijing University remained the center of activities. The immediate consequences of the movement were the refusal to sign the peace treaty with Germany and the punishment of the Chinese diplomats who made the secret agreement with Japan.

The unrest in May 1919 was not simply a student demonstration. It produced far-reaching consequences in the societal and cultural development of China in the later decades. Some Chinese women, for example, were awakened by the movement's leaders through the reading of their radical vernacular-style journals. The movement leaders' attack of Confucian ethics and the traditional family system accelerated the liberation of Chinese women. University coeducation was a case in point, as it broke down traditional gender barriers in the university setting. The vernacular style—the main focus of the Chinese literary revolution of the 1920s—helped to bridge the gap between the gentry and popular cultures. This literary revolution paved the way for the mass language movement in the 1930s. Another legacy of the May Fourth Movement was the formation of various social organizations, which were highly conducive to the mass demonstration movements in later years. As such, the consequences of the Chinese May Fourth Movement extended well beyond the university setting of Beijing, both in time and place.

—Yuen Ting Lee

Bibliography

- Chow Tse-Tsung. *The May Fourth Movement: Intellectual Revolution in Modern China*. Cambridge, MA: Harvard University Press, 1960.
- Schwarcz, Vera. *The Chinese Enlightenment: Intellectuals and the Legacy of the May Fourth Movement of 1919*. Berkeley: University of California Press, 1986.
- Weston, Timothy B. *The Power of Position: Beijing University, Intellectuals, and Chinese Political Culture, 1898-1929*. Berkeley: University of California Press, 2004.

Quit India Movement

The Quit India movement first gained momentum in April 1942 after the publication of Mahatma Gandhi's article "Foreign Soldiers in India."

> VICEROY LORD LINLITHGOW

Victor Linlithgow, Viceroy Lord Linlithgow, was appointed to the post of viceroy for India in 1936. His term ran until 1943 and was marked by the frustrations exposed by the Indian people during the 1942 Quit India movement. The first elections held under the 1935 Government of India Act, which Linlithgow had helped formulate, took place in 1937. Linlithgow was instrumental in convincing those elected to take their posts, despite reservations they may have had about provisions in the act. In 1939, however, with the outbreak of World War II, Linlithgow unilaterally declared war on Germany in the name of India. Waves of resignations from the government followed in protest. Despite the fact that Linlithgow's tenure as viceroy was the longest in the history of British India, his decision to declare war without consulting the Indian government proved to be a fundamental facet of the Quit India movement, which in turn helped expedite Linlithgow's resignation.

—Maryanne A. Rhett

Gandhi's article was in part a response to the Working Committee of the All-India Congress's call to end individual civil disobedience. Between April and August of that year, therefore, Gandhi and members of the committee met several times to try to come to an agreement on the objectives and goals of the Indian peoples. The continuation of World War II, British efforts to quell Indian cries for independence, and the progression of Japanese forces through South and Southeast Asia were collectively bringing the situation to a head. Finally proclaimed in August 1942 by the committee, the Quit India movement was marked by work stoppages, trade union, and student group-led demonstrations as well as guerrilla assaults on communications facilities and military installations. Arrest records of the era indicate that the great majority of those who were involved were from middle and upper castes and more often than not were students.

The Quit India movement's objectives were simple: the immediate withdrawal of the British imperial forces. Even as early as July 1942 British politicians in London were facing the reality that transferring power to the Indians following the

war had become inevitable. In a speech (often quoted since) delivered to the Congress on August 8, 1942, Gandhi gave the Indian people a simple mantra by which to live their lives: “‘Do or Die.’ We shall either free India or die in the attempt; we shall not live to see the perpetuation of our slavery.” Gandhi’s speech directed the actions of the coming campaign. Gandhi asked journalists to put down their pens, only returning to them when India gained its freedom. Gandhi did not ask soldiers to leave their posts but instead to refuse to obey any but just orders and never to open fire on their own people. Finally, of students and their professors, the most active component of the Quit India movement, Gandhi asked that they teach and lead the people down the path to independence.

Despite these calls for continued nonviolent action, the Quit India movement was marked by increased violence and revolutionary fervor, indicating a distinct shift away from Gandhian philosophy. The British reaction to Quit India was harsh. Viceroy Lord Linlithgow asserted that the Quit India campaign was the most serious uprising to face the Raj since the 1857 Rebellion. Instances of police shootings and even the destruction of whole villages were typical in the record between August 1942 and December 1943. Maintaining this level of violence to suppress Indian independence would be impossible, if even acceptable, in a postwar global structure.

Finally, while India moved in a decided direction away from British imperial presence, some found alliances with other imperial powers ad-

vantageous in expediting the process. Just as the Quit India movement was making headway, Subhash Chandra Bose’s Japanese-allied Indian National Army was also on the rise. Marching toward India, Bose hoped to attack the pro-British state with the aid of the Japanese in order to expedite the process of a British pullout. Conversely, Quit India meant not only the full removal of British power but also a subsequent declaration of Indian neutrality in the war in an attempt to stave off Japanese attacks on the subcontinent. Energies, Indian leaders felt, should be turned inward, focusing on the internal divisions and concerns that were causing violent rifts among the population.

In essence the Quit India movement was a success; Great Britain left India in 1947. From the standpoint of the Congress, however, the movement’s spontaneity denoted the Congress’s lack of control over the outcomes. The early arrests of the Congress leadership meant that they could not directly control nor benefit from the movement. What is more, the Congress, because of the denigration of its leaders, found itself playing political catch-up on the eve of independence and partition.

—Maryanne A. Rhett

Bibliography

- Bhuyan, Arun Chandra. *The Quit India Movement: The Second World War and Indian Nationalism*. New Delhi: Manas, 1975.
- Zaidi, A. Moin, ed. *Defying a Distant King: A Study of the Quit India Movement*. New Delhi: Indian Institute of Applied Political Research, 1986.

■ Introduction: Literature

The literature of the period from 1900 to 1945 reveals authors the world over grappling with the conflict between modernity and the vanishing of traditional lifeways. In Japan, authors such as Natsume Soseki contrasted characters nostalgic for the past with more “modern” types battling with a sense of ennui. What might be described as a literature of human rights also became common as authors gave voice to im-

poverished and exploited peoples. While some of this human rights literature was based in Marxism, often it offered an anticolonial or antiracist perspective, as could be seen in the literature of the Harlem Renaissance in the 1920s in the United States, the negritude movement among North African expatriates in France, and the *indigenismo* movement in Latin American countries. Such stirrings of identity literature often became

politicized, as racial hierarchies in places such as the United States and Europe were recognized as an extension of the colonial racial hierarchies imposed on much of the world. Political literature also could fall into the ultranationalistic camp of right-wing provocateurs, as in the profascist poetry of Marinetti or that of left-wing writers declaiming the values of communism and the needs of laborers to end their exploitation.

Proudly representing “modernity,” science fiction developed from its roots in the gothic novel as a sturdy and imaginative genre in this period. Writers such as H. G. Wells, C. S. Lewis, Olaf Stapledon, and Edgar Rice Burroughs offered high-brow fare and escapist fantasies that explored the impacts of new technologies, utopian possibilities, and travel through space and time. The genre gained a great boost through the development of fan-based magazines such as Hugo Gernsback’s pioneering *Amazing Stories*, which debuted in 1926. The dystopian science fiction novel also came of age in this period, particularly with works such as Yevgeny Zamyatin’s *We* (1920) and Aldous Huxley’s *Brave New World* (1932).

At the same time, this was an important period for aesthetic experimentation, as poets and novelists, influenced by revolutionary art movements such as cubism and dada and the insights of depth psychology, developed new techniques such as stream of consciousness, imagism in poetry, and the flat narrative voice common to Ernest Hemingway and detective writers such as Dashiell Hammett. The interwar period, marked by the Great Depression, also showed an efflorescence of a documentary aesthetic—particularly in the United States—as writers turned to understanding and documenting the plight of what Franklin Roosevelt had termed the “Forgotten Man.”

—Fred Nadis

Négritude

Négritude emerged as a literary and ideological movement in France during the 1930s. Led by self-identified “Negro-African” French-speaking writers, scholars, and activists, the movement sought to liberate the minds and bodies of the African diaspora from the insidiousness of French

colonial oppression. Négritude began with three unacquainted students—deferentially referred to as the *trois pères* (three fathers) of the movement—who met while studying in Paris in 1929: Aimé Césaire of Martinique, Léopold Sédar Senghor of Senegal, and Léon-Gontran Damas of French Guyana. These three men served as the artistic and philosophical architects of a cultural anti-imperialist campaign among African francophone intellectuals. Négritude addressed the particular historical, linguistic, and cultural complexities of being a Negro-African colonial subject of the French. In a general sense, the term “négritude” came to denote a rejection of Western imperialism and African assimilation. More specifically, the principal ambition of négritude was to facilitate the emancipation of Africa and the Caribbean by affirming the Negro-African identity, to condemn and ameliorate the historical symptoms of colonization and slavery, and to promote racial solidarity among the French colonies.

Heavily influenced by the early-twentieth-century writers and scholars of the New Negro Movement in the United States, the provocative writers of négritude scrutinized the prevailing Eurocentric notions of Africa, reasserting African sensibilities and promoting racial pride. New Negro poets, novelists, and essayists such as Langston Hughes, Jean Toomer, Countee Cullen, James Weldon Johnson, Sterling Brown, and Alain Locke served a fundamental role in fomenting the cultural nationalism of négritude’s leadership. And to this end, Claude McKay’s novel *Banjo* (1929), set in France, served as an archetype for the candid and politically charged analysis of the Negro-African condition. The New Negro’s cultural and political contestation of American race prejudice spurred négritude writers to equally challenge their own subordination.

The New Negro Movement was not the sole inspiration for the avant-garde authors and intellectuals of négritude. Also in Paris, a group of Martinique students strongly wedded to French surrealism and Marxist metaphysics equally sought a political arena to critique the longstanding inequalities of the French colonial system. In 1932 this cohort of activists published a single issue of *Légitime Défense* (*Self-Defense*), a journal devoted to political reformation. Although

➤ NEW NEGRO MOVEMENT

The New Negro Movement, commonly referred to as the Harlem Renaissance, was an artistic and intellectual movement that took place in the 1920s and 1930s. During this unprecedented time, the African American community challenged the aesthetic, social, and political restrictions of the previous era with new forms of cultural production as well as a new sense of self-determined racial pride. With the increasing labor demands of World War I, a large number of African Americans in the rural South migrated to the urban industrial cities of the North. This flood of African Americans, desperately searching for the economic opportunity and social freedom that was denied them by the prejudices of the South, secured more lucrative employment through the increased productivity of wartime industries. At the same time, this migrating population disseminated its rich culture and sensibilities and in doing so transformed American literature, art, music, theater, culture, and politics by ushering in an unparalleled era of African American achievement. The New Negro Movement cultivated a vast spectrum of cultural forms, including the philosophies of Alain Locke, W. E. B. Du Bois, and Marcus Garvey; the literature of Zora Neale Hurston, Jessie Fauset, Langston Hughes, and Claude McKay; the athletic achievements of Jesse Owens; the blues and jazz stylings of Louis Armstrong and Bessie Smith; and the artistic techniques of Aaron Douglas.

—Vida Robertson

this journal was short-lived, its ardent critique of French imperialism provided the framework for the *trois pères* to contemplate their own creative and philosophical perspectives.

Between 1929 and 1934, Césaire, Senghor, and Damas took progressive steps toward realizing their ambitions by collaborating with other like-minded student activists who also desired to continue the work initiated by the contributors of *Légitime Défense*. Consequently, in 1934 the *trois pères* inaugurated negritude with the founding and publishing of *L'Étudiant Noir* (*The Black Student*). *L'Étudiant Noir* was a literary journal devoted to the celebration of African cul-

tural expression and the creation of a Pan-African solidarity. The *trois pères*—unwilling to entirely subscribe to any particular political methodology as the guiding principle of their cultural renaissance—only incorporated the functional insights of Marxism, socialism, French surrealism, and the racial affirmation found in the New Negro Movement that directly advanced their cause. Thus, the impetus of the movement was not merely to reject Western values but, more importantly, to reassert patrimonial African sensibilities. By utilizing literature as an active force, *L'Étudiant Noir* redactors brought to light the systematic inequalities of racial prejudice and the desperate socioeconomic conditions that result from it.

Accordingly, in 1937 Léon-Gontron Damas was the first of the three founders to publish his work, which appeared in a book of poetry titled *Pigments*. In this collection Damas offers a fiery and unsympathetic critique of African absorption and Western superiority. His rhythmic, nostalgic, and witty verses received widespread acclaim. Contemporary literary scholars would later acknowledge this groundbreaking text as negritude's manifesto. Two years later, in 1939, Aimé Césaire published his much-celebrated collection *Cahier d'un Retour au Pays Natal* (*Notebook of a Return to My Native Land*). It is here among Césaire's vivid descriptions of life in Martinique and his biting yet sometimes humorous critiques of French tyranny that the term “negritude” is first introduced. *Notebook* is considered Césaire's masterpiece for its innovative use of language, imagery, and an unmistakably rebellious tone.

As for Léopold Sédar Senghor, his first compilation of poetry, *Chants d'Ombre* (*Songs from the Shadows*), was not published until 1945. This collection celebrates the ancestral heritage, communal strength, and vibrant culture of Senghor's beloved Senegal. Moved by a keen sense of alienation in Paris, Senghor evoked somber scenes of Africa and juxtaposed them with his castigation of France for its racist horrors. It is this intimate sense of devotion to Africa that led Senghor to resign in 1948 as Senegal's representative for the French Socialist Party in the French National Assembly and establish the Senegal Democratic Bloc. Over the next decade, Seng-

hor held several offices in the French legislature on behalf of Senegal. Unsurprisingly, in 1960 when France finally granted independence to its colonies, Senghor was elected the first president of the Republic of Senegal.

This historic struggle for self-awareness, dignity, and independence has had a far-reaching theoretical and literary effect around the world. The consciousness-raising black nationalism of negritude has cultivated such prominent works as Jacques Roumain's *Masters of the Dew* (1944); Léopold Senghor's *Anthology of New Black and Malagasy Poetry in French* (1947); Franz Fanon's *Black Skin, White Masks* (1952); Edward Glissant's *The Ripening* (1958); and the journal *Présence Africaine* (1947) edited by Léopold Senghor, Aimé Césaire, Albert Camus, Richard Wright, and Jean-Paul Sartre along with numerous others. Furthermore, negritude has played a significant role in fostering artistic and political progress throughout the world. Negritude's artists, activists, and intellectuals are directly responsible for the formation of the Congress of Negro Writers (1956), the African Union (1963), the World Festival of Negro Arts (1966), and the dynamic black nationalism of the Black Power and civil rights movements of the 1960s and 1970s. Undoubtedly, negritude's newly ordained field of Negro-African literature generated a nationalist discourse and a sense of racial unity that sought to ultimately dismantle the sinister grip of colonization, slavery, and racism on Africa's diaspora.

—Vida Robertson

Bibliography

- Irele, Abiola. *The African Experience in Literature and Ideology*. Bloomington: Indiana University Press, 1981.
- Jack, Belinda E. *Negritude and Literary Criticism: The History and Theory of "Negro-African" Literature of French*. Westport, CT: Greenwood, 1996.
- Kesterlout, Lilyan. *Black Writers in French: A Literary History of Negritude*. Philadelphia: Temple University Press, 1974.
- Michel, Jean-Claude. *The Black Surrealists*. New York: Peter Lang, 2000.
- Warner, Keith Q, ed. *Critical Perspectives on Leon Gontran Damas*. Washington, DC: Three Continents Press, 1988.

Japanese Literature as a Reflection of Conflict

The literature of early-twentieth-century Japan was shaped by a generation of writers who appeared after the nation's successful modernization in the previous century. Nineteenth-century Meiji intellectuals played an integral role in shaping and influencing the government-directed modernization, largely complete by 1895. By 1900, however, Japan's modern education system had produced intellectuals outside the Meiji elite. Lacking influential connections, most writers withdrew from society, nursing a sense of apathy toward sociopolitical affairs while exploring the nature of the individual in a modern Japan still burdened by medieval customs and social obligations.

Japan's intellectuals of the period 1900–1945 addressed the dilemma of life in a modern world by combining traditional beliefs and aesthetics with Western realism, individualism, and concepts of freedom and morality. Writers of this period may be loosely categorized into four groups: realists, naturalists, aestheticists, and Marxists. For most, their lives and writing reveal the difficulty of attaining social harmony for a modern man determined to live rationally in a society dominated by irrational tradition. Intellectuals attempted to portray life as realistically or truthfully as possible, the primary inspiration being their own experience. Unlike its Western literary inspiration, their writing avoided social criticism, instead becoming an introspective analysis of the self as a way to show that the crux of the conflict can be found within the individual, within human nature.

The realists, such as Mori Ogai (1862–1922) and Natsume Soseki (1867–1916), were a source of inspiration for later writers. Their subject was the elusiveness of finding harmony as a rational, moral individual exercising free will within the constraints of societal obligations. The careers of Ogai and Soseki reveal a growing frustration born of their own attempts to pursue a rational existence within the confines of a highly regulated modern Japanese sociopolitical system. The result was an air of resignation in the later works of Ogai (who was a career army medical

officer) and withdrawal from society by Soseki (who abandoned a position at Tokyo University in 1907 to live solely off his writing).

Following in the rational footsteps of Ogai and Soseki was the Shirakaba group, formed in 1910. The Shirakaba was composed of young elite men, such as Shiga Naoya (1883–1971), a fact that allowed them to challenge social norms with little fear of recrimination. They were idealists who posited that despite the vagaries of human nature, the individual has the power to harmonize oneself with nature and society, thereby attaining happiness and peace of mind. Because the Shirakaba saw themselves as moral exemplars whose abilities as artists benefited the rest of society, they wrote about their own lives to reveal to the world how one could attain harmony within society.

The rationalism of Ogai and the egoism of the Shirakaba were incorporated by another group, the aestheticists, such as Nagai Kafu (1879–1959), Tanizaki Jun'ichiro (1886–1965), Akutagawa Ryunosuke (1892–1927), and Kawabata Yasunari (1899–1972). Their original focus was the depiction of modern man's awareness as realistically, logically, and aesthetically pleasing as possible. Over time the aesthetic nature of their work overshadowed all else, drifting into fantasy and using the sensual or the exotic as subject matter best suited to the pursuit of aesthetic perfection. As their art left the bonds of reality, so the artists' lives left the bounds of society, withdrawing into their own world like the naturalists.

The naturalists were also inspired by Western realistic novels and liberal individualism as well as Japan's Buddhist tradition of detachment. The naturalists determined that truth could only be perceived within the self, so it was necessary to write from the perspective of the author. Thus was born a unique literary form called the I-novel, a form taken up by writers in other literary veins to become a singularly Japanese writing style. Authors such as Kunikida Doppo (1871–1908), Iwano Homei (1873–1920), and Dazai Osamu (1909–1948) developed the I-novel. The I-novel exemplifies the introspective, self-centered, and critical nature of the naturalist movement. I-novels almost never address societal problems, revealing the naturalists' depar-

ture from Western realism. The I-novel typically took the form of a confession, revealing the dark side of human nature. Many expressed guilt or shame for abandoning family and community in order to pursue a literary career. Most naturalists struggled financially, living lives of dissipation in a pathological rejection of the demands of Japan's modern bureaucratic society. Their novels lacked widespread popularity, as their writing was too dark and confusing for those inexperienced with the tenuous existence of the modern intellectual. Their lives, a spiral of self-destruction brought on by guilt and shame and heightened by alcohol, drugs, and diseases, became fodder for their self-recriminating novels.

The literary community was severely shaken with the rise of Marxist, also known as proletarian, literature in the 1920s. This genre was short-lived, as government suppression all but ended the production of Marxist works by 1935. Even though no significant works of literary merit were produced, Marxist literature had a lasting impact on Japanese literature for decades. The Marxist movement, riding a wave of victory following the Bolshevik Revolution in Russia, forced the literary community to take notice of Japan's social inequalities. The proletarian movement held some appeal for Japanese intellectuals in their shared view of the restrictive nature of society that denied individual freedom to live in accordance with one's ideals. Intellectuals from all walks of life were stirred by Marxist rational, scientific explanation of the causes of and practical solutions for society's ills. In addition, government suppression and the demands of Marxism's uncompromising and very Western idealism kept the movement on the fringe of Japanese society, mirroring the intellectual community. Marxist works, many produced by converted naturalists, borrowed the I-novel form to communicate the struggle faced by the dedicated individual, typically drawn from the author's personal experience although to express the author's opposition to, rather than escape from, modern society.

The brutal suppression of radical elements in Japan from 1928 stifled honest intellectual expression. Writers had few options: either cooperate with the imperialist agenda or remain silent. The 1930s' literature turned toward ro-

mantic portrayals of Japan's past or hopeless expressions of loss and guilt. With the advent of war in 1937, the state forced many intellectuals into "pen brigades," sending them into occupied territory under army command to promote imperialist policies. At home, severe censorship and rationing of paper and ink limited publication options. The struggle of modernity and individualism, as expressed by its writers, entered into hibernation, not fully to awaken until the end of the U.S. occupation in 1952.

—David G. Nelson

Bibliography

- Minichiello, Sharon A., ed. *Japan's Competing Modernities: Issues in Culture and Democracy, 1900–1930*. Honolulu: University of Hawaii Press, 1998.
- Powell, Irena. *Writers and Society in Modern Japan*. Tokyo: Kodansha International, 1983.
- Varley, Paul. *Japanese Culture*. 4th ed. Honolulu: University of Hawaii Press, 2000.
- Yamanouchi, Hisaaki. *The Search for Authenticity in Modern Japanese Literature*. Cambridge: Cambridge University Press, 1978.

Latin American Literature

During the first half of the twentieth century, Latin American intellectuals engaged in an extensive debate on the cultural identity of the subcontinent in general and their nations in particular. Until then, the elites, including the literary circles, were deeply influenced by a long-term vision of Latin America that was popularized by the Argentinian writer and politician Domingo Faustino Sarmiento (1811–1888) through his essay *Facundo* (1845). According to this author, the region was trapped in a fatal struggle between civilization and barbarism, that is, between modernizing forces such as urbanization and European culture and backward elements such as a hostile nature and primitive native peoples. In the minds of several Latin American intellectuals, the tragedy of World War I (1914–1918) revealed the limits of this idealization of Europe as the central plank of civilization and progress in a phase in which they were also experiencing dramatic contradictions and conflicts in their home countries. The search

for authenticity and cultural autonomy from the Old World became the dominant aspect of Latin American literature.

In Mexico, the revolution that broke out in 1910 stimulated an early renovation of literary production, which culminated in the novel *Los de abajo* (*The Underdogs*, 1915) by Mariano Azuela (1873–1952), who interpreted the revolution as a healthy reaction by popular classes and culture against a regime that imposed an authoritarian modernization. During the 1920s a new genre dawned: the *novela de la tierra* (telluric novel), which portrayed the sociopolitical problems of marginal areas of the subcontinent from a regionalist and popular perspective, suggesting a variety of interpretations and solutions. In *La vorágine* (*The Vortex*, 1924), for example, José Eustasio Rivera (1888–1928) denounced the lack of control by the Colombian state over the natural resources of its Amazonian interior. Ricardo Güiraldes (1886–1927) expressed in *Don Segundo Sombra* (1926) his nostalgic idealization of the Argentinian countryside, offering a reversal of Sarmiento's argument. The masterpiece of this genre, *Doña Bárbara* (1929) by Rómulo Gallegos (1884–1969), depicted a symbolic cross-generational conflict over land in the Venezuelan plains, where modern laws and education collided with a tradition of superstition and violence. Finally, *Vidas secas* (*Barren Lives*, 1938) by Graciliano Ramos (1892–1953) provided a pessimistic view of the tough existence of landless peasants in the droughty backlands of northeastern Brazil.

In the 1930s as a consequence of the global economic crisis that began in 1929, new radical trends developed on the scene of Latin American literary production, with a qualitative leap in textual refinement, range of themes, and political engagement. The most prominent literary movement of the period was *indigenismo*. In the regions where native peoples still constituted a considerable portion of the population such as Mesoamerica and the Andes, several authors published works in which the abuses and exploitation suffered by indigenous peoples became the main focus. This is the case of the collection of short stories titled *Leyendas de Guatemala* (*Legends of Guatemala*, 1930) by

Miguel Angel Asturias (1899–1974), who later obtained the Nobel Prize in Literature, and the novels of authors such as the Ecuadorian Jorge Icaza (1906–1978) and the Peruvians Ciro Alegría (1909–1967) and José María Arguedas (1911–1969). The writings of this last author in particular included an unprecedented use of a variety of Spanish deeply influenced in its vocabulary and syntax by Quechua, the main Andean native language. This tendency toward linguistic experimentation was shared by other Latin American intellectuals who were especially interested in giving voice to other humble and exploited segments of the population: a significant example is the phonetical transcription of dialectical expressions used by people of African descent that appeared in the collection of short stories titled *Los que se van* (*The Ones Who Go Away*, 1930) written by the three young Ecuadorians, Demetrio Aguilera Malta (1909–1982), Joaquín Gallegos Lara (1911–1947), and Enrique Gil Gilbert (1912–1975), and in the poems of Nicolás Guillén (1902–1989) from Cuba.

Some authors were deeply influenced by the European turmoil of the 1920s and 1930s and especially by the Spanish Civil War (1936–1939), which was directly experienced by two of the most prominent Latin American poets of the twentieth century, Peruvian Cesar Vallejo (1892–1938) and Nobel laureate Pablo Neruda (1904–1973) from Chile, as demonstrated by their respective collections *España, aparta de mí este cáliz* (*Spain Take This Cup from Me*, 1939) and *España en el corazón* (*Spain in My Heart*, 1937). In their rhymes, these two poets attempted to elaborate new forms of social and political criticism through an original combination of European socialism and a more in-depth comprehension of the peculiar Latin American geographical, ethnic, social, and economic profile. Such a task in the field of nonfiction was performed by the unorthodox Marxist philosopher José Carlos Mariátegui (1894–1930), who in his *Siete ensayos de interpretación de la realidad peruana* (*Seven Interpretive Essays on Peruvian Reality*, 1928) tried to harmonize pre-Columbian communitarianism with twentieth-century communism.

During the 1930s, the publication of essays on past and current affairs was particularly rich

in Latin America: indeed, in this period modern human sciences started to take root in the sub-continent. Some groundbreaking works in this field were *Radiografía de la pampa* (*X-Ray of the Pampa*, 1933) by Ezequiel Martínez Estrada (1895–1964), which explored the life and values of the Argentinian countrymen; *Casa-grande e senzala* (*The Masters and the Slaves*, 1933) by Gilberto Freyre, which is still the most influential study on slavery and racial relations in Brazil; and *Contrapunteo cubano del tabaco y del azúcar* (*Cuban Counterpoint: Tobacco and Sugar*, 1940) by Fernando Ortiz (1881–1969), who dedicated his intellectual life to a pioneering ethnographic analysis of African Cuban culture.

A novel attention to gender issues and a new wave of sophisticated female authors also characterized this period. Criticism toward the traditional role of women in primarily male chauvinist Latin American societies was expressed by a variety of writers who adopted a plurality of styles. The Chilean María Luisa Bombal (1910–1980), for example, published novels and short stories that were deeply influenced by European and North American surrealist and experimental authors such as James Joyce and William Faulkner. On the contrary, the Mexicans Nellie Campobello (1900–1986) and Rosario Castellanos (1925–1974) promoted women's emancipation within the boundaries of the Latin American regionalist genre.

—Juri Bottura

Bibliography

- Gollnick, Brian. "The Regional Novel and Beyond." In *The Cambridge Companion to the Latin American Novel*, edited by Efraín Kristal. Cambridge and New York: Cambridge University Press, 2005.
- Hart, Stephen M. *A Companion to Latin American Literature*. Woodbridge, Suffolk, UK, and Rochester, NY: Tamesis, 2007.
- Larsen, Neil. *Reading North by South: On Latin American Literature, Culture, and Politics*. Minneapolis: University of Minnesota Press, 1995.
- Wilson, Jason. "Spanish American Narrative, 1920–1970." In *The Cambridge Companion to Modern Latin American Culture*, edited by John King. New York: Cambridge University Press, 2004.

Stream of Consciousness

Stream of consciousness is a narrative mode and literary technique that seeks to provide a sense of inner consciousness on the page, thereby offering access to the thoughts of a character in fiction. Readers are brought into contact with a character's point of view by way of an interior monologue. Stream of consciousness opens the imagined inner life of the character and reflects an associative process of thinking and feeling. This thought process is in the mind and may be addressed to the self. What is overheard in the mind may be sounds, rhythms, evocations of feeling, or visual observations as well as what is verbal. Stream of consciousness, as a technique, expresses the experimental tendencies of modernism. The flux of life reflected in stream of consciousness writing roughly corresponds with Henri Bergson's philosophy of *durée*, a sense of inner time rather than clock time. Stream of consciousness appears to let go of rational categories and external methods of characterization that were dominant in the nineteenth-century novel.

Dorothy Richardson's *Pilgrimage*, a 13-novel sequence that began with *Pointed Roofs* (1915), was the first book by an English-language writer to fully explore stream of consciousness, a writing style that the author called "interior monologues." Stream of consciousness became an important literary technique in the 1920s and can be found in the works of several prominent authors, including James Joyce, *Ulysses* (1922); Virginia Woolf, *Mrs. Dalloway* (1925) and *To the Lighthouse* (1927); and William Faulkner, *The Sound and the Fury* (1929). In addition, stream of consciousness can also be found in works by Marcel Proust, Samuel Beckett, and T. S. Eliot.

The term "stream of consciousness" derives from psychologist William James's 1892 essay in which he used the term to describe "adult consciousness itself." For James, stream of consciousness conveyed how states of mind occur in succession in personal consciousness, always changing and "sensibly continuous." James suggested that this was something more than a movement from sensation and simple ideas to complex ideas, as in John Locke's epistemology. Rather, for James this was one's "total concrete states of mind." Modernist writers began to uti-

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In *Modern Fiction* (1925), Virginia Woolf wrote that the technique of stream of consciousness was a way to "come closer to life" and "to record the atoms as they fall upon the mind." She wrote that in the stream of consciousness in the fiction of James Joyce, he is "concerned at all costs to reveal the flickering of that inmost flame which flashes its messages through the brain." As French philosopher Henri Bergson observed, an interior sense of time may be distinguished from clock time. The work of Bergson and Einstein was absorbed by their contemporaries and influenced modernism. Bergson's time theories had some impact upon Virginia Woolf, James Joyce, Marcel Proust, Gertrude Stein, William Faulkner, and others. From free association in Freudian psychoanalysis and psychology to literature, an intuitive sense of fluid experience was increasingly present in the awareness of writers and thinkers in the early decades of the twentieth century.

—Robert McParland

lize the term to present thoughts and feelings as they occurred. An individual's images, recollections, and ideas were thus cast as flowing spontaneously in consciousness.

A key member of the expatriate arts community of Paris, the American writer Gertrude Stein's stream of consciousness writing and fascination with the visual arts styles of postimpressionism and cubism had considerable impact upon Ernest Hemingway, Ezra Pound, Sherwood Anderson, and other writers. Anderson called Stein's work "an entirely new recasting of life, in the city of words." Stein's unique prose presents thoughts as they occur in a continuous present. Stein's detractors called her *Tender Buttons* (1914) repetitive and illogical, but it was obvious to the modernists that her experiments were valuable.

In James Joyce's fiction, moments of epiphany or revelation are enhanced by this technique. Joyce's use of this method first becomes apparent in his novel *Portrait of the Artist as Young Man* (1916), in which the reader is invited into the thoughts of a Stephen Daedalus. Joyce's use of interior monologue is further developed in *Ulysses* (1922), and stream of consciousness emerges with

great force and creativity in Molly Bloom's monologue toward the end. Built upon wordplay, allusion, and stream of consciousness, the first word of James's *Finnegan's Wake* (1939), "riverrun," suggests the continuous flow of consciousness.

Marcel Proust's seven-volume *À la recherche du temps perdu* (*In Search of Lost Time*, also translated as *Remembrance of Things Past*), published serially from 1913 to 1927 in French, is told primarily in stream of consciousness fashion. In one famous episode, a sensation of the taste of a madeleine, a traditional small cake, draws up memories of the past that become simultaneous with the present. In these explorations of memory, at times stream of consciousness associations proceed for a dozen pages or more; there are incidental occurrences that trigger other images, sensations, and memories. This sequential pattern of free thought is characterized by long sentences, and time past is present in this first-person narration.

In Virginia Woolf's *Mrs. Dalloway* (1925) and in many of her other works, including *To the Lighthouse* (1927) and later experiments such as *The Waves* (1931), Woolf illuminates the inner impressions of her characters through stream of consciousness techniques. In *The Waves*, her earlier attempts at individual psychological portraits merge into a lyrical, somewhat dreamlike rendering of a group of six friends' linked memories and biographies. In her diaries, Woolf described it as not a novel but as "an abstract mystical eyeless book: a playpoem."

William Faulkner's *The Sound and the Fury* (1929) brings readers into the mental life of three members of the Compson family: Benjy, Quentin, and Jason. Each of their perspectives provides a retelling of the family's story around a central incident in the life of another family member, Caddy. Here, stream of consciousness intersects with the unity of action of a more traditional novel. This is a single story told several times as filtered through the consciousness of its characters. Action is revealed through their associations and memories. Readers perceive the associative processes in circling movements and proceed from a lack of clarity in the mind of Benjy, who is developmentally disabled; the brooding and sullen Quentin; and the fractured rationalist Jason. A

Nobel Prize winner, Faulkner's fiction in turn inspired many later novelists, including the Nobel Prize winners Gabriel Garcia Marquez of Colombia and Toni Morrison of the United States.

—Robert McParland

Bibliography

- Bergson, Henri. *Creative Evolution*. 1907; reprint, New York and London: Palgrave MacMillan, 2007.
- Dainton, Barry. *Stream of Consciousness: Unity and Continuity in Conscious Experience*. London: Routledge, 2000.
- Faulkner, William. *The Sound and the Fury*. 1929; reprint, New York: Vintage, Random House, 1990.
- Joyce, James. *Ulysses*. 1922; reprint, New York: Random House, 1986.
- Woolf, Virginia. *Mrs. Dalloway*. 1925; reprint, Boston and New York: Houghton Mifflin, Harcourt, 1990.

Imagism

Imagism is the literary movement, boosted by Ezra Pound in the autumn of 1912, which launched the careers of poets Richard Aldington and Hilda Doolittle (H. D.). Often characterized by scholars as rooted both in French philosophy (particularly the work of Bergson) and in the thought and poetry of T. E. Hulme and his circle, whom Pound came to know in London in 1908, imagism, according to Aldington in his memoir *Life for Life's Sake* (1941), was at least at first merely a label Pound used to advertise the poems Aldington and H. D. had written in Paris during the previous summer. Aldington writes that Pound was "so much worked up" by H. D.'s poems that, over tea in a bun shop in Kensington, he "informed us that we were imagists." Neither H. D. nor Aldington had ever heard of the word much less of the principles later used to define the movement. In fact, they had developed their ideas of modern poetry in part through Pound's influence and in part through their own rejection of Victorian sentimentality in favor of verse derived from their passion for Greek literature. Specifically, Aldington and H. D. had been reading the French symbolists, Villon, Verlaine, and Neo-Latin poetry, but had

been translating together short epigrams from *The Greek Anthology* and writing relatively short poems in free verse which captured the subjects, spirit, rhythms, and form of the Hellenic material.

The now famous bun-shop meeting was significant on several counts. Pound slashed away with his red pencil at H. D.'s poems and signed them "H. D. Imagiste," thereby giving Hilda Doolittle the initials which would serve as her pen name through her career. Pound's "naming" of H. D. was to be for her both a burden and a limitation with which she would struggle for years (was she a developing poet in her own right or merely Pound's protégée, merely an imagist?). Imagism soon became an important movement which gathered about it a circle of early modernist writers, both British and American, and formally heralded modernism in English poetry; it also forged trans-Atlantic links and made many writers (and readers) conscious of literature and its possibilities in an entirely new way.

Pound sent Aldington's and H. D.'s poems to Harriet Monroe at *Poetry: A Magazine of Verse* in Chicago. Acting as the journal's "foreign correspondent," Pound praised the work of his friends and advertised it over the months that followed by delineating its "rules." Aldington's work ("Choricos," "To a Greek Marble," and "Au Vieux Jardin") appeared in the November issue, in which Monroe described the "imagistes" as "a group of ardent Hellenists who are pursuing interesting experiments in *vers libres*." H.D.'s work ("Hermes of the Ways," "Epigram" and "Priapus") appeared in *Poetry* in January 1913. These poems as well as others by Pound himself and by their friends (Skipwith Cannell, John Cournos, John Gould Fletcher, F. S. Flint, Ford Madox Ford, D. H. Lawrence, Allen Upward, and William Carlos Williams, among others) soon appeared not only in *Poetry* but in *The New Free-woman* (soon to become *The Egoist*) in London. Amy Lowell also became part of the group.

Informally, these young poets had developed standards for the poetry they admired and wanted to write themselves. Aldington wrote in *Life for Life's Sake*, "We wanted clear outlines, directness, concision, unhackneyed verse." Pound rather cryptically formalized imagism's

"four principles" in a manifesto published in *Poetry* in March 1913:

1. Direct treatment of the "thing," whether subjective or objective.
2. To use absolutely no word that did not contribute to the presentation.
3. As regarding rhythm: to compose in sequence of the musical phrase, not in sequence of a metronome.
4. The "doctrine of the Image"—not for publication.

In order to advertise his new movement, Pound initiated a collection of work he entitled *Des Imagistes*, but by the time it appeared early in 1914, Pound was disillusioned with imagism and interested in developing a new movement he denominated vorticism. Aldington, H. D., and Amy Lowell pursued the idea of an annual volume of imagist verse and produced *Some Imagist Poets* in 1915, 1916, and 1917. Working together, they published their own work as well as poems by their friends, having decided that each writer would make his or her own selection and that all poets would be equally represented and appear in alphabetical order. Pound refused on this basis to be included. In his introduction to *Some Imagist Poets 1915*, Aldington amplified Pound's rules, stressing the use of "the language of common speech" and "the exact word" as well as "absolute freedom in the choice of subject." He explained the importance of presenting "an image," striving for poetry that was not necessarily visual but that "should render particulars exactly and not deal in vague generalities." The anthologies of this avant-garde movement managed to survive the conflict of personalities that led to Pound's defection, but they could not survive the war. With Aldington at the front, the project was abandoned in 1918, although Aldington would continue to draw explicitly on the continuing appeal of imagism in his two volumes of verse published just after his demobilization in 1919: *Images of War* and *Images of Desire*.

A decade later, when all of the original imagists had gone their separate ways, Aldington edited a final "imagist" collection, designed to

demonstrate the divergent artistic development since the war of all those writers who had once appeared under the movement's banner. With H. D.'s help, Aldington solicited an introduction from Ford Madox Ford and collected work that appeared in *Imagist Anthology 1930*. Lowell and Lawrence were both dead, and Pound once more refused to participate, but most of the others contributed at least one poem, if only as tribute to the movement which had encouraged their early work and given voice to an exciting experiment in early literary modernism.

—Caroline Zilboorg

Bibliography

- Gage, John. *In the Arresting Eye: The Rhetoric of Imagism*. Baton Rouge: Louisiana State University Press, 1981.
- Hughes, Glenn. *Imagism and the Imagists*. Stanford: Stanford University Press, 1931.
- Harmer, J. B. *Victory in Limbo: Imagism 1908–1917*. London: Secker and Warburg, 1975.
- Laity, Cassandra. *H. D. and the Victorian Fin de Siècle: Gender, Modernism, Decadence*. Cambridge: Cambridge University Press, 1996.
- Zilboorg, Caroline, ed. *Richard Aldington and H. D.: The Early Years in Letters*. Bloomington: Indiana University Press, 1992.
- Zilboorg, Caroline, ed. *Richard Aldington and H. D.: The Later Years in Letters*. Manchester: Manchester University Press, 1995.

Literature as a Voice of Protest in the United States

The period 1900 to 1945 was one of great ferment in literature in the United States, as modernism and its experimentation with multiple perspectives and voice was introduced while a reformist agenda was added to the tradition of the social realist novels that had begun earlier with naturalist writers such as Stephen Crane, Theodore Dreiser, and Frank Norris. Such novels of protest gained a great boost from the “muckraking” movement in journalism of the turn of the century as well as the public fascination with socialism and communism that accelerated during the difficult economic times of the Great Depression. During this period, African American

and women authors raised questions of social inequality, while others spoke against the hypocrisy of small-town life and sexual repression.

The muckraking movement in journalism generally accompanied the Progressive movement in U.S. politics in which industrialists, with their singlehanded pursuit of wealth and power, were no longer seen as social Darwinist heroes but instead were attacked for creating unstable social conditions and a potentially revolutionary underclass. The movement centered largely on McClure's magazine. McClure's staff writers, such as Lincoln Steffens and Ida Tarbell, specialized in exposés of political corruption, corporate malfeasance, and labor exploitation. Unlike the naturalist novelists that had preceded them, they presented a reform program. In a similar vein, the ardent socialist Upton Sinclair wrote dozens of novels that served as exposés including *The Jungle* (1906), which examined the meatpacking industry; *King Coal* (1917), which was set during a mining strike; *The Profits of Religion* (1918), which explored the clergy; *The Goose Step: A Study of American Education* (1923); and *Oil!* (1927).

In the early twentieth century, African American writers continued their protest of racism in all its facets. In 1903, W. E. B. Du Bois published his important tract *The Souls of Black Folk*. Du Bois described the tendency for African Americans to have a “double consciousness,” indicating a serious split between how they were perceived by the majority white society and their own experience of selfhood. He also argued that this split became part of the African American consciousness, as individuals living in a racist society tried to please both the white majority and the demands of their own race. A similar line of analysis with an added insistence on the need for self-definition was taken up in the anthology *The New Negro* (1925), which became a seminal document of the Harlem Renaissance of the 1920s and 1930s. Numerous African American writers associated with this movement, such as Zora Neal Hurston, Langston Hughes, and Jean Toomer, celebrated the black experience and the issue of the color line in poetry, novels, and plays.

With the extension of voting rights in 1920, women writers more easily became part of new

movements and the literary scene. In her novels, Edith Wharton chronicled the lives of the upper class and revealed how stultified and limited women's lives were in this milieu. At another extreme, Anzia Yezierska, then called the "sweatshop Cinderella," wrote of the lives of poor immigrant Jewish families in the United States and her own rebelliousness against her Old Country father's autocratic rule over the family, as in *The Bread Givers: A Struggle between a Father of the Old World and a Daughter of the New* (1925). Poets Hilda Doolittle (H.D.) and Gertrude Stein also brought a viewpoint welcomed in the avant-garde; to give one example, Doolittle's "Eurydice" retells the myth of Orpheus from the point of view of his doomed and angry wife. Edna St. Vincent Millay relied on older forms such as the sonnet to convey her passionate and nuanced sensibility.

Sexual permissiveness and greater openness concerning sex became prominent in the 1920s, and this was reflected in the era's films, magazine articles, and literature. Numerous novels were written that lambasted small-town life and its hypocrisy, denounced as "Puritanism" by journalists such as H. L. Mencken. Sherwood Anderson's *Winesburg, Ohio* (1919), detailed the stunted lives of the typical American small town. It included portraits of a possible child molester and another study of a young woman, driven to near madness by anomie, who runs naked in the rain. To directly offend the "Puritan," Joseph Moncure March's banned 1928 erotic poem "The Wild Party" offered a graphic narrative involving sex, drugs, and jazz at one imagined drunken party of the Flapper age. Novelist and memoirist Henry Miller, whose works were also banned in the United States, with his long rants and explicit descriptions of his sex life, attempted to portray the joy of living as a free spirit.

The Great Depression of the 1930s, which coincided with the end of Prohibition, curiously brought a new cultural sobriety. The party was over, and the Communist Party, with its fierce advocates, was in vogue, with many writers serving their apprentices while attending meetings of local John Reed clubs. Editor Mike Gold of the communist *New Masses* magazine insisted that realism was not enough; Marxism must be added.

➤ THE CURIOUS CASE OF JOHN DOS PASSOS

John Dos Passos (1896–1970) began as a literary hero of the radical Left but became a pariah in his later years. Dos Passos was a Harvard graduate, journalist, and novelist, and his work grafted modernist documentary techniques to a social realist agenda. His earliest novels offered a highly critical view of the military, based on his observations as a medical volunteer during World War I. Dos Passos was a radical but not a captive of the Left; although he contributed to *New Masses* magazine, often it was to debate the views of true believers and editor Mike Gold.

Dos Passos wrote numerous novels; his most famous work was *U.S.A.*, a trilogy that included *42nd Parallel* (1930), *1919* (1932), and *The Big Money* (1936). In its main theme, the novels explored the social ills of capitalism. His critique included organized labor and business elites, but he was particularly outraged by the rise and influence of the advertising and public relations industries. The novels follow the histories of men and women of all social classes.

While covering the Spanish Civil War, Dos Passos became outraged at the Soviet manipulation of the failed Republican cause, which included assassinations of Leftists who rejected the straight Stalinist party line. In the 1940s and 1950s, Dos Passos published novels that critiqued the Communist Party, the New Deal, and the labor movement. Leftists who continued to embrace communism during the Stalin years lambasted Dos Passos as a reactionary. Dos Passos ultimately identified himself with the radical Right and anticommunism.

—Fred Nadis

To Gold, the only worthwhile literature was proletarian literature, which would detail the lives and difficulties of the working class, the need for united action, and the guidance of the Communist Party. Numerous writers, whether communist or simply socially committed, answered the call. Some of the finer literary efforts included Jack Conroy's *The Disinherited* (1933), Robert Cantwell's *The Land of Plenty* (1934), and Clifford Odets's drama *Waiting for Lefty* (1935). Perhaps the best known of 1930s' social realist

➤ NO SAFETY IN THE JUNGLE

Jurgis Rudkus, the protagonist of Upton Sinclair's *The Jungle* (1905), is an optimistic Lithuanian immigrant who arrives in the United States with his youthful bride Ona and relatives. They find work in the immense Chicago slaughterhouses and meatpacking plants. The factory owners, however, pay only starvation wages to their predominantly immigrant workers, and the working conditions are inhuman, debilitating, and unsanitary. All develop health problems; the grandfather dies. Jurgis works in the fertilizer factory, the fertilizer being the ground-up remains of beef carcasses after the lard and tallow have been melted out of them and only the offal and the bones remain. Shoveling cadaver dust into bags, Jurgis soon gets a constant headache and has asthmatic problems. His wife works in the meat packery, where dirt, moldy rejected sausage, spoiled hams, rat droppings, and poisoned rats all go into the meat hoppers to be ground into sausage.

Sinclair's frequent use of narration in the second person directly addressed the readers and

drew them into his images, with remarkable power. Consequently, the descriptions of the methods of production in the meat factories were so shocking that *The Jungle* triggered a government investigation, the first book to do so since Richard Dana's *Two Years before the Mast* in 1841. Aided by the novel, Dr. Harvey Washington Wiley, chief of the Bureau of Chemistry and Soils of the U.S. Department of Agriculture, saw his demands finally enforced in the Pure Food and Drug Act of 1906.

Sinclair, however, had intended the food production to be an eye-catcher only. His focus was on the working conditions, and in the second half of the book the personal tragedy and recovery of Jurgis takes second rank to a socialist program. Critical reception also centered mainly around food production, even though Jack London had initially called *The Jungle* “the *Uncle Tom's Cabin* of wage-slavery.”

—Wolfgang Hochbruck

novels is John Steinbeck's *The Grapes of Wrath* (1939), which chronicled the difficulties of Oklahoma's “dust bowl refugees” when they arrived in California; their exploitation as farm laborers, their endurance, and the value of unions or government action to protect workers.

—Fred Nadis

Bibliography

- Aaron, Daniel. *Writers on the Left: Episodes in American Literary Communism*. New York: Oxford University Press, 1977.
- Denning, Michael. *Cultural Front: The Laboring of American Culture in the Twentieth Century*. London and New York: Verso, 1998.
- Stott, William. *Documentary Expression and Thirties America*. New York: Oxford University Press, 1973.

Literature as a Voice of Protest in Europe

The political and social instability that shook much of Europe in the first half of the twentieth century, in addition to two world wars and the

subsequent stirrings of the Cold War, created a wealth of literature protesting against the existing cultural and political status quo. A panorama of authors from 1900 to 1945 criticized contemporary society and politics, warning of both the values underlying bourgeois decadence and the radicalism of new political ideologies. Others proposed socialist utopias free of the constraints of the past and present. Writers such as Emile Zola, Thomas and Heinrich Mann, Erich Maria Remarque, Franz Kafka, H. G. Wells, Aldous Huxley, and George Orwell are representative of the literature that confronted reactionary Victorian values, capitalism, modern warfare, fascism, communism, and all forms of totalitarianism.

The intimate relationship between French politics and literature can be surmised in the French public's traditional adoration for public intellectuals, common since the days of Voltaire (1694–1778). Emile Zola's scathing works—which critiqued French politics, society, and economic structure—were read by an avid public. A great many of Zola's novels were aimed at the social injustices of French society and described the

plight of the less fortunate amid insurmountable odds. Zola's immense influence on Belle Epoque France was most notably felt in the Dreyfus Affair (1894–1906) when he penned articles such as “J'accuse” and was a fervent Dreyfusard (supporter of Alfred Dreyfus). Through his books, Zola also informed the French public about the virtues of socialism in his attacks on capitalist inequity, anti-Semitism, and reactionary conservatism, which were all prevalent in the French Third Republic.

Late imperial Germany also produced a bevy of writers who were critical of German society and its ubiquitous class divisions, the rampant militarism and jingoism, widespread anti-Semitism, and the decaying bourgeois value system. The Mann brothers, Thomas and Heinrich, produced a multitude of novels that critiqued late imperial Germany. Thomas Mann's first novel, *Buddenbrooks: The Decline of a Family* (1901), traced the decline of a well-to-do merchant family over four generations, sharply criticizing the decaying values of the German middle class. His brother Heinrich typically wrote about social issues and scathingly critiqued the authoritarian and militaristic elements developing in the Weimar Republic. His novel *Der Untertan (Man of Straw)*, published in 1918, depicted the life of Dietrich Hessling, a typical German nationalist from prewar Germany who embraced the reactionary values of militarism, anti-Semitism, and chauvinism while despising socialists, Jews, and women. Heinrich Mann uses the character of Dietrich to illustrate the vacuous and empty nature of German bourgeois society, which tried to emulate German aristocratic values.

The onset of World War I destroyed the pre-existing social structure of Belle Epoque Europe while sending millions of men to the trenches and to their untimely deaths. The social and economic dislocations of war for both soldiers and civilians and the mounting death tolls at the front severely affected the public's views of the traditional values advocated by their elders. The so-called front generation, which saw their fellow soldiers die in droves in machine-gun fire or shelling attacks, was deeply shaped by their experiences during the war. Erich Maria Remarque's novel *All Quiet on the Western*

➤ GEORGE ORWELL—LITERATURE AS POLITICAL COMMENTARY

George Orwell (1903–1950), the pseudonym of Eric Blair, was a British author who penned a multitude of fiction and nonfiction works that criticized imperialism, capitalism, authoritarianism, and Stalinism, reflecting the many political concerns of the first half of the twentieth century. His older works, such as *Burmese Days* (1934), *The Road to Wigan Pier* (1937), and *Homage to Catalonia* (1938), written in his days as a journalist, illustrate his own experiences and disenchantments with British imperialism, social inequality, and encroaching Soviet communism. However, Orwell's most notable works include *Animal Farm* (1945) and *1984* (1949), which were scathing critiques of totalitarian societies and their characteristic police states. Despite his socialist leanings, he exposed the coercive policies that such states imposed under the pretense of egalitarianism or in response to real or imagined external threats. Much like H. G. Wells and Aldous Huxley, Orwell illustrated the flaws of current European ideological movements in his two major dystopian studies. In the eyes of Cold Warriors and conservatives in the West, Orwell's critique of Stalinism in *Animal Farm* and in *1984* established Orwell, despite his advocacy of socialism, as a prophet decrying the Soviet Union and global communism.

—Abraham O. Mendoza

Front, published in 1929, encapsulates the experience of World War I from its depictions of ubiquitous slaughter in the trenches to the miseries of the German home front. Remarque's novel depicted the experiences of the common soldier not as a heroic warrior of Victorian lore but as a mere boy duped by nationalists and politicians to engage in a senseless slaughter that neither side was able to bring to an adequate conclusion.

The interwar period (1919–1933) also stirred many European authors to expose the ideology and goals of totalitarian systems (such as fascism, National Socialism, and communism) as threats to human liberty. Jewish-Bohemian author Franz Kafka wrote about individuals struggling within tightly controlled bureaucratic

worlds in his novels *The Metamorphosis* (1915), *The Trial* (1925), and *The Castle* (1926). A recurring theme in Kafka's surreal narratives is the helplessness of individuals against external forces beyond their control in the form of governments, political movements, and mass society. Kafka's work elucidates the growing power of governments at the expense of the rights of the individual. Many of these literary themes also characterized elements in Weimar Germany's Expressionist theater, particularly that of Bertolt Brecht. Similar themes also inflected the research of the Frankfurt School with its noted Marxist scholars Theodor Adorno, Herbert Marcuse, and Walter Benjamin.

British authors H. G. Wells, Aldous Huxley, and George Orwell also fervently attacked the existing social order, the development of modernity, and the dangers of the emergent ideological movements throughout Europe. H. G. Wells's novels, such as *The Time Machine* (1895) and *The Invisible Man* (1897), were pointed critiques of capitalism, modernity, technology, and humankind's destructive capacity. His later works, such as *The Shape of Things to Come* (1933), warns about impending world war and the creation of a world state under a benign dictatorship, thereby espousing his socialist views given the social chaos prevalent in the 1930s. Many of Wells's works were deemed prophetic of events to come, such as World War I and World War II, National Socialism, and the rise of communism in the Soviet Union. His fellow Englishman, Aldous Huxley, also ventured to critique the West in his own dystopian (or dysfunctional utopian) novel *Brave New World* (1932) in which the future is characterized by predetermined genetically categorized social classes bound to specific societal roles. In this dystopian future, pharmaceutical drugs and escapist entertainment (the so-called feelies) are in common use as a way to cope with the dreariness of day-to-day life. To Wells's critique, Huxley added a prescient vision of the dangers of eugenics (or genetic engineering) and mindless consumerism.

—Abraham O. Mendoza

Bibliography

Bessel, Richard. *Germany after the First World War*. New York: Oxford University Press, 1993.

Eksteins, Mordis. *Rites of Spring: The Great War and the Birth of the Modern Age*. Boston: Houghton Mifflin, 1989.

Gay, Peter. *Weimar Culture: The Outside as Insider*. New York: Norton, 2001.

Literature as a Vehicle for Nationalist Movements

In the first half of the twentieth century, nationalist discourse in world literature became widespread, albeit for varying ideological purposes. After World War I, Leftist literature that critiqued the role of nationalism in creating the war became popular among segments of the war-weary public in the West. Yet in interwar Europe, advocates of fanatical nationalism, such as fascists and National Socialists, popularized a more pronounced nationalist literature. As these movements saw themselves as a vanguard against the forces of revolution (particularly from the Soviet Union) stemming from the Left and as a replacement for the weakened liberal democratic systems inherited from the prewar period, much of their literature celebrated war, racial superiority (with anti-Semitic overtones), and the seizure of power as a means of gaining political authority. Simultaneously, across much of the non-Western colonized world under the control of the Great Powers of Europe, nationalist literature that focused on the plight of indigenous people against their imperial overlords imbued the emergent struggle against European imperialism with a sense of greater purpose.

Interwar Italy entered a dire political and economic situation following the cessation of hostilities (1918) and the signing of the various surrender treaties (1919). Nationalists in Italy felt slighted by the fact that they had acquired minimal amounts of territory at the expense of the former Habsburg empire in spite of the Italian war losses. The Italian Gabriele D'Annunzio and 2,000 troops seized the city of Fiume on the Adriatic coast from Allied occupied forces, claiming it for Italy. D'Annunzio was a notable scholar and poet as well as a fervent Italian nationalist. Following the Fiume episode, D'Annunzio retired and spent his latter years writing and campaigning for nation-

alist causes. While D'Annunzio had a strong influence on the fascist ideology of Benito Mussolini, he never became directly involved in government politics in Italy. Other writers, such as Enrico Corradini, Alfredo Oriani, Giosue Carducci, and Filippo T. Marinetti, much like D'Annunzio, also wrote nationalist tracts exalting violence and war as positive forces for national regeneration. Many of these writers' written works had preceded the war and had fostered themes celebrating Italy's Roman heritage and the excellence of the Italian race. Among these writers, the Futurist Marinetti advocated fascism as the best way for the Italian people to restore their former artistic and cultural glory. Much of this literature was absorbed by young Italians immersed in the ideological fervor of the postwar era.

German high culture in its literary forms, mostly a reserve of the political Left during the postwar Weimar period, stood in opposition to the nationalist desires of the emergent Radical Right, particularly that embraced by the National Socialists. However, National Socialists did procure the services of many mediocre nationalist writers to popularize their racist and anti-Semitic ideology to the masses through literature, particularly Adolf Hitler's own autobiography *Mein Kampf* (*My Struggle*), published in 1925 and 1926 in two volumes. Similar to intellectuals and their involvement in Italian fascism, some German authors and poets did advocate National Socialism. Noted philosopher Martin Heidegger in particular remains notorious, given his level of involvement in the party and in intellectual discussions regarding the virtues of Nazism. However, it was not until Hitler's ascension to power in 1933 that liberal and Leftist literature was promptly abolished through censorship and book burnings, particularly those of Jewish writers. The theme of national regeneration through war and struggle was prevalent in much of this literature and, while of low literary quality, was still readily absorbed and accepted by many Germans.

Nationalist literature across the colonized world had preceded World War I but was embraced only by the small literate elite with access to education. The British, French, Dutch, Portuguese, Spanish, Italian, and German co-

➤ HEIDEGGER AND HITLER—NATIONAL SOCIALISM AND INTELLECTUALS

As the purge of German Jews from academia gathered steam after Hitler's ascension to power in 1933, many in German academia refused to abide by the Nazis' anti-intellectual ideology and censorship. However, others gladly accepted the change and embraced the political tenets of National Socialism in their respective fields, such as law, medicine, history, and philosophy. Among the most famous German intellectuals to accept and even advocate National Socialism was the influential philosopher Martin Heidegger. He served as rector of the University of Freiburg in 1933, a few months after Hitler's rise to power, for nearly a year. Furthermore, in many of his works written during the period, Heidegger made references to National Socialism, most of them in a positive light. Later in life, Heidegger denied that his involvement with National Socialism was ever sincere, commenting that he was only attempting to preserve intellectual freedom in universities as best he could. However, given his support for various Nazi policies and some of their ideological tenets in his work, it remains uncertain that this was in fact the case.

—Abraham O. Mendoza

lonial empires held sway over huge swaths of Africa, Asia, and Oceania. Intellectuals such as Indian Nationalist Mahatma Gandhi had already written numerous articles criticizing British imperialism and the position of Indians in South Africa in the early 1900s, already showing his distaste for British colonialism. World War I had shattered the illusion of Western invincibility, and many colonized elites had seen the chaos and disorder in Europe in the midst of the war, giving further strength to arguments against European colonialism and in favor of national independence in world regions such as India and the Middle East. As many of these men (and they were mostly men) had fought for the colonial motherland, many of them expected some type of autonomy or self-determination (a notion popularized by President Woodrow Wilson). When these expectations were not met, critics of imperialism, such as Indians Mahatma Gandhi and Jawaharlal Nehru and Vietnamese Ho Chi Mihn,

emerged as nationalists and authors of colonial nationalist literature.

Marxism and Pan-Africanism also emerged as stimuli to anticolonialist literature. The success of the Russian Revolution and the creation of the world's first workers' state had a significant influence on colonial nationalist literature, as some authors professed admiration for the Soviet experiment as a successful departure from European imperialism. During the 1920s and 1930s African American writers of the Harlem Renaissance wrote not only of the plight of blacks in the United States but also of the subjection of African blacks to European colonialism, thereby creating a Pan-African nationalist literature. Much of this nationalist literature advocated working against colonial authorities, either through violence or nonviolence, and also celebrated the history of the colonized peoples before the arrival of the Europeans. While couched in the language of the European Enlightenment, encouraging equality and political liberty, much

of this literature also developed a unique sense of national purpose identified with the colonized country in question and its history. Unlike the nationalist literature in Europe, which during the interwar period advocated racism, violence, and the colonization of "inferior" foreign peoples, much of the literature in the colonized world merely advocated breaking away from European authority and setting up autonomous or independent states.

—Abraham O. Mendoza

Bibliography

- Baird, Jay W. *Hitler's War Poets: Literature and Politics in the Third Reich*. New York: Cambridge University Press, 2008.
- Cannistraro, Philip V. "Mussolini's Cultural Revolution: Fascist or Nationalist?" *Journal of Contemporary History* 7(3/4) (1972): 115–139.
- Majeed, Javed. *Autobiography, Travel, and Postnational Identity: Gandhi, Nehru, and Iqbal*. New York: Palgrave Macmillan, 2007.

■ Introduction: Visual Arts

In the field of visual arts, that is, painting, sculpture, and architecture, an enormous transformation occurred during the first half of the twentieth century. The classical forms and the artistic vocabulary of the Renaissance classicism lost its predominance. The artists whom we call "modern" tried to develop a new artistic vocabulary, mostly in opposition to the curricula prescribed by well-established academies of arts, such as the Ecole de Beaux Arts in Paris. The search for new artistic forms moved in various directions. Some artists sought inspiration in African tribal art; others saw raw industrial forms and materials as beautiful. Other groups, such as the surrealists, believed that true art comes from the untrained and the unconscious mind. What all these movement had in common was their challenge to the classical academic arts. They saw themselves as the avant-garde, soldiers on the front line of the struggle

between the old controlled world of the academic neoclassicism and the new exciting world of fast-paced improvisation. The whole movement is called modernism and is represented by names such as Pablo Picasso, Georges Braque, and Walter Gropius. These modern artists undertook and accomplished a successful revolution in the arts that threw out the established academic curriculum based on human figure, perspective, and classical styles.

However, after World War II the avant-garde rebels themselves became the establishment. The majority of artists mentioned in this topic are now veritable household names. Yet in the first half of the twentieth century, they were still young and trying to make a name for themselves and win large commissions. Once they acquired their niches in the growing industries of visual media, they quickly created their own unified sense of style, the so-called international modernism.

The career of Le Corbusier (Charles-Édouard Jeanneret-Gris), one of the most prominent modern architects, can serve as an illustration. Between the two world wars, Le Corbusier was not an unknown architect, but the buildings that he created were mostly private villas in Parisian suburbs. He still did not yet complete his great commissions that brought him fame and prestige in the artistic world. After World War II, Le Corbusier and his followers in the International Congress of Modern Architecture would receive commission to design not just private villas but also whole cities, from Baghdad to Brasilia, and important landmark buildings such as the new United Nations headquarters in New York.

Modernists' dislike for the European Classical tradition opened the door to a revived interest in folk art—and at this time we are talking about the art of the colonized world. It was the art that the academic neoclassical tradition often characterized as “primitive.” The modernists therefore loved the “primitive.” An African tribal mask was considered as beautiful as a classical Greek sculpture, and this caused consternation among the largely middle-class bourgeois audience. Cubists especially drew their inspiration from African art. Native American art found its way to elite art galleries of major industrial cities, especially as this tradition was mediated for the Western audience by the work of Mexican painters Diego Rivera and Frida Kahlo. The Modernists wished to change the prevailing tastes, and by the end of World War II they achieved this.

Furthermore, the modernists also wanted to change society in general. It is interesting that most modernist artists, with some notable exceptions, were on the left of the political spectrum. Bauhaus, one of the most influential schools of modern art, aimed at changing the bourgeois character of the relationship between the patron and the artist. Modernists wanted to produce art for the average mass consumer, not for a lonely and wealthy bourgeois connoisseur. Modern architecture was even more ambitious; its practitioners wanted to change, or even eliminate, prevailing class differences in modern industrial societies. To us today these ideas might seem naive, but at the time it was an essential part of the modernist revolution in arts.

Nothing exemplified this failed ambition as does the career of the architect Mies van der Rohe. In 1926 he designed an avant-garde monument to Karl Liebknecht and Rosa Luxemburg, leaders of the failed communist revolution in Germany. But after World War II, van der Rohe's glass and steel buildings became a widely recognized symbol of the largest and most powerful corporations in the world, such as IBM, Seagram, and American Life.

—*Alexander Mirkovic*

African Visual Arts

African art in the early twentieth century remained largely traditional despite the incursions of European colonial powers and ensuing cultural upheaval. Wood carving was almost ubiquitous south of the Sahara, as shown in the photographic evidence gathered by the colonial masters in their documentation of this art form. Many of the wood sculptures before that era could not survive the termites and decay that resulted from the region's climate. Ethnographic and anthropological studies of ancient Africa relied on archaeological finds that were in nonperishable media, such as metal and stone.

The visual arts of this period were referred to as tribal art. The traditional carvers of wood, ivory, and stone as well as the metal casters and potters worked within the context of the tribal system, expressing the religious and artistic values of their communities. The wood that carvers chose varied according to the type of work or the function that the finished object would perform. Carvers chose wood for a variety of reasons, including its hardness or softness, because it came from a certain tree with sacred affinities, or because it allowed for a particular kind of finish. For example, among the Kalabari, located in the Niger Delta, special woods are associated with heroes, the dead, and the water spirits. Among the Dogons, found in the central plateau region of Mali, the termite-resistant hardwood is chosen for masks that are supposed to last, such as for effigies of ancestors, whereas if the sculpture is an ephemeral piece, it may be made with

➤ PARADIGM SHIFT IN AFRICAN ART

During the twentieth century, most African countries at one time or another witnessed a shift in the arts from magic and ceremonial purposes to images created for aesthetic purposes. This shift occurred at very different moments in different countries, representing a long process in which traditions and modernity interacted to set a new paradigm in the arts of the continent. The period of shift to modern art in Africa, influenced as it was by the Western arts, paradoxically coincided with the era in which the Cubists first found inspiration in classical African sculptures for a sweeping radicalization of Western artistic styles. During this same period Africans began to take up easel painting, to paint portraits and scenery in the naturalistic style, and to shift away from art primarily dedicated to ritual ceremonies and magic practice toward a more purely aesthetic orientation.

This newly imbibed naturalistic paradigm in Africa quieted critics of African art who opined that Africans were too primitive to produce fine arts. First among Africans to tread this new paradigm was Aina Onabolu from Nigeria. He ordered his professional art materials from London, introduced art lessons in the Schools of Lagos, and initiated the training of artists in Nigeria.

—*Tolulope Lawrence Akinbogun*

soft wood. Among the Bangwa in western Cameroon, the seasonal hardwoods are favored by carvers because they last longer.

African sculptures in wood, widespread in sub-Saharan Africa, are the most common African art pieces in museums and private collections. It was through wood carvings that African art was initially recognized outside the continent. Extant African wood sculptures are rarely older than two centuries, with the exceptions of some of the figures that the Dogon ascribed to the Tellem and a Yoruba Ifa divination tray. The Dogon Tellem figures were dated to the twelfth century CE, while the Yoruba Ifa divination tray was dated to the first half of the seventeenth century. Most African wood sculptures, however, date from the eighteenth century to the present. By 1900 the West developed ethnographic interests in traditional

African art, and a handful of scholars started field-work gathering data for books on African art.

Wood sculpture of the early twentieth century allowed for the incorporation of other media by sculptors or those who use the objects. These other media were seeds, grains, pieces of leather and cloth, feathers, cowrie shells, metal objects, beads, small bells, animal teeth, and horns. With these media, varieties of dance masks and ritual figures were produced. Also, items such as assorted utensils, neck rests, stools, thrones, quivers, loom pulleys, beakers, boxes, and drums were made with wood and other media. Some tribes in Africa such as the Yoruba (Nigeria), Edo (Benin), and Bamileke (Cameroon) fashioned various decorative objects, including armlets, bowls, and boxes, from elephant tusks.

Some of the African sculptures from this era were influenced by European themes. Before the nineteenth century, Portuguese merchants commissioned African craftsmen to make items such as salt cellars, hunting horns, spoons, and forks. Some of the ivories were carved by Benin sculptors, although most are in a style similar to the *nomoli* figures of Sierra Leone. It was argued that the first artworks brought back to Europe from Africa were the ivories carved by Africans based on European models.

The Benin bronze works flourished vibrantly up to the British conquest of the city in the late nineteenth century. Benin artistic grandeur produced a royal art consisting of bronze figures, bronze plaques, state swords, carved ivory tusks, masks, and bells. Benin's products also included the paraphernalia of kings and chiefs consisting of coral beads, royal crowns, and coronets displayed at important ceremonies of a new *oba* (ruler) and other state events.

Pottery was a common craft that vigorously entrenched itself into the social, economic, and religious life of the peoples of sub-Saharan Africa up to the middle of the twentieth century. Through pottery, the ethnographic study of the people became unambiguous. The traditional African system of class based upon age continued to manifest itself in the visual arts of the early twentieth century. For example, the Sen- ufo potters in Cote d'Ivoire made pottery that

represented the form, organization, and operation of the Senufo age-class structure.

In the early twentieth century some Western artists were tiring of the Western naturalistic style of art that had been introduced during the Renaissance, and these artists began searching for new styles. The experiments of these turn-of-the-century modernists culminated in movements such as impressionism, fauvism, cubism, and pointillism. Modernists such as Pablo Picasso, Amedeo Modigliani, and Jacob Epstein were profoundly influenced by African art. Thus, by way of African art Western art was transformed to new abstract modes. Ironically, contemporary African art has had three corresponding periods of Western influence during the twentieth century: precolonial times, when traditional crafts and sculptures flourished; colonial times, which saw the development of Christian iconographic images, Western themes, and exotic media; and postcolonial times, during which several predominating styles emerged among contemporary African art composition.

By the 1940s some art lovers and missionaries urged a synthesis of African traditional styles alongside the modern ones. For example, Fathers Sean O. Mahoney and Kevin Carroll established a workshop school at Oye-Ekiti, Nigeria, where traditionally trained carvers were given evangelical themes from the Bible to execute in their own style. In this way, the Roman Catholic missions in Nigeria and in Zimbabwe became patrons of African traditional art that hitherto had earlier been condemned as fetish art. With this development, the common opinion that all African art products were fetishist oddities gradually gave way, restoring hope for the artists working in the traditional method.

—Tolulope Lawrence Akinbogun

Bibliography

- Adepegba, C. O. *Nigerian Art: Its Tradition and Modern Tendencies*. Ibadan, Nigeria: JODAD Publications, 1995.
- Brain, Robert. *Art and Society in Africa*. London: Longman Group Limited, 1980.
- Egowan, O. D. *African Art: A Contemporary Source Book*. Nigeria: National Gallery of Art, 2005.

Maitland, Carolyn. "Contemporary African Art: Western Attitudes." In *Crossroad: Africa in the Twilight*, edited by Chike C. Aniakor and Krydz Ikwuemesi. Enugu, Nigeria: National Gallery of Art, 1999.

Nicodemus, E. "Out of Invisibility: Problems of Writing on Contemporary African Art." In *Crossroads: Africa in the Twilight*, edited by Chike C. Aniakor and Krydz Ikwuemesi. Enugu, Nigeria: National Gallery of Art, 1999.

Asian Visual Art

In the first half of the twentieth century Asian art, from Istanbul to Tokyo, shared one common feature: the onslaught of Western culture and the need for artists to absorb it while maintaining their own cultural identity. Often this created a bifurcation in the arts, such as Western versus native or modern versus traditional. But it also stimulated efforts to find a creative synthesis, a modern art with Asian, but more particularly national, character.

As in other things, Japan was the first Asian country to make this effort, to go beyond technological borrowing and search for the cultural basis for Western wealth and power. As early as 1876, Western oil painting was being taught in a government school in Tokyo. By the turn of the century there was a community of Japanese artists studying in Paris. In Japan, Yoga ("Western Painting"), mainly oil, was an officially recognized art form at government-sponsored annual exhibitions.

This enthusiasm for the new and foreign was, however, matched by a cultural nationalism that tried to modernize native Japanese art, brush and ink painting, by synthesizing Western and Japanese art. Ironically, the initial stimulus for this revalorization of native tradition came from one of the foreign experts hired to modernize Japanese art and culture. The American art theorist and critic Ernest Fenollosa urged the Japanese to appreciate the value of their own art and encouraged Japanese artists to free brush painting from the supposed effete conservatism of Confucian literati painting acquired from China several hundred years earlier.



The Asceticism of Uma, by Nandalal Bose, illustration from *Myths of the Hindus and Buddhists* by Sister Nivedita and Ananda Coomaraswamy, 1913. (Private Collection/The Stapleton Collection/The Bridgeman Art Library)

This message appealed to national pride and the desire to modernize, giving birth to a distinctively new genre called Nihonga (Japanese painting). Nihonga incorporated some techniques of Western realism, such as shading and fixed point perspective, but was still very self-consciously Japanese in an age of strong and pervasive nationalism.

Fenollosa's foremost Japanese disciple, Okakura Tenshin (1862–1913), was the movement's theorist and argued that Japan was the natural leader for a Pan-Asian cultural revival that would counterbalance Western materialism with Asian spirituality. These ideas also had some resonance in early-twentieth-century India, in particular among the intellectuals and artists who formed the Bengal School around

Rabindrinath Tagore. By no means traditional conservatives, in Japan, India, and elsewhere these new intellectuals sought to produce a creative synthesis that would be the foundation for a progressive reawakening in art and culture.

Pan-Asianism did bear some artistic fruit. Some leading Nihonga painters visited India, where their East Asian brushwork and particularly the slightly blurred misty effect obtained through light ink washes had an influence on some prominent modern Indian artists. The foremost was Nandalal Bose, an artist closely associated with Gandhi's Congress Party and the independence movement.

But there would be no significant Pan-Asian art movement. Twentieth-century Asian nationalists were too much concerned with their own particular cultural survival and with using art to promote nationalism to accept Japan's leadership, cultural or political. Further, Japanese military expansionism soon disabused them of any idea of following Japan's leadership.

This can be seen quite clearly in the history of the first group of Chinese painters to try to import the Nihonga style of modernized brush painting into China.

At the beginning of the century many Chinese revolutionaries had looked to Japan as a model for national rejuvenation in art as well as in other things. Up to the 1930s more Chinese artists studied Western art in Tokyo than in Paris. But in the early years reformed ink painting, Nihonga, also had its appeal. One group of young artists, also political activists in Sun Yatsen's revolutionary party, took the Nihonga blending of Eastern and Western art back to China and tried to promote a "New National Painting," Chinese in character (ink on paper) but incorporating Western techniques and modern subject matter.

Their attempt to combine Chinese and Western art had only limited success, and they became known as the Cantonese School (Lingnan Pai), from their province of origin. The Japanese flavor to their synthesis was a liability in appealing to Chinese nationalism.

In fact, throughout the republican period, from 1911 to 1949, Chinese visual art was rather sharply divided into the traditional ink painters, who mostly shunned foreign influences, and

► THE FEMALE ARTIST BETWEEN TWO WORLDS—PAN YULIANG

In the twentieth century, many young Asian artists went to Europe to study Western art. Although some stayed, most returned home to teach and practice in their native country. A very few made the long sea voyage more than once. These artists were pioneers and forerunners of an important phenomenon of the emergence of transnational art, cultural hybridity, and a nascent global culture. Although most of these cross-cultural pioneers were male, there were a few females, another new feature of Western globalization. One Chinese female oil painter, Pan Yuliang, was unique in her bifurcated life. She spent over 30 years in China in two separate periods, spending the rest of her life in Europe, mainly Paris. At home in two cultures and fluent in two languages, she led a life in two different social worlds.

Orphaned at a young age and sold into a brothel, the future artist was rescued by an official in the new Republican government, who took her to Shanghai as his second wife or concubine. There, through her husband's modern cultural connections, Pan (her married name) gained admission to the first coeducational art school in China, itself a controversial innovation in a society that had rigorously separated respectable young women from the public male world.

Pan's remarkable talent, especially in life drawing of the nude—another shocking Western innovation for traditional Chinese—earned her a government scholarship to study in Paris, where, after a hard financial struggle, she graduated from L'Ecole des Beaux Arts as a highly accomplished oil painter and sculptor in a rather conservative academic style.

Returning to China in the early 1930s, Pan had exhibitions and taught Western art, first in Shang-

hai and then as a professor at the newly established National Central University in Nanjing.

Despite success and recognition in China's modern cultural circles, rumors about her past life plagued her, and in 1936 she returned to Paris ostensibly for more experience at the center of Western art. But war and revolution intervened, and she spent the last 40 years of her life as an émigré artist achieving some recognition (a prize from the Paris city government, works in the Paris Museum of Asian Art, and works in the National Museum of Asian Art) but not a great deal of financial success. Sadly, Pan's life ended in poverty.

After Pan's death, just as China was reopening to the world in the late 1970s, her Paris works of art were brought back to China, a best-selling novel was written about her extraordinary life, and she became a national celebrity in the early 1980s, with art exhibitions in major cities, a widely watched TV miniseries about her life, and a movie starring China's most famous film star, Gong Li, as the global woman artist.

Was Pan Yuliang a great artist, unappreciated in life, discovered after death? Probably not. Although her substantial body of work that is not in Chinese museums has soared in value on the international art market as newly rich Chinese collectors have entered the scene, most of her oil paintings are rather ordinary by Western standards. However, the ink-on-paper studies of the female nude from her later Paris years combine Western anatomical training with Chinese brush technique in a successful fusion of Eastern and Western art, the goal of so many twentieth-century Asian artists.

—Ralph Croizier

young art students, who avidly studied Western art either abroad or in the new art schools, government and private, established in China's major cities.

But there were some ink painters who responded to the charge of stagnation by finding sources of innovation within China's long tradition of artistic creation. For example, during the Sino-Japanese War in the 1940s, the decidedly non-Western ink painter Zhang Daqian

(1899–1983) drew inspiration for bold coloristic innovations from the 1,200-year-old Indian-influenced Buddhist wall paintings in the caves at Dunhuang in the Gobi Desert. In the twentieth-century crisis of adjusting to cultural importations, these wall paintings served as a historical example of China successfully absorbing foreign influences.

Other Asian countries that had long been sources of cultural creativity for surrounding

areas faced similar problems in coping with Western influence. India had received a head start in absorbing Western art because of British rule, and by the mid-nineteenth century government-established schools were teaching Western art.

By far the most famous Indian artist to emerge under the Raj was Ravi Varma (1848–1906). He painted with oils in a highly polished and completely Western style that might be called Victorian romantic realism. But the subject matter was completely Indian: portraits of native Indian aristocrats and dramatized scenes from ancient Vedic literature and myths. Reproduced as cheap prints, this became by far the most popular form of art with the Indian masses, preserving traditional culture and religion while using Western art and technology to spread a new vision of ancient beliefs. Varma, with his financial success and popularity at all levels of Indian society, also established the social and cultural position of the artist as independent creator rather than servant to political or religious masters. By the middle of the twentieth century this new role for the artist was common across Asia.

But Varma did not challenge British rule or cultural hegemony. In the early twentieth century, awakening Indian nationalism inspired artists to seek out a more Indian style in painting. The first, and perhaps most successful, response to this came from the Bengal School and particularly the work *Mother India* (1905) by Abindrinath Tagore (1871–1951). A nationalist innovation—there is no such deity in Indian myth or religion—the multiarmed goddess drew on traditional Hindu iconography but was accurately Western in drawing while relying on soft colors and a misty effect, suggesting the superiority of Indian spirituality over Western materialism. *Mother India* became an icon of modern Indian art.

Over the next decades the central tension in Indian art was not so much traditional versus Western, as in China and to some extent Japan, but rather Western modernism versus the academic realism of the British established art academies. Some of the more interesting attempts at combining the bold simplified lines of modernism with Indian folk painting can be found in

the primitivist pictures of ordinary Indian women by Jamini Roy (1887–1974).

In the Islamic countries of West Asia, despite the Quranic discouragement of visual imagery, many of the issues and developments in the visual arts paralleled those in eastern and southern Asia. Ottoman Turkey was, in fact, one of the first countries to hire Western art teachers, significantly in military academies to teach scientific drawing. Under Mustafa Kemal (Ataturk) the new republic made vigorous efforts to catch up with Western art, with Turkish artists experimenting with everything from social realism to abstraction.

Cairo was the other major center for Western art and Western cultural influence before World War II, with an active modernist movement that tried to give modernism an Egyptian, Arabic, or even Islamic face. The same fundamental issue emerged across the continent: how to be modern without losing cultural identity. And behind that lurked another project: how to make art serve the cause of building national identity, another Western idea.

—Ralph Croizier

Bibliography

- Andrews, Julia, and Kuiyi Shen. *A Century in Crisis: Modernity and Tradition in Twentieth Century China*. New York: Guggenheim Museum, 1998.
- Clark, John. *Modern Asian Art*. Honolulu: University of Hawaii Press, 1998.
- Clark, John, ed. *Modernities of Asian Art*. Sydney: Wild Peony, 1991.
- Conant, Ellen, Thomas Rimer, and Stephen Owyong. *Nihonga: Transcending the Past, Japanese Painting, 1868–1968*. New York: Weatherhill, 1996.
- Croizier, Ralph. *Art and Revolution in Modern China: The Cantonese School, 1906–1949*. Los Angeles: University of California Press, 1988.
- Karnouk, Liliane. *Modern Egyptian Art*. New York: American University Press, 2005.
- Mitter, Partha. *Art and Nationalism in Colonial India, 1850–1922*. Cambridge: Cambridge University Press, 1994.
- Sinha, Gayatri. *Art and Visual Culture in India, 1857–2007*. Mumbai: Marg Publishers, 2009.
- Sullivan, Michael. *Art and Artists of Twentieth Century China*. Los Angeles: University of California Press, 1996.

Takashima, Shuji. *Paris in Japan: The Japanese Encounter with European Painting*. Tokyo: Japan Foundation, 1987.

Dada

Dada was an informal artistic revolution that took place in Europe and the United States from about 1916 to approximately 1924. A multimedia antiart movement in art, literature, design, and music, Dada originated out of abhorrence and disgust at the bloodshed and destruction of World War I and was aimed by its protagonists at the total annihilation of art. The artists who created the movement, largely refugees from the war who were living in Zurich, Switzerland, included the Romanian poet Tristan Tzara, the German poet Richard Huelsenbeck, the Alsatian sculptor and painter Hans Arp, and the German writer Hugo Ball. They claimed that the traditional aesthetics, values, logic, and rationales of society had led to war; therefore, those qualities were without meaning and must be rejected. The Dada movement was abstract in that it evaded coherent description; it was also nihilistic in that every action and manifesto was about the refutation of traditional art and culture in favor of the absurd. Much of art during the subsequent decades of the twentieth century was influenced by Dada, including Surrealism, Abstract Expressionism, Pop Art, Conceptual Art, and Performance Art.

Accounts vary about the choice of “Dada” as the name of the movement. According to one version, the name was selected at random from a Larousse dictionary. Another account ascribes the name to a child’s first babbled words. Still another explains that the label came from the French word for “hobby-horse.” Whatever the origins of the name, Dada first came to public attention after February 1916 with the opening in Zurich of the Cabaret Voltaire, a venue at which the clientele witnessed spectacles of antiart. These spectacles included exhibitions of Dada artworks, recitation of nonsense poems by one artist or multiple artists simultaneously in different languages, defiantly absurdist musical performances of “African” music or arrhythmic drumming, and displays of outlandish costumes.

As Hugo Ball announced in the first Dada manifesto, read aloud to a gathering in July 1916, Dada was “outside all the parrotry of your self-evident limitedness.” All aspects of the prevalent culture were subject to parody, subversion, and distortion.

Reveling in the shock value of their compositions, the visual artists incorporated machinery, found objects, photographs, and scraps of paper or newsprint into their assemblages, as in Hans Arp’s *Collage with Squares Arranged according to the Laws of Chance* (1916–1917). Another striking example of this type is *Mechanical Head, or The Spirit of Our Time* (1919), the Austrian Raoul Hausmann’s wooden mannequin head adorned with a wallet, gears, measuring stick, and various other incongruous objects. Among the most notorious artworks of the era are two by the French painter and sculptor Marcel Duchamp, who incorporated what he termed “readymades.” These are *Fountain* (1917), a ceramic urinal placed on its back, and *L.H.O.O.Q.* (1919), a reproduction of Leonardo da Vinci’s *Mona Lisa*, with an added penciled mustache.

Dada poetry and literature were equally confrontational. Ball, Tzara, and Huelsenbeck wrote and performed works in which they used words in unexpected combinations and irrational contexts or presented *Lautegedichte* (sound poems) of nonsensical arrangements of syllables. They also wrote and proclaimed manifestos calling for the derangement of all conventions and the end to manifestos. In 1918 at the height of the movement, Tzara issued his own Dada manifesto, claiming, “In principle, I am against manifestos as I am against principles.” This contradiction is emblematic of work created in the name of Dada in that it was art that aimed at the eradication of art.

While the earliest manifestations of Dada took place in Zurich, the end of the war in November 1918 led many of the artists who had assembled in Switzerland to return to their homelands, taking the absurdist movement with them. Thus, Dada spread to Berlin, Paris, Barcelona, and New York, taking on a fresh momentum.

Duchamps and Francis Picabia went to New York, where they met Man Ray, one of the most innovative figures of the era. Man Ray (born Emmanuel Radnitzky), an American artist whose name is associated with both the Dada and

Surrealist movements of the twentieth century, was a photographer, writer, painter, designer, and sculptor. By 1920, Duchamp and Man Ray were collaborating with Katherine S. Dreier on the creation of the *Société Anonyme*, which sponsored exhibitions and lectures on modern art.

Dada in Berlin took on a more political tone in the aftermath of World War I with the atmosphere of civil war and the instability of the new Weimar Republic. Hannah Höch, George Grosz, John Heartfield, and Hausmann led the movement there, publishing a series of journals and producing the 1920 First International Dada Fair. Another artist of the Berlin movement was Kurt Schwitters, who broke away and created his own branch of Dada art, calling it Merz. In the early 1920s many of the Dada artists moved to Paris, where Dada was led by Guillaume Apollinaire, Max Jacob, and André Breton. By this time, however, Dada was waning, the victim of infighting and its own success.

As the avant-garde became fashionable, Dada teetered on the edge of respectability and threatened to become part of the art establishment. By 1922 the movement was waning in favor of Surrealism, and by 1924 Dada had given way to new trends in artistic expression.

—Ellen Jan Jenkins

Bibliography

- Friedrich, Otto. *Before the Deluge: A Portrait of Berlin in the 1920s*. New York: HarperCollins, 1995.
- Gay, Peter. *Modernism: The Lure of Heresy from Baudelaire to Beckett and Beyond*. New York: Norton, 2008.
- Metzger, Rainer, ed. *Berlin in the Twenties*. New York: Abrams, 2007.
- Nadeau, Maurice. *The History of Surrealism*. Translated by Roger Shattuck. Cambridge, MA: Belknap Press of Harvard University Press, 1989.
- White, Erdmute Wenzel. *The Magic Bishop: Hugo Ball, Dada Poet*. Columbia, SC: Camden House, 1998.

Surrealism

The avant-garde phenomenon Surrealism was a cultural, literary, and artistic movement that began in Paris in the 1920s, following close on the heels of its predecessor, Dada, and spreading its

influence through the rest of the twentieth century. In the early 1920s when the bloodshed of World War I had ended, thus eliminating the initial source of Dada's momentum, many of the Dada artists resigned from the waning antiart movement. Surrealism provided a new focus for the avant-garde in their continued adherence to the irrational and revolutionary in art and literature. Though unlike Dada, which was nihilistic in its aim to reject art and traditional values, the newer movement was a positive trend, calling for creativity drawn from humanity's subconscious.

In his 1924 *Manifesto of Surrealism*, André Breton, a French poet and writer with some background in psychiatric studies, defined Surrealism as "psychic automatism in its pure state." The theoretical basis for Surrealism was the connection among the unconscious mind, dreams, and reality, a reflection of the influential role that Sigmund Freud's theories of psychoanalysis and dream interpretation played in the foundation of the movement. Freudian dream analysis had become a popular topic with readers after the 1913 publication of Freud's *Interpretation of Dreams* in its third edition, with the addition of some new and very literal interpretations of symbols. In Breton's manifesto, which established his position as the movement's principal figure, he argued for "the future resolution of these two states, dream and reality," into superreality. Breton's agenda identified poetry as the most appropriate medium for this automatism, though many of the movement's most well-known examples over the decades have been in the visual or plastic arts.

Breton named the contemporaries whose work he considered Surrealist in the 1924 manifesto, describing the group as inhabitants of an imaginary castle. His lists included Louis Aragon and Philippe Soupault, with whom he had founded the journal *Littérature* in 1919, as well as Paul Eluard and others. Pablo Picasso is mentioned but only as a hunter nearby the castle in the woods. Breton also listed a number of Surrealists as qualified in distinctive areas, identifying the Marquis de Sade as "Surrealist in sadism" and Charles Beaudelaire as "Surrealist in morality." According to Breton, "We really live by our fantasies when we give free reign to them." The poetry written under the Surrealist standard was

full of the same sort of fantastic imagery that leapt from dreams to the unfettered imagination, as in Breton's poem "Freedom of Love" in which he describes his wife's "eyes of purple panoply and of a magnetic needle."

Surrealism as a cultural revolution provided a rich field for visual artists as well, including Man Ray, Max Ernst, Joan Miró, René Magritte, Salvador Dalí, Marc Chagall, and Paul Klee, many of whom participated in the first group exhibit, *Exposition, La Peinture Surréaliste*, in November 1925 at the Galerie Pierre in Paris. One of Joan Miró's earliest Surrealist paintings was *The Tilled Field* (1923–1924), a work in which the Spanish artist incorporated many disparate images of animals and farm implements on a bright yellow ground, drawing upon fantasies of his childhood on his family's farm in Catalonia. Magritte's *The Treachery of Images* (1928–1929) is a painting of a tobacco pipe labeled in French "This is not a pipe." Magritte, a Belgian painter, became known for his visual contradictions, which flouted the connections between images and words. In another of his works, *Golconda* (1953), the sky is filled with identical floating businessmen in overcoats and bowler hats. One of the most famous Surrealist paintings is *The Persistence of Memory* (1931) by the Spanish artist Salvador Dalí. In this haunting and bleak landscape, melting clocks droop over the edge of a table, the branch of a tree, and a rubbery body that may be a fish or a man. All of these works are rife with ambiguity even to their titles, which reveal little of the works' meanings.

The Surrealists adopted social revolution and ambiguity in a more political sense as well, and many of them became members of the Communist Party in the late 1920s. Ultimately, however, the Surrealists and the communists parted ways after only a few years, unable to agree on their brands of political activism. The Surrealists criticized the stultifying conformity of Soviet communism, and in 1933 Breton, Eluard, and others were expelled from the party. They responded in 1935 by publishing *Bulletin International du Surréalisme*, which proclaimed their censure of the Soviet Union.

By the outbreak of World War II, many of the major Surrealists had left Europe, including Breton, Ernst, and Dalí. Surrealism increasingly

took hold in New York, particularly with the patronage of the wealthy art collector and gallery owner Peggy Guggenheim. Eventually, the irrationality of Surrealist images and the rejection of traditional rules of art and literature that characterized Dada and Surrealism created the climate in which Abstract Expressionism, the first truly American modernist artistic movement, could thrive.

—Ellen Jan Jenkins

Bibliography

- Barr, Alfred H., Jr., ed. *Fantastic Art, Dada, Surrealism*. 3rd ed. New York: Museum of Modern Art, 1946.
- Gay, Peter. *Modernism: The Lure of Heresy from Baudelaire to Beckett and Beyond*. New York: Norton, 2008.
- Nadeau, Maurice. *The History of Surrealism*. Translated by Roger Shattuck. Cambridge, MA: Belknap Press of Harvard University Press, 1989.
- Seigel, Jerrold. *Bohemian Paris: Culture, Politics, and the Boundaries of Bourgeois Life, 1830–1930*. Baltimore: Johns Hopkins University Press, 1999.

Abstract Art

Abstract art, as a movement, began in the early twentieth century. A worldwide phenomenon, it was a movement defined as being free from representational qualities; in this sense the movement and its goals were both idealistic and visionary. It evolved at a time of great change in the world, especially with the increased mechanization of the workforce, the breakthroughs in science, and the advances in photography and film. This was also a time during which there was a sense of fascination with anything new, especially following World War I. The modernist movement in literature and the arts, of which abstract art was an offshoot, was a revolt against the old order and its certainties. Instead, spontaneity, new perspectives, and subconscious processes were valorized.

Abstract Art was distinguishable by its non-representational form, color, and texture. The movement seemed to be a natural progression from the Impressionists and their use of color that was different from the traditional European

WASSILY KANDINSKY (1866–1944)

Wassily Kandinsky, one of the leading innovators of the abstract art movement in the twentieth century, did not start painting until his early thirties. He studied at the Academy of Fine Arts in Munich (1896–1900), where his early paintings were naturalistic. Then in 1909 he attended an exhibition of the French Impressionists, sparking an interest in new approaches to representation. Subsequently he founded the art group *Der Blaue Reiter* (1910–1914) with artists Franz Marc and August Macke and was heavily influenced by the French Impressionists as his paintings became more abstract. Impressionism showed Kandinsky that he could strip away the detail to find the color, lines, and shapes, which then could be interpreted individually by the viewer while also portraying the inner emotions of the artist.

Kandinsky also belonged to the German art and design school Bauhaus (1922–1933), teaching design and painting while theorizing about visual art and its relationship to other arts. His two major publications were *On the Spiritual in Art*, promoting abstract art and the use of color, and *Paint and Line to Plane*, dealing with the importance of line and geometrics. In his writings he also explored the correlation between art and music. He was fascinated with the emotional power that music provided the listener: freeing the mind to interpret the piece as an individual experience. Kandinsky wished to



Wassily Kandinsky's *Composition IX* (1936).
(CNAC/MNAM/Réunion des Musées Nationaux/Art Resource, NY)

translate this process to his paintings. He believed that music and color allowed him to portray subjects according to his knowledge of them and not what his eyes actually saw. He used very intense color in his paintings to indicate the different moods of his works, for example *Yellow-Red-Blue* (1925). The use of geometric shapes became more important in his paintings together with the intense use of color, and as his works progressed his visions became more complex, such as in *Composition IX* (1936) and *Composition X* (1939). For Kandinsky, painting could reproduce spiritual experience.

—Shelley G. Allsop

style of image reflection. Abstract Art also developed from the short-lived Fauvism style that had introduced the use of brilliant colors and broader brushstrokes. The trend became one of “art for art’s sake”; it was all about the process and end result, not necessarily the subject matter. The artists used their materials as their inspiration rather than starting with a preconceived idea as to what the end product should look like. Abstract Expressionism is the extreme example of this, and its ultimate voice is the action painting style of Jackson Pollock (1912–1956), with its canvases covered spontaneously with splatters and drips.

The forerunner to the Abstract Art movement was cubism, in which artists started to paint in a flattened fragmented style, with geometric renderings that captured movement and

multiple perspectives. Although there were experiments with limited color palettes, nature was still represented. Instead of turning to total abstraction, cubists chose to experiment with collage, thus retaining a part of the real world in their art. Others were developing more colorful and geometric alternatives. For example, Robert Delaunay (1885–1941) and Frantisek Kupka (1871–1957) painted totally abstract paintings to reflect their deep interest in color and shape with an interest in the use of light and its impact on color. They experimented with the power of color and light to suggest movement.

After something new and vital, the pioneers of the Abstract Art movement, Wassily Kandinsky (1866–1944), Kasimir Malevich (1878–1935), and Piet Mondrian (1872–1944), moved away

from cubism, which they believed still represented natural images rather than imaginary ones. The progression was toward using geometric shapes that were not present in nature in their pure form, such as the square, the triangle, and the circle.

Within the Abstract Art movement two basic categories existed—organic and geometric—although neither category was exclusive. Organic Abstract Art incorporates symbols derived from nature and the subconscious and had much in common with Expressionism. The geometric style, however, was deemed the purer form of abstraction. Malevich created the first truly Abstract painting, which was a simplistic completely geometric painting of a black square on a white background. He called his style Suprematism to reflect the importance of the shape over the background. He developed further into Constructivism, in which forms were defined by pure precision. Mondrian's work was even more precise than that of Malevich, with the former using black lines in grid patterns with asymmetrical areas of primary colors. He termed his style Neoplasticism, turning away from natural forms altogether. Kandinsky's works moved from the organic to the geometric (although more fluid); his paintings began to reveal huge expansions of color intersected with lines, circles, squares, and triangles.

The philosophy of the Abstract Art movement was spread through gatherings of like-minded artists, through salons and schools, and through new artistic periodicals. The most recognizable of these institutions were the Dutch artistic journal *De Stijl* (*The Style*) and the Bauhaus art school in Germany. In his 1912 *Über das Geistige in der Kunst* (*Concerning the Spiritual in Art*), Kandinsky proposed the philosophy that colors and emotions were linked.

The Abstract artists wanted to produce works that were on one end of the scale spontaneous and extreme and on the other end completely structured as to depict “purity” in form, color, and line. Despite the vast variety of artists and works represented by Abstract Art, they all adhered to the movement's basic philosophy: art is meant to excite and be both by and for the imagination of the artist and the viewer.

—Shelley G. Allsop

Bibliography

- Foster, A., et al. *Art since 1900: Modernism, Anti-modernism, Post-Modernism*. London: Thames and Hudson, 2004.
- Gooding, M. *Abstract Art*, London: Tate Publishing, 2001.
- Whitford, F. *Understanding Abstract Art*. New York: E. P. Dutton, 1987.

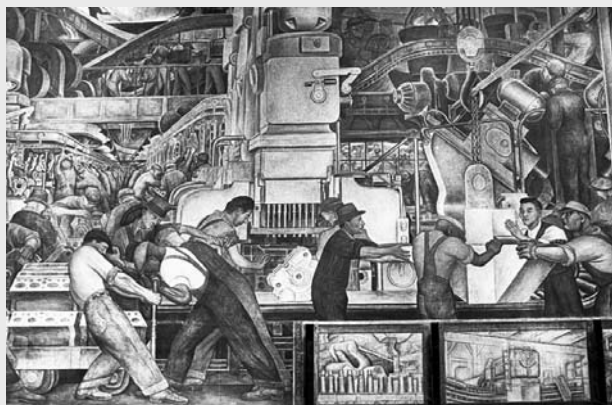
Muralism

The muralist movement began in Mexico in the 1920s. It germinated in the climate of the Mexican Revolution, which erupted in 1910 as a response to the long dictatorship of Porfirio Díaz (1876–1910). After a decade of turmoil, José Vasconcelos, the minister of education during the Alvaro Obregón administration (1920–1924), envisioned using public works to bolster national stability. As part of this program, Vasconcelos commissioned artists, many of whom had fled the country during the violence of the revolution, to create nationalistic murals. The three most prominent muralists were Diego Rivera (1886–1957), José Clemente Orozco (1883–1949), and David Alfaro Siqueiros (1896–1975). Starting in the 1920s, these artists, often referred to in literature as *los tres Grandes*, gained national and international attention for their paintings, which adorned the walls of some of Mexico's most important buildings.

Rivera, a child prodigy, started as a traditional easel painter. Recognizing his talent, the Mexican government awarded Rivera a grant to study art in Europe, where he honed his skills in cubism. After an extended period abroad he returned to Mexico in 1919, at which time he was recruited by Vasconcelos. Rivera incorporated imagery that spanned the entirety of Mexican history from the pre-Columbian world of the Aztecs to the revolutionary leaders of the early twentieth century. At the same time his murals, as well as those created by other artists, served as sounding boards for political, religious, and other ideological material.

Orozco lost a hand and suffered permanent sight and hearing damage from an explosion, and thus his work was fueled by personal tragedy. Prior to working on Vasconcelos's mural projects, Orozco had garnered attention, often

➤ DIEGO RIVERA'S *DETROIT INDUSTRY*



Diego Rivera's mural *Detroit Industry*, North Wall, 1933.
(Bettmann/Corbis)

Diego Rivera's *Detroit Industry* fresco cycle, completed in 1933 on the walls of the inner court of the Detroit Institute of Art, is one of the best examples of the muralist era outside of Mexico.

—Melvin D. Davis

negative, for his depictions of schoolgirls, prostitutes, and political caricatures. Stylistically, he differed significantly from Rivera. However, Orozco's murals focused on similar content, including the Mexican Revolution, socialist propaganda, and Mexican historical figures.

Siqueiros, the youngest of the three prominent muralists, participated in the Mexican Revolution, witnessing its horrors firsthand. A pronounced Stalinist, he also fought for the Republican Army in the Spanish Civil War and later led an unsuccessful attempt to murder Leon Trotsky, who had sought exile in Mexico. Siqueiros's murals were stridently political and filled with socialist imagery. Some of his greatest artistic achievements came from his advocacy of experimentation with new techniques in mural art, including the use of synthetic mediums and the integration of sculpture to create a medium known as *escultopintura*.

As enthusiasm for mural art spread throughout the Americas during the 1930s, artists in the United States took up the medium. The Works Progress Administration (WPA), created by Franklin D. Roosevelt during the Great Depres-

sion, commissioned artists to paint murals to promote nationalism and unity. Rivera, Orozco, and Siqueiros also visited the United States during this period and not only served as inspirational figures for fellow artists but also worked on mural projects in major cities such as Detroit and San Francisco. One of the most prominent U.S. muralists of the WPA period was an African American, Aaron Douglas (1899–1979). A major contributor to the Harlem Renaissance, Douglas gained prominence for his visions of African American life during the 1930s. Some of his best-known murals include the WPA-sponsored project at the 135th Street Branch of the New York Public Library and his work at Fisk University in Nashville, Tennessee.

The period between 1920 and the end of World War II was arguably the apex of mural painting in the Americas. In the United States, mural art has remained particularly popular among inner-city communities made up of Latino and African American populations. Likewise, the muralists inspired a generation of painters and were the precursors to modern graffiti artists.

—Melvin D. Davis

Bibliography

- Charlot, Jean. *The Mexican Mural Renaissance*. New York: Hacker Books, 1962.
- Hurlbert, Laurence. *The Mexican Muralists in the United States*. Albuquerque: University of New Mexico Press, 1989.
- Powell, Richard J., David A. Bailey, and Hayward Gallery. *Rhapsodies in Black: Art of the Harlem Renaissance*. Berkeley: University of California Press, 1997.
- Reed, Alma. *The Mexican Muralists*. New York: Crown Publishing, 1960.
- Rochfort, Desmond. *Mexican Muralists: Orozco, Rivera, and Siqueiros*. San Francisco: Chronicle Books, 1998.

Social Realism in Visual Arts

Social realism reflected and expressed many of the central tensions, political and social, in the tumultuous decades of war and revolution that marked the first half of the twentieth century. Although social realism had roots in European

art from the middle of the nineteenth century on, its greatest impact in art and politics came in the period between World War I and World War II, 1919 to 1939. Social realism was also mainly a Euro-American phenomenon, most significant in the USSR and the United States, although it had echoes and reverberations in the colonial and semicolonial world.

The term “social realism” can be confusing, for it is sometimes applied to the official art from Stalin’s Soviet Union, where instead of exposing social ills, art supported the state and its policies by showing only positive developments and the happiness of the masses. This was in one sense a continuation of the original impulse behind social realist art: to dignify the common people and promote social change. But as the official art of the USSR and other communist countries after 1945, it became state propaganda rather than critical art, more wishful thinking than realism.

Realism—the apparently accurate portrayal of visual images on a two-dimensional surface—had a stronger tradition in European art than in any other sophisticated visual culture, especially since the Renaissance. Common people and their social condition were not common subjects, however, until the nineteenth century. Gustave Courbet (1819–1877) is often cited as the most important figure in this movement, and his 1851 monumentalization of common labor, *The Stonebreakers*, was the beginning of what was a subversive trend rather than an organized movement in nineteenth-century Europe. The painting reflected both the emancipatory ideals of the French Revolution (by no means confined to France) and the social tensions accompanying industrialization.

Probably the most coherent and influential social realist movement emerged in tsarist Russia with a group of young painters who forsook the classical themes taught at the Imperial Art Academy and took their scenes of everyday Russian reality, often brutish and backward, on a series of unofficial exhibitions in various Russian cities, hence the name given this group, *Peredvizhniki* (The Wanderers).

The *Volga Boat Haulers* of 1870 by Ilya Repin (1844–1930) is perhaps the most famous and potentially subversive of this group’s paintings. It shows bedraggled and exhausted peasants

hauling a barge up the Volga, with one strikingly blonde young man rising from the tow ropes as if looking to the future for liberation. From the 1860s to the 1880s, The Wanderers had a major impact on Russian art and social consciousness, but by the end of the century patronage from newly prosperous Russian capitalists and eventual recognition by the imperial state had taken most of the sting out of their potentially revolutionary message and co-opted them to the force of Russian nationalism.

In western Europe, and in Russia itself at the beginning of the twentieth century, the artistic “left”—painters, print makers, and pioneers in the new technology of photography—inclined more toward emerging modernist styles and techniques even when conveying a social or political message. Starting during the agony of World War I, the Dada movement was anything but realistic in a conventional sense, and neither was Surrealism in the interwar decades. Some of the most potent social and political art came from post-World War I Germany: Kathe Kollwitz’s grim prints of lower-class suffering, George Grosz’s savage caricatures of the ruling classes, and George Heartfield’s satirical photomontages. But in style, all of these leaned toward expressionist exaggeration rather than toward realism.

More conventional realism gained greater traction in the Depression-era United States, where both New York’s so-called Ash Can School of the 1910s–1920s and the Regionalists from the Midwestern heartland had laid the groundwork for a distinctively American social art. By the 1930s a genuine social realism had emerged, with artists such as Ben Shahn, Philip Evergood, and Reginald Marsh portraying the hopelessness of unemployment lines and soup kitchens. Some of the most powerful and lasting images of the impact of the Great Depression on ordinary people’s lives came from realist photographers such as Walker Evans and Dorothea Lange, who took photography out of the artist’s studio into the real world of poverty, privation, and despair.

This art and photography emerged along with social realism in literature, such as the brief popularity of the proletariat novel as well as sociological studies and documentary journalism that focused on the struggles and heroism of members of the underclass (such as industrial

➤ BEN SHAHN AND ALEXANDER DEINEKA—AMERICAN AND RUSSIAN REALIST PAINTERS IN THE 1930s



Unemployed, by Ben Shahn, 1938. (The Bridgeman Art Library/Estate of Ben Shahn/Licensed by VAGA, New York, NY)

The life spans of Ben Shahn (1898–1969) and Alexander Deineka (1899–1969) match almost perfectly, and their respective careers tell a great deal about the tight association of art with politics and social change in the first half of the twentieth century.

Both came from relatively humble backgrounds and maintained a lifelong connection to the lives and welfare of common people. Both became involved in political causes. Shahn's political involvement began as a critic of injustice and prejudice in his series of pictures, 1931–1932, on the murder trial and execution of the Italian immigrant anarchists Sacco and Vanzetti, and continued in his work as a mural painter for the New Deal's Works Project Administration (WPA) and a photographer for the New Deal's Farm Security Administration. Deineka worked as a propaganda artist for the new Bolshevik government after the revolution and then as an official painter of socialist achievements in the USSR. Like Shahn working for the WPA, Deineka did public art, designing mosaic murals for the Moscow subway system.

There the similarities stop, and the differences show that American social realism and Soviet socialist realism were very different. Shahn's art, for all its gritty realism in printmaking, easel painting, and photography, showed affinities for modernist simplification and flattening of the picture surface. His group portrait *Unemployed* (1938) is representative of his Depression-era

work, combining sympathy with condemnation of the system that inflicts this misery.

Deineka moved in the other direction. The modernist flattening so pronounced in his early work and derived from his affinities with the Russian avant-garde around the time of the Russian Revolution almost disappears once the Communist Party has proclaimed socialist realism in 1932. One of his more monumental and propagandistic works is *Heroes of the First Five Year Plan* (1936). A phalanx of six laboring types—including peasants, ethnic minorities, and liberated women—march forward with a monumentalized worker figure at the head. Overhead, in a blatant rejection of all modernist sensibilities, the classical Greek statue *Winged Victory* flies over the heroes of the new age. Although the direct propaganda content in his art diminished somewhat after Stalin's death in 1953, Deineka continued to present the labor heroes of the Soviet Union in larger-than-life poses, as in his *Tractor Driver* of 1956.

Both Shahn and Deineka painted ordinary people, the concern of social realists, but one painting is critical of the society, and the other is celebratory. There is the difference between social realism and socialist realism.

—Ralph Croizier



Tractor Driver, by Alexander Deineka, 1956. (DACS/RIA Novosti/The Bridgeman Art Library)

workers, hoboes, and sharecroppers). While the taste for social realism and activist art came first, many artists and writers were influenced by the 1935 Popular Front directive of the Seventh World Congress of the Comintern. The Popular Front encouraged efforts to bridge the distance among hard-line communists, socialists, and liberals in the West to fight against fascism and to support labor and other social causes.

Despite this declaration of common cause between the Soviet Union and Western artists and writers, contemporaneous socialist realism in the USSR, proclaimed as official art policy in 1932, bore a similarity only in name and to some extent in the common people it portrayed. To be sure, art had government support in the United States under the New Deal's program to provide employment for artists doing murals and other public art for the Works Project Administration. But American painters were not under the same type of political control as their Soviet counterparts, and there were other outlets for socially critical art in the United States.

In the USSR, stock socialist realist subjects consisted of sturdy workers exceeding production quotas, happy peasants celebrating agricultural collectivization (at the same time as millions were starving from Stalin's agricultural policies), and, furthest from the spirit and goals of original social realism, heroic portraits of communist leaders, including Lenin and especially Stalin. In contrast to the dark tones of most social realist pictures, Soviet social realism usually showed the workers' paradise in bright, cheerful colors. The technical ability of some of the leading socialist realist painters, such as Isaac Brodsky, Alexander Gerasimov, and Alexander Deineka, is indisputable; however, by the canons of modern art, they were painting in an academic realist style that was long out of favor. It remains to be seen if postmodern art historians will look upon their work any more favorably.

Before it became the official and only permitted art style in the new communist countries after 1945, socialist realism had little appeal abroad—some echoes in proletarian art in Japan and the left-wing art movement in China—but generally speaking the style was too conservative for left-wing artists. This can be seen in Latin America's most famous social-political art,

the muralist movement from the 1920s to the 1940s. This movement's most famous figures, such as Diego Rivera, Jose Clemente Orozco, and David Siqueros, were sympathetic to Marxism but took nothing from Soviet-style socialist realism. Perhaps another communist sympathizer, on another continent, put it best when Pablo Picasso allegedly commented, "I don't tell the Soviet commissars how to do politics; they don't tell me how to paint."

On the other side of the artistic-political divide in the postwar United States, social realism faded into the background as the prosperity of the 1950s removed much of social art's *raison d'être* and new modernist styles—abstract expressionism, color field painting, and minimalism—took over the art market. Social realism became outdated, or out of fashion, and socialist realism only survived as long as orthodox communist governments could enforce it. North Korea is perhaps the last surviving example.

—Ralph Croizier

Bibliography

- Bown, Mathew Cullerne. *Art under Stalin*. Oxford, UK: Phaidon, 1991.
- Goodrich, Lloyd. *Reginald Marsh*. New York: Abrams, 1973.
- James, C. Vaughn. *Soviet Socialist Realism*. New York: St. Martin's, 1973.
- Shapiro, David. *Social Realism: Art as Weapon*. New York: Ungar, 1973.
- Valkenier, Elizabeth. *Russian Realist Art: The State and Society, the Peredvizniki and Their Tradition*. New York: Columbia University Press, 1989.
- Whiting, Cecile. *Anti-Fascism in American Art*. New Haven, CT: Yale University Press, 1989.

The Bauhaus School

The Bauhaus in Germany (1919–1933) was one of the most influential art and design schools of the twentieth century. Founded just after the end of World War I, on April 1, 1919, in the city of Weimar, its modernist approach, including the teaching of the hence unknown abstract art and the new architecture, caused so much controversy that various factions including artisans, Weimar artists, and emerging right-wing groups forced the Bauhaus from the city just a few years later. In 1925 it moved to Dessau and seven years

► THREE BAUHAUS LEADERS

Walter Gropius (1883–1969), founder of the Bauhaus, was a famous pioneer of modern architecture and design. Due to his inability to draw, he always collaborated closely with partners such as Adolf Meyer, with whom he made important contributions to the New Objectivity movement. Gropius immigrated to the United States in 1934 and later became a professor at Harvard University. In America he founded The Architects Collaborative, Inc. (TAC). Important Gropius buildings include the Fagus Factory in Alfeld, Germany (1910–1911); the Bauhaus buildings in Dessau (1925–1932); the Harvard Graduate Centre (1949–1950); the University of Baghdad (1957–1960); the Pan Am building in New York City (1958–1963); and the U.S. Embassy in Athens, Greece (1959–1961).

Hannes Meyer (1889–1954) was a Swiss architect. He joined the Bauhaus in 1927, created an architectural class, and took over as director one year later. During his two years as director he built apartment buildings in Dessau and also the ADGB (Allgemeiner Deutscher Gewerkschaftsbund) trade union school in Bernau, near Berlin, in

which many Bauhaus workshops were housed. After the Bauhaus, he went to Moscow to continue his work. In 1936 he moved to Mexico and worked for the government before he retired in Switzerland.

Architect Mies van der Rohe (1886–1969) had a style characterized by simplicity, classic proportions, and luxurious materials. His minimalist approach was influenced by architect Peter Behrens, chef designer of Allgemeine Elektrizitäts Gesellschaft (AEG), which produced electrical equipment. He worked at AEG as an apprentice, as had Walter Gropius and Le Corbusier. Van der Rohe immigrated to the United States in 1938 and continued his work as head of the Department of Architecture at Chicago's Armour Institute of Technology. Among his best-known buildings and iconic works are the Villa Tugendhat in Brno, Czech Republic (1930); the residential towers at 860–880 Lake Shore Drive (1949–1951); the Farnsworth House (1945–1951); Crown Hall (1950–1956) in Chicago; and the Seagram Building in New York City (1954–1958).

—Anja Baumhoff

later to Berlin, where the National Socialists initiated its final closure in 1933. Its radical and controversial impact was due to the fact that it was the only art school at the time that taught exclusively modernist art such as abstract painting, design, and architecture. Its three directors were the architects Walter Gropius, Hannes Meyer, and Mies van der Rohe. Among its masters were eminent modernist artists such as Lyonel Feininger, Wassily Kandinsky, Paul Klee, László Moholy-Nagy, Herbert Bayer, Marcel Breuer, Wilhelm Wagenfeld, Anni and Josef Albers, Oskar Schlemmer, Marianne Brandt, and Gunta Stölzl.

Conceptually, the school followed new ideas, many of which had been developed by the German Werkbund (Work Federation), in that it combined an arts and crafts school with a fine arts academy. Wanting to unite all the arts and crafts into a total work of art (a *Gesamtkunstwerk*) under the leadership of architecture, they intended not only to produce a new design but

also to create a new world. What the Bauhaus actually created was a new profession, that of the designer, a term that only made its way into the German language after World War II when this profession slowly gained more recognition.

The Bauhaus's importance rests on its relentless promotion of the idea of modernism, making it a controversial focal point for debate during the economic crisis and the stormy political developments of the Weimar Republic. The Bauhaus under Walter Gropius's leadership endorsed Abstract Art at a time when this form of representation was not well accepted as art. When the school hired some of its most significant representatives, such as Feininger, Schlemmer, Klee, and Kandinsky, this caused further dismay. The Bauhaus propagated not only modern architecture but also a new style of life and, correspondingly, a new interior design at a time when people still preferred eclecticism and heavy, velvety drapes surrounding opulent furniture. Eclecticism commonly identified a style that also

implied a set of bourgeois tastes and way of life. While most manufacturers wanted to continue to individually produce this kind of ornate interior design, Bauhaus members participated in the development of the Deutsche Industrie Norm (DIN), which aimed to standardize the construction and design of buildings as well as furniture to aid less-expensive mass production. This would put out of work manufacturers who oftentimes attacked the Bauhaus movement in the contemporary press. The Bauhaus responded by publishing ideas of their own in a series of 14 books, the so-called *Bauhausbücher*, and in the *Bauhaus Journal*.

The Bauhaus reflects more or less all of the different tendencies of the Weimar Republic. In its early days, between 1919 and 1923, it was still very much influenced by Expressionism and had a strong spiritual component with the Mazdaznan life reform movement. Bauhaus master Johannes Itten was a follower of this sect, which prescribed vegetarianism, fasting, breathing exercises, and other disciplines. The title of master, which was used to refer to teachers in the school, connected the Bauhaus to the influential medieval tradition and Gothic forms that influenced its early phase. The idea of a total work of art (*Gesamtkunstwerk*) also belongs to this phase.

Once Johannes Itten left the Bauhaus in 1923 and the Hungarian constructivist László Moholy-Nagy took his post, the school changed directions. The road to this change had been paved by the Dutch artist and writer Theo van Doesburg, founder of the Dutch De Stijl group that had strongly influenced the Bauhaus since 1921. Others, such as the influential architectural critic Adolf Behne, also urged the school's director to turn away from Expressionism and the arts and crafts and to focus more on industry. Gropius thus put out the slogan "art and technology, a new unity." This dictum, in combination with Louis Sullivan's motto "form follows function," led to the reduction of design to minimalist forms, including the use of simple black and white interiors as well as simple basic colors. All of these elements combined capture the popular interpretation of the Bauhaus legacy still current.

But the Bauhaus was about more than simple geometric forms, flat roofs, or polished interiors. When Walter Gropius left the institute in 1928

he was succeeded by the Swiss architect Hannes Meyer, who had a more radical approach and reformed the school's program in order to promote more socially responsible design. The Bauhaus, Meyer thought, should help to improve the living conditions of the poor, raise hygienic standards, and build affordable houses. He captured this in the slogan "Volksbedarf statt Luxusbedarf" ("to design for the masses and not for the rich"). During Meyer's brief time as director, from 1928 to 1930, the Bauhaus workshops focused on industry and mass production. He also established the first workshops that taught architecture specifically in 1927 and a much-longed-for photography workshop in 1928. They complemented the other workshops in Dessau, which included typography and advertisement, carpentry, metal, weaving, wall painting, sculpture, and a stage workshop. The more arts and crafts-oriented workshops, such as pottery and bookbinding, remained in Weimar.

Although Meyer was quite successful, he lost his position in 1930 to Mies van der Rohe due to the rising right-wing forces. In order to save the Bauhaus from its political opponents, Mies van der Rohe tried to calm the school's intense political discussions, but he could not prevent the National Socialists from closing down the school. However, becoming a prominent victim of the new fascist regime turned out to be a stepping stone for the posthumous international fame of the Bauhaus.

As an architectural school, the Bauhaus was always a predominantly male institution, but even so, one-third of its 1,250 members were female. Women mainly worked in the weaving workshop, the pottery workshop, or the bookbinding workshop. Exceptions included Marianne Brandt, who was a member of the metal workshop, and Alma Buscher, who designed children's toys. Despite the rather conventional gender stereotypes present at the Bauhaus and within the modern movement in general, many courageous female artists left their mark during that time.

—Anja Baumhoff

Bibliography

Baumhoff, Anja. *The Gendered World of the Bauhaus: The Politics of Power at the Weimar Republic's Premier Art Institute, 1919-1931*. Frankfurt and New York: Peter Lang, 2001.

- Droste, Magdalena, and Peter Gossel, eds. *Bauhaus*. Los Angeles: Taschen America, 2005.
- Sharp, Dennis. *The Illustrated Encyclopedia of Architects and Architecture*. New York: Quatro Publishing, 1991.
- Wick, Rainer K. *Teaching at the Bauhaus*. Ostfildern-Ruit, Germany: Hatje Cantz, 2000.
- Wingler, Hans Maria. *The Bauhaus: Weimar, Dessau, Berlin, Chicago*. Cambridge, MA: MIT Press, 1986.

Modernism in the Visual Arts

Modernism in the visual arts is closely linked to the idea of modernity and also to industrialization and constitutes a shift away from production within the traditional academy system to works made by increasingly individualistic yet usually movement-identified artists who for the most part sold their works through private dealers. Because modernist visual art is both relatively recent and old enough to have entered the canon—work created in the present day is now called postmodern or contemporary rather than modern—modernist works remain new and startling to many viewers while providing a reference and starting point for contemporary artists. Art movements from the early stages of modernism, such as Impressionism and Fauvism, are now so widely accepted that favorite works from these movements now adorn countless mugs, umbrellas, and tote bags.

Thus, while every era in history has probably seen itself as new and up-to-date, artistic modernism can be seen as involving a special preoccupation with ideas of modernity, change, and modernization as opposed to ideas of tradition, continuity, and the historical. This was in part due to the extensive social changes that occurred with industrialization over the course of the nineteenth century, which prompted changes in both urban and rural life and brought about both the entrenchment and important critiques of capitalism. It is not surprising, then, that the mid-nineteenth-century writer Baudelaire's text "The Painter of Modern Life" (1859) remained significant for artists long after precise visual depictions of urban life ceased to be considered very modernist. Whether the artist was a nineteenth-

century Impressionist examining the Parisian bourgeoisie or a twentieth-century Surrealist working with ideas of the Freudian unconscious, modernity and modern life have been the fundamental underpinnings of modernist visual art. Changes in technology, such as the invention of photography and cinema along with new methods of color printing, also encouraged visual artists to think about their work in new and radical ways.

The importance of industrialization and social change explains why artistic modernism was strong under both capitalism and early Soviet communism. Ideas relating to the effects of industrialization, capitalism, and social class have been underlying themes vital to many modernist movements, whether one looks at the fin-de-siècle Decadents' preoccupation with sexuality and degeneration, the Futurists' desire to sweep away the past in favor of a speeded-up technological future, or the Russian Constructivists' interest in deposing "easel painting" in favor of an art that would be simultaneously built in the physical sense and that would help build the new classless communist society. Although modernist movements received some support from sympathetic critics and forward-looking patrons, in general modernist art was not immediately well received by either the art press or the general public. The average person, even if excited by the invention and availability of cars, planes, telephones, and radio or by the spread of movies, jazz, and short skirts, also wanted some degree of familiarity.

From 1900 to 1945, rapid formation and equally rapid dissolution were typical of modernist movements. Analytical cubism, developed by Picasso and Braque in 1907, quickly fascinated the art world with its fracturing of the picture plane into a kind of visual puzzle, but it was soon supplanted by synthetic cubism, which relied on an additive collage-influenced method of composition. Numerous forms of cubism soon came into existence, and these did not necessarily look much like one another. Fernand Léger's version was not greatly like that of Marcel Duchamp, and among the Czech cubist painters, there was heated disagreement over whether their cubism should closely follow in the footsteps of Picasso and Braque or should be free to go in other directions. Cubism's enormous influence in the art

world also prompted the birth of such short-lived but significant movements as Italian and Russian Futurism, Orphism, Rayonnism, and Constructivism and heralded the way for nonobjective art.

Nonobjective art, which began to be created sometime around 1910 by Kandinsky (working in Germany and Russia) and Kupka (working in France) in their search for a means to more perfectly express spiritual and mental concepts and states, was a direction taken up by relatively few modernist artists until the Abstract Expressionist movement of the 1940s and 1950s. Among the few artists to work in a truly nonobjective manner were Malevich (in some of his Suprematist paintings such as the *Black Square*) and Mondrian (in his neoplasticist works). Most works that at first glance appear to be nonobjective are in fact highly abstract works that do represent some sort of physical object. Art that falls into this category includes the work of Miró, which although appearing to consist of random biomorphic shapes is actually composed of carefully simplified representations of entire and often complex scenes. By the middle of the twentieth century, however, nonobjective art would become the focus of praise by influential formalist critics, notably Clement Greenberg who argued that this rejection of pictorial representation simultaneously posed an opposition to capitalist culture and concentrated on essential formal qualities. Greenberg argued, in short, that content (meaning) was no longer of importance in painting and that form was paramount. At the same time, however, the U.S. government was using Abstract Expressionist painting to advertise the freedom allowed American painters under capitalist democracy. American artists were free to throw paint at the canvas and sell the result to the highest bidder.

Most twentieth-century modernist art was not, however, nonobjective and in fact often dealt with very explicit social and political themes. While Dadaism, for instance, has often been characterized as destructive and nihilistic, it came into existence largely as a response to World War I, and the Berlin Dada group specialized in sociopolitical comment and satire. Much 1920s modernist art indeed examined postwar society, whether from the jaded viewpoint of an Otto Dix or the more celebratory works cre-

➤ CZECH CUBIST ARCHITECTURE

Cubist architecture developed in only one area, the Bohemian lands of Austria-Hungary (now the Czech Republic). Inspired partly by cubist painting, it also drew on ideas from earlier Czech architecture, such as the Renaissance Letohrádek Hvě zda (Star Summer Palace) and the works of Baroque architect Jan Blažej Santini Aichel.

Pavel Janák's treatise "The Prism and the Pyramid" (1911) advocated architecture that employed non-right-angled construction, especially the use of crystalline forms. The first cubist building, Josef Goč ár's House of the Black Madonna (1911–1912), a department store in central Prague, now houses the Museum of Czech Cubism. The House of the Black Madonna was required to be visually compatible with its baroque neighbors, so its facade and roof combine traditional and cubist elements, while its interior is more strictly cubist. Goč ár, Janák, and Josef Chochol are considered the three main cubist architects, but many others designed cubist buildings that were never constructed.

—Karla Huebner

ated by the African American artists of the Harlem Renaissance and the Czech avant-gardes of the Devě tsilgroup. Likewise, Mexican muralists such as Diego Rivera, David Siqueros, and Jose Clemente Orozco emphasized a combination of nationalism and strongly Leftist politics. And while Surrealist art seldom directly addressed sociopolitical themes, artists within that movement sought to express internal reality, working from a so-called internal model whose exploration was regarded as vital to a modern and scientific understanding of the human psyche.

With form, content, and innovation being regarded by most modernists as vitally important, it is not surprising that modernist architects also sought a melding of form and content through innovation. Frank Lloyd Wright and the Prairie School, Walter Gropius and the Bauhaus, the Functionalists of the 1930s, and the International Style of Le Corbusier and Mies van der Rohe all sought, in differing ways, a simplification of form and an attention to use of space.

—Karla Huebner

Bibliography

- Arnason, H. H. *History of Modern Art: Painting, Sculpture, Architecture, Photography*. 5th ed. Upper Saddle River, NJ: Prentice Hall, 2004.
- Baudelaire, Charles. *The Painter of Modern Life, and Other Essays*. Translated and edited by Jonathan Mayne. New York: Phaidon, 1970.
- Cockcroft, Eva. "Abstract Expressionism: Weapon of the Cold War." In *Art in Modern Culture: An Anthology of Critical Texts*, edited by Francis Frascina and Jonathan Harris. New York: Harper-Collins, 1992.
- Greenberg, Clement. *Clement Greenberg: The Collected Essays and Criticism*, edited by John O'Brian. Chicago: University of Chicago Press, 1986.
- von Vegesack, Alexander. *Czech Cubism: Architecture, Furniture, and Decorative Arts, 1910–1925*. Weil am Rhein and Montréal: Vitra Design Museum and Laurence King, 1992.

Art Nouveau

"Art Nouveau" is a term used to describe an artistic movement that manifested itself between about 1890 and 1910 in the fine and decorative arts and architecture in Europe and the United States and subsequently in other parts of the

world. The movement is named after the shop opened in Paris in 1895 by art dealer Siegfried Bing, who exhibited and sold furniture, textiles, ceramics, glass, and jewelry in the new style. It is also known as Modern Style in Great Britain and the United States, Stile Floreale (Floral Style) or Liberty in Italy (named after the London shop Liberty's), Arte Joven or Modernista in Spain, Jugendstil (Youth Style, after the Munich magazine *Jugend*) in Germany, Secessionstil in Austria, Velde Style in Belgium, and Style Sapin (Fir Tree Style) in Switzerland. Art Nouveau does not represent a coherent style but instead designates the modern art of the time, which wanted to break free from tradition and from the revivals that had characterized most of the arts of the nineteenth century.

The lack of an original and contemporary style, which would not consist of merely copying the arts of past centuries, was already at stake in the first years of the nineteenth century. As early as 1836, the French poet Alfred de Musset deplored this situation in his *Confession d'un Enfant du Siècle* (*Confession of a Child of the Century*). Art Nouveau would thus appear as a much-awaited solution to a long-unresolved problem. Although it had the taste of novelty, Art Nouveau was influenced by a series of previous artistic experiences, such as the Gothic revival, Japonisme, the Rococo revival, the Arts and Crafts movement, and the Aesthetic movement. In addition to these, artists turned to the study of nature for fresh inspiration, as had architects and designers such as Owen Jones in Great Britain and Viollet-le-Duc in France.

Art Nouveau artists sought the perfect unity of the arts, encompassing all artistic manifestations from architecture to fashion and furniture in order to achieve a total work of art. This vision led them to design everything, from the general structure of a building to the smallest details of the furniture. The aim was also to produce objects of high aesthetic quality that would be available to everyone. This had also been one of the objectives of the Arts and Crafts movement, promoted by William Morris. But while Morris had rejected industrial production, the artist of the Art Nouveau tried to achieve an alliance between art and industry, taking advantage of modern means of production. However, in



Art Nouveau detail from the Palais Royal metro station in Paris, designed by Hector Guimard. (Jean-Pierre Dalbera)

most cases this resulted in expensive products that could only be bought by an exclusive clientele, although in Germany experiments were carried out that led to the creation of the *Deutscher Werkbund* (German Work Federation) in 1907 and the basis of modern design.

Although the roots of the movement owe a great deal to British ideas, Art Nouveau was never much favored in Great Britain. The movement's major centers were Brussels, Paris, Nancy (an industrial city in Northeast France), Munich, and Vienna, with important developments in Glasgow and Prague as well. The new style manifested itself in different ways according to each nation, but we find some common characteristics, such as the predilection for the use of sinuous and curved lines, decoration derived from or inspired by the study of plants, and the preoccupation with the organic ornamentation of a structure. This focus on vegetal growth was particularly prevalent in France and Belgium, whereas in Scotland, Germany, and Austria a more geometric and abstracted decorative vocabulary was preferred.

In Brussels, the major exponents of Art Nouveau were Victor Horta in architecture, who designed the Hotel Tassel (1891–1892), one of the most well-known buildings of Art Nouveau, and Henry Van de Velde in the decorative arts. Tassel's organic forms greatly influenced French architect Hector Guimard, who designed exuberant buildings in Paris, such as the Castel Béranger (1897–1898), in which the structural parts of the building are organically developed to suit his linear and fluid decoration. In Guimard's design for the Paris Metro Station (1899–1904), the contorted ornamentation, derived from the vegetal and animal world, reaches a totally organic relationship with the iron structure. In Nancy, Emile Gallé specialized in glass production, experimenting with textures and taking inspiration from nature, while Louis Majorelle devoted himself to the creation of furniture.

In Munich, Hermann Obrist produced a celebrated tapestry in 1895 using the motif of the whiplash, which was taken up by August Endell for the facade of the Elvire photography studio (1897–1898), one of the most famous examples of Art Nouveau. In Austria, the Secessionstil turned to a more rigorous and geometrical

search, exemplified by Joseph Olbrich's Secession Building (1898) in Vienna and in the work of Joseph Hoffman and Otto Wagner. Other important exponents of the movement included the highly particular and original Antoni Gaudí in Spain, Charles Rennie Mackintosh in Glasgow, and Alfons Mucha in Prague.

Exhibitions and publications contributed to the international development of the movement, favoring the rapid circulation of new ideas and concepts. *The Studio*, a magazine dealing with painting, sculpture, architecture, furniture, textiles, pottery, and all sorts of crafts, was published in London starting in 1893 and provided a regular insight into all spheres of creation. It was a platform for artists such as Audley Beardsley, whose drawings also appeared in *The Yellow Book*. Other magazines include *L'Art moderne* and *Van Nu en Straks* in Brussels, *Pan* in Berlin, *Ver Sacrum* in Vienna, and *Jugend* in Munich.

The 1900 Exhibition in Paris saw the triumph of Art Nouveau. But the movement's glorious climax rapidly collapsed. By 1902 at the Turin Exhibition, it had already started to look outdated, and by 1908 at the London Exhibition it was almost invisible. In just a few years, Art Nouveau had been eclipsed and was no longer the style of modernity.

—Ariane Varela Braga

Bibliography

- Duncan, Alastair. *Art Nouveau*. London: Thames and Hudson, 1994.
- Escritt, Stephen. *Art Nouveau*. London: Phaidon, 2000.
- Rheims, Maurice. *The Age of Art Nouveau*. London: Thames and Hudson, 1965.
- Schmutzler, Robert. *Art Nouveau*. New York: Abrams, 1962.

American Domestic Architecture

In the first half of the twentieth century, American architects produced some of the most diverse, innovative, and rewarding domestic designs in the nation's history. Accelerated growth in both urban and suburban populations fueled demand for housing. In general, whether working in cities or suburbs, architects and

home builders experimented with new forms of domestic design, incorporated sophisticated technologies, and adapted traditional styles to the changing needs of a self-consciously modern age. The forms and styles of houses in this period of rapid change reflected the range of tastes and social circumstances of the increasingly varied American population.

A rift developed between architects practicing in the so-called academic or traditional styles and those practicing in the newer so-called progressive styles of architecture. However, architects in the period generally adhered to the principle of appropriateness, sometimes also called decorum. Appropriateness suggested that architectural forms should be suited to the functions and purposes, including symbolism, of building programs. Within this framework, architects matched the appropriateness of the style to the social status and function of the building.

Architects were not the only source of design, as pattern books and catalogs provided others. Sears, Roebuck & Co. was the most successful of the mail-order companies that offered prefabricated bungalows and larger single-family houses for sale. In fact, the standardized bungalow—usually a one-story structure with a dominant horizontality—became the preeminent house type in the suburbs.

Colonial Revival was by far the most common stylistic category in domestic architecture from the 1870s through the middle of the twentieth century and even to the present. For many people, the various styles within Colonial Revival were physical manifestations of the entrenched national mythology that saw in the colonial period the existence of a distinctive American culture, although this was inflected by regional differences. In New England, British colonial styles such as the Georgian, characterized by a rigidly symmetrical facade and a central hall, could express a sentimental attachment to the early settlers and provide a symbolic bulwark against the increasing waves of non-Anglo European immigrants. In contrast, various versions of Spanish colonial styles popular in California, Arizona, New Mexico, and Florida took advantage of the warmer climates of those regions and provided an alternative of light, color,

and exoticism to the more conservative East Coast styles.

Many American architects trained at the Parisian *Ecole des Beaux-Arts*, where classicism was the rule, and most schools of architecture in the United States also adopted the *Beaux-Arts* design philosophy. Classicism was thus inculcated among several generations of architects, deeply affecting the appearance of American houses. Among the best-known architects in this mode were David Adler, who worked in the suburbs of Chicago; Philip Shutze in Atlanta; Addison Mizner in Florida; Albert Kahn in Detroit; and Julia Morgan in southern California. Morgan, one of the first successful female architects, is best known for the flamboyant William Randolph Hearst Castle in San Simeon, California, begun in 1920.

At the other end of the spectrum, a number of influential architects rejected traditional styles altogether and promoted a modernist approach that emphasized new materials and building technologies, the architect's free-ranging imagination, and the abandonment of ornament. Modernist architects such as Richard Neutra and Rudolf Schindler designed houses to express the rapid change and technological progress of the modern age. Both had worked for the iconoclastic Frank Lloyd Wright before pursuing their own careers in California, where each built an iconic modernist house for Dr. Philip Lovell. Schindler's Lovell Beach House in Newport Beach and Neutra's Lovell Health House in Los Angeles, both from the 1920s, set a high standard for modernist houses.

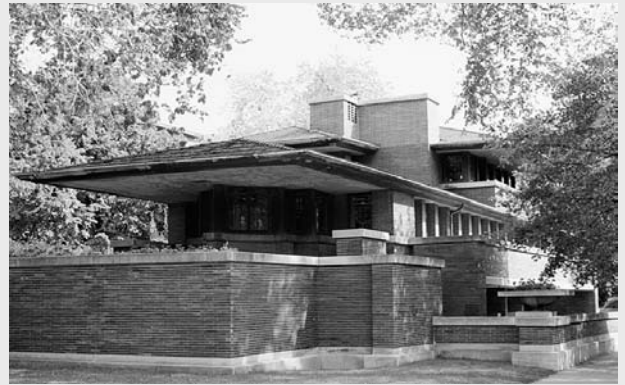
Among the technological advances that made domestic living more convenient were central heating, electricity, running water, and natural gas. These services were new luxuries that in a short period of time became household essentials, valued for helping to increase comfort, hygiene, and convenience. Such labor-saving devices reduced the manual labor required for daily tasks and were integral parts of house design.

Indoor bathrooms replaced outdoor privies thanks to running water and improved sewerage. In older houses, closets or small bedrooms were converted into bathrooms. Gas ranges replaced wood-burning stoves, and the telephone

➤ FRANK LLOYD WRIGHT'S DOMESTIC REVOLUTION

Developed in the late 1890s, Frank Lloyd Wright's Prairie Style houses, mostly in and around Chicago, Illinois, incorporated low roofs, horizontal lines, and flowing spaces. Drawing upon both the Arts and Crafts and the Shingle Style of the Gilded Age, the Prairie Style brought Wright international renown. His best-known Prairie design is the Frederick Robie House in Chicago, Illinois, built during 1906–1909. Wright's emphasis on the new social realities of domestic life prompted him to devise a more open and informal house type. The Robie House lies close to the ground, provides deep overhanging eaves, and reduces interior divisions. Emphatically horizontal, the house echoes the flat plains of the Midwest, and by obscuring the entrance and windows it provides a sense of shelter and security that Wright felt was important for domestic life.

In the 1930s Wright designed several houses that launched a new direction in American domestic architecture. Fallingwater, a house for Edgar Kaufmann in rural western Pennsylvania, dramatically cantilevers over a small river and waterfall and encompasses natural rock outcroppings inside. It set a new standard for the relationship



Frederick Robie House in Chicago, designed by Frank Lloyd Wright in 1909. (iStockPhoto.com)

between nature and architecture. Wright's Usonian Houses of the 1930s were an attempt to create an affordable house type for all Americans. The Usonians were designed as part of a new suburban landscape called Broadacre City, Wright's concept of decentralized land development that would be largely realized (without Wright's help) in the postwar suburbs.

—Paul Ranogajec

became a standard feature of middle-class respectability. By the 1920s, most Americans had come to expect a large amount of convenience in their domestic arrangements that would have been unthinkable just one generation earlier. This era, then, marks the birth of the modern house.

At the opposite end of the building scale, skyscrapers were used increasingly for domestic accommodations. Invented in the nineteenth century following advances in steel construction, mechanical elevators, and fire safety measures, skyscrapers were first considered suitable only for commercial structures. Early apartment towers such as Henry Hardenbergh's Dakota Apartments in New York paved the way for their use as urban domestic accommodations. Most high-rise apartment buildings were designed in traditional styles until 1925, when Art Deco became a popular alternative. Its streamlined forms and geometric patterns often emphasized soar-

ing vertical lines to dramatize high-rise living. Among the most celebrated Art Deco domestic buildings are those in Miami Beach, Florida, characterized by their warm colors, abstract surface patterns, and rounded corners.

After World War I there was an important shift in housing patterns. Suburbs expanded even as cities reached their maximum size. City populations were fueled by continuing high levels of immigration, but the suburbs were populated by middle-class residents newly mobilized to leave the city thanks to the widespread acceptance of the automobile. The architecture and settlement patterns of these new suburbs were conditioned by zoning and restrictive covenants. Zoning set rules for the types of functions that the land could accommodate, usually separating residences from commercial and industrial areas, while restrictive covenants were used to promote racial and economic homogeneity, excluding minorities and the poor. Wielding tremendous

power, developers and real estate associations often controlled the exterior appearance of the houses themselves.

Suburban development radically changed the American landscape. The federal government influenced this change by means of its active role in suburban planning starting during the Great Depression. Greenbelt, Maryland, begun in 1935, was one of several new suburban towns built to provide low-cost housing close to industrial work. On the side of private enterprise, the model suburb of Radburn, New Jersey, was laid out in 1928 by reform-minded urban planners as a small self-sufficient community. In these and most other suburbs, cul-de-sacs lined by houses were separated from major traffic arteries, promoting the ideal of an isolated, secure enclave that has been a dominant theme of American suburban life ever since.

—Paul Ranogajec

Bibliography

- Brooks, H. Allen. *The Prairie School: Frank Lloyd Wright and His Midwest Contemporaries*. New York: Norton, 2006.
- Hildebrand, Grant. *The Wright Space: Pattern and Meaning in Frank Lloyd Wright's Houses*. Seattle: University of Washington Press, 1992.
- Ierley, Merritt. *The Comforts of Home: The American House and the Evolution of Modern Convenience*. New York: Three Rivers Press, 1999.
- Reiff, Daniel D. *Houses from Books: Treatises, Pattern Books, and Catalogs in American Architecture, 1738–1950*. University Park: Pennsylvania State University Press, 2000.
- Stern, Robert A. M., Gregory F. Gilmartin, and Thomas Mellins. *New York 1930: Architecture between the Two World Wars*. New York: Rizzoli, 1988.
- Wright, Gwendolyn. *Building the American Dream: A Social History of Housing in America*. Cambridge, MA: MIT Press, 1981.

Toward Functionalism

The equation of function with beauty owes much to the related classical ideals of utility, beauty, and firmness proposed by the first-century BCE architect Marcus Vitruvius Pollio. The term “functionalism,” however, emerged in the mid-nineteenth century to represent the belief that

the parts of a whole, be it a sculptural form or a building form, should be essential to that whole. In architecture, with which functionalism is most often associated, this parts-to-whole relationship was translated to mean that the attendant parts of a building should contribute to the overall function of that building. In other words, nothing should be wasted, and everything must be meaningful to the total enterprise.

In the 1840s and 1850s, the quality of being functional meant that a form possessed fitness, which was theorized in various disciplines and by many different kinds of scholars, including the essayist Ralph Waldo Emerson (1803–1882) and the sociologist Émile Durkheim (1858–1917). The American sculptor Horatio Greenough (1805–1852) was the first to think about form and function as mutually dependent elements of architecture and space. In his 1843 essay “American Architecture,” he succinctly noted that banks should have the “physiognomy of a bank,” meaning that if the building operates as a bank, it should be laid out to optimally work that way.

It was the Chicago architect Louis Sullivan (1856–1924), however, who famously expanded this idea in the now-often misquoted dictum that form follows function. In his landmark 1896 essay “The Tall Office Building Artistically Considered,” he proposed that the way a building is articulated—that is, designed and built—should reflect that building’s purpose. The essay prescribed a form for the tall office building, the precursor to the modern skyscraper, as first having a base that would serve pedestrian purposes at ground level, such as retail space, by offering large display windows. Above the base, a series of identical floors should contain a honeycomb of offices, likening the efficiency required of office workers to the kind achieved by bees. Crowning the tall office building was an attic level that should contain the mechanical equipment required by elevators and, more importantly, distinguish itself as a mechanical space on the outside. That “form should ever follow function,” Sullivan’s actual words, meant that the purpose of a building (tall or otherwise) should be evident from its appearance.

Functionalism was also a moral argument that architecture should present itself honestly. Honesty, transparency, and truth became synon-

ymous terms that were linked by new uses for old materials in the second half of the nineteenth century. Glass in great quantities became ubiquitous in architecture, as it was considered an inherently honest material for its transparency even if in reality its reflective qualities sometimes defeated that altruistic notion. In tall buildings, glass could be used to create curtain walls, or walls that do not carry any structural loads and are free to be as thin and light as possible. One of the beneficial effects of this, of course, was that interior spaces could be far brighter and appear lighter than the typical Victorian room of the period, a condition that would influence the way that these spaces were arranged in plan.

The thing that made this use of glass possible came in the form of advances in structural systems, which had made a quantum leap in 1851 with Joseph Paxton and William Cubitt's Crystal Palace in London, built for the Great Exhibition of that year. Before midcentury, masonry construction was the principal mode for building. In it, brick, stone, marble, granite, and other materials are arranged and bound by mortar. The Crystal Palace, on the other hand, was composed entirely of wrought iron and glass and, because of the lightness and versatility of these materials, spanned more than 1,800 feet in length (equivalent to five football fields) and had a height of more than 400 feet (120 meters). To achieve those dimensions, the base of a traditional masonry building would have to be several feet thick in order to support the weight of the upper stories. Paxton and Cubitt's hall, on the other hand, was only as thick as a panel of glass from top to bottom.

If functionalism was aligned with modernism, a fundamental part of that relationship was represented by the ways that iron and glass could reduce the time and labor that construction required. Iron beams and glass windows could be produced off-site, transported, and assembled relatively easily, unlike the labor-intensive processes involved in masonry construction. Iron and glass buildings represented an efficient process of construction and an economy of means: the smallest amount of raw material used to create the greatest product. Steel would later be more widely used for its superior strength, but

the material spirit of functionalism, that less is more, remained.

"Less is more," often attributed to the German architect Ludwig Mies van der Rohe (1886–1969) in the early twentieth century, can be traced to the English poet Robert Browning (1812–1889), who explored the same minimalist position of Emerson, Durkheim, and Greenough that any idea, work, or form can be paired down to its essential elements. Just as functionalism was a moral argument about architecture, minimalism was a moral argument about the visual arts. Anything that was extraneous, unnecessary, or ornamental was unmodern and in some ways regressive. The Austrian architect Adolf Loos (1870–1933), in his 1913 essay "Ornament and Crime," castigated the flourishes and organic gestures of Art Nouveau and claimed that ornament was primitive and therefore immoral. His example was the practice of the so-called uncivilized Papuan to wantonly tattoo himself, in stark contrast to the modern man for whom such acts were thought to be criminal.

Industrialization, rapid urban growth, and a dearth of sanitary practices plagued many European and American cities for decades leading up to the turn of the century. Loos's position was extreme, but it represents the polemical nature of functionalism in modern architecture: its practitioners can and should create a more civilized society and improve the living and working conditions of everyone. If only things and people worked efficiently and properly, society could function as a whole, and the modern *zeitgeist* could be realized.

—William Richards

Bibliography

- Banham, Reyner. *Theory and Design in the First Machine Age*. London: Architectural Press, 1960.
- Greenough, Horatio. "American Architecture." *United States Magazine and Democratic Review* 13 (August 1843): 206–210.
- Jeanneret-Gris, Charles-Edouard (Le Corbusier). *Vers une architecture*. Paris: Edition Cres. Lawrence, 1923. Translated and reprinted by John Goodman with an introduction by Jean-Louis Cohen. Los Angeles: Getty Research Institute, 2007.
- Sullivan, Louis H. "The Tall Office Building Artistically Considered." *Lippincott's Magazine* 57 (March 1896): 403–409.

■ Introduction: Performing Arts

The period from 1900 to 1945 highlighted wrenching changes and experimentation in the performing arts worldwide. Simultaneously, mass culture was shaping a new popular art, standardized and distributed en masse via print and new electronic media. During this period, cinema came of age as the primary mode worldwide for popular storytelling: as it progressed as an art form and industry, simple travelogues gave way to elaborate narratives that included sophisticated editing techniques, sound, color, and the resources of production studios.

In music, modernists such as Arnold Schoenberg rejected inherited traditions, including classical Western harmony, with the development of his 12-tone row, while innovators such as Charles Ives created new pastiches that included atonal harmonies and quotations from popular music. A new era of sound was hinted at as well with

Soviet inventor Leon Theremin's development of the first electronic synthesizer, the Theremin, introduced to the West amid much acclaim in 1927. On the popular level, jazz rhythms infiltrated light popular music in the 1920s and came of age with the big band swing of the 1930s and 1940s in orchestras including those of Duke Ellington, Count Basie, and Benny Goodman. The introduction of the microphone also shaped a new singing style, that of the smooth crooner such as Bing Crosby, who no longer needed to overemote and shout to be heard in all corners of an auditorium, as had Al Jolson.

Important developments in theater include Constantin Stanislavski's founding of the Moscow Art Theatre in 1897 and his work in developing what later became known as the method school of acting, applied with great effect to the plays of Anton Chekhov. In the early twentieth century, George Bernard Shaw developed his argument-based dramas. Following World War I, expressionist plays explored the dehumanization of the machine age, such as Czech author Karl Capek's *R.U.R. (Robert's United Robots)* and Elmer Rice's *The Adding Machine*, whose hero was named "Mr. Zero." In the same period, Surrealism was reflected on the stage in such works as Guillaume Apollinaire's *The Breasts of Tiresias*, while Luigi Pirandello offered his metadrama *Six Characters in Search of an Author* (1921).

Until the Stalinist regime solidified, the Soviet Union was a mecca for modernist arts experiments. Vsevolod Meierhold, a Stanislavsky disciple, applied his theory of "bio-mechanics" to acting and created an experimental theater that broke free of many of drama's realist conventions; many of his Soviet-sponsored productions toured throughout Europe in the 1920s. German playwright Bertolt Brecht's Marxist-based theories of theater rejected the "fourth wall" and sought to strip away the glamour of theater to instead reveal the craft as a product of labor. Brecht's theater, with its frequent satire of capitalism (*Rise and Fall of the City of Mahoganny*) was forged as a pedagogical tool to help audiences recognize the contradictions built into the existing world

➤ RADIO AND JAZZ

Nightclubs, speakeasies, and the new radio transmission technology all promoted the early popularity of jazz. Radio transmissions of music allowed jazz to become a mainstay in the airwaves and increase its popularity outside of the urban centers with which jazz is typically associated. Both recorded and live music were played over the radio, drawing much attention from radio listeners as the medium became ever more popular by virtue of its novelty. However, while jazz was identified with mostly black musicians, over the radio it was rare to hear or listen to black musicians, as most jazz was played or sung by white musicians. The decade's greatest African American vocalists, most notably Louis Armstrong, Bessie Smith, Ma Rainey, and Florence Mills, were seldom heard on radio broadcasts. The hundreds of other black artists who recorded on "race record" labels in the 1920s were also not played on the radio. While many white American radio broadcasters and aficionados did appreciate and admire black musical styles, they still retained many of the existing racial prejudices of the time.

—Abraham O. Mendoza

order. In the newly formed Soviet Union, agitprop (“agitation and propaganda”) theater was born, a movable theater meant to energize the masses, provide the latest news, and coach them in revolutionary principles via broad strokes and simple sets and props. In the United States, serious drama came of age with the plays of Eugene O’Neill of the 1920s, while the 1930s was a period of great ferment; a proletarian aesthetic emerged in plays such as Clifford Odets *Waiting for Lefty*. The U.S. government, as part of the New Deal’s aid to the arts, from 1935 to 1939 sponsored the Federal Theater Project that included in its offerings circus and vaudeville units, living newspapers such as the pageant “Power, A Thrilling Dramatization of Modern Industry,” and experiments such as Orson Welles’s version of *Macbeth*, soon known as *Voodoo Macbeth*, developed with the project’s Negro Theatre Unit.

On the popular level, vaudeville and music halls—with their standardized variety offerings—remained a popular art form, with well-established circuits in the United States and Europe and elsewhere until the 1930s. Risqué burlesque entertainments had also developed with their own circuits, while the more upscale Ziegfeld’s Follies combined “leg shows” with sophisticated stage sets, music, choreography, and Ziegfeld’s promised goal of “glorifying the American girl.” An offshoot of European operetta, large Broadway musicals were also undergoing a Golden Age in the United States, as Tin Pan Alley composers crafted shows with unified themes throughout the song lyrics, an approach that culminated in Rodgers and Hammerstein’s *Oklahoma* (1943).

—Fred Nadis

Atonal Musical Theory

The term “atonal music” refers to any music composed without a tonal center and outside of the major- and minor-scale system. While tonal music is based on 7-note scales wherein each tone or triad has a specific function, atonal music has all 12 notes of the chromatic scale available; they can be combined independent of the contextual relationship that triads, keys, and scales have in tonal music. “Atonal” is an imper-

fect term for such music, as it connotes the absence of tonal harmony without describing the resulting music. While initially rejected by the composer Arnold Schoenberg, a pioneer of atonal music, and employed by critics as an epithet, the term “atonal” has established itself. Some scholars limit the term “atonal” to music written before the advent of the 12-tone method (ca. 1923); others find it lacking because it does not allow for distinction between “free” atonality and the 12-tone, or dodecaphonic, compositions that followed. The 12-tone method, developed by Schoenberg, applies a system to atonal composition; dodecaphonic works are structured by a series, or tone row, of all 12 notes of the chromatic scale in a set order determined by the composer and are thus examples of serialism in composition. Free atonality and dodecaphony represent distinctive phases of new musical directions in composition and theory, and both should be included in a cultural-historical consideration of atonal music.

The roots of atonal music extend to Franz Liszt in the late 1870s and Claude Debussy in the 1890s. Their chromatic expansion of harmony was taken further by Schoenberg in the early twentieth century. He pursued what he termed the “liberation of dissonance” by setting aside the rules of harmony and employing the full range of harmonic combinations allowed by the full 12 notes of the chromatic scale. The Second Viennese School, which refers to Schoenberg and his students, particularly Alban Berg and Anton Webern, are thus often considered the founders of atonal music.

Schoenberg began to compose atonal music in 1908, the same year in which composers as diverse as Bela Bartok, Aleksandr Scriabin, and Charles Ives were working on compositions that also indulged dissonance and employed only a loose sense of key. Late-nineteenth-century European musical culture was marked by a divide between adherents of Richard Wagner’s *Zukunftsmusik*, or music of the future, and those who favored the traditionalism represented by Johannes Brahms. Composers of the Second Viennese School did not think that the two factions were irreconcilable. Wagner moved away from traditional tonality and employed chromaticism to express revolutionary sentiments of a political

► **TIMELINE OF SELECTED ATONAL OR 12-TONE COMPOSITIONS OF ARNOLD SCHOENBERG, ALBAN BERG, AND ANTON WEBERN**

- 1908–1909—Schoenberg composes *Das Buch der hängenden Gärten*, song cycle of poems by Stefan George.
- 1909—Schoenberg composes *Five Pieces for Orchestra* as well as *Erwartung*, a one-act opera that is first performed in 1924.
- 1909—Webern composes *Six Pieces for Orchestra*, op. 6.
- 1910—Berg composes *String Quartet*, op. 3.
- 1910–1913—Schoenberg composes *Die glückliche Hand*, a drama with music that is first performed in 1924.
- 1912—Schoenberg composes *Pierrot Lunaire*, a setting of Otto Erich Hartleben's translation of Albert Giraud's poetic cycle.
- 1913—Webern composes *Six Bagatelles for String Quartet*, op. 9.
- 1914—Webern composes *Three Little Pieces for Cello and Piano*, op. 11.
- 1914–1922—Berg composes *Wozzeck*, an opera, first performed in 1925.
- 1925–1926—Berg composes *Lyric Suite* for string quartet.
- 1928—Webern composes *Symphony*, op. 21.
- 1929–1935—Berg composes *Lulu*, an opera, first performed in 1937.
- 1930–1932—Schoenberg composes the unfinished opera *Moses und Aron*.
- 1936—Schoenberg composes *Concerto for Violin and Orchestra*, op. 36.
- 1938—Webern composes *String Quartet*, op. 28.
- 1947—Schoenberg composes *A Survivor from Warsaw* for narrator, men's chorus, and orchestra, op. 46.

—Anthony Cantor

and sexual as well as musical nature. The destabilization of tonality by dissonance and chromatic tones is of a piece with the assault on laws and hierarchy in art and politics that led nineteenth-century cultural observers to view themselves as living in a “century of movement,” as described by Carl Schorske. The sensation of uprootedness that resulted from the undermining of the tonal center is also reflected in the art and literature of that time and place. Schoen-

berg described himself as seeking “complete liberation . . . from all symbols of cohesion and of logic,” just as artists and intellectuals such as Gustav Klimt and Sigmund Freud perceived a world in flux, unmoored from old verities. While Wagner's dissonance was tempered by familiar harmonies, composers of the Second Viennese School completely replaced old harmonies with new ones; Schoenberg in particular was wont to employ the dissonant intervals of the minor ninth and major seventh. As Webern later commented, “We broke [tonality's] neck.”

Schoenberg described his compositions as the necessary outcome of a historical process. His analysis of tonal harmony in *Harmonielehre* (1911), steeped in the discourses of social Darwinism and racial pseudoscience that permeated intellectual endeavor, saw tonality as a formerly logical, ethical, and healthy musical language that had degenerated; the composer required purity and asceticism. Schoenberg spoke about tonality in the same language that his contemporaries Wagner and Otto Weininger employed to describe the supposedly nefarious influence of Jews in Austro-German culture. Schoenberg, like many leading figures of Wiener Moderne, or Viennese modernity, was Jewish. Jews had acclimated well to the upheavals of modernity; they were well represented among Vienna's educated middle classes but hardly monolithic in their philosophies and politics. Alex Ross suggests that the “weird undercurrent” of pseudo-scientific racism in *Harmonielehre* and Schoenberg's 1898 conversion to Lutheranism were both efforts undertaken by Schoenberg to separate himself from Jewish stereotypes. With the rise of anti-Semitism as an unavoidable political and cultural reality in Austria and Germany, Schoenberg's relationship to his Jewishness evolved; by 1933 he had embraced his Jewish identity and Jewish faith.

The break with tonality should not be regarded as a musical development abstracted from its cultural moment. The Second Viennese School was a constituent element of the political, philosophical, and aesthetic innovations that arose in Vienna from the turn of the twentieth century through World War II. Schoenberg, in railing against the aesthetic values of beauty and comfort, heeded the call of his friend, the

architect Adolf Loos, that art's purpose was "to shake us out of our complacency and comfort." Sometimes called critical modernists, these artists revolted against the cult of beauty, which they regarded as a lie that masked the failures of their society to realize its liberal, tolerant promises. During 1912–1914 Schoenberg worked on an ultimately unfinished symphony that would have dramatized the death of the bourgeois God. Schoenberg's opera *Moses und Aron* (1926–1932), based on a tone-row, set Truth and Beauty in opposition, cast art as a corruptor of truth, and indicted those who trusted in art and beauty.

The Second Viennese School was also influenced by the critic Karl Kraus, who campaigned against kitsch in his periodical *Die Fackel* (*The Torch*). Berg was an enthusiastic attendee at Kraus's lectures, and Webern imparted Kraus's convictions about the dangers of even minor linguistic errors to his students. The protagonist of the novel *Doctor Faustus* (1947) by Thomas Mann, also an admirer of Kraus, is depicted as having invented the 12-tone method; the novel explores the intellectualism of modern art, the rise of irrationalism, and the roots of fascism. Though Schoenberg and his students had only passing contact with Freud, psychoanalytic explorations are apparent in works such as Schoenberg's opera *Erwartung* (1909). These are but a few of the ways in which atonal music is connected to cultural and intellectual life.

Schoenberg's hope that one day people would whistle his tunes has not come to pass. Still, atonal music continues to exert influence even on those composers who do not produce atonal or dodecaphonic compositions. The serialism of 12 tones that Berg and Webern learned from Schoenberg was developed after World War II by composers such as Milton Babbitt, Pierre Boulez, and Karlheinz Stockhausen into "integral" or "total" serialism, the serialism of musical elements other than pitch, such as rhythm, tempo, and dynamics.

—Anthony Cantor

Bibliography

Janik, Allan, and Stephen Toulmin. *Wittgenstein's Vienna*. New York: Touchstone, 1973.
McDonald, Malcolm. *Schoenberg*. Oxford, UK: Oxford University Press, 2008.

Perle, George. *Serial Composition and Atonality: An Introduction to the Music of Schoenberg, Berg, and Webern*. 5th ed. Berkeley: University of California Press, 1981.

Ross, Alex. *The Rest Is Noise: Listening to the Twentieth Century*. New York: Picador, 2007.

Schorske, Carl E. *Fin-de-siècle Vienna: Politics and Culture*. New York: Vintage, 1981.

Simms, Bryan R. *The Atonal Music of Arnold Schoenberg, 1908–1923*. Oxford: Oxford University Press, 2000.

Simms, Bryan R., ed. *Schoenberg, Berg, and Webern: A Companion to the Second Viennese School*. Westport, CT: Greenwood, 1999.

Music and Nationalism

Nationalism emerged as a way of thinking that included a strong patriotic pride for one's homeland. Musical nationalism reflected the conscious efforts of composers to identify their tradition. The recovery of a country's music—songs, ballads, folk melodies—was a central part of national revival. A sense of national heritage and pride was drawn from the oral culture, the music of the folk, that was held to express unique qualities of each nation. As the emergence of the nation-state as a territory defined by language, music, a history, and common culture came to be equated with progress, music intertwined with these national aspirations. Composers consciously turned to folk idioms, hoping to recover the spirit of the nation. Utilizing the resources of folk dance and folk song provided a means to express the native life of the people.

The twentieth century began with further assertions of nineteenth-century nationalism, during which time political fervor shot through Europe and composers adopted the rhythms and melodic attributes of folk song. *Finlandia* (1900), composed by Jean Sibelius (1865–1957), espoused nationalism in Finland at a time when that nation was controlled by Russia. Edvard Grieg (1843–1907), in Norway, used folk song materials and composed on national themes. Bela Bartok (1881–1945) in Hungary and Carl Nielsen (1865–1931) in Denmark mined the folk resources of their countries. Nationalism appeared in the music hall in England during the

Boer War. When Edward Elgar's *Pomp and Circumstance* appeared in 1902, a lyric was set to it that spoke of Britain as a "Land of Hope and Glory." In 1916 Hubert Parry (1848–1918) set William Blake's *Jerusalem* as a nationalistic ode. Later, Ralph Vaughan Williams (1872–1958) recalled English folk songs as central to the English nation, reaching back to the Elizabethan era for some of these.

In the twentieth century, nationalism is often considered discontinuous with modernism. The National Socialists in Germany suppressed modernist composition. Russian composers were required to embrace Soviet state-sponsored themes for music. Whereas the modernist Sergei Prokofiev (1891–1953) invented his own style, Dmitri Shostakovich (1906–1975), seeking individuality, often blended with the new Soviet style.

In the United States, Charles Ives (1874–1954) and Aaron Copland (1900–1990) developed modernist compositions in connection with texts that reflected national images. For Ives, there was the New England landscape. For Copland, who drew upon American folk texts and Native American backgrounds, there was the cowboy, the Native American, and the American vistas suggested by John Steinbeck's *The Red Pony* (1933). Several attempts were made to point to jazz as indigenous to America. Among these was William Grant Still's *Afro-America Symphony* (1930), using jazz as America's music.

Latin American music is often markedly nationalistic and represents diverse traditions. Traditional music is reclaimed, some say "reinvented," in the interest of expressing the self and culture. Typical of this in Mexico is Jaime Nuno's Mexican national anthem of 1854 and mariachi music. In Central America, Carlos Chavez (1899–1978) composed on Indian themes, and his students built upon folklore. As Latin American people sought to define the nation apart from colonial influences, they drew upon music and other cultural expressions. There were many African influences upon Caribbean music and upon Portuguese-speaking Brazilian music. In Brazil, Heitor Villa-Lobos (1887–1959) developed a considerable output of chamber, choral, and symphonic works, filled with Brazilian rhythms. Calypso, reggae, ska, and other music forms emerged from the islands, often with lyrics that embodied political

protest. In Haiti, French traditions were gradually replaced by an African-inspired musical culture of percussion. When competing colonial regimes sought political control of the Caribbean, colonial conditions prompted the development of carnival and calypso in Trinidad. In Trinidad festivals there emerged a repertoire of song and dance, including *calinda*, *jboba*, and *bamboula*. In Cuba, Eduardo Sanchez de Fuentes (1874–1944), Alejandro García Caturla (1906–1940), and Amadeo Roldán (1900–1939) expressed the Right, Center, and Left of politics, respectively, with Roldán absorbing Black forms in his music. Ernesto Lecuona y Casado (1895–1963) composed *Malaguena* and *Siboney*, which are among the most memorable of Latin American compositions.

—Robert McParland

Bibliography

- Bohlman, Philip V. *Focus: Music, Nationalism, and the Making of a New Europe*. 2nd ed. New York: Routledge, 2010.
- Kippen, James. *Gurudev's Drumming Legacy: Music, Theory and Nationalism in the Mrdang Aur Tabla Vadanpaddhati of Gurudev Patwardhan*. Aldershot, UK: Ashgate, 2006.
- Largey, Michael. *Vodou Nation: Haitian Art Music and Cultural Nationalism*. Chicago: University of Chicago Press, 2006.

Expressionism in the Performing Arts

Shocked at the devastation caused by World War I, artists saw in German Expressionism a means to come to terms with the social and political turmoil as well as an opportunity to sound the call for social renewal. Seeking to give visual form to inner urges and desires, Expressionists revolted against bourgeois morality, which, with its strict social codes, they believed constrained the authenticity and spontaneity of expression. World War I initially seemed to fulfill their desire for social purification. By 1916, however, the true nature of the war had become evident, and with the abdication of Kaiser Wilhelm in 1918, the Expressionists redirected their aspirations for a new and reformed society to the Weimar Republic. Their hopes were disappointed once again by the problems plaguing the nascent gov-

► THE CABINET OF DOCTOR CALIGARI

The Cabinet of Doctor Caligari premiered in German movie theaters in February 1920. In the movie, Doctor Caligari has a stand at a carnival featuring a somnambulist named Cesare. Using his powers of hypnosis over Cesare, Caligari has him commit murders in the town. The two central characters, Francis and Jane, begin to investigate, and this leads to Caligari's orders to Cesare to kill Jane. But captivated by her beauty, Cesare is unable to kill her and kidnaps her instead, only to fall to his death while pursued by the townspeople. Francis then discovers that Caligari is actually the director of the local insane asylum. When confronted with Cesare's corpse, Caligari breaks down and is imprisoned in his own asylum. However, what makes this film so distinctive is the framing device inserted around the narrative by the director Robert Wiene. The opening scene presents the body of the story as a flashback narrated by Francis. However, when the flashback ends, it reveals a surprising twist: Francis, Cesare, and Jane are all shown as inmates of the asylum with Caligari as the benevolent director. The story was in fact one of Francis's delusions.

—Isabel Suchanek



Werner Krauss as Dr. Caligari in *The Cabinet of Dr. Caligari*, a German expressionist film of 1920. (John Springer Collection/Corbis)

ernment, and the political element of Expressionism never managed to engender the transformation of society it desired.

Some of the earliest Expressionist plays—including Wassily Kandinsky's *Yellow Sound* (1909) and Oskar Kokoscha's *Murderer, the Hope of Women* (1909)—were written before the war by painters and sculptors who were also interested in theater. These artists translated characteristics of Expressionist painting and prints for the theater, notably the use of stylized and unnatural figures and the extreme simplification of form. *Yellow Sound*, for example, had no dialogue, and the music, lighting, and set designs were intended to construct abstract pictures rather than realistic scenes. *Murderer, the Hope of Women* was even more antinaturalistic; its characters were reduced to emblematic types, such as The Man and The Woman, while both the speech and gestures of the actors were deliberately exaggerated.

This move away from mimetic representation toward a cultivated artificiality would become characteristic of Expressionist theater as it flourished from 1916 through the early 1920s. Simplified and often abstract set designs replaced the elaborate and realistic ones of previous years. The plot progressed episodically with little regard for causality or character development. Dialogue was declaimed rather than naturalistically acted and was accompanied by equally spastic and unnatural gestures, while directors enhanced the emotional intensity of the play through their use of lighting to create stark contrasts between light and dark. The difference between Expressionist theater and the more conventional naturalistic approach is amply demonstrated in Leopold Jessner's production of *William Tell* (1919). Jessner eliminated all references to Switzerland, highlighted the difference between the good and bad characters through the use of white and black costumes, and limited the set design to a series of

bridges, ramps, and stairs with an abstract mountain range in the background. But if Expressionist actors and directors embraced an obvious artificiality in the production, this was never taken to include the expression of emotion, which was to remain intense and authentic throughout. The ecstatic performance of the actors on stage and their reduction of movement and speech were a result of their search for a new language of the body capable of communicating a purity of expression.

The Expressionist reaction against bourgeois society and established authority often took the form of a dramatic struggle pitting sons against fathers, with the father representing the strict German code of social and moral taboos. In Walter Hansencleaver's *The Son* (1918), for example, the son believes that by shooting his father he can save humanity. When the son confronts his father with a pistol in hand, the father dies of a heart attack, and the play ends with the son striding triumphantly over his father's corpse into his new future. This patricide is not only antiauthoritarian but also embodies Germany's anxiety over its history and its attempts to liberate itself from the past. In the place of the father the Expressionists envisioned the new man, an enlightened figure capable of leading the masses because of his power of expression, as in Ernst Toller's *The Transformation* (1917/1918), in which the protagonist voluntarily enlists in the military only to evolve into an opponent of war and ultimately a revolutionary leader.

The prevalence of Expressionism in art and theater facilitated its entrance into cinema, heralded by the premiere of *The Cabinet of Doctor Caligari* in 1920. With its dramatic lighting and distorted sets and the inclusion of actors Werner Krauss and Conrad Veidt, who had both starred in Expressionist plays, *Caligari* translated features of Expressionist art and theater into film. Directed by Robert Wiene and based on a screenplay by Hans Janowitz and Carl Mayer, the film presented a horror story with plot extremes and twists that delighted the public. The brevity and stylized lettering of the original titles (although in the English version the clipped and telegraphic titles have been lengthened into narrative description) added to the heavy shadows, slanting doors, curved walls, and angled win-

dows of the scenery and echo the distortions and extremes of the characters and plot.

Although the Expressionist impulse in the other arts had largely waned by the time *Caligari* appeared, the enormous success of the film engendered a vogue for Expressionist cinema in the early 1920s. Some, such as Karl Heinz Martin's adaptation of the Georg Kaiser drama *From Morn to Midnight* (1920), were Expressionist in both form and content, with abstract sets and stylized acting in addition to an episodic plot structure. Far more common, however, were films, ranging from *Nosferatu* (1922) to *Metropolis* (1927), that utilized Expressionist sets while drawing their themes, characters, and imagery from romantic tales and other literature of the period. For a while, even some films that exhibited no characteristics of the new cinematic style went so far as to have Expressionist advertising, seeking to capitalize upon the "Caligari mania." In part, this was a means of making cinema a more respectable medium. By associating itself with an avant-garde movement, cinema presented itself as a legitimate cultural attraction on par with the other arts. Yet it also shows the degree to which Expressionism as a style had become divorced from the politics of its earlier years.

—Isabel Suchanek

Bibliography

- Barron, Stephanie, and Wolf-Dieter Dube, eds. *German Expressionism: Art and Society*. Exhibit catalog. Venice: Palazzo Grassi, 1997.
- Eisner, Lotte H. *The Haunted Screen, Expressionism in the German Cinema, and the Influence of Max Reinhardt*. Translated by Roger Greaves. Berkeley: University of California Press, 1969.
- Kuhns, David. *German Expressionist Theatre: The Actor and the Stage*. Cambridge: Cambridge University Press, 1997.
- Scheunemann, Dietrich, ed. *Expressionist Film: New Perspectives*. Rochester, NY: Camden House, 2003.

The Jazz Age

The Jazz Age, a term coined by world-renowned American author F. Scott Fitzgerald, describes the period from the end of World War I to the emergence of the Great Depression. The Roaring Twenties, as this period is also known, was

characterized by the waning of traditional values as they were challenged by new cultural trends in the United States and Europe, among them jazz music. From the early twentieth century and into the 1920s, the terms “ragtime” and “jazz” were often used synonymously, and much of what was labeled jazz was actually popular music typically in ragtime form or other syncopated musical styles.

Jazz combined black West African folk music forms—developed in North America for decades during the eras of slavery and postemancipation—with European musical influences, much of it filtered through the popular song-writing industry of Tin Pan Alley in New York, whose composers sought to re-create a syncopated ragtime sound. The popularity of jazz spread as the music emerged as a key aspect of the Harlem Renaissance, a flowering of interest in African American arts and culture in the 1920s in New York City. Audiences attributed freedom, spontaneity, and adventure—associated with myriad cultural and societal changes occurring in the 1920s—to the jazz sound.

The 1920s was a decade of profound social changes not only in the United States but also in much of Europe. The atrocities of World War I had shaken the social and political foundations of the Victorian Era and exposed the younger generations to the horrors of the trenches and the perceived corrupt values of the older generation. Young men, who returned from the front lines where they were forced to stare death in the face on a daily basis, were eager to enjoy what was left of their lives. Many young women, having been exposed to the freedoms offered by war-industry employment, were reluctant to return to the Victorian propriety expected by their elders. Two additional trends contributing to the societal changes were the rise of a consumer-oriented economy and new forms of mass entertainment, which triggered what historian Frederick Lewis Allen termed a “revolution in morals and manners.” In the United States, Prohibition legislation inadvertently created the ubiquitous culture of the speakeasy, where both men and women enjoyed illegal moonshine and cocktails and danced and listened to new musical styles.

In Europe young people of both genders, disenchanted with the cultural institutions of their

➤ DJANGO REINHARDT AND GYPSY JAZZ

Django Reinhardt was one of the first and most prominent European jazz musicians and one of the most acclaimed jazz guitarists of all time. Born in Belgium in 1910, Reinhardt was the son of a circus clown and spent much of his life in gypsy caravans in and around Paris. Heavily influenced by Louis Armstrong and other American jazz musicians, Reinhardt managed to successfully fuse American-style jazz with traditional European folk elements. Despite losing the use of two fingers and a thumb on his left hand in a fire when he was 18 years old, he played lead guitar for one of the first all-string jazz bands in the world, the Quintette du Hot Club de France. This group pioneered Gypsy jazz and popularized the new genre throughout Europe and the United States. Reinhardt was so popular in Europe that he was able to continue playing his music during World War II in occupied France. This is an incredible testament to his popularity considering his Gypsy heritage, his defiance of authority by refusing to perform in front of flags bearing a swastika, and the fact that jazz was looked down upon as “black” music by the Nazi regime. In 1943 Reinhardt refused an invitation to go on a tour of Nazi army bases across Europe; instead he attempted to escape to neutral Switzerland. He was captured en route, but fortunately for Reinhardt his captors were jazz fans. Instead of sending him to a concentration camp, which was the fate of so many other Gypsies during the war, Reinhardt was merely returned to Paris. Even long after his death in 1953 from a brain hemorrhage, Reinhardt continues to have a large following of music aficionados and jazz fans the world over.

Bibliography

Johan Åhr, *France and the Americas*, ed. Bill Marshall (Santa Barbara, CA: ABC-CLIO, 2005), 982.

parents that had sent them and their deceased peers off to war, embraced their newfound liberation, and they pursued a more unconstrained lifestyle amid the political and social tumult that shook postwar European society. During the 1920s sexual morality, prescribed gender roles, fashion, and even hairstyles (such as the notorious bob) changed dramatically. Many Americans and Europeans saw such change, accompanied



American composer, bandleader, and pianist Duke Ellington at the Cotton Club in New York City, with the Cotton Club Orchestra, 1930. (Frank Driggs Collection/Archive Photos/Getty Images)

by commercial culture and new entertainment forms, as a radical break with a recent Victorian or even Puritan past. This was the context in which jazz emerged as a popular form of music, representative of the break with the past and an embrace of the revolutionary.

Ragtime, the direct predecessor of jazz, was a new music that developed largely among African American musicians in the saloons along the Mississippi River in the American South, most notably in New Orleans, during the post-Civil War period. Many of the innovations attributed to jazz emerged from musicians in the early twentieth century in New Orleans. In the early 1920s there was a rapid migration of jazz artists to Chicago following the so-called Great Migration of many American blacks from the South to northern cities in pursuit of greater economic and social opportunities. This migration brought about yet another change in jazz style, later acknowledged as the Chicago style. This innovation in jazz focused on the soloist and also added the use of the saxophone. The saxophone had a more complex and textured sound, thereby contributing significantly to this developing style, along with the cornet. From Chicago, jazz began to make its way to New York City, particularly to Harlem, and to other major U.S. cities such as

San Francisco, Los Angeles, and St. Louis. Jazz in the Dixieland and early swing form as popularized by King Oliver, Louis Armstrong, and later Duke Ellington, Fletcher Henderson, and others was spreading nationally and by the mid-1930s became America's popular music with the aid of numerous touring swing big bands, radio coverage, and the recording industry.

Postwar Harlem was in the midst of a cultural movement known as the Harlem Renaissance during which American black culture embraced literary, musical, and artistic endeavors. In Harlem jazz music was extremely popular and influential, drawing white audiences as well as local black aficionados. Among the innovations to jazz from Harlem was the integration of the piano into musical pieces, often marked by intricate and complex chords. Many nightclubs and speakeasies drew large crowds eager to listen to jazz during this period of its evolution. Notable U.S. jazz artists such as Louis Armstrong, Bix Beiderbecke, and Duke Ellington emerged out of the 1920s jazz scene. The jazz scene in many American cities also created close contact between white and black patrons of nightclubs and speakeasies, much to the shock of older generations. While these interactions did not lead to the loosening of the racial conflict in the 1920s United States, it did mark growing white American regard and outright admiration for black American cultural forms. The Cotton Club was a famous Harlem nightclub that featured many of the more notable black entertainers of the time such as Duke Ellington, Cab Calloway, Ella Fitzgerald, Louis Armstrong, Billie Holiday, and Ethel Waters. However, it denied entry to blacks. In its heyday it was a celebrity hotspot in Harlem frequented by celebrities such as Al Jolson, Mae West, Irving Berlin, and New York mayor Jimmy Walker, among others.

Jazz, particularly as it flowered into the Big Band sound of the 1930s and 1940s, was an influential addition to music during this interwar period in many urban centers around the world. In addition to the above-noted U.S. cities, Paris also became a significant center of jazz music, as it had always been hospitable to artistic innovations and the avant-garde. Paris also had a significant black population of U.S. soldiers who refused to return to Jim Crow America, having

enjoyed life in France during World War I. Many of these Parisian blacks, familiar with innovations in jazz back in the United States, adopted the style and created their own scene in Paris, drawing large crowds of local Parisians and American expatriates. Nightclubs in Berlin, London, Tokyo, and Shanghai also promoted jazz music, illustrating its global reach.

—Abraham O. Mendoza

Bibliography

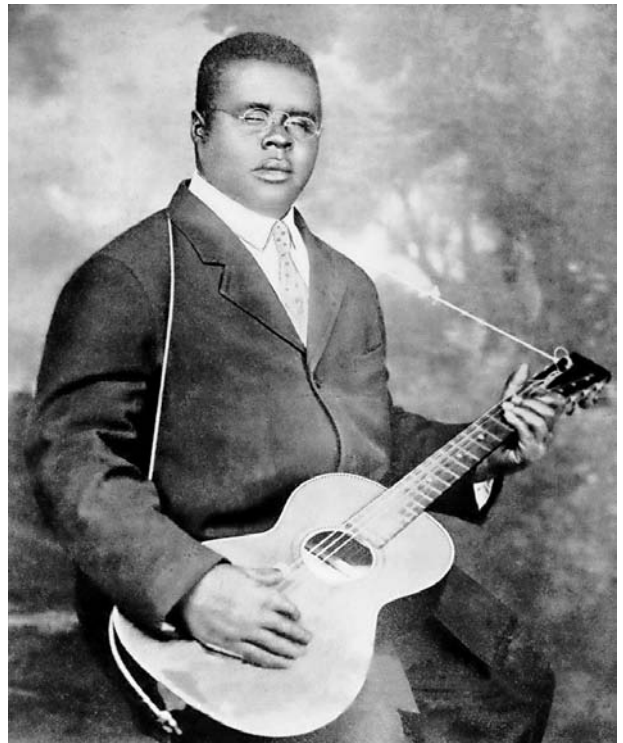
- Allen, Frederick Lewis. *Only Yesterday: An Informal History of the 1920s*. New York: Perennial Classics, 1931.
- Blumenthal, Bob. *Jazz: An Introduction to the History and Legends behind America's Music*. New York: Collins, 2007.
- Dumenil, Lynn. *The Modern Temper: American Culture and Society in the 1920s*. New York: Hill and Wang, 1995.

Blues

The roots of blues music stretch back before slavery to Africa and Europe; however, the blues music that we now know germinated during the 1890s and flowered as a musical form in the first decade of the twentieth century. This new music rose from the black farms and towns of the American South during a time when lynching was on the rise, segregationist Jim Crow laws and disfranchisement were spreading throughout the region, and the economic and social position of black Americans as a permanent underclass was being viewed as acceptable.

The blues derived from the European folk ballad, but its sound and feel came out of the cotton and corn fields of the rural South, a descendent of the arwhoollie, or field holler, the song of the plow hand working the land. It was a music free and forceful in its melody, lyrics, and expression. By the turn of the twentieth century, gospel and church music in the form of black hymns and spirituals had also channeled into secular ragtime, jazz, and blues. Each is a uniquely American musical form because it combines European and African musical traditions.

In 1912 the sheet music for W. C. Handy's "The Memphis Blues" was first published along with three other songs with the word "blues" in



Blind Lemon Jefferson, American country bluesman, singer, and guitarist. (Hulton Archive/Getty Images)

their titles. In 1920 the first blues record was released: Mamie Smith's "Crazy Blues" was a tremendous success, selling 75,000 copies the first month and a million copies the first year. By 1927 more than 500 blues and gospel recordings were being released in the United States, most of them featuring black female vocalists. Vaudeville blues stars, most of them women, were recorded throughout the 1920s, often accompanied by a small jazz band. Blues women of the 1920s, Gertrude "Ma" Rainey and Bessie Smith most prominently, appeared in minstrel and medicine shows, in circuses, and on vaudeville stages across the South, often singing the blues along with a mix of other types of folk and popular music. In fact, most early blues musicians played a range of songs, including ragtime, ballads, spirituals, and dance tunes. Likewise, many jazz bands relied heavily on blues forms. Talent scouts scoured the South, and in 1926 new records by Blind Lemon Jefferson began a wave of folk blues that extended through the early 1930s. The country blues was sung by mostly male singers, often accompanied

> ROBERT JOHNSON (1911–1938)

In life, Robert Johnson was an obscure musician playing and singing in the rural Mississippi Delta; in death, he became a legend. Prior to his death, the artist left behind recordings of 30 songs from the mid-1930s. The intensity and authenticity of Johnson's musical expression and his powerful, stark lyrics, combined with the danger and gritty romance of his life, personified the mystique of the rambling bluesman. He lived much of his short life on the road and was killed over a woman. The story circulated, even during his lifetime, that Johnson had stood at a crossroads outside Greenville, Mississippi, one midnight and sold his soul to the devil for the chance to play guitar. The beautiful, tortured sound of such songs as "Hell-hounds on My Trail" and "Come On in My Kitchen" are the mythical products of that Faustian bargain. The results, in terms of his impact on American rock, pop, and rap music, were immeasurable. In the decades since he died, countless musicians have aimed for Johnson's raw intensity, soulfulness, and authenticity as well as his image as a troubadour of mystery.

—Louis Mazzari

by solo guitar or piano, and was the kind of music played at African American picnics and house parties throughout the South, in juke joints and bars, and on street corners and train platforms.

By the end of the 1930s the blues moved along with so many black southerners in the United States—in what historians have come to term "The Great Migration"—to the factories and ghettos of the North. Chicago's South Side became a center for blues clubs and recording studios. The sound became amplified—it was louder and more raucous—and jump blues and boogie-woogie came into vogue. By the late 1940s, the electric guitar had become central to urban black music. Most of the rhythm and blues singers and early rock and rollers played the blues, from Little Richard and Chuck Berry to Elvis Presley and Jerry Lee Lewis. Blues also continued to influence major rock musicians of the 1960s, including the Beatles, the Rolling Stones, and Jimi Hendrix.

The structure of the standard blues is 12 bars of 3 lines, usually played in 4/4 time. The first 4-bar line begins with at least a suggestion of a tonic chord, the second 4 bars moves to the subdominant chord, and then the last 4-bar line moves through the dominant chord to resolve back at the tonic, like so many folk ballads of the late nineteenth century. A line of text goes with each musical line, the second repeating the first, sometimes with a slight variation for effect, before the third line, rhyming with the preceding, resolves the thought of the first and second lines. The form invites short melodic phrases or riffs, an element that has become ubiquitous in contemporary popular music. This structure allows for an accompanying instrument—whether a guitar, harmonica, trumpet, or clarinet—to become a second voice that responds to the song's vocal lines. In a way, the blues is a context for a conversation between a voice and an instrument. The flatted blue note is an African element in the blues, while the form that provides for those blues notes to find resolution at the end of each stanza is a product of the music's Western ballad structure.

The lyrics in blues music are frank and tough-minded, often filled with bravado and desire. The viewpoint is always first-person. Most blues take place in the present tense, and the lyrics are always about the singer's feelings. Most songs are about love and sex, crime and escape, poverty and death, despair, alcohol and gambling, voodoo and fate, topics often beyond the bounds of polite society, black or white.

For decades, the blues was seen by many as devil's music, and the music was associated with the black underworld of pimps and prostitutes, gamblers, drug addicts, and crooks. Blues singers, women and men, were considered low down, and most were products of the poor and dispossessed of the rural and urban South. In later decades, blues lyrics would become emblematic of self-determination and verve in the face of a harsh world.

—Louis Mazzari

Bibliography

Cook, Bruce. *Listen to the Blues*. London: Robson Books, 1975.

- Evans, Paul. *Big Road Blues: Tradition and Creativity in the Folk Blues*. New York: Da Capo, 1982.
- Komara, Edward, ed. *Encyclopedia of the Blues*. New York: Routledge, 2006.
- Oliver, Paul. *The Story of the Blues*. Boston: Northeastern University Press, 1988.

Radio Entertainment

When wireless telephony, later called radio broadcasting, appeared in 1919–1920, the consensus of most scholars was that it was a harmless fad that would mainly appeal to fans of technology. Few predicted that the fad would soon become a craze, and within a couple of years it would take its place as an essential part of daily life for millions of listeners all over the world.

Among the first countries to broadcast were the United States, Canada, and Argentina, and almost immediately questions were raised about what kinds of programs should be offered. Some early stations were operated by men who believed that radio should be used to educate and uplift the average person. American inventor and engineer Lee DeForest (1873–1961) was typical of this viewpoint. He had tried to broadcast opera on an experimental basis as early as 1910, and when commercial broadcasting began, he never wavered in his belief that popular music was vulgar. Sharing the view that only “good music” was what the public ought to hear, Westinghouse-owned station KYW in Chicago chose an all-opera format when it debuted in late 1921 and featured Chicago’s Grand Opera Company. Even people who were not opera fans were impressed. For the first time they had access to high culture, and they did not have to leave their home or dress up for the occasion.

KYW was not alone in its choice of music. A number of pioneering radio stations debuted by featuring the classics. Argentina’s first station went on the air from Buenos Aires in late August 1920. Its first program was a performance of Richard Wagner’s opera *Parsifal*. In Canada, when the *Toronto Star* newspaper put its radio station on the air in late March 1922, the first broadcast consisted of light classical selections performed by lo-

cal artists such as tenor Victor Edmunds and cellist Boris Hambourg (1885–1954).

Although a majority of early programs were classical, other broadcasters realized that audiences favored popular genres. In cities such as Montreal and Toronto, signals from American stations were easily received, and dance music was winning out over the classics. Canadian stations continued to provide “good music,” but they also began to broadcast local dance orchestras; bandleader Rex Battle and his Mount Royal Concert Orchestra became especially popular with Canadian fans. Also popular in both Canada and the United States were inspirational talks from clergy and women’s shows, where a radio homemaker gave advice about child-raising, cooking, and budgeting. Speeches by politicians also drew favor. American candidates campaigned by radio as early as 1922, and several presidents gave radio talks. In Canada, Toronto radio station CFRB also broadcast election returns from England in 1929.

By the mid-1920s, radio entertainment in the United States no longer represented what certain elites wanted; it was now dominated by the advertisers and corporations that supported the programs. After initially resisting commercials the government had begun to allow them, and advertising agencies often chose the performers for the programs they sponsored. They also named the entertainers after the products: the Cliquot Club Eskimos were a dance orchestra who dressed in costume to represent the soft drink company that paid their salary. American sponsors sometimes supported a classical orchestra, but generally American radio became a mass-appeal medium, oriented toward all types of popular music from country and western to the latest dance hits. America was still racially segregated, but a number of radio stars were black, including such vocalists as the Ink Spots and Ethel Waters. The 1930s in American radio was referred to as the Golden Age of broadcasting because many radio dramas, soap operas, children’s shows, and variety programs became popular. Several radio comedians, notably Jack Benny (1894–1974) and Eddie Cantor (1892–1964), also had millions of fans. And in North America, sporting events were well

➤ EARLY RADIO IN EAST ASIA

In Asia, radio took off much more slowly than in North America or Great Britain. In 1927 there were only three stations in all of China, where the government had long resisted the idea of broadcasting. In Japan, the first station did not go on the air until March 1925, but radio proved so popular that the government soon permitted the industry to expand. The first successful station was JOAK in Tokyo. At a time when women announcers were still rare in broadcasting, JOAK hired a woman, Akiko Midorikawa, as the chief announcer. JOAK and the other stations that followed broadcast news reports, talks, and Japanese classical and folk music. In Hong Kong, the first station, GOW, did not go on the air until 1928, and as late as the mid-1930s only about 5 percent of residents owned a radio. Hong Kong was a British colony, and the government often used radio to reinforce colonial ideas and promote British culture. Much of the programming was in English, and although a Chinese-language service was finally developed in 1934, it was not well funded and was only able to provide Cantonese programs on a limited basis. The British government's control was also reflected in the news broadcasts, which featured stories that favored the British point of view and downplayed any dissent from the Hong Kong Chinese. In the Philippines, a popular station was KRZM in Manila, which hired American broadcasters as advisers. The programming included concerts of patriotic music by the Constabulary Band as well as educational programs and coverage of boxing matches.

—Donna L. Halper

received, especially hockey in Canada and baseball in the United States.

In the United Kingdom where the British Broadcasting System was dominant, the same debate played out about “good music” versus “popular music.” During the first decade of the British Broadcasting Corporation (BBC), some members of its management encouraged only those genres of music that they believed would appeal to upper-class members of British society. Popular music, especially jazz, was identified with the lower class, and while some dance

music and local folk songs were played on stations in Wales and Scotland, the BBC itself tended to focus on symphonies, chamber music, and the most lyrical and melodic modern vocalists. British sporting events were sometimes heard. During the mid-1930s, live broadcasts from the Berlin Olympics amazed the audience, and broadcasts of cricket matches were always welcomed. Also popular were poets and authors who read from their work. During the 1920s and early 1930s, the BBC had a policy that prevented entire plays from being broadcast (there was a belief that doing so would discourage theater attendance); listeners only heard excerpts until the policy was finally changed.

Although under British control, Australia carved out its own path, and by the late 1920s there were 20 stations in operation. One particularly popular kind of program was community singing, allowing listeners to sing along to their favorite songs. Australian stations, like their British counterparts, offered classical and opera programs but, like Canada, also offered dance music, jazz, and local sporting events. In India, in contrast, British control was tighter: All-India Radio avoided politics, focusing on educational and entertainment programs. Due to India's linguistic diversity, programs were offered in seven languages. In Africa, one of the first stations was set up by the British in Johannesburg, South Africa, in 1924. Programs were all in English until 1931, when a few were broadcast in Afrikaans; little effort was made to offer music for non-European tastes.

In other countries, radio entertainment varied. In Mexico an early station was CYL, which called itself *El Universal-La Casa del Radio*, after the Mexico City newspaper that co-owned the station. From its beginning in 1923, CYL provided a hybrid of programs. Catholic mass from Mexico City's most important cathedral was broadcast, as were light classical and opera performances, but equally popular were Mexican folk and dance music and musical comedies from local theaters. By 1928 Mexico had 20 stations. In addition to local music, they offered political talks, church services, and coverage of such popular sporting events as bullfights.

In 1927, American journalist and radio reporter H. V. (Hans von) Kaltenborn (1878–1965)

wrote about his trip to Russia and what he heard on the radio there. All of the stations were government run, and no advertising was permitted. The programming consisted of news from “official sources” along with operas, plays, light classical concerts, and educational talks by experts. He was told that popular music was discouraged. Kaltenborn found the programming more educational than entertaining, but he was told that the average Russian was very pleased with it. Because large numbers of the peasants were illiterate, they relied on radio to teach them about current events, and they were grateful to hear the finest Russian musicians performing.

By the late 1930s as World War II broke out, many stations changed their programming to include a majority of songs that had patriotic themes, and news broadcasts about the war increased. So did censorship. In 1940 Sir Hugh Robertson, conductor of a popular Scottish choir, was temporarily removed from the air because the British government objected to his pacifist views in a time of war. American broadcasters too had to contend with a government censorship agency that made sure broadcasts did not inadvertently help the enemy. The Japanese government turned its radio stations into vehicles for pro-government information, and when Japan took over Hong Kong, the radio stations there reflected the views of the new occupying forces.

—Donna L. Halper

Bibliography

- “B.B.C. Bars Film Star for Peace Activities.” *New York Times*, March 5, 1941, 5.
- Clayton, David. “The Consumption of Radio Broadcast Technologies in Hong Kong, c. 1930–1960.” *Economic History Review* 57(4) (November 2004): 691–726.
- Ferreira, Leonardo. *Centuries of Silence: The Story of Latin American Journalism*. Westport, CT: Praeger, 2006.
- Griffen-Foley, Bridget. “The Birth of a Hybrid: The Shaping of the Australian Radio Industry.” *International Studies in Broadcast and Audio Media* 2(3) (2004): 153–169.
- Langdale, John V. “East Asian Broadcasting Industries: Global, Regional, and National Perspectives.” *Journal of Economic Geography* 73(3) (July 1997): 305–321.

Muller, Carol Ann. *Focus: Music of South Africa*. New York: Routledge, 2008.

Street, Sean. *A Concise History of British Radio, 1922–2002*. Tiverton, UK: Kelly Publications, 2002.

Hollywood

The modern motion picture industry was born when Auguste and Louis Lumière held the first public screening in Paris on December 28, 1895. The brothers considered their films to be of only limited interest, but creative businessmen began exploiting the technology almost as soon as it came into existence. Within months, the United States, France, Germany, and Great Britain were developing motion picture industries. Two decades later, films were being shown in urban areas across the world. Many people believed that the future of motion pictures was as an educational tool, but cinema was soon on its way to becoming the world’s most popular form of entertainment.

The United States and France were the pioneers of worldwide marketing. Entrepreneurs from both nations promoted their wares in India, China, Japan, and Latin America before the onset of World War I. During the war as France fought for survival, the United States began dominating the markets. Afterward, the United States held on to its predominance chiefly through greater attention to narrative construction and to the use of grandiose production effects. American films spread the image of an affluent, commercialized culture that was sometimes at odds with existing social norms. Many governments took action to control or minimize the U.S. influence, sometimes in response to cultural imperatives and other times to assist local industries. Still, U.S. films were commercial successes in foreign markets, which allowed glamorized, fictionalized depictions of life in the United States to spread across the world.

The attractive, inexpensive entertainment became immediately popular, although the content was a matter of some concern to local political and social establishments. The most common complaint regarded Hollywood’s use of stereotypes, such as the square-headed Germans,

THE HAYS CODE

In 1930 the Motion Picture Producers and Distributors of America (MPPDA) adopted the Motion Picture Production Code, better known as the Hays Code after MPPDA president Will H. Hays. The Hays Code was essentially a set of self-regulated censorship guidelines used to determine moral acceptability in films. The code was a means of quelling the general outcry over the violent and sexual material that was prevalent in motion pictures, thus both appeasing special interest groups and avoiding direct government oversight. It contained three General Principles that were supplemented by additional, more specific restrictions concerning such things as nudity, obscenity, religion, and offensive stereotypes. The Hays Code remained enforced and intact until 1966.

General Principles of the Hays Code

1. No picture shall be produced that will lower the moral standards of those who see it. Hence the sympathy of the audience should never be thrown to the side of crime, wrongdoing, evil, or sin.
2. Correct standards of life, subject only to the requirements of drama and entertainment, shall be presented.
3. Law, natural or human, shall not be ridiculed, nor shall sympathy be created for its violation.



Will Hays, president of the Motion Picture Producers and Distributors of America from 1922 until 1945, and author of the Hays Code. (Library of Congress)

effeminate Frenchmen, indolent Hispanics, and so forth. The desire to maintain profit margins kept filmmakers in the United States generally responsive to foreign sensibilities. By the 1920s and 1930s, the industry earned approximately 35 percent of its gross income from foreign distribution and could not afford to offend consumers. In 1922, for example, the Mexican government took offense at the portrayal of Mexican villains in Hollywood westerns and placed an embargo on the importation of films from the offending companies. The new U.S. trade association, the Motion Picture Producers and Distributors of America, Inc. (MPPDA), responded quickly. Their representative negotiated an agreement to “do everything possible to prevent the production of any new motion picture films which present the

Mexican character in derogatory or objectionable manner.” Afterward, the Mexican government kept pressure on the U.S. film industry whenever it found offensively stereotyped portrayals of Hispanics. The tension between ethnocentric and economic urges has never been completely resolved. Other groups, realizing the effectiveness of pocketbook protests, have experienced varying degrees of success using tactics similar to those of Mexico.

Whereas some viewers reacted against unfavorable images of themselves, others responded strongly to U.S. films as an escape from the boredoms or frustrations of their daily lives precisely because they did not see the mundane, familiar world portrayed on the screen. The representations and storylines of Hollywood films often

created a desire for a life as free and affluent as the lives seen on the silver screen. Others were disgusted at portrayals of themselves and their compatriots. Some analysts believe that the contrast between reality and the romanticized fiction of the cinema contributed to the dissatisfaction that led to social upheavals and revolutions in places such as Cuba. Certainly, Cuba is an excellent illustration of the complexity of the reactions of local populations to imported movie extravaganzas. Hollywood films were very popular in Cuba and helped shape its identity. Films (and later television) emphasized the country's tropical allure and thus arguably bolstered its tourist industry yet alienated many Cubans. Audiences in the United States and Cuba were gazing at stereotypical representations of each other and envisioning a luxurious freedom missing in their own cultures. Films such as *Week-End in Havana* (1941) portrayed an uncomplicated land of moonlit nights and Latin lovers who were romantic and desirable but also vain, cocky, and irresponsible. Cuba's reality was more sinister and complex.

U.S. magazines, such as the *Saturday Evening Post*, *Time*, and *Variety*, portrayed Havana as "one of the last of the world's sinful cities," and opportunists worked to create a playground to fit the reputation. Some Cubans asserted that they ultimately supported rebels because they found Cuba's relationship with the United States profoundly disturbing and humiliating, complaining that "the Yanquis had turned Havana into the bordello of America" and a criminal headquarters for drugs, gambling, and other rackets as well. Cuba became popular as a vacation site where tourists could escape the moral structures of their everyday life in the United States. The social costs became unacceptably high to many Cubans. The popular images created expectations and demands that were economically attractive for a few in the short term but were ultimately degrading and offensive to the larger population. Cuba's stereotype in U.S. films as an exotic and immoral tropical paradise fed Cuban resentment and dissatisfaction.

Imported entertainment may be alluring, but in the end people want images with some relationship to their own experiences. Although a lucrative market for American films continues,

cultural pride and the lure of profit have led filmmakers and entrepreneurs around the world to begin producing films tailored specifically for local audiences. The cultural webs created by the global diffusion of mass media technology have had a profound impact, if for no other reason than that they inspire people to consider the ways in which their societies and lives differ from others.

—Carolyn Neel

Bibliography

- Appadurai, Arjun. *Modernity at Large: Cultural Dimensions of Globalization, Public Worlds*. Minneapolis: University of Minnesota Press, 1996.
- Nowell-Smith, Geoffrey. *The Oxford History of World Cinema*. Oxford and New York: Oxford University Press, 1996.
- Páerez, Louis A. *On Becoming Cuban: Identity, Nationality, and Culture*. H. Eugene and Lillian Youngs Lehman Series. Chapel Hill: University of North Carolina Press, 1999.
- Vasey, Ruth. "Foreign Parts: Hollywood's Global Distribution and the Representation of Ethnicity." *American Quarterly* 44(4) (1992): 620.

Early Non-European Film Industries

While most early experiments with silent film occurred in Europe and the United States, the pioneering inventors—the Lumière brothers and Thomas Edison—demonstrated their moving pictures all over the world. Auguste and Louis Lumière, for example, sent representatives to Mexico City in mid-August 1896. Six weeks later the Lumière Cinématographe was entertaining the public in Sydney, Australia, and by mid-1897 there were few countries the competing companies had not visited.

What happened after the arrival of Lumière and Edison films varied. In many countries, local film production was considered too expensive, so movie theaters continued to import films from Europe and the United States. In Australia, however, the arrival of Lumière and Edison films created an immediate demand for local pictures. The popularity of the October 1896 film *Arrival of the Ferry "Manley" at Brighton* encouraged its producers, Marius Sestier and H. Walter

▶ INDIAN FILM

Motion pictures were an instant success in South Asia. Indian audiences saw their first motion pictures when six short French films, produced by the Lumière Brothers' Cinématographe, debuted in Bombay on July 7, 1896. By 1899 Indians were producing their own works. Feature films arrived in 1917, and cinema became a full-fledged industry by 1920. The addition of sound in 1931 revolutionized production. Not long afterward, filmmakers discovered the magic of the big-production musical, now India's favorite genre. Films produced for Western audiences were often a bit too grim for Indian sensibilities, as audiences there tended to prefer entertaining spectacles with happy endings over the gritty slice-of-life films sometimes favored in Europe and the United States. By the beginning of World War II, Indian film audiences were considered the most devoted on earth, and many people habitually attended favorite movies several times. It was also during this time period that the big-production musical, typically three hours long, became the most popular film type. The raucous, exuberant shows were attended by equally unrestrained audiences who strenuously participated in the entertainment, cheering, hissing, booing, and commenting loudly on the action.

—Carlos Marquez

Barnett, to shoot others. In late 1906 Australia's first feature-length film, *The Story of the Kelly Gang*, was released. It was a then-unheard-of 60 minutes long, and it aroused controversy because some critics felt that it glorified crime. Similar adventure films about "bushrangers" (outlaws and bandits) remained extremely popular until government censorship boards finally banned them around 1912.

In Japan, audiences sought a cinema unique to their country and that utilized familiar customs. One of Japan's first local filmmakers was Tsunekichi Shibata, who began documenting people in Tokyo around 1899. His scenes from Kabuki presentations were first shown in 1904, and in the following year he filmed the Russo-Japanese War. Early silent pictures in Japan required a *benshi*, a narrator who explained the film to the audience and who was considered part of the show. As filmmaking techniques—

such as sophisticated editing and the use of intertitles—developed in other countries, Japanese audiences resisted; they did not want films that minimized the importance of the *benshi*. By 1914 there were nine studios in Japan, mainly centered in Tokyo. Japanese director Norimasa Kaeriyama took the lead in changing earlier conventions, and by the early 1920s some Japanese studios were making films with complex plots, dynamic editing, and actresses (rather than actors, as in Japanese Noh and Kabuki theater) playing the female roles. A few studios resisted the modern style, using a *benshi* as late as 1932, a year after Japan's first talking picture, *The Neighbor's Wife and Mine*. Renowned Japanese director Yasujiro Ozu, who produced masterpieces such as *A Story of Floating Weeds* (1934) and *Late Spring* (1949), began his apprenticeship in the silent era.

While foreign films were popular, local Chinese film industries had emerged in both Hong Kong and Shanghai by 1910. Among the most popular films was the 1913 *Zhuang Zi Tests His Wife*. Hong Kong also exported films to countries such as Vietnam. Because it was a British colony, Hong Kong also had the freedom to make films in Cantonese long after mainland China insisted that films be made only in Mandarin. In Siam (Thailand), American and European films were shown by 1904, but the pioneering film producer was a Japanese businessman named Watanabe Tomoyori. Japanese-made films remained popular in Siam until 1910, when a group of Chinese and Siamese businessmen set up the first local studio. In Taiwan, then a colony of Japan, Japanese films and conventions were dominant throughout the silent era. Japan also had considerable influence in early Korean cinema, although films from Europe and Shanghai were also shown.

In Africa, local film industries were slow to develop. Although films were shown in Senegal as early as 1900 and in Nigeria in 1903, throughout the silent era most Africans saw films primarily from the colonial nations that ruled their particular country. In Egypt, films by the Lumière brothers had been shown in late 1896, and for the next few years a number of European filmmakers visited to shoot scenes of Cairo and Alexandria for travelogues. Later, newsreel

cameramen filmed events that most Western viewers would find unusual, such as Muslim holiday celebrations. But there was little local filmmaking, and the majority of the pictures that Egyptians saw through the 1910s came from France and Italy, with Arabic intertitles added. The man considered the father of Egyptian film, Mohamed Bayoumi, did not make his first movie until the early 1920s. In most other Arab countries, there was also little local filmmaking during the silent era. As they had done in Egypt, European directors also filmed in Tunisia, Syria, and Morocco, with local filmmaking not beginning in these countries until the 1920s.

Several countries in Latin America, most notably Brazil and Argentina, produced local documentaries and dramatizations of history and current events. For example, a 1908 film from Argentina, *El Fusilamiento de Dorrego*, focused on the career of the first governor of Buenos Aires. The 1910 Brazilian film *Paz e Amor (Peace and Love)* relied on satire to critique the country's president. In addition to political and historical subjects, religious films and newsreels were also popular. In Mexico films from the United States dominated, but this became a problem, as many of these films stereotyped Mexicans as criminals. The Mexican government was so irate that in 1922 it threatened to ban U.S. films unless changes were made. During the talking-picture era, film in Latin America expanded. Argentina produced the majority of the Latin American films, exporting many of them to other Spanish-speaking countries. The Mexican film industry also grew and benefited from the contributions of expatriate directors such as Sergei Eisenstein (Russia) and Luis Bunuel (Spain). By 1943 Mexico produced about 70 films a year.

The arrival of talking pictures in the late 1920s and early 1930s was crucial for many countries in forging a national cinema. China found that talking pictures were essential in creating a common culture and a common language. The country's first talkie, *The Songstress Red Peony*, was filmed in Shanghai and released in 1931. China had many widely used dialects, but the film was made in Mandarin. The film featured four songs, sung by the famed opera singer Mei Lenfang, whose voice was dubbed in over that of actress Hu Die. Another important Chi-

nese film was *Street Angel*, a 1937 tragicomedy—with a left-wing political point of view—about the struggles of the urban poor in a corrupt society. In the Philippines, colonized first by Spain and then by the United States, the talkies enabled directors to popularize the use of Tagalog as the country's national language. Successful silent film director José Nepomuceno began making talking pictures in 1933, using only Tagalog. The popularity of *Ang Punyal na Ginto (The Golden Dagger)*, the country's first talkie, led to other equally popular films as the filmmaker's use of Tagalog spread.

Competition with Hollywood was still a part of life for many international filmmakers. Australia's local industry was still struggling in the 1930s and 1940s, and the same was true in Mexico. Although the Mexican industry had grown, the majority of popular films were still made in the United States with dialogue dubbed into Spanish. In Africa only a few films, mostly educational or documentary, were made by and for Africans. During World War II, Japan's film industry thrived. In addition to numerous propaganda films, the nation's industry also produced the first films of critically acclaimed director Akira Kurosawa including *Sanshiro Sugata*, his 1943 film about a judo master.

—Donna L. Halper

Bibliography

- Bottomore, Stephen. "An International Survey of Sound Effects in Early Cinema." *Film History* 11(4) (1999): 485–498.
- Russell, Deac. "A Chronology of Cinema, 1889–1896." *Film History* 7(2) (Summer 1995): 115–236.
- Serna, Laura I. "As a Mexican, I Feel It's My Duty: Citizenship, Censorship, and the Campaign against Derogatory Films in Mexico, 1922–1930." *Americas* 63(2) (October 2006): 225–244.
- Tofighian, Nadi. "José Nepomuceno and the Creation of a Filipino National Consciousness." *Film History* 20(1) (2008): 77–94.

Film Industry in Europe

When the French inventors Louis and Auguste Lumière began showing short documentary films on their cinématographe in late December 1895, it is doubtful the two brothers expected

YIDDISH FILM

Yiddish cinema was a unique genre of popular film in the early twentieth century that transcended national boundaries. These films targeted Jewish audiences in central and eastern Europe but were also exported to countries with large immigrant Jewish populations, such as the United States. The screenwriters and many of the actors may have been Jewish, but the themes of these films were often universal: familial power struggles, encounters with prejudice, questions of identity, and assimilation. Many of these Yiddish films were made in Poland, Russia, Germany, and Romania. While Yiddish films were also made in the United States, they were of lesser artistic and production quality. With such Warsaw studios as Kinior and Green Film, Poland was at the center of Yiddish film production during the period. Among the best known of the silent movies was the 1912 original version of *Mirele Efros*, starring famed Polish actress Ester Rachel Kaminska, and the 1924 film *Tkies Kaf (The Oath)* from Polish director Zygmunt Turkow.

The arrival of sound proved to be very beneficial for Yiddish films, since a number of the stars came from the theater or had been singers. The 1936 musical *Yidl Mitn Fidl (Yiddle with His Fiddle)* gave audiences a chance to both see and hear well-known entertainer Molly Picon, playing the role of a traveling musician. Many critics believe that the 1937 drama *Der Dibek (The Dybbuk)* was the best Yiddish film ever made. Poland remained at the center of Yiddish film production during the 1930s. *On a Heym (Without a Home)* was the last film produced there in 1939. As persecution of Jews increased during the 1930s, many producers and directors fled to the United States.

—Donna L. Halper

moving pictures to become a national craze. Their first films were brief (about 40–50 seconds) and showed actual events from daily life: workers leaving the Lumière factory, a train arriving at the station, an adorable baby eating, people bathing in the ocean. There was so much demand that the Lumières soon began sending trained camera crews to distant locations to film interesting scenes. By the late 1890s their films

were being shown in other countries, including Germany, Hungary, Russia, and Spain.

France was at the forefront of the silent film industry in those formative years. French motion picture executives Charles and Emile Pathé became very influential, producing and distributing films throughout Europe. Unlike with the early Lumière minidocumentaries, Pathé had studios where events could be staged. In the early 1900s the company was producing comedies and dramas as well as something new: short films that depicted current events. Pathé was able to re-create scenes from the 1905 Russian Revolution, using information gathered from newspapers, and in a further innovation Pathé then introduced the newsreel, a concise look at recent news. Also popular during this time were travelogues, as exemplified by the 1909 Pathé film *Moscow Clad in Snow*.

Because movies were silent, they could be produced in one country and then shown in another. All that was needed for a foreign audience to understand a movie was a translation of the intertitles into the local language. France remained the dominant source of pre-World War I European films, a status that continued into the 1920s. Among the other European nations that had some success in producing silent films was Italy, where new studios like Cines became known for extravagant and lavishly produced spectacles such as the 1913 epic *Quo Vadis*. Italy was among the top three film producers worldwide during that time, competing with the United States and France. Also with a strong local film industry was Sweden, where Victor Sjöström's 1918 film *The Outlaw and His Wife* received international acclaim.

Because movies from France, Italy, and the United States could be imported, German filmmakers did not start producing their own films until 1909, with the local industry not expanding until World War I, when most of the countries from which Germany had imported films refused to do business. A new company, Ufa, was created in Berlin. Ufa's first productions were mainly patriotic, but by the end of the war Ufa and other German studios began producing crime and melodrama films; among the most critically acclaimed was a 1919 thriller directed by Robert

Wiene, *Das Cabinet des Dr. Caligari* (*The Cabinet of Dr. Caligari*) and the 1921 vampire film *Nosferatu*, directed by F. W. Murnau. Fritz Lang's critically acclaimed 1927 film *Metropolis* was also an important German film of this time.

Russia—soon to become the Soviet Union—was home to several international companies, including Pathé Frères. But by 1907 a local industry emerged. Two of the first Russian filmmakers were Alexander Drankov and his rival Alexander Khanzhonkov, both of whom operated studios in Moscow that produced dramatic and documentary films. By 1914 moviegoing had become more popular than attending stage presentations. In August 1919 Vladimir Lenin nationalized the industry, and in 1924 Sovkino was organized. This gave filmmakers much-needed financial support and, initially, freedom to innovate beyond the confines of “bourgeois” narrative forms and to draw from other revolutionary art forms including constructivism with its interest in photo-collage. Among the most admired Soviet directors was Sergei Eisenstein, known for his theory of montage: the rapid juxtaposition of images from different points of view in film editing to create a “collision” on the cognitive level. Eisenstein applied this technique most famously in the 1925 film *Potemkin*, still regarded as a masterpiece. Another important early product of the Soviet film industry that predated Stalinism was Dziga Vertov's innovative and joyous documentary *Man with a Camera* (1927). However, as Stalinism emerged and Soyuzkino was created as the new state film enterprise in 1929, Soviet filmmakers were expected to make films that expressed a vision of the ideal communist state and inspire the masses, a style of filmmaking called socialist realism. In the 1930s Soviet films frequently featured patriotic themes that praised communist heroes, and many filmmakers such as Eisenstein felt stymied as new genres such as socialist song and dance musicals were mounted to counteract Hollywood fare.

In smaller countries like Greece, the showing of American- and French-made silent films, especially comedies, was well received. Early Greek directors like Spiros Dimitrakopoulos often modeled their own silent films after the American and French styles. Also popular were film versions of Greek classical folktales and lit-

erary works, such as the 1927 drama *Prometheus Bound*, directed by Dimitris Gaziadis.

It was not until after World War I that major British-owned studios opened. In 1924 Michael Balcon cofounded Gainsborough Pictures, and during the 1930s he worked for Gaumont-British, where he produced imperialist adventure films such as *King Solomon's Mines* (1937). In 1925 Balcon also hired the young director Alfred Hitchcock, whose reputation as a master of psychological thrillers grew throughout the 1930s.

By the late 1920s when the silent era was ending, about 85 percent of the films sold worldwide were being made in Hollywood. Most European and Mediterranean countries were unable to complete the changeover to talking pictures until the mid-1930s. In some countries, leaders decided that the best way to support the national film industry was through nationalization. Like Lenin in the Soviet Union, Italian leader Benito Mussolini believed that the cinema could be a powerful force in society, and in 1926 he nationalized the Italian cinema. Under fascism, the Italian film industry made many nationalistic and patriotic movies such as *Luciano Serra Pilota*, a 1938 film about a courageous aviator, produced by Mussolini's son Vittorio. But audiences also wanted escapist films, especially comedies like the 1937 film *Il Signor Max*, starring Vittorio De Sica.

A more malevolent takeover occurred in Germany in 1933, when the National Socialists (Nazis) gained control of what had been a highly creative and independent film industry. By the time World War II broke out in Europe in 1939, the German film industry was producing mainly pro-Nazi propaganda films, notably Leni Riefenstahl's 1935 pseudodocumentary *Triumph of the Will*. In addition to films praising Hitler, German directors such as Fritz Hippler created anti-Semitic works, such as the 1940 *The Wandering Jew*.

During the Great Depression, the documentary film evolved in countries such as Britain and the United States as government agencies sponsored films that celebrated the dignity of common people and the value of united social efforts. During the war years most countries used their film industry to disseminate nationalistic

messages and to keep audiences entertained through difficult times.

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Bibliography

Dyer, Richard Dyer, and Ginette Vincendeau, eds. *Popular European Cinema*. New York: Routledge, 1992.

Nowell-Smith, Geoffrey, ed. *The Oxford History of World Cinema*. New York: Oxford University Press, 1999.

Tsivian, Yuri. *Silent Witnesses: Russian Films, 1908–1919*. London: British Film Institute, 1989.

Vincendeau, Ginette, ed. *Encyclopedia of European Cinema*. New York: Facts on File, 1995.

Migration and Travel

During the first half of the twentieth century, traveling became faster and less expensive than ever before. The invention of the internal combustion engine and its application to the development of automobiles, trucks, airplanes, and ships revolutionized travel and made it available to an increasingly greater number of people, first in the industrialized countries and then across the globe. These inventions coincided with the so-called second wave of the Industrial Revolution, characterized not only by the massive production of consumer goods but also by the shift from coal and steam to oil and electricity as main energy sources. When the economic pressures and the social disruptions of two world wars were added to such new travel technologies, populations became more mobile than ever, and the consequences were enormous.

Nineteenth-century means of transportation were dominated by coal as the main energy source, and the steam engine was used to power locomotives and steamships. Toward the end of the nineteenth century, in addition to electric vehicles, an improved internal combustion engine was developed. The new engine used various kinds of petroleum products, such as kerosene, gasoline, and diesel fuel. The first diesel locomotive started to operate in Switzerland in 1912. Even though the first diesel locomotive was a commercial failure, it had many advantages over the steam locomotive, especially because it was easier to operate and could be managed by just one person. The invention of the internal combustion engine had a similar impact on ocean and river shipping, ending the era of the steamboat that had dominated the nineteenth century. The sinking of the *Titanic*, the largest steamship ever built, in 1912 symbolically marked the end of an era. Diesel engines started to replace steam turbines on ocean liners and battleships in the 1920s, and their advantages were soon obvious, such as decreased susceptibility to fire. The internal combustion engine was the source of power that moved people around in the first half of the twentieth century, even though sailboats, steamboats, and steam locomotives were still used.

The life and travels of Mahatma Gandhi are a good example of how much people traveled. Born to an influential family in the Gujarat Province in northwestern India in 1869, Gandhi sailed to England in 1888 to study law. After completing his studies in London, Gandhi returned to India and started looking for work. Unable to find a suitable job in his native land, he decided to join a law firm in South Africa, where he arrived in 1893. In 1896 Gandhi again traveled to India in order to marry, but he returned to South Africa in 1897. Gandhi stayed in South Africa throughout the so-called Boer Wars while struggling for the civil rights of Indians living there. He finally returned to his native India in 1914

and, at that point his travels were mostly limited to India in the context of the national struggle for independence.

Leon Trotsky is another example of how politics and not just the search for work pushed people across the globe. Trotsky, born in southern Russia in 1879, was arrested for revolutionary activity in 1898 and sent into exile in Siberia. In 1902 he escaped with a false passport and headed to London, where he joined the Russian revolutionary movement in exile. In 1905 after the revolution in Russia, Trotsky returned to his native land, where he was again arrested (1906) and convicted to a second exile in Siberia. He escaped for the second time in 1907 and settled in Vienna, where he worked as a journalist. As World War I started in 1914 Trotsky was forced to leave the country, eventually reaching New York City in 1917. After a brief sojourn he went back to Russia to join the revolution. His role in the Bolshevik Revolution is well known. After the death of Vladimir Lenin, Trotsky lost the power struggle for leadership. Josef Stalin, who succeeded Lenin in 1923, expelled Trotsky from the Soviet Union as a dangerous rival in 1929, whereby Trotsky was offered refuge in Turkey. In 1936 after failing to settle in France and Norway, Trotsky settled in Mexico, which remained his home until he was assassinated by Stalin's agents in 1940.

Such movements of individuals, when regarded from a larger point of view, are indicative of patterns of migration. Migration can refer to short-term movement without the intent to settle and as such is a phenomenon quite common in the animal world and indeed of pastoral peoples who follow their flocks. The term "migration" can also describe movements of people from one region to another to settle permanently, either looking for improved economic or political opportunities or fleeing a calamity in their place of origin. Analysts explaining migration usually refer to the socioeconomic push and pull factors that encourage such movements. Our discussion will consider demographic shifts, international migrations, domestic migrations, and ethnic and forced migrations as well as travel and technology.

An examination of the larger demographic shifts in world population for this period aids in an understanding of overall patterns of mi-

gration, whether voluntary or forced. The overall demographic trends indicate that there was an increase in world population in the first half of the twentieth century, growing from 1.65 billion in 1900 to 2.52 billion in 1950. The main reasons for the increase were technological improvement in food production and better hygienic practices and health care. This population

growth was somewhat hampered by the carnage caused by the two world wars, with World War I claiming 20 million lives and World War II claiming roughly 72 million lives. However, it is important to note that the two wars did not stop the world population growth but instead merely moderated its rate. The largest growth occurred in North America and South America, and the largest decline occurred in Europe. In 1900 Europeans amounted to 24.7 percent of the world pop-

The overall demographic trends indicate that there was an increase in world population in the first half of the twentieth century, growing from 1.65 billion in 1900 to 2.52 billion in 1950.

ulation, whereas in 1950 they only amounted to 21.7 percent. Several factors contributed to this significant drop. First, Europeans migrated to other parts of the world, in particular North America, South America, Asia, and Oceania. Second, the two world wars and associated genocides (most notably the Holocaust) were responsible for millions of dead and wounded in Europe, given the fact that the bulk of the fighting happened on that continent. Third, the population of the rest of the world grew at a much faster rate, leaving Europe proportionately behind. Finally, simply stated, Europeans had fewer children, and the traditional European pattern of marrying later in life and having small families continued.

For the period from 1900 to 1945, migrations are divided into three categories: international migrations, domestic migrations, and forced migrations. International and domestic migrations were largely voluntary, whereas forced migrations were obviously involuntary. Overall, it could be said that the movement was largely from less industrialized agrarian areas to the industrialized hubs of the world, namely western Europe and North America. Thus, for example, the largest international migration of the period was the movement from impoverished agrarian areas of southern and eastern Europe to rapidly industrializing areas of the eastern seaboard of North America and the Great Lakes region. Domestic migrations in China, Italy, Germany, France, Mexico, and the United States also involved the movement of impoverished agrarian workers to industrialized regions. One of the most famous migrant routes in the United States was U.S. Route 61, known as “the Blues Highway,” that led poor blacks from the Mississippi Delta near New Orleans through Memphis all the way to the industrial plants of the Chicago South Side.

This picture of one-directional movement of people, however, is somewhat misleading. The industrialized economy affected the world in many ways, creating several layers of interdependency and allowing for more than one-directional movements of people. For example, many small farmers from either Europe or Asia were forced to migrate and search for land in the areas that were less affected by industrialization and massive food production. Migrants from agrarian southern Italy moved to South America looking not for work but instead for cheap and fertile farmland. Moreover, international diasporic communities offered transnational economic linkages and cultural exchanges between peoples on a global basis to aid such migrations.

The migrations in the first half of the twentieth century were not only limited to voluntary labor migrations but also included forced migrations. Two global wars and numerous local conflicts pushed millions from their homes, in most cases permanently. The two world wars moved most of the world population. In particular, millions of East Europeans were moved from eastern Poland and Belarus during the Soviet invasion in 1939. German policies of forced resettlement in eastern Europe are well known during the period between 1941 and 1944. Long before the war, the Jewish populations of Germany, Hungary, Poland, and the Soviet Union were attempting to leave for British-controlled Palestine in the hopes of finding a safe haven. Millions of East Europeans, an ethnic group considered suitable only for hard manual labor, were

transported to Germany and put into forced-labor camps working for German industrial brand names. Millions of Germans from eastern Prussia and western Poland departed before the advancing Soviet Army and permanently lost their homes. The massive reshuffling of the Soviet population under Stalin displaced so many people from their traditional homelands that the effects are still being felt to this day. Finally, during the many anticolonial struggles, millions of white settlers in former colonies moved back to Europe either willingly or forcibly.

—*H. Micheal Tarver, Alexander Mirkovic,
and Abraham O. Mendoza*

■ Introduction: Urbanization

From 1900 to 1945, the rapid urbanization of much of the industrialized world in Europe, North America, Asia, and Oceania continued the trend that had begun in the prior century. Urbanization was augmented by a vast pattern of international migrations as well as domestic migrations from rural to urban centers, as industry's demands for a larger labor force attracted people in search of employment. Industrialization and modernization shaped the modern city. New York City, London, Berlin, Beijing, Tokyo, Sydney, Mexico City, Moscow, and Buenos Aires, among others, vastly expanded and developed into the major metropolises of their respective nation-states during this period. This growth was aided by the development of urban infrastructure that included new transportation and communications systems enhanced by access to electrical power. Modern architecture allowed for the spatial expansion of cities horizontally and vertically. During the interwar period, the spread of the electrical power network and electrification reshaped factories and homes and brought in new entertainments and consumer products, changing lifestyles for urban residents. Other world regions, particularly in the colonial world, also experienced a boom in the populations of their cities, albeit to a lesser extent, but established a pattern that would vastly accelerate in those regions after 1945.

—*Abraham O. Mendoza*

Trends toward Urbanization in Africa

At the Berlin Conference of 1884–1885, 14 European colonial powers agreed to partition Africa for economic exploitation. After the conquest, the continent was divided and effectively occupied while political systems, regulations, laws, and administrative structures were implanted. Transportation infrastructures were among the key areas of urban development in which colonial authorities invested most of their financial resources in order to secure trade routes. Moreover, the construction of railway systems was never intended to promote regional development. Instead, its main concern was merely to connect the hinterland to the seaports in order to transport goods and products abroad. Likewise, telecommunications were also restricted to urban centers, linking major cities in the colonies with their ruling country in order to transform African cities into European dependencies. The colonial powers established major centers for transportation, marketing, and administration where decisions were made regarding the establishment of capital cities. Places such as Dakar in West French Africa, Ouagadougou in Burkina Faso, and Brazzaville in French Equatorial Africa were established according to the socioeconomic and administrative organization of the territory. In the case of the Congo and Rwanda-Burundi, the Belgians planned and laid out approximately

180 towns with the same purpose. The other colonial powers built new centers displaying distinctive urban patterns and layouts reflecting the cultural influences of their respective colonial rule. As part of establishing the colonial governments' administrative centers, Western institutions such as schools, hospitals, prisons, and churches were created that reinforced their cultural dominance and imposed a particular urban way of life. The construction of transportation and waterfront infrastructures led to the rise of major port cities, such as Dakar in Senegal, Abidjan in Côte d'Ivoire, Takoradni and Jema in Ghana, Lagos and Port Harcourt in Nigeria, Mombasa in Kenya, and Dar es Salaam in Tanzania. It is worth noting that colonial powers discouraged any attempt at developing local indigenous industries in African towns. Furthermore, planning in this context was not effective in dealing with urban problems since underlying economic inequalities were not addressed; instead, regulations were used to reproduce the structural conditions of inequity.

—Alfonso Valenzuela-Aguilera

Bibliography

- Becker, C. M., A. M. Hamer, and A. R. Morrison. *Beyond Urban Bias in Africa: Urbanization in an Era of Structural Adjustment*. Portsmouth, NH: Heinemann, 1994.
- Mabounje, A. L. "Urban Planning and the Post-Colonial State in Africa. A Research Overview." *African Studies Review* 33(2) (1990): 121–203.
- O'Connor, A. *The African City*. London: Hutchinson, 1983.

Trends toward Urbanization: Asia and Oceania

During the first half of the twentieth century, urban populations in Asia rapidly increased at rates higher than that of Europe and the Americas. Moreover, Asian urban population growth was responsible for the general rapid increase in the aggregate world urban population of the period. In 1905, Asia had more large cities than did Europe or North America.

Major Asian cities and their growth offer concrete images of urbanization trends in the

region. Kawasaki, Japan, the Asian city with the highest growth rate during the first half of the twentieth century, went from a small village of 4,000 people to a city of 319,000 inhabitants, a seventy-eight-fold increase of total population. The second city was Harbin, China, which grew from 20,000 inhabitants to more than 1 million inhabitants, a transformation that informs one important feature on urbanization trends of the region, which is the recurrent emergence of large cities of populations of more than 1 million inhabitants. By the mid-twentieth century, ten Asian cities had populations that exceeded 1 million people: Harbin, Dalian, Jakarta, Shenyang, Shanghai, Karachi, Saigon, Seoul, Lahore, and Calcutta. It is worth mentioning that by midcentury, Shanghai—with more than 5 million inhabitants—and Calcutta—with

➤ JAKARTA (BATAVIA)

In 1947 Java was one of the most densely populated regions of the world, with an average of over 800 people per square mile and a total of 57 million inhabitants, within which the city of Batavia, later called Jakarta, reached a density of over 3,000 people per square mile. The Culture System, implemented by the Dutch during the nineteenth century, was a major contributor to this population congestion. The system compelled Javanese farmers to give part of their land and labor to commercial large-scale agriculture for export. This led to population growth at a rate of 33 percent per decade in the last phase of its implementation. In 1905 the Dutch government instated a transmigration program, one of the largest state-determined rural colonization policies to prevent overpopulation. Nevertheless, the population of Batavia increased from 116,000 people in 1900 to around 2 million in 1950. This was due to changes in government policy during the first half of the twentieth century with the application of a new approach to overseas governance, known as the Ethical Policy. Batavia became an administrative and economic center, the most modern city in Southeast Asia, and the stage was set for the emergence of twentieth-century nationalist movements for independence.

—Andrea Yuri Flores Urushima

more than 4 million inhabitants—had already reached a metropolitan scale.

Massive growth in major Asian cities reinforced the historical importance of trade, industry, and transportation as premises of urban modernization. The largest Asian cities were important trade-industry centers, strategically located in relation to infrastructural transportation systems. Moreover, with the exception of Karachi, Lahore, and Calcutta, the cities developed under Japanese economic influence and experienced differing levels of colonial rule during this period. Comprehensive analysis is complex not only because of the general lack of comparative statistical references but also due to the fact that this was a period of enormous instability brought about by successive wars and movements for decolonization, paralleled with the emergence and decline of Japan as a regional imperialist state. Even by midcentury, however, Asia was the second least-urbanized continent of the world, behind Africa. This suggests that the region was still largely rural, even though China, Japan, India, and most of the Asiatic triangle from Pakistan to Japan had developed urban centers that existed prior to European colonial expeditions.

Southeast Asian and Oceanian urban traditions were less settled, and the colonial period definitively shaped modern urban development. In Southeast Asia, European and North American colonial rule—which had begun in the seventeenth century—was contested by nationalist movements that developed in major colonial cities that tended to be composed of more educated populations. Australia and New Zealand populations were concentrated in main colonial cities that were less dependent upon neighboring Asiatic countries but more directly connected with Britain and immigration from the British Isles. Similarly, considerable portions of Melanesia and Polynesia had received European migrants and witnessed major transformations due to colonial economic enterprises. Although the urban growth rates during the first half of the twentieth century were not exceptionally high in Southeast Asia or Oceania when compared to East and South Asia, the region had definitively centered around a modern urban

economy and way of living, which resulted in startling postwar urbanization growth.

Generally, urbanization in Asia was stimulated by the world population growth and the establishment of modernization trends at pioneering industrial centers. Modernization—whose fundamental starting point is technological advancement in agriculture, transportation, industrial production, and war industries—spurred new forms of sociopolitical organization. Developed in the context of historical transition from imperial powers to new modern nation-states, these new forms of organization triggered a more integrated global economy, and the industrialization of Asia contributed to them. Industrialization had first transformed cities in western Europe and North America, supported by the supply of materials, labor, and markets from the colonization of foreign territories. Improvements in transportation, which at first supported colonization efforts and international trade, boosted internal migration on an unprecedented scale, evidenced by the subsequent rise of Asian urbanization rates.

Furthermore, once agriculture became more productive and efficient through mechanization and new scientific research, the overpopulation of areas with limited resources pressed internal and transnational migration to the cities and transcontinental migration to other world regions. Widespread migration led to growth in the existing Asian cities and occupation of inhabited areas, especially in Southeast Asia and Oceania. Overpopulated territories, with internal competition for labor opportunities, succumbed to the international demands of new labor markets created by colonial expansion.

—Andrea Yuri Flores Urushima

Bibliography

- Cohen, R., ed. *The Cambridge Survey of World Migration*. New York: Cambridge University Press, 1995.
- Gilbert, G. *World Population: A Reference Handbook*. 2nd ed. Santa Barbara, CA: ABC-CLIO, 2006.
- Mitchell, B. R. *International Historical Statistics: Africa, Asia & Oceania, 1750–2005*. 5th ed. Basingstoke, UK: Palgrave Macmillan, 2007.
- Silver, C. *Planning the Megacity: Jakarta in the Twentieth Century*. London: Routledge, 2008.

Trends toward Urbanization: Europe

Urbanization in Belle Époque Europe reflected the impact of the dual processes of modernization and industrialization. Over the course of the first half of the twentieth century, urbanization would be drastically affected by the contingencies of technological advances, rapid sprawl due to growing populations, and wartime bombing during World War II. From the modernization of urban centers such as the Ringstrasse in Vienna reflecting the impact of liberal ideals in the late nineteenth century to the dull blocks of government housing in the postwar era created by the nascent welfare state, urbanization in Europe during the first half of the twentieth century represents a manifestation of multiple political, social, and economic changes.

The Second Industrial Revolution of the late nineteenth and early twentieth centuries was characterized by advances in the transport, communication, chemical, and energy industries. While urban growth in the first half of the nineteenth century centered on the growth of factories and the unorganized sprawl of working-class housing (resulting in atrocious living conditions adjoining the old city centers outside the old medieval walls), new transportation networks—facilitated by newly built railroad networks and tram systems—allowed for a more expansive city with adjoining suburbs. New building materials, also made available through the products of industrialization, made building *en masse* more affordable and expansive, and massive urban renewal projects in major metropolitan areas such as Paris, Vienna, and Berlin allowed these innovations to restructure decaying urban areas into sprawling modern cities.

The influence of liberalism manifested itself in various public works projects, such as the building of the Ringstrasse in Vienna and of broad new boulevards in Paris. The massive rebuilding of city centers to celebrate the nationalistic and liberal spirit of each nation was represented in beautiful new buildings such as parliament houses, courthouses, and city squares. Art museums, botanical gardens, promenades, cultural centers, and other beautification projects illus-

trated the impact of civic pride and public wealth on the urban landscape. The Houses of Parliament in London are an example of this phenomenon. To a lesser extent, the impact of steel made some of the building of this period vertical, as skyscrapers made limited inroads in the skylines of European cities, although mostly it was put to use in the construction of bridges and railroads. The Eiffel Tower represented this emergent obsession with the potential of modernity and modernization with the possibilities of steel.

Around the turn of the century, socialist legislation in some European cities allowed for the construction of low-income housing for working-class families. The Karl Marx-Hof in Austria is an example of government-subsidized housing using simple designs that provided affordable housing to workers. This type of socialist public housing project would later be used in Weimar Germany in various cities as well as after World War II throughout much of Europe. Socialist parties in Europe advocated for government housing for the lower classes in their platforms.

World War I ignited a period of warfare traversing four years that led to widespread destruction on the western front. However, it also led to a stagnation of government expenditures on infrastructure, as most funds went to war production. European cities became bastions of workers who mobilized on the home front to work in munitions and war-production factories. In the midst of World War I, the home front became pivotal to the pursuit of total war. Trams and trains took soldiers to the various fronts; trucks carried supplies to the rear lines. As such, in this manner the face of war attached itself to the urban landscape.

The interwar period (1919–1939) combined social experimentation with modern architecture. Architects such as Walter Gropius created buildings meant to exemplify the simplicity of modern design with socialist ideals in community housing projects. The social and political liberties of Weimar Germany allowed many of these innovative architectural experiments to thrive. The building of the Paris Métro illustrated the French efforts to create a systemized network of transportation that would integrate

all the metropolitan suburbs with Greater Paris. The building of massive factories in the nascent Soviet Union presented Europe with an example of the possibilities of architecture in the new socialist world, exemplified by beauty, and order for the proletariat masses. The construction of the autobahns in National Socialist Germany as a military measure, but also as a way of constructing highways for the purpose of creating another infrastructural improvement, integrated the Reich economically and politically. Many public works projects undertaken in this period to meet the economic collapse of the Great Depression resulted in numerous infrastructural improvements in urban areas that concentrated on improved roadways, railroad stations, and subway systems. In turn, this changed the dynamic and layout of cities to correspond with the relationship of the suburbs with the city center, which now also included automobiles to a greater extent.

The massive amount of destruction created by the contingencies of warfare during World War II necessitated a massive amount of rebuilding throughout Europe. Britain, France, and Germany sustained immense amounts of damage to metropolitan areas due to aerial bombardment and artillery attacks, not to mention the prevalence of fires in the midst of such attacks. During the war, there was little to no construction in the cities of Europe; most construction took place outside urban areas to conceal worker settlements in an attempt to avoid bombardment. Inside urban areas, there was much in the way of construction of defensive structures, such as bunkers, shelters, and flak towers. These reinforced concrete and steel structures throughout much of Europe are an example of the contingencies of war in urban areas. The widespread destruction of urban areas in the Third Reich necessitated that the government be proactive in ensuring the survival of urban residents in the midst of aerial attacks due to their value as workers for the war industry. The vast destruction suffered by European populations was met by an immense amount of reconstruction, assisted by American auspices in the form of the Marshall Plan in the midst of the Cold War antagonism with the Soviet Union.

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Bibliography

- Hobsbawn, Eric. *The Age of Empire: 1875–1914*. New York: Vintage, 1989.
- Hobsbawn, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Schorske, Carl E. *Fin-de-Siècle Vienna: Politics and Culture*. New York: Knopf, 1980.
- Winders, James A. *European Culture since 1848: From Modern to Postmodern and Beyond*. New York: Palgrave, 2001.

Trends toward Urbanization in the Americas

The process of urbanization, the concentration of population in urban centers, is the product of large-scale transformations in the organization of society due to a combination of processes of economic, political, technological, and demographic nature. At the global level, the earliest significant trends toward urbanization were the result of the intensification of international trade and the reinforcement of state power in the eighteenth century that led to the growth of ports and capital cities, respectively. During the nineteenth century, technological innovations and the development of industrial capitalism, which concentrates the labor force in urban centers, greatly accelerated the pace of urbanization. During the twentieth century urbanization trends spread worldwide, not only because of increased industrialization but also due to demographic processes that have pushed populations from rural areas to the cities.

At the turn of the twentieth century, one in eight people lived in urban areas at the global level, and only Great Britain was an urbanized society with more than 50 percent of its population living in urban centers. In the sparsely populated Americas, European immigration played an important role in making the young nations urbanized territories. Argentina and Uruguay became urban nations in the first decade of the twentieth century, while the United States reached this status slightly before 1920. Canada, Cuba, and Chile followed, yet the rest of the Americas was only slightly urbanized during that time, although it had many cities and towns within its vast territory. Unlike the colonization of North America, which began on the northeast coast and ad-

vanced westward, Spanish and Portuguese colonization occurred earlier and was more evenly distributed across the territory. Many cities were located on the Atlantic and Pacific coasts, as colonial trade and mine extraction were the most important economic activities.

Due to the obvious differences between North and South American economic development, urbanization trends developed at different tempos. Whereas 25 percent of the population in the United States lived in urban centers in 1870, Latin America reached that rate of urbanization only in 1925. Its cities began to grow only in the late nineteenth century when European capital was introduced in the region, searching for the raw materials and foodstuffs needed by European nations undergoing industrialization. While North America was industrializing, Latin American nations exported primary commodities—meat and cereals, wool, coffee, cacao, fruit, sugarcane, wood, fertilizers, and minerals—and imported tools, iron, steel, textiles, and other manufactured goods.

Latin America's export-oriented economy favored the growth and development of port cities. Between 1880 and 1920, railroad networks were built to connect the largest ports with inland areas in Argentina, Uruguay, Mexico, Chile, Cuba, Brazil, and Peru. Unlike North America, where the railroad networks gradually advanced westward, structuring the territory and promoting industrial development, Latin American railroads remained monocentric and centralized in the ports. Instead of decentralizing and building up an urban system, they reinforced urban primacy and concentration in the port cities.

The assimilation of these ports into the global trade promoted a flow of European immigration to Latin America, which mainly headed to Argentina, Uruguay, southern Brazil, and Cuba. Most immigrants, however, did not settle in the interior of the country, as was initially intended, but instead remained in the cities, working in petty commerce, the construction sector, incipient industries, or the recently formed state apparatus. Consequently, these countries experienced a swift process of urbanization. On the other hand, urbanization trends did not affect disadvantaged regions with weak transportation systems and large-scale landownership. Although

➤ MOST POPULOUS CITIES IN THE AMERICAS IN 1900 AND 1950

Population in 1900 (in thousands)		Population in 1950 (in thousands)	
1. New York	3,437	1. New York	7,892
2. Chicago	1,698	2. Buenos Aires	4,622
3. Philadelphia	1,293	3. Chicago	3,621
4. Buenos Aires	867	4. Mexico City	3,145
5. Rio de Janeiro	691	5. Rio de Janeiro	2,885
6. Saint Louis	575	6. São Paulo	2,333
7. Boston	561	7. Philadelphia	2,071
8. Mexico City	541	8. Los Angeles	1,970
9. Baltimore	509	9. Detroit	1,849
10. Cleveland	382	10. Santiago	1,509

Sources

- C. Gibson, *Population of the 100 Largest Cities and Other Urban Places in the United States: 1790 to 1990*, Population Division Working Paper No. 27, U.S. Bureau of the Census, Washington, D.C., 1998.
- J. E. Hardoy, ed., *Urbanization in Latin America: Approaches and Issues* (New York: Anchor Press/Doubleday), 1975.

—Ana María Fernández-Maldonado

less extreme than in South America, urbanization trends in North America were also uneven. Striking differences could be seen between the urbanized Northeast of the United States (with 66 percent of its population being urban in 1900) and its rural South (with only 18 percent of its population being urban at that time).

In the nineteenth century, New York City became the unquestionable gateway for European immigrants coming to North America, as the city was a world center for international movements of goods and capital. In 1900 New York City had approximately 3.5 million inhabitants and was by far the largest city in the Americas. Chicago and Philadelphia had approximately 1.7 million and 1.3 million residents, respectively. Buenos Aires, the equivalent of New York in South America, was the fourth-largest city in the Americas, with approximately 867,000 inhabitants in 1900. Rio de Janeiro, the then capital of Brazil, was the fifth largest with approximately 692,000 inhabitants.

The prosperity from their export-oriented economies led Latin American states to modern-

ize at the turn of the twentieth century. A professional class and a state bureaucracy emerged; technical universities were created to train the engineers needed for the feverish pace of the construction sector. The old colonial centers expanded, and the first industries were located on the cities' fringes. Systems for drinking water, sewage, electricity, telephone, and tram-lines were built. Modernization and the new urban facilities also attracted an internal migration flow from the provincial elites.

After World War I, European influence gradually decreased, while that of the United States, in terms of investments and cultural influence, rose. The global economic crisis of the 1930s brought an abrupt end to the export-led economic model in Latin America and a subsequent strengthening of inward-oriented industrialization. Governments imposed high tariffs on imports in order to promote industrialization via import substitution. Urbanization trends intensified because most factories were located in large cities, close to their markets and labor forces. The resulting migration to these urban centers increased their primacy and made regional differences even more pronounced.

New York and Buenos Aires were the most populous cities in the Americas in 1945, but they would not be so for long. Soon after, urbanization trends in Latin America accelerated drastically through a process of demographic transition triggered by improvements in health, food, and hygiene. The subsequent lowering of mortality rates greatly increased natural growth, which in turn resulted in an unprecedented rural-to-urban migration flow.

—Ana María Fernández-Maldonado

Bibliography

- Fernández-Maldonado, Ana María. "Changing Spatial Logics in Latin American Metropolises." In *Globalization, Urban Form and Governance: Globalization and Urban Transformation*, edited by M. Carmona and M. Schoonraad. Delft: DUP Science, 2002.
- Hardoy, J. E. "Two Thousand Years of Latin American Urbanization." In *Urbanization in Latin America: Approaches and Issues*, edited by J. E. Hardoy. New York: Anchor/Doubleday, 1975.
- Harris, Walter D. *The Growth of Latin American Cities*. Athens: Ohio University Press, 1971.
- Yeates, Maurice, and Betty J. Garner. *The North American City*. New York: Harper and Row, 1976.

■ Introduction: International Migrations

The period from 1900 through the 1920s was the apex of the wave of mass global migration that had begun in the 1830s. Per capita numbers reached heights that would not be attained again until the 1990s. European migration to the Americas rose to an average of 1.5 million a year from 1905 to 1914, while Chinese and Indian migration to Southeast Asia reached a peak of 1.25 million migrants a year from 1925 to 1930. The long-distance migration of Chinese, Russians, Koreans, and Japanese to Manchuria and Siberia also increased to nearly 1.4 million migrants a year in the late 1920s. Although much of this migration to northern Asia was not strictly international, it was still very much a part of the broader global pattern of labor migration into cities and resource-producing frontiers.

Migration histories centered on the Atlantic world often date the end of the first wave of mass migration to 1914. Looking at migration from a global perspective, however, makes it clear that the wave lasted into the 1920s. Taken together, the three major flows into the frontiers of the Americas, Southeast Asia, and northern Asia averaged over 3.3 million migrants a year in 1909–1913 and 1925–1929. Even transatlantic migration resumed its momentum after World War I, with up to 1.2 million migrants in 1924, after which it was curtailed by immigration quotas in the United States. The Great Depression marked the real end of this wave, with European migration shrinking to less than 150,000 a year in the 1930s and migration to Southeast Asia dropping by more than half. Migration to northeastern Asia, on the other hand, maintained a

pace of over 1.25 million a year, stimulated by command economies and coerced migration in the Soviet Union and the Japanese empire.

These vast migrations were all linked to the expanding global industrial economy. Factories in Chicago, London, and Tokyo needed laborers as well as the resources produced by migrants in the copper mines of the Congo, the coal mines of North America, the tin mines of Indonesia, and the rubber plantations of Borneo. These migrant workers were among the many global consumers of food produced by other migrants in places such as the newly reclaimed rice paddies of Southeast Asia, the coffee plantations of Indonesia and Brazil, the wheat fields of the American West, and soybean farms of Manchuria. New transportation and communication technologies carried migrants and their products, helped transmit information, and employed many workers.

Barriers against immigration grew hand in hand with the rise of international migration. The mid-nineteenth century was a period of nearly free mobility in which migration restrictions had been abolished in much of the world. In the half century after the 1870s, however, many countries around the world started to restrict migrants according to health, solvency, literacy, political desirability, and race. The 1924 U.S. quota law was the culmination of this trend, a milestone of technocratic management designed to select and manage optimal migration. It established categories of persons, such as merchants, family members, and professionals, who would enjoy free mobility while restricting other migrants to numbers designed to replicate the ethnic composition of the nation at an earlier period. By the 1930s most nations around the world had adopted some form of numerical immigration restrictions. Some nations, especially communist ones, even began to adopt exit restrictions in the 1920s, although these never gained the global legitimacy of immigration controls. Although the racism that motivated the quota laws of the 1920s has now been largely repudiated, the basic techniques of categorizing migrants and selecting them according to some conception of their qualifications and ability to contribute to the national welfare have been maintained and further refined up until the present.

This impulse to manage national populations also generated some of the first huge refugee movements of the modern world. Modern refugee flows have their origins in the population exchanges and expulsions among the Ottoman, Russian, and Austro-Hungarian empires in the nineteenth century, culminating in the expulsion of 1 million Armenians from Turkey in 1915. The emergence of a passport regime after World War I gave this problem a new dimension, as many persons fleeing communist Russia had no passports and were officially “stateless.” The reluctance of many nations to accept the large numbers of Jews fleeing Nazi Germany in the 1930s further brought refugee management into the global limelight, as did the millions of displaced persons in Asia and Europe as a result of World War II. With decolonization and the ethnic and political violence that accompanied the creation of new nation-states in the second half of the twentieth century, refugees have become one of the most visible aspects of international migration.

—Adam McKeown

Bibliography

- Ferenczi, Imre, and Walter Willcox, eds. *International Migrations*. 2 vols. New York: National Bureau of Economic Research, 1924.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- McKeown, Adam. “Global Migration, 1846–1940.” *Journal of World History* 15 (2004): 155–189.
- Zolberg, Aristide. “The Formation of New States as a Refugee-Generating Process.” *Annals of the American Academy of Political and Social Sciences* 467 (1983): 24–38.

Migration from Africa to Europe and the United States

While occurring in small numbers, African migration to Europe and the United States began in earnest in the first half of the twentieth century, beginning a trend that would accelerate in the postwar era, particularly to western Europe. The movement of Africans to Europe can be traced back to colonial relationships with European

➤ ALGERIAN MIGRATION TO FRANCE

Algeria was a French colony from 1830 until 1962. Many French, Italian, Spanish, and Maltese workers migrated to Algeria to take part in the growing agricultural industry as well as the rampant land appropriation by the European settlers from the Algerian peasants. Unlike France's other North African colonies, Algeria was integrated into the French state in such a way that Algerians were considered French, to a certain extent. In the early 1900s, Algerian men began to migrate to metropolitan France, entering through the port of Marseilles. Many followed suit, and by 1924 there were more than 100,000 Algerians in the French workforce, primarily in the coal mining, iron, steel, and car manufacturing industries located in Marseilles, Lyon, Saint Etienne, Lille, Strasbourg, and Paris. These men never intended to stay in France on a long-term basis. Rather, they viewed their position as temporary and vital to the financial survival of their families back in Algeria. In the 1920s, French settlers in Algeria, fearing the loss of their colonial labor pool, began spreading propaganda throughout mainland France, stating that Algerians were "criminals" and intrinsically "sexually aggressive." Fueled by these fears as well as a growing anxiety regarding Algerian nationalist movements, the French government carefully controlled Algerian migration into France.

—Jennifer Westmoreland Bouchard

powers in the nineteenth century. In the early to mid-twentieth century, African migration to Europe was encouraged by major European powers as a way to bolster each country's workforce before, during, and between the two world wars. The period 1900–1945 is commonly referred to by migration scholars as the second phase of African migration to Europe. Considered as cheap temporary labor, Africans were viewed as an interim solution to labor shortages and for performing jobs undesirable to locals. As a result of the Great Depression, however, their numbers dropped as jobs became scarce.

Africans were hired on as cheap laborers in the coal mining, iron, steel, and car manufacturing industries in France, the Netherlands, Britain, Belgium, and Germany. It was also common for Africans to be recruited as soldiers during

the world wars. During this period, the majority of immigrants to France and Britain came from each country's former colonies or possessions, due in large measure to the linguistic and political affiliations with their respective metropole. As such, the majority of African immigrants to France came from Senegal, Mali, Morocco, Algeria, and Tunisia, while the bulk of Britain's immigrants came from Gambia, Nigeria, Sierra Leone, and South Africa.

The main migration route for Africans to Europe was through North Africa, passing through either Spain, Italy, the Canary Islands off the coast of the western Sahara, the Spanish enclaves of Ceuta and Melilla, Malta, or the Italian islands of Lampedusa and Sicily. During 1900–1945, typically a combination of land and maritime forms of transportation were used to arrive on Europe's Mediterranean shores.

Voluntary migration from sub-Saharan Africa to the United States began in the 1860s. The first wave of immigrants from Cape Verde included a group of seamen who traveled to Massachusetts to work in the maritime industry. Cape Verdean women followed and were employed in East Coast textile mills and cranberry bogs. Until the beginning of the 1900s, these West Africans were the largest African-born population (except for Egyptians and white South Africans) living in the United States. Nonetheless, their numbers were quite minimal in comparison to other migration waves entering the United States from Europe and Latin America at that time.

In the early 1900s, African students were sent by Christian missions and churches in Africa to black colleges and universities in the United States. These students included Nnamdi Azikiwe (1904–1996) and Kwame Nkrumah (1909–1972), who later became the first presidents of Nigeria and Ghana, respectively. After graduating from Lincoln University, both men pursued graduate degrees at the University of Pennsylvania. With the exception of a few who married and stayed in the United States, the great majority of African students returned to Africa after completing their studies. Many of these individuals contributed greatly to their respective countries' development throughout the rest of the twentieth century.

Africans who settled in the United States and Europe between 1900 and 1945 were all

considered members of the African diaspora. As a result of the diversity of individuals coming from Africa as well as the regional specificities of the European or North African countries to which they migrated, myriad diasporan cultures developed. Each of these diasporan cultures claimed a unique combination of social, religious, and linguistic elements linked to both their former homelands and their host countries.

—Jennifer Westmoreland Bouchard

Bibliography

- Clarence-Smith, William. "Emigration from Western Africa, 1807-1940." In *European Expansion and Migration: Essays on the Intercontinental Migration from Africa, Asia and Europe*, edited by Pieter C. Emmer and Magnus Mörner. Oxford, UK: Berg, 1992.
- Curtin, Philip. *Why People Move: Migration in African History*. Baylor, TX: Markham Press Fund, Baylor University Press, 1990.
- Okpewho, Isidore, Carole Boyce Davies, and Ali A. Mazrui, eds. *The African Diaspora: African Origins and New World Identities*. Bloomington: Indiana University Press, 1999.
- Van Moppes, David. "The African Migration Movement: Routes to Europe." *Working Papers Migration and Development Series*, Report 5. Nijmegen, The Netherlands: Research Group Migration and Development (Department of Human Geography) Radboud University, 2006.
- Walvin, James. *Making the Black Atlantic: Britain and the African Diaspora*. New York: Cassell, 2000.

Migrations from Asia

The years between 1900 and 1945 represent a significant turning point for the global migration of Asians. In 1900 Asian immigrants in many parts of the world faced innumerable challenges, ranging from exclusion laws to violent attacks. With the onset of World War II and the Japanese occupation of East and Southeast Asia, migration trends changed dramatically. On the other hand, the war provided Asian immigrants in Western societies with the chance to flex their political muscle. Consequently, immigrant communities during this period created social, cultural, and

political structures that continue to affect global history today.

During the early years of the twentieth century many predominantly white countries, including Australia, Canada, and the United States, actively blocked Asian immigration. Politicians, labor leaders, and journalists repeatedly portrayed Asians as inassimilable economic threats. Nevertheless, Asians continued to find loopholes that allowed them to move to these countries.

At the same time, other countries encouraged Asian migration. Labor-intensive industries—such as sugarcane cultivation—desperately needed large numbers of unskilled laborers. To meet this demand, they looked to Asia as a source of contract laborers. A typical contract would stipulate that the company would pay for the immigrant's transportation and living expenses plus provide a small wage in exchange for a legally binding labor requirement that lasted a specified length of time, usually three to seven years. Exploitative practices often required laborers to extend the length of their contracts indefinitely.

As Japan's military swept through East and Southeast Asia in the 1930s and 1940s, Asian migration entered a new era. Japanese began settling in many of their newly won colonies. At the same time, non-Japanese Asians living in the West found that they were suddenly considered military allies. This in turn allowed them to expand their political participation in their adopted countries.

To better understand the vicissitudes of Asian migration, it is helpful to delineate the different types of settlers. As mentioned above, contract laborers made up a sizable portion of Asian migrants. For the most part these individuals came from extremely poor agricultural areas, although some were fleeing unbearable debt or other social or legal problems. Predictably, contract laborers were the most powerless of all Asian migrants.

Others had a greater degree of control over their situation. For instance, by the 1930s thousands of Asians had willingly left their home countries to study in prestigious universities in the West or in less prominent colleges in Japan. Upon returning to their home nations these students, including such individuals as Mahatma Gandhi, Deng Xiaoping, and Ho Chi Minh, played a tremendous role in twentieth-century history.



At the turn of the twentieth century, in addition to the gold mines of America and Australia, many Chinese also labored in South Africa. In this photograph, Chinese, African, and European miners work side by side in a South African gold mine. (Library of Congress)

Business immigrants also enjoyed relative freedom of movement. Chinatowns in such cities as San Francisco, Manila, and Bangkok provided moneymaking opportunities to entrepreneurial Chinese. Similar communities existed for other Asian immigrants with adventurous spirits and a healthy dose of business acumen. After succeeding in overseas trade ventures, individuals frequently encouraged their family members and friends to join them in their new environment, creating migration chains.

Asian migrants came from several different countries. By 1900 Guangdong province in southern China had established a long tradition of sending its residents abroad. Although exclusion laws curtailed their travel to North America, Chinese continued to find ways to move to “Old Gold Mountain” (San Francisco) and other cities in the United States and Canada. Others chose to go to the Caribbean or to Latin America instead. Still others chose Europe as their migration destination. During World War I, young Chinese men dug trenches along the western front. After the war, many of them stayed to study in Paris and other French cities. Although not as numerous, some Chinese immigrants relocated to the islands off the southeast coast of Africa, creating sizable Chinatowns in places such as Mauritius.

Yet the most popular destination for Chinese migrants was Southeast Asia. The British, Dutch, and French colonies in Southeast Asia drew hundreds of thousands of Chinese settlers.

South Asian Indians also migrated in large numbers between 1900 and 1945. Originating primarily from the Punjab area in India’s northwest, many of these travelers initially chose to go to Canada. Because both countries had colonial connections with Britain, Indians could move to Canada with few legal restrictions. Fearing a so-called turban tide, Canadian officials created new requirements designed to limit Indian immigration. Consequently, Indians increasingly chose to migrate to the United States and Europe. Others decided to travel to non-Western societies. Sikh laborers, for instance, worked in African colonies helping to build railways and roads. Indians also traveled in large numbers to Guyana, Trinidad, Fiji, and British Malaya.

Although Japan was more economically developed than either China or India, it nevertheless provided many of the immigrants of the early twentieth century. Many Japanese traveled to work as farm laborers in California and other western states. Some Japanese immigrants were contract laborers on Hawaiian plantations or in Peruvian mines. After colonial territories were secured in Taiwan, Korea, and Southeast Asia, millions of Japanese settled in these areas. Ironically, concurrent with Japanese migration to these colonies the Japanese military forcefully relocated thousands of Koreans to Japan to work in dangerous war-related industries.

The Philippines served as a fourth source of Asian immigration from 1900 to 1945. The imperialist ties between the Philippines and America opened the door for Filipinos to settle in California, Washington, Illinois, and other parts of the United States. After arriving in their new homes, these individuals soon realized that they were subjected to various discriminatory laws ranging from antiscegenation legislation to education-exclusion regulations. Besides the U.S. mainland, Filipinos also worked on plantations in the U.S. territory of Hawaii.

Koreans, Vietnamese, Indonesians, and other Asians also added to this large migration of humans. Asian migrants from all of these regions reacted and contributed to the tremendous tech-

nological, political, cultural, and military changes of the early twentieth century.

—David Kenley

Bibliography

- Adachi, Nobuko. *Japanese Diasporas: Unsung Pasts, Conflicting Presents and Uncertain Futures*. New York: Routledge, 2006.
- Brown, Judith M., and Rosemary Foot, eds. *Migration: The Asian Experience*. New York: St. Martin's, 1994.
- Clarke, Colin G., Ceri Peach, and Steven Vertovec, eds. *South Asians Overseas: Migration and Ethnicity*. Cambridge: Cambridge University Press, 1990.

Migration from Europe

The turn of the twentieth century witnessed a series of mass migrations from Europe to various parts of the world, including North America, Latin America, and Africa. Southern Europe experienced mass movements more than any other region after the 1920s, whereas most prior migrations came from the north European countries such as Germany, Ireland, and Poland. Several factors caused these mass migrations, including the development of nation-states in Europe and the Great Depression, which adversely affected living conditions for the middle class. While poverty and increased population density pushed middle-class Europeans to migrate, various host countries also adopted policies to encourage immigration.

Many citizens of southern Europe, particularly from Italy, engaged in farming at the turn of the century. Conditions in Europe began to decrease the ability of families to earn a living in agriculture amid a growing industrial society. At the same time, national politics favored industrialization, often at the expense of the needs of small farmers. Whereas most immigrants to North America settled in urban centers such as New York City, those who maintained a rural lifestyle predominately immigrated to South America.

Prior to World War I, U.S. policy and culture favored immigrants from northern Germany and Poland, in part due to the societal preference for

Anglo-Saxon and Nordic peoples, as well as Protestant immigrants. In addition, the United States already had a growing German population in regions like Wisconsin and Pennsylvania that was receptive to German language and culture. Following the war, however, the German language experienced a decline of popularity in U.S. society, and the number of German newspapers published in the United States dropped significantly.

Businesses in both North America and South America still viewed immigrants as a major source of labor, and southern Europeans began to dominate the immigrant population. Although large numbers of the immigrants during this time period came from Italy, a significant number of them also arrived from eastern Europe and Russia, of which many were Jews.

In the nineteenth century male immigrants outnumbered female immigrants, but by the turn of the twentieth century the gender bias began to level out. This was partly due to the large number of Italian immigrants who tended to relocate with entire families. On some occasions immigrants who became wealthy sponsored the migration of other family members in what was termed chain migration. Large numbers of Jews from central Europe also migrated to North America during this period, with large numbers residing in New York City. As with most immigrants of all ethnic backgrounds, they settled in fairly homogenous urban neighborhoods and worked in particular industries. Many Jewish immigrants worked in the bustling New York City garment industry, whereas Chinese immigrants in California worked on railroads. In total, the majority of European immigrants to North America settled on the east coast. European immigrants to the United States peaked in the first decade of the 1900s and continued to decline until the post-World War II era, at which time immigrants from other areas such as South America and Asia became dominant.

The predominance of Catholicism in many southern and eastern European communities created friction for those immigrants when they migrated to the United States. Whereas Catholicism and Judaism led to differing levels of discrimination in the United States, the predominance of Catholicism in South America led countries such as

➤ IMMIGRANT DISEASE INSPECTION



Doctor examines immigrants arriving from Europe for skin diseases at Ellis Island, 1902. (Library of Congress)

In addition to their observations while in transit, as immigrants arrived in the United States at Ellis Island (New York), they were observed and examined by public health officials for a variety of symptoms and diseases, including cholera, tuberculosis, epilepsy, influenza, and trachoma. If an immigrant appeared sick, they would be sent to the Ellis Island hospital for further observation and/or care. If, on the other hand, an immigrant was diagnosed with an incurable disease, they would be excluded from processing and returned to their foreign port of departure.

—H. Micheal Tarver

Brazil and Argentina to actively recruit from regions such as southern Italy. However, these recruiting methods were informed by various stereotypes of southern Italians such as possessing predisposed inclinations toward large families.

Of all South American countries, Brazil and Argentina attracted the largest numbers of European immigrants during the 1930s. This was partly due to government policies in conjunction with plantation companies that actively recruited southern Italian immigrants and paid for their initial passage. These plans specifically targeted the migration of entire families since companies thought that this would prevent internal

migration of workers and thus add stability to the labor force. However, neither country was prepared for the large influx of immigrants that occurred. Most immigrants faced difficult living conditions and often spent long periods in holding locations at ports awaiting an assignment to a plantation. Once the immigrants were on the plantations, business owners used a system similar to debt servitude to keep them on farms.

By the late 1930s and early 1940s many Italian immigrants began to move away from plantation housing. Some immigrants began settling their own communities beyond plantation borders or migrated to the cities looking for wage labor. Along with Italian immigrants, Jews also made up a large number of European migrants to South America. During this period many Jewish immigrants arrived from Russia. Although Italians migrated largely due to declining economic conditions, many Jews, who faced increasing discrimination, hoped to escape racism in Europe by starting farms in South America. Both of these migrant groups faced different levels of discrimination in both South America and North America. The economic and social freedoms that most migrants sought were only partially realized, as the Great Depression and racism continued to affect economic and social mobility.

Africa, while on a smaller scale, was also a recipient of European migrations during this period. Most European countries that possessed colonial holdings in Africa restricted migration to colonial officials and missionaries, who often stayed for a limited time. Prior to World War I, a limited number of immigrants from Germany settled in German African colonies such as Cameroon. However, migration from Europe to Africa was not significant during this period for several reasons. Considering the world wars, movement to Africa was often relegated to military personnel and officials who did not plan prolonged stays. When Europeans did migrate to Africa, they tended to congregate to coastal areas such as in Nigeria or the arid plains in Kenya. Racism dominated politics, and white settlers often controlled the most fertile regions and left the poorer lands to Africans. In Kenya, this developed into long-lasting strife between the two groups and led to the Mau Mau

Rebellion (1952–1960), which the British brutally suppressed.

—Adam Paddock

Bibliography

- Bethell, Leslie, ed. *Argentina since Independence*. Cambridge: Cambridge University Press, 1993.
- Blackbourn, David. *The Long Nineteenth Century: A History of Germany, 1780–1918*. Oxford, UK: Oxford University Press, 1998.
- Daniels, Roger. *Coming to America: A History of Immigration and Ethnicity in American Life*. New York: Perennial, 2002.
- Kindelberger, Charles P. *The World in Depression, 1929–1939*. Rev. ed. Berkeley: University of California Press, 1986.

Migration to Europe

At the beginning of the twentieth century, migration involving Europeans was characterized primarily by the flow of people from Europe to the outside world and the few who would return from their short sojourns abroad. There was also considerable migration from Eastern to western Europe due to employment opportunities in industrial regions such as the Rhineland in Germany. The dislocations created by World War I caused a massive refugee problem that resulted in a further movement of Central Europeans toward the northwestern part of the continent. The economic and political collapse brought about by the Great Depression ended most immigration outside of Europe in addition to precipitating xenophobic legislation that greatly diminished intra-European migration. World War II created a massive flow of migrations of coerced labor, ethnic expellees, and war refugees, resulting in a tremendous exchange of populations immediately after the global conflagration.

European migration to the United States, Latin America, and the British empire characterized much of the immigration history of early twentieth-century Europe. Thousands of Italians, Russians, Britons, and Poles proceeded to immigrate to the United States, while residents of the British Isles had access to the white dominions of the British empire such as Australia, New Zealand, and Canada. Thousands of Italians and Germans went abroad to Argentina and Uruguay

alongside people of various nationalities who migrated to Brazil, which was always eager to attract European migrants. There were instances in which some immigrants only went abroad to work for a short period and eventually returned home to settle with the economic gains made in their sojourns overseas. Some workers followed merely seasonal work from Europe to the Americas, not really setting down any roots. European anti-Semitism in the late nineteenth century and early twentieth century triggered the emergence of political Zionism, which helped encourage the vast migration of Jews to Palestine. In essence, the great bulk of migration during the first half of the twentieth century was characterized by net migration out of Europe.

Internal migration within Europe was characterized by the movement from rural to urban areas within nation-states as well as international movement from east to west and south to north. France and Germany, which were both rapidly industrializing, attracted Italian and Polish immigrants eager to fill the labor pools of industry. French industrial regions in Alsace-Lorraine gathered considerable numbers of immigrants as industrial workers, and Germany's industrial regions in the Ruhr and the Rhineland had considerable settlements of Polish and Italian workers. Immigration patterns within Europe reflected cultural affinities among nation-states owing to historical ties, alliances, and geographic proximities. Labor needs on the part of industrializing European nations allowed them to actively seek workers abroad.

The outbreak of World War I ended both external and internal migration within Europe. From 1914 to 1918 there was negligible movement among Europeans, as they were needed at home to work for the war effort of their respective nation-states. The end of the war and the collapse of the German, Austro-Hungarian, Ottoman, and Russian empires as well as the resulting creation of their successor states (i.e., Czechoslovakia, Yugoslavia, Poland, Austria, and Hungary), created a situation characterized by massive population exchanges, millions of refugees, and stateless people. The League of Nations, newly created by the Treaty of Versailles in 1919, attempted to offset the catastrophic problems of large numbers of stateless people

and changing borders by persuading these new countries to protect the rights of national minorities. In the interwar period (1919–1939), new nation-states such as Czechoslovakia and Poland had to accommodate the rights of Germans detached from the prewar German Empire. An influx of Jews from eastern Europe into Germany also created much resentment among right-wing nationalist groups such as the National Socialists.

The economic and political collapse caused by the Great Depression in the 1930s triggered massive changes in European migration patterns. Autarkic economic policies and restrictive immigration legislation hampered movement both outside and inside Europe. Fascist and National Socialist ideologues accused immigrants of Slavic or Jewish ancestry of contaminating the nation-state with their presence. Overall, the restrictive environment and instability during this period hampered migration considerably, although coercive legislation led to considerable Jewish emigration from Germany to Palestine or adjacent countries, at least by those who could afford it.

The outbreak of World War II ended European emigration from the continent to the outside world for the duration but spurred internal movement due to National Socialist policies regarding slave labor, the relocation of ethnic Germans, and the Final Solution to the Jewish question. Slave labor was implemented to augment the massive war industries necessary to ensure German military capabilities. Millions of French, Russian, and Polish citizens as well as many others were drafted for work inside Germany to free up millions of German men for combat. Millions of ethnic Germans were relocated from eastern Europe, primarily from territories belonging to the Soviet Union under treaty (Nazi-Soviet Pact, 1939), and were settled into areas recently seized from Poland, while the Poles were forcibly removed into the General Government (Eastern Poland). European Jews throughout Europe were forcibly seized, dispossessed, and shipped to ghettos in Poland. Given the stalemate of the war against the Soviet Union that had begun in 1941, the German policy toward Jews shifted from resettlement to extermination as German authorities were unable to resettle them in the provinces of the East as previously expected. Concentration camps in the

East were fitted with adjacent death camps, especially equipped to kill Jews en masse by gassing and disposing of their corpses quickly.

Following 1945, the massive dislocations of millions during the war in addition to a redrawing of borders and the beginnings of the antagonisms of the Cold War created a chaotic situation. Millions of displaced persons, among them the Jewish survivors of the Holocaust, had no country to which they could return. Drove of Germans expelled from the territories now occupied by the Red Army flooded westward into what would become West and East Germany. Former slave laborers returned to their countries after years abroad in deprivation and bondage. Millions of civilians whose livelihoods had been destroyed by the war sought to rebuild their lives abroad by moving to countries such as the United States, Australia, and Canada. In order to fill the depleted labor pools and to help rebuild their domestic economies, Britain, France, and Germany sought overseas guest workers from former colonial dominions and economically peripheral regions such as India, Algeria, and Turkey.

—Abraham O. Mendoza

Bibliography

- Fassmann, Heinz, and Rainer Munz. "Patterns and Trends of International Migration in Western Europe." *Population and Development Review* 3(18) (1992): 457–480.
- Hobsbawn, Eric. *The Age of Empire: 1875–1914*. New York: Vintage, 1989.
- Hobsbawn, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Kirk, Dudley. "European Migrations: Prewar Trends and Future Prospects." *Milbank Memorial Fund Quarterly* 2(25) (1947): 128–152.

Migration to Latin America

Mass migration to Latin America in the postcolonial period begins with the mid-1800s' boom in steamship transportation that brought the greatest numbers of southern and eastern European settlers into the large cities of the temperate southern regions of the Americas, especially Buenos Aires, Montevideo, and São Paulo. During the period 1851–1924, some 46 percent of all immigration to Latin America was destined for

Argentina, 33 percent for Brazil, and 4 percent for Uruguay, this last case being especially remarkable given the republic's relatively small area and population base. The 1880s marked a turning point for immigration in most South American countries, beginning a major wave lasting until the 1930s with relatively minor declines during conflicts and times of economic weakness. The history of migration to Latin America during 1900–1945 entails several key flows of people, but the primary influx comprised these urban-bound Italians, Spaniards, Portuguese, German, and French as well as various Slavic nationalities from within the Austro-Hungarian and Russian empires and eastern Mediterranean groups from what was then the Ottoman empire. It is estimated that during the period 1854–1924 among the 11 million European immigrants to Latin America, 38 percent were Italian, 28 percent were Spanish, and 11 percent were Portuguese, while French, German, and Russian immigrants represented roughly 3 percent each, patterns that did not drastically change until immigration as a whole declined significantly in the late 1930s.

Jews were a part of these European movements, most of them Ashkenazi but also including numerous Sephardic arrivals, especially from Ottoman-influenced areas. Beyond European immigrants there were important Asian flows during this period, with the Japanese being the most sizable group and most significant in Brazil. Overall these varied inflows represented largely economic migrations, although persecution played a greater role in driving relocation for some, particularly those from crumbling empires.

Latin American countries became independent from Spain and Portugal mostly in the first half of the 1800s, with the notable exception of Cuba. There were few major inflows until the Southern Cone (Argentina, Uruguay, Chile) began to industrialize vigorously after 1880. Immigration increased drastically, fueling the industrial workforce, the commercial middle class, and urban populations generally. The numbers of European immigrants coming to the Americas in this turn-of-the-century period were similar to those in the settler societies of British dominions. After the United States (32.6 million European immigrants), Argentina received the most

(6.5 million) followed by Canada (5 million), Brazil (4.4 million), and Australia (3.4 million); in descending order, Cuba (1.4 million), South Africa (731,000), Uruguay (713,000), New Zealand (588,000), Mexico (270,000), and Chile (90,000) rounded out the top immigrant destinations for Europeans in the period 1820–1932.

Italians were migrating to all of the above destinations but especially North America, Australia, and the Southern Cone. Emigrants from across Spain went primarily to Latin America but especially to Argentina and Cuba. Together, Italian and Spanish arrivals made up the bulk of immigrants in the Southern Cone, where their experiences differed from immigrants of the same period in North America for three major interconnected reasons: first, immigrants in South American were coming to societies with somewhat lower levels of capitalist development, which made their existing skills superior to many residents; second, immigrants held relatively high social status among the receiving populations; third, the size of receiving societies was smaller than in the United States, facilitating assimilation. In Buenos Aires, for example, residential clusters representing ethnically specific neighborhoods did exist, but generally there was much dispersion of Italian, Spanish, and French immigrants among native Argentines in the city. In the Brazilian cities of São Paulo, Porto Alegre, and Rio de Janeiro, there was important Italian immigration but also an important flow of Portuguese nationals.

Several other important groups entered at this time. In the same cities mentioned above there was a notable German presence (both Jewish and non-Jewish), which helped cultivate a middle class of urban merchants. In Argentina and Chile a numerically small but economically significant influx of Britons managed large infrastructural utilities, commercial ventures, and export operations through ties with agricultural landowners. Arab immigrants were also key in the sector of urban commerce. Often called *turcos*, even in the present, they came in their largest numbers between 1900 and 1930 from what is now Syria, Lebanon, and Armenia, which were then within Turkish-controlled Ottoman territory. Records show that in the period 1896–1924 some 132,500 Middle Easterners immigrated to

➤ ASIAN IMMIGRATION TO LATIN AMERICA

Traditional thinking about migration to Latin America around the turn of the twentieth century focuses on flows originating in Europe. Indeed, the largest numbers of new arrivals at that time did hail from the Mediterranean region, with Italians, Spaniards, and Portuguese constituting 77 percent of all immigration to Latin America during 1854–1924. However, there were also important influxes of Japanese and Chinese, followed in later periods especially by Koreans, to several Latin American countries. In Brazil from 1900 to 1949, while those same Mediterranean groups combined to form 86 percent of all immigrants, the Japanese made up 5.7 percent, ahead of both Germans (4.5 percent) and Middle Easterners (3.5 percent).

Chinese merchants came to Mexico mostly before the revolution in 1910. Intermarriage with native-born Mexicans was frequent but commonly the focus of derision in popular culture. Xenophobic views of Asians were an easy fit with the strictly binary vision of postrevolutionary Mexican nationalism that upheld indigenous and Spanish influences as the basis of contemporary Mexico. This worked to the ideological exclusion of not only Chinese but also Japanese and numerous Arabs. Nonetheless, there was general upward economic mobility among these groups.

Although there were a few thousand Japanese populations settling in Peru (33,000), Mexico (14,500), and Argentina (5,400) at the beginning of the twentieth century, the largest flow from Japan by far was to Brazil. Some 188,000 Japanese citizens arrived in Brazil between 1899 and 1941, the period of greatest influx. This made Brazil the second-largest destination in the world for Japanese immigrants from the late 1800s to the

mid-1900s, second only to Hawaii (which was not yet an American state) with 231,180 and ahead of the mainland United States, where 197,253 Japanese arrived. Although many had intended to come temporarily, improve their economic fortunes, and return to Japan within a few years, from the Great Depression onward this was no longer feasible. Although there was not the same internment impulse in Brazil as in the United States, Canada and Peru—as well as forced relocation policies in Mexico—during World War II, there were significant social changes for Brazilian Japanese communities at that time. Nationalist policies in Brazil after the 1930s restricted facile short-term migration that would accumulate and export wealth. The same spirit also required greater adoption of the Portuguese language and Brazilian institutions among resident Japanese. Early concentrations of Japanese settlement in Brazil were in southern agricultural areas. However, through the 1950s there was extensive migration to the metropolis of São Paulo and a shift to urban employment. The São Paulo neighborhood of Liberdade (“Freedom”) represents the symbolic heart of Japanese Brazil, yet there is extensive residential integration of Japanese-descent Brazilians across the urban region within the middle and upper economic echelons.

Today Brazil is home to the greatest number (1.5 million) of people of Japanese descent outside Japan, far surpassing the United States or Canada. There is also a significant flow of Brazilians to Japan in search of work as well as permanent relocation. More than 200,000 Brazilians live in Japan today, many of Japanese descent.

—Ryan Centner

Argentina, while 7,826 entered Cuba during the same period. From 1900 to 1949 there were 114,848 Middle Eastern arrivals in Brazil, representing 3.5 percent of all immigration and placing this group behind Spanish (42 percent), Portuguese (29 percent), Italian (15 percent), Japanese (5.7 percent), and German (4.5 percent) entrants to Brazil in this period. Aside from the general “Turk” category, which could have indicated anyone from anywhere in the Ottoman empire, the national groups of Syrian and Lebanese

were the largest Middle Eastern categories. In Brazil alone between 1884 and 1939, Syrians made up 72 percent of arrivals from the region; Lebanese constituted 18 percent. The great majority of them were not Muslims but instead were Catholics (65 percent of all Ottomans in Brazil) and Greek Orthodox (20 percent in Brazil) who fled persecution, eventually flourishing in Latin America as urban entrepreneurs. Although there are important Syrian-Lebanese and other Ottoman-origin populations in many countries of

Latin America from Mexico to Colombia to Venezuela, the largest destinations at the time were Argentina and Brazil, which are also home to the most prominent communities of descendants today.

Nonurban immigration was also formative. Most noteworthy are the immigration of Irish farmers into Argentina and Russian Jewish farmers in Brazil, the influx of Japanese into rural Brazil and Peru, and the expansion of previously existing but remote German colonies in southern Brazil. British newcomers, especially in Argentina, took up ranching, which linked with compatriot exporters in Buenos Aires to provide an enormous supply of beef to Britain.

Immigration also occurred to other parts of Latin America. However, perhaps only Cuba was as extensively shaped by immigration as Argentina, Brazil, Uruguay, and Chile. The island nation is exceptional in that it is the only major long-term migration destination for Europeans in history with a tropical location. Colonial rule until 1898 facilitated a continuous flow of Spaniards unlike in the rest of Latin America, but after 1900 immigrants from the Canary Islands became especially important in both commerce and agriculture. Elsewhere, especially in the Caribbean and Central America but also in landlocked Bolivia and Paraguay, immigration was quite insignificant during this period. Mexico, Colombia, Venezuela, and Peru all received some amount of immigration from the disintegrating Austro-Hungarian and Ottoman empires at this time, with these arrivals mostly taking up work as urban merchants as in their southern counterparts, but the numbers were much smaller.

—Ryan Centner

Bibliography

- Baily, Samuel L., and Eduardo José Míguez, eds. *Mass Migration to Modern Latin America*. Wilmington, DE: Scholarly Resources, 2003.
- Elkin, Judith Laikin. *Jews of the Latin American Republics*. Chapel Hill: University of North Carolina Press, 1980.
- Endoh, Toake. *Exporting Japan: Politics of Emigration toward Latin America*. Urbana: University of Illinois Press, 2009.
- Karpat, Kemal H., "The Ottoman Emigration to America, 1860–1914." *International Journal of Middle East Studies* (1985) 17: 175–209.
- Klich, Ignacio, and Jeffrey Lesser, eds. *Arab and Jewish Immigrants in Latin America: Images and Realities*. London: Frank Cass, 1998.
- Lesser, Jeffrey. *A Discontented Diaspora: Japanese Brazilians and the Meanings of Ethnic Militancy, 1960–1980*. Durham, NC: Duke University Press, 2007.
- Lesser, Jeffrey. *Negotiating National Identity: Immigrants, Minorities, and the Struggle for Ethnicity in Brazil*. Durham, NC: Duke University Press, 1999.
- Lesser, Jeffrey, ed. *Searching for Home Abroad: Japanese Brazilians and Transnationalism*. Durham, NC: Duke University Press, 2003.
- Masterson, Daniel M., and Sayaka Funada-Classen. *The Japanese in Latin America*. Urbana: University of Illinois Press, 2004.
- Mörner, Magnus, and Harold Sims. *Adventurers and Proletarians: The Story of Migrants in Latin America*. Pittsburgh: University of Pittsburgh Press, 1985.
- Moya, José. *Cousins and Strangers: Spanish Immigrants in Buenos Aires, 1860–1940*. Berkeley: University of California Press, 1998.

Migration to North America

In the first half of the twentieth century, immigration into North America was sustained by high numbers of European immigrants mainly from Southern and eastern Europe and to a lesser degree from the British Isles and northern Europe, which had traditionally been the countries of origin for most immigrants to North America in the latter half of the nineteenth century. Both the United States and Canada received millions of immigrants between 1900 and 1914, but this trend ended with the outbreak of World War I. Furthermore, postwar anxieties over labor shortages, political radicalism, and widespread racism made both the U.S. and Canadian governments eager to curtail immigration from Asia and Southern and eastern Europe. Immigration from Latin America, mainly from Mexico, and the internal Great Migration of southern blacks to northern cities, sustained U.S. labor needs after cutting off the spigot from Europe. Canada sought to attract immigrants from the British Isles, but labor necessities made it reluctantly accept other Europeans from less desirable regions. Toward the end of World War II,

➤ IMMIGRANT FAMILIES ANGLICIZE NAMES

In the early 1900s large numbers of southern Europeans continued to immigrate to the United States. Families such as the Salvatore and Maria Di Nuovo family in this photograph moved from Vicari, Sicily, to the United States in search of a better life. Many of the newly arriving immigrants also changed their names to more Anglicized versions; in this case Di Nuovo became Denova.

—H. Micheal Tarver



(Photo courtesy of H. Micheal Tarver)

both the United States and Canada made greater concessions to immigration from their Allies and from occupied Europe, allowing great numbers of displaced persons (DPs) to enter North America.

At the turn of the twentieth century, America was seen as a paradise by potential immigrants wishing to leave their socially and economically circumscribed situations in Europe and Asia. Both the United States and Canada had a tremendous need for labor as their economies industrialized and expanded. However, as the economic situation in northern Europe improved, particularly in Britain and Germany, the numbers of immigrants from those regions were drastically reduced. Protestant Britons and Germans were seen by both Canadians and Americans as the most desirable types of immigrant, as they were perceived as kith and kin and as easily assailable to national values. However, labor demands and economic dislocation in southern and eastern Europe al-

lowed for increased immigration from those areas. Jews, Slavs, and Italians, with their religions and cultural folkways, were not seen as potential Americans or Canadians but were accepted nonetheless, however reluctantly, to fill labor needs. In contrast, on the West Coast immigration from China and India was severely curtailed in both countries due to racist attitudes and growing xenophobia of the so-called Yellow Peril emanating from the East, with both the U.S. and Canadian governments responding to popular demands.

The outbreak of World War I in 1914 ended immigration from Europe altogether, given the situation on the high seas and the inability of people to leave for safer shores. Considering the high number of men in uniform, U.S. labor needs desperately required the use of other sources of labor. Filipino and Mexican farm laborers filled the gap in agriculture created by the war and by the growing number of black workers who had begun to move to the northern industrial centers in order to fill positions formerly held by white servicemen. These positions were potentially filled by eastern and southern Europeans. Continuing a trend begun early in the century, Puerto Ricans immigrated to New York City in large numbers seeking employment opportunities given their status as a U.S. colony. Following the end of the war and in light of the political situation abroad, namely the Russian Revolution and other upheavals in Europe, Americans, wary of anarchists and communists, demanded further restrictions on European immigration. The postwar Red Scare and the Sacco-Vanzetti Trial in the United States fueled domestic anti-immigrant attitudes further, spurring the growth of nativist organizations such as the Ku Klux Klan. Furthermore, as U.S. servicemen returned, employment opportunities granted to Filipino, Mexican, and black workers ceased. Widespread xenophobia and racism led to the Immigration Act of 1924, which severely restricted immigration from southern and eastern Europe. However, it had the unintended consequence of creating a greater need for Mexican and black labor to fill the gap created by the removal of the major source of U.S. immigration up to that point. Canada also faced labor shortages due to the fact that it lost immigrants who moved to the United States after spending a short time in

Canada. Wishing to offset this dire situation, Canada actively recruited for potential immigrants in interwar Britain, ravaged by economic and social instability. The numbers did not prove adequate to meet Canada's labor demands, and government officials reluctantly accepted greater immigration from southern and eastern Europe. However, the Great Depression in both the United States and Canada forced immigration to slow down throughout the 1930s under the economic constraints imposed by declining unemployment.

The international situation abroad, particularly given the rise of fascism in interwar Europe, also spurred restrictions on immigration. German Jews seeking asylum abroad were effectively barred from both the United States and Canada. However, small numbers of exiles from Europe were able to find safe haven as the situation in Europe worsened. As the grip of National Socialism in Europe tightened, the United States and Canada further restricted immigration amid the continuing economic slump. Also, Mexican immigration was halted completely, and large numbers of Mexican laborers, both foreign and native to the United States, were deported to Mexico in order to secure jobs for Americans. However, Canada continued to work in attracting British nationals to emigrate, as Britain too was eager to populate the self-governing dominions in its hope of creating imperial solidarity. The outbreak of World War II in 1939 ended all immigration into North America.

As growing exclusion had been the order of the day preceding the war, the closing years of the war saw an ebbing in racist and exclusionary immigration restrictions in both the United States and Canada. The need for Mexican farm labor was again recognized, and arrangements were made with the Mexican government for these *braceros*. Exclusionary legislation against Chinese immigrants was lifted in both the United States and Canada, given China's status as an ally against the Japanese. Upon the cessation of hostilities in 1945, both the United States and Canada took in great numbers of DPs from Europe to fill labor needs. Also, the Holocaust convinced their respective governments to take large numbers of Jewish survivors, especially in light of their previous reluctance to accept Jews during the interwar period. War brides, married

by U.S. and Canadian GIs stationed abroad, also entered North America at the end of the war.

—Abraham O. Mendoza

Bibliography

- Daniels, Roger. *Coming to America: A History of Immigration and Ethnicity in American Life*. 2nd ed. New York: Harper Perennial, 2002.
- Goldberg, David J. *Discontented America: The United States in the 1920s*. Baltimore: Johns Hopkins University Press, 1999.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Kelley, Ninette, and Michael J. Trebilcock. *The Making of the Mosaic: A History of Canadian Immigration Policy*. Toronto: University of Toronto Press, 1998.

Migration to Oceania

Three distinctive features demonstrate the complex migratory movements in the region known as Oceania. Both a geographical and geopolitical region in the South Pacific Ocean, Oceania encompasses Australia and New Zealand and their dependencies, as well as the subregions of Melanesia (including Fiji, New Caledonia, Papua New Guinea, Solomon Islands, and Vanuatu), Micronesia (including Guam, Kiribati, Marshall Islands, Nauru, and Palau) and Polynesia (including Samoa, Cook Islands, French Polynesia, Niue, and Tonga). Oceania, like other parts of the world in the late nineteenth century, was drawn into the global flows of trade, investment, and migration that were shaped by European imperial expansion and the transnational integration of economic and political activity. These processes transformed the region's demographics, politics, and economies.

The complex migration into Oceania can be characterized by the following three features. First, British migration to Australia and New Zealand since the late eighteenth century was a direct product of British convict transportation and empire-building in the Pacific Ocean, and both Australia and New Zealand emerged as settler colonies in the expanding British empire. Second, the Melanesian, Micronesian, and Polynesian islands fell under the sway of various Western powers, and intransigent migration in

THE WHITE AUSTRALIA POLICY

The White Australia Policy emerged during the colonial era out of a long tradition of racially motivated immigration practices that heavily favored European, primarily British, immigrants. There was enormous political and popular opposition to non-European immigrants, namely Chinese and Pacific Islanders, who arrived in Australia during the gold rushes or as cheap labor for rural plantations. By the time of the federation of Australia (1901), a national identity was already closely tied to the notion of a white homogenous society. To maintain such a society, the government, nearly unanimously, passed the Immigration Restriction Act of 1901 and implemented a dictation test that could be administered at the discretion of government officials to any potential immigrant. This test was often delivered in a language that was unfamiliar to the immigrant and thus became an effective means for controlling immigration. Race-based nationalism and an unfounded fear of being overrun by the burgeoning Asian populations to the north remained the driving forces behind the White Australia Policy for the better part of the twentieth century until the policy was officially dismantled in 1972.

the region was a defining feature of Oceanic globalization prior to 1940. Finally, Asian migration to Oceania coincided with capitalist interventions in agriculture and the developing global trade in commodities.

Initial migration to Australia and New Zealand largely comprised convict transportation that lasted until the mid-nineteenth century. Convict transportation was replaced by assisted labor migration aimed at developing trade in commodities that included wool, gold, and wheat against the backdrop of “white” settlement. Although the assisted migration policy was racially exclusionist and favored British settlement, European migration was permitted. Subsequently, the 1901 Immigration Restriction Act (Australia) meant that non-Europeans could only enter on a temporary basis.

Continuing labor shortages had earlier led to importation of South Sea Islanders, mainly from Melanesia, as indentured labor to work in the

sugar plantations of Queensland. Most of them were officially repatriated in 1906–1908, following passage of various exclusionary regulations.

Chinese and Indian labor migration to Oceania was an integral dimension of the global trade in commodities. Chinese migrants entered a much more diversified and open labor market in Australia and New Zealand, initially as indentured workers under the credit-ticket system or as free immigrants who paid their own passage. They were also more mobile than Indian immigrants. In 1857, there were 26,000 Chinese miners on the Victorian goldfields, representing 32 percent of the mining population; however, their systematic exclusion under the Australian (and similar New Zealand) Restriction Acts resulted in the percentage of Chinese falling from 0.78 percent in 1901 to 0.16 percent of the population in 1947. In New Zealand, Chinese numbered 5,004 in 1881, but by 1916 their numbers had declined to 2,147.

Indian labor migration to Melanesia (Fiji) was consistent with Britain’s annexation of Fiji, imperial domination of India, and these colonies’ specific economic roles in the greater British empire. The migration of indentured Indian laborers to Fiji from 1879, to work for the Australia-based Colonial Sugar Refining Company, was a direct consequence of prohibition against the employment of indigenous Fijians as wage laborers. By 1916, some 60,000 Indians had been shipped to Fiji on five-year contracts. Many acquired land and stayed on, and by the 1940s Indians surpassed the Fijians and this trend was reversed only in the 1980s. Relations between Indians and Fijians were strained and fear and contempt between the two groups hindered assimilation in Fijian society. After independence, many educated Indo-Fijians left Fiji, and became “twice” migrants, mainly in Australia and New Zealand.

The colonial presence in Micronesian Oceania was initially identified less with plantation agriculture and more with strategic interests and resource extraction. At the turn of the century, Germany took over control of the Marshall Islands and acquired the Carolinas from a moribund Spanish administration, largely to facilitate the activities of a German company. Labor was sourced internally. After the Japanese took over the islands

in 1914, sugarcane cultivation was started and commercial fishing also became important.

Immigration to the main islands in Polynesian Oceania (Samoa and Tonga) was dominated by geopolitical considerations. In 1899, Germany took over Western Samoa while the United States assumed control over Eastern Samoa. From 1914, New Zealand occupied and administered Western Samoa under a mandate from the League of Nations.

—Amarjit Kaur

Bibliography

- Borrie, W. D. *Immigration to New Zealand 1854–1938*. Canberra: Demography Program, RSSS, ANU, 1991.
- Gibney, Matthew J., and Randall Hansen. *Immigration and Asylum from 1900 to the Present*. Santa Barbara, CA: ABC-CLIO, 2005.
- Hoerder, Dirk. *Cultures in Contact: World Migration in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Jupp, James. *The English in Australia*. Cambridge: Cambridge University Press, 2004.
- Lal, Brij V. *Girmitiyars: The Origins of the Fiji Indians*. Canberra, Australia: Journal of Pacific History Monograph, 1983.

Jewish Diaspora

Anti-Semitism, widespread discrimination and persecution, and little recourse for social mobility forced members of many Ashkenazi (German Russian and East European Jews) and Sephardic (Spanish, North African, and Middle Eastern Jews) Jewish communities to migrate in the first half of the twentieth century. Immigration quotas established in many host countries during the interwar period and during World War II, however, forced many Jewish migrants to seek other options. Many of them were unable to leave German-occupied Europe and became victims of the Holocaust despite the efforts of their fellow Jews in the United States and Britain.

Major events ranging from pogroms in late tsarist Russia to the Dreyfus Affair in the French Third Republic in the late nineteenth and early twentieth centuries convinced many Jews to emigrate. Many Ashkenazi Jews, following prior patterns of migration, immigrated to the United States, Canada, and Australia in growing num-

bers in reaction to the surge in anti-Semitism in Europe. In addition, Sephardic Jews in the Ottoman empire were also migrating to the Americas in greater numbers in the wake of World War I, driven by economic factors and the lack of social mobility granted in Ottoman society and in the Balkan successor states. Both Jewish groups also immigrated to the British Mandate of Palestine (after 1919). Jewish communities already established in the host countries, most notably in the United States, Canada, Australia, and South Africa, welcomed and assisted the newcomers with financial and institutional assistance. Furthermore, the development of the Zionist movement under Theodor Herzl (1860–1902) in the Habsburg empire opened the possibility for East European Jews to migrate to the Ottoman dominion of Palestine.

The outbreak of World War I cut off any immigration routes for European Jewry. However, the Jewish Diaspora communities fought for their respective host countries for both the Entente (Britain, France, and Russia) and Central

➤ INTERWAR ASYLUM—JEWS AND THE DOMINICAN REPUBLIC

In the 1930s when most of the world closed its borders to large-scale immigration from Europe, specifically Jewish migrants attempting to escape National Socialist anti-Semitism in Germany, the Dominican Republic was a rare exception. In 1938, Dominican Republic dictator Rafael Trujillo opened his country to 100,000 Jews seeking asylum. However, fewer than 1,000 Jewish migrants took up this offer, with most of them choosing to settle in the coastal community of Sosua. Trujillo, notorious for his massacre of approximately 25,000 Haitians in 1937, avidly encouraged Jewish immigration, as he felt that they would bring valuable skills that his country desperately needed as well as racial attributes to Europeanize Dominicans. While Jewish immigration to the Dominican Republic was comparatively small, it still signified an exception from the closed borders of the United States and the British Dominions, which had historically been open to large-scale Jewish immigration prior to World War I.

—Abraham O. Mendoza

powers (Germany, Austria-Hungary, and the Ottoman empire). British, ANZAC (Australia and New Zealand Corps), Canadian, South African, and American forces included Jewish officers and soldiers. The German and Habsburg forces also included large numbers of Jewish soldiers. Both sides were cognizant of the importance of Jewish communities within their countries and their support of the war effort. British foreign secretary Arthur Balfour had this in mind when he issued the classified Balfour Declaration, which suggested the possibility of a Jewish homeland in Ottoman Palestine to ensure the support of British (and Entente power) Jewry.

The end of World War I and the subsequent interwar period (1919–1939) were characterized by strict immigration quotas and growing xenophobia in many of the formerly hospitable host countries for Jewish immigration. In the United States, Canada, Australia, New Zealand, and South Africa, immigration legislation was put into place that set quotas for East European and Asian immigration and showed preference for migrants from Britain of “Anglo-Saxon racial stock.” Much of this legislation was aimed at preventing the entry of Jews and Slavs and ensuring the continued migration of superior Anglo-Saxon “racial stock” but was also due to fears of Bolshevism, which was associated with Jews in many of these countries. Furthermore, the newly acquired British Mandate over Palestine restricted Jewish immigration to small numbers, which hampered the ambitions of the Zionist movement. Nonetheless, many determined Jewish settlers entered the region illegally. Many Jews who had formerly sought refuge in these countries made do with migration to Latin America, mostly in Argentina and Brazil, until those places also instituted immigration quotas.

The establishment of the overtly anti-Semitic National Socialist movement in Germany in 1933 drove many German Jews to seek asylum elsewhere. However, strict quotas established in host countries limited their ability to leave the Third Reich. In spite of the clamor of established Jewish communities in host countries to assist downtrodden fellow Jews in Germany, political and economic considerations were given a higher priority than humanitarian

considerations. Furthermore, anti-Semitic and racist attitudes also led many politicians and officials to fear that too many Jews would migrate if given the opportunity. The few open spots available for those seeking asylum led to long lines outside of foreign embassies in Berlin, with many hoping to secure a spot. Wealthy Jews were typically able to secure a spot, while their less-wealthy cohorts were abandoned to the discrimination instituted by the Nazi state in the form of the Nuremberg Laws of 1935.

During World War II, millions of European Jews found themselves at the mercy of the Third Reich. The *Einsatzgruppen aktions* (massive shootings of Jews), massive starvation in the ghettos, and the “final solution” (destruction of Jews in death camps), which characterized the Holocaust, led to the estimated deaths of 6 million Jews in Europe. The Jewish Diaspora worked actively to bring the slaughter of their fellow Jews to the attention of the Allied Powers, but such demands mostly fell on deaf ears. Most of the political and military leaders of the United States, Britain, and the Soviet Union felt that the defeat of the Axis Powers was a higher priority than the destruction of the Nazi death camp infrastructure. With the liberation of the concentration and death camps by Allied forces in 1944–1945, many surviving Jews were placed in Displaced Persons (DP) camps, which were interim facilities. Large numbers of these DP Jews chose to go to Palestine, the United States, Australia, New Zealand, and Canada, with smaller numbers desiring to return home to Germany and eastern Europe. With the building outrage caused by the realization of the extent of the Holocaust, asylum was granted in North America and Oceania to many Jews. However, Palestine was closed to Jewish immigration by British authorities, sparking large-scale illegal immigration in the immediate postwar period.

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Bibliography

- Cohen, Robin. *Global Diasporas: An Introduction*. Seattle: University of Washington Press, 1997.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Lesch, David W. *The Arab-Israeli Conflict: A History*. New York: Oxford University Press, 2008.

■ Introduction: Domestic Migrations

The domestic migrations of people from rural to urban regions rapidly accelerated throughout much of the world from 1900 to 1945. Technological and scientific innovations in agriculture as well as rapid industrialization in various world regions prompted these internal migrations. In Europe, North America, and Oceania, higher wages and the promise of social mobility available in urban centers continued to attract migrants from rural hinterlands, following a long-term pattern from the prior century. Moreover, in the context of the two world wars, war mobilization and the growth of related industry also increased urbanization during this period. To a lesser extent, urbanization increased in Latin America, Asia, and Africa—regions which had retained a large portion of their population in rural areas as a result of their extraction industries and agriculture. Migration to the cities in these regions would vastly accelerate after 1945.

—*Abraham O. Mendoza*

Migration in Africa

During the colonial era, migration in Africa was characterized by an attempt to perpetuate the population distribution that existed when the European powers took over the territories, which were characterized by an artificial creation of boundaries separating many ethnic groups in between the newly established political entities.

Permanent migration within the African continent was discouraged by administrative policies. However, some important movements took place across international frontiers, in particular those of the Mossi and Hausa traders across French areas to the Gold Coast administered by Great Britain. In addition, seasonal migrations were avoided by a high legal tax that foreign farmers had to pay. Moreover, communication and transportation networks were developed within each colonial territory (from the interior to the coast) and displayed a pattern of

discontinuity with other regional frameworks (e.g., those crossing the Sahara). Separate currency systems utilized by the different colonial powers in Africa also made it more difficult for migrants to move to a different colonial system. In addition, customs fees discouraged potential migrants from crossing frontiers or increasing the length of stay of those who had migrated.

A further restraint to migration was the educational system. At the secondary level the system concentrated students in a few centralized regional institutions, such as William Ponty in Dakar for the French African territories. However, at the university level, European schools were emphasized. For the urban elite, this sort of educational migration was longer than that of a laborer.

In all, the effect of taxes on migration was more widespread than that of the educational systems. Head taxes were introduced, which induced people to migrate to centers where they could find jobs. Some men migrated in order to be able to pay taxes, while others migrated to avoid paying taxes. Thus, economic pressures (to earn money in order to pay the dowry or taxes), the desire to escape from the direct authority of chiefs and elders, and avoiding recruitment were the major explanations of African migration. In fact, colonial administrations disliked migrations because the control of migrants, the collection of taxes, and the recruitment of laborers were rendered difficult.

Migration increased gradually during the colonial era, with various types of temporary and permanent migrations. During the first four decades of the twentieth century, three categories of temporary migrants existed: the peasant-laborer who came to town or to a cash crop area for some time and then went back home; the educated African who migrated as a student and later as a government, mission, school, or commercial house employee (certain trading ethnic groups—Hausa, Dioula, and Wolof—had come to engage in roles close to that of the educated elite); and non-African elites, such as European officials working in administration, commerce, schools, and missions, and Indian merchants

within the East-African British territories who migrated temporarily.

Permanent migration was less multifaceted. Permanent urban skilled laborers had emerged who were often second-generation immigrants. Some of them left schools and accepted urban clerical jobs or began to work in the cash crop regions as farmers and traders. Often these migrants had settled in cities of the same country as their village of origin. There was also a new permanent rural middle-class settlement in cash crop areas. The ancestors of these people had not lived in the same rural areas. Examples were migrants to European farms and plantations in settler colonies such as Kenya, parts of German East Africa, Rhodesia, Angola, and South Africa. These colonies could only be developed with huge rural-to-rural migrations. Another group was that of Syrian-Lebanese origin working as merchants and who intermarried with local populations. A last group came from West India and merged into the East African urban elite. Famines in southern and eastern Africa at the turn of the twentieth century also encouraged migration. For example, up to 1920 Mozambique lost 100,000 inhabitants to the region of the current Malawi, where refugees found work as laborers building railroads or working on plantations.

Migration also affected the age-sex balance within the African colonies, and thus it influenced the social tasks attributed to various groups. Toward the beginning of the colonial era, women rarely participated in migration movements. At the same time, low salaries and dwellings built for young bachelors did not allow the family to live in towns. As a consequence, in immigration regions there was an extreme excess of men, and in emigration regions there was an extreme excess of women. One of the many consequences of this reality was the appearance of prostitution and homosexuality. In many towns, there were only 100 women per every 130 to 250 men; in the South African miner towns, the African population consisted even of 93 percent men in 1910.

Over the long run the patterns of migration changed. Since the colonial economy could not find enough men, women and children began to

be employed at lower salaries. Migrants no longer responded to immediate pressures for cash, and the rural economy became dependent upon the national economy and on the money that the migrants sent home or brought back. As unemployed youths decided to leave for urban centers, labor migration became a means of coping with a surplus rural population. The individual return migration also led to the creation of new desires, such as buying new commodities. Yet until World War II, this influence was rather small in rural regions.

Overall, urban centers attracted migrants because of their administrative, commercial, and sometimes industrial activities. The immigrants concentrated in certain types of jobs and belonged to certain status groups. They knew economically competitive situations and created ethnoprofessional groups. These ethnic associations influenced later modern political organizations so that colonial administrators blamed migrants. Migration was seen to induce unemployment, destitution, and crime. An increasing number of children born in towns returned with their migrant parents to villages that they considered a new phenomenon. Migratory movements widened the political perspective of more and more people. Even if much migration was short-term, migrants were brought into contact with new ideas that after World War II threatened the colonial power system and the relations to traditional political rulers. Migration was thus a phenomenon that contributed to the transformation of African societies.

—Ulrike Schuerkens

Bibliography

- Baker, Jonathan, and Tade Akin Aina, eds. *The Migration Experience in Africa*. Uppsala, Sweden: Nordiska Afrikainstitutet, 1995.
- Mabe, Jacob E., ed. *Das Afrika-Lexikon: Ein Kontinent in 1000 Stichwörtern*. Stuttgart, Germany: Peter Hammer Verlag, Verlag J. B. Metzler, 2001.
- Manchuelle, François. *Willing Migrants: Soninke Labor Diasporas, 1848-1960*. Athens: Ohio University Press, 1997.
- Wallerstein, Immanuel. "Migration in West Africa: The Political Perspective." In *Urbanisation and Migration in West Africa*, edited by Hilda Kuper. Berkeley: University of California Press, 1965.

Migrations within Asia

The period from 1900 to 1945 in Asia was characterized by colonialism, modernization, and urbanization, all of which provided the continued impetus for migration within the region. Intraregional and interregional mobility were widespread, and some migrant communities, such as the Koreans in Japan, reached record numbers during this time. Aside from a relatively favorable physical geography, cross-border migration took many forms in response to the social, economic, and political conditions in these peoples' countries of origin and in the receiving states. Notable cross-border migrations included labor, military, student, and trade migration as well as the resultant chain migration.

Much of Asia at the turn of the twentieth century was under foreign control. With the exceptions of Thailand and Japan, the rest of Asia was invariably under direct and indirect control by the major Western powers. European expansionism and capitalism created large-scale plantations in colonies that required constant flows of laborers, many of whom were indentured until 1920. The opening of treaty ports to foreign control advanced the Chinese coolie trade. South Asians from Madras migrated en masse to British Malaya to work in the rubber estates from the early 1900s to the 1920s. Indian labor filled colonial administrative positions in Burma, forming its middle class until 1945. Although having a long history of migration, the labor demands in Southeast Asia pushed many Chinese peasants and fishermen to work in the Dutch East Indies and in British-owned mines and plantations. Chinese migrants were concentrated in mining districts of the Federated Malay states.

Japan was the only non-Western imperial power in Asia until 1945. Control of Korea, Taiwan, and Manchuria led to migration within these areas as well as into Japan. Recruitment, both private and government initiated, of Korean labor responded to the structural requirements of certain Japanese industries such as construction, mining, and glass, leather, and fertilizer manufacturing. Three million Koreans migrated to Japan from 1910 to 1945. By 1945, there

were 28,000 Taiwanese in Japan. Another 1.5 million impoverished Korean peasants moved to Manchuria between 1931 and 1945. In the 1910s and 1920s, Chinese migration to Manchuria rapidly increased. In 1921 more than 1,000 Chinese longshoremen were in Japan, but their continued presence, together with the Koreans, caused local resentment. These tensions culminated in the mass killings of an estimated 6,000 Koreans and 700 Chinese workers by the military and disgruntled citizens in Tokyo and Yokohama after the Great Kanto earthquake in 1923. Japanese peasants also were encouraged to migrate to Manchuria, and by 1939 their numbers reached 1.1 million.

Military migration occurred under British colonial rule. Punjabi—members of a religious minority in India—became known for their martial skills and loyalty during the Sepoy mutiny and were vigorously recruited for the Gurkha regiment of the British Army and as security forces in colonial posts. About 150,000 Sikhs were enlisted in the army by the time of World War I (1914), and in 1939 there were 774 Sikhs in the Hong Kong police. After the dissolution of the Sikh contingent, about 15,000 stayed in Malaya. Nepalese hill men also served as Gurkhas, numbering more than 50,000 during World War I and fighting alongside the Allied forces in World War II. About a third of them returned to Nepal after the war.

Modernization and urbanization contributed to domestic migration within the region. The rise of new urban centers and portals of economic exchanges linked the local and regional with the outside world. The construction of rail systems and canals facilitated travel and trade, as in the case of Jat Sikh peasants and independent immigrants from South Asia to the Far East. Land reclamation projects in Nepal from the 1890s to the 1930s allowed Indian zamindars (landlords) to possess land in the unpopulated plains on the Midwest and encouraged the migration of tenant farmers. Rising costs of rent and taxation pushed many Nepalese to migrate to nearby Indian highlands and cities to work. In the 1901 census, 200,000 Nepalese resided in India. In Malaya, the expansion of rice cultivation witnessed the entry of Indonesians

into farming districts comprising about 15 percent of the total population since 1911.

The precipitation of modern ideas was nowhere more visible than in the area of education, where many students were sent abroad to study. In 1903, about 1,000 Chinese students were enrolled in Japan, and many were later involved in anti-Qing revolutionary activities. Pursuing higher education outside of China became a new form of migration strategy. Students of different Asian ancestry were admitted into the newly founded Manchuria Nation Building University in 1938.

The most common form of migration was chain migration, particularly of the Chinese and South Asians following the lead of male family members already settled in the country of destination. Increasing numbers of women, along with their children, started joining their husbands overseas. For example, Chinese women in Singapore reached 45 percent of the total Chinese population from 1935 to 1939. Economic opportunities and domestic political unrests prompted many to leave China. Different Chinese ethnolinguistic groups emigrated this way to an already established trading network in Southeast Asia. Massive Chinese migration to Thailand occurred in the 1920s, with 70,000 to 140,000 migrants a year. In the 1930s, the Chinese consisted of more than 70 percent of the population in Singapore. South Asians, on the other hand, also have a tradition of chain migration based on religious and economic ties with China and Indonesia. Some South Asian communities have long left their native places because of persecution and brighter opportunities abroad. The Parsis, for example, followed an ancient migration religion and often moved away from a hostile environment. Other South Asians followed in the footsteps of traders and independent migrants who successfully settled in Southeast Asia. In Singapore, Indians took advantage of the common British governance to look for employment.

—Glenda Lynna Anne Tibe Bonifacio

Bibliography

Brown, Judith M., and Rosemary Foot, eds. *Migration: The Asian Experience*. London: St. Martin's, 1994.

Cohen, Robin, ed. *The Cambridge Survey of World Migration*. New York: Cambridge University Press, 1995.

Douglas, Mike, and Glenda Roberts. *Japan and Global Migration: Foreign Workers and the Advent of a Multicultural Society*. Honolulu: University of Hawaii Press, 2003.

Wee, Vivienne, Michael Jacobsen, and Tiong Chong Wong. "Positioning Strategies of Southeast Asia: Chinese Entrepreneurs." *Journal of Contemporary Asia* 36(3) (2006): 364–384.

Migrations within Europe

Between 1900 and 1945, millions of people voluntarily moved within Europe to improve their economic standing and to escape the ravages of war. In addition, forced migrations during two global military conflicts included the relocation of conquered civilians to war-production areas and the herding of Jews into concentration camps. The first four decades of the twentieth century also witnessed the general transformation of unhindered, voluntary, and seasonal labor migrations to state-regulated and state-restricted movements.

At the beginning of the twentieth century, migrations within Europe reflected the traditional nineteenth-century movements of temporary or seasonal workers from rural southern and southeastern Europe to central and western European fields and factories. World War I, however, changed these historic migration patterns. Migrations to overseas destinations decreased dramatically, and return migration temporarily increased as thousands of people went home. As countries removed men from their labor force in order to man the trenches, governments actively sought or coerced foreign laborers. For example, France maintained its traditional source of migrant labor from Spain and Italy but also recruited laborers from new sources such as Greece, North Africa, and China. At the same time, Germany denied Polish and Russian seasonal workers the right to return home, while the imperial government deported Belgian and Dutch civilians and relocated prisoners of war in order to coerce and utilize the labor of over two million foreigners during World War I.

The military conflict also created a refugee crisis as millions of people tried to escape war-ravaged areas. Over one million refugees left Belgium and France during the war in order to move southward and westward. Historians estimate that five million people became refugees on the eastern front of the war. Though the fighting ended with the armistice of November 1918, the refugee crisis continued. During the war, in addition to the persecution and genocide of Armenians in Turkey, as many as two million were deported and, often after long marches, forced into relocation camps. The 1917 Russian Revolution resulted in hundreds of thousands of exiles and refugees primarily moving to central Europe, while the transfer of Alsace-Lorraine to France and the construction of new states, such as Poland, not only contributed to the return migration of conational ethnic groups but also turned one million Germans into refugees.

The period between World War I and World War II marked a change in human movements as governments began to more intensely regulate and control migrations in order to protect local workers. German officials reduced the length of working visas to one year and issued permits to foreign laborers only if German workers did not fill positions. The Italian government restricted the migration of labor within Europe in order to preserve the national character and encouraged settlement in Ethiopia to solidify imperial control. By contrast, the French state, more than any other European country, actively recruited laborers through bilateral agreements with Poland, Spain, and Italy to rebuild the war-torn areas and work in agriculture. Adoption of immigration limits in the United States (1921 and 1924) drastically reduced transatlantic migrations from Europe. During the international economic crisis of the 1930s, however, thousands of migrants returned and stayed at home. Western European countries, including France, a traditional immigration country, closed their borders to labor migration. The 1920s and 1930s also witnessed a general movement of populations from the rural to the urban areas. Following the establishment of the Irish Free State (1922), England became the destination of choice for many Irish migrants, despite persis-

➤ MIGRATIONS IN THE BALKANS

The forced migration and segregation of nearly two million Greeks, Turks, Romanians, and Bulgarians between 1912 and 1928 represents an important aspect of migration history in early twentieth-century Europe. The First and Second Balkan Wars (1912–1913) resulted in the fleeing of nearly half a million Muslims from the Balkans to Turkey and treaties that exchanged minorities in order to create more ethnically homogeneous societies in the region. Greece and Turkey signed a similar agreement ending the Greek-Turkish War in 1923, mandating the resettlement of Greeks and Turks to their respective countries. The forced separation of ethnic groups in southeastern Europe did not alleviate future conflict but instead worsened it, as segregation intensified ethnic stereotypes and hatred.

—Petra DeWitt

tent prejudices. Irish women in particular used this opportunity to move to the urban areas of England to work in factories and offices. At the same time, Italian migrants, who faced emigration restrictions, also moved more frequently from rural to urban areas in increasing numbers, entered white-collar employment, and stayed permanently.

Political events also encouraged migrations during the 1920s and 1930s. The rise of fascist governments in Spain, Italy, and Germany contributed to the migration of political exiles and undesirable ethnic groups. Jews represented the largest segment of these oppressed people, as Poland, Romania, Hungary, Austria, and Germany actively persecuted them. Historians have estimated that over 400,000 Jews sought refuge in France, the Netherlands, Switzerland, England, the Americas, and Palestine, although they faced anti-Semitism and bureaucratic restrictions. The beginning of World War II virtually ended the voluntary migration of Jews; instead, the German government relocated Jews into ghettos and concentration camps.

World War II contributed to the migration of more people than any other event during the first half of the twentieth century. Masses of people fled as German armies overran Poland,

the Netherlands, Luxembourg, Belgium, and France. The Soviet Union had forcibly relocated Poles, Ukrainians, and White Russians after its Non-Aggression Pact with Germany in 1939. Germany also intensified the expansion of its *Lebensraum* (living space) into eastern Europe by relocating or deporting Slavic people and resettling ethnic Germans on incorporated and conquered land. German advances into south-eastern Europe and the invasion of the Soviet Union in 1941 further uprooted millions of people. The German war government forcibly relocated many of these displaced persons into labor camps, and they were then used in the war effort.

As the war ended, masses of people, including refugees, forced laborers, and prisoners of war, returned home. Following the war, Poland, Czechoslovakia, and Hungary—with the approval of the Allied Powers—expelled 12 million *Volksdeutsche* (ethnic Germans), including those who had lived in eastern Europe for generations, and repatriated displaced persons to the former Reich territories.

Legacies of the migrations within Europe during the first half of the twentieth century include the establishment of the Jewish State of Israel in 1948. State regulations of migrations also intensified further as Europeans not only dealt with unprecedented internal movement but increasingly confronted international migrations brought on by the decolonization movement of the 1920s and the collapse of European imperial empires at the end of World War II.

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Bibliography

- Bade, Klaus J. *Migration in European History*. Translated by Allison Brown. Malden, MA: Blackwell, 2003.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.
- Lucassen, Leo. *The Immigrant Threat: The Integration of Old and New Migrants in Western Europe since 1850*. Urbana: University of Illinois Press, 2005.
- Moch, Leslie Page. *Moving Europeans: Migration in Western Europe since 1650*. 2nd ed. Bloomington: Indiana University Press, 2003.

Domestic Migrations within the Americas

From the beginning of the twentieth century to the end of World War II, much of the internal migration within the Americas is characterized by the movement of rural populations to urban industrialized regions and major cities. In North America much of the internal migration was from Canada to the United States in addition to large flows of people from the U.S. East Coast and from the South to the West, given the economic fluctuations of this period. Furthermore, Caribbean immigration to the U.S. East Coast as well as Florida was also quite common in this period. South American internal immigration was characterized by the migration from the countryside to the bustling city centers as countries such as Argentina, Brazil, and Mexico experienced modernization and industrialization during this period. The Mexican Revolution (1910–1920) also displaced many northern Mexicans into the southwestern United States, many of whom were later deported back in the 1930s during the Great Depression.

Between 1900 and 1914 migratory patterns in the Americas were primarily characterized by immigration from Europe. European immigrants in the millions entered the United States and Canada. Significant numbers of immigrants to Canada went there due to the fact that they were unable to enter the United States, which they later were set on doing after spending a brief sojourn there. Neo-European Latin American countries (those with large concentrations of European-descended populations) such as Argentina, Brazil, Chile, and Cuba experienced a large influx of European immigration, with lesser numbers migrating to the primarily mestizo countries of Mexico, Colombia, Venezuela, and Cuba. Only minute numbers of individuals migrated from one Latin American country to another. The outbreak of World War I in 1914 ended any significant emigration from Europe.

From the 1930s to the 1940s, internal migration in the form of rural to urban outmigration was occurring throughout the Americas en masse. Rapid industrialization and urbanization in many American cities encouraged peasants, farmers, and sharecroppers to leave their professions

and move to the city to make a living, drawn by higher wages and a more exciting city life. Large numbers of rural denizens moved to the major cities of the East Coast and the industrial cities along the Great Lakes regions. In particular, black Americans migrated from the Jim Crow South to the northern United States in pursuit of better job opportunities from World War I through World War II in what is known by historians as the Great Migration (1910–1940). Large urban populations of blacks grew in many U.S. cities such as New York, Philadelphia, Detroit, Los Angeles, and Oakland due to the large amount of employment created by war industries, particularly during World War II. The Immigration Act of 1924, which cut off emigration from eastern and southern Europe due to xenophobic attitudes in the interwar United States, also led to active labor recruitment of black Americans. The Great Depression of the 1930s also drove many dispossessed farmers (known at the time as Okies) from the Midwest and the Southwest to California, Oregon, and Washington. While many of these Dust Bowl migrants sought work in agriculture, large numbers of them were eventually absorbed into war industries in the Pacific states with the outbreak of World War II. In addition, Canadian internal migration from the eastern provinces to the western provinces, principally to British Columbia, also increased during this time due to the development of agriculture, mining, and other primary industries.

In the various Latin American states, the increasing poverty of the Great Depression years and the constricting social system of patron rule by caudillos (strongmen) in the countryside drove many to search for opportunities in the cities. The relatively more egalitarian cities offered former farmers opportunities in industrial and service professions. Major Latin American cities such as Mexico City, Buenos Aires, and Rio de Janeiro drastically grew in size. Furthermore, as these states were cut off from a steady supply of European immigrants due to the world wars, it was necessary for the state to encourage internal migration for the purpose of sustaining a growing economy, even amid the Great Depression of the 1930s.

Wars and economic dislocation also drove many Latin Americans to seek their fortunes in other adjacent countries. The Mexican Revolu-

➤ THE AMERICAS IN WORLD WAR II— CONTINENTAL SOLIDARITY

World War II unleashed a massive internal migration within the Americas, with individuals searching for better economic opportunities as economies across the Americas mobilized for a war on two global fronts. In addition, many American countries, not just the United States and Canada, contributed to the aggregated American war effort. Members of the Pan American Union (later the Organization of American States) formed an alliance for the mutual defense of the Americas in Havana in July 1940. Twenty-one American foreign ministers (from the United States, Mexico, Brazil, and other Central and South American states) signed the Declaration of Reciprocal Assistance and Cooperation for the Defense of the Nations of the Americas to coordinate their resources and military forces for the global two-front war. Furthermore, to make up the loss of American workers in agriculture now working in defense industries, the U.S. government made a deal with the Mexican government for the use of guest workers (*braceros*), which brought thousands of Mexican farm laborers into the U.S. Southwest. Economic arrangements for nitrates were also made with countries such as Chile to ensure the constant supply of these for wartime needs, fostering economic continental integration for war production.

—Abraham O. Mendoza

tion and the need for farmworkers in the United States due to the labor scarcity created by World War I prompted many Mexicans to migrate to El Norte, particularly to the U.S. Southwest. Economic fluctuations and xenophobia in the interwar period would lead to many of them being deported back into Mexico. Nonetheless, guest worker programs and a need for a readily available cheap labor pool led to a continued flow of Mexican immigrants into the United States during World War II. Much like Mexican immigrants, Caribbean immigrants, such as Puerto Ricans, Jamaicans, and Cubans, migrated to U.S. eastern cities (particularly New York City) and Florida seeking employment as ticket laborers (indentured temporary workers) in agriculture or in the lower echelons of the service industries, as many of these jobs were undesirable or

unfilled due to the draft and war mobilization. In particular, black migrants from the British Caribbean took advantage of the quota for Britain created by the U.S. Immigration Acts to enter in large numbers, which U.S. authorities had not intended when they implemented the act in the hopes of attracting white Britons.

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Bibliography

- Cohen, Robin. *Global Diasporas: An Introduction*. Seattle: University of Washington Press, 1997.
- Goldberg, David Joseph. *Discontented America: The United States in the 1920s*. Baltimore: Johns Hopkins University Press, 1999.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.

The Great Migration—African American Migration within the United States

Trapped in a system of debt peonage, robbed of civil rights, deprived of voting rights, and subjected to a rising trend of lynchings, African Americans began escaping the segregated Jim Crow South in the 1890s. Over the next 20 years the slow, steady stream of black migrants traveled to southern and border cities such as Atlanta, Baltimore, Louisville, Memphis, New Orleans, Richmond, and St. Louis before moving north. Following their arrival in the urban areas, African Americans took low-paying jobs, working as janitors, laundresses, maids, housekeepers, waiters, and porters.

World War I was a watershed event for the African American community, as it was for people all around the globe. As immigration from Europe ended and the military expanded, the United States turned to African Americans to fill the ranks of the industrial workforce. Recruiters scoured the South for those eager to leave on the promise of steady work in the North. Well-circulated newspapers such as the *Chicago Defender*, which printed a famous editorial on May 15, 1917, exhorting African Americans to leave the South, also carried the message. The devastation that floods and boll weevils took on cotton left many southern farmers—black and

white—with little alternative but to accept a guaranteed job that was offered to them. Southern business interests unsuccessfully attempted to coerce black laborers from departing. By 1919, as many as one million African Americans had moved north to Chicago, Cleveland, Detroit, New York, Philadelphia, and Pittsburgh, among other cities.

Much to their disappointment, African Americans found that the urban North was no more hospitable in many ways than the rural South. Restrictive covenants on housing, racially motivated zoning laws, unofficial segregation, and vigilante violence kept African Americans confined to rapidly decaying urban ghettos and their facilities. Often, the buildings were of poor quality and lacked indoor plumbing and heating. Garbage was often piled high in the streets, and entire neighborhoods stunk from rotting trash, poor sanitation, and outhouses. As more people crowded in, even the most decrepit housing commanded premium rates. Concerned about protecting their neighborhoods, whites outside of the ghettos met even the most harmless excursions with violence, resulting in a spate of serious race riots in 1917, 1919, and 1921. Conflict resulted from concern not only over neighborhood control but also over jobs. Many white veterans assumed that they would get their jobs back when they returned from the war. On the other hand, many African Americans felt that having proved their loyalty to their country, they deserved to be treated as equal citizens.

Throughout the 1920s and 1930s the exodus north continued, particularly as a deepening economic crisis and mechanized harvesting of cotton made sharecropping and farmwork even more precarious as a livelihood. The Great Depression might have slowed the migration slightly, as unemployment of blacks greatly exceeded that of whites, but President Franklin D. Roosevelt's New Deal unintentionally revived it. Federal assistance programs, such as Aid to Families with Dependent Children, paid more money in most northern states than in the South. The Agricultural Adjustment Act provided large subsidies to white rural landowners, but the black tenant farmers received no money, and many were kicked off their land as a result. Finally, federal money for public housing was used to im-

prove conditions inside the ghettos and create more space by making the buildings taller.

World War II further accelerated African American migration northward, as hundreds of thousands of additional black migrants moved north to find work in war industries and thus help build the so-called arsenal of democracy. The African American population of Chicago, for example, swelled 77 percent, and that of Los Angeles doubled. Many urban areas in the North experienced similar rates of growth. Once again, adjustment was difficult, and there were numerous race riots in 1943.

The Great Migration had a number of important effects. First, it led to the flourishing of a uniquely black culture. In the movement labeled the Harlem Renaissance, artists, musicians, poets, playwrights, and novelists captured the frustrations, disillusionment, and occasional victories that African Americans experienced during the Great Migration. Over time such artistic forms bridged the racial divide and became part of the wider American popular culture. Second, African Americans developed a political power that they lacked in the South. The right to freely exercise the franchise in the North allowed for the election of African American representatives in nearly a dozen states by the end of World War II. During the 1920s, most of the African American political thought was expressed in the Black Nationalist movement of those such as Marcus Garvey and his Universal Negro Improvement Association. During the 1930s African Americans moved more into the political mainstream and began to vote in large numbers for the Democratic Party. By the 1936 presidential election, northern urban African Americans had become an important Democratic Party constituency.

—Gregory J. Dehler

➤ 1943 RACE RIOTS IN THE UNITED STATES

On June 25, 1941, President Franklin D. Roosevelt issued Executive Order 8802 prohibiting racial discrimination in hiring practices among industries that received U.S. government contracts. The purpose of the order was to grant African Americans some access to skilled high-paying jobs, which would allow them to share in the wartime prosperity. Roosevelt's order, however, could not stop racial tension. Relocation by hundreds of thousands of blacks and whites, competition for jobs and housing, the incidence of hundreds of small acts of racial violence nationwide, and wartime nervousness combined to trigger three significant race riots in the summer of 1943. The first began in June in the shipbuilding facilities of Beaumont, Texas. Five days later, a massive race riot that left over 20 dead and 1,000 wounded rumbled through Detroit. Six weeks later, a riot in Harlem destroyed hundreds of white-owned stores in black neighborhoods.

—Gregory J. Dehler

Bibliography

- Franklin, John Hope, and Alfred A. Mass Jr. *From Slavery to Freedom: A History of African Americans*. 7th ed. New York: McGraw-Hill, 1994.
- Lehman, Nicholas. *The Promised Land: The Great Migration and How It Changed America*. New York: Knopf, 1991.
- Meier, August, and Elliott M. Rudwick. *From Plantation to Ghetto: An Interpretive History of the American Negro*. New York: Hill and Wang, 1966.
- Philpot, Thomas Lee. *The Slum and the Ghetto: Immigration, Blacks, and Reform in Chicago, 1880-1930*. Belmont, CA: Wadsworth, 1978.

■ Introduction: Ethnic and Forced Migrations

The first half of the twentieth century witnessed significant demographic shifts throughout the world with a number of underlying causes, including the search for jobs and labor supply, ethnic migrations to rapidly in-

dustrializing countries, forced population displacements, and war. International migration was generally voluntary and unregulated until 1914, the year when World War I began. The liberal spirit of the times up to the outbreak of the

➤ 1915: THE DEPORTATION OF ARMENIANS FROM THE OTTOMAN EMPIRE

A topic that has stirred up much scholarly and political-legal controversy, the deportation of a massive number of Armenians from various provinces in eastern Anatolia is one of the many severe incidents at the time of World War I. On the grounds that several Armenian groups, otherwise Ottoman subjects, were collaborating with Russian forces at war with the Ottoman Army in a number of fronts in World War I, the Ottoman government made a formal decision to deport about 1 million Armenians from eastern Anatolia to Syrian inland, then under Ottoman rule. More than half of the deportees lost their lives en route. The political and scholarly debate hinges on the causes of these tragic losses. While some wish to qualify the events of 1915 as the first genocide of the twentieth century and attribute the deaths to a premeditated Ottoman design to systematically annihilate the Armenian population, others suggest that there is no evidence of such premeditation and that epidemic diseases, extreme poverty, famine, and intercommunal fighting account for lost Armenian lives.

—*Fethi Keles*

war encouraged free international mobility. Extensive emigration from the center and periphery of Europe to favorite destinations such as North America (including the United States and Canada) and Australia for better jobs and livelihoods characterized the prewar era.

In addition, the rapid growth of global capitalism, along with the implementation of imperial policies worldwide, accelerated the search for jobs and new locales for settlement. In Southeast Asia, this resulted in millions of Indians and Chinese becoming contract laborers on plantations and in rice fields and mines mainly in the Southeast Asian region but also in distant destinations including Latin America, North America, and European colonies in the Caribbean.

With the onset of World War I, the nearly universal liberal norm of free movement of people underwent a sea change. Combatant states went to great lengths to restrict emigration and immigration, passing laws and utilizing various

legal instruments (such as the passport) to that effect. These states further undertook systematic harassment and forcibly displaced foreigners in their lands who did not fit into idealized definitions of a nation-state. The waves of pogroms against Jews in Russia, for instance, led to massive Jewish immigration, most notably to the United States and Britain, among other countries. Even after the 1917 Bolshevik Revolution granted civic equality to Russian Jews, Stalin's moves to repress Jewish social life resulted in additional displacements.

As many new nation-states came into being upon the collapse of multiethnic empires, major population displacements, diasporas, and exchanges ensued. Hundreds of thousands of Armenians, subjects of the Ottoman empire, were deported from various Anatolian provinces on grounds of acting in collusion with the invader enemies in the war. The Ottomans' retreats in the Balkans led to the eviction of several thousand Turkish subjects from that region into Asia Minor.

Characteristic of the postwar period was the ascent of fascism across Europe. Hitler in Germany and Mussolini in Italy, for example, set out to create pure nation-states, declaring an ethnic core superior to all others in their respective countries. As a result, millions were on the move to find new homes or escape persecution. A protectionist international migration regime that chose to shut the doors to escapee newcomers to curb the effects of postwar economic stagnation and safeguard its respective domestic labor forces reinforced xenophobia and potentially contributed to the outbreak of World War II.

In addition, the question of stateless persons remained high on the international agenda after World War I and until the beginning of World War II. In 1922 the Soviets denationalized refugees fleeing communist Russia and invalidated their travel papers, stripping them of their status as members of the Soviet state. An effective solution came in the form of the Nansen passport, named after Fridtjof Nansen, the first high commissioner for refugees of the League of Nations. The passport allowed millions of displaced persons, mostly Russians, to travel legally and apply to other states for admission. This was one of

the earliest steps toward the institutionalization of the refugee regime internationally.

A legacy of this particular era has been the transformation of temporary controls and restrictions on emigration and immigration into permanent ones. The right to regulate the movement of people came to be seen as an exclusive right of state sovereignty, thus paving the way for the forced migrations of the decades that followed.

—*Fethi Keles*

Bonded Labor

The end of slavery throughout much of the Western world in the late nineteenth century, beginning with its abolition throughout the British empire in 1833 to its abolishment in Brazil in 1888, ended a centuries-old system of forced labor. However, the need for labor throughout much of Europe's colonial domains necessitated another source of workers. British colonial authorities in India and China established linkages with local labor recruiters and began to export large numbers of indentured servants overseas. While mostly associated with the British empire, French, German, and American businesses with foreign investments in Latin America, sub-Saharan Africa, Southeast Asia, and Oceania also recruited large numbers of both Indian and Chinese coolies as indentured servants. By the early twentieth century this system provided a substantial amount of the Chinese and Indian diasporas spread over much of the West Indies, sub-Saharan Africa, Southeast Asia, and Oceania, estimated to be in the tens of millions.

In the early twentieth century the unequal development of world regions subject to European economic and military hegemony, particularly India and China, led to the continuation of the practice of indentured servitude. The political and economic instability of India and China, not to mention large-scale famines, in the late nineteenth and early twentieth centuries made recruitment of indentured servants quite easy for European officials and their subaltern middlemen. Coolies were subject to mistreatment, abuse, and long hours. Committed to five-year contracts to work for a miserly wage, they faced

THE BRITISH ELECTION OF 1906— CHINESE SLAVERY

The legacy of slavery left a deep imprint in the consciousness of the British electoral politics. The abolition of slavery in the British empire early in the nineteenth century, due to economic and moral arguments engaged through public debate, led to distaste for coerced labor practices and the advocacy of free labor markets. The ubiquitous practice of indentured servitude throughout much of the British empire since the end of chattel slavery did attain the same level of notoriety for decades. However, the national elections of 1906 brought the issue to the fore of public debate, as the Conservative Party under A. J. Balfour supported the importation of Chinese indentured labor into the South African mining district of Transvaal. The British Liberal Party, under the leadership of Sir Henry Campbell-Bannerman, reacted with indignation at the prospect of sending "Chinese slaves" to work in horrible working conditions and be subjected to potential abuse by employers. This election marked the beginning of the end for the practice of indentured servitude, which was now present in the public sphere and openly debated as a topic of discussion in early twentieth-century Britain, albeit with both moralistic and racist arguments against indentured servitude.

—*Abraham O. Mendoza*

destitution and poverty that forced many of them into this unreasonable sale of their livelihoods. At the end of five years many of them found themselves bound due to debt or having nowhere to go with no money on hand. Wealthy Chinese businessmen also participated in exporting indentured servants through the practice of the credit ticket. The credit ticket bound a laborer to work for his employer for a specified period of time anywhere his employer demanded, typically overseas. These employers would typically work with European firms—with which they had a financial stake themselves—and recruit labor in this manner as their own personal coolies.

The end of slavery created a huge void in the labor demands of the West Indies' sugar plantation economies. With the prevalence of Chinese

and Indian indentured servants in the plantations of the East Indies (Indonesia), British authorities found it expedient to bring large numbers of such laborers into the Caribbean plantation colonies, such as Jamaica, Barbados, and St. Kitts. Furthermore, following the scramble of Africa in the late nineteenth century, British authorities also began to import large numbers of Indian laborers into its east and south African colonies. British South Africa used large numbers of Indian workers at diamond mines and other industrial and mining concerns, much to the displeasure of the local Boers. In fact, large Indian communities in Kenya and South Africa were established due to the large concentrations of Indian indentured laborers imported by British colonial authorities and businessmen. In the early twentieth century in both South Africa and India, Mahatma Gandhi led a fervent campaign against the abuses of the system of indentured servitude, marking the beginning of his career as a civil rights leader and Indian nationalist. Many of the servants who had gone to Africa remained there permanently, effectively becoming immigrants. The large-scale immigration of the Overseas Chinese in the early twentieth century—concentrated mostly in Southeast Asia, Oceania, and the Dutch East Indies—was also due to the increased use of bonded labor. Immigration exclusion acts ended the practice of indentured servitude from Asia in the United States and Australia, primarily due to racist and xenophobic concerns and fears of the so-called Yellow Peril rather than the abuses inflicted on such laborers by this peculiar institution.

In 1904 at the end of the Boer War, the lack of native African labor in the Rand mines of the South African Transvaal led to the large-scale importation of indentured Chinese laborers by British colonial authorities. However, the Boer population in the Transvaal was fervently opposed to this act, fearful that it would exacerbate the already volatile racial problems of South Africa. This issue led to the British electoral victory of 1906 in which the issue of Chinese slavery was central to the victory of the Liberal Party, a decision that led to the beginning of the end of the practice of indentured service throughout the British empire. However, at the

time more than 50,000 Chinese laborers had already entered the Transvaal.

World War I increased the need for indentured servants throughout much of the world for the purpose of mobilizing colonial resources, filling domestic labor shortages, and effectively utilizing the full manpower of the colonies to engage the Central Powers. It also led to the conscription of large numbers of soldiers, auxiliaries, and laborers for use at various battle fronts. The mobilization of the British empire for the purpose of war involved using large numbers of Indian troops and laborers in Middle East campaigns and Chinese laborers in the western front. This also introduced the practice of indentured servitude into Europe, where it had previously had little public display. Furthermore, many conscripted soldiers, auxiliaries, and labor battalions from India saw firsthand the vulnerability of their colonial British overlords to the destructive onslaught of war, sparking nationalist aspirations in many of them. With the end of the war, Chinese laborers were imparted with the responsibility of cleaning up the damage along most of the western front up to the end of the practice of indentured servitude in 1920.

—Abraham O. Mendoza

Bibliography

- Hahamovitch, Cindy. "Creating Perfect Immigrants: Guestworkers of the World in Historical Perspective." *Labor History* 1(44) (2003): 69–94.
- Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Hoerder, Dirk. *Cultures in Contact: World Migrations in the Second Millennium*. Durham, NC: Duke University Press, 2002.

Forced Migrations in the Soviet Union

"Forced migration" is a general term that refers to the involuntary movement of people away from their homes to other areas, whether domestic or international. This term is used interchangeably with the terms "displacement" and "forced displacement" and often implies the use of coercion or violence. Forced migrations in the Soviet Union during the period 1918–1945 were mostly imposed by the government. The

most important forms of forced migration were the expulsion of wealthy peasants from grain-producing areas of the Soviet Union from 1930 to 1933, the political purges of the 1930s, and the nationality deportations from 1941 to 1945. Human displacement in the Soviet Union during these decades also included semivoluntary migrations, such as forced relocation resulting from the change of regime in 1917 from tsarist to communist and wartime evacuations in the early 1940s. There also existed other forms of forced migration within the Soviet Union that involved fewer people at a time.

During the period 1918–1941 the Soviet government deported, imprisoned, or exiled its citizens based mainly on their class or on a variety of political factors, though ethnicity was also one of the important components. The first Soviet attempt at mass relocation included the deportation of 70,000 rebellious Cossacks from the northern Caucasus and 100,000 rebellious peasants from the province of Tambov in 1918. In the period 1929–1933 the Soviet government attempted to turn agricultural production into a collective and state-controlled enterprise in a campaign labeled “collectivization” by means of “collectivizing” peasants’ farms, tools, and livestock. As a result of propaganda and coercion advanced by the Soviet government, by June 1929, 1 million wealthy peasants turned their agricultural tools over to the government and enrolled in collective farms. But many more, estimated at 25 million, held back. To promote its campaign, the government confiscated property and agricultural tools and livestock from wealthy peasants, called *kulaks*, and deported 1.5 million of these peasants to Siberia and northern Russia between 1930 and 1933. Approximately 900,000 more kulaks were arrested and sent to prisons or labor camps in remote parts of the Soviet Union. Only class and perceived wealth were used to single out people for deportation in this campaign. Although in the 1930s the majority of peasant families joined collective farms under the state’s administrative control, the collectivization campaign resulted in massive forced human displacement, a decline in agricultural production, and enormous losses of livestock due to slaughter and neglect.

➤ SOVIET POLICY TOWARD JEWS

The cosmopolitan and international character of the Russian revolutionaries allowed many Jews to join the ranks of the Bolsheviks. Many historians suggest that this was perhaps due to the anti-Semitic nature of the Russian nationalism utilized by the tsarist regime that classified Jews as traitors to the Russian state. Prominent Jewish revolutionaries, such as Leon Trotsky, were ardent supporters of the Soviet cause. However, after the emergence of Josef Stalin in the Communist Party as general secretary, many of these Jewish revolutionaries were suspected as traitors to the Soviet cause. Many Soviet Russian leaders, along with Stalin, suspected Soviet Jews of having foreign proclivities and loyalties and thus being potentially capable of treason. In the Great Terror purges of the late 1930s many Jews were removed from positions of power within the Soviet regime, most notably Trotsky and Maxim Litvinov. Furthermore, Jews from Germany and occupied Europe were prevented from entering the Soviet Union as refugees. At war’s end, the Soviet Union took credit for the liberation of the Jews and other eastern Europeans from the yoke of Nazi tyranny. However, some Soviet Jewish survivors of death camps had the unfortunate fate of being shipped to the Gulag, as they were exposed to “bourgeois” institutions and thus were suspect in the eyes of Soviet authorities.

—Abraham O. Mendoza

In the mid-1930s the Soviet government staged two massive waves of human displacement, one presumably based on political factors and another based on class and ethnicity. In the 1930s the Soviet government arrested, prosecuted, and exiled or imprisoned millions of people in political purges, which culminated in a grand wave of arrests in 1937–1938 known as the Great Terror. The official explanation for these purges was an attempt to cleanse the Soviet territory of foreign spies and internal enemies. Hence, the overwhelming majority of these people were accused of being spies and saboteurs and were sent to prisons on charges of treason as “enemies of the people.” The prisoners were torn away from their homes and forced to work for the Soviet government in inhumane conditions. Many

prisoners perished; however, some historians believe that this free labor was at the core of early Soviet economic success. The chain of prisons, collectively known by the acronym GULAG, housed as many as 1.3 million people in 1936 and almost 2 million by 1941, according to official Soviet documents. However, historians still dispute the exact number of prisoners, especially since hundreds of thousands of arrested Soviet citizens were shot. Some scholars estimate the number of displaced people at between 10 million and 20 million. The number of prisoners continued to grow after the end of World War II until Stalin's death in 1953.

Besides political and economic relocations in the mid-1930s, the Soviet government decided to cleanse its borders of various ethnic diasporas as a preemptive measure to strengthen the Soviet frontiers. As a result, during 1935–1938, 70,000 Germans and Poles and 30,000 Finns residing in the regions of the Soviet Union's western border were deported to Siberia and Kazakhstan, along with some Estonians, Latvians, Kurds, and Iranians. In 1937, all 170,000 Koreans of the Soviet Far East were resettled to central Asia. In 1939–1940 another 400,000 Poles and 135,000 Germans were deported to Siberia and Kazakhstan as a direct result of the Soviet Union's incorporation of its neighboring states and various treaties signed between Germany and the USSR. There were also many smaller waves of displacement at this time, and although ethnicity was used as a main criterion for deportation, class, citizenship, and "political reliability" were still important factors in these deportations.

After the German invasion of the Soviet territories on June 22, 1941, ethnicity completely replaced class as a key factor in Soviet deportations. During 1941–1942 the entire German population of the Soviet Union, numbering over 1.2 million people, was resettled to the east, predominantly in Siberia and Kazakhstan, to prevent them from potentially collaborating with the Nazis. Yet ethnic government-enforced migration reached its peak in 1943–1944, when the Soviet government accused entire nationalities of collaborating with the Nazis against the Soviet war effort. The Soviet government deported 70,000 Karachai, 93,000 Kalmyks, 520,000

Chechens and Ingush, 45,000 Balkars, 185,000 Crimean Tartars, 12,500 Crimean Bulgarians, 10,000 Crimean Armenians, 15,000 Greeks, and finally 92,000 Meshketin Turks, Kurds, and Khemshins from Georgia. Although the official explanation for this wave of forced migration was punishment for collaborationism, many historians now believe that the true reason for ethnic deportation was the Soviet government's desire to assimilate many ethnic groups into Soviet society by relocating them far from their homes and forcing them to forget their cultures, languages, and traditions.

Some migrations, however, were semivoluntary; they did not result from any direct action taken by the government but rather from change in the political, economic, or environmental situation in the country. When the regime in Russia changed from tsarist to communist in 1917, many members of the nobility and intelligentsia found the new political order and its repressions to be intolerable. Between 1918 and 1921 an estimated 1 million to 3 million Russians fled their lands in order to seek asylum abroad. This wave of migration came to be known as the White Emigration, with the emigrants known as supporters of the whites as opposed to the Bolsheviks, or Reds. During World War II, besides state-imposed deportations, many millions of people were forced to relocate due to the coming of the Nazi occupiers to Soviet territories. Many people were evacuated from western Soviet territories to central Asia and Siberia, predominantly to Tashkent, Uzbekistan, and Alma-Ata (present-day Almaty), Kazakhstan. The Soviet Census Bureau reported 17 million evacuees during the war years; however, historians estimate that a total of 25 million people moved around the Soviet Union between 1941 and 1945 as part of evacuation attempts. At the war's end, many more people moved around after their demobilization and repatriation.

Overall, in the Soviet Union from 1918 to 1945, 12 nationalities (Germans, Karachai, Balkars, Chechens, Ingush, Kalmyks, Crimean Tartars, Poles, Armenians, Greeks, Finns, and Bulgarians) were subjected to wholesale or partial deportation, numbering roughly 2 million people. At least 30 million more became subject to forced migration due to government-induced

political cleansings, economic factors, and war-related displacement. As such, as many as 35 million to 55 million people in the Soviet Union fell victim to forced or semi-involuntary migrations during 1918–1945.

—*Irina Mukhina*

Bibliography

- Applebaum, Anne. *GULAG: A History*. New York: Doubleday, 2003.
- Freeze, Gregory L., ed. *Russia: A History*. Oxford, UK: Oxford University Press, 1997.
- Polian, Pavel. *Against Their Will: The History and Geography of Forced Migrations in the USSR*. Budapest: Central European University Press, 2004.

Ethnic and Forced Migrations: Jews

While much of the historical literature on twentieth-century anti-Semitism focuses on the Holocaust and Nazi Germany, in the period from 1900 to 1945, many pogroms and armed attacks on Jewish communities were enacted by tsarist (later Soviet) and Polish authorities, primarily during the interwar period. The Pale of Settlement, which formed the westernmost regions of the Russian empire bordering on imperial Germany and Austria-Hungary and where the bulk of the Jews of Europe were forced to settle by tsarist authorities in prior centuries, was the scene of multiple conflicts. These ranged from state-sanctioned pogroms under the tsar to the Final Solution implemented under the Third Reich. As a sizable minority in central and eastern Europe, Jews were a convenient scapegoat for political, economic, and social instability for the various national groups seeking autonomy or control of the region.

The Pale of Settlement for Russian Jews was created as the Russian empire absorbed large Jewish populations at the expense of the former independent state of Poland in the eighteenth and nineteenth centuries. The Pale of Settlement served as a means to restrict Jewish economic potential and mobility. In the Pale, Jews were restricted to living in ghettos (specified urban areas) and shtetls (Jewish rural communities). In the early twentieth century, tsarist authorities ac-

INTERWAR LEAGUE OF NATIONAL MINORITY TREATIES—SELF-DETERMINATION

The League of Nations instituted a series of minority protection treaties for nascent central and eastern European nations born out of the collapsed tsarist, German, and Habsburg empires. The mixed populations of Czechoslovakia, Poland, Romania, Hungary, and Yugoslavia posed a problem as the newly formed nation-states sought to form a more homogenous population to adhere to the notion of self-determination. With limited success, the League of Nations sought to ensure that minorities would not be excluded from civil and political rights. The Armenian situation in Turkey during World War I, an early example of genocide and ethnic cleansing, was the extreme case of what could potentially occur. However, the League of Nations' arranged exchanges of expatriate Greek and Turkish populations in those regions was posed as a potential solution to ensure stability in the region. Given the historically mixed populations of the European "shatterbelt," these minority treaties were seen as a means to prevent the further fragmentation of the region and to ensure stability in these historical volatile regions, fraught with centuries-old ethnic hatreds.

—*Abraham O. Mendoza*

tively supported or tolerated large-scale pogroms against Jews by local peasants of different nationalities. From 1905 to 1907, large-scale pogroms took place throughout the southern regions of the Pale as a response to the botched Russian Revolution of 1905, which was partially attributed to Jewish complicity. Due to the large influx of Jewish immigration from the Russian empire, the United States responded by pressuring the tsarist government to restore order. The February and October revolutions of 1917 and the subsequent Russian Civil War unleashed a series of pogroms in which tens of thousands of Jews were killed. Given the large numbers of civilian dead, it is difficult to arrive at an exact number.

During the interwar period, the instability of the former Pale of Settlement region, which then included the newly created Baltic states, Poland, and Ukraine, led to a series of state-sanctioned policies aimed at restrictions against

Jews. In the aftermath of World War I and the subsequent conflicts that plagued eastern Europe (the Russian Civil War, the Polish-Ukrainian War, and the Polish-Soviet War), endemic pogroms were incited by all sides. Associated as supporters of the Bolshevik regime, Jews were seen as viable targets by Polish and Ukrainian nationalists. The Polish Army's actions against Jews during this period raised suspicions among Polish Jews regarding their position in relation to the Polish state. Just after the end of World War I, for example, the West became alarmed by reports of alleged massive pogroms in Poland against Jews.

In post-World War I Europe, the nations of central and eastern Europe grappled with the American-influenced League of Nations policy of self-determination, which aimed to create homogenous nations. These newly independent nation-states across the former German, Habsburg, and Russian empires, with their intermixed populations, struggled to forge cohesive national populations. At the same time, their Jewish communities struggled to maintain a Jewish identity that did not conflict with the political ambitions of self-determination of their host states and attendant persecutions. Poland instituted laws against its Jewish population to ensure compliance within the newly created Polish state; notable among these regulations were educational and employment quotas that specifically limited the number of Jews in certain professions and universities. A sizable Jewish population in large Polish cities and the countryside found itself alienated from much of the Catholic Polish population during the greater part of this period. While many Jews sought to pursue assimilation into Polish society as a way to prevent discrimination, they were still seen as suspect and foreign by many Poles.

With the emergence of Nazi Germany and its anti-Semitic ideology, European Jewry was targeted as the primary racial and ideological (given that all Jews were portrayed as potential Bolsheviks) enemy of the state. However, as the Third Reich expanded eastward into the former Pale of Settlement from 1939 to 1945, it found many willing participants in the non-Jewish population as collaborators in all phases of the Holocaust. Given the history of this region in

terms of state-sanctioned and grassroots pogroms, restrictions, and violence against Jews, it is suggested by some historians that Germany would not have succeeded to the degree that it did had it not enjoyed such a high degree of local cooperation.

—Abraham O. Mendoza

Bibliography

- Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.
- Gross, Jan. *Neighbors: The Destruction of the Jewish Community in Jedwabne*. New York: Penguin Books, 2002.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Knopf, 1998.

Refugees as a Phenomenon

While human beings have sought safe havens to escape religious and political persecution throughout history, the legal concept of the term “refugee” has essentially emerged and developed in the twentieth century. Some of the earliest instruments of law, such as the Nansen Passport, devised to recognize refugee status and to enable flight from hardship, came into being in the first half of that century.

Between 1900 and 1945, forced population movements were mainly the outgrowth of territorial realignments across Europe and Asia due to World War I and World War II. The emergence of the refugee as a specific legal phenomenon is strictly connected with international organizations that were established to deal with the problems and status of the millions of people displaced as a result of the two wars.

In the period preceding and following World War I there were substantial uprootings of populations and population exchanges en masse. The collapse of the Ottoman empire, accelerated by the Balkan Wars of 1912–1914, among other causes, resulted in the displacement of some 250,000 Bulgarians from various countries of southeastern Europe and nearly 500,000 Turks from Greece; about 1 million Greeks from Turkey were subjected to transfer policies imposed by newly emerging postimperial nation-states. The Bolshevik Revolution of 1917 caused succes-

sive waves of flight from Soviet Russia. The ascent of authoritarian rule in Italy, Spain, and Germany that resulted in attempts to establish homogenous nation-states resting on the Westphalian ideal of *cuius regio, eius regio* (whose land it is, his religion it is) forced many to escape their respective homelands in the hundreds of thousands. Before World War II began, the number of people forced to leave their homes totaled some 30 million.

To deal with the massive number of evictions, the League of Nations founded the High Commission for Refugees in 1921 and subsequently entrusted its leadership to Fridtjof Nansen, a Norwegian explorer, scientist, and diplomat. To solve the problem of stateless persons, most of whom were Russians displaced by the 1917 revolution, Nansen devised an instrument that was later called the Nansen Passport. By the time World War II began, the document came to be accepted by 52 governments, all of which allowed its bearers to travel as refugees to an accepting country. During his tenure as commissioner, Nansen implemented methods such as voluntary repatriation and third-country resettlement that have remained viable components of the international refugee regime well into the twenty-first century. The passport and other such methods were the first tools utilized in the previous century to distinguish the refugee as a separate, legally identifiable category of human being.

Before, during, and after World War II this identification assumed a more sophisticated character with the foundation of the Nansen International Office for Refugees in 1930, the United Nations Relief and Rehabilitation Administration

in 1943, the International Refugee Organization in 1946, and the United Nations High Commissioner for Refugees (UNHCR) in 1951 and the drafting of the Geneva Convention in 1951. The war itself uprooted some 40 million people across Europe. Known as displaced persons (DPs), they included Jews, Poles, French, Ukrainians, Czechs, and others. The ongoing hostilities among China, Japan, and the Soviets in the interwar years and in the post-World War II era dislocated many in Asia. As refugee crises deepened, the institutional infrastructure devised to solve them led to the establishment of nearly definitive criteria by which to assign refugee status to specific human beings. Among other issues, these criteria—formalized in the 1951 Geneva Convention—have come to emphasize persecution as the reason for being identifiable as a refugee, unwillingness or inability on the part of refugees to return to their countries of origin, and the principle of nonrefoulement (no forced repatriation). Contemporary work by the UNHCR is still conducted to a large extent on the basis of these criteria.

—Fethi Keles

Bibliography

- Eltis, David, ed. *Coerced and Free Migration: Global Perspectives*. Stanford, CA: Stanford University Press, 2002.
- Harrell-Bond, Barbara E., and Eftihia Voutira. "Anthropology and the Study of Refugees." *Anthropology Today* 8(4)(1992): 6–10.
- Marfleet, Philip. *Refugees in a Global Era*. New York: Palgrave, 2006.
- Skran, Claudena M. *Refugees in Inter-War Europe*. Oxford and New York: Oxford University Press, 1995.

■ Introduction: Travel and Technology

The revolution in transportation was an outgrowth of the Industrial Revolution. In order for industrialization to be successful, it had to be possible to transport goods quickly and inexpensively. Technical advances, notably the steam engine, led to new forms of transportation like steamships and railroads.

Those new forms of machine-powered transportation represented a revolution in the movement of people, goods, and information across water and land. Steamships and railroads transformed the world by making transportation easier than it ever had been. The next revolution in transportation, heralded by the gasoline-powered

automobile, would likewise transform the world in the twentieth century.

By the time practical steam-powered automobiles were developed later in the nineteenth century, the gasoline engine had also been developed, and the steam automobiles never established a market. Electrically powered cars were also produced as early as 1891, but batteries were not good enough to compete against gasoline engines. In Germany the mechanical engineer Karl Benz was awarded the first patent for a gasoline-powered automobile with an internal combustion engine in 1886. After successful demonstrations in France, Charles and Frank Duryea demonstrated the first practical gasoline-powered automobile in America in 1894, triggering a rush to develop marketable cars. In 1896 Henry Ford built his first gasoline-powered car and opened a factory called the Ford Motor Company to produce them in 1903. Ransom Olds then began mass-producing the Oldsmobile in 1901 with a production of 425 cars.

Two important events for the automobile industry occurred in 1908: William Durant formed the General Motors Corporation, and the Ford Motor Company introduced the Model T automobile. In 1913 Ford began assembling cars on a moving assembly line, which became a crowning achievement of the Second Industrial Revolution.

Special types of automobiles evolved into buses in order to offer flexible public transportation for those who opted not to purchase their own cars. Although a bus carries fewer people than a train, usually between 8 and 70 people, buses run on the same roads as cars and can stop for passengers anywhere along the road, which offers public transportation to many more places. The first regularly scheduled bus service started in New York City in 1905. Other large cities soon started bus routes to connect their rail and street-car lines with outlying residential areas.

Automobiles and buses moved passengers from place to place, but a solution was needed to move freight from factories and farms to ships and trains and then from the boat docks and railroad yards to customers. Even in the 1890s those two portions of freight transportation were done with horse-drawn wagons, as they had been for a thousand years. Consequently, the truck was created using the same technology as

the automobile. Trucks are manufactured in many forms: pickups, flatbeds, tractor trailers, tankers, and dump trucks. They are also designed to perform such specialized functions as making deliveries, fighting fires, towing cars, and lifting heavy loads and even for off-road uses like hauling dirt. Probably no other form of transportation is as flexible or adaptable as a truck. The first trucks were developed during the 1890s and were based on steam power or electric batteries, but they were too fragile for the roads at that time and too expensive to operate. Soon gasoline engines were adapted for trucks, and stronger bodies were made to carry heavier loads over the rough roads.

The creation of small internal gas-powered engines that proved useful for automobiles also helped spur the development of powered flight. Human flight was just a dream until the development of the airplane early in the twentieth century. Although balloons, blimps, gliders, and helicopters have been flown over the years, nothing has been as successful as the airplane.

An airplane is totally impractical without an internal combustion engine or a jet engine to power it, which made its initial development dependent on the availability of a lightweight gasoline engine to turn a propeller and pull the plane through the air. As time went by a jet engine, which is a special type of gas turbine, was developed that either turns a propeller (turboprop), pushes the plane through the air by its exhaust (turbojet), or augments the turbojet with engine-driven fans to increase their power (turbofan). Flight also required a firm understanding of aerodynamics—the science of air flowing over surfaces—which generates the lift to hold the plane in the air.

In Germany in the 1890s Otto Lilienthal began constructing and flying in gliders. In 1899 two bicycle shop owners in Dayton, Ohio, Orville and Wilbur Wright, started experiments to develop an airplane that could actually take off under its own power with a pilot on board. Over the next four years they conducted tests in a wind tunnel of their own design and built model gliders to find a way to control the plane in flight. They also obtained a 12-horsepower gasoline engine that was light enough to be used on an airplane. With the flight controls and the en-

gine, they designed and built a biplane (a plane with two wings) big enough to carry a pilot. In 1903 the Wright brothers successfully flew their plane in a field near Kitty Hawk, North Carolina. Orville made the first flight of 120 feet (36.6 meters) at roughly 30 miles per hour, but Wilbur made the longest flight, more than 850 feet (259 meters). Those two efforts were the first manned flights of an airplane that included a takeoff and successful landing.

After the Wright brothers' demonstrations, many people began to make successful flights. Better and lighter engines soon became available. Biplanes were used for dramatic dogfights during World War I and helped to train hundreds of new pilots in the process. In 1918 the U.S. Post Office began to carry the mail across the country by plane on a regular schedule, creating the first airmail service. The first truly successful airplane for commercial service was the Douglas Aircraft Company's DC-3, which entered service in 1936. The DC-3 flew commercially in the United States for many years and is even still flying today in some countries.

In order to get around size constraints at airports during the 1930s, commercial seaplanes that took off and landed in the water became available. The seaplanes, called flying boats, flew between America and Europe and to the Far East. The planes had luxurious accommodations, including staterooms, for the 36-hour trip between America and Europe. Germany tried to establish a commercial flying service using hydrogen-filled dirigibles (called zeppelins) to fly to America, but unfortunately a zeppelin called the *Hindenburg* exploded on landing in New Jersey in 1937. The *Hindenburg* explosion ended that type of commercial service.

As in World War I, military developments during World War II significantly advanced technology, including advanced airframe designs and new sources of power. In 1946 airplane manufacturers began producing commercial transports, particularly propeller-driven aircraft with four engines like the Douglas DC-6, the Lockheed Super Constellation, and the Boeing Strato-cruiser. The airplanes could fly 100 or more passengers nonstop across the continent or across the Atlantic Ocean at speeds of 300 miles per hour (480 kilometers per hour). However,

another new technology from the war, the jet engine, quickly made the propeller-driven airplanes obsolete.

In 1939 Germany first flew a jet engine-powered fighter plane that could fly much higher and faster than propeller-driven planes. After the war Russia, Great Britain, and the United States all started developing larger bombers and transports using the jet engine. In 1952 Britain flew the first commercial service using a jet airplane, the De Havilland Comet. Unfortunately, two of the planes disintegrated in the air, killing everyone on board, and the Comet was discontinued. Instead, Britain put a turboprop, the Vickers Viscount, into service to replace the Comet in 1953. In America, Lockheed developed a turboprop, the Electra, but the turboprops did not stay in service for long, as better turbojets followed quickly, although smaller turboprop planes still fly regional routes. In 1958 the Boeing Airplane Company developed the first American turbojet airplane, the Boeing 707.

—Ronald Young

Flight

The advent of flight promised many things to many people, but the changes that aircraft provided for communications and transportation were unique. Both lighter-than-air and heavier-than-air craft prophesied important social changes.

Before World War I, there were dirigibles. The new luxury liners of the sky provided opportunities for the ultrawealthy to travel in a new form of style. German Zeppelins—rigid airships manufactured by the Zeppelin Company—became the latest mode of transportation for those who could afford it. However, a number of crashes, including the infamous *Hindenburg* (LZ-129) fire in 1937, spelled doom for the future of these hydrogen-filled airships. Only very recently have lighter-than-air dirigibles made a comeback as a method of transportation.

In sharp contrast, even with a slow start, heavier-than-air craft revolutionized communications and transportation in the twentieth century. Immediately after World War I, airplanes were widely available to many daring young

► CHRONOLOGY OF AIR FLIGHT

In the decades that followed the first successful manned and powered heavier-than-air flight of Orville and Wilbur Wright in 1903, new uses and possibilities for aircraft were developed. World War I added bombing runs to a list that was to include crop dusting, mail delivery, daredevil aerial shows, government propaganda, and limited passenger and freight service. The first commercial flights were established in 1919 in Europe, but many travelers still found rail travel faster, more convenient, and less expensive. Aircraft, however, had the allure of the modern and endowed passengers, pilots, and their nations with prestige. The Soviet Union began sending “agit-flight” squadrons to its rural regions, allowing peasants to experience air flight and wonders to come, while European colonial powers also began to rely on aircraft for communication and transportation between Europe and its far-flung colonies. Below are listed some highlights of aviation history in the 1900–1945 period.

December 17, 1903—Wilbur and Orville Wright’s first successful manned engine-powered flight.

The flight lasts 12 seconds.

July 15, 1909—Louis Blériot flies across the English Channel and is a hero in France.

June 14–15, 1919—British pilot John Alcock and navigator Arthur Whitten Brown fly from Newfoundland, Canada, to Ireland. They win the Daily Mail’s 10,000-pound prize and are knighted in England.

November 12–December 19, 1919—Australian brothers Ross and Keith Smith fly from Britain to Australia along with two mechanics, Wally Shiers and Jim Bennett. Their aircraft is one of six entered in an air race. They win a 10,000-pound prize issued by the British government and are knighted.

March 30–June 17, 1922—Portuguese pilots Sacadura Cabral and Gago Coutinho cross the South Atlantic from Lisbon to Rio de Janeiro. They make stops and repairs en route.

May 20–21, 1927—Charles Lindbergh in the Spirit of St. Louis achieves the first solo flight across the Atlantic, from New York to Paris.

May 31–June 9, 1928—Australian Charles Kingsford Smith and crew complete first transpacific flight, from Oakland, California, to Brisbane, Australia.

May 5–24, 1930—British air pilot (and former typist) Amy Johnson flies solo from Britain to Australia.

1932—Amelia Earhart crosses the Atlantic solo, duplicating Lindbergh’s feat.

—Fred Nadis

Bibliography

Dierikx, Marc. *Clipping the Clouds: How Air Travel Changed the World*. Santa Barbara, CA: Praeger, 2008.

pilots. In an effort to capitalize on the new technology, two distinct uses for aircraft emerged. One was in the communications field, and the other was civilian transportation.

One of the first commercial uses for aircraft was communications for business documents and mail. The first use of airmail service began immediately after the war, and by the 1920s there were airmail services around the world. The benefit of airmail was the relative speed of the service as compared to rail and ship. Initially, however, the service was quite expensive, and few took advantage of the opportunity. In an effort to build support, contests were held to prove the viability and reliability of airmail. The MacRobertson Air Race (1934), for example,

brought airmail from London to Melbourne, Australia, in record time.

But airmail was not without its hazards. Bad weather and fickle machines led to delays and even crashes. In the United States airmail was privatized, but by 1934 this industry was seen as corrupt and inefficient. In 1934 the government permitted the U.S. Army Air Corps to take over airmail, but the results were disastrous. In the winter weather the army lost a number of pilots, and the service was once again given to civilian contractors. Airmail became a staple of business contracts and eventually grew into a necessity for ordinary people. The pace of life—and of communication—reached new levels, and until widespread

use of the telephone, airmail was the preferred method of communication.

The second use for flight became even more widespread. Flight for passenger travel took off in the interwar period. From business travelers to fare-paying passengers, people took to the skies with the promise of shorter travel times in luxurious settings. The demand for commercial travel was highest in the United States, where vast distances separated the commercial centers of the Northeast from the Midwest and the West Coast. With the traditional vacation spots in Florida already established and with an increasing interest in Hawaii, Americans were perfectly suited for the development of long-distance air travel. One of the first recognized airlines was Aeromarine Airways, which in the 1920s offered flights to the Caribbean from the U.S. mainland. Whereas the Europeans had integrated rail networks, the geography of North and South America facilitated the growth of commercial airliners and airlines.

By the 1930s, several airlines were in operation around the world. Led by the Americans and Europeans, fare-paying passengers relaxed in luxury as they traveled the skies. Interestingly, the Europeans focused more on speed, primarily because of the short distances in continental Europe, whereas the Americans focused on range and reliability. With these industrial prerequisites, it was no accident that by 1939, with the approach of World War II, the Americans were the world leaders in heavy four-engine bombers, and the Europeans, especially the Germans, French, and British, were much more advanced in high-speed fighter technology. Peacetime commercial aviation technology evolved quickly into wartime military weapons systems.

During the 1930s, commercial aviation technology advanced to include monoplane designs, retractable landing gear, cowled or aerodynamically covered engines, and substantial improvements in engines, instruments, and fuels. By the late 1930s, there were two completely independent programs, one in Germany and the other in Britain, to develop gas turbine (or jet engine) aircraft. The German jet designer Hans von Ohain commented after an especially rough ride in a Junkers Ju 52 triengine airliner that flight needed to be more “elegant,” and he set out to design a

quieter, smoother engine to power aircraft to higher speeds at higher altitudes.

From the military technology of the war emerged the civilian technology of the postwar period. Commercial airliners adopted jet technology for efficiency and speed, and passengers began to use the commercial skies ever more frequently. The airliner and commercial aviation became a staple of the industrialized world’s vacationing population as interest in travel grew with a corresponding increase in discretionary funds in the average Western household.

Throughout the first half century of flight there remained two distinct but often intermixed roles for civilian aviation: communication and transportation. Aircraft became the new form of transportation for both cargo and passengers and subsequently revolutionized both the communications and transportation industry.

—Sterling Michael Pavelec

Bibliography

- Allaz, Camille. *The History of Air Cargo and Airmail from the 18th Century*. London: Christopher Foyle Publishing, 2004.
- Glines, Carroll. *Airmail: How It All Began*. Blue Ridge Summit, PA: Aero Publishers, 1990.
- Heppenheimer, T. A. *Turbulent Skies: The History of Commercial Aviation*. New York: Wiley, 1995.
- Van Der Linden, F. Robert. *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry*. Lexington: University Press of Kentucky, 2002.

The Automobile to 1945

Few modern technologies have had greater economic, political, social, and cultural effects than the automobile. Automobiles and their manufacture have been a source of millions of jobs and have encouraged diffuse settlement patterns, absorbed large shares of individual incomes, conferred an unprecedented degree of personal mobility, and posed a variety of threats to personal safety and the natural environment. None of this was foreseen when the first automobiles emerged from the workshops of their creators toward the end of the nineteenth century. As with many technological innovations, the automobile had a number of precursors that turned

➤ AESTHETICS AND THE AUTOMOBILE

Although most automobile owners probably would not admit it, the styling of a car has been a major influence over their choice of an automobile. During the first decades of the automobile industry, little conscious thought was given to a car's overall appearance; just getting it to work reliably was challenge enough. By far the largest-selling car of its era, the Ford Model T, was an ungainly looking thing that famously came in "any color you wanted as long as it was black." In the early 1920s General Motors began to challenge Ford's position as the world's largest automaker and in 1927 took a major step in that direction when it hired Harley Earl (1893–1969) to head its newly created Art and Color Section. Earl had designed custom bodies for luxury automobiles in California, and his influence soon resonated through General Motors. He was not a talented draftsman, but he had a keen eye for style. As he put it, his stylistic goal was "to lengthen and lower the American automobile, at times in reality and always at least in appearance." For many years General Motors cars had the most eye-catching designs, although some of the corporation's stylistic innovations such as wraparound windshields, two-tone paint jobs, tailfins, and an overabundance of chrome trim may seem a bit ridiculous today.

—Rudi Volti

out to be dead ends. In France, Nicholas Cugnot built two self-propelled steam-powered vehicles between 1765 and 1770, and Oliver Evans in the United States used steam to propel an amphibious dredger that may have traveled under its own power in Philadelphia in 1805. But the true ancestors of today's automobiles were built in Germany. In 1885 Gottfried Daimler (1834–1900) and Wilhelm Maybach (1847–1929) built a two-wheeled vehicle powered by a gasoline engine, and in the following year Carl Benz (1844–1929) built a three-wheeler that may be considered the first automobile. Both vehicles used a four-stroke internal combustion engine, a design that had been created by Nicolaus Otto (1832–1891) in 1876. Although early electric and steam-powered cars had their virtues, cars with internal combustion engines went on to dominate the industry.

Although Germany can lay claim to being the birthplace of the automobile, the center of the industry soon passed to France, where firms like Peugeot, DeDion-Bouton, and Panhard produced cars at a price that adventurous members of the upper middle class could afford. France's lead was short-lived, however, as in 1904 the United States became the world's largest producer of automobiles. Being the world's largest producer meant manufacturing about 20,000 cars in that year. Cars were far from being an essential consumer good; they were instruments of fun and adventure rather than utilitarian means of transportation. Continual improvements during the first decade of the twentieth century made automobiles a more practical proposition, but their high price limited their market. Many manufacturers addressed this drawback, but none was as successful as Henry Ford (1863–1947) and his outstanding creation, the Model T. Ford was determined to build what he called "a car for the great multitude." This he was able to do by insisting on the use of specialized machinery, rigid standardization, and interchangeable parts. In 1913 his firm began to experiment with the use of an assembly line, and over the next few years this labor-saving system allowed him to slash production costs. Lowered costs allowed lower selling prices that put a Model T within the reach of millions of people who had not been able to afford a car. So successful was this strategy that by the early 1920s half of the cars on America's roads were Model Ts.

Ford thought that his Model T would continue in production for many more years if not decades, but automotive technology and public tastes were not standing still. The firm that was best able to exploit the rapidly changing automobile market was General Motors (GM). Founded by William C. Durant (1861–1947) in 1908—the same year that the first Model T rolled out of Ford's small factory—GM offered a range of automobiles that catered to every income niche. Equally important, GM set up a lending agency that allowed customers to buy cars on credit, while Ford still insisted on cash up front. Durant was an erratic manager, however, and in 1920 leadership of GM passed to Alfred Sloan (1875–1966), who emphasized styling and instituted the annual model year as a means of inducing

customers to buy a new Chevrolet or Oldsmobile even though there was plenty of useful life left in their car. In 1927 Ford finally replaced the Model T with the more technically advanced Model A, but by then it was too late, as GM dominated car sales in the United States for many decades to come.

Ford and GM through its subsidiaries Vauxhall and Opel were important manufacturers in Europe as well. A plethora of European firms such as Renault, Fiat, and Morris also contended for a share of the market that was considerably smaller than that of the United States. Many firms attempted to build an affordable car in order to expand the market. One of the most notable was the Volkswagen (or “People’s Car” in English; also known as the VW), which was created at the behest of Adolf Hitler. Thousands of Germans paid into a regular payment plan that was supposed to culminate in the ownership of a new VW, but they never got their car, as only a few prototypes were produced prior to the start of World War II.

Although production of the VW failed to meet expectations, Germany took the lead in highway design and construction with the first of its autobahns. By contrast, the United States had been struggling to develop an adequate highway system for its large car population. The shortcomings of American roads and highways had been highlighted in 1919 when a fleet of U.S. Army trucks needed 56 days to travel from Washington to San Francisco, averaging only 50 miles (80 kilometers) a day as they slogged through mud, dust, potholes, and ruts. Some help came in the form of the Federal Highway Act of 1921, and a few New Deal projects carried out by the administration of Franklin Roosevelt improved infrastructure, but the Great Depression of the 1930s was a bleak one for the automobile industry. Although the number of miles driven actually increased, car sales never rebounded to their 1929 peak. Instead, the American automobile industry took on a new and vital role as the United States entered World War II in 1941. Automobile production came to a virtual halt as the industry was transformed into a great arsenal of democracy when it became a major supplier of tanks, airplanes, engines, ordnance, and other necessities of modern warfare.

By 1945, economic depression and war had taken their toll on the American automotive fleet. At the same time, Japan and the devastated countries of Europe were about to embark upon an economic boom that would put automobiles within the reach of hundreds of millions of people. The great postwar expansion of automobile ownership was about to begin.

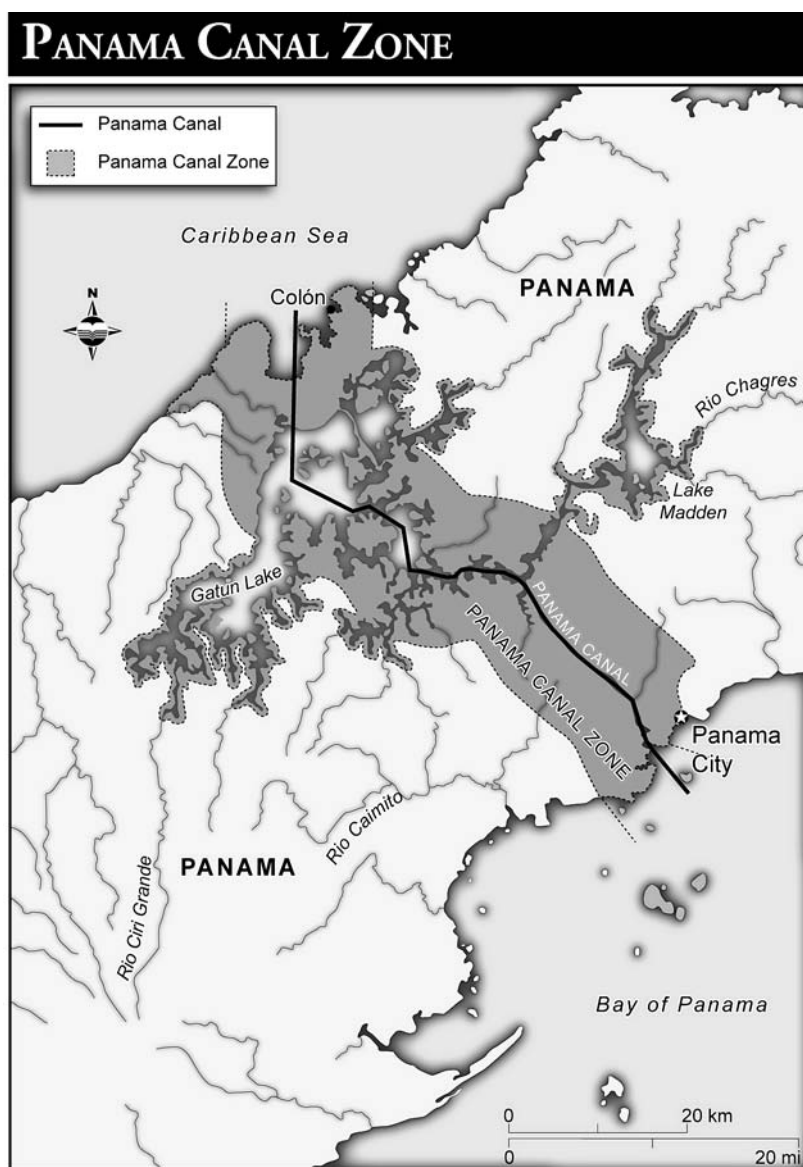
—Rudi Volti

Bibliography

- McCarthy, Tom. *Auto Mania: Cars, Consumers, and the Environment*. New Haven, CT: Yale University Press, 2007.
- McShane, Clay. *Down the Asphalt Path: The Automobile and the American City*. New York: Columbia University Press, 1994.
- Volti, Rudi. *Cars and Culture: The Biography of a Technology*. Baltimore and London: Johns Hopkins University Press, 2005.
- Wik, Reynold M. *Henry Ford and Grass-Roots America*. Ann Arbor: University of Michigan Press, 1972.

The Panama Canal

The Panama Canal was built by the U.S. government during 1903–1914 following a failed attempt by the French in the 1880s. Cutting through the Isthmus of Panama (or Isthmus of Darien), the canal connects the Pacific Ocean to the Caribbean Sea. A remarkable engineering feat and a prime example of U.S. president Theodore Roosevelt’s Big Stick diplomacy, it has been a crucial waterway for commercial and military shipping and remained under U.S. control until 1977. The Isthmus of Darien is only 50 miles (80 kilometers) wide, but it features difficult terrain, rain forests, heavy rainfall, and disease-bearing mosquitoes. The first European explorer to cross the isthmus was Vasco Nuñez de Balboa (1513) en route to his historic first glimpse of the Pacific Ocean. Under Spanish control, Panama soon became a transit point for shipments of Peruvian bullion that were transported on mule trains across the isthmus before the final sea voyage to Cuba and Spain. Spanish king Charles I (1516–1556) considered digging a canal, but a survey showed that the undertaking was beyond the technology available at the time. During the California Gold Rush



era, land crossings at Guatemala, Nicaragua, and Panama to link shipping lines became a popular travel route to California's Mother Lode terrain. In 1855 when Panama was a province of an independent Colombia, a narrow-gauge railroad financed by U.S. capital opened. The first attempt to dig a canal was led by Ferdinand de Lesseps, the French diplomat who led a similar project to completion in Suez (1859–1869). De Lesseps's private company obtained a 99-year concession from Colombia in 1878 and, after purchasing the American-owned railroad in 1880, began excavation the following year.

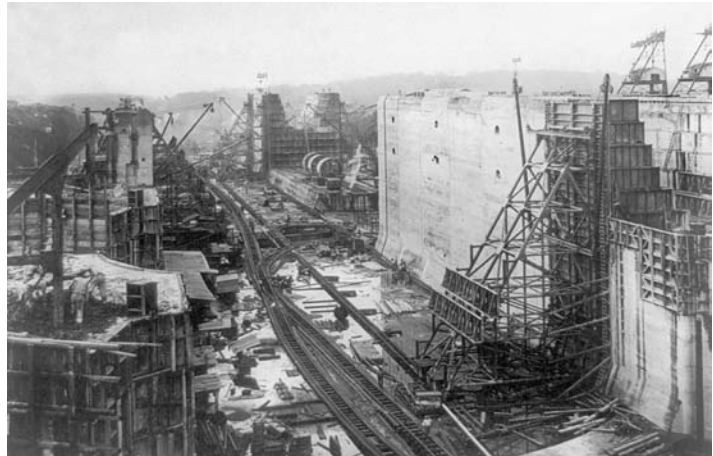
The French effort was undermined by a variety of factors. First among them was the decision to build a sea-level canal. Although this decision eliminated the need for complicated locks, it greatly increased the scope of the excavation. Furthermore, rainfall and mudslides undermined the capabilities of the steam-powered shovels. Tropical fevers also decimated the workforce, and by 1889 the endeavor had lost 25,000 workers and had only completed 10 percent of the work. The company also ran out of funds, ruining small shareholders and sparking a massive scandal in France, as the company had

bribed politicians and journalists to keep its financial troubles secret.

Meanwhile, U.S. interest in a canal increased. The settlement of California and other western states had escalated the need for east-west commerce, which the transcontinental railroads could not fully meet. The Spanish-American War (1898) established the strategic need for a quick route from naval bases in California to the Caribbean. Inspired by the 1823 Monroe Doctrine and Alfred Thayer Mahan's *The Influence of Sea Power upon History* (1890), U.S. politicians such as Roosevelt concluded that such a canal, if built, should be under U.S. control.

U.S. politicians and engineers considered two other routes besides Panama: (1) the Isthmus of Tehuantepec in southern Mexico and (2) Nicaragua. The latter was long a U.S. favorite because the San Juan River and Lake Nicaragua could be made use of. But Philippe Bunau-Varilla, an engineer who had worked on the French venture and hoped to profit from his shares in the bankrupt Panama Canal Company, convinced President Roosevelt to opt for Panama by arguing that a Nicaraguan route was longer and dangerously close to volcanoes. The U.S. government bought the company's assets in Panama (including the railroad) for \$40 million.

The Hay-Herran Treaty (1903), named after U.S. secretary of state John Hay and Colombian chargé d'affaires Tomas Herran, specified that Colombia would grant the United States a renewable 100-year lease on a six-mile zone that excluded Panama's main cities of Colón and Panamá City for a one-time payment of \$10 million and a yearly \$250,000 rent. The Colombian Senate refused to ratify the treaty, however, and Roosevelt conspired with Panamanian nationalists to incite a rebellion in Panama. A U.S. naval blockade prevented Colombia from rushing in reinforcements and allowed Panama to obtain its independence in November 1903. Bunau-Varilla, now an ambassador, subsequently signed the Hay-Bunau-Varilla Treaty (1903) under which Panama accepted the same financial compensation previously rejected by Colombia but had to grant the United States a larger zone, 10 miles (16 kilometers) wide, in perpetuity (the United States also obtained partial authority for police and sanitation in Colón and Panama City).



Construction of the Panama Canal, about 1910. The canal revolutionized the possibilities for the international movement of people and trade goods. (Library of Congress)

Panamanians objected, to no avail, that the treaty had been negotiated by a nonnational.

The U.S. government then focused on solving the epidemiological problems that had plagued the French effort. Dr. Carlos Juan Finlay of Cuba had rightly posited in 1881 that one species of mosquito (the *Stegomyia fasciata*) transmitted yellow fever. In 1897, British physician Ronald Ross had identified another species of mosquito, *Anopheles*, as the carrier of malaria. Dr. William C. Gorgas led a massive sanitation effort that drastically reduced yellow fever and malaria cases in Panama by destroying mosquito breeding grounds.

The work itself, led by chief engineers John F. Wallace, John F. Stevens, and Lt. Col. George W. Goethals, began in earnest in 1904 and lasted until 1914. Instead of the sea-level design advocated by de Lesseps, the U.S. design centered on a dam built at Gatún, creating an artificial lake that allowed ships to sail through the isthmus while minimizing excavation at the highest point of the isthmus (Culebra Cut). Starting from Colón on the Caribbean side, ships were to be raised by three pairs of massive locks (110 feet wide and 1,000 feet long) up to the height of Gatún Lake, sail through the lake and the high part of the canal, and then be lowered through two pairs of locks (Pedro Miguel) and then another pair (Miraflores) to the Pacific Ocean. Other improvements included heavier machinery and better use of the

existing railroad to haul debris away from the construction site.

The Panama Canal was completed under budget in 1914 at a total cost of \$365 million. The canal was protected by permanent U.S. bases and occasional military interventions, the last one in 1989–1990. Under the Panama Canal Treaties, signed in September 1977 by U.S. president James E. Carter and Panamanian leader Omar Torrijos, the United States agreed to give the canal to Panama in 2000 while retaining the right to intervene militarily should neutral access to the canal be impeded. More than 14,000 ships transited the canal in fiscal year 2005.

—Philippe R. Girard

Bibliography

- Mack, Gerstle. *The Land Divided: A History of the Panama Canal and Other Isthmian Canal Projects*. New York: Octagon Books, 1974.
- Major, John. *Prize Possession: The United States and the Panama Canal, 1903–1979*. New York: Cambridge University Press, 1993.
- McCullough, David. *The Path between the Seas: The Creation of the Panama Canal, 1870–1914*. New York: Simon and Schuster, 1977.

Needs of Urbanization

In the first half of the twentieth century, the expanded urbanization that occurred throughout much of the developed world was characterized by the establishment of transportation, sanitation, and electrification infrastructures; steel construction in architecture; and the expansion of suburban and urban housing projects. The urbanization that occurred in the developing world, while mirroring some developments in the West, was not to the same degree due to their economic and political subservience to Europe. However, most of these changes were made in order to address the economic, social, and political needs created increased urban populations in a vastly changing urban landscape. Due to the increased rates of internal migration from the country and external immigration to conurbations in the West, state initiatives drove many of these infrastructural and architectural projects to fulfill the needs of the urban populace, which had expanded rapidly vis-à-vis rural populations.

Cities in Europe (mostly in Britain, France, Germany, and regions in Italy and Austria), North America (the United States and Canada), and Oceania (Australia and New Zealand) experienced massive waves of internal migration due to the rapid rate of the Second Industrial Revolution, which contributed to the expansion of electricity, chemicals, and consumer goods in their respective societies. Moreover, the growing affluence of their middle classes led to the expansion of suburban and exurban (areas outside suburbs) housing in areas surrounding the center of the city (downtowns or central business districts). This necessitated the construction of reliable public transportation to and from the city center to the suburbs, a slow transition from horsecars to subways and trolley cars. However, the exodus of the well-to-do to the wealthier concentric areas that surrounded the city centers were filled by rural migrants or, in the case of the “neo-Europes,” vast communities of immigrants. In the case of the United States, the internal migration of African Americans from the Jim Crow South to northern cities in the first half of the twentieth century also shaped the urban settlement patterns of major cities such as Detroit and Chicago. In the Soviet Union, particularly during the Stalinist Five-Year Plans of the interwar period, cities such as Magnitogorsk were established next to vast centers of industrialization.

As a result of this rampant growth particularly in the interwar period, municipal, regional, and national governments took a more proactive stance at subsidizing city infrastructure in the forms of creating sanitation, transportation, and electrical infrastructural improvements. Major cities like London, New York, Paris, Berlin, and Tokyo, which had experienced massive growth in the late nineteenth century, grew immensely in terms of suburban and exurban developments, which necessitated more investment in the installation and expansion of existing trolley lines, subways, sidewalks, paved roads, electric grids, telephone lines, gas lines, municipal dumps, and water and sewage systems. Often, these improvements were done by the municipal governments at public cost or through private firms (utilities monopolies in the United States) at public expense and regulation. Moreover, it became a government prerogative to en-

sure that the needs of urbanization, such as expansion, were planned and executed under state auspices to ensure compliance of building codes and sanitation standards. In the midst of this expansion, cities absorbed outlying suburbs and adjacent towns and rural communities outside of the city walls in the European context.

While municipal governments provided the means to develop urban conglomerations during this period through the establishment of infrastructural improvements based on technological advancements developed from the Second Industrial Revolution, commercial considerations also had a significant impact. City centers (central business districts, or CBDs), as the commercial and financial centers of business, retained their importance as the hub of city life (characterized by steel-framed high rises and modernist architectural designs in the United States), while external regions also developed their own retail and commercial establishments closer to their residential communities. Wealthy communities developed shopping centers with consumer goods geared toward their respective residents, while poorer neighborhoods retained their smaller, more localized shops and specialized services geared to the working and poor classes (especially in Berlin, Chicago, and San Francisco).

As social mobility allowed people to move to external suburbs indicative of their social station, the poor internal sections of major cities were left to the poorer migrants or immigrants, who in turn also left when their economic conditions improved. However, within the city centers, more lucrative housing developments were also constructed, as many wealthy people would decide to move close to the downtown districts to enjoy the proximity to what was deemed a more exciting urban lifestyle than the humdrum suburbs and exurbs. In the United States, the poorest neighborhoods were often occupied by African Americans and recent immigrants (Russian Jews, Italians, and Poles) due to either racial or economic status. Poor neighborhoods were often adjacent to the city centers, often at the opposite end of a more affluent internal community and often geographically separated by roads or train tracks or the downtown or political center itself (for example, West End and East End in London).

While public transportation initially shaped the outgrowth of cities to a certain radius from the city center, the automobile allowed for an even greater expansion of conurbations, particularly in the United States. The automobile allowed for the middle class to live farther from the city center in exurban, almost rural environs and commute to their employment in the city center. Moreover, centers of distribution and commerce in the suburbs were already close to the residents of those outlying districts, allowing a level of detachment from the old city center (for example, Hollywood and Los Angeles). The urban core of the city was subsequently developed into surrounding ethnic neighborhoods (e.g., Chinatowns), working-class neighborhoods (e.g., Wedding in Berlin), or trendy affluent neighborhoods (e.g., Soho in London and Greenwich Village in New York City), most often with their own series of shopping districts and entertainment. Moreover, national and international trade allowed for the creation of consumer goods that entered all Western countries through major cities, which were the hub of the expanding global economy. While other world regions experienced similar processes of urbanization (prior to 1945) in their major industrial cities and political centers (e.g., Buenos Aires, Shanghai, and Tokyo), they would experience a far more accelerated rate of urbanization after 1945.

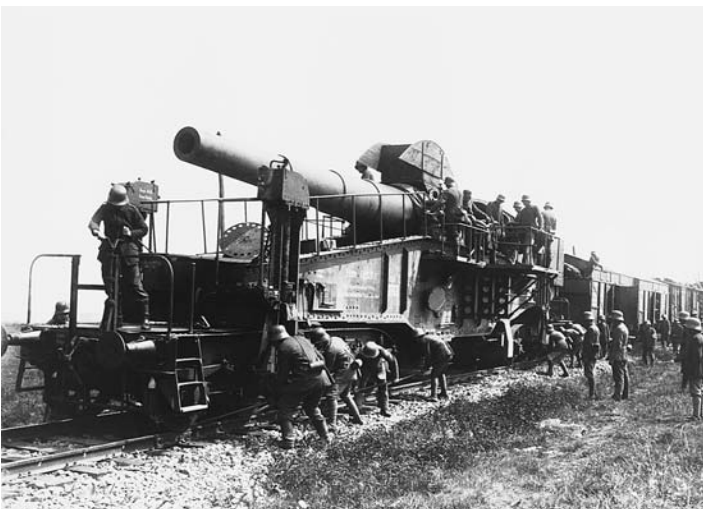
—Abraham O. Mendoza

Bibliography

- Brueggemann, Robert. *Sprawl: A Compact History*. Chicago: University of Chicago Press, 2005.
- Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects*. New York: Harcourt, Brace and World, 1961.

Railroads

By 1900, railroads interconnected much of the industrialized world, areas of Asia, European colonial possessions in Africa, and the rapidly growing economic centers in Central and South America. Although in most of the world the era of major railroad construction was coming to an end, innovations in operations and the



German soldiers use the railway to transport a long-range cannon during World War I. (Bettmann/Corbis)

➤ DEATH RAILWAY

During World War II, more than 50,000 British, Australian, Dutch, and American prisoners of war (POWs) were forced by their Japanese captors to build railway lines that would effectively link Burma and Thailand to other Japanese-held areas and facilitate a Japanese invasion of India. A similar scheme for a Burma-Thailand railway had been abandoned by the British earlier in the century because of the sheer difficulty in negotiating the rugged mountainous, disease-ridden jungle terrain. Pressed by logistical difficulties and the Allied submarines that were hampering efforts to supply troops at the front, the Japanese determined in 1942 to build the railway using forced labor. An estimated 25 percent of POWs died because of overwork, disease, malnutrition, and other factors. While these death rates are appalling, the toll on the forced Asian laborers was even higher. Out of an estimated 250,000 Asian laborers on the railway, perhaps as many as 100,000 or more died. The construction of the Death Railway, as it came to be called, was one of the acts highlighted through prosecution at the war crimes trials following World War II.

—Gerrit Dirkmaat

expansion of rail lines had a dramatic impact worldwide.

Although some important railroad expansion still occurred in the United States—such as the new Santa Fe rail line built in 1907 from San Diego, California, to Yuma, Arizona, that broke the Southern Pacific Company's monopoly—this period represented an explosion in the use of existing rails for commuting purposes. Major cities such as Chicago, Boston, New York City, and Philadelphia expanded their capacity in order to meet the rising demands of their rapidly growing suburban areas. By 1920 in the Boston area alone, nearly 250,000 commuters were riding the rails every day. In New York where commuter rails were slower to develop, commuters on rails increased from 14.5 million in 1913 to 33.5 million in 1929. Most cities adopted electrical lines for their commuter trains in the early decades of the twentieth century. However, as quickly as the railroad grew as a commuter transport, it began to just as rapidly decline in importance following its peak in 1929. By 1940 with the rise of the automobile, commuter rail traffic in the United States had been cut almost in half.

In Europe the strategic aspects of railways were essential during World War I. Although railways had been used by the Germans to win the Franco-Prussian War (1870–1871) and to an even greater extent in Africa by the British in their prosecution of the Boer War (1899–1902), World War I far surpassed any previous conflict in its utilization of railways for military purposes. Railways allowed armies to mobilize and reach the front in weeks rather than months. Many historians argue that the very existence of the railways facilitated the outbreak of hostilities at the outset of the war. Because mobilization was placed on a much more rigid and rapid timetable based on the usage of rolling stock, it was both difficult and imprudent to stop once it had begun, lest the resulting snarled transportation network left one's army disjointed and paralyzed if an enemy nation did in fact attack.

Throughout the war men and matériel were rapidly moved to the battlefield, and smaller branch lines were constructed to serve the evolving needs of the battlefield. Massive artillery pieces, such as the German Big Bertha, were

mounted on railcars to expedite their movement. Russia, whose lack of effective rail connections to the Far East had at least partially caused that nation's crushing defeat at the hands of the Japanese in 1905 during the Russo-Japanese War, had invested much in the way of railway construction and modernization and utilized these improvements to quickly move thousands of men to the front.

In the late interwar years, rail transport began to lose ground to other methods, namely airplanes and automobiles. The turn against railroads in this period was evident in the British efforts, or lack thereof, to build railways throughout their sphere of influence in the Middle East and Southeast Asia. While many plans were put forward, most were discarded in the face of prohibitive costs, difficult construction, and viable alternatives.

Despite the fact that railways were declining in relative significance economically and militarily, World War II greatly increased the need for locomotives, rolling stock, and new rail lines. On the Russian front, Germans undertook massive rail building and conversion efforts, as they were forced to contend not only with the scorched-earth policy of the Soviet Army that wrecked locomotives, tore up rail lines, and demolished railway bridges but also with the fact that the Russian rail gauge was a different size than the German lines. This necessitated a painstaking regauging process, first by the Germans in their advance and second by the Russians as they retook the lost rail lines later in the war. The Russians also built more than 4,000 miles (7,000 kilometers) of new track during the conflict. In Nazi-occupied Europe, railways were a major accomplice to genocide, as Jews were herded into train cars and taken to concentration and death camps. Allied strategists have been criticized for failing to target for bombing the rail lines to death camps such as Auschwitz.

Following World War II, the brief resurgence in rail traffic ended, and rail traffic steadily declined as automobiles and trucks proved more effective and flexible for the economic needs of the booming postwar economy.

—Gerrit Dirkmaat

Bibliography

- La Forte, Robert, and Ronald E. Marcello. *Building the Death Railway: The Ordeal of American POWs in Burma, 1942-1945*. Wilmington, DE: Scholarly Resources, 1993.
- Middleton, William D., et al., eds. *Encyclopedia of North American Railroads*. Bloomington: University of Indiana Press, 2007.
- Otte, T. G., and Keith Neilson, eds. *Railways and International Politics: Paths of Empire, 1848-1945*. New York: Routledge, 2006.
- Westwood, John. *Railways at War*. San Diego: Howell-North Books, 1980.

Petroleum

Between 1900 and 1945 petroleum changed from a minor source of power to a major one. The primary reason for this transformation was the use of petroleum in the form of gasoline and diesel to power new modes of transportation that utilized the combustion engine, including automobiles, trucks, airplanes, and ships. These new modes of transportation affected all facets of social, economic, and cultural life, and the demand for petroleum altered the geopolitical climate.

From earliest recorded history humans utilized shallow pools of crude petroleum that rose to the surface as a lubricant, a source of lighting, and even medicine. But in 1859 the Drake well in Titusville, Pennsylvania, was the first successful attempt to drill into subterranean pools of petroleum. From 1859 until 1913, most of the petroleum was distilled into kerosene to provide fuel to light private homes. After the invention of the incandescent light bulb in 1879, electricity rapidly replaced kerosene lamps as a lighting source in the early twentieth century.

The development of the automobile in the late nineteenth and early twentieth centuries created an additional demand for petroleum. At first, gasoline was only one option to power automobiles; several engine designs used steam or electric motors. Neither steam nor electricity, however, could provide the power necessary in the United States to travel vast distances or across rugged rural roads. Henry Ford's production of the Model T, first begun in 1908, marked the emergence of the mass market for automobiles.

> VENEZUELAN OIL

Long before the arrival of the Europeans, the native inhabitants of Venezuela knew that their land contained petroleum deposits. Natural seepages of crude petroleum had been occurring around Lake Maracaibo for centuries, with the indigenous people using the black crude to caulk and repair their canoes. Although the Compañía Petrolera del Táchira (Táchira Petroleum Company) began production in the Venezuelan Andes in 1879, such operations were limited and primitive. The company produced only about 40 gallons of petroleum a day, achieved by manually digging pits and scooping the petroleum out with buckets. The first commercial oil well in Venezuela, Zumaque 1, was drilled in February 1914. By 1917, the first year that Venezuela exported petroleum, the industry was producing only about 125,000 barrels a year. Thus by the end of World War I, Venezuela had not yet become a major supplier of petroleum. By 1928, however, Venezuela was producing around 100,000,000 barrels a year, more than any other country in the world.

—H. Micheal Tarver

Over the course of two decades, Ford continued to manufacture the Model T at a declining cost to the consumer, turning the automobile from a toy of the rich to a staple of American life. By 1913 the United States claimed 485,000 of the 606,000 cars worldwide. In 1913 as automobiles created greater demand for petroleum, William Burton developed the process of thermal cracking. Using high heat to break down the carbon molecules, thermal cracking proved more efficient than distillation and allowed for the production of more gasoline from the same amount of crude. In addition, petroleum provided lubricants necessary to the automobile and to manufacturing equipment. Petroleum also provided the material to build the roads that the new cars traveled over. By 1907 the use of asphalt for road construction exceeded the use of natural materials. The road networks of North America and Europe grew exponentially, and during the 1920s and 1930s asphalt roads replaced older stone roadbeds in urban areas.

Military vehicles and railroads also stimulated reliance on petroleum. During the Boer War (1899–1902) the British made extensive use of gasoline-powered trucks for the first time in military history. For the navy, oil appealed to admirals such as Britain's John Fisher because it gave the fleet increased range, greater carrying capacity, and more speed. No longer would fleets be limited in range to the vicinity of their coaling stations.

In the years prior to World War I, several European nations and the United States began shifting from the use of coal-powered steam locomotives to diesel engines that had greater power and carrying capacity. By the end of World War II, most railroads in Europe and North America were diesel powered.

During the 1920s demand for private and commercial transportation increased the sales of both cars and trucks. To provide gasoline, service stations became a standard fixture of the roadways. New pumps were designed to fill the increased gas tanks. Prior to 1923 automobile engines tended to run very rough. The introduction of ethyl (leaded) gasoline dramatically improved engine performance although at a great expense to the environment. As Henry Ford had revolutionized the automobile industry in the 1910s, Alfred Sloan did so in the 1920s when General Motors introduced the annual model change. In so doing, Sloan removed the car from the sole realm of transportation and made it an item of consumption, style, and self-expression. Furthermore, in urban areas gasoline-powered buses replaced electric trolleys as the main source of public transportation.

In the 1920s gasoline-powered airplanes competed with airships (dirigibles and blimps) for long-distance commercial service. Charles Lindbergh and Amelia Earhart, among hundreds of barnstorming daredevils, glamorized the possibilities of airplanes. In the 1930s, new wing designs and building materials dramatically improved airplane capacity and distance. The *Hindenburg* disaster in 1937 sealed the fate of airships and guaranteed the supremacy of the gasoline-powered aircraft.

As demand for oil increased, scientists and geologists developed new technologies to locate

potential petroleum fields and extract oil from deeper wells. Aerial photography, seismography, and improved understanding of geological requirements for petroleum deposits allowed companies to identify potential oil fields. Improved rigs and drills increased access to deep oil reservoirs. In 1918 the best rigs could drill to a depth of 6,000 feet (1,800 meters), and by 1930 they could reach 10,000 feet (3,000 meters). In 1900 the United States and Russia were the leading petroleum extractor nations. Between 1900 and 1945 new fields were opened in North, Central, and South America; the Middle East; Southeast Asia; Russia; and Romania.

During World War II, oil played a tremendous role. Oil served as fuel for tanks, planes, ships, and trucks and served as a raw material for explosives, runways, roads, and synthetic rubber. A lack of petroleum forced the Axis nations of Germany and Japan to seek synthetic sources of fuel. By 1944 synthetic oil accounted for 57 percent of the German total supply. Following World War II the importance of petroleum as a source of energy increased as automobiles and airplanes became more common forms of transportation throughout the world.

—Gregory J. Debler

Bibliography

- Flink, James. *The Automobile Age*. Cambridge, UK: MIT Press, 1988.
- Maugeri, Leonardo. *The Age of Oil: The Mythology, History, and Future of the World's Most Controversial Resource*. Westport, CT: Praeger, 2006.
- Shah, Sonia. *Crude: The Story of Oil*. New York: Seven Stories Press, 2004.
- Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Simon and Schuster, 1991.

The Economics of European Travel

Modern tourism originated in Europe as a result of the eighteenth-century Grand Tour, a coming-of-age ritual that drew wealthy young Englishmen, and a few women, to the continent for a stay of several months to a few years. Parents expected young tourists to master languages, de-

velop more sophisticated aesthetic sensibilities, and acquaint themselves with various European cultures. Tourists spent liberally, traveled with mountains of luggage, purchased art, and spent lavishly on alcohol, prostitutes, and accommodations. When visitors wrote about their experiences, more and more readers dreamed of making similar trips.

Two factors were particularly important to the dramatic growth of tourism after the middle of the nineteenth century. First, transportation options grew and became more affordable. By the 1880s, European railway companies offered express trains to particularly popular destinations such as the French and Italian Riviera, the Atlantic coast, and the Alps. Travelers could move from the French Channel ports to Cannes or Nice in under 24 hours. The addition of expanded steamboat service by the fin-de-siècle further expanded travel options and efficiency. Likewise airline travel, first for the wealthy after World War I and then for a growing segment of the middle and working classes after World War II, further increased the availability of holidays for both Europeans and non-Europeans alike.

The extension of available leisure time further expanded the popularity and importance of tourism. During the early nineteenth century most workers enjoyed almost no free time and therefore could not contemplate holidays. Gradually, agitation by workers' groups and unions prompted a half a day Sunday, free Sunday, and eventually the growth of weekends. Many workers earned unpaid summer holidays by the last two decades of the nineteenth century. After World War I many British employers awarded their workers with paid holidays; the government extended this benefit to all workers in 1938 by passing the Holidays with Pay Act. Similarly, in Germany workers gradually earned greater and greater free time, moving from an 80- or 90-hour week during the nineteenth century to a 50-hour week by World War I and a 40-hour week in 1975.

State-sponsored tourism development remained rare during the first years of the twentieth century. The Spanish government was among the first to include tourism development in the state's agenda for economic growth. The program strove to attract tourists from foreign

IRISH TOURISM

During the nineteenth century tourist traveling to Ireland increased, especially after an English entrepreneur launched a private tourism development association to promote the importance of tourism development. Irish tourism suffered greatly due to the Anglo-Irish War (1919–1921) and then the Irish Civil War (1922–1923), but after a group of mostly Irish entrepreneurs launched the Irish Tourist Association (ITA) in 1924, tourism development started in earnest. The Irish government established the first official tourist board in 1939 following pressure from the ITA. Following World War II the government again increased both interest and investment in tourism by creating a succession of new tourism bodies. Even to date, Irish tourism benefits from the picture-postcard appearance of many Irish towns.

—Eric G. E. Zuelow

markets such as Britain and France. Various European officials and journalists soon noted that tourism was a growing part of the French, Spanish, Swiss, and Italian economies, and patriots such as Spaniard Marqués de la Vega-Inclán presented tourism as an important national interest. By the eve of World War I nationalists in many European countries believed tourism to be an important national interest. Thus, private pressure groups urged their state governments to expand tourism initiatives.

During the interwar period several state governments, including France, Germany, Italy, and Ireland, formally instituted tourism development programs. Spanish dictator Miguel Primo de Rivera pursued the development of infrastructural improvements such as roadway development and maintained a belief that tourism would become a vital moneymaker for the nation. Likewise, in Ireland the Irish Tourist Association (ITA) pursued private development projects while applying constant pressure to the Irish Free State government. In 1938–1939 the ITA finally convinced the government to create one of Europe's first statutory tourist development bodies. The fascist regimes in both Italy and Germany pursued tourism as a significant component of state-

regenerative policies. Leisure organizations such as the Nazi's Kraft durch Freude strove to create both a tourism infrastructure and affordable vacation opportunities for workers, spawning both economic growth and loyalty to the regime.

World War II brought European tourism development to a grinding halt, while total war destroyed much of Europe's tourism infrastructure. Even in Ireland, which remained neutral during the war, tourism development as well as tourist traffic slowed to a crawl, while tourism revenue all but vanished.

During post-World War II reconstruction, the Marshall Plan encouraged European states to further expand official tourism efforts. In Ireland, for example, U.S. officials working to implement the plan threatened to revoke agricultural grants unless Irish officials reconsidered state tourism policy. Indeed, tourism development made sound economic sense because the market for tourism certainly did not vanish as a result of the war. In fact, in the immediate aftermath of V-E Day, tourists rushed to Ireland partly because the country had avoided the destruction inflicted on British and European cities and partly because it was virtually the only place in Europe where fresh meat and dairy products were easily available to visitors during a period of otherwise widespread rationing. By the 1950s Europe far exceeded other world tourist destinations. In 1950, for example, European states together earned \$490 million from tourism, ahead of the \$366 million earned by the United States and the \$215 million collectively earned by Latin American countries.

—Eric G. E. Zuelow

Bibliography

- Baranowski, Shelley. *Strength through Joy: Consumerism and Mass Tourism in the Third Reich*. Cambridge: Cambridge University Press, 2004.
- Barton, Susan. *Working-Class Organisations and Popular Tourism, 1840–1970*. Manchester, UK: Manchester University Press, 2005.
- Bray, Roger, and Vladimir Raitz. *Flight to the Sun: The Story of the Holiday Revolution*. London and New York: Continuum, 2001.
- Pack, Sasha D. *Tourism and Dictatorship: Europe's Peaceful Invasion of Franco's Spain*. New York: Palgrave, 2006.

Politics and Statecraft

On November 9, 1923, a group of German nationalists attempted to launch a rebellion against the Weimar Republic from a beer hall in Munich. They believed that they would be joined by the local citizenry, but local authorities swiftly ended the uprising. Although they failed, many Germans shared their frustrations with the Weimar Republic, believing that the government was constituted by the “socialists and Jews” who had betrayed Germany and caused it to lose the war in 1918. The uprising’s leader, Adolf Hitler, was arrested and tried for treason by German authorities. With Hitler in prison, the National Socialist Workers Party of Germany (Nazi for short) faded from public consciousness. However, by January 30, 1933, Hitler would reemerge triumphant as the leader of this political party and become chancellor of Germany, still preaching the same rhetoric against the Weimar Republic that he uttered at what became known as the Beer Hall Putsch of 1923. As such, National Socialism emerged out of the aftermath of World War I, when ideologies like nationalism, anti-Semitism, imperialism, and socialism had a significant influence on national politics in many parts of the world. Such authoritarian movements developed across the world in reaction to the postwar settlement of World War I and were further spurred by the development of economic instability even before the great global economic depression of the 1930s. These authoritarian movements radically changed the political landscape of the world as well as the statecraft of individual nation-states, all of which sought to revise or preserve the existing power relations within and between states during the interwar period.

From 1900 to 1945 two world wars—and an interwar global economic collapse—led to ideological shifts and major changes to political systems worldwide. The disintegration of European hegemony shaped much of this period. Western Europe’s aura of invincibility disappeared in the aftermath of World War I. While Britain and France were able to maintain some stability in the interwar period, Germany, Italy, Spain, and Russia, among others, were drastically altered by revolutionary ideological movements. At the same time, in world regions under European direct or indirect rule, nationalist sentiment and resentment against colonialism led to the emergence of independence movements. The Boxer Rebellion (1899–1901) was a precursor of these developments as Chinese rebels sought to drive foreigners from China. Nationalist movements

The Boxer Rebellion (1899–1901) was a precursor of these developments as Chinese rebels sought to drive foreigners from China. Nationalist movements also increased in fervor in southern Asia as leaders such as Mahatma Ghandi organized Indian resistance to British rule.

also increased in fervor in southern Asia as leaders such as Mahatma Ghandi organized Indian resistance to British rule.

European investments had a wide impact even in areas where Europeans were not clearly hegemonic. For instance, about one-third of the capital in Russian companies was owned by foreign investors, primarily the British, French, and Germans. Russia, Mexico, and China underwent political and economic revolutions. The common goal of these revolutions was to eliminate external economic influence as well as the internal political control of elites who collaborated with foreign interests. Rebels in these states shared the goal of modernization and economic autonomy. New authoritarian states also came to power in this era not only in Russia but also in Germany, Italy, and Japan. With the unleashing of World War II, the authoritarian yet revolutionary political movements that ruled in the Axis nation-states of Germany, Italy, and Japan sought to destroy the international order established by Britain and France (and the United States) during the interwar period and to redraw the global map under shared Axis dominance.

Before World War I the European Great Powers, the United States, and Japan had launched various colonial ventures, creating expansive empires and territorial rule. Nonetheless, vast political changes reshaped developments at home and in their respective colonial domains. In Europe the multiethnic central European empires faced the growth of nationalist fervor within their minority populations. Britain and France, while both possessing republican governments, were confronted by large electorates seeking to ensure social and economic gains at the expense of landed wealth and the industrial class whose influence was being challenged. In the Americas, greater demands for political representation and economic opportunity extended from the United States to Argentina. Moreover, European women had been slowly gaining the right to vote in some areas since the mid-nineteenth century, attaining at first political and then greater social and economic autonomy. The working classes, many but not all of whom were influenced by socialist ideology, also sought greater changes, such as political power, higher wages, and better working conditions.

World War I and the Great Depression further destabilized the delicate political landscape in Europe, unleashing the forces lying below the surface. The institution of monarchy unraveled in major dynastic European states with the war, as the Hohenzollerns in Germany, the Habsburgs in Austria-Hungary, and the Romanovs in Russia were removed from power in their respective states, much as the Qing dynasty in China had been prior to the conflict. Socialism, fascism, and other forms of authoritarian political systems seemed viable ideological systems to replace “bourgeois” liberalism, which had failed to prevent the war. Some came to believe that elites had pursued the war for the alleged benefit of a small class of individuals. In theory the Treaty of Versailles was intended to establish new borders in Europe, following the doctrine of national self-determination, and aimed to create ethnically homogenous nation-states in central Europe. In practice, however, Germany, Italy, Hungary, and others immediately contested the new borders, increasing rather than alleviating tensions in the area.

The political uncertainty of the era, exacerbated by economic stresses and combined with the disgrace of being defeated in war, stimulated a radical new political outlook—fascism—first in Italy and then in Germany. As it developed fascism became a form of extreme nationalism, with a goal of promoting resistance to threats of decadence, particularly racial and cultural “pollution.” The element of ultranationalism was promoted in both states but particularly in Germany, which framed defeats, humiliation, and losses as the result of subversive attacks by impure elements from within. Italians were somewhat resistant to the racial messages, but German Romanticism—the idealization of mythical tribal ancestors—made Germans particularly susceptible to the message. Ravaged by the depression, burdened with the requirement for reparations (payment of fines for damages in World War I), and frustrated by unresolved issues left over from the war, Germans were willing to recast traditional institutional folkways along a reactionary modernist framework, emphasizing national unity and an aggressive foreign policy and ultimately leading to the invasion of Poland and World War II. Italy and Germany were not alone in their desire for strong, decisive leadership. Authoritarian dictatorships such as that established by Francisco Franco in Spain after the Spanish Civil War (1936–1939), while assuming the trappings of fascism, did not seek to establish racist ideologies as state policy, being inclined to restore the power of traditional elites and institutions.

The extreme nationalism expressed by fascist movements was in direct opposition to the extremely internationalist socialist movements of the day. Although there had been European precursors, Marxist socialism was born of the excesses of industrialization. Workers began organizing across Europe seeking to end abusive working conditions; communist ideology held the promise of a more egalitarian society with a fair distribution of wealth. The Russian Revolution, which established the first viable Marxist state in the former tsarist Russian empire, set a precedent for the working classes of the world. As World War I and the Russian Civil War ravaged and depleted the Russian countryside, the Bolsheviks sought to create, primarily through coercion, a socialist state administered by a small clique of communist leaders. On the opposite political extreme, Social Democracy (encapsulated in the Social Democratic Party, which established the liberal Weimar Republic), particularly in Germany, and the Popular Fronts of Spain and France sought a more conciliatory strategy to work within their respective republican systems of government while expanding their welfare states for the benefit of the masses and resisting fascist encroachment. In this context, a milder form of socialism would be established gradually through cooperation among socialists, liberals, and republicans within the existing constitutional framework of government.

As authoritarian movements came to power, however, voting rights vanished. This ensured that their leadership could not be challenged.

Authoritarian dictatorships such as that established by Francisco Franco in Spain after the Spanish Civil War (1936–1939), while assuming the trappings of fascism, did not seek to establish racist ideologies as state policy, being inclined to restore the power of traditional elites and institutions.

Authoritarian leaders insisted that they needed such power to effectively meet national emergencies, most notably the Great Depression. Germans voted into power the National Socialists to avenge the humiliations enacted by the Treaty of Versailles. Once in power, the Nazis implemented expansionist plans that led to the outbreak of World War II in Europe in 1939. In this context, National Socialism and Stalinism, while diametrically opposed, managed to muster and mobilize their respective national economies and populations for total war. Both movements inspired men, women, and children in the tens of millions to fight and die for their ideological tenets and the restoration of national greatness while demonizing the “other”: enemies both foreign and internal. In this manner, authoritarian regimes in Japan, Italy, Germany, Romania, Hungary, Austria, and Bulgaria eliminated democratic institutions.

In contrast the United States, under the New Deal of the 1930s, had found a way to maintain political liberalism by extending the powers of the federal government to coordinate the national economy and ameliorate the worst effects of the global depression, all for the benefit of its national population but at the expense of economic liberalism. President Franklin D. Roosevelt had established a valuable precedent that would serve the country well when it entered the war in 1941, when the federal government, in tandem with big business, would coordinate the economic mobilization of the nation’s resources and labor in order to fight on two global fronts. Similarly, governments in Britain, Australia, and Canada expanded the role of the state in the daily lives of the citizens. Britain in particular instituted the cradle-to-grave welfare state after the end of the war to address the needs of its populace, building on precedents of state-interventionism during the war, a model subsequently followed by other European and British commonwealth states.

In 1900 much of the world was under direct or indirect control by the European Great Powers (the Americas, while nominally politically independent, were nonetheless tied to European political and economic control). Nationalism, which had shaped European political movements in the nineteenth century, grew as a reaction against imperialism in much of the non-European regions of the world, drastically affecting the political cultures of people already resentful of European dominance. Resentment against European and U.S. interference led to the development of fervent nationalist movements. World War I ended with a promise of greater egalitarianism in global politics for the colonial world. U.S. president Woodrow Wilson announced this in the principle of national self-determination; however, this ideal was almost immediately shattered, as its premise was only extended to white Europeans. Despite its gains, Japan felt slighted that its territorial acquisitions did not correspond to its efforts. From the perspective of colonized nations, the newly established League of Nations served the interests of the European Great Powers and their efforts to retain their empires and annex the territories of the defeated Central Powers. The former Arab provinces of the Ottoman empire, for example, were seized as League of Nation “mandates” by Britain and France.

Economic collapse and the consequences of war, radiating out of Europe and eastern Asia, drastically shaped world regions and aspirations. Nationalist leaders in British India, Dutch Indonesia, and French Indochina at first shared a common cause with the Japanese ambition to drive the Europeans out of eastern Asia and the Pacific. In the same manner, nationalists in the Middle East and eastern Europe viewed Nazi Germany as a harbinger of freedom for their respective independence movements. Nationalist rhetoric to the contrary, Japan and Germany ultimately regarded such nations as only worthy of conquest and eventual subordination to either the Third Reich or the Greater East Asia Co-Prosperity Sphere. Nevertheless, such nascent political alignments are indicative of the resentment directed against European colonialism.

Political revolutions in Mexico and China attempted to eliminate Western economic dominance by overthrowing national elites and dismantling institutions that catered to foreign interests. In China, the May 4th Movement was a direct reaction to Japan gaining control of previously German-held Chinese lands through the Treaty of Versailles, despite China's labor contributions in World War I. Nationalist movements in sub-Saharan Africa, the Middle East, and Asia were shaped by developments in Europe and Japan, as their residents fought with their respective colonial authorities hoping for increased economic and political gains after World War I. Millions of colonial subjects fought for Britain and France in Europe, northern Africa, eastern Asia, and the Pacific alongside European regulars. Anticolonialism returned as a key force following World War II when independence movements gathered momentum and dozens of new states developed on former colonial holdings.

—*H. Micheal Tarver, Carolyn Neel,
and Abraham O. Mendoza*

■ Introduction: Imperialism

During the first half of the twentieth century, imperialism reached its pinnacle before entering a steep decline. While European nations accounted for the majority of empires, the United States and Japan were also actively expanding at this time. Although there were several factors that contributed to imperialism, the more significant ones included economics, industrialism, and scientific racism. The imperial powers shared methods as well as motivations; violence defined diplomatic relations between the empires and their subject colonies. The older European empires, such as those of Britain and France, were already in decline at the

turn of the century, while newer imperial nations, such as Germany, actively conquered new lands, primarily in sub-Saharan Africa and Asia.

Economic expansion and exploitation motivated most imperial expansion. As the European nations, the United States, and Japan further industrialized, each sought new markets to control and new resources to fuel industrial output. Underdeveloped countries were often politically divided, militarily unprepared, and economically impotent compared to industrialized nations. Powerful nations colonized weaker ones through military and economic force as well as through convoluted diplomacy that

exploited the ignorance of the native populations. Once the imperialists were firmly entrenched as the dominant political power in an area, they coerced natives to labor for the benefit of the empire by extracting valuable natural resources. History has shown that King Leopold II of Belgium was among the worst offenders in this sense.

Culture was likewise forced upon native populations. Scientific racism attempted to explain the dominance of Western civilization through faulty interpretations of Darwinian science and Christian ideals. This belief justified and promoted the subjugation and forced acculturation of nonwhite populations as beneficial to the barbarous non-Europeans. In actuality, the cultural aspects and religious teachings most often disseminated were those stressing loyalty, obedience, and similar values in order to reinforce the imperial relationship as natural and holy. Within the British empire some of these cultural goals became reality. Canada and Australia enjoyed virtual autonomy as dominions with white majorities, while in India Mahatma Gandhi became motivated by British political ideals and worked toward achieving India's independence. Imperial Japan was exceptional only because it was not a Western nation; it too used violence as a means of securing colonies in Asia, sought colonies whose natural resources it could exploit, and forced Japanese culture in its colonies.

The cumulative effects of World War II changed society on virtually every level, thus effectively ending imperialism. Empires became too costly, and nationalism receded. Belief in the supremacy of European civilization ended, while at the same time Japan became a defeated nation through war.

Imperialism in the early twentieth century had been the product of extreme nationalism, economic competition, and international prestige. Industrialized nations exploited nonindustrialized nations for their natural resources. Scientific racism justified colonization and allowed greed to overpower altruistic goals. By 1945, World War II had explicitly demonstrated the potential for abuse and the repercussions of unchecked imperialistic motivations, thus destroying much of the desire for empire. The aftermath of the war changed the political, cul-

tural, and philosophical landscape of the globe, rendering such exploitative empires archaic.

—*Ian Patterson*

Imperialism in East Asia

Between 1900 and 1945, imperialism in East Asia changed from British economic domination in China to Japanese conquest of the region. In 1900, foreign powers had wide-ranging legal rights, territorial possessions, and financial investments in China. Protecting these interests prompted a multinational force to put down the Boxer Uprising (1900) in order to preserve the weak Qing dynasty, whose collapse might have jeopardized imperialist positions in China. During this same time Japan was a rising power in the region, having defeated China, gained control of Korea, and annexed Taiwan following the Sino-Japanese War of 1894–1895. By the beginning of World War II, Japan had vastly expanded its presence in China and displaced Britain as the foremost imperialist power in East Asia.

Britain, France, Germany, Russia, and the United States all had a significant imperial presence in China in 1900, but Japan would be able to expand its East Asian empire at the very time that two world wars made the cost of overseas empire building less tenable for European powers. Through victory in the Russo-Japanese War of 1904–1905, Japan gained Russian concessions in northeastern China (Manchuria). In 1910, Japan formally annexed Korea after 15 years of less formal control. Although World War I initially took some Western imperialist pressure off China because European attention was focused elsewhere, Japan turned this opening to its advantage.

In 1914, under a 1902 Anglo-Japanese treaty, Japan entered World War I on the Allied side by seizing German-held territories in China. The following year Japan issued the Twenty-One Demands, forcing China to grant the island nation still more privileges. Although China had supported the Allied war effort by sending over 100,000 Chinese laborers to assist behind the lines in Europe, the ensuing Treaty of Versailles

did not reward China. Although the treaty stripped Germany of its East Asian colonies, instead of returning them to China the treaty formally granted them to Japan. Thus, between 1895 and 1919 Japanese imperialist control had extended up the Korean peninsula, into north-eastern China, and down into coastal China.

In 1922, the United States, China, Japan, France, Great Britain, Italy, Belgium, the Netherlands, and Portugal signed the Nine-Power Treaty, designed to ease imperialist pressures and give China a chance to build an effective central government. The treaty was a tacit admission that imperialism had made a weak China even weaker. However, the emergence of a strong centralized government in China by 1928 prompted concern in Japan that the large republic might soon be able to overthrow imperialism; thus, a new wave of Japanese expansionism ensued, with clashes between Chinese and Japanese forces. In the Mukden Incident of 1931, officers of Japan's Kwantung Army staged what looked like a Chinese attack on Japanese installations to rally more support in Japan for the Kwantung Army's expansionist plans.

With Japan's all-out invasion of China in 1937, much of eastern China came under Japanese control, which Japan administered through several collaborationist governments. In January 1943, the puppet regime in Nanjing signed an agreement with Japan to eliminate extraterritoriality and return the foreign concessions to Chinese control. The United States and Britain signed similar agreements with Jiang Jieshi (Chiang Kai-shek) later that year. Japan's surrender in 1945 and the changed circumstances of the Western imperialist powers following World War II restored Chinese sovereignty to nearly all historically Chinese territories.

—Kristin Mulready-Stone

Bibliography

- Duus, Peter. *The Abacus and the Sword: The Japanese Penetration of Korea, 1895*. Berkeley and Los Angeles: University of California Press, 1995.
- Hicks, George. *The Comfort Women: Japan's Brutal Regime of Enforced Prostitution in the Second World War*. New York: Norton, 1995.
- Iriye, Akira. *The Origins of the Second World War in Asia and the Pacific*. London and New York: Longman, 1987.

COMFORT WOMEN IN WORLD WAR II

After reports of Japanese troops raping Chinese women early on during World War II, the Japanese military decided to provide their troops with women. The hope was that if the troops had ready access to sex, assaults against the general population would diminish. Initially, the army transported Japanese and Korean prostitutes to China for the purpose. But as the army took over more territory in East and Southeast Asia, the demand exceeded the supply of prostitutes. The result was widespread forced prostitution. Most of the comfort women were poor and Korean, and many of them were captured during slave raids. By the end of World War II, an estimated 100,000 to 200,000 young women had been turned into comfort women. The story only received widespread attention once three former Korean comfort women took legal action in 1991.

—Kristin Mulready-Stone

Osterhammel, Jurgen. "China." In *The Oxford History of the British Empire*, Vol. 4, *The Twentieth Century*, edited by Judith M. Brown and Wm. Roger Louis. Oxford: Oxford University Press, 1999.

Spence, Jonathan D. *The Search for Modern China*. 2nd ed. New York: Norton, 1999.

Imperialism in Western Europe

The half century between 1900 and 1945 marks an ambiguous phase in the history of West European imperialism. On the one hand, the general characteristics of the period were the absence of major colonial crises and the normalization and bureaucratization of colonial relationships. The frenzied imperial scramble, which began in the 1870s, had all but come to an end by the turn of the century. Colonial policy increasingly shifted from territorial expansion and military conquest to administrative consolidation and economic penetration. Furthermore, the relatively widespread euphoria that had accompanied the imperial scramble in metropolitan Europe gave way to a more sober assessment of the advantages

► THE MANDATE SYSTEM OF THE LEAGUE OF NATIONS

At the end of World War I, colonial interest groups in the British empire and in France coveted as war booty the colonies of defeated Germany as well as the Middle Eastern provinces of the disintegrated Ottoman empire. Yet these interests collided with the antiannexationist and anticolonial ethos of the United States under the leadership of Woodrow Wilson, whose economic strength and ultimate military decisiveness gave the president considerable clout at the Paris Peace Conference. When the negotiations almost appeared to falter in the face of this conflict of interests, the idea of mandates, first developed by South African prime minister Jan-Christian Smuts, developed as a compromise formula. According to Article 22 of the Covenant of the League of Nations, mandates were defined as territories formerly ruled by Germany or the Ottoman empire “which are inhabited by peoples not yet able to stand by themselves under the strenuous conditions of the modern world.” They would, for the time being, be placed under the “tutelage”

of “advanced nations,” with the eventual goal of independence. The former German colonies were divided among Britain, France, South Africa, Japan, Australia, and New Zealand; the erstwhile Ottoman provinces were divided between Britain and France. The mandatory powers had to provide annual reports to the League of Nations about the progress achieved. Furthermore, unlike “regular” colonies, mandates should be open to trade to every member of the League of Nations. Most academic and political commentators on the mandate system during the interwar years remained skeptical about its efficacy, and some regarded it as nothing but an elaborate smoke-screen to veil “old-fashioned” colonial expansionism. However, it nevertheless created an unprecedented degree of international accountability and transparency in global imperialism. It also, for the first time, set certain, albeit often limited, standards of “good” colonial governance.

—Daniel Becker

and disadvantages of colonialism among elites and to a general loss of interest in colonial affairs among the broader strata of society. On the other hand, the first half of the twentieth century also saw the emergence of an international debate about the goals, methods, and ultimately the very legitimacy of colonialism that must, in retrospect at least, appear as a crucial element in the unraveling of imperialism after World War II. It gave birth to both the major classics of European anti-imperialist criticism—such as the theories of, among others, John Atkinson Hobson, Vladimir Lenin, and Joseph Schumpeter—and to some of the precursors of contemporary postcolonial criticism (e.g., the cultural-political thought of Mahatma Gandhi or of the *négritude* movement). It also aided in the formation of an often Western-educated nationalist elite in the colonies who would become the political leadership of the Third World during the decolonization era in the 1950s and 1960s.

In this interplay of imperialist and anti-imperialist tendencies, World War I proved a watershed moment. The global conflict was not primarily fought over the colonies, but it was very

much fought with them. France and Britain in particular relied heavily on the additional manpower their empires provided to sustain their military operations. Soldiers from North and West Africa and from India and Canada fought against Germany in the trenches of northern France; Indians, Australians, and New Zealanders made up a significant part of the British forces launched against the Ottoman empire in the Middle East. The imperial powers consequently had to acknowledge that their empires’ service to their European concerns would have to be rewarded with concessions once the war ended. On another plane, Germany’s ultimately unsuccessful attempts to infiltrate enemy colonies and weaken them by inciting unrest and rebellion—unrealistic as they may seem in retrospect—forced the British and French governments to make relatively explicit promises of future improvements, even if these promises often remained vague and bound to open-ended conditions and timetables. The war rhetoric employed against Germany in the international battle over hearts and minds, replete with ideas of national self-determination and the advancement of democracy, slowly devel-

oped a dynamic of its own that the European imperial powers found difficult to contain or control after hostilities had ceased.

In the 1920s and 1930s then, the colonial administrations found themselves entangled in a web of promises and expectations, which they could often ill afford to fulfill because World War I had left Europe politically, economically, and psychologically exhausted. The structure of the international system in the interwar years only exacerbated their dilemma. The creation of the mandate system of the League of Nations introduced a certain degree of international oversight into European imperialism, even in territories that did not legally fall under the purview of the league. Moreover, the mere existence of several colonial powers-in-waiting—especially Germany (deprived of its former colonies at the end of the war), Italy (disappointed in its share of the spoils of war), and Japan (increasingly expanding in East Asia)—as well as of two emerging superpowers, albeit still somewhat isolationist, new, and officially anticolonial, the United States and the Soviet Union, ensured that imperialism would henceforth be judged in the court of international public opinion. Last but not least, colonial elites—often, though not always, Western-educated intellectuals and professionals—both in the colonies themselves and in the metropolitan centers were beginning to form political associations and other forums in which they could express their disaffection with colonial rule and, in some cases, openly advocate for its end.

The European colonial powers thus increasingly faced the problem of turning the legitimating rhetoric of an imperial civilizing mission into practical policy. Due to the general economic situation, they often had to solve it on a shoestring. For several reasons, Britain proved generally more successful in this endeavor than France or the other remaining imperial states. First, because it could afford to withdraw from immediate European political, economic, and security concerns, Britain could concentrate on its imperial affairs in ways that its erstwhile allies could not. Second, the traditional British system of colonial governance—now cast in terms of quasi-official philosophies of indirect rule and the dual mandate—lent itself better to the emerging international discourse on good colo-

nial practices than, for example, the French notion of assimilation (which, at any rate, France was at the same time abandoning for a seemingly cheaper and clearly more racist associationism). Finally, because the British empire was significantly larger and thus politically and economically more diverse than any of its counterparts, it was more amenable to sustaining its own economic and political development and consolidation. In addition, its experience with diversity within the empire enabled the British colonial elite to experiment with various forms of co-opting or accommodating potential critics without necessarily compromising the empire as such, as, for example, in the ultimately futile but initially promising attempts to deal with the Indian nationalist movement under Mahatma Gandhi and Jawaharlal Nehru, which stood in stark contrast to the often violent French attempts to address anticolonial opposition.

Overall, European imperialism between 1900 and 1945 was shaped by a relatively stable interdependency or equilibrium of forces of affirmation and forces of contestation. It was only during World War II that this balance began to unravel. The loss of control over significant parts of the various empires as a result of German conquests in Europe and of Japanese conquests in Asia strengthened anticolonial tendencies, which would then largely dominate imperial history after 1945.

—Daniel Becker

Bibliography

- Albertini, Rudolf von. *Decolonization: The Administration and Future of the Colonies, 1919–1960*, translated by Francisca Garvie. Garden City, NY: Doubleday, 1971.
- Brown, Judith M., and Wm. Roger Louis, eds. *The Oxford History of the British Empire*, Vol. 4, *The Twentieth Century*. Oxford, UK: Oxford University Press, 1999.
- Callahan, Michael D. *The League of Nations and Africa*. 2 vols. Brighton, UK: Sussex Academic Press, 1999–2004.
- Conklin, Alice L. *A Mission to Civilize: The Republican Idea of Empire in France and West Africa, 1895–1930*. Stanford, CA: Stanford University Press, 1997.
- Thomas, Martin. *The French Empire between the Wars: Imperialism, Politics and Society*. Manchester, UK: Manchester University Press, 2005.

Imperialism in the Soviet Union

Despite its ideological pronouncements of being inherently “anti-imperialist” and actively working against the forces of capitalism that utilized colonialism as a means to oppress peoples abroad and extract their wealth and labor, the Soviet Union also held imperial dominion over vast expanses of Eurasia. The Soviet Union covered a landmass that extended from the Baltic, Caspian, and Black seas on its western flank all the way to the Bering Sea and the Sea of Okhotsk to the east. Much like its predecessor, the tsarist empire of the Romanovs, the Soviet Union held dominion over most of northern Eurasia with the exception of the Baltic republics (until 1940) and Poland to the west, which were lost in the Treaty of Brest-Litovsk of 1918 and which the Bolsheviks failed to recapture at the end of the Russian Civil War in 1922.

Communist ideology negated the idea that the Soviet Union could be imperialist and insisted that nationality was an oppressive bourgeois construct. However, under V. I. Lenin and Josef Stalin, the Soviet Union (the Russian Socialist Federated Soviet Republic until 1922) through military force conquered the former territories of the Russian empire and forced ideological conformity through military, political, and economic means. More often than not, Soviet national identity was enforced as state policy relying on the Soviet police state apparatus. Despite the recognition of various “national” Soviet Socialist Republics (or SSRs), the official policy of the Soviet state was to create a uniform Soviet identity at the expense of the hundreds of nationalities across their Eurasian domains.

The Russian Civil War (1917–1923), which broke out in the midst of the Russian Revolution, led to the devolution of various parts of the former Russian empire, most notably Ukraine. Initially, myriad White forces faced the Red Army across the expanse of Eurasia; the defense of the revolution was the Bolshevik’s top priority. However, as the Red Army was able to reverse the gains of the Whites, the conquest of former tsarist territories became part of overall Soviet military strategy. While some of the White forces were in fact monarchists fighting against the Reds to restore

the tsarist regime or at least a noncommunist government, various segments of those fighting for the Whites were non-Russian nationalists seeking to dislodge themselves from what was seen as yet another colonizer, namely the Soviets. As the Red Army organized under Leon Trotsky, all Whites were lumped together as “reactionaries” seeking to destroy the revolution and collude with the external forces of capitalism. American, Japanese, and British forces indeed did attempt to prevent supplies from falling to the Red Army in various incursions during 1917–1922.

As territory was claimed, the Red Army forces were followed by Communist Party officials and the myriad organs of the police state, all seeking to establish stability, most often by removing the leadership and sending them to prisons farther inland and enforcing ideological conformity. The People’s Commissariat of Nationalities, established in 1917, sought to create viable solutions to the issue of nationalities; the goal was to nurture nationalist identities without encouraging separatism. The establishment of the various SSRs under the aegis of the Russian Socialist Federated Soviet Republic, which was officially an “equal” among other SSRs, established the imperial domination through the establishment of an ideological identity (Soviet) that negated national identity.

With the ascension of Stalin after Lenin’s death in 1924, Soviet imperialism was characterized by the effort to enforce ideological conformity throughout the vast expanse of the Soviet territories, usually by force. The goal was to unify the Soviet Union—composed of Muslim central Asia, the Arctic stretches of Siberia, the Russian Far East, and the Caucasus Mountains—despite its multicultural character. Stalin desired to establish ideological uniformity throughout these lands, albeit under Russian tutelage, via the establishment of different Soviet organizations and commissariats emphasizing Soviet unity across multiple nationalities. However, this Soviet identity was in fact heavily influenced by various Russian characteristics and values that often clashed with non-Russian cultural groups and their religious traditions. Moreover, during the economic policy of collectivization, which displaced hundreds of thousands of Soviet citizens from their farms, as well as the First and Second

Five-Year plans, which sought to industrialize the Soviet Union at an accelerated rate, various Soviet nationalities suffered tremendously at the hands of the police state apparatus. In the most obvious case, the population transfers that occurred before and during World War II of large numbers of Poles, Koreans, and Crimeans, among other nationalities, across the expanses of Eurasia, with many ending up in the Gulag prison network, also dislocated various national groups from their former homelands.

The Nazi-Soviet Pact of 1939, which included a secret protocol by which Nazi Germany and the Soviet Union divided swathes of eastern Europe, notably Poland, between each other is another flagrant case of Soviet imperialist expansion. Under this deal, the Soviet Union acquired Latvia, Lithuania, Estonia, and eastern Poland. Moreover, the “winter war” against Finland, fought for strategic points to confront Germany in an eventual conflict, also presented the Soviet Union as an aggressor seeking to expand westward after sharing spoils with its ideological enemy. However, this arrangement ended with the German attack on the Soviet Union in 1941. During World War II, the Soviet state emphasized Russian nationalism over other nationalities to maintain the cohesion of the state under Russian domination against the Axis. Therefore, during the war Soviet imperialism was manifested through the auspices of the Soviet party apparatus, the secret police, and the military. Despite the official line that the Soviet people were fighting the “Great Patriotic War” against the fascists, non-Russian nationalities found themselves at the whims of the Soviet police state, constantly under suspicion of seeking common cause with either German or Japanese forces. After the end of the war in 1945, hundreds of thousands of non-Russians (as well as Russian Red Army troops who had served in Europe) were accused of espionage or sabotage, which led to further population transfers and long prison terms in the Gulag.

—Abraham O. Mendoza

Bibliography

- Fitzpatrick, Shelia. *The Russian Revolution*. 3rd ed. New York: Oxford University Press, 2008.
- Kotkin, Stephen. *Magnetic Mountain: Stalinism as a Civilization*. Berkeley, CA: University of California Press, 1995.

Imperialism in South Asia

The British in South Asia ruled over a vast colony in population and geographical space that became the envy of the other powers during the apex of European imperialism. British rule was predicated upon a paternalistic assertion that the Indians were not mature enough yet to rule themselves. However, South Asians increasingly resisted a British rule that became more and more oppressive. When the British partitioned Bengal in 1905, Bengalis responded with a fierce Swadeshi (self-sufficiency) boycott, prompting a change of the capital from Calcutta to Delhi in 1911. At the same time, the growing strength of the Indian resistance to the British empire made British control over the most precious jewel in their crown increasingly tenuous. The moderate influence of the Indian National Congress (founded in 1885) and the religious nationalism of Swami Vivekananda yielded to the Extremist elements during the Swadeshi campaign of 1905–1908. In response, the British cracked down hard on the rise of extremists, such as Aurobindo Ghose and V. D. Savarkar. The former went on trial in 1908 and later into a permanent self-imposed internal exile in Pondicherry, while the latter was transported to imprisonment on the Andaman Islands.

Without prior consultation with the South Asian leaders, the British declared war for their South Asian colony in both World War I and World War II. During the wars, India provided a cornerstone of British global power, providing significant numbers of troops and tremendous wealth to the war efforts. As a consequence, Britain was deeply indebted to its South Asian colony.

During and after World War I, Britain was faced with increasing opposition to its rule, including the Ghadar (or Ghadr, meaning “revolution”) movement of Indians living outside South Asia. This movement became further fueled by the *Komagata Maru* incident in September 1914, when a ship with South Asian immigrants attempted to land in Vancouver, Canada, but was refused admission. The ship then went to India, where the British police jailed the passengers after a bloody clash. In 1915 the British successfully suppressed unrest within India through

➤ GEORGE NATHANIEL CURZON, FIRST MARQUESS CURZON OF KEDLESTON

Lord Curzon, Viceroy of India from 1899 to 1905, was a promising, eloquent, arrogant, important, and ultimately classically tragic figure. Ironically, the more he worked the more remote his goals of furthering British rule and helping the Indian population became. Although he never appointed an Indian to his Executive Council, Curzon did spend lavishly to preserve ancient Indian monuments such as Fatehpur Sikri and the gardens of the Taj Mahal in nearby Agra. His fund-raising also proved instrumental in the construction of the British answer to the Taj Mahal, the Victoria Memorial Hall in Calcutta. To the admiration of Indians, Curzon personally intervened to punish a British military unit, the Ninth Lancers, whose members had covered up their killing of an Indian cook. To protest Curzon's fairness, the English cheered loudest for this unit at the Coronation Durbar in 1903.

While Curzon did much to build up British prestige and power, ultimately his legacy was bitterly divisive and counterproductive for British rule. For the sake of administrative efficiency and dividing nationalists into Hindus and Muslims, he partitioned the capital province of Bengal. Announced in 1903 and carried through a month before Curzon left India in 1905, it sparked a vehemently hostile response among Indians, fueling the Indian independence movement.

—Douglas T. McGetchin



George Curzon, British Viceroy of India from 1899 to 1905.
(Library of Congress)

the Defence of India Act, suspending civil rights and extending martial law. By 1917, Annie Besant and Bal Gangadhar Tilak organized parallel Home Rule Leagues that agitated against British rule.

Failure to deliver on wartime promises and British general Reginald Dyer's massacre at Amritsar in 1919 fed Indian unrest, including Mahatma Gandhi's several Satyagraha (nonviolent resistance) campaigns, such as the Salt March in 1930. The British were successful, however, in stalling Indian aspirations by offering several inconsequential Round Table Conferences and including some Indian ministers under the diarchy scheme of the Montagu-Chelmsford reforms of 1919. Likewise, the Government of India Act (1935) brought more South Asians into the gov-

ernment, despite Winston Churchill's dismissal of Mahatma Gandhi as a "half-naked fakir."

The British extended their control of the subcontinent in part through their bestowing of favors and privileges upon special "martial races"—such as Ghurkhas, Sikhs, and Muslims—who played important roles in the Indian military, illustrating the larger British strategy of divide and conquer. This approach by the British was also used to fuel communal religious differences, such as providing a separate electorate for Muslims under the Muslim League.

During World War II, the British faced more serious opposition from the Quit India movement and the Azad Hind, the Indian National Army (INA). The INA, led by Netaji Subhas Chandra Bose, fought on the side of the Japanese in

Burma against Allied forces, including the British and Indian troops loyal to the British. Although viewed as traitors by many Indians, a postwar trial of INA soldiers in Delhi's Red Fort backfired against the British. The INA enjoyed widespread sympathy in India, and the prominent venue produced much press coverage.

The British lost control of South Asia because of mounting pressure by nationalists, a desire to reduce the enormous debt amassed from fighting World War II, and a British Labour government. The British withdrew rapidly in 1947 from their colonies in South Asia, leaving behind a hastily drawn border in Kashmir and shaky political settlement between India and Pakistan, leading immediately to 1 million refugee deaths and decades of animosity and violence. On the other hand, India remains the world's largest democracy based upon political traditions and civil liberties developed while struggling against a British rule that in practice often failed to live up to the ideals its Indian subjects aspired for it.

—Douglas T. McGetchin

Bibliography

- Chandra, Bipan. *India's Struggle for Independence*. New York: Penguin, 1989.
- Gilmour, David. *Curzon*. London: John Murray, 1994.
- Sarkar, Sumit. *Modern India, 1885-1947*. Delhi: Macmillan, 1983.
- Tomlinson, B. R. *The Political Economy of the Raj, 1914-1947: The Economics of Decolonization in India*. London: Macmillan, 1979.

Direct Rule

In contrast to indirect rule, direct rule refers to a method of ruling a colony without relying on native elites and/or institutions but instead ruling through bureaucratic and military institutions imposed upon the indigenous populations. Although direct rule was pursued by several imperial powers to varying degrees when it was deemed necessary and in regions where indirect rule was viewed as impossible, in general the policy of direct rule was followed by Britain, France, Germany, Japan, and the United States from 1900 to 1945. Typically, direct rule was imposed when military authorities were unable or unwilling to allow native collaboration due to in-

digenous resistance or a prior state of war with the native population. Britain, an advocate of indirect rule particularly in British India, also had to set up colonial bureaucracies for ruling certain colonies that could not be ruled through native elites or institutions, such as Burma. Direct rule also had social Darwinist and racist underpinnings that expressed a condescending perspective, such as in the paternalistic French notion of *mission civilisatrice* (civilizing mission). Colonizers assumed that certain Asian and African peoples could not be ruled by themselves but instead needed European tutelage and assistance to carry on daily life.

As the European empires made headway in colonizing most of the world's regions following the scramble for Africa and expansion into Asia in the late nineteenth century, they found it expedient to develop indirectly ruled colonies by using native political elites and existing institutions. This allowed them to rule cheaply, maintaining a limited bureaucratic and military presence in such regions while benefiting through economic and strategic advantages garnered by colonization. However, as these empires found themselves confronted by resistance or what they deemed to be vastly "uncivilized" native populations, colonizers found that establishing direct rule would be far more practical for themselves and for the "good" of the indigenous population. In these instances, after quelling a rebellion or a large-scale war of resistance, colonial troops would occupy the colony and set up martial rule, with limited to no native collaboration.

In the early twentieth century, most of the directly ruled European empires had already been established. However, there were instances, such as the American occupation of the Philippines, the British conquest of Burma, and the Italian seizure of Ethiopia, in which direct rule was imposed over a native resistance movement unwilling to comply with foreign demands and seeking to maintain its sovereignty.

Following the end of the fighting between Spain and the United States in the Spanish-American War in 1898, Filipino resistance against U.S. rule ensued. The Filipino resistance against Spanish rule, under the leadership of Emilio Aguinaldo, had declared its independence from Spain toward the close of the Spanish-American War.

THE THIRD REICH—DIRECT AND INDIRECT GERMAN RULE

Within Nazi-occupied Europe before and during World War II, intra-European colonialism was imposed through means somewhat similar to those of European colonial practices overseas. German military administrators ruled directly over German-occupied provinces such as the Protectorate of Bohemia-Moravia (formerly Czechoslovakia) and the General Government (rump of Poland), both of which were seen as integral parts of the expanded German Reich. The General Government was in effect a racial dumping ground for the Reich, as a bulk of the concentration and death camps were located within its boundaries. Indirect rule, through quisling (collaborationist) rule was effective in areas with elites wishing to adhere to or work within the greater Third Reich. Vichy France and Norway are the most notable examples of this type of arrangement. However, given the nature of National Socialism, its racist doctrines, and its lack of consistent policies, along with the competing policies of the SS, the Wehrmacht, party-state bureaucracy, and local administrators (*Gauleiters*), German-ruled Europe was fraught with chaos.

—Abraham O. Mendoza

Bibliography

Mazower, Mark. *Hitler's Empire: How the Nazis Ruled Europe*. New York: Penguin, 2008.

However, when the United States was ceded the Philippines by a defeated Spain, the United States did not recognize Philippine sovereignty. The First Philippine Commission, appointed by President William McKinley in 1899 to assess the new territory, recommended that the Philippines were not ready for self-government and were in need of American direct rule with some characteristics of indirect rule at the local level. This resulted in Filipino resistance to U.S. rule and a war of attrition that lasted until 1902, although guerrilla resistance continued until 1913. The Philippine Organic Act of July 1902 passed by the U.S. Congress ratified President McKinley's Executive Order establishing the Philippine Commission as the upper house of the legislature with a popularly elected Philippine Assembly. While most local affairs were handled by natives according to this new arrangement, the U.S. colonial authori-

ties had the last say in political affairs in the rule of the Philippines until 1946.

British direct rule of Burma was instituted as a result of a series of wars between British forces and the Burmese resistance in the late nineteenth century. Burma was made a part of British India in 1886. Well into the twentieth century, the civil service of British Burma was composed primarily of Anglo-Burmese and Indians. The Burmese were excluded almost entirely from military service, which also was composed primarily of Indians and Anglo-Burmese. Local Burmese were not seen as reliable enough to serve the British administration. Widespread resistance by Buddhist organizations established by Burmese students was an annoyance to British authority; however, this form of resistance did eventually lead to the development of British Burma as a colony separate from British India in 1937. Continued resentment against British rule led some Burmese resistance organizations to seek common cause with the Japanese during World War II in the hopes that they would help them oust the British, although the prospects for Burmese independence under the Japanese soon proved groundless, and the British were then seen as allies in Burmese efforts to oust the Japanese occupation. After the war, Britain again set up its colonial authority over Burma, leading to widespread resentment. However, Britain could no longer retain the trappings of empire due to financial hardship and its ebbing role as a world power, and as a consequence Burma achieved independence from Britain in 1948.

A third example of direct rule was Ethiopia (Abyssinia). Italian rule over Ethiopia began after the Italian-Ethiopian War (1935–1936), which resulted in the creation of Africa Orientale Italiana (Italian East Africa), encompassing Italian Ethiopia, Somililand, and Eritrea. In the 1930s, despite the continued existence of the European overseas empires, European public opinion viewed expansive colonialism with distaste. Thus, Italy was criticized internationally for its war against a sovereign African power and subject to economic sanctions and condemnation by the League of Nations. Italian dominion of Ethiopia was characterized by military occupation authorities continuing to fight a war of attrition against remaining guerrillas even after the capitulation of the Ethiopian government.

Italian atrocities against captured militants and local resisters characterized Italian direct rule over Ethiopia. The inability of the Italian government to recruit Italian farmers to emigrate and the continuing resistance made Italian control of this colony particularly burdensome in terms of manpower and finances. The Italians placed local Muslim rulers in control of Ethiopian provinces under an Italian viceroy, a move that antagonized Ethiopia's Christian majority and led to continued widespread resistance. With the outbreak of World War II, Ethiopian resistance succeeded, as the beleaguered Italians, now fighting on multiple fronts at the whim of their German ally, were ousted and defeated with Allied assistance and support. By 1943, Italian forces were no longer in control of any part of Ethiopia.

—*Abraham O. Mendoza*

Bibliography

- Ferguson, Niall. *Empire: The Rise and Demise of the British World Order and Lessons for Global Power*. New York: Basic Books, 2003.
- Gilbert, Felix, and David Clay Large. *The End of the European Era: 1890 to the Present*. 6th ed. New York: Norton, 2009.
- Sibley, David J. *War of Frontier and Empire: The Philippine-American War, 1899-1902*. New York: Hill and Wang, 2007.

Indirect Rule

Indirect rule is the governance of a conquered territory through the control of local institutions. The system gained particular prominence in nineteenth- and twentieth-century colonial empires. In colonial states relying on indirect rule, the higher tier of government was typically recruited from the motherland, while actual governance of the local population was delegated to tribal rulers. Different political, legal, and economic regimes were applied to both segments of colonial society. The system was usually perceived merely to integrate existing polities into the colonial state, but it often created and always deeply transformed local political structures. Indirect rule changed the political order and the relation between state and society in many colonized countries and contributed to the increasing role of ethnicity and patronage. While indirect rule is most widely associated

with British colonialism, many traits of the system are found in other colonies as well.

When modern colonialism started to strive for real territorial control during the nineteenth and early twentieth centuries, the paucity of colonial resources of domination quickly became apparent. The number of civil servants and military forces in the colonies was insufficient for an effective control of the entire population, and their lack of knowledge about and insufficient understanding of the colonized people created further problems. Attempts to replace effective governance by subjugation through terror had often proven dangerous and inefficient. In practice, colonial rule was mostly limited to some towns and to those areas immediately surrounding administrative and military posts.

In order to increase its reach, colonial powers began to negotiate with local rulers and co-opt them into their system of governance. In India, residents of the British East India Company managed to establish British suzerainty over local rulers, a system that was then taken over by the British government. In mid-nineteenth-century Natal (today part of South Africa), the British introduced a system of differentiation between whites and indigenous Africans whereby Africans were subject to a different set of laws that was applied by local headmen. These systems of indirect rule were gradually, and with much debate, adopted in other colonies. Between the world wars, this arrangement, born from failure rather than choice, was turned into a strategy, most notably by Lord Lugard, who published his *The Dual Mandate in British Tropical Africa* in 1922. Based on his experience as high commissioner (1900-1906) and governor-general (1912-1919) in Nigeria, Lugard systematized indirect rule into a coherent ideology of domination.

However, the system of indirect rule was not only founded on pragmatism. Its ideology was built on European assumptions about native societies. They were thought to be ahistoric, unchanging, paternalistic entities governed by chiefs and headmen. The role of the chiefs was conceptualized by many Europeans as similar to that of feudal lords in early modern Europe. Consequently, each individual was thought to be a member of a tribe that was fully represented by its chief, and if the colonial state established

➤ LORD LUGARD ON THE CREATION OF TRIBES AND TRIBAL RULERS

Lord Frederick John Lugard (1858–1945) served as a British colonial administrator and as governor-general of Nigeria from 1914 to 1919. In his work *The Dual Mandate in British Tropical Africa* (1922), he argues for the necessity of colonizing the natives for their own protection and progress in addition to the profit and prestige that imperialism would bring to Britain. The following excerpt illustrates his attitude regarding the policy of indirect rule of African peoples.

“Here, then, in my view, lies our present task in Africa. It becomes impossible to maintain the old order—the urgent need is for adaptation to the new—to build up a tribal authority with a recognized and legal standing, which may avert social chaos. . . .

The first step is to hasten the transition from the patriarchal to the tribal stage, and induce those who acknowledge no other authority than the head of the family to recognize a common chief. Where this stage has already been reached, the object is to group together small tribes, or sections of a tribe, so as to form a single administrative unit, whose chiefs . . . may be constituted a “Native Authority” . . . through whom the district officer can work instead of through alien subordinates. His task is to strengthen the authority of the chiefs, and encourage them to show initiative; to learn their difficulties at first hand, and to assist them in adapting the new conditions to the old. . . . In brief, tribal cohesion, and the education of tribal heads in the duties of rulers, are the watchwords of the policy in regard to these backward races.”

—Gregor Dobler

Source

Lord Lugard, F.J.D., *The Dual Mandate in British Tropical Africa*, 5th ed. (London: Frank Cass, 1965), 217–218.

domination over the chief, it would be able to govern the whole group through him. In addition, natives were thought to be fundamentally different from Europeans. As such, they had to be subject to different laws based on their own customs and to a different system of governance

in line with their own traditions. The power of the idea of indirect rule lay in the combination of pragmatism and ideology. The system fit all of these wrong assumptions about natives and solved the problem of insufficient resources.

In the ideological rivalry between the different colonial powers, indirect rule was most closely associated with British colonialism, while French rule, for example, was thought to be much more assimilatory and direct. Practical constraints, however, made some elements of indirect rule necessary for colonial administration in general. All colonial powers experimented with different forms of government, and differences between two colonies belonging to the same European power could be as great as those between colonies of different countries.

The application of indirect rule had important consequences for colonized populations, consequences that continue to shape many post-colonial societies to this day. Local politics were retraditionalized, political tribalism was reinforced, and a rift was created between traditional and modern elites.

Precolonial political systems often did not meet the needs of the colonial state with regard to a clear distribution of competences and an established hierarchy of power. All variants of political systems occurred, from acephalous societies to authoritarian kingships. Power was often contested by several leaders or systems of leadership, and different types of power could balance each other. To make these divergent political systems compatible with colonial rule, the administration had to pick out individuals and institutions that could be strengthened and transformed into chiefs and tribes. As natives were thought best to be governed by traditional law, local norms and customs had to be identified and codified. Colonial officials usually relied on chiefs and old men to tell them about these customs, took their partial point of view as the reality, and started to enforce it. Both through the identification of local leaders and the codification of customary law one group of actors came to be privileged over all others. For the leaders co-opted by the colonial state, their new position often constituted an important source of power and wealth.

The frame of reference in which this establishment of political domination took place was

the tribe. Every colonial subject was allocated to an ethnic group and subject to the authority of its leaders. Any access to the colonial state was channeled through traditional authorities. This greatly increased the leverage of local rulers by providing the resources for internal patronage. Ethnic unities were established as politically and economically meaningful entities separately integrated into the colonial state. By creating a traditional system of governance compatible with colonial administration, the practice of indirect rule simultaneously strengthened ethnicity and local class structures.

The most radical application of the principle of indirect rule was the homeland system in South African apartheid politics. The ideology of a fundamental difference between Europeans and natives that found its expression in different laws and different economic regimes for both, the principle of limited self-government and self-taxation of natives, and the partition of a society into different isolated groups were all carried to extremes within the homeland system.

By establishing a principal difference between European and native societies, indirect rule subjugated local politics to the colonial state while simultaneously excluding its citizens from political participation in it. Indirect rule barred the way to upward mobility through local politics and helped to create a rift between society and the modern state that still shapes many post-colonial societies.

—Gregor Dobler

Bibliography

- Berman, Bruce. "Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism." *African Affairs* 97(388) (1998): 305–341.
- Crowder, M. "Indirect Rule: French and British Style." *Africa* 34(3) (1964): 197–204.
- Lugard, Frederick J. D. *The Dual Mandate in British Tropical Africa*. Edinburgh and London: Blackwood, 1922.
- Mamdani, Mahmood. *Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism*. Princeton, NJ: Princeton University Press, 1996.

■ Introduction: Socialism

The first half of the twentieth century was characterized by the further development of socialist political structures and movements in much of the world, building on precedents from the prior century. The Russian Revolution led to the establishment of the first communist state in the world in 1917 followed by the establishment of the social democratic Weimar Republic in Germany in 1918. Moreover, socialist parties and movements across Europe, the Americas, Asia, and Africa thrived despite their curtailment under repressive regimes in certain instances. Socialism, in all its variants, criticized the oppression of colonial peoples and the working classes. Communists sought to remove all institutions and traditions that retained any semblance of the trappings of capitalism. In contrast, social democrats sought to create a more egalitarian society gradually through existing liberal political structures and to expand

state power in order to ensure social equality. These differences led to antagonism and divisiveness in the interwar period, most overtly in the case of Weimar Germany and the Spanish Republic during the Spanish Civil War; this lack of a unified front on the Left often led to the success of authoritarian movements.

—Abraham O. Mendoza

Socialism in Africa

Socialism in Africa dates back to the beginning of the twentieth century and the struggles against colonialism. Although the implementation of socialist policies was not possible in early twentieth-century Africa because colonial governments controlled the continent, the popular acceptance of socialist ideas was growing in response to the political and social needs of

➤ LÉOPOLD SÉDAR SENGHOR

Léopold Sédar Senghor (1906–2001), was one of Africa's leading intellectuals in the twentieth century and the author of African Socialism. As a poet, a politician, and a black citizen of France, he openly encouraged the celebration of blackness. Blending Marxism with the literary movement and ideology of negritude, his African Socialism advocated universal freedom. African Socialism attempted to integrate African communalism with Western modernization in an effort to return Africa to a path of egalitarianism and the allotment of resources for the enrichment of all members of a community. Born in Joal, Senegal, Senghor was the fifth child of Basile Diogoye Senghor and his third wife Gnylane Bakhoun. An ardent negotiator able to balance competing responsibilities and loyalties, Léopold Sédar Senghor was able to take his place as the first president of Senegal (1960–1980), a Christian leader in a Muslim nation.

Senghor's extensive writings demonstrate knowledge not just in political theory, Marxism, and socialism but also in linguistics, philosophy, and sociology. Yet he is equally renowned for the passion of his poetry. Senghor's poetry celebrated rhythms of the African landscape and life as it admired the strength and beauty of African women and paid homage to African music and art. He published seven volumes of poetry. His early poems collected in volumes titled *Chants d'ombre* (1945), *Hosties noires* (1948), and *Éthiopiennes*

(1956) provide the essential components of negritude, which contrasted the warmth and richness of Africa to the sterile coldness of Europe. In 1964 he published a collection of essays on negritude, humanism, and socialism titled *Liberté*. Other essays, lectures, and speeches appear in volumes published by Éditions du Seuil, Paris.

An essential objective of Senghor's writings was to define black as beautiful against a global milieu of racial injustice and discrimination. Using poetry and politics, his theory of negritude attempted to rebuild the validity of African culture and to establish a positive image of black consciousness. negritude held that there existed in blackness a special social quality and humanness. Senghor's 1948 *Anthologie de la nouvelle poésie negre et malgache de langue française* (introduced by Jean-Paul Sartre's landmark essay "Black Orpheus") was perhaps the true manifesto of negritude.

Senghor received numerous honors for his writings and political leadership, including the Dag Hammarskjöld Prize (1965), the Peace Prize of German Book Trade (1968), the Haile Sellassie African Research Prize (1973), and the Apollinaire Prize for Poetry (1974). In 1969 the French Academy of Moral and Political Sciences awarded him membership. He received a nomination for the Nobel Prize in Literature in 1962.

—Lorna Lueker Zukas

Africans, which were not being met by colonial rulers. Socialist leaders promoted an independent Africa in which the state controlled the redistribution of wealth, the development of economic programs for the well-being of all people, the need to develop institutions to create appropriate paths to development, the quest for a cohesive society without class or tribe distinctions, and finally the creation of stronger links between state policies and cultural practices. Socialism, as it was conceived, would help African nations overcome the brutalities of colonialism, discover the essence of human purpose in traditional African societies, and allow Africa to reassert itself in a modern context and develop through egalitarian policies scientifically devised and appropriately applied.

After 1917 Marxist-Leninist ideas defined socialism throughout colonial Africa. These ideas resonated with African intellectuals, educated in Europe and America, who were rebelling against colonial intruders who had no room for the majority of Africans except as low-paid exploited workers and against political systems that did not allow for black majority rule. International ideological movements resembling the Leninist anti-imperialist Communist International (Comintern) and other social movements as well as independence struggles on other continents of the world fueled the development of socialist ideas. Socialism in Africa began as a borrowed idea from Europe, namely from the French Communist Party, the German socialists, and the Russians. However, African intellectuals indi-

genized socialism as a path toward a higher and reconciled form of society that could reaffirm Africa's cultural and political heritages. Expressions of socialist ideals were prominent among individuals who were active in trade unions and political parties.

A shared history of socialism, working-class organizations, and national liberation struggles began in South Africa in 1909 when a Native Convention was held in Bloemfontein and subsequently led to the formation of the African National Congress (ANC) in 1912. Also in 1909 the South African Labor Party formed among white working-class laborers. This organization became the anti-imperialist International Socialist League (ISL) in 1915. In cooperation, the ANC and the ISL launched the first industrial African trade union in South Africa, the Industrial Workers of Africa. In 1919 the Industrial and Commercial Workers' Union of Africa (ICU) was formed in Cape Town, and within ten years membership reached 100,000 workers. The ICU was clearly influenced by socialist ideas; in the preamble to its constitution members are assured that the union will seek higher wages, better working conditions, pensions, sick leave and unemployment allowances, and the protection of workers' rights. The International Trade Union Committee for Negro Workers (ITUC-NW) was also formed with socialist backing and strong African representation.

The International Socialist League and several other South African socialist organizations merged in 1921 to form the Communist Party of South Africa (CPSA), the first Communist Party on the African continent. The ISL was the main component of the CPSA when it became a member of the Comintern in 1921. By 1924 the vast majority of its membership was black, and by 1928 the CPSA had become the first party in South Africa to call openly for independence and black-majority rule. Communists were instrumental in forming the first Non-European Trade Union Federation (1927) and in 1941 the Congress of Non-European Trade Unions.

International connections were strengthened among socialists, nationalists, labor parties, and freedom fighters in 1927 when members of the ANC traveled to the inaugural Congress of the League against Imperialism that

took place in Brussels during February 10–15 that year. This historically significant congress brought together anticolonial fighters from around the world. The conference also marked the first time in history that representatives of the progressive labor movements of the capitalist countries were united with delegates from the labor and national liberation movements on all continents. The aim of the participants was to take up the struggle for the independence of colonized countries and fight against imperialism on a wider front.

International travel and exposure fueled the development of socialist ideas across Africa. The men who became Africa's first generation of leaders were primarily socialist. Studying the philosophy of political freedom and democracy and examining the history of representative institutions, legal codes, and the impartial judiciary, these students began to demand political independence and the right to self-government for Africa. Colonialism represented alien control of mind and body; the ideas of socialism offered a chance for freedom and unity. Immediately following World War II, African leaders called for the implementation in Africa of the principles for a free world order as were laid down in the 1941 Atlantic Charter, and at the 1945 United Nations Conference they demanded that these principles apply wholly to the colonized world and thus end colonialism.

Despite the progress of socialism in Africa, little homogeneity existed among the various plans of action to bring about the creation of independent African socialist states. The main points of contention of socialism in Africa were the problem of continental identity, the form of economic development, and the dilemmas of control and class formation. Not willing to completely align themselves with the East or the West, African socialists strove to define their own political ideology. To avoid becoming pawns in the international struggles, African socialists developed doctrines that distinguished them from their European counterparts. The socialist leaders contended that prior to colonialism Africa was indigenously based on socialist practices of communal land ownership, the existence of primarily noneconomically stratified societies, and the redistribution of resources

among kinship networks. After 1945 leaders of Africa's newly independent nations attempted to implement the political, economic, and social ideals of socialism. Men such as Kwame Nkrumah, Léopold Senghor, Ahmed Sékou Touré, and Julius Nyerere stand out among the important early national African leaders.

—Lorna Lueker Zukas

Bibliography

- Fenner, Brockway. *African Socialism: A Background Book*. London: Bodley Head, 1963.
- Friedland, William H., and Carl G. Rosberg Jr., eds. *African Socialism*. Stanford, CA: Stanford University Press, Hoover Institution on War, Revolution, and Peace, 1964.
- Munslow, Barry, ed. *Problems in the Transition to Africa Socialism*. London: Zed Books, 1986.
- Onuoha, Father Bede. *The Elements of African Socialism*. London: Andre Deutsch, 1965.

Socialism in South Asia (British India)

In considering socialism in south Asia, we are considering the area from Kashmir southward encompassed by the British empire until its independence in 1947. Economic resentments were at the forefront of the development of Indian nationalism, with various forms of socialism contending for primacy as parts of the many developing nationalist movements.

After 1858 the British ruled or controlled all of the south Asian subcontinent from Kashmir southward under the generic name “India.” The economies of the societies gathered under the rubric ranged from herding and subsistence farming to sophisticated urban areas with dynamic banking and commercial trading networks. There is no doubt that British rule was extractive—India was supposed to pay its fair share of the debts of the empire—but the actual degree of British economic influence cannot be precisely established. Certainly it can be argued that the British-Indian relationship delayed industrialization by at least half a century and perhaps much more, but there were great areas in the interior that appear to have been relatively untouched. Until the beginning of World War I, their relationship was typical of colonial ar-

rangements: India exported raw materials to Great Britain and imported manufactured wares. Such arrangements, working to the detriment of colonies, produce fertile soil for the introduction of socialism in one form or another. Although political action intensified after World War I, the Indian National Congress of 1885 provided a good start. Trying to trace the various groups after that point is possible (but difficult) for only the most dedicated historians; organizations of the various groups identified as “Congresses” or “congressional” that were agitating and planning for nationalism merged, blended, and separated at a dizzying rate as the focus of elements of their membership shifted from time to time.

In the development of Indian nationalism, a sense of economic oppression was fed by other important issues. Although “indirect rule” was the British goal, all the upper-level government posts were held by Britons, yet Indians were expected to support the empire in all instances. Furthermore, about 60,000 Indian soldiers died in World War I, a war in which Indians felt that they had little to gain and much to lose. Indian taxpayers were expected to pay their prorated share of the expenses of war. After the war, a realization of British dependency on Indian wealth and manpower made European might far less intimidating; many Indians in fact realized that Britain needed India more than India needed Britain, economically as well as politically. Indian nationalism burgeoned, and the “drain of wealth” from India to Great Britain was the topic of heated debate (and an issue that has never been fully resolved), but it is impossible to deny that great wealth did drain from India into British projects.

As nationalist groups agitated for independence, the colonial state unwisely responded with repressive laws at a time of economic uncertainty. By the 1930s the severe economic crisis brought about by the Great Depression had intensified resentment of British economic policies in India. Several distinct forms of socialism were proposed by various groups. Socialism per se is a political system based on ideas of equitable economic organization but is interpreted in many differing ways, some opposed to capitalism and others considering socialism a means of

maintaining a healthy capitalistic system. The most extreme group, the Communist Party of India, was active by the early 1920s, but other less radical socialist groups, such as the Congress Socialist Party (founded in 1934), organized and gained in influence during the depression. Early leaders of the Indian Congress Party, such as Dadabhai Naoroji (1825–1917), Gopal Krishna Gokhale (1866–1915), Jawaharlal Nehru (1889–1964), and Mahatma Gandhi (1869–1948) worked toward a national socialist democracy. On the local level, Gandhi especially promoted socialism but in a manner that emphasized a tight-knit community with strict social mores to promote a virtuous peace-loving society devoid of traditional caste divisions.

After independence and partition following World War II, under the leadership of the Congress Party India adopted aspects of socialism and nationalized a significant portion of industries and natural resources to control the economy and allow it to grow rapidly, but neither Gandhi's dreams of self-sufficient villages nor the Indian Communist Party's radical agenda prevailed. Even before independence, the Congress Party had established national planning committees with the goal of building an industrial base and combating illiteracy and poverty. At the time of independence, Nehru, the prime minister, was pursuing a policy of development involving both nationalization of heavy industry and close cooperation with powerful capitalist groups. Two splinter groups from the Congress Party formed the Praja Socialist Party (PSP) in 1952, indicating the enduring strength of the socialist vision in south Asian politics for the decades that followed.

—Ian Patterson
and Carolyn Neel

Bibliography

- Cross, Cecil. *The Development of Self-Government in India, 1858–1914*. New York: Greenwood, 1968.
- Kahin, George. *Major Governments of Asia*. New York: Cornell University Press, 1963.
- Smith, Donald Eugene. *Religion, Politics, and Social Change in the Third World: A Sourcebook*. New York: Free Press, 1971.
- Tinker, Hugh. *South Asia: A Short History*. New York: Praeger, 1966.

Socialism in East Asia

Two factors spurred the spread of socialist ideas in early-twentieth-century East Asia. The first was the communist success in the Bolshevik Revolution of 1917; the second was the Paris Peace Conference of 1919–1920 that seemed to promise liberation from colonialism and ensure national self-determination. This gave hope to colonized people throughout East Asia and provided the motivation for two major nationalist movements in 1919: Korea's March First Movement and China's May Fourth Movement. Asian efforts failed to bring liberation, however, and the Western international community largely ignored them. When it became clear that the principle of national self-determination applied only to Europe, people throughout Asia rejected the West and its perceived hypocrisy. Many in Asia saw in Marxism a chance to reject the West and its values while at the same time surpassing them, and thus socialism began to attract a sizable following in East Asia.

Socialism's earliest and strongest followers in East Asia were in China. The Chinese Communist Party (CCP) was founded by leading Chinese intellectuals in Shanghai in 1921 with a small membership represented by some 12 delegates. Mao Zedong, who would emerge in the 1930s as the leader of the CCP, was among the delegates. In a marriage of convenience designed to further their goal of socialist revolution in China, the fledgling CCP allied itself with the larger Nationalist Party, the Guomindang, (GMD) in 1923 with the intent of wiping out the warlords who had come to power in the wake of the 1911 fall of the Qing dynasty. A reunified China, went the reasoning, would then move through a capitalist phase toward the ultimate goal of socialist revolution. This goal, however, was interrupted by years of conflict with Japan during which time serious conflict also broke out between the CCP and the GMD. After Japan's defeat in World War II, civil war once again broke out between the CCP and the GMD, as both parties struggled for control of China. Defeated in 1949, the GMD retreated to Taiwan, and the victorious CCP established the People's Republic of China in October 1949.

Socialist ideas also found adherents in both Korea and Japan in the early decades of the twentieth century. In both cases, however, government repression prevented their early spread. Japan's strongly authoritarian government succeeded in limiting communist activity, and during the war years (1931–1945) thousands of Japanese were arrested and imprisoned for espousing communism. A major turning point in the history of socialism in Japan came in 1933 with a wave of *tenko* (“turn-about” or “about-face”) when two leaders of the JCP issued jail-cell repudiations of socialism and professed allegiance to Japan's imperial government and its military “Mission in Asia.” This all but crippled the communist movement in Japan. At war's end while endeavoring to promote democracy in Japan, the Allied Occupation released all political prisoners, including the communists. After an initial swell in communist ranks in the immediate postwar period, improved living conditions—fostered in part by sweeping land reform—undercut the growth of socialism in postwar Japan.

As in Japan, socialism was thoroughly suppressed in Korea under Japanese colonial rule from 1910 to 1945. When Japan's surrender in World War II led to Korean independence, socialist ideas again caught the popular imagination. However, the postwar occupation by the United States in the south and Soviet involvement in the north prevented the Koreans themselves from determining socialism's success or failure on the peninsula. While the United States endeavored to contain the growth of socialist organizations in the south, the Soviet Union fostered their growth. Separate elections in 1948 resulted in the creation of the noncommunist Republic of Korea in the southern half of the peninsula and the communist Democratic People's Republic of Korea in the north. The 1950–1953 peninsular war failed to reunify the country and led to a 1953 armistice that created an uneasy truce between the commonly called North Korea and South Korea.

—Mary L. Hanneman

Bibliography

Brown, Archie. *The Rise and Fall of Communism*. New York: Ecco, 2009.

Ree, Erik van. *Socialism in One Zone: Stalin's Policy in Korea, 1945–1947*. Oxford, UK: Berg, 1989.

Schoppa, R. Keith. *East Asia: Identities and Change in the Modern World, 1700–Present*. Upper Saddle River, NJ: Pearson/Prentice Hall, 2008.

Socialist Movements in Southeast Asia

Socialist movements typically develop within industrialized societies where popular politics and electoral processes are firmly established. In much of Southeast Asia, however, Western colonial rule in the early twentieth century provided little room for electoral politics, and the region's primarily agricultural economies also deterred European-style socialism. The local socialist impulses that did emerge tended to find expression in unionism, particularly among workers employed in small but growing industrial enterprises.

Such progressive developments occurred largely at the fringes of colonial society. Metropolitan powers used a combination of local rulers, traditions of hierarchy and order, and external military force to maintain their control of Southeast Asia, and in turn they financed mining and plantation agriculture, used cheap and unorganized labor, and oversaw the collection of taxes, tariffs, and fines. By the mid-1930s most Southeast Asian colonies had links to the international economy, and the combined effects of World War I, the Russian Revolution, and the Great Depression forced colonial authorities to allow some progress, albeit unevenly, across the region. This progress was primarily aimed at promoting self-governance and political expression. Elections were introduced, notably in Burma and Malaya, and small socialist movements began to take shape, sometimes aided by socialist activists from the metropolitan power.

By 1910 Indonesian indigenous leaders with political interests began to establish Pan-Islamic movements and organizations, including the broadly popular Sarekat Islam (Islamic Union) alliance. The Sarekat Islam promoted popular political activity beyond the reach of Dutch authorities and stimulated the creation of Indonesia's first labor union, organized by railway

workers. Dutch socialists arriving in Indonesia from the Netherlands helped found socialist groups including the Indies Social Democratic Association (1919) as well as socialist newspapers and journals. During World War I Indonesian socialists, initially focused on labor issues and land reform, shifted to more radical anticolonial and communist political agitation. By 1920 the nation's socialist movement had been eclipsed by the ill-fated Bolshevik-style radicalism of the new Perserikatan Kommunist di India (Communist Party of the Indies).

The French Indochinese colonies in Laos, Cambodia, and Vietnam experienced virtually no popular electoral activity before or during World War II, but in the Philippines, which the United States seized from Spain after the Spanish-American War (1898), municipal and local elections were introduced in 1901, just as a powerful guerrilla movement developed against U.S. rule. While American troops suppressed the insurgency, new electoral institutions, including by 1907 a National Assembly, were taking shape. However, political party development in the Philippines was dominated by the issues of nationalism and progress toward independence from the United States, and no significant socialist movement emerged. America's defeat of the Japanese occupying forces in the Philippines returned the United States to power in 1945. However, by this time the U.S. government had determined that in order to prevent the rise of Leftist groups in the colony, the islands should gain political independence, which was granted in 1946.

Each Southeast Asian colony also housed relatively small but economically powerful ethnic Chinese minorities. Operating as traders, merchants, and financiers, these Chinese minorities were firmly entrenched in the increasingly internationalized economy of the region. Moreover, most of the overseas Chinese in Southeast Asia remained closely connected to political events in China and rejected both the ideals and the local expressions of socialism. By the late 1930s the political sentiments of overseas Chinese communities in Southeast Asia were split by the civil war in China. Except where Chinese workers dominated industrializing economies, as in Malaya and Singapore,

➤ LABOR UNIONS IN MALAYA AND SINGAPORE

The worldwide depression of the early 1930s caused exports of Malaya's chief products, tin and rubber, to plummet. Job losses led skilled tradesmen and unskilled laborers, many of them Chinese, to organize unions in Malaya and Singapore. Strikes involving thousands of workers were launched in 1936. Beginning at pineapple canning factories in Singapore and Johore, socialist-inspired sympathy strikes developed among construction, quarry, and municipal employees. By 1937 more than 10,000 plantation and mine employees joined the movement. Rather than suppressing the unions, colonial authorities urged employers to meet the strikers' demands. Communist influence was derailed. Laborers' wages improved, and by 1941 socialist-oriented unions were common throughout Malaya and Singapore.

—Laura M. Calkins

most overseas Chinese in Southeast Asia opposed labor movements and socialist politics in favor of unrestricted free trade.

—Laura M. Calkins

Bibliography

- Purcell, Victor. *The Chinese in Southeast Asia*. Oxford, UK: Oxford University Press, 1965.
- Steinberg, David Joel, ed. *In Search of Southeast Asia: A Modern History*. Rev. ed. Honolulu: University of Hawaii Press, 1987.
- Stenson, M. R. *Industrial Conflict in Malaya: Prelude to the Communist Revolt of 1948*. London: Oxford University Press, 1970.

Socialism in Western Europe

From 1900 to 1945, socialism, as a political force, expanded in Europe as socialists gradually attained political power, particularly in Britain, France, and Germany. At the turn of the century, European socialist parties had been able to gain many seats in their respective legislatures as the main representatives of the working class. Yet throughout these decades, the movement also found itself threatened by the growth of the fringe Left and Right.

➤ ANARCHO-SYNDICALISM IN SPAIN

One fringe political movement that shaped the course of Spanish politics during the interwar Spanish Republic (1931–1939) was anarcho-syndicalism. Anarcho-syndicalism in Spain was advocated by the Confederación Nacional del Trabajo (National Confederation of Labor, or CNT), which was a national Spanish organization composed of various anarcho-syndicalist labor unions. Ideologically anarchist—which meant that they were in opposition to any form of organized government—these unions supported the establishment of a society completely run by labor union councils, be it in the factory, in the market, or in agriculture. They were not only at odds with the previously existing conservative regime of Alfonso XIII but were also opposed to the liberalism advocated by republican and socialist parties. The CNT was also opposed to communism, which it viewed as just another form of centralized government. Nonetheless, CNT members voted for and supported the Popular Front in the elections of 1936, which ultimately prompted the outbreak of the Spanish Civil War. During the war, the anarcho-syndicalists became adamant supporters of the Spanish Republic as it fell under siege by Francisco Franco's nationalist rebels and their German and Italian fascist allies. This meant that CNT followers set aside their ideological fervor in order to work with liberals, republicans, socialists, and communists against a common aggressor. While ultimately defeated by Franco's forces in 1939, they had provided substantial support to the beleaguered Spanish Republic in the form of anarchist militias.

—Abraham O. Mendoza

Before World War I, socialist parties, particularly in France and Germany, made significant inroads into their respective governments as representatives of not only their working-class constituencies but also segments of the middle classes and some rural districts. “Revisionists,” such as Eduard Bernstein in Germany and the Fabians in the Labour Party in Britain, advocated a more moderate stance and rejected the original Marxist call for revolution. These moderates, found within some socialist parties, preferred to work within the confines of liberalism until the day when they could lead their respective societ-

ies into utopia. However, this meant that many socialist parties in Europe, such as the Social Democratic Party (Sozialdemokratische Partei Deutschlands, SPD) in Germany, the French Socialist Party (Section Française de l'Internationale Ouvrière, SFIO) in France, and the Labour Party in Britain would break with their Far Left Marxist brethren who still yearned for revolution. Moreover, this allowed them to develop a certain air of respectability among more moderate voters who sympathized with the working class. Nonetheless, they were deemed as traitors by their fellow Marxists on the Left.

The outbreak of World War I led to further rifts among European socialist parties. Socialist parties in France and Germany split into those supporting the war and those opposed to fighting their fellow proletarians. In Germany, the antiwar faction split and formed the Independent Social Democratic Party (Unabhängige Sozialdemokratische Partei Deutschlands, USPD) in 1915 after refusing to vote for further war credits. The Spartacus League was a significant element within the greater USPD organization, with Karl Liebknecht and Rosa Luxembourg in its stead. At war's end, with the outbreak of the German Revolution in 1918 under the leadership of the USPD (KPD or Communist Party of Germany after December 1918), the SPD sought the support of the militarist Freikorps (Far Right militias) to end the urban uprisings. By 1920, the Freikorps had destroyed the insurgency and restored order, placing the SPD under suspicion in the eyes of many German Leftists.

The outbreak of the Russian Revolution in 1917 also had a significant impact on European socialism in the interwar period. The primacy of Bolshevism and the formation of the Third International (Comintern) in 1919 created an international network of communist parties following directives from Moscow. As a result, the SPD, the SFIO, and the British Labour Party were all threatened by the emergence of stronger communist parties during the interwar period. The SFIO was split in 1917 as its more Leftist members formed the French Communist Party, which was part of the Comintern. The split weakened the SFIO during this period as the Center Right was able to hold power throughout much of the 1920s. In Germany the KPD, under the leader-

ship of Ernst Thälmann, established closer links with Moscow and thus managed to develop a significant role in the context of the interwar politics of the Weimar Republic. As a result, the SPD developed a more moderate course of action to distinguish itself from the more radical KPD, thus advocating social democracy within the confines of the German republic. The SPD managed to create a viable welfare state in Germany in the early 1920s as long as they held power. In Britain, Ramsay MacDonald's Labour government of 1924 was suspected of working for the Comintern as he sought to recognize the Soviet Union. As a result, his government fell late that year. While he was able to lead another government from 1929 to 1931 as His Majesty's prime minister, he was deemed a traitor to his class for working with the British Conservative Party to seek a solution to the financial crisis.

The Great Depression throughout Europe also contributed to the weakening of socialism during the 1930s. As conservative Center-Right governments in Britain, France, and Germany were increasingly unable to deal with the expanding global economic crisis, socialist parties found themselves in a seemingly opportune moment that did not turn to their advantage. In Britain, Conservative prime minister Stanley Baldwin and his cabinet took the pound off the gold standard and raised tariff barriers after forming a trade bloc with the British dominions and colonies. As a result, German, French, and Italian governments did likewise, severely cutting off imports and reducing their own exports. Socialist parties, which were out of power by then, had become powerless to stop this development, which sent all European economies into a downward spiral, throwing millions out of work and into destitution. As a result, fascist and communist parties, formerly on the political fringes, became a more popular and significant threat to the moderate socialist parties. With the Soviet Union showing itself immune to the Great Depression, many desperate workers flocked to Communist Party rallies, particularly in Germany. Other Germans found the Nazi Party appealing, as it blamed Jews for the ills of the country and promised to restore the glory of the Reich.

By 1935, Josef Stalin worried that the economic collapse of Europe and the resulting

growing popularity of fascism might threaten the Soviet Union. The rise to power of Adolf Hitler and National Socialism in 1933 had proven to be disastrous to both socialism and communism, as the SPD and KPD were outlawed and its members persecuted. Many of its leaders ended up either in concentration camps, in exile, or in resistance movements for the duration of the war. As a result, the Comintern advised its affiliate European parties to form "Popular Fronts" with socialist and centrist republican parties against the fascists, taking into consideration the interests of the middle classes. The Popular Front tactic led to the victory of socialist Leon Blum in France as a result of the collaboration of the French socialist and communist parties. The tactic also led to the election of the socialist government of Largo Caballero in Spain as a result of the collaboration of socialists, communists, and anarchist-syndicalists. However, the Popular Front government of Leon Blum was unable to stay in power long due to a large worker uprising and the outflow of gold from France. In Spain, the victory of the Popular Front led to the Spanish Civil War, as General Francisco Franco led a nationalist revolt against the Spanish Republican government with the help of Nazi Germany and fascist Italy. Soviet support of the Spanish Republic waned as the Comintern sought to impose its directives on the Spanish socialists (Socialist Party of Spain, PSE), not to mention anarchist-syndicalists and Trotskyites. As a result, socialists fell out of power in Europe as fascists gained the upper hand. With the signing of the Nazi-Soviet Non-Aggression Pact of 1939, the official Comintern line against fascism was that communism held no quarrel with Germany and its fascist allies. This angered many communists, who broke away from their Comintern-affiliated parties, leading some to join socialist parties.

During World War II (1939–1945), socialists in Axis-occupied Europe were persecuted. People such as Blum and Thälmann spent the duration of the war in concentration camps. Other socialists and communists managed to escape to Britain or the United States or even the Soviet Union, where Thorez spent the war, while others chose to work as part of underground resistance organizations. In 1945 with the end of the

war, European socialist parties sought again to distinguish themselves from the communists advocating revolution, as the future antagonism between the West and the Soviet Union was already beginning to show itself.

—*Abraham O. Mendoza*

Bibliography

- Brendon, Piers. *The Dark Valley: A Panorama of the 1930s*. New York: Knopf, 2000.
- Gilbert, Felix, and David Clay Large. *The End of the European Era: 1890 to the Present*. 6th ed. New York: Norton, 2009.
- Overy, Richard J. *The Inter-War Crisis, 1919–1939*. 2nd ed. New York: Longman, 2007.

Socialism in Latin America

During the first half of the twentieth century, three general stages characterized socialist movements in Latin America. At the turn of the century, socialism persisted as an imported political ideology that aided in the creation of early workers' parties. During the second stage, the Russian Revolution of 1917 inspired the rise of political activism, which received support and leadership from the Soviet-led Communist International (Comintern). Finally, the influence of Stalinism, the policy of a popular front uniting many center-Leftist political parties, and the decrease in anti-imperialist rhetoric marked the development of socialism after 1935.

Socialism was first introduced throughout Latin America toward the end of the nineteenth century by European immigrants. Increased urbanization and the beginnings of industrialization accompanied the large-scale immigration of Europeans to Latin America. As a result, the first workers' parties began to form as their early leaders embraced socialist ideas and European precedents. However, in Latin America the moderate socialist goals sometimes failed to attract the interest of immigrant workers. For example, the Argentine Partido Socialista (Socialist Party), founded by Juan B. Justo (1865–1928) in 1895, advocated an electoral and evolutionary strategy for reform, but Argentine workers generally supported anarchist organizations that called for direct action via

general strikes. By contrast, the more revolutionary Chilean Partido Obrero Socialista (Socialist Workers Party), founded in 1912 by journalist and intellectual Luis Emilio Recabarren (1876–1924), achieved immediate electoral success and played a leading role in the nascent Chilean labor movement.

The terms “socialism” and “communism” were almost interchangeable until the consolidation of power by the Bolsheviks as the Communist Party in postrevolutionary Russia. The Third International (Comintern), held in 1919, cemented Soviet leadership of worldwide socialist movements, and after 1919 communism as a form of government became the political goal of socialist movements affiliated with the Comintern. In addition, the rise of the Comintern limited interaction between socialist movements in Latin America and their contemporaries in the United States in part because of the split between the Socialist Party of America and the Comintern and the latter's anti-imperialist, and hence anti-U.S., rhetoric. Support from the Comintern facilitated the foundation of communist parties across Latin America, including in Argentina (1918), Guatemala (1922), Brazil (1922), Ecuador (1925), and Venezuela (1931).

This establishment of communist parties in Latin America took place during the politically active period of the 1920s that lasted through 1935. The most significant socialist theorist in Latin America during this time was Peruvian José Carlos Mariátegui (1895–1920), while the most important political expression of socialism in Latin America was the failed Salvadoran insurrection in 1932. Mariátegui believed that Latin American society needed a socialist transformation that would include agrarian and anti-imperialist objectives. He contradicted the policies of the Comintern by stating that a socialist revolution in Latin America ought not result from the mechanical imposition of a European formula but should instead evolve organically from local conditions and practices. In 1932 the Communist Party of El Salvador, founded in 1930 by a group of union leaders and Leftist intellectuals that included Agustín Farabundo Martí, Miguel Mármol, and Modesto Ramírez, tried to enact such an indigenous, socialist transformation. However, the

➤ AGUSTÍN FARABUNDO MARTÍ

Agustín Farabundo Martí (1893–1932) was born and raised in rural El Salvador, where from an early age he identified with rural laborers. As an adult this socialist and revolutionary leader moved across Central America from one self-consciously anti-imperialist fight to another. His itinerant career began in 1920 when, as a result of antigovernment agitation at the Universidad Nacional, the Salvadoran government deported Farabundo Martí to neighboring Guatemala. There he bonded with Quiché-speaking Indian peasants and soon became involved in revolutionary activity against the owners of Guatemalan coffee plantations, who forced his escape to Mexico.

Between 1925 and 1930 Farabundo Martí divided his time between Mexico, El Salvador, Guatemala, Nicaragua, and the United States. He became affiliated with the Liga Antiimperialista de las Américas (Anti-Imperialist League of the Americas) and fought in Nicaragua against the U.S. military occupation under Augusto César Sandino. In 1930 Farabundo Martí became the Latin American leader of the International Red

Aid, an international social service organization affiliated with the Communist International. Also at this time he helped found the Partido Comunista Salvadoreño (Salvadoran Communist Party). The government again deported Farabundo Martí, but he returned clandestinely to his native country.

In March 1931 Salvadorans elected Arturo Araujo president primarily because of his appeals to the lower classes. Neither the ruling classes nor the army favored Araujo, and after an economic crisis began in December 1931, a military coup ousted the president. Popular discontent against the conservative regime built quickly, and in January 1932 a communist-led insurrection of Salvadoran farmers attacked government forces. Farabundo Martí's followers succeeded in taking control of several towns, but the poorly armed group was no match for the army. A strong military repression—popularly remembered as La Matanza (the slaughter)—led to the deaths of up to 40,000 revolutionaries, including Farabundo Martí.

—Jonathan Hagood

conservative and ethnically European government and military leaders easily put down the insurrection, which included peasants' and workers' unions as well as many indigenous enlisted men.

In contrast to Mariátegui's belief in a particularly Latin American variant of socialism, adherence to Stalinism and implementation of the policies of the Comintern characterized socialism after 1935. The model of the Soviet Communist Party and the influence of Stalinist ideology led directly to the creation within communist and socialist parties throughout Latin America of a hierarchical and authoritarian bureaucracy connected to the Soviet leadership. As a result, socialist movements in Latin America adopted the Stalinist doctrine of revolution by stages, and because Latin American society was not yet ripe for socialism, the political goal became the realization of the national-democratic (antifeudal and anti-imperialist) stage.

The Seventh Comintern Congress in 1935 endorsed a method for achieving this stage of

development in the concept of the popular front, an antifascist alliance of communist, socialist, and bourgeois-democratic parties. Although nearly every Socialist Party in Latin America attempted to forge such an alliance, the strategy only succeeded in Chile. There, the Chilean socialist and communist movements united behind the Radical Party and elected Aguirre Cerda president in 1938. By the early 1940s the anti-imperialist portion of the popular front had been replaced by antifascism and an accommodation with the United States and the United Kingdom because of the broad alliance against Nazi Germany.

—Jonathan Hagood

Bibliography

- Löwy, Michael, ed. *Marxism in Latin America from 1909 to the Present: An Anthology*. Atlantic Highlands, NJ: Humanities Press, 1992.
- Skidmore, Thomas E., and Peter H. Smith. *Modern Latin America*. New York: Oxford University Press, 2005.

Socialism in the United States and Canada

Socialist movements in the United States have a history that stretches back to the early nineteenth century. The steady growth of the Socialist Party in the United States was checked during the Red Scare that followed World War I. By the time of the second Red Scare of the 1950s, socialism, along with communism, had been pushed to the fringe in the United States. Labor and laborers did not wish to be associated with movements that had been pathologized by critics. Canada's parliamentary politics ultimately aided socialists' efforts to establish an official presence in politics and governance from the turn of the twentieth century to the present.

In the 1820s the first Workingmen's Parties in the world, commonly called "Workies," were founded in the United States. On December 26, 1877, the Workingmen's Party at its convention in Newark, New Jersey, changed its name to the Socialist Labor Party (SLP). The bitter labor disputes and strikes of the turn of the twentieth century radicalized many labor supporters such as Eugene Victor Debs (1855–1926), who became the secretary-treasurer of the National Brotherhood of Locomotive Firemen in 1880. Serving in this position until 1892, Debs also became the city clerk of Terre Haute (1879–1883) and was elected to the Indiana state legislature as a Democrat in 1885. In 1892 he accepted a position with the American Railway Union (ARU), an industrial union that sought to organize all railway workers regardless of skill. During the Pullman strike, Debs was arrested and sentenced to six months in the Woodstock jail in Illinois for contempt of court. By the time Debs left prison, he was moving toward socialism.

Although Debs supported the populist Democratic candidate William Jennings Bryan (1860–1925) in the 1896 election, by the following year he was ready to break with the Democrats. In the January 1, 1897, edition of ARU's *Railway Times*, Debs declared that "The issue is Socialism versus Capitalism. I am for Socialism because I am for humanity." Later that year the ARU met in a convention in Chicago and voted to dissolve itself and to merge with other socialist groups to form the Social Democracy of America (SDA).

This new organization called for public ownership of monopolies and utilities, public works projects to employ the unemployed, a shorter workday, and a utopian plan for colonization of a western state where socialists could concentrate, win elective office, and thus establish a model cooperative commonwealth. With the success of socialism in one state, they reasoned, the movement would eventually fan out and bring a national cooperative commonwealth to the entire country. In the election of 1900 Debs was their presidential candidate, with Job Harriman (1861–1925) as his running mate.

In the years before World War I the Socialist Party of America (SPA) steadily grew in size, reaching a peak of 118,045 members in 1912. That year the party had elected 1,039 dues-paying members to public office, including 1 congressman, Victor Berger; 56 mayors; and numerous state legislators and local councilmen. The Socialists were strongest in the city of Milwaukee, the only U.S. city to have three Socialist mayors: Emil Seidel from 1910 to 1916, Daniel W. Hoan from 1916 to 1938, and Frank P. Zeidler from 1946 to 1960. In 1904 and again in 1908, the party ran Debs for president and Ben Hanford (1861–1910) for vice president, receiving over 400,000 votes. In 1912 the party ran Debs and Seidel, with their vote doubling to the highest they ever received, 897,011, or about 6 percent of the vote.

The American socialist movement in these years was publishing scores of newspapers and magazines, notably the *Appeal to Reason* from Girard, Kansas, with half a million subscribers. There were several labor colleges and other left-wing schools being established at this time, such as the Rand School of Social Science in New York. Among the student wings of the movement was the Intercollegiate Socialist Society (ISS), founded in 1905 and a direct predecessor of the League for Industrial Democracy, whose student group became the Students for a Democratic Society in 1960. Also founded in 1905 with the participation of many of the Socialists was the radical trade union Industrial Workers of the World (IWW), led by William D. "Big Bill" Haywood (1869–1928). A fight developed in the party over the IWW's syndicalist tactics of sabotage and violence, which led to Haywood's expulsion for the Socialist Party's Executive

Committee in 1913 and the SPA's rejection of violent tactics as counterproductive.

The steady growth of the party was interrupted by events far from American shores. With the outbreak of World War I in 1914, the SPA urged the United States to remain neutral. In the 1916 election the party used a referendum vote for the first and only time in its history to nominate writer Allan L. Benson (1871–1940) for president and lecturer and former college teacher George R. Kirkpatrick (1867–1937) as the running mate, campaigning on a prosocialist and antiwar ticket. Opposition to the war was divisive both within and outside of the world socialist movement. Most of the Second International parties supported their governments when they declared war. Many, like the German Social Democrats, suffered defections and splits over this stance. Within the SPA its antiwar position cost it members and votes, and in the 1916 election the party's vote dropped by a third over its previous 1912 high.

The crisis intensified shortly after the United States entered World War I in 1917. In that year the party's emergency St. Louis convention rejected a prowar resolution offered by John Spargo (1876–1966) and instead adopted a resolution proposed by Morris Hillquit, pledging the party's unalterable opposition to the war and calling upon the workers of all countries to refuse to support their governments in making war. Following the convention, a number of influential prowar socialists quit the party, including Spargo, Robert Hunter (1874–1942), Charles Edward Russell (1860–1941), J. G. Phelps Stokes (1872–1960), Rose Pastor Stokes (1879–1933), and William English Walling (1873–1936), to form the short-lived Social Democratic League of America, which conducted educational campaigns on behalf of the war effort.

In June 1917 the U.S. Congress passed the Espionage Act, amended in 1918 to include a Sedition Act that made several nonmilitary offenses illegal, including using profane, scurrilous, or abusive language about the government. SPA headquarters around the country were raided, and the attorney general withdrew second-class mailing privileges for the party's paper, the *American Socialist*, for the crime of advertising a pamphlet that claimed that the plutocrat John

Pierpont Morgan Jr. (1867–1943) had loaned the Allies \$1.9 billion before U.S. entry into the war and that the U.S. government was protecting this loan that was behind U.S. involvement in the war. As the war continued, other Socialist newspapers also were denied mailing rights.

The October Revolution and Russia's withdrawal from the war brought another wave of mass arrests and censorship in direct violation of the U.S. First Amendment guarantees of freedom of speech, press, and peaceable assembly. Thousands of Socialists were arrested, including Debs for the crime of giving an antiwar speech. Debs was convicted, and the U.S. Supreme Court upheld the decision in *Debs v. United States* (1919). He was sentenced to eight years and served four in the Atlanta federal penitentiary before being pardoned by postwar president Warren G. Harding (1865–1923) in 1922. Debs was the first man to run for president from a prison cell, receiving over 900,000 votes in 1920. He also wrote a valuable and still timely work on prison conditions, *Walls and Bars*. During World War I and the Red Scare period following it in 1919 and 1920, thousands of communists and anarchists were jailed or deported, in some cases for merely making a critical comment in the privacy of their own homes. The SPA and the socialist press never fully recovered from this blow of massive government repression.

During the Great Depression the SPA's membership increased somewhat, although by then the SPA was outdistanced in size by the Communist Party, USA. The Depression had brought into the Socialist Party a new group of young "Militants" who challenged the Old Guard, whom they felt were not doing enough to build the party with the opportunities to do so presented by the extraordinary economic crisis in which American capitalism found itself in the 1930s.

Students of Socialism attempting to explain why Socialism has such a weak presence in the United States focus on issues of factionalism within the party, U.S. government repression during the Red Scares that followed the two world wars, the population's mobility, the refusal of workers to view themselves as "labor" and thus forge a "class consciousness," and the difficulties of creating an effective political presence with the U.S. two-party system.

In Canada, as early as 1890 branches of the U.S. SLP had been established in the cities of Montreal, Toronto, and Winnipeg. By 1899 a Canadian Socialist League was formed by dissidents opposed to Daniel De Leon's (1852–1914) autocratic style of rule in the SLP, as were U.S. radicals at the time who would go on to form the SPA in 1901. Other socialist groups were forming as the nineteenth century gave way to the twentieth century, and they united in 1905 into the Socialist Party of Canada, paralleling the split from the SLP that was taking place in the United States. Although unable to elect any members to the Canadian Parliament in the years before World War I, nevertheless the Socialist Party of Canada was able to win elections in the provincial legislatures in Alberta and Manitoba. In 1911 a second democratic socialist group was founded, the Social Democratic Party of Canada. Shortly thereafter it joined the Second International, something that the older and more radical Socialist Party of Canada refused to do as long as the decidedly nonradical British and Australian labor parties were members.

During World War I and the period following, the Canadian socialist movement gave much attention to the idea of building One Big Union, a syndicalist idea popularized by the Industrial Workers of the World (IWW) especially in the wake of the general strike in Winnipeg in 1920. Various labor parties also sprang up in parts of Canada during this period and were able to win elections to provincial legislatures. With the support of the United Farmers of Ontario, one such group, the Canadian Labour Party, sent its first candidate, Angus McDonald, to the Canadian Parliament in April 1920. In 1921 the Labour Party of Winnipeg Center, Manitoba, elected to the federal Parliament John Shaver Woodsworth (1874–1942) the leader of the Canadian Labour Party movement in the 1920s and 1930s. In addition to various socialist and labor parties winning elective office in Canada in these years, the communists began to form their own groups in Canada in 1920 and the following year united to form the Communist Party of Canada, which was soon banned by the government.

What was clearly needed was a uniting of the various socialist and labor parties operating

in Canada in the interwar years. To this purpose, labor and farm leaders met in Calgary in 1932 to form the Cooperative Commonwealth Federation (CCF). The same had been tried and is still being tried in the United States—so far unsuccessfully—where many labor leaders remain tied to the Democratic Party and the capitalist system. However, the Canadians apparently had no such ties. At the CCF's first convention in Regina, Saskatchewan, it adopted a socialist platform calling for public ownership of industrial monopolies operating against the public interest and for an independent political party. The CCF core was a group of parliamentary members led by J. S. Woodsworth, already dubbed the "Ginger Group" (another way of calling them the Reds) because of their left-wing stands on social issues.

The CCF grew steadily in the years before World War II, electing 8 members to Parliament by 1940. In 1942 CCF member Joseph Noseworthy was able to defeat the former prime minister and leader of the Conservative Party, Arthur Meighan, for one of Toronto's parliamentary seats. By the following year, the CCF had elected 69 members to various provincial legislatures and were the official opposition in four provinces. Then in 1944, for the first time, the CCF was able to win a majority in a provincial legislature, and Saskatchewan became Canada's first province with a socialist government, electing T. C. Douglas (1904–1986), a former minister and member of Parliament, as provincial prime minister. Whereas the Socialist Party, USA, was going into decline in these years, the CCF was forging ahead, something perplexing and yet an inspiration to socialists in the United States. The CCF continued to thrive in the decades that followed and spearheaded important legislation, including comprehensive health insurance.

—Donald F. Busky

Bibliography

- Busky, Donald F. *Democratic Socialism: A Global Survey*. Westport, CT: Praeger, 2000.
- Cantor, Milton. *The Divided Left: American Radicalism, 1900–1975*. New York: Hill and Wang, 1978.
- Commons, John R. *History of Labor in the United States*. 2 vols. New York: Macmillan, 1918.

- Douglas, T. C. *Canadians Find Security*. New York: League for Industrial Democracy, 1949.
- Laidler, Harry W. *History of Socialism*. New York: Apollo, 1968.
- Lens, Sidney. *Radicalism in America*. Rev. ed. Cambridge, MA: Schenkman, 1982.
- Parenti, Michael. *Democracy for the Few*. 5th ed. New York: St. Martin's, 1988.
- Petersen, Arnold. *Bourgeois Socialism: Its Rise and Collapse in America*. New York: New York Labor News, 1963.
- Weinstein, James. *The Decline of American Socialism*. New York: Monthly Review Press, 1967.
- Whitehorn, Alan. *Canadian Socialism: Essays on the CCF-NDP*. New York: Oxford University Press, 1992.

■ Introduction: Fascism

Fascism is a sociopolitical philosophy that originated in southern and central Europe in the years immediately following World War I and grew into a mass political movement. Fascist regimes eventually took power in some countries, most notably Italy, Germany, Japan, and Spain, and it was the aggressive expansionism of fascist nations that brought about the conflicts that eventually culminated in World War II.

The term “fascism” was used in 1919 by Benito Mussolini in Italy to name his political party, which stood for a combination of socialist and nationalist policies. The term refers to the ancient Roman icon of an ax blade affixed to a bundle of sticks, or *fascies*, that make the axe unbreakable. This symbolized the power of a completely unified state. In Germany at the same time, a new party, the Nationalsozialistische Deutsche Arbeiterpartei (National Socialist German Workers Party, NSDAP), or Nazi Party, was emerging as well, with similar notions of unity, struggle, and exclusive nationalism.

Though fascist ideology draws on a number of political and philosophical traditions (such as authoritarianism, syndicalism, and anti-Semitism), its origins are most closely associated with conditions in Europe at the end of World War I. A sense of national disappointment and victimization was common to nearly all nations that produced fascist regimes or significant fascist parties. This sense of national humiliation was then exacerbated by serious economic downturns in the interwar years. The social and economic demands of World War I placed exceptional pressures on nations like Germany, Italy,

and Japan, which were only partially modernized. The early 1920s produced serious slumps with the termination of wartime production, and later the consequences of the Wall Street crash of 1929 produced depression conditions and massive unemployment. With the seeming collapse of capitalism and the apparent inability of liberal-democratic regimes to deal with it, these conditions produced a significant advance for the Marxist Left. This perceived threat to private property in turn produced an opportunity for fascists to appear as the protectors of property and order.

The German populace after the war to a great extent rejected the idea that German troops had been militarily defeated. No combat had taken place on German soil, and the military command had not communicated the seriousness of the German military situation. Therefore, when the military government abdicated and set up a democratic republic led by the German Socialist Party (SPD), it was the new government that was blamed for surrender and the signing of the Treaty of Versailles. The Treaty of Versailles, signed at the conclusion of the Paris Peace Conference, explicitly placed the blame for World War I on Germany, demanded significant reparations payments (in money and resources), and limited the size of the German military to a token force. In the years that followed, Germany's new republican government struggled to deal with the economic difficulties of the worldwide slump. Germany suffered through hyperinflation in 1923 and then disastrous unemployment in the early 1930s, all of which discredited the liberal regime and produced fertile ground for Nazism.

Italy had joined the Allies in World War I based upon guarantees of territorial expansion in the secret Treaty of London (1915). However, after the termination of the war, Woodrow Wilson's principles of diplomatic openness and self-determination for ethnic peoples ruled out Italy's territorial expansion. Vittorio Emanuele Orlando, the Italian prime minister, eventually walked out of the conference. This failure caused the collapse of his government and produced a wave of reactions, including Gabrielle D'Annunzio's occupation of the port city of Fiume and Mussolini's Fascist Party violence.

In Italy as elsewhere in Europe, Marxist political movements gained great momentum after the success of the Russian Revolution and as a reaction to diminishing conditions for workers. Especially in Italy, this resulted in a wave of strikes and factory occupations. Mussolini's Fascist Party, like the Nazi Party in Germany, used the often unemployed demobilized soldiers to form private uniformed paramilitary units. Mussolini's "blackshirts" used violence to combat strikes, intimidate Socialist Party leaders, and burn the offices of socialist newspapers. This violence was not confronted by the weak liberal state, and the fascists were partially financed by the business community, who appreciated the suppression of the labor Left regardless of the means. After gaining a small presence in the Italian Parliament, the fascists were able to gain power by constitutional means in 1922, when the intimidated Italian king, with few alternatives, called upon Mussolini to form a government. Mussolini would rule Italy until his fall in 1943 as a result of the Allied invasion of Italy.

In Germany, Adolf Hitler had taken charge of the Nazi Party by 1923 and staged an armed coup now known as the Beer Hall Putsch. The coup failed, and Hitler was arrested but was given a light sentence by an unreformed judiciary. During his nine months in prison he wrote *Mein Kampf* (*My Struggle*), which outlined his conception of a world defined by the struggle between racial groups and was a manifesto for the Nazi Party. By 1933 as Germany suffered through terrible economic depression, the Nazi Party claimed a significant number of seats in the Reichstag, and Hitler was named chancellor under President Paul von Hindenburg. Hinden-

burg soon died, and Hitler managed to consolidate his power into a dictatorship. As did Mussolini in Italy, Hitler violently eliminated all political opposition. He ruled Germany without significant resistance until that nation's defeat in World War II. Hitler produced an economic recovery based upon a massive rearmament program that prepared Germany for a war of territorial expansion and enjoyed great popularity among the German people. His radically racist views resulted in progressively harsher legislation that barred Jews from government, business, and cultural life and would eventually lead to their mass execution in concentration camps during World War II.

Italy and Germany are the most recognizable examples of fascist regimes, but fascist or fascist-inspired governments appeared all over Europe during the interwar years. In Portugal, a military coup in 1926 eventually placed Antonio de Oliveira Salazar in charge in 1928. Salazar's regime included some important fascist practices but suppressed the more radical fascist parties. Fascist-inspired regimes also took power in Austria (1934–1938) under Engelbert Dolfuss and (after his assassination, Kurt Schuschnigg) in Hungary (1919–1944) under Admiral Miklos Horthy.

The longest lasting of the explicitly fascist regimes was that of Francisco Franco in Spain. After the establishment of the Second Republic in 1931, Spain's government swung dramatically to the Left as a result of the Popular Front in the 1936 elections. Members of the Falange, Spain's most important fascist party, were arrested, and important members of the military were dismissed. General Franco led a military revolution to overthrow the government that resulted in the Spanish Civil War (1936–1939). Franco's movement was aided directly by both Italy and Germany, while the democratic governments of Britain and France provided no help to the Republican forces. The Republic eventually accepted the aid of the Soviet Union. Franco's Nationalists won the war and used the Falange party apparatus to rule the nation, violently exterminating political opposition. Franco aided Italy and Germany during World War II but remained neutral. After the defeat of the Axis Powers, Franco gradually reduced the overtly

fascist characteristics of his government, but Spain remained a military dictatorship until Franco's death in 1975.

Less successful fascist movements developed all over Europe and throughout the world during this period. Significant movements developed in France (Action Française), Great Britain (British Union of Fascists), and Belgium (Rexist Movement). These movements made important social and political impacts but never seriously threatened to take power.

In 1935 fascist Italy invaded the nation of Abyssinia (modern-day Ethiopia) despite loud protests from the League of Nations, to which both Italy and Abyssinia belonged. Italy eventually defeated the Abyssinians by means of a brutal strategy that included the use of poison gas on military and civilian targets. This began the process of aggressive and rapacious imperial expansion by the fascist powers. Soon after, Hitler reoccupied the Rhineland in 1936 and then annexed Austria in 1938. Though these were outrageous breaches of the League of Nations and the Treaty of Versailles, no other powers (most importantly France and Britain) moved to stop them, instead using diplomacy to try to reach a negotiated settlement. This strategy is known today as the policy of appeasement. Later, in 1938, Hitler made clear his intention to move into Czechoslovakia to reclaim the German-speaking area of the Sudetenland. France and Great Britain negotiated desperately to avoid a major conflict and eventually reached an agreement that gave the Sudetenland to Germany in exchange for peace. Germany soon occupied the rest of Czechoslovakia and in September of 1939 invaded Poland. At this point appeasement was seen to be a failed policy, and war broke out. Through the first years of the war, Nazi Germany invaded and occupied in succession Poland, Denmark, Norway, Holland, Belgium, and France. In France, the northern part of the country remained under direct Nazi control, but in the south a French fascist-style government was established with its capital at Vichy. After Germany's invasion of the Soviet Union and the entry of the United States into World War II in 1941, the war gradually but inexorably led to the fall of fascist regimes and the material devastation of Germany, Italy, and Japan by 1945.

Even before the end of World War II, fascism had been essentially discredited as a political system. Great lengths were taken by occupying Allied Powers to ensure the rebuilding of Europe, the denazification of Germany, and the reconstruction of Japan to both guard against the development of communism and to suppress the reemergence of fascism. However, fascist-inspired regimes did develop in the postwar period. In Argentina, Juan Peron (1946–1955) openly admired and communicated with European fascist powers and established what is often referred to as a pseudofascist regime. In South Africa, the Afrikaner Nationalist Party took power in 1948 and was led by many open fascists and fervent admirers of Nazism. Though the regime had no single mythic leader and retained a parliamentary structure, its radical policy of apartheid (legal racial separation and suppression) has led many to see it as a particular variant of fascism. Other semifascist governments emerged in places such as Guatemala, Rhodesia, and Iran. Most recently, a case can be made for the Slobodan Milosevic regime in Serbian Yugoslavia, which openly advocated exclusive nationalism and ethnic cleansing. Most neofascist movements today are marginalized fringe groups of the extreme Right that attract members most concerned with simple race hatred and anti-immigration policies.

—Patrick G. Zander

Bibliography

- Arendt, Hannah. *The Origins of Totalitarianism*. New York: Harcourt Brace, 1951.
- Eatwell, Roger. *Fascism: A History*. London: Chatto and Windus, 1995.
- Paxton, Robert O. *The Anatomy of Fascism*. New York: Knopf, 2004.
- Payne, Stanley G. *A History of Fascism, 1914–1945*. Madison: University of Wisconsin Press, 1995.

The Ideology of Fascism

The characteristics, values, and priorities of fascist movements were highly particular, with various combinations of policies and sometimes contradictory notions. Few scholars agree on a single description of fascism, and its very definition remains to this day the most controversial

➤ GERMAN FATHERLAND PARTY

The German Fatherland Party (Vaterlandspartei) was formed in 1917 in response to efforts in the Reichstag (German parliament) to formulate a peace proposal with the Allies in World War I. Composed mostly of right-wing military officers and supporters of the German Supreme Command (military dictatorship), the Fatherland Party was specifically focused on continuing the war effort. The Supreme Command held a near-dictatorial grip over the state in mobilizing for war. Led by Paul von Hindenburg and Erich Ludendorff, the Supreme Command eagerly accepted the support of the rapidly expanding Fatherland Party. Along with supporting the Supreme Command's annexationist policies on both fronts, the Fatherland Party also supported the dictatorial hold that the current militarist regime had over the economy and society in addition to advocating the impotence of the parliament. In the interwar period former members of the Fatherland Party, such as Wolfgang Kapp and Anton Drexler, continued to support such views. Kapp led a coup against the German government in the famous failed Kapp Putsch (coup) of 1920. In 1919 Drexler formed the German Workers' Party, which eventually became the German National Socialist Workers' Party (NSDAP).

—Abraham O. Mendoza

debate on the subject. Making the task even more difficult is the fact that fascist dictators, such as Benito Mussolini and Adolf Hitler, often sneered at ideologies and programs, insisting that pragmatic action alone was important. Mussolini was very open about his lack of a concrete ideology early in his political life, describing fascism merely as a series of policies designed to gain power. Despite this, the combined actions and writings of the various fascist movements provide areas that stand out as characteristic and can be assembled into a generalized picture of fascist ideology.

Fascist ideology begins with the conception of the state as the supreme entity to which all other areas must be subordinated. This is a rejection of the Enlightenment philosophies of the priority of individual liberties, individual worthiness, and equality of citizens before an impartial

law. In fascist ideology, individual rights are explicitly subject to the will of the state.

The definition of precisely what constitutes a nation is problematic. During the early twentieth century, nation was typically viewed as the composite of traditional ethnicities, language, and culture of a political state. This was often seen by fascist leaders as the justification for expanding their political states to include those who shared their culture but had been left outside of the new boundaries as a result of the reorganization of Europe after World War I. Citizens of a state, however, who were not seen as part of the traditional ethnicities, were considered foreign or impure elements. Many of these groups were subject to oppression, expulsion, and even extermination in order to preserve national integrity.

Politically, fascist movements were led by political parties, typically with a single charismatic leader who was seen as the embodiment of the nation. This leader was perceived as possessing the vision and the will to lead the nation to a so-called mythical rebirth as a dominant power. Fascist movements were nearly always antiparliamentarian, violently denouncing the impracticability of multiple parties vying for influence. Fascist regimes, once in power, typically moved to eliminate opposition parties, often through violence, and retained parliaments merely for the sake of appearance. Fascist leaders sometimes used plebiscites to legitimize themselves, but these were hardly trustworthy given the use of violent coercion and the lack of voting alternatives.

Another characteristic of fascist ideology was the militarization of political culture. Fascist political parties often used groups of uniformed paramilitary squads to intimidate and defeat political opposition as well as to maintain internal order. Violence was generally celebrated in fascist doctrine because a great nation, it was asserted, could only arise out of struggle. This extended to the practice of mass political meetings and rallies, which were often regimented and ritualized affairs. They typically included marches, uniforms, symbols, and insignia.

In terms of economic issues, fascism was, first of all, concerned with maintaining the private ownership of the means of production but

under state direction. Older Marxist interpretations saw fascism as merely a tool of the industrial bourgeoisie and the defense of that class by violent means. More recent scholarship has demonstrated that although some fascist regimes accepted financial help from industry in the early stages, after taking power fascist governments instead dictated terms to the business community.

One of the most common economic policies of fascism was the reorganization of governmental infrastructure into corporations. First attempted in Italy, these corporations were composed of business leaders, technicians, labor representatives, and government agents. These would monitor and regulate entire industries, including prices, labor conditions, production levels, and wages. The corporative model was highly attractive to most fascist movements during periods of economic depression. Corporations figured prominently in the regimes of António de Oliveira (Portugal) and Francisco Franco (Spain) and in the programs of many of the movements that never took power. In both Italy and Germany, however, the corporative structure produced little in the way of industrial progress and eventually became a mere instrument of government economic policy. Labor suffered severely under the corporative model. Having lost the ability to strike effectively, labor organizations became increasingly marginalized and irrelevant.

Many fascist movements also aspired to create self-sufficient economies. In Germany, Hitler created the Four-Year Plan, led by Hermann Göring, that was designed to make the nation self-sufficient in terms of all military-sensitive materials. In Italy, Mussolini declared autarky (an economy that does no trade with the outside world) to be the number one economic priority as economic sanctions were imposed by the League of Nations after Italy's invasion of Abyssinia. Franco's Spain followed suit, attempting to reach economic self-sufficiency in the 1940s. This pursuit of economic independence reflected the fascist desire for an independent political agenda. It was also a contributing factor in the imperial expansion of fascist nations as they attempted to obtain natural resources, labor, and markets to construct economies large and rich enough to be self-sufficient. Autarky was never

achieved by any fascist power, and the attempts often produced economically disastrous results.

Some scholars have seen the pursuit of a closed, self-sufficient economic system as the economic counterpart to the exclusive racial attitudes of fascist ideology. Given the exclusive nationalism of fascist regimes, it followed that foreign elements were generally weeded out. Nazi Germany was the most fanatical in this respect, reflecting Hitler's obsession with a racially pure German citizenry. He conceived the nation in terms of a gene pool and saw any "impurities" as harmful threats to national integrity. Nazi ideology was especially concerned with the Jews. In Germany, laws were passed that excluded Jews from government, business, and cultural participation. Eventually, Jews were forced to wear humiliating identification and were segregated, persecuted, and expelled from the country. Finally, during World War II, Nazi Germany embarked on a radical project to exterminate the Jews through an industrialized system of death camps, known today as the Holocaust. Six million Jews, as well as many other groups such as the Gypsies, were murdered in this way.

In Italy, there was relatively little formalized racial legislation until the invasion of Abyssinia. After 1935, however, Mussolini passed legislation against Africans and against their intermarriage with Italians. After his alliance with Hitler in the late 1930s, Italy also passed anti-Semitic legislation. Some degree of anti-Semitism was common to nearly all fascist movements, which saw the world in racial terms, like Hitler, and saw Jewish investors and financiers as involved in a conspiracy to control the world economy.

In terms of religion, fascists were divided in their attitudes. Hitler and Mussolini both saw religion in pragmatic terms and reached agreements with the Roman Catholic Church for reasons of mass appeal. Their real aims, however, were to create a kind of political religion, and they kept the Church well out of politics. In more conservative fascist regimes such as Spain, Portugal, and Austria, fascist leaders saw the Church as an important pillar of the state and allowed it a modest influence on policy. This more integrative approach to religion by conservative regimes is sometimes referred to as clerical fascism.

Finally, fascist ideology was vague about the role of women, but most regimes were discriminatory. Fascist culture was typically very masculine, celebrating virility, strength, domination, and violence. Women's roles were mostly seen in the idealized terms of motherhood. Women were seen as crucial to producing and nurturing new, vital, and energetic generations capable of fighting and winning in the world struggle. There were medals and awards created in Germany and Italy, for instance, that decorated the best examples of fascist motherhood. Despite this, many women were attracted to fascism, and most movements had special women's sections with their own marches, uniforms, and insignia.

—Patrick G. Zander

Bibliography

- Passmore, Kevin. *Fascism: A Very Short Introduction*. New York: Oxford University Press, 2004.
- Payne, Stanley G. *Fascism: Comparison and Definition*. Madison: University of Wisconsin Press, 1980.

Fascism in Germany

German fascism is better known to the world as Nazism and is closely associated with the name of Adolf Hitler (1889–1945). Like its counterparts in Italy and elsewhere in Europe, Nazism was a product of the severe social dislocations experienced after World War I and found a ready audience in the urban and rural middle classes. In Germany, these highly nationalistic classes were shocked and frightened by the overthrow of the German monarchy in 1918 and the inexplicable German defeat in World War I. Furthermore, this group was anxious about the loss of their savings in the hyperinflation of 1923, the growth of Leftist trade unions and socialist parties, and the perceived anarchy of democratic politics. As a result of this collective angst, they desperately looked for someone who could save them from their economic and political woes. Hitler's racism, antisocialism, anticommunism, anti-industrialism, xenophobia, and antidemocratic politics appealed to these classes. He promised to save Germany and the Germans from enemies at home and abroad. As time would show, however, his plans would bring

about another world war, the deaths of tens of millions of people, and the complete destruction of the Germany they all knew.

The full name of the Nazi Party was the Nationalsozialistische Deutsche Arbeiterpartei (National Socialist German Workers' Party, NSDAP). The so-called socialism that Hitler espoused was the comradeship of the front in World War I. It was an experience, he believed, that destroyed class barriers and made everyone German. The movement was national because it was the solidarity against foreign powers that would prevent the disintegration of the German nation. Hitler's workers were anyone who earned a living, thus wage and salaried employees. In fact, the wage-earning German working class had not supported the Nazis before Hitler came to power in 1933 but instead backed the socialist and communist movements. As its leader, Hitler hoped to create a *Volksgemeinschaft* (a folk community) of equal German citizens. The community would be based on race, and membership would be limited to those of the Aryan race. Such a *Volksgemeinschaft* would first have to be purged of the alleged traitorous or unnational elements, which for Hitler meant the communists, socialists, trade unionists, Jews, and Gypsies. As he made clear in his book *Mein Kampf* (*My Struggle*), he believed that the struggle between the races was the key to history, and he planned to lead Germans in a neo-Darwinian life-and-death struggle for living space (*Lebensraum*) against the Jews and Slavs of eastern Europe. Without living space, the Germans, whom Hitler believed were the world's premier Aryan race, would lose this racial battle and be extinguished as a people. To fight this war successfully, Hitler argued that Germany would have to become a dictatorship, a *Führerstaat* (leadership state), with him as the *Führer* (leader).

The Great Depression gave Hitler the opportunity to rule Germany. The economic, social, and political crises caused by mass unemployment and business failures created panic among the middle classes. Surprisingly, unemployed workers did not vote for Hitler, but the middle classes did. In the July 1932 parliamentary elections, the NSDAP garnered 31 percent of the popular vote. Although the party lost votes in the subsequent November 1932 election and

never became a majority party in Weimar Germany, it was the only right-wing party with a mass base of support. As such, the conservative notables around German president Paul von Hindenburg (1847–1934) urged him to appoint Hitler as chancellor (prime minister) of Germany. Since 1930, Germany had been a constitutional dictatorship in a state of emergency where the elected president was able to pass laws and appoint governments without the approval of the Reichstag (parliament). Using this authority, von Hindenburg appointed Hitler as chancellor on January 30, 1933.

Hitler quickly capitalized on the opportunity afforded him by his appointment to bring about a *Machtergreifung*, or seizure of power. He attacked and banned the Kommunistische Partei Deutschlands (Communist Party of Germany), held new elections in March 1933 during a reign of terror, and had the new parliament pass the Enabling Act that gave him dictatorial powers for four years. He methodically eliminated all constitutional and organizational obstacles to a dictatorship while at the same time preserving the facade of legality. He used the Enabling Act to ban trade unions, outlaw all other political parties, create a one-party state, dissolve the federal structure of the government, purge the civil service, and terrorize regime opponents whom he ordered sent to concentration camps, whose first inmates were trade unionists, socialists, and communists. After von Hindenburg's death in 1934, nothing stood in the way of the Nazi regime's ruthlessness and brutality, especially once the press, radio, and film industries had been synchronized with the regime's propaganda apparatus under Josef Goebbels (1897–1945).

Once Hitler's left-wing opponents and their organizations had been liquidated, he turned his attention to getting people back to work and strengthening Germany's armed forces. His rearmament drive lifted Germany out of the Great Depression by 1936 and was a needed component of his drive for living space. Without a modern-equipped army, he could not conquer his neighbors' territory—Poland and the Soviet Union—where he believed German living space existed. Hitler argued that the Slavs were an inferior race and deserved to lose their right to live and occupy good agricultural land on which

➤ GREGOR STRASSER AND NATIONAL SOCIALISM

Gregor Strasser (1892–1934) was a member of the top ranks of the leadership of the German National Socialist Workers' Party (NSDAP), also known as the Nazi Party. After World War I, Strasser was heavily involved with right-wing paramilitary groups known collectively as the Freikorps and became associated with the Nazis in 1921. He was also involved with Adolf Hitler's botched Beer Hall Putsch of 1923, a plot to take over the Bavarian state government in Munich. Strasser, like Hitler, was sentenced to prison for these actions. Upon Strasser's speedy release, he was instrumental in the reorganization of the national structure of the party organization, responsible for transforming the NSDAP from a fringe splinter party into a national party capable of winning seats in the Reichstag (national legislature) and state houses. Unlike Hitler, whose ideological beliefs were strongly anti-Semitic and anti-Marxist, Strasser advocated social and economic reforms more akin to Marxism, which put him at the Left of the party. Ultimately, as Hitler secured his domination of the NSDAP, Strasser's profile as party leader lessened from the late 1920s to the early 1930s. After Hitler's rise to power in 1933, Strasser remained high in the party leadership but was nonetheless deemed a liability, as conservatives flirted with him and not the more radical Hitler in an effort to break up the power of the NSDAP in 1932. In 1934 during the *Nacht der langen Messer* (Night of the Long Knives), Strasser was captured and assassinated by the *Sturmabteilung* (SA), a Nazi paramilitary organization, under Hitler's orders.

—Abraham O. Mendoza

he hoped to settle sturdy German peasants. Besides Slavs, Jews were the other major ethnic group pathologically hated by Hitler, who saw in both of them the antithesis to German civilization. While the Slavs would be dealt with later when war broke out in 1939, the Nazis began their racial attacks against the Jews soon after they took power. Most Jews were expelled from the civil service in 1933 and lost their citizenship rights in 1935. In 1938 Jewish shops were destroyed across Germany in the *Reichskristallnacht* (Night of Broken Glass). Once war started in September 1939, the German Army (*Heer*)

and the Security Forces (Schutzstaffel) began rounding up Slavs and Jews in Poland, many of whom were pressed into forced labor, put in concentration camps, or murdered. Hitler's race war began in earnest with the German invasion of the Soviet Union in June 1941. There, hundreds of thousands of Russians and other peoples were murdered, often for being communists, while millions starved to death. Meanwhile in Germany and Poland, death camps such as Birkenau began the mass murder of Jews in the spring of 1942. By the time World War II was over, approximately 6 million Jews had been killed along with 11.5 million Soviet civilians (mostly Slavs) and more than 2 million Polish civilians. Total Polish and Soviet casualties, including soldiers, were nearly 29 million people, which included 4 million Jews.

When Hitler launched his war for living space in 1939, he meant to overturn the international order of his day and make Germany the strongest nation on the European continent. It was more than a conventional war, however: it was an imperialist war, a race war, and a war against communist collectivism. Nazism was a form of fascism distinguished by the sheer scale and scope of its brutality, its racial ideology, and its expansionist drive, all of which turned on their creators and buried them by 1945 in the broken cities of the Fatherland.

—Alexander M. Zukas

Bibliography

- Berghahn, V. R. *Modern Germany: Society, Economy and Politics in the Twentieth Century*. 2nd ed. New York: Cambridge University Press, 1987.
- Gregor, Neil, ed. *Nazism*. New York: Oxford University Press, 2000.
- Kershaw, Ian. *The Nazi Dictatorship: Problems and Perspectives of Interpretation*. 4th ed. London: Edward Arnold, 2000.
- Kitchen, Martin. *A History of Modern Germany, 1800–2000*. London: Blackwell, 2006.

Fascism in Italy

Fascism originated in Italy out of the political party activity of Benito Mussolini in the years immediately following World War I. Mussolini ruled Italy from 1922 until he was deposed in

1943 during World War II. During Mussolini's reign an Italian fascist philosophy took shape, and he was able to consolidate his power into a dictatorship. He produced the perception of an economically sound society with strict order, efficiency, and modernization. Fascist Italy invaded Abyssinia in 1935, alienating other democratic powers, and eventually formed an alliance with Nazi Germany. This led Italy to enter World War II on the side of Germany, whereupon its illusion of modernized efficiency was exposed as fiction. Italy was defeated time and again in combat and suffered invasions from both the Allies and Nazi Germany. Mussolini was deposed in 1943, and Italy was left materially devastated after the war.

Benito Mussolini was born in 1883 to relatively poor parents, who brought him up in the tradition of revolutionary socialism. In his early adult life he moved around Italy and Switzerland, taking jobs as a teacher and writer and consistently getting into trouble for his temper and violence. He joined the Socialist Party and was eventually given the post of editor of its newspaper *Avanti!* This was a notable responsibility given his age. In *Avanti!* he continued to promote a violent revolution to overthrow the state and capitalism. In the years leading to World War I, however, he made clear his opinion that Italy should show its strength in the war, as great nations, he asserted, could only be forged out of struggle. This was in direct opposition to the Socialist Party program, and he was soon expelled from the party. He thereupon founded his own newspaper, *Il Popolo d'Italia*, (*The Italian People*), and his own political party, which he named the Fasci di Combattimento, in 1919 that later became the Partito Nazionale Fascista (National Fascist Party) in 1921.

During 1919–1922 the Italian people suffered greatly. Economically, the end of wartime production brought unemployment and lower wages, which led to a wave of strikes and factory occupations by workers, mostly of the Socialist Left. At the Paris Peace Conference, Italy found that it could gain none of the territory it had been promised in the Treaty of London, and the Italian prime minister, Vittorio Emanuele Orlando, returned home empty-handed. This triggered the collapse of his government, and a succession of

weak and ineffective administrations followed. As it turns out, these later administrations were ill-equipped to deal with the difficulties that Italy faced. In the elections, the Socialist Party gained a significant number of seats, becoming Italy's majority party. This produced a great deal of anxiety among those in the middle classes who worried about the elimination of private property and the prospects of a violent revolution.

All of these conditions provided an opportunity for Mussolini's fascists to appear as the protectors of private property and internal order. Mussolini had assembled a private uniformed army mostly of demobilized soldiers who could find no work. These *squadristi* (action squads) broke up strikes, violently attacked Socialist leaders, and destroyed the offices of the Socialist Party and the press. In the rural areas, this was especially appreciated by large landowners who wanted to keep wages low among the agricultural day laborers. Industry and large landowners contributed financially to the movement, providing some of its membership during these early years.

By 1922 the fascists had gained a small number of seats in the Italian Parliament but were by no means a majority. The government of Francesco Nitti collapsed that year, and widespread violence was feared. The king, fearing violent uprisings and suspecting that the army might defect to Mussolini, called upon him to form a government. Mussolini thus took the reins of power by constitutional means but immediately afterward orchestrated a massive march of fascist squads known as the March on Rome to create the illusion of a forceful seizure of power.

In the early years of Mussolini's regime, there was little in the way of a political program beyond restructuring the government and eliminating political opposition. In 1924 the Socialist Giacomo Matteotti was murdered by Fascist Party squads presumably at the suggestion of Mussolini. Parliament eventually became merely a Fascist Party assembly, with Mussolini, now known as Il Duce, as head of the Grand Council of Fascism. The Grand Council became a tool for Mussolini, who had exclusive rights to summon it and decide which issues it would review.

Economically, Mussolini restructured Italian trade, beginning in 1927, on the corporative model. Corporations were composed of manag-

➤ GIOVANNI GENTILE, *A DOCTRINE OF FASCISM* (1932)

Italian philosopher Giovanni Gentile (1875–1944) devised the philosophical basis for fascism, the political system implemented by Benito Mussolini in 1922 in Italy. Gentile, known as “the Philosopher of Fascism,” has been credited with the writing of *A Doctrine of Fascism* (1932), although the work was signed by Benito Mussolini. In this work, Gentile described the central tenets of Italian fascism, necessary for the creation of the Italian fascist state. These were the institution of compulsory state corporatism, the abolition of the parliamentary system (and all forms of hated liberalism), and the implementation of economic autarky (self-sufficient national-centered economy with little to no international trade). He also wrote the *Manifesto of the Italian Fascist Intellectuals*, signed by many members of the Italian intelligentsia including playwright Luigi Pirandello. Gentile also served the Italian fascist state as minister of education and member of the Fascist Grand Council. He remained under Mussolini with the establishment of the Republic of Salò. Ultimately, Gentile was murdered by antifascist partisans in Florence in 1944.

—Abraham O. Mendoza

ers, technicians, labor, and government representatives. Their purpose was to monitor and regulate entire industries based on the belief that the needs of the state and national unity transcended class. Trade unions, even the historically fascist trade unions, were eliminated in favor of the National Council of Corporations, established in 1930. The corporate structure, however, produced very little industrial progress, mostly choking the economy with bureaucracy and handling issues on an inconsistent and ad hoc basis. Labor interests were crushed as their organizations disappeared, while private ownership remained in place. In 1926 Mussolini decided to arrest the rapid decline of the lira and fixed it to the gold standard. This created an adverse economic recession as exports became far more expensive. Mussolini cared little for the economic consequences; however, the value of the lira was a matter of national prestige.

On the heels of smaller imperial expeditions such as annexing the island of Corfu, in 1935 Mussolini made the decision to invade the Kingdom of Abyssinia (present-day Ethiopia). This was partly aimed at gaining additional natural resources, labor, markets, and farmland for Italian settlers. It was also clearly done as a display of strength and national glory. It was a costly decision, as Abyssinia yielded little in the way of economic assets, and Italy's blatant aggression, including the use of poison gas, was denounced by most of the democratic world. The League of Nations imposed economic sanctions on Italy, whereupon Mussolini campaigned for an intensified policy of economic autarky, which further inhibited Italy's industry.

Having alienated most of the democratic powers, Italy eventually formed an alliance with Nazi Germany. Mussolini visited Germany in 1936, and soon after both Italy and Germany provided direct support to Francisco Franco's Nationalist forces in the Spanish Civil War. Franco's victory as well as Mussolini's role in the diplomatic crisis over Czechoslovakia in 1938 marked the apex of the Italian dictator's popularity on the world stage, but in reality Italy was fast becoming beholden to Germany. After the decisive success of German forces in the early months of World War II, Mussolini entered the war on the Axis side in order not to miss out on the spoils of victory. The demands of total war, however, starkly exposed the limitations of Italy's backward industrial economy and its inept military. The poorly equipped Italians suffered many defeats, more than once forcing German troops to come to their aid.

After the entry of the United States and the Soviet Union into the war in 1941, the Allies advanced deliberately toward victory. In 1943, the year of the Allied invasion of Italy, Mussolini was deposed by members of his own government, arrested, and imprisoned in a mountain fortress. German commando forces, however, came to his aid in a dramatic rescue operation. Hitler then set up Mussolini in a tiny puppet government at Salò in northern Italy. As German forces retreated and Allied forces advanced, Mussolini attempted to evacuate but was discovered by a group of Italian Leftists and shot along with his mistress. Their bodies were hanged and dismembered by the crowd.

After World War II a neofascist party, the MSI (*Movimento Sociale Italiano* or Italian Social Movement), persisted in Italy and remained loyal to the principles of Mussolini's fascist program. It was not very popular and did not enjoy legal status, as it refused to recognize the new Republic of Italy.

—Patrick G. Zander

Bibliography

- De Grand, Alexander J. *Italian Fascism: Its Origins and Development*. Lincoln: University of Nebraska Press, 2000.
- Lyttleton, Adrian. *The Seizure of Power: Fascism in Italy, 1919–1929*. New York: Scribner, 1973.
- Smith, Denis Mack. *Mussolini: A Biography*. New York: Vintage, 1982.

Fascism in Japan

The term “fascism,” when related to Japan, is most often used to describe its ultranationalist, militarist, and expansionist regimes of the 1930s that lasted until the end of World War II. Some apply the term to the early period of the Showa Restoration (Emperor Hirohito's reign) from 1926 to 1945. Although Japan in this period shared many similarities with European fascist regimes, there were also many differences, and so there remains much debate about applying the term “fascism” to Japan.

The roots of modern Japanese nationalism go back to the beginning of the Meiji Restoration, which began in 1868. A process began then, with the accession of Emperor Mutsuhito (the Meiji Emperor), to consolidate power in the hands of the emperor and to embark upon modernization. To the Japanese, modernization included constitutionalism, industrialization, a well-trained and modernized military, and the formal abolition of feudalism. The combination of these efforts brought Japan rapid economic growth and a more unified national identity. The Constitution of 1889 established a Western-style parliament, but the emperor retained significant power, including the power to call and dismiss parliament.

To help in the process of modernization and the social upheavals it inevitably produced, mod-

ernizers proposed policies and reintroduced ideas associated with Japan's ancient and feudal past. There was a revival of the Shinto religion and Confucianism. There were also notions regarding the divinity of the emperor as well as the concept of *Kodushugisha* (Imperial Way), which suggested that Japan had a divine mission to bring the entire world under its rule. Modernization and industrialization brought with them social upheaval and, eventually, social reaction. Labor movements and even a small Communist Party appeared after 1900, which threatened the nationalist Right. From this point, Japan implemented a series of policies to suppress these movements, culminating in the Peace Preservation Laws of 1928 that formed a police force to root out "dangerous thoughts." The only progressive social legislation passed during the period was the gradual expansion of the franchise, which granted universal manhood suffrage in 1925. The 1929 Wall Street crash, however, sent the Japanese economy reeling, especially with its dependence on exports. This served to discredit Japanese politicians, who were seen as being unable to deal with the crisis while serving their own interests at the expense of the nation.

Certain elements of the military were especially convinced of the worthlessness of Japan's party politics. Through 1930–1931, Japan endured a wave of violent confrontations and assassinations of top-level officials, as the Young Officers defied the government. The Young Officers' ideas gelled easily with the group of secret right-wing societies that had developed. The latter rejected parliamentary government and demanded a return to authoritarian Japanese traditions and also advocated racial purity. Much like fascist parties in Europe, these societies took to the streets and used violence and terrorist acts to intimidate their opponents.

In September 1931 the Manchurian Incident occurred in which the Japanese military on the continent determined that a train had been bombed by Chinese resistance forces. This prompted the military to move into a full occupation of all of Manchuria. Despite the objections of the Japanese parliament, military officers went ahead with their occupation. For the next five years a power struggle developed between military officers, who constantly tried

➤ THE GREAT KANTO EARTHQUAKE OF 1923

The Great Kanto Earthquake struck Japan on September 1, 1923. The 8.3 magnitude earthquake devastated the Kanto plain, the densely populated, industrial heart of Japan. Tokyo and Yokohama lay in ruin, rendering the vast majority of their inhabitants homeless and bringing the economy to a halt. Even after the four to ten minutes it took for the earthquake to subside, the damage to Japan was further amplified by more than 800 aftershocks as well as tsunamis along the coast and widespread fires that swept across the rubble. The death toll is estimated to be 143,000 from the earthquake and resulting fires. However, the repercussions did not end there. Rumors began to spread that Korean residents were using the disaster to loot and rob. In response to these rumors, Japanese vigilante groups began to form and took the law into their own hands, identifying, beating, and often killing Koreans. It is estimated that as many as 10,000 Korean residents were killed as a result of vigilante violence. Although the Japanese government condemned the violence, it too used the chaos to its own advantage. Fearful that the state of disorder could prove a threat to its power, the Japanese government began to round up and execute prominent socialist and anarchist leaders. The most notable instance was the highly publicized Amakasu Incident. The radical Japanese feminist Sakae Osugi, her anarchist husband, and their six-year-old nephew were arrested by the military police and beaten to death. The state of panic and chaos in the aftermath of the Great Kanto Earthquake revealed the presence of a number of traits that would come to define fascism in Japan. The distrust and mistreatment of their neighbors and the government's silencing of political dissidents became all too prevalent in the buildup to World War II.

to get the government to move to marshal law, and the parliament, which tried to control imperial expansion. In July 1937 Japanese and Chinese troops again skirmished, which served to renew the war between Japan and China. Japan continued to occupy increasingly larger areas of Chinese territory right into World War II.

Japan joined Nazi Germany in a wartime alliance in 1940, as Germany experienced consistent success in its war in Europe. While Japan

was friendly with the fascist powers, it did not itself have a dictatorial government but instead maintained its parliament and constitution. In 1940, however, the Konoe Fumimaro government created the Imperial Rule Assistance Association, which consolidated all parties into one organization. In late 1940 the Japanese moved into Indochina, and when the United States was unable to negotiate a settlement, the North American nation responded with an oil embargo. Although he was willing to leave Indochina, Konoe could reach no agreement with the United States and resigned in October 1941, replaced by his minister for war, General Tojo Hideki.

In December 1941 the Japanese made the decision to bomb the U.S. naval fleet in the port of Pearl Harbor, Hawaii. The attack achieved complete surprise and devastated the U.S. fleet. The Japanese leadership was convinced that recovery and invasion would be far too costly for a weak liberal democracy such as the United States. With this in mind, the Japanese continued their march through East Asia accumulating imperial territory at a very rapid pace and ruling in an extremely dictatorial way. The Philippine Islands fell to Japan in early 1942 followed by Singapore, the Dutch Indies, and Burma. These successes brought Tojo unprecedented popularity, and he began to govern and present himself in a more totalitarian, or fascist, fashion. In 1943, however, Japan began to experience a series of setbacks as the United States resolutely rebuilt its fleet and steamed into the Pacific with the goal of absolute victory. Guadalcanal and the defeat of Japanese carriers at Midway turned the tide of the war in the Pacific, and from that point the U.S. military pursued its deliberate advance toward Japan.

By July 1944 it was clear that Japan was losing the war, and Tojo's government was replaced by that of Koiso Kuniaki. Despite forming a war cabinet with direct links to the military, the United States continued to defeat the Japanese in repeated engagements. In April 1945 U.S. forces landed on Okinawa in the bloodiest battle of the Pacific war and secured the island. The Kuniaki government fell, and the new prime minister, Suzuki Kantaro, unsuccessfully pursued a negotiated settlement to end the war. Having not yet attained absolute victory and facing the possible

necessity of an invasion of Japan, the United States made the decision to drop atomic bombs on Hiroshima and Nagasaki in August 1945. The extraordinary destruction that the bombs inflicted and the looming possibility of Russian entry into the Pacific war pressed the emperor to discuss peace terms with the United States. The United States accepted the single condition of retaining the institution of the emperor (subject to the will of the Japanese people), and Hirohito then immediately pressed for surrender. Military leaders attempted to prevent the news from reaching the Japanese people, and several committed suicide at the dishonor. Despite their efforts, however, the Empire of Japan came to an end with the signature of the surrender documents aboard USS *Missouri* on September 2, 1945.

—Patrick G. Zander

Bibliography

- Fletcher, William Miles. *The Search for a New Order: Intellectuals and Fascism in Prewar Japan*. Chapel Hill: University of North Carolina Press, 1982.
- Morris, Ivan I. *Japan 1931–1945: Militarism, Fascism, Japanism?* Boston: Heath, 1963.
- Tanin, O., and E. Yohan. *Militarism and Fascism in Japan*. New York: International Publishers, 1934.

Fascism Movements in Eastern Europe

Amid the political and economic chaos that followed World War I, eastern Europe developed various fascist movements similar to those developing in interwar Weimar Germany and fascist Italy in the 1920s and the 1930s. However, these movements lacked the momentum and mass appeal that fascism developed in Central Europe. Moreover, fascist groups in Austria, Hungary, Poland, Czechoslovakia, Yugoslavia, and Romania were restrained from seizing power by the authoritarian dictatorships that saw these Far Right groups as too radical and divisive in their rhetoric and ideology. These authoritarian dictatorships, imbued with conservative values, were also reluctant to allow these groups to come into power, given that these were sympathetic to the revisionist foreign policy goals of both Italy and Germany.

The end of World War I resulted in the dissolution of the Habsburg Austro-Hungarian state and in the creation of the new successor national states of Austria, Hungary, and Czechoslovakia. Former Habsburg lands also went to the newly formed states of Poland and Yugoslavia. The attempt to create homogenous national states amid large population exchanges and territory losses resulted in increased xenophobia and resentment of new borders. Political, social, and economic instability within these new states further exacerbated the domestic situation. Suspicions grew of new national minorities protected by international League of Nations treaties, particularly of Jewish populations that were a marginal yet economically preponderant community within eastern Europe.

In the late 1920s and early 1930s both Austria and Czechoslovakia developed fascist movements affiliated with the National Socialist movement in Germany, and these were primarily separatist nationalist organizations that advocated union with Germany. Austria developed a fascist movement aligned with the National Socialist Party (NSDAP) of Germany, working toward the union of Austria with greater Germany. With the accession to power of Adolf Hitler in Germany in 1933, the Austrian Nazi Party became viewed with suspicion by the Catholic authoritarian party in power. While this Austrian Nazi Party was not able to muster a significant voting bloc in Austrian elections, it was nonetheless a threat to Austrian security due to its affiliation with Nazi Germany. The Sudeten Nazi Party of Czechoslovakia, made up primarily of Austrian “Germans,” seeking union with Germany (a country that they, as former Habsburg subjects, were never part of), also were insignificant in Czechoslovakian elections but carried weight given their ties with the Nazis. Both of these movements would be crucial in justifying German annexation of these regions in the late 1930s.

The East European states of Hungary, Yugoslavia, Poland, and Romania also developed fascist movements with close ties to Germany and Italy, but these movements were kept from seizing power by their respective authoritarian regimes. Within Hungary the Arrow Cross movement, which had similar ideological elements with the fascist movements in Germany



Engelbert Dollfuss, chancellor of Austria's authoritarian government, addresses a rally in Vienna, Austria, 1933. (Bettmann/Corbis)

➤ AUTHORITARIANISM IN INTERWAR EUROPE

Authoritarian dictatorships in postwar Europe are often categorized as fascist regimes, but many of these regimes did not possess the same radical ideological goals as fascism in Italy and Germany. While the authoritarian regimes of Francisco Franco in Spain, Admiral Miklos Horthy in Hungary, General Ion Antonescu in Romania, Joseph Pilsudski in Poland, and Dr. Antonio de Oliveira Salazar in Portugal were characterized by conservative, traditionalist values, these regimes often advocated reactionary policies toward communists, socialists, and fascists. And while many of these regimes did sympathize with Germany and Italy on some of their revisionist foreign policies, they did not share radical ideological goals based on anti-Semitism, racial organization of society, or the corporatist organization of society. These regimes were geared toward retaining the conservative institutions of the church, the army, and major landholders, albeit with some policies directed against Jews and socialist (and fascist) agitation. However, these authoritarian regimes did not share the antipathy toward religion and tradition that fascism espoused in its more extreme forms of German National Socialism and Italian fascism. While they did tolerate fascist movements, at times reluctantly to gain favor with the Axis Powers, they also quelled these movements when they posed a danger to the domestic political stability.

—Abraham O. Mendoza

and Italy (i.e., anti-Semitism, nationalism, revision of international borders, and organized shirt formations), was a significant party in the political life of the state. By 1939 the military dictatorship of Admiral Miklos Horthy ended the Arrow Cross's potential rise to power. Similarly, the fascist movement of Corneliu Codreanu, the Romanian Iron Cross, was cut off from access to power by the military dictatorship of General Ion Antonescu. In Poland, the fascist Falanga and the Camp of National Unity (OZN) were also stamped out by the military dictatorship of Joseph Pilsudski. Lastly, the Croatian Ustasha movement under Ante Pavelić in 1929 called for the creation of an independent, authoritarian Croatia free from Yugoslavia. Although repressed by the Yugoslavian government, this fascist group gained control over Croatia after the German invasion in 1941. The Ustasha was eventually dissolved by Marshall Tito at war's end when he re-created the Yugoslavian state under communism.

—Abraham O. Mendoza

Bibliography

- Carsten, F. L. *The Rise of Fascism*. Berkeley: University of California Press, 1982.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.
- Payne, Stanley G. *A History of Fascism, 1914–1945*. Madison: University of Wisconsin Press, 1995.

Fascism in Portugal

In the early twentieth century, Portugal had fallen from the heights it had achieved in the sixteenth century. The empire was now impoverished, having declared bankruptcy in both 1892 and 1902. This fall in prestige and wealth contributed to the collapse of the monarchy in 1910 and the subsequent establishment of Portugal's First Republic. Unfortunately, the republic proved to be no more efficient a government than the last kings had been. After the outbreak of World War I, the British government began urging Portugal to enter the war on the side of the Allies. The republican government decided to comply with the request in the hope that it would rally national support against the Ger-

mans and around the government. In the end, however, the war only caused further financial stress on the new government and allowed the entrance of two military dictators in 1915 and 1917.

As public resentment grew, new political and economic ideas began circulating among the educated and the elite. As a result fascism grew in popularity, primarily in reaction to the chaos that reigned and to the "atheism" of the government. Beginning in 1914, groups such as *Intehralismo Lusitano* (Lusitanian Integralism) and groups with strong Catholic origins began to gain support. The Integralists supported a strong single-party government, preferably a monarchy. The group offered to support the exiled ex-king Manuel II, but since he supported a constitutional government, he declined the offer. The Integralists then threw their support behind Duarte Nuno, the grandson of Miguel I. On May 28, 1926, a military rebellion overthrew the Republic and instituted the *Ditadura Nacional* (National Dictatorship). Several temporary rulers were appointed by the military, and in 1928 the constitution was changed in order to allow for elections. General Antonio Carmona, the only candidate on the ballot, was elected the first president of the Second Republic in April 1928. Included in President Carmona's cabinet was Antonio de Oliveira Salazar, an economics professor who had been appointed as finance minister. Salazar's economic knowledge became immediately apparent, as the 1928–1929 budget produced the first surplus in 15 years.

Salazar was viewed as the "savior of the country" and soon began addressing the populace on issues unrelated to finances. His popularity grew not only within the general population but also within specific groups that supported his views. He had the support of the Catholic Church, who looked to move away from the atheism of the First Republic; the capitalists, who wanted to conduct business without restrictions or strikes; the army; the intellectuals, which included groups like the Integralists; and the monarchists, who hoped that as a fellow monarchist Salazar would be able to bring about a return of the monarchy. On June 25, 1932, Prime Minister Domingos Oliveira resigned from the government, and Salazar took over the post. Salazar's term as prime minister is the begin-

ning of what he would call the Estado Novo (New State). A new constitution was drafted and ratified by popular vote on March 19, 1933. The voting results showed that 6,190 people voted “no,” 800,000 voted “yes,” and 500,000 abstained. The government took the abstentions as approvals and declared a victory. Salazar placed himself at the head of the União Nacional (National Union) Party, the only party now allowed, and the death of Manuel II dashed the hopes of the monarchists. Fascism was firmly entrenched in Portugal.

This New State continued on a right-wing course. All labor unions, secret societies, and political parties other than the National Union were disbanded. Salazar’s platform was one of stability, financial responsibility, and Catholicism. His commitment to the Catholic Church meant that he wanted to create a Catholic Social Order, and he based all secular laws on the Bible and the doctrine of the Church. However, the Catholic faith was never forced on anyone, and even though it was taught in public schools, non-Catholic parents had the option to remove their children from religious instruction. In addition, like the other fascist regimes, Salazar strongly opposed communism and persecuted communists as well as anyone else who opposed his power. Education was not a priority for the government, but the curriculum was centered on Portugal’s glorious past, particularly in 1940, which marked the 300th anniversary of Portugal’s independence from a 60-year period of Spanish rule. In addition, Salazar also had a secret police force, which after 1945 would be officially known as the *Policia Internacional e de Defesa do Estado* (PIDE, International Police for the Defense of the State). Up until 1945 the secret police modeled itself after Adolf Hitler’s Gestapo, arresting suspected political prisoners and using methods of torture at their prison in Cape Verde.

Despite Salazar’s admiration of Benito Mussolini, when war started in Europe, Salazar found that he did not have much use for Hitler and his ideals. Not only was the Führer becoming a real threat, but Portugal was still allied with England, a 550-year alliance that was the oldest in Europe. After the disaster of World War I, Salazar decided that it was best to stay neutral during World War II, although he did allow the allies to construct a base on the island of Ter-

➤ LUSOTROPICALISM

One of the goals of the Salazar regime was to revive the glorious history of Portugal to both the Portuguese and the rest of the world. One aspect of this glory would come partially from a theory conceived by Gilberto Freyre in the 1930s called lusotropicalism: the idea that the Portuguese had been the most humane and color-blind of the colonial empires, especially vis-à-vis the Spanish. Salazar upheld lusotropicalism as a reason why Portugal needed to maintain its colonial empire, despite the widespread decolonization that was occurring throughout the world and the growing skepticism of the Portuguese that keeping the overseas empire was necessary. Freyre maintained that the Portuguese were the most natural colonizers, especially in Africa, because as a maritime society many different people had passed through its borders over the centuries. In addition, the Portuguese policy of miscegenation proved that they were more color-blind and tolerant than other nationalities. Finally, Salazar used these concepts to prove that without its overseas empire, Portugal could not maintain its independence or its glory. In reality, the Portuguese reacted the way they did to the indigenous populations they encountered because the goal of the Portuguese was to establish trade rather than conquer. Since the Portuguese population was small, they did not have the necessary number of people to populate their colonies. Therefore, they intermarried with the indigenous populations out of necessity as opposed to being motivated by an inclusive tolerance unique to Portuguese culture and history. This idea of lusotropicalism is the opposite of the Black Legend: the idea that the Spanish were cruel to indigenous Americans because of their history and nationality.

—Monique Vallance

ceira, in the Azores. Portugal was also a favorite place for many exiles from both the Spanish Civil War and World War II.

Salazar remained in office until he suffered a brain hemorrhage in 1968. The Estado Novo fell relatively quickly after that, lasting only another six years and falling with the Carnation Revolution in 1974, when democracy was restored to Portugal.

—Monique Vallance

Bibliography

- Gallagher, Tom. *Portugal: A Twentieth Century Interpretation*. Manchester, UK: Manchester University Press, 1983.
- Marques, Antonio de Oliveira. *History of Portugal, Vol. 2, From Empire to Corporate State*. New York: Columbia University Press, 1972.
- Wheeler, Douglas L. *Republican Portugal: A Political History, 1910–1926*. Madison: University of Wisconsin Press, 1978.

Fascism in Spain

Through the late nineteenth and early twentieth centuries, the political situation in Spain was extremely complex and fluctuating. The nation was highly fragmented into regional interests (especially Catalan and Basque), nationalists, republican liberals, monarchists (Carlists), socialists, communists, and anarchists (most popular

among the rural workers). From the Revolution of 1868, Spain was racked by a succession of liberal advances and conservative reactions, which often undid liberal legislation, reinstated the monarchy, and protected the Catholic Church. In 1898 Spain endured the loss of most of its remaining empire to the United States in what Spaniards termed simply “the Disaster.” In the early twentieth century Spain continued to suffer through political near-chaos and a lingering sense of national humiliation.

By 1918 the labor agitation of Spanish anarcho-syndicalists gained tremendous momentum beyond the control of its organizational leadership. Strikes (including the highly successful Barcelona Strike of 1919) and violence between workers and employers racked the country. In an effort to bring stability, General Miguel Primo de Rivera staged a military coup, or pronunciamiento, in 1923 with the support of King Alfonso XIII. Primo de Rivera believed that it was his mission to provide a temporary military government that would clean out corruption and subversion and then hand over the government to legitimate politicians.

Primo de Rivera is not considered a genuine fascist even though he openly admired Mussolini and often consulted him on matters of policy. Primo de Rivera’s rule became increasingly contentious, as he alienated the Left as well as the Catalan regionalists. By 1930 in spite of some important successes, the political situation in Spain had returned to one of constant uprisings and demonstrations. The king dismissed Primo de Rivera, but his earlier support of the dictator guaranteed his own unpopularity with the people. On August 17, 1930, an alliance of various liberal and moderate groups agreed to overthrow the monarchy. King Alfonso left Spain rather than face a civil war and further violence. A new government, the Second Republic, was established, although its leadership fluctuated from those who represented the socialists to those who represented the more conservative interests.

In response to the Second Republic, Jose Antonio Primo de Rivera, son of Miguel Primo de Rivera, founded the Falange Española (Spanish Phalanx) in 1933. He was driven by an ambition to vindicate the work of his father, who had died



Falange Española was a Spanish political party, founded in 1933 by José Antonio Primo de Rivera. Professing generally the principles of fascism, the Falange distinguished itself from other fascist groups by its great emphasis on national tradition. (Library of Congress)

in disgrace, and to unite Spain along the lines of a strong fascist state. His party promoted the reorganization of the economy into a “Corporate State,” the preservation of the rights and privileges of the Roman Catholic Church, the celebration of Spain’s imperial past, and the adherence to a fierce anti-Marxist stance.

Though very small at first, the Falange grew and eventually led street squads in violent confrontations with demonstrating workers. The squads of the Falange were uniformed in the fashion of fascists all over Europe, wearing blue shirts and a red military beret. In the 1936 elections the Popular Front (an alliance of Leftist organizations) produced a victory for the socialists, who immediately suppressed the fascist agitators, including the arrest of Primo de Rivera. This prompted the Falange party leadership to join the military conspiracy of General Francisco Franco, who was preparing a new pronunciamiento to overthrow the Leftist government. On July 17, 1936, the African Army (stationed in Morocco) rebelled and eventually joined the right-wing forces, including Falange troops, in Spain. The Spanish Civil War had begun.

The Spanish Civil War holds an important place in the history of fascism. It involved a struggle between the legitimately elected Spanish Republican Government and the Nationalist military led by Franco. Franco was able to procure direct material and military support from Fascist Italy and Nazi Germany, both crucial to his securing supreme command. The liberal-democratic powers, most importantly France and Britain, remained neutral, which forced the Republican Government to accept military aid from the Soviet Union. Thus the Spanish Civil War was seen by many as representative of the coming struggle for power between the extremes of fascism and communism.

The Nationalist forces eventually defeated the Republic, primarily due to better equipment, better-trained troops, and aid from the fascist powers. Also of consequence was the fact that while the Republican command was becoming fragmented, the Nationalists were being strengthened by troops and equipment from Italy and Germany. In fact, the most notorious example of fascist military ruthlessness was the bombing of

➤ SPAIN AND WORLD WAR II

Spanish allegiances were constantly shifting during World War II. Ideologically, Spain sympathized with its former fascist allies and benefactors, Germany and Italy. Adding to the Axis allure was the possibility of extending Spanish control into French North Africa. However, having just ended a violent civil war, Spain was in no condition to stand up to the military might of Britain and the Allies. While Spanish leader Francisco Franco maintained official neutrality only until 1940 after the fall of France, Spain remained a nonbelligerent entity throughout the war. Despite this nonbelligerent stance, Spain produced a bombardment of pro-Axis propaganda; focused trade away from the Allies and toward the Axis Powers; allowed Nazi agents onto Spanish soil; provided Germany with war-related raw materials, especially wolfram; secretly allowed Axis ships to use Spanish ports; and even organized a force of 47,000 purported volunteers, known as the Division Azul, to fight against the Soviets on the eastern front. However, as the tides of war shifted in favor of the Allies and as the United States and Britain starved Spain into submission with embargos, Spain renewed its position of official neutrality and toned down the open support of the Axis Powers. To the dismay of the tens of thousands of Spanish Republican volunteers and Spanish Civil War veterans who came out of exile and hiding to once again fight against authoritarianism, the Allies did not liberate Spain and oust Franco at the conclusion of World War II. Franco remained in power until 1975, in large part due to his noncommittal policies.

Bibliography

Francis, J. Michael. *Iberia and the Americans: Culture, Politics, and History*. Santa Barbara, CA: ABC-CLIO, 2006.

the Basque town of Guernica in 1937, where German bombers experimented with the blitzkrieg tactics that they would eventually put to use in World War II. Franco’s troops eventually marched into Madrid on March 28, 1939.

Previously Franco had begun to incorporate the Falange into his own right-wing coalition, and by the spring of 1937 the alliance coalesced

into the Falange Española Tradicionalista y de las Juntas de Ofensiva Nacional-Sindicalista. The party retained the Falange's agenda but was controlled tightly by General Franco. After the war Franco used the party as the vehicle for his rule and, like most other fascist dictators, began the process of brutally eliminating his opposition. Within a decade, Franco had executed nearly 250,000 perceived political enemies.

During World War II Franco had significant conferences with Hitler and Mussolini and offered them aid in the way of grain, natural resources, and the use of Spanish islands as submarine bases. At the same time, however, Franco maintained that Spain was in no condition to enter the war and remained neutral for its entirety.

With the help of Falangist policy advisers, Franco implemented many fascist-style policies, such as the establishment of a corporative economy, the utilization of the Catholic Church as a pillar of the state, and the pursuit of economic self-sufficiency. It was the development of the Cold War that helped Franco further consolidate his power and to emerge from the shadow of the fascist discredit from World War II.

In 1953 Franco and Dwight D. Eisenhower reached an agreement that allowed the United States to establish extensive military bases on Spanish soil. This agreement, which added revenue, renewed Spain's public image, gained the protection of the United States, and contributed to Spain's economic miracle of the 1950s and early 1960s. From that point on, Franco gradually reduced the fascist characteristics of his government, pursuing more liberal economic policies and appointing more technocratic officials. Spain remained a military dictatorship until Franco's death in 1975. Upon the dictator's death, the Spanish monarchy was restored, and King Juan Carlos I began the nation's move toward democratization.

—Patrick G. Zander

Bibliography

- Payne, Stanley G. *Fascism in Spain, 1923–1977*. Madison: University of Wisconsin Press, 1999.
- Preston, Paul. *Franco: A Biography*. London: Harper Collins, 1993.
- Preston, Paul. *The Politics of Revenge: Fascism and the Military in 20th Century Spain*. New York: Routledge, 1990.

Fascism in Latin America

Understanding the history of fascist movements in Latin America involves tracing the influences of European fascist regimes in the Western Hemisphere and resolving questions over the definition of fascism as a European or a universal phenomenon. European regimes such as Francisco Franco's Spain and Antonio Salazar's Portugal actively promoted fascism in Latin America. However, scholars disagree on whether authoritarian governments and movements in countries such as Brazil, Chile, Argentina, and Mexico can be considered fascist.

Although there are many different definitions of fascism, four main components emerge from the various interpretations. First, fascism generally describes nationalist movements that surfaced during the first half of the twentieth century as a reaction to economic and social crises brought on by modern industrialization. In Latin America these crises were generally related to increasing levels of urbanization and labor unrest. Second, movements characterized as fascist were frequently self-identified as a third path of development, distinct from capitalism and socialism. In Latin America such triangulation also often included a strong anti-imperialist position. By and large, an authoritarian and charismatic leader personified fascist movements, and in Latin America this element drew on the long-standing tradition of the authoritarian caudillo (military strongman). Finally, scholars tend to limit the label "fascist" to movements that spread from the initial developments in Benito Mussolini's Italy and Adolf Hitler's Germany, and they subsequently explore the direct links between the European examples and their Latin American variants.

The worldwide diffusion of fascist ideology formed a critical component of fascist governments. As a general rule, the authoritarian regimes in Europe with ethnic and cultural ties to Latin America actively cultivated influential contacts with the region. Fascist Italy's relationship with the immigrant organization Lega Fascista del Nord America (Fascist League of America) served as a model for this behavior. The Spanish regime of Francisco Franco actively pursued the foreign policy of hispanidad, which was a com-

prehensive program of activities in Latin America. Franco's program was designed to garner recognition and legitimacy for his regime both at home and abroad as well as to increase the international prestige and influence of Spain in the Americas. Similarly, Salazar's Estado Novo (New State) in Portugal cultivated closer ties with recent Portuguese immigrants in Brazil, as Salazar envisioned the Portuguese immigrant as an agent of his Estado Novo.

The fact that Brazil was home to the most self-consciously fascist movement in Latin America also merited Salazar's close attention. The circulation of several Far-Right political journals and fascist literature concerned with Brazil's national problem aided the development of several right-wing regional movements motivated by the European fascist ideology. Most of these factions coalesced, in the early 1930s, into the Integralismo (Integralism) movement, founded and led by Plínio Salgado. Integralism advocated a corporatist state whose purpose, among other things, was to arbitrate conflicts between capital and labor. In addition, Salgado also adapted many of the symbols of European fascism by creating a green-shirted paramilitary organization with uniformed ranks and conducting highly regimented street demonstrations. Although Getúlio Vargas incorporated many of the authoritarian and corporatist policies of Integralismo into his own vision of an Estado Novo for Brazil in 1938, the Ação Integralista Brasileira (Brazilian Integralist Action) party never completely merged with the state as it did in fascist Italy and Nazi Germany. Instead, Salgado twice failed in attempts to overthrow Vargas's increasingly dictatorial regime and replace it with his vision of an Integralist state with Salgado at the helm. In 1939 Vargas had Salgado arrested, imprisoned, and later sent into exile in Portugal.

The unsuccessful coup by the Movimiento Nacional Socialista de Chile (National Socialist Movement of Chile) in September 1938 also exemplifies the failure of fascism to take root in Latin America with the same effectiveness that right-wing movements attained in Europe. Chilean Nacismo (Nazism) held that the nation and society were coterminous and that the nation acted as a natural entity within which socio-

➤ PLÍNIO SALGADO (1895–1975)

Plínio Salgado, best known as the leader of Brazilian Integralism, began his political career in 1918 with his involvement in the founding of the Partido Municipalista in rural Brazil and ended as a member of Brazil's House of Representatives from 1958 to 1974.

Salgado's time as leader of the movement that most closely resembled European fascism lasted from the foundation of Ação Integralista Brasileira (Brazilian Integralist Action, AIP) in 1933 until his forced exile in 1939. He famously wore a square moustache reminiscent of Adolf Hitler, and his followers dressed in green-shirted uniforms for public demonstrations that contained antiliberal, anticommunist, and anti-Semitic rhetoric. One of the most important principles of Integralism was the Revolution of the Self in which Salgado encouraged citizens to stop thinking selfishly and instead begin to integrate themselves into the nation, or the homeland. Although Brazilian president Getúlio Vargas relied upon Integralist support during his rise to power, Vargas quickly turned on the AIP in response to Salgado's attempted coups and as a strategy to centralize Vargas's political authority.

The end of Brazil's Estado Novo in 1945 cleared the way for Salgado's return from Portugal. The former Integralist leader helped found the Partido de Representação Popular (Popular Representation Party) and ran unsuccessfully as its presidential candidate in 1955. Beginning in 1958 Salgado served for 16 years in the Brazilian Congress. He retired from active political life in 1974 and died in his native state of São Paulo in 1975.

—Jonathan Hagood

economic problems should be discussed and solved. The head of the Nacista movement, Jorge González von Marees, known as El Jefe (The Chief or The Boss), acted with absolute authority. He implemented a vertical political command structure that demanded total obedience and rejected the principles of deliberation and agreement.

Three factors help explain why fascist movements did not have the same political success in Latin America as they enjoyed in Europe. First, adherents to fascist philosophy imported

from Europe were always numerically small in relation to their size in Europe, with the exception of the supporters of Brazilian Integralism. Second, charismatic and authoritarian leaders primarily drew upon Latin American traditions of caudillismo rather than fascist visions of the state, and these strongmen sometimes appropriated aspects of fascism without embracing it completely (e.g., Vargas in Brazil). Finally, nationalist movements in Latin America frequently contained a strong pro-Catholic component, a hierarchical and religious element often lacking in European variants of fascist movements. All of these factors suggest that left unchanged, Euro-

pean fascism faced strong competition from pre-existing authoritarian and corporate tendencies in Latin American politics and society.

—Jonathan Hagoood

Bibliography

- Larsen, Stein Ugelvik, ed. *Fascism Outside Europe: The European Impulse against Domestic Conditions in the Diffusion of Global Fascism*. Boulder, CO: Social Science Monographs, 2001.
- Payne, Stanley. *A History of Fascism, 1914–45*. Madison: University of Wisconsin Press, 1995.
- Skidmore, Thomas E., and Peter H. Smith. *Modern Latin America*. New York: Oxford University Press, 2005.

■ Introduction: Revolution and Rebellion

From 1900 to 1945, myriad revolutions and rebellions occurred in various world regions as the political structures of European hegemony became unraveled by two world wars and a global economic collapse. In Europe itself, the Russian Revolution of 1917 overthrew a centuries-old autocratic system and replaced it with a socialist state, setting a precedent for what was possible if the masses were willing to rise against a system of oppression. As nationalist sentiment awakened, European colonialism from its direct forms in Africa and Asia to its indirect manifestations in Latin America triggered various uprisings ranging in size and consequence.

—Abraham O. Mendoza

The Arab Revolt (1916)

The Arab Revolt of 1916 was one of the first successes for Arab nationalism and helped define the modern boundaries of Jordan, Iraq, Israel, Lebanon, and Syria. In 1915 Sharif Hussein ibn Ali, the emir of Mecca and protector of the Holy Places of Islam, believed that his position was threatened by Wahib Pasha, the Ottoman official in Mecca. As a consequence, Hussein initiated a dialogue with the underground Arab nationalist movements, the British government, and the Ot-

toman government. In essence, Hussein desired a unified Muslim state with Great Britain as a major trading partner.

In the Hijaz, the west coast of the Arabian Peninsula that contains both Mecca and Medina, Hussein discovered a plot to overthrow his authority and began to search for an ally against the Ottomans. He sent his son Feisal to Istanbul to enter a complaint against Wahib Pasha. While in Istanbul, Feisal not only met with Ottoman government officials but also conducted secret meetings with the underground Arab movements against the Ottomans, called al-Fatat and al-Ahd. In these secret meetings the Damascus Protocol was adopted as a basis for all further negotiations with the British government. This protocol included not only the desired boundaries for a future Muslim state but also the preference for Great Britain as a trading partner with this future state. In June 1915 Feisal returned to Mecca with the Damascus Protocol, whereby Hussein began negotiations with the British.

The political weakness of the Ottoman Empire had also become a concern of the British government by 1914. The British were worried that if the German-Ottoman alliance won World War I, British interests in the Middle East would be severely damaged. As a consequence, Lord Herbert Kitchener, the British secretary of state for war,

commanded Sir Henry McMahon, the British high commissioner in Cairo, to negotiate a treaty with Hussein. A series of correspondences among Hussein, McMahon, and the British government began in mid-July 1915 concerning a list of requests similar to the Damascus Protocol. McMahon did not initially accept Hussein's boundary demands and devoted subsequent letters to negotiating these terms. The issue of boundaries was a sensitive one for the British due to their alliance with France and ultimately was left undefined.

Prior to beginning the 1916 Arab Revolt, Hussein tried to amend relations with the Ottoman Empire, making the same requests that were included in the Damascus Protocol. When the Ottoman government refused, Hussein and his sons Ali and Feisal participated in the first part of the revolt and took Mecca. Hussein then issued a statement claiming that he was saving Islam from the current secular Ottoman government. The Ottoman officials were stunned but were too preoccupied with executing members of the underground Arab groups in Damascus to mount an effective response.

In Damascus, Feisal believed that more than 10,000 Arab men would revolt at their call. Despite the success in Mecca, the revolt did not spread to the Arabs in the empire. Hussein then sent Feisal to accompany T. E. Lawrence in an attempt to capture Damascus. To do this they needed to secure the railroad lines, which led them into Transjordan and Palestine. When this proved difficult, they began attacking the port of Aqaba on the Red Sea. British troops from Australia and New Zealand (ANZAC) were commanded to surround Damascus and wait for Feisal in order to stage a triumphant entrance into the city, delivering it back into Arab hands. This was thwarted when the ANZAC troops entered and occupied the city to discourage a local takeover. Feisal did enter the city in 1918, and Lawrence and the new British war minister, David Lloyd George, spread propaganda that Feisal had liberated the city from Ottoman control.

The British government, due to other agreements, reneged on its promise to give Hussein direct control of the Arab lands, taking Palestine, Iraq, and Transjordan for itself. They did, however, give Hussein's family control of Transjordan and Iraq. Feisal ruled in Iraq until 1958, when

➤ WINSTON'S HICCUP

At the Cairo Conference of 1921, British colonial secretary Winston Churchill boasted of having created Transjordan "with a stroke of the pen one Sunday afternoon." The British bestowed the new state upon Abdullah, the son of Faisal, for his family's role in the Arab Revolt during World War I. According to legend, while drawing Transjordan's eastern border with Saudi Arabia, Churchill, a lover of both food and drink, hiccupped, causing his pen to swerve off course. The resulting large indentation into the interior of Transjordan is to this day known as "Winston's Hiccup." While there is likely little truth behind the anecdote, it does highlight the arbitrary nature in which the borders of the Middle East were drawn after the fall of the Ottoman empire.

Bibliography

Gelvin, James L. *The Modern Middle East*. New York: Oxford University Press, 2005.

General Abdal Qassam deposed him in favor of a secular government. Another son who aided Faisal, Abdallah, was sent to rule Transjordan (now Jordan), and his descendents still rule there.

—Victoria Penziner

Bibliography

Fromkin, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Henry Holt, 1989.

Jewish Virtual Library. "The Hussein-McMahon Correspondence, letters 1-10." <http://www.jewish-virtuallibrary.org/jsourc/History/hussmac1.html>.

Tauber, Eliezer. *The Arab Movements in World War I*. London: Frank Cass, 1993.

The Ashanti Rebellion (1900–1901)

The 1900 Ashanti Rebellion was the culminating war between the British and the Ashanti over land and control of Ghana's coastal region. This rebellion, which was led by Yaa Asantewa, the queen mother of Edweso, had a long and

THE GOLDEN STOOL

As Ghana's symbol of nationhood, the Golden Stool looms large in the country's lore and culture as it tells the story of the Ashanti (Asante) kingdom's birth. Legend states that a golden stool floated down from the heavens and landed onto the lap of the first Asante king, Osei Tutu. Priest Okomfo Anokye, who served as an adviser to the first Asantehene (Asante ruler), declared that the Golden Stool represented the new Ashanti kingdom. The stool garners enormous respect. No one—not even the king—sits on the stool. Hidden in a secret place and heavily guarded, the Golden Stool, which contains the spirit or the soul of the Ashanti people, is only taken outside during special occasions. Because the stool can never touch the earth, it lies on a piece of leopard skin or other animal hide. Its features, which consist of four sculpted pillars and a central column, compliment a curved seat inlaid with gold. Bells dangle from the Golden Stool to alert the king of impending danger. The Ashanti jealously guard the stool and have historically defended its stature and honor. In 1896 for example, the Ashanti allowed their king, Prempeh I (r. 1888–1931) to experience exile rather than lose the war or the sacred stool. The Ashanti also protested against Sir Frederick Hodgson's demand to sit on the stool in 1900. Rather than submit to his forceful request, the Ashanti prepared for war. To commemorate the Golden Stool's spiritual and historical importance, participants, who carry the chief's stools from the old slave castle of Elmina, commemorate this sacred artifact in a traditional yearly ceremony. The Golden Stool is a treasured monument that unifies disparate Ghanaian communities while further solidifying the idea of nationhood in this West African nation.

—Dawne Y. Curry

sustained history whose roots can be traced back to the early nineteenth century. At that time, most of the Gold Coast's fortresses were under British control. British territorial reign included the area where the Ashanti (who form part of the Twi-speaking people of the Akan in present-day Ghana) lived and enjoyed relatively peaceful relations with the Dutch in the central part of the country, some 186 miles (300 kilometers) from the coast.

The Ashanti Confederacy, which was a major state from 1570 to 1900, was ruled under paramount chiefs called Asanthenes. These chiefs supervised an area abundantly rich in gold deposits. Besides the trade in gold, the Ashanti participated in slave trafficking. The Ashanti captured human chattel, whom they obtained from neighboring nations either through raids or through bartering and then sold to European slave traders. Because the Ashanti focused principally on the selling of slaves, they neglected other enterprises such as agricultural production and cloth manufacturing. Then, with the banning of slave trading in the 1850s, which the Ashanti did independently of the British and other European powers, the Ashanti further weakened their economy because they no longer had their main revenue generator, slaves, to sustain their state's economic growth. The Ashanti's prominence and stature in the region similarly declined. The Ashanti's weakened state captured the attention of their former European allies, the British, who viewed the Ashanti's vulnerability as an opportunity to further their own geopolitical aims. These aims included controlling the land that the Ashanti inhabited and creating a European colony over the entire coastal region.

The Ashanti were one of the few African nations that offered the British serious and recalcitrant resistance. British presence presented a geopolitical problem for the Ashanti, who viewed the intrusion of colonial forces as an infringement upon their sovereign rights and therefore wanted to expel the British from their territory. In 1826 the Ashanti Army launched an offensive attack against the British along the coast. During this encounter the Ashanti suffered major casualties and had to retreat from the coastal plains near Accra because the superior firepower of the British and the Danish had militarily overwhelmed them. With the Ashanti defeated and the Europeans having a tactical advantage, the two warring factions signed a peace treaty in 1831. That treaty did not end the Ashanti's woes.

The British were relentless in their pursuit of pacifying the entire central area as they signed a political agreement, referred to as the Bond of 1844, with a confederation of Fante states. That agreement not only extended protection to the signatory states but also allowed the British to

have authority over them. With Britain purchasing all the territory once owned by Denmark and the Netherlands, it became the sole European country exercising influence over the indigenous people. The Ashanti, who felt further threatened by Britain's systematic consolidation of power and territorial ownership, launched an invasion in 1873. The British responded by dispatching an expeditionary force to the Ashanti territory, where they captured the capital, Kumasi, and then razed the villages and administrative center. Fearing further retribution, the Ashanti retreated.

That short-lived invasion led to the Ashanti signing yet another treaty with the British. The treaty's stipulations were as follows. The Ashanti agreed to recognize British sovereignty over the entire coastal region, to pay war-reparation costs, and to renounce authority over all territories that resided under British protection. In return, the Ashanti received Britain's pledge about the coastal area. Following this treaty, the British immediately proclaimed the coastal territories as the Gold Coast Colony and then moved their administrative headquarters from the Cape Coast to Accra.

In the subsequent years, tension between the Ashanti and the British mounted. The Ashanti soon lost their autonomy when the British attacked and occupied their territory and then proclaimed it a protectorate. British officials captured several Ashanti elders, including King Premph, and imprisoned and exiled them to the Seychelles, a small island nation situated in the Indian Ocean. The British were not satisfied with this military gain; they wanted to possess the Golden Stool, the supreme symbol of Ashanti prominence and nationhood, and demanded its surrender on March 28, 1900. British officials dispatched Captain C. H. Armitage to find the Golden Stool, bring it back, and place the symbolic artifact under British custody. Visits to several villages produced no results, and when Armitage found the homesteads populated only by children, as the parents were hiding, he bound and beat them. Armitage meted out the same reprisal to the parents when they surfaced from their hideaways. All of these occurrences instigated the 1900 Ashanti rebellion known as the Yaa Asantewaa War for Independence.

Under the leadership of Yaa Asantewaa, who served as the military tactician and spiritual guide, the Ashanti held a meeting to galvanize the army and prepare for war. Yaa Asantewaa motivated the army with these inspiring and provocative words: "Is it true that the bravery of the Ashanti is no more? If you men of Ashanti will not go forward, then we will. We the women will. I shall call upon my fellow women. We will fight the white men. We will fight till the last of us falls in the battle fields."

With this call to arms, the Ashanti, who used musketeers, bowmen, and spearmen, laid siege to the British mission at the fort of Kumasi, where the British governor and his entourage took refuge. The Ashanti occupied the fort for three months. The British responded by sending 1,400 troops and additional artillery to quell the rebellion. When the revolt ended in 1901, the British captured and exiled Yaa Asantewaa and 15 of her closest advisers. The last Ashanti rebellion resulted in the formal annexation of the Ashanti empire as a British possession on January 1, 1902.

—Dawne Y. Curry

Bibliography

- Allman, Jean. *I Will Not Eat Stone: A Women's History of Colonial Asante*. Portsmouth, NH: Heinemann, 2000.
- Bleeker, Sonia. *The Ashanti of Ghana*. New York: William Morrow, 1966.
- James, Lawrence. *The Savage Wars: British Campaigns in Africa, 1870-1920*. New York: St. Martin's, 1985.

The Chinese Revolution (1911-1912)

Named for the year when it began, the Chinese Revolution of 1911-1912, or the Xinhai Revolution, fatally weakened China's Manchu (Qing) dynasty (1644-1912). An unexpected revolt began in Wuchang (in Wuhan City). Thereafter, a clever military leader of the empire self-servingly allowed the revolt to spiral out of control. While China's expanse was simply too large for any imperialist country to colonize, foreign powers had diminished Chinese sovereignty with treaty ports, "unequal treaties," and judicial extraterritoriality. Concerned

CHRONOLOGY OF THE CHINESE REVOLUTION

1911–1912 Chinese Revolution

November 24, 1894	Sun Yatsen founds “Revive China Society” in Hawaii.
February–June 1909	Elections for provincial assemblies and local councils.
October 10, 1911	Wuchang Uprising.
December 25, 1911	Sun Yatsen returns from foreign fund-raising trip.
January 1, 1912	Sun Yatsen proclaims Republic of China in Nanjing.
February 12, 1912	Pu Yi abdicates Qing throne.
February 12, 1912	Sun Yatsen resigns presidency.
February 15, 1912	Yuan Shikai elected provisional president.
1915–1927	New Culture Movement.
June 6, 1916	Yuan Shikai dies.

—Vincent Kelly Pollard

nationalists were also irritated by the inability of their government to resist the foreigners’ incursions. China had become a semicolony. Sixty years earlier, the Taiping Rebellion (1850–1864) came close to toppling the Qing dynasty. At the end of four months of sharpened political turmoil during late 1911 and early 1912, the Qing rulers formally ceded power.

Sun Yatsen (1866–1925), also known by his formal name Sun Wen or Sun Yatsen, was the most important political and intellectual leader of the 1911–1912 Revolution. Sun dedicated his life to overthrowing the foreign Manchu rulers of the Qing dynasty for their inability to solve China’s poverty and its failure to defend China against foreigners. Sun energetically brought his revolutionary message of modernization and representative government to the Chinese diaspora in Japan, Southeast Asia, North America, and Europe. To this end, Sun Yatsen founded secret societies such as the Revive China Society, the United League, and the Revolutionary League. Even though Sun was periodically forced into exile, he was not deterred by the failure of ten armed revolts during the period from 1895 to 1909, and from 1905 onward he promoted repub-

licanism or representative government. Two years later Qing generals signaled their willingness to join the revolution if it looked likely to succeed. Liberal and revolutionary European ideas had opened the eyes of Chinese modernizers like Sun to radical change. However, Sun was aware of the misery of millions in the bourgeois societies. This spurred him to articulate a better future for China in his Three Principles of the People, namely, “national economy, national independence, and popular freedom.”

In response to growing demands for reform, the government made concessions. In 1909 provincial assemblies with limited debating powers were permitted to convene, and in October 1910 a partly appointive national Provisional Parliament met. These new legislative bodies generated additional political unrest, and the belated reforms were insufficient to maintain support from scholars and rural gentry. On August 24, 1911, students in Sichuan Province demonstrated against Qing economic policies. This sparked widespread fighting with local troops. Elsewhere, soldiers in Wuchang (now in Wuhan City, Hubei Province) were influenced by revolutionary ideas. After an uprising was planned in 1910, police discovered a list of names of revolutionaries in the army. To avoid further disruptions by police, revolutionaries in Wuchang’s local garrison revolted on October 10, 1911 (an anniversary that is celebrated today as “Double Tenth”), upon which the Manchu governor-general (viceroy) fled the city. Despite his request shortly thereafter, the Consular Body in nearby Hankow passed a resolution of neutrality in the belief that the revolt was not directed against foreigners (other than the Manchu) and that international treaties then in force would not be repudiated. The consuls included one Mr. Reau, a French diplomat. He was a personal friend of Sun. Their decision broke with precedents of assistance during the previous 60 years, contributing to the political isolation of the Qing dynasty.

Within a few weeks, the revolution spread to Shanghai and to 15 provinces of China. By late November 1911, defecting Qing officers held power jointly with local assembly leaders in most secessionist provinces. Armed combat was minimal. General Yuan Shikai (1859–1916) was

charged with suppressing the revolts. However, for the most part he cleverly encouraged the spread of these revolts. Negotiating with all parties to the conflict, Yuan was recognized as the military leader with the best chance of uniting secessionist forces in China.

Sun was traveling in the United States when news of the revolution caught up with him. He promoted the revolutionists' cause diplomatically. The U.S. government remained neutral, but American public opinion was favorable. Sailing to Europe, Sun succeeded in having loans to the Qing government canceled by the four-power banking Consortium (the United States, Great Britain, France, and Japan). Sun also convinced Britain to pressure Japan not to intervene in the spreading revolts. This surprising outcome was favored by two considerations. First, Britain (and France) did not want the international balance of power in China upset by Japanese or Russian intervention because inter-European rivalry from the Balkans to the Middle East was a higher priority than China. And, second, Sun convinced the British that the revolution was not directed against the European powers.

Participants' motives for supporting the revolution varied. A skilled opportunist like General Yuan Shikai seized the opportunity to increase his personal power. Influential local gentry in rural communities longed for a renewal of traditional Chinese values. As has already been alluded to, nationalists of all social classes wanted to escape the humiliation of imperialist incursions and to drive the foreigners out of China. At the same time, commercial and industrial capitalists hoped that their business enterprises would prosper free of restraints imposed by the Qing dynasty.

In late December 1911 the imperial household was still negotiating with Republican forces. Meanwhile in Nanjing, deputies from all the provinces elected Sun as provisional president of China. On January 1, 1912, he proclaimed the Republic of China in Nanjing. Qing officials continued to make concessions into late January 1912, and the child emperor Pu Yi (Hsuan Tung) became a nominal ruler until his abdication on February 12, 1912. Outmaneuvered by the militarily superior Yuan Shikai, Sun resigned the provisional presidency on the same day. Just

three days later Yuan was elected provisional president, and on March 10 he was inaugurated as president of China in Peking.

Less violent than the civil wars to follow, the 1911–1912 Revolution ended more than two millennia of imperial rule. Tactical unity among politically diverse revolutionists did not create a unified republican China; instead, divisive monarchist and warlord tendencies emerged. In an early setback to the largely Han Chinese revolution, Outer Mongolia declared independence under a Russian protectorate on December 1, 1911, and the revolution also terminated Qing advances in eastern Tibet.

Yuan Shikai's influence as mediator gained in status as a result, primarily owing to his clever handling of both sides of the revolutionist conflict. In actuality, life for the agricultural majority in China's countryside changed little, and Chinese women did not experience dramatic changes in their status. Meanwhile, imperialist countries continued to benefit from extraterritoriality and the continued extraction of China's wealth. Yet the revolution expanded the public forum for discussion and debate about the nature of good governance, and its irritating shortcomings raised expectations. As a consequence, the inadequacies of the Xinhai Revolution spurred the Chinese masses and intellectuals to struggle for a more radical social transformation.

—Vincent Kelly Pollard

Bibliography

- Clubb, Oliver Edmund. *20th Century China*. 3rd ed. New York: Columbia University Press, 1978.
- Harrison, Henrietta. *China*. Inventing the Nation Series. London: Arnold (Hodder Headline Group); New York: Oxford University Press, 2001.
- Lu, Xun [Zhou Shuren]. *The True Story of Ah Q*, translated by Yang Xianyi and Gladys Yang. Bilingual Series on Modern Chinese Literature. First published 1921–1922. Xianggang, China: Zhong wen da xue chu ban she, 2002.
- Sun, Yat-sen. *Memoirs of a Chinese Revolutionary: A Programme of National Reconstruction for China*. Translator unknown. London: Hutchinson, ca. 1921.
- Zarrow, Peter Gue. *China in War and Revolution, 1895–1949*. Asia's Transformations Series. London and New York: Routledge, 2005.

The German Revolution (1918–1919)

The German Revolution refers to the events that destroyed the Hohenzollern monarchy and resulted in the founding of the Weimar Republic. The upheaval began in late September 1918 when Germany's High Command concluded that the war was lost and urged the kaiser to conclude an armistice with the Entente Powers. The military, along with top imperial officials, also called for the appointment of a new government based on a majority in the Reichstag. Such a government, they believed, would be able to negotiate more favorable terms with the Allies while also allowing the generals to fob off their own responsibility for the defeat onto the civilian politicians. In October this revolution from above resulted in an exchange of diplomatic notes and a series of legislative changes that transformed Germany's semiautocracy into a constitutional monarchy in which the new chancellor, Prince Max von Baden (1867–1929), was responsible to parliament rather than the kaiser. The strategy was cut short, however, when popular unrest exploded into a revolution from below that swept away the monarchy in early November.

This explosion had its roots in the widespread discontent that intensified as wartime conditions worsened. By 1918 many Germans, especially workers, had been worn down by severe shortages of food, fuel, and other basic goods; declining working conditions; and losses on the war front. While many still hoped for victory, antiwar sentiment grew, and in January massive strikes across Germany demanded peace. When it became clear that defeat was imminent, many Germans came to see the monarch as an obstacle to achieving favorable peace terms. To them, the reforms undertaken by von Baden's government did not go far enough.

On October 28 a naval mutiny at the Kiel naval base precipitated the onset of a nationwide rebellion. On that day, sailors refused to follow the admiralty's orders to put to sea for one last battle against the British fleet. Within days, local workers joined the sailors in their act of defiance and organized a workers' and soldiers' council that took control of the city. Similar actions soon

occurred around the country as armed workers and soldiers established councils that displaced the rapidly dissolving authority of the imperial police and military. By November 9, 1918, the revolution had reached Berlin. In the face of massive public demonstrations, Prince Max announced Kaiser Wilhelm II's abdication and transferred power to Friedrich Ebert (1871–1925), head of the Sozialdemokratische Partei Deutschlands (SPD, Social Democratic Party).

The SPD was the largest German political party and the nation's most important proponent of democratic reform. As a Socialist Party, it was not surprising that many members welcomed the kaiser's overthrow, but the SPD had long been a force for political reform, not revolution. In 1914 its leaders backed the government's war effort, and in 1918 they joined Prince Max's cabinet. Now they were preoccupied with Germany's disastrous military and economic situation and were not interested in an immediate and radical break with capitalism or the monarchy. Instead, their higher priorities were to negotiate an armistice, to begin an orderly transition to a peacetime economy, and to establish a parliamentary republic as a framework for gradual social, economic, and political reforms.

To achieve these ends, Ebert proposed creating a Provisional Government with the more radical Unabhängige Sozialdemokratische Partei Deutschlands (USPD, Independent Social Democratic Party of Germany), whose members had broken with the SPD over the latter's support for the war. The USPD leaders agreed, and on November 10, 1918, the two groups formed the Rat der Volksbeauftragten (Council of People's Deputies), which won the decisive support of the workers' and soldiers' councils.

The council soon found itself divided: Only two days after the agreement, it issued decrees granting universal suffrage and the eight-hour workday, but disputes arose over the timing of elections to the national assembly that would write a new constitution. The SPD wanted elections to take place as soon as possible, while the USPD called for the socialization of industry and the democratization of the state and the army before holding elections. The Far Left element of the USPD, led by Karl Liebknecht and Rosa Lux-

emburg, had participated in the Spartakusbund (Spartacus League) during the war and were now starting to reject parliamentarianism altogether and demanding a German republic based on soviets, or local workers' councils.

The mid-December 1918 decision of the Congress of Workers' and Soldiers' Councils to hold the elections to the National Assembly on January 19, 1919, represented a victory for the SPD and deepened tensions within the coalition. These conflicts climaxed on Christmas Eve, when the USPD members quit the coalition after Chancellor Ebert, who had earlier secretly allied himself with the Army High Command, called in troops to suppress a mutiny in Berlin without consulting USPD leaders. Now ruling alone, the SPD used the army to crush the January 1917 uprising in Berlin, led by the newly founded *Kommunistische Partei Deutschlands* (Communist Party of Germany), in which troops murdered Spartacist leaders Luxemburg and Liebknecht. For the next six months, the SPD relentlessly put down workers' rebellions throughout the country, culminating in the brutal suppression of the Bavarian Soviet Republic in May 1919.

Meanwhile the January 1919 elections went forward, and the newly elected National Assembly convened in Weimar on February 6, 1919. The Social Democrats were in the plurality, although no party obtained a majority. As such, the SPD was forced to form a coalition with the liberals and Catholics, and over the next six months the National Assembly signed the Treaty of Versailles (June) and hammered out a new constitution (August).

The SPD leaders had hoped to steer the November 1918 upheaval in a direction that would lead to peace and the establishment of a democratic republic that embodied a wide range of freedoms and the promise of continued social and economic reform. A year later, the party had achieved those aims but at great cost. Not only could the recovering nationalist right now blame the new democracy for losing the war and for the humiliation of Versailles, but the SPD's hesitation to carry out more thorough reforms and its alliance with the reactionary officer corps to crush left-wing opponents deepened the rift within the workers' movement. The failure to create the new republic on the basis of stronger

➤ ROSA LUXEMBURG AND THE GERMAN REVOLUTION

Rosa Luxemburg was a Jewish German Marxist theorist and activist who supported the German Social Democratic Party (SPD). In 1914 following the SPD's support of German participation in World War I she cofounded, with Karl Liebknecht, the revolutionary Spartacist League (Spartakusbund). The Spartacist League would eventually become the German Communist Party (*Kommunistische Partei Deutschlands*), or KPD, in 1919. In November 1918 during the German Revolution, she founded *The Red Flag*, the official newspaper of the Leftist revolutionaries, to spread the news of the revolution and the ideological tenets for the foundation of a new socialist Germany. Ultimately, as the rebellion was crushed by the *Freikorps* (freelance right-wing militias), Luxemburg, Liebknecht, and hundreds of left-wing revolutionaries were slaughtered. In spite of her tragic end, Luxemburg, along with Liebknecht, became a martyr to millions of Marxists and communists in the interwar period.

—Abraham O. Mendoza

institutions and a broader social consensus ultimately weakened its ability to withstand later challenges.

—William Smaldone

Bibliography

- Broué, Pierre. *The German Revolution: 1917-1923*. Translated by Ian Birchall and Brian Pearce, with an introduction by Eric D. Weitz. Leiden and Boston: Brill, 2005.
- Haffner, Sebastian. *Failure of a Revolution: Germany, 1918-1919*. Translated by Georg Rapp. Foreword by Georg Bruch. Chicago: Banner, 1986.
- Morgan, David W. *The Socialist Left and the German Revolution*. Ithaca, NY: Cornell University Press, 1975.

The Guatemalan Revolution (1944)

For ten years, Guatemala experienced an unprecedented revolution that sought to improve the plight and suffering of Guatemalans during the

Great Depression. The 1944 Guatemalan Revolution and the “Ten Years of Spring” that sprang from that revolution can only be understood in a world-historical context. The 1944 Guatemalan Revolution is often seen as a precursor for Leftist movements, most notably the Cuban Revolution of 1959. This view is misguided, however. When Guatemalan dictator Jorge Ubico was overthrown in 1944, the two presidents who succeeded him undertook an astonishing program of reform that was quashed by foreign influences that viewed the 1944 revolution as communist.

Against the backdrop of the worldwide economic depression, Ubico assumed dictatorial control of the country in 1931. To help alleviate the economic hardships, Ubico passed two highly controversial laws. The first was Public Roadways Law that required people to work on public works projects for two weeks a year. Of course people could avoid this service by paying a fee. The second was the Vagrancy Law that required all people who owned less than a predetermined amount of land to carry cards showing that they had worked at least 150 days on one of the country’s large estates. This measure was highly unpopular because less than 7 percent of Guatemalans owned land, meaning that a vast majority of Guatemalans were forced to work under the Vagrancy Law.

Although there was some modest economic recovery, Ubico’s reforms and policies only made the rich wealthier. Life was still hard for the people in Guatemala’s countryside. One major point of contention was the presence and power of foreign companies such as the United Fruit Company (UFCO). The UFCO owned an estimated 550,000 acres (223,000 hectares) of land in Guatemala, of which only 15 percent was in use. The difficult economic times led many to protest. Ubico responded with authoritarian measures to quash any opposition. This strategy worked until 1944 when, amid growing street protests led by the middle classes and the urban sector, Ubico resigned and fled the country. The ten years that followed was an interesting period in Latin American history. The 1944 revolution ushered in a period of reform that was ultimately suppressed by the United States amid fears that it was influenced by communist principles.

During the period from 1944 to 1954—known as the “Ten Years of Spring”—Guatemala was a functioning democracy led by two presidents who tried to make significant improvements in the lives of average Guatemalans. In December 1944 Juan José Arévalo, a former philosophy professor, was elected president. The new president proclaimed himself a “spiritual socialist.” During his term of office he abolished the Vagrancy Law of his predecessor. One of the first steps in the revolutionary government was a series of political reforms that gave the right to vote to women and illiterate males over the age of 18. In addition, the Arévalo government introduced a labor code that provided for collective bargaining rights. Arévalo, who survived 25 assassination attempts, was a popular figure for many Guatemalans; however, he was hated by elites.

Arévalo honored his pledge against reelection, and his secretary of defense, Jacobo Arbenz Guzman, ran for president in 1950 on a platform of agrarian reform. In 1952 Arbenz pushed through the Agrarian Reform Law, known as Decree 900. The decree allowed for the expropriation of any parcel of land larger than 223 acres (90 hectares) that was unused. To most, the obvious target of the law was the UFCO. The land expropriations of the Arbenz administration caught the attention of the U.S. government, which supported a coup d’état to overthrow President Arbenz.

While the agrarian reforms of Arbenz could have been overlooked, two lawyers for the UFCO were in prominent positions in the U.S. government: John Foster Dulles, secretary of state, and Allen Dulles, director of the Central Intelligence Agency (CIA). These two men organized Operation PBSUCCESS to overthrow the Arbenz government, which led to a 30-year civil war.

The 1944 revolution in Guatemala was meant to transform the society of the Central American nation, but world historical pressures precluded the changes from being fully implemented. Global forces and the threat, both real and perceived, of communism in the backyard of the United States conspired to doom Guatemala’s efforts toward social democracy and agrarian reform.

—Alberto E. Nickerson

Bibliography

- Handy, Jim. *Gift of the Devil: A History of Guatemala*. Toronto: Between the Lines, 1984.
- Handy, Jim. *Revolution in the Countryside: Rural Conflict and Agrarian Reform in Guatemala, 1944–1954*. Chapel Hill: University of North Carolina Press, 1994.
- Pearcy, Thomas L. *The History of Central America*. Westport, CT: Greenwood, 2006.

Herero-Nama Uprising (1904–1907)

Historians of modern genocide now consider the German army's suppression of the Herero Uprising of 1904 and the Nama Uprising of 1905–1907 to be the first genocides of the twentieth century. Although the Germans governed the colony of South-West Africa (the country of Namibia today) in conjunction with local chieftains from 1884 to 1904 in a system of indirect rule, indigenous groups fought the Germans almost continually between 1890 and 1914 to preserve their rights and sovereignty. In their attempt to impose and consolidate direct colonial rule from 1904 to 1914 the Germans systematically dispossessed and killed the Herero, Nama, and San peoples and destroyed their independent political structures. Mass resistance to the imposition of direct German rule culminated in the Herero Uprising of 1904 and the Nama Uprising of 1905–1907.

As part of the scramble for Africa, German merchants such as Adolf Lüderitz (1834–1886) established trading posts and German territorial claims to South-West Africa. In 1883 Lüderitz paid local clans for land and mining rights. In 1884 the German Empire declared the whole region of southwestern Africa, from the Orange River to Angola, a German protectorate.

In 1888 the Namas and Hereros rejected the German claims to political suzerainty, and Dr. Heinrich Ernst Göring (1839–1913), the imperial commissioner, returned to Germany without their consent to German protection and suzerainty. Hendrik Witbooi (ca. 1825–1905) of the Namas rejected German rule outright, and the Germans considered him a great threat to the consolidation of their rule. In 1894 German

GENERAL LOTHAR VON TROTHA'S DECREE

On October 2, 1904, the army commander in German South-West Africa, General Lothar von Trotha, read out the following proclamation to his officers after a Sunday field service: “I, the great general of the German troops, send this letter to the Herero People. Hereros are no longer German subjects. They have murdered, stolen, they have cut off the ears, noses and other bodily parts of wounded soldiers, and now, because of cowardice, they will fight no more. I say to the people: anyone who delivers one of the Herero captains to my station as prisoner will receive 1000 Marks. He who brings in Samuel Maharero will receive 5000 Marks. All the Hereros must leave the land. If the people do not do this, then I will force them to do it with the great guns [i.e., cannons]. Any Herero found within the German borders with or without a gun, with or without cattle, will be shot. I shall no longer receive any women or children; I will drive them back to their people or I will shoot them. This is my decision for the Herero people.

[signed] The Great General of the Mighty German Kaiser.”

—Alexander M. Zukas

Source

Von Trotha quote from Jon M. Bridgman, *The Revolt of the Hereros* (Berkeley: University of California Press, 1981), 127–128.

South-West Africa governor Theodor Leutwein (1849–1921) put down the last guerrilla-style insurgencies, fought with great determination by the Namas and their headman Hendrik Witbooi, and ruled indirectly through local headmen.

To encourage German migration, Leutwein concluded a treaty of dubious legality with one of the Herero headmen, Samuel Maherero (1856–1923), that ceded eastern Herero land and cattle to German settlers. The eastern Hereros resisted the cattle and land confiscations, and the War of the Boundary erupted in March 1896. The Germans were able to defeat the indigenous forces within a few weeks, and the situation for the Hereros steadily worsened. In 1897 the majority of the Hereros' cattle were killed by rinderpest, also known as cattle plague. This loss was a cultural

as well as economic blow since cattle embodied wealth and status in Hereroland, and the destruction of the cattle herds sparked an economic depression and cultural crisis for the Hereros. Many Hereros abandoned cattle raising and adopted nontraditional occupations, such as farming and wage labor. To make matters worse for the Hereros, the scarcity and rising price of cattle induced German farmers to raise their own cattle, and as a consequence they began to buy land from impoverished Hereros who needed cash to buy provisions, livestock, and seed.

Land sales left two dire consequences in their wake. First, the number of Germans in South-West Africa rose from 539 in 1891 to 4,500 in 1904. While whites owned just 10 percent of the land in 1904, the Hereros saw the increase as an encroachment on their subsistence base. After 1896 the Hereros saw their prime land and prized cattle becoming the property of white settlers. The sale of land went so far that the German government created tribal reserves for the Hereros, but the Hereros viewed these reserves as confirming the expropriation of their traditional landholdings. Second, the new German immigrants brought a stronger racist attitude with them. White farmers mistreated African workers, the incidents of white men raping black women increased, and the German courts did little to protect the person and rights of the Hereros. Any sense of mutual respect between sovereign peoples was evaporating.

In addition, white merchants charged usurious interest on loans, which infuriated Africans: one or two cows would be forcibly taken for a one-English-pound debt. Maherero, who turned on his German friends and led the Herero Uprising of 1904, stated that this daylight robbery of Africans was the final spark for rebellion.

On January 12, 1904, the Hereros under Maherero rose up in revolt and attacked German farms, train depots, and trading stations. One hundred fifty Germans died in the first attacks. When news of the revolt reached Germany, the German General Staff sent reinforcements of 14,000 German soldiers to fight the Hereros. Leutwein believed that he could end the uprising by talking with Maherero, but the imperial government in Berlin thought that negotiations would be interpreted by Africans as a sign of

weakness and would only encourage more rebellions. The Hereros had battled the Germans to a standstill by mid-1904, and the German General Staff decided to take drastic action, sending General Lothar von Trotha (1848–1920) to take command. Von Trotha had a reputation for brutality and a distaste for negotiation, and he reflected Berlin's desire for a quick success at any price.

He defeated the Hereros in the war's major battle, Waterberg, in August 1904, after which the Germans drove the Herero people into the Kalahari Desert, poisoned the waterholes there, and blocked all retreat back into South-West Africa. In his proclamation of October 1904, von Trotha announced that the German goal was the complete destruction of the Herero nation and their extinction as a people. He thought that the Herero Uprising was the beginning of a race war between Europeans and Africans, and his proclamation was designed to give legal sanction to the common German practice of executing Herero prisoners and civilians since the beginning of the uprising. Leutwein resigned in disgust as governor soon after von Trotha's proclamation and returned to Germany to muster opposition to this genocidal war. With public outrage in Germany growing, the German chancellor Bernhard von Bülow (1849–1929) instructed von Trotha in December 1904 to erect concentration camps in which to confine any surviving Hereros.

While the Namas also suffered loss of cattle and land at the hands of ruthless traders and experienced unequal treatment in German courts, at first Hendrik Witbooi supported the Germans in their fight against the Namas' traditional enemy, the Hereros, but after von Trotha's declaration of October 1904 he concluded that the Germans were bent on wiping out all Africans regardless of their ethnicity or gender. The increasing anti-Nama sentiments of German settlers and German newspaper accounts that after the war with the Hereros "all tribal structures would be destroyed, chiefdoms abolished, and all communities disarmed" finally provoked the Namas into open rebellion. About 1,500 Nama warriors fought a robust guerrilla war from October 1904 to October 1905 against 14,000 German soldiers. Hendrik Witbooi died from wounds he received during a raid he conducted in October 1905, and his demoralized warriors

surrendered at the beginning of 1906. However, it was not until March 1907 that the Nama people finally laid down their weapons. Nearly 100,000 native Namibians died in these wars and their aftermath. It is generally agreed that between 1904 and 1906 about 60,000 Hereros were killed out of a total population of about 80,000. Most died from thirst, exhaustion, and exposure in the desert or in the concentration camps. About 6,000 Namas died out of a total population of 20,000, and most died after the war due to hunger, mistreatment, and deportation. After their defeat, the Hereros' and Namas' traditional clan structures were disbanded, and all communal land was confiscated as punishment for the rebellion. The remaining Hereros and Namas were forced into migrant wage labor and worked on European farms and ranches. The Hereros and Namas were also required to carry passes and live in segregated housing. Within three years of the uprising's start, Germany had mercilessly crushed the independence of the Hereros and Namas, who lost all rights in their homeland, while prime grazing land came under German jurisdiction.

—Alexander M. Zukas

Bibliography

- Bridgman, John M. *The Revolt of the Hereros*. Berkeley: University of California Press, 1981.
- Gewald, Jan-Bart. *Herero Heroes: A Socio-Political History of the Herero of Namibia, 1890–1923*. Athens: Ohio University Press, 1999.

The Mexican Revolution (1910–1920)

The Mexican Revolution was one of the most critical political junctures in the history of Mexico. The revolution started in late 1910 and set in motion a devastating civil war. Segments of the elite struggled against each other for power, while the masses fought for major social and economic changes. For a decade the country was immersed in political chaos and social violence that led to the deaths of hundreds of thousands of Mexicans. In 1917 a Constitutional Congress passed a socially progressive constitution that provided tools for Mexico's national reconstruc-

tion and guided the reforms that followed in the ensuing two decades.

President Porfirio Díaz, who had dominated national politics since 1877, was the immediate and initial target of the Mexican Revolution. He based his long rule on fraudulent elections, routine violence against his opponents, and the dispensation of personal favors and benefits to his supporters. During his administration, foreign capital flowed constantly as foreigners increased their control of large sectors of the national economy. At the same time, land concentration increased at the expense of peasants' small and medium holdings. Díaz's policies produced impressive results, but they only benefited a small segment of Mexican society. Declining living standards among the rural masses and harsh working conditions in urban settings were intensified by a vicious recession in 1907. Workers' and peasants' demands met increased political repression. In 1910 Díaz, who had assumed power on a platform that emphasized no reelection, decided to run again for Mexico's presidency. His decision provided the immediate cause of the 1910 revolution.

In the spring of 1910 Francisco Madero, a wealthy landowner from the state of Coahuila, emerged as the leader of the anti-Díaz forces. After spending some time in jail, Madero issued his *Plan de San Luis de Potosí* in which he denounced Díaz's regime as fraudulent and called for democratic elections. The plan revealed Madero's primary political concerns and only barely addressed social and economic demands of the peasants and workers. Nevertheless, his call for a national insurrection to end Díaz's dictatorial regime offered new hope to millions of Mexicans. The rebel movement grew rapidly, and local insurrections spread throughout Mexico. After Pascual Orozco captured Ciudad Juárez in May 1911, Díaz reached an agreement with Madero, resigned Mexico's presidency, and sailed for Paris, where he died in 1915. The Porfiriato (the period of rule of Díaz) was over, but the revolution was only beginning.

On October 1, 1911, Madero was elected president of Mexico. His moderate attitude dealing with peasants' and workers' grievances disillusioned the most socially progressive forces of the revolution. His presidency lasted 14 months during which there were regional revolts, attempted

BATTLES OF THE MEXICAN REVOLUTION



coups, and labor strikes. In the south Emiliano Zapata pronounced his *Plan de Ayala*, which advocated land redistribution, municipal autonomy, and bargaining rights for workers. In the north, Orozco and his forces revolted against the government and proclaimed the *Pacto de la Em-pacadora*, decrying the president's betrayal of revolutionary principles. Foreign investors joined the pro-Díaz elites in their opposition to Madero. General Félix Díaz, Porfirio's nephew, conspired against Madero but was quickly arrested by the authorities. After quelling the Orozquista (followers of Orozco) rebellion in the north, General Victoriano Huerta betrayed and overthrew President Madero. Huerta assumed the presidency of Mexico in February 1913, and soon after former president Madero was murdered, thus initiating the most violent phase of the revolution.

Huerta assumed the presidency of a country in deep political turmoil. Emiliano Zapata in the south and Francisco "Pancho" Villa in the north refused to recognize Huerta's government. Opposi-

sition to the usurper coalesced around the governor of Coahuila, Venustiano Carranza, who issued his *Plan de Guadalupe* in March 1913. A mostly political document, the declaration refused to recognize Huerta and named Carranza as first chief of the Constitutionalist Army and as Mexico's provisional president. The coalition defeated Huerta in a series of battles in northern Mexico. In addition to his domestic military problems, Huerta's political position was also delicate at the international level: U.S. president Woodrow Wilson refused to recognize Huerta's government and in September 1913 stopped the supply of weapons to Mexico. The final blow took place in April 1914 when U.S. forces occupied the city of Veracruz, thus depriving the Mexican government of the port's customs revenues. It was clear that Huerta had lost his war on both the local and international fronts. In July 1914 he tendered his resignation and left the country.

Despite his success against Huerta, Carranza was unable to put an end to the civil war. With

Huerta out of the way, the conflict that followed brought to light the significant disparities that had characterized the goals of the various factions participating in the revolution. Villa and Zapata denounced Carranza's moderation and lack of commitment to the agrarian program of the revolution and launched a campaign against Carrancistas (followers of Carranza). In December 1914 Villa occupied Mexico City and was soon joined by Zapata. Carrancista general Manuel Obregón saved the situation. In several battles between April and July 1915, he defeated the Villistas (followers of Villa), who suffered tremendous casualties and retreated to the north to limit their rebel activity to a guerrilla war in the mountains. Zapata fared no better and was forced out of Mexico City and back to Morelos in August 1915. During this period, which is considered the bloodiest phase of the revolution, it is estimated that almost 200,000 soldiers died fighting on both sides.

By the beginning of 1916, Carrancista forces were in control of the war, and the military outcome of the revolution appeared evident. In November, Carranza convened a constitutional convention at Querétaro that excluded representatives from the most extreme revolutionary groups. Despite the reformist inclinations of the delegates, the final document included far-reaching anticlerical, nationalistic, and socially progressive provisions such as protection for workers and a commitment to agrarian reform. These provisions would guide the orientation of the revolution during the 1920s and 1930s. Reluctantly, Carranza accepted the new charter and was elected president of Mexico in March 1917. Even though the passage of the constitution did not put an immediate end to the violence—as the assassinations of Zapata, Carranza, Villa, and Obregón clearly demonstrate—it did provide important tools that guided Mexico's national reconstruction during the ensuing decades.

—Patricia Juárez-Dappe

Bibliography

- Bakewell, Peter. *A History of Latin America c. 1450 to the Present*. 2nd ed. Malden, MA: Blackwell, 2004.
- Hart, John M. *Revolutionary Mexico: The Coming and Process of the Mexican Revolution*. Berkeley: University of California Press, 1997.

Knight, Alan. *The Mexican Revolution*. 2 vols. Lincoln: University of Nebraska Press, 1990.

Meyer, Michael C., and William Beezley. *The Oxford History of Mexico*. Oxford and New York: Oxford University Press, 2000.

The Palestine Revolt (1936–1939)

The Palestine Revolt of 1936–1939, sometimes referred to as the Arab Revolt but not to be confused with the Arab Revolt of 1916–1918, was motivated largely by the outcomes of World War I. In particular, two international policy decisions—the issuance of the Balfour Declaration (November 1917) and the granting of the British Mandate for Palestine (formally recognized in July 1922)—directly encouraged the events leading up to and during the revolt.

The Balfour Declaration and the subsequent mandate both sought to reinforce a pro-Zionist policy that aimed to promote the establishment of a Jewish national home in Palestine. During the first decades of the twentieth century increasing numbers of Jewish immigrants, mostly from Europe, motivated by the ideals of political Zionism, immigrated to the region. This influx of immigrants and their acquisition of land



A group of Arab prisoners in the Old City of Jerusalem (in the British Mandate of Palestine) is guarded by a British soldier armed with a rifle and bayonet on October 26, 1938, during the Arab revolt against British rule and Jewish settlement in Palestine. (Hulton/Archive by Getty Images)

► IZZ AL-DIN AL-QASSAM

Izz al-Din al-Qassam was born in Jabla, Syria. A participant in the 1921 revolt against the French, Qassam fled to Haifa shortly thereafter. Once in Haifa, he turned his efforts on recruiting local *fellahin* (peasants) to rise up against the imperial forces in the region. The Salafiya movement and the ideological underpinnings of local Sufi groups inspired the one-time al-Azhar student. Qassam's rhetoric was imbued with patriotic overtones and carried a distinctly Palestinian nationalist message. Reports indicate that Qassam recruited as many as 800, perhaps as few as 200, *fellahin* leading up to his call for revolt in 1935. Playing on the popular

memory of the legends surrounding the assassins, Qassam's message was one at once religious, militant, and patriotic. Qassam was killed in a early battle against British policy, one for which the group was probably ill-prepared. His early death achieved for him a position as local hero, and his grave became a pilgrimage site. As recently as 2008, the military wing of Hamas, known as the al-Qassam Brigades in commemoration of this early anti-imperialist activist, fired rockets into Israel, calling them Qassam rockets.

—Marianne Rhett

added to the frustration over continued British rule (frustration felt by both native Palestinians and Zionist Jews alike). Coupled with the ideological underpinnings of Palestinian national consciousness, these factors combined to produce a volatile environment. Set against the global backdrop of the economic and political uncertainty of the interwar years, the Palestinian Revolt was first triggered by Izz al-Din al-Qassam's encouraged uprising against Jewish settlers and British officials in November 1935 and then by his death shortly thereafter.

On April 13, 1936, two Jews were murdered in the mountains outside of Nablus, and the revolt reached a high-water mark of violence. Soon thereafter the Arab Higher Committee was formed. The committee was a loose representative body for the Palestinian people, primarily concerned with the future of the region in terms of political formation. Led in large part by Muhammad Hajji Amin al-Husayni, the committee called for a general strike. The main demand of the strike was the halting of Jewish immigration to the region. According to some estimates, as many as 60,000 Jewish immigrants fleeing the growing threat of Nazism had come to Palestine in 1935, and this population pressure was causing havoc for the Palestinian economy and politics. Between 1936 and 1939 British forces were steadily increased, and thus by 1939 the Arab militias and guerrilla forces were fighting a British military force of nearly 20,000, aided by the Royal Air Force and local Zionist groups. During the course of the revolt, Palestinians, Jews, and

Britons were all killed in the crossfire. Arab casualties reached nearly 20,000. When the British forces, aided by local Zionists, were finally able to halt the revolt in 1939, it had become abundantly clear to the mandatory administration that changes to the policies of Palestine were necessary. For the first time, a clear and deliberate plan for the future of Palestine was set out in the White Paper of March 1939. Over the next five years Jewish immigration was to be limited to only 75,000, land sales would be more strictly regulated, and within ten years an independent Palestinian state was to be developed, one that hopefully would be agreeable to both the Arab and Jewish populations in the region. However, the Munich Pact of September 1938 and the subsequent world war changed the direction of Palestinian politics once again.

—Marianne A. Rhett

Bibliography

- Burke, Edmund, III, and David N. Yaghoubian, eds. *Struggle and Survival in the Modern Middle East*. Berkeley: University of California Press, 2005.
- Gettleman, Marvin, and Stuart Schaar, eds. *The Middle East and Islamic World Reader*. New York: Grove, 2003.

The Russian Revolution (1905)

At the turn of the twentieth century, imperial Russia was ruled by an autocrat whose authority was unchecked by any kind of constitutional or par-

liamentary restraint. Although Tsar Alexander II (1855–1881) had initiated a series of comprehensive reforms—known as the Great Reforms—including the emancipation of the serfs, he failed to introduce a parliament or even a consultative forum where social and political issues could be discussed. After his death in 1881 political repression increased, and a militant underground revolutionary movement grew stronger. The Socialist Revolutionaries, who aimed their appeals at the peasantry, and the Social Democrats, who divided in 1903 between Bolsheviks and Mensheviks and who sought the support of Russia's small but growing working class, were this movement's most important organizations.

In 1904–1905 Russia was engaged in the Russo-Japanese War in which armies of up to 150,000 men fought along 50-mile fronts, making it a large war by contemporary standards. Taking advantage of the fact that the war was going badly for Russia, liberals escalated their demands for constitutional reforms. After the fall of Port Arthur (December 1904), a strike began at St. Petersburg's mammoth Putilov engineering works. On January 9, 1905, tsarist troops fired on a large but peaceful demonstration, killing or injuring hundreds. Some of the protestors were shot in the back as they tried to flee. Bloody Sunday, as this event became known, set off a wave of strikes and disorders that collectively came to be called the Revolution of 1905.

Urban workers, seeking better wages, eight-hour workdays, and an end to abusive treatment by factory foremen, posed the most serious challenge to the government. Skilled metalworkers, machinists, and railway men often organized large strikes, while bakers, clerks, tailors, and other skilled and semiskilled laborers frequently struck as well. Although the socialist organizations did not generally control or direct these strikes and factional bickering sometimes hurt their cause, socialist agitators did help convince workers to escalate and politicize their demands. Many strike demands included the right to assemble and form unions and the creation of a democratically elected parliament.

Other groups rebelled as well. Peasants sought redress of local grievances, such as conflicts over rents. In some areas, for example, the 1861 Emancipation had left peasants with less than half of the land they had worked as serfs.

➤ THE OCTOBER MANIFESTO (1905)

In an attempt to quell widespread rebellion and return order to the Russian empire, Tsar Nicholas II, under the guiding influence of Count Sergei Witte, issued "The Manifesto on the Improvement of the State Order," better known as the October Manifesto, in October 1905. The following are the rights it guaranteed.

"We have therefore ordered the government to take the following measures in fulfillment of our unbending will:

Fundamental civil freedoms will be granted to the population, including real personal inviolability, freedom of conscience, speech, assembly and association.

Participation in the Duma will be granted to those classes of the population which are at present deprived of voting powers, insofar as is possible in the short period before the convocation of the Duma, and this will lead to the development of a universal franchise. There will be no delay to the Duma elect already organized.

It is established as an unshakeable rule that no law can come into force without its approval by the State Duma and representatives of the people will be given the opportunity to take real part in the supervision of the legality of government bodies.

We call on all true sons of Russia to remember the homeland, to help put a stop to this unprecedented unrest and, together with this, to devote all their strength to the restoration of peace to their native land."

However, peasant rebellion, which peaked in November and December when nearly 1,400 rural disturbances were reported, rarely coincided with urban rebellion. National minorities, such as Poles and Finns, also fought for rights. Warsaw experienced some 1,300 strikes during 1905, and hundreds died in clashes with police and soldiers. Violence and guerrilla warfare continued well into 1906 in other outlying cities such as Riga and Baku.

In the autumn of 1905 after the universities were allowed to reopen, many students joined the revolutionary movement. In October

a general strike spread throughout the country, and a beleaguered Nicholas II issued the Октябрьский Манифест (October Manifesto), granting freedom of speech, assembly, and other civil liberties and creating the first parliament (Duma) in modern Russian history. No law was to be enacted without the Duma's approval. Right-wing forces retaliated by inciting a wave of pogroms that killed hundreds, mostly Jews in Ukraine. The October Manifesto satisfied many opponents of the regime but not the radicals. Soviets (Councils of Workers' Deputies) had formed in many cities, providing forums for radical activists. Moreover, mutinies in the armed forces increased in frequency. In June on the battleship *Potemkin* sailors had mutinied in Odessa Harbor, resulting in a massacre in which hundreds were killed. From October through December some 200 military mutinies were reported, convincing radicals that the tsarist system could still be overthrown. However, soldier-mutineers generally targeted squalid conditions within the army or abusive treatment by officers and rarely coordinated their efforts with civilian uprisings.

In December the government put down an armed rebellion in Moscow where 1,000 people died and overwhelmed rebels in towns such as Kharkiv, all but ending the revolution. Cumber-some elections to the First Duma were held in the spring of 1906. It was dominated by the liberal Constitutional Democratic (Kadet) Party, which carried on the fight for further democratization and social reform. When Nicholas II dissolved the Duma, defiant reformers challenged the government's right to levy taxes or conscript soldiers, but in 1907 Nicholas managed to limit the Duma's franchise primarily to the propertied elite, thus ensuring a more conservative body.

Although Russia remained a police state after 1905, the tsar's powers were no longer absolute. Political parties continued to exist as did trade unions, although labor activists were often harassed. Three additional Dumas were elected, with the Third and Fourth Dumas each sitting for about five years. The press also gained a greater ability to discuss and criticize public policy. Ukrainians and other national minorities were now free to use their languages in written form. Those who had been victimized by social,

legal, or national discrimination, having tasted freedom, were now less likely to accept their fate passively. At the very least, the foundations of a law-based constitutional monarchy had been put into place.

Despite intense repression, Russia's subjects periodically manifested demands for more freedom. Workers struck, especially on May Day, and labor activism increased as World War I drew near. Unable to withstand the strains of this war, the tsarist regime finally collapsed in February 1917. The Bolsheviks (Communists) staged a coup in October of that year, and three years of chaotic civil war followed. Stability returned under the New Economic Policy in the 1920s, but in the 1930s Josef Stalin imposed a brutal police state on the Soviet Union that was far more repressive than the tsarist state had been. Opportunities for freedom would not come again until Mikhail Gorbachev initiated a series of reforms in the late 1980s that ultimately led to the collapse of the Soviet Union in 1991.

—Michael F. Hamm

Bibliography

- Ascher, Abraham. *The Revolution of 1905*. 2 vols. Stanford, CA: Stanford University Press, 1988, 1992.
- Smele, Jonathan, and Anthony Heywood, eds. *The Russian Revolution of 1905: Centenary Perspectives*. London and New York: Routledge, 2005.
- Surh, Gerald. *1905 in St. Petersburg*. Stanford, CA: Stanford University Press, 1989.
- Weinberg, Robert. *The Revolution of 1905 in Odessa: Blood on the Steps*. Bloomington: Indiana University Press, 1993.

The Russian Revolution (1917)

The Russian Revolution of 1917 actually consists of two distinct political revolutions that occurred that year, the February (March) Revolution and the October (November) Revolution (according to the Old Julian calendar). Both revolutions involved relatively minor outbreaks of violence but were nonetheless characterized by social upheaval and radical changes in government, foreign policy, and ideological imperatives by all parties involved. The February Revolution, led by

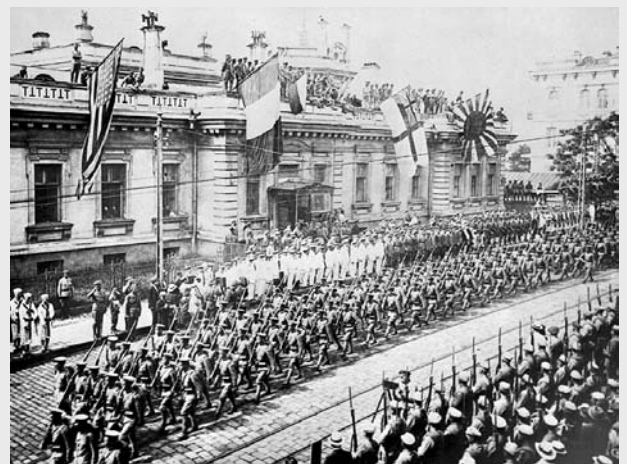
the Provisional Government and the Petrograd Soviet (Worker's Council), formed an interim government to continue Russian involvement in World War I and set up a new government through the Constituent Assembly in an effort to replace the tsarist regime. In the subsequent interim period, the fragile unity between the Soviet and the Provisional Government fell apart, given different interests regarding the continuation of the war, land redistribution, and food supply. This allowed the fringe Far Left Bolsheviks to gain control of the Soviet and call for the dissolution of the Provisional Government, thereby seizing power in the name of the Russian working class.

Early in 1917, the third year of World War I, the Russian armed forces were rapidly deteriorating on the eastern front against the more effective and better-equipped German forces, and this coupled with food supply problems on the home front led to the increasing lack of popu-

larity of Tsar Nicholas II. Both the Duma (Russian legislature) and the Russian High Command convinced the reluctant tsar to abdicate in favor of his son. However, due to the tsarevitch's poor health, he instead gave up his throne in favor of his brother, Grand Duke Michael Romanov, who subsequently declined it, saying that he would only be tsar if he was elected by the people. This left the Duma, with Cadets (Liberal Party) and SRs (Social Revolutionary Party) coalescing in power, along with the tsarist bureaucracy and army. Simultaneously, following a similar pattern as in the 1905 Revolution, soviets were elected among workers and soldiers across much of Russia. The formation of the Petrograd Soviet allowed them access to events in the Duma (henceforth known as the Provisional Government), with which it was in full cooperation. The expectation by the soviets was that this was a matter of course, being a bourgeois revolution that needed to occur in order to create the

➤ ALLIED INTERVENTION IN THE RUSSIAN CIVIL WAR—RESISTING THE FOREIGN IMPERIALISTS

Following the October Revolution, as the Bolsheviks sought to consolidate their power over the newly created socialist state, internal and foreign military forces sought to reverse the situation. In addition to the emergence of White reactionary armies, composed of liberals, conservatives, and monarchists, the Bolshevik forces also had to contend with foreign forces sent by the Entente Powers to protect supplies and evacuations. Britain, France, Japan, Canada, and the United States, among other Allied Powers, sent small detachments in the beginning stages of the Russian Civil War. British and U.S. forces were concentrated in northern Russia, most notably near Arkhangelsk. French and British forces were located in southern Russia along the Ukrainian border. The U.S. and Japanese forces were also engaged in Siberia and the Russian Far East. The Allied intervention gave ample reason for the Russian populace to support the Bolshevik regime, as it allegedly proved the intransigence of foreign capitalists to accept the existence of the world's first socialist state. Ultimately, the intervention missions proved to be of little to no consequence and were mostly withdrawn by 1920. However,



During the Allied intervention to cut off arms supplies to the Russian Revolution, soldiers and sailors from the United States and other Allied countries line up in front of the Allied Headquarters building in Vladivostok, Russia, in September 1918. (National Archives)

they remained part of the Soviet memory as an invasion by the capitalist West.

—Abraham O. Mendoza

conditions for a socialist revolution. This swift and relatively bloodless transition from the failed tsarist autocracy to the dual power arrangement between the Provisional Government and the Petrograd Soviet is known as the February Revolution.

The interim period in the months between the February Revolution and the October Revolution is characterized by the growing schism between the Provisional Government and the Petrograd Soviet, along with the growing influence of the Bolsheviks. The decision to continue fighting the war in order to soothe nationalist sentiment among liberals and the Western Allies had proven unpopular as Russian losses continued to mount against the Central Powers along the eastern front. Minister of War Alexander Kerensky, who supported staying in the war, also served as a liaison between liberals and socialists within the Provisional Government as well as within the Petrograd Soviet and grew unpopular among the masses. This was in stark contrast with his popularity in the early days following the February Revolution. Furthermore, peasant unrest in the countryside, owing to unresolved land redistribution issues coupled with a dearth in food supplies for the cities, increased popular discontent with the Provisional Government. As the working class saw the soviets more in tune with their interests, in contrast with the Provisional Government's preoccupation with maintaining order, the fragile cooperation between the two governing entities rapidly deteriorated. The controversial Kornilov Affair, in which Russian general Lavr Kornilov attempted to stage a coup in Petrograd in the interest of preserving order but was foiled by the Petrograd Soviet,

further exacerbated the situation while also illustrating the relative weakness of the Provisional Government. Demonstrations demanding "all power to the soviets" and "peace, land, and bread" became prevalent in major Russian cities. Increasingly, large numbers of soldiers deserted the front in the hopes of land reforms.

By October, the hopes for cooperation between the liberal Provisional Government and the socialist Petrograd Soviet were dashed by disasters on both the battle and home fronts. The Provisional Government under Kerensky continued to work toward fighting the war and creating a viable government in tandem with the Petrograd Soviet. During this time, the Bolshevik Party, now under Vladimir Ilyich Lenin's leadership, vied to gain control. The October Revolution occurred when the Bolsheviks managed to gain control of the soviets throughout much of European Russia, thereby ultimately gaining access to power through the major Petrograd Soviet. The largely unpopular Provisional Government fell in a coup on October 25, 1917, as the Bolsheviks and their socialist allies stormed the Winter Palace, which housed the Russian interim government. The Bolsheviks quickly established a dictatorship of the proletariat with the historical mission of creating a workers' state from the ruins of the tsarist regime.

—Abraham O. Mendoza

Bibliography

- Fitzpatrick, Sheila. *The Russian Revolution*. New York: Oxford University Press, 2001.
- Pipes, Richard. *The Russian Revolution*. New York: Knopf, 1990.
- Wade, Rex A. *The Russian Revolution, 1917*. New York: Cambridge University Press, 2005.

■ Introduction: Collapse of Empires

Most of the great European and East Asian empires collapsed during the first half of the twentieth century, destabilized by both external and internal forces. The overwhelming economic and military pressures and stresses of World War I led to

the dissolution of the empires of Russia (1917), Austro-Hungary (1918), the Ottomans (1918), and Germany (1918). At the same time, internal ethnic nationalist movements, upheavals in traditional social relationships, and the political collapse of ruling royal houses also played a

role in their destruction. Likewise, the collapse of the Qing empire in China (1911) was a result of long-standing popular discontent regarding the failure of the royal house to maintain Chinese territorial sovereignty and prevent foreign exploitation. The dissolution of the Japanese empire (1945), otherwise known as the Greater East Asia Co-Prosperity Sphere, was a direct outcome of World War II. Although the military might of the United States was the most obvious cause of Japan's collapse, acts of resistance by occupied nationalities in Southeast and East Asia were also components of Japan's defeat.

—*Abraham O. Mendoza*

Collapse of the Ottoman Empire

Although the Ottoman empire did not collapse until the formal partition of its Middle Eastern territories by France and Great Britain in 1923, the seeds of its dissolution were planted much earlier in the period leading up to the Second Constitutional Era in 1908. During this period, Sultan Abdul Hamid II (1876–1909) sought to regain control of the political and economic decision-making apparatus from the civil bureaucracy and to move forcefully to resurrect the Islamic identity of the Ottoman dynasty. Abdul Hamid was contemptuous of many earlier nineteenth-century reforms instituted during the Tanzimat era, when European governmental practices (e.g., financial, civil, and criminal codes based on the French model) that privileged Western liberal and secular reforms over the absolute rule of the monarch had been the inspiration.

Collectively, Abdul Hamid's centralizing policies, coupled with the revitalization of the empire's Islamic identity, did little to resolve what the British historian Dominic Lieven has termed "the dilemma of empire": the difficulty in reconciling the supranational demands of empire with local calls for more representation and nationalism. Nor, for that matter, would the Young Turks who eventually overthrew him in 1908 have any greater success in this regard. During Abdul Hamid's rule, the Ottoman possessions in the Balkans, which were the empire's geopolitical core

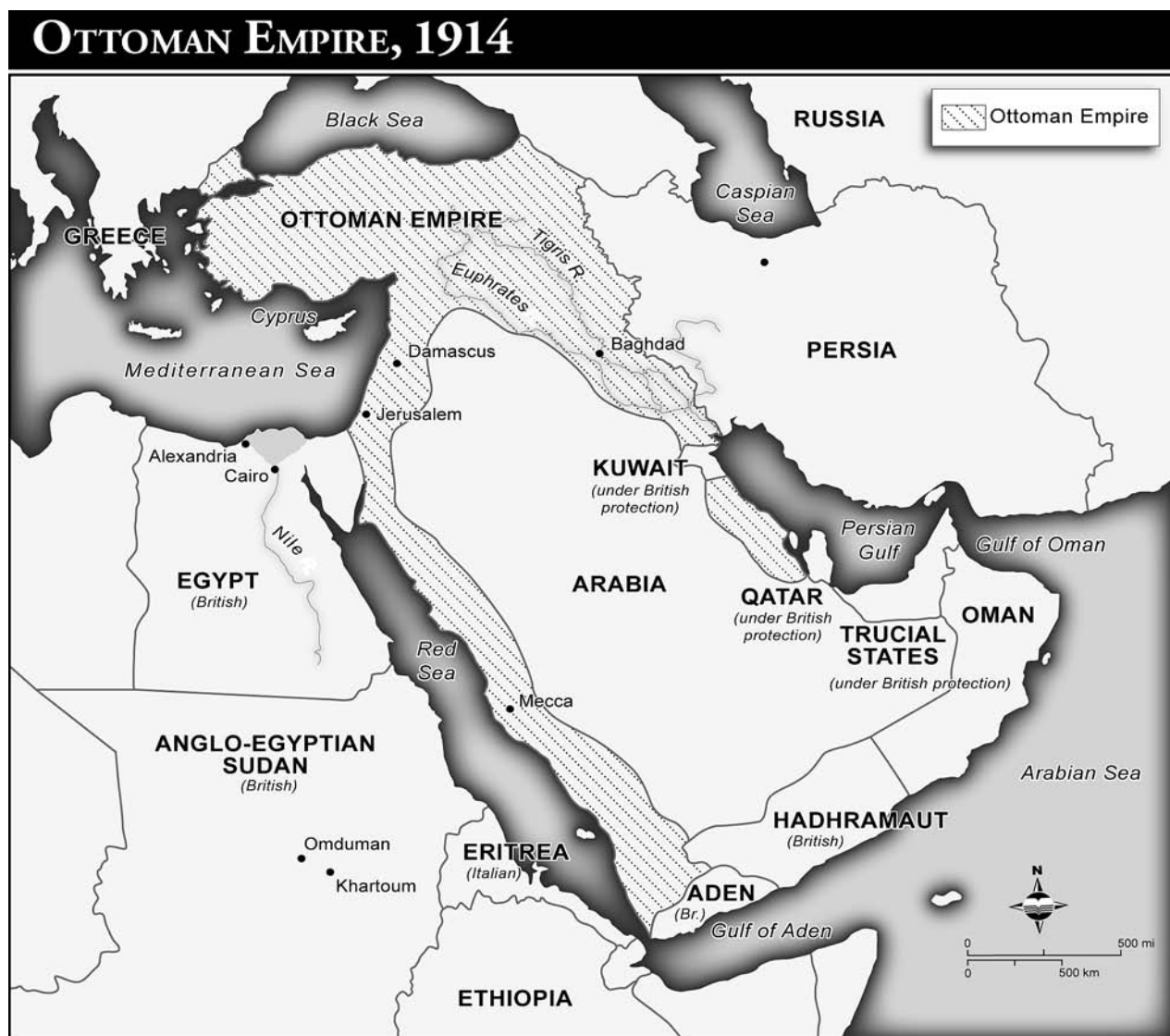


Faisal I, a prominent early Arab nationalist, became the first king of Iraq, a kingdom created especially for him by the European colonial powers following World War I. (Library of Congress)

at one time, shrank considerably: Tunis was lost to France (1881), while Egypt and the Suez Canal were lost to Great Britain (1882). Instability and turmoil were also rampant in the eastern provinces, most notably among the Armenians in eastern Anatolia.

The Young Turks, a group that sprang out of the small, but largely Turkish, Committee of Union and Progress (CUP), directly challenged the authority of Sultan Abdul Hamid on July 3, 1908; restored the 1876 constitution; and reconvened the parliament. The Young Turks Revolution was largely driven by Westernized educated, secular, and Turkish-nationalist army officers and civilian professionals bent on reversing what they regarded as the backward, incompetent, and overly religious course on which the empire had been placed under Sultan Abdul Hamid. Once in power, however, the Young Turks faced the dilemma of empire on multiple fronts: in the western provinces neighboring the newly independent Balkan states and in the Arab provinces caught in the whirlwind of Arab nationalism. The first test for the CUP was the 1911–1912 Turco-Italian War (also known as the Tripolitan War), a comparatively minor conflict in which the Italians easily seized the Ottoman provinces of Tripolitania and Cyrenaica (modern Libya), thus revealing the extent of Ottoman weakness.

The Balkan Wars (1912–1913) pitted the Balkan states of Serbia and Bulgaria in alliance with Montenegro and Greece against the Ottomans. The partition of Macedonia in March 1912, as a result of a secret agreement between Serbia and Bulgaria, prompted the onset of the First Balkan War. The swift defeat of the Ottoman forces in



almost all of its European territories convinced the Great Powers—for whom the collapse of the Ottoman empire would have grave repercussions—to initiate peace talks. On May 30, 1913, the Ottomans were pressured to sign the Treaty of London, which ceded all of their European possessions to the victorious Balkan alliance. The Balkan alliance, however, quickly fell apart as disputes over the newly acquired territories pitted Bulgaria against Serbia and Greece. The outbreak of the Second Balkan War in June 1913 proved to be a fortunate occurrence for the Ottomans, as they were able to intervene (along with Romania) and reclaim some of their lost territories in Thrace.

With the onset of World War I, the successive defeats and losses of territories at the hands of European powers and alliances sparked mass discontent within both the Turkish core of the empire and its increasingly unruly Arab provinces. The Ottoman empire entered the conflict as an ally of Germany. At the time the Ottomans viewed Russia as their most dangerous enemy, so the decision to enter the war on the side of the Central Powers was largely driven by the hope of the possible recovery of lost territories from the Russians (eastern Anatolia and the Caucasus), the Greeks (the Aegean Islands), and the Italians (the Dodecanese Islands). The Ottomans were successful early on in the Battle of Gallipoli and

the Siege of Kut against the French and the British in 1915–1916, but they later suffered devastating defeats at the hands of the Russians during the Caucasus Campaign. Although significant gains—such as the takeover of Azerbaijan—were made, Armenian resistance and widespread revolts in the Arab provinces brought about the effective disintegration of the empire by the end of the war. By 1918 the Ottoman empire was being pulled from every direction by the competing forces of ethnic nationalism.

The Arab Revolt of 1916–1918, led by Hussein ibn Ali in the Hejaz (Arabian Peninsula), coupled with sustained British attacks on strategic Ottoman installations led to the eventual collapse of the empire. On October 30, 1918, the Armistice of Mudros concluded World War I in the Middle East and obligated the Ottomans to renounce their entire empire except for their possessions in Anatolia. The victorious Allies soon undertook the partitioning of the Ottoman empire with the signing of the Treaty of Sèvres (August 10, 1920) under the mandates of Britain and France. The boundaries of this partitioning had been earlier determined by the two powers in the secret Sykes-Picot Agreement (1916). The harsh terms of these treaties, however, brought about the outbreak of the Turkish War of Independence (1919–1923), led by a movement of Turkish nationalists under the leadership of Mustafa Kemal (Atatürk). The Turkish War of Independence resulted in the dissolution of the Ottoman parliament and the establishment of the Grand National Assembly, which convened in Ankara on April 23, 1920, and declared Kemal its first president. The Ottoman dynasty was soon abolished in 1922, and on October 29, 1923, under the terms of the Treaty of Lausanne, the Republic of Turkey was established.

—Hussein Banai

Bibliography

- Kayali, Hassan. *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire, 1908–1918*. London: University of California Press, 1997.
- Kent, Marian, ed. *The Great Powers and the End of the Ottoman Empire*. London: Frank Cass, 1996.
- Lieven, Dominic. "Dilemmas of Empire: Power, Territory, Identity." *Journal of Contemporary History* 34(2) (1999): 163–200.

Macfie, A. L. *The End of the Ottoman Empire, 1908–1923*. Essex, UK: Addison Wesley Longman, 1998.

Collapse of the Chinese Empire

The Manchu-ruled Qing empire collapsed in 1911 after a decade of superficial reform and the growing alienation of the majority of the Chinese population. The Empress Dowager Cixi (1835–1908) and senior Manchu officials initiated limited reforms that aided the suppression of domestic uprisings and the resistance against foreign intervention. Yet the empress did not genuinely support reform and chose to engage in the process solely as a means to retain Manchu domination. Chinese reformers became convinced that fundamental government reorganization was impossible and gravitated toward anti-Manchu revolutionary activity. The 1911 Revolution ended Manchu rule in China.

Cixi enacted a series of reforms beginning in 1901. The most significant of these reform policies occurred in the areas of education and the military. Education was the heart of the Qing political system and served as a means of inculcating the social ideology of an orthodox state. Passing the civil service examination required intimate knowledge of the Confucian classics and elevated successful candidates into the social elite of China. The educational reforms struck at this status by establishing a new school system, combining Chinese history and classics alongside foreign subjects, as a second path to government office. These educational reforms encouraged Chinese students to study abroad and altered the contents of the civil service exam to include questions pertaining to Western subjects. The education reforms were similar to those proposed by the Guangxu emperor in 1898, which were suppressed by Cixi and conservative Manchu leaders. These reforms languished due to insufficient funds and the lack of proper facilities and teachers, but they did achieve the abolition of the civil service examination in 1905.

The Manchu rulers also oversaw the creation of a modern military force. Designed to replace the inefficient and obsolete Green Standard

Army and Manchu Bannermen, New Army units were recruited from their home province and stationed at strategic locations throughout the country. Following the abolition of civil service exams, a military career received greater interest and newfound prestige. Officers for these New Army units received training at military academies, and many graduates went on to study abroad, in particular in Japan. Those officers who studied in Japan returned with anti-Manchu sentiments and revolutionary ideals. They served in New Army units that played critical roles in the 1911 Revolution.

The Japanese defeat of Russia in 1904–1905 sent shockwaves throughout Asia. Japan emerged as the leading power in Asia. Chinese reformers looked to the creation of a Japanese-style constitutional monarchy as a remedy for China's continued weakness and failed reform programs. Chinese reformers believed that constitutionalism offered the establishment of civil rights and personal liberty. Others believed that the creation of representative assemblies at the provincial and national levels might subvert Manchu domination. The Empress Dowager and Manchu officials endorsed the creation of a constitutional monarchy as a means to increase control and limit Chinese influence at court. Cixi used the extended debate over constitutionalism, which began in September 1906, to centralize more power in Manchu hands at the expense of weakening the economic and military powers of provincial officials, usually Chinese.

The creation of an outline constitution authorizing overwhelming powers for the Manchu emperor did not change Cixi's distaste for fundamental reform, especially Western-inspired government reorganization. She urged a nine-year delay in its enactment. Even after Cixi's death in 1908, Manchu officials continued to delay enacting elements of constitutional reform in the face of rising Chinese demands to form a national parliament. The final blow to Chinese reformers' constitutional hopes was the creation of the Royal Cabinet in 1911. This cabinet included eight Manchus, five of whom were imperial relatives; one Mongol; and four Chinese. Chinese protests were ignored as Manchu officials cited the powers outlined in the constitu-

tion, which permitted the throne absolute authority over appointments.

While senior Manchu officials delayed and distorted reform efforts, anti-Manchu sentiment deepened. The leading revolutionary in this period was Dr. Sun Yatsen (1867–1925) and his organization, the Revolutionary Alliance. Sun had acquired his education abroad and had become convinced that an armed uprising was necessary to end Manchu domination of China. Sun's political philosophy was contained in his *Three Principles of the Peoples* (*Sanmin Zhuyi*). The three principles were nationalism, which called for the end of Manchu rule and foreign intervention; democracy, to establish a republic based on the idea of popular sovereignty; and socialism, sometimes called "people's livelihood," that promised "land to the tiller." Between 1895 and 1911, Sun and his supporters staged ten revolts.

Growing anti-Manchu sentiment as well as repeated failures to enact substantive reform fanned a revolutionary atmosphere that culminated in the 1911 Revolution. The triggering event was the accidental explosion of a bomb in the city of Wuchang on the Yangzi River on October 9, 1911. When police investigated the scene, they found the student revolutionary bomb makers, revolutionary tracts, and membership lists, the latter of which included the names of New Army officers and troops stationed in the area. Fearing arrest, the New Army units spontaneously initiated an uprising without preparation or leadership. Sun, for example, was traveling in the United States and learned of the revolution by reading a newspaper.

Manchu leadership in the provinces and at the capital failed to meet the challenge. By the middle of November, 15 provinces, following some combination of New Army units, old scholar-gentry, rich merchants, secret society members, and returned overseas students, seceded from the Qing empire. With a stalemate on the battlefield between Qing loyalist and revolutionary forces, the last Manchu emperor abdicated on February 12, 1912.

The 1911 Revolution succeeded in ending 268 years of Manchu rule in China. It also marked the end of a 2,000-year-old Chinese dy-

nastic tradition. The Mandate of Heaven, the Son of Heaven, the Confucian-based moral system, and the civil service exam system were swept aside by the fledgling Republic of China.

—Thomas McGrath

Bibliography

- Hsu, Immanuel C. Y. *The Rise of Modern China*. 4th ed. Oxford, UK: Oxford University Press, 1990.
- MacKinnon, Stephen R. *Power and Politics in Late Imperial China: Yuan Shi-kai in Beijing and Tianjin, 1901–1908*. Berkeley: University of California Press, 1980.
- Schoppa, R. Keith. *Revolution and Its Past: Identities and Change in Modern Chinese History*. Upper Saddle River, NJ: Prentice Hall, 2002.

Collapse of the Japanese Empire

Japan initiated the building of its Asian empire in the late nineteenth century at the expense of China and accelerated its growth by defeating Russia in 1905. The shocking defeat of a European power by an Asian power elevated Japan's international standing and conferred upon the Asian nation Great Power status. Japan's continued expansion of its empire in Manchuria in the 1930s and its prolonged conflict with China alienated the United States, Great Britain, and the Soviet Union. These ambitions also led to the fateful decision to attack the United States at Pearl Harbor in December 1941. Initial military success quickly ceased, and Japan's surrender in 1945 witnessed the end of overseas empire and dramatic postwar political reform.

By the eve of World War II, Japan had constructed an extensive overseas empire including Manchuria, Korea, Taiwan, occupied areas of China, and island holdings in the Pacific. The conflict in China, initiated in 1937, set in motion the downfall of Japan. Japan's military leaders did not sanction or desire a prolonged conflict with China; rather, they wanted to promote Manchuria's economic development to aid Japan in a future conflict with the Soviet Union. The conflict with China diverted resources from this effort and bogged down the Japanese Army. The Sino-Japanese War demonstrated the limits of

Japan's military capacity to force a resolution and political will to withdraw. The war also heightened tensions with the United States and Great Britain.

As the war in China dragged on, Japan sought diplomatic means to neutralize the reinvigorated U.S. support for China. Japan concluded the Tripartite Pact with Germany and Italy in September 1940. Japan expected this treaty to force a more moderate stance by the United States; instead, it sharpened the American position. The United States extended loans to China, embargoed the shipment of scrap iron to Japan, and insisted upon a Japanese withdrawal from China. When Japan entered French Indochina, the United States froze Japanese financial assets and added oil to the embargo list.

➤ ACCEPTANCE OF THE POTSDAM DECLARATION (1945)

On August 15, 1945, Emperor Hirohito issued a radio broadcast effectively declaring Japan's unconditional surrender and bringing an end to World War II. It was the first time that the people of Japan had ever heard their emperor's voice. The following is an excerpt.

"Moreover, the enemy has begun to employ a new and most cruel bomb, the power of which to do damage is, indeed, incalculable, taking the toll of many innocent lives. Should we continue to fight, it would not only result in an ultimate collapse and obliteration of the Japanese nation, but also it would lead to the total extinction of human civilization.

Such being the case, how are we to save the millions of our subjects, nor to atone ourselves before the hallowed spirits of our imperial ancestors? This is the reason why we have ordered the acceptance of the provisions of the joint declaration of the powers."

Source

Emperor Hirohito, "Accepting the Potsdam Declaration (1945)," Radio Broadcast, Recorded by the Federal Communications Commission, <http://www.mtholyoke.edu/acad/intrel/hirohito.htm>.

The Japanese government, dominated by the military, feared the loss of prestige if it acquiesced to American demands. Instead, the decision was made to challenge the U.S. naval strength and invade Southeast Asia to secure the critical oil and rubber resources necessary for Japan's national security. Following Japan's surprise attack on the American naval base at Pearl Harbor on December 7, 1941, the Japanese Army and the Japanese Navy enjoyed repeated success. Japanese forces seized the British naval base at Singapore, secured the oil resources of the Dutch East Indies, and severed the supply link to China by taking Burma. The Japanese Navy captured the Philippines and established an extensive ring of Pacific island bases to protect the home islands.

To justify its invasion of Southeast Asia, Japan espoused a doctrine of Pan-Asianism and expelled Western colonial rule. Japan promised a "new world order" free of Anglo-American domination and membership in the Great East Asian Co-prosperity Sphere. However, the goal of the Co-prosperity Sphere was not the stated equalization of nations but rather the subordination of other Asian nations to Japan. At first, Southeast Asians rejoiced at the arrival of the Japanese Army as liberators, but the heavy imposition of Japanese political, economic, and cultural policies as well as its brutal practices alienated the populace.

Six months after the flurry of success, the military tide turned irrevocably against Japan. Following the decisive naval battle at Midway in June 1942, Japan was on the defensive against a more powerful American military and remained tied to heavy commitments on the Asian mainland. The U.S. island-hopping campaign in the Pacific, whereby American forces bypassed heavily defended Japanese islands in favor of easier targets, collapsed the buffer created in the early months of the war. Japan's home islands were under repeated bombings, including devastating fire bombing raids by July 1944. An incendiary raid on Tokyo in March killed more than 100,000 people. Cities throughout Japan were systematically devastated. The Japanese populace became weary of war and demoralized.

Even though it was clear that Japan possessed no hope of victory, the Japanese leadership refused to accept defeat. For the Japanese, the

stumbling point was the postwar disposition of the emperor, whom the Japanese people revered as divine. Japanese leaders wanted guarantees that the imperial institution would be preserved and that the emperor would not face war crimes trials. The Allies insisted on unconditional surrender. To compel a resolution, the United States dropped the first atomic bomb on the city of Hiroshima on August 6, 1945. Three days later, a second atomic bomb was dropped on Nagasaki. The immediate death toll in the two cities was over 125,000 people, and tens of thousands more later died as a result of radiation sickness.

Confronted by the destructive capacity of this new weapon and the invasion of Manchuria by the Soviet Union, Emperor Hirohito personally intervened to accept the Allied demands. On August 15, 1945, the emperor made a public broadcast to the Japanese people to surrender. After the war, Japan relinquished its overseas empire and experienced dramatic political reform at home. The imperial institution was preserved, but the emperor renounced his claim of divinity. A new constitution, shaped in fundamental ways by the occupying American administration, ushered in a new political order in Japan.

—Thomas McGrath

Bibliography

- Dower, John W. *War without Mercy: Race and Power in the Pacific War*. New York: Pantheon, 1986.
- Iriye, Akira. *Japan and the Wider World: From the Mid-Nineteenth Century to the Present*. London: Longman, 1997.
- Myers, Ramon H., and Mark R. Peattie, eds. *The Japanese Colonial Empire, 1895–1945*. Princeton, NJ: Princeton University Press, 1984.
- Young, Louise. *Japan's Total Empire: Manchuria and the Culture of Wartime Imperialism*. Berkeley: University of California Press, 1998.

The Collapse of the Tsarist Russian Empire

By the end of the nineteenth century, tsarist Russia was a deeply flawed entity that had moved well beyond its political and social apex. The regime's competition with the modernizing West had only intensified its long-term problems, with World

War I (1914–1918) delivering the final blows that brought it down. While Tsar Nicholas II was certainly ineffective in his efforts to preserve the monarchy, it is not certain that someone else or different policies might have been able to save it. The world was a different place following the war, as the demise of the Ottoman, Prussian, and Austrian empires illustrated.

Among the most fundamental problems of tsarist Russia that had resisted attempts at reform were the unmanageable size of the state, the endemic poverty of the agrarian sector, the alienation of the educated and Westernized elite, and the autocratic traditions of the tsar, which stifled creativity and initiative among the citizenry.

The geographical reach of the state—the largest by far in the world—meant that it was always difficult to develop any sense of unity or patriotism among the people, who included many different nationalities and religions. This problem, already recognized by both Peter the Great and Catherine the Great in the eighteenth century, was intensified in the nineteenth century after the Napoleonic era with the spread of nationalism. Although the government tried to use modern communications to strengthen its control, others used the same to spread different messages among the people. When the crisis arrived in 1917, the empire disintegrated as various nationalities seceded one after the other.

Throughout modern Russian history, the agricultural base has been barely adequate to support the needs of the people. Historians use the poverty of Russian agriculture to explain both the communal system of farming that was used in many parts of Russia and the very late development and survival of serfdom in Russia (abolished only in 1861). These two institutions then served as an effective brake on both modernization in the countryside and on industrialization. Moreover, productivity was too low to support much urbanization. Thus, historians also point to the so-called missing middle class in Russia as an unfortunate result of agricultural poverty. When the Russian war effort in World War I descended into catastrophe, it was not long before the soldiers—peasants in uniform, as they were called—began to desert their posts and leave the front to return home and seize the land from their landlords.

➤ RASPUTIN AND THE ROMANOV

Grigori Rasputin (1869–1916) was a Russian holy man who had a tremendous influence in the Romanov royal household in the last days of tsarist Russia. He was able to supposedly heal the hemophilia of the young tsarevich Alexei (heir to the throne) and was also a trusted counselor to both Tsar Nicholas II and Tsarina Alexandra, a situation that was not kindly looked upon by many in the royal household. Rasputin's demands on the royal couple, his undue influence in government circles, and his notorious sexual exploits were the talk of the Saint Petersburg elite and were considered a public scandal for the Romanovs. The legend of Rasputin's prolonged murder, involving his seemingly superhuman refusal to die, asserts that his plotters poisoned, stabbed, shot, and drowned him. Rasputin was murdered on December 29, 1916, because he was seen as part of the decay of the tsarist court and the growing ineptitude of Nicholas II to lead Russia to victory in World War I. As the Russian Revolution ensued, the Bolsheviks and their supporters viewed Rasputin as a symbol of all that was wrong with the Russian autocracy.

—Abraham O. Mendoza

Not only were disgruntled nationalists and impoverished peasants uninterested in supporting the imperial state, but the educated elite in Russia, the intelligentsia, had in large part committed itself to some form of opposition to the autocratic tsar. This opposition included the liberals who sought an expansion of constitutionalism and the powers of the Duma and the revolutionaries who were dedicated to the destruction of the entire political and social order. Among the latter, the Socialist Revolutionary Party was the most popular and devoted itself to the peasantry, while the Social Democratic Party, both the Menshevik and Bolshevik wings, dedicated itself to raising the revolutionary consciousness of the belatedly growing Russian working class, or proletariat.

The crisis itself resulted when World War I overwhelmed the Russian state and destroyed any progress that had been made toward constitutionalism or stability in the wake of the Revolution of

RUSSIAN EMPIRE, 1914



1905. Nicholas II made a fundamental error when he insisted on refurbishing the image of autocracy in Russia by calling on the tradition of Peter the Great and Alexander I (who led Russian troops in defenses against Swedish and French invasions, respectively) and assuming the role of commander in chief of the Russian armed forces. Not only was he inadequate to this task, but when the war effort went badly, the blame fell directly on him. Perhaps even worse, it meant that the political leadership of Russia devolved effectively to Empress Alexandra (a German by birth and an unpopular figure in Russia for many reasons) and her spiritual and political adviser, the bizarre and unsavory monk Grigori Rasputin (1869–1916). Rasputin's influence over Alexandra and thus also Nicholas, a devoted husband and father, stemmed from his ability to stabilize the condition of the Romanovs' hemophiliac son and heir to the throne, Alexis, in moments of medical crisis. Rasputin likely accomplished this by calming the frightened and suffering boy perhaps through hypnosis, thus slowing his blood flow and giving his body a chance to heal. Rasputin was convinced

that it was his God-given mission to save the Russian autocracy from the forces of Western, secular, constitutional reform. He frequently advised Alexandra to ask Nicholas to dismiss certain reform-minded ministers and to limit cooperation with the constitutionally elected Duma. Rasputin's influence was decidedly pernicious and helped to deprive the tsar of any remaining goodwill among the most able political leaders in Russia at the time.

The imperial Russian state fell in February 1917 in the midst of military disaster, the disintegration of empire, the collapse of the Russian war effort, strikes and other disorders in the major cities, and an incompetent government in St. Petersburg. On March 15, 1917, the tsar was confronted by a delegation from the Duma with the demand that he abdicate the throne. This, in great sorrow and no small relief, he did in his own name and that of his ailing son, Alexis, thus bringing to an end both the Romanov dynasty that had ruled Russia since 1613 and also the imperial Russian state. A provisional government that proclaimed itself in the wake of the abdication survived for less than eight months in deteriorating conditions

before itself collapsing in October 1917, giving up power to the Bolsheviks.

—Anita Shelton

Bibliography

- Bartlett, Roger P. *A History of Russia*. New York: Palgrave Macmillan, 2005.
- Perrie, Maureen. *The Cambridge History of Russia*. New York: Cambridge University Press, 2006.
- Smith, S. A. *The Russian Revolution: A Very Short Introduction*. New York: Oxford University Press, 2002.

The Collapse of the Austro-Hungarian Empire

The decision to go to war in 1914 following the assassination of the heir to the throne of the Habsburg empire, Franz Ferdinand, in Sarajevo would seal the fate of the Habsburg monarchy and lead to the dismemberment of the empire. Once the dominant power in Europe, especially during the sixteenth century (often referred to as the Age of Charles V), by the end of the Napoleonic Wars (1803–1815) its weaknesses were clearly evident. Consistently defeated on the battlefield by the French emperor, the Habsburg monarchy used its hosting of the Congress of Vienna in 1815 to maintain at least the aura of a great power and to help engineer the “concert” of Europe in an attempt to resist future revolutions that might imperil the state. With the emergence of nationalist movements in Europe following the French Revolution, the multinational Habsburg state was threatened by both the awakening of its various ethnic communities and the ever-present danger of war in Europe.

In 1848 revolution in France quickly spread to the Habsburg lands, leading to the resignation of Prince Clemens von Metternich, the architect of the Congress system, and the subsequent flight of the royal family from Vienna. Although Habsburg forces would ultimately suppress the revolutionary movements, most bloodily in Hungary, which had declared its independence in 1849, outside the boundaries of the empire, the Frankfurt Assembly had adopted the *Kleindeutsch* (“Little German”) position, which called for the exclusion of the Habsburg lands from a future German state. Vienna’s primacy in “Germany,” which had dated

for hundreds of years, would soon end in the Austro-Prussian War of 1866.

The crushing defeat at the hands of Prussia forced the government to make concessions to the Hungarians, the most troublesome of its many national groups. The resulting *Ausgleich* (Compromise) with the Hungarians created the Dual Monarchy of Austria-Hungary, a move that temporarily quelled the prospects of internal dislocation but did not address the larger issue of similar nationalist yearnings by the other ethnic peoples of the empire.

While it is often asserted that the Habsburg state was the “second sick man of Europe,” its demise was by no means certain. Austria-Hungary occupied a critical position in the heart of Europe with an intellectual vitality unsurpassed anywhere. Budapest, Prague, and Vienna were centers of culture that saw the musical genius of Richard Strauss, Béla Bartók, Ferenc (Franz) Liszt, and Bedřich Smetana (to name but a few); the birth of modern psychology under Sigmund Freud; the writings of Endre Ady, Ján Kollár, and Franz Kafka, among others; and the art of giants such as Josef Mánes and Alfons Mucha. Nevertheless, nationalism was the empire’s Achilles’ heel, and by the dawn of the twentieth century the state’s inability to deal with its ethnic problems had caused the monarchy to reach a state of virtual political atrophy.

Despite the fact that the *Ausgleich* led to at least a measure of stability between Vienna and Budapest, the compromise did not address the empire’s wider problems, principally the fact that over one-half of its population was neither German nor Hungarian. With the awakening of national consciousness among the other ethnic populations, especially the Czechs and Croats, during the nineteenth century, movements that began as cultural and linguistic revivals by the last quarter of the century had turned increasingly political in nature. The emperor, Franz Joseph, now faced pressure from these groups to extend rights greater than most German or Hungarian political leaders were willing to offer. The Hungarians especially refused to consider expanding the provisions of the *Ausgleich* to include the Czechs, Croats, and other Slavic groups within the empire; this would have resulted in changing dualism to trialism, thereby diluting the

THE OTHER BOLSHEVIK STATE—“RED” HUNGARY

The cessation of formal hostilities in 1918 did not bring peace to Europe, as evidenced by the outbreak of civil war in Russia and the resulting Allied intervention in the new Bolshevik state aimed at toppling the government of Vladimir Lenin. The rise of communism, however, was not limited to Russia. The most significant communist uprising outside of Bolshevik Russia occurred in Hungary, where a “red” (communist) regime, led by Béla Kun, came to power in March 1919 and would last for 133 days. The communist government nationalized banks, collectivized agriculture, and attacked religion, measures that quickly lost the support of much of the population, especially the peasants. Civil war quickly ensued. Meanwhile, in April the Kun government also found itself under attack by Czechoslovak and Romanian forces. In late July, with Romanian troops nearing Budapest and under pressure from Hungarian “white” (anticommunist) forces, Kun fled into exile in Moscow. As the communist government fell the White Terror ensued, a bloody repression that saw thousands killed.

In part because of fears of the Soviet Republic in Hungary, the provisions of the Treaty of Trianon, which formally ended World War I, were the harshest of any directed at the defeated powers. Hungary lost two-thirds of its territory to its neighbors and over 50 percent of its population. As a result, although Red Hungary was long gone, the new government in Budapest remained implacable foes of the Paris Peace Accords, thus further undermining the fragile peace in Central Europe during the interwar years.

—Richard Frucht

advantageous position held by the Hungarians after 1867. Instead, Budapest pursued a policy of Magyarization, the imposition of Hungarian language and culture upon the nationalities in their half of the empire. Likewise, many ethnic Germans, who saw themselves as the true leaders of the state, were angered by the loss of the empire’s “German” character. This led to the emergence of a strongly jingoistic German movement centered in Vienna and Bohemia, a highly charged atmosphere at times anti-Semitic in tone and posture, that would see a young Austrian named Adolf Hit-

ler caught up in its undercurrents. This combination of nationalism, the refusal by Hungarians to extend the rights of the Ausgleich, and an increasing radicalization within the German community proved to be a volatile mixture. Political groups that advocated moderation and political evolution were pushed aside by often younger politicians who were more strident in approach. Thus, any social, economic, or political slights, real or perceived, caused a greater sense of friction and dissatisfaction.

Whether the ethnic tensions would have in the end proven to be intractable, thereby resulting in the internal fracturing of the state, is at best a matter of conjecture. The empire had been resilient in the past, and while some called for the breakup of the empire, those voices were still a minority within the overall population. Instead, it was war that brought an end to the Austro-Hungarian empire.

With its removal from German and Italian affairs following the wars for Italian and German unification, Vienna increasingly directed much of its foreign policy toward the Balkans, the most unstable part of Europe. When Vienna formally annexed Bosnia-Herzegovina in 1908, tensions with Serbia, which saw Bosnia as its rightful territory, rose. On June 28, 1914, Franz Ferdinand was shot in the Bosnian city of Sarajevo by a Serb nationalist, a plot that was reportedly known in the highest quarters of the government in Belgrade. A month later Vienna declared war on Serbia, the act that soon widened into World War I. Like its other great power counterparts, Vienna thought that the war would be over quickly; however, it was to drag on for four years and rip the state asunder.

At first almost all segments of Habsburg society rallied to the cause, but as the war dragged on with no end in sight, nationalist leaders, often in exile, pressed at first for reforms and by 1917–1918 for national self-determination. With the promulgation of U.S. president Woodrow Wilson’s Fourteen Points, the breakup of the empire and the pursuit of national self-determination had become the objective of both the Allies and much of the population.

By 1918 shortages abounded, and strikes were rampant. The new emperor, Karl, who had succeeded Franz Joseph in 1916, could not stem

the tide. By the time Vienna signed an armistice on November 3, 1918, the state had already fractured. Although Karl had not abdicated, he was the emperor of a state that no longer existed.

At the Paris Peace Conferences of 1919, the formal dismemberment of the Austro-Hungarian empire was codified in the Treaty of St. Germain with Austria and the Treaty of Trianon with Hungary. What was once an empire now became a region of small states, often referred to as a “shatter zone.” Austria and Hungary became independent nations, as did Czechoslovakia, which also included lands taken from Germany and Russia. Other parts of the empire were included in the newly reconstituted Poland; the Kingdom of Serbs, Croats, and Slovenes (later known as the Kingdom of Yugoslavia); and Greater Romania. For the victors there was great jubilation; for the vanquished, there could never be acceptance of lost land (Hungary) or the restrictions on joining with Germany (Austria). What had once been the stabilizing force in Central Europe had now become a region of tension and instability and a central factor leading to war two decades later.

—Richard Frucht

Bibliography

- Frucht, Richard, ed. *Encyclopedia of Eastern Europe: From the Congress of Vienna to the Fall of Communism*. New York: Garland, 2000.
- Jaszi, Oscar. *The Dissolution of the Habsburg Monarchy*. 5th ed. Chicago: University of Chicago Press, 1971.
- Kann, Robert A. *A History of the Habsburg Empire, 1526–1918*. Berkeley: University of California Press, 1974.
- Sked, Alan. *The Decline and Fall of the Habsburg Empire, 1815–1918*. 2nd ed. London: Longman, 2001.

Collapse of the German Empire

The German Empire (Deutsches Reich) was formed at the climax of the Franco-Prussian War in January 1871 by the unification of major and minor Germanic states in north-central Europe. These states included the kingdoms of Prussia, Bavaria, Saxony, and Württemberg and almost two dozen other territories and free cities. The

kingdom of Prussia was the dominant force in the new nation of Germany (Deutschland) and the king of Prussia became the German emperor (*Deutscher Kaiser*). Stretching from France to Russia as a unified and industrialized state with a powerful military, Germany’s establishment altered the balance of power in Europe. When Wilhelm II (1859–1941) acceded to the thrones of Prussia and the German Empire in 1888, his policies to make Germany a world power soon created a coalition of enemies that along with Germany’s own internal growing social, political, and economic contradictions would see the empire and monarchy overthrown in a revolutionary upsurge in November 1918.

The empire’s constitution gave the elected German parliament, the Reichstag, little actual power. Foreign and defense affairs were in the hands of the kaiser, and he appointed all government ministers who were responsible only to him and not to the Reichstag. As king of Prussia he directly ruled the wealthiest, largest, and most populous state of Germany, which had veto power in the Reich’s upper chamber, the Bundesrat, regarding any constitutional reform. The Reich’s rapid economic growth after 1871 increased the size of its working and middle classes; however, the suffrage system favored the sparsely populated rural areas that were controlled by the conservative Prussians and other aristocracies over the densely populated urban areas such as Berlin, Hamburg, and the Ruhr. Because the Reichstag was not the power center of imperial Germany and the political system was heavily autocratic, domestic politics after 1900 became very polarized, with the new working class in particular calling for major political, economic, and social changes. Its political voice quickly became the Marxist-inclined Sozialdemokratische Partei Deutschlands (Social Democratic Party, SPD), which became the largest party in the Reichstag in 1912 with 34.8 percent of the vote and 27.7 percent of the seats. This victory created a crisis for the ruling class, who regarded the socialist, anti-imperialist, and anti-monarchical SPD as unpatriotic and subversive.

In response to the growing support for the SPD in the period after 1900, German ruling circles followed a nationalistic military and foreign policy to rally middle-class and peasant support

➤ EMPEROR WILHELM II

Wilhelm II (1859–1941) was born on January 27, 1859, in Berlin. Early in his life he developed a penchant for a belligerent, tactless, and impulsive approach to problems and people, and this outlook stamped his personal and political life until his death. On June 15, 1888, Wilhelm became the German kaiser. Having come to the throne with the idea that he was going to govern as well as reign, he forced the resignation (1890) of the chief political architect of the German Empire, Otto von Bismarck (1815–1898), who had served as chancellor since its inception in 1871. With the cautious Bismarck gone, Wilhelm embarked upon a so-called New Course in which he hoped to exert decisive influence on the government of the empire, make Germany a major colonial power, and create a formidable navy. These goals and his belligerent style brought Germany into an arms race with other European powers and ultimately into World War I in August 1914. Despite his love of the trappings of militarism, he had little military experience and was mentally and emotionally unable to play the role of a wartime leader. By 1916 the empire had effectively become a military dictatorship under the control of Paul von Hindenburg (1847–1934) and Erich Ludendorff (1865–1937). A mutiny in the German Navy and the beginning of the German Revolution in early November 1918 coupled with Germany's impending defeat by the Allies forced Wilhelm to abdicate as German emperor on November 9, 1918. He died in exile at Doorn in the Netherlands on June 4, 1941.

—Alexander M. Zukas

for the political and social status quo. In particular, a desire for greater prominence on the world stage (*Weltpolitik*) led to a massive rearmament program after 1900 that included the creation of a high seas battle fleet and allowed the government to find parliamentary majorities for its major pieces of legislation. German foreign policy and rearmament so alarmed Britain that it allied itself with France in 1904 and with Russia in 1907, bringing forth the very specter that German policy meant to avoid: encirclement. Increasing social unrest led to a series of major strikes in 1912, and the imperial government entertained plans to repress the German working-class movement with military force in a state of

emergency. By 1913 politics in Germany had become polarized between those who wanted to make the Reichstag into the center of political decision making and those who wanted to preserve the monarchical order or create an even more dictatorial state if necessary to preserve their property, prerogative, and status.

The kaiser and his advisers linked civil unrest and foreign war in their minds. They believed that Germany's external and internal enemies aimed to destroy the monarchical order. The chief of the German General Staff, Helmuth von Moltke (1848–1916), believed that Germany would lose its military edge to its enemies by 1916 at the latest, so the earlier Germany went to war, the better chance it had of winning. The assassination of Austrian archduke Franz Ferdinand (1863–1914) gave the German General Staff the opportunity to fight a war that, if won, would stabilize the German monarchy's international and domestic positions.

In August 1914 Germany declared war on Russia and France. In the same month commanding generals were authorized to secure law and order in their districts, censor news, and observe opponents of the regime. Their authority stemmed from the 1851 Prussian Siege Law, which was invoked in case the SPD, which vocally opposed war, voted against war and war credits or mounted street demonstrations. The military was ready to arrest SPD Reichstag members and use lethal force to break up demonstrations. However, the SPD did vote to support the war and agreed to a *Burgfrieden* (domestic peace) for the duration of the war. Popular support for the war was high, and everyone expected that it would be over by Christmas 1914. The war, however, dragged on for four more years, and the cost to Germany was staggering: 2.4 million war casualties and 300,000 civilian deaths from disease and malnutrition.

The war was devastating for the German economy. The banking system was badly disrupted, and export-oriented businesses, the engine of German economic growth, lost their overseas assets and markets. Furthermore, inflation spun out of control, money became devalued, and consumer prices more than doubled. As the war became a stalemate, armament production was given a high priority and culminated in

the Hindenburg Program of 1916 that set production targets, prices, and wages and further militarized the German economy. Most Germans, especially workers, saw their living standards drastically reduced. Rationing helped, but black market items commanded a better price. Poor harvests in 1916 and 1917 made the situation catastrophic, and malnutrition and starvation became common. Food riots, demonstrations, and strikes occurred frequently despite martial law. Organized by revolutionary shop stewards and workers' councils, the first mass strikes occurred in April 1917. In one strike, 200,000 workers walked out in Berlin alone, and civil unrest became a daily event in much of the nation. This popular upsurge encouraged left-wing politicians to found popular radical movements such as the Independent Social Democratic Party (USPD) and the Spartacus League that gave political voice and organization to massive grassroots discontent.

Erosion of support for the monarchy was growing, and in January 1918 strikes of more than a million workers occurred in major German cities. The polarization of German politics had reached the breaking point. Despite the withdrawal of the Soviet Union from the war in March 1918, the German General Staff realized by September 1918 that Germany was going to lose the war. In October 1918 the USPD called for the overthrow of the monarchy and the installation of a socialist republic. An 11th-hour

conversion of the autocratic German political system into a constitutional monarchy in the same month failed to attract popular support. Instead, a revolt by sailors at Kiel on October 30 launched a revolutionary movement across Germany. After years of material deprivation, left-wing agitation, and pent-up anger at the inequalities and injustices of the old regime, masses of workers, soldiers, and sailors wanted it swept away. The German Revolution of 1918 had begun. On November 7 Kurt Eisner (1867–1919) of the USPD proclaimed a socialist republic in Bavaria, and faced with mutinies and revolutionary upheaval, the kaiser abdicated on November 9, 1918. With this act the German monarchy and empire collapsed, and the SPD, USPD, and the Workers' and Soldiers' Councils of Berlin proclaimed a German Republic.

—Alexander M. Zukas

Bibliography

- Berghahn, V. R. *Modern Germany: Society, Economy and Politics in the Twentieth Century*. 2nd ed. New York: Cambridge University Press, 1987.
- Feuchtwanger, Edgar. *Imperial Germany, 1850–1918*. London: Routledge, 2001.
- Kitchen, Martin. *A History of Modern Germany, 1800–2000*. London: Blackwell, 2006.
- Stürmer, Michael. *The German Empire, 1870–1918*. New York: Modern Library, 2000.
- Wehler, Hans-Ulrich. *The German Empire, 1871–1918*. New York: Berg, 1997.

■ Introduction: The Mandate System

Although the 2003 Iraq War has focused worldwide attention on the Middle East, the region has had a long and often troubled history of foreign intervention. Outside influence in the area during modern times began with World War I. The global nature of the war brought Allied troops to northern Africa and the Middle East to combat the Ottoman empire, which had joined the Central Powers in late 1914. British authorities encouraged the local Arab population, which had suffered under Ottoman rule for years, to rebel. The subsequent

Arab Revolt (June 1916–October 1918) was spearheaded by Husayn ibn Ali, the sharif of Mecca, who had been given assurances of support from British high commissioner in Egypt Sir Henry McMahon.

After the defeat of the Ottoman empire and the end of World War I, the victorious European allies quickly carved up the region for themselves. The Treaty of Sèvres (1920) removed all Arab regions from the control of the newly created nation of Turkey. Saudi Arabia was made a nominally independent state, while the rest of

the Middle East was divided into League of Nations mandates. Through this system Syria and Lebanon came under French control, while Iraq and Palestine came under British control. Although the 1923 Treaty of Lausanne returned several territories to Turkey, the mandate system remained in place.

The colonial period in the Middle East lasted until the mid-1940s, despite growing Arab nationalism. Although Iraq was granted independence on October 3, 1932, the other mandate territories did not receive independence until during or immediately after World War II: Lebanon on November 22, 1943; Syria on April 17, 1946; and Jordan on May 25, 1946. Palestine, the last Middle Eastern mandate to gain sovereignty, became the State of Israel on May 14, 1948. That decision, perhaps the most controversial move made by a foreign power regarding the Middle East, was based in part on the 1917 Balfour Declaration, which stated that the British government “view[ed] with favour the establishment in Palestine of a national home for the Jewish people.”

The Middle East quickly became an important theater in the ensuing Cold War. In addition to the region’s inherent economic and strategic value to foreign nations, it now became a proxy battlefield in the conflict between East and West. The Suez Crisis of 1956 highlights the nature of foreign intervention in the Middle East during that period. In 1956 Egyptian president Gamal Abdel Nasser decided to nationalize the Suez Canal Company in order to finance the creation of the Aswan High Dam. Although he promised to compensate foreign shareholders, this decision infuriated Great Britain and France, which had previously received a majority of the company’s profits. In addition, the French government was furious with Nasser’s support of anti-French campaigns in nearby Algeria and Morocco. The two aggrieved European powers found a regional ally in Israel, which had been warring with Egypt since its establishment and considered the nationalization of the canal a threat to the safety of its own shipping. The joint military campaign, however, was cut short by the entrance of the United States, which considered Egypt an important Cold War ally.

—*Maxine Taylor*

Role of the League of Nations in the Mandate System

At the end of World War I, with the dissolution of the German, Habsburg, Russian, and Ottoman empires, the League of Nations instituted a series of guidelines in terms of distributing the former colonial possessions of the aforementioned polities. While the principle of self-determination was utilized for the creation of new states from the former Habsburg and Russian empires in eastern Europe (e.g., Czechoslovakia, Poland, and Yugoslavia), this was not extended to the non-European populations of the defunct Ottoman and German empires. Britain and France, which were the primary powers of the League of Nations, given the exclusion of Soviet Russia and the reluctance of the United States to join, established a system of mandates to rule these territories under the auspices of the League of Nations. Article 22 in the Treaty of Versailles (1919) stipulated the provisions under which these territories would be administered by the mandatory power. However, this status created a situation in which the Mandatory power ruled the territory as a de facto colonial possession, fostering resentment of foreign domination and European hegemony during the interwar period in these myriad regions.

Article 22 roughly assigned three different categories of mandates that were set up along differing sets of criteria that depended on the suggested “level of development” of said people, according to European standards, albeit with paternalist and racist overtones. The Council of the League of Nations stipulated more concrete guidelines as to the character and type of administration of mandates in 1920. The first category of mandates were designated as Class A mandates, which were deemed to have reached a level of development that made them suitable to complete independence upon a short period of tutelage by a mandatory power. Class A mandates were exclusively former Ottoman territories in the Middle East, which included British Transjordan, Mesopotamia, Palestine, and French Syria (which included Lebanon). These were akin to the territorial adjustments agreed to by Britain and France known as the Sykes-Picot

Agreement (1916). These remained mandates until after the end of World War II with the exception of Mesopotamia, which became the independent state of Iraq in 1932. While sections of Turkey proper were promised to Italy and Greece as mandates, these never materialized due to Turkish resistance to the dismemberment of control of Anatolia and Constantinople by the Allies.

Those territories designated as Class B mandates were all former German colonies in sub-Saharan Africa. These were deemed to need a longer period of mandatory administration given their relative level of development vis-à-vis European industrialization and political structures. Belgium was assigned to administer Ruanda-Urundi (modern Rwanda and Burundi), and Britain was assigned to administer Tanganyika (formerly German East Africa, now modern Tanzania), while Togoland (modern Togo) and Kamerun (modern Cameroon) were divided and administered by Britain and France. Given that these were adjoining existing Belgian, French, and British colonies, they were put under the administration of these established governing authorities. While these were mandates of the League of Nations, they were administered as de facto colonies of the mandatory power.

Class C mandates included all former German possessions in the South Pacific and German Southwest Africa. These were deemed to be exclusively administered by colonial authorities of said mandatory power given the lack of development or isolated nature of these territories according to the standards stipulated by Article 22. Many of these were scattered islands in the South Pacific that were divided among Australia, Britain, Japan, and New Zealand. The largest of these, former German New Guinea (modern Papua New Guinea), was granted to Australia for mandatory administration. German Southwest Africa (modern Namibia) was assigned to be administered by the Union of South Africa.

—Abraham O. Mendoza

Bibliography

Andelman, David A. *A Shattered Peace: Versailles 1919 and the Price We Pay Today*. Hoboken, NJ: Wiley, 2007.

➤ TREATY OF VERSAILLES, ARTICLE 22 ON MANDATES

“To those colonies and territories which as a consequence of the late war have ceased to be under the sovereignty of the States which formerly governed them and which are inhabited by peoples not yet able to stand by themselves under the strenuous conditions of the modern world, there should be applied the principle that the well-being and development of such peoples form a sacred trust of civilization and that securities for the performance of this trust should be embodied in this Covenant. The best method of giving practical effect to this principle is that the tutelage of such peoples should be entrusted to advanced nations who by reason of their resources, their experience or their geographical position can best undertake this responsibility, and who are willing to accept it, and that this tutelage should be exercised by them as Mandatories on behalf of the League. The character of the mandate must differ according to the stage of the development of the people, the geographical situation of the territory, its economic conditions, and other similar circumstances.”

—Abraham O. Mendoza

Source

Article 22, Treaty of Versailles, 1919.

Fromkin, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Owl Books, 2001.

Macmillan, Margaret. *Paris 1919: Six Months That Changed the World*. New York: Random House, 2003.

British Mandates

Mandates were granted to Britain and France at the settlement of World War I at Versailles in 1919 as an expeditious way of dealing with the former colonies of the Central Powers. The mandate system was set up in tandem with the organization of the League of Nations to grant the Entente Powers the responsibility of administering former German and Ottoman colonies. The mandate



British general Edmund Allenby enters the Old City of Jerusalem through the Jaffa Gate on December 11, 1917, after capturing the city. Following World War I, the British helped to establish a Jewish state in the region through their administration of the Palestinian Mandate. (Library of Congress)

system worked on the logic that the newly liberated colonies were not considered capable of self-government and that with European administration, after a number of years or perhaps decades, peoples living under mandates would be allowed to self-govern and eventually gain independence. In reality, the populations of the mandates found themselves transferred from the domination of one colonial master to another.

During World War I, British involvement in the Middle Eastern theater of war was characterized by the manipulation of Arab and Jewish nationalisms in addition to attempting to placate French ambitions in the region. In addition to the Sykes-Picot Agreement (1916) with France and the Balfour Declaration (1917) promising a Jewish homeland in Palestine, British strategy in the region and the potential for expanding its re-

gional influence were complicated by providing support and military aid to Arabs fighting against the Ottomans. Initially British military objectives involved securing a wedge in the Ottoman empire to allow the opening of a second front in the East and increased links with Russia. As first lord of the Admiralty and a key war cabinet member, Winston Churchill's stubbornness on opening up a second front in Anatolia led to the Gallipoli fiasco resulting in the butchering of Australian and New Zealander Army Corps (AN-ZAC) troops at the hands of the Ottomans. The failure of this policy shifted British strategy from direct military engagement to one of using diplomacy and intelligence to utilize nascent Arab nationalism as a tool against the Central Powers to supplement British military strength in the region. Ironically enough, the Foreign Office already had plans with France to divide the Middle East from the spoils gained from the Ottomans through the Sykes-Picot Agreement.

Following the war, with the assignment of mandates under the authority of the League of Nations, Britain found itself with the responsibility of administering Palestine, Transjordan, and Iraq in the Middle East and Tanganyika (Tanzania) in Africa. Formerly having backed Arab nationalism and now serving as a mandate power in the Middle East soured Britain's relations with former allies in Arabia and Mesopotamia. The switch from coal to oil by the British Royal Navy also gave Britain a motive to administer Iraq as British oil companies converged on Mosul in the northern region of Iraq. The tenuous relationship with France during the war complicated matters further due to the disagreements over French ambitions in the region and the feeling that they had not gotten all the spoils that were coming to them according to the conditions of the Sykes-Picot Agreement. This very agreement was seen by Arabs as evidence of British duplicity during the war because the agreement contradicted a series of correspondences between the British high commissioner in Egypt, Sir Henry McMahon, and Sharif Hussein of Mecca.

While the Balfour Declaration promised a Jewish homeland in Palestine to Zionists in Europe and Palestine (seen as potential allies against the Central Powers in the war), the re-

traction after the war to appease Arab nationalists fell on deaf ears. Jewish immigration to Palestine continued in limited numbers but enough to enrage local Arabs against the British authorities. Clashes between Palestinian Arabs and Jewish migrants became endemic. These issues resulted in both sides distrusting the motives of Britain in the region and planted the seeds of the Arab-Israeli conflicts of the later twentieth century.

British strategic objectives in the region involved securing communication and trade links with India, the most important and lucrative imperial dominion, and ensuring oil supplies for the Royal Navy. However, the high cost of World War I resulted in Britain having to cut military expenses considerably, resulting in the overreliance of the British military on the innovative tactic of aerial bombardment. Revolts in Iraq and Palestine were dealt with severely through this new military procedure. Although cost-efficient and versatile, one significant effect of aerial bombardment was its creation of further resentment against Britain's presence in the region.

The interwar period and the end of World War II saw Britain's global influence dwindle dramatically. Iraq was granted independence in 1922 after having assured an alliance with Britain. Partly due to the depleted state of British military presence in the region, some Arab nationalists, both in Palestine and Iraq, began to display sympathies with German National Socialism to counter British occupation and Jewish migration into Palestine. While living in exile in Germany throughout the war, the mufti of Jerusalem, Muhammad Amin al-Husayni, rallied for National Socialist support of an independent Arab state; the defeat of Germany dashed any hope of German assistance toward that end.

World War II exhausted Britain's military and financial resources, leading to a loosening of ties in the region. Transjordan emerged as a fully independent state in 1946. Britain's frustration with Arab and Jewish in-fighting in Palestine and Zionist terrorist attacks against their own occupational forces led them to abandon the problem to the newly formed United Nations. This led to the creation of the State of Israel in May 1948.

➤ IRAQ AND NATIONAL SOCIALISM

During the interwar period (1919–1939), Britain saw its power projection across the world decline in relation to the growing strength of National Socialist Germany. The imperial domination of much of its colonies rested on its naval and military strength, which was in peril due to the economic tribulations of the Great Depression. The Kingdom of Iraq, created out of the mandate granted to Britain in settlement at Versailles in 1932, was set up as a puppet regime subject to British military strategic necessities. Resentment against Britain's presence in the region due to oil reserves in the northern provinces of Iraq led a group of army colonels to stage a coup. This resulted in the installation of Rashid Ali al-Gaylani as prime minister. Antagonism against Britain made Rashid Ali sympathetic to the German National Socialists, flush with victories in 1940 with the fall of Norway, the Low Countries, and France. Britain saw this flirtation with the Nazis as a threat to their control of the region. The 1932 treaty recognizing the sovereignty with Iraq necessitated that it subject itself to British military authority and oil interests. Rashid Ali took a stand against British demands for a naval base in Basra, triggering hostilities. The British crushed this revolt and occupied the country during the remainder of the war.

—Abraham O. Mendoza

The long-term impacts of the British system of mandates in the Middle East and Africa were the instability created by artificial borders, the secret treaties with France and Zionists to divide up the region, and resentment for supplanting previous colonial domination in the form of benign international authority while simultaneously propping up Arab nationalists. This instability was characterized by the contemporary in-fighting between Shia and Sunni Muslims as well as Kurds in Iraq and Israelis and Palestinians in the Levant.

—Abraham O. Mendoza

Bibliography

Ferguson, Niall. *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books, 2004.

Fromkin, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Owl Books, 2001.

Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage Books, 1996.

Segev, Tom. *One Palestine, Complete: Jews and Arabs under the British Mandate*. New York: Owl Books, 2001.

French Mandates: Syria and Lebanon

After the defeat of the Ottoman empire in World War I, the victorious Allies divided the empire's Arab provinces (present-day Iraq, Syria, Lebanon, Jordan, and Israel) between themselves. During the war Britain, which had occupied the region, promised Feisal ibn Hussein, the leader of the Arab Revolt, leadership of a united state including all these territories but also promised Syria, Palestine, Transjordan, Lebanon, and Mosul to France and promised Palestine to the Zionist movement. In 1918, however, Britain changed the agreements, retaining control over Palestine, Transjordan, and Mosul and leaving the French a free hand in Syria.

Because America's help had been crucial to winning the war, Britain and France had to support Woodrow Wilson's Fourteen Points, including the right of self-determination, and were unable to impose direct colonial rule in the conquered areas. Instead, they ruled them as mandates for the League of Nations. The mandates were meant to be stepping-stones on the way to full independence for the local populations, and the occupying powers were supposed to help the populations become ready for independence, but in practice they allowed traditional colonialism to continue under a new guise.

Feisal had set up an independent state in Syria, but in July 1920 the French overthrew his government and established direct rule. France had wanted to rule Syria because of the long-standing French role as protectors of the Christian Maronites in Lebanon and because of the large investments in infrastructure France had made in Syria. Now in possession of the land, France practiced a policy of divide and rule.

France separated the Bekaa Valley from Syria and attached it to Lebanon, which before that had consisted only of Beirut and the Lebanon Mountains, and divided the rest of Syria into separately administered states centered around Damascus and Aleppo as well as semi-independent areas for the Alawites and the Druze, two minority groups within Syria. These political arrangements changed every few years, making the region unstable. This combined with the practice of attaching to every Syrian official a French adviser with powers to countermand any order prevented any strong local leadership from emerging, with disastrous consequences after the French withdrew from the region.

In July 1925 a revolt began in the Druze region in response to French land restructuring. Led by Sultan Atrash, the Druze chieftain, the rebels drove the French from the region. News of the Druze successes caused the revolt to swiftly spread through the rest of Syria until in the spring of 1927 large-scale French reinforcements reasserted control. The Great Revolt, as it became known, was extremely destructive, killing 6,000 Syrians and leaving many more homeless. It also led the French to change their system of governance for Syria; rather than direct control, they would rule through local collaborators. The most important of these groups was the National Bloc. Composed of members of Ottoman-era elite urban landowning families and local government figures, the National Bloc engaged in a practice that came to be known as Honorable Cooperation. Under this, they adopted and encouraged the anti-French sympathies of the people while preventing violence on the scale of the Great Revolt. The French, glad to find allies who would control the people for them, accepted them as local elites and ruled through them. Because France was determined to maintain close control and refused to sign a treaty spelling out its intentions and limiting its power, the National Bloc came to have very little power of its own, and the situation remained predictably unstable.

Lebanon, on the other hand, faced a smoother path to autonomy. This was because the pro-French Maronites, though only 30 percent of the population, were the dominant political group. Although France maintained a similar

system of shadow advisers, Lebanon suffered no upheavals similar to the Syrian Great Revolt. The conflict between the Maronites and the Muslims, who found themselves forced into a state that did not reflect their aspirations, was no less intense than the anti-French conflicts in Syria but was expressed more civilly through religious and political local leaders. Under the 1926 constitution, which did not provide Lebanon with meaningful independence, members of the government were elected on the basis of religion. The Maronites sought to turn Lebanon into a Mediterranean country looking to Europe, while the Muslims wanted to stand with the other new Arab states against European domination.

In 1936 the election of Leon Blum's Popular Front coalition led to a French reevaluation of its position in Syria and Lebanon. By the end of that year, France had signed treaties with both mandates, providing for semi-independence and alliance under French protection as well as admittance for Syria into the League of Nations. The treaty, however, was never ratified by the French government and was set aside by a new coalition in 1939, which reimposed direct rule and partition and ceded the district of Alexandretta to Turkey to the displeasure of Syria.

On the eve of World War II, Syria and Lebanon were no more prepared for self-government than they had been in 1920. The upheavals of the war did not improve matters. Officers loyal to the collaborationist Vichy regime took control in 1940, but by 1941 renewed revolts had paralyzed the French occupiers, and in July 1941 British and Free French forces expelled the pro-Nazi government. Britain and the Free French agreed to grant Syria and Lebanon immediate independence, but Charles de Gaulle, the Free French leader, reneged on his promise and reestablished direct control. In 1943, however, elections were held under British pressure, and anti-French parties won power. France continued to assert control until 1946, when French exhaustion and another upsurge of violence forced France to withdraw.

Having been forced to wrest independence from unwilling colonial overlords, the new rulers of Syria and Lebanon had no experience in peaceful self-government and were unprepared to make the transition from revolution to peace-

➤ PRINCE FEISAL OF IRAQ

The third son of Emir Hussein of Hijaz, Feisal (1883–1933) rose to prominence during the Arab Revolt (1916–1918) by his connection to T. E. Lawrence (Lawrence of Arabia). A more skilled statesman than his father or brothers, Feisal won the confidence of the British, who set him up as the ruler of Syria in 1920. The British, however, abandoned him in the face of a French invasion that expelled him later that year. Instead, he was given control of the new country of Iraq. Feisal was the only ruler capable of uniting Iraq's diverse and fractious population, and his untimely death contributed to the country's instability.

—Jesse Ravage

time rule. The two states would meet the challenges that lay ahead with divided and uncertain leadership.

—Jesse Ravage

Bibliography

- Cleveland, William L. *A History of the Modern Middle East*. Boulder, CO: Westview, 2004.
- Fromkin, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Owl Books, 2001.

British Mandate: Palestine

Palestine became part of the British Mandate during the conclusion of World War I. Looking to secure regional loyalty, British officials promised both Arabs and Jews a national home in Palestine. Although technically the agreements were not in direct conflict, both Arabs and Jews felt threatened and betrayed. As such, the British had set the stage for wide-scale conflict.

The majority of the Jews in Palestine referred to themselves as Zionists, Jews who desired to build a national home in the ancient land of Israel. In this regard, they desired to purchase Palestine and thereby redeem the land through civil versus military means. With funding from American Zionist organizations, the Zionists were able to purchase large quantities of land from Arab landowners. However, Arab

landowners often sold land that was settled by Arab tenant farmers, many of whose families had been living on the same plot for centuries and who viewed the land as their home. In the process, British officials were frequently caught between legal Zionist land purchases and mobs of angry Arab farmers. As a result, the 1920s was categorized by a series of Arab riots and raids interspersed with Zionist retaliation.

The first major Arab raid occurred on March 1, 1920, when hundreds of Arabs gathered at the gate of an isolated Zionist farm known as Tel Hai. Shots were fired, confusion ensued, and the Arabs quickly overcame the local Zionists. The events in 1920 at Tel Hai have become important in that they established the Zionist precedent that no settlement should be abandoned. The next major Arab riot occurred on May 1, 1921, when a group of armed Arabs gathered in Jaffa. The Zionists declared a state of emergency and called upon the British government to intervene. The Jaffa riot received international attention, which helped to create a global awareness of the growing conflict in Palestine between the Arabs and the Jews.

In a vain effort to appease both parties and bring about peace in Palestine, Britain's 1922 Churchill White Paper promoted the idea of a Jewish national home in Palestine while at the same time repudiating the idea that Palestine would become an entirely Jewish nation. This document outraged both Jews and Arabs. The Arab leadership was primarily concerned with the extensive unchecked Jewish immigration into Palestine, which was threatening to upset the existing labor pool and economic system as well as jeopardize the Arab majority. In response to Arab trepidations, the British government began to restrict Jewish immigration to Palestine, although illegal Jewish immigration continued through a system known as *Aliyah Bet*.

Violence continued, and on the morning of August 23, 1929, thousands of armed Arabs gathered at the Temple Mount in Hebron and began to pray. By midmorning several shots were fired, and Arab mobs attacked Jewish peasants. These events led to a series of riots that continued until the following evening. Miraculously, almost two-thirds of Hebron's Jews were saved, being hidden in Arab homes whose inhabitants risked

their own lives to save the Jewish community. The riots at the Temple Mount were the deadliest the region had seen to date.

Unable to prevent and control regional violence, Britain issued the 1930 Passfield White Paper, which further limited Jewish immigration to Palestine. This new British policy also promised to accurately represent Palestine's Arab majority in the Palestine legislative council. Although the British government soon recanted, Zionists were outraged. In 1931 a small group of revisionist Zionists formed the *Irgun Zvai Le'umi* (National Military Organization) in order to efficiently combat British intimidation. Known by its Hebrew acronym, *Etsel*, the organization was an early terrorist unit. Together with its sister organization *Lohamei Herut Yisrael* (Fighters for the Freedom of Israel), known as *Lehi*, the groups led Zionist raids of Arab villages and targeted and destroyed British infrastructure in Palestine.

Despite favorable legislation, the Arab community in Palestine was also displeased with the British Mandate authorities. Beginning in 1932, Britain granted independence to several of its occupied regions, including Iraq, Egypt, and Jordan. Thus, while their Arab neighbors were realizing independence, Palestinian Arabs remained bound to the British authorities, who in 1936 began recklessly tearing down Arab homes in the name of public improvement. As a consequence, the British often destroyed entire Arab communities with nothing built to replace them.

In April 1936 Arab leadership inspired a large-scale Arab revolt against British Mandate authorities. Demanding an immediate stop to illegal Jewish immigration and reconciliation for unfavorable land purchases, the revolt lasted until 1939, by which point more than 5,000 Arabs had been killed. The onset of the Arab revolt sparked renewed British concern. In 1936 the British Peel Commission investigated the nature of the conflict in Palestine, concluding that a two-state solution, otherwise known as a Palestinian partition, was the only solution to regional strife. This vision was presented to the international community in the 1939 White Paper, which promoted the creation of an independent binational state in Palestine within ten years.

The eruption of World War II did not drastically affect the Palestinian conflict among the

British, the Arabs, and the Jews. British occupying forces continued to unsuccessfully restrict Jewish immigration, Arab riots continued to ransack Zionist settlements, and Zionist terror organizations continued to destroy British infrastructure. In November 1944 members of Lohamei Herut Yisrael successfully assassinated Lord Moyne, Britain's senior official in Egypt. Condemned by the larger Zionist community, the murder of Lord Moyne deeply injured British resolve to ensure a Jewish state in Palestine. However, the horrors of the Holocaust increased international sympathy to Zionism, pressuring Britain to end the violence in Palestine.

On June 29, 1946, more than 100,000 British soldiers surrounded dozens of Zionists settlements, including Tel Aviv and Jerusalem, and imposed a curfew. The Zionists were left defenseless as the British ransacked Zionist headquarters, confiscating a large number of documents. Plans for Zionist retaliation were immediately enacted. On July 22, 1946, calls were placed warning that bombs placed in the British wing of the King David Hotel would soon be detonated. British officials refused to evacuate. When the bombs exploded, 91 individuals were killed and another

45 injured. Although several Zionist organizations colluded to bomb the hotel, Etzel was solely blamed and soon disassembled.

The British government looked for an immediate solution. On November 29, 1947, the United Nations declared a Palestinian partition, thereby ending the British Mandate. On May 14, 1948, the British left peacefully; the violence between the Zionists and the Arabs was no longer Britain's problem.

—Joy Newman

Bibliography

- Fromkin, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Henry Holt, 1989.
- Hourani, Albert, Philip Khoury, and Mary C. Wilson, eds. *The Modern Middle East*. London: Tauris, 2004.
- Segev, Tom. *One Palestine, Complete: Jews and Arabs under the British Mandate*. New York: Henry Holt, 1999.
- Swedenburg, Ted. "The Role of the Palestinian Peasantry in the Great Revolt (1936–1939)." In *Islam, Politics, and Social Movements*, edited by Edmund Burke III and Ira M. Lapidus. Berkeley: University of California Press, 1988.

■ Introduction: Political Transformation in Africa, Asia, and Oceania

Although much of the area remained economically subordinate to Europe and North America during the first half of the twentieth century, Africa, parts of Asia, and Oceania began significant political transformation. Although they did feel the impact of ideological and economic convulsions from abroad, from 1900 to 1945, these regions also underwent independent internal developments that increased their international political clout after 1945. For example, Japan, Australia, India, and China became major players in the world wars, expanding their roles as military and economic powers during this period. Nationalist movements, beset on ousting foreign rule, would prove highly influential in colonized world re-

gions such as the Middle East, East Asia, and Southeast Asia. Moreover, the British dominions, Australia, New Zealand, and South Africa, developed into fully independent states in the interwar period.

—Abraham O. Mendoza

Political Transformation in Southern Africa

At the dawning of the twentieth century, political transformation in southern Africa—currently Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe—were conditioned by

conflict. These wars and conflicts were primarily between the various European powers and indigenous African polities, the established and recently arrived settlers groups, and the Africans and European settlers. These wars left millions dead; led to the eventual expropriation of African land, rights, and freedom; and created new boundaries with territory assigned to three European Powers: Britain, Portugal, and Germany. Europeans created governments and policies that transformed Africans from independent producers to squatters and wage laborers. A system of male migratory labor left women in rural subsistence economies. African political transformation can be described as both a process of adaptability to and a struggle against European domination.

Some Africans adapted to colonialism as a result of missionary Christianity and education, as both were critical factors in Africans' acceptance of colonialism. The missionaries created an educated class of Africans who became clerks, teachers, preachers, journalists, businessmen, and lawyers and who accepted the ideas of white cultural superiority. Ideologically, they thought nonracialism was possible. They worked for and were committed to bringing about African equality through legislative changes and cultural assimilation. They believed that equality could be achieved through black economic self-determination and political accommodation. For example, in 1912 Pixley ka Isaka Seme, a black European-trained lawyer, brought together other black lawyers and formed the South African Native National Congress. This group conducted itself as a restrained and moderate organization seeking improved conditions and political rights for blacks by peaceful means. The group accepted colonialism and Christianity as civilizing institutions and separated itself from militant resistance to colonialism such as antipass campaigns, bus boycotts, or various workers' strikes.

Less conservative African initiatives and forms of resistance to European rule demonstrated an unceasing struggle for self-determination by African peoples. Outright confrontation by Africans came to an end as the twentieth century began. The last few efforts to evade colonial conquest through war revealed African courage in the face of overwhelming odds and an unwillingness to

submit to arbitrary rule. Some of the final conflicts included the joint 1896–1897 Shona-Ndebele Chimurenga (war) fought against the pioneer column of Cecil Rhodes, the 1904 anticolonial rebellion by the Herero in South-West Africa against the Germans, and the 1906 Bambatha Rebellion in Zululand, Natal.

The collapse of indigenous sovereign states in southern Africa forced the majority of Africans to survive in a colonized world. African political transformation ensued as people struggled to regain their self-determination. The struggles were ongoing for four key groups: peasant communities, independent churches, elitist organizations, and working-class movements.

Throughout southern Africa, unorganized and sporadic peasant protests against poverty and exploitation were waged in attempts to protect land and livestock against taxation and limit demands on forced labor and military conscription. To evade paying taxes, peasants disregarded registration laws concerning age and marriage, and sometimes they attacked chiefs installed by colonial regimes. When all else failed, some peasants simply fled to avoid paying taxes or working on European farms. Organized political resistance was also clear. For example, throughout South Africa from 1913 to 1917 there was a widespread campaign to refuse to pay a cattle-dipping tax, and organized peasants boycotted and destroyed dipping tanks. In 1917 rural women in the Transkei region of South Africa organized a series of boycotts to protest price fixing by Europeans and refused to supply basic commodities on credit. Elsewhere in southern Africa there were sporadic peasant uprisings to fight oppression.

The independent churches offered an institutional framework for the political transformation of both peasants and workers. Within the churches, broad-based protest movements evolved that enabled Africans to express their dissatisfaction with colonialism and the uneven distribution of resources. The number of independent churches in the region grew from fewer than 100 in 1918 to thousands in 1945. Independent churches varied in their response to colonialism, but some promoted explicit insurgent activities. One important example is the first Angolan messianic protest revolt of the Mafalu in

1918. Islamic revisionist movements in northern Mozambique also engaged in uprisings against colonialism, while African independent churches in Mozambique limited their opposition to verbal criticism.

Elitist and working-class political organizations formed by Africans were the key institutions responsible for political transformation. These organizations formed as early as 1900 and began as native associations, native conventions, and welfare societies. Although they were initially organized to improve local matters, petition for African rights, and seek the black franchise, they quickly expanded their activities. Among the first of these numerous organizations were the Cape-based South African Native National Congress (SANNC) and its affiliate, the Transvaal Native Congress (TNC); the Transvaal Basotho Committee (TBC); and the Orange River Colony Native Vigilance Association (ORCVA). In 1923 the SANNC transformed itself into the African National Congress (ANC) to serve all Africans colonized by the British empire. The first president of the ANC was John Langlibalele Dube, a Methodist minister and founder-president of the Zulu Christian Industrial School and the Natal Bantu Business League. The ANC appealed to the British government for African rights through petitions, conferences, newspapers, and delegations. In Angola, lawyer, novelist, and journalist António de Assis Júnior founded the Cuanza Norte alliance in 1916–1917. This alliance linked alienated intellectuals with Mbundu peasants in an effort to protest colonial oppression and the preferential treatment given to the white settler community. Both the ANC and the Cuanza Norte alliance were part of the growing Pan-Africanist movement and an emerging African press that frequently criticized the excessive abuses of the colonial system. Africans formed their own unions, calling for labor strikes that were critical for mass political transformation. International labor unions and social movements also served to promote African nationalism. The Industrial and Commercial Workers Union (ICU), a general union formed in 1919, was the most active and popular organization in rural and urban areas in South Africa at this time. Socialist organizations also began to organize black workers in the 1920s.

By the 1940s, growing discontent led to the creation of additional African community organizations, squatters' movements, and black trade unions. The most well known of these organizations is the ANC's Youth League, founded in 1944 by Nelson Mandela, Oliver Tambo, and Walter Sisulu. As such, a younger, more militant generation of African freedom fighters was organized.

—Lorna Lueker Zukas

Bibliography

- Boahen, A. Adu, ed. *General History of Africa*, Vol. 7, *Africa under Foreign Domination, 1880–1935*. London: James Currey, 1990.
- Omer-Cooper, J. D. *History of Southern Africa*. 2nd ed. Portsmouth, NH: Heinemann, 1994.
- Shillington, Kevin. *A History of Southern Africa*. Essex, UK: Longman, 1987.

Political Transformation in West Africa

After the European imperial powers had carved up the African continent at the Berlin Conference in 1884, almost the entirety of West Africa fell under the complete control of a European power. As a result, Africa's traditional political order—based on communal and kinship ties—was replaced by artificially drawn boundaries encompassing a multitude of culturally diverse groups. Although at least one colony in West Africa during this time was under the control of either Spain (Spanish Morocco, Rio de Oro), Portugal (Portuguese Guinea), Germany (Togo), and Great Britain (Gambia, Gold Coast, Nigeria, Sierra Leone), the larger part of the region was dominated by France, whose empire spread from the Mediterranean Sea in the north to the Anglo-Egyptian Sudan in the east to the Atlantic Ocean in the west and south.

By the early years of the twentieth century the period of French military conquest had largely ended, and France faced the difficult task of consolidating its territorial gains. French colonial administration followed one of two principles: assimilation and paternalism. The former was the case in the Senegalese principalities of Saint-Louis, Rufisque, Gorée, and Dakar, where France assigned French citizenship with all its legal and political rights to Africans. Accordingly,

these four principalities remained self-governing entities. By contrast, the policy of paternalism was applied in the remainder of the French Empire. It allowed the European colonial administrator to subject Africans to compulsory labor and taxation. The agents responsible for the collection of taxes and the drafting of labor were local tribal chiefs, Africa's traditional rulers. However, the role of the tribal chief was reduced to that of an auxiliary of the French *commandant de cercle* (cercle commander), who had control over the cercle, the smallest of the political administrative units in French colonial Africa. The French also began to impose new chiefs on its colonial population, which meant that traditional ways of selecting them were no longer practiced. As a consequence, French colonial policy led to a complete reorganization of West Africa's indigenous political systems.

Although chiefs in British West Africa were equally responsible for the collection of labor and taxes, they were not incorporated into the colonial hierarchy. While French colonial policy adhered to a centralized pattern of command and relied on a large number of European administrators, its British counterpart—indirect rule—at least theoretically provided traditional rulers with higher degrees of autonomy. London rarely imposed new chiefs and hardly ever broke up ancient chiefdoms to create new administrative structures.

Despite theoretical differences, all forms of European colonial rule in West Africa aimed at exploiting raw materials and at exercising political domination. In both the British and French empires, the transfer of power from traditional rulers to colonial administrators destroyed indigenous systems of checks and balances. This political rupture resulted in a process of estrangement between citizens and the state as well as the creation of a coercive apparatus of police and military forces to ensure compliance with colonial rules and regulations. Indeed, the authoritarian nature of the state can be seen as the hallmark of colonial rule. Economically, the West African markets, previously engaged in trade relations spanning the whole of the African continent, were transformed into export-oriented economies designed to satisfy the import needs of the respective European power.

In extreme cases, this meant that states were reduced to a monoculture status, producing one primary product. Cocoa production in the Gold Coast (Ghana) is an often-cited long-term effect of the economic policies of British colonialism.

Throughout the West African region, African political participation in government was marginal. Outside the four Senegalese principalities mentioned previously, Africans living in French-dominated states had no right of political association or freedom of speech until 1937. In the British colonies, the constitutional framework provided for the establishment of Legislative Councils in which membership was by appointment. In most cases, selected members of the African elite were nominated and sat with British officials. Nevertheless, in both Anglophone and Francophone countries, African political engagement remained an elite affair and did not pose a serious challenge to European domination until the 1920s.

In the decades following World War I, however, West African politics became characterized by rigorous struggles between African elites and their colonial governments about the degree of African involvement in governmental affairs. Mass protests against colonialism also occurred, such as the revolts against the implementation of the hut tax in Sierra Leone and Dahomey in the mid-1920s and resistance in Upper Volta against the arbitrary requisitioning of food and animals by the French. Among the individuals who dominated the African elite representation between the two world wars were Blaise Diagne (1872–1934) and his Senegalese Republican Socialist Party and Herbert Macaulay (1864–1946) and his Nigerian National Democratic Party. Like many other political leaders, they called for increased African political representation, electoral rights, and better educational facilities.

The growing scope of political consciousness in the interwar years was a result of many factors. First, World War I had required active African participation. Fighting on the battlefields made many Africans realize that there was a world beyond their villages and outside their lineage groups. Second, West Africa experienced a cultural awakening as a consequence of that participation. Africans who had studied abroad

had become influenced by European ideas, such as the right of self-determination and nationalism. Simultaneously, these European-educated Africans had also experienced European racism. Back home, this generation of African leaders began to promote the cultural and historical foundations of Europe. Some of the most famous works in this regard are associated with *négritude* or Pan-Africanism and the writings of individuals such as Léopold Senghor (1906–2001) and Léon-Gontran Damas (1912–1978). These were important contributions to proving false the notion of white superiority by which colonialism had justified its existence and in advocating the idea of a new, emancipated African self. Third, growing urbanization and a widely circulating African press saw the radicalization of political demands, including the Africanization of the civil service and a later call for independence.

The decline of Europe after World War II and, equally, Africa's important role in it as large-scale provider of troops during the war sounded the death knell of colonialism. If World War I resulted in the rise of African nationalism, World War II exacerbated its effect. However, for the West Africans the authoritarian legacy of colonial rule remained the region's most significant historical burden, especially as the environment of political and economic subjugation was carried over into the postwar era. After African independence—starting with Ghana in 1957—the authoritarian trend of colonial governance was replaced by the rise of undemocratic one-party states and military regimes.

—Sebastian Elischer

Bibliography

- Crowder, Michael. *West Africa under Colonial Rule*. London: Hutchinson, 1968.
- Hodgkin, Thomas. *Nationalism in Colonial Africa*. London: Mueller, 1968.
- Mamdani, Mahmood. *Citizen and Subject: Decentralized Despotism and the Legacy of Late Colonialism*. Oxford, UK: Oxford University Press, 1996.
- Schraeder, Peter. *African Politics and Society: A Mosaic in Transformation*. Boston: St. Martin's, 2000.
- Webster, James, and A. Adu Boahen. *History of West Africa: The Revolutionary Years, 1815 to Independence*. New York: Praeger, 1970.

Political Transformation in East Africa

Political transformation in East Africa during the period 1900–1945 can best be described as processes of local resistance to, and collaboration with, colonial rulers. When colonial powers arrived in East Africa in the latter half of the nineteenth century, they found a mix of African political systems in operation. Some peoples lived without subjugation to an external authority and without reliance on external exchange; these groups recognized an internal authority such as a chief and a hierarchy of elders. Colonists also encountered groups whose political structure and economies were based on a centralized government, and far from being self-contained, their economies were based on trade and were often predatory. These political systems were not kinship based, and their polities were distinguished by well-established formal bureaucracies that depended on revenues and exploitation of labor and slaves.

The imposition of colonial rule was aided by African leaders who aligned themselves with foreigners to strengthen their positions vis-à-vis a changing political climate. The British created British East Africa (the territory of what is now the independent countries of Tanzania, Uganda, and Kenya), and the Germans created German East Africa (modern-day Tanganyika, Rwanda, and Burundi).

African political transformation came primarily under the guise of religion, namely Christianity. In order to gain ascendancy within the colonial structure, many Africans became Christianized, as Christianity provided a pathway to salvation and political and social survival under colonial rule. This strategy was successful for Africans because neither the Germans nor the British wanted to invest heavily in the administration of the colonies, therefore relying heavily on chartered companies and very small colonial administrative forces. As such, Africans who allied with the colonial powers were left to govern themselves. For example, at the turn of the twentieth century in present-day Uganda, the Ganda people became Christianized. Armed with Christianity and aligned with Britain, the colonial-appointed chiefs were able to usurp

► ROLE OF INDEPENDENT CHURCHES

East African Independent Churches instigated and mediated political transformation not solely out of opposition to missionary churches. Radical criticism of colonialism and mistrust of European religion also fueled the movement of Africans to establish their own forms of Christianity. Africans initiated Independent Churches for religious, political, and social reasons. These churches were places where existing African cultural practices and Christian doctrines met and mutually transformed. The constitution and testament principles of the African National Church, introduced in Tanzania in 1930, demonstrated the confluence of African faith, Christian doctrine, and political change.

—Lorna Lueker Zukas

power from the traditional ruler, Mwanga, who opposed British encroachment.

Britain was able to utilize an African administrative structure, reducing its expenses for control of the area. With British support, Buganda chiefs attacked neighboring peoples and imposed Buganda political structures and colonial control throughout the region. The allied kingdoms under British control were left to govern themselves with a minimum of interference. However, not all peoples inhabiting the region welcomed the British and often employed forms of passive resistance, such as the use of vernacular languages and the refusal to accept the authority of neighboring or colonial appointed alien chiefs. Outright attacks on colonial officials were also carried out at times.

The situation was similar in Kenya, as African political transformation was shaped by resistance and collaboration to colonialism. The Masai, decimated by disease, group infighting, and Rinderpest infestation of their herds, joined forces with the British against their neighbors, the Kamba and Kikuyu, who resisted British rule. The Masai, like the Ganda, gained political power by oppressing other peoples. In addition, the British also used a policy of divide and conquer by empowering subgroups within a group to challenge an uncooperative existing political structure. Individuals locked out of traditional

power structures, by birth or as a factor of age, were able to gain power by siding with the colonial power. Legitimate African leaders who resisted colonial occupation were often killed or sent into exile. The colonial-designated chiefs were simply figureheads with little initiative in directing the business of their areas. Their primary functions were to aid in communication, maintain order, collect taxes, and designate men to work for European settlers.

While some educated Christian elites served the colonial master, there were many who opposed colonialism and led resistance efforts. Designated chiefs could not control people who were upset with land expropriations, forced labor at inadequate wages, or the migratory labor systems that took men away from their families. These unredressed issues, generalized oppression, and the desire for fair treatment, freedom, and a political voice led to African resistance movements and rebellions.

In German East Africa (GEA) the colonial master differed only in the higher level of violence used against Africans. The Germans also used the local people in the administrative structures of the areas. Greater violence against Africans led to more fierce forms of resistance in GEA as Africans attempted to assert their autonomy and independence. The fiercest resistance came in 1905 with the Maji Maji Rebellion. Struggling against forced cotton-growing schemes that produced more hardship than profit for African workers and with no other way to protest, the people of the Matumbi Hills attacked the GEA colonial headquarters. The Maji Maji Rebellion represented a moment of political transformation as a mass movement of protest rather than just local rebellion by individual ethnic or tribal groups. The rebellion failed in 1907; however, the lessons of mass action were used by later political leaders.

After the Maji Maji Rebellion, the Germans changed their colonial policies to end the worst of the abuses, and many Africans transformed their resistance into acceptance, gained European educations and skills, and used these to better their position within the colonial society. After 1914 the members of this newly educated African cohort established themselves as the most effective communicators between Europe-

ans and Africans, thus usurping political power away from official chiefs.

Despite Christianity and the growing number of educated Africans working within the colonial system, Africans were acted upon and not consulted by the colonial rulers. Authoritarian colonial political systems encountered African resistance. After World War I, African political transformation was channeled into educational, religious, and ethnic groups. Most political activity was local in nature and contained within a locality and an ethnic group. These local political protests sought not to overthrow colonialism but rather only to improve quality of life and working conditions. However, during this period the formation of indigenous African political organizations became an important part of the ongoing political transformation.

Throughout East Africa, political associations sprang up to demand equal access to education, land, and the ability to grow cash crops where colonial policy prohibited the peasantry from doing so. The formation of improvement societies and African associations helped Africans to organize and improve local communities. However, by the end of the 1930s Africans found that their improvement societies brought them into conflict with the colonial government. For example, when the Kikuyu Central Association began to make preparations for a campaign of civil disobedience involving all of the Kikuyu in order to protest the land issue, the association was banned. However, within a few short years organizations such as this would lead the way to African independence; African resistance to colonial policies and practices ultimately transformed the colonial landscape.

Colonial rule was imposed in Africa without consent from most African people. Some African leaders collaborated with European colonizers to gain power for themselves and their people, while others offered fierce resistance to foreign rule. Africans did not accept being governed without any representation and often struggled to transform the political landscape. Primarily educated and Christian Africans, who maintained that all men were equal, opposed the colonial policies that restricted economic opportunities and limited participation in the political process. Four key means were used to achieve political transformation in

East Africa: (1) the formation of African organizations to promote African economic interests and to end discriminatory policies and increase opportunities, (2) religious opposition and the formation of African Independent Churches, (3) attempts by labor unions to organize workers, and (4) the use of mass protest and consumer boycotts gave rise to an African voice in the transformation of East Africa.

—Lorna Lueker Zukas

Bibliography

- Boahen, A. Adu, ed. *General History of African*, Vol. 7, *Africa under Foreign Domination, 1880–1935*. London: James Currey, 1990.
- Maxon, Robert M. *East Africa: An Introductory History*. 2nd and rev. ed. Morgantown: West Virginia University Press, 1994.
- Ranger, Terrence. *The African Churches of Tanzania*. Historical Association of Tanzania Paper No. 5. Dar es Salaam: East African Publishing House, 1972.

Political Transformation in North Africa

The following discussion will focus on the dramatic transformation of the political structures of northern Africa that occurred as a consequence of the brief period of European colonial domination of the region. During the first half of the twentieth century, Britain, France, and to a lesser extent Italy replaced the Ottoman empire as the dominant powers in northern Africa, ending five centuries of Islamic rule. European expansion and the north African struggle against European colonialism in the first half of the twentieth century are the principal themes to be explored in this article.

As the twentieth century commenced, the British were seeking to extend their control over the territory transversed by the Nile in order to secure their position in Egypt, which was central to their strategic interests in the region. Control of Egypt ultimately led to the control of the Suez Canal, thereby controlling a passageway to Asia, especially to India, the most important British colony. In 1899 combined British and Egyptian forces invaded Sudan and defeated Sudanese forces at the Battle of Omdurman. Sudan was

► IMPLICATIONS OF THE DEMISE OF THE OTTOMAN EMPIRE

The Ottoman sultan's decision to sign the Treaty of Sevres in 1920 was the catalyst for the overthrow of the sultanate and the creation of the modern State of Turkey. With the end of the sultanate, hopes across North Africa that Ottoman revival would lead to the defeat of the European invaders and a return to the precolonial unification of the Arab lands were dashed. The Ottomans had provided the political, economic, and cultural environment for North African and Arab societies for four centuries. The end of the Ottoman sultanate sent shockwaves throughout the region. Without the traditions of the past glory of the Ottomans, North African resistance to the occupiers required a transformed political framework. The void left by the demise of the Ottomans would be filled by the competing ideologies of liberal nationalism, Pan-Arabism, and political Islam. During the ensuing decades the political aspirations of North Africans would alternate between these three dominant political ideologies. Nationalism would influence the first-generation leaders as they fought for independence from colonialism. Over time, both Pan-Arabism and political Islam would prove influential in shaping the politics of North Africa.

—Noah Bassil

conquered by the British primarily to prevent French control of the region that might threaten the all-important water route to India. However, French pride would be soothed by British support for the extension of French control elsewhere in northern Africa, in particular in the strategically important Kingdom of Morocco.

Although Morocco was still an independent kingdom at the turn of the century, it had been weakened by Spanish penetration from the 1860s onward. In a bid to counter further European expansion into his domains, Sultan Hasan (1873–1894) embarked on a costly program of modernizing the army and the government administration mainly by borrowing from European banks. When the sultan was unable to meet the repayments, British and French financiers had the sultan at their mercy, and in 1904 the Spanish and the British agreed to allow the

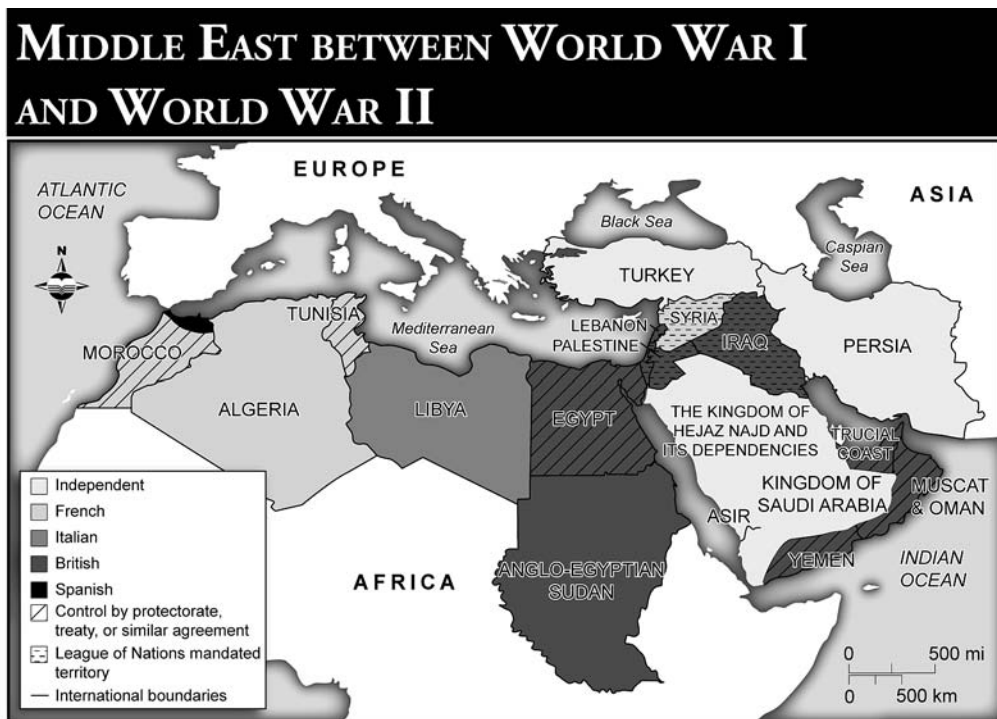
French to establish paramount influence in Morocco. In 1907 the Spanish and French officially occupied the Kingdom of Morocco, and the sultan acquiesced to the occupation, which led to internal rebellion. Five years later the kingdom became a French protectorate, with the important trading port of Tangier governed by a special international agreement.

The other region of northern Africa that was still independent of European control at the turn of the twentieth century was the Ottoman province of Libya.

In 1911 the Italians invaded the area by declaring war on the Ottoman empire, upon which they occupied the coastline and the capital city, Tripoli. The Ottoman rulers accepted Italian administration over Libya at the peace settlement that ended the Italo-Turkish War (1911–1912). As a result of these various actions, by the outbreak of World War I all of northern Africa was under European control.

In Egypt, British colonialism brought about dramatic changes to land ownership, and as a result a large landless class was created, with 40 percent of cultivable land being owned by absentee landlords in large estates of more than 50 *feddans* ($\pm$ 52 acres or 21 hectares). The wealth exhibited by the foreign population of colonial administrators, merchants, and investors was in stark contrast to the increasing levels of poverty to be found across the country. As a result, a dual society was formed in which Westernized Egyptians and foreigners mingled in the newly constructed fashionable areas of Cairo and Alexandria, while the majority of the population struggled to find employment on the estates of the rich. By 1914 opposition to British rule was endemic among the Egyptian populace.

The changes that had occurred in French northern Africa were equally dramatic. By 1914 the situation in Tunisia had come to resemble Algeria, which was the first European colony in northern Africa (with European settlements from the 1830s). The influx of European settlers into Tunisia unsettled the existing social structures and led to increasing resentment of the colons (the European settlers) by the indigenous population. Land reappropriation and generous capital advances to immigrants from France led to the formation of a significant settler population. The



colons demanded political power over both protectorates, and by the time of the outbreak of World War I, both Algeria and Tunisia were controlled by French settlers who regarded the indigenous population as a threat and resented any attempt by the metropolitan government in Paris to intervene on behalf of the Muslims.

Although both Great Britain and France seemed to be at the apogee of power in 1918, with control of vast empires that stretched across the world, the reality was that four years of death and destruction had taken their toll. As a consequence, western Europe's hold on empire was more tentative than ever. At the same time, the north Africans had come to realize the hollowness of the European promises of "civilizing the natives." From all over the colonial expanse, the colonized asked the question of how the authors of the four years of carnage in Europe could claim any moral superiority over them.

British and French wartime vilification of the Habsburg and Ottoman empires revolved around dismantling "oppressive" regimes that repressed the right to self-determination. The hypocrisy of such claims, if not apparent to the colonizers, was certainly evident to the colonized. The contradictions were most apparent to the Algerians and Tunisians on their return home from the

war, during which time they had fought for French liberty. The Egyptians also paid a high price for supporting the British war effort, with higher taxes, rationing of goods, salary reductions, and forced retrenchments. When no reward for the sacrifices by north Africans for the war effort was forthcoming, agitation ensued, thus increasing the discontent.

The most well-developed movement for self-rule was to be found in Egypt. On receipt of the news that the British had disallowed an Egyptian delegation to Versailles in 1919 to put forward its case for self-determination, widespread opposition to British rule broke out. Though the insurrection was put down, it was apparent that the era of British political domination over Egypt was drawing to an end. On February 28, 1922, independence was declared. Even with independence, however, the British maintained control over vital areas of Egyptian domestic and foreign policy, which would be further abrogated in 1936. Elections were held in 1924, with the anti-British Al-wafd Al-misri Party receiving widespread support and winning 179 out of the 211 parliamentary seats.

Over the following decade, the growth in the potency of Egyptian nationalism and British fears of further radicalization of the movement

if concessions were not forthcoming led to a compromise agreement in 1936. It was announced that the British military occupation of Egypt would come to an end and that British control over foreign and domestic policies would conclude. However, the British would be able to maintain troops in a zone immediately surrounding the Suez Canal. The following year, Egypt was admitted to the League of Nations as the first independent state from northern Africa.

Northern Africa would be the scene of major battles of World War II, leading to Italian defeat that ensured Libya's emancipation from Italian colonial rule. Despite the erosion of French power, the French north African colonies faced years of agitation and war before independence finally became a reality. However, the force of national liberation movements in Algeria, Tunisia, and Morocco could not be ignored by the French, and it would not be long before upheaval and war would bring independence to northern Africa.

—Noah Bassil

Bibliography

- Abun-Nasr, Jamil M. *A History of the Maghrib in the Islamic Period*. 3rd ed. Cambridge: Cambridge University Press, 1987.
- Hourani, Albert. *A History of the Arab Peoples*. Cambridge, MA: Belknap Press of Harvard University Press, 1991.
- Moore, Clement Henry. *Politics in North Africa: Algeria, Morocco, and Tunisia*. Boston: Little, Brown, 1970.
- Packenham, Thomas. *The Scramble for Africa*. London: Weidenfeld and Nicolson, 1991.
- Segre, Claudio G. *Fourth Shore: The Italian Colonization of Libya*. Chicago: University of Chicago Press, 1974.

Political Transformation in China

During the first half of the twentieth century, China experienced a series of dramatic and at times bewildering political shifts from an imperial dynasty to a communist state. Chinese leaders experimented with Western-style republican government, military dictatorship, and nationalist revolution to achieve a national revival. From the decline of the imperial system, it would take

nearly four decades for the Chinese Communist Party under Mao Zedong to organize and implement a lasting political and ideological framework to restore stability and unity in China.

From 1901 to 1911 the Manchu-ruled Qing dynasty undertook a series of reforms to stave off dynastic collapse in the face of Western imperialism and social disintegration. These superficial reforms were designed to retain Manchu rule rather than modernize the empire. Education reforms, such as abolishing the civil service exams in 1905, undermined the means of inculcating an orthodox state and social ideology that had linked Chinese scholar-elites to the state. The Qing dynasty severed its role of legitimating elite status and alienated an important element of Chinese society, while other Chinese reformers demanded transition to a constitutional monarchy.

The alienation of the Chinese scholar-elites and growing demands for constitutionalism led to a growing anti-Manchu sentiment. Uprisings broke out in Central China that were inspired by Dr. Sun Yatsen and his *Three Principles of the People* (*Sanmin Zhuyi*): nationalism, democracy, and people's livelihood. By November 1911, 15 provinces had successfully seceded from the Manchu Empire. The 1911 revolution, known as the Xinhai Revolution, swept away ancient imperial institutions and state ideologies; however, no ready-made political or ideological systems existed with a common consensus capable of restoring stability and unity to China.

The presidency of the fledgling Republic of China was placed in the hands of General Yuan Shikai. Even though Yuan had initially supported the Qing dynasty, he was viewed as the only person who could hold the nation together at this crucial time. As president during 1912–1916, he relied on political assassination, threats, and corruption to achieve political ends. Instead of governing through the civilian officials and bureaucratic institutions, Yuan ruled through the Beiyang Army, which was personally loyal to him.

In late 1915 Yuan abandoned the idea of a republic and proposed the restoration of the monarchy. He believed that a monarchy was a more effective, durable, and appropriate form of government for China, as the republican attempts had failed to engage the average Chinese citizen, who remained aloof from the political process.

Yuan's attempt to name himself emperor ignited the successful Anti-Monarchical Movement, which forced Yuan to cancel his plans. In the end, however, the Western-style republican government had failed to provide an alternative to imperial rule and to unify the nation.

With Yuan's death in 1916, no single recognized authority existed with the ability to prevent national disintegration. The result of this political vacuum was the rise of regional warlords. The warlord era emerged when civilian authorities increasingly called upon local military officers to solve political issues. Regional and provincial militarists gradually replaced civilian authorities as political leaders. The warlord era also witnessed the fracturing of China into regional and provincial units governed by these militarists that reflected a long-present regional differentiation in China. Although a national government existed in Beijing and was recognized by the foreign powers as the legitimate government of China, it was no more than the pawn of the militarist who temporarily controlled the capital.

Conflict between individual warlords and warlord factions devastated China between 1916 and 1928. The militarists shifted their support and remade alliances at a dizzying pace, and hopes of national revival under a single military leader led to greater political fragmentation. Resources were squandered in endless conflicts, and militarist intervention in politics denigrated the whole political process and political frameworks.

Warlord rule, bereft of appealing political ideals, continued until another force challenged it both militarily and ideologically.

In 1924 the alliance between the Nationalist Party (Guomindang) and the Chinese Communist Party (Gongchangdang) presented just such an alternative. Initiated by Dr. Sun Yatsen, this alliance paved the way for a military campaign, the Northern Expedition, to destroy the warlords, check foreign intervention, and unify the country. The Nationalist-Communist Alliance stood poised to establish a new order in China. However, the conflicting ideologies of the two parties were too great to maintain the successful coalition. In April 1927 Generalissimo Jiang Jieshi, commander of the National Revolutionary Army and leader of the Nationalist Party's right wing, violently purged communists from

➤ WORK-STUDY MOVEMENT

During the early twentieth century, wealthy Chinese families began to send their sons abroad for an education. Paris, considered by many to be the cultural and intellectual center of the world, was the most popular destination for the Chinese students. The overarching purpose of the work-study program was to expose the students to Western ideals and to better equip them to strengthen and reform China upon their return. However, the effects of these programs were far greater than anyone could have predicted. The students became entrenched in Western ideologies, most notably Marxism and anarchism, through not only intellectual pursuits but also hard factory labor as well. They actively participated in labor movements and anti-imperialism demonstrations, developed numerous left-wing societies, and had direct contact with some of the greatest intellectuals in Europe. When the students returned to China, they profoundly altered the traditional political arena. Many became proponents of various Leftist movements, while others, including Deng Xiaoping, became high-ranking members of the Chinese Communist Party.

the party and massacred communist supporters in Shanghai, leaving the Nationalist Party dominant.

During the Nanjing Decade (1927-1937), the Nationalist government spoke of nationalist revolution. Rather than a class-based Marxist revolution or a Western-inspired political ideology, the Nationalists depicted warlords and imperialists as weakening China. Yet the Nationalists allowed many former warlords to accept positions in the government during the 1926-1927 Northern Expedition. The Nationalist government's authority only extended to eastern and central provinces, with many peripheral provinces retaining local autonomy. All in all, the administration remained corrupt and inefficient. It continued to rely upon the urban and elite elements of society for support, and it failed to address the real problems of the rural masses. Although the Nationalists espoused Dr. Sun's beliefs about democracy, the government failed to adequately deal with the growing pressure of political participation.

During the Sino-Japanese War (1937–1945) the vigors of the Nationalist regime eroded. A second Nationalist-Communist Alliance during the war was suffused with tension and failed to maintain a genuine concerted effort. The Communists, under Mao Zedong, used the war period to regroup and reorganize. After the war the Chinese Civil War began, pitting the Communists against the Nationalists. The Chinese Communist Party defeated the Nationalist regime in 1949 through its exceptional organizational skills, effective leadership, popular discontent with Nationalist corruption, inefficiency, and arrogance during and after the war and finally through successful peasant mobilization. Under Mao, the Communists effectively harnessed the strength, energy, and support of the rural masses by offering a coherent ideology and political framework for restoring stability and unity to China.

—Thomas McGrath

Bibliography

- Bailey, Paul. "The Chinese Work-Study Movement in France." *China Quarterly* 115 (September 1988): 441–461.
- Eastman, Lloyd E. *The Abortive Revolution: China under Nationalist Rule, 1927–1937*. Cambridge, MA: Harvard University Press, 1974.
- Kapp, Robert A. *Szechwan and the Chinese Republic: Provincial Militarism and Central Power, 1911–1938*. New Haven, CT: Yale University Press, 1973.
- McCord, Edward A. *The Power of the Gun: The Emergence of Modern Chinese Warlordism*. Berkeley: University of California Press, 1993.
- Sheridan, James E. *China in Disintegration: The Republican Era in Chinese History, 1912–1949*. New York: Free Press, 1975.

Political Transformation in Japan

The period from 1900 to 1945 in Japan witnessed the development of popular political parties and their deterioration and removal by authoritarian rule. The emergence of popular political parties ended the domination of the Meiji oligarchs and offered the potential for new forms of stable democratic government within

the framework of the Meiji Constitution. Growing tension in the 1930s between civilian politicians and military leaders over international and domestic policy prompted independent actions by the military that led to their eventual domination of the Japanese government.

After a decade of contentious parliamentary politics between popular political parties and the Meiji oligarchs who had led the Meiji Restoration in 1868 and modernized Japan, there was a profound shift toward mutual accommodation. In 1900 Ito Hirobumi, one of the last of the oligarchs, became president of a parliamentary party, Seiyukai (Friends of Constitutional Government Party), led by Hara Kei. An astute politician, Hara Kei used this newfound alliance with the oligarchs and bureaucracy to enhance and extend the power of Seiyukai.

By making concessions and providing critical support to the government in the early 1900s, Hara Kei enabled Seiyukai to be the dominant party in Japanese parliamentary politics. During the Russo-Japanese War, Seiyukai support for the budget was critical. In exchange for party support, Hara was appointed home minister and used his position to build local-level support through patronage and directing government funds to loyal supporters. Seiyukai's growing success and influence compelled other parties to find powerful patrons.

In 1913 Katsura Taro, another leading oligarch, formed another political party to resist Seiyukai dominance. Known by many names during its lifetime, this anti-Seiyukai party successfully challenged Seiyukai dominance and established the pattern of a two-party political system in prewar Japan. Seiyukai won the 1917 election, and Hara Kei was chosen as prime minister, setting the precedent for the prime minister to be drawn from the dominant political party. Political parties thus established a stable democratic parliamentary system by working within the structure of the Meiji Constitution.

The two-party political system dominated Japanese politics between 1918 and 1932. Although there were three transcendental or non-party cabinets between 1922 and 1924, the Seiyukai and anti-Seiyukai party (established as Doshikai in 1913, Kenseikai in 1916, and Min-

seito in 1927) cabinets retained the dominant position over the military and bureaucracy in Japanese politics. The Meiji bureaucratic leadership, which had been so influential before 1900, was unable to perpetuate a new generation. The military, internally factionalized, had yet to present itself as a direct challenger to parliamentary government.

This situation changed in the 1930s due to a variety of domestic and international issues. Factions within the military became increasingly concerned about intensifying social unrest, the growing Chinese nationalism that threatened expansionist designs in Manchuria, and the international cooperation and disarmament policies of Prime Minister Hamaguchi Osachi's cabinet. In particular, the military was dissatisfied with Foreign Minister Shidehara Kijuro's conciliatory policy toward the West, as evidenced by the London Naval Treaty of 1930. Leading naval officers accused Shidehara of capitulating to British and American efforts to keep Japan as a second-rate power when he comprised on warship ratios. The treaty required imperial approval, and the emperor looked to naval advisers before approving the treaty. The government manufactured a majority of support within the Supreme War Council for approving the treaty, but a leading admiral demanded an audience with the emperor based upon the right of supreme command.

The controversy between the military and the civilian government thus focused on the right of supreme command. This right, included in the Meiji Constitution, gave the military the right to advise the emperor on military policy. The question emerged as to whether the civilian cabinet or the military had the right to determine defense policy. Hamaguchi's cabinet won imperial approval and gained ratification of the treaty, thereby protecting the prerogative of the civilian cabinet over the military on defense policy. Yet the process weakened civilian rule and led to further challenges by the military against popular party politics.

The Manchurian Incident of 1931 once again brought the compromising attitude of the civilian government into conflict with the military factions who sought to secure Japanese control over resource-rich Manchuria. The general staff and

midlevel officers who staged the incident fervently believed that Manchuria's resources were a prerequisite for Japan's defense against the Soviet Union or the United States. The incident, a small explosion along the Japanese-owned railway tracks blamed on Chinese soldiers, paved the way for the Japanese takeover of Manchuria and won popular support for the military, which acted with complete disregard of the civilian cabinet's wishes.

The assassination of Prime Minister Inukai Tsuyoshi in 1932 signaled another shift in political dominance. The political parties' influence declined sharply, to be eclipsed by a resurgent bureaucracy and military that dominated the political landscape like the parties had done since 1918. However, the military and bureaucracy never fully consolidated power in a monolithic authoritarian system similar to German or Italian fascism. The military remained factionalized and competed for control over the direction of Japan's future. Uprisings, political assassinations, and coups led by right-wing ultranationalists and military officers between 1932 and 1936 failed to alter the political structure but succeeded in further undermining civilian rule and enhancing military influence.

Subsequent short-lived cabinets, which were run by military men or by civilians such as Prince Konoe Fumimaro, were strongly influenced by the military. The military's vision of domestic and international policies, characterized by Japan's need for strategic resources drawn from the Asian mainland in order to prepare for a future war with the Soviet Union or the United States, dominated policy making in the 1930s and 1940s up to World War II.

—Thomas McGrath

Bibliography

- Matsusaka, Yoshihisa Tak. *The Making of Japanese Manchuria, 1904-1932*. Cambridge, MA: Harvard University Asia Center, 2001.
- Mitani, Taichiro. "The Establishment of Party Cabinets, 1898-1932." In *The Twentieth Century*, Vol. 6, *The Cambridge History of Japan*, edited by Peter Duus and John Whitney Hall. Cambridge: Cambridge University Press, 1988.
- Pyle, Kenneth. *The Making of Modern Japan*. 2nd ed. Lexington, MA: D. C. Heath, 1996.

Political Transformation in South Asia

The early twentieth century was a time of social change and upheaval for southern Asia. The Indian subcontinent had been under British rule in one form or another for over a century, and agitation toward the Raj (British rule) increased with the rising national and racial aspirations of the natives. Much of the cause for this change in attitude toward the British rule was due to political and educational processes brought to southern Asia by the British themselves.

During the preceding century, the Indian National Congress (INC), formed in 1885, began pushing for more influence in the Indian Civil Service. Members of the congress succeeded as candidates elected to the Legislative Councils, the legislative bodies of the various principalities, in the late nineteenth century, but their influence was minimal in the early part of the twentieth century. A series of governmental bungles responding to bubonic plague outbreaks, accompanying famine, and a later earthquake caused further dissension in the native population. The creation of new provinces out of the populous Bengal province was seen as an attack on the Hindu majority in this area and prompted protests and a boycott of British goods. The move cut into imports by more than 25 percent within the space of a few years and was a stimulus to Indian industry and national aspirations. The British response was to attack the boycott and Hindu antiparition (of Bengal) movements with criminal prosecutions and military force. This simply spurred more radical elements of the Indian National Congress to split into the New Party in 1906. In reaction to this Hindu power bloc, the Muslims of eastern Bengal and Assam began to form moderate political parties loyal to the Raj and based around their Islamic religion.

These more religiously based movements advocated violence and, sensing weakness in their foreign rulers, turned to the bomb to gain their freedom. More crackdowns by the government followed in an inevitable cycle of rebellion and repression. Despite this trend, 1909 saw the election of an Indian to the Executive

Council, the body that instituted legislation crafted by the Legislative Council and advised the governor of the colony. The seat would be retained by a “native,” and more seats in the central Legislative Council for Indians were created in 1910, with the ability to “question and debate” legislation and budgetary issues. This newly empowered Hindu-strong influence in Indian government alienated the Muslim League, moving it toward radicalism. Hindu influence also fomented resistance in Burma, where the Young Men’s Buddhist Association began to agitate against Indian involvement in Burmese affairs.

Initial Indian reaction to World War I was surprising to many in London. The Indian nationalists and the native princes showed amazing loyalty to the Raj and Britain, sending troops to Europe to aid in the fight. The casualty numbers were staggering, and the shortages caused by the war soon turned Indian public opinion against conflict. To stabilize the empire, the India Office, the English bureaucracy overseeing the governance of the colony, tried to push through more constitutional and nativist policies, but opposition among the white bureaucracy in Calcutta was too entrenched to allow it. The result was that the Indians felt a deep sense of insult at the lack of gratitude Britain showed for their sacrifice. The INC abandoned cooperation with the colonial government in 1920. Lawyer and Indian independence activist Mohandas K. Ghandi returned to India to launch small-scale experiments in self-rule and promoted a crusade of nonviolent resistance to British rule.

As Ghandi’s supporters sought to paralyze the machines of British industry in India, Muhammed Jinnah, leader of the All India Muslim League, led the native officials in doing the same to the instruments of governance. Police action against these nonviolent protests lost Britain the moral luster of its colonial mission, leading to the 1935 Government of India Act, which introduced direct elections and expanded franchise; in 1937, provincial autonomy was provided to India. The elections of 1937 resulted in a government that was heavily skewed in favor of Hindu politicians and led Jinnah and the Muslim League

to realize that their political aspirations were not to be realized in the framework of a united India. World War II and the congress's support of the British gave Jinnah the pretext needed to accelerate his plans to create a separate Muslim state. This set the stage for the Partition of India and the creation of the independent nations of India and Pakistan in 1947.

While often connected in the colonial mind with India, Ceylon (the island now known as Sri Lanka) was a separate colony created in 1802. The island was primarily a haven for plantations producing rubber, indigo, tea, sugar, and other products. Throughout the early part of the twentieth century Youth Leagues mirrored the actions of the civil rights movements on the subcontinent. The island was one of the main bases for operations against the Japanese in World War II. In 1948 the colony was granted independence by Great Britain.

Nepal had changed little throughout the nineteenth century. The shah kings of Nepal had lost much of their territory to the Indian colonial government, and the country entered a period of self-imposed isolation, broken only by tribute payment to the Chinese emperor every five years. Even these payments ended in 1912. Except for the British resident to the court and the occasional explorer, Nepal was untouched by the outside world. This changed with World War II. The effects of the fighting in China and Tibet pushed refugees into Nepal, bringing new political ideas along with population pressures. The independence of India and the radical politics of the INC directly influenced the creation of the Nepali Congress Party in 1946 and the first constitutional government in 1948.

—Scott Rhymer

Bibliography

- Pakenham, Valerie. *Out in the Noonday Sun: Edwardians in the Tropics*. New York: Random House, 1985.
- Read, Anthony, and David Fisher. *The Proudest Day: India's Long Road to Independence*. New York: Norton, 1998.
- Spear, Percival. *A History of India*. New York: Penguin, 1978.
- Wolpert, Stanley. *A New History of India*. New York: Oxford, 1989.

Political Transformation in Southeast Asia

Although Southeast Asia's societies evolved differently under the often very restrictive, racist, and authoritarian political frameworks imposed by the Western colonial powers, they nevertheless underwent significant political transformation during the period from 1900 to 1945. During these years the gradual, but often substantial, process of political change was further galvanized by the Japanese occupation during the early 1940s. Yet how these transformations played out locally depended upon a number of geopolitical factors, such as the interplay between foreign powers and the local society against the backdrop of rapid social change, notably rapid demographic growth, urbanization, cultural transformation, and technological innovation.

Alone among the Southeast Asian mainland polities, Burma, conquered by the British in three stages (1823–1826, 1852–1853, and 1885) had its monarchy abolished. From 1886 to 1937 Lower Burma, a part of British India with its predominantly ethnic Burman population, was governed directly; Upper Burma and its many hill tribes were ruled indirectly. Initially Buddhism and from the 1930s mainly various Western political ideologies (spanning the political spectrum) became vehicles of Burman political aspiration. Due to the British preference for Indians and ethnic minorities in the administration, police, and military, the reassertion of Burman ethnicity became a key rallying point. While the Hsaya San (Saya San) Rebellion (1930–1932) had at least shown the potential of violent collective action, politics remained heavily fractured between various leaders. The Japanese defeat of the British and their support of the Burma Independence Army opened the door toward independence but at the same time unleashed destructive forces that would lead to decades of civil strife and the eventual assertion of the army as the key state-building institution.

The kingdom of Siam's diplomacy and relative openness toward Western ideas and trade as well as its buffer position between the British and the French allowed it to preserve its independence, though at the price of painful territorial losses

COLONIAL ELITES AND POSTWAR INDEPENDENCE IN SOUTHEAST ASIA

While often coming from privileged backgrounds in terms of access to education, Southeast Asia's newly emerging modern elites often were Western-trained and well traveled. These individuals had to negotiate the contradiction of colonial ideals and repression, balance the weight of tradition with the uncertainties of the future, and explore new ideas, means of communication, and forms of organization in order to mobilize collective action. Among this group were Burma's General Aung San (1915–1947), Thailand's Field Marshal Phibun Songkhram (1897–1964), Vietnam's Ho Chi Minh (1890–1969), and Indonesia's Ahmed Sukarno (1901–1970). Ho and Sukarno were the most charismatic, radical, and successful of this new group of political entrepreneurs. Ho, the classically and Moscow-trained son of a middle-ranking scholar-official, was the founder of the Vietnamese communist movement and first president of the Democratic Republic of Vietnam. In the Netherlands East Indies, the mercurial Dutch-trained civil engineer Sukarno, son of an aristocratic Javanese primary schoolteacher and a Balinese mother, was a founding member of the Indonesian Nationalist Party and was also the Republic of Indonesia's first president.

—*Tobias Rettig*

and significant administrative modernization. In 1932 reformers in the bureaucracy and the armed forces led a coup that ended the absolute monarchy. Seven years later the ultranationalist and pro-Japanese government of Prime Minister Plaek Pibulsonggram (aka Phibun Songkhram) (1938–1944) gave Thailand its present name. A pattern of usually short-lived civilian governments and coups and sometimes longer-lived military dictatorships continued well into the post-1945 era, with national politics remaining the preserve of the military and the bureaucracy until the early 1970s.

Vietnam was conquered by the French in stages between 1859 and 1884 and was divided into the colony of Cochinchina and the protectorates of Annam and Tonkin. In 1887, together with Cambodia (Laos was added in 1893), they would be formed into the Indochinese Union.

Unlike Cambodia and Laos, where identification with Buddhism and royalty remained strong until well after 1945, Vietnamese nationalists explored new ideas and modes of organization when they realized that the French had politically emasculated the Vietnamese emperors. Communism and the Guomindang provided particularly attractive models from the late 1920s on, but communist and nationalist uprisings were heavily repressed in the early 1930s. The Japanese elimination of the French colonial administration in March 1945 and Japan's wartime defeat five months later created a political vacuum. Capitalizing on the events in play, Ho Chi Minh and the broad-front Viet Minh declared Vietnam independent under the new name of the Democratic Republic of Vietnam (DRV).

In British Malaya—the lightly populated Malay Peninsula—the British had extended piecemeal control from 1786 and established different forms of governance for its three colonies: the Straits Settlements (which had gained Crown colony status in 1867), the Federated Malay States (which provided central administration to five Malay sultanates from 1895), and the Unfederated Malay States (which was formed in 1909 with no central institutions). As the twentieth century progressed, a new Malay political consciousness gradually emerged, one that was separate from the more localized allegiances to the sultans. It became more pronounced in the 1930s, as Chinese and Indian immigration threatened Malay demographic superiority and when the Chinese-dominated Malayan Communist Party challenged the existing power structure. Even the Japanese invasion and occupation during World War II did not transform into violent Malay anticolonial mass mobilization but instead transformed into the soliciting of British protection. Following the war, Malay elites claimed political hegemony and negotiated independence with other ethnic groups as junior partners.

While parts of the Netherlands East Indies had been under Dutch control for more than three centuries, accelerated Dutch campaigns from the 1850s were mostly completed by 1900. To overcome the sprawling archipelago's regional, ethnic, and historical differences, early-twentieth-century nationalists attempted to mobilize by means of religion (Islam) and ideology (commu-

nism). Eventually a secular nationalism using Indonesian (a form of Malay) as its lingua franca proved most successful. The Japanese interregnum, when Japanese-led military and paramilitary units were created and nationalist leaders were given free rein to mobilize, set the country on a four-year independence war against the returning Dutch. The Indonesian armed forces would reveal themselves as the key state-building institution, outlasting the initial period of multiparty democracy, rebellions against the central government, and President Sukarno's Guided Democracy.

Colonized during the reign of Spanish king Philip II (r. 1556–1598), the United States intervened in the Philippines during the Spanish-American War of 1898. After the harsh suppression of the Philippine Revolution (1896–1902), the Americans rapidly implanted democratic institutions and elections but failed to launch significant land reform. The 1934 promise of independence by 1946 went ahead despite more than three years of Japanese occupation. The American failure to address important social inequalities led to the capturing of state institutions by a well-connected though rivaling oligarchy of families who continue to dominate national politics to this day.

—Tobias Rettig

Bibliography

- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso, 1983.
- Osborne, Milton. *Southeast Asia: An Introductory History*, 9th ed. Crows Nest, New South Wales, Australia: Allen and Unwin, 2004.
- Steinberg, David Joel, et al. *In Search of Southeast Asia: A Modern History*. New York: Praeger, 1971.
- Tarling, Nicholas. *Southeast Asia: A Modern History*. Oxford, UK: Oxford University Press, 2001.

Political Transformation in Oceania

From 1900 to 1945, vast political changes occurred in the geographic area commonly referred to as Oceania, which includes Australia, New Zealand, and numerous islands in the Pacific. Some transformations resulted from a de-

sire on the part of the inhabitants for sovereignty, some were administrative changes, and others were the result of world wars. All, however, took place amid dynamic world events in which the area of the South Pacific became more tied to global politics.

In 1900 the British parliament ratified a separate constitution for Australia, and the six preexisting colonies consolidated as one federal state in 1901. Although the new Commonwealth had its own parliament and prime minister, the British monarch continued as head of state. The government established its transitional headquarters in Melbourne while the permanent capital at Canberra was built. Several adaptations in the structure and membership of Australian political parties transpired, but World War I caused even more dramatic adjustments. In August 1914 Australia entered the war and supported the Allied Powers. Australian Labor Party leader William M. Hughes was elected prime minister in 1915 and advocated conscription, but disputes over that practice divided the Labor Party, while Australia sent thousands to fight for Britain during the war.

At war's end, the 1919 Paris Peace Conference divided German-held lands in the Pacific among the Allied Powers. German New Guinea came under Australian authority, and the Commonwealth also shared administrative responsibilities for Nauru with New Zealand and the United Kingdom. Disagreements over national economic measures to alleviate poverty during the Great Depression caused the Labour Party to fracture further, allowing the conservatives in the United Australia Party led by Joseph Lyons to



John Curtin, Australian prime minister during World War II, made Australian defense his main war objective by withdrawing troops from British command and creating a closer relationship with the United States. (Library of Congress)

➤ AUSTRALIA AND NEW ZEALAND ARMY CORPS (ANZAC)

Acknowledging their past imperial ties and role as British dominions, both Australia and New Zealand provided military personnel to support Great Britain during World War I. These combined forces, known as the Australian and New Zealand Army Corps (ANZAC), were first deployed to Egypt and Turkey. Members of ANZAC are commemorated for their resolve during the unsuccessful campaign on the Turkish peninsula of Gallipoli in 1915 that was intended to eliminate the Ottoman empire as a German ally. The episode, however, created a rift between ANZAC and the British Military Command when ANZAC troops began to see themselves as mere cannon fodder for the benefit of British advances. As a consequence, a sense of Australian and New Zealand nationalism began to emerge. After withdrawal from Gallipoli ANZAC was reorganized, with some units being sent to the western front while others remained in the Middle East. ANZAC Day is acknowledged yearly in Australia and New Zealand on April 25 as a day of memorial as well as national celebration.

—Brenda Jeanne Murray

dominate for several years. Australia again followed Britain to war with Germany in 1939. The Australian Labor Party regained power, and its leader John Curtin became the new prime minister of the Commonwealth, serving until his death in 1945.

New Zealand experienced similar political developments. It had declined to become part of Australia in 1901 and became a separate British Overseas Dominion in 1907. But like Australia, New Zealand remained tied through previous association to the United Kingdom and joined Australia with a combined military force known as ANZAC to support the Allies in World War I. After the war, New Zealand gained authority over German Western Samoa and shared the mandate for Nauru with Australia.

Economic distress during the Great Depression caused riots in New Zealand. The govern-

ment, led by Labour Party leader Michael Savage, took control of many financial ventures, imposed rationing, and instituted conscription after a 1939 joint defense conference with Australia and the United Kingdom. By 1942 Nationalist Party members dissented amid political disaffection. Even so, the administration continued nationalizing private organizations, including banks.

Pacific Island groups experienced different types of political transformation. New Guinea, Samoa, and the Solomon Islands had been German territories, but Australia and New Zealand took control of them after World War I. The Micronesian and Marshall islands had similarly become Japanese Mandates after World War I but then later became occupied by the United States during World War II. Others, including the Solomons and Papua New Guinea, became fierce battlegrounds between the Japanese and Allied forces, occupied intermittently by one and then another throughout the conflict.

Increased autonomy gained at the turn of the twentieth century led to a rise in nationalist sentiment in Australia and New Zealand through political participation by their citizens even though they acted upon ties of heritage to Britain. However, a continuous change in governmental administration throughout the first half of the twentieth century in the islands translated into a protracted undefined allegiance. In both the new sovereign states and the administered islands political transformation in Oceania from 1900 to 1945 stemmed largely from outside forces.

—Brenda Jeanne Murray

Bibliography

- Grattan, C. Hartley. *The Southwest Pacific since 1900: A Modern History*. Ann Arbor: University of Michigan Press, 1963.
- Howe, K. R., Robert C. Kiste, and Brij V. Lal, eds. *Tides of History: The Pacific Islands in the Twentieth Century*. Honolulu: University of Hawaii Press, 1994.
- Lea, David, and Colette Milward. *A Political Chronology of South-East Asia and Oceania*. London: Europa Publications, 2001.

■ Introduction: Political Transformation in Europe and the Americas

Whereas the main political division in the nineteenth century was between conservatives and liberals, in the twentieth century the main political division was between classical laissez-faire capitalists and their many opponents. This is a truism that both describes and obscures the political reality of the period. As every truism, it also exceedingly simplifies the political divisions. Politics during the years of the emerging mass media was also characterized by an alarming gap between political rhetoric and political reality. The emergence of various totalitarian political movements, including Nazism and fascism in Europe, Stalinism in Eurasia, and Caudillism in Spain and Latin America, further complicates an analysis. Thus, one finds political parties that are socialist on economic issues yet traditional on cultural issues. This reality is exemplified by Josef Stalin's support of a controlled economy with social realism in art and culture. Another case in point is American Progressivism, which advocated the breakup of large corporations by the state but also advocated prohibition, crusaded against pornography, and brought about the criminalization of narcotics. Some leaders, such as Adolf Hitler, were in favor of large corporation capitalism but also were in favor of traditionalism for cultural issues. Two more combinations should be added: the Spanish Anarchists, who favored a controlled economy but promoted liberalism in cultural issues, and the Austrian School of Economics, which was in favor of laissez-faire capitalism and were generally liberal on cultural issues.

Although support for social control of the economy was on the offensive during the first several decades of the twentieth century, that was often not enough to make one a socialist (Marxist) in the classical sense. The case in point is Franklin D. Roosevelt's New Deal policy. Was the New Deal an attempt to save capitalist free market or to introduce the socialist-style economy? Did President Roosevelt use the political rhetoric in such a way that it appealed to both conservatives and liberals but actually

pleased none of them? Latin American leaders make it often impossible to distinguish between the political program and political rhetoric. Was Juan Peron predominantly a Marxist or just a populist? What role did traditional anti-U.S. nationalism play in the presidency of populist Lázaro Cardenas in Mexico? Historians have argued both sides of the issue, and acts of these leaders, especially the gap between political action and rhetoric, make it possible to do so.

One can also say that the supporters of classical liberal democracy were often hard-pressed by forces of both right-wing and left-wing extremism, as is painfully illustrated in the case of Weimar Germany. Following one of the most serious economic crises in history, the forces opposed to representative government, such as the National Socialist German Workers' Party, known as the Nazis, and the German Communist Party, made steady gains at the expense of the Christian Democrats and Social Democrats. The Nazi slogan that democracies were weak had some support in the political reality. In actuality, both the communists and the Nazis argued that representative democracies were doomed to perish, but they attributed their obvious weaknesses to different causes. While the Marxists saw the conflict and corruption among the capitalists as normal (because it was predicted by Marx), the Nazis attributed it to a Jewish racial conspiracy and convinced a sufficient number of Germans that there was some truth to their outrageous claim.

In spite of their weaknesses, representative democracies in Europe and the Americas made at least one substantial leap forward by extending the right to vote to women. In this regard, the 1920 presidential election was the first in the United States that allowed women to vote on a national scale, as the Nineteenth Amendment to the U.S. Constitution was adopted just a few months earlier. Similar changes occurred throughout Europe and the Americas in the decades that followed.

—Alexander Mirkovic and H. Micheal Tarver

The Weimar Republic (1918–1933)

The German Weimar Republic was the product of the incomplete political and social revolution that swept away the Hohenzollern monarchy in 1918. For some Germans, its founding realized the democratic goals of the revolution of 1848; for others, it embodied Germany's humiliating defeat at the end of World War I. For still others, it was the betrayal of the socialist revolution. The new republic certainly was an important step in the democratization of German political life, but it did not break thoroughly with Germany's authoritarian past. On the contrary, it left much of the imperial political, social, and economic order unscathed, a condition that left the republic vulnerable to its enemies.

In January 1919 the Socialist Provisional Government organized the election of a constitutional convention (National Assembly). Fearing unrest in Berlin, the convention convened one month later in Weimar, a provincial city known for its cultural heritage. Dominated by the socialist and moderate liberal parties (the Weimar Coalition), the assembly created a parliamentary republic in which all Germans enjoyed the full range of basic civil rights and some social benefits. While concentrating legislative authority in the Reichstag, the assembly also called for a popularly elected president, who would appoint the chancellor (prime minister), head the military, and wield sweeping emergency powers. This latter authority would play a key role in the republic's undoing.

The Constitution did little to change Germany's Prussian-dominated federal structure or its system of political parties. Ranging from conservative to Marxist, the parties were now elected on the basis of proportional representation, although they continued to court the same interest groups as they had under the empire. Only late in the Weimar period would the Nationalsozialistische Deutsche Arbeiterpartei (National Socialist German Workers' Party, or Nazi Party) form a true people's party by attracting cross-class support.

The new parliamentary order also did not challenge the status of Germany's conservative aristocratic and industrial elites, who continued to dominate the economy and hold key political of-

fices. Fearing violent opposition, Weimar leaders failed to purge the monarchists from the officer corps, the judiciary, and other state institutions. As a result these institutions were unreliable, a problem that intensified as the republic encountered repeated challenges to its legitimacy.

The Weimar Coalition's decision to sign the Treaty of Versailles in June 1919 angered many who refused to accept Germany's defeat, its sole responsibility for the war, the requirement that it pay massive reparations, and the loss of its colonies, border territories, and military power. Others turned against the new democracy as successive governments failed to resolve repeated economic crises fueled primarily by wartime financing policies and the problems of demobilization, reconstruction, and reparations payments. The misuse of deficit spending to finance postwar costs, including the passive resistance against the French occupation of the Ruhr in 1923, fueled the onset of hyperinflation, which peaked in November of that year as the value of the German mark fell to approximately 4.2 trillion to the U.S. dollar.

Inflation bankrupted the middle class, undercut the unions, and enriched a small elite circle who manipulated the credit system. It also increased the strength of the radical nationalist and communist parties and led to popular unrest in several states. The government's use of emergency powers and foreign loans, the rescheduling of debts, and the introduction of a new currency (the rentenmark) stabilized the economy between 1924 and 1928. Although these steps eased political tensions, lingering high unemployment and government instability did little to raise public confidence. To many Germans, the republic had forfeited its legitimacy.

The Great Depression precipitated the republic's terminal crisis. Rising mass unemployment and poverty, escalating political violence, and the state's failure to ease the plight of the people led to the electoral collapse of most of the middle-class parties and to the rapid growth of the Nazi Party and the Communist Party. Between 1930 and 1932 these diametrically opposed parties collectively secured a majority of seats in the Reichstag and undermined its work. With the parliament paralyzed, Reich president Paul von Hindenburg appointed a succession of

REPARATIONS, WAR DEBT, AND INFLATION

In June 1923, the year this 1 billion German Papiermark note was printed, prices were 19,985 times those of 1914. Workers received and spent their pay every halfday before the money lost its value; the cost of a meal could rise between the time it was ordered and served. It was clear in 1919 that the newborn republic lacked the means to pay its \$32 billion war reparations. For a while it fulfilled its obligations by printing more bills, but as the mark depreciated in foreign markets, Germany defaulted. France, which was entitled to 52 percent of the reparations and owed war debts to the United States, occupied the industrially vital Ruhr to force payments. The Weimar government pumped out bills to pay the region's striking workers while simultaneously losing that tax revenue. In 1924 the Dawes Plan saved Germany by lowering annual reparations payments, introducing the gold-supported rentenmark, and providing U.S.-backed loans. Through this and the diplomacy of Gustav Stresemann, first chancellor and later foreign minister, France withdrew from the Ruhr, and the economy not only stabilized but grew. Stresemann died in October 1929 from overexertion just before his achievements collapsed with the crash on Wall Street. The United States recalled its loans, and the new Young Plan, while further reducing reparations payments, did



A one billion Reichsbank note from the German Weimar Republic, 1923. (germannotes.com)

not stop the Great Depression from mortally wounding the republic.

Bibliography

- Allen, Larry. "German Hyperinflation." In *The Encyclopedia of Money*. Santa Barbara, CA: ABC-CLIO, 1999.
- Barrett, Michael B. "Stresemann, Gustav (1878–1929)." In *World War I: Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2005.
- Murphree, R. Boyd. "The Dawes Plan." In *Germany and the Americas: Culture, Politics, and History*. Santa Barbara, CA: ABC-CLIO, 2005.

antirepublican chancellors who invoked emergency powers to rule by decree.

In July 1932 the Nazis became Germany's largest political party with 37 percent of the vote. The party won broad support across Germany by blaming Marxism, democracy, capitalist plutocrats, and Jews for the nation's misery as well as demanding the abrogation of the Versailles Treaty, the restoration of German national power, and the creation of a People's Community (*Volksgemeinschaft*) based on race. Reactionary elites around von Hindenburg now hoped to use the Nazis' strength in the Reichstag to dismantle the republican constitution. Thinking that the Nazis' charismatic leader, Adolf Hitler, could be controlled, von Hindenburg's advisers convinced him to appoint Hitler chancellor in January 1933. As it turns out, how-

ever, Hitler quickly outmaneuvered them. Using the pretext of a national emergency, within a few months Hitler eliminated his rivals and became a de facto dictator.

The political and economic weakness that characterized the republic's short life contrasted sharply with its many cultural achievements. In literature, film, art, music, architecture, and science, Germans took advantage of their freedom to challenge traditional norms and provide fresh perspectives. Writers such as the brothers Heinrich and Thomas Mann, filmmakers such as Fritz Lang, and architects such as Walter Gropius won worldwide acclaim, and their ideas remain influential to this day. But the creators of this Weimar culture did not have sole control of the field. Their ideas met strong opposition from conservative writers such as Ernst Jünger and Oswald

Spenger, whose works rejected, among other things, the pacifist, rationalist, and cosmopolitan tendencies circulating in postwar Germany. Their popularity demonstrated widespread discomfort with many of the modern elements of Weimar culture, an attitude that sections of the political Right successfully exploited.

The Weimar Republic represented a partial and temporary victory of those forces in Germany that had long sought to democratize the political and social order. That it proved ephemeral reflected the unfavorable national and international context in which the republic was born as well as the strength of Germany's conservative forces. The republic's fall was not inevitable, but its likelihood increased as a variety of circumstances, many outside of Germany's control, undermined social consensus and paved the way for the popular acceptance of the radical solutions proposed by democracy's enemies.

—William Smaldone

Bibliography

- Feuchtwanger, E. J. *From Weimar to Hitler: Germany, 1918–1933*. 2nd ed. New York: St. Martin's, 1995.
- Gay, Peter. *Weimar Culture: The Outsider as Insider*. New York and London: Harper and Row, 1970.
- Kaes, Anton, Martin Jay, and Edward Dimenbergh, eds. *The Weimar Republic Sourcebook*. Berkeley, Los Angeles, and London: University of California Press, 1994.
- Mommsen, Hans. *The Rise and Fall of Weimar Democracy*. Translated by Elborg Forster and Larry Eugene Jones. Chapel Hill and London: University of North Carolina Press, 1996.

Big Government and Big Business in the United States

During the last decades of the nineteenth century, American businesses grew and consolidated at a dizzying pace. With little government interference, the rise of big business also led to a landscape of social Darwinism, in which laborers were deskilled and exploited, and to business corruption that went unchecked. Bribery of

public officials was widespread, while corporations swallowed small rivals. At the same time, the gap between the wealthy and the poor widened. To rectify the excesses of what came to be known as the Gilded Age, progressive politicians emerged (in both political parties) who focused on social reform and on the regulation of big business.

In 1902 President Theodore Roosevelt, the first progressive politician on the national scene, used the Sherman Antitrust Act (1890) to initiate a series of suits designed to break up business combinations colluding to restrain free trade. This action by President Roosevelt was a dramatic reversal of federal policy. To regulate business, Roosevelt's administration forged new federal departments, such as the Food and Drug Administration, and increased the regulatory power of existing agencies, such as the Interstate Commerce Commission.

Presidents William Howard Taft (Republican) and Woodrow Wilson (Democrat) continued Roosevelt's regulatory policies. While President Taft preferred to use the Justice Department to bring antitrust suits before the courts, President Wilson preferred to regulate business by placing experts in charge of public policy. The Wilson administration also initiated antitrust suits, gained passage of the Clayton Anti-Trust Act (1914), and created the Federal Reserve Board (1914) and the Federal Trade Commission (1915). During World War I the influence of the federal government over business reached its zenith. Through the U.S. War Production Board, the federal government managed the economy yet relied primarily on voluntary compliance.

In 1921 the U.S. government approved the plans of the American Telephone and Telegraph Company (AT&T) to consolidate the telephone industry, marking a reversal of Progressive Era policies. The probusiness Republican administrations of Presidents Warren Harding (1921–1923), Calvin Coolidge (1923–1929), and Herbert Hoover (1929–1933) staffed the federal regulatory agencies with candidates favorable to big business. Instead of regulation, the government now promoted the concerns of business as being in the best interest of the United States. When the Great Depression struck, President

Hoover created the Reconstruction Finance Corporation to provide millions of dollars to businesses in an attempt to restore the economy through a trickle-down effect.

The Great Depression led many Americans to believe that business leaders acted according to their own selfish motives and not in the public interest. Reversing the policies of the 1920s, President Franklin Roosevelt (Democrat) aggressively regulated big business. His administration reformed banking laws, created the Securities and Exchange Commission, established labor-friendly policies, restricted ownership of public utilities, and gave the Federal Reserve Board increased power to control the economy. The Tennessee Valley Authority, a federal regional development project, directly competed with business. Using the National Recovery Administration (NRA), President Roosevelt proposed a thorough reorganization of government-business relations, following the patterns established during World War I. The NRA, however, was unpopular because it tended to hurt the smaller businesses as well as seemed unduly restrictive to trade. In 1935 the U.S. Supreme Court declared the NRA unconstitutional, and after its failure the Roosevelt administration returned to greater regulation, including the initiation of several antitrust suits.

World War II saw a revival of the close relationship between big business and big government as America geared toward wartime production. The government pumped billions of dollars into industry to build all manner of war materials but also made demands, such as price and wage controls, strict rationing, and hiring rules. A federal directive, for example, ensured that African American workers would be hired at businesses with federal contracts. Despite some frictions—at one point Roosevelt threatened to nationalize Ford Motor Company for failure to comply with the government's demands—the war was a boom to industry, and not just those producing war materials. Wrigley gum, Lucky Strike cigarettes, Coca-Cola, and Parker pens, just to name a few, benefited from massive government orders.

By 1945 the relationship between big government and big business had transformed from

➤ BUSTING TRUSTS

A classic example of a Gilded Age monopoly, John D. Rockefeller's company Standard Oil gained control of nearly the entire American oil market in the late nineteenth century by relying on ruthless tactics. Whether it was finding loopholes in state laws, bribing government and railroad officials, or eliminating any and all competition, Standard Oil did whatever was necessary to control the market. In addition to oil refineries, Rockefeller extended his dominance into the source and distribution of oil as well as many supplemental industries. By the turn of the century, public opinion began to turn against Standard Oil. Journalists known as muck-rakers exposed the misdeeds of the company, and in 1911 the U.S. Supreme Court ordered that Standard Oil be broken up.

"No doubt the indictment of Mr. Rockefeller in the spring of 1879 seemed to him the work of malice and spite. By seven years of persistent effort he had worked out a well-conceived plan for controlling the oil business of the United States. Another year and he had reason to believe that the remnant of refiners who still rebelled against his intentions would either be convinced or dead and he could rule unimpeded. But here at the very threshold of empire a certain group of people—'people with a private grievance,' 'mossbacks naturally left in the lurch by the progress of this rapidly developing trade,' his colleagues described them to the Hepburn Commission—stood in his way."

Source

Ida M. Tarbell, "The History of the Standard Oil Company" (New York: McClure, Phillips, 1904), 241.

one of mutual hostility and suspicion to a relationship of cooperation focused on using American goods and economic power to stabilize the post-World War II era.

—Gregory J. Debler

Bibliography

Geisst, Charles R. *Monopolies in America: Empire Builders and Their Enemies, from Jay Gould to Bill Gates*. New York: Oxford University Press, 2000.

Hawley, Ellis W. *The New Deal and the Problem of Monopoly: A Study in Economic Ambivalence*. Princeton, NJ: Princeton University Press, 1966.

Keller, Morton. *Regulating a New Economy: Public Policy and Economic Change in America, 1900–1933*. Cambridge, MA: Harvard University Press, 1990.

McCraw, Thomas K. *Prophets of Regulation*. Cambridge, MA: Harvard University Press, 1984.

Populism in Latin America

Populism emerged in Latin America during the 1920s and 1930s as a response to the limitations of exclusionary democracies and economic laissez-faire that had characterized Latin America since the nineteenth century. The various populist movements offered alternative political and economic models that incorporated previously marginalized social groups, in particular the urban working classes. Despite national variation, populist movements shared certain elements such as charismatic and personalist leadership, mass mobilization, a heterogeneous coalition of followers, nationalistic rhetoric, and a clearly reformist agenda that emphasized import-substitution industrialization and redistributive policies. Latin America's most notable populist leaders include Mexico's Lázaro Cárdenas (1934–1940), Brazil's Getúlio Vargas (1930–1945 and 1950–1954), Venezuela's Rómulo Betancourt (1945–1948 and 1959–1964), and Argentina's Juan Perón (1946–1955 and 1973–1974).

During the nineteenth and early twentieth centuries elites in Latin America maintained their countries' political stability through a combination of exclusionary politics based on suffrage limitations, electoral fraud, and strict mechanisms of social control. Favorable international conditions enabled these governments to embark on export-oriented economic programs that produced unprecedented economic growth. The Great Depression revealed the limitations of the export-oriented model and hit hard the political elites who had advocated it. In many Latin American countries the discontent associated with the economic crisis paved the way for the rise of populist movements.

Despite national variation, populist movements shared some common features. Populist

leaders had charisma, which is defined as leadership conferred to an individual perceived to have a set of talents and special qualities above the common people. Populist leaders resorted to different means to achieve and hold power. They encouraged electoral participation to expand their base of support and took advantage of new mass technologies, such as the radio, to spread their message across larger sectors of society. Once in power, populists did not hesitate to implement more authoritarian mechanisms to guarantee political stability and social control. Most decisions and responsibilities resided in the leader who, in many cases, ran the parties in unsystematic and personalist ways. This style of leadership enabled a leader to establish close paternalistic bonds with his followers. A rhetoric that emphasized popular symbols while stressing the leader's deep awareness of the needs of the people (a concept loosely defined) contributed to the growth of the movement and of the leader's mythical figure. The primary constituency of populist movements was the working class, whose support was obtained through the distribution of material benefits. Populist movements gave these masses a new sense of belonging. However, populist coalitions were multiclass and included members of other groups as well, such as the middle classes and the petit bourgeoisie. To maintain a broad electorate, populist leaders formulated eclectic and flexible platforms. Nationalism and national integration provided a pertinent set of ideas that spoke to many sectors and guaranteed the inclusion of disparate groups in society. Populist programs were mostly reformist compromises that prevented revolution by integrating into society previously marginalized groups and redressing their grievances.

Early populist leaders emerged throughout Latin America and included such men as Víctor Raúl Haya de la Torre in Perú, Arnulfo Arias in Panamá, José María Velasco Ibarra in Ecuador, and Rómulo Betancourt in Venezuela who challenged traditional leaders to become more democratic. Latin America's most notable populist leaders during the first half of the twentieth century were Getúlio Vargas in Brazil, Juan Perón in Argentina, and Lázaro Cárdenas in Mexico.

Lázaro Cárdenas assumed the presidency of Mexico in 1934, and once in power he created a

populist coalition that enabled him to achieve full control of the country and carry out important programs following the goals set out by the 1917 constitution. Land redistribution became a priority of Cárdenas's government. During his six-year term, 44 million acres (18 million hectares) of land were distributed to landless Mexicans. Cárdenas protected labor and gave support to the Confederation of Mexican Workers. In 1938 after a long labor dispute between oil companies and workers, Cárdenas announced the expropriation of foreign oil companies and subsequently created the state-owned *Petróleos Mexicanos* (PEMEX). This was the high point of his presidency, as the last two years of his tenure witnessed an increased deficit, inflation, and falling exports.

Getúlio Vargas assumed the presidency of Brazil in 1930 through a military coup. Once in power he centralized authority and replaced state governors with officials who reported directly to him. In 1934 his government enacted a new constitution that increased presidential power. Vargas also expanded the electorate by extending suffrage to women and citizens over 18 years of age. Furthermore, he gave to workers concrete benefits such as minimum wage guarantees, training and education programs, security of employment, and pension plans. On the other hand, the government increased its control over labor relations by eliminating the right to strike and by creating new unions. Vargas's regime became more authoritarian with the establishment of the corporatist *Estado Novo* (New State) in 1937. He ruled until 1945, when he was forced out by a military coup. Five years later Vargas became president for a second time, governing only four years until he committed suicide, overwhelmed by the pressures of dealing with the nation's inflation and his increasing opposition.

Juan Domingo Perón rose to national prominence after taking part in the 1943 military coup that ousted President Ramón Castillo. In Perón's position as secretary of labor, he granted important benefits to improve the conditions of workers in Argentina. In 1945 he was jailed, and thousands of workers demonstrated in his favor. After his release and taking advantage of his popularity, Perón started an aggressive political campaign that won him the presidency. During his administration, working conditions improved

➤ VENEZUELAN POPULIST

Rómulo Betancourt, president of Venezuela from 1945 to 1948 and again from 1959 to 1964, was one of the most influential figures in Venezuelan history. His program sought to diversify the Venezuelan economy, initiate land reform, and improve health and education for the population. The state had a paramount role in this process, and his political instrument was the *Acción Democrática*, a multiclass party created in the late 1930s that obtained the mass support of workers and peasants. On October 18, 1945, a military-civilian coup established a provisional government led by Betancourt. The following three years witnessed the first effort in Venezuela to transform the country's economic and social structures. As the Junta's provisional president, Betancourt passed a new electoral law and provided for universal suffrage, organized trade and peasant unions, and guaranteed workers' civil and social rights. On December 14, 1947, *Acción Democrática's* candidate Rómulo Gallegos won the elections but was overthrown in 1948. A decade later Betancourt won the presidential election in Venezuela once again. During his second term he distributed lands among peasants, increased investments in public education and health, raised taxes on oil profits, and encouraged industrialization through loans to private entrepreneurs. In 1964 he was succeeded by Raúl Leoni, which marked the first time in Venezuelan history that a democratically elected president transferred power to a democratically elected successor.

—Patricia Juárez-Dappe

sharply. Workers benefited from increased social spending by the state in the form of housing projects, health, and other social programs. His wife, Eva Duarte de Perón, became an important supporter of the regime and was instrumental in recruiting female supporters and voters. Women were granted the right to vote in 1947. Perón was reelected in 1951; however, economic problems and his increasingly authoritarian political style eroded his base of support. He was ousted by a military coup in 1955.

As the examples of Getúlio Vargas, Lázaro Cárdenas, and Juan Perón illustrate, although the various populist movements in Latin America

varied in their methods, they all shared a set of core traits, such as personalist leadership, mass mobilization, and a reformist agenda.

—Patricia Juárez-Dappe

Bibliography

- Conniff, Michael L., ed. *Latin American Populism in Comparative Perspective*. Albuquerque: University of New Mexico Press, 1982.
- Conniff, Michael L., ed. *Populism in Latin America*. Tuscaloosa and London: University of Alabama Press, 1999.
- Demmers, Jolle, Alex E. Fernández Jilberto, and Barbara Hogenboom, eds. *Miraculous Metamorphoses: The Neoliberalization of Latin American Populism*. London and New York: Zed Books, 2001.
- Knight, Alan. "Populism and Neopopulism in Latin America, Especially Mexico." *Journal of Latin American Studies* 30(2) (1998): 223–248.

Authoritarianism in Latin America

Throughout history, many forms of authoritarianism have existed. For the most part, they have been associated with monarchical absolutism, traditional dictatorships, and most forms of military rule. Briefly, authoritarianism is a belief in or the practice of government "from above." Political rule is imposed upon the populace by an elite group, regardless of the consent of the former; policies and the political structure are elaborated to preserve and enhance the domination of the elite. Twentieth-century authoritarian governments in Latin America grew from the regimes of nineteenth-century caudillos (military strongmen), such as Porfirio Díaz (Mexico), Antonio Guzmán Blanco (Venezuela), and Gabriel García Moreno (Ecuador).

During the first decade of the twentieth century, while populism modernized politics in South America, the situation in the Caribbean basin was different. The harsh trend was brought on by a new generation of dictatorial politicians who became characterized by practices that nourished many negative stereotypes in the minds of North American and European writers, journalists, and travelers. This negative perception reached its maximum peak in the early twentieth century, the so-called Age of the Caribbean Dictators.

Dictators assumed command of their countries for a variety of reasons. First was the legacy of the nineteenth-century caudillo, which encouraged the violent seizure of power in the absence of a tradition of democracy. Second, the dictators exacted huge profits for their countries' exports. Petroleum, minerals, sugar, tobacco, and cotton sold for lucrative prices in U.S. markets. Third, the U.S. government sent military forces to occupy and govern several countries of the Caribbean basin and Central America. More often than not, when the U.S. troops withdrew the commanders of the National Guard forces assumed political control.

Most dictators of the early twentieth century had served as officers in their countries' armies. For the most part, the armies of the various Caribbean countries were nothing more than police forces that were used to maintain internal security. As a consequence, they often functioned to protect the economic interests of the wealthy elites and North American investors. Moreover, these forces were not true armies in the modern sense. Their officers entered into politics; fought each other; stole money, goods, and property; and generally cared little or nothing about the discipline of their men.

Once in office, Latin American dictators tended to hold onto power through fraudulent elections, various subterfuges, and the use of force. These dictators demanded obedience, adulation, and loyalty from the citizens. In fact, those who refused could expect persecution. These governors used crude but effective means to keep their opponents in line. On the whole, the Latin American dictators in the first half of the twentieth century were rather intelligent, despite their lack of regular schooling. What these leaders possessed was the political trickery and willpower to take advantage of their opportunities. Despite poor formal training, most of them exhibited an innate understanding of military tactics. They did not trust counterparts, often suspecting them of wishing to take power away. Thus, they rarely supported protégés for fear that they might become political rivals.

Manuel Estrada Cabrera in Guatemala and Juan Vicente Gómez in Venezuela are excellent examples of early-twentieth-century Latin American dictators. Both governed their countries for

➤ JUAN VICENTE GÓMEZ (1857–1935)

Rising to power as a supporter of Venezuelan president Cipriano Castro, Juan Vicente Gómez effectively ruled Venezuela from 1908 until his death in 1935. After seizing power from Castro in December 1908, Gómez officially served as the nation's president three times during this period, but he was generally understood to exert final political authority in Venezuela even when not officially head of the government. The Venezuelan leader came to symbolize caudillismo and political endurance, and Gómez often said that he needed “a lifetime to fulfill his political work.”

The authoritarian leader's greatest source of power came from the benefits of Venezuelan petroleum. Gómez successfully negotiated concessions to foreign oil companies, which garnered both domestic and foreign support, relative economic stability and growth for Venezuela, and a rapid increase in Gómez's personal fortune. Nevertheless, the leader maintained order through brutal and authoritarian tactics including the crushing of any political opposition through the use of secret police. Gómez died in Venezuela after a long illness.

—Jonathan Hagood

(Courtesy Archivo Histórico de Miraflores)



nearly a quarter of a century. Afterward a new generation of dictators took over Latin America during the 1930s. Some historians have labeled these dictators “classic dictators.” Anastasio Somoza (Nicaragua), Fulgencio Batista (Cuba), and Alfredo Stroessner (Paraguay) are three examples of this new generation of dictators.

The reality was that by the twentieth century, most Latin American nations had no strong political and judicial institutions, which subsequently allowed the caudillo tradition to become stronger in one viable institution: the military. As such, it was this institution that supplied the authoritarian leaders. In the twentieth century, the classic nineteenth-century caudillo became a military man with a personal following and was generally independent of any institutional leadership role. Recent interpretations place the phenomenon within larger political, social, and

economic patterns. These include the breakdown of the power of the state as well as centrifugal regionalism and disorganized trade resulting from the effects of the early nineteenth century.

—Alfredo Angulo Rivas

Bibliography

- Collier, David. *The New Authoritarianism in Latin America*. Princeton, NJ: Princeton University Press, 1980.
- Nelson, David N., ed. *After Authoritarianism: Democracy or Disorder?* Westport, CT: Praeger, 1995.
- O'Donnell, Guillermo, and Philippe C. Schmitter. *Transitions from Authoritarian Rule: Latin America*. Baltimore: Johns Hopkins University Press, 1986.
- Skidmore, Thomas, and Peter Smith. *Modern Latin America*. New York: Oxford University Press, 2004.

Progressivism

Progressivism in the first half of the twentieth century was a general movement for social, political, moral, and economic reform. The rise of big business along with its brutal competition and violent labor disputes made economic reform urgent. Social tensions caused by rapid urbanization, an influx of immigrants, corrupt political machines, and the rise of an urban middle class also forged the consensus for progressive reforms. Middle-class progressives felt threatened from above by the unchecked immoral greed of the robber barons and from below by the radicalism of an alien working class. To protect themselves and their concept of democracy, the progressives advocated an interventionist government at all levels. Such thinkers as Henry George, William James, Jane Addams, John Dewey, Herbert Croly, and Walter Lippmann, among many others, shaped progressive thought. Progressives drew much from trends in Europe, especially England, and were not afraid to take ideas from the socialist canon.

Several key assumptions underpinned progressive thought. First, progressives had a faith in the objectivity of the dispassionate expert to shape public policy. They drew economists, social scientists, and engineers into governmental service. Second, they believed strongly in placing the good of the community over the rights of the individual. As progressives saw it, unchecked individualism was out of place in the modern industrial world. Third, progressives rejected the social Darwinism and laissez-faire social attitudes that had guided the last quarter of the nineteenth century. Accepting that the environment played an important role in shaping individual behavior, they pushed for social improvements. Finally, progressives possessed optimism that a bureaucratic government could shape a socially just and responsible society.

At the urban level, progressives sought municipal ownership of important utilities, a system of licenses for businesses, regulation of rates for public transit, construction of parks and playgrounds, honest government, and sanitation and public health programs. At the state level, progressives investigated and regulated key industries and shifted more of the tax burden to

corporations and the wealthy and instituted the recall, initiative, and referendum to make government more accountable to the electorate. At the federal level, President Theodore Roosevelt used the Sherman Antitrust Act of 1890 to break up monopolies, enacted laws regulating railroad rates and the food industry, and instituted a program for the conservation of national resources. From 1913 to 1916 President Woodrow Wilson followed the path of progressive reform with a tariff revision that included a graduated income tax, the Federal Reserve Act, the Clayton Anti-Trust Act, and the Federal Trade Commission.

Triumphs for progressivism also included the Sixteenth, Seventeenth, and Nineteenth amendments to the U.S. Constitution, which allowed for the direct election of U.S. senators, the graduated income tax, and the women's right to vote. Progressive moral reform proved successful, as vice districts were closed in cities across America, movies were regulated, pornography was banned, narcotics were rendered illegal, and the Constitution was amended in 1919 for the prohibition of alcohol.

Progressivism reached its zenith during World War I, when the government regulated the economy to hitherto unprecedented levels. In addition to controls on production, pricing, and raw materials, labor and wages were protected in a manner generally supported by organized labor. In keeping with the focus on the greater good of the community, during the war the government shaped public opinion and restricted civil liberties.

The emotional pitch of 20 years of reform, the intensity of the war and ensuing peace treaty, and the tumultuous Red Scare soured the national appetite for progressive reforms. Save the 1924 presidential bid of Senator Robert La Follette and a handful of laws, progressives were overshadowed in the indulgent consumerism and probusiness atmosphere of the 1920s. The Great Depression changed this.

Progressives argued that economic inefficiency such as overproduction, ruinous competition, maldistribution of wealth, and unsound and unethical business practices caused the economic disaster. Elected in 1932, President Franklin D. Roosevelt promised Americans a New Deal, that is, an activist government in the progressive

JANE ADDAMS

Jane Addams was born in 1860. Inspired by settlement houses in England, she cofounded Hull House in 1889 in Chicago. Addams used Hull House as a form of outreach into immigrant communities where volunteers taught English classes and offered day care, guidance, and cultural events. In addition, Addams organized political movements in immigrant neighborhoods for sanitation collection programs and park construction. Her 1910 memoir, *Twenty Years at Hull House*, inspired a generation of progressives. In addition to importing the settlement house movement to the United States, Addams was a political reformer, suffragette, and pacifist and won the Nobel Peace Prize in 1931. She died in 1935.

—Gregory J. Dehler

Jane Addams leaving Mercy Hospital in Chicago. (Library of Congress)



mold. At first the New Deal looked to streamline the American economy to remove the inefficiency and overproduction that had presumably caused the Great Depression. In the banking system the New Deal strengthened the Federal Reserve Board's ability to manage the economy and regulated the ethics of the stock market under the Securities and Exchange Commission. To raise farm income Congress created the Agricultural Adjustment Act, which controlled prices by subsidizing farmers to leave fields fallow. Finally, in the industrial sector, Roosevelt created the National Recovery Administration (NRA), the centerpiece of the New Deal, patterned on the economic management of World War I. The NRA

was a failure at restoring the economy, and Roosevelt abandoned it when the Supreme Court ruled it unconstitutional.

At this point, Roosevelt moved less in the direction of sweeping structural reforms and more toward improving the purchasing power of consumers, often referred to as the Second New Deal by historians. Programs including Social Security, the minimum wage, abolition of child labor, and fostering labor union growth and collective bargaining were designed to increase the ability of Americans to buy more goods and services. Progressivism was giving way to liberalism, which placed more emphasis on the individual than on the community, took the consumer

economy into a greater account, and celebrated America's ethnic diversity. The final element that marked the transformation of older progressivism into liberalism was a strong belief in civil rights safeguards. Believing in the importance of the community over the individual, progressives did not have a strong regard for civil liberties and had even advanced the cause of racial segregation.

—Gregory J. Dehler

Bibliography

- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Knopf, 1995.
- Dawley, Alan. *Struggles for Justice: Social Responsibility and the Liberal State*. Cambridge, MA: Harvard University Press, 1991.
- McGerr, Michael E. *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870–1920*. New York: Free Press, 2003.
- Rodgers, Daniel. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge, MA: Harvard University Press, 1998.

Proactive National Government in the United States

In the period between 1900 and 1945, the national government of the United States of America became increasingly proactive. This trend of increased governmental activity had begun during the American Civil War and proceeded

slowly throughout the nineteenth century. The pace of activism greatly accelerated after 1900, and by 1945 Americans had come to expect their government to regulate business in order to guarantee equal opportunity for all, provide a social safety net, promote commerce, protect the environment, and advance the general welfare of its citizens through action.

In the first two decades there were many groups who promoted a more active government for different reasons. Some business groups, led by the National Civic Federation, believed that federal regulation could stabilize the social and economic systems. Middle-class Americans looked to the government to act as a bulwark against both the avarice of the wealthy robber barons and the fears of radicalism among the immigrant working class. Labor groups argued that only a strong national government could protect the rights of workers. New professional organizations, representing such groups as doctors, lawyers, social scientists, and teachers, urged the government to codify their standards into law. Moral reformers wanted the government to regulate private behavior, such as what they saw as the evils of alcohol consumption. Each one of these groups lobbied the federal government directly instead of using the traditional method of securing passage of the same law (often referred to as model laws) in as many states as would pass them.

The goals of the reformers were followed by two strong-willed presidents in the first 20 years

► STRUCTURAL CHANGES

As the federal government increased its size and scope between 1900 and 1945, there were several notable reforms that improved the efficiency of government operations. In 1913 the Seventeenth Amendment to the U.S. Constitution provided for the direct election of U.S. senators. This was seen as a way to reduce the connections between corporations and the Senate. Also in 1913 the Sixteenth Amendment empowered the federal government to utilize an income tax. This measure shifted the collection of revenue from the tariff. Although modest at first and affecting only the wealthiest Americans, the income tax was in-

creased as needed to supply the funds necessary to meet the growing demand for federal programs. During World War II the income tax was expanded to the middle and working classes. In 1921 the Office of Budget and Management was created in the Executive Department to improve the federal government's reporting, forecasting, and budget planning. Finally, several attempts were made to reorganize the Executive branch in its entirety, the most important of which created a modern staff for the president, reorganized the departments, and generally streamlined the bureaucracy in 1939.

—Gregory J. Dehler

of the twentieth century: Theodore Roosevelt (1901–1909) and Woodrow Wilson (1913–1921). Although they belonged to different political parties, they both believed in an activist national government that acted on the principle that the public good superseded the rights of the individual. Roosevelt and his administration established a conservation program for natural resources, brought antitrust lawsuits against businesses, intervened in the anthracite coal strike of 1902 to prevent a shortage of home heating fuel, expanded the power of the Interstate Commerce Commission, established the Department of Commerce and Labor, and created the Food and Drug Administration to oversee new safety laws. Wilson saw the implementation of the federal income tax as part of the tariff reform of 1913 as well as the creation of the Federal Reserve System to regulate banking and the Federal Trade Commission, given regulatory oversight of business transactions, mergers, and rates. Although the U.S. Supreme Court later declared it unconstitutional, Wilson signed a law to ban child labor. During World War I Wilson vastly expanded the power of the government through conscription, sedition laws, and economic controls. When the war and the Red Scare ended, the powers of the government receded.

During the 1920s the focus of government activism shifted from business regulation toward promoting commerce and economic growth. Secretary of Commerce Herbert Hoover used his office to establish an elaborate federal framework for voluntary programs for businesses on a range of subjects from product standards to resource allocation. One area in which government power expanded dramatically during the 1920s was the field of law enforcement. This was due to the Eighteenth Amendment to the U.S. Constitution, which prohibited the sale and manufacture of alcohol. In response, the duties and size of the Federal Bureau of Investigation were greatly expanded.

The Great Depression shook the foundations of American society, and many citizens looked to the federal government to stabilize the economy and ease the burden of unemployment. President Herbert Hoover (1933–1937) responded with the most vigorous stimulus program up to that time, which included among other things economic



Worm-infested food seized under provisions of the Pure Food and Drug Act is destroyed in Washington, D.C., on November 20, 1909. Designed to protect consumers, the Act was created in 1906 during the administration of Theodore Roosevelt. (Library of Congress)

pump priming through the Reconstruction Finance Corporation. His programs failed to bring recovery, and when the public demanded more action, he balked.

In 1932 Franklin D. Roosevelt was elected to succeed Hoover as president. Immediately after his inauguration, Roosevelt initiated the New Deal reforms to stimulate economic recovery and individual relief, thereby shifting welfare from charity and the local level to the federal and state levels. Economically, the New Deal strengthened the hand of the Federal Reserve Board, and the national government took on the responsibility for insuring individual bank deposits. Business regulation included the Securities and Exchange Commission to oversee financial transactions as well as new agencies to oversee banking, public utilities, trucking, agriculture, aviation, oil, and communications industries, among others. During the New Deal the federal government used its power to level the economic playing field through the establishment of the right of collective bargaining, a minimum wage, a 40-hour workweek, and the Social Security program. The federal government also sponsored massive public works projects. Following the 1937 recession, the federal government assumed the role of managing

the economy through the use of its taxing and spending policies in a Keynesian manner.

There were limits to government activism, however. It did not benefit all people equally, as the federal government did not challenge the Jim Crow system of racial segregation in the South. The U.S. Supreme Court ruled Roosevelt's National Recovery Administration unconstitutional, as it attempted to regulate commerce that was not necessarily interstate. Roosevelt's new vision of the government as responsible for the social welfare of citizens, however, remained largely intact in the decades that followed the Great Depression.

—Gregory J. Dehler

Bibliography

- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Knopf, 1995.
- Cooper, John Milton, Jr. *Pivotal Decades: The United States, 1900–1920*. New York: Norton, 1990.
- Dawley, Alan. *Struggles for Justice: Social Responsibility and the Liberal State*. Cambridge, MA: Harvard University Press, 1991.
- Parrish, Michael. *Anxious Decades: America in Prosperity and Depression, 1920–1940*. New York: Norton, 1992.
- Skowroneck, Stephen. *Building a New American State: The Expansion of National Administrative Capacities*. Cambridge: Cambridge University Press, 1982.

The New Deal

President Franklin D. Roosevelt coined the phrase “New Deal” for the efforts of his administration and Congress to end the Great Depression. The New Deal marked an unprecedented intervention of government in the economy in hopes of putting people back to work, restoring the solvency of banks, and reinvigorating business and agriculture. In these efforts, the New Deal did not seek to replace capitalism with socialism, as critics of the New Deal on the Right charged, but rather sought to protect capitalism from its critics on the Left who wished to replace it. In this sense the New Deal was partially a conservative movement that sought to preserve capitalism rather than supplant it with a progressive economic system. Despite the refusal of Roos-

evelt and Congress to jettison capitalism, the New Deal marked a departure from the limited response of government to the economic depressions of the nineteenth century. In this regard, the New Deal was progressive in its use of government to better the lives of ordinary Americans. Being both conservative and progressive, the New Deal defies easy summation.

The New Deal arose as a response to the Great Depression. The stock market crash in 1929 marked the beginning of the Depression, although agriculture had been in the doldrums since 1919. By 1933, 15 million Americans, nearly one-third of the workforce, had lost their jobs. Construction, manufacturing, and investment all contracted, weakening business as the decline in commodity prices had hurt agriculture. In the 1920s the Republican Party had prided itself on minimizing government intervention in the economy. In 1932 voters repudiated this policy and elected Democrat Franklin Roosevelt president.

Amid the fear that banks were failing en masse as depositors scrambled to withdraw their money, Roosevelt, upon taking office in March 1933, closed all banks and called Congress into special session. Within weeks Roosevelt had restored calm and authorized the reopening of banks on a case-by-case basis. In an effort to curb expenses, Congress cut veterans' benefits and the salaries of federal employees. By reducing spending, the New Deal in its first days further deflated prices and wages. Congress, alert to the dangers of deflation, abandoned the gold standard in order to inflate the currency.

Having pared expenses, Congress, at Roosevelt's urging, created several federal agencies to combat the Depression. Between 1933 and 1936 the new Federal Emergency Relief Administration gave states \$3 billion to open soup kitchens, distribute food and clothing, and otherwise relieve the misery of the unemployed. In homage to the belief of Theodore Roosevelt, former president and cousin of Franklin Roosevelt, that people benefited from a life of outdoor activity, the Civilian Conservation Corps (CCC) put millions of young men to work building parks and roads. The Tennessee Valley Authority (TVA) built hydroelectric plants along the Tennessee River. The Agricultural Adjustment Act (AAA) sought to reduce the production of food

and cotton in hopes of increasing commodity prices, and the National Industrial Recovery Act (NIRA) sought to increase factory production as a way of putting people back to work. Among its provisions, the NIRA guaranteed the right of workers to bargain collectively with their employers. The Federal Deposit Insurance Corporation (FDIC) insured bank deposits.

Despite these efforts, the New Deal could claim only limited success during its first years. Although New Deal programs had put 2 million Americans to work by 1934, 10 million Americans still had no jobs, and nearly twice that number remained on relief. Expressing the frustration of many, Secretary of the Treasury Henry Morgenthau Jr. doubted that the New Deal had made much progress. Critics on the Left derided the New Deal for doing too little to help Americans, while those on the Right thought it had intervened excessively in the economy. Worse, in 1935 the U.S. Supreme Court declared the NIRA and the AAA unconstitutional.

Undaunted, Franklin Roosevelt launched the Second New Deal in 1935. Perhaps its most enduring achievement was the Social Security Act (SSA), which Congress enacted in June 1935. The act required both employee and employer to fund pensions for retirees and widows, payments to unemployed workers for a fixed duration, and payments to the disabled. The act also created Aid to Families with Dependent Children (AFDC), a welfare program that remained a cornerstone of social policy until 1996. Also in June 1935, Congress passed the National Labor Relations Act, known as the Wagner Act, reasserting the right of workers to bargain collectively in the absence of the NIRA. Despite the benefit to factory workers, the Wagner Act did not cover workers in the agriculture, services, or public (government) sectors.

Victorious in his bid for reelection in 1936 and fearful that the Supreme Court would overturn the legislation of the Second New Deal as it had the NIRA and AAA, in 1937 Roosevelt proposed to add four justices to the Court, increasing it from 9 to 13 justices. Critics, alert to the rise of totalitarianism in Europe, countered that Roosevelt was seeking to expand his power beyond the scope of the Constitution. The public, heeding these critics, turned against him. Even

THE BANKHEAD-JONES ACT

Among its stream of legislation, Congress, on June 29, 1935, enacted the Bankhead-Jones Act. Born of the New Deal commitment to agriculture, the act sought to raise farm prices by empowering the U.S. Department of Agriculture (USDA), the land-grant universities, and the agricultural experiment stations to conduct research on developing new markets for food and cotton. Amid the drought of the mid-1930s, the act led these institutions to conduct research on developing new methods of conserving soil and water. To accomplish these aims, the act gave the USDA and the states \$5 million a year for research. The act affirmed the eighteenth-century belief that science could improve the lives of farmers and committed the New Deal to the advancement of both science and agriculture. In the Bankhead-Jones Act, the New Deal emphasized the practical rather than theoretical value of science, an orientation in vogue since the colonial era. The act affirmed that science had a role in restoring prosperity, the central aim of the New Deal, and thus affirmed the position that science was a tool of economic policy. Perhaps most importantly, the Bankhead-Jones Act affirmed that science was more than a private enterprise. Science was a public activity that called on scientists to use the resources of government for the common good.

—Christopher Cuno



President Franklin D. Roosevelt signs the Social Security Act on August 14, 1935. Initially a New Deal program, Social Security developed into a government program that provides retirement, death, and disability benefits to all eligible Americans. (Library of Congress)

many Democrats, most of them conservatives from the South, deserted Roosevelt. The defeat of Roosevelt's Court-packing plan and his growing concern with foreign affairs ended the New Deal.

In the short term, the New Deal failed to end the Great Depression. Millions remained unemployed until the production of armaments during World War II spurred the recovery of industry, while the demand for food overseas restored prosperity to agriculture. World War II re-oriented the federal government toward the defeat of fascism and Nazism abroad rather than the pursuit of prosperity at home. In any case, the war, rather than the government, restored prosperity. Over the long term, the New Deal cemented the reputation of the Democratic Party as the party of reform. Its enthusiasts would preserve the impetus for reform into the 1960s, when President Lyndon B. Johnson, a Texas congressman during the New Deal, launched the Great Society. The Social Security Act and the Wagner Act continue to shape economic and social policy.

—*Christopher Cumo*

Bibliography

- Bernstein, Irving. *A Caring Society: The New Deal, the Worker, and the Great Depression*. Boston: Houghton Mifflin, 1985.
- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Knopf, 1995.
- Leff, Mark. *The Limits of Symbolic Reform: The New Deal and Taxation, 1933–1939*. New York: Cambridge University Press, 1984.
- Louchheim, Katie, ed. *The Making of the New Deal: The Insiders Speak*. Cambridge, MA: Harvard University Press, 1983.

Women and Politics

In 1900 women in the United States possessed the right to vote only in Wyoming, Colorado, Utah, and Idaho. Despite the widespread lack of suffrage, women of this era possessed political power and influenced important social legislation. The defined gender roles of the time, sometimes called separate spheres, held that the husband worked outside the home while the wife served as caretaker to the children and guardian of the family morals and domestic

sphere. Tacitly accepting this ideology, more socially conservative women reformers argued for reforms outside the home as a means of protecting the morals of the family and so attempted to slowly extend the boundaries of the domestic sphere. At the same time, more radical reformers attacked the ideological basis of separate spheres and its assumption that women were appropriately relegated to domestic roles.

One example of a conservative reform was the drive to limit alcohol consumption. Between 1900 and 1920 women played a dominant role in advocating local temperance through dry laws and eventually nationwide prohibition under the Eighteenth Amendment to the U.S. Constitution. Other political issues in which women took part included improving education, regulating sweatshops and factory work conditions, banning child labor, promoting the construction of parks and playgrounds, advocating urban sanitation programs, and campaigning against prostitution. To advance their goals women founded advocacy organizations such as the Women's Christian Temperance Union, the General Federation of Women's Clubs, the National Consumer's League, and the Women's Trade Union League.

There was also a small yet more radical element of women who advocated a complete overthrow of the patriarchal society and the odious separate spheres ideology. Charlotte Perkins Gilman best expressed the ideas of the radicals in *Women and Economics* (1898) and her utopian novel *Herland* (1915).

Inspired by the British suffragettes, the National American Women Suffrage Association (NAWSA) led by Carrie Chapman Catt resumed an aggressive effort to lobby on behalf of women's right to vote after 1908. They were rewarded in 1910 when Washington state granted women the right to vote. By 1912 California, Kansas, Oregon, and Arizona had followed suit. Despite these victories there were also defeats, as referendums failed in Michigan, Ohio, and Wisconsin. Many men believed that women were not yet ready for the responsibility of voting. World War I accelerated women's suffrage, and President Woodrow Wilson came out strongly in favor of an amendment to the Constitution. The NAWSA and other suffrage groups lobbied state legislatures to pass the amendment. In addition,

more radical activists such as Alice Paul picketed the White House and led marches and protests, even if it meant being arrested.

The war highlighted divisions within the women's movement that would become more exacerbated during the 1920s. The moderate women of the NAWSA generally supported the war effort by selling war bonds, raising money for hospitals, and sending care packages to American soldiers. The radical women, however, did not support the war. In 1915 before American involvement, Jane Addams and others had formed the Women's Peace Party. They considered war a symptom of the sick and violent male-dominated oppressive society that they wanted to reform. It was more than symbolic that Jeanette Rankin of Montana, the first woman elected to the House of Representatives, voted against the Declaration of War in 1917.

On August 26, 1920, the Nineteenth Amendment to the U.S. Constitution granting women the right to vote was ratified. Women voted for the first time in a national election during the presidential election of 1920. But a women's voting bloc that politicians had both feared and courted never emerged. The bulk of the newly enfranchised women voted with a slightly smaller turnout but along the same party affiliation as did their husbands. During the 1920s the emerging consumer economy had a significant effect on women. Middle-aged women became the primary consumer of the home, and younger women were drawn to the decade's extravagance.

The division in the women's movement solidified during the 1920s. Alice Paul and the radicals urged women to use their new electoral strength to address their long-neglected concerns through the National Women's Party (NWP), which they had formed in 1917. Paul and the radicals considered the right to vote only the first step to more aggressive reforms, such as an Equal Rights Amendment to the Constitution that would ban all forms of gender-based discrimination. Although Congress conducted hearings, the NWP could not build enough public support for the amendment. Many working women did not stand behind the Equal Rights Amendment because they believed that it would hurt them by undermining some of the gender-based protective laws put in place over the previous 20 years.

➤ JEANETTE RANKIN (1880–1973)

Jeanette Rankin was born in Missoula, Montana, in 1880. Progressive reforms and women's suffrage drew her to politics. In 1916 she became the first woman ever elected to the U.S. Congress. She immediately confronted the issue of war and voted against American entry into World War I. Rankin served one term but devoted her life to antiwar activities and founded the Georgia Peace Society. Elected to Congress again in 1940, she cast the lone vote opposing the American declaration of war against Japan in 1941. She continued her antiwar activism up until her death in 1973.



(Library of Congress)

—Gregory J. Dehler

More moderate women considered suffrage an end in itself, a sign of equality, and disbanded their organizations. To better inform the newly enfranchised women voters they formed the nonpartisan League of Women Voters. Former suffragettes also advocated many progressive reforms, such as restrictions on child labor and the Sheppard-Towner Act, which put federal dollars into maternal care.

The Great Depression with its high unemployment rates was a difficult time for women because any woman working outside of traditional female occupations was seen as taking a job away from a male breadwinner. Despite this handicap, women made significant gains under the presidency of Franklin Roosevelt (1933–1945). First Lady Eleanor Roosevelt served as a vocal advocate of women and the reforms that progressive women espoused. President Roosevelt appointed Frances Perkins to the cabinet, Florence Allen to the U.S. Circuit Court of Appeals, and Ruth Brogan Owen as an ambassador, and these three individuals were the first women to hold those respective positions. Roosevelt also appointed women to the new agencies

formed during the New Deal. New Deal programs such as the Wagner Act (1935), the Social Security Act (1935), and the Fair Labor and Standards Act (1938) addressed issues such as work safety, poverty, and single-parent homes. While President Roosevelt addressed many concerns of women, he did not address all of them. He disappointed the First Lady and the largely women-dominated Council of Interracial Cooperation in failing to push Congress to make lynching a federal crime.

Despite the significant gains that women had made between 1900 and 1945 they still had not achieved equality in the political system. Although women had gained the right to vote,

they were seriously underrepresented in local, state, and national political offices.

—Gregory J. Dehler

Bibliography

- Cott, Nancy. *The Grounding of Modern Feminism*. New Haven, CT: Yale University Press, 1987.
- Evans, Sara M. *Born for Liberty: A History of Women in America*. New York: Basic Books, 1989.
- Matthews, Glenna. *The Rise of the Public Woman: Women's Power and Women's Place in the United States, 1630–1990*. New York: Oxford University Press, 1992.
- Ware, Susan. *Beyond Suffrage: Women in the New Deal*. Cambridge, MA: Harvard University Press, 1981.

■ Introduction: National Policy

A nation's ideological goals, reflected through official government statements, laws, and other actions, create its national policy. These policies necessarily vary for each nation, but throughout the course of the early twentieth century several commonalities among nations of every level of development existed. National policies developed as a result of international and domestic factors that the policies were designed to affect. Vast changes in economic conditions and two world wars proved more influential in the creation and implementation of national policy than anything else during this period. Domestic policies became more oriented toward the working and middle classes, while international policy focused on averting conflict between the Great Powers.

Dynamic changes in society resulted in domestic policies dominated by populism and economic reform. These two aspects of policy focused on improving the lives of the masses. Industrialized urbanization shifted populations more than ever, creating the need and desire for social reorganization. Populism in Venezuela, Mexico, and the United States shared several characteristics, including collective bargaining rights for workers, increased government regulation of the economy, and female suffrage. Re-

moving legal impediments to collective bargaining enabled workers to join together to secure better working conditions, shorter hours, and higher pay, thus empowering the workers to limit the abuses of their employers. Governments across the globe began increasing control over economic activity in reaction to the failure of laissez-faire economics, as experienced with the worldwide depression of the 1930s. The New Deal policies of the United States and the *Petróleos Mexicanos* in Mexico represent two instances of direct government intervention in economics. Women's suffrage also fell under the umbrella of populism as an important policy of the era. Women gained the right to vote and thus increased their direct impact on the course and development of the national government.

Isolationism, expansionism, and appeasement highlighted the international aspects of national policy. Many nations, including the United States, sought to remain outside of international affairs as much as possible. While Western imperialism remained aggressive at the turn of the century, it quickly declined among the established empires. Budding nations such as Germany, Italy, and Japan sought to enlarge their influence, as evidenced by their aggressive expansionism. Nations across the globe re-

mained mortified by the violence of World War I and desired peace regardless of the price, as evidenced in the cases of Germany and Japan and their expansions in Europe and Asia. Britain, France, and the remainder of the League of Nations had opportunities to stop Germany and Japan but ultimately did not do so. This bred mistrust and perceived weakness among other nations. In the end, the failures of the League of Nations and the timidity with which it approached the prospect of war emboldened expansionist nations.

Two world wars, a global economic crisis, and the urban shift restructured social and political conditions throughout the world. National policies adapted to these changing conditions. During the early twentieth century, the rising importance of the masses, aversion to warfare, and reaction to economic strife were manifest in the changes in national policies.

—*Ian Patterson*

U.S. Interventionism

From 1900 to 1945, U.S. interventionist foreign policy—or the direct forceful interference into the internal politics of other independent states—was justified through various ideological rationalizations. U.S. interventions in the Philippines, the Caribbean, Mexico, and Central America, for example, were justified with liberal and democratic rhetoric, despite the policy's disregard of the national sovereignty of the states toward which these actions were aimed.

U.S. interventionism from 1900 to 1945, as practiced from the McKinley through the Hoover administrations, attempted to distinguish American foreign policy from European colonialism by framing such actions as a means to establish liberal and democratic institutions abroad through U.S. paternalism. Despite this discourse, the Roosevelt Corollary to the Monroe Doctrine, as issued in 1904, justified U.S. intervention in the Western Hemisphere to ensure U.S. hegemony and protect U.S. interests if Latin American republics proved themselves “unstable” or unable to pay their foreign debts. Likewise, President Woodrow Wilson advocated “moral diplomacy,” seeking to impose U.S.

➤ GREATER EAST ASIA CO-PROSPERITY SPHERE

During World War II, Japanese colonialism was cloaked in the rhetoric of the Greater East Asia Co-Prosperity Sphere, with its central claim that Japan was liberating Asia from European domination to establish an “Asia for the Asians” under Japanese supremacy. In contrast with outright seizure of territories and the installation of colonial authorities or proxy governments, these interventions were presented as ventures for the benefit of the state and people whose territory was being invaded and/or occupied. The general tone was similar to that of the early-nineteenth-century Monroe Doctrine, which had placed the United States in the role of regional leader after the withdrawal of European colonial powers in the Americas.

Japanese expansion in East Asia and Southeast Asia was presented as a means to empower Asian peoples through the defeat of European colonialism. The stated goal of the Greater East Asia Co-Prosperity Sphere was to replace white regimes that sought to exploit Asian peoples with a Japanese regime that would allow Asians differing levels of autonomy and ensure economic and political rights. Official Japanese propaganda presented this as a viable alternative to the people of Dutch Indonesia, French Indochina, and British Malaya, with some initial acceptance. While certain contingents of these territories collaborated with Japanese occupation authorities, overall, Japanese colonialism in these regions followed the same pattern of exploitation as practiced by European colonial authorities. Some indigenous rulers, such as Sukarno in Indonesia, benefited from Japanese authority; however, most regions under Japanese occupation suffered exploitation, leading to resistance and guerrilla movements, such as that of Ho Chi Minh's Vietminh in French Indochina.

—*Abraham O. Mendoza*

hegemony through force when governments proved “unstable” as perceived by American commercial interests or diplomatic aims. U.S. military and intelligence actions in Colombia, which encouraged Panamanian rebels to separate from Colombia for the purpose of ensuring the attainment of the Panama Canal territory, is an overt instance of this policy. Similarly, interventionism in Cuba and the Philippines after

the Spanish-American War were also attempts to ensure American domination of these regions through the utilization of the rhetoric of freedom and democracy. Regardless of the nature of warfare in the U.S.-Philippine War and the imposition of the Platt Amendment (1901) on Cuban sovereignty, American interventions abroad were presented to the U.S. public as unselfish actions for the benefit of those affected.

The most overt cases of U.S. interventionism involved the installation of an authoritarian regime in Nicaragua. U.S. intervention in Nicaragua began in 1912, when U.S. marines were sent to “protect” U.S.-backed President Adolfo Díaz. Armed resistance by Nicaraguan forces was quashed by U.S. troops, thus securing Díaz’s authority. This set a long-standing precedent for U.S. interference in that country’s politics. During the interwar period, U.S. policies regarding Nicaraguan internal politics resulted in the installation of the Anastasio Somoza García regime. U.S. interventions in Mexico, particularly the occupation of Veracruz and the U.S. raid into Mexican territory after Pancho Villa’s attack on Columbus, New Mexico, both during the Mexican Revolution, were the most overt examples of violations of Mexican sovereignty.

The U.S. occupation of Haiti, which lasted from 1915 to 1934, to ensure debt payments and the “protection of American interests” was a gross violation of that country’s national sovereignty. Similarly, the United States established a protectorate over the Dominican Republic in 1905 after a two-year military occupation that followed the same rationale. It was not until Franklin D. Roosevelt’s more conciliatory foreign policy that U.S. relations with Latin America improved. Two events in 1934 best demonstrate the improved relations: the removal of U.S. troops from Haiti and the signing of the Treaty of Relations with Cuba, thereby repealing the Platt Amendment. The outbreak of World War II also ensured that the United States would seek greater Pan-American cooperation, in contrast with earlier policy that sought to impose U.S. hegemony throughout the Americas.

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Bibliography

Beisner, Robert L. *From the Old Diplomacy to the New: 1865 to 1900*. Wheeling, IL: Harlan Davidson, 1975.

Dower, John W. *War Without Mercy: Race and Power in the Pacific War*. New York: Pantheon Books, 1986.

Keylor, William R. *The Twentieth Century World: An International History*. 4th ed. New York: Oxford University Press, 2001.

Isolationism

Isolationism describes the desire of a nation to exempt itself from involvement with other nations and to occupy itself simply with matters within its own borders. This policy, often prompted by xenophobia, or fear and hatred of other peoples, characterized the actions of numerous nations before the twentieth century. Historically, isolationism had been more prevalent in non-Western nations than in Western nations, which since the fifteenth century had been keen to expand their boundaries. In Asia, several countries had managed to maintain semi- or completely closed societies well into the nineteenth century, chief among those were China and Japan. However, a series of global wars in the first half of the twentieth century and the exponential growth of communications and transportation made it nearly impossible for any nation to be truly isolationist after 1945.

The case of the United States perhaps best illustrates this change. While the United States by the end of the twentieth century was the single most powerful nation in the world, it had a long tradition of isolationism and neutrality. In his farewell address, George Washington warned the infant nation against “foreign entanglements.” The policy of neutrality first articulated by Washington characterized U.S. foreign policy for much of the nation’s first two centuries.

That policy was challenged as the U.S. government got caught up in the race for empire in the waning decades of the nineteenth century. Still, those foreign involvements were perceived to be an aberration, and a majority of Americans at the beginning of the twentieth century believed in an “America First” policy, putting U.S. domestic concerns above those of their international counterparts.

Throughout the first few decades of the century, this sentiment prevailed, with the exception of intermittent interventions in Latin

America meant to secure and safeguard the economic interests of U.S. companies. World War I put the first real cracks in the isolationist armor of the United States, however. President Woodrow Wilson sought to create a League of Nations, which would provide collective security to member nations in the hope of offsetting another world war. Even though the United States did not join the league, after World War I, the nation struggled to maintain its political and economic distance from the rest of the world.

Only two decades later, European calls for help in the fight against such fascist aggressors as Adolf Hitler and Benito Mussolini gradually drew the United States into closer economic and military ties with England, France, and other European nations. By the late 1930s, as the United States inched toward full involvement in the war, the isolationist impulse continued to influence U.S. policy. For example, the United States resisted getting involved in saving the threatened Jewish populations of Europe; in 1938, a shipload of several hundred German Jewish refugees unsuccessfully sought asylum in the United States. American authorities turned them away, and they were forced to return to Germany, where they all subsequently perished. Three years later, after the Japanese attack on Pearl Harbor, the United States finally renounced isolationism and joined the Allies in their struggle against the Axis Powers.

China's policy of isolationism illustrates one of the dangers of such a policy: the potential for unchecked abuse of power by the government. For example, in 1930, there were approximately four million Chinese children reportedly held in slavery. Abuses of that sort increased after China became a communist nation in the middle of the twentieth century. Yet the turn to communism forced the Chinese at least partly out of its isolationism, for it sought to maintain buffer zones along its borders, especially in Southeast Asia.

China's neighbor Korea also had a tradition of isolationism, a tradition that was challenged on many occasions by other nations, both friendly and unfriendly. Korea's struggle to maintain its goal of isolationism was difficult, in large part because Korea was of strategic geographic importance. After Japanese occupation of Korea ended following World War II, any thoughts by the Koreans of returning to a policy of isolationism were

quickly erased. The Chinese and Soviets' desire to spread communism, a goal that Western powers resisted, played a big role in Korea's future. Both sides found Korea's existence as a bridge to the Asian mainland increasingly attractive, and the Korean War (1950–1953) became the first real battle in the Cold War. At the end of the Korean War, the nation was divided into two distinct political entities, North Korea and South Korea, both of which continued throughout the century to be of critical strategic importance.

Another Asian nation that struggled to cling to its isolationist goals was Japan. Perhaps more than any of its Asian counterparts, Japan maintained a policy of isolationism for centuries. That tradition of isolationism was interrupted during a couple of periods in the nation's history: during the sixth and seventh centuries Japan sent students to China to acquire information about that nation's advanced technology; and by the middle of the nineteenth century, Japan was lured by economic prospects to enter into trade agreements with the United States and various European powers. However, Japan did remain a closed society, deeply steeped in tradition and virtually completely self-reliant, until well into the twentieth century.

During World War II, Japan became involved directly in world affairs, as it joined the Axis Powers in the war against European and American Allied forces. During the war, Japan invaded and took control of part of China but lost it when defeated by the Allies. After the war, Japan, under Allied occupation, became a democracy. By the last quarter of the twentieth century, Japan had turned virtually completely away from its isolationist heritage to become a key factor in the world's marketplace and an important political force.

Those changes were paralleled in Mongolia. That nation had long struggled to maintain its independence from its Asian neighbors. China in particular posed a threat to that aim. Like many of its Asian counterparts, Mongolia's history of isolationism, although often challenged by outside forces, resulted in a very homogeneous society. The year 1924 marked a change in Mongolian policy, as it became a communist nation and turned even more ardently inward.

Frequently, nations have retreated into a policy of isolationism at inexplicable times.

Argentina, for example, was the fourth-most prosperous nation in the world in the 1930s and enjoyed a standard of living equal to that of the United States and as good as, if not better than, most European nations. World War II, however, wrought transformative changes in Argentina. In the aftermath of the war, Argentina changed politically, socially, and economically, and as a result, suffered in all those areas. It remained essentially isolationist until 1989.

In summary, World War II forever changed the relationship of most isolationist nations with the rest of the world, and indeed international relations writ large. In the aftermath of the War, the United Nations (UN) was created, its aim to maintain a kind of global police force that would check the behavior of aggressive nations and provide a sense of collective security to all its member nations. Another important mission of the UN was to oversee human rights throughout the world and to sanction nations that engaged in human rights abuses. The attention paid to such matters put isolationist nations under significantly more scrutiny than they had been before the creation of the global alliance of the UN.

—Maeve Cowan

Bibliography

- Doenecke, Justus D. *Not to the Swift: The Old Isolationists in the Cold War Era*. Lewisburg, PA: Bucknell University Press, 1979.
- Rossini, Daniela, ed. *From Theodore Roosevelt to FDR: Internationalism and Isolationism in American Foreign Policy*. Staffordshire, UK: Ryburn Pub., Keele University Press, 1995.
- Veganzones, Marie-Ange, with Carlos Winograd. *Argentina in the 20th Century: An Account of Long-Awaited Growth*. Paris: Development Centre of the Organisation for Economic Cooperation and Development, 1997.
- Yahuda, Michael B. *Towards the End of Isolationism: China's Foreign Policy after Mao*. New York: St. Martin's, 1983.

Appeasement

The foreign policy of appeasement is associated with British and French diplomacy vis-à-vis Nazi Germany during the late interwar period. By definition, appeasement is the policy of offering

concessions through negotiation rather than through conflict. In this instance, it refers to the concession of territory to avoid armed conflict. The policy has historically been associated primarily with British prime minister Neville Chamberlain's diplomacy in regard to negotiating the transfer of the Sudetenland region in Czechoslovakia to Germany, with no regard to the position of the Czechs at the Munich Conference of 1938. French reliance on British military support made them support any policy that came out of London. The strategy of appeasement also characterized British, French, and League of Nations policy regarding the Italian invasion of Ethiopia (1936) and Germany's annexation of Austria (1938).

Memories of World War I and the international economic situation strongly influenced British and French foreign policy in the late 1930s. Public opinion in both Britain and France was particularly opposed to entering into a major conflagration with the revisionist powers of Germany, Italy, or Japan. The belief that a second global war would mirror the trench warfare of World War I frightened many among the British and French public, who still remembered the large casualties and the loss of a huge proportion of their young men. Images of the destruction caused by strategic aerial bombardment in the Sino-Japanese War (1937–1945) on the cities of Shanghai and Nanking as well as the German Air Force bombing of Guernica during the Spanish Civil War also raised apprehensions of what war would bring. Given the financial constraints created by the Great Depression, defense spending was seen as an unnecessary expenditure for the state. Responsive to public opinion and concerned with the financial consequences of war, high government officials, such as British prime minister Neville Chamberlain and French foreign minister Georges Bonnet, were avid supporters of appeasement. These leaders also overestimated German military power, strengthening their belief that it would be catastrophic to enter into a war.

The failure of the League of Nations policy of collective security and suspicions of the Soviet Union also led to the appeasement of the revisionist powers. After World War I, the League of Nations was established to secure international collaboration to prevent aggression with

recourse either through sanctions or military intervention. The League of Nations, whose main support was Britain and France—given that the United States was not a part of it and the Soviet Union only joined in 1934—failed to ensure collective security. While issuing condemnations against Japanese aggression in Manchuria in 1931 and the Italian invasion of Ethiopia in 1936, the League of Nations essentially did nothing else, thereby illustrating the impotence of the international body in enforcing international peace. This permissive climate encouraged the revisionist powers to seek further expansion at the expense of weaker powers. British and French officials also hesitated in allying with the Soviet Union. They were suspicious of the Soviet Union's international designs, particularly after learning of the Great Purge as well as the Soviet involvement in the Spanish Civil War. Some of these officials actually thought of Nazi Germany as a "bulwark against communism," given the international activity of the Comintern in the past decades at directing the policies of European communist parties. Moreover, leaders of East European nations, such as Poland and Romania, did not wish to allow the Red Army to go through their respective national territories for fear that they might never leave. Britain and France were reluctant to go against the wishes of these East European states.

British and French appeasement of the revisionist powers took various forms: condemnation without sanctions, the overlooking of flagrant violations of international law and/or agreements, or efforts to negotiate on the behalf of slighted powers. Japanese aggressions in the Far East particularly those against China, while met with official condemnation, were not met with sanctions or military threats. British and French politicians and officials did not see their national interests at stake. German and Italian involvement in the Spanish Civil War (1936–1939) on the side of Francisco Franco's Nationalists, while a clear violation of the Non-Intervention Agreement of 1936, which stipulated that no outside power would assist either side and that signees would actually assist in monitoring such actions, did nothing to sway Britain and France. Fears that such involvement could trigger a major European war prevented the British and the French from breaching

➤ THE FAILURE OF COLLECTIVE SECURITY— WESTERN SUSPICIONS OF THE SOVIET UNION

In contrast with appeasement, the policy of collective security purported that aggression by revisionist powers in the late 1930s needed to be addressed by members of the League of Nations, primarily the Great Powers of Britain, France, and the Soviet Union (after 1934). Collective security could only work if Britain and France would allow the Soviet Union to pass through East European countries to attack Germany from the east while Britain and France advanced in the west. However, the Little Entente Powers (especially Poland and Romania), which were already aware of France's reluctance to partake in an offensive war and its preference to stay behind the Maginot Line, were not prepared to allow the Soviets on their soil. Furthermore, French reluctance to go to war without British support, when the British were not prepared to go to war over eastern Europe, further antagonized the Soviet Union, which viewed this as a sign of the weakness of liberalism against fascism. British and French appeasement of Germany and their reluctance to come to terms with the Soviets, also fueled by fears of Bolshevism, eventually led to the Nazi-Soviet Non-Aggression Pact of 1939, which allowed Germany to turn its full fury against the West.

—Abraham O. Mendoza

the issue, even after flagrant German, Italian, and Soviet involvement (on the side of the Spanish Republicans). The Italian invasion of Ethiopia, widely condemned by the League of Nations and individual member powers, met with sanctions; however, sanctions did not cut off oil supplies to Italy. Furthermore, British foreign secretary Sir Samuel Hoare and French prime minister Pierre Laval attempted to come to a secret understanding with Italy, known as the Hoare-Laval Pact, that would allow Italy to annex two-thirds of Ethiopia in an effort to maintain Italian support against German expansion. However, when publicized, this offer led to the dismissal of these two men from office, as it showed that they were willing to concede foreign territory to ensure their own national interests.

The Munich Conference of 1938, in which Neville Chamberlain and Adolf Hitler, along with

French prime minister Édouard Daladier and Italian prime minister Benito Mussolini, decided against Czechoslovakia and essentially handed over the Sudetenland to Nazi Germany, was the high point of appeasement. The failure of collective security through the inaction of the League of Nations, the inability to come to an agreement with the Soviet Union, the widespread fears of war, and the current economic problems all culminated at Munich in a British and French decision to negotiate on behalf of other states (no Czechoslovakian officials were allowed at these meetings). Chamberlain returned to Britain promising “peace in our time” to jubilant crowds, indicative of the public support in the United Kingdom that he had in preventing war. However, this last-ditch effort to stem German expansion proved to be a failure. Czechoslovakia was swallowed up by the Third Reich in March 1939, with the occupation of Bohemia-Moravia, the establishment of Slovakia as a German protectorate, and the small region of Teschen going to Poland.

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Bibliography

- Lamb, Margaret, and Nicholas Tarling. *From Versailles to Pearl Harbor: The Origins of the Second World War in Europe and Asia*. New York: Palgrave Macmillan, 2001.
- Martel, Gordon, ed. *The Origins of the Second World War Reconsidered: A. J. P. Taylor and the Historians*. New York: Routledge, 1999.
- Taylor, A. J. P. *The Origins of the Second World War*. New York: Atheneum, 1983.

Expansionism

Before World War I, expansionism across much of the world was still characterized by European colonial expansion, triggered by commercial growth and Great Power rivalries. However, with the end of World War I, much of the expansionist policies of the Great Powers were at the expense of the defunct German and Ottoman empires, whose former colonies were set up as League of Nations Mandates. In the interwar period, amid the economic chaos of the global Great Depression, expansionism was characterized by revisionist states such as

Nazi Germany, fascist Italy, and imperial Japan in their quests to expand their territories owing to either economic necessity or ideological and political goals. These expansionist policies would eventually trigger World War II in Europe and the Far East.

From 1900 to 1914, the European Great Powers were the main contenders for global expansion along with the United States and Japan, which had also recently acquired colonial holdings. While much of Africa and Asia had been carved up into colonies or spheres of influence in prior periods, conflicts among the Great Powers were affected by events in their respective empires. In an effort to colonize the remaining scraps left on the globe, the Great Powers would clash, sometimes leading to major conflagrations. The Russo-Japanese War (1905), which served as evidence of Japan's entry into the Great Powers, is an example of how border skirmishes could trigger a war among the major powers. Among other factors, imperial rivalries played a role in unleashing World War I. It particularly marked Germany's ambitions for hegemony in Europe.

After the guns fell silent on the western front in World War I, the process of rebuilding the world was marred by the efforts of Britain, France, and Japan to grab the spoils of war at the expense of the former German and Ottoman empires. While U.S. president Woodrow Wilson used the rhetoric of self-determination to create a new order in Europe among the wreckage of the defeated Central Powers, the League of Nations ceded former German and Ottoman territories in the Middle East and the Pacific to the British empire, France, and Japan as League of Nations Mandates, to be allowed self-rule in the future but to be immediately occupied and ruled under the tutelage of these Great Powers.

Revisionist foreign policies on the part of Germany, Italy, and Japan during the 1930s, partly triggered by the Great Depression but also influenced by domestic political ideologies, led to a period of expansionism that eventually triggered World War II. Beset by economic and political chaos at home, Germany, Italy, and Japan embarked on an aggressive foreign policy aimed at expansion close to home rather than overseas.

► TREATY OF BREST-LITOVSK (1918)

In the last year of World War I, German desires for expansion in eastern Europe were manifest in the Treaty of Brest-Litovsk, signed on March 3, 1918, by Germany, Russia, and other Central Powers. In the aftermath of the October Revolution, the Bolsheviks' desire to exit the war led them to seek peace with Germany. However, Germany sought to capitalize on Russian weakness to extract huge territorial concessions for itself and its allies. Given these circumstances, the Bolsheviks had no choice but to concede the Baltic States (Latvia,

Estonia, and Lithuania), Poland, Belarus, and Ukraine to Germany, with smaller concessions to the Ottoman empire along the Ottoman-Russian border. While this treaty was nullified with the end of the war later that year, it still illustrated German foreign policy toward eastern Europe and Russia. Within two decades, there would be another attempt to seize these same European territories, this time under the aegis of National Socialism.

—Abraham O. Mendoza

Nazi Germany, under the rule of Adolf Hitler, sought to annex its former territories as well as the German regions of the former Habsburg empire (Austria and the Sudetenland) while also creating a series of alliances with Central European nations to create a German-controlled economic zone to contend with the rampant protectionism amid the Great Depression. Furthermore, German ambitions were based on the concept of *Lebensraum* (living space), as purported by Hitler in his biography *Mein Kampf* (1925). Italy sought to conquer Ethiopia in 1936, mostly to sate its imperial designs but also to supposedly quench its economic desires. Along the same lines, Japan sought to expand at the expense of China through the seizure of Manchuria and the establishment of the puppet state of Manchukuo in 1931 as well as with the move to create the Greater East Asia Co-Prosperity Sphere. Both German and Japanese aggressions would later be characterized by roughshod conquest of foreign peoples and their subjugation to new forms of imperialism, characterized by slave labor and genocide.

—Abraham O. Mendoza

Bibliography

- Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.
- Lamb, Margaret, and Nicholas Tarling. *From Versailles to Pearl Harbor: The Origins of the Second World War in Europe and Asia*. New York: Palgrave Macmillan, 2001.

Women's Suffrage

During the period 1900–1945, as an outcome of concerted political activism, the right of women to vote in democratic elections was granted in most of Europe, North America, and much of Asia and Latin America. While in some cases women's suffrage was granted to all women for all elections, in many cases the franchise was extended gradually, either by territory, age, or class.

During the last half of the nineteenth century women had sought greater rights, and the right to vote was one of them. Others included the ability to own property, to inherit a husband's estate, to retain custody of children, to maximize work hours, and to gain access to education. Demand for suffrage grew louder as the numbers of educated women increased. The outline of the arguments used to support women's suffrage in the twentieth century were basically those stated at the Seneca Falls Convention of 1848 and by English philosopher John Stuart Mill in *The Subjection of Women*, published in 1869. Women, these supporters of suffrage had argued, were equal citizens deserving of equal rights. They too had an interest in good and efficient government. Moreover, their social role as guardian of the home required them to take political action to protect their families and to promote reforms such as temperance that could improve domestic and civil order. Still, there were many who opposed women's suffrage, believing that women lacked the emotional balance and education to pass judgment on important issues. More

➤ SUFFRAGETTES' HUNGER STRIKES

The first known use of a hunger strike as a tactic in the British suffrage movement was in July 1909 by Marion Wallace Dunlop, when she was arrested and sentenced to one month in prison. After 1908, imprisoned suffragettes had been regarded as criminals by the authorities and were therefore denied privileges that they had once enjoyed, such as wearing their own clothes. Dunlop asked that she be treated as a political prisoner and when her request was denied, she began a hunger strike which eventually led to her release after refusing food for 91 hours. This method of protest was quickly taken up by other suffrage prisoners and was endorsed by the Women's Social and Political Union (WSPU) as a way to gain sympathy for the cause.

Although at first women who went on hunger strikes were released, the British government changed its policy by the autumn of 1909 and women were force-fed, a painful procedure that permanently damaged the health of some of those who endured it. Following adverse publicity surrounding the procedure by publications such as *Votes for Women*, the official newspaper of the WSPU, the Cat and Mouse Act was passed in

1913. Under its provisions, hunger strikers could be released from prison and then rearrested once their health had improved.

Hunger strikers gained considerable sympathy from many members of the public, and *Votes for Women* repeatedly portrayed them as martyrs. In Britain, hunger strikes came to an end in 1914, when suffrage prisoners were released at the outbreak of World War I. Hunger strikes continued to be used by women in other countries who were still trying to gain the right to vote. In Mexico, for example, it was after María García and her followers had staged a hunger strike that the president agreed to submit a bill to amend the constitution to enable women to vote and to hold office.

—June Hannam, Katherine Holden,
and Mitzi Auchterlonie

Bibliography

Hannam, June, Katherine Holden, and Mitzi Auchterlonie. "Hunger Strikes." In *International Encyclopedia of Women's Suffrage*. Santa Barbara, CA: ABC-CLIO, 2001.

conservative societies still relied on deference to the male to hold the family together, and orthodox religious sentiment frequently worked against women.

Prior to 1900, only New Zealand had full women's suffrage. Partial suffrage existed in Sweden and Australia, and four states in the United States had granted the right of women's suffrage in the late nineteenth century. Between 1906 and 1916, Finland, Norway, Denmark, Iceland, and most of Canada extended the franchise to women. In Britain and the United States, suffragettes led by Emmeline Pankhurst, Carrie Chapman Catt, and Alice Paul used protest tactics to push their agenda. Some of the large street rallies and speeches turned into riots when the police arrived and arrested activists.

The cause of women's suffrage accelerated at the end of World War I. Between 1918 and 1921 Austria, Belgium, Czechoslovakia, Estonia, Germany, Latvia, the Netherlands, Poland, Swe-

den, and the United States granted full suffrage, and Great Britain extended the franchise to all women over the age of 30. The pace of women's suffrage slowed later in the decade, although both Britain and Ireland removed its age requirement in 1928 and allowed all women to vote.

During the 1930s, women's suffrage made gains in Latin America and Asia. By the end of World War II, 12 Latin American nations and 7 Asian nations extended partial or full women's suffrage. The Government of India Act of 1935 granted both Indian men and women the right to vote. In addition, three more European countries granted women's suffrage. The last nations to grant women's suffrage before the end of 1945 were Bulgaria, France, and Japan.

No significant women's political party took root in any of the countries that granted women the right to vote by 1945. In some nations where women had the right to vote, traditional patterns of deference to males and religious mores often

discouraged them from exercising their suffrage, especially outside the metropolitan areas. In addition, some of the gains made toward women's suffrage between 1900 and 1945 were erased by antidemocratic fascist and communist governments in the political turmoil of the interwar years. Following the conclusion of World War II, the United Nations Universal Declaration of Human Rights of 1948 called for elections and universal suffrage, setting women's suffrage as a global ideal.

—Gregory J. Dehler

Bibliography

- Baker, Jean, ed. *Votes for Women: The Struggle for Suffrage Revisited*. New York: Oxford University Press, 2002.
- Evans, Richard J. *The Feminists: The Women's Emancipation Movements in Europe, America, and Australasia, 1840–1920*. New York: Barnes and Noble, 1977.
- Harrison, Patricia Greenwood. *Connecting Links: The British and American Women's Suffrage Movements, 1900–1914*. Westport, CT: Greenwood, 2000.
- Meyer, Donald B. *Sex and Power: The Rise of Women in America, Russia, Sweden and Italy*. Middletown, CT: Wesleyan University Press, 1989.

Creation of the Welfare State

The period between 1900 and 1945 saw the building of the intellectual, institutional, political, social, and economic foundations of the welfare states of the post-World War II era. The term “welfare state” only came into use in the 1940s.

During the early decades of the twentieth century, the laissez-faire concept of free-market liberalism—which dominated governmental policy in the late nineteenth century—gave way to the concept of the state taking some responsibility for the material welfare of its citizens. Several factors contributed to the change of attitudes. Industrialization dramatically altered the social landscape, thereby creating great wealth for a few and great poverty for many. The old system of family and private charity proved unable to provide support during times of need. Intellectuals, ranging from Karl Marx to John Dewey, successfully argued for greater governmental

powers to alter the imbalance between wealth and poverty. Conservative politicians, such as Otto von Bismarck of Germany, used the welfare state to undercut support for the more radical reforms of the socialists. As the franchise was expanded down the economic ladder, the new voters exerted pressure on the government to provide an economic safety net.

By 1900 Denmark, Germany, and New Zealand had the most advanced welfare systems with an old-age pension, unemployment insurance, and workman's compensation. Other states had established food safety laws, public education systems, and economic regulation of corporations to varying degrees. To pay for the welfare systems, states enacted tariffs as well as value-added and income taxes. By 1911 Australia and Great Britain had introduced government pensions for the indigent elderly.

During World War I all of the governments of the belligerents greatly expanded the role of the state through measures such as the enforcement

➤ GROWTH OF THE WELFARE STATE

In the midst of the welfare state's growth in the early half of the twentieth century, there were several intellectuals who called attention to what they saw as potential dangers of the new system. Inspired by Adam Smith's *The Wealth of Nations* written in 1776, these economists argued that an unfettered market was the best insurance to human happiness. Conversely, excessive government interference in the form of rules, regulations, and controls would create a dependent, controlled, and ultimately unhappy population. Although there were many more who wrote in this vein, three important works at this time were *Socialism* (1922) by Ludwig von Mises, *Challenge to Liberty* (1934) by former U.S. president Herbert Hoover, and *The Road to Serfdom* (1944) by Friedrich Hayek. Hayek argued that welfare programs and regulation formed the thin edge of the wedge that separated people from their freedom. As the government penetrated deeper into the economy, it accumulated more power and inevitably evolved into an authoritarian regime beyond the control of the people and leading to a new form of serfdom.

—Gregory J. Dehler

of conscription, increase in taxation, centralization of economic decisions, and nationalization of key industries. Agreements were made between the government and organized labor in which the unions pledged not to strike in exchange for a minimum wage and increased insurance. The state also regulated private behavior, such as alcohol consumption, in the name of the public good. The Bolshevik takeover in Russia in 1917 marked the emergence of an all-powerful state that subverted the rights of the individual for the benefit of the state. The Bolsheviks redistributed land, eliminated private ownership, centralized the economy, and established a state-run health care system.

After the war, millions of disabled veterans were added to the social welfare system. Industries that had been nationalized during the war were privatized, taxes were reduced, and labor's gains were either limited, as in the case of Great Britain, or entirely lost, as in the United States. The Great Depression, which began in 1929, renewed the demand to expand the welfare state as the capitalist economies of the world collapsed. Governments took responsibility for unemployment, housing construction, currency management, and employment. During the 1930s Belgium, Canada, France, Greece, the Netherlands, Norway, Sweden, and the United States established or strengthened their welfare systems.

Although the European model of the welfare state did not take hold in Latin America, nationalist leaders in Brazil, Colombia, and Mexico built populist governments and enacted programs of land redistribution and nationalized natural resources. The British economist John Maynard Keynes advanced the idea that the state should replace the market as the regulator to the economy through its spending policy.

The additions made to the state over the first 45 years of the twentieth century would be consolidated and rationalized after World War II. By the end of the war a consensus had emerged in western Europe that included new concepts of rights, such as health care and full employment, that the state should guarantee.

—Gregory J. Dehler

Bibliography

- Levine, Daniel. *Poverty and Society: The Growth of the American Welfare State in International Comparison*. New Brunswick, NJ: Rutgers University Press, 1988.
- Pedersen, Susan. *Family Dependence and the Origin of the Welfare State: Britain and France, 1914–1945*. New York: Cambridge University Press, 1993.
- Rodgers, Daniel T. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge, MA: Harvard University Press, 1998.

■ Introduction: Official and Nationalistic Art

In an effort to construct national identity and foster unity across multiethnic populations, the development of official state and nationalist art in much of the world from 1900 to 1945 emphasized national greatness and uniqueness. In authoritarian and fascist regimes, military leaders, battles, and national symbols were utilized in paintings, statues, and monuments. Moreover, in socialist regimes the working class, surrounded by the implements of industry and agriculture, was a common motif to support a vision of an egalitarian ideal.

Similarly, nationalist art in colonized or semi-colonized world regions romanticized the plight of the oppressed masses in their fight for liberation, emphasizing the promise of freedom from imperialism and the hope offered by modernization. Along similar lines, the nationalist art of republics in the Americas often emphasized national narratives of “freedom and liberty,” a common theme often highlighting the importance of state institutions in the construction of the nation-state.

—Abraham O. Mendoza

Official and Nationalistic Art in Africa

Early colonial education was generally not invested in promoting the visual arts, partly because it attempted to encourage only specific utilitarian skills and because it denied the full humanity of the colonized by ignoring their potential for developing creative abilities. The scope and reach of colonialism inspired a sense of unity among Africa's nationalist liberation movements, which in turn inspired critiques of colonialism emergent in the work of artists in the first part of the twentieth century. Although influenced by the different cultural and historical influences of each region as well as by the different media and forms of artistic production, artists in Africa were inspired by the struggles of nationalist leaders and intellectuals and thus became engaged in the production of anticolonialist and nationalist art.

Many emerging artists in the early part of the twentieth century were forced to be self-taught, as the incorporation of the arts was denied in the colonial curriculum. In West Africa, Aina Onabolu became a self-taught painter whose work reflected a universal humanism and a realism evocative of both European modernist painters and the conventions of classical Ife court art that are part of his heritage.

Egypt's Wafdist movement of the 1920s and 1930s inspired new themes in the production of nationalist and revolutionary art that aimed to assert the authenticity of Egypt's distinct cultural past and to distinguish Egypt from its British occupier. In colonial Egypt, the emergent nationalist art relied on asserting a distinct historical lineage by using Pharaonic themes from Egypt's ancient past. The leaders of the modern Egyptian art movement, whether educated in Europe or in Egypt, were significantly influenced by European styles, techniques, and schools. Calling themselves *Al-Ruwwad* (pioneers), they initiated an artistic revival that collectively depicted Egypt's anticolonialist struggle and women's liberation as well as its agricultural landscape as an expression of its cultural and political resurgence and uniqueness. The prominent sculptor Mahmoud Mokhtar created statues of Egyptian peasants as

➤ SAAD ZAGHLOUL MAUSOLEUM

After the Wafdist nationalist leader Saad Zaghloul died in 1927, a political conflict ensued regarding the aesthetics of his tomb in Cairo, Egypt. The style of his mausoleum became a topic of debate in the press, centering mainly on whether the forms incorporated into its development should be religious or national. Although plans were made for a mosque or a mosquelike location where prayers could be conducted, the style of the mausoleum was eventually determined to be nationalistic. The options for the national style to be selected included the distinctly cultural and historical Pharoanic style, evocative of the ancient Pharoanic past of Egypt that predates Islam and its Arab influences, and the distinctly Islamic-Arabic style. The Pharaonic style of architecture was experiencing a revival in the 1920s but was subject to a decline shortly thereafter. Because the construction of the tomb would be a significant national decision, as its style would signal the leanings of the nationalist movement, the final decision incorporated the Pharaonic aesthetic as well as the Arab-Islamic style into a syncretic national piece commemorating Zaghloul.

—*Nahrain Al-Mousawi*

well as the elite, including one of a symbolic father figure in the nationalist movement, Saad Zaghloul, before the politician's death in 1927. Another artist, Ragheb Ayad, focused on depictions of Egypt's peasantry using various scenes from Egypt's popular life through street-level and field-level intimations, whether in the coffeehouses or in the field. Other artists were sent to other parts of Africa on artistic missions to document its distinct cultural and political life. In 1931 the diplomat and artist Mohammed Naghi went to Addis Ababa to paint the Nile sources as well as court portraits, such as that of Emperor Haile Selassie.

In South Africa, the pioneers of modernist art in the 1930s also chose classical African frameworks that displaced European influences. Ernest Mancoba was such a pioneer African modernist who was considered to have

reflected the influence of African and European modernisms within the framework of his classical African wood sculptures. Mancoba's aesthetic influenced and prefigured a generation of midcentury artists who shifted their attention from an appropriation of European modernist influences to a reworking and rearticulation of classical African forms that developed new cultural forms as well as a new alternative artistic modernism.

Political cartoons expressed the burgeoning nationalist sentiment of a variety of African countries. Starting in the mid-1940s, Akinola Lasekan was Nigeria's pioneering political cartoonist at a time of significant anticolonialist nationalism. The medium of the cartoon came from a modern European colonialist consciousness against which he created his political commentary. However, Lasekan's commitment to realist art was articulated with a deep knowledge of the ironic process and production of anticolonialist criticism in its use of both the forms and tools of the colonizers.

In the later decades, the *négritude* movement, pioneered by Leopold Senghor and Aimé Césaire in France, inspired more and more visual artists than ever before who came to be influenced by the movement's nationalist struggle for African self-determination. Decades of colonial education's curricular denial of the arts was met with African artists' nationalist affirmation of the inherent worth of what had been denied and suppressed sustainably through colonial education: African cultural and artistic consciousness.

—*Nabrain Al-Mousawi*

Bibliography

- Coury, Ralph. "The Politics of the Funereal: The Tomb of Sa'ad Zaghloul." *Journal of the American Research Center in Egypt* 29 (1992): 191–200.
- Döring, Tobias. *African Cultures, Visual Arts, and the Museum: Sights/Sites of Creativity and Conflict*. Amsterdam: Rodopi, 2002.
- Oguibe, Olu. *The Culture Game*. Minneapolis: University of Minnesota Press, 2004.
- Salmoni, Barak, and Amy Johnson. *Re-envisioning Egypt, 1919–1952*. Cairo: American University in Cairo Press, 2005.

Official and Nationalistic Art in Asia

The ubiquitous world's fairs and expositions held during the last decades of the nineteenth century and the first decades of the twentieth century provide a useful context for understanding major art phenomena that occurred in many Asian nations of the era. These international venues, designed to demonstrate the cultural authority and economic strength of a nation, were embraced by its participants as a means of aggressively asserting their rightful position in international politics. The Asian nation most dedicated to the project was Japan. The most emblematic example of Japan's ambitions can be seen in its participation in the St. Louis World's Fair of 1904. Not only was the scope of Japan's exhibit noteworthy, but the contemporary publication of seminal texts—such as Nitobe Inazo's *Bushido: The Soul of Japan* and Okakura Kakuzo's *The Ideals of the East*—touting the unique strengths of Japanese culture announced the government's ambitions for colonial ascendance in the Pacific as it laid out its justifications for such aspirations.

Taking Korea as an example, the Japanese government justified its annexation of Korea in 1910 as part of an effort to civilize a backward culture. The Meiji-era bureaucrat Nitobe Inazo vociferously spoke about how the event clearly demonstrated Japan's newly found status as a legitimate world power. Along with victory in the Russo-Japanese War (1904–1905), the annexation emboldened the Japanese government and spurred Japan to ratchet up colonizing projects in the Pacific region.

The art that was produced in Korea from 1900 to 1945 is a fascinating test case for evaluating official and nationalist art production in contemporary Asia. The binary distinction between "traditional" and "modern" art and the efforts to assert a unique national identity through artistic representation were primary issues with which artists, critics, and the governments of the era struggled. However, in Korea—as well as in Formosa (Taiwan) and many other islands in the Pacific—the artistic enterprise was further complicated by the role that the colonialist

powers played in writing the national artistic narrative.

Before Korea was annexed by Japan, Korea's penultimate king, Gojong (r. 1863–1907), had been keenly invested in making Korea's presence felt in the world. Korea's first participation was at the World's Columbian Exposition of 1893 in Chicago, to be followed by participation in the Exposition Universelle in Paris in 1900. This desire to demonstrate the nation's modernity and progress was overturned as Japan, in disciplined fashion, methodically portrayed Korea as tragically backward and mired in a calcified past. According to the Japanese, it was their role to bring Korea in step with the present, and as part of this goal, the colonial government established the Joseon Art Exhibition in 1922.

In its early years, the Joseon Art Exhibition was dominated by Japanese nationals. More than half of the artists who participated were Japanese, and the jurors were all Japanese. Korean artists' responses to the foreign control of the official institutions of art were varied. Some artists refused to participate as a means of protest, but many saw no alternative if they wanted a career in art and thus chose to dedicate their contributions to articulating not only an individual artistic vision but also nationalistic concepts concerning a unique Korean cultural aesthetic.

The pursuit of an inherent national essence was a shared goal between both the colonialist power and native Korean artists, although what that essence was exactly and how it should manifest itself in material terms was a matter of debate. An aesthetics debate emerged around 1928 over a quality called local color (*hyangtosaek*) among Korean artists and art critics and became embraced by both the colonizer and colonized. Part of the call for local color was grounded in a rejection of Western art and its traditions, while it also privileged the notion of timeless character unique to the peninsula. Thus, many called for a portrayal of the geography, climate, and scenes of Korean rural life. What was touted by nationalist Koreans as a means for proudly asserting a positive national identity was ironically also supported by the Japanese colonialist power. Imagery of pastoral scenes and customs fit the view of Korean culture favored by the Jap-

ART IN OCEANIA

Oceania consists of approximately 25,000 islands including Australia, New Guinea, Melanesia, Micronesia, and Polynesia. The diverse cultural traditions that constitute Oceania produced varied forms and concepts of art throughout centuries.

A notable late-nineteenth- and early-twentieth-century phenomenon that exerted an enormous impact upon Oceanic art production and reception was the cross-cultural contact between the islands and the European avant-garde. The role of Post-Impressionist painter Paul Gauguin (1848–1903), in particular, and the broader phenomenon of exhibiting Oceanic and African art as “primitive” art, prominent in the late 1800s and early 1900s, is seminal to the discourse of art in Oceania from 1900 to 1945.

As was the case in many non-Euro-American nations during that era, the concept of the traditional was actively redefined in the context of comparing native forms and practices as a contrast to those of Western origin. The establishment of art schools following the European model and the emergence of modern tourist art commerce had a significant impact on the development of artistic concepts and practices in Oceania.

—Susan Lee

anese government as one frozen in time, forever in a state of provincial exoticism, and therefore in need of a greater nation's guardianship for survival in the twentieth century.

The single most prominent figure in Chinese art production between 1900 and 1945 was the writer and political activist Lu Xun. In addition to his notable literary achievements, his leadership in the woodcut print movement epitomized the effective merger of political activism with promotion of avant-garde aesthetic ideals imported from Europe and Japan. Many of the themes and working methods of the prints also provided the foundation for Socialist Realist art that was to dominate Mao Zedong's People's Republic of China.

—Susan Lee

Bibliography

Clark, John. *Modern Asian Art*. Honolulu: University of Hawaii Press, 1998.

Hanson, F. Allan, and Louise Hanson. *Art and Identity in Oceania*. Honolulu: University of Hawaii Press, 1990.

Kaeppler, Adrienne L. *The Pacific Arts of Polynesia & Micronesia*. Oxford, UK: Oxford University Press, 2008.

Kim, Youngna. *20th Century Korean Art*. London: Laurence King, 2005.

Official and Nationalistic Art in Europe

Ideological and political movements in post-World War I Europe had a significant influence on culture and the arts. Italian fascism, German national socialism, and Soviet communism permeated the cultural life of interwar Europe to a considerable degree. The construction of monuments, promenades, and buildings that glorified and celebrated the achievements of these varying ideologies were ubiquitous throughout Italy, Germany, and the Soviet Union. The nationalist cult of personality of these respective states, which focused on the image of the leader (Benito Mussolini, Adolf Hitler, and Josef Stalin) in busts, statues, and images, was also widespread. Growing state control in these totalitarian societies restricted the sort of art allowed in the public sphere and hindered artistic movements and styles that did not adhere to the party or state line.

From the 1920s through the 1940s, with fascist Italy under the control of “il Duce” Benito Mussolini, much of the state-endorsed art celebrated the achievements of the Fascist Party and the fascist state. Artistic movements, such as futurism (associated with poet and polemicist Filippo Marinetti), emphasized the social and economic advances that fascism granted to the Italian state and its people. Much of the art and architecture produced in Italy during this period focused on the glorious Roman past and the parallels with the development of a modern Roman Empire under Mussolini. Roman columns and classical motifs in buildings were quite common, as were busts and statues of fascist heroes such as Mussolini himself and Gabriele D’Annunzio. In contrast, artists critical to the fascist regime found themselves ostracized, harassed, and sometimes imprisoned if their art was found to be subversive or critical of the rule of Mussolini.

Nazi Germany (1933–1945) and its ubiquitous display of nationalist art and monuments starkly contrasted with the widespread innovations and movements in the arts that preceded it in the Weimar Republic (1919–1933). German dictator Adolf Hitler, an artist himself as a young man, was disgusted with modern art and its various forms (such as modernism, cubism, and expressionism), seeing these as decadent and promulgated by Jews. National socialism advocated art that celebrated German national life and its achievements. Nazi architecture, as designed by such luminaries as Albert Speer, included gigantic neoclassical and art deco-influenced structures that emphasized the greatness of the German state and race. Statues celebrated the Aryan human form as an ideal. Streets and promenades were decked with Nazi flags and regalia to imbue a sense of cultural uniformity and subservience among the German masses. Neoclassical stadiums and parade grounds, such as the Nuremberg rally grounds and the Sportsplatz in Berlin, were built to hold massive national socialist rallies in order to garner support for Hitler’s regime. Busts, images, and statues celebrating Adolf Hitler were prevalent in daily German life, with images of the benevolent yet authoritarian German dictator saturating the public sphere of Nazi Germany. Artists and architects were forced to abide by national socialist cultural guidelines or else



The neoclassical “Ehrentempel” in Munich, designed for the Nazis by Paul Troost. (Library of Congress)

INTERNATIONAL EXPOSITION DEDICATED TO ART AND TECHNOLOGY IN MODERN LIFE, 1937

The Exposition Internationale des Arts et Techniques dans la Vie Moderne (International Exposition dedicated to Art and Technology in Modern Life) held in Paris, France, in 1937 was a showcase for the ideological exhibits of the rival nation-states of Europe. The Spanish pavilion, which was representative of the Spanish Republic and not of Franco's Nationalist Spain, included Pablo Picasso's celebrated mural *Guernica*, which was painted specifically for the exposition and depicted the atrocious nature of modern war. This choice emphasized the Spanish Republic's protest against fascist aggression by Franco's allies, Nazi Germany and fascist Italy, who were actively involved in supplying Nationalist forces with matériel and troops. Nazi Germany was represented by its pavilion, designed by notable Nazi architect Albert Speer. Speer's pavilion was focused on a 500-foot

(152-meter) tower adorned with the twin symbols of the National Socialist German state, the eagle and the swastika. The pavilion was meant to represent the greatness and pride of the German state and the restorative power of National Socialism. Immediately across from the German pavilion was the Soviet pavilion, which celebrated the achievements of the Soviet state under socialism. The Soviet monument, located at the top of the pavilion, consisted of a large stainless steel sculpture depicting a male worker and a female kolkhoz (agricultural collective) peasant with their hands holding a hammer and a sickle together as a symbol of communism atop a massive building facade. These two pavilions directly faced each other, making the exhibition a symbolic competition between the two ideological rivals.

—Abraham O. Mendoza

face incarceration in concentration camps, leading many of them to choose exile abroad. Many advocates of German modern art and architecture found refuge in places such as New York, Los Angeles, Paris, and Tel Aviv; these expatriates wielded a significant influence on the art and thought of those cities.

Cultural life in the Soviet Union was completely shaped by the ideological and political guidelines set by the Communist Party of the Soviet Union (CPSU), which emphasized the Soviet worker, government policies, and the cult of personality of CPSU general secretary Josef Stalin. The Soviet laborer, peasant, and working class in general, rendered in the heroic style of social realism, were typical motifs in Soviet art to emphasize the collective effort of socialism in creating the Soviet state. Government policies (Five-Year Plans) in industry, agriculture, and in the military were also subjects in art, as these were also seen as pivotal to building socialism. Stalin was a major motif in much of the propagandist art promulgated in the Soviet Union in

addition to the other patriarch of the socialist movement, Lenin, whose body was displayed in Moscow in an elegantly designed tomb. Architecture also focused on gigantic monuments that celebrated Soviet achievements, typically in city centers, squares, and promenades, along with statues of Stalin, Lenin, and other Soviet heroes. Much like the other totalitarian regimes, artists and intellectuals who did not follow the official party line in regard to what was deemed acceptable art often were sent to forced-labor camps and detention centers in Siberia.

—Abraham O. Mendoza

Bibliography

- Brendon, Piers. *The Dark Valley: A Panorama of the 1930s*. New York: Vintage House, 2000.
- Golomstock, Igor. *Totalitarian Art in the Soviet Union: The Third Reich, Fascist Italy, and the People's Republic of China*. New York: Icon, 1990.
- Payne, Stanley. *A History of Fascism, 1914-1945*. Madison: University of Wisconsin Press, 1995.

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World History Encyclopedia

Era 8: Crisis and Achievement, 1900–1945 ■ Volume 18

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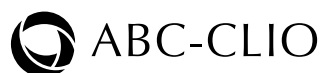
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Economics and Trade

A truly unified global economy emerged in the first half of the twentieth century. As the century opened, the European imperial states had developed interdependent complex economic relationships with their colonies and with each other. From 1900 to 1914 the global economy was centered in western Europe, the United States, and Japan as the major centers of world industry, with Asia, Latin America, Africa, and Oceania serving as sources of raw materials as well as markets for finished goods and services. Germany was the premier industrial nation, the center of the European economic system and its greater linkages to global trade. The economic relationships among the various societies in the British empire gave the illusion of stability. Germany, France, and Britain exported capital through development loans and investments to their imperial dominions or other developing semi-industrial states. The United States was still a net debtor nation but was beginning to develop its economic power on a global scale. The world economy underwent several transitions as the center of the international economic system shifted, as New York City became the nexus of global trade, gradually taking the mantle from the City of London.

Colonialism and neocolonialism were critical forces shaping the world's economies in this period. From 1900 to 1914 Britain, France, Germany, the United States, and Japan were the foremost economic powers. Britain in particular exerted an immense economic influence through its vast colonial dominions over much of Africa, Asia, Oceania, and North America as well as its indirect economic control of much of Latin America. Attempts to acquire economic independence, most notably in the context of the Mexican Revolution (1910–1920), proved successful in loosening the grip of European and U.S. economic domination from some Latin American countries. Despite such successes, most of the colonial world remained subject to European and American economic dominance, with some regions developing into important centers of production in their own right, such as Canada, Australia, Brazil, and Argentina. Other regions, such as the Ottoman empire and tsarist Russia, became semicolonial states, subject to foreign economic domination. During this period the United States and Japan, following their emergence in the late nineteenth century as major global economic powers, continued to expand

Attempts to acquire economic independence, most notably in the context of the Mexican Revolution (1910–1920), proved successful in loosening the grip of European and U.S. economic domination from some Latin American countries.

their economic clout. In contrast, the combination of foreign entrenchment, wars, and internal rebellion in China proved disruptive economically as well as politically.

Warfare was arguably the most critical force shaping the world's economies over this half-century period. The major belligerents learned to mobilize their economies effectively during World War I. In particular, Britain, France, and Germany had mobilized most of their economies—including capital, material resources, manufacturing capacity, and labor—for the purpose of war. These government-coordinated efforts established boards of politicians, military officers, and major businesses to draft and implement economic plans that allowed for the maximum amount of war matériel while minimizing or eliminating consumer goods for civilians. Due to naval blockades and unrestricted submarine warfare, most of the international economy was cut off from the major European ports and major sources of investment. As a result, nominally independent world regions, such as Latin America, that had relied on European investment and markets for their goods became attached to the United States during this period. The efforts of the Great Powers to obtain war materials from external colonial sources also were disrupted by blockades, setting off a desperate scramble. The Bolshevik regime in Russia, having learned from war mobilization, managed to establish a state-command economy in the areas under its control during the Russian Civil War, creating a socialist economy in the midst of the Russian Revolution. Moreover, the economic growth ignited by the war in the United States, Canada, and Australia allowed for the expansion of their respective industrial economies, encouraging vast internal migrations to industrial cities from the countryside while overseas immigration was cut off for the duration of the war. In eastern Asia, Japan was able to expand its own trade within the region, supplying European colonial possessions and China in the absence of European trade due to concessions granted for the duration of the conflict. Moreover, lessons learned while mobilizing wartime economies ended the primacy of laissez-faire economics, illustrating the value of state intervention in the economy. This lesson was not lost on individuals such as British economist John Maynard Keynes and Russian socialist revolutionary V. I. Lenin.

Following World War I, the economic boom of the 1920s reverberated through the global economy. Britain and France were able to reestablish themselves in the world economy, albeit in a relatively lesser role given the advantages gained by the United States, Canada, and Japan as well as several Latin American republics during the war. The diversified nature of the multipolar international economy was evident. Germany, shackled by reparations and foreign occupation, succumbed to rampant inflation in 1923, saved only by an infusion of American capital. Problems emerged in agriculture, as the massive amounts of foodstuffs available during this period depressed prices and allowed for massive dumping of grains abroad. Moreover, manufactured consumer goods flooded the industrialized economies, most notably the United States, and eventually saturated the markets. Risky trading practices such as buying stock on margin and illegal practices such as insider

trading led to rampant speculation by individuals and by corporations seeking to reap huge dividends and short-term profits. The vulnerability of this globally unregulated free market, mostly centered in Europe, the United States, and Japan, affected the rest of the world when the whole structure came undone in the late 1920s. Dependence on the U.S. economy led to global collapse, given that the United States had become the largest consumer as well as the largest creditor nation during the inter-war period.

The reverberations of the Great Depression of the 1930s were felt worldwide. The financial losses incurred in the world's stock exchanges dragged most of the major economies into a downward spiral. The magnitude of this international economic collapse overshadowed all prior business cycle downturns in its ramifications. On October 24, 1929, otherwise known as "Black Thursday," more than 16 million shares of stock were sold as investors panicked and sought to cut their losses. Within the next three weeks, the general industrial index of the New York Stock Exchange (NYSE) dropped by more than half. Bank runs led to the insolvency of many U.S. banks and caused them to fail, with many people losing their entire savings. The interdependence that existed between the United States and the world's economy led to the collapse of European economies as U.S. banks called in their loans, causing the world's leading banking systems to experience further insolvency and economic collapse. For example, when U.S. banks called in their loans from Germany, which depended on U.S. capital to pay its war reparations, this led to Germany's immediate economic collapse. The ensuing fall in production and prices led to massive layoffs and unemployment, with Germany experiencing a high of 6 million unemployed.

During the Great Depression many of the major world economies enacted protectionist measures, in effect cutting off international trade by creating barriers to foreign goods and privileging domestic production. Moreover, Britain went off the gold standard in 1931 and the United States did so in 1933, thereby effectively ending gold's value as the peg of the world's major currencies and thus devaluing most of the world's money supply. In contrast, the communist Soviet Union, effectively isolated and cut off from international trade, presented itself as a model for economic stability under socialism. The truth was somewhat different. Although Russia had expanded industrialization and commerce in the years following 1917, war and population growth put severe stresses on agriculture. During the Great Depression income from exports went down, but such external pressures were eclipsed by the forced collectivization of both industry and agriculture in the Soviet Union that ultimately resulted in the imprisonment of about 8 million people and the deaths of approximately 3 million more.

The Great Depression also led to the economic collapse of much of Asia and Latin America, which while not heavily industrialized were nonetheless vulnerable given their interdependence on European and

For example, when U.S. banks called in their loans from Germany, which depended on U.S. capital to pay its war reparations, this led to Germany's immediate economic collapse.

North American investments and trade. The impact of the crisis in Southeast Asia was worsened by the excess production capacity in various export commodities such as rubber, sugar, copra, tobacco, tea, rice, and tin that had occurred throughout the 1920s. By the late 1920s and with the beginning of the Great Depression in the 1930s, the price of these commodities dropped, severely affecting regional economies that depended on their sales to Europe and the United States. Bank collapses in Europe and the United States also affected Southeast Asia as international credit became more scarce. As their already miniscule profit margins vanished, many firms defaulted on loans, which ruined the region's credit rating and thus led to further collapse. Similarly, Latin American economies, which relied on the sale of raw materials to the industrialized world, also declined in their profitability and suffered as international banking systems collapsed. Countries like Mexico, Brazil, and Argentina, which relied on foreign investment and were still primarily suppliers of raw materials, were severely affected by the protectionist policies and trade barriers created by the world's industrial powers.

The global depression of the 1930s vastly recast the world's economy as major world states attempted to intervene to alleviate the worst aspects of the depression on their domestic populations, often leading to populist political revolutions amid the social chaos that ensued from the economic collapse. Keynesian economics, which built on the state-interventionist methods of the wartime economies, was used in the United States in the form of the New Deal economic policies of the 1930s to infuse the economy with capital while providing employment. In Germany after Adolf Hitler came to power in 1933, the Nazi regime infused the German economy through a program of government investment in armament production and massive public works projects in tandem with price controls and wage freezes, alleviating the worst effects of the Great Depression for the German public.

Economic protectionism contributed to the destabilization of the global economy in the form of trade policies and tariffs that were to factor into the emergence of World War II. From 1930 to 1939, with the exception of the Soviet Union, most of the world's major economies set up protective barriers at the expense of outside trade, vastly affecting international stability. The U.S. Smoot-Hawley Tariff Act of 1930, which effectively cut off international trade, set off immediate retaliation. The British set up their empire and dominions as a pound sterling bloc, privileging exports and imports from within. France followed suit, with much of continental Europe within its protectionist bloc. Germany and Japan, suffering the effects of the economic depression and viewing protectionism as a factor that worsened their own economic position, turned to warfare to carve out their protectionist blocs through the annexation of their neighbors. For example, prior to the Great Depression, the Japanese were in the process of addressing an unfavorable balance of payments to foreign states and the transition from an agrarian to an industrial economy. The Japanese took measures to cut the cost of manufactures to increase international trade and tried to strengthen the yen by returning to a gold standard. However, when agricultural prices became depressed globally, by 1930 Japanese farm income was down by at

least one-third. Japanese peasants were hit the hardest, many of them reduced to subsistence and desperate measures, such as staving off starvation by eating bark or grass and even selling their daughters into prostitution. These circumstances spurred the annexationist drive of the Japanese military establishment, which saw the acquisition of east Asian territories as a means to ameliorate the effects of economic collapse. The resultant World War II also vastly changed the global economy, as wartime production pulled the major belligerents out of the depression as their economies shifted to war production.

World War II, which started in eastern Asia in 1937 and in Europe in 1939, also led to vast changes in the global economic order. As in World War I but on a more vast scale, Britain, the Soviet Union, and the United States mobilized their national economies to effectively create a powerful war machine to defeat their Axis enemies. Collectively, the British dominions (Britain, Australia, Canada, New Zealand, and South Africa), the United States, and the Soviet Union amassed massive military formations, industrial capacity, and labor pools that outmanned and outproduced and eventually defeated the Axis Powers. Moreover, the interwar lessons of planned economies and the expansion of the welfare state (such as the New Deal legislation in the United States) served as crucial models for the Allies in their efforts of state-coordinated war mobilization at a more immense scale than that of World War I. In the end, the economic mobilization for World War II ended the Great Depression. However, the war also ended European economic hegemony. With the war having destroyed most of Europe, the U.S. Marshall Plan of 1947 was instituted to rebuild and reintegrate western Europe into the global economy as well as tie it to U.S. economic hegemony.

—*H. Micheal Tarver, Abraham O. Mendoza,
Carolyn Neel, and Alexander Mirkovic*

■ Introduction: A Global Economy

During the late nineteenth century, the international economy was in many ways more global than it is today. Most strikingly, laborers were able to move great distances in massive numbers. Peasants from places like Italy and Poland, for instance, crossed the Atlantic Ocean to the Americas by the thousands. Investors used communication technology—telegraphs and telephones—to spend huge sums of money in overseas business deals. In part, businesses were able to borrow and invest so much because London emerged as the center of world lending. London bankers operated strictly on the gold standard, which kept the value of British cur-

rency tied to the supply of gold and thus closely aligned to the country's actual financial wealth. The United Kingdom also stood at the center of a vast overseas empire that was primarily based on trade. The country's holdings across the globe were so extensive that Britons often boasted that the sun never set on the British empire. France also maintained a substantial international trading empire. The global economy of 1850–1914 greatly expanded the size and capacity of the Industrial Revolution.

The international economy went through another change between 1914 and 1945. Two world wars and a devastating economic depression led

many political leaders to clamp down on the wide-open global economy that had previously existed. Several nations abandoned the gold standard, which made it riskier for businesses to consider making overseas investments, as many national currencies were no longer tied to actual wealth. Even more extreme, some nations like Nazi Germany and the Soviet Union adopted an isolationist stance that closed off many of their trade connections with the outside world in an attempt to force their internal economies to grow.

The post-World War II era saw the rise of a host of such international institutions as the United Nations that were designed to prevent further world wars. In addition, many nations agreed to form institutions that would help nations recover from the war's devastation and spark economic growth in other countries that had fallen behind in the shift from farm-based to industry-based economies. The United States emerged from World War II with the world's strongest industrial economy, largely because very little fighting had actually occurred in the country, which left its factories and farms intact. The United States funded many of the new institutions, often with the belief that such organizations would help prevent the spread of communism around the world. In any event, the Marshall Plan, the World Bank, and the International Monetary Fund played key roles in the remarkable economic growth of western Europe, Japan, and other countries around the Pacific Rim.

—Josh Ross Ashenmiller

Keynesianism

Keynesianism reflects the body of economic thought associated with John Maynard Keynes. Most notably, Keynesianism shows how economies do not necessarily return to conditions of full employment, and how an activist government policy of increased spending and lower taxes may be necessary to end economic downturns. Keynesianism developed in response to the classical economics of the early twentieth century, which taught that short-term economic fluctuations, such as recessions, are an unavoidable part of economic life. Nonetheless, the

economy will naturally gravitate toward its full employment level and the government would only hamper this process by intervening.

But the duration and severity of the Great Depression had begun to turn these views on their head. How long would it take for the economy to correct itself? In 1936, John Maynard Keynes published *The General Theory of Employment, Interest, and Money*, which argued that it is possible for the economy to remain permanently trapped in a condition of high unemployment and economic stagnation. This can result from a loss of confidence by businesses and consumers. If businesses do not feel confident about the future and consumers are not spending, the economy's savings will not be transformed into investment projects and the economy will stagnate with few new employment opportunities. The government must step in and fill this gap in investment to provide the necessary boost to the economy. In the short term, it is acceptable for the government to borrow funds for this purpose, which can be paid back during subsequent economic expansions.

The government expenditures used to finance World War II showed the power of government spending to provide an economic stimulus. In 1940, government purchases in the United States totaled \$6.2 billion, while the total output of the economy was \$100.6 billion and 8.1 million people were unemployed. By 1945, government spending has risen to \$74.8 billion, while the total output rose to \$312.6 billion, and 1 million people were unemployed. Even after accounting for a 28 percent rise in the price level, the increased spending associated with the war provided a dramatic boost to the economy. Meanwhile, economists such as Alvin Hansen worked tirelessly to explain to Americans how the Keynesian idea of an activist government policy was a necessity to avoid lengthy economic depressions. These events eased peoples' concerns that Keynesianism was a form of socialism and helped pave the way to the Employment Act of 1946, which committed the U.S. government to pursuing a policy of full employment.

Keynesianism also played a direct role in Great Britain during World War II, as Keynes involvement with the Treasury helped to lay the

framework for Britain's financing of the war. Keynesian prescriptions included increasing taxes to discourage consumer spending and inflation, delaying income payments until after the war to provide for pent-up consumer spending desires, and lowering interest rates to stimulate investment in industries needed for war production.

Finally, Keynesianism would play a vital role in the development of the postwar international financial structure. Keynes served as Britain's representative at the Bretton Woods Conference of 1944. His ideas contributed to the creation of the International Monetary Fund and the World Bank. Essentially, he sought expanded trade between countries and believed that this would be possible through a system of stable currency exchange rates maintained through international cooperation.

John Maynard Keynes died in 1946, but the effect of his theory and policy prescriptions is still felt today. After the war, Keynesian theory underwent a number of challenges and refinements. Keynesians adapted certain points of their critics while maintaining the same underlying ideas and recommendations. Governments still use activist policies to stabilize economic fluctuations.

—Wade D. Pfau

Bibliography

- Baumol, William J., and Alan S. Blinder. *Economics: Principles and Policy*. 9th ed. Mason, OH: Thomson South-Western, 2003.
- Hall, Peter A., ed. *The Political Power of Economic Ideas: Keynesianism Across Nations*. Princeton, NJ: Princeton University Press, 1989.
- Heilbroner, Robert L. *The Worldly Philosophers: The Lives, Times, and Ideas of the Great Economic Thinkers*. 6th ed. New York: Simon and Schuster, 1986.
- Heilbroner, Robert L., and Aaron Singer. *The Economic Transformation of America: 1600 to the Present*. 2nd ed. New York: Harcourt Brace Jovanovich, 1984.
- Pfau, Wade D. "Keynesianism." In *The Home Front Encyclopedia: United States, Britain, and Canada in World Wars I and II*, Vol. 1, edited by James Ciment and Thaddeus Russell. Santa Barbara, CA: ABC-CLIO, 2006.

Economic Colonialism

For more than a century, historians, economists, and politicians have debated the impact of colonial occupation on the economies of colonizing and colonized nations in the first half of the twentieth century. To a large extent their answers were mixed and depended on the countries they examined and the assumptions they brought to their studies. In the last major colonial scramble, which lasted from around 1875 to around 1900, economic motives were loudly touted by politicians and businessmen in Britain, France, Germany, and the United States. Men such as Joseph Chamberlain (1836–1914) and Cecil Rhodes (1853–1902) in Britain, Jules Ferry (1832–1893) in France, and Theodore Roosevelt (1858–1919) in the United States promoted the material and strategic economic benefits of colonizing distant lands. Many colonies never lived up to the economic expectations of their promoters. Yet almost all studies agree that whatever the benefit of individual colonies to individual powers, the new imperialism of the late nineteenth century and the colonial scramble that accompanied it were key preconditions for the expansion of capitalism into a globally integrated system of production and exchange. Late-nineteenth-century imperialism essentially laid the groundwork for the wave of globalization that began after 1945.

Colonialism is the formal annexation and administration of a territory by an outside power and its concurrent integration into the political and economic structures of the metropolitan (colonizing) power. The colony assumes a relationship of inequality and subordination to the metropolis. The colonialism that developed in the late nineteenth century was considered by Europeans to be a new phenomenon. From 1820 to 1875 the prevailing economic doctrine of industrial capitalist Europe was one of laissez-faire at home (little government regulation of the economy) and free trade overseas. Colonies were regarded, at least officially, as economically burdensome and interfering with the benefits of free trade. During the economic depression of 1873–1896 world productive capacity exceeded demand, and economic doctrine and practice began to emphasize



Two colonists examine the rubber collected by the workers on a plantation in French Central-Equatorial Africa. (Hulton-Deutsch Collection/Corbis)

the need for tariffs to protect home markets from cheap foreign goods, for cartels and monopolies to limit production and keep prices high, and for colonies to secure exclusive access to raw materials, markets, and investment outlets overseas. The word “imperialism” entered political and popular discourse in the 1890s as the name for this new aggressive drive by the world’s major industrial powers to carve the globe up into exclusive economic preserves.

By 1900 the major capitalist powers had pulled out of their long depressions but kept their colonial possessions. By 1915 most territories outside of Europe and the Americas were under the formal political domination of a handful of states (mainly Great Britain, France, Italy, Germany, the Netherlands, Belgium, the United States, and Japan) and comprised about one-quarter of the world’s land surface. These states became more active in economic affairs both at home and in their colonies, shaping policies to benefit the metropolitan economy and aligning the colonial economy to that of the metropolis. New developments in transportation such as oceangoing steam freighters, river boats, and refrigerated ships generated interest in the development of remote colonial lands. Colonies soon specialized in exporting industrial raw materials and bulk foods: Malaya exported rubber and tin; the Congo exported rubber; Ceylon exported

tea; South Africa exported gold; Indonesia exported indigo, coffee, tea, and sugar; and India exported jute and cotton.

India was the jewel in the crown of the British empire and is one colony that turned a profit for its owners. Forty to 45 percent of British cotton exports went to India, and India remitted tens of millions of pounds sterling in annual economic surplus to Britain, which allowed Britain to maintain a favorable balance of payments from 1900 to 1945. In 1945 India was the seventh-largest industrial country by output. The general consensus among historians is that German and French colonies as a whole were net economic losses for the metropolitan economy, but certain groups did make a great deal of money out of colonial trade and investments. For instance, the *Compagnie Française de l’Afrique Occidentale* paid dividends of 26 percent in 1913. Beyond the economic proceeds remitted to the metropolis and individual corporations, the main contribution of colonialism to the development of a worldwide capitalist economy was the replacement of indigenous economic infrastructures with ones geared toward export markets (port facilities, railroads, canals, and roads) and the introduction of financial and accounting practices, legal structures, and taxation systems that facilitated colonial integration into the capitalist economy of the metropolis. These changes did little to help the internal development of the colonies since all advances were geared toward bringing mostly primary commodities to an export market. This export orientation of the colonies prepared them for integration into a global economy, but the fact that the commodities they exported were often unfinished primary goods (raw rubber, tin, cotton cloth, or bulk commodities such as sugar) left them at a competitive disadvantage vis-à-vis industrialized countries (often their former colonial occupiers) that exported higher-value finished goods in exchange.

The new colonialism was the result of an era of severe political and economic rivalry between the advanced capitalist nations of the world that lasted from 1870 to 1945. This intense rivalry also resulted in two world wars. However, the major economic result of the colonialism that matured between 1900 and 1945 is that it sowed the seeds for a post-1945 world capitalist system

► THE CONGO FREE STATE, 1903

Sir Arthur Conan Doyle (1859–1930), the author of the Sherlock Holmes stories, wrote an exposé of the ruthless economic exploitation of the indigenous people of the Congo Free State of King Leopold of Belgium (1835–1909). As Doyle wrote in his Introduction, “The Congo State was founded by the Belgian King, and exploited by Belgian capital, Belgian soldiers and Belgian concessionaires.” He cited the following account from the 1903 eyewitness reports of an English missionary named Scrivener:

“Everything was on a military basis, but, so far as I could see, the one and only reason for it all was rubber. It was the theme of every conversation, and it was evident that the only way to please one’s superiors was to increase the output somehow. . . . [The indigenous people] were told to bring in rubber. This was quite a new thing for them to do. There was rubber in the forest several days away from their home, but that it was worth anything was news to them. A small reward was offered, and a rush was made for the rubber; ‘What strange white men, to give us cloth and beads for the sap of a wild vine.’ They rejoiced in what they thought was their good fortune. But soon the reward was

reduced until they were told to bring in the rubber for nothing. To this they tried to demur, but to their great surprise several [indigenous people] were shot by the soldiers, and the rest were told, with many curses and blows, to go at once or more would be killed. Terrified, they began to prepare their food for the fortnight’s absence from the village, which the collection of the rubber entailed. The soldiers discovered them sitting about. ‘What, not gone yet?’ Bang! bang! bang! bang! And down fell one and another, dead, in the midst of wives and companions. There is a terrible wail, and an attempt made to prepare the dead for burial, but this is not allowed. All must go at once to the forest. And the poor wretches had to go, without even their tinderboxes to make fires. Many died in the forests from exposure and hunger, and still more from the rifles of the ferocious soldiers in charge of the post. In spite of all their efforts, the amount [of rubber collected] fell off, and more and more [indigenous people] were killed.”

—Alexander M. Zukas

Source

Sir Arthur Conan Doyle, *The Crime of the Congo* (New York: Doubleday, Page, 1909), vii, 52–54.

managed by the United States. Colonialism weakened and in some cases eradicated precapitalist modes of production and exchange in the colonies, replacing them with economies that meshed better with industrial capitalist economies. When the United States emerged from World War II as the richest and most powerful nation in the world, it embarked on an economic strategy that looked to the elimination of colonial trading blocs and protectionist measures that would impede the flow of American goods and capital around the world. Former colonial rivals had exhausted themselves in two world wars, and the threat of the Soviet power in 1945 created a community of interest between them and the United States. Even though postwar American anticolonialism was seen by many Europeans as an economic imperialism of the free-trade variety, it set the stage for rapid decolonization and

for the global integration of the economic resources and assets of colonizer and colonized in the Bretton Woods system.

—Alexander M. Zukas

Bibliography

- Barratt Brown, Michael. *The Economics of Imperialism*. Harmondsworth, UK: Penguin, 1974.
- Chilcote, Ronald, ed. *The Political Economy of Imperialism: Critical Appraisals*. New York: Rowman and Littlefield, 2000.
- Hobsbawm, Eric. *The Age of Empire, 1875–1914*. New York: Vintage, 1987.

Monopolies and Oligopolies

In the late nineteenth and early twentieth centuries, powerful monopolies and oligopolies became common economic fixtures throughout



Female foreign workers from the Stadelheim prison work in a factory owned by the Agfa Camera Company in May 1943. Agfa was part of I.G. Farben, which faced trial for war crimes at the end of World War II. (United States Holocaust Memorial Museum)

the capitalist world. These enterprises or collaborations allowed specific corporations to secure control of markets, maximize profits, and limit or stamp out the competition. Monopolies (sole providers of a product or service in a particular market) and oligopolies (small group of sellers, also known as a pool, working in collaboration to dominate a market) existed in various forms and entities throughout much of the West, such as pools in the United States (U.S. Steel, Standard Oil, and U.S. Tobacco), cartels in Germany (Siemens, I. G. Farben, and Hugo Stinnes' business empire), and the *zaibatsu* in Japan (Mitsui, Mitsubishi, and Sumitomo). These business entities had considerable control over internal politics and social developments given their scope and power during this period. Monopolies also held sway in colonialist endeavors abroad, most typified by the British domination of Middle Eastern oil in Iraq and Persia (present-day Iran) through the Anglo-Persian Oil Company, which had a considerable influence on the internal politics of those emergent states as well as on British foreign policy.

Known to posterity as the trust buster, President Theodore Roosevelt (in office from 1901–1909) combated the monopolies, oligopolies, and pools that had near free rein over U.S. indus-

try and domestic markets. Companies such as Andrew Carnegie's U.S. Steel and John D. Rockefeller's Standard Oil cornered the market in their respective industries but also among related subsidiary industries that often included railroads and shipping. This resulted in their domination of pricing, domestic output, and markets and the marginalizing and elimination of competitors. While antitrust legislation did put an end to some of these unethical practices in the first decade of the twentieth century, many of the coercive tactics of these monolithic entities continued in subsequent decades, often supported by conservative business interests.

Interwar Weimar Germany, fraught with political discord and economic collapse, created the perfect opportunity for industrialist Hugo Stinnes (1870–1924) to amass a large business conglomerate concern that included mines, foundries, shipping lines, paper mills, and banks, among other companies. From 1920 to 1924 Stinnes, as the founder of the German People's Party, held considerable sway in political developments in the Weimar Republic, which allowed him to pursue his accumulation of multiple enterprises. Other such cartels, including the industrial concern Siemens and chemical giant I. G. Farben, also cornered their respective markets in Germany during both the Weimar (1919–1933) and Nazi (1933–1945) periods. Many business leaders supported the emergence of National Socialism, given the stability that it promised amid the revolutionary discord (as evidenced in the widespread popularity of anticapitalist social democratic and communist movements) that characterized Weimar Germany in the early years of the Great Depression. They also supported Adolf Hitler's massive expansion of the military, as it created large orders and hence increased business for their interests.

Imperial Japan also maintained large-scale monopolistic entities, known as *zaibatsu*, that were family-owned interests that dominated particular economic sectors. More specifically, the *zaibatsu* were vast family-controlled monopolies that consisted of a high-level holding company, a banking subsidiary to provide finance, and several industrial subsidiaries dominating varying sectors of a market, often through other subsidiaries. Among the largest and most influential of the *zai-*

► MONOPOLIES AND WAR: I.G. FARBEN AND AUSCHWITZ-BIRKENAU

The vast chemical cartel I.G. Farben, along with its pharmaceutical subsidiary Bayer, held a large complex adjacent to the concentration and death camps located at Auschwitz-Birkenau in German-occupied Poland during World War II. Under the auspices of the national socialist Third Reich and the police empire of the Schutzstaffel (Protective Squadron, or SS), I.G. Farben relied on forced labor from the camps. Starving Jewish prisoners, surviving on meager rations and suffering widespread abuse by SS guards and Polish supervisors, often worked themselves to death. Many experiments deemed necessary to the production of weapons and medicine were tested on Jewish victims, already condemned to death. Bayer

experimented with new, potentially fatal drugs on many Jewish prisoners, often leading to their deaths. Many other business concerns in the Third Reich exploited and utilized slave labor, which allowed them to make huge profits as they supplied the products and machinery of war for the Nazi regime. Such companies as Bayern Auto Werks (BMW) also profited from slave labor conscripted from abroad (such as French workers or Russian POWs) in Nazi-dominated Europe. At war's end many major German cartels were split up and some of their leaders prosecuted for war crimes, but other companies remained unscathed and have continued to prosper.

—Abraham O. Mendoza

batsu of this period are Mitsubishi, Mitsui, and Sumitomo. Much like the cartels of Nazi Germany, the zaibatsu were intimately linked with the military cabal in power and willfully supported aggressive colonialism in East and Southeast Asia to secure sources of raw materials and markets in the Greater East Asia Co-Prosperity Sphere.

The Anglo-Persian Oil Company (APOC) was founded in 1908 following the discovery of a large oil field in Persia (Iran) by British surveyors. It is significant because it was the first multinational monopoly that exploited the oil reserves of the Middle East. Prior to the onset of World War I, First Lord of the Admiralty Winston Churchill made the decision to switch from coal fuel to oil for the Royal Navy, making APOC pivotal to British influence in the region. After the concession of Iraq as a mandate upon the dissolution of the Ottoman empire at the end of World War I, British attempts to secure the rights to oil fields in Mosul drove British foreign policy in the region to the detriment of local Iraqi leaders. This led to increased resentment in the region, sparking Iranian and Iraqi nationalism against British and later U.S. influence in the Middle East.

—Abraham O. Mendoza

Bibliography

Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.

Hobsbawm, Eric. *The Age of Extremes: The Short Twentieth Century, 1914–1991*. New York: Vintage, 1994.

Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Simon and Schuster, 1991.

War Reparations

The concept and practice of reparations, in which the victors of a war demand payment from opponents for costs and losses incurred in warfare, extends back to the ancient world. The most significant reparation episode of the twentieth century followed World War I, as Germany, with its faltering economy, defaulted on payments and thus added to the downward economic spiral of the 1930s. An earlier episode of war reparations during the twentieth century included China paying reparations as indemnification for damage caused during the Boxer Rebellion (1900). Likewise, at the conclusion of the Russo-Japanese War (1904–1905), victorious Japan sought reparations from Russia, but the United States, which had mediated the resolution of the conflict, prevented it.

Due to the immense material and human costs of World War I, the victors sought reparations. Germany made the first harsh demands for financial indemnification as part of the Treaty of Brest-Litovsk that the Central Powers

➤ GERMAN REPARATIONS

Through most of the twentieth century it was accepted canon that the high reparations demands that the Allies placed on the defeated Germans after World War I was a key cause of World War II. In *The Economic Consequences of Peace* (1919), British economist and Paris peace delegate John Maynard Keynes argued that the reparations placed on Germany would ruin the entire global economy. Instead, he called for debt forgiveness and for a massive U.S. investment effort to revive the war-ravaged European economy, an idea that was in principle similar to the Marshall Plan that the United States implemented after World War II. In the last 20 years, revisionist historians such as Niall Ferguson have questioned Keynes's analysis. They call attention to the fact that Keynes dismissed the extent to which fiscal mismanagement in Germany led to the inflation crisis of the early 1920s and the fact that the victorious powers suffered greater economic consequences from World War I than did Germany. Instead of portraying Keynes as a prophet as earlier historians had done, revisionists see his arguments as having abetted the false claim that reparations were harsh and excessive.

—Gregory J. Dehler

negotiated with Russia in 1918. This treaty, however, was voided later that year at the war's conclusion. Following the defeat of the Central Powers, the victorious Allies took their turn at demanding reparations. Belgium and France wanted Germany to pay for the destruction to their territory and economy and for the loss of life caused by the kaiser's war of aggression. At the same time, Britain viewed reparations as a means to prevent a resurrection of German dominance on the continent. Reparations were also imposed on Austria, Hungary, and Bulgaria. Turkey was the lone Central power belligerent to escape reparations. In 1921, it was finally settled that German reparations would total \$33 billion, with payment being made in cash, manufactured goods, and natural resources, most importantly coal. When Germany failed to make payments in 1923, the French Army occupied

the coal mines of the Ruhr Valley. As the British economist John Maynard Keynes had predicted, the German reparations proved excessive, with far-reaching economic and political consequences. Instead of raising taxes, the Weimar government followed a fiscal policy of running huge budget deficits that ushered in a period of hyperinflation.

Across the Atlantic, American bankers worried about the stability of the entire international financial system. The Allied nations owed \$12 billion in war loans, and they could not meet their obligations unless they received timely reparations payments from Germany. In 1924 under the provisions of the Dawes Plan, the payment schedule was restructured for both war debts and reparations. Furthermore, American bankers stabilized the German currency with a significant loan that was also used to make reparations payments. In the 1920s, this system worked well toward restoring the international economy but came to a crashing halt with the Great Depression. As the American banks fell, they dragged down those in Europe. In 1931, President Herbert Hoover placed a moratorium on war debt and reparations payments. Although reparations had been reduced in 1929, Germany still defaulted in 1932. In total, Germany paid \$16.8 billion toward reparations and defaulted on \$44.7 billion in loans granted under the Dawes Plan and subsequent agreements.

Due to the lessons of World War I, the United States and Great Britain decided not to demand any form of indemnification from Germany following World War II. At the 1945 Potsdam Conference, it was agreed that the Soviets would receive reparations from the Axis Powers in the form of cash, industrial machinery, heavy equipment, and other assets, although no reparations were paid by West Germany. The 1952 Treaty of San Francisco obligated Japan to pay reparations for its acts of aggression in the Pacific and Asia, although the United States did not accept reparations. Instead, as with the Marshall Plan for Europe, the United States chose to actively stimulate economic recovery.

—Gregory J. Dehler

Bibliography

Kent, Bruce. *The Spoils of War: The Politics, Economics, and Diplomacy of Reparations, 1918-1932*. New York: Oxford University Press, 1989.

Keynes, John Maynard. *The Economic Consequences of Peace*. London: Macmillan, 1919.

Moulton, Harold G., and Leo Pasvolsky. *War Debts and World Prosperity*. Port Washington, NY: Kennikat, 1971.

■ Introduction: The Great Depression

The Great Depression of the interwar period had major international economic, social, and political consequences. It not only unraveled the transnational linkages of the global economy and thus illustrated the growing dependency of all world regions on each other for economic prosperity but also unleashed protectionist policies by the world's major economic powers that contributed to the development of authoritarian movements internationally. In the core industrial and financial centers of Europe and North America, the Depression contributed to unemployment of millions as production halted and prices skyrocketed, thus shaking the political and social foundations of society and making political alternatives on the extremes, notably fascism and communism, much more attractive. In the peripheral regions of the global economy in Africa, Asia, and Latin America, which served as centers for the extraction of raw materials and as markets for the industrialized core regions, their vulnerability as nondiversified economies was exacerbated by the global economic collapse, thereby fueling already emergent nationalist sentiment and resentment toward foreign domination. The Soviet Union, built on the ruins of the tsarist empire, suffered little during the Great Depression amid the rapid industrialization under Stalinism while nevertheless suffering the violent excesses of an oppressive police state. While the Great Depression was not the cause of World War II, it did create the circumstances for the emergence and popularity of fascism in Europe and of Japanese aggression in Asia.

—Abraham O. Mendoza

Causes of the Great Depression

The depth, length, and international scope of the Great Depression are historically unique. Although economists and other scholars have struggled since that time to explain the event, a variety of explanations of the Great Depression were put forward during the period. Some argued that the Great Depression was the final crisis of capitalism, reflecting the fact that productive capability had outstripped consumption. Others suggested that the problem was a worsening income distribution that limited the market for mass-produced goods. Still others pointed to collusive practices in some sectors of the economy that encouraged firms to reduce output. And there also were suggestions that the problem lay in limited technological innovation or perhaps limited entrepreneurial zeal. Contemporary historians have continued these debates.



The ideas of John Maynard Keynes on state intervention in the economy remain influential into the present. (Library of Congress)

➤ TECHNOLOGICAL INNOVATION DURING THE DEPRESSION

The Second Industrial Revolution of the late nineteenth century had three key elements: developments in the generation and transmission of electricity, invention of the internal combustion engine, and the improved understanding of chemical reactions. Each of these yielded major innovations in process technology that had their greatest impact during the interwar period: the assembly line was developed in the automobile industry just before World War I, chemical engineers developed continuous processing at about the same time, and the price of electricity fell dramatically through the 1910s and 1920s.

These three elements of the Second Industrial Revolution also yielded new products that became items of mass consumption—the automobile, the radio, and rayon—and stimulated hiring in the early 1920s. Following a gap in such innovations, more complex new products—the airplane, television, and nylon—were developed in each case in the late 1930s. The Great Depression may thus to some extent reflect this gap in the development of new industries.

—Rick Szostak

Mainstream economic theory of the time could not explain the Great Depression, for it predicted that economies would quickly return to full employment. Many economists found themselves in the unfortunate position of advocating government borrowing and spending, even though their theory supported a policy of balanced budgets. This situation began to change with the publication of John Maynard Keynes's *General Theory of Employment* in 1936. While some economists had explored business cycles before Keynes, he was the first to posit a theory that suggested that economies might deviate from full employment for lengthy periods of time. The postwar development of a recognized field of macroeconomics focused upon business cycles owes much to both the experience of the Great Depression and the work of Keynes.

Keynes argued that economies would enter a recession, or even a depression, if either desired investment expenditure or desired con-

sumption expenditure fell. In the early postwar period economists tended to assume that this was why the Great Depression had occurred but devoted little attention to asking why desired consumption and/or investment would have fallen far and fast enough to cause the economic downturn. In the 1960s Milton Friedman and Anna Schwartz developed an alternative explanation: that the problem was a decrease in the money supply, which had caused output to fall. Decades of detailed empirical analysis of these competing hypotheses followed and led to the general conclusion that neither of these explanations nor even both in concert could adequately explain the Great Depression.

Recent research by economists has tended to emphasize refinements to the monetary approach. One suggestion is that decreases in the money supply caused banks to reduce their lending, which in turn discouraged investment. Another approach points to the worldwide gold standard in existence at the start of the Great Depression. It is suggested that many countries in trying to maintain the value of their currency relative to gold were forced to pursue contractionary policies. While some economists celebrate one or the other as *the* explanation, the empirical evidence in their support remains equivocal. It is possible that some of the popularity of these explanations is due to the fact that they locate the blame for the Great Depression not in the market system itself but in failures of certain institutions, whether the Federal Reserve Board of the United States or the gold standard itself. Notably, the stock market crash of October 1929 is generally viewed by economists as a result of the same forces that caused the Great Depression or even a result of the onset of the depression itself much more than an independent cause of the depression.

Some economists and many historians pursue nonmacroeconomic explanations. The most common of these involves the time path of technological innovation. The interwar period was highly unusual in this respect. The spread of the assembly line, electrification, and continuous processing (by which outputs such as gasoline were produced via continual chemical reactions rather than one batch at a time) led to massive advances in worker productivity. There were

virtually no technological innovations that resulted in new products, as opposed to new productive processes, in the decade after 1925. Thus, it can be argued that workers who lost their jobs because of improvements in production technology had nowhere to go. The absence of new products also limited opportunities for investment, and the observed decline in bank loans rather than conservative bank practices might reflect this fact.

There has been an increased recognition in recent decades that the explanations outlined above are potentially complementary. Given the uniqueness of the Great Depression, it may well be that it resulted not from one cause but from interactions among more than one of the causal processes discussed above.

—Rick Szostak

Bibliography

Friedman, Milton, and Anna J. Schwartz. *A Monetary History of the United States 1867-1960*. Princeton, NJ: Princeton University Press, 1963.

Keynes, John M. *The General Theory of Employment, Interest, and Money*. London: Macmillan, 1936.

Szostak, Rick. "Evaluating the Historiography of the Great Depression: Explanation or Single-Theory Driven?" *Journal of Economic Methodology* 12 (2005): 35-61.

The Great Depression in Sub-Saharan Africa

The Great Depression severely affected Africa, most of which had been under European colonial rule since the late nineteenth century. Africa's economies depended on the sale of crops and minerals to Europe, and when prices for these commodities collapsed after 1929, Africa's economies went into a downward spiral. Africans who produced cash crops suffered as their incomes plummeted and poverty spread. In order to bolster their earnings, some African farmers increased their production of cash crops, but this diverted them from subsistence agriculture. In areas where subsistence production was deemphasized, the risk of famine increased, especially in times of drought. Many small farmers migrated to cities in search of greater opportuni-

ties between 1929 and 1934, ushering in a new period of urbanization in Africa.

The Great Depression eroded the standard of living in Africa in many ways. When prices for the continent's exports fell, tax revenues declined, creating financial deficits for colonial administrations. Government officials reacted by cutting expenditures significantly. They reduced the size of their civil services and spent far less on African health and education. They reacted to the collapse of commodity prices by trying to increase production, often by forcing Africans to cultivate more cash crops. European-run firms in Africa cut jobs and wages, banks closed, and many small businesses went bankrupt. Wage labor in Africa contracted by 50 percent between 1931 and 1934. The number of strikes by African workers rose during this period as employees resisted retrenchments and lower wages.

In West Africa, prices for commodities fell sharply during the Great Depression. In areas under French control, officials responded by seeking to increase output. The French administration in Senegal pressured Africans to cultivate more peanuts, mandated when harvests should begin, and determined when crops could be sold. French officials in the Côte d'Ivoire and Cameroon implemented forced-labor projects to increase the production of coffee and cocoa. Forced labor exacted a heavy toll on Africans; for example, in Niger forced labor on railroads and plantations, combined with a famine and a plague of locusts, caused high mortality rates in the early 1930s. In order to escape such harsh conditions in the rural areas, many Africans in French West Africa migrated to cities such as Dakar, Abidjan, Conakry, and Ouagadougou, where wage labor opportunities were scarce. Like their French counterparts, British-controlled Nigeria and the Gold Coast also experienced hardships from falling commodity prices.

The Great Depression struck with particular force in Central Africa. In the Belgian Congo, the value of exports fell by almost two-thirds in the early 1930s. Many African farmers could not afford to pay their taxes in currency, so they were required to perform labor under government supervision. Poverty in some areas was so severe that farmers could no longer afford basic necessities for their families. In addition, conditions for

African miners in the Belgian Congo also deteriorated. When the value of copper exports plummeted in the early 1930s, Belgian-owned mines reduced their workforce by almost 75 percent, causing widespread unrest among African miners in the affected areas. Strikes and riots occurred at several mines in 1931, fueled by miners, construction workers, bricklayers, and carpenters who boycotted mining company stores on the grounds that they were overcharging workers.

Prices for East Africa's commodities, particularly sisal, coffee, cotton, maize, and hides, fell sharply during the Great Depression. In Tanganyika, the British administration pressured African chiefs to increase their villages' production of cash crops, especially cotton, to compensate for the decline in prices. Other Africans stopped producing cash crops entirely in an attempt to withdraw from the European-dominated economy. In Kenya, the value of exports fell by half between 1931 and 1934, causing severe losses to growers of coffee and pyrethrum. Profits for Uganda's coffee, cotton, sugar, tobacco, and tea producers declined as well.

In southern Africa, most farming and mining operations faced shrinking profits. Mozambique's key cash crops included sisal, sugar, and groundnuts, and when the value of the territory's exports fell by half between 1929 and 1933, Portuguese authorities tried to compensate by increasing output through forced-labor projects. In British-controlled northern Rhodesia, the price of copper fell during the Great Depression, forcing mines to reduce their workforce or close altogether. Nyasaland suffered when the price of tobacco fell, reducing African income and jobs. The economic situation in southern Rhodesia was more complex. Although demand for that colony's crops—chiefly maize, tobacco, and dairy products—fell, officials there assisted white farmers by providing loans and price supports and protected them from competition by restricting African land ownership. Southern Rhodesia's asbestos and chrome mines fared poorly during the Great Depression, but gold mining became more profitable.

South Africa, the continent's economic giant, was not as hard hit by the Great Depression as the rest of sub-Saharan Africa. To be sure, both black and white farmers suffered as the

country's agriculture prices fell in the early 1930s. Wages paid to black South African farm laborers were too low to provide an adequate standard of living, and the number of so-called poor whites in South Africa multiplied, particularly in the countryside. But even though prices for South Africa's crops fell, the gold price remained fixed until 1933, when it rose by almost 50 percent. As the price of gold rose, South Africa's mining companies enjoyed higher profits and employed more workers. The expansion of gold mining stimulated growth in other industries, such as machinery, electrical equipment, explosives, cables, cement, coal, railroads, and banking. The gold mining industry bolstered government revenues through taxation and royalties, and by the end of the 1930s gold accounted for more than 70 percent of South Africa's total exports. In short, gold mining kept the entire South African economy afloat.

By the mid-1930s, the worst of the Great Depression was over in most of Africa. The continent's commodity prices began to rise in 1935, although in some areas, such as British West Africa, economic life only fully recovered in the 1940s. Urbanization in Africa, partly stimulated by the Great Depression, would also accelerate in the 1940s, especially in cities such as Dakar, Lagos, and Nairobi. Economic dislocation resulting from the Great Depression caused many Africans to view their colonial rulers more critically. But as severe as the economic depression was, it did not seriously threaten colonial rule. African nationalism would only intensify after another crisis—World War II—engulfed the globe.

—Steven Gish

Bibliography

- Boahen, A. Adu, ed. *UNESCO General History of Africa*, Vol. 7, *Africa under Colonial Domination, 1880–1935*. Berkeley: University of California Press, 1985.
- Feinstein, Charles H. *An Economic History of South Africa: Conquest, Discrimination, and Development*. New York: Cambridge University Press, 2005.
- Oliver, Roland. *The African Experience*. 2nd ed. Boulder, CO: Westview, 2000.
- Roberts, A. D., ed. *The Cambridge History of Africa*, Vol. 7, *From 1905–1940*. New York: Cambridge University Press, 1986.

The Great Depression in Southeast Asia

The Great Depression, which began with the crash of the U.S. stock market in October 1929, subsequently affected the fabric of Southeast Asian life throughout the 1930s. Since the nineteenth century, Southeast Asian economies in Burma, Thailand, French Indochina, Malaya, Dutch East Indies, and the Philippines were linked to international markets through the production and export of raw materials and food. While the region had weathered previous economic downturns, the Great Depression was unprecedented and compromised the dependent economies of these states, which relied upon export production. The policies of colonial and indigenous regimes influenced the intensity of the crisis and peasant response.

The impact of the Great Depression was exacerbated by protectionist policies, overproduction, and a steep fall in commodity prices. As the world reeled under the economic downturn, countries enacted protectionist policies designed to preserve their national economies. For Southeast Asian states, this limited their opportunities to sell goods on the world market. Limiting access to the home country meant that those colonies with ties to more robust economies fared better. For example, the Philippines' sugar industry suffered less due to preferential access to the protected U.S. market, where by contrast the Dutch East Indies' sugar and rubber industries, tied to the Netherlands' much smaller market, suffered heavily. Javanese sugar exports fell by 66 percent between 1928 and 1936, while earnings amounted to only 10 percent of predepression levels.

Encouragement from colonial regimes to increase production of export commodities such as rubber, sugar, tobacco, abaca, and tin led to overproduction by 1928. In addition, Southeast Asian states achieved record production levels with new high-yield plant varieties and more efficient industry. However, once the economic crisis hit, the prices for export products fell immediately and continued to plunge during the early 1930s. In Malaya, for example, the value of rubber and tin exports together fell nearly 80 percent from 319 million Straits Dollars (cur-

rency used in British colonies in Malaya) in 1928 to 68 million Straits Dollars in 1932.

Responding to the precipitous decline in revenue, colonial regimes borrowed heavily and reduced budgets, usually by reducing government employment. The Malayan Civil Service cut back from 270 officials in 1929 to 213 in 1935. Additional recruitment was suspended, and the salaries of those remaining officials were reduced by as much as 25 percent. European employees of companies faced similar consequences. Significant retrenchment in personnel occurred on plantations throughout Southeast Asia. Many of the newly unemployed Europeans were sent home or were given minimal financial support. Colonial authorities feared that large numbers of unemployed Europeans would damage western prestige.

Indigenous employees of colonial bureaucracies and export industries also faced reduced salaries and unemployment. In some cases, they were unable to find equivalent positions and were forced to accept lesser positions or return to the countryside. While those who remained in their jobs or accepted lesser positions saw a decrease in their salaries, they still experienced an increase in their standard of living, as retail prices were falling faster than wages. A Filipino civil servant, for example, saw a doubling of real income between 1929 and 1932.

Foreign laborers employed on plantations and in mines were the most vulnerable to the economic retrenchment. Export industries were increasingly unable to find markets as the effects of the Great Depression intensified. Initial efforts to reduce production costs by lowering wages and cutting workforce were insufficient. By 1932, many labor-intensive plantations and mines were forced to shut down. Hundreds of thousands of foreign laborers were now unemployed and unwanted in the Southeast Asian colonies. In Malaya, 250,000 Indian and Chinese rubber plantation workers and tin miners were repatriated by the government between 1930 and 1932.

Small peasant farmers also experienced severe hardships, which led to peasant resistance. The severity of the situation for small peasant landholders depended to a great extent on the policies of the colonial regime. In Burma and

French Indochina, the government insisted on collecting existing taxes in cash. In Lower Burma, the government taxes, high land rents, and falling rice prices combined to spark the Saya San Rebellion in late 1930. The proximate cause of the rebellion was the impending collection of the poll tax. The government had refused to remit the tax and moneylenders refused to advance money to the peasants before the winter rice harvest to pay the poll tax. Saya San, the rebellion's leader, promised a new kingdom where no taxes would be collected. His rebellion lasted two years and ended with his capture and execution by British Burmese authorities. Throughout the rebellion, rice exports from Lower Burma remained high although their value plummeted. While it might be surprising that peasants continued to produce rice in this context, they had no alternative. Peasants still had to pay the government taxes and continue to service debts and thus could not withdraw from rice production and the export economy.

While economic distress and strict government enforcement of tax collection prompted rebellion in some parts of Southeast Asia, more benevolent policies ameliorated the harshness of the Great Depression for other peasant populations. In the Philippines, the protected American market was open to Philippine export products. Furthermore, colonial officials were lax in tax collection. As a result, no major uprisings occurred. Filipino peasants instead resorted to previously developed coping strategies. As export commodity prices fell, peasants shifted to subsistence cropping. This was possible due to the government's willingness to permit peasants to default on their taxes. In addition, Filipino peasants reduced expenditures on unnecessary or leisure activities and postponed noncritical expenses.

The severity of the economic crisis and the slow recovery of the 1930s prompted colonial regimes to accept the need for economic diversity, shifting from their focus on raw materials and food to developing an industrial base. The Great Depression and some colonial governments' repressive policies spurred the growth of nationalist movements. Nationalists increasingly looked to new ideas and influences, especially

Marxism, to understand and critique imperialist rule, which had failed so spectacularly.

—Thomas McGrath

Bibliography

- Boomgaard, Peter, and Ian Brown, eds. *Weathering the Storm: The Economies of Southeast Asia in the 1930s Depression*. Singapore: ISEAS, 2000.
- Elson, Robert E. "International Commerce, the State and Society: Economic and Social Change." In *The Cambridge History of Southeast Asia*, Vol. 2, *The Nineteenth and Twentieth Centuries*, edited by Nicholas Tarling. Cambridge: Cambridge University Press, 1992.
- Owen, Norman. "Subsistence in the Slump: Agricultural Adjustments in the Provincial Philippines." In *The Economies of Africa and Asia in the Inter-War Depression*, edited by Ian Brown. London: Routledge, 1989.
- Rothermund, Dietmar. *The Global Impact of the Great Depression, 1929–1939*. London: Routledge, 1996.

The Great Depression in the Soviet Union

Although the Soviet Union did not experience the Great Depression as did most great powers, throughout the 1930s its history was dominated by Stalin's so-called revolution from above, a colossal effort to transform the Soviet economy and to prove socialism as superior and more humane than capitalism. Already in 1928 Stalin had announced his ambitious First Five-Year Plan for rapid industrialization, and at the time of the Wall Street Crash in 1929 the Soviet Union was embarking on the large-scale collectivization of agriculture. As capitalist powers sought to recover from the Great Depression throughout the 1930s, the Soviet Union sought to build socialism in one country, a process that included not only industrial advancement but famine and terror as well.

By the late 1920s the Soviet Communist Party had committed to catch and overtake the capitalist world through the mechanism of a scientifically planned economy. To do so would be no small feat. The Soviet Union lacked much of the technology already employed in industrially advanced states and the hard currency needed

to buy industrial machinery from the capitalist West. The Soviet population remained overwhelmingly rural, and in the 1920s the Scissors Crisis exemplified the divide between city and country: because the prices of consumer goods were high and agricultural products were low, peasants had refused to supply the state with an agricultural surplus that could adequately feed urban populations.

Stalin's First and Second Five-Year plans, during 1928–1932 and 1933–1937, respectively, demanded the vast expansion of Soviet industry and the fulfillment of artificially high production goals. In the course of the First Five-Year Plan alone (which was said to have been accomplished in only four years and three months), more than 1,500 new factories were built, and industrial output nearly doubled. The greatest successes of both Five-Year plans were achieved in the realm of heavy industry and with the help of foreign engineering firms whose domestic business had suffered from the Great Depression. Yet such success came at a high price for peasants, whom Stalin sought to make responsible for financing industrialization.

In late 1929 Stalin decided that industrial goals could only be met if peasants paid the state tribute in the form of grain and other agricultural products. The full collectivization of agriculture, he argued, would allow such tribute to be collected and would further aid in eradicating peasant cultural backwardness and in merging the proletariat and peasantry in socialist unity. In early 1930 brigades of urban communists and workers descended on the countryside to requisition grain and orchestrate collectivization by force. Prosperous peasants, or kulaks, were deemed class enemies and were deported to concentration camps in Siberia and Central Asia. Resistance to collectivization was fierce: many peasants slaughtered livestock, destroyed harvests, attacked collectivizers, or fled the countryside. In March, Stalin announced that collectivization should proceed voluntarily and not by force and blamed all failures on collectivizers' excessive enthusiasm. The damage, however, had already been done. Agricultural output suffered, and collectivization contributed to deadly famines in 1932–1933.

In 1934 Stalin used the assassination of Sergei Kirov, a Communist Party leader in Leningrad, as the basis for commencing four years of state-sponsored terror known as the Great Purge. While the purges were directed in part at the Communist Party and the Red Army, millions of people unaffiliated with either institution were declared enemies of the people and were sent to labor camps or executed. An estimated 8 million people were arrested. In the midst of this terror, the 1936 Stalin Constitution was propagandized as the most democratic in the world.

For Stalin and his sympathizers in the 1930s, the Great Depression had revealed the fatal weaknesses of capitalism, while the successes of his Five-Year Plans and the creation of the concept of socialism in one country had confirmed the triumph of the Soviet system. For Stalin's detractors at home and abroad, forced collectivization and terror had shown the moral bankruptcy of the Soviet government.

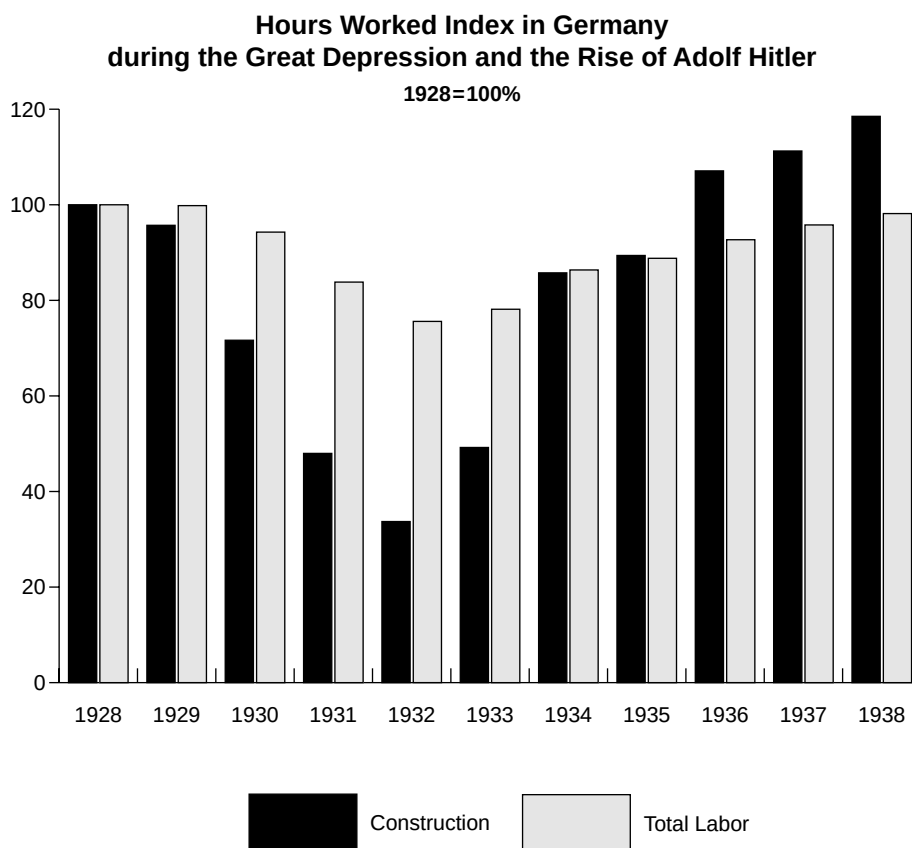
—Brigid O'Keefe

Bibliography

- Brendon, Piers. *The Dark Valley: A Panorama of the 1930s*. London: Jonathan Cape, 2000.
- Getty, J. Arch. *Origins of the Great Purges: The Soviet Communist Party Reconsidered, 1933–1938*. New York: Cambridge University Press, 1985.
- Kotkin, Stephen. *Magnetic Mountain: Stalinism as Civilization*. Berkeley: University of California Press, 1995.
- Riasanovsky, Nicholas V., and Mark D. Steinberg. *A History of Russia*. New York: Oxford University Press, 2005.
- Viola, Lynne. *Peasant Rebels under Stalin: Collectivization and the Culture of Peasant Resistance*. New York: Oxford University Press, 1996.

The Great Depression in Western Europe

Despite the unevenness of the economic impact of the Great Depression of 1929–1939 on western Europe, it inaugurated the most intense economic, political, and social crisis that this region, the birthplace of modern capitalism, had experienced in more than 400 years. As a result of the Great Depression, millions of workers lost their



The Great Depression had an enormous impact on the German economy, leading to unemployment and massive inflation. This table indicates, for example, that in 1932, German construction workers were working only 1/3 the hours that they had been in 1928.

Source: Lölhöff, M. v. (1974). "Zeitreihen für den Arbeitsmarkt—Lohnsatz, Beschäftigungsfälle, Arbeitskosten und Arbeitsstunden (1925 bis 1938 und 1950 bis 1967)," IFO-Studien 20 (1/2), 33-150.

jobs, millions of farmers lost their land, millions of businesses folded, and every government in the region (with the exception of Mussolini's fascist Italy) changed its composition. The economic onslaught of the Great Depression left a changed western Europe in its wake. It pushed countries to initiate increasingly nationalistic policies and led directly to the greatest armed conflict in world history, World War II.

Western Europe included the countries of Portugal, Spain, France, Great Britain, Ireland, Belgium, the Netherlands, Italy, Switzerland, and Germany. In the worst-affected country, Germany, one in five adults was unemployed in 1932, and industrial output fell by 40 percent from 1929. At the Great Depression's nadir, levels of European trade fell to 33 percent of its 1929 value, and currencies were near collapse. While many countries had recovered from the worst of

the Depression by 1937, a renewed recession in 1937 showed that recovery was neither complete nor sustainable. It took military rearmament and the enormous government expenditures and deficit spending of World War II to end the Great Depression in western Europe.

The stock market crash on Wall Street in October 1929 is usually taken as the start of the Great Depression, but historians now agree that business and agriculture were in trouble long before the crash. The stock market crash has more symbolic than real value as a cause of the Great Depression in western Europe. First, signs of economic crisis (declining output and investment) were present in Germany and western Europe in 1928. Second, fear of recreating the hyperinflation of 1923, which destroyed middle-class savings, meant that in the first years of the Great Depression politicians worked to balance

budgets, cut spending, and stay on the gold standard, all of which only made economic problems worse by weakening already falling demand and limiting credit and the expansion of the money supply. It was these national policies that signaled the 1928–1929 onset of economic recession and ushered in the modern world's most severe economic depression to date.

The consensus among historians is that the wave of Austrian and German bank failures in May and July 1931 was the turning point of the Great Depression: it destroyed any hope among politicians and economists that their previous policies would end the economic crisis and forced them to deploy new policies and step up government intervention. As production and prices in industry and agriculture fell in the face of overproduction and declining investment, all European nations except Britain turned to nationalist policies such as tariffs, quotas, and other price supports to prevent complete economic collapse.

In Britain the widening economic crisis and worsening balance of payments led policymakers to abandon the gold standard in September 1931 and, with the depreciation of the pound sterling by 30 percent relative to countries still on the gold standard, the British economy began to grow as British exports became cheaper and the government began to print more money, run budget deficits, and establish public works projects to increase demand. By 1934 production was higher than in 1929, and housing construction boomed. Unemployment fell by 30 percent by 1938. The pound's depreciation was an indirect form of protectionism because imports from countries still on the gold standard (such as France, Belgium, and the United States) were now more expensive. To pursue their own national interests other countries soon followed the British example, with France finally leaving the gold standard in 1936.

The Great Depression hit western Europe at different times: it was most severe in Germany in early 1932, while Belgium hit bottom in 1935 and France in 1936. In all of the countries of western Europe except the Italian police state, the impact of the Great Depression changed the political landscape. The main impetus to change was social unrest associated with prolonged job-

➤ GEORGE ORWELL ON THE PSYCHOLOGY OF UNEMPLOYMENT

"When I first saw unemployed men at close quarters, the thing that horrified and amazed me was to find that many of them were *ashamed* of being unemployed. I was very ignorant, but not so ignorant as to imagine that when the loss of foreign markets pushed two million men out of work, those two million are any more to blame than the people who draw blanks in the Calcutta Sweep. . . . The middle classes were still talking about 'lazy idle loafers on the dole' and saying that 'these men could find work if they wanted to', and naturally these opinions percolated to the working class themselves. I remember the shock of astonishment it gave me, when I first mingled with tramps and beggars, to find that a fair proportion, perhaps a quarter, of these beings whom I had been taught to regard as cynical parasites, were decent young miners and cotton-workers gazing at their destiny with the same sort of dumb amazement as an animal in a trap. They simply could not understand what was happening to them. They had been brought up to work, and behold! it seemed like they were never going to have the chance of working again. In their circumstances it was inevitable, at first, that they should be haunted by a feeling of personal degradation. That was the attitude towards unemployment in those days: it was a disaster that happened to *you* as an individual and for which *you* were to blame."

—Alexander M. Zukas

Source

George Orwell, *The Road to Wigan Pier* (1937; reprint, New York: Penguin Books, 1979), 76–77.

lessness and the failure of policies to alleviate the crisis and its consequences. For example, unemployment in Britain went from 10.4 percent of the total workforce in 1929 to 22.1 percent in 1932, and in Germany it went from 13.1 percent to 43.7 percent.

The economic distress and misery behind those numbers demanded action. In Britain the Labour government elected in 1929 dissolved in favor of the formation of a National Government made up of members of the Labour, Liberal, and

Conservative parties in August 1931 that took Britain off the gold standard. In Germany the severity of the economic crisis and unemployment caused the government of Heinrich Brüning (1885–1970) to rule by emergency decree. His deflationary policies led to tremendous social conflict, but in the end the ruling clique around President Paul von Hindenburg (1847–1934) persuaded him to appoint Adolf Hitler (1889–1945), the head of the right-wing Nazi Party, as chancellor in January 1933 to avert what they saw as a left-wing threat to social stability. In France a Popular Front government of communists, socialists, and radicals was elected in 1936 to stanch the economic tailspin of the French economy. The Popular Front introduced paid vacations, promised a 40-hour workweek with no cut in pay, and floated government bonds in an attempt to reinvigorate idle economic capacity in France. The Popular Front fell in March 1938, and a more conservative government took over that ended the 40-hour week, instituted wage and price controls, and used army troops to break up an attempted general strike in 1938.

The most radical and successful solution to the Great Depression came out of the policies of Nazi Germany, which continued the state of emergency begun under Brüning. The Nazis used their emergency powers to destroy democratic institutions, labor unions, and other political parties starting with the communists and socialists and set up a one-party state. Under the Nazis the state controlled not only foreign trade but also prices, wages, and investment, and it was state investment in industry that revived the German economy. In 1934 the level of government investment in public works, industry, and construction doubled and in 1935 increased by another 60 percent. Wages were kept low and failed to keep pace with the rising national income, leading to a reserve of capital for further investment. These policies were so successful that by 1937 Germany was experiencing a labor shortage. However, from 1935 onward the goal of these investments and the Nazi drive toward autarchy (economic self-sufficiency) was the creation of a powerful war machine that could launch the wars of aggression against Germany's neighbors that Hitler believed were necessary to ensure German economic growth and greatness.

It was the military buildup to World War II that ended the Great Depression in Germany, and it was similar build ups in Britain, France, and the United States that ended it there as well. The human cost of that war on the battlefield and in concentration camps was staggering; nevertheless, the merger of militarism and capitalism brought about by World War II and the large government expenditures entailed have served as a recipe to avert another economic depression in western Europe.

—Alexander M. Zukas

Bibliography

- Clavin, Patricia. *The Great Depression in Europe, 1929–1939*. New York: St. Martin's, 2000.
- Hall, Thomas E., and J. David Ferguson. *The Great Depression: An International Disaster of Perverse Economic Policies*. Ann Arbor: University of Michigan Press, 1998.
- Kindleberger, Charles P. *The World in Depression, 1929–1939*. Berkeley: University of California Press, 1973.

The Great Depression in Latin America

The Great Depression marked a significant turn for Latin American economic policies and patterns of growth. The crisis put into question the outward-oriented model of growth that relied on the export of raw goods that had been adopted by most countries in the region since the second half of the nineteenth century. The effect of the economic shock and the policies implemented differed from country to country. In general, Latin American economies resorted to inward-oriented policies characterized by import substitution industrialization (ISI) and strong state intervention in the economy, giving way to new models of economic development. The crisis also helped discredit the political elites who had advocated the export-led economic model, paving the way for political changes in many Latin American countries.

During the second half of the nineteenth century Latin America became integrated into the world economy. The two main features of this economic scheme were the exporting of primary products from Latin America to Europe and

the United States and the importing of manufactured goods and capital into Latin America from the industrialized nations, in particular Great Britain. Unrestricted trade and the adoption of the gold standard constituted two other important components in this economic scheme. In spite of the emphasis on the production of raw materials during the first decades of the twentieth century, many Latin American countries experienced slow growth in the manufacturing of nondurable consumer goods to supply, in part, the local demand. These industries, however, were not dynamic enough to act as an engine of growth, so Latin American economies remained deeply dependent on the export sector when World War I broke out.

The system created during the second half of the nineteenth century depended heavily on the existence of an equilibrium that was disrupted during World War I and its aftermath: the global capital market suffered deeply due to the lack of investment dollars, the gold standard was abandoned by many nations, and foreign loans were called in. The commodity market was also deeply affected. The terms of trade for nonstrategic materials deteriorated during the war, and shortages of shipping vessels added to an already difficult economic situation for the Latin American nations. With the end of the war things went back to normal, with some changes. The United States clearly emerged as a dominant power in Latin America not only as a commodities supplier but also as a major capital provider through loans and direct investments. Latin American economies experienced a minor shift in the direction of diversification and industrialization. Nevertheless, Latin America still relied heavily on the export sector, thus maintaining its vulnerability to adverse conditions in the international market. This vulnerability became apparent with the stock market crash of October 1929.

The 1930 crisis diminished the international market for Latin American exports and inaugurated a protectionist period that marked the end to the commitment of international markets to free trade. International demand for beef, wheat, coffee, sugar, and minerals declined sharply. The decline in the volume of exports was accompanied by a decline in export prices as well, thus severely affecting Latin America's purchasing

➤ LÁZARO CÁRDENAS

During the presidency of Lázaro Cárdenas (1934–1940), the original ideals of the Mexican Revolution acquired new strength. Cárdenas regarded land distribution as being of primary importance to improve the well-being of the population. He presided over the distribution of 44 million acres of land among landless peasants. The program struck a heavy blow to the traditional hacienda system. By 1940 the lives of hundreds of thousands of peasants had improved as a result of land reform, public education, medical care, and significant infrastructure improvements in rural areas. Another remarkable episode during his government was the nationalization of foreign oil companies and the creation of a state oil monopoly. Mexico's oil nationalization provided cheap and plentiful fuel needed for the development of domestic industry and was celebrated as a significant step toward national economic independence.

—Patricia Juárez-Dappe

power. Between 1928 and 1932 Latin America's import capacity fell 45 percent, which in turn affected public revenues highly dependent on external trade taxes. Interest rates on public and private debt remained unchanged and increased the pressure on Latin American governments, which had to allocate a larger share of export revenues for the service of the debt. These disruptions gave rise to budget deficits and a negative balance of payments that could no longer be financed with new loans, as had been the case in the past.

Governments acquired a more active role in the economy and resorted to a number of different measures to restore their countries' economic balance, such as the suspension of the gold standard, import and exchange controls, and debt default. Some countries tried to protect their export sector through infrastructure development or direct manipulation of stocks. Recovery from the crisis began after 1931–1932 with the return of more favorable conditions for the export sector. However, during this period governments also committed to promoting long-term growth through structural changes. Public

works, housing, and industry, in particular, benefited from governmental assistance. Therefore, in combination with the export sector, ISI became a very important engine of growth. This period witnessed the growth of a manufacturing sector that, taking advantage of the inherited industrial capacity from the 1920s, substituted imports and supplied the domestic market with consumer goods. The leading sectors were textiles, petroleum refining, tires, pharmaceuticals, chemicals, cement and building materials, and food processing. Encouraged by credit facilities, infrastructure, and price-support programs, import substitution also affected the agricultural and service sectors.

The Great Depression represented a major landmark for economic policies and patterns of growth and development in Latin America. The crisis exposed the vulnerability of Latin American export economies and discredited the ruling elites that had advocated the export-led economic model. Open unemployment was not dramatic after the initial years of the crisis although real wages declined, thus leading to a significant deterioration in the standard of living for urban and rural workers. New nationalist political forces emerged on the Latin American scene. They pledged to create stronger and more independent economies and undertook programs to promote the general well-being of the population. The new governments made concessions to rural and urban workers through social legislation but maintained strict control over workers' organizations. They mediated in labor conflicts, passed labor codes, and implemented social security programs, thus guaranteeing a strong base of support for their regimes. As a result, the 1930s witnessed the consolidation of multiclass and heterogeneous populist alliances that challenged the long-standing predominance of the groups associated with the export-led model and paved the way for significant and long-lasting changes in the political systems of Latin America. One dramatic expression of this trend was the seizure of foreign oil properties and land distribution in Mexico during the nationalist administration of Lázaro Cárdenas in the late 1930s.

—Patricia Juárez-Dappe

Bibliography

- Bulmer-Thomas, Victor. *The Economic History of Latin America since Independence*. Cambridge: Cambridge University Press, 1994.
- Díaz Alejandro, Carlos F. "Latin America in the 1930s." In *Latin America in the 1930s: The Role of the Periphery in World Crisis*, edited by Rosemary Thorp. London: Macmillan in association with St. Antony's College, Oxford, 1984.
- Thorp, Rosemary. *Progress, Poverty and Exclusion: An Economic History of Latin America in the 20th Century*. Baltimore: Distributed by Johns Hopkins University Press for the Inter-American Development Bank and the European Union, 1998.

The Great Depression in the United States

The Great Depression of the 1930s was far worse in terms of both depth and length than any other contraction in American history. Although the onset of the Great Depression is associated in many minds with the stock market crash of October 1929, the economic downturn actually began during the summer of 1929. Industrial production peaked in mid-1929 at levels that would not be observed again for several years. In some sectors of the economy, weakness was apparent long before 1929; the construction sector in particular had been in decline since 1926. The 1920s, though often celebrated due to the dramatic growth of automobile and radio production and the exuberance of the stock market, had in fact been a decade of unspectacular growth, some unemployment, and concerns in many industries about future prospects.

Real gross national product—the total output of the economy—fell by 29 percent between 1929 and 1933, the year of the worst economic performance. This downturn thus erased all of the economic growth achieved in the previous quarter century. Manufacturing output fell by half. The average level of prices and wages fell by a third. Official statistics on unemployment rates were not kept at the time, but it has been estimated that the unemployment rate was at least 25 percent in 1933 and perhaps more than 30 percent. In addition, the number of hours worked

fell dramatically for many who retained their jobs, as employers cut back on output. Gross investment almost ceased, and thus the capital stock eroded through depreciation. The economy then recovered from 1933 to 1937. This was the longest recovery phase that economists had ever observed in the United States at that time. Yet it did not return the economy to the levels of output per capita achieved in 1929. The unemployment rate fell only to 14 percent. A short but sharp recession occurred in 1937–1938, and then recovery ensued. Unemployment neared 20 percent in 1938 and remained above 10 percent well into 1941. The 1929 level of output per person was only regained in the 1940s. The Great Depression, then, had not clearly ended when the United States entered World War II.

The United States was poorly prepared for this calamity. Rapid urbanization and immigration in preceding decades meant that most of the unemployed could not easily rely on friends or family, as was often the case in rural communities. Most of the unemployed had little or no savings at the start of the Great Depression. City and state governments that attempted to help the unfortunate soon found their financial solvency threatened, for their tax revenues naturally fell as output fell. The federal government had the capability to borrow but was hesitant at first to enter what seemed to be an area of local responsibility. Private charities struggled to fill the gap with soup kitchens and other activities, but their resources also dissipated, as the depression lasted longer than any had anticipated. Millions of men road the rails—boarded freight trains—to travel the country searching for elusive employment opportunities. Agricultural prices fell by half—much more than industrial prices—and thus farm incomes collapsed (especially in the drought-stricken western plains); still, many with rural connections moved back to the land and pursued a subsistence lifestyle. While the Great Depression was a national occurrence, industrial and mining regions and wheat-producing states suffered the most.

The effects of the Great Depression were also unequally distributed based on gender and ethnicity. Women and especially married women were often the first to be laid off, as even govern-

ments expressed a desire to protect the income of male breadwinners as much as possible. Blacks and immigrants were also often laid off first; the latter were often also excluded from government relief efforts. Many women, though, were able to retain jobs in the service sector that were widely perceived to be women's work. Likewise, blacks and immigrants were often able to retain some of the least-desirable industrial jobs.

There was little outright starvation in the United States, but there were severe levels of undernourishment. Death rates did not rise, but rates of many diseases, and especially childhood diseases, did. Educational attainment fell as children sought to help their families or lacked the energy to attend to their studies and as many localities closed schools or shortened the school year to save money.

Some workers moved in and out of casual employment during the 1930s. But about half of the unemployment experience involved workers who were unemployed for years at a time. The very young and very old were especially likely to find themselves in this group, as were immigrants. A great deal of family discord and psychological despair also resulted, and both marriage and birth rates were significantly lower during the Great Depression.

The administration of President Herbert Hoover hoped at first that economic recovery would set in within a year or two as it always had in the past. The Hoover administration eventually moved to fund employment relief. The most extensive efforts in this regard are associated, however, with President Franklin Roosevelt's New Deal. By 1938 some 10 percent of the American workforce was employed by government relief efforts. The Works Progress Administration (WPA) hired private firms to construct public works. The Civilian Conservation Corps (CCC) was directly managed by the government and focused on public works in the countryside and especially in national or state parks and protected areas. These relief projects, it might be noted, produced a range of valuable public works still in use today: public buildings; hiking trails, stairways, walls, and chalets in national and state parks; and works of public art.

—Rick Szostak

Bibliography

Darby, M. "Three and a Half Million U.S. Employees Have Been Misled: Or, An Explanation of Unemployment 1934–41." *Journal of Political Economy* 84 (1976): 1–16.

Margo, Robert A. "Employment and Unemployment in the 1930s." *Journal of Economic Perspectives* 7 (1993): 41–60.

Rosenbloom, Joshua, and William Sundstrom. "The Sources of Regional Variation in the Severity of the Great Depression: Evidence from U.S. Manufacturing, 1919–37." *Journal of Economic History* 59 (1999): 714–747.

Szostak, Rick. *Technological Innovation and the Great Depression*. Boulder, CO: Westview, 1995.

■ Introduction: Half Century of Global Economic Change

From 1900 to 1945, the global economy expanded rapidly as a result of growing industrial capability, improved transportation, more efficient communications networks, and an emergent international consumer culture. These developments affected all world regions to a greater extent than in any prior periods in world history. Despite two world wars and the interwar collapse of the global economy, trade and commerce expanded by leaps and bounds during this period. Growth continued during wartime as developing world regions gained a larger share of the global markets, producing an increased amount of consumer goods while European countries were forced to concentrate on war production. Moreover, as European economic domination ebbed during this period, other world regions such as India, China, and Mexico expanded their economies. These countries initiated their own unique processes of industrialization and modernization within their own cultural contexts. However, such developments also vastly changed cultural traditions and lifeways.

—*Abraham O. Mendoza*

Economic Change in the Developing World

Between 1900 and 1945, societies that had been dominated by European powers went through dramatic economic, political, and social changes. They achieved increasing levels of autonomy during the world wars and were less amenable

to outside dominance after those periods of relative independence. Sub-Saharan Africa, the Middle East, Latin America, and Asia all experienced varying degrees of economic development, vast internal migration, and improved infrastructural expansion, albeit at differing levels. While many of these changes were due to the diminishing of European imperial power, they were also a result of increased regional nationalist sentiment and calls for independence.

In 1900 much of the world was controlled by European states. While vast regions of Latin America, Asia, and the Middle East did possess nominal political independence, they were heavily influenced by European financial interests, particularly that of the British, which had a great degree of influence on their political structures. For example, Mexico, China, and Egypt, while de facto independent politically, were dominated by Western financial institutions. New York City and London, as the main centers of Western finance, had a tremendous influence over the fortunes of these subordinate economic regions. In spite of their formal political independence, the Ottoman and Qing empires were vulnerable to European military and financial dominance, as were the Central European Habsburg and Russian empires. Much of sub-Saharan Africa, South Asia, Southeast Asia, and the Caribbean was under the direct political control of European empires (e.g., British, French, German, Dutch, Portuguese, Spanish, Belgian, and the United States). There are still heated debates about the ultimate economic impact of the colonial period,

but it certainly delayed industrialization in the subordinate areas, which generally exported raw materials and imported the more profit-generating manufactured wares.

The two world wars revealed European vulnerability and inspired national independence movements throughout the remaining colonized or subordinated lands. The Middle East, South Asia, and Southeast Asia developed as pivotal economic actors during World War II, even if they were still ostensibly political colonies. Formal imperial domination in sub-Saharan Africa, Southeast Asia, and the Caribbean continued in spite of increasing demands for full political independence. The wartime use of colonial troops by European forces, as well as the loss of other colonies to Japanese occupation, highlighted both the importance of colonies to the metropolises as well as the weakness of the West. Attempts, particularly by Great Britain and France, to restore the prewar colonial relationships contributed to growing resentments among peoples who had become much more confident and self-reliant during the wartime years. During the war, the levels of investment in Latin America, Oceania, and Asia, due primarily to wartime needs, had increased the industrial capacity of those regions and led to development of production centers in their own right. Moreover, the Marxist-Leninist model of socialism in the Soviet Union offered a model of development that contrasted with the capitalist model. Although the old European/American power structure was altered by World War II, new economic pressures inspired by the post-war balance of power became a factor in establishing late twentieth-century international economic relationships.

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Bibliography

- Cooper, Frederick. *Colonialism in Question: Theory, Knowledge, History*. Berkeley: University of California Press, 2005.
- Gilbert, Felix, and David Clay Large. *The End of the European Era: 1890 to the Present*. 6th ed. New York: Norton, 2009.
- Wallerstein, Immanuel Maurice. *The Essential Wallerstein*. New York: New Press, 2000.

Economic Change in the Industrialized World

Radical changes occurred in the industrialized world between 1900 and 1945, brought about by technological advances, global economic development, and the effects of total war on different regions. Much of the world became interconnected through transportation and communications networks vastly expanded through increased technological innovations such as larger steamships, underground telegraph lines, and long-range radio. The two world wars also forced massive changes that influenced the growing role of the state in the lives of individuals, rapid technological innovations, and synthetic replacements for scarce raw materials. In addition to these positive developments, science and technology also allowed for the creation of new methods for destroying human life, most notably in the development of Zyklon-B and the atomic bomb.

Before 1914 much of the capital of the developed world was concentrated on internal industrial development and global market networks, which caused the expansion of widespread empires to seem both necessary and rational. Britain, France, Germany, Italy, Japan, and the United States, as well as some minor European nations, dominated much of the world's trade. Those major powers controlled large colonial empires in Asia, Africa, and Oceania. Technological developments from the previous century, such as trains, subways, motorcars, electric grids, and centralized plumbing networks, were ubiquitous in major metropolitan areas.

The outbreak of World War I in 1914 accelerated technological and economic development, and also opened the door to a growing role of nation-states in daily life. The juxtaposition of new technologies on the battlefield such as the machine gun, long-range field guns, and mustard gas with the traditional implements of war such as horses and bayonets combined with older battle tactics caused the deaths of thousands upon thousands of soldiers. The western front, characterized by barbed wire along no-man's-land, shell holes, and corpses strewn about, left a deep imprint in the minds of many who now saw western progress as an empty promise. European governments all increased their power

➤ TECHNOLOGICAL ADVANCES IN WAR

World War II led to the development of various technological breakthroughs as a result of wartime necessities and scarcities. Technological developments such as radar, rockets, jet engines, chemical synthetics (i.e., nylon, synthetic rubber, and lubricants), and early computers, among other innovations, emerged directly out of their value in the conduct of war. These innovations would have a direct impact on the development of a prosperous postwar economy in most of the West, as these products were developed into consumer goods, eagerly purchased by consumers who had endured deprivation during the war. Advances in the chemical industry led to significant innovations in synthetic products such as herbicides, insecticides, and exfoliants, which were used simultaneously in both the Green Revolution and in subsequent proxy wars (such as the Vietnam War). However, other developments such as atomic and biological weapons, satellite technology, ballistic missiles, and so-called wonder pesticides (e.g., DDT) would have severe ramifications in the subsequent Cold War period, leading to diplomatic superpower confrontations (between the United States and the Soviet Union) and widespread environmental degradation. In spite of the blessings derived from wartime innovations, many of these products came with a severe price for posterity.

—Abraham O. Mendoza

in order to harness national and colonial resources for the purposes of war. In addition, they generally silenced opposition, increased surveillance of potential foreign agents within the domestic population, and mobilized their economies for war. The interwar period, building on precedents established during World War I, expanded the reach of the developing welfare state, providing economic safety nets for seniors, the disabled, and the unemployed.

World War II, much like its predecessor, accelerated technological and economic innovations throughout the West. Britain had already developed its industrial base for the conduct of war but remained dependant on its overseas dominions and on U.S. support to continue its fight against Germany. Nazi Germany and fas-

cist Italy had created a formidable war machine based on the mobilization of their populations for the conduct of war while maintaining rationing systems for food and consumer goods. When some goods became scarce, chemical industries filled the gap by creating synthetic products, allowing for the creation of entirely new products. Most of the damage was inflicted on enemy terrain during blitzkrieg attacks and aerial bombardment. Within five years, in 1945, the economic situation was drastically altered for the West. The former Nazi Third Reich and Japanese East Asian Co-Prosperity Sphere were destroyed by the Grand Alliance onslaught on multiple fronts and the aerial bombardment of Axis cities and industrial centers. This led to severe economic dislocation, infrastructural destruction, and dislocations of huge numbers of people, both national populations and enslaved laborers from their occupied territories. In 1945 most of the formerly occupied countries of western Europe and Asia were completely dependent on Allied goodwill for sustenance. The European and Japanese metropolises, at the pinnacle of their power back in 1900, now lay subservient to the new Cold War superpowers in a bipolar world.

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Bibliography

- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Knopf, 1998.
- Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.

The Role of Gender in Sub-Saharan Economic Activity

Gender has played a significant role in sub-Saharan African economic activity during both the precolonial and postcolonial periods. Although gender roles were often distorted by colonial officials and patriarchal societies to deny women their achievements, historical information about African women illustrates their contributions to commerce, especially the local production and distribution of goods. Furthermore, women have

oftentimes not been commended either for resisting colonial projects that affected their economic power or for negotiating terms or tasks favorable to their conditions during colonialism. The social and economic injuries that were inflicted by colonialism were largely absent in past debates, although they were major factors that contributed to denying women the control of property. While men were generally portrayed as active participants in urban trading, women were usually relegated to the domestic sphere and rural manual jobs, with little or no access to or experience in commerce.

Views about the role of women in African economic activities tend to suggest that women were hapless victims who were passive in their interactions with men in economic activities. In truth, however, women in the precolonial period occupied very influential positions in commerce, especially in textile, kola, palm oil, and rubber trading. To understand the role of gender in sub-Saharan Africa, it is vital to trace the role of men and women beyond traditional male roles as hunters and female roles as gatherers. While men generally controlled long-distance trading, women were active agents who negotiated and initiated trading routes and networks within their local communities and along the coast. Women competed with local and foreign male traders in human cargo, gold, and cotton. At the dawn of colonial regimes women in Africa engaged with foreign merchants and explorers in diverse trading activities including farm produce, spices, handicrafts, and clothes. On the local front women in commerce engaged in petty trading selling vegetable, cloth, soap, meat, fruits, and household goods.

African women, rather than men, primarily participated in wholesale and retail business. While men normally worked as individual entrepreneurs, women competed with other women while at the same time forming cooperative groups, associations, unions, and traditional banking systems to enhance their economic activities. Also, women were involved in the cotton business and textile trade, a position that allowed them some social and domestic control and mobility. On some occasions men were employed as laborers working on land and property owned by women. During colonial times Europeans not

ABA RIOT

The protest by women of Calabar and Owerri Provinces of modern southeastern Nigeria during the last two months of 1929 was christened the Aba Riot by the British colonial government. Explicitly, the colonial government used the word “riot” to delegitimize the protest of the women as senseless and unwarranted, as it was customary for hegemonic powers to describe attempts aimed at undermining the essence of domination as a riot instead of revolution or war. Locally the Aba Riot is known as Ogu Umunwanyi (Igbo) and Ekong Iban (Ibibio), meaning “Women’s War.”

The main cause of the riot included numerous oppressive policies that negated preexisting patterns of gender relations among the people. Women’s role and status during the colonial period were reduced drastically, while men assumed roles that were beyond the traditional confines. The immediate causes of the riots included fear of the introduction of direct taxation to women, and many women’s reaction was chiefly motivated by the need to halt further policies that marginalized their survival. By the time the riot was over about 50 women had lost their lives according to official statistics. The long-term effect of the riot was the abandoning of the exploitative warrant chief system, which the women successfully protested against.

—Kwame Essien

only adjusted existing traditional and pleasant community lifestyles but also modified the ways that African men and women carried out their economic activities in order to impose European values, control African economies, exploit African resources, and enrich their countries’ treasure. Europeans’ voracious appetite for wealth in Africa facilitated European capitalist advancements and simultaneously stifled grassroots commercial activities in sub-Saharan Africa.

Colonial officials also invested in railways, ports, and roads not only to provide easy access for transporting African resources such as rubber, timber, groundnut, and palm oil into Europe but also to create channels for flooding African markets with cheap European goods. For example, in 1932 the French Textile Company was built near Bouke, Ivory Coast, to derail local textile trading

activities and to weaken fledgling technological innovations by local African traders. As a result, local hand-woven clothes took a second seat to factory clothes and caused commerce to be regulated by Western capitalist systems, a phenomenon that lingers even today.

In addition, land reforms by colonial officials significantly interfered with the socioeconomic power and security of women. It stifled their upward mobility and forced them to succumb to lower-paying jobs with higher taxes. The advantage given to men in formal education also tilted gender power in their favor. Men were given a monopoly over public administration and the newest technological farming techniques, while women were kept on the margin as farm laborers producing cash crops such as cassava and yam for domestic consumption and for minimal profit.

—*Kwame Essien*

Bibliography

- Allman, Jean, Susan Geiger, and Nakanyike Musisi, eds. *Women in African Colonial Histories*. Bloomington and Indianapolis: Indiana University Press, 2002.
- Berger, Iris, and E. Francis White. *Women in Sub-Saharan Africa*. Bloomington and Indianapolis: Indiana University Press, 1999.
- Dike, P. Chike. *The Women's Revolt of 1929: Proceedings of a National Symposium to Mark the 60th Anniversary of the Women's Uprising in South-Eastern Nigeria*. Lagos: Nelag, 1995.
- Hafkin, Nancy J., and Edna G. Bay, eds. *Women in Africa: Studies in Social and Economic Change*. Stanford, CA: Stanford University Press, 1978.

Japanese Militarism and Industrialization

“*Fukoku kyōhei*” (wealthy country, strong army) was the rallying cry of Meiji (1868–1912) Japan. It was a big-tent ideology accommodating the views of former samurai politicians bent on repelling the Western powers forcing Japan to open and sign unequal treaties granting Westerners extraterritorial rights in treaty ports. It was an ideology that the profit-oriented business community, which was intent on unlocking the secrets of Western technology (e.g., how to run factories with steam engines), could subscribe

to and former samurai committed to empire building abroad could embrace.

The concept of *fukoku kyohei* foreshadowed several themes: Japanese domestic politics were heavily factionalized, and big-tent concepts attempted to create consensus, awarding every faction something; Japan's military drive was partially defensive—maximizing security in the cutthroat world of international power politics—and partly offensive aimed at gaining regional dominance in East Asia; in both domestic and international matters, alliances of convenience were essential; and Japanese militarism before 1945 was tightly connected to Japan's industrialization.

Although during the early Meiji period Japan was predominantly agricultural, under Tokugawa rule, villages had made impressive gains in producing crafts for market: tea, silk thread, woven cotton textiles, hemp rope and clothing, organic fertilizers, and wooden implements used in farming. Entrepreneurship was widely diffused.

Building on this entrepreneurial base, Japanese industries using Western technology—iron and steel factories, integrated spinning and weaving factories using steam power, steam shipbuilding yards—sprang up. By the turn of the century, an industrial belt stretching from Tokyo and Yokohama in the north to Osaka and Kobe in the south had sprung up on Japan's Pacific Ocean coastline. This belt constituted the economic base for Japanese militarism, spewing out the battleships, aircraft carriers, and fighter planes that the Japanese military employed in its many wars between 1894 and 1945.

The military leadership of an island archipelago lying off the Eurasian landmass bent on securing great power status in the region for centuries naturally wanted to build both army and navy, its army to take on the two great Eurasian powers in its region, China and Russia (later the Soviet Union), and its navy to take on the two great naval powers of the Pacific, the United Kingdom and the United States. Trying to deal with these enemies sequentially, picking them off one by one, Japan's leadership entered into various alliances of convenience. Ultimately, however, it fought all of these enemies simultaneously.

Building upon its victory over China in the mid-1890s, Japan fought a second successful war

against Russia in 1904–1905, securing control over the South Manchurian Railway. Defending the railroad became a principal focus of the Kwantung Army, originally placed in northern China to oversee the Kwantung Leased Territory that Japan had obtained. Pressuring Korea from its Manchurian base, Japan ratcheted up its demands on Korea, formally incorporating it as a colony of the Japanese empire.

Allied with England in the Anglo-Japanese alliance of 1902, Japan helped defend the interests of the British empire during World War I. However, its main actions during the period from 1914 to 1918 were strictly opportunistic. Realizing that the European powers that had been dividing up China into separate zones were tied up fighting each other and thus too distracted to object, Japan presented China with a set of demands effectively making it a dependency of the island nation.

In the aftermath of World War I, the United States and the British dominions—Canada and Australia—pressured England to abandon the Anglo-Japanese treaty. In its place, a new treaty regulating naval affairs in the Pacific was negotiated in Washington during 1922. Under its terms, the powers agreed to not carve up the “Chinese melon” any further, and the five negotiating powers (the United States, the United Kingdom, Japan, France, and Italy) agreed to set limits on the tonnage of their war-making ships. Reluctantly, the Japanese Navy agreed to sign off on the Washington Naval Treaty. In the aftermath of Japan’s accession to the treaty, however, the Naval High Command split into two factions: one opposing renewing the treaty, the other willing to operate under rules largely dictated by the United States and England.

Japan also operated in concert with the United States dispatching troops into Russia during the Russian Revolution, finally withdrawing its army in 1922 when it signed a peace treaty with the Soviet Union. Pulled out of Russia and restless to expand its military influence in Manchuria and northern China, the Kwantung Army carried out a series of provocations during the 1920s aimed at triggering war with the Chinese warlord ruling Manchuria. The Mukden Incident engineered by the Kwantung Army, blamed on the Chinese by Japan, ushered in full-fledged

THE KWANTUNG ARMY

The Kwantung Army played a crucial role in shaping Japan’s military and political posture on the Eurasian mainland during the first three decades of the twentieth century. Established after the Russo-Japanese War of 1904–1905, the Kwantung Army was to defend the Kwantung Leased Territory along the South Manchurian Railway that had been wrested from Russia during the war. During the 1920s the army focused on bringing all of Manchuria under its control, and in 1931 it blew up a portion of the South Manchurian Railroad, blaming the Chinese for the attack. Operating behind this trumped-up fabrication, the Kwantung Army managed to swallow Mukden, eventually conquering all of Manchuria and creating the puppet state of Manchuko.

From its base in Manchuko, the Kwantung Army pushed eastward, threatening to seize Chinese territory in the south and Soviet-dominated Mongolia in the north. Penetrating Inner Mongolia in 1933, the Kwantung Army began probing territory that the Soviets were intent on keeping as a buffer zone between themselves and the Japanese-dominated Manchuko. In 1938 at Zhanggufeng and in 1939 at Nomonham, the Kwantung Army fought the Soviet Union’s Red Army and went down to bloody defeat.

—Carl Mosk

war, paving the way for Japan to absorb Manchuria and create the puppet state of Manchuko.

Internationally, breakdown in trade caused by the collapse of the gold standard system and friction between ideologically opposed powers (communist, fascist and liberal democratic) by beggar-thy-nation tariff wars intensified the worldwide drive of big powers to create trade blocs. Following this logic, the Japanese bureaucracy began planning for the creation of a Greater East-Asia Co-Prosperity Sphere centered on Japan’s growing industrial might during the late 1930s. These developments played into the hands of the faction of the Japanese Navy opposed to the Washington Naval Treaty system. Following the faction’s demands Japan withdrew from the treaty, thereby rendering it a dead letter.

Under the banner of creating a trade bloc in Asia, the Kwantung Army’s interventions in

Manchuria and northern China brought Japan to the brink of war with both China and the Soviet Union. Tensions with the Soviets were high because Manchuko shared an extensive border with Outer Mongolia, which was a client state of the Soviets, while tension with China was ongoing after Japan created the puppet state of Manchuko. In 1937 a full-scale invasion of China by the Japanese Army commenced. Shortly thereafter, the Kwantung Army briefly fought the Soviet Army along the Outer Mongolian-Manchurian boundary, with the Japanese troops being overwhelmed by a Russian tank onslaught. Extricating itself from this defeat, the Japanese Army command decided to concentrate on China, and a nonaggression treaty was negotiated between the Soviet Union and Japan.

As Japan pushed farther into China, the United Kingdom and the United States looked on with alarm. Washington took a series of steps designed to signal its displeasure with Japan's aggression in China: cutting off export of scrap iron and steel to Japan, moving the headquarters of the Pacific naval fleet to Honolulu from the West Coast, and pushing for a naval expansion bill designed to vastly increase the size of the Pacific fleet. Realizing that it had a very short time to operate in prior to the U.S. Navy becoming dominant in the Pacific, the Japanese High Command rolled the dice. It decided to take out the American Pacific fleet, attacking it at Pearl Harbor in December 1941 and ushering in full-scale war with the United States.

In 1945, its industrial belt having been decimated by American firebombing and facing an alliance of enemies that now included the Soviet Union, which let its nonaggression treaty with Japan lapse, Japan's government surrendered unconditionally. In this act of submission Japan not only surrendered but also saw the *fukoku kyohei* policy, the mantra of Japanese militarism for eight decades, perish in the ruins of its military defeat.

—Carl Mosk

Bibliography

Evans, D., and M. Peattie. *Kaigun: Strategy, Tactics and Technology in the Imperial Japanese Navy, 1887–1941*. Annapolis, MD: Naval Institute Press, 1997.

Mosk, C. *Japanese Economic Development: Markets, Norms, Structures*. New York: Routledge, 2008.

Nakamura, T. *Economic Growth in Prewar Japan*. New Haven, CT: Yale University Press, 1971.

Samuels, R. *“Rich Nation, Strong Army”: National Security and the Technological Transformation of Japan*. Ithaca, NY: Cornell University Press, 1994.

The Importance of Colonial Raw Materials

In the first half of the twentieth century, European and North American manufacturing and commerce relied on the extraction and processing of raw materials from European colonial dominions. The development of large industrial concerns and expansive international markets was based on the ability of European empires to extract raw materials from their colonies. Consumer goods produced in the colonies, such as coffee, tea, and soap, were also in high demand throughout the West. Moreover, during World War I and World War II, colonial raw materials were pivotal in the total mobilization of the wartime economies of the belligerent parties. Scarce or unavailable in Europe and North America, items such as petroleum, nitrates, and rubber acquired extreme importance in the conduct of war to the extent that their regional sources became prone to conquest by those powers that deemed them absolutely necessary for continued expansion.

Before World War I, much of the raw cotton, cash crops, alloys for steel manufacturing, and petroleum in Europe and North America was coming in larger and larger quantities from the European colonial empires in Africa, Asia, and Latin America. For example, Britain relied on Indian tea, Egyptian cotton, and African palm oil for domestic consumer goods and products for export. To a degree, the economic dependence of Latin America on Britain and the United States made them akin to colonies in spite of their political independence. This situation created an imbalance between the European commercial cores and their colonial peripheries in which their colonies and economic dependencies re-

mained mere sources of raw materials for export while also remaining relatively industrially undeveloped in contrast with their respective metropolises. Most of their imports and exports were decided by their colonial masters, ultimately depending on the uncertainties of the international market.

World War I, which rapidly revolutionized the economies of the West in terms of their mobilization for total war, created a deeper dependence on the raw materials of the colonized world for the conduct of war. The Central Powers, cut off from their external trade, relied on extracting their raw materials from their domestic and occupied zones or, in the case of Germany, by developing synthetic materials in their chemical industries. In contrast, Britain, France, and the United States relied on European colonies for many of the raw materials necessary for war mobilization. Upon the defeat of the Central Powers, the victorious Allies scrambled for the spoils of the former Ottoman Empire in the Middle East. Oil reserves in the British Mandate of Iraq and the protectorate of Iran became a main geostrategic interest in the Middle East that created rifts between Britain and its former allies, France and the Soviet Union.

World War II illustrated how pivotal colonial raw materials were perceived by the aggressor powers of Germany and Japan. Nazi Germany was keen on maintaining control of Romanian oil fields and in seizing Soviet oil fields to sustain its modern war machine in the field. Cut off from international overseas trade, Germany also extracted most of its raw materials from occupied Europe and neutral countries such as Spain and Sweden (from which it received most of its iron ore) for war manufacturing. The expansion of the Nazi Empire in Europe created an autarkic economic system of exploitation, which ensured the constant supply of raw materials from occupied Europe to the Reich in the form of coal, steel, and other materials necessary for the war effort.

—Abraham O. Mendoza

Bibliography

- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.

The Great War and Industrial Production in Europe

The outbreak of World War I in 1914 and the resulting stalemate on the western front created a conundrum for both the Entente and Central Powers. A war of movement similar to those of the late nineteenth century was expected by army staffs on both sides of the front, not one in which the forces would be so evenly matched that attrition would be the only feasible strategy. The result was the total mobilization of the economy for the purpose of conducting total war. Britain, France, and, to a greater extent, Germany mobilized their economies to supply munitions and food for the soldiers while rationing and cutting production in consumer goods for civilian use. This unprecedented development in national economic infrastructures was recognition on the part of all belligerents that their entire national economies would have to be mobilized in order to win the war. With a disproportionate amount of young men on the front, the labor pool from which to draw from had to consider taking women as viable workers. As the war continued, Britain and France grew to rely more on U.S. matériel and loans.

During most of the war, Britain's geographic location made it vulnerable to being cut off from the continent as well as from its empire by unrestricted submarine warfare, but it still relied on the empire for supply and matériel to a significant extent. While supplies at the front in the initial year of the war were adequate, as growing numbers of men went to war this necessitated a government response. Furthermore, by 1915 there was a shortage of shells that provoked a public outcry against His Majesty's government. This resulted in the creation of the Office of the Minister of Munitions, which was in charge of coordinating the allocation of resources for production, the actual production, and the distribution of munitions for all branches of the British military. Subsequently, the Munitions of War Act of 1915 prohibited recruitment and conscription of munitions workers without notification of their respective employers. Furthermore, British dominions were put under the jurisdiction of the Imperial Munitions Board to produce war

ARTILLERY PRODUCTION, 1914 THROUGH 1918

NATION	Prewar	1914	1915	1916	1917	1918	Total
BRITAIN	1,487	91	3,226	4,551	6,483	10,680	26,518
FRANCE	4,679	150	4,000	6,000	7,000	7,908	29,737
RUSSIA	7,088	355	2,065	8,289	4,302	—	22,099
ITALY	2,121	50	1,800	2,400	3,000	3,000	12,371
SUBTOTAL	15,375	646	11,091	21,240	20,785	21,588	90,725
USA	897	55	189	398	605	4,341	6,485
SUBTOTAL	16,272	701	11,280	21,638	21,390	25,929	97,210
GERMANY	8,165	500	3,000	18,000	24,000	24,400	78,065
HABSBURG	2,890	219	1,463	3,650	4,191	2,038	14,451
SUBTOTAL	11,055	719	4,463	21,650	28,191	26,438	92,516
GRAND TOTAL	27,327	1,420	15,743	43,288	49,581	52,367	189,726

*Note: Britain obtained 1,396 artillery pieces and 14,623 artillery tubes from the United States. U.S. data includes all artillery pieces produced for the Entente. The United States had a prewar production capacity of 55 guns of all types per year. Italy began the war with 2,121 guns and produced over 12,000 guns during the war. Italy had 7,995 guns and howitzers of all types in November 1918.

Source: Kevin D. Stubbs, *Race to the Front: The Materiel Foundations of Coalition Strategy in the Great War* (Westport, CT: Praeger, 2002), 123.

—Abraham O. Mendoza

matériel for the remainder of the war. Rationing programs, conscription of soldiers and workers, and government oversight of industrial production geared for war were ubiquitous in Britain for the remainder of the war.

France was directly confronted by the German Army right on its border and thus was forced to mobilize its economy for the purpose of national survival, as its forces were depleted along the fronts. In the first year, France was able to engage its soldiers along the fronts while suffering shortages in supplies and materials, but the government intervened to some extent in economic mobilization to meet the needs of the military. The French government, acting under the premise of national emergency (which given the proximity of German forces was warranted), mobilized the French economy for the purpose of conducting total war. Along the same lines as in Britain, this meant rationing, government oversight of industrial production and resource allocation, and ensuring the speedy distribution of artillery pieces, shells, and guns for the military. In 1915 the French government ap-

pointed Albert Thomas undersecretary of state for artillery and munitions to increase munitions production. France was able to ensure that agricultural production and food shortages on both the war front and on the home front were minimal, while industrial production churned out the necessary implements for warfare. However, the French were prone to standardizing their field guns to one model rather than developing several, viewing expediency of production, rather than technological innovation, as a higher priority.

Germany was faced by a two-front war while being cut off to overseas resources. As a result, it faced a grimmer picture in terms of its economic vulnerability. However, the German government was amenable to ensuring the rapid and complete economic mobilization of the economy for the purpose of war. To a far greater extent than any of the other belligerents, the German government, in tandem with the General Staff, made significant strides in ensuring that agricultural and industrial productions were adequate for supplying both soldiers and civilians, as well

as their allies, on all fronts. The German Supreme Army Command (Oberste Heeresleitung) made most of the major economic decisions with key German industrial concerns, which profited from the war. However, despite the surge in industrial output due to the total mobilization of the German economy for total war, it also led to ubiquitous food shortages.

Russia, Austria-Hungary, and Italy also mobilized their economies to a significant extent while depending on their far more affluent allies for a considerable portion of their matériel. Austria-Hungary depended on Bohemian (Czech) industrial output for most of its munitions, and Italy relied on its northern industrialized regions for its matériel. Shortages in Russia led to the Russian Revolution. Nonetheless, these states also experienced increased government controls over economic life, geared toward increasing production of war matériel and allocation of national resources to that purpose.

—*Abraham O. Mendoza*

Bibliography

- Keegan, John. *The First World War*. New York: Random House, 1998.
- Stubbs, Kevin D. *Race to the Front: The Materiel Foundations of Coalition Strategy in the Great War*. Westport, CT: Praeger, 2002.

German Precision Production versus U.S. Mass Production

During World War II (1939–1945) the United States and Nazi Germany mobilized for war, relying on differing strategies concerning the quality and quantity of military equipment. The U.S. war effort relied on the cooperation between business and labor interests under the close scrutiny of federal officials under the War Production Board (WPB). Moreover, total mobilization of the U.S. economy for war entailed careful economic planning, taking note of supplies of raw materials, prioritizing the armament industries, and maintaining supplies of consumer goods for domestic consumption. In contrast, the chaotic nature of German leadership at both the state and party levels and their haphazard

delegation of power between various factions allowed the focus on total mobilization to waver well into 1942, when the decision was finally made to mobilize for a total war economy three years after hostilities had commenced. This glaring contrast provides the reason behind the German emphasis on the production of precision equipment versus the U.S. mass production of war goods based on economies of scale.

In the 1930s the New Deal economic and social policies of President Franklin D. Roosevelt failed to catapult the United States out of the Great Depression. However, it did set a precedent for increasing government interference in economic planning and resource allocation. In the period immediately preceding the entry of the United States into the war (1941), the federal government had already begun to slowly mobilize small numbers of munitions industries for defense. Upon entry into World War II following the attacks on Pearl Harbor (December 7, 1941), the U.S. government decided upon the full economic mobilization for war on two fronts, with the emphasis on equipment rather than manpower. Working in close collaboration with business interests and labor organizations on whose cooperation it relied, the federal government was able to entice both to participate in the war effort by means of offering lucrative contracts. Federal economic planning, including the allocation of raw materials, the division of mass production between the two coasts, the imposition of wage and price controls, civilian rationing, and the shifting of large factories from civilian to war production, rapidly ensued. Large amounts of war matériel, not only for use by U.S. forces but by the Grand Alliance, were made available through the Lend-Lease Program. Tanks, planes, artillery, and shells in addition to uniforms, equipment kits, and other war goods were churned out in large numbers. By focusing on one model, such as the M4 Sherman tank or the B-17 Flying Fortress bomber, U.S. manufacturers emphasized quantity rather than quality. Mass production of these goods was prioritized over quality and precision. Although oftentimes inferior to Axis equipment, their sheer numbers overwhelmed the combined industrial output of all the Axis Powers.

In contrast, German manufacturing placed higher priority on precision items, oftentimes

► THE ECONOMIC PURPOSE OF BLITZKRIEG

In an effort to fight war without mobilizing the German economy for total war and to produce both “guns and butter” for the domestic German population, Adolf Hitler and his military commanders adopted the strategy of lightning war (blitzkrieg) in the late 1930s. By combining aerial, artillery, and tank attacks in combination with infantry en masse in concentrated attacks to surround and destroy enemy forces, typically in pincer movements, German military forces were able to project German might rapidly and effectively. Moreover, by quickly destroying enemy forces, German military forces could be rapidly deployed elsewhere, having set up a smaller occupation force typically in league with a quisling (collaborationist) government in power (Vichy France, the Netherlands, and Norway). This tactic provided Germany with the capability of launching war on the cheap and capturing territory and resources as bases for future expansion. This would provide the domestic German population with evidence of military prowess and garner increased support for the Nazi regime while simultaneously showing off German military capability among allies and foes alike. However, once the Third Reich was at war on two fronts against both the United States and the Soviet Union (1941), whose secure land bases and large human and natural resources were not as vulnerable to blitzkrieg as were the smaller countries of western Europe, this tactic would eventually prove futile.

—Abraham O. Mendoza



A German motorized detachment rides through the remains of a Polish town during the Blitzkrieg of September 1939, illustrating the success of this strategy of “lightning war.” (Library of Congress)

resulting in smaller quantities of high-end equipment. Multiple models of German fighters, tactical bombers, heavy tanks, and guns, while superior to U.S. armaments, were produced in smaller increments and subject to increasingly long periods of testing before production. At times, plans for mass productions were scrapped when small improvements were made on specific models. The haphazard way in which decisions were made at all levels of the Nazi regime, with party, state, and military officials having a say, created multiple bottlenecks in production. Having multiple versions of bombers, fighters, tanks, submarines, and guns while providing optimal

quality and choice could not openly compete with overwhelming U.S. production. Moreover, Allied aerial bombing attacks over German cities severely cut German productivity, as factories and labor were decimated and thus rendered incapable of working for long periods of time. Vulnerable to air attacks, German industry was increasingly successful in surviving by retreating to huge underground factories specifically built to withstand air attacks. However, these facilities merely prolonged the war to the bitter end for the Third Reich.

The total war mobilization of the German economy under German minister of armaments

Albert Speer in 1942 had a sizable impact on increasing German output of war goods but was nonetheless incapable of keeping up with aggregate Allied production or even with U.S. productivity alone. This also resulted in the retention of older forms of technology, such as horses and carts as modes of transport. Perversely, the German authorities placed a higher priority on resource allocation for the destruction of the European Jews in the Holocaust than on war mobilization.

—Abraham O. Mendoza

Bibliography

- Kennedy, David. *Freedom from Fear: The American People in Depression and War, 1929-1945*. New York: Oxford University Press, 1999.
- Kennedy, Paul. *The Rise and Fall of the Great Powers*. New York: Vintage, 1989.
- Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.

Soviet Production and World War II

In the decades leading up to World War II, the Soviet Union undertook industrialization in an unprecedented manner, much of it geared toward militarization. The collapse of production in the civilian sector that followed the revolution forced Lenin's new government to briefly allow some free-enterprise industrial activity in the early 1920s under the New Economic Policy (NEP). On a longer term, though, the Soviet government was committed to following the Marxist economic theory that central planning and economies of scale could create an industrial economy more efficient than a capitalist economy. A series of economic five-year plans, starting in 1929, first concentrated on infrastructure and heavy industry, with subsequent development of various manufacturing sectors.

Even before the first five-year plan, a top Soviet priority had been self-sufficiency in military production. Western engineers hired to help in a number of industries in the early 1930s observed that almost all factories, including those ostensibly for producing consumer goods, were primarily designed to manufacture military equipment,



Rows of mass-produced Soviet tanks roll toward the battlefield in June 1941. (Hulton-Deutsch Collection/Corbis)

and thus there was great difficulty producing civilian goods in them. Due to the misinterpretation of those apparent failures in civilian manufacturing, there was a tendency outside the Soviet Union to underestimate the Soviets' industrial abilities as well as the portion of their economy devoted to the military sector. This would later lead to the perception that the expansion of industry during the war was much greater than was actually the case.

Part of Soviet planning was to locate new and to relocate existing strategic industrial assets deep inside the country. Thus, even before the outbreak of the war with Germany in June 1941 new infrastructure was in place, many factories had been partially or completely moved from the western areas of the Soviet Union, basic facilities had been constructed for other factories and workers in anticipation of their relocation, and most new industrial development was taking place in the Ural Mountains and areas farther east. Despite the collaboration between Germany and the Soviet Union in the division of Poland in 1939 and the Soviet agreement to supply petroleum products and other commodities to the Germans as the latter fought France and Britain in 1940 and early 1941, Stalin considered war with Germany inevitable. However, he was caught off guard by the timing of the German attack, and there was a brief period of panic and chaos in which it appeared that the

➤ FARMING COLLECTIVES AND SOCIAL UNREST IN THE SOVIET UNION

The industrialization that enabled the Soviet Union to successfully fight the mechanized warfare of the 1940s came at a terrible price. Farming was collectivized in the 1930s to gain control over agricultural commodities that could be traded for machinery abroad. Met with widespread resistance to the expropriation of private farms, the Soviet government responded with mass deportations and confiscation of virtually all foodstuffs. Ten million Soviet citizens died of starvation or from unbearable conditions in slave labor camps. Industry expanded, but the agricultural sector was devastated, and hundreds of thousands of Soviet citizens who had survived the horrors took up arms against the Soviet government during World War II.

—Leonard Leshuk

Soviet government and military might collapse before Stalin arranged a strategic retreat to the Volga River. This extended the German supply lines several hundred miles while placing the Soviet forces that much closer to their new military-industrial centers.

The accompanying industrial and human evacuation that took place, although one of the great logistical feats of history, was largely an acceleration of ongoing industrial relocation. So thorough was the removal of industrial equipment, skilled workers, and agricultural machinery that the invading Germans soon found that rather than benefiting economically from occupation of the western Soviet Union, just maintaining the minimum infrastructure and providing the basic necessities in many areas was a net drain on their own resources.

The industrial capacity of the Soviet Union became obvious to the world during the initial German attack when the Soviets lost three times as many tanks and aircraft as the Western intelligence agencies had been estimating that they possessed, and yet they still had enough to continue fighting. Although machinery and industrial technology obtained from the United States

and western Europe had enabled the Soviets to establish some very sophisticated industrial capabilities before the war, equipment for the Red Army, although functional, was generally made as simply, crudely, and cheaply as possible. This facilitated production of huge quantities of equipment to overwhelm the German qualitative advantage.

Although the Soviets relied on U.S. Lend-Lease supplies for a few critical needs such as precision industrial machinery, trucks, boots, and high-grade aviation fuel, many of the items they requested and received, including tanks, airplanes, aircraft-quality aluminum, railroad equipment, marine engines, and construction machinery, were held for postwar use. Other goods, such as foodstuffs, textiles, and lower-grade petroleum products, received from the United States were used in place of similar products that the Soviet Union, as a neutral country in the Pacific war, were selling to Japan or allowing the Japanese to obtain under concessions from Soviet territory. After the war turned in their favor and the Red Army advanced into Central Europe, the Soviets made every effort to capture German military manufacturing facilities intact, which they then moved to the Soviet Union. When the war ended, while the Western countries quickly reconverted to civilian production (greatly reducing their military capabilities until the advent of the Korean War), the Soviets continued to devote a disproportionately large segment of their industrial capacity to military manufacturing, setting the course that their economy would follow to its end.

—Leonard Leshuk

Bibliography

- Davies, R. W., Mark Harrison, and S. G. Wheatcroft, eds. *The Economic Transformation of the Soviet Union, 1913–1945*. Cambridge: Cambridge University Press, 1994.
- Leshuk, Leonard. *US Intelligence Perceptions of Soviet Power 1921–1946*. London: Frank Cass, 2003.
- Raymond, Ellsworth L. *Soviet Preparation for Total War*. Ann Arbor, MI: University Microfilms International, 1951.

■ Introduction: Socialism

The term “socialism” refers to a social and governmental system, based on equality and social and economic justice, that requires government intervention in economic affairs. In the more extreme form, the state, rather than individual or market forces, owns and controls the means of production, distribution, and exchange.

Socialism refers to both political doctrines and the political movement and system in which the doctrines are enacted. There are various forms of socialism, but all stress the need to redress the perceived moral flaws in capitalism. Socialists believe that capitalism was intended to satisfy people’s needs and wants at a price, which along with paid interest and the profit motive is immoral because of its inherent exploitation of labor and misappropriation of resources. Socialism stems from democracy, as the ideal of political equality is extended to economic equality. In theory, socialism is the first step toward communism. However, socialism differs from communism because it is based on democracy and ethical values and can allow for private ownership.

The development of Marxist socialism reached its peak of radicalism with the Bolshevik Party, created by Vladimir Lenin during the years before the Russian Revolution of 1917. The development of Lenin’s political thought borrowed heavily from Marxist revolutionary principles, but Marxism-Leninism included the belief that a group of dedicated revolutionaries must control—and complete—the revolution. This ideological departure led to the development of communism.

During the years following World War II, socialism developed in different ways. In Africa, countries slowly began to gain independence from their colonizers. African countries attempted to wean themselves from Western trade by developing government-controlled economies. African socialism was seen as compatible with the rise of nationalism on the continent, as many saw capitalism as an extension of colonialism. With the decline of communism, however, many countries moved toward a more open economy.

—*Philip J. MacFarlane*

New Economic Policy

Widely known by its acronym NEP, the New Economic Policy was a temporary retreat from centralized economic control that Soviet leader Vladimir Lenin initiated at the Tenth Party Congress in 1921 and terminated by the inauguration of Stalin’s First Five-Year Plan in 1928–1929. Reversing the Bolsheviks’ introduction of state control of production and commerce in 1918, NEP permitted Soviet citizens to engage in small-scale private trade, manufacturing, and land ownership. Contemporaries regarded NEP variously as a betrayal of the Bolshevik Revolution or as an expedient compromise and necessary detour on the road to Soviet socialism.

Emerging victorious from the Russian Civil War in 1921, Lenin and the Bolsheviks nonetheless encountered dangerous challenges to Soviet rule. Having nationalized industry and property, abolished private commerce, introduced strict rationing, and forcibly requisitioned agricultural products from peasants during the period of War Communism (1918–1921), the Bolsheviks now faced an exhausted, hungry, and resentful population. In the summer of 1920 peasants in Tambov Province revolted, and in March 1921 soldiers at the Kronstadt naval base mutinied. Though the Bolsheviks brutally repressed both rebellions, drought imposed a devastating famine in the spring and summer of 1921. Several million Soviet citizens starved to death, and the Bolsheviks accepted international aid in an attempt to save the starving.

Lenin recognized the need for reform, and he understood that the peasants would need to be pacified in order for the cities to be fed and for socialism to thrive. In this regard, Lenin envisioned NEP as a necessary compromise with the disgruntled peasantry. Approved overwhelmingly by the Tenth Party Congress, NEP abolished War Communism’s system of produce requisition, replaced it with a fixed tax in kind, and re-introduced private trade to the Soviet economy.

Between 1921 and 1923 NEP evolved to become the multifaceted policy backbone of a mixed economy composed of both public and

private sectors. While the State Planning Commission (Gosplan) retained control over large-scale industry, financial institutions, and transportation (the so-called commanding heights of the economy), Soviet citizens were authorized to trade privately and to establish small-scale manufacturing and service industry enterprises. To facilitate overall economic growth, the Soviet currency was stabilized. Still under state control, foreign trade expanded.

In 1925 Nikolai Bukharin, a Communist Party theorist and outspoken proponent of NEP, encouraged the Soviet Union's capitalists to enrich themselves. Bukharin and other like-minded party leaders believed that NEP helped to stabilize the Soviet state and was a positive, necessary step toward establishing socialism. At the same time, opponents of NEP referred to it as the "New Exploitation of the Proletariat" and argued that the greed of enterprising "Nepmen" and affluent peasant "kulaks" impeded the realization of socialism. NEP prompted intense debates over the meaning of the Bolshevik Revolution and the future of the Soviet state.

Having consolidated his power over several years, Josef Stalin emerged as the driving force in Soviet politics by 1928. In that year, he announced the First Five-Year Plan, making clear his desire to rapidly develop Soviet industry, strengthen the military, and collectivize agriculture. As a consequence, NEP was dismantled, and centralized state control over the entire Soviet economy was ultimately reestablished.

—Brigid O'Keefe

Bibliography

- Ball, Alan M. *Russia's Last Capitalists: The Nepmen, 1921-1929*. Berkeley: University of California Press, 1987.
- Fitzpatrick, Sheila, Alexander Rabinowitch, and Richard Stites, eds. *Russia in the Era of NEP: Explorations in Soviet Society and Culture*. Bloomington: Indiana University Press, 1991.

Soviet Five-Year Plans

Having defeated his political rivals at the Fifteenth All-Union Communist Party Congress in December 1927, Josef Stalin moved quickly to transform the Soviet Union from a country of

peasants and relative industrial underdevelopment into an economic powerhouse designed according to socialist principles. In 1928 Stalin committed the Soviet people to rapid industrialization, the collectivization of agriculture, and the full transition to socialism. A series of ambitious centralized programs for the industrial, agricultural, and technological advancement of the Soviet Union known as Five-Year Plans underpinned Stalin's so-called revolution from above.

With his First Five-Year Plan (1928-1932), Stalin dismantled V. I. Lenin's gradualist New Economic Policy (NEP) and mobilized Soviet citizens in a collective effort to rapidly catch and overtake the capitalist West and to construct socialism in one country. Characterized by artificially high production goals, the First Five-Year Plan prioritized the development of heavy industry. The State Planning Committee (Gosplan) oversaw the building of 1,500 new factories, the construction of massive industrial complexes, and the introduction of new branches of industry such as aviation. As a result of the First Five-Year Plan's great leap forward, Soviet industrial output nearly doubled.

The collectivization of agriculture, meanwhile, was intended not only as a means of agricultural requisitioning and thus industrial financing but also as a method of controlling and sovietizing the peasantry. Although the First Five-Year Plan initially stipulated only the partial collectivization of agriculture, collectivization efforts quickly devolved into a full-scale assault on the peasantry when, in early 1930, urban brigades descended on the countryside to collectivize by force. Peasants fiercely resisted by slaughtering livestock, destroying harvests, attacking collectivizers, and fleeing the countryside. In March 1930 Stalin scaled back state plans, announced that collectivization should proceed voluntarily, and blamed all failures on collectivizers's excessive enthusiasm. Although the First Five-Year Plan achieved the collectivization of at least 14 million peasant households, it also resulted in the deportation of peasant class enemies (*kulaks*) to Soviet concentration camps and led (at least temporarily) to famine and reduced agricultural output.

The First Five-Year Plan, declared fulfilled after only four years and three months, was succeeded by the Second Five-Year Plan (1933-1937)

➤ MAGNITOGORSK

Established in 1929, the city of Magnitogorsk served both as a monument to the Bolshevik goal of refashioning life on earth and as a purported testament to the Soviet Union's enthusiastic embrace of Josef Stalin's First Five-Year Plan. Located 40 miles (65 kilometers) east of the southern end of the Ural Mountains and built atop rich reserves of iron ore, Magnitogorsk ("Magnetic Mountain City") was created with the intention of transforming undeveloped land into a center of iron and steel production and thus into a monumental symbol of a distinctly anticapitalist Soviet modernity.

Magnitogorsk and the so-named Stalin Magnitogorsk Metallurgical Complex were built from scratch by foreign—namely American and German—architects and engineers, Soviet managers and specialists, and a labor force that brought together recruited workers and punished peasant kulak deportees. Throughout the 1930s Magnitogorsk's 200,000 workers managed to build this ostensible exemplar of enlightened Soviet socialism despite living conditions that were characterized by privation if not squalor. Already in 1939 Magnitogorsk was the site of 10 percent of the Soviet Union's steel production. Its strategic importance swelled further still during World War II when it produced half of all steel used in the production of Soviet military tanks.

—Brigid O'Keeffe



Soviet workers outside the steel plant in Magnitogorsk, an example of the industrial goals of the Five Year Plans, 1949. (Yevgeny Khaldei/Corbis)

and Third Five-Year Plan (1938–1942), both designed to extend the purported successes of the First Five-Year Plan in further developing Soviet industry and completing collectivization. The Second Five-Year Plan focused in particular on the training of industrial specialists and on the nurturing of a new kind of Soviet worker, the Stakhanovite. Named after a coal worker, Alexis Stakhanov, who reportedly exceeded his production quota by 1,400 percent in one night's work in 1935, the Stakhanovite movement was a campaign in which the Soviet government generously rewarded zealous workers with fame and material benefits for their record-breaking achievements. Stakhanovites figured prominently in the Soviet Union's propaganda narrative of how, under Stalin's lead, Soviet citizens had triumphed economically as capitalist coun-

tries had suffered the Great Depression. This romantic narrative, though ruthless in silencing the role that terror and coercion played in the Stalinist 1930s, did have some basis in fact. By the time of the Nazi invasion of the Soviet Union in 1941 (and thus of the Third Five-Year Plan's premature termination), the first three Five-Year Plans had indeed revolutionized Soviet industry, agriculture, communications, military, and transportation although at a very high price.

The destructive impact of World War II on the Soviet Union cannot be underestimated; entire cities were laid to waste, and an estimated 27 million Soviet citizens perished during the war. In the war's aftermath, Stalin challenged Soviet citizens to fulfill his Fourth Five-Year Plan (1946–1950) and Fifth Five-Year Plan (1950–1955). These provided not merely for economic

recovery and reconstruction but also, again, for further rapid increases in productivity and industrial development. Stimulated by war reparations paid by a defeated Germany and its allies, Soviet industry not only rebounded but also expanded, especially in the areas of aviation, armaments, and atomic energy. Stalin, however, died in March 1953 and thus did not witness the completion of the Fifth Five-Year Plan.

—Brigid O’Keeffe

Bibliography

- Kotkin, Stephen. *Magnetic Mountain: Stalinism as Civilization*. Berkeley: University of California Press, 1995.
- Siegelbaum, Lewis H. *Stakhanovism and the Politics of Productivity in the USSR, 1935–1941*. Cambridge: Cambridge University Press, 1988.
- Viola, Lynne. *Peasant Rebels under Stalin: Collectivization and the Culture of Peasant Resistance*. New York: Oxford University Press, 1996.

War Communism

War Communism attempted to prevent the total collapse of the economy, which had been left in shambles by the war and imperial and provisional government policies. It sought to mobilize national resources for the struggle against the new regime’s enemies. It also represented a Communist attempt to rapidly reshape the socioeconomic structure of the country from a market economy to one that was both centrally planned and state controlled.

There were three main phases of War Communism. First came nationalization of the major economic institutions, transportation, and foreign trade as well as large industries, all of which would be managed through a centralized bureaucracy. Next came an attempt to shift from market forms of exchange and distribution toward rationing of goods and services. Last came the application of coercion when persuasion failed to replace traditional economic stimulation. Tied to the last two, the principle of confiscation of surplus production was not just an exigency of conditions of shortages but rather was part of the socialist tenet of “equal distribution” of goods.

To manage these processes, in December 1917 the Bolsheviks established a large bureau-

cracy headed by the Council of National Economy. The council was charged with the task of planning and coordinating Russia’s future economic expansion. However, the turbulence of the Russian Civil War and Allied intervention did not support long-range planning.

Along with the general breakdown of the economy, the Bolsheviks faced related problems that required urgent solutions. One dangerous development was the loss of vast amounts of productive territory in the March 1918 Treaty of Brest-Litovsk and the lands occupied by White and Allied forces during the Russian Civil War and Allied intervention. This sharply reduced natural resources and raw materials available for manufacturing. The same territorial losses affected food production, which contributed to the downward spiral of industrial production. The workers did not receive adequate food, even though they were given priority in distribution. The vicious circle continued as industrial workers fled to the countryside in search of food, further reducing industrial output.

In response to these conditions, the Bolsheviks first tried food rationing, which failed. Next they resorted to impressment and labor conscription. Unions were no longer instruments seeking and defending workers’ rights but became government-controlled organizations for bolstering production. The government also abolished the workers’ councils, initially formed for workers to manage factories and their production. Labor conscription led to the assignment of the unemployed to any work the government required, regardless of worker training or ability.

At the same time, the need for compulsion spread to the countryside. The spontaneous seizure of land by the peasants that had taken place in 1917 did not lead to automatic support of governmental needs. Peasant landholders, large and small, were disinclined to provide their produce voluntarily to feed workers and soldiers without compensation, so the government decreed that agricultural producers would surrender all their produce above a minimum subsistence level to the government for redistribution. The needs of peasants were in turn to be supplied by the government, something that remained a dead letter due to low industrial productivity and the needs of the Red Army fighting the Russian Civil

War. Peasants responded with passive resistance, lowering their production to minimum subsistence levels.

A longer-range goal of food confiscation was to compel peasants to abandon their individual properties and join collective farms or state farms. In some instances when confiscation of even the subsistence production took place, peasant uprisings occurred. Since 80 percent of the Russian population still lived in the countryside, engaged in agriculture, and controlled 50 percent of the national income, peasant attitudes toward War Communism policies carried great weight.

By 1921 the Bolshevik leadership realized that War Communism had tried to achieve more than the nation could absorb. The transition from capitalism to a socialist economy could not be achieved in one great leap forward. At the Tenth Communist Party Congress in March 1921, Bolshevik leader Vladimir Lenin announced a departure from War Communism and declared the New Economic Policy (NEP). This policy left production of “secondary importance” under private control and made a series of concessions to placate the peasantry. The decree ended arbitrary requisitioning and instead imposed a graduated tax on surplus production of food, initially paid in kind. This tax fell heaviest on the wealthiest peasants, called kulaks, and could not exceed 50 percent of the former requisition. Peasants could sell the remainder of their surplus on the open market.

The NEP also affected industrial production. If peasant surpluses were to be sold in cities, industries had to produce more in order to offer something in return. For a few years, at least until Stalinist times, a market economy existed in Russia alongside the state-controlled economy, contradicting Bolshevik aims and intentions.

—Arthur T. Frame

Bibliography

- Anderson, Thornton. *Russian Political Thought: An Introduction*. Ithaca, NY: Cornell University Press, 1967.
- Bettleheim, Charles. *Class Struggles in the USSR, First Period: 1917–1923*. London: Monthly Review, 1976.
- Dziewanowski, M. K. *A History of Soviet Russia*. Englewood Cliffs, NJ: Prentice Hall, 1979.

Figs, Orlando. *A People's Tragedy: The Russian Revolution, 1891–1924*. New York: Viking Adult, 1997.

Frame, Arthur T. “War Socialism.” In *The Encyclopedia of World War I: A Political, Social, and Military History*, Vol. 1, edited by Spencer C. Tucker. Santa Barbara, CA: ABC-CLIO, 2005.

Pipes, Richard. *The Formation of the Soviet Union: Communism and Nationalism, 1917–1923*. Rev. ed. Cambridge, MA: Harvard University Press, 1997.

Building Socialism

The project of creating a socialist state following the collapse of Alexander Kerensky's Provisional Government and the seizure of the levers of power by the soviets in 1917 presented Vladimir Lenin and the Bolsheviks with both a monumental opportunity and immense chaos. Having inherited the rudimentary industrial base of tsarist Russia and the economic collapse caused by World War I, the Bolsheviks had to quickly improvise through the situation and create a strong centralized government, a functional bureaucracy, and centralize worker committees to create a functional socialist economy. The concept of building socialism centered on utilizing the economic base of existing capitalist structures and adapting them to create a socialist state under the leadership of the dictatorship of the proletariat.

After the Treaty of Brest-Litovsk (1918) with imperial Germany that effectively dropped



Vladimir Lenin presides over a meeting of the Bolshevik Council of People's Commissars, or Sovnarkom, attended by Leon Trotsky, 1917. (Hulton-Deutsch Collection/Corbis)

THE RUSSIAN CIVIL WAR (1918–1922)

Following the seizure of power by the Bolsheviks in the October Revolution in 1917, civil war erupted in Russia by various factions unwilling to accept the rule of the revolutionaries. Known as the Whites, these rebels against the authority of the Bolsheviks were composed of contingents of Old Regime Russian aristocrats, nationalists from various provinces of the former Russian empire, and liberals who still believed that Russia could evolve into a parliamentary democracy akin to those in western Europe. Given the divisiveness and lack of unity of these various groups, although the Bolsheviks were outnumbered, there was little common cause among the Whites other than their extreme dislike of the communists.

In 1918, confronted on multiple fronts in a circumscribed area surrounding Moscow and Petrograd, the Bolsheviks mustered their scattered militia forces under the command of Leon Trotsky into the notorious Red Army. The ideologically driven Red Army destroyed the various forces of the Whites in Belorussia, the Ukraine, and Siberia and simultaneously fought with nationalist revolutionaries in Poland. In the ensuing chaos of this civil war, the Bolsheviks were able to centralize and implement their control over the Russian state, ultimately defeating all their enemies by 1922.

—Abraham O. Mendoza

Russia out of World War I, the Bolsheviks set about creating their socialist utopia amid the chaos of the Russian Civil War (1918–1922). Immediately faced with the demands of peace and bread by the working classes, which were initially supportive of the Bolsheviks, the leadership of the party set about centralizing their control. The soviets, which were workers' councils, were crucial organizations in administering civil institutions in the vacuum left by the Provisional Government. The Bolsheviks set about infiltrating the soviets with their own agents in order to assert more efficient control by the party.

The control of factories was first delegated to worker committees. Factory owners were reluctant to work with such committees but were ultimately coerced into concessions. While these worker committees operated effectively in es-

tablishing industrial productivity, they also created various problems due to their degree of autonomy. The Bolsheviks did appreciate giving the workers legitimacy in running their own affairs but recognized that centralization required that they have a greater degree of agency in regard to industrial output, especially in the midst of the civil war. Party organizations and bureaucracies were implemented to work with these worker committees, setting them up as trade unions to better control them and then disregard them. In this manner, the Bolsheviks reduced the influence of worker committees and augmented their control of factories and overall industry under the policy of War Communism.

Many of the bureaucracies created by the Bolsheviks were modeled on those created in western Europe during World War I. The German military implemented a strong centralized committee to plan economic output to meet the demands of total war. The Bolsheviks copied this method in setting up bureaucracies and other party organs to replace those created by the soviets. Under this rapid centralization, the government would infiltrate the existing soviet or worker committee with its own agents and/or create a government bureaucracy to replace it. Given the contingencies of the Russian Civil War and Allied incursions in the far north and east, the Bolsheviks utilized the policy of War Communism to assert their control over industry. Resistance by labor was eventually met by coercion in the gradual creation of a police state. Vladimir Lenin developed the *Cheka* (secret police) to engage potential dissenters as saboteurs and wreckers of industry.

State capitalism, as defined by Lenin, stipulated that a level of private enterprise needed to exist in order for Russian society to evolve into the eventual socialist state that the Bolsheviks were building. However, this form of capitalism was tightly restricted and controlled by the Bolshevik bureaucracies that had already wrested control from the worker committees. Through the periods of War Communism and the New Economic Policy (NEP), small entrepreneurs managed to preserve their existence in cooperation with the Bolsheviks. This was seen as a fundamental and necessary step in the evolution of Marxism in Russia by Lenin. When the NEP was

abolished by Josef Stalin in 1924, the state assumed direct control of planning the entire Soviet economy in an effort to build socialism.

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Bibliography

- Fitzpatrick, Shelia. *The Russian Revolution*. New York: Oxford University Press, 1994.
- Malia, Martin E. *The Soviet Tragedy: A History of Socialism in Russia, 1917–1991*. New York: Free Press, 1994.
- Remington, Thomas F. *Building Socialism in Bolshevik Russia: Ideology and Industrial Organization, 1917–1921*. Pittsburgh: University of Pittsburgh Press, 1984.

Stakhanovite Movement

The Stakhanovite movement began in the Soviet Union during the Second Five-Year Plan in 1935 in order to motivate workers to exceed their prescribed quotas, thereby increasing aggregate industrial production. The accelerated rate of industrialization set by the Second Five-Year Plan, designated by General Secretary Stalin and the top echelons in the leadership of the Communist Party of the Soviet Union (CPSU), required that workers abide by an unrealistic socialist work ethic emphasizing high productivity for the purpose of building socialism. The Stakhanovite movement was named after coal miner Aleksei Stakhanov, who had been reported to have mined more than 100 tons of coal in under six hours, in effect going 14 times over his quota. By adopting what were deemed by Soviet leaders to be capitalist time-and-motion methods of industrial productivity and efficiency and by raising expectations of worker output, Soviet authorities sought to catch up with the West by instilling Stakhanovite values in Soviet workers.

The CPSU, motivated by the success of the Stakhanovite movement in the coal industry and composed by workers who went over government prescribed quotas, quickly implemented it in other industrial sectors such as steel, railroad, and agriculture, among others. In November 1935 the First All-Union Stakhanovite Conference was held at the Kremlin. Soviet officials emphasized the central significance of the Stakhanovite movement in the socialist reconstruc-



Alexis Stakhanov, Soviet labor leader of the 1930s, whose exploits were set as an unrealistic example for Soviet workers to follow. (Library of Congress)

tion of the national economy, particularly the industrial sector. As part of this push, Soviet officials organized meetings, speeches, and award ceremonies in which they handed out medals and prizes in order to provide incentives for Soviet workers, in addition to increased salaries and improved working conditions. In spite of these genuine incentives, the official Soviet Stakhanovite stresses that all Soviet workers should aspire to produce to their full ability in order to help build the socialist state and that such a goal, in and of itself, should be their incentive as good Soviet workers. Soviet authorities reported that during the First Five-Year Plan (1929–1932), industrial labor productivity had only increased 41 percent. In contrast, with the implementation of the Stakhanovite movement across all industrial and agricultural sectors of the economy during the Second Five-Year Plan (1933–1937), productivity allegedly increased more than 80 percent.

Official Soviet propaganda, media, and government-sanctioned cultural programs emphasized the importance of the Stakhanovite movement to the nation's progress. Newspapers, advertisements, and rallies celebrated the achievements of these Soviet heroes, heralded as models for all workers. Stakhanov and other such workers were actively promoted in the press, literature, and film throughout the Soviet Union. The individual achievements of Stakhanovites were in some cases set by Soviet authorities as acceptable

➤ WRECKERS—ALLEGATIONS OF SABOTAGE IN SOVIET INDUSTRY

State-sanctioned terror was a major aspect of Soviet industrialization in the 1930s. While the Soviet authorities were keen on providing incentives for industrial workers to exceed their quotas, they did not take kindly to those who did not (or could not). Industries where growth was not evident were purged of managers and engineers, and its workers were labeled as wreckers (saboteurs). These alleged wreckers were coerced by Soviet police to confess to working with internal or external enemies to undermine Soviet industrialization, when, in fact, many of them were working with inadequate resources to meet unreasonable quotas. Many

individuals avoided being accused of wrecking by “cooking the books” to avoid being sent to Siberia or worse. The scare tactics utilized by Soviet authorities in order to ensure high productivity inadvertently led to fraud and corruption by individuals who knew what their fate would be if they did not produce according to plan quotas. At the same time, the Soviet state removed highly skilled and motivated individuals from industry and shifted them to work in forced-labor camps, in turn affecting the efficiency of sectors that could have used the talents of these skilled professionals.

—Abraham O. Mendoza

quota levels for all workers, thereby raising the bar on already unrealistic worker quotas. However, the Stakhanovite movement was largely a propaganda tactic on the part of the Soviet government. Contemporary historical research has found that worker productivity in many Soviet heavy industries (steel, coal, and machinery manufacturing) actually increased when adequate working conditions and proper equipment were provided by state industries. The unrealistic goals set by the Stakhanovite movement, while motivating certain individuals to exceed their own personal productivity quotas, was more or less ig-

nored by the mass of workers who produced according to realistic expectations given their own particular circumstances.

—Abraham O. Mendoza

Bibliography

- Fitzpatrick, Shelia. *Everyday Stalinism: Ordinary Life in Extraordinary Times: Soviet Russia in the 1930s*. New York: Oxford University Press, 2000.
- Kotkin, Stephen. *Magnetic Mountain: Stalinism as a Civilization*. Berkeley: University of California Press, 1997.

War and Diplomacy

In October 1925 the former major European belligerents of World War I negotiated the Locarno Treaties in Locarno, Switzerland. By December 1, 1925, Britain, France, and Germany formally signed these treaties, guaranteeing Germany's western borders and leaving its eastern borders open for later revision. Locarno was an attempt by German foreign minister Gustav Stresemann and French foreign minister Aristide Briand to alleviate diplomatic tensions regarding the controversial Treaty of Versailles (1919) in Europe. Locarno was part of a greater strategy on the part of Stresemann to negotiate peace with France and Britain; following the 1923 French occupation of the Ruhr over unpaid reparations, Stresemann also sought to slowly negotiate the revision of Germany's eastern borders with Poland and Czechoslovakia, which held huge swaths of prewar German territory as well as large populations of ethnic Germans. The Locarno Treaties were the high point of interwar diplomacy in Europe, given that prior to their negotiation Germany was saddled with a huge reparations bill amid a sagging economy and the constant threat of invasion. The Locarno Treaties were regarded as the centerpiece of the improved west European diplomatic climate of 1924–1930, introducing optimism for international peace and stability, typically referred to as the “spirit of Locarno.” Germany's admission to the League of Nations, the international organization established by the Treaty of Versailles to ensure cooperation and stability, and the withdrawal of Allied troops from German Rhineland emphasized the spirit of Locarno. Stresemann and Briand's attempts, however, were short-lived; in the 1930s tensions increased between France and Germany and rapidly eroded the spirit of Locarno. This was indicative of the fact that during much of this period, warfare trumped diplomacy.

International relations from 1900 through 1945 were characterized by the balance of power of the European Great Powers as well as the emergence of the United States and Japan, shaped by their industrial capacity, colonial possessions, and accumulated wealth. By 1945 both world wars had severely depleted Europe's capacity, ebbing the primacy of its hegemony in global affairs and setting the stage for the emergent bipolar confrontation between the United States and the Soviet Union that would characterize much of the post-1945 period of world history. European rivalries had ultimately led to the outbreak of World War I, which affected mostly Eurasia in terms of actual warfare but nonetheless generated economic and ideological repercussions felt the world over. While Locarno was an instance of attempts to quell the immediate tensions created after World War I in Europe, attempts by Germany, Italy, and Japan to revise their borders at the expense of their neighbors severely affected any chances for diplomatic stability during the interwar period.



Britain and France, under the auspices of the League of Nations, attempted to engage the revisionist policies of Germany, Italy, and Japan through policies of appeasement. Fears over the potential of revolution, stemming from the newly created Soviet Union, shaped Britain's and France's reluctance to eliminate growing German power in the continent. Japan, driven to expand in eastern Asia, was also allowed to proceed largely unimpeded, despite strong protests in the League of Nations and the threat of sanctions. The Soviet Union, through its nonbelligerence pacts with both Japan and Germany, stood on the sidelines until German aggression in 1941 forced the Soviets to decide in favor of the Allies.

Other conflicts, such as the Russian Civil War, the Mexican Revolution, the Spanish Civil War, and the Chinese Civil War, that were fought to dislodge authoritarian elites also marked this period. While smaller in scale than the world wars, they left many dead. Moreover, colonial rebellions in the Middle East, Africa, and Asia, while "pacified" by colonial powers, were indicative of growing nationalist movements for independence. However, these were often met with brutal retribution by colonial occupiers, as illustrated through actions by American forces in the Philippine-American War (1899–1904), by German forces in the Herero genocide in German Southwest Africa (1904–1907), and by British forces in the Anglo-Boer War (1899–1902). However, in the context of the world wars, these conflicts were significantly minor, given the larger scope, scale, and amount of forces deployed to engage across vast fronts in the world wars.

From 1900 to 1914 German diplomacy was guided by the desire to counter French ambitions to retain its lost territories of Alsace-Lorraine

and to check British global power. German kaiser Wilhelm II desired to find Germany a “place in the sun” and embarked on a *Weltpolitik*, or world policy. Despite diplomatic provocations and saber rattling, Britain, France, Austria-Hungary, Russia, and Italy maintained nominal stability through the balance of power that characterized the international relations in Europe. The balance of power international system was understood to maintain stability, given that due to the matched resources and strength of the alliances of European powers a major conflict could be prevented and negotiations would inevitably ensue, thus eliminating the potential of warfare. However, this very policy of balance of power allowed for the establishment of two immense alliance blocs: the Triple Alliance (Germany, Austria-Hungary, and Italy) and the Triple Entente (Britain, France, and Russia). Moreover, small-scale wars in the Balkans brought individual members of these blocs into conflict.

Austria-Hungary’s relations with its Balkan neighbors had been tense during the first decade of the twentieth century, given increased Slavic nationalism and the Balkan Wars in the region. Russian Pan-Slavic solidarity with Serbia ultimately became the initial trigger of World War I after Serbian nationalist Garvilo Princip shot Austrian archduke Franz Ferdinand on June 28, 1914. Austria had preemptively annexed Bosnia-Herzegovina, populated primarily by ethnic Serbs in 1878, and was convinced that Princip was acting on behalf of the Serbian government. Within the next month the Triple Alliance and the Triple Entente engaged in hasty exchanges and provocations. Understanding the affinity between the Slavic Russians and Serbs, Austria obtained German support for its demands, most notably the infamous “blank check,” agreeing to Austria-Hungary’s demands for restitution from Serbia after the assassination. By August 1 after Russia began partial mobilization of troops, Germany declared war on Russia and then France in order to enact the Schliffen Plan and defeat France first. The Schliffen Plan dictated that the German Army should defeat France before Russian forces could be ready to engage in actual combat. Through its invasion of Belgium, as dictated by the Schliffen Plan, Germany drew into the war Britain, which had upheld Belgian neutrality. Italy remained neutral until it switched sides and joined the Allies in 1917. The Ottoman empire joined Germany and Austria-Hungary against the Triple Entente, thus forming the Central Powers.

Most of the world remained unscathed by the ensuing conflict on the European continent and in the Middle East. Nonetheless, the immensity of the war, characterized by the trench warfare of the western front with its large-scale infantry attacks, artillery barrages, gas attacks, and hundreds of thousands of deaths, horrified the public. In 1917 the entry of the United States and the exit of Bolshevik-dominated Russia in the midst of the Russian Revolution changed the course of the war. By 1918 Germany signed an armistice with the understanding that the

The balance of power international system was understood to maintain stability, given that due to the matched resources and strength of the alliances of European powers a major conflict could be prevented and negotiations would inevitably ensue, thus eliminating the potential of warfare.

Allied Powers and the Associated Power, the United States, would respect its interests under the guidelines President Woodrow Wilson earlier had enunciated, known as the Fourteen Points. Rather than negotiate with the Central Powers, the Allies imposed the Treaty of Versailles as well as other treaties that severely punished the former belligerents. Other world powers and colonial possessions were not allowed concessions that met their expectations for their participation, despite the Wilsonian rhetoric of national self-determination. Moreover, Britain and France were able to attain German and Ottoman possessions in the Middle East through the auspices of the newly established League of Nations as “mandates,” a euphemism for colonies. India, China, and Japan, despite their contributions to the Allied war effort as combatants, were denied concessions in the form of either territory or sovereignty.

Notions of collective security and a diplomatic policy of appeasement characterized international relations of the interwar period (1919–1939). If a belligerent attempted to threaten the international order, the League of Nations would resort to a policy of economic sanctions and, if necessary, armed force to restore order. Cooperation between the major powers upholding the League of Nations was absolutely necessary for collective security to function. Despite initial attempts to alleviate tensions, such as the Locarno Treaties, the emergence of National Socialism in Germany, along with other fascist movements in Europe, and Japanese aggression in China eliminated possibilities for more conciliatory diplomatic policies. The economic dislocations brought on by the Great Depression in Britain and France and the increasing expansionist drive by Germany, Italy, and Japan further undermined this policy. Moreover, the reluctance of the United States to get involved in European affairs and British and French suspicions of the expansionist ambitions of the Soviet Union further weakened the ability to mobilize any efforts of this sort. France would not act without British support, while the British were adopting a very conciliatory approach because of the need for economic austerity to meet the demands of maintaining the British empire. As a result, Germany, Italy, and Japan were given rein to expand under their respective ideology-driven political systems, often met only with strong words and the empty threat of sanctions.

The German annexation of Austria and the seizure of the Sudetenland from Czechoslovakia in 1938 were met by British and French appeasement. Similar incursions by Japan in Manchuria in 1931 and Italy in Ethiopia in 1935 were also permitted. Soviet fears of German expansion made the Soviet Union an advocate of collective security but it gradually became disillusioned by British and French appeasement and amenable to conciliation with the revisionist powers. As a result, the Soviet Union signed nonaggression pacts with both Germany (1939) and Japan (1941), much to the consternation of the rest of the world.

The establishment of the Rome-Berlin Axis in 1936 cemented German and Italian ambitions for expansion within Europe. Japan joined the Axis first through the Anti-Comintern Pact of 1936, signed with Germany against the Soviet Union, and then with both Germany and Italy with the Tripartite Pact of 1939. Axis expansionist foreign policy, particularly that of Germany and Japan, was fueled by their respective

ideological movements to establish hegemony over their neighbors. Nazi Germany sought to establish the Third Reich over Eurasia and Africa and eventually the Americas, and Japan sought to create the Greater East Asian Co-Prosperty Sphere over eastern Asia, Southeast Asia, and Oceania. Both Germany and Japan possessed racist ideological systems that designated peoples not of those countries' particular racial groups as outcasts to be used as slave labor. Within the Nazi worldview, Jews, Slavs, blacks, and other "undesirables" were to be used as forced labor in the creation of their empire, with little to no regard to their lives. With the implementation of the Final Solution, Germany sought to remove the Jews from Europe through extermination rather than through mere forced migration. Germany also sought to eliminate the Soviet Union, which they regarded as an ideological threat to National Socialism and the German people as well as a tool of "World Jewry." In their efforts to present Britain, France, the United States, and their allies as decadent "bourgeois" powers, the Axis appealed to the nationalist movements of the colonial world, promising liberation and autonomy via a new world order. However, the reality was starkly different, as people of color were designated racial inferiors, subject to the potential of slavery or genocide in an Axis-dominated world. This eliminated the initial prospect of Axis armies as being forces of liberation.

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Axis advances and Allied losses initially characterized the outbreak of World War II in Asia in 1937 and in Europe in 1939. By 1940 both Germany and Japan were at the height of their strength in terms of territorial advances and military output, as the Allies were on the retreat along all fronts. However, the German attack on the Soviet Union and the Japanese attack on the United States in 1941 brought those two major powers into the war, drastically changing the nature of the conflict. Both the United States and the Soviet Union, despite initial losses, were able to mobilize massive war matériel, manpower, and labor to counter dwindling Axis resources. Britain was also able to muster its own national resources and those of the British commonwealth, which included British colonies in Africa and southern Asia as well as the British dominions of Canada, Australia, New Zealand, and South Africa. However, the war matériel production of Britain, China, Canada, Australia, and other Allied contingents was dwarfed by the output of the United States and the Soviet Union; this advantage in matériel made possible the breakthroughs in both the European/north African and Asia/Pacific theaters of operations.

The Grand Alliance, dominated by Britain, the United States, and the Soviet Union, launched a coordinated effort, established at the Yalta Conference of early 1945, to defeat the Axis Powers. Moreover, nationalist movements in Axis-dominated territories, such as France, Poland, Yugoslavia, the Philippines, and Vietnam, fought guerrilla wars against their German and Japanese oppressors. Despite German and Japanese

last-ditch efforts to fight to the bitter end (Italy dropped out and switched sides in 1944), the Axis Powers were ultimately defeated in 1945.

The years of war destroyed much of Europe. In the aftermath of the war, Europe's people were impoverished and dependent on American and Soviet troops for their sustenance. The U.S.-sponsored Marshall Plan, which infused billions of dollars to rebuild western Europe, is the most notable example of European dependence on outside assistance. Both Germany and Japan were occupied by large Allied armies, subject to the beneficence of their former enemies after surrender. In particular, Japan was occupied by U.S. forces under General Douglas MacArthur, who established a new Japanese constitution minimizing the role of the emperor as a figurehead. Britain, once the world's premier superpower, was financially ruined, and its international position was reduced. France also felt its new relative position in international affairs diminished amid the emergence of both the United States and the Soviet Union as the arbiters of global diplomacy. Moreover, nationalist movements in southern Asia, sub-Saharan Africa, and Asia were emboldened by the decline of European hegemony and actively sought independence in the last year of the war. In essence, 1945 marked the end of European hegemony and the beginning of the process of decolonization and presaged the eventual establishment of a bipolar international system in 1947.

—*H. Micheal Tarver, Alexander Mirkovic,
and Abraham O. Mendoza*

■ Introduction: Revolutions

Political and social revolutions from 1900 to 1945 were frequently violent forms of resistance against existing political authorities and institutions. Such revolutions were attempts to either remove the existing regime in control of the state or remove a foreign colonial authority in order to replace it with an indigenous nationalist state. In either instance, violent resistance was a common means that was employed, as in the Bolshevik Revolution against the Russian Provisional Government, the Irish Rebellion against British rule, and the Young Turks movement that led to revolt in the late Ottoman empire. However, in other instances non-violent means of resistance, such as in the Quit India movement, were also seized upon as in order to instigate social change and remove an unwanted colonial authority.

—*Abraham O. Mendoza*

The Young Turks

The Young Turks, known as the Committee for Union and Progress (CUP), were the most successful of the various reformist groups that emerged in the Ottoman empire as a response to the Islam-backed autocracy of Sultan Abdulhamid (r. 1876–1909). Founded in 1894, CUP was originally a collection of diverse groups united primarily by their opposition to Abdulhamid. However, CUP was soon taken over by a Turk-dominated group led by Ahmed Riza that sought to create a unified state on the basis of Turkish, and Muslim, dominance. Although CUP and similar organizations were initially suppressed, by 1906 the failures of Abdulhamid's government to suppress rebellions in Anatolia and Armenia led to the emergence of CUP in Thessalonika. The reform movement grew in strength and in

July 1908 forced Abdulhamid to restore the Constitution. The Sultan's supporters retaliated, but after their counter coup was put down on March 31, 1909, CUP deposed Abdulhamid, replacing him with his brother Mehmed V.

Although CUP had begun as a reformist movement, it proved to have no interest in relinquishing power to either Parliament or the sultan, and resorted to dominating events behind the scenes. CUP's policies included centralization of power, modernization, opposition to foreign domination, and the favoring of the Turkish minority within the empire. (Turks consisted of 40 percent of the Ottoman population until the Balkan Wars in 1912–1913.) This Turkish preference eventually pushed the Albanian, Arab, Armenian, and other minorities to demand autonomy in increasingly strident terms, leading to Albania's breaking away in the First Balkan War (1912–1913) and, most tragically, the Armenian Massacres (1915–1919). Despite CUP's repression of the Arabs within the empire, during World War I most Arabs remained loyal to the sultan and Islam against Christian Britain.

CUP was unable to maintain the integrity of the empire any better than had Abdulhamid. They lost Libya to the Italians and the entirety of Ottoman Balkan possessions except eastern Thrace (the part of modern Turkey that lies in Europe). After 1913 the CUP government came under the control of three charismatic men, Enver Pasha, Talaat Bey, and Djemal Pasha. Enver, educated at the German War College, became minister of war shortly before World War I; Talaat became minister of the interior; and Djemal was military governor of Constantinople. Enver's pro-German orientation combined with Britain's dismissive policy toward the Ottomans led the empire to join World War I on the German side. Neither Enver nor Djemal were skilled military leaders; Enver led a series of disastrous expeditions against Russia in the Caucasus, while Djemal decisively failed to conquer Egypt in 1915.

After the Ottoman empire's defeat in World War I, Enver, Talaat, and Djemal fled to Berlin, and CUP was removed from power. Although the Young Turk era was over, their influence did not end. After the publication of the punitive Treaty of Sevres in 1920, former CUP member

➤ ATATURK

Mustafa Kemal (1881–1938) was the founder of modern Turkey. Born in modern Thessaloniki, he became an army officer and a member of the Committee for Union and Progress. His first great achievement was at Gallipoli (1915), when his forces shocked the world by defeating the British. After the partition of the Ottoman empire (1920), Kemal raised a national army and won Turkish independence in a campaign culminating in the tragic sack of the cosmopolitan city of Smyrna (now Izmir), which included violence against its large Christian population of Greeks and destruction of many of its buildings in 1922. He forged a nationalist and secular state, earning for himself the title Ataturk ("Father of the Turks"), and reestablished relations with Britain and France while following a policy of strict neutrality. Kemal's efforts to forge a secular Turkey remain a legacy to this day.

—Jesse Ravage

Mustafa Kemal fled to Anatolia and raised the banner of a new secular Turkish state.

—Jesse Ravage

Bibliography

- Cleveland, William L. *A History of the Modern Middle East*. Boulder, CO: Westview, 2004.
- Finkel, Caroline. *Osman's Dream: The History of the Ottoman Empire*. New York: Basic Books, 2005.
- Nettleton-Fisher, Sydney, and William Ochsenwald. *The Middle East: A History*. New York: McGraw-Hill, 1997.

The Bolshevik Revolution

The revolution of February 1917, which overthrew the Romanov dynasty in the Russian Empire, reflected the deep-seated animosity of many groups in Russia against the old dynastic order, especially its conduct during World War I. However, these groups did not agree on what type of government should take its place. This was reflected in the system of dual power that sprang up in the first days of the revolution. On the one side, members of the Duma, a quasi-parliamentary body composed primarily of representatives of

the privileged classes such as nobility, professionals, and urban middle classes, created the Provisional Government that was dominated, at least initially, by moderate liberals. On the other side, the lower classes, principally industrial workers, soldiers, and peasants, set up local grassroots organizations or councils known as soviets to represent and protect their interests. The existence of the soviets reflected the distrust that the masses felt for the parties and politicians in the Provisional Government.

The policies of the Provisional Government over the next few months only exacerbated the distrust of large numbers of soldiers, peasants, and workers toward the government and ultimately led many of them to oppose it actively. The most fateful policy, of course, was the decision to remain in the war, which meant that the suffering of the preceding years would continue. While not necessarily opposed to the war in principle, many among the lower classes hoped that the new government would conduct it more effectively and minimize, or at least equally distribute, the burdens. The abject failure of the government's new offensive in June–July 1917 resulted in a massive loss of faith in the government among soldiers. Tens of thousands of soldiers began to desert every week, while those who remained were often distrustful of officers and openly disobedient.

Similarly, the government's decision to delay any significant land reform until after the end of the war produced widespread anger and disobedience in the countryside. Moreover, as it became clear that the government had few reliable troops to deploy against them, large numbers of peasants began to seize the land, crops, livestock, and property from private estates. While peasant disturbances began as early as May 1917 in some areas, they became increasingly widespread and violent as summer gave way to autumn.

Last but not least, the government proved unable to alleviate, let alone improve, the living and working conditions of most urban workers. As railroads and other transportation infrastructure broke down, many factories began to shut down or reduce production because of shortages of fuel and raw materials, threatening more and more workers with unemployment. Efforts by workers to protect their interests through

strikes or workers' control were often met by lockouts. The brief era of goodwill during the spring of 1917 gave way to a growing spirit of class war in the summer and autumn.

Although the political composition of the Provisional Government underwent a number of changes in the spring and summer of 1917, as moderate socialists joined in an effort to make it more broadly representative, this did little to help its popularity. Moderate socialists fatally underestimated the forces radicalizing lower-class opinion and the impatience of soldiers, workers, and peasants for change. Indeed, it was only the Bolsheviks who captured the mood of the masses and were able to channel it for their own purposes.

Much of the credit for this, of course, was due to the leadership of Vladimir Lenin, who pushed other Bolshevik leaders to pursue a revolutionary course. Shortly after returning from exile, he announced his famous April Theses and was able to get these adopted as official party policy. The April Theses rejected any support for or cooperation with the Provisional Government, calling instead for "Peace, Land, Bread" and "All Power to the Soviets." Such slogans struck a responsive chord with the increasingly militant masses, and by the summer of 1917 Bolshevik support in local soviets, factory councils, and soldiers committees was increasingly evident, while party membership had begun to grow rapidly. Although precise figures are sketchy, reliable estimates suggest that total party membership rose from about 10,000 in February to more than 100,000 in July and perhaps more than 250,000 by October.

The so-called July Days revealed the success of the Bolsheviks in tapping into the mood of the masses. On July 16 hundreds of thousands of soldiers, sailors, and workers, many of them chanting or carrying banners with Bolshevik slogans, took to the streets in Petrograd demanding a new government based on the soviets. After two days, though, the protests collapsed, and in the subsequent weeks the government moved to suppress both popular militancy and the Bolsheviks. However, the apparent collapse of the Radical Left inspired antisocialist groups to mobilize and support efforts to create a military dictatorship that would restore law and order. These efforts

culminated in the Kornilov coup in late August when the new commander of the army, General Lavr Georgiyevich Kornilov (1870–1918), sent troops to impose martial law in Petrograd (St. Petersburg). The Bolsheviks played a crucial role in mobilizing and organizing armed opposition to the coup.

The abortive coup helped revive the Bolshevik fortunes after the setback of the July Days. In particular, the coup solidified the Bolsheviks' image as the most dedicated defenders of the revolution and helped them secure control of the soviets in Petrograd, Moscow, and several other large cities in September and early October. Convinced that the time was now ripe, Lenin pressed the party's Central Committee to seize power as soon as it became practical. After considerable hesitation and debate, in early October the leadership directed Leon Trotsky (1879–1940), the new chairman of the Petrograd Soviet, to organize a seizure of power that would coincide with the meeting of the Second All-Russian Congress of Soviets in whose name the takeover was to take place. The actual revolt occurred on October 25 and proceeded with little bloodshed, a testimony to the extent to which the Provisional Government had lost legitimacy and the willingness, at least temporarily, of many lower-class Russians to support the Bolsheviks.

—Craig Patton

Bibliography

- Fitzpatrick, Sheila. *The Russian Revolution*. 2nd ed. New York: Oxford University Press, 2001.
- Lincoln, W. Bruce. *Passage through Armageddon: The Russians in War and Revolution, 1914–1918*. New York: Knopf, 1990.
- Thompson, John M. *Revolutionary Russia*. 2nd ed. Long Grove, IL: Waveland, 1996.
- Wade, Rex. *The Bolshevik Revolution and Russian Civil War*. Westport, CT: Greenwood, 2000.

Eire—The Republic of Ireland

Eire, also known as the Republic of Ireland, began the twentieth century as part of the British empire. In the late nineteenth century, anti-British sentiment and Irish nationalism had led to a renewal of cultural and nationalist rhetoric.

Ireland's move toward freedom from England became militarized with the creation in 1913 of two nationalist armies: the Irish Volunteers and the Irish Citizen Army.

The Irish Volunteers, originally under the leadership of John Redmond, divided over the issue of World War I. Redmond committed the Irish Volunteers to fight in the war in the belief that England would grant Ireland political freedom if Ireland fought for Britain in the conflict. However, many nationalists of the Irish Volunteers refused to fight due to anti-English sentiment and their desire to remain outside of what they perceived to be an imperialist cause. For this reason, many British officials perceived the Irish to be on Germany's side, although they were actually neutral.

Hoping to catch the British off guard, Nationalists launched a rising (rebellion) during Easter Week of 1916. While Dublin was the epicenter of the Easter Rising, several other counties also witnessed rebellions. The English overreacted to the rising, overtook the city with brute force, and executed the leaders. While some countries, particularly the United States, had groups that sympathized with the Irish cause, other nations refused to interfere on Ireland's behalf, fearing that doing so might destroy alliances with England.

After the Easter Rising, Irish nationalists used the outrageous prison conditions and the nature of the executions as nationalist propaganda, gaining strength for their cause within the country as well as abroad. Nationalism in Ireland finally led to a guerrilla war fought against English authorities in Ireland. This war, which is referred to as the Anglo-Irish War or the Irish War of Independence, took place during 1919–1921. The war grew out of Irish nationalist propagandists' activities in the aftermath of the Easter Rising, which included pamphlet campaigns and international speaking tours. These activities slowly led into strikes against British authorities and the execution of intelligence agents who worked for Dublin Castle. A critical event was Bloody Sunday on November 21, 1920, when Michael Collins ordered the assassination of British agents in Dublin, successfully killed 14, and triggered a reprisal in which British soldiers killed numerous participants at a football match, including one player.

➤ MICHAEL COLLINS

Michael Collins was an Irish republican and a patriarch of the Irish Free State. Born in 1890 in County Cork, Collins became political after moving to London in 1906 where he joined a secret society known as the Irish Republican Brotherhood. From that point on he devoted himself to Irish independence. In 1916 he returned to his homeland only to be imprisoned for his participation in the Easter Rebellion. Upon his release he rose to prominence as head of the military arm of Sinn Féin and director of intelligence for the Irish Republican Army. In December 1921 Collins accepted a treaty with the British government that, while falling short of outright independence, was viewed as a step toward a free Ireland. The signing of the treaty split Irish republicans into two camps and sparked the Irish Civil War. Collins and the government of the Irish Free State were pitted against republican rebels led by Eamon de Valera, a former compatriot of Collins and fellow leader of Sinn Féin. Collins was assassinated in an ambush on August 22, 1922.



Michael Collins acted on behalf of Irish independence as the military leader of Sinn Féin, but it was as Director of Intelligence of the Irish Republican Army that he became famous. (Library of Congress)

Bibliography

“Michael Collins,” *World History: The Modern Era* (Santa Barbara, CA: ABC-CLIO), <http://www.worldhistory.abc-clio.com>.

The British responded to Irish disobedience with harsh measures, most notably the involvement of its paramilitary troops/police force, the Black and Tans. Between 1920 and 1921 these troops would burn Irish homes (and the city of Cork), shoot citizens and guerrillas alike, and torture women and men whom they believed held the slightest sympathy with the Irish cause. The Irish Republican Army (IRA), formerly the Irish Volunteers, under the leadership of Collins took drastic measures to level the battlefield. IRA members were vastly outnumbered, and Collins realized that the only way to beat the British was to begin ambushing and killing British intelligence agents and other leaders, one by one. Many of these men would be shot in their homes, as would many of the IRA men. In the end Collins forced the British into a stalemate, and they signed the Anglo-Irish Treaty in December 1921.

The final terms of the Anglo-Irish Treaty gave Ireland dominion status, very similar to that of Canada. However, the treaty also allowed Northern Ireland to opt out of this arrangement

and remain directly under British control; six of Northern Ireland's nine counties voted to do this (although these acts only passed by slender margins, which led to great violence in the northern countries). Another grievance of many Irish nationalists with the treaty was its requirement that all members of the Dail Eireann (Irish Parliament) take an oath of allegiance to Great Britain.

The heated debates surrounding the treaty led to the factioning of the IRA into Pro-Treaty and Anti-Treaty sides and also led to the Irish Civil War. In 1922 and 1923 Eamon de Valera led the Anti-Treaty IRA against Collins and the troops of the new Irish Free State. The Free State's methods for crushing the IRA's resistance were brutal due to fears that rebellion in the early years of the new nation would cause it to falter, making the British reassume direct control over the country. Collins was killed in 1922 during these skirmishes.

During the period 1923 to 1949 the Irish Free State continued to be wrecked by discon-

tent and sporadic acts of violence. There were still many Irish who wished for complete Irish independence, and a great deal of infighting took place between Irish politicians over issues of the state. De Valera, who had led the Anti Free State IRA in the Irish Civil War, came into power in the Free State in 1932. He became heavily invested in restoring the Irishness of Ireland and issued a new constitution for Ireland in 1937. Through this new constitution, the name of the nation was changed to Eire, or Ireland. However, de Valera refused to ask for Irish independence from the British commonwealth.

During World War II, Eire was the only British commonwealth nation to remain neutral throughout the entire conflict due to great political and nationalist divides present in the country at the time. In fact, Ireland avoided direct references to “World War II,” instead calling it “The Emergency.” Even after Dublin was bombed by German forces in 1941 (supposedly by accident, although it has been claimed that this was really a warning not to become involved), neutrality was maintained. Northern Ireland, however, as part of the United Kingdom, was heavily involved in the war.

Following the war, many nations began to gain their freedom from imperial governments. In 1948 when John A. Costello defeated de Valera in the Irish elections, the Irish government demanded its complete independence. On April 18, 1949, Ireland withdrew from the British commonwealth and since then has enjoyed its status as a republic. This status has kept the Irish Republic relatively free of the fighting experienced in the northern counties.

—Christi McCallum

Bibliography

- Bew, Paul. *Ideology and the Irish Question: Ulster Unionism and Irish Nationalism, 1912–1916*. Oxford, UK: Oxford University Press, 1994.
- Brown, Terence. *Ireland: A Social and Cultural History, 1922 to the Present*. Ithaca, NY: Cornell University Press, 1985.
- Connolly, James. *Collected Works*, Vol. 1, edited by Michael O’Riordan. Dublin: New Book Publications, 1987.
- Hopkinson, Michael. *The Irish War of Independence*. Dublin: Gill and MacMillan, 2004.

The Mexican Revolution (1910–1920)

The Mexican Revolution (1910–1920) ravaged the nation, costing an estimated 1 million lives, more than 6 percent of the population, and setting the country back economically for decades. It was the consequence of the growing social and political unrest that accompanied the dictatorial regime during 1876–1911 of Porfirio Díaz (1830–1915).

Díaz’s refusal to allow free elections in the 1910 election, although he had stated that Mexico was ready for them in an 1908 interview, sparked the beginnings of the revolution. Díaz arrested his chief political opponent, Francisco Madero, just before the election, ensuring that Díaz would continue to rule the country for another presidential term. Although Madero was released following the election, the damage had been done. Madero and his followers launched their revolution in October 1910 with the issuance of the *Plan de San Luis de Potosí* (Plan of St. Louis of Potosí) manifesto calling for the violent overthrow of the Díaz regime. Díaz attempted to resist, but faced with pressure from revolutionaries in the south (led by Emiliano Zapata) and in the north (led by Francisco Madero, Pascual Orozco, and Pancho Villa), the Porfiriato (reign of Porfirio Díaz) came to an end, and the aged dictator fled to exile in France.

Although Madero assumed the presidency, the country was far from unified. Madero, while more progressive than Díaz, was far from being a revolutionary. Madero was unable to prevent Orozco from turning against him in the state of Chihuahua, and the more radical peasant movements led by Zapata distrusted Madero, who had failed to deliver on his promise of land reform. Madero’s forces, commanded by Victoriano C. Huerta, defeated Orozco at Rellano and Ciudad Juárez and relentlessly drove him across Chihuahua.

Madero also faced opposition from the conservative elites who yearned to stop even his minor reforms. General Bernardo Reyes and General Félix Díaz, the nephew of the fallen dictator, headed the attempts to restore conservative rule in the country. After Reyes was defeated in the 1911 election, he and Félix Díaz each separately attempted to foment a revolt. After both attempts

➤ PANCHO VILLA'S NEW MEXICO RAID

In January 1916 an officer in the service of Francisco Pancho Villa stopped a mining train in Santa Isabel, Chihuahua, and 17 American mining engineers on board were summarily shot on the spot. Villa subsequently marched his troops to the U.S. border, just outside Columbus, New Mexico, and on March 4, 1916, in the predawn hours, approximately 400 mounted Mexicans crossed the border and began an assault on the town. One detachment struck the town itself, while another sought to eliminate the threat posed by the U.S. military garrison there. (The Mexicans mistakenly believed that the town was held by about 50 U.S. soldiers, when in fact around 600 were present.) Although surprised, the U.S. troops quickly set up their machine-gun units and began to rake the Villista troops with withering fire. Villa's detachment in the town indiscriminately shot civilians and set fire to buildings until being forced to retreat by the garrison troops arriving in the town. Three hours after the assault began, Villa's troops withdrew in the face of superior American firepower. Seventeen Americans, most of them civilians, had been killed in the fight, but more than 100 of Villa's men were killed, or more than 25 percent of his invading force.

—Gerrit Dirkmaat



(Library of Congress)

failed and the men were jailed, the determination was made to lead a counterrevolution by the use of a coup. They enlisted the support of Madero's victorious general, Huerta, who turned on Madero and had him brutally murdered in 1912. Huerta assumed command of the country himself, much to the pleasure of the conservative elements both in and out of the country.

Huerta quickly sought to consolidate his power, strengthen the federal military, and quash any rivals. Kidnappings, murders, and even the dissolution of the Mexican Congress followed. Although most foreign governments quickly recognized the regime that pledged to honor foreign property rights, U.S. president Woodrow Wilson refused to do so. Wilson wanted to aid the forces fighting against the Huerta government and negotiated with the leader of the anti-Huerta forces, Venustiano Carranza. The nationalistic Carranza

shunned any such alliance with the United States, but Wilson nonetheless occupied Veracruz and placed an arms embargo on the Huerta regime while still allowing arms shipments to cross the northern border, fueling the efforts of men such as Pancho Villa.

The Huerta government soon found itself caught in a pincer movement. Zapata was advancing from the south, General Alvaro Obregón was bearing down on Mexico City in Jalisco from the west, Americans had cut off his arms imports and custom revenues in the port city of Veracruz to the east, and Pancho Villa had captured the last federal stronghold in the north, Zacatecas, in an overwhelming victory. Sensing that the end was near, Huerta abandoned the capital and exiled himself to Spain, leaving the revolutionaries to haggle over who should now rightly rule the country. Zapata and Villa both represented the

more revolutionary ideals, such as land redistribution, but Obregón and Carranza had much more political savvy as well as greater ties to the middle class. While Zapata and Villa were powerful regional revolutionaries, neither man seemed able to forge a national coalition. For short periods of time Carranza, Villa, and Zapata each occupied Mexico City with their forces. Many thought that Villa's larger force and popular appeal would win the day, but he failed to press home his advantage after Carranza and Obregón fled to Veracruz, having been recently abandoned by the occupying American forces. The shrewd Carranza led the Constitutionalist forces, a broad-based national coalition of anti-Huerta elements, in efforts to consolidate power nationally, while Obregón marched northward for a final confrontation with Villa in early 1915.

The showdown that took place at Celaya as well as the successive battles that followed routed Villa and gave de facto control of the government to Carranza. Villa underestimated the accomplished tactician and strategist Obregón and, on several occasions, imprudently charged the lines of the Constitutionalist forces. The U.S. government had allowed one Constitutionalist general, Plutarco Elías Calles, to reinforce with troops and supplies that crossed U.S. territory, leading to Villa's defeat at Agua Prieta. Reacting to the apparent U.S. support of the Carranza government, Villa raided Columbus, New Mexico. Wilson dispatched U.S. troops to Mexico to punish Villa; however, the Americans left with little success by January 1917 in the face of impending U.S. intervention in Europe.

Carranza and his supporters drafted a new Constitution in 1917, one that gave the government power to displace foreign economic interests as it saw fit. Carranza, however, did not deliver on the promise of land redistribution, making only a few localized efforts to give the appearance of such agrarian reforms. Obregón, who was the real hero of Mexico for his famous battlefield victories, decided to face off against the Carranza regime and his old ally in the 1920 presidential campaign. Carranza attempted to strong arm the mounting opposition and, seeing the unstoppable support for Obregón, fled to Veracruz with hopes of again establishing a power base there with which to contend against Obregón, much as he

had done against Villa in 1915. Unfortunately for Carranza, he was intercepted by forces loyal to Felix Díaz en route and was killed as he slept.

Obregón now assumed almost total control of the country, giving it more stability than it had enjoyed for almost a decade. He judiciously instituted measured land distribution in the areas that were most in need of it, but he did not turn wholesale against the upper classes as some revolutionaries had hoped. He sought to create a delicate balance between the resources and political influence needed from the upper classes and the popular support vital from the lower classes. Zapata had already been assassinated by Constitutionalist forces in 1919, and Villa was forced into retirement. Villa's overwhelming popularity was considered just too dangerous to the Obregón government, and his lieutenants conspired to murder the volatile Villa in an ambush in 1923.

Although there was still instability following the Obregón presidency (1920–1924) in the form of local revolts and the Cristero Rebellion (1926) that pitted pro-Catholic forces against the rising tide of anticlerical sentiment and enactments coming from the secularizing federal government, the most unstable and bloody times of the Mexican Revolution had come to an end with Obregón's ascendancy. The Mexican Revolution had perhaps fallen short of the goals of many who were seeking a completely transformed state, but it had made an indelible imprint on the psyche of average Mexicans. In the end, many see the Mexican Revolution as, at best, an incomplete movement that left the majority of the Mexican lower classes still deeply divided from the elite upper class.

—Gerrit Dirkmaat

Bibliography

- Camín, Hectór Aguilar, and Lorenzo Meyer. *In the Shadow of the Mexican Revolution: Contemporary Mexican History, 1910–1989*. Translated by Luis Alberto Fierro. Austin: University of Texas Press, 1993.
- Gilly, Adolfo. *The Mexican Revolution*. Translated by Patrick Camiller. New York: New Press, 2005.
- Gonzales, Michael J. *The Mexican Revolution, 1910–1940*. Albuquerque: University of New Mexico Press, 2002.
- Katz, Friedrich. *The Life and Times of Pancho Villa*. Stanford, CA: University of Stanford Press, 1998.

■ Introduction: International Conflict

During the first half of the twentieth century, the international tensions of the nineteenth century erupted in major warfare. Two of the wars were sufficiently grand in scale to have earned the designation “world wars,” but smaller conflicts broke out on nearly every continent. The Japanese continued their expansion on the East Asian mainland initiated in the Sino-Japanese War (1894–1895) through a war with Russia (1904–1905) over possession of Manchuria and Korea. Other conflicts included a second Boer War in South Africa (1899–1902), and the Balkan Wars (1912–1913). Growing nationalistic sentiment, anti-imperialism, idealized modernism, and industrialism contributed to and connected many of the smaller international conflicts, even though the combatant countries had achieved various levels of industrialization, economic strength, and international power.

Nationalism grew throughout the nineteenth century and peaked by the mid-twentieth century. At the same time, Western imperialism waned. While not newsworthy in the Americas, imperialism’s decline fostered change in new areas, such as Africa and Asia. Ethnic identity unified the masses against the ruling elite and served as a foundation for aggressive nationalism and anti-imperialism. Often, burgeoning nations sought to establish themselves in positions of regional authority in place of recently overthrown Western powers, paradoxically making them anti-imperialistic even as they created their own empires or spheres of influence. Rapid industrialization became a popular method for achieving these goals, as doing so stimulated the economy and promoted nationalism.

Public opinion also played a major role in international conflicts. All combatant countries had to keep public support for war as strong as possible in order to maintain interest in and funding for their war effort. Consequently, massive propaganda campaigns were used to ensure support. Support lessened as wars dragged on without conclusive battles, and public desire to continue fighting flagged, causing public relations crises and rebellion in some cases.

Warfare changed dramatically during the early twentieth century as well. Technological advances rendered traditional tactics and strategies ineffective and inefficient. Firearms became more accurate, durable, and reliable while simultaneously increasing range and rates of fire. Mechanization increased the belligerents’ ability to strike quickly and effectively, thus ending the days of pitched battles of block formations in open fields. The forces most able to maneuver quickly with discipline often won even when facing larger forces using traditional frontal or predictable assaults. Running battles and guerrilla warfare also favored the less technologically-advanced nations in war because they allowed troops to attack at will and rarely give the larger forces a chance to react and mount a counterattack. With such elusive tactics, large, decisive battles became rarer, thus drawing the war effort well beyond the interest of the citizens and the economic power of the government to maintain. International conflicts during this time increased nationalism and political tension while fundamentally altering warfare but resolving little else.

—*Ian Patterson*

Balkan Wars (1912–1913)

The Balkan Wars were two bloody conflicts in southeastern Europe that occurred just prior to World War I. During the nineteenth century, nation-states in southeastern Europe emerged from the weakened structure of the Ottoman empire. These states, including Bulgaria, Greece, Montenegro, and Serbia, all harbored irredentist aspirations against the Ottomans. Many of these aspirations overlapped, especially in Macedonia. For some time, these rivalries precluded the formation of a Balkan alliance. The Young Turk revolution in 1908 in the Ottoman empire and its objective of an Ottoman revival, however, engendered closer cooperation among these Balkan states. An opportunity for the realization of their nationalist objectives arose when the weakness of the Ottomans became apparent during

BALKAN WARS, 1912-1913



the Italo-Turkish War of 1911-1912. As a result of this conflict, the Turks were forced to relinquish territory to Italy. With Russian support, Bulgaria and Serbia signed an alliance in March 1912 that contained provisions for a rough division of Ottoman territories, including a partition of Macedonia into a Bulgarian zone and a contested zone to be arbitrated by the Russian tsar. Bulgaria and Serbia then signed bilateral agreements during the spring and summer of 1912 with Greece and Montenegro, creating the Balkan League.

The fighting began on October 8 between Montenegro and the Ottoman empire. Bulgaria, Greece, and Serbia joined in the war ten days later. Each Balkan ally confronted the common

enemy separately. The most important theater was in Thrace, where a strong Bulgarian offensive overcame Ottoman resistance at Lozengrad and at a massive battle that raged from Buni Hisar to Lyule Burgas. At the same time, the Bulgarians surrounded and besieged the Ottomans at Adrianople. The Bulgarian offensive thrust the Ottomans back to the final defensive positions at Chataldzha, about 20 miles (32 kilometers) outside of Istanbul. Finally, on November 16-17 Ottoman forces rallied to defend their capital against a Bulgarian attack on the Chataldzha lines. Meanwhile, smaller Bulgarian units proceeded into western Thrace and into Salonika.

Elsewhere the Greek Army advanced in two directions against slight opposition. The thrust

► RADOMIR PUTNIK (1847–1917)

The Balkan Wars provided opportunities for some military leaders to develop skills that they later employed during World War I. Among these were Radko Dimitriev, a Bulgarian general who commanded Bulgarians at Lyule Burgas/Buni Hisar and Chataldzha during the Balkan Wars and led Russian armies on the eastern front in World War I, and Mustapha Kemal, an Ottoman lieutenant colonel who defended Gallipoli against the Bulgarians in the Balkan Wars and again against the British during World War I. Prominent among such Balkan War veterans was Serbian Field Marshall (Vojvoda) Radomir Putnik. Born in Kraguevac, Serbia, on January 24, 1847, he participated in fighting in 1876 against the Ottoman empire and in 1885 against Bulgaria. By the time of the Balkan Wars, he was Serbian Army chief of staff. He led the Serbian Army to victories over the Ottomans at Kumanovo in October 1912 and against the Bulgarians at Bregalnitsa in July 1913. Field Marshall Putnik directed the successful Serbian defense against three Austro-Hungarian attacks in the autumn of 1914. An invasion one year later by combined Austrian, Bulgarian, and German armies forced an epic Serbian retreat across the Albanian mountains. By the time Putnik reached the Adriatic Coast, he was seriously ill. Soon afterward he was relieved of command. He died in Nice, France, on May 17, 1917.

—Richard C. Hall



(Library of Congress)

moved into Epirus (in northwestern Greece) and besieged the city of Janina. The northeasterly push overran Thessaly and entered Salonika on November 8, only a day ahead of the Bulgarian unit moving south. An uneasy condominium ensued in that city. The Greek Navy held the Ottoman fleet at bay and seized the Aegean Islands of Limnos, Mitylene, and Chios. One section of the Montenegrin Army advanced into the Sandjak of Novibazar, while most of the rest of the Montenegrins besieged the northern Albanian town of Scutari (Shkodër). The main part of the Serbian Army defeated the Ottomans at Kumanovo in

northern Macedonia and then proceeded to take most of the rest of Macedonia. Other Serbian units occupied Kosovo. By the time the warring parties agreed to an armistice on December 3, the only territories in Europe remaining to the Ottomans were the besieged cities of Adrianople, Janina, and Scutari; the Gallipoli peninsula; and that small part of eastern Thrace behind the Chataldzha lines.

While the Balkan allies and the Ottomans assembled in London on December 16 to negotiate a peace settlement, the ambassadors of the Great Powers convened nearby to direct the course of

the peace settlement and to protect their own interests. This ambassadors' conference, on the insistence of Austria-Hungary and Italy, recognized the independence of an Albanian state that some Albanian notables had proclaimed in Vlorë on November 28. This state blocked Serbian and Montenegrin claims to the eastern shore of the Adriatic Sea. The Austrians demanded that Serbian troops evacuate those portions of northern Albania occupied that autumn. The talks between the Balkan allies and the Ottomans soon stalled, mainly over the issue of Adrianople. On February 3, 1913, hostilities resumed.

On March 6 Janina fell to the Greeks. On March 26 the Bulgarians, with Serbian help, took Adrianople. The Montenegrins and assisting Serbian units bogged down around Scutari. Only on April 23, after the departure of the Serbs under Great Power pressure, did the Montenegrins succeed in entering the city. Nevertheless, the Great Powers refused to sanction a Montenegrin occupation of Scutari because the London ambassadors' conference had assigned it to the new Albanian state. Threats and a show of force, together with the promise of generous subsidies, caused the Montenegrins to evacuate their prize. On May 30, 1913, the Balkan allies and the Ottomans signed a peace treaty in London to end the First Balkan War.

By then the loose Balkan alliance was disintegrating. The Serbs sought compensation for Albania in Macedonian areas occupied by Serbia but assigned to Bulgaria by the alliance treaty. The Bulgarians and Greeks skirmished over Macedonia and Salonika. On May 5, 1913, the Greeks and Serbs signed an agreement directed against Bulgaria. A feeble Russian attempt at arbitration in June failed. On the night of June 29–30 the Bulgarians launched probing attacks against Serbian positions in Macedonia. The Greeks and Serbs utilized these attacks to implement their alliance. Greek and Serbian counterattacks forced the Bulgarian troops back. In mid-July, Romanian and Ottoman troops invaded Bulgaria. The Romanians objected to the establishment of a strong Bulgaria on their southern frontier and sought compensation in the Danubian town of Silistra and in southern Dobrudzha. The Ottomans sought to recover Adrianople. The Bulgarians found themselves attacked on all

sides. With no aid forthcoming from any Great Power, the Bulgarians sought terms. In the Treaty of Bucharest (August 10, 1913) with Greece, Montenegro, and Serbia and the Treaty of Constantinople (September 30, 1913) with the Ottoman empire, the Bulgarians acknowledged their total defeat in the Second Balkan War.

The Balkan Wars left a legacy of frustration for the Bulgarians and Ottomans, who both sought redress for their defeats on the side of the Central Powers in World War I. The wars also imparted a sense of inflated success among the Greeks, Romanians, and Serbs. Less than a year after the conclusion of the Treaty of Bucharest, war again erupted in southeastern Europe. During the next five years, all of the participants in the Balkan Wars would become involved in further disastrous and costly conflicts.

—Richard C. Hall

Bibliography

- Hall, Richard C. *The Balkan Wars, 1912–1913: Prelude to the First World War*. London: Routledge, 2000.
- Helmreich, E. C. *The Diplomacy of the Balkan Wars, 1912–1913*. Cambridge, MA: Harvard University Press, 1938.
- International Commission to Inquire into the Causes and Conduct of the Balkan Wars. *The Other Balkan Wars*. Washington, DC: Carnegie Endowment, 1993.
- Kiraly, Bela K., and Dimitrije Djordjevic, eds. Boulder, CO: Social Science Monographs, 1987.

The Chaco War (1932–1935)

The Chaco War, fought between the South American states of Bolivia and Paraguay from 1932 to 1935, ranks behind the U.S. Civil War as the second-bloodiest war in the modern history of the Western Hemisphere. The Chaco War was fought for possession of the region known as the Gran Chaco, which covers about 100,000 square miles (260,000 square kilometers) and is a vast forested wasteland with little water and no resources that today comprises most of western Paraguay and part of eastern Bolivia. Although Paraguay ostensibly won the war, both states suffered heavy loss of life and were further impoverished as a result of the conflict.

Paraguay's population in the late 1920s has been estimated at approximately one million. A Spanish-speaking elite governed the country and ruled over an indigenous population of Guaraní Indians. The economy of the country was based primarily on subsistence agriculture. In the War of the Triple Alliance (1865–1870) against Argentina, Brazil, and Uruguay, Paraguay lost huge swaths of territory and almost its entire male population. As a consequence, Paraguay became a country surrounded by hostile neighbors and constantly on the verge of extinction.

Bolivia, on the other hand, had a much larger population of three million. The nation was also primarily indigenous peoples ruled by a Spanish-speaking elite. Subsistence agriculture predominated in the nation, although tin mining had proved an important source of revenue in the 1920s. The worldwide economic depression of the 1930s led to a fall in tin prices, and by 1932 Bolivia was deeply in debt and experiencing declining living standards. Prior to the Chaco War, Bolivia had lost territory through unsuccessful conflicts, suffering defeats by Chile in 1884 and Brazil in 1903. By 1932 the president of Bolivia, Daniel Salamanca, was determined to gain the Gran Chaco for Bolivia.

The Gran Chaco region is best described as a forested wasteland that blends into desert on the western edge. The region had virtually nothing in terms of economic resources, and water was very scarce. During the course of the nineteenth and early twentieth centuries, the border between Bolivia and Paraguay remained rather undefined. The Paraguayans probably had the stronger claim to the region and had settled Canadian Mennonites in the Chaco in the 1920s to strengthen their claim. A theory widely circulated in the 1930s held that the war had been provoked by the American company Standard Oil, which had allegedly encouraged Bolivian aggression in the belief that vast oil reserves could be found in the Gran Chaco, but historians have since discredited that theory.

Border clashes in the late 1920s and early 1930s culminated in full-scale combat on June 15, 1932, when the Bolivians launched an offensive. The war initially proved wildly popular in both countries, with vast crowds at train stations cheering troops departing for the front.

Both governments undertook propaganda campaigns and public fund-raising drives. Bolivia's Salamanca used the war as an opportunity to move against his political opponents by declaring a state of emergency and imprisoning many dissidents, especially members of left-wing groups and trade unions.

The Bolivian offensive quickly stalled, and the Paraguayans moved over to the attack. The Paraguayans were led by General José Félix Estigarribia, a highly competent officer who understood the terrain of the Chaco. At the same time, the Bolivian Army was led by General Hans Kundt, an inept German émigré whose tactics consisted simply of hurling his troops frontally at prepared Paraguayan defensive positions. The Bolivians advanced in predictable patterns down roads that could be easily ambushed by the enemy. By contrast, Estigarribia stressed mobility with flanking and envelopment tactics and repeatedly surrounded the Bolivian units. He concentrated on capturing all the water sources in the Chaco, a strategy that inflicted much hardship on the Bolivians. The Bolivians troops, accustomed to higher altitudes, also had great difficulty acclimatizing to the low, swampy terrain of the Chaco. Many of the Bolivian soldiers could not understand why they were fighting for such a strange and worthless territory. Paraguayans, by contrast, saw the war as a struggle for national survival and had higher morale. However, troops on both sides suffered from disease, starvation, and water shortages.

By late 1934 the Paraguayans controlled all the Chaco, and their armies were ready to advance into Bolivia itself. By this time, the Bolivians had begun to rally. General Kundt had been removed from command in December 1933, and President Salamanca was forced from office by the army in late November 1934. The Bolivians began to win some victories by April 1935, in part due to the fact that the Paraguayans were by this stage overextended and tired. However, the Bolivians realized that they were unlikely to regain the Chaco, either diplomatically or militarily. At the same time, Paraguay was running out of food, supplies, and ammunition and was on the verge of bankruptcy. As such, the two countries signed a cease-fire on June 12, 1935, with the war having lasted almost exactly three years.

It took until July 21, 1938, to sign the final peace treaty, which left most of the Gran Chaco in Paraguayan territory. Although the League of Nations and neighboring states in South America had made diplomatic efforts to settle the war while it was in progress, neither side had a motive to end the war until mutual exhaustion set in.

The Chaco War cost an estimated 100,000 lives, about 60 percent of them Bolivian. Bolivia had mobilized 250,000 troops during the war, while Paraguay had mobilized 140,000. Both states emerged from the war exhausted and debt ridden. Postwar recrimination in Bolivia led to much criticism of the governing elite, culminating in a revolution in 1952 that brought in modest democratic reforms.

—Paul W. Doerr

Bibliography

- Farcau, Bruce. *The Chaco War: Bolivia and Paraguay, 1932–1935*. Westport, CT: Praeger, 1996.
- Rout, Leslie. *Politics of the Chaco Peace Conference, 1935–1939*. Austin: University of Texas Press, 1970.
- Wood, Bruce. *The United States and Latin American Wars*. New York: Columbia University Press, 1966.
- Zook, David. *The Conduct of the Chaco War*. New York: Bookman, 1960.

Second Sino-Japanese War (1937–1945)

The Second Sino-Japanese War began over a minor altercation in North China on July 7, 1937, and continued until Japan's surrender on August 14, 1945. The Marco Polo Bridge incident differed from previous altercations between Nationalist China and imperial Japan because of Jiang Jieshi's (Chiang Kai-shek, 1887–1975) commitment to resisting Japanese military aggression. From North China, the conflict expanded to a full-fledged war between Chinese Nationalist and Communist forces against the Japanese army and navy and puppet governments. The conclusion of the war witnessed a weakened Nationalist China susceptible to a takeover by the Chinese Communist Party (CCP) and the collapse of the Japanese empire.

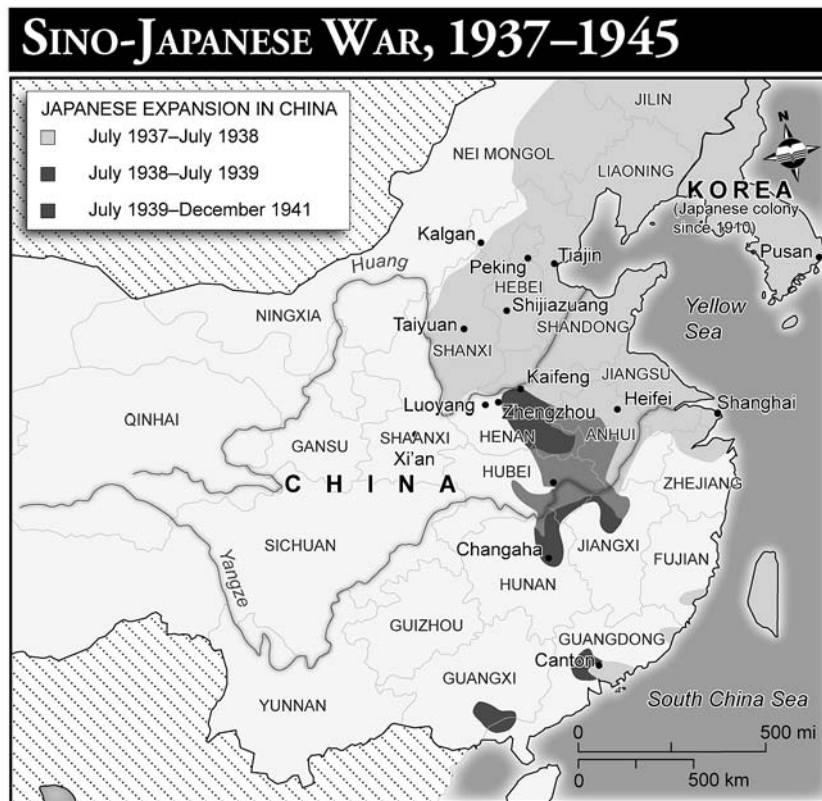
Japanese militarists gained their first foothold on Chinese territory in 1931 when the Kwantung Army occupied Manchuria and es-

tablished the puppet state of Manchukuo. Not satisfied, the Japanese army continued to press China and succeeded in carving out two autonomous regions in North China under Japanese protection. During this period, Jiang's Nationalist government pursued a strategy of appeasement toward Japan's militarists while conducting bandit-extermination campaigns against the CCP. Jiang fervently believed that the communists presented a greater threat to China. He declared that the Japanese were a disease of the skin but that the communists were a disease of the heart.

The first phase of the war began at the Marco Polo Bridge and ended with the fall of Wuhan in October 1938. By July 1937 Jiang shifted to an uneasy alliance with the CCP and pursued a policy of resistance to Japanese aggression. In this context, he rushed Nationalist forces to North China and ordered local commanders to resist, escalating the conflict and forcing the Japanese army to reinforce its units. In September, Jiang expanded the scope of the conflict when he committed his best German-trained divisions to fighting the Japanese in Shanghai, with its international concessions. Thus, Jiang demonstrated his commitment to resisting Japan anywhere in China and sought international recognition and support for his efforts. Nationalist forces stubbornly resisted the Japanese army and navy forces for three months until the Nationalists were dislodged and forced to flee inland.

The Japanese army launched offensives from North China and along the Yangzi River that were designed to bring the Nationalist army to battle and destroy it, thereby forcing Jiang's government to negotiate. From Shanghai, the Japanese army took the capital of the Nationalist government at Nanjing in December. For six weeks the Japanese army began a program of systematic atrocities known as the Rape of Nanjing. This event steeled Chinese resolve and tarnished the reputation of the Japanese army. The Chinese strategy was to trade space for time. Subsequent Japanese advances met dogged Chinese resistance and extreme measures to slow the Japanese army, including intentionally breaking the Yellow River's dikes, which caused massive flooding and loss of life.

The second phase of the war, October 1938 to December 1941, was marked by a strategic



stalemate. Lacking sufficient manpower to conquer China, the Japanese shifted their strategy from large-scale military offensives to the securing of a political settlement. The Japanese controlled a weblike network of cities and communications lines in northern and central China but not in the countryside. To secure their hold, they created puppet regimes to help maintain security and win popular support. The Nationalist government, based at Chongqing, maintained a low-intensity warfare designed to wear down and hopefully wear out Japanese forces while working to build up the economy and the industrial capacity of Free China, the latter consisting of those areas outside Japanese control. During their retreat inland, the Nationalists dismantled and relocated whole factories to build a new economic base and to retrain and reequip the army in order to continue the war. The communists, based in the North China countryside outside effective Japanese control, organized effective popular resistance and harassed Japanese lines of communication. Japanese reprisals, known as the Three All campaign—burn all, kill all, destroy all—further alien-

ated Chinese support, which swung in favor of the communists.

With the Japanese attack on Pearl Harbor on December 7, 1941, the Second Sino-Japanese War folded into the broader World War II. China received increased British and American support in the form of loans, military advisers, and lend-lease aid. At first this aid came via the Burma Road until it was closed by the Japanese invasion of Burma in 1942. Afterward, aid arrived by air transport from India. As the war expanded, Japan was compelled to withdraw units from China in order to meet commitments elsewhere. In this final phase, the Japanese army managed limited objective offensives, such as Operation Ichigo in May 1944, aimed at destroying American air bases that launched bombing raids against Japan. Still, Nationalist China's fighting effectiveness declined, and Jiang did not undertake significant major offensives in Burma and Central China until the waning months of the war. Jiang seemed more concerned with equipping, training, and husbanding his best units for the coming conflict with the CCP, which was also preparing for the coming civil war. The war ended with Japan's surrender

on August 14, 1945, and the formal surrender of Japanese troops to China on September 9, 1945.

The toll of the Second Sino-Japanese War has been estimated at 2.5 million military deaths on both sides, with a very rough estimate of Chinese civilian deaths at 10 million due to fighting, starvation, and flooding. For Jiang's Nationalist government, rampant inflation, corruption, and war weariness rendered him vulnerable to the communists in the ensuing civil war. By 1949 the Nationalists had fled to Taiwan, and Mao Zedong's CCP ruled China. For Japan, the war in China led into a larger unwinnable war with the United States and Great Britain that ended in the collapse of the Japanese empire.

—Thomas McGrath

Bibliography

- Boyle, John Hunter. *China and Japan at War, 1937–1945: The Politics of Collaboration*. Stanford, CA: Stanford University Press, 1972.
- Eastman, Lloyd E. *Seeds of Destruction: Nationalist China in War and Revolution, 1937–1949*. Stanford, CA: Stanford University Press, 1984.
- Wilson, Dick. *When Tigers Fight: The Story of the Sino-Japanese War, 1937–1945*. New York: Penguin, 1983.

The Russo-Japanese War (1904–1905)

The Russo-Japanese war of 1904–1905 resulted from disputes between Russia and Japan over the future of the Chinese region of Manchuria and the kingdom of Korea. Russia and Japan had been competing for power and influence in the northwestern Pacific region for many years prior to the outbreak of war in 1904. The war resulted in a spectacular series of victories for the Japanese armed forces over the Russians, and the victory of an Asian power over a European power inspired anticolonial movements in Asia and Africa.

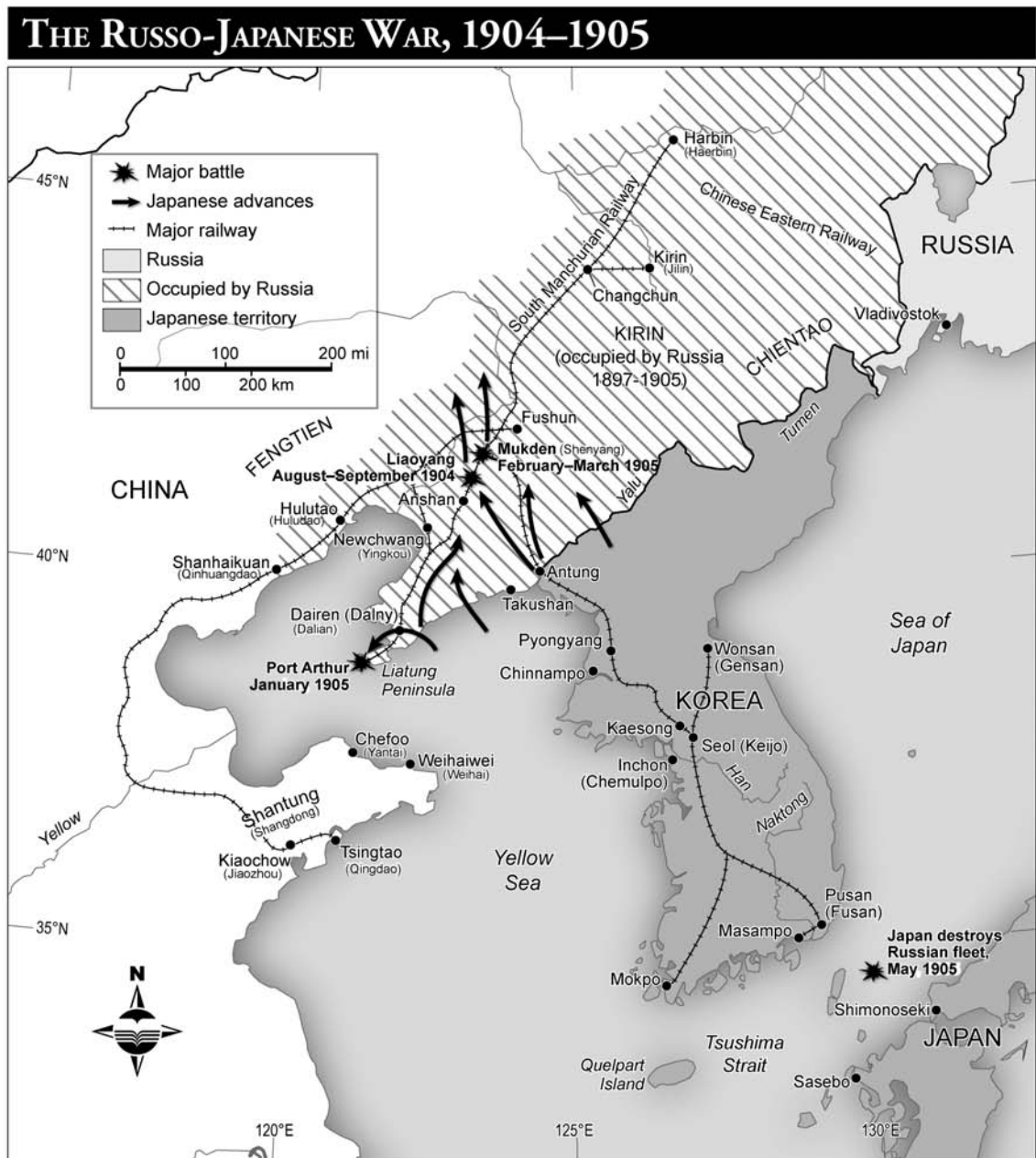
The decline of the Chinese Empire in the late nineteenth century saw a gradual loss of Chinese control over outlying regions such as resource-rich Manchuria. At the same time, Russia had expanded across Siberia in the late nineteenth century; this expansion was supported by the single-tracked Trans-Siberian railway. Russian leaders in this period hoped that Manchuria would fall into their sphere of influence.

At the same time that China was in decline, Japanese leaders embarked upon a major program of crash industrialization, convinced that industrialization followed by a rapid military buildup offered the only path for Japan to survive the threat posed by Western imperialism. By the 1890s the Japanese harbored ambitions for expansion into the Chinese Empire. In the 1894–1895 Sino-Japanese War, the Japanese quickly defeated the Chinese and seized the Liaotung Peninsula. However, the major European powers, led by Russia, Germany, and France, intervened diplomatically and forced the victorious Japanese to return the peninsula to China.

Capitalizing on the 1895 Chinese defeat, Russia forced the Chinese government to grant it a lease over the Liaotung Peninsula in 1898. The Russians began work on a major fortress and naval base known as Port Arthur and located on the peninsula. Russia also obtained permission from China to build a railway across northern Manchuria, thus forming a shortcut by connecting the Trans-Siberian line to Vladivostok. A branch line was then built from Harbin in Manchuria southwestward to Mukden and Port Arthur. The Japanese leaders became alarmed and angered at the Russian gains in Manchuria, especially when the Russians hinted that they had ambitions in Korea, which the Japanese regarded with deep concern due to Korea's proximity to Japan.

After prolonged tensions between the two countries, war broke out on February 8, 1904, when the Japanese launched a surprise naval attack on Port Arthur. Japanese troops landed in Korea the next month, overran the country, crossed the Yalu River, and moved swiftly into Manchuria. Japanese forces also landed on the Liaotung Peninsula and cut off the Russian garrison at Port Arthur on May 26, beginning a protracted siege. The siege of Port Arthur prefigured many aspects of World War I with the use of trenches, barbed wire, machine guns, and costly frontal infantry attacks. Port Arthur eventually fell on January 2, 1905, although the Japanese suffered heavy losses. With the siege of Port Arthur in progress, Japanese armies overran Russian positions in Manchuria and moved north toward Mukden.

The decisive land battle of the war took place at Mukden from February 20 to March 10,



1905, where a Russian army of 300,000 confronted a smaller Japanese army along a front more than 70 miles (110 kilometers) long. However, the Japanese made superior use of their mobility and outflanked the Russians, forcing them to retreat. The Battle of Mukden was one of the largest battles in history up to that point. Throughout the war, the Russians were poorly led and had difficulty in supplying their armies along the lengthy Trans-Siberian railway, which suffered frequent bottlenecks.

The decisive sea battle of the war took place in the Tsushima Straits during May 27–28, 1905. The Russian Baltic fleet had sailed the entire distance around the world from the Baltic Sea only to be annihilated by the Japanese.

By the spring of 1905 the Japanese economy was approaching bankruptcy, while the Russian home front, having experienced food shortages, defeats, and hardships, teetered on the brink of rebellion. American mediation was essential to ending the war, which took place with the

signing of the Treaty of Portsmouth on September 5, 1905.

Under the terms of the Treaty of Portsmouth, Russia recognized Japanese dominance in Korea and turned its lease of the Liaotung Peninsula and Port Arthur over to Japan. Both sides evacuated Manchuria and agreed to return it to Chinese sovereignty. Japan gained the southern half of Sakhalin Island from Russia. Overall, the treaty marked the emergence of Japan as a major regional power in the northern Pacific.

In Japan, the Russo-Japanese War glorified militarism and strident nationalism, although there was also much dissatisfaction among nationalist circles over the lack of greater territorial gains for Japan. Furious nationalist protests forced the resignation of the Japanese cabinet. In Russia, the war resulted in industrial strikes, peasant revolts in the countryside, and middle-class demands for reform. Although Tsar Nicholas II crushed the worker and peasant revolts, he did create a parliament, the Duma, that was granted limited powers. In terms of foreign policy ambitions, the Russians turned their attention back to the Balkan region of Europe.

The Russo-Japanese War was also important for the lessons, many of them wrong, that it seemed to teach. Many observers concluded, mistakenly, that the Japanese had won the war because of their superior morale and samurai spirit. The war seemed to show that daring attacks and offensive action could overcome new technology, such as machine guns. The fact that the war was so short in duration also reinforced the illusion of the short war, or the belief that the next war among major powers would be over quickly. In addition, the economic exhaustion of Russia and Japan apparently showed that no major power could fight a modern war for any

➤ BATTLE OF TSUSHIMA STRAITS

The Battle of Tsushima Straits was the final decisive battle of the Russo-Japanese War. The entire Russian Baltic battleship fleet under Admiral Zivony Rozhdestvensky had sailed thousands of miles to reach Japan from Europe. This was due to the earlier near destruction of Russian naval power in the Pacific at the hands of the Japanese Navy. The Russian Baltic and main Japanese fleets clashed on May 27 and 28 in the Tsushima Straits adjacent to the Japanese mainland between Japan and Korea. The older Russian ships were no match for the newer and more superior Japanese models, and superior Japanese gunnery tactics destroyed two-thirds of the entire Russian Baltic fleet. This major defeat forced the Russians to sue for peace. The loss of prestige of Russia at the hands of what Europeans deemed an inferior race also did much to raise the status of the Japanese in the eyes of the European Great Powers of the early twentieth century.

—Abraham O. Mendoza

length of time. As coming events would prove, both the illusion of short wars and the belief that morale could overcome technology were wrong.

—Paul W. Doerr

Bibliography

- Nish, Ian. *The Origins of the Russo-Japanese War*. London: Longman, 1985.
- Okamoto, S. *The Japanese Oligarchy and the Russo-Japanese War*. New York: Columbia University Press, 1970.
- Trani, Eugene P. *The Treaty of Portsmouth*. Lexington: University of Kentucky Press, 1969.
- Walder, David. *The Short Victorious War: The Russo-Japanese Conflict, 1904–1905*. New York: Harper and Row, 1974.

■ Introduction: The First World War

World War I (1914–1918) has often been described as “the war to end all wars.” Instead, it was the harbinger of a completely new type of warfare in which technological advances enabled belligerents to kill

or injure vast numbers of soldiers and civilians and to destroy cities with greater efficiency. By the end of the war in November 1918, tens of millions of people were dead for no clear purpose. Rather than ending all future warfare, the

dissatisfaction that grew out of peace treaty negotiations led in great part to the outbreak of World War II in 1939.

The causes of World War I are nebulous. At the time, European foreign policy was a tangle of alliances, imperialist rivalries, nationalist chauvinism, and xenophobia mixed with memories of old slights and humiliations between nations. The last general war in Europe had taken place 99 years earlier with the defeat of Napoleon. From time to time international crises had arisen, causing nations to expect war at any moment, but these events had been resolved at least temporarily by diplomatic means.

The German empire, only in existence since 1871, was ruled by the autocratic Wilhelm II (1859–1941), who was determined that Germany would be respected and feared by the other Great Powers. This determination led to a naval buildup prior to World War I supported by successive acts of legislation, intended to create a fleet of ships that would rival Great Britain's. The result of this naval escalation was the formation of the German High Seas Fleet, followed by Great Britain's adoption of HMS *Dreadnought*, the first of a new and more powerful type of battleship. The British were alarmed at Germany's intentions and the balance of power in Europe. The Germans were suspicious that the Triple Entente of Britain, France, and Russia intended to encircle their nation and limit Germany's role as a European and colonial power. The military buildup that stemmed from their mutual suspicions, as well as those of the other European nations, did much to increase the likelihood that some international incident or other would lead to open warfare.

The event that served as the catalyst to the war was the June 28, 1914, assassination of the heir to the Austro-Hungarian throne, Archduke Franz Ferdinand, and his wife, Sophie, Duchess of Hohenberg, who were making an official visit to Sarajevo, the capital of Bosnia. The assassin, Gavrilo Princip, was a young Serbian nationalist affiliated with the secret society the Black Hand, a nationalist group that worked toward the goal of uniting Serbia and Bosnia-Herzegovina. Austrian officials argued that Serbia must be held accountable for the assassination, and at any rate, Austrian leaders were willing to take advantage

of the opportunity to suppress Serbia's nationalist groups with force.

On July 28, 1914, Austria declared war on Serbia, reassured of the support of their German allies. Over the next few days European diplomacy broke down, the major powers mobilized their armies, and the continent was divided into armed camps. Russia sided with Serbia, and France and Great Britain sided with their ally, Russia. Germany declared war on Russia on August 1 and France on August 3. On the following morning, Germany also declared war on Belgium in order to send troops through Belgian territory on their way to France. Great Britain, which, with Prussia, France, Russia, and Austria, had guaranteed Belgium's neutrality in 1839, had pledged to support Belgium if it was invaded by Germany and resisted. Germany's invasion and Belgium's resistance brought the British into the war on August 4. Thus, Germany and Austria-Hungary, supported by Turkey, became the major Central Powers; the major Allied Powers were Great Britain, France, and Russia from 1914 until the Bolshevik Revolution ended Russia's participation in late 1917, by which time the United States had abandoned its neutral stance and had entered the war on the Allied side.

At the time the war began, there was a rush for civilians to join up and go to war before it ended; popular opinion in the belligerent nations supported the idea that the war would last for only a few months. Instead, the Great War, as it was known as the time, dragged on for more than four years, and more than 65,000,000 troops were mobilized. Governments discovered that they must carefully control enlistments in order to avoid draining crucial industries of their workers, and many jobs were opened to women for the first time so that male workers who had enlisted could be replaced, at least temporarily. The years of warfare resulted in over 37.5 million casualties, many from the new technological innovations in poison gasses, machine guns, high-explosive shells, tanks, airplanes, and artillery. These new technologies completely changed the nature of warfare to one in which large numbers of people could be injured or killed at great distances.

The Great War finally ended on November 11, 1918, when the Allies forced Germany to

agree to an armistice. In January 1919 peace negotiations began in Paris, led by the “Big Four”: Woodrow Wilson, president of the United States; David Lloyd George, prime minister of Great Britain; Vittorio Orlando, premier of Italy; and Georges Clemenceau, premier of France. Wilson insisted upon shaping the peace treaties according to the “Fourteen Points” he had produced the year before, an idealistic plan for “Peace Without Victory.” This plan, to include freedom of the seas, open covenants between nations, self-determination for the subject peoples of the now-defunct Central Powers, and a reduction of armaments, was at odds with the postwar aims of the other Allied Powers, who were more concerned with containing Germany than with noble causes. Wilson’s 14th point, a “general association of nations,” led to the creation of the League of Nations.

In the long run, the resulting Versailles Treaty with Germany was almost entirely self-defeating. While it was only one of the five peace treaties negotiated between the Allies and the former Central Powers, it was arguably the most important. The harsh terms dictated to Germany in the Versailles Treaty were a major factor in the subsequent rise of Adolf Hitler and the outbreak of World War II.

—Ellen Jan Jenkins

Bibliography

- Carlisle, Rodney P. *World War I*. New York: Facts On File, 2007.
- Martel, Gordon. *The Origins of the First World War*. 2nd ed. London: Longman Group UK, 1987.
- Robson, Stuart. *The First World War*. New York: Addison Wesley Longman, 1998.
- Tucker, Spencer, and Priscilla Mary Roberts. *World War I: A Student Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2006.

The Outbreak of World War I

World War I (1914–1918) erupted during a series of events known as the July Crisis, a period of frenetic communications and maneuvering that occurred during the weeks after the June 28, 1914, political assassination of Archduke Franz Ferdinand, heir to the Austro-Hungarian throne, and his wife, Sophie, the duchess of Hohenberg.

The couple had been making an official visit to Sarajevo, Bosnia, part of the empire, where Ferdinand was to observe military exercises. While in Sarajevo, the archduke and his wife were murdered by Serbian nationalists, members of the secret revolutionary organization Ujedinjenje ili Smrt (Unification or Die), but generally known as the Black Hand, which was part of a Pan-Slavic movement working for the creation of a Greater Serbia and had ties to the Serbian government.

There were two major alliance systems in Europe in existence at the time. These were the Triple Alliance, which included Germany, Austria-Hungary, and Italy, and the Triple Entente, which included Great Britain, France, and Russia. Both alliances had begun in a series of defensive treaties or the resolution of territorial conflicts between the nations in the late nineteenth century. Through the years, however, both systems had come to incorporate promises or expectations of military involvement to protect the security of the major powers involved. The Triple Alliance and Triple Entente were never completely rigid systems, and there were many times in which cooperation took place between members of opposing groups; however, in the summer of 1914, these entangling alliances obstructed and then made impossible any diplomatic solution to the disintegrating stability of Europe.

The Austrian government decided that Ferdinand’s assassination would provide an opportunity to stop Serbian expansionist ambitions in the Balkans as well as the activities of Slav separatists. Vienna responded to the tragic murder of the archduke by sending a harsh ultimatum to Serbia on July 25 demanding that all anti-Austrian propaganda be forbidden immediately, that Austrian officials be involved in quelling nationalist activities in Serbia, and that Austro-Hungarian representatives be allowed to participate in Serbia’s prosecution of the murderers. In the meantime, the German government had issued the infamous Blank Cheque to their Austrian allies, promising their support in whatever the Austro-Hungarians had to do in order to suppress troublesome Serbia.

Within only hours after receiving the list of demands from Vienna, the Serbians responded with their agreement to all points in the ultimatum except the demand that they accept the

► THE SCHLIEFFEN PLAN

The Schlieffen Plan was the German General Staff's overall strategic plan for knocking France out of a war quickly on the western front before Russian mobilization on the eastern front. Formulated by General Alfred Graf von Schlieffen in 1905, the General Staff plan expected to take advantage of tsarist Russia's slowness in mobilizing fully for war, which was expected to take several weeks. In contrast, France was expected to be ready to confront German forces within a matter of days on the western frontier. A skeletal German force would meet the bulk of the French forces in the frontier east of Paris, while a powerful and much larger German force would push through the Netherlands and Belgium to attack the rear of the French forces. In 1906 modifications were made to the plan by General Helmuth von Moltke to add more divisions to the skeletal attack force and avoid violating the neutrality of the Netherlands, thereby weakening the original plan. As a result, with the outbreak of World War I, a French counterattack against German forces, rapid Russian offensives, fierce Belgian resistance, and the entry of the British Expeditionary Forces stalled the scheduled timetable of the Schlieffen Plan. The end result was years of trench warfare along the western front, with bloody battles of attrition amid machine-gun fire, over-the-top attacks, and artillery barrages.

—*Abraham O. Mendoza*

participation of officials from Austria in prosecuting those involved in the assassination plot. This, they argued, would violate the terms of Serbia's constitution. Rejecting what was deemed a partial compliance from the government in Belgrade, the Serbian capital, the Austrian emperor Franz Joseph signed orders for the mobilization of his army for an invasion of the Balkan nation.

From that point, the European nations lurched toward armed conflict. On July 28, 1914, Austria declared war on Serbia. Russia, with its own Slavic population, was Serbia's traditional protector as well as Austria's rival. By the next day, the Austrians received word that Russia had begun to mobilize. Germany sent a warning to Russia on July 31 demanding that the Russians stop their mobilization. When they did not com-

ply, Germany declared war on Russia on August 1 and on France, Russia's ally in the Triple Entente, two days later. On August 5, Austria-Hungary declared war on Russia. Five days later, France declared war on Austria-Hungary.

The Germans had prepared for the possibility of war with the Schlieffen Plan, named for Alfred von Schlieffen and Helmuth von Moltke, the two successive German chiefs of staff who had formulated the strategy earlier in the century. The plan called for the German Army to attack and defeat France quickly, marching through Belgium to do so, and then to concentrate its military forces against Russia, which would require more time for its mobilization. With this strategy, the Germans would be able to avoid fighting a war on two fronts.

The French also had a war strategy, Plan 17, that had been adopted in 1913. Plan 17 was largely designed for an invasion of Germany and was focused especially on allowing for France's recovery of Alsace and Lorraine, the two provinces lost to Germany at the end of the Franco-Prussian War of 1870–1871. The strategy would deploy much of France's army too far to the south to be of much use against the Schlieffen Plan.

Belgium was a neutral nation, its perpetual neutrality guaranteed by the Treaty of London, which had been signed by England, France, Prussia, Russia, and Austria in 1839. This neutrality would be violated if German troops invaded Belgium on their way to France according to the terms of the Schlieffen Plan. In preparation, Belgium began to mobilize its army on July 29 and then on August 3 rejected demands from Berlin that German troops be granted free passage through Belgian land.

Great Britain was waiting and watching the play of events with great apprehension. The British government had offered to negotiate an end to the growing hostilities in Europe during July 1914, but these overtures came to nothing. For many years, British plans had been focused on the possibility of contributing naval and monetary support in case of war between Britain's allies and Germany, but in the end this was not the case. The British Army was mobilized partially on July 29, and a general mobilization followed on July 31 so that Britain was prepared in

case diplomatic efforts failed. After much deliberation and fully aware that they could not stand by and watch Germany take control of continental Europe, the British cabinet decided to act under the following circumstances: If Germany invaded Belgium and the Belgians resisted, Britain would enter the war as one of the 1839 guarantors of Belgian neutrality. If Germany invaded Belgium and the Belgians allowed them to pass unchallenged, Britain would be under no obligation to protect Belgian neutrality.

As it happened, German troops entered Belgium on the morning of August 4, 1914. The Belgians launched a furious resistance and appealed to the British for help. Great Britain dispatched an ultimatum to Berlin demanding that German troops withdraw from Belgium by midnight (11:00 p.m. in London). When this deadline expired without the withdrawal of German troops, Great Britain declared war on Germany. The Great War had begun.

—Ellen Jan Jenkins

Bibliography

- Joll, James. *The Origins of the First World War*. 2nd ed. Origins of Modern Wars Series. London: Addison Wesley, 1992.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- Nicolson, Colin. *The First World War: Europe, 1914–1918*. Longman Companions to History Series. Harlow, UK: Pearson Education, 2001.
- Robbins, Keith. *The First World War: The Outbreak, Events, and Aftermath*. Oxford, UK: Oxford University Press, 1993.

Leadership of the Great Powers in 1914

In 1914 the major belligerent powers of World War I operated under a variety of political systems and leadership. Of the Allied Powers, Great Britain was a constitutional monarchy with a strong parliament, Russia was an autocracy with a legislature but a system in which the tsar was left to limit his own powers, and France was a republic led by a conservative president and a socialist prime minister. The major members of the Central Powers, both Germany and Austria-

Hungary, were parliamentary monarchies, although in each case conservative hereditary rulers played politicians and bureaucrats against each other in order to maintain power. The various heads of state, personifications of their countries' traditions and aims, grappled with their changing roles in the early twentieth century even as they struggled to prepare their nations for modern warfare.

Great Britain's king was George V (1865–1936; r. 1910–1936), a taciturn and conservative former naval officer, who was, in common with the German kaiser, a grandson of the late Queen Victoria (1819–1901; r. 1837–1901). George was a constitutional monarch who reigned but did not rule over a vast empire that included India, Australia, Canada, and other dominions and colonies throughout the world. The British Parliament, under the guidance of the Liberal prime minister Herbert H. Asquith, was in charge of the government and the administration of the war effort, and the role of George V was one primarily based on ceremonial duties and tradition.

During the war, the British royal family came under increased criticism and even some suspicion because of their German ancestry and family ties. It was this controversy that led George V to change the family's name from Saxe-Coburg-Gotha to Windsor in 1917. Another controversy and one that has outlived him is his failure to rescue his cousin, Tsar Nicholas II of Russia, and his family before they were assassinated by the Bolsheviks in 1918. Although the British government explored plans for the rescue of the Romanovs, British public opinion was largely unfavorable toward the despotic Russian monarchy. Concern over the political problems that would likely result in his nation if asylum were granted to the unpopular Romanovs led the British monarch to scrap the idea of a rescue.

Nicholas II (1868–1918; r. 1894–1917), known as “Autocrat of All the Russias,” had been forced by the Russian Revolution of 1905 to convene a Duma, or legislative assembly. Despite the growing discontent among the population and demands for civil liberties for Russians and more power for the Duma, Nicholas was determined to limit the role of the assembly. With the cooperation of the Russian State Council, made up of

the tsar's appointees, he managed to subvert reforms repeatedly. In August 1914 the Fourth Duma voted to dissolve itself for the duration of the war, but the disastrous effects of Nicholas's inept military command and the ruinous influence of the peasant mystic and faith healer Gregor Rasputin (1869–1916) over the imperial family led to the public demand for the Duma's recall in 1915. Eventually, several members of this Duma participated in the short-lived Provisional Government set up during the Russian Revolution of 1917.

In 1914, the president of France's Third Republic was Raymond Poincaré (1860–1934), a Conservative and former prime minister. Poincaré took the lead in government matters, wielding the upper hand politically in an era in which France's prime minister—at the time, the Independent Socialist René Viviani (1863–1925)—generally controlled the government. Poincaré was also deeply anti-German, and his commitment to France's alliance with Russia played a central part in the July Crisis of 1914, which prompted the onset of the war. Although Poincaré remained president until 1920, he was eclipsed in managing France's affairs after Georges Clemenceau became prime minister in 1917.

Kaiser Wilhelm II (1859–1941; r. 1888–1918) was the German emperor in 1914. The eldest grandchild of England's Queen Victoria, Wilhelm had a difficult relationship with his relatives in the British royal family and spent much of his reign trying to build up a naval fleet to match or surpass the British Royal Navy. His fascination with all military and technological matters and his consciousness of his exalted station in life convinced him that he was a better arbiter of German foreign policy than his more seasoned or experienced ministers. Wilhelm also failed to understand that personal diplomacy among fellow monarchs was no longer a suitable way to settle national disputes when kings did not exercise absolute power. He frequently made promises of support that were contradictory, such as courting friendly relations with Russia and Austria-Hungary at the same time before 1914 while these countries were hostile toward each other. Ultimately, his assurance to the Austro-Hungarian emperor Franz Joseph (1830–1916; r. 1848–1916) that Germany would support whatever efforts were necessary

to quell Serbian nationalism amounted to a blank check of support for Austria-Hungary and further fueled the onset of World War I.

Franz Joseph became the emperor of Austria and king of Bohemia at the age of 18 in 1848 and was crowned king of Hungary in 1867, remaining on the throne for 68 years. In 1849 he had turned back Austrian constitutional government in favor of a renewal of absolutism; under his leadership, Austria experienced conflicts with France, Hungary, and Sardinia; had sided with Prussia against Denmark successfully in 1864; and then fought Prussia unsuccessfully in 1866. In 1867 Hungary's population was granted equal footing with Austria in the *Ausgleich*, which created the Dual Monarchy, and Franz Joseph was crowned king of Hungary. By 1914, however, Franz Joseph was elderly and disillusioned, having seen his brother, Maximilian, emperor of Mexico (1832–1867; r. 1864–1867), executed by a firing squad of Mexican republicans; his only son die tragically and mysteriously in 1889; and his empress, Elisabeth of Bavaria (1837–1898), assassinated by an Italian anarchist. In addition, Austria had ongoing difficulties with Slavic separatists in her Balkan territories, and these were encouraged by Serbia. When his great-nephew and heir, Franz Ferdinand (1863–1914), was assassinated at Sarajevo in June 1914, Franz Joseph was easily convinced by his ministers that Serbia must be dealt with firmly. The ultimatum sent to Serbia and the series of events that took place between Austria-Hungary and Serbia and their respective allies during the July Crisis of 1914 led to the outbreak of World War I.

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Bibliography

- Burg, David F., and L. Edward Purcell. *Almanac of World War I*. Lexington: University Press of Kentucky, 1998.
- Joll, James. *The Origins of the First World War*. 2nd ed. Origins of Modern Wars Series. London: Addison Wesley, 1992.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- Nicolson, Colin. *The First World War: Europe, 1914–1918*. Longman Companions to History Series. Harlow, UK: Pearson Education, 2001.
- Robbins, Keith. *The First World War: The Outbreak, Events, and Aftermath*. Oxford, UK: Oxford University Press, 1993.

Men, Munitions, and Supply

Although warfare had always required strength in troop numbers, the belligerent nations were caught off guard by the changed technology of warfare almost immediately upon the outbreak of hostilities in 1914. Even war departments that had planned for the likelihood of a major war found themselves undersupplied, and munitions shortages reached crisis proportions very quickly. World War I represented a break with former warfare and ushered in an era of battles that lasted for months, consumed unprecedented levels of munitions, and created casualties in vast numbers and with a horrific expense of lives.

Manpower was a greater problem for Great Britain than Germany, France, or Russia since, unlike the other belligerents, the British had avoided adopting conscription and still relied on a small professional army. In August 1914 the British Army and Britain's Territorial Force and Reserves totaled 733,514 men. The British could mobilize six artillery divisions and one cavalry division but were unprepared for war on the European continent and had assumed for years that their contribution to a continental war would be naval and monetary. In August 1914 the British Expeditionary Force sent to France comprised six of Britain's seven divisions. By the end of 1918 Great Britain had sent 5.7 million soldiers into a war on foreign soil, calling into service a vast proportion of its civilians and, to supply them, every manufacturing concern at its disposal.

France had a standing army of nearly 800,000 men but with conscription could mobilize more than 4 million troops. The French were also depending on Plan 17, their strategic offensive plan for a war with Germany that was intended to split the German Army and recapture Alsace and Lorraine, lost to the Germans after the Franco-Prussian War of 1870–1871. The French, with jingoistic pride in their national spirit, or *élan*, neglected to consider the importance of modern artillery and possessed too few machine guns for modern warfare. In its execution, Plan 17 was no match for Germany's Schlieffen Plan. By 1918 the French had deployed more than 8.4 million troops.

In 1914 Russia's Duma (parliament) had approved plans to increase the size of the army by

➤ GERMAN SUPREME ARMY COMMAND (OHL)

The German Supreme Army Command (Oberste Heeresleitung, OHL) served as the highest level of command of German forces during World War I. While formally under the control of Kaiser Wilhelm II, the top generals of the OHL made most of the major decisions autonomously in collaboration with major German industrial concerns that profited from the war. Throughout the war the OHL acquired much power, often superseding the decisions of the elected government. In 1916 the OHL came under the control of Erich Ludendorff and Paul von Hindenburg, who created a nominal military dictatorship over Germany, thereby rendering both the kaiser and the Reichstag impotent. The OHL further mobilized the German economy for total war, exacerbating food shortages that had already resulted from the British blockade. As the public clamored for peace, the OHL pressed for victory. By late 1918 when the OHL began to see Germany's position on the western front as dire, they allowed for the creation of a civilian government to compromise an armistice with the Allies. As a result, they were also able to cast the blame for the defeat on the so-called November criminals. The reality was that they did not want to be responsible for the coming German defeat.

—Abraham O. Mendoza

nearly 40 percent, although this expansion program was not intended to be complete until 1917. Russia had a vast population and theoretically could field 37 corps readily upon the outbreak of hostilities. However, even a huge additional pool of men of military age, which could yield a mobilization of more than 5 million troops, could not win a war without adequate training or equipment, and Russia could not supply those. Transportation was another barrier to Russian success. Roads and railroads were unreliable and poorly maintained at best, so mobilization of millions of men was nearly impossible. Over the duration of Russia's participation in the war, 12 million Russians were mobilized, although logistics and supply remained catastrophically inadequate.

By 1915 shell shortages among the Allied Powers reached catastrophic levels. Great Britain,

France, and Russia found it more feasible to coordinate their purchases abroad than to bid against each other, particularly from sources in the neutral United States. Ultimately, the British assumed responsibility for placing Russian orders, as well as their own, in the United States through the J. P. Morgan banking house, and the French began to place their orders for American-made munitions through the same source.

The Germans were arguably the best prepared for war of any of the belligerent nations in 1914. With nearly 900,000 well-trained and well-equipped men in the peacetime army and more than 3 million reservists who could be mobilized at short notice as well as an up-to-date navy second in size only to that of Great Britain, Germany's position appeared to be unassailable. By the end of the war, Germany had sent to war 11 million troops. Ironically, however, the Germans had gone to war in 1914 having equipped their military with all the munitions, machine guns, and artillery necessary for a short war, not one lasting more than four years.

The Germans had adopted the Schlieffen Plan earlier in the century as their strategy for avoiding a war on two fronts against France and Russia. Named after Alfred von Schlieffen and Helmuth von Moltke, the successive German Army chiefs of staff who created the strategy, the plan called for Germany to invade France through Belgium and quell the French Army before turning to face the Russian Army, which was expected to take at least six weeks to mobilize.

Austria-Hungary had 3 million men in their standing army and reserves in 1914, and by late 1918 the Habsburg empire had mobilized 3.8 million troops. The multiethnic force combined soldiers drawn from all the subject populations of the empire, however, as well as from Austria and Hungary, so the army of Emperor Franz Joseph was made up of men who practiced five religions and nine different native languages. Prewar modernization of this army was limited by the conservative military hierarchy of imperial Austria, and thus the Dual Empire entered the war unprepared to fight a twentieth-century conflict. Austria-Hungary's inconsistent record of military successes on the eastern front increasingly came to depend upon Germany's

leadership, and as a result the weaknesses of the empire became more apparent internationally. Franz Joseph died in 1916 after 68 years on the Austrian throne. Throughout 1917 and 1918 the Austro-Hungarians faced internal mutinies and industrial unrest, and the empire splintered from within as the Poles, Czechs, Slavs, and Hungarians declared their independence. By the end of World War I, no empire would remain.

Overall, approximately 65 million combatants were mobilized during 1914–1918. Of these, there were more than 37.5 million casualties, including those killed, wounded, taken prisoner, or missing. Estimates of the financial costs of the war in contemporary figures range as high as \$82 million. None of these figures is likely to be entirely reliable, however, since the human and material costs were so vast as to defy accounting.

—Ellen Jan Jenkins

Bibliography

- Gilbert, Martin. *The First World War: A Complete History*. New York: Holt, 1994.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- Lowry, Bullitt. *Armistice, 1918*. Kent, OH: Kent State University Press, 1996.
- Nicolson, Colin. *The First World War: Europe, 1914–1918*. Longman Companions to History. Harlow, UK: Pearson Education, 2001.
- Robbins, Keith. *The First World War: The Outbreak, Events, and Aftermath*. Oxford, UK: Oxford University Press, 1993.
- Strachan, Hew. *The First World War*. New York: Penguin, 2003.

American Neutrality

On April 2, 1917, President Woodrow Wilson addressed a special session of Congress and asked for a declaration of war against Germany. Congress complied within days. Wilson's appeal was not made lightly; the war in Europe had begun more than two and a half years earlier, and throughout that time the president had done everything possible to keep the United States out of the war. Ultimately, however, American neutrality proved impossible to maintain in the face of Germany's unrestricted submarine warfare, increasing U.S. investment in the Allied war effort, and American public opinion.

Earlier, on August 19, 1914, only two weeks after the start of war in Europe, President Wilson had addressed the U.S. Senate, warning that Americans must remain impartial and apart from the conflicts of European nations. He insisted that the United States “must be neutral in fact as well as in name during these days that are to try men’s souls.” According to Wilson’s point of view, the United States had a more exalted role to play in the world than those nations engaging in mutual bloodshed, one that depended on absolute impartiality. The United States should act as the arbitrator between nations, using its efforts to create a better world. Wilson, a highly principled man, had an idealistic bent that often obscured the realities of international affairs. He repeatedly offered to mediate between the belligerents, apparently refusing to consider the magnitude of the grievances between them and naively urging compromise as the most desirable outcome of the hostilities.

Wilson also insisted that as citizens of a neutral nation Americans were entitled to travel as they liked and trade as they liked, refusing to acknowledge that this unfettered commerce would make it difficult for them to remain above the conflict in Europe. That Americans’ freedom to trade favored the Allies made little difference to Wilson’s interpretation of neutrality. The powerful British Royal Navy controlled the Atlantic, leaving the Central Powers without access to American-made goods. At the same time, the Allied Powers had recognized almost immediately after the onset of hostilities that they would be unable to equip their armies adequately, and they began to place orders for munitions and other military equipment with manufacturers across the United States. Thus, American companies were unable to trade equally with all belligerents, a situation that created outrage not only among Americans of German and Austro-Hungarian descent but also in the Central Powers, who argued that this one-sided commerce was anything but neutral. Subsequently, Germany deployed U-boats (*Unterseebooten*) to destroy Allied supply lines crossing the Atlantic. In early 1915 they launched a policy of unrestricted submarine warfare, declaring the waters around the British Isles to be a war zone and warning that all British shipping would be torpedoed, re-

➤ ANTI-GERMAN SENTIMENT DURING WORLD WAR I

Despite President Woodrow Wilson’s promise of neutrality and noninvolvement in World War I, by 1917 the United States entered on the side of the Allies. Many German Americans held mixed feelings regarding American involvement against their country of origin, and some were vehemently opposed to U.S. involvement. Upon American entry into the war, many German immigrants were treated with suspicion and seen as disloyal as American society become infused with anti-German sentiments. Some German Americans were tried for sedition, sometimes for being unwilling to support the war effort against Germany. Sauerkraut became “liberty cabbage” and hamburger became “liberty steak” in a frenzy of name changes of what were rapidly becoming common American products. While a majority of German Americans were loyal to their new country and many of them served in the military, they felt obligated to anglicize their names and shun their heritage in an effort to prove their loyalty. Isolated incidents of murder and violence, while not widespread, did illustrate the xenophobia unleashed by the American entry into the war.

—Abraham O. Mendoza

gardless of loss of life. They warned Americans not to travel on British ships.

The issue of American neutrality and German submarine warfare became a flash point several times, particularly after May 7, 1915, when the passenger liner *Lusitania* was torpedoed by a U-boat off the coast of Ireland and sank, resulting in the loss of 1,198 passengers and crew, including 128 of the 197 Americans on board. In the United States, Americans clamored for the government to punish the Germans and were outraged when three days later Wilson declared, “There is such a thing as a man being too proud to fight; there is such a thing as a nation being so right that it does not need to convince others by force that it is right.” The Germans temporarily discontinued their policy of unrestricted submarine warfare in the face of official protests lodged by the U.S. government, although in early 1917 they would resume this

practice. American public opinion was increasingly anti-German, partly a result of losses of American lives but also because of the success of Britain's very skillful campaign of propaganda in the United States, as the British endeavored to sway public opinion to their side.

By this time, however, the British were spending at least 40 percent of their total war-time expenditures in the United States, and American financial institutions were making large loans to grant credit for these purchases. In September 1915, 61 underwriters and more than 1,500 American banks subscribed to the Anglo-French Loan of \$500 million, and further loans followed. With hundreds of millions of dollars invested in the Allied war effort, the United States could not afford to stand by while the Central Powers won the war. Then, in early 1917, two events completed the demise of American neutrality.

The first of these was the notification, sent by the German ambassador in the United States, Count Johann von Bernstorff, to the American secretary of state, Robert Lansing, reporting that Germany would reinstate its policy of unrestricted submarine warfare on February 1. On February 3 the United States severed diplomatic relations with Germany. Later that month, the British turned over the Zimmerman Telegram to the American ambassador, and it was published in U.S. newspapers on March 1. Intercepted by British code breakers, the telegram was sent by Germany's foreign minister, Arthur Zimmermann, to the German minister in Mexico. It included Germany's promise to return "lost territory in Texas, New Mexico, and Arizona" to that country if Mexico would agree to an alliance. In light of this evidence that Germany was planning aggression against the United States, Wilson could no longer beg his countrymen for adherence to neutrality. The United States officially entered the war in April 1917, giving the Allies a fresh source of manpower and industrial resources as well as renewed morale.

—Ellen Jan Jenkins

Bibliography

Link, Arthur S. *Wilson: The Struggle for Neutrality, 1914–1915*. Princeton, NJ: Princeton University Press, 1960.

Peterson, H. C. *Propaganda for War: The Campaign against American Neutrality, 1914–17*. Norman: University of Oklahoma Press, 1939.

Woodward, David R. *Trial by Friendship: Anglo-American Relations, 1917–1918*. Lexington: University Press of Kentucky, 1993.

World War I—In the Trenches

Trench warfare had appeared before World War I, most notably during the Napoleonic War, the American Civil War, and the Boer Wars, although nineteenth-century armies had usually engaged each other in wars of movement rather than warfare in which armies took up and defended stationary positions. The Great War that began in August 1914 quickly became a war of position rather than a conventional war of mobility. The first trenches on the western front were dug in September 1914 by the Germans shortly after the Battle of the Marne, when they were forced to retreat as far as the Aisne River. In order to hold their position against French and British forces, the German troops were ordered to dig in, and the French and British troops did so as well. Thus, the western front turned into a 400-mile (645-kilometer) series of entrenchments, eventually stretching from the North Sea coast of Belgium to the border of Switzerland. Trenches existed on the eastern front as well, but they were not as prevalent there, where troop positions were more widespread.

The trench system was a maze of connected channels carved out of the ground. The foremost was the frontline trench, which held intermittently placed reinforced dugouts to provide protection in each sector. The front line was connected by angled communications trenches to a command trench, another support trench to the rear, and behind that to a reserve trench. The entire system might be hundreds of yards or even several miles from front to rear. At various points there were camouflaged machine-gun positions or observation posts. There might also be saps, or short trenches extending forward from the frontline trench toward the enemy trenches. Long-range artillery was located some distance to the rear of the reserve trench. Trenches were

constructed in irregular zigzag formations to slow down enemy raiding parties, grenade blasts, and enfilading fire, which also meant that it was quite easy for defending troops to become lost and disoriented, especially in the dark of night or in inclement weather. Posted fingerboards gave the sectors the names of streets at home or, with bleak humor, pointed out the number of miles to Paris.

The trench was ideally 6 or 7 feet deep (about 2 meters) and about the same width. This was deep enough so that a man could stand with his head lower than the front parapet, which was made of packed earth and stacked sandbags, although the actual depth and width were generally dependent upon such factors as the rockiness of the local terrain and level of the water table. The trench floor was made of planks, or duckboards, intended to keep the soldiers' feet above water and mud but seldom doing so with any success. There was also a fire step about 2 feet high (60 centimeters), just high enough to enable a marksman to make use of loopholes left between the sandbags of the parapet. Interior trench walls were reinforced or revetted with timbers, discarded doors, or whatever was available nearby, and maintenance of the whole muddy fortification was an ongoing event. Between the trenches of the opposing troops, sometimes fewer than 100 yards in distance, was the area called no-man's-land. This space was an obstacle course of shell holes, mud, tangled barbed wire, and, quite often, dead or dying men.

During quieter periods the trenches were scenes of endless waiting and much boredom. The boredom gave way to terror during enemy bombardments, however, with bursting shrapnel shells raining pieces of scrap metal down on the trenches or, later, the blasting of guns firing high-explosive shells. Sniper fire was intermittent throughout the day and night, so it was crucial that those in the front line keep their heads below the parapets to avoid providing targets for the enemy.

Troops were sent into the front lines on a rotation system. British troops, for example, were to spend eight days in the front line, four in the reserve trenches, and then four supposedly resting at a location behind the lines, with occasional leave. The increasing scarcity of troops



German soldiers in a trench during World War I. (Library of Congress)

and equipment, however, often meant extended stays in the front line, along with the resident rats, frogs, and lice. Heavy bombardment generally delayed the removal of the dead, so the corpses of men shot by snipers or killed by shells might be dragged out of the way and stepped over by their living comrades for several days. Reports of knee-deep or even waist-deep water were routine. Men in the trenches were susceptible to two other dangers as well: trench foot and trench fever.

Trench foot was a condition in which a fungus attacked the feet of men who had stood in wet, clammy boots and socks for days at a time, and it was a serious problem for the troops, particularly during the first year of the war. Swollen feet turned red and then blue, grew numb from decreased circulation, and if left untreated could become gangrenous. Eventually soldiers began to coat their feet with whale oil and carry dry socks with them, and the problem lessened.

Trench fever, or pyrexia, was carried by the lice that infested the men in the trenches, leaving them miserable with itching red welts if they were lucky or shooting pains and high fevers if they were not. While this illness was not fatal, it was responsible for much sickness among the troops. It was nearly impossible to remain louse-free during time in a trench, since the nits remained in the seams of clothing even when washing was possible. Casual delousing, sometimes with the help of a candle flame or a match, was a constant activity.

Trench warfare was a factor, as well as a consequence, of the stalemate on the western front. While the trenches were the settings for vast

amounts of carnage and thus have come to be the identifying characteristic of the World War I battlefields in western Europe, these earthworks provided a level of shelter and safety where all other aboveground structures had been destroyed.

—Ellen Jan Jenkins

Bibliography

- Burg, David F., and L. Edward Purcell. *Almanac of World War I*. Lexington: University of Kentucky Press, 1998.
- Corrigan, Gordon. *Mud, Blood and Poppycock*. London: Cassell Military Paperbacks, 2004.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- Strachan, Hew. *The First World War*. New York: Penguin, 2003.

Major Battles of World War I

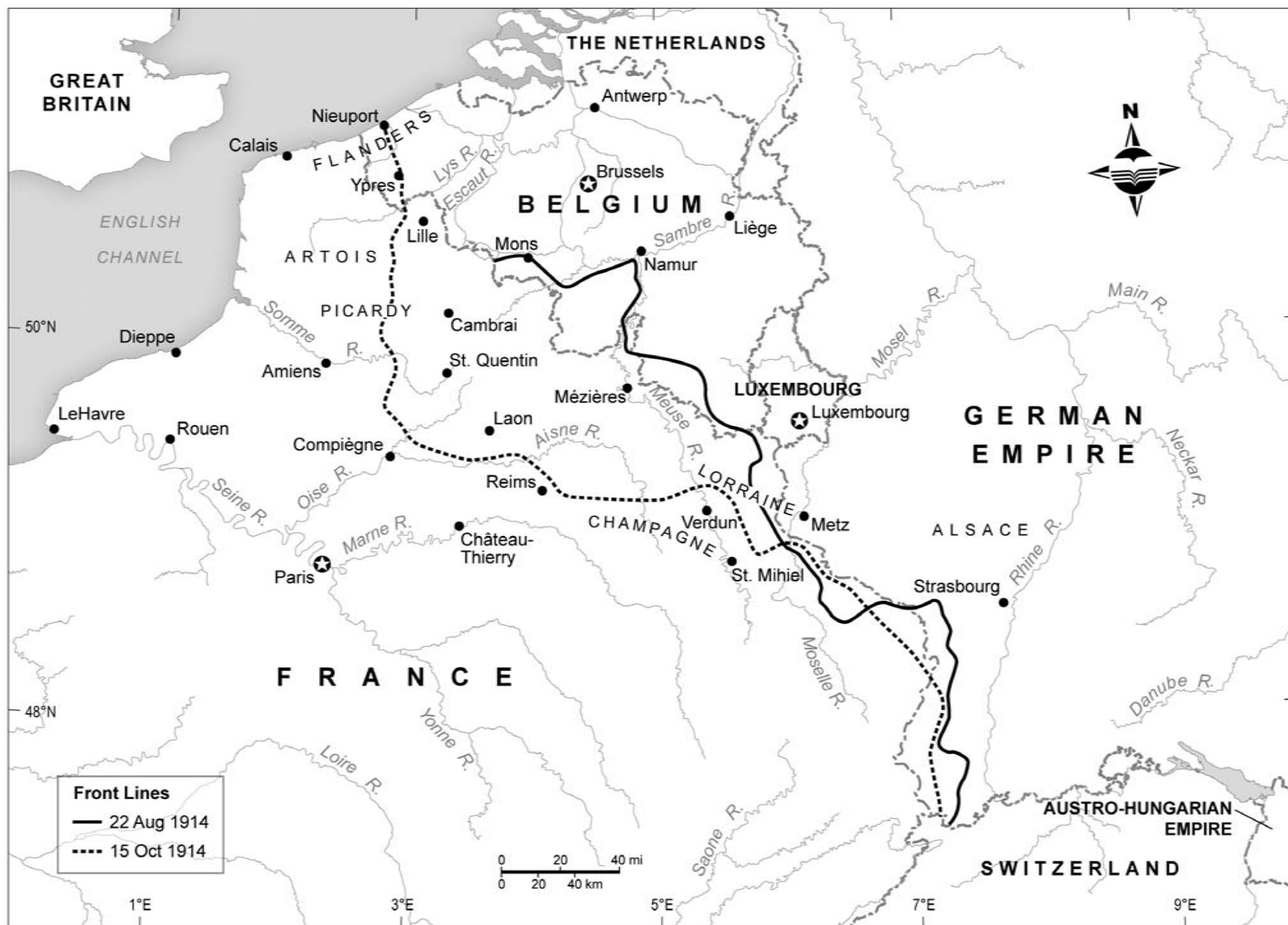
World War I (1914–1918) pitted massive conscripted armies of both the Entente (Britain, France, and Russia) and Central Powers (Germany, Austria-Hungary, and the Ottoman empire) alliance systems along various fronts in Europe, with smaller engagements in sub-Saharan Africa, Asia, and the Pacific. The western front, which ran along the length of Belgium and eastern France, bore the brunt of the German armies facing off against the British, French, and later U.S. forces throughout the war. The eastern front shifted between the borders of Germany, Austria-Hungary, and tsarist Russia to a more lengthy and scattered front inside Russia. The Italian Front was characterized by Italian engagements along its northern Alpine borders with the Habsburg empire. The Middle eastern front consisted of excursions by British dominion troops into Turkish territories in Gallipoli and Palestine, along with auxiliary Arab nationalist troops.

The British forces faced the German military along the northwestern sector of the western front along with their British dominion allies (Canadian, South African, and ANZAC forces). In the initial battles of 1914, the British relied on their crack military formations that formed into the British Expeditionary Force (BEF). In the

Battle of Mons (August 23, 1914), the BEF successfully engaged the numerically superior German forces before being forced to retreat back to the Marne River. As British and French positions were forced to retreat along various sectors of the western front after German forces were at the brink of reaching Paris, the First Battle of the Marne (September 6–10, 1914) signified a new Entente offensive to prevent further advances into central France. It also signified a greater willingness on the part of the Entente to prevent German advances toward the Atlantic from which they might later push into northern France. This “race to the sea” between BEF, French, and German forces led to increasingly large skirmishes, such as the First Battle of Ypres (October–November 1914) in which the BEF was crushed by German forces as it attempted to hold to the Belgian town for which this battle was named. As a result of these early battles the western front stabilized, in the sense that it shifted from a war of movement to one characterized by trench warfare along an increasingly stalemated front; accordingly, battle tactics and strategy changed on both sides. Future battles would consist of large conscript armies facing each other from trenches, separated by barbed wire in no-man’s-land, and facing machine gun and sniper fire, artillery barrages, and over-the-top raids.

The year 1915 was characterized by little movement in terms of the acquisition of territory along the western front and more so by the astonishing rate of casualties due to attrition warfare (numbering in the tens of thousands). In contrast, the year 1916 was characterized by large-scale battles with even larger numbers of casualties on both sides. The Battle of Verdun, fought in northeastern France, pitted several German and French armies from February 21 to December 18, 1916, and resulted in more than a quarter of a million deaths with at least 1 million wounded. French armies sought to prevent a major German push into northeastern France and engaged the bulk of their available troops to plug what was perceived as a vulnerable gap. Later that year, the Battle of the Somme (July–November 1916), which was a primarily British offensive in northern France, was halted by German forces. The Battle of the Somme would lead

WESTERN FRONT, 1914



► CHRONOLOGY OF MAJOR WORLD WAR I BATTLES

Western Front

Battle of Mons, August 23, 1914
 First Battle of Marne, September 6–10, 1914
 First Battle of the Aisne, September 13–28, 1914
 First Battle of Artois, September 27–October 10, 1914
 First Battle of Ypres, October 15–November 22, 1914
 Battle of Neuve Chapelle, March 10–13, 1915
 Second Battle of Ypres, April 22–May 25, 1915
 Second Battle of Artois, May 9–15, 1915
 Third Battle of Artois, September 25–October 15, 1915
 Battle of Verdun, February 21–December 18, 1916
 Battle of Jutland, May 31–June 1, 1916
 Battle of the Somme, July 1–November 18, 1916
 Second Battle of the Aisne, April 16–May 9, 1917
 Battle of Messines, June 7–14, 1917
 Third Battle of Ypres (Passchendaele), July 31–November 6, 1917
 Battle of Cambrai, November 20–December 6, 1917
 Fourth Battle of Ypres (Lys), April 9–29, 1918
 Third Battle of the Aisne, May 27–June 6, 1918
 Second Battle of the Marne, July 15–August 6, 1918
 Battle of Amiens, August 8–11, 1918
 Battle of St. Mihiel, September 12–19, 1918
 Battle of the Argonne Forest, September 26–November 11, 1918

Eastern Front

Battle of Tannenberg, August 22–29, 1914
 First Battle of the Masurian Lakes, September 9–14, 1914

Battle of Lodz, November 11–December 6, 1914
 Second Battle of the Masurian Lakes, February 7–22, 1915
 Gorlice-Tarnów Offensive, May 1–September 18, 1915
 Brusilov Offensive, June 4–August 10, 1916
 Kerensky Offensive, July 1–19, 1917

Italian Front

Battle of Caporetto, October 24–November 19, 1917
 Battle of Vittorio Veneto, October 23–November 3, 1918

Middle East Fronts

Gallipoli Campaign, February 19, 1915–January 9, 1916
 Siege of Kut al-Amara, December 6, 1915–April 29, 1916
 First Battle of Gaza, March 26, 1917
 Second Battle of Gaza, April 19, 1917
 Third Battle of Gaza, October 31–November 7, 1917
 Battle of Megiddo, September 19–21, 1918
 Battle of Sharqat, October 23–30, 1918

Naval Battles

Battle of Coronel, November 1, 1914
 Battle of the Falkland Islands, December 8, 1914
 Battle of Jutland, May 31–June 1, 1916

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to approximately 1.5 million casualties and would stand as one of the bloodiest battles of World War I. On July 1, 1916, alone, British forces would suffer an estimated 67,500 casualties, which included 19,200 deaths. As a result of this murderous episode, throughout 1917 the opposed armies showed restraint and were unwilling to commit high numbers of troops yet continued attrition tactics that continued to kill and maim in the tens of thousands.

On the eastern front, the Italian Front, and the Middle East, large-scale battles were also ubiquitous but were characterized by movement rather than stalemate. Along the eastern front,

where German and Habsburg forces faced tsarist troops along a wide front, after initial setbacks the Central Powers were able to push back the poorly equipped Russian armies into Russia. The Battles of Tannenberg and Battle of the Masurian Lakes of 1914 ensured that Russian armies retreated from eastern Prussia into Russian territory. German forces followed up on these victories through the Gorlice-Tarnow Offensive in 1915, advancing into Russian territory.

However, by 1916 Russian forces were able to advance against the Central Powers through the Brusilov Offensive, which was a major strategic setback for Austria-Hungary and forced

EASTERN FRONT, 1914–1918



Germany to draw divisions from the western front to buttress its ally (which significantly affected its position vis-à-vis Britain and France in that sector). In spite of this Russian breakthrough, German forces were able to sustain significant advances as the Russian Army collapsed, triggering domestic discord and eventually igniting the Russian Revolution of 1917 (and the resulting cession of vast tracts of Russia to Germany in the Treaty of Brest-Litovsk).

The Italians, entering the war as an ally of the Entente in 1915, fought mostly against Habsburg forces along its Austrian border in the Alps and along the Isonzo Valley. Italian efforts here would prove highly unsuccessful due to the inadequate tactics and training of Italian troops against the more highly trained and more effective Habsburg and German troops. In the Battle of Caporetto (October–November 1917), Habsburg and German troops would smash Italian offensives along the Isonzo Front.

The Middle Eastern campaigns, in which British forces (composed of mostly ANZACS and British Indian armies) and their Arab allies faced Ottoman forces, were characterized by major skirmishes in Palestine in attempts to capture Jerusalem and to secure the Suez Canal. The Gallipoli Campaign in the Bosphorus, which was meant to capture Constantinople, led to a large number of ANZAC and British casualties. As the British forces attempted to dislodge Turkish forces from high ground, Turkish snipers easily took down the advancing forces. The subsequent British retreat proved to be a more lasting success than this ill-advised offensive on the part of British command. British forces in Mesopotamia fought to dislodge Ottoman forces from Iraq, encountering significant resistance. British general Charles Townshend's surrender at Kut in 1916 exemplifies the strength of Ottoman forces in the region, not to mention that it proved an embarrassment for the Allies. Nonetheless, British forces and their Arab nationalist allies regained the initiative and were able to advance in the Middle East, particularly in Palestine, the Caucasus, and Iraq, at the expense of Ottoman forces through 1917 and 1918.

While major naval engagements in World War I did not contribute significantly to the strategic outcome on land, they were still ma-

jor displays of the destructive technology (e.g., Dreadnought-class battleships) available to the major antagonists, primarily Britain and Germany. The Battle of Coronel (1914) off the coast of Chile in Latin America was a major German Kaiserliche Marine victory at the expense of the British Royal Navy. In 1916 the Battle of Jutland, by far the largest naval engagement up to that time, pitted the German High Seas Fleet against the Royal Navy's Grand Fleet near the coast of Denmark. This was an attempt by Germany to break through the British naval blockade in the North Sea and regain access to Atlantic shipping sea-lanes. The outcome of this battle, which took place from May 31 to June 1, 1916, resulted in a strategic win for the Royal Navy in spite of suffering a higher loss of ships and men in contrast with Germany. Nonetheless, Germany avoided engaging its fleet against the British for the rest of the war. However, naval blockades continued to be utilized by both Britain and Germany (who used the strategy of unrestricted submarine warfare on British sea-lanes) and had an impact on supplies of foodstuffs and supplies from abroad.

With the entry of the United States in 1918, the western front shifted from a war of stalemate to one of large-scale operation and offensive on the part of the Entente. German forces from the eastern front were moved to the western front in significant numbers to engage the increasingly large armies buttressed with American units. In the Battle of Amiens, the Battle of St. Mihiel, and the Battle of the Argonne Forest, French and American troops broke through stiff German resistance and advanced with superior numbers of weapons and troops. Along the northern sector, British forces advanced from their positions to take advantage of the German retreats in the south. By November 11, 1918, the guns fell silent as the armistice came into effect, thereby ending four years of carnage and death.

—Abraham O. Mendoza

Bibliography

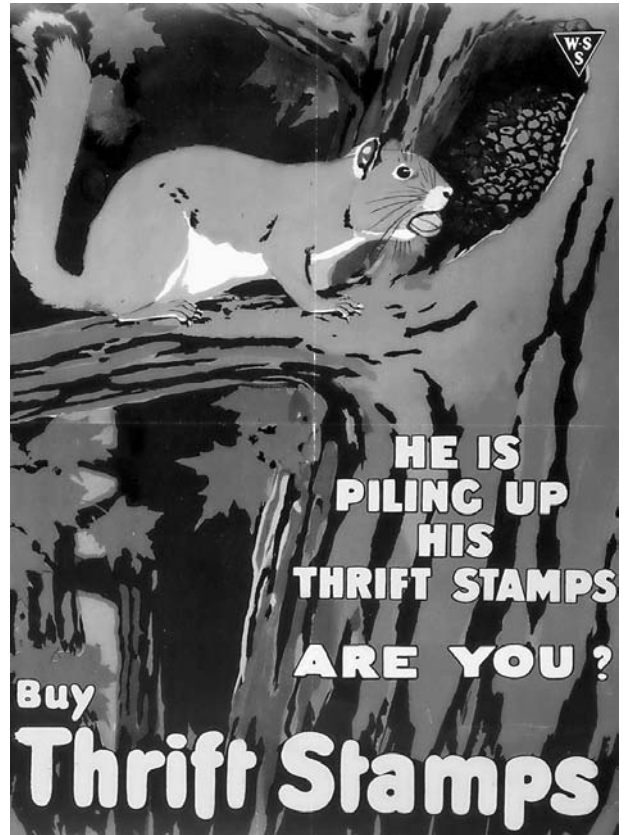
- Gilbert, Martin. *The First World War: A Complete History*. New York: Holt, 1994.
- Howard, Michael Eliot. *The First World War*. New York: Oxford University Press, 2002.
- Keegan, John. *The First World War*. New York: Vintage, 1998.

World War I—Propaganda and Espionage

The United States was officially neutral from 1914 to 1917 during the first years of World War I. This policy of neutrality was emphatically supported by the American president, Woodrow Wilson (1856–1924), whose own Calvinist outlook and largely isolationist constituency convinced him that it was not only possible but desirable for the United States to remain above the fray of the European belligerents. American goods, however, especially munitions, were crucial to the success of the Allied war effort. Almost from the beginning, American manufacturers became major suppliers for the Allies. Eventually as U.S. citizens became financially or emotionally entangled in the war effort, the question of American neutrality became a contentious matter. In order to sway American popular opinion to support their war efforts, each side of the conflict launched a campaign of propaganda in the United States. The British worked to make sure that the American government would not be pressured into adopting an arms embargo and thus eliminate their most important source of supply; the German propaganda campaign was designed to stir up support among German Americans, Irish Americans, and other American ethnic groups for such an embargo.

The Wilson administration cautioned the American public to remain strictly neutral but also refused to curtail the American traffic in arms, claiming that neutrality protected such trade. Pro-German groups made every effort to convince Congress to prohibit the export of American-made arms and equipment to the Allies, since the Central Powers were cut off from the United States by the British Royal Navy and so were unable to acquire American supplies. American neutrality thus favored the Allies, and the result within the United States was outrage from a variety of groups including pacifists and ethnic Americans whose families had come from nations now fighting for the Central Powers.

As a result of this controversy, Germany and Great Britain launched propaganda campaigns to sway public opinion in the United States. Although the flow of information to other parts of the world was carefully managed as well, the pri-



As the United States entered World War I, many citizens could not afford the Liberty Bonds that helped underwrite the war effort. Thrift Stamps, sold at 25 cents apiece encouraged children to become involved in the war effort. Many Thrift Stamps were sold by teachers in schools—this explains the fairly mild and nonbellicose imagery of this poster. (Library of Congress)

mary belligerents fought their most concerted propaganda war in the United States. Ultimately, the British were the winners on this front.

Early on August 5, 1914, within hours of declaring war on Germany, the British dispatched the cable ship *Telconia* to cut the telegraph cables connecting Germany to Spain, France, Africa, and the Western Hemisphere. Germany was forced to depend on the international mails and wireless telegraphy for communication with much of the world and was unable to send or receive information without problems. Throughout the war, the British held the advantage in communications and were able to deliver their reports to the American public several days before information arrived from Germany. In addition, within four months of the outbreak of war

the British Admiralty acquired copies of the three primary codes used by the German Navy. The Admiralty's staff quickly became experts at intercepting German wireless transmission.

The politician Charles F. G. Masterman (1873–1927) was put in charge of organizing British propaganda abroad. The result was the creation of the War Propaganda Bureau at Wellington House, a building in Buckingham Gate, London. Each division of the War Propaganda Bureau, known as Wellington House, was responsible for monitoring the press, keeping track of public opinion in the countries in its charge, and providing materials to the foreign press. These materials included articles, official documents, and transcripts of speeches that were specifically chosen to foster a positive view of the Allied war effort. Similar materials were also sent or given to influential citizens in each country, and representatives traveled abroad to follow trends and problems. Sir Gilbert Parker (1862–1932), a member of Parliament and a Canadian who had traveled extensively in the United States, was director of the bureau's American Ministry of Information. The major feature of British propaganda was secrecy. Not even President Wilson was to know that the British were working to influence public opinion in the United States.

German propaganda in the United States was much more boisterous and less subtle. All German activity in the United States was directed and financed by Count Johann von Bernstorff (1862–1939), ambassador to the United States and Mexico since 1908. Von Bernstorff, a popular figure in Washington society, always denied any connection with or knowledge of the activities of German agents in the Western Hemisphere, although intercepted documents repeatedly implicated him in their actions. Only in the 1920s was von Bernstorff's dual role of diplomat and chief of German intelligence established.

Propaganda fell to Dr. Bernhard Dernburg (1865–1937), who entered the United States as head of the German Red Cross but who was actually head of the German Information Service, established in New York in August 1914. German agents in the United States used every possible method to limit the availability or transportation

of munitions, but their methods were frequently heavy-handed or at cross-purpose with the German government. For instance, while the German Information Service was trying to gain the sympathy of black Americans, the government in Berlin was making statements of indignation over the Allies' alleged use of black colonial soldiers against the white European troops of the Central Powers.

Germany's covert activities in the United States were handled by Captain Franz von Papen (1879–1969), the German military attaché at the embassy, and Captain Karl Boy-Ed (1872–1930), the naval attaché. Funds for their operations came from an account, controlled by von Bernstorff, at the Chase National Bank in New York. German agents did not limit their efforts to propaganda; they also engaged in espionage and sabotage to disrupt munitions production or shipping.

British agents in the United States, under the direction of Captain Guy Gaunt (1869–1953), the naval attaché at the British Embassy in Washington, managed to squelch the activities of German saboteurs. Many British agents disguised the actual nature of their work by claiming to be representatives of insurance or engineering companies. Others, including British journalists, were able to combine their official and clandestine duties with less secrecy. Since Great Britain had become the major purchaser of American-made goods, especially munitions, the presence of countless British buyers and technical advisers in the United States was good cover for thousands of British agents, who were careful to avoid any appearance of acting upon instructions from their government in London. The British and the Germans carried their fight to the public of the neutral United States, thus turning the contest to sway American popular opinion into a third battle front.

—Ellen Jan Jenkins

Bibliography

- Beesly, Patrick. *Room 40: British Naval Intelligence, 1914–18*. San Diego, CA: Harcourt Brace Jovanovich, 1982.
- Link, Arthur S. *Wilson: The Struggle for Neutrality, 1914–1915*. Princeton, NJ: Princeton University Press, 1960.

Luebke, Frederick C. *Bonds of Loyalty: German-Americans and World War I*. DeKalb: Northern Illinois University Press, 1974.

Sanders, M. L., and Philip M. Taylor. *British Propaganda during the First World War, 1914–18*. London: Macmillan, 1982.

Armistice

The end of World War I began in mid-July 1918 with the Second Battle of the Marne, the last major German offensive of the war. On July 15 the German Army launched an attack against the Allied positions on the Marne River, a diversionary tactic that was to be followed by a crucial offensive in Flanders against the northern lines of the British Expeditionary Force. On July 18 a massive counteroffensive was launched by French, British, Italian, and American troops under orders from the Allied supreme commander and marshal of France, Ferdinand Foch. On July 20 the German Army began a retreat that took them, by August 5, back to the position from which they had begun their Spring Offensive. On August 8 the final Allied onslaught began; this was known as the Hundred Days' Offensive, and it included the Battle of Amiens and the Second Battle of the Somme as well as the destruction of the Hindenburg Line, making it clear to the German High Command that Germany could not win the war.

In the meantime, the Central Powers were falling apart. Germany's allies were exhausted materially and physically, with too few gains to support their war effort or justify their losses. Their populations were sick of war, hunger, and hardship. Bulgaria was the first of the Central Powers to sign an armistice, ending its participation in World War I on September 30, 1918. Bulgaria's collapse was quickly followed by the collapses of Turkey and Austria-Hungary. Turkey signed the armistice a month after Bulgaria, on October 30.

Germany and Austria-Hungary had sent an official request for an armistice based on Woodrow Wilson's Fourteen Points to the American president on October 4, although their appeal was only the first step. This move initiated a month of often-contentious consultation among the American, French, and British governments

THE "STAB IN THE BACK" MYTH

The myth of *Dolchstoßlegende* ("stab in the back") endured in Germany until the end of World War II. Due to the fact that Germany itself had never actually been invaded and that the treaty concluded with Russia had freed up millions of crack troops who could have been transferred to the western front, many within the German military grumbled that they had been "stabbed in the back" by the new socialist civilian leadership. This sentiment created a great deal of resentment toward the Weimar Republic in a period already riddled with political and economic chaos. In the end, the cause of the armistice was the lack of resources caused by the British blockade, specifically food. With famine killing large numbers of civilians, the newly installed German leadership decided to sue for peace with the Allies. Adolf Hitler and the Nazi Party would eventually exploit this myth, blaming liberalism, socialists and communists, and a powerful world Jewish conspiracy for the loss of the war.

over the terms of the armistice and negotiations between those powers and the Germans and Austro-Hungarians before hostilities officially ended. Among the demands made by the Allies was the insistence that Kaiser Wilhelm II of Germany abdicate. When Wilhelm procrastinated, Germany's new chancellor, Prince Max of Baden, took the initiative and announced the emperor's abdication on November 9. By this time, civil war had broken out in Germany. The kaiser went into exile in Holland, where he spent the rest of his life, dying in June 1941.

Austria-Hungary signed the armistice on November 3. Germany capitulated on November 11 at 5:00 a.m. with the armistice effective at 11:00 a.m. that same day, the 11th hour of the 11th day of the 11th month. A German delegation signed the armistice with the Allies in Foch's railroad car in the Compiègne Forest, near Paris. On June 25, 1940, after France was overrun by the German Army early in World War II, Adolf Hitler would exact his revenge by forcing the French to surrender to Germany in the same railroad carriage in the same forest.

The terms of the 1918 armistice with Germany required the Germans to evacuate all territories they were occupying within 14 days and to surrender 5,000 guns, 25,000 machine guns, 3,000 *minenwerfer* (mortars), 1,700 planes, and all submarines plus other matériel. All other German warships were to be disarmed and interned in neutral ports, under supervision by the Allies. In addition, the left bank of the Rhine River, of crucial importance to Germany, was to be administered by the Allies and the United States, while the right bank was to be designated a neutral zone. The Treaty of Brest-Litovsk, signed on March 3, 1918, and marking the cessation of hostilities between the Central Powers and the Bolshevik Russian republic, was officially repudiated. The armistice was to last for 36 days, after which it was to be subject to renewal. The agreement was regularly renewed until the signing of the Treaty of Versailles on June 28, 1919.

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Bibliography

- Gilbert, Martin. *The First World War: A Complete History*. New York: Henry Holt, 1994.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- Lowry, Bullitt. *Armistice 1918*. Kent, OH: Kent State University Press, 1996.
- Nicolson, Colin. *The First World War: Europe, 1914–1918*. Longman Companions to History. Edited by Chris Cook and John Stevenson. Harlow, UK: Pearson Education, 2001.

World War I—Paris Peace Conference

The treaty negotiations at the end of World War I were conducted at the Paris Peace Conference, which was officially convened at various locations in and around the French capital city on January 18, 1919, and lasted until January 21, 1920. Although the Treaty of Versailles (signed on June 28, 1919) with Germany was arguably the main settlement of the conference, it was only one of the five treaties that the Allied Powers and the United States negotiated with their former enemies who had made up the Central Powers. The other settlements were the Treaty of Saint-Germain with Austria (signed on Sep-

tember 10, 1919), the Treaty of Neuilly with Bulgaria (signed on November 27, 1919), the Treaty of Trianon with Hungary (signed on June 4, 1920), and the Treaty of Lausanne with Turkey (signed on July 24, 1923). The latter replaced the earlier Treaty of Sévres (signed on August 10, 1920) after the Turkish War of Independence abolished the Ottoman sultanate and rendered the Sévres treaty null and void.

Although the representatives of 32 countries participated in the negotiations, the primary figures at the Paris Peace Conference, known as the Big Four, were the president of the United States, Woodrow Wilson; the prime minister of France, Georges Clemenceau; the prime minister of the United Kingdom, David Lloyd George; and the prime minister of Italy, Vittorio Orlando. Germany, Austria, and Hungary were not invited to send delegates to the conference nor was Russia, having signed the Treaty of Brest-Litovsk, a separate peace agreement with Germany, in 1917. Although it was Wilson's resolute objective to oversee the implementation of his Fourteen Points as the basis for world peace, Britain, France, Italy, and many other nations had serious objections to the adoption of this framework.

Wilson had unveiled the Fourteen Points in a speech he made to a joint session of Congress on January 8, 1918. The first five items were wide-ranging objectives, addressing an end to secret treaties and calling for freedom of the seas, free trade, arms reduction, and arbitration of colonial disputes. The next seven items dealt with territorial issues, most specifically self-determination for the subject peoples of the former German, Austro-Hungarian, and Ottoman empires. The fourteenth item called for a "general association of nations" to protect the political and territorial integrity of all nations and to provide a venue for arbitration to resolve international disputes. This last item became the basis for the League of Nations, established by a separate covenant that was attached to each of the five peace treaties.

The other nations represented by the Big Four—Great Britain, France, and Italy—had war aims that stood in direct conflict with Wilson's idealistic peace plans. Orlando's aims on behalf of Italy at the Paris Peace Conference focused on the promises of territorial gains made in the 1915 Treaty of London. The Italians had joined

the Allies under the condition that Italy would be granted sizable territorial rewards, including most of the Dalmatian coast. Unfortunately, the Allies had made conflicting promises to other nations during the course of the war. Clemenceau put his efforts into protecting France by making certain that Germany was permanently weakened militarily and had to pay large reparations for the reconstruction of northern France. These goals meant that France could not support Wilson's plans for disarmament in Europe. As the representative of Great Britain, Lloyd George aimed for a more delicate balance; Germany should be punished for the deaths of 743,000 British troops but not to the extent that the balance of power in continental Europe was thrown to the French or to the point of crippling the Germans economically so that they were unable to maintain a healthy trade relationship with Britain. At the same time, however, the British had no intention of supporting Wilson's plan for freedom of the seas: the British Royal Navy was central to Britain's national security and to the security of the British empire.

The creation of the League of Nations was crucial enough in Wilson's opinion that he agreed to compromises demanded by Lloyd George and Clemenceau in return for various other points in the postwar settlement. Although 44 states signed the charter initially, the Republican-led U.S. Congress, swayed by politicians hostile to Wilson and concerned that he was bargaining away American sovereignty, would ultimately refuse to ratify the Treaty of Versailles. Therefore, the United States never joined the League of Nations, an omission that would be an important factor in the body's failure over time.

The treaties of Saint-Germain, Neuilly, Trianon, and Lausanne addressed national boundaries and territorial disputes, the protection of the rights of ethnic minorities, troop limitations, and reparations payments. The Treaty of Versailles addressed all of these issues but also included the controversial Article 231, the War Guilt Clause, by which Germany was forced to accept responsibility for having started World War I. Germany also had to agree to pay reparations for damage to civilian properties in the Allied nations. Overall, Germany was forced to sign away territories that included important mineral and industrial

➤ FORGOTTEN TREATIES AND BROKEN PROMISES

During World War I various agreements were made by the Allies with countries in order to convince them to enter the war against the Central Powers. Britain and Italy forged the secret Treaty of London in 1917, according to which Italy was to leave the Triple Alliance and join the Triple Entente. Furthermore, Italy was required to declare war against Germany and Austria-Hungary within a month. In exchange, Italy was to obtain some territorial gains at the expense of Austria-Hungary at the end of the war.

The Treaty of Sykes-Picot (1916) was a secret agreement between Britain and France dividing up the Ottoman empire into British and French spheres of influence after the war. The terms of the agreement, secretly negotiated by the French diplomat François Georges-Picot and the English diplomat Mark Sykes, conflicted with agreements made with Arab leaders in the Hussein-McMahon Correspondences of 1915–1916 that promised independence after the war and with the Balfour Declaration that designated a Jewish homeland in Palestine.

With the coming of power of the Bolsheviks during the Russian Revolution, these treaties, not secrets to the tsarist government, were made public to the world. At the Versailles Peace Conference in 1919, none of the promises made by these treaties came into fruition. Italy did not get all it desired for entering the war, the former Ottoman provinces taken from Turkey were developed into League of Nations Mandates instead of independent Arab states, and no Jewish homeland was developed in Palestine.

—Abraham O. Mendoza

resources as well as population, give up all colonial possessions to the League of Nations, to return Alsace and Lorraine to France, agree to limit the German Army to 100,000 troops, and refrain from manufacturing or importing weapons, tanks, poison gas, artillery, military aircraft, and submarines. In addition, the Rhineland was to be demilitarized and occupied for 15 years by Allied troops, and the valuable Saar mining region was to be administered for 15 years by the League of Nations, with its coal production to be awarded to France. Germany was also forced to

cede the Danzig Corridor, which made Danzig a free city under the administration of the League of Nations while also giving the Poles an outlet on the Baltic Sea but separating East Prussia from the rest of Germany.

Germany protested the harsh terms of the Treaty of Versailles, but the German counterproposals were rejected entirely. The Germans had little choice: they could sign the treaty, or war would be resumed within a matter of hours. Delegates of the government of Germany's new Weimar Republic signed the Versailles Treaty on June 28, 1919, exactly 5 years after the assassination of the Austrian archduke Franz Ferdinand at Sarajevo. The German population was stunned and bitter at the treaty's punitive terms.

—Ellen Jan Jenkins

Bibliography

- Gilbert, Martin. *The First World War: A Complete History*. New York: Holt, 1994.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- MacMillan, Margaret. *Paris, 1919*. New York: Random House, 2001.
- Nicolson, Colin. *The First World War: Europe, 1914–1918*. Longman Companions to History. Edited by Chris Cook and John Stevenson. Harlow, UK: Pearson Education, 2001.

Consequences of World War I

Despite the best efforts of the delegates to the Paris Peace Conference of 1919, Europe was not a more stable or a more peaceful place after the end of World War I. Germany, Austria-Hungary, and Russia were embroiled in civil wars as the Great War ended. Many national boundaries had been redrawn or had shifted without regard to the ethnicities of populations, and the Treaty of Versailles was an enormous disappointment to almost everyone involved, either because it was too harshly punitive toward Germany or not punitive enough.

France generally adhered to the latter view. With the destruction of 8,000 square miles (20,000 square kilometers) of agricultural land and nearly 2,000 square miles (5,000 square kilometers) of forest and the loss of more than

250,000 buildings and at least 1.3 million head of livestock as well as a 428 percent increase in the size of the national debt by the early 1920s, France's was a Pyrrhic victory. Despite the return of Alsace-Lorraine and the steps taken in the Versailles Treaty to forestall a German military resurgence in Europe, French premier Georges Clemenceau was voted out of office in 1920, having become a scapegoat for all the things he was not able to achieve at the peace conference.

The French government had promised to pay its citizens for all wartime damages but was unable to do so when the intended source of this money, German reparations payments, proved to be slow and unreliable. In January 1923 French and Belgian forces occupied the Ruhr Valley to take control of German coal, steel, and iron production and make up for the shortfall in reparations installments. The German miners and laborers in the Ruhr responded with work stoppages, and when their government began to print additional currency in order to support the workers, the result was disastrous inflation and the subsequent collapse of the German economy. In the massive wave of unemployment and the dire circumstances that followed, propelling right-wing movements into national support against Germany's Weimar government, Adolf Hitler and the National Socialist German Workers' Party (or Nazis) began their gradual rise to power.

Hitler blamed socialists and Jews for the Weimar government's acceptance of the terms of the Versailles Treaty and for all of Germany's instability and unemployment. He was able to garner a great deal of support from among the ranks of the unemployed, particularly those who had fought in the war and were convinced that Germany had been stabbed in the back by politicians. These malcontents made up the body of his *Sturmabteilungen* (Storm Troopers), who were given the task of eliminating all opposition to Hitler. As Hitler consolidated his power during the 1920s and 1930s, he discarded his plans to seize government by force and entered the mainstream of German politics, but his most devoted supporters remained those who considered Germany to have been too harshly punished for World War I and were determined

that Germany would eventually exact revenge upon its enemies.

Britain ended World War I deeply in debt to the United States. New York had also replaced London as the world's financial center during the course of the war, and with the loss of traditional markets in Germany, Austria, and Russia the British suffered burgeoning unemployment and labor strife. In addition, there was a serious shortage of housing, and the government's wartime promise that postwar Britain would be "a home fit for heroes" proved impossible to keep, giving the British establishment reason to worry that Bolshevism would take hold among the embittered population. By the middle of 1921, more than 23 percent of Britons were unemployed.

Italy had joined the Allies in World War I with the intention of gaining territory, notably the city of Trieste and the Dalmatian coast. When these territorial rewards were not forthcoming after the war, the Italian population considered themselves to have been cheated. In addition, Italy's government was weak and was being weakened further by antiparliamentary political opposition. Out of this erratic situation and economic distress, Benito Mussolini, the nationalist leader of the paramilitary Fasci di Combattimento (fascists), rose to power. His forceful opposition to socialists, anarchists, and communists made him popular with the Italian masses and catapulted him to high political position; he ruled Italy as prime minister and de facto dictator from 1922 to his execution by antifascist partisans in 1945.

The United States fared better economically than its wartime allies, although the Senate's failure to ratify the Treaty of Versailles effectively repudiated President Woodrow Wilson's efforts at the Paris Peace Conference and meant that the Americans never joined the League of Nations, a factor that worked to doom the League of Nations' chances of success over the long run. The United States reverted to its former isolationist approach to foreign policy.

The League of Nations, the international body that was created to enforce peace in the world through diplomacy and collective security, was thus forced to operate without the United States, the newest of the Great Powers and the one least damaged materially by World War I. This absence among the permanent mem-

➤ TREATY OF RAPALLO (1922)

In the years following World War I, various international conferences were held in order to restructure and map the future of Europe. During the Genoa Conference of 1922, representatives from 34 countries met to discuss common economic problems and establish a series of international economic compacts and standards. Outside of Genoa, in the town of Rapallo, representatives from Weimar Germany and the Soviet Union, both considered pariahs by most of Europe, met secretly to come to terms. The Treaty of Rapallo was an agreement made on April 16, 1922, between Germany and the Soviet Union in which each renounced all territorial and financial claims against the other following the Treaty of Brest-Litovsk (in which Germany seized much of the western Russian empire in 1917) and World War I. It also allowed the German Army to train in Soviet territory, in violation of the Treaty of Versailles, with the condition that Germany help instruct the Red Army. While relations between the two countries waned later during the interwar period, it did set a precedent for later collaboration against the West, culminating in the Nazi-Soviet Pact of 1939.

—Abraham O. Mendoza

bership on the League of Nations Council meant that the others—Great Britain, France, Italy, and Japan—were often reluctant to take action or impose economic sanctions against an aggressive nation. Italy and Japan ultimately withdrew from the League of Nations in the 1930s, as did Germany, which had only been allowed to join in 1926. Despite some early diplomatic successes in the resolutions of disputes among smaller countries, the League of Nations proved unable to stop the aggression of these former members and was also unable to prevent the coming of World War II.

—Ellen Jan Jenkins

Bibliography

- Gilbert, Martin. *The First World War: A Complete History*. New York: Holt, 1994.
- Keegan, John. *The First World War*. New York: Knopf, 1999.
- MacMillan, Margaret. *Paris, 1919*. New York: Random House, 2001.

■ Introduction: The Second World War

World War II was a global conflict that stemmed from a European-centered conflict that began in Europe in 1939 and a Sino-Japanese conflict that began in eastern Asia in 1937. The ensuing warfare directly affected much of Europe, North Africa, eastern and Southeast Asia, and indirectly affected all other world regions. World War II was the largest conflict in world history, given the amount of troops and war matériel and the vast scale of combat fronts in eastern Asia, the Pacific, Eurasia, and northern Africa. The eastern front, where 6 million Soviet troops confronted 4 million Axis troops over a span of thousands of miles from the Arctic to the Caucasus Mountains, stands as a stark example of the immense scale of the conflict. Moreover, the war led to millions of civilian deaths through the destruction of cities by strategic aerial bombardment (e.g., the firebombing of German and Japanese cities by Allied air forces, the dropping of the atomic bomb on Hiroshima and Nagasaki) and artillery attacks by invading armies (e.g., the German blitz on Polish cities, the Soviet siege of Berlin of 1945). The development of technologies that offered new methods of killing (e.g., Zyklon-B poison gas, the atom bomb, and B-17 Boeing Flying Fortress bombers) also characterized the nature of this global conflict. Moreover, the deliberate systematic destruction of civilians by military authorities in tandem with civilian collaboration, most notably in the Holocaust, was an example of the vast scale of destruction of human life made possible in the context of total war. In contrast, those areas least affected by war, such as the Americas and sub-Saharan Africa, were still heavily involved, providing troops and/or material to the Allies.

—*Abraham O. Mendoza*

Causes of World War II

The causes of World War II stemmed primarily from the 1919 peace settlement that concluded World War I. The Treaty of Versailles resulted in bitterness and unrest within Germany, as it forced

the German government to accept responsibility for the outbreak of war, pay reparations to the Allies, reduce the size of its navy and army, promise not to manufacture munitions, and relinquish territory to other European powers. Failures in diplomacy and the worsening economic conditions that culminated in the Great Depression also spurred Germany's return to militarism.

The failure of world leaders to establish institutions or legislation to ensure peace and security was another factor that contributed to the outbreak of World War II. During the 1920s British prime minister Ramsey MacDonald entered into negotiations with German foreign minister Gustav Stresemann and French foreign minister Aristide Briand to prevent rearmament among the European nations. However, the agreement was compromised when the foreign ministers and prime minister sought to include special provisions that benefited their respective nations. The League of Nations, which was established following World War I, was also intended to prevent conflicts among foreign countries, but each nation attempted to promote its own interests rather than provide collective security. The U.S. refusal to join the League of Nations also weakened its effectiveness. Although 64 countries attempted to end international unrest by signing the 1928 Kellogg-Briand Pact that denounced aggression and outlawed war, the legislation proved futile in preventing renewed conflicts because it lacked provisions for enforcement.

Economic conditions also contributed to the outbreak of World War II. Burdened by the demands of reparations payments and a slow economic recovery, Germany's economy suffered from inflation, which caused the republic's money supply to become nearly worthless. When Germany defaulted on its reparations payments, financial panics and industrial collapse spread throughout the world economies. European nations attempted to stabilize their economies by curtailing imports of American goods and defaulting on their foreign loans. Instead of improving the economic conditions in Europe, these policies contributed to the Great Depression in the United States, which created further

EUROPE, SEPTEMBER 1939



THE UNITED STATES' ENTRANCE INTO WORLD WAR II

Following the outbreak of war in Europe, Americans debated whether the nation needed to intervene in the conflict or remain neutral. During the next two years the United States shifted its policy from neutrality to preparedness. U.S. president Franklin D. Roosevelt supported expanding the nation's armed forces, constructing defense plants, and aiding the Allies. On December 7, 1941, the Japanese attack on Pearl Harbor caused the United States to join the war on the side of the Allied forces.

In the late 1930s the threat of war divided public opinion among most Americans. While isolationists wanted the country to stay out of the international conflict, others known as the interventionists urged political leaders to aid the Allied forces. Nonetheless, Congress passed several Neutrality Acts during the 1930s that reinforced the isolationist movement throughout the nation. In 1939 the U.S. government declared neutrality and stopped all shipments of American arms to warring nations.

Despite the political pressure from the isolationists, President Roosevelt moved the nation closer to war by establishing the National Defense Advisory Commission and the Council for National Defense in May 1940. The president also urged the American public to provide the Allied troops with military supplies through sale, loan, or lease. On March 11, 1941, Congress adhered to Roosevelt's recommendation by passing the Lend-Lease Act.

On December 7, 1941, Japanese forces attacked Pearl Harbor in Hawaii, which destroyed a portion of the American Pacific Fleet. The following day Roosevelt asked Congress for a declaration of



President Franklin D. Roosevelt signs the declaration of war against Japan on December 8, 1941, a day after the Japanese attack on Pearl Harbor. (National Archives)

war against Japan. With only one dissenting vote, congressional leaders voted in favor of war. On December 11, 1941, Germany and Italy declared war on the United States, and the U.S. Congress responded by declaring war on the two countries.

—Kevin M. Brady

economic havoc worldwide. As world leaders struggled with a depressed economy and rising unemployment, they withdrew from world affairs to concentrate on national issues.

The depression also enabled Adolf Hitler to become chancellor of Germany in January 1933. As leader of the National Socialist Workers Party, or Nazi movement, he promised to renew German pride and nationalism. Once in power, Hitler formed a fascist government bent on establishing a new German empire, the Third Reich. By the autumn of 1933 Hitler withdrew German repre-

sentatives from the League of Nations because he believed that the organization did not serve Germany's national interests. Furthermore, Hitler promoted German rearmament and urged German industries to begin producing military equipment. Thus, Hitler's rise to power resulted in a new arms race within Europe.

The economic crisis of the 1930s also impacted Japan by severely limiting its foreign trade. Japanese leaders concluded that territorial expansion would restore the nation's economy by enabling Japan to dominate international trad-

ing routes and gain access to natural resources. In 1931 Japanese forces seized control of Manchuria. This action represented the first step in the creation of a Greater East Asia Co-Prosperity Sphere, which was intended to promote regional economic cooperation under Japanese leadership. When the League of Nations condemned Japan for its actions, Japanese leaders withdrew from the international organization. Japan continued its territorial aggrandizement by invading northern China in 1937. While Japanese soldiers gained control of China's capital city, Nanking, they were unable to defeat the Chinese forces. By the late 1930s the conflict in Asia turned into a war of attrition.

Meanwhile, Benito Mussolini, who seized power in Italy in 1922, embarked on an aggressive imperialistic policy by attacking Ethiopia in 1935. Following the invasion, Ethiopian emperor Haile Selassie called upon the League of Nations to thwart Mussolini's efforts. The League of Nations responded by sanctioning Italy for its actions, but this measure proved futile, as Italian forces easily defeated the Ethiopian soldiers, thus transforming Ethiopia into an Italian colony.

In 1936 civil war erupted in Spain when General Francisco Franco led fascist rebels in an uprising against the Loyalists who supported the existing Spanish republican government. During the insurrection Germany and Italy, which had formed the Rome-Berlin Axis, provided Franco with soldiers and military equipment, while the Soviet Union assisted the Loyalists with limited aid. However, other European nations and the United States did not provide assistance to either side during the conflict. By 1939 Franco's fascist forces defeated the Loyalists and established an authoritarian government in Spain. As the events in Spain unfolded, Hitler noted the reluctance of European leaders to lend aid to the civil war combatants.

Realizing that European leaders were reluctant to become involved in another conflict and believing that they would not interfere with his plans of unifying all ethnic Germans within the Third Reich, Hitler ordered the German Army to reoccupy the Rhineland, which had been placed under French authority by the Treaty of Versailles. In 1936 the German Army marched unopposed into the Rhineland, as French troops

failed to mount any offense against the invading forces. Hitler continued his reunification efforts by annexing Austria in 1938. That same year Hitler targeted the German-populated Sudetenland, which had been granted to Czechoslovakia by the Treaty of Versailles.

Fearing that a war might erupt between Germany and Czechoslovakia over Sudetenland, British prime minister Neville Chamberlain, Premier Edouard Daladier of France, and Mussolini met with Hitler in Munich. At the Munich Conference Chamberlain and Daladier followed a policy of appeasement, which resulted in Germany gaining control of Sudetenland in exchange for Hitler promising not to seek additional territory. Hitler's promise proved short-lived when German forces invaded Czechoslovakia in 1939. Following Germany's success in Czechoslovakia, Hitler made plans to attack Poland. Realizing the ineffectiveness of appeasement, Great Britain and France began to rearm and announced that they would come to Poland's aid if Germany invaded the territory.

Concerned that the Soviet Union might join forces with the British and the French to thwart Germany's efforts to invade Poland, Hitler offered Soviet premier Josef Stalin territorial concessions, including portions of Poland, Finland, and the Baltic States, if the Soviet Union agreed not to wage war against Germany. Although deep animosity existed between Germany and the Soviet Union, the two nations signed a Nazi-Soviet treaty of nonaggression in August 1939. On September 1, 1939, German forces invaded Poland, and two days later France and Great Britain declared war on Germany, thus beginning World War II.

—Kevin M. Brady

Bibliography

- Crozier, Andrew J. *The Causes of the Second World War*. Malden, MA: Blackwell, 1997.
- Offner, Arnold A. *The Origins of the Second World War: American Foreign Policy and World Politics, 1917-1941*. New York: Praeger, 1975.
- Watt, Donald C. *How War Came: The Immediate Origins of the Second World War, 1938-1939*. London: Heinemann, 1989.
- Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

Pacific Theater/Fronts

The Pacific theater of World War II, which encompassed large parts of East Asia, Southeast Asia, and Oceania, pitted the enlarged Japanese Empire (or the Greater East Asia Co-Prosperity Sphere) against the ABCD powers (the United States, Great Britain, China, and the Netherlands) and later the Soviet Union. The Pacific War was launched by Japanese militarists seeking economic and military hegemony in East Asia and the exclusion of Western powers in the region after being diplomatically and economically excluded during the interwar period. The Pacific War began when Japanese forces invaded Peking (Beijing) after provoking Nationalist Chinese forces in the Marco Polo Bridge Incident in July 7, 1937, and ended when Japan surrendered unconditionally to Allied forces on August 15, 1945.

Initial hostilities between Chinese Nationalist forces and the Japanese Kwantung Army began with the Mukden Incident of September 18, 1931, otherwise known as the Manchurian Incident. Japanese agents blew up a section of the South Manchurian Railway near the border of the Japanese concession in order to precipitate war with China over Manchuria. This led to the Japanese invasion of Manchuria and the creation of the puppet state of Manchukuo in 1932. Chinese political disunity in confronting the Japanese and a muted international reaction encouraged further Japanese hostility toward China and, with the provocation of the Marco

Polo Bridge Incident, full-blown war in 1937, six years later after initial confrontation. The Second Sino-Japanese War (1937–1945) that Japan waged on Chinese Nationalists and Communists raged along the Chinese coastal provinces as Chinese forces held onto inland territories and the stronghold capital of Chungking. While Japanese forces were able to hold onto the coastal cities, they faced stiff Chinese resistance farther inland.

By 1940 Japanese ambitions were set also on the acquisition of British, U.S., French, and Dutch colonial possessions in East and South Asia and Oceania. Events in Europe, thought to be distracting most of the world's attention, persuaded Japanese political and military leaders to take the initiative given the fall of France and the Netherlands and Britain's isolation. However, the United States remained engaged in Asian affairs, and the Soviet Union remained a concern for the Japanese. The Japanese had already fought the Soviets in a skirmish known as the Nomonhan Incident on the Manchurian border in 1939. In 1940 the Japanese military was divided between army demands to march against the Soviets and naval demands to engage the United States. It was decided that events in Europe presented Japan the opportunity to attack British, Dutch, and U.S. possessions in the Pacific and so gain raw materials necessary for a prolonged war. However, this southern strategy necessitated Soviet neutrality, which had already been negotiated in September 1939 in the Soviet-Japanese Neutrality Pact. In addition, Japanese forces occupied northern French Indo-China in 1940, given that this was now under the rule of the Axis-collaborationist Vichy French government, an Axis ally, to engage China along another front and also giving it a foothold in Southeast Asia for future expansion.

The bold Japanese attack on the United States at Pearl Harbor on December 7, 1941, and on the British naval base at Singapore the following day, in addition to simultaneous tactical attacks by Japanese forces on Dutch colonies, brought the United States into World War II and Britain into a war against Japan. While these efforts were meant to convince the United States to negotiate its position in Asia, it had the opposite effect and fueled American public opinion firmly for war against Japan. However, much of the following



U.S. Army reinforcements disembark from tank landing ships and proceed across a coral reef toward the beach on Saipan, Mariana Islands, in the summer of 1944. (National Archives)

PACIFIC THEATER, 1941–1945



➤ JAPANESE EXCLUSION—VERSAILLES, THE WASHINGTON SYSTEM, AND THE DEPRESSION

Japan's expansionist foreign policy of the interwar years gradually developed, under a nationalist military clique, in reaction to its perceived exclusion from the Great Powers and the world economy. At the end of World War I Japan, after having vigorously participated on the side of the Entente Powers and captured German possessions in Asia and Oceania, was promptly rebuffed by the Great Powers of Europe. Racist considerations at the Versailles Conference of 1919, particularly by Australia, did not grant Japan the equality it sought as a Great Power. Furthermore, the Washington Treaty of 1922, negotiated by the United States, Britain, Japan, France, and Italy, relegated the British and U.S. fleets to parity and the Japanese fleet to third place among the world's navies. The United States and Britain argued that they needed larger navies given their global commitments and that Japan should suffice with a Pacific navy, given its preoccupation with regional interests. However, Japan saw this as another insult to its Great Power status. In addition, the global economic slump of the 1930s led to increased economic isolation in the form of tariffs, protections, and semiautarky on the part of much of the developed world, thereby closing off supplies of raw materials and markets to Japan and adding fuel to the fire of resentment.

—Abraham O. Mendoza

year consisted of the Japanese dislodging British and U.S. forces from the Pacific region and capturing large numbers of prisoners in the Philippines, the Dutch East Indies, and Burma. In addition, Allied forces retreated to Australia. Official Japanese propaganda painted this war as one of liberation from Western imperialism with the goal of creating an East Asia Co-Prosperity Sphere, an "Asia for the Asians." However, Japanese atrocities against civilians in China, French Indo-China, and the Philippines, among other captured territories, proved otherwise.

The latter half of 1942 proved fortuitous for the Allied Powers after nearly a year of setbacks in the Pacific theater and sustained Japanese offensives. The Battle of the Coral Sea and the Battle of Midway destroyed the majority of the Japanese battle fleet and its adjunct air forces and

put the Allies on the offensive. The year 1943 was marked by intensified Allied attacks designed to dislodge Japanese advances in the Pacific. The island-hopping campaigns that followed allowed U.S., Australian, and British forces to engage Japanese forces through amphibious attacks on important strongholds such as in the Battle of Guadalcanal of 1942–1943. Allied advances in 1944 continued to roll back Japanese advances in South Asia with the goal of establishing air bases closer to Japan to bomb cities and destroy its ability to continue the war. The Battle of Saipan in the Solomon Islands and the Leyte Gulf in the Philippines brought the war ever closer to the Japanese home islands and also brought the beginnings of a sustained aerial bombing campaign. The Allies were also providing Chinese forces matériel through supply routes in recently captured territories in Southeast Asia.

By 1945 most Japanese cities had endured constant aerial bombardment at the hands of the U.S. Army Air Corps Bomber Command as the Japanese military's grip on their empire loosened. The Battle of Okinawa, which lasted from March to June 1945, was the Japanese military's last-ditch effort to deter Allied forces from invading Japan proper. Desperate strategies, such as kamikaze attacks on U.S. carriers, did little to prevent Allied advances. In the Yalta Conference of February 1945 the United States had ensured eventual Soviet participation in the Pacific War subsequent to the end of the European war. The U.S. decision to drop atomic weapons to end the war in August 1945, stemming from fears of massive U.S. casualties in the event of a major U.S. invasion of the Japanese home islands, was also arguably motivated by the upcoming Soviet invasion of Manchuria, China, and Korea. The United States was in effect racing with the Soviets to prevent a similar division of spoils in Asia as had occurred in eastern Europe. Both the Soviet invasion and the U.S. bombs played a significant part in the eventual Japanese surrender of August 10, 1945.

—Abraham O. Mendoza

Bibliography

Dower, John W. *War without Mercy: Race and Power in the Pacific War*. New York: Pantheon, 1986.

Hasegawa, Tsuyoshi. *Racing the Enemy: Stalin, Truman, and the Surrender of Japan*. Cambridge, MA: Belknap Press of Harvard University Press, 2005.

Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

Mediterranean Theater and Fronts

In the Mediterranean theater of World War II, which included the Balkans, Italy, North Africa, and the Middle East, German and Italian forces faced mostly British commonwealth, Free French, and U.S. troops. The Mediterranean theater of operations became crucial to the Axis objective of closing off British access to the Suez Canal, thereby closing off supply routes to the Soviet Union through the Middle East. Furthermore, by locking the Allies out of the Middle East and securing access to oil fields in the Caucasus and Iraq, the Axis could potentially link up with Japan in India much later. British imperial interests in Africa and the Middle East led some Soviet and American leaders to believe that operations in the Mediterranean front were merely to protect the British empire from Axis invasion. However, these operations proved to be strategically decisive; by extracting troops from the eastern front with the Soviet Union, the Allied forces were able to engage the Axis forces on multiple fronts.

The Italian conquest of Abyssinia (Ethiopia) in 1936, in addition to its substantial African forces in Libya, meant that Italy threatened British and French interests in the eastern Mediterranean region. However, Italy did not play a decisive role in German conquests in Europe in 1939 and 1940 but instead played merely a peripheral role in distracting British and French forces in the Mediterranean. Benito Mussolini decided to take the initiative in invading Albania and Greece in late 1940, having stood idly by as his cohort Adolf Hitler conquered most of western Europe. Albania was already a virtual protectorate of Italy and thus an easy occupation for Italian forces. However, the British-backed independent state of Greece was not an easy occupa-

tion, and the Greek Army launched a huge counteroffensive that pushed Italian troops back into Albania.

Simultaneously, Italian troops in Libya were advancing into British Egypt. They were met by a devastating British counteroffensive in December 1940 in the Sidi Barrani region along the Egyptian-Libyan border. Further British offensives destroyed Italian positions in Bardia, Tobruk, and Derna in Axis North Africa. British attacks on Italian positions in the Horn of Africa dislodged Italian power from Italian-occupied British Somaliland and Italian Eritrea and Ethiopia, thereby freeing those countries from Axis rule and capturing large numbers of Italian soldiers. These actions ensured British control of East Africa, the Red Sea littoral, and the Suez Canal and also made Italy vulnerable to Allied attack.

With Italy suffering setbacks in North Africa and in the Balkans, the Germans had no choice but to back their rapidly crumbling ally. In late 1940 and early 1941 Germany sent forces to buttress Italy's retreating positions in Greece and in North Africa. The Germans crushed Greek forces and their British allies and also advanced into Yugoslavia to secure the Balkans for the Axis Powers. In North Africa, the German Afrikakorps, composed of mechanized infantry and tank corps under the command of General Erwin Rommel, advanced steadily against British offensives in Libya.

Erwin Rommel's North African army held British troops in check through most of 1941 and 1942, securing an Axis toehold on much of western North Africa buttressed by Vichy French forces in the West. While Germany sought to capture British positions in Egypt and Palestine and moved up toward the Caucasus region to attack the Soviets, the Italians pushed for the dislodgement of Allied forces in Malta to secure their passage to North Africa. The Germans won out and decided for an all-out invasion of Egypt. However, in the Battle of El Alamein of 1942, a major turning point in the Mediterranean front, the British Eighth Army halted Rommel's North African forces and went on the offensive on a massive front, pushing the Axis back into Libya.

These Allied successes were followed by a massive U.S. and British invasion—known as Operation Torch—on the Atlantic and Mediterranean

► THE HOLOCAUST IN AXIS NORTH AFRICA— THE GLOBAL SCOPE OF THE SHOAH

Many historians of the Holocaust typically refer to the Holocaust as a European event, overlooking German actions toward Jews outside of the European theater of operations. However, events in Vichy French Tunisia illustrate German intentions for Jewry on a global scale. In November 1942 German authorities took charge of Tunisia from Vichy French control and established a local Judenrat (Jewish council), confiscated Jewish property, and extracted huge financial penalties from the local Jewish community, all similar procedures to those practiced in Europe. The Tunisian Jewish community was required to provide money and services for the German occupation. Furthermore, Tunisian Jews were forced to wear the Star of David badge, much like their fellow European Jews. Approximately 4,000 Jews were sent to concentration camps in Tunisia, with some shipped to extermination camps in Europe. Many Tunisian Jews perished through shootings, death marches, starvation, and disease throughout the Axis occupation. This chapter of the Holocaust ended when Tunisia was liberated by the Allies in May 1943.

—Abraham O. Mendoza

coasts of French Northwest Africa. Operation Torch was the second front agreed to by Allied leaders to take some of the pressure off the Soviet Red Army in the eastern front. Soviet leader Josef Stalin reluctantly accepted this Allied operation, which he suspected was part of a U.S.-British ploy of letting the Germans and the Soviets bleed each other to death while the Western allies fought sideshow operations. The Axis forces, distracted with events in the eastern Mediterranean and European fronts, were caught by surprise. While French forces in North Africa loyal to Vichy proved to be an obstacle to Allied advances, arrangements with German-Allied Vichy leaders, highly controversial with Allied domestic public opinion, allowed for Allied movement into Axis-held Tunisia. Troops from the eastern front were brought in to hold this last bastion of Axis power in North Africa, as it was surrounded by British commonwealth and American forces. German

military authorities maintained that it was pivotal to hold this position or risk exposing Italy to Allied invasion. German forces were able to hold off and defeat Allied forces at the Kasserine Pass and stop advances by the British Eighth Army; however, major counteroffensives by U.S. and British forces eventually led to the dislodgement and evacuation of large numbers of Axis troops in Tunisia by mid-1943.

Along with advances in the eastern front, the disengagement of Axis forces from North Africa was a great success for the Allies. It ensured Allied control of the Mediterranean region, which was also assisted by the British and U.S. fleets and their active pursuit of German and Italian submarines. In the summer of 1943 Allied forces began their invasion of Sicily and southern Italy, which was the first successful Allied invasion of mainland Europe of World War II. However, this also allowed for the collapse of fascist power in Italy and subsequent German occupation. In spite of the Italian surrender, German forces held much of the northern portion of Italy for much of 1943 and 1944. Nonetheless, this new front took many German divisions from the eastern front as well as from the defense of the Atlantic Wall, ensuring future advances along the latter fronts in 1944 and 1945.

—Abraham O. Mendoza

Bibliography

- Gilbert, Martin. *The Second World War: A Complete History*. New York: Holt Paperbacks, 2004.
- Keegan, John. *The Second World War*. New York: Viking, 1990.
- Moorehead, Alan. *The March to Tunis: The North African War, 1940-1943*. New York: Harper and Row, 1967.
- Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

European Theater and Fronts— World War II

During World War II, the Allies (Britain, the British commonwealth, the United States, and the Soviet Union) confronted the Axis Powers (Germany, Italy, Romania, and Hungary) along various fronts in Europe. In 1940 after the fall of France,

MAJOR BATTLES OF WORLD WAR II—EUROPEAN THEATER

September 1–October 6, 1939	Invasion of Poland
1939–1945	Battle of the Atlantic
September 8–28, 1939	Battle of Warsaw
April 9–June 10, 1940	Invasion of Norway and Denmark/Operation Weserübung
May 10–June 25, 1940	Battle of France
May 26–June 4, 1940	Dunkirk Evacuation
July 10–October 31, 1940	Battle of Britain
June 22, 1941–January 7, 1942	Invasion of Russia/Operation Barbarossa
July 17, 1942–February 2, 1943	Battle of Stalingrad
July 4–August 23, 1943	Battle of Kursk
June 6–August 25, 1944	D-Day Normandy Landings/Operation Overlord
December 16, 1944–January 25, 1945	Battle of the Bulge/Ardennes Offensive
April 16–May 2, 1945	Battle of Berlin

—Abraham O. Mendoza

Poland, and much of Europe to the German blitzkrieg, when Britain faced the full onslaught of Axis forces alone, the English Channel was the only barrier in existence between the British Isles and Hitler's so-called Fortress Europe. Following Germany's Operation Barbarossa directed against the Soviet Union in June 1941, German forces pushed its eastern front in three directions, threatening the Soviet capital and seizing vast territory and resources to feed the German war machine. However, with the entry of the United States in the war in December 1941 following the Japanese attack on Pearl Harbor and Germany's declaration of war, the Allies went on the offensive and encircled Germany, thereby slowly closing in on the grip of the Third Reich on Europe.

Britain, the British commonwealth (Canada, Australia, New Zealand, and South Africa), and British colonial forces (especially India) faced the armed might of the German military across the English Channel in 1940. The Battle of Britain, fought mostly over British skies by the German Luftwaffe and the British Royal Air Force (RAF), was an attempt by the German military to destroy Britain's ability to defend itself and ensure an invasion of the British Isles (Operation Sea Lion) by the German Wehrmacht (Armed Forces). However, British civilian morale and the RAF were able to withstand repeated attacks in

spite of the destruction of various English cities. German attacks subsided as Hitler decided to invade the Soviet Union in mid-1941.

As the Soviet Union was attacked by three major German offensives in 1941 (Operation Barbarossa), it lost huge swathes of territory as well as soldiers and industrial plants to the Axis. As the front stabilized and the Red Army held against the Wehrmacht, the eastern front extended approximately 1,000 miles (1,600 kilometers) into the Soviet Union. This front was further divided into a Northern front along the outskirts of Leningrad, a Central front with the Red Army defending Moscow, and a Southern front along the Volga River and the Caucasus. German forces aimed to seize and raze the major Soviet cities and also sought to incorporate vast tracts of Soviet farmland and industrial plants in order to augment the German war machine. In the South, they specifically aimed to seize the oil fields in Baku.

In 1942 the German command under Hitler decided to attack the city of Stalingrad to gain access to the Baku oil fields and also to destroy the symbolic city named after their ideological nemesis. However, the year-long battle of Stalingrad halted German forces, which had to resort to street fighting rather than field engagement. The Red Army was able to gain the initiative and

COLLAPSE OF GERMANY, 1945



POLAND AND EASTERN EUROPE, 1939–1940



push back the German armies, taking advantage of the winter conditions. The so-called General Winter, which had stalled the German forces back in 1941, was now killing droves of German soldiers because of dwindling supplies and lack of proper provisions for these conditions. With this breakthrough, Soviet forces on the Central front were able to counterattack a German mechanized assault in 1943 in the Battle of Kursk, which was the largest engagement of tanks in world history. This ensured the slow and gradual advance of the Red Army westward back toward the German Reich.

The entry of the United States into the European theater brought huge resources to bear on the German war machine. The Battle of the Atlantic, in which Britain and the United States fought against German U-boats, ensured the provision of American supplies to the Allies. Greater coordination among the Allies after the Tehran Conference in 1943 ensured that the unconditional surrender of the Axis Powers was the ultimate objective. The entry of the United States also led to the preparation of a second front in the West to offset the pressure on the Soviets by Axis forces. Britain, British commonwealth, and U.S. forces, already fighting in North Africa, decided to open up a front in Italy and a subsequent one in northwestern France. Allied forces successfully invaded Sicily and southern Italy, meeting fierce German resistance as they headed north into the peninsula in 1943. Although this front tied down significant numbers of German troops, it did not allow for significant breakthroughs into Europe by the United States and Britain.

However, the Allies had already planned for an eventual attack on northern France for 1944. Through the Normandy Invasion (Operation Overlord) of June 6, 1944, Allied forces rapidly established themselves in northern France after meeting fierce initial German resistance. British and U.S. forces seized the initiative and pushed German forces into central France. By August 25, 1944, Paris was liberated by Allied forces as the Wehrmacht retreated eastward into the Reich. Furthermore, U.S. and British bombing attacks on German cities had intensified to destroy German industrial capacity and morale. The destruction of German cities resulted in great loss

of life and property but did not make a significant dent in German industrial output.

Faced by Britain, the British commonwealth, Free French, and U.S. forces on the western front and the Soviets on the eastern front, the Germans and their Axis allies (some of whom had already sought peace feelers with the Allies) rapidly retreated into their respective rump states as they were pushed back. The Battle of the Bulge, fought in early 1945 on the western front, was a last-ditch attempt by Hitler to deter Allied advances. The attack slowed Allied progress but also destroyed Germany's last reserves in the West; hundreds of thousands of German soldiers began to surrender themselves to Allied forces. As the Allies advanced north from Italy, west from the Soviet Union, and east from France, the German resistance rolled up late in April 1945. In eastern Germany, the slow retreat of German forces eventually culminated in the Battle of Berlin, which was the final attempt to stave off Soviet forces from entering the Nazi capital. German forces were composed primarily of weary Wehrmacht soldiers from eastern campaigns, children, and older men. The Red Army destroyed the last of the German reserves and entered the city in triumph, thereby ending the war in Europe in early May 1945.

—Abraham O. Mendoza

Bibliography

- Keegan, John. *The Second World War*. New York: Viking, 1990.
- Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.
- Wright, Gordon. *The Ordeal of Total War, 1939–1945*. Long Grove, IL: Waveland, 1997.

Domestic Fronts—Nazi Germany

National Socialist Germany underwent a radical transformation of its home front due to the increasingly destructive impact of bombing attacks on its industrial plants and infrastructure on the part of the Allies after having lost the initiative in its military offenses against the Allies, during which time it suffered relatively little damage. The German home front after 1942 was

► THE DRESDEN BOMBINGS

Among the most notorious instances of Allied bombings of Axis cities are the Dresden bombings of February 1945. Dresden was not deemed an appropriate military target in the same manner as Berlin, Hamburg, and the cities of the Ruhr by the Allied Bomber Command. A vibrant cultural capital city of Germany, coined the “Florence on the Elbe,” Dresden’s strategic location in relation to the eastern front necessitated its destruction in the eyes of the Allied Bomber Command in order to allow the Soviet Red Army a breakthrough in that sector. On February 13, 1945, a huge British squadron of bombers emerged at night over Dresden, cloaked in total darkness due to wartime precautions. By utilizing flares and markers, the bombers were able to see the outlines of the city and their targets. Unleashing incendiary bombs rather than blockbuster bombs, the bombing raid was aimed at unleashing a firestorm rather than a conventional bombing campaign. While civilians were clustered away in shelters, the fire grew in the old city center and its whereabouts. A huge firestorm grew out of control and incinerated those who came into immediate contact with it, burning the oxygen of those who did not. Masses of charred bodies and huddles of asphyxiated dead clustered in bunkers were found in the aftermath. Two further raids, one by another British bomber squadron and one by an American squadron, also attacked, creating massive fire rings that flared throughout the city roads. While the actual death toll of the raids is unknown, various scholars estimate the number to be between 35,000 and 135,000 casualties.

—Abraham O. Mendoza



View of the wreckage of Dresden, Germany, after it was firebombed by the Allies in 1945 during World War II. The bombing, which targeted the civilian population, was one of the most devastating aerial raids in history. Four years after the blaze, the city still appeared as a wasteland; most of its buildings were gutted, including many 1,000-year-old structures that had been completely destroyed. (Library of Congress)

characterized by the daily peril suffered by civilians amid severe bombing attacks on major metropolitan areas, causing significant property damage and civilian casualties. Furthermore, German civilian dissidents were also silenced by the oppressive authoritarian police state imposed by the Nazis to deter so-called defeatist behaviors that might affect public morale.

The rapid advance of the German military in Europe and North Africa in the late 1930s and early 1940s encouraged Adolf Hitler and Nazi Party elites to refrain from imposing restraints on the civilian populations. The Third Reich fo-

cused on military conquests far from the homelands in order to remove the destruction associated with war away from the minds of civilians. These early victories gave the Nazi leadership much domestic political capital, having been able to capture huge amounts of land and resources at the expense of the Allies without having demanded or enforced the austerity associated with total war mobilization. Comparatively minimal damage due to British bombing raids in response to the Battle of Britain (1940–1941) and the Battle of the Atlantic (1939–1945) were exceptions to the rule. However, with the

turn of the tide in 1942–1943 after the Battle of El Alamein (1942) and the Battle of Stalingrad (August 1942–October 1943) in the Soviet Union, the German Army found itself on the defensive, and the civilian populations became fair game in the military objectives of the Allies. The Luftwaffe had illustrated through its own attacks on civilian populations how supposedly effective aerial bombardment was in destroying civilian morale, war industrial production, and infrastructure, as evidenced in Rotterdam, Warsaw, and Coventry.

The home front became increasingly blurred with the battle front in Nazi Germany. The amount of destruction inflicted on civilians, infrastructure, cities, and industrial plants through Allied aerial bombardments was staggering. Swarms of Allied bombers flew over German cities such as Dresden, Hamburg, and Berlin, dropping millions of tons of bombs that were often aimed not only at military targets but at civilian targets as well. In the context of World War II civilians became targets of total war, as they contributed to the continuance of their respective government's aggression. Allied military commanders sought to destroy both civilian morale and Germany's ability to make war, which provided sufficient justification for bringing the war to the home front. Urban civilians had to cope with the day-to-day threat of bombardment by learning to flee at the first sight of bombers or the sound of air-raid sirens, retreating to reinforced concrete underground bunkers. After bombings, civilians had to assist in putting out massive fires before they spread. Firebombings were even more deadly, not only by destroying all the oxygen and often asphyxiating civilians to death but also by charring their already-dead bodies into unrecognizable remains. The destructive toll on factories, buildings, national historic monuments, and the simple dwellings of laborers was massive. The impending defeat of the German military, while troubling to civilians, did not deter them from fighting on. German civilians feared the brutality of the invading Soviet Red Army, inspiring them to fight on to the end in order to prevent the rape of their daughters and other forms of retribution.

Total war allowed the Nazi regime to increase its already tight control on society. In tan-

dem with informers and spies, the Nazi regime and its police forces (most notoriously the Gestapo), rounded up defeatists, critics of the government, and traitors. Widespread persecution of partisans, resistance activity, and even the mild grumblings of a civilian unhappy with his rations was the norm. Notable German dissidents, such as Sophie Scholl of the White Rose movement and the Lutheran pastor Dietrich Bonhoeffer, lost their lives speaking out against the National Socialist government during this ubiquitous persecution. Propaganda minister Joseph Goebbels attempted to mislead the public by purposefully minimizing military losses and disparaging the enemy in the worst light, contributing greatly to German civilian misperception of the progress of the war in their disfavor.

—Abraham O. Mendoza

Bibliography

- Bessel, Richard, ed. *Life in the Third Reich*. New York: Oxford University Press, 1987.
- Chickering, Roger, Stig Förster, and Bernd Greiner, eds. *A World at Total War: Global Conflict and the Politics of Destruction, 1937–1945*. New York: Cambridge University Press, 2005.
- Friedrich, Jörg. *The Fire: The Bombing of Germany, 1940–1945*. Translated by Allison Brown. New York: Columbia University Press, 2006.
- Kershaw, Ian. *The Nazi Dictatorship: Problems & Perspectives of Interpretation*. 4th ed. London: Arnold, 2000.

Domestic Fronts—Nazi-Occupied Europe and Satellites

The occupied territories and Axis satellites of the Third Reich found themselves subjected to the political and economic domination of National Socialist Germany and the attacks of the Allies on all fronts. Occupied France, Belgium, the Netherlands, Italy (after 1943), Poland, Norway, Denmark, Greece, Yugoslavia, and vast western provinces of the Soviet Union found their territories subjected to the occupation and subsequent exploitation by the Nazi war machine after having suffered defeat at the hands of the German military. The European Axis composed of Italy (before 1943), Hungary, Romania,

Finland, Vichy France, Bulgaria, and Slovakia suffered a similar fate while willingly subjecting their foreign policy and resources to the needs of the Third Reich and sharing its fate during the Allied advance. However, subjection to Nazi occupation and exploitation led to widespread clandestine resistance in the form of partisan organizations and resistance movements in collaboration with the Allies.

Following the occupation of vast tracts of western and eastern Europe (1939–1942), much of Europe was under German authority. In the west, much of northeastern France, the Netherlands, Belgium, Luxembourg, Denmark, and Norway had fallen to the Germans. In the east, Poland, the Ukraine, the Baltic countries, and much of western Russia had also come under German hegemony. The result was immediate German requisition of goods, resources, and coerced labor to fuel the Nazi war machine. Hundreds of thousands of slave laborers were forcibly taken from their homes throughout Europe and shipped into Germany to work in munitions factories and other work necessary for the war effort. Exposed to widespread abuse, horrible living and working conditions, and bombing attacks by the Allies, slave laborers from the occupied territories suffered lamentable privations throughout the entire war. In addition, many of these occupied countries were subject to heavy taxation in order to contribute toward the Axis war effort. Some countries suffered more than others, given the National Socialist racial hierarchy established throughout occupied Europe. Slavs in the east (Poland, Yugoslavia, Russia) were treated considerably worse than Latins (France, Italy) and Nordics (Norway, Denmark) in the west and north.

Axis allies suffered a similar fate to that of the occupied territories, suffering privations due to their economic collaboration with Germany. Subject to similar authoritarian political structures as those found in Germany, Axis allies extracted tribute and labor from their civilian populations for the needs of the war effort in addition to supplying troops and material for direct military involvement. The extraction of millions of Jews from their territories occurred as a result of the German Final Solution with their active collaboration, although there were exceptions



French civilians walk among German tanks and soldiers in Metz, France, in 1940 after the capitulation. The occupation of France resulted in the imposition of high taxes, forced labor conscription, and other deprivations for the French population. (Library of Congress)

➤ POLISH SLAVERY UNDER THE THIRD REICH

Poland suffered the most out of all the occupied territories of National Socialist Germany, given the proximity of the country, the racial composition (Slavs and Jews) of its people, and its position as a model for occupation to be followed later in the occupied Soviet territories. After its surrender in 1939 Poland was divided into three provinces under German authority (the eastern part was given to the Soviet Union under the Nazi-Soviet Pact): the Wartegau, Danzig-East Prussia (both incorporated into greater Germany), and the General Government. The General Government was established essentially as a slave province where thousands of Poles were forcibly removed from this territory to make room for German settlers and were forced into slave laborers for the Reich. Jewish Poles were subjected to a far worse fate during the *Einsatzgruppen aktions* (mass shootings) in the ghettos and the death camps. Overall, Polish nationals were subjected to widespread abuse and mistreatment under German occupying authorities as slave laborers in Germany and in the General Government, enduring far worse treatment than most other occupied countries.

—Abraham O. Mendoza

to this, notably in Bulgaria. Given their precarious position and fearing direct German occupation and exploitation or Allied aggression, Axis allied governments found themselves subjected to the same fate as Germany at the hands of the Allied onslaught.

Resistance to German occupation and their own collaborationist governments' repression resulted in the creation and activity on the part of various partisan and resistance organizations (French Resistance, Yugoslavian partisans, Ukrainian partisans, etc.). These movements actively collaborated with Allied intelligence to disrupt Axis military movements through covert sabotage operations or through open combat. These organizations provided significant contributions to the advance of the Allies and the eventual liberation of Europe from the Germans.

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Bibliography

- Chickering, Roger, Stig Förster, and Bernd Greiner, eds. *A World at Total War: Global Conflict and the Politics of Destruction, 1937–1945*. New York: Cambridge University Press, 2005.
- Kershaw, Ian. *The Nazi Dictatorship: Problems & Perspectives of Interpretation*. 4th ed. London: Arnold, 2000.
- Payne, Stanley G. *A History of Fascism, 1914–1945*. Madison: University of Wisconsin Press, 1995.

Domestic Fronts—Japan and the East Asian Co-Prosperity Sphere

Throughout World War II the Japanese home islands and its conquered dominions, known collectively as the Greater East Asia Co-Prosperity Sphere, endured tremendous austerity, oppressive authoritarian rule under the Japanese, and massive destruction at the hands of the Allies, particularly the American forces in the Pacific. The domestic Japanese civilian population suffered from excessive surveillance and deprivations on the part of the government. To a much greater extent Japanese occupied territories—Korea, Formosa (present-day Taiwan), Dutch East Indies (present-day Indonesia), Singapore, the Philippines, Southeastern China, Manchu-

ria, Burma (present-day Myanmar), Thailand, Hong Kong, French Indochina (Vietnam, Laos, Cambodia), and various Pacific islands—and their civilians suffered from military excesses in the form of massacres, widespread abuse, confiscation of property, and forced slave labor. Collectively, they all suffered from Allied military penetration and invasion, leading to massive destruction in Japan proper through aerial bombing raids.

The Japanese home islands were not privy to the devastation of warfare when the Japanese forces were on the offensive throughout the Pacific up to 1942. With the exception of the Doolittle Raid by U.S. bombers on Tokyo (April 1942), civilians remained aloof from the destruction and death associated with war. Wartime austerity due to the lack of food and raw materials for consumer goods was enforced through widespread rationing. The notorious Tokko (thought police) kept close surveillance on the civilian population in order to ensure public subservience to the government's imposition of censorship and to prevent individuals, organizations, and the press from criticizing the war or the government's foreign policy objectives. Japanese civilians were also exposed to the massive influx of slave laborers imported from Japanese dominions abroad to help contribute to the war effort.

The Greater East Asian Co-Prosperity Sphere was created under the Japanese pretense of fighting against Western imperialism (United States, Great Britain, the British Dominions, and the Netherlands) in defense of its fellow Asians and in the hopes of creating an Asian commonwealth under Japanese leadership. This pretension did not mask the reality of the Japanese Empire, characterized by the naked and rampant exploitation of people and resources for the benefit of the Japanese war effort. Thousands of people were forced into slave labor for extracting, producing, and manufacturing goods for the military and for export to Japan proper. In particular, large numbers of Koreans were taken to Japanese manufacturing centers and forced to work for their imperialist masters. In addition, large numbers of women from the colonies were forced to serve as prostitutes for the Japanese military and were popularly known as comfort women.

UNIT 731—JAPANESE BIOLOGICAL EXPERIMENTS ON CHINESE CIVILIANS

The notorious Japanese test facility Unit 731, disguised as a water purification unit based in the Ping Fan district of the northeastern Chinese city of Harbin in Manchukuo, was a covert biological warfare research and development center responsible for some of the most notorious war crimes carried out by the Japanese military during World War II. Approximately 10,000 people of civilian and military status from China, Korea, and Russia were subjects of the experimentation conducted by Unit 731. Test subjects from the surrounding Chinese population, referred to euphemistically as logs, included pregnant women, the elderly, and infants.

Various experiments and dissections were performed without anesthetics out of a belief that it would affect the results. The use of biological weapons researched in Unit 731's biological weapons program resulted in tens of thousands of deaths in China, with some estimates ranging as high as 200,000 casualties. After the war, the U.S. government seized the data from these experiments for usage in its own biological warfare research, causing an ethical controversy over the implications of this action when this was uncovered several decades thereafter.

—Abraham O. Mendoza

Following the military turning point of the Battle of Midway (June 3, 1942), Japan lost the initiative to the Allies and remained on the defensive up to its ultimate defeat in 1945, although on the Asian mainland the Japanese Army continued to make some gains in China as late as 1944, exposing its civilian population to the destruction of total war on the home front. As American forces liberated areas closer to the Japanese home islands, airfields gave the United States the opportunity to utilize long-range heavy bombers on Japanese cities. The American air forces leveled Japanese cities on a wide scale, destroying large tracts of manufacturing facilities, military installations, and civilian housing. These bombing raids brought the war to the civilian population, exposing them to the perils of strafing, firestorms, and massive death. However, these conventional bombing raids, while more destructive, did not capture the same sort of attention by contemporaries as did the atomic explosions at Hiroshima and Nagasaki. The most destructive raid was made by conventional firebombers and came against Tokyo on the night of March 9–10, 1945. Between 80,000 and 100,000 Japanese civilians were killed, and approximately 1 million Tokyo residents were left homeless in the burned-out city. Approximately 8 million Japanese in more than 60 cities were left homeless by the firebombing raids during 1945, with a further count of dead and injured estimated to be several hundred thousand.

—Abraham O. Mendoza

Bibliography

- Chang, Iris. *The Rape of Nanking: The Forgotten Holocaust of World War II*. New York: Penguin, 1997.
- Harris, Sheldon H. *Factories of Death: Japanese Biological Warfare, 1932–1945, and the American Cover-up*. New York: Routledge, 2002.
- Spector, Ronald H. *In the Ruins of Empire: The Japanese Surrender and the Battle for Postwar Asia*. New York: Random House, 2007.
- Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

Domestic Fronts—China

China was one of many battlefields during World War II, with its domestic experience being defined by fighting, foreign occupation, and migration. While in reality the war for China began when Japan attacked Manchuria in 1931, the Japanese efforts were not transformed into a full invasion of the mainland until 1937. An incident at the Marco Polo Bridge (Lugouqiao) on July 7, 1937, began the second phase of the Japanese attack.

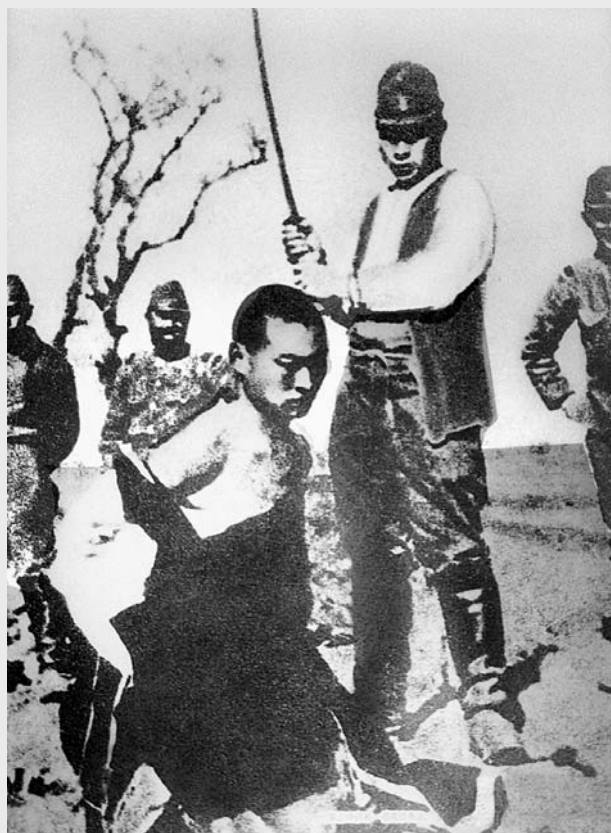
Japan's initial assault on China ended in 1938 after the fall of Wuhan. When the guns stopped, China was divided into ten units, with five of these areas controlled by the Japanese to some extent: Manchukuo, the Inner Mongolian Federation, northeastern China (south of the Great Wall), east-central China, and Taiwan. The

➤ NANJING MASSACRE

After bombing the Guomindang capital, Nanjing (Nanking), for four months, Japanese troops entered the city on December 13, 1937. For the next six weeks rape, murder, arson, and pillaging were inflicted on Chinese troops and civilians in the city. After the war, the International Military Tribunal for the Far East estimated that 200,000 Chinese were killed in Nanjing, including 20,000 female rape victims and 30,000 fugitive soldiers. Reports by Westerners, official complaints, and photographs indicate group and individual killings, repeated rapes, and organized arson and theft by the Japanese Army. Scholars argue that Japanese soldiers were made capable of this behavior through harsh discipline and indoctrinated disdain for the enemy combined with extended bloody fighting in Shanghai immediately prior.

This controversial event has also sparked an international historical debate. In Japan since the 1970s, many conservatives and nationalists deny or downplay the massacre. Some extremists claim that only 100 people were killed and very few raped (although progressive Japanese scholars and most Japanese textbooks support the findings of the International Tribunal). The Chinese and other Asian nations have objected to Japanese revisionism. For instance, in 1982 the People's Republic of China (PRC) protested that the Japanese Ministry of Education attempt to replace the term “aggression” with “advance” and alter the description of the Nanjing Massacre in their state textbooks. The PRC, though, has also politicized this massacre; official organizations such as the Chinese Alliance for Memorial and Justice have inflated the numbers, claiming that 300,000 people were killed.

—Kassi Klinefelter



Japanese Imperial Army soldiers prepare to behead a Chinese man in Nanjing in 1937 during the Japanese occupation of the city. One of the worst atrocities committed by the Japanese during the Sino-Japanese War of 1937–1945, the occupation of Nanjing resulted in the murder and rape of thousands of Chinese civilians. (AFP/Getty Images)

remaining areas were managed either by independence movements, Chinese warlords, the Guomindang, or the Chinese Communists. The Japanese created a network of puppet regimes rather than one centralized government. Shortages of manpower dictated Japanese reliance on Chinese collaborators such as prominent Nationalist politician Wang Jingwei, who led the Nanjing collaborationist government beginning in 1940. (Wang Jingwei worked with the Japanese in a failed effort to bring the war to an end and

reconstitute a Chinese government in the central and southern areas under his control.)

After their initial defeats, both the Nationalists (Guomindang) and the Communists moved their bases westward, to Chongqing and Yan'an, respectively. As part of their retreat, the Guomindang organized an internal migration in 1937–1938. Entire universities and industries were moved to the south and the west. A total of 639 factories were transplanted to the hinterland, but only 418 resumed production dur-

ing the war. Accompanying the 110,000 tons of industrial potential were 42,000 skilled and semiskilled workers and a similar number of university students. The Southwest Associated University in Free China, for example, was a combination of the relocated Qinghua, Beijing, and Nankai universities. While these efforts composed only a small percentage of China's population and industry, nonetheless it constituted a tremendous achievement made possible by an outpouring of Chinese nationalism.

The majority of China's population, which is concentrated in the east, remained in occupied China. As the Guomindang fled rural areas such as Neihuang County in northern China, chaos ensued. Prisoners broke out of jail, public funds were absconded, and some townspeople engaged in looting and rioting. It took months and the deaths of hundreds before a local militia restored order and gained control from local bandits. This area did not come under Japanese control until 1940. The Japanese enlisted Chinese collaborationists and bandits to run the government and maintain the peace. Not surprisingly, the new government had little public support. In an effort to eliminate resistance, the Japanese with their Chinese allies launched a series of mop-up campaigns in 1941. One of these massacres resulted in the destruction of 141 villages and the deaths of 4,000 civilians. From 1937 to 1945, approximately 20 million Chinese lives were lost. The great majority were civilians such as the villagers living in Neihuang County.

China's leading intellectual centers, Beijing and Shanghai, avoided much of the destruction that ravaged the countryside after 1938. Instead, the Japanese sought to use public figures in these areas to galvanize Chinese support. Initially, Shanghai's International Settlement provided a safe haven for Chinese scholars; however, after the Japanese attacked the United States and British and French territory, Japan assumed control of the area. Despite Japanese attempts, studies of Beijing and Shanghai indicate that the Japanese efforts to use Chinese intellectuals to justify their occupation were unsuccessful. Although among Chinese intellectuals in Shanghai passivity, resistance, and collaboration could all be found, even those engaged in collaboration were generally unwilling to promote

Japanese actions. One example is provided by the writers of *Gujin*, a Shanghai literary journal sponsored by Wang Jingwei's collaborationist government. Their writings, rather than justifying or promoting Japanese behavior, were filled with nostalgia.

In western China the Nationalists and Communists initially formed a second united front to combat the Japanese, but this collapsed by 1941 when armed domestic clashes resumed. The Nationalist wartime policies, in general, alienated many, while hunger and corruption were paramount problems. When the Guomindang established its base in Chongqing, peasants were taxed and conscripted, while health and literacy concerns were ignored. Peasants, frustrated by Guomindang policies in Henan, attacked the military and confiscated its grain in the midst of a famine. Communist land-redistribution policies in Yan'an were far more popular, and as a result their numbers grew from an estimated 40,000 in 1937 to 1.2 million in 1945. However, they were also not without problems. In an attempt to deal with their increasing numbers, Mao Zedong, who attained leadership in the early 1940s, instituted a rectification campaign in 1942. Independent thought and party criticisms were crushed.

In all, the Chinese populace faced varying but scarring wartime experiences as they fought to regain their homeland.

—Kassi Klinefelter

Bibliography

- Barrett, David P., and Larry N. Shyu, eds. *Chinese Collaboration with Japan, 1932-1945: The Limits of Accommodation*. Stanford, CA: Stanford University Press, 2001.
- Eastman, Lloyd E. *Seeds of Destruction: Nationalist China in War and Revolution, 1937-1949*. Stanford, CA: Stanford University Press, 1984.
- Fogel, Joshua A. ed. *The Nanjing Massacre in History and Historiography*. Berkeley: University of California Press, 2000.
- Fu, Poshek. *Passivity, Resistance, and Collaboration: Intellectual Choices in Occupied Shanghai, 1937-1945*. Stanford, CA: Stanford University Press, 1993.
- Hsiung, James C., and Steven I. Levine, eds. *China's Bitter Victory: The War with Japan, 1937-1945*. Armonk, NY: East Gate, 1992.

Domestic Fronts—Allies: Soviet Union

The initial phase of World War II for the Soviet Union was accompanied by stunning defeats. Yet in 1939 the Soviet defense industry was large, with more than 1 million employees in four main branch ministries, known as Narkomats (People's Commissariat, NK). The defense industry also was well funded and could produce weapons comparable in design sophistication if not production quality to the Axis. Wartime conscription of the workforce, jail terms for absenteeism, abolition of vacations, and prohibition of voluntary change of employment were decreed by the Supreme Soviet's Presidium in 1940 prior to the start of hostilities. The Achilles' heel for the Soviets was poor coordination between NKs, loss of workforce to the Great Purges, Stalin's obsession with quantity and World War I priorities (battle cruisers, dirigibles, cavalry), and the conservative outlook of his 1930s' military supremo Voroshilov.

With the beginning of the war the system of government was reorganized, with the Gosudarstvennyi Komitet Oborony (State Committee on Defense, GKO) taking charge of all home-front functions, thus sidelining the Communist Party and the Council of Ministers (SNK). GKO tasks were assigned variably, with the main functional responsibilities as follows: I. V. Stalin, chairman; V. M. Molotov, deputy and tank production; K. E. Voroshilov (N. A. Bulganin from November 1944), army reserve and logistics; G. M. Malenkov, aviation; L. P. Beria (from February 1942), research and development, munitions; and N. A. Voznesensky (from February 1942), planning. The GKO also created numerous ad hoc underlying offices and a semipermanent Bureau of Operations, headed by L. P. Beria (from December 1942). Beria's dreaded security police, the NKVD (People's Commissariat of Internal Affairs), was reorganized several times during the war while maintaining control over vast swaths of the economy such as mining and railroad construction. The latest reorganization, in April 1943, carved out the NKGB (People's Commissariat of State Security) and SMERSH (Military Counterintelligence Directorate), which possessed de facto executive pow-

ers in the 60–100 mile (95–160 kilometer) zone behind the front lines.

In the early period of the war, the Soviet Union lost to the German advance areas that previously contained 40 percent of its population and 41 percent of its railroad track and produced 38 percent of its grain and 65–75 percent of its coal and steel. In 1941–1942 defense industries were relocated to the East on an unprecedented scale: 1,360 enterprises (including 455 to the Urals, 210 to Siberia, and 250 to Central Asia), together with more than 10 million evacuees.

By 1943 the Soviet Union was able not only to restore its defense production but also to overcome Nazi Germany in all principal categories of weapons. The Soviet defense output was second only to the United States (\$36.2 billion U.S. to \$13.9 billion in the USSR in 1943). The Soviet technological model presented a stark contrast to Nazi Germany. While the Germans developed many advanced technology designs in small numbers, the Soviets preferred evolutionary improvement of existing mass-produced systems. Programs that did not contribute to the immediate needs of land warfare—long-range bombers, jets, nuclear research, and shipbuilding—were curtailed until the end of the war.

The Franklin Roosevelt administration extended the Lend-Lease Program to the Soviet Union in October 1941, providing aid in the amount of \$11.3 billion. The overall contribution of Lend-Lease to Soviet production of the principal weapon systems was small (aircraft, 13.5 percent; tanks, 6.5 percent) despite the special significance of modern fighters early in the war. However, U.S. and British commonwealth supplies of trucks, tires, motors, foodstuffs (such as the proverbial spam), and nonferrous metals were considered indispensable. These were warmly remembered by Soviet veterans despite official postwar propaganda.

The evacuation at the beginning of the war and construction of the new industrial centers, power plants, and mines in the nearly uninhabitable Soviet East was conducted with total disregard for human costs. Soviet civilians, attacked by the Germans from air and sea, maintained the domestic front under command by brutal and frequently incompetent administrators. Demographic losses of the Soviet Union differ with

► PRODUCTION OF THE MAJOR WEAPON SYSTEMS IN THE SOVIET UNION AND GERMANY DURING WORLD WAR II

Despite the loss of major industrial centers to the German offensive in the beginning of the war and lower prewar output in industrial commodities (coal, oil, steel, etc.), the Soviet Union was able to significantly outproduce Germany in all main weapon systems. Quality of weapons also im-

proved later in the war, as conscripted women and teenagers went through extensive on-the-job training and their rations increased. On the contrary, the quality of German production declined as it lost overseas sources of raw materials and relied more and more on concentration camp labor.

Germany/Soviet Union Units, Thousand	1940	1941	1942	1943	1944	1945	Total 41–45
Tanks and SPG [Self-Propelled Guns]	2.2/2.8	3.8/6.6	6.2/24.7	10.7/24.0	18.3/29.0	4.4/22.6	43.4/106.9
Guns	6/15	22/41	41/128	74/130	148/122	27/77	312/498
Combat aircraft	6.6/8.3*	8.4/12.4**	11.6/21.7	19.3/29.9	34.1/33.2	7.2/20.9	80.6/118.1

*By June 1941, less than 14 percent of the fighters and approximately 22 percent of the bombers of the Red Army's Air Force (VVS RKKA) were state-of-the-art. Mass production of obsolete aircraft continued throughout 1940 and the first part of 1941.

**Actual deliveries to the VVS were much smaller: 3,950 or approximately 4,800 by other estimates.

—Peter Lerner

head count losses by 5 million to 7 million (21–22 million vs. 26–27 million); this discrepancy may be attributable to civilian lives, including those of Gulag prisoners, shortened by starvation, disease, reprisals, and overwork, although this estimate remains controversial.

—Peter Lerner

Bibliography

- Barber, J., and M. Harrison, eds. *The Soviet Defense-Industry Complex from Stalin to Khrushchev*. New York: St. Martin's, 1999.
- Harrison, M. *Accounting for War*. New York: Cambridge University Press, 1996.
- Kennedy, P. *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*. New York: Random House, 1987.
- Samuelson, L. *Plans for Stalin's War Machine: Tukhachevsky and Military-Economic Planning, 1925–1941*. New York: St. Martin's, 2000.

Domestic Fronts—Allies: The United States and the United Kingdom

Both the United States and Britain experienced drastic social, political, economic, and demographic changes in the midst of World War II

(1939–1945) within the context of their respective home fronts. During this period, the role of the state in the day-to-day operations of the economy, national security, and social stability increased substantially. Daily life was regulated by the needs of war in terms of military conscription, war-industry employment, rationing, and the growing numbers of women in the workplace. Most British civilians entered the conflict with determination and resolve, seeking to muddle through the hardships of the home front. Most Americans entered the war with a fervent disdain of the enemy and spoiling for a fight. In the United States, legislation pertaining to national security was enacted to prevent defeatism and treason by organizations and publications as well as to monitor and incarcerate foreign nationals suspected of aiding and abetting the enemy.

World War II immediately altered the economic condition of both Britain and the United States. Britain, which had entered the war upon Germany's invasion of Poland in 1939, rapidly changed its political leadership from that of Prime Minister Neville Chamberlain to that of Winston Churchill. Churchill recognized the need for placing the government in charge of the economy in order to efficiently engage in

► THE BLITZ—BRITISH LIFE DURING THE BATTLE OF BRITAIN (1940–1941)

Unlike Americans who did not have contact with war on an everyday basis, average people in Great Britain endured and muddled through five years of close contact with the destruction associated with aerial bombardment. The Battle of Britain, devised by Adolf Hitler as a means to destroy the morale of the British people through the destruction of vast tracts of urban neighborhoods, forced urban denizens to seek the protection of underground shelters and brave the mass fires that broke out throughout their cities. The London Underground, London's main subway, was used in particular by many Londoners to escape certain death on the surface during a bombing attack.

Most major British cities in the southeast were exposed to bombing on a regular basis, requiring the citizenry to routinely seek the protection of bomb shelters, fight fires before they spread over greater parts of the city, and essentially endure and accept the pressure of danger on a regular basis. The destruction of vast segments of the East End in London and the near annihilation of the city of Coventry are among the most significant instances of destruction endured by the British people, who were forced to become directly engaged in war as civilians at the mercy of long-range German bombers.

—*Abraham O. Mendoza*

total war, building on the lessons learned from World War I. Through austere regulations on prices, wages, and rationing as well as state regulation and organization of the nation's economic output, Churchill set about implementing strict government oversight over the British economy in the interest of the war effort. American entry in the war followed the Japanese attack on Pearl Harbor on December 7, 1941. U.S. president Franklin Roosevelt, building on the increased role of the state set forth in the New Deal to combat the Great Depression, co-opted big business, big labor, and big agriculture in an economic planning program for engagement on a two-front war against Germany in the Atlantic and Japan in the Pacific. The U.S. war effort required a significant mobilization of society.

Civilian mobilization for war under both the United States and Britain was characterized by mass military conscription, rationing, increased opportunities for women, and massive industrial organization. Such massive mobilization required the creation of huge government bureaucracies to oversee all day-to-day operations and ensure their efficiency. Both countries raised massive armies through compulsive conscription, allowing for exemptions of conscientious objectors. Rationing enforced austere but equitable amounts of food and commodities for average people in the interest of preserving goods for the war effort and avoiding a scarcity of such valuable resources. Average Britons and Americans dealt with rationed goods in the form of limited food options and limited consumer goods, gasoline, and other items deemed as luxuries. The lack of manpower on the home front necessitated a need to include women in the workforce, leading both governments to encourage their female populations to actively join the war industries. Ceding to political pressure, the U.S. government also ordered war industries to begin hiring African American and other minority workers, providing new employment possibilities to these marginalized groups. Such directives spurred black migration north as well as social tensions including major race riots in shipyards and cities such as Los Angeles, Detroit, New York, and Chicago.

Increased government intervention in the economy was also matched by intervention in domestic security. Both Britain and the United States enacted legislation to ensure potential internal and external threats to their national security. Such legislation included censorship of potentially treasonous organizations and publications, routine city blackouts to prepare for possible aerial bombardments (or real in the case of Britain), and the ever-controversial tracking and internment of “enemy” aliens. Government censorship scrutinized and outlawed newspapers and organizations critical of the domestic government or seemingly or even directly supportive of the enemy. Organizations like the British Union of Fascists and the American Nazi Party were almost immediately outlawed at the outset of war. Citywide blackouts were put in effect in most major metropolitan areas, primarily on the vulnerable coasts, in or-

der to prevent the potential threats of enemy bombing attacks. Britain's experience with German bombings during the Battle of Britain (1940–1941) made this procedure particularly crucial in ensuring the day-to-day survival of the urban population. The pervasive threat of enemy infiltration of the homeland also secured the enactment of laws restricting the movements and liberties of potential enemy aliens. In Britain, foreign nationals of German descent were registered and monitored by the government. Internment camps in the Isle of Wight, Canada, and even Australia were set up for the most potentially dangerous. The United States also enacted similar legislation in regard to German, Italian, and Japanese foreign nationals. Japanese nationals on the West Coast were subject to gross civil rights abuses, having their properties and assets confiscated and being sent to inland internment camps in Idaho, Arizona, Arkansas, and central California.

—*Abraham O. Mendoza*

Bibliography

- Blum, John Morton. *V was for Victory: Politics and American Culture during World War II*. New York: Harcourt Brace Jovanovich, 1976.
- Jeffries, John W. *Wartime America: The World War II Home Front*. Chicago: Ivan R. Dee, 1996.
- Mackay, Robert. *The Test of War: Inside Britain, 1939–45*. London: UCL, 1999.
- Rose, Sonya O. *Which People's War? National Identity and Citizenship in Britain, 1939–1945*. New York: Oxford University Press, 2003.

Consequences of World War II

By the end of World War II in 1945, Europe and large parts of Asia were fields of ruins: cities were transformed into heaps of rubble, infrastructures were left in ruins, and factories were destroyed. The war's effects on property, populations, and politics were vast. Moreover, in both Europe and Asia civilian populations were caught in the midst not only of combat but also of occupation policies. In many cases, civilian casualties surpassed military losses. In the end, World War II had caused a degree of moral and material destruction unparalleled in history.

The material impact of World War II is difficult to assess with precision. German occupation policy strained the industrial infrastructures of occupied territories. The output from mobilized factories, mines, railroads, and farms in Belgium, France, the Netherlands, and Norway were channeled toward the German war effort. The monumental size of the destruction brought about by aerial bombardment and combat meant that in defeated states such as Germany and Japan, industrial output simply collapsed. Even in the case of victorious states, the mobilization of national economies meant that industrial output was destined almost solely for military demands, and almost everywhere except in the United States and Canada standards of living sharply declined. In Britain, for example, the country was only able to overcome economic collapse with the help of foreign help; rationing only ended in 1949.

For most contemporaries, though, the impact of the war was measured by the scale and nature of the destruction process. In Europe, few cities were left untouched by either aerial bombardment or the ruthless advance of ground troops. In France, for example, Brest, Caen, and Le Havre were leveled by Allied bombing; in Germany, the cities of Hamburg, Cologne, Dusseldorf, and Dresden were destroyed. Damage was even more severe farther east. The nature of the fighting in the Soviet Union meant that 70,000 villages and 1,700 towns as well as more than 32,000 factories and 39,767 miles (64,000 kilometers) of railroad tracks were destroyed. There was also the damage caused by the firebombing of Japanese cities; 25 percent of Tokyo was destroyed during the night of March 9, 1945. The use of atomic bombs on Hiroshima and Nagasaki was even more devastating. Moreover, 2 million buildings, 31,000 miles (50,000 kilometers) of railroads, and 40 percent of Japanese urban zones were destroyed by American bombers.

Beyond the material consequences of World War II, the human cost of the war is staggering. In the Soviet Union and China, the civilian and military death toll ran into the tens of millions. The most striking aspect of the demographic impact of the war is its effect on the civilian population. Never in such a short time span has a conflict generated such sorrow, misery, and death. Even though the military losses vary

considerably—in some cases, such as in Britain and France, military losses were lower than in World War I—the main characteristic of World War II is the civilian death toll. In fact, in many cases civilian losses far exceeded military deaths. The causes of civilian deaths were numerous: mass extermination by shooting or in concentration and death camps, reprisals for acts of resistance, malnourishment and disease, or simply being caught in the cross fire of colliding armies. The extermination of European Jews in particular proved one of the most shocking consequences of World War II, and by the end of the war almost 6 million Jews had been murdered for ideological reasons.

Combat and occupation, especially in Europe, caused a massive shift in population and sent millions of people on the road. The rapid advance of Soviet troops caused millions of Germans to flee the eastern areas, such as East Prussia, toward inner Germany. They were eventually joined at the end of the war by the millions of foreigners working in Germany in factories and on farmland and by concentration camp survivors.

World War II also brought profound and lasting political changes. At the end of the war France, Germany, and Britain had lost their status as Great Powers. Germany was occupied and ruled by American, British, French, and Soviet occupying forces; France was trying to recover from four years of military occupation and social division; and Britain, although one of the victors and the only country that, with its colonies and dominions, had remained in the fight against Germany since 1939, faced the consequences of six years of warfare. By 1945 the country was basically bankrupt. To sustain the war effort, Britain had borrowed £14 billion during the war, and by the end of the war the national debt totaled more than three times the national revenue. The war effort had basically been more than the national economy could sustain, and in the words of the famed economist John Maynard Keynes, the war for Britain had been a “financial Dunkirk.”

In Asia the two main powers, Japan and China, were in shambles. In China the government of Jiang Jieshi (Chiang Kai-shek) not only resisted reforms toward modernization and liberalization of the state but also was rife with cor-

ruption and was unable to control Mao Zedong's communist forces. By 1945 the country was in the middle of a civil war. The defeated Japan remained occupied and controlled by Allied forces until 1952.

The Allied victory over the Axis Powers also represented the eclipse of the old European power and its replacement by the United States and the Soviet Union, two powers considered to be on the margin of the prewar diplomatic scene. The end of World War II brought an end to the fighting but not to armed opposition. Within two years the world had slipped toward what journalist Walter Lafeber called the Cold War.

—Martin Laberge

Bibliography

- Dear, I. C. B., and M. R. D. Foot. *The Oxford Companion to World War II*. Oxford, UK: Oxford University Press, 2001.
- Hobsbawm, Eric. *The Age of Extreme: A History of the World, 1914–1991*. New York: Pantheon, 1994.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Keylor, W. R. *The Twentieth-Century World*. Oxford, UK: Oxford University Press, 2001.

Formation of the United Nations

The creation of the United Nations (UN) represented an attempt by the World War II Allies to establish an international organization that would be more effective than the interwar League of Nations had been at mediating international disputes and preventing full-scale conflicts. At the same time, the new organization would promote friendly relations among nations; international cooperation on economic, cultural, social, and humanitarian issues; and further the cause of international human rights. Its architects were much influenced by the belief that during the 1930s nationalist policies, economic and political rivalries, and the absence of amicable international collaboration to resolve outstanding disputes and contentious issues had contributed substantially to the outbreak of war in 1939. They therefore sought to create an institution that could successfully avert similar future conflicts.

UNITED NATIONS EMBLEM

While the major emphasis of the early days of the United Nations (UN) was focused on establishing the institutional framework for the new organizations, some rather mundane issues also had to be resolved. Through a series of revisions, the Sixth Committee of the UN proposed the following description (December 2, 1946): "A map of the world representing an azimuthal equidistant projection centered on the North Pole, inscribed in a wreath consisting of crossed conventionalized branches of the olive tree, in gold on a field of smoke-blue with all water areas in white. The projection of the map extends to 60 degrees south latitude, and includes five concentric circles." The described emblem was approved five days later by the UN.

Image: Revised version of United Nations Emblem, proposed November 26, 1946. Source: United Nations, A/C.6/75/Rev. 1 (1946), Sixth Committee,



(Corel)

Proposed United Nations emblem. (2nd rev.)
Drawing November 2, 1946, 1 p.

—H. Micheal Tarver

Even before the United States entered World War II (December 1941), U.S. secretary of state Cordell Hull established a departmental planning group for this purpose. Meeting off of the Newfoundland coast in August 1941, American president Franklin D. Roosevelt and British prime minister Winston Churchill discussed a broad proposal for an international security system in the Atlantic Charter, their declaration of overall war objectives.

On January 1, 1942, the governments of 26 nations fighting Germany, Italy, and Japan issued a declaration by the UN affirming their alliance against the Axis Powers and also stating their commitment to liberal war objectives, as set forth in the Atlantic Charter, and the restoration of the principles of international law. In 1943 both houses of the U.S. Congress also passed resolutions demanding the creation of a postwar international security organization in which, they implied, their own country should take the leading role that it had abdicated in the League of Nations. Meeting at Moscow in October 1943, foreign ministers of the four leading Allied Powers—the United States, Great Britain, the Soviet Union, and China—signed the Declaration of

Four Nations on General Security, pledging in general terms to establish a postwar international organization.

More specific proposals came out of the Dumbarton Oaks Conference of 39 nations held in Washington, D.C., from August to October 1944. These proposals represented a compromise between the ideas of Roosevelt and other devotees of realpolitik, that agreement between the Big Four Allied Powers—"the four policemen"—must be the foundation of postwar international security and that more idealistic popular visions of a world in which all powers, great and small, enjoyed equal status and protection. The Dumbarton Oaks Conference agreed to create a bipartite UN organization, modeled upon the earlier League of Nations but reserving ultimate authority to the dominant Allied states. Any peace-loving state that was prepared to accept the obligations of the UN Charter would be eligible to apply for membership. All member states would be represented in the General Assembly, which would debate, discuss, and vote on issues that came before it. Executive authority rested with the 11-member UN Security Council, which would have 5 permanent members: Britain, France, the United States,

the Soviet Union, and China. The remaining Security Council representatives would be drawn from other UN states, all of whom would serve two-year terms in rotation. Besides providing an international security mechanism, the UN was also expected to promote international cooperation on economic, social, and humanitarian issues.

On Soviet insistence, at the February 1945 Yalta Conference the Allies agreed that each permanent Security Council member should enjoy veto power over all General Assembly decisions. The Soviet Union also obtained separate representation for Byelorussia (Belarus) and the Ukraine. The Yalta Conference further agreed on a UN trustee system to administer both former League of Nations mandated territories—originally colonies taken from Germany and Turkey after World War I—and areas seized from the Axis Powers when the war ended.

The Yalta Conference formally invited all Allied and most neutral powers to attend a conference that would open in San Francisco on April 25, 1945, to establish the new UN organization. Representatives of 51 nations attended this gathering and hammered out the details of the charter of the new UN organization, which accorded smaller states slightly more authority than had the original Dumbarton Oaks proposals. The charter incorporated the International Labor Organization (ILO) established under the original 1919 League of Nations Covenant. To pursue its stated nonsecurity objectives, the charter also created the UN Economic, Social and Cultural Organization (UNESCO) together with the 18-member Economic and Social Council, the Trusteeship Council, and the International Court of Justice. The charter also established the UN Secretariat, which administers the organization. By the end of 1945 all 51 states represented at San Francisco had ratified the UN Charter. In 1946 the body held its first session in London and in 1947 moved permanently to the United States, where its New York headquarters was completed soon afterward.

Although sometimes derided as ineffective and handicapped in international crises by its reliance upon military forces contributed by member states, the UN often provides a valuable forum for the quiet exchange of views and the promotion of humanitarian and social goals. On

occasion it also conveniently furnishes a useful alternative channel of communications among powers whose diplomatic relations were otherwise limited or even nonexistent. While never as effective in terms of resolving international conflicts as its founders envisaged, the UN proved considerably more successful than its predecessor, the League of Nations, in attracting and retaining as members most of the world's major as well as minor states, whose continuing membership implicitly bestowed authority and legitimacy upon the organization's statements and actions.

—Priscilla Roberts

Bibliography

- Hillerbrand, Robert C. *Dumbarton Oaks: The Origins of the United Nations and Search for Post-war Security*. Chapel Hill: University of North Carolina Press, 1990.
- Hoopes, Townsend. *FDR and the Creation of the United Nations*. New Haven, CT: Yale University Press, 1997.
- Schild, Georg. *Bretton Woods and Dumbarton Oaks: American Economic and Political Post-war Planning in the Summer of 1944*. New York: St. Martin's, 1995.
- Schlesinger, Stephen C. *Act of Creation: The Founding of the United Nations—A Story of Superpowers, Secret Agents, Wartime Allies and Enemies, and Their Quest for a Peaceful World*. Boulder, CO: Westview, 2003.

The Universal Declaration of Human Rights

In 1948, the Universal Declaration of Human Rights determined that World War II's crimes against humanity, such as the Nazi Holocaust and the Japanese Rape of Nanking, must never again be repeated. In 1946 the United Nations (UN) established the International Commission on Human Rights, charging it to draft a Universal Declaration of Human Rights (UDHR). Eleanor Roosevelt, widow of President Franklin D. Roosevelt, chaired a five-member committee, consisting of René Cassin (France), Peng-chun Chang (China), John Humphrey (Canada), and Charles Malik (Lebanon). The committee spent two years drafting the declaration.

Drawing upon the major Western and non-Western political, religious, and philosophical traditions, the UDHR consists of 30 articles. Articles 1–15 are modeled on the French Revolution’s Declaration of the Rights of Man and the Citizen and enshrine traditional political rights of life, liberty, security, and freedom of movement irrespective of race, color, birth, or national origin. Articles 16–30 enumerate the social and economic rights of each person. Inspired by the constitutional tradition of Latin America, the teachings of Confucius, the Quran, and the Papal encyclicals *Rerum Novarum* (1891) and *Quadragesimo Anno* (1931), these articles delineate the special rights of women and children, the right to an education and medical care, and the special protections afforded to the family. Words such as “dignity,” “person,” and “responsibility” are embedded throughout the declaration, thereby ensuring a balance between a person’s rights and civil obligations. Most importantly, for the first time in history the UDHR afforded the individual citizen the right to enlist the moral and legal authority of international law to challenge the laws and the courts of his or her home country.

The UN General Assembly adopted the UDHR on December 10, 1948, with no dissenting votes, although the Soviet Bloc, the Republic of South Africa, and Saudi Arabia abstained from voting. Because the UDHR has no legal standing until ratified by sovereign states, two implementing covenants (treaties) were promulgated to ensure that the 1948 declaration would be ratified by each UN member state. Ninety-five states have signed the first of these covenants, the International Covenant on Civil and Political Rights. Due to concerns about racial equality, social entitlements, and national sovereignty, the U.S. Senate did not ratify this covenant until 1992. Since 1966, 99 states have ratified the second of these covenants, the International Covenant on Economic, Social, and Cultural Rights. Fearful that this covenant might undermine its national sovereignty and deny American courts the right to execute criminals, the U.S. Senate still has refused to ratify this covenant.

Under the aegis of the UDHR, three salutary developments advancing human rights have occurred. First, in the 1960s nongovernmental



Eleanor Roosevelt holding a copy of the Universal Declaration of Human Rights, 1948. (Corel)

organizations (NGOs) began an aggressive and systematic effort to advance human rights throughout the world. NGOs such as Amnesty International, Human Rights Watch, OXFAM (Oxford Committee for Famine Relief), and Médecins sans frontières (Doctors without Borders) joined with religious groups, such as World Vision and Maryknoll, to promote human rights worldwide.

The regional human rights courts established in Europe, Africa, and America are a second promising development in ensuring the rights that the UDHR promotes. The European Court of Human Rights has been the most successful in ensuring that the European Union (EU) monitors human rights within all member countries. The EU has also succeeded in abolishing the death penalty, providing asylum for political refugees, harmonizing European legal systems, developing more uniform immigration policies, and providing a high quality of health care for its citizens. It has been able to find a way to balance the UDHR with its member states’ commitment to national sovereignty, thereby serving as a model for other regional courts.

Finally, the UDHR played a critical role in hastening the collapse of the Soviet Union and its East European empire. In the 1975 Helsinki Accords, the Soviet Union pledged special respect for human rights issues within its own borders and within its East European satellites. At first it appeared that the Soviets were ignoring human

rights issues, but by the 1980s it became clear that Soviet authorities could not ignore the UDHR or the Helsinki Accords, thereby hastening the breakup of the Soviet empire.

Even the most strident critics of human rights have recognized that the moral authority of the UDHR grew considerably in the second half of the twentieth century. As its drafters expressly intended, the 1948 declaration enshrines universal human rights based upon both Western and non-Western traditions; claims that the UDHR is merely a screed for Western imperialism and that there must be cultural exceptions for non-Western cultures, especially in the Middle East and East Asia, have been made but not sustained. Political leaders who trample on human rights are no longer immune from international sanctions. Advances in wireless communications and satellite photography virtually ensure immediate worldwide reporting of human rights violations no matter how determined the perpetrators are to hide the evidence.

The two most effective instruments for promoting human rights remain the UDHR and NGOs. In 1948 Eleanor Roosevelt insisted that the UDHR would be the most powerful voice for human rights for the twentieth century. She also believed that “a curious grapevine” would develop to carry the human rights message to all corners of the world.

—Philip F. Riley

Bibliography

- Clendon, Mary Ann. *A World Made New: Eleanor Roosevelt and the Universal Declaration of Human Rights*. New York: Random House, 2001.
- Johannes, Morsink. *The Universal Declaration of Human Rights: Origins, Drafting, and Intent*. Philadelphia: University of Pennsylvania Press, 1999.
- Korey, William. *NGOs and the Universal Declaration of Human Rights: “A Curious Grapevine.”* New York: St. Martin’s, 1998.

The Holocaust and World War II

The massive destruction of human lives in the Holocaust can only be understood in the context of World War II, the largest and deadliest

conflict in human history. Without that conflict, the Holocaust would not have occurred. This is not to say that the murder of roughly 6 million European Jews and millions of others was a spontaneous wartime atrocity or resulted from battlefield frenzy. Rather, the Holocaust was based on official government policy that used carefully calculated operating procedures to implement racial Nazi ideology and warfare as events developed throughout the war.

The German war effort combined territorial expansion with a belief in the need for so-called racial purification. “Race and space,” Doris L. Bergen wrote, were “related goals” of that effort. In Adolf Hitler’s view, the Jews were the root of all evil, and Germany could only be saved from collapse by the total destruction of Jews and Jewish influence. War was not only desired but also necessary to redeem the Germans through racial purification and the acquisition of *Lebensraum* (“living space”) for the so-called superior Germanic or “Aryan” race. The antithesis of the Aryan was the Jew along with all others deemed racially inferior by the Nazis, including Gypsies (the Roma and Sinti), Jehovah’s Witnesses, and homosexuals. This intersection of war and genocide lies at the heart of National Socialist beliefs, something that Hitler had already revealed in his 1925 work *Mein Kampf* (*My Struggle*).

After Hitler came to power on January 30, 1933, acts of racial purification were initiated against the Gypsies, the disabled, and the Jews, the primary target group of the Nazis. In the period leading up to World War II, these actions intensified. Similarly, Hitler’s foreign policy grew increasingly aggressive. Jews were economically boycotted and banned from the German civil service in 1933 when Hitler also initiated Germany’s secret rearmament. He ended the secrecy around Germany’s rearmament only two years later, in 1935. This was also the year of the Nuremberg Laws, which forbade Jews and Aryans from intermarrying and attempted, for the first time, to define who was to be considered a Jew in Nazi Germany. In 1938 the Germans annexed both Austria and Czechoslovakia and organized the so-called Kristallnacht (“Night of the Broken Glasses”), the first massive and openly organized physical attack on Jews by the state.

World War II molded a more systematic and destructive alliance between race and space. In August 1939 the Germans invaded Poland, instigating war with Britain and France. The invasion in Poland was accompanied by massive killings of Jews through pogroms, starvation, and mass shootings by the so-called Einsatzgruppen ("Intervention Groups"), special mobile units of the Schutzstaffel (SS) and the Order Police (police units with military training and equipment). At the same time, deportations were organized to concentration camps and ghettos, where Jews were isolated from the world. In the spring of 1940 Germany invaded and conquered Norway, the Netherlands, Belgium, and France. Only Great Britain was able to check the Germans in the West, but this was of little aid in preventing the murderous activities against Jews in the East.

In June 1941 the Germans opened their attack on the Soviet Union and immediately began to organize pogroms and even more systematic killings of Jews and others. The war against the Soviet Union, also known as Operation Barbarossa, intensified the killing of Jews. In September 1941 Jews in German-occupied Europe were obliged to wear the Star of David. The next month, deportations began of the Jews from Germany and western Europe. Then, in December, the first killing camp was created, located at Chelmno, close to Lodz (Poland). Here gas vans were used to kill Jews and Gypsies.

Most of the fighting between 1941 and 1943 took place in the East, where the Russians were able to halt the Nazis during the Battle of Stalingrad from August 1942 to February 1943. Stalingrad was a decisive turning point, but it did not slow down the killings of Jews; on the contrary, it actually speeded them up. Initial plans to deport the Jews of Europe to Madagascar or deep into the Russian landmasses were made impossible by Allied military resistance.

The decision to exterminate all Jews, however, was not taken until January 1942 at the Wannsee conference. After the conference five more killing centers were created, all of which, like Chelmno, were located in Poland. These camps were Belzec, Sobibor, Treblinka, Majdanek, and Auschwitz-Birkenau, which had initially been created as a killing center for Soviet prisoners of war (POWs) in the summer of 1941.

➤ HOLOCAUST OR SHOAH?

The term "Holocaust" derives from the Greek "holókauston" (λόκαυστον), which means "a sacrifice totally burned by fire." In the 1960s the term "Holocaust" started being used in the Anglo-American world to refer to the systematically planned extermination of as many as 12 million people during Germany's Nazi regime from 1933 to 1945. Critics of the term "Holocaust," however, often point to the religious connotation of the term "sacrifice." They argue that it falsely makes sense of and gives meaning to the senselessness and randomness of the victims' deaths and war experiences. In addition, since Nazi policies were not religiously motivated but instead were sustained by pseudoscientific and racial social Darwinist ideas, the term "sacrifice" is not only morally ill-suited but also historically incorrect. Therefore, critics of the term "Holocaust" often prefer the Israeli use of the (Hebrew) word "Shoah" (catastrophe) to denote the German murder of Jews during World War II. In Israel, the Knesset (the Israeli parliament) has designated an official day, called Yom ha-Shoah, as a day for commemorating the systematic killing of Jews. In France too, one often uses the term "Shoah" rather than the term "Holocaust." These criticisms notwithstanding, most people in the world are more familiar with the term "Holocaust" than with "Shoah." To them the word "Holocaust" refers primarily to the actual historical event rather than to the inherent meaning of the term. For that reason, the term remains both useful and significant.

—Steven Schouten

Although the murder of Jews continued to be characterized by confusion and bad coordination, the erection of these killing centers proved enormously efficient, especially in 1942 when the annihilation of Jews reached its absolute peak. At the beginning of 1942, 75 percent of the Jews who would be killed during the Holocaust were still alive; however, by the beginning of 1943, 75 percent of the approximately 6 million Jews who would be killed were dead. Though the relative numbers of Jews killed declined after 1943, the killings nonetheless continued until the end of the war. Even when it

was clear that the war was lost, the Germans decided to transport a large number of Jews and Gypsies from Hungary to Auschwitz, many of whom did not survive the war. In the summer of 1944 when the Hungarian Jews arrived, Germans in Auschwitz were killing as many as 12,000 Jews a day. Despite Allied knowledge from intelligence sources of the systematic murder of the Jews of Europe, as it was not part of their strategy for the defeat of the Axis, next to nothing was done on behalf of European Jewry.

—Steven Schouten

Bibliography

- Bergen, Doris L. *War and Genocide: A Concise History of the Holocaust*. Lanham, MD: Rowman and Littlefield, 2003.
- Browning, Christopher R. *Ordinary Men: Reserve Police Battalion 101 and the Final Solution in Poland*. New York: Harper Perennial, 1998.
- Friedländer, Saul. *The Extermination of the Jews: Nazi Germany and the Jews, 1939–1945*. New York: Harper Perennial, 2008.
- Friedländer, Saul. *Nazi Germany and the Jews*, Vol. 1, *The Years of Persecution, 1933–1939*. New York: Harper Perennial, 1998.

■ Introduction: Nationalist Movements and Conflict

The first half of the twentieth century was a period of national awakening, increased struggle for national identity against Western colonial powers, and, quite often, conflict with rival ethnic groups and their liberation movements. Societies living under colonial rule suddenly became acutely aware of their lesser position. By and large, the awareness spread from the Western-educated native middle classes to the masses of peasants and workers. These national movements, which successfully captured the imagination of the great majority of the population in Africa and Asia, achieved their final goal of decolonization. The process of emancipation started with the independence of India, achieved in 1946, and was followed by scores of countries achieving independence during the following decade.

Although local circumstances varied from one country to another, these national liberation movements have some common elements. Many of their leaders were Western-educated, for example: Mahatma Gandhi, David Ben-Gurion, Menachem Begin, Ho Chi Min, and Sukarno. Quite often, their education called attention to the discrepancy between lofty proclamations embedded in Western culture about freedom and equality for all men and the practice of denying those rights to colonized peoples. This inconsistency exposed Western ethnocentrism, the underlying intellectual foundation of the civilizing

mission, the so-called White Man's Burden, and the implicit racism it entailed.

The second common element shared by all national liberation movements was the influence of various forms of socialism including the most popular, Marxism. Marxism, as the most comprehensive critique of the laissez-faire economy and state-driven imperialism, was a natural ally of those seeking to overthrow the colonial rule of Western powers. Furthermore, from 1919 to 1943, the Communist International Organization (the Comintern), funded by the USSR, also provided the nascent national liberation movements with sympathetic allies, often an important element in the struggle. Public opinion in the West often managed to limit imperial governments' more drastic actions against liberation movements. Marxists in the West, on the other hand, were often very slow to respond to the challenges posed by national liberation movements. The movement was dominated by either Trotsky's ideas of a world revolution, which emphasized a revolution in industrialized Western countries and ignored the less developed Asia and Africa, or Stalin's isolationism and building of socialism in only one country. Orthodox Marxism also saw nationalism as a reactionary bourgeois movement and rejected it. As such, the USSR kept a safe distance from liberation movements in the Third World until the death of Stalin.

Third, many national liberation movements were put in a very difficult position by the two world wars when they had to pick and choose allies without actually having an influence in the conflict. The most difficult situation was in Asia, where the empire of Japan openly courted national liberation movements in eastern and southern Asia by promising them help in their struggle against Western imperial powers. Gandhi famously pointed out that India was dragged into the war, which was fought for freedom and against oppression, while the same freedoms had been denied to millions of Indians. Many other nationalist leaders were much less generous than Gandhi. Their reluctance to help the Allies was not motivated by an affinity for the Nazis but rather by local considerations and the fact that distant theaters of operation in Europe and the Pacific did not influence them directly, while colonial injustices dominated their daily lives.

Finally, World War II economically and politically wore out the greatest imperial powers, Great Britain and France, making their resistance to independence movements, with some notable exceptions, feeble and difficult to sell to the population at large because of the high cost involved. When the war ended in 1945, there was no stopping the national liberation movements in Asia and Africa, as many nations achieved their goal of formal independence very quickly.

—*Alexander Mirkovic*

Nationalism in the Ottoman Empire

The Ottoman empire was a dynastic multiethnic, multireligious, and multicultural state. The rise of nationalism within the empire combined with the interference and economic imperialism of European powers together with limited Ottoman response was instrumental in the collapse and disintegration of the empire during the nineteenth century. In addition to the founding of new nation-states, this period also witnessed ethnic cleansing, mutual civil violence, and mass migration.

In contrast to common misconceptions and stereotypes, intercommunal relations in the Otto-

man empire remained good and relatively peaceful compared to other European states until the beginning of the nineteenth century. Having their own legal system and wearing distinctive clothing, different communities had lived and worked together for centuries. Despite the primacy of Islam in a region in which religious identity was extremely important, the communities within the empire did not live completely separated from each other. This does not mean that the Ottoman empire was free of conflict or had established eternal peace within the country. Rather, instead of being the result of intercommunal hatreds, the occasional rebellions and unrest were mainly the result of socioeconomic concerns, financial issues, or the ambitions of local notables.

The origins of nationalism in the Ottoman empire are very problematic. For example, even the Serbian rebellion of 1804, which was instrumental in establishing an autonomous Serbian principedom in 1817, began not as a nationalistic revolt but rather as a reaction to the administrative corruption and abuses in the region. However, it is obvious that after the foundation of the Greek national state in 1829, nationalism became the most important issue in the European portion of the Ottoman empire. The initial reaction of the Ottoman administration was piecemeal and limited, showing a lack of understanding of this new development. Traditional military-administrative methods to combat sporadic rebellions and popular unrest not only increased the dissatisfaction for ethnic groups but also created an outcry in Europe and gave additional excuses for the interference of the Great Powers, which was ultimately instrumental in the success of the nationalist movements.

Religious identity and the foundation of separate churches obviously had a significant effect on Balkan nationalism, but other infranational identities on tribal and local levels were also important. Nationalist intellectuals—trained in Europe or missionary schools—became the ideologists and leaders of the independence movements, and these individuals contributed greatly to the national consciousness of their respective ethnic groups. As a result, the various ethnic groups began to desire the creation of mono-ethnic states within the highly cosmopolitan

Balkans, thereby resulting in wide-scale ethnic cleansing and intercommunal fighting. The conflicting interests of the nationalist movements subsequently became especially apparent in regions like Macedonia.

After 1878 nationalism began to also affect other parts of the empire. Following in the footsteps of the new Balkan nations, Armenians and Anatolian Greeks started their nationalist movements. Due to the predominantly Muslim population in Anatolia they initially asked for reform and autonomy, although they later called for independence. In contrast to Christian communities, nationalism tended to not affect Muslim communities until the end of the nineteenth century. Even after this date Muslim communities accepted nationalism somewhat reluctantly, as their nationalism remained essentially a defensive character and therefore did not contribute to the dissolution of the empire.

The Ottoman governing elite and intellectuals began to develop several supranationalist ideologies in order to fight against the nationalist movements and the Great Powers' interference after the 1840s. The first of these new ideologies was the secular and multiethnic "Ottomanism," which basically tried to combine the different groups and regions under the Ottoman flag by providing equality to all citizens in order to gain their loyalty to the dynasty and state. Even though the disastrous Ottoman-Russian War of 1877–1878 had showed clearly the failure and naïveté of this ideology, it remained the backbone of official policy in a somewhat downgraded form until the end of the empire. After World War I, a new ideology under the leadership of Sultan Abdulhamid II was devised: "Pan-Islamism." The basic idea behind this ideology was to unite Muslim communities in an effort to prevent further loss of territory; however, the movement had to be limited in scope so as to not alienate the non-Muslim communities. Abdulhamid tried to gain the loyalty of Muslim groups by creating a new elite through enlisting local notables into the central administration and by opening special schools in various corners of the empire. In the end, Pan-Islamism achieved limited results.

The loss of nearly all of the European territory of the Ottoman empire after the Balkan War

of 1912 led to a significant influx of refugees from the Balkans and the Caucasus. At the same time, the rise of Albanian and Arab nationalism aroused deep suspicion about the loyalties of non-Turkish Muslim groups. In response, the new military-dominated governing elite, Ittihad ve Terakki (Committee of Union and Progress), formulated a more sustainable and viable ideology: "Pan-Turkism." In actuality, it was an imported ideology first devised by Tatar intellectuals from Russia as a literary movement to unite Turkish people to combat Russian imperialism. While Pan-Turkism primarily targeted Turks within the Ottoman empire, it also unofficially appealed to Turkish groups outside the empire, especially those under Russian dominion.

Even though most of the members of the governing elite accepted Pan-Turkism as a viable solution, it never officially replaced Pan-Islamism and Ottomanism. The lack of a consensus and popular support created confusion from the top to the bottom of the imperial administration. This lack of unity could explain the conflicting and controversial policies of the different members of the government at that time. During World War I, all three supranational ideologies failed to achieve the unity that the empire needed. While the absence of the Christian-minority communities' contribution to the war and the Armenian rebellion proved the failure of Ottomanism, the Arab rebellion and the lack of response to jihadist proclamations shattered all Pan-Islamist hopes of enlisting Muslims against "Christian aggressors." The failure of a last-minute advance in 1918 toward the Caucasus did not satisfy even the most ardent Pan-Turkists. In the end, however, these failures provided a suitable environment for an Anatolia-centered Turkish nationalism that became the official ideology after the foundation of the Turkish Republic in 1923.

—Mesut Uyar

Bibliography

- Berkes, Niyazi. *The Development of Secularism in Turkey*. London: Routledge, 1998.
- Brown, Lean Carl, ed. *Imperial Legacy: The Ottoman Imprint on the Balkans and the Middle East*. New York: Columbia University Press, 1996.

Landau, Jacob M. *The Politics of Pan-Islamism: Ideology and Organization*. 2nd ed. Oxford, UK: Oxford University Press, 1994.

McCarthy, Justin. *The Ottoman Peoples and the End of Empire*. London: Arnold, 2001.

Palestine

Palestine between 1900 and 1945 was a dynamic place, due in large part to a demographic shift brought on by Jewish immigration. The land of Palestine was bordered to the north by Syria and Lebanon, to the east by Transjordan (now Jordan), and to the southwest by Egypt. Although the territory had areas of fertile land that supported the existing population, changing Ottoman land laws shifted land ownership, leading to the impoverishment of many Palestinian peasants.

The population of Palestine according to the 1922 census was approximately 752,048 people. Of these, 589,177 were Muslim, 83,790 were Jewish, and 71,464 were Christian. It is difficult to find accurate numbers concerning the Arab Jews who were residing in Palestine prior to the East European migration, as the Ottoman government did not account for Arab Jews. However, it is clear that the population rose steadily, with the total population in 1942 being more than 1 million people.

In the mid-nineteenth century, the Ottoman government instituted the Tanzimat (Reorganization) reforms in an attempt to modernize its empire in response to increasing British and French pressure. These reforms included an increase in taxes and the number of conscripts for the Ottoman Army. This led to many Palestinians signing their land over to a sheikh (leader) who would then be responsible for conscripts and taxes for the entire village, thus lessening the load on the individual families. This new land tenure system with its absentee owner became an important factor in the early 1900s, when the Jewish National Fund (JNF) was established to purchase land for future Jews. The JNF had been established in 1901 and by the 1920s was a considerable force within Palestine vis-à-vis land ownership, holding approximately 25,000 acres (10,000 hectares). It was on JNF money that Tel Aviv was established.

From World War I (1914–1918) onward, most of Palestine's history can be understood via diplomatic documents and their effect on the land and its peoples. During the war, the Ottoman empire sided with Germany and Austria. Because of this, the British and French attempted to foment unrest within the Ottoman territories. The first attempt at this was through the Hussein-McMahon Correspondence (1915) whereby the British envoy, Henry McMahon (1862–1949), approached the sharif of Mecca, Ali ibn Hussein, asking him to begin a revolt among the Arabs in the empire in exchange for sovereignty over the Arabs in the former Ottoman provinces.

Shortly after the Hussein-McMahon agreement, the British entered into the Sykes-Picot Agreement with the French. This pact divided former Ottoman provinces into spheres of influence, with Britain retaining roughly the areas of Egypt, Palestine, Transjordan, and Iraq and France entering into Syria and Lebanon. This was the part of the template for the mandates formed following World War I.

In 1917 the British further enmeshed themselves in Palestinian politics with the Balfour Declaration. This document, addressed to one of the world's foremost and wealthiest Jews at the time, Lord Rothschild, explained that the British government was supportive of the establishment in Palestine of a national home for the Jewish people. Shortly after this declaration, the immigration of Jews to Palestine increased dramatically, causing a strain on the local economies and general civil unrest. This immigration was caused by ethnic conflict in Europe, pogroms in Russian controlled areas, and the rise of Nazism in Germany.

Following the Treaty of San Remo (1920) and the Treaty of Sèvres (1920), the Jews in Palestine believed that they had achieved power and thus began organizing cohesive political groups led on the Left by Chaim Weizman and then David Ben-Gurion and on the Right by Vladimir Jabotinsky and then Menachem Begin and Yitzhak Shamir. The Arabs in Palestine were also divided into two groups fighting on the basis of family, the Nashashibis and the Husseinis. However, with the ascension of Haj Amin al-Husseini to the position of grand mufti (spiritual head) of Jerusalem, the family's rivalry was ensured, and nationalist feeling superseded cohesion.

After 1920 violence spiraled out of control throughout Palestine. Riots began soon after the Balfour Declaration was made public. British support for Jewish immigration into Palestine had been waning since the 1920 riots, when Winston Churchill issued a White Paper (a British government memorandum) arguing that the number of immigrants should not overwhelm the existing population. This sentiment was echoed and strengthened in the 1929 Passfield White Paper but was not put into policy until another White Paper in 1939.

The Jewish leadership believed that the British were cooling in their support at about the same time as persecution was rising in Europe. In response, they began increasing emigration numbers as much as possible. This led to another Arab Revolt in 1936 in which, for the first time, the Arabs formed an organized and cohesive group. They revolted against the British mandate government by attacking Jewish settlements, and it took more than 20,000 British troops to contain and end the violence. This final revolt led the British to send the Peel Commission to Palestine. The commission concluded that partition was the only answer to the violence. At this point, the Jewish leadership officially split between the Irgun, led by Begin, who wanted to oust the British and the Haganah, led by Ben-Gurion, who preferred cooperation over conflict. The Arab leadership was decentralized during this period, but they were satisfied for a short time with the 1939 White Paper that curtailed Jewish immigration.

Soon after, World War II broke out in Europe, and Britain was forced to defend itself against the Axis Powers of Germany and Italy, leaving Palestine and its violence unattended and the 1939 White Paper unenforced. Violence continued until the 1948 Israeli War of Independence, when Israel declared and won its independence.

—Victoria Penziner

Bibliography

Jewish National Fund. "The Jewish National Fund: Celebrating 100 years as Caretaker of the Land of Israel." 2001, <http://www.jnf.org/site/PageServer?pagename=history>.

Kimmerling, Baruch, and Joel S. Migdal. *The Palestinian People: A History*. Cambridge, MA: Harvard University Press, 2003.

Sachar, Howard M. *A History of Israel from the Rise of Zionism to Our Time*. 2nd ed. New York: Knopf, 2001.

Wolf, Aaron. *Hydropolitics along the Jordan River*. Japan: United Nations University Press, 1995.

Nationalist Movements in India

Indian nationalist movements developed in opposition to the British colonial occupation of the region. Indian nationalism grew increasingly restive against British rule the more apparent it became that the British were only going to relinquish control of India slowly and reluctantly. Although they were unable to win their independence, the 1857 rebellion was an important rallying point for Indian nationalists. Around the turn of the twentieth century, newly assertive leaders included the "Lal, Bal, Pal" trio: Lala Lajpat Rai (1865–1928), Bal Gangadhar Tilak (1856–1920), and Bipin Chandra Pal (1858–1932). The Asian victory in the Russo-Japanese War (1904–1905) boosted the confidence of Indians to resist the British. The abrupt partition by the British of Bengal in 1905 between the predominantly Muslim eastern region (which would become East Pakistan in 1947 and then Bangladesh in 1971) and the majority Hindu West Bengal proved provocative. In response, extremist nationalists such as Sri Aurobindo Ghose (1872–1950) organized the Swadeshi movement, a boycott of British cotton textiles. Some Indians turned to violent means to free India from British control including Vinayak Savarkar (1883–1966), who helped establish India House (1905–1910) in London and whose followers carried out assassinations of British officials and later even nationalist rival Mahatma Gandhi (1869–1948). During World War I, Germany provided aid to young Indian nationalists, including Virendranath Chattopadhyaya (1880–1937) in Berlin and members of the Ghadar (Rebellion) Party among Indian immigrants in San Francisco. Other revolutionaries, such as Manabendra Nath Roy (1887–1954),

worked with Vladimir Lenin and the Soviet Union to found the Communist Party of India in 1920.

The almost 60,000 Indians killed fighting for Britain in World War I made significant contributions to the Allied war effort on the western front and in the middle east, where they captured Baghdad. The British rewarded this loyal sacrifice in 1919 with the disappointing Montagu-Chelmsford Reforms and the Amritsar Massacre, where troops under the command of British General Reginald Dyer killed 379 and wounded more than 1,200 peaceful protestors at Jallianwallah Bagh, an enclosed market with only one entrance.

Counteracting the British strategy of divide and conquer proved to be a difficult challenge during the independence movement, as it fed communal strife between Hindus and Muslims. Nevertheless, the Lucknow Pact (1916) between the Indian National Congress and the All-India Muslim League allowed for the concession of separate electorates for Muslims in order to get Muslims and Hindus to work together against the British. Both groups of Indian nationalists continued to cooperate during the early 1920s to support the Muslim Khalifat (Khilafat) movement as it merged with Gandhi's Anti-Rowlatt Satyagraha campaign. Despite increased pressure for independence as a result of the Great Depression, the British were able to divide the revolutionaries further by giving a separate electorate to lower-caste Hindus.

Although most Indians remained loyal to the British during World War II, the conflict added new motivation for independence. The Congress, split between conservative and radical factions on the eve of the war, was embarrassed when the British declared war again on behalf of India without bothering first to consult with them. Even the moderates under Gandhi and Jawaharlal Nehru (1889–1964) then opted to withdraw support from the British, choosing the Quit India campaign that resulted in the largest civil disobedience campaign since 1857. In his 1908 pamphlet *Hind Swaraj (Indian Self-Rule)*, Gandhi made the point that a few hundred thousand Englishmen were able to hold on to millions of Indians only because the Indians let them. With

➤ MOHANDAS K. "MAHATMA" GANDHI'S SALT MARCH SATYAGRAHA, 1930

Satyagraha (Sanskrit for "grasping for truth"; also translated as "soul force") was Gandhi's technique of nonviolent civil disobedience that he developed on behalf of Indians toward the British in South Africa. Its success required well-trained, law-obeying, obedient, self-disciplined volunteers who openly picked a single unjust law to break, accepting all consequences including violent reprisals and jail. The hope was that focusing public attention on that narrow issue and by highlighting its injustice would elicit support among a wider public and even among those within the establishment charged with enforcing the law. Through the use of nonviolence Gandhi sought not just to win but also to achieve a genuine consensus by awakening compassion in the oppressor; he saw nonviolence as an ultimately quicker method for achieving an objective than using violence to force one's opponent superficially to do one's will.

On March 12, 1930, Gandhi started his 240-mile (385-kilometer) almost month-long march to the sea from Ahmedabad to Dandi to break the British salt law that taxed this vital substance. After a highly publicized march, on April 6, 1930, Gandhi and thousands of his followers defied the government through the simple act of making salt from seawater. This high point in Gandhi's career landed him in jail yet again but gained widespread sympathy for the Indian independence movement.

—Douglas T. McGetchin

simple refusal to cooperate, Indians could force Britain from India. The British responded to Quit India by throwing Gandhi and the Congress leadership in jail. The loyalist Muslim-majority provinces played little role in Quit India, foreshadowing the postindependence Indo-Pakistani split. Netaji (respected leader) Subhas Chandra Bose (1897–1945), once president of the Congress, took an even more radical path. Under house arrest at the war's outbreak, he escaped first to Nazi Germany and then imperial Japan, where he organized the Azad Hind Fauj (Indian National Army) among Indian prisoners of war, leading them in the Burmese campaign against

the Allies. Further eroding British support was a massive famine that struck Bengal in 1943–1944, killing around 3.5 million as the British neglected to provide relief.

In the Lahore Resolution (1940), Mohammad Ali Jinnah (1876–1948) took a public stand in favor of the partitioning of British India into an independent Pakistan and an independent India. Although Gandhi deeply opposed such partitioning, he agreed to it in 1944 with the hope that the two future countries could at least form a coalition. Independence for Pakistan (August 14, 1947) and India (August 15, 1947) was marred by the violence of one million refugee deaths, as riots accompanied the Muslims who fled from India to Pakistan and the Hindus who fled from East and West Pakistan to India. Ambiguities remained in regions such as Junagadh and Hyderabad, which had Muslim leaders and Hindu populations, while the opposite situation occurred in the border region of Kashmir.

During the four decades from 1905 until the end of World War II, Indian nationalists made significant strides toward independence. Leaving moderation behind, many became increasingly radicalized, yet Gandhi and other Congress leaders managed to direct most resistance along nonviolent paths of peaceful noncooperation and economic boycott. Still, deep disagreement existed among revolutionaries about how to free India from the British: through violence or more moderate noncooperation. Despite the lingering religious communal rivalry that rent the region creating a separate Pakistan and shattering Gandhi's hopes for unity, South Asians did gain independence from British rule.

—Douglas T. McGetchin

Bibliography

- Brown, Judith. *Gandhi: Prisoner of Hope*. New Haven, CT: Yale University Press, 1989.
- Chatterjee, Partha. *Nationalist Thought and the Colonial World: A Derivative Discourse*. Minneapolis: University of Minnesota Press, 1993.
- Gordon, Leonard. *Brothers against the Raj: A Biography of Indian Nationalist Sarat and Subhas Chandra Bose*. New York: Oxford University Press, 1990.
- Minault, Gail. *The Khilafat Movement: Religious Symbolism and Political Mobilization in India*. New York: Columbia University Press, 1982.

Nandy, Ashis. *The Intimate Enemy: Loss and Recovery of Self under Colonialism*. Delhi: Oxford, 1983.

Nationalism in Burma

Burma's modern nationalism emerged in the form of the Dohbama Asiayone (We Burmans Association, or Our Burma Association), founded in 1930. This new association replaced the Buddhist-sponsored nationalism of the Young Men's Buddhist Association (YMBA) of 1906. The Dohbama Asiayone was composed mainly of students from Rangoon University and discussed a diverse range of nationalist and state philosophical trends with which to strengthen Burma and ultimately free the country from British rule. Among the group's members was Aung San, father of today's resistance icon Aung San Suu Kyi, who was to become the key figure in the independence movement until his assassination on July 19, 1947. As a symbol of resistance, members addressed themselves as *Thakin* (master), an address employed by the British colonial masters. Gradually, Marxist reading gained ground, and on August 15, 1939 (sometimes dated 1943), the communists within the Dohbama Asiayone founded the Burma Communist Party (BCP) with the aim of forming a united anti-imperialist front and gaining freedom by destroying British capitalism and imperialism.

The Burmese communists adopted the anti-imperialist line, even though in the face of the rise of fascism the Communist International (Comintern) had decided in 1935 to suspend the struggle against imperialism and fight fascism (Dimitrov line). Ideologically, imperialism was seen as a necessary stage in capitalist development. Fascism, then, appeared as capitalism in a state of crisis that embarked on an imperialist war to overcome the crisis.

In July 1941 the BCP leadership turned anti-fascist with the Insein Manifesto, drawn up while they were jailed in Insein. Going against the Dohbama mainstream, this manifesto called for a temporary cooperation with the British, especially after Great Britain and the Soviet Union had become allies against fascist Germany. The mainstream Dohbama initially ignored this move

and instead cooperated with the Japanese—who had conquered Burma from Great Britain—in an effort to gain independence. Indeed, on August 1, 1943, Japan declared Burma to be independent; however, the reality was that this independence was in name only. At that point the Burmese resistance followed the communists and cooperated with the British to turn against the Japanese. A united front according to the Dimitrov line emerged in August 1944 in the form of the Anti-Fascist Organization (AFO). On August 19, 1945, the AFO was renamed the Anti-Fascist People's Freedom League (AFPFL).

In February 1946 the BCP split into two factions, subsequently known as the Red Flags and the White Flags. The Red Flags, led by Thakin Soe, assumed a radical line, whereas the White Flags, led by Thakin Than Tun, maintained the moderate cooperative strategy endorsed by Georgi Dimitrov in 1935 and stayed within the AFPFL after World War II. On July 3, 1946, Soe's radicalism led Sir Henry Knight, then the governor of Burma, to outlaw the Red Flags and the closely associated Red Flag Labour Unions and Red Flag Cultivators Unions.

In late September 1946 in the midst of strikes, a governor's executive council was appointed. The AFPFL was allocated 6 out of 11 seats. Aung San became deputy chairman, a position resembling that of a prime minister. Four months later Aung San and Britain's prime minister Clement Attlee agreed to form an interim government in preparation for Burmese independence. By April 1947 the White Flags began to take an increasingly radical posture. They first boycotted the April 1947 general elections for delegates to the Constituent Assembly; however, they eventually contested 28 seats of which they won only 7. The AFPFL won the remaining 248 seats.

From the start the AFPFL had problems of maintaining unity. This factional problem was carried into independence and contributed to the instability of the political system throughout the 1940s and 1950s. On January 4, 1948, Burma gained independence under an AFPFL government, with U Nu (1907–1995) as prime minister. Two months later the White Flags decided to go underground and attempt to overthrow the government by revolution.

—Oliver Hensengerth



General Aung San was a leading nationalist figure in Burma and considered to be the father of Burmese independence. (Library of Congress)

► CHRONOLOGY OF NATIONALISM IN BURMA

- 1885/1886—Third Anglo-Burmese War finalizes Burma's incorporation into the British empire.
- 1906—Young Men's Buddhist Association (YMBA).
- 1930—Dohbama Asiayone.
- 1935—Antifascist Dimitrov line.
- 1937—The British colonial government separates Burma from British India.
- 1939—Burmese Communist Party (BCP).
- 1941—Insein Manifesto; declaration of war between Great Britain and Japan.
- 1943—Declaration of independence under Japanese auspices.
- 1944—Anti-Fascist Organization (AFO).
- 1945—Japanese surrender; AFO renamed Anti-Fascist People's Freedom League (AFPFL).
- 1946—BCP splits; executive council; split AFPFL-White Flag BCP.
- 1947—Aung San-Attlee agreement; Constituent Assembly and new constitution; Andrei Zhdanov's two-camp thesis; Nu-Attlee agreement.
- 1948—Independence, Prime Minister U Nu; White Flag BCP starts insurgency.

—Oliver Hensengerth

Bibliography

- Fleischmann, Klaus. *Die Kommunistische Partei Birmas: Von den Anfängen bis zur Gegenwart and Documents on Communism in Burma 1945–1977*. Hamburg: Institut für Asienkunde, 1989.
- Lintner, Bertil. *The Rise and the Fall of the Communist Party of Burma (BCP)*. Ithaca, NY: Cornell University, Southeast Asia Program, 1990.
- Smith, Martin. *Burma: Insurgency and the Politics of Ethnicity*. 2nd ed. London: Zed, 1993.

Thompson, Virginia, and Richard Adloff. *The Left Wing in Southeast Asia*. New York: William Sloane Associates Publishers, published under the auspices of the International Secretariat, Institute of Pacific Relations, 1950.

Nationalism in French Indochina

In Vietnam a modern nationalist movement emerged at the turn of the twentieth century with the actions of Phan Boi Chau, a member of the class of scholar-officials, or literati, who were influential through their rise in the imperial bureaucracy, which was staffed by officials graduating within the Confucianist imperial examination system. The nationalist movement, of which Phan Boi Chau was the figurehead, tried to reform the monarchy but then changed to the advocacy of a republican system, underpinned by Neo-Confucianism.

The abolishment of Sino-Vietnamese education, the introduction of a modern Western curriculum, and the abolishment of the imperial examinations by the French colonial authorities by 1919 saw the decline of the scholar-officials and their nationalist movement. Instead, the nationalist scene radicalized, and in 1925 Ho Chi Minh founded the first communist organization in the whole of French Indochina: the Viet Nam Thanh nien Cach mang Dong chi Hoi (Revolutionary Youth League/Association of Revolutionary Young Comrades/Association of Revolutionary Youth), commonly known as the Thanh Nien party. Although the organization was founded in exile in Guangzhou (Canton), China, its members were infiltrated into Vietnam to organize communist cells.

In January 1930 Ho Chi Minh, staying in Hong Kong, merged the Thanh Nien with two parties operating within Vietnam into the Dang cong san Viet Nam (Vietnamese Communist Party). In October 1930 its name was changed to Dang cong san Dong Duong (Indochinese Communist Party, ICP) to allow for the participation of Laos and Cambodia. The party's headquarters were relocated to Haiphong. In order to acquire an additional network after the suppression of the ICP in the early and late 1930s, in 1941 mem-

bers of the Vietnamese communist refugee community in China's Guangxi province founded the Viet Nam Doc Lap Dong Minh Hoi (League for the Independence of Vietnam), better known as the Vietminh, chaired by Ho Chi Minh. The Vietminh acted against both Japan and France at a time when the French Vichy regime was allied with Nazi Germany and France and Japan were engaged in the suppression of resistance activities in Indochina.

The Japanese attack on French Indochina resulted in a power-sharing arrangement between Japan and France: on August 30, 1940, the Japanese government recognized French sovereignty over Indochina, while France recognized Japan's military control of the colony and agreed not to interfere with Japan's expansionist plans in East Asia. By December 1941 Japan had taken military control over the whole of Indochina, and Indochina became effectively included into Japan's Greater East Asia Co-Prosperity Sphere. France was officially left in sovereignty and to administer the colony. Mounting French resistance to increased Japanese control, however, led to the Vietminh switching sides to France against Japan. In response to French resistance, the Japanese dissolved the French administration and took complete control over Indochina in the coup de force of March 9, 1945.

In the following months the Japanese restored nominal independence to Vietnam by restoring Emperor Bao Dai to full authority, while the Japanese kept military control. Before the coup de force, in March 1945, Bao Dai had been allowed to extend his authority to Tongkin through a viceroy (who was checked by Japan), and in July the French concessions in Hanoi, Haiphong, and Tourane had been dissolved. On August 8, 1945, the Japanese agreed to hand Cochinchina to the Bao Dai government. However, Bao Dai was unable to fill the power vacuum that was left by the absence of French administration.

The vacuum that was created enabled the Vietminh guerrilla forces to operate more easily and expand their influence over Tongkin. In August 1945 the surrendering Japanese gave full authority over Tongkin to Viceroy Phan Ke Toai. The Allied-backed Vietminh, arriving in Hanoi, informed the viceroy of their taking over the gov-

ernment of Tongkin. In Cochin, China, where the ICP network was destroyed, a united front government led by Vietminh forces took over. The abdication of Bao Dai in Hue, in agreement with the Vietminh government in Hanoi, put the Vietminh in charge of Annam. A national government was formed and independence declared on September 2, 1945. The attempt of France to re-establish the French Union in Vietnam led to a guerrilla war of the Vietminh, which was settled at the Geneva Conference in 1954.

In Cambodia a modern nationalism did not take hold until the 1930s and was based on historic affiliations to the Angkor period and religious affiliation to the Buddhist sangha. The first Khmer-language newspaper, *Kambuja Surya*, was published in 1936; however, it belonged to the Institut Bouddhique founded by the French authorities, which was supposed to give Buddhism a national focus, an action also pursued in Laos. The first signs of anti-French resistance emerged in the 1930s through the French-sponsored Lycee Sisowath, which brought about a small Cambodian elite, the Institut Bouddhique. The sangha and the newspaper *Nagara Vatta*, founded in 1936, since 1940 had become increasingly anti-French, anti-Vietnamese and pro-Japanese as Japan promised independence from France. The paper was eventually suppressed in 1942. It was not until the start of the Japanese occupation of French Indochina that anti-French feelings broke out. This was created by increased suppression of Vichy France, allied to fascist Germany, throughout French Indochina; seizure of Cambodian territory by Thailand in the Franco-Siamese War of 1940–1941; clashes between French authorities and Cambodians during the monks' demonstration in July 1942; and attempts by France to Romanize the Cambodian alphabet between 1943 and 1945. The Japanese coup de force resulted in Tokyo urging King Sihanouk, who had ascended to the throne in 1941, to declare independence within the Greater East Asia Co-Prosperity Sphere, which he did on March 13, 1945. After the Japanese surrender in August 1945, Sihanouk declared full independence. In October an Allied force occupied Phnom Penh and entered into negotiations with Sihanouk. On January 7, 1946, an agreement was reached to grant Cambodia autonomy within the French

► CHRONOLOGY OF NATIONALISM IN FRENCH INDOCHINA

- 1925—Thanh Nien Party founded by Ho Chi Minh.
- 1930—Indochinese Communist Party founded.
- 1941—The Viet Minh founded, chaired by Ho Chi Minh.
- 1945—All three Indochinese states declare independence from France; Japan surrenders in August; the surrender agreement is signed in September, officially ending World War II in the Pacific.
- 1945/1946–1954—Resistance War.
- 1946—France reestablishes the protectorates over Laos and Cambodia; restoration of French colonial rule in Vietnam proves more difficult due to the elaborate structure of the communist Vietnamese resistance.
- 1954—Geneva Conference ends French colonialism in Indochina.

—Oliver Hensengerth

Union, effectively re-creating the French protectorate over Cambodia. In 1954 Cambodia became fully independent.

While Vietnamese nationalism became increasingly radical and Leftist-leaning, in Laos, as in Cambodia, nationalism took longer to develop, and communism was absent—except in some instances among the Vietnamese minority—until the late 1940s. Nationalism appeared first during the reign of King Rama IV as linked to the monarchy and Buddhism. To wean Buddhist thinking away from Siamese affiliations, the French authorities set up Buddhist institutes in the 1930s. French-supported creation of a Lao national history, history textbooks and newspapers in the Lao language, introduction of national symbols as well as designs of unification of the country by the king of Luang Phrabang between the 1920s and 1940s—thus the creation of a secular nationalism—furthered the idea of Lao nationalism against the tendency of looking to Thailand. During the process France pronounced that by establishing the protectorate it had saved Laos from destruction. The Indigenous Consultative Assembly, mostly consisting of members of the provincial councils but also containing a French-educated aristocratic elite,

gave Laos the idea of having a national deliberation body. The overthrow of the French administration in Japan's coup de force led to the declaration of Lao independence under Japanese auspices. After the Japanese surrender an elite resistance group, the Lao Issara (Free Lao), managed with the help of the Vietminh—which similar to Cambodia in the absence of communism cooperated with the present noncommunist resistance forces against a French return—to install a government, which however was ousted by advancing French forces. In the following years, the protectorate over Laos was essentially re-created, as an independent state within the French Union, until Laos gained full independence in 1954.

—*Oliver Hensengerth*

Bibliography

- Hoang, Van Chi. *From Colonialism to Communism: A Case History of North Vietnam*. London: Pall Mall, 1964.
- Kiernan, Ben. *How Pol Pot Came to Power: Colonialism, Nationalism, and Communism in Cambodia, 1930–1975*. 2nd ed. New Haven, CT: Yale University Press, 2004.
- Lancaster, Donald. *The Emancipation of French Indochina*. London and New York: Oxford University Press, 1961.
- Stuart-Fox, Martin. *Buddhist Kingdom, Marxist State: The Making of Modern Laos*. 2nd ed. Bangkok, Thailand: White Lotus, 2002.

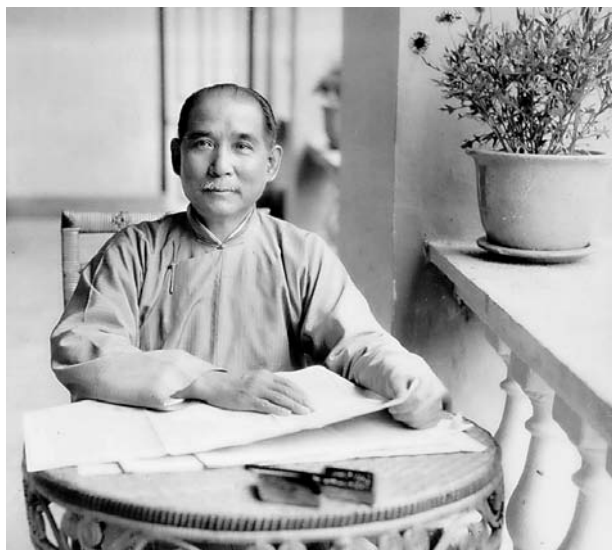
Nationalism in China

By 1900, economic penetration of China by imperialist powers had become advanced. China was a semicolony under the stipulations of the treaty system, a number of so-called unequal treaties that the government of the Qing dynasty was forced to conclude with imperialist powers. A number of abortive attempts to initiate reform of the Confucian state during the second half of the nineteenth century in order to strengthen the Chinese state, the military, and the economy against the threat of imperialism (such as, for instance, along the lines of the Meiji Reform in Japan) eventually led to the defeat of the Chinese Army in the Japanese-Chinese War in 1894–1895

and showed the shortcomings of the moderate reforms of the Self-Strengthening Movement (ca. 1861–1894). The Hundred Days' Reform (1898), initiated through petitions by the scholar-official Kang Youwei to the Guangxu emperor, was stopped by conservative circles at court, led by the Empress Dowager Cixi. This further weakened the Qing vis-à-vis imperialism, and attacks were increasingly launched against the dynasty by radical nationalists. Among the nationalists were Sun Yatsen, who criticized the inability of the Qing to strengthen China and who also focused on the foreign (Manchu) origin of the dynasty. This development ended the reformist nationalism of the 1861–1898 period with its goal to moderately reform, but essentially keep, the multiethnic state held together by Confucianist morality. Reformism was replaced by a Western-style nationalism in which a nation-state corresponds with an ethnic homogenous population and a common language within precisely defined borders. This was the birth of anti-imperialism, which would eventually topple the Qing dynasty.

In order to recover from its defeat in the Boxer Rebellion, the Qing decided to move forward with reforms, including the abolishment of the Confucian examination system for the civil service, the introduction of Western-style schools, the remodeling of Confucian academies into Western-style universities, the introduction of Western-style military academies, and the introduction of a constitution for local and central administrative reform and a constitutional monarchy.

The Qing dynasty was eventually overthrown in 1911, and on January 1, 1912, the revolutionaries set up a republican government with Sun Yatsen as provisional president. As the Qing had not yet abdicated, this was a rival government. The dynasty asked its supreme commander, Yuan Shikai, to negotiate a settlement. At its end stood the abdication of the Qing in February 1912 and the yielding of the presidency to the autocratic Yuan. Led by Sun Yatsen, the nationalist Guomindang, a merger of several revolutionary organizations including Sun's Tongmeng Hui, could not prevent this autocratic transformation. In 1915 Yuan tried to make himself emperor, but the plan was opposed and finally wrecked by the provincial



Chinese nationalist leader Sun Yatsen in 1923. (UPI/Bettmann/Corbis)

leaders and the Guomindang. Yuan died in 1916, and the country fell apart into zones of influence under provincial warlords. The power of the warlords was due to the military empowerment of the provinces through decentralization measures in the wake of the Taiping Rebellion (1851–1864).

Whichever warlord was in charge of Beijing was dealt with by foreign countries as the government of China. The government that was in place in Beijing in the spring of 1919 was confronted by the May Fourth Movement, with its nationalist aim of ridding China of imperialist interference. On April 30, 1919, the results of the Versailles Treaty to end World War I were announced. The stipulations of the treaty forced Beijing to hand the formerly German Shandong to Japan instead of China. At the same time, it became known that Beijing also had agreed to Japan's 21 demands, a blueprint for Japan's expansionist ambitions in China. These events resulted in widespread demonstrations and violence against pro-Japanese cabinet members, foreigners in general and Japanese citizens in particular. The protests peaked on May 4, when a student was shot by the police; this was followed by a wave of nationwide strikes. The protests became known as the May Fourth Movement (*wu si yundong*). On June 12, 1919, the government resigned.

In 1921 the Chinese Communist Party (CCP) was formed in Shanghai, with the May Fourth Movement serving as the catalytic process for its formation. Committed to a nationalist cause—with communism as the ideology—to rid China of foreign domination and rule of the bourgeoisie (which in its view was cooperating with the imperialist exploiters), the CCP was to become the Guomindang's main foe and ally at different stages in the history of the Republic of China.

The disappointment about the outcome of the Versailles conference discredited the Western democratic countries and instead led China's left-wing politicians and intellectuals to look toward the Soviet Union as a successful example of how to achieve peace and strength. After Sun's death in 1925, the ideological conflict between the Guomindang and the CCP became unbridgeable. Jiang Jieshi (Chiang Kai-shek), who came to succeed Sun in leading the Guomindang, was a strong anticommunist and focused more on wiping out communist activity rather than joining forces with the CCP against Japan in the Sino-Japanese War (1937–1945).

In the full civil war that broke out after Japan's surrender, corruption and economic mismanagement eroded the urban support for Jiang Jieshi, and military defeats despite military support from the United States eroded the morale of his army. The CCP, however, enjoyed popular

➤ CHRONOLOGY OF NATIONALISM IN CHINA

- 1898–1900—Boxer Rebellion.
- 1901–1910—Qing reforms.
- 1911–1912—Xinhai Revolution.
- 1916–1928—Warlordism.
- 1919—May Fourth Movement.
- 1921—Foundation of the Chinese Communist Party (CCP).
- 1923–1927—First United Front.
- 1925—Sun Yatsen dies.
- 1926–1928—Northern Expedition.
- 1931—Japanese attack.
- 1931–1934—Jiangxi Soviet.
- 1934–1935—Long March, Yanan base area.
- 1936–1941 (1945)—Second United Front.
- 1945–1949—Civil war.

—Oliver Hensengerth

CHINESE CIVIL WAR, 1945–1950



support in its rural bases and high morale in its military. This eventually decided the war, and on October 1, 1949, Mao Zedong proclaimed the People's Republic of China. The Guomindang, including parts of the government machinery (parliament, ministries) fled to Taiwan. In December 1949 Jiang Jieshi declared Taipei to be the temporary capital of the Republic of China.

—*Oliver Hensengerth*

Bibliography

- Dreyer, June T. *China's Political System: Modernization and Tradition*. 4th ed. New York and London: Allyn and Bacon, 2004.
- Furuya, Keiji. *Chiang Kai-shek: His Life and Times*. Translated by Chun-ming Chang. New York: St. John's University Press, 1981.
- Schwarcz, Vera. *The Chinese Enlightenment: Intellectuals and the Legacy of the May Fourth Movement of 1919*. Berkeley: University of California Press, 1986.
- Spence, Jonathan D. *The Gate of Heavenly Peace: The Chinese and Their Revolution, 1895–1980*. New York: Viking, 1981.

Nationalism in German East Africa

At its core, nationalism is a political ideology—developed by nineteenth-century European middle-class intellectuals and state builders—that asserts that a nation, a people, or an ethnic group is the primary element of human social life and that each nation is entitled to its own sovereign state. In this sense, the term “state” refers to a political community that occupies a definite territory, has an organized government, and is self-governing. Modern theories of nationalism, however, contend that national identity and unity were not the result of spontaneous popular desires but instead were invented or imagined communities carefully crafted by politicians seeking greater control over a state's economy and society. In colonial territories such as German East Africa, ease of governance involved a divide-and-conquer strategy. Tanganyikan, or Tanzanian, nationalism was not promoted by the German state. Indeed, it was

actively subverted, and the autonomy of the existing ethnically based states, such as the Hehe and Nyamwesi, was not respected. Nevertheless, the actions of the German colonial government inadvertently created conditions for the so-called invention of Tanganyikan nationalism under later British rule.

The people who lived in what became German East Africa after 1889—present-day Tanzania, Rwanda, and Burundi—were quite diverse and privileged local loyalties and identities. In the interior were mostly Bantu-speaking and politically independent ethnic groups who lived mainly by crop farming (the Hehe, Ngoni, Kimbu, Makonde, Chagga, and Myamwesi) as well as the Nilote-speaking Masai herders. On the coast, Swahili-speaking Arabs and Africans had long engaged in commerce and were nominally subject to the sultan of Zanzibar, while Hindu-speaking Indians were deeply involved in commercial activity. Around 1900 the densely populated kingdoms of Rwanda and Burundi came under the protection of German East Africa. Rwanda and Burundi had developed a class structure similar to medieval Europe, although the aristocrats were drawn exclusively from the Tutsi ethnic group (about one-tenth of the population) who ruled over the mainly peasant-farmer Hutu and from whom they exacted taxes and labor services. Paramount chiefs who acknowledged German suzerainty were confirmed in office and ruled as representatives of the German government, whereas in Burundi, Rwanda, and Bukoba German government representatives became residents (advisers) to the kings who kept control over the administration of their state. The main task of the chiefs outside the kingdoms was to collect a hut tax, organize a workforce for German plantations, and muster workers for road construction projects and cultivation of new crops.

Uprisings against the German intruders were common. Before 1900 the major revolts were the Abushiri Rebellion (1888–1890), the Uzigua Revolt (1890), the Nguru Revolt (1891), the Nyamwesi Rebellions (1892–1894), and the Hehe Resistance (1891–1898). These uprisings were not based on a sense of shared ethnicity or nationhood but instead were based on multiple grievances against the new German rulers: new

taxes, disrespect for Islam, disregard for sovereign African polities, and generally brutal treatment. Although the Nyamwesi and Hehe were ethnically based and highly organized African states, they had no rituals, myths, or institutions creating a national allegiance. While the uprisings in the colony before 1905 were often confined to single ethnic groups organized into autonomous states (re)asserting their traditional independence against German claims to suzerainty, the Maji Maji Rebellion that began in July 1905 in the Rufiji River valley was a new form of resistance to colonial rule: this mass movement of protest against the hut tax, forced labor on roads and plantations, and autocratic local officials swiftly spread across dozens of ethnic groups in the southern third of the colony. Using religious rather than national belief as a motivating force, the uprising began among the Matumbi, a stateless people without a traditional structure of centralized leadership, who sought to regain their independence and to resist the forced cultivation of cotton. The Matumbi rubbed holy water (*maji*) from the prophet Kinjikitile onto their bodies in the belief that it made them invulnerable to German bullets. By July 1907 the revolt was put down in a scorched earth policy that devastated the southern half of the colony and depopulated large areas of it.

Other rebellions followed (e.g., the Turu Rebellion of 1908, the Chagga uprising of 1909) but none of the anticolonial uprisings from 1889 to 1914 were framed in the language and ideas of nationalism. They were local movements of resistance to direct exploitation and German cultural, political, and economic incursions. Germans were in fact reluctant to educate native Africans in more than the rudiments of reading, writing, and arithmetic needed for working in the colonial economy. The Germans feared that education would make Africans presumptuous, give them notions of equality with Europeans, and provide a common language (German) that could unite Africans across linguistic and ethnic lines against the German Reich and thus create a modern nationalist movement. In the belief that the power of Europeans was based on their literacy and numeracy, starting in 1907 local chiefs and sultans set up schools to educate Africans, and while these independent schools

often aimed to improve Africans' positions in the colonial hierarchy, they also educated future national leaders.

Tanganyikan nationalists, in the process of creating national myths in the 1950s and later, argued that the Maji Maji Rebellion was the first inkling of Tanganyikan (later Tanzanian) nationalism. Later historians have challenged this view, claiming that the rebellion was not a unified Tanganyikan or Tanzanian movement but rather a series of revolts conducted by a large number of ethnic groups, or nations. Tanzanian nationalism and the imagined community it created did not cross the historical horizon until the late 1940s. It certainly did not exist in German East Africa. What did exist were the clan-based states and the feudal states of Rwanda and Burundi, which were ethnically based lineage states but not national states in the modern sense. The Maji Maji Rebellion did, however, provide an example of united mass action upon which later Tanganyikan and Tanzanian nationalist leaders would draw.

—Alexander M. Zukas

Bibliography

- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Rev. ed. London and New York: Verso, 1991.
- Maxon, Robert M. *East Africa: An Introductory History*. 2nd and revised ed. Morgantown: West Virginia University Press, 1994.
- Smith, Woodruff. *The German Colonial Empire*. Chapel Hill: University of North Carolina Press, 1978.
- Stoecker, Helmuth, ed. *German Imperialism in Africa: From the Beginnings until the Second World War*. Atlantic Highlands, NJ: Humanities Press, 1986.

The Khaksar Movement

The Khaksar Tehreek (Khaksar Movement) was a grassroots volunteer organization founded in 1930 by Allama Mashraqi, a Muslim leader who sought a unified India. The objective of his movement was to bring freedom to British India by inculcating discipline, unity, brotherhood, and social service among its followers. The movement quickly gained popularity, and its supporters grew into the millions by the end of the decade.

The movement brought awareness among the masses in India and played a role in mobilizing the nation for independence. Mashraqi ultimately disbanded the movement on July 4, 1947.

The Khaksar Movement's philosophy was defined by 24 principles and a 14-point decree and stressed character building and equality. Community service was also an integral part of the movement. In addition, there was a spiritual side to the movement that encouraged Khaksars to seek self-purification and placed special emphasis on collective prayer. Although members were primarily Muslim, the movement also included representation from the Hindu and Sikh communities.

While the movement's philosophy instilled mental discipline, the organization's day-to-day activities imparted physical discipline. The Khaksars held daily parades in which members marched in khaki uniforms and carried spades, symbolizing the dignity of labor and the leveling of society. Along with their daily parades the Khaksars also periodically held mock wars and camps in various cities in India, designed to mobilize the nation to seek freedom from British rule.

During the 1930s the Tehreek rapidly increased in numbers. In 1934 it initiated its own weekly newspaper, *Al-Islah*, to spread its message. By the end of the decade the Tehreek had expanded throughout India and had international offices in Burma, Bahrain, South Africa, and Saudi Arabia. As the Khaksar Movement grew in popularity, the government viewed the movement as an increasing threat to its rule in India and thus imposed greater restrictions on the movement. On March 19, 1940, Khaksars marched on the streets of Lahore in protest of the government's restrictions, leading to a clash that resulted in a number of Khaksar deaths and injuries. Following the clash the government banned the movement and raided its headquarters. Mashraqi, his sons (one of whom later died of an injury sustained during the raid), and a number of other Khaksars were arrested, resulting in widespread demonstrations by fellow Khaksars in protest of these actions.

After Mashraqi's release, he and the Khaksars intensified their campaign and applied pressure tactics for Indian independence. The group

➤ ALLAMA MASHRIQI (1888–1963)

Inayatullah Khan, known as Allama Mashriqi (Allama Mashraqi), was born in India on August 25, 1888. He received an MA in mathematics from Punjab University (India) and then joined Christ's College at Cambridge University (England). Mashriqi authored many books throughout his lifetime, the best known of which is *Tazkirah*, which was nominated in 1925 for a Nobel Prize for its commentary on the Holy Quran. Upon his return to India from Cambridge, Mashriqi joined the Education Department and served in various positions, including undersecretary. In 1930 he resigned from government service and started the Khaksar Movement (Khaksar Tehreek) to seek freedom for British India. For the next three decades he remained a frontline politician and was arrested on a number of occasions for political reasons. Mashriqi died in Pakistan on August 27, 1963. His passing was widely mourned, with more than 100,000 people attending the funeral and procession.

—Nasim Yousaf



(Nasim Yousaf)

pushed for Hindu-Muslim unity as well as a meeting between Quaid-e-Azam Mohammad Ali Jinnah of the Muslim League and Mahatma Gandhi. The hope was that these leaders could resolve their differences and collectively seek independence. Although the meeting took place, the leaders were unable to reach an agreement. After the failure of the Jinnah-Gandhi meeting, Mashraqi made another effort to keep India undivided, drafting a constitution for the nation. Although the constitution attempted to satisfy the needs of all communities in order to keep India united, it was not adopted.

In February 1947 the ongoing pressure from various sources, including the Khaksar Movement, prompted the British government to announce a transfer of power to the Indians. To ensure the actual transfer of power and in a final attempt to keep India undivided, Mashraqi called for the assembly of 300,000 Khaksars in Delhi.

However, due to government restrictions, only about 75,000 Khaksars were able to assemble. Since the desired number of Khaksars could not assemble and the division of India was now inevitable, Mashraqi disbanded the Khaksar Movement on July 4, 1947. Approximately one month later Pakistan and India emerged as two separate countries on the world map.

—Nasim Yousaf

Bibliography

- Hussain, Syed Shabbir. *Al-Mashriqi: The Disowned Genius*. Lahore, Pakistan: Jang Publishers, 1991.
- Muhammad, Shan. *Khaksar Movement in India*. Meerut, India: Meenakshi Prakashan, 1973.
- Seth, Hira Lal. *The Khaksar Movement and Its Leader Allama Mashraqi*. Delhi: Discovery Publishing House, 1985.
- Yousaf, Nasim. *Allama Mashriqi & Dr. Akhtar Hameed Khan: Two Legends of Pakistan*. New York: Xlibris, 2003.

■ Introduction: Sports and Statecraft in the Early Twentieth Century

Throughout history, sports have always played a role in society. Whether they have brought people together or torn them apart, athletic contests have been instrumental as cultural, political, and social events. From the Ancient Olympics in Greece—which began in 776 BCE and served more as an avenue for the various city-states to congregate, celebrate military victories, forge treaties, and even settle political disputes—through the ceremonial ball games of the Aztecs, sports have proved to be more than mere entertainment.

In the first half of the twentieth century as the world suffered through various stages of colonialism, the horrors of two world wars, an economic depression, and various revolutions and civil wars, sports were often at the forefront of society's attentions. It would be through the utilization of sports and sporting events that different classes and races would be brought together, at least for a while. It would also sometimes be through sports that nations attempted to foster the assimilation of other groups.

In 1936 the world watched Nazi Germany take center stage as Berlin hosted the Summer Olympics. Adolf Hitler believed that these games were an opportunity to showcase what he thought was the superiority of the Aryan race. Coupled with the fact that he had already instituted anti-Semitic policies within Germany for various political, social, and racial reasons, even before the games began observers expected the Olympics to be filled with political intrigue and controversy. While Hitler proclaimed his athletes to be superior, he also ordered anti-Jewish signs and graffiti to be removed from public buildings and areas of Berlin in order to promote a false image to the world of an open and welcoming society. At the same time, Gypsies were rounded up in Berlin and other cities and secretly placed in "camps" out of the public's view.

Many Americans, especially the nation's Jewish community, wanted to boycott the games due to Germany's anti-Semitic policies, but the U.S. Olympic Committee believed that the na-

tion should participate. The committee was backed by many members of the African American community who understood that victories by black athletes at the games would not only undermine Hitler's claims of Aryan superiority but also help their standing at home. Among the biggest stories from the games was the performance of African American Jesse Owens (1913–1980), who won four gold medals. Owens publicly stated that he received better treatment from the Germans than from Americans back home and that Hitler afforded him more of an acknowledgment than U.S. president Franklin D. Roosevelt. In spite of this, Albert Speer, one of Hitler's top confidants, wrote after World War II that the Nazi leader was incensed at the fact that an African American had defeated numerous Aryan athletes. Overall, the successes of German athletes led Hitler to proclaim not only the superiority of his people but also his political system.

Two years later the world turned its attention to France, which hosted the 1938 World Cup. Held a little more than a year before the outbreak of World War II, this was another case where a sporting event was politicized. The team from Benito Mussolini's fascist Italy wore all-black uniforms in order to showcase their devotion to fascism, while Austria was forced to withdraw despite qualifying because the nation had been absorbed into Germany through the Anschluss earlier that year. Italy won the tournament, but not without controversy in the final match against Hungary. The Hungarian goalkeeper made a controversial comment after the match that led many to believe that he had allowed the Italians to score four goals in their 4–2 victory because the Italian team had supposedly received a threat from Mussolini to win or die. In reality the threat was actually misinterpreted by the Hungarian and was nothing more than common fascist rhetoric, which meant "play to your fullest ability." Others have claimed that Hungary's players did not give their best effort because of their concerns about their own gov-

ernment, which was fascist and two years later would join the Axis of Italy, Germany, and Japan during World War II.

—Seth A. Weitz

Bibliography

Kruger, Arnd, and W. J. Murray. *The Nazi Olympics: Sport, Politics, and Appeasement in the 1930s*. Champaign-Urbana: University of Illinois Press, 2003.

Lisi, Clemente Angelo. *A History of the World Cup: 1930–2006*. Lanham, MD: Scarecrow, 2007.

Export of English Football

The spread of British customs and leisure activities accompanied the hegemony of British trade in the late nineteenth and early twentieth centuries in large part due to increased British involvement in the creation of transportation networks and nascent industrial sectors in regions such as Africa, Asia, and South America. As a significant increase in the number of British expatriates abroad accompanied the construction and management of British-owned railroads and textile factories, British managers, administrators, and entrepreneurs replicated customs and leisure activities from home, including English football.

As a consequence, by 1945 professional and amateur teams around the world played the sport of English football, also known as soccer. In several nations with strong economic or political connections with the United Kingdom, football quickly became the most popular sport. For example, in Latin America football developed into the national sport played by people from every socioeconomic level in countries such as Argentina, Brazil, and Uruguay. This was also true in Europe and to a lesser extent in parts of Africa and Asia. In response to this growth of popularity, officials representing football leagues from across the globe in 1904 formed the Fédération Internationale de Football Association (FIFA), which continues to be the main international body that controls football in the twenty-first century.

Within Europe, football initially spread from England to Denmark and Switzerland and then on to Belgium, France, Germany, the Netherlands, and Scandinavia. By the beginning of the

twentieth century, cities with large British enclaves such as Vienna, Budapest, and Prague witnessed the growth of the sport in their areas. The growth of football-oriented sports dailies, which quickly outstripped cycling journals in circulation, and the increased number of continental tours by British professional teams reflected the rise of public interest in football. Ever-expanding professional leagues formed within national boundaries, and these teams fed the public's appetite for the game.

British expatriates played football informally among themselves and formally with boarding school and club teams. As the sport became popular with indigenous populations, many British-owned factories and other businesses be-

THE EUROPEAN TOUR OF BOCA JUNIORS

In 1925 English football returned to Europe as *fútbol* in the form of a European Tour by the Argentine football club Boca Juniors. The team, composed of 17 players—12 from Boca and 5 on loan from other Argentine clubs—left Buenos Aires on February 4 for a five-month tour of Europe. Boca played 19 games in Spain, France, and Germany. The king of Spain, Alfonso XII, attended the match between Boca and Real Madrid, which the Argentine squad won. During their tour Boca Juniors won 15 games, tied 1, and lost only 3. The team arrived in Buenos Aires on July 12 to a large and enthusiastic public reception.

The Argentine press lauded Boca Juniors as ambassadors of the nation and of its emerging style of football: *el estilo criollo* (the creole style). News reports emphasized the distinctively Argentine cultural attributes of the players. For example, news articles reported that players had brought tango records along with them. In addition, reporters contrasted the artistic, improvisational, and passionate play of Boca Juniors with the mechanical and methodical style of their Old World competitors. In the end, the Boca victories over older, traditional football powers in Europe inspired pride in and respect for Argentine and Latin American football. Uruguay's defeat of Argentina in the finals of the 1928 Olympics and the first FIFA World Cup in 1930 reinforced the early dominance announced by the successful European Tour of Boca Juniors in 1925.

—Jonathan Hagood

gan to sponsor company teams. Argentina and Uruguay had the most highly developed football infrastructures in Latin America in the first part of the twentieth century. This fact evidenced the large British presence in the Río de la Plata region, which included a significant number of British-run boarding schools and British-founded athletic clubs. By contrast, company and neighborhood teams characterized the development of football in Brazil and Peru.

Football tournaments in the Olympic Games and FIFA's World Cup popularized international competition between national teams. Football premiered as an Olympic sport at the 1900 Olympics in Paris. Great Britain won the first three Olympic football tournaments as European teams dominated play. However, Uruguay's gold medal victories in the 1924 and 1928 Olympics signaled the rise of Latin America as a home of competitive football. Uruguay also won the first World Cup tournament in 1930. French football administrators, led by Jules Rimet, developed the international tournament, which was held three times before World War II put a 12-year stop to the competition. The World Cup resumed in 1950 and by the end of the twentieth century was the most popular international sporting event worldwide. According to FIFA, there were 41 FIFA-affiliated national football associations by the time of the first World Cup tournament, with that number reaching 73 when the games resumed after World War II.

During the 1930s Italy's domination of international football competition exemplified the use of sport by fascist regimes for political purposes. Italy won the World Cup as the host country in 1934 and again in Paris in 1938 and won the gold medal for football at the 1936 Olympics. In addition to using these victories to claim the superiority of fascism, Mussolini's regime also incorporated sports into its program of national regeneration by drawing on athletics to promote physical fitness and national pride in the average citizen. For example, although the Italian sport authorities' new game, *volata*—a mixture of soccer and handball—never became widely played, football remained the most popular sport organized within the fascist *dopolavoro* movement, or after-work program for the masses.

—Jonathan Hagood

Bibliography

- Mason, Tony. *Passion of the People? Football in South America*. New York: Verso, 1995.
- Murray, Bill. *Football: A History of the World Game*. Brookfield, VT: Ashgate, 1994.
- Murray, Bill. *The World's Game: A History of Soccer*. Urbana: University of Illinois Press, 1996.
- Taylor, Matthew. *The Leaguers: The Making of Professional Football in England, 1900–1939*. Liverpool, UK: Liverpool University Press, 2005.

Introduction of American Baseball to Foreign Countries

By the early twentieth century the United States had joined the major European powers—Great Britain, Germany, and France—in a global competition for imperial influence. One of the tools that Americans used to build goodwill and to advertise the American lifestyle was the introduction of American baseball overseas.

In 1867 American teacher Horace Wilson introduced the game of baseball (*besuboro*) at Kaisei Gakko (now Tokyo University). Hiroshi Hiraoka, an engineer who had studied in Boston and subsequently became a Red Sox fan, assembled the first Japanese baseball team, in 1878, from members of the Shimbashi Athletic Club in Tokyo. Keio University had a team in 1885, and Waseda University, Keio's great rival, formed a team in 1901. Together with Meiji University, Keio and Waseda formed an intercollegiate league in 1914. When Nels Norgren of the University of Chicago led a collegiate team to Japan in 1922, he reported in amazement that baseball was more the national sport of Japan than it was in the United States.

Two years after a memorable 1934 goodwill tour by an American team that included Babe Ruth, which took place during an increasingly difficult period in U.S.-Japanese relations, a professional league was launched in Japan. In the summer of 1941 the militarists who controlled the Japanese government disbanded the league, and baseball fell out of favor for a time. After World War II baseball in Japan was back in vogue although with a new name, *yakyuu*. In 1950 the Japanese established a two-league system akin

to the American system, and every autumn the champions of the Central League and the Pacific League compete in the Japan Series.

Baseball was introduced to Cuba by Nemesio Guilló in 1864 after his return from studies in the United States. The first historically attested game took place between Habana Base Ball Club and a team from Matanzas, according to a report published in *El Artista* on December 31, 1874. Cuban teams were numerous enough by 1878 for Havana's Emilio Sabourín to organize the Liga de Béisbol Profesional Cubana (Cuban Professional Baseball League), whose first and second annual tournaments were won by El Club de Habana. An 1887 tour in Cuba by the Philadelphia Athletics also helped to popularize the game on the Caribbean island.

After the 1898–1902 Spanish-American War, when U.S. troops gained control of the island nation, Cuban baseball took off. In 1922 an entire team, the Cuban Stars, became a part of the eight-team Negro National League in the United States. A number of yanquis who failed to make major league rosters in the United States tried their luck on the island. The money and the climate were not the only attractions. The Cubans' more relaxed attitudes about racial differences made it possible for major leaguers, all of whom were white, to compete in Cuba against Josh Gibson and other stars of the Negro National League. For the Negro League players, Cuba served as an escape from repressive racism.

Meanwhile, in Mexico, the Yankee employees of the Mexican National and the Mexican Central railroads organized company teams in the summer of 1882 to play scrimmage games. The first Mexican teams were formed no later than 1886, and by 1895 Mexican players in the capital were skilled enough to win the city's championship against the American teams. In 1904 the Mexican teams established two leagues, and in 1907 the Mexican baseball scene received an unprecedented boost from the Chicago White Sox, who held their spring training in Mexico.

By 1924 Mexico City had at least 56 teams, and a visit to the capital by Byron Bancroft Johnson, the founder of the American League, left him so enthusiastic that he decided to encourage the development of a new professional

BASEBALL AT THE OLYMPICS

Baseball has a very strange history at the Olympics. The first unofficial game occurred in exhibition in the 1904 Olympics in St. Louis. Exhibition games also occurred in 1912, 1936, 1952, 1956, and 1964. Baseball became a tournament event in 1988, but it was not officially granted medal status until the Barcelona Olympics in 1992. Players were required to be amateurs. As of the 2008 games, Cuba has won three gold medals and two silver medals, the United States has won one gold and two bronze medals, and Japan has won one silver and two bronze medals. Meanwhile, South Korea earned its first gold medal in the sport at the 2008 Olympics. Interestingly, prior to the 2008 Olympics, the International Olympic Committee decided that baseball would not be part of the 2012 London Olympics, citing the absence of major league participation and limited international participation, among other factors. However, the sport may be reconsidered for inclusion in the 2016 Olympics.

league, which began operation in 1925. By the 1940s the level of play and of salaries in the Liga Mexicana (Mexican League) were both high enough to cause a crisis in major league baseball in the United States. A Vera Cruz millionaire, Jorge Pasquel, became president of the Liga Mexicana and offered players from the United States two or three times what they earned north of the Rio Grande to play in Mexico. Major league baseball's commissioner, Albert "Happy" Chandler, blacklisted the jumpers but was unable to dam the southward flow of players or entice the defectors to return.

Meanwhile, the Dominican Republic had become the center of gravity for Caribbean *béisbol*. The first Dominican clubs were formed in 1891 by Ignacio and Ubaldo Alomá, ironworkers from Cuba. When Dr. Samuel Mendoza y Ponce de León took the game to the interior of the island in 1893, he adopted the nicknames that the fans had given to the two Cuban teams because of their blue and red uniforms: the Azules (the Blues) and the Rojos (the Reds). In 1914 Dominicans rejoiced as Enrique Hernández of El Club Nuevo pitched a no-hitter against a team of Americans from the U.S. Navy cruiser *Washington*.

After World War II came the development of the Dominican professional league in 1951, but the flow of baseball players would reverse direction toward El Norte. The racial integration of American baseball, which had begun in 1947, opened doors for Dominicans of African ancestry. However, for Cuban players, white and black, the doors to major league baseball slammed shut in 1960 when contacts between the United States and communist Cuba were broken. After 1960 the Dominican Republic became North American baseball's chief source of Caribbean talent.

Some historians have argued that American baseball became a form of cultural imperialism, as baseball diamonds were laid out in regions stretching from East Asia to Australia and the Caribbean beginning in the mid-nineteenth century. In an increasingly interconnected world, as more Americans traveled abroad—whether for business, to be stationed at a far-flung military outpost, or as athletes on goodwill tours—they took their culture and their love of baseball to distant lands, and while they imparted the rules of the game with native peoples, the spread of American culture was inseparable.

—Luke Nichter

Bibliography

- Echevarría, Roberto González. *The Pride of Havana: A History of Cuban Baseball*. New York: Oxford University Press, 1999.
- Klein, Alan M. *Sugarball: The American Game, the Dominican Dream*. New Haven, CT: Yale University Press, 1991.
- Reaves, Joseph A. *Taking in a Game: A History of Baseball in Asia*. Lincoln: University of Nebraska Press, 2002.
- Zeiler, Thomas W. *Ambassadors in Pinstripes: The Spalding World Baseball Tour and the Birth of the American Empire*. Lanham, MD: Rowman and Littlefield, 2006.

The Olympic Movement

The Olympic Games of today bear little resemblance to the first modern Olympics, held in Athens in 1896. The early games struggled to define their ideals, survive both world wars, and outpace other national and regional sporting events. From the beginning, the Olympics have been in-

tertwined with international politics and diplomacy. This intrusion of politics into the Games has at times interfered with their original purpose: to offer a forum for peaceful athletic competition among all nations.

In spite of its message of global unity through sport, it was not until after World War II that the Olympic Games became a truly global event. All of the Olympics from its revival in 1896 to the 1952 Games in Helsinki were held in either Europe or the United States. Indeed, only one city from outside these regions even made a bid, when the Egyptian city of Alexandria made an unsuccessful application for the 1916 Games.

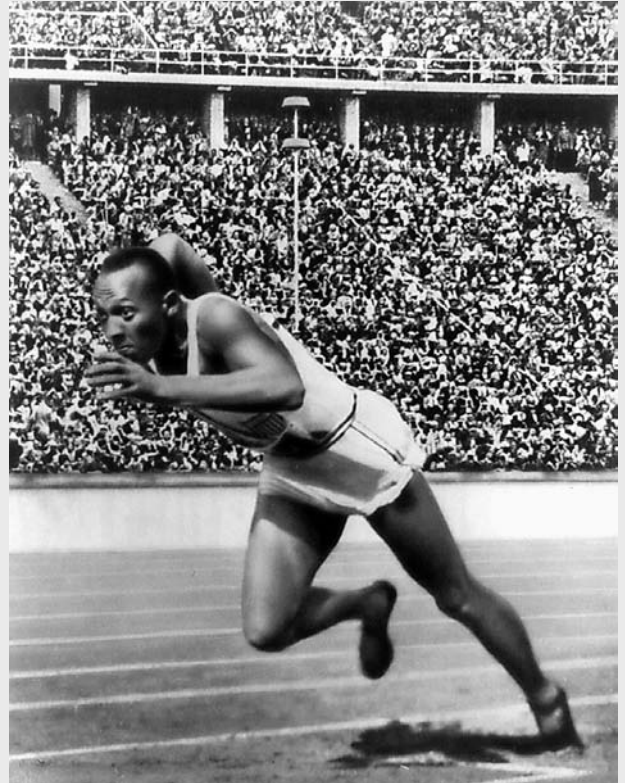
The man whose vision fueled the revival of the Olympic Games was the French educator Pierre Frédy, Baron de Coubertin. Coubertin set about to improve the health and vigor of French youths after the French defeat in the Franco-Prussian War of 1870–1871. Based on the examples of ancient Greece and modern England, Coubertin developed his own model for a complete education, which incorporated training in academics, morals and ethics, and athletics. From this vision grew the Olympic ideal, which was understandably rooted in upper-class Western ways. The men who met in Sorbon, France, in 1894 to establish the new Olympics looked to upper-class English prep students as their model of athletic achievement and took much from their own athletic experiences in sports such as tennis, rowing, cricket, and yachting, almost exclusively the preserve of the wealthy. As such, the amateur ideal essentially excluded working-class athletes.

The early Olympics were small, and the range of participating nations was limited. Only 13 nations and 12 reporters attended the first Olympics, held in Athens in 1896. Virtually everyone in attendance and all of the participants were either from Europe or the United States. The early Olympics endured considerable growing pains. The 1900 Paris Games were poorly scheduled, poorly publicized, and poorly run. They coincided with Bastille Day, the French national holiday, and few spectators attended. The St. Louis Games of 1904 were even worse, as few nations were able to send a team to such a distant city. The Olympics were also overshadowed by the St. Louis World's Fair, which attracted greater attention and larger crowds.

> JESSE OWENS

American Jesse Owens became the star of the 1936 Olympics, winning four gold medals in track and field events, setting world records in the broad jump and 200-meter race, and tying the record for the 100-meter run. After watching him win his first event, Adolf Hitler purportedly stalked from the stadium in a state of fury. Whether or not that tale is true, the generally gentle, amiable Owens completely destroyed Hitler's desire to prove Aryan racial superiority through the competition. On the other hand, Owens enchanted the German population. Schoolboys idolized him and thronged in areas where they hoped to catch a glimpse of him. Many adults were just as enthusiastic; the German media described him as the *Wunderathle*, or "god of the stadium." One would like to report that racism died that day, but of course it did not do so in Germany or in Owens's homeland, the United States. During his latter years Owens was criticized by some in the civil rights movement for his moderation and lack of acrimony as he worked to help reduce racial tensions and animosity in the United States.

—Carolyn Neel



African American athlete Jesse Owens at the start of his record-breaking 200-meter race at the 1936 Nazi-hosted Olympic Games in Berlin. (Library of Congress)

The disappointments of these early Games led Coubertin to experiment with the idea of a permanent site. In 1906 the Olympics returned to Athens for what would be the first, and last, in an anticipated series of Olympics held at their original site. While not part of the traditional four-year Olympiad, this contest marked the beginnings of a transition to the modern Games, as more nations attended than ever before (20), and those that did submitted their athletes to a more rigorous entrance process than in earlier Games. This transition continued in London in 1908, when numerous controversies inspired the installation of international neutral teams of officials since the hometown British judges made many questionable rulings in favor of British athletes.

By 1912 the Games were well established and had begun to take on the modern implications of nationalism. The final Olympics before the interruption of World War I were hosted for the first

time in a Nordic city, Stockholm. The Swedes far outdid any of their predecessors in preparation, construction, and attendance at the Games. With such innovations as electric clocks, photo-finish equipment, and brand new athletic and housing facilities, Stockholm previewed many of the characteristics of more recent Olympics. Controversies over which events should be included in the program indicate the increasingly international and politicized nature of the Games.

The Olympics enjoyed their period of greatest growth and innovation during the inter-war years, as the host cities fell into a pattern of one-upmanship that made each festival more grandiose than the last. The 1920 Olympics were hosted in Antwerp, Belgium. A poorer choice could hardly be imagined, as Belgium was perhaps the most war-ravaged of all European nations, and the destitute populace could not adequately support the Olympics. But the

expansion of the Games resumed four years later when the Olympics returned to Paris. They were a celebration of excess, a not-so-subtle symbol to the world that the war was over and all was well. The splendor and decoration, the pomp and circumstance of the modern Games began to appear, as national flags and national anthems became ubiquitous. The excitement surrounding the Paris Games was almost matched by the Amsterdam Games of 1928. Returning to a smaller country lent an international flair to the 1928 Games, as more nations won medals than ever before, and the traditionally dominant teams from the United States, Britain, and France all saw their medal totals drop. Also in 1928 women competed in track and field for the first time, although the fact that several of them fainted during the 800-meter run led the slate of women's events to be limited in future Olympics.

The interwar blossoming of the Olympics is best exemplified by the 1932 Los Angeles and 1936 Berlin Games. In 1932 the United States placed a great deal of significance on the Olympics to ease the hardship of the growing Great Depression and to show the world that Americans could put on a great show in spite of the hard times. The Los Angeles Games set a new precedent for expense, extravagance, and construction of new facilities.

Four years later the Germans took each innovation from the Los Angeles Games and made

it bigger and more elaborate. Adolf Hitler and the Nazis used the 1936 Olympics to publicize their regime and its organizational abilities. These Olympics were also infused with political tensions, and the openly racist policies of the Nazi regime led to many protests, including an international boycott led by Jewish and worker communities. These Games are also noteworthy for the resounding success of black American athletes, particularly of track star Jesse Owens whose victories shattered the myth of Aryan supremacy. The Berlin Games, the last held before 1948, set a standard for spectacle as well as for politicization that would remain unmatched perhaps until 1968 when protests and boycotts again took center stage at the Olympics.

—Kevin B. Witherspoon

Bibliography

- Espy, Richard. *The Politics of the Olympic Games*. Berkeley: University of California Press, 1979.
- Findling, John E., and Kimberly D. Pelle, eds. *Encyclopedia of the Modern Olympic Movement*. London: Greenwood, 2004.
- Guttmann, Allen. *The Olympics: A History of the Modern Games*. Urbana: University of Illinois Press, 2002.
- Riordan, James, ed. *Sport and International Politics*. New York: E and FN Spon, 1998.

Exports of Sports to Colonial Possessions

The globalization of sports is one of the few positive outcomes of colonialism. Many sports grew in popularity throughout the world during the first half of the twentieth century, so much so that global tournaments are now held. Some of the most popular team sports in the world such as football (soccer), cricket, and rugby grew in popularity as colonial exports. Other individual sports also gained prominence. Sports typically associated with the higher socioeconomic classes, such as polo and equestrian, also became popular in colonial territories.

Colonialism was for a long time a significant part of global relations, basically occurring when one state asserted sovereignty over a foreign territory by settling it and/or exploiting the natural resources and the labor force of said territory. Brit-

➤ FIFA AND THE WORLD CUP

The Fédération Internationale de Football Association (FIFA) was founded in Paris in 1904 to serve as the international body regulating international soccer matches and harmonizing the rules of the game. FIFA started a global tournament in 1930 known as the World Cup in which countries from all over the world could qualify and compete for the title of being the best team on the planet. Under the direction of FIFA, 208 national associations currently compete in the World Cup tournament, making it a truly global event. National teams qualify through their various continental zones until 32 teams come together in a final tournament format.

—Glen M. E. Duerr

ain, France, Spain, Portugal, the Netherlands, Germany, Denmark, Sweden, Belgium, Italy, Turkey, Russia, and the United States were all involved in colonialism, albeit to different extents and in different contexts. Part of the colonial legacy was the sharing of institutions, governance, and economic rules. However, this also extended to cultural elements in society, including leisure and recreation. Sport is a major part of life in much of the world. It occupies much time, discussion, and thought. Yet in order for various sports to become recognizable throughout the world, they required exportation so that their rules could become harmonized. This is where colonialism played a significant part in the export of sports.

Sport became much more global in the late nineteenth and twentieth centuries such that the same sports were being played by metropolitan states and their colonial possessions all over the world. Many global team sports were invented in England and the United States. The most popular, soccer, grew out of England and spread throughout the British Isles in the mid-nineteenth century and then onto the European continent in the late nineteenth and early twentieth centuries. In this way, it gained a foothold in Europe and was exported to the various European colonial possessions. In fact, significant numbers of the first teams were founded by British businessmen or missionaries throughout the world.

Another popular team sport, cricket, spread in a much different manner. Not popular in Europe, it spread throughout parts of the British commonwealth. There are various different lengths of a cricket match, but the most prestigious is test match cricket, which lasts up to five days. England and Australia originally began playing test matches in 1876. Since then, other countries have also gained test match status including South Africa (1889), West Indies (1928), New Zealand (1929), India (1932), Pakistan (1952), Sri Lanka (1982), Zimbabwe (1992), and Bangladesh (2000), all of which are in the British commonwealth.

England was not the only place where sports were invented and then exported. Other team sports like basketball and baseball, which were popularized in North America, also spread throughout the world. Baseball spread throughout parts of the Caribbean such as Cuba and

➤ SOCCER AT THE 1936 SUMMER OLYMPICS

Among the various controversies at the 1936 Olympics, many incidents during the soccer tournament proved particularly polemic. Italy advanced to the finals but not until after a controversial 1–0 victory over the United States. After a fight that left two Americans injured, the referee ejected an Italian player from the match, but he refused to leave. Several Italian players suddenly surrounded the referee and verbally threatened him. The Italian player was allowed to stay in the match. In a quarterfinal match, Peruvian fans rushed onto the field and attacked several Austrian players. In the ensuing chaos, Peru won the match. Austria protested, and after a meeting with Hitler the Olympic Committee ruled that the match was to be rescheduled. Peru refused to replay the match and left Germany. Austria was awarded a spot in the semifinals. Italy eventually won the Gold Medal, and Mussolini claimed this as a great victory for fascism.

—Seth A. Weitz

the Dominican Republic, which were under direct U.S. colonial control, and through parts of Latin America such as Venezuela and Nicaragua, where U.S. geopolitical influence was significant. Despite the many negative aspects of colonialism, sport is an area where states can come together and participate in goodwill events. The long-term impact of sports in colonial possessions has been quite a positive outcome of colonialism. It has allowed participants from across the world to share what has often been referred to as a “common language.”

—Glen M. E. Duerr

Bibliography

- Bairner, Alan. *Sports, Nationalism and Globalization: European and North American Perspectives*. Albany: State University of New York Press, 2001.
- Beckles, Hilary, and Brian Stoddart, eds. *Liberation Cricket: West Indies Cricket Culture*. Manchester, UK: Manchester University Press, 1995.
- Judd, Denis. *Empire: The British Imperial Experience, 1765 to the Present*. New York: Basic Books, 1996.
- Murray, Bill. *Football: A History of the World Game*. Aldershot, UK: Scholar Press, 1994.

■ Introduction: Ethnic Conflict and Genocide

From 1900 to 1945, growing ethnic nationalism and the stresses of economic pressures and warfare caused the number and scope of ethnic conflicts and genocidal reactions to grow exponentially. The Turkish assault on Armenians within the Ottoman empire in 1915 led to the death of an estimated 1.5 million Armenians. Hitler cited this action as a precedent as Germany began its “final solution” against the European Jews, resulting in the death of approximately 6 million Jews between 1939 and 1945. These incidences of state violence directed against undesired ethnic groups were often perpetrated in a context of total war. During the Holocaust the attempt to eliminate all Jews and Gypsies was undertaken by the German state and military authorities with civilian cooperation in Nazi-occupied Europe. It differed from the prior pogroms of tsarist Russia, which while sponsored by the regime were carried out by Russian villagers who were bent on violence against local Jewish communities and unleashed violence on a relatively smaller scale. Colonial genocides were also undertaken by colonial authorities, most notoriously the German genocide of the Herero people in German South-West Africa from 1904 to 1907, that were shock-and-awe tactics perpetrated by imperial powers against resistant subject populations in an effort to eliminate resistance against their authority. In contrast, political famines were often caused by a lack of action by the state that subsequently led to the depletion of an ethnic group, such as in the Ukrainian famine of 1938. While these famines were similar in scale to acts of genocide, they were qualitatively different given that there was no actual violence but rather deliberate inaction that would thus lead to catastrophic mass death.

—Abraham O. Mendoza

Ideology of Genocide

Almost always, an important part of the process that leads to genocide is an ideology that the perpetrators create or adopt. This ideology varies in form or content but usually has certain struc-

tures in common with other ideologies that support genocide, and they all serve certain common functions for the group and its members.

An ideology is a conception of social arrangements in a society or in the world that for the creators of the ideology are the desirable, ideal forms of life. There are *nationalist ideologies*, which focus on the wealth, power, influence and frequently also the purity of a group or nation; and “*better world*” *ideologies*, like communism, which offer a vision of ideal social arrangements for all humanity.

Many ideologies are destructive, potentially genocidal, in that they identify enemies who supposedly stand in the way of the ideology’s fulfillment. These enemies must be “dealt with” if the ideology is to be fulfilled. Sometimes the intention to kill them is present from the start. More often, there is no intention or fully formed intention to kill them, but discrimination and limited violence against the opponents, nonbelievers and outsiders lead to changes in perpetrators and to an evolution of increasing violence that ends in genocide.

Genocidal ideologies can have both nationalist and better-world elements. For example, the Nazi ideology included the concept of “*lebensraum*” or living space, the right of Germans to more territory, clearly nationalist in nature. It also included the concept of the purity of race. While its focus was the protection of Germans from Jews, Gypsies, and others, even genetically inferior Germans, it implied that by eliminating the contamination of higher races by lower ones all the higher races would be improved. The “autogenocide” in Cambodia was based on a vision of total social equality derived in part from communism, but had nationalistic building blocks and elements. The genocide of the Armenians in Turkey was shaped by a “pan-Turkish,” nationalistic ideology. The violence in Bosnia was based on a combination of fear, hate and ambition that manifested itself in a primarily nationalistic form.

Why do people turn to such destructive ideologies? They often do so in response to difficult social conditions and the frustration of basic human needs, fear and confusion. Having a positive

vision of the future provides a comprehension of reality and hope in place of the chaos and confusion of the present. It helps people unite, at a time they feel alone and isolated. It provides them with purpose and meaning, at a time they feel helpless and not in control of their lives. People do need visions of a hopeful future in such difficult times. Unfortunately, the culture, past history and the conditions of life generate forces for the creation of visions that identify enemies. Scapegoating some group, identifying it as responsible for life problems, provides an explanation for the difficult conditions of life, and makes people feel better about themselves. Pointing to enemies also brings people together, helps them unite. The group's culture often includes a history of devaluation of the group that becomes the scapegoat and ideological enemy (the Jews, the Armenians), or a historical rift (between people in the cities and in the countryside in Cambodia). At times the difficult conditions themselves arise from conflict and enmity with another group, or there is a history of mutual antagonism between the two groups (like the Hutus and Tutsis in Rwanda and Burundi). Long-standing traditions of dehumanization and antagonism can be greatly and speedily intensified and catapulted into frenzied extremes relatively easily and in amazingly short periods of time by propaganda campaigns, for example, Hitler's repeated denunciations of the Jews in contexts of majestic public events accompanied by stirring pageantry and martial spirit. There was an extensive state-run radio campaign against the Tutsi preceding the Rwanda genocide in 1994.

As the dehumanization effect escalates, another mechanism of attribution of evil intention and demonic powers to the intended victim people also comes into stronger play. In the end, the implicit or explicit message becomes that the other people must be killed first in order to save one's own people from destruction. The combination of dehumanization—they are not human beings like us and are outside our moral universe of obligation to protect human life—and attribution of dangerous demonic intent and strength provides a powerful basis for an ideology of genocide: they deserve to be and must be eliminated.

To make genocide less likely, groups and their leaders have to choose the psychologically

more difficult path of forging constructive ideologies in difficult times, positive visions that unite all groups to work together for practical solutions to life problems.

—Ervin Staub and Israel W. Charny

Bibliography

- Charny, Israel W., in collaboration with Rapaport, Chanan (1982). "Towards a Genocide Early Warning System." Chapter in *How Can We Commit the Unthinkable?: Genocide, the Human Cancer*. pp. 283–331. Republished in Portuguese with new Introduction and Bibliography as *Anatomia do Genocídio: Uma Psicologia da Agressão Humana*. Rio de Janeiro: Editora dos Tempos, 1998.
- Kelman, Herbert C. (1973). "Violence without Moral Restraint." *Journal of Social Issues*, 29(4), 25–61.
- Kuper, Leo. *The Pity of It All: Polarisation of Racial and Ethnic Relations*. London: Duckworth, 1977.
- Staub, Ervin. *The Roots of Evil: The Origins of Genocide and Other Group Violence*. Cambridge: Cambridge University Press, 1989.

Armenian Genocide

The Armenian Genocide of 1915–1922, triggered during the hostilities of World War I, was the first major genocide of the twentieth century, resulting in the deaths of an estimated range of 5,000 to 1.5 million Armenians and the subsequent deportation of the remaining 2 million Armenians living within the Ottoman empire. Some historians suggest that the failure of the Western Allies to punish the Turkish perpetrators of the genocide set a precedent by which future genocides later in the century, including the Holocaust during World War II, were made possible. The major factors that contributed to the Armenian Genocide were the xenophobic nationalism espoused by the Young Turk Movement seeking to create a national Turkish state, wartime fears of foreign invasion assisted by alleged Armenian traitors, official and unofficial Islamic religious intolerance directed specifically at Christian Armenians (chastised as infidels, or *gavurs*), and decades of resentment directed at the economic prosperity of the Westernized Armenian middle classes of the towns and cities.

➤ GLOBAL REACTIONS TO THE FIRST MODERN GENOCIDE

The sheer number of casualties from World War I, numbering in the tens of millions, astounded the international reading public upon learning about the extreme nature of total war and the new technologies that made such destruction possible. Similarly, the Armenian Genocide struck the consciousness of the reading public as something unique in that it had occurred in the context of the greatest war up to that time, but concern proved to be short-lived. Upon initial revelations coming from inside correspondents and witnesses, the genocide was constantly discussed in U.S., British, and French newspapers, among other major world news presses of the time. However, reaction to the Armenian massacres was mixed, ranging from extreme revulsion and condemnation to indifference among both the European and North American public. In the United States the

Armenian Genocide generated considerable attention, managing to mobilize religious organizations to raise money and aid Armenians in the Ottoman empire. Nonetheless, many places throughout the world were too distracted by news closer to home and the devastation and destruction brought on them by World War I to dwell too much on the annihilation of Armenians at the hands of the Turks. Eventually the genocide failed to attain much long-term attention after the end of the war and during the interwar period. A mere two decades later, before embarking on his wars of aggression that would culminate in the destruction of European Jewry, Adolf Hitler would reportedly quip “Who now remembers the Armenians?” in light of the lack of attention and remembrance that the Armenian Genocide attained.

—*Abraham O. Mendoza*

The Armenian Genocide was the eventual culmination of decades of persecution of Armenian communities in the Ottoman empire at the hands of government officials and Muslim civilians. Armenians were harassed for their economic success (albeit only achieved by a minority) and their Christian religion. The history of their persecution includes the Armenian massacres of 1894–1896 in Sasun and the Moush Plain, leading to an estimated 100,000 to 200,000 deaths, and in Adana in 1909 with approximately 15,000 to 30,000 deaths. These were all areas of dense Armenian settlement in northern Turkey on the border with Russia. In the late eighteenth century, the Ottoman empire had been experiencing a long period of decline, having lost territory in Europe and North Africa to seceding provinces and the European Great Powers. The Ottoman empire’s Balkan Wars of 1912–1913 with its former colonies of Greece, Bulgaria, and Serbia contributed to a substantial loss of territory in European Turkey. These Christian nations were seen as assisting in the breakdown of the Ottoman empire, and internal Christian minorities were suspected of also seeking independence, particularly Armenians who had sought such arrangements in the past. In response, the Young Turk government, otherwise known as the Committee for Union and

Progress (CUP), led by Jemal Pasha, Enver Pasha, and Talat Pasha, established a nationalist Turkish state and proceeded to abandon the former policies of multiculturalism of the Ottoman empire and embrace a militant nationalism. The leaders of the CUP government were xenophobic nationalists who suggested that the multinational character of the Ottoman empire was responsible for its long-term decline and thus advocated creating an ethnically homogenous Turkish state, embracing all Muslim Turks in Anatolia and in the adjacent provinces in Russia populated by Turkish-speaking peoples (Turan).

In the summer of 1914, as World War I commenced, the CUP decided to ally itself with imperial Germany and the Central Powers against France and the traditional Turkish enemy, Russia. In the event of a major European war, the CUP sought the creation of a Turkish homeland, Turan, that would unite the Turkish Ottomans with the Turkic-speaking people of southern Russia and Central Asia. Such plans obviously necessitated eliminating the Armenian populations who traversed these regions. The CUP wished to utilize the pretext of World War I to annihilate the Armenians without attracting foreign involvement, so they accused Armenians of collaborating with the Russians in their plan to invade the Ottoman empire.

In response to Armenian intellectuals' requests for Ottoman neutrality in the war, on April 24, 1915, Turkish officials apprehended Armenian social and political leaders, deporting them to Anatolia and murdering them en masse. On May 27, 1915, the "Regulation for the Settlement of Armenians Relocated to Other Places because of War Conditions and Emergency Political Requirements," commonly known as the Tehcir Law, was passed by the Ottoman Parliament under the aegis of the CUP. Utilizing the Tehcir Law as a pretext, the CUP quickly decided to relocate the Armenians living on the eastern borders of Anatolia, claiming that they would be instrumental in assisting the Russian forces in an invasion. The Special Organization was established by the Ministry of War to recruit, organize, and deploy thousands of convicted criminals for the explicit purpose of exterminating the Armenian population. These death squads, known as *chetes*, operated with impunity and were estimated to be between 30,000 and 34,000 in total number. The *chetes* were also assisted by the Turkish military police and gendarmes. Turkish officials seized Armenian men by drafting them into the military, either murdering them (by shooting them point-blank) or assigning them to labor battalions and working them to death. The remaining women, children, and the elderly were evicted from their *vilayets* (provinces) and forced into relocation camps in the arid deserts of Syria and Mesopotamia. The CUP also relied on the use of their railways to deport the Armenians by loading them onto freight cars and then releasing them at their destination, only to be subsequently raped and murdered by the *chetes*.

For months, many Armenians were marched in the thousands over treacherous mountains and arid deserts, starving in droves due to the lack of food and water. Along the way, many were tortured, abused, raped, or murdered by *chetes* and Kurdish mercenaries assigned to implement such forced relocation by Turkish bureaucrats. Many Armenian orphans were seized from their soon-to-be murdered parents and given to Turkish or Muslim families. Older children were coerced to convert to Islam. Many if not most of those Armenians who survived these forced relocations by managing to escape died in the desert from exposure. A further estimated 20,000 Armenians were slaughtered upon the Ottoman military advances

into Russian Armenia late in the war, suggesting that the CUP was intent on eliminating not just Armenians within the Ottoman empire but also those in Russia and Central Asia in their effort to create a Greater Turkish state. Toward the end of the war in 1918 and well into 1922, the newly created Turkish state under the CUP continued to persecute the remnant of the Armenians, albeit on a smaller scale, in their efforts to create a more homogenous ethnic state. Armenians who managed to survive the genocide left the newly created republic of Turkey forever, choosing to settle in the United States, Great Britain, France, Germany, and Australia, among other places around the world.

The use of the term "genocide" in this case remains controversial, as the Turkish government and some Turkish intellectuals dispute that genocide was committed against Armenians.

—Abraham O. Mendoza

Bibliography

- Balakian, Peter. *The Burning Tigris: The Armenian Genocide and America's Response*. New York: HarperCollins, 2003.
- Dadrian, Vahakn N. *The History of the Armenian Genocide: Ethnic Conflict from the Balkans to Anatolia to the Caucasus*. 6th ed. New York: Berghahn Books, 2003.
- Hovannisian, Richard, ed. *The Armenian Genocide: Cultural and Ethical Legacies*. New Brunswick, NJ: Transaction Publishers, 2007.

Persecution and Genocide of Jews in Europe

The early twentieth century was a turning point in Jewish history. Jews at this time faced physical annihilation and persecution for their perceived otherness from mainstream European identities. Many Jews fled anti-Jewish sentiment and the increasing homogenization of ethnic identities that accompanied European-style nationalism, leading to growing Jewish populations throughout the world and the development of Zionism, or Jewish nationalism. Yet Jewish persecution was not a twentieth-century invention. Small Jewish communities existed throughout the world in America, Australia, Argentina, and China prior to 1900, and most of these were settled due to persecution in Europe.

➤ JEDWABNE MASSACRE (1941)

Following the German invasion of Poland in 1939, Soviet troops entered eastern Poland to occupy their half of the country, as was agreed in the Nazi-Soviet Pact (Rippentrop-Molotov Pact). For two years anti-Semitic Polish locals blamed the Soviet occupation on the Jews. With the German attack against the Soviet Union in 1941, eastern Poland was invaded by German occupation forces. However, before the German Army even reached the town of Jedwabne, local Polish citizens took it upon themselves to round up local Jews and shoot them en masse, among other acts of violence (burnings, beatings, and other attacks). An estimated 600 to 1,600 Jewish deaths were attributed to this massacre, prompted not by official Nazi directives but by local Polish initiative. For years after the war, most killings associated with the Holocaust were attributed to the Germans by many people in Poland. However, this episode and other countless acts across Europe illustrate that the Holocaust occurred at various levels and often involved local initiative.

—*Abraham O. Mendoza*

One reaction to these pogroms was a rise in nationalist thinking. Although Zionism existed prior to 1900, the second wave of pogroms brought a renewed sense of urgency to many in the organization. Zionists sought to create an autonomous Jewish homeland. In 1901 the Zionist Organization, now the World Zionist Organization, was formed along with the Jewish Agency to facilitate and administer the acquisition of land in Palestine. By 1914, there were approximately 60,000 Jews in a total population of 800,000 in Palestine and many settled farming communities on Jewish Agency land, such as Tel Aviv. The Jewish population steadily increased after the 1917 Balfour Declaration whereby the British government accepted and nominally supported the Jewish claim to Palestine. The immigrants clashed with the local population on a number of occasions, forcing the British to issue White Papers, or governmental memorandum, in 1929 and 1939 to curb the influx of Jews to Palestine. With the advent of World War II, the British lost interest in Palestine as the fighting in Europe increased.

The rise of the German Nazis and their genocidal policies represented a unique situation in history in which a government attempted to exterminate those whom they considered undesirables such as Jews, Gypsies, Catholics, mentally handicapped persons, homosexuals, and other resisters. The genocide began in earnest with Kristallnacht (1938) in which individual soldiers killed so-called undesirable civilians. The killing of unarmed civilians led to low morale among many German soldiers, and the Nazi government eventually enacted the Final Solution whereby groups of undesirables were killed en masse so as not to lower the morale of the German soldiers with individual killings. These large-scale killings initially occurred in warehouses and basements but eventually moved into more formal locations, called extermination camps.

Before being transported to the camps, many Jews were forcibly moved into ghettos, such as the Warsaw Ghetto in Poland around 1940. Here, Jews lived in squalor and poverty, isolated from the outside world. The ghettos provided collection areas for those being prepared to enter the labor or concentration camps. In forced labor camps, prisoners were forced to build the facilities where they and others would eventually be killed. Some labor camps became

Throughout the 1800s, the Russian empire had begun a repressive crackdown on Jews, which manifested itself in the form of pogroms, or anti-Jewish riots, and forced assimilation into and identification with Russian cultures. Often, these attacks accompanied events blamed on Jews, such as the 1881 pogroms when Jews were rumored to have killed the tsar. Another wave of pogroms hit Russia in 1903 and 1905. In 1903, pogroms broke out in Bessarabia (modern-day Moldova) after a young Christian boy was found dead and a local newspaper blamed the Jews. Two years later, another pogrom occurred after antitsar riots got out of hand. Some authors believe that the imperial secret police or local police sanctioned this second wave of pogroms, but many agree that the tsar was not included in the planning. Pogroms continued to occur throughout the early 1900s and often accompanied times of general unrest, such as those that occurred during the Russian Revolution of 1917 and the Polish-Bolshevik War of 1918. It is important to note that with all of these attacks on Jewish communities, no more than 500 Jews were killed in total.

extermination camps; the most notorious were Auschwitz-Birkenau and Treblinka. More than 50 percent of the Jews in Ukraine, Hungary, Holland, and Czechoslovakia and more than 90 percent of all Jews of Poland and Germany were killed during the Holocaust, with no fewer than 5 million European Jews being killed in total.

This time in history is commonly referred to as genocide today, but the concept of genocide did not exist prior to 1944. By 1948, it was sufficiently popular to be adopted into the language of international law with the publication of the United Nations Convention on the Prevention and Punishment of the Crime of Genocide. Each of the convention stipulations comes directly from the European experience with the Holocaust and the specific targeting of groups for annihilation. In recent years, this term has been expanded to also include the experiences of Armenians and Rwandans.

The persecution of Jews did not develop in the twentieth century. What was a twentieth-century innovation was the idea that entire groups could be systematically eliminated at the whim of a government. While the pogroms of the early twentieth century focused on attacking Jews, there was not yet an idea that as a group they could be wiped off the earth. By the 1940s, the wholesale elimination of Jews from Europe was under way, prompting an exodus when possible or large-scale death. When viewed with the major trends of violence and discrimination that were embodied by the pogroms and the Holocaust, it is undeniable that European Jewish history in this period is nothing less than a struggle between assimilation and the retention of culture.

—Victoria Penziner

Bibliography

- Australian Government. National Archives of Australia. "Fact Sheet 217: The Jewish Experience in Australia." June 2003. http://www.naa.gov.au/Publications/fact_sheets/fs217.html.
- Botwinick, Rita Steinhardt. *A History of the Holocaust: From Ideology to Annihilation*. 3rd ed. Upper Saddle River, NJ: Pearson, Prentice Hall, 2004.
- Elazar, Daniel J. "Are There Really Jews in China? An Update." *Jerusalem Center for Public Affairs: Daniel Elazar Papers Index*, 1987. <http://www.jcpa.org/dje/articles2/china.htm>.
- Elazar, Daniel J. "Jewish Frontier Experiences in the Southern Hemisphere: The Cases of Argentina,

Australia, and South Africa." *Modern Judaism* 3(2) (May 1983): 129–146.

Gross, Jan. *Neighbors: The Destruction of the Jewish Community in Jedwabne*. New York: Penguin, 2002.

Sachar, Howard M. *A History of Israel from the Rise of Zionism to Our Time*. 2nd ed. New York: Knopf, 2001.

Political Famines

The instances of famine in the first half of the twentieth century affected greater numbers of peoples on a vaster scale than in previous centuries. World War I and World War II and their dire consequences on both militants and civilians led to mass starvations in both Europe and Asia. During both wars, naval blockades, disrupted food supply networks, major shortages, military occupations, and widespread hoarding led to millions of deaths through starvation and diseases associated with malnutrition. Under the drive toward agricultural collectivization in the Soviet Union in the 1930s and the Nazi policy toward Jews and others who were deemed racial inferiors under the Third Reich in the 1940s, millions suffered official state-sanctioned famines in central and eastern Europe. Large-scale famines in China, India (Bengal), and Vietnam associated with major droughts, bad harvests, and warfare also killed tens of millions between 1900 and 1945.

World War I triggered multiple instances of large-scale famines due to the restrictions imposed by occupation forces or to the economic mobilization for total war. The German military occupation of Belgium eventually resulted in famine due to the strict regulations that military authorities held over provisioning the civilian population, whom they regarded as hostile. Similarly, conditions inside Germany itself due to the British blockade and state prioritizing of food for frontline soldiers led to an onset of malnutrition and starvation among the German civilian population late in the war. Food shortages in Russia during World War I and the subsequent Russian Civil War led to two major famines that resulted in millions of deaths primarily due to requisitioning by central authorities and the disruption of food distribution networks. The needs of soldiers and combatants were placed at

BRITISH BLOCKADE OF GERMANY, 1918–1919

In the latter years of World War I (1914–1918), the British Royal Navy continued its economic blockade of Germany. Landlocked and cut off from food sources from both the Atlantic and the Eurasian landmass by enemy forces, Germany was increasingly forced to rely on its own food supplies in order to continue the war. What food was available was prioritized for German troops on the front, with civilians constrained by a rationing system that supplied them with nothing but meager near-starvation rations. As the war drew to a close with the armistice of November 11, 1918, the blockade ended temporarily. However, in order to force concessions from the Germans at the Paris Peace Conference, the British continued the blockade of Germany well into 1919. Already weakened by disease and malnutrition and plagued with a broken-down supply system, nearly half a million Germans died of starvation as a result of this British naval blockade. The British blockade continued for eight months after the cessation of hostilities, further inflaming the resentment of those who would later protest against the injustices heaped on a defeated Germany, such as the leaders of the postwar National Socialist movement.

—*Abraham O. Mendoza*

a higher premium than that of civilians, resulting in lower rations and the potential for shortages that would then trigger malnutrition and instances of starvation among the less fortunate.

The interwar period was characterized by the incidence of both political and natural famines, particularly in Asia. Josef Stalin's drive toward collectivization in the 1930s resulted in multiple famines throughout the Soviet Union, especially in the Ukraine and Kazakhstan. Widespread food requisitions and flawed government policy decisions allowed the situation to spiral out of control, resulting in the estimated deaths of 10 million people (up to 20 million by some accounts). China suffered multiple famines due to constant warfare among major warlords that disrupted food supply networks but also due to a series of bad harvests and droughts. In 1928 and 1929 a famine in northern China claimed as many as 3 million lives, while another major famine in 1936 claimed approximately 5 million lives.

World War II had various instances of famines, deliberate in the case of the Holocaust and also due to the hardships created by the vastness of the conflict in places such as the Netherlands, Greece, and Poland. The German Final Solution policies deliberately cut the daily calorie intake of Jewish prisoners to ensure their starvation in the labor and concentration camps. Furthermore, hordes of prison laborers in Germany brought in from Nazi-occupied Europe had to suffer the deprivation of food, while most of the available stock was reserved for Germans. Occupied countries such as the Netherlands (estimated 20,000 deaths) and Greece (approximately 300,000 deaths) suffered tremendously under Axis authorities, which requisitioned and limited their food supplies to a bare minimum, resulting in tens of thousands of deaths.

The dislocations caused at the end of World War II also resulted in massive famines in places such as Central Europe and Vietnam. As Allied forces flocked to bring supplies to the hungry, they found that millions were prone to starvation due to the impositions placed on them by occupation forces during most of the war. For some, such as many displaced persons (DPs), it was already too late, as they had already become weakened and prone to other diseases such as typhus. Near the war's end, between 400,000 and 2 million civilians are believed to have died in Vietnam as a result of the Japanese occupation of that country.

—*Abraham O. Mendoza*

Bibliography

- Davis, Mike. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. New York: Verso, 2002.
- Hionidou, Violetta. *Famine and Death in Occupied Greece, 1941–1944*. New York: Cambridge University Press, 2006.

Pogroms in Russia

At the turn of the twentieth century Jews comprised about four percent of Imperial Russia's population. Nearly all Russian Jews were required to live in the 10 Polish provinces or the 15 Lithuanian, Belarusian, Ukrainian, and Bessarabian provinces known as the Pale of Settlement.

Because of high birth rates, employment restrictions, and other forms of discrimination, many Russian Jews were impoverished. Frequently labeled as exploiters and enemies of Christ, Jews also became identified with antitsarist political movements. In 1881–1882 after the assassination of Tsar Alexander II, a wave of pogroms, or anti-Jewish riots, broke out. Perhaps 120,000 Jews lost their homes or suffered major property destruction. Between 1880 and 1914 about one-third of imperial Russia's Jews emigrated, many going to the United States.

The next major pogrom occurred in 1903 in Kishinev (Chişinău), in Bessarabia, after a local newspaper accused Jews of ritualistically murdering two local youths. Forty-seven Jews died, and 1,300 homes and shops were burned or looted. The Kishinev Pogrom encouraged Jews and socialist organizations to form self-defense units. When a pogrom occurred in Gomel in September 1903, these self-defense organizations helped protect members of the community.

In 1904 during the Russo-Japanese War, army reservists, angered at having been called to duty, committed pogroms against Jews at mobilization points. Since Jews were prominent in the socialist movement, anti-Semitic tensions mounted during the strikes and disorders collectively called the Revolution of 1905. After a general strike spread throughout the country in October 1905, Tsar Nicholas II issued the October Manifesto, an extraordinary concession that provided protection for civil liberties and established Russia's first modern parliament, the Duma. A wave of retaliatory pogroms quickly broke out, sometimes even as crowds were celebrating news of the manifesto. In Kyiv, so-called patriots attacked 1,800 homes and shops, killing 100 Jews. In Odessa, which had a long history of pogroms, an estimated 10,000 families were victimized, and as many as 850 Jews died. Within a few weeks, some 700 communities had witnessed pogroms, mostly in the southern provinces of Ukraine and in Bessarabia. Where the Jewish Bund had organized stronger self-defense units, in Belarus and Lithuania, there were far fewer pogroms.

While the tsarist government probably did not organize the pogroms, violence generally occurred with the tacit consent of local authorities



Corpses of Jews massacred in the pogrom at Proskuriv in Ukraine, February 15, 1919. (Getty Images)

and sometimes with their participation. Mobs were generally small and easily dispersed, but police and local officials often refused to challenge them, signaling that pogroms were permissible (for three days, rumor had it). In 1905 Kyiv's mayor disappeared as its pogrom began, and the police chief and military commander who were responsible for maintaining order actively encouraged the mobs. In a few cities such as Kharkiv, decisive action by local authorities and by socialist self-defense militias prevented massive pogroms.

Imperial Russia's 1903–1905 pogroms were similar in nature and description to outbreaks of racial violence in the United States in the early twentieth century and, more recently, communal violence in India. Political scientist Paul Brass believes that pogroms and other forms of ethnic disorder occur mainly in cities where networks of potential mob activists are permitted to organize and prepare for attacks against targeted minorities. Riot-specialists—rumor mongers or arsonists, for example—can readily convert smoldering tensions into destructive riots when allowed to do so. Some carry lists, directing the mobs to the apartments and workplaces of intended victims. In Ukraine, as elsewhere, pogroms ravaged targeted minority communities where and when authorities refused to intervene, often blaming one another for the inaction and destruction. Where officials made it clear that violence would not be tolerated, it generally did not occur.

► POGROMS IN RUSSIA AND THE SOVIET UNION

The *Protocols of the Elders of Zion* is a literary forgery that claims to detail an international Jewish conspiracy for world domination. Although its origins remain the subject of much debate, the *Protocols* is believed to have first appeared in print in 1903 in Russia. The *Protocols* became increasingly popular within Russia but did not gain international attention until the onset of the Russian Revolution of 1917. Since many prominent Bolsheviks, in particular Leon Trotsky, were Jewish, the overthrow of the tsarist state and the rise of the communists were seen by some as a Jewish attack on the old world order. Russian refugees began to spread the *Protocols* throughout western Europe in an attempt to gain support in their struggle against the Bolsheviks. In addition to being used as a means of persuasion, the *Protocols* was used by the White Army to justify brutal acts of violence

against Jews in the Ukraine and Russia. Even long after the White Army had been defeated, the *Protocols* was still receiving a remarkably warm welcome in the West. In England such reputable news agencies as the *Times* fell just short of stipulating to its authenticity, while in the United States Henry Ford ran the *Protocols* in his own newspaper, the *Dearborn Independent*. The *Protocols* was also celebrated by the right-wing factions of the German government and later used as propaganda and justification for the persecution of Jews by the Nazis. The authenticity of the *Protocols* was questionable even at the dawn of its conception and has since been completely debunked as a work of plagiarism and a fraud. Despite this fact, the *Protocols* remains widely distributed in South America and the Middle East as well as among anti-Semitic circles all over the world.

In February 1917 the monarchy collapsed, and in October the Bolsheviks (communists) staged a coup. In the three years of civil war that followed, more than 1,200 pogroms occurred, mostly after May 1919 and mostly in Ukraine. Writing in the collection of essays edited by John Klier and Shlomo Lambroza, Peter Kenez notes that 10 percent of Ukraine's Jews may have died during the violence of 1919–1920. Moreover, in its scale this mass murder of Jews was surpassed only by the Holocaust of World War II. Anton Denikin's Volunteer Army, various anarchist bands, and units associated with Symon Petliura's Ukrainian nationalists were particularly notorious for their pogrom violence. Kyiv experienced its most brutal pogrom while occupied by Denikin's forces, and small communities were victimized as well. In Proskuriv 2,000 unresisting Jews were massacred in three hours. In Fastiv 600 were murdered and 3,250 injured. Both of these towns were in Kyiv province, which accounted for more than half of all pogrom deaths during the Russian Civil War. Sometimes Jews were attacked for their alleged Bolshevik sympathies or sometimes simply for a bottle of *samo-gon* (home brew), which might cost 1,000 rubles in inflation-ravaged Ukraine. Some soldiers partic-

ipated in multiple pogroms as members of different armies. Bolshevik leaders generally opposed pogroms, and the Red Armies committed far less anti-Semitic violence than did their adversaries.

Thus during the Russian Civil War, pogroms became chronic, and they resulted from the breakdown of authority and from economic collapse. Even then, officials and military officers who took decisive action against pogroms could often prevent them or at least mitigate the consequences, but especially in Ukraine such leadership was often absent.

—Michael F. Hamm

Bibliography

- Brass, Paul. *Theft of an Idol: Text and Context in the Representation of Collective Violence*. Princeton, NJ: Princeton University Press, 1997.
- Hamm, Michael F. "Jews and Revolution in Kharkiv: How One Ukrainian City Escaped a Pogrom in 1905." In *The Russian Revolution of 1905: Centenary Perspectives*, edited by Jonathan Smele and Anthony Heywood. London: Routledge, 2005.
- Hamm, Michael F. *Kiev: A Portrait, 1800–1917*. Princeton, NJ: Princeton University Press, 1993.
- Klier, John D., and Shlomo Lambroza. *Pogroms: Anti-Jewish Violence in Modern Russian History*. Cambridge: Cambridge University Press, 1992.

■ Introduction: Peace and Stability

From 1900 to 1945, international organizations and conferences were initiated in an effort to achieve or secure an end to international warfare and the political tensions that gave rise to them. These organizations and treaties were the outgrowth of efforts to alleviate the tensions that led to and grew from two major world wars involving millions of deaths and the destruction of billions of dollars' worth of property. Of particular note were the multiple international conventions in The Hague and Geneva prior to and after World War I that were aimed at establishing international legal frameworks to arbitrate potential conflicts, thereby setting the precedent for international diplomatic organizations such as the League of Nations of the interwar period and its successor, the United Nations. Disarmament and peace conferences, held periodically to discuss international issues regarding the reduction of weaponry and the resolution of contentious territorial disputes, also led to successful yet short-lived periods of international stability. Out of these came major treaties, such as the interwar Locarno Treaties of 1925 and the Kellogg-Briand Treaty of 1928, aimed at establishing diplomatic cooperation between the European Great Powers and the United States to ensure global stability. In similar efforts, naval conferences such as the Washington Conference (1921–1922) attempted to establish suitable naval ratios among Britain, the United States, Japan, and France and prevent disputes among these global naval powers.

—*Abraham O. Mendoza*

Locarno Pact

The Locarno Pact refers to a series of five treaties initialed on October 16, 1925, by the leading powers of Western and Central Europe at the Swiss town of Locarno. The treaties were designed to stabilize relations between France and Germany after a long period of post-World War I hostility as well as to provide a solid basis for peace in Europe. The Locarno agreements were

formally signed in London on December 1, 1925, and the agreements became the centerpiece of European diplomacy until destroyed by Adolf Hitler in the 1930s.

In 1919 the victorious Allies signed the Treaty of Versailles with defeated Germany, ending World War I. Under the terms of the treaty, the Allies stationed an army of occupation in Germany's Rhineland region in order to ensure French security. The Allied forces were to remain in the Rhineland for 15 years. The Germans were also required to pay heavy reparations to the Allies, especially France, which needed reparations payments to rebuild areas of northeastern France that had been devastated by the war. German reluctance and inability to pay reparations prompted the French on January 11, 1923, to extend their occupation of German territory into the Ruhr Valley, a major German industrial center. The Germans responded with a policy of passive resistance. Workers stayed home, and the civilian population refused to cooperate with the French occupiers. The Ruhr occupation triggered a major economic crisis in Germany, featuring a wave of inflation that wiped out the savings of the German middle class. In August 1923 the new German foreign minister, Gustav Stresemann, called off passive resistance and began negotiations with the French.

The idea for Locarno originated with members of the German foreign office who saw the need for a dramatic improvement in relations with the French. They also feared that a continuing impasse over reparations might lead the French to extend their occupation of the Rhineland beyond 15 years. The idea, soon taken up by Stresemann, was to guarantee Germany's borders with France, meaning that Germany would promise never again to attack France. With French security assured, Germany could win more lenient terms over reparations and other issues. Early in 1925 Stresemann went a step beyond the original idea and formally proposed an international guarantee of the territorial status quo in western Europe. Other European powers such as Britain and Italy would join to maintain

➤ GUSTAV STRESEMANN (1878–1929)

Born into a middle-class family in the German capital of Berlin, Stresemann was first elected to the German Reichstag in 1908 as a member of the National Liberal Party. In 1918 he founded the center-right German People's Party. Stresemann served briefly as



(Library of Congress)

German chancellor in the fall of 1923 and played a key role in resolving the Ruhr crisis with France. From 1923 until his death in 1929 he served as German foreign minister. Stresemann is most famous for negotiating the Locarno treaties of 1925 for which he was awarded the Nobel Prize.

—Paul W. Doerr

the peace. In addition, Stresemann pledged that once the Allies left, the Rhineland would remain demilitarized as a testament of German goodwill toward France.

Stresemann's proposal made slow progress, but by October the legal texts had been prepared. Delegates from Germany, France, Great Britain, Belgium, Poland, and Czechoslovakia gathered in the Swiss town of Locarno on October 5. Eleven days later the Locarno negotiators initialed a series of agreements. The key pact was the Treaty of Mutual Guarantee, sometimes also known as the Rhineland Pact. The term "mutual guarantee" simply meant that the obligations of guarantee were similar for all signatories. Germany promised never to attack France or Belgium, and France and Belgium gave reciprocal pledges to Germany. Italy and Britain then guaranteed the German-French-Belgian border, meaning that they promised to assist any signatory that came under attack. Germany then signed arbitration agreements with France and Belgium that renounced the use of force and promised that disputes would be submitted to peaceful arbitration. Germany also promised not to station troops in the Rhineland once the Al-

lies had departed. Finally, Germany was promised admission into the League of Nations.

Germany also signed arbitration agreements with Poland and Czechoslovakia but refused to give a guarantee of German borders with the two nations. Under the terms of the Versailles Treaty, Germany had lost territory to Poland, and a large German minority resided in that part of Poland known as the Polish Corridor. In addition, a large German minority resided in the Sudetenland region of Czechoslovakia. The fact that the Germans would not guarantee their eastern borders implied that Germany wanted territorial revisions in the east; however, by signing arbitration agreements Germany promised that such revisions would take place only after peaceful negotiations. Additional security for Poland and Czechoslovakia was provided when France signed mutual defense treaties with those two countries, also on October 16.

Initialing the agreements prompted celebrations in Locarno and wildly optimistic hopes around the world. Politicians, diplomats, and ordinary people across Europe thought that a new era of peace and stability was at hand. Locarno ended a long period of postwar tension in Europe, and this coincided with an upturn in the European economy. On September 10, 1926, Germany entered the League of Nations, symbolizing the nation's return to the world community. The formal signing of the Locarno agreements took place in London on December 1, 1926.

The three major signatories of Locarno—Great Britain, France, and Germany—all held different interpretations of what Locarno really meant. Stresemann thought that the path had been cleared for the revision of Germany's borders in the east, the French thought that their security against Germany had been assured, and the British thought that French security needs had been met and that Germany was now a member of the world community. Tragically, the high hopes raised by Locarno failed to materialize. The chain of events following the Wall Street stock market crash in late October 1929 ushered in a worldwide economic depression that helped to propel Adolf Hitler and the Nazis to power in Germany. By March 1936 Hitler rejected Stresemann's pledge of goodwill toward the French and sent German troops into the Rhineland,

thereby taking a crucial step on the road to World War II.

—Paul W. Doerr

Bibliography

- Dutton, D. *Austen Chamberlain: Gentleman in Politics*. Bolton, UK: Ross Anderson, 1986.
- Jacobson, J. *Locarno Diplomacy: Germany and the West, 1925-1929*. Princeton, NJ: Princeton University Press, 1972.
- Marks, S. *The Illusion of Peace: International Relations in Europe, 1918-1933*. London: Macmillan, 1976.
- Orde, A. *Great Britain and International Security, 1920-1926*. London: Royal Historical Society, 1978.

Naval Conferences

During the first half of the twentieth century, the various great naval powers of the world sought the creation of international laws governing naval warfare and naval construction. The goals of such legislation were to safeguard the rights of neutrals in time of war and to decrease tensions between countries that might result from a naval arms race.

The twentieth-century efforts to expand the power of international law over naval affairs had its foundation in the 1856 Declaration of Paris, created at the end of the Crimean War (1853-1856). The signatories to this agreement abolished privateering and crafted rules that defined how a nation should conduct naval blockades in order for them to be legal. The goal was to create a relatively safe environment for neutral powers to conduct trade in times of war by establishing uniform legislation governing the conduct of belligerents.

Rising diplomatic tensions between the great naval powers in the early twentieth century led to further attempts at the 1907 Second Hague Peace Conference to foster peace through international arbitration and the creation of laws restricting operations in war. The result was the Hague Convention, consisting of eight stipulations that included a prohibition on the use of underwater contact mines that remained active in excess of one hour and the restriction of naval bombardments in order to limit civilian deaths. The conference also created the International

Prize Court to adjudicate the seizure of property at sea and more clearly set out the rights and duties of neutrals during wartime.

British politicians in the wake of the Hague Conference wished to use the creation of the International Prize Court as a pretext for further agreements to safeguard trade during war. The result was the Declaration concerning the Laws of Naval War, signed in London on February 26, 1909, by ten powers: Austria-Hungary, France, Germany, Italy, Japan, the Netherlands, Russia, Spain, the United Kingdom, and the United States. The plenipotentiaries of these powers sought stricter codification of the terms in the earlier Declaration of Paris through greater definition of contraband and limitations on the conduct of naval blockades. All but the British ratified the declaration, as the British Parliament believed that it would cripple the country's greatest offensive weapon, which was the use of blockade.

The experience of World War I underlined the inherent weakness of international law in the early twentieth century. As there was no effective means to enforce such laws when violated, many signatories to the Declaration of Paris, the Hague Convention, and the Declaration of London violated the agreements in the name of military expediency. The Germans violated the Hague Convention stipulations on mines and shore bombardment, while Britain's blockade of Germany ultimately contravened all the laws ensuring neutral rights.

Renewed efforts to further international law unfolded in the wake of World War I, fueled in part by the desire to avoid such a catastrophic event in the future. In the interwar period, efforts focused on placing limits on capital ship design and the size of the fleets of the world's major naval powers in order to avoid a future naval arms race such as the one that helped fuel World War I. Consequently, the 1921-1922 Washington Conference centered on naval arms reduction talks in which the United States, Great Britain, Japan, France, and Italy took part. These powers agreed primarily to the establishment of tonnage limits for navies. An American proposal that these caps be extended to cover smaller naval craft foundered on French opposition, as the French maintained that the high cost of their army made cheaper naval vessels such

as cruisers, destroyers, and submarines essential to national defense. Additional stipulations included a 35,000-ton limit for future capital ships and a ten-year naval construction holiday pertaining to ships in excess of 10,000 tons displacement with an armament larger than 8-inch (20-centimeter) guns.

The initial effect of the conference was enormous, as it greatly reduced the size of the world's fleets, but it failed in its far-reaching goals. The inability to agree on tonnage limits for smaller warships led to naval competition in the construction of cruisers, destroyers, and submarines. The agreement also suffered, like those of the past, from a lack of means to enforce it. The Japanese and Italians repeatedly violated their tonnage limits and built warships that exceeded the design limitations.

Failures to enforce the Washington Treaty overshadowed further efforts to expand the reach of international law in naval affairs. As in the case of the agreements made before World War I, the stipulations of the treaty ran counter to the national interests of some signatories, while others refused the further extension of international law for the same reason. An example is the 1927 Geneva Disarmament Conference that sought to curb the growing arms race in cruisers. Of the original signatories to the Washington Treaty, the French and Italians declined to discuss further limitations, while the other powers deadlocked on specifics.

Even so, the Geneva Disarmament Conference revealed to the world's leaders, particularly in the early 1930s, that some agreement was necessary to address the growing naval arms race in small craft and the resulting diplomatic tensions. The 1930 London Conference produced new legislation that, on the surface, enhanced the Washington Treaty but practically served little purpose for the same reasons that undermined earlier agreements. The First London Conference of 1930 established tonnage allotments for cruisers, destroyers, and submarines, but the treaty produced during the conference suffered in terms of effectiveness, as France and Italy refused to limit production in ships that they deemed vital to their national defense.

The First London Conference represented the last time before World War II that any of the

major naval powers could reach an agreement concerning the regulation of naval affairs through international law. Rising diplomatic tensions in Europe and the Far East hampered future efforts. The Japanese starkly revealed this state of affairs when in August 1934 they announced their intention to abrogate the Washington Treaty for the sake of their national interest, which at the time was an expansionist policy in the Pacific that relied on naval power. The Second London Conference that unfolded during late 1935 and early 1936 accomplished precious little, as both the United States and Great Britain left the conference over Japanese demands for parity in tonnage allotments of capital ships.

In retrospect, the naval conferences in the first half of the twentieth century did little to either constrain the use of naval power in wartime or limit arms production. Each agreement rested solely on the goodwill of the participants. Many participants violated them when they became a hindrance to national policy objectives in peacetime or wartime. Even so, the conferences serve as pretexts for the agreements of the twenty-first century in the sense that international maritime law governing neutral rights in time of war remains the law of the sea.

—Eric W. Osborne

Bibliography

- Goldstein, Erik. *The Washington Conference, 1921–22: Naval Rivalry, East Asian Stability and the Road to Pearl Harbor*. New York: Routledge, 1994.
- Maiolo, Joseph A. *The Royal Navy and Nazi Germany, 1933–1939: A Study in Appeasement and the Origins of the Second World War*. New York: St. Martin's, 1998.
- Osborne, Eric W. *Britain's Economic Blockade of Germany, 1914–1919*. London: Frank Cass, 2004.
- Stark, Francis R. *The Abolition of Privateering and the Declaration of Paris*. New York: Columbia University Press, 1897.

League of Nations

Originating at the Paris Peace Conference of 1919, the League of Nations was an international institution dedicated to maintaining world peace. The Paris Peace Conference drafted the Treaty of Versailles, the treaty that ended the war between

the Allied Powers and Germany. The charter for the League was written directly into the Treaty of Versailles. The League, with its headquarters in Geneva, Switzerland, consisted of a Secretariat, a Council, an Assembly, and a number of humanitarian organizations. The League held its first meeting on January 10, 1920. While the League enjoyed some success in settling minor disputes among European powers in the 1920s, it failed to prevent Japanese aggression in Manchuria in 1931 and Italian aggression in Ethiopia in 1935. By 1936 the League was effectively marginalized in European diplomacy and was disbanded in 1946, to be superseded by the United Nations.

Long before the twentieth century, writers and thinkers had floated plans for an international organization, but it took the carnage of World War I to build popular support for the concept. In 1915, the League of Nations Union was founded in Britain to promote the idea of a post-war international organization. Three years later, U.S. president Woodrow Wilson, in his Fourteen Points speech to the U.S. Congress, called for an international organization to uphold the peace, while at the same time the British government set up a commission to study the idea and make specific recommendations.

As set out in its charter, the League of Nations was composed of a number of different parts. The Secretariat, led by the secretary-general, carried out most of the day-to-day bureaucratic functions of the League. The Assembly was made up of all the member states of the League, with each state having one vote. The Assembly met once a year, with its session starting in September. In addition, the League Council comprised five permanent members plus four elected nonpermanent members serving three-year terms. The Council met four times a year plus any extraordinary sessions as required. Finally, a number of humanitarian organizations, such as the Commission for Refugees, the International Labor Organization, the Health Organization, and the Permanent Court of International Justice, came under the League umbrella. League headquarters were established in the Palais des Nations in Geneva, Switzerland, in 1920.

Member states of the League of Nations pledged to respect national boundaries and refer disputes to the international body for peaceful

➤ LEAGUE OF NATIONS MALARIA INVESTIGATION COMMITTEE



(Library of Congress)

The spectacular political failures of the League of Nations have overshadowed the successes of the League's humanitarian organizations. The Health Organization undertook highly successful campaigns against malaria and typhus. This photograph shows an educational play put on by the League's Malaria Investigation Committee in India in 1929 or 1930. Youngsters in the play are extolling the use of quinine in curing malaria.

—Paul W. Doerr

resolution. Aggressors could be punished by economic sanctions, and the Council could also recommend military action. The League was also charged with the task of promoting international disarmament.

The League of Nations ran into serious obstacles from the very start. Reflecting a new mood of isolationism, the U.S. Senate rejected the Treaty of Versailles in 1920. As a result, the United States never joined the League. The absence of such a major power was a serious blow to the strength of the League. Germany was not initially allowed to join, and neither was Russia, then in the throes of a civil war. Britain and France dominated the League from the start, leading critics to charge that the League was not an impartial body but rather a winner's club for enforcing the Treaty of Versailles. The League

also had no means of enforcing its will other than relying on the good graces of the major powers to do so.

The League of Nations had some successes in the 1920s, settling minor disputes among European states, such as a border dispute between Greece and Bulgaria in 1925, and the dispute over the Åland Islands between Finland and Sweden in 1921. Germany joined the League in 1926 at a time when international tensions seemed to be lessening. However, the League was unable to prevent the Japanese conquest of the northeastern Chinese region of Manchuria in 1931. The attack on Manchuria was a clear act of aggression; however, none of the Great Powers had the will or capability to confront Japan. Condemned as aggressors, the Japanese simply walked out of the League in 1933 and remained in Manchuria.

Supporters of the League of Nations reasoned that Manchuria was a distant conflict, and the League still had relevance for Europe, then the center of world power. But Adolf Hitler, elected chancellor of Germany in 1933, scorned the League as a product of the Treaty of Versailles. Germany left the League in 1933. The USSR was finally allowed to join the League in 1934, but by that time the League's credibility was in decline. The League failed to respond to the Italian attack on Ethiopia, a League member, in 1935. Once again, Great Powers such as Britain and France were reluctant to go to war in support of the League. The outbreak of World War II in 1939 marked the final failure of the League.

The League of Nations held its final session in 1946, when it voted to dissolve and transfer all its assets and humanitarian organizations over to the newly created United Nations. The League's health organization, for example, became the World Health Organization. The Palais des Nations in Geneva today serves as the European headquarters for the United Nations.

—Paul W. Doerr

Bibliography

- Egerton, G. *Great Britain and the Creation of the League of Nations: Strategy, Politics and International Organization, 1914–1919*. Chapel Hill: University of North Carolina Press, 1978.
- Knock, T. *To End All Wars: Woodrow Wilson and the Quest for a New World Order*. New York: Oxford University Press, 1992.

Northedge, F. *The League of Nations: Its Life and Times, 1920–1946*. Leicester, UK: Leicester University Press, 1986.

Walters, F. *A History of the League of Nations*. London: Oxford University Press, 1952.

Kellogg-Briand Pact

Signed on August 27, 1928, the Kellogg-Briand Pact, also known as the Pact of Paris, attempted to outlaw war as an instrument of national policy. The main movers behind the pact were Frank Kellogg, American secretary of state, and Aristide Briand, the French foreign minister. The pact was a product of post-World War I idealism and was eventually signed by almost all the independent nations of the world. But it lacked an enforcement mechanism and was ignored as Europe headed to war once again in the 1930s.

The Kellogg-Briand Pact originated in 1927 when James Shotwell, an American university professor who headed the pacifist Carnegie Trust, suggested to Aristide Briand that France and the United States should make a joint declaration renouncing the use of war. The declaration would mark the passage of just over ten years since the American declaration of war against Germany. Briand took up Shotwell's idea and made a formal proposal to the American government in June 1927.

Briand, as foreign minister, was trying to draw the United States closer to France as a way of ensuring French security against Germany, and a joint declaration rejecting war was an ideal first step, especially from the point of view of public relations. The French leaders had hoped that the United States would remain active in European affairs after World War I ended, and they were bitterly disappointed when the U.S. Senate rejected the Treaty of Versailles and membership in the newly formed League of Nations in 1920. Plans for a formal French-British-American defensive alliance against Germany had also fallen through. Although European international relations had improved somewhat in the mid-1920s, especially after the signing of the Locarno Pact in 1925, the French remained uneasy about their long-term security against Germany, which had a larger and faster-growing population and a

superior industrial base. Briand believed that involving the United States in a joint diplomatic declaration would reignite American interest in Europe.

The American secretary of state, Frank Kellogg, found that Briand's proposal put him in a difficult position. Americans who supported the League of Nations as well as antiwar pacifists had been disappointed by the American refusal to join the League of Nations. Agreeing to Briand's proposal would certainly win support from those quarters. But isolationist sentiment was overwhelmingly strong in the United States in the late 1920s, and involvement in European affairs would not be looked upon kindly. Kellogg also, with reason, suspected that the French were trying to enmesh the United States in a formal military alliance. At the same time, an outright rejection of Briand's proposal would put the United States in a poor light.

Kellogg's solution was ingenious. He suggested that all governments of the world—not just the United States and France—should sign a statement renouncing the use of war. Accordingly, the Kellogg-Briand Pact, more properly known as the Pact of Paris, was signed in the French capital on August 27, 1928. According to the first article of the treaty, the signatories renounced the use of war as a means of settling disputes. The second article pledged that the signatories would settle conflicts solely through peaceful means. The treaty would enter into force on July 24, 1929, with an indefinite duration. Eleven states initially signed the treaty in Paris, 4 additional states added their signatures before it came into force, and eventually almost all the independent states of the world signed on, 62 in total. An optional clause to the treaty pledged that signatories would submit justifiable international disputes to the Permanent Court of International Justice.

The Kellogg-Briand Pact was a statement of good intentions with no enforcement mechanism. Today it is widely ridiculed as an example of naïveté in the practice of international relations. Governments almost immediately tried to back out of what they had just signed. The British government stated that the pact did not apply to certain unspecified areas of British national interest. Although the U.S. Senate rati-



Frank Kellogg, representing the United States, signs the Kellogg-Briand Pact in Paris on August 27, 1928. Also known as the Pact of Paris, this international treaty was an ambitious attempt to outlaw war as an instrument of national policy. It failed in this purpose but later provided the legal basis for the Nuremberg trials. (Topical Press Agency/Getty Images)

fied the Kellogg-Briand Pact with only one negative vote, some senators argued vociferously that the pact did not override the American government's right to make war and did not force it to take action against states that broke the terms of the pact. The pact failed to stop Japan from attacking China in 1931 and again in 1937 or Italy from attacking Ethiopia in 1935.

However, it is important to remember that the pact almost perfectly symbolized the hopes of an era and that public opinion received it rapturously. World War I, or the Great War as it was then known, was still a very recent memory, and people all across the world ardently wanted to believe that its horrors would never be repeated. Frank Kellogg was awarded the Nobel Peace Prize in 1929 for his efforts in promoting the pact; Aristide Briand had been awarded the prize in 1926 for his part in the Locarno Pact. The Kellogg-Briand Pact helped to advance the idea that war is an unacceptable instrument of national policy. Aggressor states such as Japan and Italy in the 1930s avoided making formal declarations of war partially in order to avoid condemnation under the terms of the Kellogg-Briand Pact. Finally, the Kellogg-Briand Pact was used to prosecute leading Nazis at the Nuremberg Trials after World War II on the grounds that they had conspired to destroy the peace of the world.

—Paul W. Doerr

THE PACT OF PARIS

The Kellogg-Briand Pact, or the Pact of Paris, renounced the use of war as an instrument of national policy. The pact was signed in Paris on August 27, 1928. Eventually almost all independent nations in the world signed the pact, which technically remains in force. The key provisions of the pact were contained in Articles One and Two.

Article 1

The High Contracting Parties solemnly declare in the names of their respective peoples that they condemn recourse to war for the solution of international controversies, and renounce it, as an instrument of national policy in their relations with one another.

Article 2

The High Contracting Parties agree that the settlement or solution of all disputes or conflicts of whatever nature or of whatever origin they may be, which may arise among them, shall never be sought except by pacific means.

—Paul W. Doerr

Bibliography

- Ferrell, R. *Peace in Their Time: The Origins of the Kellogg-Briand Pact*. New York: Norton, 1969.
- Kneeshaw, S. *In Pursuit of Peace: The American Reaction to the Kellogg-Briand Pact, 1928–1929*. New York: Garland, 1991.
- Marks, S. *The Illusion of Peace: International Relations in Europe, 1918–1933*. London: Macmillan, 1976.

Global Economic Motivations for Peace

By 1900 one of the primary motivators for maintaining peace and avoiding war for most industrialized nations was the economic costs involved in warfare. These costs were calculated not only in terms of the human and material resources involved in fighting but also because wars generally initiated periods of commercial instability and disrupted trade links, interna-

tional communication networks, and credit and finance arrangements. Peace, especially between the industrialized states (including Great Britain, France, Russia, Germany, the United States, and to some extent Japan and China) was conducive to international economic stability, profit, and growth and was recognized as such.

Not surprisingly, numerous attempts were made in the nineteenth and early twentieth centuries to prevent the outbreak of war between the Great Powers through diplomatic discussions, such as the Congress of Vienna (1815), the Peace of Paris (1856), and the Kellogg-Briand Pact (1928). Efforts also included the development of the international law of war and multilateral agreements, such as those initiated at The Hague in 1899 and 1907. The delineation of the law on neutrality in these discussions was especially significant, as it offered the possibility for nonbelligerent states to continue trading in wartime as long as they upheld strict standards of impartiality toward the warring states and did not trade in contraband (war goods).

At least until the outbreak of World War I (1914–1918), it looked likely that neutrality offered a real option for states to stay out of the conflicts of others and to gain maximum economic benefit from those wars. However, as World War I as well as World War II (1939–1945) showed, neutrality could not be safeguarded in time of total war, and this has led historians to claim that the period 1914–1945 witnessed the death of neutrality.

Until the outbreak of World War I, the world economy was growing to the general benefit of the industrial powers. However, the competition for the world's resources inaugurated by industrialization also placed pressure on the peaceful relationships between these powers and challenged the logic and dominance of liberal ideologies in Western states, namely that free trade benefited all. In part, therefore, the diplomatic tensions that brought about World War I came out of economic competition and rivalry.

World War I would prove disastrous for the wealth and well-being of all involved, including many neutral countries. The war not only reversed the growth of the world economy but also witnessed the collapse of the central position held in that economy by states such as

Great Britain, Germany, and France. In recognition of the economic impact of the war, the peace treaties signed at the end of the conflict, including the Treaty of Versailles, focused on recuperating some of the immense costs involved. This demand, however, had the result of destabilizing the international system even more, indirectly contributing to the onset of the Great Depression (1930s) and, some historians argue, World War II. Still, what both World War I and the Great Depression suggested to many at the time was that the world could not afford any more large-scale wars. This perception underpinned the appeasement policies of the Western powers, especially Great Britain and France, in their diplomatic relationships with aggressive states such as Germany, Japan, and Italy in the mid to late 1930s.

The establishment of the League of Nations (1919) also reflected the reality that the world had become economically interdependent, a process that had started in the nineteenth century with the mutually reinforcing developments of industrialization and imperialism. In an acknowledgment to the financial devastation wreaked by World War I, the collective security model proposed by the League of Nations aimed to protect the world from war and thereby ensure a peaceful environment for states to recover their economic positions and interests.

Tellingly, the Soviet Union and Germany were initially denied entry to the League of Nations, a reflection of the economic parameters of the organization. The Soviet Union, as a proclaimed communist state, would not adhere to the same economic rules as the rest of the world; Germany was denied the opportunity to function as an equal in the world economy due to its supposed responsibility for the outbreak of World War I. Furthermore, the League of Nations' primary means of ensuring compliance with its decisions was by members imposing economic sanctions on errant nations. Hence, trade and economics featured as two of the principal elements of interwar collective security and foreshadowed Western attempts in the aftermath of World War II to regulate the world economy even more carefully through such institutions as the World Bank.

—Maartje Abbenhuis-Ash



The League of Nations, one of the great hopes to ensure global peace during the interwar period, at its opening session in Geneva in 1920. (Corel)

➤ NEUTRALITY IN THE WORLD WARS

Due to international law developments in the nineteenth century, by 1914 neutrality (the noninvolvement in war) was a valid foreign policy option for many states. Neutrality not only offered the chance to avoid military involvement in a conflict but also guaranteed neutrals trading privileges and protection from the economic warfare policies of belligerents. However, during World War I the pressures of industrial war were such that all the belligerents challenged or disregarded their responsibilities to protect neutral rights. The Allied blockade and the German U-boat campaigns made it especially difficult for the European neutrals, including the Netherlands, Denmark, Norway, Sweden, Switzerland, and Spain. They suffered similar economic deprivations as their warring neighbors.

This war witnessed the decline of neutrality, and in the era of the League of Nations' collective security (1920s), neutrality became almost obsolete. However, in the uncertain diplomatic times of the 1930s and in response to the failure of the League of Nations, many states returned to their traditional positions of neutrality. Ultimately, World War II, a far more total war than its 1914–1918 predecessor, witnessed the near complete disregard of neutrals' international rights by both sets of belligerents, so much so that it was more appropriate to label the few neutral states that did survive the war, including Switzerland, Sweden, and Spain, as nonbelligerents rather than neutrals.

—Maartje Abbenhuis-Ash

Bibliography

- Broadberry, Stephen, and Mark Harrison, eds. *The Economics of World War I*. Cambridge: Cambridge University Press, 2005.
- Neff, Stephen C. *The Rights and Duties of Neutrals: A General History*. Manchester, UK: Manchester University Press, 2000.
- Ørvik, Nils. *The Decline of Neutrality, 1914–1941: With Special Reference to the United States and the Northern Neutrals*. London: Frank Cass, 1971.
- Wrigley, Chris. “The War and the International Economy.” In *The First World War and the International Economy*, edited by Chris Wrigley. Cheltenham, UK: Edward Elgar, 2000.

World Disarmament Conference

Building upon the success of the Naval Conferences of 1921 and 1930, the League of Nations convened the Conference for the Reduction and Limitation of Armaments in February 1932. Representatives from all of the major nations of the world, with the exception of Japan, converged in Geneva. The Japanese had only recently invaded Manchuria and were preoccupied with events within China. Although the conference had been designed as an attempt to negotiate a reduction of armament levels, in the end it demonstrated just how divided the world was and how ineffective the League of Nations had become at brokering agreements among the major powers.

When the conference began, the United States and Great Britain faced significant popular pressure at home to restrict the arms race. Following the atrocities of World War I, both nations hoped to avoid any future conflicts, and both faced difficult economic times that restricted military spending. As a consequence, the two governments were willing to consider serious limits on offensive weapons. In contrast, France hoped to remain well armed, at least in comparison to Germany. The French continued to embrace the position that a severely weakened Germany was the key to French national defense. At the same time, the German populace continued to pressure the Weimar government to defy the French and ignore the harsh conditions of the Treaty of Versailles (1919). The Ital-

ian government of Benito Mussolini, despite its militant style, was open to disarmament as long as Italy maintained parity with France. Finally, the Soviet Union supported a position of general and complete disarmament.

Faced with such major divisions, the conference made little significant progress. In June 1932 the United States proposed the abolition of offensive weapons and the reduction of all other weapons by one-third across the board. The U.S. proposal included such vague definitions as battleships being construed as defensive weapons. Such weaknesses, coupled with the absolute refusal on the part of the French to disarm in the face of growing German militancy, crippled the U.S. proposal almost immediately. As the conference prepared to adjourn for a summer break, the German delegation announced that it had no plans to participate further without guarantees of military parity between Germany and France. The British and American delegates worked tirelessly to craft a compromise, and the German delegation agreed to their efforts. As the international delegates departed Geneva, the conference was scheduled to resume on January 31, 1933.

In the interim months the German Weimar government collapsed, and Adolf Hitler assumed power as chancellor. The governments of Britain and France reacted very differently to the news of the ascendancy of Hitler's National Socialist German Workers Party (Nazi Party) in Germany. Britain considered even more seriously dismantling the hated Versailles restrictions on Germany in order to erode a cornerstone of Nazi power. France stood more resolutely than ever on using the Treaty of Versailles to isolate and weaken Nazi Germany.

During the spring months, French diplomats undertook significant efforts to modify the British position. At the same time, the new Nazi regime began to dismantle the institutions of democracy in Germany and to openly persecute Jews. As a consequence, the events in Germany forced a change in British public opinion, and the British government sided with France in proposing new pacts that merely reaffirmed the existing restrictions on Germany.

In the United States, Franklin Roosevelt came to power in March 1933, and his govern-

ment undertook efforts to reduce the U.S. level of cooperation with the League of Nations in response to a surge in isolationist feelings at home. Thus, participation at the conference by the United States became perfunctory and ineffective beginning in July 1933.

Hitler destroyed any hope for the success of the World Disarmament Conference by formally withdrawing German participation in October 1933. At the same time, he began proceedings to withdraw Germany from membership in the League of Nations. As a consequence of these events, the conference collapsed. Although formal meetings were held during 1934, no significant agreements were produced. Conference delegates met irregularly over the course of the next several years; however, no meetings were held after May 1937.

The World Disarmament Conference demonstrated many of the cracks that had begun to form in the foundations of peace that had been laid by the early 1930s, such as the Kellogg-Briand Pact. Franco-German distrust was escalating almost daily. Germany had abandoned democracy and had embraced the nationalist—and anti-French—rhetoric of the Nazis. The conference had marked the entry of the Soviet Union into mainstream diplomacy; however, that movement was offset by the departure of the United States, which had become preoccupied with domestic affairs. The British found themselves in an increasingly uncomfortable situation and moved closer to France.

The conference clearly demonstrated the weakness of the League of Nations as a peace-making body. The irony of holding a disarmament conference in the shadows of Japan's aggressive war against China was not lost on observers. The failure of the Disarmament Conference proved to be one among a string of failures that heightened tensions until Europe exploded in war in September 1939.

—Rob Coyle

Bibliography

- Noel-Baker, Philip. *The First World Disarmament Conference, 1932-1933, and Why It Failed*. New York: Pergamon, 1979.
- Sontag, Raymond J. *A Broken World, 1919-1939*. New York: Harper and Row, 1971.

Peace Movement

In the twentieth century, the peace movement across the world grew intensely as two world wars and the threat of nuclear conflict galvanized a diverse segment of the population into organizing. The groups that joined to work for peace and disarmament were often united in other causes, including civil rights, the feminist movement, and protection of the environment.

Since the Reformation, a number of religious sects have emerged with pacifism as a central tenet of their beliefs. The Quaker Church is the best example of this sort of movement. As the sects spread around the world, especially in the United States, they took their message of peace and antiwar with them.

The modern peace movement, however, had its beginnings during the nineteenth century. The earliest nonsectarian groups formed for the purpose of promoting peace were the New York Peace Society and the Massachusetts Peace Society, both formed in 1815. The very next year the Society for the Promotion of Permanent and Universal Peace was formed in England. Other societies in other European countries followed in subsequent years. The leaders of the movements were generally bourgeois liberals, especially professionals.

Several world peace conventions, which gathered advocates from several countries, were held in the middle of the nineteenth century. In 1889 the World Peace Congress convened in Paris, France, and was held annually until the beginning of World War I. The First Hague Peace Conference was held in the Netherlands in 1899 with the goal of promoting international peace and methods by which nations could arbitrate their difference. If the conference's goal of peace failed, its delegates did attempt to devise rules by which war would be waged. In 1901 the first Nobel Peace Prize was awarded to Henry Dunant, founder of the International Committee of the Red Cross, and Frédéric Passy, a prolific writer against war.

In the United States by the eve of World War I, more than 40 peace organizations had been created as professional Americans began to realize that working for peace was an important public responsibility. In 1914, for example,

former president William Howard Taft helped to fashion the League to Enforce Peace, a citizen pressure group. The league attempted to persuade President Woodrow Wilson to create a mechanism for the collective enforcement of international law in order to prevent war. The outbreak of World War I that year, however, brought increasing difficulties for peace advocates, who now confronted charges of treason and unpatriotic behavior when they criticized the war effort. Nevertheless, Leftists, humanitarians like Jane Addams, and other groups of Progressives—including social workers, urban intellectuals, and social radicals like Emma Goldman—formed a powerful antiwar group. Though the antiwar effort showed surprising strength in the mid-western United States and among Scandinavian and German ethnic groups, it was destroyed by a heightened law enforcement and censorship campaign undertaken by the federal government and the infant U.S. Federal Bureau of Investigation (FBI).

In Europe the most visible attempt by private citizens to promote peace during the war was the International Congress of Women, held in The Hague in 1915. This international group, dedicated to feminist causes before the war, brought together women from all the warring countries to discuss methods of settling national differences. Although unsuccessful, the attempt led in 1919 to the formation of the Women's International League for Peace and Freedom.

A general revulsion toward war followed the end of World War I. The League of Nations became the focus of efforts to stop international conflict. Although hampered by the failure of the United States to join, the league brought together most of the other countries of the world. Peace organizations formed before the war resumed their efforts along with new groups formed in the 1920s and 1930s. The main aim of most groups was pacifism. In smaller countries in particular, peace activists hoped to withdraw from entangling alliances and preached isolation from big-power conflicts. Peace activists greeted disarmament conferences, designed to make World War I the "war to end all wars," with relief and joy. Their greatest complaint was that the conferences did not do enough to make future wars unlikely.

Prior to World War II, the peace movement in the United States atrophied in the wake of a lack of militancy on the part of the U.S. government and a disinterest in world affairs prompted by the ravages of the Great Depression. Once the United States joined the war, though, conscientious objectors (COs) earned the support of American pacifists like A. J. Muste as well as peace churches and other Protestant denominations. Quakers, for example, founded the American Friends Service Committee, which provided alternative wartime service for COs. Others followed the teachings of Mahatma Gandhi and the Congress of Racial Equality to agitate instead for solutions to domestic disharmony. Despite their efforts, peace enthusiasts watched in horror as the "good war" destroyed more than 55 million people.

The end of World War II left most countries exhausted, but the rapid beginning of the Cold War between the United States and the Soviet Union led to the rebirth of the peace movement around the world. Europeans in particular were quick to realize that a future war between the superpowers could be fought in Europe with nuclear weapons. The first large postwar peace movement organized in western Europe between 1958 and 1965. A coalition ranging from mothers to students to trade unions worked for disarmament in Europe. Antiwar activities in the Soviet Bloc were less well defined and generally attacked imperialism among the Western powers.

—Jason Newman

Bibliography

- Chatfield, Charles. *The American Peace Movement: Ideals and Activism*. New York: Twayne, 1992.
- Lunardini, Christine A. *The ABC-CLIO Companion to the American Peace Movement in the Twentieth Century*. Santa Barbara, CA: ABC-CLIO, 1994.
- Taylor, R. K. S. *Against the Bomb: The British Peace Movement, 1958–1965*. New York: Oxford University Press, 1988.
- United Nations. *The League of Nations, 1920–1946: Organization and Accomplishments; A Retrospective of the First Organization for the Establishment of World Peace*. New York: United Nations, 1996.
- Wank, Solomon, ed. *Doves and Diplomats: Foreign Offices and Peace Movements in Europe and America in the Twentieth Century*. Westport, CT: Greenwood, 1978.

■ Introduction: Atrocities of Modern Warfare

The term “total war” denotes a concept that has come into increasing use in the modern age. Total war describes the transformation of modern war over the last two centuries from a limited activity, carried out by professional armies on clearly defined battlefields, to the all-encompassing efforts of entire nations to destroy their enemies completely. The development of total war began in Europe at the end of the eighteenth century and has extended into the age of nuclear weapons. Unfortunately, along with total warfare came major wartime atrocities.

Although the Franco-Prussian War of 1870–1871 gave many indications that war was becoming total, it was World War I that fully displayed the increasing scale and destruction of armed conflict in the modern age. Nations went to war in 1914 largely ignorant of the effects that modern weapons would have. Though there were many theaters of operations around the globe, the decisive front was in France, where the German Army faced French and British forces in a stalemate of trenches and barbed wire.

As the war dragged on and months faded into years, each belligerent mobilized more and more of its national resources. Gigantic artillery pieces, machine guns, submarines, flamethrowers, poison gas, airplanes, and other new weapons made the battlefield a nightmare landscape of death and suffering, while the need to produce those weapons oriented entire national economies toward production for the war effort.

World War II was the apotheosis of modern conventional warfare and saw the realization of the true potential of the dual nature of total war: the complete mobilization of entire nations’ populations and economies to field large armies with weapons of enormous destructive power and the targeting of those populations and resources by enemy militaries so as to deny the armies the sustenance they needed. Such developments transformed the world into a battlefield, and the distinction between the front lines and the home front nearly disappeared. Everything became a military target, from soldiers, tanks, and battleships to civilian workers, factories, and homes.

During World War I the British blockade of Germany, which denied the Germans important natural resources and food, and German submarine warfare had demonstrated the trend toward this kind of total war, but World War II took those practices to extremes. Planes bombed cities to destroy both industry and the will of the enemy to fight. Surface naval and submarine warfare once again sought to deny essential resources to the enemy in an even more intensive fashion than in the previous conflict.

German leader Adolf Hitler even made war against entire peoples as he sought to exterminate Jews, Slavs, Russians, and any others he thought undermined or stood in the way of Germany’s victorious destiny. At least 50 million people died during the war. Added to that appallingly high cost of lives was the trillions of dollars’ worth of wealth consumed.

World War II also produced a weapon that would propel modern war into an entirely new dimension of destruction and help define the twentieth century as the “century of total war,” as one scholar has called it. On August 6, 1945, the United States dropped the first atomic bomb on the Japanese city of Hiroshima and three days later dropped another one on Nagasaki. The scale of destruction was enormous and brought warfare into the nuclear age. Though nuclear weapons have not been used since, many nations around the world have developed ever more powerful warheads and ever more accurate and rapid delivery systems, including missiles that can cross oceans and continents.

—Richard Fogarty

Soviet War Crimes

The Soviet Union under the control of the general secretary of the Communist Party, Josef Stalin (1922–1953), followed an ideological set of objectives throughout the trajectory of the Great Patriotic War (World War II) against Germany and its fascist allies that called for the elimination of potential sources of insurrection and opposition to Soviet rule in zones of occupation. The Red Army



Partially emptied mass grave at the Katyn Forest massacre site in 1943, an overt example of the war crimes of the Soviet military. (AP Photo)

and the NKVD (Soviet secret police) along with various collaborationist officials in occupied zones were responsible for various atrocities that could be construed as war crimes by definitions already set by international law (such as the Geneva Convention). However, in the course of their undertaking many of these were overlooked by the Grand Alliance (the United States, Britain, France, and China) as long as the Soviet Union was an ally against the Axis Powers.

The signing of the Nazi-Soviet Pact (also known as the Molotov-Ribbentrop Pact) of 1939 ensured nonaggression between the Soviet Union and Nazi Germany in the event of war between Germany and the Western Allies. It possessed a secret protocol for the division of eastern Europe into spheres of influence between the two signees. In particular, Poland, which had been part of the patrimony of the Soviet Union since the days of the Russian tsars, was coveted by Stalin because it had been lost in 1922 at the end of the Russian Civil War. Late in September after the German invasion of Poland, Soviet troops entered the eastern half of Poland and quickly asserted their control over the region. Almost immediately, the Red Army and Soviet commissars set about eliminating Polish elements deemed dangerous to Marxist-Leninist political objectives for the new Soviet Poland.

The Katyn Forest Massacre was a mass execution of Polish citizens ordered by Soviet au-

thorities on March 5, 1940, estimated to have left approximately 22,000 dead, murdered by the Red Army and other Soviet officials in the Katyn forest and surrounding areas. Approximately 8,000 of these were military officers taken prisoner during the 1939 invasion of Poland. Others were Poles arrested as spies, saboteurs, and class enemies, a designation given to property owners, lawyers, Catholic priests, and government officials. The Soviets were able to round up most of the Polish intelligentsia due to the fact that Poland's conscription system required university graduates to serve as reserve officers with no exemptions. This episode was later used by the Germans, subsequent to their invasion of the Soviet Union in 1941, as propaganda to the West to illustrate the atrocities committed by the Soviets to the Western Allies later in the war.

As the Red Army advanced against the German Wehrmacht (Armed Forces) between 1941 and 1945, it also undertook various actions against both the allies of the Germans and the class enemies of the Soviet people. Partisan warfare was common behind the German lines, as Soviet partisans fought both the Wehrmacht forces and competing partisan forces that were both anti-Soviet and anti-Nazi. Furthermore, German-occupied Soviet villages that allegedly helped the enemy were subjected to Soviet retribution in the form of summary execution of the town's leaders or the destruction of the entire community. As the war raged across the eastern front, the Red Army entered formerly occupied German countries and satellite states such as Czechoslovakia, Hungary, Romania, and Poland, exacting vengeance on thousands of collaborators and alleged collaborators with the assistance of local resistance movements.

The Warsaw Uprising of 1944, crushed by German forces, is partly attributed by various historians to the Soviets' reluctance to enter Warsaw. Allegedly the Red Army halted at the Vistula River after having pushed a German retreat behind Poland and after having overstretched their forces. The Polish resistance had expected the Red Army to liberate Warsaw and had begun taking the initiative in attacking the German occupiers before this occurred. The Red Army halt allowed German forces to stamp out the revolt while it stood a few miles outside the city and

➤ EXACTING VENGEANCE—GERMANS AND THE RED ARMY

From 1941 to 1945 as the Red Army pushed the German Wehrmacht back into Germany, it also uprooted and displaced millions of ethnic Germans (*Volksdeutsche*) from formerly Nazi-occupied eastern Europe. Thousands of these ethnic Germans were ethnically cleansed through evictions, rapes, executions, and their placement in concentration camps by the Soviets or their allies, while those who survived were forced to flee in droves into Germany. According to estimates, from one million to two million Germans died in the late 1940s as a result of these actions. As the war drew to a close, the Red Army advanced into Eastern Germany and ultimately Berlin. Along the way, Red Army soldiers were responsible for the rape of

hundreds of thousands of German women. Both young and old German women were subjected to multiple rapes a day, sometimes to episodes of gang rape, by mostly drunken Soviet soldiers. Many women committed suicide rather than live in this condition. Also, German soldiers captured by the Red Army were subjected to abuse and starvation. Millions of German POWs were shipped into the Soviet Union to serve as slave labor in the Gulag camps, many of them spread over the vast expanses of Siberia, with droves of them dying of disease, starvation, exposure, and overwork. The last of these German POWs were repatriated in 1956 after an estimated 400,000 had died.

—Abraham O. Mendoza

waited, leading to Polish accusations of being an accomplice to German war crimes.

—Abraham O. Mendoza

Bibliography

- Borowiec, Andrew. *Destroy Warsaw! Hitler's Punishment, Stalin's Revenge*. Westport, CT: Praeger, 2001.
- De Zayas, Alfred M. *A Terrible Revenge: The Ethnic Cleansing of the East European Germans*. 2nd ed. New York: Palgrave Macmillan, 2006.
- Moeller, Robert G. *War Stories: The Search for a Usable Past in the Federal Republic of Germany*. Berkeley: University of California Press, 2003.
- Zawodny, J. K. *Death in the Forest: The Story of the Katyn Forest*. South Bend, IN: University Of Notre Dame Press, 1962.

Confinement of Enemy Aliens during Times of Domestic Crisis

In the first half of the twentieth century, the confinement of enemy aliens during times of domestic crisis was ubiquitous in much of the West, although to a lesser degree than in times of war. Nonetheless, domestic fear of foreign ideologies, particularly nationalism, communism, and fascism, allowed governments in Britain and the United States to circumvent their own re-

gard for the civil liberties inherited from the Enlightenment in order to arrest, imprison, and deport foreign nationals deemed to be a threat. The authoritarian regimes of tsarist Russia, imperial Germany, and Habsburg Austria-Hungary also persecuted foreign nationalist and socialist agitators, particularly those deemed harmful to maintaining their already-fragile multiethnic empires. After the collapse of these empires following World War I, their successor states also proved capable of doing the same to their own ideological enemies.

Fear of communism, particularly after World War I and the outbreak of the Russian Revolution, pervaded the United States and Britain. Socialist agitators and trade unionists from abroad suspected of having ties to the Soviet Union were apprehended and detained without right to an attorney and denied their civil liberties. The Red Scare of the early 1920s in the United States involved a series of raids on socialist organizations suspected of having overseas links to the Soviet Comintern. While some of the suspects were indeed linked to the Soviet Union and were actively seeking to organize a communist movement in the United States, others were simply at the wrong place at the wrong time. Nonetheless, they were mostly all deported en masse along with other foreign undesirables. In interwar Britain, foreigners were also scrutinized by government

► ENEMY ALIENS IN BRITAIN—GERMAN JEWS

During World War II the British government found it expedient to intern German enemy aliens deemed a threat to the British war effort. However, many of these internees turned out to be German Jewish refugees who had left Germany to avoid persecution. Approximately 60,000 German refugees moved to Britain in the years prior to the outbreak of World War II. Many of these were typically German Jews and Socialists who opposed the Nazis and who had successfully escaped from Nazi Germany. Following the outbreak of World War II, British authorities arrested a large number of Germans residing within Britain. The British government feared that these enemy aliens could potentially be spies posing as refugees. They were thus apprehended and interned in various camps all over Britain, among them the famous Isle of Man internment camp. The living conditions in many of these internment camps were often atrocious, with some internees housed in tents and sleeping on the floor. Husbands and wives were separated, as camps were set up separately for men and women. Internees were forbidden to read newspapers, listen to the radio, or receive correspondence and were thus unable to know what had happened to family members in the Third Reich for years. Many refugees, who had ironically fled to Britain to avoid persecution in Nazi Germany, committed suicide during their internment. Furthermore, many of these internees were shipped to internment camps in Canada and Australia, further exacerbating their desperate situation given the deplorable conditions of the journey by ship and the living conditions in internment camps abroad.

—*Abraham O. Mendoza*

agents particularly after the General Strike of 1927, which was actively supported and subsidized by the Soviet Union. Enemy aliens—albeit at a smaller rate than in the United States—were detained and eventually deported, particularly those who were Soviet agents. Uncertain economic and political conditions allowed both Britain and the United States to engage in coercive police-state tactics with regard to enemy aliens, utilizing scare tactics to convince public opinion of their necessity.

Tsarist Russia, imperial Germany, and Habsburg Austria-Hungary also had problems with foreign nationals serving as socialist or nationalist provocateurs. Prior to their dissolution, these authoritarian states detained enemy aliens—sometimes on legitimate charges but more often than not on trumped-up charges—and subjected them to long prison terms for working with foreign states. Tsarist Russian autocrats, always fearful of liberals and socialists, were quick to deport enemy aliens as well as national political criminals to the stretches of Siberia, particularly after the botched 1905 revolution. Imperial Germany quelled internal discontent by rapidly stamping out socialist uprisings or strikes and was quick to detain foreign nationals active in these movements, particularly nationalists from Habsburg or Russian Poland. Austria-Hungary, rocked by internal ethnic separatism and surrounded by irredentist regimes such as Serbia and Poland, also actively arrested and detained foreign nationalist agitators. These three authoritarian regimes, already known for being police states, had zero tolerance for nationalist provocateurs with claims on what they deemed national territory.

Similarly, their successor states, the Soviet Union, and Nazi Germany (after the short-lived Weimar Republic), respectively, also acted aggressively against foreign agents working against their ideological objectives. The Soviet Union, under the leadership of Lenin and Stalin, actively detained individuals associated with the tsarist regime or bourgeois elements seeking to destroy the workers' state. Many of these were summarily shot if not sent east to the forced-labor camps that constituted the Gulag. In Nazi Germany, Hitler and his secret police agencies—the Sicherheitsdienst (SD) and the Gestapo (contraction of Geheime Staatspolizei)—also were active in eliminating those deemed enemy aliens, particularly Jews, socialists, and communists, from public life prior to the war between 1933 and 1939.

Concentration camps such as Dachau served to detain both internal political criminals and enemy aliens deemed harmful to the National Socialist state, particularly Soviet agents. Both of these states found that the building of their respective ideological states necessitated the removal of foreign elements who threatened this process. Both the Soviet Union and Nazi Ger-

many were born out of chaotic and unstable political and economic conditions that allowed these states to circumvent legal niceties and persecute, arrest, incarcerate, and violate the civil liberties of foreign nationals deemed enemy aliens. These practices would continue to a greater degree in the context of World War II.

—Abraham O. Mendoza

Bibliography

Hobsbawn, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.

Chemical and Biological Warfare

Chemical weapons were first used on a large scale during World War I. The stalemate of trench warfare caused both sides to seek means by which the enemy's troops could be forced into the open. After the French failed to achieve significant results using tear gas munitions, the Germans made a breakthrough with the use of chlorine gas released from cylinders and carried by the wind to enemy lines. In addition to achieving the intended effect of dislodging the entrenched troops, the first use of this gas also unexpectedly caused many fatalities from asphyxiation, and thus began the escalating use of poison gases specifically to inflict casualties.

A typical early attack required 100 tons of gas released from thousands of cylinders that took weeks to position. Since shifts in wind direction could result in more casualties among the attackers than among the intended targets and since the cylinder-release method required preparations that could not be concealed, the cylinder-release technique was soon replaced by the use of gas-filled artillery shells. Although this latter method made delivery more controllable, it also required the firing of hundreds or thousands of artillery shells into a small area over a very short time in order to build up a lethal concentration of gas.

In another breakthrough, the Germans developed mustard gas. Unlike the true gases that drifted as clouds and soon dissipated, the oily



British soldiers blinded by mustard gas line up at an advance aid station near Bethune in April 1918, during World War I. Employed by both sides during the Great War, the use of chemical weapons was banned in 1925 with the Geneva Protocol on Gas Warfare. (Bettmann/Corbis)

chemical agent dichlorodiethyl or so-called mustard gas dispersed as droplets in aerosol form over a very limited area. Depending on the air temperature, these droplets persisted where they fell, from a few hours to several days. Although lethal if enough of the vapor was inhaled, mustard gas generally caused only painful skin blisters of a couple of weeks duration and sometimes temporary blindness.

Approximately seven tons of poison gas were used in World War I for each poison gas fatality. The total number of wounded and fatal casualties from gas have been calculated as exceeding 1 million, but that figure includes unreliable and likely exaggerated numbers from the eastern front. On the western front, fatalities from chemical weapons were approximately 18,000, with total casualties estimated to be just under 500,000, in a war with more than 8 million recorded fatalities, 7 million missing in action, and more than 21 million wounded.

Most military officials disliked chemical weapons because they interfered with normal tactics without providing decisive advantage. Also, being unpredictable and unreliable they needed to be backed up by a full compliment of conventional weapons. The military ambivalence combined with a 1925 conference that led to a proposal for an international ban in 1925 limited

► CHEMICAL WARFARE DURING AND AFTER WORLD WAR I

World War I propaganda portrayed chemical weapons as especially horrible. Military medical records, however, show that fatalities from gas were relatively low. Moreover, nonfatal wounds inflicted by conventional weapons had a much greater chance of causing permanent disabilities than did injuries by gas. Thus, some military officers—most notably the American lieutenant colonel Augustin Prentiss, whose technically and statistically irrefutable book *Chemicals in War* became a standard military reference on both sides of the Atlantic in the interwar period—argued that gas was the most humane weapon and proposed that future wars be fought exclusively with chemical weapons. Ultimately, propaganda images and emotional arguments prevailed. Chemical weapons were vilified and banned. Yet knowledgeable veterans of World War I, such as Brigadier General Jacquard H. Rothschild in his book *Tomorrow's Weapons* (1964), would decades later still propose that United Nations peacekeeping forces use mustard gas as a humane and minimally lethal means to quell international conflicts.

—Leonard Leshuk

the use of chemical weapons in the interwar years. The Italians did use mustard gas extensively in Ethiopia in the 1930s, delivered in bombs or directly sprayed from airplanes. However, even against lightly clothed, barefoot Ethiopians, such unilateral use of chemical weapons was not the decisive factor in that war.

Prior to World War II the Germans made yet another breakthrough with their development of tabun nerve gas (ethyl dimethylphosphoramidocyanide) followed by Sarin (1-methylethyl methylphosphonofluoride) in 1938 and Soman (1,2,2-trimethylpropyl methylphosphonofluoride) in 1944 but never put these gases to use in the battlefield. Interwar experimentation with biological weapons led only to some ineffective World War II uses by the Japanese in China and preparations by the British for an anthrax attack on Germany that was never carried out. The experimentation with biological weapons, how-

ever, led later to many unfounded rumors of their use by various armies during World War II. Furthermore, while all of the major powers considered making first use of the chemical weapons in their stockpiles—and there were some casualties from chemical weapons mishaps during World War II—the major powers ultimately refrained from relying on them primarily due to logistical and tactical considerations.

—Leonard Leshuk

Bibliography

- Haber, Ludwig F. *The Poisonous Cloud*, Oxford, UK: Oxford University Press, 1986.
- Leshuk, Leonard. *A More Insidious Enemy: Exposing the Dangerous Lies and Misinformation concerning Chemical and Biological Weapons*. Washington, DC: Europa University Press, 2002.
- Prentiss, Augustin M. *Chemicals in War: A Treatise on Chemical Warfare*. New York: McGraw-Hill, 1937.

The Holocaust

The murder of millions of civilians by the Nazi regime in Germany is one of the most tragic and significant events in recorded history. With a cost of perhaps 12 million lives, the worst of the human potential was laid on display in ways that have redefined modern perceptions of race, religion, politics, and morality. During the years surrounding World War II, Nazi doctrines of racial and national superiority led to the maltreatment and murder of Soviet prisoners of war, Polish Catholics, Gypsies, homosexuals, Seventh-day Adventists, and Jews.

The event known as the Holocaust all but destroyed the Jewish presence in Europe and has scarred Germany to the present day. Hatred of the Jewish minority by many in Europe went through various mutations through the years, first under Roman law and then in medieval Europe. Until the modern era, such hatred was more a question of anti-Judaism rather than anti-Semitism, since the religion, rather than the race of the Jews, was deemed to be objectionable. This began to change in the nineteenth century due to terrible misreadings of the work of Charles Darwin.

Some viewed Darwin's work as promoting the idea of race as a scientific category, thus

leading to the rise of the related pseudoscience of eugenics with its program for the selective breeding of humans for racial competition. This intellectual context was in place in the 1920s when Adolf Hitler and the National Socialist German Workers' Party (Nazis) emerged in German politics. Many Germans were receptive to Hitler's arguments about a German race subverted by Jewish infiltrators, especially after the nation's devastating and demoralizing losses in World War I. For many, the Jews simply became an identifiable enemy who could be blamed for the country's problems.

Fueled in part by the appeal of his racial arguments, Hitler and his Nazi Party were able to claim power in Germany in 1933 and immediately began to institute their program against the Jews. At first the persecution was mostly economic, including a 1933 boycott of Jewish businesses, but the persecution grew more radical with time. The 1935 Nuremberg Laws, for example, excluded Jews from many professions and effectively revoked their citizenship.

An important turning point was the *Kristallnacht* (Night of the Broken Glass) of November 1938 when thousands of Jewish properties were burned and thousands of German Jews were mistreated and arrested. The invasion of Poland in September 1939 was a second crucial point of departure, massively increasing the number of Jews in the custody of the Nazis from approximately 500,000 to more than 3 million.

The next step toward genocide came with the invasion of the Soviet Union in June 1941, at which point five million Jews in that country were placed in danger. Although many would escape with the general Soviet exodus to the east, perhaps two million perished. Many of them were killed by *Einsatzgruppen* (Intervention Group) forces composed of *Schutzstaffel* (SS) troops along with army and police units following the German advance and committing mass murder in their wake, usually with machine-gun executions. By the end of 1941, hundreds of thousands of Jews had reportedly been murdered in this way.

It is worth considering that the death camps, the symbols of the Holocaust for many, had not yet been built at the beginning of World War I. This is because the Final Solution evolved over time. So-called intentionalists and structuralists

have argued over the degree to which the genocide was the product of a concrete plan in Hitler's mind, but the argument is largely over just that: a matter of degree. Historians agree that the plan evolved, from the harassment of the Nuremberg Laws to the forced Zionism that saw Adolf Eichmann learn Hebrew and visit Palestine to the *Einsatzgruppen* and death camps. Partially this is because as more Jews fell into the hands of the Nazis and as the war grew more savage, so to did the discourse about Jews in official German circles. Nevertheless, although we acknowledge the evolution of the Final Solution, it is undeniable that the possibility of genocide was there from the moment Hitler—a man who predicted the annihilation of the Jews is acknowledged in a speech in January 1939—took power.

Over the course of 1942 the machinery of death reached its full awful capacity with the construction and operation of a series of death camps, all in Poland. In these camps, new techniques and technologies were employed to speed up the massacres, including the use of poisonous gases in chambers disguised as showers. In that year alone more than four million people were killed, making it the peak of the Nazi genocide.

The Holocaust continued until the end of the war as German and then West European Jews were shipped to the East to take the place of murdered Polish and Soviet Jews, first in the ghettos, then in the camps, and then in the gas chambers. By the war's end, in 1945, the German government was still diverting resources to the camp system even as those resources were desperately needed at the front. The final stage of the Holocaust involved a series of death marches as SS guards herded their last victims back to camps in Germany.

The aftermath of the Holocaust is difficult to evaluate because it is so broad and significant. The most important effect of the genocide was the virtual destruction of the Jewish presence in Europe. The intellectual and moral legacy of the Holocaust is particularly hard to assess. On one hand, it seems a given that politics and moral life after 1945 are heavily influenced by the genocide. From the existentialists to the poststructuralists and from Israel to Germany, much has been remade because of the Holocaust. On the

other hand, genocides have continued. The legacy, then, of the Holocaust might be best described as ambiguous.

—Robert Willingham

Bibliography

- Aretha, David, ed. *The Holocaust Chronicle*. Lincolnwood, IL: Publications International, 2000.
- Browning, Christopher R. *Ordinary Men: Reserve Police Battalion 101 and the Final Solution in Poland*. New York: HarperCollins, 1992.
- Gilbert, Martin. *The Holocaust: A History of the Jews of Europe during the Second World War*. New York: Henry Holt, 1985.
- Levi, Primo. *Survival in Auschwitz*. Translated by Stuart Woolf. New York: MacMillan, 1961.

Nazi War Crimes

The most infamous aspect of the Nazi period of German history is the genocide and war crimes committed against the peoples of Europe. Approximately six million Jews and more than six million other noncombatants died as a direct result of Nazi atrocities. Millions more died as a re-



Corpses of U.S. Army personnel slain by the Germans after capture near Malmedy, Belgium, on December 11, 1944, illustrative of the German disregard for the rules of war under the Nazi regime. (National Archives)

sult of the war thrust upon Europe by the Nazi war machine. Another part of Nazi brutality came in the form of war crimes against the soldiers who fought against the Axis Powers.

The most vicious fighting of the European theater of World War II occurred on the eastern front during the struggle between Nazi Germany and the communist Soviet Union. Between World War I and World War II, the Soviet Union had not formally endorsed the Geneva Accords on the treatment of prisoners of war (POWs) nor the Hague Agreements on the conduct of war. Using this as an excuse, the war unleashed by Germany against the Soviet Union in 1941 was especially brutal.

The German Army marched into the Soviet Union with orders to kill all captured Soviet political officers, and these orders were carried out almost without exception. When the German invaders captured millions of Soviet prisoners, Nazi officials made a decision to purge the POWs of those whom the Nazis considered dangerous. Anyone thought to be Jewish, part of the intelligentsia, troublemakers, or dedicated Communist Party members were shot. Those not selected for immediate execution were fed little or nothing, and as a result starvation was widespread. In addition, thousands of POWs died on the long death marches west toward German-occupied territory, as German guards shot any POW who fell behind or could not continue. Eventually, when trains were used to transport Soviet POWs, only open cars were set aside for prisoners, causing many to freeze to death. Those who actually made it back to either the POW or concentration camps were also subject to death. About 900 Soviet POWs died in September 1941 in the first trial gassing at Auschwitz-Birkenau using Zyklon-B; at least another 10,000 would eventually perish in its gas chambers.

By the end of the war approximately 5.5 million Soviet prisoners of war had fallen into German hands, of which nearly 3.5 million (or more than 60 percent) were reportedly killed or died; in comparison, fewer than 4 percent of British and American prisoners died in captivity. The majority of the Soviet POWs died within the first year of the German invasion of the Soviet Union. By 1942, with labor shortages growing, the decision was made to select Soviet POWs for slave la-

bor instead of systematically trying to annihilate them. However, even as laborers they were under the constant threat of death, as they were treated poorly and underfed.

Soviet soldiers were not the only ones to face the brutalities of the Nazis. Many Polish officers captured early in the war were killed as part of the German attempt to obliterate any potential leaders. Jewish prisoners from various countries usually faced some of the worst treatment. As mentioned above, Jews among Soviet POWs were selected and usually turned over to Schutzstaffel (SS) death squads for immediate murder. Only those Soviet Jews able to pass as non-Jewish had a chance to survive German capture. Thousands of Polish Jews also became POWs when Germany invaded Poland in 1939. Many of these were shot by the Germans, and most of the others were released back into the local populations as civilians only to face future anti-Jewish measures.

Although the Germans did not undertake the systematic extermination of prisoners of war from the Western Allies, there were many incidences of war crimes against them. During the battle for France in May 1940, SS soldiers shot and killed as many as 100 captured British soldiers. Hitler Youth soldiers killed dozens of Canadian POWs in June 1944 during the fight to retake France from the Germans. There were also several different occurrences of American POWs being shot during the Battle of the Bulge (1944), the most famous happening near Malmédy, Belgium, where more than 80 American POWs were killed.

One group that received especially harsh treatment by the Nazis was captured Allied airmen. The German military, and even civilians, were encouraged by the Nazi government to execute captured flyers. Many airmen who were not immediately killed were turned over to the SS and sent to concentration camps. In 1944 about 50 captured airmen from Britain, the United States, and Holland were sent to the Mauthausen concentration camp, where they were killed by being forced to haul stones out of the quarry until they collapsed (many thousands of Soviet POWs were killed in the same manner). In another incident, Hitler personally ordered the execution of about 50 British airmen who

➤ TOP-SECRET COMMANDO ORDER

One group of Western Prisoners of War that the Nazis ordered exterminated was special forces units or commandos. In October 1942 Hitler issued his Top-Secret Commando Order, which stated: "From now on all enemies on so-called commando missions in Europe or Africa challenged by German troops, even if they are uniform, whether armed or unarmed, in battle or in flight are to be slaughtered to the last man" (Nr. 003830/42 g. Kdos.OKW/WFSt).

Several other orders followed and reiterated that all captured commandos be killed. Those soldiers kept alive for the sake of questioning were to be killed immediately after their interrogation. Also, commanders were told that it was imperative to keep the orders a secret, and they were to destroy all copies of the orders after reading them.

There were many examples of these orders being carried out with vigor. In March 1944 about 15 uniformed American soldiers were captured behind German lines in Italy and were all executed without a trial. In another incident about 15 British and American troops on a commando mission in Czechoslovakia were captured and sent the Mauthausen concentration camp to be executed.

—Philip Flowers

were recaptured in 1944 after escaping from a POW camp.

—Philip Flowers

Bibliography

- Murray, Williamson, and Allan R. Millet. *A War to be Won: Fighting the Second World War*. Cambridge, MA: Belknap Press of Harvard University Press, 2000.
- Shirer, William L. *The Rise and Fall of the Third Reich: A History of Germany, 30th Anniversary Edition*. New York: Fawcett Crest, 1983.
- Yahil, Leni. *The Holocaust: The Fate of European Jewry*. New York: Oxford University Press, 1990.

Targeting Civilian Populations in World War II

The rapid development of technology during World War I made aviation a potent military tool. In the 1920s and 1930s military theorists—such



Scene from a German air raid on London in September 1940. More than 20,000 civilians were killed during the London Blitz which lasted until May 10, 1941, in a strategic attempt to force the British into surrender. (National Archives)

as General Giulio Douhet in Italy, Sir Hugh Trenchard in Britain, and General Billy Mitchell in the United States—proposed the use of bombers in a strategic role: bombers would destroy industrial targets and terrorize the enemy’s population, allowing for a quick and rapid victory without the need to deploy ground forces. Even though they must be placed in the wider context of strategic bombing, the examples of London, Dresden, and Tokyo illustrate the aims and effect sought by the belligerents as a policy of total war developed.

Early on in World War II, Germany bombed the Polish city of Warsaw—culminating in a massive raid on September 25, 1939—and the Dutch city of Rotterdam on May 14, 1940, albeit by mistake. The gradual escalation of violence and the belief in the virtue of strategic bombing—hitting industrial targets and annihilating the morale of the enemy’s population—made the targeting of cities appear justifiable during World War II. The bombing of cities and civilians also illustrates the shift toward total war, where civilian population and infrastructure are considered justifiable military targets.

In the wake of the battle for Britain, the German Luftwaffe (Air Force) launched its first major attack on London. In 12 hours, 625 airplanes bombed the British capital, killing 430 and setting off more than 2,000 fires. The bombing of London marked the starting point of an eight-

month campaign (September 7, 1940 to May 11, 1941) that also included other British cities. Known as the Blitz—from the word “blitzkrieg,” or lightning war—the objective of this campaign was to disorganize the British economy and to demoralize the population of London. Confronted with effective British defense, Germany quickly reverted to night bombing. Between September 1940 and May 1941 London received 100,000 high-explosive bombs and more than 1 million incendiary devices. The last night attack against London, on May 10–11, killed 1,436 people and severely wounded 1,742.

In spite of prewar prognostics stressing the vulnerability of large cities to aerial bombardment, the nature of the losses were less dramatic than anticipated: up to 3,000 dead and around 12,000 wounded per raid. What remained most striking to the British population was the disproportion between material damage and human loss. Even though more than one million homes were damaged by the Blitz on London, civilian morale never really faltered, and the population displayed remarkable courage and stoicism, the catch phrase being “London can take it.”

Britain mobilized considerable technological and industrial resources in its strategic bombing campaign against Axis targets. In fact, this effort mobilized the same level of industrial resources as that required by the British ground forces. Original objectives were German industrial and economic targets, but antiaircraft defenses over German cities as well as the bombers’ lack of precision forced the British to resort to nighttime area bombing. As such, bombers would aim and bomb a general area of a city instead of trying to bomb a particular target. By the end of 1944, British Bomber Command devoted large numbers of airplanes to its strategic bombing campaign and attained a respectable degree of precision. In 1945 the British Air Ministry prepared a plan calling for the bombing of major cities in eastern Germany. The objective was twofold: to help Soviet ground forces and to disrupt the flow of refugees fleeing the advance of Soviet forces.

On the night of February 13, 1945, British Bomber Command sent 805 aircrafts over Dresden, dropping 1,478 tons of high-explosive bombs and 1,182 tons of incendiary bombs. The following day, 311 American planes also bombed

► STRATEGIC BOMBINGS IN WORLD WAR II

The concept and use of strategic bombing proved controversial early on, and the moral debates over bombing civilians arose early in World War II. While at first the British and French limited their actions to dropping propaganda leaflets on Germany, after Germany reverted to bombing civilians in Warsaw and Rotterdam the Allies also accepted the concept of bombing cities and thus civilians. Overall, Allied strategic bombing in Europe followed three distinct phases. First, from 1940 to 1942, strategic bombing was ineffective and mainly served to display the British resolve to maintain the struggle against Germany. Second, from 1943 to the spring of 1944, British and American strategic bombing had limited impact on German industrial output, but it compelled Ger-

many to reorganize its industrial infrastructure and devote important military resources to the defense of the Reich. Finally, from the spring of 1944 to the end of the war in Europe, strategic bombing came of age, and perfected aiming techniques and air superiority brought devastation to German cities. It is in this context that the bombings of Dresden and Tokyo must be understood. Although some historians criticize the moral value of bombing civilians, going so far as to accuse Allied leaders of war crimes, it must be remembered that it was part of the global struggle against Nazi Germany. In the end, however, World War II brought about a new age in warfare, an age where the distinction between civilians and combatants vanished.

—Martin Laberge

the city. Having been spared thus far from major raids, Dresden was weakly defended. The raid created a firestorm whereby many fires coalesced to form a gigantic one, creating hurricane-force winds and temperatures of up to 800°C. In all, around 50,000 people lost their lives in the bombing.

The United States also pursued a policy of strategic bombing against Axis targets. The American bombing of Japan started in June 1944 after the required islands in the Pacific from which to launch bombers toward the Japanese mainland were secured. Once again, the objective was to damage civilian morale and to destroy the Japanese industrial and economic infrastructures. Strong winds at high altitudes and the presence of Japanese fighter planes impeded early American attempts at precision bombing. The chosen solution was to bomb Japanese cities at night at low altitude using incendiary bombs to ignite the wooden structures that made up most Japanese cities. On the nights of March 9–10, 1945, approximately 300 American bombers dropped 2,000 tons of incendiary bombs on Tokyo. The flames created by the multiple fires joined, as in Dres-

den, to form a massive firestorm. In all, almost a quarter of the city was destroyed, and around 85,000 Japanese were killed.

Although strategic bombing campaigns were designed to destroy industrial infrastructure and shake civilian morale, their results were mitigated by the fact that targeting cities and civilian population did not really impede industrial production or destroy civilian morale, except in the devastation of Japan. Theories of total war aside, it was the bombing of specific targets—oil factories or transportation infrastructure—that made strategic bombing a valuable military tool.

—Martin Laberge

Bibliography

- Biddle, Davis. *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914–1945*. Princeton, NJ: Princeton University Press, 2002.
- Hastings, Max. *Armageddon: The Battle for Germany, 1944–1945*. New York: Knopf, 2004.
- Hastings, Max. *Bomber Command*. London: Pan Books, 1999.
- Overly, Richard J. *The Air War: 1939–1945*. New York: Potomac Books, 2005.

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Thought and Religion

The first half of the twentieth century was an age of secularization. During this period, traditional worldviews competed with new worldviews based on scientific and technological advances. Just as scientific truths and a basic understanding of time, space, energy, and matter had been revolutionized by Albert Einstein's theory of relativity and the development of quantum mechanics, a vaguely formed worldview that rejected inherited truths and hierarchies emerged under the rubric of "modernism." Particularly in the West, popular interest crystallized around the new physics as well as the long-standing theories of Karl Marx, Charles Darwin, and the more recent theories of Sigmund Freud. Combined, their reasoning suggested that the drive to fulfill biological and economic imperatives explained the social order and human nature more fully than explanations that depended upon the existence of a divine cosmic order. Traditional world religions—notably Christianity, Islam, Buddhism, and Hinduism—remained crucial to the cultural characteristics of all the world's regions; however, adherents needed to either resist or absorb the cosmological challenge that science posed.

During this same period, secular ideological movements such as socialism, anarcho-syndicalism, nationalism, and anti-Semitism, among others, developed into near religious worldviews offering utopian promise. In this sense, these movements offered to re-create the shattered cosmological order. The increasing amount of information diffused through new media such as mass-circulation newspapers, radio, and film and the accelerated modernization of the developed world allowed for these ideological movements to promise their adherents a perfect world, devoid of economic hardships or of undesirables deemed sources of social breakdown.

The first decade of the twentieth century was a time of simmering tensions. The United States was just months past a territorial war with Spain. Japan was beginning to flex muscles and extend dominance. The Boer War and the Maji Maji Rebellion erupted in Africa. Nationalistic ideology, influenced by romantic mythology, was inspiring the birth of modern fascism in some areas and a hope for independence in others. At the same time, hopes of economic equity and better living conditions were inspiring dreams of a "workers' paradise." Ideas were not only competing but were inspiring people to organize and take action. Tensions and skirmishes in Asia increased as the dying Chinese dragon—marked by the fall of the Qing dynasty—lost its hegemonic position; war in Europe was largely the result of growing competition for colonial resources, nationalism, and the fear that gave birth to the

complex Alliance System. As these circumstances unfolded, people in societies around the world met in coffeehouses, tearooms, bars, and living rooms and debated the ideology of the day. Asian intellectuals were pouring over Georg W. F. Hegel, Karl Marx, John Stuart Mill, Herbert Spencer, and Charles Darwin. Europeans were looking for a “new order” to replace worn-out ideas and were finding a heady brew of romance and science.

Traditional worldviews and world religions competed with other forces for the attention of newly developing mass societies via new information technologies. Promoters of fascism and socialism relied on the new media to broadcast their message, replete with its own religious rhetoric and promises of a new heaven on earth. At the same time, efforts to harness technology to provide a traditional religious message could be seen in the birth of religious radio broadcasting in this period. In Britain, the Reverend John A. Mayo began Christmas Eve broadcasts in 1922. In the United States, the charismatic evangelical preacher Aimee Semple McPherson began radio broadcasts of her Four-square Church services to a wide audience in 1924.

Curiously, even scientists and engineers believed that they needed to fashion an image of science that could captivate their audiences and illustrate that a scientific viewpoint was worthy of reverence as the

engine of progress. Science promotion—perhaps better termed “scientism”—in the hands of early science fiction editors, scientists themselves, and corporate promoters offered a cosmos as saturated with meaning as any of traditional religions. Science was a utopian force, a new source of miracles, stability, and plenty. Presentations of “miraculous” technology were common in corporate electricity exhibits at world’s fairs since the 1890s. In the

Science promotion—perhaps better termed “scientism”—in the hands of early science fiction editors, scientists themselves, and corporate promoters offered a cosmos as saturated with meaning as any of traditional religions.

1930s in the United States, the National Research Council, an organization founded by Woodrow Wilson in 1916 to promote scientific research for national defense, brought together scientists to design the science exhibits and promote the impending 1933 world’s fair, “The Chicago Century of Progress Exposition.” Part of their efforts included the production of 30 15-minute radio broadcasts that highlighted the wonders of science. Plans to name the fair’s central exhibition arena “The Temple of Science” were reconsidered, and it was simply called the “Hall of Science,” with a central mural that depicted the Tree of Knowledge in the Garden of Eden as a source of good. At the same time, Christian evangelists from the Moody Bible Institute in Chicago began to mount shows of scientific wonders that reconnected similar wonder-evoking phenomena (for example, images of a lecturer on a transformer with sparks shooting from his hands) to a religious worldview. As in previous eras, images of science and technology veered between utopian dreams and apocalyptic worries, both of which connected them to religious thought. The move to the apocalyptic became underlined with the development and use of the atomic bomb. During the Trinity atomic

bomb test, for example, physicist and Manhattan Project director J. Robert Oppenheimer turned to scripture and quoted the *Bhagavad-Gita* to declare, “Now I am become Death, the destroyer of worlds.”

Not all of modern thought relied on such grandiose utopianism or apocalypticism. A quieter tragic worldview, for example, had grounded the thought of Sigmund Freud, the founder of psychoanalysis. A physician concerned with treating mental illness, he believed that sanity meant living with life’s ambiguity. The cosmic canopy was indeed shattered, and an individual had to accept his or her own death and other limitations as inevitable. A good life required peeling away the layers of conditioning that papered over traumatic events and the trauma of living in a meaningless universe; nevertheless, basic human impulses could be destructive and should not be necessarily encouraged. However, Freud’s disciple, Carl Jung, attempted to reenchant what Freud had identified as the individual’s subconscious. Jung offered the possibility of a mystical awakening; an individual’s interplay with a world of mythical archetypes was not escapist folly but instead was a way to a sounder self-understanding and authenticity.

Theologians and philosophers in the West also grappled with the consequences of a shattered cosmic order. This was most dramatically underlined with the development of existentialism from the late nineteenth century through the mid-twentieth century. Religious thinkers such as Søren Kierkegaard and “antireligious” thinkers such as Friedrich Nietzsche pioneered existential thought, which rejected a notion of “essences” engrained in human nature, values, or institutions. All was provisional and unfinished. As existence preceded essence, the burden was on the individual to embrace freedom in the face of the absurd, make decisions, and take actions. The goal, as in Freudian psychoanalysis, was for the individual to come to “authenticity,” to face reality and reject blind conformity. This thought flowered in the philosophical and literary works of Jean-Paul Sartre and Albert Camus during and after World War II, a cataclysm that encouraged a tragic worldview. Christian and Jewish philosophers, including Martin Buber, Franz Rosenzweig, Paul Tillich, and Karl Jaspers, grappled with the demands of bringing religious thought into an existentialist framework.

Despite the tempting image of modernists knocking traditionalists out in a twentieth-century boxing match, traditional world religions remained important and largely intact in the quotidian existence of most of the world’s population.

From rural Tennessee in the United States to Hindu provinces of British India to Shinto temples in Japan, traditional social relationships and institutions remained important to individuals. Muslims throughout the Middle East, central Asia, and Southeast Asia remained adherents to their faith and traditional in their day-to-day routines, despite European penetration into their respective societies. Christian missionaries in Africa, China, and Asia continued to deliver the message of the Gospel.

Despite the tempting image of modernists knocking traditionalists out in a twentieth-century boxing match, traditional world religions remained important and largely intact in the quotidian existence of most of the world’s population.

Many traditional religions in Africa, despite the infusion of Christianity and Islam, retained their original belief systems or syncretic versions of these combined with Christian or Islamic elements. Likewise, in Asia, Christianity had made significant advances in myriad regions such as Korea but within the existing cultural framework. As such, world religions, as in other prior historical periods, were able to exist in a foreign cultural context, adapting to the new environment and absorbing and influencing social and political structures. Latin America, traditionally Catholic, had been shaped in its social and political structures in this manner for centuries, since the Spanish conquest.

If daily lives, particularly in rural regions, remained under the sway of traditional thought and religion, cosmopolitan political movements seized on the notion of “progress” and encouraged a change in entrenched thought. Political and intellectual developments in capital cities and industrial urban areas had affected rural areas in prior periods, but new transportation and communications technologies allowed for the proliferation of ideas at a far faster rate, particularly influencing young people who were far more receptive to new ideas than their elders. In this way in the rural regions of both the industrialized and colonized worlds, new ideologies circulated that painted modernization and industrialization as positive developments and the retention of traditional ideas as detrimental to the notion of progress, with progress in this world rather than the afterlife as the primary goal.

During the interwar period, secular-minded progressives, from socialists to nationalists to liberals, lambasted the traditional worldviews of the countryside and embraced ideological notions that promised economic and social stability of their respective nation-state. The Spanish Civil War was a primary example of the clash of traditional-minded religious conservatives against liberals, socialists, republicans, and anarchists. Fascism emerged as a political and social movement, which while imbued with progressive notions of modernization and secularism also sought to restore the authentic national past through the removal of cosmopolitan elites and the influence of international capitalism, which was demonized and portrayed as bacteria that poisoned the national soul.

On the extreme left of the spectrum, the Bolsheviks promised a secular atheist worker’s utopia that required the elimination of class enemies who threatened the ideological purity of the workers who propelled the movement. In contrast, National Socialism advocated for the restoration of German power and the removal of world Jewry, making anti-Semitism the primary ideological strain of the movement, while also advocating national vigor, militarization, and the infusion of National Socialism into all German institutions. Other fascist, socialist, and nationalist movements in Europe shared many of these beliefs, particularly disdain of capitalism and Jews, and often clashed with the existing government in power, which often held onto liberalism amid political and social tumult in places like France.

Much of the colonized world, from North Africa to Asia, was also affected by the diffusion of new ideological movements from abroad,

though only as it fit their own needs to remove European colonial authority and assume their own independent state, replete with national identity and institutions. Nationalist movements in Asia, Africa, and the Middle East adhered to notions of national identity and modernization although taking their traditional cultural context into consideration, making their version of nationalism unique. Recognizing that cultural traditions and folkways distinguished them from Europe and that modernization could be viewed as Westernization, these nationalists sought to appropriate only the positive aspects that would improve economic and social conditions while preserving their religions and social relationships.

The alliances that existed before World War I were reconstituted before World War II, although in the latter fear of the spread of Soviet communism made the United States and western Europe hesitant to oppose the ambitions of German, Italy, and Japan. The Soviet Comintern promised the colonized world its support against the decadent capitalist world as well as the threat of fascist aggression. Despite these movements the world over, traditional conservatives were wary of the potentiality of their own removal from power, even if it meant national autonomy from European hegemony. Societies feared each other's nationalism, with its veneer of modernization and progress, but treasured their own as virtuous, particularly when contrasted with "Godless Communism."

The radical ideological and political movements of the first half of the twentieth century developed their own symbols, liturgy, and cultish aspects, which were very similar to the characteristics of traditional religion. By donning uniforms and titles, mythologizing heroes and martyrs, preaching a Manichean struggle between the forces of Good and Evil, and rousing exuberant enthusiasm through public speeches and spectacles, National Socialists, communists, and socialists sought to create an atmosphere that syncretized the belief systems of the traditional-minded in their societies while galvanizing the true believers. Anarcho-syndicalists (anarchists in support of laborers or tradesmen) in the Spanish Civil War, German Waffen-SS columns on the eastern front and Japanese kamikaze pilots in World War II, and Soviet police (NKVD) requisitioning grain in the impoverished Ukrainian countryside all performed their duties in the belief that their cause was just and that their respective system was worth the sacrifice despite the bloodshed and their morally questionable actions. The perpetrators of the Holocaust were able to rationalize their actions on the basis of a perceived "greater good" as were the Japanese soldiers at Nanjing, enforcers of the Stalinist police state, and countless others, all acting in the name of race, emperor, and history, respectively. The unquestioning loyalty of people at every level to fervent belief systems was necessary to sustain social and political movements such as National Socialism and Marxism-Leninism (in its Stalinist variety in particular) to inflict such a devastating impact on their own societies and those they conquered.

—*H. Micheal Tarver, Abraham O. Mendoza,
Fred Nadis, and Carolyn Neel*

■ Introduction: Nationalism as an Intellectual Current

Nationalism is the name by which we know the carefully nurtured loyalty that unites populations in support of the modern state and was probably the single essential intellectual development in the creation of the modern world. By the beginning of the twentieth century, European societies had organized their political and economic systems to such a degree that they were able to control most of the world's resources. Their ability to arouse the fierce loyalty of their populations allowed them to achieve unprecedented heights of mobilization and production to support imperialist ventures. Nationalism made modern imperialism possible; in reaction, dominated or threatened peoples developed their own brands of nationalism. European political and economic domination aroused resistance, inspiring people across the world to dedicate their lives and fortunes to further the interests of their own nascent states. Gathering force, nationalism reached a deadly maturity in the twentieth century when competition among European states sparked two deadly world wars, culminating in the end of European hegemony and the intensification of nationalism across the globe.

European nationalism and success in overseas adventures moved forward hand in hand. By 1800 as nationalism became a force in their political and economic activities, European states controlled about 35 percent of the world's land area (as opposed to 7 percent in 1500). In 1914 at the beginning of World War I, European states, or states populated by Europeans, controlled about 85 percent. There had been no major international wars in Europe after Napoleon's armies had been defeated, but the century between 1815 and 1914 could not be described as nonviolent. Indeed, there were only four years between Napoleon's defeat and 1901 during which European forces were not involved in major battles. Industrialized European states had not become more peaceful; they had pursued their national interests by launching outward.

One of the most effective ingredients of nationalism is the sense that a specific population is different from (and more worthy than) the

people against whom they define themselves. There is no reason to unify if there is no competitor against whom to unite. The mythology of nationalism—in an unfortunate corruption of Charles Darwin's theory of evolution—held that it was the nature of strong states to expand and conquer weak states and that it was necessary for the progress of humanity that they do so. There is an assumption of racial or ethnic superiority inherent in nationalism that manifests itself even in nations that consider themselves bound only by civic loyalties. Perhaps this was more glaring in the writings of the German Romanticists and their celebration of the masculine Teutonic virtues, but it was also alive and well in the other nations of the early twentieth century. Self-appointed intellectuals expended much time and effort trying to prove the “scientific” superiority of one group or another. The term “Eugenics” came into use to describe a “science,” the mission of which was to ensure the development of desirable human offspring. Between 1900 and 1945 Eugenics movements appeared in nearly every industrial society as the elites in each defined their group as inherently superior, the possessor of the most desirable human characteristics.

By 1900 nationalism had become strident and adversarial. Passionate nationalism became both a symptom and a cause of intense competition between states. Through political speeches, art, newspaper editorials and cartoons, popular music, and literature, competing societies often depicted each other as buffoons, deceivers, rabid animals, or vermin. The constantly reinforced perceptions of national interests made it possible for states to arouse support for industrialization, mobilize for war or defense, and launch large-scale ventures into international markets. The dominant European states were involved in increasingly dangerous and ever-shifting alliances with (or against) each other. Many of their leading political and military figures believed that war was inevitable and perhaps desirable. Nationalism in eastern Europe—shaped by the ambitions of the Ottoman, Russian, and Austrian empires—simmered. In 1914 a Serbian nationalist provided the spark that set off the first of two devastating

world wars when he assassinated the heir to the Habsburg throne of Austria-Hungary, Archduke Francis Ferdinand and his wife, Sophie.

Resistance to European imperialism, in turn, had awakened nationalist sentiments in societies around the globe. As the entries below illustrate, the forms of nationalism differed from society to society. Resistance to both formal and informal imperialism has been a part of the Latin American experience for almost four centuries, but until the late eighteenth and early twentieth centuries the sense of nationhood seemed less central than that of ethnic or class identity. Africans and members of the African diaspora began to form a common sense of identity for the first time as the Pan-African movement grew. The first Pan-African Conference was held in London in 1900. Asian nationalism emerged as a reaction to European incursions as well. The Indian National Congress was founded in 1885 to work with the British; during World War I, Indian Nationalists sensed Britain's vulnerability and began to demand autonomy. In China, European powers had been circling the declining Qing empire even before the humiliations of the Opium Wars. European states, joined by Japan, made incursions into China and eroded the authority of the existing government until it collapsed. China fell into a period of revolution and political chaos before emerging with a new political reality and a highly developed sense of national identity. By 1900 Japanese nationalism, with its stated goal of "Asia for Asians," set in motion some of the most powerful and dramatic events of the twentieth century.

The unifying power of nationalism propelled imperial forces and inspired nationalistic reactions among the peoples whom European powers had subdued or threatened. Societies united in resistance to imperialism, successfully employing the symbolism and mythology of nationalism to unite, inspire, and invigorate their own populations. The aggressive nationalism that fueled European imperialism launched a global reaction.

—Carolyn Neel

Bibliography

Anderson, Benedict R. *Imagined Communities: Reflections on the Origin and Spread of National-*

ism. Rev. and extended ed. London and New York: Verso, 1991.

Greenfeld, Liah. *Nationalism: Five Roads to Modernity*. Cambridge, MA: Harvard University Press, 1992.

Hobsbawm, E. J. *Nations and Nationalism since 1780: Programme, Myth, Reality*. Cambridge and New York: Cambridge University Press, 1990.

McCrone, David. *The Sociology of Nationalism: Tomorrow's Ancestors*. International Library of Sociology. London and New York: Routledge, 1998.

Smith, Anthony D. *Myths and Memories of the Nation*. New York: Oxford University Press, 1999.

Nationalism in Africa

The Berlin Conference of 1884–1885 set off a scramble for Africa among European powers that resulted in the forced colonization of almost the entire continent by the early 1900s. Nationalist movements quickly arose, however, that would ultimately lead to colonialism's demise. Sometimes lasting decades, the struggles for independence involved many groups sharing common grievances against the colonial system and desires for human dignity and freedom.

Before discussing nationalism in Africa, it is important to understand how it was different from nationalism in Europe, from whose experience the term "nationalism" is based. When most European countries became nations in the nineteenth century, people within the territories involved shared, for the most part, a common culture, language, and history. They perceived themselves to be a nation and, on those grounds, sought self-determination and their own state. By contrast, in most of Africa colonialism had destroyed historical territories and states within which people had lived, and foreign rule replaced indigenous forms of governance. The colonies that became the independent countries of Africa were the artificial creations of conquest in which people of diverse languages, cultures, and religions typically shared little in common but their subjugation. The nationalist movements that arose in this context were not, therefore, representative of nations seeking self-determination; rather, the nationalists wanted independence and statehood in order to create nations.

▶ NNAMDI AZIKIWE (1904–1996)



(Bettmann/Corbis)

One of West Africa's most famous nationalist leaders was Nigeria's Nnamdi Azikiwe. Azikiwe was among the numerous talented Africans from the British colonies of Nigeria and the Gold Coast who attended U.S. colleges and universities in the 1920s. He studied at Lincoln University in Pennsylvania, Stores College in West Virginia, and the University of Pennsylvania.

The experiences of these American-educated students resulted in leaders who returned to their countries with less elitist attitudes than those of

their counterparts educated in British universities, who often felt that they were superior to other Africans. Azikiwe and his fellow graduates, by contrast, were able to identify and communicate with the masses of Africans. They were also impatient for change and quickly turned their education to nationalist activities once they returned home. Affectionately known as "Zik," Azikiwe returned to Nigeria in 1937 and started a leading nationalist newspaper, *The African Pilot*. He also joined a student group, the National Youth Movement (NYM), and in 1944 was a founder of the National Council of Nigeria and the Cameroons (NCNC), which became a mass political party. A Pan-Africanist, Azikiwe's dream was the eventual creation of a United States of Africa. At independence in 1960 Nnamdi Azikiwe became the first president of the new country of Nigeria, and in his long political career he was one of Nigeria's most respected statesmen.

—April Gordon

The main colonial powers in Africa were the British, French, Portuguese, Germans, and Belgians. Although each European country had different systems of ruling its colonies, there were some commonalities in how Africans were treated that led to growing discontent and eventual calls for independence. Typically, education, political rights, and economic opportunity for Africans were limited, and racist attitudes and the maltreatment of natives by whites were pervasive. Brutality and repression were used by Europeans to maintain control and to exploit African labor. Other abuses such as land expropriation, unjust taxes, forced labor, and conscription of African men to fight in the two world wars were further catalysts to local demands for change.

Although hardships were experienced in both rural and urban areas, it was in the urban areas that much of the nationalist activity was concentrated. Most of the leaders of nationalist movements were products of Western-style education, and they had adopted aspects of Western culture such as language, dress, and the Christian religion. Many held lower-level civil service

jobs or were small business owners and professionals. They viewed themselves as civilized by European standards but were frustrated by the discrimination they faced from whites. Some leaders were drawn from the trade unions that had developed due to foreign investment in mining and industry. Members of women's groups, such as market women, also became involved in anticolonial activities in response to the unpopular policies and ill-treatment of colonial officials or their African collaborators.

Before World War II, most nationalist demands were for reform of colonialism; however, after the war the call was increasingly for independence. One of the ideas that inspired nationalist movements was Pan-Africanism, which espoused the unity of all persons of African descent in the struggle against racism and imperialism. Some of Africa's most famous nationalist leaders—such as Kwame Nkrumah (Gold Coast), Nnamdi Azikiwe (Nigeria), and Kenneth Kaunda (Northern Rhodesia)—were exposed to Pan-Africanism during their education in the United States and worked to spread its ideals in British African colonies.

Experiences and hardships during World War II contributed to the radicalization of many groups. For instance, while serving overseas or in other colonies in Africa, African conscripts saw firsthand what conditions were like in other parts of the world, leading many to want change back home. While fighting alongside Europeans, they learned to use European military weapons, technology, and tactics that later would be effectively employed in colonies where armed struggle became necessary to gain independence. On the home front, ordinary working Africans grew resentful of the increased forced labor, inflation, and diversion of food and other production to the war effort, which further subjected the African poor to hardship. Strikes by the trade unions and other forms of protest increased among Africans in all walks of life, and the discontent of ordinary people made it easier for nationalist groups to seek common cause with the masses for independence once the war was over.

Colonialism was further and fatally discredited by the Western powers themselves when they drafted the Atlantic Charter in 1941. The Atlantic Charter, with its stated values of respect for the rights of all people to self-determination and sovereignty, was a foundation for the United Nations. The charter further stated that such rights should be restored to people who had been forcibly denied them. The effect of the Atlantic Charter on people all over the colonial world, including in Africa, was tremendous, giving powerful ideological justification for anticolonial struggles.

With its call for independence, African nationalism in action was mostly peaceful. Most groups opposed armed struggle, favoring instead Gandhian ideals of nonviolence. There were several reasons for this. For one thing, most Africans could recall how resistance to colonial rule had been crushed by Europeans in the past, and they understandably hoped to avoid such bloodshed. Also, most nationalist leaders were Westernized and felt an affinity for Europeans and their culture and values; therefore, they hoped to pursue their goals peacefully by appealing to those values. Lastly, nonviolence had been shown by Mahatma Gandhi and his followers to be successful in securing independence for India in 1947. This provided a model of peaceful change for other

liberation movements to emulate. Still, in some colonies such as Guinea-Bissau, Mozambique, Angola, Kenya, Southern Rhodesia, and South Africa, armed struggle was adopted when peaceful tactics were met with repression.

Regardless of how independence was pursued, between 1957 and 1994 the colonization of Africa ended. Africa's nationalists had succeeded in returning control of Africa to its own people once again.

—April Gordon

Bibliography

- Bohannon, Paul, and Philip Curtin. *Africa and Africans*. Prospect Heights, IL: Waveland, 1995.
- Collins, Robert O. *Western African History*. Princeton, NJ: Markus Weiner, 1990.
- Freund, Bill. *The Making of Contemporary Africa: The Development of African Society since 1800*. Bloomington: Indiana University Press, 1984.
- Gordon, Donald L. "African Politics." In *Understanding Contemporary Africa*, edited by April A. Gordon and Donald L. Gordon. Boulder, CO: Lynne Rienner, 2007.

Nationalism in Southern and Eastern Asia

In the early 1900s the British-run government of India ruled the entire subcontinent of southern Asia. The government confronted a growing nationalist movement, composed of both Muslims and Hindus who sought Britain's withdrawal and India's self-governance. During World War I, India supported the British empire's war effort, providing over 1 million troops and auxiliary workers to the Allied war effort in Europe and Asia. Indian nationalists, from both the Hindu-dominated Congress Party and the Muslim League, endorsed India's aid to Britain in the belief that the south Asian colony would be rewarded with early independence. Instead, British administrators extended wartime restrictions on the press and public assemblies into the postwar era, and police and military forces were used to quell nationalist threats.

Following the end of World War I, tensions within India continued to rise. In April 1919 in the city of Amritsar, a crowd celebrating a religious festival was fired upon by British-directed

troops, leaving 400 people dead and 1,200 wounded. After the Amritsar Massacre, most Indian nationalists abandoned all support for British rule. At the same time, tensions between the Hindu and Muslim communities within India escalated. Mahatma Gandhi, a London-trained Hindu lawyer, led nonviolent protests against British rule, the most provocative of which was the Quit India campaign during World War II, when India was again required to support Britain. Following Gandhi's lead, protesting Congress Party officials resigned rather than help Great Britain. Muslim League leader Mohammed Ali Jinnah forced London to agree to India's immediate transition to full independence as the price of Muslim India's wartime cooperation. Amid widespread postwar communal violence, Great Britain established a separate majority Muslim state, Pakistan, when India achieved independence in 1948.

Although it had never been fully colonized, by the turn of the twentieth century China had surrendered scores of special trading and legal privileges to Western powers. Popular Chinese nationalism thus first turned against the weak imperial Qing government that had granted so many concessions to the West. As a consequence of the weakness of the Qing and the efforts to overthrow the nonreformist government, China's dynastic government collapsed in 1911. Although the nationalist leader Sun Yatsen was widely admired, his Guomindang, or Nationalist Party, lacked military power. To preserve order, Sun resigned as president of the new Republic of China in 1912, with leadership passing to General Yuan Shikai, who unsuccessfully sought to become emperor. Chaos ensued, and China fractured into large regions, each run by powerful warlords.

China supported the Allies in World War I, although the nation was humiliated by postwar settlements when Japan was awarded all of Germany's special rights in China. Ignited by this insult, a new variety of nationalism swept China. Popular support shifted to the Guomindang, which after Sun's death in 1925 was led by military commander Jiang Jieshi (Chiang Kai-shek), and later to the Chinese Communist Party (CCP), led by theorist Mao Zedong (Mao Tse-tung) after 1934. Though the Nationalists and the Communists briefly were allied against war-

lord rule, their pact dissolved in 1927. Using this time to build a sophisticated military, the Communists attracted increasing nationalist support in both urban and rural areas. During a civil war that lasted for more than 20 years, the Nationalists and the Communists had brief periods of reluctant cooperation in their common struggles against the Japanese invaders. Eventually the Communists prevailed and founded the People's Republic of China in 1949. As a consequence, Jiang moved the Republic of China government from the mainland to Taiwan.

Japan's emergence as a global power in the early twentieth century was driven by a deep-seated nationalist movement that shaped governmental priorities, including accelerated industrial development, military modernization, and imperial expansion. In 1895 after a period of rapid socioeconomic change that mimicked Western technical and industrial development, Japan attacked and defeated China, forcing its weak dynastic leadership to cede control of Korea and the island of Formosa (Taiwan). Japan's successful absorption of Western technologies, its cultural homogeneity, and its centralized government unified with imperial tradition all underpinned its accelerated economic development and the growth of its army and navy. In 1905 Japan's forces shocked Europe by defeating Russia, home of the world's then-largest military. As a consequence of the war, Japan seized Russian assets in Manchuria. During World War I, Japan joined the Allies but did little fighting. Its nationalist politicians at the Versailles Conference arranged Japan's acquisition of German trading and territorial concessions in warlord-riddled China.

Quarrelsome parliamentary politics during the 1920s gave way to popular nationalism in the 1930s, strengthened by Japan's growing empire in eastern Asia. The Japanese Army invaded Manchuria in 1931, and military successes stoked state- and race-centered Japanese nationalism, which reflected traditional Japanese disdain for Chinese, Korean, and other Asian ethnic groups. During the 1930s military-backed politicians planned further expansion of Japan's empire, which would ensure access to oil, food, cheap labor, and other resources in short supply on Japan's crowded home islands. Japan launched armed attacks in 1937 in China and in late 1941

in U.S. and European territories in the Pacific and Southeast Asia. Intense nationalism, worship of Japan's Emperor Hirohito, and the boldly aggressive behavioral code of Bushido ("the way of the warrior") shaped Japanese policies, military activities, and the conduct of those who served in its huge military juggernaut, which occupied most of Asia between 1942 and late 1944. Propaganda, policing, and the emperor's presence ensured domestic cohesion, even as Allied forces cut Japan's maritime supply lines and liberated Japanese-occupied territories. Tokyo's hyper-nationalist government abruptly surrendered in 1945 following American nuclear weapons attacks on Japan's home islands. However, by challenging the Western powers, Japan had emboldened indigenous nationalists throughout Asia, where powerful anti-imperialist and decolonization movements took shape during the postwar period.

—Laura M. Calkins

Bibliography

- Berger, Gordon M. "Politics and Mobilization in Japan, 1931–1945." In *The Cambridge History of Japan*, Vol. 6, *The Twentieth Century*, edited by Peter Duus. Cambridge: Cambridge University Press, 1988.
- Duus, Peter, Ramon H. Myers, and Mark R. Peattie, eds. *The Japanese Informal Empire in China, 1895–1937*. Princeton, NJ: Princeton University Press, 1989.
- Eastman, Lloyd. *The Nationalist Era in China, 1927–1949*. Cambridge: Cambridge University Press, 1990.
- Wolpert, S. *A New History of India*. Oxford, UK: Oxford University Press, 1989.
- Young, Louise. *Japan's Total Empire: Manchuria and the Culture of Wartime Imperialism*. Berkeley: University of California Press, 1998.

Nationalism in Latin America

Nationalism has been central to the political and economic development of Latin America. Nationalism emerged relatively early in the context of global history and is traced by most historians to the wars of independence at the beginning of the nineteenth century. However, Latin American nationalism has been a contested and problematic ideal, and the issue of precisely who was

to be included in nationalist visions has been the subject of debate and negotiation up to the present. Nationalist ideologies have varied widely according to political perspective and chronological period and have been strongly infused with ideas of race and gender. The formation and dissemination of nationalist ideas need to be explored from above at the level of elite discourse and state policy and from below in the sense of the spread of popular consciousness and must be clearly distinguished from the state-led enterprise of nation building.

Leaders of the movements for independence in Latin America first began to articulate ideas of nationalism and used the language of "nations" and "peoples" to advance their cause. However, implicit in these early nationalist ideas was a sense of ambivalence toward the nonwhite population and a fear of black and indigenous unrest. Elite leaders needed to appeal to the masses in order to obtain their support, yet they sought to leave the existing colonial structures of power and economic privilege unchallenged. These contradictory pressures remained at the heart of nationalist ideologies for at least the next century.

Following independence, nationalism became the ideology through which competing elite visions for development were played out. As the nineteenth century progressed, nationalist ideologies became increasingly infused with social Darwinism, which equated political and economic prosperity with the racial composition of a population. Imaginings of nationalism became more inclusive in the twentieth century through intellectual currents such as *indigenismo* and *mestizaje*, which sought to rethink the role of indigenous heritage in national identity. Indigenismo emphasized the power of the indigenous heritage and the achievements of Native Americans in the ancient past. Mestizaje glorified the cultural and biological fusion between indigenous and Spanish groups and lauded the *mestizo* as the ultimate embodiment of national values. The Mexican Revolution of 1910 was particularly influential in advancing these ideas. Government education minister José Vasconcelos wrote about the mestizo as the "cosmic race," the people of the future, while the murals of Diego Rivera depicted the glory of the Aztec

WOMEN AND NATIONALISM IN LATIN AMERICA

Ideas about women have been entwined into nationalist ideologies in Latin America in complex and multiple ways. The ideal of Republican Motherhood, which held that the ultimate patriotic honor for women was to give their sons to national military struggle, served to glorify women as the biological reproducers of the national collectivity. Mariana Grajales, the mother of Cuban Independence leader Antonio Maceo, lost 10 of her 11 sons to the independence struggle and embodies this ideal. Women's bodies have been used to symbolize the boundaries of national inclusion through racialized ideas about the relative honor and respectability of different groups. Women have served as active transmitters and producers of national culture in their roles as schoolteachers, artists, and writers. They have been important participants in national struggles, whether in the more traditional secondary capacity of message runners and nurses or as frontline guerrillas, as was the case in the Cuban and Nicaraguan revolutionary movements. Oftentimes, women have encoded the biological identities ascribed to them by nationalist ideologies into their participation in these struggles, as when Evita Perón famously referred to herself as the "mother of the Argentine nation."

—*Nicola Foote*

empire. The Brazilian counterpart was the state-sponsored idea of "Racial Democracy," which argued that because of the proliferation of race mixture, racism against Afro-Brazilians did not exist. However, while these currents included subaltern groups at the level of representation, there was little shift in the realities of political and economic experiences, and many scholars and activists have asserted that these nationalist mythologies served to obscure racial discrimination.

The rise of the political Left in the twentieth century further reshaped nationalism, and Leftist intellectuals and activists presented left-wing politics as inherently nationalistic in their struggle to liberate the region from oligarchic elites and imperialist interests. Leftist nationalism was inextricably entwined with anti-imperialism and struggled against the economic influence of the

United States. Leftist nationalism also sought to redistribute power among the lower classes. However, nationalism in the twentieth century was not the sole intellectual property of the Left. Right-wing nationalism also flourished, promising national security and the preservation of conservative values, and followed a very different economic agenda centered on foreign investment and privatization. The Populist movements of the mid-twentieth century borrowed elements from both Right and Left in using the language of nationalism to gain political support. While populist regimes typically brought only limited change in terms of practical hierarchies of power, they reshaped nationalist ideologies in a more inclusive manner in order to focus on the poor and dispossessed. The rise of Juan and Evita Perón in Argentina arguably represented the apogee of populist nationalism, and the rapturous fervor they generated among the urban working classes underscores the power of nationalism as a strategy for connecting with the popular classes. Other important populist regimes include those of Getúlio Vargas in Brazil and José María Velasco Ibarra in Ecuador. Economic nationalism was a central part of both populist and Leftist programs and focused on the nationalization of key resources such as oil fields, railroads, and mining enterprises as well as public services such as electricity and phone companies.

Competing nationalisms spilled over into war at various points. This could take the form of civil conflict between liberal and conservative visions, as seen most dramatically in Colombia during the War of the Thousand Days (1899–1902) and La Violencia (The Violence) of 1947–1953, in which at least 180,000 Colombians died. Alternatively, it could mean war between rival nations for access to resources. The most devastating nationalist conflict of the early twentieth century was the Chaco War (1932–1935) between Paraguay and Bolivia that was fought over a border region mistakenly thought to be rich in oil resources.

Gender has been central to nationalist formulations in Latin America. Citizenship has typically been associated with male characteristics and responsibilities, while women's domestic and family roles have been emphasized, particu-

larly motherhood, routinely asserted to be women's ultimate patriotic contribution.

Intellectuals have played a key role in the development of Latin American nationalism as an ideology. Contrasting visions for the nation have been articulated through the means of national identity essays, novels, poems, and artistic works. Academic disciplines have been important, and archaeological and anthropological knowledge in particular have been woven into the narrative of nationalism. The state has also taken leadership in the dissemination of nationalist ideas through public education programs and the creation of monuments and memorials. Nationalism has also been shaped from below, as seen most clearly in the relationship between popular culture and nationalist ideas, with food, sport, music, and clothing all used to express and negotiate national identities.

—Nicola Foote

Bibliography

- Appelbaum, Nancy P., Anne S. Macpherson, and Karin Roseblatt, eds. *Race and Nation in Modern Latin America*. Chapel Hill: University of North Carolina Press, 2003.
- Castro-Klaren, Sara, and John Charles Chasteen, eds. *Beyond Imagined Communities: Reading and Writing the Nation in Nineteenth Century Latin America*. Baltimore: Johns Hopkins University Press, 2004.
- Dunkerely, James, ed. *Studies in the Formation of the Nation-State in Latin America*. London: Institute of Latin American Studies, 2002.

Nationalism in Europe

In the course of 200 years, nationalism evolved into a major force shaping the contours of modern European history. Beginning in eighteenth-century western Europe, nationalism emerged as a modernizing force and liberal impulse reflecting the rational ethos of the Enlightenment. Nationalism assumed a more exclusionary and racist tenor during the nineteenth century, generating reactionary ideologies. This exclusionary, belligerent, and reactionary brand of nationalism was, to a great extent, propounded by academic figures who invoked Darwinism in order to lend scientific legitimacy to their racial nationalism

and thereby perverted the once liberal and liberating aspects of liberal nationalism. This new brand of ethnic nationalism sought to define the nation in terms of ethnicity, which more often than not required some element of hereditary descent from previous generations. Membership in the nation, which includes shared culture and language, also depended on heredity. The state, in essence, derives its legitimacy from its status as a homeland, for this ethnic group and its sole *raison d'être* is the protection of that ethnic group and its culture against infiltration by others. This exclusionary and racial permutation of nationalism ultimately produced the cataclysmic events of the twentieth century: two world wars, unprecedented acts of genocide, and the eclipse of European power and global influence.

At the turn of the twentieth century, the dramatic rise in dogmatic nationalism among many East European countries then dominated by several empires, especially in the Balkan states of Serbia, Bosnia, Herzegovina, Romania, Bulgaria, and Montenegro, would ultimately ignite World War I. One of the most notable nationalist associations to appear at this time was the "Union or Death" better known as the Black Hand. In May 1911 ten men in Serbia formed this secret society. Their main objective was the creation, by means of violence, of a Greater Serbia. By 1914 there were around 2,500 members of the Black Hand. The group was mainly made up of junior army officers but also included lawyers, journalists, and university professors. One of this group's members, Gavrilo Princip, assassinated the Austrian archduke Franz Ferdinand and his wife, Sophia, on June 28, 1914, triggering World War I. The drumroll of approaching warfare reverberated throughout the continent as German, Austrian, British, Russian, and French citizens responded to the call and the romantic allure of national unity and patriotic fervor.

Yet despite the unimaginable carnage on the battlefields and the economic and social hardships suffered on the home front, the sense of national purpose and solidarity was only reinforced in the years between 1914 and 1918. When the guns at last fell silent at the eleventh hour of the eleventh day in the eleventh month of 1918, the fever pitch of nationalist passion did not wane. Defeat required answers. The vulnerability

of the great German war machine with its history of honor demanded explanations. The response for many Germans was to be found in a resurrected nineteenth-century “scientific” racial nationalism. The Jews were to blame, and the pure “German soul” had to be safeguarded from alien influences and further humiliation. Similarly, in France in the first decades of the twentieth century nationalistic and anti-Semitic organizations such as Action Française, founded in the era of the Dreyfus Affair, proliferated. Antidemocratic, antirepublican, and antiliberal groups such as Jeunesses Patriotes (1924), the Ligue des Croix-de-Feu (1927), and Solidarité Française (1933), fearing a decline in the image and destiny of France, invoked the canards of nineteenth-century extreme nationalist and racist instigators such as Edouard Drumont (1842–1917) and Maurice Barrès (1862–1923). With the assassination of Ernst vom Rath, a secretary in the German embassy in Paris by a Polish Jew in 1938, the anti-Semitic proponents of French nationalism had yet another basis for anti-Jewish rhetoric and pro-French advocacy.

Nationalism as an ideological phenomenon posited an important distinction between “civilization” and “culture.” Early twentieth-century authors such as Thomas Mann, Gerhard Hauptmann, Robert Musil, and Gabrielle D’Annunzio incorporated this dichotomy in their belletristic and political writings. These nationalist writers viewed “civilization” as the aggregate of ideas and traditions that had been inherited from the ancient world and from the ethos and doctrines of Christianity. Thus, they believed that civilization represented an external influence that was superimposed over the native cultures of Europe. “Culture” (*Kultur*), to the contrary, emerged from the everyday life of the people and was unique and specific to the nation. The notion of *Kultur* includes native speech, folklore, religious deviations, and idiosyncratic practices and exclusive ceremonial and ritual practices. Nationalists extolled the virtues of culture while deprecating the previously favored notion of civilization. The embedded passions of nationalism as defined by the concept of *Kultur* inevitably led to conflict in all parts of Europe as the popular nationalism of ethnic minorities clashed with state-led nationalism, as embodied

in *Kultur*. While religious beliefs enforced many forms of nationalism, by the twentieth century nationalism had become, in effect, a secular religion. The notion of a glorious past, or an imagined golden age along with a surrounding medium of cultural symbols, produced a quasi-religious aura to twentieth-century nationalism. Extreme nationalists endowed their patriotic zeal with a messianic fervor and believed themselves to be entrusted with a sacred mission.

It should be noted that not all nationalist ideologies specifically espoused racism. Fascism in Italy emphasized not racial but rather ideological notions of “purity.” Italy’s Benito Mussolini maintained that the nation represented the supreme good and that individual concerns and needs were secondary to those of the state. Nationalism, as conceived by the Italian dictator, demanded “Everything for the State, nothing outside the State, nothing against the State.” Similar early-twentieth-century conceptions of the state and its absolute integrity can be found in Francoist Spain as well.

Additionally, not all nationalist sentiment manifested itself in militancy and belligerence. In Poland under the leadership of Józef Piłsudski (1867–1935), the legacy of numerous failures to secure autonomy and independence was a concept of organic work, a program and agenda aimed at strengthening Poland’s economic and cultural resources and infrastructure as an alternative to military confrontation. Other nations whose military capabilities were insufficient likewise appropriated the Polish model of cultural and economic nationalism. Yet even within the context of Polish national revival, there were elements that rejected Piłsudski’s cultural nationalism in favor of an integral nationalism that proclaimed “Poland for the Polish” and displayed a profoundly anti-Semitic, anti-German, and anti-Ukrainian bias.

In Germany, from the end of the nineteenth century through World War II, biological race theory was grafted onto European nationalism. Every aspect of Nazi policy had as its focus and basis racial or ethnic nationalism. While such racist elements can be found in most nationalist movements, they are typically directed at other nations. In the case of Nazism these sentiments were directed toward minority communities within the

nation, most conspicuously at Jews, Gypsies (Roma/Sinti), and Poles. German nationalism, even prior to the Third Reich, was rooted in a notion of *Blutgefuehl*. Blutgefuehl embodied the “collective unconscious,” to use a Jungian term, and was manifest in the instinctual and transcendent bond with a primal past as evinced in a unique cultural tradition. This blood bond tied the individual with the nation and its imagined glorious past and projected future destiny. The consequences of this rabid racial doctrine was first to exclude those not of the same bloodline and, ultimately, to annihilate them.

After 1918 the victorious Allies, led by President Woodrow Wilson, championed the right of each nation to determine its own present and future. While predicated on the traditional definition of nationalism, this new nationalism was based, at least theoretically, on democratic principles. But practical impediments to establishing autonomous states based on common language, history, and culture—that is, single nationalities—precluded a successful realization of the Wilsonian dream in interwar Europe. It was unrealistic to relocate all displaced Germans through-

out the war-ravaged continent in Germany or all Poles in Poland. Ethnic minorities were a political reality in Europe and, as it turned out, a time bomb that would ignite a second world war just two decades later. While the stress on self-determination after World War I led to the creation of several nation-states, the determination of the former Central Powers to have their ethnic minorities returned led to calls from Sudetenland Germans in Czechoslovakia, for example, to demand repatriation with Germany.

—Stephen Garrin

Bibliography

- Hobsbawm, E. J. *Nations and Nationalism since 1780: Programme, Myth, Reality*. Cambridge: Cambridge University Press, 1992.
- Kamenka, Eugene, ed. *Nationalism: The Nature and Evolution of an Idea*. Canberra: Australian National University Press, 1973.
- Kohn, Hans. *Nationalism: Its Meaning and History*. Malabar, FL: Krieger, 1982.
- McCrone, David. *The Sociology of Nationalism*. New York: Routledge, 1998.
- Nairn, Tom. *Faces of Nationalism*. New York: Verso, 1997.

■ Introduction: Socialism

Socialism, as a political ideology and as a social movement, can modestly be defined as one of the many social programs that originated during and after the French Revolution, emphasizing, first of all, equality among citizens of newly emerging nations. Attracting people of divergent temperaments, ranging from benevolent utopian charity donors to hard-line terrorist revolutionaries, socialism crystallized into three main branches by the end of the nineteenth century: anarchism, communism, and social democracy. Anarchism never managed to play a major role of the progressive Left (except during the Spanish Civil War), so it is easier to make a distinction just between moderate and radical socialists. In the aftermath of World War I, the socialist movement split into a moderate faction and a revolutionary faction, known as social

democrats and communists. This same division, although originating in Europe, affected socialist and progressive movements all over the world. In Russia the division was known as the Mensheviks (Social Democrats) and the Bolsheviks (Communists). In China the same division appeared between the Guomindang's left wing and the Communist Party of Mao Zedong.

At the beginning of the twentieth century, socialism's most important organization was the Second International, a world coalition of socialist and labor parties founded in 1889. The Second International, although a fairly successful organization worldwide, broke down over the issue of military funding before and during World War I. A majority of national parties broke with the traditional pacifism of the labor movements and voted in favor of supplemental war funds.

The socialists in Europe embraced, with more or less enthusiasm, the war efforts of their respective nations, leaving the more radical and anti-war elements in the minority. At the Zimmerwald Conference in 1915, the antiwar elements condemned the Second International as “traitors,” thus paving the way for a permanent division.

Due to the success of the October Revolution in Russia, the most influential socialist organization between 1919 and 1943 was the communist-dominated Third International (or the Comintern). The Social Democratic-dominated Second International lingered on and was revived only after World War II. Lenin came to power promising the end of the war, although while in power he often emphasized the misguided support for the “imperialist war” by fellow socialists in the West. In his “Imperialism, the Highest Stage of Capitalism,” Lenin laid down his position that workers have no lesser or greater enemies during a war between “imperialist powers,” and this stance dominated the newly founded Communist Third International. Communists participated in elections but expected and worked toward a revolution, often considering political parties on the Left even more dangerous than their opponents on the political Right.

After moderate socialists lost power in Germany’s Weimar Republic, the socialist movement was dominated by Josef Stalin from the late 1920s, when he consolidated his power in the USSR until his death in 1953. The successful creation of the first socialist state in the world added enormous prestige to its leaders, Lenin (during 1917–1924) and Stalin (during 1924–1953). In 1940 Stalin physically eliminated his main rival, Leon Trotsky, the founder of the Fourth International and an advocate of world revolution. Stalin argued that the USSR first needed to develop socialism internally and presented himself as a pragmatist who abandoned the dream of a world revolution, thereby gaining many political allies and sympathizers in the West and all over the world. His prestige was further enhanced by the Popular Front strategy in the 1930s, which called for the deferral of the “class struggle” and set as its first priority the fight against fascism and Nazism. This policy opened the doors of cooperation between the communists and other progressive groups. It also gave Stalin enormous

influence on the political Left and Center-Left. In reality, Stalin was a very pragmatic and shrewd politician who had no moral doubts even about cooperating with the Nazis when necessary, and his reputation as the giant of the antifascist struggle only increased after the heroic Soviet victories on the eastern front during World War II. It was only after Stalin’s death in 1953 that the socialist movement managed to shake off his legacy. The Socialist International managed to become the largest worldwide organization of socialist and labor parties, following the tradition of the Second International and not of the Soviet-controlled Comintern. Its first president was Morgan Philips, general secretary of the British Labour Party.

—*Alexander Mirkovic*

Socialism in China

The Chinese Communist Party (CCP) was formed in 1921, shaped by the 1919 May Fourth Movement and its two strands of nationalism and cultural renewal. Committed to a nationalist cause with communism as the chosen ideology to rid China of foreign domination and rule of the bourgeoisie—which in its view was cooperating with the imperialist exploiters—the CCP was to become the Guomindang party’s main foe and ally at different stages in the history of the Republic of China (1912–1949).

Sun Yatsen led the Guomindang with a Leftist ideology embodied in Sun’s Three Principles of nationalism, democracy, and socialism. After the formation of the CCP, the Communist International (Comintern) contacted the Guomindang and offered organizational, economic, and arms support. The Comintern’s goal was to combine forces, undermine the Guomindang, and then use it for the communist cause. Marxist theory insisted that revolutionaries instigate a bourgeois-democratic revolution as a first step and then a socialist revolution as a second step. The Soviet advisers urged the CCP to form a united front with the Guomindang, and in 1923 CCP members joined the Guomindang individually as the Bloc Within.

Sun died in 1925 and was succeeded by the anticommunist Jiang Jieshi (Chiang Chieh-shih

or Chiang Kai-shek). Two years later the Guomindang's left wing (under Wang Jingwei) set up a rival government in Wuhan. The struggle was eventually won by Chiang, thereby effectively eliminating the Guomindang's left wing. In the same year the united front with the CCP came to an end in a white terror against communists in China's urban areas. As a consequence, Chiang moved his government from Guangzhou to Nanjing in 1928.

The white terror forced the Communist Party leadership to move to the province of Jiangxi in 1933, where party member Mao Zedong (Mao Tse-tung) had set up a rural soviet two years earlier. Realizing that the time for a proletarian revolution was not yet ripe in China, the CCP adopted a rural strategy of mobilizing the peasantry and of taking the cities from the countryside with a people's army, the Red Army, the beginnings of which were formed in the Jiangxi soviet.

Chiang accordingly set out to destroy the Communist Party's rural bases. In 1934 he had almost completely encircled the CCP leadership in its Jiangxi soviet. However, the communists managed to escape and embark on the Long March to the province of Shaanxi, where the rural base area of Yan'an was set up in October 1935. It was during the Long March that Mao Zedong became the dominant political figure of the CCP.

In 1935 the Comintern decided to suspend the struggle against imperialism and instead fight fascism. This strategy, known as the Dimitrov line, was based on the theory that fascism appeared as capitalism in a state of crisis, embarking on an imperialist war to divide the world into imperialist spheres in order to overcome this crisis. In December 1936 Chiang was ready to attack the Yan'an base. However, he was captured (the Xi'an Incident) and only gained his freedom after agreeing to stop fighting the communists and to fight the Japanese instead. Japan had attacked China in the north in 1931 and set up the state of Manchukuo. In 1937 Japan launched full-scale war against China, and the Nanjing government relocated to Chongqing. The Xi'an Incident prompted the Second United Front against Japanese fascism in a strategy that proceeded from the Dimitrov line.

The two years that passed between the pronouncement of the Dimitrov line and the es-

➤ CHRONOLOGY OF SOCIALISM IN CHINA

- 1919—May Fourth Movement.
- 1921—Founding of the Chinese Communist Party (CCP).
- 1923–1927—First United Front.
- 1925—Sun Yatsen dies.
- 1927—Wuhan government under Wang Jingwei; white terror against communists.
- 1931—Japanese attack on Manchuria.
- 1931–1934—Jiangxi soviet.
- 1934–1935—Long March, Yan'an base area.
- 1935—Antifascist Dimitrov line.
- 1936–1945—Second United Front.
- 1937—Japan launches full-scale war against China.
- 1945–1949—Chinese Civil War.

—*Oliver Hensengerth*

tablishment of the Second United Front were filled by a conflict between the center of international communism in Moscow and the Chinese leadership. The conflict was between the anti-imperialists and the antifascists. Mao's conception of a united front consisted of an anti-imperial class alliance, encompassing all national elements, including the national bourgeoisie, directed against both the "imperialist lackey" Chiang and Japan. However, the Comintern's strategy of a national alliance included Chiang and the CCP united against Japanese fascism. The Comintern line was supported by the Returning Students, or the Twenty-Eight Bolsheviks, headed by Wang Ming, who had replaced Li Lisan as head of the CCP in 1930.

The Second United Front was terminated after Japan's surrender in 1945, and full civil war broke out within China. When the communists captured Beijing on October 1, 1949, Mao Zedong proclaimed the People's Republic of China. The Guomindang fled to Taiwan, where in December 1949 Jiang Jieshi declared Taipei to be the temporary capital of the Republic of China.

—*Oliver Hensengerth*

Bibliography

Dimitrov, Georgi. "The Fascist Offensive and the Tasks of the Communist International." Report before the Seventh World Congress of the Communist

International, August 1935. In *Georgi Dimitrov: Selected Speeches and Articles*, edited by Harry Pollitt. London: Lawrence and Wishart, 1951.

Dreyer, June T. *China's Political System: Modernization and Tradition*. 4th ed. New York and London: Allyn and Bacon, 2004.

Spence, Jonathan D. *The Search for Modern China*. London: Hutchinson, 1990.

Socialism in Indochina

Despite the creation of the Dang cong san Dong Duong (Indochinese Communist Party, ICP) in 1930, socialism in Indochina was a Vietnamese affair. In 1925 Ho Chi Minh founded the first communist organization in French Indochina, the Viet Nam Thanh nien Cach mang Dong chi Hoi, or Thanh Nien Party. Thanh Nien was in fact formed in Guangzhou, China, where Ho Chi Minh was sent by the Communist International (Comintern, or Third International) as part of the Mikhail Borodin mission to China, from

where Vietnamese communists infiltrated Vietnam and organized communist cells. From the nationalist perspective, communism was seen as a means to free the country from colonialism, whereas the democratic countries of Europe and the United States, who denied their colonies the freedom they claimed for themselves, were seen as a sham. In 1927 following Jiang Jieshi's crackdown on communists, Ho Chi Minh together with the Borodin mission left for Moscow.

In 1927 members of Thanh Nien set up a rival organization in Vietnam, the Communist Party of Indochina (Dong Duong cong san dang, not to be confused with the 1930 ICP). In reaction, Thanh Nien no longer concealed its communist ideology and changed its name to An Nam cong san Dang (Communist Party of Annam). At the same time, the moderate Tan Viet Party, which operated in Cochin China, changed its name to Dong Duong cong san lien doan (Indochinese Communist Union). Thus, three Leftist parties were active in Vietnam, fighting France and each other. In January 1930 Ho Chi Minh merged the three parties into the Dang cong san Viet Nam (Vietnamese Communist Party). In October 1930, urged by the Comintern, its name was changed to Dang cong san Dong Duong (ICP) to allow for the participation of Laos and Cambodia. As opposed to what the name suggests, the ICP was almost exclusively composed of Vietnamese.

In 1935–1936 the ICP formed a Lao section or the Committee for Laos, the predecessor of the Neo Lao Issara (Free Lao Front, sometimes given as Naeo Lao Issara). However, active recruitment of Lao communists and the building of a party structure did not take place until the mid-1940s. A Cambodian party was not formed until 1951 in the form of the Kampuchean People's Revolutionary Party (KPRP). Between 1945 and 1949 the Vietnamese communists cooperated with the primarily noncommunist anti-French resistance in Cambodia, among them the Khmer Issarak, a diverse group with a communist component. In Laos the Vietminh cooperated with the Lao Issara, a diverse nationalist group led by the Lao elite. In February 1951 the ICP dismantled into three national parties: the Vietnam Workers' Party (Dang lao dong Viet Nam) and the above-mentioned KPRP and Neo



Ho Chi Minh, founder of the Vietnamese Communist Party, addresses delegates of the French Socialist Party in Tours, France, in December 1920. (AFP/Getty Images)

Lao Issara. The latter then formed the Resistance Government of the Lao Homeland, in short Pathet Lao (Lao Homeland).

In the late 1920s and early 1930s, understanding that the proletariat was too small to be a useful political force, the communists in Vietnam turned to organizing the peasantry and tried to exploit the explosive situation in rural northern Annam (Ha Tinh and Nghe An provinces) during the world economic crisis. In 1930 the peasantry there rose against the colonial administration. Throughout the country strikes occurred, and smaller uprisings happened in central Annam and Cochin China. After colonial forces had quelled the uprisings, the ICP created rural soviets in Nghe An province, which were quickly wiped out by colonial forces. By the end of 1931 the colonial administration had restored order in Tongkin and Annam. The center of resistance shifted to Cochin China. In Annam, meanwhile, the ICP took on a friendly outlook and promoted mutual assistance associations among peasants during the late 1930s. In Tongkin the ICP operated under the name of the Indochinese Democratic Front. Beginning in 1941 many peasants became members of the ICP or joined the Vietminh.

In 1936 following the Comintern's Dimitroff line of 1935, the ICP suspended class struggle and anti-imperialism in favor of a national front against fascism. This resulted in relaxed French control under the Popular Front under Léon Blum (1936–1938). However, the downfall of the Popular Front, the outbreak of the war in Europe, and the installation of the Vichy regime led to increased persecutions against communists. Eventually the communist resistance in Cochin China was crushed. In November 1940 a peasant uprising in the Mekong Delta was quelled and the network of the ICP in Cochin China destroyed.

The ICP managed to maintain its clandestine network in Tongkin and Annam. From 1941 it was used by the Vietminh (Viet Nam Doc Lap Dong Minh Hoi), which followed the antifascist line. The Vietminh was founded in 1941 by Ho Chi Minh separate from the ICP to avoid French attention of the Vietnamese communist refugee community in China's Guangxi province. The idea was to achieve independence from Japanese and French fascism with the help of China and the United States, with which the Soviet

➤ CHRONOLOGY OF SOCIALISM IN INDOCHINA

- 1925—Thanh Nien party.
- 1930–1951—Indochinese Communist Party (ICP).
- 1936—Lao section of the ICP.
- 1945—Japanese surrender.
- 1946—France re-creates protectorates over Laos and Cambodia; assertion of authority in Vietnam results in a guerrilla war.
- 1951—The ICP dissolves into the Vietnam Workers' Party, Kampuchean People's Revolutionary Party, and Neo Lao Issara.
- 1954—Geneva Conference ends French rule in Indochina.

—*Oliver Hensengerth*

Union was allied. Japan in the meantime had attacked Indochina but acknowledged French sovereignty over territory.

Increasing French resistance to the arrangement with Japan in Indochina led the Japanese to dissolve the French administration in the coup de force of March 9, 1945. In Vietnam Emperor Bao Dai was restored to full authority, checked by the Japanese military. In August 1945 Japan surrendered to the Allied Powers, creating political opportunities. The advancing Vietminh took over Tongkin, Cochin China, and Annam. Bao Dai abdicated, and on September 2, 1945, Ho Chi Minh declared independence. The resistance war that followed the French attempt to reassert sovereignty over Vietnam was settled at the Geneva Conference in 1954, at which Vietnam was partitioned in a communist north and a noncommunist south.

In Cambodia, Japan's coup de force resulted in Tokyo urging King Sihanouk, who had ascended the throne in 1941, to declare independence within the Greater East Asia Co-Prosperty Sphere. After the Japanese surrender in August 1945, Sihanouk declared full independence. In October an Allied force occupied Phnom Penh and entered into negotiations with Sihanouk. On January 7, 1946, an agreement was reached to grant Cambodia autonomy within the French Union, effectively re-creating the French protectorate over Cambodia. Cambodia became independent in 1954.

In Laos after the Japanese surrender, the Lao Issara managed with the help of the Vietminh to install a government, which was ousted by advancing French forces. Laos was granted autonomy within the French Union and gained full independence in 1954.

—*Oliver Hensengerth*

Bibliography

- Hoang, Van Chi. *From Colonialism to Communism: A Case History of North Vietnam*. London: Pall Mall, 1964.
- Kiernan, Ben. *How Pol Pot Came to Power: Colonialism, Nationalism, and Communism in Cambodia, 1930–1975*. 2nd ed. New Haven, CT: Yale University Press, 2004.
- Lancaster, Donald. *The Emancipation of French Indochina*. London and New York: Oxford University Press, 1961.
- Porter, Gareth. “Vietnamese Communist Policy towards Kampuchea 1930–1970.” In *Revolution and Its Aftermath in Kampuchea: Eight Essays*, edited by David P. Chandler and Ben Kiernan. New Haven, CT: Yale University Southeast Asia Studies, 1983.
- Stuart-Fox, Martin. *Buddhist Kingdom, Marxist State: The Making of Modern Laos*. 2nd ed. Bangkok: White Lotus, 2002.

Socialism in Russia and the Soviet Union

The ideology of socialism, particularly two of its interpretations known as Leninism and Stalinism, served as the dominant political system in Russia and later the Soviet Union from late 1917 until the end of World War II in 1945. While a group of Russian revolutionaries used Russia’s disastrous experience in World War I and the hopes of a disaffected population to overturn the tsar, gain power, and establish their vision of socialism in late 1917, the history of socialism in Russia can be traced back decades earlier. During the second half of the nineteenth century a number of Russian thinkers and writers, such as Georgi Plekhanov (1856–1918), looked toward socialism as an alternative vision to the autocratic system of the Russian Empire, which was the status quo. Socialism, with its promises of social and economic equality, appealed most to Russia’s nonnoble educated classes. From within this

group came many socialists, not all of whom wished to bring revolution to Russia. One radical socialist, Vladimir I. Ulyanov (1870–1924), better known by the surname Lenin, came to dominate a faction of the Russian Social Democratic Labor Party in 1903. Lenin was the leader of a small revolutionary group known as the Bolsheviks, and he and his supporters promoted a doctrine of class struggle and proletarian revolution based primarily upon the earlier writings of Karl Marx (1818–1883) and Friedrich Engels (1820–1895) as well as Lenin’s own philosophy about the future of socialism in Russia.

Interestingly, the Bolsheviks were not directly involved in Russia’s first two revolutionary episodes of the twentieth century. The first of these events was a failed popular uprising against the regime of Tsar Nicholas II known as the Revolution of 1905. While Nicholas II failed to resolve the social and economic grievances that were the root causes of the revolt, Lenin did not believe that the time was yet right to begin a radical socialist revolution. Part of his rationale rested in the fact that he and some of his eventual supporters, particularly Leon Trotsky (1879–1940), believed that the path toward socialism in Russia should be somewhat different than that advocated by Marx. Instead of waiting for the inevitable arrival of socialism during the dying days of advanced capitalism as Marx had predicted, Lenin maintained that Russia could pass from its current state of feudalism into a brief, albeit painful, period of capitalism. Then, the Bolsheviks believed, they could use revolutionary activity to push Russia rapidly into the next stage—socialism—within a relatively short time. The events of World War I convinced Lenin that the time was ripe for action, although it would take the influence of non-Bolshevik forces in early 1917 to allow him to move.

The February Revolution of 1917, a popular movement in which the Bolsheviks played only a minor role, forced the abdication of Nicholas II. Later that year in the October Revolution the Bolshevik Party took control of Russia’s industrial and economic heartland. Once in power, Lenin’s Bolsheviks sought to implement their interpretation of Marxism, which came to be known as Marxism-Leninism, through the creation of a centralized one-party state that strongly pro-

moted atheism and internationalism, that is, the support of revolution worldwide.

While the Bolsheviks controlled Russia's central core, they still faced a potent opposition in the form of the whites, a loosely organized group of counterrevolutionaries who shared a common desire to restore the tsarist system and to remove the Bolsheviks from power. The resulting conflict, the Russian Civil War of 1918–1921, witnessed the Bolshevik implementation of a strictly centralized economic policy known as War Communism and the first use of widespread repression at the hands of the Bolsheviks, who viewed as a threat various religious groups, most notably Russian Orthodox believers, and a host of potentially divisive ethnic groups (e.g., Ukrainians and various peoples of the Caucasus and Central Asia) that had been previously incorporated into the tsarist state.

With the Bolshevik victory in the Civil War and the creation of the Soviet Union in 1922, Lenin turned away from War Communism and toward the New Economic Policy (NEP), which introduced elements of capitalism into the previously centralized economy of the Soviet Union. Although NEP never represented a wholesale adoption of free market economics, the early years of NEP did witness a loosening of economic strictures as well as a relaxation of social mores. With Lenin's death in January 1924, however, NEP began to lose momentum, and by the late 1920s the policy had become a target of attacks by more conservative elements within the Soviet government.

The leader of this conservative movement was Joseph V. Stalin (1879–1953), who in 1928 shifted from Lenin's and especially Trotsky's vision of worldwide revolution to a policy known as Socialism in One Country. Instead of devoting its resources to the overthrow of capitalist governments abroad, Stalin decreed that the Soviet Union would focus on rapid industrialization and the forced collectivization of agriculture at home through the implementation of a new economic model known as the Five-Year Plans.

By the early 1930s Stalin's reinterpretation of Marxism-Leninism, which many have termed Stalinism, emphasized the inclusion of previously disenfranchised social groups into the command-economic system that now dominated the Soviet



Russian revolutionary Leon Trotsky in 1920, the year he became Commissar of War and founded the Red Army. (The Illustrated London News)

Union. Along with industrialization and collectivization came a new and more widespread assault on the state's enemies, both perceived and real. Known collectively as the Great Purges or the Stalinist Terror, Soviet socialism took on a decidedly self-defensive tone as thousands of so-called class enemies were executed or sent into forced labor in the corrective labor camps. Nazi Germany's attack on the Soviet Union in 1941 forced Stalin to reenvision socialism. With the nation now at war, Stalin needed to curry favor not only with the functionaries of the Communist (Bolshevik) Party but also with other populations that had suffered during the Great Purges. Under Stalin's direction, the state reached out to members of the Russian Orthodox Church and to the Soviet Union's majority Slavic peoples. In a departure from Lenin's policies of atheism and internationalism, Stalin's regime promoted Russian Orthodox identification and Eastern Slavic

► VLADIMIR ILLYICH LENIN

Vladimir Lenin, the head of the revolutionary Bolsheviks and a leading theoretician of Russian communism, was one of the most influential leaders of the early twentieth century. Born Vladimir Ilyich Ulyanov on April 22, 1870, in Simbirsk, Russia, Lenin's views became extreme early on with the execution of his brother, Aleksandr, for subversive activity. In 1893 Lenin moved to St. Petersburg, where he became familiarized with the works of Karl Marx. Lenin wrote propaganda for the early socialist movements and was eventually arrested and served four years in jail before being exiled to Siberia. After receiving his freedom he moved around Europe, continuing to write propaganda advocating revolution. He returned to Russia in April 1917 after the February Revolution. His faction, the Bolsheviks, emphasized a highly motivated and disciplined revolutionary cadre and

believed in a rapid adaptation to capitalism before socialism was established. Lenin, with the support of the workers and the Petrograd fleet, launched a successful coup d'état against the provisional government. Lenin ceded a great deal of land to the Germans in order to win peace in the belief that global revolutions would soon make nations irrelevant. He then waged a bloody civil war against counterrevolutionaries from 1918 to 1921. After the civil war, Lenin allowed some minor capitalist concessions in nonindustrial enterprises in an effort to rebuild the ruined economy. He became ill in 1922 and died on January 21, 1924, acknowledging that he had left a huge and inefficient bureaucracy as well as divisive subordinates who were already fighting for power. His body is embalmed in a mausoleum in Red Square, where it is still visited by thousands.

(i.e., Russian) ethnicity as part of the state's drive to unify the country in the face of the Nazi onslaught. After the Soviet Union's eventual victory in World War II, however, Soviet-style socialism returned to its prewar conditions. The state, under Stalin's direction, again attacked organized religion, capitalism, and expressions of nationality that it deemed destructive to its ultimate socialist goal, the attainment of communism. According to Marxism-Leninism, this utopian final stage of historical development would witness the elimination of the need for private property, the beginning of communal ownership of all goods and services, and the achievement of complete equality among all people.

—*Christopher J. Ward*

Bibliography

- Dziewanowski, M. K. *Russia in the Twentieth Century*. 6th ed. Englewood Cliffs, NJ: Prentice Hall, 2002.
- Freeze, Gregory L., ed. *Russia: A History*. 2nd ed. Oxford, UK: Oxford University Press, 2002.
- Service, Robert. *A History of Twentieth-Century Russia*. Cambridge, MA: Harvard University Press, 1997.
- Thompson, John M. *Russia & The Soviet Union: An Historical Introduction from the Kievan State to the Present*. 5th ed. Boulder, CO: Westview, 2004.

Socialism in Western Europe

Socialism is difficult to define because by 1900 it had branched into a number of new movements with different agendas. Widely defined, however, socialism teaches that the working class should own—or at least have partial ownership of—the means of production (i.e., the factories or places where workers work). While this is a predominantly working-class ideology, middle-class individuals have traditionally helped to develop the philosophy.

Socialism became more popular near the end of the nineteenth century as agitation for working-class men's suffrage became widespread. In addition, as workers tried to improve their working conditions, they often turned to socialist groups and formed trade unions. In time, strikes, boycotts, and other mass movements became common elements of working-class movements. At the turn of the twentieth century, European socialist movements generally fell under one of two categories: democratic socialism and Marxist socialism.

Democratic socialism became especially popular in Europe in the early twentieth century. This form of socialism combined the ideas of democratic government and socialist notions.

► GEORGE ORWELL ON SOCIALISM AND THE BRITISH WORKING CLASS

“For it must be remembered that a working man, so long as he remains a genuine working man, is seldom or never a Socialist in the complete, logically consistent sense. Very likely he votes Labour or even Communist if he gets the chance, but his conception of Socialism is quite different from that of the book-trained Socialist higher up. To the ordinary working man, the sort you would meet in any pub on a Saturday night, Socialism does not mean much more than better wages and shorter hours and nobody bossing you about. To the more revolutionary type, the type who is a hunger-marcher and is blacklisted by employers, the word is a rallying cry against the forces of oppression, a vague threat of future violence. But, so far as my experience goes, no genuine working man grasps the deeper implications of Socialism. Often, in my opinion, he is a truer Socialist than the orthodox Marxist, because he does remember, what the other so often forgets, that Socialism means justice and common decency. But what he does not grasp is that Socialism cannot



*British novelist George Orwell, a socialist who wrote about working conditions in books such as *Down and Out in London and Paris* (1933) and *The Road to Wigan Pier* (1937). After fighting with the Trotskyites in the Spanish Civil War, Orwell began to critique totalitarian regimes. (Bettmann/Corbis)*

be narrowed down to mere economic justice and that a reform of that magnitude is bound to work immense changes in our civilization and way of life.”

—Alexander M. Zukas

Source

George Orwell, *The Road to Wigan Pier* (1937; New York: Penguin Books, 1979), 154–155.

By making political participation accessible to the people and providing the people with candidates who actually had a chance of getting elected, democratic socialism turned itself into a mass movement rather than just a theory or a radical fringe group. The middle class played important roles in democratic socialism, especially as leaders of the movements.

The other predominant form of socialism in Europe during this era was Marxist socialism. Marxists and democratic socialists disagreed on a number of things, most especially about the idea of revolution. Marxists expected full-scale revolution and a redistribution of property, while democratic socialists desired to achieve their ends not through violent revolution but rather through elections, as Britain's Labour Party did in 1918. At the same time, while democratic socialists had a strong middle-class following, Marxists did not believe that the bourgeoisie could possibly become integrated into their program. This latter fact was especially true if the

Marxist leaders were able to achieve their goal of a classless society. Central and East European states generally favored Marxist socialist groups, while West Europeans tended to turn to democratic socialist movements.

For socialists to have an impact upon politics in western Europe, it became necessary for them to set aside their differences and unite to create political parties. In France the need for unity caused evolutionary socialists and French Marxists to unify under the tent of the Section Française de l'Internationale Ouvrière (French Section of the Workers' International, SFIO). Britain's various socialist groups, including Fabians and the Marxist Social Democratic Federation, united under the umbrella organization known as the Labour Party in 1906. Even with these efforts, socialists for the most part did not gain power until after World War I, when economic hardship struck many West European states.

In Great Britain, economic crisis in the interwar period led to election of Britain's first Labour

government in 1924, led by Ramsay MacDonald. However, the Labour government only passed limited welfare legislation and soon lost power again. To add to other economic crises in Britain, the nation was greatly damaged by America's stock market crash in 1929 and the Great Depression that followed. Britain had borrowed a great deal of money from the United States during World War I, and the United States now expected the European nation to pay it back. In the end Britain's economy continued to fail, and only the creation of the national government in 1931 brought about any type of recovery. Unfor-

tunately, World War II would once again destroy the British economy, leading to the election of another Labour government at the war's end.

—Christi McCallum

Bibliography

- Geary, Dick. *Labour and Socialist Movements in Europe before 1914*. Oxford, UK: Berg, 1989.
- Lindemann, Albert. *A History of European Socialism*. New Haven, CT: Yale University Press, 1984.
- Wrigley, Chris. *Challenges of Labour: Central and Western Europe, 1917–1920*. New York: Routledge, 1993.

■ Introduction: Traditionalism versus Modernism

By the twentieth century, the West looked less to tradition and the past for guidance, and increasingly toward innovation and the future. Premised on the sanctity of the individual and the empowerment of human civilization through science, reason, and creativity, modernism coincided with the rise of civil society—a value-neutral arena in which to conduct the practical affairs of business, education, government, and public life generally. The civil sphere depended on pluralistic openness and deliberation. Each group must have a voice to represent its interests, and each individual must be free to make choices and accept personal responsibility.

In Europe, tradition had governed conceptions of social order and institutions since the Middle Ages, based on loyalty to established monarchies, class and status privileges, and social roles based on gender, race, religion, and other customs. In traditionalism, life is a set of obligations, not a series of choices held according to established precepts of political, economic, and social orders.

In World War I (1914–1918), “Old World” traditionalism clashed with modernism. Monarchies in Germany, Austria, and the Ottoman empire fought against the democracies of France, Great Britain, and, later, the United States. Although siding with the Allies, Russia's monarchy collapsed

in 1917 and the allied victory ensured the demise of the monarchies. Although the dynastic empires disappeared, traditionalism continued in other forms. Even in the United States, which lacked a feudal and dynastic period, established and wealthy families still held considerable power and retained considerable privileges in social and political circles. Still, their power and influence was not primarily based in tradition; they had to compete with other players and prove their relevance in a democratic system.

In the United States, traditionalism was more typically associated with religious values. In 1909, Cyrus I. Scofield published the *Scofield Reference Bible*, which contains copious commentary from the author. His particular interpretation of Scripture formed the literary basis of the movement in Christianity now called fundamentalism. Revised in 1917, the text inspired many traditionalist leaders, such as Billy Sunday (1862–1935) who preached that modern highly individualistic society lacked moral structure and that rampant immorality and corruption would destroy the nation. His boisterous style and relentless eschatological doom and damnation became the model for evangelical preachers for decades afterward.

Thus, the first half of the twentieth century saw the emergence of two basic worldviews. On one side, modernism looked forward, and prom-

ised constant change and progress. It offered individual choices for everything from career to consumer goods to morality. Mass education, free thought, and equal opportunity would empower individuals. However, existential uncertainty and psychological insecurity were suggested by commentators to be the price for a free and open society.

In contrast, traditionalism promised a clear moral framework and clearly defined social roles, most often along gender lines, but sometimes along the social construct of race. Religion rather than science and reason would guide society, especially in education, lifestyle, and government. This offered a greater sense of certainty but inhibited freedom and innovation.

In the United States, religion often played a vital role in modernism as well as traditionalism. For example, in the 1920s, two very different movements, the Ku Klux Klan and the Progressive movement, both gained their greatest size and influence. The Klan attempted to restore the racial and religious order of the antebellum South. The U.S. Progressive movement promoted a social agenda based on the inherent rights and dignity of the individual, which, therefore, necessitated struggles against poverty, as well as struggles in support of labor and civil rights, including the right of women to vote, achieved in 1920. Secularists, such as John Dewey (1859–1952), called for a broadly active populace committed to social development and participatory democracy, and progressive ministers, such as Walter Rauschenbusch (1861–1918), joined Christianity with socialism in order to promote social improvement for all.

In 1925, the State of Tennessee put high school biology teacher John Scopes on trial for teaching evolution, which was illegal in Tennessee. Known as the Scopes Monkey Trial, Scopes' guilt was never in doubt. Rather, both sides made the trial a national forum for the battle between science and religion. Not a biblical literalist, William Jennings Bryan (1860–1925), representing the religious side, instead feared that evolution would usher in a new era of scientific totalitarianism based on biological essentialism. On the side of science, Clarence Darrow (1857–1938)—working for the American Civil Liberties Union (ACLU)—argued that schools must teach the

truth, and science only becomes sinister when people apply it that way. He noted also that religion can be equally positive or destructive. Far from resolved, these issues remain salient in the United States today.

In Europe, fascism emerged in Italy after World War I. It attempted to revive the mythical traditions of the Roman Empire, especially its patrimonial relations of political authority under the new-day emperor Benito Mussolini (1883–1945), known as “*Il Duce*” (the Leader). As fascism spread to Germany in the 1930s, Adolf Hitler (1889–1945) similarly became the Leader, *Der Führer*. His leadership, based significantly on a mystical vision of Germany's traditional past, inspired a new barbarism that murdered about 12 million people in concentration camps, forced marches, mass shootings, and systematic starvation (including millions of Jews), and ignited World War II (1939–1945), a conflict that caused the deaths of about 20 million soldiers and 40 million civilians. Modernism and traditionalism once again clashed in the form of free societies on one side and obligatory totalitarianism on the other, which also included another society steeped in traditionalism—Imperial Japan. It should be noted that, although the Soviet Union ultimately joined the allies, their totalitarian system originally allied with Nazi Germany against Finland, Poland, and other independent states. Based on modern principles of rational management, the Soviet Union relied far less on tradition and mysticism and far more on direct terror and oppression, especially under Josef Stalin, who ruled from 1922 into 1953.

Allied victory in World War II seemingly vindicated the free and democratic societies of the West, and the notion that modernism, despite its problems, offered a far more humane and beneficial vision than those that envisioned the restoration of traditional hierarchies, privilege, or totalitarian socialism. Later in the twentieth century, progressive modernism would open the door to civil rights, antiwar movements, countercultures, women's emancipation, and environmental movements. Progressive Modernism also facilitated tremendous creativity and innovation in art, music, literature, science, industry, and commerce.

—George Lundskow

Bibliography

Bruns, Roger A. *Preacher: Billy Sunday and Big Time American Evangelism*. New York: W. W. Norton, 1992.

Gilbert, Martin. *A Complete History of World War II*. New York: Henry Holt Publishing, 2004.

Traditionalism and Modernism in Africa

In the first half of the twentieth century, when more than 90 percent of the continent of Africa was under European colonial rule, Africans and their colonizers frequently debated their values and religious beliefs in terms of tradition and modernity. The question was not only whether or not Africans should modernize their beliefs and practices but also which beliefs and practices—African indigenous, colonial, Islamic, or Christian—were traditional and which were modern. In this period of drastic transformation,



Members of the Presbyterian Church pose in front of their banner for the “Stranger Mission” in Liberia, about 1900. (Corbis)

Africans searched for an identity that offered the most meaning to their life under colonialism.

Nineteenth-century events formed the backbone of this twentieth-century debate. While there were many indigenous religions in Africa, most shared a belief in a god or gods, spirits, the continued relevance of ancestors, a fear of witchcraft, and the power of healers. A majority of Africans followed these indigenous religions; however, Islam was the most widespread religion in precolonial Africa, and it was most prevalent in North and West Africa and along the Swahili coast of East Africa.

The nineteenth century saw both a series of Islamic reform movements and the spread of Christianity as a number of European missionaries came to Africa with a civilizing mission. The most well known of these was David Livingstone, a Scottish missionary-explorer in Africa from the 1840s to the 1870s. The three Cs—Christianity, commerce, and civilization—that Livingstone advocated for Africa summarized the missionaries’ efforts to spread the word of God, replace the slave trade with legitimate commerce, and rid Africa of its savage customs.

By 1900 most of the continent was under European colonial rule, and with the establishment of colonial rule came the gradual expansion of Christianity. For example, in Kenya where a minuscule number of converts were reported in 1900, Christians represented 8 percent of the population by 1938. Those attracted to the mission stations were mainly disadvantaged members of society: former slaves or slave descendants, women, and young men. At the missions, these groups found access to status and wealth denied to them at home. Missionaries encouraged converts to give up certain African customs and conform to life on the mission station, which included adherence to a new daily schedule, attendance at mission school and church, dressing in Western clothing (which covered private areas of the body), and commitment to a monogamous marriage. In Kenya in 1929 missionaries encouraged the colonial government to ban female circumcision, a necessary ritual for a Kikuyu girl’s entry into womanhood. As a result, a large number of Kikuyu Christians broke away from the missions to form their own independent churches and schools.

By the 1920s mission and colonial schools resulted in the emergence of a class of educated elites, many of whom worked as clerks in the colonial governments. As more young men and women left their villages to live at the missions and in urban areas in search of employment, chiefs and elders back home complained that they were losing control of their community's youths. Both officials and chiefs became concerned about detribalization, the removal of Africans from their traditional communities and lifestyles. British administrations established a policy of indirect rule in the early 1920s to address this problem. Britain established Local Native Councils, Native Tribunals, and a system of appointed chiefs to rule Africans based on customary law. This resulted in the codification of customs that, in the precolonial period, were less rigidly defined. Historians such as Terence Ranger argue that this resulted in the "invention of tradition" as part of a divide-and-rule colonial tactic.

French administrations, however, encouraged assimilation, urging Africans to give up their language, culture, and beliefs to become Frenchmen. The promise was French citizenship, although only the residents of the early urban settlements of Dakar, St. Louis, Gorée and Rufisque (in modern-day Senegal), and a few colonial-educated French-speaking Africans actually saw this promise fulfilled. All other Africans in French territories remained subjects, not citizens.

Meanwhile, Islam continued to flourish. The greatest increase in the number of Muslims in sub-Saharan Africa occurred during the colonial period, in part as resistance to colonial domination. Islam was strongest in urban centers, which often resulted in the perpetuation of the association of Islam with modernity in the face of rural traditions. As Islamic modernist movements spread south and west out of Egypt in the early decades of the twentieth century, more Muslims obtained a secular education in spite of the association, whether perceived or actual, of colonial schools with Christianity. Many Muslims established their own schools or implemented modernist curricula in existing schools such as the Al-Azhar University in Egypt. In North Africa, Islamic modernists embodied anti-colonial sentiment, sparking protests in the 1950s,

➤ AHMADU BAMBA

The Muridiyya movement of Senegal represents the new forms that Islam took hold of in the face of colonial expansion. Ahmadu Bamba (ca. 1850–1927), a marabout from the Kingdom of Boal in Senegal, established the Muridiyya movement in the 1880s as part of the Qadiriyya tradition, the oldest Sufi brotherhood. Bamba, an Islamic teacher and scholar, developed a following at a time when the French were in the final stages of defeating jihadist attacks challenging their expansion in West Africa. Bamba gained popularity in regions on the margins of French control, raising fears of a new jihad. The French arrested and exiled him, first to Gabon (1895–1902) and then to Mauritania (1903–1907). In an effort to avoid an exodus of valuable Muridiyya farmers to Mauritania, the French allowed Bamba to return to Senegal, where he remained under strict surveillance until 1912. Bamba's letters to his followers praising French efforts in Senegal convinced the colonial rulers that he would not dissent. Collaboration between Bamba and the French resulted in the expansion of both peanut farming and the Muridiyya movement eastward along the railway lines. By the time Senegal gained independence in 1960, Mourids represented 20 percent of the population and controlled about 25 percent of the peanut production.

—Corrie Decker

whereas East African Islamic modernists, such as the sultan of Zanzibar, collaborated with colonial officials.

Religious pluralism, the coexistence of different religious beliefs and practices, and syncretism (the combination of different beliefs and practices in one religion) characterized most African cultures of the colonial period. The Mumbo cult of the Luhya near Lake Victoria, which experienced a strong revival during the 1920s and 1930s, was an indigenous religion that incorporated a number of biblical symbols and stories. The *aladura* movement beginning in the 1920s among the Yoruba in Nigeria combined Christian practices with local beliefs about witchcraft. Spirit cults such as the *bori* of Nigeria, the *zar* of Sudan, and the *pepo* among the Swahili in East Africa, which spread during

the colonial period, were based on a mixture of African and Islamic beliefs and practices.

Colonial debates over the values of African traditions and European modernity, whether in terms of culture or belief, characterized the first half of the twentieth century and remained the terms on which the values of colonialism itself was measured. The coexistence and/or overlap of indigenous and colonial cultures, African cosmologies, Islam, and Christianity, all of which have their own histories of tradition, was itself the marker of modernity.

—Corrie Decker

Bibliography

- Isichei, Elizabeth. *A History of Christianity in Africa: From Antiquity to the Present*. Lawrenceville, NJ: Africa World Press, 1995.
- Levtzion, Nehemia, and Randall L. Pouwels, eds. *The History of Islam in Africa*. Athens: Ohio University Press, 2000.
- Ranger, Terrence. "The Invention of Tradition in Colonial Africa." In *The Invention of Tradition*, edited by Terence Ranger and Eric Hobsbawm. Cambridge: Cambridge University Press, 1983.
- Robinson, David. "Beyond Resistance and Collaboration: Amadu Bamba and the Murids of Senegal." *Journal of Religion in Africa* 21(2) (1991): 149–171.

Traditionalism versus Modernism in East Asia

At the turn of the twentieth century, East Asia was undergoing changes that would have major lasting effects on both the public and private lives of nearly everyone in the region. China was on the brink of the 1911 Republican Revolution and the fall of the Qing dynasty, Korea's 518-year Joseon dynasty was drawing to a close, and Japan had just opened its ports to foreigners after more than two centuries of near-complete isolationism. The underlying current of these changes taking place in East Asia was that of modernization and a rising interest in becoming more integrated with the outside world. Throughout the long dynastic periods that preceded the 1900s, many rich traditions flourished, and these traditions tended to clash severely with the efforts to-

ward modernization that occurred throughout East Asia in the early twentieth century.

Modernization is a concept that is frequently conflated with Westernization, and the history of East Asia helps in part to explain why this is so. While China, Korea, and Japan had remained relatively closed and isolated countries prior to 1900, a growing interest both by and about foreign (especially Western) nations led to increased contact between the West and East Asia by the mid-nineteenth century. This meant that certain modes of production, technologies, and sociocultural values from the West were suddenly juxtaposed with Chinese, Korean, and Japanese traditions that in many cases had gone more or less untouched and unchallenged for centuries. However, while increased contact with the West may have helped to prompt these East Asian nations to make major changes, it is important to keep in mind that the modernization occurring in East Asia in the early twentieth century was not simply the East trying to emulate or catch up with the West.

There were many debates and attempts to make sense of the dramatic changes that were taking place at that time. For example, the slogan "Wakon Yosai" (Japanese spirit, Western learning) became popular in Japan. In China, a similar slogan was adopted, "ti-yong," that was the abbreviation of a slogan meaning "Chinese learning at the essence, Western learning for practical development." These slogans were reassuring to many who were concerned that their philosophical and moral values were at risk of fading away as foreign people and ideas began permeating their society. They also show that in spite of the fact that modernization and Westernization were indeed taking place concurrently throughout East Asia, there was a clear distinction made between the two in the minds of many Chinese and Japanese.

Moreover, the changes that came with the modernization of East Asia at the turn of the twentieth century were far from uniform throughout the region. Within nations, there were huge discrepancies between rural and urban areas, with the urban centers tending to change at a much faster rate than the countryside. Among China, Korea, and Japan there were large discrepancies as well, with many citing Ja-

MAJOR EVENTS IN EAST ASIAN MODERNIZATION, 1900–1945

While the process of modernization took place in East Asia over a number of centuries, the period from 1900 to 1945 marked a particularly accelerated period of transformation. In the decades leading up to the twentieth century, several events prompted major change in East Asia. The 1868 Meiji Restoration set Japan on a path toward modernization in a social, economic, and political sense. The 1894–1895 Tonghak Peasant Revolution in Korea, in which a guerrilla army composed primarily of farmers attempted to overthrow the government, set off a chain of events that would ultimately bring the Joseon dynasty to an end in 1910. Prompted in part by the Tonghak rebellions, the Sino-Japanese War of 1894–1895 highlighted how successful modernization efforts had already been in Japan when the Japanese came out victorious against China and began their territorial expansion across Asia.

The timeline here highlights key moments in East Asian history during the first half of the twentieth century. Many of these events were directly related to modernization and the increase in contact between nations that was taking place at that time.

1900	Boxer Rebellion in China
1904–1905	Russo-Japanese War
1910	Japanese annexation of Korea
1911	Revolution in China
1912	Abdication of the last Chinese emperor
1915	Japan's Twenty-One Demands to China
1923	Great Kanto Earthquake in Japan
1931	Japan seizes Manchuria
1934–1935	Communists conduct the Long March in China
1937	Second Sino-Japanese War begins
1937	Nanking Massacre
1941	United States initiates an oil embargo on Japan
1945	Atomic bombs dropped on Hiroshima and Nagasaki
1945	Japan surrenders, and World War II concludes

—Robin Kietlinski

pan's late-nineteenth-century Meiji Restoration as a resounding success and China's period of self-strengthening as an overall failure. While this would be putting it too simply, there were measures taken during Japan's Meiji Restoration that rapidly propelled the country toward modernization in an economic, industrial, and social sense, while in China, civil wars and general turmoil in the early twentieth century made it nearly impossible for the desired self-strengthening to reach its full potential.

For example, from the end of the nineteenth century and into the early twentieth century, the Japanese government made great efforts to strengthen the nation through various campaigns centered on politics, education, and the economy. In addition to the "Japanese spirit, Western learning" slogan, popular catchphrases such as "fukoku kyohei" ("rich country, strong army"), "oitsuke, oikose" ("catch up, overtake"), and "bunmei kaika" ("civilization and enlightenment") embodied the successful campaigns that were being

carried out to build up the nation's military and to educate the masses. The Sino-Japanese War of 1894–1895 and the Russo-Japanese War of 1904–1905, both of which were won by Japan against their much larger neighbors, added fuel to the rising tide of militarism and imperialism that was building in Japan. The state-led crusades toward national strengthening did not come about without opposition, however, as the new modern way of life often did not blend well with the traditional values and lifestyles of the Japanese.

Japan's strict Confucian-based hierarchical *shi-no-ko-sho* ("warrior-peasant-artisan-merchant") class system was gradually phased out at the end of the nineteenth century. This completely threw Japan's social order into flux, as the samurai class suddenly wielded little power, and the previously lowly merchant class began to rise in status as Japan moved away from a barter economy into a more commercial system. Another form of social reformation included a push toward universal education,

which meant that the opportunities for young women began to expand beyond traditional household duties. This was of great concern to those who had lived by Confucian codes of conduct, which emphasized filial piety and the general subordination of women. Rapid and drastic changes were also seen as vast sums of government money were allocated for the development of Japan's railway system. As trains and other forms of transportation such as rickshaws, horse-drawn carriages, and steamboats became more widespread, the movement of people and goods became much quicker and less expensive.

While political, economic, and social campaigns had been well coordinated and successful in Japan, such campaigns in China wound up falling flat in the face of factional infighting and the absence of a widely shared national ambition. For example, in the early 1900s the Chinese government sought to expand the nation's economic base by developing state-supervised companies, but individual entrepreneurs were simultaneously seeking private wealth, and the two endeavors wound up undermining each other. There was an effort to modernize and improve the nation's military, but it proved extremely difficult to unite forces that once had loyal followings to competing factions prior to 1900. Overall, while the state had managed to wield tremendous organizational power in the Japanese context, the tension between centralized and localized power in China made efforts toward modernization in the early twentieth century enormously challenging.

In this period, there were many hurdles to overcome as the East Asian region transitioned from being relatively isolated and inward-facing to being part of the global community. This modernization cut across all segments of society in the early 1900s, from the fundamental alteration of military and legal structures to the reformation of educational systems and social hierarchies. Oftentimes there were clashes between old and new, and in the case of China some of these clashes delayed processes of modernization. Japan, on the other hand, seemed to embrace the *Wakon Yosai* ideology, using Western learning and technology to help the nation transition rapidly into the modern era while

maintaining a Japanese spirit by incorporating old traditions and ways of life into the new.

—Robin Kietlinski

Bibliography

- Eckert, Carter J., et al. *Korea Old and New: A History*. Cambridge, MA: Harvard University Press, 1990.
- Henshall, Kenneth. *A History of Japan: From Stone Age to Superpower*. 2nd ed. New York: Palgrave Macmillan, 2004.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1990.
- Vlastos, Stephen, ed. *Mirror of Modernity: Invented Traditions of Modern Japan*. Berkeley: University of California Press, 1998.

Traditionalism versus Modernism in Europe

The clash between traditionalism and modernism in Europe during the first four decades of the twentieth century led to dynamic political, social, economic, and intellectual changes. The rapid industrialization and urbanization—which characterized the first half of the twentieth century—in tandem with its embrace of scientific knowledge, rationality, and technology and coupled with the two global conflagrations that engulfed much of the European continent did much to spur this contentious struggle. The three major political ideologies of fascism, communism, and liberalism, in confronting the social and political chaos of the interwar period, the global economic depression, and the two world wars, promised a new world to masses desperate for stability. Traditionalism offered a return to the hallowed past of the Belle Époque, with its Victorian purity, Christian values, and rural simplicity, while modernism offered a new social order with its basis in egalitarianism, economic prosperity, and urban excitement.

Following the collapse of the old European order at the end of World War I (1914–1918), the political forces unleashed upon the European continent promised hope and the restoration of order. Britain, France, Germany, Italy, the countries of the former Habsburg domains, and the Soviet Union were all profoundly affected by the rapid changes brought to their societies by

the war. Liberalism, the political ideology that had promised reform and democracy to Europe, was increasingly seen as impotent and decadent in the interwar period. Fervent nationalism, economic protectionism, and resentment against the new order created at Versailles in 1919 profoundly set the stage for the contrasting popularity of fascism and communism, each of which attracted scores of disillusioned veterans and restless youths.

Traditionalism, as displayed in the surge of reactionary conservative and fascist movements, had a significant influence on the political ideologies of the interwar period. For example, German National Socialism, Italian fascism, and Spanish monarchism (both Alfonsine and Carlist) promised the restoration of older values and institutions, which were the bastion of these nations' stability. Family, religion, and rural prosperity were to be the bulwark against the decadence of the cities, industrialization, and the urban masses. In the political and economic chaos of the interwar period, fascist and nationalist reactionaries embraced imagined pasts of provincial prosperity, hearty peasants, and pious Christianity as the means of fighting the perceived decadence of liberalism and the specter of communism. German conservative parties, Italian monarchists, and Spanish rightists found common cause with the fascists, seeing them as vital allies in their struggle against the forces of modernization. Anti-Americanism, along with anti-Semitism, became prevalent among traditionalists, as the United States and its consumer culture (in the form of department stores and mass merchandising), jazz music, and so-called soulless capitalism were seen as poisonous to long-standing traditional European values. Ironically, as reactionary as these fringe rightist movements purported to be, they utilized new technologies (loud speakers, film, radio, advertising, and so forth) to get their message across while also pandering to the interests of disgruntled urban dwellers who sought social and economic stability from whoever promised it.

In another example of such hybridization, the Futurists, such as Italian writer Filippo Tommaso Marinetti, embraced fascism, which they saw as a vehicle for progress and dynamism rather than as a reactionary force of traditional-

➤ NATIONAL SOCIALISM AND MODERNITY

National Socialism in Germany pitted itself ideologically against the purported forces of modernization, which allegedly came in different nefarious forms. According to Adolf Hitler's autobiography and political manifesto, *Mein Kampf*, American capitalism (in the form of department stores), Russian Bolshevism, European Jewry, and decadent liberalism were all threats to the German people and the purity of their traditional values and racial stock. However, the German Third Reich displayed various characteristics that were the very essence of modernity. Indeed, the National Socialist Party-state, prevalent from 1933 to 1945, used technology, economic planning, communications, the regimentation of daily life, and mass advertising in order to attack the forces of decadence. The very tools of global capitalism were usurped by the Nazis for the benefit of the German people, as were other facets of the dreaded specter of modernity.

—Abraham O. Mendoza

ism. Similarly, in Germany, many scientists, intellectuals, and medical doctors viewed National Socialism as a driving force of modernization for Germany and not as a bastion of Prussian reactionaries.

The end of World War I brought wide-eyed optimism to much of the European Left in light of the success of the Russian Revolution of 1917 and the dissolution of the remaining Old Regime European empires. While liberalism festered, socialism and communism imbued many social classes with hope for the future. Interwar Weimar Germany, Third Republic France, and the Spanish Republic, among other national governments, had significant socialist majorities in their legislatures, proving that the will of the masses had been heard loud and clear. Rapid industrialization and urbanization were problems to be addressed by the expansion of the welfare state for the purposes of the distribution of wealth and the social security of the citizenry. Furthermore, the arts, architecture, and culture, imbued with modernist themes, carried with them both beauty and functionality (e.g., the

Bauhaus School) to be enjoyed by all of society, not just elites. As a case in point, Weimar Germany became the bastion of European art, literature, architecture, and theater, having thrown off the shackles of the Prussian militarism of the prewar period. Across Europe, communist and socialist parties, sharing a social milieu with many artists and intellectuals, became the intellectual paradigm of the era, with both not only promising drastic political and social changes in the new postwar world but also offering new venues for intellectual development and academic discourse (e.g., the Frankfurt School). In particular, in Weimar Germany many artists, writers, actors, and playwrights, such as Bertolt Brecht and Walter Benjamin, met and shared ideas with socialists, communists, and other political activists.

World War II (1939–1945) was the culmination of the struggle between the forces of modernism and those of traditionalism. Advocates of traditionalism, which had surrendered to the dynamic nationalist and fascist forces of revisionism, had inadvertently become accomplices to ideologies that advocated radical social and political changes with the mere trappings of restoring the past. In contrast, the forces of modernization were unleashed as most all European countries again mobilized for total war, requiring the requisitioning of troops, national wealth and resources, and technological advances. The rapid modernization of war, in addition to the revitalization of liberal democracy in confronting the immediate dangers of war, restored the will of the West in quashing the revisionist fascist powers. The Soviet Union, the bastion of world communism, was a vital ally in the destruction of the German Third Reich and its reactionary allies while also legitimizing their variant of socialism to the world as a means toward modernizing and creating a new society free of the constraints of global capitalism. With the end of the war in 1945, traditionalism survived the onslaught of war to undergo different guises during the Cold War, pitted in resistance against communism and the advocates of social justice (e.g., feminism, gay rights, abortion) in the liberal West.

—Abraham O. Mendoza

Bibliography

- Eksteins, Mordis. *Rites of Spring: The Great War and the Birth of the Modern Age*. Boston: Houghton Mifflin, 1989.
- Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Knopf, 1998.

Traditionalism versus Modernism in the Americas

Similar to developments in Europe during the first half of the twentieth century, the conflict between traditionalism and modernism in the Americas reflected fundamental changes that both inspired and frightened people. Industrialization, urbanization, immigration, scientific and technological advancements, new currents of thought, and changes in the arts that were transplanted from Europe in the nineteenth century led to dramatic changes in conservative worldviews particularly in urban areas. These changes in turn led to reactions on the part of tradition-minded inhabitants against what they saw as a threat to their established worldview.

Changes in the arts and literature in the early twentieth century reflected the social changes that accompanied modernization. The culture wars between the dynamic “new America” of the cities and the more traditional and religious-minded rural areas exemplified this paradigm shift. Younger generations, shaped by a burgeoning consumer culture and drawn by jazz, dancing, and urban possibilities sought to abandon the repressive moral codes of their parents and sought a more exciting life. In Latin America, shaken by political revolutions and dramatic social and economic changes particularly in the interwar period, the gap between cosmopolitan urban areas and conservative rural areas became even wider. Major cities, such as Mexico City and Buenos Aires, became cultural centers with more in common with Paris and New York than their own outlying rural areas.

In the United States and Canada, rapid cultural changes from 1900 to 1945 created a so-

► SCOPES MONKEY TRIAL

Perhaps the most well-known incident regarding the conflict between traditionalism and modernism in the United States is the Scopes Monkey Trial of 1925 in Dayton, Tennessee. In 1925 the State of Tennessee passed the Butler Act, which stipulated that public schools could not teach the theory of evolution as the basis of human origins. As a result, the American Civil Liberties Union (ACLU) arranged for a high school biology teacher, John Scopes, to intentionally violate the act by teaching about evolution. The subsequent trial, which turned into a national controversy, pitted ACLU lawyer Clarence Darrow, representing Scopes, against famed statesman William Jennings Bryan, who represented the state prosecution. Both sides used authorities in both the scientific and religious communities to support their claims, ultimately turning the entire trial into a circus. By pitting literal interpretations of Scripture against existing scientific paradigms and vice versa, both sides sought to discredit the other. Ultimately, Scopes was found guilty and fined \$100. However, the trial represented the existing conflict between rural traditionalism and urban modernism in the context of 1920s America.

—Abraham O. Mendoza

Dr. John Neal with John Scopes (right), made famous by the Scopes Monkey Trial of 1925. (Library of Congress)



phisticated modern urban culture associated with theater, art, film, and other means of entertainment, which traditionalists deemed decadent. Traditionalists associated major cities with immigrants, crime, alcohol, communism, and moral decay, thereby igniting a series of reactionary movements in many rural areas. In the United States, the resurgence of the Ku Klux Klan in rural areas and the conservative Protestant-based movement that led to the Eighteenth Amendment (1919) that outlawed alcohol were two major examples of the rural conservative backlash against modernity. Nonetheless, Prohibition encouraged a widespread illegal drinking subculture supported by bootlegging, organized crime, speakeasies, and jazz culture celebrated by many in the United States. U.S. au-

thors such as F. Scott Fitzgerald and Henry Miller wrote about the tumultuous lives of those who took part in this interwar urban society, looking at the new bohemians who were disgusted with traditional society and sought to embrace the freedoms of the jazz age. At the same time, authors such as Sherwood Anderson described in his collection *Winesburg, Ohio* (1919), a small American town full of repressed people with stunted lives. Meanwhile, advertisements and periodicals hyped the “new woman” of this period, with her bobbed hair and liberated attitude toward drink and relationships, which also threatened traditional conceptions of hearth and home. While some rural areas, particularly in the U.S. South, sought to lessen the damage of this perceived debauchery by reverting to more

conservative Christianity, the onset of modern culture percolated across the country.

In Latin America, developments similar to those occurring in Anglophone North America did take place, albeit on a more regional basis. Major cities with more exposure to European contact, such as Mexico City, Buenos Aires, and Rio de Janeiro, developed as major cultural centers that embraced modernist culture. These more cosmopolitan urban areas were worlds apart from rural areas, with their stricter religious- and patron-based political relationships. The power and influence of the Catholic Church throughout much of Latin America still shaped popular disfavor of the immorality of the new cosmopolitan modernist culture. Fears of how urban values might affect families, women, and religious belief were taken very seriously by traditionalists. Rural people, while significantly affected by the growing industrialization of their respective countries, still largely observed traditional hierarchical relationships between villagers and local elites. While the expansion of extractive industries focused on raw materials or energy production did bring social change to rural areas, traditional values did not change considerably in comparison with that of urban areas. Young people in major cities in Latin America shared in the consumerism and appreciation for high culture of that of their North American and European peers, given their access to such activities based on wealth and education. While exposure to Euro-

pean cultural forms, primarily those emanating from Spain and France, had a significant impact on urban youths, the development of local high culture was also quite influential during this period. Important artwork by creative minds such as Diego Rivera and Frieda Kahlo illustrated the development of such cultural forms. Literature by authors such as Pablo Neruda and Jorge Luis Borges also exemplified native contributions to this shift. The urban poor were attracted either to the same values as that of their rural compatriots or the more radical political ideas emanating from Europe, such as communism and fascism. In the midst of the Great Depression and the world wars, such political ideologies had a definite impact on all segments of society. However, political ideologies such as that of Peronism in Argentina and one-party rule in Mexico under the Partido Revolucionario Institucional (Institutional Revolutionary Party) are examples of political organizations embracing modernization while preserving the trappings of traditionalism.

—Abraham O. Mendoza

Bibliography

- Allen, Frederick Lewis. *Only Yesterday: An Informal History of the 1920s*. New York: Harper Perennial Modern Classics, 2000.
- Hobsbawn, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.
- Larson, Edward J. *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion*. New York: Basic Books, 2006.

■ Introduction: Religion

The first half of the twentieth century was a time of vivid contrasts. On the one hand, the secularism of the European Enlightenment seriously undermined the credibility of religion. States such as the Soviet Union were openly hostile to religion and officially promoted atheism. On the other hand, there was a religious revival, a reaction against modernism and secularization, that could be called fundamentalism for the sake of brevity. Fundamentalist movements profess strict adherence to ancient princi-

ples and are generally accompanied by a belief in scriptural inerrancy. Although adherents often think of their religious organization as eternal and unchanging, all worldviews are shaped in part by the societies in which they exist.

In the nineteenth century, Christianity in particular underwent a phase of self-examination of its own tradition called “higher criticism,” and many mainstream churches embraced liberal theology. The main principle of liberal theology (which actually culminated in the Christian ecu-

➤ KARL BARTH

Karl Barth, considered the leading Protestant theologian of the twentieth century, rejected liberal theology, emphasizing the radical dichotomy between God and human nature. Leaving behind traditional views that called for a synthesis between church and culture, Barth focused on the supernatural and eschatological aspects of Christianity.

Barth began his professional career as a liberal and active supporter of his college professors' teachings. His first job was writing and editing for the leading liberal theological journal *Die Christliche Welt* in Marburg, after which he accepted his first position as a pastor in Geneva from 1909 to 1911. Between 1911 and 1921 Barth became pastor of a small church in the village of Safenwil, where he earned the nickname "The Red Pastor" for his socialist politics and support in organizing the underpaid textile workers in the village. He began to question his acceptance of Liberal Protestantism when he saw the world's economic inequalities. Similar to what happened with many other leading theologians and social thinkers, World War I destroyed Barth's optimistic view of a world where there was always progress because of mankind's innate good as well as his faith in Liberal Protestantism.

Barth and a neighboring pastor, Edward Thurneysen, began to question and criticize their professors' theology. From these discussions Barth published his first book in 1919, *Epistles to the Romans*, that contained his first rejection of Liberal Protestantism. Barth returned to a view of God as all-powerful and all-knowing. He rejected the nineteenth-century humanist view of God and mankind and believed that the nineteenth century had placed too much emphasis on the goodness of mankind and that there needed to be a greater recognition of mankind's sinful nature. Barth's book created a major theological debate in Europe and was severely criticized by his professors and colleagues in Liberal Protestantism.

Barth wrote a second book in 1927, *Christian Dogmatics in Outline*. In 1932 he began his multi-volume examination of church doctrine, *Church Dogmatics*. His fifth volume, *The Doctrine of Reconciliation*, was unfinished when he died. Barth became one of the most outspoken opponents of the Nazi regime as it began to dominate both government and church, and he vigorously urged Christians in Europe and the United States to fight against Adolf Hitler. After the war Barth encouraged people not to hate the German people and advocated for their political freedom.

—Jose Valente

menical movement) was that traditional Christian theology is not in conflict with a modern secular-scientific worldview. This moderate idea lost much support in the early part of the twentieth century as religious people took sides. Some moved into indifference toward religion, some moved into agnosticism or atheism, and others moved in the opposite direction and reasserted the religious fundamentals and their primacy over secular and humanistic principles.

The relationship between nationalism and religion was also very dynamic during this period. The global religious revival was a complex phenomenon, often influenced by factors that were not strictly religious. Religious movements, such as the *Kokugaku* revival of Shinto in imperial Japan, African Ethiopian and Zionist churches, British and American Fundamentalism, and Middle Eastern Islamism, could also be considered

nationalist movements in religious garb. What these movements had in common was the idea of the return to the original purity of religion as it once existed in a premodern period. Once these fundamentals are found in the past, they are then applied to the problems of the modern national state. Thus, Kokugaku sought to eliminate Buddhist and Confucian influences on Shinto, and Ethiopian churches emphasized the fact that Africa had direct links with many biblical figures long before the arrival of European colonial missionaries. British and American Fundamentalists sought a return to the idealized pure Anglo-Saxon Protestantism that once was the "shining city on a hill," and Islam desired a return to the glory days of the Arabic caliphate when Islam was pure and there was no humiliating occupation by the imperialists and infidels. All these revivalist or fundamentalist groups idealized their groups'

unity in the historical past in order to achieve the unity in thought and deed that, they believed, was lacking in modern secular societies.

Religious practices of the early twentieth century reflected the emerging global world and were quite syncretistic. For example, beginning with the early twentieth century there was a vivid interest in Asian religions, such as Buddhism, in Western intellectual circles. Thinkers such as Friedrich Nietzsche and Carl Jung were substantially influenced by their study of Asian religions. Theosophy, one of the most popular occult groups of the turn of the century, was deeply influenced by Asian religious thought (and in turn encouraged the revival of Hinduism in colonial South Asia). Hermann Hesse's novel based on the life of the Buddha, *Siddhartha* (1922), was one of the great best-sellers of continental Europe. The journeys that Daisetsu Teitaro Suzuki undertook in the 1920s and 1930s in order to present Japanese Zen to Western audiences also had considerable influence on artistic and intellectual circles. However, only time will tell if this was just a trend of the early half of the twentieth century or if it will have more substantial consequences on the religious map of the world.

—Alexander Mirkovic

Diasporic African Religions

Diasporic African religions, faiths that originated in Africa and spread throughout the western hemisphere via the slave trade, had taken on forms distinct from both their African antecedents and Christianity by the early twentieth century. These new faiths would deeply influence the society and culture of blacks throughout the New World. At the same time that these religions were taking their more-or-less permanent forms, they were also coming to the attention of whites, who typically stereotyped them as mere magic or devil worship.

Several such religions existed by the turn of the twentieth century, including Brazilian Candomblé, Bahamian Obeah, and Trinidadian Shango, even though scholars and popular authors alike have tended to focus most of their

attention on Cuban Santería and Haitian Vodou. Santería is sometimes known as Lucumi, a Cuban term for the Yoruba and related ethnic groups whose beliefs formed the foundation of the faith. The word “Santería” refers to the syncretistic nature of the religion, which identifies major gods or spirits with Catholic saints who possess similar attributes. In addition to Catholicism, elements of Native American beliefs, Kardecian Spiritism, and other African religions helped shape Santería.

At the heart of the Santería faith is service to the *orishas*, spirits originating among the Yoruba of present-day Nigeria. Some of the most prominent are Shango, a deity of thunder, lightning, and fire; Yemaya, goddess of the sea and mother of the world; and Ellegua, messenger of the orisha. These beings communicate with humans through various forms of divination and sometimes possession of devotees during ceremonies. Other spiritual forces in Santería include ancestral spirits, a supreme being known as Olodumare, and a force, called Ashe, that suffuses the entire cosmos.

Haitian Vodou shares many features in common with Santería, the most notable being its multiple deities. Similarly, it is also a syncretistic religion that has incorporated elements of Catholicism, including the identification of spirits with particular saints, Native American beliefs, and European spiritualism. One major difference between Santería and Vodou is the point of origin. While Santería is overwhelmingly Yoruba, Vodou was more strongly influenced by the religion of the former kingdom of Dahomey, now known as Benin. Yoruba elements still feature prominently, however, as do those of the Kongo people.

As with Santería, Haitians accept the existence of a supreme being who is distant from his creation. Likewise, lesser spirits are more important to everyday life. In Haiti these beings are known as *lwa*. Believers divide them into several nations, including the Rada (from Arada or Alada, a Dahomean city) and Kongo pantheons, which reflect their African places of origin. One nation, known as the Petwo, may have developed in Haiti itself during its struggle for independence in the late eighteenth and early nineteenth centuries. Followers of the faith honor the spirits in communal and familial rituals, which typically

include spirit possession. Many also rely on the lwa to work magic and foretell the future.

To the north, the United States was also experiencing developments in its own brands of Creole faiths, the most prominent of which was Voodoo. It was most strongly associated with New Orleans, Louisiana, although it was a presence in many areas along the Mississippi River and its tributaries. In nineteenth-century New Orleans a succession of priestesses, known as queens, had presided over major ceremonies and had been important leaders in the black community. Like other African diasporic religions, it also had its own pantheon of deities. By the first few decades of the 1900s, most outsiders determined that the faith had degenerated into magic, losing its distinctive deities and large-scale rituals as it was abandoned by increasingly educated African Americans. The fact that large numbers of shops catering to blacks' magical needs had developed in New Orleans and elsewhere seemed to bear out this conclusion.

Voodoo, however, never died out completely, and investigators discovered covert ceremonies continuing until at least the 1930s, although they had become rare. Much more important have been the Spiritual churches, which combine elements of Pentecostalism, Catholicism, and Spiritualism with survivals from Voodoo. By the 1920s congregations had appeared in New Orleans, Chicago, and elsewhere. These organizations adopted many aspects of Voodoo, including service to a variety of spirits. The most important of these was Black Hawk, a nineteenth-century Native American chief, whose people fought a losing war to prevent U.S. expansion into their homeland. Scholars suggest that Black Hawk achieved prominence because he shared with African Americans the experience of oppression at the hands of whites. Modern believers also accept reincarnation and practice magic, which they call "spiritual work." Church members, however, generally consider themselves Christians, relying heavily on the Bible and Apostles' Creed-like statements of faith to support their beliefs.

The practitioners of diasporic African religions found their beliefs being increasingly vilified by white popular writers during the first half of the twentieth century, who depicted

➤ HOODOO IN THE UNITED STATES

Zora Neale Hurston, a key figure in the Harlem Renaissance movement in U.S. arts and literature, was trained as a folklorist and also a novelist and playwright. The following is from her memoir *Mules and Men* (1935), which included descriptions of her own apprenticeship to hoodoo practitioners in New Orleans:

"New Orleans is now and has ever been the hoodoo capital of America. Great names in rites that vie with those of Hayti in deeds that keep alive the powers of Africa. Hoodoo, or Voodoo, as pronounced by the whites, is burning with a flame in America, with all the intensity of a suppressed religion. It has its thousands of secret adherents."

—Jeffrey Elton Anderson

Source

Zora Neale Hurston, *Mules and Men* (Philadelphia: Lippincott, 1935), 229.

them variously as witchcraft, criminal religions, or devil worship. Chief among such writers was William Seabrook, whose *Magic Island* (1929) depicted Haitian Vodou ceremonies as sinister and typically sexual in nature. Another author in this vein was Robert Tallant, who wrote a sensationalistic treatment of Louisianan beliefs titled *Voodoo in New Orleans* (1946). At the same time that authors were promoting negative stereotypes of these faiths, the religions were often suffering severe repression in their homelands. Nevertheless, with the possible exception of U.S. Voodoo, they survived and even prospered.

—Jeffrey Elton Anderson

Bibliography

- Anderson, Jeffrey. *Conjure in African American Society*. Baton Rouge: Louisiana State University Press, 2005.
- Brandon, George. *Santeria from Africa to the New World: The Dead Sell Memories*. Bloomington and Indianapolis: Indiana University Press, 1993.
- Jacobs, Claude F., and Andrew J. Kaslow. *The Spiritual Churches of New Orleans: Origins, Beliefs, and Rituals of an African-American Religion*. Knoxville: University of Tennessee Press, 1991.

Christianity in Africa

Africa moved from being a peripheral to a central part of the Christian world in the first half of the twentieth century. Throughout the nineteenth century the Christian missionary impulse grew stronger in Europe, North America, the Caribbean, and Australasia, and Africa was a central target of these missionary efforts. The mission presence was strongest in coastal areas, particularly along the Atlantic coast; regions that were also undergoing white settlement, such as South Africa and Kenya; and in the areas under the strongest colonial control, such as Angola, Senegal, and Liberia. In general, the rate of conversion was low and attracted the marginalized in the nineteenth century; however, during the first half of the twentieth century the growth of Christianity became explosive.

There are several factors that contributed to this explosive growth during 1900–1945. First, colonial conquest threw doubts upon indigenous cosmologies, which made Africans more receptive to hearing about other religious options. As more Africans began to preach to fellow Africans with whom they shared language and culture, the rate of conversion quickened. Thus it was largely Africans themselves, not foreign missionaries, who were responsible for the spread of Christianity. Although this sort of indigenous missionizing had been occurring in some parts of Africa for decades, in most regions of the continent this did not occur with regularity until the twentieth century. Second, by the twentieth century numerous translations of the Bible into African languages had appeared. The first full translations to appear were often in those languages with the most speakers or converted elites such as Yorubas, isiZulus, and Kiswahilis. Biblical translations permitted literate Africans to learn of the new religion on their own terms. Third, as conversion began to speed up, numerous denominations began to develop their own theological schools in Africa, thereby increasing numbers of Africans who became ordained clergy. The development of an African church leadership helped to remove the perception that Christianity was a foreign religion. African clergy also displayed consistent enthusiasm in evangelism. To many, the spread of Christian-

ity was directly tied to the vindication of black peoples and the redemption of Africa itself.

A number of African Christians, however, began to grow dissatisfied with the Catholic and various Protestant churches over what they felt was second-class treatment by Europeans due to their race. During the decades from the 1880s through the 1920s a number of churches emerged that scholars identify as Ethiopian, a name that derives from Psalm 68:31: “Let Ethiopia stretch out her hands to God,” where Ethiopia is being used as the ancient term for Africa. For many African Christians, this Bible verse demonstrated that Christianity belonged to them as much as anyone. The first church to use this name was the Ethiopian Church formed by Rev. Mangena Mokone in South Africa in 1892. Many similar churches emerged, most often in racially charged areas such as South Africa and typically with ethnic constituencies. Some better-known examples include the Native Baptist Church in Nigeria, founded in 1888; the Zulu Congregational Church in South Africa, founded in 1897; the Nigritian Church in the Gold Coast, founded in 1907; and the Bantu Methodist Church in South Africa, founded in 1933. The Ethiopian churches offered a theology virtually identical to the European-Christian Church they split from but with an entirely African leadership and membership. Many Ethiopian churches still exist in Africa, but new ones rarely formed after the 1920s.

An African reformation began in the 1910s, experienced colossal growth from the 1920s through the 1940s, and continues today. Many churches began to form as a result of local theological differences with both European and Ethiopian Christianity. The style of church that emerged is called Zionist by scholars, taking its name from the fact that many of these churches promoted a concept of a New Jerusalem, or Zion. Although some Zionist churches were formed through schisms with Euro-Christian or Ethiopian churches, many were entirely new institutions founded solely on biblical exegesis or prophetic inspiration.

Zionist leaders reached different conclusions than Euro-Christian or Ethiopian churches about the Trinity, Christology, the Sabbath, sacraments, gender, Levitical laws, and the role of African cul-

tural practices. As examples, the Nazareth Baptist Church of South Africa was non-Trinitarian and viewed the Father as superior to the Son, the Legio Maria of Kenya permitted polygamy, the Église Kimbanguiste of the Congo used honey for communion, and the Celestial Church of Christ prohibited the consumption of pork or crawling animals, shoes on church grounds, and the use of nonwhite candles.

Zionist churches have adopted these differing beliefs and practices either because they believe it is in accordance with God's will or because they view these as harmless cultural practices, compatible with Christianity. Zionist churches have been regularly criticized by theologians, both in and out of Africa, who accuse them of promoting improper forms of Christianity. While the Euro-Christian churches insist that they are the only proper forms of Christianity, the Zionist churches argue that the truth that they present is closer to God's Word.

During the period 1900–1945 both Ethiopian and Zionist churches endured constant suspicion, surveillance, and even repression by colonial authorities. An extreme case was that of Simon Kimbangu, founder of the Église Kimbanguiste, who was jailed by the Belgians from 1921 until his death in 1951. Colonial officials often doubted the religious sincerity of Africans and felt that a separate church was nothing but a front to foment revolution. Only in a very few cases such as the Providence Industrial Mission and the Église des Noirs en Afrique did African churches have anything to do with anticolonial politics. By the 1940s and 1950s many colonial governments were adopting more tolerant positions toward African Christianity. Ironically it was South Africa that perhaps permitted the greatest tolerance, as whites there appreciated Africans self-segregating into their own churches.

What both Ethiopianism and Zionism represented were Africans defining religious truth for themselves. Many other Africans remained content with the varieties of Christianity brought by Europeans. From 1900 to 1945 Euro-Christian churches, Ethiopian churches, and Zionist churches all underwent enormous growth in Africa. At the beginning of the twentieth century approximately 3–5 percent of Africans were Christians; by the end of World War II in 1945

➤ SIMON KIMBANGU

Simon Kimbangu was founder of the Église Kimbanguiste, now Africa's largest Zionist church. He was born around 1887 in Nkamba in the Congo Free State. Kimbangu's first prophecy occurred in 1918 when he believed that he heard a voice tell him, "I am Christ. My servants are unfaithful. I choose you to testify about me and to guide my people to salvation." Yet Kimbangu responded that he was not educated enough, and he did not heed this prophetic calling for three years.

In April 1921 Kimbangu felt compelled against his will to enter the house of a woman in agony. He healed her, thus embracing his prophetic calling. Kimbangu would gain a reputation as the greatest healer in all of the Congo. Thousands of Africans began to make pilgrimage to Nkamba. The mass conversion of these pilgrims became known as the Nkamba Pentecost. Kimbangu told them to renounce violence, polygamy, alcohol, tobacco, hemp, dancing, and the use of indigenous medicines. These pronouncements form the core of Kimbanguist theology.

Many whites living in Belgian Congo were convinced that Kimbangu was using religion as a disguise to foment rebellion. He was arrested in September 1921 and convicted of hostility to the state, instigating violence, and general insubordination. He was given a sentence of 120 lashes and execution, later commuted to life imprisonment. Kimbangu was whipped and transported to Lubumbashi. He spent most of his sentence in solitary confinement. Kimbangu died in the prison hospital in 1951.

—Joel E. Tishken

the figure was more than 33 percent. Thus, during the period from 1900 to 1945 Africa became a central part of the Christian world.

—Joel E. Tishken

Bibliography

- Anderson, Allan. *African Reformation: African Initiated Christianity in the 20th Century*. Trenton, NJ: Africa World Press, 2001.
- Campbell, James T. *Songs of Zion: The African Methodist Episcopal Church in the United States and South Africa*. Chapel Hill and London: University of North Carolina Press, 1998.

Isichei, Elizabeth. *A History of Christianity in Africa: From Antiquity to the Present*. Lawrenceville, NJ: Africa World Press; Grand Rapids, MI: Eerdmans, 1995.

Spear, Thomas, and Isaria N. Kimambo, eds. *East African Expressions of Christianity*. Oxford: James Currey; Dar Es Salaam: Mkuki na Nyota; Athens: Ohio University Press, 1999.

The Global Reach of Islam

The global reach of Islam in the first half of the twentieth century is highlighted not so much by Islam's expansion into new territorial regions as by its deepening extension into the societies across the world that it had already penetrated in earlier ages. By the dawn of the twentieth century Islam had truly established itself as a world religion. Even the commonly held assumption that Islam did not come to the Americas until the twentieth century fails to recognize the number of Muslims, however much a minority, who were brought to those regions by virtue of their African Muslim heritage as part of the North Atlantic slave trade from as early as the eighteenth century or possibly even the seventeenth century. In the case of Central and South America, there are claims that peoples of Muslim heritage left over from Moorish Spain, however limited their numbers may have been, came in the Spanish and Portuguese conquests of those continents in the fifteenth and sixteenth centuries.

The importance of understanding this background with respect to the global reach of Islam in the first half of the twentieth century lies in one's view of history, namely that the new waves of fresh Islamic influx into North and South America at the dawn of the twentieth century were just that, new waves breaking over long-forgotten ones, albeit comparatively in increasing measure. Indeed, the Western expansion into the old Islamic heartlands of Asia and Africa throughout the eighteenth and nineteenth centuries, together with world population growth stimulating migration that was aided by newly developed forms of transportation emerging from the Industrial Revolution, the steamship and railroad in particular, opened new corridors of passage for immigrants from various parts of

Islam's domains to enter and take up life in what for them could still be called the New World.

Renewed interest in Islam in the late nineteenth and early twentieth centuries occurred among not only African American communities but also small numbers of Caucasians, with the earliest such conversion dated to 1888, a certain Muhammad A. R. Webb who eventually established the Oriental Publishing Company in New York through which he published, among certain other works, *Islam in America* in 1892. But knowledge of Islam was being perpetuated not only by a slowly increasing Muslim presence within North America but also by the deeper study of Islam among Western scholars as a result of their own increased penetration into the Islamic world via Western expansionism. In particular, the field of study that traces its roots back to F. Max Muller (1823–1900) and came to be known as the history of religion(s) spawned, for example, the first Parliament of the World's Religions held in Chicago in 1893, providing yet another opportunity not only for small numbers of Muslims to migrate to North America but also for Islam to receive further spotlight and propagation in the North American context during that highly international period.

And so these trends continued into the early twentieth century, with a large number of Muslims immigrating to the United States alone. For example, some 86,000 Syrians arrived in America from 1899 to the onset of World War I in 1914. Many were Christian, but a sizable number were Muslim. Some took advantage of free land grants by the U.S. government during that period and established small Islamic communities like those that sprang up in Rugby and Williston, North Dakota. Albanians likewise opened a mosque in Maine in 1915, while Tatars who had migrated to Poland during the Tsarist Russian period left that interim homeland amid the turmoil of the Bolshevik Revolution, settling in Brooklyn and other areas of New York and opening small mosques there. Similar accounts could be cited, though perhaps in lesser number, within the Canadian context.

Although many of Muslim background had come to Central and South America as part of exploration expeditions or the slave trade starting with the sixteenth-century Spanish and Por-

➤ AFRICAN AMERICAN ISLAMIC HISTORY IN AMERICA

The surge of interest in Islam that occurred among those of African descent in the late nineteenth and early twentieth centuries in the United States was not primarily motivated by a concern for religious truth but instead was closely tied to the crisis of identity occurring in the context of racial prejudice and oppression in the post-American Civil War period. The Emancipation Proclamation had been issued by President Abraham Lincoln in 1863, but equality was still a long way off at the dawn of the twentieth century. Groups like the Ku Klux Klan (KKK) were founded immediately following the Civil War, and though their activities were outlawed, they reorganized and experienced revival in the early twentieth century. Not only KKK-type groups but also many white Christians used the Bible to support ideas of white racial supremacy and its counterpart of black racial inferiority. It was also the dawning of Darwinian evolutionary science, and some white Christians went so far as to argue that those of black African descent were not human but instead were still at a prehuman stage

in the evolutionary process. Against this degrading background, black identity and black pride issues were of deep power and significance. Some in the African American community saw Christianity as the religion of the white man, the oppressor and enslaver of the black man (this sentiment can be seen as early as the 1845 publication of Frederick Douglass's slave narrative). Islam provided a counterreligious identity and divine authority that vested the black African with dignity and equality or, as the case was also, a counternarrative of black supremacy. It was not until much later in the twentieth century, after the Civil Rights Movement and the passing of the civil rights bills in its wake in the 1960s, that black Islamic leaders would, through their Hajj experiences, begin to align themselves more closely with traditional Islamic teachings and practices. Until that time, the movement of Black Muslims, as they were also called, was primarily an ethnic-cultural identity movement employing religion in its cause.

—R. Charles Weller

tuguese expansions into those realms, a renewed surge of Arab immigrants mostly of Syrian, Lebanese, or Palestinian origin began to trickle into Honduras and other surrounding areas from the 1890s onward, particularly after World War I. A sizable number of these were Christian, but many were Muslim. If we are thus to inquire into the histories of the Muslim communities in countries such as Trinidad, Guyana, and Suriname or farther south in Argentina where, in some cases, as much as 10 percent of the population today are Muslim, these late-nineteenth and early-twentieth-century migrations played an important role.

Peculiar to the United States in this period was the emergence of several rather unique yet related Islamic movements among those of African American descent, linking Islam as they did to their native identity and merging it with what can be called the beginnings of black nationalism stirring within the larger context of Asian, African, and Middle Eastern anticolonial nationalist and renewal movements taking shape across the globe in this same period. Against this inter-

national background and World War I that would erupt around it, the Moorish-American Science Temple was established in New Jersey in 1913 by Timothy Drew (1886–1929). Drew was one of the first African American converts to Islam, subsequently changing his name to Noble Drew Ali. More significant and lasting, however, was the Nation of Islam founded in the 1930s by Wallace D. Fard Muhammad and taken over upon his death in 1934 by one of his followers, one who would become, in the place of the original Prophet Muhammad, the Nation of Islam's recognized prophet, Elijah Muhammad (1897–1975). From out of these streams, central figures would emerge to significantly impact the American sociopolitical scene in the latter half of the twentieth century. The Nation of Islam did not originally practice the five pillars of traditional Islam or observe its annual holidays and customs.

Turning our attention toward Europe in the same period, we have, for example, the Great Mosque of Paris being built in 1922, indicating an increased Islamic presence there in that period. In Germany, by 1900 there were already

some 10,000 Muslims residing there, owing to long-standing ties between Germany and the Ottoman empire, but this number more than doubled during World War I, when approximately 15,000 Muslim prisoners of war were taken, resulting in the building of a mosque in Berlin in 1915 that functioned until 1930. England likewise had some 10,000 Muslims residing there by the early twentieth century due to its prolonged imperial contact with Mughal India, Afghanistan, western Africa, and other regions of the globe where the Islamic presence was formidable.

But all these serve only as examples, since Islam's spread in the first half of the twentieth century in the West would require a detailed accounting of each ethnic, cultural, and/or political domain into which it entered during that period.

Two related events of significance should be noted at this juncture that aided the spread of Islam in the broader English-speaking West and its imperial domains. These two events were two translations of the Quran into English, one by Muhammad Marmaduke Pickthall in 1930 in India, published in England in 1939, and one by Abdullah Yusuf Ali in 1938 in Lahore, India (later Pakistan), with the latter figure helping to open the al-Rashid Mosque in Alberta, Canada, in 1938 from where his translation was disseminated in North America and beyond.

Apart from western Europe and the American continents, Islam had a fairly established history in eastern Europe via the nations of Bulgaria, Albania, Bosnia, and other such countries. Its growth across eastern Europe, including Russia and Siberia, during the early twentieth century was minimal. Indeed, to the contrary, Islam suffered significant setbacks in the antireligious milieu of the Soviet communist world. Likewise, except for northwestern and other specific regions of China where Islam had a long and rich history, its historical spread into broader eastern Asia was extremely limited during this period and remains so to this day. Renewal movements counteracting Western imperialism and competition with Christian missions occurring in the context of that imperialism did result in a measure of growth in India, Southeast Asia, and particularly inland Africa, but overall there was not a great deal of

new ground gained in those regions apart from perhaps the emergence of the Muslim nation of Pakistan in 1947, which was more a redefining of the balance of power and identity in relation to predominantly Hindu India than a spread into new territory.

Consideration of such growth and spread into new territories and among new cultural groups aside, there are two significant factors emanating from the Middle Eastern heartland that gave shape to global Islam in the early twentieth century. First among these would be the various renewal movements that arose out of Pan-Islamic, Pan-Arab, and Arab nationalist as well as Ottoman-Turkish nationalist reform movements that took shape in the nineteenth century. These all came successively in response to the seemingly unstoppable extension of Western power into Islamic (and broader Afro-Eurasian) domains. Two Islamic renewal movements in the early twentieth century stand out in particular, namely the Muslim Brotherhood (Ikhwan al-Muslimi), birthed in Egypt in 1928 under the guidance of Hasan al-Banna (1906–1949) and Sayyid Qutb (1906–1966), and the Islamic Society (Jamaat-i-Islami), brought to life in 1941 through the reform efforts of Mawlana Abul Ala Mawdud (1903–1979) in India. These two movements have served as significant models and sources of inspiration for countless other Islamic revival movements around the globe to the present day.

The second major factor affecting global Islam in this era was the disappearance of the last three great Islamic empires, namely the Ottoman, Safavid Persian, and Mughal Indian empires, with the Ottoman empire holding out longest, down to the close of World War I when its territories were divided up among the European powers, creating in their demise a crisis of authority throughout the Islamic world and evoking the renewal movements just noted above.

—R. Charles Weller

Bibliography

- Ansary, Tamim. *Destiny Disrupted: A History of the World through Islamic Eyes*. New York: PublicAffairs, 2009.
- Esposito, John L., Darrell J. Fasching, and Todd Lewis. *Religion and Globalization: World Religions in Historical Perspective*. New York: Oxford University Press, 2007.

Luxner, Larry. "The Arabs of Honduras." *Saudi Aramco World* 52(4) (July–August 2001): 34–37.
www.SaudiAramcoWorld.com/issue/200104/the.arabs.of.honduras.htm.

Spread of Asian Religions

A prevalent theory in western Europe and North America suggests that Asian religions did not reach the West until the counterculture movements of the 1950s and 1960s, when these movements provided propitious ideological and social conditions for the general reception of Eastern ideas. The emergence of the New Age movement in the 1980s and later was also largely influenced by Asian as well as North American indigenous spiritual and religious sources. However, the expansion of the great traditions of Buddhism and Hinduism to the West can be dated back much earlier to the end of the eighteenth century and the beginning of the nineteenth century. The fascination for an idealized Orient at that time—manifested in the aesthetics and literature of the Romantic movement—provided the framework through which these cultures could be understood.

The expansion of Asiatic religions in the West was initially marked by a process of importing a Western enthusiasm for Asian spirituality. But from the end of the nineteenth century, it was from a waning influence of monotheism that Asian religions expanded within the West. These included modernist Buddhist movements, such as the Chinese Mahayana of the monk Taixu (1890–1947), the Japanese Zen of Soyen Shaku (1859–1919), and the Cingalese-Burman Theravada reformed by Anagarika Dhammapala (1864–1933), as well as contemporary Hindu movements, such as that inspired by Ramakrishna Vivekananda (1863–1902).

The first session of the World Parliament of Religions held in Chicago in 1893 offered a platform for representatives of Asian traditions, such as Chinese Buddhism, Singhalese Buddhism, and Indian Hinduism, among others. The parliament also gave Western audiences a direct means of contact with exponents of these religions. Although during the first several decades of the twentieth century the expansion of Asian reli-

gions was fairly limited to intellectual and urban centers, by the post-World War II era they were gaining a wider audience and had a greater social influence. The foundation of intellectual circles, such as London's Buddhist Society in 1907, was accompanied by the building of the first Buddhist temples destined for a Western public, with the first being established in Switzerland in 1911. At the same time, Hinduism experienced a growing popularity in both North America and Europe, notably through the impetus of the French author René Guénon (1886–1951), whose writings sought to bring a fuller understanding of Eastern religions to Westerners.

Asian religions were not only expanding through missionary zeal, as the occurring migration flows also contributed to their expansion. The movement of Asian populations from China and Japan toward America and Australia for economic reasons in the mid-nineteenth century led to the establishment of new religious institutions. In the United States the first Buddhist temples were built in the 1880s and 1890s, but they were exclusively for immigrants.

During the latter part of the nineteenth century and the early part of the twentieth century, Asian religions were also engaged in a process of reconquering Asia. In India—with the movements of Arya Samaj of Dayananda Saraswati (1824–1883) and the Yoga of Sri Aurobindo (1872–1950)—and throughout Southeast Asia, such as the Young Men's Buddhist Association in Myanmar founded in 1898 by C. S. Dissanayake. These movements emerged as a reaction to Western colonialism but were paradoxically organized along religious, educational, and political models inspired from the West. The renewal of Buddhism in India—through the initiatives of Anagarika Dhammapala, also known as David Hewawitharne, and of the Theosophical Society, founded in New York in 1875—embodied this fusion of Asian and Western influences active in the expansion of Asiatic religions. While some religious traditions, such as Chinese Daoism, slowly disseminated owing to the diffusion of Asiatic medical systems, "ethnic" religions, such as Japanese Shinto and its firm rooting in its national and cultural contexts, never experienced such expansion processes.

—Lionel Obadia

Bibliography

Clark, J. J. *The Tao of the West: Western Transformations of Taoist Thought*. London and New York: Routledge, 2000.

Richardson, E. Allen. *East Comes West: Asian Religions and Cultures in North America*. New York: Pilgrim, 1985.

Soviet Atheism

Upon the seizure of power in October 1917, the Bolsheviks set about restructuring Russian society according to Marxist ideals, thereby radically altering the existing centuries-old hold of the Orthodox Church over much of the Russian populace. The Bolsheviks had emerged from a radical and cosmopolitan Russian intelligentsia that was imbued with a zeal for radical social change and a distaste for anything that retained

the trappings of the Old Regime, including the Orthodox Church. The Bolsheviks were determined to remake the new Soviet society along a Marxist order. Russian Orthodox Christianity had a hold over a vast mass of the population, particularly the peasantry, and was a significant factor in the antipathy most Russians had against the new Bolshevik regime radiating from Petrograd. Islam, Buddhism, and other faiths of significant size within Bolshevik-held regions were also affected by state policies regulating and prohibiting religious practices, driving many of them underground where they often served as clandestine forms of resistance against the Communist Party-state. However, during World War II when the Soviet state decided that it would be advantageous to rally national fervor against the Nazi onslaught, state policy against religions throughout the Soviet Union was somewhat relaxed.

From 1917 well into the late 1930s, the Soviet state was active in seeking the destruction of the Orthodox Church and the instatement of state atheism as the official ideology of the Soviet Union. As Karl Marx and V. I. Lenin had argued, state atheism held that the institution of religion served the interests of the bourgeois classes in that they held the illiterate masses to bogus superstitious beliefs of an afterlife, preventing them from seeking social justice in this life. In order to “build socialism,” it was necessary for the state to actively replace the existing cultural belief systems of the people with the Marxist ideological worldview. The Bolsheviks sought to promote a new conception of Soviet citizenship through the implementation of this new paradigm via public education, legal changes, police enforcement, and social policies. The state actively sought to dissipate religious values in Soviet society through the promotion of secular values via cultural events, festivals, films, and propaganda.

In spite of these efforts, Russian Orthodoxy, as the former state religion under the tsarist regime, remained a significant factor in peasant resistance against the Soviet regime. Driven underground, deprived of its land and its assets and with its clergy persecuted and exiled, the Orthodox Church sustained a precarious existence as it provided a form of passive resistance

► ANTI-CHRISTMAS CELEBRATIONS: STATE ATHEISM AND HOLIDAYS

In their efforts to dissuade people from celebrating Christian holidays and feast days, the Soviet state organized festivals and celebrations that offered an alternative, albeit with a very pronounced political message mocking religion. Running from December 25, 1922, to January 6, 1923, the Moscow Komsomol (Communist Youth League) organized the first Komsomol Christmas (or anti-Christmas). It served mainly as a parody of Orthodox Church rituals, Christmas processions, and holiday traditions through such activities as atheist caroling, antireligious films, and plays or processions in which participants carried “red” Christmas trees. These celebrations provoked angry reactions by locals in certain locales outside Moscow. Anti-Easter celebrations followed in later years, also serving as ways of propagating state atheism and as criticism of the Christianity lingering in Soviet society, particularly among the elderly. Following the beginnings of the Cultural Revolution of 1928, the state was more careful in not insulting the sensibilities of fervent believers, seeking to sway them through persuasion by adapting to their beliefs rather than forcing them to reject their faith outright.

—Abraham O. Mendoza

by dissidents who quietly continued to practice their faith in secret, vulnerable to arrest and imprisonment. Adherents of other faiths in Central Asia and the Russian Far East also clandestinely kept their religious traditions in the midst of Soviet efforts to stamp out their faiths and replace them with state-sanctioned atheism.

Through various political festivals, the activism of Komosols (Communist Youth Leagues), and official police and state actions, organized religious organizations were circumscribed and gradually disbanded, with churches, mosques, and synagogues ultimately seized by the state. Legislation passed early in the establishment of the Soviet state required that religious property be seized by the state for the purpose of designating it for other purposes, such as schools, movie theaters, workers' clubs, and other uses that served the public. Soviet policy decreed that such organizations served no purpose in society, as they were relics of the Old Regime and the treasonous bourgeoisie. Furthermore, in order to replace the iconography and symbolism of religion, the party actively supported the cult of Lenin and later the cult of personality of Josef Stalin, founded on the mythologization of his status as a leader and symbol of the Soviet state and ideology. Communist organizations, such as the Komosols, were active in organizing celebrations and marches glorifying the Soviet state, particularly during the Five-Year Plans and collectivization. Unlike many of the older generations who remembered the days before the Russian Revolution, younger people were prone to fervently adhering to the revolutionary tenets advocated by the Soviet state. Holidays and festivals that had their origins in the Orthodox Church were replaced by state holidays (e.g., May Day, Harvest Day, and Day of the Tractor), whose celebrations actively competed for the public's attention.

—*Abraham O. Mendoza*

Bibliography

- Husband, William. *"Godless Communists": Atheism and Society in Soviet Russia, 1917-1932*. DeKalb: Northern Illinois University Press, 2000.
- Poppielovsky, Dimitry. *A History of Soviet Atheism in Theory and Practice, and the Believer*. Hampshire, UK: Macmillan, 1987.

Christianity in Oceania

Christianity came to Oceania through contact with Europeans in the sixteenth century. However, it was not until indigenous missionizing took place in the late nineteenth and early twentieth centuries that Christianity began to spread at a quick pace. With adoption also came adaptation, and Oceanic peoples began to create their own Christian movements. Some movements integrated a good number of ideas from indigenous religions, some took their inspiration from a desire to gain the power of whites, and others disputed theological tenets of Western Christianity. The process of adaptation indigenized Christianity, transforming it from a foreign religion to a central part of Oceanic identity.

Missionaries arrived during the nineteenth century, predominantly from Latin America, Australia, and New Zealand, and established mission societies throughout Oceania. Various factors influenced the distribution of missionaries including geographic proximity to the host nation, colonial influence, population density, and the prior presence of rival mission societies. In general the rate of conversion was low and attracted the marginalized in the nineteenth century. However, the rate of conversion exploded in the first half of the twentieth century.

Several factors contributed to this explosive growth during 1900-1945. The primary factor was colonial conquest that threw doubt upon the power of indigenous cosmologies. Doubting their indigenous beliefs made Oceanians more receptive to hearing about other religious options. Second, by the twentieth century, numerous translations of the Bible had begun to appear, principally in Polynesian languages and less frequently in Micronesian or Melanesian languages (where each language tended to have far fewer speakers). Biblical translations permitted literate Oceanians to learn of the new religion on their own terms. Third, increasing numbers of Oceanians became ordained clergy. Oceanian clergy displayed a consistent enthusiasm for evangelism and helped to produce an image of Christianity as an indigenous faith. Undeniably the greatest spread of Christianity within Oceania was the result of indigenous missionizing,

➤ TAHUPOTIKI WIREMU RATANA

Tahupotiki Wiremu Ratana, a native Maori of New Zealand, began his prophetic career in 1918. He believed this initial vision to be of the Holy Spirit who told him that he was the mouthpiece of God (“Te Mangai”) and was to unite the Maori people and turn them to Jehovah. Additional visits from angels and the Holy Spirit caused Ratana to give up drinking and to begin healing. His reputation and following spread throughout the Maoris of New Zealand, simultaneously fulfilling his dual goals of conversion and unification. The Ratana Church was founded in 1925 and remains the largest indigenous Maori church. Ratana taught that angels protected his church, which led to his alienation from other Christians. Feeling that religious goals were inseparable from political ones, Ratana campaigned for Maori rights in New Zealand and even secured four seats in Parliament for Maoris. He died in 1939.

—Joel E. Tishken



(Alan Liefing)

not the actions of foreign missionaries. The combination of these factors meant that most Christian denominations could be found across Oceania (though with uneven distributions) by the end of World War II.

Colonialism grouped together many islands and populations that had previously contained disparate identities divided by history, culture, and language. Christianity often served as a point of common ground among distinct groups that shared little with their neighbors in the newly formed colony. Thus, in a number of cases, perhaps most notably in Marquesas, Samoa, and the Cook Islands, Christianity provided an impetus for the development of a modern national identity.

Like peoples in other regions, Oceanic peoples adopted and indigenized Christianity to suit their local religious desires. A suitable

term for these indigenized variants of Oceanic Christianity has yet to emerge. Within Melanesia they have historically been called cargo (*kago*) cults. However, this term may perpetuate colonial images of naive Melanesians who improperly understand the modern world more than it describes any Oceanic religious reality. Regardless, no single term could suffice given the diversity within Oceanic Christianity. Two concerns dominated these indigenizing movements: theology and a desire to gain the power that whites had.

Colonial conquest shamed traditional institutions and called the supernatural power of indigenous religions into question. The global success of Europeans was attributed, in significant part, to their Christian religion. Many groups assumed that by making Christianity their own, they too would enjoy the power, prestige, and wealth

that whites enjoyed. The first of these indigenizing movements began to emerge as early as the 1820s. However, World War II gave large impetus to this thinking when the material wealth of Western nations, particularly the United States, was put on grand display across Oceania.

Although these movements shared the common goal of ushering in a time of prosperity, they differed in the degree to which they integrated indigenous traditions. Most movements underwent a complex theological evolution, sometimes appearing more Christian than at other moments. For instance, in the 1940s the Yali movement of the Madang District of New Guinea formed around the belief that both the ancestors and God would bring cargo in the future. When material wealth was not forthcoming, Yali relied upon traditional imagery more and more often. Another example of this sort of movement is the Jon Frum (or Jonfrum) movement of Tanna, in Vanuatu, that formed in the 1940s. Jon Frum is likely a mythical figure and not a historical character. Over time, various traditions regarding indigenous myth heroes, American nationalism, and Christian apocalypticism were crystallized into the single figure of Jon Frum. Thus, these movements were not static but instead were able to adapt to the changing circumstances of the lives of Oceanic peoples brought by colonialism, World War II, and later independence.

Theological concerns underpinned still other indigenizing movements and practices. Like others across the globe, Oceanic peoples reached their own conclusions about the best ways to practice Christianity. Some of these conclusions were reached through biblical exegesis, and others were arrived at through prophetic inspiration. For instance, Ten Naewa emerged on the island of Onotoa in the southern Gilberts in 1930. Naewa declared that he was a prophet of God and had been instructed that God would soon descend to the island. When the appointed day of God's arrival passed without event, the Catholics were blamed, and Naewa's male followers (the "swords of Gabriel") killed two Catholic Onotoans. In New Zealand, Tahupotiki Wiremu Ratana believed that he was the mouthpiece of God based upon his prophetic experi-

ences and healing gifts. Ratana and his followers were alienated from other Christians due to their prophetically inspired belief that their church was protected by angels. Ratana founded his own church in 1928 and campaigned for Maori rights with the belief that religious goals were inseparable from political ones. His church is now among the largest in New Zealand.

Because of Christianity's spread and adaptation in the first half of the twentieth century, Christianity has become a vital part of Oceanic identity. Oceania is, at the beginning of the twenty-first century, the most Christian region of the world. With the notable exceptions of Fiji and New Guinea, all Oceanic nations are now 90 percent or more Christian. Nations such as Samoa and Tuvalu are estimated to be at least 98 percent Christian. The majority of conversion to Christianity in Oceania, like in Africa, has taken place within the last century, particularly during the first half of the twentieth century.

—Joel E. Tishken

Bibliography

- Garrett, John. *To Live among the Stars: Christian Origins in Oceania*. Geneva: World Council of Churches; Suva, Fiji: Institute of Pacific Studies, 1982.
- Swain, Tony, and Garry Trompf. *The Religions of Oceania*. New York: Routledge, 1995.
- Trompf, G. W., ed. *The Gospel Is Not Western: Black Theologies from the Southwest Pacific*. New York: Orbis, 1987.
- Worsley, Peter. *The Trumpet Shall Sound: A Study of "Cargo" Cults in Melanesia*. New York: Schocken, 1968.

Indigenization of Christianity

The indigenization of Christianity is as old as Christianity itself. All religions are indigenized—or modified as they spread to suit local needs—whether those changes are cultural, religious, political, or social. The integration of local belief, ritual, or culture to an evangelical faith such as Buddhism, Islam, or Christianity is commonplace and explains why such religions are practiced differently in diverse places. In reality there is no such thing as Christianity as a

singular religion. Christianity is really a group of loosely associated subtraditions with regional variations. The period of 1900–1945 was particularly significant to the process of indigenization. First, movements emerged that indigenized Christianity within an existing church. Second, new global trends in the (re)definition of race and nation caused some populations to create new national churches. And third, indigenization followed the rapid spread of Christianity by missionaries.

During this time period, a number of movements emerged that indigenized Christianity within an existing church. These movements emerged in response to global changes taking place in the early twentieth century, particularly the two world wars, colonialism, and the rise of new ideologies such as communism and fascism. In France, for instance, there emerged a new attitude toward ecumenism within the Catholic Church. Prominent theologians such as Yves Congar, Marie Dominique Chenu, Henri de Lubac, and Jean Danielou argued that global ecumenism would also lead to the innerrenewal of the Catholic Church. They contended that Protestant and Orthodox churches had theological insights that could benefit Catholicism. The movement can be seen as indigenization in the sense that it slowly integrated a more liberal theological perspective, from western Europe, into the global Catholic Church. Similar indigenizing movements within a church may be found in the creation of new shrines (such as Fatima in Portugal in 1917), ordination of female clergy (Church of God in 1909; Assemblies of God in 1914), or a host of other prayer groups, healing movements, women's groups, and charitable societies. Each of these groups or movements wished to improve their existing church through the integration of their local perspective.

Indigenization was also prompted in this period, as new global trends in the (re)definition of race and nation caused some populations to create new national churches. The indigenization taking place in these situations did not typically concern theology, which continued to resemble that of related Christian bodies. What was indigenized was the leadership structure, which was assumed by people of a particular race or

ethnicity, and church practice, which became more ethnic or national in character. Some examples of this from around the world include the emergence of the Iglesia Filipina Independiente in the Philippines in 1902, the formation of separate black churches among peoples of African descent (such as the Spiritual Baptists in Trinidad in the 1910s and 1920s), creation of new national Protestant churches in many parts of the world (e.g., the American Lutheran Conference in 1930), or the emergence of newly independent Orthodox patriarchates (Georgia in 1917, Serbia in 1920, and Albania in 1937). In situations such as these, parishioners did not feel that their local needs could be met without the creation of a distinct religious body.

Finally, because of the Christian missionary zeal of the nineteenth century, Christianity had begun to spread rather rapidly by the first half of the twentieth century. This spread occurred in regions where Christianity was previously little known such as in Africa, Oceania, and many parts of Asia. As new groups from these regions embraced Christianity, they often altered the theology and the leadership structure to entirely suit their religious needs. There are countless examples of this, but some that formed during this period include the Non-Church Movement (Mukyokai) in Japan, the Nazareth Baptist Church of South Africa, and the Ratana Church of New Zealand. Kanzo Uchimura, founder of the Non-Church Movement in Japan, rejected an institutionalized church as a Western invention. He insisted that the church should be as invisible as faith. In the 1890s and early 1900s Uchimura formed loosely organized Bible studies organized along the more familiar Asian teacher-pupil relationship. Isaiah Shembe formed the Nazareth Baptist Church in South Africa in 1910. Based on his prophetic experiences and biblical exegesis, he insisted that salvation came through proper Saturday observation of the Sabbath and adherence to God's law. He permitted some Zulu practices such as dance and plural marriage for existing polygamists. In New Zealand, Tahupotiki Wiremu Ratana, founder of the Ratana Church, believed that he was the mouthpiece of God based on his prophetic experiences and healing gifts. He eventually founded his own

church in 1925. These three founders, and many like them around the world, indigenized both church organization and theology, seeing the truth of Christianity as being distinct from Western culture.

Tension exists between newly indigenized forms of Christianity and older churches of the Western world. What is at stake is the ownership of Christianity. Churches that developed within the Western world view themselves as the inheritors of the apostolic mantle and therefore the judges of what is proper Christian belief. Many theologians and missiologists from Western-style churches have judged newly indigenized forms of Christianity to be in error with improper theologies. Yet because there has never been such a thing as a single Christian truth, variants of Christianity can be neither right nor wrong. Many forms of newly indigenized Christianity argue that Christianity is a universal faith that no one culture owns. They would argue that truth is best revealed by God and the Bible, not by human traditions and cultures as these older churches have defined it.

All churches in existence today are the products of indigenization themselves, whether or not they remember their own past that way. For instance, one cannot possibly explain the Catholic Church in Ireland without regular reference to Celtic culture or explain the Russian Orthodox Church without Russian traditions. The definition of Christianity has always been disputed and will continue to be in the future as the indigenization of Christianity continues. For large parts of the world, that process began apace during 1900–1945.

—Joel E. Tishken

Bibliography

- Congar, Yves. *Ecumenism and the Future of the Church*. Chicago: Priory Press, 1967.
- Glazier, Stephen D. *Marchin the Pilgrims Home: A Study of the Spiritual Baptists of Trinidad*. Salem, WI: Sheffield Publishing, 1991.
- Howes, John F. *Japan's Modern Prophet: Uchimura Kanzo, 1861–1930*. Vancouver: University of British Columbia Press, 2006.
- Kaplan, Steven, ed. *Indigenous Responses to Western Christianity*. New York: New York University Press, 1995.

Global Spread of Protestantism

In the early twentieth century, European powers believed that war had been successfully overcome. Focusing their attention on colonial expansion meant that violent conflicts tended to occur in other parts of the world and not in Europe. However, as the European Great Powers had eventually expanded into most parts of the world, their focus was once again on Europe, as the crumbling Ottoman empire left parts of the Balkans in disarray. As events from this region ignited World War I, they also raised questions about the work of Protestants (such as Anglicans, Presbyterians, and Methodists) in spreading their message. As had been true from very early in the Reformation, Protestants were badly divided in their doctrine, and this meant that they did not present a unified response to the challenges of World War I. These challenges revealed differences not just in specific doctrines such as eschatology (study of the end times) or social theory but also in their concepts of authority and how to settle differences as well as their understanding of what is foundational.

Following the flurry of activity and expansion of Protestant Christianity in the nineteenth century, the early twentieth century can be understood as a time of challenges that exposed internal divisions within Protestantism and heightened external rejections of the Protestant message. For some time Protestants had united their teachings with the philosophical and cultural assumptions of western Europe, including the perfectibility of humanity through a changed environment, an interpretation of nature based on Uniformitarianism that ruled out special creation or miracles as mythology, and the combination of these into a linear progression of Western culture into a millennial age.

Although there were premillennial groups in the nineteenth century, it was common during that period for Protestants, both conservative and liberal, to believe in the progress of humanity and the ability for good to overcome evil through social progress (a version of postmillennialism that focuses on natural evils and fruit sin rather than root sin). What the twentieth century revealed

► PROTESTANT CONCEPTIONS OF AUTHORITY

The issue of authority has always been a problem for Protestants from the struggles leading to the Peace of Augsburg (1555) to the present and the seemingly unending number of denominational divisions. Having rejected the ecclesiastical authority of Roman Catholicism, Protestants never laid the foundation for a united judicial system. More importantly (because of its role in new and continued divisions), Protestants never found a foundation for a united doctrinal system. Although there is a common emphasis on *sola scriptura*, *sola fide*, and *sola gratia*, varying interpretations of the Scriptures have continually given rise to new denominations. Protestants have generally not distinguished between Scripture and that by which Scripture is understood. The consequence has been that different methods of understanding and interpreting have been confused with Scripture itself and have promoted long-standing and deeply felt divisions. For instance, in the fundamentalism/liberalism debate, literalism as an interpretation is asserted as the only meaning of the text rather than as one interpretation with application to some parts of Scripture.

—Owen Anderson

was the extent to which the expansion of good had been understood to be coextensive with the expansion of Western civilization. World War I and its devastation revealed the failures of Western civilization and the inability of Europeans to live in unity. For many within Christianity, this was sufficient proof that postmillennialism was false, and a dramatic increase of premillennial thinking resulted. For many outside of Christianity this was proof that Christianity could not be true since the best it could produce had so colossally failed (an argument all the more reiterated after World War II).

After the war there was a time of this-worldly focus. This need not be interpreted as a decrease in religious activity, although that might account for some of it. Another aspect is that premillennialism and its otherworldly focus on heaven is often accompanied by an emphasis on financial success in this world both as proof of God's bless-

ing and because of a kind of Christian hedonism. The crash of the U.S. stock market and the global depression worked as another challenge that called into question this view of the Christian life. The missionary societies (such as the American Missionary Society) of the nineteenth century struggled to both staff positions and receive donations, although there were times of surprising giving relative to the difficult economy.

Divisions within Protestantism were heightened due to these challenges. Premillennials interpreted the events as indicative of the end of history and worked to save as many individual souls as possible through an evangelical message of sin and redemption as well as heaven and hell. The Liberal Protestant alternative of amillennialism, which rejected both the claim that humanity was improving and the end time interpretations of premillennials, focused on social justice issues rather than saving individual souls for heaven. The Great Depression heightened that focus on the need to develop a Christian social philosophy that included politics and economics as well as justice and law. Because Marxism, although explicitly materialist, relied heavily on Christian moral intuitions about equality (and thus is often called a Christian heresy by thinkers like Jacques Maritain), this appealed greatly to Liberal Protestants and continues to be their central social philosophy. This is a continuation of the impact of European philosophies on Christian thinking, thus revealing that the challenge of the world wars was not entirely heeded.

One of the most controversial issues of the time, which continues into the present day, was the rejection of naturalistic cosmology by some Protestants (such as Congregationalists and some Presbyterians and Methodists). These are called Fundamentalists because their concerns were articulated in a set of writings called the *Fundamentals*, and their willingness to rely on Scripture over the interpretations of naturalistic empiricists has been stigmatized as antiscientific by liberal Protestants and naturalists alike. Although this characterization may be true in many cases, it is especially true of those groups (such as Dispensationalists like Hal Lindsey) who are premillennial and thus downplay achievement in this world and among those who emphasize inspiration

through an immediate intuition through to the Holy Spirit (Pentecostalism).

The latter group is one of the most striking features of twentieth-century Protestantism both in its departure from historic Christianity and its widespread acceptance throughout the world. Pentecostalism as a movement believes that the miraculous events described in the book of Acts on the day of Pentecost are normative for the church. Its interpretation of the challenges of the day is that the church needs spiritual renewal, which is taken to mean a return to the miracles that occurred on the day of Pentecost in Acts. Speaking in tongues, prophecy, and miracles are believed (by Pentecostals) to be continuing signs that the Holy Spirit is at work. Characterized by numerous divisions due to its emphasis on charismatic leaders and individual intuition, this group has spread faster than any other Protestant group and has had effects on other forms of Christianity such as Roman Catholicism. In essence, it is an attempt to find a solution to the questions of division in the church: divisions continue because people have not accessed the Holy Spirit (known through an immediate sensation rather than the work of the pastor or teachers throughout Christian history). Although this movement began before World War I, the events of the twentieth century were viewed as confirmation that other forms of Christianity were not “spirit filled.”

Having been the center of Protestant Christianity and learning in the nineteenth century, Germany also served as the source of these most significant challenges. Coming to a climax in World War II, the Nazi regime appealed to many of the Liberal Protestant ideas of the nineteenth century: the perfectibility of man, the leadership of the German church in civilizing the world, and the need for a worldview that affected all aspects of life (this was influential in Germany and throughout the Protestant world, since many pastors studied in Germany as part of their training). Although many German Christians accepted this view, some did not and instead worked against the Third Reich. This includes theologians and pastors who made public statements about the dangers of National Socialism, perhaps the most famous being Dietrich

Bonhoeffer who was eventually put to death in 1945 for his opposition.

The effects of this part of the twentieth century on the world were a rejection of Europe and colonialism. For Christianity, this meant a reaction against its message or an alteration of its message to take out what was thought to be European additions. This was encouraged by the most influential new theological movement (although European in origin) called crisis theology, dialectic theology, or neo-orthodoxy. Developed by Karl Barth as a reaction against the failures of European liberalism, this view calls for an inductive nonsystematic reading of Scripture whereby God is believed to speak infallibility through fallible texts and persons. God is said to be unknowable apart from this process. Consequently, there is no standard by which claims to illumination can be judged, so this view lends itself to pluralism even if Barth would not have wanted to go in that direction.

—Owen Anderson

Bibliography

- Johnson, Paul. *A History of Christianity*. New York: Atheneum, 1976.
- Livingston, James C. *Modern Christian Thought: The Enlightenment and the Nineteenth Century*, Vol. 1. 2nd ed. Upper Saddle River, NJ: Prentice Hall, 1996.
- Livingston, James C., et al. *The Twentieth Century*, Vol. 2. 2nd ed. Modern Christian Thought Series. Upper Saddle River, NJ: Prentice Hall, 1999.
- Stanley, Brian. “Christian Missions and the Enlightenment: A Reevaluation.” In *Christian Missions and the Enlightenment*, edited by Brian Stanley. Grand Rapids, MI: Eerdmans, 2001.

Christian Ecumenical Movement

During the first half of the twentieth century, a movement led by Protestant Christians sought to overcome confessional and denominational differences and to bring about unity in belief and practice among all Christians to make whole the one body of Christ. While unity has always been an idealized goal among Christians, the modern

ecumenical movement has its roots in cooperation among missionary groups in the nineteenth century and, as a cohesive movement, played a significant role in twentieth-century world Christianity, with a high point being the foundation of the World Council of Churches (WCC) in 1948.

Early leaders of the movement and its denominational supporters came almost exclusively from established or mainline Protestant groups in Europe and North America. As the movement succeeded in several of its goals between 1910 and 1948, its character necessarily became more inclusive and global. Indeed, it can be argued that as the movement became more open to Christians and Christian practices from around the world, what began as a movement for some degree of institutional unity came to be a force for decentralized, multicentered global Christianity. The result is that today, while the ecumenical spirit still lives on, the organizational movement has lost its focus and, for many Christians, much of its appeal.

The influence of the Christian ecumenical movement can best be seen in the cooperative organizations founded in the wake of the

International Missionary Conference, held in Edinburgh in 1910. Already in the nineteenth century, Protestant leaders founded interdenominational missionary societies in order to pool resources and support intensive programs for evangelism in Africa, Asia, and Latin America. The Edinburgh conference in 1910 brought together the leaders of these early ecumenical societies to discuss the challenges of world missions and to coordinate further missionary activity. More than 1,000 delegates attended the International Missionary Conference, all of them Protestants and most of them from Great Britain and the United States. For this reason, many scholars have portrayed the Edinburgh conference as the point at which Anglo-American Christianity began to take seriously the rest of the world as well as world Christianity. Under the leadership of the American Methodist John R. Mott, also a key figure on the International Committee of the Young Men's Christian Association (YMCA) and the Student Volunteer Movement for Foreign Missions, the delegates decided to create a more permanent organization. Although delayed by the outbreak of World War I, the International Missionary Council was founded in 1921, with Mott serving for 20 years as its first chairman.

Also during the 1920s, two other organizations were established to further the goals of the unfolding ecumenical movement. Five hundred delegates from 39 countries and 91 denominations met in Stockholm in 1925 for the first Conference on Life and Work to coordinate efforts to address social, economic, and political issues. Two years later, in 1927, representatives from 69 denominations gathered in Lausanne to build the theological basis for Christian unity; this was the Conference on Faith and Order. By 1937, the two conferences on Life and Work and Faith and Order agreed that a broader umbrella organization was necessary and called for the establishment of a World Council of Churches (WCC). Although World War II delayed the formal launch of the WCC, a provisional committee was formed, led by the Dutchman Willem Visser't Hooft. After the war, in 1948, 351 delegates representing 147 denominations and 44 countries convened in Amsterdam and founded

► THE CHRISTIAN YOUTH MOVEMENTS

Much of the groundwork for Ecumenicism in Protestantism came about as a result of the Christian Youth Movements. The Young Men's Christian Association (founded in 1844), the Young Women's Christian Association (founded in 1855), and the World Student Federation (founded in 1895) represented the largest colloquium of Protestants up to that time with the specific purpose of working across denominational lines for a global mission. This mission was meant to provide upright moral support; education, both physical and civic; and religious social connections. Many of the founders and participants of these organizations went on to participate in the worldwide Ecumenical movements, arguing for a religious devotion to Jesus Christ that crossed denominational lines. These organizations still exist today, comprising tens of millions of members.

—Peter A. Dykema

the WCC. Visser't Hooft continued to lead the organization into the 1960s and established the Ecumenical Institute in Switzerland with an endowment from John D. Rockefeller Jr. Under Visser't Hooft's leadership, the WCC took an active role in Third World disputes, following the ethical thrust of the Conference on Faith and Work. In 1961 at the WCC meeting in New Delhi, the Russian Orthodox Church joined the council, and the International Missionary Council came under the authority of the WCC, bringing full circle the organizational dynamics begun in Edinburgh 50 years earlier.

A second major thrust of the ecumenical movement has been the promotion of denominational mergers; however, most of these have occurred in North America (the Church of South India, formed in 1947 through the union of three existing bodies, being a major exception) and in the years following World War II.

The Roman Catholic Church and many conservative evangelical groups resisted ecumenical cooperation in the first half of the twentieth century. Disagreements over papal power, the meaning and practice of the sacraments, and the relationship between scripture and tradition separated Catholics from most ecumenical discussions until the openings offered by the Second Vatican Council. In the council's Decree on Ecumenism (1964), Rome acknowledged for the first time that there were authentic Christians outside of the Catholic obedience. Conservative evangelicals resisted the ecumenical movement because, in its early years, its leaders were liberal mainline Protestants seeking to accommodate Christianity to the modern world, while in

the years since the founding of the WCC, conservatives have objected to the council's occasional support of Leftist political movements around the world.

The Christian ecumenical movement unfolded when it did for several reasons. Certainly many Christians came to be embarrassed by the continued splintering of churches over details of doctrine and practice, while other Christians, recognizing the decline of the church's influence in modern secular society, were motivated to seek unity to shore up the church's prestige. From an institutional perspective, it is clear that the opportunities for cooperation in the mission fields of Africa and Asia provided the true impetus for the movement. What began as coalitions among European and North Americans, often working hand-in-hand with colonial regimes to create joint missionary operations and to bring commerce, civilization, and (Protestant) Christianity to the rest of the world, developed into mutual respect for European, African, Asian, Anglo, and Latin American forms of Christianity. The result was a more diverse, global Christianity.

—Peter A. Dykema

Bibliography

- FitzGerald, Thomas. *The Ecumenical Movement: An Introductory History*. Westport, CT: Praeger, 2004.
- Kinnamon, Michael, and Brian Cope, eds. *The Ecumenical Movement: An Anthology of Key Texts and Voices*. Grand Rapids, MI: Eerdmans, 1997.
- Rouse, Ruth, and Stephen Neill. *A History of the Ecumenical Movement, 1517-1948*. 4th ed. Geneva: World Council of Churches, 1993.

■ Introduction: Political and Sociopolitical Ideologies and Systems

From 1900 to 1945, a wide variety of ideologies characterized social and political movements throughout much of the world, ranging from the political Right in its conservative and monarchist manifestations to the other

political extreme, characterized by Marxism in its various forms. Other ideologies emphasized national and/or racial superiority and thus justified the subordination of others, as in imperialism and some forms of fascism. Such ideologies

contrasted in the extreme with anticolonial paradigms. In the context of the social upheavals and wars of the twentieth century, these ideological systems had a pivotal role in shaping history.

—*Abraham O. Mendoza*

Imperialism and Ideology

In the first half of the twentieth century, attitudes toward European imperialism radically changed as a result of the influence of anticolonial movements outside and within Europe as well as the prevalent activism against colonialism by socialists and communists, particularly after the success of the Russian Revolution (1917). While the European Great Powers were able to expand and sustain much of their vast domains through the interwar period, the gradual realization on the part of European politicians and policy leaders that European prestige and economic might had significantly declined would eventually lead to decolonization in the latter part of the century.

From 1900 to 1914, Britain, France, and Germany, in addition to Belgium, the Netherlands, and Spain, held significant colonial holdings in Africa, Asia, and Oceania. Economic growth, nationalism, and military strategy drove European expansion. The United States and Japan also acquired colonies in the late nineteenth and

early twentieth centuries, bringing two more contenders into the ranks of the Great Powers. With the onset of World War I the Allies used colonial troops in battle, thus raising the expectations of colonized areas for future political autonomy and greater independence. However, as such change failed to materialize, many colonial ex-servicemen returned to their countries of origin, particularly in places such as French Algeria, French Indochina, and British India, and joined anticolonialist movements seeking outright independence. U.S. president Woodrow Wilson's Fourteen Points, with promised to end war with postwar national self-determination for all combatants and occupied areas, raised expectations throughout much of the world. With the acquisition of former German and Ottoman provinces as League of Nation Mandates after World War I, many anticolonialists saw this as a veiled attempt to expand European imperialism under the new guise of Wilsonian rhetoric. Many of these anticolonialist leaders, such as Ho Chi Mihn (1890–1969) in Vietnam, were heavily influenced by the anticolonialist position of the European communist parties led by the Moscow-centered Comintern. Following the success of the Russian Revolution, in which a backward nation overthrew an autocratic regime and placed the “people” in power, anticolonialist movements the world over found a viable model and ally for their own struggles.

During the interwar period as the revisionist powers of Germany, Italy, and Japan sought to expand their imperial domains at the expense of the British and the French, using the global economic crisis as the crux of the issue, attitudes against imperialism had hardened significantly in much of the West. The Italo-Abyssinian War (1935–1936) and the Japanese attack on Manchuria (1931), conflicts in which the Great Powers were expanding at the expense of weaker regions, shocked world opinion in a sharp contrast with how such events would have been received earlier in the century. Furthermore, internal European aggression from Nazi Germany, directed at the acquisition of territory within Central Europe, drastically changed perceptions of imperialism throughout the West. The overt racism espoused by the National Socialists in their treatment of Slavs, Jews, and other East European

➤ AMRITSAR MASSACRE (1919)

Following World War I, Indian demands and protests for autonomy increased in India. On April 13, 1919, British Indian soldiers under the command of General Reginald Dyer shot an unarmed group of Indian civilians in the city of Amritsar in the province of Punjab. Sources differ on the exact number of total casualties, which range from 379 to over 1,000. Dyer alleged that he was merely trying to put down a potential revolt, but sources contend that it was a peaceable gathering. This massacre shocked people across Britain and British India, thus illustrating the excesses suffered under the yoke of imperialism by colonized peoples.

—*Abraham O. Mendoza*

peoples had a significant impact on how imperialism was seen by many throughout the West. Complicating matters further, some anticolonial nationalists, such as Sukarno (1901–1970) in Indonesia and Subhas Chandra Bose (1897–1945) in India, sought Axis support for their fight against Western colonialism. Nonetheless, with the end of World War II, the consequent ebbing of European dominance across the world, and the rise of the two superpowers, the end of colonialism was at hand.

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Bibliography

Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.

Lamb, Margaret, and Nicholas Tarling. *From Versailles to Pearl Harbor: The Origins of the Second World War in Europe and Asia*. New York: Palgrave Macmillan, 2001.

Liberalism

Liberalism is a political philosophy based upon individual freedom, the essential goodness of mankind, and the value of rational thought. Prior to World War I, liberalism was used in Europe and North America to support the protection of individual freedoms and limited roles for a representative government. Acceptable government duties included the enforcement of civil order, the provision and maintenance of a stable currency, and the protection of citizens from foreign invasion. Liberalism included a belief in laissez-faire economics, which suggests governments should not interfere with the operation of markets. The social miseries created by free-market capitalism and the devastation of World War I led to the postwar rejection of liberal ideas, an increase in the size and scope of government, and the rise of authoritarianism.

Liberalism is derived from two distinct sources. One source, which traces back to classical antiquity, views the primary purpose of government as the protection of individual liberty. This tradition is represented by the political doctrines of the English Whigs in the seventeenth and eighteenth centuries. Whigs favored severe restrictions on the power of the monarchy. The

other source, which developed on the European continent, favored a reconstruction of society in accordance with the principles of reason. This tradition is represented by the Enlightenment philosophies of Rene Descartes, Voltaire, and Jean-Jacques Rousseau. These ideas assume that people are able to recognize problems and take active steps to improve the human condition. These two sources combined in the nineteenth century to become liberalism. Liberal beliefs include government by democracy, equality of men, and the individual freedoms of thought, speech, and the press. Liberalism stands in contrast to conservative and authoritarian philosophies, which favor the restriction of individual liberty by established religious and political authorities.

Liberalism's popularity in the nineteenth century gave rise to powerful political parties in the United Kingdom and Canada. The British Liberal Party, which was influential from 1832 to 1922, supported free trade and individual liberties, but opposed imperialism and government interference in the economy. Notable leaders include William E. Gladstone, Herbert Henry Asquith, and David Lloyd George. In Canada, Wilfrid Laurier led the Liberal Party to power as the prime minister from 1896 to 1911. The liberal movement in the United States never reached the magnitude of that in Europe, primarily because many goals of liberalism, such as the establishment of individual freedoms, were already embodied in the U.S. Constitution and Bill of Rights.

By the end of the nineteenth century, the unregulated industrialization and development of business resulted in huge inequalities of wealth and power. Other undesirable outcomes were widespread pollution, famines, unsafe working conditions, and the use of child labor. Liberalism and its support of free-market capitalism seemed to promote exploitation, colonialism, imperialism, war, inequality, and poverty.

The negative consequences of industrialization led many people, especially poor workers, to question the liberal philosophy. Liberal thinkers developed new interpretations of individual freedom. These included movements to protect workers' rights through the creation of trade unions. Thus, in the early twentieth century, liberalism began to advocate an active role for the

government in the promotion of social progress and the provision of a minimum level of individual welfare. This sentiment was also the foundation of the Progressive movement, which shared liberalism's belief in the ability to improve living and working conditions and advocated change over the maintenance of the status quo. In Great Britain, Liberals successfully implemented national insurance, welfare programs, and laws regulating conditions for workers. In Canada, Prime Minister Laurier's continued support for traditional liberal ideas, such as the promotion of free trade with the United States, led voters to replace him in 1911 with a Conservative Party candidate.

The promotion of a more active social role for government was a distinct departure from classical liberal thought and is now known as social liberalism. An alternative branch of liberalism, which prefers the classical interpretation of minimal government, is now known as libertarianism. The justification for social liberalism is the belief that in order for people to be free, society needs to provide them with basic education, protections, and opportunities. Thus many liberal thinkers advocated laws that mandated minimum standards for wages and working conditions and against the employment of children. Laissez-faire liberals viewed such laws as unnecessary impediments to free-market capitalism.

World War I dealt a severe blow to the popular support of liberalism. There was a perception that liberalism contributed to the conditions that led to World War I. Disillusionment with the duration of the war and the huge loss of life created a backlash against liberal thought. Citizens encouraged governments to play a more active role in managing their economies and societies. Some nations even adopted socialism or fascism as better alternatives to liberalism. This rise of authoritarianism, including the subsequent rise of Nazism in Germany, became a factor leading to World War II.

World War I had a profound effect on societies. It led to the expansion of governmental power and authority in many countries, including the United States, Great Britain, and France. World War I helped destroy the strong belief in liberalism that had prevailed in Europe since the Enlightenment. Liberalism returned to popularity after World War II with the belief that demo-

cratically elected governments would better serve societies than the authoritarian regimes that had emerged in the early twentieth century.

—John B. Buck

Bibliography

- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Knopf, 1995.
- Buck, John B. "Liberalism." In *The Home Front Encyclopedia: United States, Britain, and Canada in World Wars I and II*, Vol. 1, edited by James Ciment and Thaddeus Russell. Santa Barbara, CA: ABC-CLIO, 2006.
- Dewey, John. *Liberalism and Social Action*. New York: G. P. Putnam's Sons, 1935.
- Hayek, Friedrich A. *New Studies in Philosophy, Politics, Economics and the History of Ideas*. London: Routledge & Keagan Paul, 1982.
- Hobhouse, L. T. *Liberalism*. London: Williams and Norgate, 1911.
- Mansfield, Harvey. *The Spirit of Liberalism*. Cambridge, MA: Harvard University Press, 1978.
- Schapiro, J. Salwyn. *Liberalism: Its Meaning and History*. Princeton, NJ: D. Van Nostrand Company, 1958.
- Sykes, Alan. *The Rise and Fall of British Liberalism 1776–1988*. London: Longman, 1997.

Marxism

From 1900 to 1945, Marxism developed from a European ideological phenomenon into various strains of political movements throughout much of the world. In the previous century, Marxist parties had been mostly associated with radical political movements connected to labor organizations and clandestine intelligentsia. In the twentieth century, however, Marxists forged legitimate political parties participating in elections and office holding, particularly in Britain, France, and Germany. However, theoretical disagreements led to major schisms, particularly between socialists and communists. Major global events, such as World War I, the Russian Revolution, the rise of fascism, events in the Soviet Union under the Stalinist regime, and the coming of World War II, led to major changes in the theoretical and practical applications of Marxist ideology.

The Second International (1889–1916), which was an alliance of European socialist parties, coordinated the interests of Marxist parties in

setting a common agenda. Major disagreements over political participation in liberal government, imperialism, the exclusion of radicals, and questions of national interests plagued the organization. The outbreak of World War I led to its eventual dissolution, as socialist parties from various nation-states failed to hold together against the war, choosing to support their respective countries. However, the more radical contingents split off from their respective socialist parties during the war, most notably the radical Independent Social Democratic Party of Germany. Viewing the success of the Russian Revolution in the dissolution of the tsarist regime, radical Marxist parties across Europe chose to support the overthrow of liberal regimes rather than work within them for the gradual transition of society, as had been the agenda of moderate Marxist parties. These moderates, such as the Social Democratic Party in Germany, found themselves competing for the same voters as the far more radical parties.

Interwar Marxism was characterized by the growing appeal of the Soviet Union under the Stalinist regime, whose ideology was known as Marxism-Leninism. While most of Europe and North America was mired by diplomatic impasses and economic turmoil, the Soviet Union was presented as a beacon of progress and hope to much of the world. The Third International held in Moscow developed into the Comintern (1919–1943), an international communist organization under Soviet leadership, that served as a means to influence events abroad, particularly using European communist parties in order to achieve its ends. The Comintern had links to anticolonialist movements across the world, particularly in Asia and Africa. This left moderate socialist parties, such as the British Labour Party and the French socialist parties, to compete for the same votes as the Moscow-controlled parties with their international appeal.

During this era, fears of communist revolution prompted many middle-class voters to elect fascist leaders into power particularly in Austria, Germany, and Italy, all of which had sizable communist parties. The Great Depression and the diplomatic crises of the 1930s led many socialists to consider allying themselves with communists, as was evident with the Popular Front govern-

➤ KARL KAUTSKY AND SOCIAL DEMOCRACY

Prominent socialist and Marxist theoretician Karl Kautsky (1854–1938), who initially attacked the Marxist concept of social democracy advocated by fellow German socialist Eduard Bernstein, later became a major advocate for it. Kautsky initially sustained a position that supported a workers' revolution and opposed any sort of alliance with liberals in a constitution framework of government. However, after the end of World War I and the onset of the Russian Revolution, Kautsky became more accepting of social democracy as he became more critical of the authoritarian workers' state developing in Russia. In Kautsky's view, the Bolsheviks in Russia had staged a coup against the wishes of the Russian people, sustaining their own interests and ideology and not the will of the majority. In contrast, social democracy would provide the representation necessary for the underprivileged classes, which would gradually assume the mantle of power.

—Abraham O. Mendoza

ments set up in France, Spain, and China under Soviet auspices. Growing fears of German and Japanese power in relation to the Soviet Union had compelled Soviet leaders to search for allies abroad rather than foment a workers' revolution. With the signing of the Nazi-Soviet Pact of 1939, many committed communists found themselves torn between following the Stalinist lead or continuing the fight against fascism.

The outbreak of World War II, with much of the world fighting against the Axis, led to conciliation among communists, socialists, and liberals to fight against global fascism. Many communist partisans across Europe were pivotal members of resistance organizations and sabotage efforts. This marriage of convenience would not obscure the ideological goals that committed Stalinists expected from the postwar settlement. Many Marxists felt that the Red Army that ousted the Germans from eastern Europe along the eastern front paid heavily in casualties, while the United States and Britain allegedly had fought a “side-show” on the Western and Southern fronts. As the guns fell silent in 1945, the Grand Alliance between the Soviet Union and the United States

soured. Communist agitation across Europe and Asia, in tandem with anticolonialist movements, retribution against former Axis collaborators, and growing resentment against former Allies, led to the gradual dissolution of this wayward wartime alliance. The exclusion of communist parties and the toleration of socialist parties across Europe further complicated relations, particularly after the establishment in 1947 of the Marshall Plan, which officially set such conditions for financial aid. The development of peoples' democracies in eastern Europe under Stalinist auspices and the communist victory in the Chinese Civil War in the mid to late 1940s finally led to the onset of the Cold War between the superpowers.

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Bibliography

Gilbert, Felix, and David Clay. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.

Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.

Conservatism

In the first half of the twentieth century, conservatism was not a fixed set of values or ideals that could be deemed an ideology on the same footing as socialism, fascism, or communism. Rather, it was a set of political movements, mostly in the West, set on preserving the political, social, and economic status quo of international and domestic affairs. In the West, it is mostly associated with the British Conservative Party and the U.S. Republican Party, but other variants included staunch royalists such as the Nationalists in Spain or the Center (Catholic) Party in Weimar Germany. Some of these variants hoped to restrain the populism of the far Left social democratic parties that threatened the social and economic stability upon which the conservatives' constituents depended (Britain, France, Germany, United States, Italy, etc.). Other conservative groups hoped to retain the influence of institutions such as the monarchy, the nobility, the military, and the church as political and social actors in national affairs (Spain, Portugal, Germany, etc.). However, amid the political and

economic chaos unleashed by World War I, conservatism confronted the growing popularity of fringe movements on both sides of the ideological spectrum, finding itself on the offensive and, in some instances, having to compromise with the perceived lesser of two evils.

In the United States and the British commonwealth, conservatism was dominated by the industrial class but also by increasing numbers of nationalists, free traders, and farmers. In Britain, it also held large numbers of supporters of the empire and members of the British aristocracy along with their supporters. The onset of World War I, while making conservatives avid supporters of the war effort, also diminished their influence in politics as economic mobilization and the expansion of the welfare-state became an integral part of their respective governments' responsibilities. The interwar period, with its international and global economic crises, found British commonwealth and U.S. conservatives advocating for raising tariffs and closing off trade as well as advocating a foreign policy that recognized their current weakness vis-à-vis the Germans. British conservatives, such as Prime Minister Neville Chamberlain, became advocates of appeasement, while American conservatives such as President Herbert Hoover supported isolationism as responses to aggression abroad by Germany, Italy, and Japan. While remaining fiercely in opposition to fascism, National Socialism, and communism, conservatives did not wish to engage in hostilities unless absolutely necessary. In the midst of the Great Depression, many conservatives supported measures of austerity and balanced budgets, which did not alleviate the needs of the poorer members of society but did do damage to their popularity as they slashed social spending.

In contrast, monarchists, nationalists, and Christian parties in western Europe offered a more assertive reaction amid the tumultuous interwar period than that of the more moderate Anglophone conservatives. Spanish nationalists and monarchists came together under the rebellion of General Francisco Franco in 1936 to fight what they saw as a godless red menace in the Spanish Republic, igniting the Spanish Civil War. Moreover, Catholic and social conservatives in Germany, Austria, and Italy, fearing the

➤ CARLISTS IN INTERWAR SPAIN

The Spanish rightist fringe movement of Carlist monarchists supported a separate lineage of the Bourbon monarchy that descends from Holy Roman emperor Charles V (King Charles I of Spain, r. 1516–1556). While they ultimately succumbed to the right-wing dictatorship of Francisco Franco, they were illustrative of the many varieties of conservatism. Their suspicions of the existing Bourbon line of the Spanish monarchy as accommodating to liberalism in early twentieth-century Spain as well as the growing influence of socialism, anarcho-syndicalism, and communism made them eager to seek allies among other political factions on the Right. Mostly monarchists and staunch Catholics, Carlists sought to destroy the liberal republic, whether it be under the conservative Bourbons or the red Spanish Republicans. They reluctantly supported General Franco's Nationalist rebellion against the Spanish Republic in 1936 in spite of his support for the existing Bourbon monarchy. However, ideological clashes with their nationalist allies, such as Franco's militarists and the fascist Falange, continued to make them an alienated party within the fragile Nationalist grouping. After the end of the Spanish Civil War (1936–1939), they continued to exist in quiet opposition to Francoism and its support of



A group of Carlists enters Badajoz, Spain, on August 15, 1935, following a victory there by Nationalist Army rebels against the Republican government. (Bettmann/Corbis)

the Alfonsine Bourbon line (which was considered the legitimate line descending from King Alfonso). In spite of the liberal traditions established in the nineteenth century and the destruction of the intra-European empires and kingdoms after World War I, similar conservative movements continued to exist in Europe.

—Abraham O. Mendoza

potential uprising of the communist masses, found common ground with far Right fringe groups such as the Italian Fascists and the German National Socialists in spite of their violent and radical ideological tenets. The German Center Party, composed of German Catholics from across Germany, threatened from the political Left, found common cause with nationalists and anti-Semites. Moreover, many European conservatives supported military dictators, such as António de Oliveira Salazar in Portugal, Admiral Horthy in Hungary, and Marshal Pilsudski in Poland, all of whom promised stability amid domestic and international chaos.

The onset of World War II was partly due to the collaboration of some of the continental European conservative movements with Far Right groups (due to their fears of socialism and communism) but also the reluctance of the Anglo-American conservatives to engage the revisionist

powers (Germany, Japan, and Italy) from a position of strength.

—Abraham O. Mendoza

Bibliography

- Capoccia, Giovanni. *Defending Democracy: Reactions to Extremism in Interwar Europe*. Baltimore: Johns Hopkins University Press, 2007.
- Lamb, Margaret, and Nicholas Tarling. *From Versailles to Pearl Harbor: The Origins of the Second World War in Europe and Asia*. New York: Palgrave Macmillan, 2001.
- Overly, Richard J. *The Inter-War Crisis 1919–1939*. 2nd ed. New York: Longman, 2007.

Monarchism

Monarchism evolved from a conservative political grouping that supported the European Old Regime monarchies of the Belle Époque to a

➤ WILHELM II IN THE NETHERLANDS

As the popular shout of “hang the Kaiser” rang out through the capitals of the Allies toward the end of World War I, Kaiser Wilhelm II reluctantly abdicated the throne on November 9, 1918, and fled to the Netherlands the next day to live in exile. Much to the dissatisfaction of the Allies, Wilhelm Hohenzollern remained in exile for the rest of his life and continued to be a rallying symbol for monarchists in Germany for decades. He wrote letters, essays, and his memoirs, blaming the German people for their interwar miseries while vindicating himself of any wrongdoing. With the rise of National Socialism in the 1930s, Wilhelm applauded the restoration of political and social order under Adolf Hitler, hoping for his own eventual restoration to the throne. However, Hitler was no monarchist, and Wilhelm was utterly disappointed as he realized that the new German political order did not require the monarchy. In spite of this, during the German occupation of the Netherlands Wilhelm retained a



Friedrick Wilhelm Victor Albrecht became Kaiser Wilhelm II of Germany at age 29; his volatile temperament and actions had a profound effect upon German and European history during the twentieth century. (Library of Congress)

personal honor guard of German soldiers, which Hitler did not approve of but nonetheless tolerated. Upon his death in 1941, Wilhelm's wish to never return to Germany unless the monarchy was restored was respected by Nazi authorities.

—Abraham O. Mendoza

series of reactionary movements in support of the dethroned pretenders during the interwar period, some of which flirted with other far Right ideological parties in alliance against the mainstream political Left. In essence, monarchism from 1900 to 1945 was a fringe ideological and political movement in much of Europe that collaborated with fascists against the political Left, with many of its adherents ultimately becoming pawns of the Germans under the Third Reich.

In the early twentieth century, the German Empire, Habsburg Austria, imperial Japan, Ottoman Turkey, and tsarist Russia, while having the trappings of liberalism as concession to their respective elites, retained varying degrees of power for the monarch and the aristocracy, namely in the state bureaucracy, the military, and high government positions. In contrast with the constitutional monarchy of Britain, which ceded much of its political authority to Parliament, these Old Regime monarchies only granted limited representation to their respective citizenries through bicameral legislatures, with major concessions only for the aristocracy and the upper echelons of the middle classes. While greater representation

was in fact granted to the masses, allowing for direct election for representatives in the lower house of the legislature, legislative checks in the upper houses (often dominated by aristocrats) restricted any sort of major social reforms.

With the collapse of the major European monarchies at the end of World War I (the Russian Romanovs, the Austrian Habsburgs, the German Hohenzollerns, and the Ottoman sultans) new republics emerged in their stead. Interwar Europe was characterized by the emergence of the Weimar Republic in Germany and the Soviet Union in the old Russian Empire and the dissolution of Austria-Hungary into its composite states of Austria, Hungary, and Czechoslovakia with some concessions to Poland, Romania, and Yugoslavia. However, in the political and economic instability that characterized the interwar period, monarchist reactionary movements emerged as a response to the liberalization of government, the growing popularity of socialism, and fears of communism. The whites in Russia, Action Française in France, Carlists and Alfonsists in Spain, and segments of the German Nationalist People's Party, among other groups in major European states (Hungary, Portugal, Italy, etc.), supported

the reinstitution of the monarchy as the main agent of the state. Many of these groups also supported other institutions that characterized the Old Regime, such as the church, the aristocracy, and the reverence to these by the masses, while also advocating fervent nationalism, xenophobia, anti-Semitism, and political violence.

The success of fascism, socialism, and to a lesser extent communism in interwar Europe worked against the goals of monarchist movements. In light of their limited numbers and political power, these monarchist movements sought common cause with fascist and authoritarian movements. The monarchist German Nationalist People's Party subsumed itself under the political power of the National Socialist Party in Germany as a means to prevent the rise of communism. In a similar fashion, the monarchist Carlists and Alfonsists in Spain joined forces with the fascist Falange and the authoritarian reactionary Francisco Franco to fight against the Spanish Republicans (anarchists, socialists, communists, and liberals) during the Spanish Civil War (1936–1939). Other movements, such as Action Française (in Vichy France), emerged during the Nazi occupation of much of Europe as active collaborators in their respective puppet regimes, albeit at the whim and direction of their German superiors. These puppet regimes would later be termed quislings after Vidkun Quisling (1887–1945), who headed Norway's government during the Nazi occupation.

—Abraham O. Mendoza

Bibliography

- Overy, R. J. *The Inter-War Crisis 1919–1939*. 2nd ed. New York: Longman, 2007.
- Payne, Stanley G. *A History of Fascism, 1914–1945*. Madison: University of Wisconsin Press, 1995.
- Weber, Eugen. *Action Française: Royalism and Reaction in Twentieth-Century France*. Stanford, CA: Stanford University Press, 1962.

Republicanism

In the late nineteenth century, republican forms of government were limited to France in Europe, various South American republics, and the United States in North America. The newest of these was the Third French Republic established in 1870, built on the ruins of the Third Empire of Napo-

leon III at the end of the Franco-Prussian War. Britain was characterized by its constitutional monarchy, and most of the other major European powers retained more authoritarian monarchical systems with limited powers beset for their legislatures. During World War I, most of Europe experienced an increase in the power of the state due to the social and economic mobilization for war. At the war's end, with the dissolution of the Habsburg (Austria-Hungary), Hohenzollern (Germany), and Romanov (Russia) royal houses, new republics emerged in their stead. Poland, Czechoslovakia, Austria, Hungary, the Weimar Republic in Germany, and at least in theory the Soviet Union and its composite republics all added to the map of the world's republics.

In 1911 Chinese revolutionaries deposed the Qing royal house and established the Republic of China, which was based on Western principles while retaining certain cultural characteristics, such as the civil service examinations, of China's long monarchical past. Under the leadership of President Sun Yatsen, the early Chinese experiment with a republican form of government developed into an utter failure given the rife divisions in the country and the factional infighting between warlords, which lasted for decades. With the ascension to power of Jiang Jieshi (Chiang Kai-shek) in 1925 after Sun Yatsen's death as the leader of the Nationalist Party (KMT), the pretense of a democratic republic was dropped as China became an authoritarian state.

Developments in Europe also ensured the end of the nascent republics that succeeded the antebellum Central European empires. The Polish Republic, created in 1919, was ended by the 1926 May Coup of Josef Pilsudski, which established a dictatorship. Austria and Hungary also succumbed to authoritarian governments in the interwar period, given the factional infighting driven by political and economic chaos. Weimar Germany saw its end with the coming to power of Adolf Hitler in 1933. The last of the postwar republics, Czechoslovakia, was absorbed by Nazi Germany in 1938 as the protectorate of Bohemia-Moravia, with its Sudeten region annexed into Greater Germany. The growing authoritarian nature of the Soviet Union under Josef Stalin also removed any pretense of its republicanism during the late 1920s and early 1930s.

World War II led to the destruction of the authoritarian states that had supplanted the short-lived republics instituted at the end of World War I. Following the end of the latter war, areas occupied by the Western Allies were set up with republican forms of government such as the Federal Republic of Germany and the Italian Republic, among others. In areas under Soviet occupation, the establishment of peoples' republics (i.e., East Germany, Poland, Hungary, and Czechoslovakia) also followed, which were republics in name only but were really authoritarian states ruled by national communist parties under Moscow's direction.

—*Abraham O. Mendoza*

Bibliography

Gilbert, Felix, and David Clay. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.

Hobsbawm, Eric. *The Age of Extremes: A History of the World, 1914–1991*. New York: Vintage, 1996.

Xenophobia

From 1900 to 1945 xenophobia arose repeatedly during times of economic duress and war. Xenophobia, defined as one group's fear of the other, is often equated with tribalism or ethnocen-

trism. While it can embody racism, xenophobia is distinct because it is driven less by a sense of race-based superiority and more by a fear that outside groups will not adapt and may even seek to undermine the predominant culture.

From 1900 to 1945 there were many local and regional forms of xenophobia. For example, after the colonization of Korea in 1910, thousands of Koreans immigrated to Japan, where their culture was disparaged and they were crowded into ghettos in the cities of Osaka and Nagoya. During World War II, Japan utilized more than 600,000 Koreans as forced laborers in factories. In Africa, tribal rivalries that had raged for centuries continued to cause animosity, such as conflict between the Hutu and Tutsi. Often these were exacerbated by colonial policies favoring one tribe over the other. In Belgium, the Flemish ethnic minority faced xenophobic discrimination at the hands of the majority Walloons. Flemish language was not allowed to be spoken in the army or in the national parliament. The multiethnic dual empire of Austria-Hungary created more ethnic tension in the Balkans. Hungary's Magyarization policy stamped out other ethnicities and languages in favor of Hungarian. In both the Austrian and Hungarian portions of the empire, Slavs were looked upon with contempt and suspicion. This hostility led to the assassination of Archduke Franz Ferdinand in Sarajevo in 1914, which triggered World War I. In addition, this time period saw the rise of two global forms of xenophobia: fears of a Zionist Conspiracy and of the Yellow Peril.

Published in a Russian newspaper in 1903, the forged *Protocols of the Elders of Zion* disclosed an imaginary Jewish plot to take over the world. This publication fueled anti-Semitism and pogroms. For example, in April 1903, 45 Jews were killed and another 400 injured in Kishinev, Russia, when violence erupted over the false accusation that a local youth had been killed by Jews. Toward the end of World War I, copies of the *Protocols* made their way to Europe, the United States, and other countries. From Russian peasants to farmers on the American Great Plains to the industrialist Henry Ford, many blamed their woes on an alleged international Jewish conspiracy managed by the Rothschild banking family.



Japanese Americans arrive at the Santa Anita Assembly Center in Arcadia, California, prior to going to a relocation center on April 5, 1942. Following the attack on Pearl Harbor, persons of Japanese ancestry living on the West Coast were required to go to internment camps under Executive Order 9066. (National Archives)

Another common popular form of xenophobia was fear of the Yellow Peril, a phrase coined by Germany's kaiser Wilhelm II. The kaiser and many other Europeans feared that waves of Asians would overrun their nations demographically. In the United States, especially on the West Coast, anti-Asian xenophobia became very strong. Two examples of this fear in the United States include the banning of the immigration of Chinese laborers (1882) and the internment of more than 100,000 Japanese Americans in prison camps during World War II. The fear of many Americans was that the Japanese as well as Japanese Americans living in the United States might act as a fifth-column movement in support of Japan during the war.

The 1920s and 1930s were a time of heightened xenophobia. This attitude was also expressed in international trade as nations built high tariff walls to keep out foreign goods. Many countries, such as the United States and Mexico, closed their traditional open-immigration policies. While Turkey and Greece agreed to mass deportations of more than 1.2 million individuals as one way of reducing long-simmering ethnic tensions in their countries, Filipino and Mexican field workers were deported from California in the 1930s. In addition, various nationalist movements throughout the world drew their support and existence from xenophobia, including the Ku Klux Klan in the United States, the Muslim Brotherhood in Egypt, the fascist movements of Southern and eastern Europe, and the communists of China.

In its worst form, xenophobia led to outright attempts at extermination. During World War I, the Ottoman Turks allegedly murdered almost one million ethnic Armenians. Years later the rise of Nazi Germany became the most horrific example of violent xenophobia, as Adolf Hitler blamed the German Jews for the loss in World War I and the unfavorable terms of the Treaty of Versailles. He also linked the Jews to the communist movement. The Nuremberg Race Laws (1935) restricted the rights of German Jews, and four years later the Nazis confined Jews to ghettos. The Final Solution, as the Nazis called their plan to exterminate the Jewish race, led to the deaths of more than six million Jews during the Holocaust, with another six million Slavs, homo-

sexuals, Catholic clergy, and Gypsies also being murdered.

—Gregory J. Dehler

Bibliography

- Allport, Gordon. *The Nature of Prejudice*. Cambridge, MA: Perseus, 1979.
- Joll, James. *Europe since 1870: An International History*. New York: Harper and Row, 1973.
- Waller, James. *Becoming Evil: How Ordinary People Commit Genocide and Mass Killing*. New York: Oxford University Press, 2002.

Social Democracy

The term "social democracy" describes those movements and parties that beginning in the latter half of the nineteenth century aimed to achieve the democratic aspirations of the revolutions of 1848 and to transform the industrial-capitalist order into a socialist one. As parliamentary government and industrialization spread, social-democratic parties and trade unions arose throughout Europe and were linked together in the Second International, headquartered in Brussels after 1903. Eventually they were established in most of the world's nations.

By 1900, a simplified or vulgar version of Marxism dominated social democracy's ideological outlook and consisted of three core propositions. First, the wage relation between capitalists and workers is unfair and allows the former to exploit the latter through the extraction of surplus value in the production process. Second, history proceeds in stages in which each is characterized by a specific economic system dominated by a particular class. Thus the capitalist order, like earlier ones, was a transient historical phenomenon, which would be replaced by socialism. Third, workers are a fundamentally homogeneous class united by similar interests. In order to improve their day-to-day condition, resist efforts to divide them, and ultimately overthrow capitalism, they had to organize into political parties and trade unions. In the context of Europe's industrial transformation, this form of Marxism attracted substantial numbers of workers, artisans, and elements of the middle classes.

It was the German Social Democratic Party (Sozialdemokratische Partei Deutschlands, SPD) that led the way. Founded in 1875 through the merger of the reformist Allgemeiner Deutscher Arbeiterverein (General Association of German Workers) and the more radical and Marxist-oriented Sozialdemokratische Arbeiterpartei (Social Democratic Workers' Party), the SPD emerged from more than a decade of illegality as a powerful mass party in 1891. The SPD's *Erfurt Program*, drafted in that year by Karl Kautsky and Eduard Bernstein, provided a Marxist analysis of capitalist development, called for the socialization of the means of production, and set forth a range of practical demands to empower workers and improve their condition. The program served many other parties as a model and was one of the most widely read socialist texts.

Between 1903 and 1912 the SPD's dues-paying membership increased from 300,000 to more than 1 million, while from 1891 to 1912 its share of the vote rose from 20 percent to almost 35 percent. This growth rested on the SPD's ability to reach out to workers with its ideas and to draw them into the party's organizational and electoral network. Many European parties, such as those in Austria, Belgium, Denmark, Finland, Sweden, and Italy, emulated the Germans' success, but others, such as the French, were less effective due to organizational and ideological divisions. In a few places, such as Great Britain, social democracy remained a relatively minor movement until after World War I.

As social democracy grew, it faced a number of interrelated practical and ideological problems. Most important among the former was the issue of whether the parties should focus on electoral or nonelectoral (i.e., revolutionary) means to bring about change. Social democrats agreed that the movement needed to take advantage of the parliamentary arena in order to attract new supporters and work for reforms, but many also opposed cooperating with bourgeois parties or entering into governing coalitions with them. Leaders on the movement's left, such as Rosa Luxemburg, urged less focus on elections and more on extraparliamentary strategies to build a revolutionary consciousness among the workers. Inspired by the Russian Revolution of 1905, they promoted such tactics as the political mass strike,

an option that met strong opposition among party and trade union leaders. Having worked for years to build their organizations into an effective means of winning votes or bargaining with capital, they regarded radical actions such as political strikes as a threat to their hard-won gains. By 1914 such views dominated the leadership of many parties across Europe.

The two decades preceding World War I also witnessed the revisionist challenge to Marxist theory within social democracy. Led by Eduard Bernstein, the revisionists argued that actual historical experience had undermined many of Marx's conclusions about the future of capitalist development. The social structure was not becoming more simplified, as he had expected, but more complex. Small- and medium-sized enterprises were not disappearing but continued to exist, and the middle classes were expanding, not shrinking. Instead of growing more intense, capitalist crises were diminishing, and there was strong evidence that workers' living standards were not falling but instead were rising. The revisionists rejected the overthrow of capitalism and the establishment of socialism through violent revolution. Instead, they called on the party to drop its revolutionary pretensions and to continue its *de facto* strategy of reform largely, though not exclusively, through electoral politics and the formation of coalitions with bourgeois parties if it advanced the cause. For revisionists, socialism was a continuing process rather than a particular condition; it resulted from a moral imperative and not historical necessity.

Prior to 1914, the parties of the Second International officially and often heatedly rejected revisionism, but over the next half century it became the movement's dominant outlook. The decision by most social democratic parties to back their respective governments' decision to enter World War I revealed reformism's strength among party leaders, who hoped that such a step would open the door to fundamental democratic and social reform. This collaborationist policy, however, turned socialist internationalism on its head and split the reformist and radical wings of the prewar movement. Following the victory of Bolshevism in Russia, the radical minority gravitated toward the newly founded communist movement.

This division weakened the workers' movement and created a powerful rival to social democracy's Left, but it also eased the latter's adoption of an avowedly reformist strategy. During the interwar years social democratic parties throughout Europe pursued a wide range of political and economic reforms within the framework of parliamentary democracy. Debates about social democracy's identity, the role of class struggle, coalition politics, the extent of planning, and the meaning of socialism continued, but of overriding importance was the movement's commitment to democracy and its rejection of authoritarianism. Following the period of fascist hegemony between 1933 and 1945, social democracy resumed its evolution away from its Marxist, working-class origins to become a movement that was more ideologically and socially diverse.

—William Smaldone

Bibliography

- Eley, Geoff. *Forging Democracy: The History of the Left in Europe, 1850–2000*. New York and Oxford: Oxford University Press, 2002.
- Gay, Peter. *The Dilemma of Democratic Socialism: Edward Bernstein's Challenge to Marx*. New York: Columbia University Press, 1952.
- Meyer, Thomas. *Demokratischer Sozialismus—Soziale Demokratie: Eine Einführung*. Bonn: Verlag J. H. W. Dietz, 1991.
- Sassoon, Donald. *One Hundred Years of Socialism: The West European Left in the Twentieth Century*. New York: New Press, 1996.

Zionism

Anti-Semitism, a guiding influence for the formation of modern Zionism, was on the rise in Europe after the depression of 1873. Many Jews, because of their ties to finance and business, received much of the blame for this depression. Lasting until 1896, this depression fostered a new kind of anti-Semitism, one that European Jews could not escape through conversion or assimilation. This racial anti-Semitism was given distinct expression in the pogroms that followed the Russian tsar Alexander II's assassination in 1881 in which a young Jewess was involved. These pogroms, the most intense of which oc-

curred from 1903 to 1907, and the anti-Semitic tsarist policy made it clear that the dismal condition of the Russian Jews would continue.

During the intense period of pogroms, the bloodiest pogrom to date occurred in Kishinev in 1903. Stirred on by the accusation of a blood libel, mobs killed and wounded many Jews, burned their houses, and looted their shops. Jewish cries of outrage were heard, and money was sent to the Russian Jews for relief, but there was another response to this pogrom. Stirred by the poet Hayyim Nahman Bialik's "In the City of Slaughter" (1903), which castigated the Jews at Kishinev for their cowardice, Russian Jews defended themselves in the next pogrom at Gomel in 1903 as well as the pogroms that followed until 1907.

Many of the defenders included socialist Jews. Since the Russian industrial proletariat organized in the 1880s and 1890s, Jewish socialism arose as well, specifically through the organization of the

➤ AHAD HA'AM

Ahad Ha'am (1856–1927), whose given name was Asher Hirsch Ginsberg, was the leader of the cultural, or spiritual, Zionist movement that opposed Theodor Herzl's political Zionism. Born near Kiev in the Ukraine, Ha'am was raised in a Hasidic tradition, which he later rejected. He did not, however, abandon his connection to Jewish culture. He carried this connection into his work with the Hibbat Zion (Love of Zion) movement but criticized the movement for focusing too much on settlement activities (that is, practical Zionism) and not enough on Jewish cultural development and preservation. In 1899, within the Hibbat Zion movement, Ha'am formed the B'nai Moshe (Sons of Moses), which established several schools and libraries to encourage Jewish cultural preservation. However, this group was established after cultural aims were officially adopted by the Zionists in 1898 and after the First Zionist Congress in 1897, which Ha'am attended as a visitor. At this congress, he characterized Herzl's Zionism as European, not Jewish, and therefore found it inadequate for the diverse peoples of the Jewish Diaspora in need of a state. Ha'am's point was that without a culturally united people, a political state could not survive.

—James M. King



Chaim Weizmann was an accomplished scientist who worked tirelessly to advance the Zionist movement. His effort brought the momentous Balfour Declaration by Britain, which was crucial in the emergence of the nation of Israel. (Library of Congress)

General Association of Jewish Workers in Russia, Poland, and Lithuania (Bund fun Yidishe Arbeter in Rusland Poyln un Lite, or Bund for short). Many of its activists came from underground revolutionary movements and returned to their Jewish origins because of the pogroms. They were not socialist Zionists, however, for the Bund activists rejected Zionism as bourgeois and utopian; socialist Zionism arose in 1898 with Nahman Syrkin (1868–1924) and the Poale Zion organization (1905), specifically urging a socialist settlement in Palestine. The main task of the Bund, in contrast, was to organize workers against the tsarist regime.

Despite their forged self-defense, many Jewish revolutionaries left for the United States after the failed Russian Revolution of 1905 or turned to the political Zionism established by Theodor Herzl (1860–1904). Herzl, from a wealthy, assimilated, and politically liberal German Jewish family in Austria-Hungary, had only a limited knowledge of Judaism. Stirred by the anti-Semitic atmosphere festering in Europe, specifically with the election of an anti-Semitic mayor in Herzl's home of Vienna, Herzl began seriously considering the Jewish question. His ideas were expressed in his *Der Judenstaat* (*The Jewish State*), published in 1896. For the next few years, Herzl devoted himself to the Zionist cause until his death, arguing that anti-Semitism was inevitable regardless of where the Jews lived. Although the idea of a Jewish state was not new, Herzl's method, organization, and political goal certainly were. The solution, for Herzl, was no longer simply about settlement and colonization, as it had been for the practical Zionism of the Hibbat Zion (Love of Zion) movement, but gain-

ing a charter for a Jewish settlement that was internationally recognized. Later, the Hibbat Zion movement accepted Herzl as its leader, and with this additional support he was able to establish the First Zionist Congress and the World Zionist Organization (WZO) in 1897.

The organization, however, was not entirely unified. As stated above, there was the rise of socialist Zionism and practical Zionism, but the most challenging opponent to political Zionism was Ahad Ha'am (1856–1927) and his cultural, or spiritual, Zionism. Ha'am and his followers were suspicious of Herzl's purely political solution and encouraged the cultivation of and familiarity with Judaic heritage and values. This division—usually, but not completely, between political West European Jews on one side and tradition-based East European Jews on the other—was exacerbated by the Uganda scheme. After an unsuccessful attempt to enlist German help, Herzl managed to secure the aid of Britain, which in 1903 offered Uganda as a place for Jewish settlement. While Herzl only saw this as a temporary solution for immediate relief from the Russian pogroms, the proposal angered many Eastern Jews who insisted on settlement only in Palestine.

After Herzl's death in 1904, synthetic Zionism arose as the guide for the WZO with Chaim Weizmann, the first president of Israel, at the helm. This kind of Zionism advocated simultaneous political, cultural, and practical activity in Palestine. It also stressed Zionist activity in the Diaspora, or *Gegenwartsarbeit* (work of the present), which encouraged such things as modernizing Jewish education, providing clubs for the young, and participating in elections.

Zionism had already become a recognized political force by the time of World War I. As a result, the competing powers had to take Zionist influence under consideration. This influence led to deliberations with the British government that resulted in the Balfour Declaration (1917) through which Britain recognized a national home for Jews in Palestine. The British issued this declaration in hopes of winning U.S. Jewish support, thereby influencing the decision of the United States to enter the war and to keep Russia in the war after the Revolution of 1917 by also appealing to its large Jewish population.

The Balfour Declaration placed British support behind Jewish migration to Palestine, but the Arabs argued that this declaration encroached on Arab rights and thus insisted that only a small Jewish population be allowed to settle in Palestine. As the overall Jewish circumstances were worsening in Europe, especially with the rise of Adolf Hitler in Germany, more people viewed mass migration as the most immediate solution. As a result, conflict often broke out between Jewish settlers and local Arabs. There was a proposal issued by the Peel Commission (1936) involving the partition of Palestine, but the Arabs rejected the proposal, and the British White Paper (1939) further weakened the Jewish position by limiting migration to 75,000 people.

The knowledge of the Holocaust, uncovered by the Allies during World War II, led to a radical step by the Zionists. Encouraged by David Ben-Gurion (1886–1973), the Zionists issued the Biltmore Program (1942), a document that stated that the Jews were no longer going to depend on British assistance to establish a Jewish state but instead would invest their energies in the Jewish Agency—a prestate Jewish government—and in the Jews themselves. The end of the war only saw Jews become more outraged at the atrocities committed against them and led, in 1947, to a debate in the United Nations on the future of Palestine. The result was a partition of Palestine, much like the Peel Commission had proposed, but the Jews took a further step and formally declared the formation of the State of Israel on May 14, 1948.

—James M. King

Bibliography

- Gartner, Lloyd P. *History of the Jews in Modern Times*. Oxford, UK: Oxford University Press, 2001.
- Mendes-Flohr, Paul, and Jehuda Reinharz, eds. *The Jew in the Modern World: A Documentary History*. 2nd ed. Oxford, UK: Oxford University Press, 1995.
- Sachar, Howard M. *A History of Israel: From the Rise of Zionism to Our Time*. 3rd ed. New York: Knopf, 2007.

The Welfare State

The term “welfare state” usually refers to a government that advocates public authority for the social and economic welfare of its citizens. Such

governments base their actions on the principles of equality of opportunity, equitable distribution of wealth, and public responsibility for those who cannot care for themselves. For most of human history, people have relied on their families or their churches to assist them; only in nineteenth-century western Europe did the idea take hold that national governments might extend their services in those ways. Welfare states saw their most dramatic expansion following World War II, but in recent decades they have come increasingly under attack.

The ideas that gave rise to welfare states envisioned no radical restructuring of society, as did the more radical ideologies of socialism and communism, which also called for state planning and a more equitable distribution of resources. The goal of welfare states was to maintain social stability by softening the worst extremes of poverty. The origins of the welfare state were tied to industrialization and the ability of large numbers of organized industrial workers to protest their exploitation and to disrupt economic growth in the process.

The first of the great welfare states was created in the German empire by Otto von Bismarck in an attempt to lure the working class away from socialism. Bismarck attempted to crush the socialists through repression, but his government also instituted a system of social insurance against accidents, illness, old age, and unemployment that was years ahead of any other European nation.

The more common pattern among west European governments was to gradually expand the basic services necessary to sustain an industrial workforce. The most important of those services was education, and beginning in the 1870s Great Britain and other nations began to extend free primary schooling throughout their countries. (Education remains a central element in the welfare state; education through university levels is provided free in France and Scandinavia today.) In the late nineteenth century governments also began to seek greater control over sanitation and health concerns especially in the great cities, where epidemic disease and tuberculosis were rampant. The inspection of factories and the financing of charity hospitals became standard government responsibilities.

The next great turning point for the welfare state occurred in England in the early twentieth century. There the British Conservative Party had long defended the great landowners; the British Liberal Party had advocated free trade, individualism, and industry; and the British Labour Party was just beginning to organize around socialist demands. The Liberals sought to preserve their electoral edge against the nascent Labourites by abandoning their dependence on laissez-faire doctrine and intervening in the nation's economic policy. Between 1906 and 1916 Prime Minister H. H. Asquith and Chancellor of the Exchequer David Lloyd George created social insurance against illness, accidents, old age, and some types of unemployment. The government passed a moderate minimum-wage law, created employment bureaus, and lifted the restrictions against labor strikes.

Most strikingly, the British government financed those measures partly through progressive income and inheritance taxes. Taxes are called progressive when those with higher incomes are taxed at a higher rate. The idea that tax policy could be used to modify extremes of wealth and poverty was very novel and was strongly resisted by conservatives almost everywhere. Other forms of positive state intervention also developed. Though France, for example, enacted some programs similar to those in Britain, its government placed less overall emphasis on male workers and more on families. Support to working women and mothers was always more pronounced in France, where the welfare state evolved to provide cash-payment support on a per-child basis to large families of every class.

In the United States, ideologies based on individualism and competition remained more popular than ideas about social assistance among lawmakers. Although such leaders as Theodore Roosevelt and Woodrow Wilson recognized that organized labor and mergers among big businesses had undermined fair competition between individuals in the U.S. economy, they hesitated to support any rights for workers and sought to restore competition through antitrust actions.

It was only during the desperate years of the Great Depression that the U.S. government was able to take on some of the characteristics of the strong central governments in Europe and insti-

tute social programs. Under the guidance of Franklin D. Roosevelt and his New Deal, the U.S. government took measures to reactivate the economy, extended assistance to farmers and industrial concerns, and legislated some kinds of social insurance. Aid to poor families, however, was not set up as a social insurance program like unemployment insurance or Social Security but rather as a cash-payment relief program that stigmatized its recipients. The resulting Aid to Families with Dependent Children (AFDC) was always a despised program but did not create controversy as long as most of its beneficiaries were white.

While the Great Depression had encouraged governments throughout Europe—and especially in Scandinavia—to intensify welfare measures, it was World War II that produced the most dramatic expansion of government responsibility for the well-being of the population. For one thing, the necessities of total war had greatly expanded the power of central governments in such areas as planning and industrial intervention. For another thing, European governments felt the need to reward the poor in their countries for the loyalty they had shown during the war and the hardships they had suffered.

The Labour government in Great Britain led the way in 1948 by extending social insurance and enacting a comprehensive national program of free medical care. In addition to extremely progressive taxes, the government sought to guarantee the rebuilding of the British economy by securing public ownership of the Bank of England, public utilities, coal mines, communications, and the iron and steel industries. Those nationalizations still left four-fifths of the British economy in private hands, which qualified it as a mixed economy rather than a socialist one.

—Karen Mead

Bibliography

- Einhorn, Eric S. *Welfare States in Hard Times*. Kent, OH: Kent Popular Press, 1980.
- Henriques, Ursula R. Q. *Before the Welfare State: Social Administration in Early Industrial Britain*. New York: Longman, 1979.
- Pedersen, Susan. *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914–1945*. New York: Cambridge University Press, 1993.
- Zucchino, David. *Myth of the Welfare Queen*. New York: Scribner, 1997.

■ Introduction: Social and Behavioral Sciences

The terms “social science” and “behavioral science” are used to describe a variety of academic disciplines that use scientific methods to understand and explain individual behavior, group behavior, social structure, and culture. The term “social science” is used more broadly to refer to academic disciplines that focus on larger patterns, social institutions, or historical trends (e.g., sociology, anthropology, history, or economics). The term “behavioral science” is used to refer to academic disciplines that focus on direct observation or experimentation to investigate the causes that influence the behaviors of individuals and groups (e.g., psychology). Despite these distinctions, the disciplines share an intellectual heritage, and there is a great degree of overlap between them, especially in the use of the scientific method to understand and explain individual and group actions as they are influenced by social and cultural environments. Further, given the complexity of their subject matter, it is common for these disciplines to share an interest in both individual behavior and broader social patterns, although research may differ along disciplinary lines and levels of analysis.

While some of the social and behavioral sciences trace their intellectual roots to ancient philosophies, the primary influences on their intellectual traditions are found in the works of Enlightenment philosophers such as Jean-Jacques Rousseau, John Locke, and David Hume. One of the most important influences of Enlightenment thinking on the social and behavioral sciences was the position that scientific understanding of the natural world and social phenomena was superior to the knowledge produced through religious teaching, which was dominant prior to the eighteenth century. The successes of the natural sciences in particular led many Enlightenment thinkers to turn to science not only as a way to understand society but also to improve it. They believed that an empirical understanding of problems such as disease, inequality, famine, and the acquiescence to traditional forms of authority might help in the transformation of social institutions; thus they promoted equality, freedom, and

emancipation from religious or superstitious thought. In addition, they felt that the use of science and reason would not only provide the basis for objectively identifying problems but also would legitimate the required changes.

Throughout the nineteenth century, the Enlightenment ideals of scientific understanding were developed more fully as a basis for the study of both individuals and societies. For example, advances in understandings of the brain and the nervous system would lead to the theories of Johannes Muller (1801–1858), Herman von Helmholtz (1821–1894), and Wilhelm Wundt (1832–1920), which laid the foundations of psychology. Likewise, theorists such as Auguste Comte (1798–1857) laid the groundwork necessary to add rigor to the application of scientific methods to new fields through his elaboration of positivism. Comte’s work would go on to influence Herbert Spencer (1820–1903), Edward Tylor (1832–1917), Lewis Henry Morgan (1818–1881), and Emile Durkheim (1858–1917) in both anthropology and sociology. Further, the work of Karl Marx (1818–1883) and later in the nineteenth century the work of Sigmund Freud (1856–1939) became so influential that many schools of thought in the behavioral and social sciences remain influenced by them to this day. As a consequence of these developments in theory and method, more opportunities arose for students to receive specialized training in a growing number of graduate programs, and the disciplines began to diverge and professionalize.

The late nineteenth and early twentieth centuries marked a period in which the American social and behavioral sciences experienced a great deal of intellectual development that distinguished them from the European progenitors. For example, the pragmatism of Charles Sanders Pierce (1839–1914), William James (1842–1910), John Dewey (1859–1952), and George Herbert Mead (1863–1931) would not only serve as the foundation of a uniquely American school of philosophy but would also provide the foundations for functionalist psychology and symbolic interactionism in sociology. The behaviorism of John Watson (1878–1958) also served as a foundation for symbolic interactionism as well as social

exchange theory later in the twentieth century. In both instances, there is a focus on the practical nature of problem solving and finding meaning in the world for these emergent American variants of social and behavioral sciences. These approaches became the basis for an emphasis on not only theoretical and empirical work but also application of the findings to the experiences of individuals in their daily lives. As an outgrowth of this tendency to focus on the practical, American social sciences began to develop subspecialty areas that focused on application in real-world settings (e.g., industrial psychology, social psychology), thus leading to the growth of private- and public-sector jobs for practitioners of the social and behavioral sciences.

From the early twentieth century to the present, the social and behavioral sciences have continued to evolve in response to major social, political, and economic events. World War I and World War II, for example, increased the demand for psychologists qualified in statistical testing and assessment. Immigration, changes in population composition, issues of socioeconomic inequality, and issues of racial prejudice gained the attention of sociologists wishing to understand emerging social problems. The maltreatment of indigenous populations and exposing cultural prejudices became the province of anthropology. At present, the social and behavioral sciences continue to grow more sophisticated in the knowledge produced through increasingly complex methods and refinements in theory.

—Sean Huss

Anthropology

Anthropology is the study of mankind. Although today anthropology is rarely considered a “hard” science, it has a strong scientific tradition. In the nineteenth century, anthropologists adopted methodologies that enhanced the scientific status of their findings. Skull measuring and brain weighing, for example, for a time lent some credence to claims, made by French anthropologist Paul Broca (1824–1880) and others, about the cognitive superiority and inferiority of different races. Much of the influential work in anthropol-

ogy dealt with racial classification, and anthropology became an important tool for the apologists for slavery in the United States prior to the Civil War. British anthropologist Edward Tylor (1832–1917) helped to codify an intellectual school of thought, evolutionism, which focused on the development of mankind’s civilization through stages. He believed these stages were universal across cultures, but each of the world’s peoples existed at a different level. This outlook reinforced preexisting racial attitudes of superiority and inferiority. Because research indicated a wide variety of influences on human societies, however, such as totemism, sexuality, and kinship, early-twentieth-century anthropologists such as William H. R. Rivers (1864–1922) tried to augment evolutionism with “diffusionism,” noting the separate paths taken by disparate peoples because of differing social structures.

Anthropology became the leading social science, a term used to describe fields that explore human society with some methodological tools borrowed from the natural sciences. In the 1920s, a number of anthropologists were dissatisfied with the historical approach of both evolutionism and diffusionism because of its inherently conjectural nature and argued for a view based on more stringent methodology. The result was functionalism, and its leading adherents were British anthropologists Bronislaw Malinowski (1884–1942), Polish-born, and Alfred R. Radcliffe-Brown (1881–1955). Malinowski was particularly keen to make anthropology a strictly empirical science, inspired by the positivist philosophy of Ernst Mach (1838–1916). Functionalism implied that all aspects of society have a purpose that is integral to the whole, and these aspects can be identified and perhaps even quantified to gauge their importance to the whole. Malinowski’s other influences included sociologist Émile Durkheim (1858–1917) and psychologist Sigmund Freud (1856–1939), from whom he learned about the importance of social and cultural practices and the individual’s internalization of cultural norms. The functionalists emphasized rigorous data collection, requiring extensive fieldwork such as Malinowski’s in New Guinea. More than ever before, anthropologists were obligated by their professional standards to leave the comfort of their homes and universities and

➤ MARGARET MEAD

Margaret Mead (1901–1978) was one of the most well-known anthropologists of the first half of the twentieth century. Her work helped to transform thinking about gender roles, sexuality, and the importance of culture in defining social behavior. She did more than any other anthropologist to extend Franz Boas's (1858–1942) cultural deterministic views. She also worked to popularize her findings, making herself a widely recognized scientific celebrity. Mead traveled extensively during her career, including expeditions to Samoa and New Guinea, where she conducted her most significant fieldwork. She held a position in the Department of Anthropology at the American Museum of Natural History from 1926 until her death.

Mead's mentor, Boas, was an ardent supporter of seeing differences in human populations in terms of environmental and social influences, rather than taking a purely biological (i.e., genetic) approach. Mead's work also reflected this willingness to explore culture as a major anthropological force. Her doctoral research required her to travel to the Manua Islands, in American Samoa, for nine months in 1925–1926, where her observations provided her with evidence that certain phases of human development were culturally, not biologically, determined. In particular, Mead noted that the tumultuous years of adolescence, often thought to be universal, were a cultural by-product resulting from trying to suppress or hide sexuality. She generalized that Samoan culture was casual and easygoing, lacking many of the aggressive

tendencies found in Western cultures. In general, she criticized notions that characterized emotions and other behaviors as universal across cultures. Her work became a powerful argument for an emerging group of anthropologists who embraced cultural determinism.

Mead continued to travel and conduct fieldwork among island peoples in the late 1920s and 1930s. She published *Growing Up in New Guinea* in 1930, and eventually published more than forty books, some of which emphasized the transmission of culture to children and the roles of women in different cultures. For example, she found that, in the Tchambuli culture of New Guinea, the men (not women) were in charge of the household. Mead's books raised provocative questions about the organization of society, particularly in gender roles.

Other anthropologists occasionally disagreed with Mead's observations. Some have attempted to debunk Mead's entire body of work on the grounds that she was biased. Anthropologist Derek Freeman dedicated part of his career to demonstrating that Samoans were more violent and troubled than Mead acknowledged. He observed that Mead simply found in Samoa the results that her mentor wanted to find; in other words, Boas's deep-held cultural determinism spoiled Mead's objectivity.

Mead became active in national and international bodies in later years. She received many honors for her work, including nearly thirty honorary degrees. Mead died of cancer in 1978.

—Jacob Darwin Hamblin

to travel to the areas they studied and encounter the peoples they analyzed. The impulse to ensure proper “scientific” bases for subjects beyond the natural sciences is often called scientism, and it had a pervasive influence among anthropologists in the twentieth century.

Why did this change from evolutionism to functionalism occur? One reason was certainly tied to the anthropologists' own influences, as in the case of Malinowski. Another was patronage. Funding organizations such as the Rockefeller Foundation provided money for research more readily when the research had sound methodological foundations. In other words, anthropol-

ogy needed a rigorous, scientific basis to acquire funds for fieldwork. Functionalism asserted precise roles for every aspect of society. Malinowski was skilled at arguing that anthropological research would be of practical benefit to colonial regimes. One important result of this change in anthropologists' attitudes (functionalism replacing evolutionism) was in social control. Evolutionism had emphasized the ranking of different races in a hierarchy of civilization, providing a rationale for imperialism. Functionalism drew out the structures of indigenous cultures, including nascent political relationships, allowing imperial powers (especially the British, where the

anthropologists were particularly influential) to understand local institutions and to permit and encourage some degree of autonomous rule.

Probably the most influential of all twentieth-century anthropologists was the German-born American Franz Boas (1858–1942), who was an ardent critic of racial determinism. Boas conducted fieldwork in Canada upon the Kwakiutl, an indigenous tribe. He became convinced that social and even physical differences in peoples resulted not from biological necessity, but rather from a combination of historical, geographic, and social factors, which gave rise to unique cultures. Most of cultural anthropology owes an intellectual debt to Boas, who insisted that culture was the dominant influence on individuals. Cultural anthropology struck a blow against universalism; it asserted that societal differences are not racially determined and have nothing to do with any “stage” of civilization; instead, they are a product of the specific cultural environment into which individuals are born and raised. Some of the most prominent anthropologists were disciples of Boas, including Ruth Benedict (1887–1948) and Margaret Mead (1901–1978)—both of whom tried to shatter universalist notions. Mead, for example, asserted that what most Westerners thought were normal, natural experiences of adolescents were absent in some populations in the Pacific region. Though some of Mead’s findings later were questioned seriously, the outlook of cultural anthropology became a particularly “American” tradition by mid-century.

—Jacob Darwin Hamblin

Bibliography

- Foerstel, Lenora, and Angela Gilliam, eds. *Confronting the Margaret Mead Legacy: Scholarship, Empire, and the South Pacific*. Philadelphia: Temple University Press, 1992.
- Freeman, Derek. *Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth*. Cambridge, MA: Harvard University Press, 1983.
- Goody, Jack. *The Expansive Moment: The Rise of Social Anthropology in Britain and Africa, 1918–1970*. New York: Cambridge University Press, 1995.
- Hamblin, Jacob Darwin. *Science in the Early Twentieth Century: An Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2005.
- Harris, Marvin. *The Rise of Anthropological Theory: A History of Theories of Culture*. New York: Cromwell, 1968.
- Kuper, Adam. *Culture: The Anthropologists’ Account*. Cambridge, MA: Harvard University Press, 1999.
- Stocking, George W., Jr. *After Tylor: British Social Anthropology, 1888–1951*. Madison: University of Wisconsin Press, 1995.

Sociology

Sociology, the scientific study of large-scale and small-scale human social action, structure, and organization, originated in Europe during the early nineteenth century in response to the dramatic intellectual, political, economic, and technological transformations that created the modern social order. The decline of traditional religious and political authority, industrialization, and urbanization offered the potential for social disintegration just as they offered opportunities for greater individual liberty, wealth, and societal progress. Early sociological thinkers such as Auguste Comte (1798–1857) and Herbert Spencer (1820–1903) sought to establish a science of sociology to study the laws that governed the evolution of human societies as a means to facilitate stability and consensus in modern societies. In the late nineteenth century, Emile Durkheim (1858–1917) contributed to the greater methodological sophistication of the discipline by elaborating guidelines for conducting sociological research and specifying the proper subject matter of sociology (*The Rules of Sociological Method*, 1895). Furthermore, Durkheim demonstrated the sociological perspective in his analysis of how social organization (as opposed to psychological factors) influences suicide. Sociology also gained a foothold in the United States in the late nineteenth century, as scholars such as William Graham Sumner (1840–1910) and Lester Ward (1841–1913), influenced by the work of Spencer and Comte, sought to identify laws that governed societal evolution in order to prevent the United States from following the path of social conflict, poverty, and even revolution that had beset European societies (particularly France and Britain).

At the beginning of the twentieth century, several key intellectuals helped to further distin-

guish sociology from other social scientific disciplines, in the process contributing to its greater theoretical and methodological complexity. In Germany, Max Weber (1864–1920) produced an extensive body of historical and comparative analyses of religions, economic systems, legal and political systems, and other institutions. Weber's emphasis on value-freedom (i.e., objectivity) with regard to teaching and conducting sociological research, his focus on social action as an object of study, and the sheer breadth of his analyses of multiple institutions across various societies made him one of the most influential scholars for the development of sociology in Europe and the United States. While Weber focused on large-scale analyses of social structure, Georg Simmel (1858–1918) focused more on forms of small-scale group interaction, such as the dynamic changes in social roles prompted when a two-person group becomes a three-person group, as well as an examination of social types (e.g., the poor, the stranger, the miser) to reveal the system of interactions and role expectations composing everyday life. Simmel's work would influence later theoretical developments in the United States, particularly the theory of symbolic interactionism.

As Weber and Simmel were gaining notoriety in Europe and abroad, Sociology was developing into a distinct discipline in the United States. By 1892, one of the discipline's earliest and foundational departments was founded at the University of Chicago by Albion Small, who later helped to establish the American Sociological Society (currently the American Sociological Association) in 1905. The "Chicago school," as the department came to be known, was dominant in the field due in part to the extensive empirical research produced by the department in the early twentieth century. In 1918, W. I. Thomas (1863–1947), along with Polish philosopher and nationalist Florian Znaniecki, published *The Polish Peasant in Europe and America*, a product of eight years of research using a host of data sources, including autobiographies and personal documents. The focus on the city as an object of analysis, and the integration of racial and ethnic minorities into dominant society, were also hallmarks of the Chicago school due primarily to the work of Robert Park (1864–1944). One of Park's more significant

contributions to the field was his concept of the race relations cycle, which would influence the elaboration of assimilation theory in the 1960s. However, the greatest theoretical contribution of the Chicago school would come from philosopher George Herbert Mead (1863–1931) and sociologist Herbert Blumer (1900–1987), whose emphasis on the origins of meaning created and re-created through the process of everyday interaction would later become the core social psychological theory of symbolic interactionism.

In the 1930s, the influence of the Chicago school declined, while scholars at Harvard and other elite eastern U.S. universities advanced a theoretical perspective that would become dominant in U.S. Sociology into the 1960s: structural functionalism. This perspective, initially developed in the United States through the work of Talcott Parsons (1902–1979), could be traced back to Durkheim, Comte, and Spencer (among others) and their emphasis on consensus and the maintenance of social cohesion or solidarity. Parsons' analysis of social structures as striving toward a dynamic equilibrium was remarkably similar to Spencer's metaphor of society as an organism, in which parts of the organism are interdependent on one another, and work together to maintain the system as a whole. Taken to its logical conclusion, social inequality was ultimately essential to the stable functioning of society—a conclusion explicitly asserted by structural functionalists in the 1940s.

Though the thrust of sociology in the United States was predominantly conservative from the late 1930s to the 1950s as the intellectual center of sociology shifted to the eastern Ivy League universities (particularly Harvard), there were radical theorists such as C. Wright Mills (1916–1962) who produced works such as *The Power Elite* (1956) that sparked the development of conflict theory. In addition, a coalition of Marxist theorists known as the "Frankfurt school," so named because the school started as an institute in Frankfurt, Germany, in 1923, resided in the United States at Columbia University from 1934 to 1949 due to pressures from the National Socialist regime. During this period, intellectuals of the Frankfurt school integrated the theoretical work of Weber with that of Karl Marx (1818–1883), moving from a doctrinaire emphasis on

the economy to the study of culture as a central force maintaining subordination. By the 1960s, structural functionalism began to lose its dominance while conflict theory, feminist theory, and radical race relations theory began to emerge in light of social upheaval.

—Josef Castañeda-Liles

Bibliography

- McKee, James B. *Sociology and the Race Problem: The Failure of a Perspective*. Urbana and Chicago: University of Illinois Press, 1993.
- Ritzer, George. *Classical Sociological Theory*. 2nd ed. New York: McGraw-Hill, 1996.
- Ross, Dorothy. *The Origins of American Social Science*. New York: Cambridge University Press, 1991.

Psychoanalysis

Although physicians studied mental disorders such as hysteria in the late nineteenth century, modern psychoanalysis began with Sigmund Freud (1856–1939), who published *The Interpretation of Dreams* in 1900. Freud determined in the late nineteenth century that many mental problems, which he routinely saw through his own private practice, were connected to conflicts residing in the unconscious mind. He and his colleague Josef Breuer (1842–1925) had conducted hypnosis experiments that seemed capable of bringing to light forgotten memories in patients, which had the cathartic effect of occasionally ending the neurotic behaviors simply by making the patient conscious of their probable origins in a memory from the distant past. Although Freud had some success with hypnosis, he believed that analysis of dreams and fantasies could help bring these problems to light by moving them from the unconscious to the conscious mind. Hallmarks of psychoanalysis were concepts such as the repression of memories and the sublimation of erotic or aggressive instincts, that is, channeling them in other ways such as through art or music. The purpose of psychoanalysis was to understand how the mind interacts with itself and with the environment, often creating mental problems (neuroses).

By the early 1920s Freud had refined his version of psychoanalysis. In his effort to create a

new science of the mind, he developed a conception of mental dynamics based on fundamental human instincts: Eros and Thanatos, or life and death. The life instinct tended toward self-preservation and sexuality, driven by the libido (sexual energy). The death instinct was the cause of self-destructive or aggressive behavior. These instincts made up the id that was balanced by the superego, which reined in one's instincts because of norms of behavior acquired from external influences (such as moral values learned from parents or teachers). The conscious mind, the ego, was a product of these two forces in tension.

Although Freud's emphasis on sexuality, the overarching motivation of the life instinct, scandalized some scholars, psychoanalysis provided a tool to engage neuroses in a scientific way. Critics of Freud were taken aback by his willingness to ascribe human character to the development of the libido, which gave a paramount importance to erotic impulses. Yet the systematic analysis of dreams and memories had great appeal to physicians and psychiatrists—and patients—for whom strictly physiological studies had provided little aid in a clinical setting. Freud's ideas attracted numerous scholars in Europe and North America; the first International Psychoanalytical Congress took place in 1908 in Salzburg, Austria, which facilitated the discipline's spread.

Psychoanalysis became popular in the United States after 1909, when Freud and his protégés Alfred Adler (1870–1937) and Carl Jung (1875–1961) were invited to lecture at U.S. universities. One scholar has argued that somatic (body-oriented) approaches to mental disorders had reached a crisis point among many U.S. psychologists, and Freudian psychoanalysis established a new paradigm of thinking about the nature of neuroses and how to treat them. In Russia, psychoanalysis took root among intellectuals and thus was widely appreciated by early revolutionaries such as Leon Trotsky. Under Josef Stalin (1879–1953), however, psychoanalysis was condemned because of its focus on the past. Stalin and other Soviet leaders believed that the implicit belief that the past inescapably shapes one's life forever challenged communist ideology in the sense that it seemed to deny the pos-

sibility of radical improvement or change in behavior. Accepting the possibility of such changes was crucial to ensuring the life of the Soviet state. Psychoanalysis itself acquired a reputation as a degenerate, immoral philosophy inextricably tied to Western capitalism.

Despite Freud's foundational work, psychoanalysis evolved in others' hands. Both Adler and Jung, for example, broke with Freud. Jung became renowned for his theories of collective unconscious memories, or archetypes. Like others, he was disturbed by Freud's emphasis on sexuality, which Jung viewed as a potentially destructive instinct. Jung founded analytical psychology in the second decade of the twentieth century, breaking with Freudian psychoanalysis.

The creation of psychoanalysis continues to be controversial. Freud initially believed that most neuroses, especially in women, were a result of repressed memories of trauma, specifically sexual assault during childhood. However, he later revised his view, claiming that unconscious memories were only part of many elements of the unconscious, of which fantasies also played a crucial role. One author, J. M. Masson, has made a controversial claim that Freud in fact made an important discovery—that child sexual abuse was far more prevalent than anyone realized—but the negative reactions of his peers convinced him to abandon his premise. However, psychoanalysis ultimately embraced far more than repressed memories or even fantasies; it studied desires, guilt, shame, paranoia, aggression, self-loathing, and a host of other instincts and learned values that, according to psychoanalysis, underpin the conscious self.

—Jacob Darwin Hamblin

Bibliography

- Burnham, John C. "The Reception of Psychoanalysis in Western Cultures: An Afterword on Its Comparative History." *Comparative Studies in Society and History* 24(4) (1982): 603–610.
- Fine, Reuben. *A History of Psychoanalysis*. New York: Columbia University Press, 1981.
- Hale, Nathan G. *The Rise and Crisis of Psychoanalysis in America: Freud and the Americans, 1917–1985*. New York: Oxford University Press, 1995.
- Hamblin, Jacob Darwin. *Science in the Early Twentieth Century: An Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2005.

Masson, Jeffrey Moussaieff. *The Assault on Truth: Freud's Suppression of the Seduction Theory*. New York: Farrar, Strauss, and Giroux, 1984.

Miller, Martin A. *Freud and the Bolsheviks: Psychoanalysis in Imperial Russia and the Soviet Union*. New Haven, CT: Yale University Press, 1998.

Schwartz, Joseph. *Cassandra's Daughter: A History of Psychoanalysis*. New York: Penguin, 2001.

Behaviorism

Behaviorism was a primarily American philosophy that deemed the scientific study of behavior to be the purpose of psychology. The movement developed in response to the subjective metaphysics that defined earlier psychology. Soon after John B. Watson (1878–1958) first used the term "behaviorism" in an article for the *Psychological Review* (1913), this movement came to dominate the field of psychology in the United States. While those who accepted Watson's title never followed a common creed, they were united in their rejection of the metaphysical in favor of a scientific psychology of experiments and practical applications.

Originating from psychology's roots in Western philosophy and the Christian religion, metaphysical psychology remained the discipline's dominant paradigm in the United States until the late nineteenth century. Watson found the German psychologist Wilhelm Wundt's views as characteristic of this metaphysical mind-set. Wundt (1832–1920) identified psychology's goal as the study of consciousness. Therefore, research was pursued through "introspection"—thinking about one's own mind and thoughts—and the passive observation of behavior within experiments. Watson found this unacceptable because not only did such research ignore the scientific method in practice, but its conclusions were expressed using imprecise terms (e.g., consciousness) and was biased against evidence unrelated to the consciousness (i.e., pertaining to the physical world).

The twentieth century opened with scholars throughout Europe and the United States attempting to release psychology from these metaphysical roots. The Russian physiologists Ivan M. Sechenov (1829–1905) and Vladimir M. Bekhterev

➤ RADICAL BEHAVIORISM AND OPERANT CONDITIONING

B. F. Skinner, the developer of Radical Behaviorism, was heavily influenced by John B. Watson's theories. However, Skinner expanded the theories of behaviorism, arguing that feelings and thoughts also could be construed as behaviors and could therefore be positively encouraged. Skinner created the idea of Operant Conditioning in which positive and negative stimuli could be used to alter behavior. He conducted many experiments on rats and pigeons to prove that these animals would respond to a positive stimulus, such as food. In one of his most famous experiments, Skinner rigged a machine to give out food at random intervals and then observed that the pigeons would repeat whatever actions they had been doing at the time that food arrived. He believed that such mechanisms could explain the chance origins for superstitious beliefs. Skinner believed that these results could have positive applications for society in child rearing and education, although he added the caveat that animals are not passive receivers of conditioning but instead act and are acted upon by their environment.

(1857–1927) argued that the human mind was solely the result of brain activity, while their German counterparts struggled to develop a more precise terminology for psychology. In the United States, the Functionalism of James Rowland Angell (1869–1949) developed a following as a compromise between the traditional study of consciousness and the physiologist's experimentation on behavior.

John Watson sparked the shift to behaviorism in 1913, when he declared that the science of psychology should focus exclusively on observable behavior. Unfortunately, his ideas were not as compelling as his declaration, leading many contemporaries to accept the title of "Behaviorist" based merely on opposition to metaphysics. Although lacking a unifying system, these "Behaviorists" generally agreed about using scientific experiments to obtain objective evidence, drawing no distinction between human and animal and applying their findings to improving society.

In rejecting the psychology of consciousness, behaviorism required a new foundation of research from which to grow. One group that provided this foundation was the Russian physiologists, including Ivan P. Pavlov (1849–1936) and his scientific explanation of stimulus and response. In his famous dog-and-bell experiments, Pavlov explained that a response may be conditioned by connecting it to a stimulus in the creature's memory (e.g., if a bell is sounded every time a dog is fed for a long enough period, whenever the bell is sounded expectant salivation will occur regardless of the presence of food). He later expanded this idea into elaborate models describing other ways that responses may be conditioned.

Watson agreed with the Russian physiologists that the mind is a function of the body rather than a separate entity. However, he used Pavlov's findings regarding stimulus and response to conclude that all behavior is simply a reflex response to some stimulus, including emotions, talents, thought, and other metaphysical qualities.

Edward C. Tolman (1886–1959) and Clark L. Hull (1884–1952) responded by developing their own systems within behaviorism. Known for experimenting with rats in mazes, each worked from Pavlov's stimulus-response models but separated themselves from Watson by rejecting his assertion that all behavior is reflex and presenting their findings as scientific theories. Attempting to find the connection between behavior and decision to act in his experiments, Hull formulated several complex stimulus-response models. Tolman's investigation of thought processes in his lab rats marked him as a significant behaviorist forerunner of cognitive theory.

Behaviorism was steeped in a uniquely American pragmatism and logical positivism; thus, only in the United States did it become the dominant paradigm in psychology. Other English-speaking countries were marginally influenced by the movement, but most countries had no contact with behaviorism at all. It maintained supremacy in the United States until the 1960s, when Jean Piaget (1896–1980) and the "cognitive revolution" renewed interest in the mind. However, behaviorism did not disappear; rather, it continued to develop indepen-

dently and influence modern psychology into the twenty-first century.

—Jason M. Brown

Bibliography

- Hilgard, Ernest R. *Psychology in America: A Historical Study*. Fort Worth, TX: Harcourt Brace Jovanovich, 1987.
- O'Donohue, William, and Richard Kitchener, eds. *Handbook of Behaviorism*. San Diego: Academic Press, 1999.
- Rahmani, Levy. *Soviet Psychology: Philosophical, Theoretical, and Experimental Issues*. New York: International Universities Press, 1973.
- Staddon, John. *Behaviorism: Mind, Mechanism and Society*. London: Duckworth, 1993.
- Watson, John Broadus. *Behaviorism*. Rev. ed. Chicago: University of Chicago Press, 1958.

Developmental Psychology

Developmental psychology is the study of psychological changes that occur in human beings over the course of their lives, from infancy through old age. Most of the pioneers of developmental psychology, such as Jean Piaget (1896–1980), were concerned primarily with the psychological development of infants and children, and the field is still considered by some to be centered on the study of children through adolescence. However, most scholars today agree that psychological development continues over a life span and that developmental psychology is not restricted to the study of any particular stage of life. In this regard, the terms “life-span development” and “life-span psychology” are often used to emphasize this fact.

Many developmental psychologists have studied how children learn and how children's minds change as they mature. Jean Piaget is probably the most influential figure in this area and is best known for his theory of the stages of cognitive development. Piaget believed that children, in the course of normal development, pass through four stages, each characterized by a general cognitive structure and understanding of reality. The stages and the approximate ages to which they apply are sensorimotor (birth to age 2), preoperational (ages 2 to 7), concrete operational (ages 7 to 11), and formal operational (after age 11).



Beyond his fundamental qualities of intellectual rigor and scientific imagination, Switzerland's Jean Piaget may have been one of the most idiosyncratic and multidisciplinary scientists of the twentieth century. (AFP/Getty Images)

Piaget's stage theory has influenced scholars such as Lawrence Kohlberg (1927–1987) and Lev Vygotsky (1896–1934). Kohlberg is best known for his stages of moral development theory, while Vygotsky is best remembered for his theory of the zone of proximal development (ZPD). The ZPD refers to tasks a child can do with guidance but not alone and has become a popular concept in education. Vygotsky's work has been further developed by Jerome Bruner (1915–), who developed the model of instructional scaffolding. This theory advocates that supports such as guidelines and templates should be provided when concepts are first introduced to students and may later be removed as students become autonomous learners.

Erik Erikson (1902–1994) was one of the first psychologists to concern himself with human development across the entire life span and was particularly concerned with how individuals establish a sense of identity. His theory of the stages of psychosexual development elaborated on ideas developed by Sigmund Freud (1856–1939). While Freud's theory had five stages—oral, anal, phallic, latent, and genital—Erikson added three stages in adulthood and described the stages in terms of a basic conflict that must be resolved in order for normal development to proceed. For instance, stage six, which takes place in early adulthood, requires resolution of the conflict between intimacy versus isolation. Daniel J. Levinson continued the focus on development in adulthood with his theory that there are four periods, or seasons, of postchildhood life. The seasons and their approximate age ranges are childhood and adolescence, early

➤ JEAN PIAGET

Jean Piaget (1896–1980) received his doctorate in zoology from the University of Neuchâtel in 1918, followed by studies in psychology in Zurich. While working in Paris at a boys' school created by Alfred Binet and directed by Theodore Simon, developers of the modern intelligence test, Piaget noted that children of different ages make predictable errors in reasoning, an observation later developed in his stage theory of human cognitive development. Piaget was a professor of child psychology at the University of Geneva from 1929 until his death.

—Sarah Boslaugh

adulthood (17–45 years), middle adulthood (40–65 years), and older adulthood (age 60 and older). Levinson believed that each season is associated with specific biological and social changes in the individual and that each season presents the individual with specific challenges and tasks to be accomplished. Levinson developed his theory through the study of men only, and researchers' attempts to validate his theory for women have revealed areas of divergence.

—Sarah Boslaugh

Bibliography

- Bennett, Mark, ed. *Developmental Psychology: Achievements and Prospects*. Philadelphia: Psychology Press, 1999.
- Miller, Patricia A. *Theories of Developmental Psychology*. 4th ed. New York: Worth Publishers, 2001.

Industrial Psychology

Industrial psychology, the professional application of psychology to the problems of industrial life, emerged during the first half of the twentieth century. After World War I, an increasing number of psychologists came to be interested in the subject and gained the active support of both workers and employers, which was crucial to their success of establishing industrial psychology as an academic discipline that was recognized as central to managing the workplace. The message of those early scientists was that psy-

chology, if applied to the various aspects of industry such as organization of the shop floor and techniques of management, branding, marketing, and so forth will increase productivity, eliminate industrial rift, and promote greater social happiness. The promise of increasing productivity by the application of psychology is today widely accepted and practiced, although some of the methods that psychologists use and the questions they seek to address have changed considerably. Today, psychology is recognized as a vital element of workplace organization, although the problems psychologists face, the methods they use, and the solutions they suggest have changed considerably. Moreover, many of the problems in which industrial psychologists were interested during the first half of the twentieth century have developed into separate fields of study, such as organizational psychology, occupational psychology, and market research.

Until World War I, scientific interest in workers was primarily physiological. During the late nineteenth century, doctors attempted to find the best ways to conserve energy at work and to prevent fatigue. As historian Anson Rabinbach demonstrates, these investigations into the science of work were closely linked to liberal agendas of social reform. During the same period, physicians also came to be interested in the health of laborers and their ability to work. Physicians dealt with a range of questions, such as food, safety, and intoxication. A third branch of knowledge was the new science of management that emerged in the decade before World War I. The most well known was Taylorism, which aimed at increasing industrial output by applying scientific methods to the management of individual workers.

During those years, psychology was usually conceived as either a clinical science or, more often, a theoretical study of the mind. But some psychologists called for a psychology that would be applied to the problems of everyday life. Two of the most important promoters of applied psychology were Hugo Münsterberg, a German psychologist whose popular *Psychology and Industrial Efficiency* (1909) outlined the new field of industrial psychological investigations, and Bernard Muscio, an Australian psychologist whose *Lectures on Industrial Psychology* (1910)

was later considered the pioneering text in the British world.

The real impetus for the application of psychology to industrial life was World War I. Impelled by the heavy demand for munitions, belligerent countries began investigating health-related problems in the major industries, and these studies increasingly included attention to the psychological aspects of such work issues as fatigue, rest pauses, monotony, incentives, and so forth. Moreover, the view that psychology could be applied to the problems of daily life was strengthened by the experience of shell shock and combat stress. Working with soldiers who had experienced nervous breakdowns, psychologists such as Charles Myers in Britain and Elton Mayo, who worked with Australian soldiers before moving to the United States, made connections between the experience of war and the demands of peace. In ways that were similar to the reformist agenda of nineteenth-century practitioners of the science of work, they hoped that psychology applied to industry would play a central role in the reconstruction of civil society.

The leading research institute was the National Institute for Industrial Psychology (NIIP), established in London in 1921. A private institute, it was funded by philanthropists and research foundations such as the Carnegie UK Trust and successfully mobilized the support of leading public figures and government agencies. The major part of its income was derived from services rendered to employers, to whom the NIIP promised increased output, reduced costs, and contented workers. To workers, industrial psychologists promised a humane vision of labor in contrast to Taylorism and other forms of scientific management, which were often seen as reducing the worker to a mere automaton. As at similar institutes elsewhere, NIIP researchers studied vocational guidance, personnel selection, motion studies, and various psychological aspects of industrial efficiency. The focus was therefore on the individual worker's capacities and adaptation to the workplace.

A major change in the research agenda came with the studies conducted at the Western Electric Company at its Hawthorne Plant in Illinois between 1923 and 1932. More than 20,000 interviews conducted during those years established

> HUGO MÜNSTERBERG

Hugo Münsterberg was born in Danzig, Germany, in 1863 and joined the Harvard faculty in 1892. His pioneering studies on the psychology of industry and the market culminated in his best-seller *Psychology and Industrial Efficiency* (1912), in which he argued that the key to productive efficiency was matching workers to jobs that they would enjoy. He was also the first intellectual to write about cinema as a new art form, in *The Photoplay: A Psychological Study* (1916). He believed that the new medium's power came from the fact that the way films were edited and directed mimicked mental functions. He was also influential in writing about the use of psychological information in legal situations. He enjoyed being a public figure and came under attack for his defense of Germany during World War I. Münsterberg died in 1916.



(Library of Congress)

attitudes, emotions, and motivation of employees as key to successful management. For the first time, psychologists found ways to articulate the psychological life of workers as groups rather than individuals. The chief promoter of this school was Elton Mayo. While not participating in the Hawthorne experiments and in many ways arguing in very different terms than those who conducted them, Mayo emerged as the single most important promoter of the human relations school in industrial psychology. The language of human relations was used not only to discuss the emotional life of factory workers in terms of a social organization but also to articulate the same questions with references to the workers' life outside the factory and to address issues such as unemployment or labor unrest. As sociologist Nikolas Rose suggests, it proved a powerful political language for the new forms of management of democratic life in the twentieth century.

During World War II there was a massive use of psychologists in all aspects of warfare, at home and abroad. Their work drew heavily on the new science and concepts that had been developed during the preceding decades. For a short while after the war these new sciences, and especially research on human relations, saw an unprecedented expansion, manifested by the establishment of the Tavistock Clinic for Human Relations in London in 1946. From the 1960s onward, the transformations in the nature of governmental culture and workplace organization brought new psychological understandings and new conceptual tools. Perhaps the most important of these, as Nikolas Rose suggests, was the emergence of a new language that conceived the worker as a consumer rather than a producer. The language of human relations that linked factory life to the community has been seen as increasingly out of date.

—*Daniel Ussishkin*

Bibliography

- Rabinbach, Anson. *The Human Motor: Energy, Fatigue, and the Origins of Modernity*. Princeton, NJ: Princeton University Press, 1990.
- Rose, Nikolas S. *Governing the Soul: The Shaping of the Private Self*. 2nd ed. London: Associated Press, 1999.

Pragmatism

Pragmatism is the philosophical theory that attempts to understand meaning or truth in light of what works. In the history of thought, one finds pragmatism resulting from skepticism about the ability to know. For instance, in Plato's dialogues the Sophists are a group who teach their students the art of persuasion because it is "what works" in attaining the benefits of this life, and they are skeptics about the ability to know what is true or good. This skepticism was a result of an increased diversity of philosophies without resolution into a unified view. This diversity was both inside and outside of Greece, as the Greeks came into contact with other civilizations and their worldviews. Similarly, in the modern world—and in a special way within the United States—an increased diversity among philosophical and religious worldviews and an

increased population diversity by the late nineteenth century led to skepticism about the ability to resolve these differences. This skepticism led to pragmatism whereby theories were tested in terms of how well they "worked." There was also a reformist component to pragmatism as it emerged in the late-nineteenth-century United States. Leaders of the movement wished to unseat the intellectual underpinnings of social Darwinism and Herbert Spencer's notion that society and the world, like any natural system, would automatically improve if left unregulated.

Pragmatism is especially connected to William James (1842–1910), who developed it as part of his studies in psychology. Rather than analyze beliefs as mental entities that could correspond—or fail to correspond—to reality, James proposed that beliefs be thought of in terms of how they functioned in a person's life. James thought that as long as beliefs were thought of as mental entities, they could not be studied scientifically. However, if they were instead thought of as affects or consequences in human life, then they are observable and quantifiable.

James made special application of this to religious beliefs: How do religious beliefs work out for individuals and groups in human history? What is the effect on an individual of a religious experience? James gave to these kinds of questions special attention and argued that they could be resolved scientifically through observing whether or not religious beliefs and experiences have beneficial consequences (i.e., Does a given belief help or hinder life?). Some viewed this as an application of Darwinism to psychology, but as was noted earlier it is not dissimilar to pragmatism that has developed in other time periods and is simply an attempt to use practical rationality apart from settling conflicts in the area of pure rationality.

Practical rationality is the study of goals and means to goals. It is in this sense that the phrase "what works" can be understood: Does a given belief result in actions that are conducive to achieving one's desired goals? If so, then that belief works; if not, then it does not work. Under the influence of James, modern psychology (or specifically the American branch) came to focus almost exclusively on behavior. This is not to identify James with the school of thought called

behaviorism but rather to capture his emphasis on how consciousness affects action. There was a shift from the evaluation of truth claims in the abstract to the evaluation of “what works.” In other words, is a given behavior healthy or unhealthy, where unhealthy is defined as causing harm to the self or others and harm is defined as the failure to integrate into one’s environment (which is observable and can be measured in degrees)? If a behavior is unhealthy, then the causes of this behavior are sought with the goal of changing them and therefore changing the behavior. Various schools developed around explanations of these causes, but the overall theory remained unchanged. Beliefs are termed problematic if they cause unhealthy behavior, but they are not analyzed in terms of a true/false dichotomy.

The obvious problem that arises for pragmatism, and for practical rationality when isolated, is that one does not know what goals to seek. “What works” is defined in reference to goals, but there are many different and competing goals that an individual can choose from. It becomes circular to say “choose the goal that works for you,” since what works is defined in relation to a goal. And so, to define healthy behavior in terms of integration into a specified environment is unhelpful because it does not tell us which environment one should choose to be integrated into. Presumably, some environments are harmful, and the individual should not integrate (e.g., Nazi Germany). Furthermore, the skepticism that gives rise to pragmatism undermines the pragmatic endeavor: If we cannot know what is good, then we cannot know what goals to seek, and we cannot know what works. It is because of these kinds of problems that pragmatism has never been a final philosophy, and humans continue to search for truth and meaning as the basis for knowing what goals to choose and for understanding what works.

—Owen Anderson

Bibliography

Anderson, Owen. Review of “William James and a Science of Religions: Reexperiencing ‘The Varieties of Religious Experiences’” by Wayne Proudfoot, ed. *Review of Metaphysics* 59(2) (December 2005): 443–444.

Copleston, Frederick Charles. *A History of Philosophy*, Vol. 8, *Bentham to Russell*. Mahwah, NJ: Paulist Press, 1994.

Hamner, M. *American Pragmatism: A Religious Genealogy*. The American Academy of Religion Reflection and Theory in the Study of Religion Series. New York: Oxford University Press, 2002.

James, William. *Pragmatism: A New Name for Some Old Ways of Thinking*. New York: Longmans, 1910.

Misak, C. J., ed. *The Cambridge Companion to Peirce*. Cambridge, UK, and New York: Cambridge University Press, 2004.

Existentialism

The philosophical movement of existentialism grew from its founders’ experiences of World War II. The movement’s leaders, which included Jean-Paul Sartre and Albert Camus, had participated in the Resistance against the Nazi occupation of France. They shared in the disillusionment of their compatriots over the Nazi conquest and shared the conviction that they could, through their actions, oppose totalitarianism on ethical

› SARTRE ON EXISTENTIALISM

“Atheistic existentialism, of which I am a representative, declares with greater consistency that if God does not exist there is at least one being whose existence comes before its essence, a being which exists before it can be defined by any conception of it. That being is man, or, as Heidegger has it, the human reality. What do we mean by saying that existence precedes essence? We mean that man first of all exists, encounters himself, surges up in the world—and defines himself afterwards. If man as the existentialist sees him is not definable, it is because to begin with he is nothing. He will not be anything until later, and then he will be what he makes of himself.”

—Christopher Cumo

Source

Jean-Paul Sartre, quoted in Morton White, ed., *The Age of Analysis: 20th Century Philosophers* (New York: New American Library, 1983), 124.



Jean-Paul Sartre was one of the most important and visible French intellectuals of the twentieth century. (Library of Congress)

grounds. In its despair, its call to action, and its morality, existentialism captured the mood of many Europeans during and immediately after World War II.

Existentialism broke from traditional philosophy in two ways. The first concerned the relationship between essence and existence. Philosophers distinguish between what a thing is, its essence or conceptual grounds, from a thing's presence as a physical entity, its existence. Existentialists agreed that essence has a primacy over existence with one exception: in the case of humans, existence precedes essence. A person first exists and then only during the course of his life defines himself through his actions. Existentialists held that the authentic person, spurning the impulse toward conformity, gives his or her life meaning through actions, even when these actions go against the norms of a culture.

Existentialists also broke from traditional philosophy in their understanding of rationality and logic. Whereas traditional philosophy and

science ranked these as the faculties that distinguished humanity, existentialism emphasized the degree to which irrational forces shaped human behavior. In Albert Camus's novel *The Stranger* (1942), Meursault, the book's hero, kills a man, not because the killing was part of a rational plan but because, it seems, the sun beating in his face goaded him to murder. Certain that philosophy was more than the exercise of reason, existentialists acknowledged the power of irrationality in human existence.

Rather than a tidy system, existentialism was an attempt to understand the concrete experience of human existence, even if that understanding eluded rational analysis. In its focus on concrete experiences, existentialism rejected abstractions. Sartre, Camus, Malraux, and Heidegger all dismissed God as an abstraction and thus embraced atheism. Yet other existentialists such as the German theologians Martin Buber and Rudolf Bultmann defined their relationship with God as the central experience of their lives. Certain that concrete experience mattered more than abstractions, existentialists affirmed the uniqueness of the individual over the monotony of mass culture.

The call to action was central to the movement. Sartre recounted the story of a young man faced with a moral dilemma. His father and brothers had died fighting the Nazis, and he faced the dilemma of joining the Resistance as his father and brothers had or of staying home to care for his mother. Either choice was morally debatable, and Sartre encouraged him to act and in so doing to create his own morality.

The call to action, central to existentialism, required a heroic engagement with the absurd. Camus' 1942 essay "The Myth of Sisyphus" explores the fate of Sisyphus, whom the gods condemned to an eternity of ceaseless and futile action: he must push a boulder to the top of a mountain in the underworld only to have it roll back down to the bottom. Each time he must retrieve the boulder and begin his labor anew. The meaninglessness of his labor must, one suspects, fill Sisyphus, the existential hero, with despair. Despair at its bleakest may lead to nihilism. But Camus did not sink to nihilism. He declared both Sisyphus and Meursault happy.

The philosophy of existentialism had an enormous impact on literature, the arts, and on popu-

lar culture. At the apex of this movement were Camus and Sartre, each of whom won the Nobel Prize in Literature, Camus in 1957 and Sartre in 1964. The nihilistic vein of postmodern art shared in the mood of despair that marked existentialism. Over the long term, the influence of existentialism is less clear. Its leaders are now dead, and philosophers in the academy have relegated existentialism to a historical movement rather than a living tradition. Moreover, the mood of despair, central to existentialism, lifted amid the prosperity of postwar America and Europe.

—*Christopher Cumo*

Bibliography

- Appignanesi, Richard, and Oscar Zarate. *Introducing Existentialism*. New York: Totem Books, 2002.
- Camus, Albert. *The Myth of Sisyphus, and Other Essays*. New York: Knopf, 1955.
- Copleston, Frederick C. *Contemporary Philosophy: Studies of Logical Positivism and Existentialism*. London and New York: Continuum, 2002.
- Reynolds, Jack. *Understanding Existentialism*. Chesham, UK: Acumen, 2006.
- Solomon, Robert C., ed. *Existentialism*. New York: Oxford University Press, 2005.

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Science and Technology

The importance of science and technology for the period from 1900 to 1945 is illustrated by the fact that in a 1999 *TIME* magazine poll about who was the most influential person of the twentieth century, Albert Einstein (1879–1955) came out on top. The great majority of those polled would have had a hard time naming even one of Einstein’s many scientific breakthroughs, let alone explaining the photoelectric effect for which he received the Nobel Prize in Physics in 1921. Einstein was not necessarily admired then or now for the nuances of his theoretical breakthroughs but instead is more generally associated with the progress made in the twentieth century in the fields of science and technology.

Historians should be more precise: Einstein is associated with the betterment of life occurring during the so-called Second Industrial Revolution, which is dated to the end of the nineteenth century and the beginning of the twentieth century. The Second Industrial Revolution not only began to make use of new sources of energy, such as electrical power, petroleum, and finally atomic energy, but also created the mass production of consumer goods that changed the way ordinary people in industrialized nations lived. For the public, Einstein was a symbol for the dramatic social changes that science and technology brought about. While many of these changes were for the good, others, particularly innovations in warfare, were less decidedly so. At the opening of this era, the Swedish chemist and inventor Alfred Nobel’s decision to set up a “Peace Prize” in addition to prizes for scientific innovations telegraphed the growing awareness that technical and theoretical innovations (such as Nobel’s dynamite or later atomic discoveries) could lead to not only social betterment but also vast destruction.

Innovations in manufacturing, industrialization and urbanization, biomedical sciences, practical inventions, warfare technology, communication and transportation, agricultural and animal sciences, and, finally, comprehensive scientific theories, mostly in the field of physics, occurred at a rapid pace from 1900 to 1945 across much of the world. The daily lives of families in the industrialized world changed quickly and dramatically in a generation or two. A grandmother in 1900 had to cure meat with salt to preserve it for the winter. Her granddaughter in 1950 simply went to a department store and bought a refrigerator. A grandmother in 1900

The daily lives of families in the industrialized world changed quickly and dramatically in a generation or two. A grandmother in 1900 had to cure meat with salt to preserve it for the winter.

crocheted her own woolen socks. Her granddaughter in 1950 wore transparent nylon stockings that looked like silk and were many times cheaper. Even today, the older members of families in the industrial world remember these dramatic changes. What became characteristic of the use of technology in the first half of the twentieth century is that through mass production, marketing, and advertising, new technologies and products finally reached ordinary people. For example, the process of refrigeration has been known for centuries. By the end of the nineteenth century, it was widely used on large ships and in big storage facilities. It was only in the early twentieth century that the well-known “fridge” had reached homes, at first the homes of the wealthy and then, through the assembly line’s mass production, the homes of the middle class. It should also be noted that while all this was happening in the First World, or the developed world, the benefits of scientific and technological progress did not reach the developing world before the end of World War II (1945) or later.

At the same time, Einstein and other scientists, like Nobel before them, developed moral qualms about the use of new scientific knowledge. Einstein’s 1939 letter to Franklin Roosevelt urging that the Allies develop an atomic weapon before Germany helped initiate the Manhattan Project. However, when the atomic bombs exploded over Hiroshima and Nagasaki in 1945, Einstein—along with many scientists who more actively participated in the Manhattan Project—publicly regretted his involvement. In the aftermath, an international scientist-based movement organized to discourage governments from developing atomic arsenals but gained little ground during the Cold War. Among these conscience-afflicted scientists, Einstein was a lifelong pacifist, was committed to world peace, and was deeply concerned about how the benefits of scientific progress could reach those less privileged.

As Einstein became an icon of scientific progress of this period, Henry Ford (1863–1947) became an often controversial symbol of the advancements in technology. Ford was not a quixotic figure struggling for world peace but rather a hard-nosed businessman fighting to increase the profits of his corporation. His name was immortalized in the newly coined word “Fordism.” The neologism “Fordism” was not so much a political or economic philosophy but rather a practical guide on how, with the help of technology, particularly through mass production, to make the world a richer and better place. The assembly line, created first in Michigan on the eve of World War I, became the prototype for modern industrial production. Ford’s advice was simple: shorten the time and reduce the money spent on making the product, make a lot of it, sell it for a fair price to a “great multitude,” and pay your workers decent living wages so that they too can buy the cheap product that they are making with their own hands. The strength of Ford’s vision was its practicality; it achieved immediate tangible results. With 15 million automobiles sold over the course of a decade, the Ford Model T truly became “the car for the great multitude,” as its founder envisioned it. The wage of five dollars a day, announced by Ford in 1914, doubled the earnings of the unskilled workers of the time. Ford became

a “wise man” of the era, often interviewed and quoted on a wide range of topics. Fervor for the philosophy of mass production was widespread. Ford’s engineers and other efficiency experts designed systems to optimize the flow of work through the factory floor. The emphasis was on increased production but not necessarily on safety or health. Ford’s critics, among them labor organizers, pointed out mass production’s hidden costs: assembly line work encouraged the “deskilling” of artisans and was repetitive, exhausting, and psychologically numbing. All power of decision shifted from the workers to management.

The development of science and technology and its social consequences in the first half of the twentieth century could be seen as oscillating between these two iconic poles. On the one hand, there was Einstein’s vision of world peace achieved by gradual enlightenment through scientific progress. On the other hand, there was Ford’s pragmatic vision of first making life easier by improving modern conveniences and making life better by increasing wages. Both visions were criticized and even ridiculed. One can only imagine what kind of a reaction Einstein caused among gray-suited politicians by suggesting that all of the U.S. nuclear bombs be placed at the disposal of the newly created United Nations for the purpose of maintaining world peace. Ford and Fordism were satirized many times, including by Charlie Chaplin in the 1936 movie *Modern Times* and earlier by Aldous Huxley in his 1932 novel *Brave New World* (in which Huxley invented a new calendar with years referred to by the phrase “In the Year of Our Ford”).

It is therefore quite significant that the outcome of the struggle of these conflicting visions was the world of the latter half of the twentieth century, a world that resembled Ford’s vision—or perhaps more accurately Huxley’s fear of a hollow consumer paradise—more so than Einstein’s dream of peace.

Outside the Western world, visions of the value of science and technology varied. Mahatma Gandhi (1869–1948), for example, promised to bring freedom and peace to his native nation of India by fostering spiritual enlightenment and tolerance. He had reservations concerning technology, given his disapproval of textile manufacturing machinery and its impact on Indian society. Gandhi’s successors, stepping away from his vision, namely Jawaharlal Nehru (1889–1964), took on the task of industrializing India and thus catching up with the technological changes in the West. In the Soviet Union, new technology was valorized. Vladimir Ilyich Lenin promised earthly paradise to the many nations of the old Russian empire to be achieved through electrification and industry. While most socialists embraced technology and mass production as revolutionary forces and while workers were valorized as heroes, goals set for production pushed workers to extremes, often in settings as dangerous as or more dangerous than in capitalist nations.

In the first half of the twentieth century there were few dissenters from the vision of progress offered by science and technology, whether under communist or democratic institutions. The World’s Fair of 1933–1934 (“A Century of Progress” International Exposition) held in Chicago at the start of the Great Depression, for example, championed a heroic vision of scientific progress stamping out “superstition” throughout the

world. This upbeat message was reflected in what now appears an ominous motto: “Science Finds—Industry Applies—Man Conforms.” Research money flowed to scientists and to corporate research and development teams.

Such faith in progress and its inevitable connection to technology, mass production, and improved living standards was common and could lead to excesses of enthusiasm and misguided thought. One of the most alarming trends was the fad for eugenics that reached a fever pitch in the 1920s and 1930s and interlinked with other social reform campaigns.

Based presumably on Darwinian theory and new knowledge about genetics, social elites sought “race betterment,” first through rigorous immigration controls and second by promoting policies that would prevent “undesirables” within communities or nations from bearing children.

Based presumably on Darwinian theory and new knowledge about genetics, social elites sought “race betterment,” first through rigorous immigration controls and second by promoting policies that would prevent “undesirables” within communities or nations from bearing children. Eugenics advocates in North America and Britain, for example, assumed that there was a natural racial hierarchy, with the Anglo-Saxon race superior to other races, while fertile “lesser” races were threaten-

ing its survival. Forced sterilization campaigns were successfully and legally carried out in the United States in this period, and immigration laws strengthened to radically reduce inflows of what were seen as less desirable races. In Germany, with the rise of the Nazi regime, laws were enacted that made it illegal for Germans to marry so-called undesirables such as Jews. Eugenics underpinned much of Nazi ideology and the ensuing Holocaust. Eugenics linkage to the Nazi regime’s excesses ended social elites’ embrace of eugenics-based notions.

The darker side of the new possibilities that technology offered became prominent in twentieth-century warfare. While inventions in the nonmilitary sectors of industry improved the lives of many people, the same cannot easily be said for military technology. During this period, submarines, poison gas, aircraft and aircraft carriers, radar, rocket-propelled missiles, and the atomic bomb were added to military arsenals. In general, the new technology made war a more deadly exercise, though some was obviously used to lessen the loss of life and limb. This was the darker side of the technological progress that Nobel, Einstein, and many other critics were concerned about. To make things more complicated, the division between military and civilian technology was and remains very porous. Civilian technology can be used for military purposes and vice versa. For example, nylon was used to produce women’s stockings, but it was also used in the making of parachutes. Radar, which was a strictly military invention, soon spilled over to civilian use on ships and airplanes.

Drastic innovations in the biomedical sciences and agricultural and animal sciences also mark this period. The most dramatic changes were in the area of surgery. With the new advancements in the making and use of local and general anesthetics, surgical operations of long duration

became possible. Furthermore, the discovery of penicillin and, subsequently, of other antibiotics improved a patient's chances of surviving a surgery. Surgical techniques advanced so much that complicated and risky brain surgeries became possible. It should also be noted that the two world wars became the largest training ground for the medical profession. In the heat of battle surgeons had to operate for hours, even days at a time, and gained valuable experience. Furthermore, new technologies used during the conflicts also created new kinds of injuries, which, in turn, presented new challenges to the medical profession. Colonialism also affected the advancements in life sciences because various tropical and non-European diseases posed a challenge to the medical profession, leading to the rapid development of cures and remedies.

Breakthroughs in scientific theory were many in this period. During this period the discipline of astronomy probed the beginnings of the universe and the life sciences probed the origins of humankind, while physics probed the nature of matter and energy. In astronomy, powerful telescopes revealed a universe of multiple galaxies. An important breakthrough came in 1929 with U.S. scientist Edwin Hubble's discovery of the redshift in spectroscopy that revealed that all galaxies are receding from each other, indicating that the universe is expanding. In biology, in 1902 and 1903 researchers Theodor Boveri and Walter Sutton published research that indicated that cell chromosomes contained the material that allowed the transmission of inherited characteristics. By 1915 Thomas Hunt Morgan's studies of fruit flies (*Drosophila melanogaster*) confirmed their controversial theory, and by the early 1920s researchers had succeeded in triggering mutations of genes in cell nuclei and firmly established the previously unknown mechanism that Darwin had posited for the generation of variations that might permit natural selection and the evolution of species. The fledgling science of ecology also gained traction in the early twentieth century and gained respectful attention during the agricultural disasters that struck the United States during the 1930s.

The major scientific breakthroughs of the twentieth century, however, belonged to physics. New theorizing not only made atomic energy possible but also dramatically changed the way scientists saw the universe. Einstein's theory of relativity and its revolutionary recasting of classical physics opened the door to new conceptions, some of which even he was loath to accept. During World War I, for example, Karl Schwarzschild, a fellow scientist, sent a letter to Einstein arguing that general relativity opened the door to the singularity of a collapsed star (now known as a black hole) from which no matter or energy could escape. In addition to relativity, the new quantum theory pioneered in the first decade of the twentieth century by scientists such as Max Planck, Einstein, and Neils Bohr turned centuries of scientific tradition upside down. Foremost, quantum theory posited that radiative energy such as light was not continuous or

Foremost, quantum theory posited that radiative energy such as light was not continuous or capable of infinite division but instead was composed of finite lumps, or "quanta."

capable of infinite division but instead was composed of finite lumps, or “quanta.” Louis de Broglie (1892–1987) demonstrated in 1924 with his theory of wave mechanics that electrons are, at the same time, both matter (“corpuscles”) and energy (“waves”). During the same decade, Werner Heisenberg (1901–1976) insisted that an electron’s location and momentum could never simultaneously be pinpointed (i.e., certainty was impossible on the quantum level). Exploring the implications of quantum mechanics, in 1935 Erwin Schrodinger (1887–1961) formulated the so-called Schrodinger’s Cat paradox. The behavior that Heisenberg’s Uncertainty Principle pointed to on the quantum scale (i.e., an electron could be in multiple locations simultaneously) led to bizarre results if projected on a larger scale. Schrodinger offered a thought experiment in which a cat hidden in a box could be posited to simultaneously be both dead and alive (in quantum terms, its two possible superpositions) depending on the unpredictable decay of a radioactive substance that would then trigger a gunshot; from its suspended probabilistic state of alive and dead the cat would actually only become alive or dead when the box was opened and the cat was observed.

Not surprisingly, the gap between scientists and the ordinary public widened as such paradoxical theories about the nature of matter, energy, gravitation, the universe, and reality developed. The years between 1900 and 1945 can truly be called an era of scientific and technological revolution, but they were also rife with paradoxes as well as philosophical and moral concerns.

—*H. Micheal Tarver, Alexander Mirkovic,
and Fred Nadis*

■ Introduction: Manufacturing, Industrialization, and Urbanization

The process of modernization, manifested in the expansion of industry, increased urbanization, and technological innovations including transportation and communications infrastructure, rapidly accelerated from 1900 to 1945. While these developments occurred primarily in the more developed and wealthy regions of the world, they affected all world regions. The emergence of the modern city, with its skyscrapers, electric lights shining on the skyline, transport systems, and factories, was a key historical development in this period. Yet such symbols of possibility could not mask the era’s myriad social and economic problems.

—*Abraham O. Mendoza*

The Assembly Line

Although it had dramatic effects, the essence of the assembly line is very simple. Products are assembled as a conveyor belt passes various workstations, each devoted to a particular assembly function. The various parts needed for assembly are delivered to the appropriate workstation. Labor previously devoted to moving parts around the workplace is thus eliminated. The assembly line dramatically decreased production costs, but jobs on assembly lines were monotonous, and the pace of work was regulated by the conveyor belt.

As with any technological or organizational innovation—and the assembly line was both—the

assembly line had many precursors. In terms of technology, one precursor was the dis-assembly lines developed in the meatpacking industry from the 1860s. Faced with a national market after the advent of refrigerated railcars, meatpackers developed overhead conveyors on which pig and cow carcasses moved past workers, who each were responsible for performing a different operation. The carcasses were at first pushed along these conveyors, but powered conveyors soon followed. The speed of the conveyor regulated the speed at which workers performed their tasks.

Another precursor was the idea of interchangeable parts. In early nineteenth-century industry, parts were assembled by individual artisans, and much filing was often necessary to make parts fit. With the development of specialized machinery for the manufacture of particular components, it became possible to produce guns and other products from components that would easily fit together. While the degree to which perfect interchangeability was achieved with the nineteenth-century American system of manufacturing is sometimes exaggerated, the assembly line was only feasible if workers at each station could perform a particular act of assembly expeditiously.

Last but not least, electrification, which began at the turn of the twentieth century, allowed factories to locate machinery where it best facilitated the production process rather than where it could most easily be attached to an external engine. Electrification also made it easier to operate different machines at different speeds.

In the nineteenth century factory owners had begun to reorganize factories to encourage work flow. The use of iron as a building material allowed for much larger work areas. Also invaluable were the scientific management studies of Frederick Winslow Taylor from the 1890s, in which workers were timed in task performance and best practices identified, and the somewhat later motion studies of Frank and Lillian Gilbreth, in which workers were followed while working by motion picture cameras and their motions analyzed in detail. Assembly lines depended on understanding both the time and motions necessary for each stage of assembly.

The Ford Company's Highland Park plant introduced the first full-fledged assembly line on

THE DISASSEMBLY LINE



(Library of Congress)

The Armour meatpacking plant's disassembly line, Chicago, circa 1909. Such work areas, which included conveyors that moved animal carcasses through the plant for workers at assigned stations, were an important precursor of the assembly line that led to the rise of mass manufacture.

—Rick Szostak

the eve of World War I. Although not designed with the assembly line in mind, the Highland Park factory, built in 1910, was a large, well-lighted space with electrical wiring throughout. Henry Ford was determined to lower the cost of automobile manufacture and was convinced that there was a mass market for automobiles if these could be produced cheaply enough. He and his staff first established a small assembly line for assembling the magnetos that powered the electrical system and found that assembly time fell from 20 minutes to 4 minutes. In 1913 after developing assembly lines for the engine and transmission, they introduced a much longer line for the assembly of the car chassis itself. Even with a rope pulling the chassis past components, assembly time fell from 17 hours to 6 hours. The conveyor belt was then powered and specialized workstations designed, with the

result that assembly time for each car fell to 1.5 hours by the end of 1914.

While the assembly line succeeded in dramatically lowering the cost of production, it did not provide attractive jobs. Ford on average replaced his workforce four times during 1913 alone. In 1914 he introduced the famous five-dollar day, a rate of pay almost double the wages usually earned by unskilled labor at the time. Ford also employed immigrants and blacks who had limited alternative employment opportunities. This trade-off between wages and intrinsic enjoyment of labor was symbolic of the adoption of the assembly line elsewhere in industry. Workers sacrificed a sense of achievement or control in return for higher incomes. Notably, though, further automation would later eliminate some of the more tedious assembly line tasks.

Through the 1920s almost every large factory assembling goods for a mass market would introduce the assembly line or at least some key elements of this such as conveyor belts or a reorganized production process. As machine-tool firms developed specialized machinery for workstations in many industries, the stage was set for the full automation decades later of some steps in production.

Ford's assembly line of 1914 embodied four principles essential to all later assembly lines. First, there was an unprecedented degree of division of labor such that each worker performed only one simple task. Second, interchangeable parts were used throughout. Third, specialized machines were developed for each workstation. Fourth, numerous jobs that had involved moving parts around the workplace were eliminated.

After selling 15 million Model Ts, Ford would find—in the face of competition from General Motors—that consumers wanted some variety in their mass-produced goods. Later assembly lines across many industries would need to have the flexibility to produce goods with slightly different colors and styles. In the post-World War II world the development of programmable numerically controlled machine tools would greatly facilitate this task.

—Rick Szostak

Bibliography

- Lewis, Robert. "Redesigning the Workplace: The North American Factory in the Interwar Period." *Technology and Culture* 42 (2001): 665–684.
- Mazzolini, Roberto. "Innovations in the Machine Tool Industry." In *Sources of Industrial Leadership: Studies of Seven Industries*, edited by David C. Mowery and Richard R. Nelson. New York: Cambridge University Press, 1999.
- Rubenstein, James M. *Making and Selling Cars: Innovation in the U.S. Automobile Industry*. Baltimore: Johns Hopkins University Press, 2001.

Efficiency Studies—The Hawthorne Plant Experiments

Conducted at Western Electric's Hawthorne Works in Cicero, Illinois, between 1924 and 1933, the Hawthorne Plant experiments formed an important case study that changed the direction of labor-management relations as they influenced generations of management experts with their findings. In the age of assembly line production through the 1920s, scientific management—following from the work of Frederick Taylor—had emphasized the routinization of tasks to increase efficiency. In the wake of the Hawthorne experiments, however, a more complex set of variables was viewed as equally, if not more, important in increasing worker productivity. The most important conclusion of the experiments pointed to the social interaction among workers and between workers and managers as a significant factor in affecting productivity levels. When worker satisfaction was improved through active participation in structuring the work environment, productivity levels also increased, even if work conditions were made worse.

In the decades since the findings were publicized, scholars have criticized the study for its methodological flaws and the subjective interpretation of the data that researchers invoked. The study has even given rise to the term Hawthorne effect to denote a study that leads to increased (yet short-lived) levels of worker productivity based on employees' gratification for being chosen to participate in the project. Despite these critiques, however, the conclusions

of the Hawthorne Plant experiments continue to echo through contemporary labor-management theories, including participatory decision making, quality circles, and total quality management.

First built in 1905 by American Telephone and Telegraph's (AT&T) Western Electric (WE) division, the Hawthorne Works in Cicero, just west of Chicago, Illinois, employed 12,000 workers by World War I. As the primary site of AT&T's manufacture of telephones and telephone switching equipment, the plant expanded its operations to employ over 22,000 workers in the massive factory site by 1927. Known for its welfare capitalism measures, WE instituted a number of programs in the Hawthorne Works to foster satisfaction and company loyalty among the workforce. In addition to offering medical care onsite and educational courses after working hours, WE sponsored numerous sports teams and social programs for its employees. It also instituted numerous efficiency measures in the Hawthorne Works to improve productivity. Like other manufacturers, these efforts typically focused on the scientific management of the workplace to simplify production tasks and make each worker's job more routine and easier to perform.

As part of its efforts to study how work conditions affected job performance, WE agreed to sponsor an experiment to determine the effects of lighting levels on assembly line workers' productivity. Begun in November 1924, the lighting experiments were cosponsored by the National Research Council of the National Academy of Sciences, a federal agency that undertook the project after being lobbied by several manufacturers of industrial lighting equipment, and foundations supported by the Rockefeller Family. Although the researchers hypothesized that reduced lighting would lead to similar reductions in output by workers, there proved to be no correlation between the amount of lighting on the assembly line and worker output. Even as the amount of lighting decreased to dismal levels, productivity actually continued to increase. Although the results from the first experiments were inconclusive, researchers tentatively concluded that factors other than lighting were influencing productivity.

After the National Research Council withdrew from the studies, Clair Turner and George E. Mayo joined the research team in conjunction with the Harvard Business School in April 1928. Intrigued by the outcome of the first study, the research group set up another set of thirteen experiments with a group of five women assembly line workers. Once again changing a number of variables such as lighting, rest periods, and the length of the working day and week, the researchers found no specific correlation between the variables and productivity, which increased a total of 46 percent over the five years of the subsequent studies. From these observations, the researchers concluded that factors such as increased participation by employees in managing the workplace were more important than incentive pay schemes or physical conditions in improving productivity. From this early conclusion, WE followed up the experiments by conducting over 10,300 interviews with its employees to discuss their opinions about their work environment. The experiments themselves continued until they were curtailed as an austerity measure in 1933, as the Great Depression unfolded.

The emphasis on employee participation instead of scientific management of work conditions made an immediate impact on the fields of industrial and labor relations after the researchers' studies began to appear from the late 1920s onward. Elton Mayo, in particular, became the leading expert on industrial human relations and psychology, although it was not long before significant critiques of his work appeared. To many scholars, it was clear that Mayo and his colleagues were far from objective in their interpretation of the data and often ignored workers' statements about their motivations and satisfaction. With an ideological bias that argued against worker self-organization and in favor of managerial prerogatives, Mayo's subjectivity also seemed to predict the conclusions he drew from the evidence. In one instance, Mayo labeled a worker he deemed troublesome as a "Bolshevik," even though there was no evidence that the woman had demonstrated any political leanings. The woman was quickly replaced as a test group member, and the experiments continued.

By suggesting that worker satisfaction—and therefore, productivity—could be improved by a more participatory management style, the Hawthorne experiments nonetheless ushered in a new age of labor-management relations for many employers. Even those who criticized the conclusions agreed that the experiments were a breakthrough in terms of treating the workplace as a complex social environment. Although the results of the Hawthorne experiments did not completely replace the scientific management school in the arena of industrial relations (which held that in-depth mathematical and motion analysis provided the key to worker productivity), they did mark an innovation in the theory and methodology of industrial management studies and their implementation. The contemporary interest in cooperative decision making through practices such as quality circles demonstrates the continuing influence of the Hawthorne experiments.

—Timothy G. Borden

Bibliography

- Borden, Timothy G. "Hawthorne Plant Experiments." In *Work in America: An Encyclopedia of History, Policy, and Society*, edited by Carl E. Van Horn and Herbert A. Schaffner. Santa Barbara, CA: ABC-CLIO, 2003.
- Gillespie, Richard. *Manufacturing Knowledge: A History of the Hawthorne Experiments*. Cambridge: Cambridge University Press, 1991.
- Greenwood, Ronald G., Alfred A. Bolton, and Regina A. Greenwood. "Hawthorne a Half Century Later: Relay Assembly Participants Remember." *Journal of Management* 9 (1983): 217–231.
- Milkman, Ruth. *Farewell to the Factory: Auto Workers in the Late Twentieth Century*. Berkeley: University of California Press, 1997.
- Schatz, Ronald W. *The Electrical Workers: A History of Labor at General Electric and Westinghouse, 1923–1960*. Urbana: University of Illinois Press, 1983.
- Sonnenfeld, Jeffrey A. "Shedding Light on the Hawthorne Studies." *Journal of Occupational Behaviour* 6 (1985): 111–130.
- Trahair, Richard C. S. *The Humanist Temper: The Life and Work of Elton Mayo*. New Brunswick, NJ: Transaction Books, 1984.
- Waring, Stephen P. *Taylorism Transformed: Scientific Management Theory since 1945*. Chapel Hill: University of North Carolina Press, 1991.

Skyscrapers

Skyscrapers came to dominate the skylines of major world cities in the first half of the twentieth century. The development of the elevator, the use of steel, and innovations in architectural design made it possible to build structures that rose far above the previous limit of five stories. New York City and Chicago, centers of industry and trade where industrialists were eager to make statements about their worth and power, were home to the earliest and some of the most impressive skyscrapers.

More than any other type of building, the skyscraper is quintessentially twentieth century. The older idea that a city consisted of small- to medium-sized buildings made urban by their proximity to one another fell to the new notion that size mattered. A city showed its significance by how many buildings it possessed, how many people used those buildings, and especially the height of its buildings. The skyscrapers of the nineteenth century were buildings that fit into the existing urban context. Taller than earlier buildings, they were not tall enough to dominate the skyline. At the start of the century, the tallest building in New York City, George B. Post's Pulitzer Building on Park Row, stood 309 feet (94 meters) tall, only slightly higher than the 284-foot (87-meter) steeple of Trinity Church.

However, the new steel buildings that began to appear in Chicago in the mid-1880s turned the old rules of architecture inside out. The Home Insurance Building, built by William Le Baron Jenney in 1885, is generally acknowledged as the first skyscraper. Made of steel and masonry, a fireproof metal frame supported both the inside floors and the outside wall. Elevators in the building allowed for a greater number of stories, fireproofing made them safe, and electric lights accommodated the needs of office workers housed in the structure. Instead of resting a building's weight on thick external walls of brick or stone, Jenney innovated by placing it on an internal framework—a skeleton—of steel columns and beams. Walls would still be necessary for weather protection and adornment, but structurally they had become almost incidental.

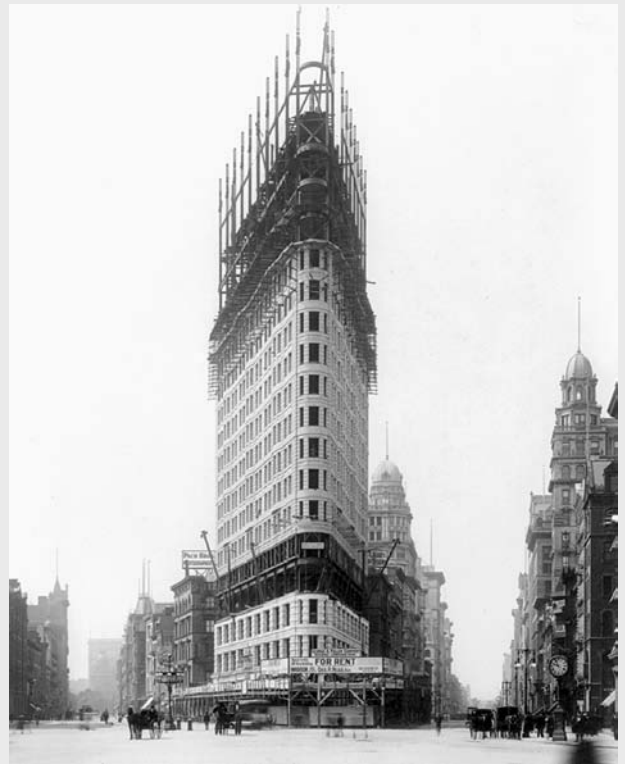
The majority of the best-known skyscrapers have been built in the United States. Tall build-

THE FLATIRON BUILDING

New York City's Flatiron Building is not only one of the most photographed skyscrapers in the world but also one of the oldest. Completed in 1902 from a design by Daniel Burnham, the steel and terra-cotta office building at the junction of Fifth Avenue and Broadway has a triangular shape 200 feet wide by 300 feet by 85 feet (61 by 91 by 26 meters) that resembled an iron to contemporary observers. As the building went up, skeptics stood at a safe distance to watch it crumble at the first high wind. The building, designed in the Beaux Arts style, has 22 stories.

—Caryn Neumann

Flatiron Building in New York City during construction, about 1902. (Library of Congress)



ings became a status symbol, showcasing the industries that they housed. These buildings include, in New York City, the Metropolitan Life Insurance Tower (700 feet/213 meters), completed in 1909; the Woolworth Building (792 feet/241 meters), completed in 1913; and the Chrysler Building (1,046 feet/319 meters), completed in 1930. The Empire State Building (1,250 feet/381 meters), part of the race to build the tallest building in the world, was promoted as the Eighth Wonder of the World at its 1931 opening. The devastation of the Great Depression brought construction nearly to a halt worldwide. Rockefeller Center, opened in 1940, was the last great skyscraper of the prewar era and the only large private project executed between the start of the Great Depression and the end of World War II. The centerpiece of Rockefeller Center is the RCA Building (850 feet/259 meters), one of the first office buildings to have air conditioning.

When building resumed after the war, skyscrapers became more streamlined as architects

were influenced by European modernism and the use of standardized parts. The tallest building in the United States is Chicago's Sears Tower. Built in 1974, it stands 1,454 feet (443 meters), taller than the 1,368 feet (417 meters) of the fallen World Trade Center towers in New York City, destroyed in the September 11, 2001, terrorist attacks on the United States. The tallest of the twin Petronas Towers, completed in 1996 in Kuala Lumpur, Malaysia, stands 1,476 feet (450 meters). The Petronas Towers are part of a shift in the construction of skyscrapers from the United States to Asia. By the close of the twentieth century, most skyscrapers were being built in the Far East as symbols of the strength of newly emerging powers.

—Caryn Neumann

Bibliography

- Dupré, Judith. *Skyscrapers*. New York: Black Dog and Leventhal, 1996.
- Goldberger, Paul. *The Skyscraper*. New York: Knopf, 1986.

Kreitler, Peter Gwillim. *Flatiron: A Photographic History of the World's First Steel Frame Skyscraper, 1901–1990*. Washington, DC: American Institute of Architects Press, 1991.

Rasenberger, Jim. *High Steel: The Daring Men Who Built the World's Greatest Skyline*. New York: HarperCollins, 2004.

Electrification

The electrification of cities in the United States and Europe was a piecemeal affair that began with laying telegraph lines in the 1840s. These bestowed commercial advantages on cities (as opposed to the countryside) by focusing news and information on them. Likewise, the telegraph facilitated the expansion of large enterprises, notably railroads and stock markets. At the same time, a series of technologies based on the telegraph, such as burglar alarms, stable calls, and doorbells, familiarized people with the idea that a current carried over wires could be instantaneously transmitted virtually anywhere.

However, practical applications of this notion were few because most electricity still came from batteries, and the use of electricity to provide light, heat, or power was limited until the availability of large, efficient generators in the 1870s. Until then, “impractical” electric lighting was confined to special effects in theaters.

Both in Europe and the United States, regular public electric lighting first appeared in the late 1870s as a spectacular display in city centers and at expositions and fairs. In each setting, electric lighting had to compete with existing gas systems. Department stores and clothiers quickly adopted arc lights because they were cleaner, brighter, and safer than gas, and because they proved popular with customers.

For similar reasons of cleanliness, brightness, and safety, Thomas Edison's enclosed incandescent light (whose distribution system and pricing were designed with competing gas systems in mind) was rapidly adopted where convenience and fashion were most important. First displayed in 1879, his system spread rapidly during the following decade into the wealthiest homes, the best theaters, and the most exclusive clubs in New York, Chicago, and other large cities. In many cases, isolated plants were installed

(in skyscrapers, for example) obviating the need to secure permission to deliver current through public streets via overhead wires (which soon became a public nuisance because of their number) or conduits (which were costly to lay under streets). As a result, a patchwork of competing and incongruent services developed in the 1880s. These were later integrated into unified, mostly privately owned, utility companies, though Progressives did create some public systems, notably in Seattle and Cleveland. Nevertheless, because of the high cost of producing electrical current, as well as the high cost of changing systems, gas supplied the vast majority of private homes with light and heat until 1910. The major shift to electricity did not occur until the years between 1918 and 1929.

In contrast, electric lighting dominated public spaces quickly and by 1900 had already reached an intensity well beyond the purely functional. Large hydropower generators efficiently transmitted alternating current over long distances, making American cities such as New York the most intensively lighted in the world, not least because of the speed of electric advertising. Spurred by the “white way” campaigns of General Electric and the utility companies, even smaller cities aspired to have a “great white way” in imitation of New York, where millions of bulbs flashed in Times Square, creating a new, artificial environment. In Europe, such technological and cultural centers as Frankfurt, Berlin, and Paris also underwent intense electrification in the early decades of the twentieth century.

During these same years, electric traction, often powered by its own generating plants, rapidly displaced horsecar lines and steam transit systems because of its aesthetic and technological advantages. Electric trolleys were faster and cleaner than horsecars; they could stop more precisely and climb steeper grades than cars powered with steam. Electric cars could also be lighted at night and heated in winter. Real estate promoters often invested in or owned traction companies, whose spreading lines defined much suburban and regional development, as in Los Angeles, Boston, and Minneapolis.

In addition, on evenings and weekends electric companies used their superfluous generating capacity to power amusement parks. These diver-

sions typically generated as much as 30 percent of a line's overall traffic, as well as providing a market for electricity. Thus, the trolley established the city as the center of an easily accessible network, from the downtown shopping district to streetcar suburbs to the amusement park and on out to rural hamlets on interurban lines.

Factory and industrial electrification also began with lighting and traction. Flour and cotton mills quickly adopted electric light because of its safety and ease of handling; printers, artists, and others whose work required accuracy and true color values found incandescent light preferable to gas; and factory owners soon discovered that artificial light allowed large interior spaces without regard for windows.

Electric traction proved especially useful in moving materials, particularly in mines and other closed environments. Traction was adapted to overhead hoists and cranes, which began to move their loads more freely overhead when electric motors replaced drive shafts. In short, electricity revolutionized factory design by brightening and opening up work space; it also made new work flows possible, most notably on assembly lines where machines powered by electricity could be arranged in combinations that were impossible with older systems of delivering power.

This is not to say that electrification necessarily caused a particular form of mass production. Rather, it facilitated experiments and new designs. At the same time, electrification changed the location requirements of factories that no longer needed access to rushing water or to coal. Because power lines could reach virtually anywhere, factories could move to the edge of cities or out along main highways. Thus, electrification transformed factory layouts and the location of industry, and it contributed to the gradual disaggregation of walking cities into postindustrial cities that sprawled beyond suburbs into the hinterland. While the automobile has received more attention as an explanation for this development, full deployment of the electrical grid was a precondition for decentralization away from railway lines and the older urban core.

The electrification of homes spread from the wealthy to the middle class only after factory electrification was well under way. The domestic

market became attractive to utilities once the overall load curve peaked during the day, creating a need for compensating nighttime demand from homes and apartments. At first, only lighting was installed, but a series of domestic electric appliances soon appeared, in roughly the order of irons, fans, vacuum cleaners, and washing machines by the 1920s, followed by radios, stoves, phonographs with loud speakers, and refrigerators in the 1930s. Thereafter came a host of other technologies, the most important being air conditioning. It began in public buildings such as movie theaters well before World War II but only became widespread after the war, gradually assuming central importance in climate control, particularly in the warmer parts of the United States. Since electricity also makes possible the creation of artificial daylight, precise delivery of ventilation, and rapid vertical movement on escalators and elevators, it clearly played a central role in creating new urban environments, ranging from the skyscraper, giant department store, amusement park, assembly-line factory, and subway of the early twentieth century to the malls and domed stadiums of later decades.

In short, the modern city is unimaginable without electricity, a technology that underlies many changes in design and function at every level of society. Its importance becomes starkly apparent when power fails, a city is plunged into darkness, and many of its functions are paralyzed, most obviously communications, work, law enforcement, entertainment, and transportation.

—David E. Nye

Bibliography

- Hughes, Thomas P. *Networks of Power: Electrification in Western Society, 1880–1930*. Baltimore: Johns Hopkins University Press, 1983.
- Nye, David E. "Electrification." In *Encyclopedia of Urban America: The Cities and Suburbs*, edited by Neil Larry Shumsky. Santa Barbara, CA: ABC-CLIO, 1998.
- Nye, David E. *Electrifying America: Social Meanings of a New Technology*. Cambridge, MA: MIT Press, 1990.
- Nye, David E. *When the Lights Went Out: A History of American Blackouts*. Cambridge, MA: MIT Press, 2010.
- Platt, Harold L. *The Electric City: Energy and the Growth of the Chicago Area, 1880–1930*. Chicago: University of Chicago Press, 1991.

■ Introduction: Biomedical Advances

The practice of medicine was transformed by changing conceptions of disease—notably the germ theory of disease, developed in the nineteenth century. The work of Louis Pasteur (1822–1895) and Robert Koch (1843–1910) had indicated that tiny microbes were responsible for many diseases and that controlling the reproduction and transmission of such microbes could be the key to modern medicine. Medical practitioners typically emphasized prevention of disease through improved sanitation, or the cure of disease through new drugs.

Much of the medical profession in the early twentieth century was focused on battling infectious diseases. As if carryovers from the nineteenth century such as cholera and tuberculosis were not damaging enough, an influenza epidemic during World War I spread throughout the world, killing more than 21 million people, the work not of a bacterium but of a much smaller organism, a virus. Although studies indicated that better sanitation might decrease the spread of deadly microorganisms, scientists realized that the human body could never be made perfectly sterile. In addition, physicians emphasized the “microbe” nature of disease rather than the “filth” nature of disease. Although cleanliness certainly would help prevent disease, a person infected with tuberculosis could spread the disease to nearby people in even the cleanest of homes. Despite the medical community’s recognition of the role of microbes in spreading disease, the popular conception of dirt as the source of “germs”—and thus disease and death—continued beyond midcentury and is still prevalent today.

Physicians played important roles in shaping social policy, by defining diseases, formulating appropriate therapy, and making recommendations to public health officials. One example was the effort to eliminate tuberculosis, commonly known as consumption, which combined physicians’ expertise with state-sponsored social programs. When Britain recruited soldiers for the Boer War at the turn of the twentieth century, for instance, officials were shocked at the numbers of young men who were unfit for service.

Armed with the germ theory of disease, physicians proposed a series of measures—rules against spitting in public, strict controls on milk, meat, and other potential breeding grounds for bacteria, and the separation of infected patients in hospital wards. The effort to eliminate tuberculosis continued during the first half of the century as part of a larger campaign to improve the overall health of British subjects. Although it was not very effective in combating the disease, the campaign served as a vehicle for enforcing social laws desired by the middle classes.

In another example of the connections between physicians and social policy, medical practitioners in Nazi Germany helped to initiate the racial hygiene laws by advising on the language to be used. Thus sterilization, euthanasia (medical killing of “undesirables”), and restrictive marriage laws find their origins not merely in extremist Nazi ideology but also in mainstream medicine of the era. As historian Robert Proctor argues, this active participation of medical professionals served to validate racial policies by providing them with a blessing from the scientific community.

Another important development in medicine was the rise of the pharmaceutical industry. Drug companies were an important source of funding for research in the biomedical sciences, and they benefited from the results. The German bacteriologist Paul Ehrlich (1854–1915) first developed Salvarsan, a chemical therapy to treat syphilis; it was marketed widely, but the side effects were so painful that many refused to subject themselves to it. Aside from chemically produced therapies, drug companies reproduced naturally occurring fighters of disease. The 1902 discovery of the body’s regulating fluids (later called hormones) by British scientists William Bayliss (1860–1924) and Ernest Starling (1866–1927) produced a flurry of interest among pharmaceutical manufacturers. Hormone therapy became a crucial area of research, and products that could use hormones to alter the body’s reactions were produced and sold by corporations. The most celebrated of these products was Frederick Banting’s (1891–1941) discovery of insulin in 1921, which

► THE FIRST GENERATION OF JAPANESE MICROBIOLOGISTS

Between 1886 and 1910 three young Japanese physicians worked at major biological research institutes in Germany. All made critical discoveries in the field of microbiology. Shibasaburo Kitasato (1852–1931), encouraged by Western physicians in Japan, worked at Robert Koch's laboratory in Berlin between 1886 and 1891, where he isolated the first pure culture of *Clostridium tetanus*. With Emil Behring, Kitasato did critical early work with tetanus antitoxin. Returning to Tokyo, Kitasato founded a microbiological research institute, initially governmental and later private. In 1894 Kitasato and Alexander Yersin independently identified the bubonic plague bacillus.

Kitasato mentored many young microbiologists. Kiyoshi Shiga (1871–1951) was working in Kita-

sato's institute in 1897 when he discovered *Shigella*, the cause of bacillary dysentery. In 1901 Kitasato sent Shiga to Frankfurt to work with Paul Ehrlich, where Shiga conducted research with antimicrobial dyes and atoxyl, an early arsenical. Shiga returned to Kitasato's institute in 1905.

Sahachiro Hata (1873–1938) was sent by Kitasato to work at the Koch Institute in Berlin in 1908. In 1909 Hata joined Ehrlich in Frankfurt. Hata's expertise with experimental syphilis in animals and his systematic investigation of hundreds of potential antimicrobial arsenicals led to the discovery of Salvarsan. Hata returned to Kitasato's institute in 1911.

—Sandra Moss

was the key to treating diabetes. Other products directly fought bacteria and were called antibiotics. During World War II, U.S. pharmaceutical companies such as Pfizer and Merck mass produced penicillin and saved thousands of soldiers' lives and limbs from infection.

Although industries had the potential to develop "miracle drugs," they also presented dangers when the effects of medicines were poorly understood. Some governments tried to respond to such uncertainties with regulations. The United States, for example, passed the Pure Food and Drug Act in 1906 in order to require accurate labeling of drugs; this measure, officials hoped, would enable consumers to make wiser choices. It also established the Food and Drug Administration to ensure proper controls on potentially dangerous substances. In 1938, after hundreds were killed from a toxic form of the drug sulphanilimide, it passed a law (the Food, Drug, and Cosmetics Act) requiring prescriptions for certain drugs. Before, many narcotics could be purchased without permission from a doctor; now, there were distinctions between over-the-counter drugs and those requiring consent of a physician. This put responsibility for medical ethics and risks directly on the shoulders of government, and it empowered doctors to be the brokers between patients and their

cures, not merely recommending treatment but controlling access to potential remedies.

—Jacob Darwin Hamblin

Radiology

The major task of the medical specialty of radiology is to diagnose diseases of the inner organs with the help of medical imaging technologies. In former times, the only radiologic diagnostic tool was the X-ray machine. More recently, ultrasonography, computed tomography, magnetic resonance imaging, and positron emission tomography have gained in importance.

The history of radiology began in 1895. Wilhelm Conrad Roentgen, a German physics professor, was the first to describe the so-called X-rays, although many other scientists had generated this radiation before, including Johann W. Hittorf, William Crookes, Heinrich Hertz, and Nikola Tesla. As these scientists did not declare their findings publicly or make them widely known, Roentgen came fresh to the analysis of these electromagnetic waves. He independently discovered the X-rays, a form of electromagnetic radiation that is more powerful than visible light or radio waves, while he was working with a primitive cathode ray generator. During an experiment, he noticed a faint

► MEDICAL RADIATION EXPOSURE

X-ray and other radiologic applications have become quite common in our modern health system. Although these technologies enable physicians to make precise diagnoses, we should bear in mind that computed tomography as well as a simple X-ray photo can expose a patient to high-energy radiation. An overdose of this radiation can be hazardous to the human body. Physicians should not expose their patients to unnecessary dangers, nor should patients insist on dispensable screenings. On the other hand, the radiation exposure created by radiology is relatively small in comparison to natural radiation sources from outer space, from the ground, or from inside the human body. If one does not have to undergo computed tomography and X-ray scanning constantly, there is no need to fear these modern technologies. In earlier times, the radiation doses during an X-ray examination were much higher because of less-efficient equipment. Today, medical research is increasingly interested in reducing a patient's risk factors to a minimum.

—Florian Steger and Matthias Schrempf

X-ray photo of Albert von Koelliker's hand made by Wilhelm Conrad Roentgen, about 1896. (Library of Congress)



green light on the wall. The exceptional feature of this light was that it seemed to travel through some books and papers standing between the ray generator and the wall. Being fascinated by this discovery, he began putting various objects in front of the ray generator. Exposing his wife's hand to the radiation for 20 minutes, he produced the first X-ray plate of a human organ. Two months after his pioneering discovery in 1895, he published his paper "*Eine neue Art von Strahlen*" ("*On a New Kind of Radiation*") at the Physical-Medical Society in Wuerzburg, Germany. This was the first formal and public recognition of X-rays.

Roentgen referred to the rays as "X" in order to emphasize that they were unknown. On Janu-

ary 23, 1896, he demonstrated his work in a public experiment to the Physical-Medical Society in Wuerzburg. At the meeting, he produced an X-ray picture of the hand of Albert von Koelliker, a notable anatomist at that time. Von Koelliker spontaneously suggested that these rays be named Roentgen-rays, which is still quite common in many countries. For his pioneering work, Roentgen received the first Nobel Prize in Physics. The committee stressed especially the practical importance of this discovery. The importance of X-rays grew quickly in the area of medical imaging, as bones and teeth could be visualized perfectly and it became easy to detect the exact place and seriousness of fractures.

X-rays penetrate solid objects but are absorbed by some tissues. Exposing a patient to X-rays provides a picture that shows black and white elements. As calcium-containing tissues absorb X-rays very well, they create a positive contrast. Because of that, bones and teeth appear as white structures on the photo. In contrast, soft tissues and air are black on the image and cannot be differentiated. After Roentgen's discovery, physicians could take an X-ray photo in cases where a bone fracture was suspected. If the white image of the bone is not continuous, the suspicion is confirmed. Osteoporosis, a certain bone disease, can also be detected, as the affected tissues show an increased transparency on the image. Tuberculosis, which was quite a common disease in former times and is still widespread in countries of the Third World and in eastern Europe, can also be diagnosed with this X-ray technique.

X-rays, or Roentgen-rays, however, do not capture images of inner organs. It was not until the 1920s that this problem was solved. In 1927 the Portuguese surgeon Egas Moniz produced an injectable contrast medium that was usable in the clinic. This invention was an important step for the diagnostic medicine of the twentieth century. Allowing detailed X-ray imaging of vessels, the alimentary canal, and the urinary tract, contrast mediums are of great importance for numerous modern examination methods and are also applied in sonography and magnetic resonance imaging. Contrast mediums usually contain barium, a heavy metal that is considered to be nontoxic because it is almost insoluble in water. Barium absorbs the radiation much more than the surrounding tissues, and thus the contours of the examined organ appear on the photo. Iodine-containing substances can be injected into the vessels and serve as contrast mediums for the radiography of arteries and veins, a technique known as angiography. As they are excreted with the help of the kidneys, contrast mediums can also be used to visualize the urinary tract. The radiography of the intestine that provides information about inflammations, tumors, or abscesses also requires the use of a contrast medium.

Another important diagnostic method is the use of ultrasound technology. Instead of using

electromagnetic waves such as X-rays, this technology uses high-frequency sound waves far above human hearing in order to generate a picture of the inner organs. The basic idea of visualizing hidden objects with the help of sound developed during World War I. By sending ultrasonic waves generated with the help of quartz crystals into the water, French scientist Paul Langevin developed a method to detect submarines. But as the intensity of the sound waves was extremely strong, this technology was not yet ready for medical use. In 1942 the ultrasound technology was used in medicine for the first time by neurologist Karl Dussik, who relied on ultrasound to create an image of the brain's ventricles. Within the next few years, sonography gained quickly in popularity as an imaging technology completely free of side effects.

Although developed at the turn of the twentieth century, these inventions still act as the cornerstones for today's modern imaging technologies and are used in hospitals worldwide. Computed tomography is the latest derivative of X-ray technology. Using X-ray scanners that rotate around the patient's body, computer tomographs can create three-dimensional images of the inner organs.

—*Florian Steger and Matthias Schrempf*

Bibliography

- Michette, Alan, and Slawka Pfauntsch, eds. *X-rays: The First Hundred Years*. Chichester, NY: Wiley, 1996.
- Mould, Richard F. *A Century of X-rays and Radioactivity in Medicine: With Emphasis on Photographic Records of the Early Years*. Bristol, PA: Institute of Physics Publishing, 1993.
- Sherrow, Victoria. *Medical Imaging*. New York: Marshall Cavendish Benchmark, 2007.

Antibiotics

Antibiotics, a class of drug, are produced by microorganisms and are capable of killing bacteria or inhibiting their replication. Some antibiotics kill only Gram-positive or Gram-negative bacteria, whereas broad-spectrum antibiotics kill bacteria in both classes. The terms "Gram-positive" and "Gram-negative" refer to their staining characteristics, a technique discovered in 1884



Alexander Fleming in his laboratory holding a petri dish. Fleming was awarded the Nobel Prize in Medicine in 1945 for his discovery of penicillin more than 15 years earlier. (Library of Congress)

by the Danish physician Hans Christian Gram. Soon after the serendipitous discovery of antibiotics in the 1940s, the drugs began to save lives. So great has been their effect that enthusiasts have credited antibiotics with opening a new era in medicine.

In 1928 the British physician Alexander Fleming, who was growing bacteria in dozens of petrie dishes, chanced upon a single dish contaminated by the mold *Penicillium notatum*. Noting that the bacteria in the dish had died, Fleming surmised that the mold had produced a chemical toxic to them and named the chemical penicillin to signify its derivation from *Penicillium*. Able neither to isolate penicillin in pure form nor to produce it in quantity, Fleming made no headway in treating bacterial infections with it. Penicillin was then a curiosity rather than a cure.

Despite Fleming's lack of success, the British physician Cecil Paine in 1930 first used penicillin on a person, treating gonorrhea in a three-year-old boy. The success of the treatment led Paine to make other trials with penicillin, although in the 1930s few people knew of his work. At Oxford University the pathologist Howard Florey and the biochemist Ernst Chain were aware of Paine's work, and they derived penicillin in pure form between 1938 and 1940. World War II stimulated combatants on both sides to

aim to produce penicillin in bulk. In 1942 the U.S. Department of Agriculture began a crash program, similar to the more renowned Manhattan Project, to mass-produce penicillin at its Northern Research Laboratory in Peoria, Illinois. Robert E. Coghill, director of the lab's fermentation division, began growing *Penicillium notatum*, Fleming's mold, in corn steep liquor and lactose. Although Coghill and his research team increased the production of penicillin more than 20 times over earlier methods, they continued to experiment. One of Coghill's research associates happened upon a rotten cantaloupe in a Peoria grocery and isolated *Penicillium chrysogenum*, and from it they isolated a strain that produced more penicillin than Fleming's mold. The new production techniques and new species of *Penicillium* enabled the United States in 1943 to produce penicillin for both its troops and those of Great Britain, whereas in 1942 the United States had had only enough for 100 patients. With wartime rationing at an end, American pharmaceutical firms began to produce penicillin for civilian use in 1945.

Parallel to the effort at the U.S. Department of Agriculture, Rutgers University microbiologist Selman Waksman searched for other antibiotics. Aware that the tubercle bacillus does not grow in soil, Waksman and graduate student Albert Schatz screened soil microbes for the production of a chemical toxic to the bacterium, discovering in 1943 streptomycin, the first antibiotic effective against tuberculosis. The success of streptomycin was dramatic. In 1940 playwright and Nobel laureate Eugene O'Neill, himself a tuberculosis survivor, had cast the shadow of tuberculosis across the Tyrone family in *Long Day's Journey into Night*. A decade later, thanks to streptomycin, sanitariums were closing for lack of patients.

Waksman's method of checking the soil for antibiotics led to imitators. In 1943 Yale University microbiologist Paul Burkholder along with Oliver Kamm, director of pharmaceutical company Park Davis, began sifting through soil samples worldwide and isolated the antibiotic chloromycetin. Following Burkholder and Kamm, Lederle Laboratories researcher Benjamin Dugger also screened soil from around the world and discovered the antibiotic aureomycin in 1945. After World War II scientists discovered still more anti-

➤ A LIFE WITH MICROBES

Selman A. Waksman (1888–1973) was a microbiologist who won the Nobel Prize in 1952. He was born in Priluka, a town near Kiev in Ukraine, but spent most of his adult life in the United States, where he studied and taught microbiology at Rutgers University. Among his accomplishments was the identification of numerous new antibiotics used in the treatment of infections of not only humans but also plants and animals. The following is from his memoirs:

“In 1939, I started on a new type of hunt, one of the most peculiar and exciting that man has ever undertaken—a hunt for microbes that have the capacity to yield a new kind of life-saving drug. How can expeditions for lions and tigers compare, in the nature of their preparation and results achieved, in the anxiety due to the many failures encountered and in the joy of the final accomplishments, with this new form of hunting? How can a mere desire to kill wild animals, whether they be

birds or rabbits, crocodiles or behemoths, compare with the search for microbes which might yield chemical substances that have the capacity to combat such devastating human diseases and epidemics as tuberculosis and bubonic plague, intestinal infections and typhus fever, typhoid and brucellosis, leprosy and syphilis? The human mind can visualize a hunter trying to kill a dangerous leopard or a lion. But can it visualize the attempt of another type of hunter to domesticate unknown microbes hidden in the soil or in a manure pile, in order to combat the numerous infectious disease-producing germs that lurk to attack man and animals?”

—Christopher Cumo

Source

Selman A. Waksman, *My Life with the Microbes* (London: Robert Hale, 1958), 202.

biotics, stirring up hope that the number of antibiotics was nearly infinite and that cures were at hand for all bacterial infections. Indeed, one estimate holds that antibiotics saved 1.5 million lives between 1943 and 1958.

But bacteria are resilient. As early as 1942, scientists discovered that strains of *Staphylococcus aureus*, the bacterium that causes staphylococcal infections, were resistant to penicillin. These strains produced penicillinase, an enzyme that destroyed penicillin and so made *Staphylococcus* immune to penicillin. In 1946, 12 percent of staphylococcal infections at Hammersmith Hospital in London, England, were resistant to penicillin, whereas in 1948 the rate leapt to 59 percent. By 1955, 80 percent of staphylococcal infections were fatal even with penicillin. Streptomycin suffered a similar fate. Some strains of bacteria grew more virulent in the presence of streptomycin than in its absence as though the bacteria fed on streptomycin.

Physicians responded by mixing and matching antibiotics with other drugs, sometimes in trial and error fashion, in hopes of finding a combination lethal to bacteria but safe in peo-

ple. Pharmaceutical companies forged ahead in the search for new antibiotics, but the optimism of the 1940s has faded with the realization that, given enough time, bacteria will evolve resistance to even the newest antibiotic. Like cars, antibiotics become obsolete, giving urgency to the search for the next generation of antimicrobial drugs.

—Christopher Cumo

Bibliography

- Amyes, Sebastian. *Magic Bullets, Lost Horizons: The Rise and Fall of Antibiotics*. New York: Taylor and Francis, 2001.
- Epstein, Beryl. *Medicine from Microbes: The Story of Antibiotics*. New York: J. Messner, 1965.
- Wainwright, Milton. *Miracle Cure: The Story of Penicillin and the Golden Age of Antibiotics*. Cambridge, MA: Basil Blackwell, 1990.

Chemotherapy

One of the most significant advances in medicine during the first half of the twentieth century was the discovery and development of antimicrobial

chemotherapy. The term “antimicrobial chemotherapy” refers to the pharmaceutical treatment of infections caused by pathogenic viruses, bacteria, fungi, and parasites. Antibiotics are narrowly defined as antimicrobial agents derived from other microbes. Physicians today tend to use the term “antibiotic” to refer to any medication that kills or inhibits pathogenic organisms, particularly bacteria. All antimicrobial drugs carry some degree of toxicity for the host. The development of drug resistance in pathogenic organisms has become a major challenge in recent decades. Examples include multi-drug-resistant tuberculosis and antibiotic-resistant hospital-acquired infections.

One of the first effective modern antimicrobial treatments was the bark of the South American cinchona tree, introduced into European practice in the seventeenth century as an anti-malarial medicine. Following that introduction, French chemists Pierre Pelletier and Joseph Caventou extracted pure quinine from the cinchona bark in 1820. Modern antimicrobial chemotherapy began with the discovery of arsphenamine in the Frankfurt laboratory of Paul Ehrlich (1854–1915) in 1910. Ehrlich, an expert in the chemistry of dyes used to stain living tissues and microbes, believed that fixation of dyes or other chemicals to microorganisms was the key to finding magic bullets, chemicals that targeted and killed microbial pathogens with minimal toxicity. Aware that an arsenical compound, atoxyl, demonstrated some antimicrobial activity, Ehrlich and Sahachiro Hata began testing hundreds of arsenicals against corkscrew-shaped spirochetes in vitro and in laboratory animals in 1909. A year later Ehrlich announced that compound 606, arsphenamine, was effective against the syphilis bacterium (*Treponema pallidum*) and other spirochetal infections. Although widespread use of arsphenamine (trade name Salvarsan) caused severe toxicity in some patients, a less toxic arsenical (Neosalvarsan, 1914) remained the primary treatment for syphilis until the 1940s.

With the exception of a few drugs for malaria and other parasitic infections, no major advances were made in antimicrobial chemotherapy for another 20 years. In the late 1920s Gerard Domagk (1895–1964), director of the bacteriology and pathology laboratories at the German dye com-

pany I. G. Farbenindustrie, began testing analine-derived azo dyes as potential antimicrobials. In 1932 Domagk found that chrysoidin-sulfonamide was effective in infected laboratory animals, and three years later the drug was marketed as Prontosil-rubrum. Despite initial skepticism, physicians soon reported seemingly miraculous cures in cases of meningitis, puerperal sepsis, tonsillitis, erysipelas, and pneumonia. In 1936 scientists at the Pasteur Institute in Paris proved that the sulfonamide was the active antimicrobial agent in the drug, and sulfanilamide and its derivatives proved critical in the treatment of wound infections during World War II.

In 1928 the Scottish-born Alexander Fleming (1881–1955), working in the bacteriological laboratory at St. Mary’s Hospital in London, found that a colony of airborne mold had contaminated a petri dish in which he was culturing *staphylococci* bacteria. Rather than discarding the culture, Fleming studied the contaminated *staphylococci* and observed that the bacteria around the mold colony were lysed (gradually eradicated). Filtrates of the mold, identified by American mycologist Charles Thom as *Penicillium notatum*, showed antibacterial activity against a number of pathogenic bacteria. Subsequent efforts by Fleming and his associates to isolate pure penicillin failed, and his 1929 paper on penicillin aroused little interest at St. Mary’s or elsewhere.

At Oxford University, Australian physiologist Howard Florey and biochemist Ernst Chain, a German Jewish refugee, were intrigued by Fleming’s penicillin paper. In 1939 with the aid of biochemist Norman Heatley, a master of innovation in the cash-strapped laboratory, the Oxford group partially purified penicillin from mold fermented in convenient ceramic bedpans. Two years later the Oxford laboratory produced sufficient penicillin to treat a handful of desperately ill patients with remarkable improvements, limited only by the miniscule supply of penicillin. Penicillin was shown to be effective against many bacteria resistant to sulfonamides, and *gonococcus* and the spirochete of syphilis were later found to be sensitive to penicillin, revolutionizing the treatment of venereal disease. The Oxford group turned to the American pharmaceutical industry—the British industry was overwhelmed by war needs in 1941—to perfect and

upscale the fermentation technology required to produce penicillin on a commercial scale. Within just two years penicillin was released for clinical use, with most of the supply going to the military. Semisynthetic penicillins, produced by laboratory manipulation of the basic mold-derived molecule, increased the antimicrobial spectrum and overcame acquired resistance to unaltered penicillin.

Working with others, the Ukrainian Jewish immigrant Selman Waksman (1888–1973), a soil microbiologist at Rutgers University and the New Jersey Agricultural Experiment Station, found that filtrates of some strains of actinomycetes, soil organisms related to both bacteria and fungi, had *in vivo* activity against pathogenic bacteria. Actinomycin, isolated in Waksman's laboratory in 1940, proved too toxic for clinical use, although it would later be used in anticancer chemotherapy. Waksman devised a systematic scheme for isolating the active products from strains of actinomycetes and then testing the products *in vitro* and *in vivo*. Three years later graduate student Albert Schatz isolated the antibiotic streptomycin from *Streptomyces* (previously *Actinomyces*) *griseus*. Effective against a broad spectrum of penicillin-resistant bacteria, streptomycin was shown in 1944 to inhibit *Mycobacterium tuberculosis* *in vivo*, the first glimmer of hope in the quest for an effective treatment for tuberculosis. William H. Feldman and H. Corwin Hinshaw at the Mayo Clinic quickly demonstrated antituberculosis effects in guinea pigs treated with streptomycin, and in 1945 the first human trials of streptomycin were under way. Resistance to streptomycin developed quickly in tuberculosis patients, and the high doses and prolonged treatments resulted in ear damage. Fortunately, within a few years new antituberculosis drugs such as isoniazid and para-aminosalicylic acid, used in long-term combination chemotherapy with streptomycin, effectively cured tuberculosis with acceptable toxicity. Other antibiotics derived from actinomycetes, such as the tetracyclines and chloramphenicol, proved effective against a broad spectrum of bacterial pathogens, and streptomycin has been replaced by newer, less toxic aminoglycosides.

—Sandra Moss

Bibliography

- Baldry, Peter. *The Battle against Bacteria*. Cambridge: Cambridge University Press, 1965.
- Bäumler, Ernst. *Paul Ehrlich: Scientist for Life*. New York: Holmes and Meier, 1984.
- Macfarlane, Gwyn. *Alexander Fleming: The Man and the Myth*. Cambridge, MA: Harvard University Press, 1984.
- Waksman, Selman A. *My Life with the Microbes*. New York: Simon and Schuster, 1954.

Blood Transfusion and Blood Banking

The life-saving benefits of blood transfusion were realized in the first half of the twentieth century. The prerequisites for success included (1) the technical ability to collect blood from a donor, maintain it in a fluid state, and transfuse it into the vasculature of a recipient; (2) prevention of immune-based transfusion reactions; and (3) the ability to store blood safely until needed. Ironically, many of these life-saving advances were the sequelae of war.

Since antiquity, blood had been recognized as a source of vitality, and the concept of transfusion dates back over 500 years; however, practical applications were limited by both technical obstacles and a lack of understanding of the functions and properties of blood. Many of these early attempts involved transfusing blood from calm animals such as lambs into patients with violent psychiatric disorders with the expectation that the donor's calm temperament would also be transferred. Fortunately, the inability to prevent clotting and other technical problems during the procedures undoubtedly saved many lives, as animal and human blood are highly incompatible. In 1818 James Blundell, a London obstetrician, reported some success treating postpartum hemorrhage with transfusions. In these instances human blood was used to treat blood loss, the primary current indication for transfusion. However, the outcome of transfusions prior to the 1900s was unpredictable and ranged from success to violent reactions resulting in death.

In 1900 Karl Landsteiner, a pathologist at the University of Vienna, discovered the major cause of these unpredictable hemolytic reactions, the

➤ KARL LANDSTEINER (1868–1943)

Karl Landsteiner (1868–1943), an Austrian American pathologist and possibly the most important immunologist of the twentieth century, received the 1930 Nobel Prize in Physiology and Medicine for his discovery of ABO blood groups in 1900. When first notified Landsteiner, who did not consider the ABO system to be among his most important discoveries, naturally assumed that it was for his more recent research. Landsteiner considered his discovery of hapten-antibody reactions (in which simple chemicals linked to proteins can elicit an antibody response) to be his most important work. His other important discoveries included defining cell-mediated (as opposed to antibody-mediated) immunity, isolating the antibody responsible for the first known autoimmune disease (paroxysmal cold hemoglobinuria), and developing monkey models to study syphilis and poliomyelitis (advancing serological testing for both). But it was the direct clinical applicability of the ABO system to blood transfusion that ultimately resulted in the award. Ten years after receiving the Nobel Prize, Landsteiner, with Alexander Wiener, discovered the Rhesus (Rh) blood group antigen system, which



Karl Landsteiner, winner of the Nobel Prize in Physiology or Medicine in 1930. (Library of Congress)

ranks second to the ABO system as a cause of adverse transfusion reactions; this discovery not only further facilitated blood transfusion but quickly resulted in ways to treat and prevent erythroblastosis fetalis, a cause of neonatal mortality occurring when pregnant Rh-negative women develop antibodies to the RBCs of their Rh-positive fetuses.

—James R. Wright Jr.

mismatching of ABO blood groups. Landsteiner examined blood samples from various workers in his laboratory and discovered that the serum of each individual often, but not always, agglutinated and lysed (i.e., dissolved) the red blood cells (RBCs) of other workers. He discovered three blood groups (now known as A, B, and O) and demonstrated the presence or absence of compatibilities between serum and RBCs in blood samples from members of each group. In 1902, a fourth blood group (AB) was discovered by two of Landsteiner's trainees, Alfred von Decastello and Adriono Struli. Although a basic understanding of the ABO system could soon be used to match donors and recipients, occasionally significant transfusion reactions still occurred because of other unknown minor blood groups. In an attempt to prevent these reactions, direct matching agglutination tests using donor RBCs and recipient serum were often performed.

Whole blood, once collected, clots immediately. Because of this, direct transfusion meth-

ods generally were more successful than indirect methods prior to 1915. However, both standard direct methods were technically challenging. One method, developed by the French American surgeon Alexis Carrel in 1905 (recipient of the 1912 Nobel Prize in Physiology and Medicine for pioneering vascular surgery), actually involved suturing the donor's artery (wrist) to the recipient's vein (arm), while the other method, developed by George Crile (founder of the Cleveland Clinic) in 1907, involved connecting the donor artery and vein with a short cannula. Although successful in the hands of very skilled surgeons, the procedure was traumatic, and it was not possible to measure the volume of blood transfused. On the other hand, indirect methods generally involved drawing blood into one or more syringes, which allowed blood volumes to be measured, but such methods were greatly hampered by clotting. However, over a three-month period at the end of 1914, Albert Hustin of Belgium, Luis Agote of Buenos Aires, and Richard Lew-

isohn and Richard Weil of New York City all reported that sodium citrate could be used as an anticoagulant, allowing the uniform adoption of indirect methods. Citrate also functioned as a preservative, preventing RBC degeneration for up to a week if refrigerated. Soon, the addition of dextrose to the solution allowed preservation for up to two to three weeks, making the concept of blood banking feasible. In 1943 Patrick L. Mollison and John Freeman Loutit of England developed an improved preservative, acid-citrate-dextrose, that became the industry standard for several decades.

The first well-documented blood bank was opened by Bernard Fantus in 1937 at the Cook County Hospital in Chicago. The concept was his response to recent work in Russia by the surgeon Sergei Yudin, who in the early 1930s was pioneering the use of preserved cadaver blood for transfusions. Fantus believed that cadaveric donors were the solution for treating critically injured indigent patients who frequently had no friends or relatives to donate blood. However, hospital officials and the medical profession rejected the concept on ethical grounds. Fantus then advanced the idea of saving blood in a bank to which deposits and withdrawals could be made, in a manner analogous to how banks handle money.

Bloodshed associated with war spurred rapid developments in this arena. During World War I, transfusion of citrated whole blood was used occasionally after 1917, but there was no organized military blood transfusion service to rely on. The Spanish Civil War (1936–1939) brought the first opportunity to use citrated blood on a large scale. The Barcelona Blood Transfusion Service collected and distributed 9,000 liters. During World War II, blood transfusion services were perfected and widely recognized as one of the three major medical advances during the war. The other two major lifesaving innovations were the use of penicillin and the placement of surgeons near battlefields.

Most patients do not require whole blood. The concept of using plasma (the liquid remaining after RBCs, other cells, and antibodies are removed) as a blood substitute was implemented for small-scale in-hospital use during the 1930s. However, with the advent of World War II, large volumes of plasma were needed to treat injured

soldiers. Charles Drew, a pioneering African American surgeon with a PhD in blood banking (Columbia, 1940), was appointed director of the Blood for Britain program in 1940. He developed large-scale methods to collect and process plasma in New York City and ship it to Britain. He also helped establish the national blood collection program for the U.S. military, which collected more than 13 million bottles of blood between 1941 and 1945, much of which was processed to dried plasma that could be reconstituted with sterile water at the battlefield. After the war, he helped establish domestic American Red Cross blood banking. Ironically, legend has it that Drew, who was fatally injured in an automobile accident in North Carolina in 1950, bled to death because he was turned away from an all-white hospital; however, it is well established that this is pure fiction.

Enhanced scientific understanding of blood groups throughout the 1900s and technical refinements in blood collection, processing, and storage brought about as a result of World War II transformed blood transfusion and blood banking, bringing both into the mainstream of medicine and thus saving many thousands of lives every year.

—James R. Wright Jr.

Bibliography

- Bendiner, Elmer. "Karl Landsteiner: Dissector of the Blood." *Hospital Practice* 26 (1991): 93–104.
- Craft, Patrick P. "Charles Drew: Dispelling the Myth." *Southern Medical Journal* 85 (1992): 1236–1240, 1246.
- Diamond, Louis K. "Milestones in Blood Transfusion and Blood Banking." *Pharos* 45 (1982): 7–10.
- Hutchin, Peter. "History of Blood Transfusion: A Tercentennial Look." *Surgery* 64 (1968): 685–700.
- Rosenfield, Richard E. "Early Twentieth Century Origins of Modern Blood Transfusion Therapy." *Mt. Sinai Journal of Medicine (New York)* 41 (1974): 626–635.

Insulin

Biologists today know insulin as the small peptide hormone—secreted into the blood stream by the beta-cells of the Islets of Langerhans of the pancreas—that primarily stimulates cells to

➤ STARVATION THERAPY

Diabetes mellitus has been known since ancient times in Egypt, India, and China. Before the discovery of insulin, it was an acute condition; hyperglycemic shock or acidotic coma killed its sufferers within weeks or months.

By World War I, leading diabetologists such as Elliott P. Joslin (1869–1962) and Henry Rawle Geyelin (1883–1942) were championing Frederick M. Allen's (1879–1964) starvation therapy for diabetes. In the early 1900s, prior to Allen's work, doctors had tried prescribing high-fat and high-protein diets. However, Allen recognized that these substances contributed to dangerously low blood pH, and he recommended instead a balanced but low-calorie diet to avoid both glycosuria and ketoacidosis as long as possible. Unfortunately, this meant such meager food intake that diabetics following a strict regimen of perhaps 750 calories a day soon wasted away to mere skeletons. Not everyone was sure that inanition—the euphemism for death by this treatment—was preferable to a more comfortable life that ended in coma and death sooner rather than after a period of prolonged hunger, and many doctors and patients chose normal-calorie or fad diets (i.e., all oatmeal).

The introduction of insulin ended the need for diabetics to starve themselves. However, insulin did not cure diabetes mellitus; it transformed it into a chronic condition with a different set of symptoms and complications stemming from extended hyperglycemia that regular insulin usage can only slow, not stop.

—Kristen Ann Ehrenberger

take up glucose and use it for energy; the inability of the body to make or respond to insulin leads to diabetes mellitus. Hailed upon its discovery and isolation in the 1920s as a wonder drug, today insulin is incorporated into the daily regimens of diet and exercise of Type I (also known as juvenile or insulin-dependent) and some Type II (also known as adult-onset or noninsulin-dependent) diabetics.

The first scientific evidence of diabetes' biological cause came in 1889, when Joseph von Mering (1849–1908) and Oskar Minkowski (1858–1931) removed a dog's pancreas and recognized that it developed the classic symptoms

of diabetes mellitus: excessive passage of urine (polyuria), excessive thirst (polydipsia), and excessive hunger (polyphagia). In 1893 Gustave Edouard Laguesse (1861–1927) named the insulin-producing tissues in the pancreas the “Islets of Langerhans” after Paul Langerhans (1847–1888), who had described these “little heaps of cells” in 1869. In 1901 Eugene Opie (1873–1971) made the connection between damaged islets and diabetes mellitus.

Diabetologists consequently became interested in treating their patients with some version of organotherapy. Georg Ludwig Zuelzer (1870–1949) made great but ultimately unsupportable claims about the rather toxic pancreatic extract he patented in the United States in 1912. The same year, Ernest Lyman Scott (1877–1966) suggested that the pancreas's “external secretion” of digestive enzymes for the small intestine might be interfering with the isolation of its “internal secretion” of the factor that lowered blood and urine sugar concentrations; however, his adviser persuaded him to abandon the difficult task of tying off the ducts of the pancreas in order to stimulate selective atrophy of the enzyme-producing cells. In 1915 and 1919 Israel S. Kleiner (1885–1966) and Samuel J. Meltzer (1851–1920) also reported the discovery of a nontoxic pancreatic extraction. Perhaps the most successful but unknown researcher was Nicolae C. Paulescu (1869–1931). He published his studies on “pancreine” in French journals and patented its manufacture in Romania in April 1922.

In the fall of 1920, ignorant of Scott's inconclusive results, Frederick Grant Banting (1891–1941) approached John James Richard Macleod (1876–1935) at the University of Toronto about trying some ligation experiments on dogs. Macleod accepted Banting into his laboratory group in May 1921 and offered him an assistant. That summer, Banting and Charles Herbert Best (1899–1978) went through many experimental dogs as they struggled to overcome their inexperience as independent researchers. Neither had read much of the preceding literature, and what Best had encountered of Paulescu's work he had misunderstood.

In August they named their hypoglycemic beef pancreas extract “Isletin,” but as their methods changed they dropped this neologism for

“insulin,” which Macleod apparently suggested without knowing that Jean de Meyer (1878–1934) in 1909 and Edward Sharpey-Schafer (1850–1935) in 1916 had independently coined “insuline.” Despite some sloppiness in their methods and record keeping, Macleod helped Banting and Best announce the work in a handful of cautious journal articles and presentations and—increasingly convinced that they were on to something—devoted more and more of his laboratory’s resources to the problem. Late in 1921 James Bertram Collip (1899–1978) joined the team, further upsetting the delicate balance of egos.

Although Banting fed one of his and Best’s concoctions to Joseph Gilchrist in 1921, the first formal clinical test of an insulin preparation came on January 11, 1922, when Leonard Thompson (1908–1935) suffered a toxic reaction not unlike that of Zuelzer’s subjects. An extract refined by Collip was successfully administered on January 23, and optimistic newspaper coverage of the breakthrough flooded the Toronto researchers’ offices with requests from desperate physicians and patients.

Patent and production talks began with Eli Lilly & Company in the spring of 1922, and by January 1923 “Iletin” was available commercially in Great Britain, then in Latin America, and by the fall in the United States and Canada.

The 1923 Nobel Prize in Physiology or Medicine went to Banting and Macleod, who promptly announced that they would share their halves of the award with Best and Collip, respectively. Insulin research was far from exhausted, however, and the succeeding decades witnessed the development of purer crystalline extracts (1926), long-acting insulins such as protamine zinc insulin (1936), intermediate insulins such as Neutral Protamine Hagedorn (NPH) (1950), the standardization of strength at 100 units per milliliter (U100) (1970s), human insulin (1982), recombinant human insulin (1983), and insulin analogues (1996).

Three more Nobel prizes highlighted other developments in the understanding of insulin. Frederick Sanger (1918–) won the Prize in Chemistry in 1958 for working out its amino acid sequence. Dorothy Crowfoot Hodgkin (1910–1994), the 1964 Nobel Prize winner in Chemistry for the development of X-ray diffraction crystallography,

determined the small protein molecule’s three-dimensional shape. And in 1977, Rosalyn Sussman Yalow (1921–) collected the Nobel Prize in Medicine for developing the radioimmunoassay technique, which made the precise measurement of blood glucose levels much more accurate.

—Kristen Ann Ehrenberger

Bibliography

- Bliss, Michael. *Banting: A Biography*. 2nd ed. Toronto: University of Toronto Press, 1992.
- Bliss, Michael. *The Discovery of Insulin*. Chicago: University of Chicago Press, 1982.
- Bliss, Michael. “Rewriting Medical History: Charles Best and the Banting and Best Myth.” *Journal of the History of Medicine and Allied Sciences* 48(3) (July 1993): 253–274.
- Feudtner, John Christopher. *Bittersweet: Diabetes, Insulin, and the Transformation of Illness*. Chapel Hill: University of North Carolina Press, 2003.

Yellow Fever

Yellow fever is a disease caused by Yellow Fever Virus, which the female mosquito of several species carries and transmits. Yellow fever is indigenous to sub-Saharan Africa and spread to the Americas during the slave trade. By the turn of the twentieth century, yellow fever had spread throughout sub-Saharan Africa, Central and South America, and southern North America, though outbreaks occurred as far north as Philadelphia. Fever marks the onset of the disease and may last for weeks. In many cases the fever subsides, and the fortunate recover. In others the fever returns with jaundice and internal bleeding, causing death. In 1900 American physician and army Officer Walter Reed estimated the mortality from yellow fever at 40 percent.

The realization that more Americans died from yellow fever than from wounds during the Spanish-American War led the United States in 1900 to establish the Yellow Fever Commission with Reed at its head and with the aim of determining both the cause of yellow fever and the means of eradicating it. Reed set to work in Cuba, the island where the United States had fought the Spanish-American War and where yellow fever had been endemic since the seventeenth century.



A technician cultures yellow fever virus in chick embryos, relying on the same method as that of Max Theiler. The virus derived from a chick embryo is then used to vaccinate humans against yellow fever. (Library of Congress)

In seeking the cause of yellow fever, Reed had to choose between two hypotheses. The prevailing one was that yellow fever spread by contact with clothes or bedding soiled with fluids, such as sweat, from the ill. In 1881 Cuban physician Carlos Findlay had countered this opinion by positing that mosquitoes transmit yellow fever. Recruiting volunteers willing to be bitten by the *Aedes aegypti* mosquito, Reed chronicled their condition, noting that everyone bitten by the mosquito contracted yellow fever, some of whom died. Reed had other soldiers sleep on soiled bedclothes, but none of these subjects contracted yellow fever. By October 1900 Reed had, through these experiments, vindicated Findlay's mosquito hypothesis.

After isolating the *Aedes aegypti* mosquito as the culprit, Reed reasoned that the eradication of the mosquito would eradicate the disease. Because the female mosquito laid her eggs in stagnant pools of water, the solution was to drain all standing water. This policy worked not only in Cuba but also in Panama, allowing the United States to complete the Panama Canal in 1913, whereas the French, ignorant of the cause and control of yellow fever, had failed.

Success in lowering the population of *Aedes aegypti* did not, however, entirely eradicate yellow fever. As early as 1907 a yellow fever epidemic in Muzo, Colombia, pointed to another culprit. Physician Roberto Franco observed that the outbreak occurred in the dwellings along

the fringe of the jungle, where *Aedes aegypti* was not numerous, leading him to suspect that another species of mosquito must also transmit yellow fever. In 1928 and 1929 two researchers identified species of *Haemagogus* mosquitoes as transmitters of yellow fever in Africa, and in 1929 scientists came to the same conclusion in South America. Further confirmation came between January and April 1932 when an epidemic swept through Valle do Chanaan, Brazil, an area where *Haemagogus* mosquitoes rather than *Aedes aegypti* were native. Whereas *Aedes aegypti* transmits yellow fever only to humans, *Haemagogus* mosquitoes transmit yellow fever to both humans and monkeys. Even where human population was low, *Haemagogus* mosquitoes perpetuated Yellow Fever Virus by cycling it through monkeys, which were numerous in the jungle. Scientists have adopted the term "jungle fever" for yellow fever that is transmitted by *Haemagogus* mosquitoes.

Although attractive in theory, the eradication of *Aedes aegypti* and *Haemagogus* mosquitoes was impossible in practice, for one could not hope to drain every pool of water in Africa and the Americas. It would be better to guard against yellow fever with a vaccine. In the 1920s, South African physician Max Theiler began his search for a vaccine. Along the way, in 1927, he established that a virus rather than a bacterium causes yellow fever. In the 1920s scientists used monkeys as the host for Yellow Fever Virus in hopes of deriving a vaccine from monkey serum. In contrast to this approach Theiler used mice, which were less expensive and easier to handle than monkeys. In 1932 Theiler derived a vaccine from mice serum. To inoculate a person, one scratched the skin and rubbed the vaccine into the wound as though the vaccine were ointment.

The vaccine was effective and was used in France and in French West Africa. However, it required the production of so large an amount of mouse serum that widespread use of the vaccine was impractical. Aware of this inadequacy, Theiler in 1937 derived a second vaccine, one that was an attenuated live virus. In contrast to the mouse vaccine, inoculation with live Yellow Fever Virus required a subcutaneous injection.

Between 1937 and 1950 physicians inoculated 5.7 million people in Brazil, 1.5 million in

Colombia, 361,000 in Venezuela, 211,000 in Bolivia, and 186,000 in Peru. At the outbreak of World War II, the United States had on hand 18 million doses of the vaccine. Fearing a biological attack from Japan, the United States began inoculating all servicemen and servicewomen. Some of the vaccine was, however, contaminated with hepatitis B. Roughly 330,000 were infected, and 50,000 were hospitalized. Alert to this danger, the United States suspended inoculation of military personnel in April 1942. The British armed forces inoculated at least 500,000 soldiers and sailors during the war.

Employing both mosquito abatement and vaccinations, the campaign against yellow fever succeeded in the United States and in Europe. In 1949, however, an epidemic swept through Panama, Costa Rica, Guatemala, and Mexico. Five epidemics wracked sub-Saharan Africa during the 1950s. Between 1960 and 1962, yellow fever infected some 100,000 Ethiopians and killed 30,000. In 1990, 1,000 people died of yellow fever in Cameroon. In 1992 Kenya recorded the first yellow fever outbreak in more than 25 years. Dour predictions from the World Health Organization underscore that science is far from eradicating yellow fever.

—*Christopher Cumo*

Bibliography

- Dickerson, James. *Yellow Fever: A Deadly Disease Poised to Kill Again*. Amherst, NY: Prometheus Books, 2006.
- Strode, George K., ed. *Yellow Fever*. New York: McGraw-Hill, 1951.

Anesthesia

Anesthesia is the process of making patients insensible to pain, fear, or other discomfort that they would otherwise feel while undergoing medical and surgical procedures. The benefits of surgical anesthesia, by ether inhalation, were first publicly demonstrated in 1846 at the Massachusetts General Hospital in Boston. News of the effectiveness of ether was announced shortly thereafter to the medical community by Henry Jacob Bigelow's article in the *Boston Medical and Surgical Journal* on November 18, 1846. The term "anesthesia" (from Greek roots mean-

ing "without feeling") came into use shortly thereafter. Ether and chloroform inhalation anesthesia continued to be used well into the twentieth century despite disadvantages. Problems associated with their use inhibited what surgeons could do and occasionally had deleterious results.

In the period from 1900 to 1945, a number of significant developments led to increased comfort and safety for patients, improvements to the convenience of operating room personnel, and an expansion of the capabilities of surgery. As a young medical student, Harvey Cushing administered ether anesthesia while assisting at an operation. The patient died, probably as a result of anesthetic overdose. This painful experience convinced Cushing of the need for systematic monitoring of vital organs during anesthesia and surgery. Cushing, with Amory Codman, developed a system for monitoring the pulse and breathing of anesthetized patients in the 1890s, the first anesthetic record. On a trip to Italy in 1901, Cushing was impressed by Scipione Riva-Rocci's sphygmomanometer (an inflatable cuff for the arm used for measuring and recording blood pressure), brought one back to the United States, and introduced blood pressure monitoring into his own anesthetic records. These came to be known as Ether Charts. The use of blood pressure monitoring with anesthesia became prevalent after 1907. Cushing's example of meticulous care influenced surgical practices in ways that significantly lowered mortality rates.

Another landmark ushering in the so-called modern era was the development of endotracheal anesthesia. Flexible tubes passed down the patient's throat allowed safer, more efficient breathing while surgical staff controlled the intake of anesthetic gas. John Auer and Samuel James Meltzer were pioneers of the technique, circa 1909. A key technical modification was the inflatable cuff, which expanded in the trachea and provided an airtight seal. The first gas machines for inhalation anesthesia (starting in 1899 and in common use after 1910) brought calibration and an improvement of standards to anesthetic equipment. Around 1918 the American Dennis E. Jackson saw the importance of mechanical ventilation during surgery and wanted to improve it. Concerned about wasting nitrous

> CURARE

During abdominal surgery under anesthesia in the nineteenth century, surgeons were limited by the fact that a patient's muscles usually became rigid and that abdominal muscles sometimes spasmed. The discovery that curare, a substance used for centuries by South American Indians as an arrow-head poison, could function as an effective and safe muscle relaxant during surgery was a landmark in the history of anesthesia comparable to the introduction of ether in 1846. Curare paralyzes the muscles by acting on their junction with motor nerves and takes effect quickly without interfering with circulation or brain function. French chemists first extracted the plant's active alkaloid, curarine, in 1828. An American explorer, Richard Gill, on a 1938 trip to the Ecuadorian rain forest acquired 24 pounds of crude curare from natives. Returning to the United States, he gave this raw material to the pharmaceutical manufacturer E. R. Squibb. The company prepared and tested extracts, named the resulting drug Intocostin, and distributed it to various researchers. Initial reports warned that Intocostin was too dangerous for use on human beings, but Harold R. Griffith and his associate Enid Johnson in Montreal carefully administered small intravenous doses in combination with cyclopropane during abdominal surgery in 1942. The curare derivative worked safely and effectively, heralding a new era in surgical anesthesia.

—Jeffrey Mifflin

oxide (a nineteenth-century anesthetic agent still used in the twentieth century) and oxygen, he constructed a circle carbon dioxide absorption apparatus for nitrous oxide-oxygen anesthesia. The machine used a pump to circulate the gases, liquid sodium hydroxide to absorb carbon dioxide, and sulfuric acid for elimination of excess moisture. Additional innovations were necessitated by the American Ralph M. Waters's introduction of cyclopropane (1930), a potent anesthetic gas that had the side effect of depressed breathing. The result was closed-circuit anesthesia whereby the patient's respiration was totally controlled by means of a closed rebreathing apparatus that absorbed carbon dioxide. Significant improvements to gas machines by other practitioners followed.

In the first half of the twentieth century a number of new anesthetic agents were introduced, including new halogenated hydrocarbons, distantly related to chloroform but practically nonflammable (making them safer for use in the operating room). New drugs included ethylene (1918), divinyl ether (1930–1933), trichloroethylene (1935), and sodium amytal, a barbiturate widely used for intravenous anesthesia in the United States, from 1929 to 1933. Intravenous anesthesia was injected directly into the bloodstream by means of a hypodermic needle. In 1909 the German Ludwig Burkhardt used chloroform and ether for intravenous anesthesia, which was later followed by Paraldehyde (1913) and magnesium sulfate (1916). John S. Lundy, the “father of intravenous anesthesia,” introduced intravenous sodium pentothal (1934) and coined the term “balanced anesthesia” to describe the practice of not relying on just one agent to accomplish all of the desired effects. In other words, not just providing analgesia, unconsciousness or lack of awareness, and muscle relaxation during anesthesia but rather mixing some of one and some of another to achieve the optimum result. It is one of the key concepts of modern anesthetic practice.

Developments also included improvements to local anesthesia. The first effective local anesthetic was cocaine, used in the late nineteenth century as a numbing agent. Its success led to derivatives that were safer to use, such as procaine (1905), Eucaine (1900), Stovaine (1904), and lidocaine (1943). In 1912 the German Alfred Einhorn discovered Novocain, which was introduced into clinical practice by Heinrich Friedrich Wilhelm Braun, known as the “father of local anesthesia.” After 1916 Novocain was produced in the United States under the name “procaine.” Various anesthetic agents and techniques were administered to women to relieve the pain of childbirth in the first decades of the twentieth century, including “Twilight Sleep” (a combination of scopolamine and morphine first used in Austria in 1902 and popular for several decades until the dangers it posed to the newborn became apparent) and epidural anesthesia (after 1933).

During 1908–1915 the American G. W. Crile achieved advances in muscle relaxation during

surgery by means of anoci-association, which was ether inhalation combined with procaine administered regionally. In 1942 the Canadian Harold R. Griffith introduced curare as a muscle relaxant for anesthetized patients during surgery, facilitating endotracheal intubation and artificial respiration. As such, he paved the way for lighter doses of anesthetic and improved the safety of many procedures.

In the early twentieth century it became apparent that administering anesthesia required specialized training as well as systematic and reliable sharing of information. Anesthesia was recognized in England as a specialty when Oxford University created the first chair in anesthesia at the Radcliffe Infirmary in 1922. Early textbooks on the subject were James T. Gwathmey's *Anesthesia* (1914) and P. J. Flagg's *The Art of Anesthesia* (1916). The U.S.-based National Anesthesia Research Society started the first journal dedicated entirely to anesthesia, *Current Researches in Anesthesia and Analgesia*, in 1922, followed by the *British Journal of Anaesthesia* the next year. In 1928 Ralph M. Waters started the first academically oriented training program for anesthesia at the University of Wisconsin. The Long Island Society of Anesthetists (founded in 1905) became the New York Society of Anesthetists in 1911 and finally the American Society of Anesthetists in 1936. It merged with the American Society of Regional Anesthetists in 1945 to form the American Society of Anesthesiologists (ASA). Although the term "anaesthetist" is used in Great Britain to mean a physician specializing in the study and use of anesthesia, the same term in the United States applies to a nurse or technician trained to administer anesthesia; American physicians who are medically qualified in the field are called "anesthesiologists."

—Jeffrey Mifflin

Bibliography

- Dormandy, Thomas. *The Worst of Evils: The Fight against Pain*. New Haven, CT: Yale University Press, 2006.
- Gill, Richard C. *White Water and Black Magic*. New York: Henry Holt, 1940.
- Keys, Thomas E. *The History of Surgical Anesthesia*. Huntington, NY: Robert E. Krieger, 1978.
- Lundy, John S. *Clinical Anesthesia*. Philadelphia: W. B. Saunders, 1942.

Rushman, G. B., N. J. H. Davies, and R. S. Atkinson. *A Short History of Anesthesia: The First 150 Years*. Oxford and Boston: Butterworth-Heinemann, 1996.

Advances in Neurosurgery

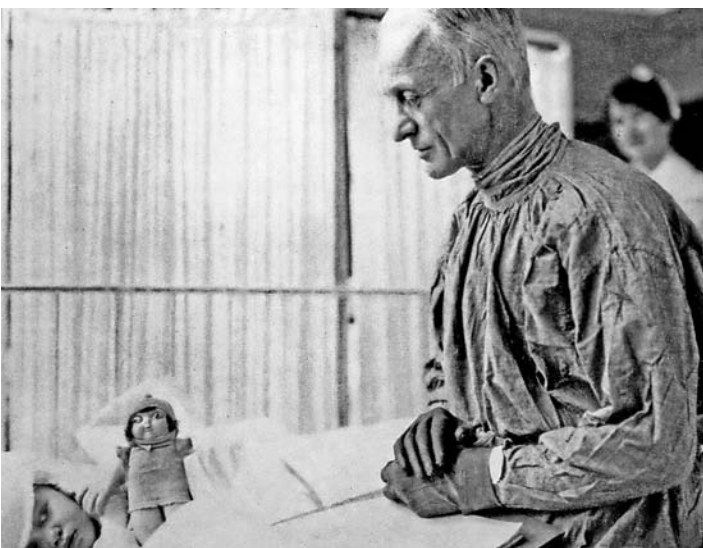
The first half of the twentieth century marked a remarkably successful period in medicine. As new therapies—both pharmacological and surgical—were developed, therapeutic pessimism gradually succumbed to an emerging optimism in medicine's ability to cure or manage illness. The specialization of different branches of medicine allowed physicians to become experts in relatively narrow areas, and this in turn had a positive impact on therapeutics. Neurological surgery constituted one such new and increasingly successful specialty.

Perforations of the human skull for the purpose of tending to a head wound or for allowing "demons" to escape the head of a mentally ill individual date back to antiquity. However, consistently safe and effective brain surgery depends

➤ HARVEY CUSHING (1869–1939)

Harvey Cushing was born in Cleveland, Ohio; studied at Yale and Harvard; and practiced surgery first at Johns Hopkins Hospital in Baltimore and later at the Peter Bent Brigham Hospital in Boston. Quite early in his career, Cushing became particularly interested in operating on the brain and the spinal cord. He brought to the practice of brain surgery his dexterity, his surgical aptitude, and his determination to make neurosurgery as safe as possible. But most importantly, he made practical innovations such as vascular clips for the control of bleeding and techniques for monitoring intracranial pressure. As early as 1910, Cushing reported a rate of operative deaths of only 13 percent, and nine years later this rate had further decreased to 7.4 percent. During his long career, Cushing trained many aspiring surgeons who subsequently established neurosurgery practices all over the world.

—H. Micheal Tarver



*Neurosurgeon Harvey Cushing with a young patient, 1928.
(National Library of Medicine)*

on three essential prerequisites: antisepsis, anesthesia, and cerebral localization of function. It was not until the end of the nineteenth century that all these requirements fell into place. In 1846 the American dentist William Morton (1819–1868) discovered ether anesthesia, in the 1860s the British doctor Joseph Lister (1827–1912) discovered and promoted the practice of antiseptic surgery, and throughout the second half of the nineteenth century physiologists such as Paul Broca (1824–1880), Carl Wernicke (1848–1905), David Ferrier (1843–1928), and Hughlings Jackson (1835–1911) effectively correlated distinct cerebral structures with discrete functions, such as vision and speech production.

Despite these advances in medicine, in the last decades of the nineteenth century even the leading surgeons who attempted brain operations—the Scottish William Macewan (1848–1924), the English Victor Horsley (1857–1916), and the German Ernst von Bergmann (1836–1907)—had to contend with problems such as infection, uncontrollable bleeding, unintentional brain damage, and the herniation of the brain through the aperture made in the skull. These surgeons had not been trained in neurology and were working with instruments that did not afford them the finesse necessary for such a delicate organ. It is not surprising, therefore, that only about half of their patients survived.

Truly effective neurosurgery began at the turn of the twentieth century with the work of the American surgeon Harvey Cushing (1869–1939). The casualties during World War I spurred new interest in head trauma and brain surgery while also bringing about successful new therapies, such as blood transfusions, and a more consistent use of recently developed medical technology, such as X-ray machines. Cushing was involved in the wartime effort to establish military hospitals and to increase medical preparedness. During the war, he operated 16 to 18 hours a day, often on soldiers who suffered from head trauma, and he became even more convinced of the necessity of specialized neurological training for surgeons. His hopes were soon after realized. In March 1920 with the founding of the Society of Neurological Surgeons, neurosurgery was officially recognized as a medical specialty in the United States. In its first year the society had only 20 members, but in the following decades this number increased exponentially.

In the second quarter of the twentieth century a new generation of neurosurgeons stood poised to take the field a step further. Cushing had been a cautious and conservative surgeon who limited brain surgery to the removal of tumors and to head trauma. He did not take unnecessary risks; he operated slowly and carefully, avoiding cutting into healthy tissue. Younger neurosurgeons were more ambitious. Cushing's student and sometime-rival Walter Dandy (1886–1946) devised a diagnostic technique (ventriculography) that consisted of the replacement of the cerebrospinal fluid of the brain's ventricles with air. An X-ray of the brain thus allowed the physician to identify any abnormalities in the area surrounding the ventricles. Ventriculography was a somewhat dangerous procedure; Cushing cautioned against it, but the younger neurosurgeons embraced it enthusiastically. This second generation of neurosurgeons extended neurosurgery's purview to include conditions such as epilepsy. The Canadian neurosurgeon Wilder Penfield was the most vocal supporter of the surgical treatment of epilepsy, and he reported that about half of his patients found relief following surgery.

A minority of doctors, such as the Portuguese neurologist António Egas Moniz (1874–1955), the American neurosurgeon James Watts

(1904–1994), and the American neurologist Walter Freeman (1895–1972), embraced radical forms of neurosurgery, such as psychosurgery, that consisted of various procedures designed to damage or remove parts of the brain in order to ease the symptoms of mental illness. In 1936 Moniz was the first doctor to perform a lobotomy, an operation in which the connections between the rest of the brain and the prefrontal cortex are severed. As the serious and irreversible side effects of lobotomies became clear, they were later denounced as excessive and inhumane interventions.

The first half of the twentieth century thus saw the birth of neurosurgery, along with that of other specialties of medicine. Better instruments, a more thorough understanding of brain physiology, and the leadership of Harvey Cushing contributed to the success of neurosurgery to the benefit of patients suffering from tumors, epilepsy, head trauma, and other conditions affecting the nervous system.

—*Delia Gavrus*

Bibliography

- Bliss, Michael. *Harvey Cushing: A Life in Surgery*. Oxford, UK: Oxford University Press, 2005.
- Corsi, Pietro, ed. *The Enchanted Loom: Chapters in the History of Neuroscience*. Oxford, UK: Oxford University Press, 1991.
- Greenblatt, Samuel H., T. Forcht Dagi, and Mel H. Epstein, eds. *A History of Neurosurgery in Its Scientific and Professional Contexts*. Park Ridge, IL: American Association of Neurological Surgeons, 1997.
- Penfield, Wilder. *No Man Alone: A Neurosurgeon's Life*. Toronto: Little, Brown, 1977.

Surgical Advances

Modern surgery began with the discovery of anesthesia and antisepsis in the nineteenth century. At the dawn of the twentieth century, the discovery of X-rays and radioactivity enabled surgeons even further. Nonetheless, challenges associated with infection, shock from blood loss, and difficulties with anesthesia rendered surgery inadvisable; as a consequence, physicians often opted for nonintervention. Between 1900

and 1945, however, surgical methods greatly improved due to innovations in specialized equipment and increased diagnostic ability. Injuries sustained during both world wars promoted advances in wound treatment, blood transfusions, and anesthetic methods, affecting a transition from general surgery into the specialized fields of modern surgery.

Harvey Cushing (1869–1929) played a pivotal role in laying the foundation for neurosurgery. His surgical success in removing brain and spinal cord tumors depended largely on his discovery of the Cushing Reflex (relationship among intracranial pressure, rising blood pressure, and a falling pulse) and the use of electrocautery to control hemorrhage. Advances in physics led to the development of cerebral pneumography for localization of brain tumors and lesions, and the important work begun by Hans Berger (1873–1941) with the electroencephalograph revolutionized the treatment of epilepsy.

Plastic surgery emerged as a response to burns and facial injuries sustained during World War I. Harold Gillies (1882–1960) pioneered new methods in reconstructive surgery such as the tubed pedicle graft, which provided continued blood supply and ensured greater survival of transplanted tissue. Gillies used autogenous (reimplanted in the same individual) bone and cartilage grafts to repair cranial injuries and restore the nose. Surgical success depended on the codevelopment of endotracheal anesthesia, as facial injuries prohibited the use of anesthetic masks. Gillies opened a plastic surgery center in Britain, treating thousands of war victims, and thereafter initiated cosmetic surgery on civilians such as face lifts and breast surgery.

Similarly, gunshot fractures led to the first orthopedic centers under the leadership of Robert Jones (1857–1933), whose promotion of the Thomas Splint (effective immobilization) reduced mortality from 80 percent to 20 percent. The extent of injuries to the abdomen from highly explosive weapons of war forced surgeons to abandon their cautious approach and operate on the stomach and intestines. In addition, the muddy battle grounds on the western front were so conducive to bacteria that infections necessitated surgery to allow adequate drainage of pus. Prior to the advent of penicillin,

► TIMELINE OF MEDICAL ADVANCES

- 1895—Roentgen discovers X-rays.
- 1900—Landsteiner identifies blood types.
- 1903—Einthoven develops electrocardiography.
- 1908—Carrel introduces arterial anastomosis.
- 1909—First use of bismuth meal for stomach examination.
- 1912—Herrick's description of a heart attack due to hardening of the arteries.
- 1915—Carrel-Dakin method of wound irrigation with Dakin solution.
- 1916—Introduction of Citrate-Glucose solution to prevent blood coagulation.
- 1918—Dandy invents cerebral pneumography (X-rays after injection of air).
- 1927—Drinker and Shaw develop the Iron Lung (artificial respiration).
- 1929—Berger introduces electroencephalography (EEG).
- 1931—First pneumonectomy by Niessen.
- 1932—Cushing's syndrome discovered (causes upper body obesity and thinning of arms and legs).
- 1932—Wolf-Schindler's gastroscope.
- 1935—Egaz Moniz's controversial lobotomy to relieve obsessive or melancholic states.
- 1941—Penicillin.
- 1941—Pearl Harbor victims injected with albumin for shock.
- 1942—Griffith and Johnson administer curare to paralyze muscles during anesthesia.
- 1944—Blalock-Taussig operation to relieve cyanosis (inadequate oxygenation of the blood) as a result of congenital cardiac or pulmonary defects.
- 1944—Streptomycin.
- 1945—Kidney dialysis machine.

—Andrea Patterson

contaminated tissue had to be excised, and introduction of the Carrel-Dakin wound irrigation method with antiseptic solution reduced infection rates. The inevitable experimental surgeries during World War I also improved the mortality rate of abdominal and gastric surgery for civilians, aided by the invention of the gastroscope that produced more accurate diagnosis for stomach cancer and ulcers.

The discovery of blood types by Karl Landsteiner (1868–1943) in 1900 marked the beginning of blood transfusions, but to avoid clotting, anastomosis (transfusion from donor's artery to recipient's vein) was necessary until the use of sodium citrate as an anticoagulant allowed for direct transfusion and limited refrigeration, leading to the first blood depot during World War I. However, it was not until World War II, when the process of plasma fractionation allowed plasma and albumin storage long term, that blood transfusions were widely used for shock treatment.

Of all emerging specialties, thoracic surgery was last to develop, as admitting air into the pleural cavity causes the lungs to collapse. Surgeons had attempted open chest procedures since the 1890s, but this generally resulted in excessive mortality rates. There were a few notable exceptions, such as the successful suture of the pericardium by Daniel Hale Williams (1856–1931), the first African American cardiologist. Blood transfusions and penicillin improved conditions, and most importantly, advances in clinical anesthesia allowed life to be maintained by artificial respiration during heart and lung surgery. Endotracheal intubations kept the lungs inflated, and Harold Griffith's (1894–1985) introduction of cyclopropane as anesthetic gas, together with curare, effectively solved problems of carbon dioxide removal and muscle reflexes. The Blalock-Taussig operation on "blue babies" showed that congenital heart disease could also be corrected surgically. This along with more reliable diagnostic methods such as X-ray angiography brought cardiothoracic surgery into a recognized medical specialty.

—Andrea Patterson

Bibliography

- Cartwright, Frederick F. *The Development of Modern Surgery*. London: C. Tinling, 1967.
- Greenblatt, Samuel H., ed. *A History of Neurosurgery in Its Scientific and Professional Contexts*. Park Ridge, IL: American Association of Neurological Surgeons, 1997.
- Kennedy, Michael. *A Brief History of Disease, Science and Medicine*. Irvine, CA: Asklepiad, 2004.

■ Introduction: Age of Invention

In the last decades of the nineteenth century and in the early twentieth century, in the popular rhetoric of magazines and newspapers famous inventors such as Thomas Edison, Nikola Tesla, and Guglielmo Marconi were referred to as “wizards,” amazing and mysterious figures whose fertile brains produced wonders. Electrification and new inventions such as the telephone, phonograph, and radio fascinated the public. Although the image of the lone romantic inventor as a variant on the artist or wizard was popular, the reality by the early twentieth century was that most inventions were the products of industrial research and development divisions, stocked with engineers and bankrolled by large corporations, often with government or military funding. While important patents designated apparent inventors, more often than not great inventions were a collaborative effort: this was true, for example, of radio and television, endeavors that required many theorists and practical tinkerers to perfect. In the first decades of the twentieth century, world’s fairs carefully associated technological advance with corporations, as companies such as General Electric and DuPont highlighted the wondrous results of their research divisions not only in “Halls of Miracles” but also in model kitchens or living rooms and as lone “wizards” like Edison or Tesla began to appear as throwbacks.

A key component of all electronics for decades to follow was the triode vacuum tube that Lee De Forest created in 1906; the vacuum tube remained common in electronic equipment until it was eventually replaced with the transistor, developed in 1947. In addition to the unveiling revolution in electronics, new materials aided the development of industry and consumerism. In the 1920s as part of a joint venture in the United States, the chlorofluorocarbon freon was developed as a nontoxic gas to be used as the refrigerant in compressor-run refrigeration systems. Replacing toxic gases such as ammonia, this breakthrough encouraged the introduction of refrigerators—and later air conditioning—to households. In 1907 Belgian chemist Leo Baekeland created Bakelite, the first industrial-strength plas-

tic. Bakelite was nonconductive, heat-resistant, and easily molded to create the outer shells for radios as well as shielding for high-voltage electrical equipment. In fabrics research, attempts to create what was termed “artificial silk” date to the mid-nineteenth century. The first practical (i.e., nonflammable) variant was developed in the 1890s in Britain and marketed in France as “art silk”; in the 1920s it was renamed rayon. Rayon was derived from wood cellulose; however, an entirely synthetic material, nylon, was invented in 1934 from petrochemicals. Nylon stockings were first offered to the public at the 1939 New York World’s Fair. Polyethylene, another new plastic, was first developed in 1942 and later was used in Tupperware and other now-common products.

The first radar stations were created in Britain during the 1930s, although they became common worldwide during World War II as radar became key to aerospace defense and offense. Research during the war led to many notable developments, including refinements to jet-engine aircraft, rocketry, and the creation of nuclear weaponry, nuclear power, and advanced computing systems.

—Fred Nadis

Nylon

Nylon is a synthetic fiber developed by E. I. du Pont de Nemours and Company (DuPont) during the 1930s. As a material, nylon can have a variety of properties, including those similar to natural silk. The most important early use for nylon was in the manufacturing of women’s hosiery and, during World War II, parachutes. Nylon was the world’s first true synthetic fiber, and it remains one of the most versatile and significant of the artificial fabrics that have replaced natural materials in many applications.

The development of nylon came out of DuPont’s decision in the late 1920s to commit corporate resources to a program of basic chemistry. The director of the firm’s Chemical Department, Charles Stine, felt that such a program would



During World War II, an American worker attends to a massive thousand-spool warping machine, used in the making of nylon thread destined for the fabrication of parachutes. She and millions of other women went without their nylon stockings for the duration of the conflict as production was diverted to military purposes. (Library of Congress)

have a number of advantages. It would provide good public relations for the firm, be useful in attracting top scientists to the firm's employ, and have a practical payoff in terms of new products or processes that would be developed. In the 1930s DuPont promoted the association of science and material well-being with the slogan "Better Things for Better Living . . . through Chemistry."

Among those recruited to DuPont for the nylon project would be Wallace Hume Carothers, the first industrial chemist elected to the prestigious National Academy of Sciences, and Paul Flory, an eventual winner of the Nobel Prize in Chemistry for his work on polymers. While Carothers is often credited with the invention of nylon, the success of the project was, in fact, a team effort. Carothers directed work on polymer chemistry at the new lab building at DuPont's Experimental Station outside of Wilmington, Delaware. More of a theoretical than an applied chemist, Carothers built upon ideas suggested by the work of the Germans Hermann Staudinger and Hermann F. Mark. The work at the Wilmington Experimental Station eventually led to the discovery of two important synthetic products: the rubber substitute neoprene and nylon.

By 1930 one member of the polymer team, Julian W. Hill, had drawn out a filament from a beaker of long-chain polyester. While a number of polyesters were rejected as candidates for a synthetic fiber because their low melting points meant they would not stand up to laundering and ironing, a switch to the ammonia-derived polyamides seemed to have the contrary problem of a melting point too high to be practical for industrial spinning processes. In July 1931 as DuPont became more concerned with ensuring that Carothers's research would yield commercial advantages, the firm filed a patent application that became the basis for DuPont's priority in nylon. A particular form, called nylon 6-6 from its chemical structure, was first prepared by Gerard J. Berchet on February 28, 1935. This would be DuPont's final choice for the basis of nylon fabric. DuPont was not alone in its search for a new synthetic fiber, as an alternative, nylon 6, was developed shortly afterward by Paul Schlack at the I. G. Farben company in Germany.

The origin of the name "nylon" is unclear, but one story claims that it evolved from "no-run." Runs, or unraveling, have always been a major problem in women's hosiery, the product that was nylon's first application. DuPont accepted the generic name, and consumer usage of that name made "nylons" synonymous with "stockings," which were previously made from expensive silk or the less-attractive rayon.

In its development and marketing of nylon, DuPont was able to build upon its experience with earlier substances such as the packaging material Cellophane (1923) and the artificial silk Rayon (1924). The multiyear process of product development involved the firm's Ammonia Department, which made the chemicals used to produce nylon; the Chemical Department, responsible for the polymerization and spinning needed to make nylon fiber; and the Rayon Department, responsible for nylon as a textile. As with rayon and its other synthetics, DuPont would not itself mass manufacture the final products, leaving that to outside manufacturers such as the hosiery makers in this case. DuPont did, however, ensure quality. The wives of DuPont's nylon team researchers performed in-house testing of nylon at DuPont. Continued advances in chemistry and technology ensured that nylon

fabric could be produced with the consistency and with the qualities that consumers desired.

Although the first commercially marketed nylon product was a nylon-bristle toothbrush, by 1938 rumors of nylon stockings and their supposedly indestructible properties were rife. DuPont announced the substance publicly to an audience of members of women's clubs on the site of the forthcoming New York World's Fair on October 27, 1938. In March of the following year, the first 5,000 pairs of nylon stockings were sold to DuPont's own employees. At the World's Fair, which opened the next month with the theme "Building the World of Tomorrow," nylons shown at DuPont's display attracted enthusiastic attention. General sales to the public began on May 15, 1940, and quickly captured a substantial share of their market. The entry of the United States into World War II diverted nylon production into wartime use for parachutes and other war-essential items. The reintroduction of nylon stockings, in short supply, after the war led to unruly nylon riots as consumers scrambled to buy them.

Today DuPont remains the leading nylon producer in the world. While nylon hosiery and lingerie have remained major usages for nylon, they have been joined by tire cords, carpets, and myriad other products.

—James Hull

Bibliography

- Handley, Susannah. *Nylon, the Story of a Fashion Revolution: A Celebration of Design from Art Silk to Nylon and Thinking Fibres*. Baltimore: Johns Hopkins University Press, 1999.
- Hermes, Matthew E. *Enough for One Lifetime: Wallace Carothers, Inventor of Nylon*. Washington, DC: American Chemical Society, 1996.
- Hounshell, David A., and John Kenly Smith. *Science and Corporate Strategy: Du Pont R&D, 1902–1980*. Cambridge: Cambridge University Press, 1989.
- Meikle, Jeffrey L. *American Plastic: A Cultural History*. New Brunswick, NJ: Rutgers University Press, 1995.

The Computer

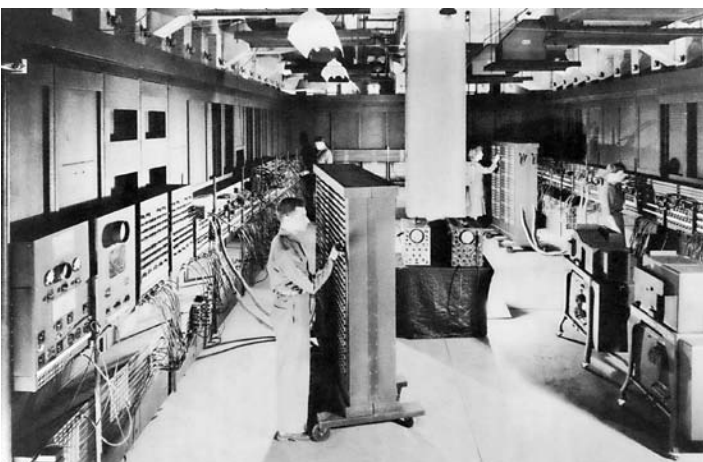
The Internet, email, the World Wide Web, and the modern computer age came to popular consciousness during the mid-1990s. However, the

predecessors of the modern computer date back more than 100 years before this. Some people even claim that simple types of computers were known to the ancient Greeks, such as a recovered analog machine designed to calculate stellar positions and dates from the beginning of the Roman Empire. Devices to aid mathematical calculations are similarly ancient and range from the Chinese abacus to the modern slide rule and manual adding machine. There are also machines, such as the Napoleonic French looms, capable of using patterns in production without having the pattern recited by operators.

Machines capable of operating without human control have been traced back to the U.S. Census Bureau and the 1890 census. The 1890 census was the first instance of machine tabulation rather than human tabulation of the data recorded by field agents. This early machine used wood and metal gears to add totals from cards fed into the machine. There were no electric circuits involved. These cards were the direct precursors for the punch cards used by later electronic computers. The idea for the cards was taken from French looms developed in 1801 that used punched holes to control the color patterns in the carpets being manufactured.

The logic systems of wood and metal gears were eventually replaced by vacuum tubes in the first generation of electronic computers. Each vacuum tube contained exactly one circuit and was originally the size of a lightbulb. Technological advances eventually reduced vacuum tubes to the size of a human thumb. The tube size is the reason people talk about computers as big as large rooms. The earliest practical vacuum tubes were developed during World War I using ideas developed as early as the 1890s. These tubes were eventually replaced by the now familiar integrated circuit (IC) chips in computers, utilizing technology that began to be developed in the 1950s. Modern computers contain several IC chips, each having tens of thousands or even millions of circuits.

Punch cards were the first storage technology used by computers. Eventually they were replaced by magnetic media, starting with tapes and going to the current USB (stick) drives. Each punch card was approximately 8.5 inches by 3.5 inches (21.5 by 9 centimeters). The name comes



The Electronic Numerical Integrator and Computer (ENIAC), developed at the University of Pennsylvania in 1943. (National Archives and Records Administration)

from the need to punch a hole in the card where the data point went. If your program had a “3” in it you used a special hole punch on the printed “3.” An average computer program of a few hundred bytes in length would require hundreds of cards. If the cards got out of order, the program would not run. The important thing about punch cards that remains with computers today is the concept that each point in the data set or the program could contain only one piece of information. This is the same logic that enables all forms of magnetic data storage, which operate by either turning on or off a magnetic field at a specific spot in the storage medium. The phrase “do not fold, spindle or mutilate” comes from computer punch cards.

The concepts behind programming a computer mathematically were first developed by Charles Babbage (1791–1871) for his planned invention, the Difference Engine. Although Babbage never actually programmed a computer, he provided the logical underpinnings necessary for the development of early computer programming. He created machines that demonstrated the possibility of what would become modern computers with the machines that he could build at that time.

The actual mathematical system that is the logical underpinning of all modern computers was developed by George Boole (1815–1864). The mathematical system he devised consists of true and false and ways to combine true and

false mathematically into the logical operations known as “ands,” “ors,” “nands,” and “nors.” The basic building blocks of computer logic—the organizing and manipulating of zeroes and ones—rely on Boolean Logic.

The man commonly given the greatest credit for the development of the modern computer and differentiating it from all of the old machines associated with computers is Alan Turing. Turing lived from 1912 to 1954 in England and devised the Turing machine that defines modern computers. A Turing machine is a device (including but not limited to computers) that meets certain conditions regarding the processing of information. The defining characteristic of a Turing machine is referred to as a Turing test and relates to the sequential form of information stored in and therefore processable by the machine. The test itself and the logic that has arisen from it define how a computer “thinks” in a linear step-by-step fashion and the implications this has for writing computer programs versus how a human thinks in a type of spider web or free association pattern. All computers currently “think” linearly from one end of a program to the other and follow the instructions in exactly the order specified by the programmer. Supercomputers make certain modifications to this situation because they split the program using specific rules so that portions are handled simultaneously. However, each portion is handled in instruction order like a normal computer, and the portions must be re-integrated in precise order. The conditions behind this requirement of computer programming also apply to computer memory. This is different from how a human can handle tasks and remember, because a human can create linkages without needing to follow a specified order.

During World War II, Germany used the first obviously recognizable protocomputers to encode military messages; the Allies used similar machines to break the codes. These machines are not considered computers because they translated the information fed into them depending on the dial positions and did not perform mathematical calculations. These coding machines used sets of tumblers to convert the messages from German into unrecognizable sets of letters. The interesting aspect of these machines is that each preceding tumbler altered the start-

ing value of all the following tumblers so that the starting value became vital to translating the message: the change made to the first letter helped to determine how the second letter changed, which then influenced how the third letter changed. This was accomplished by having each tumbler reset the starting point of the next tumbler when the first tumbler was used.

ENIAC (short for Electronic Numerical Integrator and Computer) was among the first recognizable computers built and was the first publicly known. The Germans (with the Z3) and the English (with the Colossus) also created early computers between 1941 and 1944, but those were kept from public knowledge until recently. ENIAC itself was built in 1943 by engineers at the University of Pennsylvania for the U.S. Army with the purpose of calculating artillery firing tables. This machine was built using vacuum tubes, ran on punch cards, and required rewiring to reprogram. The programs run on the machine were small, measuring in bytes and not in modern kilobytes, megabytes, or even gigabytes, but they used the ideas developed by Babbage, Boole, and Turing. The modern computer age had finally begun.

—David Conklin

Bibliography

- Burke, James. *Connections 1*. New York: Ambrose Video Publishing, 2007.
- Campbell-Kelly, Martin, and William Aspray. *Computer: A History of the Information Machine*. New York: Perseus, 2004.
- Ceruzzi, Paul E. *A History of Modern Computing*. 2nd ed. Cambridge, MA: MIT Press, 1998.
- Rojas, Raul, and Ulf Hashagen, eds. *The First Computers: History and Architectures*. Cambridge, MA: MIT Press, 2002.

Intelligence Testing

Intelligence testing through tests of reasoning was developed in the early twentieth century as prior methods of measuring intelligence, specifically craniometry (the measurement of skulls) and the analysis of anatomical stigmata, were increasingly discredited and abandoned by the scientific community. Though intelligence testing represented a major methodological de-

parture from the physically based measures of intelligence in the nineteenth century, most of the intellectuals responsible for developing and popularizing intelligence tests in the United States and Europe perpetuated a theory of intelligence as innate and unalterable by environment or education. For these intellectuals, intelligence testing represented the means to realize a eugenicist social order, one in which individuals of lower intelligence (assumed to be genetically inferior) could be identified and channeled into menial occupations or, at the most extreme, institutionalized and prevented from reproducing. The intelligence testing movement thus rationalized existing racial and class inequality and also served to bolster arguments for restricting immigration to the United States, especially from eastern and southern Europe.

The origins of intelligence testing through the measurement of intelligence quotient (IQ) can be traced to the work of French psychologist Alfred Binet (1857–1911). Binet, who headed the psychology laboratory at the Sorbonne in Paris, was commissioned by the minister of public education in 1904 to develop tests for identifying children who were failing to make adequate progress in the regular classrooms and who could thus benefit from special education. Binet designed an assemblage of short everyday tasks of increasing difficulty with the intent of directly measuring processes of reasoning and capturing a student's intellectual potential with a single score. Binet revised his scale in 1908 by assigning an age level to each task. A child's mental age could then be determined by the last task that the child was capable of completing, which in turn could be subtracted from the child's actual age to determine his or her intellectual level. Binet's scale could thus pinpoint children in need of special education as those whose mental ages lagged far behind their actual age. Binet's scale would provide the model for intelligence testing in the decades to follow, although the specific concept of IQ (defined as the division of mental age by actual age) would not be advanced until 1911, after Binet's death, by German psychologist Wilhelm Stern (1871–1938).

Binet declined to associate his scale with the measurement of intelligence per se. He argued that intelligence was too complex a construct to

measure with a single score; rather, his tests were merely designed for the practical purpose of identifying students with some form of learning disability who could benefit from special instruction. Moreover, Binet rejected the prevailing view of intelligence as constrained by biological inheritance and thus unalterable through education. However, the leading psychologists in the United States and Europe who would be responsible for adapting Binet's scale and popularizing the use of intelligence tests in the school systems and the military explicitly conceived of intelligence testing as a ranking mechanism to sort individuals by innate intellectual ability. Henry H. Goddard (1866–1957), the researcher who first adapted and popularized Binet's scales in the United States, argued that intelligence could be traced to a single gene, which in turn dictated a person's proclivity toward moral or immoral behaviors. He adapted Binet's scale for the purpose of identifying individuals just below the normal range of intelligence, those who would be most likely to engage in criminality and sexual deviance, and advocated for the establishment of institutions to confine these individuals and prevent them from reproducing. In 1913 Goddard tested his adapted scales on immigrants just arriving to Ellis Island, relying on assistants to select intellectually deficient candidates by sight. Disregarding the numerous problems in the administration of the tests, Goddard concluded that the majority of immigrants coming to U.S. shores were below normal intelligence, thus providing ammunition for advocates of tighter immigration quotas.

While Goddard was adapting and administering the Binet scale in the eastern United States, Stanford professor Lewis M. Terman (1877–1956) was also testing his own revision of the Binet scale on samples of school students in northern and central California. Like Goddard, Terman believed that intelligence was inherited and that low intelligence was specifically tied to criminality, poverty, and other social problems. Terman published his scale, the Stanford-Binet, in 1916. In 1917 Terman would join a team of other psychologists, led by Robert M. Yerkes (1876–1956), in an effort to develop intelligence tests for army recruits. This team developed two tests (an Alpha exam for literate recruits and a

Beta exam designed for illiterate recruits or those who failed Alpha) and tested a total of 1.75 million recruits during the course of the U.S. involvement in World War I. Though the testing process itself was fraught with inconsistencies (especially with regard to the testing of recruits with limited to no English literacy), the sheer amount of data lent support and momentum to intelligence testing as the primary solution in restructuring schools to accommodate an ever-growing ethnically and socioeconomically diverse student population.

After World War I, psychologists involved in the army testing effort concentrated on adapting the Stanford-Binet and the army tests, along with scholastic achievement tests, for widespread use in schools throughout the United States. Intelligence testing drew criticism from some segments of the psychological community, especially the contention by Terman that such tests measured an innate inherited intelligence isolated from environmental or educational influence. These critiques were echoed in the media by columnist Walter Lippmann (1889–1974), who also forewarned of the technocratic potential of intelligence tests to dictate the professional opportunities of individuals at a young age. Despite these and other criticisms, including those of school administrators, by 1925 intelligence tests were being used in schools across the United States to classify and divide students into ability groups and to place students with below-normal scores into special classes. Intelligence testing as a means to track students in ability groups was incorporated in Europe, most notably in England with the implementation of the 11+ examination (taken by students at age 11), used to identify a select minority of students for college preparation. The use of intelligence testing in the United States for the purposes of educational tracking would not be challenged until the 1960s, when increasing criticism would prompt several cities and states to discontinue their use in schools.

—Josef Castañeda-Liles

Bibliography

Chapman, Paul Davis. *Schools as Sorters: Lewis M. Terman, Applied Psychology, and the Intelligence Testing Movement, 1890–1930*. New York: New York University Press, 1988.

- Gould, Stephen Jay. *The Mismeasure of Man*. Rev. and expanded edition. New York: Norton, 1996.
- Thomas, William B. "Black Intellectuals' Critique of Early Mental Testing: A Little Known Saga of the 1920s." *American Journal of Education* 90(3) (1982): 258–292.
- White, John. *Intelligence, Destiny and Education: The Ideological Roots of Intelligence Testing*. New York: Routledge, 2006.

Mechanical Refrigeration

The development of mechanical refrigeration in the second half of the nineteenth century drastically altered the patterns and practices of food storage at many points between the farm gate and the table. In addition, household refrigeration changed the material culture of millions in industrialized nations at the most basic level of the range of foodstuffs available for consumption.

Mechanical refrigeration systems include such items as the familiar kitchen refrigerator used to store household foods, large commercial cold-storage rooms, industrial units where cooling or freezing is required, and the making of ice for hockey rinks. Although mechanical refrigeration systems are not particularly complex, the technology is fundamentally science based and takes advantage of an understanding of thermodynamics, latent heat, and the phases of matter. The most important type of mechanical refrigerator either in the home or for commercial and industrial uses is based on a vapor compression cycle. The refrigerant, a vapor, is mechanically compressed and condensed into a liquid. It then passes through a valve that abruptly reduces the pressure, thereby allowing part of the refrigerant to expand and evaporate, a process that uses heat. This refrigerant, now cold, moves through a tubular coil and cools the interior of the refrigerator. The refrigerant is returned to the compressor to begin the cycle anew, while the heat is dissipated externally through a heat-exchanging coil. Other types of mechanical refrigeration include gas absorption, once important but now used only where a cheap heat source to evaporate the refrigerant is available; gas cycle, used in some aircraft; thermoelectric cooling, used in portable coolers; and adiabatic demagnetization, used in cryogenics. In everyday applica-

tions, refrigerators cool compartments to a few degrees above freezing to keep items chilled and to about -18°C (0°F) to keep items frozen.

While the principle of artificial refrigeration was demonstrated by the Scottish chemist William Cullen as early as 1748, the first practical refrigeration devices were not built until a century later. Developments by such people as John Gorrie and Jacob Perkins in the United States, James Harrison in Australia, Edmond Carré and Ferdinard Carré in France, and most importantly Carl von Linde in Germany pioneered the construction of refrigeration devices principally for industrial usage.

By the 1880s in many parts of the world, mechanical refrigeration systems were being used for ice making and cold storage as well as in the brewing, dairy, and meatpacking industries. Several factors combine to explain the successful introduction and rapid growth of household refrigeration in the early twentieth century. First, because of the icebox, many households were

➤ EINSTEIN'S REFRIGERATOR

In 1926 Nobel Prize-winning physicist Albert Einstein collaborated with Leó Szilárd on the development of a refrigerator. Supposedly motivated by newspaper reports of a fatal accident involving the ammonia in a Berlin family's refrigerator, the invention was a type known as a gas-absorption refrigerator. Using liquid ammonia, butane, and water, the device had a number of important advantages. First, with no pressure changes involved, the new refrigerator did not require a pump or compressor. As such, not even a power source was needed, only a heat source to drive vaporization. Second, the lack of a pump or compressor enabled the new devices to operate very quietly. In principle, the simplicity and lack of moving parts could allow such a refrigerator to be manufactured and sold inexpensively. The refrigerator was patented in several countries, including the United States, and the rights sold for commercial development, notably to the Swedish Electrolux company. However, the development of Freon gas as a refrigerant and the greater efficiency of gas-compression refrigerators led to a neglect of gas-absorption technology.

—James Hull



One of the first Frigidaire refrigerators, 1921. (Bettmann/Corbis)

already familiar with and becoming reliant upon artificial cooling for the storage of foodstuffs. Second, more and more households, especially in urban areas, had acquired access to electrical power. Third, the refrigerator was part of the broader trend that witnessed a reduction in the hiring of domestic labor in favor of the supposedly labor-saving household technologies of the time. Finally, because of falling prices and increasing profits, refrigerators became within the reach of the broader middle-class market.

In 1904 attendees at the World's Fair in St. Louis, Missouri, saw a self-contained mechanical refrigerator manufactured by the Brunswick Refrigerating Company. Seven years later, General Electric Corporation undertook the significant step of making refrigerators based on a design by the Frenchman Marcel Audiffren. Shortly after World War I, General Motors purchased the small but creative Guardian Refrigerator Company, which was renamed Frigidaire. Soon, General Electric, Frigidaire, and Kelvinator dueled for dominance in what would be the world's biggest market for refrigerators: the United States. Competition and mass production brought prices down, while engineering research introduced a host of new features. These included separate refrigeration and freezer compartments, each with its own temperature control; automatic thermostatic temperature control; redesigned interiors with shelving; and ice cube

trays. For those not on the power grid, companies such as Electrolux marketed gas-absorption refrigerators. The advances in refrigeration became so popular that by 1931 annual production of mechanical refrigerators in the United States alone reached one million units.

Perhaps the most significant engineering problem of the new mechanical refrigerators was the choice of refrigerant. The ammonia and carbon dioxide used in industrial systems were inappropriate to household devices, and a variety of other gases—such as sulfur dioxide, methyl chloride, ethyl chloride, and isobutene—were either toxic or flammable. By 1930, Thomas Midgley and others at the General Motors Research Laboratory had developed the solution: chlorofluorocarbon (CFC). The substance, non-toxic and nonflammable, became manufactured and marketed as Freon by General Motors and a subsidiary of DuPont.

Industrial uses for mechanical refrigeration also continued to expand. The brewing and meatpacking industries became the earliest to make major use of the technology, along with commercial ice making itself. In addition, a variety of goods-storage and foodstuffs manufacturing industries found mechanical refrigeration a boon to their enterprises. The development in 1940 of a roof-mounted refrigeration unit for trucks allowed for the expansion of both short- and long-haul delivery of perishable goods.

The impact of mechanical refrigeration, in particular for food preservation, has been enormous. It has changed the way in which food is marketed and the way households budget for and manage food resources and has permitted a vast increase in the variety of foods available year-round. With foods less likely to spoil, particularly in the summer months, one source of risk in food consumption has been reduced. While a greater choice of available foods does not guarantee the selection of a healthy diet, the increased availability of a greater range of foods has had a measurable impact on nutrition and health. The ability to purchase fresh produce year-round meant the disappearance of the vegetable gardens that were once commonplace even in urban settings. Brand name milk, cheese, meats, and frozen foods, stored first in grocery store cabinets and then household refrigerators,

became and remain essential features of contemporary material culture. The electrically powered refrigerator has also been a part of the making of the modern household, one plugged into a wider industrial world and dependent on access to outside utilities.

—James Hull

Bibliography

- Anderson, Oscar Edward. *Refrigeration in America: A History of a New Technology and Its Impact*. Princeton, NJ: Princeton University Press, 1953.
- Dienel, Hans-Liudger. *Linde: A History of a Technology Corporation, 1879–2004*. New York: Palgrave Macmillan, 2004.
- Hard, Mikael. *Machines Are Frozen Spirit: The Scientification of Refrigeration and Brewing in the 19th Century*. Frankfurt: Verlag, 1994.
- Nagengast, Bernard. “It’s a Cool Story.” *Mechanical Engineering* 122 (May 2000): 56–64.

Television

Television is a system made of a camera that continuously converts light patterns into a corresponding electrical signal for the displaying of moving images on the screen of a receiver.

A Russian professor of electricity, Constantin Perskyi, coined the word “television” in a paper for the Paris International Electricity Congress in 1900. By then, “seeing by electricity” was the colloquial expression used to describe experiments with transmission of images by electric wires. It was not until the mid-1920s, however, that a satisfying workable television system had been built and publicly demonstrated. Indeed, several individuals set out theoretical schemes and built up experimental apparatuses in order to achieve this goal. They were independent inventors, university scientists, and corporate researchers scattered about North America and Europe. Therefore, the invention of television cannot be credited to a single individual because it mainly resulted from the combination of technologies that inventors borrowed chiefly from both the science of electricity and the telecommunication industry.

Inventors followed two technological paths: the electromechanical and the electrical, the latter of which would become the dominant one.

Early schemes and inventions for a television system were conceived as early as the late nineteenth century. In 1873 an English electrician, Willoughby Smith, published an important observation in the journal *Nature*. He noted that selenium rods, a nonmetallic mineral element used in telegraphic apparatuses, change their electrical resistance when they are exposed to varying light intensities. Knowing that selenium could convert light into an electrical circuit, inventors started to seriously investigate means for transmitting images at a distance. Most of the first theoretical schemes were publicly disclosed in the technical press but were hardly built as experimental apparatuses. Some inventors used magic lanterns for projections, while others used either the telephone or the telegraphic system for signal transmission. A Portuguese professor of physics, Adriano de Pavia, invented the telectroscope, which attracted worldwide attention in 1877. It was more a facsimile apparatus (like the fax machine) than a television system.

Electromechanical technology was the first line of investigation that inventors followed to break an image down point by point for transmission and reception. The Frenchman Maurice Leblanc laid down some fundamental principles in a short note published in *La lumière électrique* in 1880. His scheme was based on the optical properties of light for capturing an image and the use of selenium cells as a pickup device. Several means—rotating prisms, rotating lenses, and vibrating mirrors—were considered to achieve Leblanc’s vision. However, inventors would mostly refer to an invention patented by the German electrical engineer Paul Gottlieb Nipkow in 1885. The image frame was scanned by a camera made of a rotating disk with holes punched in a spiral pattern along the edge. Each hole passed rapidly across the image frame to create a line of definition. When the disk had accomplished a full rotation, the addition of lines produced a television frame. These lines of definition were projected by the receiving device, which was provided with the same rotating disk as the camera.

Another line of investigation for image scanning began at the beginning of the twentieth century. It exploited the properties of the cathode ray tube, an instrument that was used in physical experiments with electricity. Inventors

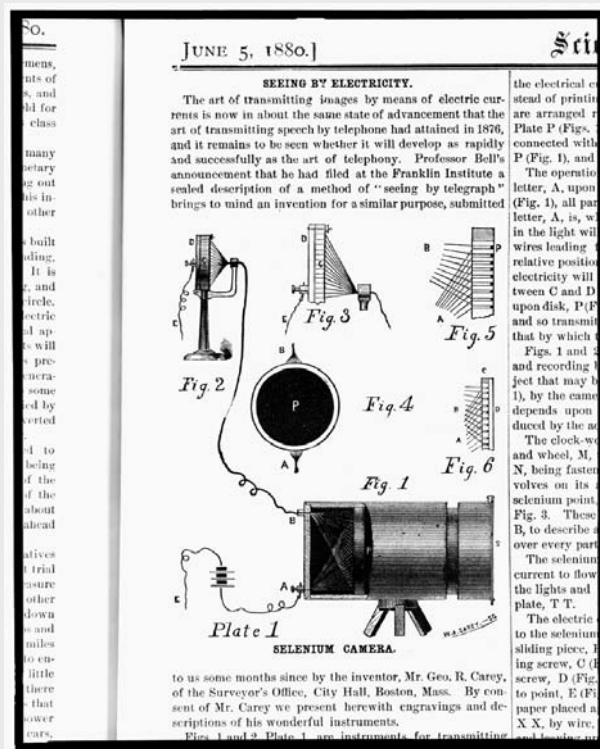
SEEING BY ELECTRICITY

“The art of transmitting images by means of electric currents is now in about the same state of advancement that the art of transmitting speech by telephone had attained in 1876, and it remains to be seen whether it will develop as rapidly and successfully as the art of telephony. Professor Bell’s announcement that he had filed at the Franklin Institute a sealed description of a method of ‘seeing by telegraph’ brings to mind an invention for a similar purpose, submitted to us some months since by the inventor, Mr. Geo. R. Carey, of the Surveyor’s Office, City Hall, Boston, Mass. By consent of Mr. Carey we present herewith engravings and descriptions of his wonderful instruments.”

Source

Scientific American, June 5, 1880. Courtesy of the Library of Congress.

Illustration of a selenium camera, invented by George R. Carey, presents the concept of electronic transmission of images, in Scientific American, June 5, 1880. (Library of Congress)



were experimenting with the Braun cathode ray tube for the receiver and, later on, the camera. At St. Petersburg Technological Institute, Boris Lvovich Rosing used a Braun cathode ray tube for a receiver and a mirror drum for a camera in his experiments from 1907 onward. A year later a Scottish consulting electrical engineer, Alan Archibald Campbell Swinton, envisioned in the journal *Nature* an all-electric television system. His model used the cathode ray tube designed by the German physicist Karl Ferdinand von Braun for both the camera and the receiver, and his scheme promised to achieve a higher level of definition, as compared to the electromechanical mean for scanning an image. It would not be until 1921 that practical experiments actually started with this technology.

From 1923 to 1926 independent inventors obtained crude black and white images. They staged separate public demonstrations of television systems with the electromechanical technology. In London the Scottish electrical engineer

John Logie Baird demonstrated a workable television system using the Nipkow disc. In Washington, D.C., the inventor Charles Francis Jenkins transmitted images by wireless, relying on two discs for image scanning. Both independent inventors created their own companies to experiment with regular broadcasting. They also commercialized the first television sets. However, in the latter 1920s their efforts were eclipsed by companies such as General Electric in the United States, Marconi in the United Kingdom, Compagnie Générale de Télévision in France, and Telefunken in Germany.

Although the electronic television system was on the rise, it had not yet demonstrated its superiority over its electromechanical counterpart. In 1927 an American independent inventor, Philo Taylor Farnsworth, built a practical all-electric camera tube that he called an Image dissector, which offered a distinct image. He founded the Farnsworth Television Company to commercialize his invention. In 1932 the Soviet-

born American physicist and electronics engineer Vladimir Kosma Zworykin, working for Radio Corporation of America (RCA), achieved a working implementation of the television tube called the iconoscope. Both Farnsworth's and Zworykin's camera tubes consisted of a beam of high-velocity electrons scanning a photoemissive mosaic charged with photons to create a varying electric current that corresponded to the televised image. In 1934 Farnsworth and Zworykin staged separate public demonstrations of working television systems.

Regularly scheduled television broadcasting started in Washington, D.C., in 1928, in London and Berlin in 1929, and in Paris in 1932. The iconoscope was replaced by new generations of television camera tubes called Orthicon, Saticon, and Vidicon. As the electronic television became the industrial standard, experimentations and broadcasts with the electromechanical technology resumed. After 1945 broadcasting companies relied primarily on the monochrome

electrical television camera, while listeners were also equipped with monochrome television sets. The electronic camera tube for color television had been released in 1954. By then, the television system was no longer a chimerical idea: it had become a major component of the consumption society with the mass production of television sets.

—Jean-François Auger

Bibliography

- Abramson, Albert. *Electric Motion Picture: A History of the Television Camera*. New York: Arno, 1974.
- Fisher, David E., and Marshall John Fisher. *Tube: The Invention of Television*. Washington, DC: Counterpoint, 1996.
- Smith, Anthony, ed. *Television: An International History*. Oxford, UK: Oxford University Press, 1995.
- Udelson, Joseph H. *The Great Television Race: A History of the American Television Industry, 1925-1941*. Tuscaloosa: University of Alabama Press, 1982.

■ Introduction: Warfare and Technology

A number of historians of science and technology argue very effectively that there is a causal relationship between warfare and technological evolution throughout time. Peacetime promotes technology at a relatively constant pace of development, but wartime accelerates the pace of technological evolution. It was war, or at least the threat of war, that promoted the rapid development of military hardware in the first half of the twentieth century. Furthermore, although most military equipment, or at least portions thereof, later became useful in civilian society, war remained the underlying factor in the rapid development of many technologies.

From the bow to the crossbow to the development of flight and tanks, militaries and warfare have had an amazing impact on the development of high technology. In the interest of staying ahead of their adversaries, nations have devoted vast sums of money, material, work hours, and research and development toward

building better military technology. In wartime, this trend is accelerated as nations try to overpower enemies and as the enemies, in turn, try to counter new technologies. This dialectic is especially apparent in the twentieth century.

The twentieth century brought into being the concept of total war. Nations that went to war in 1914 were dedicated to the fight bolstered by the idea of nationalism; societies went to war as nations. In turn, the belligerents in World War I (1914-1918) dedicated their entire societies, economies, and ideologies to the prolonged fight. As soon as the war devolved into a stalemate on the western front, World War I gave way to the modern concept of total war. The entire population was mobilized: conscripted soldiers were sent to the front to fight, and civilians at home were brought into industry to produce for the war effort, sent to the mines to extract raw materials, or sent to the farms to produce food for the nation. War became a national effort.

As nations fought, technological development accelerated apace. Nations expended vast effort in order to perfect war-winning weapons of destruction. During World War I, all of the belligerent nations examined and built such weaponry as the technologies of the aircraft and aircraft carriers, submarines, machine guns, poison gas, and tanks all made their way onto the battlefield. Both the Allies and the Central Powers designed, built, and experimented with various high-technology weapons systems in order to bring about the war's conclusion. But developing new technology was not enough; it also had to be understood, adopted, and incorporated into strategic and operational thinking. Thus, the beginning of World War I in 1914 looked a lot more like nineteenth-century warfare than what was to actually develop.

By 1918, armies became truly technological. The Germans were the best at incorporating technology into strategic thinking, and they were so feared that the final peace process limited German technological development severely. But the seeds were planted; technological innovation in the interwar period, both civilian and military, continued at a frantic pace. Former military hardware, such as airplanes, was improved for civilian uses. Specific military hardware, such as tanks, submarines, and machine guns, were materially improved, leading to further doctrinal changes. Various militaries experimented with military hardware that promised high-speed massed firepower and total destruction. Overall, the interwar period was characterized by the rapid development of both military hardware and doctrine.

Interestingly, military technology had an enormous influence on the formation of military doctrine. The Germans, who developed new and innovative tanks and airplanes, led in the doctrine of maneuver warfare. Their concept of blitzkrieg (lightning war)—the name developed later—was based on armor and aviation technological successes in interwar experiments and testing. The French, concerned over German technological developments, concentrated on defensive measures such as the Maginot Line. The British worked on naval and defensive technology, making great strides in the development of single-engine fighter-

interceptor aircraft and inventing radio direction and ranging (radar) equipment and then coordinating it into a comprehensive air defense system. In the Pacific, the Japanese focused on high technology to fight at sea and low technology to fight on land; their motivation was complete control over the Greater East Asia Co-Prosperity Sphere. The Italians, who did not have the industrial base, continued to dream of Italian high-technology weapons systems of all types, while in fact they relied on their Axis German partners for almost everything. The Soviets, emerging from the growing pains of Marxism-Leninism combined with Stalin's iron will, suffered from a lack of industry and technological development.

The isolationist Americans were perhaps the most interesting case in the interwar period. The United States had an intense desire to keep out of European—and by extension world—affairs but at the same time became involved nearly everywhere. Up until the Great Depression (beginning in 1929), the United States was one of the world leaders in specific technology, especially the civilian uses for aircraft. By the 1930s economic depression led to a sense of incredible industrial potential but little actual technological or doctrinal evolution. The Americans did not have a strong record in the interwar period, but this can be explained through economics rather than technology.

Military technology was the focus of World War II. German technology ruled the battlefield in the campaigns against Poland, Norway, the Low Countries, and France; the war became an effort to stem the tide of German high-technology weapons systems and the military doctrine that drove them forward. The Battle of Britain (1940) showed the limits of airpower technology and doctrine as well as the power of the defensive and insular capabilities of the English Channel. But in the German invasion of the Soviet Union (1941), the Soviets were left exposed to the speed and maneuverability of the German onslaught. In the Pacific in the closing month of 1941, the United States, the British, and everyone else who faced the Japanese had a frontline account of the new Japanese Imperial Navy's seapower technology and doctrine. The Japanese ran rampant across the Pacific for months

with new hardware and unmatched operational doctrine.

However, by the summer of 1942 in the Pacific at the Battle of Midway, American military technology began to drive the Japanese back. Moreover, by the winter of 1942–1943 on the eastern front the Soviets began to turn the tide against the Germans. The Soviets on land and the British and Americans in the Combined Bomber Offensive over Germany exhibited the two extremes in military technology. The Soviets were a massed low-technology military, relying on the dedication and sacrifice of the Red Army soldiers to counter the weight of the Germans on land. The Western Allies—the British and Americans—relied on high technology in the form of heavy bombers, fighters, and deception to counter the Germans. After the D-Day invasion of the continent, the British and Americans both preferred to expend material rather than manpower. And by the end of the war in Europe, the Allies actively sought out German scientists, engineers, and designers in an effort to improve each of their own postwar military technology capabilities. The Germans were the recognized leaders in a number of technological fields; the Allies competed directly to obtain German manpower and equipment.

In the Pacific war, technology also emerged as the deciding factor. For the Americans, it was a combination of skill and determination as well as effective use of technology and doctrinal development that eventually defeated the Japanese. Not only did U.S. submarines destroy nearly all of the Japanese merchant fleet, but the U.S. Navy eliminated the Imperial Japanese Navy as an effective fighting force. The U.S. Army and U.S. Marine Corps took important island airfields, and the United States, with its two latest technological advances, forced the Japanese surrender. The first was the Boeing B-29 Superfortress, a heavy four-engine bomber and the apex of World War II bomber development; the second was the atomic bomb. The war ended after the United States dropped two atomic bombs on Japan, the defining moments in technological warfare.

The Cold War began with improved military technology including tanks, machine guns, submarines, airplanes, aircraft carriers, and radar. In addition, both superpowers dedicated vast re-

sources to research and development programs in order to maintain and improve technological capabilities. Added to the mix were the new weapons systems developed during World War II. As the superpowers began Cold War posturing, they both fielded jet aircraft, missile technology, and improvements all around. Until 1949 the United States had a monopoly on atomic power and was very surprised when the Soviets tested their first atomic device. The Cold War was characterized by races for high-technology systems, including the Space Race, the Bomber Gap, and later the Missile Gap. Technology in turn influenced military doctrine and national policy with the policy of containment, atomic diplomacy, and the concept of mutually assured destruction.

Military technology is a constantly evolving field. In peacetime, military technology, like other technologies, evolves at a steady pace with few historical revolutions. However, during wartime, military technology advances rapidly. But with all technologies, the benefit is in its intelligent use within a system. With military technology there are many improvements; however, the most successful military technologies are the ones incorporated for use on the battlefield. The following sections outline some of the most influential military technologies of the twentieth century.

—Sterling Michael Pavelec

Bibliography

- Bull, Stephen. *Encyclopedia of Military Technology and Innovation*. Westport, CT: Greenwood, 2004.
- French, David, and Brian Reed, eds. *The British General Staff, Reform and Innovation, 1890–1939*. Portland, OR: Frank Cass, 2002.
- Goldman, Emily, and Leslie Eliason, eds. *The Diffusion of Military Technology*. Stanford, CA: Stanford University Press, 2003.
- Gudmundsson, Bruce. *Stormtroop Tactics: Innovation in the German Army, 1914–1918*. New York: Praeger, 1995.
- Millett, Allan, and Williamson Murray, eds. *Military Innovation in the Interwar Period*. New York: Cambridge University Press, 1998.
- Van Creveld, Martin. *Technology and War: From 2000 B.C. to the Present*. New York: Free Press, 1991.

Machine Gun

The machine gun on the battlefield was a natural evolution of the effort to increase small-arms firepower. By 1914 the machine gun transformed the Western style of warfare once and for all. Armies adopted machine guns in order to increase the efficiency and effectiveness of the individual combat soldier on the field of battle. Machine guns eventually replaced bolt-action rifles as the premier infantry weapon of choice.

The concept of the machine gun grew out of the desire for mobile firepower. Beginning in the U.S. Civil War (1861–1865) and with continued evolution through the Franco-Prussian War (1870–1871), the machine gun eventually gained a place on the battlefield. The Gatling gun and later the Belgian Mitralleuse (used by the French) began their operational lives as artillery pieces. Initially able to increase firepower on the

battlefield from a cyclic rate of 4 to 6 shots (rounds) per minute (the maximum for a musketeer) to more than 120 rounds per minute (as long as the gun could be fed), the machine gun became a powerful set-piece weapon.

In 1881 an American, Hiram Maxim, invented the first real automatic machine gun. The Maxim gun used the recoil of the shot to unlock the bolt, reload, and fire the weapon automatically. Although it was nearly light enough to be carried by one man, it was primarily used on a carriage for stability. The Maxim gun would fire as long as there was available ammunition and at the unprecedented rate of 500 rounds per minute.

Experiments continued in different settings and against different foes. Even though the British had used license-built Gatlings against the Zulus in southern Africa, the machine gun came of age in World War I. The Hochkiss, Vickers, and Spandau guns of 1914–1918 provided mobile

► MACHINE GUN WARFARE

By World War I the machine gun changed the nature of warfare. Infantry were increasingly capable of inflicting damage on the enemy, and machine guns became more effective and widespread during the war. As cyclic rates increased and crews learned to use their weapons, the machine gun helped facilitate static, defensive warfare, the trench warfare that characterized World War I. However, with technological evolution, the machine gun also became more portable and effective as an individual infantry weapon. Mobility was restored as infantry adopted efficient destructive capabilities. Through World War II and beyond the machine gun (assault rifle) has developed as the ubiquitous infantry weapon of choice, increasing the lethality and efficiency of each individual soldier.

—Sterling Michael Pavelec

World War I U.S. Army Ordnance Department poster shows a worker making a machine gun behind soldiers firing another machine gun. (National Archives)



and relatively light battlefield firepower. Arguably one of the reasons for the stalemate of the western front was the machine gun's abilities to repel continued human-wave attacks such as those seen at Verdun and the Somme. During World War I the cyclic rate increased from 600 to 1,200 rounds per minute. When combined with other wartime technology, such as motorcars, aircraft, and tanks, the machine gun became a powerful and destructive tool. However, the early air-cooled machine guns and the heavier water-cooled machine guns were too bulky for rapid mobility and limited the average foot soldier of the trenches to static warfare. By the end of World War I the Germans had improved the technology in the form of an infantry machine pistol, MP18, a light, mobile infantry machine gun that used pistol rounds.

During the interwar years, development continued on all forms of automatic weapons. Individual automatic weapons such as submachine guns and assault rifles were modified and improved. Submachine guns, smaller and lighter, use pistol rounds, whereas assault rifles were designed to fire rifle cartridges. Assault rifles, on the other hand, combine range and accuracy with a high rate of fire, but the drawback is weight and bulk. Of the lighter weapons, the American-designed Thompson (or Tommy) gun was an excellent submachine gun that fired .45-caliber pistol rounds and came with either 18-, 20-, or 30-round stick magazines or 50- or 100-round drum magazines. Because of their reliability and low cost, these weapons became the favorite of Prohibition era gangsters in the United States.

During the interwar years as well, both light and heavy machine guns were made lighter and more reliable. The Browning Automatic Rifle (BAR) was the American example of an individual combat infantryman's assault rifle. Firing .30-caliber rifle cartridges from a 20-round magazine, the BAR offered the firepower of an automatic weapon with the accuracy of a rifle. The premier U.S. heavy machine gun was the Browning M2 .50-caliber heavy machine gun. This belt-fed, air-cooled weapon could be transported by a two- or three-man crew but was found most often on vehicles and in fortified positions. Further developments included improved machine

guns and machine cannons (by definition with a caliber over 20 mm or 0.8 inch) for use in ships, tanks, and planes.

By World War II the machine gun had come of age. All of the belligerents had developed machine guns for every tactical level. Individual infantrymen used machine pistols and submachine guns for high volumes of firepower and mobility on the battlefields of the world. Combat units and vehicles used combinations of light and heavy machine guns for both offense and defense. In the air, machine guns and machine cannons were adapted for both protection and destruction. With increased mobility and new technological innovations for maneuvering, dynamic warfare was restored in World War II with increased firepower added to the battlefield. During the war, almost all modern militaries switched from bolt-action and semiautomatic weapons in favor of automatic weapons at the individual tactical level, a trend that continued throughout the world in the immediate postwar period.

Following World War II the evolution of weaponry continued, with the machine gun becoming the premier infantry combat weapon, used extensively on every battlefield. Millions of individual soldiers' machine guns were constructed by the superpowers to arm their militaries and those of friendly nations. Increasing efforts were devoted to the development of light and heavy infantry arms, while improvements also continued on machine guns and cannons for use in vehicles. In the case of both portable and mounted machine guns, the emphasis was and continues to be on high volumes of fire, from infantry machine guns that fire at 600 rounds per minute to the U.S. M61A1 Vulcan 20-mm aerial cannon at 6,600 rounds per minute. In addition, designers continue to increase relative accuracy, range, and portability.

—Sterling Michael Pavelec

Bibliography

- Armstrong, David. *Bullets and Bureaucrats: The Machine Gun and the US Army, 1861-1916*. Westport, CT: Greenwood, 1982.
- Crutchley, C. E., ed. *Machine Gunner, 1914-1918: Personal Experiences of the Machine Gun Corps*. London: Bailey Brothers and Swinfen, 1975.

Ellis, John. *The Social History of the Machine Gun*. New York: Pantheon, 1972.

Smith, Anthony. *Machine Gun: The Story of the Men and the Weapon That Changed the Face of War*. New York: St. Martin's, 2003.

The Submarine

Since the seventeenth century, attempts have been made at the design and construction of submersibles, but it was not until the technological advancements became available in the nineteenth century that the first modern submarine prototypes were constructed that could maneuver underwater by their own power.

The first documented submarine was the American *Turtle*, designed by David Bushnell, that was used in an aborted attempt to sink the British ship HMS *Eagle* in New York Harbor in September 1776. As the century progressed this technology was revisited, and submarines were developed in both the United States and Europe. By the time of the U.S. Civil War (1861–1865), both the Union and the Confederacy had submarines of their own. The Union *Alligator* became the U.S. Navy's first submarine, but it was lost in a storm in 1863. The Confederate submarines gained a much more lasting reputation during the war, with CSS *Hunley* being the first submarine used to destroy another vessel when it sank USS *Housatonic* on February 17, 1864. Unfortunately for the Confederacy, their most famous submarine was lost with all hands aboard almost immediately after the action, most likely due to damage sustained in the attack.

One of the main issues with early submarines was propulsion. The question became how to power the submarine and provide breathable air for the crew and still allow for underwater action. One answer was the use of compressed gas, and another was a peroxide-powered engine. But experiments continued with electric and gasoline-powered submarines throughout the late nineteenth century. One inventor, John Philip Holland, an Irishman, made use of a gasoline–electric hybrid engine that proved successful. Holland's improvements led to contracts for his ships from around the world.

By 1914 the majority of military submarines were powered by a diesel-electric hybrid engine.

While navigating on the surface the submarine would use the aspirated diesel engine, and while underwater it would use the electric motors.

World War I introduced the world to the submarine's role in commercial warfare. The British instituted the distant naval blockade, and the Germans responded with unrestricted submarine warfare. The first "Battle of the Atlantic" was under way. The German Type III *Unterseeboot*, commonly referred to as U-boats, searched the North Atlantic for enemy ships to destroy. On May 7, 1915, in one of the most spectacular attacks, the German U-boat *U-20* torpedoed and sank RMS *Lusitania*, killing more than 1,000 passengers including a number of Americans. This event was one in a series that would eventually lead to American involvement in World War I. But even though the submarine did not play a decisive role in war, its potential uses were greatly feared. As a consequence, at the conclusion of World War I the Germans were denied submarines in the Treaty of Versailles.

During the interwar years, the potential of submarines was investigated by almost all of the world powers. Germany, in secret, continued experimenting with submarine development, while the Americans, British, French, Italians, and Japanese began to develop their own submarine fleets.

Interestingly, there was little qualitative difference between the submarines of World War I and those of World War II. In the latter, the submarines were bigger, carried more men and arms, and were faster with longer range, but the engines were still diesel-electric. The Germans had advanced to the Type VII U-boat, the most ubiquitous submarine of the war, while also fielding the highest number of submarines during the war. The Germans were determined to strangle Britain from the sea, especially after the capture of Norwegian ports in the spring of 1940 and French ports later that year.

The commerce war that became known as the Battle of the Atlantic was waged between the German submarine Wolfpacks and the Allied navies and merchant marines. Lessons from World War I were quickly readopted, as shipping was organized into convoys, guarded by the British Royal Navy, the Royal Canadian Navy, and later the U.S. Navy.

Technical evolution continued throughout the war as antisubmarine warfare (ASW) was perfected. From sonar and high-frequency/direction-finding (HF/DF) to the actual weapons used to destroy the submarines, the Allied response to the German U-boat threat was intense. At the height of the German U-boat activity, the Germans sank as much as 5 percent of the total Allied shipping, enough for British prime minister Winston Churchill to comment that the U-boat threat was the only thing that might prevent the Allied victory. During World War II the Germans improved their submarines, adding equipment such as the snorkel that allowed the diesel engines to “breathe” while the submarine operated underwater, thus increasing its submerged speed. By the end of the war (1945) the Germans were introducing the Type XXI U-boat, a new streamlined design with new engines and more power. The *Elektroboot*, as it became known, could travel as fast submerged for short periods as it could on the surface.

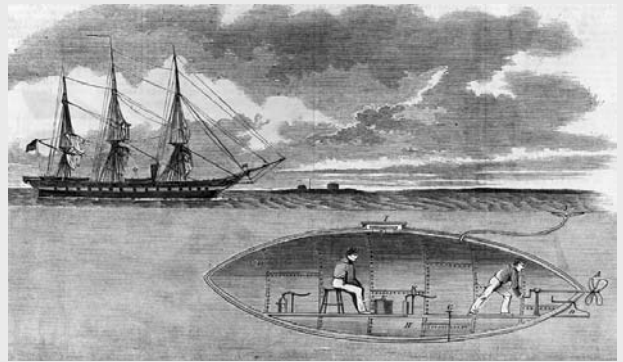
In the Pacific, the battle was between the vast fleets of the U.S. Navy and the Imperial Japanese Navy. At the beginning of the war the Japanese had better torpedoes, and their Type 93 Long Lance torpedo was considered to be the best in the world at the time. The Japanese had interesting submarine types, including the largest of the war, the I-400 class that could carry aircraft in a special hangar deck. Although Japanese submarines did sink ships, specifically the I-168 and USS *Yorktown* (CV-5) after Midway, the Japanese submarines were not part of the overall Japanese war strategy and were poorly utilized.

The Americans, on the other hand, were aggressive in the Pacific in their use of submarines to target Japanese merchant shipping as well as military targets. The American submarine fleet was responsible for the destruction of 5 million tons of Japanese shipping, about 60 percent of the total tonnage sunk during the war.

During the two world wars of the twentieth century, submarines evolved and earned a central place in naval strategy. The ability to approach and attack by stealth and to destroy merchant and military shipping will continue to be a critical maritime concern.

—Sterling Michael Pavelec

➤ EARLY SUBMERSIBLES



Harper's Weekly illustration of a Confederate submarine intended to sink the Union frigate USS *Minnesota*, published in 1861. (Library of Congress)

The earliest submersibles were wooden-construction human-powered antishipping vessels that were both delicate and dangerous. However, they did present a new era of naval warfare that promised stealth, deception, and destruction. Naval theorists had to reconsider their ideas with the introduction of naval warfare in three dimensions.

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Bibliography

- Blair, Clay. *Hitler's U-Boat War: The Hunters, 1939–1942*, Vol. 1. New York: Modern Library, 2000.
- Blair, Clay. *Hitler's U-Boat War: The Hunted, 1943–1945*, Vol. 2. New York: Random House, 1996.
- Blair, Clay. *Silent Victory: The U.S. Submarine War against Japan*. Annapolis, MD: Naval Institute Press, 2001.
- Gunton, Michael. *Submarines at War: A History of Undersea Warfare from the American Revolution to the Cold War*. New York: Carroll and Graf, 2003.
- Hutchinson, Robert. *Jane's Submarines: War beneath the Waves from 1776 to the Present Day*. New York: Collins, 2002.

Aircraft in War

Humans have always had an affinity for flight. From the ancient tale of the winged flight of Daedalus and Icarus to today, flight has captured our imagination. Balloons lifted the Montgolfier

COLONEL WILLIAM MITCHELL



Billy Mitchell, commander of the U.S. Air Force in World War I. (Library of Congress)

An early U.S. advocate of airpower and a very controversial figure, Billy Mitchell remains one of the most influential airpower theorists. With an early interest in flight, Mitchell became the commander of the American air component in World War I. His dedication to and passion for airpower led to conflicts with superiors in both the U.S. Army and the U.S. Navy. He angered the navy with bombing trials of capital ships in the 1920s and alienated his superiors with his open criticism of the way the air services were being handled after airship disasters. Mitchell was court-martialed for his insubordination. He resigned from the army and continued to prophesy airpower until his death in 1936.

—Sterling Michael Pavelec

brothers as early as 1783, and dirigibles were in use in Europe in the late 1800s. Heavier-than-air experiments were widespread by 1900 with Otto Lillienthal's gliders and the Wright brothers' powered airplane. From the earliest days of ballooning and dirigibles to the advent of

heavier-than-air flight, an interest in the military application of this technology also endured.

After their first flight in 1903, the Wright brothers exclaimed that the invention of the airplane made all further wars obsolete. However, contrary to the Wrights' predictions, aircraft technology was immediately adopted for war-time use. By the outbreak of World War I, aircraft had been employed in a variety of contexts: they had been used in exhibitions to prove their value, they had been used in military reconnaissance, and they had dropped bombs and scared locals. But with the outbreak of war in 1914, no one had a clear conception of how airplanes would be used against other airplanes.

Chivalry in the sky was a myth that grew out of World War I. The truth lay closer to the fact that early airplanes lacked armaments, were severely underpowered, and were not very maneuverable. Thus, at the beginning of the war, pilots were content to let others pass with a wave. But the chivalry of the sky was quickly shattered as pilots sought to deny enemy aerial action. The first use of planes in war was for observation, usually for artillery spotting, while the second use was to block enemy observation. The first aerial combat was quite ineffective, but with the German development of the synchronizer gear, which allowed a machine gun to shoot through the propeller arc along the axis of the plane, the fighter was born. Fighter aircraft were developed to shoot down enemy observers. The Germans started the trend in 1915, and the British and French copied it very quickly. By the summer of 1915, the fighter plane—and the mystique surrounding the fighter pilot—had become a reality. Throughout the war, each side sought to outdo the other with increasingly sophisticated aerial technology. This race culminated in 1918 with a diversity of aircraft, including heavy bombers, fast fighters, close-support aircraft, and transport aircraft. By the end of the war, the aircraft was seen as such an invaluable tool of war that the Germans, in the Treaty of Versailles, were denied military aviation in perpetuity.

The interwar period ushered in an era of both theoretical and technological development. The Italian Giulio Douhet, followed by the American Billy Mitchell and the Briton Hugh Trenchard, became the prophets of airpower. Each preached

the importance of the airplane as an unstoppable platform for future warfare. In their countries, the focus was on the development of large bomber fleets to project power over enemy airspace if the need ever arose. Facing technological constraints, the German military turned its attention to developing aircraft designed for a supportive role of short-range tactical bombing. The Germans focused their efforts on short-range close-air support aircraft. The Japanese, requiring long-range power projection for campaigns, considered naval aviation a key. They built long-range fighters and bombers that could be employed from aircraft carriers. The British, French, and Italians were dedicated to long-range bombing, but this proved to be harder to develop than predicted; all had ongoing problems with the development of bomber fleets. The French were resistant to all but a small amount of military spending, and the British were more successful in developing defensive fighter aircraft. Only the Americans, who dealt with the vast expanses of North America on a regular basis, envisioned the technological issues involved in the development of long-range transports, that is, large multiengine aircraft initially suited for carrying passengers, mail, and goods; this technology was later adopted for excellent American bomber designs.

Technological developments in the interwar period increased the effectiveness of aircraft as tools of war. Bombers were developed to fly higher, faster, and farther and with more bombs than could have been imagined. Fighters retracted their undercarriage into the wings, increased firepower, and set escalating speed records up to the outbreak of World War II. Transports carried greater quantities of goods farther to support troops.

In the Pacific theater, the Japanese ravaged the Chinese with airpower and forced them to turn to the Americans for assistance. The American Volunteer Group (AVG, better known as the Flying Tigers) gained valuable tactical experience engaging Japanese aircraft in the Pacific. The Japanese attack on Pearl Harbor, Hawaii, in December 1941 proved the viability of naval aviation to the entire world.

In Europe, the Germans had perfected the coordination between land and air as they swept across Poland, the Low Countries, and France

in 1939 and 1940. Tactical airpower became the hallmark of German operations, earning the moniker blitzkrieg (lightning war). When the war opened on a wider scale, the aerial component became increasingly important. The Germans could not run an army across the English Channel and had to rely on airpower to defeat England. The Luftwaffe failed, and Britain survived. The Germans used tactical airpower against the Soviet Union but had no long-range bombers for the eastern front.

The Americans and the British responded in Europe with the Combined Bomber Offensive, the Americans bombing Germany during the day while the British took over bombing operations by night. Strategic bombing evolved quickly during World War II, and although it did not live up to the prophesies of the theorists, it was vital in the defeat of Germany.

Interestingly, it was the Germans who had the most technologically advanced aircraft of the war. The Germans were able to field combat-operational jets, rocket planes, and missiles during the war; none of these, however, proved to be Hitler's war-winning weapons. The Germans were simply overwhelmed by Allied industrial output.

In the Pacific, tactical airpower became strategic airpower in the Battle of Coral Sea and the Battle of Midway. Until the Americans had airfields in the Pacific, they relied on naval aircraft and aircraft carriers for the air component in the Pacific war. But with the capture of the Marianas, Iwo Jima, and Okinawa, the Americans were poised to use strategic bombing against the home islands of Japan. Beginning with the firebombing raids against Tokyo and other cities, the ultimate example of strategic bombing came in August 1945 when atomic bombs were dropped on Hiroshima and Nagasaki, leading to the end of the war in the Pacific.

Following World War II, the airplane once again turned to peaceful roles. After the war, developments continued to increase speed, range, and altitude, and the introduction of the gas turbine engine—better known as the jet—led to a revolution in aircraft design and use. Following the war, there was a resurgence of passenger and transport aircraft design that corresponded to public interest in flight and travel.

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Bibliography

- Boyne, Walter. *Influence of Airpower upon History*. Gretna, LA: Pelican, 2003.
- Higham, Robin. *100 Years of Airpower and Aviation*. College Station: Texas A&M University Press, 2003.
- Mellinger, Phillip. *The Paths of Heaven: The Evolution of Airpower Theory*. Maxwell AFB, AL: Air University Press, 1997.
- Sherry, Michael. *The Rise of American Airpower: The Creation of Armageddon*. New Haven, CT: Yale University Press, 1989.

Poison Gas

During the Second Industrial Revolution of the late nineteenth century, industrial chemistry came of age, and one result was the deployment of poison gas in World War I. After the initial war of maneuver, by 1915 the trench positions of the western front settled into stalemate. Mass human-wave attacks proved to be futile, and new offensive tactics were introduced to the battlefield. One of these was gas warfare.

Chemical warfare was initially envisioned as a nonlethal measure to instill panic in the enemy in the initial phases of an attack. The chemical agents in the earliest gas warfare were projected at the enemy in order to soften up the opposing trenches and create an offensive advantage. The French were the first to use chemical warfare against the Germans in August 1914 although in somewhat negligible quantities. The Germans reciprocated later that year and continued to develop plans and tactics to use chemical weapons effectively.

The Germans, who in 1915 were the first to use gas in large amounts and with tactical considerations in mind, sought to disrupt the Allied lines and gain favorable positions. The first asphyxiant, Chlorine, was intended to cause panic and flight in the enemy trenches and therefore make them easier to overtake. However, as with most chemical agents used in the war, Chlorine was fatal in concentration. The Germans delivered their first tactical gas attacks with artillery shells against the Russians in January 1915, but cold weather made the attack a failure. When the British were attacked near Ypres in April of

that year, the Chlorine gas was brought to the front in canisters; the Germans released the gas by opening the valves and allowing the wind to carry it to the British trenches. Unfortunately for the Germans, prevailing winds in northwestern Europe blow toward Germany, and they had to reconsider the method of delivery. Although the gas attacks at Ypres caused widespread panic and death, the Germans were unable to capitalize on the chaos.

As the war progressed, new chemical agents were used and new delivery methods were adopted. Gas was successfully released from artillery shells so that by the end of the war, one in four artillery shells contained chemical agents. There was even a rudimentary code developed for artillery shells that contained chemical agents; they were painted with crosses based on their contents. The German cross code indicated the effect of the chemical contained and sometimes the actual chemical. White crosses referred to chemicals that affected eyes and moist tissues, blue crosses were upper respiratory tract agents, green crosses indicated lung agents, and yellow crosses were marked on artillery shells that contained chemicals designed to affect the skin and exposed surfaces.

The chemicals came in varying types. The least lethal were the tearing agents, or Lachrymators, that are comparable to modern-day tear gasses. The most common of these were the Bromide family of tear gasses, including the easily produced Xylol Bromide. The next class was the Asphyxiants, or poisonous gasses, like Chlorine and Phosgene. These gasses were fatal in concentration; the latter was twice as effective as the former. These gasses attacked the lungs and eyes, causing severe edema and a painful death. The most infamous chemical agent of the Great War was the blistering agent Dichlorethylsulphide, more commonly known as Mustard gas. The chemical attacked moist skin on the inside and outside of the body and caused large painful blisters wherever it came into contact. It was nearly impossible to protect the entire body from this method of chemical attack, and there were severe casualties due to Mustard gas attacks. As well, this gas was very persistent and remained in low areas for extended periods. Sol-

diers frequently entered areas where Mustard gas remained days after the initial attacks.

The countermeasures to chemical warfare were as interesting as the development of the offensive weapon. As new chemical agents were introduced, new masks and filters were employed to decrease the effectiveness of the gas attack. By the end of the war there were gas masks for men and animals and effective counters to almost all of the offensive chemical agents.

The casualties from chemical agents in World War I were not insignificant; 3 percent of the total killed in the war were from gas (about 300,000 men). The fear of a gas attack and subsequent debilitation as well as the aftereffect of chemical warfare on those who survived was decisive. An unimportant German corporal named Adolf Hitler felt the effects of chemical warfare in the trenches of World War I; although the event was in and of itself insignificant, Hitler's future rise to power influenced the development of chemical weapons in Germany and the Nazis' decision not to turn to chemical weapons for battles. Furthermore, in the aftermath of World War I, chemical warfare was banned during the Third Geneva Convention in 1925.

However, the chemical innovations continued. Again, the Germans led the field with continued research and development in chemistry. During the interwar years populations grew increasingly anxious about future gas warfare, and civil drills included gas masks and shelters. Chemical warfare was used effectively in other theaters of war when the Italians employed gas in Ethiopia and the Japanese gassed Chinese civilians and military in their advance into China in 1941.

The Germans, who began World War II in Europe in 1939, did not use chemical warfare in battle, perhaps because of Hitler's reluctance or perhaps because of concerns over Allied retaliation. But the Germans, and the Nazis specifically, did employ chemical agents in the prosecution of the Final Solution of the Jews in Europe. Building on developments in nerve agents in the interwar period and throughout the war, including Tabun, Sarin, and Soman, the Germans used a hydrogen cyanide derivative, named Zyklon-B, in the extermination camps, including the infamous Auschwitz.

➤ ZYKLON-B

Zyklon-B was originally developed as a delousing agent and was mass-produced by a subsidiary of the German chemical company IG Farben. While its use as a pesticide was widespread both before and during World War II, Zyklon-B would soon take on a far more sinister role. Finding firing squads and hangings to be ineffective execution methods, the Nazis began to construct permanent gas chambers in concentration camps. It was discovered that a single tin of Zyklon-B could kill 250 people in as little as half an hour. This made the mass killings in the Nazi concentration camps possible. One of its earliest documented uses was in September 1941 at the Auschwitz concentration camp in Poland, where 600 Russian POWs and 300 Jews were gassed using Zyklon-B.

Bibliography

Blamires P., Cyprian, and Paul Jackson. *World Fascism*. Santa Barbara, CA: ABC-CLIO, 2006, Entry 1751, <http://historyreferencelibrary.abc-clio.com/?9781576079416&1751>.

Thus, after the horrors of chemical warfare in World War I, the use of chemical agents on the battlefield was for the most part avoided in World War II. However, chemicals were still used to deadly effectiveness in the Nazi concentration camps as well as by the expansionist Japanese. One of the continuing fears throughout military history, which haunts militaries to this day, is the looming specter of chemical warfare on the battlefield or against civilian targets.

—*Sterling Michael Pavelec*

Bibliography

- Coleman, Kim. *A History of Chemical Warfare*. New York: Palgrave Macmillan, 2005.
- Heller, Charles. *Chemical Warfare in World War I: The American Experience, 1917-1918*. Honolulu: University Press of the Pacific, 2005.
- Palazzo, Albert. *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I*. Lincoln: University of Nebraska Press, 2002.
- Richter, Donald. *Chemical Soldiers: British Gas Warfare in World War I*. Lawrence: University of Kansas Press, 1992.

Tanks

The addition of the armored vehicle to the military during World War I forever changed the nature of warfare. Building upon the invention of the internal combustion engine as well as new metallurgical and industrial capabilities, the development of a new mobile artillery piece, the tank as it became more commonly known, changed the depth, speed, and tactical fundamentals of war.

Beginning with motorcars and drawing on the need for speed, mobility, and protection on the battlefield, the tank was a natural evolution from the concept of cavalry. At the beginning of World War I mounted cavalry had been marginalized by the stalemate of trench warfare. In an effort to regain mobility, automobiles—with mounted machine guns—were employed as scouts and to harass the enemy. But with little protection and few roads, contemporary cars were ineffective. In response to these limitations, designers substituted caterpillar treads for wheels and created a bullet-proof vehicle that could cross uneven and often muddy ground. These were the first tanks.

The British introduced the tank to the western front in 1916. The Battle of the Somme had become a quagmire, and the new invention was brought to aid the British forces. The brainchild of the Landship Committee (1915), the first British Mark I tanks were rhomboid in shape and thus theoretically better able to cross trenches. They were armed with a six-pound gun on each side but were notoriously slow and unreliable. Their slow speed (three to four miles per hour, or five to six kilometers per hour) made them vulnerable to enemy artillery, and the unreliability of the engines caused frequent breakdowns. The crew compartment was also the engine compartment; the temperature could reach 122°F (50°C) and overheat the crew as well as the engine. Added to this was the fact that there was no clear strategy or use for the new tanks on the battlefield. Theorists alternately saw the tank as the first wave to lead the infantry; others thought that the tank would best survive as an infantry-support vehicle.

After initial failures, tanks became increasingly important to British tactics, eventually

playing a central role at Cambrai in 1917. The British and French were the only ones to put substantial research, development, and industrial capacity into tank development, although they still were unable to turn the tide of battle in World War I. However, the tank was destined to become one of the most influential and most easily recognizable of military technologies.

During the interwar period the evolution of the armored fighting vehicle continued, with improvements in both the technology and strategy. The tank was eventually recognized as an important military machine, and its usefulness on the battlefield was secured. The major militaries of the world implemented tank production and procurement as a central theme in their militaries. As a result, the use of tanks in warfare became a heated discussion in military circles. Theorists argued whether the tank should be treated as an independent actor or as an integrated part of an organized whole.

The Germans, arguably the best at incorporating the tank into operational strategy, organized their land forces around them. As an integral part of army strategy, the tank became the mechanized spearhead in the doctrine of blitzkrieg, or lightning warfare. Lightning warfare was characterized by fast-moving tanks, cooperating with aircraft, as the highly maneuverable first line of attack. The German Mk IIIs and IVs at the start of the war were followed closely by infantry to clean up the attack. This method of warfare worked spectacularly well against the Poles in 1939, against the Low Countries and France in 1940, and in the deserts of northern Africa into 1942. Lightning warfare was less successful in the wide expanses of the Soviet Union in 1941 and faltered as a defensive strategy in the last years of the war. The Germans boasted the best tank technology, culminating in the Panthers and Tigers. But in the end, as in a number of cases with German technology, German production was not up to the task of a two-front war, and after June 1944 the Germans were simply out-produced by the Allies.

Both the Americans and Soviets built tanks that were good enough and in great enough quantities to defeat the Germans. The Soviet main battle tank (MBT) was the ubiquitous T-34.

The Soviet tank, designed around an American chassis, became the mainstay of the Red Army's armor effort. Originally armed with a 76-millimeter (mm) gun, it was eventually upgraded to an 85-mm gun in the T-34/85. Overall, the Soviets produced over 55,000 T-34s of all types during the war. The Americans also had a standard model, the M4 Sherman tank. With a 75-mm gun, it was a good counter to the German tanks and overwhelmed German production in the war in the west after D-Day. The United States produced over 55,000 Sherman tanks during the war for use by all of the Western Allies as well as the Soviets.

In the Pacific theater the Japanese used light tanks for maneuverability, and the Americans countered with more Sherman tanks in the constant struggle over strategic islands. However, the Pacific War was characterized more by ships, amphibious-assault vehicles, and aircraft attacks than by armored assaults.

The evolution of the tank through World War II also coincided with doctrinal development. The change from the World War I idea of the tank as an infantry-support vehicle to the World War II concept of the tank as an independent tactical weapon moving in teams encompassed the range and evolution of tank doctrines. The Germans thought of tanks as separate from the infantry but relied on them in coordination with other weapons systems such as the airplane, thus creating the first fully developed idea of combined arms. The United States took the equation one step further with the incorporation of infantry.

Tank development has continued apace with military history. As with other technologies, the tank has undergone constant improvement in armor, armament, speed, range, mobility, efficiency, and lethality. However, the current doctrine on the use of tanks still follows most of the premises that were worked out on the battlefields of World War II.

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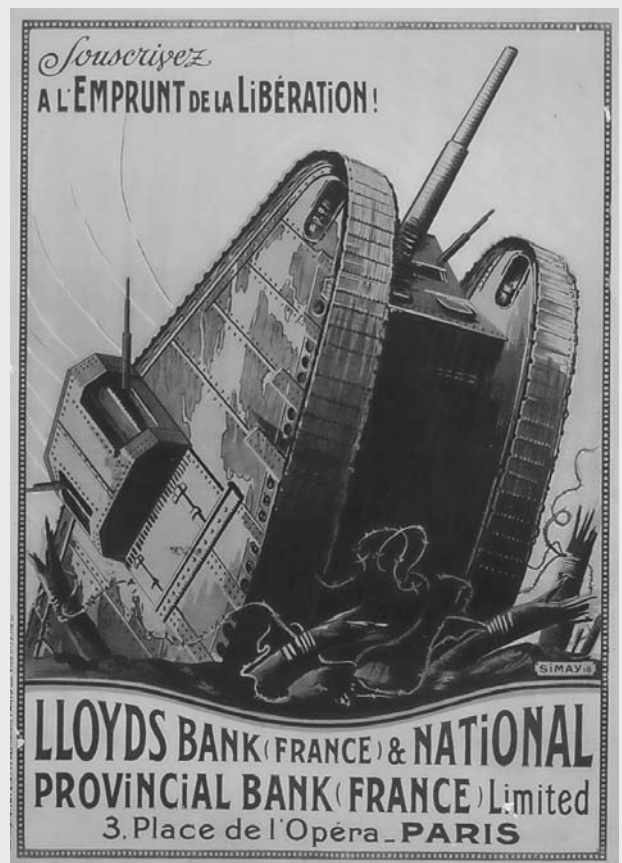
Bibliography

Cooper, Belton. *Death Traps: The Survival of an American Armored Division in World War II*. New York: Presidio, 2002.

➤ TECHNOLOGY AS WAR PROPAGANDA

By 1916, the English and French employed tanks on the battlefield. By 1917, they became a symbol for military might and technological superiority. They quickly became a powerful propaganda tool that signified both material superiority as well as an ongoing request for public funds—in the form of war bonds—for the continuing crisis. In World War I, military technology became a tool to raise money from the home front.

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(Library of Congress)

Fletcher, David. *Tanks and Trenches: First Hand Accounts of Tank Warfare in the First World War*. Stroud, UK: Sutton, 1996.

Wright, Patrick. *Tank: The Progress of a Monstrous War Machine*. New York: Viking, 2002.

Radio Direction and Ranging (RADAR)

During the interwar years, the idea that “the bomber will always get through” was a fear for citizens in most European countries. Still reeling from the carnage of World War I, there was widespread interest in keeping airspace safe, and as a consequence Europeans worked toward the development of technology that would counter the threat of enemy aerial attacks.

Giulio Douhet, the Italian air theorist, argued as early as 1922 that the heavy bomber was the tool of future warfare. He surmised that with an armada of 500 heavy bombers raining gas and high explosives from the sky, entire cities and countries could be subdued in a matter of hours instead of years. His theory was that four-engine bombers were an unstoppable first-strike weapon designed to overwhelm and destroy enemy morale in the opening phases of any future war. If used effectively, a large group of bombers could destroy an entire city—preferably a capital—and convince a population to surrender. Furthermore, he argued that a heavy bomber fleet could also become an effective deterrent to prevent wars from breaking out.

Other interwar theorists supported and often plagiarized Douhet’s theories. American Billy Mitchell of the U.S. Army Air Corps showed Douhet’s theories in action with bomber experiments in the 1920s. He used planes to sink captured German World War I ships in an effective show of airpower. In England Hugh Trenchard,

chief of the Air Staff for the Royal Air Force, also thought along the same lines. The consensus was that heavy four-engine bombers were the important technological component that would guarantee future airpower and aerial supremacy; there was simply no counter to them.

Technically, the theory was correct. In the interwar period the existing bombers were as fast as fighters and were also more sturdy and had better flight characteristics. Antiaircraft artillery was still in its infancy. The bomber could actually get through. But technological breakthroughs soon overcame the power of the bomber in theory and in practice.

Building on the early discoveries in electromagnetic theory and the more recent work on radio waves, a number of effective radar systems were developed by 1935. Although there were a number of countries working on the technology, the British have been credited with the first successful integrated radar system.

In an effort to create a death ray, that is, a radio transmission that might physically disturb a pilot or an aircraft’s mechanical operation, the British inadvertently created radar. The British found that aircraft were interfering with radio waves and began to investigate. H. E. Wimperis, the director of research at the Air Ministry, appointed Henry Tizard to be the chair of the Committee for the Scientific Study of Air Defense. Although the committee, in coordination with Robert Watson-Watt, concluded that radio waves could not be used as an offensive weapon, it did determine that there were possibilities for defensive uses. A demonstration was held in 1935 whereby an aircraft was detected before it could be seen or heard. Radar was born. Its workings were simple: radio waves were transmitted and then bounced off aircraft and clouds, and the return signal was represented visually on a cathode ray tube (also used in early television screens).

The British moved forward with the development of the new technology as an integrated system. By the start of World War II, the British had a dedicated air defense system that coordinated two radar systems, Chain Home High and Chain Home Low; a central command system called Fighter Command; and excellent interceptor fighter planes. During 1940 the British proved that the systems were effective against aerial

➤ RADAR DURING WORLD WAR II

In the 1930s many nations experimented with radar. By the outbreak of war in Europe in 1939, both the Germans and the British had sophisticated radar systems. The major difference was that the British integrated their systems as an entire defensive package of early warning, signals, and airfields; the Germans did not. Thus, even though the Germans possessed excellent radar systems, they did not use them as effectively as the British.

—Sterling Michael Pavelec

bombers when the British Royal Air Force successfully defended the home islands against the German Luftwaffe (Air Force).

Although the Germans also had highly technical radar, their radar was not part of an integrated system and was therefore poorly coordinated. The Germans preferred to use their radar for tactical rather than strategic operations, with radar sets at the squadron level. Thus, the effort was wasted because the system was not part of air defense strategy. Some of the most recognized German radars included the Freya (1938) and Wützburg (1940).

Throughout the war, the development of radar continued. The first radar stations were very bulky and heavy and were only suited for land-based use. Over time, however, radar was adapted for shipboard use to find ships at sea as well as for use in aircraft. The aerial combat predicted by Douhet came true in the skies over Europe, and the technological battle continued.

The British were the first to use an effective radar-countermeasure with Window in 1943 on a raid to Hamburg. Window was a collection of millions of aluminum foil strips cut to match the German radar wavelength that were then dropped from the attacking bombers, thus confusing the radar and creating an unreadable pattern on the receiver. The German radar detection of the British was foiled for the night as counter-countermeasures were considered.

Radar was also used in planes for finding targets and other planes. In 1943 the British introduced their H2S target-finding radar, which was designed to find ground targets. Although primitive, it gave the British Bomber Command the ability to bomb at night and during unfavorable weather conditions. One ill-advised British system was Monica, a tail-mounted radar warning system that was designed to let the bomber pilots know if there were German fighters following them. Unfortunately for the British, the Germans were actually capable of locating the bombers by the radar signature of the Monica system.

The German aerial radar systems included the Naxos and Flensburg types. Both used in aircraft and both used predominantly at night (as well as the Naxos U for German submarines), they were designed to locate British bombers.

These radar systems were highly successful in the night battles over Germany.

The reciprocal battle between the Axis and the Allies continued throughout the war as each tried to outperform the other and become more effective in the air war. In the end, Allied technology and production capacity prevailed, as the Germans were simply overwhelmed by Allied industrial output.

Radar development has continued, culminating in weather radar systems as well as radar for aircraft, air traffic control, and sea transport safety and identification.

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Bibliography

- Brown, Lewis. *A Radar History of World War II: Technical and Military Imperatives*. Bristol, UK: Institute of Physics Publishing, 2000.
- Nissen, Jack. *Winning the Radar War: A Memoir*. New York: St. Martin's, 1987.
- Pritchard, David. *The Radar War: Germany's Pioneering Achievement, 1904–45*. New York: HarperCollins, 1989.
- Swords, S. S. *Technical History of the Beginnings of Radar*. London: Institute of Electrical Engineers, 1986.

Aircraft Carriers

The great naval theorists Alfred Thayer Mahan and Sir Julian Corbett prophesied that the battleship was, and would always remain, the dominant form of sea power. Writing before World War I and using historical case studies of the British Royal Navy, there was little contention that they would be correct for the foreseeable future. But by 1910 the advent of new technology would reshape the future of sea power forever. Although the theorists were right on grand strategic levels, the aircraft carrier has supplanted the battleship as the dominant weapon on the sea.

Aircraft were married to oceangoing ships very early in the developmental lifetime of both lighter-than-air and heavier-than-air machines. As early as 1910 Americans were trying to use aircraft at sea with the help of the first aircraft carrying ships. USS *Birmingham* became the first ship to launch a heavier-than-air plane, and



The aircraft carrier USS Yorktown, 1939. (Library of Congress)

an airplane landed on USS *Pennsylvania* in a 1911 experiment. The daring pilot in both attempts was Eugene Ely, a demonstration pilot for the Curtiss Aircraft Company.

In World War I the idea of using aircraft with ships was expanded. The British Royal Navy commissioned seaplane carriers and tenders, which carried the seaplanes, lowered them to the water for flight, and retrieved them for maintenance, repair, and long-distance transport. The seaplane tender HMS *Ark Royal* was one of the ships that the Royal Navy committed to operations in the Gallipoli Campaign in World War I. Similarly, the British were interested in balloon ships, naval vessels that carried tethered observation balloons, and these were also used in the Gallipoli Campaign for artillery spotting from offshore.

It was not until the interwar period that serious development of dedicated aircraft carriers took place. Both the ships and the aircraft evolved to the point where they could be used effectively at sea. One of the early problems with aircraft was that they were simply too fragile and underpowered for use at sea. The development of small, sturdy single-engine aircraft—as well as some twin-engine designs—led to a revolution in naval aviation.

The British were interested in naval aviation but did not foresee a strategic necessity for large fleet aircraft carriers. The main improvements came about in two new sea-power countries, the United States and Japan. In the United States the development of dedicated aircraft carriers and naval aircraft was realized with USS *Langley* (CV-1) and reached full fruition with USS *Yorktown* (CV-5). The United States, while still relying on battleships, decided to dedicate material and resources to the development of aircraft carriers.

The Japanese were interested in expanding their empire and controlling the Pacific and naturally turned to aircraft carriers as the backbone of their fleet. The Imperial Japanese Navy (IJN) was severely restricted by the British and Americans in the 1920s and rather than developing a large battleship fleet instead turned to the power-projection potential of aircraft carriers. In addition to some of the finest ship designs—including the fleet aircraft carriers *Akagi*, *Kaga*, *Soryu*, and *Hiryu* as well as the Shokaku-class *Shokaku* and *Zuikaku*—the Japanese also developed some of the finest naval aircraft of the interwar period: the Mitsubishi A6M Zero fighter and the Nakajima B5n Kate torpedo bomber. Finally, the Japanese made the mixture of technology effective with superior tactical and operational cooperation and the finest torpedo of the upcoming war, the Type 93 Long Lance torpedo.

The imperial Japanese fleet was used effectively in an unprecedented attack on the U.S. military installations on Oahu, Hawaii, including the naval base at Pearl Harbor on December 7, 1941. Using a combination of aircraft—fighters for cover and dive- and torpedo-bombers—naval aircraft launched from six IJN aircraft carriers devastated the U.S. military installations in Hawaii and dragged the United States into World War II. The American Pacific aircraft carriers, the original target of the IJN attacks, were not at Pearl Harbor, which was fortunate for the American war effort. But the destruction of the U.S. Navy's battleship fleet (three sunk, five damaged) forced a new strategic doctrine. The U.S. Navy turned reluctantly to the aircraft carrier as its tool for power projection across the Pacific.

The results were a new kind of naval warfare, fought from a distance, and the eclipse of the battleship as the centerpiece of naval strategy. At the Battle of Coral Sea (May 7–8, 1942) and later the Battle of Midway (June 4–6, 1942), the U.S. Navy and IJN fleets did not come within sight of one another; instead they fought at a distance with aircraft. After Midway, American industrial capacity began to overwhelm the Japanese in the Pacific to the point where the Pacific war, like the European theater, would become a battle of resources. By the end of the Pacific war the Americans simply overwhelmed the Japanese with a combination of naval, man-

power, and technological strengths, but in the midst of war it was the aircraft carrier that emerged as the single most important piece of naval hardware, eclipsing the battleship once and for all.

When USS *Missouri* (BB-63) was decommissioned (retired) for the last time in March 1992, the era of the battleship was over. Used extensively in the Pacific war against Japan, including the Japanese surrender ceremony on September 2, 1945, and even refurbished for the Gulf War (1991), the Mighty Mo has now been converted to a museum and memorial to both the war in the Pacific as well as the legacy of battleships. USS *Missouri* sits next to USS *Arizona* at Pearl Harbor, Hawaii, as symbolic starting and ending points of the U.S. involvement in World War II (1941–1945).

In the modern era, the aircraft carrier has eclipsed the battleship as the most important weapons system in every modern navy. As the definitive example of visual power projection, the U.S. Navy, for one, relies on its aircraft carriers as examples of American naval strength and presence around the world.

—Sterling Michael Pavelec

Bibliography

- Friedman, Norman. *US Aircraft Carriers: An Illustrated Design History*. Annapolis, MD: Naval Institute Press, 1983.
- Hone, Thomas, Norman Friedman, and Mark Mandeles. *American and British Aircraft Carrier Development, 1919–1941*. Annapolis, MD: Naval Institute Press, 1999.
- Polmar, Norman. *Aircraft Carriers: A History of Carrier Aviation and Its Influence on World Events*, Vol. 1, 1909–1945. Dulles, VA: Potomac Books, 2006.
- Robbins, Guy. *The Aircraft Carrier Story, 1908–1945*. London: Cassell, 2001.

Electronic Intelligence

From 1900 to 1945, great advances in electronic intelligence (also known as signal intelligence), from radio transmission to encryption machines, allowed for greater military successes by gaining intelligence of enemy objectives in both world wars. Furthermore, these new technologies al-

lowed for the development of military departments specifically assigned with deciphering encrypted messages through the use of statistics or other forms of quantitative analysis, ultimately leading to the development of computers during World War II.

Prior to the outbreak of World War I, the use of radio transmissions to send military commands was scarcely employed by many of the Great Powers. Nevertheless, interception of such messages became the norm. France and Austria-Hungary both set up radio intercept stations near their borders to listen to their neighbors' exchanges. France had a diplomatic code-breaking station next to its northeast border with Germany, and Austria-Hungary was keen on listening to Italian messages sent during the Italo-Turkish War (1911). However, these efforts did not achieve very much in the development of actual strategy for combat operations.

During World War I, the first state to capitalize on listening to enemy objectives primarily through the interception of radio messages was Germany. Early in the war, tsarist Russian radio messages, sent freely over the airwaves, gave German radio operators, who were initially just listening out of curiosity, key information regarding the whereabouts of their troops, their equipment, and their strategies. This led to the ultimate defeat of Russian forces in East Prussia in the Battle of Tannenburg of 1914. This neutralized the potential of a Russian breakthrough into Germany and instead led to Russian forces being expelled from Germany. For the remainder of the war, Austrian and German cryptographers began deciphering Russian messages almost as soon as the Russian command began encrypting them, thereby positioning their troops at an advantage for all subsequent battles. The Italian defeat at Caporetto in 1917 is partly attributed to Austrian knowledge of Italian objectives and positions. French cryptographers were able to decipher German codes along the western front late in the war, thereby allowing Allied forces to halt German advances. Both sides also became quite adept at the interception of telephone exchanges, leading to knowledge of enemy movements. In one case during a battle along the Somme in 1917, the Germans were able to listen in as a British

► PEARL HARBOR AND PRESIDENT ROOSEVELT— THE DEBATE OVER PRIOR KNOWLEDGE

The release of Robert Stinnett's book *Day of Deceit* (1999), which claimed that President Franklin D. Roosevelt had prior knowledge of the attack on Pearl Harbor and allowed it to occur in order to bring the United States into World War II, triggered a polemic debate among historians. According to Stinnett's theory, Allied military and diplomatic cryptographers had been able to decipher Japanese codes prior to the attack and had warned their respective superiors. With this knowledge at hand, Roosevelt supposedly refused to act and thus allowed the attack to occur, thereby ensuring American support for entry into the war. However, some historians argue that although this knowledge existed, it did not trigger any response primarily due to lack of preparation or inattention to what was deemed by government and military authorities something not very likely to happen. Still others argue that Roosevelt knew that something was bound to happen and that he hoped that it would in order for the United States to enter the war.

—Abraham O. Mendoza

officer commanded an order through the telephone, which led to the deaths of hundreds of British soldiers. The most famous episode of the impact of a decoded message during World War I was the case in which the British deciphered the Zimmermann Telegram, which was a German proposal to Mexico to enter the war on the side of the Axis for which it would receive territories lost to the United States in the Mexican War of 1848.

During the interwar period, the creation of cryptanalytic agencies attached to the respective militaries of all major powers advanced the development of automated cryptology. The United States, the Soviet Union, Germany, France, Japan, and Britain all developed signal-intelligence departments specifically aimed at decrypting the military and diplomatic codes of potential enemies. Automated encryption machines were developed to create highly complex messages that, it was assumed, could only be decoded through codebooks given to cryptologists. The German

Enigma was developed as a machine specifically for the encryption of messages and was first available on the domestic consumer market. All other major powers also created their own ciphering machines but developed them in secret. Both sides had successes in deciphering each other's messages early in World War II. Early in the war, British codes deciphered by German Afrikakorps led to German advances against British forces in North Africa. Once the codes were changed, the British were able to turn things around at El Alamein. German radio interceptions by the B-Dienst (Observation Service) of British naval communications allowed them to know about fleet and convoy movements.

Later in the war, Allied successes outweighed the early achievements of the Axis and played a pivotal role in the eventual defeat of Nazi Germany and Imperial Japan. Japanese codes, which relied on the PURPLE encipher machine, were decoded by U.S. cryptologists, allowing them to learn about the attack on Midway in 1942. This knowledge allowed U.S. naval forces to obliterate Japanese forces and end their potential to close off the western Pacific to the Allies. Decryption also allowed the Allies to attain information shared between the German and the Japanese through the Japanese ambassador in Germany, who relayed information back to Tokyo about German positions, troop formations, and plans on both the eastern front and what was to become the western front in 1944. Both Germany and Japan failed to change their encryption machines in a way that might prevent Allied decryption and thus continued to provide valuable information to their enemies. The availability of the Enigma Code to the Allies also proved invaluable in the British operation codenamed Ultra, which deciphered German military codes and contributed to Allied victories. During this time, Britain's Bletchley Park became the nerve center of electronic intelligence in tandem with U.S. Army and U.S. Navy signal-intelligence agencies.

—Abraham O. Mendoza

Bibliography

- Bauer, Friedrich L. *Decrypted Secrets: Methods and Maxims of Cryptology*. 4th ed. New York: Springer, 2007.
- Kahn, David. *The Codebreakers: The Story of Secret Writing*. Rev ed. New York: Scribner, 1996.

Kahn, David. "Codebreaking in World Wars I and II: The Major Successes and Failures, Their Causes and Effects." *Historical Journal* 23(3) (1980): 617–639.

Electronic Communications

The development of electronic and radio communications technologies between 1900 and 1945 for its use as a means of communicating for commercial and military purposes grew by leaps and bounds in the context of the two world wars. At the turn of the century, radio communication was used in a maritime context for ships to communicate with each other and with land-based stations in Morse code for the purpose of navigation. During World War I, radio communications were used by both the Entente and Central Powers to coordinate plans and exchange diplomatic communiqués. However, these became vulnerable to enemy interception, and encryption became necessary to protect sensitive information. During the interwar period and through World War II, the use of electronic communications to coordinate strategy, intelligence, and troop movements became a prevalent form of military communication by all sides.

At the beginning of the century radio communications was an established technology, albeit with limited practical uses. Innovations made in Europe and the United States in the late nineteenth century by Oliver Lodge, Nikola Tesla, Guglielmo Marconi, Alexander Muirhead, and Alexander Stepanovich Popov made radio a viable technology for communications and commercial broadcasting from its theoretical foundations. However, wireless telegraphy's first practical uses were in maritime communications to ensure contact between ships and land stations. Among its most notable initial maritime uses were by Japanese ships in the Russo-Japanese War (1904–1905) and the *Titanic* disaster (1912), both instances that respectively illustrated the value of electronic communications in military strategy and emergency situations at sea.

During World War I, electronic communications were used on a vaster scale to coordinate strategy and to relay diplomatic messages by

THE BRITISH BROADCASTING CORPORATION— COMMUNICATIONS INFRASTRUCTURE

The British Broadcasting Corporation (BBC) established the BBC Empire Service in 1932 to relay radio broadcasts to outposts of the empire in order to maintain the cohesion of the disparate regions that extended the world over. This allowed the British public media service to relay communications from London to the rest of the British dominions, thereby ensuring the cultural dominion of the English metropole. In 1939 the Empire Service was renamed the BBC Overseas Service. During World War II, the objective of the Overseas Service was as a propaganda tool to inform the civilian populations under Axis occupation of Allied ideological objectives and solidarity with resistance movements. BBC subsidiaries, such as the German Service (1939) and the European Service (1941), were established to fulfill distinct objectives in the propaganda war with the Third Reich. Currently known as the BBC World Service, its objective is in relaying British news across the world in multiple languages, now through newer technologies, and is often a means of addressing audiences, offering an alternative to state-controlled media used to manipulate domestic public opinion.

—Abraham O. Mendoza

both the Entente and Central Powers. However, these messages were vulnerable to enemy interception, and subsequent actions made due to the exposure of such delicate information led to the development of encryption systems. Nonetheless, warfare radically transformed the uses of electronic communications as a means to coordinate logistics, strategy, and intelligence. At war's end, radio communications were accepted as a necessity by military institutions in the West as a means of relaying messages to ships, planes, and mass formations in battle, thereby allowing coordination between forces and altering overall military strategies from techniques inherited from nineteenth-century warfare.

Developments in the interwar period related to electronic communications allowed the interception of enemy aircraft, ships, and submarines. The interwar invention of radar in the

West (the British acronym for *radio detection and ranging*) led to its implementation by the British, amid fears of German aerial bombardment, who used radio waves to identify enemy planes and allow for their interception by the Royal Air Force. Moreover, radio communications allowed for coordinated blitzkrieg attacks by German forces, which rapidly destroyed and overwhelmed enemy forces. World War II was characterized by the greater usage of electronic communications by all belligerents, thus allowing for larger movements of troops and material in two global theaters of operations (Europe and Asia-Pacific). Moreover, it allowed for large-scale coordinated offenses on multiple fronts by the Allied armed forces. Radio stations were such a vital part of a state's communications infrastructures that they became viable targets in World War II as a means of disrupting the integrity of the Axis states and their ability to continue the war effort.

Moreover, during World War II the use of radio as a propaganda tool was used by both sides as a means of affecting enemy morale and assuring domestic public opinion of success. Nazi Germany and fascist Italy had used the radio to propagate their ideological messages to their civilian populations in the interwar period. German minister of propaganda Joseph Goebbels (1897–1945) was keenly aware of the power of radio to maintain ideological solidarity across the Third Reich. During the war the Allies, mostly through the British Broadcasting Corporation (BBC) and Voice of America (VOA), relayed their own ideological message to the people of Nazi-occupied Europe of eventual liberation, while the Germans and Japanese countered with messages of false optimism and coming atrocities if the war was lost. Radio commentators, such as Lord Hee Haw, Axis Sally, and Tokyo Rose, were used by the Axis to counter Allied propaganda throughout the war, further illustrating the use of radio to stir public opinion and morale in the context of total war.

—Abraham O. Mendoza

Bibliography

Gilbert, Felix, and David C. Large. *The End of the European Era: 1890 to the Present*. 5th ed. New York: Norton, 2002.

Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.

Overy, Richard. *Why the Allies Won the War*. New York: Norton, 1997.

Weinberg, Gerhard L. *A World at Arms: A Global History of World War II*. 2nd ed. New York: Cambridge University Press, 2005.

Missile

The missile, in its modern military application, did not come into being until World War II. Prior to the war, the concept that would eventually yield the missile was embodied in what is commonly referred to as the rocket. Prior to the twentieth century rockets saw varied uses, ranging from colorful displays in dynastic China to signal flares and eventually light bombardment weapons by European armies. Advanced programs by combatant nations during World War II would bring into existence the guided missile and alter geopolitical and military history.

At the dawn of the twentieth century, the solid-fueled rocket had reached its technological limit. Rockets were in use by most major Western armies as battlefield signals, illumination flares, incendiary devices, and short-range but somewhat inaccurate bombardment systems that were overshadowed by the more powerful and practical artillery systems of the day. The theoretical and practical work of four men would lay the foundation for the next logical stage of development of what would become the liquid-fueled missile: American Dr. Robert Goddard, Russian schoolteacher Konstantin Tsiolkovsky, and German scientists Hermann Oberth and Werner Von Braun.

A gifted scientist, Robert Goddard spent much of the early part of the twentieth century conducting small-scale rocket experiments. He worked for the U.S. Department of Defense during World War I, primarily on rockets. Goddard launched the world's first liquid-fueled rocket on March 16, 1926, from a farm in Auburn, Massachusetts, based on his theoretical designs and concepts. In addition, he would publish several papers detailing the use of such rockets for space travel. Konstantin Tsiolkovsky's work in

this era was primarily theoretical; however, he developed theories on gyroscopic stabilization, the escape velocities from the earth's gravitational field, the principle of reactive action, and the use of liquid propellants for rockets. His Tsiolkovsky Formula established the relationships among rocket speed, the speed of the gas at exit, and the mass of the rocket and its propellant. This fundamental principle remains basic to contemporary astronautics and essential to missile design. In Germany, Dr. Hermann Oberth published some of his landmark works on rockets in the early 1920s. He too was primarily interested in the uses of such rockets for space travel. The technical papers produced by these men inspired young scientists such as Werner von Braun and led to the creation of the Verein für aumschiffahrt (Society for Space Travel).

The theories and work of these men came together in 1932 when Drs. Oberth and Von Braun were put to work by the German Army's newly formed Rocket Research Group. Their designs would eventually lead to development of the V-1 buzz bomb, the world's first operational cruise missile. The V-1 was essentially a liquid-fueled pulse jet engine attached to a large explosive warhead. It was a ground-to-ground weapon system. Massive infusions of capital by the major combatants during World War II would allow for the development of several other rocket-powered and missile weapons by the end of the war.

After extensive research and development, the German V-1 missile was introduced into combat in June 1944, with an estimated operational range of 150 miles (240 kilometers). Thousands of pulse-jet-powered V-1s were launched against targets in Europe, primarily London. V-1s were slow and inaccurate and could be intercepted or shot down by propeller-driven fighter planes. Working under increasingly difficult conditions as the war progressed, von Braun developed the V-2 missile, the world's first large-scale liquid-propellant rocket vehicle. The V-2 was also the first long-range ballistic missile, the original ancestor of today's large rockets and launch vehicles. Unlike the V-1, the V-2 traveled in a suborbital ballistic trajectory at supersonic speed and therefore could not be shot down with the technology of the times. A true missile,

➤ DR. WERNER VON BRAUN (1912–1977)

Werner von Braun holds a unique place in history for his affiliation with the National Socialist Party of Germany, as the designer of the vengeance weapons that killed hundreds of innocent civilians, and ultimately as a pioneering National Aeronautics and Space Administration (NASA) scientist who made the U.S. moon missions possible. As a child, von Braun grew up fascinated by early science-fiction writers of the day and decided to study calculus and physics in college in hopes of working on space travel research. A brilliant scientist, von Braun earned his doctorate in 1934 at the age of 22, just as Adolf Hitler and the Nazi Party were coming to power in his native Germany. With few options to work in his field, von Braun joined the German Army and was placed in charge of its advanced ballistic missile program. A team of scientists under his direction developed both the V-1 and V-2 missiles that were responsible for reigning destruction on London during World War II. Von Braun even made conceptual designs for a multistage V-2-type missile that theoretically could have been launched on the United States from Germany, but this never went beyond the design stage. Facing defeat, von Braun organized the surrender to the Allies of several key German scientists, along with their technical plans and weapons. The U.S. government, seeing his potential, first put von Braun to work for the U.S. Army designing missiles; however, his abilities soon had him assigned to the NASA. Finally able to work on space travel as he had dreamed of as a child, von Braun and his team designed the massive Saturn V rocket that enabled the United States to defeat the Soviet Union in the Space Race to the moon.

—Christopher Ferraro

the V-2 would be the forerunner of the intercontinental ballistic missile (ICBM) developed soon thereafter during the Cold War.

Nearly simultaneously, the Japanese and Soviets acquired missile technology during World War II and quickly applied it to the battlefield but in very different ways. The Japanese Yokosuka MXY7-K1 Cherry Blossom, a crude liquid-fueled manned kamikaze missile, entered service in 1944. The sole use of the missile was to be flown at high speed in suicide attacks at the U.S. Navy.

On the eastern front, the USSR introduced the BM8 multiple rocket launcher, dubbed “Katyusha” by the German Army for its distinctive sound. This small-scale missile had no internal guidance system and had a short-range capability, and thus it was fired blindly in mass quantities at the enemy. The Soviets used the BM8 and similar systems until war’s end. German scientists also developed the Henschel HS 293 A-1, the world’s first air-to-surface missile. The HS 293 A-1 was essentially a glide-bomb assisted by a liquid-fueled rocket engine. On the infantry level, the Germans also introduced the *Panzerfaust*, or “Iron Fist,” a handheld antitank rocket launcher that made use of solid fuel.

A relative latecomer, the United States attempted to develop a remote-controlled cruise missile, the Lark, to intercept kamikaze attacks; however, this system was still under development when the war ended in 1945. The British were also working on a similar weapon when Japan surrendered.

By 1945, all major combatants had either deployed missile systems or had such systems in development. After the war, the United States and the Soviet Union quickly found themselves engaged in an arms race that would take missile technology to its ultimate conclusion, the moon.

—Christopher Ferraro

Bibliography

- Goddard, Robert. *Rockets*. Mineola, NY: Dover, 2002.
- Hunt, Linda. *Secret Agenda: The United States Government, Nazi Scientists, and Project Paperclip, 1945 to 1990*. New York: St. Martin’s, 1991.
- von Braun, Werner, and Frederick Ira Ordway. *History of Rocketry & Space Travel*. New York: Crowell, 1966.

Atomic Bomb

The ultimate weapon known to mankind was a direct descendant of war, namely World War II. In the most destructive war to date the power of the atom was harnessed and released in the first, and hopefully the last, atomic attacks. In 1945 the world witnessed the devastation wrought by man’s harnessing the power of the atom.

As early as 1905 Albert Einstein predicted the potential results from splitting the atom.

Throughout the 1920s and 1930s nuclear physics advanced to the point where the idea of harnessing the power of the atom was quickly approaching reality. In three countries specifically experiments were conducted that tested the theories of atomic power. The theory predicted that by breaking apart strong atomic bonds, enormous amounts of energy could be produced. In Germany, Britain, and the United States theoreticians and scientists began examining the possibility of atomic power. In Germany the new National Socialist (Nazi) government under Adolf Hitler forced Jewish scientists and professors from their positions in academia and laboratory research, to the detriment of the German atomic program. But to the benefit of the future Allies, their forced exile from Germany and subsequent immigration to Britain and the United States meant that their research and experimentation continued in their new home countries.

As war loomed in Europe, exiled scientists persuaded Einstein, living in the United States, to warn the American president Franklin D. Roosevelt that the Germans were studying atomic theory and that the United States should follow suit. The Germans had the most developed atomic program at the time and also had access to heavy-water sources, fissile materials, and an almost-completed cyclotron. Einstein wrote the infamous letter in August 1939, a month before the opening of the war in Europe, urging that the United States begin an atomic bomb program. Roosevelt immediately ordered further research into the issue with a contract for experimentation.

After the start of the war German advances were virtually unknown, but American experts assumed that the German atomic program continued. In the United States the atomic program, under the aegis of the National Bureau of Standards, began work in two places: at the Naval Research Labs in Washington, D.C., uranium-isotope separation was investigated, while at Columbia University the physicist Enrico Fermi examined reactors.

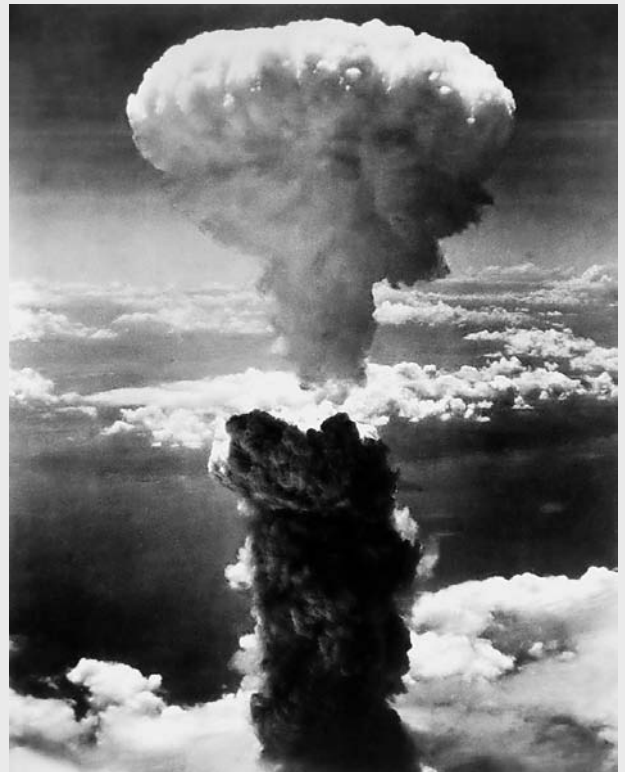
In Britain the Maud Committee was appointed to examine the question of what amount of uranium would be necessary for an atomic bomb. The expected amount was revised from tons to pounds, and the committee determined

➤ MUSHROOM CLOUD

The distinctive mushroom-cloud shape generated by an atomic blast is not actually unique to a nuclear explosion but is simply facilitated by the heat and explosive power of the blast. The shape can be replicated with conventional explosives, but it is a characteristic of this type of explosion. The heat, debris, and explosive force of the initial blast creates the cap of the mushroom cloud, which quickly rises due to the intense heat of the explosion. The quick rise of the cap draws in more air and creates a turbulent effect as the cloud rises, creating the stem of the mushroom. The iconic mushroom cloud is therefore created by the initial explosion and the intense heat that causes it to rise.

—Sterling Michael Pavelec

A dense column of smoke rises more than 60,000 feet into the air over the Japanese port of Nagasaki on August 8, 1945. (National Archives)



that an atomic weapon using uranium was feasible. But in wartime Britain the costs in manpower and money were too high, and the detailed reports were dispatched to the Uranium Committee in the United States.

At first, atom bomb interest in the United States was lax. The United States was not yet at war, and little progress was forthcoming. In August 1941 the British scientist Mark Oliphant traveled to the United States to see what was holding up progress. When he could not persuade Lyman Briggs, the chair of the Uranium Committee, that the project was important, Oliphant contacted his scientist colleagues. Along with the National Academy of Sciences, they persuaded the U.S. administration to fund the project, funding that was dedicated as early as October 1941. Two months later the United States was drawn into the war by Japan.

In Britain a small program, renamed Tube Alloys, was sent to Montreal, Canada, where its researchers could continue their studies. But by

1943 Tube Alloys became a part of the larger American program. In the United States the atomic program began to diverge on two distinct paths. One side of the project was concerned with uranium as the atomic material, while the other examined plutonium for the same purpose. Interestingly, in the end both were successful in developing atomic weapons.

In the summer of 1942 the Army Corps of Engineers colonel Leslie Groves was put in charge of the program to develop the atomic bomb. He named it the Manhattan Project and named J. Robert Oppenheimer as the chief scientist. The program was relocated to Los Alamos, New Mexico, where desolation aided security. The Manhattan Project became America's most closely guarded wartime secret.

By December 1942 Fermi was able to achieve a sustained nuclear chain reaction at the University of Chicago, confirming atomic reactivity. Atomic Materials Production Facilities were erected around the United States for

the development of atomic material, including installations at Oak Ridge, Tennessee (uranium), and the Hanford Site in Washington state (plutonium).

By 1945 the teams at Los Alamos were successful in the creation of three atomic bombs. One was a uranium gun type called Little Boy. The bomb was designed to detonate when an amount of uranium was shot down a tube at another amount of uranium, creating a critical mass for detonation. The uranium used in Little Boy was the isotope uranium 235. The other two bombs, one of which was named Fat Man, were plutonium-implosion bombs. In these, a subcritical plutonium sphere was surrounded by chemical explosives that when detonated caused the sphere to collapse, creating an artificial critical mass. The resulting detonation theoretically would be the atomic explosion. This was by far the more complicated version of the two and was subsequently the first one tested.

On July 16, 1945, one of the plutonium bombs was hoisted up a test stand and detonated at the Trinity Test Site at Alamogordo, New Mexico. The news was good for President Truman, negotiating at the Potsdam Conference over the spoils of defeated Germany and the future of the Pacific war. But Josef Stalin, the United States' Soviet ally at the time, was not equally impressed, as Soviet spies had already informed him of the achievement.

Little Boy was the first atomic bomb used in warfare when it was dropped on the Japanese city of Hiroshima on August 6, 1945. The effects, as predicted in theory, were devastating: the city

was destroyed with one bomb. The plutonium-implosion bomb Fat Man was used three days later on the Japanese city of Nagasaki; the combination of the bombs and the threat of invasion finally forced the Japanese to surrender, ending World War II.

After the war the Allies found that neither the Germans nor the Japanese had atomic programs of note. The Americans, with substantial British assistance, were the only country with the technology until the Soviets exploded their first atomic device, a direct copy of the U.S. plutonium-implosion type, on August 29, 1949.

The Manhattan Project and the U.S. government's decision to use atomic weapons on civilian populations in Hiroshima and Nagasaki during World War II are two topics that maintain a level of controversy to this day. Highly polluted water and land contaminated with radioactive waste in Hanford, Washington, is just one of the legacies of the atomic bomb's development in the United States. From a technological standpoint, the development of atomic weapons, and later atomic power, is a testament to scientific ingenuity in wartime, regardless of the controversial aspects.

—Sterling Michael Pavelec

Bibliography

- Bird, Kai. *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer*. New York: Vintage, 2005.
- Hughes, Jeff. *The Manhattan Project: Big Science and the Atom Bomb*. London: Icon Books, 2002.
- Rhodes, Richard. *The Making of the Atomic Bomb*. New York: Simon and Schuster, 1995.

■ Introduction: Communication

During the first half of the twentieth century, communication fundamentally changed from what was previously available. To the many inventions made in the nineteenth century to improve communication, the first half of the twentieth century added motion pictures, radio, and television. Most of the communication products created in the nineteenth

century improved communication between individuals. During the twentieth century new products added ways for groups or organizations to communicate to other groups, and mass communication was born.

The first major communication improvement to be commercialized in the twentieth century was the motion picture. At an exhibition in

Paris in 1894, the father of Louis and Auguste Lumière saw a demonstration of Thomas Edison's Kinetoscope, a device that used a band of film, a light source, and a rapid shutter to animate a series of pictures. Inspired to create a motion picture camera that could also project animated images, the Lumière brothers invented the Cinématographe, a combination camera/printer/projector that was hand cranked and weighed less than 20 pounds. The Lumières sent their camera all over the world to collect film, and as a result the Russian, Australian, and Japanese film industries began with the cinematograph.

The United States was the pacesetter for the film industry, however, and New York City was the early center of the motion picture business. The first narrative film was *The Great Train Robbery* (1903). During World War I, Hollywood replaced New York as the home of the movie industry. By 1920 such stars as Charlie Chaplin, Buster Keaton, and Mary Pickford had established themselves. The first talking movie—*The Jazz Singer*, starring Al Jolson—was released in 1927. Movies would become the world's leading form of entertainment until the advent of television after World War II. Although motion pictures were mostly used for entertainment, showings often included short films on such current news events as wars, parades, and speeches. In the 1930s after sound had been added, newsreels covering the week's major events were shown in most theaters along with the movies and proved very popular.

By the early twentieth century, wireless communication began to appear. The first example of wireless communication was the radio. In 1895 Italian inventor Guglielmo Marconi transmitted the first wireless telegraph message. In 1901 he used radio telegrams to communicate with ships traveling across the Atlantic Ocean. From that beginning, voice radio rapidly grew. In the United States, experimental broadcasting to a mass audience started in 1910 with a program by the famous singer Enrico Caruso at the Metropolitan Opera House in New York City. During World War I the demands of military communications sped up the development of radio technology.

By 1920 several experimental broadcasting stations had converted to commercial stations by broadcasting programs on a regular basis, including such news as the results of the 1920

presidential election in the United States. In the United States because radio was a good way to communicate with large groups of people, broadcasting rapidly consolidated into national networks in order to attract advertising revenue to support news and entertainment programming. The Radio Corporation of America (RCA) created the first nationwide broadcast network, the National Broadcasting Company (NBC), in 1926. In Europe and some other parts of the world, governments generally controlled radio broadcasting.

Besides providing entertainment and making money for entrepreneurs, radio also proved to be an important tool for politicians. Perhaps best known are Franklin D. Roosevelt's fireside chats. Leaders in the Soviet Union and Nazi Germany also made effective use of the radio during the 1930s and 1940s.

In the Soviet Union the first experimental radio broadcasts began in 1919. In 1922 a central radio station in Moscow began broadcasting. Two years later regular broadcasts could be heard throughout most of the country. By 1937 there were some 90 radio transmitters in operation. In 1990 there were 168 broadcasting centers and more than 5,000 local stations in the Soviet Union that operated in 72 different languages.

Radio has also become an important means of communication in other parts of the world. In Latin America, for example, radio—and television—are the main channels for transmitting information. In most Latin American countries, they reach far more people than print media due to lower rates of literacy and lack of purchasing power. From the 1930s to the 1960s, many radio stations broadcast radionovelas, serial radio programs similar to soap operas. Early Latin American radio also featured variety shows, dramas, sports, talk shows, and news.

Another important twentieth-century development was television, which would soon overshadow radio and motion pictures. In the United States during the late 1920s, many attempts were made to create an experimental telecast, and a few met with success, particularly RCA's efforts. In the early 1930s the United Kingdom's Electric and Musical Industries designed a television system that was later adopted by the British Broadcasting Corporation. Germany also had some

success in broadcasting at the time. In 1936 NBC provided 150 experimental television sets to homes in New York City and sent telecasts to them; the first show was the cartoon *Felix the Cat*. By 1939 NBC was providing regular telecasts but to a limited market. When the United States entered World War II in 1941, however, all television projects were suspended until the war ended in 1945.

After the war, television development continued where it left off, with the invention of better television sets, creative programming, and larger markets. The first coast-to-coast program was President Harry Truman's opening speech at the Japanese Peace Treaty Conference in 1951. By the 1950s television had become a profitable industry. In 1953 the first color telecast was made, which spread so fast that by the 1960s most telecasts were in color.

—Ronald Young

Radio

The invention of radio opened a new era in communication. As did the telephone, radio made communication instantaneous, but whereas the telephone permitted conversation between just two people, a radio broadcast could reach thousands. In 1921, for example, some 300,000 Americans from Maine to Florida, 100,000 alone in

New York City's Times Square, heard the broadcast of the championship fight between heavyweights Jack Dempsey and George Carpentier. In addition to sports, radio broadcasts included music, humor, speeches, religious services, politics, and propaganda. In reaching thousands, radio had the potential to shape the ideas of people in all walks of life. In its ability to deliver a world beyond the confines of the neighborhood, radio integrated itself into the lives of those who wanted the vicarious experience of living beyond the familiar. Radio became as much a part of the daily routine as the newspaper and small talk between friends and family.

Radio had its roots in the classical physics of the nineteenth century. In 1887 German physicist Heinrich Hertz discovered radio waves, a type of low-frequency electromagnetic energy outside the visible light spectrum. Italian inventor Guglielmo Marconi in 1895 sent Morse code by radio waves, creating the wireless and spurring efforts to transmit the human voice. In 1906 University of Pittsburgh electrical engineer Reginald Fessenden succeeded in transmitting the voice, but the signal was weak and difficult to separate from static. Alert to these problems, Lee De Forest of Armour Institute of Technology led the way in the 1910s in improving the vacuum tube to amplify radio signals and reduce static.

By 1916 David Sarnoff of the Marconi Wireless Telegraph Company in New York City had decided that the future of radio lay not in sending and receiving private messages. The telephone already served this end. Rather, a radio transmitter would broadcast music, speeches, news, sports, and the like to receivers in homes. In 1918 Columbia University electrical engineer Edwin Armstrong invented the superheterodyne circuit to tune a receiver with precision to the frequency of a radio wave. In 1919 Radio Corporation of America (RCA) formed with the aim of realizing Sarnoff's vision and in 1920 gave 10 percent of its stock to American Telegraph and Telephone (AT&T), a move that forged cooperation between the former rivals.

In 1920 Westinghouse Electric launched in Pittsburgh the first commercial station, KDKA. In its first hours on the air KDKA broadcast the election results that Republican Warren Harding had won the presidency. Subsequent broadcasts



Station KDKA in Pittsburgh broadcasts presidential returns on November 2, 1920. (Bettmann/Corbis)

were one hour each evening, although with time the program lengthened. Buoyed by the success of KDKA, Westinghouse established stations in New Jersey, Massachusetts, and Illinois. By interesting people in the broadcasts, Westinghouse aimed to create a demand for radio receivers, in time known simply as radios.

As it had with AT&T, RCA fashioned an agreement with Westinghouse, giving it in 1921 a million shares of stock and 40 percent of the market for radio equipment. Having absorbed its rivals, RCA became the leader in U.S. radio. By 1922 RCA was manufacturing radios that produced sound superior in clarity and amplification to the old crystal set and earphones. Mounted in wooden cabinets, the radio was a piece of furniture that the family could gather around in the evening for the day's news, although in the 1930s cheap portable radios began to erode sales of the large units.

The appeal of radio led to spectacular growth in the industry. By the end of 1921 radio could count just 10 stations in the United States, but by the end of 1922 the number was nearly 350. In 1922 Americans bought \$60 million in radios and equipment, and by 1924 the number had leapt to \$358 million.

Radio spread beyond the United States with the first broadcasts in England, Argentina, and Canada in 1920; in Turkey and the Philippines in 1922; in Mongolia in 1934; in Malaysia in 1937; and in Jamaica in 1939. In the 1920s the fascists in Italy and the Bolsheviks in Russia and in the 1930s the regime of Francisco Franco in Spain and the Nazis in Germany took control of the airwaves, using radio as a disseminator of propaganda. These authoritarian governments used radio to forge consensus and to silence dissent.

Radio allowed people to participate in a common culture. A housewife in Avignon, France, and a salesman in Paris might have little in common other than the fact that they heard the same news every evening at 7:00 p.m. on the radio. In this way radio knitted people into a homogeneous community and diminished the sense of isolation that they might otherwise have felt. At the same time the diversity of programming allowed people to assert their individuality. Catholics, Lutherans, Baptists, and Jews each had their own stations. Like the automo-

➤ RADIO PATENT BATTLES

In 1893 the Serbian American inventor Nikola Tesla allegedly demonstrated at a lecture in Saint Louis the transmission and reception of radio waves through space. In 1897 he was awarded a U.S. patent for the apparatus he used to generate and receive radio waves to control a small demonstration-sized boat.

Despite Tesla's priority of invention and his patent, the Italian Guglielmo Marconi claimed to be the real inventor of radio. His apparatus was so similar to Tesla's that Tesla judged it an infringement of his patent. The U.S. Patent Office several times denied Marconi's application for a patent but in 1905 changed course, awarding Marconi the patent for radio. The public and the scientific community sided with Marconi, who shared the 1909 Nobel Prize in Physics with the German Karl Braun for this invention.

Eager to reassert his priority, Tesla sued Marconi in 1915 but lost. Only after his death in January 1943 would Tesla be vindicated. The Marconi Wireless Telegraph Company sued the United States for infringing two of Marconi's patents for radio. The U.S. Supreme Court decided on June 12, 1943, that Marconi Wireless had no basis for suing the United States because the Marconi patents were invalid, the real patent holder being Tesla.

—Christopher Cumo

bile, radio in the first half of the twentieth century was a technology forged for the masses.

—Christopher Cumo

Bibliography

Douglas, Susan J. *Listening In: Radio and the American Imagination*. Minneapolis: University of Minnesota Press, 2004.

Mattern, Joanne. *The History of Radio*. Berkeley Heights, NJ: Enslow, 2002.

Commercial Radio Broadcasts

Commercial radio broadcasts, or broadcasts that are supported by direct or indirect advertising, developed in the early 1920s. They became the dominant form of radio in France and much of

► COMMERCIAL RADIO BROADCASTS

Although ads were not allowed on British radio stations before World War II, advertisers could still reach British listeners by sponsoring programs on overseas stations. This ad from page 33 of the October 11, 1935, issue of a British program magazine, *Radio Pictorial*, describes a show that Proctor & Gamble sponsored for Oxydol laundry detergent:

“Don’t miss the new Radio Thrill—Carson Robinson and his Pioneers on Radio Luxembourg, Sunday 10:15 a.m. There’s romance in the far, far West and that’s where Carson Robinson and his pioneers take you in this thrilling programme. Plaintative and beautiful songs threaded with stirring tales of Jesse James, Buffalo Bill, Bucky O’Neal, Billy the Kid and other famous adventurers of the new continent.”

—Jennifer Spohrer

North and South America, including the United States, between 1920 and 1945, while national public broadcasting, funded by listener subscriptions or taxes on radio sets, became the norm elsewhere. Commercial radio broadcasters of this period pioneered many of the features common to television broadcasts today such as network broadcasting, game shows, and soap operas.

Prior to World War I, radio was used almost exclusively to transmit telegraph messages. In 1906 American inventor Lee de Forest invented the vacuum tube triode, a modified electric lamp that made radio transmission of speech and music possible, but the tubes remained expensive and experimental. World War I paved the way for the broadcasting boom of the 1920s by creating a supply of mass-produced radio tubes used for military communication equipment. The war also created a potential market for them among radio hobbyists, many of whom served as radio operators during the conflict.

Just after the war, American and European radio manufacturers began setting up commercial broadcasting stations to encourage more

people to buy radio equipment. Radio broadcasting grew rapidly but unevenly over the next decade. A survey conducted by the U.S. Department of Commerce in 1930 found 1,250 radio stations operating worldwide, almost 80 percent of which were in North America and Europe. Economic underdevelopment slowed the growth of broadcasting on other continents except in Australia, New Zealand, Japan, South Africa, Argentina, Brazil, and Uruguay. Not all of these stations operated commercially. In Japan, many European countries, and their colonies, public broadcasting monopolies operated all stations, banned advertising, and relied on taxes or listener fees to finance broadcasting. Elsewhere, however, most broadcasters used at least some direct or indirect advertising to cover their production and operating expenses.

The earliest direct advertisements were brief announcements that the station announcer read directly into the microphone. These announcements were relatively inexpensive—the advertiser usually wrote the text, and stations charged by the word—so even local restaurants, movie theaters, and stores could afford them. Larger companies, particularly manufacturers of brand-name consumer goods such as soap, chocolate, beverages, and toothpaste, hired advertising agencies to create their announcements, which transformed them into the prerecorded 15- or 30-second commercials still common on radio and television today. Agencies also developed the jingle—a short catchy song that was used like a brand name or logo to identify a product quickly and ensure that the listener remembered it—and recorded them onto records for stations to play so that the jingle would sound the same every time.

The most common method of indirect advertising was the sponsored program. A sponsor paid the radio station for a block of airtime and provided a program to fill it that began and ended with a short advertisement for the sponsor’s product. Sponsored programs became more widespread in the 1930s when popular backlashes against radio advertising and, in some cases, government regulation encouraged broadcasters in many countries to reduce or tone down advertising.

In the early 1920s most commercial stations broadcast to a local audience and produced mostly live musical concerts, talks, and also prerecorded record concerts sponsored by record companies in their own studios. In the mid-1920s, however, broadcasters began to increase the power of their stations and form networks of smaller stations linked by telephone lines to reach larger regional or national audiences. By 1932 Radio Luxembourg, for example, broadcast to seven European countries from a single high-powered transmitter. In the United States, most commercial stations joined one of two rival national networks: the National Broadcasting Company (NBC) and the Columbia Broadcasting System (CBS). Sponsors could spend more on a program created for these networks since a single program would reach a larger audience than multiple programs created by many scattered local radio stations. Advertising agencies built specialized radio production studios, permanently staffed by professional producers, writers, and performers, to produce these programs and distribute them to broadcasters over telephone wires or on records.

Since sponsors wanted to attach their names to popular, yet distinctive, programs, radio producers experimented with new formats drawn from popular preradio entertainments such as vaudeville. Radio variety shows featured the traditional vaudeville combination of musical numbers, comedy sketches, and stand-up routines with celebrity hosts such as Eddie Cantor and Bing Crosby. The radio comedy sketch became the forerunner of the modern situation comedy, or sitcom. One of the very first, *Amos 'n' Andy*, drew millions of listeners to their sets for 15 minutes every evening from the late 1920s to the early 1940s. Game shows were another popular radio innovation. One of the most popular in France was *Radio crochet*, an amateur music contest on Radio Cité that substituted a gong strike for the giant hook that had traditionally pulled the worst amateur performers offstage in vaudeville.

In the early 1920s most stations broadcast only a few hours each evening because reception was better at night and more people were at home listening. Evening programs, which targeted a family audience, remained prime time



Freeman Gosden and Charles Correll, two white actors, performing as the imaginary black characters Amos 'n' Andy on their radio program in 1935. Despite its controversial racial politics it remained popular as a nightly radio broadcast through the early 1940s. A weekly version remained on air until 1960. (Corbis)

for radio until the 1950s and were more expensive to sponsor. In the late 1920s, however, stations and advertisers developed daytime programs aimed at women listening while doing housework. The earliest were instructional programs with hostesses who gave listeners recipes and ideas for using the food, beauty, and cleaning products that sponsors manufactured. Soap operas, or serialized melodramas, were another innovation of daytime radio, nicknamed for the dishwashing, laundry, and other cleaning products that often sponsored them.

Commercial radio broadcasts changed in the 1950s and 1960s as families began tuning to television in the evenings instead of sitting down to radio broadcasts. Sitcoms, game shows, soap operas, and other sponsored programs migrated to television, and radio returned to musical programming. Local station announcers, now called disc jockeys (DJs), played records over the air that were paid for by short prerecorded commercials broadcast at intervals between songs.

—Jennifer Spohrer

Bibliography

Douglas, Susan. *Listening In: Radio and the American Imagination*. New York: Times Books, 1999.

Méadel, Cécile. *Histoire de la radio des années trente*. Paris: Anthropos, 1994.

Smulyan, Susan. *Selling Radio: The Commercialization of American Broadcasting, 1920–1934*. Washington, DC: Smithsonian Institution Press, 1994.

World Broadcast Advertising: Four Reports. New York: Arno, 1971. (A reprint of reports compiled by the U.S. Department of Commerce, 1930–1932.)

Film Technology

Film is an art form in which still images photographed in sequence on a celluloid strip are projected to viewers at a speed that creates an impression of continuous movement (“persistence of vision”). The steady rotation of a perforated strip through a film projector is broken into intermittent movement by a gear—the Maltese cross—that pulls film forward one frame at a time so that each still image pauses for a fraction of a second between a light and a projecting lens. The first public demonstration of projected movies (Auguste and Louis Lumière, Paris, 1895) caused an immediate sensation. The evolution of filmmaking technique over the succeeding 50 years was based on improved equipment for recording and projection, changes in the film industry’s manufacturing and marketing methods, and new approaches to presenting understandable, meaningful, and affecting narratives.

Very early films recorded scenes from everyday life. Soon after 1900, filmmakers produced fictional stories portrayed by hired actors, as feature films grew in length as well as sophistication. In the 1910s, D. W. Griffith and cameraman Billy Bitzer invented and improved film language, including innovative techniques (like backlighting, flashbacks, cross-cutting, long shots, and close-ups) for dramatic effect, psychological development, and definition of time and place. *The Birth of a Nation* (United States, 1915) was a technological landmark that illustrated film’s vast narrative range.

Photographed in black and white but often tinted for atmospheric or emotional effects, films before 1927 were silent, having no recorded sound track to accompany the visuals. Audiences followed plot developments and understood dia-

logue by means of title cards projected on the screen. Musicians often played live music to reflect mood. Sound technologies in the late 1920s opened the door to more subtle characterization and sophisticated storytelling. Sound tracks contained dialogue, voice-over, music, or sound effects synchronized (more or less) to the visual images, reinforcing what filmmakers wanted audiences to feel (exhilaration, sadness, apprehension, and so forth). Studios experimented with different sound systems (recording devices, amplifiers, loudspeakers), including phonograph records (“sound on disc”) and methods of converting sound into light waves reproduced on a photographic strip affixed to the film’s edge (“sound on film”). *The Jazz Singer* (United States, 1927) was the first part-talkie, but silents continued to be made and distributed for several more years. *The Lights of New York* (United States, 1928) was the first all-talkie. Many theaters, especially in small towns, were unequipped for sound, and movies were often released in silent as well as talking versions. Western Electric’s sound-on-film system was widely adopted in the late 1920s, and by 1932 most American theaters were equipped for sound.

One outgrowth of the close-up shot was the star system. Appealing actors, promoted in the press, became the first movie stars. Major star attractions of the silent era included Charlie Chaplin, Lillian Gish, Mary Pickford, and Rudolph Valentino. Stars of talking pictures through 1945 included Fred Astaire, Humphrey Bogart, Bette Davis, Jean Gabin, Clark Gable, Judy Garland, Cary Grant, Carole Lombard, and Barbara Stanwyck. Some, like Greta Garbo and Joan Crawford, were successful in silents as well as talkies, but others were unable to make the transition because their voices or diction did not match audience expectations. Paradoxically, one of the best silent films appeared after the effective end of the silent era. Chaplin’s *City Lights* (United States, 1931) has never been surpassed in its carefully crafted evocation of loneliness, altruism, and the human condition.

Some early films were distributed in black and white as well as color versions, with the color laboriously hand-painted on each frame of each print. A number of less-than-adequate two-color processes were available after 1908, al-

though they were untrue to nature but widely used for embellishment. In the mid-1930s, Technicolor Corporation developed a more accurate three-color process. Technicolor cameras employed a light prism to split light coming through the lens into blue, red, and green values, each of which registered on a separate strip of black-and-white film. Positive matrix images from each strip were used to transfer yellow, magenta, and cyan dyes onto the finished print, creating a balanced color picture. *Becky Sharp* (United States, 1935), the first three-color movie, is otherwise undistinguished. Color was often no improvement over the rich visual quality and flexibility of black-and-white film.

Important editing techniques, essential for controlling narrative and suggesting meaning, include cross-cutting (e.g., switching back and forth between sequences set in different locations to heighten suspense, as when a car speeds to rescue a heroine threatened by a ticking time bomb), montage (shots laden with contrast are juxtaposed for effect; e.g., a starving worker's family and a gluttonous factory owner are shown in consecutive shots), and composition in depth (deep-focus photography enabling action on multiple planes within the same shot).

Technologically significant landmarks from 1900 to 1945 include *Gertie the Dinosaur* (United States, 1909), illustrating the technique and capability of animation; *Nanook of the North* (United States, 1922), with gyroscope cameras for innovative pans and tilts; *The Last Laugh* (Germany, 1924), as expressionist cinema showing how set design and the subjective camera influence interpretation; *Greed* (United States, 1924), with its re-creation of a novel in exact detail and shot on location under severe conditions; *Battleship Potemkin* (USSR, 1925), with its dynamic use of montage to jolt and persuade; *The Passion of Joan of Arc* (France, 1928), with close-ups as open windows to the minds of complexly represented characters; *Blackmail* (England, 1929), with its prescient understanding of the creative potential of sound, including the dramatic effects of music and suspenseful interludes of silence; *Triumph of the Will* (Germany, 1935), a virtuoso documentary illustrating the potential of sound and image for propaganda; *The Rules of the Game*

THE INTERFACE BETWEEN PHOTOGRAPHIC AND SOUND TECHNOLOGY

The transition from silents to talkies affected more than an expansion of the filmmaker's ability to express plot and characterization through dialogue. The changes also involved complex trade-offs between sound quality and picture quality. During the silent era, studio sets were lit by noisy arc lamps, emitting bright light that allowed the camera lens to be stopped down to a small aperture ideal for sharp focus and depth of field. Arc lamps could not be used on talking picture sets. Studios replaced them with incandescent lamps, which were quieter but provided less illumination. To compensate for lower light levels, cameras in the early 1930s operated at maximum aperture settings, resulting in softer focus and less depth of field. Technological advances in lighting and faster film stock by the late 1930s allowed a return to the sharper photography seen in many silent films. Switching to color presented new challenges to production methods. Quiet, powerful, and more easily adjusted arc lamps emerged in response to Technicolor cinematography. Kodak's Super XX film stock (1938) was faster than previous options without being significantly grainier, and innovative lens coatings with a microscopically thin layer of magnesium fluoride (1939) dramatically increased the transmission of light.

—Jeffrey Mifflin

(France, 1939), illustrating multifaceted uses of depth of field; *Citizen Kane* (United States, 1941), with its innovative uses of photography and sound (e.g., cameraman Greg Toland's pan focusing and pioneering acoustic effects borrowed from Welles's radio days); *Double Indemnity* (United States, 1944), a seminal film noir illustrating the capacity of lighting for establishing mood and meaning; and *Rome, Open City* (Italy, 1945), the prototypical Neo-Realist film using available light, a mix of nonprofessional and professional actors, and improvisation to craft a poetics of everyday life.

Most feature films were photographed on studio sets or back lots. To make room for bulky equipment, interior sets consisted only of walls that would appear on screen. Facades stood

in for buildings in exterior shots. Rear-screen projection or painted backdrops often combined with live acting to create the illusion that characters were on location instead of in a studio. Film production by the 1940s was typically an elaborate and complex undertaking involving many creative and technical workers. The production credits for *Citizen Kane*, for example, include producers, director and assistant directors, writers and editors, camera operator, assistant cameraman, gaffer, grip, art director, sketch artists, set decorators, wardrobe designers, makeup artists, special effects technicians, sound technicians (production mixers, boom, and special sound effects crew), composers, musicians, and choreographers.

At some point before 1945, film replaced literature as the most popular and influential art form. Using technology-based illusions on screen to realize the vision of writers, producers, directors, and so forth, film has had a major impact on the formation of self-image and the shaping of individual behavior as well as social norms.

—Jeffrey Mifflin

Bibliography

- Bordwell, David, Janet Staiger, and Kristin Thompson. *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960*. New York: Columbia University Press, 1985.
- Cameron, Evan W., ed. *Sound and the Cinema: The Coming of Sound to American Film*. Pleasantville, NY: Redgrave, 1980.
- Carringer, Robert L. *The Making of Citizen Kane*. Berkeley and London: University of California Press, 1985.
- Henderson, Robert M. *D. W. Griffith: The Years at Biograph*. New York: Farrar, Strauss and Giroux, 1970.
- Nowell-Smith, Geoffrey, ed. *The Oxford History of World Cinema*. Oxford and New York: Oxford University Press, 1996.

Television Broadcasting

Television emerged out of experimental physics. From the late nineteenth century, physicists studying the behavior of electrons had used the cathode ray tube in their work. By 1907 Russian physicist Boris Rosing understood that he could

use a cathode ray tube to project a stream of electrons onto a screen. These electrons would, through pointillism, form an image on a screen. By the 1920s several inventors, among them American Philo Farnsworth and Russian American physicist Vladimir Zworykin, had devised their own versions of television.

Central to the invention of television were improvements in communications, principally in the technology of broadcasting. In the 1920s transmitters broadcast television at the frequencies of radio, between 50 and 10,000 Hertz, or cycles per second. This situation was satisfactory only for the communication of sound. The broadcasting of images required bandwidths up to one million Hertz. In 1936 television transmitters, borrowing from the work of American radio innovator Edwin Armstrong, broadcast the waves that carried voice and images by varying their frequency, the number of waves that pass a given point per second. By 1936 television sets used valves to tune in and to amplify incoming waves or signals. The first television sets needed more than 18 valves to amplify a signal, making television sets expensive. Signals were weak because the Heaviside Layer (part of the earth's ionosphere named after its discoverer, Oliver Heaviside) of the atmosphere absorbed a portion of television waves, reducing the number of waves that reached television antennae. (Curiously, the Heaviside Layer reflected radio waves, allowing their transmission unimpaired.) Television transmitters compensated for this loss in the number of television waves by amplifying them, but this did not eliminate interference from the Heaviside Layer.

In the 1930s television transmitters used a large number of bandwidths. Part of the problem stemmed from the fact that transmitters produced two cycles for each signal, or two waves. One cycle or set of waves was redundant in that television sets did not need duplicate signals to function, and in 1939 engineers designed transmission towers that filtered out one cycle of signals, conserving bandwidth. By the late 1930s television sets used diode valves to separate sound and vision waves. Television sets received these waves with long wires. Television set owners strung wires between chimneys of

► VLADIMIR KOSMA ZWORYKIN

Born on July 30, 1889, in Murom, Russia, Vladimir Kosma Zworykin displayed aptitude in applied science and mathematics at an early age. During summers he helped his father make electrical repairs to his boat, work that stimulated his interest in electricity. A student of Boris Rosing at the Imperial Institute of Technology in St. Petersburg, Zworykin worked on one of the first cathode ray tubes in projecting an image on a screen. Graduating from the institute with honors in 1912, Zworykin studied at the College de France between 1912 and 1914 and at the University of Berlin in 1914. The outbreak of World War I cut short Zworykin's stay at Berlin because the government expelled all aliens from Germany. Returning to Russia, he served in the Signal Corps until 1919, when he immigrated to the United States. Becoming a naturalized citizen in 1924, Zworykin received a PhD in physics from the University of Pittsburgh in 1926. At Westinghouse he worked to refine his iconoscope, an early television set, securing a patent in 1928. Transferring to RCA, Zworykin realized a string of successes in the 1930s, and in 1939 RCA, using an



A man adjusts an early commercially available television set, about 1940. (Library of Congress)

improved version of the iconoscope, televised the World's Fair. Zworykin retired from RCA in 1954. He died on July 29, 1982, in Princeton, New Jersey.

—Christopher Cumo

neighboring houses or between a house and a tree or pole to maximize the reception of television waves.

The early days of television were spartan. Television transmitters did not broadcast programs 24 hours a day, every day of the year, as they do now. Instead, in February 1937 television broadcasters in London offered programs for only 1 hour, five days a week. Broadcasting between 9:00 and 10:00 p.m., television was an event akin to visiting the theater. Like theaters, television aired plays. The first television program, *Picture Page*, hosted a different director each week in staging a play. Between 1936 and 1939 the British Broadcasting Corporation (BBC) broadcast 326 plays. Each play was broadcast twice, inaugurating the concept of rerun.

In July 1937 the BBC telecast Wimbledon tennis matches by short wavelength transmission, an advance over the use of coaxial cable. Short wavelength transmission did not replace

the use of coaxial cable in the early days of television. In November 1937 Bell Telephone made the first broadcast between New York City and Philadelphia by coaxial cable. In 1938 the BBC achieved the first live broadcast of an event. In February 1939 the Radio Corporation of America (RCA) broadcast a program between London and New York City, then a long-distance record. In March 1940 a Boeing 247-D transmitted the first broadcast from an airplane in flight. After 1945 broadcasters would use airplanes to beam television signals back to earth just as engineers now use satellites for this purpose.

On September 1, 1939, with the outbreak of World War II, television transmitters in Britain ceased operation for the war's duration. Necessary for the operation of radar, cathode ray tubes could not be spared for television. Moreover, the transmission of television signals might imperil civilians because enemy bombers could fix their location by tuning into these signals. In 1939 the

United States began television broadcasting. In 1941 before U.S. entry into World War II, the National Broadcasting Company (NBC) and the Columbia Broadcasting System (CBS) broadcast roughly 15 hours of television per week. But like Britain the United States suspended most programming with its entry into World War II in December 1941. Those broadcasters that did not go off the air reduced their schedule to some 4 hours per week.

Having ceased broadcasting in 1939, France, under German control, resumed television transmissions in July 1940. Germany aimed these broadcasts at hospitals in hopes of entertaining wounded Nazi soldiers. Beginning in 1943, Germany broadcast programs from the Eiffel Tower. The French public, hostile to the reality that Germany controlled French television broadcasting, watched little television during the war. According to the French, German broadcasts were poor in quality. The Nazis continued television broadcasting until August 16, 1944, when they abandoned Paris.

In October 1945 television broadcasting resumed in the United States. That month broadcasters televised a rodeo from Madison Square Garden, New York City. On December 1, 1945, broadcasters televised the Army-Navy football game. In 1945 broadcasting resumed in Moscow and Saint Petersburg, and on October 1, 1945, the Eiffel Tower resumed broadcasting under French control. Television spread slowly in the 1930s and more rapidly in the 1940s. In 1936 television sets numbered only 200 worldwide. Whereas Americans owned some 7,000 television sets in 1940, the number leapt to 170,000 in 1945.

—Christopher Cumo

Bibliography

- Abramson, Albert. *The History of Television, 1880 to 1941*. Jefferson, NC: McFarland, 1987.
 Abramson, Albert. *The History of Television, 1942 to 2000*. Jefferson, NC: McFarland, 2003.
 Goldstein, Norm. *The History of Television*. New York: Portland House, 1991.
 Sinclair, Ian. *Birth of the Box: The Story of Television*. Wilmslow, UK: Sigma, 1995.

■ Introduction: Agricultural and Animal Sciences

From 1900 to 1945, although subsistence farming remained the norm through much of the world, numerous innovations in agricultural and animal sciences allowed for the expansion of crop and livestock production in industrialized nations and in areas of the colonized world. University departments of soil science and government research stations became common in this period. The United States Department of Agriculture, for example, formed its Division of Agricultural Soils in 1894, and for the next few decades, scientists conducted soil surveys across the country. Similar advances were made in the hybridization and development of disease- and drought-resistant seeds. Advances in veterinary medicine included new treatment of ailments of poultry and livestock—horses in particular were of critical economic importance until the 1920s when automated vehicles replaced draft animals and the use of

horses in the military. Mechanized farming, which went into widespread effect in the Soviet Union, the United States, and some colonial regions, in addition to increasing productivity, created social disruptions and could have disastrous environmental effects, particularly when marginal lands were opened to farming. A prime example of such an agricultural disaster was the Dust Bowl in North America, which fostered long-term changes in farm policy and land utilization. Even before World War II, large-scale farms incorporated “factory farming” processes that brought automation and assembly line production to agriculture and animal husbandry as a template for increasing productivity and profits. Moreover, wartime production and domestic scarcity necessitated the development of newer uses of foodstuffs and ersatz substitute products.

—Fred Nadis

Advances in Agriculture— Staple Crops

For millennia, humans have labored to improve staple crops with the goal of higher crop yields and resistance to insects and diseases. The pace of these efforts quickened after 1900, when the science of crop breeding began to draw upon knowledge from the new science of genetics.

Although the Austrian monk Gregor Mendel labored in obscurity, his work in hybridizing pea plants shaped the breeding of crops in the twentieth century. Corn was the first staple crop to benefit from Mendel's work. In 1909 the geneticist George Harrison Shull announced that the inbreeding of corn separated it into homozygous lines analogous to pea varieties and that the crossing of these lines would produce hybrids. Many of these new corn hybrids offered better yields and greater resistance to insects and diseases than traditional varieties. In 1917 the corn breeder Donald F. Jones developed a method of crossing hybrids over two generations to produce seed on a scale large enough to create an industry. Hybrid corn spread throughout the United States in the 1930s and into the developing world in the 1940s.

In Japan the staple crop rice benefited at first less from science than from the care that farmers took in scrutinizing their fields for a plant that yielded well and had a stiff stalk. Around 1900 a farmer found a plant, later named the *shinriki* variety, that thereafter spread into western Japan, while another farmer found what became known as the *kamenoo* variety, which thereafter spread into northern Japan. In contrast to the Japanese method of selecting varieties by inspection, in Taiwan scientists bred rice. Around 1910 Taiwanese agronomists crossed Japanese and indigenous varieties to produce the *ponlai* hybrids. In Korea in the 1930s, the Iri branch of the agricultural experiment station bred varieties that replaced the Japanese varieties that Korean farmers formerly had grown.

The scientists who bred new varieties of wheat concentrated their efforts on resistance to diseases and to lodging, or sideways bending of stems. The English botanist Rowland Biffen in 1910 bred *Little Joss*, the first variety of wheat resistant to the fungal disease yellow rust and suitable for planting on both light and heavy



An Iowa farmer stands in a field of hybrid corn, 1939. Hybrids yielded more corn and stood straighter than the old open-pollinated varieties. (Library of Congress)

soils. In the United States, early efforts focused on the wheat crop in Washington state, where farmers needed wheat that had a stout, short stalk to resist lodging. As early as 1899, the agronomist William Spillman began breeding wheat for resistance to lodging. Yet his hybrids were vulnerable to the fungal disease loose smut. In the following decades new wheat varieties were developed that showed stronger resistance to such diseases.

These advances in the breeding of corn, rice, and wheat underlay the Green Revolution in developing nations. In 1943 the Rockefeller Foundation, eager to replicate around the world the success in breeding staple crops in the United States, Taiwan, and Korea, began to fund further efforts. The ensuing efforts of American agronomist Norman Borlaug and other scientists led to the founding of the International Rice Research

Institute in the Philippines in 1960, the International Center for Wheat and Maize Improvement in Mexico in 1966, and the International Institute of Tropical Agriculture in Nigeria in 1967. The breeding of staple crops had become the focus of international science and economic policy.

—*Christopher Cumo*

Bibliography

Perkins, John H. *Geopolitics and the Green Revolution: Wheat, Genes and the Cold War*. New York: Oxford University Press, 1997.

Shand, R. T., ed. *Technical Change in Asian Agriculture*. Canberra: Australian National University Press, 1973.

Sprague, George F., and John W. Dudley, eds. *Corn and Corn Improvement*. Madison, WI: American Society of Agronomy, 1988.

Advances in Agriculture—Cotton

After 1900 geneticists turned to the work of geneticist Wilhelm Johannsen to improve cotton varieties. Johannsen had worked with beans by self-fertilizing them and obtained homozygous lines, that is, separate lines that bred true. Thus,

progeny had the same genotype as the parent and were identical. The best of these he selected for planting. Researchers took a similar approach to a heterozygous variety of cotton. When inbred for several generations, it segregated into homozygous lines of cotton, each line different from the others. Scientists selected the best among these lines for planting in the field. Because each variety was uniform, a farmer could count on a homozygous line giving the same performance in the field year after year.

Yet the absence of genetic diversity in a homozygous line hindered the further improvement of cotton and gave rise to an alternate method of breeding cotton: the progeny row method. In this method agronomists bred the uniform lines with a heterozygous variety of cotton, an approach that promised to restore genetic diversity to the inbred lines. In this method, scientists bred the progeny from a single row in the field with a heterozygous variety of cotton to restore genetic diversity to the formerly uniform lines. At the same time agronomist Howard L. Manning and others developed the criteria for selecting the best cotton variety in a diverse population.

▶ COTTON PICKERS



Cotton pickers in Pulaski County, Arkansas, 1935. (Library of Congress)

Prior to the development by John Rust of the first commercially viable mechanical cotton harvester in 1935, sharecroppers and laborers were used in large numbers to harvest the crop. The new

mechanical Rust picker picked cotton by using prongs to unwind the cotton fibers and soon proliferated throughout the Old South and the Midwest. This invention caused significant social changes, such as eliminating the need for large workforces. Small sharecroppers and laborers, most of whom were African Americans, were forced by their unemployment to migrate to urban areas. During the 1930s and 1940s, millions of African Americans took part in the Great Migration from the South to industrial cities of the North and California. This migration caused great demographic, political, and social change in large cities.

Bibliography

Shumsky, Neil Larry, ed. *Encyclopedia of Urban America: The Cities and Suburbs*. Entries 16, 84, and 225. Santa Barbara, CA: ABC-CLIO, 1998.

These two methods, the pure line method and the progeny row method, culminated in the varieties U4 and BP52 (the numbers simply refer to the research plots in which the varieties were grown). In 1935 the cotton breeder William Parnell used the pure line method to select a variety of cotton for breeding with a heterozygous line to obtain U4. Alert to the danger of insects to cotton, Parnell bred U4 with lines resistant to the leafhopper jassid to obtain resistant progeny. Farmers planted U4 and its jassid-resistant derivatives in the Sudan, South Africa, Portuguese East Africa, southern Rhodesia, and Nyasaland. Using the same method, the agronomist Albert L. Stephens derived BP52 in 1938. In 1945 Manning bred BP52 with other cotton varieties to obtain progeny for planting in the field. Farmers planted BP52 and its derivatives in Uganda.

In both the short and long terms, cotton breeding has focused increasingly on resistance to diseases, an area that had received little attention before 1945. In 1949 the first cotton variety resistant to bacteria blight, Albar 49 (in this instance the number refers to the year in which the variety was bred), marked a new era in the breeding of cotton resistant to diseases. Other varieties followed including Albar 51 and were planted throughout Africa. Modern cotton varieties combine high yield with resistance to insects and diseases.

—Christopher Cumo

Bibliography

- Hutchinson, Joseph. *The Application of Genetics to Cotton Improvement*. Cambridge: Cambridge University Press, 1959.
- Jenkins, Johnie N., and Sukumar Saha. *Genetic Improvement of Cotton*. Enfield, NH: Science Publishing, 2001.

Advances in Agriculture—Sugarcane

After 1900 the improvement of sugarcane drew upon the experience of breeding corn in the United States and rice in Taiwan. These breeding programs improved crops through hybridization. Relying on worldwide sugarcane varieties, scientists developed hybrids not only for yield



This World War I-era U.S. Food Administration poster, "Sugar Means Ships" equates eating molasses and cane syrup with patriotism as the inconvenience of wartime sugar shortages is balanced against the needs of the U.S. military to ship soldiers overseas. (Library of Congress)

and quality of sugar but also, in some cases, for resistance to disease. Farmers tended to eagerly adopt the new hybrids, planting them on as much as 90 percent of their acreage.

Around 1905 breeding efforts in Hawaii yielded H109, a hybrid grown until the end of World War II. In 1932 a cross in Hawaii between Javanese varieties yielded a hybrid that farmers in 1944 planted on 100,000 acres (40,500 hectares). In Australia, the Queensland Acclimatization Society crossed a New Guinea variety with an indigenous variety to yield the hybrid Q813, which farmers thereafter widely planted throughout Queensland. In Barbados, the Imperial Department of Agriculture for the West Indies bred a hybrid useful in areas of high rainfall. The British West Indies Central Sugarcane Breeding Station superseded the Department of Agriculture and in 1937 bred two varieties of sugarcane that farmers thereafter grew widely in Barbados. In 1912 the Java Sugar Experiment Station on the island of Java began a long breeding program that in 1929 culminated in POJ2878, which farmers subsequently planted on 90 percent of the acreage devoted to sugarcane. Scientists worldwide used POJ2878 in making hybrid crosses.

In 1925 the Sugar Producers' Association in Puerto Rico, in the midst of an epidemic of the Sugarcane Mosaic Virus that threatened to end the production of sugarcane on the island, began breeding the crop for virus resistance. The association developed three resistant varieties, and their widespread planting may have saved the cultivation of sugarcane. In 1929 the Experiment Station of the South African Sugar Association imported varieties of sugarcane from India and Mauritius and with them bred a hybrid subsequently grown in South Africa, Queensland, the Philippines, and Taiwan. In Mauritius, the Sugarcane Research Station, beginning its work in 1930, used the Javanese variety POJ2873 to breed a variety that farmers then planted widely on the island.

After 1900 the cultivation of sugarcane was as much science as economic activity. The improvements in sugarcane have sustained its cultivation worldwide as new hybrids replaced old ones. In many cases farmers were eager to plant new hybrids. Others, however, were accustomed to planting one variety for several years and confronted with anxiety a new way of agriculture in which varieties replaced one another nearly every year, much as new automobiles made old ones obsolete. In an environment in which farmers were hard-pressed to distinguish one hybrid from another, they became beholden to scientists to tell them which variety among the new releases was best for their soil and climate.

—*Christopher Cumo*

Advances in Veterinary Medicine

The early to mid-1900s was a time of flux in veterinary medicine. An initial period of retrenchment of veterinary practices and schools was followed by resurgence, growth, and diversification. Key advances included a shift in the core of veterinary practice from the farming industry and horses to small animal medicine; the creation of major international societies serving agriculture and animal science; numerous medical discoveries, especially new vaccines; and the official entrance of women into the veterinary profession.

In 1905 delegates at the eighth World Veterinary Congress held in Budapest passed a resolution to establish the Permanent Committee for International Veterinary Congresses as a connecting link between worldwide congresses and events. The committee represented more than 30 countries, each with a national subcommittee. It later became the World Veterinary Association, which is now the recognized world body representing the veterinary profession. Several other international societies were created during the early to mid-1900s, including the International Dairy Federation (1903), the International Association of Instructors and Investigators in Poultry Husbandry (1908), and the Permanent International Committee for Genetic Congresses (1911). On October 16, 1945, the Food and Agriculture Organization, a world body that aimed to improve agricultural methods and promote food security, was created in Quebec, Canada.

There were a number of key medical discoveries in the early to mid-1900s. In 1906 Marion Dorest, W. B. Niles, and colleagues at the Bureau of Animal Industry near Ames, Iowa, developed a vaccine for hog cholera, a disease that had caused enormous losses in the swine industry. In 1926 George William Dunkin and Patrick Playfair Laidlaw at England's National Institute for Medical Research Farm Laboratories isolated the canine distemper virus, which led to commercial vaccine production in 1929. This was followed in the 1930s by the development of vaccines for feline distemper. Veterinarians worked on a range of other diseases, including rabies and foot-and-mouth disease, set against a backdrop of major scientific advances by nonveterinarians such as the discovery of insulin (1921–1922) and penicillin (1929) as well as the development of typhus and yellow fever vaccines in the 1930s. Veterinarians were also influential in improving human surgery techniques, which were initially performed on animals.

The mainstay of veterinary medicine in the early 1900s was the farming industry, particularly horses. There was a substantial societal demand for horses, used as draft animals in agriculture, construction, and transportation. There was also a need for horses in both world wars for use in cavalry units, transport, and logistical support. The development of the

automotive industry, especially substitution of tractor power on farms (the first Ford tractor was mass-produced in 1917), led to heavy mechanization in transport and agriculture. Consequently, there was a postwar decline of the horse industry, which resulted in a decreased demand for veterinarians.

Another setback for veterinary medicine was the economic depression. In the United States, the severe agricultural depression in the 1920s, followed by the financial panic and onset of the Great Depression in 1929, led to widespread farm closures, rural poverty, and the closure of many veterinary practices and schools. The veterinary industry gradually recovered from the late 1930s and early 1940s onward, in line with overall economic recovery. Also, in the United States there was renewed demand for veterinarians following the passage of the Food, Drug and Cosmetic Act by Congress in 1938 that required animal safety tests on proposed drugs.

Veterinarians could no longer rely on equine medicine, and from the 1940s onward they began to specialize in the treatment of domestic animals such as cats and dogs. Many pet hospital facilities were built during this time, a trend supported by a marked increase in pet ownership, a nascent pet food industry, and changing public attitudes regarding willingness to spend money on pet care.

During the early 1900s women officially entered the male-dominated veterinary profession. In 1903 Mignon Nicholson was the first American woman to graduate with a veterinary degree (McKillip Veterinary College in Chicago), followed in 1910 by Elinor McGrath at Chicago Veterinary College and Florence Kimball at New York State College of Veterinary Medicine. Other countries followed suit. In 1905 Belle Bruce Reid qualified as a veterinarian in Australia, in 1922 Aleen Cust registered as a veterinary surgeon in the United Kingdom, in 1928 E. B. Carpenter was the first woman to graduate from a Canadian veterinary college, and in 1935 V. B. D'Apice earned a veterinary degree in Brazil at São Paulo's College of Veterinary Medicine.

—Gareth Davey

Bibliography

Swabe, Joanna. *Animals, Disease and Human Society: Human-Animal Relations and the Rise of Veterinary Medicine*. London: Routledge, 1998.

Wilkinson, Lise. *Animals and Disease: An Introduction to the History of Comparative Medicine*. Cambridge: Cambridge University Press, 2005.

Animal Rights Movement

Animals and humans have maintained a close relationship for thousands of years. Animals provided food and muscle for work, especially in the time before the internal combustion engine. Some religions, like Hinduism, have always preached a respect for animals as a part of the faith, but the animal rights movement is a relatively new phenomenon and is limited largely to western Europe and the United States. Stressing that animals have inalienable rights like human beings, animal rights advocates created a powerful broad-based, long-lasting movement in the 1960s.

During the last part of the nineteenth century and the first part of the twentieth century, the animal rights movement centered around antivivisection. Vivisection was the practice of dissecting living animals, especially dogs, to study their internal workings and use that knowledge in human medicine. In Germany during the 1880s and 1890s, antivivisectionists proposed legislation to outlaw the practice without success. In Great Britain, the Act to Amend the Law Relating to Cruelty to Animals in 1876 restricted vivisection by requiring a license. Besides raising awareness of animal cruelty, the antivivisection movement also caused some to question the appropriateness of government regulation of science. In addition, the movement allowed women to assume a greater leadership role in public organizations. Many feminists and suffragists were prominent leaders of the movement.

The rise of totalitarian regimes during the twentieth century affected the treatment of animals in Europe. The Nazis had a nontraditional view of people's relationship with animals. Some animal species were considered favorably and held in higher esteem than some humans. Adolf Hitler, a vegetarian, abhorred vivisection and kosher butchering methods. He and his followers identified them with Jews and outlawed them soon after taking power. Other laws were passed to limit animal suffering, including limits on the ways lobsters were cooked. Endangered species,

like bears and wild horses, were protected by legislation. Other species, including German shepherds and beasts of prey, were held up as ideals of the spirit of National Socialism. In contrast, the Soviet Union accepted Karl Marx's theory of humans as superior to animals because of their control over the environment. The Soviets destroyed animals and the environment in large parts of eastern Europe and their own territory during their efforts to industrialize.

After World War II the animal rights movement entered a new era. New activists included in their critique of animal mistreatment not only

conservation but also the protection of animal species from any manipulation by society, including the use of animals for food.

—Tim Watts

Bibliography

French, Richard D. *Antivivisection and Medical Science in Victorian Society*. Princeton, NJ: Princeton University Press, 1975.

Kean, Hilda. *Animal Rights: Political and Social Change in Britain since 1800*. London: Reaktion Books, 1998.

Regan, Tom. *The Case for Animal Rights*. 2nd ed. Berkeley: University of California Press, 2004.

■ Introduction: Scientific Theories

The first four decades of the twentieth century witnessed numerous advances in the area of theoretical science, particularly in the fields of physics and genetics. At the turn of the century, German physicist Max Planck asserted that energy came in tiny units, called quanta. In addition, sunlight also came in quanta, in what fellow German physicist Albert Einstein called photons, and Einstein demonstrated that these photons of light have enough energy to dislodge electrons from their atoms. Photovoltaic cells, which capture these electrons as electricity, became popularized at the 1933 World's Fair in Chicago.

Early in the century, Einstein contributed two theories of relativity. The first, the Special Theory of Relativity (1905), posited that the faster an object moves, the slower time ticks for it and the smaller the object becomes. In principle, Einstein's Special Theory of Relativity should make time travel possible. Perhaps more importantly, the Special Theory of Relativity demolished the traditional notion that time was universal, ticking at the same rate everywhere in the universe. The General Theory of Relativity (1916) posited that massive objects distort space. The sun, for example, warps space so that the planets follow elliptical orbits around it. What Isaac Newton called gravity Einstein believed to be the distortion of space around massive bodies.

As an outgrowth of nineteenth-century physics, twentieth-century physicists revived the ancient idea that matter is composed of atoms. Far from being uniform, atoms contained a tiny dense nucleus, and the nucleus, having protons, was positively charged. The electrons in an atom are negatively charged so as to make an atom electrically neutral. In 1911 British physicist Ernest Rutherford determined that an atom is mostly empty space, and others such as Einstein understood that the nucleus contained enormous energy. It would be this atomic theory that made possible the construction and use of the atomic bombs that ended World War II.

In 1927 German physicist Werner Heisenberg posited that one cannot know both the position and speed of an electron. That is, at the quantum level, reality is unknowable. From this discrete principle, social commentators interpreted the Uncertainty Principle to challenge the conventional belief that one could know a set of propositions about reality with certainty. However aptly, the Uncertainty Principle has taken on an existence beyond science. As much a philosophical as a scientific belief, the Uncertainty Principle underscored the notion that human knowledge is imperfect.

In a major advance for the earth sciences, German meteorologist Alfred Wegener asserted (1912) that the continents had once been a single landmass (Pangea) that over millions of years

had moved slowly to their current positions. This theory of Continental Drift undermined the conventional view that the continents had always been and would continue to be at their current longitude and latitude. Wegener's theory explained how distant continents had come to have the same plant species.

In the field of genetics, the rediscovery of Gregor Mendel's paper on pea hybridization in 1900 led to developments in the discipline. The first practitioners of this new science sought to determine the relationship between genes and chromosomes. American cytologist Walter Sutton suggested in 1902 that chromosomes contained genes, and between 1909 and 1915 American embryologist Thomas Hunt Morgan proved Sutton correct and demonstrated that chromosomes contain a linear arrangement of genes. The fact that chromosomes contain proteins and Deoxyribonucleic Acid (DNA) raised the question of which molecules contained hereditary information. In 1944 Oswald Avery and his colleagues at Rockefeller Institute confirmed that DNA was the molecule of heredity. After World War II, the American James Watson and his British colleague Francis Crick would discover the structure of DNA.

The new science of genetics offered new fodder for the quasi-scientific field of eugenics, with alarming social repercussions. Just as Austrian monk Gregor Mendel had found that single genes coded for traits in pea plants, eugenicists posited that one or at most a few genes coded for intelligence, diligence, thrift, criminality, insanity, sloth, and prodigality. Because eugenicists believed that heredity was destiny, they encouraged the reproduction of the intelligent and industrious and discouraged the breeding of idiots and criminals. When voluntary measures achieved little, eugenicists clamored for laws to sterilize the feeble-minded, the criminals, and the insane. In the United States, eugenic theories aided new efforts at curtailing immigration, while surgeons sterilized approximately 60,000 people, one-fifth of them in California, between the 1920s and 1960s. Between 1933 and 1937 Germany sterilized 400,000 detainees in prisons and mental institutions. Beginning a euthanasia program in 1939, the Nazis had killed 70,000 mental patients by 1941.

In all of their manifestations, the making and testing of scientific theories define science as a discipline and distinguish it from other forms of knowledge. Over the long term, the fashioning of theories has lent authority to science, with the public and, to some degree, scientists conferring greater prestige on theoretical disciplines than on disciplines that are more descriptive than theoretical. Scientists fashion theories, often in the form of mathematical formulae, with the aim of substituting subjectivity with objectivity. To the degree that it is possible to be objective, a scientific theory represents an advance over nonscientific methods of thought. Scientists' misadventures with eugenics, however, indicate that supposed objectivity may instead be quite subjective and dependent on one's prejudices, with scientists no exceptions.

—*Christopher Cumo*

Quantum Theory

At the end of the nineteenth century, American physicist Albert A. Michelson believed that physicists had described the workings of the universe in all their particulars. Perhaps a few discoveries awaited detection, but physicists should expect nothing revolutionary. Quantum theory ended this complacency, revealing a subatomic world that contained particles that behave like waves and waves that behave like particles. Even light behaves as both particle and wave. Quantum theory conceives matter and waves as behaving according to probability rather than certitude. This unsettling new understanding has been at the core of physics since the early twentieth century.

Quantum theory began as an investigation in thermodynamics. Every object that absorbs energy radiates some of it as heat. In the nineteenth century, German physicist Robert Kirchoff had conceived an object (a blackbody) that radiated as heat all the energy it absorbed. In other words, a blackbody is a perfect transmitter of heat. Kirchoff and others determined to quantify this heat mathematically but were puzzled by the discrepancies between their equations and the amount of heat that a blackbody radiated. In 1900 German physicist Max Planck,

alert to this problem, resolved the discrepancies by deriving an equation that precisely described the amount of heat that a blackbody radiated. Planck included in his equation a constant that required the energy of a blackbody, or any object for that matter, to be calculated in tiny units, which he called quanta. In 1900 Planck seems to have thought of a quantum as little more than a mathematical convenience and not as a physical description. He did not think that quantum theory was revolutionary.

An early advocate of quantum theory, German physicist Albert Einstein extended the theory to light in 1905. A tenet of nineteenth-century physics held light to be a wave. Einstein, however, used quantum theory to demonstrate that light is a particle. He understood that when light shines on a metal it can knock electrons free with its energy in some measurable multiple of a quantum. Because the energy from light comes in quanta, light must be composed of quanta. Light therefore was not simply a wave but also a particle. Einstein had taken a step beyond Planck in ascribing reality to the quantum.

In 1913 Danish physicist Neils Bohr applied quantum theory to the behavior of electrons in an atom. He asserted that electrons occupied fixed orbits around the nucleus of an atom. Upon absorbing energy in some multiple of a quantum, one or more electrons move to a higher orbital. Conversely, an electron, in falling from a higher to a lower orbital, radiates light as energy in some multiple of a quantum. From his model, Bohr derived the spectrum of hydrogen, substantiating quantum theory as a tool of atomic physics.

French physicist Louis de Broglie demonstrated in 1924 the dual nature of an electron as both a particle and a wave, a tenet of quantum theory. Noting, as Bohr had, that atoms emit light with energy in some multiple of a quantum, de Broglie asserted that electrons must orbit the nucleus of an atom as a wave and with energy equal to some multiple of a quantum. In behaving like a wave, an electron was not therefore solely a particle but rather had the qualities of being both matter and wave.

Seeking a rigorous mathematical model for the Bohr and de Broglie atoms, Austrian physicist Erwin Schrodinger in 1927 derived a single set of

equations that predicted the energies and locations of electrons. The fact that these energies were yet again some multiple of a quantum provided another confirmation of quantum theory.

The architects of quantum theory sought a philosophy that made sense of a theory that allowed matter to behave as a wave and a wave as matter. As such, in keeping with Schrodinger's model of an atom, they treated the behavior of electrons in terms of probability rather than certainty. The notion that quantum theory dealt with probability rather than certitude disturbed Einstein, who, although an early advocate of quantum theory, distanced himself from it. He even declared that "God does not play dice," a colorful way of saying that the universe does not behave according to probability but instead according to fixed physical laws.

In 1927 Bohr defended quantum theory with the complementarity principle. Paradoxical as it seems, a phenomenon may at the same time hold two incompatible properties. An electron, physicists knew, is both a particle and a wave and will display the property that an experimenter seeks to measure, not because that property alone defines the electron but because the instruments used to measure it can detect only one property. Apart from the measurement of a property, an experimenter can know nothing definite about an electron. Bohr's position came to be known as the Copenhagen Interpretation.

Schrodinger rejected the Copenhagen Interpretation with a thought experiment. Suppose one puts a cat in a chamber in which the cat faces some probability of death. The Copenhagen Interpretation would define the cat as both alive and dead. Upon opening the chamber door, however, one would verify that the cat was never both alive and dead but instead was only one or the other. Should the cat be dead, its status is irrevocable. No amount of trials in the chamber will restore it to life.

Einstein and Bohr joined the issue, debating the Copenhagen Interpretation for more than a decade. Bohr persuaded Einstein of several particulars of quantum theory, but in the end both men held their ground: Einstein rejected the probabilistic nature of quantum theory, and Bohr defended it. Despite their disagreements, they remained friends.

Quantum theory, over the long term, has explained and predicted the behavior of subatomic particles with great success. The results of experiments have strengthened rather than weakened quantum theory, and it now has few detractors. Accurate in the subatomic world, quantum theory makes no predictions about the macroatomic world described by Einstein's special and general theories of relativity. Physicists, Einstein among them, have sought to unify quantum theory and relativity in a so-called theory of everything. String theory may do just that.

—*Christopher Cumo*

Bibliography

- Brush, Stephen G. *The History of Modern Science: A Guide to the Second Scientific Revolution, 1800–1950*. Ames: Iowa State University Press, 1988.
- Capria, Marco Mamone, ed. *Physics before and after Einstein*. Amsterdam: IOS Press, 2005.
- Supplee, Curt. *Physics in the 20th Century*. New York: Abrams, 1999.

Relativity

Relativity is a theory of physics that describes the properties of space, time, and gravity. It was developed by Albert Einstein (1879–1955) during the first two decades of the twentieth century and is commonly split into a restricted version known as special relativity and a more complex and widely applicable form known as general relativity. It is one of the most successful theories in modern science and remains largely unchanged since its inception. Relativity remains a major research area in physics and provides the foundation for the current efforts to develop a theory of everything.

In 1905 German-born Albert Einstein, working as a patent clerk in Switzerland, published his theory of special relativity based on two basic principles: the laws of physics are constant in all inertial reference frames (meaning an observer who is not accelerating), and the speed of light is constant. Einstein constructed a series of thought experiments to show the consequences of these postulates for moving observers. In particular, he showed that observers taking measurements of length and time while moving very

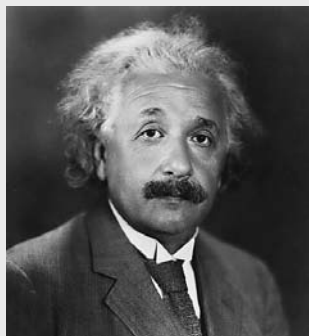
fast (near the speed of light) can disagree about how long an object is (length contraction), how much time has passed between events (time dilation), and whether two events happened at the same time (relativity of simultaneity). Einstein emphasized that there is no one privileged observer whose measurements are correct; instead, all observers are equally valid. This is the origin of the name “relativity,” although Einstein did not give his theory that name and never liked its implication of relativism. He unsuccessfully tried to call it invariant theory to emphasize the constancy of the laws of physics in his theory. In 1907 he deduced a further consequence of his theory: an object's mass increases as it moves faster and faster, with infinite mass at the upper limit of the speed of light. This is a result of the equivalence of mass and energy as expressed in his famous equation $E=mc^2$.

Special relativity was not immediately accepted. It was unconventional and broke with many of the assumptions of Newtonian physics, which had been the dominant view of physics for 200 years. Einstein, for example, banished as superfluous the notion of an “ether” or hypothetical all-pervading substance that provided the medium for optical and electromagnetic effects. Not only did special relativity break with convention, but it was difficult to confirm experimentally since the phenomena predicted only appeared at very high speeds.

Einstein continued to try to expand and improve special relativity. He spent many years working on a version that included accelerating observers. This would become general relativity, which was based on the principle of general covariance (the laws of physics appear the same to all observers anywhere) and the equivalence principle (an observer cannot distinguish locally between constant acceleration and gravitational attraction).

Einstein began a long search for appropriate mathematical equations, eventually adopting the ideas of the mathematician Hermann Minkowski (1864–1909). In 1908 Minkowski showed that he could describe time dilation and length contraction by postulating a space-time continuum in which space and time were fundamentally linked in a four-dimensional (three dimensions of space and one of time) universe. Einstein at

➤ ALBERT EINSTEIN (1879–1955)



(Library of Congress)

Albert Einstein was born in Ulm, Germany, on March 14, 1879. He studied physics and mathematics at the Swiss Federal Polytechnic during 1896–1900 and became a Swiss citizen. In 1909 Einstein's academic career finally took off, and he went to Berlin in 1914. His social

recognition in Germany peaked, and he won the Nobel Prize in Physics in 1921. In the interwar years he became a target for anti-Semitism among his colleagues. When the Nazis came to power in 1933, Einstein was guest lecturing in the United States; he denounced the regime, one of the first German scholars to do so. He never returned to Germany and continued his work at Princeton University.

During World War II Hungarian émigré scientists Leo Szilard and Eugen Wigner persuaded Einstein to sign a letter warning President Franklin D. Roosevelt about the likelihood of a German atomic bomb project. This prompted the U.S. Manhattan Project and the development of the bombs that later destroyed Hiroshima and Nagasaki. After the war Einstein, a staunch lifelong pacifist and Zionist, frequently jeopardized his reputation by opposing nuclear weapons and McCarthyism and by expressing support for the civil rights movement. Yet the right-wing American establishment failed to discredit him. Today, Einstein remains the most famous physicist of the twentieth century.

Bibliography

Hamblin, Jakob Darwin. "Einstein, Albert." In *Science in the Early Twentieth Century: An Encyclopedia*. Santa Barbara, CA: ABC-CLIO, 2005.

first resisted this as too complex but soon accepted space-time as necessary for the further development of his theory.

Einstein had a difficult time developing the equations of four-dimensional space-time. Eventually, in 1915, he found equations that predicted that masses, such as planets and stars, bent or warped the space-time continuum around them. Objects present in warped space-time were predicted to move in particular ways, and this motion was what humans observed as gravity. Einstein's equations could explain the movement of the planets just as precisely as Newton did, but he replaced the force of Newtonian gravity with abstract properties of space-time itself.

Einstein derived three observable tests of his theory. The first was that planets close to the sun would have their orbits modified so that they would wobble slightly, an effect called precession of the perihelion. This had already been observed in Mercury's orbit, and relativity's ability to explain it was a major success for Einstein. Second, Einstein predicted that the warping of space-time near the sun would deflect light from distant stars as it passed. This would be seen as

stars appearing to be displaced from their normal places in the sky and was observed in 1919 by the British astronomer A. S. Eddington shortly after the end of World War I. This scientific collaboration by scientists from recently warring nations was celebrated as an example of scientific internationalism. The third test, the gravitational redshift, predicted that light coming from the surface of a massive body such as the sun would be slightly redder than normal. This test was very difficult to carry out at the time (it was not successfully performed until 1923), and general relativity was accepted largely on the strength of the first two tests.

Einstein became famous after 1919 as the man who overthrew Newton and transformed our understanding of space and time. Einstein became an iconic scientific figure and was asked to speak on everything from politics to religion. Relativity became a subject of popular fascination, and there were many books, magazine articles, and radio lectures that tried to explain the new conceptions of space and time. Writers, philosophers, poets, and artists around the world created work inspired by the new relativistic universe.

Beginning in the 1920s, general relativity was used by astronomers to try to understand the structure, history, and eventual fate of the universe, a field of science now called cosmology. The mathematical tools of the theory were combined with observations made by figures such as the astronomer Edwin Hubble to conclude that the universe was, in the distant past, very densely packed into a singularity, a point of space-time so intensely warped that it cannot be accurately described with relativity. Georges Lemaitre suggested that this initial singularity had exploded, resulting in the expanding universe we see today. This model of the universe, known as the Big Bang Theory, became widely accepted by the late 1960s as evidence for it (such as the cosmic microwave background) accumulated. General relativity still forms the basis of cosmological theory today.

Several alternative theories of gravity have been proposed since 1915, but none have replaced relativity. However, most physicists acknowledge that it cannot be a complete theory because it is not compatible with quantum mechanics, the other great twentieth-century theory of physics. Physicists have been attempting to reconcile relativity and quantum mechanics in a theory of everything since the 1920s, with little success. String theory, also known as superstring theory, is one currently promising approach to this problem.

—Matthew Stanley

Bibliography

- Einstein, Albert. *Relativity: The Special and General Theory*. New York: Crown, 1961.
- Galison, Peter. *Einstein's Clocks, Poincaré's Maps*. New York: Norton, 2003.
- Holton, Gerald. *Thematic Origins of Scientific Thought: Kepler to Einstein*. 2nd ed. Cambridge, MA: Harvard University Press, 1988.
- Thorne, Kip S. *Black Holes and Time Warps: Einstein's Outrageous Legacy*. New York: Norton, 1994.

Atomic Structure

The fifth-century BCE Greek philosopher Democritus believed that matter could not be subdivided to infinity, arguing that in the process of

subdividing matter into smaller units one must reach a substance that can be divided no further. Democritus termed this substance “*atomos*,” meaning indivisible. This substance, the atom, comprises all matter, and Democritus thought that the shape and arrangement of atoms gave different materials their characteristics. Atomic theory had detractors, among them Aristotle, whose influence marginalized it for the rest of antiquity and the Middle Ages. In the early nineteenth century, British chemist John Dalton revived atomic theory, thinking of atoms as tiny solid balls of uniform consistency and with no internal structure.

Dalton's thinking about atomic structure ran into trouble in the late nineteenth century. In the 1870s, British physicist William Crookes (1832–1919) passed an electric current through a vacuum, believing that the current emitted from the cathode, the negatively charged wire, was composed of particles. His compatriot Joseph J. Thomson (1856–1940) agreed, and in 1897 he found the mass of these particles to be a minute fraction of the mass of a hydrogen atom. This finding led Thomson to realize that atoms must contain these tiny particles, which he termed “electrons.” Thomson thought of the atom, far from having no internal structure as Dalton had believed, as a sphere with positive charges and electrons distributed more or less evenly. The atom was neutral: positive charges counterbalanced the negative charges from the electrons.

Intent on elucidating the atom's structure, between 1906 and 1909 New Zealand physicist Ernest Rutherford (1871–1937) at the University of Manchester in England fired alpha particles, the nuclei of helium atoms, at thin sheets of gold. Most of the particles passed through the sheets, leading Rutherford to conclude that the atom was mostly empty space. A few particles were deflected, and some bounced back as though they had collided with a massive substance. The atom must therefore have a massive dense core. Because alpha particles were positively charged, the core of the atom must also be positively charged to account for the repulsion of the alpha particles that had come too near the core. The core, or nucleus, contained most of the atom's mass, and around it moved electrons in an orbit. Rutherford's model of the atom was

➤ NIELS BOHR

The son of Christian Bohr and Ellen Adler, Niels Henrik David Bohr was born October 7, 1885, in Copenhagen, Denmark. Bohr received an MS in physics in 1909 and a PhD in 1911. Upon completing his doctorate, he worked in the laboratories of Joseph J. Thomson at Cambridge and Ernest Rutherford at the University of Manchester. In 1913 the University of Copenhagen appointed Bohr lecturer in physics and in 1916 professor of theoretical physics. In 1921 the university founded the Institute of Theoretical Physics, which Bohr would direct until his death. His work on atomic structure won him the Nobel Prize in Physics in 1922. In the 1930s he concentrated on identifying the building blocks of protons and neutrons, work that others would carry to fruition in the 1960s. The German conquest of Denmark led Bohr to seek refuge in Sweden, England, and eventually the United States. Working on the Manhattan Project, Bohr failed to persuade President Franklin D. Roosevelt and British prime minister Winston Churchill to include the Soviet Union in its research on the atomic bomb. After the war Bohr focused on the peaceful uses of atomic energy and opposed the arms race. He died in Copenhagen on November 18, 1962.

—*Christopher Cumo*

much like a miniature solar system. If electrons moved around the nucleus, they must use energy. With nothing to give them energy, electrons must slow and, being attracted to the nucleus, spiral into it, collapsing the atom. The fact that this did not happen meant that Rutherford's model of the atom was incorrect.

Rejecting the solar system model of the atom, Danish physicist Neils Bohr (1885–1962) in 1913 asserted that electrons occupy energy levels. At a lower level an electron is stable and not in danger of spiraling into the nucleus. An electron has some quanta of energy. When an electron absorbs energy, it jumps to a higher energy level. When it returns to its original level, an electron emits a photon of light. In this model of the atom, Bohr borrowed from the work of German physicists Max Planck (1858–1947) and Albert Einstein (1879–1955), both of whom described energy in terms of a fundamental unit, the quantum.

In 1923 French physicist Louis de Broglie (1892–1987), borrowing the idea that particles and waves are two manifestations of the same phenomenon, asserted that electrons are not merely particles; they are also waves. The atom therefore contains electron-waves that oscillate around the nucleus. A wave can only occupy distances from the nucleus that are whole-number multiples of the wavelength of each electron-wave. What Rutherford had described as an orbital, de Broglie described as an electron-wave. As was true of Bohr's model, an electron could only occupy discrete spaces in the atom.

Retaining de Broglie's notion of an electron-wave, German physicist Erwin Schrodinger (1887–1961) emphasized in the late 1920s the impossibility of pinpointing the location of an electron-wave. At best one could express only some probability that an electron-wave occupied a region of the atom. Schrodinger's compatriot Werner Heisenberg (1901–1976) went further than Schrodinger in abolishing all models of the atom. One could never pinpoint anything in the atom with certitude, making futile the attempt to visualize the atom. For Heisenberg, the atom had a structure but one that was fundamentally unknowable.

In contrast to Heisenberg, Rutherford and his postdoctoral students continued to believe that the atom's structure was knowable. In pursuit of this structure, one of Rutherford's students, James Chadwick (1891–1974), discovered that in addition to protons, positively charged particles, the nucleus of most atoms also contains neutrons, particles with the same mass as protons but without an electrical charge. Because neutrons have no charge, they could be fired at the nucleus of an atom without being repelled by the protons. In the 1930s, German physicists Otto Hahn (1879–1968) and Friedrich "Fritz" Strassmann (1902–1980), the Austrian-born Lise Meitner (1878–1968), and the Italian physicist Enrico Fermi (1901–1954) bombarded the nucleus with neutrons. Under this assault the nucleus split apart, converting a tiny amount of matter into energy in accord with Einstein's equation $E=mc^2$. Because the speed of light squared equals 90 million billion meters per second squared, the nucleus of an atom contains enormous energy. The belligerents in World

War II attempted to build an atom bomb based on the work of Hahn, Meiter, and Fermi. The United States succeeded in 1945, dropping two atom bombs on Japan and bringing about the end of World War II.

Putting aside Heisenberg's insistence that the structure of the atom is unknowable, one might visualize the atom as vast stretches of empty space, as Rutherford had urged, with a massive dense core. In this nucleus, physicists have since the 1960s identified still smaller particles that are the building blocks of protons and neutrons. U.S. physicist Murray Gell-Mann (1929–) identified the quark as the constituent of protons and neutrons and therefore of all matter. The electron, however, is not composed of quarks but is itself a fundamental particle. The electron occupies the empty space of the atom, but where precisely is a matter of probability rather than certainty.

—*Christopher Cumo*

Bibliography

- Goldstein, Natalie. *How Do We Know the Nature of the Atom*. New York: Rosen Publishing Group, 2001.
- Pullman, Bernard. *The Atom in the History of Human Thought*. New York: Oxford University Press, 1998.

Uncertainty Principle

The uncertainty principle, an aspect of quantum theory, departed from the classical physics of the nineteenth century. Classical physics held that one can measure quantities with precision: the amount of heat that an object radiates, the position of an object, the speed and momentum of a moving object, time, and numerous other quantities. This claim of classical physics, in line with common sense, was unchallenged until 1927, when German physicist Werner Heisenberg derived the uncertainty principle.

The uncertainty principle held that classical physics applied only to the macroatomic world. The subatomic world did not behave according to classical physics. Consider the attempt to fix both the position and momentum of an electron as it moves around the nucleus of an atom. To fix the electron's position, one must aim a wave of light

➤ HEISENBERG ON UNCERTAINTY

In his Nobel Lecture, delivered on December 11, 1933 (after being awarded the prize in 1932), Werner Heisenberg explained the importance of the principle of uncertainty to quantum theory:

“The perturbation of the system to be observed caused by the observation is also an important factor in determining the limits within which a visual description of atomic phenomena is possible. If there were experiments which permitted accurate measurement of all the characteristics of an atomic system necessary to calculate classical motion, and which, for example, supplied accurate values for the location and velocity of each electron in the system at a particular time, the result of these experiments could not be utilized at all in the formalism, but rather it would directly contradict the formalism. Again, therefore, it is clearly that fundamentally unverifiable part of the perturbation of the system caused by the measurement itself which hampers accurate ascertainment of the classical characteristics and thus permits quantum mechanics to be applied.”

—*Christopher Cumo*

Source

Werner Heisenberg, Nobel Lecture, 1933, http://nobelprize.org/nobel_prizes/physics/laureates/1932/heisenberg-lecture.html.

at it. The light will rebound from the electron to the observer, just as light rebounds from a mirror to the eye. A physicist would prefer to use a low-energy long-wavelength wave of light in hopes of causing the least disturbance to the electron. But such a wave of light has a margin of error as large as the wavelength is long. A short wavelength of light will more accurately locate the position of the electron, but this wave has high energy that will knock the electron from its path, changing its momentum. One cannot therefore measure both the position and momentum of an electron with precision. The very act of trying to measure something in the subatomic world disturbs that world, making impossible a precise measurement of its properties. Physics therefore was a study not in precision but rather in probability.

The assertion that precise measurement in the subatomic world was impossible created a stir among physicists. Danish physicist Neils Bohr joined Heisenberg in supporting the uncertainty principle, but German physicist Albert Einstein, believing that physicists could know something with more than a degree of probability, broke from Heisenberg. Einstein believed, contrary to the uncertainty principle, that physicists could know the properties of an object with certainty, and he challenged Bohr and Heisenberg with a thought experiment. Suppose one has a box with radioactive atoms and a clock to measure time. At precise times a door to the box opens for an instant, allowing subatomic particles emitted by the radioactive atoms to exit the box. At the end of the experiment one will know how much time elapsed with precision. If one weighed the box both before and after the experiment, one may calculate with precision the amount of energy given off by the radioactive atoms during the experiment. One can therefore know properties in the physical world with precision and not merely to a degree of probability. Although Einstein had been an early architect of quantum theory, his estrangement from the uncertainty principle led him away from quantum theory. Despite Einstein's defection, a new generation of physicists, many of them younger than he, came to accept the uncertainty principle. The battle over the uncertainty principle was something of a generational struggle, with the older Einstein ceding ground to the younger Heisenberg.

—Christopher Cumo

Bibliography

- Peat, F. David. *From Certainty to Uncertainty: The Story of Science and Ideas in the Twentieth Century*. Washington, DC: Joseph Henry, 2002.
- Suplee, Curt. *Physics in the 20th Century*. New York: Abrams, 1999.

Continental Drift

The first half of the twentieth century marked a period of increasing debate over long-held geological principles, which ultimately resulted in one of the most significant revolutions in mod-

ern scientific thought. Whereas nineteenth-century geologists believed that the earth was cooling down and that the rate of its movement was in decline, by the 1960s the theory of plate tectonics had convinced scientists that the earth's landmasses were like rafts of lighter rock floating on the plates beneath them.

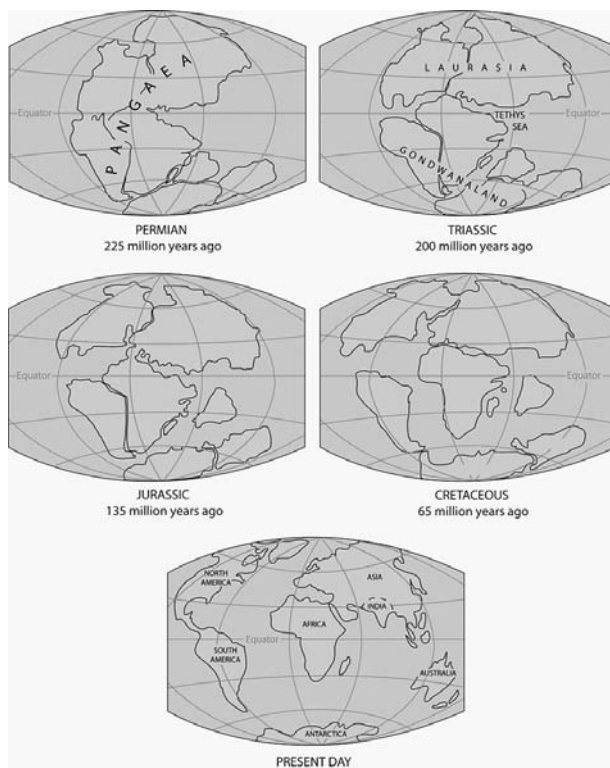
The continental drift hypothesis was first presented as a serious scientific proposal by the German geophysicist Alfred Wegener in 1912 and reached a wider audience in 1915 with the publication of his book, *Die Entstehung der Kontinente und Ozeane* (*The Origin of Continents and Oceans*), translated into English in 1924. Wegener was certainly not the first person to notice that the coastlines of Africa and the Americas looked like interlocking pieces of a jigsaw puzzle, separated by the Atlantic Ocean, but he was the first to systematically build a comprehensive theory that sought to make sense of this phenomenon. His interest was driven by the discovery of identical or near-identical fossils of animals in Africa and South America, suggesting that the two continents must have been connected. Previously, scientists seeking to explain these floral and faunal similarities had suggested that a land bridge had formerly crossed the South Atlantic Ocean long ago; some even speculated that the Atlantic Ocean had been formed over the former continent of Atlantis or out of an enormous valley. Alternative theories of independent evolutionary development seemed far too improbable.

But Wegener showed that there was no indication of any such land bridge and produced further supporting evidence for what he called continental displacement by stressing geological similarities on both sides of the ocean. To illustrate, Wegener offered a comparable analogy: "It is just as if we were to refit the torn pieces of a newspaper by matching their edges and then check whether the lines of print run smoothly across," he wrote in *The Origin of Continents and Oceans*. "If they do, there is nothing left but to conclude that the pieces were in fact joined this way." As his hypothesis began to take shape, Wegener posited that the world had consisted of a supercontinent or protocontinent during the Mesozoic era. He called this continent Pangaea. Relatively recently, in geological time, Pangaea

had begun to fracture, and the fragments had separated and moved away from one another, thereby creating the continents with which we are familiar. According to Wegener, this also explained the mountain ranges along the western fringes of North and South America; if the continents were pushed laterally across the earth's surface, friction would cause the leading edge of the continental plate to crumple, creating mountain ranges.

In general, Wegener's contemporaries—especially those based in North America—were not convinced by his continental drift theory. It was especially difficult to imagine large continents forging across the sea floor without a plausible explanation for what kind of forces could move such large masses of solid rock over such significant distances. The older theories maintained that the earth's surface—rather than shifting laterally—was forced up and down as its crust relieved pressure brought on by the cooling interior, which reduced in volume. This disagreement on how the earth moved was the focal point of nineteenth-century earth sciences. Nineteenth-century geologists were divided between catastrophists and uniformitarians, with catastrophists insisting that changes to the earth occurred sporadically and violently, while uniformitarians supported the idea that the earth endured a relatively steady state of change over a much longer period of time.

By the beginning of the twentieth century the catastrophists were in the ascendancy, but Wegener's theories offered ammunition for uniformitarianism, sparking debate. Wegener's work also contained some important weaknesses that would eventually be resolved, but not before his death in 1930 while on an expedition in Greenland. Most significantly, Wegener's belief that the continents were like ships that plowed through the ocean floor proved weak. Wegener thought, incorrectly, that the underlying heavier oceanic crust of *sima*—rock comprised mainly of silicon and magnesium—was static. The result made it supremely difficult to effectively argue that the continents were pushed across this surface without colossal friction. Undaunted, Wegener proposed that the crust was not rigid but instead was susceptible to continuous pressure that might allow the con-



Alfred Wegener's pictorial description of continental drift.
(United States Geological Survey)

tinents to drift. Even this was dubious; the English geophysicist Harold Jeffreys dismissed this hypothesis when he correctly observed that a large mass of solid rock could not possibly plow through the ocean floor as Wegener suggested without breaking up.

Some of Wegener's critics also took issue with his credentials. Wegener had been trained as a meteorologist rather than a geologist. Several critics chastised Wegener for his attempts at adopting geology, paleontology, and paleoclimatology to support his claims. Furthermore, it did not help that he was German at a time of rising anti-German sentiment. The Yale University paleontologist Charles Schuchert, for example, dismissed continental drift as a "German theory." These disputes over professionalism were, on some level, justified insofar as Wegener did tend toward generalization, but they also smacked of tensions in the profession between newcomers such as Wegener, with a geophysics orientation, and an old guard that relied more on data collection. Nevertheless, Wegener's lack of specific training in geology might have actually provided

the intellectual flexibility to develop a completely novel interpretation about earth movement.

His bigger idea that the continents had once composed a single continent and were now drifting across the planet's surface persisted and gave rise to the modern theory of plate tectonics. The threat of submarines during World War II and later during the Cold War created a context for geophysicists to engage in careful study of the sea floor. The discoveries from these studies justified Wegener's claims and provided the vital missing evidence. As heat from the center of the earth moved toward the mantle, it dispersed from hot places to cooler places. In so doing, the heat energy moved rocks slowly below the earth's surface, which in turn dragged the crust that lay over them, thus causing the continents to move. By the 1960s continental drift had supplanted older theories and at the same time supplanted scientific definitions of what constituted good science.

—Michael Egan

Bibliography

- Oreskes, Naomi. *The Rejection of Continental Drift: Theory and Method in American Earth Science*. New York: Oxford University Press, 1999.
- Schwarzbach, Martin. *Alfred Wegener: The Father of Continental Drift*. Madison, WI: Science Tech., Inc., 1986.
- Stewart, John A. *Drifting Continents & Colliding Paradigms: Perspectives on the Geoscience Revolution*. Bloomington: Indiana University Press, 1990.
- Wegener, Alfred. *The Origin of Continents and Oceans*. New York: Dover, 1966.

Eugenics

In 1883 British mathematician Francis Galton coined the term “eugenics” from the Greek *eu-genes*, for well-born. Whereas his cousin Charles Darwin had identified natural selection as the mechanism of evolution, Galton believed that humans could transcend natural selection by shaping their own heredity through selective breeding. According to Galton, the mating of the intelligent and industrious would yield the well-born, whereas the mating of degenerates would produce criminals and the insane. The goal of

eugenics was to encourage the breeding of superior humans and to discourage the breeding of inferior people.

Adherents labored to make eugenics a science. They grounded their work in the selective breeding of crops and livestock at the agricultural colleges, noting with regret that some scientists paid more attention to the breeding of corn than to the breeding of humans. Rejecting the position that both heredity and the environment shape humans, eugenicists focused on selective breeding because they believed that heredity alone codified the destiny of humans. Eugenicists scoffed at social workers who believed that improvements in nutrition and education could better the lives of the poor. The poor were degenerates who had fallen into poverty through a lack of innate talent and ambition. No amount of social engineering could change their fate.

The rediscovery and application of Mendelian genetics after 1900 seemed to strengthen eugenics. Austrian monk Gregor Mendel had understood that particles (genes) code for traits and pass from generation to generation. From this insight, eugenicists argued that a small number of genes are coded for intelligence, frugality, or industriousness on the one hand and stupidity, prodigality, and sloth on the other hand. Furthermore, eugenicists compiled pedigrees to chart the passage of these characteristics through the generations of a family.

The movement toward intelligence testing in the 1910s further emboldened eugenicists, who claimed that these tests measured innate intelligence and so ranked the inherent cognitive abilities of the people who took them. Eugenicists used the term “feeble-mindedness” as a blanket condemnation of people with low scores, though eugenicists could not agree on the score that separated a “feeble-minded” person from someone with a low but functional level of intelligence. As a rule, immigrants scored lower on intelligence tests than did native-born Americans, enhancing the claims of eugenicists that some races were genetically inferior to others.

The shift in the debate from the individual and the family to the race marked the most sinister phase in eugenics, which came to be more a social and political movement and less a science. Eugenicists in the United States, heirs to centu-

ries of racism, identified blacks as the cauldron of harmful genes and decried miscegenation. In 1920 Indiana barred the marriage of a white person to a person who was as little as one-eighth black, and more than half the states had laws against miscegenation. In 1924 the U.S. Congress passed the Immigration Restriction Act, reducing the number of immigrants from Southern and eastern Europe. Eugenicist Harry Laughlin's testimony, arguing that such immigrants were feeble-minded, was a major factor in convincing Congress that such legislation was appropriate.

The restriction on immigrants did nothing to solve the eugenicists' problem of what to do with the "degenerates" already in the country. In both the United States and Germany, authorities took alarm at the burgeoning populations in prisons and mental institutions. These people, housed and fed at taxpayer expense, did not have the biological potential to contribute to society, according to eugenicists. If one could do little to salvage the current generation, one could reduce the future population of degenerates by sterilizing criminals and the insane. Indiana passed the first sterilization law in 1907, and between 1910 and 1941 surgeons reportedly sterilized more than 38,000 criminals, the mentally ill, and the feeble-minded in the United States. Furthermore, it is estimated that between 1933 and 1937 Germany sterilized 400,000 detainees in prison and mental institutions. Going a step further in an attempt to rid the country of degenerates, Germany began a euthanasia program in 1939, killing a reported 70,000 mental patients by 1941. The Nazi effort to purge Germany of inferior races led to the Holocaust. In distorted form, eugenics thus contributed to the death of millions.

With the Holocaust fresh in the minds of many, scientists fled from eugenics. By 1945 the movement seemed to be dead. In the long term, the fate of eugenics is less clear than it appeared in 1945, with some social critics wondering if later efforts at population control are nothing more than a form of eugenics.

—Christopher Cumo

Bibliography

Bachrach, Susan. *Deadly Medicine: Creating the Master Race*. Chapel Hill: University of North Carolina Press, 2004.

➤ FORCED STERILIZATION OF THE "FEEBLE-MINDED"

The following excerpt, from a U.S. Supreme Court decision written by Oliver Wendell Holmes Jr., indicates the extent to which eugenics was accepted doctrine in the early twentieth century:

"Carrie Buck is a feeble-minded white woman who was committed to the State Colony above mentioned in due form. She is the daughter of a feeble-minded mother in the same institution, and the mother of an illegitimate feeble-minded child. She was eighteen years old at the time of the trial of her case in the Circuit Court in the latter part of 1924. An Act of Virginia approved March 20, 1924 (Laws 1924, c. 394) recites that the health of the patient and the welfare of society may be promoted in certain cases by the sterilization of mental defectives. . . .

We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes."

—Christopher Cumo

Source

Justice Oliver Wendell Holmes, Majority Opinion in *Buck v Bell*, 1927.

Kevles, Daniel J. *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. New York: Knopf, 1985.

The Big Bang

A cosmological model, the Big Bang Theory, a phrase coined by a detractor, states that the universe began some 13.7 billion years ago. At the beginning of time the universe was a tiny, dense ball of energy. This energy rushed out in all

➤ EDWIN POWELL HUBBLE

Born on November 20, 1889, in Marshfield, Missouri, Edwin Powell Hubble studied mathematics, astronomy, and philosophy at the University of Chicago, earning a BS in 1910. A Rhodes scholar at Oxford University, Hubble initially studied law but instead switched to Spanish, receiving an MA in 1913. Back in the United States, he taught at New Albany High School in Indiana and was admitted to the bar in Kentucky. Having no interest in law, Hubble returned to the University of Chicago from which he received a PhD in 1917. In 1919 he joined the staff at Mount Wilson Observatory, where he remained the rest of his life. His fame rests on his confirmation of the redshift, an insight he used to demonstrate that the galaxies were moving away from each other. The victim of a blood clot in the brain, Hubble died on September 28, 1953, in San Marino, California.

—Christopher Cumo

Edwin Hubble at the guide telescope of the 1.2m Schmidt camera at the Mount Palomar Observatory in California, 1949. (Ann Ronan Pictures)



directions into space in an explosion. The initial phases of this explosion lasted only 10^{-43} seconds. During this instant, all four forces in the universe—gravity, electromagnetic force, and the weak and strong nuclear forces—equaled one another, implying that they may all have been a single force in the first instant in time and only became independent forces during the initial expansion. In the second stage of the universe's expansion, the inflation era, the universe expanded at a rapid rate. During this stage, some of the energy from the initial surge began to form quarks, electrons, protons, and neutrons, the building blocks of all matter. Lasting for roughly 100,000 years, the third stage of the Big Bang spawned the formation of hydrogen and

helium, the first two elements on the Periodic Table. These elements formed all the heavier elements, such as carbon and oxygen, that are essential for life. During the last stage of the Big Bang the stars and planets coalesced out of hot gases, and the universe assumed its characteristic form.

The belief in the stasis of the universe is as old as humanity, but in the twentieth century astronomers would overturn this idea in favor of an expansionary universe. As a theory, the Big Bang did not originate with one scientist. As is true of many discoveries, several people shared credit for shaping this theory. In 1912 American astronomer Vesto Slipher discovered that light from distant stars reached earth as long-wave

light (infrared light, for example), whereas he had expected short-wave light (ultraviolet light, for example). The wavelength of this light had stretched because, Slipher realized, the stars were moving away from earth. The stretching of these stars' wavelengths shifted their light spectrum toward the color red. For this reason, this change in wavelength is known as the redshift. In the 1920s American astronomer Edwin Hubble announced that these stars were part of other galaxies that were moving away from earth and from one another.

In 1931 French astronomer and philosopher Georges Lemaitre realized that all galaxies were rushing away from one another as though they had been shot out of a cosmic cannon. The universe must be expanding. This expansion must have arisen from a primordial explosion in the distant past. In the 1940s Soviet physicist George Gamow and American physicist Ralph Alpher, accepting Lemaitre's ideas, postulated that the universe should contain large amounts of microwave radiation, a residual form of energy left over from the Big Bang. In 1964 the Soviets A. G. Doroshkevich and Igor Novikov detected this background radiation. That year, Bell Laborato-

ries scientists Arno Penzias and Robert Wilson verified the Soviets' findings. The work of these four confirmed the Big Bang Theory.

The Big Bang Theory may illuminate the fate of the universe. Scientists must determine whether the universe will keep expanding or whether this expansion will slow down, halt, and finally lead the universe to collapse upon itself. At issue is whether the universe has enough matter for gravity to overcome the forces of expansion. There is no consensus, although the majority holds that the universe will expand forever, growing colder in the process until it is a lifeless collection of matter and energy, scarcely above absolute zero.

—*Christopher Cumo*

Bibliography

- Fox, Karen C. *The Big Bang Theory: What It Is, Where It Comes from, and Why It Works*. New York: Wiley, 2002.
- Levin, Frank. *Calibrating the Cosmos: How Cosmology Explains Our Big Bang Universe*. New York: Springer, 2007.
- Singh, Simon. *Big Bang: The Origin of the Universe*. New York: Fourth Estate, 2004.

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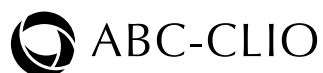
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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

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130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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ERA 9 Promises and Paradoxes, 1945–Present

Janus (for whom the month of January is named) is an appropriate image for the current era. As the god of beginnings and endings, entrances and exits, his two faces allowed him to look backward as well as forward, seeing the past as well as the future. Historians of this era look backward, as historians must, but with the realization that they also are working at the advanced edge of human history, facing the future. Our task is to examine and bring some order to the history of the immediate past, about which it is nearly impossible to be completely objective. There is an important disjuncture between historical vision, however keen, and the interpretation of events as they approach the present. As Janus is at the very least middle aged, events closest to his gaze are least likely to be in clear focus. The people, places, events, and things that are today considered to be of great historical importance will in many cases be soon forgotten. Other events or persons, now little noticed, will come to be seen as of paramount importance.

Having acknowledged these limitations, we will immediately predict that future historians looking to the post-1945 period will pay particular attention to certain key events and trends. The Cold War, decolonization, the increasing sophistication and breadth of technology, and increasing globalization will assuredly find prominent places in future history textbooks. This era's starting date, 1945, marked the end of World War II and a political and cultural landscape sharply altered and ripe for further change worldwide. Colonized people saw in the increased humanitarian rhetoric of the postwar era and shifting fortunes of colonial powers a chance for autonomy and a dismantling of European imperialism. At the same time, national economies geared for war production shifted slowly to the production that allowed consumer societies to emerge in full force. The scientific and technological research that had marked the war's end with the atomic bomb attacks by the United States on Japan provided a name to describe the newness of the post-1945 era, expressing both its promises and anxieties, that is, the Atomic Age, which soon begat the Space Age and then the Information Age, all such names indicating the primacy of technology and its hold on the imagination.

The Cold War

Despite the wide devastation of World War II, which left more than 60 million dead, many people began the postwar era with great, but short-lived, optimism. The fearful military strength of the Axis powers had been crushed, only to be followed by a new and complex competition.

The two states that emerged as triumphant world powers, the United States and the Soviet Union, appeared unable to easily coexist. Each side promoted an economic system incompatible with the other and promoted its system in the fervent belief that in it was the last best hope of humanity. The U.S.-aligned states championed capitalism, with its ideology of individual freedom matched by free markets, while many also simultaneously expanded the welfare state along a moderate socialist trajectory. The communist world championed central command economies promoting social equality.

The political and military conflict was already evident when the leaders of the United States, the Soviet Union, and Britain met in Yalta in 1945 to discuss the postwar political map. At Yalta, Josef Stalin signaled to Franklin D. Roosevelt and Winston Churchill that the Soviet Union did not intend to withdraw its power or influence from Eastern Europe. By 1947, as elections in Poland were manipulated to support Soviet interests, as the Soviet Union and the United States clashed over the fate of West Berlin, and as a communist insurgency in Greece threatened Western interests, U.S. president Harry Truman issued the Truman Doctrine, insisting that the United States would aid “freedom-loving peoples” anywhere in the world seemingly threatened with communism. While the Soviet Union consolidated its power over Eastern Europe, the aid funds of the U.S. Marshall Plan bolstered West European economies to make communism a less attractive alternative and to increase U.S. overseas markets. By 1947 the Cold War had begun, along with a nuclear arms race and nuclear brinkmanship.

As both the United States and the Soviet Union built up their nuclear arsenals in the immediate postwar period, the world neared nuclear confrontations several times. One of the first followed the outbreak of the Korean War, when Soviet- and Chinese-supported North Korean forces swept past the 38th parallel in 1950. The U.S. military and the Truman administration seriously weighed the option of dropping atomic bombs on targets in the Soviet Union, North Korea, and China as a way to quickly end that confrontation but abandoned it in favor of supporting a plan whereby United Nations (UN) allied forces would protect South Korea and repel North Korean forces. Nuclear diplomacy also was unveiled behind the scenes during the Berlin Crisis of the late 1940s and in the later Berlin crises of the late 1950s and early 1960s when U.S. presidents Dwight D. Eisenhower and John F. Kennedy could only vaguely hint at atomic retribution if the Soviets, with their far superior land armies, made good on their veiled promises to seize control of West Berlin, an isolated Western pocket within the territory of East Germany. The Cold War again almost became hot in 1962 during the Cuban Missile Crisis when the United States learned of nuclear missile installations—capable of targeting U.S. cities—that the Soviets had placed on that island nation. For nearly a week, U.S. ships imposed a blockade on Soviet ships headed toward Cuba, and both sides, with their militaries on high alert, weighed nuclear options. Following the Cuban Missile Crisis, the first treaty talks between the United States and the Soviet Union began to limit nuclear missiles. Atomic diplomacy shifted from direct offensive threats to decisions to limit Cold War military confrontations to the

confines of proxy and confined regional wars, most notably the Vietnam and Afghanistan wars.

As the Cold War became the supreme issue in international politics, it also reshaped the cultural landscape. Both superpowers vied for supremacy not only in nuclear weapons but also in missions to outer space (whether unmanned satellites or spacecraft holding dogs, monkeys, or humans), consumer goods production, science education, and international chess matches. Each of the superpowers wished to lay claim to the mantle of modernity. At the same time, the ideological competition between the communist Soviet Union and the capitalist United States played out in hot spots around the globe, particularly as nationalist movements sought international support and sponsors. One prime example is Vietnam. Following World War II, Ho Chi Minh's decade-long nationalist struggle in Vietnam against French and Japanese imperialism slowly morphed into a Cold War set piece, with the People's Republic of China (PRC) and the Soviet Union aiding Ho Chi Minh in North Vietnam and the United States supporting the procapitalist and nominally democratic government of South Vietnam.

Afghanistan was the last of the proxy battlefields of the Cold War, as Soviet troops and tanks entered Afghanistan in 1979 to support a communist government that lacked popular support, while the United States quietly funded insurgent troops inspired by an Islamist ideology. By the late 1980s, in part a result of enormous Cold War expenditures, the Soviet Union's economy was stretched to its brink, and the Soviet state's ensuing disintegration, official as of 1991, severely altered the political and economic landscape of Eastern Europe, Central Asia, and the Caucasus.

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Decolonization

During both world wars, European powers and Japan relied on their colonies for support. The defeat of Japan and the weakening of the European powers left previous colonies or dependent states in a precarious position. For more than a century, a sense of nationalism had been developing across Asia, Africa, and Latin America, encouraging anticolonial sentiments and, in Latin America, protests against neo-colonialism. In India, with an already decades-old independence movement, South Asians had fought on behalf of Britain with promises of autonomy following that war. Postwar independence was delayed as street conflicts approaching anarchy broke out between the country's Hindu majority and Muslim minority; after much rioting and upheaval, India, quickly divided into a largely Hindu India and a Muslim East and West Pakistan, ultimately gained independence in 1947. The founding of India and Pakistan as independent nations signaled the first major

concession of European colonialism over an enormous population and landmass as well as the attendant perils of civil war during partition. Anticolonial struggles worldwide were emboldened, particularly as the newly formed UN and the two new superpowers formally repudiated colonialism (although their own practices were somewhat ambiguous). Between 1945 and 1985, more than 80 countries achieved independence. Some accomplished this with relative ease and little bloodshed; others suffered intense—sometimes genocidal—violence.

Technology and “Progress”

Many of the more dramatic technological advances of the late 20th century had Cold War origins. From the dropping of the first atomic bomb over Hiroshima, the world was gripped with a sense that a new age—the Atomic Age—had dawned. Atomic bombs were horrifying yet awe-inspiring and were celebrated in their own fashion with so-called atomic cocktails and fashion photographs of “Miss Atomic Bomb.” The dreadful backdrop of nuclear holocaust also fit the fervent nihilism associated with art movements such as abstract expressionist painting, bebop music, and later jazz experimentation. The flip side of terror over possible nuclear destruction was utopian dreams of human ingenuity and the eventual benefits of the friendly atom when harnessed to industrial and home energy needs. The consumer abundance spreading across the capitalist West underlined the possibility that technology—and capitalism—could provide comfort and new luxuries. In this sense, the Cold War competition extended from the sphere of the kitchen and on into outer space. Beginning with the Soviet Union’s launch of Sputnik in 1957, the superpowers funded costly space missions, vying for dominance in outer space often as a staged sideshow to advances in missile designs. Yet slowly through the decades, while the military repercussions of space exploration never subsided, space ventures turned from nationalistic spectacles to set pieces for global scientific cooperation.

The space programs also paralleled and intertwined with advances in electronics. As integrated circuits etched on silicon chips replaced vacuum tubes as switching devices and as information processing was miniaturized, the now widely available progeny of the enormous ENIAC computer built for the U.S. military during World War II and its counterparts in Europe slowly fueled a revolution in electronic goods, computing, communications, media, lifestyles, and thought. Machine Age metaphors (“shifting gears,” “accelerate”), rampant since the early 20th century, gave way to Information Age metaphors (“multitasking,” “networking”) in vernacular expressions.

Technology and science also changed the world’s demographics. A far quieter revolution ensued with a base in medicine and public health, as regimented agriculture and the postwar spread of public health measures, including at its most basic level inoculation campaigns, mosquito abatement, and clean drinking water increased lifespans and the world’s population. In this same period, new drug regimens and treatments had

made some forms of cancer and other formerly deadly diseases manageable. The earth's human population of 2.6 billion in 1950 skyrocketed to 6.5 billion in 2005. Average life spans increased, and infant mortality rates decreased to a third of their 1950 levels over this same period.

The Cold War era with its technological advances renewed with new vigor debates over the utopian or dystopian promise of new technologies. Nuclear power provided inexpensive energy but left behind deadly radioactive waste. The fertilizers and pesticides that aided the Green Revolution in agriculture and averted famines also entered groundwater, ecosystems, body tissues, and human breast milk. The demand for oil led to oil spills that devastated wildlife. The comforts and freedom of automotive travel caused unhealthy smog. Industrial production following market incentives led to the poisoning of land, water, and air. Critiques of the new postwar prosperity slowly emerged in academic and popular books and in movements of the 1950s and 1960s that questioned the assumptions and hidden sacrifices involved in "progress."

The environmental movement that emerged in the 1970s gave voice to these concerns. It offered a critique of rampant technology and insisted on an economics of limits and on an ethic based not only on utilitarian concerns regarding human life but also on the needs of the larger living communities of the earth. One of the more profound symbols of this movement was the "Whole Earth" photograph supplied by NASA from the Apollo 17 mission of late December 1972 that revealed the earth as a fragile harbor for life, a blue marble pressed in the darkness of space, revealing an icy white Antarctica and a sandy brown Africa surmounted with white clouds and surrounded with blue oceans. By the early 21st century, concerns for the human impact on the "whole earth" rose, as the likelihood of human-induced climate change, with increasing atmospheric levels of greenhouse gases affecting polar ice levels, sea levels, and climactic patterns shifted from a highly speculative theory to a pillar of policy making.

Globalization and Antiglobalization

One of the characters in Ernest Hemingway's *The Sun Also Rises*, when asked how he went bankrupt, answered, "Two ways . . . gradually and then suddenly." Much the same can be said for the emergence of globalization as a defining characteristic of the late twentieth and early twenty-first centuries. Centuries in the making, globalization defies easy definition. It is based on an evolving technological infrastructure in shipping, transport, travel, communications, and finance that has created worldwide networks and allowed corporations, industries, and other institutions to decentralize and link with partners in formerly remote regions. From these myriad networks, resources, products, and ideas can be transported and changed. People too are a component of globalization, whether tourists or shifting populations of intellectual and physical laborers. International financial institutions such as the World Bank, the International Monetary Fund, and the Group of 8 also

have helped steer national economies toward greater interconnection and dependencies. Ways of life and thought have changed as the local intersects the global.

Globalization challenges older physical, political, and geographical boundaries. On the political front, globalization is marked with the increasing power of nongovernmental organizations (NGOs), including health and charitable organizations such as the International Red Cross, Oxfam, and Doctors without Borders (Medicins Sans Frontieres); political or environmental watchdog groups such as Amnesty International, Greenpeace, or the World Wildlife Fund; and international economic groups such as the World Bank, supranational institutions such as the European Union, and the UN and its myriad organizations.

Such evolving institutions with their multinational bases indicate a challenge to older parochial boundaries between nations and peoples. For some, globalization represents the triumph of U.S.-styled consumerism, while for others it represents the triumph of the multinational corporation over the nation-state. Sociologists speak of global cities with corporate headquarters, consumer centers, and retail chains such as Starbucks and Wal-Mart offering similar products in Brasilia, Boston,

Beijing, and Buenos Aires. Anthropologists insist that the global trend toward homogenization must nevertheless navigate the local, including customs and tastes, hence hamburgers with rice buns in Japan and teriyaki-flavored chicken sandwiches in the United States. Few would still argue that globalization is Americanization. The United States can no longer be regarded as the world's sole transmitter of consumerism. A modern automotive corporation, for

example, might have originated in England; might now be based in Germany; might have factories in South America and Asia, banking affiliates in the Middle East, and phone support in South Asia; might engage in joint ventures with a U.S.-based automotive firm; and might rely on parts shipped from all over the world.

Global migrations and new technologies also encourage global flows of ideas, ideologies, and religions. Since 1945, the efforts of missionaries and grassroots efforts have made Christianity a global faith embraced by one-third of the world's population, with the majority no longer based in Western countries. Despite predictions that African nations would turn away from Christianity following decolonization, Christianity in Africa has instead grown. In 2000 half the total population of Africa embraced some form of Christianity, and Africa remained fertile ground for conversions to Roman Catholicism and Protestant denominations, many of which included syncretic elements such as dance in church services. Since 1945, North American-inspired Pentecostal churches have made large inroads in traditionally Roman Catholic Latin America. Islam has also grown since 1945, following rising birthrates, and has had an increasing impact on politics with the rise of Islamist thought and political agendas. While moderate Muslims advocate inclusion in

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secular societies, Islamists reject the movement toward secularism and instead encourage the creation of governments whose rule is based on the Quran and Sharia. Extremists among these proponents have formed terrorist groups to destabilize contested regions and Western governments.

As people have become more mobile, with larger flows of transnational migration, or as people link electronically on the Internet, personal and group identities too have become more fluid. Globalization arguably has its positive effects, exposing people to new ideas, comforts, and possibilities that may lead to more rewarding identities and lives. In addition to material comforts, cultural productions also have spread, creating common ground, with, for example, hip-hop music devotees in myriad countries. Yet there is a flip side to such spreading cosmopolitanism: a loss of tradition, of cultural norms, and even a loss of a sense of place. The threat of a homogenized landscape and the alienation it can evoke has underpinned leftist critiques and reactionary movements, including terrorism (from ecoterrorism to the significant rise of fringe Muslim terrorism) and older forms of xenophobia, such as anti-immigration movements. Likewise, the benefits of globalization flow toward elite nations (the industrial or postindustrial North) and the elites within nations. As in the unrestrained capitalism of the 19th century, the neoliberal era of global corporations exacerbated the exploitation of natural resources, including people. Mobility of production benefits multinationals while severely undermining the power of labor unions and exploits workers in less developed nations (or the South) coerced or enticed to labor in sweatshop conditions. By late 2008, there were signs of curbs on globalization, as rising oil prices increased transport expenses and made the outsourcing of production less attractive. The economic meltdown that spread globally beginning in 2008, leading to the collapse of banks and lending and increased joblessness, also illustrated the vulnerability of interlinked economies.

The Cold War, decolonization, new technologies, and globalization have been primary shaping forces of world history since 1945. Their effects can be clearly observed when examined on a regional level.

Sub-Saharan Africa

Nationalism, colonialism, and Cold War ideological battles were a volatile mix in post-World War II Africa. As historians Erik Gilbert and Jonathan Reynolds observed in *Africa in World History* (2007), the history of Africa seems to provide the best examples of the “triumphs and tragedies” of the postwar years. At the end of the war, all of Africa was at least nominally under the control of European states except for South Africa (dominated by white settlers), Liberia, and Ethiopia. At the same time, the war had left the imperial powers Britain, France, Belgium, and Italy with devastated infrastructures and wrecked economies. They were not anxious to divest themselves of the colonies that might provide the labor and materials to rebuild. Yet none was anxious to alienate either of the two remaining superpowers, both of which were ideologically

opposed to colonialism (although both employed hegemonic practices that were sometimes tantamount to informal colonialism, or neocolonialism). The United States—officially dedicated to the concepts of free trade and self-determination—promoted the view that Africans who had helped defeat the Axis powers had earned independence. The Soviet Union also supported African independence, holding to the Marxist-Leninist precept that colonies were the highest stage of capitalism. Both superpowers, however, routinely intervened in any instance where they perceived their own national interests at jeopardy.

After the war, Belgium and Portugal tried to operate on a business as usual basis in Africa, but Britain and France attempted to strike a course that would pacify African nationalism and avoid ideological confrontations with the United States and the Soviet Union. European political innovations, primarily consisting of a cosmetic increase in African participation in government (without actually reducing European control), generally fell flat. There was a strong residue of mistrust and hatred lingering from previous exploitation. In the Congo, for instance, the brutality of Belgian rule had been shocking even to the other colonial powers; no superficial changes could erase the remaining acrimony. Resentments lingered toward the less brutal colonial powers as well. Some of their economic innovations resulted in disaster, particularly those that attempted to transport the techniques developed for the heavy soils of Europe to the fragile topsoils of Africa. As an example, a devastating loss of topsoil resulted from the British attempt to use tanks as tractors in the British East African Groundnut Scheme to establish huge peanut farms in Tanzania. As a result of this failed effort, hundreds of thousands of acres of African land lost productive capacity. As would be expected, these disasters intensified the nationalist movements already in progress.

The years following World War II were a period of dramatic political instability and of recurrent violence in Africa. Many Africans had unrealistic optimism about the 51 new states created between the late 1950s and the 1980s. Most of these new countries were based on European colonial boundaries, with little basis in geography or ethnicity. There was no reasonable hope that centuries of competition between groups now united into fragile states would resolve quickly or painlessly. Some governments tried to embrace all of their population, but too often ethnic favoritism left a large number of people angry and dissatisfied. With only rudimentary economic structures and little or no experience in self-government, these new governments were very unstable and were particularly vulnerable to the meddling of erstwhile colonial powers. During the decade of the 1960s alone, there were more than 40 successful insurrections. The United States and the Soviet Union would often play out their Cold War animosities by funding or otherwise supporting opposing sides in these civil wars.

By the beginning of the 21st century, most African states had found ways for their populations to live in peace, but the exceptions are dramatic and bloody. There is little hope that Africa will be entirely free of violence within the near future. Yet there have been many heroic acts

of peacemaking, enabling populations in places such as South Africa and Rwanda to live in relative peace after going through bloody—and sometimes genocidal—periods. There is also a growing international commitment to helping address Africa's problems. Private organizations supported by celebrities or philanthropic groups such as the Bill and Melinda Gates Foundation are investing many millions of dollars to provide health care assistance, stimulate economies, and reclaim lost agricultural lands. There is also wide international interest in helping to reduce or eliminate civil violence and to call into account those who have initiated or exacerbated civil violence. In one example, on July 14, 2008, the International Criminal Court indicted Sudanese president Omar Hassan al-Bashir for genocide.

North Africa and the Middle East

The area stretching across North Africa through the Arabian Peninsula into Pakistan has been the site of conflicting cultural, social, and economic goals since the end of World War II. North Africa had been a war zone from 1940 through 1943 as the Allies attempted to secure a place to launch their offensive thrust into Europe. After the war, there was a powerful resurgence of Arab nationalism. The French attempted to preserve their empire after World War II, but the pull of nationalism and independence proved too strong. After French withdrawal from Vietnam in 1954, Algerians began a bloody eight-year rebellion. Morocco and Tunisia became independent in 1956, and two years later the French government offered independence to colonies agreeing to join an assembly, the French Community. Algeria rejected the option; the prolonged violence eventually led to the collapse of the French Fourth Republic in 1958 and the establishment of the Fifth Republic under Charles de Gaulle.

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The establishment of the State of Israel has been the most volatile issue in the postwar Muslim world. Arabs considered the establishment of Israel to be another version of European colonialism. Zionism, the Jewish nationalist movement, had originated in late-nineteenth-century Europe, but only small numbers of Jewish people migrated to Palestine before the mid-1930s. After the devastation of World War II, Jewish immigrants from all over the world went to British-held Palestine, including large waves of displaced persons from Eastern Europe. Yet Palestinian Arabs had been in the area for well over a millennium and, based on promises of self-determination, had expected to form a Muslim state. Regardless of the efforts of the UN to implement a two-state solution to the Palestine issue after the British withdrawal in 1948, Arabs attacked. Israeli troops, many of whom had honed their skills in the European armies of World War II, not only held their ground but also expanded

their borders. Despite international efforts at peace, the ongoing Arab-Israeli conflict currently focused on the contested Occupied Territories of the West Bank still inflames hostility against Israel in much of the Middle East.

Meanwhile, despite U.S. support of Israel, some Muslim states allied themselves with the United States while others allied themselves with the Soviet Union. Cold War confrontations and manipulations kept the area roiling. The Soviet intervention in Afghanistan (1979–1989) unleashed a plethora of Muslim guerrilla warriors, known as mujahideen (such as a young Osama bin Laden) from elsewhere in the Muslim world to fight against the communist aggressor. Members of the ruling elite made fortunes participating in the global economic arena, exacerbating the disparity in the distribution of wealth. Ill-advised attempts at modernization were perceived as attacks on religious values. The combination inspired a backlash that drove many believers to more conservative religious positions. U.S. interventions in the Middle East during the post-Cold War period—particularly its continued support for Israel—created resentment in the region against what was perceived as U.S. imperialism, resulting in increased support for violent extremist groups, such as the Taliban and al-Qaeda (both of which were ironically remnants of U.S.-supported groups in the Soviet-Afghan wars). Acts of terror in major Western cities triggered major military responses by the West, notably the second Gulf War and the ongoing (as of 2009) war in Afghanistan that began on October 7, 2001. Worldwide apprehensions about the region were intensified by the 2009 disclosures of the development of enriched plutonium in Iran. Iran's leaders continue to decry accusations that their goal is to produce weapons of mass destruction, claiming that they are developing such technology for peaceful uses.

South Asia

As with Africa, self-determination failed to bring peace to South Asia (the Indian subcontinent and Sri Lanka). British withdrawal from South Asia and the partition between Hindu India and Muslim Pakistan in 1947 resulted in an overwhelming 10 million refugees. Deaths resulting from the forced relocations have never been completely documented but are estimated to have numbered between 500,000 and 1 million. Five wars subsequently were fought between Pakistan and India, with Pakistan generally aligned with the United States and the officially non-aligned India sharing warm relations with the Soviet Union until its dissolution. The Soviet Union, for example, supported India with large loans during its border clashes with China. The ongoing hostilities also hampered social and economic development in both lands, although the economies of both Pakistan and India, the latter the world's largest democratic state, have been growing since the last decade of the 20th century. India, in particular, since the 1990s has emerged as one of the economic powerhouses of the modern world. The current economic base ranges from subsistence farming through modern agribusiness, industrial production (with much foreign investment), and a strong service

industry. Software development and technology services are a growth industry now.

Off the eastern tip of India, the island nation of Sri Lanka (formerly Ceylon) also won independence from Britain shortly after the war but has not enjoyed the same economic growth as India and Pakistan. The transition from a plantation economy was hampered by an intermittent civil war that was waged for 26 years, beginning in 1983, with Hindu separatists of South Indian heritage called the Tamil Tigers (LTTE) engaged in a struggle against the Buddhist Sinhalese majority. The insurrection was finally crushed in May 2009. All in all, the states of South Asia are only gradually overcoming the disruptions and division that resulted from their colonial past.

East Asia

East Asia—China, Japan, Korea, and Taiwan—has been through astonishing changes since the end of World War II. After World War II, the economy of East Asia was in tatters, with famine and mass starvation occurring across vast regions. By the turn of the century, South Korea, Taiwan, Japan, and China controlled almost 30 percent more of the world's trade than North America (the combined economies of Canada, the United States, and Mexico).

The history of China between 1900 and 2000 has been a roller-coaster ride, swinging between extremes. During that relatively brief period, China went from empire to civil war, from a nearly subjugated people to an international powerhouse, from nationalist right-wing rule to communism, and then to a thriving market-oriented economy. Although both were nominally Marxist, China's relationship with the Soviet Union became tense as disputes over borderlines and doctrine multiplied. China's relationship with India also deteriorated when India denounced China's assertion of authority over Tibet in 1959, setting the stage for a subsequent series of border skirmishes. Despite China's problems in international relations, it survived the tragic mistakes of early communist rule and has prospered economically. As of the summer of 2004, entrepreneurs from the private sector have been eligible to join the Communist Party; many observers now argue that communism now exists in China in name only.

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At the end of World War II, Japan's once-powerful empire had been dismantled, along with its industrial productive capacity. War-related death tolls were high: over 2 million civilian and military deaths and at least 810,000 persons whose fate was never learned. Most of the urban areas were bombed and devastated; about 9 million people were homeless. Food shortages were dire; death by starvation was common (over 1,000 died of malnutrition during the first 90 days of U.S. occupation in Tokyo alone). Although the U.S. occupation was aimed at reconstruction

and rehabilitation, only the economic boom created by the Korean War in 1950 prevented a severe depression. By the end of the Korean War, the economic stimulus brought higher wages that allowed food consumption to rise to truly subsistence levels. Although general economic ups and downs have occurred, Japan's economy remains dynamic.

Korea was one of the first battlegrounds of the Cold War. On August 8, 1945, two days after an atomic bomb was dropped on Hiroshima, the Soviet Union declared war on Japan and invaded Manchuria. Seeking an Asian presence, the United States rushed troops to Korea on August 15. The United States and the Soviet Union agreed to divide Korea on the 38th parallel, with the Soviets administering the surrender of Japanese forces north of the parallel and the United States responsible for the south. Millions of Koreans who had lived in Japan or Manchuria during the war flooded back to the peninsula. Separate governments were established, one led by Kim Il Sung in the north and the other by Syngman Rhee in the south. By 1949, both were conducting raids across the border. All-out war broke out on June 25, 1950, when Kim launched an invasion of South Korea with seven divisions. By the end of formal hostilities in 1953, death tolls included at least 1 million North Koreans, 1 million South Koreans, 1 million Chinese, and nearly 37,000 American soldiers. After the Korean War, the area enjoyed a precarious peace, with South Korea developing into an economic powerhouse, while North Korea stagnated. Koreans still speak of reunification, but most observers seriously doubt that the impoverished, rigidly controlled North Korea could successfully integrate with the dynamic market economy of South Korea.

Regions are not only geographical but conceptual, and their defining characteristics fluctuate historically. Scholars debate about placing modern Vietnam into the geographic-cultural category of Southeast Asia because of its historic ties with the Indian Ocean and its societies in East Asia. Conrad Schirokauer and Donald N. Clark, in *Modern East Asia, a Brief History* (2004), include it with East Asia for several reasons, primarily because in the 20th century Vietnam's history has been intertwined with that of Japan and Korea as well as China. The French colonized the land in the mid-19th century, and the Japanese took over after France fell to Germany during World War II. At the war's end, Vietnam was divided between a communist north and a capitalist south. In the 1950s, Vietnam became a hot site in the Cold War, as the United States began its slow involvement that led to military conflict with nationalist communist forces. Following the U.S. withdrawal in 1975, the country united as a communist state. In 1986, the socialist transformation of the economy was declared a failure, and the party established a policy to support an entrepreneurial spirit and encourage people to farm and create businesses for profit. Over the next few years, Vietnam gradually moved toward a capitalist economy with little fanfare and few grand announcements. The economy has been gradually improving since the transition. Ironically, the U.S. goals for Vietnam—a form of democratic government and a capitalist market-based economy—were achieved only after the United States removed its troops.

Southeast Asia

The lands comprising the area that we now call Southeast Asia were, until World War II, considered a rim of isolated, minimally significant countries that evinced traces of Indian culture. Many scholars now include in this geographical area Myanmar (formerly Burma), Thailand, Malaysia, Singapore, Brunei, Indonesia, East Timor, Laos, Cambodia, the Philippines, and Vietnam. During and after World War II, the strategic location of these Southeast Asian states caused international observers to change their perception of the area from a periphery to one of great global importance. As was true throughout Asia, prewar imperialism aroused intense nationalism in local populations. After finding that the post-World War I doctrine of self-determination was being applied to European states only, many Southeast Asian nationalists became disillusioned and looked toward the Soviet Union and later China for support. The area became explosive after World War II. Despite the nationalist sentiments that spread throughout the region, only Myanmar, Indonesia, and Cambodia achieved a significant degree of independence; even they remained vulnerable, to each other as well as to outside imperialism. In fact, Vietnam overtook Cambodia in late 1978 and occupied the country for a decade. Uprisings, coups, wars, and purges have plagued Southeast Asia since the end of World War II but have abated somewhat since the 1990s.

Indonesia, with the world's largest Muslim population, is made up of over 17,500 islands. It was occupied by the Japanese during World War II and declared itself a republic in 1945 but faced violent frictions on many fronts. Some groups denounced "Japanese collaborators," while the Islamic party (the Masjumi) denounced the Marxist and socialist groups. Communists attempted at least two coups. Despite promises made during the war by the Dutch government-in-exile, after the war Dutch forces launched an attack on Indonesian territories. The Independence Preparatory Committee was already in place, and the Japanese-trained Indonesian Army performed well against the Dutch during the hostilities of 1945–1949. Finally, the Netherlands government succumbed to international pressure and acknowledged the sovereignty of the Indonesian government. Achmed Sukarno led the country for its first 15 years, and his presidency was followed by General T. N. J. Suharto (1968–1998). The Sukarno period ended with a violent government response against communists, and the Suharto period was also marred by increasing human rights abuses. Coups, attempted coups, and violence have plagued the state during most of its existence.

Meanwhile, the Japanese had driven the British empire out of the land known as Burma or Myanmar during World War II. The Japanese slogan "Asia for Asians" inspired and excited the Burmese nationalists, but their harsh treatment under the Japanese soon disillusioned them. An underground resistance led by a small band of communists was joined by other groups, soon combined as the Anti-Fascist People's Freedom League (AFPFL). The Burmese drive for independence coincided in time with that of India, and the British decided to withdraw from South

and Southeast Asia and announced elections to the Constituent Assembly in January 1947. From 1948 until 1962, the country existed as an independent republic under the name of the Union of Burma until a military coup overthrew the civilian government. Some pundits argue that Myanmar/Burma's decision not to be a part of the British Commonwealth left it without the protection that might have prevented the military coup.

Russia, Eastern Europe, Caucasus, Central Asia, Northeast Asia

The former Soviet Union and its wider sphere of influence includes present-day Russia, the Caucasus, Eastern Europe, the Baltic region, and Central Asia. Certainly, one of the biggest stories of the second half of the 20th century is the rapid ascendancy to superpower status, the sudden collapse of the Soviet Union, and Russia's steady effort in the past decade to reassert hegemony in the newly independent republics. During World War II, the governments of Hungary, Finland, and Romania joined Adolf Hitler in his declaration of war against the Soviet Union. Bulgaria also was an Axis member. After the war—in which 20 million to 30 million Russians died—Stalin, general secretary of the Communist Party and de facto head of government, insisted that domestic security required that friendly powers govern all countries bordering the Soviet Union. His position was understandable: although few in the West realized the extent of Soviet losses, nearly an entire generation of men had died. The war had destroyed farms along with livestock, farm machinery, factories, and homes. Before the end of World War II, Soviet armies were within reach of Berlin, having gained control of everything between that area and the USSR. The Soviets retained control of the lands they had occupied during their push through German-held areas, but it was not a simple matter of possession. The Soviets eradicated non-communist political parties in Poland, Hungary, Romania, and Bulgaria, yet there had already been a communist faction firmly in place in most East European states. The support of the Red Army ensured the initial success of local communists, and the Soviets kept a watchful eye thereafter. In the region, only Yugoslavia under Marshal Josip Broz Tito was able to retain autonomy during the Cold War.

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Conflict between the so-called satellite states and Soviet Russia accelerated after Stalin's death. A revolt in Hungary was crushed in 1956, tightening Moscow's oversight. Soviet intervention also squashed attempts in Czechoslovakia to establish political diversity. The failure of economic reform, however, pushed the region into a long period of economic crisis, leading to a collapse of the Soviet Union in 1989. Many volumes have been written—and will undoubtedly continue to be written—about the underlying eco-

conomic weaknesses and mistakes under socialist rule. Soviet hegemony collapsed in 1989, and the Soviet Union itself ceased to exist on December 31, 1991. Not enough, perhaps, has been written about the remarkable restraint with which communist leaders relinquished their supremacy. The area that comprised the former Soviet Union has avoided the sort of large-scale bloodbath that could have ensued. In 1993, Czechoslovakia split peacefully in what has been called a “Velvet divorce” into the Czech Republic and Slovakia. Other areas were not so fortunate. In the former Yugoslavia, rival ethnic groups divided into Macedonians, Slovenians, Croatians, Serbs, and Bosnians, who launched an ethnic cleansing onslaught against Muslim-held Bosnian territories. The UN, the United States, and other European states intervened in 1995 and brought a halt to overt warfare, but resources are thin, and ethnic resentments have been escalating since 2000. Relying on its gas and oil reserves as a source of political power, Russia has reasserted its influence across Eurasia and come into direct conflict with many of the new republics formed after the USSR’s dissolution, most notably the Ukraine and Georgia, a region in which Russia intervened militarily in 2009.

The portion of the Soviet Union that lay in the large area of the traditionally Islamic lands to the north of Afghanistan and Iran (which might be described as western Central Asia) were also reorganized as a result of the collapse. Turkmenistan, Uzbekistan, Kyrgyzstan, and Tajikistan (which was involved in a devastating civil war between 1992 and 1997) became independent in 1991 followed by Kazakhstan, the world’s largest landlocked state, which declared independence on the last day of December 1991. Due to its large oil wealth and large populations of ethnic Russians (known as the “near abroad”), this region remains of geopolitical importance to post-Soviet Russia.

Southern and Western Europe

Two elements characterize the fortunes of Southern and Western Europe after the end of the war in 1945: a sharp contraction in international power followed by amazing reconstruction and economic recovery. The end of World War II marked the end of European world imperialism. As historian W. M. Spellman noted in *A Concise History of the World since 1945* (2006), for about 400 years the European states had projected “Western power, Western culture, Western religion, and Western ideas around the globe.” In so doing, the West had defined the parameters of the modern world. The European colonial edifice cracked in the early 20th century and crashed to the ground in the aftermath of World War II. In 1945, approximately one-third of the world’s population lived in states dominated by imperial powers; that number dropped to less than 0.1 percent by the end of the century. European powers were not pleased to lose their colonies, but most lacked the resources to continue when faced with the triple threat of flagging domestic enthusiasm, opposition from the new superpowers, and increasing nationalism in the colonies.

The largest challenge in Southern and Western Europe was to rebuild their war-torn lands. U.S. secretary of state George Marshall (1880–1959) proposed the European Recovery Program to assist in rebuilding, with the United States providing grants and loans for rebuilding and thus preventing the potential of communist victories in elections. All told, 16 nations participated. The plan was an outstanding political and economic success, resulting in jobs and economic recovery among the participating states. Its trade provisions also boosted the U.S. economy: almost two-thirds of European imports came from the United States. The Soviet Union instituted a counter program called the Council for Mutual Economic Assistance to coordinate rebuilding within the Soviet sphere of influence. Since all the participants had experienced the same devastation in war, there were not enough funds in the so-called Eastern Bloc to compete with the Marshall Plan. The high degree of success under the Marshall Plan served to exacerbate ideological conflicts. Communist parties were very active in the states in Southern Europe for a few years after 1945. There were communist coalition governments in France and Italy, and only British intervention prevented a successful communist takeover in Greece in early 1945. However, as economic prosperity returned, interest in communism waned.

Europeans were conscious of both advantages and disadvantages of the accelerating global economy. In March 1957, Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany signed an agreement to form the European Economic Community (ten years later, renamed the European Community). They enacted provisions for free movement between the member states, eliminated tariffs and other curbs on free trade, and formed political institutions such as the European Parliament dedicated to increasing European economic and political cohesion. The European Union presently consists of 27 members, with 13 members having adopted a common currency, the euro. Whether or not these measures will lead to political integration cannot be easily predicted, but the European Union exerts more influence than any of the member states could have done alone.

Latin America and the Caribbean

As the 20th century progressed, the tensions of the Cold War and other global struggles troubled Latin American states, such as Mexico, Argentina, Brazil, and Chile, intensifying preexisting struggles and bringing new ones. Most of Latin America had little direct involvement in World War II (with the exception of Mexico and Brazil) but continued to suffer from the impact of the Great Depression. From the end of the war well until the present, most of the region experienced intense urbanization as rural agriculturalists migrated to cities, such as Mexico City, Brasilia, and Buenos Aires, that were ill-prepared for the influx. Industrialization lagged, and state involvement in social services was inadequate for the task. Many of the states of Latin America relied primarily on agricultural commodities and the sale of natural resources, such as petroleum ex-

ports, that were subject to wide variations in price. Postwar population escalation outstripped economic expansion, resulting in a dangerously growing unemployed or underemployed population. A wide and dangerous economic and social gap grew between the bulk of the population and the holders of the large rural estates or the wealthy urban elite.

Political developments in Latin America during this period varied widely among the states. Some became more intensely conservative in their support of the economic elite. Some regimes are occasionally described as crypto-fascist, as in the Getulio Dornelles Vargas dictatorship of Brazil and the coalition that created the Concordancia government of Argentina, which survived into the mid-20th century.

The more regressive states, such as Paraguay, often banned or suppressed labor unions or organizations of laborers or peasants. The more industrialized states, such as Mexico, Venezuela, Brazil, Argentina, and Chile, attempted to pacify the urban workforce by acceding to at least some demands.

Representative governments were rare in Latin America, and even those with a claim to republicanism more often represented the interests of the elite. Cuba, as the sole communist dictatorship under the leadership of the charismatic Fidel Castro since the late 1950s, was an exception. By the mid-1960s, some activists and politicians in Latin America believed that Marxism would be the best road to reform, although few if any supported a Leninist or Maoist interpretation. Although appealing to peasants and laborers, the prevailing social, political, religious, and military establishments hotly opposed any local interpretations of Marxism. At the same time, the United States often wound up supporting, in the name of anticommunism, repressive regimes throughout Latin America (such as Argentina, Chile, Nicaragua, and Mexico). By the last decade of the 20th century, military dictatorships had largely been replaced by democratic and constitutional governments throughout Latin America, although there have been occasional threats of attempted coups.

In the Caribbean region, 12 former British territories were decolonized following World War II, and political problems have continued to linger in impoverished countries such as Haiti; the Latin American debt crisis also extended to the Caribbean, where high unemployment has remained an issue. There is a continuing trend in Latin America for states to join in cooperative ventures such as the creation of free-trade zones such as NAFTA, CAFTA, Caricom (Caribbean Community), and Mercosur and continuing pressure on the United States to abandon its isolation of communist Cuba. There also remain problems in some states of Latin America, such as Colombia and Mexico, from powerful criminal enterprises, particularly those involving the international drug trade.

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North America

On January 1, 1947, Canada became the first of the Commonwealth nations to declare its population citizens of their own state, Canada, rather than British citizens. As in the United States, in Canada there were advances in the political rights of women and ethnic minorities during the postwar years, including the enactment of a largely symbolic Canadian Bill of Rights in 1960 declaring equality of race, religion, and beliefs. In 1969, Canada enacted the Official Languages Act that brought official bilingualism to Canada, making French a coequal language with English. Language was also an issue in the United States, where there were several unsuccessful attempts to enact official English monolingual acts. Both nations continued to move toward official protections for multiculturalism.

Canada supported the United States during the Cold War but not uncritically. Relations between the two became strained during the Vietnam War period. Canadian prime minister Lester Pearson and U.S. president Lyndon Johnson had a personal dust-up over critical remarks made by Pearson at Temple University in Philadelphia in 1965. All in all, about 500 Canadian firms supplied war materials to the United States, and more than 10,000 Canadians volunteered for combat in Vietnam. On the other hand, Canada gave refuge to more than 32,000 American draft resisters and later to nearly 60,000 Vietnamese War refugees. When 52 Americans were taken hostage in Tehran, the Canadian embassy staff hid American fugitives in their homes and also gave official sanctuary to 6 who had eluded capture at the American embassy. About 4,500 Canadians served in the 1991 Gulf War, but Canada declined to participate in the 2003 invasion of Iraq. However, Canada has sent troops to Afghanistan as part of a greater NATO contingent. The giants of North America acknowledge common interests but are not always a united front.

Oceania—Australia, New Zealand, Papua New Guinea, Polynesia, and the South Pacific

A somewhat problematic geographical unit, Oceania covers an enormous area of the South Pacific that includes Australia, New Zealand, Papua New Guinea, and the islands of Melanesia, Micronesia, and Polynesia. The population for the region hovers at around 30 million, with 95 percent concentrated in Australia, New Zealand, and Papua New Guinea. Decolonization, Cold War politics, labor migration, globalization, and environmental issues have shaped the region since 1945. With the Korean War as a spur, the United States offered military protection to much of this region. In 1951, the United States, Australia, and New Zealand formed a mutual defense pact (the ANZUS Pact), which marked the end of British military power in the region. On the periphery of Oceania, the United States also forged a similar pact with the Philippines, allowing naval and air bases, and the United States maintains major mil-

itary bases as well in Guam. In trade, the Southeast Asia Treaty Organization (SEATO) included Australia and New Zealand with the states of Southeast Asia as well as the United States and Britain. In recent years, Australia has developed a closer relationship with China as a result of their growing economic interdependence.

In the postwar period, New Zealand and Australia gradually liberalized immigration policies and by the 1970s had jettisoned rules that limited immigration based on racist standards. Immigrants from the Pacific Islands and Asia became more common, with about 9 percent of New Zealand's population being Asian in the early 2000s.

New Guinea, the world's second-largest island, is divided, with its western half part of Indonesia and the other half in Papua New Guinea, with its population of six million, that gained independence from Australia in 1975. Its governance has been unstable, with one island, Bougainville, granted limited autonomous status in 2000 after a violent secessionist movement. The central government has developed economic and military ties with China. The smaller island nations of Oceania gained independence from European and Western colonial powers in much of this region by the 1970s, with French Polynesia and the U.S. territory of Guam notable exceptions.

Some of the region's continuing conflicts can be regarded as the outgrowth of poverty and the legacy of colonialism. For example, native Fijians and peoples of South Asian ancestry transported to Fiji to work as indentured laborers under British rule have clashed in recent decades over political control of the island; this conflict led to a violent coup in 1987. Along with poverty and racial rifts, environmental issues continue to shape the region: the U.S. hydrogen bomb tests on the Marshall Islands during the Cold War have left a legacy of fallout and contamination. As of 2009, evacuated residents of the Bikini Atoll had still not returned to the island, although tourism has returned. There are still ongoing efforts at cleanup of the soil, which is contaminated with cesium. Many of the islands of Polynesia, notably Tuvalu, have been experiencing increasing salinization of groundwater and cropland because of rising sea levels that may soon make that island nation uninhabitable. Many others are also threatened.

Conclusion

While the year 1945 is an important historical marker, many of the major historical trends that followed 1945 represent continuities with earlier eras. The Cold War and its underlying nuclear terror keynoted the new in science and technology. Yet basic advances in sanitation and medical care also had significant impact on world populations. Reactions to wartime atrocities as well as to Western rhetoric for freedom, including U.S. president Franklin Roosevelt's 1941 address highlighting the "Four Freedoms" (freedom of speech and worship, freedom from want and fear), marked a social shift postwar that registered worldwide. The UN "Universal Declaration of Human Rights" (1948) further encapsulated such concerns. Yet the drive for autonomy in the developing

(and post-Soviet) worlds intensified nationalism and sometimes tragically has led to ethnic cleansing campaigns.

With both the United States and the Soviet Union vying for supremacy in output of missiles and refrigerators during the Cold War, it was not until the advent of the environmental movement in the 1970s that the values underlying Western consumer society faced a serious challenge. One can celebrate the expansion of capitalist ideology as well as consumerism following the collapse of the Soviet Union. Yet there have been strong reactions against unrestrained capitalism and what many perceive as the Westernization of the world. Globalization's boosters view the appearance of a McDonald's or Starbucks in every world capital as a sign of a progressive economy, yet such outlets are a source of irritation for antiglobalization advocates of all stripes.

During the Cold War, it often seemed that the world was on the brink of self-destruction, yet after the September 11, 2001, attacks in the United States on the Pentagon and the World Trade Center and subsequent terrorist attacks in Europe, Africa, and the Middle East, many observers looked back on the era with a degree of nostalgia. Despite the enormous power that the current knowledge base and latest technologies provide, population growth, the threat of famine in the less industrialized nations, environmental degradation (including the threat of disruptions in climate caused by global warming), financial instability, and competition for geopolitical resources offer formidable challenges to existing states and institutions.

—*Fred Nadis, Carolyn Neel, and Jack Waskey*

Environment and Population

Borrowing from the terminology of sociologist of science Thomas Kuhn, the history of environmentalism represents the emergence of a new paradigm, or worldview, in the late twentieth century. Kuhn suggested that when “anomalies” that the standard model cannot explain finally build up, scientists begin to question central assumptions, and a major shift in thought may ensue. Reduced to its simplest formula, environmentalism insisted that nature and its resources could not be taken for granted. The older paradigm, based on the assumption that nature had unlimited resources, ripe for exploitation, came into question.

The sources of environmentalism as a new paradigm for science and for culture at large were many. At its base, however, was the realization that the scientific and technological conquest of nature no longer appeared to simply define progress. The dropping of atomic bombs on Hiroshima and Nagasaki and their devastating consequences established that humanity had the power to wreak havoc on human populations, cities, and the natural order; nuclear fallout could and had disrupted health hundreds of miles from test sites. Polluted air, water, marginal land turned to desert, loss of timber, diminishing natural resources, and biodiversity could no longer be overlooked as negligible side effects of industrial and agricultural productivity. Spaceflight and photographs of earth taken from outer space confirmed the notion that Earth and its atmosphere was a fragile refuge of life, unique in the solar system and perhaps the galaxy. What had once been fringe concerns of wilderness enthusiasts shifted to the center. By the 1990s as scientific consensus on global warming confirmed that human activity was leading to dramatic and likely catastrophic climate shifts, the environmental imperative could no longer be ignored.

But environmentalism had not surfaced out of a vacuum either ideologically or scientifically. What could be described as an environmentalist mentality has deep roots. While celebrants of free markets denied any natural or ethical limits on economic activity, others had always critiqued the more predatory practices of industrialism and the wholesale harvesting of natural resources to the detriment of future generations. Such an ethic gained a scientific vocabulary by the late nineteenth century. Gifford Pinchot, the first head of the U.S. Forest Service, adopted the creed “the greatest good for the greatest number in the long run.” This utilitarian resource management creed soon meshed with an organic theory of nature. In the early twentieth century, the influential U.S. biologist Frederic Clements insisted that a natural system, if undisturbed, reached a harmonious climax community analogous to a healthy organism, whether an oak forest or prairie. This became one of

the central paradigms in the new science of ecology. But as the historian Donald Worster noted in *Nature's Economy: A History of Ecological Ideas* (1977), such ideas, rooted as much in ethics as science, long had served as a romantic counterpart to the imperialist vision of the conquest of nature from the earliest period of the Industrial Revolution. This vision, or ethic, of nature as an organic, harmonious interconnected whole, however, underpins much of environmental belief.

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Military interest in the effects of atomic radiation on ecosystems led to intense funding of ecology projects in the United States following World War II. At the same time, many leading ecologists and educators continued to depend on Clements's notions, which suggested that natural systems, when left alone, achieved maximum efficiency and harmony. Such ideas, supported by leading postwar ecologists such as Eugene Odum and his brother Howard T. Odum and that implied an inherent wisdom in nature, became part of the environmentalist arsenal. By the 1970s, however, as these ideas were popularized, many population biologists were rejecting this paradigm and turning to a vision of nature based on chaotic systems and focusing on interspecies competition rather than on organic wholeness; nevertheless, at its formative moment, the environmental ethic and scientific theory appeared in agreement. While the newer ecology undercuts the idea that the "mind" of nature can be interpreted and revealed, it does not dispute the general notion of complex, interactive natural systems; nor does it dispute the critical awareness that human activities can have huge impacts on natural systems.

In the United States and Europe, through much of the early twentieth century, the institutional base for environmental activism was made up of the wilderness preservation and wildlife protection societies such as the Sierra Club, the Audubon Society, and Fauna and Floral International. Many of these groups began at the turn of the twentieth century as elite attempts to curb the more rapacious practices of industrialists and colonialists at the expense of forests and wildlife. These elitist preservation societies gained new momentum in the 1960s and began to merge their concerns with those of consumer protection groups such as the Public Interest Research Groups that Ralph Nader helped found to create legal challenges to corporate practices in the United States. Global protests against radioactive fallout, nuclear weapons, the storage of nuclear waste, and the dangers of nuclear power and agricultural pesticides added to the growing chorus.

During the 1960s, there also was a return to Malthusian concerns about population and resources. Ecologist Garrett Hardin's often-cited 1968 essay "The Tragedy of the Commons" laid the framework by arguing that a market economy and growing population when combined could only lead to disaster. Hardin's essay centers on the premise that a common meadow could support only so many grazing animals and would inevitably disintegrate as more were added to support a growing human population. Yet community members would feel compelled to

add to their herds. Self-interest and free enterprise trumped the long-term common good. Hardin argued that limits to population and use had to be encouraged.

Biologist Paul Ehrlich took up the same cause as early as 1967 in a short essay and in his 1968 book *The Population Bomb*. Ehrlich argued that population growth as well as growing prosperity were directly linked to environmental stresses and were likely to lead to world famines. While Ehrlich's mathematical predictions linking population growth and inevitable famine never proved accurate, his general argument is hard to reject. From 1950 to 2005 the world population has grown from approximately 2.5 billion to approximately 6.5 billion people. According to critics, the Green Revolution's chemical techniques to increase agricultural output and stave off famine in the 1960s were successful in the short term but will eventually exhaust soils and degrade ecosystems. The tragedy of the commons, reconfigured in the 1980s as the quest for sustainability—a term introduced in the 1987 *Report of the World Commission on Environment and Development*—has never been far from center stage.

Worldwide, for example, there is a major concern over groundwater overdraft, that is, the tapping of aquifers at a rate more rapidly than they can be renewed. Demands on water for agriculture and municipalities are ultimately depleting the earth's centuries-old reserves. Private corporations that prospect for water to sell to municipalities and nations are now the norm, as this example of the tragedy of the commons continues to play out. To mention other examples, as agriculture expands, deforestation remains a problem, particularly in Africa and South America. There are similar grave concerns about the sustainability of current fishing levels throughout the world's oceans.

Further, at the close of the twentieth century, the tragedy of the commons became written onto the earth's atmosphere itself, as consensus developed for the reality of human-based global warming. Concerns about global warming gained strong voice at the United Nations (UN) Earth Summit of 1992, while global warming became a prominent issue in 1997 at the Kyoto Summit at which the scientific community affirmed the human causation of climate change. The stalling of the Kyoto Protocol, which required signing nations to place limits on carbon emissions, and the drawn-out post-1997 debate over the reality of global warming indicate that short-term economic and political needs could continue to trump the common good.

The conflict over the Kyoto Protocol also emphasizes the fissure that environmentalism has exposed between the wealthier developed nations, or the North, and the developing world, or the South. Many of the poorer nations of the South questioned why they should be locked into agreements limiting pollution levels when they were still struggling for financial solvency and indebted to the nations of the North. Further, they argued, the North should bear the greater burden, as they were primarily responsible for the environmental

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crisis. With industrializing China and India rejecting the more stringent demands on them that the United States requested, the United States eventually declined to ratify the protocol.

The South's case, in general, has merit. A UN Development Programme report in 1998 indicated that 86 percent of total private consumption could be traced to the 20 percent of the world's people in the wealthiest income levels, while the poorest 20 percent of the world's people were responsible for only 1.3 percent of private consumption. The report also indicates that the top fifth consume 58 percent of energy, while the bottom fifth consumed less than 4 percent. The world's top 20 percent own 87 percent of the world's vehicle fleets, while the poorest 20 percent own less than 1 percent. Environmentalism, in this sense, is a problem that the rich have bequeathed to all the earth's inhabitants in order to maintain a luxury lifestyle and its infrastructure. Given this enormous imbalance, the nations of the South justly point out that the earth's environmental problems have been dumped on them. Other progressive groups argue further that the debt of developing nations is a false issue, as the North owes an enormous ecological debt to the countries whose resources they have plundered.

Perhaps goaded by activists and protests at world trade forums, private environmental groups and transnational corporations have begun to step into the breach. A welcome development in recent decades has been a quickened corporate interest in environmental matters and efforts to recast environmentalism as good business, whether through paradigms of efficiency, the selling of new green technologies, or such innovations as the Kyoto-generated trade in carbon credits. Likewise, groups such as Friends of the Earth International, an offshoot of the Sierra Club, has begun to purchase the debt of developing nations and rechannel it into environmental projects in the developing world. The World Wildlife Federation also has financed preservation efforts in developing countries.

Despite the South's resentment of the North's exploitative economic and environmental practices, the environmental paradigm has spread to most continents. At the 1992 UN Earth Summit held in Rio de Janeiro, more than 150 nations and 1,000 private nongovernmental organizations (NGOs) participated. In 1996 over 100,000 environmental NGOs existed worldwide. The South continues to explore ways to meet the North's demands for debt repayment and environmental responsibility with requests for technology transfers, aid, and the newer lure of ecotourism as an economic engine.

The historically grounded essays that follow assess the growth of environmental awareness and the scope of current environmental challenges. The essays also examine the efforts on the part of environmental organizations, governments, NGOs, and multinational corporations to slow or reverse the tragedy of the commons and encourage sustainability.

—Fred Nadis

■ Introduction: Environmental Challenges

Gathered by prevailing winds and as of 2009 centered at latitude 35 degrees north and longitude 140 degrees west, floats the Great Pacific Garbage Patch, an enormous area of the Pacific Ocean composed of about 3 million tons of the fragmented plastic detritus of industrial society. As this new geographic feature of the earth indicates, the planet's resources are limited and fragile. A reluctant acceptance of this fact in the late nineteenth century and the twentieth century underpinned the new discipline of resource management and ethic of environmentalism. By the twentieth century, myriad dangers to public health and wildlife surfaced that made it abundantly clear that natural resources were finite and subject to deterioration; these included air pollution, soil erosion and contamination, water pollution, loss of animal and plant species, and the winnowing down of the richness of natural environments.

As the twenty-first century began, the reality of human-induced global warming and its likely catastrophic consequences—including rising ocean levels as polar ice caps melt—capped the litany. Even more alarming is the awareness that global warming, a process that proceeds on geological time, may perhaps be slowed but not stopped. The problems of management of the earth's resources and natural wealth remain as a premier challenge for future generations.

—Fred Nadis

Global Warming—Scientific Consensus and Debates

The possibility of anthropogenic global warming, defined as a man-made enhancement of the greenhouse effect, has received much media and scientific scrutiny for several decades. After much debate, the scientific consensus is that anthropogenic global warming is a real phenomenon.

The greenhouse effect is an outcome of the complicated balance between the incoming solar radiation from the sun and outgoing radiation from Earth that regulates the atmosphere's temperature. When an object becomes warmer than -273.15°C (also called absolute zero on the Kelvin

temperature scale and equivalent to -459.67°F), it begins to emit electromagnetic radiation. Therefore, as the sun warms Earth's environment, Earth begins to emit its own radiation. However, radiation is dependent on temperature. The hotter an object is, the shorter the wavelength of peak emission. The much hotter sun emits most of its radiation as visible light. The cooler Earth emits its energy at a much longer wavelength in the infrared spectrum, which human eyes cannot see unaided.

Short wavelength solar radiation passes freely through the atmosphere's molecules and warms Earth. However, as Earth tries to emit this heat back to space in the longer wavelength infrared spectrum, some of it becomes absorbed by molecules in the atmosphere, thus warming the air. A portion is again radiated back to Earth, which warms the surface. In this way, the atmosphere acts as an insulating layer, keeping part of the infrared radiation from escaping rapidly into space. Consequently, Earth's surface and lower atmosphere are much warmer than they would be without this selective absorption of infrared radiation by air molecules. This process is called the greenhouse effect since it is analogous to a glass building that allows visible light inside but prevents some infrared radiation from leaving, keeping plants inside warm. It is important to realize that the atmosphere's greenhouse effect is a natural process, and without it Earth would be a much colder, unlivable planet with an average surface temperature of 0°F .

Certain molecules are more effective than others at trapping infrared radiation. The most important greenhouse gas is water vapor because it strongly absorbs a portion of outgoing infrared radiation and is a plentiful gas. The other main greenhouse gas is carbon dioxide (CO_2), which is equally as absorptive but far less plentiful than water vapor and therefore plays a much smaller role in the greenhouse effect. CO_2 is a natural component of the atmosphere and is produced mainly by the decay of vegetation.

The global warming debate centers on human participation in the greenhouse effect and its long-term consequences. Not only the decay

GLOBAL WARMING TIMELINE

- 1938—Guy Stewart Callendar posits that the burning of coal and oil could lead to increasing levels of atmospheric carbon dioxide and increasing average temperatures.
- 1955—Charles Keeling begins accurate measurements of atmospheric carbon dioxide levels. His data indicates a steady rising curve, since named the Keeling Curve.
- 1957–1958—International Geophysical Year (IGY). Cooperative international scientific studies were initiated, collecting valuable data on geophysics. IGY agrees to fund expansion of Charles Keeling's atmospheric research using infrared gas analyzers. New test sites are established at the South Pole and on Hawaii.
- 1975—Stephen Henry Schneider founds the scientific journal *Climactic Change*.
- 1979—First World Climate Conference, arranged by the World Meteorological Organization, to discuss climate trends.
- 1988—The United Nations and the World Meteorological Organization establish the Intergovernmental Panel on Climate Change (IPCC).
- 1989—Journalist Bill McKibben's *The End of Nature* is one of the first popular accounts describing coming environmental catastrophes, including the dangers of global warming.
- 1990—Second World Climate Conference, Geneva. Several weeks before her resignation as prime minister, Margaret Thatcher speaks at the conference and urges research and policy initiatives to curtail global warming.
- 1992—Earth Summit, or United Nations Conference on Environment and Development, Rio de Janeiro. The agenda included drafting of the United Nations Framework Convention on Climate Change (UNFCCC), which urged nations to begin to limit greenhouse gas emissions.
- 1997—Kyoto Protocol, an amendment to the UNFCCC in which signatory nations agree to limit greenhouse gas emissions within set guidelines.
- 2004—Roland Emmerich's Hollywood film *The Day after Tomorrow* provides an apocalyptic scenario in which global warming leads to the onset of a sudden cataclysmic ice age.
- 2005—Regional Greenhouse Gas Initiative. This initiative of seven eastern U.S. states to cap regional carbon dioxide emissions allows companies with lower emissions to trade or sell their deficits to others that exceed their caps.
- 2006—*An Inconvenient Truth*, an influential documentary film based on former U.S. vice president Albert Gore's lectures about global warming.
- 2006—California's Global Warming Solutions Act. California governor Arnold Schwarzenegger signs this law that mandates caps on greenhouse gas emissions and provides penalties to industries that do not comply.
- 2007—Albert Gore and the IPCC are awarded the Nobel Peace Prize for efforts to curtail global warming.

of plants but also the burning of fossil fuels such as coal, oil, gasoline, and natural gas produce CO₂. Observations show that CO₂ has increased from a preindustrial value of 280 parts per million (ppm) in 1750 to 379 ppm in 2005 (a 35 percent increase). The atmospheric concentration of CO₂ in 2005 far exceeds the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores. The annual carbon dioxide concentration growth rate was larger during the last ten years (1995–2005 average of 1.9 ppm per year) than since the beginning of continuous direct CO₂ measurements (1960–2005 average of 1.4 ppm per year). The primary source (80 per-

cent) of increasing CO₂ results from fossil fuel emissions from automobiles, factories, and other power sources, with land-use changes contributing the other 20 percent. Other minor greenhouse gases have also increased in the industrial age, especially methane (CH₄), nitrous oxide (N₂O), and halocarbons, due to agriculture and fossil fuel activities.

Man-made global warming theory states that the greenhouse effect will be enhanced as greenhouse gases increase because more outgoing infrared radiation will be absorbed. There is also the possibility that increasing the temperature will increase water vapor concentrations (the

major greenhouse gas) due to increased evaporation rates, further enhancing warming prospects.

Climate scientists have amassed considerable data supporting the existence of global warming. The years 1906–2005 show a linear trend of 0.13°F per decade warming for global surface temperature. This trend over the last 50 years is nearly double the century trend (0.23°F per decade), suggesting that this warming is increasing. This increase is also larger in polar regions at twice the 100-year average rate. As a result, mountain glaciers, snow cover, and polar ice sheets have declined on average in both hemispheres. For example, Arctic sea ice has shrunk by 2.7 percent per decade, and seasonally frozen ground has decreased by about 7 percent in the Northern Hemisphere since 1900. This melting trend has also contributed to a sea level rise of 1–3 millimeters per year, corresponding to a 4–8 inch rise this century. Ocean water temperatures have also increased by 0.5°F to 1.0°F in the past several decades.

These changes may have impacted weather regimes. Precipitation increases have been observed in eastern North and South America, northern Europe, and northern and central Asia. Drying has been observed in the Sahel, the Mediterranean, southern Africa, and parts of southern Asia. Longer and more intense droughts have been observed over wider areas since the 1970s, particularly in the tropics and subtropics. Finally, cold days, cold nights, and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent in the last 50 years. Evidence for warming is also observed in seasonal changes with earlier springs, longer frost-free periods, longer growing seasons, and shifts in natural habitats and in migratory patterns of birds.

While Earth has experienced numerous climate swings throughout its history, observations and climate models calculate that the increase of greenhouse gases was caused by recent global warming, not by natural causes. Computer models project that CO₂ has contributed to most of this warming (63 percent), while the other greenhouse gases contributed 37 percent. The computer simulations also generally reproduce the temperature trends and weather regime changes discussed above, providing confidence that the

cause and effect of man-made global warming is real. The water vapor feedback is also consistent with the models. Water vapor has increased since at least the 1980s over land and ocean. The increase is broadly consistent with the extra water vapor that warmer air can hold. The frequency of heavy precipitation events has also increased over most land areas, consistent with the temperature and water vapor increases.

The models predict future warming. Continued greenhouse gas emissions at or above current rates will result in a warming between 3.2°F (best-case scenario) and 7.2°F (worst-case scenario) this century, magnifying current changes and creating new alterations such as slower Atlantic Ocean currents.

Although the skeptics' case has weakened and they do represent a small minority, some global warming critics remain suspicious of the new consensus in the scientific community. Indeed, in the 1970s many scientists claimed that global cooling was occurring because there was a decrease in average global surface temperature during 1945–1968. Global warming skeptics point out that climate models contain uncertainties in cloud processes (a very important contributor to earth's heat budget), do not handle ocean-atmosphere coupling well, and can only resolve coarse atmospheric features. Earlier models also overpredicted the warming, and detractors claimed this as proof that the models had physics flaws. In response, climate scientists later claimed that suspended particles (aerosols) from pollution and volcanic eruptions partially offset anthropogenic global warming, and new models now contain their radiative contribution. Other critics either state that global warming is real but it is due to natural processes or dilute concerns by stating that global warming will be benign and perhaps even beneficial to humans. Proponents of man-made influences have claimed to address these questions, but the debate will undoubtedly continue.

—Patrick Fitzpatrick

Bibliography

Alley, R., et al. "Climate Change 2007: The Physical Science Basis—Summary for Policymakers." Intergovernmental Panel on Climate Change, Geneva, Switzerland, 2007. Available at <http://www.ipcc.ch/>.

American Meteorological Society. "Climate Change: An Information Statement of the American Meteorological Society." *Bulletin of the American Meteorological Society* 88 (2007). Available at <http://ametsoc.org/POLICY/2007climatechange.html>.

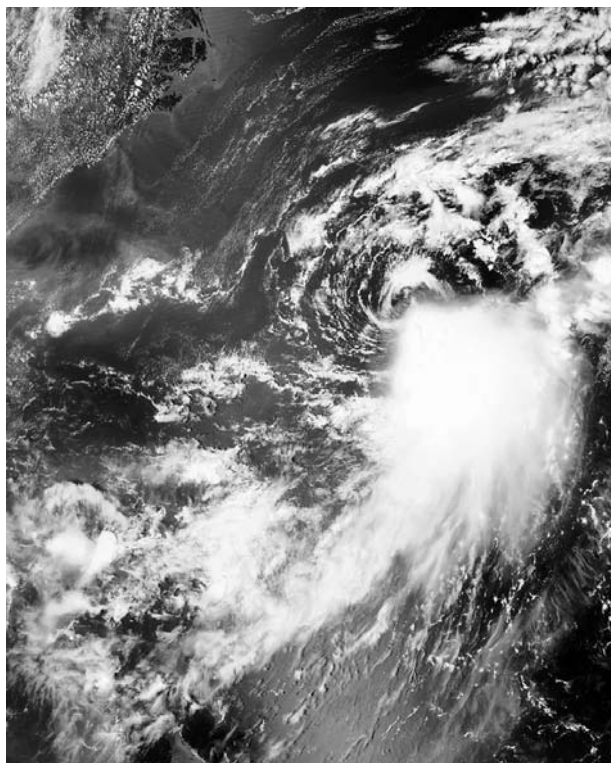
Maslin, M. *Global Warming: A Very Short Introduction*. New York: Oxford University Press, 2004.

Singer, S. F., and D. T. Avery. *Unstoppable Global Warming: Every 1500 Years*. Lanham, MD: Rowman and Littlefield, 2007.

The Debate over Tropical Cyclones and Global Warming

Tropical cyclones pose serious threats to coastal communities around the globe. These large cyclonically rotating storms contain organized thunderstorm activity with a spectrum of increasingly violent wind categories. The possible association between tropical cyclones and global climate change has energized much controversy in the last few years. The Atlantic hurricane season in 2005 inflamed this issue. The 2005 Atlantic season set records for the largest number of tropical cyclones (27), the most hurricanes (14), the most Category 5 hurricanes (3), the most intense hurricane on record (Hurricane Wilma, 882 mb), the most intense storm in the Gulf of Mexico (Hurricane Rita, 897 mb), and the most costly storm on record (Hurricane Katrina, \$150–200 billion). Katrina was also the fifth-deadliest U.S. storm on record (1,500–1,600 fatalities). Indeed, since 1995 most years have witnessed above-normal Atlantic hurricane activity. The period from 1970 to 1994 consisted of relatively quiet Atlantic seasons, suggesting that some kind of climate shift has occurred. Other recent high-impact tropical cyclone events around the globe also support this assertion.

It is well established that water temperatures in most ocean basins have increased by 0.5°F to 1.0°F in the past several decades. Most scientists attribute this to anthropogenic (human-influenced) global warming. The genesis and intensification of tropical cyclones is critically influenced by warm oceans. Therefore, some scientists have postulated that global warming has augmented hurricane activity. Several recent studies have provided evidence for this allegation. One analysis shows that the number of Cat-



Satellite image of tropical cyclone Franklin over the Atlantic Basin on July 24, 2005. (National Aeronautics and Space Administration)

egory 4 and Category 5 hurricanes has increased since 1975. Another study shows that the number of Atlantic tropical cyclones closely parallels the increase of water temperature from the late 1800s.

However, critics point out three main flaws in this proposed global warming relationship. First, tropical cyclones exhibit natural variability in terms of intensity and number. Second, the historical record is not reliable. Both factors make less certain the connection between tropical cyclones and anthropogenic climate change. Finally, other factors besides water temperature affect tropical cyclones, and it is unknown how these other influences will change on a warmer planet.

For example, intense tropical cyclones (Category 3 or higher) in the Atlantic Ocean exhibit multidecadal (20–30-year) variability. It is generally accepted that this oscillatory behavior is due to slow water temperature cycles in the Atlantic, which last 20–30 years. Atlantic hurricane activity tends to be active when this phase has above-normal water temperatures (such as 1945–1970

and starting in 1995), while Atlantic activity is relatively quiet during the cooler ocean mode (such as 1970–1994). Intertwined in these long cycles are El Niño phases associated with warmer than average oceans in the central and eastern equatorial Pacific that last 2–7 years. Atlantic activity is dramatically reduced during an El Niño because it creates Atlantic wind patterns that are hostile to tropical cyclones. In other basins, tropical cyclone numbers are not changed in an El Niño year, but their primary locations are altered consistent with the locations of the shifted warmer water.

Serious questions about the historical record also exist. Prior to the era of satellites, many tropical cyclones were missed entirely. Therefore, all datasets after 1960 on average contain more storms. The intensity of many tropical cyclones is also unknown. Currently, only the United States performs aircraft reconnaissance flights. Only one other basin ever had aircraft measurements (the western Pacific, from 1946 through 1987). When aircraft measurements are missing, most estimates rely on satellite techniques and are known to contain errors. The combination of intensity uncertainty and missing storms makes extrapolating any trends from this dataset problematic.

Finally, while water temperature is the most important factor in tropical cyclone dynamics, many other environmental factors affect these storms. These include the deep warm water; moisture availability; weak wind shear, a source of rotation; and no land interaction or no landfall. Only when all these factors exist can a hurricane reach its maximum potential intensity for a given water temperature. In fact, few hurricanes reach their potential because some inhibiting factor exists. Furthermore, global warming could enhance some negative influences. Therefore, anthropogenic warmer oceans do not necessarily correlate to increased tropical cyclone activity or stronger hurricanes. Climate models give mixed results, although most show evidence for some increase in intensity.

—Patrick Fitzpatrick

Bibliography

International Workshop on Tropical Cyclones. “Statement on Tropical Cyclones and Climate Change.”

➤ A GUIDE TO TROPICAL CYCLONE CLASSIFICATIONS

Tropical cyclones are classified in terms of the sustained (time-averaged) winds they generate at 33 feet altitude, measured in units of miles per hour (mph) in the United States. Storm intensity can also be categorized by central sea-level pressure, which represents the weight of the air above a given area of Earth’s surface. The standard unit of measurement for pressure is the millibar (mb), although pressure is also popularly measured as the height of a column of mercury supported by the atmosphere’s weight using an instrument called a barometer.

Large, cyclonically rotating storms contain organized thunderstorm activity with a spectrum of increasingly violent wind categories. Systems with maximum sustained surface winds less than 39 mph are called tropical depressions. Once this wind reaches 39 mph, it is a tropical storm. If winds equal or exceed 74 mph, it is called a hurricane in the Atlantic Ocean but referred to with different names in other ocean basins (such as a typhoon in the West Pacific). Intense tropical cyclones are defined as Category 3 (winds of 111–130 mph), Category 4 (131–155 mph), or Category 5 (155 mph and up). Since winds are caused by pressure differences, the more intense the tropical cyclone, the lower the central pressure. A minimal hurricane will have a central pressure around 979 mb, a Category 3 will range between 964 and 945 mb, and a Category 5 will be less than 920 mb.

Recent examples of intense hurricanes that made landfall include Hurricane Andrew (Category 5) in 1992, Hurricane Ivan (Category 3) in 2004, Hurricane Charley (Category 4) in 2004, and Hurricane Katrina (Category 3) in 2005.

—Patrick Fitzpatrick

San Jose, Costa Rica: World Meteorological Organization, 2006.

http://www.wmo.ch/web/arep/press_releases/2006/iwtc_statement.pdf.

http://www.wmo.ch/web/arep/press_releases/2006/iwtc_summary.pdf.

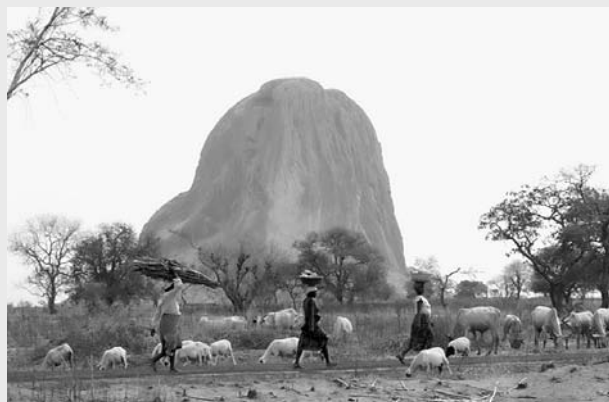
Desertification since 1945

Contrary to popular opinion, desertification is not simply the expansion of deserts such as the

➤ SAHEL

The Arabic name “Sahel,” meaning border or shore, applies to the semiarid, transitional zone of Africa between the Sahara to the north and the savannahs to the south, extending from Senegal on the western coast to the east African Horn, dominated by Ethiopia. This climate delivers an average annual rainfall of 6 to 20 inches, mainly during the summer months. The lack of water is intensified by a generally acidic soil that is deficient in phosphate and nitrogen. In late spring when the rains arrive, the region’s seminomadic people plant peanut and millet crops and feed their cattle and goats on the remaining stubble and shrubs. After the wet season, they journey southward to the more abundant but less invigorating grasses in the northern edges of the savannah.

Although once part of the Sahara Desert, this region, because of its location on trade routes across the desert, was the site of the medieval Sahelian kingdoms. In the 1960s the United Nations tried to improve the conditions with deep wells, which may have upset the delicate climate balance to which the natives were accustomed. During the 1970s there was a multi-year drought that triggered an enduring famine, leading to 300,000 to 1 million deaths, a loss of 5 million livestock, and the widespread dislocation to urban existence of numerous Bedouin tribes such as the Turegs. The cause of the drought has been attributed to human overuse of natural resources, natural large-scale climate changes,



Women carry firewood and other supplies near Wase, Nigeria, in the sub-Saharan region known as the Sahel into which the desert is advancing. (Corel)

or air pollution generated in Europe and North America.

—Thomas Deaton

Bibliography

- Adams, William M., and Michael J. Mortimore. *Working the Sahel: Environment and Society in Northern Nigeria*. London and New York: Routledge, 1999.
- Azyeetey-Attoh, Samuel, ed. *Geography of Sub-Saharan Africa*. Upper Saddle River, NJ: Prentice Hall, 2003.
- Stock, Robert. *Africa South of the Sahara*. New York: Guilford, 1995.

Sahara into surrounding lands. Nearly 50 percent of Earth’s surface has experienced the deterioration and degradation of its soil and plant cover. Desertification of our terrestrial ecosystems has been occurring for thousands of years, but it was not until 1949 that the French scientist A. Aubreville decisively linked this process to humankind’s agricultural practices.

Although the ebb and flow of the fringes of the Sahara has impacted northern Africa, Spain and North America have the largest percentage of dry lands and soils affected. Rangelands have suffered from wood cutting and overgrazing, while nonconservation-conscious farming has

multiplied wind and water erosion in areas of adequate rainfall. Lands with limited water conditions tend toward salinization of the soil, even when irrigation is possible. All this has led to the loss of nutrients, the alteration of soil structure, changes in macro and micro plant species, and the limiting of productivity of profitable crops. This process has been accelerated by thoughtless recreational practices, strip mining, and aggressive urbanization. Except for Antarctica, every continent has evidence of desertification. Although droughts increase the likelihood of desertification, proper land management practices since 1945 have altered the destruction in some

areas and can aid land recovery in others if the sociopolitical will is present.

—Thomas Deaton

Bibliography

- Dregne, H. E. "Desertification of Arid Lands." In *Physics of Desertification*, edited by F. El-Baz and M. H. A. Hassan. Dordrecht, Netherlands: Martinus, Nijhoff, 1986.
- Kepner, William G., ed. *Desertification in the Mediterranean Region: A Security Issue*. Dordrecht: Springer, 2006.
- McKnight, Tom L., and Darrel Hess. *Physical Geography: A Landscape Appreciation*. New York: Prentice Hall, 2002.
- Smith, H. Jesse. "Drying Out." *Science* 312 (April 28, 2006): 500.

Global Deforestation since 1945

Human beings have cut trees for crop production, pasture, building materials, and firewood for centuries, sometimes destroying forests in the process. The growth of the human population from 1 billion to 6.5 billion over the past 200 years has pushed the rate of deforestation to alarming levels, especially in coastal and low-land areas. For example, Brazil has lost nearly 90 percent of its Atlantic forest, one of the world's richest regions for species diversity, while West Africa has lost more than three-quarters of its forest. Deforestation contributes substantially to biodiversity loss and to increased levels of atmospheric CO₂.

The destruction of tropical rain forest is a particular concern. According to the National Academy of Sciences, one four-square-mile patch of tropical rain forest may contain up to 1,500 species of flowering plants, 750 species of trees, 400 species of birds, 125 species of mammals, and 150 species of butterflies. South America's Amazonian tropical rain forest, the largest in the world, shelters an estimated one-third of the world's plant and animal species. With perhaps 30,000 unique species of plants, it is a valuable source for new medicines. About 20 percent of the Amazonian forest has already been lost. An ever-growing number of land-hungry farmers slash and burn the forest, and powerful commercial firms clear-cut huge tracts, selling logs at sub-



Timber workers sitting on tree trunks in the threatened Amazon rain forest of Pará, Brazil. (Corel)

sidized prices and converting forest into pasture and crop land for soy and other export products. Careless and indiscriminate logging practices contribute greatly to the problem. In one study in Brazil's Pará state, forest canopy was reduced by half, and a quarter of all trees were damaged or destroyed by loggers who were seeking to harvest only 1 percent or 2 percent of the trees. With an annual loss of about 93 million square miles, tropical forest now covers only 2 percent of the globe.

The slow-growing circumboreal taiga, which accounts for about 25 percent of the world's intact, closed-crown forest and 8 percent of its total forest, is also threatened. About three-quarters of this boreal forest can be found in Russia, especially in Siberia. Enormous fires destroy hundreds of thousands of acres there every year. Some are set by rogue timber companies in order to purchase cheap leases to log the damaged forests. Canada, which has most of the remaining boreal forest, protects about 8 percent of its forest, but single companies have purchased logging rights to areas that exceed New York state in size. Wood from these ancient Canadian forests is often used to make tissue products, newsprint, and paper for advertising catalogs, mostly in the United States. Regeneration of boreal forest generally takes a long time because of harsh climate and poor soil.

The fragmentation of large forests into smaller tracts can accelerate the numerical decline of

► THE AMAZON RAIN FOREST

The Amazon rain forest is the largest and most species-rich tropical forest in the world. It encompasses over 2.123 million square miles (5.5 million square kilometers) within nine nations. It is the largest rainforest in the world and home to tens of thousands of species and a great variety of human indigenous cultures. Estimates show deforestation rates in the Amazon averaging about 7,335 square miles (19,000 square kilometers) per year during 1998–2007, though recent trends have shown a significant decline. Deforestation is caused primarily from slash and burn techniques used for subsistence agriculture and cattle ranching. Much of the region has long been viewed as communal land, providing subsistence for local people. This has proven an obstacle to conservation efforts, as foreign pleas for environmental protection are often seen as affronts to local sovereignty. The Brazilian government noted a nine-year high in deforestation in 2004 with the loss of 10,571 square miles (27,379 square kilometers) of forest. This destruction of habitat continues to threaten the region's biological wealth and has already had a measurable negative effect on the global environment. The large-scale loss of flora has disrupted the amount of carbon dioxide that is recycled into oxygen, further contributing to global warming.

some species. The brown-headed cowbird, for example, enters fragmented forest in North America, parasitizing the nests of warblers and other neotropical migrants that are already in decline because of habitat loss in both their summer and winter grounds. In Borneo, where much of the forest has disappeared, pygmy elephants and orangutans may be unable to survive in the small forest fragments that remain.

Many countries have tried to protect some of their remaining forest. Brazil plans to create 80 parks and preserves that will equal California in size. Brazil's Tumucumaque Park, the world's largest protected tropical forest, is four times the size of America's Yellowstone National Park. However, few governments have made forest protection a consistent priority, especially in the developing world, and logging with or without the government's consent often continues in for-

ests that are protected on paper. In Indonesia, where much of the forest has disappeared, an estimated 70 percent of all harvested logs are cut in lands that are theoretically protected. The current rate of deforestation in Indonesia is two to four times the rate of natural regrowth.

Deforestation contributes to soil erosion, declining water quality, and the buildup of greenhouse gases in the atmosphere. Pasture and cropland store less carbon than forests. Felled timber releases carbon dioxide as it burns or decays and disturbed soils also produce carbon dioxide from burned organic matter.

The human population may reach 9 or 10 billion during this century, so relentless pressure on the world's forests will continue. Moreover, much of the increase will occur in tropical forest regions. Further declines in human fertility rates, especially in the developing world, more effective protection of remaining forest tracts, and a willingness to use sustainable forestry practices and to recycle forest products can help protect remaining forests. If carbon credits become widely available, countries that reduce deforestation below baseline levels may be able to sell their credits to others, thereby benefiting financially from their efforts to curb deforestation. International organizations such as the Nature Conservancy, the World Wildlife Fund, and Conservation International will continue to play critical roles both by protecting land and educating the public about the importance of conservation and environmental protection.

—Michael F. Hamm

Bibliography

- Sharma, Naredra P., ed. *Managing the World's Forests: Looking for Balance between Conservation and Development*. Dubuque, IO: Kendall/Hunt, 1992.
- Williams, Michael. *Deforesting the Earth: From Prehistory to Global Crisis*. Chicago: University of Chicago Press, 2003.

Industrial Pollution since 1945

An unwanted by-product, industrial pollution from both factories and mobile sources fouls the air, contaminates the soil, poisons the water, and warms the planet. Industrial pollution, which has become global in scope and impact only

since the mid-1900s, has caused or contributed to a number of worldwide trends, especially the following: climate change from increasing greenhouse gas emissions; stratospheric ozone depletion; increasing acidification of rain, freshwater bodies, and oceans; increasing use and misuse of chemicals; increasing solid waste generation; reduction in and degradation of natural areas (with a corresponding loss of biodiversity and human cultural diversity); and disruption of biogeochemical cycles. These trends exacerbate the continuing decline and in some regions decimation of the ecological systems that nurture and sustain all life on Earth.

Although volcanoes, forest fires, and dust and sand storms can cause serious air pollution, sometimes with worldwide impact, air pollutants resulting from the combustion of fuels—especially the burning of coal and petroleum products since 1945—have profoundly impacted human health and the environment. Factories, automobiles, and diesel trucks became significant contributors to urban air pollution (and noise pollution), adversely impacting most large cities throughout the world during and since the second half of the twentieth century. As of 2008, fossil fuel-burning power plants worldwide annually emit billions of tons of carbon dioxide (a principal greenhouse gas), soot (particulates), sulfur oxides, nitrogen oxides, carbon monoxide, and hydrocarbons. Other air pollutants produced by industrial sources such as steel mills, refineries, smelters, and petrochemical plants include a variety of toxic substances, such as mercury, lead, arsenic, and other heavy metals, volatile organic compounds, and other hazardous organic chemicals.

Industrial land pollution entails the deposition on land of solid wastes that do not naturally decompose quickly (or at all) such as bottles, cans, plastics, paper, diapers, electronics, and used cars as well as hazardous wastes, including chemical wastes that are toxic, carcinogenic, mutagenic, or teratogenic (cause fetal malformations) or that exhibit the characteristics of ignitability, corrosivity, or reactivity. Other examples of industrial land pollutants include oil, gasoline, and solvents that leak from storage tanks. Among the most serious chemical pollutants are persistent and bioaccumulative substances, includ-



View of the heavily-polluted Calumet River flowing through an industrial zone south of Chicago. (Environmental Protection Agency)

➤ LOVE CANAL

In 1947 Hooker Chemical and Plastics Corporation bought an abandoned canal near the town of Niagara Falls. After filling it with industrial waste products, they sealed the canal with clay. Soon after, the city purchased the land and built 100 homes and a school on the site. Although Hooker Chemical initially refused on the grounds of safety, they eventually sold the property for one dollar after being threatened with seizure through eminent domain. In 1978 after the clay seal had been breached several times, resident Lois Gibbs began to wonder if chemical leakage was responsible for her children's recurring health problems. Her subsequent protests garnered national attention. It was discovered that the toxic waste sealed in the canal had leaked into the groundwater and endangered the local community. An emergency was eventually declared by President Jimmy Carter in 1979, and those living closest to the site were relocated. The Love Canal disaster eventually led to the creation of the Superfund Act in 1980, providing funds to clean up Love Canal and other toxic sites.

ing halogenated hydrocarbon pesticides such as dichloro-diphenyl-trichloroethane (DDT), aldrin, and dieldrin and toxicants such as polychlorinated biphenyls (PCBs), which, even at very low concentrations as land or aquatic pollutants, can increase the risk of cancer, birth defects, and

➤ INDUSTRIAL POLLUTION SINCE 1945 TIMELINE

- Mid-1940s—Brown, acidic, photochemical smog begins to plague Los Angeles.
- 1952—Pollution-embedded London fog causes an estimated 4,000 deaths over a five-day period.
- 1957—Strontium 90, a radioactive isotope created by nuclear explosions, is found in people around the world.
- 1962—Rachel Carson's book *Silent Spring* alerts the public to worldwide dangers of the widespread use of pesticides.
- 1972—At the first United Nations Conference on the Human Environment, Sweden first raises the need to control long-range transport of industrial air pollutants, particularly acid rain.
- 1974—Chlorofluorocarbons (CFCs) are identified as destroying Earth's ozone layer.
- 1980—Residents in Love Canal, New York, discover that poisonous cancer-causing industrial chemicals improperly disposed of decades earlier have been leaking into their homes.
- 1984—In Bhopal, India, a release of 40 tons of methyl isocyanate gas from a pesticide manufacturing plant kills thousands of people.
- 1989—Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal adopted.
- 1990—Forty-nine Nobel laureates identify threats from global warming caused by greenhouse gases.
- 1999–2007—A deep brown cloud three kilometers deep regularly develops over vast parts of East Asia.
- 2007—United Nations Environmental Program GEO-4 report finds that global climate change accelerates the warming particularly of Arctic and Antarctic regions and the acidification of global oceans; increases the intensity of storms and droughts; and impacts freshwater availability and quality, surface water runoff and groundwater recharge, and the spread of waterborne disease vectors.

—Bertram C. Frey

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genetic mutations in fish, birds, and people through biomagnification a million times up the food chain as they build in body tissues and organs.

Factories have always discharged wastes into nearby waterways. Just as Great Britain, Germany, the United States, and Japan all suffered from severe river pollution as they industrialized in the nineteenth century, Russia, China, India, and Brazil have suffered even more from despoiled waterways as they have industrialized since the mid-twentieth century. In each country, factories such as iron and steel mills, power plants, refineries, paper mills, and petrochemical plants and natural resources facilities, including mines and smelters, have discharged huge amounts of water pollutants. The pollutants include the same toxic heavy metals and hazardous organic chemicals that those sources emit to the air and dispose of on land. The water pollutants have destroyed fish, shellfish, and vegetation; irreparably altered stream ecology; and rendered water unusable for drinking, industrial, or social purposes. Many pharmaceuticals and manufactured personal care products, often entering sewage via human excretion, also pollute streams and rivers. Moreover, there is emerging public concern over manufacturing by-product contaminants called endocrine disruptors (e.g., TCDD, a form of dioxin) that mimic hormones in animals (especially fish) and can alter sexual characteristics and functioning. Water pollution damage impacts aquifers and extends well out into the oceans. Fishermen and farmers have suffered the greatest economic loss caused by water pollution.

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Bibliography

- Gerdes, Louise I., ed. *Pollution. Opposing Viewpoints Series*. Farmington Hills, MI: Thomson Gale, 2006.
- Gore, Al. *An Inconvenient Truth*. New York: Rodale, 2006.
- Stradling, David. 2004. "Air Pollution." In *Encyclopedia of World Environmental History*, Vol. 1, ed-

ited by Shepard Krech III, J. R. McNeill, and Carolyn Merchant, 37–44. New York: Routledge.

Tarr, Joel A. 2004. "Water Pollution." In *Encyclopedia of World Environmental History*, Vol. 3, edited by Shepard Krech III, J. R. McNeill, and Carolyn Merchant, 1305–1312. New York: Routledge.

United Nations Environmental Programme. "Global Environmental Outlook-4." http://www.unep.org/geo/geo4/report/GEO-4_Report_Full_En.pdf/.

Toxic Waste

Massive industrialization in the developed world, particularly in the production of industrial, chemical, and consumer goods, often results in toxic wastes as by-products. Such wastes, often posing detrimental and irreversible damage to the environment, have to be stored and/or disposed of in ways that have minimal consequences to the local community in which their processing takes place. Significant events whereby corporations irresponsibly (or even purposely) have dumped or stored toxic wastes (Love Canal in New York, 1978; Seveso disaster in Italy, 1976) have led to increased monitoring and regulations in much of the developed world. One unfortunate solution, however, has been to export waste products to the developing world. Pressure from nongovernment organizations (Greenpeace) and coalitions of developed and developing countries (Group of 77) have led to international law restricting such exports. Nevertheless, many corporations circumvent such regulations.

Since the end of World War II, toxic waste disposal and storage has been increasingly controversial and subjected to numerous regulations. The Love Canal incident in New York state, which involved the illegal dumping of toxic wastes from the 1920s to 1952 on land that later became a suburban housing development and a public school became a national controversy in the late 1970s when people in the community developed various diseases due to the contamination of the local environment. Similarly, in the early 1980s, waste from the cleanup of the Seveso disaster in Italy was illegally shipped to France. This attracted mass attention to the problem of handling waste products in Europe. Furthermore, within specific low-income communities in the United States, often populated

➤ E-WASTE

Almost as soon as a computer leaves the showroom or the shop at the point of purchase, it is already obsolete, given the rapid advances in personal computer technologies. The multiple components that make up a computer (CPU, monitor, peripherals) are typically upgradable within months of purchase, prompting consumers to buy new devices as rapidly as possible. In addition to these, old televisions, DVD players, and VCRs also experience rapid turnaround or breakdown. This results in the vast accumulation of what is known as e-waste, which due to the chemical composition of electronic implements (i.e., lead, mercury, and lithium) is extremely hazardous to the environment because it pollutes soil and the water table and releases gases in the decomposition process.

In many developed countries, particularly the United States and the European Union, there are currently strict prohibitions regarding the disposal of e-waste, encouraging consumers and companies to recycle these products. However, many of these recyclers often sell much of this waste overseas, typically to countries in sub-Saharan Africa or China where these components are broken down for reuse, the extraction of gold and copper wiring, and other elements. The unregulated nature of the international recycling market in e-waste allows many of these recycling firms to sell their wares abroad for a hefty price. The extraction of these components, typically done in large outdoor heaps and sometimes by young children, is extremely hazardous to human health and the environment. However, the lack of international regulation and the accumulation of massive amounts of e-waste in the developed world continue unabated.

—Abraham O. Mendoza

either by indigenous people (Native Americans) or socially marginalized ethnic groups (blacks and/or Hispanics), charges of environmental racism are leveled when government agencies and corporations build toxic waste disposal sites in the proximity of such communities. These situations have led to increased domestic regulation of toxic waste storage and disposal in the United States (Superfund, 1980; stricter EPA regulations) and the European Union.

In contrast, rapidly industrializing nations such as China, seeking to catch up with the rest of the industrialized world, as of 2009 had almost no controls over toxic waste, allowing factories to dump large amounts of chemical by-products into domestic water sources. The Amur and Sungari rivers in China, in the heavily industrialized northeast, are increasingly poisoned by the constant influx of chemicals, wastes, and by-products dumped by factories. Toxic water from the Amur River used at a factory in Jilin caused an explosion in November 2005, illustrating the gravity of the problem.

The export of toxic wastes from the developed world into the developing world, aided by corruption, lax regulations, and loopholes, has led to increasing controversy and greater international regulation concerning such issues. The infamous *Khian Sea* (1986) and *Karin B* (1988) episodes, in which cargo ships loaded with hazardous wastes searched for foreign ports in which to dump their noxious cargos, stirred international attention. Foreign traders in toxic wastes often have sought out African countries, such as Guinea-Bissau and Kenya. Many of these incidents are immediately brought to international attention by Greenpeace as examples of the toxic colonization of the developing world at the hands of multinational corporations. Such companies, headquartered in the West, allegedly utilize duplicitous practices, such as selling waste as fertilizers or recyclable goods, as means of smuggling hazardous waste into unsuspecting countries under the impression that they are purchasing legitimate products. Blame or liability cannot easily be established. Many of these shippers cannot be linked to the producer of the waste due to the chaotic exchange that occurs between traders.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal of 1989 was designed with the intention of restricting the trade of toxic waste from the developed to the developing world. The Basel Convention also focused on reducing the quantity and toxicity of wastes at their source in order to ensure their subsequent management and minimize environmental degradation. Furthermore, the Basel Convention assists developing countries in the development of

adequate management of wastes, utilizing environmentally friendly techniques. However, as of 2009, the United States, has refrained from signing the Basel Convention, thereby allowing the producers of toxic waste to circumvent such international efforts.

—Abraham O. Mendoza

Bibliography

- Hilz, Christoph. *The International Toxic Waste Trade*. New York: Van Nostrand Reinhold, 1992.
- Smith, Zachary A. *The Environmental Policy Paradox*. 3rd ed. Upper Saddle River, NJ: Prentice Hall, 2000.
- Tesi, Moses K., ed. *The Environment and Development in Africa*. Lanham, MD: Lexington Books, 2000.

Dams—Aswan in Egypt and Three Gorges in China

In the latter half of the twentieth century, large-scale infrastructural projects were undertaken in many postcolonial developing countries under communist or communist-backed regimes. For the purposes of modernizing their economies, countries such as Egypt and China built dams to harness their river systems to create massive irrigation projects, establish hydroelectric facilities for power, and eliminate endemic annual flooding. Among the most notable of these massive national projects are the Aswan Dam on the Upper Nile River in Egypt and the Three Gorges Dam on the Yangtze River in the People's Republic of China. However, as beneficial as these projects have been for the development of their respective national and regional economies, they have also caused irreparable environmental damage and displaced peoples whose livelihoods depended on the annual silt deposits of these rivers.

Egyptian nationalist Gamal Nasser came into power in 1952 with the desire to oust British influence and modernize Egypt. After initially courting both the United States and the Soviet Union for help with construction, he eventually settled on Soviet financing and technical assistance for the purpose of building a dam in Aswan, located along the Upper Nile River near the border with Sudan. In 1958, in order to expand its influence in Africa during the Cold War, the

Soviet Union funded the dam project and provided equipment and technicians. Two dams straddle the river, the newer Aswan High Dam (construction began in 1960, and the dam was completed in 1970) and the older Aswan Dam (Aswan Low Dam built by the British in 1902). The purpose of the new dam was to prevent annual flooding along the banks of the Nile, for which the old dam was inadequate. Annual flooding, while destructive, also brought nutrients and minerals in the form of silt that made adjacent regions ideal for farming, particularly cotton (an important cash crop export for Egypt). However, due to population growth in the regions surrounding the river, flood water needed to be curtailed to prevent damage to adjacent farmland and cotton fields. In addition, the new dam has generated electricity and provided reservoir water for agricultural development farther inland.

Construction on the Three Gorges Dam, originally proposed by Chinese statesman Sun Yat-sen in 1919 and suggested after a survey by the U.S. Bureau of Reclamation in 1944, was delayed until 1994 due to episodes of political unrest and disagreement over the necessity of the dam. Located along the Upper Yangtze River in the central Chinese province of Hubei and expected to be completed in 2011, the Three Gorges Dam is the largest dam project in the world. Much like the Aswan Dam, the Three Gorges Dam was built as a massive infrastructural project aimed at preventing flood damage, harnessing hydro-electrical power for nearby regional economic development, and providing drought relief through the containment of reservoir water for irrigation and agricultural output. The government of the People's Republic of China has poured huge amounts of resources, investment, and manpower into the project, hoping in so doing to develop the economy of the central regions of China. The total electric-generating capacity of the dam is expected to be 22,500 megawatts, making it the largest-capacity hydroelectric power station in the world.

While the Aswan Dam and Three Gorges Dam, ideally, will provide invaluable economic benefits for their respective national economies, they are also responsible for devastating environmental damage and the resultant displacement of millions of people. The Aswan Dam, while elim-

➤ ARAL SEA

The Soviet Union holds the dubious honor of having built the most ill-conceived and environmentally disastrous agricultural plan in the postwar era. In the 1950s the Soviets decided to exploit the Aral Sea, which sits between Kazakhstan and Uzbekistan, as a water source that would irrigate a huge expanse of previously unused land, primarily for cotton and rice. By 1990, what was once the world's fourth-largest lake was reduced to a third of its original size, and what remained was three times more saline. Half the mammal species were gone, as were 34 fish species.

The agricultural bounty of Central Asia never materialized. As the Aral Sea shrank, it exposed to the sun broad areas of salt- and chemical-encrusted soil that were picked up by the wind and settled on and destroyed much of the same land that irrigation waters were supposed to reclaim. The regional fishing industry lay in ruins, and the drinking water was no longer potable. In 1990, an outbreak of plague afflicted what remained of the population. To make matters worse, less water in the sea meant less moisture in the atmosphere, which translated into regionally drier weather that further devalued farmland.

Solutions are costly. With aid from the World Bank, in 2001 the Kazakh government began an \$85 million effort to reconstruct canals, dams, and waterworks to return water to the portion of the Aral that lies within Kazakhstan's borders. As of 2006, the results were promising: with water, fish, and wildlife returning as well as a fishing industry. However, the Aral seabed that lies within the more impoverished Uzbekistan, which lacks Kazakhstan's oil resources, remained a wasteland.

—Andrew Duffin

inating sporadic and destructive annual flooding along the banks of the Nile, has also prevented the replenishment of adjacent agricultural regions with silt, with catastrophic consequences for agriculture. Many previously thriving agricultural regions have been lost to the desert as a result of the lack of replenishment that silt provided. This has severely affected Egyptian agricultural output in the past quarter century and has displaced droves of Egyptians engaged in agriculture by prompting them to migrate into

Egyptian cities, already fraught by problems due to massive urbanization. The Three Gorges Dam construction has also contributed to the massive relocation of millions of Chinese citizens (currently estimated at 2.3 million) as well as the loss of historical and archaeological sites. Pollutants, unable to diffuse themselves through the course of the river, have accumulated in the reservoir and contributed to low quality of the Upper Yangtze water. Like the Aswan Dam, the buildup of salts in the soil from irrigation has lessened the fertility of regions surrounding the course of the river, which had depended on annual flooding and silt.

—Abraham O. Mendoza

Bibliography

Fahim, Hussein M. *Dams, People, and Development: The Aswan High Dam Case*. New York: Pergamon, 1981.

Khagram, Sanjeev. *Dams and Development: Transnational Struggles for Water and Power*. Ithaca, NY: Cornell University Press, 2004.

Leslie, Jacques. *Deep Water: The Epic Struggle over Dams, Displaced People, and the Environment*. New York: Picador, 2006.

Salinization of Water Supplies and Land

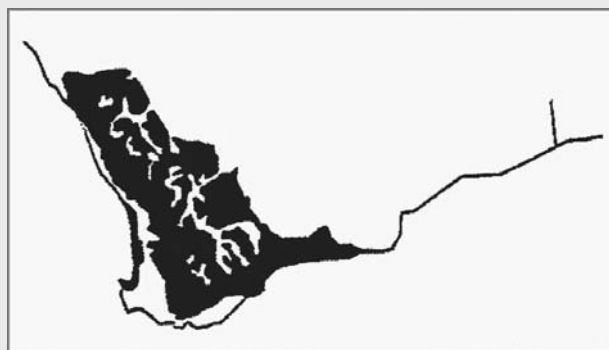
Salinization is the increase in salt levels as runoff from rain or irrigation carries salts from soils up to the surface or into groundwater. This can lead to a harmful buildup of salt in soil or water naturally, but most salinization is caused by mismanagement of farmland. Millions of acres around the world have been rendered unsuitable for agriculture, yields have been reduced over a much larger area, and many productive aquatic ecosystems have been damaged or destroyed.

► RECLAMATION BY REPLANTING

Trees may ultimately prove to be a vital element in managing groundwater for farming operations and to prevent salinization in arid environments. China and Australia have been most active in using this traditional solution in their modern salinity management programs. Large reclamation projects with trees have been completed in both countries. In Shangdong Province, for example, more than 4 million trees and 2.5 million shrubs were planted on 13,000 hectares (approximately 32,000 acres) for groundwater management in the battle against salinization.

Trees increase evapotranspiration of water and help maintain groundwater below the danger zone within which salts leach to the surface. Trees also improve microclimatic conditions on surrounding lands, reducing crop water demand and evaporation from the soil surface so that less irrigation water is needed. This climatic improvement results from increased humidity, reduced wind speed, and shading. Trees can also reduce wind damage to crops if planting is planned to provide wind breaks.

Salt-tolerant multipurpose trees can provide farmers with fuelwood, building materials, food, and medicine. These added products can increase



Graphic illustrating soil salinity problems in western Australia. Soil salinity buildup from salt in irrigation water is common, but dryland salinity is a special concern in Australia. Shaded regions on this map indicate areas at risk in one area of southern Australia. Salt can rise from the deeper soil even on such nonirrigated land. Some farmers call it the "white death." Dryland salinity currently affects more than 5 million hectares (12.4 million acres) of land in Australia, and causes damage totaling \$270 million each year. (After Schofield, N.J. "Tree planting for dryland salinity control in Australia" in *Agroforestry Systems*, Nov. 1, 1992)

farm profits and reduce risks, a critical factor in most arid lands.

—David A. Bainbridge

Salinization most commonly occurs when farmland is irrigated in arid environments. This tragic result was first noted in Mesopotamia more than 4,000 years ago. As salt built up in the soil, wheat could no longer be grown, and farmers switched to barley. As salinization became worse, many areas were abandoned and have remained unproductive ever since. Irrigation can also cause the water table to move closer to the surface, and then capillary action can lead to rapid salt buildup in the upper soil. The same problem has occurred when trees are cut in arid environments. As evapotranspiration—that is, the water used by plants—declines, the groundwater rises, and salinization develops.

Research over the last 100 years has demonstrated that if farmlands are managed carefully, salt buildup can be slowed by flushing the soil with water through buried drainage tiles or surface flooding. Unfortunately, this very saline drainage water then creates worse problems when it is concentrated in reservoirs or evaporation ponds. This led, for example, to the toxic selenium buildup at the Kesterson Reservoir in the San Joaquin Valley of California in the 1980s, causing extensive damage to birds and other wildlife. Salinity levels in the inland Salton Sea in southern California have increased to the point where the water has become fatal to most fish species, and the risk to waterfowl is growing each year. The current estimate of the cost to stabilize the Salton Sea ecosystem is more than \$7 billion, highlighting the magnitude of the challenge involved in fighting salinization.

Research also has demonstrated that salinized soil can be reclaimed, but the process requires large amounts of fresh water, costly infrastructure, or a long recovery period. In some cases salt-tolerant trees and shrubs have been used to increase evapotranspiration and drop the groundwater below the danger zone, but this can be costly. Rainfall catchments have also been used to flush salts from planting spots.

Salinization is an ongoing crisis of agriculture and development in arid lands. The technical issues are well understood, but solutions are elusive because it is primarily an economic problem, and little work has been done to convert to more sustainable systems in arid lands. Although the very sophisticated Nabatean floodwater farms

of the Negev Desert in Israel offer excellent examples of what might be done, international aid and development programs instead have promoted large dams, water transfers, and irrigation that inevitably lead to salinization.

—David A. Bainbridge

Bibliography

- Hillel, D. *Rivers of Eden*. Oxford: Oxford University Press, 1994.
- Jacobsen, T., and R. M. Adams. "Salt and Silt in Ancient Mesopotamian Agriculture." *Science* 128 (1958): 1251–1258.
- Kovda, V. A. "Loss of Productive Land Due to Salinization." *Ambio* 12(2) (1983): 91–93.
- Schofield, N. J. "Tree Planting for Dryland Salinity control in Australia." *Agroforestry Systems* 20 (1992): 1–23.
- Vengosh, A. "Salinization and Saline Environments." In *Treatise on Geochemistry*, edited by Heinrich D. Holland and Karl K. Turkekian, Vol. 9, edited by B. S. Lollar. San Diego: Elsevier Pergamon, 2004.

Ocean Pollution since 1945

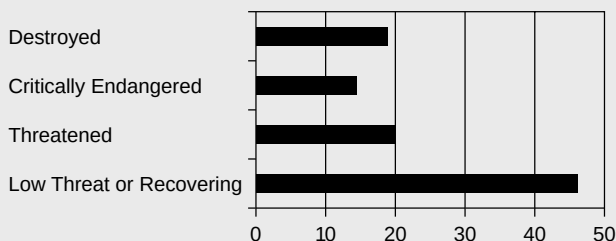
International marine pollution has only been regulated since World War II. In 1948, the International Marine Consultancy Organization—later named the International Maritime Organization (IMO)—was established to regulate international shipping. Six years later, the London Oil Pollution Convention was convened to start a 20-year process for regulating international ocean pollution. Since that time, several other international



Garbage washed up on a beach—a growing world problem endangering ocean wildlife. (Shutterstock)

THREATENED CORAL REEFS

Endangered Coral Reefs, 2008



■ Reefs at Risk Globally (Calculated as percentages of total reefs)

Categories:

Destroyed: 90 percent or more of the coral is lost on these reef areas.

Critically Endangered: 50-90 percent loss of corals and likely to join category 1 in 10-20 years.

Threatened: 20-50 percent loss of corals and likely to join category 1 in 20-40 years.

Low Threat or Recovering.

A crucial habitat for many species, coral reefs around the globe are now in crisis. Coral reefs are threatened by several processes including disease, coastal development that can increase sediment disposal, invasive species such as the crown of thorns starfish that eats coral, and destructive fishing practices such as the use of poison or explosives to catch ornamental reef fish. Another primary force in the destruction of reefs is coral bleaching that occurs when water temperatures warm enough to expel the organisms that live in the calcium-carbonate hard shell of the coral. The dead coral then turns white, although it may later

Reefs at Medium or High Risk:

51 percent of Pacific
61 percent of Caribbean
82 percent of Southeast Asian

be reinhabited. Thus, climate change has raised important concerns about the ability of coral to survive in some areas if they are unable to adapt to warmer waters. The likelihood of this adaptation is yet unclear but not very promising.

In 2000, 11 percent of the world's reefs were in the destroyed category, but this category has since nearly doubled to 19 percent. Thirty-five percent of the remaining world's reefs are at risk as of 2008. This number is down from previous years because some recovery occurred after a significant bleaching event in the Pacific in 1998, and management has improved through protected areas and effective management, as in the Great Barrier Reef in Australia.

—Peter Jacques

Bibliography

- Bryant, D., et al. *Reefs at Risk: A Map Based Indication of Threats to the World's Coral Reefs*. Washington, DC: World Resources Institute, 1998.
- Wilkinson, C. *Status of Coral Reefs of the World: 2008*. Townsville, Australia: Global Coral Reef Monitoring Network and Reef and Rainforest Research Center, 2008.

laws have been developed to limit ocean pollution, although most occurred in the 1970s.

Most marine pollution starts on land because of human activities. More than 70 percent of marine pollution comes from land-based sources, while the direct dumping of pollutants into the ocean and pollution from marine transportation make up another 20 percent of all international ocean pollution.

Chlorinated pesticides such as polychlorinated biphenyls (PCBs), dioxins, and dichlorodiphenyl-trichloroethane (DDT) are of particular concern because these chemicals are persistent, meaning they are very difficult to break down.

For marine mammals such as seals, porpoises, and whales that eat fish contaminated with these pollutants, the toxins become a permanent part of their fatty tissue. Humans who eat these fish (or mammals) also accumulate this poison in their bodies. This poisoning has been linked to cancer, and scientists have now documented that marine mammals all around the world are contaminated with DDT, PCBs, and other toxins.

Another major pollution concern is sewage that ends up in the ocean and directly causes major health problems in humans. One in 20 people entering seawater classified as acceptable under some of the most strict water quality

standards in the United States and the European Union will become ill with even just one swim. Every year 250 million cases of gastroenteritis and upper respiratory disease occur from this kind of direct exposure to sewage. Nations that do not have adequate treatment encounter more severe threats. Furthermore, eating contaminated shellfish can introduce infectious hepatitis and is typically responsible for 2.5 million cases per year resulting in about 25,000 deaths and 25,000 victims of long-term disability.

Eutrophication, the process through which bodies of water absorb excess nutrients, can be yet another source of pollution when there is an oversupply of organic material to a water ecosystem. Most typically, eutrophication is related to the amount of agricultural fertilizer and nitrates used near rivers that empty into the ocean. The ensuing algae blooms can be harmful, especially if the algae is toxic to begin with. An overabundance of algae at the top of the sea layer prevents light and nutrients into the water, while dying algae float to the bottom of the area and release the carbon they stored from photosynthesis. The increased use of agricultural fertilizers corresponds with the number of algae blooms experienced each year. In the early 1970s, just over 90 million tons of agricultural fertilizer was used globally, but by the mid-1990s global use of agricultural fertilizer increased 30 percent to more than 130 million tons a year.

As a dramatic example of eutrophication's adverse effects on ecosystems, in the United States agricultural fertilizer runoff into the Mississippi River has created a dead zone in the Gulf of Mexico. A dead zone is an area that has experienced eutrophication to the extent that the dissolved oxygen that other organisms need to live becomes depleted. The size of the Gulf dead zone varies but is typically around 20,000 square kilometers, while some dead zones around the world have been as large as 70,000 square kilometers. A United Nations report from 2003 noted that dead zones had doubled around the world since the 1990s, and the trend is expected to continue upward as the use of fertilizers increases and as fertilizers drain into bays and outlets.

Finally, oil pollution is a matter of concern. Oil pollution comes from operational or intentional releases, tanker accidents, and in-land oil-

related facilities. Oil pollution levels vary greatly from year to year depending on the occurrence of major tanker spills. In general, oil pollution from ships remains steady or in decline. Intentional oil pollution occurs when ships put ocean water in their oil cargo tanks after the oil has been unloaded at port. Tankers then release this contaminated water back into the ocean after it is no longer needed for stability. However, the tanks still have oil residue in them, and this residue mixes with the water to create a sludge-like pollutant.

—Peter Jacques

Bibliography

- Jacques, Peter, and Zachary A. Smith. *Ocean Politics and Policy: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2003.
- Juda, Lawrence. *International Law and Ocean Use Management: The Evolution of Ocean Governance*. New York: Routledge, 1996.
- Mitchell, Ronald. *International Oil Pollution at Sea: Environmental Policy and Treaty Compliance*. Cambridge, MA: MIT Press, 1994.

Invasive Species, 1945–Present

Species exchange has always followed humanity's ability to overcome the physical boundaries between ecosystems, but the pace of that exchange has increased substantially with developing globalization. During World War II travel increased between regions of the world, creating pathways for invasive species to follow. Following the war, transport links often remained, and new trade flourished. While some species introduction post-1945 have been accidental, as with seeds and animals caught up in machinery or clothing or traveling unnoticed in soil, other introductions have been deliberate as people seek new plants for their gardens, new species of fish or plants for their aquariums, new crops, or new forms of biological control for established pests. As in previous time periods, the results of the arrival of any particular species cannot be predicted, and the threat of ecosystem invasion by exotic species remains.

Increasing global ties since 1945 have increased the ability of all species, not just humans, to travel. Global trade has greatly increased in volume, and more trade means more transportation

➤ BROWN TREE SNAKE OF GUAM

One of the most devastating incidents of species invasion after 1945 has occurred on the small Pacific island of Guam. The use of Guam as a U.S. base during World War II increased its air and sea links with Papua New Guinea and resulted in the arrival of the Brown Tree Snake (*Boiga irregularis*). The snake was not noticed immediately, as it is secretive, nocturnal, and arboreal, but two decades after its arrival, the loss of Guam's birdlife drew attention to its presence.

It may have been only one pregnant female Brown Tree Snake that arrived in 1949, but as a result of that arrival Guam has lost 13 of its 22 bird species, and there are far fewer birds on the island. Native reptiles and bats have also been affected.

At present, shipping through Guam is increasing, and there is the danger that the Brown Tree Snake will reach the Northern Mariana Islands or Hawaii and that the experience of Guam will be repeated.

—Claire Brennan

between different regions and a greater risk of unwanted species exchange. In addition, an increasing speed and ease of travel means that species are more likely to survive transportation, and the increase in air travel means that a trip across the Atlantic can be accomplished in hours rather than weeks. Changes in transport have increased the risk of new invasive species in another way too. Invasive species used to be most common near ports, but now transport networks penetrate continents far more thoroughly. The development of containerized transport, whereby goods are loaded into shipping containers and transported to their final destinations rather than unloaded and redispached at a port, means that invasive species can emerge anywhere, not just at international ports.

It is not just landmasses that are at increasing risk of invasive species. The period after 1945 also has seen an increase in aquatic invasive species. Ships have always had the potential to transport stowaway species attached to their hulls or in their ballast, but since 1945 shipping

has vastly increased in volume and speed. In addition, the trade in live seafood, which requires speed, has also allowed species to spread beyond their native range. Likewise, through carelessness or intentional releases, hobbyist fish tank owners have allowed exotic species of fish, plants, and invertebrates to enter waterways, providing even more chances for species to invade new regions. In North America the aquarium trade has introduced the Lionfish (*Pterois volitans*) along the southeastern coast, while the waters around Florida have been invaded by the Moorish idol (*Zanclus cornutus*), the sailfin tang (*Zebrasoma desjardinii*), the yellow tang (*Zebrasoma flavescens*), the bursa triggerfish (*Rhinecanthus verrucosus*), the racoon butterflyfish (*Chaetodon lunula*), the orbiculate batfish (*Platax orbicularis*), and the emperor angelfish (*Pomacanthus imperator*).

Species have been introduced to new regions deliberately as well as accidentally in this period. For example, despite a government decision not to introduce the rabbit disease *Calicivirus* to New Zealand in 1997 (to combat the growing population of this introduced species), farmers deliberately imported rabbit tissue, some infected with the virus, from Australia in a desperate attempt to control New Zealand's rabbit population. In Australia the bumblebee has become extensively established on the island state of Tasmania in the period since 1992. While the bee may have arrived in Tasmania accidentally, there has been support for introducing it to the continent more broadly despite the risks that this might pose.

Although the wholesale redistribution of species around the world has resulted in the presence of more species in any one place, its overall result has been the loss of diversity. Species that developed in isolation, particularly those that developed on islands, have been lost because of habitat destruction, direct predation by humans or other species, or competition for food supplies with introduced species. As a result, many places have more species present, but fewer native species survive as hardier nonnatives or weeds invade disturbed environments. The planet as a whole has become, and continues to become, more uniform and weedy.

—Claire Brennan

Bibliography

- Calado, R., and P. M. Chapman. "Aquarium Species: Deadly Invaders." *Marine Pollution Bulletin* 52(6) (June 2006): 599–601.
- Low, Tim. *Feral Future: The Untold Story of Australia's Exotic Invaders*. Melbourne: Viking, 1999.
- Rodda, Gordon H., and Julie A. Savidge. "Biology and Impacts of Pacific Island Invasive Species: 2. *Boiga irregularis*, the Brown Tree Snake (Reptilia: Colubridae)." *Pacific Science* 61(3) (July 2007): 598–607.
- Van Driesche, Jason, and Roy Van Driesche. *Nature out of Place: Biological Invasions in the Global Age*. Washington, DC: Island Press, 2000.

Endangered Species, 1945 to Present

Many scientists believe that a massive extinction of species is under way because of the huge growth in human population, the rapid consumption of the world's resources, and the destruction or degradation of habitats, especially species-rich lowlands, tropical forests, wetlands, and aquatic ecosystems. Other people believe that the rate of extinction is less rapid, and some contend that the rate of documented species extinction peaked in the 1930s.

It is clear that some of the world's most magnificent animals are critically endangered. To take one example, only about 6,000 tigers live in the wild today, compared with an estimated 100,000 in 1900. Three of the world's eight tiger subspecies are already extinct. Tigers are killed by trophy hunters and by those who sell their body parts as alternative medicines. Ultimately the loss of habitat is the most important factor. In China, about 1,600 giant pandas survive in isolated forest fragments. Although some 50 panda preserves have been created, the fate of this animal remains uncertain. Only a few rhinoceroses can survive today outside of protected areas because they are hunted for their horns, which are coveted in some societies as traditional medicines, aphrodisiacs, and dagger handles.

Plants and animals with narrow habitats are particularly vulnerable to changes in climate or habitat. The introduction of invasive species, often by accident, has also contributed to species decline and extinction. Genetic erosion—the loss of genetic diversity—can make surviving clusters



Protected reserves have helped increase the population of the endangered black rhinoceros. (Corel)

of plant and animal species vulnerable to extinction from new diseases.

Marine life is also threatened globally. Six of the world's seven marine turtle species are highly endangered. Coral reefs store extraordinary levels of diversity. Some scientists believe that 70 percent of the world's coral reefs may be destroyed by 2050. Many freshwater and saltwater shellfish have declined or disappeared, mainly because of deteriorating water quality. Overfishing has reduced both freshwater and ocean fishes. Perhaps 20 percent of the world's freshwater fish have become extinct or are currently endangered. Some reports suggest that this percentage may be higher.

Tropical invertebrates account for a high percentage of the species that are disappearing. Thousands of these insect species have not yet even been identified. The protection of all species including insects is a matter of considerable controversy. Some argue that species are interlinked in ways that are not fully understood so that destruction of any species could pose a serious loss to humans and to nature in the future. Crucial to the debate is the issue of the social value of the different species, that is, how to determine whether they are worth saving.

Increased public awareness is helping to save some species. The southern white rhino population increased from about 248 in 1997 to 11,600 in 2001 thanks to sanctuary protection in southern and East Africa. The critically endangered

▶ IVORY-BILLED WOODPECKERS

Ivory-billed woodpeckers (*Campephilus principalis*) were the largest North American woodpeckers, measuring from 18–20 inches (46–51 centimeters) in height. Prior to 2004, ivory-bills were last sighted in the woods of northwestern Florida and in the Singer Tract in central Louisiana. The latter was logged in the mid-1940s, whereas the last sighting was in 1944. Until recently the species was believed extinct. Common to old-growth hardwood forests in the southern United States in the 1700s, the ivory-bill was endangered by the logging of the nineteenth and early twentieth centuries. The ivory-bill's food supply is the beetle larvae found in very old dying or dead sweet gums, tupelos, and hackberry trees. The birds nest in an unlined hole drilled into a big cypress tree where a clutch of three to five glossy white eggs would be laid. Prompted by amateur sightings, in 2004 ornithologists from the Cornell Laboratory of Ornithology and the Nature Conservancy of Arkansas led an excursion and reported sighting an ivory-bill in the swampy forests along the White and Cache rivers in eastern Arkansas. Since the 2004 announcement, experts have debated whether the sound recordings and video footage that the Cornell team obtained is of the ivory-bill or a closely related species. Restoration of the ivory-bill would reverse one species' purported extinction.

—Jack Waskey

black rhinoceros is also increasing slowly in protected areas. Many organizations now protect habitat and educate the public about the importance of protecting biodiversity.

The Center for Plant Conservation, for example, works to conserve and restore native plants in the United States, where an estimated 20 percent of native plant species are in decline. The Nature Conservancy, a private conservation organization, has set a goal of protecting at least 10 percent of each of the world's major habitats by 2015. Conservation easements—formal restric-

tions on the use of land designed to prevent the degradation of critical habitats—are one means of protecting biodiversity. Conservation banking, a system under which land developers can buy and sell conservation credits generated by restoring or preserving habitat, also may become increasingly popular.

Government initiatives are critical as well. More than 120 governments have signed the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which offers varying levels of protection for 30,000 plant and animal species. The Endangered Species Act (ESA), passed by the U.S. Congress in 1973, has enabled the remarkable recovery of such species as the American alligator, the Canada goose, the brown pelican, and America's national symbol, the bald eagle. According to the American Bird Conservancy, 44 percent of the bird species protected by this act have increased in number, while about 20 percent have continued to decline and 2 percent have become extinct. In 1992 authorization of the ESA expired. While many of its provisions remain in force, special interests continue to try to weaken or destroy the act.

Why should disappearing birds, beetles, and plants be of concern? As environmentalist John C. Ryan has argued, "A species is the unique and irreplaceable product of millions of years of evolution, a thing of value for scientific study, for its beauty, and for itself. For many people, however, a more compelling reason to conserve biological diversity is likely to be pure self-interest: Like every species, ours is intimately dependent on others for its well-being."

—Michael F. Hamm

Bibliography

- "American Birds. An Endangered Species Act Success Story." *Bird Conservation* (Spring 2006): 2–20.
- Stalcup, Brenda, ed. *Endangered Species: Opposing Viewpoints*. San Diego: Greenhaven, 1996, 34–36.
- Wilson, Edward O. *The Diversity of Life*. Cambridge: Belknap Press of Harvard University, 1992.

■ Introduction: Environmentalism in Thought and Practice

In 1977, lawyer Christopher D. Stone published his essay “Should Trees Have Standing?” that argued that trees should be regarded as having legal rights. Such a legal argument, which would have been unheard of 50 years earlier, indicates that by the late twentieth century, environmentalism had entered the mainstream of thought and awareness. While it drew from much earlier precedents, including writers and thinkers of the eighteenth and nineteenth centuries, environmentalism has grown and splintered since its emergence in full force in the 1960s and 1970s. The movement gradually moved from wilderness preservation to concerns with all environments. One landmark was the forceful argument of environmental racism, which revealed that environmental ills tended to be distributed where they would harm the health of poor people and racial minorities and not disturb elites. Another more recent landmark is the emergence of environmental stewardship notions in the Christian evangelical community, which suggests a strengthening unity behind the ethic that crosses political lines. The capitalist business model is also beginning to adapt to environmentalist currents when cost-effective. Yet a united purpose is far from guaranteed. Industrial economies, the expansionism inherent in capitalism, and the comforts of consumer lifestyles place continued stress on limited resources. Likewise, inequalities of wealth within nations and between the states of the North and the South indicate that there are forces at work that will continue to divide the unity of purpose needed to achieve the ideals of environmentalists.

—Fred Nadis

Environmentalism and Green Movements

From its symbolic birth at the first Earth Day, held in the United States in April 1970, environmentalism has been a cluster of local, regional, and international movements. Key organizations have incorporated establishment, grassroots, and counterculture philosophies. Older well-funded elite wilderness preservation societies, such as

the Sierra Club (United States) and the Fauna and Flora Preservation Society (United Kingdom) helped shape the environmentalist message that emerged in the 1970s along with new environmental legislation in the United States, Europe, and other countries. Issues such as pollution from industrial sites, smog, chemical dumps, and the protection of wetlands, forests, or other habitats galvanized grassroots organizations, including single-issue groups, as well as public interest groups that developed into important environmental monitoring organizations, relying on litigation against corporations. By the 1990s, inner-city and developing-world groups demanded that attention shift from wilderness protection to also consider environmental justice. In this sense, environmentalism was redefined as a form of human rights. Today, thousands of environmental nongovernmental organizations (NGOs) exist worldwide, while international agreements such as the Kyoto Protocol attempt to broker the problem of global warming. No longer simply a protest movement, environmental monitoring, planning, and sustainable technologies are industries unto themselves, central to governance, corporate strategies, and research and development.

In the 1970s, the more conservative lobbying-based approach to wilderness preservation was represented in the United States by the Group of Ten. This group included the older and more conservative wilderness and wildlife protection groups such as the National Wildlife Federation, the Izaak Walton League, the National Audubon Society, the Sierra Club, the Wilderness Society, and the Council for Environmental Quality as well as newer professional-based groups such as the National Resources Defense Council, the Environmental Defense Fund, the Environmental Policy Center, and Friends of the Earth (a more activist offshoot of the Sierra Club) that focused on policy and court challenges. These groups had ties to important grant sources such as the Ford Foundation as well as funds from an increasing membership base. Many of their leaders had also worked in industry as chief executive officers.

➤ EARTH DAY

U.S. senator Gaylord Nelson of Wisconsin first conceived of Earth Day after visiting the ocean front that the Santa Barbara oil spill had devastated in 1969. While flying to San Francisco, he thought, “My God, why not a national teach-in on the environment.” At a time of civil crisis over the continuation of the Vietnam War, environmentalism created a safe subject for public discussion. The first Earth Day, with teach-ins and speeches planned across the United States, was set for April 22, 1970. One of its chief organizers was the law student Denis Hayes, who said that Earth Day offered an antidote to the public fear that “things were falling apart.”

The day’s more radical events tended toward humor as a tactic. In San Francisco, for example, the Environmental Vigilantes poured oil into a reflecting pool in front of Standard Oil Company headquarters to protest oil spills. In New York City, demonstrators demanding a cleanup of the Hudson River held up dead fish and shouted, “You’re next, people!” Meanwhile, schoolchildren and high school students participated in cleanups and planted trees, while public rallies encouraged a heightened environmental awareness. Earth Day is now celebrated in nearly 200 countries across the globe. Russia, a recent addition to that list, hosted its first Earth Day in 2006.

—Fred Nadis



People gather for the first Earth Day celebration on April 22, 1970. (Hulton Archive/Getty Images)

At the same time, a more radical brand of environmentalism emerged from the 1960s counterculture, suspicious of the status quo and aiming for a thorough refashioning of a green social order. In 1971, David McTaggart formed Greenpeace in Vancouver, Canada. Greenpeace sought dramatic media-friendly David versus Goliath confrontations in which its small boats attempted to force an end to nuclear tests, whaling, and the killing of seal pups. The group soon developed into an international operation with members in the United States, France, the Netherlands, and Canada. In 1985, French agents of the Direction Generale de la Securite Exterieur (DGSE) blew up the organization’s vessel, the *Rainbow Warrior*, while it was docked in New Zealand, killing one crew member. Crew members had been

set to sail to Muroroa Atoll to protest a planned French nuclear weapons test.

Another counterculture group, Earth First!, developed as a radical offshoot of the conservative Wilderness Society in the 1970s. Inspired by Edward Abbey’s 1976 novel *The Monkey-Wrench Gang*, the Earth First! founders, which included Dave Foreman, championed monkey wrenching or direct actions to sabotage development and projects that despoiled wilderness. Earth First! members became best known for their attempts to save old growth forests by chaining themselves to trees, tree sitting, and dramatic protests, while some members resorted to illegal tactics such as hammering steel spikes into trees slated for harvesting. Although such trees were usually marked to prevent harvesting, loggers could be

seriously injured if their chainsaws broke on these spikes.

In the 1970s and 1980s, political movements such as the Green Party and Barry Commoner's Citizen's Party in the United States emerged in an attempt to reform industrial society through electoral politics. Biologist, environmental activist, and socialist, Commoner attempted to forge a new political party that would wed an environmentalist ethic to Old Left bastions such as trade unions. Commoner's 1979 presidential bid faded when Jimmy Carter, the incumbent Democrat, gained the support of mainstream environmental groups. Commoner ended with a modest 250,000 votes. In West Germany in the 1980s, a wide coalition of conservative and radical environmentalists inaugurated the German Green Party. The German group's most important victory came in 1983, when Greens gained parliamentary representation in West Germany. In the same decade, the Verts gained representation in France. In the decades that followed, the German Green Party's idealistic grassroots vision of democracy and oppositional politics gave way to a more realistic approach to implementing goals such as sustainability.

While established environmental groups such as the Switzerland-based World Wildlife Fund, the Netherlands-based Friends of the Earth International, and Greenpeace International have aided environmental projects throughout the world, notable movements have emerged in the developing nations as well. In 1977, Wangari Maatha began the Green Belt Movement in Kenya. Over the decades the tree planting she encouraged spread to 30 African countries and as of 2002 involved the planting of 20 million trees. In her speeches, Maatha, who gained the Nobel Peace Prize in 2004, has underlined the connection between degraded environments, poverty, and political turmoil.

Since the 1980s, the movement to save the tropical Amazon and rain forests of South America—crucial carbon sinks and refuges of biodiversity—has received much international attention and engendered violent conflict. In 1988, Brazilian activist Chico Mendes was murdered. Mendes was a founder of Brazil's National Council of Rubber Tappers, which, along with indigenous groups, protested the destruction of

the Amazonian forest to make way for cattle ranching. Ademir Alfeu Federicci (or "Dema"), leader of the Movement for the Development of the Transamazon and Xingu Region, which attempted to block illegal logging operations as well as dams on the Xingu River, was assassinated in Brazil in 2001.

In Ecuador, groups such as Accion Ecologica and Oilwatch International also formed to slow deforestation and to block oil pipeline construction, often facing violent opposition from government forces. In 1999, Amnesty International and the Sierra Club created Defending Those Who Give the Earth a Voice to attempt to aid Latin American environmental activists, facing violent repression at the hand of government troops aiding multinational enterprises. In other Latin American countries, professionally based environmental groups such as the Bolivian Ecology Society and Costa Rica's Amigos de la Naturaleza have been more successful in their decades-long efforts at establishing national parks and monitoring wilderness. In those countries, public action groups akin to those in the United States have also developed.

In recent years, the United Nations (UN) has become a crucial forum for launching international environmental efforts, forging policy, and providing a forum for issues of environmental justice and environmental monitoring. The UN Conference on the Human Environment (Stockholm, 1972) and the UN Conference on Environment and Development (or Earth Summit) in Rio de Janeiro in 1992 were both landmark events, prompting long-term planning to slow global warming and aid biodiversity and sustainability.

Currently, more NGOs than ever are dedicated to environmental causes, while multinational corporations publicly embrace sustainability. Yet despite some optimistic green business goals, underlying economic structures (quite simply, the profit motive) do not tend to favor sustainability or environmental justice. Environmental awareness has become mainstream, but environmental crisis remains.

—Fred Nadis

Bibliography

Gottlieb, Robert. *Forcing the Spring: The Transformation of the American Environmental Movement*. Washington, DC: Island Press, 1993.

Shabecoff, Philip. *A Fierce Green Fire: The American Environmental Movement*. Washington, DC: Island Press, 2003.

Switzer, Jacqueline Vaughn. *Environmental Activism*. Santa Barbara, CA: ABC-CLIO, 2003.

Wapner, Paul. *Environmental Activism and World Civic Politics*. Albany: State University of New York Press, 1996.

Philosophy of Nature

During the second half of the twentieth century, a growing sense of environmental crisis led philosophers and social critics in many countries to reexamine dominant views of the relationship between human beings and the natural world. The new philosophies that emerged during this period were diverse in character and provided the intellectual justification for a wide range of political activism while fueling debates within

the environmental movement over tactics and objectives. In the final decades of the century, philosophers developed increasingly sophisticated analyses of the connections between social and environmental problems and often adopted a global perspective on ecological destruction.

At the outset of World War II, most Europeans and North Americans believed that nature should serve the interests of human society. Deeply embedded in the Judeo-Christian tradition, this view regarded the natural world as a stockpile of resources for human consumption and underpinned a pervasive ethic of environmental exploitation. In the nineteenth-century United States, agricultural expansion, industrial mining, timber operations, and large-scale ranching caused widespread damage to the natural world. These developments, in turn, gave rise to an influential conservation movement focused on regulating economic expansion and protecting

► FIERCE GREEN FIRE

Ecologist Aldo Leopold was born in Burlington, Iowa, in 1887. He developed an early infatuation with outdoor life that would later grow into a lifelong passion. Leopold received a master's degree in forestry in 1909 from the Yale University School of Forestry. He worked for the U.S. Forest Service for 19 years. In addition to working as an independent contractor, he was appointed professor of game management in 1933 at the University of Wisconsin. Leopold died in 1948, and his book *A Sand County Almanac*, published posthumously, is considered a classic text in environmental thought.

In one of the book's most famous chapters, "Thinking Like a Mountain," Leopold described a turning point in his life when he was one of a group of hunters that killed a mother wolf:

"We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view."



The influential writings of environmentalist Aldo Leopold changed the way many Americans viewed nature. (Library of Congress)

wilderness areas in the American West. Yet by the 1930s most North Americans continued to regard human beings as superior to other living things and to view nature primarily in utilitarian terms.

Aldo Leopold, professor of game management at the University of Wisconsin-Madison, objected strenuously to this dominant view. His best-known work, *A Sand County Almanac* (1949), promoted a new ethical orientation toward nature. The adoption of his land ethic involved recognizing that humankind was part of a larger biotic community of animals, plants, soils, and water and that all living things have an inherent right to exist. For Leopold, these values were the building blocks of an ecological conscience based on an individual obligation to protect what he called the health of the land. In keeping with this ethic of responsibility, he was often critical of government conservation efforts, arguing that conventional legislative and technological solutions to the problem of environmental degradation slighted the need for fundamental changes in human attitudes.

The philosophy of deep ecology, first articulated by Norwegian Arne Naess in 1972, drew on the key principles of the Leopold land ethic to criticize mainstream environmentalism and advocate a fundamental transformation in human consciousness. For Naess, the largest and most powerful environmental organizations were focused too narrowly on the problems of resource depletion and pollution in advanced industrial societies and tended to neglect the profound shift in human values required to address the escalating environmental crisis. Subsequent deep ecologists were inspired by Eastern religions and alternative strains in Western thought to stress the interconnectedness and equality of all living things and the need for new cultural norms. American proponents Bill Devall and George Sessions argued that the solution to pressing environmental problems required personal spiritual growth, global population controls, and the adoption of a land ethic. In the late 1970s, the radical environmental group Earth First! became the most visible adherent of deep ecological principles, using them as an intellectual foundation for its confrontational brand of political activism.

Deep ecologists often faced criticism from rival environmental thinkers. The most vocal criticisms came from social ecologists and ecofeminists, two groups that rose to prominence in the 1980s. Led by anarchist philosopher Murray Bookchin, social ecologists assailed deep ecology for its limited understanding of the causes of environmental degradation and its narrow focus on wilderness preservation and population control. To Bookchin, the root of the ecological crisis lay not in misguided human values but rather in the hierarchical and authoritarian nature of human social, economic, and political structures. These structures permitted some humans to dominate other humans and nature and therefore had to be dissolved. Accordingly, Bookchin advocated the development of new forms of political organization, economic production, and technology that were consistent with the specific features of local ecosystems. These small-scale community-based institutions were envisioned by social ecologists as uniquely suited to the goals of modest consumption, collective governance, and ecological sustainability.

While many ecofeminists embraced the principles of deep ecology, others criticized it for failing to address gender issues. First labeled in 1974 by the French philosopher Francoise d'Eaubonne, ecofeminist thought drew on diverse ideas from ecology and feminism but was united by a belief in the essential connections between the oppression of nature and the oppression of women. Many of d'Eaubonne's followers argued that understanding these connections was crucial for understanding why humans have abused the environment. Meanwhile, other ecofeminists insisted that women experience nature in fundamentally different ways than men and can offer unique advice on building healthy environmental relationships. In the mid-1970s, ecofeminism was animated primarily by cultural feminists who celebrated the feminine qualities of nature and viewed ancient traditions of goddess worship as a source of political empowerment. Liberal feminists concerned with the passage of environmental legislation were also instrumental in launching the movement. More recently, however, Marxist intellectuals have expanded the body of ecofeminist theory into entirely new terrain by examining the complex links between

capitalism, gender oppression, racial and ethnic prejudice, and environmental degradation. The development of such integrated analyses of social and environmental problems characterized the evolution of environmental thought in general during the second half of the twentieth century.

—Brad Martin

Bibliography

- Devall, William, and George Sessions. *Deep Ecology: Living As If Nature Mattered*. Salt Lake City: Gibbs M. Smith, 1985.
- Diamond, Irene, and Gloria Orenstein, eds. *Reweaving the World: The Emergence of Ecofeminism*. San Francisco: Sierra Club Books, 1990.
- Leopold, Aldo. *A Sand County Almanac and Sketches Here and There*. New York: Oxford University Press, 1949.
- Meine, Curt. *Aldo Leopold: His Life and Work*. Madison: University of Wisconsin Press, 1988.
- Merchant, Carolyn. *Radical Ecology: The Search for a Livable World*. New York: Routledge, 1992.

Rachel Carson's *Silent Spring*

In 1962, Rachel Carson (1907–1964) published a series of articles and then the book *Silent Spring*, which passionately argued the dangers to humans and nature posed by pesticides such as dichloro-diphenyl-trichloroethane (DDT). In an age when big business and technological solu-

tions went unquestioned, her best-selling book sounded an alarm. Carson's premise was simple: pesticides, although designed to kill insects and so prevent blights and diseases, were collecting in the environment and poisoning all of us. As she wrote, "Every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death." Most historians agree that the publication of *Silent Spring* was a milestone in the modern environmental movement.

Born in Springdale, Pennsylvania, Carson earned degrees in 1929 at the Pennsylvania College for Women and in 1932 from Johns Hopkins University. She then worked at the Marine Biological Laboratory at Woods Hole, Massachusetts. In 1936 she joined the U.S. Bureau of Fisheries at its station in Patuxent, Maryland. She wrote radio scripts and pamphlets for the Bureau and also began writing books for a popular audience about the ocean and its ecology, including *Under the Sea-Wind: A Naturalist's Picture of Ocean Life* (1941); *The Sea around Us* (1951); and *The Edge of the Sea* (1955).

In *Silent Spring*, Carson shifted from natural history to an indictment of then-current insect abatement practices. She offered a well-documented argument to prove her point that insecticides, which spread throughout the ecosystem and collected in the food chain, concentrating in tissues, were a threat to human life and nature. She also captured her readers' imaginations with her lyricism and skillful presentation. Her book opened with a description of an imaginary small town in America, harmoniously balanced with nature, suddenly experiencing blight. Suddenly, no birds sang, chickens began to lay eggs that would not hatch, cattle died, and adults and children succumbed to illnesses. Carson, who was dying from breast cancer when she wrote the book, insisted that citizens deserved the right to know the dangers they had been subjected to. Chapters included titles such as "Elixirs of Death," "Needless Havoc," "And No Birds Sing," "Rivers of Death," "The Human Price," and "The Other Road."

Silent Spring quickly became a controversial best-seller. While Carson questioned the ethics of scientists whose research catered to industry's needs, opposition from government officials and



Rachel Carson appears before a Senate Government Operations subcommittee to discuss pesticides in 1963. (Library of Congress)

scientists was muted as her book also argued for further research of the ecological implications of insecticide use. The chemical industry and agribusiness, however, hired a public relations firm and gathered together a \$250,000 war chest to challenge Carson's viewpoint via public lectures, television and radio appearances, pamphlets, articles, and direct mail campaigns. Her scientific credentials were questioned, her use of evidence was belittled as name dropping, and her argument was presented as hysterical and that of a fanatic follower of a cult of nature. Chemical manufacturer Monsanto created a parody of *Silent Spring* titled *The Desolate Year*, which argued that without pesticides blights on agriculture and cattle, and human diseases such as malaria would run rampant. Another industry pamphlet sent out in mass mailings titled *Fact and Fancy* counterposed Carson's "Allegations" with "Facts."

Carson's book is still regarded as a key text in the environmental movement. It stimulated public debate, further research, and an eventual ban on DDT while advancing the position that government and industry should be held accountable for public health endangerment.

—Fred Nadis

Bibliography

- Carson, Rachel. *Silent Spring*. Boston: Houghton Mifflin, 1962.
- Murphy, Priscilla Coit. *What a Book Can Do: The Publication and Reception of Silent Spring*. Amherst: University of Massachusetts Press, 2005.
- Rothman, Hal K. *Saving the Planet: The American Response to the Environment in the Twentieth Century*. Chicago: Ivan R. Dee, 2000.
- Shabecoff, Philip. *A Fierce Green Fire: The American Environmental Movement*. Washington, DC: Island Press, 2003.

Animal Rights

Animal rights galvanized as a social movement in the 1970s as one of the radical adjuncts of the new environmentalism. Based on the philosophical premise that sentient animals have a moral status, animal rights activists left behind the gentler reform tradition of the centuries-old animal welfare movement to urge a new ethic. Long-standing animal welfare societies such as the

➤ RACHEL CARSON'S "A FABLE FOR TOMORROW"

"Some evil spell had settled on the community: mysterious maladies swept the flocks of chickens; the cattle and sheep sickened and died. . . . In the town the doctors had become more and more puzzled by new kinds of sickness appearing among their patients. . . . There was a strange stillness. The birds, for example—where had they gone? . . . The farmers complained that they were unable to raise any pigs—the litters were small and the young survived only a few days. The apple trees were coming into bloom but no bees droned among the blossoms, so there was no pollination and there would be no fruit. . . .

"This town does not actually exist, but it might easily have a thousand counterparts in America or elsewhere in the world. I know of no community that has experienced all the misfortunes I describe. Yet every one of these disasters has actually happened somewhere."

Source

From the Introduction to Rachel Carson's *Silent Spring* (1962; reprint, Boston: Houghton Mifflin, 2002), 2–3.

American Humane Association had primarily urged a more humane treatment of animals, whether in experiments, captivity, or slaughterhouses. The new activists, however, argued for the abolition of much of the scientific testing of animals, the slaughter and eating of animals, the trapping and raising of animals for fur or hides, and the exploitation of animals for entertainment, as in circuses and zoos.

The animal rights movement was strongly influenced by the publication of two books, Australian philosopher Peter Singer's *Animal Liberation: A New Ethics for Our Treatment of Animals* (1975) and Tom Regan's *The Case for Animal Rights* (1983). Both of these philosophers critiqued the assumption, inherent in Western philosophy and religion, that animals are subordinate to humanity and of no moral consequence on their own. Singer, a utilitarian, argued that right and wrong actions can be calculated by weighing whether one's decision maximizes benefits or adds to overall suffering. Since it was

➤ PLANTS AS PLAINTIFFS— “SHOULD TREES HAVE STANDING?”

In 1972, law professor Christopher D. Stone published an article titled “Should Trees Have Standing?” in the *Southern California Law Review*. He argued that it was time to radically rethink humanity’s relationship to nature and to extend legal rights to trees, rivers, lakes, animals, and other natural objects. He argued that historically, legal rights had slowly extended to previously excluded groups such as corporations, minority groups, and children.

Just as courts might appoint legal guardians to the mentally incapable or infants, Stone argued that trees might be appointed guardians to protect their rights. He wrote the article as part of a brief for the U.S. Supreme Court case *Sierra Club v. Morton* (1972) to attempt to stop the development of a valley in Sequoia National Park. While the Sierra Club lost that case, Justice William O. Douglas dissented, in part because of Stone’s argument. Douglas’s dissent supported the notion that individuals could sue on behalf of the environment. Ultimately the development in the valley was stopped on another appeal. While Stone’s argument for legal rights for natural objects did not win the day, it furthered discussion of extending standing to include a more general notion of injury, as seen in a 1973 Supreme Court ruling in the *United States v. Students Challenging Regulatory Agency Procedures* (SCRAP). Stone’s article has remained influential, furthering discussion of ways to merge an environmental ethic with law.

—Fred Nadis

clear that sentient animals suffered (i.e., could feel pain and pleasure), this reality had to be taken account in all ethical decisions. In Singer’s view, all sentient beings are equals in regard to pain.

Regan, in his work, made the case for animals not in terms of utility but rather of rights. That is, they had a claim to justice. Animals had intrinsic value that should be honored. They should not be treated as instruments or simply as means to ends. If humans would not volunteer for laboratory testing, then neither cats nor monkeys should be forced to be test subjects. Both philosophers supported a radical revision

of the treatment of animals: calling for an end to most or all animal testing in laboratories and an end to hunting and the raising of animals as food for humans.

As a social movement, the animal rights movement developed alongside environmentalism as well as new legislation efforts such as the Endangered Species Act of 1973 in the United States and the formation of radical ecogroups such as Greenpeace. Radical animal rights organizations also developed, including the radical Animal Liberation Front (ALF) and in 1980 People for the Ethical Treatment of Animals (PETA). A celebrated case came in the late 1970s when Henry Spira, a labor organizer in New York, began to investigate experiments that the National Institutes of Health (NIH) had sponsored for many years at the Museum of Natural History in New York. The experiments involved maiming cats in different ways to see how they would then cope sexually, for example, how frequently a cat that had been rendered deaf, incapable of smelling, or brain damaged might try to mount other cats. After congressional investigation and public outcries, the NIH, after 17 years of support, withdrew its funding, and the lab was closed.

The more radical ALF, begun in England in the late 1970s, engaged in illegal activities on behalf of animals such as breaking into laboratories to free test animals. According to allegations, ALF has also threatened animal researchers and vandalized laboratories. PETA, while controversial, has tended to avoid outlaw actions. It had its origins in 1980 when activist Alex Pacheco gained a volunteer position at the Institute for Behavioral Research in Maryland in Edward Taub’s laboratory, where macaque monkeys were subjected to painful experiments aimed at understanding why human stroke victims sometimes could not move limbs when there was no clear nerve damage. In a criminal trial, Taub was convicted for violating the state’s anticruelty statute. The conviction was later overruled by the Maryland Court of Appeals, but the laboratory lost its federal funding, and publicity over the case prompted congressional hearings on animal cruelty.

PETA has since organized actions against the use of animals to test cosmetic products and has sought to abolish the fur industry. PETA relies on



Stained with red paint and possessing leghold traps, a demonstrator from People for the Ethical Treatment of Animals (PETA) is arrested outside the entrance to Vogue magazine in New York City on June 2, 2003, while protesting the use of animal fur in the fashion industry. (Adam Rountree/Getty Images)

shock tactics and humor. At one event in Iowa, for example, an activist in a pig costume threw a pie in the face of the Iowa Pork Queen at the World Pork Exposition. In addition to enlisting high-profile rock musicians for its “Rock Against Fur” concerts, fashion models aided PETA’s “I’d Rather Go Naked Than Wear Fur” advertising campaign that also included street activists parading naked in the United States, Italy, Germany, and Japan. On July 5, 2007, PETA continued its annual “Running of the Nudes” in Pamplona, Spain, to protest bullfighting as a sport.

Despite its ethical concerns, PETA and the animal rights movement, with its celebrity backers and protests of populist venues such as circuses, project an elitist image. In 2005, a PETA

campaign asking “Are Animals the New Slaves?” drew criticism in New Haven, Connecticut, for its images of ankle shackles on an elephant next to an image of shackles on a black human. The Southern Poverty Law Center’s Intelligence Project director, Mark Potok, remarked, “Black people in America have had quite enough of being compared to animals without PETA joining in.” This controversy came only months after another misbegotten PETA campaign, “Holocaust on Your Plate,” in which animals were compared to Nazi Holocaust victims.

—Fred Nadis

Bibliography

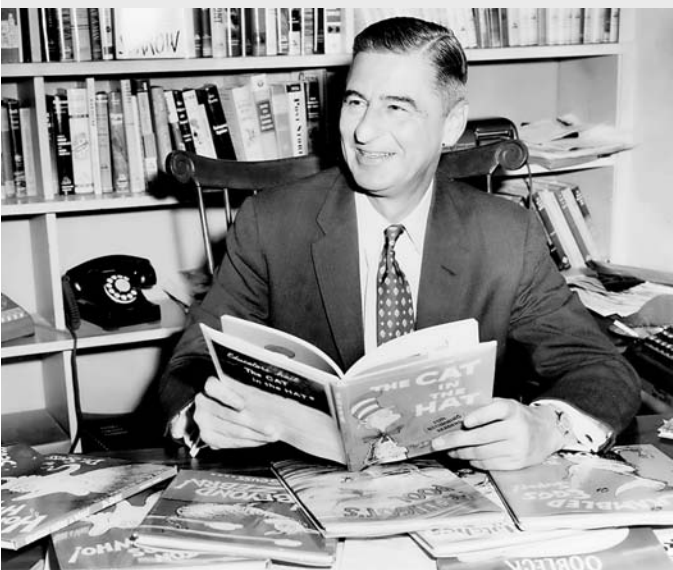
- DeGrazia, David. *Animal Rights: A Very Short Introduction*. Oxford: Oxford University Press, 2002.
- Francione, Gary L. *Rain without Thunder: The Ideology of the Animal Rights Movement*. Philadelphia: Temple University Press, 1996.
- Garriga, Maria. “Outrage on the Green.” *New Haven Register*, August 9, 2005.
- Regan, Tom. *The Case for Animal Rights*. Berkeley: University of California Press, 1983.
- Singer, Peter. *Animal Liberation: A New Ethics for Our Treatment of Animals*. New York: New York Review, 1925.

Environmentalism in Literature and the Arts

Following World War II, many activists issued warnings about the dangers of radioactive fallout from atomic testing, smog inversions in cities such as London and Los Angeles, and the widespread use of chemical pesticides. It was not until the 1970s that such environmental concerns became leading issues worldwide. Following the first Earth Day, held in the United States in 1970, environmentalism not only became prominent in public forums and in legal and political debates but also became a shaping force in the media, arts, and literature as artists and writers embraced the environmental cause.

The Santa Barbara Oil Spill of 1969 prompted public outrage and numerous photo essays in magazines that depicted landscapes blighted by industrial pollution. Wilderness preservation clubs had earlier explored similar photo exposés. The Sierra Club, for example, published numerous calendars, posters, and books that

➤ DR. SEUSS'S *THE LORAX*



Children's author Ted Geisel, better known as Dr. Seuss, in 1957. He took up the cause of environmentalism in his 1971 children's book *The Lorax*. (Library of Congress)

The children's book author and illustrator Dr. Seuss (Theodore Geisel, 1904–1991) was at the height of his influence in the 1960s and 1970s. Many children throughout the world enjoyed his books. Yet Seuss wanted an escape from the frenzied lifestyle near his California home, and in the fall of 1970 he vacationed in Africa. While there, he was inspired by the trees, elephants, and other wildlife of the region. *The Lorax*, written during the trip and published in 1971, describes the destruction of a healthy forest resulting from corporate and personal avarice, abdication of responsibility, and ineffective environmental advocacy.

highlighted threatened wilderness and wildlife. In 1963, the Sierra Club published *In Wilderness Is the Preservation of the World*. This large-format or coffee-table book featured quotes from Henry David Thoreau alongside Eliot Porter's photographs of pristine wilderness. In 1965, the Sierra Club published *This Is the American Earth* with Nancy Newhall's text warning of an Earth endangered by urban sprawl. The accompanying landscape photographs, by Ansel Adams and oth-

The tale is told by the Once-ler, who lives at the sludge-gray "end of town." When he had arrived, the area was filled with dancing Bar-ba-loots, "rippulous" ponds, and Truffula trees that smelled like "butterfly milk." He saw a chance to cash in and used the Truffula's silky tufts to create a sweaterlike Thneed. Despite warnings from a foresighted but shrill Lorax, the Once-ler's business eventually ruins the Truffula forest and scatters the animals. In the end, all the Once-ler can do is pass the last Truffula seed to a small boy and urge him (and all of us) to plant and care for the trees.

Readers who had enjoyed Seuss's earlier works were surprised by *The Lorax*'s stark message and uncertain ending. At least one logging community tried to ban the book from school reading lists, and building and manufacturing interests sponsored *The Truax*, a book with an alternative ending. Yet *The Lorax* remains important for demanding environmental action, rather than simple appreciation, from our children. Particularly since the early 1990s, *The Lorax* has headed ecology teachers' and librarians' booklists. It will continue to do so as long as the well-being of Earth hangs in the balance.

—Bernadette Lear

Bibliography

- Dobrin, Sidney I., and Kenneth B. Kidd, eds. *Wild Things: Children's Culture and Ecocriticism*. Detroit: Wayne State University Press, 2004.
- Morgan, Judith, and Neil Morgan. *Dr. Seuss & Mr. Geisel*. New York: Random House, 1995.
- Nel, Philip. *Dr. Seuss: American Icon*. New York: Continuum, 2004.

ers, contrasted untrammelled nature with hellish images of new suburban tracts in Los Angeles.

While such efforts were aimed at the domestic front, the environmental movement also developed an iconography for public protests and display. The counterculture staple *The Whole Earth Catalog*, first published in 1968, featured on its cover a satellite photograph of the whole Earth with swirling clouds above the oceans of a blue sphere. Also emblazoned on posters and

buttons, the whole Earth satellite photograph, aimed at raising the consciousness of purchasers, has had lasting iconic power. A green-and-white striped ecology flag, first publicized in *Look Magazine* in 1970, still is common at environmental awareness events. Another notable addition to such public iconography was a 1971 Keep America Beautiful television advertising campaign that featured a close-up of the actor “Iron Eyes” Cody—actually Antonio DeCorti of Sicilian ancestry—portraying an American Indian in traditional garb with a tear rolling down his cheek as he surveyed a blighted industrial landscape. The print version ran with the headline “Pollution, It’s a Crying Shame.”

Highbrow art movements also bore the imprint of environmentalism and an engagement with the 1960s counterculture’s back-to-the-earth sensibility. The October 1968 show at the Dwan Gallery in New York City titled “Earth Works” announced this new art movement. Many of the earthworks artists arranged natural materials, whether dirt, stones, gravel, coal, asbestos, grass, sawdust, or tree branches, in galleries or in the countryside. For example, in 1968 Walter De Maria filled an entire gallery with two feet of dark soil. Other artists, particularly Robert Smithson and Michael Heizer, began to create grandiose earthworks projects in the deserts of the West. Smithson’s masterpiece was *Spiral Jetty*, an earthworks piece completed in 1970 that required bulldozers to build a spiral-shaped raised-earth pattern on the shores of the Great Salt Lake in Utah. Westerner Michael Heizer also created large earthworks projects in the deserts of Nevada. In contrast, Richard Long, an English earthworks artist, distanced himself from such large-scale engineered landforms that he felt were “about ownership, real estate, machinery, American attitudes.”

Environmentalism also became part of the protest music repertoire. Joni Mitchell’s witty song “Big Yellow Taxi,” for example, lamented a lost Hawaii strangled by commercial development. Soul singer Marvin Gaye entered the arena with his lament “Mercy, Mercy Me (The Ecology)” (1971), which became a blues for the planet, as he described winds containing poisons, fish containing mercury, and other environmental woes. In contrast, folk pop songwriter John Denver’s

song “Rocky Mountain High” (1973) became an anthem for wilderness lovers. From the late 1960s, jazz saxophonist Paul Winter, as a form of homage to Earth, began directly quoting nature in his music. His compositions increasingly relied on recorded animals such as the songs of humpback whales and wolf calls. Winter’s 1987 album *Whales Alive*, for example, included the composition “Concerto for Whale and Organ.”

Nature writing as a genre gained new life after the publication of Rachel Carson’s *Silent Spring* (1962), which warned of the dangers of the use of insecticides such as dichloro-diphenyl-trichloroethane (DDT) to humans, animals, and entire ecosystems. Naturalists turned journalists such as Canadian Farley Mowat took up the cause of wildlife in such books as *Never Cry Wolf* (1963), while naturalist Edward Abbey described the hidden beauty and values of the desert landscape in his memoir *Desert Solitaire* (1968). Abbey also became notorious after the publication of *The Monkey Wrench Gang* (1975), a novel about a group of activists who destroy billboards and construction equipment and otherwise stymie new developments that would mar the natural beauty of the American West. Abbey’s books inspired David Foreman to found the radical environmental group Earth First! in 1975.

While poets have always written of personalized encounters with the wilderness and the wild, Gary Snyder might be dubbed the unofficial poet laureate of environmentalism. A founding member of the beat generation literary movement, native of the American West, and student of Zen Buddhism, Snyder has consistently written of humanity’s debt to the planet. His work mixes nature mysticism with an earthy sense of humor. His poems include, for example, one widely circulated on the Internet, the comic paean “Smokey the Bear Sutra.” It depicts Smokey, the U.S. Forest Service mascot, as a benevolent yet fierce guardian of Earth, ready to feed those who are hungry, uproot false desires with his shovel, and stamp out the endangerments to nature created by human greed.

Science fiction has long been ideal for dramatizing environmental issues, with its creators imagining worst-case scenarios or environmental apocalypses. Cold War science fiction writers wrote numerous books that conjured post-nuclear

holocaust worlds and landscapes. Beginning in the 1960s, with almost equal frequency, science fiction authors such as Philip K. Dick, Ursula K. LeGuin, and J. G. Ballard imagined post-environmental apocalypse worlds featuring new ice ages, floods from rising seas, or landscapes of blighted species. Science fiction movies such as *Silent Running* (1971) also offered a postapocalyptic vision. Its plot centered on the efforts of a botanist tending the last existing Earth forests now afloat in space ships.

Concerns about global warming that became prominent in the 1990s have also led to apocalyptic scenarios exploited in novels and films. For example, Roland Emmerich's film *The Day after Tomorrow* (2004) explored the premise that global warming could trigger a sudden and devastating ice age. True to the religious theme of apocalypse, this film ended with the vision of a postcrisis moral revival, as the cataclysm encouraged a new global unity.

—Fred Nadis

Bibliography

- Boettger, Susan. *Earthworks: Art and the Landscape of the 1960s*. Berkeley: University of California Press, 2002.
- Dunaway, Finis. *Natural Visions: The Power of Images in American Environmental Reform*. Chicago: University of Chicago Press, 2005.
- Snyder, Gary. "Smokey the Bear Sutra." <http://www.smokeythebearsutra.com>.

International Environmental Law and Agencies

Until the late 1960s, most international agreements aimed at protecting the environment served narrowly defined utilitarian purposes and were not specifically identified as environmental agreements. Indeed, what is now recognized as environmental law began to be identified as such only as recently as the late 1960s. Since then, the tremendous growth in both the number and breadth of environmental treaties, conventions, and other international agreements has paralleled the growth of national legislation, regulations, and environmental agencies around the world that collectively have sought to preserve, protect, and enhance the environment.

Like many of the branches of international and environmental law, international environmental law is interdisciplinary and still evolving. Internationally, environmental law has developed in response to a number of worldwide trends that have become global in scope and impact only since the mid-1900s, especially the following: unsustainable use of nonrenewable resources, climate change from increasing greenhouse gas emissions, stratospheric ozone depletion, increasing acidification of rain, freshwater bodies and oceans, the reduction in and degradation of natural areas (with a corresponding loss of biodiversity and human cultural diversity), increasing use and misuse of chemicals, escalating energy use, unplanned urbanization, increasing waste generation, disruption of biogeochemical cycles, and unsustainable human population growth. As of 2008, around the world environmental treaties, laws, and regulations cover the following subject areas: air, atmosphere, conservation (of nature, natural areas, and natural resources), environmental impact assessments, fishing, forests (conservation and management), hazardous substances and radiation, hunting (harvestable species), land use and land-use planning, noise, nonrenewable resources use and mining, protected areas, the sea, soil, wastes (for example, garbage and rubbish), water, and wild animals and plants (including species protection and management, control of pests and diseases, and vegetation cover).

In addition to multilateral conventions, treaties, and other international agreements, statements, reports, and documents issued by multinational and nongovernmental organizations also have relevance in shaping and defining international environmental law. Another source is customary international law, which is often evidenced by national legislation, government statements, restatements of the law, and the interpretations of international tribunals such as the International Court of Justice, the World Trade Organization, and other arbitral bodies. Secondary sources include treatises, periodicals, and increasingly Web sites. One problem concerning the limits of international environmental law results from the very important role played in the field by the European Union as a

► ENVIRONMENTAL TREATIES

Until the late 1960s, most international agreements aimed at protecting the environment served narrowly defined utilitarian purposes. Beginning with the Stockholm Declaration of the United Nations Conference on the Human Environment in 1972, however, international agreements started to reflect a desire to limit damage to the global environment. In general, these international agreements paralleled national legislation that increasingly sought to preserve, protect, and enhance the environment.

- 1946—International Convention for the Regulation of Whaling.
- 1956—Plant Protection Agreement for the South East Asia and Pacific Region.
- 1958—Convention on Fishing and Conservation of the Living Resources of the High Seas.
- 1969—International Convention on Civil Liability for Oil Pollution Damage.
- 1971—Convention on Wetlands of International Importance.
- 1972—Stockholm Declaration of the United Nations Conference on the Human Environment.
- 1972—Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, also known as the London Convention on Ocean Dumping.
- 1972—International Convention for the Protection of the World Cultural and Natural Heritage.
- 1973—Convention on International Trade in Endangered Species of Wild Fauna and Flora.
- 1973—Marine Pollution (MARPOL) 73/78 (1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978).
- 1976—Convention on Conservation of Nature in the South Pacific.
- 1979—Convention on Long-Range Transboundary Air Pollution.
- 1979—Convention on the Conservation of Migratory Species of Wild Animals, also known as the Bonn Convention.
- 1982—United Nations Convention on the Law of the Sea.
- 1983—International Tropical Timber Agreement.

- 1985—Vienna Convention for the Protection of the Ozone Layer.
- 1987—Montreal Protocol on Substances That Deplete the Ozone Layer.
- 1989—Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific.
- 1989—Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
- 1990—International Convention on Oil Pollution Preparedness, Response, and Cooperation.
- 1992—United Nations Framework Convention on Climate Change.
- 1992—Rio Declaration on Environment and Development.
- 1992—Convention on Biological Diversity.
- 1994—Draft Declaration: Human Rights and the Environment.
- 1994—United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa.
- 1995—Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.
- 1997—Kyoto Protocol to the United Nations Framework Convention on Climate Change.
- 1998—Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.
- 2000—Cartagena Protocol on Biosafety to the Convention on Biological Diversity.
- 2001—Stockholm Convention on Persistent Organic Pollutants.
- 2002—Johannesburg Declaration on Sustainable Development.

—Bertram C. Frey

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quasi-federal institution. The environmental rules issued by the European Union can be considered intermediary between international and national law. But neither domain can ignore them.

Beginning with the 1972 Stockholm Declaration of the United Nations Conference on the Human Environment, governments pursued efforts to protect the environment with a global perspective. The United Nations Environment Programme (UNEP), the first international environmental program, was formed as a result of the conference. Since the Stockholm Declaration, the pace of progress in recognizing and addressing global environmental problems has quickened. Alarming, this progress has coincided with the continuing decline and in some regions decimation of the ecological systems that nurture and sustain all life on Earth.

The 1992 Rio Declaration on Environment and Development (sustainable development) and 2002 Johannesburg Declaration on Sustainable Development bear particular mention because they represent the 20- and 30-year follow-ups, respectively, to the Stockholm Declaration. The Rio Declaration introduced key principles that promote sustainable development and stated that global economic progress requires global environmental protection, which in turn requires international and equitable partnership and agreement. The Johannesburg Declaration, which addressed a wider variety of topics than the Rio and Stockholm declarations, promotes global sustainable development not only through environmental protection but also through poverty eradication and improved consumption and production patterns.

Since the founding of UNEP, international entities have established several international agencies to protect the environment. For example, the World Meteorological Organization and UNEP, both UN organizations, established the Intergovernmental Panel on Climate Change (IPCC) in 1988 to evaluate and understand the risks and impacts of human activity-induced climate change as well as assess possible solutions for adaptation and mitigation. Established in 1990 at the World Congress of Local Governments for a Sustainable Future, the International Council for Local Environmental Initiatives (ICLEI), an association of more than 700 local, national, and

regional government organizations, promotes sustainable development. Additionally, regional entities such as the Commission for Environmental Cooperation (created by treaty, effective in 1994, by Canada, Mexico, and the United States) and the European Environmental Agency (European Union agency created in 1990 that became operational in 1994) help monitor the environment and identify environmental conditions and trends.

International environmental law reflects growing scientific understanding of the complex term “environment.” As current research on the environment confirms that developing countries continue to be the most vulnerable to environmental damage such as (among others) habitat loss resulting from global climate change, loss of biodiversity, depletion of fish stocks, and increasingly severe natural disasters, international concern has incrementally expanded to recognize the interrelationships that exist among and between not only air, land, water, and all living things but also global poverty, economy, and society. As scientific understanding of these interrelationships increases, international agreements and agencies will adopt new and refine existing environmental standards. Thus, international environmental agreements always await their inevitable revision.

—Bertram C. Frey

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Bibliography

- Burnett, Anne. “ASIL Guide to Electronic Resource for International Law.” American Society of International Law, <http://www.asil.org/resource/env1.htm>.
- ECOLEX. “A Gateway to Environmental Law.” <http://www.ecolex.org>.
- Frey, Bertram C. “Environmental Law.” In Herbert Kritzer, ed., *Legal Systems of the World: A Political, Social and Cultural Encyclopedia*, Vol. 1. Denver, CO: ABC-CLIO, 2002.
- Kiss, Alexandre. 1992. “Environmental Law.” In Marc Boes, ed., *International Encyclopedia of Laws: Environmental Law*, Vol. 1, 2–80. Deventer, Netherlands: Kluwer Law and Taxation Publishers, 1992.

United Nations Environmental Programme. "Global Environmental Outlook-4." http://www.unep.org/geo/geo4/report/GEO-4_Report_Full_en.pdf.

Sustainable Development

In 1987, Gro Harlem Brundtland, chair of the World Commission on Environment and Development, introduced the concept of sustainability in the book *Our Common Future*, prepared for the United Nations. This groundbreaking book defined sustainability as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." In addition to stressing the value and importance of natural resources and the natural services that a functioning ecosystem provides, this book highlighted the importance of addressing the problem of poverty to protect the environment and to improve the quality of life.

The term "sustainability" is a new name for old practices. Sustainable development reflects the practices of many traditional societies, including the Iroquois Confederation of the Eastern United States. Their decision making was guided by a concern for the Seventh Generation, not simply the people living today. This forward-looking approach is needed to bring ecological, cultural, and economic considerations into development decisions, but it is not easy because these changes affect who profits and who pays and often run counter to corporations' responsibility toward investors and the desire of governments—at all levels—to encourage prosperity in the short term to protect political careers.

Since the term "sustainable development" first emerged on the world scene, it has most commonly been related to environmental issues associated with agriculture, animal production, water, energy, fisheries, forestry, planning, and building. Critics have noted that with rising populations and improved technology we have been mining most potentially renewable resources instead of harvesting them. A 2006 report in *Science* magazine predicted that if current trends continue, almost all important ocean fish species will be effectively gone by 2050. World water resources are equally imperiled and are expected to lead to increasing conflicts. Recent studies

➤ STRAW BALE BUILDINGS



*Straw bale house under construction in Quebec, 2003.
(Colin Rose)*

Buildings are responsible for 40 percent of the global-warming gases produced in the United States, but we can dramatically reduce energy use and improve comfort and security if we design and choose building materials wisely. Orientation, shape, insulation, thermal mass, ventilation, and shade all work together for natural heating and cooling.

Straw bales with mud or lime plasters are becoming increasingly popular as sustainable materials for building homes and commercial buildings. Straw, the waste material left after grains such as wheat are harvested, is usually baled with a machine towed behind a tractor. Straw bales can be used structurally or for insulation in a wood or metal frame building. After the walls are completed, they are plastered with lime, mud, or cement plaster. The techniques are simple, and communities and families often work together to create their own homes.

This building technology originated on the treeless plains of Nebraska but has now spread all over the world from Mexico to China. In Mongolia straw bale buildings have reduced energy use for heating by 80 percent.

—David A. Bainbridge

suggest that as many as 50 countries on 5 continents might soon be caught up in water disputes unless they learn to better manage and apportion scarce resources. Timber mining around the world also remains a critical problem, with an area of forest comparable to the size of Panama lost each year.

The popularity of the term “sustainable development” has diluted its meaning in recent years. By using a narrow enough focus it is possible to say that almost anything is sustainable: for example, “sustainable profits (for this year)” or “sustainable water use (for Las Vegas at the cost of San Diego and Tijuana).” This has led some advocates to contrast the notion of a strong sustainability, with a holistic ecological/cultural and economic content, to a weak sustainability.

An interest in the research and implementation of sustainable policies bodes well for the future. We ignore such issues at our peril. The concept of an ecological footprint has been developed, for example, to help people understand the impact that each individual has on Earth’s natural support systems. Web-based ecofootprint calculators indicate that supporting Earth’s entire human population according to the prosperous Western standard would require at least 3 and perhaps as many as 10 additional planets.

Fortunately, this footprint can be decreased without lowering living standards. For many of the products we use, 90 percent of the biomass harvested and the abiotic (nonrenewable) resources relied on are wasted. From this perspective, humankind has few supply problems but has very serious efficiency problems. Efforts to reduce inputs 4, 10, or 20 times are under way in the effort to achieve sustainable development.

The integration of sustainable development into the marketplace and economy has been increasing rapidly. The value of understanding environmental sustainability has also been gaining strength, and the importance of social/cultural sustainability is gaining long-overdue attention. The challenge for this century is improving efficiency and sustainability globally. As sustainable practices become good business practices, the marketplace will play a key role in making this happen.

—David A. Bainbridge

Bibliography

- Dresner, S. *Principles of Sustainability*. Sterling, VA: Earthscan, 2002.
- Meadows, D. H. *The Global Citizen (Working toward a Sustainable World)*. Covelo, CA: Island Press, 1991.
- Stone, L. “A Passive Solar Straw Bale School.” *Solar Today* (January–February 1999): 32–35.
- Wackernagel, M., and W. Reese. *Our Ecological Footprint*. Gabriola Island, British Columbia: New Society Publishers, 1996.
- Wanek, C. *The New Straw Bale Home*. Layton, UT: Gibbs Smith, 2003.
- World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987.
- Worm, B., et al. “Impacts of Biodiversity Loss on Ocean Ecosystem Services.” *Science* 314(5800) (2006): 787–790.
- Young, R. 2006. “Sustainability: From Rhetoric to Reality through Markets.” *Journal of Cleaner Production* 14(15/16) (2006): 1443–1447.

Alternative Energy—Water, Wind, Solar, and Bio

Renewable sources of energy are defined as fuels that are consumed with no net or permanent depletion of Earth’s resources and also make no addition to greenhouse gases. Examples are hydroelectric power, wind power, solar power, biofuels derived from plants or waste, wave power, and wood from fast-growing tree crops. Nuclear power plants usually fall outside the renewables category since they consume enriched uranium or plutonium, generate long-lasting radioactive waste, and involve heavy energy consumption to construct although emitting no carbon when generating electricity.

Hydropower is the most established renewable, with significant potential to meet electricity needs beyond the nearly 20 percent globally it already supplies. The amount of electricity that a hydropower installation can produce depends on the quantity of water passing through a turbine (the volume of water flow) or on the height from which the water falls (the amount of head). Today, the largest water turbines are extraordinarily powerful machines, producing in excess of 700 megawatts (nearly 1 million horsepower).

Norway obtains 95 percent of its electricity from hydro sources. China has also invested large sums in hydroelectric schemes, of which the most spectacular is the giant Three Gorges scheme, due for full completion in 2012. Harnessing tides or ocean waves is among the new possibilities being explored.

Wind is the fastest-growing energy source worldwide. From 1998 to 2005, world wind energy harvesting increased approximately six times. Europe dominates regional markets, followed by North America, then Asia, the Pacific Region, Africa and Latin America, and the Caribbean. There are many different types of wind turbines in use around the world, and they are employed in diverse applications from powering small water pumps on remote ranches to producing bulk electric power for modern cities. The blades on a modern wind turbine sweep 48 tons of air every second, which is the same weight as 10 elephants. Large modern wind turbines have rotor diameters ranging up to 65 meters. Towers range from 25 to 80 meters in height. The main drawback of wind power is that it is, by its nature, intermittent and requires backup facilities to meet continuous demand. Estimates of efficiency vary between 14 percent and 36 percent. Large wind farms on land can also be highly intrusive. Even when sited offshore they require heavy cabling and coastline substations. The economics of wind power are such that heavy subsidies are nearly always necessary, usually in the form of levies on other power sources.

Solar power, which in essence is unlimited and highly accessible, can be harnessed in a number of ways and on a large or small scale. Photovoltaic energy conversion (PV) is the direct conversion of light (solar radiation) to electricity and heat. Solar power is also collected in very large volumes through the so-called concentrated solar power technology. This can produce heat at up to 300°C, which is then used to drive steam turbines and generate electricity. On a smaller scale solar power can be, and is, captured via roof panels for direct water heating or via links to a central conversion point to produce small flows of electricity sufficient for domestic lighting. It is conceivable that solar power could yet be the next big thing. The technology



Wind turbines in Estonia, an emerging solution to the energy crisis. (Shutterstock)

has been described by an enthusiastic Chinese manufacturer of large-scale solar equipment as “about where mobile phones were ten years ago.” In other words, a very rapid advance in large-scale solar technology is seen as potentially lowering costs dramatically.

Biomass (plant material and animal waste) was the world’s primary source of energy until the late 1920s. Today about 10 percent of the world’s energy use is still derived from biomass. However, this average masks the far greater importance of bio energy in the developing countries of Africa, Asia, and Latin America, where its share is as high as 80 percent. Bio fuels—natural gas from animal waste, biodiesel from soybeans, and ethanol from corn, grain, sugarcane, farm waste, and straw—are sustainable. They also have the potential to create jobs and economic growth in developing countries, reduce demand for costly oil imports, and address environmental problems ranging from desertification to climate change. The production of energy from biomass involves a range of advanced technologies to produce a variety of liquid and gas fuels including ethanol, bio-cellulosic ethanol, and bio-diesel fuels. The infrastructure throughout North America necessary for inserting biomass firmly into the fuel supply chain is fast taking shape. Six U.S. states already require all gas station pumps to have 10 percent biofuel content. But car and truck makers would need to build vehicles with

➤ ETHANOL IN BRAZIL

Brazil, the world's biggest sugar producer, is devoting most of its sugarcane crop to ethanol. Ethanol represented only a small share of Brazil's fuel market until the government made reducing oil import dependence a national priority after the 1973 Arab oil embargo. As a result of a combination of tax breaks and fuel blending mandates that encouraged investment in ethanol production and use, the industry made rapid progress. Sugar mills won large subsidies, and a national distribution system was built around existing gas stations to give motorists a choice at the pump. At first, ethanol was blended with gasoline. Next, it was sold as an alternative to gasoline. The Brazilian government also promoted the manufacture and sale of all-ethanol cars. Brazilian automakers were told that half of their new vehicles had to be ethanol-only cars, while infrastructure was developed to distribute ethanol to thousands of pumping stations around the country.

As a result, by the mid-1980s ethanol-fueled vehicles accounted for 96 percent of total car sales. But growth slowed dramatically in the 1980s and 1990s as oil prices fell and sugar prices rose, so that by 1997 sales of ethanol vehicles fell to less than 1 percent of total vehicle sales. To address this problem, in 2003 Brazil began encouraging flexible fuel vehicles that can run on virtually any mixture of gasoline and ethanol, changing the ethanol market overnight. In 2005, flex-fuel vehicles accounted for more than half of new cars sold. Today, the nine vehicle makers in Brazil (including General Motors Corporation and Ford Motor Company) make flex fuel cars that can burn gasoline, ethanol, or any mixture of the two. Brazil has rebuilt its economy on ethanol and other bio-fuels, using sugarcane as its main energy source. Since the 1970s, Brazil has saved almost \$50 billion in imported oil costs while creating more than 1 million rural jobs.

—Carole Nakhle

slightly adapted engines, as has already happened in Brazil (see sidebar). The cost of adding this capability to new automobiles has been estimated at roughly \$100 a vehicle. And ethanol would need to be much more readily available at gas stations.

Biofuels are expected to make a significant contribution to meeting global road-transport energy needs. They can account for 7 percent of the road-fuel consumption in 2030, up from 1 percent today. Biofuels undoubtedly have a place in the emerging global energy mix. But rising food demand, which competes with bio-fuels for existing arable and pasture land, will constrain the potential for biofuels production using current technology.

—Carole Nakhle

Bibliography

- Canadian Hydropower Association. "Clean Air, Renewable Energy: The Power of Water." <http://www.canhydropower.org>.
- Deffeyes, Kenneth S. *Beyond Oil: The View from Hubbert's Peak*. New York: Hill and Wang, 2005.
- Howell, David, and Carole Nakhle. *Out of the Energy Labyrinth*. New York: Tauris, 2007.
- "World Energy Outlook." International Energy Agency, 2006. <http://www.shellgas.co.uk>.
- Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Simon and Schuster, 1991.

Kyoto Protocol

In 1992, at the United Nations (UN) Earth Summit in Rio de Janeiro, the Framework Convention on Climate Change (UNFCCC) was adopted. The framework reported the growing danger of human-induced global warming and the need for a shared international policy to curtail greenhouse gas emissions. Carbon dioxide is the most prominent of the gases that contribute to the greenhouse effect. In subsequent meetings of the UNFCCC Conference of the Parties (COP 1) in 1995 and 1996, standards for reducing emissions were adopted as a part of international law. In 1997, at the third COP meeting, more than 160 UNFCCC member nations met in Kyoto and adopted the Kyoto Protocol. With the adoption of the protocol, UNFCCC signatory nations that went on to ratify would then be committed to its emission-reduction regimen from 2008 to 2012. The protocol required 38 industrialized nations to reduce or cap their greenhouse gas emissions to levels of 5 percent their total for 1990. As of 1997, this meant that European nations would reduce their then-current levels by 8 percent,

Japan by 6 percent, and the United States by 7 percent.

For the Kyoto agreement to go into force it had to be ratified by at least 55 UNFCCC nations and, in addition, by a group of industrialized nations whose combined emissions totaled 55 percent of that groups' output. Both of these conditions were met when Russia ratified the agreement in November 2004. At that point the only major industrialized nations that had not ratified were Australia and the United States. The United States (the world's leader in producing greenhouse emissions), under the incoming administration of President George W. Bush, announced in 2001 that it would not ratify because the Kyoto Protocol did not require industrializing nations that were also major polluters, specifically China and India, to cap levels as well. Australia, a major coal exporter, hedged but finally signed in December 2007 under the leadership of newly elected Prime Minister Kevin Rudd in time for the new UNFCCC meetings in Bali to plan for 2012 and beyond. As of early 2008, the United States remained the only industrialized nation that had not ratified the Kyoto Protocol.

While there were no legal enforcement mechanisms—beyond UN-based review procedures—the Kyoto Protocol, a multiparty treaty, became international law when Russia ratified in 2004. In addition to direct efforts to reduce total emissions of air pollutants from industrial sources, automobiles, and deforestation, at a conference in Marrakesh, Morocco, in 2001 the UNFCCC also finalized several market mechanisms, allowing developed nations to pursue less costly measures that would still decrease overall global greenhouse gas emissions. The most intriguing of these is emissions trading in which developed nations can purchase emission-reduction efforts in other developed nations. To this end, regional markets have developed to encourage so-called dirty businesses to buy credits from others that have cleaned, with the net effect that emission-reduction efforts will be financed. In an aligned mechanism known as joint implementation, developed nations can help finance carbon sinks, or reforestation or afforestation (creating new tree groves), in other developed nations to the credit of their own reduction goals. Finally, developed nations can finance projects in less-developed



Participants at the United Nations Climate Change Conference in Bali, Indonesia, in December 2007. (Oxfam International)

nations that lead to emissions reductions, including reforestation efforts.

In December 2007, the UNFCCC met again in Bali to begin a framework for a new agreement to begin in 2012 when the Kyoto Protocol would have concluded. The meeting ended with a road map including provisions that developing nations (including India and China) would also begin to voluntarily reduce emissions, in a verifiable process, and that in turn developed nations would lend expertise and help to finance cleaner technologies in the countries of the South (or less-developed nations). After being booed and hissed earlier, the U.S. representative announced that the United States would not stand in the way of the road map.

Plans were also put into place for wealthier nations to finance efforts to prevent deforestation—which releases large levels of carbon dioxide and eliminates effective carbon sinks—in undeveloped nations with tropical forests. Many environmentalists were concerned that the new plan did not put into place specific reduction regimens, for example, the 25–40 percent reductions by 2020 that the UN Intergovernmental Panel on Climate Change (IPCC) had recommended for the developed nations. However, other experts saw the conference as a breakthrough in North-South relations, with both the United States and emerging industrial giants such as India and China offering concessions.

—Fred Nadis

➤ CARBON MARKETS

In 2005, the European Union opened trading for carbon credits via its Emissions Trading Scheme (ETS). According to this scheme, European governments issue allowances to industry and utilities with a baseline to reduce overall greenhouse gas emissions. Companies that use less than their allowances can sell their surplus to others that fail to meet their allowances (that is, pollute too much). The European Union also allows these permits to be traded one on one with Certified Emission Reduction credits, earned from funding carbon cuts in less-developed nations. The ETS also recognizes futures trading market in carbon allowances. As of 2007, the scheme was flailing since too many allowances originally had been issued, forcing the allowance values down to almost a hundredth of their original cost, making polluting a fairly inexpensive exercise. Likewise, the baseline permits had been handed out to industry for free, allowing companies to sell them as a windfall profit.

Although not bound by international law to the Kyoto Accord, a regional carbon credits market, the Regional Greenhouse Gas Initiative (RGGI) has been established in the United States. Ten Eastern Seaboard states created RGGI to reduce greenhouse gas emissions in the region by 10 percent

over a nine-year period. RGGI (or “Reggie”) is due to go into effect in January 2009 and continue to 2018. Rather than offering permits free of cost, states will auction them and thus allow market forces to set values.

In yet another carbon market scheme, the U.S. Congress in late 2007 began to debate the America’s Climate Security Act (ACSA). Like the regional ETS and RGGI, the ACSA proponents would set up a national emissions market with pollution caps and trading for surplus. Other members of Congress have argued for an emissions border tax whereby imported goods would have their carbon content certified and taxed to ensure that U.S. carbon initiatives would not decrease U.S. competitiveness globally. Others suspect that this would only lead to new tariff disputes.

New Zealand has set itself the daunting goal of one day becoming carbon neutral, that is, emitting no more greenhouse gases than it can absorb. With its 4 million people, 40 million sheep, and 10 million cows, approximately 30 percent of New Zealand’s greenhouse gas emissions come from the natural gas of methane emitted by livestock. Carbon dioxide, methane, and nitrous oxide are the most common greenhouse gases.

—Fred Nadis

Bibliography

- “Embracing Reggie.” *The Economist* 385(8555) (November 17, 2007): 36–37.
- Gorman, Hugh S., and Barry D. Solomon. “The Origins and Practice of Emissions Trading.” *Journal of Policy History* 14(3) (2002): 293–320.
- “Lightly Carbonated.” *The Economist* 384(8540) (August 4, 2007): 53–54.
- United Nations Framework Convention on Climate Change. <http://unfccc.int/2860.php>.

Industrial Ecology

The emerging field of industrial ecology attempts to redesign and rethink industrial systems so that they more closely mimic natural ecosystems. This concept first emerged in the late 1980s, was refined in the 1990s, and has since evolved rapidly around the world. Proponents argue that industrial ecologies will eventually be

fully recycling, with closed resource loops and no wastes, and will run entirely on renewable energy. These new manufacturing systems will be designed to fit into the landscape without harming the environment or human health. They will use sustainable or fully recyclable resources, and products will be used, reused, recycled, or returned to nature at the end of service.

The rapid growth of global connectivity has made this goal more approachable. The field also benefits from new accounting methods that calculate the true cost of products and processes. By including the environmental and health costs for both the short and long terms when evaluating profit or loss, company managers, stakeholders, and consumers gain information they need to make more profitable and sustainable choices.

Industrial ecology also is becoming easier as the analysis of material flow improves. Analysts

must calculate these flows at the company, regional, national, and global levels. Material flow accounting helps reduce leakage and losses and connect waste generators with waste users. The International Society for Industrial Ecology and the International Society for Ecological Economics provide the intellectual foundations for this important work, but a new generation of ecological accountants and engineers will be needed.

To create more ecological industrial systems, industrial ecologists need to calculate the life cycle costs of products, from the cradle to the grave (made, used, disposed) or the cradle to the cradle (made, used, recycled, reused, or returned to nature). This is the goal of most sustainability reporting, including the Eco-Management and Audit Scheme in Europe and the internationally based Global Reporting Initiative. This will not be easy, because flow pathways and impacts can be complicated and occur over many years or decades.

Industrial ecology has worked well in the chemical industry, which might seem the most resistant to change. At the Rhone-Poulenc plant in Chalampe, France, for example, the nylon-manufacturing process was changed to eliminate a problem with diacids, which previously had been burned. New equipment recovered these in a more useful form so they could be sold as additives for dye and coagulation, with a three-year payback. More commonly, return on such adjustments is even better, with nearly two-thirds of improvements in one chemical industry study having a payback of less than six months. Apple Computer recycles or reuses 97.5 percent of the material at one plant, saving \$1 million the first year. The Sony Corporation has cut waste dramatically and has set a goal of no disposal to landfills by 2010.

Industrial ecologists argue that we can provide the same level of production, comfort, and quality of life with sustainable resources and renewable energy. The continuing increases in gross national product with energy use per capita declines in a range of nations reveals the promise of this trend, but much remains to be done. The long-term goal of industrial ecology is to create an economy that is as efficient, healthy, and pleasant to be in and around as a natural ecosystem. Early efforts suggest that this is both

➤ KALUNDBORG

A key task of industrial ecology is finding consumers for waste because Waste = Food. This is easiest in industrial parks where waste generators and consumers are colocated, reducing costs for exchanging materials. The town of Kalundborg, Denmark, is an early example of this approach. The company Statoil removes sulfur from its natural gas to reduce air pollution, selling the sulfur to the nearby Kemira sulfuric acid plant. The Asnaes power plant sells gypsum wastes to the Gyproc plasterboard factory. The fly ash from the power plant goes to a cement manufacturing plant. The hot water from the power plant provides district heating for the municipality and to Novo Group, a biotech company. The leftover boiler water and salty cooling water from the power plant provides 23 million cubic meters of warm water to a fish farm, increasing fish production 15 percent with a two-year payback for improvements. Water consumption at the power plant was cut 66 percent, and high-quality feed water was replaced with waste water. Thermal pollution of the ecosystem and surrounding waters has been reduced dramatically, and many other products are sold including soil amendments offered by Soilrem A/S. There are 20 different product exchanges within this industrial symbiosis.

—David A. Bainbridge

possible and profitable, but critics argue that it is too little too late and too difficult a change for the existing industrial base. It remains to be seen if industrial ecology can provide a way forward out of a currently unsustainable economy that threatens the world with global warming and pervasive pollution.

—David A. Bainbridge

Bibliography

- Bainbridge, D. A. "Adding Ecological Considerations to Environmental Accounting." *Bulletin of the Ecological Society of America* 8(4) (October 2006): 335–340.
- Erkman, S. "Industrial Ecology: An Historical View." *Journal of Cleaner Production* 5(1/2) (1997): 1–10.
- Graedel, T. E., and B. R. Allenby. *Industrial Ecology*. Englewood Cliffs, NJ: Prentice Hall, 1995.

Hansen, E., and C. Lassen. "Experience with the Use of Substance Flow Analysis in Denmark." *Journal of Industrial Ecology* 6(3/4) (2003): 201–219.

Jacobson, N. B. "Industrial Symbiosis in Kalundborg." *Journal of Industrial Ecology* 10(1/2) (2006): 239–255.

McDonough, W., and M. Braungart. *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press, 2002.

Electric, Hybrid, and Fuel Cell Automobiles

Electric vehicles, considered a serious development option in the late nineteenth and early twentieth centuries, is making a comeback in the early twenty-first century along with hydrogen fuel cell vehicles. Curiously, not even the resurgence of gas-electric hybrid automobiles is a novel idea. During the heyday of the electric vehicle, early-twentieth-century magazines reported that the future was bright for the petrol-electric car.

At the start of the twenty-first century, the petroleum and automobile industries retained their

close working relationship and wielded their lobbying might. Yet times appear to be changing as consumers and legislators demand greater engine efficiency without the attendant noise and pollution. Consequently, gas-electric hybrid vehicles have gained appeal in the marketplace, and the potential of the all-electric hydrogen-powered fuel cell car is gaining interest.

The weight of the batteries and relatively long recharging times have muted the long-term market success of all-electric vehicles. One battery-only-powered electric car, General Motor's EV-1, marketed briefly in the late 1990s, is unlikely to serve as prototype unless a major breakthrough in battery technology is achieved. In the meantime, hybrids using electric motors augmented with small clean-burning gasoline engines are gaining market acceptance, particularly since hybrid cars do not sacrifice the ability for long-distance travel.

After only five years of sales in the United States, hybrids in 2006 had already obtained a 2 percent share of the automobile market. Toyota, the leader in sales of gas-electric hybrids, sold 312,500 units in 2006, of which 240,000 units were sold outside the United States. The 33 percent rise in sales over 2005 was a result of increasing consumer favor for fuel-efficient vehicles resulting from surging gasoline prices. Analysts have predicted an overall gas-electric hybrid growth at 20 percent annually, with almost 8 million vehicles expected to be in operation by 2020. The next step in the evolution of the gas-electric hybrid is the plug-in hybrid electric vehicle (PHEV) that will run on either an electric motor or a small gasoline engine. The emergence of lithium-ion batteries, able to store twice the power of current nickel-metal-hydrate batteries used in today's hybrids, will define the marketing of the PHEV.

The acceptance of hybrid technology is also paving the way for the fully electric vehicle, one that uses fuel cell technology instead of batteries to power the generators while entirely eliminating the gasoline engine. The hydrogen fuel cell is not a fuel or a motor but rather a device that generates electricity. It emits zero emissions, producing only heat and water. The electricity produced will run a generator or series of motors within the next generation of electric vehicles.

➤ EARLY ELECTRIC VEHICLES

Electric vehicles appeared on the roads of New York City in 1896 as an alternative to horse-driven cabs. In the following year, the United Kingdom's W. H. Preece began electric taxicab service in London. His plan created competition for the hackney carriages that had served the city since the seventeenth century. These electric taxicabs found favor around the world since they left no polluting waste and were much less noisy and were easier to start than their gasoline counterparts. By 1904, New York City, Boston, and Chicago saw electric vehicles comprising one-third of the market, competing with both steam-powered and gas-powered automobiles. Acceptance of electric vehicles was rapid, with more than 34,000 on the city streets by 1912. Almost 50 companies manufactured electric cars, catering to a wide range of consumer budgets and tastes. However, the advent of cheap gasoline and a desire to travel great distances ended this early era of popularity for electric propulsion.

—Robert Karl Koslowsky

Continuing development is leading to fuel cells as reusable resources.

However, just as with the introduction of gas-electric hybrid vehicles, the initial selling prices for hydrogen-powered electric vehicles will be higher than conventional alternatives. A second challenge remains: the infrastructure modifications needed to deliver hydrogen fuel at the filling station, a challenge that the manufacturers of gas-electric vehicles did not have to face. While hybrid vehicles still use gasoline, hydrogen fuel-cell vehicles abandon gas completely in favor of another fuel source, elemental hydrogen packaged in a compressed pressurized form.

Even a century ago, a poll taken at the inaugural National Automobile Show held in November 1900 revealed that attendees favored electric vehicles over gasoline vehicles by a wide margin. Today hybrids are gaining market share because they utilize existing infrastructure, something not available 100 years ago, and reduce air pollution. At the end of the twentieth century, the American Lung Association estimated a \$93 billion annual cost for health care due to automobile pollution.

—Robert Karl Koslowsky

Bibliography

- Anderson, Judy, and Curtis D. Anderson. *Electric and Hybrid Cars: A History*. Jefferson, NC: McFarland, 2005.
- Koppel, Tom. *Powering the Future: The Ballard Fuel Cell and the Race to Change the World*. Toronto: Wiley, 1999.

Energy Efficiency

Since the 1970s, environmental advocates have been pushing for energy efficiency (whether involving building techniques, materials, power generation and distribution, or infrastructure planning) as a cost-cutting measure but more importantly as a step toward achieving sustainability. Interest in energy efficiency increased, first with the escalating costs of oil in the early 1970s and more recently with the growing confirmation of human induced global warming. As an example of increasing interest in this area, the U.S. Department of Energy (DOE) spent a total of \$6.3 billion on research and development on energy efficiency during 1973–1995. The

stimulus plan that President Barack Obama signed in February 2009 earmarked nearly \$20 billion toward energy efficiency and renewable energy spending, including research and the retrofitting of government-owned buildings and the homes of lower-income people. The United Nations World Summit on Sustainable Development in 2002 led to the founding in 2004 of the Renewable Energy and Energy Efficiency Partnership (REEEP), a nongovernmental organization funded by many European nations as well as the United States, Canada, and Australia that encourages sustainable energy practices including energy efficiency in both developed and developing countries around the globe.

The main scientific concern behind energy efficiency is simple: when one form of energy is converted to another, there is always some energy lost to the environment. So, energy efficiency is all about minimizing that loss. A simple measure of improved energy efficiency is when the same end can be achieved with less initial energy input, as it demonstrates clearly that less energy is being lost in the process. In buildings, the primary efficiency concern involves the supply and conservation of thermal energy for heating (or cooling) air, water, and food. Another energy efficiency concern is the consumption of electricity, which is typically used as the energy source for other requirements. Given that sources of thermal and electrical energy all waste energy to some extent no matter what measures are taken to improve efficiency, it has become incumbent on architects, builders, material manufacturers, and the owners of buildings to take responsibility for optimizing the energy efficiency of houses, apartments, offices, shops, factories, and so on.

In the case of buildings, particular emphasis has been placed on building design and construction materials along with methods of maximizing insulation and ways of harvesting energy (especially solar, wind, or water power) on site. The overall idea is to create buildings that require less energy input with the use of solar panels, heat exchangers, and other options. Solutions include low-tech approaches, such as the building of straw bale houses that efficiently insulate, or systems for farmers in the developing world to harvest natural gas from animal waste for cooking

and heating. High-tech approaches include the use of electronic components such as smart windows and panels that electro-chemically block or allow sunlight through depending on thermal needs. Other medium-tech measures such as the shift from incandescent lightbulbs to more efficient compact fluorescent lightbulbs (cfl) have been championed worldwide. Likewise, solar heating can involve low-tech passive heating systems in which roof ponds, rocks, masonry walls, or other materials soak up heat that is then distributed in various ways, as opposed to more costly photo-voltaic solar power conversion panels.

Another important phenomenon in the energy efficiency movement is the recycling of materials. Reprocessing waste metals, glass, and plastics uses far less energy than manufacturing them from raw materials. In addition, there has

been a good deal of research put into harvesting the waste thermal energy from power stations and putting it to good use growing foodstuffs. This improves the energy efficiency of the power stations and conserves energy in the fuel that might otherwise be used to ship the same foodstuffs from other countries. In the same way, the emphasis on farmers markets and buy-local movements in the West can cut down on fuel costs from shipping foods hundreds of miles or more.

—Gerard Cheshire

Bibliography

Galbraith, Kate. "Preparing for a Flood of Energy Efficiency Spending." *New York Times*, February 26, 2009, B1.

Moeller, Stephen T. *Energy Efficiency: Issues and Trends*. Hauppauge, NY: Nova Science Publishers, 2002.

■ Introduction: Feeding the World—Agriculture, Livestock, and Fishing

The population of the world has more than doubled since 1945. Means employed to feed this burgeoning population have included agricultural expansion into previously wilderness areas, increases in water supplies, the Green Revolution in agriculture, the development of industrial farming, and advances in biological research.

Agricultural development into former wilderness areas has occurred in many places around the world, including tropical regions where rain forests have been destroyed to make way for farming and ranching. The loss of jungle habitat in the Amazon basin has been matched by the encroachment of farmers upon forest lands or wild areas in India, Southeast Asia, and elsewhere. The habitat losses have alarmed environmentalists.

Dams built as hydroelectric projects and as sources of agricultural water have raised the capacity of many areas for agricultural production, but such dams have also destroyed valuable historic and cultural sites as well as some species dependent upon running water.

The processes we refer to as the Green Revolution began after World War II when manufacturing efforts were redirected from munitions to producing chemical fertilizers. The new fertilizers made agriculture possible in areas that had been infertile or at best marginal lands. The increased yield that chemical fertilizers made possible was coupled with advances in the development of high-yield hybrid seeds. The great growth in food supplies fed more people and increased farmer incomes. It also contributed to the movement of people into the cities as mechanization made their labor obsolete.

The Green Revolution also led to a consolidation of agribusiness. As of 2007, three major companies (Syngenta, Bayer, and BASF) controlled close to half of the world's global agriculturally related chemical industry. Industrial farming emerged as an extension of advances in fertilizers and seed in basic commodity row crops such as corn. It also describes the development of meat production of poultry, pigs, and cattle en masse in feedlots or facilities known as confined ani-

mal feeding operations (CAFOs). Animals were no longer allowed to range freely but were warehoused and given feed that contained medicines, growth hormones, and carefully prepared feed mixtures. The increases in food production were enormous, but the effects were also a growing degree of obesity in the West.

Fish pounds for fish farming have a history that dates back to ancient times. Modern fish farming that includes oyster, shrimp, and other seafoods has expanded to an industrial scale. It was also matched by destructive fishing practices that eliminated or so threatened stocks of some fish that somewhat ineffective efforts to halt such overharvesting have been enacted by law and treaty.

The story of food production after 1945 is one of great increases in the food supply. However, many have argued that the global resources are finite and that eventually a Malthusian event will occur. By the term “Malthusian event,” we are referring to postulation of the Reverend Thomas Malthus in *An Essay on the Principle of Population* (1798). Malthus noted that populations grow geometrically (exponentially), while food production grows arithmetically; in other words, any population will increase to the limits of its capacity to find or produce food during times of highest production. When production returns to normal or below, starvation, wars, and general misery occur. According to this theory, since global population grows at more rapid rates than food supplies, starvation is likely to be the end for many people. So far his dismal prediction has not occurred, but there are many who fear that the food gains are not sustainable.

The carrying capacity of the planet for humans is dependent upon the ability of humans to produce more food. Even after the Green Revolution, there are millions who still have inadequate diets due to global environmental degradation, poverty, and the onset of famine. The growing demand for more and better foods in China and other developing economies has added to the challenge.

—Jack Waskey

Agribusiness and Factory Farms

At the end of World War II much of the world was still agricultural and rural, with farms tend-

ing toward the small family model. One important exception was the large collective state-run enterprises set up in the Soviet Union in the 1920s and 1930s that displaced peasant farmers. Much of the United States remained filled with small farms; states such as Hawaii, however, where large corporations such as Dole dominated agriculture, were early harbingers of the future. In Hawaii, sugar and pineapple along with cattle ranches had dominated the agricultural economy for decades. There large-scale farming with plantation-style workers had been the norm as it had been on the larger farms in the U.S. South, with their dependent sharecroppers. Large agriculture also had become the norm early in California, whose ranchers relied on displaced persons and Mexican and Filipino guest workers to labor in what Carey McWilliams described as its “Factories in the Fields” in 1939.

As of the 1940s, mechanical, chemical, biological, and economic factors began the shift to large-scale farming across the world. New varieties of seeds, chemical fertilizers, and automated equipment were introduced. Increased production was significant enough to keep food prices so low that huge agricultural surpluses occurred in the United States and Canada. The surpluses also underpaid small farmers to the point that many were driven off of the land, further consolidating large holdings.

As post-World War II wages increased, the cost of farm labor also increased to the point that mechanization came as a solution to the low rates of return on agricultural commodities. This in turn led to more farm families leaving the land and to the growth of agribusiness in tandem with the widespread use of machinery and improved distribution. The profits in agribusiness for farm machinery companies, seed growers, and chemical companies supplying fertilizers, pesticides, and herbicides grew, as did actual harvests. The economies of scale for farming continued to drive small farmers out and to promote consolidation.

The advent of the Green Revolution with its herbicides and fertilizers in the 1960s and the 1970s contributed to the decline of the agricultural population and consolidation of big holdings in the United States and other parts of the world. By the 1980s agribusiness was international in its operations. Foods were grown and

shipped around the world. From the tropics went tropical fruits that had never been really affordable in temperate zones. From the temperate zones flowed commodities such as wheat, corn, rice, dairy products, and meats that fed the growing subtropical and tropical populations. Animals raised for meat, instead of left to graze, were shifted to feed lots, stimulating feed crops.

The development of genetically modified crops, resistant to disease or insects, was accompanied by faster modes of transportation for delivering foods to global markets. As environmentalists protested the use of pesticides or other chemicals, some agricultural operations simply moved to the developing world and continued production. From 1961 to 2004 the export of chemical pesticides from countries such as the United States and China to developing nations increased threefold to \$3.3 billion. As early as 1990, the World Health Organization noted that around 3 million people a year suffered from severe pesticide poisoning. Three large companies—Bayer, Syngenta, and BASF—as of the early twenty-first century controlled approximately half of the global agrochemical market.

Genetically modified (GM) seeds, first brought to the market in the 1990s, two decades later had become a critical factor in agribusiness: 85 percent of the soybeans and nearly 50 percent of the corn grown in the United States are from GM seeds. Monsanto Corporation sold close to 90 percent of all GM crops in the world. While these seed varieties are developed to help crops withstand disease, pests, and droughts, such a narrowing of crop seed varieties has had a marked effect on biodiversity.

The consolidation of farms and the widespread use of mechanization ended the practice of setting aside a part of a farm for raising food for the draft animals. Large-scale raising of animals has shifted to confined animal feeding operations (CAFOs). New feed mixtures were designed for maximum growth in animals and birds in the least amount of time. Farm animals were increasingly bred to be designer breeds that would produce a uniform quality meat product. Genetic stock has been depleted. Nearly all the white eggs available in the United States, for example, come from one variety, the white leghorn. Over 40 percent of the world's meat supply now

comes from CAFOs. Animals on CAFOs are subjected to regimens that include growth hormones and antibiotics.

Corn is grown in increasingly standardized varieties that have been used not only for traditional agricultural needs but also for industrial purposes. Most of the corn crop was no longer used to feed humans or livestock. From the chemical that could be derived and then transformed from corn, hundreds of products were developed. Huge portions were used to make traditional chemicals such as ethanol as a fuel substitute. Corn syrup has been used as a sweetener in all manner of foods and beverages. It is less expensive than and has often replaced cane sugar. The products made from processed corn include foods such as grits and corn meal as well as corn oil, corn starch, liquid glucose, dextrin, malt dextrin, sorbitol, and dextrose monohydrate. Chemicals derived from corn are also used to make biodegradable plastics. Like corn, other commodities such as soybeans are also being chemically processed into other products.

The linking of agricultural commodities with industrial food production increased food supplies for feeding an increasingly globalized economy. It also was seen as a threat to survival, as the varieties of seeds used were ever more specialized hybrids. Agribusiness also contributed to widespread ecological damage, as land was often kept in production rather than being rotated. Intensive buildup of animal waste and the introduction of growth hormones and antibiotics into the ecosystem and human consumers have also been of concern. Factory farming also has been linked to global warming, with animal gas a considerable source of greenhouse gas. Such operations, in tandem with fast food operations and supermarket chains, are all links in the global agribusiness network and illustrate the downside of the Green Revolution and industrial-scale farming: more people are fed, yet diseases and environmental damages increase along with dangerous working conditions. Advocates of organic foods and green movements have been critical of industrial-produced foods.

—Jack Waskey and Fred Nadis

Bibliography

Centner, Terence J. *Empty Pastures: Confined Animals and the Transformation of the Rural Land-*

- scape. Champaign: University of Illinois Press, 2004.
- Hamilton, Shane. *Trucking Country: The Road to America's Wal-Mart Economy*. Princeton, NJ: Princeton University Press, 2008.
- Kallen, Stuart A. *Is Factory Farming Harming America?* Farmington Hills, MI: Cengage Gale, 2006.
- Laidlaw, Stuart. *Secret Ingredients: The Brave New World of Industrial Farming*. Toronto, Ontario: McClelland and Stewart, 2003.
- McWilliams, Carey. *Factories in the Field: The Story of Migratory Farm Labor in California*. Berkeley: University of California Press, 2000.
- Niman, Nicolette Hahn. *Righteous Porkchop: Finding a Life and Good Food beyond Factory Farms*. New York: HarperCollins, 2009.
- Shmaefsky, Brian Robert. *Biotechnology on the Farm and in the Factory: Agricultural and Industrial Applications*. New York: Chelsea House, 2005.

Soil and Agricultural Sustainability

Earth's soil is the living skin of the planet, the organic and inorganic layer that allows plants, and thus humans, to survive. Ever since the advent of agriculture some 10,000 years ago the emergence, fruition, and decline of countless civilizations can to a large degree be explained by the maintenance of soil fertility. In recent decades soil resources have been pushed to ever further lengths to support growing demand and to improve balances of trade, conditions that jeopardize long-term sustainability.

Irrigated lands often build up salt levels in the soil's top layers. Once afflicted, soils remain sterile for decades, turning once-thriving farm operations into wastelands. And with the total number of irrigated land worldwide nearly doubling in the last 40 years, today approaching 300 million hectares, it is no surprise that this problem has grown more acute. In addition, the explosion of chemical fertilizer use after 1945 meant that other harmful substances, such as nitrates and selenium, came to irrigated soil's top layer, often leaving land unsuited for farming and the surface water unfit for drinking.

Erosion is another great threat to agricultural sustainability. Although it occurs in nature anywhere there is wind or water, human activity currently accounts for upwards of three-quarters



Terraces are cut and trees planted to stabilize from erosion the valuable loess soil in Shaanxi, China. The land in this region has been cultivated for the past 3,000 years. (Julia Waterlow; Eye Ubiquitous/Corbis)

of all erosion. This is no small matter, for the uppermost layers of topsoil contain all the essential nutrients that make agriculture possible. Remedies are difficult. Fertilizers can make plants grow in the absence of good soil, but to pay for them farmers and governments usually must incur considerable debt. Chemicals do not fix the problem; they merely mask the dark reality that repeated plowing on steep slopes or on unstable land undermines long-term output and profitability.

Perhaps the most dramatic example of the effects of erosion on agriculture is in the loess plateau of China. Loess, or wind-driven soil deposits, are typically quite fertile but also loose, light, and prone to erosion. The land has been in cultivation for roughly the past 3,000 years, but population pressures and the demands of the communist regime have put the land under far greater stress in recent decades, with the result being serious drops in productivity and an increase in rural poverty. One historian claims that from 1957 to 1977 China had 25 million acres of land rendered useless by erosion and that one-seventh of the landmass has been afflicted. But in command economies, as in capitalistic ones, short-term wants usually win out over protecting future interests.

Erosion damages grazing lands as well as croplands. This was true particularly in Africa in the twentieth century, either because colonial powers encouraged or demanded more animals

➤ WHY CALIFORNIA'S CENTRAL VALLEY IS SINKING

Excessive pumping of groundwater in much of California's Central Valley—an intensive agricultural area—has resulted in it sinking approximately 30 feet since the late 1940s. Much of this water was siphoned off by local agricultural interests since early in the century. Geologists call the process that leads to sinking *subsidence*, which is caused by the filling and draining of underground aquifers. The problem lies when year after year these aquifers are drained to increasingly lower levels due to increasing water demand, which causes surrounding rocks and soil to become compacted. This decreases the amount that can be stored the following year and allows for the decreasing elevation of the upper strata of soil. Sinking elevations have also led to the creation of hills where there formerly was flat land. With California's current water crises, due to high demand, agricultural needs, and widespread development, the Central Valley and other parts of the state will continue to sink.

—Abraham O. Mendoza

be allowed to graze or because the unregulated nature of the commons discouraged land stewardship. The data is clear: the number of grazing animals in Africa increased from 295 million in 1950 to 520 million in the early 1980s. In Ethiopia cattle have mowed down native perennial grasses, which were then replaced by annual grasses that provided less ground cover. Erosion then ate away at the land, making cattle grazing an even more tenuous enterprise. And in Swaziland, erosion on steep slopes has created not just gullies but also trenches up to 30 meters deep.

Basic statistics explain why there has been such pressure to develop new agricultural and grazing lands. In 1900, world population stood at 1.6 billion. By 2000, world population surpassed 6 billion. In response, from 1940 to 2000 the total area of land farmed worldwide increased by about 158,300 square miles (300 million hectares), and the total area of land grazed increased by more than 5,019,328 square miles (1.3 billion hectares). The challenge to feed the world became enmeshed with the desire to

maximize productivity in both the developed and less-developed nations, usually with significant environmental and social consequences. Yields from farming and ranching on submarginal land can be strong for a few years, allowing for population growth and high profits in the short-term, but cannot produce well for long. Deforestation, erosion, and salinization have all been a consequence of the pressures to develop such marginal lands.

Soils can also be damaged by activities seemingly far removed from the agricultural realm. Industrial pollutants, whether falling from the air or carried in by water, can quickly turn rich farmland into useless dirt. Such was the case in nations eager to industrialize. Industrialization in postwar Japan came at the expense of heavy metal particulates that drifted onto rice fields and infiltrated groundwater. The Eastern Bloc states developed smokestack industries that did much the same, putting lead, zinc, cadmium, and other metals into the environment. Moreover, most of these elements persist for hundreds or even thousands of years.

Understanding geological forces and deep history is essential for appreciating the value of fertile soil. On average, it takes about 10,000 years of sediment deposition and plant growth and decay to form a mere 30 centimeters of soil. At such a pace, it is easy to see the significance of soil conservation.

—Andrew Duffin

Bibliography

- Federico, Giovanni. *Feeding the World: An Economic History of Agriculture, 1800–2000*. Princeton, NJ: Princeton University Press, 2005.
- Hillel, Daniel. *Out of the Earth: Civilization and the Life of the Soil*. Berkeley: University of California Press, 1991.
- Hughes, J. Donald. *The Environmental History of the World: Humankind's Changing Role in the Community of Life*. Oxford, UK: Routledge, 2001.
- McNeill, J. R. *Something New under the Sun: An Environmental History of the Twentieth-Century World*. New York: Norton, 2000.
- Ponting, Clive. *A Green History of the World: The Environment and the Collapse of Great Civilizations*. New York: Penguin, 1991.

The Green Revolution

The Green Revolution was a major transformation in agriculture that began in the 1940s and became dynamic and celebrated in the news media by its champions in the 1970s. The term “Green Revolution” was first used by William Caud, a U.S. Agency for International Development (USAID) officer. He described the huge gains in productivity reaped by farmers from using improved varieties of seeds in conjunction with improved agricultural techniques and chemical fertilizers as a Green Revolution.

The 1970s was a time of significant ideological competition between the United States and the Soviet Union, expressed in one arena in terms of opposing modernization strategies directed toward the postcolonial developing world. An important target of these strategies was the great masses of agricultural people in the developing nations of Asia, Africa, and Latin America. The Communists sought a Red Revolution of social change characterized by command economies. In contrast, the emphasis by Western capitalists was on increasing wealth by increasing agricultural productivity dependent on private investment strategies through the World Bank and the International Monetary Fund. The Green Revolution became the focus of Western aid strategies.

The roots of the Green Revolution had developed earlier, in the 1940s, in Mexico, where famine was averted through the use of improved seeds and planting techniques. The Rockefeller Foundation and the Ford Foundation had sponsored the experiments that demonstrated that new hybrid strains of seed and modern chemical fertilizers would increase crop yields by manyfold in some cases. In 1961, with famine threatening India, the Indian government at that time, while seeking to be independent or nonaligned with either the communist Eastern Bloc or the capitalist West, yielded to necessity and invited U.S. agronomist Norman Borlaug to India. Experiments were conducted in the Punjab region where the five rivers flow into the Indus River. The wheat yields from the experiment were huge. Rice from hybrid strains grown with chemical fertilizers and modern planting techniques yielded harvests that doubled and tripled the

➤ MECHANIZATION OF AGRICULTURE

In the postwar prosperity following World War II, many economists and government officials in the United States felt that small-scale agriculture had become marginal. Farms and livestock operations needed to be consolidated and needed to incorporate new technology to improve efficiency, production, and profits. The ensuing mechanization of cotton growing and other cash crops ended the need for unskilled labor, and thousands of sharecroppers left farms in the South for California and the big cities of the North. The same movement off of the farms occurred all over the United States.

By the mid-1950s many of the remaining U.S. farmers decided to contract with a large corporation, such as Campbell Soup, Ralston Purina, or Sunkist Growers, to produce a specific quantity of crop, such as tomatoes, grain, or oranges. While this reduced farmers’ financial risk and guaranteed an income, in effect they gave up control to the corporation. This led most agricultural companies to become very vertically integrated, making decisions about every step of production, processing, and commercial marketing.

Similar developments occurred among livestock producers, particularly for poultry and dairy cattle. Companies such as Tyson Foods now contract with operators of large chicken farms to mass-produce animals, which the company subsequently processes and sells to consumers. Dairies and cheese factories similarly need large herds of milk cows. A partial exception is the beef cattle industry, where meat packers rely on large feedlot operations to supply them with livestock. The economic gains of purchasing feed grains and finishing out cattle, however, do not include raising those animals from birth, which is still done at separate cow-calf operations in the United States.

—Cameron Saffell

tons produced per acre. From India word of the success spread to other areas in the developing world. Since the 1960s, Green Revolution techniques have made it possible to feed the huge increases in the world population. The Green Revolution has also inspired further agriculture

research, leading to studies of genetically modified seed through collaboration between government, nongovernmental organizations (NGOs), universities, and private firms.

There have been problems and criticism of the Green Revolution in several areas. The innovations of the Green Revolution have met with success in many South Asian countries as well as in Mexico and some other areas of Latin America. However, in Africa, wars, droughts, corruption, and other problems have hindered the development of a continental Green Revolution. Furthermore, in places such as Indonesia and Vietnam, traditional agricultural practices created resistance to Western methods of agricultural production that ignored centuries-old methods that accorded with religious customs.

Critics of the ongoing Green Revolution note that environmental side effects of the introduction of large-scale agriculture include soil erosion, high water consumption, salinization, and water pollution from pesticides and fertilizers. Other critics have argued that the Green Revolution methods ultimately cannot forestall vast numbers of people perishing in a Malthusian famine. Eighteenth-century economist Reverend Thomas Malthus argued that food production increased arithmetically, while uncontrolled population growth increased geometrically. This means that it is possible for the population to outstrip its food supply if it produces too many children. As the world's population in the developing world grew exponentially in the late twentieth century, this concern continued to haunt advocates for stemming global population growth. So far, as of 2009 the Malthusian doomsday scenario has not taken place. However, critics worry that it could because the seeds supplied by seed companies are hybrids and are vulnerable to diseases. In a sense, such agriculture promotes an anti-Darwinian favoritism of a species. The possibility therefore exists that heirloom seeds that have greater genetic possibilities could be lost if they are not planted. This is critical if something happens to the seeds used to produce the ongoing Green Revolution.

—Jack Waskey

Bibliography

Brown, Lester Russell. *Seeds of Change: The Green Revolution and Development in the 1970s*. New

York: Published for the Overseas Development Council by Praeger, 1970.

Hurt, R. Douglas. *Problems of Plenty: The American Farmer in the Twentieth Century*. Chicago: Ivan R. Dee, 2002.

Manning, Richard. *Food's Frontier: The Next Green Revolution*. New York: North Point, 2000.

Pearse, Andrew Chemocke. *Seeds of Plenty, Seeds of Want: Social and Economic Implications of the Green Revolution*. Oxford, UK: Clarendon, 1980.

Genetic Modification of Seed

With the discovery of the DNA molecule and its structure in 1953, the field of genetics began a rapid advance. By the 1970s, the ability to modify the arrangement or the types of genes in a molecule of DNA gave scientists a powerful tool for creating insect- and disease-resistant strains of plants, or the power to promote the growth of high-yield crops. Genes have been removed, spliced, or relocated in DNA molecules to create new hybrids.

The Green Revolution in agriculture that unfolded between 1945 and 1965 did not depend on gene-splicing techniques; instead, researchers developed hybrid versions of seeds to be used along with large quantities of pesticides and fertilizers. The seeds used were high-yield varieties crossbred for growth gains. The resulting monoculture created a genetic reduction in the crop seeds available. At the same time, a few seed companies with rights to these hybrids came to dominate the market. Biologists and others interested in agronomy grew concerned that the heirloom seed stocks from which hybrids were developed could die out. The heirloom seeds were closer to the original genetic pools from which seed crops such as corn, wheat, rice, and other major cereal grains come that are vital to human survival.

In the 1990s, genetically modified organisms (GMOs) were developed. Some of the GMOs were agriculture seeds, produced by the laboratory modification of genetic material in a variety of seeds. In many cases, instead of just rearranging gene material or instead of eliminating some genes, the seed was modified with the insertion of genes from a manipulated organism to, for example, make crops more disease resistant. Since the 1990s the acreage devoted to genetically modi-

fied (GM) crops has increased greatly around the world, with over half of such production in North America as of 2007. However, there have been numerous concerns raised by scientists over this use of GM foods. The concerns have been centered on the unknown effects of the consumption of genetically modified foods and the unforeseeable effects of GMOs in larger food chains and ecosystems. The opposition grew rapidly, especially in Europe, already galvanized in the 1980s after the much-publicized outbreak of Bovine Spongiform Encephalopathy (BSE), popularly known as mad cow disease. The disease is not caused by genetic modifications, but it raised fears among Europeans that industrial agricultural practices were undermining the world food supply.

Despite opposition, agricultural corporations such as Monsanto, Bayer Crop Science, and Archer Daniels Midland have continued development and production of GMOs. Scientific organizations and governments have given limited support to the use of GM seeds, including research funding. Research is currently focused on inserting drug manufacturing genes into foods that will be consumed in tropical areas in order to combat diseases. Testing of the safety of GMOs is also an ongoing project.

—Jack Waskey

Bibliography

- Avise, John C. *Hope, Hype, and Reality of Genetic Engineering: Remarkable Stories from Agriculture, Industry, Medicine, and the Environment*. New York: Oxford University Press, 2004.
- Murray, David R. *Seeds of Concern: The Genetic Manipulation of Plants*. New York: CABI, 2003.
- Pinstrup-Andersen, Per, and Ebbe Schioler. *Seeds of Contention: World Hunger and the Global Controversy over GM Crops*. Baltimore: Johns Hopkins University Press, 2001.
- Thomson, Jennifer A. *Seeds of the Future: The Impact of Genetically Modified Crops on the Environment*. Ithaca, NY: Comstock Publishing Associates, 2007.

—Jack Waskey

Cattle

There have been significant changes in and restructuring of the beef and dairy cattle indus-

➤ GENETICALLY MODIFIED COTTONSEED

In the post–World War II era, cotton has continued its historic role as an important crop for fiber and seed. Cottonseeds are used to make one of the four major genetically modified vegetable oils (soy, corn, canola, and cotton) used globally. Large quantities of cottonseed oil are used in potato chip production. Increasingly, cottonseed oil is produced from genetically modified cotton plants.

The chemical gossypol is a natural toxin found in cottonseed, where it functions as a natural insecticide. Gossypol makes cottonseed oil inedible to humans unless it is further refined. Through genetic modification, varieties of cottonseed have been produced without gossypol. Other genetic modifications have focused on eliminating two fatty acid desaturase genes in cotton plants. The goal is to produce a healthier product by reducing the omega fatty acids in cottonseed oil.

Activists oppose the use of genetically modified cotton for environmental and health reasons. Those varieties that eliminate gossypol require heavy applications of insecticides to protect the cotton crop from damage. They also argue that new protein-making genes added to cotton plants may create proteins that act like prions (disease agents that damage protein molecules) in mad cow disease.

—Jack Waskey

tries and animal breeds in the U.S. and world markets since the mid-twentieth century. Production has expanded while changes in animals have largely resulted from scientific improvements in breeding. In most instances, producers in the largest beef cattle countries—including the United States, Australia, Argentina, Brazil, and the European Union—have become highly scientific and efficient, needing large areas of land and large herd sizes to maximize their production.

Prior to World War II, most beef cattle production occurred as secondary enterprises in grain-producing areas or in large ranches such as those of the American West and Australia. These areas were better suited to livestock because much of the land would not support intensive crop farming. Postwar grain improvements

➤ MAD COW DISEASE

In April 1985 a veterinarian was called to diagnose a cow in Kent, England. The animal had lost all coordination and suffered fits of aggression. By 1987 this affliction was officially named Bovine Spongiform Encephalopathy (BSE), dubbed “Mad Cow Disease” by the press. BSE is caused by prions, an indestructible brain-protein pathogen that warps normal proteins into new prions, making holes in the brain and turning it to sponge. BSE also wreaks havoc on the nervous system and major organs but apparently does not affect regular muscle tissue. As of May 2007, 160 people, all in the United Kingdom, had died after eating infected beef and developing a human version of the syndrome.

By 1988 the external cause of BSE was identified: throughout the twentieth century, cows and sheep that were old, sick, or otherwise unfit as human food were used as a cheap protein supplement in cattle feed. Thus, cows with BSE were consumed by other cows, which then became infected. The United States banned cattle imports from the United Kingdom in 1989 and beef shipments from many European countries in 1991. By the time the European Commission passed an import-restricting resolution in 1994, the epidemic had peaked in Britain with 3,000 new cases per month. Extensive regulation reforms regarding cattle feed and butchering subsequently stemmed the epidemic.

Despite the additional regulations, additional cases of BSE in cattle have been confirmed. Because the infection can be transmitted through feed products to other cattle as well as by direct consumption of the meat, when new cases occur other countries move quickly to ban all beef cattle imports from those countries. The example of how one infected animal and its by-products may be quickly distributed through tens or hundreds of other products to other areas of the world shows how closely interrelated markets, feed supplies, and pathogens have become in the global age.

and surplus production led to a shift in methods. Enterprising cattle and grain producers began feeding the excess grain to cattle. While this increased the cost of meat for consumers, the public quickly demanded more grain-fed beef because of its improved flavor and tenderness.

This has led to a reorganization of the beef cattle industry.

Most commercial beef production in the United States takes place in three stages. The first is cow-calf production, where cows breed and have calves in areas of the country where forage is abundant. The purpose is to produce steers and heifers that will eventually be slaughtered. The next stage involves a stocker operator, who takes recently weaned calves and doubles their weights by feeding them cheap forage. The last step, called finishing, occurs on a feedlot where animals spend 120 to 150 days eating mostly grains. Feedlots may have from a few hundred head to more than 40,000 beef cattle, and many are located either in large grain-producing areas or near large meat-packing facilities, where the cattle are sent for slaughter and processing.

A similar reorganization occurred in Australia. Australian producers introduced similar feedlot practices by the 1970s and expanded that country's overall output significantly. Since the mid-1980s, Australian beef has represented about 40 percent of the world's total beef production.

The amount of time and the ultimate weight of beef cattle vary based on the breed used. Breed selection and development is a science unto itself, as producers enhance the best characteristics, including reproductive traits, weaning weight and subsequent animal growth, meat quality, and minimized genetic defects. Since each attribute varies from one breed to another, finding the right combination suitable to producer, processor, and consumer is a challenge. Producers worldwide frequently utilize crossbred stock, meaning that the meat bought by a consumer is not usually a particular type. Some producer groups have tried to overcome this by marketing their breed as premium certified meats.

The dairy industry in the United States has been more diversified geographically than the beef industry because milk is perishable and shipping costs are expensive. Thus, small operations with as few as 30 milking cows can be found in many parts of the country. Industrial advances, particularly in breeding, however, have resulted in many large dairy herds being assembled to reduce expenses.

The most significant advancement for dairy production was the introduction of artificial in-



Cattle feeding on grain in a commercial feedlot. Some feedlots fatten over 40,000 head of cattle at a time. (U.S. Department of Agriculture/Brian Prechtel)

semination of cows during the 1930s and 1940s. This allowed producers to control calving and the period of lactation. Milk production has advanced rapidly as dairy management and breeding have improved. Overall, the average milk production per cow is more than three times greater than it was in 1940, a result of selective breeding and improvements in organizing dairy herds.

Globally, similar improvements in beef and dairy production are being adopted along with an increase in beef and dairy consumption worldwide. This consumption may be related to several kinds of emerging health problems including obesity and heart attacks.

—Cameron Saffell

Bibliography

Damron, W. Stephen. *Introduction to Animal Science: Global, Biological, Social, and Industrial*

Perspectives. 2nd ed. Upper Saddle River, NJ: Prentice Hall, 2002.

Taylor, Robert E., and Thomas G. Field. *Scientific Farm Animal Production: An Introduction to Animal Science*. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2003.

Growth of Fishing Fleets and Destruction of Fishing Stock

Second only to navigation, fishing is the primary human use of the World Ocean, the global ocean body comprised of the Pacific, Atlantic, Southern, and Indian oceans. Commercial and small-scale fishing supports about 200 million people in direct employment. About 500 million others draw livelihoods indirectly from marine resources. An area in the ocean that is used for fishing is called a fishery, and these areas usually have populations of specific fish. Fish account for 16 percent of all animal protein intake in the world and may account for 40 percent or more in developing nations, Japan, and Norway.

However, fisheries are in danger. The world fishing fleet has undergone unprecedented growth since World War II, when international records began to be kept systematically. The world fish catch nearly doubled over a 20-year period from 50 million tons in 1975 to 95 million tons in 1995 as a result of increased fishing effort. This increased fishing was prompted by an ever-increasing human population but was



A fisherman along Romania's Black Sea coast reaches for a fish from a net full of jellyfish, 2005. (Robert Ghemet/epa/Corbis)

➤ FISHING TREATIES

Since the ocean is international and beyond the control and therefore management of any single agent or country, international agreements are essential for developing rules (institutions) for fishing. This has been a difficult issue since the 1600s, when Hugo Grotius's legal concept of *mare liberum* ("freedom of the seas") institutionalized the premise that there need not be any rules for ocean use. Thus, since the seventeenth century, there has been a bias in international law against setting rules for using the ocean. In part, this was a result of the popular misconception that the ocean was an infinite resource that could not be impaired by human actions.

It was only after 1958, when the first Law of the Sea convention was held, that the *mare liberum* doctrine began to be formally questioned. In 1982, when the final Law of the Sea convention was concluded, serious changes to the *mare liberum* doctrine were made, and conservation of ocean resources was institutionalized as an expectation for all countries.

More recent advances include the adoption of the Fishery Stock Agreement (United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks) that went into force in 2001. This allowed regional fishery authorities to take much greater control of the fish stocks than ever before, giving them, for example, the authority to board and stop ships violating regional fishery management guidelines. The regional bodies are a recent development, so it will take some time to understand what kind of effect they have on the downward spiral of marine fisheries.

—Peter Jacques

also a result of intensive industrial investment into larger and more efficient commercial fishing fleets. This has created what economists refer to as overcapitalization, that is, an overinvestment of resources into fishing fleets.

Overcapitalization, a primary cause of overfishing, encourages more boats with improved equipment to pursue fewer and fewer fish. Fishing fleets compete with each other over the same dwindling fish stocks. In order to win these fish, fleets have not only been forced to become more

numerous but must also have the latest best gear such as sonar and refrigeration to compete. This means that each fleet continues to invest greater resources into getting their fish before competitors, increasing the pressure on stocks. This is a key reason why fishery management in the modern era has been one of the world's most pressing failures.

Most of the world's fisheries are being exploited faster than they can recover. Approximately 60 percent of the world's marine fisheries are now at or close to the decline. Worse, overfishing does not indiscriminately affect fishing populations. The most valuable fish are targeted first. These fish are typically the larger species and individuals. This means that as the world fishing fleet progresses from smaller to smaller fish, biological richness and diversity is eroded systematically. This is referred to as fishing down the food chain and has occurred worldwide. Top ocean predators have therefore seen extraordinary historic collapses in several cases. For example, in the Black Sea, populations of *Mnemiopsis* jellyfish have increased dramatically as their economically important competitors, such as chub mackerel, have been removed. This has reduced the number of main fisheries in the Black Sea from 26 to 5.

While specific fish are diminished purposefully, other marine life is diminished indiscriminately. Fishing nets can extend for miles, catching species that are not targeted and even species that may be protected. This is called by-catch, and it is a serious problem for fish populations. By-catch wastes about 27 million metric tons of fish annually, that is, almost one-third of the total annual world fish catch. When by-catch is added to the world fish catch, the total burden on world fisheries can be as high as 120 million metric tons per year. This by-catch includes millions of cetaceans (whales, dolphins, and porpoise). These figures indicate not only a tremendous waste but also an unnecessary disruption in the world food chain and a threat to ecological stability and security.

Fishing is a vital aspect of peoples' diet and economy but a threat to biodiversity. The successes of fishing fleets have put a high degree of pressure on fish stocks. In some cases, this has

led to catastrophic collapses, such as that of the cod fisheries off Newfoundland, Canada, during the 1990s that have not recovered after a full decade. These collapses then send shockwaves into the communities that depended on that work, revenue, and food source. Yet conserving fish stocks has been very difficult in the modern era given the race for fish, disregard for cautionary scientific estimates, and inappropriate goals for fisheries to produce a steady maximum across time.

Some new proposals to head off a catastrophic collapse of the world's fisheries include creating marine protected areas (which may have no-take zones where fisheries are permitted to rest), encouraging community enforcement of fishery standards (as opposed to regulation from federal governments), and a restructuring of individual fisher incentives via quotas. These incentives would involve assigning or auctioning individual permits that can be transferred or sold. To maintain the value of a license, individual holders would have a stake in conserving stocks rather than in racing to deplete them. However, the most promising strategies are based on managing large marine ecosystems, not just protecting a single species of fish but also its environment (e.g., regulating pollution in addition to regulating fishing).

—Peter Jacques

Bibliography

Pauly, Daniel, et. al. "Towards Sustainability in World Fisheries." *Nature* 418 (2002): 689–695.
State of the World Fisheries and Aquaculture. Rome: UN Food and Agricultural Organization, 2002.

Whaling Industry and Opposition

The modern whaling industry originated in the late nineteenth century as advancements in harpoon technology and shipbuilding facilitated the expansion of whaling outside coastal regions. Driven by the demand for whale oil, used primarily for lighting, the leading whaling nations—Norway, England, and the United States—constructed large whaling fleets that operated mostly in the North Atlantic and Pacific oceans.

FISHING EFFORT

Number of fishers in the world:

1970—12.2 million
 1980—17 million
 1990—27.8 million
 2000—34.5 million

Approximate Decked Fishing Vessels by Continent (Thousands)

	1970	1980	1990	1998
Asia	400+	700	1000	1100
North and Central America	20	30	55	60
Europe	100+	90	105	118
Africa	>5	10	12	14
South America	>5	7	8	8
Oceania	>5	>5	5	5

All data adapted from *State of the World Fisheries and Aquaculture* (Rome: UN Food and Agricultural Organization, 2002).

—Peter Jacques

Pelagic (open-sea) whaling grew rapidly in the 1930s as Japan, Germany, and the Soviet Union sent fleets to the Antarctic. During this period, Japan emerged as a major consumer of whale meat. In the second half of the twentieth century, whaling became a contentious geopolitical issue, as whale stocks declined precipitously and an influential antiwhaling movement developed.

The earliest international efforts to regulate whaling occurred in the 1930s. Negotiations among the whaling powers proved difficult because nations with entrenched interests opposed restrictions on the industry and sought control over their competitors. Nonetheless, the 1931 Convention for the Regulation of Whaling and the 1938 London Protocols established important precedents for future regulatory efforts. Most significantly, in 1946 14 nations signed the International Convention for the Regulation of Whaling. Drafted during the same period of international cooperation that witnessed the formation of the United Nations (UN), this agreement

dramatically lowered existing catch quotas and established a new regulatory body, the International Whaling Commission (IWC).

While World War II disrupted commercial whaling, the IWC quickly evolved into the main forum for regulating the industry during the postwar era. In the 1960s, members of the scientific community pressured the organization to replace existing methods for allocating quotas based on the oil content of blue whales with procedures more sensitive to the population dynamics of individual whale species. However, internal conflicts prevented the IWC from developing clear preservation objectives. Despite its 1965 hunting ban on the endangered blue whale and its success in reducing quotas on other species later in the decade, critics claimed that the organization was more concerned with the survival of the whaling industry than the protection of whales.

In 1972, the UN Conference on the Human Environment in Stockholm passed a resolution recommending a temporary ban on industrial whaling. Three years later, the radical environmental group Greenpeace staged the first of several highly publicized confrontations with whaling fleets at sea. Combined with the lobbying efforts of more moderate conservation organizations and the elevation of whales to iconic status in the environmental movement, these actions initiated fundamental change in the international whaling regime. In 1982, pressured by delegates from the United States, nongovernmental organizations, and new African and Eu-

ropean members, the IWC imposed a 10-year moratorium on commercial whaling.

The 1982 moratorium ushered in a period of intense conflict between pro- and antiwhaling nations. Japan and Norway initially objected to the ban and later continued whaling under scientific permits issued by the IWC. The leading opponents of industrial whaling—the United States, Australia, and the United Kingdom—regarded scientific permits as a cover for commercial activities and campaigned for additional protective measures, including a whale sanctuary in the Southern Ocean. At the turn of the twenty-first century, several nations continued limited whaling activities in defiance of international regulations, and the IWC remained divided over a range of issues, especially indigenous whaling practices, the economic benefits of whale tourism, and the legitimacy of scientific management.

—Brad Martin

Bibliography

- Birnie, Patricia. *International Regulation of Whaling: From Conservation of Whaling to Conservation of Whales and Regulation of Whale-Watching*. 2 vols. New York: Oceana, 1985.
- Ellis, Richard. *Men and Whales*. New York: Knopf, 1991.
- Mulvaney, Kieran. *The Whaling Season: An Inside Account of the Struggle to Stop Commercial Whaling*. Washington, DC: Island Press, 2003.
- Tonnessen, J. N., and A. O. Johnsen. *The History of Modern Whaling*. Translated by R. I. Christophersen. Berkeley and Los Angeles: University of California Press, 1982.

■ Introduction: Resource Industries

Enormous resources have been extracted to supply the growth of the world population to over six billion people since the end of World War II. The world's extraction industries have greatly expanded the supplies of fossil fuels, minerals, building materials, and other natural resources to meet global population growth. The search for needed resources has pushed the extraction industries into prospecting in ever more remote areas or into searching

older areas with significant advances in technology. The new prospects have produced huge new supplies of fossil fuels, especially natural gas and petroleum. New diamond mines have been opened in Canada and Russia. New copper mines or other sources have been able to supply the world's growing demand.

The use of resources has shifted geographically. For example, the Chinese have been urbanizing since 1945. An estimated 300 million

Chinese have moved to the cities since 1975. This is the largest internal migration in the history of the world. It is expected that another 500 million will have moved into China's growing cities in the next several decades. The urban growth has required huge volumes of building materials. It has also required huge increases in electricity and other resources. What has happened in China is a common development worldwide.

The improved technologies that have increased the extraction of nonrenewable resource supplies have contributed to the world's population growth because they have reduced epidemics, famines, and the effects of other natural disasters. Critics of overpopulation argue that this level of growth is unsustainable and have advocated family planning, forced sterilization, mandatory birth control, abortion, and later marriage in order to attain zero population growth for the planet.

Many ecologists have argued that finite nonrenewable resources make modern industrial civilization unsustainable. In response to the fears that some have of running out of resources, many are urging a greater shift to renewable resources.

—Jack Waskey

Coal, Oil, and Natural Gas

In recent decades, the world's energy planners have been presented with three challenges, sometimes in conflict: to bring forward sustainable energy sources of all kinds, to reduce dependence on greenhouse gas emissions caused by hydrocarbon fuels, and to reduce the heavy dependence of almost all societies on oil. In addition to concerns about the turbulent Middle East where two-thirds of the world's proven oil reserves still lie, there are also geopolitical challenges to Russian gas supplies on which Western Europe has developed a heavy dependence, the perils of political sabotage of oil and gas pipelines, and the shadow of potential terrorist action against major oil installations and facilities.

The task of displacing fossil fuels even marginally with genuinely sustainable and truly low-carbon alternatives cannot be minimized. Nor are the most-favored green renewable sources with-



Coal-fired electrical power plant in China. One of many built since the 1980s. (Danny Zhan)

out their downsides. (To give one example, the front-running biofuel, ethanol, widely used already in Brazil, involves clearing rain forests to plant the necessary soya and sugar cane.) Solar power has yet to prove competitive on a large scale, while nuclear power continues to raise waste disposal problems and meet strong political resistance. Perhaps the most realistic assessment of world energy needs is to be found in the 2006 United Kingdom energy policy review, which states bluntly that oil, gas, and coal will continue to dominate the energy supply chain for many years to come.

Coal has long been an important fuel, and large reserves remain. North America, India, and China together possess two-thirds of the world's coal reserves, while the United Kingdom and the rest of Europe also retain very large commercially exploitable deposits, despite coal having been the key energy source of the Industrial Revolution of the eighteenth and nineteenth centuries, with enough to meet energy requirements for hundreds of years. Sixty percent of U.S. electricity comes from coal-fired power stations, and 120 more coal-fired stations are being planned or are under construction in the United States alone. Many more are now being constructed in China to help meet the enormous energy demands of that country's rapid economic and industrial growth.

Coal is cheap but dirty. It is full of carbon and sulphur. Because coal is a relatively inert

> LPG

Liquefied petroleum gas (LPG) is a mixture of hydrocarbon gases—propane and butane—extracted from oil and gas. LPG exists as a gas at normal atmospheric pressure and only becomes liquid at very low temperatures or under pressure. When the pressure is released, the liquid boils and forms a vapor. It is this vapor that is used to fuel appliances. The calorific value of LPG is about 2.5 times higher than that of methane gas, so more heat is produced from the same volume. LPG is carried by sea in large quantities. Carriage temperatures are around -44°C for propane and -5°C for butane.

Many domestic and commercial applications of LPG are similar to those of natural gas, but because of its physical state and mobility, LPG can be put to a number of other uses that are normally outside the scope of natural gas. LPG is used for space and water heating, cooking and air conditioning, industrial or agricultural processes, and power for vehicles and fleets.

—Carole Nakhle

solid, cleaning the coal before burning to remove sulphur is almost impossible. The exhaust gas in the smokestack is chemically more accessible, but removing carbon dioxide, sulphur, and mercury from smoke remains a costly technological challenge. One potential approach is the underground gasification of coal: turning coal to gas underground, cleaning it, and making it sulphur- and carbon-free, with the carbon being piped away and stored underground or under the sea.

Oil reserves are less certain than coal. Proved reserves (quantities that have a better than 90 percent chance of being produced over the life of the field) were estimated to be 630 billion barrels in 1975. In 2005, the estimates of proved reserves climbed to 1,189 billion barrels. Oil resources are also highly concentrated. The Middle East, which is more likely to strike oil than water, holds more than 63 percent of the world's total oil and gas reserves. Technology has opened up more accessible and profitable oil reserves and has improved recovery rates. A few decades ago, the average oil recovery rate from reservoirs

was 20 percent, but this rose to about 35 percent by 2006. Nevertheless, currently two-thirds of the oil known to exist in reservoirs is still abandoned as uneconomical. The energy crisis has also led to the examination of using unconventional oils, such as Canadian tar-sands and bitumen oil from the Orinoco belt in South America and elsewhere.

At one stage, when oil companies used to find a gas well they tended to call it a dry hole. But given the main concerns surrounding oil (rising oil cost, supply disruption, and CO_2 emissions as a result of burning oil), interest has shifted toward natural gas (methane), and attitudes have changed. Natural gas is the lightest end of the hydrocarbon resource. Per unit of volume, natural gas contains 1/1,000th the heat energy of oil. Once processed and treated to remove impurities, gas provides a clean burning fuel. Its carbon emissions are 40 percent lower than oil. Gas is ideal for heating and for gas turbines. Natural gas is also an abundant energy source, with Russia the world's largest holder of gas reserves. Gas reserves have grown rapidly, now even exceeding oil. Similar exploration and drilling techniques are used for both oil and natural gas. But gas is moved in pressurized pipelines, whereas oil can be transported in both pipelines and tankers.

Liquefied natural gas (LNG) transported by ship is seen as a practical if costly worldwide alternative. LNG is methane that has been super-cooled beyond the point at which it turns into liquid (-163°C). It occupies 1/600th the volume of gas and can be loaded into insulated ship tanks, shipped to consumer country destinations, and then warmed and regasified into its original form and pumped into local grids. The whole process also requires building special terminals to receive the LNG, warming it up, and feeding it into national and local gas grids. But technology is bringing costs down, and more LNG terminals are being built worldwide.

While fossil fuels are viewed as culprits in the battle to limit greenhouse gases, they remain the lifeblood of the world economy and will remain so for years to come. The task will be to use all the instruments of technology to increase energy end-use efficiency, to accelerate competitive alternatives, and to forge an ecofriendly al-

liance between Earth's environment and the growing world population's legitimate needs for safe and affordable energy supplies.

—Carole Nakhle

Bibliography

- Deffeyes, Kenneth S. *Beyond Oil: The View from Hubbert's Peak*. New York: Hill and Wang, 2006.
- Howell, David, and Carole Nakhle. *Out of the Energy Labyrinth: Uniting Energy and the Environment to Avert Catastrophe*. London: Tauris, 2007.
- World Energy Outlook 2006. Paris: International Energy Association, 2006.
- Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Simon and Schuster, 1991.

Strip Mining

Strip or surface mining, one of the earliest of mining techniques, involves digging to remove topsoil that covers shallow mineral deposits. This method is most commonly used to extract coal. Strip mining is often chosen when coal is flat-lying and close to the surface. The method, which is used in Africa, the Americas, Asia, and Europe, is less expensive than underground mining and does not involve the high loss of life and accident rates associated with underground mining. Since the 1970s, the rate of strip mining has rapidly increased. Soaring global energy prices and new technology have made it economically feasible to extract thin seams of coal embedded in hilltops that previously were too costly to mine. However, the environmental impact of strip mining is severe. Many communities, including many indigenous groups, oppose strip mining because of its side effects.

Strip mining includes such environmentally destructive techniques as mountain top removal. In this technique, particularly popular in the Appalachian Mountains in the United States, the top of a mountain is blown off with an explosive mixture of ammonium nitrate and diesel fuel. A seam of exposed bituminous coal is revealed. A dragline, an excavating machine with a bucket that is operated by lines, is then used to strip out the coal. The mountain top is not replaced. Trees, topsoil, and sandstone are dumped into the valleys below. Local water supplies are polluted with mercury and other chemicals used in



Heavy machinery at work at a North Dakota strip mine. Coal is the fuel used for much of the world's electrical energy production. (Pastel Dakota Photo)

mining. More than 1,000 miles of streams have been buried in this way, and an Environmental Protection Agency study found that 95 percent of headwater streams in the United States near mines have been contaminated by heavy metals leeching from the sites. The habitat of many plants and animals is ruined, and the landscape is permanently scarred.

If mining companies attempt to reclaim strip mined land, the most common strategy is to spray grass seeds to create pasture. This technique does little to restore the environment. Forest animals and plants do not survive in grassland, while forests remove carbon, prevent flooding, purify water, and prevent erosion. Accordingly, in 2004 the U.S. Office of Surface Mining developed the Appalachian Regional Reforestation Initiative, a cooperative effort to restore forests damaged by strip mining. The best way to help forest regrowth is to plant saplings in the loose mix of sandstone and shale, known as spoil that mines leave behind. Hardwood trees, such as chestnuts, poplars, and ash, grow rapidly in this soil because there is ample room for root growth and no competition from established trees. The porous soil acts like a sponge during heavy rainfalls and greatly reduces the flooding caused by compacted strip mines.

No international organization has mechanisms in place to guarantee that strip mining companies observe international human rights

► COAL MINING ECODISASTER

Coal mining is far from being a green endeavor. The worst ecological disaster in the United States since the Exxon Valdez oil spill took place in Kentucky on October 11, 2000, when 300 million gallons of coal sludge filled 75 miles of waterways. The thick, black goo, a wet mixture produced by the treatment and cleaning of coal, came from a ruptured mountaintop coal waste impoundment lake near Inez, Kentucky.

The sludge filled the main stem of the Big Sandy River, the Tug Fork, and some of its tributaries, including Coldwater and Wolf creeks. The Kentucky Division of Fish and Wildlife Resources estimated that 1.6 million fish as well as countless salamanders, frogs, and turtles were smothered in the disaster, including every fish in the two creeks. Lawns were buried in up to seven feet of sludge.

Martin County Coal paid \$3.25 million in penalties and damages to the State of Kentucky and restocked affected waterways with fish. By 2005, lawns had again turned green, and streams were clear. However, the coal sludge remains in the soil despite a \$46 million cleanup. Residents of the area worry that the sludge may have long-term health effects.

—Caryn E. Neumann

and environmental standards. Some communities have fought back. In 2006, Mayan Indians occupied land near Lake Izabal in Guatemala that a Canadian company planned to strip mine for nickel. The Mayans cited a 1996 UN-sponsored peace agreement that ended Guatemala's brutal civil war and gave indigenous communities with historical claims to land the right to determine how it is used. Strip mining on Mayan Indian land had already damaged the ecosystem in the region by causing soil erosion, deforestation, landslides, and a host of other environmental woes. Meanwhile, international mining and exploration companies are pursuing strip mining in the Zambezi coal basin of Africa, one of the world's largest and least explored coal regions. The shallow dips and potentially vast resources of the coal seams make this region particularly amenable to strip mining.

The high price of oil has increased demand for alternative fuels. Coal is already the source for about half of the world's power. While it is cheaper than oil, it is not necessarily a better choice because of the environmental impact of coal extraction and coal use.

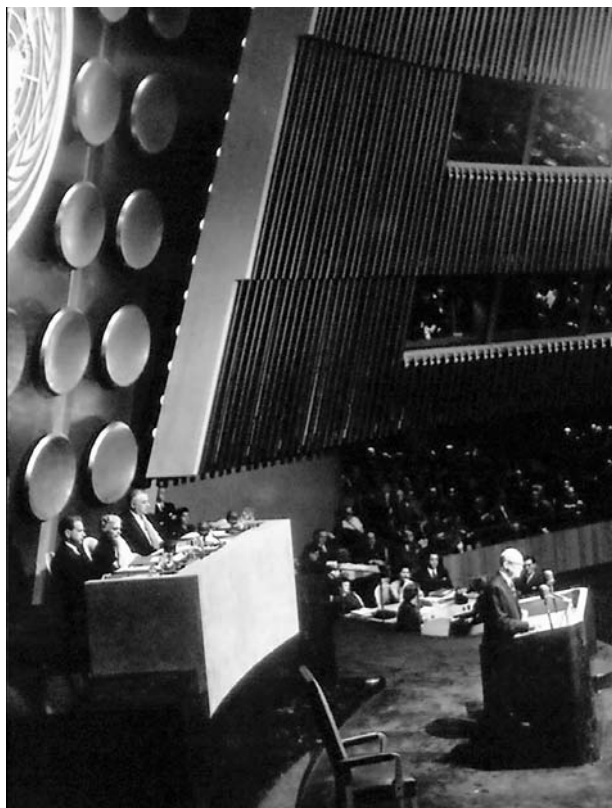
—Caryn E. Neumann

Bibliography

- Aston, Robert Lee. *The Legal, Engineering, Environmental and Social Perspectives of Surface Mining Law and Reclamation by Landfilling: Getting Maximum Yield from Surface Mines*. New York: World Scientific, 1999.
- Austin, Richard Cartwright. *Spoil: A Moral Study of Strip Mining for Coal*. New York: National Division, Board of Global Ministries, United Methodist Church, 1976.
- Kennedy, Barbara A. *Surface Mining*. Littleton, CO: Society for Mining, Metallurgy, and Exploration, 1990.
- The Strip Mining Handbook: A Coalfield Citizens' Guide to Using the Law to Fight Back against the Ravages of Strip Mining and Underground Mining*. Washington, DC: Environmental Policy Institute, 1990.

Global Nuclear Power Industry

The development of nuclear power for the domestic production of electricity began after World War II. On June 27, 1954, the Soviet Union connected the world's first commercial nuclear power plant, which produced 5 million watts, or 5 megawatts (MW) of power, to its electrical grid at Obninsk. Although corporations headquartered in the United States dominated the global nuclear industry in the nonsocialist world through the 1960s, by the 1970s firms representing countries worldwide also competed in a global nuclear marketplace with an installed capacity of 100 billion watts, or 100 gigawatts (GW). The growing antinuclear movement tempered the rise in demand for nuclear power that immediately followed the oil crisis of 1973–1974, and by the late 1980s and early 1990s the industry suffered under severe market stagnation. The worldwide capacity of 300 GW in the late 1980s increased only to 366 GW by 2005. In the late 1940s, a world faced with the specter of atomic warfare turned to the promise of nuclear power



President Dwight D. Eisenhower delivers his famous "Atoms for Peace" speech to the United Nations, 1953. (United Nations)

as a so-called peaceful use of the atom. Beginning in 1945, nearly every nation-state formed a government-run agency to explore the development of nuclear power. Affordable nuclear energy appeared to be just around the corner, and Lewis L. Strauss, chairman of the U.S. Atomic Energy Commission, in a 1954 speech to the National Association of Science Writers characterized the sense of optimism in his famous phrase "electrical energy too cheap to meter." U.S. president Dwight D. Eisenhower buoyed the promise of nuclear power with his "Atoms for Peace" speech made at the United Nations on December 8, 1953, in which he proposed international cooperation in developing atomic energy.

The U.S. corporations General Electric and Westinghouse benefited from government subsidies and U.S.-sponsored technical exchanges with governments across the globe. Beginning in 1963, the two companies made available turn-key nuclear reactors (that is, nuclear power plants completely built and placed into operation prior

to handing them over to the buyer) at prices that were competitive with fossil-fuel plants. U.S. enrichment services enjoyed a virtual monopoly in the supply of uranium fuel for these reactors, which dominated the world market. During the 1960s, these firms also engaged in a number of technology-licensing agreements and joint ventures with foreign companies, many of which were owned in whole or in part by the partnering U.S. corporations. However, state-sponsored companies in Canada, France, the Soviet Union, and West Germany soon undercut the market dominance of these multinational corporations.

The creation of the Nuclear Suppliers Group (NSG) by Canada, France, Japan, West Germany, the Soviet Union, the United Kingdom, and the United States in 1975 signified both the increase in the number of companies that made up the global nuclear industry and the growing desire to curb the proliferation of nuclear weapons without impeding the spread of nuclear power. The NSG responded to the successful Indian nuclear test in 1974, which demonstrated that peaceful nuclear technology could easily be used for weapons development, by agreeing to limit and regulate the trade of nuclear technology. The original 7 nations of the NSG grew to 45 members by 2005, with representatives from every part of the world. Although the global antinuclear movement used nuclear power plant accidents such as those at Three Mile Island (1979)

➤ NUCLEAR REACTORS AROUND THE WORLD

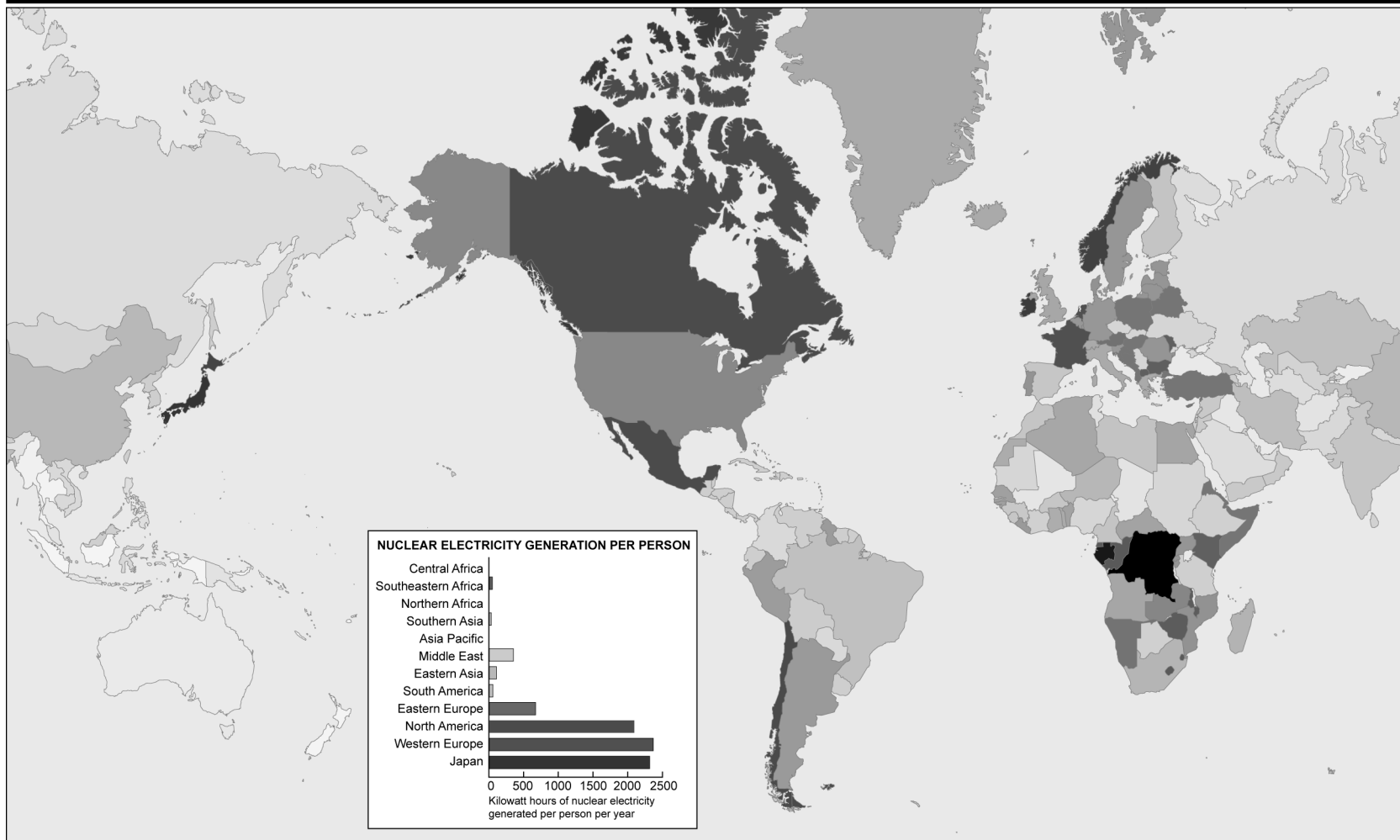
Nuclear power grew as a viable energy source in the last decades of the twentieth century, particularly in many Western countries. As is evident in the above map, the vast majority of the world's nuclear facilities are in North America, Europe, and Japan. However, many developing states have also developed their own nuclear reactors, most notably India and China.

—Abraham O. Mendoza

Source

International Nuclear Safety Center at Argonne National Laboratory, http://www.insc.anl.gov/pwrmaps/map/world_map.php.

NUCLEAR POWER PRODUCERS, 2005



and Chernobyl (1986) to slow or stop the expansion of nuclear power, the large number of nuclear power plants still in operation continued to keep the nuclear industry in business.

At the start of the twenty-first century, many nations remained heavily dependent on nuclear power. As of 2001, nuclear power met more than 75 percent of the electrical demand in France and approximately 50 percent of the demand in Japan. However, while in 2006 new nuclear power plants were under construction or being planned in Argentina, Brazil, Bulgaria, Chile, China, Japan, the Czech Republic, Turkey, and the United States, previously nuclear-dependent nations such as Germany, Sweden, and Switzerland were evaluating plans to phase out nuclear power.

—Jonathan Hagood

Bibliography

- Fischer, David. *History of the International Atomic Energy Agency: The First Forty Years*. Vienna: International Atomic Energy Agency, 1997.
- Guinnessy, Paul. "Stronger Future for Nuclear Power." *Physics Today* 59(2) (February 2006): 19.
- Hertsgaard, Mark. *Nuclear Inc*. New York: Pantheon, 1983.
- Josephson, Paul R. *Red Atom: Russia's Nuclear Power Program from Stalin to Today*. New York: W. H. Freeman, 1999.
- Potter, William C., ed. *International Nuclear Trade and Nonproliferation: The Challenge of the Emerging Suppliers*. Lexington, MA: Lexington Books, 1990.

Global Water Crisis

Over the course of the twentieth century, worldwide withdrawals of freshwater from lakes, rivers, and subterranean sources increased approximately sevenfold. The most marked increase in water withdrawals occurred in the period from around 1940 to 1990, mainly as a result of the expansion of irrigated agriculture. During the same period, the world's human population approximately tripled, making the increase in water use more than twice that of population growth. By the early 1990s, awareness of the decreasing availability of water per capita induced water specialists and environmentalists to declare that a water crisis on the global scale was immi-

➤ BOLIVIA AND BECHTEL

In September 1999 the engineering company Bechtel signed with Bolivian president Hugo Banzar to privatize the water supply in the city of Cochabamba. Water prices went up by 200 percent, causing massive protests among the poorest elements of the city. After brutal repression by the government and national unrest, the contract was withdrawn. Bechtel filed suit against the Bolivian government in 2001 for \$25 million in damages. However, after international protests, they settled for a symbolic settlement of 30 cents. This episode indicates the growing geopolitical importance that water will have in the future as local governments tend more and more to seek outside help to bolster waning water supplies.

nent. Expressions of concern about the water crisis have been made with increasing frequency since that time, with a host of multilateral agencies, public interest groups, academics, and commercial interests joining in the call for focused, coordinated attention to water.

Several factors need to be considered when explaining the emergence of concern for a global water crisis in the late twentieth century. Progress in internationally coordinated hydro-metric data gathering, especially since the 1960s, that monitored regional and global freshwater availability and use provided data from which predictions of a global water crisis could be extrapolated. The emergence of the modern environmental movement in the 1970s and concern about the degradation of aquatic ecosystems brought the ecological significance of freshwater to the fore by the 1980s. Awareness of water pollution, loss of aquatic habitat, and threats to freshwater biodiversity exacerbated the growing concerns about quantities of water available for human use. By the 1980s, the fact that groundwater was being depleted (used at rates that exceeded those of natural recharge) in many parts of the world became widely acknowledged. Statements such as that made by Ismail Serageldin, vice president of the World Bank in 1995, that the wars of the twenty-first century "will be over water" reflected the growing sense that

water had become a critical global issue. The elaboration of indices such as water stress and water scarcity in the 1980s and 1990s allowed for the graphic representation of present and projected water availability per capita over a territory such as a country or drainage basin. These indices have been widely used to convey the severity of global water problems. For example, the third United Nations World Water Development Report (2009) warned that about half the world's population is likely to be living in areas of high water stress by 2030 due to population growth, climate change, and increased irrigation demands. Perhaps most importantly, despite international efforts during the International Drinking Water Supply and Sanitation Decade (1981–1990), it was estimated that over one billion people lacked access to safe drinking water and that over two billion people had no access to sanitation services in the early 1990s, a situation that has worsened in the twenty-first century.

The idea of water crisis on a global scale became popularized in the 1990s. Publications such as *Water in Crisis* (1993), edited by Peter Gleick, brought the latest scientific findings on water availability and water use to audiences in the English-speaking world. The notion of a global water crisis was readily taken up by the more popular press and by groups and institu-

tions with interests in water. Among these institutions, the World Water Council (WWC) is perhaps the most important. Convened in 1996 by the World Bank, the United Nations Development Programme, representatives of the water services industry, professional water associations, and water policy experts, the WWC has organized a series of high-level meetings known as the World Water Forum every three years. The First World Water Forum took place in Marrakech, Morocco, in 1997, followed by meetings in The Hague (2000), Japan (2003), Mexico City (2006), and Istanbul (2009).

More recently, the rhetoric of a global water crisis has to some extent given way to a recognition that water problems, although unquestionably urgent and massive, occur in the context of particular hydrological, ecological, and social circumstances and that these circumstances vary enormously from place to place.

—Jamie Linton

Bibliography

- Gleick, Peter H., ed. *Water in Crisis: A Guide to the World's Freshwater Resources*. New York and Oxford: Oxford University Press, 1993.
- World Water Assessment Programme. *The United Nations World Water Development Report 3: Water in a Changing World*. Paris: UNESCO; London: Earthscan, 2009.

■ Introduction: Land Use and Population

The exponential growth of the world's population in the decades following the end of World War II, particularly in much of the postcolonial developing world, has resulted in widespread poverty, social unrest, and political instability. In 1900, world population was approximately 1.6 billion. The world's population as of mid-2007 was estimated to be approximately 6.6 billion people. A postwar surge in demographic growth occurring throughout the developing world (i.e., Latin America, sub-Saharan Africa, Asia) contrasts with a protracted population decline in many of the developed nations (i.e., the European Union, the United States, Japan), contributing to a gap between the wealthy aging

North and the poverty-stricken yet younger South. The challenges of the population explosion of the late twentieth and early twenty-first centuries, however, have been met with greater international collaboration. Such cooperation is evident in policies enacted by international institutions such as the United Nations, nongovernmental organizations (NGOs) such as the International Red Cross, or the multination International Conferences on Population and Development that have focused on developing a collaborative solution to global population growth.

Famine, poverty, and environmental destruction are recurrent problems associated with the rapid expansion of the world's population. Wide-

spread famines, resulting from inefficient economic planning, civil conflagrations, large-scale droughts, and poor harvests affect vast areas of dense population, particularly in the Horn of Africa (i.e., Ethiopia, Eritrea). Dire economic conditions in much of the developing world (i.e., sub-Saharan Africa) and nations fraught with burgeoning populations and governments that are hard-pressed to provide enough employment and resources for their respective citizenries result in widespread poverty and squalor amid rapid urbanization and its attendant social ills. Also, some experts speculate that global population growth will create significant environmental damage, with increased demand on resources leading to the further degradation of ecosystems.

In addition to causing severe stresses on the world's environment and economic stability, global population growth has ignited international cooperative efforts to implement policies that will stabilize growth or reverse the demographic expansion. Through a host of international institutions, such as the United Nations and the International Red Cross, the global community continues to address the issue of demographic growth in much of the developing world. In addition, national governments faced with gigantic domestic populations, such as China and India (2007 estimates: China at 1.3 billion and India at 1.1 billion), have developed their own state-centered policies to stabilize their own populations.

—Abraham O. Mendoza

Bibliography

- Livi-Bacci, Massimo. *A Concise History of World Population*. Translated by Carl Ipsen. Cambridge, MA: Blackwell, 1992, 1993.
- Newbold, K. Bruce. *Six Billion Plus: World Population in the Twenty-First Century*. 2nd ed. New York: Rowman and Littlefield, 2007.

Geography of Population

The world's human population, estimated to be 6.4 billion people in 2005, is unevenly distributed throughout the continents of Asia, Africa, Europe, South America, North America, and Oceania (Australia). Vast population growth since the end of World War II is evident in the post-colonial world, while a steady long-term popula-



While Japan has the highest life expectancy in the world, its rapidly aging population is reaching inordinate proportions. (Corel)

tion decline is currently under way in Europe and North America, creating a wide demographic gulf between the aging and prosperous North and the youthful and impoverished South. Within individual nation-states particularly in the developing world, rural populations have decreased in light of the continual migration of people into urban areas, creating gigantic metropolitan conglomerations (i.e., Mexico City, Mumbai, Cairo, and Jakarta) characterized by unsuitable infrastructure, blight, and surrounding shantytowns.

The bulk of the global population is concentrated in Asia with an estimated collective population of 3.9 billion people and possessing the two most populous countries in the world, China (1.3 billion) and India (1.1 billion). Africa is estimated to approach 1 billion people sometime in the twenty-first century, with a current population of approximately 906 million, most of which resides in sub-Saharan Africa (752 million). Europe has an estimated 730 million people, including Russia (143 million). Latin America (South America, the Caribbean, and Mexico) follows with approximately 559 million. North America (the United States and Canada) possesses 329 million inhabitants. Lastly, the continent with the smallest population is Oceania (Australia, New Zealand, and the South Pacific Islands) with an estimated collective population of 33 million.

► TOP TWENTY-FIVE COUNTRIES AND AREAS RANKED BY POPULATION, 2007

Rank	Country or Area	Population
1	China	1,321,851,888
2	India	1,129,866,154
3	United States	301,139,947
4	Indonesia	234,693,997
5	Brazil	190,010,647
6	Pakistan	164,741,924
7	Bangladesh	150,448,339
8	Russia	141,377,752
9	Nigeria	135,031,164
10	Japan	127,433,494
11	Mexico	108,700,891
12	Philippines	91,077,287
13	Vietnam	85,262,356
14	Germany	82,400,996
15	Egypt	80,335,036
16	Ethiopia	76,511,887
17	Turkey	71,158,647
18	Congo (Kinshasa)	65,751,512
19	Iran	65,397,521
20	Thailand	65,068,149
21	France	63,718,187
22	United Kingdom	60,776,238
23	Italy	58,147,733
24	Korea, South	49,044,790
25	Burma	47,373,958

Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/cgi-bin/ipc/idbrank.pl>.

—Abraham O. Mendoza

The unequal distribution of population growth is characterized by the substantial population increase in much of the so-called developing and impoverished nations (what some commentators call the South) and the long-term demographic decline in the economically prosperous Europe and North America (the North), leading to a significant gap in geographical demographic distribution between these two world

regions. Advances in medicine have decreased the death rates and increased the birth rates in many countries south of the equator and thus supported an exponential population growth. However, such population increases have created new pressures on developing countries, which are generally unable to provide social services and employment for their growing populations. Populations in the developing world tend to be younger, composing a substantial plurality of the populace in many cases such as in Nigeria, where people 15 years old or younger constituted approximately 43 percent of the national population in 2005. In contrast, the developed world in the North, particularly Europe and Japan, has seen a long, steady decline in population. Economic prosperity in the past century has imbued the ideal of a cost-effective small family, typically around 1–2 children. This has resulted in the aging of these populations as native birth replacement rates have effectively declined to 1 birth per 1 death, severely straining state welfare systems. Germany's population of people aged 65 and older constitutes an estimated 18 percent of the population, while people aged 15 and younger form only 15 percent of the total. While the United States and Canada have been receptive to allowing immigrants to supplant their native aging populations and ensure economic growth, Europe and Japan have effectively restricted immigration and asylum. However, immigrants from the developing world seeking better economic opportunities continue to enter the wealthy North through illegal immigration or as refugees.

Within individual nation-states throughout both the developed and the developing world, rapid urbanization follows massive migration from the countryside into the cities, fueled by the promise of a better life and a better standard of living, and this further contributes to the growing of unsustainable urban populations. The wealth and prosperity of the developed world allow such urban areas to function adequately as international hubs for commerce, culture, and tourism. However, in the developing world this has led to massive increases in metropolitan areas unable to house and provide essential services for recent arrivals. These new megacities of the developing world are also unable to pro-

vide sufficient employment opportunities for the burgeoning urban population, leading to high levels of poverty, poor living conditions, and health issues. As a result of the lack of adequate housing, many new arrivals choose to live in impoverished shantytowns around the metropolis characterized by makeshift housing made of cardboard, corrugated metal, and other recycled materials. These huge urban conglomerations (i.e., São Paulo, Brazil, with a population of 17.7 million; Mexico City, Mexico, with a population of 17.4 million; and Manila, Philippines, with a population of 14.75 million) number in the tens of millions and are fraught with poverty, unemployment, and continuing growth from native births and rural immigration.

—Abraham O. Mendoza

Bibliography

- Bouvier, Leon F., and Jane T. Bertrand. *World Population: Challenges for the 21st Century*. Santa Ana, CA: Seven Locks, 1999.
- Gilbert, Geoffrey. *World Population: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2001.
- Newbold, K. Bruce. *Six Billion Plus: World Population in the Twenty-First Century*. 2nd ed. New York: Rowman and Littlefield, 2007.

Population Pressure Problems

The world's population has grown from an estimated 2.5 billion in 1950 to 6.4 billion people in 2005. Some experts believe that this increased population will have considerable environmental and social impacts, including the depletion of natural resources, the degradation of the environment, issues attending massive transnational migration, and conflicts regarding control and access to water supplies and arable land. Economic disparity between the developed and the developing world, political and ethnic conflict in various world regions, and economic globalization add further complexity to the pressures that population growth creates globally.

The impact of population growth on natural resources and environmental destruction is considerable. In the developing world, population growth and economic pressures trigger an increase in the consumption of resources and the depletion of renewable resources no longer able to regenerate due to excessive extraction. Food

➤ GRAYING POPULATIONS IN THE UNITED STATES, THE EUROPEAN UNION, AND JAPAN

Population decline in the developed world, particularly in the European Union, the United States, and Japan, has led to considerable public debate regarding the future of the welfare-state and of immigration policies. The United States, while experiencing large growth in its aging demographic, particularly the baby-boomer generation, has offset this decline in its younger population through immigration. Immigration together with native birth rates, while sustaining the U.S. welfare-state, will be unable to continue to do so in the future due to the growing costs of sustaining such a large social security system. The states of the European Union and Japan have experienced a decline of their fertility rates below replacement levels (birth rates), which in turn has resulted in population decline (birth rates lower than or equal to death rates). This has resulted in a vast increase of the aging population relative to the younger working population sustaining the welfare-state. Low fertility rates are likely to slow economic growth, while the large aging population threatens to overwhelm social security and medical systems. Costs of such systems are already stressing national budgets in Germany, France, and Japan. Legal immigration is posed as a solution, but problems over national identity and fears of terrorism have led to reaction against allowing large numbers of migrant laborers and asylum seekers. As of 2007, Japan was placing hope in a *deus ex machina*, that is, the development and manufacture of robots that could aid in home care of the elderly and thus stave off health care and immigration woes.

—Abraham O. Mendoza

supply issues due to soil depletion, erosion, and inadequate distribution networks can lead to famine and social unrest, particularly in sub-Saharan Africa. The rise of the standard of living globally, especially in China and India with their populations of well over 1 billion, further contributes to the degradation of the environment, as it increases energy consumption, pollutant levels, and global warming. Scarce water supplies in arid regions can cause friction between neighboring states, such as Israel and Jordan (Jordan

River), Egypt and Ethiopia (Nile River), and Syria and Turkey (Euphrates/Tigris River).

Increased international migration, in the form of illegal immigration and asylum seekers, fueled by the need of developed countries for cheap labor and the poverty of the developing world is a huge problem related to global population growth. The developed world's (i.e., the United States, the European Union, Canada) need for low-wage unskilled labor attracts transnational migrants from the developing world who wish to escape poverty and instability in their countries of origin. Aging populations in the European Union necessitate a steady supply of workers to pay into their welfare-state systems due to native population decline. Nativist reactions in the host countries, with a discourse related to cultural identity and global terrorism, have recently led to legislation restricting the flow of laborers and asylum seekers, contributing to a significant increase in illegal immigration. In addition, transnational communities, particularly Muslims in Europe, have caused concerns about the growth of global Islamic fundamentalism within immigrant communities in the United States, Canada, the United Kingdom, France, and Germany. After the September 11, 2001, attacks in the United States and the July 7, 2005, attacks in London, transnational Muslim communities, socially and economically alienated in their host countries, have gained significant nativist attention leading to severe restrictions in immigration and asylum inflows.

—*Abraham O. Mendoza*

Bibliography

- Gilbert, Geoffrey. *World Population: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2001.
- Livi-Bacci, Massimo. *A Concise History of World Population*. Translated by Carl Ipsen. Cambridge, MA: Blackwell, 1992, 1993.
- Newbold, K. Bruce. *Six Billion Plus: World Population in the Twenty-First Century*. 2nd ed. New York: Rowman and Littlefield, 2007.

Population and Famines since 1945

Following World War II, the incidence of famines increased as a result of faulty economic planning

(particularly by communist regimes in the Soviet Union and China), ethnic conflicts and civil wars (especially in sub-Saharan Africa), and poor harvests caused by droughts coupled with faulty distribution networks (particularly in the Horn of Africa). Exponential population growth in developing regions, amid widespread poverty and political instability, has made these regions even more vulnerable to food shortages. This has resulted in millions of deaths despite significant agricultural advances and massive humanitarian aid from Western countries and nongovernmental agencies (NGOs) to these affected regions.

World War II brought widespread destruction across vast swaths of Europe, North Africa, and Asia. The chaos of invading armies, aerial bombings, and swarms of refugees devastated food-distribution networks. In the aftermath of the war, both the Soviet Union and Vietnam suffered famines. The Soviet Union experienced a major famine during 1946–1948 as Stalin's new agricultural policy, part of a misbegotten attempt to reconstruct the war-torn Soviet economy, led to an estimated 1 million to 1.5 million deaths. Faulty economic planning on the part of the Soviet bureaucracy, akin to the mistakes that led to the Ukrainian famine of 1933–1934, played a significant part. The Vietnamese famine that occurred in northern Vietnam from 1944 to 1945 during the Japanese occupation of the country led to an estimated 400,000 to 2 million deaths. The effects of the war had disrupted the economy of Vietnam, historically barely able to sustain itself. A drought in Vietnam accompanied by the efforts of the Vichy French colonial government (under Japanese tutelage) to reform the regional economy for the war effort ripened conditions for famine. In these two examples, the disruptions of war and inadequate government planning contributed to millions starving.

During the Great Leap Forward (1958–1960), the Chinese communist government under the leadership of Mao Zedong and his radical ideological principles organized the nation's agriculture into vast communes, prohibiting the use of small plots for personal use. Forced collectivization eliminated incentives for peasants to work productively, thereby affecting aggregate national output. Agricultural methods based on Soviet pseudoscience (championed by biologist Trofim

Lysenko), such as close planting and deep plowing, led to bad harvests and depleted soils, which further cut total output. Moreover, iron and steel production was heavily emphasized over agriculture, resulting in millions of peasants being diverted from agriculture and put into work to augment industrial output. Such drastic changes in agricultural organization coincided with poor weather conditions, resulting in droughts and floods and further triggering food shortages. For example, in 1959 the Yellow River flooded in eastern China. As a result of these factors, grain production in China dropped from 1959 to 1962 and only recovered after the end of the Great Leap Forward. While scholars debate the total number of deaths, they are enormous. Estimates range from 20 million to 40 million, with some scholars posing even larger totals. Similar economic policies by communist states such as Cambodia (famine, 1975–1979) and North Korea (famine, 1996) resulted in similar outcomes.

Ethnic strife, warfare, droughts, and poor harvests have led to a variety of famines in sub-Saharan Africa and the Horn of Africa. Despite continued United Nations (UN) and Western aid (the United States, Canada, the European Union, Japan, and NGOs), many African nations continued to suffer due to constant civil strife and inadequate food distribution networks overseen by corrupt and inadequate bureaucracies. Refugees and noncombatants were extremely vulnerable to starvation amid these endemic crises. Famines in Sudan, Ethiopia, Somalia, and the Congo (Zaire) have been a consequence of political instability, economic disruptions, social upheaval, widespread drought, absence of infrastructure, poverty, and warfare. In combination with genocide, rape, other human rights abuses, and disease, famines in Africa have resulted in millions of dead in the second half of the twentieth century. Exponential population growth in Africa further exacerbates the situation, creating more mouths to feed amid a dearth of food supplies.

—Abraham O. Mendoza

Bibliography

Devereux, Stephen, ed. *The New Famines: Why Famines Persist in an Era of Globalization*. New York: Routledge, 2007.



A Red Cross worker serves rice to famine victims in Cambodia, 1975. (Bettmann/Corbis)

Lawrence, Alan. *China since 1919: Revolution and Reform; A Sourcebook*. New York: Routledge, 2004.

Malia, Martin E. *The Soviet Tragedy: A History of Socialism in Russia*. New York: Free Press, 1994.

Spector, Ronald H. *In the Ruins of Empire: The Japanese Surrender and the Battle for Postwar Asia*. New York: Random House, 2007.

Global Responses to Population Explosion

Responses to exponential human population growth since the end of World War II range from international conferences convened to arrive at a joint global population policy, the development of international nongovernmental agencies (NGOs) advocating the widespread use of contraception, and Chinese and Indian legislation designed to curtail multiple births given their billion-plus populations. NGOs, working under the guidance of the United Nations (UN) and funding initiatives from the U.S. and European governments, have enacted various programs in the developing world to deter population growth.

UN-sponsored world population conferences known as the International Conference on Population and Development (ICPD), to which most countries send representatives, have been held in Bucharest (1974), Mexico City (1984), and Cairo (1994). Global population policy approved by a majority at Bucharest supported full gender

➤ ZERO POPULATION GROWTH

Sociologist and demographer Kingsley Davis (1908–1997) is credited with developing the concept of Zero Population Growth (ZPG) as a potential solution to the global population explosion. ZPG is a condition of demographic balance in a specified population in which the birth rate is equal to the death rate, resulting in neither growth nor decline. The writings of biologist Paul Ehrlich, particularly his first book *The Population Bomb* (1968), made ZPG a rallying cry of the environmentalist movement in the 1970s. Other demographic planners and environmentalists have adopted the ZPG philosophy, insisting that reducing population growth is essential for the health of Earth's environment. However, variables not taken into consideration in ZPG include immigration and economic considerations, which both make ZPG unsustainable. For example, Germany's population is characterized by zero growth with a large aging population and a smaller number of younger demographic segments, a considerable part of which consists of immigrants, resulting in pressures on its welfare-state system. Likewise, many critics detected a racist assumption hidden in ZPG similar to that of the eugenics movement of the turn of the twentieth century in which Westerners expressed fear of the "passing of a great race."

—Abraham O. Mendoza

equality as a tactic to lower birth rates, given the accepted correlation between a woman's education and how many children she will bear. The Mexico City meeting was characterized by the U.S. decision to step back U.S. efforts on population control, a result of the primacy of conservative politics domestically. The most recent ICPD meeting at Cairo (1994) addressed issues in regard to the environment, gender equality, the role of NGOs, and universal education. It was also marked by the return of the United States in terms of its continued engagement in world population policies. Most of the tactics posed are aimed only at developing nations, responsible for most of the world's population growth, and not for the developed world, given the stabilization and actual decline of populations in the more affluent world regions (the United States, Canada, Europe, and Japan).

The role of NGOs in global population responses increased after the Cairo ICPD and has buttressed the efforts of the UN Population Fund (UNFPA) and the U.S. Agency for International Development (USAID). For example, NGOs such as International Planned Parenthood and the Ford and Rockefeller foundations, among others, have contributed funds and programs to help national efforts throughout the developing world, particularly in sub-Saharan Africa, to stem their rising demographic growth rates. These NGOs provide contraception information and services, family planning programs emphasizing the benefits of smaller families, condom distribution, and media campaigns designed at changing attitudes regarding women's status in society in various developing countries around the world, in cooperation with their national governments.

Both China and India, each with populations exceeding 1 billion people, have responded by enacting antinatalist legislation to slow population growth. In 1971, China enacted the *wan xi shao* campaign (later marriage, longer intervals between births, and fewer children), which later evolved into the One Child Policy in 1979. This policy gives couples incentives (child support subsidies, higher pensions in retirement, and better housing) and penalties (higher taxes and full cost of medical and educational services) to encourage them to have only one child. Critics of China's population legislation accuse it of being near compulsory birth control. India's efforts began in the 1950s with increased funding for research and programs for contraception. In 1976, monetary incentives and family planning programs were implemented to help stall further growth. Proposals for compulsory sterilization after the birth of a third child proved to be too controversial and were dropped. Indira Gandhi's advocacy of such measures led to her election loss of 1980. Both China and India have managed to raise awareness of the issue of uncontrolled population growth. However, they have not managed to completely stop overall population growth. This is due to the fact that most of their populations are younger and hence more fertile and even with one child still contribute substantially to the total number of births given their gigantic populations.

—Abraham O. Mendoza



International Conference on Population and Development in Cairo, 1994. (Corel)

Bibliography

- Bouvier, Leon F., and Jane T. Bertrand. *World Population: Challenges for the 21st Century*. Santa Ana, CA: Seven Locks, 1999.
- Gilbert, Geoffrey. *World Population: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2001.
- Livi-Bacci, Massimo. *A Concise History of World Population*. Translated by Carl Ipsen. Cambridge, MA: Blackwell, 1992, 1993.
- Newbold, K. Bruce. *Six Billion Plus: World Population in the Twenty-First Century*. 2nd ed. New York: Rowman and Littlefield, 2007.

Suburbanization since 1945

Suburbanization refers to the postwar phenomenon across much of the developed world regarding population movement from major cities and metropolitan areas to developing communities in surrounding rural areas. Former residents of metropolitan areas migrated en masse from the central business district of major cities to adjacent communities from which they were able to commute to work in the city while maintaining a relatively safe distance from the chaos associated with city life. However, the flight of the middle class and the affluent from city centers encouraged the gradual decay of many urban areas due to the loss of revenues for the local tax base and lower property values, contributing to growing poverty and crime rates. This process has been common to countries such as the United

States, Canada, Britain, and Australia since the end of World War II.

According to experts, the process of suburbanization is directly related to specific push-and-pull factors that persuade people to leave the city center for the surrounding suburbs. Rising inner-city crime rates, overcrowded urban centers, pollution, burgeoning numbers of non-white ethnic communities (particularly blacks and Hispanics in the United States), and automobile traffic and the lower quality of life associated with inner-city areas (i.e., slums, government housing, urban decay) would be among the more significant push factors associated with city life. In contrast, pull factors encouraging migration to the suburbs include the allure of open spaces closer to natural environments, significantly less expensive home prices and property taxes relative to that of the city initially, and the quality of life associated with home ownership, all of which have been promoted in advertising and popular culture.

In the late nineteenth century, rail and boat travel spurred the first suburban developments outside major cities such as New York City and London, providing the affluent with a taste of country life. In the immediate postwar period, however, the United States, Britain, Australia, and other developed countries in much of the West experienced a massive economic expansion, triggering the development of suburban housing tracts surrounding major metropolitan areas. The most famous example—Levittown in Long Island, New York, built in the 1950s—best exemplifies postwar suburbia as a new development in mass housing. U.S. government policies such as the construction of an efficient network of interstate highways and freeways and the underwriting of mortgages for suburban housing had significant impact on suburbanization. Similar government policies in Britain and Australia by their respective governments also spurred migration to the suburbs by the affluent middle classes. In addition to the growing population and affordability of the automobile, improvements on existing railway networks, bus routes, and other means of public transport also made suburbanization a feasible option.

Debates over the consequences of suburbanization in much of the developed world are

➤ LEVITTOWN

In 1947, a new \$50 million housing development plan, later dubbed Levittown in Long Island, New York, began to redefine American suburbia and the middle class. After World War II, young veterans starting families spurred a nationwide housing shortage. In response, William Levitt and his brothers invented an assembly-line method for building identical four-room houses using standardized prefabricated parts. By mid-1948, their teams of carpenters, electricians, plumbers, and the like were building 150 houses per week. Over the next four years, they converted 4,000 acres of potato fields on Long Island, 50 miles outside Manhattan, into more than 17,400 houses divided into neighborhoods centered on landscaped shopping areas and playgrounds. Not only did the Levittown concept solve the housing crisis, but it also offered the chance for thousands of working- and lower-middle-class families to become homeowners, a status heretofore reserved for the higher-middle and upper class. While the construction method was an innovation, the idea of such whole-scale community design dates back to federal initiatives of the nineteenth century. Advocates of the Levittowns in New York, New Jersey, and Pennsylvania such as sociologist Herbert Gans applauded the social stability provided by creating safe, family-oriented environments available to the majority of Americans. Critics,



An aerial view of Levittown, New York, in 1954. (Library of Congress)

such as William H. Whyte and beat poet Gregory Corso, feared the emergence of the isolated nuclear family and despised the alleged cultural wasteland created by mindless consumerism and social conformity. Suburbia also became a target for environmentalists. The Sierra Club's early coffee-table book *This Is the American Earth* (1965) included aerial photographs of new subdivisions in Southern California as part of their critique of the loss of wilderness.

directly associated with urban sprawl and the socioeconomic gap that exists between suburban and urban residents. The growing income gap between urban and suburban areas has a significant influence on the amount of funding for public education, social services, and urban improvement. In addition, the expansive suburban housing tracts that surround city centers have led to the increased development of land, widespread construction, and growing amounts of automobile traffic and congestion. Increasing numbers of inner-city residents also choose to enter the suburbs when housing prices become affordable, making their new neighbors more amenable to flight to even more exclusive suburbs with members of their own socioeconomic or ethnic group. A more recent development worldwide has been a shift toward gated com-

munities, single-home housing developments surrounded by walls and manned by guards to provide a new sense of security and status to residents.

Suburbanization in the Western sense, however, does not explain developments in many areas of Europe, Latin America, or Asia, also shaped by the migratory patterns of elites to particular residential districts that are not specifically suburbs. In countries such as France, suburban communities (*banlieues*) are characterized by government-subsidized tower blocks, heavily populated by North African Muslim immigrants (largely from Algeria) and afflicted with high levels of crime and poverty, in contrast with the wealthy inner-city districts of French cities largely populated by indigenous French. Since the 1970s, gated communities for wealthy elites

have spread in Latin American cities. These gated communities, some of which remain in older inner-city neighborhoods, exemplify the socioeconomic segregation in modern metropolises such as Tijuana and Mexico City. Similarly, in China newer residential districts for elites, characterized by high-rise condominiums and adjacent shopping areas, contrast with the older working-class residential areas of an earlier period.

—*Abraham O. Mendoza*

Bibliography

- Clapson, Mark. *Suburban Century: Social Change and Urban Growth in England and the USA*. Oxford, UK: Berg, 2003.
- Jackson, Kenneth T. *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press, 1985.
- Schwab, William A. *Deciphering the City*. Upper Saddle River, NJ: Pearson Prentice Hall, 2005.
- Soule, David C., ed. *Urban Sprawl: A Comprehensive Guide*. Westport, CT: Greenwood, 2006.

Urbanization since 1945

Urbanization refers to the increased extent of urban development within a given geographical area, such as a region or a country. It is a term that is often incorrectly used and thus is commonly, and mistakenly, referred to as being the same as urban growth, a term that more precisely relates to the rate at which an urban population or an urban area increases in a given period relative to its own size at the start of that period of time. Urbanization instead involves two fundamental aspects relating to urban development. The first is an increased urban proportion during a given time relative to its size at the start of the defined chronological period (e.g., a year or decade). The second major characteristic of urbanization is that it can be used to describe the proportion of total population or area in urban localities (such as towns and cities). Currently, most regions of the world have experienced urbanization to some degree. Presently, global urbanization rates are 1.8 percent. In comparison, rural population growth is just 0.1 percent.

Frequently there are different levels of urbanization between continents and between countries within continents. By way of example,



A view of Hong Kong's harbor from Victoria Peak. One of the world's most densely populated places, Hong Kong's more than seven million people are crammed into a total of about 420 square miles, almost all of which is highly developed and urban in character. (Corel)

Europe today has a high level of urban population but a slow urban growth rate (0.2 percent). This is an urban population percentage much higher than Africa (urban growth rate 4.9 percent per year) where large numbers of people still live in rural locations. Yet in Africa and other regions of the world, urbanization is increasing. The Indian subcontinent is expected to increase its urban population total in the next 20–30 years by tens of millions of people. Such increases are also expected in other parts of Asia as well as in Latin America (urbanization rate 3 percent) as governments encourage industrialization.

In many Asian countries (urban growth rate about 3.5 percent) as well as in African and Latin American countries, large numbers of rural dwellers are migrating to urban centers, with urban development in places such as China (urbanization rate 41 percent) important not only to economic growth but as an answer to an age-old problem: rural poverty. Hence, urbanization has been encouraged since the 1980s by the Chinese national government. Significantly, in wider terms, less developed economic regions of the world have in the past 50–60 years seen the greatest rate of urban growth, with the United Nations estimating that urban populations in developing regions rose from about 300 million in 1950 to 2.25 billion in 2005.

BRASILIA

Inaugurated on April 21, 1960, to be the new capital of Brazil, the city of Brasilia epitomizes both the achievements and the failures of twentieth-century modernization in that country. While the idea of moving the capital inland was present in the Brazilian constitution since the nineteenth century, it was only in 1955 that it became a reality when Juscelino Kubitschek was elected president. Under the overall theme of advancing “50 years in 5,” Kubitschek called for an urban design competition won by Lucio Costa (1902–1998). As explained by the competition jury, the winning entry had the best combination of a functional urbanism with the necessary monumentality of a capital city. The scheme by Costa was based on two wings of housing blocks (*superquadras*) for workers running north-south in subtle curvature, intercepted by an east-west axis that houses the majority of the federal bureaucracy. Architect Oscar Niemeyer (b. 1907) designed the main buildings in the so-called monumental axis, including the congress, the presidential palace, and the judiciary headquarters, as well as the ministries buildings, cathedral, and theater.

Criticized almost immediately after inauguration for being a desolate dystopia, Brasilia became a classic example of the failures of modern urbanism and the separation of housing, work, leisure, and transportation. Federal employees forced to move from around the country had little or no empathy



National Congress building in Brasilia, a planned city designed by Brazilian architect Oscar Niemeyer. (Corel)

with the wide-open spaces and the absence of street life to which they were accustomed.

However, as the city grew to its current 2.5 million inhabitants, a new generation became enchanted with the shaded green areas, the uncomplicated traffic, and the neighborhood amenities. The result was the gentrification of the *superquadras* (contrary to the utopian ideals of the original plan), forcing the majority of the working class to live in other settlements removed from the center, as in any other large Brazilian city.

—Fernando L. Lara

Irrespective of the location of urbanization, its effects can be extremely difficult to manage. These effects, sometimes devastating, can be economic, social, environmental, or psychological. As large numbers of low-skilled, low-educated migrants come into cities, the demand for satisfactory housing often outstrips supply. Moreover, traffic congestion in cities often ensues, adding to environmental ills. Urbanization also leads to a sociospatial fragmentation, increasing social tensions. Frequently, wealthier members of urban society flee to gated suburban enclaves.

Industrialization has been a major influence on national and global urbanization, leading to radical changes in many societies. These changes include the rise of manufacture, the decline of

the significance of agrarian labor and output, the rise of per capita income, a dramatic rise in national populations as a consequence of changing birth and death rates, a change in the composition of the urban hierarchy, the increased influence of these settlements over the hinterlands, the decline of traditional social structures, new urban lifestyles and attitudes, and the growth of slums and shanty towns where migrants live. It is estimated that in sub-Saharan Africa 70 percent of urban dwellers live in slums. In this light, industrialization and urbanization—often assumed to mutually underpin each other—create negative as well as positive elements, and urban designers, including the modernist architects Le Corbusier and Oscar Niemeyer, have

attempted to tame the two heads of industrialization by proposing entirely new urban places, such as Chandigarh (India) and Brasilia (Brazil).

Urban development affects not only the building industry but, significantly, may overwhelm governmental practices employed previously to safeguard the urban environment, as overcrowding, poverty, inadequate sanitation, and disease demonstrate. Ecological degradation can also arise, including air and water pollution, the loss of flora and fauna, and instability within local water and land ecosystems. To combat such problems, governments have begun to implement initiatives relating to sustainable development, a strategy supported globally by the United Nations and other organizations. In countries such as China, sustainable development has become a significant means to combat environmental, social, and economic problems surrounding industrialization and urbanization.

—Ian Morley

Bibliography

- Flint, C., and Flint, D. *Urbanisation: Changing Environments*. New York: Collins Educational, 2001.
- Hayden, D. *Building Suburbia: Green Fields and Urban Growth, 1820–2000*. New York: Pantheon, 2003.
- Holston, James. *The Modernist City: An Anthropological Critique of Brasília*. Chicago: University of Chicago Press, 1989.
- Wirth, Louis. "Urbanism as a Way of Life." *American Journal of Sociology* 44 (1938): 1–24.

Urban Renewal, Post-1945

Urban renewal refers both to public policy and to a model of urbanism that followed World War II. As a public policy, urban renewal involves the redevelopment conducted by public authorities, alone or in partnership with private entities, of decaying areas in cities or metropolises. Areas targeted for renewal usually have been of high population density, with derelict urban infrastructure, poor housing conditions, a high proportion of low-income families, and, in some cases, a large proportion of ethnic minorities and immigrants. Initially, these were areas that have been most affected by the profound changes in the economy and in the social structure that occurred after 1945, including the decline of tradi-

tional industries and the move of more affluent populations from the neighborhoods around the central business district (CBD) to the suburbs, which had impacts on the local economy of the major urban centers and in the social composition of these communities.

As a model of urbanism, urban renewal stemmed initially from the modernist discourse of the Congrès Internationaux d'Architecture Moderne (CIAM), first convened in 1928 to reenvision and rationalize the city along modernist principles (or Modern Urbanism). Such principles remained popular in the post-1945 period up to around 1980, when the more humanistic principles of New Urbanism with its goals of preserving human-scaled and walkable neighborhoods began to replace the logical top-down approach inherent in CIAM and Modern Urbanism.

In Western industrialized countries, the first projects of large-scale urban renewal were implemented after the end of World War II. For example, in the United States, the first major urban renewal projects are linked to the Housing Act of 1949 and to the Eisenhower administration in the 1950s. In Europe, in those countries more affected by the war, the reconstruction of the major urban areas was conducted under the principles of Modern Urbanism and the Charter of Athens of the CIAM movement. By the 1960s and 1970s, the urban renewal model applied in Baltimore in the United States in the 1950s became a reference for urban renewal not only in North America but also in other parts of the world where variants of this model were implemented.

In practice, such urban renewal meant the destruction of old buildings and infrastructures and the relocation of residents and economic activities, affecting vast areas in the inner city. In these areas, older neighborhoods were replaced, in some cases, by high-rise buildings, including multifamily housing estates, and new and large transport infrastructures (such as freeways and trains), a process followed often by the gentrification of these neighborhoods. Urban renewal implied the displacement of low-income families, the decline of the private rental sector, and problems in providing social housing. In most of these cities, local business interests played a much more important role than local resident associations

► TEDDY CRUZ—SHANTY TOWNS AS IDEAL FOR NEW SUBURB

Born in Guatemala, Teddy Cruz is an architect who practices and teaches in southern California and is also the founder of the Border Institute. His work has always been focused on the turbulent relationship between San Diego, California, and Tijuana, Mexico. Among his most debated ideas is the proposal that Tijuana shanty towns should be an inspiration for contemporary urbanism. In his projects he acknowledges all the problems with unsecured tenure (land rights) and sanitary conditions in slums but moves on to argue that the process that generates shanty towns and some of its results should be perceived as assets rather than burdens. For instance, while traditional suburbs have the highest levels of consumerism and waste, shanty towns are built out of recycled materials, have more sustainable densities, and are much more creative and diverse in their formal arrangements. Cruz has documented how old tires are used as retaining walls and how metallic bungalows scheduled for demolition in southern California are being bought and transported across the border to Tijuana, where they are relocated on stilts to allow for parking underneath. The contrasts between San Diego and Tijuana make the case even more striking, for according to Cruz nowhere else are some of the wealthiest subdivisions of North America so close to some of the poorest slums of Latin America, separated only by a 10-foot-high metal wall. The presence of such a wall, says Cruz, makes San Diego the largest gated community on the planet. Nevertheless, he points out that 60 million people cross that specific border every year, transporting ideas and concepts as well as goods and services. Inspired by the energy he perceives in Tijuana, Cruz has been fighting to change San Diego's zoning law to make space for affordable housing.

—Fernando L. Lara

in the design and implementation and in sharing the benefits of renewal projects. Such projects were undertaken worldwide in areas such as the Darling Harbour area in Sydney and in Melbourne, Australia; Port Vell in Barcelona; the old port area in Osaka as well as in Kobe and Sakai also in Japan; Cairo in Egypt; Izmir in Turkey;

Kuwait City; Warsaw in Poland; Guatemala City and Buenos Aires in Latin America; and Cape Town in South Africa.

These interventions changed the face of inner cities in Western countries in a way that prompted strong reactions beginning in the early 1960s. Jane Jacobs in her influential 1961 book *The Death and Life of Great American Cities* mounted one of the first major critiques of the type of urbanism that privileged large-scale urban renewal. Indeed, the first generation of urban renewal projects have been controversial everywhere, not only among the most affected social groups but also among academics, independent observers, and political and human rights activists. Critiques also target the CIAM Charter of Athens' principles of functional specialization, with separated city zones for work and housing including the separation of social classes and the need for efficient transportation corridors and services. These critiques, along with the fiscal crisis of the 1970s, led gradually, in the 1980s, to new perspectives and methodologies for the regeneration of the older parts of the cities.

However, as with Modern Urbanism, the new approach is not a monolithic block, and different forms of intervention have been applied in different locales. Nevertheless, recent urban renewal projects tend to favor the redevelopment of existing communities; see the local population as the main asset; revitalize the central business district; involve only selective demolitions instead of wholesale renewal; use tax, fiscal, and administrative incentives to revitalize traditional activities; and, since the 1980s, give greater importance to cultural projects in urban regeneration, improving the local community's self-image and social cohesion. Such postmodern approaches enable local citizens to have greater control over and ownership of their houses and businesses and greater involvement with environmental and cultural issues.

—Carlos Nunes Silva

Bibliography

- Grant, Jill. *Planning the Good Community: New Urbanism in Theory and Practice*. New York: Routledge, 2005.
- Hall, Peter. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, UK: Blackwell, 1990.

- Irazábal, Clara, ed. *Ordinary Places, Extraordinary Events: Citizenship, Democracy, and Public Space in Latin America*. New York: Routledge, 2008.
- Monclús, Javier, and Manuel Guàrdia, eds. *Culture, Urbanism and Planning*. Aldershot, UK: Ashgate, 2006.
- Newman, Peter, and Andy Thornley. *Planning World Cities*. New York: Palgrave-Macmillan, 2005.
- Talen, Emily. *New Urbanism and American Planning: The Conflict of Cultures*. New York: Routledge, 2005.
- Thornley, Andy, and Yvonne Rydin. *Planning in a Global Era*. Aldershot, UK: Ashgate, 2002.
- Ward, Stephen V. *Planning and Urban Change*. Thousand Oaks, CA: Sage Publishing, 2004.

Megacities

A megacity is widely acknowledged to consist of a metropolitan area that has a population in excess of ten million persons, but in reality often it consists of not just one but two or more metropolitan areas that have merged to form a major conurbation. One example would be the merging of Yokohama with Tokyo in Japan, with a resulting urban center with a population well in excess of 10 million persons. Where two or more metropolitan centers join together, the term “metroplex” is often used, yet other definitions of “megacity” are also known to exist, such as those that relate to both a large population size and high population density. In Canada, for instance, the term “megacity” is employed to note a large municipal area but may also include both urban and rural districts within a given municipal boundary. Since cities are acknowledged as the cultural and economic motors of nations, the significance of a megacity within its domestic context is not to be underestimated. The importance of these places is in part demonstrated by economic markets that are of continental and often global importance.

The first widely acknowledged megacity was New York, which reached a population of more than 10 million persons by about 1950. Currently there are more than 20 megacities that are widely dispersed throughout the world in North America, South America, Europe, Africa, and Asia. The largest megacities currently include Tokyo, Japan (at least 30 million people); Mexico

➤ LEARNING FROM LAGOS—AFRICA'S MEGACITIES WORK

While megacities globally are officially distinguished chiefly by their size, large African cities (and megacities of the global South more generally) are commonly attested an additional feature, that of dysfunctionality. More specifically, Africa's megacities are frequently portrayed as overurbanized because population growth outstrips economic growth and are also characterized by an absence of planning and control.

Lagos, Nigeria, is often perceived through this frame of dysfunction. As one of Africa's four megacities, Lagos has grown from a mere 300,000 in 1950 to an astounding 10 million in 2006. By 2015, the city's population is expected to reach 17 million. Over the past two decades, this unprecedented growth rate has yielded a dramatic deterioration of city infrastructure and services, worsening socioeconomic conditions for its inhabitants and leading to spiraling crime rates.

Yet some argue that if we only view Lagos (and the other African megacities) as an urban nightmare, then we miss a much more significant point. Indeed, a growing body of Africanist urban scholars is challenging the tendency to measure cities of the global South through models of the Western industrial city. New York-based architect Rem Koolhaas studied Lagos for eight years. He concludes that even though Lagos lacks planning and appears degraded, the existence of bottom-up self-organization processes among the city's residents creates an improvised functionality within the apparent chaos. In other words, the presence of an informal sector and the absence of large-scale planning interventions does not equate to dysfunctional urbanism. Thus, Koolhaas and others remind us that rather than researching what is wrong with Lagos, we should pay more attention to how it functions. Dynamism and creativity make megacities work. We can indeed learn from Lagos.

—Fatima Müller-Friedman

City, Mexico (about 23 million people); New York City, New York (more than 22 million people); Seoul, South Korea (22 million people); São Paulo, Brazil (20 million people); and Mumbai and New Delhi in India (each having a population of more than 19 million people). Two other



Congested street in Tokyo, Japan. Tokyo is Japan's capital and its largest city with roughly 12 million inhabitants. There are more than 30 million people in the greater Tokyo area. (Corel)

important megacities are Lagos, Nigeria, and Manila, Philippines.

While the first megacities appeared in nations of the developed world such as North America and Europe, in recent years megacities have appeared in other parts of the world, that is, in the developing world as a result of the onset of modern processes of industrialization that stimulate urban growth. China, for instance, stands as a strong example of a newly industrialized nation experiencing both rapid and large-scale growth within its urban centers. The resulting growth of Shanghai and Beijing has promoted them to megacity status.

—Ian Morley

Bibliography

- Dogan, M., and Kasarda, J. D. *The Metropolis Era*. Vol. 2, *Mega-Cities*. Thousand Oaks, CA: Sage, 1988.
- Pick, J. B., and Butler, E. W. *Mexico Megacity*. New York: Westview, 2000.
- Reader, J. *Cities: A Magisterial Exploration of the Nature and Impact of the City from Its Beginnings to the Mega-Conurbations of Today*. London: Atlantic Monthly Press, 2005.

Garbage

The amount of solid waste (or garbage) accumulating worldwide in rubbish dumps, landfills, and

disposal sites or being illegally dumped in oceans has grown exponentially since the end of World War II. Recycling programs are a viable method of decreasing waste, but they are inadequate to handle the rising deluge of disposal packaging, paper goods, plastics, and toiletries that have accompanied global consumerism. While it is mainly developed nations that are concerned with the effects on the local environment caused by disposal techniques (landfills leaking into the water table, incineration causing air pollution, illegal dumping), developing nations contend with the added issue of health consequences to impoverished people living amid garbage dump sites.

Following the end of World War II, increased global interactions and trade networks grew. The booming consumer market in much of the developed world (the United States, Western Europe, Australia, Japan, and Canada) established that greater profits could be generated via the production of inexpensive disposable goods rather than long-term durables. The packaging industry created its own niche by providing boxes and plastic and paper materials to protect and display these goods to enhance distribution and marketing. Increasing globalization has brought manufacture to outsourcing locations in the developing world, which offered inexpensive labor and new markets for goods. The consumerist ethos, consumer habits, and the rise of the plastics industry have added to the world's accumulating garbage. To give only one example, as of 2008, one consumer group estimated that 500 billion plastic bags were in use worldwide annually.

Typical waste disposal before World War II in much of the West was characterized by the municipal dump, which accumulated household garbage collected by municipal collectors, or incineration, which involves burning garbage whether at regional sites or even in individual apartment buildings. Scrap metal and other reusable materials typically were recycled, while other goods were left to decompose in the dump. Following the population boom of the 1950s, municipalities turned to the use of landfills (also known as middens), large disposal pits in which garbage is buried. The Fresno Municipal Sanitary Landfill, opened in 1937 in central California, was

the first modern sanitary landfill in the United States, utilizing the techniques of trenching, compacting, and the burying of waste with soil. Landfills have the potential of being reused and landscaped after being filled. However, seeping waste can and does pollute local groundwater supplies. Recognition of this problem led to demand for safer landfill techniques such as impermeable liners and fill. Nevertheless, landfills are still typically built in economically depressed rural areas, where they create an eyesore for the local community and offensive odors and can pollute local water sources.

In the developing world, the accumulation of garbage in open dumps in outlying areas near urban centers (e.g., Mexico City, São Paulo, and Beijing) are typically foraged by poverty-stricken indigents and their children who live in destitution and are subject to health hazards from these living conditions. Various urban areas in sub-Saharan Africa, Latin America, and South Asia, without the benefits of modern municipal trash collecting services, have large amounts of trash accumulating in their city streets. The developing world also suffers from the importation and unauthorized dumping of garbage, often toxic, from the developed world onto its soil. International demands for regulation of the international



Birds circle over large piles of garbage, seeking food at a landfill. Most cities in the United States are rapidly overflowing their landfill space, and some are having to meet the challenge by developing creative waste reduction strategies and incentives. (Photo Disc, Inc.)

➤ TOXIC WASTE—THE *KHIAN SEA* BARGE SAGA

The growth in the movement of hazardous wastes, particularly from wealthy industrialized countries that are exporting it to poorer developing countries, is of great concern. The tale of the barge *Khian Sea* is just one of many stories of dumping that illustrate the extent of this problem.

On September 5, 1986, the *Khian Sea* left the port of Philadelphia holding 14,000 tons of ash from an incinerator located in that city. The ash was the remains of incinerated municipal refuse containing arsenic, cadmium, lead, and dioxin, all considered harmful or toxic.

The barge sought a dumpsite and was subsequently turned away from the Bahamas, Bermuda, the Dominican Republic, Honduras, Netherlands Antilles, and Guinea-Bissau. After these initial rejections, the City of Philadelphia signed an agreement to send the ash to Panama. The Panamanian government refused permission to dump the cargo. After a series of voyages, in 2002 the ash returned home to Pennsylvania to be placed in the Mount Franklin reclamation landfill.

—Arthur Holst

garbage trade have resulted in an increase of illegal dumping into the world's oceans, abetting an ecological disaster with long-term ramifications.

Greater efforts in both the developed and the developing world by governments and regional municipalities at creating recycling programs, advocating lifestyle changes (sustainability) to prevent mass disposal of consumer goods, and the restriction of dumping illustrate a growing global awareness of the problems created by garbage disposal in an era characterized by mass disposable goods. Many creative solutions posed in the developed world (the United States, the European Union, Canada, and Japan) to handle garbage include the usage of landfills for the extraction of methane gas for electricity, the mulching of biodegradable waste for the creation of natural fertilizers in municipal compost heaps, and the funding of recycling facilities. In 2007, the San Francisco municipal government banned the use of plastic bags in grocery stores within the city to compel citizens to rely on canvas bags

and encourage a culture of sustainability. Similar efforts regarding unrecyclable items, such as plastic bottles and e-waste (electronic goods with metal pollutants) are increasingly widespread in many Western municipalities.

—*Abraham O. Mendoza*

Bibliography

Melosi, Martin V. *Garbage in the Cities: Refuse, Reform, and the Environment*. Pittsburgh: University of Pittsburgh Press, 2005.

Rogers, Heather. *Gone Tomorrow: The Hidden Life of Garbage*. New York: New Press, 2005.

Society and Culture

The Cold War, Third World anticolonial movements, and globalization all have had an enormous impact on world cultures since World War II. In this period throughout the world, particularly in growing urban centers, regional folkways and artisanal production ceded more ground to mass culture. Mass culture implies a standardization of lifeways as people depend less on regional customs and become, for better or worse, global citizens. A key feature of this continuing postwar shift to mass culture was the rise of networking technologies, electronic media, and infrastructures encouraging global consumerism. This overarching trend stems from the faltering of socialism in this period and a widening embrace of the Western economic model, what some would also call the spread of Western hegemony. Yet beneath the apparent homogenization of economic structures and cultural forms is an ongoing struggle between the modern and the traditional. In addition, the heightened environmental awareness of recent decades has shifted the formula as advocates of green lifestyles combat with the call to consumer pleasures.

The emergence of the U.S. model of high consumerism post-1945 appears as the realization of the liberal dream. That dream insisted that science, technology, education, free markets, and, ideally, democracy will lead to progress, a world marked with abundance, innovation, and freedom, including freedom from want. With the collapse of the Soviet Union and the end of the Cold War, this model was reinforced and has been embraced to some degree even by the People's Republic of China (PRC). The consensus seems complete. Consumerism also enforces a notion of multicultural tolerance, as all creeds, colors, and ethnicities are of equal value as niche markets. Yet underlying this triumph of an emerging unitary world culture (with the Cold War "We Are All Berliners" morphing to a post-Cold War "We Are All Shoppers") remains a vision of ongoing class warfare and of a traditional social fabric damaged by ceaseless motion and social anomie. Global consumerism (or neoliberalism) can be regarded as a reigning thesis already conjuring up its antithesis in the form of global terrorism, with the new synthesis waiting in the wings still unknown.

The Cold War infiltrated world cultures in various ways. In the United States, the Civil Defense Agency, founded to protect the public from nuclear attack, encouraged a spate of backyard bomb shelter building that reached an absurd level with the 1959 announcement of a Florida couple that they would be spending their two-week honeymoon in their bomb shelter. Ongoing atomic bomb tests in Nevada were commemorated with a series of showgirls who posed as "Miss Atomic Bomb" and "Miss Atomic Blast" starting in 1953. Gallows humor and bravado

prevailed in these displays that would be more appropriate, perhaps, to new car sales. The Cold War had warping effects on societies both East and West. Intolerance for freethinking, if expressed far more significantly in the Soviet Bloc, also found its way to the United States in the postwar anticommunist witch-hunts and book bans. Both the United States and the Soviet Union attempted to prove that they best provided for their citizens, as highlighted in the Nixon-Khrushchev Kitchen Debate in Moscow in 1959. Standing in a model U.S. kitchen in Moscow built as part of an American National Exhibit, U.S. vice president Richard Nixon insisted that the United States better housed its citizens and offered them more cars, televisions, and radios. When Nixon also suggested that it was better to argue about “the relative merits of washing machines than the relative strength of rockets,” Khrushchev retorted that he believed that the United States was involved in both competitions.

In the high art realm, commonly treated as the centerpiece of culture, modernism resurged both as a critique of and an adjunct to the Cold War face-off. Soviet arts stagnated with the absolute embrace of social realism, which the West left behind after the 1930s. Magazines in the West showcased artists such as the abstract expressionist Jackson Pollock, whose frenzied abstract canvases suggested American individualism and creativity. Liberty Radio and Radio Free Europe, U.S. propaganda radio, broadcast American jazz to similar ends. New developments in jazz such as bebop and cool jazz showed a rejection of the past and a rebellious self-assertion of African American and romantic outsider identities. In architecture, modernism became a mass style, best reflected in the sleek geometric starkness of Mies van der Rohe’s skyscrapers and worst in the bleak and unadorned

Le Corbusier-influenced public housing projects of the postwar era. Such cheerless fare only slowly gave way to the exuberance and wit of postmodernism, with its pastiche of styles. Often with government aid, film production became a global culture industry, with film centers maintained throughout Western Europe, Eastern Europe, Russia, India, the Near East, and Japan as foci of national pride and proof of a nation’s cosmopolitanism.

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If elites embraced the high arts vision of modernism and its avatars, such as Pollock, a middle- and low-brow taste for kitsch, folk art, and nostalgia developed as well. Dwight D. Eisenhower dabbled in watercolors and paint-by-numbers and admired the folk art of Grandma Moses, who painted nostalgic images of a rural past. Walt Disney’s Disneyland, opened in 1955, featured as its entryway a nostalgic Main Street, a sentimentalized rendering of a turn-of-the-century U.S. small town. In Africa, artists trained in Western techniques sought to revitalize vernacular traditions and mix these with Western techniques to forge a new nationalist vision. Middle-of-the-road venues such as Alfred Stieglitz’s “Family of Man” photography exhibition toured the world in the 1950s. Its photo-

graphic images, culled from images by professionals and amateurs, of people in everyday life around the world sought to undercut Cold War divisions and offer a unifying vision of humanity in elemental situations. The exhibit also subtly championed democratic institutions such as the United Nations to ease crises.

The Marshall Plan for Europe and the rebuilding of Japan encouraged American-style consumerism and economic infrastructure worldwide, including the expensive highway systems necessary for trucks and for the automobile culture, with its lure of individualism that was most thoroughly championed in the United States. Buying became a duty in the Cold War United States as returning soldiers married, had families, and purchased new homes in the new suburbs, waiting to be filled with household products.

Yet many of the children of suburbia in the 1960s began to question the consumerist dream. African Americans demanded their access to plenty and political power, the United States fought its protracted neo-imperialist war in Vietnam, and recreational hallucinogenic drugs began to be manufactured, distributed, and consumed. Witnessing and participating in such social unrest emboldened a critical vision. A counterculture developed in the United States in the 1960s, and its culture of protest spread to other nations such as Mexico, Japan, and Western and Eastern Europe. Many of the student radicals expressed their support of anticolonial struggles worldwide. Posters of revolutionaries such as Che Guevara and Native American warriors of the past such as Geronimo became potent symbols of resistance. Important social changes, including the women's rights movements, gay liberation movements, and environmentalism, were outgrowths of this culture of protest. Yet the increasingly radical protests ultimately were met with violent repression; much of the counterculture dissolved into the mainstream or helped create (and profit from) an alternative form of consumerism that reflected environmental and natural values. Advertising changed to reflect this youth-oriented consumerism, and new products including the Apple computer fueled counterculture dreams and corporate fortunes.

New communications and transportation infrastructure, including the container revolution, more closely interlinked international commerce. This encouraged the deregulation that allowed wealthy nations with advanced technological capabilities to deindustrialize and shift manufacture to the developing nations, with their pools of easily exploited labor. The power of labor unions was stretched thin. Critical voices first depicted globalization as the Coca-Colonization or McDonaldisation of the world as the United States imported and imposed its products and lifestyle. Yet in more recent decades it has become clear that globalization is a multilinked network. Teenagers in South Korea might listen to Japanese youths singing American-style rap music, while adults in Russia might watch Mexican television soap operas (*telenovelas*), and in South Korea gamers have become respected professionals akin to athletes in the United States. Images of Hello Kitty are licensed and marketed worldwide as one avatar of Japanese cute culture. Along the way, local community has both gained and suffered. While the loss of local

In postcommunist Eastern Europe, Ostalgie, or affection for the mass productions of the Soviet-era past, has aided sales of Kofola Cola in the Czech Republic, while in Hungary the communist-era Tsiza running shoes are again popular, as new consumers promote a local identity ironically anchored in the lost communist past.

community is often lamented, the problems associated with provincialism also have faded as computers, global positioning systems, and cable television create more and more global citizens.

Some resistance to globalization is absorbed as glocalization. In a crucial shift, for example, cuisine has not only globalized but glocalized, with fast foods such as rice-bun hamburgers in Japan and California roll sushi springing to existence in the United States. In postcommunist Eastern Europe, Ostalgie, or affection for the

mass productions of the Soviet-era past, has aided sales of Kofola Cola in the Czech Republic, while in Hungary the communist-era Tsiza running shoes are again popular, as new consumers promote a local identity ironically anchored in the lost communist past. Proponents of the local food movement position themselves much like the antimodernists of the turn of the twentieth century attempting to embrace handicrafts in a machine age yet with the added ammunition of a green ethic and the dangers of global warming.

The problems associated with globalization, including labor exploitation, environmental hazards, and global health epidemics, remain conspicuous. Glocalization aside, concerns about the development of a bland universal commercial culture have not dissipated. Experts who have studied the new frontier of space tourism, for example, suggest that the most likely activity for space tourists, if and when a space travel infrastructure is developed, will be shopping. Since the closing decades of the twentieth century, a new culture of protest has sprung up around yearly economic conferences, particularly those of the World Trade Organization and the World Bank. At the same time as environmentalists, trade unionists, and localists assail globalism, the triumph of Western consumerism remains in jeopardy; the same infrastructure that supports globalization has also aided the rise of global terrorism. The liberal dream with its valued individualism also has defied the creation of a unified belief system, as new subcultures, for example, coalesce around different Internet interest sites to promote, perhaps, the latest conspiracy theories.

—Fred Nadis

■ Introduction: Social Class Dynamics since 1945

Following World War II, the United States, Canada, Australia, and Western Europe experienced a period of economic prosperity in which large segments of these societies enjoyed greater social mobility. The GI Bill of

Rights, passed in 1944 in the United States, provided funding for veterans to attend college and allowed them to obtain low-interest government-backed mortgages to purchase homes, while state funding of postsecondary education in Western

Europe (particularly in those states that would eventually constitute the European Union) granted working and lower-middle-class Europeans social mobility. In addition, these states developed a welfare infrastructure that provided a measure of security for many citizens. However, the social mobility experienced by many whites was elusive for many people of color in the United States and the European Union. Authorized guest workers and undocumented workers in the United States, Europe, and the oil-wealthy Gulf states filled positions in the low-wage sector. Racial minorities in the United States not only were largely denied the opportunity to purchase housing in newly developed suburban neighborhoods, but urban renewal initiatives and the construction of highways to connect suburban whites to the cities destroyed many communities in which people of color were concentrated. The Oil Crisis of 1973, the decline in real wages in the United States and the European Union, the shift from an industrial to a service economy, and the more recent fiscal crisis spurred by the fall of the subprime mortgage market have exacerbated an already-existing economic gap and created an even more stark concentration of wealth among a small percentage of the population.

Post-Cold War developments in the undeveloped nations of the world had a different trajectory in terms of social class dynamics than in the global North. Deregulation, coupled with free market ideology and rapid globalization, often only offered economic gain to local elites in developing nations. The introduction of economic liberalization in current or former communist strongholds, notably China and Vietnam, has produced mixed results with regard to opportunities for social mobility. On the one hand, liberal reforms in China have produced a growing middle class of business owners and entrepreneurs that is expected to double by 2020. However, growing urbanization in Chinese society has also produced an urban underclass, while peasant farmers continue to occupy the lower rungs of the socioeconomic ladder. Meanwhile, the implementation of privatization (the selling of public holdings to the private sector) in Russia and other former Soviet republics has done little to transform the power structure within

these nations. Moreover, most citizens in the former Soviet Bloc nations, particularly those in rural communities, have fared worse in part because they relied upon the state to provide a source of income and livelihood.

Constitutional reform in postpartition India, including protections and programs for the lowest strata of Indian society (the *dalit*, or “untouchables”), have failed to dismantle the caste system, and the growth of a middle-class sector derived from the outsourcing of labor by U.S.-owned and other foreign corporations have merely perpetuated stratification in Indian society. Moreover, the wealth gap in Latin America, the Middle East, and Africa has also created a significant cleavage between business elites benefiting from extraction industries and the benefits of modernization, while the vast majority of the population remains mired in poverty amid the uncertainties of globalization.

—Josef Castañeda-Liles

Rise of Mass Education, Literacy, and the University

According to historian of higher education Martin Trow, following World War II the industrialized world underwent a transition from elite to mass and finally to universal higher education. In the first post-World War II decade, only 5 percent of Western European high school students and about 30 percent of American high school students entered college. By the 1960s, that number had risen to about 15 percent for most Western European nations and 50 percent for the United States. And while the numbers for the United States remained more or less stable since then, the number of high school students entering college in European states grew to 30 percent by the 1990s.

Today there are 1,959 universities in North America and 1,678 universities in Europe. Exact numbers are not available because of differences with regard to the definition of a university. In Germany, for instance, one can find universities, pedagogical colleges, technical universities, and Fachhochschulen, which prepare students for very specific professions. In the case of France, special schools, not universities, are charged with the task of training the elite. In the United States,

➤ HIGHER EDUCATION ENROLLMENT— A GLOBAL TREND, GLOBAL EXPLANATIONS

Along with the expansion of higher education institutions worldwide, the increase in higher education enrollment has been a universal trend during the twentieth century. Scholars have tended to explain this increase in postsecondary enrollment by focusing on national-level or regional-level factors (e.g., the impact of the GI Bill in the United States or the process of decolonization in Africa and Asia). But there may be global explanations for this trend. According to sociologists Evan Schofer and John W. Meyer, the rapid expansion of postsecondary enrollment worldwide, particularly after World War II, was due in part to a pervasive adoption of a new model of society that emphasized liberalization and development in which the production of human capital was essential for national economic expansion. The specific institutional and ideological changes that facilitated the expansion of postsecondary enrollment included greater democratization and the international acceptance of human rights, the expansion of science into various aspects of the social world, the implementation of national development plans, and the expansion and institutionalization of international nongovernmental organizations promoting democratization, science, and educational access while holding nation-states accountable to a world community. Schofer and Meyer find that all four factors contributed to the global increase in higher education enrollment throughout the twentieth century, particularly after the close of World War II.

—Josef Castañeda-Liles

Bibliography

Schofer, Evan, and John W. Meyer. "The Worldwide Expansion of Higher Education in the Twentieth Century." *American Sociological Review* 70(6) (2005): 898–920.

four-year colleges and universities that do not have the authority to grant doctoral degrees are always counted together with doctoral-granting universities.

Since 1945, the number of institutions of higher learning worldwide grew significantly. In the United States, it increased from 1,304 in 1945

to 1,893 in 2008. The Servicemen's Readjustment Act of 1944 (GI Bill) contributed much to the expansion of American higher education in the postwar era in the United States. With this legislation, the U.S. government provided financial assistance for those World War II veterans who sought a university degree. The GI Bill led to a tremendous increase of the student population in the United States, the founding of new campuses, and a widespread sense that higher education was an entitlement for all. The Higher Education Act (HEA) of 1965 established guidelines for the distribution of student aid by the government, while the 1972 HEA Reauthorization Act was of particularly high significance since it made for-profit educational organizations eligible to receive federally funded student aid. As a result, Pell Grant awards to students at for-profit institutions grew from 7 percent in 1973 to 26.6 percent in 1988.

In the 1950s, West German higher education, to take another example, was organized in six different types of institutions: universities, technical universities, colleges, theological colleges, colleges for artistic and musical education, and pedagogical colleges. There were a total of 154 such institutions with a total student population of about 133,000 students in West Germany. The majority of all students (60 percent) attended universities. By 1993, the number of institutions of higher learning had grown to 315 with a total student population of more than 1.875 million students. About 75 percent of all students attended universities.

In Africa and Asia, postsecondary education also expanded dramatically. At the beginning of the twentieth century, there were, according to Warren F. Ilchman and Alice Stone Ilchman, only 81 universities outside of Europe and North America. By 1985, this number had grown to 1,500 universities. More than 80 percent of these universities had been founded after 1945. The growth of universities was accompanied by a growth of student populations. In India, for example, university enrollment grew from 100,000 in 1947 to more than 4 million in the 1990s. Economic problems and social strife, however, have prevented many African countries from making significant advances in broadening access to higher education. While the student population

on the African continent increased from 21,000 in 1960 to 437,000 in 1983, it has stagnated since the 1990s. Further, there remain significant differences between various countries in Africa and Asia with regard to the development of the university system. While some countries pursue a policy of expansion, others maintain an exclusive and elitist postsecondary educational system.

At the end of the twentieth century, about 7 percent of high school students worldwide attended postsecondary educational institutions. And although globally women enter universities less frequently than men, they represent about 40 percent of the world's university population.

—Thomas Adam

Bibliography

- Altbach, Philip G. *Comparative Higher Education: Knowledge, the University, and Development*. Westport, CT, and London: ABLEX Publishing, 1998.
- Gumport, Patricia, and Stuart K. Snyderman. "Higher Education: Evolving Forms and Emerging Markets." In *The Nonprofit Sector: A Research Handbook*, 2nd ed., edited by Walter W. Powell and Richard Steinberg. New Haven, CT: Yale University Press, 2006.
- Ilchman, Warren F., and Alice Stone Ilchman. "Academic Exchange and the Founding of New Universities." In *The Fulbright Experience and Academic Exchanges*, edited by Nathan Glazer. Special issue of *Annals of the American Academy of Political and Social Science* 491 (May 1987): 48–62.

Class and Society in the Postwar United States

In spite of the growth of the welfare state under the New Deal and the massive economic expansion of World War II, class structure in the United States in the subsequent period was characterized by a growing economic gap and a social stratification increasingly determined by a person's race, gender, ethnicity, and occupational prestige. Between 1945 and 1990, the U.S. economy experienced a transition from an industrial to a postindustrial society as skilled and non-skilled manufacturing jobs flowed overseas to cheaper labor markets. The privileged upper and middle classes were better able to adjust to these structural changes, while those reliant on

THE POWER ELITE

Columbia University sociologist and social critic C. Wright Mills's influential work *The Power Elite* (1956) examined the way in which power in post-World War II America was organized and distributed disproportionately, favoring a cadre of a privileged few. Mills argued that the organization of American power is shared by three interrelated institutions: the corporate, military, and political elite.

According to Mills, business interests in the post-World War II United States had shifted their focus from local regional markets to national ones. While social background remained important, exceptional organizational skills became sought after as corporations expanded their markets. Through their national and international markets, corporate elites gained greater political influence. In addition, Mills points out that the relationship between the military and the corporation became increasingly close as military personnel freely crossed over to civilian employment, which in turn had a profound impact on the course of business.

As a result of the Cold War, military preparedness became an ongoing endeavor, leading to a permanent war economy. The war lords—Mills's name for the upper roosts of military power—gained an audience with politicians who wanted to be associated with military strength. Increasing government spending in military technology and education propelled the military ascendancy to unprecedented levels of power.

Mills claimed that many top positions in the executive branch were held by politicians who had close ties to the corporate and military worlds. Not attracted by the pay, many sought positions within the higher recesses of government so as to direct policy that would further benefit their class. The power elite was comprised of men who could effectively move from one circle to the other, usurping power into a concentrated ruling class far removed from the average American and the workings of a genuine democracy. His was a chilling analysis that had a great deal of influence on the New Left thinkers of the 1960s student counterculture.

—Jeffrey A. Hinton

industrial employment were hard-pressed to find work. Furthermore, the economic plight of inner-city residents, mostly people of color, worsened as city services lost their former tax base constituencies to the growing white suburbs.

Despite the civil rights movement of the 1950s and 1960s and other movements advocating rights for underprivileged groups, much of the ensuing legislation did not address the fundamental problems that exacerbated class (which were mostly associated with race) issues in American society. Marred by inadequate funding and facilities, the educational facilities in inner-city and rural communities failed to properly educate children of color. Increased poverty led to increased crime rates in many of these neighborhoods, often associated with gangs, drugs, and theft, further exacerbating these communities' social deterioration.

In the 1980s, the Reagan administration dismantled the War on Poverty programs of the 1960s and embraced deregulatory policies that encouraged the globalization of industries. Many of the existing federally funded economic safety nets were dismantled. Concurrently, the War on Drugs that began during the Reagan administration increased prison populations from lower-income groups. As the lower class was criminalized, art forms flourished that glorified the rebellious urban gangsta in rap music, graffiti art, and fashion. At the same time the media circulated images of yuppies, young urban professionals who celebrated a life of greed and luxury typified by gentrified neighborhoods and the number of limousines that began to appear on city streets. In the essay "Fortress Los Angeles," Mike Davis argued that in this period, the class divide was made visible in urban landscapes, as "architecture of paranoia" developed to separate the middle class from street life, whether in gated communities, shopping malls, the shrinkage of public space, or the increased criminalization of the poor.

Simultaneously, large numbers of immigrants, particularly from Latin America, entered the United States both legally and illegally, providing a pool of inexpensive labor and further depressing wages for unskilled and domestic employment. Many of these immigrants were relegated

to the bottom of the American class structure, as they lacked education and the ability to communicate in English and worked for subsistence wages. Many also worked illegally and off the books.

In contrast, large numbers of white ethnic Americans were able to establish relatively stable social and economic livelihoods following World War II. With long-standing social institutions such as university alumni societies, Rotary clubs, good old boy networks, and fraternities, many upper- to middle-class white Americans were granted opportunities not available to their less-privileged fellow working-class white and nonwhite citizens. However, large numbers of whites, particularly in economically depressed regions such as Appalachia and the declining Rust Belt, were subject to social and economic conditions similar to their fellow citizens of color. Informal hiring practices ensured that white workers would be a plurality in the job market, particularly in white-collar professions, further exacerbating the socioeconomic gap.

While the federal government instituted Affirmative Action programs beginning in the 1960s to ensure admission of nonwhite ethnic groups and women to higher education or access to employment, these quotas did not completely alleviate the structural socioeconomic problems of inequality in American society. However, in spite of such unequal distribution of opportunities and wealth, many women and individuals from nonwhite communities were able to move up the social ladder and establish patterns and institutions for economic improvement for others to follow.

—Abraham O. Mendoza

Bibliography

- Beeghley, Leonard. *The Structure of Social Stratification in the United States*. 5th ed. Boston: Pearson Allyn and Bacon, 2008.
- Davis, Mike. "Fortress Los Angeles: The Militarization of Public Space." In *Variations on a Theme Park: The New American City and the End of Public Space*, edited by Michael Sorkin. New York: Hill and Wang, 1992.
- Perrucci, Robert, and Earl Wysong. *The New Class Society: Goodbye American Dream?* Lanham, MD: Rowman and Littlefield, 2003.

The War on Poverty

By the time President Lyndon B. Johnson first proclaimed the War on Poverty in his State of the Union address in January 8, 1964, the urgency to enact an antipoverty campaign resonated among the American public with the popularity of such studies as Michael Harrington's *The Other America* (1962), John K. Galbraith's *The Affluent Society* (1957), Gunnar Myrdal's *An American Dilemma* (1944), and the contentious culture of poverty perspective proposed by Oscar Lewis (1959). Whereas Harrington and Galbraith discussed the effects of market capitalism on social inequality and Myrdal outlined the contradictions between American liberalism and the state of black Americans in the 1940s, Lewis asserted that the poor remain poor because this group adapts to the conditions of poverty and gradually absorbs values that reinforce their own marginality. These studies, particularly Lewis's, together with the longstanding drive from University of Chicago social scientists to work with communities, formed the intellectual background for Johnson's War on Poverty.

The specific details of Johnson's plan were made public in a special message to the Congress when the president proposed the program's centerpiece, the Economic Opportunity Act (EOA) of 1964. Emerging in tandem with Johnson's groundbreaking civil rights legislation, this legislation captured many of the concerns outlined earlier: community revitalization, expansion of educational opportunities, investment and a federal incentive package, and the creation of job training programs for 200,000 young Americans and work study for another 140,000. At first, the Johnson antipoverty agenda called for a comprehensive tax cut to help stimulate economic expansion. This fiscal initiative was followed shortly thereafter by a number of programs such as Job Corps and Head Start, designed to transfer marketable skill training and expand educational opportunities for the poor. More controversial still were the directly funded Community Action Programs (CAPS), which sought the direct participation of members of poor communities.

On the education front, Johnson's Great Society, of which the War on Poverty was a part,

MAJOR GREAT SOCIETY LEGISLATION TIMELINE

- 1963—Higher Education Facilities Act
- 1963—Prevention & Abatement of Air Pollution (The Clean Air Act)
- 1963—Vocational Education Act
- 1964—Economic Opportunity Act of 1964
- 1964—Civil Rights Act
- 1964—Urban Mass Transportation Act
- 1964—Federal-Aid Highway Act
- 1964—Criminal Justice Act
- 1964—Food Stamp Act
- 1964—Wilderness Act
- 1964—National Arts Cultural Development Act
- 1965—Manpower Act
- 1965—Older Americans Act
- 1965—Social Security Amendments
- 1965—Voting Rights Act
- 1965—Housing and Urban Development Act
- 1965—Public Works and Economic Development Act
- 1965—Department of Housing and Urban Development Act
- 1965—National Foundation on the Arts & the Humanities Act
- 1965—Amendment of Federal Water Pollution Control Act
- 1965—Amendment to the Immigration and Nationality Act
- 1966—Higher Education Act
- 1966—Child Nutrition Act
- 1966—Child Protection Act
- 1968—National School Lunch Act

—Enrique S. Pumar

enacted some 60 separate bills intended to improve educational opportunities for minority students by providing access to public schools and financing higher education with federal grants, low-interest student loans, and minority scholarships. One of Johnson's most controversial attempts to expand educational opportunities was the Affirmative Action program. This program encouraged higher educational institutions to consider race among the qualifications for admissions. The rationale was that since poverty and racial discrimination had deprived minorities of a fair chance to attain a college education

in the past, the lagging effects of this inequity should be taken into account during admissions to remedy this injustice.

Another radical component of the War on Poverty was the drastic expansion of public works projects, particularly construction. Johnson also created New Deal-styled programs such as the Job Corps to curtail unemployment. Great Society programs also gave rise to an unprecedented expansion of the federal government as new departments such as Housing and Urban Development (HUD) were created. Other existing bureaus such as the Transportation Department experienced extensive growth.

The funding for the War on Poverty was scaled back as the Johnson administration escalated U.S. military involvement in Vietnam. The economy could not accommodate two fronts. By 1967, giving in to intense criticism, Johnson folded the Office of Economic Opportunity yet reassembled many programs under different bureaucracies. By the 1980s, during the Reagan administration, consensus developed that the War on Poverty had been a failure. Critics from the Right, particularly Charles Murray in *Losing Ground* (1984) and economist Milton Friedman, argued that government social spending programs had long-term adverse effects on the economy and the moral fabric of the nation, as they not only were costly but also undermined personal responsibility and the drive to excel.

Yet other scholars point to successes of the War on Poverty, including statistics that suggest that programs such as food stamps and increased funding for Aid to Families with Dependent Children (AFDC), begun during Franklin Roosevelt's New Deal, strongly decreased the percentage of the population under the poverty line between 1959 and 1968. Other initiatives stemming from the Kennedy and Johnson anti-poverty programs such as Head Start (for preschoolers), Upward Bound (to help high school students prepare for college), VISTA (Volunteers in Service to America), and legal services continue to have their champions. Even many of the Community Action Programs that were the maligned centerpiece of the War on Poverty still remain, with government funding shared with corporate and other private sponsors.

The shift in esteem held toward these programs is evident in the enactment of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act signed by President Bill Clinton. President Clinton embraced the rhetoric of personal responsibility popular among conservative critics of government social services and dismantled the AFDC while offering temporary assistance instead to needy families who met income restrictions, thus championing the conservative welfare to work approach to poverty.

—*Enrique S. Pumar*

Bibliography

- Clark, Robert F. *The War on Poverty: History, Selected Programs, and Ongoing Impact*. Lanham, MD: University Press of America, 2002.
- DeNavas-Walt, Carmen, Bernadette D. Proctor, and Robert J. Mills, U.S. Census Bureau. *Current Population Reports, P60-226: Income, Poverty, and Health Insurance Coverage in the United States, 2003*. Washington, DC: U.S. Government Printing Office, 2004.
- Harrington, Michael. *The Other America*. New York: Penguin, 1972.
- Lewis, Oscar. "The Culture of Poverty." In *Urban Life*, 4th ed., edited by George Gmelch and Walter P. Zenner. Prospect Heights, IL: Waveland, 2002.
- Murray, Charles. *Losing Ground*. New York: Basic Books, 1984.
- Zarefsky, David. *President Johnson's War on Poverty: Rhetoric and History*. Tuscaloosa: University of Alabama Press, 2005.

Class Structure in Post-Soviet Russia, Eastern Europe, and Central Asia

Class structure in the post-Soviet world of Russia, Eastern Europe, and Central Asia has myriad similarities with that of the defunct Soviet Union. After 1991 the old Soviet elites of the party, the bureaucracy, and the military generally maintained their power in the new republics, while the mass of the multiple nationalities accommodated themselves, somewhat hesitantly, to the new political and economic arrangements. The initial enthusiastic reception of capitalism, liberalism, and nationalism quickly waned as the dissolution of the old Soviet power structure through privatization and the redistribution of

resources among the republics created social and economic chaos. Within a few years Russia asserted its economic and political hegemony, and new social problems were characterized by the increasing wealth gap between the masses and the new elites under capitalism, which were in fact the old Soviet elites with even greater political and economic clout.

The devolution of the Soviet Union to the Russian Federation replaced the socialist edifice with rampant privatization that benefited ex-Soviet functionaries without leaving much to the average Russian. The Soviet *nonmenklatura*, which consisted of Communist Party members, government functionaries, and bureaucrats, was responsible for administering the state, the economy, and industry. As a result, they were well placed in their positions to take advantage of privatization to accrue state industries when they went up for sale. The resulting kleptocracy, created out of the chaos of Soviet collapse, gained virtual control of the Russian economy. In contrast, the majority of the Russian people were exposed to the traumatic situation of adapting to capitalism in such a short period. The ruinous inflation and economic collapse of the Russian economy as it adapted itself to attract foreign investment through inflationary policies often hurt the average Russian. People who had previously survived on an assured living wage or a pension provided by the Soviet state found themselves destitute.

The chaos of the post-Soviet era and the growing gap between the newly rich ex-Soviet bureaucrats and the average Russian created the ideal environment for surviving crime cartels based on prostitution, extortion, and other black market practices to flourish, creating a wealthy criminal class. In this same period, hardships heightened for people from outlying areas of the defunct Soviet Union that remained on the margins of society due to the ethnic and religious characteristics that separate them from the Russian Orthodox general population.

Most of the newly emancipated East European republics suffered symptoms similar to Russia in the immediate post-Soviet era. Former technocrats of the communist regimes found themselves in a position to take advantage of rapid privatization and bought up state indus-

➤ DEDOVSCHCHINA IN THE POST-SOVIET MILITARY

In post-Soviet Russia, the retention of conscription across all social classes maintains the institutional Soviet Army as a model for diluting social differences among soldiers. The issue of *dedovschchina*, a form of hazing of new conscripted recruits, still plagues the Russian military, as hundreds of soldiers are estimated to die yearly due to issues of hazing, humiliations, privations, and brutal beatings bordering on torture. Class differences in the ranks have led many lower-class soldiers to haze their economically better-off comrades with the pretext of toughening them up for the vagaries of the life of a soldier. The brutalization of Russian recruits exposed to harsh living and working conditions for multiple years under conscription characterizes the problems created by *dedovschchina* in the military establishment.

The resulting deaths and the psychological and physical damage of recruits have created much consternation among the Russian public and government. Since the end of the Soviet Union, the Russian government has promised to reform the military to remove this vestige of the late Soviet Army. Yet *dedovschchina* continues to be a problem among the ranks, contributing to high levels of suicide, various psychological disorders, and brutal acts of retribution during combat, such as in the war in Chechnya by Russian soldiers.

—Abraham O. Mendoza

tries in order to enrich themselves. The adaptation to capitalism hurt rural communities much more than urban areas because the rural regions had depended on assured government markets rather than the now open market. More cosmopolitan urbanites quickly adapted to Western trends but also suffered privations as the economies underwent crash capitalism.

The Central Asian republics had an entirely different situation in the post-Soviet era. While they did have to adapt to the new economic and political situation, they also reemerged with a sense of national identity imbued with fervent nationalism created by the establishment of various republics with primarily Islamic cultural affinities. In the Soviet era this aspect of their ethnic characteristics had been suppressed and

subsumed under a Soviet identity. The power elite who had benefited under the Soviet Union, mostly local Soviet officials, again emerged as the leadership elite after the devolution of the Soviet Union. The gap that existed between urban Russophiles and rural regionalists created a vast class difference in the newly established republics. The secular-minded urban middle class wished to create for itself a more European identity, while the poorer rural classes sought to distinguish themselves as culturally Islamic and create linkages with the Middle East.

—Abraham O. Mendoza

Bibliography

Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.

Meleshevich, Andrey A. *Party Systems in Post-Soviet Countries: A Comparative Study of Political Institutionalization in the Baltic States, Russia, and Ukraine*. New York: Palgrave Macmillan, 2007.

Mesbahi, Mohiaddin, ed. *Central Asia and the Caucasus after the Soviet Union: Domestic and International Dynamics*. Gainesville: University Press of Florida, 1994.

Webber, Stephen L., and Jennifer G. Mathers, eds. *Military and Society in Post-Soviet Russia*. New York: Manchester University Press, 2006.

Changing Class Structure in Post-Maoist China

When Mao Zedong, the paramount leader of China for nearly 30 years, died in 1976, China was a society that consisted of two distinctive social classes: the workers and peasants. At the same time, only a small number of intellectuals served as a separate social stratum. Peasants made up 80 percent of the total population. The middle class or property-owning groups were wiped out when Mao came to power. Since Mao's death, China has undergone a radical social transformation thanks to the market-oriented economic reform launched by Deng Xiaoping in 1978. Amid the massive economic restructuring, new social classes have emerged, and social mobility has increased. Privatization, industrialization, and improvement in educational opportunities are the major forces behind these changes.

China was once a planned economy with the state and rural collectives controlling all resource allocation, production, and distribution. The gradual privatization of state sectors and the dramatic reduction in state control over economic activities have opened doors for private entrepreneurship and economic freedom. The private sectors expanded rapidly. Following Deng's restructuring, many people became self-employed or owners of private firms and factories. In 2006, there were more than 11 million private business owners. They employed more than nearly 70 million employees and controlled nearly 7 trillion yuan assets (about 1 trillion U.S. dollars).

Economic growth and rapid industrialization accelerated the urbanization process. More than 140 million rural laborers have left their farmland and become wage earners in urban areas. Urban laborers have increased diversity in terms of occupation, employment, and background. More than 40 percent of the urban industrial workforces are made up of workers who still hold a rural household registration in a system that is commonly known as *hukou*, which registers people by their residency. Three decades ago, most workers were employed by state sectors. Today, most work in the private and other nonstate sectors. In addition to industrial work-

➤ RURAL FAMILIES IN CHINA

More and more rural farmers in China, especially young couples, have moved to urban areas to seek employment. They have left behind their children due to the continued restriction of the household registration system (which ties the government's social welfare benefits with people's place of residency) or because they may not have enough time or resources to raise them in the cities. Some estimate that as of 2007, there were more than 20 million children in rural areas cared for by grandparents or relatives. This has caused many psychological and behavior problems for many of those children who do not have a normal family life and may have some negative long-term social impact if the government does not respond to the issue soon.

—Baogang Guo

places, another emerging segment of workforce employment is in the service industries, including banking, insurance, real estate, hotels, restaurants, tourism, taxis, and cleaning.

The peasant class has also undergone rapid changes. Although the percentage of peasants engaging in farming has declined sharply, the absolute number of peasants engaging in agricultural production continues to rise. It is expected that another 200 million from this background will be absorbed by urban expansion in the next two decades. For those who stay behind, their income will continue to lag behind that of urban residents. As a result, one of four peasants has to make money from nonfarming activities such as business, processing, and transportation.

One notable change is the emergence of various white-collar social strata thanks to the rapid expansion of public and private education systems. The large educated workforce pool has contributed to the growth of the knowledge-based economy. The new strata include new government civil servants, business managers, and college-trained professionals and intellectuals who by 2007 made up about 12 percent of the workforce. Together with many of the private business entrepreneurs, about 20 percent of Chinese may be classified as the middle class in 2007. This number is expected to double by 2020.

However, market reform also has had a negative impact. At the bottom of the social pyramid, there exists a new social underclass, namely the urban poor. This includes unemployed school graduates, laid-off workers, part-time or day laborers, a sizable number of jobless rural migrant laborers, some of the elderly population, farmers who lost their farmland due to urban sprawl, and disadvantaged groups such as the disabled or those in poor health, all of whom make up about 10 percent of urban population.

—Baogang Guo

Bibliography

- Lu Xueyi, ed. *Contemporary Social Mobility in China*. Beijing: Social Sciences and Documentation Publisher, 2007.
- Xin Zhigang. "Dissecting China's 'Middle Class.'" *China Daily*, October 27, 2004.

Class and Caste in India since 1945

The caste system is the complex system of social divisions that still exists in present-day India. Caste is an ancient hereditary system that developed from Hinduism, organizing all members of the society into groups with specific social roles. A person's caste determines who one can marry, specifies what sort of employment he or she is permitted, and even controls what he or she can eat or touch. Given that the majority of the people in India are Hindu, the caste system has played an influential role in the history of India. However, since Indian independence from Britain (1947), constitutional reforms and egalitarian ideology stemming from secularist and socialist political factions, in addition to substantial economic development, have significantly challenged traditional Indian conceptions regarding the caste system.

The Hindu concept of *varnashramadharma* refers to the system of classes of social life and stages of individual life in Hinduism. Hindus are divided among four *varna* (meaning arrangement in the context of social hierarchies) and a fifth group, known as the untouchables. The four major *varna* are the *Brahmans* (intellectuals and professional class), the *Kshatriya* (military and political class), the *Vaishya* (laboring class), and the *Sudra* (servant class). Below the



Dalits marching in Bombay (Mumbai) carry a poster of Paul Divakar, leader of the Dalits movement, January 16, 2004. (Antoine Serra/In Visu/Corbis)

CASTE AND POLITICS—AFFIRMATIVE ACTION LEGISLATION IN INDIA

In contemporary Indian law, the term “reservation” refers to a form of affirmative action designed to aid the socially disadvantaged castes of Indian citizens, legally defined as the Scheduled Castes and Scheduled Tribes (specifically the Sudras and the untouchables). The reservation statutes require that a percentage of positions are reserved in the Parliament of India, individual state legislative assemblies, the civil services, and public educational institutions, where otherwise disadvantaged castes would be inadequately represented.

Following India’s independence from Britain in 1947, the new Indian constitution specifically prohibited any discrimination based on religion, race, caste, sex, and place of birth. While this provided equal opportunity for all Indian citizens, the constitution also included clauses to ensure reservation “for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.” While this system has allowed a percentage of lower-caste individuals to advance in Indian society, it has yet to address the widespread socioeconomic inequities that exist due to the caste system. However, critics of this system allege that it is a form of reverse discrimination against the higher castes within Indian society.

—Abraham O. Mendoza

Sudra are the untouchables, who are believed to be impure from birth and are assigned employment in positions assumed to pollute the higher classes. Such positions include working with corpses and dead animals and cleaning sewage. As such, the untouchables are deemed as a lower social and economic class apart from the rest of Indian society. Each of the varna is divided into *jati* (birth) or kinship groups with hereditary social roles and specific professions preordained within Indian society by their respective varna. According to tradition, Hindus will marry only within their own *jati*.

Following Indian independence from Britain in 1947, increased globalization and technological advances have allowed for the creation of more diverse and specialized employment, com-

plicating how new professions fit within the existing *varna* system. In addition, political factions strongly influenced by Western ideologies such as Marxism and liberalism helped institute reforms to redress the social hierarchy of modern India and allow for greater egalitarian inclusion of the lower castes in Indian society. As a result, the Indian constitution has been modified to officially outlaw caste-based discrimination. In addition, the concept of untouchables was formally outlawed by the Constitution of India in 1950, and subsequently the caste was henceforth collectively referred to as *Dalits*, a more politically correct term (while Gandhi suggested using the term “Harijan,” meaning “Children of God”). A significant number of non-Hindu Dalits adhere to religions (Christianity, Buddhism, and Islam) that have historically politically agitated against the Hindu majority for legal provisions granting all Dalits greater opportunities within the Indian state.

This ancient social system has provided widespread stability in Indian culture and society; accordingly, many Hindus have been reluctant to reject traditional prohibitions and restrictions. However, the caste system has kept a large part of the Indian population in a condition of servitude and has restricted social mobility, placing it out of phase with modern ideologies. The prospect of greater egalitarianism continues to complicate Indian politics and society, as some traditionalist Hindus resist the prospect of change, while non-Hindus and Hindu Dalits agitate for equal opportunity.

—Abraham O. Mendoza

Bibliography

- Dirks, Nicolas B. *Castes of Mind: Colonialism and the Making of Modern India*. Princeton, NJ: Princeton University Press, 2001.
- Gupta, Dipankar, ed. *Caste in Question: Identity of Hierarchy?* Thousand Oaks, CA: Sage, 2004.
- Walsh, Judith F. *A Brief History of India*. New York: Facts on File, 2006.

Class Structure in Latin America, 1945–Present

After World War II, industrial growth, larger cities, and agricultural commercialization brought changes to Latin America’s social makeup and

the relative sizes of the socioeconomic classes. Large landowners adopted capitalistic practices and replaced the old *latifundista* (elite hacienda owners, or *hacendados*). Many of the new *latifundistas* who replaced the *hacendados* were college-educated and well traveled. They combined agricultural business with industrial and financial entrepreneurship. Above all, they were just as capricious and avaricious as the old *hacendados*. An industrial and financial middle class also appeared, with strong links to foreign investors. An overlapping group known as the urban middle sector expanded rapidly. Also, a small yet combative industrial working class emerged.

As a response to mounting foreign debt, international lending agencies required Latin American nations to reduce social welfare programs and privatize or eliminate many state-run activities. Most Latin American governments implemented neoliberal fiscal policies. These budget-slashing mandates resulted in rising unemployment and poverty among the middle and working classes. While benefiting multinational corporations and their regional partners, neoliberalism reduced the number and role of small and medium-sized industrial firms.

In the second half of the twentieth century, North American and European capital was attracted to the rapidly burgeoning market in South America and Mexico. With vastly greater financial resources and superior technology, foreign corporations bought out hundreds of locally owned companies. They thus gained control of important sectors of the host nations' economy. Realizing that a prosperous middle class or bourgeoisie was crucial to their own survival, these foreign corporations cultivated friendly bonds with the largest national businesses, mainly through hybrid companies. Thus, the new Latin American bourgeoisie, tied to global capital, showed little interest in nationalism.

Meanwhile, the urban middle sectors straddled the class boundary between two groups. On one side were the landowning elite and the new bourgeoisie. On the other side were the industrial working class and the peasantry. The urban middle sectors included affluent business managers who could be considered part of the new bourgeoisie as well as retail employees and

➤ THE INFORMAL SECTOR

Throughout the second half of the twentieth century, the informal sector was Latin America's largest class. It emerged because industry could employ only a fraction of the workforce. The informal sector included countless underpaid domestic servants, street vendors, persons who offered to watch and clean cars, tattooists, shoe and boot polishers, lottery ticket hawkers, prostitutes, pimps, illicit drug dealers, and beggars. Sociologists and economists estimate that by the end of the century, more than half of all Latin Americans were part of the informal sector.

Passengers aboard Mexico City's Metro train can expect to see the informal sector in action. During the 30–45 seconds that it takes for the train to travel from one subway station to the next, travelers may be entertained by a musician or contortionist in search of tips. On the next passage, they may encounter a teenager peddling pencils, rulers, or counterfeit DVDs and CDs.

All members of the informal sector have two things in common: they are self-employed, and their work is both irregular and perilous. By its very existence, the informal sector serves as a reminder that neoliberal economic policies have had a detrimental effect on a vast segment of Latin America's population.

—Jeffrey Lucas

low-level civil servants who earned less than skilled laborers. The urban intermediate sectors also included shop owners, independent craftspeople, and white-collar workers. With urbanization and the proliferation of commercial markets, the number of bureaucrats mushroomed. Before the 1990s, public servants comprised roughly 20 percent of Latin America's population. The number diminished after 1990 due to neoliberal cutbacks.

The peasantry—that is, small landowners, tenant farmers, and landless rural workers—experienced economic crisis with the advent of the new *latifundio* (or agribusiness). Agricultural mechanization, which had begun in the early twentieth century, proliferated after World War II and replaced millions of farm laborers. The lifting of trade restrictions meant that Latin

American farmers had to compete with foreign grain producers. Under these conditions, small farmers struggled to survive. At the same time, neoliberalism negated land reform laws. In Mexico and several other countries, constitutional protection of indigenous community property was amended, enabling speculators to purchase large tracts of land from rural villages. Consequently, an increasing number of peasants moved to the cities or immigrated to the United States in search of employment. These intranational and transnational movements were driven by low standards of living. Near the end of the twentieth century, Mexican financial experts estimated that two-thirds of rural families were profoundly poor, that is, unable to acquire the basic necessities.

With the spread of capitalism came the growth of an industrial working class. Factory laborers and mineworkers were better organized than any other faction. However, artisans made up the largest group. Artisan shop dynamics were characterized by paternalism and one-on-one bargaining. The prevalence of this type of working environment hampered the development of a strong and articulate labor movement.

—Jeffrey Lucas

Bibliography

- Alexander, Robert J., with the collaboration of Eldon M. Parker. *A History of Organized Labor in Bolivia*. Westport, CT: Praeger, 2005.
- Ballent, Anahí. *Las buellas de la política: Vivienda, ciudad, peronismo en Buenos Aires, 1943–1955*. Buenos Aires: Universidad Nacional de Quilmas, 2005.
- Haughney, Diane. *Neoliberal Economics, Democratic Transition, and Mapuche Demands for Rights in Chile*. Gainesville: University Press of Florida, 2006.
- Servín, Elisa. *La Oposición política: Otra cara del siglo XX Mexicano*. Mexico City: Centro de Investigación y Docencia Económicas, Fondo de Cultura Económica, 2006.

Class Structure in Western Europe, Post-1945

Class structure in postwar Western Europe was defined by the European economic miracle that lasted until 1973, after which high unemploy-

ment and inflation exacerbated class antagonisms as reflected in politics and society. The so-called economic miracle began with postwar reconstruction under the Marshall Plan and the formation of the European Community (European Union after 1992) that ensured that Britain, France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg developed prosperous economies with improved standards of living for their respective citizenries. A more equitable distribution of wealth, better educational facilities, an increased number of university graduates, and near full employment for three decades decreased the friction between European social classes.

During the period of the economic miracle, political compromises first born out of wartime cooperation kept at bay class antagonisms between the working class and the middle class. For example, in Britain the creation of the welfare state, which ensured the well-being of all its citizens by provisions of health services and unemployment insurance, was created by such a political compromise between the social classes. Throughout much of the early 1950s to the late 1960s, France, Italy, and Germany also had center-right coalition governments that ensured that the working classes made suitable living wages by advocating labor-management cooperation. West European governments also poured money into primary, secondary, and higher education. Education allowed children of the lower middle class and working classes to advance up the social and economic ladder. University education created an educated workforce to fill newly developing professions that necessitated specialized skills in management, finance, and government.

As native Europeans were able to increase their social and economic standing, non-European guest workers were brought in to fill the jobs that they had left behind. Britain invited West Indians and South Asians, France brought in Algerians, and West Germany invited Turks all as guest workers to fill nonskilled manufacturing and service trades. Most settled in housing projects near their places of employment, isolated from greater society. Poor living and working conditions and low pay characterized the plight of guest workers. While they did make consider-

▶ EUROPE'S TRANSNATIONAL COMMUNITIES

Major European cities in the postwar era have developed into multicultural urban areas characterized by distinctive ethnic neighborhoods composed primarily of nonindigenous nationals. These neighborhoods developed as the influx of guest workers flocked to areas that already had been settled by fellow nationals, following transnational support networks. As immigration continued and guest workers married and had children, the ethnic populations in European cities vastly increased in size. London has several South Asian (Southall, Tower Hamlets, and Newhall) and West Indian neighborhoods (Croydon, Lambeth, and Newhall), among others. Paris has various Algerian and Moroccan ethnic suburbs. In particular, Germany has the largest population of Turks outside of Turkey, with most residing in Greater Berlin.

While ethnic enclaves in European cities are not new, the fact that most of these communities are of non-European extraction is a new development. Strained relationships exist between the greater society and the non-European ethnic populations. Unemployment, growing crime rates, and terrorism are increasingly blamed on ethnic minorities. Incidents such as the Brixton Riots in London



View of the Turkish neighborhood of Kreuzberg in Berlin, Germany, where ethnic differences are evident. (Kristina Musholt)

by British Blacks (1981) and widespread riots in France in 2005 by French North Africans illustrate how the frustration due to economic and social marginalization may lead to increased social frictions in European cities.

—Abraham O. Mendoza

ably more money than in their countries of origin, they suffered social marginalization and discrimination due to their religious, racial, and ethnic differences.

The 1973 Oil Crisis ended the economic prosperity that Europe had enjoyed since the end of World War II, creating economic hardships and class antagonisms. Unemployment, wage cuts, and inflation severely affected the livelihood of many West Europeans. The working and middle classes suffered privations, as many of them were thrown out of work or contended with rising inflation. Guest workers, at the bottom of society, suffered the most, as they were the first to be laid off and were also blamed for the lack of employment opportunities for indigenous Euro-

peans. The gradual deterioration of the welfare state in subsequent decades, which led to increased hardships for guest workers seeking citizenship in addition to growing antagonism against ethnic minorities, characterizes contemporary European class relationships.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.
- Sutcliffe, Anthony. *An Economic and Social History of Western Europe since 1945*. New York: Longman, 1996.

■ Introduction: Gender and Sexuality

The struggle for gender equality encompasses challenges to a variety of social, political, and economic inequalities based on gender identity. These struggles include more than just the inequities between men and women and the renegotiation of masculinity and femininity. Individuals who identify as part of the lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) community challenge the discrimination they face based on gender performance, sexual orientation, and physical characteristics.

Increased attention to inequalities in education, labor, and marriage and family structures have been analyzed by scholars as important components of gender equality struggles. In fact, a quick analysis of educational opportunities is a primary means of determining whether a society is promoting equality between men and women. In 2001 the United States declared a War on Terrorism and promoted the notion that women in Afghanistan needed saving from the rule of the Taliban. Emphasizing how women and young girls were denied an education, the George W. Bush administration heralded educational inequalities as central to Afghani women's victimization. Some transnational feminists have argued that this kind of discourse homogenized Muslim women and ignored other important issues that need to be addressed, effectively placing the West as superior and further marginalizing women in Afghanistan.

Labor has also served as a benchmark for determining gender equality. The jobs available to men and women as well as the wages garnered can illuminate the role that gender plays in employment opportunities. Scholars note that women are often placed in lower-paying undervalued jobs. This is in part due to the historical legacy of situating men as the primary income earner, while women were to labor in the home. The majority of jobs in care labor, such as nursing and childcare, are held by women and seen as an extension of gender norms that promote women as naturally caring, nurturing, and compassionate. A consequence of this essentialization is lower wages for work that is argued to

match innate features of womanhood. In addition, feminized labor such as care work makes it difficult for men to enter into such professions, as it is seen as emasculating labor.

The home as a gendered site of labor is complicated by social and cultural family structures. Notions of traditional family structures privilege heterosexual unions over homosexual ones. From the latter part of the twentieth century to the present, gays and lesbians have fought for the right to adopt and marry. In the United States both issues are decided upon by the state, with federal laws not granting gays and lesbians the same rights as heterosexual couples. The struggle for gender equality is complicated by differing laws and cultural attitudes worldwide. For example, Canada, Belgium, and the Netherlands are countries where gay marriage is legal; this becomes controversial when couples cross national borders and their status is no longer recognized.

Multiple social movements and activists have confronted gender inequalities, but depending on geographical, historical, and cultural contexts the challenges vary. Levels of inequality are further complicated by intersectional forms of identity such as race, class, sexuality, age, and religion. Therefore, different approaches are necessary when dealing with issues such as women's roles in Islamic societies, transgender issues, the role of sexual identity, and the formation of masculinity and femininity. This has led to an emergence of different feminist, gay and lesbian, and men's movements throughout the world.

—*Janiene Langford*

Feminism in Global Perspective

It is nearly impossible today to speak of one feminist movement. In actuality, feminism has been fragmented along different ideological or theoretical lines throughout its history. Third-wave feminist ideology and its insistence on the recognition of different categories and possibilities of oppression have led to a vast variety of feminisms. The majority of these new groups began with the alienation felt by many women in what was seen as a primarily white middle-class

➤ FEMALE CIRCUMCISION

Female circumcision, sometimes referred to as female genital mutilation or female genital cutting, is a sociocultural practice originating in Africa that is performed on girls as an initiation rite into womanhood, among other reasons. The World Health Organization (WHO) has described this practice as the partial or total removal of the external female genitalia or other injury to the female organs. Female circumcision is traced as far back as the second century CE.

According to the WHO, between 100 million and 140 million girls have undergone female circumcision worldwide. Although female circumcision is prevalent in Africa, where it occurs in approximately 28 countries, it occurs in many countries and regions elsewhere, including Arabia, Asia, France, England, Australia, and the United States. However, it is not practiced in all African communities. Types of circumcision differ from community to community in each country. While statistics vary, the percentage of such procedures is as high as 90 percent in some communities.

To understand any form of circumcision, one needs to understand beliefs and attitudes toward sexuality in the circumcising community. This is because while sexuality is generally associated with biology, like gender, it determines social behavior and is often used as an instrument of social organization. In many societies sexuality is viewed as a disruptive force, which ought to be controlled in order to maintain social harmony.

Because sexuality defines human behavior, feminist theories of sexuality tend to locate it

within power dynamics of gender inequality. Feminists and human rights activists view the cultural practice of female circumcision as a violation of women's basic rights to good health, bodily integrity, freedom from torture, and self-determination and as a form of social control, sanctioned by a patriarchal society.

Health risks include injury, hemorrhage, infections, prolonged child labor, infertility, inability to experience sexual pleasure, and sometimes death, a violation of Article 5 of the Universal Declaration of Human Rights, which cautions against the subjection of anyone to torture or cruel and inhuman or degrading treatment. Female circumcision continues to attract international protests because of these risks. Where public policies against the practice have been instituted, the practice appears to decline. Yet the persistence of this practice in a number of communities where the practice is banned is indicative of how deeply rooted and complex the practice is and how difficult it is to transform attitudes.

—Mary Nyangweso-Wangila

Bibliography

- Wangila, Mary Nyangweso. *Female Circumcision: The Interplay between Religion, Culture and Gender*. Maryknoll, NY: Orbis Books, 2007.
- World Health Organization (WHO). "Female Genital Mutilation." Fact Sheet No. 241, May 2008, <http://www.who.int/mediacentre/factsheets/fs241/en/index.html>.

women's movement. Others took shape independently as the former European colonies in Asia and Africa gained independence in the aftermath of World War II. While there is no strict agreement among these many diverse groups about the experience of oppression, there has increasingly been recognition of the multiplicity of this experience.

Histories of Third World feminist movements have been overshadowed to a large degree by the dominance of the Western model of a movement based on separate and distinct waves. Although this is the most common classification

of feminism, these divisions do not apply to women's movements in Asia, Africa, or Latin America. Often seen as part of the third wave, Third World feminism has developed along radically different lines, and women in these regions have experienced oppression in vastly different ways.

The importance of race and class as factors situating oppression has historically been an integral part of non-Western feminist movements. Feminists in India and Africa, for instance, have relied on Marxist or socialist ideologies and the accompanying importance of class analysis to

locate and describe female oppression. In many former European colonies, women became involved in anticolonial independence movements throughout the 1960s and 1970s. In most cases, the experience of colonialism and the racism that is inherently a part of this represented the dominant oppression. Furthermore, the concerns that drove second-wave feminists were often not relevant for women outside Western political and economic structures. In India, for example, female infant mortality, child marriage, and the issue of dowry were among the major concerns of Indian women in the 1970s.

Postcolonial theorists such as Gayatri Chakravorty Spivak and Chandra Talpade Mohanty have increased debate about the nature of feminism in non-Western countries. Much like third-wave feminists, women in non-Western feminist movements have criticized the predominant whiteness of the feminist movement in North America and Europe. Another common critique is that Western feminism tends to homogenize or appropriate the experiences of Third World women and assume a level of oppression similar to that of the West. In reality, there is no universal experience of oppression. Likewise, the second-wave theory that gender must be the overriding source of oppression has very little relevance for women in the Third World. While this idea has long been recognized by Western women of color, it has historically characterized non-Western feminist movements.

—Caroline Butt

Bibliography

- Bulbeck, Chilla. *Re-Orienting Western Feminisms: Women's Diversity in a Postcolonial World*. Cambridge: Cambridge University Press, 1998.
- Gamble, Sarah. *The Routledge Critical Dictionary of Feminism and Postfeminism*. New York: Routledge, 2000.
- Mohanty, Chandra Talpade. *Feminism without Borders: Decolonizing Theory, Practicing Solidarity*. Durham, NC: Duke University Press, 2003.

Second Wave Feminism in Europe and the United States

In the 1960s and 1970s, women throughout Europe and the United States drew attention to issues that impacted women's lives and fought

to improve their status in the workplace, their homes, and their countries. Among these women's many concerns were equal pay, education, employment opportunities, access to contraception and abortion, improved health care and child care, an end to domestic violence and rape, and lesbian and gay rights. In large organizations and small informal groups, in small towns and large cities, women from diverse economic and cultural backgrounds identified the problems they faced in their everyday lives and united to overcome such challenges by changing laws and bringing new awareness to women's rights. Together, their efforts became the second-wave feminist movement.

Movement participants, advocates, and enemies called it second-wave feminism because when women fought for political and economic rights in the 1960s and 1970s, it was not the first time they had done so. During the late nineteenth century and early twentieth century, what are now known as the first-wave feminists in the United States and Europe fought most specifically for the right to vote, which would give them a real say in national government. American women and European women in nations such as Britain, Germany, the Soviet Union, and Sweden attained voting rights successfully by the early 1920s.

By the mid-twentieth century, even more European women had won voting rights, but European and American women also began to realize that voting rights were not enough. During World War II as men enlisted, women across Europe and the United States took on jobs formerly held only by men while also serving in militaries. After the war, as more and more women tried to balance both work and home, they experienced a tension between the new realities of their lives and the growing demand that they return to their traditional roles for women as wives and mothers. In 1949, French author Simone de Beauvoir's *The Second Sex* focused on the ways in which women historically had been subordinated to men. Little more than a decade later, New York housewife and writer Betty Friedan wrote *The Feminine Mystique* to explore why women—particularly American housewives—seemed to be so unhappy with their lives. These two books would become touchstones to American and European women in the years to come.

In the United States and in Europe, second-wave feminists divided into two general groups: liberal (or equal rights or welfare) feminists and radical feminists. Both groups of activists often had similar goals but took very different approaches to activism. Liberal feminists and socialists often employed direct action, lobbying congressional representatives or creating lawsuits to fight sexual harassment or unfair work conditions and launched similar efforts through legal channels to change laws or to create new ones. Radical feminists, meanwhile, believed in the need to change people's conceptions about women's social roles and rights before trying to change legal systems. Both groups of feminists engaged in consciousness-raising (CR) sessions in which women came together to talk about the problems they confronted and to explore ways to resolve them. All feminists also utilized protest tactics and similar activities to varying degrees. No matter their approach, however, all feminists shared the common goal of expanding women's rights and opportunities. Liberal feminists, such as those in the American National Organization of Women (NOW) or the Dutch Man-Woman Society, emphasized women's equality with men. Some more radical groups such as the French *Féministes Revolutionnaires* and the U.S. Redstockings asserted that women were better than men and deserved an appropriate social position to reflect that or argued that women must be separate from men entirely in order to achieve true equality.

In the United States, the civil rights movement offered many women their first experiences in social organizing. The New Left and student movements of the 1960s also influenced women in both the United States and in many European nations. In the United Kingdom and other European nations, working-class women often dominated the movement. In the United States, the second-wave feminist movement tended to be a middle-class phenomenon that often alienated women of color when white feminists privileged gender divisions over those of race or class.

Partly because of the diverse range of feminist opinions, tactics, and perceived goals, second-wave feminism generated a sizable opposition that included men and some women, such as the American Phyllis Schlafly, who fought suc-

cessfully against the long sought after Equal Rights Amendment to the U.S. Constitution. Although results were mixed, by the end of the 1970s and the early 1980s, women across the United States and Europe had gained ground. Women won access to a wider array of professional occupations than ever before and began to take on jobs previously held only by men. In the United States, newspapers did away with sex-segregated "Help Wanted" ads. Women's health facilities began to emerge across Europe and the United States, providing new venues in which women could gain knowledge about their bodies and their distinct physical needs and capabilities. Abortion remained a key item on feminist agendas, with many nations granting abortion rights to varying degrees.

—Tanya L. Roth

Bibliography

- Beauvoir, Simone de. *The Second Sex*. New York: Knopf, 1989.
- Friedan, Betty. *The Feminine Mystique*. New York: Norton, 2001.
- Hannam, June. *Feminism*. Harlow, UK: Pearson Education, 2007.
- Rosen, Ruth. *The World Split Open: How the Modern Women's Movement Changed America*. Rev. ed. New York: Penguin, 2001.
- Walters, Margaret. *Feminism: A Very Short Introduction*. New York: Oxford University Press, 2005.

Men's Movement

The men's movement emerged in the 1970s as a response to concerns raised by the feminist movement about men's roles in liberating women. As women pressed for equality, men who were sympathetic to their appeals wondered how they might help raise consciousness about prejudice and restrictions against women. The first wave of the men's movement, which is sometimes referred to as men's liberation, grew out of this line of questioning.

Early participants in this first wave dedicated their efforts to exploring how sexism injured both women and men. The idea, akin to a major tenet of the civil rights movement, was that prejudice begot prejudice and that men who enabled or allowed sexism in public or private were also hurting themselves. They believed that traditional

➤ IRON JOHN EXCERPTS

“The Fifties male . . . got to work early, labored responsibly, supported his wife and children, and admired discipline. Reagan is a sort of mummified version of this dogged type. This sort of man didn’t see women’s souls well, but he appreciated their bodies; and his view of culture and America’s part in it was boyish and optimistic. Many of his qualities were strong and positive, but underneath the charm and bluff there was, and there remains, much isolation, deprivation, and passivity. Unless he has an enemy, he isn’t sure that he is alive.”

“In the seventies I began to see all over the country a phenomenon that we might call the ‘soft male.’ Sometimes even today when I look out at an audience, perhaps half the young males are what I’d call soft. They’re lovely, valuable people—I like them—they’re not interested in harming the earth or starting wars. . . . But many of these men are not happy. . . . Ironically, you often see these men with strong women who positively radiate energy.”

Bibliography

Robert Bly, *Iron John: A Book about Men* (New York: Vintage, 1992), 2–3.

gender stereotypes, which depicted men as powerful and tough, damaged both women and men and that attacking such stereotypes might benefit both genders. By eliminating gender stereotypes, perhaps they could help both women and men fulfill their true potential.

Although the first wave of the men’s movement in the 1970s was a clear response to the women’s liberation movement, it also owed much of its energy to contemporary civil rights movements. The search by black Americans for equality and dignity reminded contemporaries that not all men were part of the machinery of oppression against which largely white feminists struggled. Similarly, the gay rights movement of the 1970s demonstrated that men who did not fit dominant gender stereotypes could demand recognition and dignity as men. Together, feminists, blacks, and gays challenged the existence and acceptance of the traditional image of men as stolid, oppressive, and powerful.

While men who belonged to the first wave of the men’s movement were sympathetic to and supportive of the feminist movement, men in the second wave sought to pursue a similar therapeutic course for men. The second wave, or mythopoetic phase, of the men’s movement called for men to return to their roots and, perhaps as a consequence, to reject many of the assumptions of feminism. Inspired in part by poet Robert Bly, who later wrote *Iron John* (1990), one of the movement’s founding texts, these men argued for the need to escape the emasculating influences and pressures that an overdominance of women supposedly created. These men also rejected the template for masculinity from the 1950s of the organization man who repressed his emotions. With a view to recovering their lost masculinity and emerging from the malaise of modern manhood, the mythopoetic men attempted to return to nature, sometimes entering forests and beating drums. They also discussed their problems with groups of like-minded men and sought a greater emotional authenticity.

In the mythopoetic men’s movement, some viewed feminism critically, believing that any gains by women, however slight, became evidence that men’s power was dwindling. But while the popular media made much of this aggressive antifeminist slant, most members of this second wave did not wholly adhere to it. By the mid-1990s, members of the second wave dis-



Men beating drums at one of the Wild Man Gatherings inspired by the writings of poet Robert Bly. (Mark Peterson/Corbis)

cussed more universal and community-oriented topics, such as how to be good fathers while shunning the angry white-men image. Groups such as the Christian Promise Keepers and leaders such as Minister Louis Farrakhan organized massive rallies of men with a view of demonstrating a commitment to unity, family responsibility, and racial equality. In that sense, the men's movement had thus come full circle, as contemporary members, like their first-wave counterparts, embraced diversity within their all-male gatherings and promoted the idea that men and women alike should be in touch with their emotions. In lieu of marching out to the forests to discuss their fears of feminism, members of the modern men's movement now openly post their concerns and hopes on Internet blogs and Web sites. The men's movement, however, seems inevitably linked to the rise of feminism and the sense of a challenged masculinity.

—Joel Silverman

Bibliography

- Adams, Rachel, and David Savran. "Introduction." In *The Masculinity Studies Reader*, edited by Rachel Adams and David Savran. Malden, MA: Blackwell, 2002.
- Clatterbaugh, Kenneth. "Literature of the U.S. Men's Movements." *Signs: Journal of Women in Culture and Society* 5, no. 3 (2000): 883–894.
- Faludi, Susan. *Stiffed: The Betrayal of the American Man*. New York: William Morrow, 1999.
- Kimmel, Michael. *Manhood in America: A Cultural History*. New York: Free Press, 1996.
- Schwalbe, Michael. *Unlocking the Iron Cage: The Men's Movement, Gender Politics, and American Culture*. New York: Oxford University Press, 1996.
- Wood, Daniel B. "The Men's Movement." *Christian Science Monitor* 88, no. 98 (1996): 1.

"Makeover" Men— Bodybuilding and Masculinity

Although bodybuilders share a history with the sideshow strongman that dates back at least to the nineteenth century, bodybuilding did not emerge as a popular sport until well after World War II. The changing fortunes of bodybuilding, and the associated shift of emphasis from strength to self-discipline and physical beauty,

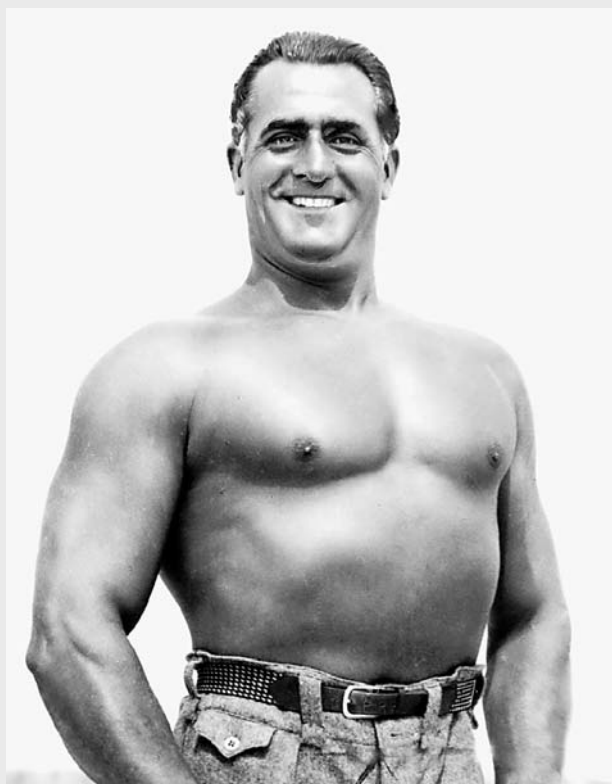
have informed our modern understanding of the meaning of masculinity. Yet bodybuilding has always been tied to the ethos of success and self-improvement.

The first man to gain recognition as a bodybuilder was Eugen Sandow, who at the turn of the nineteenth century was idealized by men and women alike as an ideal specimen of physical culture. During a period when Americans were relatively modest about public displays of the body, Sandow was able to publish nude and seminude pictures of his muscular body. Some modern scholars have suggested that Sandow's muscular nakedness was an early form of publicly available gay erotica. One might argue, in fact, that the entire culture of makeover men—indeed, the entire bodybuilding industry—stemmed in part from its homoerotic appeal. Sandow's example inspired Bernarr Macfadden, a tireless promoter of physical culture and health food who in 1899 published *Physical Culture*, the first of his many magazines.

In the United States, immigrants who were otherwise segregated from the mainstream culture could use bodybuilding as a physical makeover and attain a degree of acceptance. One example was Angelo Siciliano, an immigrant from Italy. In the 1920s, Angelo built up his body, changed his name to Charles Atlas, and after winning Bernarr Macfadden's 1922 award for "Most Perfectly Developed Man" advertised his Dynamic Tension mail-order program for bodybuilding with pictures of his own muscular body. Like Atlas, Bob Hoffman, who founded the York Barbell Company in 1938, promoted a lifestyle along with his product. Hoffman thought that strength, not just muscle, was key and this emphasis on power must have appealed to would-be muscle men who desired agency and not just corporal development.

Modern male bodybuilding owes much to the Canadian brothers Joe and Ben Weider, who founded the International Federation of Bodybuilders (IFFB) in 1946. Eschewing strength and emphasizing physical beauty, the Weiders were rivals to Hoffman's bodybuilding philosophy. Both camps advertised their version of masculinity through various magazines and competitions, but the Weiders, who focused on showmanship, performance, and sexual charisma, won out.

> CHARLES ATLAS



(Library of Congress)

It is difficult to overestimate the influence that Charles Atlas and his mail order business selling his Dynamic Tension exercise and bodybuilding method had on American culture from the 1920s on. Atlas tapped into the very American ideals of self-help, self-determination, and independence. The boy who bought Atlas's Dynamic Tension program as advertised in comic books was also buying into the rags-to-riches legend traced earlier in Horatio Alger's stories for boys in the nineteenth century. Like the boy in some of Atlas's advertisements, the purchaser hoped to transform himself from a 97-pound weakling into a strapping muscle-bound man. When Atlas presented cartoons in which a bully kicked sand in the face of the skinny boy, young people identified with the victim. Atlas amassed a fortune through his salesmanship, and he was cited in a whole range of popular culture artifacts, including songs, books, and movies. He even inspired President George H. W. Bush to liken Iraqi dictator Saddam Hussein to a bully kicking sand in America's face.

—Joel Silverman

During the Cold War, as masculinity became popularly equated with a more prominent and muscular shape and form, bodybuilding gained respectability. The Weiders and other entrepreneurs stoked the public interest in bodybuilding, and the movement spawned businesses such as gyms, health clubs, weightlifting equipment, health food products, and an underground trade in anabolic steroids. In the 1980s, major feature films featured muscle-bound actors such as Arnold Schwarzenegger (whom Joe Weider discovered and promoted in the 1970s) and Sylvester Stallone. With the election of the foreign-born Schwarzenegger to the governorship of California in 2000, bodybuilding culture had clearly entered the mainstream.

—Joel Silverman

Bibliography

- Benzie, Tim. "Judy Garland at the Gym—gay magazines and gay bodybuilding." *Continuum: Journal of Media & Cultural Studies* 14, no. 2 (2000): 159–170.
- Chapman, David L. *Sandow the Magnificent: Eugen Sandow and the Beginnings of Bodybuilding*. Urbana: University of Illinois Press, 1994.
- Fair, John D. *Muscle Town USA: Bob Hoffman and the Manly Culture of York Barbell*. University Park: Pennsylvania State University Press, 1999.
- Stokvis, Ruud. "The Emancipation of Bodybuilding." *Sport in Society* 9, no. 3 (2006): 463–479.
- Toon, Elizabeth, and Janet Golden. "'Live Clean, Think Clean, and Don't Go to Burlesque Shows': Charles Atlas as Health Advisor." *Journal of the History of Medicine and Allied Sciences* 57, no. 1 (2002): 39–60.

Comic Books and Masculinity

Comic books, despite being unfairly characterized as kids' stuff by some, have been recognized by recent historians and other social science scholars as treasure chests filled with cultural, social, political, and gendered meaning. Like other historical artifacts, comic books tell us about the time in which they were created and generally reflect the prevailing attitudes and ideals of society at large. Specifically, notions about the qualities that make a "real man" changed over the twentieth century and, subsequently, so have male superheroes in U.S. comic books.

Because comic book creators are in the business of making successful products, they want their characters to reflect the sense and mood of the time. The most successful superheroes are those whom readers can identify with personally. Many readers, especially the younger ones, look for qualities in a superhero that they can relate to or that they wish to emulate. For many young men and boys in the twentieth century, comic books were one of the first and most accessible places to encounter different masculinities and reimagine their own masculine identity, and thus these texts represent an extraordinary place to explore the historical portrayal, construction, and interpretation of masculinity.

Focusing on the 1960s, there were strong challenges against prevailing notions of masculinity in comic books, just as there were in America at large. During these years of political and social turmoil, the dominant masculinity of the 1940s and 1950s—white, heterosexual, self-confident, unquestioningly patriotic, and law abiding—came under attack and changed in ensuing decades. In the 1960s, just as a new generation of men and women questioned authority, fought the establishment, and embraced social and racial equality, a new generation of superheroes became more liberal. Superheroes such as the Green Arrow and the Silver Surfer cared as much about social inequality as they did about defeating rampaging monsters. This was in part a reflection of the fact that the young comic book readers of the 1940s and 1950s had grown up and matured. The change in the age of readers was evident in the new popularity of superheroes on college campuses in the 1960s. A 1966 issue of *Esquire* reported that an unprecedented amount of mail originating from college campuses was delivered to the Marvel office, that 50,000 college students had paid to become Marvel fan club members, and that Stan Lee's lecture at Bard College drew more attendance from students than did one by Dwight D. Eisenhower. It logically followed that as comic book readers matured, so too did their favorite superheroes.

Superheroes challenged the consensus of optimism and confidence, established in the pre-Vietnam War era, in the American virtues of anticommunism, corporatism, consumption, domesticity, and middle-class social aspirations.

Marvel Comics was the most successful at creating this kind of narrative, crafting new heroes such as the Fantastic Four, Thor, Spider-Man, the Incredible Hulk, and Iron Man, who reflected the uncertainty of Cold War America. Ambiguity, self-doubt, alienation, and imperfection came to define the superheroes of the 1960s and 1970s. Readers were presented with the irony of a superhero who could not always accomplish what he set out to do, despite his superpowers. For example, Spider-Man, the Marvel hero, could not save his uncle Ben or his girlfriend Gwen Stacy from death despite his superpowers and heroic deeds. This frustration echoed the feelings of many American men after their country's loss in Vietnam. Furthermore, as mutants, many of these superheroes grappled with feelings of doubt, self-loathing, and isolation with which adolescent readers could relate.

The 1970s and 1980s witnessed a reaction against the uncertainty of the previous decade with the introduction of the ultraviolent antihero in comic books. Amid political scandals, right-wing reactions to the 1960s, and the ending of the conflict in Vietnam, superheroes changed into something much harder, more violent, and disillusioned. The Boy Scout-like characters such as Superman, who represented the once-dominant masculinity of the 1930s and 1940s, dropped in popularity to the new men of violence and ripped bodies typified in characters such as Wolverine and the Punisher.

Susan Jeffords argues that representations of Vietnam in mass culture during the 1970s and 1980s became emblems for the remasculinization and regeneration of patriarchy in the United States in the face of challenges to older masculine ideals. Many American men were fed up with the ineffectiveness of their government and political figures and blamed the loss in Vietnam on a feminized federal government, seemingly unwilling to do everything necessary to win wars. Film also reflected these sentiments. Just as movie audiences embraced the character of Rambo for giving voice to the frustrations with government and society, so too did readers embrace a new breed of superheroes that embodied the remasculinization of America. Marvel's own fighting machine, the Punisher, actually predates Rambo by eight years. These and similar

characters, often returned Vietnam veterans, were social outcasts and loners who bypassed authority and law to exact their own brand of street justice against criminals. Visual depictions of the male body in comic books also changed dramatically, reflecting this remasculinization. With muscles as external signifiers of masculinity, male superheroes were increasingly drawn as hypermasculinized in the 1970s and 1980s.

Ultimately, superhero comic books show us that masculinity is a malleable cultural marker that changes over time. Through their pages we see what values, emotions, and images defined what it meant to be a man at different moments during the twentieth century.

—James Sherman

Bibliography

- Jeffords, Susan. *The Remasculinization of America: Gender and the Vietnam War*. Bloomington: Indiana University Press, 1989.
- Kimmel, Michael. *Manhood in America: A Cultural History*. New York: Free Press, 1996.
- McCloud, Scott. *Understanding Comics: The Invisible Art*. New York: Paradox Press, 1993.
- Rotundo, Anthony. *American Manhood: Transformations in Masculinity from the Revolution to the Modern Era*. New York: Basic Books, 1993.
- Wright, Bradford. *Comic Book Nation: The Transformation of Youth Culture in America*. Baltimore: Johns Hopkins University Press, 2001.

Women in Islamic Societies, Post-1945

The status of women in Islam is defined by the history and culture of the greater Muslim world and the teachings of Islam in its various texts and their interpretations. Some Islamic scholars argue that the Quran (holy book of Islam) supports the idea of Muslim women's religious and moral equality to that of men. However, Sharia (Islamic law), the official law of many Islamic countries, establishes significant differences between men and women in terms of their respective rights, duties, and obligations. Nonetheless, some countries with sizable Muslim majorities have given women substantial rights in their constitutions while maintaining cultural restrictions on women's behavior and status. Many conservative Islamic scholars (among them Islamic funda-



Women wearing burqas on a street in Istanbul, Turkey. (Tinou Bao)

mentalists) argue that the differences between men and women as consecrated in Islam are timeless and not open to interpretation. In contrast, many liberal Muslims and Muslim feminists maintain that more progressive interpretations, based on older analyses of the Quran, can reconcile Islam with the liberation of women in the Muslim world.

The history of the Middle East, North Africa, and Central Asia has been shaped by centuries of the admixture of the religious tenets of Islam with regional cultures. In the decades following the end of World War II, in the wake of decolonization and the emergence of multiple nation-states in the Near East and Central Asia, many Muslim-majority nations found it expedient to offer women the franchise and greater civil rights, in part to foster suitable diplomatic relations with the West. Building on the modernizing example of Turkey earlier in the century, countries such as Iraq, Egypt, and Iran focused their nationalist energies on creating a secular state bent on modernization while adapting Western ideologies to their own ends. However, while some of these countries did allow women some level of civil rights according to their secular constitutions, women often were nonetheless

constrained to follow Sharia in the domestic sphere of family and overall daily life, in accordance with long-established local and regional cultural norms.

The new secularizing tendencies offended many traditional Muslims and religious leaders; one result was the emergence of reactionary forms of Islamic fundamentalism, which saw these secularizing values as a polluting influence on the lands of Islam. Many Muslim women found themselves constrained both by nationalist secularizing forces that reinforced local customs (and their patriarchal arrangements) as well as by Islamic fundamentalists who sought to install Sharia and its resulting constraints on the civil rights of women. Forms of public shaming and abuse, including beatings, remained common as punishment for adultery, wearing clothing deemed immoderate, or appearing in public without a male chaperone. This unofficial enforcement of gender role norms often was tolerated by government officials even when deemed illegal by the state legal system.

In more fundamentalist states, Sharia inflects much of the legal system. For example, Saudi Arabia and Iran maintain specific religious courts for civil law matters as part of their legal codes. Legislation derived from Sharia also has been instituted in countries such as Afghanistan (most recently under the Taliban), Libya, and Sudan to a lesser extent. Other countries, such as the Palestinian territories, Egypt, and Algeria, while not instituting Sharia officially as part of their legal and penal codes, tend to look the other way to its unofficial practice, effectively tolerating it as a characteristic of regional Islamic culture.

Islamic scholars, academics, and Muslim feminists are currently engaged in a debate concerning the status of women in Islam. Many conservative scholars in countries such as Iran, Saudi Arabia, and Pakistan advocate maintaining Sharia and cultural norms in terms of modest dress (such as *habibs*, *chadors*, or *burqas*), deference to the husband, legal status, and sexual segregation. However, many liberal Muslims and Muslim feminists advocate a more progressive stance and interpretation of Islamic law and cultural standards, allowing women greater freedom, access to education and employment, and increased legal and political representation.

➤ HONOR KILLINGS AND MUSLIM WOMEN IN EUROPE

A common problem in European Muslim communities, as they become increasingly alienated from greater European society and economically and socially marginalized, is the influence of Islamic fundamentalism and its associated social constraints for Muslim women. According to various European law enforcement agencies, women's activist groups, and moderate Islamic organizations, in recent years growing numbers of Muslim women are killed and/or mutilated to uphold their family's honor in accordance with cultural and religious traditions from their countries of origin. Such cases typically involve an attack on a Muslim woman by a close relative, typically a brother or father angered by her refusal to accept a forced marriage or her insistence on leading a European lifestyle in denial of her Muslim heritage.

According to official German police, newspapers, and activist organizations, there were approximately eight episodes of honor killings in Berlin in 2005 and approximately 47 killings of Muslim women in Germany within the previous six years. It is estimated that tens of thousands of European-born Muslim women are forced into unwanted marriages, often to much older men, in their family's country of origin to ensure a proper Muslim family unit in accordance with cultural and religious traditions. Refusal to submit to such marriages has the potential of resulting in an honor killing at the hands of the woman's own relatives. Britain, France, and other European countries' with sizable communities of Muslim immigrants are also plagued by the problem of honor killings, associated with the growing problem of Islamic fundamentalism in these countries. This also places severe constraints on Muslim women living in the liberal democracies of Europe that mirrors the lot of Muslim women in much of the Middle East, North Africa, and Central Asia.

—Abraham O. Mendoza

In spite of these disagreements in the Muslim world, many women have managed to achieve positions of political power and influence, most famously Benazir Bhutto who had served two terms as prime minister in Pakistan and continued to be a power broker until her assassination in 2007.

In spite of calls for progressive reform, women in Islamic societies continue to exist in an environment hostile to change, with the potential for honor killings, domestic violence, enforced dress codes, and severe constraints on civil liberties, particularly in Saudi Arabia, the Palestinian territories, and Iran. Many of these patriarchal attitudes and customs also shape the experience of women in Muslim diaspora communities throughout the West, such as in France, Germany, and Britain. Despite greater freedom under the host countries laws, women of the Islamic diaspora remain vulnerable to the cultural constraints of their immigrant communities, imbued with patriarchal values stressing the subservience of women to men.

—Abraham O. Mendoza

Bibliography

- Aitchison, Cara, Peter Hopkins, and Mei-Po Kwan, eds. *Geographies of Muslim Identities: Diaspora, Gender, and Belonging*. Burlington, VT: Ashgate, 2007.
- Anwar, Etin. *Gender and Self in Islam*. New York: Routledge, 2006.
- Mahmood, Saba. *Politics of Piety: The Islamic Revival and the Feminist Subject*. Princeton, NJ: Princeton University Press, 2005.

Transgender

The term “transgender,” in popular usage only since the early 1990s, is an umbrella term describing people who do not identify with the binary gender positions of man or woman. Drag kings, drag queens, transsexuals, intersex people, cross-dressers, butch lesbians, effeminate gay men, and more may all be considered transgender people. Although some of the gender identities included in this list are linked to sexual desires (such as butch lesbians and effeminate gay men), a transgender identity does not imply a particular sexual orientation; transidentified people may name their sexual desires as heterosexual, homosexual, bisexual, asexual, or something else.

As an identifying term, “transgender” is an alternative to “transsexual,” which more specifically designates someone who medically transitions to another sex. “Transsexual” is often understood as a pathologized term due to its

emergence in the 1950s from psychological discourses of gender identity disorder. While transsexuals fall under the transgender umbrella, calling oneself “transgender” often signals a more radical gender politics of identifying as a gender between or outside of male and female, while “transsexual” often signals a transition from one stable, coherent gendered position to “the other,” affirming a binary conception of gender. Therefore, some people who have medically transitioned (thus fitting the technical definition of transsexual) may nevertheless identify as transgender, rejecting the pathologized connotation of transsexual. The terms “transgender” and “transsexual” may thus refer to very similar embodiments, even if they do not refer to similar gender politics.

Because the definition of “transgender” overlaps with that of “transsexual,” the history of transsexuality informs our current understanding of transgender. Western transsexual and transgender identities emerged in the twentieth century as a result of changes in the understandings of sex along with developments in endocrinology and plastic surgery. The possibility of sex change allowed by these developments was popularized for people in the United States through media accounts of Christine Jorgensen’s sex reassignment in Denmark in 1952. Having newly discovered these technologies, people wrote letters to mental health and medical professionals detailing their cross-gender identifications and requesting sex reassignment. Sexologist Harry Benjamin received many of these letters and directed a number of transsexuals to sympathetic specialists.

Benjamin subsequently wrote *The Transsexual Phenomenon* (1966), outlining a portrait of transsexuality read by therapists and by those seeking transition. Thus armed with the transsexual life history sure to get them the surgeries they desired, transsexuals repeated this narrative in the 1970s and 1980s to service providers. Clinicians remarked on the accuracy of Benjamin’s profile of transsexuals, noticing that many of their patients shared similar stories of feeling trapped in the wrong body from a very early age and of having asexual or heterosexual desires post-transition. This narrative was codified, starting in 1980, in the American Psychiatric Associa-

tion's *Diagnostic and Statistical Manual (DSM)* under "Gender Identity Disorder." This diagnosis remains, although many now recognize that there are multiple transgender experiences.

The newer term "transgender" was first used by Virginia Prince in the 1980s. She used the term to distinguish between transvestites (now more appropriately called cross-dressers) who occasionally wear clothing of the other sex and transsexuals who undergo bodily modification to live as the other sex. Prince used the term "transgender" as a noun to describe, for example, someone who lives in the role of the other sex without undergoing bodily modification.

However, the meaning of "transgender" changed when activist Leslie Feinberg used the term in the pamphlet *Transgender Liberation: A Movement Whose Time Has Come* (1992). Feinberg used the term as an adjective to establish a political alliance among all people who were opposed to the binary gender system. Susan Stryker, an important transgender theorist and historian, points out in her 2006 essay "(De)Subjugated Knowledges" that the term "transgender" grew in popularity in the early 1990s to describe a variety of gendered embodiments and expressions too complex to be accounted for by a binary model of sex and gender.

Although many people still find comfort in the normative forms encouraged by psychologists in the 1980s, some people are choosing to inhabit genderqueer and other spaces that defy easy categorization, opting to only take hormones, to have certain surgeries but not others, or to simply transition socially, forgoing hormones and surgeries altogether. In short, some are choosing to craft incoherently gendered bodies. In the context of these varied embodiments and identities, transgender theory is an emerging body of intellectual work drawing its lineage from feminist and queer theory, expanding on theoretical themes from these fields by attending to the transgender phenomena that question conventional alignments of sex, gender, and sexuality.

—Nicholas L. Clarkson

Bibliography

American Psychiatric Association. *The Diagnostic and Statistical Manual of Mental Disorders IV-*

LOU SULLIVAN

According to Susan Stryker's essay "Portrait of a Transfag Drag Hag," Louis G. Sullivan, born female, had no connections to other female-to-male (FTM) transpeople living in Milwaukee in the 1970s. Instead, he found a sense of community among drag queens and gay activists and referred to himself as a "heterosexual female transvestite" to account for his attraction to men and his masculine presentation. After moving to San Francisco, Sullivan attempted to medically transition to male in 1976 but changed his mind. He spent the next three years overcoming internalized misogyny by participating in feminist consciousness raising and learning automobile maintenance. When he transitioned in 1979, he spoke with psychologists, challenging their idea that only heterosexual transpeople could successfully transition. He also published a pamphlet titled *Information for the Female-to-Male Cross-Dresser and Transsexual* and established an FTM support and advocacy group in San Francisco.

Sullivan celebrated his newly embodied gay male identity in 1980 by visiting gay bathhouses. At this point, the AIDS epidemic had been affecting the community for a few years but was not yet well understood. Sullivan died of AIDS-related complications in 1991 at the age of 39, but his activism laid some crucial groundwork for FTM community organizing and for transhomosexuals seeking transition.

—Nicholas L. Clarkson

Bibliography

Stryker, Susan. "Portrait of a Transfag Drag Hag As a Young Man: The Activist Career of Louis G. Sullivan." In *Reclaiming Genders: Transsexual Grammars at the Fin de Siecle*, edited by Kate More and Stephen Whittle. London: Cassel, 1999.

Sullivan, Louis. *Information for the Female-to-Male Cross-Dresser and Transsexual*. San Francisco: Janus Information Facility, 1980.

TR. Washington, DC: American Psychiatric Association, 2000.

Benjamin, Harry. *The Transsexual Phenomenon*. New York: Julian, 1966.

Feinberg, Leslie. "Transgender Liberation: A Movement Whose Time Has Come." In *The Transgender*

- Studies Reader*, edited by Susan Stryker and Stephen Whittle. New York: Routledge, 2006.
- Meyerowitz, Joanne. *How Sex Changed: A History of Transsexuality in the United States*. Cambridge, MA: Harvard University Press, 2002.
- Stone, Sandy. "The Empire Strikes Back: A Posttranssexual Manifesto." In *The Transgender Studies Reader*, edited by Susan Stryker and Stephen Whittle. New York: Routledge, 2006.
- Stryker, Susan. "(De)Subjugated Knowledges: An Introduction to Transgender Studies." In *The Transgender Studies Reader*, edited by Susan Stryker and Stephen Whittle. New York: Routledge, 2006.

Postwar Changes in Sexual Mores in the United States

The mid-twentieth century (1940s to 1960s) in the United States is sometimes characterized by political and religious conservatives as a period of high moral virtue, a period when everyone adhered to strict rules about sex, and as a period when sexual behavior occurred only in monogamous heterosexual relationships between two married people of the same race and only for the purpose of procreation. While this may reflect how sexuality was presented (or sanitized) on popular television shows or in the Hardy Boys series of detective novels for teenagers of the 1950s, it has little other validity. Yet as these cultural representations would suggest, in the mid-twentieth century talk about sexual activity was not as common as in more recent decades. Many factors, such as the postwar vogue for psychoanalysis, the publication of the Kinsey Reports, and the 1960 introduction of the "Pill" as well as emerging demographics that fueled the youth rebellion of the 1960s encouraged the ensuing sexual revolution of the 1960s and 1970s. In subsequent decades talk about sexuality and assumptions of the importance of such openness became more prevalent in everyday life and in media.

Other than increased honesty in talking about sexual behavior, however, were there major differences in sexual behavior? As was the case with masturbation and petting, premarital intercourse among adolescents was common in the mid-twentieth century, though regularly denied. Teen birth rates reached a high in the mid-twentieth century that has not been equaled

since. In 1957, 97 out of every 1,000 girls between the ages of 15 and 19 gave birth. That number has declined since and was just 41.2 births out of every 1,000 in 2004. The high birth rates among teenagers in the mid-twentieth century were masked by several behaviors that were no longer commonplace by the end of the twentieth century. First, the average age of first marriage was substantially lower in the mid-twentieth century. The lower age at first marriage often masked premarital intercourse by legitimizing it: unmarried adolescent women who became pregnant often married their sexual partner, covering up their illegitimate child-births. For those who could not or would not marry the father, rehabilitation was often the result: the child was placed for adoption, and the woman was encouraged to start over, giving the impression that she had never had a child.

Another illustration of changing attitudes toward sex and social taboos is the change in frequency of cohabitation. Reflecting a genuine lifestyle revolution, the number of cohabiting couples increased by almost 1,000 percent between 1960 and 2005. In the same ways interracial sexual relationships, although still subject to public opprobrium, are more common, legally sanctioned, and presented in the media. Changes have been even more dramatic in same-sex relationships. While underground homosexual cultures thrived in population centers such as Chicago and New York, in the mid-twentieth century almost all public discussion of homosexuality framed it as a disorder or sin, and in many places it was against the law. Attitudes toward homosexuality began changing in the 1960s, as the civil rights and women's liberation movements encouraged the formulation of the gay liberation movement in the late 1960s. After many protests, the scientific community stopped considering homosexuality a disorder in 1974, when it was officially removed from the list of recognized psychological disorders by the American Psychological Association. While homosexuality is still marginalized in the United States, attitudes toward and laws regulating homosexuality have changed since the mid-twentieth century. For instance, when asked in 1973 whether they thought sex between two adults of the same sex is wrong or not, 73 percent of adult Americans

said that it was “always wrong,” while only 11 percent said that it was “not wrong at all.” In 2004, 58 percent said that it was “always wrong”; 32 percent said that it was “not wrong at all.”

What were the origins of the sexual revolution? One possible factor was the increase in knowledge about sex and sexual behavior, particularly with the publication of the Kinsey Reports. Another major factor leading to changing sexual mores was the development of the birth control pill in 1960. The development of a reliable and easily accessible form of birth control for women reduced the risk of pregnancy, alleviating the major concern that women held about having premarital and extramarital sex.

The pill offered foundational support for a slow diminution of the double standard in sexual behavior between men and women. In the mid-twentieth century men were expected to be sexually aggressive and promiscuous; women were not. While popular marriage manuals might indicate otherwise, even in marriage women were supposed to submit to their husbands, lessening the possibility of their own sexual fulfillment. The sexual revolution of the 1960s was, in part, a response to this double standard. Many of the changes in social mores that took place in the latter half of the twentieth century were realignments of standards for men and women, bringing the expectations of sexual behavior for women in line with those for men. Even so, this double standard of sexual aggression has not completely disappeared. It is still expected in many parts of the United States that men will be more sexually aggressive than women. A 1991 survey of junior high school students found that a majority of students believed that a woman was “asking” to be raped if she wore a seductive outfit on a date; 80 percent believed that married men had a right to force their wives to have sex with them. It also remains the case in some regions of the United States and among some subcultures that sexually active women are denigrated while sexually active men are praised.

While the United States remains more sexually restrictive than many other developed countries, U.S. culture is more open to frank discussions of sexual behavior in the early twenty-first century than in the mid-twentieth century.

—Ryan Cragun

➤ THE KINSEY REPORTS

Why did attitudes toward sex change between the mid-twentieth century and the late twentieth century? One possible factor leading to these changes was the increase in knowledge about sex and sexual behavior. One of the first U.S. scientists to examine sexual behavior was Alfred C. Kinsey, whose research team interviewed thousands of Americans about their sexual history. While some of his findings and methods have since been challenged, Kinsey's research revealed behaviors generally denied by society in the 1930s and 1940s. Prior to his investigations, studies of human sexual behavior were not widely available in the United States. Kinsey's publications on sexual behavior among men (1948) and women (1953) prepared the way for a sexual revolution in the 1960s. Social mores in the United States, however, continue to hamper the spread of such knowledge. A recent study quizzed American adults on basic facts about biology and sexual behavior. The majority flunked. Knowledge is available in the twenty-first century, but access to it remains difficult due to restrictive social norms even after the sexual revolution.

—Ryan Cragun

Bibliography

- Coontz, S. *The Way We Never Were: American Families and the Nostalgia Trap*. New York: Basic Books, 1992.
- Davis, James Allan, and Tom W. Smith. *General Social Surveys, 1972–2006*. Storrs: Roper Center for Public Opinion Research, University of Connecticut, 2007.
- Kinsey, A. C., W. B. Pomeroy, and C. E. Martin. *Sexual Behavior in the Human Male*. Philadelphia: W. B. Saunders, 1948.
- Kinsey, A. C., W. B. Pomeroy, C. E. Martin, and P. H. Gebhard. *Sexual Behavior in the Human Female*. Philadelphia: W. B. Saunders, 1953.

History of Gay/Lesbian Rights Movement

The 1969 Stonewall Riot marked the beginning of a national and international gay and lesbian rights movement. On Friday, June 27, 1969, New York City police officers arrived at the Stonewall

► THE INTERNATIONAL GAY/LESBIAN RIGHTS MOVEMENT

The modern gay and lesbian rights movement has always been international. It first began in 1897 when the Scientific-Humanitarian Committee was founded in Berlin. This group began the trend of homosexual groups identifying themselves with secularization, science, and democracy. This early German effort, though, collapsed during the Holocaust when homosexuals were persecuted and executed by the German National-Socialist (Nazi) Party. After World War II, homosexuals faced authoritarian regulations of moral and sexual behavior in both communist and democratic countries. Despite these challenges, in the 1950s small political groups formed in Los Angeles, Paris, and Copenhagen. The contemporary movement, however, owes its formation more directly to the 1960s and 1970s student-based New Left movement. In places such as Japan, North America, Western Europe, Mexico, and Czechoslovakia, homosexuals utilized the New Left's critiques of the family and sexual repression to promote gay liberation and lesbian feminism. As part of this effort, the International Lesbian and Gay Association (ILGA) formed in 1979. ILGA has successfully lobbied Amnesty International to recognize lesbians and gay men as prisoners of conscience and has also lobbied the World Health Organization to remove homosexuality from its lists of mental diseases, in addition to publishing three Pink Books that describe the situation of homosexuals and offer proposals for improvement. Although homosexuals still face discrimination, today cities across North and South America, Europe, Africa, and Asia have gay and lesbian advocacy organizations.

—Kassi Klinefelter

Inn, a Greenwich Village gay bar. Throughout the 1960s, police raids on gay bars were common. On that night, though, the bar's occupants fought back. As police officers removed the bargoers, a crowd assembled outside and began taunting the cops. Then after a lesbian woman struggled with the officers, beer bottles were thrown. Next a parking meter was used to knock down the bar's door. Finally, someone lit the building on fire. These events sparked a

weekend of rioting throughout Greenwich Village and the formation of the Gay Liberation Front (GLF) in the following weeks. More importantly, the Stonewall Riot led homosexuals across the country to begin organizing. In commemoration of these events, the first gay pride parade was held on Stonewall's one-year anniversary. A new era of gay and lesbian activism began. However, these events evolved from 20 years of localized efforts.

Two prominent early groups promoting homosexual rights in the post-World War II era developed in California. In 1950, five men formed the gay rights organization the Mattachine Society in Los Angeles. For its first three years, the Mattachine, a secret society, fought for the recognition of homosexuals as a social minority with a unique identity. However, in 1953 the organization democratized its membership in response to allegations of communism. These events eventually led to the resignation of three of the founding members and a new direction for the Mattachine Society. Now under the leadership of Harold (Hal) Call, the organization moved its headquarters to San Francisco, started a monthly magazine, the *Mattachine Review*, and began promoting homo-hetero sameness.

The Daughters of Bilitis (DOB), formed in 1955, is the first known American lesbian emancipation organization. Like the Mattachine Society, the DOB underwent early changes. The San Francisco organization first suggested by Filipina Rose Bamberger was a lesbian secret social organization. Less than a year after its formation, it was restructured. Members Phyllis Lyon and Del Martin pushed for political activism. This shift led four of the original eight members to leave the DOB. At the end of 1956, the DOB published the first issue of the *Ladder*, its monthly newsletter (published until 1972). Like the Mattachine Society, the DOB's newsletter provided it national influence. For instance, in 1956 one of the Mattachine chapters had only five members, while the *Mattachine Review* had more than 500 subscribers. The Mattachine Society and the DOB both encouraged the assimilation of homosexuals into mainstream American society. However, the two organizations differed in their approach to group membership. The Mattachine Society was open to anyone concerned with ho-

mosexual civil rights, whereas the DOB was designed primarily for lesbians.

In the 1960s, homophile advocates, as they called themselves, promoted increased activism. Frank Kameny and Barbara Gittings, two homophile leaders, argued that activists should move beyond education and begin challenging unjust laws and public policies denying homosexuals equality. The 1960s protest movement helped the gay liberation movement spread. Some radical activists joined Black Panther marches. Additionally, the movement adopted elements of the feminist critique of American society. Their efforts led to dialogues with the Protestant clergy and the medical establishment in addition to legal challenges and public demonstration. However, the 1960s homophile activists left their biggest imprint by spreading an alternative view of homosexuality through the news coverage of their activities. Homophile activists, the Mattachine Society, and the DOB's activities provided the critical backdrop for a national and international gay liberation movement, initiated by the Stonewall Riots.

Since the Stonewall Riots, homosexuals worldwide have organized, fought, and won important civil rights improvements. Within four years of the riots, there were almost 800 gay and lesbian American organizations, and by the end of the 1970s, thousands existed. Major achievements include the lifting of the Civil Service Commission's ban on gay employees, the removal of homosexuality from the American Psychiatry Association's list of mental disorders, and the recognition of civil unions for same-sex couples



Members of the Stonewall Veterans Association ride in a car up Fifth Avenue during the 30th Annual Lesbian and Gay Pride March on June 27, 1999, in New York. (AFP/Getty Images)

in Vermont and benefits for domestic partners in nearly 100 cities and from numerous large corporations.

—Kassi Klinefelter

Bibliography

- Boyd, Nan Alamilla. *Wide Open Town: A History of Queer San Francisco to 1965*. Berkeley: University of California Press, 2003.
- D'Emilio, John, and Estelle B. Freedman. *Intimate Matters: A History of Sexuality in America*, 2nd ed. Chicago: University of Chicago Press, 1988.
- Gallo, Marcia M. *Different Daughters: A History of the Daughters of Bilitis and the Rise of the Lesbian Rights Movement*. New York: Carroll and Graff, 2006.

■ Introduction: Families and Family Planning

Family structure and family planning have become issues of global concern in the late twentieth and early twenty-first centuries as they intersect with international immigration and an increasing economic disparity. Moreover, family structure in the developed world has evolved into a more inclusive definition. Trends such as gay marriage adoption poli-

cies and the absence of children from households altogether have pushed the definition's boundaries. However, this dynamic has led to debates between traditionalist and liberal definitions of the family.

Global exponential population growth since 1945 has led to an increased level of transnational efforts, through the United Nations or foreign

aid, at setting population limits via family planning. The goal is to limit population growth and its detrimental effects on the environment, the international economy, international labor flows and accompanying problems, and poverty levels in the developing world (e.g., sub-Saharan Africa). In much of the developed world, the reduction in size of middle-class family households has resulted in public debates over the core ethnic population not reproducing in adequate numbers to sustain the welfare state and the subsequent necessity for allowing larger numbers of immigrants (mostly people of color); this discussion is carried out often in extremely coded, frequently racist, anti-immigrant rhetoric by politicians (e.g., in Germany, Britain, and France).

Religious organizations and more conservative sectors of the population in the West take issue with liberal state policies for family planning, which they interpret to advocate promiscuity (leading to the promotion of abstinence-only rhetoric as an alternative to sex education) and abortion as a means of contraception, particularly in the United States. However, in countries such as India and China, both with populations that have surpassed one billion, the institution of state policies on family planning has been deemed necessary to stem the potential chaos of runaway growth on their fragile economies. Nevertheless, instances of forced sterilization in India and the one-child policy in China have been heavily criticized for their alleged infringement on individual reproductive rights.

In contrast, couples making a conscious decision not to have children at all (often opting for a pet) or adopting have increased in much of the developed world as an alternative to the traditional family in an attempt, in part, to offset population growth. Nevertheless, alternative familial arrangements such as adoption of children by gay families have been of significant controversy in the West in relation to the polemic over gay marriage, particularly in the United States.

—*Abraham O. Mendoza*

Structural Shifts in U.S. Families since 1945

While the nuclear family was already the norm in the United States in the mid-twentieth cen-

tury, the structure of families since then has changed considerably. One of the more notable ways is in family timing. The average age at first marriage in 1950 was 22.8 for men and 20.3 for women; in 2003 the ages were 27.1 for men and 25.3 for women. This later age of first marriage means that there has been a substantial increase in the proportion of women under 40 years of age who have never married. But there has also been a dramatic increase in the percentage of women over 40 years old who do marry. Women over age 35 at the end of the twentieth century are significantly more likely to marry than were women over age 35 in the 1950s. Families are still forming; they are just doing so later.

Another effect of the later age at first marriage is fewer children. Women in the 1950s and 1960s had, on average, between three and four children. By the end of the twentieth century, women in the United States had, on average, fewer than two children. The proportion of children born to unmarried women increased by 10 percent in the 1980s alone, although almost all of that increase is accounted for by the increase of children born in cohabiting households. Families are also less likely to include both parents in the household. Between 1960 and 1986, the total number of children growing up with only one parent more than doubled, from 12 percent to 25 percent of all children under age 18. At the end of the twentieth century, half of all children spent at least some time in a single-parent household. In light of this change, it is somewhat surprising that the percentage of children in the United States who live with neither parent has declined since 1940. In 1940, 10 percent of children lived with neither parent; only 4 percent of children in the United States at the end of the twentieth century lived with neither parent.

Another surprising contrast to the higher rates of children raised in single-parent homes is the fact that both men and women spent more time with their children at the end of the twentieth century than they did in the mid-twentieth century. In 2000 men spent almost ten hours more with their children per week than did men in the 1970s; women spent about four hours more per week with their children. Additionally, due to longer life spans, close relationships with extended families were more common at

the end of the twentieth century than in the mid-twentieth century; 78 percent of adults consider their relationship with their grandparents close, and most adults talk with their parents at least once a week.

Several factors account for why children are less likely to have two parents while growing up. The first factor is, of course, divorce. Divorce rates tripled between 1960 and 1982. The 1982 rate continued through the end of the twentieth century: 50 percent of first marriages (and 60 percent of second marriages) end in divorce within 40 years. At the same time, rates of cohabitation have increased. In 1960, only 439,000 couples (0.5 percent of the total U.S. population) lived in a nonmarital opposite-sex household. By 2006, the number of cohabiting couples increased to 6 million—if you include same-sex unmarried couples (4 percent of the total U.S. population)—to become the majority experience among cohorts of marriageable age. Furthermore, a majority of people cohabited before marriage by 2000. In 2005, the percentage of households made up by married couples dropped below 50 percent, compared to 84 percent in the 1930s.

Many factors play a role in these changes. One of the biggest is the decline in real wages since 1972, when they hit their postwar peak. Real wages increased through the late 1940s to the early 1970s but declined from the 1970s through the mid-1990s, meaning that workers made less money relative to inflation at the end of the twentieth century than they did immediately after World War II. The decline in real wages forced many middle-class families that wanted to maintain their middle-class lifestyle to transition from a single-income family to a dual-income family in which the wife worked. Another factor that facilitated this transition was the increase in consumer goods—washing machines, dishwashers, electric irons, and so on—that freed up considerable amounts of wives' and mothers' traditional time working in the home. Additionally, women made inroads into higher education during the second half of the twentieth century and now outnumber men in undergraduate enrollment and in graduation rates. Marriage was delayed to pursue job training and education, which in turn has delayed the age at which women have their first child. While the problem

➤ PETS AS FAMILY MEMBERS

A recent phenomenon across the West is the greater inclusion of pets as family members, in some instances comprising the sole object of affection for childless couples. As the cost of raising a child increases in much of the West, many couples have chosen not to have children and choose to dote their parental affection on a dog or a cat or even birds, fish, or other creatures. In countries such as the United States, France, and Japan, many childless couples may spend a considerable amount of their disposable income on pet spas, toys, doggie or kitty hotels, physical therapy, and other luxuries. An entire industry catering to pet owners, not just in terms of pet products but also services, is estimated to earn in the tens of billions of dollars in the United States alone. According to San Francisco's Animal Care and Control Department, that California city has an estimated 120,000 dogs in contrast with anywhere to approximately 108,000 to 113,000 children as estimated by U.S. Census figures in 2005. Trendy restaurants and coffee shops, not to mention some employers, now allow people to bring their pets along.

—Abraham O. Mendoza

of lower real wages for women remains a challenge, the greater equality between men and women has made women less dependent on men for support and freed them to live outside traditional nuclear family arrangements. The women's movement of the 1960s and 1970s and changes in divorce laws also empowered many women to leave abusive relationships. All of these factors along with changing attitudes toward marriage and women's roles resulted in substantial changes in the family in the second half of the twentieth century.

—Ryan Cragun

Bibliography

- Aldous, J., G. M. Mulligan, and T. Bjarnason. "Fathering over Time: What Makes the Difference?" *Journal of Marriage and the Family* 60, no. 4 (1998): 809–820.
- Buchmann, C., and T. A. DiPrete. "The Growing Female Advantage in College Completion: The Role

of Family Background and Academic Achievement.” *American Sociological Review* 71, no. 4 (2006): 515–541.

Bumpass, L., and H. Lu. “Trends in Cohabitation and Implications for Children’s Family Contexts in the United States.” *Population Studies* 54, no. 1 (2000): 29–41.

Coontz, S. *The Way We Never Were: American Families and the Nostalgia Trap*. New York: Basic Books, 1992.

Family Planning in India since 1945

Sometimes celebrated, sometimes reviled, India’s family planning program has been described as both a model for other developing nations and a cautionary tale. These mixed reviews have plagued the program since its inception. In 1947 the Indian government led by Jawaharlal Nehru initiated a plan to modernize the newly inde-

pendent nation. Twentieth-century modernization theories viewed state-run population control efforts as an essential step in achieving modernity, but Indian attitudes were not as enthusiastic regarding family planning. Early promoters of family planning had been British social reformers, but the influential Mahatma Gandhi opposed birth control in favor of sexual restraint. Consequently, many nationalists found family planning to be in dissonance with Indian independence. However, Nehru believed that population control was essential to India’s modernization, and in 1952 India became the first nation in the world to implement an official family planning program. In its 55-year history, the program has promoted a number of different strategies from education to incentives to limit India’s growing population.

Family planning began as a voluntary program in the 1950s but over time became more coercive. Initially, India’s family planning program worked to increase the availability of contraception information and services to women. After this strategy failed to meet expectations, efforts were intensified. Family planning officials were given targets prescribing how many people they were to recruit. While the government argued that targets helped set realistic goals, opponents argued that they were arbitrary and caused providers to pay less attention to users’ health.

Family planning efforts were further intensified under Indira Gandhi. In 1975, in response to widespread unrest, Gandhi declared a state of emergency and took authoritarian control of the government. Monetary assistance to states became contingent on family planning results, and certain licenses and permits were only made available to sterilized individuals. In order to meet targets, some officials forcibly sterilized men. During this emergency period, the number of individuals sterilized went up tenfold. Dissatisfaction with family planning was a major factor in the 1977 election in which Gandhi and the Congress Party were voted out of power and replaced with Janta (People’s) Party representatives. The new government tried to distance itself from the coercive tactics used during the state of emergency, changing the name of the national program from “family planning” to “family wel-

► ADVERTISING FOR SONS

In India, where there is a strong preference for sons, ultrasound technology has made it relatively easy for parents-to-be to find out the sex of fetuses and abort unwanted girls. While sex-selective abortions have been illegal in India since 1994, the law is difficult to enforce and consequently has not been effective. As a consequence, the latest estimates, as of 2007, show that there are only 927 females for every 1,000 male babies born in India.

While such staggering gender gaps are mostly associated with India and China, American doctors and companies are playing an increasingly important role in the business of having male babies. In America, advertisements directed at Indian immigrants, one of the fastest-growing ethnic groups in the United States, tout procedures that can preselect or identify the sex of a fetus. In India these advertisements would be illegal, but American advertising allows son preference to be expressed freely and openly. The effect of this advertising remains unknown, as there are no official statistics that show how common gender selection techniques are among Indian immigrants or other ethnic groups.

—Meghan Davison



Women attend a family planning class in a village in rural India, 2000. (Kapoor Baldev/Sygma/Corbis)

fare.” When the Congress party was voted back into power in 1980, Gandhi reiterated her commitment to family planning, this time emphasizing that the program was voluntary.

Since the 1990s, due to the pressure of international donors such as the World Bank, India’s family planning program has become more client-centered. In addition to efforts to limit fertility, the programs encourage public education, the empowerment of women, and the prevention of AIDS. In 1996 the government eliminated quotas and urged family officials to take a more user-friendly approach, consulting with individuals about their preferences and needs. In recent years, technology has come to the forefront of Indian family planning. Mass media campaigns encourage families to have no more than two children and to rethink the necessity of having sons. With a population of 1.3 billion in 2006, India is expected to surpass China as the world’s most populous nation by 2050; however, overall fertility rates are dropping. A new concern is the uneven ratio of males to females born as a result of India’s strong son preference, calling into question how India’s next generation will marry and reproduce.

Although targets have been abandoned, India’s family welfare program is still somewhat coercive, as it offers compensation and incentives for individuals who accept contraception services.

—Meghan Davison

Bibliography

- Chatterjee, Nilanjana, and Nancy E. Riley. “Planning an Indian Modernity: The Gendered Politics of Fertility Control.” *Signs* 26 (2001): 811–845.
- Donaldson, Peter J. “The Elimination of Contraceptive Acceptor Targets and the Evolution of Population Policy in India.” *Population Studies* 56 (2000): 97–110.
- Sachs, Susan. “Clinics’ Pitch to Indian Émigrés: It’s a Boy.” *New York Times*, August 15, 2001.

Family Planning in China since 1945

China’s landmass, which is slightly smaller than the size of the United States, supports a population that is more than four times larger than that of the United States. As China’s already sizable population began to swell in the twentieth century, population control programs were initially opposed by Mao Zedong based on the assumptions that a large population would fuel a strong economy and that large families were auspicious. However, when China’s first census in 1953 revealed that the national population was more than 100 million larger than originally thought, government officials implemented a population control policy.

China’s first official population policy encouraged couples to marry later, widely space their children, and use the free contraception



Woman in Beijing, China, cycles past a billboard encouraging couples to have only one child, 2001. (Goh Chai Hin/AFP/Getty Images)

ADOPTION POLICY

Every year, with thousands of girl babies abandoned to orphanages, China has become the world's leading source of children for foreign adoptions. However, in 2007 the Chinese government enacted new restrictions on adoptive parents from foreign countries. These restrictions prevent prospective parents from adopting if they are single, obese, over 50 years old, or fail to meet other financial, physical, or psychological standards. China was once known to have a fairly open adoption system, so these new regulations are a blow to many prospective parents, who complain that the new rules are unfair and too strict. However, the Chinese government insists that such measures are necessary because the number of applicants far outweighs the number of available children.

—Meghan Davison

distributed by public health workers. Popularized by the slogan *wan, xi, shao* (“late, spaced, few”), the policy urged couples to have no more than two children. When these measures failed to adequately curb population growth, in 1979 China adopted the well-known one-child policy. Signaling a vast change in thinking since Mao's rule, Chinese ruler Deng Xiaoping argued that family planning was necessary for economic and social development. With few exceptions, families were limited to only one child, often forcibly. The policy was readily accepted in urban areas where families tended to be small; in rural areas, however, where large families and male children were needed for farm labor, the policy met with hostility.

In response to widespread resistance, the government was forced to relax the stringent one-child policy. Since 1984, rural couples are permitted to have two children. Regulations vary by province, but in many areas some couples are allowed to have a second child, especially if their first is female or disabled.

Still, small families have become the standard in China, and consequently fertility rates have drastically dropped. As in India, this success is often overshadowed by accusations of coercion and human rights violations. Stories about the

persecution of women who have too many children as well as reports of widespread infanticide and child abandonment alarm many human rights organizations, which have criticized the program as too strict.

Furthermore, the success of the program has led to new demographic problems. Chinese families traditionally prefer sons to daughters, and the strict family planning policy has made this son preference more obvious. Under extreme pressure to both have sons and limit the size of their families, many couples have resorted to infanticide, sex-selective abortions, and giving up newborns for foreign adoption. Consequently, the ratio of male to female children born is wildly uneven, and some demographers predict dire social consequences when this generation comes of age to marry. Another concern is the aging population. Those over age 60 are the most rapidly growing age group in China, and China's youths will face the burden of caring for them as they age.

—Meghan Davison

Bibliography

- Attane, Isabelle. “China's Family Planning Policy: An Overview of Its Past and Future.” *Studies in Family Planning* 33 (2002): 103–113.
- Belluck, Pam, and Jim Yardley. “China Tightens Adoption Rules for Foreigners.” *New York Times*, December 20, 2006.
- Dudley Poston, Che-Fu Lee Jr., Chiung-Fang Chang, Sherry L. McKibben, and Carol S. Walther, eds. *Fertility, Family Planning, and Population Policy in China*. London: Routledge, 2006.

The Abortion Issue

The recent conflict over abortion has been unsettling to societies across the globe. Intellectual and philosophical rationales abound in the United States as elsewhere, but the central question is simply whether or not women have the right to terminate unwelcome pregnancies. On one hand, many people—humanists as well as those with deep religious convictions—call themselves pro-life and argue that every human life is sacred. They support government prohibition of abortion based on their belief that society has an obligation to protect and defend innocent unborn children. Opponents of government in-

volvement, who refer to themselves as pro-choice, argue from both philosophical and practical perspectives. The theoretical position is that women must be able to control the use of their own bodies. Proponents sometimes cite Locke's assertion in *The Second Treatise of Government* that citizens own both their bodies and their labor unconditionally. In this view, the state has no inherent authority to legislate regarding a woman's right to make decisions pertaining to her fertility. Many pro-choice advocates are strongly motivated by the large number of deaths or permanent damage resulting from unregulated illegal abortions. Both pro-life and pro-choice positions are matters of deeply held belief; the controversy cannot be resolved by any empirical proof. Governments around the world have become involved, making decisions, passing legislation, and enduring legal challenges regarding the conditions under which women may terminate pregnancies.

For the greater part of Africa's post-Neolithic history, there has been an abundance of land and a shortage of labor. Female fertility has been seen as a source of wealth. From that historical background, it is not surprising that most African countries restrict abortion unless there is a serious threat to a woman's life or health. There are exceptions: Cape Verde, Tunisia, and South Africa have relatively relaxed laws regarding abortion, and Togo recently moved to extend legalization to instances in which the pregnancy is the result of rape or incest. Throughout Africa, in spite of government attempts to control abortion, it is certain that women have access to folk practitioners who take measures to end pregnancies, sometimes under less than ideal circumstances. We do not have dependable statistics about the impact of this on women's health.

The religious and philosophical traditions of Asia all place high value on life but tend to avoid becoming involved in political issues regarding the regulation of fertility. With some exceptions, abortion is now legal in much of Asia. Legality notwithstanding, it is a matter of great controversy in some areas, particularly in India and China, where abortion is often used to prevent unwanted female births. In the absence of national retirement plans such as Social Security, parents' long-term well-being depends on having

➤ RU-486 AND ABORTION

Known early in its test trials as RU-486, Mifepristone was developed in 1980 by the French company Roussel Uclaf. It was found to be an effective abortifacient (drug that induces abortion) in the first couple of months of pregnancy. Furthermore, it was found to serve well as an emergency contraceptive in small doses. Amid controversy, it was sold for the first time in France as Mifegyne. Its importation into the United States was banned by the administration of George H. W. Bush in 1989 but was later lifted by the Clinton administration after being approved by the Food and Drug Administration (FDA). Pro-life (antiabortion) groups throughout the West protested against its sale and use and continue to do so. While strongly advocated by pro-choice groups, pharmaceutical companies, and the medical establishment as a safe method for first-trimester abortion, the legalization of this drug throughout much of the world has continually stirred opposition and provoked controversy.

—Abraham O. Mendoza

sons to care for them. In both societies, female children are often considered an expense incurred for the benefit of a prospective groom's family since a woman is expected to contribute to the care of her husband's parents rather than her own. As of 1991, India had a ratio of about 945 women to 1,000 men, an imbalance that could eventually have unfortunate consequences. In an attempt to address the problem, many provinces have made it illegal for a physician to reveal the gender of an unborn child. In the early 1970s provinces across China adopted a one-child policy that strictly limited the number of children that couples were allowed but outlawed female infanticide. These acts specifically prohibited the murder, mistreatment, or sale of girl babies and their mothers but did not require that female fetuses be brought to term. As an additional complication, human rights activists have charged the Chinese government with forcing poor women to terminate pregnancies while allowing wealthy people to buy the right to second children by paying fines. Abortion has not

been as sensitive an issue in Japan, which legalized the procedure in 1948. Although there have from time to time been restrictions, it is now considered a woman's decision.

Russia was the first country to make abortion legal during the twentieth century. In 1920 Vladimir Lenin decreed that no woman should be forced to bear a child against her will. He framed it as a human rights issue, but it is probable that he was acting more to address the health issues caused by illegal abortions performed under unsanitary and unsafe conditions during the havoc of the revolution and civil wars. The policy was reversed in 1936 but reinstated in 1955. Other Eastern Bloc countries followed suit between 1955 and 1960. By 2007, when Portugal enacted a law allowing abortion until the tenth week of pregnancy, the procedure had become legal across most of Europe with the exception of Malta and Ireland, where the procedures are available only to save the life of the mother.

Most Latin American governments have made abortion a criminal offense, but there seems to have been a general relaxation in the past two years. In 2006 Colombia's highest court ruled that women could obtain abortions if a mother's life was in danger, if the fetus was not expected to survive birth, or if the pregnancy was the result of rape or incest. The region was hit with a shockwave in April 2007 when the legislature in Mexico City legalized abortion during the first 90 days of pregnancy. Both opponents and supporters of the new laws sounded much like their counterparts in the United States. Opponents contended that the ethical and moral framework of their society was under attack; supporters claimed that making medically safe abortions available would save women's lives. There are estimates that up to 5,000 women die each year in Latin America from bungled abortions. Notwithstanding the opposition of religious authorities, many Latin Americans are beginning to advocate that women be granted the right to terminate pregnancies under some conditions. Debates are becoming heated in Colombia, Brazil, Venezuela, Uruguay, and Argentina.

In the United States, the firestorm ignited by *Roe v. Wade*, the U.S. Supreme Court decision of 1973 that ruled most restrictions on abortion unconstitutional, still rages. As is the case with

other societies, the history of abortion rights in the United States has had many twists and turns. Many pro-life (antiabortion) proponents were alienated by the violence of a fringe minority of their movement. Alliances have not been straightforward or simple. The pro-choice position has been characterized as feminist, yet that in itself is an oversimplification. In recent years, many feminists have found themselves in the awkward position of being personally pro-life while philosophically pro-choice. In her article "Our Bodies, Our Souls," prominent feminist Naomi Wolf insists that "the death of the fetus is a real death." Many thoughtful feminists join her in refusing to accept a simple answer to a complex moral issue. Yet despite misgivings, few feminists are willing to have governments take the decision away from the women whose bodies are involved. Both sides agree that the solution is to prevent unwanted pregnancies but seem unable to find a compromise that protects both women and unborn children.

—Carolyn Neel

Bibliography

- Bullough, Vern L. *Encyclopedia of Birth Control*. Santa Barbara, CA: ABC-CLIO, 2001.
- Gordon, Linda. *Woman's Body, Woman's Right: Birth Control in America*. Rev. and updated ed. New York: Penguin, 1990.
- Rivenburg, Roy. "A Decision between a Woman and God." *Los Angeles Times*, May 24, 1996, E1.
- Seery, John. "Moral Perfectionism and Abortion Politics." *Polity* 33, no. 3 (2001): 345–364.
- Wolf, Naomi. "Our Bodies, Our Souls." *New Republic*, October 16, 1995, 2E.

Birth Control, 1945 to Present

Birth control, in its varying forms, for decades has been at the center of ethical debates regarding morality and reproductive justice. In the late twentieth century, as new methods emerged, concerns came to the fore including potential health risks, disease, and population control, particularly in nations with large populations such as China and India.

During the 1950s there was increased interest in the United States to create an oral contraceptive for women. With the push of longtime advocate Margaret Sanger, biologist Gregory Pin-

cus produced the first effective birth control pill in 1957, but it was not made available to married women until 1965 with the *Griswold v. Connecticut* ruling, and not until 1972 with *Eisenstadt v. Baird* were single women given access to what is now commonly referred to as the Pill. While the Pill liberated women who had access to it from the fear and burden of unwanted pregnancies, in 1969 concerns about the potential health risks of the Pill surfaced, culminating in the book *The Doctor's Case against the Pill*, which helped to spur the Nelson Pill Hearings in 1970.

In France, tensions have mounted in recent decades among its growing Muslim population. Social workers have introduced women to a range of birth control methods to give women reproductive control, but according to some scholars, these options have increased marital tensions by challenging traditional gender roles and thus undermining the male's authority in a traditionally patriarchal household. These tensions have manifested in an increased pressure on religious leaders to ban the use of birth control, but Muslim religious leaders have not come to a consensus about whether or not forms of birth control are doctrinally acceptable. There are those who support the use of contraception by asserting that Islam emphasizes that children must be treated well and that to have more children would mean that they could not financially provide for their family.

Religious doctrine and birth control is also a point of contention within the Catholic Church, but this does not mean that birth control methods are not practiced by Catholics. The Catholic Church encourages couples to practice the rhythm method, but it has proven to be highly ineffective in preventing unwanted pregnancies. Some priests supported their parishioners' use of the birth control pill, but Pope Paul VI officially declared in his 1968 *Humanae Vitae* that the Pill directly countered Catholicism's stance on reproduction. The consequence of this debate has been that lay Catholics make individual decisions on this matter, undermining the authority of the pope, particularly in the United States and Western Europe. Other forms of birth control are also restricted by the authority of the pope, including the use of condoms. As HIV and

➤ IN VITRO FERTILIZATION

In Vitro Fertilization (IVF) was first successfully carried out in 1978 with the birth of Louise Brown in England. The process allows infertile individuals the chance to conceive by fertilizing an egg in a Petri dish and then incubating the embryo for up to 18 hours. The practice has been heavily criticized, however, as there are debates over who has access to IVF and who is deemed worthy to reproduce.

IVF is available worldwide, although there have been attempts in nations such as the United States, Italy, Egypt, and Sweden to limit the availability, with religion often at the center of the debate. For example, in Egypt, some leaders of the Islamic faith have argued that IVF is unnatural and therefore against Allah's will. Similar arguments have been made by Christian groups in the United States and Europe, with attempts to pass legislation that would make legal access to IVF more difficult.

The majority of people who undergo IVF are upper-middle-class individuals. Those who are not financially well-off do not have access to the expensive procedure, making IVF a primarily elite practice. In addition, whites are more likely to undergo IVF, which some have argued perpetuates a hegemonic racial structure that values whiteness over other racial and ethnic groups. These issues have led to the conclusion that governments should be involved in regulating and funding IVF to avoid inherent inequalities in the free market system.

Feminist scholars have also critiqued the free market system's relation to IVF, arguing that women's bodies and reproduction are being commodified. In addition to these critiques, some feminist scholars have suggested that IVF is a manifestation of a patriarchal structure that primarily values women as mothers. They argue that if a woman is unable to become a mother, she is placed in an inferior social position, putting a great deal of pressure on women to reproduce.

—Janiene Langford

AIDS continue to take a devastating toll in Africa, the Catholic Church has increasingly faced international criticism.

The female condom, first on the market in the late 1980s, has become an option for contraception in more than 90 countries and has often been touted as a way to protect women from

both pregnancy and disease, especially in situations where women are unable to convince male partners to use a male condom. In Africa in countries such as Zimbabwe, Nigeria, and South Africa, health care providers have argued that female condoms can significantly slow the rate of HIV/AIDS transmission, but distributing and convincing people to use this form of contraception has proven to be challenging. To counter resistance, governments and nongovernmental organizations (NGOs) have worked to educate people on the benefits of the female condom, and its use is increasing globally.

Beginning in 1981, the U.S. government started funding what is known as abstinence-only educational programs under the Adolescent Family Life Act (AFLA), referred to in popular discourse as the Chastity Act. Leaders of the Christian Right were concerned that access to birth control had created an immoral culture in which people could have sex with multiple partners without repercussions. The stated purpose of the abstinence-only programs was to prevent teen pregnancy and the spread of sexually transmitted infections (STIs) by promoting abstinence. Some argue that abstinence-only education is ineffective, as the majority of Americans do not abstain before marriage, but proponents maintain that sex education promotes premarital sex. In 1983 the American Civil Liberties Union (ACLU), in conjunction with other organizations including clergy members, sued the AFLA, claiming that it was violating the Establishment Clause of the Constitution, blurring the lines between church and state. After ten years of litigation, it was finally determined that the AFLA could function but could not use Christian rhetoric to promote its goals of abstinence education.

As concerns about the sustainability of natural resources and increasing evidence of climate change enter into global discussions, population control has come to the fore of debates, as it did during the early phases of the environmental movement.

—Janiene Langford

Bibliography

Bonnicksen, Andrea L. *In Vitro Fertilization: Building Policy from Laboratories to Legislatures*. New York: Columbia University Press, 1989.

Gimenez, M. E. "The Mode of Reproduction in Transition: A Marxist-Feminist Analysis of the Effects of Reproductive Technologies." *Gender and Society* 5, no. 3 (1991): 334–350.

Inhorn, Marcia Claire. *Local Babies, Global Science: Gender, Religion, and In Vitro Fertilization in Egypt*. London: Routledge, 2003.

Perrin, Karen, and Sharon Bernecki DeJoy. "Abstinence-Only Education: How We Got Here and Where We're Going." *Journal of Public Health Policy* 24, no. 3/4 (2003): 445–459.

Szupinksi, Seline Quiroga. "Blood Is Thicker Than Water: Policing Donor Insemination and the Reproduction of Whiteness." *Hypatia* 22, no. 2 (2007): 143–161.

Tentler, Leslie Woodcock. *Catholics and Contraception: An American History*. Ithaca, NY: Cornell University Press, 2005.

Warren, Mitchell, and Anee Philpott. "Expanding Safer Sex Options: Introducing the Female Condom into National Programmes." *Reproductive Health Matters* 11, no. 21 (2003): 130–139.

Watkins, Elizabeth Siegal. *On the Pill: A Social History of Oral Contraceptives, 1950–1970*. Baltimore: Johns Hopkins University Press, 2001.

Gay Marriage Controversy

The ongoing controversy over gay marriage is often the result of a traditional interpretation of Scripture that regards homosexuality as a sin and a choice as opposed to what many in the scientific community believe is genetic, a trait one is born with. In the United States as in countries such as Uganda and Saudi Arabia, the religious view that homosexuality is immoral has been the dominant one. However, since the onset of the gay rights movements of the 1970s, in many areas of the world attitudes and laws have extended increased civil rights to homosexual and lesbian couples.

Although tolerance toward gay people has increased since the 1970s, resistance to marriage equality remains in many countries. In 1996 the U.S. Congress passed the Defense of Marriage Act (DOMA), which stated that at the federal level the government only recognizes marriage as a union between a man and a woman, even if a given state allows it. Many state legislatures followed with their own version of DOMA. But a few states showed support for their gay citizens. In 1993 Hawaii's Supreme Court concluded that

it was unconstitutional to prevent same-sex marriage, but then the state legislature passed a 1998 law banning such unions, and the state court rendered its earlier verdict moot.

In July 2000 Vermont became the first state to allow same-sex couples to legalize their relationship, passing a civil union law. Civil union gives same-sex couples in that state some of the legal rights of marriage. In 2004 Massachusetts became the first U.S. state to give same-sex couples full marriage rights. In June 2008 a second state, California, also began allowing same-sex marriage; however, in November 2008 after a bitterly fought campaign, California voters passed an initiative that banned further gay marriages. Arizona and Florida also passed bans of same-sex marriage, and Arkansas banned gay couples from adopting or being foster parents. Nevertheless, by 2008 two more states offered civil union—New Jersey and New Hampshire—and Connecticut's Supreme Court ruled that gay couples did have the right to marry.

Such legislation in the United States appeared later than in several European countries. In 1988 the Netherlands was the first country to establish civil unions, followed by Denmark in 1989 and Norway in 1993. France has allowed civil union since 1999, while Germany has allowed it since 2001. Europe also led the United States in permitting same-sex marriage. The Netherlands moved from civil union to full marriage rights in 2001. Belgium began allowing same-sex marriage in 2003, while both Canada and England made same-sex marriage legal in 2005. The surprise was Spain. Known as a predominantly Catholic country, it still decided to permit same-sex marriage in July 2005. But throughout Latin America, the Catholic Church has been staunchly opposed to even civil unions. A few exceptions have occurred; in the city of Buenos Aires, Argentina, for example, civil unions have been permitted since late 2002.

Another country that is tolerant toward homosexuals is South Africa, which wrote protections for gay men and lesbians into its constitution and started allowing same-sex marriages in late 2006. But most African countries do not share that view. More typical is Uganda, where being convicted of homosexual conduct can result in life in prison.

➤ CIVIL UNION VERSUS MARRIAGE

In 2000 Carolyn Conrad and Kathleen Peterson made history in the United States as the first couple to legalize their relationship under Vermont's Civil Union law. But civil union only gives same-sex couples some, not all, of the rights accorded to married people. In a civil union, couples can file a joint state income tax return, making them eligible for tax benefits. But because of the Defense of Marriage Act, they must file their federal income tax as single people and pay higher taxes. Partners in a civil union are considered coequal parents if they have children and can gain decision-making authority if one partner is medically incapacitated. But they are not entitled to Social Security survivor benefits if one partner dies, nor are they eligible to receive a pension if one member had been in the military. And with few exceptions, civil unions are recognized only in the state where they were performed, unlike heterosexual marriage, which is valid across state lines.

—Donna L. Halper

Worldwide, gay marriage remains a divisive issue. In many countries, it is a moot point because homosexual conduct is still considered a crime. In addition to Uganda, in India homosexuals can still receive sentences from ten years to life if they are caught. In Saudi Arabia the penalty for convicted homosexuals is death. Iran has also applied the death penalty for people convicted of homosexual conduct.

In China homosexuals and lesbians are no longer persecuted, but neither civil union nor same-sex marriage is permitted. The same is true in Russia, where laws that once criminalized homosexuality are gone, but intolerance persists. And in Israel the civil unions of couples who had their ceremony in another country are recognized, but Israel itself permits neither gay marriage nor civil unions.

In the West and much of Europe, attitudes toward gay men and lesbians have become more welcoming, but in large portions of the world homosexuals are still shunned or imprisoned. Yet even in countries where being gay is against

the law, small advocacy groups work to change attitudes. The fight for gay rights and marriage equality will not stop any time soon.

—Donna L. Halper

Bibliography

Denike, Margaret. "Religion, Rights, and Relationships: The Dream of Relational Equality." *Hypatia* 22, no. 1 (2007): 71–91.

Lester, Anthony, and Alison Hayes. "Homosexual Equality in the United Kingdom." *Peace Review: A Journal of Social Justice* 17, no. 2/3 (2005): 149–154.

Meezan, William, and Jonathan Rauch. "Gay Marriage, Same-Sex Parenting, and America's Children." *The Future of Children* 15, no. 2 (2005): 97–113.

Stohs-Krause, Hilary. "Gay Unions Gaining Global Acceptance." *Washington Times*, August 10, 2008.

■ Introduction: Cold War Culture

The onset of the Cold War in the late 1940s contributed to drastic cultural changes and political discourses the world over as a response to the potential threat of the "other" created by the ideological divide between the superpowers. The growing paranoia in both the West and the Soviet Bloc over internal enemies working from within triggered political witch-hunts, such as McCarthyism in the United States and the elimination of so-called class enemies from Soviet civil society who were shipped off to the Gulag. This concern also manifested itself in cultural forms such as film, literature, and public debates by politicians and intellectuals. Moreover, popular culture also reflected this paranoid atmosphere in movies about alien takeovers of humanity, in public interest in chess competitions (particularly Bobby Fischer's claims that the Soviets employed psychics to disrupt his thoughts during his match with Boris Spassky in 1972), in advertising that touted missile systems, and in myriad pronouncements about the relative comforts provided by the competing systems.

While often paranoid anticommunist discourse pervaded the domestic culture and society of the postwar United States and its North Atlantic Treaty Organization allies, anticommunism also shaped foreign policy. In its efforts to stem the growth of communism abroad, U.S. policy included supporting, installing, and propping up authoritarian pro-U.S. anticommunist regimes. This led to a growing resentment in much of the developing world toward the United States in what was seen as interference in their domestic affairs, creating a ubiquitous anti-Americanism

particularly after the Vietnam War debacle of the 1960s. This anti-Americanism would fuel resentment not only against U.S. military hegemony but also against what some groups (e.g., Islamists, Third World guerrillas, and European conservatives) interpreted to be corrupting social and economic influence by the United States on traditional values, mostly exemplified by its embrace of consumer culture.

The apprehension over internal enemies conspiring against society in tandem with the growing threat of nuclear annihilation also fueled other forms of societal anxiety in the West. These expressed themselves in myriad forms, such as the building of bomb shelters in suburbia, the institution of atomic bomb drills at elementary schools, and the very real fear of nuclear winter as expressed in science fiction films, comic books, and television shows, particularly in the United States. However, there were also currents of thought that expressly critiqued a free society that hampered civil liberties and supported foreign aggression. Existentialist philosophers, beatniks, and free speech activists were critical of the type of society that the Cold War was creating. They decried a loss of the very freedom in which the United States and anticommunists took pride in their campaigns against the Soviet threat. More definitively, the Vietnam War and the civil rights movements did much to illustrate the shortcomings of the United States both at home and abroad to a global community that was seething with resentment against the beacon of freedom and democracy.

—Abraham O. Mendoza

Consumerism and Mass Culture (and Critiques), 1945–Present

The term “mass culture” refers to media, events, and products consumed in similar or identical form by large (inter)national audiences. Forms of mass culture include advertising, network television, popular music, and the Hollywood film industry as well as built environments, branded goods, and consumer products. Some commentators see mass culture as a tool used by governments and corporations to keep consumers in a state of servile, ignorant bliss. For others, it is a democratic force that extends cultural participation to the majority. These conflicting perspectives emerge from distinct historical moments and describe a diverse and rapidly evolving phenomenon.

The 1944 GI Bill made university education, professional careers, and single-family homes accessible to millions of returning U.S. soldiers. To supply this market, new suburban developments, such as the 6,000-unit Levittown in New York, founded in 1947, were built using generic designs and prefabricated materials. Levitt and Sons applied Henry Ford’s principles of mass production to the highly personalized space of the American home. According to the sociologist David Riesman, these bland, uniform environments would shape equally homogenous inhabitants. Journalists and academics observing the new suburbia often critiqued a white middle-class culture driven by competitive, conspicuous consumption. The suburban lifestyle of the 1950s, with its green lawns, Tupperware parties, barbecue grills, and new-model Chryslers, has remained an enduring paradigm of consumer society.

Riesman and his contemporaries echoed the more far-reaching critique advanced by the Frankfurt School. Theodore Adorno and Max Horkheimer were Marxist intellectuals who fled Nazi Germany for America, where they continued to develop their critique of the culture industry. Their pessimistic analysis was informed by the propaganda campaigns of the European dictatorships and by their identification of a similar tendency toward authoritarian control in the United States. Adorno argued that American radio spoon-fed its message to passive audiences,



A picture-perfect suburban American family in the 1950s, often seen as a symbol of postwar mass consumerism. (Roberts/ClassicStock/Corbis)

leaving no space for imaginative or intellectual engagement. In this way, “The culture industry as a whole has moulded men as a type unfailingly reproduced in every product.” From a similar perspective, literary critic Dwight Macdonald condemned “masscult” as a parasitic, degraded imitation of “high” art, while other cultural analysts of the 1950s and 1960s identified psychological manipulation and brainwashing techniques in advertising.

Developments in the post-World War II era, most significantly the booming domestic economy and widespread access to broadcast television by the early 1950s, enabled American mass culture to expand its reach and power. While the Nielsen Ratings began to record eight-figure audiences, the corporate incursions into international markets facilitated by the Marshall Plan (1947–1951) led French communists to oppose so-called cocacolonization. Disneyland in Anaheim, California, opened its gates in 1955; Elvis

► THE KITCHEN DEBATE

On July 24, 1959, a model American kitchen, on display at the American National Trade and Cultural Exhibition in Moscow, became the site of a heated exchange between then U.S. vice president Richard Nixon and Soviet premier Nikita Khrushchev. The exchange, thereafter known as the Kitchen Debate, began as lighthearted banter between the two men but quickly developed into a heated political fray. Despite the ongoing arms race, the spontaneous debate between Nixon and Khrushchev focused primarily on consumer goods, many of which could be found in the model kitchen, and the quality of life under their respective forms of government. This underscored the fact that the rivalry between the two superpowers and their economic systems had become as much about the industrial output of automatic laundry machines as of nuclear missiles and military might.

Presley moved from Sun Records to RCA, first topping the Billboard chart with “Heartbreak Hotel” in April 1956; and McDonald’s established its franchise system in 1958.

While confirming many theorists’ fears, the expansion of mass culture in the latter part of the twentieth century was accompanied by new interpretations of its status. The countercultures of the 1960s appeared to signal a rejection of consumerism but also utilized and invigorated many of its forms. Pop artists Andy Warhol and Claes Oldenburg took a wry, playful eye to the ephemera of consumer society, offering screen-printed Campbell’s Soup labels and giant fabric hamburgers as works of art. Participants in the New Hollywood movement instigated by the countercultural classic *Easy Rider* (1969) later produced the first movies deemed blockbusters with *Jaws* (1975) and *Star Wars* (1977).

Since the 1960s, critics and cultural historians have been increasingly willing to approach forms of mass culture, from Bugs Bunny to professional wrestling to Tupperware, in less condemnatory and at times even celebratory terms. Emphasizing the “complexity of mass culture’s implication in social life,” scholar Janice Radway analyzed women’s engagement with mass-market

romance novels to show the ways that “real people can use the romance to address their unmet needs.” Reconceiving their subject as popular culture, such studies have emphasized the way that mass culture responds to the desires of audiences who, in turn, personalize and adapt these products.

Conservative commentators such as Allan Bloom vehemently opposed this shift in attitudes. The culture wars of the 1990s saw Bloom and his colleagues railing against a dumbed-down society saturated at every level by popular forms. In the same period, American mass culture reached truly global markets with a McDonald’s opening in Moscow’s Red Square, the launch of MTV Asia, and Starbucks aiming to operate 40,000 locations worldwide. International protest movements targeting corporate-led globalization argued that this represented an intensification of the cultural imperialism instigated by the Marshall Plan, eroding local cultures and creating a homogenous McWorld.

Like many other technological innovations, the Internet has fundamentally changed culture. The mediascape of Google, eBay, and YouTube seems far removed from the one in which 23 million Americans sat down on April 18, 1952, to watch the same episode of *I Love Lucy*. Fragmented and global, new media and new markets present a direct challenge to the existing theories and practices of mass culture and consumption.

—John Fagg

Bibliography

- Adorno, Theodor W., and Max Horkheimer. *Dialectic of Enlightenment*. Translated by John Cumming. New York: Herder and Herder, 1972.
- Barber, Benjamin R. *Jihad vs McWorld: How Globalism and Tribalism Are Reshaping the World*. New York: Ballantine, 1996.
- Levine, Lawrence W. “The Folklore of Industrial Society: Popular Culture and Its Audiences.” *American Historical Review* 97, no. 5 (1992): 1369–1399.
- Radway, Janice. *Reading the Romance: Women, Patriarchy, and Popular Literature*. London: Verso, 1987.
- Riesman, David. “The Suburban Sadness.” In *The Suburban Community*, edited by William M. Dobrinier. New York: Putnam, 1958.

Anticommunism in the West

It was British prime minister Winston Churchill, less than a year after the close of World War II, who effectively heralded the new reality of the Cold War between East and West in his epochal “Iron Curtain” speech. As Central and Eastern European states successively fell under Soviet influence, the Western response steadily hardened. The Truman Doctrine of 1947 announced a policy of containment that aimed to halt the further progress of Soviet expansion in Europe. The doctrine was supported by the development of the Marshall Plan later that year. Under its terms, the United States offered ailing European powers a package of aid and reconstruction to provide for their postwar recovery and thereby secure them against the spread of communism. The Soviet response was to establish the Warsaw Pact, which brought all 15 members of the Union of Soviet Socialist Republics (USSR) and its European satellite states into close political alliance.

One result of this bitter international standoff between East and West was that anticommunism became an important component of the domestic and foreign policies of the United States and its allies. Domestic anticommunism, however, had taken root much earlier. The U.S. Red Scare (1919–1921), which closely followed the Bolshevik Revolution, established the techniques of legal persecution and anticommunist propaganda later deployed during the Cold War. Formed in 1938 and supported by large sectors of the public and national press, the House Un-American Activities Committee (HUAC) quickly became the most powerful legal instrument in the postwar anticommunist crusade. The Senate’s Permanent Subcommittee on Investigations (PSI) became another particularly dangerous tool when its chairmanship fell into the hands of Senator Joseph McCarthy of Wisconsin.

The PSI, HUAC, and state-based un-American activities (or loyalty) committees worked simultaneously to discredit the reputations of prominent leftists and left-leaning liberals who had thrived during the prewar Popular Front against fascism and to root out communists from areas of contemporary public life such as the U.S. Army, the U.S. government, education, and the

➤ DR. STRANGELOVE AS ANTICOMMUNIST SATIRE

The American obsession with science emerged in the 1950s alongside anxiety about Soviet power and the possibilities of nuclear war. Stanley Kubrick’s *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964) is a satire that inspects the insanity of the nuclear age. The premise centers on an air force general who takes it upon himself to enact a virtually irreversible command to attack all Soviet military depots with nuclear weapons. His justification is that he believes that the Soviets are responsible for adding fluoride to water, sugar, flour, fruit juice, and ice cream to infiltrate and impurify Americans’ “precious bodily fluids.” The film ends with the pilot of one bomber, Major “King” Kong, astride a nuclear bomb whooping like a cowboy as it falls toward a target in the Soviet Union to bring on Armageddon.

—Kelly Detrick

entertainment industry. While HUAC hearings became media events, during the Truman administration the Federal Bureau of Investigation (FBI) also quietly began to perform background checks of all federal employees, in the process discharging homosexuals, for example, as security risks. This process of persecution characterized the early years of the Cold War in America. These investigations further traumatized a public concerned about the East-West arms race and the possibility of nuclear annihilation.

As the Soviet Union actively repressed liberalization efforts in its satellite countries and Khrushchev made public details of Stalin’s purges, anticommunism gained further intellectual respectability. Numerous Western intellectuals denounced their previous affiliations with communism. Most notable perhaps was *The God That Failed* (1949), an anthology of essays by authors including Arthur Koestler, Stephen Spender, Andre Gide, Ignazio Silone, and Richard Wright that chronicled each author’s youthful romance with communism and eventual disillusionment and repudiation.

As the 1950s drew to a close, the public fervor of anticommunism subsided slightly. This was partly a result of the emergence of more

moderate leaders such as Nikita Khrushchev and John F. Kennedy. However, although traditionally seen as a period of relative détente in superpower relations (paralleled by the domestic growth of the New Left), the later 1960s and the 1970s also saw the retrenchment of international antagonism and the fighting of proxy wars in contested regions in the Third World. While continuing their campaign against homegrown radicals and communists, dedicated cold warriors in the U.S. government now redeployed tactics of subversion and counterintelligence in a new international context with the aim of undermining communist or leftist governments around the world.

This process continued into the early 1980s, when there was a return to the acute tension of the early Cold War era. Perceiving the threat from the Communist Bloc to be greater than ever, the United States began developing Cruise missiles and the Strategic Defence Initiative (or “Star Wars” antimissile systems) and engaging in renewed counterinsurgency to combat Soviet expansionism.

The so-called Second Cold War was short-lived. The impetus behind the West’s anticommunist strategy was removed at a stroke with the ascendancy of Mikhail Gorbachev in the mid-1980s. Gorbachev immediately liberalized the Soviet economy, reduced its military expenditure, and reengaged with the West. Under these new conditions of freedom, known as glasnost (openness), the Soviet Union began to fragment. This was best symbolized by the collapse of the Berlin Wall and the eventual defeat of the Russian Communist Party after 73 years in power.

Above all, the Cold War ended in ideological and political defeat for Soviet-style communism. After decades of internal dissent and open conflict with the West, the communist edifice was finally destroyed from within. For many in the West, these dramatic events confirmed that their anticommunist stance had indeed been correct all along. However, the so-called victory of anti-communism was not global. Marxist-derived ideology and practice maintains its grip on countries around the world to this day, most notably China, North Korea, Cuba, and other Latin American states, even if it is increasingly expressed

in a more general attitude of anticapitalism or anti-Americanism.

—Dorian Hayes

Bibliography

- Caute, David. *The Great Fear: The Anti-Communist Purge under Truman and Eisenhower*. London: Secker and Warburg, 1978.
- Godson, Roy. *Dirty Tricks or Trump Cards: US Covert Action and Counterintelligence*. New Brunswick, NJ: Transaction, 2001.
- Haynes, John Earl. *Red Scare or Red Menace: American Communism and Anti-Communism in the Cold War Era*. Chicago: I. R. Dee, 1996.
- Powers, Richard Gid. *Not without Honour: The History of American Anti-Communism*. New Haven, CT: Yale University Press, 1995.
- Prados, John. *Presidents’ Secret Wars: CIA and the Pentagon Covert Operations from World War II through the Persian Gulf*. Chicago: I. R. Dee, 1996.
- Schrecker, Ellen. *Many Are the Crimes: McCarthyism in America*. Boston: Little, Brown, 1998.

Anti-Americanism

Anti-Americanism can be defined as an ideology expressing opposition or even hostility to the United States, its culture, its people, its government, or its policies. However, a broad range of attitudes and actions critical of or opposed to the United States cast across a wide spectrum characterize variants of anti-Americanism, from a French newspaper editorial critical of U.S. foreign policy to an Islamic terrorist blowing up a U.S. military installation. The most overt current examples of anti-Americanism reflect opposition to U.S. foreign policy, although there are various other more indirect forms of anti-Americanism that pervade the modern world (antiglobalization, anti-McDonald’s, antigenetically modified foods). Various world regions have unique forms of anti-Americanism based on their relationship with the United States. In light of U.S. military projection abroad and increased globalization, anti-Americanism is prevalent throughout much of the world.

European anti-Americanism since the end of World War II is characterized by hostility against American cultural influence in Europe as well as

resentment of America's rise in status to a global superpower concurrent with Europe's declining importance in world affairs. Following 1945, with the infusion of American occupation troops scattered all over Western Europe (leading some Britons to popularize the quip "overpaid, oversexed, and over here" in reference to American GIs), Marshall Plan aid, and the influx of U.S. consumer goods, many elite Europeans began to resent this presence of what they considered an inferior culture, leading some critics to suggest the so-called coca-colonization of not only developing nations but also Europe by the United States. Over the course of the latter half of the twentieth century, the growing U.S. global role and its control of the world economy led to increased diplomatic conflict in Europe. In the 1960s French president Charles de Gaulle removed France from NATO command in response to what he viewed as American infringements on French foreign policy, requesting the removal of American forces from French soil and initiating a French nuclear weapons program. In a similar vein, from the 1960s to the 1980s many Europeans had been overwhelmingly in opposition to U.S. Cold War foreign policy. The results range from protests against the Vietnam War to demonstrations against President Ronald Reagan's attempt to place Pershing II missiles in Western Europe. In spite of their initial support for the United States after the terror attacks of September 11, 2001, many European nations also have been critical of the U.S. position in the Middle East, particularly in regard to its support of Israel and in its unilateral approach to the Iraq War. Some Europeans have also fervently demonstrated against U.S. genetically modified food (perhaps illustrative of some of the irrational aspects of anti-Americanist fears of U.S. cultural hegemony) among other facets of American consumer culture (such as the famous 1999 incident in which French farmer José Bové dismantled a McDonald's in France), which they deem as intrusive to European cultural norms. In blaming the United States for globalization and an overly aggressive foreign policy, correctly or not, European anti-Americanism is characterized by its opposition to American foreign, economic, and cultural policies in Europe.

➤ STEICHEN'S *THE FAMILY OF MAN* EXHIBIT

Edward Steichen (1879–1973), director of the photography department at the Museum of Modern Art in New York City, loved grandiose, thematic exhibitions. "The Family of Man" exhibit of 1955 was his greatest project. His previous exhibitions "Road to Victory" (1942) and "Power in the Pacific" (1945) attracted unheard-of audiences because of their dynamic presentation. Photographs of all different sizes, as big as 10 by 40 feet, juttied out and clustered together and involved the viewer in a pictorial essay. For "The Family of Man," 6 million submissions were condensed into 503 photographs by 273 artists, known and unknown, from 68 countries. Most centered on family—parents, children, and lovers from every class and environment—and on the joys and sorrows and commonality of daily life. Some of the images also depicted crises and the workings of democratic institutions. Over the next eight years, the U.S. Information Agency organized shows of the exhibit in 37 countries in 85 shows, and roughly 9 million people saw it. No art exhibition had ever before been mounted on this scale.

"The Family of Man" conveyed a soothing message in the wake of the Korean War, the ongoing Cold War conflict, and McCarthyism. The exhibit's final photograph of a hydrogen bomb explosion underscored the necessity for cooperation despite Cold War tensions. The show's message, supporting an U.S. vision of democracy, social cohesion, and global cooperation, was carefully crafted. Many of the exhibit photos were cropped, enlarged, renamed, and otherwise edited to support the underlying message.

In the postwar period, anti-Americanism in much of the communist second world and the third world (sub-Saharan Africa, South and East Asia, and much of Latin America) has been characterized by the demonization of the United States as an economic neocolonial imperialist. Through its alleged manipulation of the World Bank and the International Monetary Fund, the United States is seen as imposing its will on the domestic policies of the developing world, as evidenced in the demonic portrayals of the United States in the 1980s during the Latin American

➤ ANTI-AMERICANISM AND 9/11

L'Effroyable imposture (The Horrifying Fraud) by French journalist and political activist Thierry Meyssan is a highly controversial 2002 conspiracy theory book on the September 11, 2001, terrorist attacks (9/11) and the alleged role of the U.S. government. The English edition is titled *9/11: The Big Lie*. The book's central argument suggests that the terrorist attacks of September 11 were self-inflicted on the part of the U.S. government in cooperation with the American military-industrial complex in order to provoke a reaction in support of its planned wars of aggression (War on Terror) against Afghanistan and Iraq. The book presents Osama bin Laden as a U.S. intelligence operative, made a scapegoat by the CIA. In addition, the book alleges that both the Bush and bin Laden families had much to gain from this endeavor, as both families' wealth management firm, the Carlyle Group, had much to profit in the aftermath of the catastrophe.

While the book has been a best-seller in France and much of Europe, it has also received severe criticism over its accuracy in both the European Union and the U.S. media. The U.S. government has denounced the book and has deemed it a source of misinformation regarding the event in question, harmful to the image of the U.S. government abroad. However, the receptiveness to the book in Europe illustrates the anti-American attitudes that existed in segments of European society at the time of the attacks. Nonetheless, numerous rebuttals of the book in the European press also show the complexity of anti-Americanism in Europe in that not all Europeans are willing to point the finger at the United States when something goes wrong in the world.

The fact that such conspiracy theories surrounding the 9/11 attacks are also popular on the Right and the Left in the United States further complicates the scenario. Depending on point of view, critics charge that such conspiracy theories indicate anti-Americanism within the United States or a healthy self-criticism within a political culture that values free speech.

—Abraham O. Mendoza

debt crisis. Cartoons in newspapers typically portrayed the United States controlling global affairs through banking networks and international finance organizations (i.e., tentacles). U.S. support for anticommunist dictators sympathetic to American foreign policy and economic aid and CIA assistance in overthrowing leaders seen as potential communists by the United States (Mohammad Mosaddeq in Iran, 1953; Salvador Allende in Chile, 1973; and various assassination attempts on Fidel Castro in Cuba) have also severely damaged the image of the United States in much of the developing world, creating further anti-American sentiment. Critics of globalization in these parts of the world are also prone to accusing the United States of being the agent and beneficiary of increased global economic interdependence. Both the Soviet Union (until 1991) and the People's Republic of China have done much to foster hostility against American foreign and economic policies in much of the third world, but the reality behind U.S. policies has sufficiently tainted the image of the United States abroad.

The continued U.S. support of the State of Israel also has done much to ignite opposition and hatred against the United States. Anti-Americanism in the Middle East is shaped by Islamic and Arab views on foreign intrusions on the lands of Islam by infidels but also by the legacy of colonialism from a previous era and the resentment felt against a renewed Western presence in the region, particularly that of the existence of the State of Israel. Israel is portrayed as a military appendage of U.S. interests in the region, which also includes the U.S. military presence in Saudi Arabia, Iraq, and Dubai. Both Arab nationalists (e.g., Gamel Nasser in Egypt, Saddam Hussein in Iraq) and Islamic fundamentalists (e.g., Ayatollah Khomeini in Iran, Osama bin Laden of al-Qaeda) have been critical of the U.S. military and economic presence in the region as well as the cultural influence damaging to the integrity of Islamic beliefs. In spite of the conflict between nationalists and fundamentalists in their visions of what should constitute the political makeup of the modern Middle East, both groups are largely opposed to the United States and its foreign, economic, and cultural policies in the region. Much like other critics of the United States,



Protest against the U.S.-led war in Iraq in Rome, Italy, on June 9, 2007. (Simone Ramella)

many of the leaders of Near Eastern nations also place the blame for globalization and its ramifications on the United States. The September 11, 2001, attacks on New York City and the Pentagon in Washington by fundamentalist al-Qaeda militants serve as reminders of the fanatical hatred of the United States found in segments of the populations of the modern Middle East.

—Abraham O. Mendoza

Bibliography

- Farber, David, ed. *What They Think of Us: International Perceptions of the United States since 9/11*. Princeton, NJ: Princeton University Press, 2007.
- Katzenstein, Peter J., and Robert O. Keohane, eds. *Anti-Americanisms in World Politics*. Ithaca, NY: Cornell University Press, 2007.
- Rubin, Barry M., and Judith Colp Rubin. *Hating America: A History*. New York: Oxford University Press, 2004.
- Stephan, Alexander, ed. *The Americanization of Europe: Culture, Diplomacy, and Anti-Americanism after 1945*. New York: Berghahn Books, 2006.

Cold War Nuclear Anxieties

During the Cold War, anxiety about nuclear weapons reflected the fact that a nuclear-armed force could achieve, in seconds, destruction more complete and more widespread than a conven-

tionally armed force could achieve in months. The fate of Hiroshima showed that weapons available in the arsenals of the two superpowers could literally flatten cities, instantly kill hundreds of thousands, and inflict a slow death by poison on many of those who survived.

The most immediate source of anxiety after Hiroshima was the prospect that someday soon, the bomb would fall again. Those who saw nuclear war as a more intense form of conventional warfare worried that millions would die needlessly because they (or their leaders) had failed to make adequate preparations. Those who regarded nuclear war as qualitatively different than conventional war worried that it would bring the end of civilization, if not of human life. The first position was reflected in the policies of the Soviet and U.S. governments (both of which developed elaborate civil defense programs to calm such fears), in popular novels such as Pat Frank's *Alas, Babylon* (1959), and in films such as *Panic in the Year Zero!* (1962). The second and more widely held premise was promoted in novels such as Nevil Shute's *On the Beach* (1959) and Whitley Streiber's *Warday* (1984) as well as in films such as *The War Game* (1964), *The Day After* (1983), and *Threads* (1984).

The concept of deterrence, on which peace in the nuclear age has depended, assumes that nuclear weapons are controlled by rational leaders who will act in their nation's best interests.



Scene still from British film *The War Game* (1964) directed by Peter Watkins. The film depicted the devastating consequences of nuclear war and the inadequacies of civil defense. (BBC/The Kobal Collection)

➤ BACKYARD BOMB SHELTERS

In response to fears of a nuclear attack, during the Cold War years many people in the United States built backyard or basement shelters for personal and familial protection in case of nuclear attack. These shelters were designed to afford protection against the effects of nuclear weapons and to provide a safe shelter and supplies for a specified period of time after the attack. Initially they were called bomb shelters, but after thermonuclear weapons were developed in the mid-1950s they were more commonly referred to as fallout shelters.

There were two peak periods of shelter construction in the United States. The first was after the Soviet acquisition of nuclear weapons in late 1949. This led to a surge of interest in backyard bomb shelters. The second shelter craze was in response to a speech to the nation by President John F. Kennedy on July 25, 1961, during the Berlin Crisis. Kennedy committed new funding to national civil defense and advised Americans to construct shelters in their homes in order to be prepared for nuclear attack.

By the late 1960s the construction of fallout shelters declined markedly. This was due to several factors: most importantly, once the test ban treaty in 1963 moved testing of nuclear weapons underground, the actual fallout present in the atmosphere from nuclear testing declined. Other events such as the civil rights movement and the Vietnam War began to displace fears about nuclear war. Furthermore, there was a growing public awareness that fallout shelters would be futile in the face of the ever-increasing size of nuclear weapons and the nuclear arsenals



Mock-up of a properly outfitted family fallout shelter, about 1956. (National Archives and Records Administration)

of the superpowers. After the end of the Cold War, fallout shelters often were seen as quaint cultural artifacts (one is recreated for a display in the National Museum of American History in Washington, D.C.), and many were converted to more practical uses such as wine cellars and storage areas.

—Robert A. Jacobs

Bibliography

Kennedy, John F. "Speech to the Nation, July 25, 1961." In *Papers of the President, 1961*. Washington, DC: U.S. Government Printing Office, 1962.

Rose, Kenneth D. *One Nation Underground: The Fallout Shelter in American Life*. New York: New York University Press, 2001.

The possibility that rational control might break down therefore has been a potent source of anxiety in its own right. Many of the best-known cautionary tales about nuclear war rest on just this premise. The nuclear attack in *Fail-Safe* (novel, 1962; film, 1964) is triggered by a simple mechanical malfunction. The one in *Dr. Strangelove* (novel, 1959; film, 1964) is the work of a deranged U.S. Air Force general. *Colossus* (novel, 1967; film, 1970) imagines that the superpowers entrust their nuclear arsenals to intelligent supercomputers, which then form an alliance and

pursue their own agenda. *Gadget* (novel, 1977) features terrorists who kidnap a physicist and force him to build a nuclear bomb. *Crimson Tide* (film, 1994) deals with a missile-carrying submarine and a garbled message that may or may not be an order to launch a nuclear attack. All five causes of irrational nuclear war—malfunction, madness, computers, terrorists, and simple confusion—have been revisited many times since in novels, films, and think tanks.

The ability of radiation to poison and deform has been a third source of anxiety. This concern

reached its peak in the 1950s, when both the United States and the Soviet Union conducted above-ground tests of nuclear weapons. Concern over the effects of nuclear fallout—with high levels detected hundreds of miles away from test sites—led to political campaigns for a ban on atmospheric testing, which was signed in 1963. Similar concerns spawned a string of B movies about giant monsters created by nuclear testing, which began with the U.S. production *The Beast from 20,000 Fathoms* (1953) and the Japanese classic *Gojira* (1954), also known as *Godzilla*.

The broader health effects of nuclear weapons reemerged as a source of public concern in the 1980s, due in large part to the work of Australian physician and activist Helen Caldicott. The environmental effects of nuclear weapons first received wide attention in 1982, when Richard Turco and four scientific colleagues (including astronomer Carl Sagan) published a preliminary study of nuclear winter in the prestigious jour-

nal *Science*. Journalist Jonathan Schell's *The Fate of the Earth* (1982), first published as a series of articles in the *New Yorker*, described the devastating consequences of a nuclear war and also became widely influential.

After the collapse of the Soviet Union, the medical and environmental concerns about nuclear weapons diminished along with fears of a general nuclear war. Fears of what nuclear weapons could do in the hands of ruthless individuals have not only persisted but grown.

—A. Bowdoin Van Riper

Bibliography

- Boyer, Paul. *By The Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. New York: Pantheon, 1985.
- Weart, Spencer. *Nuclear Fear: A History of Images*. Cambridge, MA: Harvard University Press, 1988.
- Winkler, Allan M. *Life under a Cloud: American Anxiety about the Atom*. New York: Oxford University Press, 1993.

■ Introduction: Consumerism

Depending on an individual's perspective, consumerism can be described as one of the main organizing principles of economics and culture in the postwar period or as an example of a spreading virus killing off local cultural practices. Consumerism, or an economic system geared less to production and more to services and the stimulation of desire (and hence to consumption), is a critical element of twentieth- and early-twenty-first century social trends. Philosophers refer to the postmodern syndrome in which signs and signifiers circulate via advertising and media and create their own reality and demands. Appearances and attempts to conform to impossible ideals of youth and vitality are everything, as are versions of self-fulfillment based on acquisition, status, and therapeutic regimens. Consumerism implies the commodification of wider realms—including the domestic sphere, play, leisure, and the individual body—as men and women spend billions each year on plastic surgery and cosmetics. At venues from Disneyland to the proliferating shopping

mall, shopping has become an entertainment medium. Consumerism has also encountered a backlash as the mainstay of globalization and what some would call its substitution of an ersatz reality for traditional culture, customs, and beliefs. Seemingly a many-headed hydra, consumerism circumvents its own critiques, as in the selling of so-called cool or green products, and offers its own cures. For example, new media such as interactive software and social networking Web sites allow for progressive possibilities, as individuals can circumvent the limitations of their own neighborhoods, bodies, gender, and delimited identity during interactions in cyberspace.

—Fred Nadis

Advertising

The advertising industry, which aided the steady advance of consumerism throughout the twentieth century, remains a key component of globalization. Most developed or developing nations, from Hungary to New Zealand to Brazil, have

➤ ONLINE ADVERTISING—POP-UPS, SPAM, AND BROWSER ALGORITHMS

With the advent of the Internet in the 1990s, advertisers capitalized on new online technologies to market their wares and services so as to profit from the exponentially growing number of Internet users. In addition to the existing advertising on individual Web pages, the pop-up advertisement became a fixture of online advertising. Such pop-ups open as a new window when someone visits a certain Web page on their browser. Being forced to handle unwanted pop-ups annoyed Web surfers, particularly pop-ups designed to attain private information from people's computers, popularly known as phishing. As a defense, browser manufacturers developed pop-up blockers. On a similar path, spam (unrequested bulk e-mail), which early on was a way to advertise goods and services, eventually became a way for online criminals to gain details of people's identities, commit fraud, and steal valuable information. However, a more legitimate and convenient form of advertising, the browser algorithm, with which companies such as Google and Yahoo can match advertisers to users' interests as they make certain searches on their browsers, also has emerged as a mainstay in online advertising.

—Abraham O. Mendoza

advertising industries whose techniques reflect different cultural norms. Worldwide, advertising has evolved alongside such postwar developments as the Cold War, consumerism, postcolonialism, the youth revolution, and the hybridization of regional and global cultures.

Following World War II, while war-shattered industrialized nations, particularly Europe and Japan, experienced a period of scarcity reflected in advertising strategies, the United States gained unprecedented wealth and abundance. This abundance was reflected and encouraged in advertising. The postwar United States saw the advent of the style that design historian Thomas Hine has dubbed *populuxe*, based on the words “popular” and “luxury.” Inflated but useless tailfins on automobiles were one example of a vaguely space-age look heralded in advertisements along with visions of suburban bliss and

plenty. The *populuxe* look was mixed in magazines with public relations advertisements from aerospace corporations announcing missile systems that established authority for these manufacturers in the subdued climate of fear that the Cold War engendered.

In that same era, faced with a war-damaged infrastructure, the well-developed West German advertising industry was offering more subdued imagery than advertisers in the United States. In the late 1940s West German ads touted the value of the Marshall Plan for Europe, and by the early 1950s West German advertisements could insist on the long-term economic value of large purchases of items such as washing machines. By the late 1950s, reflecting the so-called economic miracle, even West German advertisements were urging frivolous purchases of luxury goods.

One of the first New Wave advertising campaigns of the 1960s came from German car manufacturer Volkswagen. Its Beetle was contrasted to the bulky luxury vehicles of the 1950s as a sensible, fun alternative. Instead of idyllic images linking an automobile to style or status, these ads relied on humor, irony, and the self-deprecating motto “Think Small.” PepsiCo also, somewhat fortuitously with its “Pepsi Generation” campaign, became one of the first companies whose advertising encouraged what is now called hip consumerism. With some risk, PepsiCo connected the Pepsi Generation to the burgeoning counterculture. PepsiCo, as did Levi’s and other companies soon after, absorbed the counterculture by affirming youthful rebelliousness as a selling point. The 1960s also saw the establishment of such global advertising icons as the Marlboro Man. This penultimate American cowboy and symbol of rugged individualism is still plastered on billboards around the world. New corporate logos for multinational corporations also became common in the 1970s, with streamlined fattened letters without hard edges that announced power.

By the late 1950s and 1960s, advertising also was reflecting the realities of anticolonialism and efforts to establish neocolonial ties. During colonial periods images of the colonized in subservient roles—complementing empire or providing raw products (such as tea or cocoa beans)—were common in British advertising. In the late

1950s and 1960s, as Britain was losing its hold on its colonies, advertising took up the cause of modernization in the developing world to suggest new neocolonial possibilities. Companies linked their efforts to new development projects, such as new hydroelectric dams (“Power for Uganda”) or Shell Oil’s chemical division’s benefits to agriculture in Cameroon. New images of middle-class Africans in Western garb and at the gas pumps, as opposed to colonials in subservient roles, had a vogue.

With the fall of communism throughout the former Soviet Union, advertising, previously at the service of socialist states, now shifted to private firms with corporate clients. Prior to the collapse of the Soviet Union, East German advertising, for example, did not highlight or fetishize products or rely on erotic overtures but instead underlined positive social outcomes; these product ads ran alongside public information ads that urged hygiene, nutrition, temperance toward alcohol, or products such as camping equipment to encourage healthy lifestyles. Following the collapse of the Soviet Union, East Europeans in general were eager for Western products and brands. Advertising followed. Whether such audiences—suddenly flooded with choices—needed an education first was widely debated in advertising circles. Incongruous ads, such as a television advertisement showing a person walking down a beach holding a large pack of Wrigley’s gum, were successful in Hungary (a country without beaches). Advertising campaigns for affordable Western products such as Snickers candy bars—appearing one year on almost every billboard in Moscow—were hugely popular. Yet such ads also generated a backlash as the infatuation with the West withered under the rule of Vladimir Putin. In 2000, for example, Putin insisted that he would not allow his campaign speeches to air between ads for Snickers and Tampax, as had Boris Yeltsin.

In India, an emerging industrial giant, global advertising often intermixes with regional cultures and languages. Advertising has even penetrated rural India on simple media such as wall signs painted on buildings that might feature logos such as “Pepsi” or “Whirlpool,” mixing English with Hindi, evidence of the meeting of the global with the local to create the so-called

glocal, a term used to describe regional hybridization and customizing of global services or products, including fast food. National and global advertisers have also found new audiences in the countryside of India with the advent, in 1987, of “video vans”—vans equipped with large video screens that project films and advertisements or receive satellite feeds. The video vans have become important fixtures in political campaigns and continue to draw the attention of regional and global advertisers.

—Fred Nadis

Bibliography

- Beumers, Birgit, ed. *Pop Culture Russia!* Santa Barbara, CA: ABC-CLIO, 2005.
- Bhatia, Tej K. *Advertising in Rural India*. Tokyo: Tokyo University of Foreign Studies, 2000.
- Ramamurthy, Anandi. *Imperial Persuaders: Images of Africa and Asia in British Advertising*. Manchester, UK: Manchester University Press, 2003.
- Swett, Pamela E., S. Jonathan Wiesen, and Jonathan R. Zatlin, eds. *Selling Modernity: Advertising in Twentieth-Century Germany*. Durham, NC: Duke University Press, 2007.
- Tungate, Mark. *Adland: A Global History of Advertising*. London and Philadelphia: Kogan Page, 2007.

Big Box Stores

The enormous discount merchandise outlets referred to with the names “big box retailer,” “superstore,” or “category killer” emerged as a retail species in the 1970s. By the early twenty-first century, large chains such as Carrefour, based in France, and Wal-Mart, based in the United States, as well as other box stores had become the world’s leading retailers. The name “big box store” describes these stores’ stripped-down aesthetic. They look like big boxes, or warehouses. They are windowless and come with few amenities, offering customers little in the way of service or delivery. Instead, they depend on high-volume sales on a small profit margin to offer customers low prices, so low that small stores often depend on them as wholesalers. As of 2006, Wal-Mart was the largest of these chains, with 2 million employees worldwide in 6,775 stores generating \$349 billion in sales. In the United States the emergence of suburban power malls that feature a cluster of these huge

➤ GREENWASHING OR NEW PARADIGM?

Given the controversy over the ubiquitous nature of box stores in much of the West—as well as in the Near East and Asia—there have been major efforts by global chains such as Wal-Mart, Home Depot, and Costco to adopt a more eco-friendly attitude in their business plans. In particular, Wal-Mart has made significant changes to the layout, architecture, and energy provisioning of some of its stores as well as stocking green products in an effort to change its image. However, critics allege that such attempts are corporate greenwash meant to draw attention away from the harsh business practices that these stores rely on, which might include labor abuses, the undercutting of small competitors, and buying from offshore sweatshops. Nonetheless, the embrace of green technologies can change how consumers view box stores.

—*Abraham O. Mendoza*

box stores has seriously eroded the customer bases of the more standard enclosed mall and has added further to the deterioration of small town main streets, where family-owned retail stores, pharmacies, or other similar businesses were once the center of downtown. Now powerful multinational corporations, these global chains have gained much critical attention.

While discount retailing can be traced to the late nineteenth and early twentieth centuries when large retailers such as Sears Roebuck and Co. emerged, in the 1960s smaller-scale variety chain stores such as Woolworth's began to give way to discount merchandising outlets whose number and size increased throughout the following decades. Wal-Mart is a prime example. Its founder, Sam Walton, began by opening large discount stores in the rural southern United States in small town markets that larger chains ignored as unprofitable. By 1970 there were 32 Wal-Marts in the Southern states. By 1980 there were 276, and the figures rose steadily as the company opened new regional distribution centers and arranged stores within a 300-400-mile radius. Walton spent little on advertising and built efficient operations and high morale among workers. In the 1980s as its finances grew, Wal-Mart left behind its strategy of locating only in

small towns in the United States and instead began to add suburban locations outside major cities, vying with shopping malls and department stores. They also met competition from wholesale clubs such as Price Club, which required shoppers to purchase memberships and buy in bulk from its warehouse outlets. In response, Wal-Mart launched its Sam's Wholesale Clubs. Wal-Mart began its global expansion in the 1990s, opening stores in Puerto Rico, Mexico, Argentina, Korea, China, and Germany. With less initial success, Wal-Mart met competition from the French chain Carrefour by opening superstores that featured traditional Wal-Mart household goods, hardware, and clothing, with groceries added. Eventually Wal-Mart scaled down these 220,000 square-foot (20,500 square-meter) mega-stores, or hypermarkets, to the more easily negotiable Wal-Mart Supercenter at about half the size. By 2007 Wal-Mart had become the world's largest corporate employer, with 1.8 million employees. It also had 3,000 stores outside the United States, many of them following regional formats such as the Bodega Store in Mexico.

While Wal-Mart began by serving a rural market with customers with lower than average incomes, other box stores, from their inception, catered to more affluent shoppers. IKEA, featuring both catalog sales and enormous outlets, peddles a Scandinavian design sensibility to shoppers with upscale tastes in furniture and home furnishings. Based in Sweden, IKEA offered its first furniture catalog in 1955 and expanded throughout the 1960s, opening its first major outlet in Stockholm of nearly 495,139 square feet (46,000 square meters) in 1965. It continued to add stores throughout Europe and then in the 1970s added outlets in Australia and Canada, moved into the United States in the 1980s, and continued to expand to locations such as the United Arab Emirates in 1991.

While big box retailers have had remarkable growth since the 1970s, their appearance in a new community often breeds resentment. They are big and are considered by many to be environmentally unsound destroyers of smaller businesses, and because of their stress on high volume and narrow margins they tend to generate labor unrest. Many contradictory studies have attempted to determine the ultimate economic

benefits of such stores. While they add to the tax base of a locality and provide jobs, academics Roberta Grantz and Norman Mintz have documented the attack strategies of these businesses, first opening with a staff 50 percent bigger and prices lower than either will remain several months later when the store has attracted its business and damaged local competition. While Wal-Mart in its early decades prided itself on its harmonious management-labor relations and has continued to call its employees “associates,” it has in recent decades, along with other box stores, fought antiunionizing campaigns, weathered class action suits arguing that the company discriminated against female employees, and faced political opposition for supporting sweatshop labor in developing countries and China. In recent years, Wal-Mart has concentrated on promoting itself as an environmental leader, offering energy efficient products such as compact fluorescent light bulbs while also experimenting with more environmentally appropriate store designs, packaging, and procedures.

—Fred Nadis

Bibliography

- Bosshart, David. *Cheap: The Real Cost of the Global Trend for Bargains, Discounts & Customer Choice*. London and Philadelphia: Kogan Page, 2006.
- Grantz, Roberta Brandes, and Norman Mintz. *Cities Back from the Edge*. New York: Preservation Press, 1998.
- Lichtenstein, Nelson, ed. *Wal-Mart: The Face of Twenty-First-Century Capitalism*. New York: New Press, 2006.
- Vance, Sandra S., and Roy V. Scott, “Sam Walton and Wal-Mart Stores, Inc.: A Study in Modern Southern Entrepreneurship.” *Journal of Southern History* 58(2) (May 1992): 231–252.
- “Wal-Mart to Open Its 3,000th International Store.” In Wal-Mart Facts, <http://www.walmartfacts.com/articles/5500.aspx>.

Shopping Malls

Unknown prior to World War II, shopping malls have since become one of the identifying features of global consumer culture. The shopping mall, which emerged as a feature of the suburban U.S. landscape in the 1950s, in its basic form is an enclosed, usually windowless and climate-



Designed by Victor Gruen, Southdale Center opened near Minneapolis in 1956. It was the first enclosed and climate-controlled mall. (G.E. Kidder Smith/Corbis)

controlled shopping center. The typical mall will have an enormous capacity for free parking; a food court featuring fast food versions of international cuisine; two large, prestigious anchor department stores; and an array of global outlets such as Gap, Starbucks, and the Body Shop. Since their remarkable global spread beginning in the 1970s, malls, which can be further categorized between local and regional supermalls, have often been critiqued as a challenge to democratic public space, as spaces where labor is exploited and consumer debt is encouraged, and as symbols of homogenized cultural experience. Malls can be found around the globe in cities such as Hong Kong, Osaka, Dubai, New Delhi, Singapore, London, Hamburg, and Moscow. The mall in recent years has been challenged, often globally, by urban pedestrian malls and the spread of newer no-frills box stores such as Wal-Mart, Home Depot, and Costco. Evidence suggests that at least in the United States, the building of malls peaked in 1978 and that the boom, as of 2007, was over; while many prospered, other older abandoned malls began to clutter the suburban and outlying landscape.

➤ ZOMBIES AT THE MALL

Director George A. Romero's *Dawn of the Dead* (1978) is an independent horror film that features a suburban shopping mall (filmed on location outside of Pittsburgh) taken over by zombies. A sequel to *Night of the Living Dead*, the film's premise is that an unknown plague has brought corpses back to life, creating zombies desperate to eat the flesh of the living that will also turn the newly dead into zombies. The film centers on several characters fleeing the plague who land in a helicopter on a shopping mall hoping to find supplies. The mall, unfortunately, has been invaded by the zombies who, to intentional satirical effect, engage in burlesques of shopping activities as they wander through stores and over an ice rink while groaning and mindlessly seeking out human prey. One of the still-human characters, Fran, asks, "What are they doing? Why do they come here?" Her companion answers, "[It is] kind of instinct. Memory. What they used to do. . . . This was an important place in their lives." When the protagonists drive the zombies from the mall, briefly, they also engage in a shopping spree that includes robbing a bank. Mixing graphic violence with cultural commentary, the film received some criticism for its violence and praise for its originality.

—Fred Nadis

Predecessors to the modern mall include the mid-nineteenth-century arcades built in Europe, including the Galleria Vittorio Emanuele built in Milan in 1867. This arcade, essentially two intersecting city streets of shops open only to pedestrians with elaborate tiled floors and covered with vaulted glass ceilings and glass domes, is still a highlight of downtown Milan. In 1923 the first shopping center designed for automobiles was built near Kansas City, Missouri.

The age of the mall really began with the Southdale Center, the first enclosed and climate-controlled mall that opened outside Minneapolis in 1956. Designer Victor Gruen advertised that "in Southdale Center every day will be a perfect shopping day." Architect and city planner Gruen, a Jewish refugee from Nazi Germany, became the apostle of the shopping mall and had great

hopes of the mall as a spur to community and culture and a solution to urban blight as well as an enticement to spending. His ideas were similar to those of the creators of the department stores in the late nineteenth century but pitched to the new cultural context resulting from the growth of suburbs and consumerism. Gruen designed his malls with features such as fountains and sculptures, no obvious exits, and no windows to ensure that people would feel themselves in a world apart, spend as much time as possible, enjoy themselves, and feel relaxed and happy to spend. Scholars have since dubbed the outcome of this design strategy, aimed at maximizing consumption, the Gruen Effect. Catering to the suburban automobile-centered lifestyle and encouraged by changes in tax codes, by the 1970s malls were commonplace throughout the United States. Reports from that era insisted that Americans spent more time in malls than anywhere besides their homes and workplaces. Even after the mall building boom ended, the enormous Mall of America, which opened in 1992 and combined a mall with an indoor amusement park and parking for 13,000 automobiles, still remains a major tourist destination in Minnesota.

In the late twentieth century enclosed malls became common in cities throughout the world. For example, the Lakeside Centre, outside London in Essex, includes 1.35 million square feet (approximately 93,000 square meters) dedicated to parking and shopping in the style of the suburban United States. Australian-owned mall giant Westfield owns various malls in the United States in addition to its home domestic market. Critics have argued that malls, aimed at the middle class, were a major aspect of a new architecture and urban planning, creating corridors of privilege that walled out the underclass. Malls were privately owned and were patrolled by private security forces. Many court cases in the United States indicated that mall management could limit free speech and curtail political leafleting. In developing nations such as Chile, scholars have argued that malls became symbols of modernity and part of a discourse of cleanliness, as the malls as well as office buildings and public transit system became part of a network linking clean middle-class spaces and blocking out the other (premodern and dirty) Chile.

Since 1988 the number of malls under construction in the United States has steadily decreased. As of 2007, many malls have either closed or feature empty retail spaces within. While the species is still hardy, it has suffered from competition from no-frills box stores such as Carrefour, Costco, and in particular Wal-Mart, which developed from a discount merchandising chain located in rural towns in the United States to the world's largest retailer by 2006. Likewise, the mall experience has lost its aesthetic appeal for many. The trend is toward less-homogenized malls and toward power malls that include a cluster of enormous box stores. Nevertheless, malled spaces in global consumer corridors such as transit stations, convention areas, and airports are an identifying feature of our age.

—Fred Nadis

Bibliography

- Hardwick, M. Jeffrey. *Mall Maker: Victor Gruen, Architect of an American Dream*. Pennsylvania: University of Pennsylvania Press, 2004.
- Horne, Philip. "I Shopped with a Zombie." *Critical Quarterly* 34(4) (Winter 1992): 97-110.
- Jackson, Kenneth T. "All the World's a Mall: Reflections on the Social and Economic Consequences of the American Shopping Center." *American Historical Review* 101(4) (October 1996): 1111-1121.
- Sorkin, Michael, ed. *Variations on a Theme Park: The New American City and the End of Public Space*. New York: Hill and Wang, 1992.
- Tomic, Patricia, et al. "Manufacturing Modernity: Cleaning, Dirt, and Neoliberalism in Chile." *Antipode* 38(3) (June 2006): 508-529.

The Cosmetics Industry and Shifting Beauty Ideals, 1945–Present

Over the last half century and more, few industries have experienced the growth in profits and cultural influence as has the cosmetics industry. The industry established its financial footing during World War II in the United States. Magazine advertisements promoted makeup as a natural and essential part of American womanhood, and by 1948 an estimated 80-90 percent of women routinely used rouge and lipstick as part of their beauty regimen. New products such as foundation, smudge-proof lipstick, and liquid eye-

liner helped companies expand their female consumer base. Noxzema and Cover Girl targeted the youth market; Revlon positioned itself as the brand for sexy, sophisticated, and mature women; and Maybelline aligned itself with working-class women. The cultural influence of Hollywood icons such as Marilyn Monroe, Doris Day, and Rita Hayworth reinforced such types as the blond bombshell, the girl next door, and the exotic beauty as looks that ordinary women could emulate through the purchase of cosmetics, hair dye, and other toiletries. Meanwhile, entrepreneur Madam C. J. Walker continued to create products for African American women and pursued aggressive marketing campaigns in black-owned magazines such as *Ebony*. During this time, cosmetics companies also identified men as an untapped consumer market and designed products, packaging, and ads to combat cultural perceptions that deodorant and cologne denoted homosexuality or effeminate behavior.

In the late 1950s and early 1960s, activists in the civil rights movement began challenging the standards of female beauty in the United States. Beauty culture became politicized as the hairstyle known as the Afro and slogans such as "Black is beautiful" emerged as visible markers of racial, political, and economic protest against white beauty norms and the companies that promoted and profited from this limited ideal. The criticisms from the civil rights activists also fueled a burgeoning feminist movement in the late 1960s that criticized the cosmetics industry's objectification and commodification of women in the mass media and its profiting on women's insecurities.

Refining the marketing research techniques they had developed in previous decades, the cosmetics industry responded to these criticisms in the 1970s by marketing cosmetics as products that often invoked women's independence and self-worth, such as L'Oreal's famous "Because I'm Worth It" slogan. Many companies also expanded their product lines and included shades and "scientific formulas" for a variety of ethnicities and supported these initiatives with national advertising campaigns that included African, Asian, and Latina models. By the mid-1980s, most U.S. cosmetics companies embraced multiculturalism as a successful and profitable marketing strategy.

➤ PRACTICE OF SKIN LIGHTENING

In the non-Western world, the practice of lightening one's skin with chemical bleaches and/or herbal ingredients can be traced to a legacy of colonialism, where fair skin was often equated with a woman's beauty, virtue, and civility. In recent years, global cosmetics companies have capitalized on this legacy with aggressive advertising campaigns that market fairness beauty creams to nonwhite populations all around the world. With its expanding middle class and economic prosperity, India currently leads the world market in the consumption of commercial skin lighteners. Critics note that a desire to emulate the look of fair-skinned Bollywood actors, combined with a legacy of British colonialism, has proven to be a profitable and exploitable market for global cosmetics corporations.

—Lindsey Feitz

Spurred by the communications revolution in the late 1980s, many U.S. cosmetics companies expanded their overseas operations in Eastern Europe, Asia, the Middle East, and Africa, while French and Japanese brands such as Chanel, L'Oreal, and Shiseido became household names in the United States.

Meanwhile, criticisms launched by environmental and consumer rights groups during the 1970s resulted in mandatory ingredient labeling and also raised public awareness of animal testing within the industry. In recent decades, many cosmetics companies have also begun marketing products with “all-natural” ingredients to capitalize on increasing concerns about environmental issues. Yet the ongoing ideal of youthfulness has also led to a new range of products and procedures (such as plastic surgery and Botox injections) to those concerned with aging.

—Lindsey Feitz

Bibliography

- “Anti-Aging over 60.” *Global Cosmetic Industry* 173, no. 8 (2005): 7.
- Jones, Geoffrey. “Blonde and Blue-eyed? Globalizing Beauty, c.1945–c. 1980.” *Economic History Review* 61, no. 1 (2008): 125–154.

Peiss, Kathy. *Hope in a Jar: The Making of America's Beauty Culture*. New York: Henry Holt, 1998.

Weingarten, Rachel. *Hello Gorgeous: Beauty Products in America '40s-'60s*. Portland, OR: Collector's Press, 2006.

Youth Culture and Global “Cool”

According to the Oxford English Dictionary, the term “cool” has been used as an adjective for a calm and dispassionate state of being since the Old English epic poem *Beowulf* (eighth century CE). However, “cool” in its more contemporary meaning, as an adjective for something admirable, sophisticated, stylish, or classy, is an American concept and can be traced back to African American slang of the late nineteenth century. Jazz musicians of the 1930s gave a different shade of meaning to the term by using it as a description for anything relaxed or trouble-free along with an understated aura of courage and competence. By the 1950s “cool” became associated with anything or anyone avant-garde and ahead of the mainstream. It was at this point that the rise of the concept of a youth culture and the culture of cool converged.

The concept of cool accompanied the development of the youth market for consumer goods following World War II, as industries marketed to teenagers with teen-specific magazines, music, film, soft drinks, and clothing. *Seventeen Magazine*, Coca-Cola, Levi jeans, and Ray-Bans all helped to convey the attitude of cool. Over the decades, from the 1950s to the present, two main cultural shifts have redefined cool. First, rather than simply describing an attitude, cool is more often seen in terms of consumption and must-have items. For example, both a generic MP3 player and an iPod play music, but an iPod is cool. Second, the concept of cool, if historically American, has become a global phenomenon. This is most particularly true with the current generation of adolescents and young adults, frequently termed Generation M.

Generation M (“M” for “Media”) is one name journalists have applied to young adults born in the early 1980s through the early 1990s. Many factors differentiate Gen Ms from their predecessors. One of the most significant is that they are the first generation raised in an era of personal,



Teens, members of Generation M, text message on a cell phone. (iStockPhoto.com)

real-time, and near-constant electronic information sharing. Gen Ms are early adapters; they embrace and utilize new technologies and weave them into the fabric of their daily lives. Mobile phones, iPods, and iPhones are common accessories for teenagers and young adults worldwide. The constant connectivity that such technology offers has aided the creation of a global youth culture, and this community has already had an impact on culture, politics, and economics.

The rise of a global youth culture is easily traced to the rise of personal computers and the Internet in the early 1980s. It is important to acknowledge that a digital divide (lack of access to information technology) exists and represents a real problem, both economically and culturally, for many populations. However, on a global level, personal computing and connectivity via the World Wide Web are increasingly the norm for all areas of contemporary life including commerce, education, politics, and personal interactions (including romance).

In the early 1960s media critics, including Marshall McLuhan, began using the term “the global village.” In this global village, as McLuhan conceived it, humankind is united through technology. This unification had the potential for good (intellectual freedom) or evil (the rise of totalitarian governments). In the 2000s the globalization of popular culture among teens and young adults serves as evidence that the global village has emerged. The long-term effects of the

➤ RULE OF THUMB—TEENS, TEXTING, AND THE CULTURE OF COOL

Text messaging is a global phenomenon. Worldwide, adolescents and young adults have led the way in the use of this communication tool, so much so that the current crop of 13- to 24-year-olds has been termed by market researchers Generation M or Generation Text. Here are a few interesting facts about cell phone and text messaging:

- In 2007, globally, there were more than 2 billion cell phone subscribers.
- The telecommunication industry refers to text messages as Short Message Service (SMS). The first SMS is thought to have been sent in 1992 by employees at Logica CMG.
- The Philippines leads the world in text messaging. Statistics indicate that Filipinos sent well over 200 million text messages daily in 2006.
- In the United States, a 2006 survey indicated that 51 percent of young adults, aged 18 to 25, had sent or received a text message within the past 24 hours. Only 10 percent of adults aged 41 to 60 had done the same.
- Almost 70 percent of teens in Italy use their cell phones for social networking (including texting and sharing photos and videos), more than any other West European nation.

—Vibiana Bowman

global village on personal and intellectual freedom are yet to be determined, as electronic connectivity can also engender loss of privacy and aid efforts at surveillance. Yet the global village also can be seen in action as new trends in music, fashion, and consumer products circulate rapidly among the youth community worldwide, encouraging cultural hybridity and interaction.

Research in developmental psychology has established that the habits and attitudes formed in youth carry over throughout a person's lifetime. While the focus and locus of cool will change, the globally connected and techno-savvy youth culture that now is evolving will affect business and social communities for decades to come and continue to shape the modern sensibility.

—Vibiana Bowman

Bibliography

Frank, Thomas. *The Conquest of Cool: Business Culture, Counterculture, and the Rise of Hip Consumerism*. Chicago: University of Chicago Press, 1997.

Goggin, Gerard. *Cell Phone Culture: Mobile Technology in Everyday Life*. London: Routledge, 2006.

Milner, Murray. *Freaks, Geeks, and Cool Kids: American Teenagers, Schools, and the Culture of Consumption*. London: Routledge, 2004.

Nilan, Pam, and Carles Feixa, eds. *Global Youth? Hybrid Identities, Plural Worlds*. London: Routledge, 2006.

Sharkey, Alix, "What Is Cool?" In *Transculturalism: How the World Is Coming Together*, edited by Claude Grunitzky. New York: TRUE Agency, 2004.

MAORI TATTOOS

Tattooing was a practice of art and adornment for the Maori of New Zealand that declined with European colonization in the eighteenth and nineteenth centuries. The tattoo designs denoted status, tribal affiliation, family, and individual identity.

Moko (facial tattoos) were common among most Maori men and women. Men's whole faces were usually covered in tattoo design, but women usually had just one area of the face tattooed (chin, nose, lips, or forehead). In the nineteenth century, through the efforts of missionaries, the

Maori began to tattoo less and less. By the 1920s most of the Maori men who were tattooed had died, but tattoos on women continued until the 1950s. In the late twentieth century there has been a tattoo revival, and both Maori men and women are embracing this practice. Yet the older techniques of chiseling the tattoo into the body have been replaced with metal needles and electric machines. Those who now have a moko are seen as connected to the history of Maori culture. The moko now refers to any tattoo that reflects traditional designs. Modern primitive movements have appropriated their tribal designs, but the Maori reject this use of their tattoos.

—Kelly J. Baker



Maori chief adorned with the moko, the facial tattoo that graced both Maori men and women until European colonization in the eighteenth and nineteenth centuries lead to a decline in the practice. (Wilkes, Charles. Narrative of the United States Exploring Expedition: During the Years 1838, 1839, 1840, 1841, 1842. London: Wiley and Putnam, 1845.)

Body Modification

Body modifications are ancient tribal practices that have in recent decades become a practice of many Western and Westernized youths. Even older members of pop subculture groups have sought to express themselves using these ancient art forms. Body modification includes tattooing or inking of the flesh; piercing; branding; scarification, a practice originating in Africa in which the skin is cut to cause scarring; subdermal implants in which materials, most often metal, are placed under the skin; and earlobe stretching and other activities that change the body. Tattooing, piercing, and many of these practices have existed for centuries in African, Hindu, Native American, Polynesian, and other cultures' rituals, art, and conceptions of the body. Body modifications have served to mark membership in various communities, as with Maori tattooing, and have also functioned as a way to mark slaves and prisoners from antiquity until the nineteenth century (although World War II concentration camp inmates were tattooed with identification numbers). While the process of modifying the body remains a set of indigenous practices, many present-day modifiers in Western nations have adopted these tribal practices to connect with other cultures and to establish unique identities.

The introduction of body modification to Europe and America did not occur until the late eighteenth century with Captain Cook's journey to the South Pacific in which sailors embraced the tattooing of the peoples they encountered. Unlike the cultures in which it originated, body modification has a somewhat sordid history in Europe and America because it was associated with the working class, sailors, and prisoners. In the early twentieth century, tattooing became a

vehicle for many men in the working class to create communities, but by the middle of the century tattooing, particularly in the United States, became associated with subcultures, such as bikers, street gangs, and felons.

In the 1970s devotees of the punk rock movement, based in Great Britain, combined piercings, tattoos, and mismatched clothing to assert resistance to mainstream culture. In 1978 Fakir Musafar, a white Californian, began the Modern Primitivism movement, which promoted body modification, including tribal tattooing, flesh hangings, piercings, and other indigenous rituals, as methods to focus on the body's spiritual and communal possibility. Modern primitives such as Musafar's followers sought indigenous rituals to counter the perceived Euro-American alienation of the body. Indigenous groups have rejected the neotribal emphasis of the modern primitives as a form of colonialism because of the appropriation of rituals without permission.

By the late 1980s body modification became a movement that included many different groups who began to identify themselves as body modifiers, including some feminists, members of the gay and lesbian sadomasochism communities, and participants in the New Age movement and the modern primitives. However, by the 1990s tattoos and piercings moved into the mainstream, and these modifications became popular among youths. In the twenty-first century, tattoos and piercings, regarded as expressions of self and identity, have become a staple in youth fashion, popularized by musicians and on MTV. Cyberpunks also have embraced body modification as a way to complicate ideas of natural bodies by using new technologies for modification, such as subdermal implants. Body modification has become far more mainstream, but it also remains an important part of the identities of various subculture members who rely on extreme modifications to separate them from the rest of society.

—Kelly J. Baker

Bibliography

- Camphausen, Rufus C. *Return of the Tribal: A Celebration of Body Adornment*. Rochester, VT: Park Street Press, 1997.
- Caplan, Jane, ed. *Written on the Body: The Tattoo in European and American History*. Princeton, NJ: Princeton University Press, 2000.

Featherstone, Mike, ed. *Body Modification*. London: Sage, 2000.

Pitts, Victoria. *In the Flesh: The Cultural Politics of Body Modification*. New York: Palgrave Macmillan, 2003.

Pritchard, Stephen. "An Essential Marking: Maori Tattooing and the Properties of Identity." *Theory, Culture & Society* 18, no. 4 (2001).

Thomas, Nicholas, et al. *Tattoo: Bodies, Art, and Exchange in the Pacific and the West*. Durham, NC: Duke University Press, 2005.

Electronic Developments and Entertainment

Tennis for Two, a simple game based on table tennis developed on an Oscilloscope in 1958 by Brookhaven National Laboratory's William Higginbotham, is generally regarded as the first video game proper. However, there had been mainly text-based computer games such as Noughts and Crosses (1952) earlier. In fact, the first electronic game-related patent, U.S. patent number 2455992, for the so-called Cathode-Ray Tube Amusement Device was applied for already on January 25, 1947. The impact of early games, however, was limited: no commercial consoles were built before 1972, and the circulation of computer-based games such as Spacewar! (1961) was hindered by the small number of computers, since mainframe computers, such as the DEC PDP-1 on which Spacewar! was programmed, were only available at large universities.

The first commercially successful video game, PONG—very similar to Tennis for Two—was not developed until 1972. Since then, however, video games (both console and computer games) have enjoyed an ever-growing popularity, only briefly upset by a 1983–1984 market crash in console games, resulting in the bankruptcy of many smaller firms. In the early 1980s the availability of home computers for private households (the best-selling Commodore 64 was released in 1982) diversified and increased the gaming scene. With better graphics and sound cards becoming available for personal computers, the software industry throughout the 1980s and in the early 1990s slowly shifted to machines originally developed mainly for office work.

The World Wide Web, which was opened to the public in 1993, created a new basis for

➤ VIRTUAL WORLDS

Until recently the most widespread online games were first-person shooters and strategy games. As of 2007, however, two other genres, especially among female gamers, have developed an immense popularity: massive multiplayer online role-playing games (MMORPGs) such as *Everquest* or *World of Warcraft* and online life simulations such as *Second Life*, *Dotsoul*, or some aspects of *Entropia Universe*. These games, set within computer-generated virtual worlds, give players the opportunity to develop an online persona (character or avatar). In other online games the variation between characters is at best limited to skins, that is, the modifiable in-game appearance of the character. In virtual world games, however, the impersonation of a character is a possible (MMORPG) or central (online life simulation) part.

The main difference between online life simulations and MMORPGs is that while the latter assign quests (jobs assigned to characters who guide the player), online life simulations are centered on the creation of a character, the programming of new items, or interaction with other characters, depending on the players' preferences.

The relative anonymity of the Internet gives the user the opportunity to construct any persona they wish to embody within certain limitations necessary for the game mechanism. In the more static variants the user chooses from a variety of characteristics including occupation, gender, appearance, race, and so on. In others the only limitation, as software manufacturers like to emphasize, is the user's imagination. In reality, of course, it would be more frank to also take into account the respective user's skill in handling the program, the program's source code limitations, and the time and money spent on the game (especially in virtual life simulations).

—Johannes Fehrle

national and international contact between gamers (people who play video games) and led to an ever-growing community. The latest big development in both computers and consoles are online games, where sometimes thousands of users can interact within the same game environment at the same time. Many video games can now

claim a devoted fan base who further promote games in the form of independent online forums and blogs (online journals) or by writing mods (modifications to the original source code of the game) and creating new maps for strategy games.

The reasons for the huge impact of video games are numerous and diverse. The software industry is a significant economic factor, with computer games becoming ever more complex and costly while sales figures continue to grow. According to a 2007 National Purchase Diary (NPD) Group press release, the total retail sales of video games in 2006 exceeded \$13.5 billion in the United States alone. In most industrial countries, more money is generated from video games than movies, leading critics to assume that games will be the dominant medium of the twenty-first century. In addition, the hardware-producing industry, especially in the PC branch, benefits from the ever-growing advances in graphics and the resulting hardware requirements. In fact, almost all of today's top-of-the-line computers are targeted toward gamers.

While video games, especially games with contents displaying sex or violence, remain controversial, they have developed momentum. Cultural icons or products originating in specific games (such as the character Lara Croft of the *Tomb Raider* series) are easily recognizable and frequently appear in other media. This influence reaches from cross-fertilization between video games and movies (Disney's *Tron* [1982] being the first feature film centered around a gamer), music, art, or books to the everyday use of neologisms originating in the Internet or gamer culture.

In addition, scientific research in game-related matters is increasing, ranging from inquiries into the impact that violence in games has on teenagers to reports about the benefits of gaming and the positive effects when used for educational purposes. According to 2005 Entertainment Software Association (ESA) statistics, the gender distribution of gamers in the United States was 55 percent men and 43 percent women. These figures are expected to slowly reach equilibrium as female gamers find genres that interest them. Gaming is a worldwide phenomenon with large gamer enclaves in Asia, especially in South Korea

and China where some pursue gaming as a profession, earning money in well-attended tournaments and from sponsoring or by mining (i.e., collecting virtual resources in an online game and selling them in the real world).

Even though professional gamers are not very common outside Asia, they can also be found in other countries. The German Ailin Gräf (aka Anshe Chung), who became a millionaire by selling virtual property in Second Life, is one famous example. This process of exchange of real world versus virtual currency, known as real money trading in game jargon, is the main source of income for software companies running virtual worlds games, many of which are provided free of charge and downloadable for all since the software companies own all unsold virtual land and can theoretically add new saleable items at will.

—Johannes Febrle

Bibliography

- Keitel, Evelyn, et al., eds. *Computerspiele—Eine Provokation für die Kulturwissenschaften?* Lengrich: Pabst Science Publishers, 2003.
- Poole, Steven. *Trigger Happy: Videogames and the Entertainment Revolution*. New York: Arcade Publishing, 2004.
- Salen, Katie, and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press, 2004.
- Turkle, Sherry. *Life on the Screen: Identity in the Age of the Internet*. London: Phoenix, 1997.

Disneyland and Global Theme Parks

When Disneyland opened in 1955 in Southern California, the park renovated the image of the traditional amusement park. As many critics and fans have since pointed out, unlike the carnival atmosphere of earlier amusement parks and their surroundings such as Coney Island, Disneyland offered a clean and safe haven for families. It was also an easy travel destination with its own freeway entrances and exits. Within its confines, Disneyland presented an idealized American past and, as in many of the world's fairs and expositions that it emulated, a romanticized vision of progress and the future. The consumer-entertainment model that Disneyland helped



Disneyland, a "themed" repackaging of earlier amusement parks, during a celebration of its 50th anniversary on July 17, 2005. (PRNewsFoto/Disneyland)

create is now common at tourist sites such as heritage shopping malls, hotel-casinos, restaurants, and tourist hotels and on cruise ship lines.

Walt Disney consciously crafted Disneyland as the antithesis of Coney Island and traveling carnivals. There would be no drinking, gambling, bawdy entertainments, price gouging, or pointless thrill rides. As at world's fairs, Disney sought to create displays and rides that would educate and entertain the masses. Patrons entered the park on Main Street, sauntered through an idealized American small town, and then proceeded through a fantasy castle to various lands: Tomorrowland, with its futuristic renderings; Adventureland, with its jungle fantasies; Frontierland, with its celebration of the American West; and Fantasyland, where Disney cartoon mascots roamed. The theme park was financed largely by ABC television, which also broadcast a weekly Disney television series that began its broadcasts nine months before the park's opening in 1955. The television series, like the theme park, offered nostalgic renderings of the past, as in its popular "Davy Crockett" episodes, as well as stirring visions of the future.

From the start, the television series and the park were a hit with the American public. In Disneyland's first seven weeks in operation, more than 1 million visitors came to the park. From its inception, Disneyland was recognized as akin to a national shrine. The park became so central to

➤ BARBIE GOES TOTALLY GLOBAL

Barbie, the Teenage Fashion Model, an American icon both exalted and derided, is a perennial favorite in the international toy market. Barbie is a true multinational. The story of her birth moves from America to Germany to Japan, back to America, and onto the worldwide stage.

Inspiration for Barbie came from Bild Lilli, an alluring German doll first produced in 1955. Ruth Handler, wife of Mattel Toy cofounder Elliot Handler, spotted Lilli on a European vacation. Handler, who had been developing an idea for the production of a new kind of grown-up-looking doll, immediately saw Lilli's potential and used her as a prototype. Mattel negotiated with a Japanese manufacturing company (Pony Ltd.) to mass-produce the toys, and in 1959 Barbie debuted at the International Toy Fair in New York.

To date, more than 1 billion Barbie dolls have been sold in more than 140 countries. Since the early 1960s, Mattel has customized the packaging and outfits for Barbie to reflect the language and culture of various countries where she is marketed (Barbie in bindi and a sari for India, for example). In 1980 Mattel began a line of International Barbies for American collectors that celebrate the national

character of various countries. To that end, the dolls are clothed in regional outfits and have various shades of skin tone and appropriate ethnic facial features.

Barbie has faced a lot of adversity over the years. In addition to her breakup and reconciliation with Ken, she has been banned in Iran, has been challenged for market share by Bratz fashion dolls, and is frequently at the center of heated cultural debates. However, Barbie endures, and Mattel's latest earnings reports show that she is on an upswing. Barbie, like McDonald's, Disney, and Coca-Cola, is a global American marketing presence that will not soon fade away.

—Vibiana Bowman

Bibliography

- Billy Boy. *Barbie: Her Life and Times and the New Theater of Fashion*. New York: Crown, 1987.
- Freeth, Nick. *Made in America: From Levi's to Barbie to Google*. St. Paul, MN: MBI Publishing, 2005.
- Westenhouser, Kitturah B. *The Story of Barbie*. Paducah, KY: Collector Books, 1994.

the image of the good life in 1950s America that Soviet premier Nikita Khrushchev threw a tantrum in 1959 when his visit to Disneyland was canceled due to security concerns.

If much of the world clamored to come to Disneyland, ultimately Disneyland went to the world, first with its new and expanded theme park in Florida, Walt Disney World, which opened in 1971 and included airplane links and internal hotels and restaurants. Tokyo Disneyland opened in 1983, and Euro-Disneyland opened outside of Paris in 1992. In the Tokyo park, Disney's stated strategy was not to adapt to the local cultures so that Japanese visitors could feel they had traveled abroad to a foreign venue.

From Disneyland's opening in 1955, critics have complained about Disney's tendency to sugar-coat history, to dilute the zest of earlier amusements, and to cynically manipulate crowds and promote consumption of useless goods. Re-

cent scholars such as Michael Sorkin and Alan Bryman have insisted that Disney's strategies should be recognized as pioneering formulas for many of the features of global consumerism. Bryman, a sociologist, has pointed to Disney's development of hybrid consumption methods that interlink sales and services and licensed images in multimedia as well as its use of grafted-on themes and landscapes carefully crafted to unleash consumer desire. Sorkin, an architect and critic, has discussed Disney's use of surveillance to control crowds and staff as well as Disneyland's erasure of apparent labor as two key ingredients of modern consumer venues. Disney workers are encouraged to think of themselves as performers. As such, they are trained to smile and to mean it. Such techniques for evoking consumer satisfaction are now widespread and have become defining features of global consumer venues.

—Fred Nadis

Bibliography

Bryman, Alan. *The Disneyization of Society*. London and Thousand Oaks, CA: Sage, 2004.

Klugman, Karen, Jane Kuenz, Shelton Waldrep, and Susan Willis. *Inside the Mouse: Work and Play*

at Disney World. Durham, NC: Duke University Press, 1995.

Sorkin, Michael, ed. *Variations on a Theme Park*. New York: Hill and Wang, 1992.

■ Introduction: Music and Social Change

Popular culture experts dispute whether mass arts merely reflect or in some way guide the larger culture and even historical trends. There is no question that music has been an important conduit for culture in the era since 1945. Improved communication and entertainment media as well as the growth of diaspora communities encouraged the globalization of mass music genres and fusion of styles throughout this period. One also can see clear links between particular music and social movements. For example, gospel and the folk music revival of the 1950s and 1960s provided inspiration for the world-changing civil rights movement in the United States, while free jazz expressed the anger and search for liberation associated with the Black Power movement that followed. The music of the African diaspora has had an enormous worldwide influence in the period since 1945. Electric blues as well as rhythm and blues had a formative impact on the development of reggae music in Jamaica, which has since been exported as a world music, often associated with political messages, that has hybridized in new locales. The same roots can be pointed to for rock 'n' roll, which served as both a backdrop and a formative influence on the counterculture movements and mass student protests and strikes of the 1960s in the United States, Europe, Mexico, and Japan. The more recent genre of hip-hop, born in the urban ghettos of New York City, is rife with antiauthority messages that may be regarded as of political importance, or as with rock 'n' roll, it may be argued that the rebellious message is more a style co-opted by the larger consumer system in which it is distributed and enjoyed. The growing taste for world music, whether pure folk forms or modernized fusions

of the music of Latin America and the Caribbean, the Middle East, South Asia, and elsewhere, indicate a healthy circulation of music that transcends and challenges older geographic borders and national identities.

—Fred Nadis

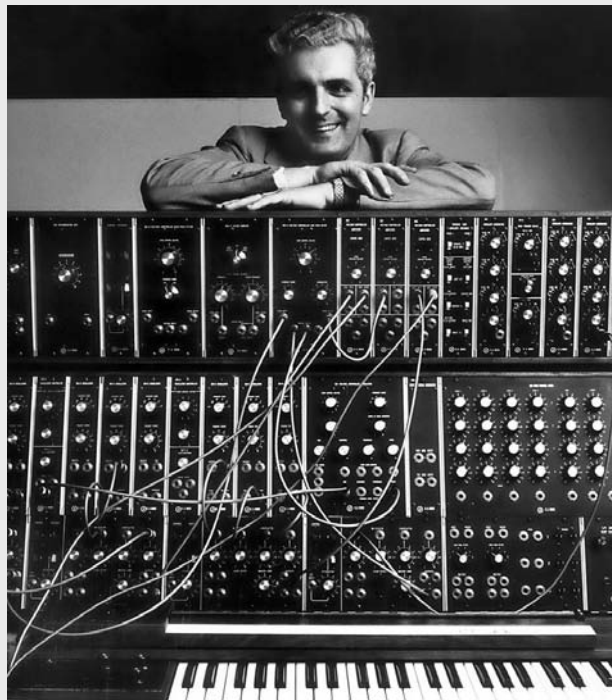
Electronic Instruments and Recording Media

Electronic instruments and recording media surged in the mid-twentieth century with the end of World War II and the introduction of computers. Novel sound techniques and a healthy economy encouraged experimentation at universities across the United States and studios around the world, from Columbia and Princeton to Paris and Cologne. Meanwhile, reactionaries denied artistic merit to machine-based sounds. Scholars of classical and otherwise serious music echoed the aesthetic critique of standardized culture industries forwarded by Frankfurt School theorist Theodor Adorno. Yet progress was inevitable. A strong interest in innovation from committees of composers, programmers, producers, and engineers was strengthened by progressive politics in the 1960s and 1970s.

Years after the invention of the Theremin (the first electronic instrument, created in 1919), electronic organs and guitars were marketed and sold in the United States. A revolution in popular music forms ensued as the fixity of traditional acoustic instruments was bypassed. The turn of a knob or movement of a potentiometer could now alter pitch or timbre. Along with new forms of popular music such as urban blues and rock and roll came modern classical music and fresh approaches to composition. Pioneer electronic

► THE MOOG SYNTHESIZER

Robert A. Moog was a child prodigy. As a young inventor, he built a theremin at age 14 from magazine suggestions and published an article on his design five years later. Prior to completing a doctorate in engineering physics, he formed the R. A. Moog Company in 1964 and introduced small synthesizers to the marketplace. The Moog Synthesizer became the first commercial music synthesizer, with its efficient design and promise attracting composers and performers from diverse musical traditions. Developed in partnership with Herbert Deutsch and Walter Carlos in 1965, the synthesizer represented a turning point in electronic music history. The Moog's basic structure included attack-decay-sustain-release (ADSR) envelopes, which manipulated the onset, intensity, and fade of sound with four knobs. The synthesizer also included tone generators with keys to configure pitch. Committees used the synthesizer to reorchestrate works from J. S. Bach to Burt Bacharach. The instrument gained commercial success following its integration into Walter Carlos's album *Switched on Bach*. The small and inexpensive synthesizers opened the world of electronics to rock and jazz musicians and made tape-manipulation cutting and splicing less problematic. The goal was to generate complex sounds with the smallest number of mathematical calculations per sound sample. Moog, who died of brain



American inventor Robert Moog stands with his pioneering Moog synthesizer, 1970. (Jack Robinson/Hulton Archive/Getty Images)

cancer in 2005, earned numerous accolades in his lifetime.

—Christopher Joseph Westgate

music composers such as Karlheinz Stockhausen and Luigi Nono focused on the abstract instead of the concrete. But in 1948, composer Pierre Schaeffer introduced his *musique concrète* composition on a Cologne radio broadcast. Schaeffer was convinced that music of the future could be created by splicing recycled recordings of the past and unwittingly anticipated contemporary sampling practices. At the end of the 1940s, Louis and Bebe Barron experimented with the musical potentials of magnetic tape delay and splicing. The tape recorder began to revolutionize performance and reception.

Some of the earliest electronic music instruments were designed to subvert conventional scales and restricted ranges. Electronic compo-

sition thereby challenged normative perceptions of tonality and temporality. Modern echo chambers and new percussive sounds slowly began to emerge. Composer John Cage collapsed the sound of silence in 1952 with his *4'33"* by instructing a performer to sit at a piano for four and a half minutes of ambient noise. In 1956, the Radio Corporation of America (RCA) designed a self-contained sound synthesizer with which the performer manipulated pitch and volume. The RCA synthesizer was subsequently used in a grant to form the Columbia-Princeton Electronic Music Center. One year later, in 1957, Max Mathews edited notes with the click of a computer mouse at Bell Laboratories. The use of digital computers to control instruments was well under way.

Many composers preferred electronic instruments because they were adaptable and accessible. In 1963, Robert Moog along with composers Herbert Deutsch and Walter Carlos designed small synthesizers. The resultant Moog Synthesizer was later integrated into popular music in Carlos's album *Switched on Bach*. A few years later, the Beatles experimented with tape collages and splicing. Other rock and pop musicians, drawn to exotic sounds that did not resemble those produced by other instruments, began to incorporate electronic keyboards and synthesizers into their music. The Voltage-Controlled Synthesizer was marketed in the middle of the decade and encouraged further experimentation as new technologies spread.

The Dutch company Philips developed the portable analog audio cassette in 1963 that made recording and duplication easier and cheaper. By the 1970s, many homes had a stereo system, phonograph, record player, tape recorder, and radio. Digital sampling whereby sounds were recorded, manipulated, and played back from keyboards or other musical devices was routine by the end of the decade. The search for fidelity, or the accurate reproduction of sounds, was the primary goal in the development of new media formats. The first compact disc (CD) was sold in 1982. The use of synthesizers and computer systems became far easier with the introduction of the Musical Instrument Digital Interface (MIDI) system, which communicated performance information to and from electronic instruments in 1983, enabling one instrument to sound like another. New recording technologies complemented new musical genres, from techno to hip-hop. Sony's production of the Walkman conflated public and private space. By the 1990s, it was possible to create CDs on personal computers. MPEG-I Audio Layer III (MP3) players were released in 1998. Eight years later, music archives (iTunes, Napster) were regularly offering new media content that users download or stream from the Internet. A digital division of labor will continue to reconfigure the present soundscape. The potential now exists to assemble and disseminate music with editing software in home or portable studios. Consumers may become tomorrow's producers.

—Christopher Joseph Westgate

Bibliography

- Appleton, J. *21st Century Musical Instruments: Hardware and Software*. Brooklyn: Brooklyn College of the City University of New York, 1989.
- Cos, Christoph, and Daniel Warner. *Audio Culture: Readings in Modern Music*. New York: Continuum International Publishing Group, 2004.
- Holmes, Thom, ed. *The Routledge Guide to Music Technology*. New York: Routledge, 2006.
- Katz, M. *Capturing Sound: How Technology Has Changed Music*. Berkeley: University of California Press, 2004.
- Sterne, J. *The Audible Past: Cultural Origins of Sound Reproduction*. Durham, NC: Duke University Press, 2003.

Cold War Jazz

During the 1950s, faced with increasing criticism abroad of U.S. race relations and international policies, a loose alliance of politicians, music critics, diplomats, record executives, and musicians began to promote jazz as a uniquely American musical art form. In an oft-quoted phrase, jazz was seen by its supporters as "America's classical music" and was linked to American modernity, democracy, and individual freedom. Through jazz broadcasts on the Voice of America (VOA) radio and state-sponsored tours to the Soviet Union, Africa, the Middle East, and Asia, jazz musicians were cast as U.S. cultural ambassadors on the Cold War stage.

Jazz emerged sometime during the late nineteenth and early twentieth centuries and was pioneered by African American musicians in New Orleans, Chicago, and other urban settings who, using improvisation, call and response, and rhythmic syncopation, reinterpreted the blues, ragtime, spirituals, marches, and other popular music genres to create a style that would eventually come to be called jazz. The music reached its peak popularity during the 1930s and early 1940s when big band swing dominated American popular taste. As swing fell out of fashion in the mid-1940s, a new style that critics dubbed bebop emerged, characterized by virtuosic solo improvisations and increased harmonic and rhythmic complexity. Significantly, the musicians who pioneered this style eschewed labels, preferring to call what they created modern music. These performers saw themselves as artists rather than



Louis Armstrong, frequently featured on the U.S. State Department's Jazz Ambassador tours of the Cold War era, traveled to the Congo in 1960 and in 1961 to Egypt where he and his wife posed near the Sphinx and a pyramid at Giza. (Bettmann/Corbis)

merely entertainers and, especially in the case of African American musicians, saw bebop's association with modernity (embodied in its emphasis on virtuosity and individual improvisational freedom) as a counterbalance to Jim Crow practices within a music industry that had a long history of white appropriation and commodification of African American musical forms.

The alliance of jazz and politics in the 1950s was due in part to the growing popularity of jazz programming on VOA radio, particularly shows such as Leonard Feather's *Jazz Club USA* and Willis Conover's *Music USA*. Both shows steered clear of propaganda in favor of musical programming and found receptive audiences in many parts of the world. In addition, Feather and Conover promoted jazz's modernity and universalism as an antidote to the Soviet Union's perceived cultural dominance in classical music and ballet. At the urging of sympathetic congressmen and music critics, the U.S. State Department began organizing tours featuring jazz artists such as Dizzy Gillespie, Duke Ellington, Louis Armstrong, Benny Goodman, and Dave Brubeck, sending them to the Soviet Union, Eastern Europe, and newly emerging states in Africa

and Asia, areas considered to be especially vulnerable to the Soviet communist threat.

The organizers promoted a vision of jazz's universalism and racial equality, an ideology underscored by the number of African American musicians on the tours. While jazz musicians were often seen as somewhat apolitical, the irony of African Americans representing an image of American racial harmony abroad at a time when Jim Crow laws were still in place throughout much of the United States was not lost on many of the tour participants. The Montgomery bus boycotts had begun during the same month that plans for the first State Department tours were being finalized in 1955, and most of the musicians, both black and white, were sympathetic to the civil rights cause. Louis Armstrong, who had always projected an engaging (and thus nonthreatening) public persona, created a stir when he refused to take part in a 1957 Soviet tour in protest of President Dwight D. Eisenhower's slow response to Arkansas governor Orval Faubus's efforts to block school integration in Little Rock. Moreover, the tours themselves were attacked by conservative congressmen and citizens' groups and met occasional opposition from local diplomats. But by and large the concerts were enormously successful both in presenting an alternative portrait of U.S. race relations and drawing enthusiastic crowds in places as diverse as Syria, Yugoslavia, Pakistan, and Ghana. These events also generated largely favorable press reviews back in the United States.

—Andrew M. Connell

Bibliography

- Eschen, Penny M. *Satchmo Blows Up the World: Jazz Ambassadors Play the Cold War*. Cambridge, MA: Harvard University Press, 2004.
- Levine, Lawrence W. "Jazz and American Culture." *Journal of American Folklore* 102, no. 403 (1989): 6–22.
- Monson, Ingrid. "Abbey Lincoln's *Straight Ahead*: Jazz in the Era of the Civil Rights Movement." In *Between Resistance and Revolution: Cultural Politics and Social Protest*, edited by Richard G. Fox and Orin Starn. New Brunswick, NJ: Rutgers University Press, 1997.
- Shipton, Alyn. *A New History of Jazz*. London and New York: Continuum, 2001.

A History of Rock and Roll, 1945–Present

Rock and roll music, with its close connection to the blues, expresses anger, joy, and pain. Its roots can be found in Negro spirituals, field hollers, and the caricatures of African American music that originated in minstrel shows in the mid-1800s. Twentieth-century blues artists such as Robert Johnson and B. B. King, using some of the call-and-response rituals of cotton-field-expression and religious worship, gave birth to the new forms of electric blues, rockabilly, and rhythm and blues. In its popular form, this music emphasized particular rhythms suitable for dancing that later became known as rock music.

The mainstream appeal of rhythm and blues and rock began to grow by the mid-1950s with African American and white performers such as Chuck Berry, Bill Haley and the Comets, Jerry Lee Lewis, Little Richard, and Johnny Cash. This new music, often mixed with country music and gospel, and the outrageous behavior of these outsized performers often challenged mainstream notions of race, gender, class, and sexuality.

During the early 1960s, the soul music of James Brown, the Supremes, the Temptations, and Aretha Franklin carved out a new place for African American involvement in American popular music. When such mainstream so-called race music disturbed conservative listeners, the record industry also created sanitized versions of earlier rhythm and blues songs with white crooners Frankie Avalon and Pat Boone. In this same era, which saw the rise of the civil rights movement, Bob Dylan, the Mamas and the Papas, and Peter, Paul and Mary crafted folk tales and songs of social protest, furthering a tradition nurtured by composers and singers such as Woody Guthrie, Pete Seeger, and Leadbelly during the 1930s labor struggles.

The Ed Sullivan Show produced two major historic moments in rock and roll: the debuts of Elvis Presley in 1956 and the Beatles in 1964. Both served as cultural milestones, giving American youths new icons as rock was introduced into the American home. Teenagers sought heroes. Television helped rock and roll become part of the new youth culture that advertisers

targeted with magazines, advertisements, movies, and record sales.

In the 1960s, public outrage over the war in Vietnam, violent reactions to civil rights demands, and other social issues helped formulate a countercultural ethos. The counterculture often turned to drug experimentation, particularly to Lysergic Acid Diethylamide (LSD), as part of their rejection of mainstream values. This subculture and the altered consciousness of drug users gave rise to the psychedelic rock of the Beatles, the Jefferson Airplane, Janis Joplin, the Grateful Dead, Jimi Hendrix, and the Doors. Acid rock dealt with politics, philosophy, drugs, and sexual experimentation. Even more than overt political change, the counterculture valued ecstatic esoteric experiences, sensuality, moments of cultural deconstruction, and transcendence, all thought to be achieved through LSD.

British invasion rock had peaked between 1964 and 1965 with the prominence of groups such as the Beatles, the Rolling Stones, the Animals, Herman's Hermits, the Birds, the Yardbirds, the Kinks, and the Who. England also produced a different sort of youthful unrest: songs emphasizing myth, legend, fantasy, mystery, and anger. The music of Black Sabbath and Deep Purple reflected a darker rebellion and melancholy, a reminder of the depths of human suffering and the longing for esoteric release. Strongly working class and fascinated with the unseen, or the occult, these groups became the archetype for the classic rock and heavy metal music of the 1970s and 1980s.

While the Woodstock music festival of 1969 helped define the counterculture, post-Woodstock rock and roll had many facets. The soft-edged music of bands such as the Eagles connected with those living the daily grind. Singer-songwriters Elton John and James Taylor offered stories. The band Kiss and the artist Alice Cooper filled arenas with vaudevillian antics. While Cream, Led Zeppelin, Lynyrd Skynyrd, and Aerosmith continued in the tradition of heavy metal and psychedelic music, other genres developed. Disco music, with its flashing lights and simple but infectious beat, was embraced as a simple pleasure, a relief from the dreariness of the protest years. While groups such as the Bee Gees created a

BRITISH INVASION



The Beatles debut on The Ed Sullivan Show in New York City on February 9, 1964. (Hulton Archive/Getty Images)

The Beatles, formed in Liverpool, England, in 1960, released their first single, “Love Me Do,” in Britain in 1962, and after rising to fame in Europe they arrived in the United States, the center of the music industry, in February 1964. Their catchy songs, long hair, and cheeky humor displayed in interviews made them a sensation. The four members of the Beatles—John Lennon, Paul McCartney, George Harrison, and Ringo Starr—played American rock and roll, soul, and rhythm and blues music and combined these styles with British folk and music hall traditions.

Approximately 73 million people, the largest television audience at the time, watched the Beatles’ first television appearance on *The Ed Sullivan Show* on Sunday, February 9, 1964. The Beatles single “I Want to Hold Your Hand” reached number one in the United States on February 1, 1964, and in April the Beatles held the top five positions on the Billboard chart. The success in the United States was replicated around the world as the Beatles incorporated a variety of styles into a series of innovative albums that profoundly influenced youth culture even after they disbanded in 1970. The arrival of the Beatles heralded a British invasion of the United States and a period of unparalleled British dominance of popular music. Prior to 1964, only two British singles had ever topped Billboard’s chart. In 1964–1965 British acts were number one for 56 weeks.

—John F. Lyons

market for dance clubs, others drew inspiration from classical music and jazz. Progressive rock became the tag for Kansas, Queen, Yes, Rush, and the classically influenced Emerson, Lake and Palmer.

Punk rock, with its nihilism, anarchy, and do-it-yourself garage band approach, formed in New York and Great Britain during the late 1970s, most notably with groups such as the Sex Pistols and later the Clash. The New York Dolls and David Bowie created the glam (glamorous) rock band culture, which reached its peak during the 1980s. Glam rock was defined by stage theatrics and androgyny, its performers wearing exaggerated hairdos, cosmetics, and flamboyant clothing.

Christian rock, now an influential genre, first formed in the early 1970s with the posthippie religious revival known as the Jesus People Movement. Larry Norman, Love Song, and the Resurrection Band are viewed as the earliest Jesus music artists. This genre evolved into contemporary Christian music and Christian rock. Modern groups include Jars of Clay, DC Talk, and P.O.D.

With MTV and other forms of mass media, the impact of rock and roll grew during the 1980s. Arena rock bands Def Leppard and Van Halen thrived with larger-than-life shows. U2 and humanitarian lead singer Bono came to fame, while New Wave groups such as the Talking Heads, Devo, and David Bowie emphasized technological savvy, futuristic vibe, ironic or alienated lyrics and posturing, and protoalternative music. New Wave became the commercial version of punk.

Inner-city problems played a tremendous role in the rise of rap music. While the Sugar Hill Gang, Grand Master Flash, and Public Enemy were among significant progenitors during the late 1970s and 1980s, Michael Jackson created a space for African Americans on MTV, changing the dynamics of race within the music industry. Jackson helped break the racial barrier. Madonna’s iconic status created a greater space for women.

Groups of the 1990s challenged gender assumptions as female singer-songwriters filled the airwaves. Alanis Morissette, Tori Amos, and Traci

Chapman were among an amalgam of female alternative rock and folk rock stars, while Seattle, Washington, became the epicenter of the grunge sound. Nirvana, Soundgarden, and the Stone Temple Pilots created a new language of anger, with a partial return to punk. As grunge found success, metal continued as the subgenres of thrash, death metal, hard core, black metal, and Goth emerged. While metal has always been subcultural, one of its greatest commercial successes has been Metallica.

As the twentieth century came to a close, female pop stars found greater success. The media saturated hundreds of cable channels and Internet sites with boy bands and girl bands. Pop stars Britney Spears and Jessica Simpson continue to thrive as mass media reinforces image. Although their genesis predates the millennium, groups emphasizing emotion, simply called Emo bands, such as Jimmy Eat World and Dashboard Confessional, spawned yet another chapter in rock's history. Many modern groups retain a sense of social responsibility and have helped support numerous political causes, such as U2 lead singer Bono's work to alleviate global poverty and AIDS with the ONE Campaign. Yet the rebellious style associated with rock and roll has also become part of mainstream consumer culture.

—Shawn David Young

Bibliography

- Campbell, Michael, and James Brody. *Rock and Roll: An Introduction*. New York: Schirmer Books, 1999.
- Charlton, Katherine. *Rock Music Styles: A History*. 4th ed. Boston: McGraw-Hill, 2003.
- Daniel, Pete. *Lost Revolutions: The South in the 1950s*. Washington, DC: Smithsonian Institution, 2000.
- DeCurtis, Anthony, James Henke, and Holly George-Warren, eds. *The Rolling Stone Illustrated History of Rock & Roll: The Definitive History of the Most Important Artists and Their Music*. 3rd ed. New York: Random House, 1992.
- Guralnick, Peter. *Last Train to Memphis: The Rise of Elvis Presley*. Boston: Little, Brown, and Co., 1994.
- Szatmary, David P. *Rockin' in Time: A Social History of Rock-And-Roll*. 5th ed. Upper Saddle River, NJ: Pearson/Prentice-Hall, 2004.

Latin American–Caribbean Music and Dance, 1945–Present

The music and dance of Latin America and the Caribbean reflect cultural influences from the three continents brought together by the European conquest of the Americas: indigenous Amerindian, European, and African. The ruling classes in the Americas, almost exclusively of European ancestry, enforced a cultural hegemony that favored European aesthetics, genres, forms, and musical instruments. Yet the long-standing multiethnic nature of many nations resulted in the increased blending of European-derived music and dance with African and/or Amerindian influences during the twentieth century. Terms such as mulatto, mestizo, and creole (and their cognates), initially used to describe miscegenation, were transferred to the description of hybrid culture. Many music and dance genres celebrated in the twentieth century as symbols of national identity—the Argentinean tango, the Brazilian samba, and the Colombian cumbia—were initially reviled by the ruling classes because of their non-European content, lascivious rhythms, vulgar dances, and lower-class origins and were only later celebrated as genuine expressions of collective identity.

Numerous twentieth-century Latin American concert or classical music composers drew upon folk expressions for thematic material in their more neo-Romantic or nationalist works. Mexico's Carlos Chávez (1899–1978), Brazil's Heitor Villa-Lobos (1887–1959), and Argentina's Alberto Ginastera (1916–1983) are renowned for their nationalist compositions. Other composers applied classical compositional techniques to popular or folk traditions in which they were active performers. Such was the case of composer and *bandoneón* (button accordion) performer Ástor Piazzolla (1921–1992), who transformed the Argentinean tango into concert music.

In Mexico, many regional music and dance folk styles have been codified and disseminated through national folklore ensembles modeled after the Ballet Folklórico de México (BFM). Founded in 1952 by Amalia Hernández (1917–2000), the BFM provided a professional and artistic model for the presentation of regional folk

► BRAZIL

Brazil, the largest and most populous Latin American nation, has a distinctive culture resulting from its Portuguese rather than Spanish heritage and its Afro-Brazilian influences (Brazil participated heavily in the transatlantic slave trade and did not ban slavery until 1888). The African heritage is apparent in many Afro-Brazilian traditions, including the Candomblé religion as well as *capoeira*, a stylized Afro-Brazilian martial art performed to music. Rio de Janeiro's samba, a music and dance genre that grew out of Afro-Brazilian and Portuguese carnival traditions, achieved popularity from the 1920s. Since the 1960s Rio's Carnaval parade has evolved into a multimillion dollar televised spectacle. In the late 1950s, a new popular music style called bossa nova combined a relaxed samba with jazz and classical music harmonies. Embodied by the compositions of Antonio Carlos Jobim (1927–1995) and performances of João Gilberto (b. 1931), bossa nova achieved lasting worldwide popularity. In the 1960s, Brazilian popular music, known by the acronym MPB (*música popular brasileira*), diversified in reaction to both global social revolutions and Brazil's 1964 military coup. MPB singer-songwriters such as Chico Buarque (b. 1944) created samba-based popular music as vehicles for poetic social commentary, while Gilberto Gil (b. 1942) and Caetano Veloso (b. 1942) produced recordings more eclectic and experimental, creating a short-lived but influential musical movement called *tropicália*. In Brazil's north-



Two practitioners of capoeira, an Afro-Brazilian martial art performed to music. (Ricardo Koji Kaihami)

east, several new or updated Carnaval traditions emerged from the city of Salvador, including *afoxé* (percussion-heavy secular processions sponsored by Candomblé houses) in the late 1940s, *trios elétricos* (heavily amplified truck-mounted bands playing fast marchlike *frevo* music) in the 1950s, and *blocos afro* (bass drum-heavy Afro-Brazilian Carnaval parade groups) in the mid-1970s. Euro-American rock music remained an influence from the early 1960s on, while American soul and funk and rap music prompted Brazilian counterparts in the 1970s and 1990s, respectively, primarily in the cities of São Paulo and Rio.

—Kevin Delgado

cultures by subsequent companies formed in Latin America. While many indigenous folk music traditions persist in rural and agricultural areas, regional and commercial styles dominate public consumption of music. The *canCIÓN ranchera* (country song) was widely popularized through radio and film beginning in the 1930s, while the mariachi music of Jalisco became popular in the capital and was transformed from a regional to a national music. In the 1950s, the accordion-based *norteño* (northern) music became more popular as it expanded its ensemble with the addition of the bass guitar, *bajo sexto* (a type of 12-string guitar), and drum set as well as vocals. In the early 1990s, traditional and updated *banda sinaloense* (brass band mu-

sic from the Sinaloa state) enjoyed a surge in national popularity. Both *norteño* and *banda* music in turn energized the traditional *corrido*, a narrative ballad genre that since the early nineteenth century has described historical, topical, and allegorical events. In the late twentieth century, *corrido* subject matter included the homesickness of Mexican migrants in the United States and the September 11, 2001, terrorist attacks, while the popular subgenre of *narcocorrido* (drug corrido) chronicled the violent world of drug trafficking.

In the Caribbean, performative culture primarily blends European and African heritages, the indigenous population having either perished as a result of colonization or largely absorbed

through intermarriage into colonial populations. Cuba is prominent in Afro-Hispanic music and dance, with genres such as the *son* and *danzón* enjoying widespread popularity in the early twentieth century. The *son*, originally a vocal genre utilizing guitar-type instruments and Cuban hand percussion (later adding the bongo drum, bass, and a trumpet or cornet), consisted of rhyming verses followed by a *montuno*: a section of music featuring African-inspired call-and-response song form, animated rhythms, and improvisation. The *son* begat the *son conjunto* in the 1940s, an ensemble that added multiple trumpets, piano, and *tumbadora* (conga drum) to the traditional *son* ensemble, creating a musical framework for subsequent salsa music. The *danzón* produced two extremely popular music and dance genres in the 1950s: a big band version of the mambo, and the cha-cha-cha. In the 1970s, state-supported ensembles such as Irakere drew heavily from Afro-Cuban sacred music, jazz, classical, and Cuban dance music, while in the late 1980s a virtuosic dance music called *timba* emerged in Havana. Among the Francophone islands, Haiti transformed the popular Dominican merengue (which itself was influenced by the earlier Haitian *mereng*) into the Haitian *konpa dirèk* in the 1950s and, in response to British pop music, *mini-djaz* in the 1960s. In the 1980s, *mizik rasin* (roots music) fused Afro-Haitian percussion with social protest against Haiti's political turmoils. Also in the 1980s, musicians from Martinique and Guadeloupe created an energetic hybrid music called *zouk* (party), sung in Creole rather than French, that swept the Francophone Lesser Antilles. The Anglophone nations of Jamaica and Trinidad and Tobago have been extremely influential musically.

In South America, many indigenous music and dance traditions are preserved in the Amazonian forests and Andean mountain and *alti-plano* (high plains) regions. In Peru and Bolivia, genres such as the *huayno* and *yaraví* appear to be mestizo creations based on indigenous antecedents. Both indigenous and mestizo cultures have appropriated European instruments, including brass and woodwind ensembles, and a variety of chordophones (stringed instruments that were virtually unknown in the Americas before European contact). Beginning in the 1950s,

popular groups such as Los Jiraras from Bolivia began combining into a hybrid ensemble instruments and repertoires that had previously been distinct, regional, or seasonal. This instrumentation, commonly including *charango* (a small guitar-type instrument), *quena* (end-blown flute), panpipes, *bombo* (bass drum), and guitar, has since become a popular Andean concert tradition.

Political protest is associated with the South American *nueva canción* (new song), a neo-folk political song movement that began in Chile in the 1960s and gained popularity throughout Andean South America. Initiated by an urban folklore revival, *nueva canción* relied on the symbolism of indigenous Andean imagery, genres, and musical instruments to bolster its connection with the lower classes. Prominent groups such as Inti Illimani and Quilapayún took indigenous-language names as well. Following a 1973 military coup, *nueva canción* was banned and its musicians forced to disband or sent into exile, while leading singer-songwriter Víctor Jara (1932–1973) was killed in government custody.

Many important popular music genres of the post-1945 era such as the Colombian cumbia, salsa (a New York marketing term for Cuban dance music performed by musicians of many nationalities), *nueva canción*, and Jamaican ska and reggae as well as romantic popular ballads styles have enjoyed transnational success. From the 1960s on, rock music from the United States and England has inspired a variety of local equivalents, as have rap and hip-hop. The popularity of *reggaetón* at the beginning of the twenty-first century—a Spanish-language dance music style founded upon Jamaican dancehall (the digital beat and deejay-dominated descendent of reggae), created in Panama, popularized in Puerto Rico, and disseminated north and south via electronic media—illustrates the increasingly international nature of commercial music and dance genres in Latin America and the Caribbean.

—Kevin Delgado

Bibliography

- Béhague, Gerard. *Music in Latin America: An Introduction*. Englewood Cliffs, NJ: Prentice Hall, 1979.
- Manuel, Peter Lamarche, Kenneth M. Bilby, and Michael D. Largey. *Caribbean Currents: Caribbean*

Music from Rumba to Reggae. Rev. and expanded ed. Philadelphia: Temple University Press, 2006.

McGowan, Chris, and Ricardo Pessanha. *The Brazilian Sound: Samba, Bossa Nova and the Popular Music of Brazil*. Philadelphia: Temple University Press, 1998.

Olsen, Dale A., and Daniel E. Sheehy, eds. *The Garland Encyclopedia of World Music*. Vol. 2, *South America, Mexico, Central America, and the Caribbean*. New York: Garland, 1998.

Schechter, John M., ed. *Music in Latin American Culture: Regional Traditions*. New York: Schirmer/Thomson Learning, 1999.

Sub-Saharan Music, Post-1945

Every aspect of African social and cultural life—whether the birth and naming of a child, initiation into adulthood, storytelling, worship, marriage, death, play, work, or control of social behavior—is associated with music. Every form of activity has its own special music, and every culture has its musical style, often linked to an ethnic group's spoken language. The African continent is home to a wide range of musical genres, and thus care is needed in using general terms to define African music. African music, produced by local and foreign-based distributors, is commonly a community affair and thus enjoyed by all: village folks, urban poor, well-to-do and educated elites as well as young and old.



Fela Anikulapo Kuti was a Nigerian musician and pioneer of Afro-Anikulapo beat music, shown at a concert in about 1980. (David Corio/Michael Ochs Archives/Getty Images)

Live music and radio, which first appeared on the continent in the 1920s, became and continues to be the primary means of listening to music. Indeed, with the advent of radio, early record companies such as the African-based Gallo-Africa as well as French and British-owned labels such as Pathé, Zonophone, and Decca recorded, produced, and disseminated African music to a broader audience on the African continent.

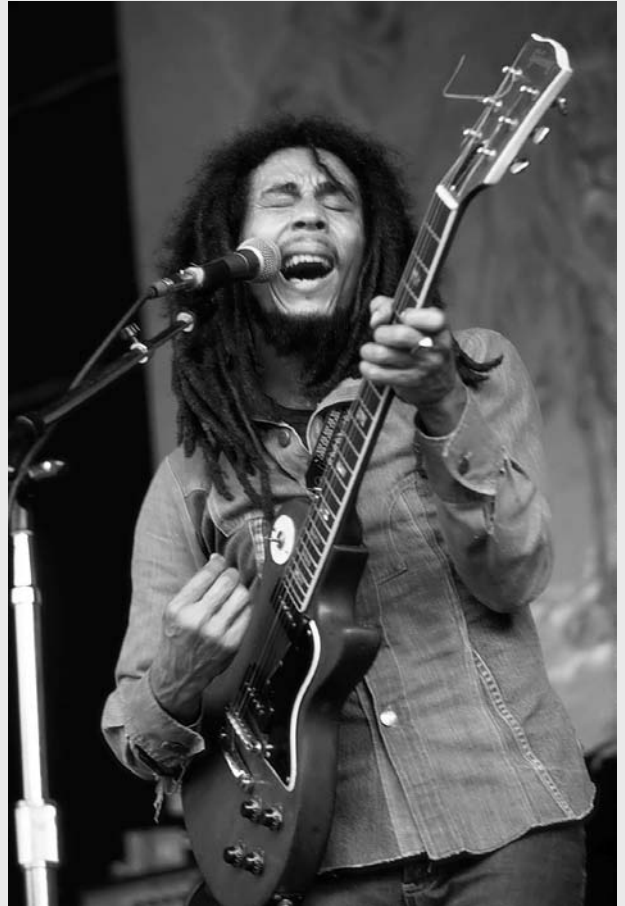
For Africans who live south of the Sahara, music comes in both traditional and modern versions, but both are profoundly rooted in native traditions and in an approach to singing or playing musical instruments that are percussive in nature. The decolonization that took place in the 1960s along with the rapid urbanization and general modernization of African societies have produced a fusion of the traditional and the modern that draws heavily as well from African American music. This hybridization has created various regional sounds known all over the world, including highlife, juju, Afrobeat, soukous, and benga. The world first gained a taste of African popular music with Miriam Makeba's *Kilimanjaro* and Hugh Masekela's *Grazing in the Grass*, which topped the American charts in 1968. But it was the Ghanaian band Osibisa that became the big breakthrough performers during the 1970s with their Afro Rock fusion music that sold millions all over the world. Since then, with radio programs such as those available on the BBC World Service and lately on the Internet, African music, classified now as World Music, has become a global affair.

Without a doubt, the rise of modern African music styles that rely heavily on electric guitars has provided great opportunity to introduce African musicians to the world. From West Africa comes highlife, a popular urban style of music centered on guitar that developed in the early twentieth century in Ghana and then spread to other West African countries. African musicologists believe that highlife music is a unique African sound of music style that blends indigenous dance rhythms with American blues, Caribbean reggae, and Western rock and pop music. West Africa is also the home of juju music, described as the Nigerian cousin of highlife that relies on a synthesis of traditional Yoruba rhythms with

➤ REGGAE—POLITICAL PROTEST OR RELIGIOUS EXPRESSION?

In mid-twentieth-century Jamaica, street-corner loudspeaker sound systems were common in Kingston, playing recent song releases whether jazz, New Orleans blues, or even country and western music from the mainland. Soon these spots started playing the records of local artists, with their rhythmic, African influences, resulting in a homegrown record industry. Coinciding with Jamaican independence in 1962, ska, with its electrified instruments and rhythmic emphasis on the upbeat, became popular, creating a new local sound based on a variety of traditions, including Trinidad's calypso music, best exemplified in the postwar period by the playful singing and sly lyrics of "The Mighty Sparrow." Ska was followed by rocksteady, which was less wild melodically and included lyrics, as in calypso, that often focused on social and political commentary. Reggae reasserted the overarching rhythm in the late 1960s but kept room for individual expression and its own lyrical realism.

It was Bob Marley and his group The Wailers who launched reggae onto the international stage. However, reggae and its predecessors were already popular in Great Britain, where it had been imported by West Indian immigrants. The alternative nature of ska and reggae also resonated with certain white youths, so-called mods in the early 1960s, who used it to distinguish themselves amid the general cultural identity crises of the period. Through Marley, reggae became associated with Rastafarianism, a religion inspired by the Old Testament and that holds the late Ethiopian emperor Haile Selassie, aka Ras Tafari, as divine. Besides the characteristic dreadlocks and cannabis smoking as sacrament, Rastafarians believe that all black peoples will eventually return to Africa, their rightful paradise. Although it became a vehicle for religious and political expression in albums such as Marley's *Natty Dread* (1975), reggae and its relatives, including contemporary dancehall in Jamaica and Spanish-language *reggaetón*, are more than that. Through all these variants of reggae, artists illustrate the woes, distinctiveness, and cultural wealth of the African diaspora.



Bob Marley, a reggae pioneer, helped bring this Afro-Caribbean music to the world stage. Reggae has developed into a popular style throughout the world, including Africa. (Jeff Albertson/Corbis)

Bibliography

- Kean, Alasdair. "Reggae." *Britain and the Americas: Culture, Politics, and History*. Santa Barbara, CA: ABC-CLIO, 2005. www.hro.abc-clio.com.
- Saunders, Nicholas J. "Music" and "Rastafarianism." In *Peoples of the Caribbean: An Encyclopedia of Archaeology and Traditional Culture*. Santa Barbara, CA: ABC-CLIO, 2005. www.hro.abc-clio.com.

native blues. King Sunny Ade is perhaps the most well known of all current juju performers.

Another ever-popular genre, Afrobeat, was pioneered by Nigeria's Fela Anikulap (Ransome) Kuti in the early 1970s. Kuti described Afrobeat as a fusion of highlife, American black soul, jazz, and traditional Nigerian musical styles. The *makossa* style of African music was played by Cameroonian saxophonist Manu Dibango of "Soul Makossa" fame. A distinct modern style of the traditional *mbalax* has emerged in more recent times in the SeneGambia and Mali regions. Normally played by traditional talking drums, its most influential artists are Youssou N'Dour of Senegal and Salif Keita of Mali. Although African music is associated with drumming, Africans employ a wealth and variety of modern and traditional musical instruments to make and enjoy music: xylophones, the *kora* (a stringed instrument), flutes, trumpets, harps, horns, and bells as well as staples of Western jazz and rock bands. Performers also use their arms, waists, and feet and adorn their bodies with noise-making instruments such as ankle rattles so that when they dance, the music produced by the movements is a musical event by itself.

Since the 1960s another popular African sound that swept the continent, especially in Francophone Africa, was the Congo dance-band music style called soukous. Often sung in Lingala, the common language of the Democratic Republic of Congo in central Africa, soukous also blends traditional Congolese music with Latin American rhythms such as the rumba and the cha cha cha, Caribbean beats, and American jazz. The music is so infectious that it has proven popular throughout Africa and beyond, especially in France where a large Francophone African expatriate population reside, and among a wider European audience.

Eastern and southern African societies have also produced their own sounds. A widely popular style is the *benga*, originating from the Luo people of Kenya. Apart from that, Thomas

Mapfumo has popularized a style of music from the Shona people of Zimbabwe known as *chimurenga*, often based on traditional music in Zimbabwe and Shona harmonic patterns. South Africa is also home to several styles. Besides the *kwela*, there is the *iscathamiya*, a traditional Zulu call-and-response cappella choral music popularized by the group Ladysmith Black Mambazo, which achieved international recognition with its collaboration with American pop star Paul Simon and their Grammy Award-winning album *Graceland* (1986). The *mbaqanga*, also sometimes called Township Jive, is another South African township music that draws its influence from swing-era jazz and was first popularized in the 1960s and introduced to the pop world by artists such as Johnny Clegg and Mahlatini and the Mahotella Queens.

Africa's music is never static and continues to evolve largely as a result of the continent's integration into the world's communication networks. For example, even though reggae is Jamaica's popular music and hip hop and rap are contemporary African America's popular music, these musical styles have now been added to the repertoire of Africa's music sounds. Reggae and hip hop are everywhere in Africa, but Africans have added their own flavors and distinctive styles to these musical genres and continue to produce a great diversity of African sounds.

—Henry M. Codjoe

Bibliography

- Agawu, Kofi. *Representing African Music: Postcolonial Notes, Queries, Positions*. London: Routledge, 2003.
- Broughton, Simon, and Mark Ellingham. *Rough Guide to World Music*. Vol. 1, *Africa, Europe and the Middle East*. London: Rough Guides, 2000.
- Stapleton, Chris, and Chris May. *African All Stars: The Pop Music of a Continent*. London: Paladin Grafton Books, 1987.
- Tenaille, Frank. *Music Is the Weapon of the Future: Fifty Years of African Popular Music*. Chicago: Lawrence Hill, 2002.

■ Introduction: The Growth of Sports around the World, 1945–Present

Since the end of World War II, sports around the globe have grown significantly as a result of various factors: the politicization of sport, the media revolution, the introduction of a big business mentality to sports associated with television and sponsorship, and the subsequent globalization of sports as a result of television, cable television, and the Internet. The growth of sports at the global level has served to increase spectatorship and participation in athletics and has served to create a common bond that can transcend geographic location.

The politicization of sports dates to the late nineteenth century, when physical education became a requirement within public schools across Europe and the United States. The primary aim of physical education was to create healthy boys, to fill the nation's military once they were grown, or for girls, to produce strong children once married. Other contemporaries, such as Pierre de Coubertin, the founder of the modern Olympic Games, viewed sports, especially team sports, as ideal ways of instilling characteristics such as teamwork, fair play, and advancement based upon merit, fostering democracy on the playing field. Thus, by the turn of the twentieth century, sports began to play a more important role within the schools and within the social realm of adults.

During the interwar period (1919–1939), the politicization of sport by regimes such as Germany and Italy took new forms, through heavy state investment and promotion of athletics in order to win national accolades and thus international glory through sporting success. One such example was the Italian soccer team that, under Fascist sponsorship in the 1930s, won numerous global titles, including the 1934 and 1938 World Cups and the 1936 Olympic gold medal.

However, with the end of World War II, governments began to encourage even more actively sport development and growth. During the Cold War, athletic contests allowed a nation's elite athletes to defend national honor on center stage. To this end, international competitions, such as the Olympics and the World Cup, became

more important, and many governments openly financed athletic training so that their athletes could excel in competition. The most famous sports clashes of the Cold War include the Hungarian versus Soviet water polo match at the 1956 Sydney Olympics, which occurred shortly after the brutal Soviet crackdown in Hungary. Others include the Soviet versus U.S. Olympic ice hockey final of 1980, which pitted the two rivals against each other on the hockey rink, and the England versus Argentina quarter-final match in the 1986 World Cup, which took place shortly after the Falklands War of 1982. Since the fall of the Berlin Wall in 1989, nationalistic competition via sport is still a priority for many nations, especially those in the developing world, as winning international athletic accolades can boost a nation's international standing and prestige.

The role of the media and its evolution in the postwar period also greatly shaped the growth of sports around the world since 1945. Television was the first major catalyst for change, as it completely altered how sports were consumed. No longer was it obligatory to attend an athletic event in person or read an account of it in the newspaper to follow one's team. Television enabled the spectator to watch sports events in real time from the comfort of the home. The first-ever televised sports events occurred in 1931 when Japan's Waseda University broadcast a baseball game and Great Britain's John Logie Baird, an inventor, broadcast the Epsom Derby. Within the United States, the first sports event televised was a 1939 baseball game between Columbia and Princeton universities. The first televised World Series baseball games appeared on network television in the United States in 1948, with other sports shortly following suit.

Television viewership from the 1950s onward was increasingly sports-centric and served to significantly bolster the spectatorship of many sports events, including soccer, baseball, ice hockey, American football, and the Olympics. Although it was initially feared that increased television sports viewing would lead to a decline of in-stadium spectator attendance, the broadcast

of sports events did just the opposite: it created a larger market of sports spectators.

From the 1960s onward, television became central to sports. As sports viewership increased, advertising on television during sports broadcasts became more coveted and more expensive. Conversely, as the broadcasting rights to sports events became more expensive, it was no longer financially feasible for a sports event to have only one sponsor, and thus began the multisponsored sports events of the late twentieth and early twenty-first centuries.

The advent of cable television brought significant challenges to network or state-run television in maintaining viewership in the 1980s, and this was only the first of a new onslaught of threats to chisel away at network television sports. With the advent of the Internet in the late 1980s and early 1990s, sports as well as gambling on sports began to be disseminated through a new medium. The Internet facilitated sports viewership and, some argue, sports participation.

Not only did government sponsorship or encouragement of athletic participation help to spread the popularity of sports across the globe in the postwar period, so too did the media revolution by making sport spectatorship more accessible to the masses, regardless of geographic location. Today, the most popular sport in the world is soccer. During the 2002 FIFA World Cup, televised coverage of the matches reached 213 different countries, for a total of 28.8 billion viewers worldwide over a period of 25 days. Due to the growth of sport and the advances in technology made by television and the Internet, today fans can follow their teams whether they are located down the road or an ocean away.

—*Lindsay Sarah Krasnoff*

Sports and Politics, 1945–Present

While the games of antiquity were already political objects for the victors and the organizing city, modern sport has maintained close links with the delegation of power since it came into being in Great Britain in the nineteenth century. With its characteristically competitive and spectacular aspect, sport gives material and visible form to the expression and outcome of a combat. As a symbolic vector for political confrontation, it is

all the more attractive as it is popular and ever present in the media. Despite the ideological discourse of sports institutions such as the International Olympic Committee (IOC) and national and international federations, which proclaim that it is apolitical, sport has never been neutral. The close ties between sport and politics can be observed at every period in its history and at different levels: nationally, sometimes even locally, and internationally.

Through induced identification mechanisms, sports competitions and spectacles tend to bind the popular masses to the nation. By promoting and controlling sport, totalitarian states conveyed the image of a strong nation and assured their popularity thanks to sporting propaganda. The Italian victory at the 1934 soccer World Cup became Benito Mussolini's and the regime he led. The Berlin Olympics, lavishly organized by Germany in 1936, demonstrated Adolf Hitler's power on the international scene. Communist regimes (from Stalin to Mao Zedong) have made systematic use of sport to grandstand and showcase their regimes. The victory of the West German soccer team in the 1954 World Cup was experienced by the Germans as a time of resurgence, summed up in the words "wir sind wieder Wer!" (We are somebody again!).

In the colonial context, sport appears as a vector for national demands. At the start of the 1960s under French colonization, the Algerian National Liberation Front (FLN) created the soccer team of the Algerian nation that went on tour in the Eastern Bloc countries and the Arab world. The affiliation of the Palestine federation to the International Federation of Football Association (FIFA) in 1998 was based on similar intentions.

Faced with intercommunity or multiethnic difficulties, nations turn to the unifying virtues of sporting victory. France, in the person of the president of the Republic, rejoiced in the 1998 soccer World Cup victory by a "Bleu, Blanc, Beur" (Blue, White, Immigrant) team, which supposedly personified its multiethnic social reality and was proof of successful integration. Mauritius, drifting into communalism and ethnic tensions, organized the 2003 Indian Ocean Games as a means of rallying the different communities around a single flag and a rainbow nation.

At the local level, politicians use sports institutions for electoral purposes, either seeking to bolster their influence by obtaining a position within the sports organization or making political capital out of popularity acquired through sports. During electoral campaigns, candidates strive to secure the support of recognized sports figures to bolster their image or convey their political message. The presence of political personalities in the stadium during local, regional, or national competitions is considered evidence of their popularity and has become a ritual. In the United States, the values enshrined in sports—initiative, performance, strength, health, and so on—must be reflected in the president's image. From John Kennedy to George W. Bush, every American president has promoted an athletic image.

At the international level, sporting contests play a nonnegligible role in diplomatic relations between states. The competitions reproduce rivalries between nations in euphemized form. The earliest Olympic Games, such as the Paris Games in 1900 that were marked by anti-German chauvinism, expressed international tensions in Europe.

The decision to boycott—forbidding a team or state to participate in sporting competitions—is significant. Thus, the 1920 Antwerp Olympics confirmed the warlike qualities of the victorious Allies, all the more so because the defeated nations were not invited. Between 1920 and 1931, sporting competitions set France against only allied and neutral countries, ruling out any meeting with Germany. After 1945, with the entry of the Soviet Union and the socialist countries into international sporting bodies, it was within the context of the Cold War pitting East against West that the international sports events reflected rivalries. In 1980 at Moscow, 29 countries including the United States, Canada, West Germany, Japan, South Korea, and Norway decided not to participate in the Olympic Games as a protest against the Soviet invasion of Afghanistan. The response of the Soviet Union and the Eastern Bloc took the form of their 1984 boycott of the Los Angeles Olympics.

The globalization of sports federations such as FIFA or the IOC is today virtually complete, and everywhere their presidents are received like heads of state. Juan Antonio Samaranch was

➤ GERMAN NATIONALISM AND THE WORLD CUP 2006

Throughout the FIFA World Cup in Germany in 2006, multitudes of Germans took up their national symbol, their tricolored national flag of black, red, and gold, with sincere pride. Not since World War II had masses of Germans held their national symbols with such fervent pride on such a wide scale. Throngs of German youths painted their faces with their national colors when attending the various soccer matches. However, many international critics argued that this held a dangerous precedent in German history (particularly Prussian militarism and National Socialism) and were alarmed by the widespread display of German nationalism at many of the games and celebrations. This episode illustrates one way that sports and politics can intermix; in this case, the memory of the past and of the dangers of nationalism had influenced contemporary views of a sporting event.

—Abraham O. Mendoza



German fans at the FIFA World Cup 2006 in Germany proudly showing national pride in a sea of black, red, and gold flags. (Arne Mueseler)

invited to deliver a speech to the United Nations General Assembly in 1992, although the IOC is merely a nongovernmental organization. Sport as a total social phenomenon is already omnipresent throughout the political sphere. By virtue of its diffusion, popularity, and mediatization, it has become a key element in politics.

—Evelyne Combeau-Mari

Bibliography

- Allison, Lincoln. *The Global Politics of Sport*. London: Taylor and Francis, 2005.
- Kuper, Simon. *Soccer against the Enemy: How the World's Most Popular Sport Starts and Stops Wars, Fuels Revolution and Keeps Dictators in Power*. New York: Avalon, 2006.
- Levermore, Roger. *Sport and International Relations: An Emerging Relationship*. London: Taylor and Francis, 2003.
- Pound, Dick. *Inside the Olympics: A Behind-the-Scenes Look at the Politics, the Scandals, and the Glory of the Games*. New York: Wiley, 2006.

Olympics and Politics since 1945

Since the revival of the Olympic Games in 1896, political issues have shaped the content and conduct of the games. During World War II the games were cancelled in 1940 and 1944. With the resumption of the Olympic Games in 1948, international political issues gained increased significance, with the Cold War tensions between the United States and the Soviet Union the dominant issue. Unprepared for competition in 1948, the Soviet Union first appeared in the Olympics in Helsinki in 1952. From that point, the Olympic Games were seen by many as a showdown between capitalism and communism, freedom and totalitarianism, good and evil. “They were in a sense the real enemy,” observed American decathlete Bob Mathias, who added

that beating the Soviet Union “wasn’t like beating some friendly nation like Australia.”

The conflict between the United States and the Soviet Union climaxed in 1980 when the United States led a boycott of 81 nations of the Summer Olympics in Moscow in protest of the 1979 Soviet invasion of Afghanistan. Despite the boycott, the United States defeated the Soviet Union in hockey at the Winter Olympics in Lake Placid that year. Dubbed the “Miracle on Ice,” the American victory was a great source of pride for a nation otherwise disappointed by the impending boycott. In turn, the Soviet Union led a boycott of the 1984 Olympic Games in Los Angeles. Cold War tensions dissipated after the collapse and breakup of the Soviet Union in 1989. Competing as the Unified Team in 1992, each of the former Soviet republics participated as individual teams in 1996.

Racial issues also have played a role in shaping the Olympic Games since the end of World War II. In 1964, the IOC banned the Republic of South Africa from participating in the Olympic Games for its refusal to reform its apartheid policies. Similarly, the IOC banned Rhodesia from the 1972 Summer Olympics in Munich for its racial segregation. In 1976, several African nations led by Tanzania boycotted the Summer Olympics in Montreal after the IOC’s refusal to condemn New Zealand for its rugby team’s tour of South Africa following the suppression of the children’s revolt in Soweto. Known as the All Blacks because of their black uniforms, the New Zealand team was also flouting international pressure to boycott the apartheid regime of South Africa. Previously banned Rhodesia returned to the Olympic fold in 1980 as Zimbabwe following a guerrilla uprising and the election of a majority black government in 1979. Zimbabwe won the gold medal in women’s field hockey with a team consisting mostly of whites. With the fall of apartheid in 1991, the Republic of South Africa returned to Olympic competition in 1992.

Racial tensions in the United States spilled over into the Olympic Games in 1968 when African American sprinters Tommy Smith and John Carlos, the gold and bronze medalists in the 200-meters, bowed their heads and raised black gloved fists during the playing of the national anthem at their medal ceremony. Other African



The Soviet Union's Unified Team celebrates victory at the Albertville Olympics in 1992. (AFP/Getty Images)

American track and field performers, such as Bob Beamon in the long jump, wore knee-length black socks as a symbol of racial unity. In contrast to the display of Smith and Carlos, African American heavyweight boxer George Foreman waved a tiny American flag in the ring following his gold medal bout.

In 1972, the Arab-Israeli conflict intruded upon the Olympic Games in Munich, West Germany. Early on the morning of September 4, eight members of the Palestinian terrorist organization Black September slipped inside the Olympic Village and raided the apartments housing the Israeli Olympic Team, killing two upon entry and taking nine Israeli athletes hostage. German snipers later opened fire on the terrorists at Fürstenfeldbruck, a military airfield, where they were to board a plane to Cairo. All but three of the Palestinians were killed, but not before they murdered the nine Israeli athletes. Postponed throughout much of the ordeal, the Olympic Games resumed on September 6, as Avery Brundage, the president of the IOC, declared that the “Games must go on.”

Domestic terrorism struck the 1996 Summer Olympics in Atlanta, Georgia, when a homemade bomb exploded in Centennial Park, killing one woman and injuring 111 other people. Richard Jewel, a security guard who discovered the bomb and attempted to lead an evacuation of the area became the principal suspect in the bombing. He was later cleared of all charges. In 2005, anti-abortion activist Eric Rudolph confessed to the bombing, stating that he wanted to bring an end to the Olympic Games because he believed they promoted global socialism and because he wanted to embarrass the United States for its sanction of abortion on demand. Rudolph also confessed to the bombings of abortion clinics in Atlanta and Birmingham, Alabama.

The IOC decision to award China the 2008 Olympic Games received much criticism from individuals, organizations, and governments concerned about China’s human rights record at home and abroad. Along the route of the Olympic Torch relay, dubbed the “Journey of Harmony,” protesters disrupted the ceremonies. The games themselves also were marked with controversies. One controversy involved the opening ceremonies in which a parade of children,

➤ THE TWO GERMANYS AND THE OLYMPICS

Germany’s division into two countries following World War II made it the embodiment of Cold War political divisions. Neither East Germany nor West Germany sent a team in 1952. After the Soviet Union recognized East Germany as a sovereign state in 1955, the International Olympic Committee provisionally acknowledged the nation but insisted that it must compete as part of a single German team. The combined team entered the Olympic Games from 1956 through 1964. Separate teams representing each of the two Germanys first competed in 1968. Fueled by a state-supported athletic training system that selected and trained potential champions from childhood, the East Germans quickly developed into an Olympic powerhouse that rivaled the Soviet Union. Since the fall of the Berlin Wall and the reunification of Germany in 1989, a single team once again has represented Germany in the Olympics.

—Adam Hornbuckle

each supposedly representing China’s 56 ethnic minorities, were all Han Chinese wearing traditional costumes.

—Adam Hornbuckle

Bibliography

- Baker, William J. *Sports in the Western World*. Rev. ed. Urbana: University of Illinois Press, 1988.
- Guttmann, Allen. *The Games Must Go On: Avery Brundage and the Olympic Movement*. New York: Columbia University Press, 1984.
- Guttmann, Allen. *The Olympics: A History of the Modern Games*. Urbana: University of Illinois Press, 1994.
- Hill, Christopher R. *Olympic Politics: Athens to Atlanta, 1896–1996*, 2nd ed. Manchester, UK: Manchester University Press, 1996.

Sports, Drugs, and Money

After winning the men’s 100-meter final in 9.79 seconds, a new world record at the 1988 Seoul Olympics, Canadian sprinter Ben Johnson was found guilty of doping. The news sparked a media storm. Yet it was no more than a case of modern methods illustrating a practice as old as humanity: the use of chemical substances to enhance performance. The evolution of the



Ben Johnson and Carl Lewis in the 100-meter dash at the 1988 Olympics in Seoul. Johnson's gold medal was later disqualified when a drug test revealed traces of anabolic steroids. (AP/Wide World Photos)

enhancement of sporting performances should be set against the scientific progress of pharmacology around three periods of significance: the 1930s, the 1960s to 1990s, and the present period, covering the last 15 years. As currently defined by the International Olympic Committee's (IOC) legal commission in 1997, "Doping is the presence in the athlete's body of a Prohibited Substance or the use of a Prohibited Method," making it a penalized and stigmatized practice. Yet for a century, sports authorities and states had remained discreet and showed little tendency to intervene in the face of very real doping practices.

With the simultaneous birth of industrialization and modern sport in mid-nineteenth-century Britain, the improvement of human performance by use of medicinal substances of vegetable or animal origin became a project that was both systematic and experimental. At the end of the nineteenth century, some athletes made use of substances such as heroin, already widespread in horse-racing circles, or morphine. In 1896, a 29-year-old cyclist, the Welshman Arthur Linton, died two months after taking part in the Bordeaux-Paris race as a result of using morphine. With the appearance of synthetic compounds, amphetamines were an immediate and lasting success with athletes. Amphetamines,

which act on the central nervous system, are reputed to inhibit fatigue, increase energy, reduce hunger, facilitate wakefulness, and enhance will-power. Available over the counter, these drugs are believed to have stimulated a number of athletes by 1936 at the Berlin Olympics. Similarly, the Japanese men's swimming teams, victorious in virtually all competitions in the 1932 Los Angeles Olympics, relied on the amphetamine trinitrine. The administration of doses was characterized by trial and error, to the detriment of athletes' health in many cases. Although discussed in a report published by the League of Nations in 1939, the risks of doping were neglected, as sports bodies remained incapable of detecting its traces.

The thirty years from 1960 to 1990 illustrate the simultaneous rise of sport as a spectacle and the appearance of hormone derivatives, notably corticosteroids and anabolic steroids. Sporting spectacles in this period involved considerable financial stakes through TV contracts and political stakes both nationally and internationally as a result of the East-West struggle. The sporting champion, a professional supervised by a medical team, was exposed to pressures that would sometimes lead him or her to use performance-enhancing drugs. Behind the scenes of the sporting event, the rivalry among doctors, researchers, and laboratories gained increasing prominence.

Apart from their androgenic effect, anabolic steroids (testosterone, methandrostenolone, nandrolone, trenbolone) develop muscle mass, increase stamina, and reduce the articular pains associated with overwork. These undetectable substances were widely used in sporting circles from the 1960s thanks to a highly lucrative underground market. It is known today that the government of the German Democratic Republic organized the doping of its elite athletes with the complicity of trainers and medical teams. The period saw the appearance of regulatory measures through the publication of lists of banned substances. The IOC published a list in 1967 and brought in the first doping controls in 1976. By the late 1960s, most of the major international federations had drawn up regulations aimed at preventing and combating doping. The French and Belgian governments committed

themselves durably to the struggle by passing anti-doping laws in 1965 that are regularly brought up-to-date.

At the end of the 1980s, growth hormones (GH), manufactured by genetic engineering and highly effective as a means of fighting the effects of aging, began to arrive on the illicit market. Erythropoietine (EPO) made its appearance during the Calgary Olympics. A certain number of athletes were suspected of using it. After Ben Johnson, the American Florence Griffith-Joyner, a 100-meter record holder and Olympic champion at 100- and 200-meters in 1988, aroused suspicion because of her spectacular physical transformation and the rapid improvement in her performances. Her sudden death in September 1998, at the age of 39, has raised questions. In 1996, the Atlanta Olympics were called the “Growth Hormone Games.” The Festina Affair, which rocked the 1998 Tour de France, brought into the open the methodical doping procedures of the racers, the distribution networks, and the sums at stake.

Faced with their responsibilities, sporting authorities and governments had to develop preventive and repressive measures on an international scale. On November 10, 1999, the Council of Europe created the World Anti-Doping Agency, a body independent of the sports movement. Commissioned to coordinate national policies and to harmonize actions between public authorities and sports bodies, its major task consisted of drawing up the world antidoping code that came into effect in Athens in 2004. Notions of authenticity in sporting accomplishments were at stake, as sports have continued to court a growing audience on television.

—Evelyn Combeau-Mari

Bibliography

- Burns, Christopher N. *Doping in Sports*. New York: Nova Science Publishers, 2006.
- De Mondenard, Jean-Pierre. *Dopage, l'imposture des performances*. Paris: Chiron, 2000.
- Hoberman, John. *Testosterone Dreams: Rejuvenation, Aphrodisia, Doping*. Berkeley: University of California Press, 2006.
- Hoberman, John, and Verner Moller. *Doping and Public Policy*. Odense: University Press of Southern Denmark, 2005.

Wilson, Wayne, and Edward Derse, eds. *The Politics of Drugs in the Olympic Movement*. Champaign, IL: Human Kinetics, 2001.

Global Soccer, 1945–Present

After World War II, as soccer increasingly became a source of national pride, the sport further disseminated across the world. While the monopoly of Europe and South America as the primary disputers of World Cup final games has not yet been broken, in this period Africa, Asia, Central America, and Caribbean countries developed from exotic guests to become indispensable actors in soccer's world theater. This expansion took part not only in national team competitions but also in the most important leagues of the world. At the same time, television broadcasting increased the influence of South American and European soccer culture and disseminated its more localized fan cultures to global audiences.

Continental organizations helped to expand soccer among their regions. South America created its own organization in 1916. The process was consolidated after World War II, when in 1954 both Europe and Asia created their own continental associations, followed by Africa in 1956 and Oceania in 1966. In 1961 a soccer federation was created to encompass countries from North America, Central America, and the Caribbean.

The progressive inclusion of new countries interested in participating in the World Cup indicates soccer's globalization. The first postwar World Cup, played in Brazil in 1950, included the exclusive participation of national teams from Europe and the Americas. In 1954 Asia was present in the World Cup for the first time. In 1966 the World Cup saw the first defeat of a European country at the hands of an Asian representative when North Korea defeated Italy 1–0. This victory also granted North Korea a place in the second round, another first for a team not from Europe or the Americas.

The World Cup of 1970, hosted by Mexico, included the participation of Morocco and Israel as well as El Salvador, the first Central American team ever to participate. Four years later in Germany, Haiti became the first Caribbean

► THE SOCCER WAR

The Soccer War was a conflict that engaged the armies of El Salvador and Honduras in July 1969. Although the conflict started barely a week after a game that decided which country would first attend the World Cup, the name is misleading. The conflict arose as a result of years of border disputes, internal economic tensions, and immigration disputes. The high density of population and lack of available land in El Salvador had promoted migration to neighboring Honduras, where conditions were the inverse. By 1969 as many as 300,000 Salvadorians lived in Honduras, where they represented 13 percent of the population. That year, the government of Honduras started to expel the immigrants, creating an economic crisis in El Salvador. This dispute led to a military conflict. The connection between the war and a soccer game is just coincidental, but the popular name indicates how important soccer has become as a source of national identity and pride.

—Marco Cabrera-Geserick

representative since 1930, Australia became the first country representing Oceania, and Zaire was the first sub-Saharan team to participate. In 1982 Cameroon finished that year's tournament undefeated, including a tie against Italy, that year's World Cup winner. In 1986 Morocco became the first African team to pass to the second round, and in 1990 Costa Rica did the same for the Central American region. The World Cup of 1994, played in the United States, signaled the first time that the World Cup was hosted by a country not considered a traditional soccer nation. Four years later, the World Cup continued its expansion to new areas when it was hosted in a joint effort by Japan and South Korea. The tournament is slated to have its first edition in Africa by 2010.

The introduction of television also influenced the process of globalization. The 1958 World Cup in Sweden was the first to be televised to an international audience. In 1970 Mexico was the first country to broadcast the World Cup in color. Currently, satellite signals broadcast the best games of European and Latin American leagues.

Revenues for broadcast rights and advertising have also led to large corporate presence in soccer club ownership. Such media saturation has helped export soccer fan culture, as local fan expressions have shifted to resemble the chants and supporting style common in Europe and South America. Fan loyalty is not restricted to the local team anymore and can include several international teams at the same time.

The strong image of soccer as a male domain has slowly changed. In some countries (and ethnic subcultures), as seen in the film *Bend It Like Beckham* (2002), women's participation was stigmatized. This perception included countries such as soccer-crazy Brazil, where until the 1970s laws forbade women's soccer. Thanks to the creation of a Fédération Internationale de Football Association (FIFA) Women's World Cup in 1991, followed by the inclusion of women's soccer in the 1996 Olympic Games, the sport became professionalized and has followed a globalizing trend similar to its male counterpart.

The growth of the game has made FIFA the largest international organization, representing more nations than the United Nations or the International Olympic Committee. In the 1990s the European Union ended its quotas limiting the number of foreign players in its leagues, allowing for the formation of globalized teams. Brazil became the main exporter of players, and Europe became the main market. Japanese players can be found playing in Argentina, Cameroonian players can be found playing in Mexico, and Central American players can be found playing in China.

—Marco Cabrera-Geserick

Bibliography

- Goldblatt, David. *The Ball Is Round: A Global History of Soccer*. New York: Riverhead Books, 2008.
- Kapuściński, Ryszard. *The Soccer War*. London: Granta Books, 1990.
- Kuper, Simon. *Soccer Against the Enemy*. New York: Nation Books, 2006.
- Lever, Janet. *Soccer Madness: Brazil's Passion for the World's Most Popular Sport*. Long Grove, IL: Waveland, 1995.
- Reid Martz, Mary Jeanne. *The Central American Soccer War: Historical Patterns and Internal Dy-*

namics of OAS Settlement Procedures. Athens: Ohio University Press, 1978.

Sandvoss, Cornel. *A Game of Two Halves: Football, Television and Globalization*. New York: Routledge, 2003.

Wagg, Stephen. *British Football and Social Exclusion*. London: Routledge, 2004.

Globalization of Basketball

The game of basketball gained global popularity over the last century but has exploded internationally in the last three decades. At one point basketball was considered as American as apple pie along with that other great national pastime in the United States, baseball (which has also undergone a parallel process of globalization in the last half century). This global spread of basketball is partially responsible for and has also been shaped by the modern phase of global media and communications technology, advertising, the global sports industry, and even international politics. The global spread of basketball was and continues to be—like so many facets of contemporary culture—tied into patterns of consumerism and national identities.

Dr. James Naismith, a Canadian, invented the game of basketball in 1891 while working as a YMCA athletic director in Springfield, Massachusetts. The game, designed to be an indoor activity for youths that required skill and not simply strength, was first played with a soccer ball, a borrowing from yet another global sport. The game changed as it spread in the United States but also was actively being spread to other nations through the YMCA movement as early as 1893. Founded in Switzerland in 1932, the International Basketball Federation (FIBA) controls and determines the rules and regulations for basketball internationally. Basketball was first featured at the 1936 Olympics in Berlin, and the Olympics also has played a large role in shaping how basketball has been played internationally. Globalization increased from the late 1970s through the 1990s, as the privatized use of satellite communications and cable television made basketball broadcasts available to a widening international market; along with broadcasts came other media coverage, marketing, and a flow of transnational

➤ HARLEM GLOBETROTTERS

Although the exact details of their origin is disputed, the Harlem Globetrotters—also known as the “Ambassadors of Goodwill,” the “Magicians of Basketball,” and many other monikers—were formed in the mid-1920s in Chicago’s Southside and have been performing their sport around the globe since. Throughout its tenure the team has played more than 25,000 games, become involved with worldwide charities and organizations, met with major world leaders such as Pope John Paul II (who joined the eclectic ranks of other famous Honorary Harlem Globetrotters such as Whoopi Goldberg and Henry Kissinger), and continually worked to spread the game of basketball across the planet. The Harlem Globetrotters represent, among other things, a unique caricature of the American style of play—with an emphasis on individual ability. They also reflect a greater tension present in the spread of basketball, between an American national identity and a global identity. The Harlem Globetrotters are named for Harlem in New York and are outfitted in red, white, and blue, the colors of the United States. These and other aspects of the Harlem Globetrotters act as cues to signify that they represent a particularly American identity even as they work to spread basketball globally.

—Anthony Kolenic

capital as well as new styles of play, leagues, and trends.

Despite the early global identity of basketball, it was still very much understood as an American game, and U.S. dominance in the game from its inception through the early 1970s solidified this identity. Basketball has been likened to jazz by many who argue that the two cultural forms hold shared characteristics: a mix of individual improvisation and teamwork, a resulting tendency to challenge convention and expectation, as well as a uniquely American aura. A highly individualistic style of play is, in more recent decades, aligned with U.S. basketball, whereas a style emphasizing fundamentals and technical play has been identified as how the rest of the world plays the game.

The U.S. National Basketball Association (NBA) has, in the last 25 years, gained new power and popularity as a result of recruiting players from around the globe, balancing styles of play in the league and, in so doing, adding to basketball's growth. In many nations, particularly throughout Europe and parts of Asia, promising youths are groomed for professional play, replacing the normal school day with intensive training in basketball. Those who go through these academies hope to be drafted to the NBA, but many play in other national leagues, such as those in Spain, Serbia, and Lithuania, and often compete in the Olympics for their respective nations.

In recent decades, the game has opened up to include female players on an institutional and professional level. The Women's National Basketball Association (WNBA) has largely thrived since its inception in the United States in 1997 and has contributed to the increased demand for the sport by involving women and girls around the world over the last decade. Despite the recent boom in popularity, women's basketball has been an international sport for decades, as the FIBA has held an international women's championship every non-Olympic year since 1953, and women's basketball became an Olympic sport in 1976, with the Soviet Union winning the gold medal.

Much like the jazz diplomacy of the Cold War, the U.S. State Department now sends NBA stars across the globe to participate in programs for persons with disabilities and youth organizations or to teach basketball in Afghanistan, Iraq, and other nations.

—Anthony Kolenic

Bibliography

- Gems, Gerald R. *The Athletic Crusade: Sport and American Cultural Imperialism*. Lincoln: University of Nebraska Press, 2006.
- Green, Ben. *Spinning the Globe: The Rise, Fall, and Return to Greatness of the Harlem Globetrotters*. New York: HarperCollins, 2005.
- LaFeber, Walter. *Michael Jordan and the New Global Capitalism*. New York: Norton, 1999.
- Miller, Toby, Geoffrey A. Lawrence, Jim McKay, and David Rowe. *Globalization and Sport: Playing the World*. Thousand Oaks, CA: Sage, 2001.
- Smart, Barry. *The Sport Star: Modern Sport and the Cultural Economy of Sporting Celebrity*. Thousand Oaks, CA: Sage, 2005.

NASCAR

The National Association for Stock Car Auto Racing, usually referred to as NASCAR, is a U.S. organization that sanctions specific automobile racing competitions with a fan base rooted in post-World War II Southern white working-class culture. As the name implies, racers use stock cars, identical to automobiles available to the buying public. Although NASCAR emerged in the United States, in recent years the sport has internationalized to a degree, attracting attention from other cultures and drawing increasingly diverse crowds within the United States itself.

NASCAR evolved in tandem with post-World War II car culture in the United States. The father of NASCAR was Bill France, who originally belonged to the NSCRA, or the National Stock Car Racing Association. France brought together the individual leaders of the numerous small racing associations that were active in 1947, and NASCAR was officially created on February 21, 1948. NASCAR grew out of the Southeast, though the race circuit spread to other areas. By 1960 the Daytona 500, in Daytona Beach, Florida, was being televised. The popularity of the sport grew steadily at this point. In the 1980s corporate sponsorship from Fortune 500 companies poured still more money into the sport. With increasing television coverage, individual drivers began to assume a movie star quality in the public eye. While during the 1980s NASCAR received as little attention by sports writers as bowling or soccer, by the turn of the twentieth century the sport claimed its own category on the *Sports Illustrated* Web site as well as ESPN and other media venues.

Until the 1990s, although NASCAR was drawing millions of fans, the sports establishment was slow to recognize the sport since it emerged from working-class Southern roots. The media stereotype was not wholly incorrect, as can be gathered from the difficult history of NASCAR's dealing with issues of racial diversity. Not only were most of the fans white and working class, but the drivers themselves were nearly all white until recently. Likewise, women have yet to become a force in the NASCAR world as drivers. At NASCAR events, as at U.S. college football games, there are almost always many fans outside the

INTERNATIONAL AUTO RACING

- 1903—In a planned Paris-to-Madrid automobile race, 200 automobiles participate. Numerous accidents, injuries, and a total of eight fatalities ensue, including the death of Marcel Renault, one of the three siblings who founded Renault Brothers. The race is cancelled when the drivers reach Bordeaux, and open road racing is temporarily banned in France.
- 1904—The Fédération Internationale de l'Automobile (FIA), forms; in addition to advocacy, it becomes the main governing body for auto racing.
- 1906—Ferenc Szisz wins the First Grand Prix race held at Le Mans, France, traveling at an average speed of 62.88 miles (101.17 kilometers) per hour in his Renault during the two-day road race.
- 1909—The Automobile Club of America sponsors a 4,000-mile New York-to-Seattle automobile race. Ford No. 2, one of Henry Ford's Model Ts, wins the race in 22 days with an average speed of 7.76 miles per hour. Four months later the race committee rules that the Ford team committed fraud, and the prize is awarded to the Shawmut.
- 1911—The first Indianapolis 500 is held in the United States. Winner Ray Harroun averages 74.59 miles (120 kilometers) per hour for the 500-mile race.
- 1926—The first world championship is initiated for manufacturers, with qualifying rounds based on Indy 500 and Grand Prix circuit results.
- 1948—The National Association for Stock Car Auto Racing (NASCAR) forms.
- 1948—Following World War II, Grand Prix adopts new regulations for car weight, engine capacity, and so on, creating Formula One and Formula 2 categories.
- 1950—The World Driver's Championship is created for Formula One racing.
- 1954—The British Stock Car Racing Association is founded.
- 1972—R. J. Reynolds Tobacco Company sponsors the Winston Cup, infusing capital and new cachet in NASCAR.
- 1977—Janet Guthrie, one of the car drivers cultivated by the Macmillan Ring-Free Oil Company's "Macmillan Ring-Free Motor Maids," is the first woman driver to enter the Indy 500.
- 1990—Dutch driver Arie Luyendyk's sets an Indy 500 record win at an average speed of 185.981 miles (299.307 kilometers) per hour. Luyendyk wins the 500-mile race by only 10.7 seconds.
- 1992—Female race driver Lyn St. James is voted the Indianapolis 500 Rookie of the Year.
- 2008—The FIA agrees to regulate planned Formula Zero races that will feature high-speed "go karts" powered by hydrogen fuel cells.

—Fred Nadis

track stadium, where an active tailgate culture (centered on parking lot beer and barbecue parties) perseveres.

To a degree, NASCAR has been diversifying ethnically and internationally. The informal color line for NASCAR was broken by African American driver Wendell Scott, who raced from 1961 to 1973. He drove in 495 races, winning 1 and finishing in the top ten in final standings for several seasons. There have been very few black drivers since Scott. In the words of NASCAR historian Joe Menzer, "too many of the circuit's insiders could not see past the Confederate flags and dollar signs . . . even as the sport continued to spread throughout the United States and further

distance itself from its moonshine roots in the Deep South." Indeed, while interest in NASCAR has diversified regionally and through social strata, many in the media continue to refer to NASCAR voters as white, conservative, and rural based.

Although the upper level of competitions that count toward the Nextel Cup are all still held in the United States, NASCAR has held allied races in other countries, such as South Africa, Mexico, and Japan. There are parallel organizations arising internationally as well, such as CASCAR in Canada (though these are not sanctioned by NASCAR). The sport has been internationalizing in the United States as well. Traditionally,

only U.S. automobile companies entered or sponsored NASCAR vehicles. In 2007, Chevrolet, Ford, Dodge, and other American makes were joined by Toyota. Another recent development, indicating NASCAR's growing cosmopolitanism, was the sport's acquisition of a former Formula One and Indy Car driver of Latino heritage, Juan Pablo Montoya. Montoya, a Colombian, has excited the growing Latino fan base in the United States and worldwide. The main ESPN station in the United States carried Spanish-language coverage of a 2007 Mexico City NASCAR Busch

series race, further evidence of the increasingly global reach of the sport.

—Rick Warner

Bibliography

- Levinson, David, and Karen Christensen, eds. *Encyclopedia of World Sport*. Santa Barbara, CA: ABC-CLIO, 1996.
- McLaughlin, Jack. "Seattle or Bust." *American History* (June 2003).
- Menzer, Joe. *The Wildest Ride: A History of Nascar*. New York: Simon and Schuster, 2002.

■ Introduction: Film and Television since 1945

While the early technology for television reception and broadcasting was developed during the 1930s, television as a mass media did not develop until the post-war era. In the West, particularly the United States with its commercial model for financing, television helped define a generation of baby boomers who grew up with its entertainment genres, news, and commercials. As newspapers continued to shrink as a viable media in the 2000s, television, with all its flaws, along with computer blog sites, has become the main vehicle for journalism with 24-hour coverage; 24-hour satellite, multiple cable channels, and computer streaming (YouTube, Hulu, TiVo) create a near infinite stream of information available to institutions and individuals. As with the film industry, television industries during this period were often nurtured with state funding, ensuring that East German broadcasting (with its very limited commercials) was quite different than that in the United States. National boundaries, however, are far from impermeable, and despite shielding efforts such as the Chinese government's Great Firewall of China that blocks Internet sites, access to alternative coverage of news of the world is far easier than in the past. Commerce also encourages transnationalism: the telenovelas (or soap opera serials) of Brazil and Mexico have become world commodities, with enormous audiences across the globe in-

cluding Eastern Europe and Russia. South Korean soap operas have also become popular in Japan and North America. Mirroring heavy industry, most North American animation production has shifted to countries such as India, South Korea, and China.

—Fred Nadis

World Film, Post-1945

Following World War II, international cinema invented new genres and style conventions. Among the innovations were Italian Neo-Realism, French New Wave, the Cold War cinema of communist nations, new national cinemas and industries, and numerous action genres. These and a heightened interest in experimental art house cinemas were all by-products of renovations in experiencing, studying, and sanctioning the 100-year-old seventh art.

Although experimentally founded by Russian filmmaker Dziga Vertov in his 1920s concept *Kino Pravda* (Cinema Truth), Italian Neo-Realism emerged as a narrative style among the ruins of Italy's cities following World War II. The term "Neo-Realism" was first critically applied by Antonio Pietrangeli and Umberto Barbaro to Luchino Visconti's *Ossessione* (1943). Visconti's style was bereft of artifice and offered an unadulterated plot, authenticity in design, location shooting, and a lyricism in direction. Akin to the later

documentary film movement of cinema verité (cinema truth), popularized in the 1960s, Neo-Realism accented observed street reality as opposed to imaginative gloss. Throughout the 1940s Neo-Realism was the staple of the Italian cinema. Roberto Rossellini's *Rome, Open City* (1945) also expressed the style, which was to endure until Giuseppe De Santis's *Bitter Rice* (1949) transformed Neo-Realism into a commercial cliché. While Italian cinema returned to escapism, Neo-Realism influenced world cinema and such movements as cinema verité and the French New Wave.

World War II's military devastation of France left its cinema enthusiasts yearning for new artistry. From 1958 to 1960, French theorists and directors developed the Nouvelle Vague (New Wave), which was, unlike Neo-Realism, not a cohesive movement but rather a conglomerate of talent, focused on the criticism of André Bazin and Jacques Valcroze in their magazine *Cahiers du Cinema*. Their new theories were brought to the screen by young directors such as Claude Chabrol, Francois Truffaut, and Jean-Luc Godard in personalized films bereft of Hollywood gloss or expected filmmaking traditions. The New Wave fostered the spirit of independent filmmaking; the genre peaked in 1962 and had faded by the early 1970s when a new generation of Hollywood filmmakers also turned to gritty realism. Engendered by similar budget limitations, Neo-Realism and the New Wave were two sides of the same coin: artistry relying on the everyday, the unglamorous, the frank, and the spontaneous as opposed to the glamorous, the painted backdrop, and the fantasy of escapist film.

Films of the New Wave directors and other world-class directors such as Akira Kurosawa, Yasujiro Ozu, Ingmar Bergman, and Federico Fellini became standard fare in 1950s art houses, or small cinemas where countercultural, obscure, underground, and experimentally directed films have been shown to discriminating audiences. Many of the films also have been associated with the great film festivals: Venice (the first, in 1932, as part of the Biennale, following the war), Berlin, Moscow, Karlovy, Cannes, Edinburgh, Cork, London, Rio de Janeiro, Sundance, and San Francisco. There are also particular genre festivals worldwide.

➤ INTERNATIONAL FILM FESTIVALS

Film festivals began in the 1930s as a way to showcase film as an art form. The first film festival was held in Venice in 1932, and the most prestigious film festivals are still held in Europe (Cannes and Berlin are among the other famous film festivals). The international festivals challenged the global influence of Hollywood studio products and sought to return film from entertainment to art. Traditionally, the festivals catered solely to European directors, but the festivals have become even more international in scope. In the last couple of decades, special interest film festivals also have been created, such as festivals dedicated solely to animation (for instance, Zagreb) and student films, the most famous being the Fresh Film Festival in Karlovy Vary, Czech Republic, and the Ivy Film Festival in Providence, Rhode Island. There have been some criticisms that the old established film festivals, especially Cannes, are becoming more commercialized. Supporters argue, however, that with the breakdown of the studio system the lines between Hollywood, independent, and globally financed cinema have become more blurred.

Outside the art house, the Cold War led to Red Scares in Hollywood and the nationalistic bravado and anxieties expressed in 1950s westerns and science fiction horror movies in the United States. International tensions were also highlighted in the film industries of communist nations. From the official division of the two Germanys in 1949 until their reunification in 1990, East German film dealt primarily with Marxist ideology, human toil, and Teutonic history. Slatan Dudow's *Our Daily Bread* (1949) and Gunther Rucker's *The Best Years* (1965) are alternating examples of the routine issues in this communist sector: Marxist propaganda and human struggle, respectively. Because of their heavy propagandistic quotient, these films' distribution was internationally slight except for Andrew and Annelie Thorndike's *The Archives Testify* (1955) series, which exposed existing Nazi lore and dossiers. The Thorndikes' *The Russian Miracle* (1963), a collaboration with Russian filmmaker Esther Shub, became East Germany's most heralded film. Unlike the famous UFA (Universum

Film Aktien Gesellschaft), Germany's earlier national film association DEFA (Deutsche Film Aktien Gesellschaft), which lasted from 1917 to 1945, operated as East Germany's film association until the Berlin Wall fell in 1990.

Disparaging the historic greatness of its own early cinema, Stalinist Russia often oppressed filmmakers and set strict propagandistic guidelines for all the arts. Vsevolod Pudovkin's *Admiral Nakhimov* (1946) was suppressed, for example, as were the later works of Sergei Eisenstein, while Mikhail Romm's *The Russian Question* (1948) was praised for its Stalinist posturing. After Stalin's death, the Soviet film industry began to revive. Grigori Chukrai's *The Forty-First* brought auteurism (personalized statements) afresh to the Soviet Union in 1956. The 1960s Soviet cinema brought to the screen great literature and/or figures as a staple, for example, the female director Larissa Shepitko's *Heat* (1963), the Armenian Sergo Paradjanov's *Shadows of Our Forgotten Ancestors* (1964), and Andrei Tarkovsky's *Andrei Rublev* (1966). With the Soviet Union's demise in 1991, Soviet films were replaced by filmmaking in the independent republics via private financing. The Federation of Independent Filmmakers Union replaced the old Soviet Filmmakers Union.

Before the close of World War II in China, the invading Japanese used Chinese actors and technicians to produce some fine film fare such as *Sorrows Left at Spring River* (1940) by directors Hiroshi Inagaki and Yeuh Feng. After the war the pre-republic period began, with films expressing China's heritage and history such as *The Bridge* (1949) directed by Wang Pin. However, in 1949 the Maoist regime nationalized filmmaking through its Ministry of Culture. Its first product was *The Victory of the Chinese People* (1950), directed by Liu-Pai-you and Leonid Varlamov in collaboration with Soviet technicians. The films were propagandistic, instructing viewers about the brutality of capitalism while offering revisionist history and underlining the need of workers' revolutions. *New Heroes for Heroines* (1950), directed by Shih Tung-shan, and *The East Is Red* (1965), directed by Li Shuang-shuang, range from nationalism to pageantry celebrating communism, respectively. Before Mao Zedong's death in 1976, 480 features, 3,000 newsreels, and

1,400 shorts were produced by the Cultural Revolution's Chinese Film Workers Association.

Postwar commercial action film genres include Japanese samurai films, the related U.S. western, the Italian spaghetti western, and the kung fu genre of Hong Kong. The Japanese samurai film became an international success with Akira Kurosawa's *Seven Samurai* (1954) in which warriors defend a peasant village using swords and the ancient ethic of the samurai warrior. The film, which won the Grand Prix award and an Oscar for best foreign film, was adapted by U.S. director John Sturges into the hit *The Magnificent Seven* (with gunfighters as the samurai) in 1960. Other samurai films followed. Italy reinvented the western genre when Sergio Leone created the spaghetti western, a slang term for a gritty, rough film that offered violent homage to the Hollywood western and to samurai films, whose plots they freely borrowed. Clint Eastwood found fame as "the Man with No Name" in Leone's *For a Few Dollars More* (1965) and *The Good, the Bad, and the Ugly* (1966). An onslaught of films with other actors followed in Italy, Spain, and Germany. Leone's masterpiece, *Once upon a Time in the West* (1968), signaled the end of the genre.

The Hong Kong kung fu film, which began despite some governmental suppression in the 1930s, sprang to world prominence in the 1970s. The genre's first international star, Bruce Lee, championed martial arts and anticolonial themes in his B-films of unending action and violence, which appealed to Western audiences. More recently, Jackie Chan has formed his own industry built around the genre of *wuxia* (mystical sword-play), emphasizing comedy as well as martial arts fights.

The filmmaking industry of India has blossomed since the 1940s. The industry, based in Mumbai (Bombay) and now referred to as Bollywood, has in recent years created 900 works per year. In theme, the films are melodramatic routine thrillers concerning love triangles, comedy, and dare devilry. Some of the best known are musical extravaganzas filled with dancing and songs and often based loosely on India's mythic narratives. Bollywood's output fills the subcontinent's roughly 13,000 theaters, catering to audiences that speak 1,600 dialects in 16 languages.

While Hollywood still dominates the world market, since 1945 filmmaking has continued its globalization. The death of the Hollywood studio system in the 1950s gave rise to outside financing and to nonstudio-based filmmaking with flourishing production centers throughout the world. Whereas studios once exclusively produced their own films, now financing for projects comes from banks, individual financiers, and countries themselves. With the common film in 2006 costing some \$65 million—and a blockbuster \$200 million in U.S. dollars—filmmakers go where they can for financing, and that brings in globalization.

—Larry Clifton

Bibliography

- Katz, Emphraim. *The Film Encyclopedia*. New York: Collins, 2006.
- Shipman, David. *The Story of Cinema*. New York: St. Martin's, 1989.
- Sklar, Robert. *Film: An International History of the Medium*. New York: Prentice Hall, 1994.
- Smith-Newall, Geoffrey, ed. *The Oxford Companion to World Cinema*. London: Oxford University Press, 1993.

Cold War Ideology in U.S. Films—Westerns, Thrillers, and Containment Culture

During World War II and the immediate post-war era, Hollywood reflected the transformation of the U.S. national character from isolationism to internationalism. Cold War ideology enveloped filmmaking as the industry sought to defend itself against accusations of communism from the government and private organizations such as the American Legion. This compelled the film industry to embrace the emerging post-war consensus, which grew out of the wartime experience of cooperation among government, business, and labor. The industry's self-defense gathered enormous steam in the late 1940s—especially after the House Committee on Un-American Activities (HUAC) was invited to Hollywood in 1947—as anticommunist rhetoric attacked anything critical of America, including its capitalist economy. Thus, the head of the Motion Picture Producers' Association, Eric Johnston, informed the Screen Writers Guild: "We'll

➤ RED DAWN

Director John Milius's *Red Dawn* (1984) portrays a nightmare scenario of Cold War ideology: the invasion and occupation of the United States by the Soviet Union. The takeover begins while students suffer through a visibly boring high school lecture about Mongol history. Meanwhile, the town of Calumet, Colorado, is invaded by Russian and Central American commandos who quickly give the town a Soviet facelift, including propaganda posters, a reeducation center at the old drive-in theater, and the (free) showing of *Alexander Nevsky* (1938) at the local movie theater. During the initial invasion a group of high school students escape to the mountains, where they form a guerrilla resistance group named the Wolverines. The students eventually wreak havoc on the seasoned Soviet and Latin American troops. Domestic Cold War ideology courses through the movie, notably where the Cuban commander Bella tells a Soviet KGB (Committee for State Security or *Komitet gosudarstvennoy bezopasnosti*) agent to retrieve information on gun owners at the sporting goods store, an explicit jab at liberal gun-control advocates. Internationally, the policies of the Reagan administration appear validated, as Cuba and Nicaragua take over the U.S.-supported El Salvador and Honduras, leaving Mexico to fall like a domino to communist revolution. Meanwhile, a second set of dominos falls as the Green Party takes over West Germany, leading to the dissolution of NATO in the face of Soviet aggression. The only reference to the United Nations is the analogously blue color of the Russian Special Forces' berets.

—Daniel R. McClure

have no more *Grapes of Wrath*, we'll have no more *Tobacco Roads*. We'll have no more films that show the seamy side of American life. We'll have no pictures that deal with labor strikes. We'll have no more pictures that show the banker as villain." Films overlaid Cold War ideals into the storylines and themes of movies, embedding Cold War ideology into genres such as westerns, thrillers, and dramas.

Overtly anticommunist films included movies such as *My Son John* (1952), which portrayed the family as a bulwark against the communist



Scene still from *Shane* (1953), starring Alan Ladd (left), Van Heflin, Jean Arthur, and Brandon De Wilde. (Paramount/The Kobal Collection)

menace that appeared in the guise of a son who is a communist agent. These films, however, usually suffered from low budgets and performed poorly at the box office. Anticommunist messages reached far wider audiences through more popular genres such as westerns. Director George Stevens's western *Shane* (1953) portrays a family-oriented settler and his homesteading community's struggle against an authoritarian cattle baron. The film's two male heroes present two alternatives to society: the nuclear family-oriented husband (Van Heflin), who fights when pushed, and the loner individual (Alan Ladd), whose violent fighting skills serve the causes of family and justice. Together, these two heroes save the community and contain the threat against the homesteaders' livelihood.

During the 1950s, thrillers sometimes incorporated science fiction to portray the anxieties of an America facing possible nuclear annihilation or communist takeover. The sense of being overwhelmed by elements larger and more powerful than society permeated through films such as *Them!* (1954), a movie in which the terror comes from atomically mutated ants and their superior social organization as a stand-in for communism. Movies about aliens reinforced the suspect nature of intellect and intelligence, thus making the scientist in *The Thing* (1951) as suspect as the killer alien itself. Finally, the film noir thriller *Kiss Me Deadly* (1955), a movie centered

on the exploits of virulently anticommunist private investigator Mike Hammer, projects the manly toughness one needs to survive, especially within the storyline that ultimately involves a nuclear device that is to be sold to an ambiguous foreign buyer, who could be assumed to be a communist.

One of the quintessential films of the 1950s exploring gender roles at the height of the Cold War is *Rebel without a Cause* (1955) starring James Dean, a rebellious son of suburban parents who often witnesses his mother ordering around his unsure father. Containment culture emphasized the role of the husband as the leader of the household through his ability as the breadwinner, while the wife's role included the domestic management of the household, including the proper nuances of raising children. In raising sons, wives attempted a precarious balance between attentiveness and over-attentiveness, with the latter possibly leading to the creation of weak, sissy adolescent males who might not possess the stamina to fight off the temptations of communism. Family conflict explodes during a scene in which the father appears in an apron while failing to offer to Jim (Dean) sound, manly advice for his adolescent problems. Upon the dramatic conclusion, the father admits his faults and asserts that he will try to become the father Jim needs: "Come on, Jim, stand up. I'll stand up with you. I'll try to be as brave and strong as you want me to be." The stated message, a family without a strong father and with a mother who rules over the men, creates unstable family networks that can lead to chaos.

Reflecting the extreme opposite of the post-war consensus was *Salt of the Earth* (1954), the product of the Hollywood blacklist. Made independently and in cooperation with the International Union of Mine, Mill & Smelter Workers, the movie tells the true story of a mining town in New Mexico whose workers go on strike after safety conditions at the mine go unattended by the owners. As a movie that portrays everything mainstream Hollywood hoped to steer clear of, *Salt of the Earth* was plagued by vigilante violence on the set as well as hostility from the Hollywood American Federation of Labor Film Council and the American Legion. Because its creators were victims of the blacklist, they were

able to make a film outside of the Hollywood system that gave them the freedom to explore themes that Hollywood abandoned in the Cold War age of consensus.

—Daniel R. McClure

Bibliography

- Leab, Daniel J. "How Red Was My Valley: Hollywood, the Cold War Film, and I Married a Communist." *Journal of Contemporary History* 19, no. 1 (1984): 59–88.
- Lipschutz, Ronnie D. *Cold War Fantasies: Film, Fiction, and Foreign Policy*. New York: Rowman and Littlefield, 2001.
- May, Lary. *The Big Tomorrow: Hollywood and the Politics of the American Way*. Chicago: University of Chicago Press, 2000.
- Sayre, Nora. *Running Time: Films of the Cold War*. New York: Dial, 1982.
- Whitfield, Stephen J. *The Culture of the Cold War*. 2nd ed. Baltimore: Johns Hopkins University Press, 1996.

Popular Indian Cinema

India has the world's most prolific film industry, with an annual production of 800–1,000 films in a variety of languages. Of these, around 200 films, each lasting nearly three hours and replete with songs, dances, and spectacle, are made in Hindi in Bombay (now Mumbai) and known as Bollywood films. With their Pan-Indian and international reach, they dominate the cultural scene in India.

India's first indigenous silent film, *Raja Harishchandra*, was made by D. G. Phalke in 1913. In the 1930s, with the advent of talkies, major studios were created including New Theatres in Calcutta (now Kolkata), specializing in screen adaptations from Bengali literature; Bombay Talkies in Bombay whose forte was romance; and Prabhat in Poona (today Pune), specializing in social melodramas. Until 1934, when the first studios were constructed in southern India, many Tamil- and Telugu-language films were also made in these studios.

The end of World War II saw the emergence of independent producers. These producers, recognizing the importance of screen stars as valuable marketing commodities, lured them away from the major studios with offers of generous

➤ D. G. PHALKE

D. G. Phalke (1870–1944) is revered as the father of Indian cinema. Impressed by French director Alice Guy's silent film *Life of Christ* (Gaumont, 1906) and enthused by Mahatma Gandhi's swadeshi movement, Phalke, a professional photographer and patriot, decided to make the first Indian film.

Pawning his wife's jewelry to raise funds, in 1913 Phalke made *Raja Harishchandra*, based on a famous story from Hindu mythology. The film, with special effects inspired by French magician-turned-filmmaker Georges Méliès that lent themselves perfectly to depictions of divine intervention and miracles, was such a resounding success that with the profits Phalke established the first Indian studio, Hindustani Film Company, in Nasik. He ran the enterprise like a patriarch of the Hindu joint family: the actors and technicians lived in the same house, while he took responsibility for all aspects of the filmmaking process. All of Phalke's subsequent feature films were made here and based in Hindu mythology.

Other filmmakers followed Phalke's lead and took the stories of gods and goddesses, kings and queens, from Hindu mythology as their subjects. Thus, the mythological film was the Indian cinema's first-ever genre and still survives, mostly on television.

Unfortunately, Phalke's style of filmmaking was overtaken by sound technology and the new studios, and this pioneer of Indian cinema, like the French film pioneer Georges Méliès, died in penury.

—Asha Kasbekar

remuneration. With no overheads associated with maintaining a studio and no actors and technicians on regular payroll, they soon ruined the studios, opening the industry to new production companies.

By the time India achieved independence from Great Britain in 1947, the Indian film industry was already flourishing with films made in most regional languages, and the 1950s marked the golden age of the Bombay-based popular Hindi cinema. The burgeoning metropolis saw a crowding of national talent and produced some of the best films in its history. Four important directors of this golden age were Raj Kapoor (*Awara*, 1951), Mehboob Khan (*Mother India*,



Poster advertising the Bollywood movie *Mother India*, a Mehboob Khan masterpiece released in 1957 during the Golden Age of Bollywood. The tale of a peasant woman's heroic efforts to keep her family intact, *Mother India* is considered a classic of Indian cinema and was the first Hindi-language film ever nominated for an Academy Award. (Corbis)

1957), Bimal Roy (*Madhumati*, 1958), and Guru Dutt (*Pyaasa*, 1957) working with actors such as Dilip Kumar, Dev Anand, and Raj Kapoor himself and actresses such as Nutan, Madhubala, Nargis, and Meena Kumari.

Elsewhere in India, a new genius was emerging in the person of Satyajit Ray (1921–1992), the greatest Indian film director, known only in Calcutta and his native West Bengal until his film *Pather Panchali* (1955), the first of the Apu trilogy, won acclaim at the Cannes Film Festival. Ray and his body of work were to inspire the future art house films, or parallel cinema.

The advent of color in 1960 heralded the dominance of romance in Bombay cinema, with

songs and dances choreographed in spectacular settings that enhanced the persona of the stars. One of the earliest was *Mughal-e-Azam* (K. Asif, 1960), a pseudohistorical romantic extravaganza made partly in color that holds the same iconic status in Bollywood as *Gone with the Wind* in Hollywood. Later, formulaic romances were churned out by S. Mukherjee's Filmistan starring Shammi Kapoor (*Junglee*, 1961), the "Indian Elvis."

In 1960 the Indian government set up the Film Finance Corporation (later the National Film Development Corporation) to subsidize low-budget films, and in 1961 the government created the Film and Television Institute of India, resulting in fine artistic films such as *Bhuvan Shome* (Mrinal Sen, 1969) and *Uski Roti* (Mani Kaul, 1969).

In the 1970s a pair of unknown screenwriters, Salim Khan and Javed Akhtar, suddenly burst upon the Bombay scene with a series of action-packed melodramas such as *Zanjeer* (Prakash Mehra, 1973) and *Deewar* (Yash Chopra, 1975), which marked the meteoric rise of all-time superstar Amitabh Bachchan. Their *Sholay* (Ramesh Sippy, 1975), a *masala* western inspired by Clint Eastwood and spaghetti westerns, broke all previous records at the box office.

However, by the 1980s the action-packed films of Salim-Javed (as they were known) and their imitators had run out of steam. The nation was in political turmoil, and its economy was in crisis. With the introduction of color television and the expansion of terrestrial networks, the urban middle classes stayed at home to watch broadcasts. The habitually precarious finances of the film industry were now even more uncertain. Ominously, the Indian mafia muscled into the financing of films to launder their profits.

Meanwhile, the artistic inheritors of Satyajit Ray came into their own with a crop of low-budget films such as *Ankur* (Shyam Benegal, 1974), and by the 1980s Malayalam film directors such as Adoor Gopalakrishnan, G. Aravindan, and John Abraham, all from the southern state of Kerala, were at the vanguard of parallel cinema, with Abraham even starting a film cooperative, the Odessa Collective.

Bedeveled by economic woes, the Indian government liberalized the economy in 1991. For the

first time, cinema was given the status of an industry in 1998 and with it access to bank and other forms of regulated loans. Although national film subsidies were discontinued, several state governments began to offer grants for regional-language films. Some states offered tax incentives for the construction of new multiplex cinemas, and thanks to their proliferation in the new shopping malls, new films made with smaller budgets for niche audiences began to emerge.

Today, the expatriate Indian populations (particularly in the United States and the United Kingdom) are major markets accounting for half the total box office receipts. Big stars such as Shah Rukh Khan, Aamir Khan, and Aishwarya Rai continue to dominate the Pan-Indian and expatriate markets. The Oscar-nominated *Lagaan* (Ashutosh Gowrikar, 2002), with its plot of colonial exploitation and cricket, was an all-time hit. Meanwhile, Hollywood, despite the lifting of import restrictions and the dubbing of U.S. blockbusters into Hindi, continues to hold less than 10 percent of the crowded national Indian market.

—Asha Kasbekar

Bibliography

- Barnouw, Erik, and S. Krishnaswamy. *Indian Film*. Oxford: Oxford University Press, 1980.
- Garga, B. D. *So Many Cinemas: The Motion Picture in India*. Mumbai: Eminence Design, 1996.
- Kasbekar, Asha. *Pop Culture India! Media, Arts, and Lifestyle*. Santa Barbara, CA: ABC-CLIO, 2006.

Television and Its Impact on International Culture

Television is a powerful and a controversial medium. Almost from its very inception in the 1930s, the impact of television has been subject to debate. Would this new audiovisual medium deliver on its promise of promulgating education and culture, or would it be an outlet for advertising consumer goods?

In the United States, the first network television show, a 30-minute variety show, was broadcast by NBC (an RCA affiliate) on July 7, 1936. During the same time period (the 1920s and 1930s), scientists in Europe and Japan were conducting research and experiments in television technology and, by the end of the 1930s, had begun broadcasting. In Great Britain the London



Family watches television in the living room of their home, about 1958. (National Archives)

Television Service was inaugurated in 1936, while Japan Public Broadcasting Company began in 1937. Large industrialized countries in Asia, such as China, India, and Indonesia, established their own broadcasting infrastructure and programming in the late 1950s and early 1960s.

Worldwide, the rate of development of television as an industry varied greatly between industrialized and evolving nations. By the end of the 1980s, television broadcasting had been introduced into practically every nation on the planet. During this period there was much debate in non-Western nations about the impact of television, especially the impact of programs based on Western cultural values and sensibilities. Nearly half a century later, this debate continues. A brief overview of the history of television reveals the positive and negative influences that this medium has had worldwide on national identity, intellectual freedom, the exportation of U.S. popular culture, and finally the reinterpretation and repackaging of that culture.

The story of television as mass media begins in the mid-1940s at the close of World War II. In the United States, the postwar era was a time of industrialized might and suburbanization. Along with a growing middle class and new housing came a growing desire for consumer goods. This period of prosperity coincided with and helped to give rise to the popularity of American television programming and a stylized American

SATELLITE TELEVISION BROADCASTING TIMELINE

- 1957—Sputnik, the first satellite to successfully orbit the Earth, is launched by the USSR.
- 1962—Telstar, the world's first communication satellite, is launched from Cape Canaveral on July 10.
- 1972—In the United States, the FCC deregulates the domestic satellite industry with the Open Skies decision. Private companies can now use communication satellites for broadcasting.
- 1975—HBO broadcasts “The Thrilla from Manilla” (heavyweight championship fight between Muhammad Ali and Joe Frazier) via live satellite feed. This marks the birth of pay-per-view TV.
- 1978—America's Public Broadcasting System (PBS) introduces Public Television Satellite Service, the first system to use satellite technology for all its program delivery.
- 1980—Ted Turner launches CNN, the first 24-hour news channel. CNN revolutionizes television by providing an all-news format and featuring a real-time feed of breaking events on an international scale.
- 1989—Sky News, Great Britain's first 24-hour news station, begins operation.
- 1991—CNN gives unprecedented access to the first Gulf War. CNN was the only TV news source with on-the-ground real-time coverage. Its success spurs competition in the 24-hour news broadcast field.
- 1996—MSNBC, Fox News, and Al-Jazeera (the Arabic language news station) all launch satellite news broadcasts.
- 1997—The British Broadcasting Corporation inaugurates BBC News 24.
- 2005—Russia Today, an English-language Russian-based satellite news service, begins broadcasting.
- 2006—Al-Jazeera English (the first international English-language news channel headquartered in the Middle East) and France 24 (the first French-based international news channel) each debut.
- 2007—The Iranian English-language 24-hour news channel, Press TV, enters the satellite news field.

—Vibiana Bowman

consumer culture. The American television industry of the 1950s, which borrowed heavily from the success of commercial radio programs, created the templates for network shows that are still used today: dramas, sketch comedy, game and variety shows, and situation comedies. While U.S. broadcasters originally emphasized live events and live dramas—with the perception that live coverage was the sphere in which television excelled—preproduced dramatic series grew in popularity.

While other industrialized nations, such as Great Britain and Japan, were producing quality, original programs, during the first few decades of television much of the rest of the world ran American shows as a staple of their broadcast day. It was less expensive for fledgling television broadcasting systems to import foreign shows from the United States and Europe than to produce their own shows. As a result, media critics voiced concerns about cultural imperialism, that is, the imposition of Western culture and values on the less prosperous nations by the more industrialized ones that were, in many cases, nations from which they had recently won political independence.

While it is true that television has served to promote consumer culture, most particularly popularizing and creating a world market for American consumer goods, television has also served to promote national identity in developing countries. In the evolving nations that make them available, U.S. and West European shows continue to be broadcast and continue to be popular. However, current media surveys show that audiences often prefer locally produced programming. These domestic shows, which reflect a region's own language, culture, and worldview, are more in tune with local public taste. The popularity of specific types of programs varies from region to region: in Central and South America, the *telenovela* (a serialized show with high drama and characters drawn from everyday life) as well as Spanish-language musical and variety shows draw large audiences; in Western African countries and Southeast Asian nations, shows that feature traditional folk dance and song as well as indigenous-language pop music groups are popular.

The popularization of a national language and identity has been one of the benefits of televi-

sion in developing nations. The use of a national language such as Bahasa in Indonesia and Swahili in Kenya, Tanzania, and Uganda in locally produced programs has furthered the cause of a national spoken and written language in these countries. Unfortunately, there is a downside, as evidenced in China. Putonghua, or Modern Standard Chinese, is the official language. It is unlawful for broadcasts to offer any regional dialects. Regional activists in China are concerned that since no media exposure is granted for their language, new generations will have less familiarity with the dialect, which will lead to its extinction.

Television broadcasting systems, infrastructure, and regulations vary from nation to nation. Broadcast networks may be commercial, government subsidized, government controlled, or some combination of the three. Access to international programs is dependent on domestic politics. More recently, the Internet and the World Wide Web have provided a worldwide audience access to global media. Through video-sharing sites such as YouTube, television programs become available almost as soon as they are broadcast. In countries such as North Korea and Iran with tight controls over media outlets and the Internet, access to international information and entertainment can be limited. While these and other totalitarian governments use filters and tracking programs to bar users access to media deemed culturally or politically unacceptable, activists and civil libertarians continually attempt to circumvent these barriers in order to access the information that television provides.

—Vibiana Bowman

Bibliography

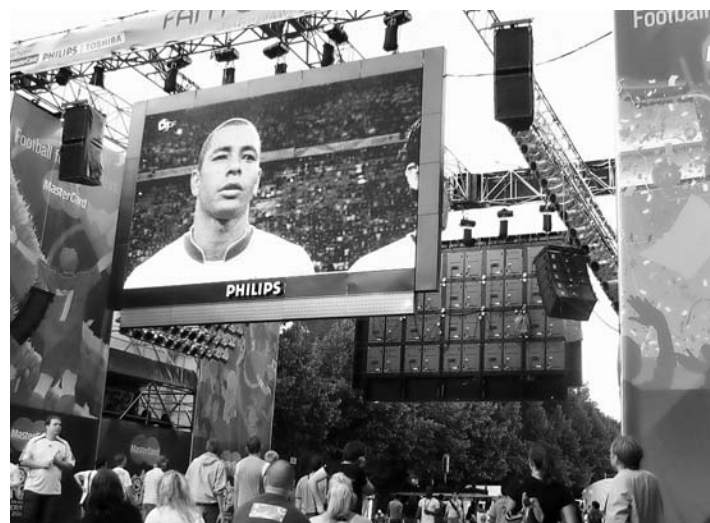
- Chun, Jayson Makoto. *"A Nation of a Hundred Million Idiots"? A Social History of Japanese Television, 1953–1973*. New York: Routledge, 2007.
- Dunleavy, Trisha. *Ourselves in Primetime: A History of New Zealand Television Drama*. Auckland: Auckland University Press, 2005.
- Moore, Barbara, Marvin R. Bensman, and Jim Van Dyle. *Prime-Time Television: A Concise History*. Westport, CT: Praeger, 2006.
- Mullen, Megan. *The Rise of Cable Programming in the United States: Revolution or Evolution?* Austin: University of Texas Press, 2003.
- Smith, Anthony, and Richard Paterson, eds. *Television: An International History*. Oxford: Oxford University Press, 1998.

Sports and Television

Television presents itself as the medium that not only enabled sport to be shown to a wider public but also brought about its profound mutation. By the turn of the 1970s, households had access to television, and the sports spectacle met network expectations as popular entertainment, generating considerable financial profits. With a head start in the United States, television promoted professional sports that transformed the practice and images of sport.

Born in Europe and the United States in the late 1930s, television provided the first sports images during the 1936 Olympic Games organized by Hitler in Berlin. In the particular context of triumphant Nazism, the sporting demonstrations staged by the Nazi propaganda services were seen on small screens by a privileged 200,000. In all Western countries, the 1960s witnessed the development of television. By 1968 the number of TV sets in the United Kingdom stood at 14 million, while there were 13 million sets in Germany, 20 million in Japan, and 78 million in the United States. Generally state-controlled until the mid-1960s, television and programming subsequently came to depend on competition between profit-motivated private companies.

Functioning simultaneously as news, games, soap opera, series, or light entertainment, sports



Fans in Berlin watch Brazil's Gilberto Silva during a television broadcast of Japan vs. Brazil in the 2002 World Cup. (Flickr)

appeared to be the ideal medium for the television networks. Live broadcasts of championship finals of nationally popular sports, whether soccer in Europe or baseball, football, or basketball in the United States, hold great appeal for viewers. The major international sporting events, the Olympic Games or soccer World Cup, score highest in the ratings. Forty billion viewers in 200 countries followed the soccer World Cup in 2002.

International sports institutions, based from an ethical point of view on the principle of amateurism, nonetheless manage this financial windfall very astutely. The Olympic Committee or the sports federations, which own the broadcasting rights for the events they organize, preside over an all-out bidding war between TV networks. The growth in demand has meant that networks are ready to outlay considerable sums. Broadcast fees for the Rome Olympics (1960) amounted to \$1.2 million, while those for Sydney (2000) were priced at \$1.35 billion and for Athens (2004) at \$1.7 billion.

On the model initiated by the United States, television networks and sports clubs maintain strictly commercial relations. Sponsors are interested in the images of sporting heroes for advertising purposes, while the sporting spectacle depends essentially on the financial backing of television. In the United States, the three networks committed themselves in 1982 to paying the National Football League \$2 billion over five years. With its payments for broadcasting rights, American television covers two-thirds of the budget of the Olympic Games, whatever the organizing city. On a lesser scale, France airs four channels producing a total of around 60 hours per week of programs wholly dedicated to sport. The channels broadcast activities or events that are neglected by the networks, with certain sports such as soccer, tennis, or Formula One racing enjoying wider coverage by the media.

Such substantial investment demands a return. Television imposes its points of view and its rules on the sports world. Through its broadcasting choices (based on activity, club, personality, and so on), its angles of observation (such as camera shots and framing), the contents of the sound track, and editing decisions, the TV program conveys an incomplete and subjective view

of the sporting spectacle. Over and above the vector of drama that is live TV, technological developments and the array of techniques (multiple cameras, on-board cameras, steadycam, loupes, computer graphics, etc.) now available to televised coverage provide the viewer with the illusion of reality.

Television techniques and television's unique demands have transformed sports practices. With the gradual transformation of rules, the games have been adapted to fit television's broadcast time and its consumers' expectations. In addition to slower balls, tennis brought in tie-breaks to shorten sets. Volleyball has undergone a similar evolution. In many sports, the refereeing provisions under the original rulebook are being brought into question by proposals for video refereeing. The pursuit of profitability for sports has led to the introduction of commercial breaks at the expense of the natural pace of the game. In the context of international sports events, the competition schedules, particularly for the most important finals, are based on peak viewing hours in the countries paying the highest fees for rights.

Positive and negative aspects emerge from this association of sport and television. By promoting previously little known sports such as golf, television has undeniably contributed to the democratization of sports activities, bringing them to a wider audience. The small screen has brought cycling to the Americans and baseball to the Europeans. But sport still has more viewers today than practitioners. The growing impact of television may continue to create changes to the spirit and essential rules of sports.

—Evelyne Combeau-Mari

Bibliography

- Bernstein, Alina, and Neil Blain, eds. *Sport, Media, Culture, Global and Local Dimensions*. London: Frank Cass, 2002.
- Jay, Kathryn. *More Than Just a Game: Sports in American Life since 1945*. New York: Columbia University Press, 2004.
- Rader, Benjamin G. *In Its Own Image: How Television Has Transformed Sports*. New York: Free Press, 1984.
- Vigarello, Georges. *Du jeu ancien au show sportif, la naissance d'un mythe*. Paris: Seuil, 2002.

Whannel, Garry. *Fields in Vision: Television Sport and Cultural Transformation*. New York: Routledge, 1992.

The Latin American Soap Opera

Serialized soap operas known as *telenovelas* have dominated television production in Latin America for the last 40 years and have become an important global product. Mexico leads the way within the Spanish-language market, with the multimedia conglomerate Televisa's productions establishing a model of melodramatic, improbable plots concerning universal issues such as frustrated love, romantic betrayal, and revenge. The 1979 Televisa soap opera *Los Ricos También Lloran* (*The Rich Cry Too*) exemplifies this tradition, with a story line based on mistaken identities and unknown parentage that has been echoed in countless other Latin American telenovelas. *The Rich Cry Too* was Mexico's most successful soap opera and was sold to various countries including Russia, where allegedly two-thirds of Moscow's inhabitants tuned into it, in addition to the Spanish-language market.

The first Brazilian telenovelas frequently imported scripts from Mexico, Cuba, and Argentina such as TV Tupi's *O Direito de Nascer* (*The Right to be Born*), an adaptation of a radio soap by the Cuban writer Felix Caignet. Launched in September 1964, *O Direito de Nascer* established the popularity of the daily soap opera. The Brazilian TV Globo station, part of Rede Globo, the world's fourth-largest commercial media network, was established in 1964 and today dominates Brazilian television and the production of telenovelas. Since the 1970s Globo has exported its soap operas to some 130 countries throughout the world. In Brazil as many as five telenovelas are screened daily, six days a week, chiefly in prime time for six to seven consecutive months. They play a central social role in the lives of the majority of the population, particularly the literate and semiliterate poor, in a nation where there is one television set for every 4.5 inhabitants. TV Globo diversified the genre in the 1970s, broadening its appeal and target audience by combining melodrama with more contemporary themes. The writer Janete Clair's major success

➤ SALMA HAYEK

The TV comedy-drama *Ugly Betty*, starring America Ferrara as Betty Suarez, is an adaptation of a Colombian telenovela or soap opera *Yo soy Betty la fea* (*I Am Ugly Betty*) written by Fernando Gaitán. The show premiered on September 28, 2006, on the ABC channel in the United States and is coproduced by Mexican actress Salma Hayek, who appeared in it as the character Sofia Reyes and in a cameo role as an actress in a fictional telenovela watched by Betty's family in early episodes. Hayek began her own career in soap operas on Mexican television in the late 1980s and was perhaps Mexico's biggest television star before moving to Hollywood. She appeared in the telenovelas *Un nuevo amanecer* (*A New Dawn*) in 1988 and *Teresa* in 1989. In the hit U.S. TV show, the sweet-natured, unglamorous Betty has an unlikely job at the fashion magazine *Mode* in New York City, where she is surrounded but undaunted by the all-white world of fashion. *Ugly Betty* appeals to Latino audiences by including references to aspects of their cultures, including allusions to other Latin American soap operas, and by affectionately portraying Betty's family life in Queens. The casting of Ferrara (who is of Honduran descent) in the lead role also reflects a growing awareness on the part of major television producers of the 40 million U.S. inhabitants of Hispanic origin, and the show has effectively brought the Latin American experience to an Anglo-American audience, garnering a wealth of awards and countless fans in the process.

—Lisa Shaw

was *Selva de Pedra* (*Stone Jungle*), screened in 1972–1973, a love story that incorporated the topical theme of rural-urban migration and became one of the most popular Brazilian soap operas of all time. The 1973 telenovela *O Bem-amado* (*The Beloved*) was the first Brazilian soap opera to be broadcast in color and the first to be sold to other Latin American countries.

In the late 1980s and throughout the 1990s soap operas shown in Brazil in the 8:00 p.m. slot increasingly dealt with contemporary issues with political subtexts such as corruption, nepotism, and the enforced celibacy of Catholic priests.

O Rei do Gado (*The Cattle King*, 1996–1997), for example, dealt with the controversial issue of land reform. Brazilian soap operas feature predominantly white-skinned actors in spite of the fact that it is estimated that between 50 percent and 60 percent of the nation's population are of Afro-Brazilian descent. In 1994 the organization SOS Racismo (SOS Racism) sued TV Globo for racism in the prime time telenovela *Pátria Minha* (*My Homeland*) specifically for an episode in which a white boss insulted a black employee suspected of theft and the employee reacted submissively. TV Globo rewrote subsequent episodes to include advice on how to react to racism. Brazilian soap operas also became extremely popular not only in Latin America but also in Portugal in the 1980s and 1990s, inspiring new Portuguese-language soap operas in Europe and marking the introduction of words that were exclusively Brazilian into the Portuguese language.

Colombian telenovelas follow the basics of the Brazilian model, mixing comedy with melodrama but incorporating particular cultural (and often regional) allusions. The 1994 production *Café con Aroma de Mujer* (*Coffee with a Scent of Woman*) exemplifies this national tradition and proved to be a major hit beyond Colombia's borders in the rest of Latin America and among Latino audiences in the United States. An archetypal rags-to-riches tale, this telenovela focuses on the life of a worker in the country's coffee-growing region and evokes identifiable aspects of rural life. Colombia is also responsible for the 2001 production *Yo soy Betty la fea* (*I am Ugly Betty*), which was watched by some 70 percent of the country's population in addition to capturing the imaginations of more than 80 million viewers in Latin America and the United States.

Argentina and Venezuela are also heavily involved in telenovela production and export. Argentine productions are sold widely across Latin America and as far afield as Asia and Eastern

Europe. The first truly successful Venezuelan telenovela export was *Cristal* (1986), yet another rags-to-riches tale that achieved an audience share of some 80 percent in Spain. The other recurrent theme of mistaken identities provided the central plot device of *Kassandra* (1992) that was produced by the Coral television company in Venezuela and proved to be a hit in Eastern Europe.

The pervasive influence of the telenovela in daily life in Latin America is reflected in the blurring of distinctions between fictional plots and characters and reality. On December 27, 1992, Daniella Perez, one of the main actors of the 8:00 p.m. soap opera *De Corpo e Alma* (*Of Body and Soul*) being aired in Brazil, was murdered in the middle of the night in Rio de Janeiro. As rumors of the tragedy spread, the soap opera's fans were confused about whether this was true or a leaked story line of how Daniella's character, the heroine Yasmin, was to be killed off. Even more confusing, it soon became known that the prime suspect in the case was Daniella's costar in *De Corpo e Alma*, Guilherme de Padua. Four years later, in 1997, Padua and his real-life wife were finally imprisoned for this crime.

—Lisa Shaw

Bibliography

- Fox, Elizabeth. *Latin American Broadcasting: From Tango to Telenovela*. Luton, UK: University of Luton Press, 1997.
- Fox, Elizabeth, and Silvio Waisbord, eds. *Latin Politics, Global Media*. Austin: University of Texas Press, 2002.
- López, Ana M. "Our Welcomed Guests: Telenovelas in Latin America." In *To Be Continued . . . : Soap Operas around the World*, edited by Robert C. Allen. New York: Routledge, 1995.
- Mato, Daniel. "Miami in the Transnationalization of the Telenovela Industry: On Territoriality and Globalization." *Travesía: Journal of Latin American Cultural Studies* 11, no. 2 (2002): 195–212.

■ Introduction: Visual Arts and Architecture

The period following World War II included many movements in art and architecture often lumped together under the general rubric of the postmodern, a clear rebellion against the emphasis on rationality and the accompanying severe geometric designs of modernism and the International Style in architecture championed in the early twentieth century by architects such as Le Corbusier. Postmodern art and design has a cynical side in its rejection of the modernist agenda of improving the lives of average citizens through an austere art and architecture. Yet postmodernism also can be regarded as a continuation of the experimentation that began in the arts in the early twentieth century, with a continued emphasis on new media, perspectives, idioms, and the critique of the illusion of the canvas as a window. Political change also radically transformed arts in this period. For example, postcolonial art in regions such as India and Africa reflects, in part, a nuanced return to folk motifs and methods.

In architecture, the postwar cultural shift toward the automobile had an important impact on architecture in the developed world as suburban developments mushroomed and commercial architecture, in areas such as Los Angeles and Las Vegas, began to reflect an automobile-centered design, particularly through the use of enormous signs, neon, and dramatic pitched roofs facing thoroughfares. In a related development, stirrings against modernism stemmed, in part, from a popular form of postwar architecture in such arenas as Morris Lapidus's hotels in Miami Beach that appealed to the average person's desire for luxury and fantasy. Historian Thomas Hine has dubbed this the populuxe style. A more highbrow postmodernism developed in the designs of architects such as Michael Graves, and, more recently, Frank Gehry, who have rejected the austerity of Mies van der Rohe's steel and glass boxes for more playful architecture that might include a pastiche of historical quotations or explorations of new materials and odd juxtapositions. Perhaps even more dominant is the new vernacular architecture of urban and suburban sprawl with bland mini malls lining streets and

interchangeable fast food restaurants, adapted in a regionally inflected utilitarian manner in many countries. Concerns with environmentalism have also emerged as a new emphasis in design school curriculums.

The visual arts were marked by the postwar rise and fall of the high-modern style of abstract expressionism, centered on the art world of New York City in the 1940s and 1950s. This movement quite literally blended the earlier interests in purely abstract art with expressionism, a representational art that rejected naturalism for exaggeration and enhanced emotional force. An expressionist school developed in Mexico City after World War II with links to the New York City art scene. The New York movement divided into two categories. The action painters, that is, the gestural school typified by Jackson Pollock and Willem de Kooning, sought to express intense emotion with techniques such as large brush strokes and chance effects such as thrown paint or drips. The other school included artists such as Helen Frankenthaler and Mark Rothko more drawn toward color field, with its use of flat colors and simpler abstractions.

The 1960s Pop Art movement deflated the romantic view of artistic production as its products mimicked and commented on mass manufacture and commercial culture, perhaps most famously in Andy Warhol's rendering of a Campbell's Soup can and in the enlarged comic strip frames of Roy Lichtenstein that revealed the printer's dots that made up the visual field.

Experimentation has continued. Visual artists combine photography and painting, explore the possibilities of video art, create art installations (or general environments), turn to the pop idioms of graffiti art or Japanese manga, and even return to archaic equipment such as the daguerreotype and tintype photography. China has become an important new capital for modern art in the decades following the Tiananmen Square massacre. In a curious twist, in the post-Soviet age, artists trained in the Soviet Realist school in Russia and China also can be relied on to offer middle-brow consumers nonironic historical scenes rendered according to the tropes

of realism, and some expatriate artists have found a large market, for example, among lovers of scenes of the mythic American West.

—Fred Nadis

Global Art since 1945

The years immediately following World War II represented an affirmation of the migratory wave of European talent to the United States as European artists and intellectuals fled the ravages of the war in Europe. The postwar years thus represented the most dramatic artistic shift of the twentieth century and the rise to preeminence of American art as New York City became the world's dominant art center.

Continued experimentation, particularly in the United States where Dadaism, Surrealism, and Abstraction had found particularly fertile ground in igniting the American avant-garde movement, led to the development of a new artistic phenomenon in New York City known as Abstract Expressionism, the first uniquely American artistic movement to achieve global recognition. In

the United States this was the era of Arshile Gorky (1904–1948) and Hans Hofmann (1880–1966), the artists who would blaze the trail for the future advent of what would come to be known as action painting.

The European art scene of the 1940s remained for the most part a highly experimental one marked by forays into Neo-Expressionism, Concrete Abstractionism, Neo-Cubism, cinematic Neo-Realism, and Surrealism. This was also the era of Jean Fautrier (1898–1964) and Jean Dubuffet (1901–1985), two of the artists responsible for pioneering the path to the advent of Informal Art.

In Latin America, Mexico remained one of the predominant focal points for European artists and intellectuals fleeing in the wake of World War II. Many of the emigrants were attracted by the vibrant expressionist aftermath of the Mexican School and the lingering social impact of the work of the Mexican Muralists. The grotesque expressionism of José Clemente Orozco (1883–1949), in particular, would influence a young generation of artists in the United States who would go on to found the American Abstract Expressionist movement in the late 1940s and early 1950s.

American Abstract Expressionism encompassed two main styles, both of which were concerned to varying degrees with the surrealist notion of creative automatism, namely the immediate, spontaneous expression of creative ideas. One of these styles, sometimes referred to as Color Field, sought to embody the essential purity of a concept or idea in a restrained version of creative automatism (spontaneous expression), as exemplified by the work of Mark Rothko (1903–1970). The other branch of this movement sought to blur the formal lines between the figurative and the abstract in an unrepressed expressionistic manner in what came to be known as action painting, or Gestural Abstraction, and whose principal exponents can be found in the paint dripping technique of American Jackson Pollock (1912–1956), the father of action painting, and in the figurative violence of the Dutch Willem de Kooning (1904–1997).

In the early 1950s the first influences of American Abstract Expressionism reached Europe, although European artists had similarly arrived at



Study for a Portrait (about 1950), by Irish painter Francis Bacon. (Christie's Images/Corbis)

➤ IMPACT OF CHRISTIANITY ON AFRICAN ART

After decades of repressing traditional African religion and the art associated with it in the early colonial period, some later Christian missionaries in the mid-twentieth century began to encourage the mixing of Christian content with local art forms, thereby creating modern African Christian art forms rather than imagery that portrayed Christ and other religious figures as white Europeans. Africanized Christian art now flourishes throughout the heavily Christian sub-Saharan part of the continent, although some parts of these Christian communities still resist any art that seems to be related to traditional African religion.

In Rome by the 1930s Catholic leaders at the highest levels of the Vatican, anticipating the end of European colonial empires, belatedly discovered an appreciation of non-Western art. Foremost in articulating a new approach toward local religious art, Cardinal Celso Costantini, the head of the Vatican's directorate for missions, advocated the creation of indigenous Christian art forms to replace the widespread use of European devotional imagery in missions. At his urging, Pope Pius XII convened a landmark international exhibition of art from the mission lands in Rome in 1950. This general approach to adapting Christian religious content to local cultural forms and styles is called inculturation or indigenization; its goal is to remove European cultural imperialism from Christian evangelicalism.

The first missionary institution founded by a Catholic order for inculturation of Christian art in Africa began in 1947 and was staffed by the Society of African Missions at Oye-Ekiti in the Yoruba-speaking region of Nigeria. Despite its brief life (1947–1954), the Oye-Ekiti art workshop launched traditionally trained Yoruba artists in woodcarving, textiles, beadwork, and leatherwork in creating a modern Yoruba Christian genre. Overseeing the workshop and for decades afterward, Reverend Kevin F. Carroll (1920–1993) promoted local artists and the use of indigenous arts, music, and architecture in Christian worship in Nigeria.

In the ensuing years, skilled carvers George Bamidele and Lamidi Fakeye and weaver Comfort Christiana Ojo created many Yoruba Christian artworks, including an impressive nativity set for the Rome exhibition in 1950. Other Nigerian artists have also continued this modern Nigerian Christian art tradition, including Bruce Onobrakpeya and Joseph Agbana. In response to the dramatic expansion of Christianity in Africa, whose adherents multiplied from 9 million in 1900 to 380 million by 2000, many other artists have created a vast and varied body of African Christian art including Reverend Engelbert Mveng in Cameroon, Mwabila Pembe of the Democratic Republic of Congo, Elimo Njau of Tanzania, Charles Sekintu of Uganda, and Ben Nhlanhla Nsusha of South Africa.

—Nicholas J. Bridger

an approach to Gestural Abstraction. The work of the Italian Emilio Vedova (1919–2006) mirrors the spiritual chaos of the gestural experiments of his American contemporaries. The figurative Expressionism of the Irishman Francis Bacon (1909–1992) deserves special mention for the brutally insightful psychological imagery it brings to life.

Pop Art, a movement that originated independently in England and the United States in the late 1950s, would explode in the early to mid-1960s especially in America, given its culture of unabashed consumerism. Pop Art ultimately sought to proclaim its disdain for the expressionist concept of art as a vehicle of protest against oppression of the individual. Instead,

Pop Art, with some irony, celebrated the triumph of popular or mass media culture over the individual. Whereas Expressionist Art focused on society's oppression of the individual, Pop Art sought merely to revel in the individual's mindless capitulation to mass media, and any figurative elements in it are intentionally objectified and thus devoid of any human quality. Pop Art remains to this day one of the most influential twentieth-century artistic trends. Among its proponents are Americans Roy Lichtenstein (1923–1997), Andy Warhol (1928–1987), and Jasper Johns (b. 1930). An offshoot of Pop Art in the 1960s was Op Art, or Optical Art, a style that focused on the optical illusionism of surface kinetics and whose primary proponent was the

Hungarian Victor Vasarely (1906–1997), a man who could be said to have anticipated the impersonal graphic art of the computer age.

In the mid-1960s further experimentation in the tradition of Abstract Expressionism led to two singular movements, Minimalist Art and Conceptual Art. Minimalist Art focuses on the concrete seriality or regularity of a work's geometrical construction as its sole aesthetic basis. Examples of Minimalist Art can be found in the work of Donald Judd (1928–1994) and Carl Andre (b. 1935).

Conceptual Art focuses on the philosophical or creative concept behind a work of art instead of its mere physical or objective presence. In fact, the physicality of a work is seen as a mere by-product of the conceptual creative process. American Joseph Kosuth (b. 1945) is responsible for creating one of the purest and truest seminal statements of Conceptual Art ever with his work *One and Three Chairs*. In this work he uses three expressions of the concept of chair in order to show three different ways of conveying the reality of the conceptual idea of the object in question by means of the object, a photograph of the object, and a textual definition of the object. In the 1970s and 1980s Neo-Conceptual Art, Performance Art, Installation Art, Pop Art, and Graffiti Art all were at the forefront of urban artistic creativity.

The responsiveness of art toward social and political phenomena remained one of the characteristic qualities of postwar artistic activity. Yet since the 1990s the global art world has entered into an extremely pluralist postmodern period in which there seem to be no new or dominant artistic trends to speak of and in which even the impetus that art once had as a vehicle for social commentary seems to be in decline.

Outside the Western world African art since 1945 has remained deeply rooted in the vibrant and rich ancient folk traditions of the continent. In the areas south of the Sahara this folkloric tradition has been primarily reflected in the creation of utilitarian everyday objects such as baskets, bowls, combs as well as ritual masks and decorative objects. The accessibility of wood makes it a fertile medium for the representation of the traditionally three-dimensional, visually abstract iconography of the region. In the realm of paint-

ing, contemporary African art makes frequent use of Abstractionist techniques.

Indian art in the postwar era has been characterized by the fusion of Western and Asian art trends and styles. The founding of the Progressive Artist's Group in 1948 ushered in a new postcolonial era in the Indian arts, an era of increased exposure to foreign artistic influences, among them that of Western Abstractionism. India remains a locale of artistic experimentation, drawing on its rich popular culture and folkloric traditions.

In the Islamic world the postwar years have seen alternating waves of nationalist and religious fervor as well as sporadic exposure to and acceptance of global art trends, creating an atmosphere in which the traditionally nonfigurative Islamic art of calligraphy has become fused with shades of Western Abstractionism. This is particularly true among artists of the Islamic diaspora living in Western nations. Even to this day, there exists the tendency among Islamic artists to remain rooted in the rich Islamic tradition of the decorative arts.

The East Asian cultures share with Islamic art a rich tradition of calligraphy, China being a perfect example. Such is the masterful use of calligraphy in Chinese culture that these symbols often transcend the mere use of language and actually become artistic works of complex abstractionist depth. Oriental calligraphy influenced the Western Abstract Expressionist movement of the late 1940s and early 1950s. During the interwar years and in the postwar period, China and Soviet Russia developed some of the most dramatic and visually powerful Propaganda Poster Art in the world. This rich twentieth-century tradition of propagandist graphic art and design stands as a testament to some of the worst political turmoil and social unrest that the modern world has ever experienced. Contemporary art in China remains quietly and cautiously subversive since the cultural crackdown of 1989.

Japanese Pop Art seems to be among the most effervescent fields of artistic creativity currently thanks to the worldwide popularity of the Japanese anime tradition, a peculiar brand of Japanese cartoon animation, as well as the equally popular manga, a style of Japanese comics.

—Carlos Márquez

Bibliography

- Carroll, Kevin F. *Yoruba Religious Carving, Pagan and Christian Sculpture in Nigeria and Dahomey*. London: Geoffrey Chapman, 1967.
- Kasfir, Sydney Littlefield. *Contemporary African Art*. New York: Thames and Hudson, 1999.
- Lucie-Smith, Edward. *Movements in Art since 1945*. New York: Thames and Hudson, 2001.
- Roberts, John, ed. *Art Has No History! The Making and Unmaking of Modern Art*. London: Verso, 1994.
- Sandler, Irving. *Art of the Post-Modern Era: From the Late 1960s to the Early 1990s*. Boulder, CO: Westview, 1996.

Postcolonialism and African Art

Postcolonialism in Africa began in the mid-twentieth century with the independence of Sudan in 1947, Ghana in 1957, Nigeria in 1960, and many others afterward. Colonialism had brought African traditional culture into contact with Western culture, and postcolonial African visual art still reflected these influences. There is no sharp distinction between colonial and postcolonial African visual art. Both have been classified as Contemporary African Art. During colonialism, many African artists went abroad to train, as opportunities for training in Africa were either scarce or unavailable. In the postcolonial period, many returned home to take over the teaching as well as the administration of art from the expatriate artists who had earlier dominated the scene. By the mid-1950s, many prominent African artists had emerged. The anti-colonial struggle that started during the colonial period continued thereafter with the growing concern of salvaging African visual art traditions that had been abandoned for Western visual art practices.

Across the African continent during the colonial period, many artistic groups, workshops, and formal schools initiated and propagated Western visual arts, some of which were anticolonial in their approach. By the postcolonial period, many powerful art groups with a Pan-African philosophy emerged. They sought to promote Africanity in African Art, and some of these groups encompassed literary and visual arts. In 1966 the First World Festival of Black Arts was held in Dakar, Senegal. Groups and workshops

SKUNDER BOGHOSSIAN—A DISTINCTIVE CONTEMPORARY ARTIST

Born in 1937 in Ethiopia, Skunder Boghossian was one of the foremost contemporary African artists. In his early period, he received informal art training in Addis Ababa and won the Haile Selassie Jubilee Exhibition prize in 1955. Boghossian studied in London and later in Paris at the École des Beaux Arts. His exposure to Parisian art life did not jeopardize his aesthetic expression, which significantly drew from African tradition. Boghossian exhibited his work in Paris in 1964 to critical praise. He was the first African painter whose work was purchased as a mark of honor by the Musée d'Art Moderne in Paris. Boghossian explored natural materials such as animal skins and tree barks for his surfaces. Thematically, his paintings manifested the infusion of myth and spirits. His painting titled *Boogie Man No2* shows a huge creature with an owl-like face; the figure that is held up against the sky is confronting several smaller creatures juxtaposed around him. The painting typifies the spiritual and mythological undertone that characterized Boghossian's works. He taught in the United States, where he died in 2003.

—Tolulope Lawrence Akinbogun

that emerged before and since that first festival included the Zaria Art School in 1953, the Mbari Art Workshop in the early 1960s, the Ori-Olokun Workshop in the late 1960s to early 1970s (Nigeria), Frank McEwen's Rhodesia Art Workshop in the 1960s, Pachipamwe workshops in 1980 (Zimbabwe), the Dakar School (Senegal) initiated in 1966, the Khartoum School in 1946 (Sudan), the Sisi Kwa Sisi in 1983 (Kenya), and the Vohou Vohou Group (Cote d'Ivoire) that first coalesced in Paris in the 1970s at the Ecole des Beaux-Arts.

In Sudan, the earlier efforts of the prominent Sudanese artists from the late 1940s to the early 1960s evolved into the Khartoum School, which became a local intellectual movement in colonial and postcolonial Sudan. One of the artists, Ibrahim El Salahi, situated his work in Islamic calligraphy. His works were characterized with motifs from Islamic art found on the baskets and calabashes of local Sudanese craftsmen.

Ethiopia had always been an independent country despite the Italian occupation during 1935–1941. Haile Selassie, the Ethiopian monarch, established the Addis Ababa Fine Art School in 1957. Addis Ababa, as the headquarters of the Organization of African Unity (now the African Union), helped to showcase African culture. The Addis Ababa Fine Art School thus became useful in the pursuit of this mission. The OAU engaged the services of Afewerik Tekle, an Ethiopian artist who created a magnificent stained glass project in 1959 at the OAU Headquarters in Addis Ababa. Another Ethiopian artist, Skunder Boghossian, became prominent in Ethiopia in the 1960s with works noted for their biological appearances. Boghossian researched the use of animal skin and tree barks as painting surfaces. The use of halos on sacred figures made his works *Twilight Braves* and *Black Emblem* reminiscent of Ethiopian icons.

In colonial and postcolonial Nigeria Ben Enwonwu (among other artists) who had training both in Africa and abroad, became prominent. His initial works were in a realistic style, whereas his later works were in an expressive stylistic stream as shown in his work *Anyanwu* (*Awakening*), among others. *Awakening* is a bronze sculpture made in 1956. It is a stylized figure with an elongated body. The figure projects forward, with the two arms stretched sideways from the elbow as if the figure is about to fly. Following closely the influence of Enwonwu were artists trained in the Zaria art school in the late 1950s and 1960s. Many of the Zaria art school graduates became very prominent in either art training or art practice. They were known to have been vibrantly Pan-African in their conceptual and stylistic approaches to art production despite the early European influence on the art program of the school.

Postcolonial African artists faced new problems as they worked through the new nations' and perhaps their own identity crises. It has not been easy to classify the works of the artists. Hence, contemporary African art classification has been the subject of polemics, and such debate is ongoing. Cornelius Adepogba devised four classifications based on new styles: discernible images of experiences and ideas; naive visions, encouraged and fossilized; abstraction beyond common understanding; and revisitation and

adaptation of traditional art forms. Other writers on African arts have used different parameters such as geographical zones, methods of training, media, chronological scales, and thematic approaches to categorize the new art.

The thrust of the patronage of contemporary African art since the turn of the twentieth century has been significantly Western. The artists have been exposed to global influence and materials that have changed their orientation and production, and thus they face criticism by their Western audience for digressing from their African background. In response, the artists claim that the new materials and new methods of art production have not changed their mind-set or individualism as African artists.

However, some contemporary African artists seeking relevance have strived to work along the line of the Western audience's preconceived and expected archetypal image of contemporary African art. Consequently, with all these fissures, the African artistic community has been beset with multiple identity crises. Today, the artists are sharply divided on issues of ideology, particularly the issues of postmodernism and the newer genre of installation art. Some African artists believe that African art should oscillate within its own artistic realm and ignore the dictates of the West, whereas other contemporary artists believe that African art should not be in isolation from the Western ideologies that are becoming global.

—Tolulope Lawrence Akinbogun

Bibliography

- Adepogba, C. O. "Split Identity and the Attendant Perceptive Tangle in Post-Colonial African Visual Artforms." Paper presented at International Symposium on Post-Colonial Literature and Culture, Queen's University at Armagh, 1996.
- Adepogba, C. O. "Modern Nigerian art: a classification based on forms." *Kurio Africana* 1, no. 2 (1989): 111–137.
- Chike Aniakor. "Modern Sensibility and Africanity in Contemporary African Art." *USO: Nigerian Journal of Art* 3, no. 1 & 2 (2000): 85–105.
- Egonwa, O. D. *African Art: A Contemporary Source Book*. Benin City, Nigeria: Osasu, 1994.
- Tritobia, H. Benjamin. "Skunder Boghossian: A Different Magnificence." *African Arts* 5, no. 4 (1972): 22–25.

Soviet and Post-Soviet Art

Soviet art after 1945 remained rooted in the conception of Socialist realism of the 1930s. After participating passionately in the 1917 revolution, avant-garde artists enjoyed a brief period of state support, but after Lenin's death in 1924 and Stalin's subsequent rise to power, it became clear that Soviet art would take a more realistic and less experimental direction. Socialist realism was the official style in the arts, and leaders enforced this with greater or lesser rigidity until Mikhail Gorbachev's policy of *perestroika*, or reconstruction. Well into the 1980s, underground movements either confronted or avoided the influence of Socialist realism, and even post-Soviet art continues to grapple with this legacy.

In 1934 at the First All-Union Congress of Soviet Writers, Cultural Minister Andrei Zhdanov and author Maxim Gorky, among others, defined Socialist realism. According to Zhdanov, art must satisfy three points: it must represent the life of the worker, it must inspire the viewer to participate in the construction of the socialist state, and it must project an image of a positive socialist future. The name itself suggests that the art must also be realistic in its style and socialist in its subject matter. By adhering to realism, a nineteenth-century tradition of painting, Socialist realism remained visually clear, even to the illiterate and minimally educated. Avant-garde art, on the other hand, was dismissed as elitist and incomprehensible. The role of Socialist realist art was also fundamentally different from that of Western art. Because there was no longer a system of patronage or an art market, all art was created for the state and served a largely didactic function. In Stalin's words, artists were to be the "engineers of souls."

Beginning with a cultural thaw after Stalin's death in 1953, an underground movement of unofficial art formed in the Soviet Union. Artists who did not embrace Socialist realism had no chance of exhibiting their work or receiving state support. They were often persecuted and ran the risk of being expatriated. In the early years of underground Soviet art, artists worked independently and without contact with other dissidents. Two organized schools of unofficial art emerged in the 1960s: Sots Art and Moscow conceptualism.



Ilya Kabakov's installation *The Man Who Flew into Space from His Apartment* (1981–1988) expressing the desire for artistic freedom. (CNAC/MNAM/Dist. Réunion des Musées Nationaux/Art Resource, NY)

In 1972, Vitaly Komar and Alexander Melamid coined the term "Sots Art." Work of the Sots artists was based on the theory that in the absence of a free-market economy, the primary consumer product in the Soviet Union was ideology; Sots Art manipulated images from Socialist realism and Pop Art to highlight the marketing strategies of socialism. In *Gorbi* (1989), Alexander Kosolapov parodied Andy Warhol's recognizable portrait, *Gold Marilyn Monroe* (1962). By replacing Monroe with Gorbachev, Kosolapov critiques the celebrity status of political leaders in the Soviet Union. In order to fashion this critique of Socialist realism, Sots artists used not only familiar images but also the most prized media of official art: easel painting, posters, and sculpture.

As opposed to Sots artists, members of the Moscow conceptualist movement sought fragments of culture untouched by the communist regime. These artists favored art forms rejected by official art: three-dimensional painting, performance, and installation. Works collected under this term are diverse. The Collective Actions group recruited artists to participate in scripted performances, which could involve, for example, reeling in a seven-kilometer-long rope from the Russian countryside. Ilya Kabakov's installation *The Man Who Flew into Space* (1981–1988) is a mock-up of a Soviet apartment, wall-papered with political posters, with a hole in the ceiling

EMIGREE ARTISTS—KOMAR AND MELAMID

Vitaly Komar (b. 1943) and Alexander Melamid (b. 1945) met while studying at the Stroganov Institute of Applied Arts in the 1960s and first exhibited together at Moscow's Blue Bird Café in 1967. After Soviet officials bulldozed an avant-garde exhibition in which Komar and Melamid participated, the artists requested and received exit visas. They temporarily moved their families to Israel before resettling in the United States in 1978. The Ronald Feldman Gallery had shown their work in New York in 1976, establishing their international reputation before they arrived.

Komar and Melamid are best known as the founders of Sots Art. The series of paintings *Nostalgic Socialist Realism* from 1981–1983 is typical in its ironic attitude toward Soviet art. One work from this series, *The Birth of Socialist Realism* (1982–1983), shows a muse whispering in Stalin's ear as they sit in a space decorated with marble columns and red drapery. Despite their seemingly anti-Soviet stance, later works by Komar and Melamid also mocked democracy and capitalism. For the project *People's Choice* (1994–1997), they surveyed people's tastes in painting around the world in order to create different countries' Most Wanted and Most Unwanted paintings. Despite the nations' ideological differences, the results for America and Russia were strikingly similar. The Most Wanted paintings for both nations were realist landscapes peopled by figures and animals and at least one historical figure. In 1997, the artists traveled to Thailand to teach elephants to paint. Despite this joke on the art world, the resulting paintings were treated as art, included in the Venice Biennale, and auctioned by Christie's New York in 1999. Komar and Melamid ceased to work together in 2003.

—Alexandra Merley

and a catapult hanging from the room's corners. This work comments on the desire to escape from Soviet culture. At least artistically, this longing for freedom was fulfilled in the late 1980s.

Under Gorbachev's leadership, artists officially escaped the confines of Socialist realism. Liberty to explore artistic styles only increased after the collapse of the Soviet Union in 1991. Formally, post-Soviet artists have few common-

alities and explore film, photography, sculpture, painting, and performance. Regardless of medium, however, many continue to grapple with their cultural heritage. Vadim Zakharov's *The History of Russian Art: From the Avant-Garde to the Moscow School of Conceptualists* (2003) is an installation that represents the phases of Soviet art as a series of filing boxes through which the viewer can literally walk. With his *Cosmonaut* installation, Oleg Kulik references Soviet art in a more subtle way. His life-sized astronaut, suspended from the ceiling of a museum's interior, seems the next step in the adventures of Kabakov's man who flew into space. Despite his successful orbit, however, Kulik's post-Soviet cosmonaut cannot escape the confines of history.

—Alexandra Merley

Bibliography

- Andreeva, Ekaterina. *Sots Art: Soviet Artists of the 1970s–1980s*. New South Wales: Craftsman House, 1995.
- Brown, Matthew Cullerne, and Brandon Taylor, eds. *Art of the Soviets: Painting, Sculpture and Architecture in a One-Party State, 1917–1992*. New York: Manchester University Press, 1993.
- Solomon R. Guggenheim Museum. *Russia! Nine Hundred Years of Masterpieces and Master Collections*. New York: Guggenheim Museum, 2005.
- Tamruchi, Natalia. *Moscow Conceptualism, 1970–1990*. New South Wales: Craftsman House, 1995.

Art in China, Post-Mao

The death of Mao Zedong (1976) affected contemporary Chinese art practice on a literal and a symbolic level. On the one hand, as Mao's successors, beginning notably with Deng Xiaoping, embraced an increasing liberalization of economic policies, artists in the People's Republic of China became freer to explore issues of national identity and subjectivity and to embrace Chinese modernity (*xiandai yishi*). On the other hand, the methods, modes of production, and distribution of arts changed radically for younger artists practicing in succeeding eras.

Art under Mao remained circumscribed by the official state doctrine of Socialist Realism, a style and attitude that reduced art to a form of party propaganda. Ultimately, such art operated on a public level and reconfirmed state ideology

and established power structures. Visual art defined Mao as the supreme cultural embodiment of Chinese culture and consciousness. Tang Xiaohu's *Forging Ahead in the Wind and Waves* (1966) exemplifies this attitude in the traditional category of oil on canvas. In addition, poster reproductions of Mao (1967), which focused on the head and face of China's leader, made the image of Mao a standardized one and an image more easily remembered and reproduced for party purposes.

During the Cultural Revolution, many artists were purged and killed, and many historical artifacts were destroyed. Chinese culture on a whole suffered. Nearly all indigenous forms of Chinese art as well as those of distinct ethnic groups or those associated with foreign religions, such as Islam, were subjected to destruction by the Red Guards, a mass movement of students and civilians mobilized by Mao to overthrow the old order and ideals of China.

It was not until the late 1970s in the years that followed the death of Mao that art practice shifted away from its state orientation. Questioning the dogma and ideology (*hong*) of the official art that had been championed by the Chinese Communist Party during the Cultural Revolution, artists turned to issues of subjectivity, the individual's relation to society, and the problem of alienation within a socialist society. Zhong Ming's *Sartre—He Is Himself* (1987) investigates not only notions of freedom and the philosophy of existentialism but also the effect of combining figural and abstract modes of presentation, two modes that have long been separated in twentieth-century aesthetic consciousness. By placing the figure of Sartre in front of an abstract background, Zhong brings together these two modes. Such experimentation represented China's first foray into the postmodern consciousness of the West as Chinese artists appropriated and made new disparate styles of the West.

Art historian Martina Köppel-Yang regards the period 1979 to 1989, from the reforms of Deng Xiaoping to the massacre of Tiananmen Square and the closure of the exhibition China/Avant-Garde, as the first wave of the Chinese avant-garde (*qianwei*). To a far greater extent, this avant-garde in China was supported on a national and political level by the state.

➤ INOPORTUNE: STAGE ONE



Inopportune: Stage One by Cai Guo-Qiang (2004), at the Massachusetts Museum of Contemporary Art. (Franz-Marc Frei/Corbis)

Since the mid-1990s, Chinese artists have participated in prominent international exhibitions such as the *Venice Biennale* (1993, 1995, 1999) and also *Documenta X* (1997). Participation in these exhibitions confirmed the rising cultural status of the Chinese artist in the West. Specifically, the work *Inopportune: Stage One* (2004) by Chinese artist Cai Guo-Qiang represents the crux of Chinese international art. By installing nine real cars suspended from the ceiling, Cai Guo-Qiang draws not only on the postmodern Western practice of installation art, which has developed since the 1970s, but also on the ancient Chinese practice of Feng Shui, a practice that, it is claimed, is inseparable from any understanding of political dynamics in premodern China. The nine cars, which are filled with neon light tubes, convey the impression of being still frames from a movie of a car exploding upward through the central atrium of the rotunda. Invoking the current climate of suicide bombings in the Middle East, particularly Iraq, Cai Guo-Qiang's installation demonstrates, physically as well as conceptually, the power of Chinese art to reflect and make an impact on Western modes of aesthetic presentation.

—J. P. McMahon

In contrast to earlier Socialist Realist art and portraits of Mao, Xiamen Dada's the *Burning Event* (1986) indicates radical changes in art practices, a shift from static representation to paradigms of process and performativity. On the afternoon of October 5, 1986, works exhibited in the Xiamen Dada exhibition at the Cultural Palace of Xiamen were intentionally set on fire and thus destroyed. This performance, that is, the *Burning Event*, paralleled developments in the West, most notably American art of the 1950s and 1960s, such as the Happenings of Allan Kaprow and the dematerialization of the art object by Sol LeWitt.

Between the years 1979 and 1989 (the years of the Chinese avant-garde) all did not move forward inexorably toward freedom and liberation of thought. Under the leadership of Deng Xiaoping, the state provided institutional support for artists; however, campaigns against the avant-garde, such as Against Bourgeois Liberalism (*zichan jieji ziyouhua*), caused inevitable setbacks in the avant-garde cause.

Following the massacre of Tiananmen Square and the closure of the exhibition China/Avant-Garde (1989), avant-garde production stalled. In the mid-1990s, the world witnessed a global diaspora of Chinese art and artists with exhibitions worldwide, such as *Fragmented Memory: The Chinese Avant-Garde in Exile* (New York and San Francisco, 1993). However, artists in China continued to wrestle with the legacy and image of Mao and the dominant effect that his idea had on the cultural, political, and artistic policies of China.

—J. P. McMahon

Bibliography

- Chiu, Melissa, ed. *Breakout: Chinese Art Outside China*. Milano: Charta, 2007.
- Jiang, Joshua, ed. *Burden or Legacy: From the Chinese Cultural Revolution to Contemporary Art*. Hong Kong: Hong Kong University Press, 2007.
- Köppel-Yang, Martina. *Semiotic Warfare: The Chinese Avant-garde, 1979–1989; A Semiotic Analysis*. Hong Kong: Hong Kong Timezone 8, 2003.
- Sullivan, Michael. *Art and Artists of Twentieth-century China*. Berkeley: University of California Press, 1996.

Modernist Architecture after 1945

After World War II, the modern style of architecture continued to spread, facing new challenges and taking on new associations. This transition was largely prompted by the closing of the Bauhaus in Berlin by Hitler's armies in 1933. Many of the designers associated with the Bauhaus, though, had left Germany earlier, following the successful reception of Henry-Russell Hitchcock and Phillip Johnson's 1932 exhibition of modern architecture at the Museum of Modern Art and its catalog, *The International Style*. While pre-war modernist architecture had been limited by technology, advances in materials and structures during and after the war, combined with the positive reception by capitalist societies such as the United States, propelled these simple forms to become the predominant style. Modernism continued as the main architectural form until the rise of the Pop movement in art, which inspired the key theorists of architectural postmodernism in the 1960s and postmodernism's further evolution beyond the 1970s.

Modernism, or the International Style, refers to a style of architecture that stated "form follows function" and valued a spare aesthetic without extraneous decoration. This machined aesthetic was minimal and highly functional and aspired to mass production and rational design. The movement was originally heavily tied to socialist ideology that related the machine aesthetic to social progress. Modernism was developed simultaneously in different regions of the world by architects such as Le Corbusier of Switzerland, working in France; Walter Gropius of Germany; Mies van der Rohe, also of Germany; Gerrit Rietveld of the Netherlands; Oscar Niemeyer of Brazil; Irving Gill of the United States; and Richard Neutra of Austria. Architects who have received less attention within the context of the International Style but were still part of the modernist project include Alexander Rodchenko and the other constructivist architects in the Soviet Union who grappled with a clear, rational design framework. With attention from museums and the media, the designs and aesthetic philosophies of modernism (if not the political and economic ideologies) spread further and became the domi-

nant style of the postwar period, though many people still preferred revivalist styles that referenced history.

The modernist style was characterized by flat-front curtain walls. Usually made of glass, these walls were not structural, that is, they did not support the buildings. Instead, a complex system of steel columns and beams supported the buildings, and the walls became protection from the cold and elements, much like curtains. These walls were often made of glass that spread light into the center of the building, which was made possible by the open plans for building interiors that used few walls.

The removal of structure—or the illusion of buildings freed from such constraints—became a common goal of modernist architects, who used glass, concrete, wood, and steel. Two prime examples are the Lever Building (1950–1952), designed by Skidmore, Owings, and Merrill, and the Seagram Building (1954–1958), designed by Mies van der Rohe and Phillip Johnson. Both appear as if simple glass facades. Today, the modern aesthetic is still seen in the work of Richard Meier, whose rational designs for the Getty Center in Los Angeles included pure rectangular forms, plays with light, and truth to materials, meaning that the textures and colors of the travertine and aluminum are shown without paint or other finishes that hide the beauty of the materials themselves.

In the 1950s and 1960s, modernism gave way to postmodern architecture and thought. Modernism's economy of form and materials tallied well with projects with low budgets and expedited schedules, including housing projects. When these projects failed, as in the demolition of the Pruitt-Igoe housing complex in St. Louis, Missouri, in the 1970s, critics such as Charles Jencks and Tom Wolfe addressed the style and design ethics rather than project limitations, claiming that modernist designs were inhuman and supported crime, among other things. In addition, modernism was accused of failing to acknowledge humanity, alienating users and inhabitants, and denying history. Since then, modern architects, like many of their postmodern peers, have tried to integrate humanity into the machine aesthetic through user-centered design,

and modernism continues to be the preferred style of many designers and consumers, including many corporations. Postmodernism changed the dominant style from modernism to one with greater eclecticism and representation, including historical referencing and pastiches.

Some architects retained modern aesthetic preferences after postmodernism, arguing that postmodernism only highlighted issues that were always integral to modernism but had been ignored, and they found the decoration involved with postmodern designs to be superficial solutions. These architects chose to continue in the modern style but with greater attention to social patterns, developing a sociology and psychology of space that could also be considered postmodern in approach, if not aesthetics.

—Erin Leary

Bibliography

- Albrecht, Donald. *World War II and the American Dream: How Wartime Building Changed a Nation*. Cambridge, MA, and Washington, DC: MIT Press and National Building Museum, 1995.
- Hitchcock, Henry-Russell, and Phillip Johnson. *The International Style*. New York: Norton, 1997.
- Roth, Leland. *American Architecture*. Boulder, CO: Westview, 2001.
- Wilk, Christopher. *Modernism: Designing a New World, 1914–1939*. London: Victoria and Albert Museum, 2006.

Postmodernism in Architecture

The term “postmodernism” refers to wide-ranging aspects of contemporary art, economics, culture, and society. The sources of postmodernism include consumerism; the shift to service-based economies; globalization; the rise of knowledge as a commodity; the growth of the popular mass media such as radio, stereo, television, and the Internet; and an accompanying fragmentation of cultural authority. All these factors have become increasingly common from the second half of the twentieth century (1950s to the present) in industrial societies. With reference to art and architecture, postmodernism can be regarded as a rejection of the modern style, which emerged in the early decades of the twentieth century.

The modern style in architecture was characterized by the belief that form follows function and led to the prevalence throughout the industrialized world of rational design forms erected from materials such as concrete, steel, and glass. Visually, the modern style was characterized by sometimes large-sized horizontal and vertical planes from a central axis. Designers such as Frank Lloyd Wright (1867–1959) in North America and Le Corbusier (1887–1965), Walter Gropius (1883–1969), and Ludwig Mies van der Rohe (1886–1969) in Europe led the modernist movement. Seeking order and logic, modernism, in many respects, reacted strongly against a perceived prior disorder. Modernists also rejected the many revivalist movements common to the nineteenth century, such as the neo-Gothic and Beaux Arts movements in architecture, which turned to the past for authority.

Seeking both order and the new, modernists sought visionary, even utopian means to design buildings and to develop urban settlements. In such a context modern architects, such as those previously mentioned, felt compelled to remove problems associated with modern living and devised a socially motivated approach to architecture and planned communities. While it is not necessary to provide a treatise concerning the decline of modernism, the reworking and dilution of the formative principles of modern architecture had a number of design and cultural effects, including the mass production of styleless, standardized, functional designs, which over time made the concept of modern architecture predictable and less desirable to the general public.

Following World War II, both European and North American society at large and architects reacted against the modernist dogma typified by the view that form follows function and the seriousness with which modern architecture had been practiced prior to 1939. After 1945, architects not only slowly began to question the doctrine of modernism but also adopted a more playful, witty attitude within the design process. Whereas modern buildings displayed a sense of solemnity in their rationally composed facades and interior spaces, postmodern edifices embraced ornamentation and local references.

Postmodern architects left behind a purely functional approach and embraced an eclectic aesthetics and an architectural ethos in which form could be adopted for its own sake. Consequently, by the 1950s and 1960s, designers were able to not only compose new means to view design styles rejected by modernists but also to establish new spatial dynamics. Familiar shapes, facades, and details thus became woven into sometimes disordered, seemingly irrational architectural forms. As a consequence, postmodern architecture induces strong, sometimes provocative reactions ranging from delight to shock and disgust, particularly among modernists. Postmodernists, in turn, had struggled to understand why modernists propagated a design style they perceive as bland, soulless, and ultimately socially irresponsible; that is, it was not receptive to the values and tastes of common people.

As noted previously, postmodern architecture has accepted the use of historic design and cultural precedents within the design process, and this greatly sets it apart from modern architecture as typified by the international style. In addition, whereas modernism encouraged a standardized form of design and frugal construction costs, postmodernism has suffered from no such inhibitions and is seemingly proud to display different aesthetic references, forms, angles, surfaces, and construction techniques. By way of example, I. M. Pei's (b. 1917) pyramid entrance (1989) for the Louvre Museum in Paris combined the modernity of the steel frame and glass wall covering with a design form inspired by ancient Egypt, while Charles Willard Moore (1925–1993) found inspiration in Renaissance Italy when creating the Piazza D'Italia (1978) in New Orleans, Louisiana, a space representing the contribution of Italian immigrants to the building of the city. The Strip in Las Vegas, Nevada, may be the strongest contemporary example of a postmodern urban environment. Its hotel-casino buildings make great use of historic models that range from pyramids to historic Venetian public buildings dating from earlier centuries. Frank Gehry (1929–), whose works appear in the United States and Europe, may be the most well-known of all postmodern architects. His Guggenheim Museum (1997) in Bilbao, Spain, makes no visible use of

historic design and instead uses contorted design forms as a means to help promote urban renewal and diversify the townscape, in so doing helping to create a new local context.

To precisely date the onset of postmodern architecture is problematic. However, from the 1960s and 1970s a number of prominent schemes had been undertaken in Europe, Asia, and the United States by the likes of architects Hans Hollein (1934–), Aldo Rossi (1931–1997), Arata Isozaki (1931–), Daniel Libeskind (1946–), and Robert Venturi (1925–), a designer who altered Mies van der Rohe's modernist dictum that less is more to less is a bore. By the 1980s schemes such as James Stirling's (1926–1992) State Art Gallery in Stuttgart, Germany, and works by Frank Gehry (1929–) and Michael Graves (1934–)

such as the 1980 Portland Building in Portland, Oregon, maintained the initial postmodern momentum and in so doing provided new icons that are currently inspiring architectural practice in many parts of the world.

—Ian Morley

Bibliography

- Galinsky, K. *Classical and Modern Interactions: Postmodern Architecture, Multiculturalism, Decline and Other Issues*. Austin: University of Texas Press, 1992.
- Ghirardo, D. *Architecture after Modernism*. London: Thames and Hudson, 1996.
- Jencks, C. *The Language of Postmodern Architecture*. London: Wiley-Academy, 1991.
- Venturi, R., S. Izenour, and D. Scott Brown. *Learning from Las Vegas*. Cambridge, MA: MIT Press, 1977.

■ Introduction: Literature and Theater

As with the other arts, world literature and theater following World War II are remarkably diverse. Nevertheless, post-war trends do emerge, aligned with political developments such as postcolonialism (as formerly colonized peoples explored via literature and criticism historical identity and worldviews) as well as intellectual movements such as Marxism and existentialism (with its absurd worldview yet hopes for individual human agency). Growing consumerism also affected the development of genres and the act of reading.

In the 1960s, accompanying the antiauthority vision of the youth counterculture, experimental literature (or metafiction) came to the forefront, with its ironic pastiche of genres, word games, and often revisionist assaults on nationalist mythologies. The theater and literature of this period explored themes and causes as wide ranging as human rights, sexual inequality, and gay rights.

If the 1960s counterculture critiqued technology, the genre of science fiction often celebrated it and explored its implications. Throughout the Cold War and beyond, apocalyptic concerns

centered on technological, environmental, or biological disasters dominated science fiction literature. As adjuncts of consumer culture, other formulaic genre literature such as westerns, crime novels, and romances reached mass markets throughout this period. As the growth of new media encouraged a shift in popular tastes from pure text to image, Japanese manga and graphic novels became increasingly popular and were repackaged in film, television, action figure toys, and computer game formats. In a similar manner, stage musicals such as those of Andrew Lloyd Webber as well as Disney productions were marketed on a mass level through a variety of interlinked media and licensing arrangements.

—Fred Nadis

Theater of the Absurd

The term “theater of the absurd” generally refers to a number of remarkable and experimental dramas, many of them French, produced in the years following World War II. The futility of humanity's quest for meaning in an amoral, irrational,

➤ WAITING FOR GODOT

Samuel Beckett wrote his seminal work, *En attendant Godot*, between 1948 and 1949. He later translated it into English as *Waiting for Godot: A Tragicomedy in Two Acts*. The play was first performed in Paris on January 5, 1953, at the Théâtre de Babylone to generally favorable reviews. In the play, two sets of curious characters, Vladimir and Estragon on the one hand and Pozzo and Lucky on the other, wait and wait again for the arrival of a mysterious M. Godot, who never arrives. As opposed to a traditional linear narrative that reaches a resolution, Beckett twice leaves his characters at the same point and at the same place in which he found them. All the nonaction takes place on a minimalist set with one lone tree. Vladimir and Estragon wear costumes reminiscent of Charlie Chaplin. While their bowler hats and tight shoes are like that of “The Little Tramp,” their nonsensical actions and dialogue are unlike anything previously seen in vaudeville. At one point, the two contemplate hanging themselves with the idea that this might produce erections, but they decide that it’s better to do nothing. Pozzo and Lucky, the master and slave duo, alternate leading each other about by a rope. In the second act, they mysteriously reappear, struck blind and mute, respectively. Pozzo and Lucky depart, and the play ends with Vladimir and Estragon sitting beneath the tree. Both agree that it is best to go, and yet neither of them move. It is an apt demonstration of Beckett’s sense of the absurdity of the human condition.

—Justine D. Price

nonsensical world is often an underlying theme in these plays. While absurdist theater was never a formal movement or a prescribed style, absurdist plays are often notable for their assault on traditional theatrical conventions: many had no linear plots or intelligible dialogues, while others dissolved the time-honored fourth wall between the performers and the audience. The giants of this avant-garde movement were the Irish writer Samuel Beckett (1906–1989) and the French writers Eugène Ionesco (1909–1994) and Jean Genet (1910–1986). These playwrights shared a sense of the tragedy of the human condition with writers such as Albert Camus (1913–

1960) and Jean-Paul Sartre (1905–1980), the philosopher of existentialism. To this generation of playwrights, going the way of the absurd appeared to be the only choice left to them in the wake of the atrocities of World War II and the rise of totalitarianism.

The phrase itself was first used by the Hungarian scholar Martin Esslin in his 1961 work *The Theatre of the Absurd*. Ultimately, the phrase derives from Camus’s reference to the absurdity of modern conditions in his seminal 1942 work *The Myth of Sisyphus*. While absurdist theater was very much the product of modern times, Esslin argued that the appeal of the absurd had deep roots within theatrical and literary history. The *mimus* or the *stupidus*—those characters who cannot understand the simplest logic or linguistic construction—appear in Greek mime plays, Shakespearean dramas, and the Italian commedia dell’arte. In absurdist theater, however, these court-jester characters take center stage. *Ubu Roi*, by the French playwright Alfred Jarry (1873–1907), is generally considered to be the modern progenitor of absurdist theater. Jarry wrote the play while still in school, and Ubu, the central character of the play, a personification of Stupidity, was based on a schoolteacher to amuse Jarry’s classmates. The play itself caused a scandal when it premiered in Paris in 1896: it opens with Ubu shouting an obscenity at the audience.

While William Shakespeare (1564–1616) and Lewis Carroll (1832–1898) both made use of the inexplicable as plot devices in, respectively, *A Midsummer Night’s Dream* and *Alice in Wonderland*, for example, absurdist theater was necessarily different in its strategies and intentions. In his celebrated work, *Waiting for Godot*, Beckett used nonsensical dialogue and ambiguous character definition to prevent the audience from forming traditional, empathetic identifications with the characters. Beckett’s strategy was similar to that of the celebrated German playwright Bertolt Brecht (1898–1956), who used a technique called the alienation effect, or *Verfremdungseffekt*, a hallmark of Brecht’s epic theater. In Brecht’s hands, this effect was designed to break down the fourth wall, the foundational illusion of the bourgeois drama, and to force the audience to rethink rarefied notions of art by see-

ing Brecht's work as another product of labor. In contrast, in Beckett's stagings, the alienation between the audience and the characters was designed to give the spectators a heightened awareness of their own particularly modern situation. Unlike Brecht's epic theater, viewers of absurdist theater in general and Beckett's work in particular were not meant to come away with a particular moral or political point of view. While Brecht derived his ideas on alienation from his belief in Marxist theory, Beckett generally remained skeptical of organized political thought.

The absurdist playwrights of the 1940s and 1950s changed prevailing notions of the theater and expressed some of the uncertainties of the postwar rebuilding of Europe as well as Europe's period of evaluating and critiquing the rise of fascism. The consequences of the absurdist theater movement are far reaching. Absurdist tendencies can be seen in the contemporary work of the British playwright Harold Pinter (1930–) and in the American playwright David Mamet (1947–). The tactics of the theater of the absurd playwrights can be seen in radical performance art of the 1960s created by such artists as Robert Rauschenberg (1925–) and John Cage (1912–1992), who blurred the boundaries between art and theater and between performer and spectator.

—Justine D. Price

Bibliography

- Esslin, Martin. *The Theatre of the Absurd*. New York: Anchor, 1961.
- Gaensbauer, Deborah B. *The French Theater of the Absurd*. Boston: Twayne, 1991.
- Grossman, Manuel L. "Alfred Jarry and the Theater of the Absurd." *Educational Theater Journal* 19(4) (December 1967): 473–477.

Postcolonial Literary Criticism

Since its inception in the 1950s, postcolonial literary criticism has developed into one of the largest and most influential movements in academia. It originated in the field of literary studies as theorists began to offer alternative interpretations of works in the literary canon to show how European literature legitimized colonialism through its depictions of native subjects as inferior. Not limited to literary studies, today post-

➤ ORIENTALISM AND OCCIDENTALISM

Edward Said argues that Orientalism is a discourse that constructs the East as the opposite and inferior of the West. One response to Orientalism is Occidentalism, a discourse that defines the West in terms of its difference from the East. Drawing on stereotypes of the West as materialistic and the East as spiritual, Occidentalism has been used by scholars from both the East and West to critique Western culture as greedy and immoral. Many Eastern nations attempting to construct an alternative modernity distinct from the Western capitalist model instead have adopted an Occidentalist discourse; communist China and Islamism in the Middle East are two examples. In the West such Occidentalism is often derided as anti-Western or anti-American and conflated with violent reactions against the West.

Although they appear contradictory, it is commonly argued that Orientalism and Occidentalism are not opposites; rather they are counterparts or mirror images of each other. Both represent the world as polarized, harness essentialist stereotypes, and ignore similarities and moments of symbiosis between the East and the West. Many scholars question the applicability of these polarizing discourses. Especially as the East industrializes and globalization brings increased contact between cultures, making such sweeping distinctions between the Orient and the Occident becomes more difficult.

—Meghan Davison

colonial literary criticism is part of the larger field of postcolonial studies, which includes history, anthropology, women's studies, area studies, and other disciplines that strive to give voice to cultures and peoples traditionally omitted from academic discourse. Despite this expansion, postcolonial literary criticism continues to be at the forefront of postcolonial studies, as literature remains one of the best ways to examine colonial discourse and to challenge the Western domination of the production of knowledge.

As formal colonialism ended, writers and theorists began to deconstruct the methods used by the West to justify colonialism. In the 1950s Franz Fanon, Aimé Césaire, and Albert Memmi published critiques of colonialism that became

important texts for postcolonial literary criticism. However, it is Edward Said's *Orientalism*, first published in 1978, that is considered the foundational text. In *Orientalism* Said argues that the Orient is a concept constructed by the West as the opposite of the Occident. The notion of the West as modern, scientific, and powerful is bolstered by descriptions of the Orient as traditional, mysterious, and effeminate. Said examines literature and U.S. politics to show how this binary of Orient/Occident validates the need for Western domination. Following Said, theorists have examined works of William Shakespeare, E. M. Forster, and Joseph Conrad to show how literature is complicit with the project of colonialism.

In addition to reexamining Western literature, postcolonial literary theorists seek to undo Western hegemony by highlighting the works of authors who have traditionally been barred from academia. The last couple of decades have seen a wave of writers from former colonies win popular success and critical acclaim. Chinua Achebe and J. M. Coetzee from Africa, Salman Rushdie and Michael Ondaatje from Asia, and Gabriel García Márquez from South America have been celebrated for penning works that reflect the legacy of colonialism. Their work is generally referred to as postcolonial literature.

Identity is a prevalent theme in both postcolonial literature and its criticism. Said explores how colonialism creates binary identities. Theorist Homi Bhaba argues that colonialism generates hybrid identities, as the colonial subject strives to both imitate and reject the colonizer. Theorist Gayatri Spivak questions whether the colonial consciousness is recoverable in the face of elite domination. Not limited to the former colonies, this exploration of the identity of the subjugated also resonates with minority groups in North America and Europe. Feminists are particularly attracted to postcolonial literary criticism, as feminist theory is also concerned with issues of identity, representation, and marginalization and calls for a recognition of voices that are traditionally silenced.

One critique of postcolonial literary criticism is that although it is concerned with the developing world, it was largely generated in the West. Much postcolonial literature is printed only in

English, and many prominent theorists speak English and live or were educated in the West. For example, Said was born in Jerusalem but was educated in the United States at Princeton and Harvard universities. It has been argued that these theorists represent elite voices that cannot aptly challenge Western hegemony or speak for the majority of the developing world.

Another critique is that postcolonial literary criticism is not sufficiently nuanced. It tends to privilege the novel over other modes of writing, such as poetry. It subsumes the former colonies into a single category and thus ignores their tremendous geographical, social, religious, political, economic, and linguistic variety. As a result, contemporary theorists have begun to take a broader approach. Not only literature but also mass media, technology, and globalization are recognized as important aspects of cultural production. There has been a call for a renewed form of postcolonial literary criticism that incorporates the literary with other fields of study, especially economics and other social sciences, to better address current geopolitical trends.

—Meghan Davison

Bibliography

- Chen, Ziaomei. *Occidentalism: A Theory of Counter-Discourse in Post-Mao China*. New York: Oxford University Press, 1995.
- Coronil, Fernando. "Beyond Occidentalism: Towards Nonimperial Geohistorical Categories." *Cultural Anthropology* 11 (1996): 51–87.
- Groden, Michael, Martin Kreiswirth, and Imre Szeman, eds. *The Johns Hopkins Guide to Literary Theory and Criticism*. Baltimore: Johns Hopkins University Press, 2005.
- Knellwolf, Christa, and Christopher Norris, eds. *The Cambridge History of Literary Criticism*. Vol. 9, *Twentieth-Century Historical, Philosophical and Psychological Perspectives*. Cambridge: Cambridge University Press, 2001.
- Said, Edward. *Orientalism*. New York: Vintage Books, 1997.

Science Fiction and the Apocalyptic Imagination

Traditionally connected to religious or mythic motifs, apocalyptic thought focuses on the cosmic theme of the death or destruction of the

world and the birth of a new world. Historical examples would include the biblical tale of the Flood, the Norse legend of Ragnorak in which the gods and giants destroy the world, and all of Christian millennial thought (that is, thought associated with the Second Coming of Christ). However, for the past century, and even more tellingly since 1945 with the onset of the Cold War, the apocalyptic theme has been the centerpiece of science fiction literature, particularly with doomsday scenarios focused on nuclear warfare or ecological (rising seas, postoil scenarios, global warming) and biological disasters (genetic experiments run amok, strange unstoppable diseases, mutant ants) that threaten or mutate life on this planet or elsewhere. On the popular level the apocalyptic theme has often been interwoven with dystopian visions that point toward the end of the world as well as unexpected posthuman rebirths (the settling of new worlds in outer space, the development of new psi powers, the blending of humanity with alien species) as well as conspiracy theories that indicate distrust of governments and their nefarious and possibly world-destroying secrets.

British scientist and science fiction novelist Arthur C. Clarke's *Childhood's End* (1953) encapsulates nearly all of these themes. Set on contemporary earth with its Cold War machinations, mankind faces two challenges: first, the arrival of a superior race from outer space, the Overlords, who begin to oversee earth's affairs, and second, the development of new strange mental powers in many children. The Overlords are eventually revealed to be horned creatures reminiscent of images of Satan in religious literature, come here as extraterrestrial emissaries to witness the birth of a new species. Ultimately, the young humans of the planet transform into pure spirit and leave the earth behind, in a variant on the Christian rapture; their parents, not offered the same option and rendered sterile, choose to collectively commit suicide.

Childhood's End was set in a believable Cold War context but chose to skirt the nuclear arms race. Other literature did not. John Hershey's *Hiroshima* (1946), which began as a *New Yorker* series, charted the lives of people before, during, and after the bombing. Japanese author Masuji Ibuse's *Black Rain* (1965) chronicled the after-

➤ NUCLEAR CLOCK

The nuclear doomsday clock has been updated by the board of directors of the *Bulletin of the Atomic Scientists* at the University of Chicago since 1947. Its minute hand indicates the short distance to nuclear annihilation, represented by midnight. The number of minutes that it is set prior to midnight depends on global events that can potentially trigger global disasters, not just nuclear war. The closest the clock was to midnight was within two minutes in 1953 when the United States and the Soviet Union both tested nuclear weapons within nine months of each other. With the end of the Cold War in 1991, the clock was at seven minutes to midnight, which was its farthest distance to date.

—Abraham O. Mendoza

math of Hiroshima and its horrors on a human scale as an aging couple try to arrange their daughter's marriage and assure suitors that she was not exposed to radioactive fallout. Early science fiction in the United States, however, tended to celebrate the atomic bomb as a proof of the genre's prophetic vanguard nature and a positive proof of the increasing value of scientific research. The 1954 U.S. military hydrogen bomb tests in the Marshall Islands and the dooming of a Japanese fishing vessel crew from deadly fallout began to shift popular opinion to reassess the celebration of atomic power. Nevil Shute's *On the Beach* (1957) concerns itself with how the sole survivors of a nuclear war await the shift in winds and the fallout that will eventually kill them in Australia. Postapocalyptic stories that pick up humanity's story in a debased future, centuries following a nuclear event, also became common, with one of the first being Walter M. Miller's *A Canticle for Liebowitz* (1963). The absurdity of nuclear war and the theories behind survivable hydrogen bomb exchange scenarios was expressed in the 1964 dark comedy *Dr. Strangelove*.

Apocalypse via environmental destruction has a similar late-twentieth-century pedigree. British science fiction writer J. G. Ballard created a quartet of novels that envision apocalypse

emerging from each of the world's four primal elements: earth, water, air, and fire. Attempts at rebirth are often failed. Ballard's *The Drowned World* (1962), for example, offers a scenario in which global warming has led to a melting of the ice caps and the onset of a world of swamps and flooded cities in which survivors contend with modern-day looters who wish to drain the swamps to uncover treasures. In Ballard's scenarios, the postapocalyptic rebirth is stalled or stillborn, making his work, according to one critic, examples of an ambiguous apocalypse. Others followed this approach. A typical Philip K. Dick novel, for example, *The Three Stigmata of Palmer Eldritch* (1965), features a debased future world in which a devastated earth leads many to reluctantly immigrate to Mars colonies. On Mars, boredom and lassitude lead them to escape through a bizarre drug that evokes group hallucinations centered on the adventures of the Barbie-like "Perky Pat." African American novelist Octavia Butler's *Dawn* (1987) offers another ambiguous apocalypse. After the earth is devastated by nuclear war, a race of alien saviors, the Oankali, arrives but drives a difficult bargain. They can heal and cure people; however, they require human subjects to mate with their subspecies, the Ooloi, to propagate new species and gather up human genetic material to help advance their biologically based technology that includes a living starship.

Soviet science fiction, laboring under the Stalinist theory of limits, which encouraged authors to provide readers with uplifting solutions to near future problems, changed somewhat in the post-Stalin era. The brothers Arkady and Boris Strugatsky, the best known of the new Soviet science fiction writers, offered one secular variation on the millennialist dream in their novel *The Ugly Swans* (1967). A town's adults are not admitted to the secrets of the leprosarium, or nearby leper colony; the adults abandon the town. Their adolescent offspring discover the leprosarium is a semi-utopian realm of wonders shaped by its inmates, who are actually mutant scientists and who offer them a new spiritual perspective and education.

In addition to these ambiguous apocalypse scenarios, the recent fascination with conspiracy theories and the implied public distrust of au-

thority has underpinned a genre that might be called the hidden apocalypse. Such conspiracy concerns took on metaphysical proportions in the works of Philip K. Dick such as *Ubik* (1970), in which the heroes careen through a devolving world and belatedly learn that they are dead and cryogenically frozen, yet interlinked with the dominant mindscape of a cruel adolescent crypt mate. With a similar critique of the consumer society's encouragement of desire and pleasure, Polish science fiction writer Stanislaus Lem's *The Futurological Congress* (1971) describes a future world so bleak that everyone, including the future's technocratic planners, are bombarded with drugs to hide the devastation of the world. These drugs, or mascons, entirely mask reality and provide a more pleasing surface world.

Global warming, nuclear warfare, the waning of petroleum reserves, conflicts over water and oil, and the continuous disruption of modernity continue to prove hearty fodder for apocalyptic tales. Tim LaHaye and Jerry Jenkins's *Left Behind: A Novel of the Earth's Last Days* (1995) was the first in a series of 16 novels that offered a more traditional Christian description of the apocalypse. In contrast, Cormac McCarthy's *The Road* (2006) describes the journey of a father and son through a devastated near-future world that resembles a moonscape, prompting the father to remark of that landscape's significance, "There is no prophet in the earth's long chronicle who is not honored here today."

—Fred Nadis

Bibliography

- Aldiss, Brian. *Billion Year Spree: The True History of Science Fiction*. New York: Doubleday, 1973.
- Brians, Paul. "Nuclear War in Science Fiction, 1949–59." *Science Fiction Studies* 11, no. 3 (1984): 253–263.
- Firsching, Lorenz J., and R.M.P. "J. G. Ballard's Ambiguous Apocalypse." *Science Fiction Studies* 12, no. 3 (1985): 297–310.
- Ketterer, David. *New Worlds for Old: the Apocalyptic Imagination, Science Fiction, and American Literature*. Bloomington: Indiana University Press, 1974.
- Maslin, Janet. "The Road through Hell, Paved with Desperation." *New York Times*, September 25, 2006.
- Salvestroni, Simonetta, Raphael Aceto, and R.M.P. "The Ambiguous Miracle in Three Novels by the

Strugatsky Brothers.” *Science Fiction Studies* 11, no. 3 (1984): 291–303.

Magic Realism

Magic realism is a literary style that blossomed in Latin America after World War II and spread internationally from the 1960s. Its main characteristic is the combination of realistic elements with unusual situations and supernatural phenomena for the purpose of surprising and bewildering the reader. The elevation of everyday facts and characters, with recourse to exaggerations and marvels, permits the author to produce a fiction in which the local reality is represented and criticized in a way that is potentially accessible to a universal audience.

The expression “magic realism” was minted in 1925 by the German art critic Franz Roh (1890–1965) to praise postexpressionist painters who recovered an interest in faithful artistic representations of reality: with this meaning, it was used in visual arts until the 1950s. Nevertheless, as early as the second half of the 1920s the term was drawn on and popularized in literature by the Italian writer Massimo Bontempelli (1878–1960), who advocated discovering the magic and mythical component of modern everyday life. This is indeed the concept on which literary magic realism developed after World War II in Latin America.

In the prologue of the novel *El Reino de Este Mundo* (*The Kingdom of This World*, 1949), the Cuban writer Alejo Carpentier (1904–1980) introduced the concept of *lo real maravilloso* (“the marvelous real”) to indicate that Latin America, in particular in the regions where the influence of native and African cultures were especially strong, was characterized by an original atmosphere of magic and spiritualism that made the subcontinent a more vital place than Europe, which in his opinion was dominated by rationality. An early example of this approach to fiction is the novel *Pedro Páramo* (1955) by the Mexican Juan Rulfo (1917–1986) in which the protagonist, during a search for his lost father, interacts with the dead inhabitants of a ghost town as if they were alive.

The undisputed masterpiece of magic realism, which rendered this literary style world-famous,

➤ ONE HUNDRED YEARS OF SOLITUDE

The opening paragraph of the acclaimed novel *One Hundred Years of Solitude* by Gabriel García Márquez establishes some of the defining traits of magic realism, such as an association between wonder and ordinary items, as well as an indefinite, malleable, nonhistorical time in which the plot is set.

“Many years later, as he faced the firing squad, Colonel Aureliano Buendía was to remember that distant afternoon when his father took him to discover ice. At that time Macondo was a village of twenty adobe houses, built on the bank of a river of clear water that ran along a bed of polished stones, which were white and enormous, like prehistoric eggs. The world was so recent that many things lacked names, and in order to indicate them it was necessary to point. Every year during the month of March a family of ragged gypsies would set up their tents near the village, and with a great uproar of pipes and kettledrums they would display new inventions. First they brought the magnet. A heavy gypsy with an untamed beard and sparrow hands, who introduced himself as Melquíades, put on a bold public demonstration of what he himself called the eighth wonder of the learned alchemists of Macedonia. He went from house to house dragging two metal ingots and everybody was amazed to see pots, pans, tongs, and braziers tumble down from their places and beams creak from the desperation of nails and screws trying to emerge, and even objects that had been lost for a long time appeared from where they had been searched for most and went dragging along in turbulent confusion behind Melquíades’ magical irons. ‘Things have a life of their own,’ the gypsy proclaimed with a harsh accent. ‘It’s simply a matter of waking up their souls.’”

Bibliography

Gabriel García Márquez. *One Hundred Years of Solitude*, translated from the Spanish by Gregory Rabassa (1970; reprint, New York: Perennial Classics, 1998), 1–2.

—Juri Bottura

is *Cien Años de Soledad* (*One Hundred Years of Solitude*, 1967) by the Colombian writer and journalist Gabriel García Márquez (b. 1927), who is also the most prominent exponent of the so-called commercial boom of Latin American fiction in the 1960s and 1970s. The domestic saga of the Buendía family in the archetypal village of Macondo (Colombia) showed all the crucial features of the magic realist novel: a break from the traditional unity of time, place, and action that leads to an epic narration; the construction of a family microcosm that was characterized by circularity and repetitiveness through generations; a number of supernatural and improbable elements that informed characters' lives in the most natural way; and a new reading of decisive moments of the national past through symbolic episodes that reversed the traditional interpretations imposed by the elites.

Magic realism continued to inspire Latin American writers well beyond the 1960s, as the international success of more recent novels such as *La Casa de los Espíritus* (*The House of the Spirits*, 1982) by the Chilean Isabel Allende (b. 1942) demonstrated. In particular, this innovative style, with its tendency toward a universal symbology, enjoyed a global diffusion in the last two decades of the twentieth century. In a world that had experienced the rapid process of decolonization and in which new nation-states were under construction, magic realism constituted an effective instrument of emancipation from the cultural authority of the West (and, by extension, from its political hegemony) in Asia and Africa as well. In novels such as *Midnight's Children* (1981) by Salman Rushdie (b. 1947) and *The Famished Road* (1991) by Ben Okri (b. 1959), the problematic colonial heritage of the home countries of the two authors (India and Nigeria, respectively) was represented through the supernatural and spiritual experiences of the protagonists. Works that have much in common with magic realism were also written in Europe and North America by experimental authors who reacted to, and reflected on, epochal collective tragedies of Western history. For instance, in *Die Blechtrommel* (*The Tin Drum*, 1959), the German writer Günter Grass (b. 1927) portrays the sufferings provoked by the Nazi regime and World War II through the family ups and downs

of an emotionally disturbed dwarf, writing his memoirs while in a sanitarium. In *Beloved* (1987), Toni Morrison (b. 1931) depicts the troubles that the mysterious, apparently supernatural character of *Beloved* inflicts on a black family recently escaped from slavery in the United States. Both Morrison and Grass were awarded the Nobel Prize for Literature in, respectively, 1993 and 1999.

Although magic realism always escaped a univocal definition and never was a structured artistic movement, the stylistic and thematic innovations that it introduced helped to open the global literary market and the Western intellectual scene to the cultural production of the emergent countries of Latin America, Asia, and Africa, giving a contribution to the shaping of contemporary multiculturalism.

—Juri Bottura

Bibliography

- Faris, Wendy B. *Ordinary Enchantments: Magical Realism and the Remystification of Narrative*. Nashville: Vanderbilt University Press, 2004.
- Hart, Stephen M. *A Companion to Latin American Literature*. Rochester, NY: Tamesis, 2007.
- Hart, Stephen M., and Wen-chin Ouyang, eds. *A Companion to Magical Realism*. Rochester, NY: Tamesis, 2005.
- King, John. "The Boom of the Latin American Novel." In *The Cambridge Companion to the Latin American Novel*, edited by Efraín Kristal. Cambridge and New York: Cambridge University Press, 2005.

Feminist Literature

Feminist literature is writing that centers on themes of women's oppression and might include poetry or prose, fiction, and nonfiction. Feminist writers may explore and address oppression by advocating for women's equality and critiquing patriarchy, sexism, and institutions that oppress women or by presenting voices and characters who challenge traditional roles of women.

The term "feminism" is difficult to define and has developed and changed over the past century and a half. In general, all feminist writers share a concern for the condition of women, particularly within patriarchal societies, cultures,

and institutions, and explore and present these concerns through various literary genres. Writers who are women are not necessarily feminist writers. Some writers identify themselves as feminist, while others might address women's oppression through their writing but may not align themselves with the term "feminist" due to its complex positive and negative connotations. Arguably, many feminisms exist and can be defined within the context of a range of variables that affect the condition of women. Politics, culture, economics, gender, and identity are only a few of the lenses through which feminist writers explore women's issues.

Feminist literature of the mid-twentieth century reflected women's concerns with inequalities in family, gender, race, and reproductive rights. During the 1960s and 1970s, often called second-wave feminism or the women's liberation movement, a rich body of literature emerged that revealed women's historical oppression and connected lesbianism with feminism.

During this period, French theorists (notably deconstructionists such as Roland Barthes and Jacques Derrida) described the concept of *écriture féminine* ("female writing") in which language is feminized, emotional, and closer to the body. Simone De Beauvoir (1908–1986) influenced a generation of feminist writers with her book *Second Sex* (1949) in which she explored the idea of women as "the other" and argued that patriarchy deprived women of freedom and that women should be treated as people rather than objects.

Other influential works of the women's liberation movement include *The Feminine Mystique*, published in 1963 by Betty Friedan (1921–2006). Her book brought to light the feelings of many middle-class American women who had lost their identities to their husbands and children. Friedan identified the "woman problem" as one in which women were influenced by advertising and social norms to be only housewives, a role that Friedan felt trapped and essentialized suburban women in particular.

Literature during the second wave of feminism explored not only women's oppression but also the intersection of racial and gender oppression in the lives of women of color. Audre Lorde (1934–1992) and Chandra Mohanty (1955–) criti-

➤ DORIS LESSING

Doris Lessing (1919–), one of Britain's most prolific writers, was born in Persia (now Iran) in 1919 and spent time living in Southern Rhodesia (now Zimbabwe). In 2007, Lessing was awarded the Nobel Prize in Literature (at the age of 87, she was the oldest person to ever win the literature award). Lessing's fiction, typically based on her own experiences, explores disparate subjects and themes including communism, Sufi mysticism, cultural clashes, individual and collective good, and social and racial injustice. Her work includes more than 25 novels (several in the science fiction genre), story collections, nonfiction, operas, plays, and a graphic novel. Lessing has been a social activist throughout her life, campaigning against apartheid and nuclear arms and, at times, being forcibly removed from South Africa and banned from Rhodesia. *The Golden Notebook* (1962) is considered a feminist classic and literary masterpiece. In this postmodern antiwar novel, Lessing tells the story of fictional writer Anna Wulf, who records the experiences of her life in her notebooks. The novel explores such themes as societal and mental breakdown, the Communist Party, and women's liberation. Lessing has said that her novel *Alfred and Emily* (2008) is her final work.

—Kim Kennedy White

cized 1960s feminists and writers such as Friedan for focusing mostly on the experiences of white middle-class women and thus marginalizing the experience of women of color or women in the Third World within feminist analysis and discourse. Toni Cade Bambara's (1939–1995) *The Black Woman*, published in 1970, was the first anthology that featured the works of black feminist writers and connected the women's liberation movement to civil rights. African American female writers explored the ways in which black women were marginalized from not only male culture but also white women's culture. African American writers who uncovered issues of black women's oppression, inequality, and civil rights in their work include Gwendolyn Brooks (1917–2000), who in 1950 was the first black woman to receive the Pulitzer Prize for Poetry; world-renowned poets Nikki Giovanni (1943–) and

Maya Angelou (1928–); Pulitzer Prize winner Alice Walker (1944–), for *The Color Purple* (1983); and Nobel Prize and Pulitzer Prize winner Toni Morrison (1931–). The landmark anthology *This Bridge Called My Back: Writings by Radical Women of Color* (1981) featured poetry and essays by writers such as Audre Lorde, Cherríe Moraga, and Gloria Anzaldúa that confronted racism within the feminist movement and voiced the struggles of women of color against homophobia and sexism. During this period, Gloria Anzaldúa also contributed *Borderlands/La Frontera* (1987), an influential work of Chicana feminism in which Anzaldúa mixed both prose and poetry to articulate a new hybrid, or *mestiza*, consciousness.

Feminist literature from the 1990s to the present, also called third-wave feminism, continued to broaden the understanding of feminism to include explorations of sexuality, race and ethnicity, queer and transgender theory, post-modernism, and critical theory. The work of contemporary feminist writers became more accepted into the literary canon as the readership of women's writing expanded. Elaine Showalter (1941–), in her groundbreaking literary critique *A Literature of Their Own: British Women Novelists from Bronte to Lessing* (1977), identified a rich tradition of women's fiction writing in England and brought forgotten writers back into the light. Her work has brought to light not only feminist literature but also feminist literary criticism and what she terms "gynocritics," or literary criticism from a feminine perspective.

Chinese Americans Amy Tan (1952–) and Maxine Hong Kingston (1940–) explore issues of cross-cultural experiences. Tan examines mother-daughter relationships such as those in her most well-known work, *The Joy Luck Club* (1983), and Kingston's memoir, *The Woman Warrior* (1975), is among the most commonly taught texts in universities. Other feminist writers who explore culture include Ana Castillo (1953–), who writes about Chicana feminism. Chilean American Isabel Allende (1942–) has written about the experiences of women through magical realism, a genre in which magical elements invade realistic settings, and has made significant contributions to Latin American literature. Margaret Atwood (1939–), the prolific and renowned Ca-

nadian writer of *The Handmaid's Tale*, continues to be an outspoken feminist and social activist, her writing diverse in subject matter and spanning multiple genres including science fiction.

Other contemporary American feminist writers who write about female identity, marginality, and sexuality, particularly lesbianism, include Adrienne Rich (1929–), one of the most influential poets in the second half of the twentieth century; novelists Rita Mae Brown (1944–) and Dorothy Allison (1949–); and contemporary poet Jennifer Baumgartner (1970–). Gloria Jean Watkins, better known by her pen name bell hooks (1952–), poet and activist, has explored race, class, gender, and media in her works including *Ain't I a Woman? Black Women and Feminism* (1981) in which she examines the impact of sexism and racism on the status of black women.

Contemporary feminist writers span the globe and explore the intersections between gender, society, ethnicity, and individual identity. Outside of Europe and the United States, feminist literature has also made significant inroads in presenting issues of concern to women of the developing world. Kenyan environmentalist and political activist Wangari Muta Maathai (1940–) writes about the importance of environmental conservation and women's rights in an African context. Her work in advocating for Green Belt Conservation made her the first African and environmentalist to win a Nobel Prize in 2004. Calcutta, India, native Bharati Mukherjee (1940–) examines the struggles of women in her home country, while Judith Ortiz Cofer (1952–) explores the dynamic between female empowerment and machismo in Puerto Rican culture. In the Middle East, feminist authors such as Egyptian Nawal El Saadawi (1931–) discuss issues of importance to Muslim women, such as genital mutilation and criticism of patriarchal systems; Iranian expatriate Marjane Satrapi's graphic novel series *Persepolis* (2003) described her own coming of age against the backdrop of the Iranian revolution, the Iran-Iraq War, and restrictions on freedom under the new regime.

—Kim Kennedy White

Bibliography

Barcan, Ruth. "Feminism and Literature: An Overview." *Social Alternatives* 12, no. 3 (1993): 14–18.

Fraser, Nancy. "Feminism, Capitalism and the Cunning of History." *New Left Review* 56 (March/April 2009): 97–117.

Pernal, Mary. *Explorations in Contemporary Feminist Literature: The Battle against Oppression for Writers of Color, Lesbian and Transgender Communities*. New York: P. Lang, 2002.

Whitson, Kathy J. *Encyclopedia of Feminist Literature*. Westport, CT: Greenwood, 2004.

Literature in the Soviet Bloc, 1945–1990

While the introduction of the communist political system to Eastern Europe did not lead to a cultural revolution as in China, socialist realism quickly became the dominating art form in these countries for most of the 1950s and 1960s. Maxim Gorki's novel *The Mother* (1907), which tells the story of the failure of the 1905 Russian Revolution, is considered the archetype of socialist realism. It was also Gorki (1868–1936) who proclaimed that socialist realism, designed to capture the real-life experience of workers in factories and social affairs, would be the only fitting style for the new age of communism. Socialist realism influenced architecture, music, literature, and the production of movies. Most of the novels produced in this style took on the form of the bildungsroman (narratives that describe the moral growth and education of a main character) but with a focus on an individual worker who, initially skeptical of the new political system, experiences the superiority of that system and finally professes loyalty to communism.

After World War II, socialist realism spread to the nations of the Soviet Bloc. In 1952, the eminent poet and East German politician Johannes R. Becher (1891–1958) declared socialist realism to be the only acceptable art form for East German artists. Authors were encouraged to seek out contact with workers and experience factory work firsthand. The core of their writing was to reflect class struggle as the driving force of history. The quality of novels in this tradition, at least in the eyes of communist politicians, was measured not against their truthful representation of everyday life but instead against their truthful reflection of class struggle and the inherent message of the moral, economic, and social

➤ CHRISTA WOLF

Christa Wolf (1929–) is the best-known author from the German Democratic Republic. Wolf was born in the small town of Landsberg, which belonged to the eastern territories lost to Poland after World War II. Her novel *Patterns of Childhood* (1976) was one of the first literary explorations of individual Germans' guilt and responsibility for the Nazi past. In this autobiographical work, Wolf writes about her journey as an adult to her former hometown and connects this narrative with a discussion of her childhood memories from the days of the Nazi dictatorship and the very selective representation of Nazism in East German media. In *Patterns of Childhood*, Wolf considers the ways in which we learn to conform to social and political standards, which are questioned only at times of social and political collapse. Her book is thus not just about Germany's difficulties with the past but about the general phenomena of memory and forgetting.

—Thomas Adam

superiority of communism. From the beginning, socialist realism was hotly contested and produced conflicts between writers and politicians.

East German literature faced two unique challenges. It needed to include discussions about the Nazi past, such as in Dieter Noll's *The Adventures of Werner Holt* (1960–1963), and it also needed to discuss the problem of East Germans leaving for West Germany before the construction of the Berlin Wall (in 1961). Socialist realism thus led to the production of novels in which the reeducation of individuals occurs over a long time span often involving a misguided life before 1945. Furthermore, East German movies such as *Our Daily Bread* (1949) contrasted a hard but successful and morally superior life in the East with an easy and morally disastrous life in the West.

After the suppression of the Hungarian Revolution of 1956, pressure on intellectuals and poets to conform to the demands of socialist realism increased. While some authors left for the West, others such as Erich Loest (1926–) and Walter Janka (1914–1994) were imprisoned. The events of 1968 in Czechoslovakia forced many more authors into exile. The most prominent

was the Czech poet Milan Kundera, who gained worldwide recognition for his best-seller *The Unbearable Lightness of Being* (1984), which he wrote in French exile. This novel and his *Book of Laughter and Forgetting* (1979) deal with the events of the Prague Spring and its aftermath.

Science fiction, which flourished in the Soviet Union and the Eastern Bloc, allowed freer reign to ideas. Polish sci-fi author Stanislaw Lem (1921–2006) gained worldwide recognition for his writings. Although his first writings were in the socialist realist vein, he soon shifted to novels of ideas and satires. His books have been translated into 41 languages. The film *The Silent Star* (1960), based on Lem's first sci-fi novel *The Astronauts* (1951), was an East German-Polish coproduction and the only East German sci-fi movie ever shown in U.S. theaters, under the title *First Spaceship on Venus* (1962).

Throughout the 1970s and 1980s, Western media provided many East European authors an outlet in which to publish their banned works. Aleksandr Solzhenitsyn's description of the Stalinist labor camp system in his novel *Gulag Archipelago* was one such work. Written between 1938 and 1968, this monumental work was first published in Paris in 1973, and copies were smuggled back into the Soviet Union and circulated underground as part of the Samizdat literature movement. The East German writer Stefan Heym was also forced to publish his account about the popular uprising in East Germany on June 17, 1953, in the West. It appeared in 1974 in West Germany.

The easing of the tensions between East and West in the early 1970s led to significant changes in the conditions of the production of literature, especially in East Germany. The crude version of socialist realism of the 1950s was no longer held up as the norm, and Erich Honecker, East Germany's head of state, in 1971 insisted that there can be no taboos for art if one proceeds from a sound socialist point of view. This no-taboo speech enticed East German writers, who quickly took up his invitation. Christa Wolf had already been able to publish her highly praised short story *Quest for Christa T.* in 1968, thus introducing the topics of cancer and death to public debate. Irmtraud Morgner's *Trobadora Beatriz* (1974) questioned the level of female equality,

while Ulrich Plenzdorf's *New Sufferings of Young W.* (1973) focused on youth rebellion against society.

Throughout the 1980s, Soviet authors such as Tschingis Aitmatow (1928–2008) were permitted to point in their novels to Stalinist crimes and signs for the moral decay of communism. In his widely read book *Place of Execution* (1987), Aitmatow discussed drug trafficking and drug abuse, the destruction of nature, and Soviet bureaucracy and mismanagement.

—Thomas Adam

Bibliography

- Gilman, Sander L. *Jurek Becker: A Life in Five Worlds*. Chicago: University of Chicago Press, 2003.
- Goodbody, Axel, Dennis Tate, and Ian Wallace. "The Failed Socialist Experiment: Culture in the GDR." In *German Cultural Studies: An Introduction*, edited by Rob Burns. Oxford: Oxford University Press, 1995.
- Swirski, Peter. *Stanislaw Lem Reader*. Evanston, IL: Northwestern University Press, 1997.

Modern Islamic Utopian Literature

Although the term "utopia," which Thomas More coined to title his novel *Utopia* (1516), etymologically means "no place" (or "nowhere") and stands as a fictional portrait of an ideal imaginary society. The modern Islamic literary utopias belong to the contemporary world and describe a good life of timeless order. There are two types of modern Islamic utopias. The first group, which can be called quasi utopias, includes socially and/or politically charged texts with a utopian tone. A second group, limited in number, combines science fiction and the realms of utopia. All modern Islamic utopian texts refer to a past Golden Age of Islam as part of their critique of a contemporary fallen world.

In contrast with the major canons of utopian writing, the relation of this first group of Islamic quasi utopias with literature is indirect and stands between contemporary issues and the Islamic heritage that is shaped by the sciences of Kalam, Islamic theology, Tafsir, exegesis, and Hadith tradition. In most cases, the ideas and fantasies are told anonymously, commonly by a lay Muslim intellectual whose voice is firmly

► TURKISH ISLAMIC SCIENCE FICTION—SPACE FARMERS

Ali Nar's *Uzay Çiftçileri: Space Farmers* (1988) is one example of Islamic science fiction from Turkey. The main character is the astronaut Hasan II, who is part of an Islamic space mission that aims to gain new natural resources off the globe. The chapters of the novel each begin with maxims taken from the Quran or the hadith collections. The theme starts with Hasan II's grandfather's unpleasant encounter with modern technology—when as a little boy he was scared by an emerging train from a tunnel—preparing the reader for a comparison between the generations and their life conditions and attitudes toward modernity. The plot presents the Muslim astronaut as a modern young man with strong religious beliefs. When the Space Committee of the Islamic Federation in Aleppo starts gathering a team, Hasan II consults Hamit Molla, the imam of his village. The imam, who compares the space mission to Mirac, or Ascension, suggests to him a training program that resembles one required by the Islamic mystical paths. After this three-month-long training, which consists of conversation with his imam on *seriat*, the divine law, the succession of the prophet Muhammad, and mystical cognition, Hasan II's

shirt is burned during a mystical ecstasy, and he is awarded *abaya*, the clothing of the Sufi, as a sign of his progress. In the sixth chapter, after his internal Mirac he goes to Aleppo to enroll in the space program and ultimately becomes a member of the space mission Refref II.

Holy numbers and numerology add religious significance to the text, such as the assigning of a 24-member crew of the mission, while the 99 units of the shuttle parallel the names of Allah. One task of the crew is to discover the eleventh planet, which is mentioned in the Quran (surah 12/4). In the second part of the novel Hasan II breaks the rules of the mission and as punishment is forced to travel alone in a separate shuttle for seven days. During this period he gets lost in the fourteenth solar system and ends up landing on a planet, which he names *dünya II*, or second world. Scholar Christian Syzka, in his "On Utopian Writing in Nasserist Prison and Laicist Turkey," has noted that while exploring the second world Hasan II meets a number of legendary figures that are part of Islamic popular culture and witnesses apocalyptic images that are rooted in the hadith literature.

—Yücel Demirel

grounded in the contemporary world and who is convinced of being part of this utopian past. These quasi utopias, whether written as a newspaper article, part of the speech of an Islamist politician, or posted on a *dawa* Islamic Web site on the Internet, reflect the values of Islamic thought, highlight the hope for a better future, and point out solutions to current problems that are faced by Muslims.

A typical text that is told or written within this utopian discourse has two main characteristics. On the one hand, this world and its affairs are considered as a sort of dystopia, the bad place, in which the life conditions of Muslims are dreadful because of deprivation and oppressive social control that are caused either by the colonizing West or by local governments contaminated by the Western way of thinking. Consistent with the Islamic conceptualization of Islam as the so-called final religion and its prophet as the seal of the prophets, the utopian Islamic dis-

course describes the current situation of Muslims and the world in general as fatally flawed, based upon human evil and idiocy. The central features of the given framework appear as poverty, social discord, and antidemocratic governance. The texts critique a highly hierarchical social and political structure in which social and economic forces are incapable of changing the fate of the Muslim people. In addition, forces such as globalization, technology, and the media are represented as the instruments that strengthen the subordination of the Islamic world.

The main theme of these quasi-utopian Islamic responses is a return to the values of the Golden Age of Islam (seventh to fourteenth centuries), the era during which Muslim scientists and physician-philosophers contributed extensively in philosophy and science. These quasi utopias are created, then, to foster a moving force against contemporary discord. While on some occasions the utopian text visibly fuels the

political Islamic movement to undermine the prevailing social and political system, in others they employ a more covert language for a more pragmatic political agenda. In the latter, one might see how the goal is to mobilize people for a social and/or political agenda within a given system. In both cases, this discourse juxtaposes the basics of Islam with Western conceptualizations of politics.

Islamic science fiction, while a limited genre, highlights protagonists who attempt to blend religious traditions with modernity. In one, Ahman Raif's *Al-bud al-khamis* (The Fifth Dimension), published in 1987, an Islamic scientist, a reporter, and a UNESCO member travel via rocket ship to Mars, where they encounter a utopian world and later converse with an American and Soviet astronaut upon their arrival. In Ali Nar's *Uzay Çiftçileri* (Space Farmers), published in 1988, a Turkish astronaut whose training combines Sufi mysticism with science discovers a new planet where he meets legendary figures from Islamic popular culture.

Since social and individual renewal overlap in Islamic utopian thinking, as in Islam in general, the glorification of the past in these science fiction novels and utopian tracts includes both spheres to describe an ideal society based on the pride of the good old days. While the place and the details of the utopia can be significantly vague, utopian social relationships are highlighted. The concept of *shura* (consultation and consensus), for instance, is frequent and prominent. This method's promotion of consensus-based leadership, consultation, and cooperation is presented as a historic Islamic response to authoritarianism. Sharia (Islamic law) is also portrayed as one of the key instruments of an Islamic model in which people can enjoy maximum equality, freedom, and social justice. These are boldly presented in these texts to assure the audience that Islam is not an impediment against democracy and development and to display the Islamic structural potential for the creation of an alternative state and administrative model.

—Yücel Demirer

Bibliography

Hutchinson, Steven. "Mapping Utopias." *Modern Philology* 85, no. 2 (1987): 170–185.

Khalidi, Tarif. *Classical Arab Islam: The Culture and Heritage of the Golden Age*. Princeton, NJ: Darwin, 1985.

Lambston, Ann K. S. *State and Government in Medieval Islam: An Introduction to the Study of Islamic Political Theory; The Jurists*. New York: Oxford University Press, 1981.

Lombard, Maurice. *The Golden Age of Islam*. Translated by Joan Spencer. Princeton, NJ: Marcus Wiener, 2004.

Nar, Ali. *Uzay Çiftçileri*. İstanbul: Elif Yayınları, 2002.

Szyska, Christian. "On Utopian Writing in Nasserist Prison and Laicist Turkey." *Die Welt des Islams* 35, no. 1 (1995): 95–125.

Political Theater since 1945

Bringing together actors and audiences in a communal and interactive situation, the theater is uniquely suited as a political art form, enabling authors and directors to go beyond staging mere social interaction in order to convey a sense of the possibilities for social and political change. Its use for spreading political messages, including radical ideas, has therefore been inevitable. At the same time, to adapt the urban middle-class conventions of theatrical viewing for the purposes of a theater of political messages has always proved difficult and has resulted in innovative methods of presentation and of using theatrical technologies.

After World War II, political theater was facing a dilemma. There was no more need for antifascist propaganda, and the new adversaries in the incipient Cold War were former allies, among them the Soviet Union, whose agitprop theater had provided one of the most popular formats for political plays in the 1920s and 1930s. Political theater in the Western world had to turn to new methods and strategies. The more primitive forms of flag-waving, slogan-shouting morality plays disappeared behind the Iron Curtain; after its fall they receded to North Korea, the People's Republic of China, and other more or less totalitarian systems.

In the Western world, theater troupes and directors continued to experiment with the methods and theories introduced by Erwin Piscator (1893–1966) and Bertolt Brecht (1898–1956). Brecht's epic theater used distancing effects and its insistence on rationality to create anti-

► SAN FRANCISCO MIME TROUPE

Founded by Ronny G. Davis in 1959, the San Francisco Mime Troupe (SFMT) used the term “mime” in the classic sense of to mimic. Subverting the psychological realism and individualism of American mainstream theater of the period, the group created political satires confronting contemporary issues: the U.S. involvement in Southeast Asia and human rights. *A Minstrel Show, or Civil Rights in a Cracker Barrel* (1965) was their most successful as well as most controversial show, a mixture of vaudevillian and agitprop elements, supported by an 11-minute movie called *Oh Dem Watermelons*. It attacked the media-propagated image of the so-called happy Negro through gross comical exaggeration.

The performances of the SFMT were designed to reach beyond the hippie fringe of society. Adapting medieval stage-cart techniques for public performances in parks, court squares, or parking lots, they aimed at the nerves, the brains, and the capacities for insight of the potentially sympathetic urban middle classes. The political thrust of the SFMT is based on the assumption that in the absence of a traditional working class, the educated segments of society are the logical basis for any hegemonic shift.

In 1970 the SFMT officially became a collective. The troupe continues to tour nationwide and internationally.

—Wolfgang Hochbruck



The San Francisco Mime Troupe entertains demonstrators during a 1969 People's Park march in Berkeley, California. (Steven Clevenger/Corbis)

illusionist perspectives on the action, but the connection to political issues became less pronounced as these methods were increasingly used for aesthetic rather than ideological purposes. Many of Brecht's plays were subsequently adopted into the theatrical canon. Foremost in developing a culture of post-Brechtian political plays in Germany are Heiner Müller (1929–1995), Volker Braun (1939–), and George Tabori (1914–2007). The leaders of postwar German political theater avoided developing future-oriented visions and struggled instead with Germany's Nazi past. Turning away from the theater of Brecht resulted in many pessimistic productions. After 1968, German theaters remained strongly director dominated but now largely without the political optimism that had inspired the earlier part

of the decade. The result was a glut of manneristic productions lacking in popular appeal.

The British political stage of Harold Pinter (1930–), Arnold Wesker (1932–), and others from the 1950s onward shifted between what was called kitchen sink realism and the powerful theater of the absurd, oscillating between a stubborn hope in the changeability of social conditions and despair at the persistence of what to the authors appeared as anachronistic historical behavior and power relations.

In the United States, the psychological realism of Arthur Miller (1915–2005) initially provided a fertile basis for political plays based on the fates of representative individuals such as his character Willy Loman in *Death of a Salesman* (1949). The effects are still felt in the plays of

Sam Shepard (1943–) and others. The political conservatism of Reaganomics and the losses incurred by AIDS notably among artists and actors in the 1980s triggered a new wave of political plays. Few were as successful as Toni Kushner's (1956–) *Angels in America*, but as in Suzan-Lori Parks's (1964–) *The America Play* (1993), the political aspect is all too often lost beneath the weight of the play's formal experimentalism.

In order to avoid such restrictions and consciously counteracting the psychological play, in the 1960s and early 1970s political dissident theater groups such as the San Francisco Mime Troupe, the Bread and Puppet Theatre, the Pageant Players, and the Living Theatre (*Paradise Now*, 1968) experimented with recombinations of medieval stage formats, the symbolic action and mass chorus of agitprop, the Living Newspapers of the 1930s' Federal Theatre Project, and nineteenth-century tableaux vivants to create interactive theatrical events. The thrust as well as the accessible theatrical technologies resulted in the formation of other groups such as the ethnic Teatro Campesino, founded in the mid-1960s for the Hispanic farmworkers in California and the American Southwest.

The success of American plays ever since the early nineteenth century has been based on

their economic viability rather than their political messages, so plays aimed at economic success need to balance their political spirit and their formal innovations against the conservative tastes of the popular market. Since 2001 and in light of a political scene pressuring the cultural scene for declarations of loyalty against a background of “those who are not with us are against us,” political plays have taken on a more fundamentally dissident role again, but few theater practitioners are as capable of combining popular formats and critical politics as are political activist and actor Tim Robbins (1958–) or the Italian playwright Dario Fo (1926–). While Robbins continues the traditional form of dramatic subversion, Fo has developed a blend of satire, burlesque, and tragicomedy with clownlike overtones that won him the Noble Prize for Literature in 1997.

—Wolfgang Hochbruck

Bibliography

- Havis, Allan ed. *American Political Plays: An Anthology*. Urbana: University of Illinois Press, 2001.
- Patterson, Michael. *Strategies of Political Theatre: Post-war British Playwrights*. Cambridge: Cambridge University Press, 2003.
- VanErven, Eugène. *Radical People's Theatre*. Bloomington: Indiana University Press, 1988.

■ Introduction: Food

While hunger and famines are still a major problem in regions of the developing world—for example, the intermittent drought-instigated famine in the Sahel region of Africa that has lasted for decades as well as famines elsewhere in sub-Saharan Africa, South Asia, and Latin America—the decades that have followed World War II have been characterized by the mass distribution worldwide of food-stuffs once regarded as luxuries as well as of homogenized fast foods such as hamburgers that no longer closely attach themselves to a regional cuisine. Diaspora communities and the relative ease of travel and tourism have also brought cuisine to new parts of the world so that one can

buy sushi in virtually all of the world's global cities, Turkish workers have made kebabs popular in Germany, South Asians have brought Indian cuisine such as curry to England, and food such as falafel has followed Middle Eastern diaspora communities. As a result, the palate of the average person is far more sophisticated than in previous decades. Methods of freezing foods, industrial farming, genetic engineering of seeds and animals, container shipping and large distribution networks, fast food chains, and increasingly sophisticated consumers all add to increasingly globalized foodways. Concerns about the health and environmental consequences of convenience foods grown, harvested, and distributed through

networks that privilege efficiency over nutrition have also spurred current movements such as slow cooking and increased interest in organic foods and vegetarianism. While concerns over obesity surface in the developed world, as of 2009 a global economic downturn and rising costs for basic staples such as wheat and rice have led to food riots in numerous locales including Egypt and the Ivory Coast.

—*Fred Nadis*

The Spread of Frozen Foods

Frozen foods are ubiquitous in most developed societies. Entire supermarket aisles of glass-front freezers full of frozen fruits, vegetables, prepared foods, and novelties can be found. Even in the developing world, frozen foods such as ice pops are common in neighborhood shops. Early in the twentieth century, although the technology to freeze foods had been developed, the wide variety and availability of frozen foods, extending even to tropical climates, would have been difficult to conceive. Today, frozen food represents a multibillion-dollar industry, growing exponentially since the early 1940s.

Freezing is one of the oldest, safest, and most intuitive food preservation methods, at least where conditions allow. In cold climes even centuries ago, foods, especially perishable foods available in winter such as meat or fish, were frozen to preserve them for weeks or even months. Unlike other food preservation methods such as salting (as in the case of sauerkraut or salt cod), canning (as in the case of canned peas or tuna fish), or drying (as in the case of dried apricots or kelp), freezing, when done correctly, does not dramatically change the chemical, nutritional, color, flavor, or textural profile of the food. Consider, for example, the differences among a fresh beef steak, a defrosted frozen beef steak, a piece of fresh corned beef (salted), potted beef (salted and canned), and beef jerky (dried). The defrosted frozen product is closest, in fact nearly identical, to the fresh. Thus, the appeal of freezing as a food preservation method is increased by its flavor-preserving characteristic.

Frozen food as known today is extraordinarily technology-intensive. Machines are used to process, freeze, keep frozen, transport, and mer-

TV DINNERS

TV dinners are frozen entrees served on compartmentalized trays inspired by the trays used to serve airline meals. The company credited with inventing and marketing the first TV dinner was C. A. Swanson & Sons in 1954. The story of its invention, possibly apocryphal, is that the inspiration for the TV dinner came from hundreds of thousands of pounds of unsold Thanksgiving turkeys following the holiday. Regardless, the first TV dinner was indeed a meal of turkey, stuffing, gravy, sweet potatoes, and frozen peas. TV dinners, conveniently sized to fit on TV trays in order to be consumed in front of the television, were also packaged to resemble a television. TV dinners, situated in a larger context of 1950s futurism and convenience, were marketed as a time-saving convenience food, featuring long-cooking American classics such as meatloaf and fried chicken that could be heated and served in minutes. The advent of the microwave further decreased the cooking time and increased the convenience of these dinners. By 1983 they were celebrated in the song “TV Dinners” by ZZ Top in their *Eliminator* album. The song performance on MTV even included TV dinners being microwaved. Today, TV dinners are called frozen entrees or frozen segmented entrees and boast a variety of ethnic, regional, dietary, and nutritional variations.

—*Jonathan Deutsch*

chandise the food. A break in this chain from production through consumption means the total loss of the product. The logistics of getting an ice cream cone from manufacturer to consumer is much more complicated than the process for other consumer products.

The pioneer of frozen food was Brooklyn-born Clarence Birdseye (1886–1956), made famous by his experiments with freezing fish and, later, the eponymous frozen food company. While freezing food may appear to be simple—take some food and put it out in the cold—the ability to do so year-round, in a variety of climates and on demand, is more complicated. Further, while ice has been available year-round for centuries by collecting it in winter months and then shipping it to distant locations, freezing food and

keeping it frozen requires temperatures colder than ice, that is, freezing the product at temperatures around 0 degrees Fahrenheit or -18 degrees Celsius since, while water freezes at 0 degrees Celsius, many foods have freezing points below that of water. Birdseye developed his techniques while stationed in Labrador, Canada, as a U.S. government field naturalist. His eventual design featured two brine-cooled metal plates between which a piece of food such as fish could be frosted. Birdseye later founded the General Seafoods Corporation, which later merged to form General Foods.

While Birdseye's innovations in freezing food were important, especially in freezing fish for short-term transport and wholesale markets, frozen food did not become a mainstream part of the consumer diet until much later. In the 1940s and 1950s in the United States and Canada, advances in trucking, home refrigerators, and freezers made it possible not only to freeze food but also to transport it to a store, where it could be merchandised in a freezer case and then purchased by a consumer who, in the early years, would have either consumed it that same day or later and may have had a home freezer as well. Other important factors that contributed to the spread of frozen foods were the increased presence of women in the workplace during World War II; the ability to preserve food for home use without the use of tin, which was needed for the war effort; and increased interest in innovations in domestic science and technology at the time.

Today there are a few major methods of freezing food: air blast freezing with cold moving air; plate freezing, similar to the technique developed by Birdseye; and cryogenic freezing whereby foods are dipped or sprayed with liquid nitrogen.

Frozen food has several advantages. One advantage of frozen food is that it allows fragile seasonal foods such as fruits and vegetables to be available all year. In addition, because frozen food processors are often proximate to growing areas, frozen food may be higher in quality than a fresh alternative. The frozen food may have been picked, slaughtered, or caught and then processed and frozen within hours, whereas the fish, meat, fruit, or vegetables sold fresh in the supermarket may be days or even weeks old.

Frozen food is not without critics, who maintain, among other things, that freezing is an energy-intensive preservation method that is worse for the environment than eating local seasonal foods.

—Jonathan Deutsch

Bibliography

- Shepherd, Sue. *Pickled, Potted, and Canned: How the Art and Science of Food Preserving Changed the World*. New York: Simon and Schuster, 2006.
- Smith, Andrew, ed. *The Oxford Companion to American Food and Drink*. Oxford: Oxford University Press, 2007.
- Williams, E. W. *Frozen Foods: Biography of an Industry*. Boston: Cahners, 1970.

Globalization of Fast Food

Fast food restaurants developed in the United States during the post-World War II era when entrepreneurs such as Richard and Maurice McDonald revolutionized the food business. By applying assembly line principles to the commercial kitchen, relying on a set and limited menu, and using disposable utensils and plates, the McDonald brothers created a highly efficient food service system. Their fast food hamburger model was soon mimicked, and today the intense competition of the 1950s remains evident. Major corporations such as McDonald's, Wendy's, Jack in the Box, and Yum! Brands now compete globally for consumer palates.

Over the decades, the U.S. fast food market has grown to a \$50 billion a year industry. Globally, it accounts for over 50 percent of the fast food market, with European and Asian-Pacific markets following at about 20 percent each of the global market share. As North American and West European markets are becoming more saturated, many U.S. companies are expanding geographically, particularly in high-growth regions such as Eastern Europe and the Asian-Pacific. A recent A. C. Nielsen survey indicates that Asian-Pacific consumers now outnumber Western consumers in weekly fast food consumption. Globalization of fast food has meant not only the availability of fast food in new areas but also increased marketing in the global arena. Leading fast food companies are now affiliated with highly

visible international sporting events such as the Olympics and the FIFA World Cup.

The phenomenal growth of American companies abroad has been accompanied by social criticism. As U.S. fast food companies have expanded overseas, they often come with their own major suppliers, reducing reliance on local food producers. And despite adapting menus to local tastes—for example, Chinese Kentucky Fried Chicken offers duck soup and a fried chicken wrap resembling Peking duck—American fast food companies have been accused of threatening local cuisines and culture. There is a fear that Americans are exporting not only their fast food but also a homogenous American culture that one political theorist has described as “McWorld.” In response to this threat of cultural homogenization and the destruction of local foodways, the Slow Food movement was launched in 1989. The movement’s goal has been to counteract fast food and fast lifestyles as well as the disappearance of local food traditions. This countermovement remains strong today, with over 80,000 members around the world. Notably, the criticism directed at the globalization of fast food and the spread of McWorld is not just about fast food. Sociologists have attacked McDonaldization, that is, the spread of increased rationalization and efficiency to all arenas of social life.

Other social activists have criticized the spread of fast food on political grounds. For example, environmentalists and animal welfare advocates have criticized the industry’s widespread use of factory farming, excessive packaging, and genetically modified products along with the inhumane treatment of animals. Protests have made headlines internationally. The so-called McLibel case drew global attention when British activists were sued for libel, only partially successfully, by McDonalds for distributing leaflets that accused the company of, among other things, environmental destruction, exploitation of children through advertisements, and nutritional misinformation. In the late 1990s, antiglobalization activists also dismantled, bolt by bolt, a McDonald’s in France. Labor rights activists have also drawn international attention to alleged human rights abuses by certain fast food companies because of low wages, minimal benefits, and poor or dangerous working conditions.

➤ REGIONAL ADAPTATION OF FAST FOOD

Inside McDonald’s, everything looks familiar at first: teenagers chatting on cell phones and drinking sodas and children wolfing down fries. But the menu of this McDonald’s outlet, in the middle of India’s capital New Delhi, is a little different from the American standard. While the logo, the french fries, and the shakes look the same, the Delhi restaurant offers many options to suit the Indian palate, from smoke-flavored mayonnaise to potato-pea patties and cottage cheese wraps. In accordance with Hindu and Muslim religious and dietary beliefs, neither beef nor pork is sold. The french fries are fried in vegetable fat (without the beef flavor that has been controversial in the United States), and burgers are made of chicken or vegetables. Since many Indians are vegetarian, a range of vegetarian options is available, from the spicy potato McAlloo Tikki Burger to the Wrap Paneer Salsa, a further Indian-Mexican fusion in which Indian cottage cheese is fried, mixed with salad and salsa, and tucked into a tortilla. To top off their McDonald’s meal, carnivores and vegetarians alike can enjoy a cup of cardamom tea or a cappuccino, definitely different fare from the everyday McDonald’s lunch in the United States.

—Kimberly Dukes

Nutritionists and health advocates have also accused the fast food industry of creating a toxic environment that is contributing to an obesity epidemic around the globe. Based on definitions relying on the Body Mass Index (BMI), the World Health Organization (WHO) reports that approximately 1.6 billion adults are overweight and that at least 400 million adults are obese. The WHO attributes the spread of obesity in part to a global shift in diet toward increased intake of energy-dense foods that are high in fat and sugars but low in vitamins, minerals, and other micronutrients. The globalization of fast food—food that is often low in nutrients, vitamins, and fiber while high in fat, sodium, sugar, and calories—is considered part of the problem. Fast food companies have been somewhat receptive, now providing healthier alternatives, supplying consumers

with nutritional information, and removing trans-fats from many of their menu items.

Despite criticism, the globalization of fast food continues. Today, to give just one example, Yum! Brands, whose companies include KFC, Pizza Hut, and Taco Bell, operates over 33,000 restaurants in over 100 countries and continues to record consistent revenue increases. Future growth is also predicted, as increased global modernization and fast-paced lifestyles around the world will make fast food even more appealing.

—*Samantha Kwan*

Bibliography

- Barber, Benjamin. *Jihad versus McWorld*. New York: Times Books, 1995.
- Brownell, Kelly D., and Katherine Battle Horgen. *Food Fight*. Chicago: Contemporary Books, 2004.
- Datamonitor USA. *Fast Food in the United States: Industry Profile*. New York: Datamonitor USA, 2006.
- Ritzer, George. *The McDonaldization of Society*. Thousand Oaks, CA: Pine Forge, 2004.
- Schlosser, Eric. *Fast Food Nation: The Dark Side of the All-American Meal*. Boston: Houghton Mifflin, 2001.

Global Spread of Ethnic Restaurants

The spread of ethnic restaurants in modern multicultural societies throughout much of the world is a result of postwar immigration patterns, increased tourism, and globalization. These restaurants are considered ethnic since they do not represent the national cuisine of the majority population but rather that of nonnative immigrant communities. The now nearly ubiquitous presence of Mexican restaurants in the United States, Turkish kebab shops in Germany, and Indian eateries in Britain are examples of this historical change. Moreover, the process of globalization further spreads the appeal of ethnic restaurants as people along with their palates (the most obvious case being the Chinese) migrate and set up shop. By building up a local clientele of their fellow nationals, they soon attract the well-to-do national ethnic (typically white) majority craving a taste of the exotic and the foreign and the status that goes along with a sophisticated palate.

Following World War II, the need for reconstruction across much of Europe necessitated the recruitment of foreign labor, typically guest workers from abroad. Countries such as Britain, France, and Germany sought laborers from their former colonies to help rebuild their domestic economies. Indians and Pakistanis moved to Britain, Algerians moved to France, and Turks moved to West Germany, bringing along their foodways. Restaurants serving their national dishes, mostly small establishments catering to workers, rapidly emerged in small immigrant enclaves. Britain, with a longer tradition of empire, had long-established Indian eateries in major cities, with most English already familiar with Indian cuisine and a penchant for curry. France and to a greater degree West Germany also developed a taste for the cuisine of their immigrant communities. France developed Algerian, Moroccan, and Vietnamese restaurants in response to the growth of these immigrant communities. In Germany the *döner kebab* (sliced meat cooked on a vertical spit typically served in pita bread), formerly merely a Turkish staple for Turkish guest workers, is now the most popular fast-food dish among the majority German population, displacing bratwurst.

Unlike Europe, countries historically developed through immigration in the nineteenth and twentieth centuries, such as the United States, Canada, Australia, and the Latin American republics (termed “neo-Europes” by Alfred Crosby), also developed similar tastes for the non-European cuisines of their new immigrants of the postwar period. The United States had long-established Chinese and Mexican populations, and the majority population had developed an appreciation for their cuisines by the turn of the nineteenth century. However, with greater immigration from Southeast Asia, the Near East, Eastern Europe, Russia, Latin America, and Africa, the United States experienced an influx of cuisine, with more and more Americans curious to experiment on their palates. Canada and Australia, also experiencing similar developments, saw a surge in the quantity of ethnic restaurants sprouting in their major metropolitan areas. Latin America, particularly Argentina and Brazil, experiencing waves of immigration from non-European countries, also shared in this development.

In an era of increased global interaction in the form of trade, communications, immigration, and international tourism, cuisine has become a pivotal element in the process of globalization. The growth in Chinese restaurants in Argentina and Mexico, Japanese restaurants in Brazil, Korean and Indian restaurants in Japan, and Turkish kebab shops in Australia are examples of the continuity of this process. The continued immigration patterns of the late twentieth and early twenty-first centuries are characterized by the diffusion of various diaspora communities throughout much of the developed world coming from the developing world (either as guest workers, illegal immigrants, or refugees). Growing numbers of Nicaraguan restaurants in the United States, Eritrean restaurants in Britain, and Moroccan restaurants in Spain are examples of these new patterns of immigration. At the same time, globalization and market forces transcend immigration. In global cities and globalized locales that herald the postmodern collapse of spatial boundaries, foreign foods (as featured in restaurants), high-end groceries, and cooking classes are no longer rare commodities but instead are markers of sophistication and abundance.

—Abraham O. Mendoza

Bibliography

- Kiple, Kenneth F., and Kriemhild Coneè Ornelas, eds. *The Cambridge World History of Food*. New York: Cambridge University Press, 2000.
- Pilcher, Jeffery. *Food in World History*. New York: Routledge, 2001.

Supermarkets

Retail chain stores such as Woolworth's and grocery chain stores such as A&P and Piggly Wiggly appeared in the United States in the early twentieth century. These new standardized outlets appeared shortly after Frederick Taylor's theories of Scientific Management had begun to transform factory production to maximize efficiency and applied similar ideas to retail and consumption, a model already pioneered in department stores and catalog houses. Open access to merchandise and self-service and an effort to minimize costs became common to early grocery and variety store chains. Even larger indepen-

➤ ETHNIC GROCERIES AND MARKETS

International immigration patterns from the developing South to the developed North have also brought immigrant diets and foods into major urban centers such as New York, London, Paris, and Berlin. A surge in the amount of small mom-and-pop grocery stores catering to ethnic minorities in much of the West has occurred since the end of World War II, mirroring such increases during prior immigration waves of the late nineteenth and early twentieth centuries. However, many large grocery store chains now carry many of these products, as they recognize the market potential of catering to the needs of the new immigrants. Furthermore, such food items are also being increasingly sought after by members of the majority ethnic populations, showing the cultural diffusion of food propagated by new patterns of international immigration and globalization.

—Abraham O. Mendoza

dent retail grocery outlets, called supermarkets, emerged in the United States in the 1930s and forged a new model that the chains slowly incorporated. It was not until the post-World War II era, however, that supermarkets became commonplace in Latin America, Europe, and, later, the Middle East and Asia. By the 1990s, food chains had become a global affair, with France's Carrefour and Holland-based Ahold creating enormous hypermarkets around the world.

In the United States in the 1930s, entrepreneurs began to open enormous grocery stores in abandoned factories and warehouses with parking for automobile shoppers. One early example was the Big Bear, which opened in 1932 in Elizabeth, New Jersey, and sold in its first three days about the same as a typical A & P store might sell in six months; another, the King Cullen chain of Long Island built stores ten times as large as the typical chain grocery stores. The new supermarkets sometimes were called "Wild Animal Stores," only partially because these stores had names such as Big Bear, Big Tiger, and Big Bull. In addition, such establishments had a reputation for being free-for-alls, with somewhat unruly customers vying aggressively for bargains. Slowly the established chain groceries adapted

➤ TRADING STAMPS

As competition among supermarkets and other outlets in the United States increased in the early 1950s, supermarket chains, drug stores, and gas stations began to offer customers trading stamps, an idea that had been around at least since the turn of the twentieth century. The stamps were to be licked and placed into booklets that, when filled, could be redeemed for items such as appliances and tools at regional redemption centers. The varieties of trading stamps offered included S & H Green, Plaid, Orange, Gold Bond, Top Value, King Korn, Valu Plus, Merchant Green, Blue Chip, Eagle, and Triple S Blue. In 1964, S & H Green Stamps listed 1,742 items available for redemption in its *Ideabook*, of which 32 million copies were distributed annually. In 1956, 52 percent of all U.S. families participated in stamp-saving programs, a figure that rose through the 1950s and 1960s. Since the stamps added to retail costs (by 1968, retailers were paying \$11 billion annually to stamp companies) and were nearly universally adopted, the competitive edge that they provided retailers was slowly blunted, making the chains somewhat grudging participants.

At the same time, retailers in countries such as Great Britain and Japan were also offering trading

stamps. The Komatsu department store in Tokyo offered its first trading stamps in 1954, and several other stamp programs developed in the late 1950s and early 1960s including Blue Chip, Green Stamp, Golden Stamp, and Zeshoren. In the 1970s, retailers and gas stations began to migrate away from trading stamps to lower prices and/or other promotions. By the late 1980s only three diminished trading stamp companies were left in the United States: Sperry and Hutchinson (S & H), Quality Stamp, and Gold Bond.

But with the growth of frequent shopping cards and Internet sales in recent decades, the trading stamp is back, in virtual form. Airline bonus miles programs are a variant on trading stamps, while S & H has shifted from green stamps to green-points, with many major retail chains offering green points for online sales. Gold Bond also offers gold points programs. Perhaps even more significantly, supermarket chains now routinely offer club cards to shoppers that provide discounts. Unlike trading stamps, these become a new source of profits to supermarkets, which sell shopping data to advertisers. This information can also be subpoenaed by governments, leading to graver concerns about privacy.

—Fred Nadis

to offer the price advantages of these mass markets with a focus on quality and efforts to respond to what women shoppers looked for in such establishments. Forty percent of all U.S. groceries were purchased in such self-service stores by 1940, 60 percent by 1947, and 95 percent by 1958. *Life* magazine's cover showing an upscale woman pushing a shopping cart through a supermarket for a 1955 issue indicated a new acceptance of the supermarket.

One force behind the internationalization of U.S. business methods was the Marshall Plan's technical assistance programs to end shortages that provided \$300 million in funding between 1945 and 1960 to aid European industry and commerce. At the same time, private companies in Great Britain tested public interest in Americanized shopping. For example, in September 1948, Hussman British Refrigeration Ltd. mounted

a full-size model supermarket at the Imperial Institute of London; the model later toured to other cities in England and Scotland. By 1953, British capital entirely backed the first large self-service groceries in London, its plans based on studies of American supermarkets.

Another nongovernmental force was Nelson A. Rockefeller's International Basic Economy Corporation (IBEC), which combined a for-profit motive to investors with the progressive ideal of spreading economic progress in the postwar world. IBEC brought supermarkets to Venezuela in the early 1950s, and in 1956 IBEC decided that Italy was the best European target country for U.S.-styled supermarkets, with an initial plan of opening three stores in Milan. IBEC found Italian partners to finance 49 percent of their operations. As they opened their Supermarkets Italiani S.p.A. outlets, first in Milan and later in Florence,

the management learned to change the U.S. model, offering not only durable canned goods, frozen foods, and brand names but also fresh foods such as pasta and bread. As in the United States, promotions such as free gifts were given to customers, and a daily lottery was offered. Because of boycott threats and resistance from small shop owners, Italian wholesalers refused to sell to Supermarkets Italiani S.p.A., so it instead imported directly from foreign sources and began to create its own production units to create pasta, bread, ice cream, coffee, and other goods. Despite boycotts, strikes, delayed licensing, stink bombs, fistfights, and in-store demonstrations, the IBEC supermarket model held for Milan and later in Florence, gaining substantial profits. Customers were fascinated with the new stores and what they represented and wrote glowing notes to management about America and Rockefeller.

As this American model of mass consumption developed and began to take hold abroad, large multinational companies based outside the United States became global leaders. The French company Carrefour, the world's second-largest retailer following Wal-Mart, opened its first hypermarché in 1963 in Sainte-Genevieve-des-Bois outside Paris, creating an enormous retail outlet that combined a grocery supermarket with electronics and other retail goods. In the decades that followed, Carrefour continued to expand into other countries in Europe, the Middle East, Latin America, and Asia. After a brief foray in the U.S. market in the 1990s, Carrefour withdrew from direct competition with Wal-Mart but continued to hold stakes in U.S.-based big box retailers such as Office Depot and Pet Smart.

—Fred Nadis

Bibliography

- Cohen, Lizabeth. *A Consumer's Republic: The Politics of Mass Consumption in Postwar America*. New York: Knopf, 2003.
- Deutsch, Tracey. "From 'Wild Animal Stores' to Women's Sphere: Supermarkets and the Politics of Mass Consumption, 1930–1950." *Business and Economic History* 28, no. 2 (1999): 143–152.
- Scarpellini, Emanuela. "Shopping American-Style: The Arrival of the Supermarket in Postwar Italy." *Enterprise and Society* 5, no. 4 (2004): 625–668.
- Shaw, Gareth, et al. "Selling Self-Service and the Supermarket: The Americanisation of Food Retailing

in Britain, 1945–60." *Business History* 46, no. 4 (2004): 568–582.

Organic Foods Movement and Vegetarianism

During the twentieth century, the organic foods movement and vegetarianism moved from the fringe toward the mainstream of popular culture as part of a growing public concern with the environment and personal health. For participants, these movements may constitute part of a complex of ethical commitments to the local and global environments. At the same time, these interlinked lifestyle choices emphasize personal health benefits for the individual, the family, or society and suggest the growing importance of a green business model to consumers.

While restrictions and definitions vary between countries, in general organic food production focuses on maintaining ecological balance in farming, and organic farmers avoid the use of synthetic fertilizers and pesticides, hormones, or genetically modified organisms (GMOs). The organic foods movement stems from many origins but was influenced by the work of Rudolf Steiner in the 1910s and Sir Albert Howard, Lady Eve Balfour, and Hans Peter Rusch in the 1940s.

Vegetarians follow a diet that eschews meat and sometimes all animal products. Some want to prevent killing or mistreatment of animals; others choose the diet for health reasons or assert that a plant-based diet can help resolve the global food shortage. While vegetarianism has long been practiced for health, religious, or philosophical reasons, during the nineteenth century some Western Christian groups began to link vegetarianism with natural food and a responsibility toward animals, while more secular groups connected it with a return to higher moral or ethical standards.

During the twentieth century, vegetarianism became associated with other movements that often mistrusted modernity or technology and for some time were perceived as fringe movements. These included the back-to-the-land movement, early environmentalism, alternative medicine, and, alongside the broader health food or natural food movement, sustainable and organic agriculture. In the early twentieth century in the United

➤ GENETICALLY MODIFIED FOOD DEBATES

In the past decade, organic farmers and consumers have created new alliances around health issues, particularly the concern in Europe, New Zealand, North America, and Asia about the possible risks of genetically modified organisms (GMOs). Organic advocates worldwide, from Canada to Thailand and India, have objected to their governments' interest in producing or importing GMOs. In 1998, American and European organic supporters opposed the development of new U.S. Department of Agriculture regulations that they viewed as insufficiently strict. Since the late 1990s, European organic farmers and consumers have protested repeatedly against GMO field trials that risked the organic certification of neighboring farms, and they currently dispute proposed changes to European Union (EU) organic farming laws that change labeling practices and allow some GMO contamination. A successful appeal against European Union restrictions on GMOs, brought at the World Trade Organization by the United States, Canada, and Argentina, among others, led to protests in Europe and North America.

—Kimberly Dukes

States, Bernarr McFadden promoted vegetarianism and health food as boosting masculinity, fertility, and muscles; some of his ideas influenced students such as J. I. Rodale, whose magazine *Organic Farming and Gardening* helped popularize the organic foods movement during the 1950s. In the 1960s and 1970s, both organic foods and vegetarianism became associated with the counterculture in the West, hippiedom, Eastern spirituality and yoga, and a larger context of social justice and environmental advocacy.

A growing consumer interest in individual and global wellness toward the end of the twentieth century helped change the public perception of these movements. In the 1970s, the

mounting public concern with health and diet coincided with the preoccupations of nutritional science, leading to a growing appreciation of the nutritional value of a more vegetarian diet and of health food in general. The public also questioned the widespread use of pesticides in farming, leading to greater interest in organic foods. During the 1980s, organic foods moved out of the counterculture and became increasingly associated with elite tastes and high prices.

Since the mid-1990s especially, both the organic foods movement and vegetarianism have grown ever more mainstream, with their benefits showcased in popular menus, magazines, and cookbooks. Internationally, organic foods capture an increasingly larger market share, especially in the United States, Western Europe, and Japan. Particularly since 2000, organic foods have become big business for major companies such as Wal-Mart, Tesco, and General Mills, and greater acreage worldwide is reported as under organic production. This has led to increased availability and lower prices for organic foods but is accompanied by questions about the processes used in producing this food.

While organic foods movement and vegetarianism have become more mainstream, they often remain associated with a larger complex of ethical, social, environmental, and economic choices. Other associated international food movements include the Slow Food movement, the Community Supported Agriculture movement, and the local foods movement.

—Kimberly Dukes

Bibliography

- Kaptchuk, Ted, and David Eisenberg. "The Health Food Movement." *Nutrition* 14 (1998): 471–473.
- Morris, Carol, and James Kirwan. "Vegetarians: Uninvited, Uncomfortable, or Special Guests at the Table of the Alternative Food Economy?" *Sociologia Ruralis* 46 (2006): 192–213.
- Spencer, C. *The Heretic's Feast: A History of Vegetarianism*. London: Fourth Estate, 1993.

Migration and Travel

Since 1945, both tourism and migration have intensified as accompaniments to and key ingredients of globalization. Growing wealth and improved infrastructure have encouraged tourism. At the same time, growing world population, political disruption, and economic opportunities have spurred both legal and illegal migration for refugees and workers. By the year 2000, more than 150 million people lived in countries foreign to their birth nations, with about 10 percent of these refugees. In that same year, as many as half a billion tourists would travel to foreign destinations worldwide. These trends, with their unintended consequences and attendant debates, reveal the post-World War II era as one of major social disruptions, economic promise, and paradox.

Political migrants, or refugees from war or oppression, reflect the enormous political and social upheavals experienced since World War II. Roughly 95 percent of the world's refugees in this period are from Third World countries, with the majority of those displaced from sub-Saharan Africa. Grappling with the refugee crisis engendered by World War II, particularly that of displaced persons (DPs), in 1947, the United Nations (UN) framed its Universal Declaration of Human Rights, which, among other principles, asserted refugees' right to asylum. In 1951 the UN High Commission for Refugees was established. One of the first major crises that it faced was the roughly 3.5 million Palestinians displaced after the Arab nations' war against Israel in 1948–1949. In the 1960s, decolonization and attendant ills saw the emergence of a refugee crisis throughout Africa. The 1970s and 1980s reflected further refugee crises as Vietnamese, Cambodians, and Laotians fled in the tangled aftermath of U.S. involvement in Vietnam. In this same period many refugees from the wars in the Central American countries of Nicaragua, El Salvador, Honduras, and Guatemala made their way to Mexico. More recent disruptions in the 1990s and early 2000s have spurred refugee crises in Haiti, Eastern Europe, and various African nations, one of the worst of these conflicts displacing as many as 7 million Sudanese.

Beginning in the 1950s and more especially in the 1960s, Western nations, responding to UN humanitarian demands and the moral imperatives of the civil rights movement and anticolonial discourse, began to liberalize immigration policies, opening their borders to unskilled and skilled labor. In the 1950s and 1960s, many Turkish men, subsequently

Political migrants, or refugees from war or oppression, reflect the enormous political and social upheavals experienced since World War II. Roughly 95 percent of the world's refugees in this period are from Third World countries, with the majority of those displaced from sub-Saharan Africa.

followed by their families, were allowed into West Germany as guest workers; Great Britain also permitted immigrants from former colonies and commonwealth nations (such as Jamaica, Haiti, and Pakistan), while France accepted immigrants from Algeria and other former colonial possessions. In the United States, the Immigration and Nationality Act of 1965 removed racial quotas that had been in place since the 1920s. In the 30-year period that followed, more than 30 million immigrants were admitted to the United States. Similar immigration policy shifts have increased the international populations of Australia and New Zealand.

From the oil crisis of 1973 on into the twenty-first century, there has been intense debate about the trend to transnational migration and its impact on nation-states and national identity. On the Right, political parties such as Jean-Marie Le Pen's National Front gained prominence in France by promoting a racist, xenophobic, anti-immigration agenda. Yet even scholars with liberal views, such as Arthur Schlesinger and the more controversial Samuel Huntington, have argued that recent immigration has not led to assimilation and instead threatens the unity of nation-states dependent on cultural rather than civic nationalism.

Immigration policy has shifted in accordance with these concerns. In recent decades, public resistance to refugees seeking asylum have made countries such as Australia and Germany restrict the entrance

of asylum seekers to microscopic quotas. Such positions, particularly in the United States, have hardened, along with border controls, following the September 11, 2001, attacks on U.S. soil. Centuries-old debates about the relative values of assimilation or of maintaining ethnic identity in adopted lands show no sign of fading; this is especially evident in Europe, squeezed between an aging indigenous population and a burgeoning immigrant birthrate.

The sample artifacts sold as souvenirs may have been manufactured thousands of miles away. Locals, particularly those catering to the tourist industry, likewise perform a version of the authentic, turning daily lives into theme park exhibitions.

In this same period, growing wealth in Western nations had made tourism the world's leading industry. While foreign travel once had been a luxury only for the very wealthy, developing transportation and communication networks helped usher in an age of mass tourism since 1945. In 2000, more than 11 percent of gross global product came from tourism, while more than 13 percent of the world's workers were employed in the industry. With more than half a billion international tourists yearly, tourism is a major component of global consumer culture that provides a widening middle class access to luxury goods and lifestyles.

Paradox accompanies mass tourism. While other consumers might remain at home to work and during their leisure hours watch on television the simulacra of exotic locales or visit a nearby theme park for an imaginary international tour, travelers attempt to experience something distant and new. Yet travel destinations tend to be so commodified and the travel experience so packaged that tourists—perhaps in search of the exotic—may experience only a bland version of the place they have labored so hard to uncover. In this sense consumer culture on all fronts encourages what many commentators have referred to as a “loss of

place.” The sample artifacts sold as souvenirs may have been manufactured thousands of miles away. Locals, particularly those catering to the tourist industry, likewise perform a version of the authentic, turning daily lives into theme park exhibitions.

The politics of tourism also replicates the colonial experience, as presumably wealthy outsiders no longer seek to strip the land outright but rather to admire and play on primitive land while others provide them with luxury services. Local resentment over such quasi-foreign occupation may build. Likewise, the environmental impact of tourism, even ecotourism, can be severe. Popularity brings the attention of global capital, increasing the development of once pristine landscapes; luxury hotels, swimming pools, and golf courses drain water; guests generate waste, rent cars, and add to air pollution; and fragile ecosystems deteriorate from overuse. While tourism provides new wealth and infrastructure improvements to what may be impoverished countries or regions, the average person’s poverty is often barely abated with low-paying service jobs; in many regions, tourism has become the twenty-first-century cash crop. If tourism offers a devil’s bargain to all, few outside the world’s dwindling number of communist command economies refuse to pay the price.

—*Fred Nadis*

■ Introduction: Transportation and Trade

Since antiquity, goods, human travelers, and armies moved along the roads and sea-lanes of the world. The Roman roads, the Grand Trunk Road in India, and the Silk Roads were, along with sea routes, used by merchants more than by armies. The world since 1945 has experienced enormous population growth that has been supported by huge increases in global trade. The huge volumes of trade could only have been exchanged because of vast changes in global logistics.

The modern era’s development of a global economy has been supported by an international financial system. Today that system can electronically transfer money virtually anywhere. However, bulk resources, commodities, goods, and people still have to be carried physically. The transportation of bulk commodities such as oil has been the product of several factors. One of the most important of these is the advances in shipbuilding. Oil tankers were engineered into giant supertankers. The invention of the cargo

container unit made trade more efficient and cost effective.

Cargo container ships now carry huge volumes of goods for delivery around the world. They are efficiently loaded and unloaded. The cargo containers, once landed, are put on trucks or trains for delivery to their ultimate destinations. The whole system has been engineered for international deliveries, making the global economy the largest and most efficient in the history of the world. Trucks, trains, planes, and barges have increasingly competed with each other for the cargo shipping business, but because of the growing volume of trade, none has replaced the other. They have all only grown larger.

The growth of automobiles has freed people to travel on land long distances at low costs. A huge service industry consisting of gasoline stations, selling diesel and other fuels, along with housing and food has replaced the old caravan-serai system of inns. The transportation of people on land in automobiles has been matched by

global air travel. After the 1960s airplanes very nearly caused ocean liners to vanish from the seas. With travel relatively cheap and with the rise of global prosperity, pleasure cruise ships grew into an industry of floating pleasure palaces. Cruise ships carried vacationers on adventures with little beyond romance and fun as the goal of the journey, all supported by a logistics system that allows travelers to see places only heard about or dreamed of by earlier generations.

—*Jack Waskey*

Cargo Container Shipping

In the 1950s a system of containerization developed to permit the handling of freight regardless of whether the freight is being hauled by trucks, trains, or ships. The system is an intermodal system put in place using standards set by the International Organization for Standards (ISO). The development of ISO standards for cargo containers is one of the great advances in logistics in the twentieth century. The container revolution is a key component of global trade.

The containerization enables the handling of cargo in ports using a standardized container. The standardization allows great savings in the cost of handling cargo, as it reduces the amount of labor needed, speeds handling, reduces business costs, and also results in lower transportation costs subtracted from the cost of goods to consumers. The lost jobs, formerly performed by unskilled or semiskilled freight handlers, have been converted into higher-paying jobs for the

mechanized container handlers. Nevertheless, container shipping was economically devastating to dock workers and freight handlers.

The first container freight systems emerged in the 1920s. American railroad carriers that were handling the mass shipping of automobiles responded with the development of standardized shipping rail cars. At the same time the Seatrains Lines began shipping loaded boxcars on ships. However, the practice was limited. After 1945 the railroads developed the piggyback service, which allows the freight trailers of 18-wheel transfer trucks to be loaded onto flatbed railroad cars and then moved across the United States. The practice spread about the time that the U.S. Department of Defense established a standardized military shipping container. The standard was adopted by Great Britain. The use of a standardized container soon ended the use of the old wooden box and barrel containers.

Containerization next began to develop in ships. In order to handle standardized containers, new ships were built. The first was the *Clifford J. Rodgers*. It was built in 1955 in Montreal and sailed a route between Vancouver, British Columbia, and Skagway, Alaska. When the ship arrived in Skagway its standardized containers were loaded onto railroad cars that had been purposely built for the containers. On the return voyage the *Rodgers* would carry containers filled with goods or materials brought from the Yukon or Alaska to Skagway by rail, truck, or smaller ships.

Statistics indicate how this revolution in transport increased trade while devastating labor: in 1959, each dockworker unloaded .627 tons per hour; in 1976, with increased standardization and mechanization, the amount increased to 4,234 tons per man hour of unloaded freight. Far fewer workers were needed to handle far higher volume. Recognizing the inevitable, in one labor agreement in 1961 the International Longshore and Warehouse Union agreed that workers would accept the new methods and inevitable layoffs in exchange for large donations to retirement funds and workers' benefits.

Between 1960 and 1980 a variety of different containers came into use. The different-sized containers were not compatible for tight packing in the holds of ships. Space was lost, and cargo



Cargo container ship entering the harbor at Charleston, South Carolina, 2008. (Andrew J. Waskey)

could shift during rough seas, causing damage. With dozens of incompatible containers systems, the containers were difficult to handle both inside of the United States and on Europe's railway system. In response the ISO was created to set standards in terminology, container specifications, and a system for effecting changes when needed. In addition to new designs in ships, the new containers were loaded double-stacked on trains, increasing freight capacities.

Within the United States, the new standards to be adopted were curtailed by the Interstate Commerce Commission due to its historic mandate that argued that standardization reduced competition. However, the movement for standards won the day by the 1990s. By 2007 nearly all of the world's nonbulk cargo was being shipped on container ships. A quarter of them start their journey from China. There were 20 million containers making about ten trips per year back and forth across continents and oceans.

—Jack Waskey

Bibliography

- Cudahy, Brian J. *Box Boats: How Container Ships Changed the World*. New York: Fordham University Press, 2008.
- Hallstrom, Kristina Tamm. *Organizing International Standardization: ISO and the IASC in Quest of Authority*. Northampton, MA: Edward Elgar, 2004.
- Levinson, Marc. *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger*. Princeton, NJ: Princeton University Press, 2006.
- Lowe, David. *Intermodal Freight Transport*. New York: Elsevier Science and Technology Books, 2005.
- Raine, George. "A Sea Change in Shipping: Fifty Years Ago, Container Ships Altered the World." *San Francisco Chronicle*, February 5, 2006.

Supertankers

The bulk transportation of oil in ships is the work of oil tankers (petroleum tankers). Since 1945 the size of oil tankers has increased dramatically, enabling very large oil cargos to be sent from remote places where oil originates to markets around the world. Today they are a fifth of the world's cargo ships, and without them many

ISO

ISO stands for the International Organization for Standards. Its Central Secretariat is located in Geneva, Switzerland, and coordinates the system. There are currently nearly 160 countries that belong to the ISO. The ISO is a nongovernmental organization (NGO) formed into a network of the standards institutes of its member countries. Each country has one standards institute that belongs to the ISO. Because some standards institutes in some countries are private organizations and are public agencies in others, the ISO is a hybrid organization of public-private participation.

The ISO provides a mechanism for business and governmental organizations to meet the needs of the stakeholders in business, government, and consumer groups. It has developed more than 16,000 standards in areas such as food safety, medical implants, shipping containers, management procedures, financial reviews, and electronic parts. It is currently issuing more than 1,200 additional new standards every year. The work of the ISO makes it possible for goods to be sold around the world as interchangeable parts or products made to globally known standards.

—Jack Waskey

places could not be supplied with oil because there are no pipelines reaching many areas of the world.

The 500,000 supertankers carrying oil supplies (as of 2008) have developed from the tankers that were in use in 1945 that were called T-2 tankers. They had been built by the hundreds during World War II and were to remain in use for decades afterward, until political instability and costs drove the oil companies to seek the construction of supertankers.

Crude oil tankers carry crude oil to refineries, while product tankers carry the products of refineries to industrial sites. Product tankers are usually smaller than crude tankers. The T-2 tankers produced during World War II and afterward had a deadweight tonnage (DWT) of 16,800 tons. They carried 141,000 barrels of oil. With a length of 523.6 feet (159.59 meters) and a displacement weight of 21,800 tons, they could readily sail through the world's primary navigational choke

➤ FLAGS OF CONVENIENCE

To maintain its official neutrality, the United States prior to its entry into World War II created the idea of the Panamanian ship registry. Legally, a ship with a Panamanian flag was a neutral ship that could carry goods to Britain through the German U-boat blockade without involving America directly. About the same time American oil companies created the Liberian Registry. The company that owned the ship was based in New York, but the ship was technically Liberian.

The flying of flags of convenience was found by the shipping companies to be very profitable. A ship registered in a Third World country could hire its crews from impoverished nations at low-cost wage rates and did not need to follow stricter, more costly European or American safety and labor laws.

The traditional shipping industry centered in Western Europe and the United States has relied on a series of informal gentlemen's agreements setting the rules for shipping. In the 1980s the Third World nations recognized the possibility that fees and other incomes could be derived from providing flags of convenience. The whole system exploded, with the Third World competing to provide the cheapest flag.

The competition has led to economic efficiencies but has also created fleets of dangerous ships and tankers that threaten the environment. An international organization that seeks to set standards for the safety of ships at sea is the London-based International Maritime Organization (IMO), a specialized United Nations agency. The IMO is supposed to set rules, but as long as these can be skirted ships will continue to sink, with oil spills as one consequence.

—Jack Waskey

points, the Suez and Panama canals. They could also berth in the world's main harbors.

The T-2 tankers were the successor to the earlier oceanic oil transports beginning with the brig *Elizabeth Watts* (224 tons) that sailed in November 1861 from Philadelphia to London. The British, Norwegians, Swedes, and others advanced the design of oil tankers, meeting many challenges in developing naval architecture. The same types of challenges to shipbuilding had to

be met with the development of supertankers to replace the T-2 tankers beginning with the Suez Canal crisis in 1956, which kept the canal closed for months and forced tankers from the Middle East oil fields to sail around Africa in order to deliver oil supplies to Europe.

In 1959 Aristotle Onassis, a Greek shipping magnate, rebuilt two of his fleet's tankers, the *Olympic Runner* and the *Olympic Rider*. Originally 48,112 DWT, after a conversion cost of over \$1 billion they were 58,900 DWT. They sailed for many years after, profitably, at a lower cost per nautical mile.

By the 1970s the OPEC oil embargo of the United States and the rising cost of shipping oil forced oil companies to build ever larger tanker fleets. Very large crude carriers (VLCC) with a DWT of 250,000 or more were built from the mid-1950s to the 1970s. VLCC tankers were followed by the construction of ultra-large crude carriers (ULCC) of 500,000 DWT or more. While the cost of a VLCC and ULCC supertanker is high and these supertankers require longer routes to avoid canals, significant savings in operating costs were gained because it would take 15 or 30 T-2 size tankers to transport as much as 1 supertanker with added crew expenses.

Oil spills were a hazard that was globally accepted for decades because it was assumed that the oceans had an infinite capacity to absorb human-generated waste. However, with the 1967 damage caused by the sinking of the tanker *Torrey Canyon*, attitudes began to change. After the famous *Exxon Valdez* oil spill (1989), environmentalists pushed for improved safety. The U.S. Oil Pollution Act of 1990 holds companies shipping oil to the United States liable for cleanup; in recent decades, many fleets have shifted to double hull designs to reduce the likelihood of serious oil spills.

—Jack Waskey

Bibliography

- Langewiesche, William. *The Outlaw Sea: A World of Freedom, Chaos, and Crime*. New York: North Point, 2004.
- Solly, Raymond. *Super Tankers: Anatomy and Operation*. London: Witherby, 2001.
- Spyrou, Andrew G. *From T-2 to Supertanker: Development of the Oil Tanker, 1940-2000*. Lincoln, NE: iUniverse, 2006.

Airline Industry

Tremendous developments have occurred since 1945 in the field of aviation. Designers have introduced new varieties of military and commercial aircraft that offer an increase in speed as well as in carrying capacity for freight, passengers, or payload. The growth of the airline industry in the post-World War II era brought enormous opportunities for travel, immigration, and business as well as new threats, including the global spread of disease and terrorism. Since 1945 the airline industry went from being dominated by national governments to an open-skies global industry, with national airlines competing and cooperating around the world.

Factors that aided the growth of the airline industry following World War II included a surplus of military planes, such as the American-made twin-propeller DC-3 cargo plane, as well as thousands of former military pilots available to fly all manner of planes and an aircraft manufacturing industry that could convert to the production of civilian planes.

As governments realized the economic benefits of international airports, they usually subsidized the airports in their major cities in order to gain the jobs that air travel and air cargo generated. This led to the building of a growing number of airports. By the 1960s, the modernist architecture associated with airports—for example, Eero Saarinen's TWA terminal building at John F. Kennedy International Airport in New York City—as well as advertising conveyed air travel as glamorous and modern.

In the 1960s new jet aircraft were built to carry large numbers of passengers on transcontinental or transoceanic flights. These models had pressurized cabins that enabled long flights at greater speeds and altitudes with greater payloads. Among the new planes were the American Douglas DC-6, the Lockheed Constellation, and the Boeing Stratocruiser. In Europe the Airbus company, a joint venture of French, British, and other European interests, began its plane manufacturing as well. Other European companies that have been organized include EADS, BAE Systems, Thales, Dassault, Saab, and Finmeccanica. New airplane manufacturers in Europe were able to capture half of the global air travel business by

2009. In Asia, Hindustan Aeronautics Limited has emerged.

With the new subsonic jet passenger planes and the low oil prices of the 1960s, the airline industry boomed. Millions of passengers were able for the first time to afford to fly from the United States to Europe. Numerous transatlantic ocean liners were put out of business as a result. In the following decades, new planes continued to be introduced such as the European Concorde and the European Airbus and the U.S. built DC-10, Boeing 747, and Lockheed L-1011 jumbo jet. These new aircraft were profitable because of their greater range and carrying capacity.

In many countries the national airline is owned by the government and is subsidized. As of 2009, Emirate Airlines was controlled by the ruler of Dubai, Sheikh Ahmed bin Saeed Al-Maktoum. Jordanian Airlines began as a private company but was eventually bought out by the Jordanian government. All during the Cold War, the Soviet airline service was state owned. However, in the United States, the airlines are privately owned and face enormous competition both domestically and internationally. In 1978, the United States deregulated the airline industry. Dozens of new airline companies entered the deregulated industry, leading to less-expensive tickets and an increase in passengers. However, most eventually went out of business or were merged with larger airlines.

Some of the original U.S. airline companies such as Trans World Airlines (TWA), Eastern, and Pan American disappeared. Others such as Continental (1983 and later 1990) and Delta (September 2005) went into bankruptcy, from which they were able to emerge as potentially viable companies. Even low-cost no-frills airlines were facing bankruptcy. By 2008 airline industry stock had changed from a good investment in the 1960s to one that most small investors sought to avoid. A major problem has been the continually rising cost of aviation fuel.

Concerns in the new millennium about the airline industry are numerous. Public health authorities are developing strategies to cope with the possible spread of infectious agents by international air travelers. Environmental critics of the airline industry have linked the industry to global warming. The European Union (EU) has

implemented a plan requiring all EU nation airlines by 2012 to purchase and trade carbon credits to offset emissions from flights. Airlines based in numerous other countries that fly into Europe that are also expected to participate have not yet agreed.

—Jack Waskey

Bibliography

- Heppenheimer, T. A. *Turbulent Skies: The History of Commercial Aviation*. New York: Wiley, 2003.
- Petzinger, Thomas, Jr. *Hard Landing: The Epic Contest for Power and Profits That Plunged the Airlines into Chaos*. New York: Times Business, 1995.

The Global Automobile Industry, Post-1945

While historian James J. Flink described the automobile as a “progressive” historic force that improved lives through the mid-twentieth century, in recent decades concerns about traffic fatalities, pollution, unfair labor practices, the

energy crisis, and global warming all have repainted the automobile industry as a necessary evil at best and as a panderer to consumer narcissism at worst. Nevertheless, the automobile industry remains one of the world’s key industries, with governments often tracking its health as a key indicator of economic vibrancy. From 1950 to 2005, the number of passenger cars produced each year rose from 8 million to 46 million worldwide. That number is expected to grow as markets expand in Eastern Europe, India, and China. While production has increased, the number of automobile companies has fallen steadily as start-ups vanish and national and transnational giants merge, acquire, and consolidate. At the same time, the industry is overcapacity in its production abilities, and many of the giant corporations make as much from their financial services to customers as from production and sales.

While the consolidation of the automobile industry first began on the national level, by the 1960s the entry of foreign cars into domestic markets led to further international consolidation. For example, the number of British car manufacturers decreased from 200 in 1913 to about 30 following World War II and by 1968 consolidated into only one corporate giant, British Leyland. Much of that holding company was eventually purchased by Honda and BMW. In the United States a scenario similar to that of Britain unfolded. From hundreds of start-ups in the early twentieth century, there were only three major automobile conglomerates by the 1960s: General Motors, Ford, and Chrysler. In 1998 the ailing Chrysler motors merged with Daimler (Mercedes-Benz), one of the giant German firms along with BMW and Volkswagen. Daimler-Chrysler went on to acquire portions of Japan’s Mitsubishi and South Korea’s Hyundai, while Hyundai in turn had large stakes in Kia. In the same period Volkswagen also made numerous acquisitions, including Skoda (Czechoslovakia), Rolls Royce, Bentley, Lamborghini, Bugatti, the Spanish SEAT, and a large share of Audi. The only major automobile manufacturers that did not undergo mergers in this period were Honda, Toyota, and Peugeot, yet all of them engage in joint ventures with various manufacturers.

Along with this scenario of consolidation, the rise of the Japanese automobile industry has

► ROBOTS IN AUTOMOBILE FACTORIES, 2005

Starting in the 1970s, robot labor began to saturate the automobile industry in Japan. After the decade’s oil shocks and economic recession, European and U.S. car manufacturers took a lesson from Japan and began to displace blue-collar workers with “steel-collar” labor. According to the International Federation of Robotics publication “Key Data 2005,” the density of robots/human workers in the world automotive industry in 2005 was approximately 1 robot for every 10 human workers. The specific country-by-country breakdown is as follows:

Japan—17.1 robots per 100 human workers
 Italy—16 robots per 100 human workers
 Germany—11.8 robots per 100 human workers
 France—11.2 robots per 100 human workers
 Spain—9.5 robots per 100 human workers
 United States—7.7 robots per 100 human workers
 United Kingdom—6.1 robots per 100 human workers
 Sweden—6.3 robots per 100 human workers

—Fred Nadis

been a key development since 1945. Prior to the war, Ford and General Motors assembled vehicles for the Japanese markets but were excluded as of 1936. In the late 1940s, Japan's automobile companies were producing about 20,000 units yearly, primarily small trucks. By the late 1960s Nissan and Toyota had begun to export light trucks. By 1991 Japan's output of cars and small trucks had increased to 13 million, making it the world's largest manufacturer. Following the 1970s oil shocks, both U.S. and European firms retooled their manufacturing processes to mimic the Japanese. The Japanese concerns with fuel efficiency and decreasing pollution emissions also meshed well with the new realities of oil scarcity and environmental priorities. New management methods that enforced a leaner approach to production, including cost accounting in decision making as well as six-day workweeks, little genuine union oversight, and rules that allowed workers to perform multiple tasks also aided output. Assembly line robots were another dramatic aspect of Japanese manufacture. First introduced in the late 1960s, by 1987 approximately 116,000 industrial robots operated in Japan, with 40 percent in the automobile industry.

The transnational corporations that now make up the globalized automobile industry operate plants in multiple nations, often purchase outsourced parts and systems from the same manufacturers, engage in joint ventures that involve pooling resources, rely heavily on robot labor, and often within their large family of automobile brands have developed modules (for example, of dashboard assemblies) and limited vehicle platforms that make the different brand names they manufacture, often on the same assembly lines, nearly indistinguishable. Many reviewers, for example, decry that Ford's purchase of the upscale Jaguar has made its Jaguar X-Type largely indistinguishable from the Ford Mondeo. At the same time, while 10 percent of the workforce in many countries is directly employed in automobile manufacture, labor unions struggle to negotiate effectively with transnational companies with shifting manufacturing and financial bases. The global economic turndown that began in 2007 radically affected the automobile industry, with U.S. giants such as Ford and General Motors both going into bankruptcy and Toyota

in 2009 reporting losses and factory cutbacks for the first time in recent decades.

—Fred Nadis

Bibliography

- Conybeare, John A. C. *Merging Traffic: The Consolidation of the International Automobile Industry*. Lanham, MD: Rowland and Littlefield, 2004.
- Flink, James J. *The Automobile Age*. Cambridge, MA: MIT Press, 1990.
- Shimokawa, Koichi. *The Japanese Automobile Industry: A Business History*. London and Atlantic Highlands, NJ: Athlone, 1995.

Global Trucking—The Sources of Differing Industry Characteristics

Trucking is the lifeline of industry and is crucial to consumer societies. Whether as the sole means or integrated into larger transport networks via container shipping, trucks carry virtually all the raw materials and finished products of industry. There are, however, significant differences in trucking industry characteristics from country to country resulting from differences in geography, legal restrictions, and taxation.

Up until the mid-twentieth century, trains dominated freight transportation. The inability of trucks to handle heavy loads and the lack of highways limited the usefulness of trucking to short hauls within cities. The ability of trucks to carry larger and larger loads and the steady building of better roads allowed trucks to be viable competitors. In the United States, President Dwight Eisenhower's signing of the Interstate Highway Act of 1953 authorized the construction of 44,000 miles of a new national megahighway. The dominance of rail freight transportation appeared to be coming to an end. In the United States, the trucking industry continued to grow rapidly as it offered inherent flexibility over rails, relatively low start-up costs, minimal operation skills, and capitalized on government-built highways and minimal regulation.

Railroad companies argued that trucking competition was unfair because trucks used public roads while railroads had to own and pay taxes on all railroad property. Even as the fuel tax paid by truckers increased, it was collected only to cover any extra costs necessary to allow the roads to accommodate ever larger trucks.

Trucking and railroads were both regulated in the United States until Congress passed the Staggers Rail Act and the Motor Carrier Acts of 1980. Thousands of new smaller carriers entered the industry as a result of deregulation. This resulted in declining rates and the failure of many of the larger trucking companies.

The Motor Vehicle Transportation Act of 1987 increased transborder trucking between the United States and its northern neighbor, Canada. According to the American Trucking Association, in 2004 about \$35 billion in freight was shipped by truck in each direction between Canada and the United States. The North American Free Trade Agreement (NAFTA) further dismantled entry barriers between the United States, Mexico, and Canada, thereby increasing transborder trucking throughout North America.

The European trucking industry differs dramatically from that of the United States. The United States has significantly looser labor restrictions and tax laws and less government support of rail service. Although this would suggest that European countries would rely less on trucking compared to the United States, this is not the case. There are three times as many trucks per person in Europe as there are in the United States, and traffic is typically made up of twice the number of trucks on the road in Europe compared to the United States. In addition, the trucking companies in the United States tend to be larger than in Europe, and the numbers of drivers who operate their own trucks are fewer than in Europe. For example, in 1997 the U.S. trucking companies employed almost 15 people on average, whereas in Europe the average number of employees was about 3 per company. The number of drivers who own and operate their own trucks is around 25 percent in the United States but 70 percent in Europe.

Prior to the formation of the European Union in 1999, trucking in Europe was hindered by haulers needing to abide by the many bilateral agreements that existed between each country. The formation of the European Union has allowed countries to largely dismantle these agreements and will effectively liberalize the markets. For the countries not part of the European Union, the requirements of these bilateral agreements remain a significant barrier to trade.

Although in industrialized countries throughout the world the trucking industry is vibrant and growing, in many of the less-developed countries of Africa, Asia, and Latin America truckers face dangerous roads and bridges and other infrastructure problems. They must make frequent stops at checkpoints or roadblocks and take long detours, which extend deliveries by days. In addition, local officials, militia, and police often harass drivers by demanding inspections, documentation, and bribes. In war-torn countries such as Uganda, Darfur, and Iraq, truckers play important roles beyond commercial interests by providing military and medical support while often becoming the target of enemy fire.

—Joseph Cavanaugh

Bibliography

- American Trucking Association. "American Trucking Trends 2004." Washington, D.C., <http://www.truckline.com/economics/>.
- Benito, Arrunada, Manuel Gonzalez, and Alberto Fernandez. "Determinants of Organizational Form: Transaction Costs and Institutions in the European Trucking Industry." *Industrial and Corporate Change* 13 (2004): 867–882.
- Guest, Robert. *The Shackled Continent: Africa's Past, Present and Future*. London: Macmillan, 2005.
- Roe, Michael. *East European International Road Haulage*. Brookfield, VT: Ashgate, 1992.

The Modern Silk Roads

The Silk Roads, the fabled network of overland tradeways that led from China across Central Asia to the West, came to a virtual close by around 1500 with the collapse of the Mongol empire and the Muslim Timurid dynasty. Over the following centuries, dominance in Central Asia and West Asia varied among new power centers. From 1945 to 1991, the Cold War confirmed a bipolar division of the Silk Roads region between a central portion incorporated in the Soviet Union and a western portion under French, British, and U.S. influence, with separate yet similar initiatives in the areas of modernization, state building, economic development, and energy exploitation. In the 1970s, this precarious equilibrium was shattered. The West lost control of the exploitation and transportation of oil when the Middle East affirmed its power through the formation of the

Organization of Petroleum Exporting Countries (OPEC) in 1973. In 1979, the strengthening of traditional Islamic groups that were rejecting communist influence in Central Asia caused the Soviet Union to invade Afghanistan.

In 1991, the breakup of the Soviet Union made possible the first significant reopening of Silk Roads trade since 1500. The European Union immediately offered help to Central Asian nations in the areas of road, rail, and fiber-optic transportation; nation-building; internal economic development; and trade assistance. The United States joined in the development of new oil and gas pipeline networks from the Caspian Sea toward Turkey and Europe. Russia salvaged its energy ties with the now independent Central Asian Republics and modernized its north-south umbrella-shaped energy transportation routes, gradually adding pipelines that ran north of the western routes, especially in the Caucasus-Caspian Sea area. While China and the European Union pursued east-west energy transportation networks, Russia and the United States vied for north-south routes from Kazakhstan to India via Iran and Pakistan. The United States was further interested in developing a pipeline from Siberia to California.

The increased energy demands of China and India in the early 2000s recentered the Middle East. Kazakhstan, Turkmenistan, and Tajikistan, not Iraq or Saudi Arabia, were now at the center of an intense competition that created a so-called Cold Energy War and ignited a line of conflict from Iraq to Afghanistan, irritated ethnic unrest in Xinjiang, and prompted stirrings of unrest in Tibet and Nepal. To deal with the new complex issues of energy security, trade, transportation, development, ethnic separatism, and terrorism, several regional organizations such as the Shanghai Cooperation Organization (SCO) were created, and regional development initiatives flourished under the aegis of the United Nations, such as the Greater Tumen Initiative, a trade, energy, and industry corridor through Manchuria. The North Atlantic Treaty Organization (NATO) continued to expand its role in keeping the peace along the Silk Roads.

This new Silk Road of the twenty-first century revived ancient, parallel, and multiple rail, road, and pipeline routes, with extensions to Laos

➤ REAL AND VIRTUAL TRAVELS

Today the Silk Roads are still a mysterious place that inspires movies, documentaries, novels, and travel diaries. Depicted in works such as Louis L'Amour's *The Walking Drum* (1984), the James Bond film *The World Is Not Enough* (1999), the *Nature* television series featuring Julia Roberts's horseback travels through Central Asia (2004), and Colin Thubron's *Shadow of the Silk Road* (2006), romance, history, and danger continue to attract adventure seekers and capture the imagination of individuals from all walks of life.

World-famous cellist Yo-Yo Ma's Silk Road Project, which he started in 1998, as of 2009 continued to provide opportunities for a virtual travel experience across time, space, and culture by encouraging the documentation, preservation, and sharing of a myriad of Silk Roads cultures and traditions. Started mainly as a musical education endeavor, his Web site features a wide range of cultural seminars, musical performances, and educational resources on a host of issues. Yo-Yo Ma's goal is to give back its voice to this ancient and pivotal world region and to allow it once again to "connect the world's neighborhoods."

—Alice-Catherine Carls

and Tibet in the east and to Tangier and Europe in the west. The grid was older and denser in the Caspian Sea-Persian Gulf area while newer from Kazakhstan eastward, and the grid quickly gained in complexity. The inland routes were complemented by the revival of the maritime Silk Roads between the United Arab Emirates and China, the linking of Australia to the eastern portion of the Silk Roads, the extension of pipeline grids to Western Europe and North Africa, and the creation of a maritime route in the Great North, alongside Russia's northern shores. Other bold initiatives included the use of new technologies to transport oil and liquefied natural gas underwater in areas such as the Caspian Sea, the Bering Straits, and portions of the Mediterranean and Baltic seas. After a century of temporary foreign-mandated arrangements, the Silk Roads asserted itself in the new millennium as once again the geographical pivot of history. The new geopolitical possibilities, however, could not hide

the political and civilizational fractures or the fact that issues of regional balance, foreign influence, regional development and cooperation, consolidation of national identities, and energy security were still very much in need of direction before a lasting peaceful new order could be found.

—Alice-Catherine Carls

Bibliography

Brzezinski, Zbigniew. *Second Chance: Three Presidents and the Crisis of American Superpower*. New York: Basic Books, 2007.

Carls, Alice-Catherine. "Central Asia: The New Silk Road's Gordian Knot?" *World History Connected* 6(1) March 2009.

Carls, Alice-Catherine. "The New Silk Road: Central Asia at the Crossroads." In *Prospects and Ambiguities of Globalization*, edited by James W. Skillen. New York: Rowman Littlefield, 2009.

Meyer, Karl E., and Shareen Blair Brysac. *Tournament of Shadows: The Great Game and the Race for Empire in Central Asia*. New York: Basic Books, 1999.

Thubron, Colin. *Shadow of the Silk Road*. London: Chatto and Windus, 2006.

■ Introduction: Global Tourism

Tourism can be defined in various manners, but normally it is thought of as traveling for nonbusiness reasons or, more positively, as traveling for pleasure. Tourism arguably began when the first human wandered into territory that was occupied by someone else, thus engaging the 'other' in our current language. With the development of multiple means of transportation, tourism increased. Today tourism is also a business, and a brisk one at that, bringing in some \$94 billion in the United States alone in 2004. As tourism has increased international and interregional connections, the practice has influenced major world historical patterns and most recently is related to the rise of globalization.

As part of European colonial and imperial expansion, tourism increased in the nineteenth century. Elite Europeans with the financial means and sufficient leisure time began traveling to locales that were considered exotic, including Latin America, Africa, and Asia. A significant number of these travelers wrote about their experiences, and these books were devoured by the literate public back home. Today these nineteenth-century travel accounts are an important genre for historical study, since many of the cultures that were visited by Europeans did not have a written language. Thus, the details that are found in these accounts are valuable to historians, though the narratives are often rife

with significant bias from the pens of haughty Europeans.

Tourism increased notably in the twentieth century due to the increasing availability of transportation options as well as the growth of a middle class with expendable income. Trains and steam engines, then automobiles, and finally airplanes extended the reach of the tourist industry throughout the twentieth century. Soon middle-class people were finding the wherewithal and leisure time for occasional travel within and between countries. A new source of information and entertainment regarding distant lands appeared with *National Geographic* magazine. Like its predecessor, the Victorian travel account, *National Geographic* contained plenty of questionable representations of exotic "others," though in recent years the publication has exhibited more sensitivity. The articles and especially the photographs encouraged many readers in the developed world to consider tourist travel.

Social science and public attitudes progressed over the twentieth century, moderating the ethnocentric attitudes exhibited in tourist literature. Anthropologists in particular began to rethink their approach. Gone are the days in which anthropology meant the study of traits of exotic cultures, and anthropologists now understand that their very presence within a cultural setting has an influence. As with tourists, the anthropologists' presence is recognized, not always posi-

tively. Early British anthropology was devoted to studying cultures viewed as primitive, carrying the colonialist assumption that the positive force of progress would improve the lot of the uncivilized. This subtle hegemony has been replicated in the postcolonial period as tourist destinations such as Cancun, in Mexico, created for the enjoyment of wealthy foreigners have been built upon previously pristine landscapes.

The growing recognition of the often deleterious environmental and cultural impact of visitors has encouraged alternative forms of tourism at the turn of the twenty-first century. Included in these are ethnotourism and ecotourism. In essence, these tourists are traveling with a sincere interest in understanding, and perhaps participating in, different cultures and environments.

Ecotourism in particular has been very successful in multiple regions. A visit to the Web site of the Institute of Ecotourism reveals some of the themes of the new tourism in their Covenant of Mutual Regard: "to appreciate nature, respect and care for the Earth, and live in harmony with the environment." Ecotourists visit a variety of natural settings, with the idea that these should remain undisturbed and, thanks to their payments, protected from development. Visits to Native American regions accomplish similar objectives. This new tourism is seen as socially responsible but is also more intellectually rewarding to a growing segment of the developed world's population than simply lying on a beach (though there is some leisure built into most ecotourism itineraries).

Related to the ecological sensitivity expressed in ecotourism is the growing acceptance of ethnotourism in Latin America, the Caribbean, and Asia. Curious Westerners travel to locations they view as exotic with a desire to understand other cultures on their own terms. In the Americas, for example, tourists might visit Embera peoples in Panama or Huichol Indians in western Mexico, engage in conversation with these "others," witness ceremonial celebrations, and learn about local flora and fauna. For their own part, native peoples benefit economically, helping them to maintain control of traditional lands against the determined encroachment of modernity.

Just as tourists have developed and reported their own images of other places and people,

tourists themselves have been represented in sometimes stereotypical fashion. The best known of these are Japanese tourists. Japanese tourists are ubiquitous in many countries, well known for their love of photography. As a society they send as many tourists out into the world as any other, with the possible exception of the United States. In Hawaii alone in 2006, for example, 1.4 million Japanese visited, spending \$2.1 billion.

American tourists are also recognized stereotypically as they travel. Due to the strong military and political presence that the United States holds in the world, tourists are sometimes threatened when they travel. Additionally, they are also understood as visitors from a supremely wealthy and exotic world, whether or not they are in fact wealthy in their own land. In truth, however, tourists are usually welcomed across the globe, since their presence can aid the local economies that they visit.

—Rick Warner

Bibliography

- Berghoff, Hartmut, et al., eds. *The Making of Modern Tourism: The Cultural History of the British Experience, 1600–2000*. New York: Palgrave Macmillan, 2002.
- Calderón de la Barca, Frances. *Life in Mexico during a Residence of Two Years in That Country*. London: Chapman and Hall, 1843.
- Honey, Martha. *Ecotourism and Sustainable Development: Who Owns Paradise?* Washington, DC: Island Press, 1999.
- Krotz, Larry. *Tourists: How Our Fastest-Growing Industry Is Changing the World*. Boston: Faber and Faber, 1996.
- Theobald, William. *Global Tourism*. Boston: Butterworth-Heinemann, 1999.

Tourism and Postcolonialism

Tourism is among the most important, if misunderstood, elements of global culture. During the twentieth century, it evolved into one of the most profitable and potent industries in the world. Tourism has emerged as an important medium for representing and encountering cultural difference and as a fundamental feature of development projects designed to improve economies and societies. Yet tourism also makes plain the history of colonialism and its reworking in the postcolonial world.

➤ ECOTOURISM

Ecotourism, or ecological tourism, is a distinctive subset of the tourism industry that developed in the 1980s. It focuses on an alternative to standard tourism in which travelers are introduced to native flora, fauna, landscapes, and culture. This type of tourism is specifically slated toward the environmentally and socially conscious. Ecotourism requires large wildlife or ecological preserves and the careful protection of indigenous cultures and, in turn, provides economic stimulus for preservation and conservation. Some criticism of ecotourism revolves around the fact that in many regions offering ecotourism, indigenous cultures are marginalized in order to create preserves and are denied technology in order to cater to the tourists' craving the so-called authentic. And as with any tourism, it can have a negative impact on the environment. Ecotourism is becoming common worldwide.

Although made possible by colonialism, which centers on the occupation of foreign places, often for the management of land, communities, and resources, tourism stresses the movement through and the consumption of culture. Indeed, while appropriation and control remain paramount, tourism concerns itself with marketing places, pleasures, and performances deemed traditional, distinctive, and even exotic. These conditions foster romantic and nostalgic attitudes among many tourists that encouraged them to seek out peoples and places on the margins supposedly unspoiled by modern life or Western culture.

Tourism relies on stereotypical images of formerly colonized peoples and places. These images essentialize and exaggerate, reducing complex societies to clichés. Importantly, these representations derive in part from colonial interpretations of cultural difference, given popular form in travelers' tales, administrative reports, anthropological studies, and world's fairs.

To attract visitors, tourism transforms traditional dress, crafts, and rituals as well as historically important and picturesque locations into objects that may be bought and sold. This process of commercialization distorts and disrupts

local practices, threatening the internal functions and historic meanings of art, ritual, and spirituality. Moreover, external values dictate the significance of cultures put on display in the tourist industry. To a large extent, the tastes and funds of tourists determine both the content and the development of cultures visited by tourists, shaping what is deemed beautiful, valuable, and important.

Despite the obvious inequities of tourism, it remains an important development strategy, with promises to infuse communities with much-needed money while granting peoples on the margins entry to the global community. And tourism does offer tangible benefits, including employment opportunities, improved infrastructure, increased land values, and a higher standard of living. Some critics argue that these benefits are short-lived and, worse, that these improvements pale in comparison to the massive profits enjoyed by multinational corporations and external cultural brokers.

While lacking formal structural power, frequently formerly colonized people do use tourism to make statements about themselves and the world. Tourism facilitates the efforts of local cultures and state institutions to formulate identity, community, and history. Through tourism, some indigenous peoples have maintained and even revitalized traditional practices. Tourism has also promoted anticolonial activism. Struggles over sacred sites transformed into tourist sites, such as Devil's Tower in the United States and Ayer's Rock in Australia, have energized sociopolitical movements to curtail recreational usage of such sites and to expand indigenous peoples' rights.

Tourism contributes to globalization by reworking European imperialism in more ambivalent, less visible forms. The neocolonial contexts structured by tourism manifest the effects of commodification, pronounced stratification, and disturbing stereotypes while granting to cultures toured limited opportunities for development, sovereignty, and equality.

—C. Richard King

Bibliography

Bruner, Edward M. *Culture on Tour*. Chicago: University of Chicago Press, 2006.

Kirshenblatt-Gimblett, Barbara. *Destination Culture: Tourism, Museums, and Heritage*. Berkeley: University of California Press, 1998.

Automobile Culture

Throughout the twentieth century, the automobile has been a major force in shaping world culture, with its effects most clearly pronounced in the United States. The revolutionary potential of the automobile was unleashed in 1908, when Henry Ford began to manufacture an automobile that would be not just a plaything for the rich but also a durable means of transportation, affordable to all people. By the mid-1920s there were over ten million cars in the United States, with nearly half of them the Ford Model-T. While the Model-T helped reshape the way people lived their lives, the automobile became an even more powerful force in the United States after World War II. With the development of new suburban communities came interstate highways, motels, gas stations, automobile showrooms, shopping centers, malls, and fast food strips, an entire land reshaped for the automobile.

The automobile has not only held together consumer culture in the United States but also remains one of its centerpieces. As early as the 1920s, General Motors rose to prominence when it began to introduce new automobile models with varying options on a yearly basis along with advertising campaigns that assured people that status depended on owning the latest design. While the Great Depression of the 1930s and the wartime production of World War II slowed down automobile manufacture and sales, the postwar years saw a steady rise. In 1945 in the United States there were 26 million registered automobiles. By 2001 that number had increased eightfold to about 200 million.

As the U.S. population shifted toward the new suburbs following 1947, national resources were continually diverted toward highway construction. In 1956, during the Eisenhower administration, \$25 billion was authorized to fund interstate highways, with the federal government paying 90 percent of construction costs. The construction of the Eisenhower National System of Interstate and Defense Highways became the largest public works project in U.S. history. Much

THE VW CAMPER VAN

It is rare that the sight of a Volkswagen (VW) Camper Van does not elicit thoughts of freedom, independence, and adventure, and there are few places where a VW Camper Van has not been sighted. These iconic automobiles have taken passionate and dedicated owners to all areas of the world, across continents, through deserts, over mountains, and on dirt roads and modern highways. The conversion of the VW Transporter and subsequent VW bus models into campers changed the way people vacation and travel. Originally marketed as a family vehicle, the VW Camper was embraced by the 1960s' counter-culture and continues to be symbolic of the era. As the counterculture spread to other countries, so too did the popularity of the VW Camper. For others, the VW Camper Van has always provided an inexpensive way to experience adventure, from camping with the family on a weekend holiday to traveling across the world in 17 months.

After the first Campmobile was introduced in 1951 by the Westfalia Company, several different companies followed suit with their own conversions that included burners, running water, a sink, beds, cabinets, and curtains. Later conversions included other items such as refrigerators and toilets. Volkswagen itself never actually manufactured a camper but instead partnered with several companies to officially sanction certain conversions. There are numerous examples of conversions and customizations, some of which were not officially recognized by Volkswagen.

Camper Van owners are passionate about their vehicles, often naming them while spending much time and money restoring and customizing their vans. Owners share their passion with others through local, national, and international groups and events.

—Katie Elson Anderson

of the funding came through taxes on gasoline and car sales, and the 1956 Interstate Highway Act required that the tax-based Highway Trust Fund be used only for highway construction.

Many states in the United States, urged on by automobile interests, also placed amendments to their constitutions that required that state gasoline tax revenues be used only for highway funding. In contrast, in Great Britain, high taxes

on gasoline instead had been diverted to fund rail systems. It was not until 1973, during the first of the oil shortages, that President Richard Nixon signed a compromise bill that diverted federal highway funds to mass transit. By then, however, except in a few major cities, mass transit and passenger rail were no longer viable alternatives in the United States. In contrast, in Great Britain, Japan, and much of Europe, even with the rise of the automobile and automobile culture, government funding had ensured the survival of healthy rail systems.

Throughout the twentieth century, the automobile became central to work and industry and also to leisure. In the 1920s, Henry Ford and high-profile friends including Thomas Edison, Harvey Firestone, and the naturalist and poet John Burroughs went on well-publicized automobile camping trips, bringing along a cook and other amenities, including a generator for electric lights. A craze for car camping followed. Driving as a form of entertainment also became common. One sociological study of the 1920s, Robert and Helen Merrill Lynd's *Middletown*, argued that the automobile was revolutionizing society: it brought families together on weekend excursions yet also encouraged an independent and rebellious youth culture. Youths became captivated by speed and the freedom of the road. Even in small towns, car thefts became common as early as the 1920s.

The automobile and its associations with freedom and speed helped shape postwar automobile culture and its folklore. Beat writers such as Jack Kerouac celebrated the freedom of driving in his novel *On the Road* (1957). Rock 'n' roll singers also celebrated the automobile and teenage courtship on wheels in hundreds of songs, including Chuck Berry's "Maybelline" and "No Particular Place to Go." Fast food restaurants catered to teenage cruising culture, while teen car enthusiasts created customized and high-speed automobiles for show and for illegal races that later became institutionalized in circuits such as the National Association for Stock Car Auto Racing (NASCAR), founded in 1948, with its first race track at Daytona, Florida.

Meanwhile, U.S. roadside culture became standardized as vacationers desired fewer unpleasant surprises at restaurants and motels. Early

car cabin camps and motels gave way to large chains such as Holiday Inn, offering standardized accommodations. Holiday Inn began with one motel in 1952, 26 in 1956, and over 1,000 in 1970 and has since continued its globalization. Howard Johnson pioneered the standardized chain restaurant with his first orange-topped restaurant in 1935 that expanded to 150 restaurants across the United States by the outbreak of World War II, each offering his famous 28 flavors of ice cream. Richard and Maurice McDonald opened their first hamburger stand in San Bernardino, California, in 1940. By 1952 they ran six self-serve restaurants that offered high volume and quick customer turnover. They then sold their franchise formula to Ray Kroc, who set up 228 new McDonald's restaurants in the next five years. Kroc learned from the McDonald's brothers several secrets: every McDonald's was created on an identical pattern, with an open kitchen that appeared as Spartan and clean as the rest of the facility; the chain also did away with waitresses, car hops, and jukeboxes and offered hard seats to discourage customers from lingering after meals.

The counterculture of the 1960s and the oil shocks of the 1970s helped sustain the first serious critiques of automobile culture in the United States. Concerns over air pollution and later global warming have increased demands for regulation, and governments have responded with measures that have ensured higher safety standards, improved fuel efficiency, and decreased pollution emissions. But the automobile is far from an endangered species. Since 1950 the number of passenger cars produced each year worldwide has increased from 8 million to 46 million. As of 2004, the United States and Europe each harbored about 27 percent of the total passenger vehicles in the world. Lacking alternative mass transit, the United States continued to be the largest gasoline consumer, using 44 percent of all gasoline in 2004. Developing nations, however, are also shifting to car culture. While there were only about 100,000 passenger vehicles in China in 1991, there were 2.3 million in 2004, a figure steadily rising with China's growing affluence. A similar trend is emerging in India with the growth of its middle class.

—Fred Nadis

Bibliography

- Bobbitt, Malcom. *VW Bus: Camper, Bus, Van, Pickup, Wagen*. Dorset: Veloce Publishing, 1997.
- Eccles, David. *VW Camper: The Inside Story*. Wiltshire, UK: Crowood, 2005.
- Eccles, David, and Cee Eccles. *Campervan Crazy*. London: Kyle Cathie, 2006.
- Flink, James J. *The Automobile Age*. Cambridge, MA: MIT Press, 1988.
- Foster, Mark S. *A Nation on Wheels: The Automobile Culture in America since 1945*. Belmont, CA: Wadsworth/Thomson, 2003.
- Worldwatch Institute. *Vital Signs 2006-2007: The Trends That Are Shaping Our Future*. New York: Norton, 2006.

Heritage Tourism

Since the end of World War II, tourism has become the world's largest industry. While leisure travel had been an elite endeavor for wealthy Europeans dating back to the 1600s, it was not until the late nineteenth and early twentieth centuries that tourism on a mass scale developed. The relatively recent emergence of large-scale tourism has been attributed to, among other factors, a general decrease in working hours, leading to an increase in leisure time for many people; surpluses in discretionary income; colonial relationships that incubated notions of the exotic; and the related impulse to experience the authentic. The pursuit of education and authenticity has given rise to what is called the manufactured heritage industry.

Manufactured heritage is the culturally constructed identification that an individual may extend to a national or local past. This identification, however variable its authenticity, has been an important driver for tourism, especially since 1945. Travelers seeking authentic historical experiences have often unwittingly settled for traditions that have been compromised by political or economic expediency.

In the past few decades, with the availability and relative affordability of long-distance travel, heritage tourism has grown dramatically. A heritage tourist destination can take multiple forms. Its most popular manifestations are often places of historical memory; this often includes battlefield sites such as Gettysburg or Waterloo, locations of important political events tied to na-

tionality such as Independence Hall in Philadelphia, and locations of religious significance such as Santiago de Compostela in Spain. Tourists are driven to these destinations, in theory, to discover themselves through an exploration of some component of their heritage. In return, the heritage tourist destination can impose a system of beliefs onto the visitor through multiple schemes such as signage, publications, souvenirs, and guided tours.

Colonial Williamsburg in Virginia is a classic example of a heritage tourist destination. The site consists of renovated buildings constructed during the period 1699-1780 as well as historical actors whose job is to portray the era in terms of dress, speech, and job tasks. The purpose of Colonial Williamsburg is to re-create and represent daily life in an important early American town. Colonial Williamsburg set a precedent for numerous open-air museums that strive to educate visitors as to their own backgrounds and heritages. Such sites often attract criticism. Colonial Williamsburg in particular has been criticized for its sometimes inaccurate or incomplete portrayals of history. Many debated, for example, whether or not Colonial Williamsburg should include actors portraying the town's former slave population. While some argued that this type of reenactment has no business at a tourist destination, others argued that Williamsburg's slave population must be accounted for in current representations.

In the early 1990s Disney, one of the most recognizable brands in global tourism, planned to build a Disney America theme park in Virginia. The park was to include historical themes such as the U.S. Civil War, immigration, and the life of Native Americans. Public criticism of these plans, based upon perceived insensitivities on behalf of Disney, ultimately led to the rejection and canceling of Disney America. Disney, however, was successful in later creating California Adventure, a theme park that promotes the California Dream. Visitors can experience Disney's version of the Golden Gate Bridge and a Hollywood film studio back lot in a single trip. While many visitors to the park may not necessarily consider California as a part of their heritage, the park is also meant to appeal to a distinct thread in American identity, exalting modernism,

» SPACE TOURISM

Space travel for private citizens is no longer reserved for science fiction. In 2001, Dennis Tito of the United States became the first individual to purchase a trip outside of Earth's orbit, assisted by the Russian Aviation and Space Agency. Since Tito, others have successfully made the trip into space, some even docking at the International Space Station. A fledgling industry of space carriers and governmental agencies has been scrambling to profit from this trend. Most notably, Richard Branson's Virgin Group, Hilton International, and British Airways have all expressed interest in serving the space travel market. The 2003 space shuttle Columbia disaster halted space tourism temporarily, but travel resumed soon after.

The desires behind space travel are similar to those that motivate more typical tourism. The search for adventure, uniqueness, and status can be applied to either form of tourism. The democratization of tourism, in which more and more people are able to participate in more and more types of travel, may have prompted space travel as an elitist reaction to mass tourism.

The pitfalls and difficulties that are a part of space travel are considerable. Besides the logis-

tical problems of space flight and its inherent danger, a host of tourism-related problems are still unsettled. The transition to any sort of mass space travel is decades, if not centuries, away. Basic human necessities such as eating, sleeping, and defecating are significantly different away from Earth's atmosphere. Current space tourists spend over a year training and preparing themselves for the journey. In addition, there are no facilities in space that are in any way comparable to even the most Spartan of tourist destinations on Earth.

Yet the lure remains. Aurora borealis, the brilliant display of lights visible from regions around the Arctic Circle, may soon become the most visited attraction in space. A partnership between Virgin Galactic (a division of the aforementioned Virgin Group) and the Swedish company Spaceport is planning to send private tourists into the northern lights for a considerable fee. Scheduled to commence in 2011, the trip will originate in the northern Swedish town of Kiruna and will last for approximately two hours. As of 2007, space mania has gripped Sweden and indeed much of Europe as tourism entered its newest frontier.

—Kevin Goldberg

entrepreneurialism, and technological know-how. Shopping malls have also been developed as heritage sites, as at the South Street Seaport in New York City.

Heritage tourism has now informed at least three generations of tourists around the globe. In fact, tourist destinations that rely on heritage as their *modus operandi* have become so ubiquitous that we no longer see them as unique. At these sites, visitors gain some sense of history but a version that is often smoothed to ease the consumer experience.

—Kevin Goldberg

Bibliography

- al-Sayyad, Nezar. *Consuming Tradition, Manufacturing Heritage: Global Norms and Urban Forms in the Age of Tourism*. London and New York: Routledge, 2001.
- Hall, C. Michael, and Hazel Tucker, eds. *Tourism and Postcolonialism: Contested Discourses, Identi-*

ties and Representations. London and New York: Routledge, 2004.

Kirshenblatt-Gimblett, Barbara. *Destination Culture: Tourism, Museums, and Heritage*. Berkeley: University of California Press, 1998.

Singh, T. V. *New Horizons in Tourism: Strange Experiences and Stranger Practices*. Oxfordshire, UK, and Cambridge, MA: CABI Publishing, 2004.

U.S. Congress, Committee on Science. *Future Markets for Commercial Space: Hearing before the Subcommittee on Space and Aeronautics*. 109th Cong., 1st sess., April 20, 2005.

Urry, John. *The Tourist Gaze*. 2nd ed. London and Thousand Oaks, CA: Sage, 2002.

Sex Tourism

In the postwar period, following the massive deployment and stationing of Allied soldiers in various locations throughout the world, occupy-

➤ “NATASHAS”—THE EAST EUROPEAN SLAVE TRADE

Following the collapse of the Soviet Union and the Eastern Bloc in the early 1990s and the period of crash capitalism that followed, many East Europeans plunged into poverty as the many nations that constituted the post-Soviet region adapted to the uncertainties of market capitalism. Women were particularly vulnerable in light of the disappearance of Soviet guarantees of employment and as most available jobs were reserved primarily for men. Russian criminal syndicates, taking advantage of this situation, created a market for the trafficking of women into the European Union, Turkey, the Middle East, and East Asia. Commonly known as “Natashas,” under the assumption that all East European women were Russian, these slave-prostitutes (various estimates range from the hundreds of thousands into millions) remain a tragic element of the modern international trade in prostitution and the complexities of increased globalization. As brilliantly depicted in the film *Lilya-4-Ever* (2002), some of these women are underage teenagers, trafficked to satisfy the demand of pedophiles.

By promising work abroad as servers, nannies, or office workers, traffickers made travel arrangements through seemingly legitimate firms for

mostly young East European women eager for employment and the excitement of the outside world away from the miseries of home. Upon arrival, these women’s passports would be seized, and they would be raped and beaten (“broken in”) and sold for sex. With vague promises of freedom after they worked off their debt, these women would be subjected to repeated sex acts, up to as many as 40 partners in one day, with little or no food. Threatened with the murder of loved ones in the country of origin if they talked and subject to deportation if they informed, many of these women suffered years of this deplorable condition. The countries of origin of many of these women such as Moldova, Belarus, and Ukraine have done little to stop this illicit trade, given that much of the proceeds of these illegal enterprises are a considerable portion of needed foreign exchange entering their countries. While countries in the West (the United States, the European Union, and Canada) have recently begun to crack down on the trafficking of women from Eastern Europe, criminal syndicates have become more careful in their activities, illustrating that much still needs to be done to end this modern form of slavery.

—Abraham O. Mendoza

ing military authorities and regional governments encouraged the development of local brothels for servicemen. Various countries in South and East Asia, Central and Latin America, and Oceania developed a sex tourism industry to cater to soldiers, businessmen, and travelers. From 1945 to the present, countries such as Thailand, the Philippines, Costa Rica, the Dominican Republic, and Cuba have developed an illicit sex tourist industry, based on the exploitation of local women and men to cater to foreign tourists seeking sexual gratification outside the West. Aspects of this illicit industry, such as human trafficking (especially from Eastern Europe and Russia in the post-Soviet era), slavery, indentured servitude, the exploitation of children, and the spread of HIV/AIDS have led to instances of international condemnation. However, many of these countries are dependent on and reluctant to curtail this industry.

Many Western countries, such as the United States (in Nevada), Switzerland, New Zealand, the Netherlands, and several Australian states have developed forms of legalized prostitution, heavily regulated to address health and workplace concerns. In countries such as Britain and Mexico, where prostitution is illegal, it is unofficially tolerated as a victimless crime. However, while these regions have a thriving localized sex industry for both locals and travelers, an illicit sex industry offers younger prostitutes, often children or underage teenagers, coerced by their pimps into engaging in more explicit sex acts. This attracts a clientele of Western, mostly male, tourists willing to pay increasingly large amounts of money to travel to exotic tropical locations to engage in sex with young adults and/or children for a low price. While some enter prostitution voluntarily from local areas, a considerable portion of the prostitutes are slaves illegally trafficked

from abroad. Many of these young women are offered jobs abroad as hostesses, entertainers, or secretaries by seemingly legitimate agents. Upon their arrival in a foreign country, their passports are seized; they are repeatedly beaten and raped and then sold to work off their debt. Children, both boys and girls, are taken from their parents or from orphanages or even sold by their parents into prostitution.

Typically, black market operations or legitimate travel agencies arrange trips to these foreign destinations for the purpose of illicit sex. In recent decades, through the use of the Internet, many sex tourists find it easy to arrange travel packages that include flights, hotels, various sexual encounters with young women or children, and other travel accommodations. Countries such as Thailand, the Philippines, and Costa Rica thrive on these arranged tourist packages, run largely by international crime organizations. Many neighboring countries (Myanmar, Malaysia, India), seeing the economic advantage of the thriving sex tourism industry, have developed their own utilizing similar models.

International condemnation, mainly stemming from the West (typically the country of origin of the overwhelming majority of sex tourists), has erupted in the past decade against the use of human-trafficked sex slaves, both young women and children, for use in the illegal sex tourist trade. In the United States, the Child Exploitation and Obscenity Section enacted initially in 1987 and constantly revised to address emerging issues ensures that those who profit from the trafficking of children for sexual purposes and those who travel to engage in sex with children are prosecuted to the full extent of the law within the United States, even if they commit their crimes abroad. Other federal statutes in the United States prohibit sex tourism and the international sex trafficking of adults and children. The European Union (mostly Britain, France, and Germany), Japan, and Australia, faced with similar problems, have been slower to enact legislation to deter their nationals from engaging in illegal sex tourism.

—Abraham O. Mendoza

Bibliography

Davidson, Julia O'Connell. *Children in the Global Sex Trade*. Cambridge, MA: Polity, 2005.

Oppermann, Martin, ed. *Sex Tourism and Prostitution: Aspects of Leisure, Recreation, and Work*. Elmsford, NY: Cognizant Communication Corporation, 1998.

Ryan, Chris. *Sex Tourism: Marginal People and Liminalities*. New York: Routledge, 2001.

Cruise Ship Industry from 1945

The *Caronia* was launched by the Cunard Line in 1949 under the British flag. It was the first ocean liner designed exclusively for leisure cruising instead of point-to-point passenger service. Painted three shades of green, the *Caronia*, nicknamed the “Green Goddess,” was 715 feet long, held 932 passengers, and was known for its round-the-world cruises. When the *Caronia* helped launch the cruise ship industry, luxury travel on ocean liners still flourished. But with the onset of transatlantic air passenger service, pioneered in the late 1950s, ocean passenger travel began to fade as an option.

In 1957 the Cunard line of 12 vessels was the world's largest passenger ship service and carried a third of all passengers crossing the Atlantic Ocean. Two of the world's most famous ships, the *Queen Mary* and the *Queen Elizabeth*, were both part of Cunard's fleet. France's flag ship the *Liberté* was also very popular at this time. The *Liberté* was known for its exquisite decor, outstanding service, and the best cuisine on the Atlantic. The pride of the American ships was the *United States*. The ocean liner industry expanded through the 1950s, and a passenger record was set in 1958 when over 1 million passengers sailed in over 30 ships. Yet the same year Pan Am flew a nonstop jet airplane flight from New York to Paris for the first time ever. Ironically, just one year later, airlines would set the record with 1.5 million passengers, while the figure for passengers by sea fell to 900,000. This marked the beginning of the end for destination service by ocean liners but the start of the cruise industry.

In the 1960s most shipping lines were not ready to exclusively offer leisure voyages. Instead, they opted to provide point-to-point passenger service with off-season cruise service. While recognizing that cruising would provide the only chance for profitable operations, cruise lines

quickly found that most ocean liners were ill-suited as cruise ships. Most liners of the day had physical segregation of classes that restricted passengers to either the forward or stern of the ship. This made it almost impossible for passengers to get from one end of the ship to another. In addition, required changes to the cargo space and engine machinery for cruising resulted in many otherwise worthwhile ships being scrapped. A notable exception to this was Holland America's *Rotterdam*. Instead of vertical class segregation, the *Rotterdam* had alternating decks allocated to first and tourist classes. All passengers had access to the entire ship during cruising, but sliding panels within the staircases separated classes to their specific decks when sailing as a point-to-point liner. Just as the cruise industry was beginning to grow, another disaster in 1973 further reduced the viability of ocean liner service. In just a few months the price of fuel oil soared to \$95 a ton from \$35 a ton. This brought the end to all passenger ship service, with the only surviving Atlantic liner being Cunard's *Queen Elizabeth 2* (QE2). Although the QE2 represents the end of a romantic era in maritime history, it is far from the end of luxury sailing.

The passenger point-to-point transportation service of ocean liners was soon replaced by jet airline flights, but the new concept of ship travel as a vacation unto itself had begun. By the mid-1970s vacationers began to discover the relaxing and relatively inexpensive option of cruising. Cruises offer vacationers a variety of exotic destinations such as the Caribbean, Alaska, Hawaii, or the Mediterranean along with continuous shipboard activities, dining options, and accommodations. The cruise industry has grown rapidly, making it an important segment of the tourist industry, which now is the world's leading industry. By the late 1970s the number of passengers taking cruises was one million per year. In 1985 the number of passengers exceeded two million, and by 2004 over ten million people took a cruise. The corresponding cruise ship count has also grown. Forty new ships were built during the 1980s, an additional 80 ships were built during the 1990s, and from the year 2000 up until the end of 2005 68 new ships were launched. The size of the typical cruise ship has also grown

dramatically since the 1970s. Typical of ships in the late 1970s to early 1980s was the twin sister ships the *Island Princess* and the *Pacific Princess*, both featured in the U.S. television series *Love Boat*, which first aired in 1977. The Norwegian *Norway* was rebuilt in 1982, with a length of 1,035 feet (about 315 meters) and a passenger capacity of 2,181. The economies of scale that brought financial success to the *Norway* started a parade of ever-larger cruise ships. As of 2006, the largest operating cruising liner by capacity is Royal Caribbean Cruise Line's *Voyager of the Seas*, with a passenger capacity of 3,840.

Critics of the cruise industry cite problems such as hidden expenses, shipboard illness, and the industry's possible harm to the environment. The cost of many cruise vacations ends up being much larger than the initial payment after vacationers pay for bar drinks, photos, spa visits, shore excursions, casino losses, and increased charges to dine in alternative restaurants. In 1997 successive outbreaks of the Norwalk virus from contaminated food led to the Norwegian Cruise Line's *Royal Odyssey* being pulled from service. In 1998 Princess Cruise Line's *Regal Princess* and in 2000 Clipper Cruise Line's *Nantucket Clipper* were each brought to port for sanitation service after disease outbreaks.

The cruise industry is likely to continue to grow along with tourism in spite of these problems. A study by the International Council of Cruise Lines found that in 2003 the North American cruise industry was a more than \$25 billion industry that generated almost 300,000 U.S. jobs.

—Joseph Cavanaugh

Bibliography

- Dawson, Philip. *Cruise Ships: An Evolution in Design*. London: Conway Maritime Press, 2000.
- Klein, Ross A. *Cruise Ship Blues*. British Columbia: New Society Publishers, 2002.
- Maxtone-Graham, Joan. *Crossing & Cruising: From the Golden Era of Ocean Liners to the Luxury Cruise Ships of Today*. New York: Macmillan, 1992.
- TNS/NFO Plog Research. "CLIA's 2004 Cruise Market Profile Cruise Lines Report of Findings." Cruise Lines International Association (CLIA) B-3A (2004), <http://www.cruising.org/Press/research/index.cfm>.

■ Introduction: Global Migrations, Transnational Diasporas, and Responses

International migration patterns since the close of World War II have been influenced by many factors. The push factors include the dislocations produced by the war itself as well as tensions and new conflicts generated in the context of the Cold War and decolonization. During such conflicts, warfare's vagaries or the fear of outright genocide have become a powerful push factor for migration. Additional catalysts for migration include the push of economic impoverishment in the developing world and the pull of labor demands in the developed nations. Immigration has had a significant impact upon receiving countries, particularly in North America, Europe, and Oceania, not only in terms of the number of immigrants and refugees but also in the demographic shifts produced by post-1945 migration. Global population flows have also created vibrant transnational diasporic communities, often in places where they had not previously existed. However, global migration patterns also illustrate the glaring economic and population differences between the developed North and the developing South.

Nation-states with a European majority have grappled with the predominance of non-European migrants in post-1945 migration streams and the resulting complexities of ethnic pluralism. These states have adopted legislation barring discrimination on the basis of race or ethnicity and eliminated immigration restrictions based on race or ethnicity and national origin. Yet many groups of migrants, particularly undocumented (or illegal) migrants or those legally admitted to work in low-wage sectors (guest workers), continue to encounter interpersonal discrimination and limited access to resources. In particular, the large numbers of undocumented migrants as well as the presence of non-European migrants and refugees in general has prompted the emergence of anti-immigrant movements in the United States, Australia, and Europe.

The growing populations of Muslim immigrants in Europe's cities face similar economic and social marginalization as that experienced

by members of Latin American diasporas in the United States. Moreover, the Persian Gulf states (e.g., United Arab Emirates), flourishing due to their vast oil wealth, imported huge numbers of guest workers from South Asia and the Philippines to work in their service and industrial sector. Though some receiving countries with significant undocumented populations (including countries such as Malaysia and Thailand) have alternated between offering blanket amnesty and aggressive deportation and tightened border controls, the trend in the United States and the European Union in the early twenty-first century has been toward aggressive surveillance and militarization of border zones, reactions stemming from the possible overlap of illegal entry and terrorist attacks. Yet increasing border surveillance and militarization have not stemmed migration, particularly unauthorized migration, as the labor needs of capitalist economies, the dearth of opportunities in developing countries, political repression in authoritarian regimes, and other catalysts have continued to produce migration in the twenty-first century. Nonetheless, states with longer traditions of incorporating immigrants, such as the United States, have had comparatively less trouble accommodating and absorbing migrants than those, such as Germany, that have had little historical experience with migration flows such as those of workers from Turkey to German cities. In contrast, Japan has only cautiously allowed nonnational migrants. Its largest ethnic minority remains Koreans, many of whom are multigenerational descendants of labor migrants during the period of Japanese occupation of Korea. In the 1990s, however, Japan admitted a sizable number of immigrants of Japanese heritage from Brazil and Peru.

Contemporary dislocations created by war or widespread destitution, particularly in Africa, Central Asia, and the Middle East, have also contributed to the exponential growth of refugees residing outside of their country of origin. The Arab-Israeli conflict, the Congolese civil wars, episodes of ethnic cleansing in both Rwanda and

Sudan, and the wars in Iraq and Afghanistan, among other regional conflicts, have created sizable flows of refugees seeking sanctuary. A majority of the world's refugees reside in United Nations (UN) camps adjacent to their former homelands, coping with cramped and squalid conditions. However, some refugees seek better fortunes in the developed world of the global North and often find themselves unwelcome guests. As most of the world's refugees are people of color, developed countries in the global North are reluctant to accept them in large numbers due to increasing xenophobia, and they become subject to the same sort of institutional discrimination as economic migrants.

—*Josef Castañeda-Liles and
Abraham O. Mendoza*

Latin America and Migration, 1945–Present

In the aftermath of World War II there was an increase in migration to and within Latin America spurred by fears of political persecution, while economic motivations have resurged again in the most recent decades. After 1945 most Latin American countries entered a long period of inward-looking economic development and fewer international connections in order to develop strong national markets that included both producers and consumers, a logic that also contributed to driving down levels of immigration by explicitly blocking new entries. This meshed with strong nationalist campaigns across Latin America that hardened political and ideological lines between members and outsiders, when these distinctions had been more fluid at other junctures.

Still, there was an important influx of three mid-century refugee groups to Latin America. First, Jews from Central and Eastern Europe fled the Holocaust and its aftermath; they predominantly went to Argentina, Mexico, Brazil, and Cuba, joining with pre-Holocaust, mostly urban Jewish communities. Second, as the Soviet influence extended into Eastern Europe, refugees from Eastern Europe came to the largest cities of the Southern Cone (Argentina, Chile, and Uruguay). Third, conflicts in the Middle East in the 1950s prompted significant communities of non-

Israeli Jews to migrate especially to Brazil and Cuba, again joining previously established Jewish social networks. For economic reasons, a small cohort of South Koreans came to rural Argentina and Brazil but quickly urbanized.

After the Cuban Revolution in 1959 most Cuban refugees went to the United States, but a great number scattered throughout Latin America, especially Mexico, the Dominican Republic, and Venezuela. This inaugurated an era of intertwined political and economic migration within Latin America. Yet in contrast to the extensive Cuban diaspora, many of the other intraregional flows represent shifts toward magnets of relatively prosperous countries or those with open immigration policies. In several cases these immigrants received poor treatment in their destinations and tended not to enjoy opportunities for upward social mobility. This is the case with Haitians in the Dominican Republic; Guatemalans, Salvadorans, and Hondurans in Mexico; Nicaraguans in Costa Rica; Peruvians, Bolivians, and Paraguayans in both Chile and Argentina; and Colombians in Venezuela and Panama. In the Southern Cone, European immigrants of the early twentieth century experienced the exact opposite, with improved social and economic standing.

Smaller, scattered, but also more elite migration occurred in the 1970s as political dissidents fled into exile from the brutal dictatorships of the Southern Cone. These exiles sought asylum throughout the wealthiest nations, but many also settled in Mexico. At the same time, these military governments created conditions fortuitous for some highly specific commercial migrants seeking to establish businesses in Latin America, for example, Taiwanese immigrants who came to Argentina in the late 1970s.

Due to widespread, protracted armed unrest in several Central American countries that reached their worst points in the late 1970s and early 1980s, a significant outpouring of refugees came into Mexico. Some continued on to the United States and other destinations, but thousands of Guatemalans, Salvadorans, and Nicaraguans settled in Mexico.

The 1980s were a time of major economic stagnation throughout Latin America, leading to very little immigration—other than refugee

➤ GUATEMALAN IMMIGRATION TO MEXICO

It is common knowledge that emigration from Mexico to the United States is one of the most significant population flows in modern history; however, Mexico has also been an important destination country for immigrants. In the latter decades of the twentieth century, new arrivals came en masse from civil wars in Guatemala, Nicaragua, and El Salvador, constituting the largest inflows in Mexican history. The early 1980s were the peak years of both conflict and exodus, with Guatemalans coming in the greatest numbers in order to escape genocidal campaigns against rural Mayan populations in highland areas of Guatemala.

Tens of thousands of Guatemalans poured into refugee camps in the Mexican border state of Chiapas in the early 1980s. Many arrived in extremely poor physical condition in the wake of traumatic journeys from destroyed villages. As encampments ballooned, domestic political pressure grew to find some resolution to the ad hoc settlement of refugees in Chiapas. A controversial move was the relocation of some 15,000 refugees to the impoverished states of Campeche and Quintana Roo in the Yucatán Peninsula (where the state of Yucatán is also located). New camps in these sites sought to integrate Guatemalans into the Mexican economy and curtail outright aid. Skill-building programs and schemes similar to

contemporary workfare in the United States were implemented by authorities.

Guatemalans, compared to other refugees and immigrants, have faced some of the most extreme discrimination in Mexico. A majority of refugees from Guatemala arrived with few or no funds, and only a quarter had strong fluency in Spanish, tending to speak Mayan instead because they hailed from rural indigenous villages. Mayan ancestry further distinguished many Guatemalans in appearance, both in dress and physiognomy, from the great majority of mestizo Mexicans.

A few thousand Guatemalans have returned to their country of birth since civilian democracy was reestablished in the late 1980s. However, along with other Central Americans, there has been a stronger tendency to remain in Mexico as permanent foreign residents, with a smaller group choosing to naturalize as Mexican citizens. As in many countries, children born to foreign citizens on Mexican soil are automatically citizens of Mexico.

Mexico continues to receive immigrants from Central America as well as a number of other countries around the world. In the 2000s, however, enforcement of entry restrictions and deportation regulations has become especially strong compared with earlier historical junctures.

—Ryan Centner

flows—during that so-called lost decade. However, the economies of Latin America, especially in South America, began to change drastically in the early 1990s as sweeping reforms in compliance with international financial institutions were enacted to make these countries more globally competitive. Restructuring involved strengthening national currencies and opening entrepreneurial opportunities. In practice, neither of these strategies was productive, but they did attract global capital and new migrants, especially to the short-term success story of Argentina and to Brazil to a much lesser extent. Increased immigration came from Paraguay, Bolivia, Peru, and Chile, but there was also a renewal of flows from Taiwan and South Korea into Buenos Aires. With the fall of the Soviet Union, there was also

an influx of Russians and Ukrainians. Many came specifically because the peso was fixed with the dollar during 1991–2001, enabling refugees to earn high enough wages to send a portion to their sending countries as remittances.

Argentina also has had open immigration policies as a holdover from its period of peak migration a century ago. One group that came to Argentina in the 1990s was a number of Bosnian refugees whom then-president Carlos Menem had personally agreed to sponsor. However, this personalized style worked to the detriment of those coming from the former Yugoslavia as well as the former Soviet Union: despite the generous immigration laws in the Argentine Constitution, the president decreed these specific groups welcome as long as they forfeited all potential claims

on the Argentine state for citizenship or financial assistance. These groups have largely remained in enclave-like communities with the exception of the Russians who are Jewish and have integrated into the large and long-established social networks of Jewish Argentina.

Landmark legal decisions in Mexico since the mid-1990s, easing restrictions on Central American refugees, have allowed 5,000 Central Americans to naturalize, with some 30,000 formalizing their status as noncitizen residents. As of 2007, however, Mexican immigration authorities have conformed to pressure from the United States to strengthen entry controls, directed not only at Central Americans but also arrivals from around the world. This is in order to stem those who would use Mexico for easier overland passage into the United States. Among Latin American countries, Mexico thus now has the most stringent immigration policies with some of the toughest enforcement.

—Ryan Centner

Bibliography

- Aguayo, Sérgio, Hanne Christensen, Laura O'Dogherty, and Stefano Varese. *Social and Cultural Conditions and Prospects of Guatemalan Refugees in Mexico*. Geneva: United Nations Research Institute for Social Development, 1987.
- Baily, Samuel L., and Eduardo José Míguez, eds. *Mass Migration to Modern Latin America*. Wilmington, DE: Scholarly Resources, 2003.
- Buechler, Simone. "Sweating It in the Brazilian Garment Industry: Korean and Bolivian Immigrants and Global Economic Forces in São Paulo." *Latin American Perspectives* 31 (2004): 99–119.
- García, María Cristina. *Seeking Refuge: Central American Migration to Mexico, the United States, and Canada*. Berkeley: University of California Press, 2006.
- Mörner, Magnus, and Harold Sims. *Adventurers and Proletarians: The Story of Migrants in Latin America*. Pittsburgh: University of Pittsburgh Press, 1985.

U.S. Immigration Policy, 1945–Present

The end of World War II and the beginning of the Cold War marked a significant turning point in American immigration policy. Ideology and international politics began to replace ideas about

race, ethnicity, and nationalism in the regulation of immigration. This shift led to two major changes: the creation of a refugee policy to complement the country's immigration policy and the move toward an emphasis on family reunion as an aspect of U.S. immigration policy. Within three years after the end of the war, Congress passed two laws that set the tone for the country's new approach to immigration. In 1945 Congress passed the War Brides Act to allow for the immigration of foreign-born spouses and children of U.S. military personnel. In 1948 and 1950 the full disclosure of the horrors of the Holocaust at the end of the war led the United States to pass two Displaced Persons acts to facilitate the admission of European refugees; 410,000 refugees entered the United States, but only about 1 in 6 admitted under these acts were Holocaust survivors.

The country's Cold War aspirations to be the leader of the free world found its fullest expression in the 1952 Immigration and Naturalization Act. The new law retained the quotas on immigration but eliminated all racial barriers to immigration and naturalization, expanded family reunion, and sanctioned the presidential parole power, which granted any future president the power to admit unlimited numbers of aliens "for emergency reasons . . . or in the public interest," as the country's basic principle for its refugee policy. Taking advantage of the family reunion provision, 63,000 Japanese immigrants came to the United States between 1952 and 1964 rather than the 2,000 sanctioned by the act. Using the parole power accorded to the government in dealing with refugees, Congress progressively expanded the definition of "refugee" to include people coming from outside Europe as well, namely people from China, the Far East, the Middle East, Cuba, Tibet, Vietnam, and other Southeast Asian countries. In 1980 the Refugee Act officially accepted the UN definition of "refugee," including asylees.

In 1965 the Hart-Celler Act dismantled immigration quotas based on national origins in favor of a preference system that reserved most annual visas for immigrants with relatives in the United States. The most significant difference between the 1952 and 1965 acts was the increased emphasis on family reunification. The 1965 law

► THE POINT SYSTEM AND THE CHANGING FACE OF CANADA

The 1962 and 1967 Immigration acts completely transformed Canadian immigration policy. The new legislation targeted immigrants with managerial and professional skills, emphasized family reunification, and defined a more humanitarian refugee policy. The two acts created an admittance rationale based on a point system that favored economic factors such as skills, education, and job opportunities rather than the origin of the immigrant. According to the point system, an applicant needed to obtain at least 50 out of 100 assessment units to be eligible for admission. The assessment system first evaluated good health and moral standing and then took into consideration employment opportunities in the area of destination and the applicant's education, training, adaptability, motivation, initiative, skills, age, arranged employment, knowledge of French and English, and relatives in Canada. The acts also prescribed that permanent residence could be granted to anyone regardless of origin, citizenship, country of residence, or religious belief as long as the applicants qualified by reason of education, training, skills, or other special qualifications. This new immigration policy brought to Canada an increasingly higher number of immigrants from Asia, Africa, and South and Central America rather than from Europe, the traditional source of Canadian immigration. While in 1966 76.25 percent of migrants to Canada came from Europe and 7.1 percent were from Asia, by 1992 Hong Kong, Sri Lanka, India, and the Philippines were the four countries that contributed the largest number of migrants to Canada. The point system has been revisited several times since its inception; as of 2009, applicants must obtain at least 67 out of 100 points in order to be eligible for admission.

—Maddalena Marinari

included parents of U.S. citizens to the category of immigrants admissible outside the quota provisions and assigned 74 percent of preference visas to family members as opposed to 50 percent in the 1952 act. Many hoped that the law would bring immigrants mostly from Europe; however, the majority of the new immigrants arrived from Asia, the Caribbean, and Latin America. By 1980,

80 percent of legal immigration to the United States came from Asia or Latin America.

By the mid-1980s, popular opinion again turned against immigration. Much like the end of the nineteenth century, a restrictionist coalition emerged that called for stricter immigration laws and tighter border controls. After five years of debate, in 1986 Congress passed the Immigration Reform and Control Act (IRCA). The new immigration law allowed 3 million undocumented immigrants to regularize their status, imposed diluted employer sanctions to limit illegal immigration, established a diversity program, and instituted a special agricultural worker program.

The IRCA, however, did little to appease disgruntled immigration critics, especially when it came to illegal immigration, which began to increase a mere three years after the passage of IRCA. To remedy some of its shortcomings, Congress passed 16 additional immigration laws in the ten years after IRCA. They primarily addressed adjustment of immigrant status or abuses of the system, including, among others, marriage fraud, the English-language requirement, and working visas. In addition, the Clinton administration launched Operation Gatekeeper in October 1994, which not only increased the presence of border control agents, but introduced new equipment to enhance the surveillance of undocumented migrants attempting to enter the United States.

The attacks of September 11, 2001, dramatically changed American immigration policy yet again. Right after the attacks, immigration critics abandoned their focus on the threats that immigration posed to social security and began to advocate for stricter immigration laws to prevent terrorism. On October 26, 2001, the Patriot Act granted power to conduct searches, employ surveillance, and detain suspected immigrants to protect the country's security. The primary goal of the law was to target people who could potentially support terrorism. The authorities detained several Muslim and Arab men for months or more without providing any criminal charges, deported many of them for minor violations, and closed down or prosecuted many Muslim charities.

Following the passage of the Patriot Act, Congress approved the Homeland Security Act of 2002. This law established a new umbrella

agency, the Department of Homeland Security, which unified formerly independent law enforcement and security agencies such as the Immigration and Naturalization Service (INS) and Customs Service in an effort to streamline communication and facilitate information sharing. The INS and Customs Service were themselves dismantled; two agencies, U.S. Immigration and Customs Enforcement (ICE) and Customs and Border Protection, were established to enforce immigration laws in the United States and to secure the border, respectively. The new orientation in immigration policy has curtailed transnational labor migration, reduced the issuance of student visas, and hindered mobility at ports of entry. Moreover, the country's renewed attempts to control the U.S.-Mexican border have resurrected animosity against legal and illegal immigrants from Latin America.

—*Maddalena Marinari*

Bibliography

- Daniels, Roger, and Otis L. Graham. *Debating American Immigration, 1882–Present*. Lanham, MD: Rowman and Littlefield, 2001.
- LeMay, Michael C. *Guarding the Gates: Immigration and National Security*. Westport, CT: Praeger, 2006.
- Nivens, Joseph. *Operation Gatekeeper: The Rise of the 'Illegal Alien' and the Making of the U.S.-Mexico Boundary*. New York: Routledge, 2002.
- Tichenor, Daniel J. *Dividing Lines: The Politics of Immigration Control in America*. Princeton, NJ: Princeton University Press, 2002.

Migrations to Oceania since 1945

Since World War II, the number of international migrants to Oceania has increased dramatically. Immigrants from developing countries contributed significantly to the total population growth of major Oceanian countries such as Australia and New Zealand. By 2006, more than 6 million new immigrants had settled in Australia and New Zealand; almost all were from developing countries during the past decade. In particular, Asian immigration accounted for more than half of the gains in population in both Australia and New Zealand.

Before World War II, Europeans had long predominated in Oceania because of its colonial

history and the intentional prohibition of non-white immigrants. In Australia, the White Australia Policy carried on the British colonial legacy of nonwhite immigration exclusion for more than half a century, from the 1890s to 1950s. During the early postwar period, such immigration was still restricted; however, ethnocultural diversity started to grow when the Australian government launched an assisted passage scheme for immigrants from various English-speaking and non-English-speaking European countries in order to accelerate domestic population growth. In 1949 Harold Holt, the seventeenth prime minister of Australia, entitled 800 nonwhite refugees to permanent residency and allowed Asian immigrants to settle down in Australia. This event signaled the gradual relaxation of the White Australia Policy and triggered an immigration flow of nonwhite workers in Australia from the 1950s onward. It was not until the 1970s that the Australian government first adopted the policy of multiculturalism while officially abolishing the White Australia Policy.

In 1989 Australia implemented a new immigration point system aimed at attracting skilled immigrant workers. Today, nearly one in four people in Australia were born overseas. Although the United Kingdom remains the single largest source of immigrants to Australia, by 2007 the number of Asian immigrants had already reached more than half of the immigrant population. The present ethnic structure is a mix of about 74 percent Anglo-Celtic, 19 percent other European, and 4.5 percent Asian.

Postwar New Zealand faced a similar decline in population growth, posing a threat to national defense and economic development. As a result, the New Zealand government in 1947 applied an assistance scheme to bring in West European immigrants who were easily assimilated. This selective immigration policy, however, never stopped immigration from other ethnic groups to New Zealand. Beginning in the 1950s, young Asian students and other Pacific Islanders in the Oceania countries also immigrated to study or live in New Zealand. As the color of the population changed, so did attitudes about the national identity of New Zealanders. In 1974 New Zealand passed a nonracist immigration policy, requiring equal measures in admitting prospective

➤ AUSTRALIA AND THE *TAMPA* INCIDENT

On September 3, 2001, 433 refugees were moved from the Norwegian freighter *Tampa* to the Australian HMAS *Manoora*, which subsequently escorted them to Papua New Guinea. The transfer occurred off Australia's Christmas Island, close to where the Norwegian freighter had saved the refugees from a sinking smuggler-operated Indonesian ferry. Australia encountered fierce international criticism for not allowing the refugees, mostly from Afghanistan, to enter the country. Instead, Australian prime minister John Howard ordered the military to seize the *Tampa* when it insisted on entering Australian waters. The Australian government declared that these refugees were the exclusive responsibility of the governments of Norway and Indonesia. Most of the refugees were subsequently given asylum in Nauru and New Zealand after Australia's refusal to take them.

Australia has enacted stringent policies regarding the clandestine smuggling of refugees seeking asylum. Refugees who do manage to enter Australia are placed in refugee detention centers, typically outside major metropolitan areas or in the middle of the desert. Many of these policies are a result of Australian attitudes on the social and economic cost of absorbing asylum seekers. However, these actions arouse much controversy, as they violate international law regarding the rights of asylum seekers and refugees accorded to them by the United Nations. Nonetheless, Australia and other Western countries conflicted between excessive numbers of developing world asylum seekers and the political desires of their domestic constituencies will continue to grapple with issues regarding the status of refugees on their soil.

—Abraham O. Mendoza

white and nonwhite immigrants. Unfortunately, the effect of nonracist policy in attracting immigrants was weakened during the next 15 years because adverse economic conditions reversed immigration flow. Between 1975 and 1990 the most significant influx of immigrants was from the Pacific Islands. It was not until the 1990s that immigration to New Zealand reflected increases in size and ethnic diversity. Due to skill shortages, New Zealand followed Australia and established a new immigration point system to

accept skilled workers from all places outside of Europe. By 2006 the Asian population had reached 9.2 percent of the total population in New Zealand, an increase of almost 50 percent from 2001. Other major immigrant ethnic groups include Europeans and other Pacific Islanders, making up 80 percent and 6.5 percent of the total population, respectively.

As early as the late 1800s, most of the other Oceanian countries had been accepting immigrants from both European and Asian countries who contributed to shape their multicultural societies. During the postwar period, however, the influx of foreigners to the smaller Oceania countries has been less significant compared with those to Australia and New Zealand. Most of the immigrants are low-skilled workers.

Currently, there are three basic trends of immigration to Oceania: the migration of skilled workers, the affiliated inflow of their spouses and children, and student migration. Although family reunification continues to be a major reason for immigration, its share of migration has been declining since the 1990s. The other two groups of migrants have been expanding. Wealthy nations such as Australia and New Zealand keep spiriting trained professionals away from developing world countries. Oceania's higher education institutions also encourage students from Asian countries to enroll and have assisted with simplified visa and application procedures.

The high concentration of immigration in the large cities has also shaped new urbanization patterns in Oceanian cities and is responsible for the urban expansions and economic development. However, the population movement to Oceania has also raised many public concerns about such environmental issues as carrying capacity and the sustainability of urban areas. In addition, ethnic segregation has emerged in many cities, posing challenges as Oceanian governments attempt to maintain social cohesion and urban inclusion among diversified socioeconomic and ethnic groups.

—Chuncui Fan

Bibliography

Australian Government Department of Immigration and Citizenship. *Fact Sheet*. <http://www.immi.gov.au/media/fact-sheets/index.htm>.

- Bedford, R. "International Migration and Globalization: The Transformation of New Zealand's Migration System since the mid-1980s." In *Sovereign under Siege? Globalization and New Zealand*, edited by R. Patman and C. Rudd. Hants, UK: Ashgate, 2005.
- Bedford, R. D., et al. *On the Move: Migration and Population, Trends and Policies*. Wellington: New Zealand Planning Council, 1991.
- Ma, L. J. C., and C. Cartier, eds. *The Chinese Diaspora: Space, Place, Mobility, and Identity*. Lanham, MD: Rowman and Littlefield, 2003.
- Newton, P., and M. Bell, eds. *Population Shift: Mobility and Change in Australia*. Canberra: AGPS, 1996.
- Phillips, Jock. "History of Immigration." *Te Ara: The Encyclopedia of New Zealand*. <http://www.TeAra.govt.nz/NewZealanders/NewZealandPeoples/HistoryOfImmigration/en>.

Political Refugees—Africa and Asia, Post-1945

According to Article 1 of the 1951 United Nations (UN) Convention relating to the Status of Refugees, a refugee is anyone who "owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country." Global developments since World War II have fueled refugee crises in every continent.

In Asia, almost every country has been either a refugee-producing country or a refugee-receiving country since World War II. Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Iran, Iraq, Japan, Laos, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, Tibet, and Vietnam are but some examples.

The most famous Asian refugee population is the Indo-Chinese refugees, resulting from the extended Vietnam War. The Indo-Chinese conflict began in 1946 when the people of Vietnam, Laos, and Cambodia fought to gain independence from France. The conflict continued into the 1960s and 1970s when the United States entered the stage in order to control a strategic region and to prevent the spread of communism. Al-

PALESTINIAN REFUGEES

One of the best-known ongoing refugee crises followed the 1948 Arab-Israeli War. In 1947, after the British government announced that it would cease its control over the mandate area of Palestine as of 1948, the United Nations (UN) brokered the partition of Palestine into Jewish and Arab states. On May 14, 1948, a day before the British left, the Jewish settlers declared a state, and a war ensued between the settlers and the armies of the adjoining Arab states. The war was won by Israel, and various armistice agreements were signed by Israel, Jordan, Egypt, Syria, Lebanon, and Iraq during the first half of 1949. The conflict resulted in a large number of Palestinian refugees (at least 700,000). Israel still is unwilling to allow the refugees or their descendants to return or settle in its territories. Reasons for this include the continued state of conflict, severe disagreement between the government of Israel and Palestinian political leaders, and the fact that if the Palestinian refugees were allowed to return, the Palestinian population would be much larger than the Israeli population, creating a large voting bloc. There are Palestinian refugee camps in Gaza and the West Bank (within the boundaries of the old UN-planned Palestinian state) and in Jordan, Syria, and Lebanon. The Arab states have given a home to the Palestinians but have been unwilling to grant them citizenship. Beyond the Arab countries mentioned, the Palestinian diaspora has spread across the globe.

—Cherie Taraghi

though the Vietnam War essentially took place in Vietnam, in reality the war spread to all three countries. During the 1960s and 1970s all three countries also experienced instability and political confusion as various nationalist, ethnic, communist, and other political groups and factions struggled to gain power and establish political control in each of the countries. Thousands from each country fled to neighboring Thailand, and over time many of these were resettled in various Western countries such as the United States, Canada, and Australia.

Until the 1960s, Europe and Asia were the main producers of refugees. There were fewer

refugees in Africa, for most of the continent was then under relatively stable colonial rule. However, by the 1990s, almost half of the world's refugees originated from Africa. Most African refugee flows commenced with decolonization. Some of the best-known examples of conflict for independence resulting in massive flows of refugees spring from French Algeria and the Portuguese colonies of Angola, Mozambique, and Guinea-Bissau.

The Algerian War of Independence, which began in 1954, is of particular importance because this was the first African struggle against European colonial rule in the postwar period to produce significant numbers of refugees. Neighboring Tunisia requested assistance from the UN High Commissioner for Refugees (UNHCR). This was the first occasion in which UNHCR assistance was requested in the developing world, and the UNHCR's decision to support Tunisia in 1957 represents a shift in the UNHCR's self-perception and role. It became an organization offering universal help. In the following year, refugees from Sudan and Rwanda flowed into Uganda, while refugees from Mozambique began flowing into adjacent countries in 1966.

In 1969, the Organization of African Unity (OAU) recognized that aspects of the African refugee problem were not covered by the 1951 Geneva Convention. The OAU passed a regional supplementary convention, known as the OAU Convention Governing the Specific Aspects of the Problem of Refugees in Africa. This convention has tried to overcome the restrictive nature of the refugee definition by adding to it the following clause: "Every person who, owing to external aggression, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality is compelled to leave his place of habitual residence in order to seek refuge in another outside his country of origin or nationality." Unlike the 1951 Geneva Convention, this definition is extended to include people who flee from war or disturbances. It allows for whole groups to be granted refugee status rather than demanding individual assessment.

One of the latest refugee crises in Africa is the conflict (still ongoing in 2009) in the Darfur region of Sudan. This conflict is largely the result

of ethnic discrimination. The ruling regime in the capital of Khartoum has attempted to consolidate power for Sudan's Arab minority since its assumption of power through a military coup in 1989. Rebel groups comprised mostly of the three non-Arab ethnic groups that populate the region of Darfur mounted an insurgency in 2003 in reaction to their political and economic marginalization and to several violent attacks waged against non-Arabs on the part of the Janjaweed (Arab militias) with the support of the regime in Khartoum. Attempts to suppress the rebellion through the coordination of the government's military forces and the Janjaweed have quickly escalated into a genocidal war against the non-Arab ethnic groups in Darfur. Since the start of the conflict, some 300,000 men, women, and children have died; 2.6 million people have been displaced from their homes; an unknown number of girls and women have been raped and abused; and over 200,000 people have become refugees.

—Cherie Taraghi

Bibliography

- Kibreab, Gaim. *Refugees and Development in Africa: The Case of Eritrea*. Trenton, NJ: Red Sea, 1987.
- Loescher, Gil. *The UNHCR and World Politics: A Perilous Path*. New York: Oxford University Press, 2001.
- Loescher, Gil, and Ann Dull Loescher. *The Global Refugee Crisis: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 1994.
- Reeves, Eric. *A Long Day's Dying: Critical Moments in the Darfur Genocide*. Toronto: Key Publishing House, 2007.

Political Refugees—Europe, Post-1945

After the defeat of the Axis powers at the end of World War II, the displacement of large numbers of slave laborers, prisoners of war, and concentration camp survivors created huge logistical problems for the occupying Allied forces in Europe. This resulted in the creation of camps for displaced persons (DPs) throughout much of Germany under Allied military authority. Many of these refugees had fled the advancing Red Army fearing the worst in addition to having suf-

➤ EXPULSION OF EASTERN GERMANS

After 1945 the three largest groups of *Volksdeutsche*, or people of German ethnicity residing outside of Germany, were in Czechoslovakia, Poland, and the Soviet Union. Prior to World War II, an estimated 3.5 million Sudeten Germans formed the largest minority in Czechoslovakia. These Germans lived in clusters near Germany and Austria in places where their ancestors had settled for generations, in some cases for centuries. When Poland emerged as an independent nation, the German minority lived primarily in the areas of West Prussia, Posen, Danzig, and Upper Silesia. This group numbered approximately 2.1 million people in 1919.

At the war's end in 1945, however, the Beneš decree allowed for the expulsion of Germans from many European territories based primarily on their presumed collective guilt. As a consequence, nearly 3 million Germans were expelled from Czechoslovakia (Sudetenland), 0.7 million from Poland, and a total of 1 million from other countries, including Hungary, Yugoslavia, Romania, Bulgaria, Italy, and even some overseas countries.

After several waves of deportation in 1941–1945, various Germanic settlers who remained scattered throughout the European parts of the Soviet Union, including the most substantial group of Volga Germans, ended up in Siberia and Central Asia. Even though many ethnic Germans there shared a common hatred toward the Soviet Union, only 40,000 Germans were allowed to emigrate from the USSR to Germany and other countries between 1955 and 1989.

Between 1989 and 1996, however, over 1 million ethnic Germans moved to Germany, taking advantage of new laws that granted full citizenship to

Volksdeutsche of the (former) Soviet territories. To regulate this inflow of newcomers, in 1993 the German government issued a law, *KriegsfolgebereitNigungsgesetz*, that set a quota for ethnic German emigration from Eastern Europe (mostly filled by ethnic Germans from the Soviet Union) at 225,000 per year.

By the early 1990s, the German government realized that its loose definition of German ethnicity and its policy of substantial benefits bestowed on *Aussiedler* (resettler, immigrant) had created more problems than it solved. Overwhelmed with the financial responsibility of supporting these emigrants, the German government reduced the emigration quota to 100,000 per year in 2000. The government also set new criteria for emigration and reduced the length and availability of some benefits. The number of Germans moving out of Eastern Europe began to decline in 1997; nevertheless, in the decade that followed, some 800,000 Germans from the former Soviet territories moved to Germany.

—Irina Mukhina

Bibliography

Horak, Stephen. *Poland and Her National Minorities, 1919–1939*. New York: Vantage Press, 1961.

Komjathy, Anthony, and Rebecca Stockwell. *German Minorities and the Third Reich: Ethnic Germans of East Central Europe between the Wars*. New York: Holmer and Meier, 1980.

Rock, David, and Stefan Wolff, eds. *Coming Home to Germany? The Integration of Ethnic Germans from Central and Eastern Europe in the Federal Republic*. New York: Berghahn Books, 2002.

ferred extreme privations under the Nazi Third Reich. Some feared returning home to what was to become the Soviet sphere of influence in Eastern Europe. As a result, hundreds of thousands of Poles, Hungarians, Jews, and Czechs were allowed to enter Britain, France, and Germany as political refugees. Others decided to go elsewhere, such as Canada, the United States, Palestine (Israel after 1948), and Australia. These refugees readily adapted and assimilated to their new homes, seeking to break ties with their coun-

tries of origin. The establishment of the United Nations Relief and Rehabilitation Administration (UNRRA) in 1943 created an effective bureaucracy for handling provisions, camps, and immigration for refugees.

The ideological and political division of Europe during the Cold War into the capitalist West and the socialist East essentially provided East Europeans with a readily available sanctuary to escape communism. In particular, the Federal Republic of Germany (West Germany) took it



Yugoslavian refugees at an asylum center in Germany, 1992. (Régis Bossu/Sygma/Corbis)

upon itself to be the refuge of choice for political dissidents from the socialist German Democratic Republic (East Germany). The Berlin Wall was constructed in 1961 to stem the flow from East Germany westward. Following episodes of political dissent to Soviet repression within the Eastern Bloc (Poland in 1956, Hungary in 1956, and Czechoslovakia in 1968), increasingly large numbers of political refugees streamed to the West for sanctuary from state persecution. The exodus of dissenters within the Eastern Bloc seeking their way into the West lasted well until the end of Soviet domination of Eastern Europe (1989–1991).

Given the postwar attitude in regard to refugees in various West European countries, created partly to make up for the closed-border policies they had enacted in the interwar period (1919–1939), refugee policies were also quite generous to political refugees from the non-European world. Non-European refugees, escaping from communist regimes and political and economic collapse throughout the developing world, found their way into Western Europe. France found itself home to hundreds of thousands of Vietnamese refugees escaping the devastation created by the Vietnam War. The Scandinavian countries—Denmark, Norway, and Sweden—opened their borders to refugees escaping wars in the Middle East. Britain found itself accepting former colonial subjects fleeing the political breakdown back in their home countries in such places as Kenya, Nigeria, and

Bangladesh. The Yugoslavian civil wars (1991–1998) drove many Serbians, Croatians, and Bosnians to Germany (unified after 1990) seeking protection from the ethnic cleansing policies of Serbian leader Slobodan Milosevic and the displacements created by warfare.

European refugees, having settled in their new homes and livelihoods, now contend with far different issues than escaping from the abuses of their former countries. Nativist reactions due to the cultural and religious practices (such as Islam) of refugees have made European countries rethink their policies on refugees, especially those concerning non-Europeans. Second- and third-generation non-European refugees, having adapted to the cultural norms of their respective countries, contend with issues of discrimination, racism, and inequality. However, the second- and third-generation descendants of European refugees have a considerably different experience than that of non-Europeans, having had a better experience in assimilating to West European culture.

—Abraham O. Mendoza

Bibliography

- De Zayas, Alfred-Maurice. *A Terrible Revenge: The Ethnic Cleansing of the East European Germans*. 2nd ed. New York: Palgrave Macmillan, 2006.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Lahav, Gallya. *Immigration and Politics in the New Europe: Reinventing Borders*. New York: Cambridge University Press, 2004.
- Panayi, Panikos. *Ethnic Minorities in Nineteenth and Twentieth Century Germany: Jews, Gypsies, Poles, Turks, and Others*. London: Pearson Education, 2000.

Political Refugees—Americas, Post-1945

From the end of World War II to the present, both North and South America experienced a widespread surge in the number of refugees from other regions of the world due to political persecution, economic hardship, or social stratification in the countries of origin of these wayward sojourners. Canada, the United States, Mexico, Argentina, and Brazil, among others, ex-

perienced massive waves of foreign refugees seeking a safe haven from their troubles at home. Further dislocations created by Cold War conflagrations and developing world instability have seen further waves of refugees both from outside and from within the Americas.

At the conclusion of World War II in 1945 Europe lay in shambles, with millions of displaced persons (DPs) unable to return home and often reluctant to do so. Many people, taken as slave laborers into Germany, were particularly unwilling to return to their countries of origin in Eastern Europe. Many Jewish refugees, having suffered tremendously under the Nazi regime, did not consider Europe home anymore. In light of this predicament, both Canada and the United States allowed significant numbers of refugees to enter their borders throughout the late 1940s and early 1950s. Jews, Germans, and thousands of other homeless DPs were allowed to migrate to North America and also, to a lesser extent, to South America. Many Italians and Germans found their way into Brazil and Argentina after the war. Some Nazi war criminals found this situation advantageous in order to escape prosecution for war crimes, changing their identities to migrate to Argentina or Uruguay. The most notable was Adolf Eichmann, a chief architect of the Final Solution who was captured by the Israelis in Argentina in 1960.

The emerging Cold War also led to a further surge in refugees seeking asylum from Europe in the Americas. The military and ideological divide between an American-dominated Western Europe and a Soviet-occupied Eastern Europe contributed to international tensions within Europe and abroad. East Europeans, fleeing from Soviet and Eastern Bloc police states, found sympathetic asylum in the West. Instances of political dissent within the Eastern Bloc to Soviet repression (as in Poland and Hungary in 1956, and Czechoslovakia in 1968) led to significant numbers of political refugees. Hungarians, Czechs, Russians, Ukrainians, Germans, and Poles made their way to the Western Hemisphere, finding new homes from Canada to Argentina.

Developing world refugees have characterized migrations after World War II. Considerable numbers of inter-American refugee migrations have occurred due to Cold War conflicts and

➤ OPERATION PAPERCLIP—NAZI SCIENTISTS IN THE UNITED STATES

Operation Paperclip, known also as Project Paperclip, was the code name under which American intelligence and military services retrieved German scientists from the Third Reich during and after the latter stages of World War II to be utilized for U.S. military objectives. The project was carried out by the newly established Joint Intelligence Objectives Agency in 1945. Although they had originally planned to only interview German rocket scientists, this drastically changed after Allied military officials sent a telegram to the Pentagon on May 22, 1945, regarding the evacuation of German technicians and their families from Nazi Germany as urgently important to strategic objectives in the Pacific theater, where hostilities had not yet ceased. There was also the objective of not allowing the Soviets to attain access to German scientists in light of the early phases of the Cold War.

Scientists specializing in rocketry, nuclear physics, chemistry, and weaponry systems were actively sought out through Operation Paperclip. The majority of the scientists involved with the development of the V-2 rocket were sheltered with their families at a housing project in Bavaria within the American Occupation Zone. Operation Paperclip remains a controversial chapter in the history of World War II and the Cold War given that many of these men were sympathetic to National Socialism and its ideological objectives. However, in the context of the Cold War, American officials believed that securing the nation against Soviet aggression far outweighed prosecuting these men for their active collaboration with the Nazi regime.

—Abraham O. Mendoza

military repressions. Cuban and Haitian refugees, escaping their repressive countries of origin, have settled in sizable communities in the United States. The emergence of Fidel Castro and his oppressive regime after the Cuban Revolution led to a large migration of Cubans (1959–1980). To this day, some Cubans continue to risk the dangerous waters separating them from Florida in pursuit of asylum in the United States. After the military overthrow of Jean-Bertrand Aristide, thousands of Haitians fled by boat to escape the

subsequent government-sanctioned repression. A number of these refugees were repatriated by the United States back to Haiti following a period of detention in Guantanamo Bay, although many were allowed to stay, particularly in Florida. In addition, approximately 1 million Salvadorans were displaced during the Salvadoran Civil War (1975–1982). Nearly half went to the United States, most settling in Los Angeles. There was also a large movement of Guatemalans in the 1980s to the United States and southern Mexico as they tried to escape from civil war and genocide.

Refugees from outside the Americas, particularly non-Europeans, have also been migrating in increasing numbers. However, public opinion and economic constraints have forced North American governments to restrict their refugee policies considerably, resulting in fewer people being granted asylum. Several hundred thousand Southeast Asians, Vietnamese, Laotians, Cambodians, and Hmong have entered the United States since the end of the Vietnam War, most of them settling in communities along the West Coast. Significant numbers of Lebanese, escaping the endemic warfare in Lebanon in the 1980s, have migrated to Brazil, creating the largest community of Lebanese outside of Lebanon proper. Conflicts in Africa have also led to small numbers of refugee migrations to the Americas but in lesser numbers than other groups previously mentioned. Contemporary conflicts in the Middle East have also contributed to small numbers of Iraqis and Afghanis entering the United States and Canada as refugees.

—Abraham O. Mendoza

Bibliography

- Genizi, Haim. *America's Fair Share: The Admission and Resettlement of Displaced Persons, 1945–1952*. Detroit: Wayne State University Press, 1993.
- Knoll, Tricia. *Becoming Americans: Asian Sojourners, Immigrants, and Refugees into the Western United States*. Portland, OR: Coast to Coast Books, 1982.
- Kochavi, Arieh J. *Post-Holocaust Politics: Britain, the United States, and Jewish Refugees, 1945–1948*. Chapel Hill: University of North Carolina Press, 2000.
- Pessar, Patricia R., ed. *When Borders Don't Divide: Labor Migration and Refugee Movements in the*

Americas. New York: Center for Migration Studies, 1988.

Simpson, Christopher. *Blowback: America's Recruitment of Nazis and Its Effects on the Cold War*. New York: Weidenfeld and Nicolson, 1988.

Refugees from Ecological Disasters

Ecological disasters are among the most powerful factors generating human displacements, as they often leave no choice but to flee from one's place of residence. Industrial accidents such as the release of a radioactive cloud from the Three Mile Island nuclear plant in 1979 and catastrophes potentially related to human-induced climate warming, such as hurricanes and floods, plague entire towns, regions, or countries in sudden, brutal, and generally unforeseen ways and sometimes lead to mass migration. Other push factors—in the terminology proposed by Everett Lee in his famous push/pull theory of migration of 1966—such as unemployment, lack of economic opportunities, or political persecution seldom hurt each and every inhabitant of an area and usually induce more gradual emigration patterns.

Although a distinction can be made between truly natural disasters (earthquakes and tsunamis represent the best examples) and man-made ecological disasters such as the explosion of the Chernobyl nuclear reactor (1986), this dichotomy has become more and more blurred by the indirect effects of human activities, from global warming to deforestation and land erosion.

During the third quarter of the twentieth century ecological displacements, often linked to food scarcity, went largely unnoticed and unregistered by migration experts because they took place in what has become known as the South (replacing the notion of the Third World). They were, to a certain extent, overshadowed by the economic migration flows of guest workers from southern to northern Europe, *braceros* from Mexico to the United States, and former colonial subjects from Africa and Asia to ex-colonial powers. The international awareness of ecological migration grew, however, during the last quarter of the century; Egyptian scientist El-Hinnawi coined the very concept of environ-

mental refugee in 1985. Some of the most striking examples of mass displacements can be found in Africa. Millions of nomads and peasants were forced to settle in cities during the 1969–1974 drought in the Sahel, 500,000 during the floods of 1985 in Benin, and more recently hundreds of thousands in Nigeria (1994, 1999), Ghana (1995, 1999), Sierra Leone (1996), and Mozambique (2000). Many displacements also took place in the rest of the world, especially the Middle East, Central and South Asia, and South America. For example, it is thought that the periodic droughts plaguing northeastern Brazil between 1960 and 1980 contributed to the decisions of 3.4 million people to emigrate.

Studies in different parts of the world show that several general statements can be made concerning the migration responses to environmental disasters. First, it is clear that even the worst disasters are neither mechanically followed by migration nor are the unique cause of displacement. Economic, social, and political contexts play an important role in mitigating or accelerating flight. People who are regularly hit by catastrophic events, such as floods in Bangladesh, have developed sophisticated ways to cope with disasters without necessarily having to migrate (such as forecasting, warning systems, flood insurance, and relief and rehabilitation schemes). In other cases, the victims are simply too poor to flee, or the warning comes too late. This was the case for the chemical tragedy of Bhopal (1984) when, despite the severity of the accident leading to the death of thousands of people and illness for hundreds of thousands, there was virtually no population movement. In other cases, governments sometimes forcibly evacuate entire populations, as in the Chernobyl area for about 135,000 Ukrainians and in the Three Mile Island area for around 143,000 Americans.

Second, an important distinction can be made between sudden disasters (such as industrial accidents, pollution, hurricanes, earthquakes, and floods), which rarely generate large-scale long-lasting migration because people generally come back as soon as they can and show an impressive will to rebuild their homes and reestablish themselves, and slow changes of the environment (such as droughts, deforestation, sea-level change,

> TUVALU

Nine islands, totaling 10 square miles of land scattered across 500,000 square miles of ocean in the western South Pacific, constitute the independent republic of Tuvalu. Although remote and with a scant 11,000 inhabitants, Tuvalu has become highly significant to other nations in the environmental forum. Tuvalu is a prime example of the threat posed to maritime countries by the environmental upheaval of a changing climate. Tuvalu's highest point is 5 meters (16 feet) above sea level, but most of the island's land mass hovers at only 1 meter (3.2 feet) above the Pacific. Its people depend on subsistence farming and fishing. As average world temperatures increase, around Tuvalu water levels could rise 1.6–3.1 feet (50–95 centimeters) by 2100. As a result, Tuvalu could virtually disappear.

water scarcity, etc.), which more often, but not always, have enduring migratory consequences.

—Etienne Piguet

Bibliography

- Boyle, Paul J., Keith Halfacree, and Vaughan Robinson. *Exploring Contemporary Migration*. London: Longman, 1998.
- Burton, I., R. W. Kates, and G. F. White. *The Environment as Hazard*. New York: Guilford, 1993.
- Castles, Stephen. "Environmental Change and Forced Migration: Making Sense of the Debate." *New Issues in Refugee Research: UNHCR Working Paper 70* (2002). <http://www.unhcr.org/>.
- Unruh, John D., Marteens S. Krol, and Nurit Kliot. *Environmental Change and Its Implications for Population Migration*. Dordrecht: Kluwer Academic, 2004.

Guest Worker Programs and Migration—Western Europe and the Middle East

Europe in the post-World War II period, characterized by widespread destruction and displaced populations, required immediate economic and infrastructural reconstruction in order for nations to ensure the livelihoods of their citizens. As a result, Britain, France, and Western Germany

➤ JEAN-MARIE LE PEN AND THE NATIONAL FRONT IN FRANCE



Jean-Marie Le Pen, leader of the far right Front National party, waves in front of a banner declaring "Separation of school and state" at a rally in Paris in 1985. (Jacques Haillot/Corbis)

The fate of France's former guest workers and their descendants in French society has drawn considerable attention in French politics. Far Right nationalists, through the auspices of Jean-Marie Le Pen's Front National (FN) party, have brought increasing awareness to the debate over the position of immigrants and their children in French society. Le Pen was able to place second in the first round of presidential elections in 2002, illustrating the concerns of many French constituents over Muslim immigrants in France. The FN's position on imposing quotas on immigration, especially on people from North Africa and the Middle East, has proved to be controversial in domestic French politics. The party itself has linked the presence of immigrants in France with high unemployment and growing crime rates as well as with global Islamic terrorism. The FN consistently has portrayed immigration as a threat to French national identity and cultural values. While the FN has sought to develop a respectable image in French politics, Le Pen has continued to publicly make racist and anti-Semitic statements. This popular Far Right party in France is an example of European xenophobia at the turn of the millennium.

—Abraham O. Mendoza

brought in foreign guest workers from abroad in order to remedy labor shortages resulting from the war and the rapid expansion of their economies. Guest workers were expected to work temporarily and return to their native countries after a certain period. In the three-decade period known as the European Economic Miracle (1945–1973), guest workers contributed to the growth and expansion of the western European economy. However, in the midst of the global economic troubles of 1973 stemming from the global oil crisis, guest workers were seen as a threat to their host countries in both economic and racialized terms. Nonetheless, many guest workers had already settled in their respective homes and established families and roots in their local communities. As a result, both guest workers and their host nations had to adapt to political and social circumstances and negotiate the position of foreigners in a multicultural European society.

For Britain's postwar economic reconstruction, guest workers were recruited from former colonial dominions in Southeast Asia and the Caribbean. As members of the newly formed British Commonwealth of Nations (which included most of the former empire), these guest workers were allowed into Britain with the full rights of citizens. Blacks from the Caribbean and Muslims and Hindus from India, Bangladesh, and Pakistan were the most prevalent of the guest workers in Britain. From the outset, their position in British society was circumscribed to a second-class status in terms of living conditions and pay. Relegated to live and work in poor dilapidated areas of England's industrial sectors, such as London's East End and similar urban areas in the Midlands, Birmingham, and Liverpool, guest workers developed a sense of consciousness of their separate and unequal position in British society. Racial, cultural, and religious discrimination on the part of greater white society, which stigmatized British guest workers, encouraged these groups to mobilize socially and politically.

In the late twentieth century, British society had attempted to grapple with issues regarding its former guest workers by embracing multiculturalism. British Asians and blacks had become sizable minorities within the British Isles and had

in turn demanded social, political, and economic changes to ensure their prosperity and integration into greater British society. Disputes over housing, labor, education, and discrimination increasingly allowed British ethnic minorities to make inroads into British politics and institutions. However, while they adapted to their new homes, they retained their distinctive cultural and religious characteristics, which continues to make them suspect to many within the indigenous British population. The Muslim population in particular has been subject to increased suspicions after the July 7, 2005, London bombings by British Islamic terrorists.

France had conscripted foreign labor from its North African dominions during the interwar period (1919–1939), and these policies continued following the end of World War II. Spanish and Italian laborers had also been recruited from time to time, given the geographic proximity of their countries of origin. French recognition of their colonial subjects as French citizens granted them full civil rights within the French republic. However, the position of Algerians, which made up the bulk of guest workers in France, was similar to the positions of blacks and East Indians in Britain. Giant suburban housing facilities characterized by residential towers in enclosed areas became sites of intense guest worker migration. Segregated in these housing projects outside major metropolitan areas, guest workers were able to continue in their religious and cultural folkways unhampered by French culture, although they were subject to social and economic discrimination. However, the gradual deterioration of these housing projects and the growing crime related to the increasing poverty of these areas associated ethnic minorities with social ills in popular French consciousness. The rising social disparity between the native French population and the guest workers and their offspring gave rise to social tensions between both groups in the late twentieth and early twenty-first centuries.

The Federal Republic of Germany (West Germany) recruited guest workers (*Gastarbeiter*) mostly from Turkey but also from other parts of Europe such as Spain, Portugal, Yugoslavia, Greece, and Poland. The migrants, who were

mostly men, were allowed to work in Germany for a short period (one to two years) before returning home. Large numbers of these migrants did not return to their countries of origin, staying in Germany legally, and were eventually joined in Germany by their families. The children of *Gastarbeiters* were born in Germany but were not granted citizenship; instead, they were granted the right to reside (*Aufenthaltsberechtigung*). After they settled down and formed ethnic minority communities, the German government and society ignored the integration of the migrants. This eventually led to widespread educational, religious, and social discrimination of foreigners in West Germany. A significant factor contributing to the development of these problems was German birth laws, which did not automatically grant citizenship to those born in the country. Those born of foreign parents were accorded the nationality status of their parents. The largest foreign population in Germany was Turkish, and they were often characterized as Islamic and non-European and were subjected to overt discrimination and acts of racist violence.

An increasingly large German foreign population continues to struggle with integration into greater German society. Problems over social and economic conditions continue to plague the relationship between Germans and what are perceived to be its non-German populations. Turkish and Kurdish immigrants and their descendants, while living in Germany, continue to have ties to their homelands, which also make them suspect to German authorities in light of recent global international terrorism networks linked to German foreign nationals.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. London: Penguin, 2006.
- Panayi, Panikos. *Ethnic Minorities in Nineteenth and Twentieth Century Germany*. New York: Pearson Education, 2000.
- Ramdin, Ron. *Reimagining Britain: Five Hundred Years of Black and Asian History*. Sterling, VA: Pluto, 1999.
- Silverstein, Paul A. *Algeria in France: Transpolitics, Race, and Nation*. Bloomington: Indiana University Press, 2004.

Guest Worker Programs and Migration—Asia

Trans-Asian labor migration, a defining feature of Asian globalization prior to 1940, comprised mainly Chinese and Indian immigration to Southeast Asia and was quantitatively and qualitatively as significant as European transatlantic migration. Asian migration was consistent with industrialization in Europe and the demand for export production that strongly affected Southeast Asian economies and societies. Although migrant work-

ers were regarded as sojourners, they established diasporic communities in the colonies. After World War II and the decolonization process, unskilled labor migration halted for several decades and gave way to new patterns.

Since the 1980s Asia has reemerged as a major player in global migration in terms of its scale, diversity, and significance, and it is estimated that Asian migrant workers comprise about 33 million of total migrant stocks worldwide. The emergence of new regional migration patterns, the fast growth in the demand for professionals

ASIAN COUNTRIES—ESTIMATES OF STOCKS OF MIGRANT WORKERS IN OTHER COUNTRIES

Origin Countries	Number	Main Destinations	Year
Southeast Asia			
Burma/Myanmar	1,100,000	Thailand	2001
Thailand	340,000	Saudi Arabia, Taiwan, Myanmar, Singapore, Brunei, Malaysia	2002
Laos	173,000 *	Thailand	2004
Cambodia	200,000	Malaysia, Thailand	1999
Vietnam	400,000	Korea, Japan, Taiwan	2005
Philippines	8,083,815	Middle East, Malaysia, Thailand, Korea, Hong Kong, Taiwan	2004
Malaysia	250,000	Japan, Taiwan	1995
Singapore	150,000**	N/A	2005
Indonesia	3,500,000**	Malaysia, Saudi Arabia, Taiwan, Hong Kong	2004
Total	14,196,815		
South Asia			
India	5,000,000	Middle East	2005
Pakistan	3,180,973	Middle East, Malaysia	1999
Bangladesh	3,000,000	Saudi Arabia, Malaysia	2002
Sri Lanka	1,500,000	Middle East, Malaysia	2005
Nepal	4,000,000	Middle East, India, Malaysia	2003
Total	16,680,973		
North East Asia			
China	550,000	Middle East, Asia and the Pacific, Africa	2005
North Korea	300,000	China	2002
South Korea	632,000	Japan	2002
Japan	61,000	Hong Kong	2000
Total	1,543,000		

Notes: * undocumented ** documented

Source: Hugo, Graeme (2006) 'The Asia/Pacific Region' in B. Marshall (ed.) *The Politics of Migration: A Survey*, London: Routledge, Table 4, p. 136.

and skilled migrants in particular occupational categories, and the creation of subregional labor markets are all manifestations of the scale and diversity of migratory movements in the region. Key factors accounting for this development include a divergence in economic growth between countries, labor shortages due to demographic transformations and structural change, and the role of social networks in the migration industry.

Asian countries may be classified into three broad categories regarding migration: emigrant producers, immigration centers, and countries that combine both functions. The first category, emigrant producers, includes the Philippines, Bangladesh, India, Pakistan, Sri Lanka, Nepal, China, Cambodia, Burma, Laos, Vietnam, and Indonesia. South Korea, Japan, Taiwan, Singapore, Hong Kong, and Brunei fall into the second category, immigration centers, while Malaysia and Thailand are in the third category.

Asian labor migration may also be divided into two systems. The first involves predominantly low-skilled workers who are employed as guest workers in low-status and low-paid occupations in the Asian Tiger economies (Singapore, Hong Kong, Korea, Taiwan, Malaysia, and Thailand) and the Middle East. These workers are from South Asia (India, Bangladesh, Nepal, Pakistan, and Sri Lanka) and Southeast Asia (Indonesia, the Philippines, Burma, Thailand, and Vietnam). The key features of the guest-worker system include employment on a temporary rotation basis, recruitment through intermediaries, off-shore recruitment procedures, the provision of assisted passage for workers, repayment of advances through salary deductions, employment with a specified employer, fixed-term employment, and the obligatory return to the country of origin upon completion of the contract. The guest workers are also admitted under a variety of arrangements varying from bilateral agreements and memoranda of agreement to unilateral programs.

The second system involves knowledge workers and skilled professionals, predominantly from India, Bangladesh, Sri Lanka, Pakistan, and the Philippines, who go mainly to North America, Europe, and Australia but are also drawn to the Asian Tiger economies and to middle-income countries such as Indonesia. Most destination

➤ MIGRATION FROM THE PHILIPPINES

The Philippines is second only to Mexico as a labor exporter. At the end of 2003, more than 7.7 million Filipinos were temporarily or permanently living abroad. The Filipino migrants sent at least \$8.5 billion home in remittances in 2004.

countries have made policy adjustments to attract knowledge workers and some categories of skilled migrants and are admitting them for settlement. Some countries such as Australia, New Zealand, and Singapore also encourage overseas students who graduate from their universities to settle in a two-step migration process.

Finally, in the current geopolitical environment, the sharp increase in labor mobility and undocumented migration has coincided with more stringent immigration policies and tighter border controls by destination countries. In Malaysia and Thailand, which attract large numbers of undocumented migrants, the state has alternated between amnesties and regularization of undocumented migrants and mass deportations.

—Amarjit Kaur

Bibliography

- Athukorala, Prema-chandra, and Chris Manning. *Structural Change and International Migration in East Asia*. Melbourne: Oxford University Press, 1999.
- International Labour Office. *Labour and Social Trends in ASEAN 2007 Integration, Challenges and Opportunities*. Bangkok: International Labour Office, 2007.
- Kaur, Amarjit. *Wage Labour in Southeast Asia since 1840: Globalisation, the International Division of Labour and Labour Transformations*. Basingstoke, UK: Palgrave Macmillan, 2004.
- Kaur, Amarjit, and Ian Metcalfe, eds. *Mobility, Labour Migration and Border Controls in Asia*. Basingstoke, UK: Palgrave Macmillan, 2006.
- Martin, Philip, Manolo Abella, and Christiane Kuptsch. *Managing Labour Migration in the Twenty-first Century*. New Haven, CT: Yale University Press, 2006.

Guest Worker Programs and Authorized Migrations—Americas

Guest worker programs in the Americas range from government-sanctioned unskilled worker programs through bilateral agreements (U.S.-Mexico) and the manipulation of visa programs to attract high-skilled labor from the Third World for lower wages than the domestic work force (U.S.-India, U.S.-China U.S.-Argentina). Toleration of itinerant worker populations fluctuating between two neighboring countries (Argentina-Bolivia, Venezuela-Colombia), while not an official

► SILICON VALLEY AND INDIAN MIGRANT LABOR

In the late 1990s and culminating in the year 2000, the dot-com bubble officially burst as high-tech stocks plummeted and dozens of software firms went under, particularly in California's Silicon Valley. Drove of high-skilled professionals found themselves out of jobs due to mass dismissals and company bankruptcies. Thousands of dollars in stocks, often offered as perquisites with employment, rapidly vanished in value over a short period of time. As American corporations sought to restructure themselves to remain competitive and profitable, the pursuit of foreign workers became a tactic that enabled U.S. corporations to lower their labor costs tremendously.

East Indian guest workers, often with graduate degrees from Indian universities, became readily available. They were brought in to fill a growing number of positions in the early 1990s, enabling companies to avoid paying large salaries to domestic workers and to depress the wages of those who remained. American high tech firms continue to advocate the HB-1 visa program, even to the extent of requesting governmental reforms to allow greater numbers of foreign workers into the country. In a letter to the U.S. Congress, Hewlett-Packard CEO Carly Fiorina stated: "To remain competitive in the future and to help keep jobs here in the United States, U.S. employers must be able to recruit and retain highly educated workers, many of whom have been educated and trained at our own universities." This point of view illustrates the need of the U.S. high tech sector for lower-wage foreign labor to ensure global competitiveness and high profits.

—Abraham O. Mendoza

guest worker program, serves the same function. These authorized migration flows within the Americas or to the Americas from outside the Western Hemisphere are symptomatic of the increasing economic interdependence of world regions following the end of World War II. They are characterized by the relationship between the expansive economy of the host country versus the declining economy of the immigrants' country of origin.

The most documented example of guest worker programs in the Americas is that of the United States and Mexico known as the Bracero Program. During World War II the United States faced a labor shortage in the agricultural sector due to war mobilization, characterized by governmental economic planning and the absorption of the domestic labor force into military forces and war industries. This resulted in the creation of the U.S. Bracero Program (1942–1964) along with the Mexican government, which allowed Mexican guest workers to enter the United States to work as farm laborers for a fixed period of time. Agribusiness in the United States was obligated to provide room and board, while the U.S. government assumed the responsibility for recruitment and transportation. These programs continued well into the 1960s due to the reliance of U.S. agribusiness on cheap labor, which resulted in profits for management and wage depression that weeded out domestic agricultural workers.

Relatively higher wages than those achievable in Mexico attracted many Mexican laborers to seek their fortunes in the United States. However, increasing reliance on growing numbers of undocumented workers, who were cheaper to hire than braceros, and disputes over the living and working conditions of guest workers eventually led to the end of the Bracero Program. In addition, domestic farm laborers, particularly the unionized United Farm Workers under Cesar Chavez, protested the continuance of the program as the cause of wage depression in the agricultural sector. Nevertheless, this program contributed to future migration flows from Mexico into the U.S. Southwest and California, as prior migrants established substantially large Mexican communities throughout this region. Current agricultural guest worker programs in-

volve contracts between individuals and American corporations that utilize work visas for short-term work in the United States.

Another form of authorized labor migration prevalent in the Americas is characterized by the host country's official toleration of migrant labor from neighboring countries that contributes to the economy of the host country. Two cases of this phenomenon are Bolivians in Argentina and Colombians in Venezuela. While these cases are not structured government guest worker programs, the reliance on these migrant workers in unskilled labor sectors is seen as necessary to the expansion of the national economy by both host countries. Bolivians migrate to Argentina in order to fill unskilled labor needs in construction, trade, and industry. Given the proximity of the two countries, most Bolivian workers return to Bolivia after the work season is over or after they have saved enough money to purchase land or start a business. Colombians migrate to Venezuela for the same reasons that Bolivians migrate to Argentina: to escape the dire economic situation at home and to contribute to the needs of their families by sending back remittances from their wages. In both cases, migrant workers live and work amid enclaves of their fellow nationals, maintaining cultural networks and a sense of community, and return home seasonally or permanently. The host countries benefit from filling their labor shortages in low-skilled employment at low wages, while the source countries benefit from decreasing their domestic labor surpluses and ensuring a flow of capital in the form of remittances. Given the unofficial nature of these migrations, there are no official estimates on the population of these itinerant workers. Moreover, while there is an awareness of the situation and while politicians such as Hugo Chavez vocalize against it, not much is done, and it continues to be generally tolerated. This is also characteristic of the transnational economic relationship between the United States and Mexico in the early twenty-first century.

The increased globalization of world markets makes particular economic sectors vulnerable to foreign competition not only in the form of products but also in labor. The U.S. H-1B visa program, modified by the Immigration Act of 1990 in delineating the qualifications for foreign

individuals to be allowed entry for employment purposes, allowed various corporations, particularly in the high tech fields of computers and biotechnology, to bring in guest workers from South Asia and China who are paid at lower wages than the domestic workforce, resulting in the alleged displacement of the latter. In the early 1990s California experienced a widespread recession during which the computer industry in Silicon Valley restructured itself to remain competitive in the world market by laying off tens of thousands of domestic workers. Growing reliance on foreign high-skilled labor allowed companies to maintain high productivity levels with fewer employees while paying lower wages. Foreign recruitment for U.S. positions and the development of subsidiary branches in the countries of origin of Asian migrant labor allowed U.S. high tech firms to develop a steady, well-trained transnational labor supply, also allowing for the outsourcing of certain positions to these foreign locales. The 1990s' high tech industries economic crisis (or dot-com bust) and global recession led to increasingly larger numbers of H-1B workers in the United States and further outsourcing abroad in the high tech industry. Some domestic workers blamed H-1B laborers as the source of their unemployment rather than the underlying structural issue of globalizing multinational corporations seeking to increase their profit margins by utilizing worker visa programs, much like U.S. agribusiness firms did with the Bracero Program.

Although high-skilled migrant workers from East Asia, China, and Argentina benefit, earning higher wages in the United States than in their countries of origin, and have the potential to establish permanent residency, their restricted ties to employers as a condition of establishing permanent residence has all but ensured their silence about any negative workplace conditions or discriminatory attitudes they may confront.

—Abraham O. Mendoza

Bibliography

Castro, Max J., ed. *Free Markets, Open Societies, Closed Borders? Trends in International Migration and Immigration Policy in the Americas*. Coral Gables, FL: North-South Center Press, University of Miami, 1999.

Gonzalez, Gilbert G. *Guest Workers or Colonized Labor? Mexican Labor Migration to the United States*. Boulder, CO: Paradigm, 2006.

Lowell, B. Lindsay, ed. *Foreign Temporary Workers in America: Policies That Benefit the U.S. Economy*. Westport, CT: Quorum, 1999.

Pessar, Patricia R., ed. *When Borders Don't Divide: Labor Migration and Refugee Movements in the Americas*. New York: Center for Migration Studies, 1988.

International Exchange of Students in Higher Education

While going abroad to study at a university in a different country is certainly not a phenomenon of the twentieth century, the flow of students across international borders increased signifi-

cantly since the end of World War II. The integration of European countries into the political and military camps of the Cold War as well as the competition for influence among the non-aligned countries in Africa and Asia furthered and limited at the same time the growth of exchange programs and study-abroad opportunities for individuals worldwide. The U.S. Department of State's Fulbright Program enacted in the years immediately after the end of the war provided an innovative and comprehensive framework for international academic exchange. Between 1949 and 1971 a total of 67,842 non-U.S. citizens were given the opportunity to work and study with the financial support of this program in the United States, while 36,179 U.S. citizens were enabled to go abroad. More than half of the support granted by the Fulbright Program was directed toward students.

While there was no comparable formalized exchange program for the socialist countries, a remarkable number of students from Eastern Europe went to the Soviet Union for higher education. Unfortunately, exact numbers are not available. In contrast to Western exchange programs, the student exchange within the Comecon (Council for Mutual Economic Assistance) was largely a one-way street. The largest flow of students occurred from East Germany, Czechoslovakia, Bulgaria, and Cuba to the Soviet Union. In the 1980s more than 60,000 students went to the Soviet Union on an annual basis to study at its many universities. East German students of Russian language and literature (future elementary and high school teachers) were, for instance, required to spend one of their five years of university training at a university in the Soviet Union. After the disintegration of the communist system, this pattern virtually disappeared. The shift in language education in Eastern Europe from Russian to English significantly diminished, at least for the time being, the need for Russian-language immersion programs. Since the collapse of the Soviet Union, students from Eastern Europe instead sought university experiences in Western Europe and the United States. More recently, the number of international students who study at Russia's universities, however, seems to have slowly rebounded and increased beyond the scope of the Cold War period. How-

TOP HOST COUNTRIES FOR EXCHANGE STUDENTS

Host countries of international students with more than 10,000 international students in 2005

Country	Number of Students			
	1980	1990	2000	2005
United States	325,628	407,529	451,935 (in 1999)	590,158
United Kingdom	56,003	70,717	222,936	318,399
Germany	61,841	105,269	187,033	259,797
France	114,181	136,015	137,085	236,518
Australia	17,694	28,993	105,764	207,264
Japan	–	23,816	59,691	125,917
Soviet Union/ Russia	62,942	66,806	41,210 (in 1999)	90,450
South Africa	–	–	–	50,449
Italy	27,784	21,416	24,929	44,921
Canada	32,303	35,187	40,033 (in 1999)	–
New Zealand	–	–	8,210	40,774
China	–	–	–	36,386 (in 2006)

Source: Altbach, *Comparative Higher Education*, p. 164;
Statistic UNESCO Table 18: International Flows of mobile
students at the tertiary level (<http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx>)

—Thomas Adam

ever, virtually all of these international students for whom we have information for 2005 came from former Soviet republics in Asia and Europe. In recent years, China as well has moved up significantly as a host country for foreign students and is now the fifth most popular country for foreign students behind the United States, the United Kingdom, France, and Germany. While only 39,000 foreign students were in China in 1997, in 2007 there were 195,000 students from Asia and the West.

As of 2005, Europe and the United States were still the major destinations for most students from Africa and Asia. There are, however, significant differences in the makeup of the foreign student population in France, the United Kingdom, and the United States. While nearly half of all foreign students in France are from Africa, Asian students form much larger groups in the United Kingdom and especially in the United States, where they represent nearly two-thirds of all foreign students. While the flow of students is still directed from the South to the North, exchanges within Africa and Asia should not be overlooked. Kyrgyzstan, China, and South Africa appear to have become new destinations for students from these continents.

The United States, the United Kingdom, and France represent a challenge to the diplomatic expectations of such exchanges. While they receive the largest numbers of international students from all over the world, they send only a very small fraction of their own students abroad. The exchange between the United States and Japan is a case in point: while in the 1990s Japan sent about 36,000 students to the United States annually, only 1,300 American students went to Japan for purposes of a university education. The same is true for China. While in the academic year 2001–2002 a total of 63,211 Chinese students went to the United States, only 2,942 American students went to China (as of 2007, however, that number increased to 11,064). When American students go abroad, they still seem to prefer the United Kingdom over any other country. In the academic year 2000–2001, 30,289 American students went to the United Kingdom compared with 16,127 who went to Italy, 16,016 who went to Spain, and 11,905 who went to France. Furthermore, in contrast to stu-

dents from Africa and Asia who come to their host countries in order to receive a degree, European and American students go abroad for a shorter period of time and receive their degrees from the institution in their home country. The accelerated European integration since the fall of communism in Eastern Europe has contributed to the integration of national university systems and the furthering of European exchange programs. European Union initiated programs such as ERASMUS, TEMPUS, and SOCRATES provide unprecedented opportunities for students to spend some time in another country.

International students tend to concentrate in specific fields, especially in natural sciences and engineering. Such students make up about half of all graduate students in engineering and management at many universities in the United States.

—Thomas Adam

Bibliography

- Altbach, Philip G. *Comparative Higher Education: Knowledge, the University, and Development*. Westport, CT, and London: Ablex, 1998.
- Altbach Philip. G., David H. Kelly, and Y. G-M. Lulat. *Research on Foreign Students and International Study: An Overview and Bibliography*. New York: Praeger, 1985.
- Browner Bevis, Teresa, and Christopher J. Lucas. *International Students in American Colleges and Universities: A History*. New York: Palgrave Macmillan, 2007.
- Hvistendahl, Mara. "China Moves up to Fifth as Importer of Students." *Chronicle of Higher Education*, November 19, 2008, p. A1.
- Lewin, Tamar. "Study Abroad Flourishes, with China a New Hot Spot." *New York Times*, November 17, 2008, p. 19.
- Li, Cheng. *Bridging Minds across the Pacific: U.S.-China Educational Exchanges, 1978–2003*. Lanham, MD: Lexington Books, 2005.

Chinese Diaspora since 1945

While it is the largest of all diaspora communities, the size of the total Chinese population outside China is a matter of some dispute. Estimates of Chinese who live in 140 countries outside the People's Republic of China (PRC) and Taiwan range higher than 60 million. This represents an increase of three to five times during the previous

► THE VIRTUAL DIASPORA

The geographical Chinese diaspora is mirrored in the online world. On the Internet, Web sites of the Chinese diaspora highlight traditional and contemporary concerns. Issues examined on these monolingual, bilingual, and sometimes trilingual Web sites include immigrant Chinese youths, women, families, and clans; social services; political advocacy; newspaper and television journalism; antidiscrimination struggles; preservation of community traditions; history; business networks; philosophy; religion; health; self-cultivation; and the arts. Reflecting the global distribution and local adaptation of the Chinese diaspora in the twenty-first century, languages used on diaspora Web sites include English, Chinese, Tagalog, Bahasa, Japanese, French, Spanish, Portuguese, German, Dutch, Polish, and Hungarian. As with other organizations with an Internet presence, ethnic Chinese individuals and associations sponsoring Web sites may not be fully representative of their communities, but they are making their presence, pride, and contributions more salient.

—*Vincent Kelly Pollard*

70 years. Of these expatriates, 80 percent reside in Southeast Asia, where 7 of the 8 countries with the largest ethnic populations are located. Chinese also reside in North America, the Caribbean, and South America as well as in Europe and Africa. In the South Pacific, 1990's concentrations of Chinese ranged from under 50 in Tonga to 1,000 in New Caledonia to 35,000 in New Zealand. Most Chinese migrants after World War II trace their ancestry to villages, towns, and cities in the PRC, the Hong Kong Special Autonomous Region of the PRC, or the Republic of China on Taiwan. Ancestors of Chinese diaspora came primarily from southern China, where families and large clans have been stronger than elsewhere.

On October 1, 1949, the establishment of the PRC and the flight of the Guomindang (Nationalist Party) from mainland China to Taiwan divided Chinese migrants. Instilling pride in some, it split Chinese communities outside China as their leaders aligned either with Taiwan or Bei-

jing. While social upheavals produced waves of political refugees, impoverished farmers left to find a better life, entrepreneurs sought to acquire wealth, and others sought adventure. During the 1960s and 1970s, loyalties were tested again as governments of countries with Chinese minorities began switching diplomatic recognition from Taipei (Taipei) to Beijing. Capping this trend in 1971, the PRC replaced Taiwan in the United Nations. Later, as Taiwan democratized and held its first three presidential elections (1996, 2000, and 2004) in the face of verbal and military threats from the PRC, divisions reopened in the communities of the Chinese diaspora, especially as migration from Taiwan also continued.

The diaspora reveals a variety of cultural interactions with host countries. The main patterns include selective retention of traditional Chinese customs, adaptation of customs to new localities, changes in host societies, and even political gains for governments in Beijing, Taipei, or both. Current Chinese-language designations for Chinese emigrants and their descendants have a range of political and cultural connotations: *Huaqiao* (Overseas Chinese, that is, Chinese citizens who reside outside China), *Huaren* (ethnic Chinese), and *Huayi* (people of Chinese descent). And for some, the English phrase “Chinese diaspora” seems neutral. By the twenty-first century, a majority of Chinese migrants and their children were still speaking Cantonese, Fujianese, or a newly adopted language at home more often than Putonghua, China's national language.

The stereotype of apolitical Chinese migrants is not a complete picture. Descendants of Chinese migrants have risen to positions of government leadership. In 1988 Corazon Cojuangco Aquino visited her family's ancestral home in Hongjian Village near Zhangzhou City, Fujian Province, in southern China. Other Chinese Filipinos such as Henry Sy, chief executive officer of SM Enterprises, have prospered in the business world. And in the United States, Canada, and Indonesia, Chinese have organized politically to fight against discrimination. In the United States, for example, discrimination against Asian immigrants began to shift in the 1940s as civil rights standards became more inclusive. Under

pressure from a wartime alliance with China in 1943, Congress repealed the Chinese Exclusion Act, the sixth such anti-Chinese statute since 1882. Its repeal facilitated access to citizenship for Chinese residing in the United States. Civil rights legislation in 1964 and 1965 and immigration reforms in 1965 and 1968 also benefited Chinese in the United States. Individual Chinese and Chinese American organizations continued to protest against racial discrimination in the streets and in the courts. Stimulated by this new legal and social milieu, the U.S. Supreme Court decision *Lau v. Nichols* required the State of California to provide bilingual education to Chinese children not yet proficient in English.

Despite variable distances from China, languages spoken, social class, and citizenship, a globally dispersed Chinese diaspora continues to expand and adapt in the twenty-first century.

—*Vincent Kelly Pollard*

Bibliography

- Armstrong, M. Jocelyn, R. Warwick Armstrong, and Kent Mulliner, eds. *Chinese Populations in Contemporary Southeast Asian Societies: Identities, Interdependence, and International Influence*. Richmond, Surrey, UK: Curzon, 2001.
- Pollard, Vincent K. "From Southern Seas to Cyberspace: Chinese Diaspora Websites in South East Asia and the South Pacific." *Chinese Southern Diaspora Studies* 1 (2007): 138–147.
- Poston, Dudley L., Jr., Michael Xingxiang Mao, and Mei-Yu Yu. "The Global Distribution of the Overseas Chinese around 1990." *Population and Development Review* 20(3) (September 1994): 631–645.

Immigration to Israel, 1948–2008

The Jewish population in Palestine rose from approximately 50,000 to 600,000 between 1880 and 1948. That figure has risen to over 5 million Jews in Israel as of 2008. Prior to the establishment of the State of Israel, the vast majority of Palestine's Jews arrived in the 1930s following the U.S. decision to curb immigration from Eastern Europe in the 1920s and the rise of Adolf Hitler in Germany in 1933. The rapid increase in Jewish immigration to Palestine during the 1930s was one of the catalysts for the Palestinian revolt against the British and Zionists during

1936–1939 and led to the British introducing the White Paper of 1939, which established specific quotas for Jewish immigration. Jews continued to arrive, many illegally, but it was not until the Jewish State of Israel was proclaimed on May 15, 1948, and subsequently won a decisive military conflict against its Palestinian coinhabitants and its Arab neighbors that Jews were allowed to move to the area en masse. The new State of Israel constituted approximately 78 percent of Mandate Palestine.

Following the 1948 War and the birth of the Palestinian refugee problem—with as many as 700,000 Palestinians displaced—the new State of Israel included approximately 750,000 citizens, of whom 150,000 were non-Jewish Arabs. Of the approximately 600,000 Jewish citizens, about 90 percent claimed European heritage, and 10 percent were from the Islamic world. In terms of its Jewish population, this would be the most European period in Israel's existence, although Israel is often assumed to be a fortress of European Jewry in the Middle East. During Israel's first decade of existence the state opened its doors, sometimes apprehensively, to mass immigration. Between 1948 and 1953 Israel's Jewish population more than doubled, and the proportion of European Jews declined precipitously. While Israel gained approximately 300,000 Jews of European descent, mostly Holocaust survivors, it also gained approximately 300,000 Jews from Asia and Africa, mostly from Arabic-speaking countries who were escaping anti-Jewish sentiment, which in many cases were new developments, from Arab nationalists, many of whom had begun to conflate Zionists and local Jews and were enraged by the plight of the Palestinians and the weakness of their own national armies in relation to Israel's. Thus, by the mid-1950s the non-European Jewish percentage of the Jewish population was nearing 33 percent.

It was also in this period when ethnic labels began to come to the fore in Israel with Jews from the East, which basically meant the Islamic world, being called, for the first time, Mizrahi and Jews from Europe being called Ashkenazi, a term that had long existed. Ironically, many Sephardic Jews, meaning Jews who traced their roots to Islamic Spain and who were not similar culturally to Ashkenazi or Mizrahi Jews, were often

subsumed under the Mizrahi category. Many Mizrahi and Sephardic Jews languished in development towns and transit camps established by the Israeli state, mostly near dangerous borders and away from the urban centers of Tel Aviv and Haifa.

During the late 1950s and 1960s Israel continued to receive tens of thousands of immigrants from the Islamic world, especially in the aftermath of Israel, Britain, and France's attack on Egypt in 1956 and the total Israeli victory in the 1967 War. Islamic nations that had housed significant Jewish populations prior to Israel's existence such as Morocco, Algeria, Yemen, and Tunisia saw these populations dwindle between 1948 and 1970.

After the 1967 War, in which Israel captured the West Bank and the Gaza Strip, thus in some sense reuniting Mandate Palestine, Israel became the occupying power of the majority of the Palestinian people. While Israel did not grant the recently conquered Palestinians citizenship, many Jews, concerned with high birthrates among Palestinian citizens in Israel and fearing future attacks from numerically superior neighbors, began looking for new sources of Jewish immigration. The only parts of the world that housed significant Jewish populations were Western nations such as the United States, Canada, Britain, France, and Argentina, all of whose Jews were integrated and on average were far more well off economically than the average Israeli; as of the 1960s, the Soviet Union's government refused to allow Jews to emigrate to Israel or the West.

In the late 1960s Israeli leaders began to lobby the Soviet Union to ease exit restrictions, a task that was made more difficult after the Soviets cut off diplomatic ties with Israel during the 1967 war. Since Israeli-Soviet relations were at a low, Israeli leaders used their clout with Jewish and pro-Israeli Christian groups in the United States to try to force the Soviet Union to change its policies. Although the Soviets never allowed large-scale emigration, small groups of interested Soviet Jews began to leave their homes for Israel in the 1970s and 1980s. Another minor source of immigration in the 1980s and early 1990s was Ethiopian Jews, whose arrival in Israel was much publicized. Between 1989 and 2000

around 1 million former Soviets migrated to Israel. While Israeli leaders were pleased, the continued high rate of Palestinian births compared to Israeli Jewish births, both inside Israel and in the Occupied Territories, caused many of these leaders to fear for future demographics. In 2004, Prime Minister Ariel Sharon issued a public call for French Jews to move to their "natural homes" in Israel, causing a brief crisis between Israel and France. While no large-scale migration has yet come of this, events such as this indicate Israeli leaders' hope that Western Europe, where anti-Semitism is on the rise, may soon be a source for significant Jewish immigration.

As of 2008 Israel's population is 7.1 million, of whom 5.5 million are Jewish and 1.6 million are either Muslim or Christian. Furthermore, Israel's Jewish population, after the predominantly Ashkenazi Russian migration to Israel, is approximately 50–60 percent Ashkenazi and 40–50 percent Mizrahi/Sephardic, though there has been considerable intermixing in recent years. Israel, which at the times of its creation made up about 4–5 percent of world Jewry, now accounts for more than 40 percent of that total and according to recent statistics now even contains more Jews than the United States. The census for 2000 indicated that the United States was home to 5.2 million Jews, a figure that many scholars have argued is low.

—Jonathan Sciarcon

Bibliography

- Buwalda, Petrus. *They Did Not Dwell Alone: Jewish Immigration from the Soviet Union, 1967–1990*. Baltimore: Johns Hopkins University Press, 1997.
- HaCohen, Dvora. *Immigrants in Turmoil: Mass Immigration to Israel and Its Repurcussions in the 1950s and After*. Ithaca, NY: Syracuse University Press, 2003.
- Morris, Benny. *Righteous Victims: A History of Zionist-Arab Conflict, 1881–2001*. New York: Random House, 2001.

Illegal Immigration, 1945–Present

Illegal immigration is considered among the most important issues of contemporary concern in the United States and Western Europe, causing considerable controversy and debate within

these societies in regard to immigration policies, citizenship, and human rights. The phenomenon of globalization further complicates the issues in regard to global illegal immigration given the immense growth in international economic networks, trade, and labor migration. Furthermore, the need for cheap labor in Western countries may cause many to turn a blind eye to the abuse and exploitation that illegal immigrants suffer in their migration, living, and working conditions, often deprived of any viable civil rights given their unlawful status in another country. Concerns over whether undocumented workers should be granted amnesty, permanent residency, and ultimately citizenship divide both sides of the political spectrum. Debate over whether these workers contribute or usurp jobs from natives or whether they overload state resources or pay into them further complicates the debate.

The United States currently contains a considerable population of undocumented workers, which has led to significant political and economic debates regarding their future legal status. As of 2008, an estimated population of 6 million to 11 million so-called illegal aliens, or undocumented workers, lived in the United States. The social and economic impact of these itinerant immigrants, whether Latin Americans, East Asians, or Middle Easterners, has been a polemic topic of debate. Various conservative organizations, think tanks, and political pundits allege that undocumented immigrants contribute to the growth in crime rates, wage depression, loss of jobs for native unemployed, and millions of dollars wasted in social and educational programs at the local, state, and federal levels. Solutions suggested by these political groups include tougher policing of the hiring of undocumented workers, ensuring tougher border controls, or outright deportations en masse. Immigrant advocacy organizations argue the opposite, that itinerant workers only do the jobs Americans do not want to do, contribute to the expansion of the U.S. economy, and pay far more into the system than they take. Solutions posed by these advocates for immigrants include developing stringent legal immigration policies, collaborating with foreign governments from the immigrants' countries of origin to ensure the economic and social well-

being of potential illegal immigrants, or offering outright blanket amnesty.

Contemporary Europe also contends with public debate over illegal immigration from Africa, the Middle East, and Asia and from nations within the European Union. Countries such as the United Kingdom, the Netherlands, France, Spain, Italy, and Germany have significantly large populations of undocumented workers. Countries with deficient internal controls, such as the United Kingdom, Italy, Spain, and the Netherlands provide easy opportunities for undocumented immigrants to enter the country. However, countries with strict policies regarding immigration such as Germany and Sweden have made illegal immigration nearly impossible. Similarly to the United States, undocumented workers are accused of taking jobs from native unemployed, contributing to rising crime rates, and taking advantage of social programs of the welfare state. They are credited with helping the economic expansion of their host countries and doing the jobs that Europeans do not want to do. Racist discourses and xenophobia often characterize the attacks on illegal workers, evidence of growing intolerance toward the ethnic and religious composition of the immigrant communities.

The perils associated with illegal migration, not to mention the living and working conditions that such migrants are exposed to in their host countries, make the life of an illegal immigrant dangerous, difficult, and often tragic. Migrants to the United States are often smuggled across the Mexican border by so-called coyotes who pack immigrants in the backs of trucks or in the trunks of cars. Such migrants are exposed to theft, abuse, being used as drug mules, and rape on their journey. Undocumented workers from Latin America suffer untold hardships on their way to a better life. Significant numbers have died from exposure and starvation in the deserts of the U.S. Southwest. However, two-fifths of illegal immigrants in the United States were at one time in the country legally but decided to overstay their visas, thereby becoming undocumented.

In Europe some illegal immigrants endure similar hardships while being smuggled across borders, while others take advantage of lax

border controls to enter without too many complications. In Europe and the United States such immigrants acquire work in low-skilled employment for wages far lower than those paid to native workers yet comparatively better than that available in their countries of origin. Frequently they are taken advantage of by their employers due to their lack of civil rights as undocumented aliens. Some of them are forced to work illicitly as prostitutes or as slaves to pay off their debt to the criminal organization that has smuggled them into the country. Others are exposed to work in the horrendous, near slave-like conditions of clandestine sweatshops, exploited through long hours, low pay, and physical abuse.

The debate concerning the position of undocumented workers in both the United States and Europe concerns issues of nationality, citizenship, and human rights. Accusations leveled at undocumented workers range from a disregard for immigration laws to attempts to disrupt the cultural and ethnic makeup and hegemony of the core nationality of the host country. Amnesty and immigrant advocacy groups counter such arguments by dispelling them as racist and bigoted and calling for widespread amnesty and the granting of residency or even citizenship to undocumented immigrants, calling into question the greater issue of what constitutes citizenship and to what extent it depends on birth, ethnicity, or nationality. Questions concerning human rights abuses also enter the debate, as the extent to which host governments tolerate such populations of illegal migrants as economically necessary contributes to their exploitation and position as second-class citizens.

—*Abraham O. Mendoza*

Bibliography

- Buchanan, Patrick J. *State of Emergency: The Third World Invasion and Conquest of America*. New York: St. Martin's, 2006.
- Dudley, William, ed. *Illegal Immigration: Opposing Viewpoints*. San Diego: Greenhaven, 2002.
- Düvell, Franck, ed. *Illegal Immigration in Europe: Beyond Control?* New York: Palgrave Macmillan, 2006.
- Yoshida, Chisato, and Alan D. Woodland. *The Economics of Illegal Immigration*. New York: Palgrave Macmillan, 2005.

Global Anti-Immigration Movements

The surge in immigration from postcolonial developing countries to the developing world since the end of World War II has increasingly shaped the culture and society of the receiving countries of much of the West. In the immediate postwar period as this occurred, certain segments of the national majority (ranging from racists and nationalists to socialists and labor leaders) saw this trend as a threat to national ethnic identity and secure employment for the indigenous population. While race riots and ethnic tensions, particularly in Western Europe, marked the initial years of immigration, a major economic downturn in the 1970s triggered massive resistance to the continued flow of immigration. From the 1990s until today, restrictive immigration legislation, the abandonment of government-arranged guest worker programs, and increased scrutiny of asylum applications have become tactics to stem the immigrant influx. Anti-immigration movements throughout much of the developed world have sought to protect the domestic labor force from inexpensive immigrant labor and to prevent the alleged draining of the national welfare state by foreigners. These movements are sometimes characterized by racist and xenophobic attitudes.

From 1945 to 1973, guest workers, ex-colonial subjects, and asylum seekers, many of them non-Europeans, were welcome throughout much of Western Europe (particularly in Britain, France, and West Germany), Canada, Australia, and the United States and were seen as beneficial to economic expansion. In addition, asylum seekers (mostly Europeans) from the Soviet-controlled Eastern Bloc were received with open arms in the midst of the Cold War under the conditions set by the United Nations Convention Relating to the Status of Refugees of 1951. From the late 1950s to the mid-1970s, growing problems related to crime and poverty within ethnic enclaves in major European cities (i.e., London, Amsterdam, and West Berlin) increased tensions between immigrant communities and indigenous ethnic nationals. The growing number of asylum seekers from the developing world, no

longer mainly Europeans, also created racial tensions that had previously been associated only with the United States. This led to the growing popularity of nationalist Far Right movements, such as the National Party in Britain, the National Front in France, and multiple neo-Nazi groups in West Germany.

With the end of economic prosperity in the wake of the OPEC oil crisis in 1973, many developed nations immediately created controls on immigration, effectively limiting it to a trickle. Blamed for taking jobs from native workers or for living off the welfare state, immigrants were increasingly marginalized in their new home countries. In the mid- to late 1970s, West European nations placed more restrictive controls on immigration, thereby ending most non-European immigration. Asylum seekers were accepted in smaller numbers, as local nationals threatened violence if higher numbers were taken in at state expense. In the United States, government-arranged Mexican guest worker (*Bracero*) programs were terminated as a result of the actions of agricultural labor unions, such as Cesar Chavez's United Farm Workers (UFW), to prevent wage depression in the late 1960s and early 1970s. These initial reactions resulted in the massive growth of illegal immigration on a global scale, usually operated by international criminal organizations specializing in human smuggling. This widespread problem now plagues much of the developed world from Britain to Japan.

From the 1980s to the present, problems over illegal immigration have resulted in tougher border enforcement and controls, most typically along the U.S.-Mexican border and the states on the extremities of the European Union, making the trek into the developed world much more dangerous and expensive for illegal immigrants seeking work and/or asylum. The existing populations of illegal immigrants within host nations were either readily absorbed through amnesty or readily deported, depending on their legal or economic status. Controversial legislation, such as California's Proposition 187 in 1994 that denied state benefits and education to illegal immigrants, characterized many popular local initiatives that addressed the concerns expressed in larger national debates over immigration.

Debates that pit the rights of refugees against the rights of nationals have made international immigration from the impoverished South to the more affluent North a polemic issue in most developed nations. Groups such as Amnesty International, advocating for the rights of immigrants and asylum seekers, have sought to allow greater numbers of destitute immigrants into receiving nations, while the business sector in much of the developed West, for its own ends (inexpensive labor), has sought the same goals. These pro-immigration factions provoke anti-immigration forces, ranging from racists who blame immigrants for growing urban crime rates to unemployed laborers fearful of losing jobs to immigrants willing to work for less. Political parties of the Center Right, such as the Conservatives in Britain, Republicans in the United States, and Liberals in Australia, typically adopt anti-immigration platforms, albeit on a more moderate scale than that of the Far Right, which typically seizes a more racist or culturally exclusionary agenda.

While xenophobia (fear of foreigners) does characterize many of the anti-immigration movements, economic, social, and cultural concerns also play a part in their widespread appeal. Nationally and regionally based immigration disputes continue, such as those centered on enforcing the use of the national language for immigrants or whether to fund education or medical expenses for undocumented workers and their families. Such disputes also fuel larger debates over the goals of immigration, such as whether a state's goal should be to integrate and assimilate immigrants or establish an often segregated multicultural society. The September 11, 2001, terror attacks in New York and Washington, D.C., and subsequent attacks in Europe added fuel to these debates, particularly when it became apparent that many terrorists come from places such as London, Paris, and Berlin, cities with large segregated Muslim populations.

—Abraham O. Mendoza

Bibliography

Huysmans, Jef. *The Politics of Insecurity: Fear, Migration, and Asylum in the E.U.* New York: Routledge, 2006.

Triandafyllidou, Anna. *Immigrants and National Identity in Europe*. New York: Routledge, 2001.

Immigration Laws

At the turn of the twenty-first century there were about 160 million people in the world living as immigrants, a development that post-1945 immigration laws helped produce. The direction of immigration policy worldwide has undergone several changes since World War II. The effects of these changes are most visible in the realm of international affairs, especially the relations between immigrant-sending and immigrant-receiving nations, and in the domestic political debates in receiving countries over the issue of social cohesion.

While the volume of immigration worldwide reached record levels after World War II, the

basis of immigration policies in receiving countries has generally shifted away from the open door philosophy of indiscriminately admitting migrants toward an ethos of greater selectivity. The two criteria most commonly used to assess the suitability of prospective immigrants have been the contribution they can make to the receiving country's economy and their potential for assimilating into the host society. A third criterion that has become an increasingly prominent component of immigration legislation in numerous countries during the post-1945 era is that of family reunification. In the United States, for example, the Immigration and Nationality Act of 1952 introduced preferences both for family members of U.S. citizens and for skilled migrants. However, one means of selection that has eventually been abandoned by various states is that of excluding migrants on the basis of their race. Although the abolition of the white Australia policy in the 1970s is the most well-known example of this trend, other countries have backtracked from similar racist programs, including Bolivia, Brazil, Canada, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, the United States, and Uruguay.

A major change in the way that receiving countries have sought to control immigration in the context of an increasingly globalized economic system is their decreasing reliance on unilateral legislative measures in favor of bilateral and, especially in recent years, multilateral inter-governmental agreements. Bilateral arrangements have usually taken the form of treaties between a sending country and a receiving country, the former committing itself to supply the latter with a specific number of temporary workers in return for certain assurances over the treatment of the migrants. For many years this was the principal means of recruiting immigrants that was used by France, whose bilateral agreements with Italy (1946 and 1951), Spain (1961), and Portugal (1963) furnished the bulk of its immigration prior to the 1970s. The Bracero Program, through which Mexico supplied the United States with migrant farm workers on and off between 1942 and 1964, is another example of this device, but it has been utilized at various times by numerous countries, including Argentina, Canada, Costa Rica, Germany, and Japan. Multilateral

► DEMOGRAPHY OF MUSLIM POPULATIONS IN EUROPE

Since 1945 the Muslim population has grown exponentially in various European countries where it had previously been insignificant. Turkey has been a major source of Muslim immigrants to Western Europe, particularly Germany and the Netherlands, where Turks comprised the single-largest immigrant group. Whereas Turkish migration usually occurred under the auspices of bilateral agreements between sending and receiving nations that date back to the early 1960s, the virtually contemporaneous movements of Pakistani and Bangladeshi Muslims to the United Kingdom (UK) originated in the recent colonial relationship between Britain and the immigrants' homelands. Muslim migration from North Africa to France was facilitated by bilateral agreements between the latter and its former colonial possessions of Algeria, Morocco, and Tunisia. By 2003 France had the largest Muslim population in Europe, numbering over 4 million and constituting 7 percent of the country's total population, followed by Germany (3.2 million and 3.4 percent), the UK (almost 2 million and 2.7 percent), and the Netherlands (850,000 and 2 percent).

—Jason McDonald

accords have invariably been outgrowths of the integrated economic systems developing in various continents and subcontinental regions of the world since World War II. For example, freedom of movement for the citizens of member states has been instituted to varying degrees in both the European Union (EU) and the Mercosur countries of Latin America (Argentina, Brazil, Paraguay, Uruguay, and Venezuela).

Prior to the global economic upheavals of the early 1970s, immigration policy was not a particularly prominent or contentious political issue in most receiving countries. However, during the 1980s and 1990s the immigration debate frequently gained center stage in domestic politics, and governments came under increasing pressure to reduce the flow and regulate the composition of immigration. Nowhere did the issue of immigration dominate political debate more than in France and the United States, but it also aroused concern in most EU countries as well as major immigrant-receiving countries in the Middle East, such as Bahrain and Saudi Arabia. While different countries have experienced varying degrees of success in controlling their borders, as a whole the drive to restrict the flow of immigration, particularly that of illegal or undocumented immigration, has met with failure. However, the multilateral approach to reducing illegal immigration adopted by Germany, which in the post-Cold War era used diplomacy to persuade neighboring countries not to act as conduits for illegal migrants, has proved more successful than the U.S. unilateralist policy, as exemplified by the Immigration Reform and Control Act of 1986, even though both states share the same problem of having to regulate entry across extensive land borders with major immigrant-sending countries, these being Poland in the case of Germany and Mexico in the case of the United States.

An important and invariably unanticipated consequence of post-1945 immigration laws has been their wide-ranging impact upon the social and cultural fabric of receiving countries. Legislation permitting increased diversity in the ethnic composition of immigration has in numerous cases transformed previously fairly homogeneous societies into multicultural ones. This has been most noticeable in former colonial powers, such

as the United Kingdom and France, and countries that have recently abandoned ethnic discrimination in their immigration laws, such as Australia and Canada. Moreover, immigration legislation, as well as the naturalization policy to which it was often intrinsically allied, has frequently curtailed the rights of immigrants and thereby contributed both to the latter's marginalization and the overall intensification of economic polarization. South Africa, for instance, has long pursued a policy of preventing migrants from neighboring countries from becoming permanent residents or acquiring full citizenship, while states such as France and the United Kingdom that traditionally had quite liberal naturalization policies began during the 1980s to impose regulations that circumscribed the legal rights of migrants.

—Jason McDonald

Bibliography

- Geddes, Andrew. *The Politics of Migration and Immigration in Europe*. London: Sage, 2003.
- Mármora, Lelio. *International Migration Policies and Programmes*. Geneva: United Nations International Organization for Migration, 1999.
- Massey, Douglas S., and J. Edward Taylor, eds. *International Migration: Prospects and Policies in a Global Market*. Oxford: Oxford University Press, 2004.
- Sassen, Saskia. *Guests and Aliens*. New York: New Press, 1999.
- Zolberg, Aristide R. *A Nation by Design: Immigration Policy in the Fashioning of America*. Cambridge: Harvard University Press, 2006.

Border Controls

Border controls are responses to the fluctuation of population transfers over international borders between neighboring nation-states or population centers. Border crossings might include the efforts of illegal immigrants, asylum seekers, and criminal syndicate drug or human smugglers. Border controls allow an aggrieved nation-state or states to prohibit or restrict the flow of undocumented workers, refugees, and potential enemies of the state. Through the use of the state's military or security services, high-tech equipment and weapons, and prohibitive checkpoints and barriers and by utilizing militarized

► THE WEST BANK WALL—BORDER MILITARIZATION AND THE ISRAELI-PALESTINE CONFLICT

The Arab-Israeli conflict is characterized by the polarization that exists between the Israeli state and the surrounding Palestinian occupied territories, not to mention the divided international opinion regarding actions on the part of both parties. The threat of terrorist attacks within Israel by Palestinian terrorists has led to increased security by the Israel Defense Forces in the form of increased military security of the borders, check points, access roads, and the building of the West Bank Wall (fence). These controversial steps on the part of Israel have raised outrage in the international community that allege that these are steps to reinforce Israeli colonization of the West Bank and Gaza territories, further evidence of the Israeli apartheid state.

Israel began construction of the West Bank Wall in 2002, igniting impassioned debate regarding its ultimate purpose. The Israeli claim that it serves as a security measure to prevent terrorist attacks on its soil is countered by international critics pointing to the significant impact it has over the economic and political rights of Palestinians, depriving them of property, mobility, and government services. The International Court of Justice in The Hague has deemed the wall as illegal. Both sides see their claims as legitimate, further souring international relations between Israel and its Arab neighbors.

—Abraham O. Mendoza

discourses of perceived danger or threat, state agencies can legitimize a fear of the flow of immigrants, foreigners, and refugees in public opinion and operate with impunity regardless of instances of alleged abuse of human rights. While commentators describe how globalization is erasing the old boundaries of nation-states, those borders are nevertheless being taken more seriously than ever.

Debates concerning security across the U.S.-Mexican border are characterized by a political desire to prohibit the entry of undocumented immigrants that conflicts with an economic necessity to allow them in, albeit in small restricted numbers. They are also characterized by the cultural contiguity of the U.S. Southwest and Mex-

ico borderlands and the insatiable need of U.S. economic expansion for cheap labor. The United States faced various labor shortages since World War II well into the 1970s, especially in agricultural labor and low-skilled service employment. This resulted in a series of guest worker programs that allowed Mexican nationals to enter the United States for employment purposes but also attracted illegal immigrants searching for economic opportunities in “el Norte.”

The U.S.-Mexican border, however, is a complicated region historically and demographically. It encompasses a culturally and ethnically contiguous area that is prone to demographic shifts due to economic and political fluctuations in Mexico. In various instances, the United States has removed undocumented workers when economic constraints and public opinion have facilitated this policy. Nativism and xenophobic attitudes toward the cultural and demographic impact that Mexican and other Latin American populations will have on American society have also informed attempts by the U.S. government to prevent the flow of immigrants into the country.

The border controls along the U.S.-Mexican border are characterized by the usage of militarized border guard units (U.S. Border Patrol), a bureaucratic apparatus designed to criminalize and persecute undocumented immigrants (Immigration and Customs Enforcement [ICE], formerly Immigration and Naturalization Service), barriers and fences, high-tech monitoring equipment, low-intensity combat (LIC) tactics and methods to be used as examples for the military services, and discourses of the foreign ‘Other’ as a cultural invader, drug dealer, or terrorist with racist and discriminatory overtones. The U.S. Border Patrol relies on military jargon, for example, calling major actions “operations.” At the same time, the public learns of large-scale actions such as the War on Drugs to further legitimize such actions and shape an image of the Other in the public mind.

After the attacks of September 11, 2001, the Border Patrol and the ICE became part of the Department of Homeland Security, thereby becoming essential services to the ensuing War on Terror. These services also utilize military equipment and hardware such as helicopters, infrared

monitoring equipment, and tracking and sensory devices along the border to detect and apprehend undocumented immigrants. The barriers, fences, lookout posts, and sentry positions illustrate to potential illegals the power that the United States projects. However, the effectiveness of such procedures is in debate, given that the illegal immigrant population in the United States, as of 2007, was estimated to be between 7 million and 11 million people. Critics still denounce U.S. policies pertaining to border enforcement as an example of border militarization.

The European Union (EU) has similar issues in regard to the entrance of illegal immigrants from outside its borders. During the Cold War, large numbers of escapees from Eastern Europe fled to the precursor to the EU, the European Common Community. Many of these were accepted as refugees and granted asylum in various countries, particularly West Germany, which took in an estimated 2.7 million East Germans from 1949 to 1961. The socialist regimes of the Eastern Bloc were adept at restricting the flow of their nationals fleeing abroad. The eventual collapse of the Soviet Union and the dissolution of the communist regimes of Eastern Europe led to an increased amount of people seeking to immigrate to the West due to deteriorating social and economic conditions. Outside of Europe, Africans and Asians unable to enter Europe as refugees seeking asylum underwent different channels, typically relying on organized crime smuggling operations, particularly those based in Russia. The EU's 2004 inclusion of Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia vastly extended the geographic scope and borders of the supranational polity. This created further concerns regarding the protection of the enlarged population and placed new responsibility of enforcement on the so-called New Europe.

Border controls along the boundary of the EU rely on patrols, tracking and monitoring equipment, checkpoints, and extensive scrutiny of individuals and their property at the various entry points and ports. Since the September 11 terrorist attacks on the United States, European authorities have stressed having a strong external security but also having extensive internal security within the various states that comprise

the EU. To ensure a common strategy, joint policies and training for various European border security forces have also been implemented. Cooperation between state police forces, including the linking of various computer databases and information sharing regarding smuggling rings and suspected illegal crossings, have also helped stem the tide of undocumented aliens. Antiforeigner public opinion characterized by fears of terror attacks has ignited support of stringent government enforcement of EU borders to stem the flow of illegal immigration. While the 1985 EU Scheme Agreement allows for the abolition of systematic border controls between the participating countries, it also requires greater vigilance of the external borders of the enlarged EU. This is to prevent the growing amount of illegal immigration stemming from the former Soviet Union, the Middle East, and Africa.

—Abraham O. Mendoza

Bibliography

- DeBardeleben, Joan. *Soft or Hard Borders? Managing the Divide in an Enlarged Europe*. New York: Ashgate, 2005.
- Dolphin, Ray. *The West Bank Wall: Unmaking Palestine*. Ann Arbor, MI: Pluto, 2006.
- Dunn, Timothy J. *The Militarization of the U.S.-Mexico Border, 1978-1992: Low-Intensity Conflict Doctrine Comes Home*. Austin, TX: CMAS Books, 1996.
- Judt, Tony. *Postwar: A History of Europe Since 1945*. New York: Penguin, 2005.
- Zielonka, Jan, ed. *Europe Unbound: Enlarging and Reshaping the Boundaries of the European Union*. New York: Routledge, 2002.

Immigrants' Rights Advocacy, 1945–Present

Immigrants' rights advocacy consists of international organizations, government institutions, nongovernmental organizations (NGOs), and grassroots social movements that work to assist immigrants. Advocates for immigrants' rights include government and United Nations (UN) personnel who assist refugees and asylum seekers, legal aid attorneys who help immigrants navigate the bureaucracy of a particular country when they apply for citizenship or other forms of residency, mental health professionals who

► IMMIGRANTS' RIGHTS ADVOCACY IN ARIZONA

Since the late 1990s, the Sonora Desert in southern Arizona has become the busiest area for illegal immigration in the United States. The increased militarization of the U.S. Border Patrol has narrowed the options for undocumented migrants, leading more migrants to risk harrowing crossings of the desert. Three immigrants' rights groups established between 2000 and 2004 aim to reduce the number of immigrant deaths in the desert. The first group is Humane Borders, which operates and maintains 83 water stations throughout southern Arizona. Each water station has a 200-foot flagpole to alert immigrants that there is water available. The second group, Samaritans, patrols migrant trails and provides water, food, and medical assistance for migrants in distress. The third group is No More Deaths. Like Samaritans, No More Deaths patrols migrant trails but also houses a base camp in Arivaca from which to patrol and operates an aid station in Nogales, Mexico, for deported immigrants returning to Mexico.

—Connie Oxford

work with refugees and torture survivors fleeing violence, and groups that work to ensure the economic and political rights of immigrants on issues such as labor, health care, and racial profiling. Immigrants' rights advocacy exists throughout the world. However, because global migration patterns are structured by a flow away from the global South in areas such as Latin America, Africa, and Asia and toward the global North and areas such as the United States, Canada, and Europe, immigrants' rights advocacy is more prevalent in countries where there are more immigrants.

The largest immigrant advocacy organization in the world that works with refugees, asylum seekers, and internally displaced persons (DPs) is the United Nations Office of the High Commissioner for Refugees (UNHCR). This agency was established on December 14, 1950, and was created to facilitate immigrant advocacy of DPs after World War II. By the end of World War II, many Europeans had been forced into concentration camps, were forcibly removed to other countries in Europe, or voluntarily fled their own

country for another to avoid persecution under the Nazi regime. In the aftermath of the war, the UNHCR worked with immigrants as they made one of three choices. First, some chose repatriation, which is the process of returning to one's home country. Many who had been forcibly evacuated from Germany, for example, decided to return to Germany. Second, some chose to integrate into the societies where they were living. For example, some Poles who had been transported to Germany chose to stay in Germany rather than return to Poland. Third, many chose to resettle in other parts of the world. The two most common destinations for displaced Europeans were Israel and the United States.

The American Jewish Joint Distribution Committee (JDC) was one of the largest organizations that worked with Jewish refugees at the end of World War II. Established in 1914 to assist Jews affected by World War I, the organization assisted European Jews at the end of World War II in DP camps by providing food, medical care, clothing, and schools for children. The JDC financed the resettlement of many Jews to Israel and the United States.

After World War II, the UNHCR continued its work by helping refugees around the world repatriate, integrate into nearby countries, or resettle in countries in the global North. From the 1960s until today, civil wars, independence movements, and natural disasters in Africa and Asia account for more than half of the immigrants in need of help. As of January 2005 there were 19 million people whom the UNHCR identified as at risk. One of the main sources of support that the UNHCR provides for refugees is camps where they receive shelter, food, and medical assistance until they can return home or relocate to another country.

While European immigration after World War II consisted nearly entirely of Europeans displaced within Europe, European immigration since the 1960s has been marked by the movements of Africans and Asians seeking temporary or permanent residence in Europe. The backlash against immigrants in Europe has been so great, particularly in the area of restrictive laws and policies that are anti-immigrant, that the term "Fortress Europe" is often used to describe Europe as an unwelcoming place for immigrants. One form

of discrimination that many immigrants face in Europe is restrictions on work that include the type of work they perform and reduction in salaries. Human rights groups that focus on immigrants' rights advocacy, such as Human Rights Watch and Amnesty International, have brought much attention to the problem of how many European nation-states treat immigrants.

Another contemporary problem that immigrants' rights groups address is racial profiling and violence. For example, many Mexican Americans experience racial profiling because the police and local residents often treat immigrants of Mexican descent as illegal aliens regardless of their citizenship status. In Arizona there are numerous anti-illegal immigration groups, such as the Minutemen Civil Defense Corp (MCDC), that immigrants' rights advocacy groups battle. In April 2005 hundreds of Americans converged in Tombstone, Arizona, to protest illegal immigration across the U.S. southern border. While most immigrants who cross the U.S. southern border are from Mexico, people from Central and South America also pass through this border. Organizations such as Border Action Network and the Human Rights Coalition (Coalición de Derechos Humanos) document human rights abuses and organize neighborhood advocacy groups for those who experience discrimination and violence based on anti-immigrant activism or police brutality.

The last contemporary issue is gender concerns for immigrant women. The most prominent gender issue is the right of female asylum

seekers to claim persecution based on gendered forms of persecution such as domestic violence, rape, female genital mutilation, honor killings, forced sterilization, and forced marriages. Organizations such as the Center for Gender and Refugee Studies, the Refugee Law Center, and the Women's Commission for Refugee Women and Children in the United States assist women seeking asylum for gender-based persecution claims. Other gender issues include women's integration into societies that discriminate against religious and cultural practices, such as immigrant Muslim girls and women wearing headscarves in France in public schools. Organizations such as the French League of Muslim Women have advocated for Muslim women's right to veil and have protested the 2004 French law.

—Connie Oxford

Bibliography

- Gebrewold, Belachew, ed. *Africa and Fortress Europe: Threats and Opportunities*. London: Ashgate, 2007.
- Handlin, Oscar. *A Continuing Task: The American Jewish Joint Distribution Committee, 1914-1964*. New York: Random House, 1965.
- Macklin, Audrey. "A Comparative Analysis of the Canadian, US, and Australian Directives on Gender Persecution and Refugee Status." In *Engendering Forced Migration: Theory and Practice*, edited by Doreen Indra. New York: Berghahn Books, 1999.
- United Nations. *The State of the World's Refugees: Human Displacement in the New Millennium*. New York: United Nations, 2006.

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Politics and Statecraft

During the latter years of World War II, the Grand Alliance (primarily Britain, the United States, and the Soviet Union) created a framework for establishing stability in the postwar world at the Yalta, Potsdam, United Nations (Conference on International Organization, San Francisco, June 26, 1945), and Bretton Woods conferences that focused on international cooperation under their leadership. Following the war, international political structures played a far larger role in the foreign policies of the world's major powers in spite of the emergent antagonism between the superpowers known as the Cold War (1947–1991). In the wake of the destruction of European hegemony, the balance of power was now between the United States and the Soviet Union, the two remaining superpowers. Postwar global developments in world politics and statecraft were heavily shaped by the Cold War, decolonization, the creation of new states, the mobilization of human rights groups, and the influence of the two superpowers (the United States and the Soviet Union) as well as a rising power (the People's Republic of China).

During the interwar period (1919–1939), the international body known as the League of Nations, designated with promoting global stability through diplomatic means, proved incapable of deterring aggression mainly owing to the unwillingness of Britain and France to uphold the policy of collective security. The lesson learned by the major world powers from the League of Nations was that international political and economic cooperation could not function without their full backing in terms of military and financial support. This resulted in the creation of the United Nations (1945), established as a beacon of international stability and backed by the United States and the Soviet Union. However, Cold War antagonisms between these superpowers led to the creation of Cold War military alliances between ideological allies. The United States established the North Atlantic Treaty Organization (NATO), the South East Asian Treaty Organization (SEATO), and the Central Treaty Organization (CENTO), in effect surrounding the Soviet Union with U.S. allies and requisite U.S. military bases. The Soviet Union established the Warsaw Pact Organization in response in 1955. Designed to fulfill military and geopolitical purposes, these blocs also fostered regional cooperation and ensured superpower financial support within regions. Other

Postwar global developments in world politics and statecraft were heavily shaped by the Cold War, decolonization, the creation of new states, the mobilization of human rights groups, and the influence of the two superpowers (the United States and the Soviet Union) as well as a rising power (the Peoples' Republic of China).

regional blocs, such as the Arab League, the European Economic Community (European Union after 1991), and, much later, the African Union also nurtured regional cooperation and similar foreign policies. International legal systems and courts such as the International Court of Justice (ICJ) affiliated with the United Nations (UN) or the International Criminal Court (ICC) also began to regulate transnational crimes by states and individuals, following the precedent of the Nuremburg Trials of German leaders and the trials of Japanese war criminals in the Philippines and Japan after World War II. Despite superpower intrusions, individual states utilized these international organizations or regional blocs to advocate their international and national interests.

In the decades following World War II, the process of decolonization created a massive number of new states that entered the world stage as the number of independent countries rose to over 200. While domestic economic considerations played a role in European decolonization, pressure from the superpowers and nationalist resistance were crucial prompting factors. European powers, such as France, Britain, Portugal, and the Netherlands, reluctantly abandoned their empires, sometimes through diplomatic means and at times after armed struggle. The British experience with the partition of India and Pakistan and their abandonment of Mandatory Palestine in the context of the Arab-Israeli conflict illustrate how issues left unsettled by former imperial powers still affect our own times. The French experiences in Indochina (Vietnam, Laos, and Cambodia) and in Algeria made it more amenable to let go of its remaining African empire. The Portuguese (Angola) and the Dutch (Indonesia) had similar experiences with their former holdings. Perhaps the most illustrative example is Belgium's abandonment of the Congo (1960), which still has contemporary implications for the people of that failed state. Nonetheless, the creation of these new states allowed them to enter the United Nations as full members and vote as a sizable bloc against the actions of the major powers that were steadily losing their grip on control of the General Assembly. More recently in the early 1990s, the devolution of the former Soviet Union into independent republics has also created a host of new states across Central Asia, the Caucasus, and Eastern Europe, all of which have been affected by their relationship to Russia in recent years due to large near-abroad Russian populations and Russian ambitions to secure the region as its backyard.

While direct political control over much of the developing world by the European powers subsided during decolonization, accusations of neocolonialism were leveled at the remaining control over economic institutions by former colonial masters, the growing influence of multinational corporations (MNCs), and international bodies such as the World Bank and the International Monetary Fund. States in Asia, Africa, and Latin America found themselves at the whims of the developed world due to the connivance of their governments with these institutions, which determined their national economic development and individual day-to-day survival. British and French interests in their former African colonies, Russian interests in Central Asia and the Caucasus, and U.S. involvement in the Middle East and Latin America showed that

the developing world still depended on the financial and political clout that the West still possessed, regardless of the process of decolonization. Nonetheless, this situation contributed to bitterness against the developed world (widespread anti-Americanism in the case of the United States) in regard to what was deemed an unfair power relations arrangement between the developed North and the developing South.

In spite of the Cold War conflict and its seemingly endless ideological struggle over the hearts and minds of the people of the world, not all people bought into the Manichean rhetoric espoused by the superpowers. The use of torture and the curtailment of civil rights in places such as the Soviet Union, the Eastern Bloc, China, Chile, Argentina, and South Africa were brought to the attention of the world through the actions of various global social movements. Advocates of human rights reported the abuses advocated or tolerated by both camps, basing their movements on common human values rather than sociopolitical ideologies. Global social movements advocating for civil rights, student movements motivated by various issues, or international pressures seeking an end to apartheid in South Africa, the plight of indigenous peoples, and human rights the world over, working from grassroots community organizations that sometimes sought and found international frameworks, managed to affect greater social change on a global scale. Non-governmental organizations (NGOs) such as the International Red Cross and Doctors without Borders (*Médecins Sans Frontières*) sought to bring all people of the world medical assistance during natural disasters and armed conflicts, regardless of their political ideology. Other NGOs, such as Amnesty International and Greenpeace, sought to combat abuses against human rights and the environment, respectively, thus illustrating the power of such groups in mobilizing world public opinion against what were gradually deemed global rather than merely regional or national problems.

In spite of the growing influence of myriad international institutions, NGOs, and newly created states, global politics and international statecraft continued to be dominated by the major superpowers throughout much of the Cold War. Through warfare and diplomacy, both the United States and the Soviet Union engaged in a global battle for the hearts and minds of the world in an ideological battle characterized by the threat of nuclear annihilation. Proxy wars using native groups supported by one or the other superpower fought primarily in developing world battlefields with NATO or Soviet weaponry became a sideshow to the nuclear policy of Mutual Assured Destruction (MAD). By the 1970s, with the widening Sino-Soviet split, the United States sought to use its China card to bring the Soviet Union to the negotiating table, thereby ensuring China with a global role in the coming decades. With the end of the Cold War, the United States found itself in the peculiar situation of being the world's sole superpower, evoking bitterness in much of the world. Nonetheless, with the September 11, 2001, attacks on the World Trade Center by al-Qaeda and the subsequent War on Terror, the Iraq War, and NATO actions in Afghanistan, the United States found itself militarily overstretched on the world stage, much as had Britain at the end of World War II. The recent tenure of the United States as

The relative economic strength of the United States has declined globally with the rise of new economies even as it has continued to be the world's major economic power.

sole superpower appears to be short term, as an economically powerful European Union, a resurgent post-Soviet Russia, and an emergent China, all seeking a world role, suggest the development of a multipolar world to replace the bipolar world of the Cold War. The relative economic

strength of the United States has declined globally with the rise of new economies even as it has continued to be the world's major economic power. With other regions such as Latin America and India seeking their own parts on the global stage, the next century could potentially see a considerable shift in the global balance of power. The outcome of the global economic crisis that began in 2007 continued to create new conditions in the global economy. The economic crisis in 2009 threatened not only tremendous economic changes but also political changes that were likely to be antidemocratic as people sought economic stability and security.

—Abraham O. Mendoza and Jack Waskey

■ Introduction: International Institutions and Laws

International institutions and legal conventions were established after World War II by the victorious Allies to ensure stability in world politics and avoid the failures of the interwar League of Nations, which contributed to the onset of the war that followed. The Grand Alliance (most notably the United States, the Soviet Union, Britain, France, and China) was intent on establishing a new world order based on international principles of law that would prevent the sort of excesses committed under the Third Reich and in the Greater Japanese Co-Prosperity Sphere. Notable achievements include the Nuremberg Trials (1945–1946) of war criminals, creating viable international legal precedents for such prosecutions, and the establishment of the United Nations (1945), which provided a forum for cooperation among the world's nations.

In spite of the implementation of these institutions and legal frameworks for international relations, Cold War antagonisms and the large-scale decolonization that followed the war complicated international cooperation. As a result, the postwar period was also characterized by the development of large intercontinental defensive

alliances (such as NATO and the Warsaw Pact Organization) based on ideological affiliation. In addition, during this period regional cooperative alliances developed such as the African Union and the Arab League to assist the economic and military needs of vast regions of the decolonized world and prevent future European exploitation.

Despite the expansion of postwar notions of international law and the associated institutions to prevent war crimes and crimes against humanity, on par with those committed during World War II, in recent decades genocide and mass rape have continued unabated in areas of the developing world due to neglect and indifference on the part of the developed world.

—Abraham O. Mendoza

United Nations

The United Nations (UN) emerged from World War II when the victorious Grand Alliance established it as the successor organization to the League of Nations because they were determined to prevent another world war and to eliminate the scourge of war around the world if possible.

The founders of the UN carefully studied why the League of Nations had failed. They sought ways to make the new institution a permanent player in global affairs. President Franklin D. Roosevelt first used the term “United Nations” on January 1, 1942, in the “Declaration by United Nations.” The declaration was a pledge by 26 nations to battle the Axis powers until they were defeated.

The UN was designed to ensure global security and to be a forum among nations on issues of peace, justice, development, and economics. The latter issue was addressed at Bretton Woods, New Hampshire, in 1944 with the Bretton Woods Agreement, which created several economic institutions, including the World Bank and the International Monetary Fund (IMF). Justice in resolving disputes among nations was centered in the International Court of Justice, which is also known as the World Court and which has its seat in The Hague.

Seeking to avoid problems that had arisen with the creation of the League of Nations, the UN was developed separately from the peace treaties that ended World War II. The UN’s framers created two major institutions: the Security Council and the General Assembly. Every member state became a participant of the General Assembly with one vote regardless of population or wealth. The Security Council was created with five permanent members. These were the major victorious warring powers against the Axis: China, France, Britain, the Soviet Union, and the United States. Each of the five has a veto that can nullify any action being sought by the other members of the Security Council. In addition, there were originally six nonpermanent member states. This number was eventually expanded to ten nonpermanent members that serve staggered terms in which five rotate off after two years.

With the onset of the Cold War, each UN secretary general has had to negotiate the ideological struggle between the United States and the (former) Soviet Union and their spheres of influence. In addition, as decolonization accelerated in the postwar period, many developing countries that were former colonies joined the UN. These countries entered the politics of the UN less with an interest in the ideological struggle than with economic development.

Major issues faced by the UN include peacekeeping missions, which have included operations such as the Korean War (1950–1953), and interventions in the Congo, the Balkans, and other world regions. In addition, the UN, often through the offices of the secretary general, has been a player in enacting a cessation of hostilities between countries such as the end of two regional wars between India and Pakistan. Since the end of the Cold War, numerous threats to regional and global peace have occurred, such as ethnic cleansing in the former Yugoslavia, the war in Iraq, and other issues of global security. The UN has been involved in more than 50 peacekeeping operations in its entire history. However, these operations have in some cases neither preserved peace nor saved the lives of innocent victims of conflicts. In some cases, such as the genocide in Rwanda or the launching of rocket attacks on Israel by Hizbullah from its bases in southern Lebanon, UN peacekeepers merely observed the slaughter. Of major concern by 2008 were the issues of nuclear weapons proliferation, especially by Iran, and the advent of global terrorist activities.

Due to the enormous growth in the world’s population and the billions of people who still live in poverty, many UN programs have been instituted to reduce poverty. Along with poverty has been a growth in initiatives intended to address global warming and other major environmental problems.

Despite opposition, UN supporters note that there has not been another world war since the creation of the UN. In addition, despite internal criticism of the UN in the United States, the U.S. State Department has found it to be a relatively inexpensive and useful tool for the conduct of diplomacy.

—Jack Waskey

Bibliography

- Gareis, Sven Bernhard, and Johannes Varwick. *The United Nations: An Introduction*. New York: Macmillan, 2005.
- Krasno, Jean E., ed. *The United Nations: Confronting the Challenge of a Global Society*. Boulder, CO: Lynne Rienner, 2004.
- O’Sullivan, Christopher. *The United Nations: A Concise History*. Malabar, FL: Krieger, 2005.

NATO, SEATO, and CENTO

In the years following World War II, as nations throughout the world began to pick sides in the emergent Cold War, new alignments and alliances came into play. The North Atlantic Treaty Organization (NATO), the Southeast Asian Treaty Organization (SEATO), and the Central Treaty Organization (CENTO) were developed under American and British auspices to contain the ideological and military advance of the Soviet Union in various regions surrounding the so-called second world of socialism. While NATO has been able to survive well past the fall of the Soviet

Union and play a significant role in recent events in Yugoslavia and Afghanistan, the other two alignments failed to survive beyond the 1970s.

NATO is a mutual defense alliance of West European and North American nations originally formed in the first years of the Cold War to protect member nations from potential aggression from the Soviet Union and its East European satellites. The original signatories to NATO were the United States, Britain, France, Belgium, the Netherlands, Luxembourg, Canada, Denmark, Iceland, Italy, Norway, and Portugal in 1949. In 1950 U.S. general Dwight D. Eisenhower was appointed as the first supreme allied commander of NATO. The addition of West Germany (Federal Republic of Germany) into NATO in 1955 led to the formation of the rival Warsaw Treaty Organization, commonly known as the Warsaw Pact, an alliance between the Soviet Union and its satellites. NATO membership expanded in 1952 to include Greece and Turkey. Spain belatedly joined in 1982.

In spite of the major differences between the United States and its European allies, NATO has survived well past the end of the Cold War and continues to be a major player in global foreign policy. In the late 1940s, due to the shattered state of Western Europe, the United States took the mantle of leadership in the alliance. However, as European nations slowly recovered, some of their leaders demanded some degree of sovereignty in foreign affairs within an alliance they saw as manipulated by American interests. As a case in point, in the 1960s French president Charles de Gaulle strongly advocated against military integration of French units into NATO, ultimately withdrawing them from its command and demanding that NATO troops leave French territory. Disagreements over troop levels, disarmament, increased military budgets amid recessions, and the stronger foreign policy stance against the Soviet Union embraced by the United States in the 1970s and 1980s further exacerbated such conflicts within NATO. The fall of the Berlin Wall in 1989 and the collapse of the Soviet Union in 1991 led some critics to predict the end of NATO as the threat of global communism rapidly eroded. However, NATO has continued to play an active role in world affairs, most recently against Serbia in Yugoslavia in the

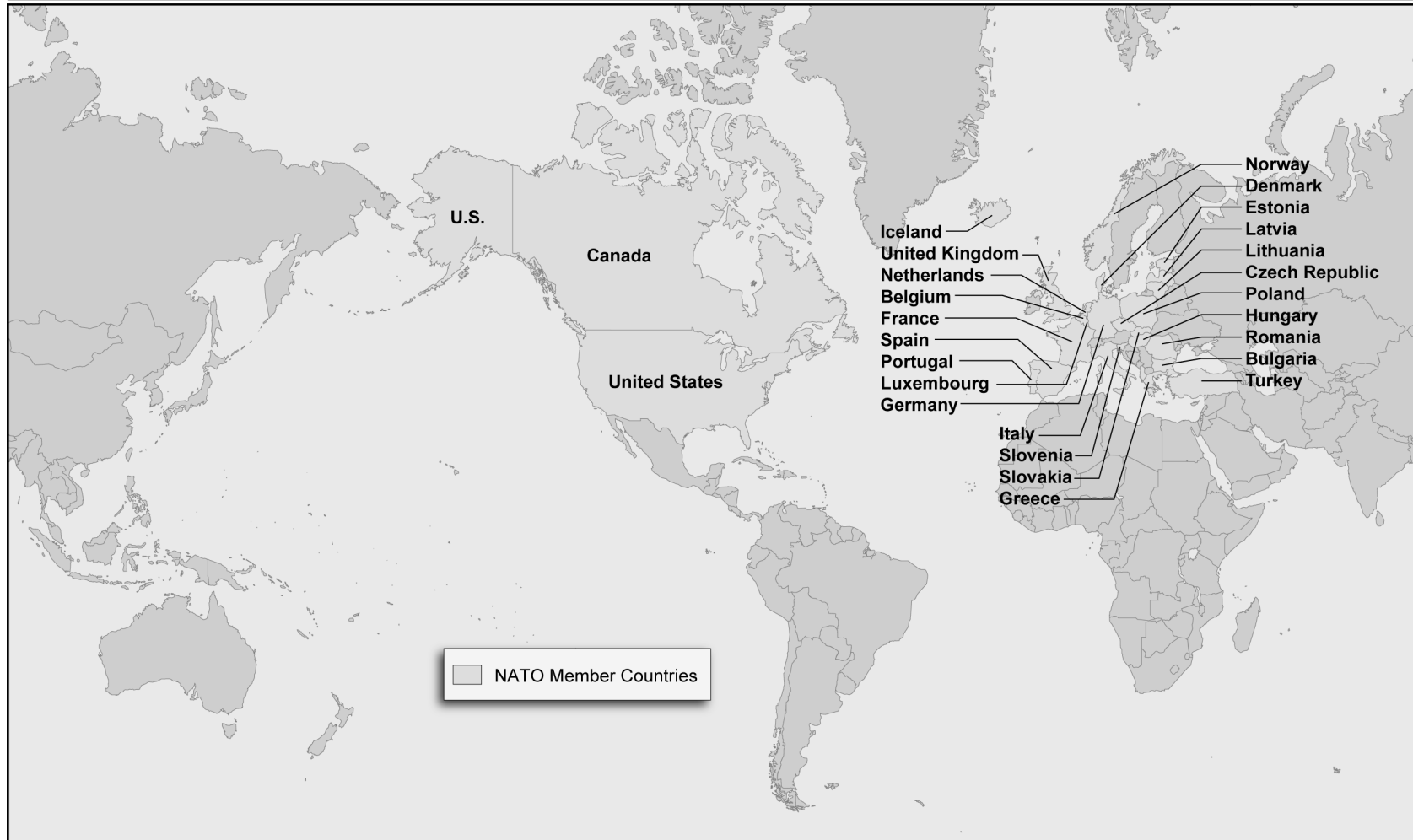
➤ AUSTRALIA, NEW ZEALAND, UNITED STATES SECURITY TREATY (ANZUS)

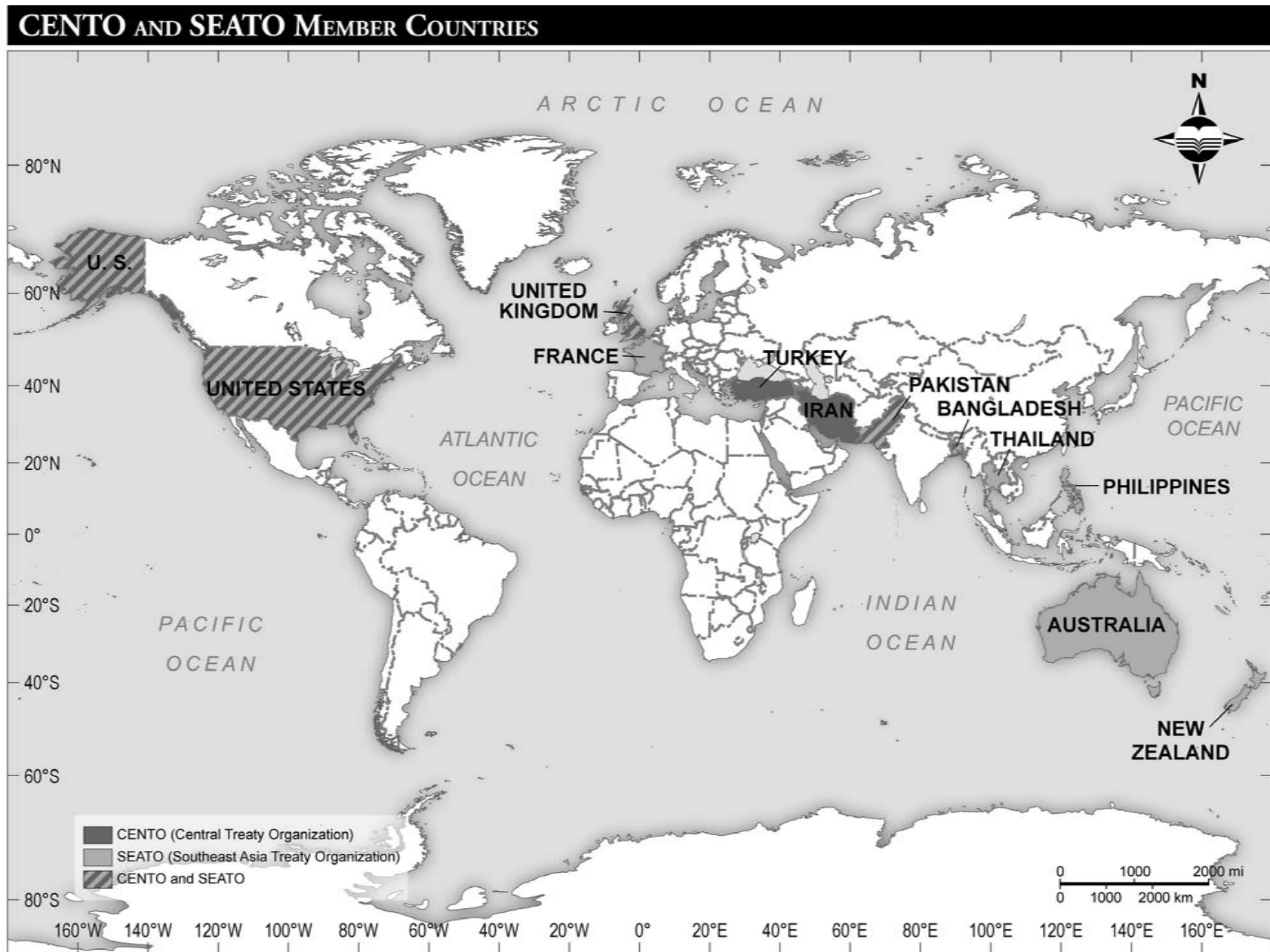
The Australia, New Zealand, United States Security Treaty (ANZUS) Treaty was a treaty for mutual defense signed by Australia, New Zealand, and the United States on September 1, 1951. It is specifically named after the initial letters of the member states. Its intention was the creation of a military alliance between Western powers in the Western Pacific region for mutual defense in response to potential aggression from communist regimes. This treaty was one of several alliance systems (including NATO, SEATO, and CENTO) that the United States created in various world regions to ensure the global containment of communism.

Currently, ANZUS functions as a military alliance that binds Australia and New Zealand and, separately, Australia and the United States to cooperate on defense issues in the Pacific region. This is due to the New Zealand 1985 ban on ships with nuclear capabilities in its ports, effectively preventing American naval ships from entering New Zealand's waters if suspected of carrying nuclear weapons. As U.S. authorities would neither confirm nor deny carrying such weapons, this blocked all U.S. naval ships from New Zealand. This led the United States to suspend its ANZUS obligations to New Zealand in protest. However, in recent years the United States still has bilateral agreements with Australia, ensuring that their alliance is intact and has had success in reconciliation efforts with New Zealand.

—Abraham O. Mendoza

NATO MEMBER COUNTRIES





1990s and against al-Qaeda and Taliban fighters in Afghanistan from 2001 to the present. It has also admitted former members of the Warsaw Pact as allies, including the Czech Republic, Hungary, and Poland in 1999 and Estonia, Latvia, Lithuania, Bulgaria, Romania, Slovakia, and Slovenia in 2004.

SEATO was the collective security arrangement for Southeast Asia arranged under American auspices and designed to prevent the spread of communism in that region. SEATO was created by the Pact of Manila of September 8, 1954, signed by the United States, Britain, France, Australia, New Zealand, the Philippines, Thailand, and Pakistan. SEATO differed from NATO in that it did not implement a multilateral defense system and emphasized the containment of communism from spreading into the region. The SEATO agreement contained a special protocol that demarcated Laos, Cambodia, and South Vietnam as countries that if infiltrated by communism could pose a danger to signatory nations. SEATO members were expected to meet and confer in order to send troops or act in unison, and unlike NATO an attack on one signatory nation did not imply an attack on all. The protocol for Southeast Asian containment provided the United States with the sanctions necessary to defend South Vietnam and engage North Vietnam militarily. Having outlived its usefulness, SEATO expired, officially dissolving in Bangkok on June 30, 1977.

CENTO was a U.S.-led alliance specifically intended to prevent the expansion of Soviet influence in the Middle East. CENTO developed from the Baghdad Pact that Britain created in 1955, along with Turkey, Iraq, Iran, and Pakistan, and was aimed at preventing Soviet expansion into the Middle East. As British influence declined in the region in the wake of the Suez Crisis (1956) and the 1959 overthrow of the Iraqi government friendly to British interests, the Baghdad Pact was transformed into CENTO under American leadership. The United States signed defense treaties with Iran, Turkey, and Pakistan in Ankara in 1959, thereby creating CENTO. The specific purpose of CENTO was to protect the Middle East against outside aggression (primarily Soviet expansion, much like NATO and SEATO) and to advocate economic and scientific cooperation between the

signatory nations. Despite CENTO efforts to the contrary, the Soviet Union was able to influence the region through diplomatic overtures and the sale of weapons. Little effort was made to promote economic and scientific cooperation between CENTO members. The United States proved unable to maintain the alliance. In 1974 Britain reduced its commitment, withdrawing its forces to Cyprus. U.S. aid to Iran, both economic and military, was unable to prop up its pro-Western government. CENTO was officially dissolved as Iran withdrew following the Iranian Revolution of 1979. Pakistan and Turkey maintained their relationship with the United States through other treaties.

—Abraham O. Mendoza

Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Hanhimäki, Jussi M., and Odd Arne Westad, eds. *The Cold War: A History in Documents and Eyewitness Accounts*. New York: Oxford University Press, 2005.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.
- Rupp, Richard E. *NATO after 9/11: An Alliance in Continuing Decline*. New York: Palgrave Macmillan, 2006.

Warsaw Pact

On May 14, 1955, the Soviet Union, Albania, Bulgaria, Romania, the German Democratic Republic (GDR), Hungary, Poland, and Czechoslovakia signed a multilateral Treaty of Friendship, Cooperation, and Mutual Assistance in Warsaw, also known as the Warsaw Pact, that established the Warsaw Treaty Organization (WTO). Member states pledged to defend each other if one or more of the members were attacked. The immediate trigger for the creation of the Warsaw Pact was the admission of the Federal Republic of Germany (FRG) into the North Atlantic Treaty Organization (NATO) and the Austrian State Treaty, which provided for Austrian neutrality and the withdrawal of Soviet troops. With the latter, the Soviet Union made it clear to its satellite states that Austria's neutral status would not likewise be granted to them. In addition, Nikita

► THE 1964 WARSAW PACT WAR PLAN

The Warsaw Pact War Plan of October 14, 1964, for the Czechoslovak front is the only actual war plan of both the North Atlantic Treaty Organization (NATO) and the Warsaw Pact (WTO) that has thus far surfaced. Others have either not been declassified or have been destroyed. Discovered in February 2000 by Czech historian Petr Lunak in the Prague military archives, the war plan describes the Czechoslovak army's role within the general operations of Soviet and other WTO armies in case of a European war. The plan shows the considerable degree to which the Soviets had to rely on the Czechoslovaks because of the location of their country and the absence of permanently stationed Soviet troops on their territory.

Prepared by the Soviet General Staff, the war plan describes the first week of an attack of the Czechoslovak front on enemy territory. It assumes an initial NATO strike quickly repulsed with a Soviet-led offensive into Western Europe and the routine use of nuclear weapons by both sides. As many as 131 nuclear missiles and bombs were to be delivered in a first nuclear strike. The offensive should be concentrated in the direction of Nuremberg, Stuttgart, Strasbourg, Epinal, and Dijon. By the seventh or eighth day of the attack, the troops of the Czechoslovak front were supposed to reach the cities of Dijon and Besancon in eastern France and be ready to advance southward toward Lyon.

—*Christian Nuenlist*

Khrushchev presented the West with a standing offer to disband the Warsaw Pact simultaneously with NATO, contingent upon East-West agreement on a new collective security system in Europe. The Political Consultative Committee (PCC) was established as the alliance's highest governing body, consisting of the member states' party leaders. On the military side, a unified command and a joint staff were created to organize the actual defense of the WTO states.

In its early years, the Warsaw Pact served primarily as a Soviet propaganda tool in East-West diplomacy. Khrushchev used the PCC to publicize his disarmament, disengagement, and peace offensives and to accord them a multi-lateral umbrella. The first concrete military step

taken was the admission of the East German military into the unified command, but not until the Berlin Crisis (1958–1961) was there a systematic militarization of the WTO. The Soviet General Staff and the Warsaw Pact unified command prepared East European forces for a possible military conflict in Central Europe. In 1961, the Soviets replaced the old defensive strategy with an offensive strategy that provided for a deep thrust into Western Europe. The WTO began to conduct joint military exercises to prepare for fighting a nuclear war in Europe. Despite the policies of *détente* (*rapprochement* between East and West), preparations for a deep offensive push into Western Europe accelerated and intensified during numerous joint WTO military exercises in the 1970s. The offensive strategy remained in place until 1987.

Behind the facade of unity, growing differences troubled the Eastern alliance. Following Khrushchev's campaign of de-Stalinization, in the fall of 1956 Poles and Hungarians demanded a reform of the Warsaw Pact to reduce Soviet dominance within the WTO. Polish generals issued a memorandum that proposed modeling the Warsaw Pact more after NATO, while Hungary's new Communist Party leader, Imre Nagy, declared his country's neutrality and its plans to leave the Warsaw Pact. In November 1956, the Soviet Army invaded Hungary and eliminated all resistance. In 1958, Romania demanded the withdrawal from its territory of all Soviet troops and military advisers. To cover Soviet embarrassment, Khrushchev termed this a unilateral troop reduction contributing to greater European security. At the height of the Berlin Crisis, Albania stopped supporting the pact and formally withdrew from the alliance in 1968. The WTO was not consulted when Khrushchev provoked the October 1962 Cuban Missile Crisis. Only after the crisis was ended did East European leaders learn in a secret meeting that a nuclear war had been narrowly avoided. Romania reacted promptly. In 1963, the Romanian government gave secret assurances to the United States that it would remain neutral in the event of a nuclear confrontation between the superpowers.

In early 1966, Soviet general secretary Leonid Brezhnev proposed a Soviet plan to reform and institutionalize the Warsaw Pact. However,

resistance by Moscow's allies prevented the implementation of his scheme. While the Soviet Union tried to intimidate the Czechoslovak government with multilateral WTO military maneuvers in 1968, the invading forces sent in on August 20, 1968, were mostly from the Soviet Union with token Polish, Hungarian, and GDR contingents but no Romanian troops. Romania denounced the invasion as a violation of international law and demanded the withdrawal of all Soviet troops and military advisers from its territory. It also refused to allow Soviet forces to conduct exercises in its territory.

The consolidation that resulted from the PCC session in Budapest in March 1969 transformed the WTO into a more consultative organization. It established a committee of defense ministers, a military council, and a committee on technology. With these three new joint bodies, the WTO finally became a genuine multilateral military alliance. In 1976, previous informal gatherings of the Warsaw Pact foreign ministers were institutionalized into a committee of ministers of foreign affairs. In the 1970s, consultations within Warsaw Pact bodies primarily dealt with the Conference on Security and Cooperation in Europe (CSCE). From 1980 to 1981, the Solidarity Crisis in Poland heralded the end of Moscow's domination of Eastern Europe. However, it did not pose a serious threat to the WTO's integrity. To avoid the high political costs of military intervention, Moscow trusted that the loyal Polish military would suppress the opposition on its own initiative. The imposition of martial law by General Wojciech Jaruzelski was a major success for Moscow, as it demonstrated that the Polish generals loyal to Moscow were protecting the interests of the WTO against their own people's desires.

During the intensified Cold War of the 1980s, internal disputes in the WTO increased. Romania demanded cuts in nuclear and conventional forces as well as in national defense budgets. It also called for the dissolution of both Cold War alliances and for the withdrawal of both U.S. and Soviet forces from Europe. The issue of an appropriate WTO response to NATO's 1983 deployment of U.S. Pershing II and cruise missiles in Western Europe, matching Soviet SS-20 intermediate-range ballistic missiles aimed at West European targets,



The Council of Ministers Palace in Warsaw, during the Warsaw Pact Political Committee talks, 1965. (Eastphoto, NYC/Library of Congress)

proved to be most divisive for the WTO. At the time of the Warsaw Pact's 30th anniversary in 1985, Mikhail Gorbachev became the new Soviet leader and intensified the role of Warsaw Pact consultations to determine the desired nuclear and conventional cuts in the Eastern alliance. After the fall of the Berlin Wall in 1989, East and West at first saw merit in keeping both Cold War alliances in place. In January and February 1991, however, Czechoslovakia, Hungary, Poland, and Bulgaria declared that they would withdraw all support by July 1 of that year. The Warsaw Pact came to an end on March 31, 1991, and was officially dissolved at a meeting in Prague on July 1, 1991.

—Christian Nuenlist

Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Hanhimäki, Jussi M., and Odd Arne Westad, eds. *The Cold War: A History in Documents and Eyewitness Accounts*. New York: Oxford University Press, 2005.
- Mastny, Vojtech, and Malcolm Byrne, eds. *A Cardboard Castle? An Inner History of the Warsaw Pact, 1955-91*. Budapest: Central European University Press, 2005.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.

The African Union

The African Union (AU), formerly the Organization of African Unity (OAU), was founded in Durban, South Africa, in July 2002. After reorganization and relaunching, the AU replaced both the African Economic Community, an organization of regional trading groups, and the OAU itself. Founded in 1963 in Addis Ababa, Ethiopia, where the AU Secretariat resides, the OAU concentrated for 39 years on freeing Africa of Western colonialism. Its powerlessness generally reduced OAU leaders to appeals for sympathy to help end violations of members' sovereign rights. Since Africa's last colony, Namibia, won independence from apartheid South Africa in 1990, the OAU/AU has taken up continental problems such as AIDS and regional conflicts, for which without its own peacekeeping forces the AU is singularly ill-prepared.

Initially the OAU was divided into two camps, a more conservative Monrovia group (named for Liberia's capital) and a Ghana-Guinea group that expressed the Pan-African radicalism of worldwide African diasporas. The Monrovia group triumphed in OAU councils over Kwame Nkrumah's Ghana and its Pan-Africanist allies, who upheld utopian ideals of a United States of Africa, still a distant prospect. Naturally, intra-African tensions have grown despite Pan-Africanist ambitions since colonialism ended. Morocco, for example, reasserted historical claims to the Western Sahara against the wishes of its indigenous peoples and Algeria, as Spain in 1975 withdrew from its ex-colony.

One of Africa's 54 states, Morocco is currently not a full AU member, owing to its expansionist ambitions in a Saharan region that Algeria and the AU call the Sahrawi Arab Democratic Republic (SADR). In 1975 Morocco invaded the ex-Spanish Sahara, thereby challenging a central OAU principle: the inviolable nature of colonial boundaries, maintained as an antidote to irredentist conflict. Once Western powers withdrew, African successor states inherited borders that colonists had drawn up with scant regard to local realities. Consequently, at the OAU's 1963 founding meeting, African leaders decided that all ex-colonial boundaries must be respected, lest people across international borders of com-

mon culture provoked interneighbor conflicts (irredentism). Except for Liberia and Ethiopia, all African states were colonial creations. Ethiopia nonetheless fought to retain today's Eritrea as part of its national territory and fought an independent Eritrea in the late 1990s.

Almost 40 years later it is clear that political instability, though a serious complication, has not been Africa's only difficulty. By the late 1990s the OAU was widely derided, especially in Africa, as a dictator's club. In recently democratized South Africa, the 2002 Durban Conference promoted peer review as a process by which AU members could counsel errant governments about internal affairs. Currently (2009) Mauritania is suspended, while Togo succumbed to AU pressure to hold presidential elections in which Faure Gnassingbe succeeded his father Gnassingbe Eyadema. A current AU priority is its peace monitoring force in Darfur, Sudan. This may be increased in number, but a continental agreement and Western logistical support will be essential, with the Sudanese government only reluctantly accepting AU soldiers in preference to United Nations soldiers.

As its rotating president, Sudanese leader Omar al-Bashir is due to lead the AU, but this embarrassment is currently on hold while the organization's executive defers Sudan's presidency. The AU executive, a gathering of presidents, prime ministers, and other African leaders, is known as the Assembly of Heads of State. There is also a Pan-African Parliament based in Midrand, Johannesburg, South Africa, representing African people, not just governments. This last is a reform of OAU structures. An ultimate AU goal is a common market building on existing regional trading groups, a common currency, and a single integrated defense force. Reflecting its Pan-African origins, the AU professes an interest in all peoples of African descent globally. It has defined the diaspora as consisting of people of African origin living outside the continent, irrespective of their citizenship and nationality, who are willing to contribute to the development of the continent and the building of the AU.

At the 2002 founding AU conference, South African president Thabo Mbeki promoted a New Partnership for Africa's Development (NEPAD). South Africa's continental leadership is almost

inevitable, given its preeminent economic status: it produces 40 percent of Africa's electricity and dominates continental extractive (De Beers), communications (MNET), and manufacturing (South African Breweries) industries. South Africa is a midrange economic power comparable to Brazil or Indonesia. South African Breweries, for instance, owns American-based Miller Brewing Company. However, old-style African leaders such as Zimbabwe's Robert Mugabe have tarnished NEPAD's image. President Mugabe has clung to power regardless of his people's democratic will, well-being, or human rights. NEPAD is intended to secure outside support in return for transparent democratic reforms to which Mugabe is belligerently opposed, preferring to excuse all government excesses with paranoia about supposed Western manipulation of local opponents.

Mugabe aside, the AU is committed to addressing Africa's health, environmental, and economic problems. Of these, HIV/AIDS is the most significant health issue. Inhabited by 10 percent of the world's population, Africa is estimated to have 60 percent of the world's HIV and AIDs sufferers. As with much else on the continent, responses to this challenge have not been without controversy, ranging over the causes, origins, nature, and extent of HIV/AIDs. Environmentally, desertification and global warming are also priorities. The provision of continent-wide clean water would be a major and, with outside assistance, not prohibitively expensive boon. If the AU Secretariat could establish itself as an authoritative source of information on Africa's socioeconomic difficulties, this too would be a step forward. Undoubtedly, the AU has much to achieve.

However, its representatives did play a significant role in the 2005 Gleneagles G-8 summit that saw Western governments forgive much African external debt. Certainly, the AU could provide a significant body for coordinating its members' responses to common challenges as well as serving as a clearinghouse to prioritize outside aid projects. The organization might in the foreseeable future take a number of steps toward its goal of a common currency and a common market. In pursuit of stability, AU coordination of local defense forces on a continent-

wide basis would, with outside logistics, be an immediate benefit.

—John David Leaver

Bibliography

- Adesina, Jimi O., Yao Graham, and Adebayo Olukoshi, eds. *Africa and Development Challenges in the New Millennium: The NEPAD Debate*. London: CODESIRA-Zed Books, 2006.
- Esedebe, Olisanwuche. *Pan-Africanism: The Idea and Movement, 1776-1991*. Washington, D.C.: Howard University Press, 1994.
- Murithi, Timothy. *The African Union: Pan-Africanism, Peace-building and Development*. Hampshire, England: Ashgate, 2005.
- Murray, Rachel. *Human Rights in Africa: From the OAU to the African Union*. Cambridge: Cambridge University Press, 2004.

Arab League

The Arab League, also called the League of Arab States, is a voluntary organization of Arabic-speaking nations. It was founded at the end of World War II with the stated purposes of improving conditions in Arab countries, liberating Arab states still under foreign domination, and preventing the formation of a Jewish state in Palestine.

In 1943 the Egyptian government proposed an organization of Arab states that would facilitate closer relations between the nations without forcing any of them to lose self-rule. Each member would remain a sovereign state, and the organization would not be a union, a federation, or any other sovereign structure. The British government supported this idea in hopes of securing the Arab nations as allies in the war against Germany.

In 1944 representatives from Egypt, Iraq, Lebanon, Yemen, and Saudi Arabia met in Alexandria, Egypt, and agreed to form a federation. The Arab League was officially founded on March 22, 1945, in Cairo. The founding states were Egypt, Iraq, Lebanon, Saudi Arabia, Transjordan, and Syria. Subsequent members include Libya (1953), Sudan (1956), Tunisia (1958), Morocco (1958), Kuwait (1961), Algeria (1962), South Yemen (1967, now Yemen), Bahrain (1971), Oman (1971), Qatar (1971), the United Arab Emirates (1971), Mauritania (1973), Somalia (1974), Djibouti (1977), and Comoros (1993).

► THE ORGANIZATION OF THE ISLAMIC CONFERENCE

Founded in 1969, The Organization of the Islamic Conference (OIC) is an intergovernmental grouping of 57 nations with substantial Islamic populations, primarily located in the Middle East, Africa, South-east Asia, and South Asia. The primary objective of the OIC is the unity, promotion, and protection of the interests of the Islamic peoples (Umma) of these member countries. The organization's strength stems from its representation of nearly 1.4 billion Muslims, a Permanent Delegation to the United Nations, active support and participation by the heads of state of these various nations, and its support from the organization's wealthy oil-rich countries. According to some of its critics, this Muslim organization suffers from divisions, uncertainty on policy matters, and public relations problems that stem from members of the Islamic community who besmirch the reputation of Islam by reliance on terrorism.

The OIC formed in Rabat, Morocco, on September 25, 1969, in response to fire damage caused by extremists to the al-Aqsa Mosque in Jerusalem. The subsequent meetings of the OIC emphasized not only the promotion and the coordination of scientific, cultural, and economic efforts of its members but also repudiation of Western imperialism, Zionism, and retrogressive attitudes such as defeatism, pessimism, and religious conservatism, an overly meticulous and counterproductive interpretation of the Quran that rejects modernity and change. The OIC firmly supports the rights of the Palestinian people but remains divided on the issue of the recognition of Israel.

—Martin Scott Catino

Bibliography

Ahsan, Abdullah. *OIC, the Organization of the Islamic Conference: An Introduction to an Islamic Political Institution*. Herndon, VA: International Institute of Islamic Thought, 1988.

Khan, Saad S. *Reasserting International Islam: A Focus on the Organization of the Islamic Conference and Other Islamic Institutions*. Oxford: Oxford University Press, 2001.

The original goals of the Arab League were to liberate all Arab nations still ruled by foreign countries and to prevent the creation of a Jewish state in Palestine as well as to serve the common good, improve living conditions, and guarantee the hopes of member states. In 1946 the league members added to their pact a cultural treaty under which they agreed to exchange professors, teachers, students, and scholars to disseminate Arab culture to their citizens.

The Arab League's pact also stated that all members would collectively represent the Palestinians so long as Palestine was not an independent state. With no Palestinian leader in 1945, the Arab states feared that the British would dominate the area and that Jews would colonize part of Palestine. In response to these fears, the Arab League created the Arab Higher Committee to govern Palestinian Arabs in 1945. This committee was replaced by the Arab Higher Executive in 1946, which became the Arab Higher Committee in 1947.

The State of Israel was declared on May 14, 1948. The next day Egypt, Iraq, Lebanon, Saudi Arabia, Syria, and Transjordan responded with a declaration of war on Israel. Yemen also supported the declaration. Secretary General Abdul Razek Azzam Pasha declared that the Arab League's goal was to conduct a large-scale massacre and extermination. Although King Abdullah of Jordan (he officially changed the name of Transjordan to Jordan in April 1949) claimed to be the legitimate power in Palestine, the league did not wish to see Jordan in control of the area and thus established its own government on behalf of the Palestinians, the All-Palestine State of October 1, 1948. The mufti of Jerusalem, Haj Amin Husseini, was its leader, and Jerusalem was its capital. Although ostensibly the new government ruled Gaza, Egypt was the real authority there. In response, Jordan formed a rival temporary government, the First Palestinian Congress, that condemned the government in Gaza. The Arab-Israeli War ended in 1949 with Israel intact. Jordan occupied the West Bank and East Jerusalem, and Egypt controlled Gaza.

During the 1950s Egypt effectively led the Arab League. In 1952 a military coup in Egypt, nominally headed by General Muhammad Naguib, overthrew King Farouk, but within two

years Colonel Gamal Abdel Nasser assumed control. A strong proponent of Arab unity, he called for a union of all Arab nations, including Palestine. Nasser ended the All-Palestine government in Palestine, formed the United Arab Republic with Syria, and called for the defeat of Israel.

In 1956 Nasser nationalized the Suez Canal, precipitating the so-called Suez Crisis that brought an Israeli invasion of the Sinai followed by British and French short-lived invasions of Egypt. U.S. economic and political pressure secured the withdrawal of the invaders. Far from toppling Nasser as the allied British, French, and Israeli governments had hoped, the failed invasions strengthened Nasser's prestige in the Arab world and raised the stature of Pan-Arabism and the Arab League.

In the 1960s the Arab League again pushed for the liberation of Palestine, and in 1964 it supported the creation of the Palestinian Liberation Organization (PLO), which was dedicated to attacks on Israel. Following the Six-Day War of 1967, which ended in extensive territory losses for Egypt, Jordan, and Syria to Israel, the Arab League met at Khartoum that August and issued a statement in which its members vowed not to recognize, negotiate with, or conclude a peace agreement with Israel. The Arab League suspended Egypt in 1979 in the wake of President Anwar Sadat's visit to Jerusalem and participation in the 1978 Camp David Peace Accords. The league also moved its headquarters from Cairo to Tunis. When the PLO declared an independent State of Palestine on November 15, 1988, the Arab League immediately recognized it. Egypt was readmitted to the league in 1989, and the headquarters returned to Cairo. In the 1990s the Arab League continued its efforts to resolve the Israeli-Palestinian dispute in Palestine's favor.

More recently, in 2003 the Arab League voted to demand the unconditional removal of U.S. and British troops from Iraq. The lone dissenting voice was the tiny nation of Kuwait, which had been liberated by a U.S.-led coalition in the 1991 Persian Gulf War.

—Amy Hackney Blackwell

Bibliography

Aburish, Said K. *Nasser: The Last Arab*. New York: Thomas Dunne Books, 2004.

Gomaa, Ahmed. *The Foundation of the League of Arab States: Wartime Diplomacy and Inter-Arab Politics, 1941 to 1945*. New York: Longman, 1977.

Hasou, Tawfig. *Struggle for the Arab World: Egypt's Nasser and the Arab League*. Boston: KPI, 1986.

Group of Eight (G8)

The Group of Eight (G8) is an association of eight nations (formerly seven) that meets to discuss a range of global issues, particularly those relating to international economic and diplomatic concerns. Its membership includes the United States, Britain, France, Germany, Japan, Italy, Canada, a significant cross-section representative of the developed nations of the world, with the addition of Russia in 1997. The G8 serves as a means for the member nations to cooperatively establish economic and political stances that affect billions of the world's people. As a result, antiglobalization activists and intellectuals frequently make the G8 a target of criticism. Since the 1970s, the G8 organization (known as the G7 before the inclusion of Russia) has come under incessant criticism for failing to solve the economic problems of developing nations and allegedly focusing on seeking global economic hegemony for its member nations.



Antiglobalist demonstrators march with posters bearing the likenesses of G8 leaders during protests against the G8 Summit in Toyako, Japan, July 7–9, 2008. From left to right: U.S. president George W. Bush, Prime Minister Silvio Berlusconi of Italy, Prime Minister Yasuo Fukuda of Japan, Prime Minister Stephen Harper of Canada, and President Nicolas Sarkozy of France. (Mujitra)

➤ ASIA-PACIFIC ECONOMIC COOPERATION (APEC)

The Asia-Pacific Economic Cooperation (APEC) is a forum for an association of 21 Pacific Rim countries for the purpose of discussing economic issues concerning cooperation, trade, and investment within the greater region. The first meeting of APEC resulted from Australian prime minister Robert Hawke's requests for more effective economic cooperation within the Pacific Rim region in 1989. The first meeting took place in Canberra, Australia, in November of that year and was attended by representative delegates rather than heads of state. The first meeting of APEC Economic Leaders, composed of the heads of states of member nations, took place in 1994.

Among the various activities coordinated by the APEC Secretariat are year-round meetings of the member states' representatives and the APEC Economic Leaders Meeting, an annual summit attended by the heads of state of all APEC members except Taiwan (Republic of China), which is represented by a delegate. The location of the summit rotates annually among the member economies, and a noted tradition involves the attending leaders dressing in the national costume of the host member nation. The current members of APEC include the United States, Russia, Australia, New Zealand, Japan, Canada, Indonesia, Malaysia, South Korea (Republic of Korea), Singapore, Thailand, Taiwan (Republic of China), China (People's Republic of China, or PRC), Hong Kong (separate from the PRC), Mexico, Papua New Guinea, Chile, Peru, Brunei, the Philippines, and Vietnam.

—*Abraham O. Mendoza*

The idea for a summit to discuss pressing economic concerns gained importance in the wake of the Organization of Petroleum Exporting Countries (OPEC) Oil Crisis of 1973, when most of Western Europe and the United States regarded cooperation and consultation pivotal in addressing solutions to their domestic economic difficulties. The rising price of oil ignited by the formation of OPEC and its impact on the oil-dependent developed world caused severe financial strains. In 1973 U.S. treasury secretary George Shultz organized a major conference of

financial consultants from Britain, France, Japan, and West Germany, known informally as the Library Group. By the following year, both France and West Germany advocated making the summit into a conference, with the heads of state of the member countries as main representatives. By 1975 the first official G6 meeting took place in Rambouillet, France, and was hosted by French president Valéry Giscard d'Estaing. The following year, Canada joined the fore, making the 1976 summit in Puerto Rico the first for the G-7. The subsequent year, the European Union (EU) was accorded observer status at the London summit, having been invited as such by the British government.

The initial summits of the 1970s addressed policies espoused by the World Bank and the International Monetary Fund and specific problems related to global inflation. However, in the early 1980s the G-7 began to discuss major international concerns as part of their agenda, particularly in Ottawa (1981) and Versailles (1982), which emphasized terrorism, arms proliferation, and conflict in the Middle East. Financial concerns and fiscal policies still contributed heavily to discussions among the representatives, primarily at the G-7 summit in Tokyo (1986), which emphasized addressing domestic monetary policies on the part of member nations.

By the late 1980s, G-7 summits began to address global environmental and health concerns, particularly the nuclear disaster at Chernobyl, the growing AIDS epidemic, and global warming. In the 1990s, G-7 summits regarded global employment and labor issues as a major topic of concern. At the Munich summit (1992) policy members agreed that nations should attempt to link their domestic sources of labor to global labor markets to ensure adequate employment levels and thus raise standards of living in poor nations.

The G-8 was created to be an informal forum of the major economic powers of the world and lacked the administrative structure of other international institutions such as the United Nations, the World Bank, and the International Monetary Fund. The G-8 does not possess a permanent bureaucracy or set of offices for its respective members and their staffs. The official presidency of the group rotates annually among

the member countries, with each new term beginning on January 1 of that year. The respective member nation assuming the presidency for the year is responsible for planning, coordinating, and hosting a series of meetings of ministers and financial officials, culminating in a midyear summit attended by the heads of state of the respective member countries.

The G-8's annual summits tend to gain much publicity and notoriety in the host country, subjecting them to extensive lobbying by major international advocacy organizations and antiglobalization groups. They typically result in massive street demonstrations by antiglobalization and environmental activists and radicals, many resulting in major altercations with the riot police of the host city. Major criticisms at these demonstrations focus on the idea that G-8 members are responsible for major global issues including widespread poverty in the developing world due to their debt and trading policies with poor countries. These critiques and protests are similar to those leveled at the World Trade Organization (WTO). In recent decades, growing concerns over the G-8's role in combating global warming and the African AIDS epidemic have taken on extreme importance in critiques. The organizers of antiglobalization protests at cities hosting the G8 summit also accuse G8 leaders of creating a vast gap in wealth between the developing and developed worlds.

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Bibliography

- Bayne, Nicholas. *Staying Together: The G8 Summit Confronts the 21st Century*. Burlington VT: Ashgate, 2005.
- Hajnai, Peter I. *The G7/G8 System: Evolution, Role, and Documentation*. Brookfield, VT: Ashgate, 1999.
- Hubbard, Gill, and David Miller, eds. *Arguments against G8*. Ann Arbor, MI: Pluto, 2005.

Introduction to International Law

Although the genesis of international law is deeply rooted in history, modern international law is distinctly marked by the formation of the United Nations (UN) in 1945. The focus of international law changed significantly at this pivotal juncture and resulted in an immediate influx of

treaties and international organizations that reshaped international law to reflect changing global concerns. Predominate among these changes was the emergence of a new philosophy that allowed for international law to protect not only states' rights but also individuals' personal rights.

Until 1945 international law was regarded as a body of law governing states alone. The brutal mass murders and torture mechanisms that were characteristic of World War II Nazi concentration camps, however, prompted international leaders to recognize that the rules of international law are equally applicable to individuals. Because the only way to enforce the law was to prosecute those who violated it, the International Military Tribunal at Nuremberg was established to bring charges against the Nazis for crimes against peace, war crimes, and crimes against humanity. Nuremberg represented the first recognition that individuals' human rights were so sacred that their protection could not be left exclusively in states' hands. Following Europe's example, the Pacific similarly established the International Military Tribunal for the Far East in 1946 to bring these same charges against military and political leaders and nationals of the Empire of Greater Japan in what became known as the Tokyo War Crimes Trial.

The end of World War II also prompted international leaders to attempt to improve relations among nations. International leaders, scarred by the war, were determined to prevent any reoccurrence of the pains their states had recently endured. With four guiding principles, the UN sought to maintain international peace and security, develop friendly relations among nations, achieve international cooperation in solving international problems, and harmonize the actions of nations in the attainment of these ends. The UN, with 192 member states as of 2009, continues to honor these common goals today. Each member state carries one vote in the UN General Assembly, thereby placing all states on equal footing despite their economic or political disparities. Although it has its lofty goals, the UN is not credited with single-handedly avoiding a third world war. Instead, it is regarded as having played a minimal role in international dispute management. Nevertheless, it is best known for

➤ BANNING LAND MINES

The Ottawa Treaty, or formally the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, bans the use of land mines. The treaty applies only to antipersonnel mines and requires their complete destruction except for a limited number, which can be retained for training purposes. Currently, 158 countries have signed the treaty, while 37 states are not party to the convention. The most important countries that have not signed are the United States, India, Russia, and China. These countries cite pressing defensive needs, with the United States concerned about the demilitarized zone between North and South Korea, while India deems them necessary to prevent infiltration along the Jammu and Kashmir states.

Two people in particular have been credited with creating public interest in the banning of anti-personnel mines: Diana, Princess of Wales, and former Canadian foreign affairs minister Lloyd Axworthy. Princess Diana visited Angola and Bosnia in 1997 and spoke out strongly against the maiming and killing of soldiers and civilians via land mines. Princess Diana's death in August 1997 created public sympathy for her cause and convinced Britain and many other countries to ratify the agreement. Axworthy, who sponsored the Ottawa Treaty, was nominated for the Nobel Peace Prize in 1997.

its proliferation of the role of treaties in the international community.

International law, since roughly 1945, is best described as a complex web of treaties and agreements, sometimes seeking to serve as the overarching law of the land and other times to fill gaps where state law governance is uncertain. Treaties address a broad range of legal topics, including the law of the sea, the law of war, international humanitarian law, trade, intellectual property, and international criminal law. Treaties bind those nations that have signed on to them and, in accordance with general principles of international law, they must be executed in good faith.

With the significant growth of treaties, however, came the need for interpretation and

clarification of the rules and principles of international law. Because a treaty's application to specific disputes is not often crystal clear, judicial interpretation is frequently necessary to resolve any remaining uncertainties. Thus, in 1945 the International Court of Justice (ICJ) was formed to replace the then-defunct Permanent Court of International Justice. Since 1945 the ICJ has served as the principal judicial organ of the UN, helping to mold rules of international law. By its own concession, the ICJ's decisions have no binding force except between parties involved in cases adjudicated by the ICJ. The ICJ does, however, frequently look to its previous decisions to justify new rulings. The court will always enforce a treaty's plain language, but when the treaty's language is ambiguous, the ICJ's prior decisions with respect to the treaty's meaning often affects the ICJ's subsequent interpretation of those rules of law.

With the UN and the ICJ firmly in place, treaties became an effective tool to address the concerns of a changing society. Specifically, in the years between the end of World War II and the end of the Cold War, nations continually urged for arms control and disarmament. Reflective of this sentiment, treaties controlling and limiting nuclear weapons took form. By the early 1990s serious efforts were made to reduce strategic nuclear weapons, and by agreement between the United States and Russia in 2002, the number of nuclear warheads to be deployed by these respective countries was dramatically reduced.

Treaty proponents, following the formation of the UN, were also mindful of the horrific human rights violations that the Nuremberg Trials brought to light. This recognition prompted the Universal Declaration of Human Rights, voted on in 1948. Although it is not a binding international obligation, it is evidence of the customary international standard. This coupled with more than two dozen other human rights conventions reflects the international community's commitment to human rights, but because of their non-binding status these conventions continue to pose enforcement problems.

More recently, international law's focus has turned to issues concerning terrorism and war crimes. Following the September 11, 2001, attacks on the United States, international scholars

have advocated for more effective means of punishing international criminal acts. Currently, the Convention against Torture and the Genocide Conventions apply in times of war and peace, while the 1949 Geneva Convention applies only in times of war or armed conflict. Nevertheless, these conventions have likewise been criticized as lacking an enforcement mechanism strong enough to deter and punish criminal behavior internationally.

Though dating back to 1948, the Convention on the Prevention and Punishment of the Crime of Genocide has not resulted in many genocide trials. Genocide is the attempt to annihilate, in whole or in part, a national, ethnic, racial, or religious group. While the former Yugoslavia and Rwanda have taken up genocide issues, the subject was largely silent until 2006 when an Iraqi court charged Saddam Hussein with genocide for allegedly seeking to annihilate the Kurdish people in the late 1980s. Hussein escaped charges in that trial, however, after his death sentence and subsequent execution in late 2006 stemming from his conviction for murdering 148 Shia men and boys in Dujail, Iraq, in 1982.

More than 60 years have passed since the inception of the UN, and while enforcement problems remain for some of its initiatives, it has largely aided nations in reaching common ground on legal issues. As globalization continues, nations will have increased dealings with one another, further perpetuating the need for uniform laws to apply both where state law is silent and where state laws conflict.

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Bibliography

- Janis, Mark W. *An Introduction to International Law*. 4th ed. New York: Aspen, 2003.
- Ku, Charlotte, and Paul F. Diehl, eds. *International Law: Classic and Contemporary Readings*. 2nd ed. Boulder, CO: Rienner, 2003.
- Miner, Richard H. *Victors' Justice: The Tokyo War Crimes Trial*. Princeton, NJ: Princeton University Press, 1971.
- Santora, Marc, James Glanz, and Sabrina Tavernise. "Dictator Who Ruled Iraq with Violence Is Hanged for Crimes against Humanity." *New York Times*, December 30, 2006.
- Shaw, Malcolm N. *International Law*. 5th ed. Cambridge: Cambridge University Press, 2003.

Simons, Marlise. "Hussein's Case Won't Bolster International Human Rights Law, Experts Fear." *New York Times*, December 30, 2006.

Nuremberg Trials

The Nuremberg Trials, named after the German city in which they took place following World War II, consisted of 13 separate trials of alleged Nazi war criminals under two different military tribunals. The International Military Tribunal (IMT) presided over the first of these trials in which 22 leading Nazis were charged with crimes against peace, war crimes, crimes against humanity, and conspiracy to commit such crimes. The IMT represented the Allies' collective endeavor to hold Nazi leaders accountable for their actions during World War II while maintaining the rule of law. In the process, the IMT established several important precedents for international justice. The subsequent Nuremberg Trials, while adhering to the IMT's principles, were conducted solely under the jurisdiction of U.S. military tribunals.

Allied leaders had discussed the need to bring high-ranking Nazis to justice long before Germany's unconditional surrender on May 8, 1945, but they initially differed on the means of achieving this common goal. British and Soviet



The defendants' dock during the Nuremberg war crimes trials. Organized shortly after the end of World War II in 1945, and continuing through 1946, the Nuremberg Trials convicted nearly two dozen high-level Nazi officials of war crimes. (National Archives)

▶ HOLOCAUST SURVIVORS AS WITNESSES— ABRAHAM SUTZKEVER

At the first Nuremberg Trial, the general failure of the International Military Tribunal (IMT) to distinguish between crimes against humanity and war crimes, together with the emphasis that prosecutors placed on documentary evidence, resulted in the notable absence of Holocaust survivors as witnesses. Only the Soviet prosecution called three Jewish witnesses to the stand, one of whom, Abraham Sutzkever, the Soviet government had rescued from the Vilna area in the final months of that city's occupation by the Nazis.

As a young Yiddish poet incarcerated in the Vilna Ghetto, Sutzkever participated in the ghetto's cultural life and worked to hide Jewish artifacts from the prewar holdings of the YIVO Institute for Jewish Research. He later fought as a partisan after his escape from the ghetto in September 1943 until his Soviet-sponsored flight to Moscow the following March. In the Soviet Union he continued working on the poetry collection he had begun in the ghetto, arranged trips to recover the materials hidden in Vilna, contributed to *The Black Book* documenting the Holocaust of Soviet Jewry, and wrote a memoir designed to provide evidence for war crimes trials, *Fun vilner geto* (*From Vilna Ghetto*).

Sutzkever appeared as a witness at the IMT on February 27, 1946. He testified to the exterminatory measures that the Nazis implemented in Vilna through the end of 1941, by which time the Nazis had murdered the majority of the city's prewar Jewish population of 80,000, including Sutzkever's mother and newborn son.

In 1947, the year following his testimony, Sutzkever immigrated to Israel and continued his Yiddish literary career.

—Elana Jakel

officials favored summarily executing top Nazis, but they later acceded to the U.S. demand for a trial. This decision reflected the larger pattern of retribution across Europe as acts of personal vengeance following the Nazis' retreat gave way to trials organized by postwar governments. Beyond exacting justice, such trials were intended to legitimize the new leadership or, in the case of the IMT, the Allied occupying powers in Ger-

many. The Allies also considered the IMT part of their campaign to denazify Germans and accordingly publicized the trials' proceedings and their evidence of Nazi war crimes throughout Germany. In this respect, the choice of Nuremberg for the trials' venue was significant, as the city previously had hosted mass Nazi rallies and had lent its name to the infamous Nuremberg Laws of 1935, which severely restricted the rights of German Jews.

On August 8, 1945, representatives of the Allies concluded the so-called London Agreement, which included a charter specifying the IMT's authority and working procedures. Two judges each from France, Great Britain, the Soviet Union, and the United States served on the tribunal. Following military protocol, no jury heard the trial. Only war crimes committed by the Nazis and their collaborators, not by any of the Allied forces, fell under the tribunal's jurisdiction. Prosecutors from the Allied nations divided responsibility for proving the charges against the accused, although the interrelated nature of the crimes ensured repetition in the prosecution's case as a whole. This overlap contributed to the length of the trial, which lasted from November 1945 to October 1946.

Considerable controversy surrounded the charges themselves. The charge of war crimes, including acts of unprovoked violence against civilians and prisoners of war, had the most solid basis in international law due to its treatment in the Geneva Convention and the Hague Convention on war first established in the late nineteenth century. At the Americans' insistence, however, the IMT emphasized crimes against peace, that is, that the Nazis conducted an aggressive war in violation of international peace treaties. These charges as well as charges of conspiracy to commit crimes against peace were stressed more than war crimes. The final charge of crimes against humanity represented a legal innovation in response to Nazi atrocities against the Jews in particular. More than the other charges, then, crimes against humanity provoked criticism that the tribunal lacked the authority to try the accused for crimes that first had been identified as such after the fact. In practice, however, the IMT generally failed to distinguish between crimes against humanity and war crimes.

Criticism of the IMT did not end with the trials' charges. Many critics in Germany as well as in the Allied countries questioned the Allies' right to hold such a tribunal and considered the first Nuremberg Trial an exercise in victor's justice or even a show trial. The Soviet Union's involvement in the tribunal reinforced such claims since, under different circumstances, Soviet officials could have faced charges identical to those of their Nazi counterparts: the Soviet leadership had conspired with Nazi Germany to divide Poland between them following the country's invasion by the Nazis, Soviet troops had committed their own war crimes against German civilians toward the war's end, and the Soviet Union's humanitarian record under Josef Stalin left much to be desired. According to the terms of IMT's charter, however, the accused could not raise such issues in their defense.

To the tribunal's credit, the accused received ample opportunity for their defense; furthermore, the acquittal of two of the defendants, Hjalmar Schacht and Hans Fritzsche, demonstrated that the verdicts were not predetermined. Four of the defendants received prison sentences ranging in length from 10 to 20 years, while an additional three—including the mentally ill Rudolf Hess—received a life sentence. The tribunal sentenced the remaining 12 defendants to death by hanging. Among these condemned men were Hermann Goering, the Nazis' second in command who committed suicide prior to his execution; Foreign Minister Joachim von Ribbentrop, who cosigned the pact that divided Poland between the Nazis and the Soviets; leading Nazi theorist Alfred Rosenberg; Hans Frank, the governor-general of occupied Poland; and General Alfred Jodl.

The documentation of Nazi atrocities and the prosecution of crimes against humanity are now considered the most important legacies of the Nuremberg Trials. The prosecution's decision to base its case on documentary evidence produced by the Nazis proved crucial in preserving a record of the Holocaust and atrocities against other groups targeted by the Nazis. In addition, although the IMT linked crimes against humanity to war crimes and thus declined to judge Nazi policies toward German Jews before the war, these trials helped establish the legitimacy

of crimes against humanity as an issue in international law. Accordingly, the IMT recently has been invoked as the guiding precedent in the war crimes tribunals for Bosnia and Rwanda and for the establishment of the International Criminal Court. The IMT also set a precedent in refusing to recognize following orders as a legitimate defense for those accused of crimes against humanity.

Acting under their authority as an occupying power, American military tribunals proceeded to try an additional 12 war crimes cases at Nuremberg from November 1946 to April 1949. The defendants in these cases ranged from judges to industrialists to military officers, further documenting the complicity of individuals across the social stratum in the Nazi project. These trials also amassed important evidence of Nazi atrocities against the Jews and others they deemed undesirable. Notably, the details of human experimentation revealed in one of these trials, the Medical Case, prompted a dialogue on the ethics and limits of performing medical experiments on humans that continues today.

—Elana Jakel

Bibliography

- Cooper, Belinda, ed. *War Crimes: The Legacy of Nuremberg*. New York: TV Books, 1999.
- Douglas, Lawrence. *The Memory of Judgment: Making Law and History in the Trials of the Holocaust*. New Haven, CT: Yale University Press, 2001.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Marrus, Michael R. *The Nuremberg War Crimes Trial, 1945-46: A Documentary History*. Boston and New York: Bedford Books, 1997.
- Rabkin, Jeremy. "Nuremberg Misremembered: Reckoning the Past." *SAIS Review* 19(2) (1999): 81-96.

World Courts—The International Court of Justice and the International Criminal Court

The ambiguous term "World Court" refers to either the International Court of Justice (ICJ), affiliated with the United Nations (UN), or the International Criminal Court (ICC). The ICJ is an international judicial body designated to settle international disputes between the world's

➤ THE HAGUE—WORLD'S JUDICIAL CAPITAL

Both the International Court of Justice and the International Criminal Court are located in The Hague in the Netherlands, which is also home to more than 150 international legal organizations and institutions, such as the European Police Office (EUROPOL), EUROJUST, and the Organization for the Prohibition of Chemical Weapons (OPCW), making it known as the “international city of peace and justice.” The Hague’s history as the center for international legal institutions began in 1899, with the first international Peace Conference taking place there followed by a second one in 1907. As a result, the Permanent Court of Arbitration (PCA) was established there, with American philanthropist and peace advocate Andrew Carnegie financing the construction of the PCA headquarters (the Peace Palace).

After the establishment of the League of Nations (1919–1946), The Hague became the seat of its affiliate Permanent Court of International Justice (PCIJ), succeeded by the United Nations International Court of Justice (ICJ) in 1946 following World War II. The creation of the Iran-U.S. Claims Tribunal (1981), the International Criminal Tribunal for the former Yugoslavia (1993), and the International Criminal Court (2002) within the city further established The Hague as the world’s capital of international legal arbitration and institutions of international law.

—*Abraham O. Mendoza*

nation-states. In contrast, the ICC prosecutes individuals for crimes against humanity such as genocide, war crimes, and attempts to destabilize foreign governments. Both institutions evolved from nineteenth-century European intellectual movements that sought to establish institutions of international law to arbitrate through diplomatic means rather than through war. The ICC evolved as a result of the incapacity of the ICJ to prosecute individuals for war crimes when such prosecutions were seen as a violation of the national sovereignty of a particular nation-state.

The Permanent Court of International Justice (PCIJ), which was the predecessor of the ICJ, was the international court of the League of

Nations, established in 1922. From 1922 to 1940 the PCIJ dealt with 29 cases between various nation-states, delivering advisory resolutions that were not legally binding. Its impotence reflected the incapacity of the League of Nations to acquire international legitimacy due to constant violations by rogue states such as Imperial Japan, Fascist Italy, and Nazi Germany in the interwar period (1919–1939). While condemning acts of aggression deemed illegal by international law, the PCIJ was unable to enforce any actions due to the reluctance of the status quo European powers, Britain and France. In 1946 the PCIJ was replaced by the ICJ following the establishment of the UN.

In contrast with its predecessor, the ICJ—which brokers international disputes between nation-states—was granted greater legitimacy owing to the fact that in passing a judgment regarding an international affair or conflict, it had the backing of the UN Security Council on contentious issues, such as war or acts of aggression. Chapter 14 of the UN Charter authorizes the Security Council to enforce World Court rulings; however, such rulings are subject to the veto of any of the five permanent members (United States, United Kingdom, France, China, and Russia). The ICJ’s main duties are to settle legal disputes submitted to it by UN member states and to give advisory opinions on legal issues submitted by authorized international institutions, organizations, and the UN General Assembly. The ICJ is composed of 15 judges elected to nine-year terms by the UN General Assembly and the UN Security Council. These judges are chosen from a list of persons nominated by their nations to the Permanent Court of Arbitration. The five permanent member nations of the Security Council are each guaranteed a seat on the bench.

The jurisdiction of the ICJ has been an issue of debate since its inception due to the level of exceptions for various nations. According to Article 93 of the UN Charter, all UN members are instantly parties to the Court’s jurisdiction, and non-UN states may also become parties to the ICJ under Article 93(2). After a state has become a party to an ICJ case, it is entitled to take part in associated cases brought before the Court, but

that does not automatically give the Court jurisdiction in disputes involving nonmembers. Major critics of the ICJ suggest that its so-called compulsory jurisdiction is only in cases where two parties agree to submit to its decision, thereby lessening its effectiveness. A notable example is that the United States is withdrawn from compulsory jurisdiction and is therefore not bound to follow ICJ rulings. Furthermore, national and international organizations, multinational corporations, and individuals are excluded from the ICJ, which directs its efforts only to states. Moreover, UN agencies can operate only in an advisory capacity and cannot be involved as a party in a case. Last, the Security Council has veto power over the ICJ, which allows its permanent members to overrule decisions even when bound to follow the Court's findings. For example, the United States refused to abide by the ICJ's decision in *Nicaragua v. the United States* in 1986 (regarding U.S. support of rightist guerrillas fighting against the Nicaragua government forces), thereby circumventing its ruling altogether.

The ICC is a permanent tribunal to prosecute individuals for genocide, crimes against humanity, and war crimes and was established in 2002 through the Rome Statute of the International Criminal Court. The ICC's precursor is the famous postwar Nuremberg Trials, which were an international effort to prosecute and sentence German and Japanese war criminals. While the ICJ served as a means of settling and arbitrating conflicts between UN member nations, it stopped short of prosecuting criminals internationally. The UN General Assembly delegated the International Law Commission to come up with an idea for an international criminal court. It prepared two draft statutes by the early 1950s, but the international climate created by the Cold War made the whole idea untenable. However, episodes of ethnic cleansing in the 1990s in both Yugoslavia and Rwanda sparked international out-

rage, which emphasized the contemporary need for an international criminal court.

The ICC has jurisdiction limited to cases where the accused is a national of a member state, the alleged crime took place on the soil of a member state, or a situation is referred to the Court by the UN Security Council. The ICC is designed as a complement to its component members' judicial systems, specifically when national courts are unable (or unwilling) to investigate or prosecute, and thereby relinquishes initial responsibility to investigate and punish crimes to individual states. Currently, 105 states are members of the Court, and a further 41 countries are signatories yet to ratify the Rome Statute. States such as China, India, Israel, and the United States are currently not members, as they view the ICC as an intrusive international institution that could potentially infringe on their national sovereignty and freedom of action in foreign affairs.

Much like the ICJ, the ICC is allowed jurisdiction in affairs dealing with a particular nation-state so long as the state, as a signatory power granting the ICC the authority, allows it to do so. The most recent episodes in which the ICC has been involved concern incidents in the African states of Uganda, the Democratic Republic of the Congo, the African Central Republic, and, most notably, the current ethnic cleansing campaign in the Darfur province in Sudan.

—Abraham O. Mendoza

Bibliography

- Boyle, Alan E., and Christine Chinkin. *The Making of International Law*. New York: Oxford University Press, 2007.
- Glasius, Marlies. *The International Criminal Court: A Global Civil Society Achievement*. New York: Routledge, 2006.
- Rosenne, Shabtai. *The World Court: What It Is and How It Works*. 6th ed. Boston: Martinus Nijhoff, 2003.

■ Introduction: Decolonization

Following World War II, the European imperial powers began to divest themselves of their colonial holdings. There are many reasons for the end of the colonial period. The defeat of the Axis nations forced Italy, Germany, and Japan to give up their colonial holdings. At the same time, the expense of war and the damage to the economies and infrastructure of Europe's former Allied nations made the cost of maintaining their own empires prohibitive. In the colonies, a move toward parliamentary-style governments undercut much of the call for the civilizing mission and legitimacy—both at home and in the colonies—for empire.

In India and the Palestinian Mandate, there had already been independence movements harrying the British. Throughout the late 1930s both Jewish and Palestinian groups had protested and used violence against British troops. The Indian movements tended toward nonviolent means to disrupt the government there and had been instrumental in weakening British will to remain in the subcontinent. With the shock and cost of the war, Britain moved to disengage gradually from empire. In the interwar years, the British had created a British Commonwealth of Nations, a guise to make their conquests seem not so much an empire but an alliance. Following the war the term “British” was taken from the title, but the power disparity between the metropole and the colonies remained the same. Likewise, France attempted to create a French Union similar in character to the Commonwealth idea but with the aim of creating a unifying Francophone culture between the members.

Both the Commonwealth and the Union gave preferential trade relations to their former colonies and also sought unskilled labor to aid in the rebuilding of their nations following the war. The migration patterns in both countries show the majority of the immigrants in Britain and France to have come from areas under their colonial administration—West Africans and Algerians to southern France and East Africans and West Indians to Britain—during this period. Migration from the metropole to the colonies also occurred, with educated and skilled people leav-

ing for their homelands to take part in the government and economies in these former colonies. The Commonwealth/Union guise made decolonization easier for the imperial powers. They could maintain the benefits of access to raw materials and labor while ridding themselves of the responsibility of governance in the colonies. It also allowed for mostly peaceful transfer of power from Britain and France to the local governments.

For the French, however, there were several places where French colonials were loathe to give up their status. In Algeria, Madagascar, and Indochina, French settlers and supporters fought not for independence but rather to remain part of the French Union, clashing with native separatist movements such as Ho Chi Minh's guerrillas in Indochina. French intervention to stop the violence in Indochina and later in Algeria was costly in terms of both life and treasure; the former would indirectly lead to the Vietnam War. Violence was also the result of decolonization in India and the Middle East, where hatred flared up. In India, Muslim-Hindu violence led to the partition of India into Pakistan and India in 1948. The same year, Jewish and Arab groups clashed over the Palestinian Mandate, which had been divided up by the United Nations into the states of Israel and Palestine. A Pan-Arab army from Egypt, Jordan, and Syria attacked Israel and was repulsed, setting the stage for the current troubles in the region.

The withdrawal of Japanese forces from Korea and China following World War II led to internecine fighting in China between Mao Zedong's communists and Jiang Jieshi's nationalists. In Korea, the victorious U.S. and Soviet forces agreed to divide the peninsula at the 38th parallel. Both of the new governments' leaders—the capitalist-leaning Syngman Rhee in South Korea and the communist Kim Il Sung in North Korea—wanted to unite the peninsula under their respective rule. These clashing interests led to the Korean War in 1950.

The effects of decolonization are open for debate. One developing consensus, however, is that the speed with which decolonization was

effected was too quick, leading to economic and political destabilization. In this view, the colonial powers withdrew, leaving many former colonies cut off from the metropole and forced into an international system for which they had been ill prepared. Without developed economies or secure bureaucratic structures, these new nations struggled, leading to widespread poverty.

These historians also cite as a reason for ensuing strife the arbitrary national borders that had been carved out by the colonial powers. These borders often disregarded ethnic and linguistic groupings and are regarded as having created issues of power disparity between the various ethnic groups. These power imbalances have led to internecine fighting between groups throughout sub-Saharan Africa. While colonization is often reviled for this, it is important to note that regional and ethnic conflict in Africa was just as rife prior to colonization as in the current day. However, the introduction of modern military technology and tactics has made the fighting more lethal and widespread; the colonial powers' use of force to maintain order legitimized warlords and elected officials in African countries to use similar techniques against their populations.

Finally, decolonization opened new areas of competition for the political ideologies of the Soviet Union and the United States, as seen earlier in the Korean Peninsula. The Soviet Union had been engaged in destabilizing colonial rule since the interwar period, often infusing independence movements with socialist theories regarding the nature of imperialism as the last phase of capitalism. To counter this in the postwar era, the United States would sponsor anticommunist leaders, whether or not they embraced democratic principles. More than decolonization itself, the sudden power vacuum in these underdeveloped areas left them open to manipulation by the United States or the Soviet Union. This Cold War manipulation, more than anything, created the political climate that allowed for the rampant corruption that has plagued many of these societies since the end of World War II.

—Scott Rhymer

Bibliography

Hyam, Ronald. *Britain's Declining Empire: The Road to Decolonization, 1918–1968*. New York: Cambridge University Press, 2006.

Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2006.

Shepard, Todd. *The Invention of Decolonization: The Algerian War and the Remaking of France*. Ithaca, NY: Cornell University Press, 2006.

Spector, Ronald H. *In the Ruins of Empire: The Japanese Surrender and the Battle for Postwar Asia*. New York: Random House, 2007.

British Decolonization

The British empire reached its greatest extent after World War I, by which time it covered one quarter of the earth's surface and governed a similar proportion of the world's population. Yet between 1947 and 1964, Britain granted independence to most of its colonies. Unlike other empires in history—such as the Roman, Byzantine, Ottoman, or Habsburg empires—the collapse of the British empire was remarkably rapid. Historical debates remain over the causes if not the chronology of British decolonization. In particular, historians disagree on the relative importance of the metropolitan (domestic British), colonial (nationalist), and international causes of British decolonization. British decolonization is usually associated with the period after 1945, but the 1931 Statute of Westminster had already granted independence to the white Dominions of Australia, Canada, Eire (Irish Free State), Newfoundland, New Zealand, and South Africa. After World War II and much conflict in India, Clement Attlee's Labour government gave independence to India, Pakistan, Burma, and Ceylon; terminated Britain's Mandate in Palestine; and prepared for the end of British rule in the West African colonies of the Gold Coast (Ghana) and Nigeria. The Conservative governments of Winston Churchill and Anthony Eden were less enthusiastic about liquidating the British empire. Between 1951 and 1957, Britain created unsuccessful federations of British colonial territories in Central Africa and the West Indies but also granted independence to Sudan, Ghana, and Malaya.

Eden's successor as prime minister, Harold Macmillan, recognized that Britain needed to accelerate the pace of colonial withdrawal, so between 1957 and 1963 nine African colonies and the Mediterranean island of Cyprus demanded and gained their independence. In 1964 Labour returned to power under the leadership of Harold

Wilson, and the process of African decolonization continued. However, Wilson ran into a serious problem in 1965 when the white settler minority of Southern Rhodesia unilaterally and illegally declared itself independent. Wilson also announced in 1967 that Britain could no longer maintain its position as a colonial power east of Suez and began the process of withdrawal from Aden and the Gulf States.

In the 1970s, the process of British decolonization largely came to an end. Britain withdrew from its bases in Singapore, divested itself of its smaller colonies in the Caribbean and the Pacific, and in 1980 was finally able to grant independence to Rhodesia (Zimbabwe). The Falklands War of 1982 reminded Britain that it still had responsibilities to very small numbers of colonial subjects in far-flung outposts, but despite some rhetoric about the British imperial spirit, it was clear that the Falklands War was an aberration. In 1997 Britain handed back Hong Kong to China, and as of 2009 there is little left of the British empire apart from a few small territories such as the Falkland Islands, the Cayman Islands, and Gibraltar. Most former colonies have, however, become members of the Commonwealth, which remains a significant international organization.

What caused British decolonization? Economic pressures seem to be relevant because several instances of colonial withdrawal—in 1931, 1947, 1957, and 1967—coincided with economic crises. On the other hand, the development of Dominion status and decisions on Indian and African independence had antecedents that went back much further than the difficult economic circumstances that attended those episodes of decolonization. Economics were clearly relevant to the 1967 decision to withdraw from east of Suez. By this time Britain could not afford to discharge its global military roles because the British economy was relatively weak and the cost of military hardware was increasing exponentially. It is also worth noting that by the 1960s most British exports were going to Europe rather than the Commonwealth. It was during this period that Britain accelerated decolonization in Africa and applied to join the European Economic Community. However, the changing pattern of British trade was apparently the result, rather than the cause, of British decisions on decolonization.

Imperial issues, largely absent from general elections, indicate that British electoral politics and party ideologies were not significant factors encouraging decolonization. Decolonization tended to cause more debate within political parties than between them. This was particularly true for the Conservative Party, which oversaw much of Britain's colonial withdrawal during 1951–1964 despite the fact that many Conservatives were opposed to decolonization. A more significant political factor to consider is the official mind of British policy makers. It is no longer fashionable to suggest that they simply recognized that the time was ripe to grant independence to the colonial peoples whom the British had carefully groomed to govern themselves. It has been suggested that Britain's ruling elite lost its will to govern the colonies, but policy makers searched constantly to maintain Britain's global power, and the desire to preserve British influence also remained even when formal power was relinquished. Historians such as John Gallagher, Ronald E. Robinson, and William Roger Louis have asserted that as Britain withdrew from its empire, it cultivated good relations with colonial elites and reverted to the nineteenth-century technique of informal imperialism. On the other hand, historians Peter J. Cain and Anthony G. Hopkins have demonstrated that the City of London (Britain's finance center) turned increasingly away from the empire-Commonwealth and the sterling area (or group of countries that based their currency on the sterling pound), which undermined the strategy of informal imperialism. There is therefore some dispute about metropolitan explanations of British decolonization.

Although British policy makers sought to maintain Britain's global influence, this was becoming increasingly difficult as a result of international developments. During the interwar period, the League of Nations Mandate system introduced the idea of accountability into colonial administration, suggesting that imperial powers had a responsibility to develop territories for the benefit of the colonial population. World War II gave great hope to colonial nationalist movements. The Atlantic Charter of August 1941 suggested, among other things, that territorial adjustments after the war must accord with the

wishes of the people in those territories, which colonial peoples thought applied to them as well as the population of occupied territories in Europe. In 1941–1942, Japanese military success against the British and other European empires in the Far East shattered the image of white racial superiority that underpinned imperialism.

After World War II, the United Nations (UN) provided a critical forum for anticolonial pressure. Chapter XI of the UN Charter established the principles that guided UN decolonization efforts, while Chapters XII and XIII established the International Trusteeship System and Trusteeship Council that succeeded the League of Nations Mandate system. The 1960 Declaration on the Granting of Independence to Colonial Countries and Peoples and the General Assembly Special Committee on Decolonization established two years later were a source of great pressure on Britain, especially in relation to difficult racial issues such as the Central African Federation and Southern Rhodesia. The British Commonwealth of Nations was another forum through which former British colonies could exert pressure on British imperial policy, and this consideration was never far from the minds of British policy makers, especially after the African members compelled South Africa to withdraw from the Commonwealth in 1961.

Britain also had to contend with contradictory impulses from the United States in the context of the Cold War. The United States was ideologically opposed to imperialism and put pressure on Britain to quit its colonies so that the United States could gain access to new markets and resources. After 1960 it also seemed desirable to force the pace of decolonization in Africa to prevent communism from becoming more attractive to nationalist movements seeking international support. Yet based on the dictates of the Cold War, the United States also urged Britain to intervene militarily or slow the pace of decolonization where it looked as if an independent territory would turn communist, such as in Zanzibar and British Guiana during the 1960s. Changes in the international environment were sometimes critical for establishing the conditions in which decolonization could take place. For example, the collapse of the Portuguese empire in Africa in 1974–1975 exposed

the flank of the white supremacist regime in Rhodesia to infiltration by nationalist guerrilla forces from Angola and Mozambique. This generated sufficient pressure to set in motion the process by which Rhodesia became legally independent as the state of Zimbabwe in 1980.

Historians disagree most strongly on the significance of colonial nationalism as a factor in British decolonization. It is unclear whether nationalist groups such as Sinn Féin in Ireland, the All India Muslim League and Indian National Congress, or the National Organization of Cypriot Fighters caused Britain to withdraw from its colonies or merely accelerated a process to which the British were already committed. What is certainly true is that colonial nationalism often shaped the postimperial state as much as British constitutionalism. For example, the Attlee government wanted to leave behind a unitary state when it quit India, but the strength of Muslim nationalism and Britain's tendency to play Hindus and Muslims against one another led to the creation of an independent Pakistan. The Central African Federation, established in 1953, was supposed to create a middle ground between the demands of African nationalists for independence on the basis of majority rule and the refusal of the white minority to countenance this, but during 1959–1963 the federation caved under the weight of its own contradictions. Similarly, the Federation of South Arabia, which was established in 1963 and lasted only four years, failed because Aden Colony was not politically compatible with the Arab Emirates of the south to which it was joined. The significance of colonial nationalism must therefore be considered seriously in any account of British decolonization.

—Carl P. Watts

Bibliography

- Brown, Judith M., and Wm. Roger Louis, eds. *The Oxford History of the British Empire*, Vol. 4, *The Twentieth Century*. Oxford: Oxford University Press, 1999.
- Cain, Peter J., and Anthony G. Hopkins. *British Imperialism: Crisis and Deconstruction, 1914–1990*. London: Longman, 1993.
- Darwin, John. *Britain and Decolonisation: The Retreat from Empire in the Post-War World*. Basingstoke, UK: Macmillan, 1988.

Gallagher, John. *The Decline, Revival and Fall of the British Empire: The Ford Lectures and Other Essays*. Edited by Anil Seal. New York: Cambridge University Press, 1982.

Hyam, Ronald. *Britain's Declining Empire: The Road to Decolonisation, 1918–1968*. New York: Cambridge University Press, 2006.

McIntyre, William D. *British Decolonization, 1946–1997: When, Why and How Did the British Empire Fall?* Basingstoke, UK: Macmillan, 1998.

French Decolonization

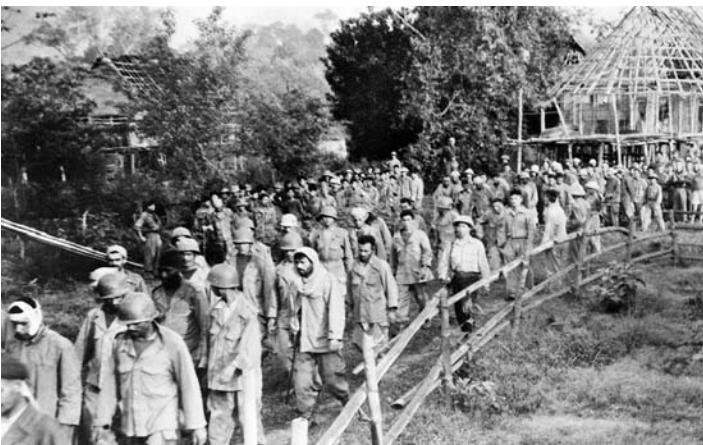
The process of decolonization throughout the French dominions was characterized by the reluctance on the part of metropolitan France to end the imperial venture, although the ensuing battles with guerrilla forces and growing domestic and international opposition would bring the era of French colonial domination to a swift end. The experience of World War II had been a traumatic experience for France and its vast empire in northern and western Africa, and Southeast Asia served as a reminder of its grandeur. However, World War II also unleashed the forces of nationalism and resistance to European imperialism throughout the colonized world. Within two decades, France was forced to abandon its empire due to the Indochina War (1946–1954), the Algerian War of Independence (1954–1962), and a relatively peaceful withdrawal from its African colonies after a failed French attempt to

form a commonwealth through the French Community (1960).

During World War II, much of the French empire had been retained by the Vichy occupation government with the exception of French Indochina (Vietnam, Laos, and Cambodia), which fell to the Japanese forces. The Japanese occupation had shown Southeast Asian nationalists, particularly future Vietnamese leader Ho Chi Minh, the vulnerability of French power. Similarly, French African colonial forces, subject to the Free French forces seeking to liberate France from the German yoke, saw their role as crucial to the European theater of war. Yet they also recognized their subsidiary position to the French forces and their place as second-class citizens within the French Empire. Both cases triggered resentment against French domination immediately after the war when France attempted to reassert its authority throughout the colonies.

In the immediate postwar period, French military forces regained control of Indochina after the withdrawal of Japanese forces, having relied on Allied forces to liberate the region. However, rather than encountering cheering throngs of Southeast Asians celebrating their return, they found nationalist guerrillas resisting the return of French power. From 1946 to 1954, French forces battled the Viet Minh under the leadership of Ho Chi Minh. The Indochina War finally ended when French forces were routed by the Viet Minh in the Battle of Dien Bien Phu on May 7, 1954. The resulting Geneva peace agreement ended French colonial rule of Indochina and divided Vietnam at the 17th parallel. This partition created further complications due to communist activities in both parts of the country and would eventually lead to U.S. involvement (the Vietnam War).

In addition to Dien Bien Phu, 1954 was also a crucial year for the battle against French imperialism in French Algeria with the formation of the Algerian National Liberation Front (FLN). This group, composed of Algerian nationalists, sought to end French rule through guerrilla warfare in the countryside and eventually in urban areas, relying on terrorist tactics that involved kidnappings, bombings, and the murders of Europeans and non-FLN Muslims. Tunisia and Morocco were granted independence by France in 1956 to pre-



Under the guard of Communist Viet Minh troops, French and Vietnamese prisoners of war march from the battlefields of Dien Bien Phu. The Battle of Dien Bien Phu marked the fall of French colonialism in Indochina in 1954. (Bettmann/Corbis)

► BELGIUM'S ABRUPT DECOLONIZATION—THE CASE OF THE CONGO

With the demands for independence in Africa growing, Britain and France made 1960 a benchmark year for decolonization. That same year, the Belgian colony of the Congo was also granted its independence by the Belgium government but in a way that ensured the instability of the region for decades to come. When Belgium decided to leave the Congo, it did so with the knowledge that it would have to fight a costly war with the indigenous nationalist insurgents, which it could ill afford. Rather than ensure that the postcolonial government was able to adequately govern over the vast territories and numerous provinces that made up the Congo, a tactic that British and French authorities tried with mixed results, the Belgians abandoned the Congo, leaving behind 30 Congolese university graduates to fill approximately 4,000 civil service positions to rule over 200 distinct African tribes constituting 22 million people.

The Congo was immediately caught up in the global Cold War rivalry between the United States and the Soviet Union during which factions based around the legitimate government (divided between noncommunist and communist factions) and secessionist insurgents received outside financial support to battle within the power vacuum created by the Belgians' departure. The Congolese Civil War erupted between rival factions, with one seeking to unite the rapidly dis-



Citizens parade through the streets in Leopoldville, Belgian Congo, celebrating their coming independence, 1960. (Library of Congress)

integrating country, even as provinces declared their independence from the state. Noncommunist authoritarian Mobutu Sese Seko (r. 1965–1996) eventually seized power from the legitimate government after the fighting ended and the secessionists were defeated. He subsequently set about making himself dictator of the new nation of Zaire, as the Congo was now known, leading to decades of authoritarian rule and widespread corruption until his fall from power in 1996.

—Abraham O. Mendoza

vent a similar conflict with their nationalist movements. However, France had ruled Algeria since 1830 and was seen as contiguous to the French state in public consciousness, having been a part of metropolitan France for a century, with a large French-ethnic population, making some reluctant to let it go. The FLN gained mass support among the Algerian populace in its efforts to expel the French. The French responded by sending in troops to pacify the region, resulting in a campaign of terror characterized by torture, executions, and the abuse of civilians. French military excesses in Algeria led to a divided French public opinion between those who sought to escalate military involvement and those who condemned French actions against innocent Al-

gerians. In 1958 after French colonists opposed to Algerian independence overthrew the French colonial administration in Algeria, Charles De Gaulle returned to power as president to resolve the situation.

However, after De Gaulle decided to negotiate Algerian independence in 1959, extremist French Algerian settlers formed the Secret Army Organization (OAS) to oust De Gaulle and his alleged FLN supporters from power. The OAS and its terrorist activities against Algerians and French authorities shocked and galvanized domestic French opposition to France's presence in Algeria, generating greater public outrage and a desire to grant Algeria independence. A cease-fire between French forces and the FLN in 1962

allowed for a referendum for Algerians to choose their destiny, culminating in the overwhelming vote for independence on July 1, 1962. The result was a mass exodus of approximately 1 million ethnic French Algerians (*pied noirs*, or “black feet”) and Muslim Algerians who had supported French authority into France.

France had fought and lost wars in Indochina and Algeria yet retained some influence over its remaining French colonies in Africa by the creation of the French Community in 1958. President De Gaulle issued a referendum to France’s remaining territories, proposing membership in this political arrangement under French tutelage. Within this system, French colonies would become self-governing states with exclusive trade and economic agreements with France and would retain the right to secede. The French Community was an attempt to retain French prestige as a global power (utilizing the British Commonwealth as a model) and to prevent allegations of French imperialism by the superpowers (the United States and the Soviet Union). Most of the French colonies (with the exception of Guinea) opted to join the French Community, enthusiastically embracing it as a vehicle for social and political advancement and economic development.

However, France instituted limited economic assistance and granted few political and civil rights to the citizens of the French Community. Growing resentment from African labor unions particularly in Senegal, seeking wages on par with their European counterparts and the denial of substantial French financial assistance, finally convinced many African leaders to ask for independence from France. In 1960 the French Community was officially dissolved as France accepted the demand for independence by the French African states (Senegal, Ivory Coast, Mauritania, Mali, Benin, Burkina Faso, Chad, Gabon, Central African Republic, Congo Republic, and Madagascar).

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Bibliography

- Betts, Raymond F. *Decolonization*. 2nd ed. New York: Routledge, 2004.
- Chafter, Tony. *The End of Empire in French West Africa: France’s Successful Decolonization?* New York: Berg, 2002.

Clayton, Anthony. *The Wars of French Decolonization*. New York: Longman, 1994.

Shepard, Todd. *The Invention of Decolonization: The Algerian War and the Remaking of France*. Ithaca, NY: Cornell University Press, 2006.

Decolonization—Portugal

In the nineteenth century, Portugal was the fifth-largest colonial power in the world. What had once been an empire centered on Asia was one that was now concentrated on Africa, with minor colonial holdings in India, Indonesia, and China. By the mid-twentieth century, Portugal still retained the vestiges of its African colonial empire with its colonies in Angola, Mozambique, the Cape Verde Islands, São Tomé and Príncipe, and Guinea Bissau. However, Africans in these territories did not benefit from this relationship. Portugal’s government was under the dictatorship of Antonio Salazar, who ruled the colonies the way he did the metropole. The loss of Brazil in the nineteenth century as well as the Great Depression of the 1930s prompted the Portuguese to squeeze as much money as they could out of their remaining colonies. Portugal’s African colonies, especially the diamond mines of Angola, provided a considerable portion of overall national wealth, which prompted Salazar to maintain his grip over the colonial economies. However, this came at quite a cost to the indigenous Africans. Because the Portuguese state did not have money to invest in Africa, Portugal made much of its money by compulsory labor in the mines and plantations, selling migrant worker contracts to the South African government, and through forced crop taxes.

Since 1910, Portugal had maintained a policy of segregation based on color, which promoted the forced labor system, an unofficial continuation of slavery. Until the 1950s, Portugal’s African colonies remained largely underdeveloped, as the Portuguese preferred to rely on this system of forced labor in order to exploit resources. However, a post-World War II boom prompted a campaign to initiate economic development, which led to a fairly large amount of immigration of Portuguese peasants to Africa. Despite the increased interest, Portugal’s relationship with its colonial citizens remained unchanged. And de-

spite the colonies' new statuses as overseas provinces, the colonized Africans received very few benefits. Only a select amount of black Africans were able to achieve citizenship on par with the white European immigrants, leaving a large number of people dissatisfied with the situation.

In 1960 and 1961, several revolts broke out in Angola in response to these growing tensions, and Guinea followed in 1962. Despite the large number of Portuguese troops sent to subdue the rebels in Guinea, the rebels still managed to capture 75 percent of the countryside, with the Portuguese holding onto only the cities and a few forts. Another 40,000 troops were sent to Angola, which began a bloody guerrilla-style war comparable to the Vietnam War, as the indigenous Africans used their knowledge of the jungle in order to gain advantage over the Portuguese. Over time, the wars in the colonies became overly burdensome for the Portuguese. By the end of the decade, the Portuguese government was spending half of its annual budget on its wars with the Africans. However, this along with help from other Western nations was not enough to claim a vic-

tory against the Africans. This caused a loss of morale, and support for the colonial wars waned considerably. Salazar continued his relentless campaign against Africa as did his successor Marcelo Caetano, who took control of the government when Salazar became incapacitated due to an accident in 1968. This policy halted only when Caetano was overthrown in 1974 after a military coup, known as the Carnation Revolution, and democracy was restored to Portugal. After the revolution, the Portuguese began to concentrate on domestic issues and realized that continued warfare in Africa was fruitless.

As a result, most of the colonies received their independence from Portugal throughout 1975. Portugal granted independence to all of its African colonies as well as its Indian ones and East Timor in Indonesia. The more than one million Portuguese who had immigrated to Africa and India returned to Portugal immediately after and were dubbed the *retornados*, or the "ones who returned." Unfortunately, independence did not improve the situation for Mozambique or Angola, as the removal of the colonial government

► COMMUNITY OF PORTUGUESE LANGUAGE COUNTRIES

The Community of Portuguese Language Countries, or Comunidade dos Países de Língua Portuguesa (CPLP), was formed in 1996 and consists of Lusophone (Portuguese-speaking) countries. The charter members consisted of Portugal, Brazil, Guinea-Bissau, Angola, São Tomé and Príncipe, Mozambique, and Cape Verde. In 2002, the island of East Timor joined after receiving its independence from Indonesia. The purpose of the organization is to join these countries that share a lingual and cultural connection based on their former connections with Portugal. Because of this goal, other countries that do not use Portuguese as their official language but were Portuguese colonies at one time are also showing an interest in joining. Macau, Goa, Indonesia, Galicia, Equatorial Guinea, Senegal, and Mauritius among others have been admitted as associate observers based on their historical links with Portugal. Interestingly, other countries that have no connection with Portugal or the Portuguese language have also shown

interest in joining, including the Philippines, Ukraine, Romania, and Croatia.

The CPLP has both political and social goals. The organization has been key in helping countries such as São Tomé and Príncipe and Guinea-Bissau recover from coup d'états by assisting in economic and democratic reforms in the two countries. The organization is also helping in social reforms. Many children in rural Africa and East Timor are not attending school and are therefore unable to speak or read Portuguese, meaning that they cannot gain employment or participate in mainstream society. The CPLP has sought to help these children by setting up Portuguese-language schools, which will not only help them in their own countries but also make it possible for them to communicate with other parts of the world, particularly Portugal, whose economy is stronger. Finally, the CPLP has taken on programs to help with both the AIDS and malaria crises in Africa.

—Monique Vallance

sparked civil wars in both countries that lasted until the 1990s. East Timor was almost immediately conquered by Indonesia after receiving its independence and remained so until 1999. As for Macau in China, it was redefined from an overseas province to a Chinese territory under Portuguese administration. It was finally returned to Chinese control in 1999. Today, the former colonies still struggle to reconcile their indigenous identities with their colonial pasts.

—*Monique Vallance*

Bibliography

- Lloyd-Jones, Stewart, and Antonio Costa Pinto. *The Last Empire: Thirty Years of Portuguese Decolonization*. Bristol: Intellect Books, 2003.
- Mazrui, Ali A., and Christopher Wondji. *Africa since 1935*. Los Angeles: University of California Press, 1999.
- Springhall, John. *Decolonization since 1945: The Collapse of European Overseas Empires*. New York: Palgrave Macmillan, 2001.

Dutch Decolonization

The abolishment of the Dutch West India Company in 1791 and the bankruptcy of the Dutch East India Company in 1800 provided the Netherlands with the largest empire in its history, as the colonies then were nationalized and absorbed into the empire. This expansion meant that the Dutch would control Indonesia as well as the Antilles and Suriname in the Caribbean.

Dutch influence in Indonesia would end in March 1942 after a Japanese invasion in January received the support of the native Indonesians who were seeking independence. After the end of World War II and the defeat of the Japanese in 1945, the Dutch tried unsuccessfully to reclaim Indonesia as a colony, but this ended in 1949 when the Indonesian resistance and international pressure forced the Dutch to concede independence to the Indonesians. However, Western New Guinea remained a part of Netherlands New Guinea until 1962, when pressure from the United States convinced the Dutch to concede it to Indonesia as a part of the New York agreement.

As for the Caribbean, the Dutch consolidated all the islands under their control, except Suriname, into what is now known as the Neth-

erlands Antilles. They were then incorporated into the Kingdom of the Netherlands in 1954 as a separate country within the kingdom. In 1986, the island of Aruba was granted *status aparte*, making it another separate country within the kingdom. These countries were granted semi-autonomy except for matters of foreign relations. In 2005, negotiations opened between the Netherlands and the Caribbean islands as to the future of the Netherlands Antilles. Relations among the islands of the Netherlands Antilles were often strained, as evidenced by the cessation of Aruba. As a result, on October 10, 2010, the Netherlands Antilles are scheduled to be dissolved. The islands of St. Maarten and Curacao will become separate countries within the kingdom, and Bonaire, St. Eustace, and Saba will become municipalities of the Netherlands. This means that residents of these islands will be able to vote in national elections as well as those of the European Union.

—*Monique Vallance*

Bibliography

- Ricklefs, Merle Calvin. *A History of Modern Indonesia since c. 1300*. Palo Alto, CA: Stanford University Press, 1991.
- Sedoc-Dalhberg, Betty Nelly. *The Dutch Caribbean: Prospects for Democracy*. New York: Routledge, 1990.

The Collapse of the Soviet Union

The most fundamental reason for the collapse of the Soviet Union in 1991 was the failure of communist ideology-based practice to conform to the demands of reality. This showed itself most clearly in three areas: (1) politics, where the political monopoly of the Communist Party of the Soviet Union repressed the creative potential of the citizenry; (2) the centralized command economy, which proved unable to compete with Western capitalist development or even to provide adequately for the Soviet population; and (3) the failure to develop genuine patriotism for the state among the Soviet Union's many national groups. By the time Mikhail Gorbachev came to power in 1985, critical secondary problems were proliferating: severe environmental degradation, declining life expectancies, demographic

➤ COMMONWEALTH OF INDEPENDENT STATES

The Commonwealth of Independent States (CIS) is a confederation of 11 former republics of the Union of Soviet Socialist Republics (USSR) that have joined together to coordinate and to foster economic relations, collective security, and other issues common to these sovereign nations, who share the experience of adjustment to the collapse of the Soviet Union and to the loss of its leadership and dominant influence. Among the former Soviet republics, only the Baltic states—Estonia, Latvia, and Lithuania—have refused to join the CIS. In 2005, Turkmenistan downgraded its role to that of an associate member. While the stated goal of this confederation resembles that of the European Union and similar organizations designed to address regional issues such as establishment of free trade, currency regulations, border security, and antiterrorist policies, Russian influence and regional hegemony have emerged as primary issues in the evaluation of the nature and efficacy of the CIS. Determining the proper role of Russia in this alliance has triggered debate and conflict among member states and has generated questions regarding the fundamental goals and the purpose of the organization.

Since the inception of the Commonwealth of Independent States in 1991, problems involving competing interests and political identities have emerged. Leadership among members accrued to Russia, which gained control of the Soviet nuclear arsenal, the Soviet seat at the United Nations, and vital military bases in the region. Russian gains and influence were offset by

member nations that have become increasingly dissatisfied with Russia's leadership and have looked to the West for guidance and support. In 1997, Georgia, Ukraine, Azerbaijan, and Moldova started the GUAM forum, an organization with pro-Western sympathies. The GUAM forum has since formalized its relationship and courted economic and political favor from the United States and the European Union. Similarly, in 2005, the Community of Democratic Choice formed in Kiev with the expressed purpose of fostering democracy, security, and economic development. This grouping of several former Soviet Republics and East European states, all stretching across "the three seas" (Baltic, Black, and Caspian seas), included the Baltic States, Ukraine, Moldova, and Macedonia.

—Martin Scott Catino

Bibliography

- Brzezinski, Zbigniew. *Russia and the Commonwealth of Independent States: Documents, Data, and Analysis*. The Center for Strategic and International Studies. Armonk, NY: M. E. Sharpe, 1997.
- Patnaik, Ajay, ed. *Commonwealth of Independent States: Problems and Prospects*. New Delhi: Konark Publishers, 1995.
- Shiells, Clinton R., and Sarosh Sattar, eds. *The Low-Income Countries of the Commonwealth of Independent States: Progress and Challenges in Transition*. Washington, DC: International Monetary Fund and World Bank, 2004.

changes in favor of the non-Russia and non-European segments of the population, alcoholism, absenteeism from work, corruption, and severe disaffection. The Soviet system was in a downward spiral. Gorbachev had to act swiftly to try to save the Soviet Union.

The earliest unmistakable signals of crisis came from the satellite states of the Soviet Bloc in Eastern Europe. The visit to Poland in 1979 of the newly elected Polish pope, John Paul II, who was committed to an anticommunist *Ostpolitik*, was ecstatically received by a nation weary and cynical after years of communist rule. A trade union movement called Solidarity that began in

the Baltic port city of Gdańsk in 1980 rapidly expanded into a national movement of opposition to the communist government. Although Solidarity was repressed during the 1980s, its spirit survived and inspired like-minded oppositionists in other East European countries as well as in the Soviet Union itself. As problems in the Soviet Union grew more acute by the end of the 1980s, Gorbachev determined that the Soviets could no longer afford to prop up the unpopular regimes in these states. What resulted were the Democratic Revolutions, the breathtakingly rapid collapse of communist regimes in one state after another between June and December 1989. The

spirit of the Democratic Revolutions bled over into the Soviet Union itself, first among the Baltic peoples, whose living political memory of independence before World War II produced new independence movements in 1990, and soon spread to Ukraine, Belarus, Moldova, and the Central Asian Republics.

In the meantime in the Soviet Union, the devastating accident at the Chernobyl nuclear power plant in 1986 dramatically exposed to the entire world a catastrophic decline in Soviet competence. Ronald Reagan's 1983 proposal for the expensive Strategic Defense Initiative ("Star Wars") had already revealed the Soviet Union's growing inability to compete in the Cold War, so in 1987 Gorbachev essentially ended it by agreeing to arms limitations and reductions. In a worldwide best-seller *Perestroika: New Thinking for Our Country and the World*, Gorbachev encouraged an end to the Cold War's military standoff and pointed toward a world in which the Soviet regime's dictatorship might indeed "wither away" and be replaced by a truer form of communism. Gorbachev also launched a massive reform campaign in the Soviet Union under the slogans of glasnost (open discourse) and perestroika (restructuring). However, since he tried simultaneously to maintain his commitment to Marxist-Leninist fundamentals, notably centralized political and economic control, and to the unity of the Soviet state, his reform proposals were contradictory and ultimately doomed to failure.

In August 1991, Gorbachev was threatened by what turned out to be a comic-opera coup

attempt by political right-wingers opposed to his reforms. Boris Yeltsin, the recently elected president of the Russian republic, bravely defended the state and Gorbachev himself, even climbing atop a tank in Moscow's Kremlin. Yeltsin's resulting popularity emboldened him to challenge Gorbachev's control of the Soviet Union by calling for an end to the political monopoly of the Communist Party, the transition from state-owned to privately-owned means of production, and the creation of a new Commonwealth of Independent States (to supplant the Union of Soviet Socialist Republics). In late December 1991, all 15 Soviet republics signed the charter of the new Commonwealth. Gorbachev found himself isolated and irrelevant, with no choice but to turn out the lights in his Kremlin office and go home. The Soviet Union was no more.

—Anita Shelton

Bibliography

- Dallin, Alexander, and Gail W. Lapidus, eds. *The Soviet System: From Crisis to Collapse*. Boulder, CO: Westview, 1995.
- Kotkin, Stephen. *Armageddon Averted: The Soviet Collapse, 1970–2000*. Oxford: Oxford University Press, 2001.
- Malia, Martin. *The Soviet Tragedy: A History of Socialism in Russia, 1917–1991*. New York: Free Press, 1993.
- Remnick, David. *The Last Days of the Soviet Empire*. New York: Random House, 1993.
- Suny, Ronald Grigor. *The Revenge of the Past: Nationalism, Revolution, and the Collapse of the Soviet Union*. Stanford, CA: Stanford University Press, 1993.

■ Introduction: Neocolonialism

Neocolonialism is a term used to describe post-World War II international economic arrangements whereby former colonial powers retained or regained some level of economic domination over former colonial possessions and protectorates. Various critics, including Western socialists, Third World revolutionaries, and antiglobalization activists allege

that neoliberal economic policies (particularly free trade), multinational corporations, and international banking and monetary institutions (specifically the World Bank and the International Monetary Fund) perpetuate the economic domination of the postcolonial developing world by former imperial powers. Moreover, international conferences aimed at coordinating the global

economic interests of the developed world (i.e., the Group of Eight, the World Trade Organization, and the World Economic Forum) have garnered the odium of critics of neocolonialism who see these institutions bent on the further subjugation of the postcolonial world by extracting resources, cheap labor, and encouraging import-export imbalances. Geopolitical considerations also play a factor in the development of neocolonialism, particularly in Central Asia and the Middle East where hydrocarbons (oil and natural gas) generate the interest of world powers such as the United States, Russia, and China in addition to emergent regional powers such as Iran and Turkey.

World regions with vital economic resources or production, such as Latin America (consumer goods, cash crops), the Middle East (oil), sub-Saharan Africa (diamonds), and Southeast Asia (electronic goods, toys, clothing), are seen as areas historically prone to the neocolonialist ambitions of Japan, the United States, and the European Union. While the United States did not venture to the same extent as the European Great Powers (Britain, France, and Germany) and Japan in creating global empires in the non-Western world in the scramble for colonies in the late nineteenth and early twentieth centuries, it did create a ubiquitous financial investment network that maintained inexpensive labor sources and ensured the underdevelopment of local industry that might undermine monopolies (i.e., the United Fruit Company in Nicaragua). Marxist and nationalist insurgents' resistance to economically based incursions, particularly in Latin America (i.e., Venezuela, Mexico, Argentina), illustrate these regions' underlying suspicion of alleged Western neocolonial ambitions. Multinational corporation practices leading to the growth of offshoring concerns in Latin America and Southeast Asia (such as the Western-owned *maquiladoras*—manufacturing facilities that import materials and equipment on a duty-free basis for assembly and then reexport the assembled product in Mexico near the U.S. border) that offer low wages to non-Western labor and extend markets to sell goods in less-developed nations at high prices illustrate the complexity of economic globalization and the associated allegations of neocolonialism.

Newly industrializing countries (NICs), such as South Korea, Singapore, Hong Kong (part of the People's Republic of China since 1997), and Taiwan, which were formerly seen as neocolonized entrepôts of Western capital, are now in turn being labeled as neocolonizers as they enter the ranks of the developed world economies. Multinational corporations (MNCs) based in these East Asian states are currently as ubiquitous in the world economy as European- and U.S.-based MNCs were in the immediate postwar world.

—Abraham O. Mendoza

World-Systems Theory

World-systems is a theoretical approach to the study of world history since 1500, developed by American sociologist Immanuel Wallerstein that concentrates on the connections between economics, power, and international relations. His most important work on the subject, *The Modern World-System*, was released in three separate volumes in 1974, 1980, and 1989, igniting scholarly debate and spurring new approaches to world history inspired by the social sciences. Building on established theoretical perspectives from orthodox Marxist literature and neo-Marxist literature on economic development, Wallerstein emphasized the primacy of Western European (and subsequent U.S. and Soviet) economic and political dominance of the world since 1500, as capitalism led to colonialism and more recently to the indirect domination dynamic of neocolonialism. Since the inception of Wallerstein's ideas, other historians have criticized, adapted, or contributed to the growing body of historiography of world-systems analysis, vastly enriching his innovative macrohistorical (or "wide angle") approach to world history, international relations, and global studies.

In the first volume of his work, Wallerstein provides a theoretical framework to explain the historical changes involved in the development of the modern world. He explains the development of the economic and political supremacy of Western Europe in global affairs since 1500, vis-à-vis other major regional powers (such as Ottoman Turkey, Mughal India, Manchu China) following the gradual collapse of the feudal system and the subsequent expansion of capitalism

➤ DEPENDENCY THEORY

Dependency theory, a collection of social science theories that emerged in the 1950s and 1960s prior to Wallerstein's theory of a world system, stipulates that the world is divided among a core of affluent developed regions and a periphery of impoverished underdeveloped regions. In essence, extensive amounts of resources are extracted from the periphery (developing nations) for the benefit of the core states (developed nations), ensuring their continued economic success at the expense of the periphery. Furthermore, the cheap labor of the peripheral regions is exploited to further the wealth of the core states, creating a vast wealth gap between the developed and developing worlds. The impoverished state of the countries in the periphery illustrates the nature of their subordination in the world economy to the wealthier core nations.

Dependency theory was popularized among leftist academics and activists as a theoretical explanation for the neocolonial relationship that existed between the developing world and the West. The theory gradually became discredited given its Eurocentric perspective that denied non-Western regions agency in their economic development.

Several theorists contributed to dependency theory. Economist Raúl Prebisch, affiliated with the Economic Commission on Latin America (ECLA), researched the relationship between the impoverishment of developing nations and the enrichment of the developed world (1950), thereby establishing the key concepts of the core and the periphery. Neo-Marxist scholars, such as historian and sociologist Andre Gunder Frank, adapted the concept to Marxism and its implications of global division of labor in his book *Capitalism and Underdevelopment in Latin America* (1967), extending that premise from social classes to world regions. World-systems theory, first advocated by Immanuel Wallerstein, further expanded on reformist (Prebisch) and Marxist (Gunder Frank) conceptions of dependency theory and vastly altered its message by describing its historical trajectory since 1500 and the inclusion of semiperipheral regions.

—Abraham O. Mendoza

throughout the world. In the late fifteenth and early sixteenth centuries, as the capitalist world-system emerged, it created an economic structure that encompassed a significant portion of the world with links that superseded political boundaries in various world regions, for example, between the British, French, and Russian empires. This new world economy differed from previous imperial systems because it was not characterized by a unitary political unit (medieval national kingdoms, city-states, principalities) or confederation of nations with similar cultural affinities (Holy Roman Empire, Austria-Hungary). These older imperial systems relied on political institutions in which commercial monopolies in tandem with military forces directed the flow of trade from the periphery to the metropole (centers of commerce and finance). Such empires had well-established political boundaries under the control of bureaucratic and military institutions. In contrast, modern capitalism, which characterized Wallerstein's conceptualization of the world-system, allowed the modern world economy to extend beyond the political boundaries of any country, nation, or empire, thereby creating undue influence on the political, social, and economic destinies of dependant world regions.

According to Wallerstein, the capitalist world-system was based on an international division of labor, premised on the division of labor between the two antagonistic social classes (the capitalist *bourgeoisie* and the laboring *proletariat*), defined geographically by the regional economic relationships between the *bourgeois* core and the *proletarian* periphery. Within this framework, each region fell into one of four different categories: core, semiperiphery, periphery, and external. These specific categories illustrate each region's relative position within the world-systems economy. The core regions (i.e., United States, European Union, Soviet Union until 1991, Japan) maintain economic dominance projected by their control of the flow of capital and trade between regions. Semiperipheral regions (South Korea, China, Brazil) are simultaneously dominated and dominant over others, developing key industries that allow them some level of autonomy from the core countries and the ability to exert economic and political agency within peripheral regions. Peripheral regions (much of

Latin America and sub-Saharan Africa) are under the economic and political domination of the core and semiperipheral regions, their political institutions kept in power to further subject the population to economic exploitation (i.e., U.S.-backed anticommunist regimes in Latin America during the Cold War). In earlier periods of capitalist development, external regions sustained their own localized economic systems and remained outside the world system, immune to the domination of core or semiperipheral regions.

The world-systems model, since its introduction in the 1970s, has had a significant impact on thought and research. Wallerstein's theories have gained both critics and supporters, igniting a major debate. Many of the arguments posed against Wallerstein's thesis stem from allegations of his Eurocentric framework—emphasizing the development of capitalism out of Europe, while minimizing the role of other world regions, such as China, India, and Africa. Historian Janet Abu-Lughod has argued for a premodern world-system existing across thirteenth century Eurasia based on the transcontinental hegemony of the Mongol empire. Historian and sociologist Andre Gunder Frank argues that a global scale world-system that includes Asia, Europe, and Africa has existed since approximately 4000 BCE. Historian R. Bin Wong has argued that state formation in China, while developing on a similar trajectory to that of Europe, developed its unique dynamic economic system outside of the constraints of Wallerstein's Eurocentric model. On a similar note, historians Christopher Chase-Dunn and Tom Hall argue that similar developments in urban settlements in the western and eastern parts of "Afroeurasia" (Africa, Europe, and Asia) illustrate the economic interdependence of these world regions, and argue these parallels are evidence of an ancient world-system. All in all, one would be hard-pressed to find a historian who was neutral or indifferent to Wallerstein's theory. His bold and elegantly written work set off a debate that has enriched the study of world history immeasurably.

—Abraham O. Mendoza

Bibliography

Dunn, Ross E., ed. *The New World History: A Teacher's Companion*. New York: Bedford/St. Martin's Press, 2000.

Manning, Patrick. *Navigating World History: Historians Create a Global Past*. New York: Palgrave Macmillan, 2003.

McCormick, Thomas J. "World Systems," in *The Journal of American History* 77, no. 1 (1990): 125–132.

Wallerstein, Immanuel Maurice. *The Essential Wallerstein*. New York: New Press, 2000.

Neocolonialism in Africa

Neocolonialism is the idea that while formal decolonization took place in Africa from the late 1950s through the 1970s, informal colonialism continues to exist on the continent. Consequently, it is argued that African countries have failed to achieve true sovereignty. This idea is most associated with the work of the former president of Ghana, Kwame Nkrumah, and his book *Neocolonialism: The Last Stage of Imperialism* (1965) in which he sought to outline the structures of continued informal colonialism. Nkrumah argued that colonialism had resulted in the underdevelopment of Africa and the enrichment of Western countries. Postindependence, the power and economic inequalities established under colonialism allowed for the continuing dominance of Western companies and countries in Africa and the continent's ongoing economic exploitation. Nkrumah referred to this phenomenon as flag independence, insisting that substantive economic and social independence remained unachieved. At the same time, the Kenyan author Ngũgĩ Wa Thiong'o argued that genuine liberation would require Africans to decolonize their minds and write in their native rather than colonial languages.

France in contemporary times has been particularly active in its former territories, maintaining monetary links and military bases to keep friendly dictators in power. This policy of maintaining a *chasse gardée* (private hunting ground) in Africa, similar to the U.S. Monroe Doctrine that forbade foreign powers from interfering in the Americas, is known as *Françafrique*. *Françafrique* had both economic and political motives: to generate diplomatic support at the United Nations and to aid *Françafrique* in serving as a counterweight to the Anglo-American special relationship, which has aided U.S. and British influence throughout the former colonized world.

► CHINESE NEOCOLONIALISM IN ZAMBIA?

China is now the world's largest copper consumer and has dramatically increased its presence in Zambia in recent years. Zambia is the third-largest recipient of Chinese foreign investment in Africa, with an estimated 200 Chinese companies active there as of 2007. This investment has been controversial, however, as Chinese companies have been accused of exploiting labor and natural resources, with workers at the Chinese-owned Chambishi mine paid only \$45 (U.S. dollars) a month and never receiving a day off. Six protesting Zambian workers were shot in 2006.

The Chinese presence is most marked in the Copperbelt and in the capital city, Lusaka, where there has also been widespread resentment over increasing numbers of Chinese traders and businesspeople and the leasing of one of the city's main markets to Chinese management. The opposition candidate for president in 2006, Michael Sata, promised to expel the Chinese, prompting the Chinese ambassador to threaten to break diplomatic relations if he was elected, thereby violating the Chinese principle of noninterference in sovereign affairs. There was widespread anti-Chinese rioting in Lusaka after Sata lost the election. The Chinese government has sought to defuse anti-Chinese sentiment by building a sports stadium and an \$800 million industrial zone in northern Zambia.

—*Pádraig R. Carmody*

Perhaps one of the most famous examples of neocolonialism in Africa, and one that overlapped with Cold War politics, was the Belgian-sponsored and U.S. Central Intelligence Agency–approved overthrow of Patrice Lumumba in the Congo in 1960 and the installation of the brutal and corrupt dictator Mobutu Sese Seko, who ruled for nearly 40 years. Lumumba was perceived by the Belgian and U.S. governments as a communist who might nationalize the mining industry, most of which was owned by the Belgian Company Société Générale de Belgique.

The most important mechanisms through which neocolonialism is maintained on the continent is through the international financial institutions of the World Bank and the International

Monetary Fund, which give loans to African governments in exchange for policy reforms. These financial institutions are dominated by the wealthy countries of the world, and based on the size of its contributions, the United States is the only country to hold veto power in both. During the 1980s and 1990s these Bretton Woods institutions promoted the adoption of structural adjustment programs that sought to encourage export-led growth, foreign investment, and privatization. These reforms were heavily criticized by many in Africa for focusing on increasing exports of cheap raw materials and cash crops while allowing Western companies to buy back previously nationalized industries, leading to increased poverty and what amounted, some argued, to a recolonization of the continent.

In the wake of the events of September 11, 2001, U.S. interest in and engagement with Africa increased substantially as the United States sought to diversify its oil supply away from the volatile Middle East and eliminate perceived terrorist threats. The world's largest oil company, Exxon Mobil, headquartered in the United States, now extracts more oil from Africa than any other region of the world.

Wealthier nations' intervention in African affairs is justified on the basis that many of these countries are failed states, with the influential U.S. political scientist and former state department official Stephen Krasner arguing that decent governance requires new forms of trusteeship. However, the U.S. government at the same time has been supportive of dictators such as Nguema Obiang in Equatorial Guinea, a major oil exporter. Obiang's regime has executed missionaries, aid workers, and tourists.

The Chinese government has also increased its involvement in Africa in recent years largely to secure supplies of oil and strategic minerals such as copper to feed its burgeoning industries. According to former British prime minister Tony Blair, China is now the most influential foreign nation in Africa and its second-largest trading partner after the United States. The *Economist* magazine refers to the Chinese in Africa as the new colonialists, and South African president Mbeki has expressed concern over the structure of trade with China, with Africa continuing to export raw materials and import manufactured

goods. In the 2000s in a number of countries such as Zambia, the Chinese presence has been highly controversial, leading to numerous riots, strikes, and shootings reminiscent of the colonial era.

Nkrumah argued that the only way to counter Western domination of the continent was through the creation of a United States of Africa. While this idea did not receive much support, the Organization of African Unity became the African Union in 2002, and the Pan-African parliament now sits in Cape Town, South Africa.

—*Pádraig R. Carmody*

Bibliography

- Alden, Christopher. *China in Africa: Partner, Competitor or Hegemon?* London: Zed, 2007.
- Ghazvinian, John. *Untapped: The Scramble for Africa's Oil*. Orlando: Harcourt, 2007.
- Krasner, Stephen D. "Sharing Sovereignty: New Institutions for Collapsed and Failing States." *International Security* 29(2) (2004): 85–120.
- Nkrumah, Kwame. *Necolonialism: The Last Stage of Imperialism*. Nelson: London, 1965.
- Schraeder, Peter J. *African Politics and Society: A Mosaic in Transformation*. Boston and New York: Bedford and St. Martin's, 2000.
- Wa Thiong'o, Ngũgĩ. *Decolonising the Mind*. London: James Currey, 1986.

Neocolonialism in the Middle East

After World War II, with the dissolution of European empires in the Middle East, myriad forces reconfigured the geopolitical arrangement of the region. Arab nationalism and Islamism were crucial factors in securing the independence of the postcolonial Middle East; however, removing Western economic influence, particularly amid Cold War antagonisms with the Soviet Union, proved far more difficult. Geopolitical ambitions on the part of the United States and Britain, due to their reluctance to relinquish control of the source base of most of the world's oil, led to them retaining their geopolitical influence by supporting authoritarian regimes.

The United States and its allies deemed the Middle East, the world's major source of oil, of critical strategic importance. Fears of Soviet domination of the region were quite prevalent. As

➤ EISENHOWER DOCTRINE (1957)

On January 5, 1957, U.S. president Dwight D. Eisenhower announced what later became called the Eisenhower Doctrine. He regarded the Middle East as threatened by Soviet expansion. Similar to the earlier Truman Doctrine and its declaration of support to anticommunists, Eisenhower pledged that the United States would assist Middle Eastern states militarily and economically to ensure their independence from the Soviet Union. In a mere two months, Congress passed what came to be known as the Eisenhower Doctrine, which marked the United States as the dominant power in the Middle East, replacing Britain as the major Western power in that region. Since the implementation of the Eisenhower Doctrine, U.S. foreign policy has sustained and supported authoritarian Arab regimes, such as Saudi Arabia, as long as they were pro-Western and anticommunist.

—*Abraham O. Mendoza*

the British and French withdrew from their former colonial possessions during the interwar period and at the end of World War II, these countries yet maintained their economic prerogatives within the framework of these newly independent states. In Iran, Britain was able to retain its oil concessions through the Anglo-Iranian Oil Company (AIOC), which became British Petroleum (BP), in 1954. Similarly, the United States had an agreement with Saudi Arabia to establish the Arab-American Oil Company (ARAMCO) in 1933. In the midst of World War II, the importance of oil grew, and its supply became more pivotal to the West.

British decolonization in the postwar period usually came with preconditions for the newly independent states regarding private property and investments in the region, particularly Kuwait in 1961. In Iran, the situation became untenable in 1951 when democratically elected prime minister Mohammed Mosaddeq nationalized Iran's oil industry, thereby infuriating the British who subsequently staged a global embargo against Iran. Mosaddeq's Tudeh Party affiliation and its link with the Soviet Union encouraged Britain and the United States to place this development in a Cold War context. This led to U.S. Central

Intelligence Agency (CIA) Operation Ajax in 1953. During this operation, CIA agent Kermit Roosevelt staged a coup against Mosaddeq, removing him from power and installing Mohammed Reza Pahlevi. Pahlevi subsequently made arrangements with both Britain and the United States while establishing a dictatorship over Iran. While the Eisenhower administration regarded the coup as necessary to protect the region against the expansion of communism, it was seen by Iranians as overt neocolonial control of their economy through a proxy ruler. Similarly, following the war, the United States supported the House of Saud in Saudi Arabia. This regime imposed severe Islamist laws on the populace that violated human rights. The United States sacrificed such concerns to the strategic goal of providing stability and gaining oil concessions through ARAMCO. Both ARAMCO and BP were seen as agents of neocolonialism by peoples of the region, wary of Western interference in their affairs.

Postwar Arab nationalism, instigated by individuals such as Egyptian Gamel Abdel Nasser and the Baath Party in Iraq and Syria, viewed Western interference in the Middle East as a threat to their power and sought agreements with the Soviet Union in order to counter Western economic domination. The Suez Crisis of 1956 in which the British, French, and Israelis attacked Egypt after Nasser nationalized the Suez Canal, was an illustration of Western reluctance to relinquish their claims in the region. Condemned by both the United States and the Soviet Union, this unsuccessful venture against Egypt illustrated to the Middle East states their vulnerability to Western aggression. Moreover, the Arab-Israeli conflict that followed the creation of the State of Israel in 1948 and the plight of subsequent Palestinian refugees has also generated Middle Eastern antagonism against the West, given its support of Israel and its expansion. U.S. military actions in the Middle East, such as the Gulf wars, the establishment of military bases (which some Islamist militants argue violate Muslim holy lands), and the onslaught of globalization in recent decades, have triggered further allegations of Western neocolonialism and ubiquitous resentment against the United States.

—Abraham O. Mendoza

Bibliography

- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.
- Yaqub, Salim. *The Eisenhower Doctrine and the Middle East*. Chapel Hill: University of North Carolina Press, 2004.
- Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Free Press, 2003.

Neocolonialism in East Asia

Since 1945, neocolonialism in an East Asian setting was shaped by the gradual offshoring of light manufacturing of consumer goods from the developed world to this specific region. Postwar U.S., European, and later Japanese investment in the region, particularly in the Four Asian Tigers (Hong Kong, Singapore, South Korea, and Taiwan), in tandem with investments from their respective authoritarian governments, ensured that East Asia retained a prosperous yet dependent relationship with the developed world during this transitive period. Moreover, these four rising economic powers were able to create, in turn, neocolonial relationships with Indonesia, the Philippines, Malaysia, and Thailand (which, along with Brunei, formed the Association of Southeast Asian Nations, or ASEAN, in 1967). These countries supplied natural resources to the Four Tigers as the Four Tigers sought to develop their economies and partake in the offshoring and outsourcing of light manufacturing from the rust belts of the West. After 1979, China replaced the Four Tigers and ASEAN as a source of cheap labor, profitable investment, and abundant natural resources.

In the early 1960s, following Japan's economic miracle example, the Four Tigers embarked on an economic policy focused on export-driven industrialization. In exchange for capital investment from the developed world, the Four Tigers supplied cheap labor for the production of low-cost manufactured consumer goods. By undercutting Japan with cheaper versions of technological goods for global consumption, they ensured a viable flow of capital and raw materials that sustained their economic growth from the 1960s onward. This neocolonial relationship transitioned by the 1980s into one of mutual reliance.

The United States, Australia, and Canada shipped raw materials to these manufacturing centers for later export of manufactured goods and often ran trade deficits with the Four Tigers. Moreover, multinational corporations (MNCs) offshored their industrial plants to these sources of cheap labor while deindustrializing their production facilities in their home countries.

The ASEAN countries also developed a neo-colonial relationship with the Four Tigers as centers of low-cost natural resources to be exchanged for manufactured goods. By the late 1970s, they sought to wean themselves from this economic dependence and follow the example of the Four Tigers and engage in light manufacturing, particularly in the textile industry. Global economic downturns in the early 1980s and the ASEAN nations' growing international debt, while slowing their economies to some degree, ensured that they did not emerge as developed as had the Four Tigers. Indonesia, the Philippines, Thailand, and Malaysia, while developing industrially during this period, retained large peasant populations that lived in glaring poverty and subsistence in contrast to residents of urban economic zones.

The People's Republic of China also created an intricate form of neocolonial relationships with the developed world while preserving its communist state and ideology. After overtures of rapprochement and official recognition by the United States, China established coastal economic zones for offshoring and capital investment to develop light industry. Moreover, China was richly endowed in raw materials for its factories. The bustling Chinese economy was able to undercut Japan, the Four Tigers, and ASEAN while simultaneously creating economic relationships with these countries (relying extensively on the East and Southeast Asian Chinese diaspora). While the interior regions of China remained peripheral and rural in contrast with the prosperous coastal economic zones, they also retained a semicolonial relationship to the coastal manufacturing zones. As a technocratic-bureaucratic elite and highly skilled middle class developed in China, the rural interior remained under the tight grip of the state and vulnerable to famine and disease, not to mention economic downturns, illustrative of this colonial relationship.

➤ INTERNATIONAL FREE TIBET MOVEMENT

Following the end of the Chinese Civil War and the centralization of Chinese authority in Tibet in 1951, allegations of Chinese violence and human rights violations in the province of Tibet have incensed international critics and activists up to the present. Many internationally recognized celebrities and musicians have thrown their support behind the Tibetan cause, infuriating Chinese authorities who view the Tibetan situation as an internal matter. The celebrities hosting fundraisers and concerts in support of an independent Tibet include Paris Hilton, Richard Gere, and the Beastie Boys. The exiled Dalai Lama works as a symbolic figurehead of the movement, meeting with world leaders as well as major contributors to the Free Tibet Movement and its subsidiary and grassroots organizations. However, the People's Republic of China continues to deny any wrongdoing and purports that life in Tibet has improved due to Chinese investment in the region. Han Chinese immigration into the region and infrastructural investments have radically transformed Tibet in recent decades.

—Abraham O. Mendoza

Since the end of the Cold War and the acceleration of globalization, East Asian economies have remained competitive given their low costs of production and relatively cheap labor pools. However, other emergent world regions, as in the case of China, offer more attractive incentives for multinational corporations. Nonetheless, the interconnection of East Asian economies illustrates a complex neocolonial relationship centered on Japanese, European, and U.S. investments in the region, particularly through the financial nexus of Hong Kong. However, the rise of China in the past two decades is indicative of its own emergent economic (and military) hegemony in the Asia-Pacific region.

—Abraham O. Mendoza

Bibliography

- Keylor, William R. *The Twentieth-Century World: An International History*. 4th ed. New York: Oxford University Press, 2001.
- Porket, J. L. *Modern Economic Systems and Their Transformations*. New York: St. Martin's, 1998.

Spellman, W. M. *A Concise History of the World since 1945: States and Peoples*. New York: Palgrave Macmillan, 2006.

Neocolonialism in Central Asia

The geographical position of Central Asia and its composite republics (Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, and Tajikistan), straddled between the Muslim Middle East, Russia, and China, has had a significant influence on its political, cultural, and economic destiny since the end of World War II. Under the direct political control of the Soviet Union until 1991, Central Asia since has become a sphere of economic and diplomatic contests among Iran, India, and Pakistan and to a greater extent among post-Soviet Russia, the People's Republic of China, and the United States. Due to Central Asia's immense wealth in terms of potential oil reserves, natural gas, and other extractable mineral resources, Western countries such as the United States and Japan have shown increased interest in developing relationships with the newly independent Central Asian republics, much to the dismay of Russia and China who see this region as their sphere of influence. The historical legacy of Islam in the region and the Turkic origins of the peoples of Central Asia as well as economic motives have also drawn the attention of Middle Eastern countries, principally Turkey, Iran, and Saudi Arabia. These multiple interests in the region create varying degrees of neocolonial influences among the various Central Asian states as global and regional powers compete for resources and meddle in these states' foreign and domestic policies. Scholars of neocolonialism would regard such economic and political influence (principally on the part of Russia) as neocolonial, as these nations attempt to extend their influence in the region at the expense of local interests.

Mostly under the rule of the Russian tsars from the eighteenth century until 1917, Central Asia continued under Russian political authority through the auspices of the Soviet Union until 1991. While the Soviets recognized distinct national minorities in Central Asia, they also discouraged Muslim religious identity when it conflicted with Soviet ideological objectives.

Nonetheless, Soviet authorities created five Soviet Socialist Republics (abbreviated as SSRs) (Kazakh SSR, Kirghiz SSR, Tajik SSR, Turkmen SSR, and Uzbek SSR) in recognition of the ethnic majorities of these states, which were part of the greater Soviet Union. Increased Russian immigration, in the form of engineers, bureaucrats, and professionals, created an ethnic Russian elite responsible for the day-to-day running of the political and economic life of the Central Asian republics. The local ethnic elites, mostly educated in Moscow and typically members of the Communist Party, had a nominal role as Soviet bureaucrats, while the vast majority of the population worked in laboring professions such as agriculture, mining, and construction. Much of the investment in Central Asia under Soviet authority was geared toward the extraction of resources and their redistribution to the Russian Soviet Federated Socialist Republic (RSFSR). While much of the investment in Central Asia did come from the RSFSR most of the wealth returned to the RSFSR, leaving little industrial development in the fringe Central Asian SSRs. This investment also created a huge infrastructure of railroads, electrical grids, waterways, and pipelines that tied this region economically to the entire Soviet Union.

With the dissolution of the Soviet Union in 1991 and its replacement with the Commonwealth of Independent States (CIS) to ease the transition into the post-Soviet era, the Central Asian republics emerged as the independent nation-states of Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, and Tajikistan. The expressed conciliatory tone of cooperation, heavily endorsed by the Russian Federation, masked Russian interest in maintaining economic control of the region after 1991. Given the high density of Russian population in the former Soviet Republics in what is known to Russians as the near abroad, the Russian government privileged ethnic Russians in Central Asia through double citizenship and pressuring their host governments on their behalf.

Through the 1990s to the present, the Central Asian republics began establishing trade with other regional powers in an effort to develop their national economies. The People's Republic of China had shown immense interest in the Cen-

tral Asian region since the 1970s given the ethnic composition of its Xinxiang Province (Turkic people of Central Asian heritage) and concerns over potential ethnic strife just over the border. China was also well aware of the wealth of natural resources of the region. India wished to extend economic assistance and investments into the region in order to expand into a potential market, previously untapped, for Indian goods. The Middle Eastern countries of Iran, Iraq, and Saudi Arabia also began to show interest in the region, given its newly free large Muslim populations and also the potential to develop pipelines in the region extending into the Persian Gulf. Turkey, with its historic cultural and linguistic ties to the Turkic republics, also created greater linkages with some of the Central Asian republics. Islamic fundamentalists from Pakistan and Afghanistan sought to spread their ideological message, creating a breeding ground for fanatical militias in the borderlands of Tajikistan and Afghanistan.

After the terrorist attacks of September 11, 2001, in the United States, the United States became directly engaged in Central Asia after establishing a base of operations in Uzbekistan for NATO forces fighting al-Qaeda and Taliban fighters in Afghanistan. The U.S. presence worried Russia, China, and Iran given their own interests in tapping Central Asian oil and natural gas supplies. Russia and China, in the hopes of countering U.S. (and Japanese) oil interests in the region, have created diplomatic links with Iran and India in efforts to ensure their economic influence in Central Asia. However, given that all of these regional powers have different objectives (cultural, ideological, economic, military, and religious) in Central Asia, it is unclear whether such cooperation is at all possible. The destinies of the Central Asian republics remain largely at the whims of their more powerful neighbors; yet these countries may maintain autonomy, to some extent, by pitting the larger powers against each other.

—Abraham O. Mendoza

Bibliography

Amineh, Mehdi Parvizi, and Henk Houweling Leiden, eds. *Central Eurasia in Global Politics: Conflict, Security, and Development*. Boston: Brill, 2004.

➤ GEOPOLITICS AND THE CENTRAL ASIAN PIPELINE



Russian president Vladimir Putin (center) shakes hands with the president of Turkmenistan Gurbanguly Berdimukhammedov (right) and president of Kazakhstan Nursultan Nazarbayev (left) during their negotiations on a landmark gas pipeline in the town of Turkmenbashi on May 12, 2007. (Mikhail Klimentyev/AFP/Getty Images)

In May 2007, Russian president Vladimir Putin signed an accord with the presidents of Kazakhstan and Turkmenistan that ensured the construction of a gas pipeline linked directly to Russia from these two Central Asian republics. This agreement allowed the creation of a transcontinental pipeline around the Caspian Sea, giving Russia direct control of significant amounts of Central Asian natural gas reserves. Russia's domestic supply of natural gas is sold domestically through the country's gas monopoly Gazprom at subsidized prices. However, Gazprom plans to sell Central Asian gas to Europe for almost double the price. This agreement is a setback to U.S. and European Union efforts to create a pipeline for Central Asian natural gas that might flow directly to Europe without Russia in a position of control. Gazprom, known for its accumulation of gas and oil concerns in Russia and the former Soviet Union, is suspected of attempting to corner the European gas market, subjecting consumers to its whims in the near future. This pipeline deal is a reflection of the neocolonial ambitions of Russia in the former Soviet Central Asian republics, much to the dismay of China, India, and the United States, also hoping to develop their own pipelines in the region.

—Abraham O. Mendoza

Kleveman, Lutz. *The New Great Game: Blood and Oil in Central Asia*. New York: Atlantic Press, 2003.

Malik, Hafeez. *Central Asia: Its Strategic Importance and Future Prospects*. New York: St. Martin's, 1994.

Neocolonialism in Latin America

Since 1945, most of Latin America maintained a neocolonial relationship to the United States, particularly in terms of diplomatic and economic policies that benefited the latter. In the context of the global Cold War, U.S. foreign policy vis-à-vis Latin America regarded this world region as pivotal to its security. The emergence of a Soviet-backed communist regime in Cuba under Fidel Castro (1959) and the subsequent Cuban Missile Crisis (1961) illustrated to U.S. policy makers that Latin America was potentially vulnerable to Soviet machinations. This led to a series of U.S. Central Intelligence Agency (CIA) covert operations in Latin America to support anticommunist dictatorial regimes, the most overt example being Chile and the ouster of Salvador Allende (1973).

In the late 1950s and early 1960s, U.S. policy in Latin America favored a conciliatory approach in terms of developing a cooperative continental foreign policy in the context of the Cold War. The Alliance for Progress, initiated in 1961, was a U.S. policy geared at establishing economic cooperation in the Americas as a means to counter perceived Soviet ambitions in the region after the establishment of the Castro regime in Cuba. Through the Organization of American States, the United States and Latin America cooperated on foreign policy issues in the Caribbean and South America, most notably in the intervention in the Dominican Republic in 1965. However, the conciliatory approach of the Alliance for Progress for social reform and economic development was scrapped by President Lyndon Johnson's administration in favor of direct intervention to suppress communism in the region, which was a policy also followed by President Richard Nixon in the 1970s. Support for right-wing authoritarian dictators and military juntas (Brazil, Chile, Uruguay, and Argentina) and one-party dictatorships (Mexico) by the United States

maintained its diplomatic and military hegemony in the region, albeit with growing anti-U.S. resentment.

Latin America was seen as a stable region, and Western banks sought to invest in regional industries, ultimately encouraging runaway Latin American debt. Latin American economies, particularly from 1960 to 1973, grew at astonishing rates in relation to the rest of the developing world, at nearly 6 percent. Much of this growth was a result of export-driven foreign trade of manufactured goods in addition to their traditional dependence on commodities (cash crops, minerals, and other extraction industries). U.S. banks, fueled by growing stocks of petrodollars coming from the oil-rich Middle East, invested billions in Latin America. The foreign debt of Latin America grew from \$2.3 billion in 1970 to \$340 billion by 1983, accounting as a region for roughly 60 percent of the world's foreign debt owed to commercial banks. During the global recession of the late 1970s and early 1980s, most of Latin America was heavily indebted and, with most banks calling in their loans, was already hard-pressed amid the economic hardships of this period. The resultant Latin American debt crisis led to increased U.S. involvement in state spending through the auspices of the International Monetary Fund (IMF) to reschedule and restructure debts. Argentina, Brazil, Mexico, and Peru, among others, were forced to cut social programs and reserve a large amount of their revenues from taxation and nationalized industries (such as oil) toward servicing their debt. Moreover, U.S. anticommunist foreign policy in the Central American republics of Nicaragua and El Salvador and the Caribbean state of Grenada in the 1980s to combat Soviet-supported insurgents also contributed to ever-growing Latin American resentment to U.S. hegemony in the region.

With the end of the Cold War, most of Latin America embraced neoliberal free market policies to lessen their dependence on the United States. With the development of the North American Free Trade Agreement (NAFTA) between Canada, the United States, and Mexico, the South American republics of the Southern Cone developed Mercosur (Mercado Común del Sur) as a means to develop their economic independence from the West. During this period, the transition

of right-wing dictatorships to popularly elected liberal and socialist governments, particularly in Argentina, Brazil, Chile, Peru, El Salvador, and Guatemala, drastically altered relations with the United States. Moreover, Venezuela's Hugo Chavez and Bolivia's Evo Morales have currently used anti-U.S. rhetoric to shore up their socialist control over their respective states. Chavez, in particular, in his support of Cuba, diplomatic exchanges with Iran, and joint military exercises and purchase of war materiel from Russia, takes a more aggressive stance against the United States in world affairs. Brazil, as South America's largest economy and an integral member of Mercosur, now stands to emerge as one of the largest world economies in the twenty-first century.

Nonetheless, the United States still maintains asymmetrical relations with Mexico and Colombia, given their dependence on the U.S. economy and financial assistance in fighting international drug cartels.

—Abraham O. Mendoza

Bibliography

- Grimson, Alejandro. *On Argentina and the Southern Cone: Neoliberalism and National Imaginations*. New York: Routledge, 2005.
- Keylor, William R. *The Twentieth-Century World: An International History*. 4th ed. New York: Oxford University Press, 2001.
- Spellman, W. M. *A Concise History of the World since 1945: States and Peoples*. New York: Palgrave Macmillan, 2006.

■ Introduction: Creation of New States

With the end of the European empires and the fragmenting of the Soviet Union into its composite national states, the world has experienced the widespread creation of new independent states from 1945 into the present. The postwar reconfiguration of boundaries in Europe and East Asia along Cold War ideological lines led to the division of Germany, Korea, and Vietnam. At the same time, most of Eastern Europe and the Baltic came under the Soviet yoke. Vast regions of Africa, Asia, the Middle East, Oceania, and the Caribbean attained independence amid the process of European decolonization. Furthermore, with the collapse of the Soviet Union, the reunification of Germany, and the breakup of Czechoslovakia and Yugoslavia into myriad national states, there was a massive proliferation of new polities that soon gained membership into the United Nations. Such transitions were not necessarily smooth. In many of these regions, disputes over national boundaries and ethnic identity triggered separatist movements, civil wars, regional conflicts, ethnic cleansing, and the development of failed states. In the post-Cold War world, geopolitical and strategic concerns on the part of major world powers, such as the United States, Russia, China, and the European Union (itself a new suprana-

tional entity), also have a significant influence in the establishment (and in some cases contraction) of these new polities.

—Abraham O. Mendoza

Tito's Yugoslavia

Born on May 7, 1892, in Kumrovec, Croatia, to a peasant family that farmed eight acres, Josip Broz was the 7th of 15 children, only 7 of whom survived childhood. In 1915, while serving in the Habsburg Army, he was captured by the Russians. He remained in Russia during the revolutions of 1917 and the ensuing Russian Civil War, although the extent to which he participated in these conflicts is unclear. In 1920 he returned to the Kingdom of Serbs, Croats, and Slovenes (after 1929, Yugoslavia), which had been created in 1918. Imprisoned from November 1928 until March 1934 for political activism, he worked for the Comintern from 1935 until 1940, taking the name Tito. In the late 1930s, he became the secretary general of the small Yugoslav Communist Party. In the fall of 1941, Tito's Partisans began their struggle against the Axis occupation of Yugoslavia and also against the Serbian nationalist (Chetnik) resistance. Gradually mastering the art of guerrilla warfare, the Partisans liberated parts

of Slovenia, Croatia, Bosnia, and Macedonia late in 1943, aided considerably by the collapse of fascist Italy. On October 20, 1944, they captured Belgrade. Despite the hatred generated by violence and reprisal among Yugoslavia's ethnic groups, in March 1945 Tito created a new Yugoslav state. Formally a federation of six republics—Serbia, Croatia, Slovenia, Montenegro, Macedonia, and Bosnia-Herzegovina—in actuality Yugoslavia would remain a unitary state governed by Tito and the Communist Party.

A dedicated Stalinist, Tito began to nationalize property, hoping to industrialize his country quickly, but in 1948, angered over Tito's efforts to aid the Greek communists and create a Balkan federation independent of Soviet control, Stalin expelled Yugoslavia from the Soviet-dominated Cominform and imposed a damaging economic embargo. Shunned by the man he had idolized, Tito gradually retreated from the Soviet model. The drive to collectivize farmland, launched in 1949, was abandoned by 1951. In 1953 peasants were allowed to leave the collectives, although private farms of more than 10 to 15 hectares were not permitted. Likewise, beginning in 1950, workers were given more authority to select their enterprise managers. As Tito moved toward market socialism, Yugoslavs came to enjoy a higher standard of living and greater freedom than their Soviet Bloc neighbors. Titoism became an attractive communist alternative to the more rigid and bureaucratic Stalinist model.

Along with Jawaharlal Nehru of India and Gamal Abdel Nasr of Egypt, Tito spearheaded the Nonaligned Movement, which encouraged developing nations to maintain independence from and good relations with both the Soviet Union and the United States during the Cold War. In 1955, as a sign of Tito's growing stature, especially in the Soviet Bloc and the developing world, Soviet premier Nikita Khrushchev publicly apologized to Tito for Stalin's harsh actions toward Yugoslavia. In 1968, Tito condemned the Soviet invasion of Czechoslovakia, again emphasizing his maverick status.

In the 1970s, as Yugoslavia opened up to global market forces, political power devolved more and more to the separate republics. In the north, relatively prosperous Slovenia and Croatia objected to financing development of the poorer

south. Tensions mounted in Kosovo, an autonomous region in southern Serbia that the Serbs regarded as the cradle of their civilization. However, Albanians now comprised 80 percent of Kosovo's population, and some began to call for separate republican status. On May 4, 1980, after 35 years in power, Tito died, leaving behind an ineffective collective presidency that rotated annually among the presidents of the six republics and the autonomous regions of Kosovo and Vojvodina. Economic woes and Mikhail Gorbachev's decision to allow the Soviet satellites to renounce communism and go their separate ways further accelerated the disintegration of Yugoslavia, which began with Slovenian and Croatian declarations of independence in 1991. The civil war that followed ultimately led to economic sanctions, NATO military intervention, and internationally brokered peace agreements.

—Michael F. Hamm

Bibliography

- Djilas, Milovan. *Tito: The Story from Inside*. New York: Harcourt Brace Jovanovich, 1980.
- Singleton, Fred. *A Short History of the Yugoslav Peoples*. Cambridge: Cambridge University Press, 1985.
- West, Richard. *Tito and the Rise and Fall of Yugoslavia*. New York: Carroll and Graf, 1994.

Post-Soviet Eastern Europe

The territorial dissolution of the Soviet Union, along with the withdrawal of Soviet troops from Eastern Europe and development of a market economy, constitute the common historical background faced by the post-Soviet East European countries from Estonia to Bulgaria in the late 1980s and the early 1990s. Remarkably, the post-Soviet East European countries achieved widely varied forms of democratization, economic reform, and civil peace. In the early 1990s, the Baltic States (Estonia, Latvia, and Lithuania), the Visegrad group (Poland, Czech Republic, Slovakia, and Hungary), and Slovenia rapidly achieved high levels of democratization, economic growth, and national unity, while the Balkan States (Bulgaria, Romania, Serbia and Montenegro, Croatia, Bosnia-Herzegovina, Macedonia, and Albania) and the former Soviet republics of Belarus, Ukraine,

BREAKUP OF THE SOVIET UNION, 1989–1995



➤ GREATER SERBIA

While the concept of establishing a Greater Serbia has deep historical roots, the concept gathered new momentum within Serbia during the mid-1980s. This nationalistic concept, emerging from the Pan-Slavic ideology, promoted political unification of Balkan lands inhabited by Serbs, to the detriment of non-Serbian populations including the Albanians, Croats, and Bosnians. The concept played an important role in Serbia's foreign policy during two Balkan wars fought in 1912 and 1913, when Serbia made territorial gains by absorbing Kosovo and part of Macedonia but failed in its objective of uniting with Serbian regions of the Hapsburg empire, including parts of Bosnia-Herzegovina, Croatia, and Vojvodina. Furthermore, the Hapsburg annexation of Bosnia-Herzegovina in 1908, which delivered a major blow to the Greater Serbia concept, greatly contributed to the rise of the nationalistic sentiments in Serbia and, eventually, to the assassination of Archduke Franz Ferdinand and the start of World War I in 1914. After the war, the concept paved the way for the establishment (1919) of the Kingdom of the Serbs, Croats, and Slovenes, named Yugoslavia from 1929. Paradoxically, this same concept contributed to the disintegration, in the early 1990s, of the very country it had done so much to create.

From the mid-1980s, Slobodan Milosevich (1941–2006), the communist leader of Serbia—one of six republics making up Yugoslavia—became a proponent of Greater Serbia. Support for this idea led to repression of ethnic Albanians in Serbia's Kosovo province (1989). With non-Serbian populations under threat, the republics of Slovenia (1991), Croatia (1991), and Bosnia-Herzegovina (1992) declared their independence. Civil war followed, marred by instances of horrific ethnic cleansing that the Serb-dominated Yugoslav National Army perpetrated, particularly in Bosnia. International intervention in 1995 produced an uneasy peace settlement and the charging of Bosnian Serb leaders with crimes against humanity.

These actions came too late to save Yugoslavia. Destroying Yugoslavia and simultaneously promoting ethnic cleansing, the concept of Greater Serbia epitomized the violent nationalism afflicting the globe since the end of the twentieth century.

—Bruce DeHart

Bibliography

Sell, Louis. *Slobodan Milosevich and the Destruction of Yugoslavia*. Durham, NC: Duke University Press, 2002.

and Moldova accomplished less in terms of democratization and economic reform, and many of them were threatened by ethnic conflicts.

Prior to the breakup of the Soviet Union, some of these countries had developed anticommunist political movements with a mass following, such as Solidarity in Poland and the Sajudis movement in Lithuania. In these countries, the communist leadership gradually—but completely—conceded power to the anticommunists. In many other countries there was continuity between the communist and postcommunist political and economic elites. Such was the case in Serbia and Montenegro. These countries, under the name Yugoslavia, continued to be headed by Slobodan Milosevic in the postcommunist era, although Milosevic turned to an ethnic (Serbian) nationalist mobilizing ideology. In yet other countries a rapid collapse of the communist re-

gime only briefly gave way to an opposition movement that was, once again, taken over by formerly communist cadres. The most spectacular example of such a regime collapse occurred in Romania, where Nikolai Ceausescu's personal dictatorship fell in a popular uprising, to eventually be replaced by a coalition of mostly communist-era political elites with some members of the democratic opposition.

Starting with the unification of East and West Germany, Europeanization has been an important focus of the last two decades in the region. It is in this region that the European Union (EU) launched the most ambitious expansion in its history, accepting ten formerly communist states from Estonia by the Baltic Sea to Slovenia by the Adriatic in 2004 and shortly thereafter reaching the Black Sea by accepting relatively poor Romania and Bulgaria in 2007. The EU ex-

erts substantial influence over the domestic politics of East European countries, exemplified by the popular rejection of the Slovakian prime minister Vladimir Meciar following the EU's policy to exclude Slovakia from membership as long as Meciar remained in power.

Rapid political and economic reform and development on the northwestern corner of the region soon created the image of a bifurcated Eastern Europe with a deep chasm between its developed and underdeveloped halves. Social scientists and pundits alike commented that this rapid divergence of developmental trajectories in Eastern Europe reflected a purportedly historic civilizational divide between the predominantly Catholic and Protestant (Western Christian) states on the one side and the predominantly Orthodox and Muslim states on the other. The early 1990s lent credence to these theories, when Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, and Slovenia, all of them Catholic and Protestant, were slated for the next enlargement of the EU, which occurred in 2004, due to their impressive record of political and economic reform.

However, by the end of the 1990s, democratization started to take root in the southeastern half of the region as well, thus upsetting the seemingly bifurcated nature of political and economic development. Bulgaria and Romania advanced rapidly in terms of political and economic reform after the election of fervently anti-communist leaderships in the second half of the 1990s, and as a stamp of their progress, both countries became EU members in 2007. Croatia also made major democratic advances and is expected to be the next country to join the EU, while Macedonia entertains similar hopes. Serbia after the fall of Milosevic in 2000 and Ukraine after the election of Viktor Yushchenko in 2004, also moved toward democracy. Belarus under the iron grip of Aleksandr Lukashenko remained the sole dictatorship in the region, with a poor level of civil and political liberties comparable only to countries such as Saudi Arabia and Laos.

Despite this picture of democratic progress overall, ethnic tensions in Eastern Europe also led to one of the darkest moments in European history in this period. The genocide against Bosnian Muslims took place during the most horrendous

war in Europe since World War II between the Serb, Croat, and Bosnian Muslim forces. The threat of another ethnic cleansing by the Serbian authorities against Kosovo Albanians was the justification for a NATO operation against Serbia, which put Kosovo under United Nations protection. Ethnic polarization between Albanians and Macedonians in Macedonia was diffused partly through the efforts of the EU to prevent a potential breakup of another former Yugoslav state. A Russian-speaking enclave in Moldova enjoyed de facto independence from the Moldovan government since the breakup of the Soviet Union, while the treatment of and demands by the Hungarian minorities in Romania and Slovakia occupied an important place in these countries' agendas. Despite the pessimistic expectations to the contrary in the 1980s, however, the sizable Turkish minority in Bulgaria entered into a political power-sharing agreement through various coalition governments, and another potential ethnic conflict was averted.

In conclusion, despite the wide variation in terms of democratization, economic reform, and ethnic relations summarized above and despite selective incorporation of some East European countries into Western Europe through EU expansion, there remain political, economic, and social features that are common to the entire region from eastern Germany to Bulgaria, such as the overall weakness of civil society and the still remarkable degree of economic equality in these societies compared to other major regions in the world. Both of these features indicate continuity with the region's communist legacy, since during communist rule civil society was thoroughly suppressed, while economic equality was a prime goal of state policy.

—Sener Akturk

Bibliography

- Brzezinski, Zbigniew. "Ten Years after the Soviet Breakup: The Primacy of History and Culture." *Journal of Democracy* 12(4) (October 2001): 20–26.
- Highley, John, Judith Kullberg, and Jan Pakulski. "The Persistence of Postcommunist Elites." *Journal of Democracy* 7(2) (April 1996): 133–147.
- Howard, Marc Morje. *The Weakness of Civil Society in Post-Communist Europe*. New York: Cambridge University Press, 2003.

Huntington, Samuel P. "The Clash of Civilizations?" *Foreign Affairs* 72, no. 3 (Summer 1993): 22–49.

Janos, Andrew C. *East-Central Europe in the Modern World: The Politics of the Borderlands from Pre- to Post-Communism*. Stanford, CA: Stanford University Press, 2000.

Post-Soviet Central Asia

The five formerly Soviet Central Asian republics—Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, and Turkmenistan—are distinguished from the other ten Union republics in the European territories of the former Soviet Union in that they became independent in 1991 even though neither the political leadership nor the public demanded independence. The independence of the Central Asian republics occurred as a by-product of the dissolution of the Soviet Union in Europe. Compared to the Baltic or the Caucasian republics, there were hardly any demonstrations in favor of independence in Central Asia. Both the political leadership and the population (the latter through the referendum on the new Union Treaty) signaled their willingness to stay within the same political framework with Russia and any other republics that wanted to remain in a reformed Soviet Union. However, President Boris Yeltsin and the Russian leadership in Moscow rejected the Central Asian leaders' demands to remain part of a new federation since they were at least partially convinced that Central Asia was a burden on Russia economically while also posing a demographic threat to the already tenuous Russian majority in the Soviet Union due to the above-average population growth in Central Asia.

Eighteen years after the collapse of the Soviet Union, Central Asia is still marked by a stunning continuity in communist-era leadership characterized by personalistic dictatorships and a lack of any substantive political reform toward democratization or economic reform toward free market economics. Uzbekistan and Turkmenistan consistently rank as the most undemocratic states in the world, in the same league as North Korea, Cuba, and Syria. Communist Party chiefs Nursultan Nazarbayev of Kazakhstan, Islam Karimov of Uzbekistan, and Saparmurad Niyazov of Turkmenistan remained the leaders of these countries into the twenty-first century. Niyazov

of Turkmenistan, who died in 2006, renamed himself Turkmenbashi (the head of the Turkmen) and created a most complete and anachronistic personality cult, reminiscent of the Stalinist period.

Tajikistan, under the iron grip of Emomali Rahmonov since 1992, was alone among the five Central Asian republics in experiencing a long and bloody civil war between the communist-era party clique, heavily dominated by the Uzbek minority in the country, and the anticommunist forces during which the democratic opposition represented by the United Tajik Opposition (UTO) was defeated. Kyrgyzstan is the only country in post-Soviet Central Asia where the communist-era leader, Askar Akayev, was replaced by a democratically elected leader, Kurmanbek Bakiyev, after the elections of March 2005 through the so-called Tulip Revolution.

Consistent with the authoritarian stability of political leadership and a lack of economic reform in this area has been the stability of the ethnic national borders that Stalin drew in Central Asia in the 1920s. After Soviet control was established in Central Asia, which was previously the province of Turkestan, the region was divided into five ethnic republics, consistent with Lenin's and Stalin's idea of ethnic-national rights to self-determination. The right to self-determination remained a fiction, as none of the republics were ever allowed to secede from the Soviet Union, but the legacy of dividing this predominantly Muslim and Turkic-speaking (except Tajikistan) region into five republics proved to be decisive for the future of the region.

Many thought these borders to be artificial, and some even expected them to wither away in a drive to unify at least the four Turkic-speaking republics (all except Tajikistan). Not only is there no sign of regional integration, but the mono-ethnic nation-building projects of the five republics systematically pushed groups other than the titular ethnic group out of these countries, most notably Russians, other Slavs, and Europeans such as Germans, Crimean Tatars, and the Meshketian Turks living in Central Asia. Nationalizing policies led to a few popular clashes in ethnically mixed and densely settled regions such as the Ferghana Valley, which is situated at the intersection of Uzbekistan, Kyrgyzstan, and

Tajikistan although most of the valley belongs to Uzbekistan.

Although every republic contained sizable Russian and other minorities in 1991, in the course of the 1990s these minorities, especially the Russians, began to leave Central Asia. Kazakhstan presents the most spectacular example of this process, where at the time of independence only 41 percent of the population was Kazakh, another 40 percent was Russian, and Germans and Koreans, for example, each made up 3 percent of the population. By 2006 the Russian share of the population declined to 30 percent, while the Kazakh share of the population rose to 53 percent, hence establishing the absolute majority of the Kazakhs in Kazakhstan. This is the result of the 15 years of nation-building efforts.

Geopolitically, Turkey was expected to play a major role in the region as a pro-American liberal democracy with close linguistic, cultural, religious, and historical ties with the Turkic-speaking republics of Central Asia. Despite the outpouring of official visits, academic exchanges, international conferences, cultural programs, and some important economic investments, Turkey by and large failed to fulfill this role. Turkey's efforts proved to be too weak when confronting Russia, China, and other powers seeking to maintain or gain influence in the region. Russia and China established the Shanghai Cooperation Organization to stabilize the country's influence in the region and shore up the current dictatorships. Iran and Pakistan emerged as other important players in the region. The leadership of Kyrgyz and Uzbek tried to diversify their international support by allowing the United States to establish military bases in Kyrgyzstan and Uzbekistan, although Uzbek-U.S. relations were strained after Karimov's suspicion that the U.S.-based democracy promotion agencies were trying to topple his regime.

—Sener Akturk

Bibliography

- Allworth, Edward, ed. *Central Asia: 130 Years of Russian Dominance, a Historical Overview*. Durham, NC: Duke University Press, 1994.
- Beissinger, Mark R. *Nationalist Mobilization and the Collapse of the Soviet State*. New York: Cambridge University Press, 2002.

Roy, Olivier. *New Central Asia: The Creation of Nations*. New York: New York University Press, 2000.

Zaslavsky, Victor. "The Soviet Union." In *After Empire: Multiethnic Societies and Nation-Building: The Soviet Union and the Russian, Ottoman, and Habsburg Empires*, edited by Karen Barkey and Mark von Hagen. Boulder: Westview, 1997.

Post-Cold War East Asia

East Asia entered a new era following the end of the Cold War. Russian involvement in the region declined significantly after the collapse of the Soviet Union. The end of the Cold War, however, did not result in the fall of the Chinese Communist Party (CCP). The People's Republic of China (PRC), after a decade of reform in the 1980s, continued with economic reform to develop into one of the world's fastest growing economies. Japan's economic success declined at the beginning of the 1990s, and all of the Asian Tiger economies suffered in the East Asian financial crisis of 1997. In the 1990s and 2000s there has been political liberalization throughout the region. Security issues regarding the Korean peninsula and Taiwan remain.

In South Korea, Kim Young-sam became the country's first nonmilitary president in more than thirty years on December 18, 1992. Kim launched a drive against corruption and announced a series of new policies to reform the South Korean economy. These measures were considered a success, although the issue of corruption has returned to Korean headlines since 2000. American troops continue to be stationed in South Korea following the end of the Cold War. In 1998 President Kim Dae-jung formulated the Sunshine Policy, a new South Korean diplomatic approach to North Korea that emphasized economic and political interaction and led to the first North-South summit on the Korean peninsula in history in June 2000. The meetings led to cross-border collaborations such as the Kaesong Industrial Region in North Korea, but relations have dramatically cooled since the North Korean missile launch of 2006 and later tests, including one in 2009.

In North Korea, Kim Il-sung died on July 8, 1994, to be succeeded as head of state by his

► CHINA'S INTERNET—GOLDEN SHIELD OR GREAT FIREWALL?

Access to the Internet is controlled in China by more than 60 Internet regulations and various local censorship systems. The Great Firewall of China, or the Golden Shield as it is known within China, blocks outside content from local Internet access by preventing IP addresses from being routed through and into the system. Content that offends Chinese authorities will often deal with topics considered taboo, such as police brutality and freedom of speech. Specific Web sites, such as BBC News (www.bbc.co.uk) and Yahoo! Hong Kong (hk.yahoo.com), are blocked. Organizations considered controversial such as Falun Gong or the International Tibet Independence Movement are also blocked. Internet access in China is increasingly common despite the controls on content. The Chinese government issued licenses to ten firms to open Internet café chains on July 11, 2003.

Criticism of Chinese policy on Internet controls centers on human rights issues and the denial of free information to millions of Chinese. This has not prevented Western companies from dealing with the Chinese; in February 2006 the search engine Web site Google.com agreed to block Web sites that the Chinese government considered illegal in exchange for equipment installation in China. In August 2006 online retailer Amazon.com announced its intention to buy Chinese online retailer Joyo.com in a deal worth approximately \$75 million.

—John Harney

son, Kim Jong-il. The succession did not bring reforms, and the economic difficulties of North Korea's isolation were exacerbated by the loss of guaranteed markets in the Soviet Union and China. During the 1990s North Korea's economy became reliant on international aid to feed its population, but military expenditure did not diminish, and the army continues to maintain a force of one million soldiers. The North Korean government keeps tight control over the civil liberties of its citizens and their access to foreign sources of news and information. China is North Korea's closest ally; however, the North Koreans

have experienced none of the economic success transforming China and exhibit no obvious signs of political evolution within the country. As of 2009, Kim Jong-il was reported in poor health, and the increasingly isolated nation continued to develop a nuclear weapons program despite international pressure.

In Japan, the bubble economy of the 1980s that peaked in 1989 and represented a high point in the dramatic and transformative economic growth in Japan since the 1950s had by 1991 come to an end. The Heisei period (beginning on January 8, 1989, and lasting until the present day of 2009) has been a period of price deflation and lethargic gross domestic product (GDP). The Liberal Democratic Party (LDP) lost power in 1993 for the first time in 38 years but returned 3 years later in 1996 with Tomiichi Murayama as prime minister. The LDP continues to dominate Japanese politics. Koizumi Junichiro had proved to be a charismatic and controversial Japanese leader. He supported a larger role for the Japanese military, and in 2003 Japan sent 1,000 soldiers to Iraq to aid in reconstruction of the country. Koizumi also played a part in the inflammation of negative opinion in China by making yearly visits to the Yasukuni shrine, where several Japanese war criminals are interred. Shinzo Abe replaced Junichiro Koizumi as prime minister in 2006 and was succeeded by Taro Aso in 2008. No political leader has yet emerged to rival the popularity and international recognition of Koizumi. In recent years the Japanese economy has failed to return to its globally pre-eminent status of the 1980s, particularly in the face of dramatic Chinese economic growth.

Taiwan held its first direct presidential elections in 1996 after 47 years of authoritarian rule. The Guomindang (GMD) party, first under Chiang Kai-shek and later his son Chiang Ching-kuo, had been in power since the end of the Chinese civil war in 1949. The communist PRC government conducted missile tests in the Taiwan Straits during the election period in an attempt to intimidate the Taiwanese electorate and increase the chances of candidates in favor of reunification with Mainland China. Despite this tactic, the GMD leader and incumbent president Lee Teng-hui defeated Democratic Progressive Party (DPP) candidate Peng Min-Ming. In response to

the Chinese missile tests, the United States dispatched two aircraft carrier battle groups to the region. This series of events, collectively titled the 1996 Taiwan Straits Crisis, came at the end of a long period of political liberalization in Taiwan that saw the rise of an opposition party (the DPP) and increased tolerance for the development of a Taiwanese ethnic and political identity separate from the mainland.

Taiwan has had three presidential elections—in 2000, 2004, and 2008—since the 1996 Taiwan Straits Crisis. The PRC refrained from provocative actions but continued to support candidates in favor of reunification with China. Chen Shui-bian, leader of the DPP, was elected president in 2000 and 2004. Taiwan's democratic system has remained intact despite controversy over the 2004 election results. GMD candidate Ma Ying Jiu successfully assumed the presidency of Taiwan in 2008. Doubts remain within Taiwan concerning the long-term relationship with Mainland China and the future of the Taiwanese economy. Desire within Taiwan for formal independence, particularly among DPP supporters, continues to provide a threat to regional security.

On July 1, 1997, the British government handed Hong Kong over to the PRC. Political liberalization had also been taking place in Hong Kong, as British governor Chris Patten introduced democratic reforms in the years leading up to the handover. Hong Kong became a Special Administrative Region (SAR) of the PRC, under the One Country, Two Systems policy developed by Deng Xiaoping. Border controls between Hong Kong and the PRC were not relaxed. Hong Kong remained a separate customs territory, retaining membership in international organizations such as the World Trade Organization. The PRC appointed Tung Chee Hwa as the first chief executive of Hong Kong. Since then, Hong Kong has often been the site of popular protest against the Chinese government.

North Korea remains a security issue. U.S. president George W. Bush, following the September 11, 2001, attacks, identified North Korea as part of an "Axis of Evil" alongside Iraq and Iran. Security issues regarding North Korea hinge on the development and use of nuclear weapons. On January 10, 2003, North Korea withdrew from the Nuclear Non-Proliferation Treaty, and

on October 9, 2006, the North Korean government announced the successful test of its first nuclear weapon. This pursuit of a nuclear program in the face of international pressure has become a major international concern. The international community's understanding of living conditions for the North Korean populace remains limited. Pyongyang has persisted in aggressive behavior, announcing a further missile launch in 2009. In July 2009 North Korea fired a series of cruise missiles into the Sea of Japan, actions widely perceived as a show of defiance against the United Nations. The traditionally close relationship between North Korea and China and North Korea's hostility toward South Korea and Japan have placed added pressure on East Asian countries for increased political cooperation.

—John Harney

Bibliography

- Christie, Kenneth, and Denny Roy. *The Politics of Human Rights in East Asia*. London: Va Pluto, 2001.
- Cummings, Bruce. *Korea's Place in the Sun: A Modern History*. New York: Norton, 2005.
- Drysdale, Peter. *The New Economy in East Asia and the Pacific*. London: Taylor and Francis, 2004.
- Goldstein, Steven M., and Richard Louis Edmonds, eds. *Taiwan in the Twentieth Century: A Retrospective View*. Cambridge: Cambridge University Press, 2001.
- Gordon, Andrew. *A Modern History of Japan: From Tokugawa Times to the Present*. Oxford: Oxford University Press, 2003.

The Creation of Israel and the Reconfigured Middle East, 1945–1949

If World War I and its aftermath permanently altered the regional politics of the Middle East, then the half-decade following World War II drastically rearranged both the domestic and international politics of the Middle East. The most notable changes in the Middle East during this five-year period were the founding of the State of Israel and the accompanying Palestinian refugee problem. These events sent shockwaves through the Middle East, affecting both the internal stability of neighboring Arab governments and their nations' dispositions vis-à-vis the developing Cold

War between the United States and the Soviet Union.

Prior to World War II the leaders of the Zionist movement concentrated on gaining great power support for their endeavor and persuading Jews (mostly European) to move to Palestine. The Zionist leadership succeeded for a while in accomplishing both goals, as the British granted steady support, both verbal and material, to the Zionist movement in Palestine during 1917–1939. In 1939, however, the British reversed course in the aftermath of the Palestinian Revolt (1936–1939) and the beginning of World War II, concluding that their imperial and national interests required greater Arab rather than Zionist support. During World War II mainstream Zionist organizations in Palestine aided the British in their fight against Nazi Germany but continued to plan for a future state.

Following World War II the Zionist leadership concluded that the British had become permanently anti-Zionist and began a guerrilla war against the British presence in Palestine. The mainstream Zionist military force, the Haganah, joined with the more right-wing Stern Gang and Irgun and attacked British targets, most notably the King David Hotel in Jerusalem in 1946, killing close to 100 people including British soldiers and civilians. Although the British effectively put down most of this revolt with mass arrests and retaliatory strikes, their leadership in London, under major financial and political stress, decided to confer with the United States on how to proceed. The result was the Anglo-American committee of inquiry, which eventually advocated a binational state in Palestine. The Truman administration, however, ignored this committee's recommendations, and the British subsequently referred the matter to the United Nations (UN). On November 29, 1947, under pressure from Americans lobbying on behalf of the Zionist cause, the UN General Assembly voted to partition Palestine into separate Jewish and Arab countries with Jerusalem as an independent, international city.

Believing that something was better than nothing, David Ben-Gurion, the elected leader of the Zionist movement, convinced his colleagues to accept partition, while the Palestinian Arab movement, under the leadership of Hajj Amin

al-Husseini, rejected partition. The recently established League of Arab States, a union of six Arab states, also rejected partition and announced its intention to ensure that such an outcome would not come to pass. The partition vote set in motion the countdown to a regional war between the Zionists and the surrounding Arab states once the British were scheduled to depart from Palestine in May 1948.

The civil war that erupted in Palestine between Zionist and Arab forces following the UN vote on partition fundamentally altered the demographics of Palestine. While armed Palestinian Arab forces enjoyed some success in separating Jewish areas in the eastern parts of Jerusalem from the major Jewish settlements near Tel Aviv and along the coast, by April the Zionist forces, led by the Haganah, went on the offensive. The Haganah implemented Plan D, which called for the conquest of entire Arab villages. Zionist victories and occasional harassment of conquered Palestinian Arabs convinced many wealthy Palestinians, including much of the leadership, to flee to neighboring countries. The exodus of Palestinian leaders combined with rumors of Zionist atrocities (several did occur) against conquered Palestinian Arabs touched off a wave of fear among the general Palestinian population that led to thousands of Palestinians following their leaders into exile. By May 1948 the Zionist forces had won the civil war, and hundreds of thousands of Palestinians had fled the Jewish-controlled areas of Palestine. The number would surpass 700,000 by the end of 1948.

On May 14, 1948, immediately following the termination of the British Mandate, Ben-Gurion announced the founding of the State of Israel. Five Arab nations—Egypt, Syria, Lebanon, Jordan, and Iraq—immediately invaded Palestine. While the Israelis were poorly equipped because Western powers refused to provide them with arms, during the early phase of the conflict they enjoyed superior numbers and coordination compared to their adversaries. The Arab nations, although better armed, could not agree on one strategy, as Jordan, Egypt, and Iraq all had national goals in the conflict. In fact, one prominent Israeli scholar has argued that Jordan abided by a previous agreement with pre-state Zionist leaders, which emphasized that Jordan and Israel

would divide Mandate Palestine among themselves. Thus the Jordanian Legion, the most powerful Arab military force at the time, concentrated on securing its control over the eastern parts of Palestine, including eastern Jerusalem, and did not engage in offensive military actions in the parts of Palestine awarded to the Zionists by the UN partition vote.

During a short-lived truce in the summer, the Israelis received arms shipments from Soviet-allied Czechoslovakia. After Egypt violated the truce, the Israelis, with superior organization and planning and now with equal weaponry, went on the offensive and by the end of 1948 had secured for themselves 78 percent of Mandatory Palestine, far more than they had been granted by the UN partition. Furthermore, Jordan occupied the entire eastern part of Palestine, and Jerusalem, rather than becoming an international city, became a divided city with the Israelis in control of the western part and the Jordanians in control of the eastern part.

In the winter and spring of 1949 Israel negotiated truces with the Arab states on the Island of Rhodes, under UN supervision, and in May 1949 it was admitted to the UN. Yet this was in no way the end of the early story. The birth of Israel and the simultaneous Palestinian refugee problem had a radicalizing effect on Israel's neighbors. With Palestinians lingering in refugee camps in Jordan, Lebanon, Syria, and Egypt, many Arabs came to view Israel as a pariah state and a continuation of European colonization in a period of supposed decolonization. In the three years following the cessation of the 1948 war, there were major political upheavals in Israel's neighboring states. Jordan's King Abdullah was assassinated in East Jerusalem by a Palestinian, Egypt's king was overthrown by the Free Officers Movement led by Gamal Abdel Nasser, and Syria endured a period of coups. Furthermore, Jewish communities in the greater Middle East came under severe pressure from Arab nationalists who began, in most cases without evidence, to equate Middle Eastern Jews with Zionism. As a result, during 1949–1953 almost 300,000 Middle Eastern Jews fled from their nations of origin to Israel, the largest group coming from Iraq. While many were not Zionists and hoped to move to other countries besides Israel, U.S. immigra-

tion quotas forced many of these people to settle in the new Jewish state. As the Cold War threatened to become hot and the Middle East slowly developed into a Cold War theater, the Arab-Israeli conflict began to play a seminal role in global politics.

—Jonathan Sciarcon

Bibliography

- Khalidi, Rashid. *The Iron Cage: The Story of the Palestinian Struggle for Statehood*. Boston: Beacon, 2006.
- Morris, Benny. *The Birth of the Palestinian Refugee Problem Revisited*. Cambridge: Cambridge University Press, 2004.
- Shiblak, Abbas. *Iraqi Jews: A History of Mass Exodus*. London: Saqi Books, 2005.
- Shlaim, Avi. *The Iron Wall: Israel and the Arab World*. New York: Norton, 2000.
- Smith, Chales D. *Palestine and the Arab-Israeli Conflict*. 6th ed. New York: Palgrave MacMillan, 2007.

The Caribbean and Postcolonialism

The Caribbean consists of the current and former colonies of Britain, France, Spain, Denmark, and the Netherlands as well as territories that currently belong to the United States and several Latin American nations. The Caribbean continues to be a zone of considerable cultural and social complexity, facing a myriad of individual and collective challenges and opportunities. The last six decades have witnessed the decolonization of 12 formerly British territories, a revolution in Cuba with far-reaching regional repercussions, the demise of dictatorships in Hispaniola, and the U.S. invasion of Grenada in 1983. While often divided in terms of politico-economic objectives, a greater sense of Caribbean commonality is developing in both intergovernmental relations and in popular culture within both the Caribbean and its considerable migrant diaspora.

Since the former colonial powers had structured Caribbean economies to be export oriented and focused on cash crops, the goal of the new nations of the region has been increased self-reliance, regional integration, and economic diversification. While tourism and agriculture (especially sugar and bananas) continue to be the

➤ CARIBBEAN CULTURAL NATIONALISM

Cultural nationalism remains a vital force across the Caribbean, especially as the region's relatively new states seek to forge distinctive national identities. While cultural imports of all kinds remain prominent in most of the Caribbean, some local cultural creations have had a powerful impact across the region and farther afield. Rastafarian countercultures, emerging first in Jamaica and expressing various ideals of Black Nationalism and popular Pan-Africanism, have become a regional phenomenon. Regional music culture also includes Calypso and its modernized variant, Soca, as well as Trinidad's steelbands and Carnival. While the Caribbean population is predominantly of African descent, friction has emerged in some territories where relations between the state and ethnic minorities are concerned, especially in the cases of Trinidad and Tobago, Guyana, and Suriname. Adding to the modern complexity of the Caribbean is the growing diaspora of Caribbean migrants in the United States, Canada, Britain, France, and the Netherlands as well as growing numbers of return migrants and the increased political influence of diaspora groups that maintain ties with Caribbean homelands.

—Maximilian C. Forte

foundations of many economies in the region, the ending of preferential trading schemes with Europe in the 1990s and increased competition from Latin America have renewed the drive toward diversification. Previous attempts to foment local development included industrialization by invitation in the 1960s whereby transnational corporations were invited to set up assembly plants in the region, thereby increasing local employment; the nationalization of foreign holdings in the 1970s, especially in Jamaica, Trinidad and Tobago, and Guyana (and much earlier in Cuba); and the creation of the Caribbean Free Trade Area (CARIFTA) in 1968 followed by the Caribbean Community and Common Market (CARICOM) in 1972, primarily for the Anglophone Caribbean. By the 1990s economic nationalism was reversed, with direct foreign investment being actively courted, especially under the mandate of structural adjustment regimes imposed by the World

Bank and the International Monetary Fund. Import restrictions to protect infant industries were canceled, currency trading was liberalized, and states divested their economic enterprises. The social impact has been severe in most territories, with unemployment rates still averaging well above 10 percent. The result has been twofold: on the one hand, local conglomerates have developed into transnational corporations in their own right; on the other hand, those with fewer resources have created an impressive informal economy of regional and transnational reach.

One of the major developments in the region in this time period has been the achievement of political independence via negotiations by almost all of the British territories in the region. France continues to maintain colonies in the region (officially termed "Overseas Departments"), namely Martinique, Guadeloupe, and French Guiana. Some Dutch colonies such as Aruba have voted to retain their dependent status, while Suriname opted for independence in 1975. Given the dependent relationship that characterized colonial and postindependence reality for most of the Caribbean, the quest for independent foreign policies and south-south cooperation (ties of mutual assistance between nations of the so-called Third World) have repeatedly arisen as major goals. Most CARICOM members share good relations with Cuba, despite U.S. pressure, and have worked to develop extensive ties with China while also voting in favor of Japan during meetings of the International Whaling Commission. Caribbean countries have cooperated with nations from Africa and the Pacific in international trade negotiations. Perhaps the best evidence of south-south cooperation occurred when Cuba went as far as sending troops to Angola in 1975 to counter invading South African forces.

The Caribbean has seen a series of dictatorships come to power over the last six decades as well as popular revolutions. In the Commonwealth Caribbean, Sir Eric Gairy ruled Grenada through vote tampering and his dreaded Mon-goose Gang from 1974 to 1979 until he was toppled in a bloodless revolt led by the New Jewel Movement under Maurice Bishop, himself overthrown by hardliners in his cabinet in 1983 just prior to the U.S. invasion. Under Bishop, close ties were forged with Cuba, which had undergone

its own revolution in 1959. In Guyana, Forbes Burnham ruled from 1964 to 1985, remaining in power through elections that were widely regarded as fraudulent while centralizing authority in his hands. His party later succumbed to international and domestic pressure for fair elections, which witnessed the rise of his longtime rival party, the Marxist People's Progressive Party. Other territories in the Commonwealth Caribbean lived through the long tenure of populist leaders, such as Vere Bird in Antigua and Eric Williams in Trinidad. François "Papa Doc" Duvalier ruled Haiti from 1957 to 1971 through a combination of brute force using his Tontons Macoutes and religious messianism and was succeeded by his son, who ruled until a popular uprising ousted him in 1986. Haiti has lived with the legacy of military and oligarchic rule and sweeping popular revolts to the present. Trinidad has also seen uprisings, first in 1970 with the Black Power Revolution and then in 1990 with the armed assault on parliament by the Jamaat al Muslimeen, which captured the prime minister and much of his cabinet for six days.

—Maximilian C. Forte

Bibliography

- Knight, Franklin W. *The Caribbean: The Genesis of a Fragmented Nationalism*. New York: Oxford University Press, 1978.
- Payne, Anthony. *The Politics of the Caribbean Community, 1961-79: Regional Integration amongst New States*. Manchester, UK: Manchester University Press, 1980.
- Ramsaran, Ramesh. *The Commonwealth Caribbean in the World Economy*. London: Macmillan Caribbean, 1989.
- Wallace, Elizabeth. *The British Caribbean: From the Decline of Colonialism to the End of Federation*. Toronto: University of Toronto Press, 1977.
- Williams, Eric Eustace. *From Columbus to Castro: The History of the Caribbean, 1492-1969*. London: André Deutsch, 1970.

The European Union as a Supranational State

The modern-day European Union (EU) evolved from postwar attempts to create a common market in Western Europe into a system of institutions and political structures that have resulted

in the greater political, economic, and social integration of most of Europe. The potential of developing the EU into a supranational federalized state has been hindered by various internal dissidents who desire to maintain their national sovereignty in the face of the growing power of the EU. Segments of European society debate the pros and cons of further integration and the erosion of the powers of the nation-states that make up the EU. European neofunctionalists (advocates for the nation-state) argue that maintaining national prerogatives among the component nations of the EU is key in its ability to function successfully. In contrast, federalists argue that the maintenance of national prerogatives is a hindrance to the successful development of the EU into an efficient set of institutions capable of addressing common problems.



Signing of the Maastricht Treaty, creating the European Union with twelve founding member countries, Maastricht, Netherlands, February 7, 1992. (European Commission)

► THE MYTH OF A UNIFIED EUROPE

The myth of a United Europe has a long history, fraught in the conflicts of the major European states and in the attempts by certain individuals to conquer and rule for the good of a common European homeland. The Roman Empire of antiquity became a model for the potential to unify the peoples of Europe under a common government, used by later kings and emperors to legitimize their power (such as the Holy Roman emperor of the Germanic nation who ruled vast tracts of Central Europe). The geographic concept of Christendom and the Roman Catholic Church presented medieval Europeans with a common set of ecclesiastical institutions under which to find common ground and identity. While many Europeans regarded themselves as part of these greater geographical conceptualizations, they identified more closely with their region, city, or principality of residence.

The French Revolution (1789–1799) unleashed the concept of nationalism upon Europe, giving entire populations the nation-state as the desirable expression of their interests. Napoleon Bonaparte attempted to unify Europe under his rule while triggering the resentment of nationalists everywhere. In subsequent decades, many Europeans looked inward into their newly formed nation-states, while socialists and pacifists still looked to the day of a common European state unified under more egalitarian and pacific principles. However, Adolf Hitler's National Socialist vision of a unified Europe envisaged German racial supremacy over a hierarchical racial order, leading to a war on a previously unknown destructive scale. The European Union evolved as a response to avoiding such conflict and has been far more successful at realizing the potential for European unification.

—*Abraham O. Mendoza*

The widespread destruction that characterized post-World War II Europe hindered immediate economic and political stability within the continent. The legacy of the quarrelsome 1930s, when European states put up tariff barriers and insulated their economies while neglecting the international interdependence of Europe, thus leading to further ruin, was closely examined by scholars and statesmen. The infusion of capital

in the form of the U.S. Marshall Plan helped reconstruct the fragile West European nations, with the intention of preventing the influence of communism from the Soviet Union. Many European leaders saw the need to address problems in common rather than return to insulated national economies. French statesmen Jean Monnet and Robert Schumann drew up the European Coal and Steel Committee (ECSC) Treaty (1952) to open up the borders and eliminate duties on these vital products for industry in Belgium, the Netherlands, Luxembourg, France, Italy, and West Germany. The European Community (EC), established in 1957, included a parliamentary assembly (Parliament), a council of the corresponding national heads of state (European Council), and a court (Court of Justice) drawing from representatives from the component democracies.

The creation of the EC led to the rapid economic expansion and growth known as the European Miracle in light of its amazing success following the destruction of World War II. This economic success led other European nations to seek inclusion, yet the founding nations disagreed on who to allow, given internal disagreements over further federal integration or maintenance of certain national prerogatives. France under President Charles de Gaulle sought to maintain French supremacy within the EC, bolstering its pretense of being a world power. De Gaulle's stance delayed the entry of the United Kingdom into the EC until 1973. The British also harbored suspicions akin to those of de Gaulle that while economic integration was desirable, political integration was an affront to national sovereignty. European federalists argued that prioritizing national interests on the part of member states set limits on the potential of further federal integration, only made possible by delegating more powers to the EC and its institutions. Along with Britain, Denmark and Ireland joined the EC in 1973. Greece joined in 1981 and Spain and Portugal in 1986 after they had transitioned from authoritarian to liberal democratic governments, which was a prerequisite for joining. Austria, Finland, and Sweden joined in 1995. Following the end of the Cold War, they were joined by Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. Further treaties that delegated

specific powers from the states to the EC were the Treaties of Rome (1958), the Single European Act (1987), the Maastricht Treaty (1993), the Amsterdam Treaty (1999), and the Nice Treaty (2000).

Such efforts at furthering integration have their critics and supporters from both the federalists and advocates of national sovereignty. The Maastricht Treaty (Treaty on European Union, or TEU) created a uniform economic and monetary union, gave the European Parliament greater powers, and introduced a common European citizenship, institutions for a common foreign policy, and coordinated institutions for justice and home affairs. Advocates for individual nation-states were concerned that the treaty meant the loss of certain national prerogatives. Certain nations, such as Denmark and Britain (known for its fervent Euro-skeptics), chose to opt out of certain EU statutes concerning currency (the Euro) and freedom of movement of goods, trade, and people (Schengen Agreements). Other nations, such as Italy and Germany, have sought to further federalist integration to ensure effective governance and coordination as the EU

expands into Eastern Europe. Groups such as the Basques, Scots, and Welsh seek greater devolution from their current nation-state governments and greater integration for their interests within the EU. However, the 2005 referendums on a common European constitution in France and the Netherlands, which constituted a majority no vote in both countries, illustrate the current growing skepticism at the devolving role of the component nations to the aggrandizing federalist EU. The possibility of Europe developing into a supranational state with the potential to compete on par with the United States and China in a multipolar world has others clamoring for the further political and economic integration of the EU.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Pinder, John. *The European Union: A Very Short Introduction*. New York: Oxford University Press, 2001.
- Zeffer, Eleanor E., and Ellen B. Pirro, eds. *The European Union and the Member States*. 2nd ed. Boulder, CO: Lynne Rienner, 2006.

■ Introduction: Human Rights Mobilization

The concept of innate human rights originated in the philosophy of Enlightenment thinkers and was incorporated in the foundational documents of various republics established over the course of the eighteenth and nineteenth centuries. Yet the period following the end of World War II has been marked by greater international recognition of a basic set of human rights, reflected in the formation of international organizations such as the United Nations (UN) and agreements with the purpose of holding nation-states accountable for human rights violations. A foundational document is the UN “Universal Declaration of Human Rights” (1948). Moreover, the decades following World War II were marked by the emergence of a range of social movements by (or on behalf of) aggrieved or subjugated populations pressing their respective governments to provide civil liberties and/or

civil rights to all of its citizenry. Oppressed racial groups in the United States and South Africa mobilized to dismantle de jure (legally sanctioned) racial inequality in all aspects of the public sphere, while citizens in the Soviet-occupied countries of Eastern Europe asserted national autonomy and dissatisfaction with the restriction of civil liberties through individual and organized acts of civil disobedience.

These and other social movements (including student movements around the world in the tumultuous year of 1968 and thereafter) were mostly met with brutal state repression. Yet racial social movements in the United States and South Africa were ultimately successful in dismantling de jure racial discrimination and in pressing the state to implement reforms designed to realize greater structural equality for people of color. These movements, particularly the U.S.

civil rights movement, have influenced the formation of other racially conscious movements in places such as Brazil and Australia and informed the rhetoric of feminism, gay rights advocacy, and other social movements. In the case of Eastern Europe, Soviet-occupied nations were able to realize the goals of self-determination with the fall of the Soviet Union.

Though humans across the globe have been able to secure greater civil liberties and rights through social movements, challenges remain with regard to the full realization of universal human rights as set forth by the UN at the dawn of this era. Nation-states continue to debate over the definition of human rights as set forth by international agreements, citing the primacy of domestic agendas such as national defense and cultural or religious traditions. People within both developed and developing nations continue to lack basic human needs, such as food, shelter, and access to clean water, health care, emergency services, and medicine, despite the humanitarian efforts of domestic and international nongovernmental organizations (NGOs) such as the International Red Cross, Direct Relief International, Doctors without Borders, and Oxfam as well as foreign aid. Continuing structural inequality, hate crimes, famine, and genocide in various parts of the globe illustrate that some groups still remain vulnerable in the twenty-first century despite significant state reforms and international recognition of basic human rights.

—*Josef Castañeda-Liles*

Human Rights Treaties and Covenants since 1945

At the end of World War II, reflecting on the scale of deaths and atrocities that warfare had inflicted on military and civilian populations, the victorious Allied powers drafted a set of universal principles of human rights, based primarily on Western intellectual traditions, to prevent such excesses from occurring in the future. Under the aegis of the newly formed United Nations (UN), the international body created by the Grand Alliance (Britain, the United States, France, the Soviet Union, and China), various human rights treaties and conventions were signed, ratified,

and implemented as part of international law by most of the world's nation-states over the course of the latter half of the twentieth century. The growing body of human rights conventions during this period allowed the major players in the Cold War to call each other into account when gross violations of human rights occurred. Decrying human rights abuses also became an ideological weapon of the Cold War.

Before World War II, the European great powers had already created various international measures to prevent human rights abuses during times of war (i.e., the Geneva Conventions, the Permanent Court of Arbitration, and the League of Nations). These measures relied on European conceptualizations of inherent human rights, based on the Enlightenment ideals that earlier had led to such documents as the French Declaration of the Rights of Man and Citizen (1789) and the U.S. Bill of Rights (1789). Following the carnage and horrors of World War II, the nascent UN adopted the Universal Declaration of Human Rights (UDHR) in 1948 to specify social, economic, and political rights of all people. The UDHR explicitly specified within its 30 articles universal principles applied to all of humanity, focused on essential human freedoms such as the right to life, liberty, and security. Furthermore, it also acknowledged universal human dignity and the requisite prevention of torture, unlawful detention, arrest, and freedom of movement, asylum, property, assembly, and livelihood, thereby proscribing signatories to abide by these principles. The UDHR was adopted almost unanimously by members of the UN, with the abstention of the Eastern Bloc under Soviet domination, South Africa, and Saudi Arabia. However, signatories almost immediately became embroiled in disputes over interpretation of the document's broad language. The Convention on the Prevention and Punishment of the Crime of Genocide was also adopted in 1948, with the intent of forever preventing the horrors of the Holocaust (1939–1945), which resulted in the deaths of 6 million European Jews under the German Third Reich.

Growing Cold War tensions between the superpowers (the United States, the Soviet Union, and China) throughout the 1950s to the 1980s often resulted in governments relying on the trea-

ties as ideological weapons. The United States and its anti-Soviet allies were quick to condemn Soviet actions that broached human rights (for example, following Soviet military intervention during the Hungarian Revolution, 1956; Prague Spring, 1968; the invasion of Afghanistan, 1979). In the 1960s, the Soviets were keen to criticize U.S. Jim Crow laws regarding African Americans as violations of human rights covenants. The Soviet Union and China were also able to suggest U.S. hypocrisy on human rights, specifically regarding brutal U.S.-sponsored actions against communist-nationalist insurgencies (Vietnam, Chile, and Guatemala) in the developing world and brutal actions taken by the anticommunist authoritarian U.S. allies (Argentina, Iran, and South Africa).

The issue of national sovereignty also touched off major debates over human rights agreements. States such as the United States, China, and Israel believed that interpretations of the vague human rights conventions could be manipulated so that actions unique to their own situation would be deemed as violations of human rights. Many U.S. politicians believed that human rights covenants would not only violate its national sovereignty but would also impede their ability to engage the communists successfully in the Cold War. The State of Israel, under increasing diplomatic isolation and surrounded by hostile Arab states, believed that human rights covenants would prevent it from defending itself in its unique situation vis-à-vis the Palestinian refugees in Gaza and the West Bank. States under theocratic Islamic rule such as Iran (post-1979), Saudi Arabia, and Afghanistan viewed human rights covenants as Western universalist precepts that overlooked cultural and religious traditions that held sway for centuries (such as Sharia). Many postcolonial African, Latin American, and Asian states (Kenya, Uganda, South Africa, and Singapore) also refused to abide by certain human rights covenants when stipulations and articles conflicted with their domestic policies, typically claiming that such conventions were based on European intellectual traditions and not in fact concerned with addressing unique cultural traditions of the non-Western world. Contemporary genocides, such as those in the former

➤ HUMAN RIGHTS TREATIES AND COVENANTS SINCE 1945

- Universal Declaration of Human Rights (UDHR), 1948
- Convention on the Prevention and Punishment of the Crime of Genocide, 1948
- Convention on the Elimination of All Forms of Racial Discrimination (CERD), 1966
- Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1981
- United Nations Convention against Torture (CAT), 1984
- Convention on the Rights of the Child (CRC), 1989
- International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW), 1990
- Rome Statute of the International Criminal Court (ICC), 2002

—Abraham O. Mendoza

Yugoslavia, Rwanda, and the Darfur region in the Sudan further illustrate that there is no solid international consensus on the concept of human rights.

—Abraham O. Mendoza

Bibliography

- Apodaca, Clair. *Understanding U.S. Human Rights Policy: A Paradoxical Legacy*. New York: Routledge, 2006.
- Headley, John M. *The Europeanization of the World: On the Origins of Human Rights and Democracy*. Princeton, NJ: Princeton University Press, 2008.
- Normand, Roger, and Sarah Zaidi. *Human Rights at the U.N.: The Political History of Universal Justice*. Bloomington: Indiana University Press, 2008.

The Growth of International Aid Groups

International aid may be economic, humanitarian, or military. Since the end of World War II in 1945, it has become a defining feature of the relationship between the affluent global North, the main donors, and the developing global South,

OXFAM

Oxfam, originally the Oxford Committee for Famine Relief, is a British group founded in 1942. Its original purpose was to help feed people suffering from the German occupation of Greece. The organization grew rapidly in the postwar years as it sought to feed famine victims in Europe after the devastation caused by World War II. While the parent company remains British, today Oxfam is affiliated with 11 other national Oxfams. The charity has more than 3,000 partner organizations in more than 100 countries. Besides directly fighting famine, Oxfam also advocates for fair-trade principles in order to help combat poverty, urging, for example, the reduction of government subsidies to U.S. cotton farmers. Oxfam sponsors events such as “Fast for a World Harvest” and “Hunger Banquet” in schools and communities in order to raise both awareness and funds. Currently, Oxfam is one of the largest and best-known organizations devoted to fighting poverty and hunger.

—Joshua Hoffman

the recipients. Propelled by decolonization, the Cold War, and the United Nations (UN), the giving or receiving of international aid was from the beginning intertwined with transnational politics, as different donor states or agencies sought to use aid as a lever for increasing their influence or attempting to prop up different states as allies in the Cold War.

During 1945–1950 an enormous amount of aid was supplied to war-torn Europe, Japan, and other Asian areas. In addition, with the postwar spread of decolonialization, aid was supplied to newly independent major countries that urgently required development assistance, including India and Pakistan (1947) and Indonesia (1949). In response to this pressing need, the Colombo Plan (so-named for the capital of Ceylon, now Sri Lanka) was launched in 1951. It was the beginning of modern aid. At first intended for the benefit of Ceylon, India, and Pakistan, the Colombo Plan was subsequently expanded to include almost 20 other Asian countries ranging from Afghanistan to the Philippines. The individual aid programs of the plan are negotiated individually between the recipient and donor

countries (the United States, Japan, Britain, Australia, Canada, and New Zealand).

The UN, founded in 1945 with the primary function of keeping the peace, has been a forum for the newly independent states to request developmental aid from the international community. It has numerous agencies devoted to different forms of developmental aid, providing vital services to less-affluent states in need of financial or technical assistance. The first UN specialized agency, the Food and Agricultural Organization (FAO), was founded in 1945 to combat hunger. The World Health Organization (WHO) was established in 1948 to address health education, sanitation, family planning, disease prevention, immunization against infectious diseases, and other health-related issues. Other UN agencies address issues related to refugees and other human needs.

By the 1960s, international aid became institutionalized as a major force in transnational politics. Most major developed countries had established departments tasked with running their aid programs, while the UN declared the 1960s its First Developmental Decade, and new organizations were created, including the International Development Association (IDA), part of the World Bank, formed in 1960 to provide loans to the least-developed countries. The Development Assistance Committee (DAC), also formed in 1960, is a part of the Organization for Economic Cooperation and Development (OECD). Comprised of 17 donor countries, DAC represents the world's largest source of developmental assistance. In 1961 the United States established the U.S. Agency for International Development (USAID) to promote American interests by assisting other states in economic development. The UN expanded in 1965 to meet growing demands for aid from developing countries with the establishment of the United Nations Development Programme (UNDP).

By the 1970s private, volunteer-based non-governmental organizations (NGOs) were becoming increasingly involved in development as a substantial force in their own right. Representing a diverse array of interests and views on aid, NGOs may receive public funding, but the bulk of their funding is private. The different kinds of NGOs partake in a number of types of

developmental assistance: Oxfam, one of the best-known aid NGOs, is involved with long-term projects aimed at alleviating poverty in the developing world. Another well-known NGO, Cooperative for American Relief Everywhere (CARE), aims at improving social and economic conditions by promoting development and the use of local resources. There are hundreds of other NGOs involved in international aid.

Starting in the early 1980s, the relationship between aid donors and recipients underwent fundamental changes. By the middle of the decade recipient countries found that they had to meet a number of donor demands having to do with greater privatization of their economies, democratic reforms, human rights programs, and so on. By the 1990s with the end of the Cold War, the aid recipient countries found themselves unable to appeal to the Soviet Union as an alternative source of funding, giving Western donors further leverage in dictating how the aid is used and the conditions attached to it.

International aid has come under criticism from a number of diverse fronts. Old colonial powers sought to use aid to maintain influence over their former possessions. Most glaringly, international aid had been a major weapon during the Cold War, as the two superpowers dispensed aid to recruit allies from nonaligned countries, bolster governments perceived to be sympathetic to them, or even contribute to war efforts. Furthermore, Cold War priorities meant that oftentimes aid was disbursed to corrupt or inept governments with the overall intention of propping up allies even at the expense of economic development. After the end of the Cold War, Western donors found that they were no longer obligated to match or surpass communist aid, with the result that they often cut back aid or reconstituted the terms of the aid agreement to give themselves more leverage in its disbursement and usage, often in such a way as to benefit themselves even over the aid recipient.

Problems of a different sort confront aid programs run by the UN or NGOs. The UN programs, which have the advantage of being less directly beholden to the politics of individual donor states, are oftentimes accused of mismanagement of funds, a failure to effectively coordinate their efforts, and general inefficiency.

NGOs were at times falsely accused of being agents of imperialism.

International aid in part has led to an increase in the real per capita gross national product (GNP) of developing countries, bringing significant medical advances and providing much-needed disaster relief. Although international aid has come under heavy criticism, often for being too little or for being paternalistic, it will continue to play a significant role in transnational relations.

—Joshua Hoffman

Bibliography

- Arnold, Guy. *Historical Dictionary of Aid and Developmental Organizations*. Lanham, MD: Scarecrow, 1996.
- Hancock, Graham. *Lords of Poverty: The Power, Prestige, and Corruption of the International Aid Business*. New York: Atlantic Monthly, 1989.
- Hoy, Paula. *Players and Issues in International Aid*. West Hartford, CT: Kumarian, 1998.

The U.S. Civil Rights Movement

The U.S. civil rights movement, which activists and scholars now more frequently refer to as the modern Black Freedom Movement, was a social movement that involved mass protests and local and national organizing to challenge racial discrimination in the United States, particularly in the South. The movement, which operated both on a grassroots and national level, along with earlier U.S. Supreme Court decisions prompted the Civil Rights Act of 1964 and the Voting Rights Act of 1965 that marked the end of the Jim Crow era in the South. The movement represented an enormous historical shift as the racial caste system in the United States and its ideological underpinnings were challenged and dismantled, and civil rights, including voting rights, and rights to equal public facilities were extended to all U.S. citizens. The civil rights movement was also well timed to capitalize on Cold War political pressure for the United States to live up to its ideals and rhetoric, yet the movement's successes came at the price of common people risking reprisals and death to demand an end to the terror-enforced oppression inherent in the racial status quo.

The modern Black Freedom Movement can be traced, in part, to protests during World



Civil rights advocates (front left–right) Roy Wilkins, Asa Phillip Randolph and Walther P. Reuther clasp hands as they lead hundreds of thousands of people in a multiracial march on Washington, D.C. in August, 1963. (Lyndon Baines Johnson Library)

War II. African American soldiers and their communities protested against segregation and the separate and unequal Jim Crow realities of serving in the military. At the same time, A. Phillip Randolph, president of the Brotherhood of Sleeping Car Porters, after threatening President Franklin Delano Roosevelt with an organized mass protest march on Washington, D.C., prompted Executive Order 8802 in 1941 that required war industries contractors to end discrimination in hiring practices. War industries employment increased living standards for the nation's minorities.

During the Cold War, when McCarthyism and loyalty campaigns made mass protests appear un-American, the National Association for the Advancement of Colored People (NAACP), founded in 1909, won a major legal victory in 1954 with the *Brown v. Board of Education* U.S. Supreme Court decision, which declared “separate but equal” school systems inherently unfair and unconstitutional. The Court, however, refused to set a timetable for change. Nevertheless, this landmark legal decision helped spur the mass protests and activism of the ensuing civil rights campaigns. Those campaigns depended on a coalition that included conservative, often church-based African American leaders; the often more radical African American student protesters; a mobilized working class; and Northern

white liberals, including Christian clergy, students, and Jewish rabbis and elites, among them Holocaust survivors. The nonviolent mass protests often succeeded best when they provoked street violence, revealing the ugliness of racism to the media and the world to force federal protection and legislation. One of many such examples occurred in 1963 when Eugene “Bull” Connor, the police chief of Birmingham, Alabama, turned fire hoses and attack dogs on children marching to protest segregated public facilities. Leaders were aware that Cold War rhetoric of American freedom and moral superiority were contradicted by ugly street confrontations that coaxed into the open the hidden violence of the racial status quo.

The first mass protest began the year after the *Brown v. Board of Education* decision. Rosa Parks, a secretary of her NAACP chapter in Alabama, challenged Jim Crow laws when she refused to give up her seat on a crowded bus to a white passenger on December 1, 1955, and was arrested. The local black community began a boycott of the bus system, founded the Montgomery Improvement Association, and asked the Harvard-educated local minister Martin Luther King Jr. to lead the newly formed association. Among the boycott's modest demands were that black bus drivers be hired, drivers cease to speak rudely to black passengers, and seating remain segregated but on a first-come basis. A one-year campaign ensued with many threats of violence to King, including the bombing of his house. One year later the city agreed to the boycott demands. King and other religious leaders formed the Southern Christian Leadership Conference (SCLC) to continue the nonviolent effort to end discrimination in the United States.

Mobilized students and workers instigated several other important campaigns in the civil rights movement that again drew media coverage to violence committed against nonviolent activists including sit-ins, Freedom Rides, and voter registration drives. On February 1, 1960, four African American college students sat at a whites-only Woolworth's diner counter in Greensboro, North Carolina. Refused service, they returned day after day. Their five-month protest eventually led Woolworth's to change its whites-only policy. At the grassroots level, this protest

encouraged many more sit-ins at lunch counters, sleep-ins at whites-only motels, swim-ins at whites-only swimming pools, and even watch-ins at movie theaters. The nonviolent protesters often prompted hecklers and mob violence. In tandem with the sit-ins, in February 1960 the SCLC encouraged student leaders to form their own organization, the Student Non-Violent Coordinating Committee (SNCC).

The following year, 1961, the Congress of Racial Equality (CORE), a northern-based group, arranged Freedom Rides to challenge the constitutionality of segregated seating arrangements on interstate buses in the South. Trained in non-violence, the integrated Freedom Riders hoped to challenge the status quo. The first bus made it to Alabama, where a local order of the Ku Klux Klan set the bus on fire and beat up the fleeing passengers. When the Freedom Riders found another bus in Birmingham, Alabama, an armed mob with chains, baseball bats, and pipes set upon the Freedom Riders. With news reporters covering these incidents, the Kennedy administration, slow to act on civil rights, began to demand FBI investigations and to put into motion the legislative changes that Lyndon Johnson would later enact. Ongoing protests in Birmingham, led by Martin Luther King and the SCLC, spurred federal action particularly when in May 1963 the flagging movement's leaders decided to allow schoolchildren to join the street actions, and the local police chief permitted police armed with clubs, attack dogs, and high-pressure hoses to attack them.

A. Phillip Randolph was the prime organizer of the August 28, 1963, March on Washington; the protest march drew 250,000 marchers, both African Americans and other Americans. The protest's centerpiece was to urge Congress to enact the civil rights bill that passed the following year after the assassination of Kennedy. However, the sweeping legislation did not focus on the right to vote in the South. The SNCC had been working since 1961 on a campaign to enlist black voters in Mississippi, where fewer than 7 percent of African American adults had managed to register to vote. SNCC workers and locals brave enough to attempt to register to vote were running risks. Many were threatened, had crosses burnt in front of their headquarters, or were shot at or

➤ U.S. CIVIL RIGHTS AND THE COLD WAR

Following World War II as relations between the United States and the Soviet Union soured, both sides attacked each other's purported abuses of human rights. For the United States, race relations were a sore spot, especially after postwar lynchings in the South of black army veterans in addition to the continued practice of segregation and disenfranchisement of African Americans. In the context of the early Cold War, labeling domestic advocates of civil rights as communists was a common practice, but ingrained racism continued to tarnish the image of the United States abroad, and legal efforts to curtail segregation and protests accelerated. President Harry S. Truman, through Executive Order 9981 in 1948, called for the desegregation of the armed forces as a response to international criticism, stirred by Soviet propaganda that mocked segregated U.S. occupation forces in Europe and Japan. Through the 1950s and 1960s both President Dwight D. Eisenhower and President John F. Kennedy, embarrassed by racial conditions in the American South and acts of violence that met protests, began taking steps toward ensuring civil rights to prevent the Soviets from critiquing American democracy. Nonetheless, lynchings, beatings, and overt acts of discrimination continued to tarnish the U.S. image abroad. It was not until President Lyndon B. Johnson actively initiated civil rights legislation in the late 1960s, in response to the grassroots civil rights movement across the country, that significant inroads were made into dismantling segregation and de jure institutionalized racism. Throughout this period, Soviet criticism affected the choices that policy makers made in regard to extending civil rights to all Americans.

—Abraham O. Mendoza

murdered. The FBI, although now in the area, insisted that it was only gathering information. Following the March on Washington, organizers from the SNCC, CORE, and the NAACP decided to make Mississippi their primary focus for the summer of 1964. Calling the new campaign Freedom Summer, SNCC leaders agreed to invite white students down to aid the voting drive. In June two of the white students and an African American student were murdered in Mississippi.

Following the activities of Freedom Summer and a voting drive early the following year in Selma, Mississippi, President Johnson went on television urging Congress to pass the legislation that culminated in the Voting Rights Act of 1965.

These two legislative triumphs became the high point of the civil rights movement. The united interracial movement, marked with cooperation, courage, mass protests, and rhetoric of Christian morality, began to unravel. While voting registration campaigns wrought huge changes in the South, African Americans in the North, chafing under ongoing discrimination in housing, jobs, and police brutality, gave way to frustration. The civil rights movement had done little or nothing for them. A riot erupted in Harlem in 1964, and a far larger riot—or uprising—occurred in Watts in the summer of 1965 and left 35 people dead. Johnson, ever seeking legislative solutions, launched his War on Poverty and its myriad programs to train and empower African Americans and poor white Americans, even as he mired the U.S. military more deeply in the costly war in Vietnam.

Simultaneously, the African American student leaders of the SNCC were disturbed that it took the deaths of white students to spur legislative changes. A power struggle ensued between the more moderate voice of King and student leaders such as Stokely Carmichael of the SNCC who during the Selma voting campaigns began to advocate Black Power. The revolution in consciousness that activists had dreamt of had not emerged. Popular interest drifted toward the angry rhetoric of black nationalist Malcolm X and the militant, revolutionary stances of new groups such as the Black Panther Party in Oakland, California, which drew common cause between minorities in the United States and colonized nations and peasant groups abroad. Renewed Pan-Africanism was a large component of this sensibility. While Black organizers continued to seek to empower local communities, often under the auspices of the War on Poverty, cultural movements such as Black is Beautiful and the Black Arts Movement emerged.

Under the leadership of Carmichael, the SNCC forced white students out of its organization to take up their own causes. These white student veterans of Freedom Summer became

leaders of the increasingly radical student movement and antiwar protests that erupted in the 1960s. In addition to a changed U.S. South and a cultural revolution, the legacy of the civil rights movement included other protest movements of the 1960s and 1970s such as Chicano power, the American Indian Movement, the women's liberation movement, gay liberation, environmentalism, and the global antiapartheid movements of the 1960s through the 1980s.

—Fred Nadis

Bibliography

- Branch, Taylor. *At Canaan's Edge: America in the King Years, 1965–68*. New York: Simon and Schuster, 2006.
- Branch, Taylor. *Parting the Waters: America in the King Years, 1954–1963*. New York: Simon and Schuster, 1988.
- Branch, Taylor. *Pillar of Fire: America in the King Years, 1963–65*. New York: Simon and Schuster, 1998.
- Dudziak, Mary L. *Cold War Civil Rights: Race and the Image of American Democracy*. Princeton, NJ: Princeton University Press, 2000.
- Lawson, Stephen F., and Charles M. Payne. *Debating the Civil Rights Movement, 1945–1968*. Lanham, MD: Rowman and Littlefield, 1998.
- Moody, Anne. *Coming of Age in Mississippi*. New York: Dial, 1968.
- Payne, Charles M. *I've Got the Light of Freedom: The Organizing Tradition and the Mississippi Freedom Struggle*. Berkeley: University of California Press, 1995.

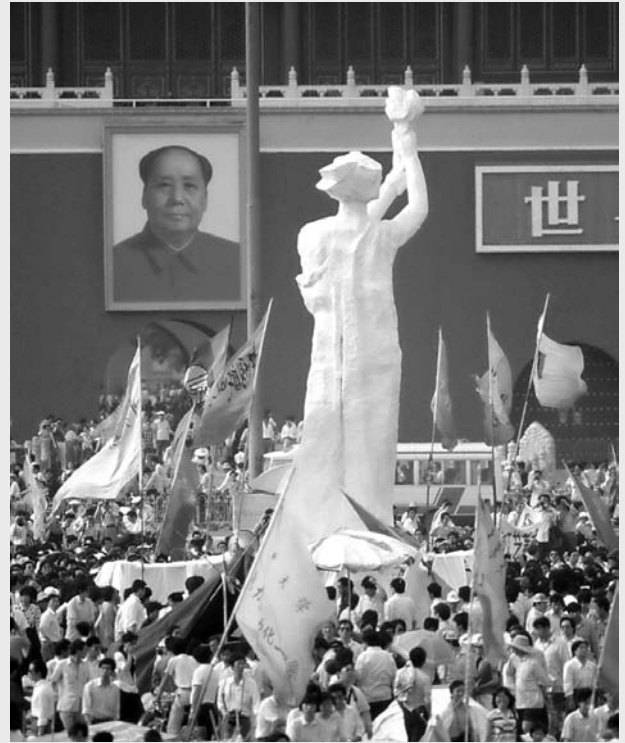
Student Protest Movements, 1945–1960

The freedom of thought encouraged at universities that has always made them potential vanguard institutions for social change incubated a near-revolution in the 1960s. The U.S. civil rights movement, labor movements worldwide, and the Vietnam War fostered the revolutionary fervor that developed in universities and then spilled out into the streets. Following the occasionally violent attempts at government suppression of these student movements, student politics later shifted to other causes such as environmentalism, antiapartheid, women's rights, gay rights, and more recent concerns about globalization and its impact on environment and labor.

In 1954, the landmark U.S. Supreme Court decision *Brown v. Board of Education* declared segregated school systems unconstitutional. Non-violent protests and civil disobedience followed. In 1955, African American community activists organized the bus boycott in Montgomery, Alabama. This incident spurred the founding of the Southern Christian Leadership Conference (SCLC), a mainstay of the civil rights movement. Student involvement in civil disobedience also soon followed. In February 1960, four African American college students performed a sit-in at a segregated Woolworth's drugstore counter in Greensboro, North Carolina, and were met with outrage and national media interest. In 1960, African American students forged the Student Non-Violent Coordinating Committee (SNCC). The SNCC organized integrated groups of Freedom Riders who sought to desegregate interstate busing. The organization also showed similar courage in leading campaigns to register African Americans to vote in Mississippi and other Southern states.

In 1964, the SNCC's leadership decided to train 800 white students to participate in Freedom Summer and register black voters in Mississippi. Three volunteers were killed that summer, one of them African American. All of the volunteers experienced the violent atmosphere that this demand for basic rights engendered. Many of the middle-class white volunteers returned to their elite institutions politically transformed. After volunteering in Mississippi, for example, philosophy student Mario Savio returned to the University of California, Berkeley, and emerged as one of the leaders of the Berkeley Free Speech movement that began in the fall in 1964. The Free Speech movement, protesting a university decision to shut down an area where student political groups handed out leaflets, relied on tactics developed in the civil rights movement. The mass rallies at Berkeley involving speeches, songs, signs, teach-ins, and sit-ins presented to the world a startling image: ranks of neatly dressed students in suits and ties demanding social change. Civil rights training also prepared many other key student activists, including leaders of Students for a Democratic Society (SDS), a group founded in 1962 at the University of Michigan that began with trade union affiliation. By the

➤ TIANANMEN SQUARE, 1989



Students protest in Tiananmen Square in front of the "Goddess of Democracy" statue, which faces Chairman Mao Zedong's portrait, May 30, 1989. (Peter Turnley/Corbis)

On Tiananmen Square in Beijing, China, in the spring of 1989, the student-led prodemocracy movement captured international interest. For more than two months, student protesters occupied Tiananmen Square making speeches and staging parades, hunger strikes, and sit-ins while issuing demands and pleas for democracy. International television coverage showed Chinese students erecting a 30-foot replica of the Statue of Liberty. Faced with a crisis similar to that of the collapsing Soviet Union, China's leader, Deng Xiaoping, called in the army to restore order. On June 3, 1989, in front of numerous international witnesses, tanks and troops opened fire on and massacred protesters and crushed the movement. Many of the leaders fled or hid, while others were jailed. Some of the student leaders who made their way to Western nations such as France and the United States were hailed as heroes and continued to call for democracy, the release of China's political prisoners, and human rights reforms in China.

—Fred Nadis

mid-1960s, the SDS shed its subdued image (and clothing styles) and became a major force behind campus teach-ins and antiwar protests in the United States.

The year 1968 was one of social upheavals worldwide. In January, student protests in Czechoslovakia aided the appointment of reformist president Alexander Dubcek. Dubcek's short-lived reform program, known as the Prague Spring, was accompanied by a flourishing youth culture complete with drugs, rock-and-roll clubs, and hippie fashions and lifestyles. In August 1968, the Soviet Union sent in troops and tanks to end Dubcek's reforms in a largely bloodless military takeover. One Czech student, Jan Palach, burned himself to death in the main square in Prague to protest the Soviet occupation. Commemorations of his death spurred further protest marches. While anti-Soviet sentiment may have sparked protests in Eastern Europe, worldwide student activists were denouncing the U.S. government's war in Vietnam.

Learning tactics from media coverage of other disturbances, student activists arranged protests worldwide throughout 1968. Although activists aimed their initial protests at university administration policies, these protests also embraced wider countercultural values and critiques of national and international politics. In their manifestos and calls for nonviolent cultural revolution, democratic reform, unity with the oppressed, or violent revolution, students worldwide called into question the system, that is, the entire ordering of modern society. The protests were often as much a celebration of youth as efforts directed at sharply defined goals. In May 1968, Columbia University students, airing campus grievances and wider grievances over Columbia's role as a landlord in the neighborhood, took over campus buildings. At that same time in France, student protests in Paris led to immense social disruptions. Sit-ins at the Sorbonne in early May spread to further civic disruptions as France's union leaders encouraged millions of workers to join student protesters in a 24-hour general strike on May 13. Other strikes and sit-ins at factories and universities shut down much of the country for the next 15 days and led to government concessions to labor demands.

That fall in Mexico City, a student protest ended in a massacre. On October 2, after months of protests and civic unrest, as many as 10,000 people gathered on Tlatelolco Square in Mexico City demanding greater political liberty in Mexico and an end to the one-party system. Held during the summer Olympic Games in Mexico, this rally infuriated officials. As darkness set in, government helicopters dropped flares over the crowd, and armed police and military personnel then slaughtered at least 300 civilians. While army helicopters and tanks patrolled the square, police assassinated student leaders trapped in a hotel above the square.

That same month was a high-water mark for street violence in Japan. While many factions were involved, many leaders belonged to the Zengakuren, a student group founded in 1948 with close ties to the Japanese Communist Party. Just weeks after the Tlatelolco massacre, in late October, approximately 6,000 Zengakuren members helped spark riots in Tokyo that included efforts to storm Japan's parliament in Tokyo as well as bloody street fighting with riot police. Simultaneous student uprisings occurred in many of Japan's university cities, including Osaka, Kyoto, Fukuoka, and Sapporo. Government suppression became more overt worldwide. In the United States, many were shocked when the Ohio National Guard shot and killed four students during a demonstration against the Vietnam War in May 1970 at Kent State University.

While government crackdowns worldwide ended the street-fighting phase of the student rebellions of the late 1960s, a crisis of authority that originated in the 1960s has lingered, and student organizations have been among the progressive groups mobilizing around new causes. In the 1970s, for example, the focus of student protests turned to environmentalism, No Nukes campaigns, and antiapartheid.

The antiapartheid movement was rekindled in the Soweto Riots of 1976 when the South African government shot and killed 69 young students who had formed a peaceful march to protest a new rule requiring that school teachers rely solely on the language of Afrikaans in the classroom. The Soweto Riots became an international scandal. The escalation of violence-

marred protests in South Africa eventually led for calls of divestment, that is, for universities to stop investing in corporations that did business with South Africa. Worldwide protests also persuaded numerous nations, including the United States in 1986, to impose economic sanctions on South Africa. The official end of apartheid in South Africa came in 1992.

While boisterous students have been a historical presence for centuries, the 1960s presented a turning point. Student activists, inspired by the civil rights movement and countercultural values, began to organize across the globe for serious social causes, for political change, and, as the title of U.S. Yippie-leader Abbie Hoffman's book put it, to encourage "Revolution for the Hell of It."

—Fred Nadis

Bibliography

- Beja, Jean-Philippe. "The Fly in the Ointment? Chinese Dissent and US-China Relations." *Pacific Review* 16(3) (2003): 439–453.
- Califano, Joseph A., Jr. *The Student Revolution: A Global Confrontation*. New York: Norton, 1970.
- DeGroot, Gerard J., ed. *Student Protest: The Sixties and After*. London and New York: Longman, 1998.
- Ehrenreich, Barbara, and John Ehrenreich. *Long March, Short Spring: The Student Uprising at Home and Abroad*. New York: Monthly Review Press, 1969.
- Fuse, Toyomasa. "Student Radicalism in Japan: A 'Cultural Revolution'?" *Comparative Educational Review* 13(3) (October 1969): 325–342.
- Poniatowska, Elena. *Massacre in Mexico*. Translated by Helen R. Lane. New York: Viking, 1975.

Civil Disobedience Movements in Eastern Europe against Communism

From 1945 to 1990, in the midst of the military occupation of Eastern Europe by Soviet forces, segments of the population of these various countries, using passive forms of dissent, displayed their unhappiness toward the communist regimes imposed on them from Moscow. On various occasions, through the participation of labor organizations, intellectuals, university

students, and Communist Party functionaries, nonviolent movements of civil disobedience against Soviet hegemony advocated change. Mass demonstrations, labor strikes, underground presses, and passive civil disobedience showed the world that not all was well behind the Iron Curtain.

Public disaffection with the imposition of People's Democracies as fronts for Soviet domination in Eastern Europe in the postwar era first emerged in Poland in 1956. The Polish Communist Party under the leadership of Wladyslaw Gomulka dissolved the Soviet grip on the party and the state and instituted greater Polish autonomy. While upsetting Moscow, Gomulka avoided military conflict by maintaining socialist solidarity and guaranteeing Poland's participation in the Warsaw Pact.

Hungary's attempt to lessen Soviet domination was not as successful. Hungarian prime minister Imre Nagy attempted to dissolve links with the Soviet Union by withdrawing from the Warsaw Pact and seeking Western support in 1956. Moscow did not want to appear weak in the eyes of both the Eastern Bloc and the West and sent tanks into Hungary to crush the insurgency. Nagy and other leaders were executed, and mass demonstrations were suppressed.

The revolutionary year 1968 was marked by the Prague Spring in Czechoslovakia, which was a policy on the part of Czech leader Alexander Dubcek for greater Czech self-determination and a relaxation of Soviet power. The massive peaceful demonstrations that marked this new policy, as in Hungary more than a decade earlier, were met by a Soviet military incursion of tanks that occupied Prague and restored order, removing Dubcek and his associates from power. In response to this subversive threat against Moscow's authority, Soviet leader Leonid Brezhnev enacted what is known as the Brezhnev Doctrine, which indicated that the Soviet Union had the right to intervene in its sphere of influence to quell any potential unrest or disaffection that might have a negative effect on its authority.

Growing discontent with economic stagnation and political oppression in the 1970s and 1980s led to underground manifestations of civil disobedience throughout Eastern Europe. The

► EXCERPTS FROM THE MANIFESTO OF CHARTER 77 (JANUARY 1, 1977)

The creation of Charter 77 was a crucial chapter in Czechoslovakia's dissident movement. Its backers were committed to defending human and civic rights within the Soviet sphere in Eastern Europe. This manifesto accused the Czechoslovak government of hypocrisy for signing international treaties on human rights while continuing to violate those of its own citizens.

"The human rights and freedoms underwritten by these covenants constitute features of civilized life for which many progressive movements have striven throughout history and whose codification could greatly assist humane developments in our society.

We accordingly welcome the Czechoslovak Socialist Republic's accession to those agreements.

Their publication, however, serves as a powerful reminder of the extent to which basic human rights in our country exist, regrettably, on paper alone.

The right to freedom of expression, for example, guaranteed by Article 19 of the first-mentioned covenant, is in our case purely illusory. Tens of thousands of our citizens are prevented from working in their own fields for the sole reason that they hold views differing from official ones, and are discriminated against and harassed in all kinds of ways by the authorities and public organizations. Deprived as they are of any means to defend themselves, they become victims of a virtual apartheid."

—Abraham O. Mendoza

Bibliography

Library of Congress, Federal Research Division.

"Country Studies. Appendix D: Manifesto of Charter 77-Czechoslovakia." http://memory.loc.gov/frd/cs/czechoslovakia/cs_appnd.html.

Lessons of 1956 and 1968 were not lost on dissidents, who chose more passive forms of resistance to Soviet domination. The Czechoslovakian organization Charter 77, led by intellectuals and students, criticized the hypocrisy of the current government that accepted international civil rights conventions while stamping out free speech and assembly at home. Polish industrial strikes in 1981, led by Solidarity under the leadership of Lech Walesa, illustrated the popular discontent of the Polish citizenry with a corrupt and inefficient socialist government. Underground writings known as samizdat were prevalent in Eastern Europe and the Soviet Union in this period, spreading and preaching criticism of the Soviet system and the crony governments of Eastern Europe. Many Soviet and East European youths began listening to Western rock music and incorporating Western styles of dress to display their passive displeasure for the current socialist authoritarian system.

As the Cold War drew to a close, the civil disobedience movements of the 1970s and 1980s slowly grew more vocal as Mikhail Gorbachev eased restrictions through his policies of glasnost and perestroika. Popular demonstrations

against the oppression of socialist regimes in the Baltic States, East Germany, Poland, Hungary, Czechoslovakia, and other Eastern Bloc countries characterized the late 1980s. Through non-violent rallies and demonstrations, these peaceful movements eventually forced the socialist leadership of these countries to accept the devolution of their power and cooperate with the accession of liberal democratic governments. As the Soviet Union floundered, communist regimes worldwide were in crisis. While Romania's leaders followed the Chinese example at Tiananmen of violent military suppression of dissidents (1989), most of the leaders of East European states refused to turn to their militaries to quell dissent. Without the backing of a Soviet military occupation—no longer feasible with the Soviet military's new policy of disengagement—the old order recognized that they could never garner enough popular support to survive such a use of force.

—Abraham O. Mendoza

Bibliography

Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.

McMahon, Robert. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2003.

Westad, Odd Arne Westad, Sven Holtsmark, and Iver B. Neumann, eds. *The Soviet Union in Eastern Europe, 1945–1989*. New York: St. Martin's, 1994.

Apartheid

A term derived from Afrikaans meaning “separation,” apartheid refers to systematic political, social, and economic organization along racial lines. The South African government’s official policy from 1948 to 1994, apartheid became a byword for racial discrimination in the modern world. Many opponents depicted it as a system of effective slavery, and the Anti-Slavery Society for the Protection of Human Rights condemned it.

Some analysts view apartheid as a means of securing white political supremacy by methods that were economically irrational and unproductive. Others stress that it was primarily an economic strategy aiding the growth of South Africa’s capitalist economy by ensuring the availability of cheap black labor. Recent scholarship challenges the view that apartheid was a single cohesive policy and emphasizes variation in its application at different times and its more flexible, pragmatic character.

Apartheid became the policy of the predominantly Afrikaner National Party in the 1948 election campaign, but it was based on earlier segregationist measures passed by previous colonial and local English-speaking governments. Since the late nineteenth and early twentieth centuries, black landholding had been restricted to small and overcrowded reserves, while pass laws (which required blacks to carry special documentation) prevented Africans from living and working freely in the towns. The 1910 Act of Union, which created the modern South African state, excluded blacks from voting.

Apartheid went further than earlier segregationist measures. In the first decade of National Party government, the focus of a legislative barrage was the extension of racial separation and discrimination. The Population Registration Act (1950) classified all South Africans by race; the Immorality Act (1950) prohibited sexual contact between whites and other South Africans, in an

attempt to maintain white purity; and the Group Areas Act (1950) enforced separate residential areas in towns. Segregation in education and all public amenities followed. Pass laws were extended to African women. These laws generated sustained opposition by organizations such as the multiracial African National Congress (ANC) and the Pan-Africanist Congress, but the state banned and silenced opponents. In 1960, the police shooting of unarmed demonstrators against the pass laws at Sharpeville highlighted the brutality of the apartheid state, although Western powers continued providing investment and support to South Africa, which they saw as a bastion against communism’s spread in Africa.

In the 1960s apartheid was extended still further with the implementation of separate development. Eight (later ten) Bantustan homelands were created, defined along imposed ethnic lines, and African political rights were confined to them. In 1970, homeland citizenship was imposed on all Africans, thus depriving them of South African nationality and any claim to representation in its government. The main impact of separate development involved the forced removal of over 3.5 million black South Africans from farms and settlements in the rest of the country to the homelands on grounds that they were foreign aliens in white South Africa, where they were entitled to work only as migrants.

During the 1970s and 1980s, separate development began to collapse. The homelands failed to attract investment and were not economically viable, and manufacturing industries needed a permanent labor force rather than migrant workers. The number of urban Africans living in illegal squatter camps around South African cities grew rapidly despite state attempts to force them back to the homelands. Most important, internal resistance in the form of strikes in Durban and Natal in the early 1970s and the Soweto Township uprising in 1976 demonstrated unified black opposition to the state and alarmed foreign investors. Accordingly, some reforms were made such as easing the pass laws, removing segregation in public facilities, and limiting parliamentary representation in 1983 to Indian and mixed-race voters (some of whom were descendants of slaves in the former Cape Colony), but not to Africans. These reforms only rallied further opposition,

and by the mid-1980s, most black townships were in open revolt.

The government responded with a heavy hand, killing many people and detaining others without trial. International condemnation of apartheid grew, but it was not until the Cold War ended in 1989 that the West indicated that it was no longer prepared to tolerate apartheid to bolster its position against the Soviet Bloc. This indication, together with continued mass internal resistance, persuaded Premier F. W. de Klerk to try to dismantle apartheid while still retaining some power for his National Party. In 1990, ANC leader Nelson Mandela was released from jail as key segregationist legislation was repealed, and in 1994, a new constitution finally abolished apartheid and established the Government of National Unity elected by universal franchise. Yet the enormous social and economic inequalities in modern South Africa and the trauma of so many years of repression are legacies that are less easy to remove.

—Nigel Worden

Bibliography

- Lipton, Merle. *Capitalism and Apartheid*. London: Gower Publishing House, 1985.
- Lowenberg, Anton, and William H. Kaempfer. *The Origins and Demise of South African Apartheid: A Public Choice Analysis*. Ann Arbor: University of Michigan Press, 1998.
- O'Meara, Dan. *Forty Lost Years: The Apartheid State and the Politics of the National Party, 1948–1994*. Athens: Ohio University Press; Johannesburg: Ravan Press, 1996.
- Posel, Deborah. *The Making of Apartheid, 1948–61: Conflict and Compromise*. Oxford, UK: Clarendon, 1991.
- Worden, Nigel. *The Making of Modern South Africa: Conquest, Segregation, and Apartheid*. New York: Blackwell, 1995.

Antiapartheid Movements

The global antiapartheid movement, characterized by its multifaceted and multinational approach at pressuring world governments to cease investment in South Africa, was successful in finally eliminating the second-class status of black South Africans in 1994. For almost half a century after the end of World War II, activists and hu-



Segregated stands in a sports arena in Bloemfontein, South Africa. The rope was separating the races. (Corel)

man rights advocates from around the world struggled together to delegitimize South Africa's oppressive system of apartheid. In spite of Cold War antagonisms, countries such as the United States, the Soviet Union, and Britain and their respective citizenries were able to condemn the policies of the South African government as a result of pressure from the global antiapartheid movement and its influence over university students, international organizations, and civil rights advocates.

Apartheid (meaning apartness in Afrikaans, the language of the South African Boers) was a system of legalized racial segregation put into law by the South African government under the National Party (NP) in 1948. The apartheid system classified South Africa's inhabitants into four distinct racial groups: black (black African), white (Boers, English, and other white South

► BRITAIN'S ANTIAPARTHEID MOVEMENT AND THE SOUTH AFRICAN DIASPORA

As the former colonial power over South Africa, Britain retained cultural and economic links with the devolved Republic of South Africa. South Africa maintained this relationship as a member of the British Commonwealth of Nations beginning in 1931. However, after the institution of apartheid in South Africa in 1948, this long-standing relationship grew strained. The Boycott Movement, a British organization, founded in London in 1959 by South African exiles, was at the center of the international movement opposing South Africa's system of apartheid and in support of South Africa's black population (and the African National Congress). The Boycott Movement's main concern was to establish a boycott of South African goods from British markets on the part of both consumers and wholesalers. Eight months after its founding, the Sharpeville Massacre (1960) aroused widespread indignation against South Africa, leading the Boycott Movement to join forces with Laborites, the Trade Union Organization (TUC), communists, liberals, church organizations, and nongovernmental organizations. The Boycott Movement renamed itself the Anti-Apartheid Movement (AAM) and advocated a more international approach to ending South Africa's racist policies.

Among the AAM's first successes was the withdrawal of South Africa from the British Commonwealth in 1961. It was also able to petition on behalf of political prisoners in South Africa, making the world aware of their plight. In the early 1960s the AAM was active in pressuring economic sanctions by the British government but remained unsuccessful at this goal for decades. The AAM thereby focused on an academic boycott of South Africa in 1965, ensuring that no academic exchanges occurred with that country. Having at first failed to persuade much of the developed world to impose economic sanctions, the AAM focused on mounting an international campaign against apartheid under the authority of the United Nations (UN) in 1966. The AAM's turn to the UN was fruitful, as the UN ensured its activity well until the end of apartheid in 1994. With its humble origins as an exile activist group, the AAM grew to encompass a wide variety of political and social interests. It stands as an example of the political agency of ethnic groups acting in Western countries and the great influence they can have in their host countries' foreign policies, much like Cuban Americans in the United States.

—Abraham O. Mendoza

Africans), colored (mixed race), and Indian, all with specific legal and civil rights along with residential segregation based on race. In particular, black South Africans were designated to live in Bantustans (homelands). Many never did due to their need to work in white South Africa. The apartheid system created a hierarchical system based on racial privilege, with white South Africans enjoying full political rights and opportunities for social advancement while all other designated racial groups were denied such things.

The oppressive policies of apartheid led to increasing internal resistance on the part of non-white race groups, but mostly of black South Africans, primarily in the form of political organizations such as the African National Congress (ANC), the Black Consciousness Movement, and the Pan Africanist Congress. These antiapartheid organizations were linked to other liberation struggles in Africa (i.e., Angola, Congo, and Alge-

ria) and viewed their resistance to apartheid as part of the worldwide socialist struggle (ensuring support from the Soviet Union and China) against Western capitalism. This led to increased police and military actions on the part of the South African government that were characterized by oppression, violence, and multiple and gross violations of human rights. Classing all resistance movement members as potential communists (to gain U.S. support in the midst of the Cold War), the South African government maintained a strong military composed of widespread conscription of all white South African men and ready to assemble and mobilize in the event of a potential rebellion.

International outrage against South Africa's apartheid system was generated by various violent excesses on the part of the government directed toward black South Africans. In the Sharpeville Massacre of March 21, 1960, South

African police began shooting into a crowd of black protesters, killing 69 people and injuring 180 others. This ignited a firestorm of international criticism, mostly in the West and in sub-Saharan Africa. India (which had many links with South Africa given its Indian minority) and the newly independent nations of sub-Saharan Africa, joined by other developing postcolonial nations that had historically struggled against racism, found a common cause in voting against South African actions in the United Nations (UN). By April 1, 1960, the UN National Security Council passed Resolution 134, which condemned the actions of the South African government. In 1973 the UN General Assembly ruled that the system of apartheid was akin to a crime against humanity, defining it as involving “inhuman acts committed for the purpose of establishing and maintaining domination by one racial group of persons over any other racial group of persons and systematically oppressing them.”

In the West, most notably in Britain and the United States, while their governments turned the other way when it came to condemning South African policies, large segments of their populations, galvanized by the political trends of the 1960s (civil rights, liberation movements, the counterculture), pressured governments, universities, and multinational corporations to disinvest and initiate economic sanctions against South Africa. The British antiapartheid movement, which initially sought a boycott in Britain against South African goods, then moved on toward a more international approach against the South African government, gaining momentum in initiatives introduced through the British Commonwealth of Nations and the UN. The U.S. civil rights movement (composed of significant numbers of African Americans who saw a common struggle with black South Africans) paid close attention to events in South Africa and finally attacked President Ronald Reagan’s lack of commitment toward sanctions.

Disinvestment from South Africa was first advocated in the 1960s but was not implemented on a significant scale until the mid-1980s (or divestment). Student activists across the United States protested investment in South Africa by their universities, pointing out how such actions tacitly condoned apartheid. Eventually by 1986

the U.S. Congress passed the Comprehensive Anti-Apartheid Act, which was immediately vetoed by President Reagan but overridden by Congress. This act banned U.S. investments in South Africa, including loans, various commodities, and the sale of arms, and was followed by legislation ensuring an erosion of U.S. support for South Africa.

By 1994 the South African government was fully aware of the international position on apartheid and was suffering economic strangulation as a result of little to no investment from abroad. The government slowly lessened restrictions on nonwhite South Africans in response to external and internal pressures. Negotiations between the government of reformist Frederik Willem de Klerk and ANC leader Nelson Mandela officially ended the last vestiges of apartheid in 1994 and created a new multicultural South African nation with full rights for all citizens regardless of race.

—Abraham O. Mendoza

Bibliography

- Guelke, Adrian. *Rethinking the Rise and Fall of Apartheid: South Africa and World Politics*. New York: Palgrave Macmillan, 2005.
- Hostetter, David. *Movement Matters: American Antiapartheid Activism and the Rise of Multicultural Politics*. New York: Routledge, 2006.
- Thörn, Håkan. *Anti-Apartheid and the Emergence of a Global Civil Society*. New York: Palgrave Macmillan, 2006.

Affirmative Action in Global Comparative Perspective

The term “affirmative action” as it originated in the United States encompasses a variety of public policy programs in areas such as higher education, public- and private-sector employment, and government contract compliance that target women and members of ethnic minority groups. Though such programs have been the subject of considerable debate, the intent of affirmative action policy directives and programs as they were developed in the 1960s and 1970s was to provide greater opportunity for racial minorities and women whose access to employment and higher education was unequal due to a history of discriminatory laws and practices that favored white men.

Issues of racial/ethnic and gender inequality, however, are hardly unique to the United States. Thus, the term “affirmative action” has been applied by scholars to other countries that, at minimum, have passed some legislation or policy directive attempting to achieve the greater representation of disadvantaged groups in at least one of the following areas: employment, education, and political representation. States that have introduced affirmative action policies include Canada, Brazil, South Africa, India, Australia, New Zealand, Britain, Northern Ireland (as a unit of Britain), Tanzania, and Israel, among others. While these programs elude simple comparison (in part because not all countries refer to such policies as affirmative action), a better understanding of the similarities and differences between affirmative action policies in various nations can be achieved by examining three key themes: groups targeted as beneficiaries of affirmative action, the areas that such programs address, and the extent to which governments enforce compliance with affirmative action policies.

Most affirmative action policies internationally have targeted racial or ethnic groups that have been subject to *de jure* (legally sanctioned) discrimination or otherwise have not had recourse to statutory protection when confronted with discrimination in areas such as employment, housing, education, or access to public services. States that have implemented affirmative action provisions based on race/ethnicity include the United States, Canada, Brazil, Britain, Northern Ireland, Australia, and South Africa. Significantly, most governments have avoided implementing or enforcing strict racial/ethnic quotas (specific target numbers or percentages for disadvantaged groups) and have preferred to use somewhat ambiguous language in legislation or administrative directives that instead offer to members of underrepresented groups training programs or other strategies to achieve greater racial/ethnic diversity. A notable exception to this tendency is Brazil, which began implementing quotas for public administrative employment and higher education in 2001.

The group that has been the most consistent target of affirmative action policies across the world has been women; in fact, with the excep-

tion of India, all of the countries referred to herein have implemented policies that have been designed to achieve greater gender equity in the workforce, higher education, or the political sphere. In countries such as South Africa and Israel, affirmative action policies focus on achieving the greater representation of women in managerial or executive sectors of government or state-regulated companies with specify target numbers or percentages, while in Tanzania, programs have focused on increasing female enrollment in higher education.

The cases of Northern Ireland and India are unique in that both countries have implemented policies to address discrimination related to religion. In Northern Ireland, Catholics had been excluded from employment in public services, the police, and several private sectors. Hiring practices had consistently favored members of the Protestant majority, while structural inequality has been blamed on the higher birth rate of Catholics or their geographical location instead of discrimination. Meanwhile, affirmative action programs in India have attempted to address the continuing inequities produced by the Hindu caste system. Affirmative action, referred to as reservation policies in India, involves setting aside nearly a quarter of all government jobs, seats in educational institutions at least partially funded by the government, and seats in electoral bodies for members of the *dalit* caste (the lowest caste, also known as untouchables) and for non-Hindu communities that trace their origins to the original inhabitants of India. Officially, these groups are referred to as Scheduled Castes (SCs) and Scheduled Tribes (STs), respectively.

With regard to the areas in which affirmative action policies have been implemented, most countries have focused on achieving greater diversity in private- and/or public-sector employment. Policies in the United States, Canada, Brazil, and Northern Ireland have targeted private employers that provide services to the federal government to comply with government directives by submitting employment equity plans or implementing specific quotas (in the case of Brazil). These employers can lose a government contract if they have not demonstrated progress toward greater diversification of the workforce at specified intervals. Britain, on the other hand,

while favoring more proactive efforts to further integrate women in the workforce, has historically provided mere recommendations to the private sector for achieving greater workforce equity. However, the British government has recently shifted to providing specific guidelines to private firms for federal contract compliance in correspondence with the Race Relations Amendment Act of 2000.

Interestingly, fewer countries have passed legislation or administrative directives with regard to education. Several Supreme Court cases in the United States have affirmed that the consideration of race as a factor in university admissions is permissible while prohibiting quotas or formulas that assign points to minority students. Meanwhile, both Brazil and India identify specific quotas for African Brazilians or SCs and STs, respectively (Brazil also has quotas for women, the disabled, and students from public schools). Finally, a few countries have attempted to achieve greater diversity within the political sphere by specifying quotas for disadvantaged groups in parliamentary seats (as in the case for women in Tanzania or for SCs and STs in India) or representative bodies for ethnic minority groups that communicate with the central government, as in the case of Australia, New Zealand, and their indigenous peoples.

Though various countries have officially authorized affirmative action programs through the passage of legislation, executive orders, or administrative directives (or a combination of these), the actual success of these policies has depended upon the level of government initiative in enforcement. For example, in India, where reservation policies are incorporated in the constitution and quotas are specified for disadvantaged groups, the actual representation of SCs and STs in the areas of public employment and access to higher education has fallen considerably short of target quotas, in part because India lacks an enforcement mechanism for its reservation policies. Even in countries that have created government agencies to enforce affirmative action policies and investigate discrimination claims, the enforcement powers of such agencies have varied considerably, subject to funding cuts and the preferences of the administration in power. In the United States, the Equal Employ-

ment Opportunity Commission (EEOC) and the Office of Federal Contract Compliance Programs (OFCCP) have consistently experienced problems in funding and staffing and have at times been administered by political appointees who oppose affirmative action policy. The EEOC has routinely confronted a backlog of cases, while the OFCCP has rarely enforced stiff penalties against noncompliant firms. For example, only five companies were banned from doing business with the federal government during the eight years of the Clinton administration. In Australia, organizations relevant to the government policy of multiculturalism were eliminated in 1996 under the Liberal government of John Howard, while employment legislation passed in 1999 opposed any forms of preferences or quotas.

The future of affirmative action in global comparative perspective remains unclear. Though affirmative action appears to be on the decline in the United States, many other nations (such as Northern Ireland, Brazil, Britain, South Africa, and Ireland) have just begun to vigorously pursue and implement affirmative action policies. A core debate remains: while advocates insist that affirmative action addresses past or institutionalized injustices, critics argue such measures create new injustices.

—Josef Castañeda-Liles

Bibliography

- Anderson, Terry H. *The Pursuit of Fairness: A History of Affirmative Action*. New York: Oxford University Press, 2004.
- Daniel, G. Reginald. *Race and Multiraciality in Brazil and the United States: Converging Paths?* University Park: Pennsylvania State University Press, 2006.
- Izraeli, Dafna. "Gender Politics in Israel: The Case of Affirmative Action for Women Directors." *Women's Studies International Forum* 26(2) (2003): 109–128.
- Kennedy-Dubourdieu, Elaine, ed. *Race and Inequality: World Perspectives on Affirmative Action*. Aldershot, UK: Ashgate, 2006.
- Lihamba, Amandina, Rosemarie Mwaipopo, and Lucy Shule. "The Challenges of Affirmative Action in Tanzanian Higher Education Institutions: A Case Study of the University of Dar es Salaam, Tanzania." *Women's Studies International Forum* 29(6) (2006): 581–591.

Weisskopf, Thomas E. *Affirmative Action in the United States and India: A Comparative Perspective*. New York: Routledge, 2004.

The World Health Organization

Headquartered in Geneva, Switzerland, the World Health Organization (WHO) is an agency of the United Nations (UN), dedicated to the improvement and maintenance of the health of people throughout the world. The WHO constitution was adopted in 1946 and came into force on April 7, 1948, a day now celebrated annually as World Health Day. WHO replaced the Health Organization, which was an agency of the UN's predecessor the League of Nations. As of May 2008, WHO had 193 member states, including all members of the UN except Liechtenstein. Member states are organized into six geographical regions—Africa, the Americas, Southeast Asia, Europe, the Mediterranean, and the Western Pacific—and each of these has a regional WHO office located in a major city.

The WHO constitution endorses a holistic model of health, defined in its Preamble of 1948. Then less common than now, the holistic model defines health as an optimal state of being for an individual and includes the physical, mental, and social spheres of life as all aspects of health. This contrasts with the more common medical model, which defines health as the absence of disease or injury. The preamble also states that health is a fundamental human right that should not be subject to distinctions based on ethnicity, religion, political beliefs, or social or economic condition; again, this is a concept that was revolutionary in 1948 but is endorsed at least in theory today by many governments and organizations.

The preamble is often cited in support of the holistic definition of health and the concept of health as a human right. However, both concepts have also been criticized as utopian and immeasurable, and few if any countries would meet both standards. In practice, the WHO focuses primarily on measures that benefit large numbers of people, particularly those who are poor or otherwise underserved, rather than on specific medical treatments that are delivered to individuals. Such efforts include promoting access to drugs such as antiretrovirals at a price that re-

> DOCTORS WITHOUT BORDERS

In 1971 a group of French doctors were working with the International Committee of the Red Cross (ICRC) during the Nigerian Civil War in the blockaded Biafra region. In response to the human rights abuses they witnessed and the rigid, silent neutrality of the ICRC, these doctors and journalists founded *Médecins sans Frontières* (Doctors without Borders, MSF). The MSF is an independent organization dedicated to providing emergency medical relief to areas affected by natural or man-made disasters, epidemics, or war. The MSF also maintains neutrality; its core belief is that regardless of race, religion, or political affiliation, every human is entitled to medical care. However, it is also MSF's policy to speak out against human rights violations when it is clear that medical aid is not enough. Over the years, MSF has developed an international standard model for compact disaster kits for surgery and obstetrics. MSF projects do not just provide immediate relief but also educate local staff and improve overall sanitation and facilities. The MSF played a major role in helping, among others, refugees in Cambodia in the 1970s, Ethiopian famine victims in 1984, and victims of war in Sri Lanka, Sierra Leone, Rwanda, Kosovo, and Darfur. The MSF won the Nobel Peace Prize in 1999.

—Sarah Boslaugh

flects a country's ability to pay. Public health measures such as disease surveillance, immunization campaigns, and education about and provision of family planning services play a large part in WHO efforts.

WHO efforts to improve public health sometimes place the organization in conflict with other authorities within a given country or area. To take one example, the WHO campaign to eradicate polio (begun in 1988) has sometimes been hampered by local politicians and clerics who oppose administration of the polio vaccine on religious or moral bases. For instance, an immunization campaign in Nigeria in 2003 was opposed by some Muslim clerics and local politicians on the grounds that the vaccine spread AIDS and caused sterility in women.

Similarly, WHO family planning and HIV-prevention campaigns often conflict with local

values: in the United States as well as less-developed countries, many political leaders have opposed making available effective measures of birth control and HIV prevention, such as the provision of latex condoms, on the grounds that ready availability of prophylactic measures will be interpreted as promotion of promiscuity. In addition, food aid programs have been criticized on the grounds that they undermine local agriculture and industry and upset the local economy. Critics also charge that such aid provides impetus for conflicts to continue in order that related profiteering (for instance, donated food being seized, relabeled, and sold at inflated prices in street markets rather than being distributed for free) may continue.

The WHO staff's understanding of the dynamic among poverty, education, and development is evident most clearly in their efforts to promote national and local development because conditions such as poor nutrition and lack of access to a clean water supply are endemic in underdeveloped countries and are major contributors to poor health. Yet the WHO also has been criticized, as has its parent body the UN, on the grounds that it is governed by an elite who are out of touch with the reality of the lives of those whom the WHO attempts to serve. Some critics feel that too many resources are spent on campaigns to promote smoking cessation or seatbelt use that are irrelevant to countries where the greatest immediate threats to life include warfare and waterborne infections. WHO reliance on Western technology, including pharmaceuticals and manufactured goods such as mosquito nets, has also been criticized as not sustainable in poor countries. Counterbalancing these criticisms, many WHO recommendations (for instance, immunization schedules) include consideration of available national resources, and the WHO has endorsed the use of indigenous medicine and medical practices since 2000.

—Sarah Boslaugh

Bibliography

- Beigbeder, Yves. *The World Health Organization*. Boston: M. Nijhoff, 1998.
- Staples, Amy S. *The Birth of Development: How the World Bank, Food and Agriculture Organization, and the World Health Organization*

Changed the World, 1945–1965. Kent, OH: Kent State University Press, 2006.

World Health Organization. *Constitution of the World Health Organization*. Basic Documents, 45th ed., Supplement, October 2006. Available for download from http://www.who.int/governance/eb/who_constitution_en.pdf (accessed May 25, 2008).

Disabled Rights

The term “disabled rights” in its widest sense signifies social, political, and human rights efforts to combat discrimination against persons with disabilities and to secure for them the same rights and opportunities as able-bodied persons. More narrowly, the term denotes the legislation that recognizes and establishes these rights. International recognition of these rights first came in 1971 when the United Nations (UN) adopted the first document on disability rights, the Declaration on the Rights of Mentally Retarded Persons, followed in 1975 by the UN Declaration of the Rights of Disabled Persons and culminating in the UN Convention on the Rights of Persons with Disabilities of 2006. In the last decades, persons with disabilities have achieved greater independence, integration, and productivity in many societies, though national strategies continue to vary significantly according to a nation's economic resources, political motivations, and social and cultural values and norms.

The current international attention underscores the special status of disabled persons historically as victims of discrimination. In North America, Britain, and Scandinavia, disabled persons were discriminated against during the eugenics movement (1890–1940) with laws requiring compulsory sterilization of those considered genetically inferior. In Nazi Germany, an estimated 250,000 physically and mentally disabled children and adults were killed in gas chambers and by lethal injection (euthanasia) under the so-called T-4 extermination program between 1939 and 1945. After World War II and following the exposure of Nazi atrocities, views on sterilization as a way to combat disability went out of favor, though sterilizations of persons with disabilities continued in some parts of the United States through the mid-1970s.

From the 1960s onward, a burgeoning disability rights movement took root and flourished in the United States. Encouraged by the Civil Rights Act of 1964, which had guaranteed civil rights to African Americans and women, parents of disabled children now demanded that their children be taught in the same class as non-disabled ones (a process known as mainstreaming). Such efforts led to a series of laws that favored the integration of disabled children in the classroom, such as the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Also in the 1960s, the independent-living movement began at the University of California, Berkeley, where Edward Roberts, a student confined to an iron lung, wanted to attend classes and successfully petitioned to do so. His efforts led to the establishment at Berkeley in 1970 of the Physically Disabled Students Program (PDSP) that organized volunteers who helped disabled students with finding wheelchair-accessible apartments, prepared meals, or pushed wheelchairs. This process to integrate persons with disabilities into everyday life became known as inclusion. Subsequently, in developed countries, mainstreaming and inclusion became the two goals of the worldwide disability movement.

In the 1990s, the disability rights movement branched out across the world, and more countries passed national legislation to promote the rights of the disabled. Industrialized countries such as Australia, Austria, Britain, Finland, Germany, Hong Kong, and Japan adopted laws or amended their constitutions to prohibit discrimination on the basis of disability. In the Netherlands, for example, school-aged children with serious disabilities are given the choice between registering for Special Education and attending a mainstream school. Those who attend a mainstream school receive a personal budget to offset tuition for trained teachers. Laws prohibiting discrimination against persons with disabilities were also adopted in some developing countries, including Brazil, China, Malawi, the Philippines, South Africa, and Uganda. To promote greater awareness of the rights of the disabled, the UN in 1992 declared that 1993–2002 would be the Asian and Pacific Decade of Disabled Persons, followed by the African Decade of the Disabled Person (2000–2009).

➤ DISABILITY AS HUMAN RIGHTS ISSUE

On December 13, 2006, the United Nations (UN) General Assembly adopted the Convention on the Rights of Persons with Disabilities and its Optional Protocol (of measures to implement the convention), at the UN Headquarters in New York. As of 2008, a total of 139 countries have signed it, and 51 have ratified it. The convention establishes disability not only as a matter of social welfare but also as an issue of human rights and a matter of law. The rights recognized by the convention include transport, employment, information technology, education, health, and justice. Article 1 of the convention states:

“The purpose of the present Convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity.

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.”

—Angela Matysiak

As of 2009, approximately 650 million people with disabilities lived around the world, an estimated 10 percent of the world's population. Eighty percent of those lived in the developing world, where resources are often scarce and stereotypes remain. In these regions, widespread poverty and social discrimination often conspire against the rights of persons with disabilities. Thus, many challenges remain for Euro-American concepts of inclusion and mainstreaming to be transferred successfully from the industrialized to the developing world.

—Angela Matysiak

Bibliography

Clements, Luke, and Janet Read, eds. *Disabled People and the Right to Life: The Protection and Violation of Disabled People's Most Basic Human Right*. London and New York: Routledge, 2008.

Ingstad, Benedicte, and Susan Reynolds Whyte, eds. *Disability in Local and Global Worlds*. Berkeley: University of California Press, 2007.

- Jaeger, Paul T., and Cynthia Ann Bowman. *Understanding Disability: Inclusion, Access, Diversity, and Civil Rights*. Westport, CT: Praeger, 2008.
- Shapiro, Joseph P. *No Pity: People with Disabilities Forging a New Civil Rights Movement*. New York: Times Books, 1994.
- Snyder, Sharon L., and David T. Mitchell. *Cultural Locations of Disability*. Chicago: University of Chicago Press, 2006.
- Switzer, Jacqueline Vaughn. *Disabled Rights: American Disability Policy and the Fight for Equality*. Washington, DC: Georgetown University Press, 2003.

Torture in Contemporary History

While post-World War II United Nations' conventions and proclamations condemning torture—the violent physical or psychological abuse of prisoners to coerce or punish—were prevalent, the practice has continued well into the present. Throughout the Cold War, torture was used not only by the two main ideological adversaries in the conflict but also by the newly created countries of the world undergoing decolonization from the former European empires. In the post-Cold War period, allegations and public debates over what constitutes torture have reemerged, particularly in the allegations of the U.S. military and its contractors' use of torture in Abu Ghraib prison in Iraq and Guantanamo Bay prison in Cuba.

After World War II, as the Allies imposed their rule over vast regions of the former Axis empires in Europe and East Asia, many of the local resistance movements, emboldened by the presence of Allied troops, began to engage in acts of retribution against collaborators. Many of these collaborators, some of whom had been active in the quisling government in power (i.e., Vichy France, Fascist Italy) during the period of occupation and others who were merely waiting the war out, quietly working within the system, were subjected to lynching, public humiliations (shaved heads, floggings, beatings, etc.), and trials before partisan courts. Often through acts of coercion, collaborators were forced to confess to crimes that immediately condemned them to death.

In the newly created Eastern Bloc, coercive police states instituted by native Stalinist regimes also began to condemn and punish individuals deemed enemies of the state. These newly created People's Republics of Eastern Europe relied

on Stalinist tactics of imprisonment, forced labor, and psychological torture to extract information, enforce compliance, and destroy political resistance. In the Soviet Union itself, the expansion of the Gulag prison system, already notorious for imprisoning millions of political prisoners, now also included vast numbers of alleged traitors returning from Western Europe, mostly Soviet prisoners of war (POWs) and Red Army soldiers who might have “been exposed to the capitalist practices of the West.” Psychological coercion, such as sleep deprivation and continuous interrogation, served to break the will of informants and to ensure a constant supply of allegations against others. Innovations in torture, mostly using techniques that did not inflict bruises or scars, became common as early as the Great Purges of the 1930s in the Soviet Union.

European powers' attempts to stave off decolonization also added to incidents of and innovations in torture. For example, the French use of torture during the Algerian War (1954–1962), most notably through the use of electrical shocks, incensed world opinion. As with the Soviets' techniques, the French military's techniques revolutionized the role of torture in war as a means of gathering intelligence and subduing local populations.

During the Cold War's numerous proxy wars in Latin America, Asia, and Africa, both superpowers made arrangements with armed factions that instituted police states, which inflicted terror on their domestic populations. The U.S. support for anticommunist regimes such as that of Augusto Pinochet in Chile, Mohammad Reza Pahlavi in Iran, and the Somoza dynasty in Nicaragua, all of which actively participated in torture and acts of repression against the population and its left-wing oppositions, did much to discredit American standing in the developing world. Resistance forces that battled U.S.-supported regimes in many developing countries also practiced torture on their own captured victims (i.e., Congo, North Vietnam, North Korea).

The Soviet Union and the People's Republic of China also maintained internal police state apparatuses that continued various forms of repression and violence against their own citizens. Mao Zedong's Cultural Revolution was an instance whereby the state was an active agent in encouraging the population to weed out dis-

sidents and traitors to their ideology. Lesser communist powers, such as Cuba, Vietnam, and Cambodia (especially the Khmer Rouge), also used coercive tactics, including torture, to enforce domestic conformity to the regime.

In the post-Cold War era, increasing fears of domestic terrorist attacks in Western countries have raised the issue of whether or not torture is an acceptable method to extract information from captured terrorists. Recent scandals surrounding the U.S. military's use of coercion to humiliate or extract information from prisoners in Abu Ghraib (2004) in Iraq and allegations of the use of torture through the practice of waterboarding (which invokes a feeling of drowning in victims) in Guantanamo Bay in Cuba has made this a contentious issue. Proponents of waterboarding have argued that it does not constitute bodily harm and assists in acquiring information that might save hundreds of lives, while opponents argue that it violates human rights and ignores the U.S. commitment to the high ideals of protecting individuals from such practices.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.
- Westad, Odd Arne. *The Global Cold War: Third World Interventions and the Making of Our Times*. New York: Cambridge University Press, 2007.

➤ AMNESTY INTERNATIONAL

Founded in 1961, the British-based international nongovernmental organization Amnesty International is dedicated to publicizing and ending human rights abuses in the world. Furthermore, it also works toward bringing violators of such rights to justice. Drawing attention to human rights violations via massive advertising campaigns and working in tandem with other international organizations such as the United Nations, Amnesty International has been successful in addressing the issue of torture. In the 1960s and 1970s, Amnesty International was active in attempting to secure the release of political prisoners in South Africa and the *desaparecidos* ("disappeared") in Latin America and to end torture practices in the developing and socialist worlds. In the 1980s and 1990s, Amnesty International worked to address the plight of refugees and genocide (Yugoslavia, Rwanda, and the Congo) in addition to continuing to work against torture. However, countries such as the Soviet Union, Argentina, and Israel were critical of the organization, accusing it of bias against their policy objectives and internal problems. In recent years, while Amnesty International continues to work against human rights violations, many world governments (the United States, China, Israel, Saudi Arabia, etc.) view it as infringing on their ability to conduct internal policing and accuse it of hindering the prosecution of internal unrest and crime through its influence on global opinion.

—Abraham O. Mendoza

■ Introduction: Indigenous Groups and Sovereignty

Since the time of Columbus's voyages, indigenous peoples throughout the Americas, the Caribbean, and Oceania have been subjected to colonization and the annexation of their lands, largely on the part of European nations and the United States. The extent to which colonizing powers infringed upon the autonomy, social organization, and cultural practices of indigenous peoples varied considerably. While indigenous groups in the United States, Australia, and New Zealand, for example, were subjected

to forced relocation, forced assimilation, and outright extermination, indigenous peoples in some island nations of the Pacific retained control of significant portions of their lands and maintained traditional forms of authority and social organization. Domination and control of indigenous peoples was not unique to the European colonial project. For example, the Ainu on the island of Hokkaido have been under the control of Japan since 1799, while the Turkic Uyghur population has been under China's control (in the

northern province of Xinjiang). In Iran, the Bakhtiyaris have had a contentious relationship with the state since their traditional authority was dismantled in the 1920s and 1930s under Reza Khan.

In the period following 1945, many indigenous groups have gained greater political autonomy and influence throughout the world. Several island nations in the Pacific, such as Nauru, Papua New Guinea, and Fiji, have gained full independence, while other island nations have retained a dependent status with the colonizer nation with relative political autonomy. In Latin America, indigenous groups have been more successful in gaining political representation and exerting influence within the national body politic (including suffrage rights for the first time in Peru, Ecuador, and Colombia). Indeed, mobilization among indigenous groups in Latin America has resulted in the election of Bolivia's first indigenous president, the removal of a president in Ecuador, and congressional representation for the indigenous in Colombia, among other key victories. Indigenous groups in Canada, Australia, and New Zealand have also gained some measure of political representation. Canada has made a radical shift in policy during the latter half of the twentieth century, from considering the appropriation of indigenous lands to acknowledging the political autonomy of indigenous peoples as nations and providing programs that support indigenous self-government and economic self-sufficiency. Australia has established a governmental body to provide indigenous groups representation at the national level as well as economic aid for indigenous infrastructure, while New Zealand established a tribunal to address treaty claims of Maoris. Meanwhile, organizations such as the National Congress of American Indians and the radical American Indian Movement have brought national attention to the plight of indigenous groups in the United States, although the Alaska Native Claims Settlement Act (1971) and a host of Supreme Court decisions under former chief justice William Rehnquist have further eroded the already tenuous sovereign status of Native American tribes.

Another significant development among indigenous groups during this period is the resurgence of indigenous identities, both as an increase

in the number of individuals claiming indigenous identity and the emergence of pan-indigenous coalitions and identities, both on a national and transnational scale. Political coalitions among once disparate indigenous groups have been forged in an effort to compel governments to recognize treaty claims of indigenous groups or improve their economic conditions, to assert political autonomy, or to preserve indigenous cultures and customs, among other objectives. Indigenous organizations, coalitions, and social movements have brought greater visibility to the cultural and structural subordination of indigenous groups, generated pride and reduced the stigma historically attached to indigenous identity, and compelled many individuals to acknowledge and affirm indigenous ancestry.

Despite the significant political gains of indigenous groups in the late twentieth century and the resurgence of indigenous identity, many indigenous communities continue to lack material resources for self-sufficiency and experience lower levels of educational attainment, inferior or substandard housing, and lower life expectancies. Even island nations that have gained political independence continue to rely heavily on foreign aid and retain economically dependent relationships with Europe and the United States. Yet many indigenous groups continue to maintain organizations and even transnational coalitions in an effort to exercise political autonomy, improve economic conditions, and maintain traditional cultures.

—Josef Castañeda-Liles

Indigenous Peoples of North America, Post-1945

In the aftermath of World War II, North American Indians lost lands and political and cultural sovereignty as a result of concerted liberal efforts to assimilate them into national identities. By the 1960s and 1970s, Indians throughout the continent rejected forced assimilation and reversed many detrimental policies by organizing to confront or circumvent state authority. Pan-Indian activism grew internationally in the 1980s and 1990s as Native American leaders increased global awareness of Indian realities by arguing for self-determination in international forums and

➤ AMERICAN INDIAN MOVEMENT

In the late 1960s and early 1970s, the American Indian Movement (AIM) came to symbolize social discontent and political resurgence throughout Native America. Arguably the most renowned activist organization in Indian Country, AIM emerged initially in response to local problems facing urban Indians and later orchestrated national media events before splintering due to pressure from the federal government and internal tensions.

AIM was formed in July 1968 in Minneapolis, Minnesota. A Pan-Indian movement from the start, its early members included Ojibwes Dennis Banks, Clyde Bellecourt, and Eddie Benton-Benai and Lakota Russell Means. Initially, it directed its efforts at monitoring local law enforcement and combating police brutality in Minneapolis. To this end, it formed citizen patrols and rapid response teams that were dispatched to reported crime scenes to document police behavior. In keeping with empowerment movements in other communities of color, AIM directed many of its energies at cultural preservation and protection from police brutality. Importantly, it also connected calls for self-determination with a broader movement in Indian Country to reassert tribal sovereignty. Consequently, it undertook actions meant to reclaim and promote positive futures by combating anti-Indian stereotypes, establishing schools, and making connections with international groups.

In keeping with other political movements, AIM took its struggles outside the corridors of power and staged evocative public events meant to capture media attention and reframe social opinion. In the early 1970s, AIM undertook a series of increasingly visible protests to highlight historic wrongs, failed policies, and the social plight of American Indians. These actions, often in concert with other Native American activist groups, included the disruption of events associated with the 350th anniversary of the arrival of the Pilgrims at Plymouth; the occupation of Mount Rushmore and later the Bureau of Indian Affairs office in Washington, D.C.; and a transcontinental march dubbed the Trail of Broken Treaties in 1972. Most dramatically, in 1973 members of AIM participated in the takeover of Wounded Knee, South Dakota, to combat corruption and violence on the Pine Ridge Reservation. The occupation soon involved federal agents and escalated into an armed standoff that concluded with a deadly shootout between the FBI, which had long targeted the group, and members of AIM. A contested trial followed and resulted in the conviction of Leonard Peltier; many critics have argued that the trial was fraudulent. Subsequently, AIM's influence began to wane. In the early 1990s AIM fragmented, creating smaller and competing factions that, despite their ideological differences, have remained active in advocacy for Native American rights.

—C. Richard King

global advocacy networks. This strategy of seeking international solutions for local concerns continued into the twenty-first century but with a renewed focus on integration into state structures of local authority.

The post-World War II assault on tribal sovereignty was most immediate and dramatic in the United States. Cold War conformity was the norm, and distinct Indian cultures and the reservation system came to be seen as separatist and un-American. Postwar Indian policy, therefore, reversed a trend toward cultural pluralism advocated earlier by Commissioner of Indian Affairs John Collier (1933–1945) and the Indian Reorganization Act of 1934. A 1953 joint congressional

resolution ushered in the new era with a call for the immediate integration of Indian peoples and an end to all federal relations with Indian tribes. The policy of termination freed the federal government from earlier treaty and trust obligations and freed Indians to fend for themselves as members of a more uniform American society. Termination proved disastrous for Indian peoples of the United States. Whole tribes were absorbed into state jurisdictions, and tribal lands and resources were sold to the highest bidder. The Menominees, the Klamaths, the Alabamas, and the Coushattas of Texas, among others, lost tribal status during the period, and more than 1 million acres of native lands fell into private hands.

► PAN-INDIAN MOVEMENT

Pan-Indian activism became an international movement in the 1970s. Through institutions such as the World Council of Indigenous Peoples (WCIP), founded in 1975, North American Indians gained a voice in the United Nations and the support of indigenous peoples around the globe. During this period, Pan-Indian organizations rejected state authority by drawing on the Fourth World ideology of George Manuel, WCIP founder and president of Canada's National Indian Brotherhood. Manuel saw tribal collaboration with respective nation-states as fruitless endeavors and promoted instead the circumvention of state authority through supranational organizations. By the 1980s, the Fourth World approach to Indian activism had fallen out of fashion as politically motivated organizations used the ideology to incite indigenous groups to separate from states in places such as Nicaragua and Guatemala, not as a real solution to indigenous problems but with the purpose of undermining popular movements such as the Sandinistas and the Guatemalan opposition.

—Eric Rodrigo Meringer



Group of Sioux Indians protest at Alcatraz in an attempt to claim the land under the allowances provided in an 1868 treaty with the U.S. government, March 8, 1964. (Bettmann/Corbis)

The Canadian government, which had sought to streamline its dealings with Indians since the Indian Act of 1951, proposed its own version of termination in the “Statement of the Government on Indian Policy, 1969,” also known as the White Paper. The White Paper called for dissolving the governmental department in charge of Indian affairs, granting titles to Indian lands, and turning over to the provinces the administration of education, health, and other services. Opponents drew comparisons to the unpopular U.S. policy, and the Pierre Trudeau administration backed away from the White Paper proposal within a year.

Resistance to termination and the White Paper fueled Indian activism and launched the modern Indian movement for self-determination throughout North America. In the United States the National Congress of American Indians (NCAI) gained strength and purpose by opposing termination and pressured the Dwight D. Eisenhower administration to overturn the unpopular policy by 1958. In Canada, Indians organized under the National Indian Brotherhood worked with the government and in 1973 gained funding and control of reserve schools for Indian band governments. Efforts to gain self-determination and observance of Indian treaty rights in the United States were more militant. Dramatic confrontations at Alcatraz, at the Bureau of Indian Affairs offices in Washington, and at Wounded Knee in South Dakota brought Indian issues into the mainstream and won the Red Power movement widespread support in the United States and abroad.

In contrast to U.S. and Canadian efforts that sought to, in the vernacular of the period, get the government “out of the Indian business,” Mexico, which was a model for Indian-state relations throughout Latin America between the 1940s and 1970s, increased expenditure and governmental involvement in Indian affairs during the same period. With the largest indigenous population on the continent, Mexico derived its Indian policy from the twentieth-century ideology of indigenism in which Indian language and culture were celebrated as essential components of national mestizo identity. Celebrating indigenous pasts did not, however, ensure space for

indigenous futures, and institutionalized indigenism, as promoted by Mexico's Inter-American Indigenist Institute (1948), sought to accelerate what policy makers saw as the inevitable decline of Indian culture in the face of modern political and economic development.

Although Mexico's Indian policy was assimilationist in nature, indigenist programs did nonetheless offer tangible benefits to isolated indigenous communities. Unlike termination that sought to unravel the reservation system and promote urbanization, Mexico's indigenist policy aimed to integrate its indigenous population by bringing the modern state, in the form of highways, railroads, and televisions, to the isolated indigenous community. Mexico's National Indigenous Institute set up administrative centers among the rural Tzeltal-Tzotzil of Chiapas, the Tarahumara of Chihuahua, and the Mazateca, Chinanteca, and Mixteca of Oaxaca. Success was measured not in terms of terminated programs but by the introduction of new schools, clinics, showers, and electrification. Indian leaders in Mexico and Central America therefore gained certain advantages by working within the existing system. The spread of Pan-Indianism in the 1970s provided an alternative system in which Indian peoples could both seek the benefits of modernization and resist assaults on indigenous cultural sovereignty.

Since the 1990s, Indian movements continue to seek rights for indigenous groups as distinct peoples as opposed to ethnic minorities. At the same time, they acknowledge the diversity of indigenous concerns and the state's ability to mediate the impact of global political and economic change on isolated indigenous communities.

—Eric Rodrigo Meringer

Bibliography

- Diaz Polanco, Hector. *Indigenous Peoples in Latin America: The Quest for Self-Determination*. Translated by Lucia Rayas. Boulder, CO: Westview Press, 1997.
- Hoxie, Frederick, and Peter Iverson, eds. *Indians in American History: An Introduction*. Wheeling, IL: Harlan Davidson, 1998.
- Iverson, Peter. "We Are Still Here": *American Indians in the Twentieth Century*. Wheeling, IL: Harlan Davidson, 1998.

Indigenous Peoples in Latin America, since 1945

The phrase "indigenous people" refers to the descendants of the aboriginal inhabitants of the Americas, alternatively known by a variety of labels including Indians and natives. However, these colonial and globalizing terms mask the wide diversity of languages and cultures that have flourished across the region. Defining who is an Indian is a complicated question in Latin America, particularly given the varying degrees of cultural and biological mixing that have occurred over the past 500 years since the Spanish Conquest. Anthropologists have typically used external characteristics such as language, clothing, residency, occupation, and religious practices to determine ethnic affiliation. Depending on definitions, about 40 million people, or about 10 percent of the population, is indigenous, with the majority concentrated in southern Mexico, Central America, and the Andes. Identity remains overwhelmingly local, and many indigenous peoples identify with their own group rather than with a pan-ethnic construction. Although past observers had predicted the disappearance of indigenous peoples, at the beginning of the twenty-first century their cultures remained strong and vibrant.



Zapatista military leader Subcomandante Marcos (center), and a security detail walk around the grounds of the meeting site between the Zapatista command and the CONAI, the mediation group involved in peace talks, September 1995. (Oscar Leon/AFP/Getty Images)

► INDIGENOUS POPULATIONS OF THE AMERICAS

The size of indigenous groups in the Americas has been a hotly contested issue from the time of the European conquest to the present. Most famously, at the time of the Spanish Conquest Father Bartolomé de las Casas placed the aboriginal population of Hispaniola at 4 million inhabitants. Some scholars have criticized his statement as an inflated estimate of an overzealous defender of indigenous rights designed to emphasize the abuses of the Spanish colonists. Subsequent demographers have lent more legitimacy to his figures. The cultural and biological mixing of indigenous peoples, Africans, and Europeans in the Americas has made it difficult to determine the ethnic category of Indian. Individuals can slide back and forth between categories based on varying criteria, definitions, and the political expediencies of the moment. Following the 1994 Zapatista uprising in Chiapas, for example, the percentage of Mexicans willing to identify themselves as indigenous doubled. The following numbers, therefore, are only a rough guide to the distribution of indigenous peoples throughout Latin America and should not be taken as an accurate and scientific determination.

Country	Indigenous Peoples (Millions)	Percentage Indigenous
Argentina	0.41	1.1
Bolivia	4.92	60.0
Brazil	2.67	0.2
Chile	1.07	7.0
Colombia	0.78	2.0
Ecuador	2.20	17.2
Guatemala	6.52	53.0
Honduras	0.94	13.0
Mexico	9.5	9.5
Nicaragua	0.33	7.5
Panama	0.24	8.3
Paraguay	0.11	2.0
Peru	12.5	51.0
Venezuela	1.39	5.7

—Marc Becker

Source

Quehacer, reprinted in *Latinamerica Press*, April 16, 2001, p. 7.

Indigenous peoples, with populations based in rural areas, had long been marginalized from mainstream politics and economics. Elites descended from European conquerors controlled most of the profitable arable land, with Indians crowded onto small and degraded plots. Indians suffered from malnutrition and a lack of health care, resulting in high infant mortality rates and short life expectancies. Most Indians did not have access to education, and governments used their illiteracy as a mechanism to deny them the vote. Indigenous peoples were only first allowed to vote in Peru in 1978, in Ecuador in 1979, and not until 1991 in Colombia.

The late twentieth century witnessed a heavy migration away from indigenous rural areas and toward urban areas that were traditionally white spaces. This did not necessarily correspond with an erosion of ethnic identities. Urban areas could be politicizing spaces as Indians who faced common issues and concerns met. Gaining a univer-

sity education provided organizing tools that facilitated a politicized ethnic agenda. Similarly, in recent decades large numbers of indigenous communities have converted to evangelical Christian religions. Guatemala, for example, is now heading toward a Protestant majority. Commonly critics have assumed that this would lead to an erosion of ethnic identities, but often, instead, the adoption of evangelical Christianity created spaces in which to preserve indigenous cultures. When missionary groups, for example, translate their Bibles into local languages, it helps to reinforce and valorize ethnic identities.

Numerically speaking, the largest surviving indigenous groups in the Americas are the Maya and the Quechua. Both are language families that include diverse cultures and traditions spread over a broad geographic area. In Guatemala the country's small nonindigenous elite held a monopoly on economic and political power. In the 1980s the Guatemalan military launched a geno-

cidal war against the country's majority Maya population. In 1992 Maya leader Rigoberta Menchú, who had become widely renowned for her testimonial *I, Rigoberta Menchú*, won the Nobel Peace Prize for her defense of indigenous rights in the country.

In neighboring Chiapas, Maya rebels shocked the world on January 1, 1994, with an armed uprising against the Mexican government. Organized into the Zapatista Army for National Liberation (EZLN), so-named after Mexican Revolutionary hero Emiliano Zapata, their demands were much broader than indigenous rights. Led by 12 Maya *comandantes* (commanders) and a charismatic nonindigenous Subcomandante Marcos, who also served as spokesperson, the rebels demanded an end to neoliberal economic policies that robbed them of their lands and livelihood.

Quechua peoples thrive along the spine of the Andean mountains on South America's Pacific coast. Bolivia has the highest density of indigenous peoples in the Americas and has long been home to the cultivation of coca leaves used for medical and ritual purposes. Because coca is also one of the raw ingredients in the production of cocaine, this cultivation was targeted in a so-called war on drugs. Indigenous farmers defended their right to grow coca. Coca leader Evo Morales won the presidency of the country in 2006 as the candidate of the Movement to Socialism Party, becoming the first indigenous person to be chief executive in that country.

Indigenous organizations in Ecuador formed one of the continent's best-organized social movements. Beginning in the 1920s they worked together with leftist political parties to agitate for land, education, political recognition, and other rights. They gained newfound visibility in 1990 when they launched a peaceful uprising against the government. Led by the Confederation of Indigenous Nationalities of Ecuador (CONAIE), militants demanded social, economic, and political changes, including changing the constitution to recognize the pluri national nature of the country. Indigenous activists commonly used marches, strikes, and road blockades to press their demands. In 1995 CONAIE founded a political party called Pachakutik to run candidates for office. They realized some electoral success but often had more impact as a social movement, in-

cluding the use of street protests to force President Jamil Mahuad from office in January 2000. In Ecuador and elsewhere, indigenous peoples emerged at the head of popular struggles against neoliberal economic reforms that shifted resources away from a country's poorest peoples.

Environmental issues often have become key to indigenous struggles for survival. Amazon indigenous groups are more diverse and dispersed than those in the core Maya and Andean areas. European conquerors had less success in subduing the Amazon, and some isolated groups still have little or no contact with the dominant culture. In 1993 the Cofáns, Secoyas, and Sionas in the Ecuadorian Amazon sued Texaco in New York for polluting their lands. In Brazil the Kayapós used modern technology such as video cameras in their struggles against the damming of the Xingu River. They gained an international profile when British rock star Sting rallied to their cause.

For centuries indigenous peoples have used state structures to petition for redress and in recent decades have gained notable successes. In 1987 Miskitu Indians on Nicaragua's Atlantic coast signed an autonomy agreement with the leftist Sandinista government. Even though Colombia has one of the smallest indigenous populations in the Americas, well-organized social movements gained significant concessions in the 1991 constitution including recognition for their territory and cultures and representation in congress. Similarly in Venezuela, many indigenous rights were codified in the 1999 constitution, including recognition of their languages, organizations, and lands. Political openings have ensured rights for indigenous peoples, facilitated their survival, and even helped them to flourish in the early twenty-first century.

—Marc Becker

Bibliography

- Albó, Xavier. "Andean People in the Twentieth Century." In *The Cambridge History of the Native Peoples of the Americas*, edited by Frank Saloman and Stuart B. Schwartz. Cambridge and New York: Cambridge University Press, 1999.
- Brysk, Alison. *From Tribal Village to Global Village: Indian Rights and International Relations in Latin America*. Stanford, CA: Stanford University Press, 2000.

Postero, Nancy Grey, and León Zamosc, eds. *The Struggle for Indigenous Rights in Latin America*. Brighton, UK, and Portland, OR: Sussex Academic, 2004.

Van Cott, Donna Lee. *From Movements to Parties in Latin America: The Evolution of Ethnic Politics*. Cambridge: Cambridge University Press, 2005.

Wearne, Phillip. *Return of the Indian: Conquest and Revival in the Americas*. Philadelphia: Temple University Press, 1996.

Indigenous Groups of Oceania since 1945

The indigenous ethnic groups of Oceania consist of Aboriginal Australians (along with Torres Strait Islanders), the Maoris of New Zealand, the peoples of the Melanesian and Micronesian archipelagos, the Polynesian groups of the South Pacific, and the various peoples who constitute Papua New Guinea. After World War II, many of these indigenous ethnic groups attained varying levels of autonomy from their respective colonizing powers, with outright independence in some

cases. Most of the Polynesian island groups, most notably Fiji and the Solomon Islands, attained their independence from their European colonizers. In contrast, the indigenous peoples of Australia and New Zealand remained under the political control of their respective colonizer governments but attained higher levels of autonomy vis-à-vis the state with mixed results in terms of economic and social advancement. The indigenous peoples of Oceania share in common various traits with other indigenous peoples in other world regions, especially in regard to their social and economic position relative to the former (or current) colonizing power.

Many of the postwar Pacific island nation-states in the Oceania region were originally populated by Polynesian, Melanesian, and Micronesian peoples before European colonial expansion brought many of these under their control in the late nineteenth century. However, during the late twentieth century many of these former colonial holdings attained their independence and were formed into viable nation-states (i.e., Fiji, the Solomon Islands, the Federated States of Micronesia, the Marshall Islands, Nauru, Palau, Samoa, Tonga, and Vanuatu). Other Pacific islands remained under the control of a Western imperial power (i.e., Australia's Christmas Island, Cocos Islands, and Norfolk Island; U.S. New Caledonia, Guam, and American Samoa; New Zealand's Cook Islands; British Pitcairn Islands; and French Polynesia) with the indigenous people granted citizenship within the metropolitan power. Indigenous people in Australia and New Zealand were incorporated as part of the national body politic with a level of autonomy in respect to indigenous rights. Finally, until 1975 Australia administered Papua New Guinea, when its disparate ethnic groups formed a unified national state.

Many of the newly independent Pacific nation-states, consisting mostly of indigenous populations, have had various instances of political and social problems in the wake of independence. States such as Papua New Guinea, the Solomon Islands, and Micronesia have been fraught with political discord, widespread poverty, and other problems. Australia and New Zealand, the most developed states of the region, have intervened militarily in local conflicts and

➤ ACKNOWLEDGING THE PAST—RESTITUTION TO OCEANIA'S INDIGENOUS PEOPLES

Given centuries of colonization and exploitation, Oceania's indigenous peoples have clamored for greater political representation and the rectification of past wrongs from colonizers. The U.S. and Australian governments have recently apologized to their indigenous peoples for such past policies. The U.S. government formally apologized to native Hawaiians in 1993 when President Bill Clinton signed the Apology Resolution for the overthrow of the Kingdom of Hawaii in 1893 and its subsequent annexation as a state in 1898. Certain provisions granted to Native Americans have been granted to native Hawaiians, with legislation pending that would grant them the same legal status. In 2008 the Australian government, under the leadership of Prime Minister Paul Rudd, apologized to indigenous Australians for the "stolen generation" policies of the early twentieth century. However, he was subsequently heavily criticized for not including financial reparations in tandem with his apology.

—Abraham O. Mendoza

crises and have also contributed heavily in terms of humanitarian aid. However, states such as Fiji have developed their local economies based on tourism, drastically changing social conditions for many. The indigenous peoples under foreign rule in places such as French Polynesia and American Guam, while having been granted certain levels of political representation and rights, still suffer economic deprivation and social inequality in comparison with their governing elites (such as continental Americans in Samoa). Likewise, Australian aboriginals in Australia, while having attained financial, territorial, and political compensation from the Australian government, still suffer from discrimination, poverty, and high levels of illiteracy and drug and alcohol abuse. This situation contrasts with the position of the Maoris in New Zealand, who along with political representation and social equality granted by the state of New Zealand have prospered in the past half century.

—*Abraham O. Mendoza*

Bibliography

- Smith, Linda Tuhiwai. *Decolonizing Methodologies: Research and Indigenous Peoples*. New York: Zed Books, 2007.
- Spickard, Paul, ed. *Race and Nation: Ethnic Systems in the Modern World*. New York: Routledge, 2005.

Nomadic Peoples and Modern States

The rapid modernization of much of the world from the twentieth to the early twenty-first century has had a severe impact on nomadic peoples in Asia, Africa, and Europe. Their relationship with evolving nation-states in the post-colonial world has had significant impact on their livelihood and traditional way of life. The expectation by their respective governing nation-states of these nomadic groups' gradual settlement into sedentary communities has had mixed results. Ranging from Central Asian pastoralists, Middle Eastern Bedouins, African tribes, and the Romani (Gypsies) in Europe, nomads have encountered drastic changes in their traditional social and political structures due to the intrusion of the global economy, local governments, and regional warfare.

➤ IRANIAN NOMADS

Traditional Iranian nomadic societies, although declining in numbers, still remain an important social group in Iran. Many still practice traditional methods of pastoralism, driving their herds between summer and winter pastures and selling animal products to the local populations. It is estimated that 30 percent of Iranian meat production comes from these groups. Although many of the people traditionally associated with these societies have become sedentary in response to growing industrialization and the loss of traditional grazing lands, it is estimated that there are still 1.4 million pastoralists, approximately 2 percent of the population. This is a far cry, however, from previous centuries, when their numbers varied from a quarter to half of the total population. Although most of the nomads played only a small part in the Iranian Revolution, traditional leadership was often targeted by the new government as monarchist supporters. Some notable pastoralist societies include Bakhtiari, Baluks, Qashqui, Shahsevan, and the Turkmen.

The adaptation of mobile pastoralists into the modern world results in their occupation of a marginal and inferior economic and social position within greater society due the constraints imposed on their way of life by the nation-state. In the period of decolonization following the end of World War II, most nomads found themselves dependent on the newly developing nation-states of the so-called Third World, eager to modernize themselves to compete in the world market. Particularly in Africa and the Middle East, nomads such as the Bedouin of Arabia, the Ababdeh of Egypt, and Kurds in Central Asia saw the incursion of the nation-state in their day-to-day lives in the forms of the construction of modern infrastructure such as roads, in businesses, and in the development of natural resources. Nomads within the Soviet Union such as the Kyrgyz and the Turkmen in Central Asia had already been forced by the Soviet authorities into sedentary societies. Similarly, global nomadic societies in the postwar era were expected to adapt to the contingencies of economic development, but many continued their way of life on the margins

of society. However, dwindling resources in the form of grazing lands for their livestock and a decline in readily available markets for their goods due to the intrusion of commercial goods created by the industrialized world market, such as finished leather goods and woolen clothing, forced large numbers of them to adapt to sedentary communities within the political nation-state.

The development of the nation-state in the postwar period became a widespread phenomenon following the era of decolonization throughout much of the Third World. In the midst of all these changes, drastic programs for modernization were implemented, funded by foreign investment and international organizations such as the World Bank and the International Monetary Fund. The political elites, European trained and educated, of these new countries sought to rid their countries of “backward” and traditional elements that might impede the economic progress of their new states. Nomads in the Middle East found themselves increasingly marginalized in society, given the prominence of the oil industry throughout much of the landscape as well as the rapid change in the market structures in the country that they depended on for subsistence. Central Asian nomads found less and less grazing lands for their livestock, and many were forced to move into sedentary communities, altering their lives drastically. African nomads, such as Bushmen from Southern Africa, Mbuti (pygmies) from the Congo, and the Tuareg in the Sahara became surrounded by tight borders that closed their traditional range of free movement. While colonial borders had been quite permeable, the newly emergent postcolonial states restricted and closed border crossings, forcing many to reside as minority groups within hostile countries. Much like the Soviet nomadic peoples of Central Asia, all these groups had to adapt to sedentary lifestyles or be forced to continue as pastoralists on land that was becoming scarcer due to state and private claims.

Nomadic groups maintaining traditional lifestyles have to cope with increasing difficulties with few advocates of their own, relying on the United Nations (UN) and major nongovernmental organizations (NGOs) such as the International Red Cross and Amnesty International. Bedouin in the Middle East have found themselves adrift

among the various wars in that volatile region, dependent on government subsidies for survival in ever smaller geographical areas. Central Asian nomads in Kazakhstan, Kyrgyzstan, and Iran have attempted to retain their way of life in smaller areas, also having to rely on support from the regional government. Those who manage to adapt to sedentary communities find their folkways and customs disparaged and looked down upon by others and, in some cases, simultaneously romanticized. The continuance of some of their customs, such as blood feuds among Bedouin in the Middle East and Romani squatting in the United Kingdom, is prohibited by their respective national governments.

—Abraham O. Mendoza

Bibliography

- Ginat, Joseph, and Anatoly M. Khazanov, eds. *Changing Nomads in a Changing World*. Portland, UK: Sussex Academic Press, 1998.
- Khazanov, Anatoly M. *Nomads and the Outside World*. 2nd ed. Translated by Julia Crookenden. Madison: University of Wisconsin Press, 1994.
- Salzman, Carl, and John G. Galaty, eds. *Nomads in a Changing World*. Portland, UK: Sussex Academic Press, 1999.

Indigenous People of the Caribbean since 1945

Taíno Indians of the Greater Antilles and Island Caribs of the Lesser Antilles have been inscribed in history as the first to suffer Spanish genocide in the Americas. Contrary to the expectations of Amerindian extinction that are to be found in a wide array of colonial and more contemporary writings on the Caribbean, the indigenous peoples of the Caribbean continue to be present in demographic terms, in nationalist symbolism, and in widely diffused rural cultural practices. A broadly overlooked constituency of the modern Caribbean, indigenous peoples in the region have engaged in political and cultural resurgence while experiencing heightened visibility within national societies and in international forums. Several factors may account for their emergence from the margins of colonial societies and their renewed self-assertions in the present. Among these factors one can include wider state recognition for indigenous communities in Belize and

the Lesser Antilles since obtaining political independence from Britain, increased coverage of Amerindian communities and issues since the 1960s and even more so since 1992, growing regional connections between indigenous communities, new forms of Amerindian political activism, nationalist reinterpretations of the Amerindian past, and in the last 20 years a small but growing body of scholarship.

There has been a resurgence of people self-identifying as indigenous. In St. Vincent the number of people self-identifying as Carib rose from 40 in the census of 1981 to 1,500 by 1991. In St. Lucia the 1991 population census had "Carib" as a category, chosen by 366 people; by 2001, 787 people volunteered to be formally registered as "indigenous." In Dominica, high fertility rates have led to a dramatic Carib population recovery, rising from 400 persons in the 1930s to 3,400 in the 1990s. In Trinidad and Tobago, with a formally organized and state-recognized Carib community in the borough of Arima unofficially numbering several hundred people, there are increasing numbers of Trinidadians in the rest of the country and abroad who are now self-identifying as Amerindian descendants. Among immigrants from Puerto Rico and the Dominican Republic in the United States, thousands are self-identifying as Taíno and joining any of several Taíno organizations that came into existence since the late 1980s.

States have recognized existing Carib communities in Dominica, St. Vincent, and Trinidad and Tobago. In some of the islands, nationalist intellectuals have seized upon Amerindians as symbolic if not actual ancestors whose struggle for freedom from colonial rule could be politically reinterpreted as part of the broader Caribbean struggle for independence.

A new political consciousness oriented toward self-determination and cultural rights has emerged in a number of communities in the region and in the North American diaspora. In Dominica, the term "Caribism" refers to this new political consciousness; the term "Garifunaduo" in Belize has a similar meaning. This consciousness is reflected in the creation of new political organizations. In Dominica, the Waitukubuli Karifuna Development Agency (WAKADA), the Kalinago Centre, and two dance groups focus on

THE AINU

The indigenous Ainu people of Japan live on the northern island of Hokkaido as well as on Sakhalin Island, the Kuril Islands, and the southern end of Russia's Kamchatka Peninsula. The exact location and circumstances of the Ainu's origins are unknown. The Ainu probably lived throughout most of Japan in ancient times, but the Yamato gradually pushed them northward. The government of Emperor Meiji (which lasted from 1868–1912) eventually took over Ainu territory, gave those lands to Japanese homesteaders, and forced the Ainu to become fishermen. The rights of the Ainu people were not recognized until Japan's post-World War II Constitution (1947). In 1997, the Japanese Diet (parliament) for the first time recognized the Ainu as an official ethnic minority. Today, most of Japan's 20,000 Ainu live on the northernmost island of Hokkaido and make their living by hunting, fishing, farming, and selling crafts to tourists. Physically, Ainu men have more facial hair than the Japanese, though their dark hair color is the same.

—Elizabeth J. Leppman

Bibliography

Elizabeth J. Leppman. "Japan: People." *World Geography: Understanding a Changing World*. (ABC-CLIO, 2009), <<http://www.worldgeography.abc-clio.com>>. Accessed September 30, 2009.

the preservation and development of the Carib culture. Where Taínos are concerned, the Indigenous Association of Puerto Rico was formed in the 1980s along with several other organizations such as the Taíno Nation of the Antilles and the United Confederation of Taíno People. The Amerindian Peoples Association and the Guyanese Organization of Indigenous Peoples are two of the leading multiracial bodies in Guyana. The National Garifuna Council and the World Garifuna Organization have been formed in Central America. In some territories, there is more or less direct representation of indigenous leaders in local and national governmental bodies.

A unique convergence of factors has afforded contemporary Caribbean indigenous peoples a presence they have not had since the first century

► THE CARIB RESERVE

Caribs in Dominica have struggled to achieve a status that some national political elites find unsettling. The reinstatement of a formal Carib Reserve in 1978 provided a platform for conflict between Carib leaders and the state. Late prime minister Eugenia Charles asserted in 1987 that “no state within a state” would be tolerated. She also sought to expel international aid agencies working in the Carib Reserve. Major points of contention have been repeated efforts by the Carib Council to expel Afro-Dominican male spouses of Carib women from the reserve’s communally held lands, the rise of “Caribism,” successive administrations’ attempts to undermine and control the affairs of the Carib Council, and disputes over the boundaries of the reserve. Caribism promotes greater Carib political autonomy as a main objective along with educational reform, the establishment of independent international linkages to facilitate Carib economic development, and the revitalization of Carib cultural heritage. In 2006, the Kalinago Barana Auté, a Carib model village designed for cultural tourism, was finally opened in the Carib Reserve after three decades of planning and investment. In addition, in a debate that is echoed elsewhere in the Caribbean, some sectors of the national population are calling for the name of Dominica to be changed to its original indigenous name, Waitukubuli (“how tall is her body”) as a symbolic means of undertaking cultural decolonization.

—Maximilian C. Forte

of colonial rule. Transnational factors that are responsible for this heightened visibility include local indigenous communities’ greater access to the international media, their presence on the Internet, and their ability to organize several Caribbean-wide indigenous gatherings. Several of these gatherings have been held in Arima, Trinidad (in 1992, 1993, 1995, 2000, and 2006), while several more, the Indigenous Legacies conferences organized by Dr. José Barreiro, were held in Baracoa, Cuba, from 1997 to 2003. From 1987, indigenous communities in Belize, St. Vincent, Dominica, Trinidad and Tobago, and Guyana were organized in their own regional body, the Caribbean Organization of Indigenous Peoples.

Important connections have also been developed between Caribbean indigenous organizations and Canadian First Nations, such as the Assembly of First Nations, the Assembly of Manitoba Chiefs, and the Federation of Saskatchewan Indian Nations.

Likewise in 1992, to commemorate the 500th anniversary of the arrival of Columbus, governments of the Anglophone Caribbean showcased surviving indigenous communities at the Caribbean Festival of Arts (CARIFESTA), hosted that year by Trinidad and Tobago. This provided official recognition of the Amerindian presence and offered Amerindians themselves a vehicle for further communication and coordination on a regional basis. Such inter-Amerindian exchange happened again with CARIFESTA in 1995 and 2006.

The national news media in several Caribbean states have been an important source of local recognition for the presence of indigenous communities, more than previously and perhaps in part due to Caribbean indigenous peoples’ international exposure. Members of various national diasporas who self-identify as indigenous and have encouraged others to do likewise or who are simply proud of Amerindian survival from a nationalistic standpoint have also been a new source of recognition. As individuals begin to broaden knowledge of their own genealogies and their cultural histories, many more are claiming Amerindian ancestry. This has been especially true of immigrants from Puerto Rico and the Dominican Republic in the United States, who have been at the forefront of the Taíno resurgence.

The indigenous resurgence in the Caribbean over the past three decades has not diminished certain critical, enduring problems. Problems of persistent poverty, cultural marginalization, and lack of political representation endure even as wider social awareness of the indigenous presence continues to be raised in the region’s media and, after a long absence, in international scholarship.

—Maximilian C. Forte

Bibliography

Barreiro, José. “Taíno Survivals: Cacique Panchito, Caridad de los Indios, Cuba.” In *Indigenous Resurgence in the Contemporary Caribbean*:

- Amerindian Survival and Revival*, edited by Maximilian C. Forte. New York: Peter Lang, 2006.
- de Terville, Albert. "Saint Lucia: Indigenous Peoples' Consultation." *CAC Review* 3(9) (October 2002), <http://centrelink.org/Oct2002.html#deTerv>.
- Gregoire, Crispin, Patrick Henderson, and Natalia Kanem. "Karifuna: The Caribs of Dominica." In *Ethnic Minorities in Caribbean Society*, edited by Rhoda Reddock. St. Augustine, Trinidad: ISER, University of the West Indies, 1996.
- Guitar, Lynne, Pedro Ferbel-Azcarate, and Jorge Estevez. "Ocama-Daca Taíno (Hear Me, I Am Taíno): Taíno Survival on Hispaniola, Focusing on the Dominican Republic." In *Indigenous Resurgence in the Contemporary Caribbean: Amerindian Survival and Revival*, edited by Maximilian C. Forte. New York: Peter Lang, 2006.
- Layng, Anthony. *The Carib Reserve*. Lanham, MD: University Press of America, 1983.
- Twinn, Paul. "Land Ownership and the Construction of Carib Identity in St. Vincent." In *Indigenous Resurgence in the Contemporary Caribbean: Amerindian Survival and Revival*, edited by Maximilian C. Forte. New York: Peter Lang, 2006.

Indigenous Peoples of Arctic Regions since 1945

The Arctic Circle is the northern polar region of the earth. It extends from 66.33 degrees north to 0 degrees north at the North Pole and encircles the northern portion of the earth. Because of the extreme low temperatures, it is also one of the great cold desert regions of the world, making it difficult for humans to survive there. Since Antiquity there have been groups of indigenous people who have so mastered the climate and environment of the circumpolar regions that they have been able to maintain continuous cultures. However, over the past centuries, the development of modern survival gear and technological support has enabled people from temperate zones to advance into the polar region and the natives to contact the outside. Traditional lifestyles have often given way to—or at the very least adapted to—modern technology. Many of the languages are threatened.

At present there are an estimated four million people living in the Arctic Circle region, and approximately one million are part of the circumpolar peoples. The indigenous peoples of the Arctic Circle region include the Lapps of

THE LOSS OF LANGUAGE DIVERSITY

Threatened languages are not only a feature of the Arctic landscape but are also a global issue. According to UNESCO statistics, 230 languages have become extinct since 1950, and half of the world's 6,700 languages are likely to disappear by the end of the twenty-first century. Three thousand or more are considered endangered as of 2009. To mention a few of the endangered, 143 languages are threatened in China, including Patua, Green Gelao, and Bonan. India has 196 endangered languages, including Naiki, Koraga, and Bangani. The 13 endangered languages in Algeria include Tidikelt and Zenatiya. Germany has 13 endangered languages, including Saterlandic. Yiddish is also an endangered language throughout Western and Eastern Europe. In Britain, 11 languages are endangered including Manx, Scottish Gaelic, and Irish; in the United States, the approximately 192 endangered languages include Hawaiian, Mandan, Sauk-Fox, and Potawatomi. At the same time as these languages are declining, according to statistics listed in *Worldwatch Vital Signs 2006–07*, Mandarin Chinese has become the world's most widespread language, with about three times the speakers of its nearest rivals, Spanish and English. Filling out the world's top ten languages are Standard Arabic, Hindi, Portuguese, Bengali, Russian, Japanese, and German.

—Fred Nadis

Scandinavia (Sami); the Samoyeds (Nentsy) of western Russia; the Nganasans, Yakuts, Tungus, Yukaghirs, and Chukchis of eastern Russia; and the Eskimos (Inuit) of North America. Besides the peoples just named, there is a considerable ethnic Russian population in Siberia, an ethnic mixture of European and Inuit in Greenland, and mostly European-descended peoples in Iceland.

The Saams (Sami) of Scandinavia (who consider the term "Lapp" derogatory) live along the Arctic reaches of Northern Europe. There are several groups that all speak a variant of *saam'kill*. However, due to geographical isolation and contemporary political boundaries, the versions of Sami spoken in Norway, Sweden, Finland, and Russia differ. Much of the income of the Sami living a traditional lifestyle comes from

herding reindeer along with fishing, hunting, and crafts. However, in recent decades due to population growth, restrictions in Swedish law on reindeer herding (Reindeer Husbandry Law of 1971), Sami emigration has become more prevalent. Arctic habitats on which the Sami depend for their livelihood have shrunk due to forestry, hydropower generation, mining, and other extraction industries. While Sami culture in the Russian Kola Peninsula region is fading, traditions and language have been preserved in Norway and Sweden, as books and other reading materials are printed in Sami. Nonetheless, Sami dialects are in danger of extinction. Their current population is estimated at around 55,000 people.

Samoyeds are the Nenets indigenous people of Russia. They are spread across the Yamalo-Nenets Autonomous Okrug (province) and the Nenets Autonomous Okrug. Their population in 2002 was estimated to be 41,300 in Yamalo-Nenets and 7,750 in Nenets Okrug. While they have historically been hunters and fishers, the expansion of oil extraction industries in the Arctic region has brought large numbers of ethnic Russians and other groups into Nenets traditional territory so that they are now only a small part of the total population. Only about half the Nenets who are either Tundra Nenets or Forest Nenets are native speakers. Under Soviet rule there were sternly applied programs that sought to collectivize the indigenous peoples. The programs usually damaged their traditional cultural practices and economic base. The Nganasans, living on the Taymyr Peninsula, are a Samoyedic people who were living in isolation until recent decades. While historically they were nomadic hunters, fishers, and herders of reindeer, under Soviet rule their Shamanic religious practices were severely suppressed. There are now an estimated 1,000 Nganasans living among Russians and others. The Yakuts, who call themselves Sakha, speak a Turkic language. They number around 400,000 speakers, with some living in the Arctic region of central Siberia. The migration of Russians into the region to exploit its natural resources has also strained traditional lifestyles. The Tungus are a Tungusic-speaking people of Siberia and Manchuria. The Manchu, who con-

quered China and ruled as its last dynasty (Qing), have been absorbed into the Han Chinese. However, those who stayed in Siberia have also nearly disappeared as an ethnic and linguistic group. Numbering approximately 30,000, they live along the Yenisei, Ob, and Amur River basins (Evenki) and along the Okhotsk Sea coast. Yukaghirs live in eastern Siberia in the Kolyma River basin. Their numbers declined radically after the 1700s. The 2002 Russian census listed them as numbering 1,500, which was an increase from 1,100 in the previous census. Most of them are now bilingual, speaking both Russian and their indigenous Yakut. Chukchis are indigenous people speaking Chukchi, which is an old form of Paleo-Siberian. Their numbers are about 15,700, but only about half of them speak Chukchi. The language is in decline and is listed as critically endangered in the UNESCO Red Book of Endangered Languages of 2009.

The Eskimos are the most populous group of indigenous people in the Arctic. They are spread across the Arctic from eastern Siberia to Greenland. There are three main groups: Yupik, Inuit, and Aleut. These are related by language and culture. At present, many of the Inuit consider the term “Eskimo” to be derogatory, while scholars have continued to use it. It is still generally used in Alaska. The Aleut are people who migrated and settled in the Aleutian Islands and other nearby island groups; their language is nearly extinct. The development of military installations, mining, oil exploration, and other industries supplied by ice road truckers have instituted changes in traditional cultures. In Alaska, the Eskimos have benefited from the oil profits paid to Alaska and from the many jobs that the oil industry has created. However, at the same time climate changes have reduced their game and fish resources. Modernity threatens to end the traditional knowledge used by earlier generations to survive in the Arctic.

In Canada, the Inuit have been able to organize their Arctic territory into the newest federal territory of Canada. Nunavut Land (“our land” in Inuktitut) was organized in 1999 as a separate territory from the North West Territories. Nunavut was the first change to the map of Canada since Newfoundland became a province in 1949.

Baffin Island is the center of the new province. The capital of Iqaluit was previously called Frobisher Bay. Geographically it is the largest political unit in Canada, covering an area about the size of Mexico, but it is the least populated. During the Cold War, a number of Inuit were forcibly relocated to accommodate Canada's program of national security. Compensation was paid decades later.

—Jack Waskey

Bibliography

- Kerttula, Anna M. *Antler on the Sea: The Yup'ik and Chukchi of the Russian Far East*. Ithaca, NY: Cornell University Press, 2000.
- Nutall, Mark. *Protecting the Arctic Indigenous Peoples and Cultural Survival*. London: Routledge, 1998.
- Slezikine, Yuri. *Arctic Mirrors: Russia and the Small Peoples of the North*. Ithaca, NY: Cornell University Press, 1996.
- Smith, Eric Alden, and Joan McCarter, eds. *Contested Arctic: Indigenous Peoples, Industrial States, and the Circumpolar Environment*. Baltimore: Hopkins Fulfillment Services, 1997.
- Zellen, Barry Scott. *Breaking the Ice: From Land Claims to Tribal Sovereignty in the Arctic*. Lanham, MD: Lexington Books, 2008.
- Ziker, John P. *Peoples of the Tundra: Northern Siberians in the Post-Communist Transition*. Long Grove, IL: Waveland, 2002.

■ Introduction: The United States in the World

There is an ongoing debate among academics, journalists, and politicians about whether the United States should be regarded as an empire and whether this is on balance a positive or negative development for the United States and international society. This debate has been fueled by the U.S. diplomatic and military response to the terrorist attacks in New York on September 11, 2001. Uncertainty about the imperial credentials of the United States can be explained by the fact that there is no commonly accepted definition of empire. Some academics interpret empire as formal rule over foreign territories, while others allow for a looser form of control, or hegemony, expressed through political, military, economic, and cultural influence. These arguments can be evaluated partly in relation to the territorial evolution of the United States during the nineteenth century. It is essential that this historical context is not lost in the often contentious discussions of contemporary U.S. foreign policy. Comparisons and contrasts between the present-day United States and previous empires, especially the British empire, also provide a useful means to analyze some of the features of the debate about U.S. imperialism.

The United States became a sovereign state as a result of a rebellion against British imperial rule, and thereafter U.S. political rhetoric continued to stress hostility to European imperialism. Nevertheless, during the nineteenth century the United States evolved through a series of territorial annexations that could be described as imperialist. Some aspects of this were peaceful, such as the purchase of Louisiana Territory from France in 1803 and Alaska from Russia in 1867. Yet the United States also occupied large swaths of territory as a result of conquest. The ethnic cleansing of Native Americans demonstrated the bellicosity of U.S. expansion, as did wars against foreign powers. Annexation of Texas in 1845 sparked a war with Mexico that resulted in the acquisition of California and New Mexico in 1848. A short war with Spain in 1898 brought the United States control of the Philippines, Guam, and Puerto Rico and prompted the annexation of Hawaii. These developments were highly significant because the United States governed foreign, noncontiguous territories in a similar fashion to the European imperial powers.

It may be denied that the United States is an empire today because it does not exercise

extensive formal control over territories and peoples beyond its own borders. At its zenith following World War I, the British empire occupied more than 13 million square miles, or almost one quarter of Earth's surface, and governed a similar proportion of the world's population. Today, the United States and its formal dependencies in the Pacific and Caribbean account for only about 6.5 percent of Earth's surface and 5 percent of the world's population. On the other hand, these figures do not acknowledge the significance of informal imperialism—characterized by economic presence rather than territorial rule—through which imperial powers have gained considerable economic benefit and exercised tremendous political influence. Relative to Britain in the nineteenth century, the United States today enjoys far higher rates of economic growth, and its multinational corporations dominate the global economy to a far greater extent than British companies did. U.S. hegemony in the contemporary world system is also expressed through its influence in institutions such as the World Trade Organization and the General Agreement on Tariffs and Trade. Lack of formal territorial control beyond the continental United States thus may not demonstrate conclusively that the United States is not an imperial power.

The power to project military force in defense of political and economic interests that are far removed from the imperial heartland has been characteristic of empires since ancient times. During the period following the September 11, 2001, attacks the United States articulated a doctrine that dictated that its armed forces must be capable of fighting two wars anywhere in the world simultaneously, such as the early-twenty-first-century wars in Afghanistan and Iraq. This doctrine has been underwritten by a U.S. defense budget that by 2007 was greater than those of the next 15 industrialized countries combined, or 40 percent of what the rest of the world was spending on defense. Technologically, the U.S. armed forces are in a class of their own on land, at sea, and in the air. The United States can act independently of regional alliances such as the North Atlantic Treaty Organization, and there can be no doubt that the present-day United States possesses the military capabilities of an imperial power.

Many writers of different political persuasions have agreed that the United States today is an empire, but their attitudes to this have varied between condemnation and endorsement. Critics on the left of the political spectrum, including writers such as William Blum, Noam Chomsky, and Chalmers Johnson, have emphasized the injustice of U.S. imperialism and argue that it explains global hatred of the United States. Critics on the right of the political spectrum, notably Patrick Buchanan, have stressed the economic cost to the United States of its imperial role and the betrayal of its isolationist heritage. Yet there are also many conservative commentators, including Max Boot, Niall Ferguson, Dinesh d'Souza, and Robert D. Kaplan, who favor an imperial role for the United States. They have stressed the positive benefits of U.S. imperialism, such as the global integration of markets, propagation of democracy, and improved security.

This debate about the existence, character, and effects of U.S. imperialism will no doubt continue to be conditioned by the U.S. response to a variety of international issues including economic development, climate change, human rights, nuclear proliferation, and terrorism.

—Carl P. Watts

Bibliography

- Blum, William. *Rogue State: A Guide to the World's Only Superpower*. 3rd ed. Monroe, ME: Common Courage, 2005.
- Buchanan, Patrick J. *A Republic Not an Empire: Reclaiming America*. Washington, DC: Regnery, 2002.
- Cox, Michael. "Empire by Denial: The Strange Case of the United States." *International Affairs* 81(1) (2005): 15–30.
- Ferguson, Niall. *Colossus: The Price of America's Empire*. New York: Penguin, 2004.
- Johnson, Chalmers. *Blowback: The Costs and Consequences of American Empire*. 2nd ed. New York: Henry Holt, 2004.

United States Foreign Policy, 1945–1962

The United States and the Soviet Union maintained an uneasy alliance during World War II. Even before the war ended there were American military officers and government officials who

spoke openly of a potential conflict between the two allies. Most Americans and the U.S. government remained guardedly optimistic about a peaceful postwar world built upon mutual cooperation. Following the surrender of the Axis powers in 1945, the United States demobilized considerable portions of its military forces and began to work through the United Nations (UN) as a forum to advance its aims and resolve disputes. Nonetheless, the United States continued to construct atomic bombs and maintain overseas bases.

Disagreements continued between the United States and the Soviet Union over joint occupation of Germany and the fate of Berlin, over the meaning of wartime agreements at Tehran and Yalta, and over Soviet support of communist movements in Western Europe. While experts at the time and even now argue whether the Soviet Union was truly expansionist or simply concerned with establishing security, consensus developed in the United States that the Soviet Union had to be forcefully confronted. U.S. State Department Soviet expert George F. Kennan was the chief architect of the new policy, which came to be known as containment. In a February 1946 telegram from Moscow, Kennan argued that Soviet leaders, like past Russian leaders, were driven by an irrational paranoia of invasion. Kennan argued that a policy of patient long-term containment of Soviet aggression or expansion would eventually lead to the collapse of the Soviet Union without recourse to direct war.

Kennan's analysis was strengthened when, one week later, British prime minister Winston Churchill made his famous Iron Curtain speech at Westminster College in President Harry S. Truman's home state of Missouri, arguing that the Soviet Union's expansionist aims posed a grave threat to the interests of the United States and global peace. The new hard-line containment policy adopted by the Truman administration was built upon political, economic, and military foundations. In a March 1947 speech to Congress, Truman announced that the United States would offer support to any country in its fight against a domestic insurgent communist movement. Greece and Turkey received the first aid grants under this policy, which was dubbed the Truman Doctrine.

To stabilize the economy of Europe and weaken the communist movements in France and Italy, which prospered in hard postwar times, the United States provided \$13 billion in assistance. Known as the Marshall Plan, it was one of the most successful American foreign policy initiatives and also aided the expansion of U.S. business opportunities. The Marshall Plan operated on the assumption that Germany was the heart of the European economy and that a strong Germany was essential to an anti-Soviet Europe. This policy worked counter to the Soviet interests, as 30 years of war had convinced the Soviets that Germany must remain weak. Militarily, the Truman administration instituted a peacetime draft, continued construction of atomic bombs, reorganized the Defense Department, created the Central Intelligence Agency (CIA) as well as the National Security Council, and in 1949 negotiated the North Atlantic Treaty Organization (NATO) to contain the Soviet Union with an armed alliance in which an attack on one nation would be considered an attack on all. The United States also provided a sizable force permanently stationed in Europe.

In 1950 the National Security Council codified Cold War policy in a classified report known as NSC-68. Building on containment policy, NSC-68 also called for covert actions, aid to allies, maintenance of atomic weapons superiority, and military preparedness to undermine the Soviet Union. This framework would remain in place throughout the Cold War. Truman's policies were a complete break with traditional American policies of noninvolvement outside of the Western Hemisphere.

The Truman administration made long-term American commitments in other parts of the world as well. In 1948 he established the permanent American commitment to Israel when he recognized that new nation. His East Asian policy focused on reconstructing and rebuilding an economically strong but militarily weak Japan. Under the limitations of the postwar Japanese constitution, the United States became its military protector.

The Soviets immediately tested containment. In 1948 the Soviet Union blockaded West Berlin in response to American economic reforms in West Germany. The blockade lasted for more

than 300 days, but war was averted because the United States responded with a peaceful airlift of supplies. The blockade highlighted the symbolic importance of West Berlin as a free city in the heart of communist East Germany. In 1950 the United States, backed by a UN resolution, sent troops to Korea when communist North Korea invaded South Korea. After three years of fighting, the border between the two Koreas was established not far from its original line. Although Truman succeeded in containing communism and keeping the war limited to Korea, it was very unpopular at home. Not all efforts at containment were successful. In 1949 Mao Zedong led the communists to victory in China to conclude a decades-long civil war. This stunned Americans and fueled suspicion that a communist fifth-column movement inside the United States operated on behalf of the Soviet Union.

After his election in 1952, President Dwight D. Eisenhower modified containment policy. Referred to as the New Look, his policy sought to decrease the amount of spending on conventional forces and increase reliance on nuclear weapons. Eisenhower was convinced that the threat of massive nuclear retaliation could contain communist expansion while, at the same time, lessening the military's demand on the economy. He wanted to balance the federal budget and keep interest rates low in order to demonstrate that the American economy provided greater opportunity to the average citizen than the communist system.

Eisenhower's policy of massive retaliation contributed to the stalemate in the Korean War conflict in 1953 and helped block threatened Chinese invasions of the islands of Quemoy and Matsu in the Straits of Formosa in 1955 and 1958. Massive retaliation was less successful in Europe. The United States did not actively aid anti-communist forces in Hungary during the 1956 uprising that led to the Soviet occupation of that country and the execution of the uprising's leaders. Instead of atomic weapons, the Eisenhower administration turned to the CIA and covert actions. At Eisenhower's order, the CIA ousted the leaders of Iran (1953) and Guatemala (1954).

Eisenhower supported French withdrawal from Indochina and the division of Vietnam into two halves based on the Korean model. To pro-

tect pro-U.S. South Vietnam from the communist North Vietnam, the United States negotiated the South East Asia Treaty Organization (SEATO). The Eisenhower administration began the slow, steady process of increasing American involvement in Vietnam when he sent in U.S. military advisers.

When Eisenhower left office in 1961, there was growing fear that the Soviet Union had outmaneuvered the United States in the developing world, while the successes of the Soviet space launches suggested the Soviet Union had surpassed the United States in science and technology. In response, President John F. Kennedy implemented an increase in military spending while also seeking to put a softer face on American foreign policy by establishing the Alliance for Progress and the Peace Corps, which spread American knowledge and some financial aid to Latin America and other developing countries. To counteract public concerns about a so-called science gap, or technological inferiority, Kennedy challenged America to put a man on the moon by the end of the decade.

Although a committed adherent of containment, Kennedy relied on a policy called flexible response, which soon would encourage an increasing involvement in Vietnam. Outlined by former U.S. Army chief of staff General Maxwell Taylor, flexible response focused on soft power, conventional forces, and counterinsurgency methods, such as the Green Berets, and less on the threat of employing nuclear weapons to contain communism.

The most immediate problem that Kennedy inherited was the new regime of Fidel Castro in Cuba. In April 1961 a botched CIA-backed invasion of Cuba at the Bay of Pigs, planned under Eisenhower, failed. Kennedy, the new president, was forced to apologize to his own nation. Two months later he met with Soviet leader Nikita Khrushchev in Vienna. This meeting only increased hostilities. Khrushchev had become concerned about the flow of East Germans to the West through Berlin. When Kennedy did not agree to Khrushchev's suggestion of an alliance that would place Berlin in the East German sphere, Khrushchev ordered the construction of the Berlin Wall. Berlin became tense throughout 1961 and 1962 as Soviet and American tanks

faced off at distances of only a few yards. In private, Kennedy was pleased at the construction of the wall, as the United States, tactically at the mercy of the Red Army, had little recourse beyond threats to use the atomic bomb in a military confrontation with the Soviet Union in Western Europe. Rhetorically, Kennedy remained firm on defending West Berlin as an island of freedom and significantly increased the defense budget.

The most dangerous moment of the Cold War occurred in the autumn of 1962. In an effort to achieve parity with the United States and its intermediate-range missiles trained on the Soviet Union, the Soviets quietly placed nuclear missiles on Cuba. Within weeks, the United States discovered these installations through U-2 spy plane surveillance. Having learned from the Bay of Pigs fiasco, Kennedy rejected any response that involved an American military attack on Cuba, but he did authorize a quarantine of Cuba to turn back Soviet ships that might be carrying missiles or warheads. After two very tense weeks of confrontation and behind-the-scenes diplomacy, the Soviets withdrew the missiles; later, the United States quietly withdrew medium-range missiles from Turkey.

—Gregory J. Dehler

Bibliography

- Divine, Robert. *Eisenhower and the Cold War*. New York: Oxford University Press, 1981.
- Gaddis, John L. *The Cold War: A New History*. New York: Penguin, 2005.
- Leffler, Melvyn. *A Preponderance of Power: National Security, the Truman Administration, and the Cold War*. Stanford, CA: Stanford University Press, 1992.
- McCormick, Thomas. *America's Half-Century: United States Foreign Policy in the Cold War and After*. Baltimore: Johns Hopkins University Press, 1995.

United States Foreign Policy, 1962–1989

The Cold War years 1962 to 1989 served as a period of restrained confrontation in American foreign policy. Unlike the first part of the Cold War, this era is marked by a relative relaxation in tension, with the Cuban Missile Crisis in October 1962 marking a turning point. After nearing the brink of nuclear war, both the Soviet Union and

the United States took steps to improve relations. While nuclear arsenals and the number of nuclear countries grew, communication and trade between the superpowers expanded simultaneously. Beginning with the presidency of Richard M. Nixon and moving forward haltingly, a spirit of cooperation called *détente*, or peaceful co-existence, developed between the two Cold War adversaries. Although direct confrontations between the United States and the Soviet Union waned after 1962, U.S. commitment to contain communism in Asia and Latin America led to several highly controversial military and covert action campaigns in Vietnam and Central America.

In the early 1960s the U.S. commitment to containment led to a 16-year-long war in Vietnam whose origins and lessons are still being debated. After Vietnamese nationalist forces defeated French colonial forces, Vietnam was granted independence and divided at the 17th parallel in 1954. The northern half of the country was led by the procommunist nationalist Ho Chi Minh. Election plans to reunite the country were ignored by an American-funded South Vietnamese government. Dissatisfied with the South Vietnamese government, in late 1960 the National Liberation Front (NLF), an insurgency group, was established in the South. Also referred to as the Viet Cong, the NLF was a nationalist-communist coalition partially supported by Ho Chi Minh's communist North Vietnamese regime. The situation in South Vietnam destabilized in November 1963; in response, the John F. Kennedy administration tacitly approved a coup against the unpopular and brutal South Vietnamese leader Ngo Dinh Diem, who was subsequently kidnapped and executed while en route to exile. Over the next year and a half, the country's civil war escalated. In 1965 following the Gulf of Tonkin incident in which a radar operator on a U.S. destroyer reported two alleged torpedo attacks, U.S. president Lyndon B. Johnson authorized a sustained bombing campaign, Operation Rolling Thunder, over North Vietnam in addition to the bombing of suspected Viet Cong territory in the South and the deployment of American troops. By the end of the year, 200,000 Americans were fighting in Vietnam.

The war became unpopular, especially on college campuses, and caused large antiwar

► THE GULF OF TONKIN INCIDENT

On August 2, 1964, the U.S. Navy destroyer USS *Maddox* was attacked in the Gulf of Tonkin by North Vietnamese patrol boats. The attack was driven off, but two days later, the *Maddox*'s crew mistook radar returns from choppy waters for a second attack. The Lyndon Johnson administration responded by ordering the bombing of a number of North Vietnamese targets and sending a resolution for further action to Congress. Although the *Maddox* had been providing intelligence support for South Vietnamese military operations, Secretary of Defense Robert McNamara denied this in his testimony before Congress when the resolution was being debated, calling the two attacks “unprovoked.” This Gulf of Tonkin Resolution, as it came to be called, is historically significant because it was used as the legal basis for future U.S. involvement in the Vietnam War. Many historians would argue that its passage involved not simply a misconception on the part of Johnson’s administration but a deception.

The stated goal of the joint congressional resolution was “to promote the maintenance of international peace and security in southeast Asia.” Largely as a result of Secretary McNamara’s testimony, the resolution passed on August 7, 1964, with only two senators dissenting. The Tonkin Gulf Resolution stated that “Congress approves and supports the determination of the

President, as Commander in Chief, to take all necessary measures to repel any armed attack against the forces of the United States and to prevent further aggression.” Although the resolution became the subject of great political controversy as the war progressed, President Johnson and his successor President Richard Nixon used it as the legal basis for escalating U.S. military involvement in Vietnam. In reaction to growing public resistance to the Vietnam War, the resolution was repealed by Congress; the repeal was signed into law in January 1971. The resolution was later replaced by the War Powers Act of 1973, still in place today, that limits the power of the president to wage war without the approval of Congress.

—Andrew Byers

Bibliography

- Caro, Robert A. *The Years of Lyndon Johnson*. 3 vols. to date. New York: Knopf, 1982–2002.
- Dallek, Robert. *Lyndon B. Johnson: Portrait of a President*. New York: Oxford University Press, 2004.
- Moise, Edwin E. *Tonkin Gulf and the Escalation of the Vietnam War*. Chapel Hill: University of North Carolina Press, 2004.
- Woods, Randall. *LBJ: Architect of American Ambition*. New York: Free Press, 2006.

demonstrations. By 1968 there were more than 500,000 U.S. troops battling NLF insurgents and the North Vietnamese Army. In January 1968, 85,000 communist forces launched the devastating Tet Offensive. Although the Tet Offensive was not a great military victory for the communists and may even have been a defeat, it was a psychological victory for the North Vietnamese and the NLF. Seeing televised footage of the U.S. embassy under attack in Saigon, the American public concluded that the war might never end in a lasting victory. The 1968 Tet Offensive and the shift in U.S. public opinion led to the opening of negotiations between the United States and North Vietnam.

After winning the presidential election in 1968, Nixon, who served from 1969 to 1974, followed a policy of Vietnamization, or removal of

American ground troops while providing greater economic aid, material assistance, and air support to South Vietnamese forces. Despite his reduction in American involvement, he briefly expanded the war with an illegal secret bombing campaign in Cambodia in 1970 to attack the communist supply routes known as the Ho Chi Minh Trail. In 1973 the United States and North Vietnam ended the war by a peace treaty, but it did not save the South, which fell two years later. In an effort to head off future Vietnams, Nixon also offered a serious shift in containment policy known as the Nixon Doctrine: nations receiving U.S. economic and military aid would have to supply their own ground troops.

Fragmentation and realignment of world power was also a crucial element of the latter half of the Cold War. The relationship between

the People's Republic of China (PRC) and the Soviet Union had steadily deteriorated after the death of Soviet leader Josef Stalin in 1953. The relationship completely cracked by September 1968 when Chinese leadership declared the Soviets as their primary threat. To gain strategic benefits from the rift and to aid efforts to end the war in Vietnam, President Nixon quietly pursued rapprochement with China during his first administration. This process was concealed from the public until October 1971 when National Security Adviser Henry Kissinger returned from his second trip to China with an invitation for Nixon to visit the following year. These dramatic events also corresponded with Taiwan's removal from the United Nations (UN) and the PRC's assumption of the UN Security Council seat. Despite these promising steps, relations between the United States and China were not normalized until 1979, when an American PRC embassy opened.

During this same period, Nixon and Kissinger, now secretary of state, pursued détente with the Soviet Union. The superpowers implemented détente through the Strategic Arms Limitations and Anti-Ballistic Missile Treaties of 1972, increased trade, and participated in summits between Nixon and Soviet leader Leonid Brezhnev. Despite these moves to bring some stability to the volatile global political system, there was a brief moment in 1973 when war seemed possible between the two superpowers because of Soviet support of Egypt in its war with Israel. Détente reached its greatest expression with the Helsinki Accords of 1975. In signing the accords, the United States recognized and accepted as legitimate the post-World War II borders and governments, including the communist regimes in Eastern Europe that were propped up by the Red Army.

Détente, however, had its limits. The United States had no toleration for leftist regimes in Latin America that could threaten the economic status quo. As an alternative, the United States turned to covert actions and the backing of military strongmen with strong anticommunist credentials but no commitment to democracy or civil rights. In 1973 with some support from the U.S. Central Intelligence Agency, a coup deposed leftist president Salvador Allende, and Augusto Pinochet seized power.

U.S. president Jimmy Carter's administration (1977–1981) saw the emergence of the Middle East as a critical theater of American foreign policy. Since the end of World War II the American Middle East policy was focused on support of Israel and keeping the vital oil supply lines open. Carter promoted peace in the region and made significant progress with the Camp David Accords in which Egypt became the first Arab nation to formally recognize Israel. However, decades of American support for Israel and for Shah Mohammed Reza Pahlavi in Iran had significant consequences in 1979. After Islamic revolutionaries overthrew the shah's government, they took 50 hostages from the American embassy in Tehran and held them for more than 400 days. The Iranian Revolution and an anti-Soviet insurgency in Afghanistan spread a growing Islamic fundamentalist movement in the region that was radical, violent, and vehemently anti-American.

In addition, in 1979 the Soviet Union sent troops into Afghanistan to prop up an unsteady local communist regime. Carter reacted by suspending trade, boycotting the 1980 Summer Olympics in Moscow, and withdrawing the second Strategic Arms Limitation Treaty from the Senate. The United States also covertly aided anti-Soviet Afghani freedom fighters. The spirit of détente was over. Carter began to increase his anti-Soviet rhetoric and bolster the military. He also announced the Carter Doctrine, which insisted that the United States had the right to intervene militarily in the Middle East and the Persian Gulf if its interests were threatened.

Amid deteriorating relations with the Soviet Union, U.S. president Ronald Reagan (1981–1989) aggressively escalated Cold War rhetoric to pre-1962 levels. In 1983 he crystallized his policy when he referred to the Soviet Union as the Evil Empire. He significantly increased military spending, deployed nuclear missiles to Europe, and backed anticommunist movements in Nicaragua and Afghanistan. His support of the anticommunist Contras who were attempting to overthrow the leftist Sandinista government in Nicaragua led his administration to break the law with a complicated exchange of arms to Iran for hostages in Lebanon in which the profits on the illegal arms sales as well as money from private sources were channeled to the Contras. This breach of U.S.

law, which was dubbed Contragate by the press and which led to the indictment or conviction of 190 officials in the Reagan administration, was the most serious presidential scandal since Watergate.

A critic of détente, Reagan positioned the Cold War as a moral crusade requiring fortitude in the face of challenge. In 1983 he deployed U.S. Marines to Beirut to stabilize Lebanon and ordered the battleship USS *New Jersey* to fire support missions. A car bomb that killed 241 marines in their barracks led Reagan to withdraw the troops. Two days after the car bombing, on October 25, 1983, the United States invaded the small and strategically insignificant Caribbean island of Grenada to overthrow a leftist regime supported by Cuba. Referring to a popular movie of the time, *First Blood* (1982), that introduced Sylvester Stallone as the volatile character John Rambo, the press began to call Reagan “Ronbo.” In April 1986 Reagan also ordered an attack on Libya after its leader, Muammar Qaddafi, was accused of supporting a terrorist attack in Berlin.

During the early years of Reagan’s administration, the Soviets had a succession of elderly and feeble premiers. It was only in 1985 with the emergence of reformer Mikhail Gorbachev that Reagan found a partner with whom to negotiate. In November 1985 the two leaders met for the first time at Geneva and established a rapport. The following year they met at Reykjavik, Iceland. Gorbachev made a significant proposal for arms reduction if the United States would give up on Reagan’s costly Strategic Defense Initiative (SDI), a satellite-based missile defense system dubbed Star Wars by the press, but Reagan refused. In December 1987 Gorbachev and Reagan signed the Intermediate-Range Nuclear Forces (INF) Treaty, which eliminated all U.S. and Soviet INF missiles.

The following year, the Soviets agreed to a UN-mediated accord regarding Afghanistan. The change in Soviet attitude also extended to Eastern Europe. Gorbachev informed leaders of the Soviet Eastern Bloc that he would not use troops to prevent their independence from the Soviet Union. Germany tore down the 28-mile Berlin Wall on November 9, 1989. Other countries such as Lithuania declared their independence from the Soviet Union in March 1990. By the conclu-

sion of 1991, the Soviet Union was dissolved and the Cold War ended.

—Gregory J. Debler and Kassi Klinefelter

Bibliography

- Beschloss, Michael. *The Crisis Years: Kennedy and Khrushchev, 1960–1963*. New York: Harper-Collins, 1991.
- Chang, Gordon H. *Friends and Enemies: The United States, China, and the Soviet Union, 1948–1972*. Stanford, CA: Stanford University Press, 1990.
- Gaddis, John L. *The Cold War: A New History*. New York: Penguin, 2005.
- Garthoff, Raymond I. *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan*. Washington, DC: Brookings Institution, 1994.
- Herring, George. *America’s Longest War: The United States and Vietnam, 1950–1975*. 4th ed. Boston: McGraw-Hill, 2002.

United States Foreign Policy, 1989–Present

Even prior to the collapse of the Soviet Union, U.S. strategic interests had begun to shift away from U.S.-Soviet power relations. While the United States contributed to United Nations (UN) peacekeeping missions around the globe and negotiated the economic realities of globalization, increasingly since 1979 its primary focus had been protecting American interests in the Middle East, as clearly shown by the Gulf War and the Iraq War in this period. The collapse of the Soviet Union and the achievements of the U.S.-led coalition during the Gulf War marked the beginning of what U.S. president George H. W. Bush (1989–1993) termed the New World Order in which the United States, as sole military superpower, either unilaterally or multilaterally would monitor the world and encourage the “growing zone of democratic peace.” Yet the legacy of the Vietnam War and the risk involved in attempts at nation building also tempered U.S. foreign policy. The Bill Clinton administration (1993–2001) in particular insisted that the United States needed to choose its interventions more selectively and focus on economic globalization and domestic prosperity. Subsequent administrations as well as the challenge of global terrorism continue to reshape the contours of

the New World Order and the U.S. role on the world stage.

By the 1990s, Iraq had replaced Iran as United States' main Middle East concern. To alleviate financial problems caused by the Iran-Iraq War of the 1980s, on August 2, 1990, Iraq invaded its oil-rich neighbor Kuwait. After a brief effort at imposing economic sanctions, the UN passed a resolution on November 29, 1990, threatening force by a 31-country coalition army if Iraq did not leave Kuwait. Iraq ignored this ultimatum, and the Gulf War (code name Desert Storm), involving a multinational coalition headed by the United States, began on January 16, 1991. The high-tech show of U.S. force, orchestrated on global television, made clear that the United States was now the world's sole military superpower. Accordingly, the triumphant George H. W. Bush administration began to formulate a vision for a New World Order. A leaked document to the *New York Times* in 1992, authored by the Defense Department's Zalmay Khalilzad and titled "Defense Planning Guidance, 1994–1999," would privilege U.S. "global leadership" over a "collective security" or multilateral approach to resolving international conflicts; the document also focused on how to nurture alliances to prevent the emergence of new superpowers or of nuclear proliferation that might create spheres of influence and lead to a multipolar world. A revised Pentagon document leaked in 1992 indicated a more multilateral approach but urged a military buildup so intense that the U.S. power could never be seriously challenged. Such an approach would do away with any future balance of power scenarios such as that of the Cold War. Yet the most immediate challenge for the United States appeared not from the power of nation-states but instead of globalizing terrorist networks.

By the end of the 1990s al-Qaeda, led by Saudi Osama bin Laden, a former Afghani freedom fighter, emerged as the world's leading terrorist group. The Gulf War was a turning point for bin Laden. During the war his proposal for a jihad against Saddam Hussein was turned down by the Saudi government, and he grew to resent the American military presence and influence in Saudi Arabia. By 1998 bin Laden had founded the anti-American extremist Muslim terrorist

group al-Qaeda. Al-Qaeda headquarters were in Afghanistan, which since 1996 was ruled by the Taliban, a militant student group. In 1998 bin Laden issued a fatwa calling on all Muslims to kill Americans as their religious duty. This mission was carried out around the world. For example, al-Qaeda had attacked an American military barracks in Dhahran in 1996 and the U.S. embassies in Kenya and Tanzania in 1998.

Al-Qaeda's most devastating attacks occurred on September 11, 2001. On that day, 19 al-Qaeda terrorists hijacked four U.S. commercial airplanes and flew them into the twin towers of the World Trade Center in New York City and the Pentagon outside Washington, D.C. The fourth plane crashed in Pennsylvania before reaching its target. More than 3,500 people were killed in less than two hours. In response, President George W. Bush declared a "war on terrorism." He stated, "If you harbor terrorists, you're a terrorist; if you aid and abet terrorists, you're a terrorist—and you will be treated as one." This doctrine was put into practice approximately one month later in Afghanistan. In October 2001 the United States, along with Britain and later other North Atlantic Treaty Organization (NATO) nations, began military operations in Afghanistan. By December the Taliban fled the capital, leaving the country to warlords. However, as of 2009, American forces remain in Afghanistan searching for al-Qaeda members and bin Laden.

The United States, which under the Clinton administration had limited itself to bombing raids in the Iraqi no-fly zones—set up to protect Kurdish populations in the North and Shia populations in the South—returned to Iraq in full force in 2003. The George W. Bush administration claimed that Iraq was violating UN inspection agreements and in fact possessed weapons of mass destruction. In February and March 2003 the UN rejected American resolutions authorizing force. Despite this failure, on March 19, the United States and its allies began Operation Iraqi Freedom, an invasion of Iraq designed to depose Hussein. On April 9 the allied forces took control of Baghdad, and on May 1 Bush declared the end of major combat operations. By the end of 2005, Operation Iraqi Freedom and the ensuing guerrilla war had cost the United States 2,100 service personnel and more than \$200 billion,

while violent factional fighting in Iraq escalated into an unofficial civil war.

While the U.S. foreign policy since the Cold War has focused primarily on the Middle East, America also cautiously awaited developments in the former Soviet sphere. The administration of President George H. W. Bush assisted in the negotiations to reunify Germany in 1990 to ensure that the new nation would be a member of NATO and the European Community (EC). While his administration also encouraged the transition of former Soviet satellites into democracies, the United States offered only modest economic aid and instead left such aid and planning to the EC. The nonaligned Yugoslavia, however, began to violently disintegrate alongside the Soviet Union. The main impetus came when Slobodan Milosevic, the president of the Serbian republic within Yugoslavia, abandoned communism and embraced instead an ideology of Serbian nationalism. As various provinces, beginning with Slovenia and Croatia, declared their independence, civil wars between contending ethnic groups in various provinces developed.

The ensuing struggle between Yugoslavian Serbs and the Muslim majority in Bosnia demanding independence led President Clinton to host the 1995 Dayton Accords, which called for a cease-fire and the lifting of the Serbian siege of Sarajevo in Bosnia. After the Dayton Accords, the United States also participated in a controversial and at times ineffective NATO peacekeeping mission in Bosnia to prevent ethnic cleansing and other abuses. In the spring of 1999 the United States and its NATO allies also bombed Serbia to force Milosevic to halt the ethnic cleansing of ethnic Albanians and remove Serb forces from the province of Kosovo. With Russian encouragement, Milosevic finally relented on June 10, 1999.

As in the Bosnian mission, American peacekeeping efforts in Somalia (1992–1993) and Haiti (1994–1996) were extremely unpopular in the United States. Mass starvation and public pressure had encouraged President George H. W. Bush to send American troops into Somalia to aid a beleaguered UN peacekeeping mission; President Clinton removed these forces the following year after 18 U.S. Army rangers were killed and their mutilated corpses dragged through the

streets of Mogadishu. The UN peacekeeping mission soon collapsed. This disaster contributed to America's decisions not to send in troops to stop the Rwandan genocide in 1994.

Clinton directives suggested that the United States become more selective in military and peacekeeping missions and instead emphasize globalization and economic prosperity. His presidency reflected a public mood of relief over the end of the Cold War and the possibility of stepping down the national security state. Highlighting this emphasis, his administration created a new institution, the National Economic Council (NEC), as a counterpart to the Cold War-originated National Security Council (NSC). In globalization, the administrations of both George H. W. Bush and Clinton saw an opportunity to increase prosperity worldwide, encourage free trade democratic institutions, and create coalitions that might eventually serve U.S. and global security needs. In 1987 the United States and Canada negotiated a Free Trade Agreement. This was extended to Mexico in 1993 when the U.S. Congress passed the North American Free Trade Association (NAFTA), creating a common market for Canada, Mexico, and the United States. Additionally, the Clinton administration helped negotiate the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), and in 1999 the United States along with 159 other nations joined the World Trade Organization (WTO), a group further committed to lowering trade barriers and mediating commercial disputes.

During this period, the United States also normalized trade relations with former Cold War enemies. The United States established full diplomatic relations with Vietnam one year after lifting the 19-year trade embargo in 1994. Although following the massacre at Tiananmen Square (1989) there was much debate in the United States about furthering the trade relationship with the People's Republic of China (PRC), the United States granted the PRC permanent normal trade relations in 2000.

While the U.S. diplomatic relations with former Soviet satellites had improved, following the election of George W. Bush and the terrorist attacks of September 11, 2001, the older di-

plomatic ties with Europe and specifically with the new European Union had become strained. Disagreements included European leaders' preference for a multilateralist world, rejection of the necessity of the second military invasion of Iraq, Washington's cancellation of the Anti-Ballistic Missile (ABM) treaty with Russia, the uncertain future direction of NATO, the tacit U.S. rejection of the Kyoto Accords on global warming, and even the Bush administration's efforts to build soft power in the Middle East with proposals to fund education, media, and banking in the region.

—Kassi Klinefelter and Fred Nadis

Bibliography

- Bacevich, Andrew J. *The New American Militarism: How Americans Are Seduced by War*. New York: Oxford University Press, 2005.
- Hodge, Carl C., and Cathal J. Nolan, eds. *U.S. Presidents and Foreign Policy: From 1789 to the Present*. Santa Barbara, CA: ABC-CLIO, 2007.
- Kynge, James. *China Shakes the World: A Titan's Rise and Troubled Future—and the Challenge for America*. Boston: Houghton Mifflin, 2006.
- Schulzinger, Robert D. *A Time for Peace: The Legacy of the Vietnam War*. New York: Oxford University Press, 2006.
- Talbott, Strobe, and Nayan Chanda, eds. *The Age of Terror*. New York: Basic Books, 2001.

■ Introduction: Soviet and Post-Soviet Politics

Soviet postwar foreign policy, designed to secure its borders from invaders and ensure warm-water ports for international commerce, followed historical Russian geopolitical ambitions vis-à-vis the Middle East, the Caucasus, Central Asia, the Far East, and Eastern Europe. From a Soviet perspective, any such expansion efforts were seen as a means of protecting itself from a future attack (given two German invasions through Poland and an international anti-Soviet allied intervention during the Russian Civil War). The United States regarded these same maneuvers as evidence of communist expansion, contributing to the emerging Cold War. While internal policies to promote socialist economic development and quell public dissent followed a Marxist-Leninist ideological framework, they also limited the production and distribution of consumer goods, as the state emphasized heavy industrial development and large-scale agricultural collective farms. From Josef Stalin to Mikhail Gorbachev, Soviet ideological, economic, and military support, and even outright intervention (as in Afghanistan) on behalf of socialist states, certainly played its role in the Cold War antagonism with the capitalist West. Regardless of attempts at rapprochement, the nuclear confrontation with both the U.S.-led West and communist China also positioned the Soviet Union in a precarious military position, which hindered its

economic and technological development and encouraged massive military spending.

With the collapse of the Eastern Bloc and the subsequent breakup of the Soviet Union in the late twentieth century, the Russian grip over much of its former dominions loosened somewhat. The post-Soviet Russian adoption of free-market capitalism and the sale of large-state industries (with its accompanying allegations that the Russian state was a kleptocracy) led to the creation of giant industrial concerns, many of which have had a stake in the current regime's foreign policy. Under the leadership of Vladimir Putin, in the early twenty-first century Russia reasserted its geopolitical hegemony in the Caucasus and Central Asia, much to the detriment of its increasingly hostile relations with Georgia and Ukraine. Moreover, Russia's concerns over the near-abroad ethnic Russian populations, control over Central Asia oil and gas reserves, the expansion of the North Atlantic Treaty Organization (NATO) in Eastern Europe and possibly beyond, and the United States' use of Central Asian military bases for its global War on Terror have served as reasons for Russia to maintain its hegemony in the region. More recently, Russian natural gas and oil distribution to various states of the European Union has expanded, leading to apprehensions that this energy dependency will leave much of Europe vulnerable to Russian

SOVIET TERRITORIAL GAINS, 1946



geopolitical ambitions. The 2008 episode during which Russia cut off the Ukraine's energy supplies indicates that these worries have grounds.

—*Abraham O. Mendoza*

The Stalin Era

Josef Stalin (1879–1953) was a Russian revolutionary and dictator of the Soviet Union (1929–1953). More absolute a ruler than any Russian tsar, Stalin (born Iosif Vissarionovich Dzhugashvili) was one of the most powerful and influential figures in history and certainly one of its most horrific. As many as 20 million people may have died as a direct result of his policies.

In 1901 Dzhugashvili joined the Russian Social Democratic Labor Party. One of his aliases, the one by which he became best known, was that of Stalin (Man of Steel), given to him by his fellow revolutionaries for his strength and ruthlessness. Coarse and ill-mannered, Stalin was six times arrested and exiled and escaped five times. Freed during the March 1917 Revolution, he returned to Petrograd and became editor of the party newspaper, *Pravda* (Truth). His role in the Bolshevik seizure of power that November is unclear, but he did not take a leading part. Leon Trotsky, a rival for power later, remembered Stalin's role as "a grey blur." Stalin was active in the Russian Civil War (1918–1921) and the Russo-Polish War (1920–1921), and from 1920 to 1923 he was commissar of nationalities. In 1923 he assumed the post of secretary general of the Communist Party of the Soviet Union (CPSU), a position that he used as a springboard to power.

His political rise has been ascribed to his skill at infighting and playing one faction against another as well as his absolute ruthlessness, but he also put in long hours at his job and deserves considerable credit for his achievement. By the late 1920s Stalin had triumphed over his rivals, chief among them Trotsky, to wield absolute power in the Soviet Union. Stalin created the bureaucratic system and refined both the secret police and slave labor camps begun under his predecessor, Vladimir Lenin. Stalin abandoned Lenin's New Economic Policy (NEP), which permitted a degree of capitalism in Russia, and initiated a series of five-year plans to modernize the economy, concentrating on heavy industry.

➤ LAVRENTI PAVLOVICH BERIA

Born March 29, 1899, in Merkheuli, Georgia, Lavrenti Pavlovich Beria, a member of the Bolshevik Party from 1917, achieved notoriety as chief of the secret police agency, the NKVD (People's Commissariat for Internal Affairs), during the Stalin era. Heading the NKVD from November 1938, Beria presided over the conclusion (1938–1939) of the Great Terror; oversaw mass deportations that followed Soviet occupations of eastern Poland and the Baltic states (1939–1941); arranged the Katyn Forest massacre of Polish military officers (1940); organized the resettlement of Chechens, Tatars, and Volga Germans to Central Asia (1944); and guided the Soviet atomic bomb program in its initial stage (1944). Resigning from the NKVD in January 1946, Beria remained a powerful figure in the Soviet ruling elite and, at Stalin's death in March 1953, joined a collective leadership that included Nikita Khrushchev. Arrested and accused of conspiring to seize power in June 1953, Beria was executed in December 1953. He remains a personification of the political repression of the Stalin era.

—*Bruce DeHart*

Stalin's economic policies included the forced collectivization of agriculture that claimed an estimated 10–15 million lives. He was personally responsible for the Great Purge trials of the 1930s that consumed virtually all of the top party leadership. Also falling victim to the Great Purge were military leaders, including 60 percent of Red Army officers above the rank of major.

In foreign affairs, Stalin seized opportunities that presented themselves in Eastern Europe and the Balkans. Knowing exactly what he wanted, he met with Western leaders in Moscow and at the Tehran, Yalta, and Potsdam conferences. In 1919 after World War I, the West had quarantined the new communist Russia with a series of new successor states, endeavoring to contain communism with a cordon sanitaire. Following World War II, Stalin sought the reverse, insisting at the very least on governments friendly to the Soviet Union in order to provide security for a badly wounded Soviet empire.

Although there were fears in the West that Stalin's plans included the communization of Western Europe, the dictator's immediate motivation was simply that of securing the Soviet empire. Because of the Red Army presence on the ground, there was little that Western leaders could do to prevent this sort of war with the Soviet Union, which despite the U.S. nuclear monopoly was unimaginable to Washington in 1945. Stalin's regime emerged from the war with all of Eastern Europe and much of Central Europe under its control. The Soviet Union had suffered grievously during the war, with perhaps 27 million people dead and widespread physical destruction. In a new five-year plan, Stalin continued his emphasis on building heavy industry, although some attention was paid to pressing housing needs.

To unite the Soviet people under his leadership, Stalin proclaimed the belief of a communist world threatened by encircling enemies. Andrei Zhdanov, political boss of Leningrad, became the guiding spirit of this ideology, known as Zhdanovshchina. It championed Russian nationalism and attacked Western influence (now known as bourgeois cosmopolitanism), glorified communism, and above all trumpeted the accomplishments and inspiration of the Great Leader Stalin, attributing to him all Soviet successes.

Once Stalin rejected a closer relationship with the West, the Cold War was launched in earnest. Stalin refused to allow the East European Soviet satellites to participate in the European Recovery Program (Marshall Plan) and following an impasse over German reunification on Soviet terms and impending Western currency reform in the Allies' zones of Germany, in the summer of 1948 Soviet troops cut off Western land access to the city of Berlin. This sparked a major East-West confrontation and led to the Berlin Airlift. Stalin's tactics and saber rattling resulted in the 1949 formation of the North Atlantic Treaty Organization (NATO) and prompted the movement toward West European unity.

Stalin pushed hard to develop an atomic bomb, a process greatly accelerated by Soviet espionage. Following the explosion of the Soviet Union's first nuclear device in late 1949, he adopted a less militant foreign policy, jettisoning the militant expansionism of the immediate post-

war years in favor of one that was comparatively defensive in nature. While maintaining the traditionally truculent Soviet tone, he abandoned the further extension of his European empire. This move was accompanied by a massive propaganda effort, the great Stalinist Peace Campaign. Agitation against colonialism was increasingly used to weaken the Western hold on global military bases, while Soviet foreign policy also sought to sow discord between the United States and its allies.

Early in 1950 Stalin gave his blessing to plans by Democratic People's Republic of Korea (DPRK, North Korea) leader Kim Il Sung to invade the Republic of Korea (ROK, South Korea) and reunify the peninsula under communist rule. Stalin evidently believed Kim's contention that the United States would either do nothing or would not react in time to save South Korea. Later, when the war went badly for Kim and North Korea, Stalin sanctioned military intervention by the People's Republic of China (PRC), promising to provide the PRC with Soviet air cover.

Stalin's death in Moscow on March 5, 1953, following a paralytic stroke came as a relief to many in highly vulnerable Soviet leadership positions. His eventual successor, Nikita Khrushchev, began the slow process of de-Stalinization and denounced the many excesses of the Red Tsar.

—Spencer C. Tucker

Bibliography

- Fitzpatrick, Shelia. *Everyday Stalinism, Ordinary Life in Extraordinary Times: Soviet Russia in the 1930s*. New York: Oxford University Press, 1999.
- Fitzpatrick, Shelia. *The Russian Revolution*. New York: Oxford University Press, 1994.
- Malia, Martin. *The Soviet Tragedy: A History of Socialism in Russia, 1917–1991*. New York: Free Press, 1994.

Khrushchev Era, 1953–1964

Named for Nikita Khrushchev, Soviet Communist Party first secretary (March 1953 to October 1964), the Khrushchev era marked a turning point in the history of the Soviet Union. Characterized by official de-Stalinization, the era witnessed Khrushchev's pursuit of reform and relative liberalization at home and peaceful co-

existence with the West, in stark contrast to Stalin's policies of internal repression and confrontation with the West.

The watershed event of the era was Khrushchev's so-called secret speech. Delivered February 20, 1956, to a closed session of the Twentieth Congress of the Soviet Communist Party, the speech revealed crimes committed by Stalin between 1934 and 1953. Targeting the "cult of personality," which Khrushchev described as a violation of the "Leninist principle of socialist democracy," the speech condemned the persecution of innocent communists during the 1930s, Stalin's refusal to heed warnings of the 1941 German invasion, his military mistakes in 1941 and 1942, his deportations of national minorities, his postwar distortion of history, and his role in the 1948–1949 Leningrad Affair. Although Khrushchev failed to address catastrophes associated with the collectivization of agriculture or the repression of noncommunist Soviet citizens, the speech stunned the audience and initiated a gradual and official de-Stalinization that would ultimately, in 1961, see the removal of Stalin's body from Moscow's Lenin Mausoleum and Leningrad being renamed Volgograd.

Beyond raising serious questions about Stalin's legacy and attacking the cult of personality, Khrushchev sponsored important domestic changes, including a retreat from political terror and the simultaneous rehabilitation of Stalin's victims and their release—in the case of those still alive—from the labor camps. Khrushchev also promoted a shift in economic priorities to production of consumer goods and housing and a cultural thaw. Consequently, Soviet citizens felt a greater sense of personal security and enjoyed a higher standard of living, while Soviet intellectuals experienced a freedom of expression unfamiliar since the New Economic Policy (NEP) era of the 1920s. Greater intellectual freedom was epitomized by remarkable publications such as Yevgeni Yevtushenko's *Babi Yar* (1961) and Alexander Solzhenitsyn's *One Day in the Life of Ivan Denisovich* (1962). Khrushchev even proposed a division of the Communist Party into industrial and agricultural sections, a reform, had it been implemented, that would have laid the foundations for a pluralistic political system.

➤ KHRUSHCHEV'S "HAREBRAINED SCHEMES"

First Secretary of the Communist Party of the Soviet Union Nikita Khrushchev's ouster from power in 1964 was a result of accusations by the Politburo that he had conducted "harebrained schemes." Khrushchev's policy of de-Stalinization and his handling of the Cuban Missile Crisis had alienated many of the hard-liners of the Politburo. However, his Virgin Lands Policy was deemed as a major disaster for the first secretary. The Virgin Lands Policy, beginning in 1954, opened vast tracts of land in the southern Russian Soviet Federated Socialist Republic (RSFSR) and northern Kazakhstan for grain cultivation as part of an effort to boost agricultural production and economic expansion. However, after a decade the soil was exhausted due to single-crop cultivation practices, eventually leading to massive soil erosion in Central Asia. Furthermore, Khrushchev's tense relationship with communist leader of China, Mao Zedong, also contributed to his growing unpopularity. Mao was seen as a leading figure by many members of the Politburo, in essence a pivotal individual in leading the Third World revolution. By alienating Mao, the Soviet Union was branded as revisionist by China and thus lost much credibility as the leader of the Socialist world. For these reasons, Khrushchev was seen as a bumbler and was removed from power, replaced by the more conservative Leonid Brezhnev.

—Abraham O. Mendoza

In the realm of foreign policy, Khrushchev promoted "peaceful coexistence" and "alternative paths to socialism." The former challenged the Stalinist axiom that armed conflict between the communist and capitalist worlds was inevitable by asserting the possibility of peaceful competition, while the latter rejected the Stalinist maxim that the Soviet path was the only path to socialism by acknowledging more than one road to a classless society. Peaceful coexistence facilitated improved relations with the United States. Alternative paths to socialism helped Moscow achieve reconciliation with Josip Tito's Yugoslavia and allowed the communist leaderships in certain Soviet Eastern Bloc countries, Poland specifically, more leeway in their internal affairs.

Yet Khrushchev's new foreign policy concepts neither ended the Cold War—a fact epitomized by the Berlin Crisis of 1958–1961, the U-2 Incident of 1960, and the Cuban Missile Crisis of 1962—nor signaled a new era of freedom in Eastern Europe, this being made abundantly clear by Soviet military intervention in Hungary in 1956.

The Khrushchev era ended in October 1964 when Khrushchev's colleagues in the Soviet leadership, disillusioned with his “hare-brained schemes,” voted him from power and installed a conservative leadership headed by Leonid Brezhnev and Aleksei Kosygin that halted de-Stalinization. Retiring to Moscow, where he lived quietly until his death in 1971, Khrushchev became a forgotten man. Yet his efforts at de-Stalinization had gone so far that the Brezhnev-Kosygin leadership, despite neo-Stalinist proclivities, could not reestablish full-blown Stalinism. Interest in the Khrushchev era ultimately revived during the Gorbachev years (1985–1991) when many, both inside and outside the Soviet Union, came to see Khrushchev's reforms as precursors to perestroika and glasnost.

—Bruce DeHart

Bibliography

- McCauley, Martin. *The Khrushchev Era, 1953–1964*. New York: Longman, 1995.
- Taubman, William. *Khrushchev: The Man and His Era*. New York: Norton, 2003.

Leonid Brezhnev and His Era

Born in Ukraine on December 19, 1906, to a working-class family, Leonid Ilyich Brezhnev joined the communist youth organization Komсомол in 1923. After studying land management at a technical institute in Kursk, he became a full member of the Communist Party in 1931. During World War II, Brezhnev served as a political officer and party secretary for defense industries in Ukraine. In 1952 he became a member of the party's Central Committee, and in 1957 he joined the Politburo, the party's executive organ. After Nikita Khrushchev was removed from office in 1964, Brezhnev was appointed general secretary of the Communist Party. Brezhnev had strong ties with local and regional party leaders and probably was selected because the political

establishment wanted a less impulsive and more predictable leader than Khrushchev. Although initially Brezhnev may have been viewed as an interim leader, he held power until his death in 1982.

In what became known as the Brezhnev Doctrine, the Soviet government proclaimed for itself the right to intervene militarily in communist nations to protect its interests. In August 1968 the Brezhnev government and several Warsaw Pact allies invaded communist Czechoslovakia for the purpose of unseating Czechoslovak leader Alexander Dubček, who had set into motion the Prague Spring, a series of liberalizing reforms designed to create socialism with a human face. Later in Brezhnev's tenure, in December 1979, the Red Army invaded Afghanistan for the purpose of rescuing a client regime that was about to collapse. In protest, President Jimmy Carter boycotted the Moscow Olympics in 1980 and imposed a grain embargo on the Soviet Union. Soviet troops remained, nevertheless, until Mikhail Gorbachev ordered a withdrawal from Afghanistan in 1988–1989.

Growing military parity with the United States enabled Brezhnev to pursue what was called in the West *détente*, a relaxation of Cold War tensions. Brezhnev's government signed more than two dozen agreements on topics ranging from trade to arms control. The multilateral Nuclear Nonproliferation Treaty (1968) attempted to reduce the spread of nuclear weapons. In 1972 the Soviet and U.S. governments agreed to the Strategic Arms Limitations Treaty (SALT I) and the Anti-Ballistic Missile (ABM) Treaty. In 1979 SALT II limited the number of missiles that could be equipped with multiple warheads, but it was not submitted to the U.S. Senate for ratification because of the Soviet invasion of Afghanistan. *Détente* did not stop the arms race. Between 1964 and 1982 the number of U.S. nuclear warheads increased by more than 50 percent, while the number of Soviet warheads increased more than tenfold. Moreover, *détente* did not significantly increase trade between the superpowers. Only about 2 percent of U.S. exports went to the Soviet Union.

In previous decades, Khrushchev had tried to de-Stalinize Soviet society, leading to hopes

for greater intellectual freedom. However, under Brezhnev, prospects for a new thaw ended quickly. In a 1966 show trial, writers Andrei Siniavsky and Iulii Daniel were imprisoned for circulating satirical work on Soviet society at home and abroad, signaling at least a partial re-Stalinization of creative life. Persecution intensified after the invasion of Czechoslovakia. Some dissidents were declared insane and imprisoned in psychiatric hospitals. Courageous writers such as Alexander Solzhenitsyn continued to write unsanctioned works in an underground network called samizdat (self-publication). Meanwhile, organizations such as the Institute for the Study of the United States and Canada and the Institute of the World Economy and International Relations (IMEMO) continued to challenge official ideology, often in relatively obscure academic journals, laying the groundwork for the open debates that would later occur under Mikhail Gorbachev. Overall, however, suppression of free expression and innovation made it increasingly difficult for the Soviet Union to compete in the fast-changing world of science and technology.

After some initial economic experimentation, the Brezhnev regime decided to maintain the massive and inefficient planning apparatus it had inherited, and by the mid-1970s economic growth began to slow. Inefficient enterprises were kept afloat with state subsidies, and the growing military-industrial complex drew off much of the country's wealth. Productivity lagged for want of sufficient incentives for workers and collective farmers, and absenteeism in the workplace was rampant. Aside from bread products, state stores offered a meager supply of foodstuffs and consumer goods, and these were often of poor quality. The second economy (black market) flourished. Average life expectancy began to fall and infant mortality rates began to rise, in part the results of poor diet, widespread alcohol abuse, inadequate housing, and an underfunded medical care system.

The optimism of the Khrushchev years seemingly gave way to a more pervasive public cynicism. It is hard to ignore Mikhail Gorbachev's grim assertion that overall, the Brezhnev years were an "era of stagnation."

—Michael F. Hamm

➤ COLD WAR CHESS CHAMPIONSHIP

No chess match has been as politicized as the championship match between American Bobby Fischer and the Soviet Union's Boris Spassky in Reykjavik, Iceland, in 1972. The competition has been called the Match of the Century and was politicized as a fight between the ideological systems of the Soviet Union and the United States. Fischer, representing the United States, beat Spassky, who represented the Soviet Union, by a total of four matches after initially playing poorly. Fischer's victory caused a brief chess craze in the United States, as he had won in a field that had been traditionally dominated by the Soviet Union.

—Michael F. Hamm

Bibliography

- Bacon, Edwin, and Mark Sandle, eds. *Brezhnev Reconsidered*. New York: Palgrave Macmillan, 2002.
- Smith, Hedrick. *The Russians*. New York: Ballantine Books, 1976.

Octogenarian Era

Between the death of Leonid Brezhnev (r. 1966–1982) in 1982 and the accession of Mikhail Gorbachev (r. 1985–1991) as general secretary of the Communist Party of the Soviet Union in 1985, for a short period two men, Yuri Andropov (1914–1984) and Konstantin Chernenko (1911–1985) assumed the leadership of the Soviet Union. They both represented the aging octogenarian generation of Soviet leadership created after the Stalinist purges of the 1930s. This generation entered high levels of power after Premier Nikita Khrushchev's (1953–1964) exit in 1956, having come of age under the Stalinist years as technocrats imbued with a strong sense of socialist ideals. Loyal to Brezhnev for several decades, both Andropov and Chernenko continued many of his policies, representing the vestiges of the past with little thought for reform of the system. Along with other top leaders of the Politburo, also in their late seventies and early eighties, Andropov and Chernenko illustrated the longevity of the communist gerontocracy in

▶ SAMANTHA SMITH—CHILD PEACE ACTIVIST

One of the most memorable episodes of Yuri Andropov's 15 months as general secretary of the Communist Party of the Soviet Union (November 12, 1982–February 9, 1984) involved his correspondence with an American child, Samantha Smith. In 1982, at the age of ten, Smith wrote Andropov a letter to ask why relations between the United States and the Soviet Union were as tense as they were. Andropov wrote back in mid-1983 that the Soviet Union did not want nuclear war but rather peace. Moreover, he also invited her to visit so she could see that the Soviet people were peace-loving individuals. The exchange of letters received intense American media attention. Later that year, Smith and her family accepted Andropov's offer and visited the Soviet Union, attracting international media attention and well-wishers everywhere they went. While she never met with Andropov, she spoke with him by telephone. Although this was a minor episode in the history of the Cold War, it indicates the desires of people on both sides of the conflict to emphasize co-existence and mutual understanding even as the international situation came to a fever pitch in the early 1980s.

—Abraham O. Mendoza

charge of the destiny of the Soviet Union in the mid-1980s.

Upon Brezhnev's death in November 1982, Andropov assumed the office of general secretary. Andropov was 68 when he assumed the top position of power in the Soviet Union after serving in the upper echelons of the Communist Party since the Great Purges of 1937–1938. He was a representative of the generation that came of age under Stalin, the *vydvizbentsy* (promotees), who were ideologically motivated and trained as technocrats to build socialism in the Soviet state. Also a former KGB (Soviet secret police) chief in the 1960s, Andropov had later served in the Politburo from 1973 and secured his position as general secretary in the chaotic fight for succession by securing the support of both the military and the KGB. Chernenko would have to wait for only a short while to assume office.

Andropov's time in office is characterized by his inability to reform the Soviet system, still caught in economic stagnation and fraught with an inefficient and corrupt bureaucracy. He did manage to make some inroads in reforming the economy through policies of decentralization and incentives for industrial production. He also included within the top levels of power and in the party, at least in subordinate roles, younger members such as Gorbachev while yet maintaining much of the Brezhnev Old Guard. Andropov's attempts to address the issues of a corrupt bureaucracy were only marginally successful.

His foreign policy strategy is noted for reacting against U.S. president Ronald Reagan's (1981–1989) renewed and invigorated anti-Soviet rhetoric, especially concerning the Strategic Defense Initiative (SDI). Andropov charged that SDI was “a bid to disarm the Soviet Union in the face of the U.S. nuclear threat.” (Reagan's stern foreign policy not only troubled Andropov but also Western Europe, although not enough to improve European attitudes toward the Soviet Union.) Andropov also continued the Soviet commitment to the war in Afghanistan, which caused some grumbling among the Soviet population. While he did attempt to invigorate the rhetoric of world revolution, the Soviet Union was so fraught in stagnation that it no longer served as an adequate model of socialist revolution. Andropov became ill in August 1983 and ceased to make public appearances. He passed away on February 9, 1984.

Assuming the office of general secretary upon Andropov's death, Chernenko represented a return to the conservative policies of Brezhnev. Andropov's domestic reforms were seen as far too radical by some elder members of the Politburo. Under Chernenko's leadership, the Soviet Union rescinded some of Andropov's policies and crippled any potential reform to the Soviet economy and industry. In terms of foreign policy, Chernenko engaged the United States in nuclear talks regarding three issues: intermediate nuclear forces (INF), strategic arms limitations (SALT), and antisatellite weapons (ASAT). President Reagan would not budge on the issue of SDI, leading Chernenko to promise to expand the Soviet Union's own nuclear capabilities and triggering another arms buildup. As a result of

growing tensions, Chernenko decided on a Soviet boycott of the 1984 Olympics held in Los Angeles. Within one year of assuming office, Chernenko became deathly ill of emphysema. He passed away on March 10, 1985.

Both Andropov and Chernenko were not in office long enough to implement any long-term reforms or solutions to the Soviet bureaucracy or economy. Andropov's limited inroads in these areas were ended by his successor, Chernenko. Chernenko represented the spirit of Brezhnev and lacked the innovation needed to change the Soviet Union. To his credit, Andropov had installed Gorbachev in a position where he could seize the reins of power after the death of Chernenko. However, the remnants of Brezhnev's octogenarian clique in the Communist Party would live to fight another day, leading a failed coup against Gorbachev in 1991.

—Abraham O. Mendoza

Bibliography

- Daniels, Robert V. *Russia's Transformation: Snapshots of a Crumbling System*. New York: Rowman and Littlefield, 1998.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Malia, Martin E. *The Soviet Tragedy: A History of Socialism in Russia, 1917-1991*. New York: Free Press, 1994.

Mikhail Gorbachev Era

Born March 2, 1931, in the Stavropol region in the North Caucasus, Mikhail Gorbachev joined the Communist Party in 1952 while studying law at Moscow University. After graduating, he returned to Stavropol and worked his way through the party apparatus. In 1980 he became a full member of the Politburo. Gorbachev was a protégé of Iurii Andropov, who succeeded Leonid Brezhnev as the general secretary of the Communist Party in 1983. After Andropov died in February 1984, Konstantin Chernenko, age 72, assumed leadership of the party, but Gorbachev, who identified with the younger reformist faction, remained second-in-command. The day after Chernenko died on March 10, 1985, Gorbachev was elected general secretary at the young age of 54.

The Soviet government had monopolized the news, information, and entertainment media,



Soviet President Mikhail Gorbachev walks with a crowd of delegates to the 28th and last congress of the Soviet Communist Party (PCUS) in July 1990. (Pascal Le Segretain/Corbis Sygma)

isolating its citizens from foreign news and the grimmer realities of Soviet life. Gorbachev called for glasnost (the open and honest reporting and discussing of real issues) and perestroika (restructuring, especially of the Soviet economy). However, when a nuclear reactor at Chernobyl began to spew massive amounts of radiation into the atmosphere in April 1986, Gorbachev remained silent, speaking publicly about the accident only 18 days later.

Chernobyl dramatized the problems that resulted from internal secrecy and the ruling establishment's mistrust of and lack of concern for its citizenry, and it apparently convinced Gorbachev to commit himself fully to glasnost. Soviet journalists began to expose official corruption and incompetence and to fill in the blank spots of Soviet history. Previously forbidden topics such as crime, abortion, drug addiction, ethnic tensions and brutality in the army, and even the failed invasion of Afghanistan began to be discussed openly. Disgraced former communist leaders such as Nikolai Bukharin were publicly rehabilitated, and Lenin, the mythologized Sacred Father of Soviet communism, fell under criticism. In 1989 Gorbachev revealed that defense spending consumed 15 percent of the Soviet budget, four times what had been reported earlier. Foreign scholarly and literary works, previously banned works by Soviet authors (such as

➤ BORIS YELTSIN

Boris Yeltsin (February 1, 1931–April 23, 2007) was the first popularly elected president of the Russian Federation (1991–1999). His opposition to the antidemocratic Putsch of August 1991, which crippled the leadership of Mikhail Gorbachev, then under house arrest, made Yeltsin one of the most popularly supported politicians of the time.

Yeltsin was born in a peasant family in the Sverdlovsk region of the Soviet Union. After he graduated from the Ural Polytechnic Institute in 1955, he spent more than a decade working for construction enterprises. Since 1968, he held various positions in the state apparatus, and in the second half of the 1980s he emerged as a leader of the democratic movement and the most outspoken critic of the Politburo and Gorbachev. In August 1991 when Gorbachev was placed under house arrest during a coup, Yeltsin bravely summoned up public opposition in front of the Russian parliament, and the coup fizzled. Gorbachev's political viability had withered, and Yeltsin was elected the president of the Russian Federation on June 12, 1991.

After the official demise of the Soviet Union in December 1991, Yeltsin supported a program of economic reforms called Shock Therapy. But this program led to a severe economic crisis (inflation reached 250 percent in some months) and popular dissatisfaction, fueled by general impoverishment. Moreover, privatization of state industries and property created a class of nouveaux riches and oligarchs. In September 1993, Yeltsin signed a decree in violation of the Constitution to dissolve the Supreme Soviet and the Congress of the People's Deputies in favor of more modern political institutions. This measure led to some violent conflicts with opponents, and the events were quickly labeled Bloody October. But more blood was shed in 1994 when Yeltsin unleashed the First Chechen War, officially waged to disarm illegal

terrorist formations in the territory of Chechnya. Although the First Chechen War ended in 1996, the conflict eventually escalated into the Second Chechen War (started in 1999), which continues to the present day.

Despite his failing health, rumors of alcoholism, and some controversial economic and political measures, Yeltsin was reelected to a second term in 1996. But several bypass heart surgeries and other medical problems prevented him from being as actively involved in politics as he was during his first term. Attempts to stage economic reforms by bringing in young, innovative reformers often failed, as became strikingly obvious during the Default of 1998 (when the government refused to pay its debts). In August 1999, Yeltsin appointed little-known Vladimir Putin as prime minister. When Yeltsin resigned on December 31, 1999, according to the Constitution of the Russian Federation, the prime minister assumed the responsibilities of the president. In March 2000, Putin was democratically elected by popular vote as the new president of the Russian Federation.

Yeltsin, whom U.S. president Bill Clinton labeled “the Father of Russian Democracy,” died on April 23, 2007, from heart failure. Yeltsin spent his final years writing memoirs, managing his various funds, and traveling the world.

—Irina Mukhina

Bibliography

Aron, Leon. *Yeltsin: A Revolutionary Life*. New York: St. Martin's, 2000.

Breslauer, George W. *Gorbachev and Yeltsin as Leaders*. Cambridge: Cambridge University Press, 2002.

Yeltsin, Boris. *Midnight Diaries*. Translated by Catherine A. Fitzpatrick. New York: Public Affairs, 2000.

Boris Pasternak, Alexander Solzhenitsyn, and Vladimir Nabokov), and manuscripts that had been written for the desk drawer (such as Anatolii Rybakov's *Children of the Arbat*) now found Soviet publishers.

In mid-1988 the 19th Party Conference approved contested local elections and the creation of the Congress of People's Deputies, a partially elected, partially appointed legislature

that held its first session on May 25, 1989. These reforms, Gorbachev believed, made perestroika irreversible. He remained a committed communist, believing that a reformed party could compete successfully with other parties for popular support.

Gorbachev encouraged decentralized economic decision making and greater competition, but as firms became more autonomous, they cur-

tailed production of less-profitable items. Shortages of medicines, soap, sugar, and even bread grew worse; queues lengthened; prices rose; and rationing became widespread. Numerous private cooperatives were formed, mostly in the consumer service sector, and the leasing of state-owned farmland to collective farmers was encouraged, but such partial reforms could not put an end to long-term economic stagnation. Gorbachev had replaced 60 percent of the party's Central Committee and two-thirds of its regional and district chiefs by 1988, but the party remained divided between conservatives who feared change and liberals who sought faster and more comprehensive reform. Caught in the middle, Gorbachev was attacked by both sides. Late in 1990 he spoke in favor of privatization and free enterprise, but here too he vacillated, fearing further erosion of Soviet governmental authority.

Russians accounted for only half of the Soviet population, and nationalist movements such as Rukh in Ukraine rapidly gained support in the outlying republics. In March 1990 Lithuania declared its independence. Soviet troops, which had already attacked a large nationalist demonstration in Tbilisi, Georgia, in April 1989, moved against centers of nationalist agitation in Latvia and Lithuania in January 1991. Nevertheless, the Baltic and Caucasian republics continued to move toward independence, and Russia's parliament posed a serious challenge as well. Led by its popular president Boris Yeltsin, who had emerged as the new champion of democratization and national sovereignty, in June 1990 it declared that Russian laws took precedence over Soviet laws. Finding it increasingly difficult to govern, Gorbachev tried to re-create the Soviet Union by establishing a voluntary union of free sovereign states. The new treaty contained no reference at all to communism.

Fearing the complete breakup of the Soviet Union, on August 19, 1991, conservatives staged a poorly planned coup against Gorbachev, who was vacationing in the Crimea. In a famous scene televised around the world, Yeltsin called for resistance while standing on a tank outside of the Russian parliament. Some 70,000 Muscovites assembled to defend the parliament against pro-coup forces, and by August 21 the coup had

collapsed. After returning to Moscow, Gorbachev resigned as general secretary of the Communist Party, and the party's activities were suspended throughout the country. Yeltsin's Russian government took control of the resources and enterprises on its soil, and the other Soviet republics declared themselves independent states. On December 25, 1991, Gorbachev resigned as president of a Soviet Union that no longer existed.

Gorbachev ranks among the most important leaders of the twentieth century. He dismantled the totalitarian communist system created by Josef Stalin, moving Russia toward a law-based democratic society that accepted plural opinion and a private sector that could function beyond state control. Gorbachev deserves primary credit for ending the Cold War. He removed Soviet troops from Afghanistan and in 1989 stunned the world by allowing the communist satellites in Eastern and Central Europe to go their separate ways. Most made a quick and peaceful transition to market-based democracies. In November 1989 the Berlin Wall, a stark symbol of the Cold War, came down, and Germany, divided between a communist East and a democratic West since World War II, subsequently reunified. In 1990 Gorbachev was awarded the Nobel Peace Prize.

—Michael F. Hamm

Bibliography

- Galeotti, Mark. *Gorbachev and His Revolution*. London: Macmillan, 1997.
 Galeotti, Mark. *Memoirs*. New York: Doubleday, 1995.
 White, Stephen. *After Gorbachev*. Cambridge: Cambridge University Press, 1993.

Post-Gorbachev Era

The Soviet Union, which collapsed in 1991, was replaced by the Commonwealth of Independent States (CIS), a loose political coalition intended to create a framework for the dissolution of the Soviet Union and an alliance for cooperation on economic, foreign affairs, and security issues. This new political structure formed by the seceding constituent republics signified a new era for the newly independent Russian Federation, Belarus, and Ukraine and the Central Asian republics of Armenia, Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan, Georgia, Kyrgyzstan,

► VLADIMIR PUTIN—TIME MAGAZINE'S PERSON OF THE YEAR 2007

The selection of Russian president Vladimir Putin as *Time*'s Person of the Year in 2007 sparked controversy among his critics. Issues raised include his questionable internal domestic control over the Russian press and regional politics in addition to his continued role in Russian politics after his presidential term ended. Despite warm personal relations with U.S. president George W. Bush, Putin's autocratic manner of governing, his engagement in the Middle East particularly with Iran, his intense criticism of U.S. foreign policy, his alleged meddling in Ukraine's domestic politics, and his threats to cut off energy supplies to the West have worried Western observers about his attempts to reassert Russian influence in global affairs.

—Abraham O. Mendoza

and Moldova and their respective transitions into global market capitalism. The end of communism in the former Soviet Union brought economic dislocation, political uncertainty, and social instability to much of the region over the next decade as these new nations adapted to free market capitalism and new political models based on Western liberal democracies. Russian domination over the affairs of the CIS, particularly over internal economic developments, has complicated matters relating to political independence from Moscow and their relations with the West (admission into North Atlantic Treaty Organization [NATO], the European Union [EU], and trade agreements). Problems concerning the Russian foreign abroad populations (particularly concerning the problem over the break-away region of Transnistria) spread out in the various CIS republics and have also created many conflicts between the post-Soviet republics and Russia.

Boris Yeltsin, the first president of the post-Soviet Russian Federation and a key figure in its emergence as a newly independent republic, ran into various difficulties in his attempts to reform Russian society and the economy. Much of this resistance came from former communists, nation-

alists, and secessionists (particularly in Chechnya). In spite of the influx of U.S. aid and financial advisers, the Russian economy suffered significant setbacks as it adapted to market capitalism. Widespread corruption, characterized by the kleptocracy formed by former Soviet officials-turned-capitalists (most significantly in the energy sector), damaged the reputation of Yeltsin's economic reforms among the Russian public. Yeltsin faced off against a Russian parliament that mirrored public anxiety over the disorganization, lawlessness, and financial insecurity instigated by his crash capitalism reforms. In spite of the chaotic situation in Russia, Yeltsin nonetheless was reelected for a second term in 1996.

Vladimir Putin emerged from a political unknown to prime minister and on to become the president of Russia. In contrast with the unpopularity of his predecessor, Putin appealed to a Russian public weary of social disorder and widespread corruption. Putin, handpicked by Yeltsin as his successor, became president following Yeltsin's resignation on New Year's Eve 1999 and was subsequently elected the following year and again in 2004. Putin attempted to reassert Russian power vis-à-vis the West, restructure the economy, stamp out corruption and crime, and assert the control of the central government over the Russian provinces. Critics allege that Putin has embraced authoritarian tactics to ensure that his policies are successful, suggestive of a dictator, in spite of post-Soviet advances toward a more liberal democratic Russian state. However, his control of the media, regional governments (by disallowing local elections), and large Russian corporations has found much support among the Russian public.

Post-Soviet Belarus and Ukraine have both found themselves seeking closer links with the West while also attempting to negotiate their economic and political ties with Moscow. In Belarus (translated as White Russia), Aleksandr Lukashenko was elected president in 1994, with promises to reintegrate the former Soviet republic with greater Russia. Amid criticism stemming from the West of his near-dictatorial control of Belarus, Lukashenko managed to alienate much of the West due to allegations over rigged elections and botched economic reforms well into

the present. Following independence, Ukraine has successfully ended secessionist movements in the Crimea seeking reunification with Russia, resolved its disputes with Russia over the Black Sea fleet, and dismantled its nuclear arsenal in agreements with Russia and the United States. However, Ukraine has continued to overhaul its economy to adapt to market capitalism and has experienced massive economic and social problems in the process. Its attempts to free itself from Moscow's control resulted in the Orange Revolution (widespread grassroots protests marked by civil disobedience, urban protests, and student activism directed at questionable election results in late 2004 and early 2005), leading to the election of pro-Western president Viktor Yushchenko. In spite of these developments, there continue to be allegations of Russian involvement in internal Ukrainian political developments, geared at drawing Ukraine closer to Russia.

The Caucasian and Central Asian republics have also confronted similar challenges to those of the other post-Soviet republics, including secessionist movements, plagued economic development, and political and economic relations with Moscow. The Caucasian republics of Georgia, Azerbaijan, and Armenia suffer from economic disarray and separatist movements. In particular, Azerbaijan and Armenia continue to be at odds over a border dispute in the south over the ethnic Armenian enclave of Nagorno-Karabakh. The Central Asian republics of Kazakhstan, Uzbekistan, Turkmenistan, and Kyrgyzstan, which have considerable populations of Muslims, struggle to maintain secularist governments bent on securing economic and political development with support from the West amid the influence of Russia from the north and Islamic fundamentalism from the south. Their proximity to hot-spots in the War on Terror (Afghanistan, Iran, and Iraq) has made them viable allies to the United States while also making them susceptible to the influence of their fellow coreligionists throughout the Muslim world. The potentiality of the development of energy industries in the region has made it a valuable location for foreign investment.

The post-Soviet republic of Moldova, located in Southeastern Europe between Ukraine and

Romania, along with troubles integrating into market capitalism has also been afflicted with secessionists. Following independence, widespread Moldovan nationalist calls for unification with Romania triggered the secession of the ethnic Russian region of Transnistria (or the Pridnestrovian Moldavian Soviet Socialist Republic) east of the Dniester River, which declared its independence from Moldova in 1990. Border issues between Transnistria and Moldova led to a war in 1992, which ended with a cease-fire later that year. Transnistria is currently an autonomous political entity, unrecognized by the international community, claiming to be a bastion of the communist Soviet Union and seeking eventual union with Russia.

—Abraham O. Mendoza

Bibliography

- Åslund, Anders. *How Capitalism Was Built: The Transformation of Central and Eastern Europe, Russia, and Central Asia*. New York: Cambridge University Press, 2007.
- Luong, Pauline Jones, ed. *The Transformation of Central Asia: States and Societies from Soviet Rule to Independence*. Ithaca, NY: Cornell University Press, 2004.
- Stefes, Christoph H. *Understanding Post-Soviet Transitions: Corruption, Collusion and Clientelism*. New York: Palgrave Macmillan, 2006.

Russo-Georgian War of 2008

Russia's resurgence as a world power became vividly clear in the summer of 2008 when the Georgian government's bid to restore its sovereignty over a pro-Russian breakaway region of Georgia rapidly developed into a war between the two countries.

On August 8, in response to days of minor hostilities, the Georgian military entered South Ossetia, an autonomous region of Georgia that had sought independence since the early 1990s, and almost captured its administrative center before the Russian military's intervention reversed the process. In the largest operation since the collapse of the USSR, the Russian Army repelled the Georgians from South Ossetia and then launched major land, naval, and aerial operations throughout Georgia. Many Georgian military facilities

➤ ENERGY RESOURCES AS A POLITICAL WEAPON

Europe's dependence on Russia for energy resources, 2006

100% dependent: Latvia, Slovakia, Finland, Estonia
More than 80% dependent: Bulgaria, Lithuania, Czech Republic
More than 60% dependent: Greece, Austria, Hungary

Source: European Council on Foreign Relations, 2006 figures.

After his election in 2000, President Vladimir Putin sought to restore Russia's former grandeur and power using nontraditional methods. His policies became based on the strategy that Russia use its energy industry, particularly gas and oil, to promote the state's interests. The world's largest gas company, the Gazprom, which was originally created from the old Soviet Gas Ministry, became a key institution in this tactic. Gazprom supplies approximately a quarter of Europe's gas, with some states solely dependent on Russia for its gas demands.

Critics argue that Gazprom, closely controlled by the Kremlin, furthers the Russian government's strategic interests and uses its natural resources as a political weapon. They point to Gazprom's shutoffs of gas to Georgia in 2006 and Ukraine in 2006–2009 as examples of Russia's willingness to use its monopoly on energy supplies to punish them for pro-Western policies and to influence other states. During the most recent shutoff, in December 2008, for three weeks most of Eastern Europe remained without gas in the midst of a bitter winter until the Ukraine agreed to a threefold increase in natural gas pricing.

The 2008–2009 crisis clearly revealed Europe's energy vulnerability and relative weakness vis-à-vis Russia. Thus Germany, which receives more than 40 percent of its natural gas from Russia, has been criticized for becoming timid in its relations with Moscow following the Russian rows with Ukraine and Georgia. Germany and other European countries have repeatedly promised to diversify their energy supplies but so far remain unable to accomplish it.

—Alexander Mikaberidze

and industries were targeted, and strategic locations, including the Black Sea Port of Poti and the city of Gori, were occupied. In a dramatic reversal of its earlier policies, Moscow also recognized the independence of Georgia's two breakaway regions of Abkhazia and South Ossetia and established formal relations with them. Officially, the war ended on August 12 when Tbilisi and Moscow agreed to a European Union (EU) cease-fire negotiated by the EU rotational president, French president Nicholas Sarkozy. Practically, however, the war continued with a lesser intensity at least for another week as both Georgia and Russia accused each other of violating the cease-fire; occasional clashes between the sides took place as late as March 2009. Following a new round of negotiations, Russia withdrew most of its forces from the Georgian territory proper by October 9 but retained its presence in the breakaway regions.

The Russo-Georgian War had a significant effect on regional politics and Russia's relations with the Western countries. It sent a clear signal to the world that Russia is resurgent and ready to use force to protect its interests. The conflict severely undermined the already tense Russian-Western relations and revived fears of another Cold War. Georgia has developed a close relationship with the United States, and to Russia; such close relations inspire cause for great alarm since they imply increased U.S. presence in what Moscow has historically considered its backyard. Russia accused the United States of instigating the war as part of an American policy to secure its influence in former Soviet republics and encircle Russia. The Russian leaders also condemned NATO's eastward expansion to the Caucasus, which threatens Russia's strategic interests. Russia's intervention in Georgia prompted the angry reaction of the U.S. government and NATO, both of which described the Russian reaction as an act of aggression and a sign of rising Russian imperialism. To some, Russia's recognition of these separatist regions, which was only formally supported by Nicaragua, seemed a response to the Western recognition of Kosovo's independence from Serbia, a historic ally of Russia.

The conflict also revealed weakness on the part of the Western powers. It became obvious that the United States, tied down in Iraq and Af-

ghanistan and confronting Iran and North Korea, is in no position to oppose Russia and has to placate Russian interests in the Caucasus. The EU failed to react as a bloc since its members were divided between those supporting the U.S. call for harsher stance against Russia and those seeking to avoid further worsening of their relations with Russia, because in recent years Russia has become a major supplier of energy resources to Europe. As a result, the EU members only agreed

to facilitate a cease-fire and send humanitarian aid to Georgia.

—Alexander Mikaberidze

Bibliography

- “The Bear Is Back on the Prowl.” *Time Magazine*, August 14, 2008.
 “Russia and Georgia: A Scripted War.” *Economist*, August 16–22, 2008.
 Steavenson, Wendell. “Marching through Georgia.” *New Yorker*, December 15, 2008.

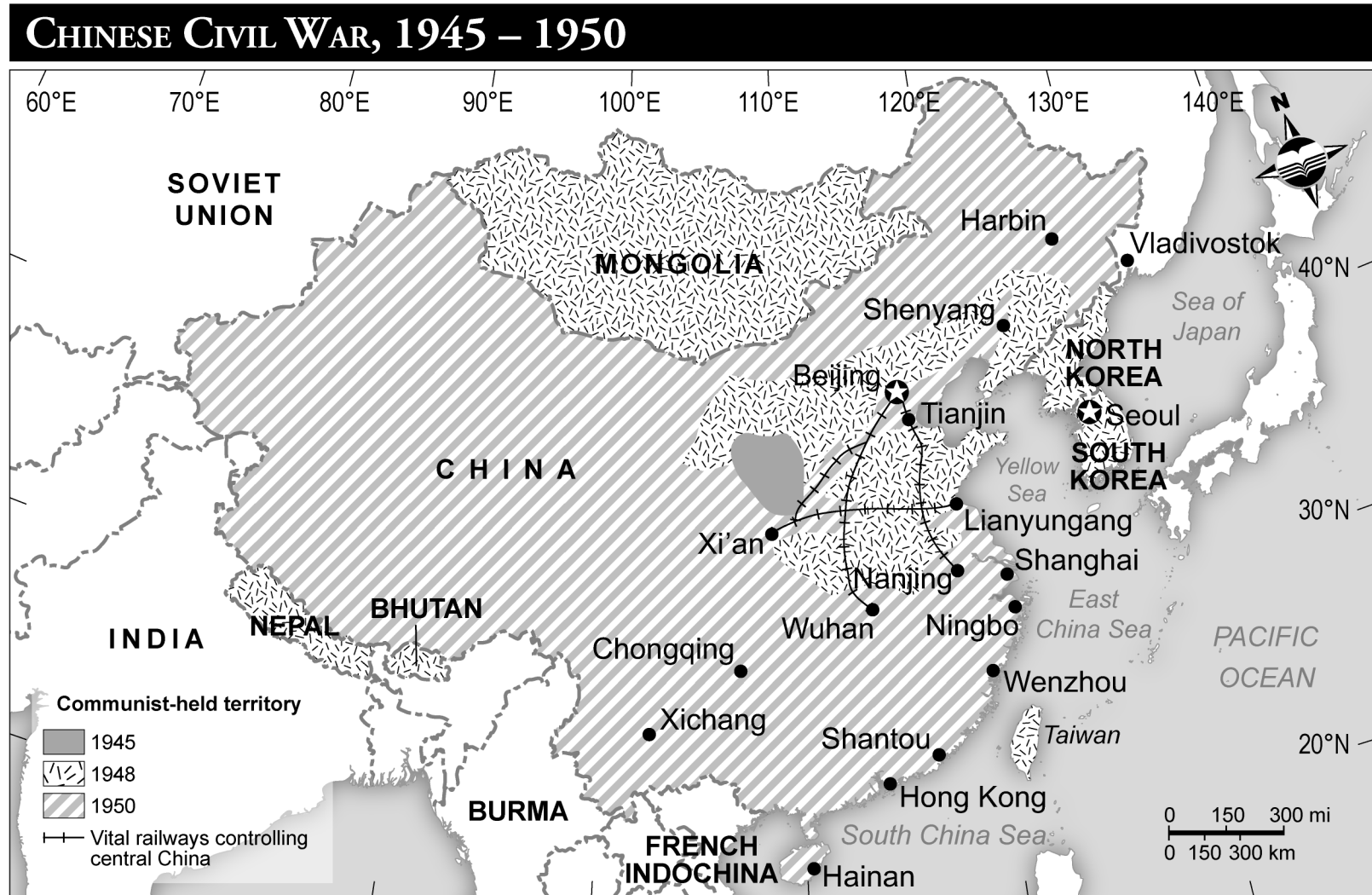
■ Introduction: China in the World, 1945–Present

Four years after the end of World War II, the Chinese Revolution ended, the People’s Republic of China (PRC) was established, and the Republic of China (ROC) on Taiwan was separated, its ties to the West remaining. China’s navigation of the ensuing Cold War period marked its early development. Under the tutelage of the Soviet Union, the PRC modernized and industrialized in the Great Leap Forward. Ideological fervor, however, met its match in poor planning, leading to famines and hardships for China’s peasantry. In the 1950s, attempts to reclaim Taiwan and involvement in the Korean War brought China into direct conflict with the United States, the imperialist enemy. Moreover, its diplomatic and economic isolation from world affairs and its close relationship with the Soviet Union made China highly suspect in the eyes of the capitalist world in the midst of the global Cold War. However, growing ideological differences and territorial disagreements with the Soviet Union eventually led to the Sino-Soviet split. While China brandished itself as the true bastion of world communism to the developing world, contrasting itself with the revisionist Soviet Union, for strategic purposes it also proceeded to simultaneously establish closer contact with the United States in the early 1970s.

The Cultural Revolution of the late 1960s and early 1970s disrupted Chinese social and economic development and made its position in world affairs almost negligible during this period. However, U.S. foreign policy, as dictated by Pres-

ident Richard M. Nixon and his secretary of state Henry Kissinger, was geared at opening diplomatic relations with China to take advantage of its soured relationship with the Soviet Union. As a result of these U.S. overtures and the Chinese response, by the mid-1970s the PRC was no longer a pariah in the international system but instead a recognized world power with a seat in the United Nations (UN) Security Council. By 1979, the PRC had established formal relations with the United States. Moreover, the PRC had also begun to divert from its ideological state-run economic system and had begun to experiment with free market capitalism.

With the death of Mao Zedong and the re-entry of Deng Xiaoping into power, China abandoned its isolated state-planned and financed heavy industrial sectors. Instead, the Chinese economy was restructured to adapt it to the capitalist world economic system. By instituting the development of free market economic zones along the coast, which would serve as a funnel for Western investment and fully integrate with the international economic system, Deng deviated from Marxist-Leninist orthodoxy. Through the 1980s, the establishment of light-manufacturing and export-oriented industry created a thriving middle class in these coastal regions, while the interior regions of the country remained rural and poor in comparison. With its cheap labor and its bounty of natural resources, China became an integral investment zone for Japan and the United States. However, the Tiananmen Square



protest and the resultant government response illustrated that Deng was unwilling to encourage democratization in China after the Soviet Union's collapse, regardless of his willingness to encourage free market capitalism.

In the post-Cold War period, China has become an integral economic and diplomatic power on the global stage. It has the world's third-largest economy after the European Union and the United States. Along with a resurgent Russia, China has close links to Iran, Venezuela, and North Korea (deemed rogue states by the United States) and is a significant regional power in the Asia-Pacific region, much to the chagrin of the United States and Japan. With the return of Hong Kong (1997) and Macao (1999) to the PRC, the issue of Taiwan has become more contentious in China's international relations, in particular with the United States. Regardless of internal problems with separatist movements in its western provinces of Tibet and Xinjiang and despite its burgeoning commercialism, China has remained stable due to the communist state's ability to stamp out dissidents and limit free discourse. Moreover, its current skyrocketing defense spending and development of a blue water navy has created concerns in the international community of its intentions in the Asia-Pacific region. However, its economic importance to the global economy, particularly to the United States, Japan, and the European Union, suggests that international stability is crucial for China to maintain its position as a rising world power, regardless of its supposed aggressive displays.

—*Abraham O. Mendoza*

China in the World, 1945–1949

World War II ended with Japan's surrender on August 15 (August 14 U.S. time), 1945. For the Chinese, it was a moment to rejoice at the victory ending the eight-year Anti-Japanese War. Following Japan's all-out invasion of China in 1937, China had suffered devastating losses during what the Chinese term the War of Resistance. Following the Japanese surrender, the Chinese had high hopes of achieving peace, unity, and national reconstruction. Nevertheless, these hopes soon gave way to fears as conflicts resumed between the Nationalist Party or Guomin-

THE SOVIET UNION AND THE CHINESE CIVIL WAR

To speed victory in the Asian Pacific battlefield and save American lives, President Franklin D. Roosevelt established the Yalta Far Eastern Agreement with Josef Stalin in February 1945. Through promising to join the war against Japan by attacking Manchuria three months after Germany's defeat, the Soviet Union received U.S. consent regarding its control over two major ports and two railroads in Manchuria as well as actual rule in Outer Mongolia. Six months later, on August 14, 1945, the Sino-Soviet Treaty of Friendship and Alliance was signed between the Soviet Union and the Chinese Nationalists. Jiang Jieshi (Chiang Kai-shek) accepted the Soviet's controlling interest in Manchuria. In return, Stalin pledged to the Nationalist government moral, material, and military support. On account of the treaty, Stalin had to support Jiang publicly and urged Mao Zedong to negotiate with Jiang.

Even though the Sino-Soviet Treaty was a great shock and disappointment to the Chinese Communist Party (CCP), the communist leaders adjusted their policies quickly in a very pragmatic manner. They tried to enlist aid secretly from the Soviet Union. Since the Nationalist troops were still far away from the Northeast, the CCP ordered its troops to move into the area. In 1946, the Soviet Red Army withdrew from Manchuria, leaving all the armaments captured from the Japanese troops to the CCP. By November 1948, the CCP totally defeated the Nationalist forces in Manchuria and won one of the decisive victories in the Chinese Civil War.

Stalin did not have much confidence in the final victory of the CCP in January 1949. It was not until the CCP triumph appeared inevitable that he approved high-level contacts with the CCP. One day after the founding of the People's Republic of China (PRC), the Soviet Union recognized the new regime and promised to assist it.

—*Yanli Gao*

dang (GMD) and the Chinese Communist Party (CCP). Once the common enemy of the Chinese was defeated, the GMD and CCP were left to scramble for positions. By 1945, the CCP had more than 1.2 million members in North China with over 900,000 troops. The GMD had larger forces with about 2.7 million troops.



Soldiers of Jiang Jieshi (Chiang Kai-shek) set off on one of five campaigns against the forces of Mao Zedong in Jiangxi during the Chinese Civil War. (Roger Viollet)

Over the course of U.S. history, Asia has always been of secondary interest to U.S. national security, with Europe holding strategic priority in its defense strategy and national security, particularly during the Cold War years. Following World War II, the United States desired to stabilize East Asia with a U.S.-Sino alliance. On October 24, 1945, the United Nations (UN) officially came into existence. From the UN's inception, China held one of the five permanent seats of the UN Security Council with the power to veto proposed actions it opposed.

Because of wartime alliances and ideologies, the U.S. government backed Jiang Jieshi, also known as Chiang Kai-shek, leader of the Republic of China and the GMD. After Japan's surrender was announced in August 1945, U.S. president Harry S. Truman's administration issued an order instructing all Japanese-controlled forces in China to surrender their positions and arms only to Jiang's representatives, not to communist armies in the field. This American decision disappointed the CCP leaders, and Mao Zedong demanded that communist commanders move to disarm the Japanese wherever possible.

War weary, most Chinese people desired a peaceful settlement of conflicts between the GMD and the CCP. The United States pressed Jiang to talk with Mao Zedong and also asked Josef Stalin, then still a putative ally of the United

States and the GMD, to clamp down on the CCP. For the sake of its own national security and interests, the Soviet Union urged Mao to resume peace talks with Jiang. From August 28 to October 10, 1945, peace talks were arranged between Jiang and Mao in China's wartime capital, Chungking (today's Chongqing). The United States aimed to create a coalition government. However, the GMD demanded the dissolution of CCP forces, while the CCP demanded real power in the government. Although both parties signed the Summary of Conversations between the Government and Representatives of the Chinese Communist Party, six weeks of negotiations left no doubt that little progress had been made.

To avoid a costly Chinese civil war, block communist movement, and promote a united democratic pro-U.S. China, Truman sent General George Marshall to China as his personal representative to mediate in December 1945. Marshall pressed the two parties to form a coalition government; however, he was also ordered to provide at least indirect support of Jiang's activities. Marshall managed to get both sides to accept a temporary cease-fire in early 1946. Due to U.S. bias during mediation, U.S. involvement in China's internal affairs was criticized by the communists. Since Asia was less important than Europe as a national security priority, the United States decided not to intervene militarily in the Chinese Civil War, and the Marshall Mission ended in failure. In January 1947, Marshall was called back by Truman to become secretary of state.

Meanwhile, the situation in the GMD areas became much worse. Inflation was out of control, and corruption at all levels of the government was rampant. Gradually, Jiang lost the support of intellectuals, students, workers, and professionals. The CCP used land reform to build support in key areas. Inept and inert, the GMD also gave the CCP the opportunity to consolidate its forces. Mao Zedong and communist commanders worked quickly to take over Manchuria from the Soviet Union.

In the summer of 1946, an all-out Chinese civil war broke out. In the beginning, the GMD still had the upper hand. However, after two years of fighting, a radical change took place in

the war. Communist commanders took Manchuria in 1948 and Tianjin and Beiping (present-day Beijing) in January 1949. All of North China was under CCP control. Throughout 1949, the communist forces moved through South and Central China mopping up GMD forces. Jiang looked at his options; took most of the government's treasure, such as gold bars, U.S. dollars, and other valuables; and fled to Taiwan. Since then, Taiwan became the location of the Republic of China (ROC). On August 2, 1949, U.S. ambassador to China John Leighton Stuart was recalled by the government.

On October 1, 1949, Mao stood on top of Tiananmen Square and proclaimed the founding of the People's Republic of China (PRC). The communists announced that the PRC was the only legitimate government in China and that Taiwan was part of China. The PRC was recognized by the Soviet Union a day later and by the other communist states in rapid succession. Because of hostility with the United States during the Chinese Civil War and the outbreak of the Cold War, Mao's foreign policy tilted solidly toward the Soviet Union. In opposition, members and supporters of the ROC settled in Taiwan and claimed that it was still the only legitimate government of China. The PRC took over the UN seat for China in October 1971. The United States remained a strong supporter of the ROC until U.S. president Jimmy Carter established diplomatic relations with the PRC in 1979. Since then, the United States has officially referred to Taiwan simply as Taiwan but retains a commitment to defend the integrity of the island from attack. From the end of World War II to 1949 when the PRC was founded, China's role on the world stage and its relationship with other nations dramatically changed.

—Yanli Gao

Bibliography

- Bai, Shouyi. *An Outline of Chinese History*. Beijing: Foreign Languages Press, 2002.
- Fairbank, John King, and Merle Goldman. *China: A New History*. Cambridge: Harvard University Press, 2001.
- Schaller, Michael. *The United States and China: Into the Twenty-First Century*. New York: Oxford University Press, 2002.

MAO ZEDONG

Mao Zedong (1893–1976) was born in the village of Shaoshan, Hunan Province. In 1918 he left for Beijing and worked as a library assistant at Peking University. There he witnessed the May Fourth student demonstrations of 1919 and was influenced by Li Dazhao and Chen Duxiu, the founders of the Chinese Communist Party.

In July 1921 Mao attended the First Congress of the Chinese Communist Party, which in 1923 allied with Sun Yatsen's Nationalist Party. In 1924–1925 Mao witnessed the peasants' outrage against the shooting of Chinese civilians by the British police in Shanghai and became actively aware of the revolutionary potential of the peasants. But in the early 1930s Jiang Jieshi, who succeeded Sun Yatsen as the leader of the Nationalist Party, attacked the communists in urban and rural areas. In late 1935 the communists undertook the famous Long March to escape the Nationalists' attack. After establishing a base area in Shaanxi Province, Mao eliminated the pro-Soviet faction in the Communist Party and established himself as its new leader.

Subsequently, the Anti-Japanese War (1937–1945) that became a part of World War II after 1939 enabled Mao to develop guerrilla tactics. Soon he penetrated the unoccupied areas behind the Japanese lines. Under his influence, the Chinese Communist revolution merged the Anti-Japanese War and the struggles against the Nationalist Party into a coherent strategy of mass mobilization. This strategy took the form of encircling the cities from the countryside in northern and central China. After the victory over Japan in August 1945, Mao capitalized on the popular dissatisfaction with the Nationalist Party and defeated Jiang Jieshi in the civil war. On October 1, 1949, Mao stood at the Gate of Heavenly Peace in Beijing and proclaimed the founding of the People's Republic of China.

—Joseph Tse-Hei Lee

Bibliography

- Blecher, Marc. *China against the Tides: Restructuring through Revolution, Radicalism and Reform*. London and New York: Continuum, 2003.
- Spence, Jonathan D. *Mao Zedong (Penguin Lives)*. New York: Viking Books, 1999.

China in the World, 1949–1971

Since the founding of the People's Republic in 1949, China had played important roles in the world. Two major dynamics determined the role of China in the world between 1949 and 1971: the rivalry between communism and capitalism and the perceived rivalry between Western imperialism and developing world nationalism. Emerging from a semicolonial background as well as a revolution inspired by the Soviet Union, China often tipped the balance of power between the two major camps in the Cold War and forged a complicated and ever-changing relationship with developing countries.

China in the world arena during the 1950s was first characterized by its role as a core member of the Communist Bloc. Upon the founding

► MAO ZEDONG'S INTERPRETATION OF THE THREE-WORLD THEORY

The post–World War II world has been typically divided into three major blocs: the capitalist First World, the communist Second World, and the rest that was lumped together as the Third World. However, Mao Zedong, the Chinese leader, had a different interpretation of this arrangement with his Three-World theory. He put the United States and the Soviet Union together as the world's superpowers, which constituted the First World. He identified this First World as the “hegemons” and the common enemies of the rest of the world. The Second World in Mao's schema was the economically more developed countries in Europe along with Japan, which were currently manipulated by the two superpowers but could potentially be the allies in the next world revolution. The rest of the world, politically independent or regions still subject to colonization—those that were mostly economically underdeveloped—made up the Third World and were the potential engine of the world revolution. As such, this interpretation of the Three-World theory justified China's role in the world as a challenger to the hegemony of the superpowers.

—Yi Li

of the People's Republic in 1949, the new government in Beijing adopted a one-sided foreign policy and concluded an alliance with the Soviet Union in exchange for Moscow's military and economic assistance. Trade with the Soviet Union and the rest of the Communist Bloc dominated China's economic links with the world, in which its inexpensive and agricultural products were sent in exchange for modern technology. China became indirectly involved in the Korean War in 1950, publicly challenging the United States, and established itself as a country set against the imperialist West. In many of the major diplomatic issues in the world, Beijing was firmly aligned with Moscow against the capitalist West and appeared to the international community as a die-hard communist country. Loud roars of anti-U.S. rhetoric, for example, echoed from the Chinese administration during the Cuban Revolution. The one-sided alignment with Moscow in world politics was complicated by China's strong anti-imperialist stand, however. As a country that had experienced humiliation by imperialists, including tsarist Russia, China was sensitive to many forms of foreign control and rejected the Soviet Union's request for the right to use Dalian as a naval base. In this aspect, China developed shared interests with many newly decolonized independent countries, such as India, Egypt, and Indonesia. In 1955, 30 or so newly independent countries gathered in Bandung, Indonesia, to discuss international politics. On this occasion, Chinese premier Zhou Enlai delivered a speech addressing the principles of anti-imperialism and peaceful coexistence. The Bandung Conference marked the birth of the Non-Aligned Movement, differentiating itself from both the capitalist West and the communist East.

In the 1960s China went on its own path as it diverged diplomatically from the Soviet Bloc. The growing schism with the Soviet Union and other members in the Communist Bloc in the 1960s ushered in a new era in which China redefined its new role in the world. While accusing Moscow of deviating from the orthodox path of Marxism and Leninism and being revisionist, Beijing stood behind Albania, which defied the direction from Moscow and strongly condemned the Soviet Union when the Red Army



➤ THE CULTURAL REVOLUTION

The Cultural Revolution in China, from 1966 to 1968, represented a power struggle between two factions within the government. State President Liu Shaoqi and then Party General Secretary Deng Xiaoping sought to promote more utilitarian economic policies. Threatened by the rejection of his own revolutionary vision, Party Chairman Mao Zedong mobilized young radical followers within China, the Red Guards, to help him remove Liu and Deng and sympathizers from power. With the Red Guards in the lead, an open period of social criticism of elites who opposed the Maoist vision was encouraged as was a cult of personality centered on Mao. Social chaos ensued as schools were closed, high-ranking officials and other “enemies” of the proletariat beaten

and killed, homes confiscated, and temples, shrines, and other symbols of tradition destroyed. The Red Guards forced many intellectuals to take on new jobs as laborers. Some PLA (People’s Liberation Army) groups that were sympathetic to the goals of Liu and Deng clashed with Red Guards, while factions of the Red Guards at times battled one another. In 1968 Mao eased the pressure and sent the disruptive Red Guards to the countryside. While Liu died in captivity in 1969, Deng ultimately returned to power and implemented economic reforms that set the course for China’s rejection of self-reliance and current emergence as a major global economic power.

—Fred Nadis

invaded Czechoslovakia in 1968. However, China's 1962 war with India marked bitter feelings in Indian-Chinese relations and cast doubts on the solidarity of the Third World. While China continued to claim that it was behind nationalist movements across the world, its support seldom materialized and therefore contributed little to China's role in the world. Nonetheless, China continued to stand in opposition to the United States. As American involvement in Vietnam intensified and the conflict escalated, China increasingly supported North Vietnam, diplomatically and materially. Throughout the 1960s large amounts of rolling stock loaded with materials was transported on the Chinese railways to the south, bound for Vietnam. As a result, both the West and the Soviet Bloc imposed economic embargos on China, which forced the country into economic isolation and on to autarky. Foreign trade became mostly insignificant within its economy, and subsequently the pace of modernization slowed down. This ideologically driven isolationism shaped China's emergent role in the world.

In 1969, a short but alarming military confrontation with the Soviet Union on a border island triggered new thinking within the Chinese leadership and steered foreign policy away from its decade-long revolutionary isolationism. Singling out the Soviet Union as its more threatening enemy, China developed a strategy for working out a better relationship with the United States and the West. Gestures and communications were made through Pakistan, a common friend of Washington and Beijing; U.S. secretary of state Henry Kissinger engineered the Secret Diplomacy to open dialogue between the two powers. The ensuing Ping Pong Diplomacy helped develop relations between the United States and China and paved the way for normalization. By 1970, the People's Republic of China was accepted as a full member of the United Nations, replacing Taiwan (Republic of China) as the sole representative of China in the organization and serving as a permanent member of the Security Council, thereby increasing the weight of Beijing in world politics at the expense of Taiwan. In 1971, U.S. president Richard Nixon announced that he was to visit Beijing in

early 1972, which signaled the dawn of the new role that China was to play in the world.

—Yi Li

Bibliography

- DeConde, Alexander. *A History of American Foreign Policy*. New York: Scriber, 1978.
- Jian, Chen. *Mao's China and the Cold War*. Chapel Hill: University of North Carolina Press, 2001.
- Meisner, Maurice. *Mao's China and After: A History of the People's Republic*. New York: Free Press, 1986.
- Scalapino, Robert A., ed. *The Communist Revolution in Asia: Tactics, Goals, and Achievements*. New York: Prentice Hall, 1969.

China in the World, 1972–Present

China's economic and international relations reached a turning point in 1972. Internal unrest and external threats inspired China to find practical strategies and new international alignments. The transition began in the 1950s when Chinese leaders reacted to a shift away from Stalinism on the part of the Soviet leadership by calling it revisionism. From the late 1960s, the relationship between the People's Republic of China (PRC) and the USSR, the world's two largest communist countries, continued to deteriorate. Diplomatic relations worsened as the PRC and the USSR verged on military confrontation.

In order to gain the support of other socialist countries, in the 1960s Chinese leaders published nine commentaries strongly critical of the Soviet Union. At the same time, the United States, in only one front of the Cold War, had become mired in the Vietnam War. In early February 1972, U.S. president Richard Nixon visited China and had meetings with Chinese leaders Chairman Mao Zedong and Premier Zhou Enlai. On February 28, 1972, China and the United States announced a joint communiqué in Shanghai that marked the normalization of relations after more than 20 years of hostility. Nixon called this monumental meeting in 1972 "the week that changed the world." Following this symbolic meeting, Great Britain signed a joint communiqué with China and upgraded its diplomatic representative to China to the level of ambassador in early March. In September Japanese prime minister Kakuei

Tanaka was invited to China and announced a joint statement of normalization with China.

Internally, Chairman Mao and Premier Zhou felt increasing pressure to normalize citizens' lives after much debate and unrest that had put the nation's economy at the edge of collapse. They recalled and reactivated the old guard, who had fought side by side with Mao and Zhou but who had been removed from power as a result of the Cultural Revolution launched in 1966. The most significant of these figures was Deng Xiaoping, who would eventually succeed Mao in the leadership of China. A symbolic sign of this new appeasement came when Mao attended the funeral of General Chen Yi. At the funeral, following Mao's statements, Zhou requested that Chen Yi's family members disseminate Mao's remarks that soon after freed a number of the old guard including Deng Xiaoping, Chen Yun, and Wang Zhen, all three of whom became the cornerstone of China's economic development since 1978.

In 1972, China's leaders initiated new economic policies. For the first time, leaders agreed with the State Development and Planning Commission (SDPC) to import eight production lines of fertilizer and chemical fiber, with this manufacturing infrastructure costing \$4.3 billion. This move in 1972 expanded China's import and export channels and enlarged the scale of foreign economic exchanges. It also broke the deadlock that had closed China from the outside noncommunist world since 1949. From then on, the SDPC concentrated on the development of the national economy and submitted reports on national economic problems to the Chinese Communist Party (CCP) Central Committee. Following the report, the Chinese government issued permission to Wuhan Steel and Iron Corporation to import rolling mills from Germany and Japan. This was the first and largest imported manufacturing project since the establishment of the PRC in 1949.

After Mao's death in September 1976, the country began reform efforts to become a more modern and economically developed nation. Between March and April 1976, Chinese people gathered at Tiananmen Square to mourn Zhou, who had died of cancer in January 1976. Many laid wreaths at the Monument to the Martyrs of

the Revolution. Policemen and security guards removed the wreaths at night, enraging people already opposed to the excesses of the Cultural Revolution. On April 5, a large protest erupted in the square. These protests developed into a turbulent upheaval that finally destroyed the power of the central core of the Cultural Revolution, the so-called Gang of Four, which included Mao's wife Jiang Qing as well as Zhang Chunqiao, Wang Hongwen, and Yao Wenyuan.

From 1978, Deng Xiaoping led a new economic revolution and built a new image of China in the world. However, the political destabilization exemplified by the fall of the Berlin Wall and the collapse of the Soviet Union by the late 1980s and early 1990s concerned the Chinese leadership. An impassioned student protest in Tiananmen Square urging democracy and reform of political institutions during the summer of 1989 seemed to conservative politicians to be a harbinger of similar destabilization in China. The People's Liberation Army was ordered to move into Beijing to end the protest. The violence of the confrontation was shocking to the Chinese people as well as to the international community, and the government was forced to launch a public relations campaign in an attempt to repair the damage. In 1992, Deng made an important trip to southern China and declared that the free market was not only for capitalist societies; Deng insisted that a socialist society also needed a market orientation. This historical declaration opened China's economic development into the new global era.

Deng, in addition to being the driving force behind the economic miracle, turned down the lifetime term for the leading position in the CCP and initiated a peaceful power transition, having learned lessons from the USSR's turbulent collapse and the Tiananmen Square incident that had halted China's cautious political reform efforts since 1989. Under Jiang Zemin, the leader of the third generation, economic development and living standards continued to increase. As of 2008, China had become the world's second-largest economy, following only the United States. China's gross domestic product increased tenfold between 1978 and 2008. Hu Jintao, the head of the fourth generation of leadership, initiated

the policy of the Peaceful Rise and Harmonious Society of China in world affairs to attempt to alleviate the world's fear of China's potential ambition and to comfort the less fortunate groups of people in China. Hu Jintao sought to address the increasing gap between the rich and poor and the problems of environmental deterioration that resulted from a sole focus on economic expansion. By 2007, China had become the third-largest economy in the world. The 2008 Summer Olympic Games in Beijing also solidified China's status as a leading world power that had moved beyond its former isolationism.

—*Xiaoxiao Li*

Bibliography

- Becker, Jasper. *The Chinese*. New York: Free Press, 2000.
- Central Intelligence Agency. "The World Factbook: China." <https://www.cia.gov/library/publications/the-world-factbook/goes/CH.html>. Accessed June 25, 2009.
- Lovell, Julia. *The Great Wall: China against the World, 1000 BC-AD 2000*. New York: Grove, 2006.
- MacMillan, Margaret. *Nixon and Mao: The Week That Changed the World*. New York: Random House, 2007.
- Spence, Jonathan D. *The Search for Modern China*. New York: Norton, 1990.

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World History Encyclopedia

Era 9: Promises and Paradoxes, 1945–Present ■ Volume 20

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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
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ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Economics and Trade

At the end of World War II, as the world stood in shambles amid the destruction following nearly a decade of total war, the Grand Alliance sought to reconstruct the global economy. Late in the war at the Bretton Woods Conference of 1944, with the promise to create a more cooperative world in order to prevent the economic anarchy that marked the interwar period, the United States and its Western allies sought to create a postwar monetary system to regulate commercial and financial relations the world over. This conference created the global financial institutions that would later be known as the World Bank and the International Monetary Fund (IMF), among others, to ensure the economic stability of the world economy and thereby prevent another global depression. However, amid the relative decline of European power and decolonization and as the Cold War loomed over the horizon, both the United States and the Soviet Union attempted to re-create the postwar world using their competing economic ideologies as a template.

The reconstruction of the world economy was a top priority for much of the decade following the war's end. The United States infused vast sums of money through the Marshall Plan into Europe and also invested heavily in Japan, not so much to create economic stability in these regions but to ensure the political compliance of these areas amid the fears of communist expansion. European compliance with the Marshall Plan also led to growing economic collaboration from within partly to prevent future German aggression, leading to the development of the European Economic Community (EEC), which would become the European Union in 1991. The Soviet Union also conducted itself similarly over areas under its domination, particularly Eastern Europe and China, to guarantee the development of communism. Ideology played a crucial role in the establishment of the global economy in what would be known as the First World and the Second World. However, ideological competition over the rest of the world (or the Third World), much of which was undergoing the process of decolonization from former European masters, characterized the relationship between the two superpowers. Two models of economic development, one based on the socialist planned economy and the other on capitalist free enterprise, were pitted against each other as the ideological battle between the United States and the Soviet Union ensued throughout much of the rest of the twentieth century. Much of the developing world responded with enthusiasm to the economic assistance provided by the superpowers and their allies, while some proved reluctant to ally themselves with either due to fears of political and economic domination. Newly independent

states, such as India, Yugoslavia, and Indonesia, sought a third way that did not include aligning themselves with an economic ideology promoted by the superpowers.

Through the 1950s into the 1960s, the developed world experienced an economic miracle due to the massive development of the global economy, internal redevelopment modernization of the industrial base, and the creation of a vast array of consumer goods available to populations eager to purchase such goods. States such as the United States, West Germany, Japan, Australia, and the composite countries of the ECC thrived economically until 1973 as they underwent this tremendous period of growth. In many of these countries, governments also created social security systems to ensure the welfare of the vast majority of their populations, with some providing full medical benefits, unemployment benefits, and old-age pensions for their citizens. The establishment of the cradle-to-grave welfare state, such as that in Britain, became a salient characteristic of the developed world during this period. Labor unions in much of the developed world grew in strength and political power, as they had a great level of agency in the growth of the global economy. Their prosperity and that of their employers rested on their productivity and job satisfaction, which given the economic boom was ensured. Furthermore, the booming global economy encouraged the creation of multinational corporations (MNCs), mostly with their headquarters based in the developed world, that searched for the cheapest labor markets, sources of raw materials, and laxest labor regulations to ensure maximum profits. While this process ensured the economic stability of the developed world, it also began the gradual process of industrialization over the next several decades.

The economic institutions created by the Bretton Woods Agreement, namely the World Bank and the IMF, which were intended to ensure the economic stability of the global economy, gradually became associated with Western neocolonialism by many states in the developing world and in the communist sphere. Both the World Bank and the IMF, while providing developing regions, such as Latin America, Africa, and Asia, with investment aid for developing infrastructure and industry, also demanded compliance with political, social, and economic conditions that led to various instances of economic dominance on the part of the developed world. International public opinion noted the association between the acceptance of U.S. foreign aid and the installation of pro-U.S. dictators in countries such as Vietnam, Nicaragua, and Chile.

The growth of MNCs had the effect of not only relocating industrial plant into low-labor cost world regions from the increasing cost of labor markets in the developed world, abiding by IMF economic aid conditions into doing so, but also led to the global interdependence of such regions and their relative power relations. Nonetheless, economic imbalances between the developed and the developing worlds would soon illustrate that the latter depended on the former for its abundance and prosperity.

By 1973, the world economy faced a severe crisis that thereby ended the sustained period of growth that had characterized it since the end of World War II. Related to the oil crisis prompted by the Organization

of Petroleum Exporting Countries (OPEC) in reaction to the Yom Kippur War in the Middle East, the crisis also illustrated the dependence of the developed world on oil. An economic slowdown the world over, affecting most of the industrialized world, led to massive layoffs, stagflation, and a growing sense of distrust in the existing economic system for the remainder of the decade. In contrast, the OPEC countries and many places in the developing world viewed this as a sign of the interdependence that existed within global capitalism, illustrating their level of agency within this relationship. The global economic crisis altered the liberal political structures in power in much of the developed world, which held in great importance the power of labor unions and the expansion of the welfare state, and led to the advent of economic neoliberalism in places such as West Germany, Britain, and the United States in the late 1970s and early 1980s. This led to the loss of power on the part of labor unions, the rapid outsourcing of industry and labor abroad, and the development of the postindustrial state in much of the developing world. As factories left the urban spaces of the developed world to cheaper and more environmentally lax developing countries, leaving behind so-called rust belts, the economy adjusted for the growth of service jobs that characterized the postindustrial society of much of the West. Some former peripheral areas, most notably the Four Tigers of East Asia (Hong Kong, South Korea, Singapore, and Taiwan) managed to rapidly industrialize, to the point of becoming part of the First World.

Neoliberal economic policies based on domestic economic deregulation and the development of capital markets for overseas investment in tandem with international organizations developed to increase transnational economic cooperation characterized much of the 1980s and 1990s. The collapse of the Soviet Union in 1991 led to the triumphalist call that ideological capitalism had won the Cold War and opened new regions to further investment and development under the aegis of free market capitalism. While the process of globalization accurately described the international nature of the world's economy since the sixteenth century, during this period it increased by leaps and bounds, making all sectors of the international economy interdependent on each other. Furthermore, international free market regions such as the North American Free Trade Agreement (NAFTA) in North America and Mercado Común del Sur (Mercosur) in South America, similar to the European Union, developed as a result of the understanding that such structures provide viable regional economic units. Greater cooperation among the major industrialized states of the world, such as the Group of 8 (G8) and the World Trade Organization (WTO), also illustrated this sense of awareness as they sought to set tariffs, production, and trade regulations affecting the global economy. However, there were myriad forms of resistance to this type of cooperation, as it was seen by some critics of capitalism as a way for the developed world to dominate at the expense of the developing world. Antiglobalization movements, both in developed and developing states, orchestrated protests and established nongovernmental organizations to counter the growing power of global capital and its purported abuses against the environment, labor, and the political autonomy of the developing world.

At the turn of the twenty-first century, amid massive international economic expansion, many problems continued in spite of sustained global economic growth. Within the United States, an unregulated mortgage industry that provided subprime mortgages with variable interest rates to consumers with questionable credit ratings and earnings led to the credit crisis of 2007. Allegations surfaced that major lenders engaged in predatory lending practices, which included targeting borrowers who may not have fully understood the terms of their loan or lending to borrowers unable to fulfill repayment. Such home loans often included hidden terms and conditions and exorbitant fees and often led to default, seizure of collateral, and foreclosure. The vast number of nationwide foreclosures eventually led to the economic collapse of many of the major firms that had taken part in these practices, such as Lehman Brothers and Washington Mutual in the summer of 2008. The British bank Northern Rock was nationalized by the UK government to salvage it from collapse. With these major banks reeling from lost assets, the global international markets reverberated by widespread banking closures and efforts by governments to bail out their faltering banking systems, particularly in the European Union and the United States. In the fall of 2008, international markets plummeted to their lowest point since the Great Crash of 1929, thereby illustrating the interconnectedness of the world economy. Massive layoffs, foreclosures, bank failures (and the resulting bank consolidations, such as Wells Fargo-Wachovia, Chase-Washington Mutual, etc.), and a looming world recession as a result of unregulated free market practices were the end result, with much of the world fearful of entering another global depression, akin to that of the 1930s.

—*Abraham O. Mendoza and Jack Waskey*

■ Introduction: Globalization

Globalization refers to processes that produce an increase in economic and cultural connections across the world and, according to some interpretations, transformation from a world organized into nation-states to a single political and economic global unit. New developments in transportation and communication technology and also in international political organizations as well as an increased international flow of information, people, and goods have all aided the process of globalization through the centuries. While the processes behind globalization via trade and the accompanying cultural exchange can be seen clearly in the sixteenth and seventeenth centuries, it was not

until recent decades that globalization was given a name and became a primary focus of thought. Disputes over its origins stem from different analytical conceptions.

One conception of globalization explains it as an inexorable process based on technological innovation and driven by individuals, groups, and firms. Power is being diffused away from states and toward firms, markets, and other private entities, whose activities disseminate ideas and practices across the globe. Those activities tend to ignore the territorial boundaries of states and erode feelings of nationalism. Globalization has the effect of relocating territorial divisions to the local in some cases and to the worldwide. The

predicted result of such processes is either a global unit or a fragmented world characterized by a medieval quality of diffused and overlapping power and authority.

A second conception explains that the economic integration that is occurring in the world engenders a need for what is termed global governance. Trends toward international cooperation through institutions have developed since the end of the Napoleonic wars. These institutional efforts gained traction in the post-World War II period through the United Nations and other international intergovernmental organizations; they have accelerated in the post-Cold War period. Furthermore, international nongovernmental organizations (NGO) have proliferated, and a growing concern has arisen to protect human rights against violations wherever they may occur. The increased connections across the globe lead logically to the need to establish governing institutions that coincide with the scope of the matters that they need to deal with. Such governing institutions can be private as well as governmental.

A third conception directs attention to the activities of leading states—especially the United States in the early twenty-first century—that, through their military power, provide the stability upon which economic transactions depend. It also explains that national governments are essential to establishing systems of law, order, regulation, and other necessary conditions for secure investment and economic activities. Rather than being undermined and eroded, smaller and poorer states and societies gain wealth and power through their participation in global processes. The proliferation of NGOs and activities in the post-Cold War period are enabled to act by the existence of very strong states that embody a liberal ideology promoting private undertakings, and such NGOs are often subsidized by governments.

Globalization processes are endorsed and advocated by some and criticized and opposed by others. Among the proponents are governments, firms, and individuals who benefit from increased international trade and opportunities for economic enrichment as well as cheap goods and expanded markets. Globalization also tends to be supported by adherents of liberal ideology be-

cause it promotes freedom and individual rights. Among opponents are those who lose employment through the relocation of jobs to areas of cheaper labor, nationalists who perceive the erosion of distinctive cultures and national autonomy, and defenders of equality who regard capitalist expansion as the generator of increasing inequality. Opposition also stems from those who oppose domination of the world by the leading democratic industrialized countries, for example, Muslim fundamentalists aspiring to the establishment of a caliphate (Islamic empire) in the Arab world. Among the issues arising out of these opposed views, free trade versus protectionism is perhaps the most prominent. It is likely that should protectionism become the dominant economic policy in the advanced industrial countries, the processes of globalization would be substantially slowed down if not arrested.

Because globalization processes continue unabated, it is impossible to know what the aftermath will be. So long as the essential conditions that underlie the processes continue, increased connections across the world seem likely to be forged. These conditions are (1) the strength of the state to both provide stability internationally and ensure law and order domestically and (2) liberal ideology and policy commitment to ensure the advancement of processes such as free trade. It is possible that globalization processes could be disrupted by events. A traumatic event, such as a massive nuclear explosion, might lead to policies of autarky and withdrawal into individual nations. A worldwide depression might also weaken states and lead policy makers to turn away from international cooperation. Aside from these prospects, no one can predict what sort of future conditions continued globalization processes might produce. It seems likely that connections will increase, for that phenomenon has been going on for over a millennium.

—Howard H. Lentner

Bibliography

- Friedman, Thomas L. *The World Is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus, Giroux, 2005.
- Held, David, Anthony McGrew, David Goldblatt, and Jonathan Perraton. *Global Transformations: Politics, Economics and Culture*. Stanford, CA: Stanford University Press, 1999.

Lentner, Howard H. *Power and Politics in Globalization: The Indispensable State*. New York: Routledge, 2004.

Scholte, Jan Aart. *Globalization: A Critical Introduction*. New York: St. Martin's, 2000.

Stiglitz, Joseph E. *Globalization and Its Discontents*. New York: Norton, 2002.

Antiglobalization Movements

The term “antiglobalization” is often used to depict a political stance that unites people around the globe who are opposed to the neoliberal project, that is, what they perceive as a large-scale attempt to remodel and integrate societies solely on behalf of efficiency and free-market imperatives. These critics target industrial corporations and the so-called Bretton Woods insti-

tutions, namely the World Trade Organization (WTO), the International Monetary Fund (IMF), and the World Bank Group (WB). Additional targets are institutions and accords that share in the Bretton Woods Consensus, such as the Organisation for Economic Co-operation and Development (OECD), the North American Free Trade Agreement (NAFTA), the Free Trade Area of the Americas (FTAA), the Multilateral Agreement on Investment (MAI), and the General Agreement on Trade in Services (GATS). Antiglobalization activists, who refer to their movement as the Global Justice Movement, the Movement of Movements, or the Anti-Plutocracy Movement, deem both the underlying consensus as well as economic policies as incompatible with democratic, social, humanitarian, and environmental concerns. A major argument that they make is that neoliberal economic policies are elitist and short on equality and equity.

Antiglobalists argue that because neoliberal economics promote the privatization of many public services, international institutions acting on behalf of neoliberalism erode the sovereignty of states and democratic arrangements. They even accuse said institutions of eroding the very possibilities of self-government. Under the pretense of false necessities, international institutions and governments presumably act exclusively for the good of large and influential transnational corporations (TNCs) such as General Motors, Mitsui & Co. Ltd., Royal Dutch Shell, and Exxon Corporation. In the eyes of antiglobalization activists, such TNCs enjoy privileges that allow them to move freely across borders, exploit natural resources, and employ workforces below fundamental social and humanitarian standards in the name of economic efficiency. In the eyes of activists, TNCs have been endowed with abundant discretion to provide solely for their own profits. They have been given leverage to wantonly destroy culturally specific social structures and damage the environment and biodiversity around the globe if it suits their efficiency-oriented ends. Some activists claim that borders should be open not only to capital but also to the movement of persons, including migrants and refugees.

Activists hold that the fate of people around the globe depends on reconciling the legitimate

» McDONALDIZATION

American sociologist George Ritzer's *The McDonaldization of Society* (1995) and his follow-up volume *The McDonaldization Thesis* (1998) describe the process by which society has become more rationalized and uniform around the globe. Drawing from the earlier work of German sociologist Max Weber, Ritzer examines the rationalization of economic institutions and the irrationalities that this creates. As an economy reshapes itself to consumerism, it further spreads the rational principles underlying assembly line production to consumption; that is, McDonaldization occurs. According to Ritzer, this process includes imposing the elements of efficiency, calculability, predictability, and control, all central to fast food establishments and the uniformity they offer and impose. The net result is a landscape that is more predictable yet less distinct. In his preface to the later volume Ritzer notes, “While undoubtedly bringing with it many positive developments, McDonaldization also involves a wide range of irrationalities, especially dehumanization and homogenization.” Along with the postmodern critics of his era, Ritzer explores the forces imposing characteristics globally that may make the world smaller but also potentially subvert the uniqueness of place and character to create a bland consumer landscape.

—Fred Nadis

interests of rich and poor countries. They point at the crucial role of free trade in a literal sense of the word and criticize existing trade regimes for being designed so as to open markets in the developing world while at the same time protecting markets of the wealthier countries. If not reversed, this trend will continue to strengthen the power of industrialized nations to the detriment of the developing nations. Alliances such as the World Economic Forum (WEF), the Trans-Atlantic Business Dialogue (TABD), and the Asia-Pacific Economic Cooperation (APEC) allegedly bolster this trend. It is within these forums that political and business leaders coordinate public trade and financial policies with a view to enhance competitiveness, which activists take to mean increasing the power of economic elites who run multinational corporations at the expense of the well-being of people around the globe.

As a remedy against neoliberal globalization, antiglobalization activists emphasize the need of terminating legal status of TNCs and endorse dramatic reform of the WTO, the IMF, and the WB.

—Günther Auth

Bibliography

- Beder, Sharon. *Global Spin: The Corporate Assault on Environmentalism*. Totnes, UK: Green Books, 1997.
- Buckman, Greg. *Globalization, Tame It or Scrap It? Mapping the Alternatives of the Anti-Globalization Movement*. London: Zed Books, 2004.
- Dunkley, Graham. *The Free Trade Adventure: The WTO, the Uruguay Round and Globalism—A Critique*. New York: Zed Books, 2000.
- Wall, Derek. *Babylon and Beyond: The Economics of Anti-Capitalist, Anti-Globalist and Radical Green Movements*. London: Pluto, 2005.

Post-World War II European Economic Revival

In the aftermath of World War II, Europe found itself devastated with destroyed cities, abandoned farms, 60 million dead, and millions more displaced, creating terrible economic and social conditions. Damage to the industrial infrastructure and material capital of Europe was vast. Poverty, disease, a diminished working force, low

productivity, disorganization, and socioeconomic insecurity were some of the major problems that followed the war. Former capital cities and centers of industrial production and entrepreneurial activity had been destroyed. Agricultural production was in no better condition, while malnutrition and homelessness across Europe seemed to be unsolvable problems.

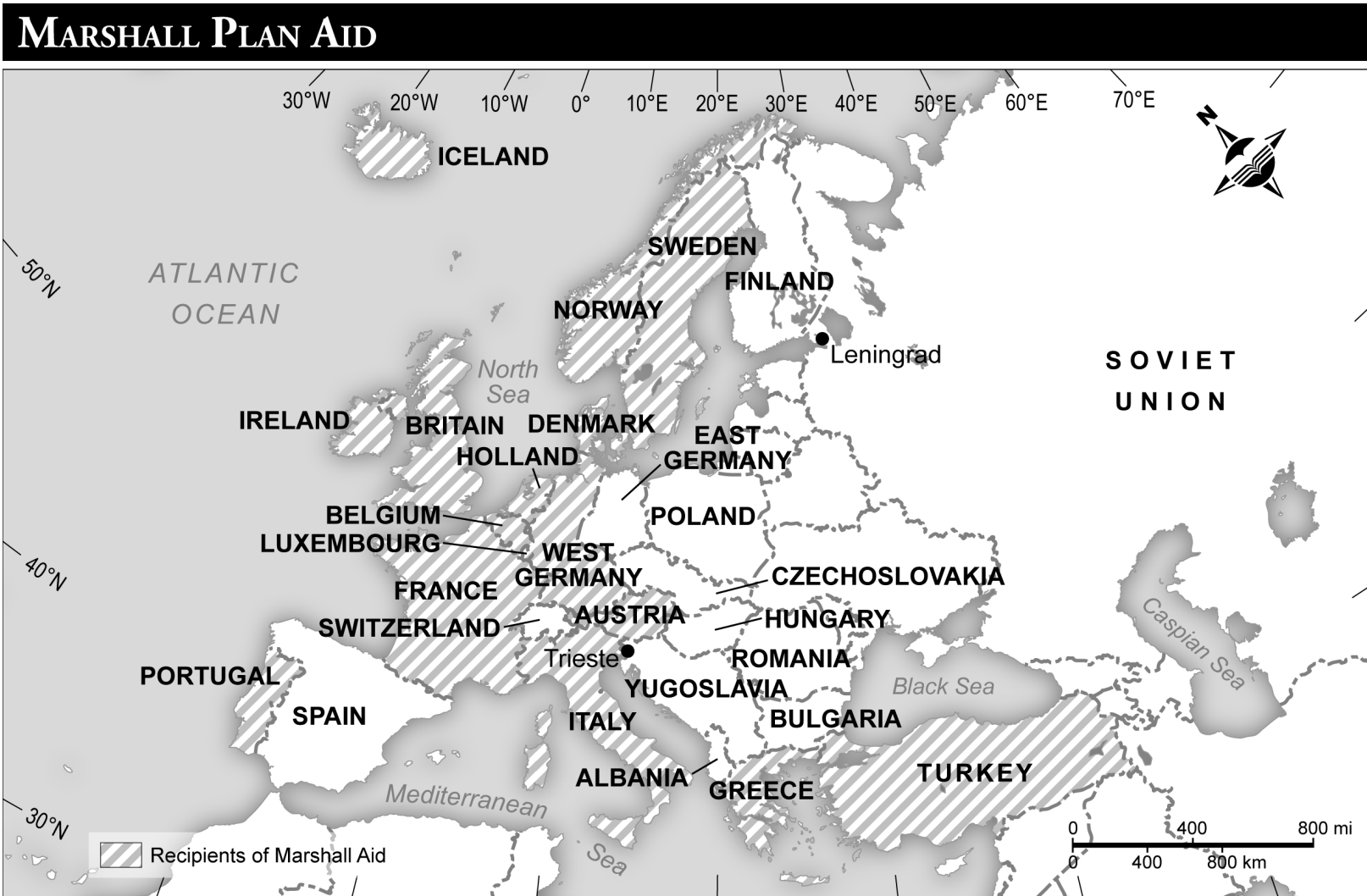
The threat of a new international crisis and wars inspired the creation of the United Nations (1945). At the Potsdam Conference (1945), the Allies divided Germany into four zones of occupation. In the Far East and Africa a number of nations declared independence and engaged in anticolonial struggles with Great Britain, France, and the Netherlands. In China, communist and nationalist powers were fighting for power.

In order to avoid consequences similar to the period that followed World War I, the United States developed an interventionist foreign policy, catapulting the country into the role of global leader. With the United States already the most important regulating power of the postwar international order, it sought to develop those parts of Western Europe under its influence. Meanwhile, parts of Central Europe, Eastern Europe, and the Balkan region languished under the influence of the USSR. Among other factors, this fact and the continuous mistrust between the United States and the USSR set the basis of the Cold War.

The process of postwar economic revival of Europe took place through various processes and attempts at both the national and international levels. One such attempt was the creation of the United Nations Relief and Rehabilitation Administration (UNRRA), an organization established in June 1943 by Franklin D. Roosevelt in order to assist and financially support about 8 million refugees of World War II.

Harry Truman assumed the presidency in April 1945 after the death of Roosevelt. In Greece, communist powers were becoming influential in the civil war, and Britain declared in February 1947 that it could no longer aid Greece. Truman announced in March 1947 his plan to intervene in countries threatened by communist insurgencies. This plan, known as the Truman Doctrine, was first implemented in Greece.

In tandem with the Truman Doctrine, in June 1947 George Marshall, U.S. secretary of state,



initiated the European Recovery Program, aimed at the economic restructuring and revitalization of the wrecked European economies. At the same time, the Marshall Plan treated Europe as an investment opportunity, since financial aid to Europe would create a new market for the export of U.S. products. From 1947 until 1952, the United States provided \$13 billion in loans and financial assistance to the 17 countries that joined the Organization for Economic Cooperation and Development (OECD). For instance, the aid that it provided to France during these years was more than \$2 million, to Germany almost \$1.5 million, and to Great Britain more than \$3 million. While the USSR was intensifying control over Eastern Europe, Vyacheslav Molotov refused to accept financial support from the Marshall Plan. He also criticized it as imperialistic, for it required the participants to impose a series of political reforms. In the United States, a postwar boom took place, and a gradual revitalization of the industrial production in Germany, France, and Italy commenced in the 1950s. The Marshall Plan offered a series of benefits to the United States, opening new markets for the export of American products. Franco's Spain was excluded from the plan.

The idea that European economies could enter a process of liberal development only through cooperation and homogenization of economic interests became dominant in the 1950s. The creation of a common Western market became a priority. Postwar restructuring could be facilitated not only through cooperation with the United States but also between the European countries and through the making of commonly accepted economic rules and minimized tariffs. Thus, a new basis for the economic integration of Europe was set in March 1957, when the European Economic Community (EEC) was ratified by the Treaty of Rome, signed by West Germany, France, Italy and Benelux (Belgium, Luxemburg, and the Netherlands).

In the decades that followed World War II, most European countries faced a period of prosperity and growth also related to technological progress. The economic model of Keynesianism was dominant in most of the European countries although with important differences between them, for instance between continental Europe,

➤ ECONOMIC REVIVAL IN EUROPE— MARSHALL PLAN IN ITALY

Following World War II, much of Italy, including its economy, was in shambles. The popularity of the Communist Party in Italy (PCI), associated with wartime resistance against the Axis and the victorious Soviet Army, worried American occupation forces. The U.S. Marshall Plan, as specifically orchestrated in Italy, sought to funnel American capital into the rebuilding of the economy and to incorporate Italy into the West European Economic Community. The main goal was to prevent Italy from falling into the Soviet orbit.

The plan's aid to Italy in the first year was focused on encouraging imports of coal and grain to provide food and heat to Italians in the long and arduous winter of 1946. It also provided much-needed capital for hard-pressed industries such as textiles. However, the Italian government immediately used American aid to invest in engineering, agriculture, energy, and infrastructure in order to get the country on its feet immediately, neglecting basic consumer and food requirements of the Italian population. U.S. authorities pressed the Italians to focus on the immediate everyday needs of the population, still fearful of the popularity of the PCI. However, the nation continued to suffer from austere wartime conditions, while its government continued to pour money only into specific sectors of the economy. The United States became involved in the elections of 1948, flooding the country with narratives of the benefits of the West and of the Marshall Plan, conveyed via pamphlets, films, and even puppet shows, to ensure that the popular PCI would not form a viable government in Italy in the midst of the Cold War. Despite these wider strategic aims, the Economic Miracle of the postwar era was by and large attributable to the Marshall Plan under American auspices.

—Abraham O. Mendoza

Scandinavia, Great Britain, and the Mediterranean countries. Keynesianism was based on broad public expenditure to provide social support and stimulate consumerism. The welfare state functioned as provider of social services and financier of social institutions. The oil crisis of 1972–1973 activated a crisis in the welfare

state in Europe and contributed to its transformation to more liberal and neoliberal forms of politics.

—*Maria Markantonatou*

Bibliography

Hobsbawm, Eric. *The Age of Extremes: The Short Twentieth Century, 1914–1991*. London: Abacus, 1995.

Hogan J., Michael. *The Marshall Plan: America, Britain and the Reconstruction of Western Europe, 1947–1952*. New York: Cambridge University Press, 2005.

Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.

European Union

The European Union (EU) is an international organization that is currently composed of 27 European states that cooperate in a wide variety of sectors, ranging from agriculture to the common market of goods and services to foreign policy and immigration. The common market is by far the most important area of policy making within the EU. The present EU system grew out of the European Community (EC) and was established in 1992 with the entry into force of the so-called Treaty of Maastricht. Prior to 1992, the EC had evolved from the European Coal and Steel Community (ECSC), founded in 1951; the European Economic Community (EEC), founded in 1957; and the European Atomic Energy Community (EAEC, or Euratom), created in 1958.

Plans to unify Europe were increasingly popular throughout the 1920s. Aristide Briand, for instance, popularized the idea of a European Federation in 1929. World War II and the destruction that it brought about induced high-level functionaries such as Jean Monnet and Robert Schuman to take up previous plans and elaborate a program for the establishment of institutional forms of cooperation between states. The ideas of Monnet and Schuman became known as the Schuman Plan and were embodied in the 1951 treaty establishing the ECSC.

The Schuman Plan would not have been realized without the support of the U.S. government. The United States endorsed European integration because the gradual implementation

of nontariff-based liberal economic policy promised to be an effective strategy of shifting the financial burden of reconstructing Europe back from the U.S. Treasury to the European states themselves. When the governments of Belgium, the Netherlands, and Luxembourg (the so-called Benelux countries) and Germany, France, and Italy founded the ECSC, the political purpose of the ECSC was to pool the decision-making competencies of the six founding states in matters pertaining to their steel and coal resources. Further attempts to establish communal agencies for the coordination of defense and foreign policies turned out to be too ambitious.

Yet the ideas behind these initiatives lived on and crystallized, on the one hand, in the European Political Co-operation (EPC) and eventually the Common Foreign and Security Policy (CFSP), which was introduced by the Treaty of Maastricht in 1991, and, on the other hand, in the European Rapid Reaction Force, still in formation. As these initiatives suggest, the process of European integration amounted to something that has always been more than an economic project pure and simple. Contrary to plans of individual governments (i.e., Great Britain), the majority of participants in the process of European integration aspired to some sort of political community enveloping and stabilizing the evolving economic community because, as had become clear by the 1970s, an economically integrated Europe without some form of political identity and leverage would remain inferior to the United States on the one hand and to Japan or some other Asian state such as China on the other.

The process of European integration gained its main impetus from the EEC, originally established in 1957. The EEC member states introduced a customs union, with goals that remain at the core of the EU's common market: freedom of movement of goods, services, capital, and people. With the Merger Treaty of 1967, the six founding members abolished internal tariff barriers and established the EC. During the 1970s and 1980s the EC first admitted Great Britain, Denmark, and Ireland, which acceded in 1973; Greece in 1981; and then Spain and Portugal, which both joined in 1986. The original member states looked forward to an enlarged market, while new member

states sought financial support from the EC's regional and structural funds.

As a result of the two enlargement rounds, the integration process faltered. Member states increasingly found it difficult to identify with the community mainly due to a lack of consensus regarding competencies and decision-making procedures of the EC. Yet various initiatives by the European Parliament, the Commission, and government representatives in the Council renewed faith in the EC. The Single European Act (SEA) of 1986 abolished the final barriers to the free movement of people, goods, and services and cleared ground for the deepening of the Common Market. At the same time, intergovernmental agreements allowed for the formal inclusion of the CFSP as well as cooperation in Justice and Home Affairs (JHA) in what became the EU in 1993.

The coming into effect of the Treaty of Amsterdam (1999) and the Treaty of Nizza (2003) adjusted the decision-making processes of the EU to a political system of 25 member states. The further project of establishing a European Constitution, discussed since the early 1980s to establish a more efficient division of labor between the EU's institutions, has faced insurmountable obstacles so that it is not clear yet if and how the EU may further evolve.

The current political system of the EU is often said to be more than a confederation of states and less than a federal state. The EU is a political system *sui generis*. Cooperation within the EU is either supranational or intergovernmental, depending on the matters that are being dealt with. With the 1991 Maastricht Treaty, the member states established three pillars: the EC, the CSFP, and the JHA. Matters falling within the EC are dealt with in a supranational fashion: the EC members often rely on majority votes. This means that all member states are required to comply with and implement supranational acts even if compliance runs against their avowed interest. Issues falling within the two other realms, the CSFP and JHA, however, are treated in an intergovernmental fashion. Here, decisions are made by government representatives, very often by unanimity. Independent appointees and/or elected representatives have solely advisory functions.

➤ THE EURO (€)

The official currency of the European Union's (EU) Eurozone, the euro (€), was introduced in 2002. The Maastricht Treaty of 1993 required EU members to adopt the euro once they met certain monetary and budgetary requirements. However, Britain, Denmark, and Sweden negotiated exemptions and have been able to keep their own national currencies. The Eurozone consists of 15 states: Austria, Belgium, Cyprus, Finland, France (and its overseas departments), Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, and Spain. After 2003, new countries wishing to join the EU did not have the option to opt out of adopting the euro. The euro is administered, printed, and distributed by the Frankfurt-based European Central Bank (ECB) in tandem with the Eurosystem, which is made up of the central banks of the Eurozone. Currently, the euro has the largest circulation and highest combined value of any world currency.

—Abraham O. Mendoza

This system has created a new mode of complex governance that is aimed at deepening the European social and economic space through framework provisions that reinforce the willingness among the participants in the market to continue playing the game and to refrain from breaking the rules. EU policy making itself is less tied to formal processes of communication and decision making among the Commission, the Council, and Parliament. Governmental and nongovernmental actors, mostly industrial associations and lobbyists, tend to interact in informal channels of deliberation with only the partial inclusion of the public through the media. Officials ritually invoke the need to observe standards of transparency and to provide legitimation. They thus have created from within democratic accountability and have streamlined the decision-making process. Regulations foster fair competition among market players.

Complex governance in turn has been effectuated by a large and comprehensive structural change in the EU. It has been brought about by a

consensus regarding the principal importance of a common European market that is based on efficient division of labor across national societies. Various instruments have been designed so as to forge postnational loyalties and to replace social solidarities by much more diffuse solidarities in a multilevel European network society. Community policies are no longer aimed at maintaining equal living conditions but instead are meant to uphold an equality of opportunity and justice. In effect, the political system of the EU has been structurally coupled with global economic developments and is characterized by a transnational pluralism.

The EU has become the most important arena for the coordination of member states' economic policies. In matters pertaining to the Common Agricultural Policy (CAP), for instance, the EU has assumed 75 percent responsibility for the regulation of agricultural subsidies and the launching of specific programs such as land stewardship. Its influence on environmental questions is even greater. The EU is responsible for over 80 percent of all environmental regulations in the individual member states. In areas such as transport, financial matters, and health, the regulations and directives of the EU constitute 40–50 percent of all prescriptions, with many issues remaining within the discretion of the member states' governments. The EU's role regarding a common European currency and issues of Home Affairs, labor and social policy, and education and science remain contested.

—Günther Auth

Bibliography

- Christiansen, Thomas, and Simona Piattoni, eds. *Informal Governance in the European Union*. Cheltenham, UK: Edward Elgar, 2003.
- Craig, Paul, and Carol Harlow, eds. *Lawmaking in the European Union*. London: Kluwer Law International, 1998.
- Joerges, Christian, and Renaud Dehousse. *Good Governance in Europe's Integrated Market*. Oxford: Oxford University Press, 2002.
- Joerges, Christian, and Ellen Vos, eds. *EU Committees: Social Regulation, Law and Politics*. Oxford, UK: Hart, 1999.
- Pollack, Mark A. *The Engines of European Integration: Delegation, Agency, and Agenda Setting in the EU*. Oxford: Oxford University Press, 2003.

Weigall, David, and Peter Stirk. *The Origins and Development of the European Community*. Leicester, UK: Leicester University Press, 1992.

The Rise of the Multinational Corporation

The multinational corporation (MNC) has become a pivotal element in the development of the international economy and the process of globalization since the end of World War II. An MNC is a corporation that has many of its facilities and other assets in at least one country other than its country of origin (where headquarters are typically located), with offices and/or industrial plants, distribution centers, and investments often in numerous countries. MNCs did exist in prior historical periods akin to modern forms (i.e., British East India Company, United Fruit Company), but the MNC's ubiquitous presence and importance to the global economy has increased dramatically since the late twentieth century. Companies such as Nike, Ford Motor Company, Starbucks, and McDonald's have various branches, subsidiaries, and franchises in multiple countries outside of their country of origin, mostly in the West (United States, European Union, and Japan).

The postwar MNCs emerged as many nationally based companies in the West shifted strategies to take advantage of the process of decolonization in much of the developing world, where many countries sought to modernize their economies with the assistance of European and American (and later Japanese) financiers. Companies such as Fiat in Italy, Ford in the United States, and Philips in the Netherlands found it beneficial to expand their manufacturing bases into developing regions (i.e., South and East Asia, Latin America, and the Near East) to assist in these nations' economic development while simultaneously taking advantage of the inexpensive labor pool and their emergent domestic markets. In turn, countries such as Mexico, Brazil, Kenya, India, and Indonesia, to mention a few, with the creation of jobs for their nationals as incentive, provided favorable conditions for corporations, offering inexpensive land, labor, and little to no taxes. Offshoring in East Asia, *maquiladoras* (border factories) in Mexico, and

sweatshops in South Asia are some examples of this establishment of manufacturing bases by MNCs in much of the developing world while slowly dismantling manufacturing throughout much of the West (i.e., the Rust Belt in the United States). However, many MNCs maintained their headquarters in the West, maintaining white-collar management professions for their nationals while eliminating the jobs of their domestic workforce.

MNCs also adopted the strategy of distributing various stages of production to many countries to circumvent tax systems and the nationalization of industries and to tap local natural and human resources. Developing countries nationalizing an industrial facility that manufactured transmissions for automobiles would find it increasingly difficult to operate it without the availability of parts. Petroleum MNCs, such as Royal Dutch Shell, British Petroleum, and Chevron, have multiple facilities globally, including transit and distribution networks, refineries, and gas stations. Controlling the infrastructure keeps such MNCs profitable even when they may lose direct control of oil fields to nationalization.

In the late twentieth and early twenty-first centuries, MNCs have aroused much resentment throughout much of the developing world and even within the developed world. Associated with the twin evils of globalization and U.S. global economic influence, MNCs have been accused of being instruments of neocolonialism and instrumental to the creation of a global American culture. International institutions such as the World Trade Organization (WTO), the Group of Eight (G8), the World Bank, and the International Monetary Fund (IMF) are seen as the tools of MNCs in the alleged subjugation of the developing world. U.S. foreign policy has also been strongly criticized as being a mere instrument of the whims of MNCs and their global reach, among them the controversial coups assisted by the Central Intelligence Agency (CIA) in Iran, Chile, and Nicaragua, and the Iraq War.

Critics, ranging from Marxists to Islamic fundamentalists, allege that MNCs contribute to the erosion of local and regional values that become replaced with consumerist values while also exploiting labor and natural resources for their own benefit. However, advocates for MNCs would ar-

➤ UNITED FRUIT COMPANY AND NICARAGUA

Instances of the influence of early U.S. multinational corporations affecting the political destinies of their so-called banana republics were quite common in the period following World War II. The classic case of the United Fruit Company (UFC) in Nicaraguan affairs is perhaps the most enlightening. The U.S.-based United Fruit Company held a domineering position in the economy of the Central American country of Nicaragua through much of the early twentieth century that was virtually untaxed by the national government in power. Bananas represented approximately 40 percent of Nicaragua's exports, making it substantially dependent on that economic sector. The company also held considerable investments in the nation's infrastructure in the form of ports, railroads, and land development.

In the 1950s, Jacobo Arbenz was elected president of Nicaragua and proceeded to enact sweeping land reform to the benefit of Nicaraguans. However, this included nationalizing UFC land not in usage. This ignited U.S. accusations of communist infiltration of Central America and the need to intervene. The subsequent U.S. government involvement in the issue was highly controversial given that the current secretary of state, John Foster Dulles, was a UFC stockholder and once had been a UFC lawyer, while his brother Allen Dulles, the director of the Central Intelligence Agency (CIA), which was responsible for planning the subsequent coup, had once been president of the UFC. The CIA, in league with a Nicaraguan rightist clique sympathetic to the United States, staged a coup against Arbenz in 1954 and installed a right-wing Guatemalan colonel amenable to U.S. interests and those of the UFC. The company changed its name to United Fruit Brands in 1970 and then to Chiquita Banana in 1985.

—Abraham O. Mendoza

gue that they are merely spreading investments to viable sources of profits, creating and expanding their global markets, and developing national economies by sustaining infrastructural development and creating employment. Steady critiques of their environmental practices have led some MNCs to simply greenwash their practices, while others have invested considerably in

developing more sustainable manufacturing and management processes.

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Bibliography

- Hobsbawn, E. J. *The Age of Extremes: A History of the World, 1914–1991*. New York: Pantheon, 1994.
- Kristensen, Peer Hull, and Jonathan Zeitlin. *Local Players in Global Games: The Strategic Constitution of a Multinational Corporation*. Oxford: Oxford University Press, 2004.
- Turner, Louis. *Invisible Empires: Multinational Companies and the Modern World*. London: Hamish Hamilton, 1970.

Japanese Economic Miracle

The Japanese Economic Miracle denotes the rise of Japan from the ashes of World War II to become one of the most modern economies worldwide in the span of four decades. Already in the nineteenth century Japan was most successful among Asian countries in adapting modern Western technology and administration during the Meiji Restoration. The rise of Japan to become the dominating power in East Asia that began in the Meiji was abruptly stopped with Japan's defeat in World War II. Industry and basic infrastructure were widely destroyed, territorial acquisitions that followed 1894 were separated from Japan, and the United States governed the country through the Supreme Command of the Allied Powers (SCAP). Millions of ethnic Japanese who had settled in former colonies had to be reintegrated. In 1948, the powerful prewar family-based industry conglomerates, the *zaibatsu*, were limited in power, with family members banned from holding official positions. Inflation, unemployment, and shortages threatened the stability of Japan.

However, with the onset in 1950 of the Korean War and its industrial demands, Japan's economy rapidly grew. Industrial production increased by 36.8 percent in 1951 alone. Overall, from 1950 to 1973, the Japanese economy expanded by almost 10 percent a year. In the 1970s it still grew by an average of 5 percent a year and in the 1980s by 4 percent a year. Among the characteristics of the Japanese postwar economy were the strong influence of the state on industrial planning, in particular by the Ministry

of International Trade and Industry (MITI); the reemergence of dominant business groups, *keiretsu*, with strong horizontal and vertical integration and so-called house banks catering to the specific needs of a certain conglomerate; a labor market with enterprise unions open only to employees of one company and therefore closely interested in the fate of their companies; lifetime employment; and the rapid adaptation of technology. In the period from 1950 to 1973 the strong contribution of factor productivity to growth was particularly remarkable.

Explanations for the Japanese Economic Miracle continue to clash. In the 1950s and 1960s, scholars such as George Allen argued that Japan was a successful model of modernization due to U.S.-led economic and political reform, massive inflow of American aid, and low defense spending due to the alliance with the United States. Japanese economists challenged this view and pointed to the successful modernization efforts of the nineteenth century and hence the cultural roots of the Japanese Economic Miracle. Chalmers Johnson has stressed the role of the MITI and sparked a debate about Japan's success as a developmental state. Other analysts were skeptical about the almost mythical power of foresight attributed to the industrial policy of the MITI. Mancur Olson placed the destruction of powerful distributional coalitions, in particular the *zaibatsu* and the related military-industrial complex, at the heart of the growth success of Japan in the postwar period, a record that is consistent with the later decline of growth rates.

A key factor of growth was the export orientation of Japan's industry, which at the same time was protected by selective liberalization, allowing the free importation of inputs and intermediate goods and a closed market for consumer goods from foreign countries. The low value set for the yen in the international monetary system during Bretton Woods helped Japan to accumulate large trade surpluses. International economic integration into General Agreement on Tariffs and Trade (1963), the International Monetary Fund, and the Organisation for Economic Cooperation and Development (1964) aided the internationalization of Japan's economy.

Japanese economic growth remained impressive until 1989, and the miracle had enormous

impact on Japan's East and Southeast Asian neighbors, as did direct Japanese investment. However, in the 1980s the initial virtuous circle of accumulation, in which cheap credit by banks played an important role, became a vicious circle of debts for companies too big to fail, and the prolonged existence of these so-called zombie companies led to two decades of slump in the 1990s that continued into the 2000s and has greatly diminished the appeal of the Japanese economic model.

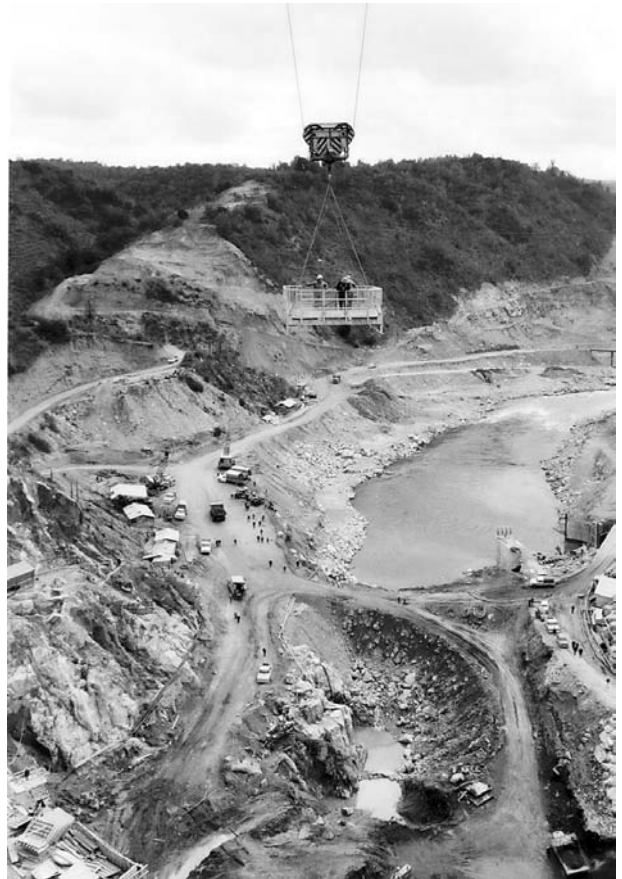
—Bernhard Seliger

Bibliography

- Allen, George C. *Japan's Economic Recovery*. Oxford: Oxford University Press, 1958.
- Forsberg, Aaron. *America and the Japanese Miracle*. Chapel Hill: University of North Carolina Press, 2000.
- Hein, Laura. "Free-Floating Anxieties on the Pacific: Japan and the West Revisited." *Diplomatic History* 20(3) (1996): 411–437.
- Johnson, Chalmers. *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925–1975*. Stanford, CA: Stanford University Press, 1982.
- Okimoto, Daniel I. *Between MITI and the Market: Japanese Industrial Policy for High Technology*. Stanford, CA: Stanford University Press, 1989.
- Olson, Mancur. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven, CT: Yale University Press, 1982.
- Ozawa, Terutoma. *Institutions, Industrial Upgrading, and Economic Performance in Japan: The Flying-Geese Paradigm of Catch-up Growth*. Northampton, MA: Edward Elgar Publishing, 2005.
- Valdés, Benigno. "An Application of Convergence Theory to Japan's Post-WWII Economic 'Miracle.'" *Journal of Economic Education* 34(1) (2003): 61–81.

World Bank

The World Bank, more specifically the World Bank group, is a subsidiary agency of the United Nations (UN) Economic and Social Council responsible for providing financial assistance in the form of loans and financial recommendations to less developed countries (LDCs). Established by the major Allied powers near the end of World War II, the World Bank has been a significant fi-



Workers build a dam on Chile's Rapel River, about 1965. The hydroelectric project was largely funded by the World Bank which makes loans to developing countries. (National Archives and Records Administration)

ancial institution responsible for the development of the global economy for the past half century. From its inception at the Bretton Woods Conference in 1944, the World Bank has provided billions in loans to assist nations throughout the developing world to help establish industry, infrastructure, employment, and commerce through its two major institutions, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). However, critics have alleged that the World Bank has undue control of the economies of developing nations, with its policies making them subservient to the economic needs of the creditor nations of the developed world, notably the United States, the European Union (EU) nations, and Japan.

The World Bank was first established as a means to alleviate the economic dislocation of

INTERNATIONAL MONETARY FUND

The International Monetary Fund (IMF) is an agency of the United Nations (UN) with the specific function of stabilizing international monetary exchange rates to promote global economic stability. In 1944 during the latter stages of World War II, the IMF was established by the Bretton Woods Agreement to endorse international monetary cooperation and the stabilization of currencies to better stimulate the expansion and growth of world trade. This was to meet the challenges of the postwar period, assumed to be fraught with major economic dislocations and widespread reconstruction projects amid the destruction caused globally by warfare. The IMF also assisted member nations confronting temporary difficulties in foreign exchange payments.

Much like the World Bank, the IMF has been heavily criticized regarding the stipulations and conditions attached to its loans and the substantial influence of the creditor nations of the developed world in its institutional policies. The debt crisis in Latin America in the 1980s made many South American nations increasingly dependent on the IMF, which in turn demanded neoliberal economic policies and austerity schemes from the governments in power as conditions for extended loans and the restructuring of old debts. Many critics also allege that the IMF has failed to prevent the environmental damage created by some of its funded projects, supposedly encouraging less-developed countries to destroy and exploit their natural resources and thus creating massive deforestation, soil erosion, and desertification.

—Abraham O. Mendoza

countries devastated by World War II. At Bretton Woods, the Allied countries established specific economic guidelines and policies to ensure future global economic stability to prevent global depression and war akin to those of the previous two decades. The first major institution of the World Bank, the IBRD, began its operations in 1946. Following postwar reconstruction investment projects, in later decades the IBRD began to provide loans to creditworthy developing nations globally for massive development projects. The second major institution of the World Bank,

the IDA, was established in 1960 for the specific purpose of working with the poorest developing countries to reduce widespread poverty by improving living conditions and infrastructure and forging economic development. In the context of the global Cold War (1945–1989), some scholars suggest that such investments in the developing world were made with the foreign policy objectives of the United States and U.S.-affiliated developed nations of preventing such LDCs from falling under Soviet political, economic, and military dominance.

In the decades following the end of World War II, the World Bank developed three affiliate organizations to assist and supplement the operations of the IBRD and the IDA, ensuring the effective flow of capital to development projects in the developing world. The International Finance Corporation (IFC), established in 1956, has since been responsible for promoting investment from the private sector into the economies of developing nations. The International Center for Settlement of Investment Disputes (ICSID), created in 1966, addresses major investment conflicts between governments and private foreign investors, arbitrating between the two parties to resolve such disputes. The Multilateral Investment Guarantee Agency (MIGA), created in 1988, has the responsibility of promoting foreign investment into the economies of LDCs.

The organization and bureaucracy of the World Bank grants representation to a vast number of countries throughout the world, yet the influence of major contributors is substantial. The president of the World Bank is elected to a five-year term by the group's executive directors. He is also chair of the Board of Executive Directors. The president is responsible for managing major World Bank business, including that of the IDA and the IFC. As the major subscriber to the World Bank, the president of the United States nominates the president of the organization, subject to the approval of the Board of Executive Directors. The executive powers of the World Bank are held by the Board of Governors, which delegates most of its powers to 24 executive directors. The five major subscriber countries—the United States, the United Kingdom, Germany, France, and Japan—appoint 1 director each, while governors from the other member coun-

tries, organized into major geographic groups with similar regional economic interests, elect the remaining 19 executive directors. China, Russia, and Saudi Arabia are also entitled to select 1 director each. Meeting once a month, the executive directors' major duties are to represent the interests of their individual or regional grouping and decide the general direction of bank policy.

Theoretically, the World Bank and its subsidiary affiliates base their decision to lend solely on economic considerations, based on creditworthiness and return of profit from projects in the developing world. However, critics of the institution have charged that political influence, nepotism, corruption, bad investment advice, and inefficient bureaucracy plague the evaluation and financing of projects. Some critics also allege that the World Bank, in addition to the International Monetary Fund (IMF), are mere tools of capitalism and increased globalization, seeking to plunder the developing world through such neoliberal economic policies as free trade, lowered trade barriers and tariffs, and cheap labor flows. These policies establish neocolonial arrangements such as offshoring, outsourcing, and sweatshops that subject LDCs to economic dependency on the developed world, particularly the United States, the EU, and Japan.

Controversy over U.S. nomination of the president of the World Bank, specifically Paul Wolfowitz in 2005, has led some critics to allege that the institution is simply a tool of global U.S. economic hegemony. However, as the world's largest source of aid to LDCs, the World Bank has funneled billions of dollars to the developing world (Africa, Latin America, South Asia, Oceania, etc.) and after the end of the Cold War to the nations of the former Soviet Union. These World Bank-sponsored investment projects have contributed to the economic well-being of millions of people. As recently as 2004, the IBRD approved approximately \$11 billion to invest in as many as 87 projects in multiple countries. These loans and grants encouraged private sector development, the development of trade and infrastructure networks, urban development and improvement projects, and environmental and efficient resource management.

—Abraham O. Mendoza

Bibliography

- Benjamin, Bret. *Invested Interests: Capital, Culture, and the World Bank*. Minneapolis: University of Minnesota Press, 2007.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Nelson, Paul J. *The World Bank and Non-Governmental Organizations: The Limits of Apolitical Development*. New York: St. Martin's, 1995.
- Ranis, Gustav, James Raymond Vreeland, and Stephen Kosack, eds. *Globalization and the Nation State: The Impact of the IMF and the World Bank*. New York: Routledge, 2006.

Postindustrial Society in the West

The conceptualization of a postindustrial society emerged in 1973 with the release of David Bell's *The Coming of Post-Industrial Society*, which depicted the then ongoing economic transition of developed societies in the West from a manufacturing-based economy to that of a service-based economy. The transformation of the United States and much of Western Europe from industrialized societies to postindustrial societies in the late twentieth century is directly related to the development of industry elsewhere in the world, particularly Asia (China, Taiwan, South Korea, Singapore, and Hong Kong). The flow of manufacturing capital from the traditional centers of manufacturing in the West (North America, Western Europe, Japan) to the developing world (China, Latin America, Southeast Asia) has led to drastic societal and economic changes as both sides navigate the transition.

The shift to a postindustrial economy is characterized by the transition from the production of consumer goods to the provision of services. The production of such materials as steel and such products as televisions declines in relation to the vast increase in service industries such as fast food, marketing, investment brokering, and personal training. However, while services dominate in a wide range of economic sectors, health, education, research, and government services are pivotal for a postindustrial society to maintain its competitiveness.

In both the United States and Western Europe, the percentage of goods manufactured overseas increased over the course of the latter

► THE U.S. RUST BELT



This General Motors auto manufacturing plant in the Rust Belt city of Flint, Michigan, was closed in the 1980s. (Bob Krist/Corbis)

The Rust Belt is a geographical area encompassing parts of the Midwest and Mid-Atlantic regions of the United States characterized by postwar de-industrialization where heavy industry and steel mills closed down due to their unprofitability or were relocated overseas to tap inexpensive labor pools (offshoring). The Rust Belt region extends west of the Boston and Washington metropolitan areas into eastern Wisconsin. It also stretches southward to the coal mining regions of West Virginia and northward to the Great Lakes industrial region (Michigan, Illinois, Ohio, and Indiana). Similar economic woes struck coal, steel, automobile, and heavy manufacturing regions in England, Belgium, and France during this period.

The loss of jobs in the U.S. Rust Belt due to de-industrialization in tandem with the transcontinental migration to the Sun Belt (southern states such as Georgia in the United States) and the West have led to a significant decline in the populations of the Rust Belt states. However, the Rust Belt is still a substantially important economic sector of the United States, responsible for a high level of industrial output. While the loss of manufacturing jobs has left many metropolitan areas in this region with increased rates of poverty and crime, the dire situation has also encouraged the region to diversify economically. New professional fields undergoing substantial growth in this region include nanotechnology, biotechnology, and information technology among other high-tech sectors.

—Abraham O. Mendoza

half of the twentieth century as corporations began to seek ways to evade strong labor unions and the taxes that the welfare state demanded. Multiple factories closed, and corporations, while maintaining headquarters in their country of origin, established new factories abroad in regions with little to no property taxes and an inexpensive labor pool. While some manufacturing sectors continue, they have remained vulnerable to wage depressions caused by the global labor market that has damaged their international competitiveness. This offshoring of manufacture has also led to the development of rust belts, or regional deindustrialization, in the United States, Canada, and much of Western Europe in areas that had typically been industrial centers in the nineteenth and early twentieth centuries.

The transition to a postindustrial society forces a wholesale change in professions calculated as a percentage of the domestic workforce. In both the United States and Europe, the development of a large white-collar labor force in tandem with a large nonskilled service labor force has been a long-term structural process occurring since the end of World War II. During the transition from an industrial base, the importance of blue-collar manual labor significantly declines in contrast with the increase in professional and technical employment, which eventually becomes a sizable majority of a society's workforce. New sources of employment, such as specialized engineering (genetic and computer), computer programming (and other related high-technology occupations), and marketing, develop a high level of importance in a postindustrial society, on par with older respectable professions such as law and medicine. However, lower-end service jobs such as clerk, cashier, short-order cook, and sales or retail associate also become more widespread yet are often poorly paid with little to no benefits. The rise of such service jobs were popularized as "McJobs" in Douglas Coupland's novel *Generation X* (1991). The income gap between high-end professions and lower-end service employment with little backing by labor unions enforces vast socioeconomic differences in postindustrial societies. In recent decades, the processes that undergird the development of Western postindustrial societies have begun to occur in other world regions. Countries

such as Taiwan, South Korea, and Singapore, typically associated with manufacturing and large-scale industry, have recently begun developing large percentages of white-collar professions, growing in relation to the older industrial professions. The increase in wage levels in many of these countries has also reduced the level of investment by multinational corporations, with multinationals choosing instead to invest in other regions with cheaper labor pools. In another more recent development, the offshoring of labor is not the only drain on postindustrial societies. The more recent outsourcing of white-collar service jobs from the developed North to areas such as India illustrates the vulnerability of professional workers as well in a global economy.

—Abraham O. Mendoza

Bibliography

Bell, Daniel. *The Coming of Post-Industrial Society*. New York: Harper Books, 1974.

Ritzer, George. *The Coming of Post-Industrial Society*. 2nd ed. New York: McGraw-Hill, 2007.

Stearns, Peter N. "The Idea of Postindustrial Society: Some Problems." *Journal of Social History* 17(4) (1984): 685–693.

Development Gap—The North and the South

The conceptualization of what has been termed the North-South paradigm (or development gap) is characterized by the social, economic, and political division that exists between the wealthy developed countries collectively known as the North and the poorer developing countries or least-developed countries (LDCs) known as the South (Latin America, Africa, and Asia). Although most nations comprising the North are located in the Northern Hemisphere (Europe, Russia, Canada, and the United States), the divide is not simply defined by geography, as wealthy countries

➤ LATIN AMERICAN DEBT CRISIS

The Latin American debt crisis refers to a period in the late 1970s through the 1980s when the foreign debt of many Latin American countries exceeded their actual earnings, and they were thus unable to repay creditors. Throughout the 1960s and 1970s many Latin American countries, especially Brazil, Argentina, and Mexico, borrowed huge sums of money from international creditors, particularly the World Bank and the International Monetary Fund (IMF), for various industrial and infrastructural projects. At the time, these countries had stable growing economies, so creditors readily provided huge loans.

However, as Latin American economic growth slowed due to the declining prices of their commodities in the world market, a simultaneous increase in U.S. interest rates in the early 1980s triggered a crisis in Latin America. By 1982, Mexico announced its inability to fulfill its loan obligations. Brazil and Argentina found themselves in a similar predicament, with large percentages of their respective gross domestic product (GDP) directed toward simply paying interest on their debts. These countries' inability to repay those debts made them increasingly dependent on the IMF, which required neoliberal economic

reforms and severe austerity measures in exchange for debt restructuring and emergency loans. The resulting compliance with these conditions was evidence of the dependence that Latin American countries had on the U.S. and European economies and the relative gap in wealth that existed between the Northern and Southern Hemispheres.

The debt crisis also led to greater demands for economic independence from foreign domination and drastic political changes from the late 1980s to the present. It fueled the creation of greater economic cooperation among Latin American nations (in the form of Mercosur) as well as cooperation with the United States (Mexico and the North American Free Trade Agreement) through free market agreements. In addition, it strengthened leftist opposition parties in many Latin American countries (Venezuela, Brazil, Bolivia, and Ecuador) bent on seeking economic autonomy from international control. Nonetheless, recent debt problems in Argentina as of 2009 continue to illustrate the level of dependence that Latin American economies have on global economic fluctuations emanating from the West.

—Abraham O. Mendoza

in the Southern Hemisphere such as New Zealand and Australia are also included as part of the North. The historical legacy of nineteenth-century and early-twentieth-century European colonialism has shaped the postwar neocolonial relationship that much of the developed world has with the developing world in terms of economic links (foreign investment) and international financial dependency fostered via the practices of the World Bank and the International Monetary Fund (IMF). This situation has led many scholars to be highly critical of the inequitable distribution of wealth between the North and the South, with the poverty of the South contrasted with the opulence and high standards of living in the North.

At the end of World War II, much of the colonized world under the European yoke rapidly acquired its political sovereignty in Africa, Asia, and Oceania. While the process of decolonization eliminated this form of political dominance, economic domination continued, emanating in particular from the United States and Western Europe. However, in the midst of the Cold War, many of these former colonies with their newfound independence could choose to align themselves with either the capitalist West (led by the United States) or the socialist East (led by the Soviet Union). Through the international financial organizations of the World Bank and the IMF, the West was able to invest increasingly large sums in projects in the developing world. However, in this process the West gained substantial economic influence over the internal policies of the newly independent developing world, often at the expense of the latter. The geographical divide that characterized this relationship gave rise to the designations of North and South by social scientists.

Through the 1960s and the 1970s, the South found itself increasingly subject to the economic domination of the North, as expressed through free trade policies, World Bank and IMF stipulations for continued investment, and international agreements made by countries in the North without consulting the South. These agreements included the General Agreement on Trade and Tariffs (GATT), the World Trade Organization (WTO), and the Group of Eight. Many organizations sought to represent the interests of the

South; these included the Non-Aligned Movement (an international organization of states not formally aligned with or against the United States or the Soviet Union in the context of the Cold War) and the Group of 77 (a United Nations coalition of developing nations) as well as ideological movements such as Maoism. However, a lack of unity in these groups, given the diversity of cultures and interests represented, posed a serious problem to countering the monolithic North. Furthermore, former less-developed countries began to enter the ranks of the wealthy North (e.g., the Four Tigers: South Korea, Taiwan, Singapore, and Hong Kong), while others currently are on the brink of doing so and have gained an interim status (Mexico, Brazil, and Turkey). This lack of unity has prevented any successful engagement between the North and the South.

The demographic explosion that occurred in the latter twentieth century vastly increased the wealth gap that exists between the North and the South. Much of the world's population growth since the end of World War II has taken place in the South, in contrast with the marked decline of populations in the North. It is estimated that in the North between 1960 and 1980, the size of the population of the age group 20–39 years old increased by 58 million, in contrast with 360 million in the South. This demographic pressure severely exacerbates the existing problem of the inequitable distribution of wealth given that the South is already less economically developed and is fraught with poverty and unemployment. This has led to increasing levels of immigration from the South to the North, as evidenced in the United States by illegal immigration from Latin America and in the European Union by illegal immigration from North Africa and the Middle East.

—Abraham O. Mendoza

Bibliography

- Demeny, Paul. "The North-South Income Gap: A Demographic Perspective." *Population and Development Review* 7(2) (1981): 297–310.
- Lewis, Martin W., and Kären E. Wigen. *The Myth of Continents: A Critique of Metageography*. Berkeley: University of California Press, 1997.
- Therien, Jean-Philippe. "Beyond the North-South Divide: The Two Tales of World Poverty." *Third World Quarterly* 20(4) (1999): 723–742.

■ Introduction: Economic Policy since 1945

Following World War II, the global economy was in shambles; only a few states, such as the United States and some neutral states, were relatively unscathed. The Bretton Woods Conference of 1944 set down a series of guidelines for global economic policies that would prevent the sort of protectionism that defined state policies in the interwar period in the midst of global depression. In the context of the emergent Cold War, U.S. aid to Western Europe and Japan contributed to the restoration and eventual flourishing of their economies. However, the Cold War also created two competing economic models that served as examples for the newly decolonized economies of the world. The U.S.-backed West embraced Keynesianism, with its emphasis on state stimulus spending, along with the development of the welfare state in an effort to balance social needs with a free market. In opposition, the Soviet model offered the command economy, with its requisite bureaucratization and lofty production goals, geared toward ensuring the industrial development of the nation within a Marxist-Leninist framework.

From the late 1940s to the oil shocks of the mid-1970s, the Western model proved most attractive, regardless of the increasing economic dependency of the developing world. Some Latin American and Asian states established policies of import substitution (domestic industrial development) as a means of lessening their dependency on the West but continued to rely on institutions such as the World Bank and the International Monetary Fund to achieve such ends. However, with the global economic atrophy of the mid-1970s, austerity was embraced by much of the West, severely affecting much of the developing world. In Latin America, as exports dried, the total foreign debt blossomed from \$2.3 billion in 1970 to \$340 billion in 1983, creating a severe crisis. Soviet and Chinese economic stagnation also proved the limitations of the command economy model; under such a model, innovation frequently was deemed ideologically unsound.

In the 1980s British prime minister Margaret Thatcher and U.S. president Ronald Reagan advocated neoliberal economic policies that began

dismantling the welfare state and deregulation and privatization of business. With the dissolution of the Soviet Union and the end of the Cold War in the last decade of the twentieth century, neoliberalism begat the acceleration of globalization throughout much of the world. Developing regions such as China and India became economic powerhouses that shared in the benefits of globalization, contributing to increased social mobility for significant portions of their populations.

In spite of the growth of the world's economy by leaps and bounds since the end of the Cold War, neoliberalism's heyday was short-lived. By 2008, a looming global recession illustrated that the reckless practices followed by an unregulated financial and business sector in much of the West could lead to a downturn and the atrophy of the world's economy. As of 2009, Western governments looked once again to Keynesianism as a way to preserve the balance between the free market and the well-being of their respective populations. Dependent on the capitalization of their economies by the West, as of 2009 much of the developing world remained in financial crisis.

—Abraham O. Mendoza

Bretton Woods Agreement

The Bretton Woods Agreement created a system of international monetary cooperation among the world's major industrial states near the end of World War II in 1944. This system established guidelines for financial and commercial relations through a stable monetary order among the participants. Bretton Woods included a system of regulations, international financial institutions, and procedures to regulate the international monetary system. Countries abiding by the agreement were expected to adopt a monetary policy that fixed the value of its currency exchange rate to one bound to the gold standard. Bretton Woods is regarded as the first internationally negotiated settlement regarding global monetary stability in the interests of the international community.

The Bretton Woods Agreement was established in anticipation of the end of World War II

EXCERPTS FROM THE BRETTON WOODS AGREEMENT (1944)

The Bretton Woods Agreement (1944) required the cooperation of participant nations to fixed monetary exchange in terms of the gold standard and the U.S. dollar. The agreement necessitated that the participant nations abide by the obligations and responsibilities stipulated in the agreement, creating the first global monetary system in world history.

“ARTICLE VIII. GENERAL OBLIGATIONS OF MEMBERS

Section 1. Introduction

In addition to the obligations assumed under other articles of this Agreement, each member undertakes the obligations set out in this Article.

Section 2. Avoidance of Restrictions on Current Payments

- (a) Subject to the provisions of Article VII, Section 3 (b), and Article XIV, Section 2, no member shall, without the approval of the Fund, impose restrictions on the making of payments and transfers for current international transactions.
- (b) Exchange contracts which involve the currency of any member and which are contrary to the exchange control regulations of that member maintained or imposed consistently with this

Agreement shall be unenforceable in the territories of any member. In addition, members may, by mutual accord, co-operate in measures for the purpose of making the exchange control regulations of either member more effective, provided that such measures and regulations are consistent with this Agreement.

Section 4. Convertibility of Foreign Held Balances

- (a) Each member shall buy balances of its currency held by another member if the latter, in requesting the purchase, represents
 - (i) that the balances to be bought have been recently acquired as a result of current transactions; or
 - (ii) that their conversion is needed for making payments for current transactions.

The buying member shall have the option to pay either in the currency of the member making the request or in gold.”

—Abraham O. Mendoza

Source

Yale Law School. “A Decade of American Foreign Policy 1941–1949: The Bretton Woods Agreements.” The Avalon Project. http://avalon.law.yale.edu/20th_century/decade047.asp.

and the subsequent rebuilding of the world economy. The disastrous economic dislocations created by the Great Depression of the 1930s and the subsequent rise of fascism and communism in the interwar period (1919–1939) were blamed on the absence of a uniform international economic system. The ultimate purpose of the conference was to promote international economic cooperation and to prevent the financial disasters that had crippled the world economy in the 1920s and 1930s. In July 1944, 730 delegates from all the Allied nations met at the Mount Washington Hotel, a remote hotel in Bretton Woods, New Hampshire. The delegates attending the United Nations Monetary Financial Conference established the aforementioned agreement.

The Bretton Woods Agreement comprised an exchange rate regime with rules to adjust monetary rates. The monetary rates of those abiding by the agreement were fixed to the U.S. dollar.

The increased military and political power of the United States at the end of World War II ensured that it was the most stable economy, so it followed that the U.S. economy should be the standard. Imbalances between the monetary systems of all respective countries would be alleviated through the financial institutions created by the agreement.

The Bretton Woods Agreement created the International Bank for Reconstruction and Development (World Bank) and the International Monetary Fund (IMF), which were operational by 1946. The IMF would prove to be a valuable yet controversial institution in the developing of the international economy, particularly in the so-called Third World. The purpose of these institutions was to ensure the resolution of monetary imbalances by promoting investment in nations unable to abide by the regulations of the agreement.

The Bretton Woods Agreement was in effect from 1946 to 1971. European economic recovery of the postwar years is attributed to the economic stability created by the agreement. American global economic hegemony is also attributed to the existence of the Bretton Woods international cooperation in subservience to the American dollar. The end of Bretton Woods was a result of growing disaffection with the gold standard in the aftermath of the massive inflation in the United States due to the Vietnam War (1961–1975). President Richard M. Nixon took the United States off the gold standard in 1971 and essentially ended the agreement.

—*Abraham O. Mendoza*

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Williams, John H. "The Bretton Woods Agreements." *Proceedings of the Academy of Political Science* 3(21) (1945): 40–50.
- Williamson, John. "On the System in Bretton Woods." *American Economic Review* 2(75) (1985): 74–79.

Gold Standard

There are numerous advantages and disadvantages of adhering to a strict gold standard. One of the biggest advantages of a strict gold standard is in its ability to force discipline over fiscal and monetary policy. A gold standard imposes restraints on fiscal policy since governments cannot print money to finance expenditures but are instead required to increase the funds through taxation. On the other side of the coin, even if government-induced inflation is eliminated, inflation will still occur whenever large new gold reserves are discovered. In addition, if new gold reserves are not discovered quickly enough, economies face the even bigger problem of disinflation. A strict gold standard also would largely eliminate the use of discretionary fiscal and monetary policy to increase output in a recession or to slow growth if the economy is growing too quickly.

After World War I many countries experienced high budget deficits, inflation, and currency depreciation that made it increasingly difficult to maintain strict conversion. Beginning in 1931 Britain abandoned full convertibility,

› CURRENCY CHANGES

Two of the most important changes in world currencies since 1945 were the formation of a single European currency and the slow movement toward a cashless society. On January 1, 1999, the euro became the official currency of the 11 member countries representing the European Union (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain). This change streamlined financial market transactions, reduced the cost of travel within Europe, and facilitated foreign and intra-European economic trade by reducing the transaction costs associated with separate currencies.

The development of electronic funds transfer technology in the mid-twentieth century brought about credit cards, debit cards, and online banking. Noncash transactions are quicker, less expensive, and safer. Despite the many advantages of eliminating cash and the proliferation of cashless options, individual privacy concerns have resulted in a continued growth of cash transactions.

—*Joseph Cavanaugh*

and by 1936 all remaining countries did the same. In July 1944, 730 representatives from 44 nations met at the United Nations Monetary and Financial Conference at Bretton Woods, New Hampshire. The ensuing agreements placed the world economy on what is often referred to as a gold-dollar standard. The Bretton Woods system did not use a true gold standard since gold reserves did not back the issued paper currency.

Over this period the increase of transactions outpaced the supply of gold, so countries throughout the world moved to fiat money, which is money whose value is based only on faith in the issuing country. By the 1960s and 1970s the economy of the United States was the largest in the world, but relative to other economies around the world it was diminished, as Europe and Japan grew increasingly important to the world economy. In the United States the balance of payments deficit grew steadily, and domestic inflation prompted President Richard Nixon to implement price controls. An attempt to balance the situation by devaluing the dollar failed to work, and in 1973 the Bretton Woods System

collapsed. Any semblance of a gold standard was over. In recent times many economists continue to rely on gold as an important macroeconomic indicator, and as recently as the high-inflation years of the early 1980s, many called for a return back to an international monetary system based on the gold standard.

Since the 1980s currencies values have generally been set by market demands. The advent of virtually 24-hour per day currency trading around the world through the Internet has created vast pools of money available for lending or trading. The globalization of currencies has in some cases led countries to peg their currencies to the dollar or the euro. Both currencies are also used for stating the current price of oil per barrel.

With the development of a globalized economy, especially with the enormous growth of the Middle Eastern oil states and the Chinese and South Asian economies, the demand for gold increased. Most of the growth was for use in industrial products. When also used as jewelry or kept as a store of value in safe places by individuals such as major purchasers in the Middle East it is removed from economic activity, which keeps it from earning interest or returns. Some countries such as South Africa mint gold coins for sale (Krugerrand). The central bank of some countries also collects gold as a safe financial reserve. The need for an expanding money supply to fund the investments, production, and consumption in these new markets has been accomplished through monetary mechanisms other than gold.

—Joseph Cavanaugh

Bibliography

- De Cecco, Marcello. *Money and Empire: The International Gold Standard*. Oxford, UK: Blackwell, 1974.
- Triffin, Robert. *Gold and the Dollar Crisis: The Future of Convertibility*. New York: Garland, 1983.

Keynesianism

Keynesianism, or the belief in Keynesian Economics, began following the publication of John Maynard Keynes's book *The General Theory of Employment, Interest, and Money* in 1936.

Keynes's book, commonly referred to as just *The General Theory*, was one of the most influential economic books ever written, and its publication is widely recognized as marking the beginning of macroeconomics as a discipline of study.

Prior to the 1930s, economic theory was grounded by a few principal beliefs. Namely, the economy would achieve efficiency if individuals were left to act in their own interests, and flexible interest rates, wages, and prices in the economy would automatically self-adjust to maintain full employment. These elements of classical theory supported a capitalist economy with a government role that was limited to supporting free enterprise through contract enforcement or by implementing and defending private property rights.

During the late 1800s and early 1900s these key tenets would be questioned as a result of a dramatic growth of market power and increased economic volatility. At the time, whole industries were controlled by a few large companies, and governments were largely unsuccessful at controlling their power. In addition, the world economy would struggle with one prolonged recession after another, leading to the Great Depression of the 1930s.

The General Theory, and subsequently Keynesians, focused squarely on the inability of the economy to quickly adjust to ensure full employment and on the role that governments should take to influence the economy. Keynesians believed that wages and prices would not fall in a recession, so unemployment would persist as long as aggregate demand for goods and services was low. In addition, even if prices decreased, this would not lead to an increase in employment. Wages would also decline, and workers would recognize that their real wages remained the same. Keynesians used a model of aggregate demand crossing a 45-degree line to demonstrate how fiscal policy could be used to increase output and employment in a recession. In this model, later called the Keynesian Cross, any initial increase in government expenditure would result in a total increase in output many times greater than the initial expenditure. This is known as the multiplier process. During a recession, Keynes demonstrated that it is impossible to use monetary policy to lower interest rates enough to

increase output. For this reason, Keynesians advocated government expenditures over monetary policy intervention.

In the late 1930s the world economy was quickly pulled out of the Great Depression, as World War II resulted in many governments spending huge amounts on war efforts. This resulted in unemployment being almost immediately eliminated and provided support for the Keynesian Theory. After the war, Keynesianism was well accepted throughout the world, and nations enacted laws and policies that would ensure that economies maintained full employment. Since the enactment of these Keynesian policies, the size and frequency of recessions and the levels of unemployment have been reduced. The increase in the level of national debt for many countries throughout the world may also be, in part, a result of Keynesianism, since Keynes demonstrated how government expenditure financed by borrowing is more effective than when the expenditure is financed through taxation.

Keynesianism fell out of favor in the 1970s and 1980s when government intervention was ineffective at dealing with the simultaneous problems of high unemployment and inflation. By the 1990s the macroeconomic theory of rational expectations and the classical ideology based on free markets operating with limited government involvement again became the dominant orthodoxy. The global economic downturn that began in 2008 with the collapse of the financial firm Lehman Brothers in New York and the subsequent collapse of numerous banking institutions once again brought Keynesian thought to the fore. The U.S. government's multibillion dollar stimulus plan instituted in 2009 as well as similar plans in Britain, France, and Japan were all squarely in the Keynesian mode.

—Joseph Cavanaugh

Bibliography

- Carlstrom, Charles T., and Timothy S. Fuerst. "Milton Friedman, Teacher, 1912–2006." *Economic Commentary*, Federal Reserve Bank of Cleveland, December 2006, 1–3, <http://www.clevelandfed.org/research/commentary/2006/dec.pdf>.
- Dimand, Robert W. *The Origins of Macroeconomics*. New York: Routledge, 2002.
- Hansen, Alvin H. *A Guide to Keynes*. New York: McGraw-Hill, 1953.

➤ CHAMPIONING THE FREE MARKET

One of the world's most influential critics of Keynes was the Nobel Prize-winning economist Milton Friedman (1912–2006). Contrary to Keynes, Friedman demonstrated that increasing the money supply causes output and employment to increase in the short run. In 1963, Friedman and Anna Schwartz argued in their coauthored book *Monetary History of the United States, 1867–1960*, that the Great Depression resulted from actions taken by the Federal Reserve. Also contrary to Keynes, Friedman believed that short-run unemployment and inflation fluctuation could best be reduced by mandating a money supply rule that would increase the money supply automatically at the same rate as real output growth. This would effectively eliminate the discretionary power that the Federal Reserve has over the money supply, which is an idea that has not been supported by the Federal Reserve. Friedman is best known for being a steadfast advocate of free markets. As a professor at the University of Chicago, his emphasis on a limited role for government and the superior decision-making ability of the individual over governments formed the basis of what became known as the Chicago school of economic thought. In the work *Capitalism and Freedom* (1963), Friedman provided arguments supporting education vouchers, a volunteer army, and the elimination of licensing for doctors. Although at the time this book was not widely read, in 1976 Friedman won the Nobel Prize and rose to public prominence. His book *Free to Choose* (1980), coauthored by his wife Rose, became a best-seller, and his television series of the same name was aired on the Public Broadcasting System network across the nation.

—Joseph Cavanaugh

Keynes, John M. *The General Theory of Employment, Interest and Money*. New York: Harcourt, Brace and World, 1936.

Command Economies

The command economy is a unique feature of the communist systems of the twentieth century, found in the former Soviet Union and its East European satellites (until 1989–1991), China, Cuba,

► COMMUNISM IN CUBA—SURVIVAL IN THE POST-COLD WAR WORLD

Following the collapse of the Eastern Bloc in 1989 and the Soviet Union in 1991, Cuba has remained one of the few outposts of communism resistant to the winds of change. Without the support of the Soviet Union in terms of economic assistance, trade, and diplomatic weight in global affairs, Cuba faced the United States alone. China, the other major communist power, had already fallen into the orbit of global capitalism, sustaining its communist political structure by adapting to market capitalism. However, Cuba retained its socialist command economy in spite of a continued U.S. embargo and limited economic activity with generous neighbors in Latin America.

In recent years Cuban leader Fidel Castro has formed closer links with socialist Venezuelan president Hugo Chavez, leading to a vast infusion of economic aid that has propped up Cuba's tottering regime. State rationing of resources for the domestic population, in spite of a thriving export economy, has maintained a low standard of living for many Cubans. Cubans rely on a thriving black market for many goods and services that the state has failed to provide. In spite of these failings, the current Cuban communist regime has survived under the authoritarian Raul Castro, Fidel's brother, who is now that nation's nominal leader and continues to see Cuba as the vanguard nation of the forthcoming communist revolution in Latin America.

—Abraham O. Mendoza

Vietnam, and North Korea. The command economy is characterized by the responsibility of the party-state (typically communist) to set economic priorities and monitor their fulfillment through the state bureaucracy and the local party organizations. The party-state makes decisions regarding investment, resource allocation, labor-management relations, and social insurance for workers, allowing for little to no involvement of citizens. This is due to the ideological assumption that the state represents the will of the people (dictatorship of the proletariat) and therefore is already cognizant of their needs in the building of a socialist society.

The Soviet Union created the first centrally planned economy based on Marxist-Leninist precepts under the reign of Josef Stalin in the 1930s, and similar plans were introduced into Eastern Europe (Czechoslovakia, Poland, Hungary, Romania, Bulgaria, and East Germany) at the end of World War II. The command economy entered China in 1949 upon the victory of the Chinese communists under the leadership of Mao Zedong. Later in the century, command economics would find variants in other communist regimes throughout the world, in socialist countries such as Ethiopia, Vietnam, Cambodia, North Korea, and Yugoslavia under either Soviet or Chinese auspices, even though such communist nations remained nominally independent in the context of the Cold War. The Soviet command economy model served to illustrate to these economically peripheral areas how the party-state played a considerable role in the economic development and modernization of an otherwise undeveloped and economically marginal country.

In a command economy, the Communist Party assumes the leading role. The party-state has the power to decide what is to be produced, how it will be manufactured, and by whom it will be consumed. The party-state sets economic priorities and resource allocation (typically prioritizing for heavy industry at the expense of consumer goods). Such priorities are handed down to bureaucrats, local party officials, and managers in the form of instructions. These instructions set general goals for major industries, announce major changes in economic policies, set targets for agricultural output, and outline the state budget in terms of investment in particular economic sectors. The party-state is also responsible for monitoring and delegating responsibility from the national down to the regional and local authority to ensure that its directives are fulfilled.

Critics of the command economy practiced by communist regimes in the twentieth century allege that such total government control over the economy has many shortcomings (evident in policies of collectivization in the Soviet Union, the Great Leap Forward in China, and other instances in the smaller communist regimes). The need for the party-state to assume ultimate authority over the economy has led in many in-

stances to excesses and episodes of widespread violence and death. Purges, intimidation, and incarceration (particularly in the infamous Gulag in the Soviet Union) have been used as tactics by the party-state to ensure obedience to its economic policies, thereby undermining efficiency and incentive on the part of individual bureaucrats and managers. To ensure their livelihood and existence, these officials overestimate their output figures in accordance with the party line. Moreover, the government allocation of resources to heavy industry and its neglect of consumer goods and luxuries has led to a thriving underground black market in many of the socialist states that ensures a steady supply of these products. In this way, the command economy also unofficially institutionalizes criminal organizations as an integral part of society, undermining its legitimacy in the eyes of the citizenry. Legitimacy is further corroded as average rank-and-file citizens with tedious employment, shoddy housing, and inadequate social services see privileged high-party officials (known as the *nomenklatura* in the Soviet Union) living in wealthy surroundings and with access to Western goods in a supposedly socialist egalitarian society. Productivity and waste are rampant, as workers often lack incentive due to their meager wages and lack of access to consumer goods, severely undermining the party-state.

—Abraham O. Mendoza

Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Gregory, Paul R. "The Stalinist Command Economy." *Annals of the American Academy of Political and Social Science* 507(January 1990): 18–25.
- Porket, J. L. *Modern Economic Systems and Their Transformations*. New York: St. Martin's, 1998.

The Emergence of the Welfare State in Europe

The post-World War II West European welfare state, particularly in Britain, emerged from the experience of governments in centralized wartime planning for the well-being of citizens. Following World War II, states such as Britain, France, Belgium, Denmark, Sweden, the Netherlands, and Italy all created comprehensive government bu-

reaucracies that administered wide-ranging social policies such as national health care, social security, unemployment insurance, and workers' compensation benefits to their respective citizenries. These institutions increased the level of state intervention in the day-to-day lives of the citizens. However, after the economic decline that followed the Organization of Petroleum Exporting Countries (OPEC) Oil Crisis of 1973, the huge cost of public expenditures would provoke a reaction as European economies stagnated. Conservative governments in the 1980s—advocates of neoliberal free trade policies and adamantly opposed to state intervention in social matters—seriously curtailed funding of the welfare state. In the late 1990s and early 2000s, the welfare state was still under scrutiny, blamed for squandering much of the state's wealth and for high taxes in an era with limited economic potential.

The welfare states were instituted almost immediately after the war to assist in the rebuilding of the economy along with postwar reconstruction aid in the form of the U.S. Marshall Plan and European economic cooperation (European Coal and Steel Community). In wartime Britain, the Beveridge Report of 1942 presented a social security plan that covered all British citizens. At war's end, the recommendations of the report were rapidly implemented. The National Insurance Act (unemployment insurance), the Industrial Injuries Act (workers' compensation benefits), and the National Health Service Act (medical insurance) were all implemented in 1946, coming into effect in 1948. In France, similar social policies were instituted beginning in 1945 with the *sécurité sociale*, building on pre-existing social programs from before the war. West Germany implemented social insurance programs of its own in the early 1950s, building on Weimar and National Socialist-era precedents. Scandinavian states, most significantly Sweden, also established government-sponsored social provisions for their respective citizens. The Swedish welfare state, which was based on government cooperation with industry and labor, became a notable model for expanding social benefits amid full employment. After 1950, social welfare protection was extended to all citizens in Western Europe in various forms of universal health insurance, free education at all

➤ SIR WILLIAM BEVERIDGE AND THE WELFARE STATE

William Beveridge, popularly known as the “father of the welfare state,” was the son of a humble colonial civil servant in British Bengal. Born in Rangpur in the British Raj in 1879, Beveridge went on to study in England at Balliol College in 1897. In his early professional life, he became a social worker, quickly familiarizing himself with the drudgery and deprivation of the lower social strata of Britain. During World War I, he was involved in various governmental committees and ministries related to war economic mobilization, state planning, and rationing. He became more committed to state interventionism during the Great Depression, becoming an advocate of state planning in an era when such a concept was associated with Bolshevism.

The outbreak of World War II in Europe allowed Beveridge the opportunity to make substantial changes to British perceptions of the state’s role in public welfare. In 1941, he served as the chairman of the Interdepartmental Social Insurance Committee and worked with economist John Maynard Keynes to create a comprehensive plan for a national insurance policy. Known as the Beveridge Report (1942), it stipulated the rights of British citizens to full employment, social security, and universal health care. In drafting such a plan, Beveridge laid the foundation for the creation of the British postwar welfare state in 1945.

—Abraham O. Mendoza

levels (particularly higher education), and in some countries job training. Maternity leave (sometimes even paternity leave), paid vacations, state-financed housing projects, and low-rent housing were also implemented in later years in most West European countries.

Only by implementing higher taxes and focusing much of the state’s wealth on public expenditures could West European states afford to sustain their welfare states. The expenditures associated with the welfare state increased substantially from 1950 to 1980, leading some politicians and economists to believe that it was fast becoming a liability to economic prosperity. For

example, in 1950 Britain spent 35 percent of gross domestic product (GDP) on public expenditures, increasing to 38 percent in 1965 and 46 percent by 1980. The Netherlands was spending 60 percent of its national wealth in public expenditures. Funding such programs led West European states to introduce substantial income redistribution policies through high levels of taxation and concentrating a large amount of GDP into their state budgets. Progressive taxation rates often exceeded 50 percent of personal incomes. In some instances, it was as high as 70 percent in the highest income brackets. Tax rates averaged 30 percent in Britain and between 20 percent and 25 percent in Germany, France, and Belgium.

The 1973 Oil Crisis, triggered by OPEC’s displeasure at Western support of Israel during the Yom Kippur War of that same year, had significant reverberations in the international economy. After three decades of untrammelled growth and prosperity, Western Europe was severely affected by the Oil Crisis as well as by the subsequent dismantling of the Bretton Woods economic system. The welfare state, which had grown by leaps and bounds in the previous decades of economic expansion, was now assailed. Growing unemployment and economic stagnation, coupled with high taxes, made critics of the welfare state more outspoken.

In the late 1970s and early 1980s, conservative politicians came into power in Britain (Margaret Thatcher) and West Germany (Helmut Kohl), reflecting the changing perception of the role of the welfare state. While such politicians had some success dismantling some aspects of social programs and cutting public expenditures, they did not undo the major programs that formed the initial core of the welfare state, such as national medical and unemployment insurance. Apparently, after nearly a half century of existence, the welfare state was not something that could be done away with overnight, as it had become part of people’s expectation of their government’s responsibility to the citizens.

In the late 1990s and early 2000s, the welfare state was threatened further by neoliberal economic ideology that advocated free trade policies and lower taxes. Increased global economic interdependence and competitiveness triggered

substantial criticism of the welfare state. Neoliberals insisted that high taxation for public expenditures hampered private investment and in turn economic growth in a competitive global market. In addition, the welfare state had the additional strains of paying for the increasing needs of an aging European population in an era of substantial population decline. West European states found that their welfare states would be unable to support their older populations in the future if the system was not substantially reformed. In particular, Margaret Thatcher became notorious for cutting social spending and selling off state-owned industries. Germany and France both have internal ongoing political debates concerning potential cuts due to the increasing costs of social security spending as their nations face a rapidly growing older population.

—Abraham O. Mendoza

Bibliography

- Aldcroft, Derek H. *The European Economy, 1914–1990*. 3rd ed. New York: Routledge, 1994.
- Berend, Ivan T. *An Economic History of Twentieth-Century Europe: Economic Regimes from Laissez-Faire to Globalization*. New York: Cambridge University Press, 2006.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.

Neoliberalism

Neoliberalism, an abbreviation of the term “neo-classical liberalism,” is a political movement that advocates economic liberalism (free market ideologies) as a means of promoting economic development. Neoliberalism also emerged as a rejection of the political and social liberalism espoused in much of the West in parties of the Left (i.e., the Democratic Party in the United States and the Labour Party in Britain) that had targeted social ills and sought economic equity through social programs and government agency.

Neoliberalism denotes a group of neoclassical-influenced economic theories, including libertarian political philosophies typically espoused by the political Right, and political discourse that emphasizes government control over the economy as inefficient and detrimental to ex-

➤ THATCHERISM IN THE UNITED KINGDOM

Thatcherism, attributed to the political and economic policies of British prime minister Margaret Thatcher, was characterized by her fervent support of minimal state intervention in the national economy. When Thatcher took office in 1979, Britain was troubled with increasing inflation and high levels of unemployment. Thatcher immediately promoted an unrestrained free market and a monetarist policy (controlling the money supply to fuel economic growth) for the United Kingdom. She also sought to privatize many state-owned businesses, such as telecoms and coal mining concerns, seeking to deregulate the economy as much as possible. She also slashed taxes in order to promote investment in the private sector by those who could afford to do so. Her assertive attack on trade unions led to their decreased influence in British society after decades of considerable power and leverage vis-à-vis the British state. Furthermore, her policies also led to a considerable dismantling of the welfare state.

Thatcherism was similar to its contemporary ideological equivalents, Reaganomics in the United States and Economic Rationalism in Australia. Similar to the tenets of Thatcherism, these neoliberal economic policies stressed a philosophy of individualism, which insisted that state mechanisms to promote social equality only hampered initiative and also advocated a free market and minimal government regulation of the economy. These new economic policies, which encouraged the dismantling of the costly welfare state's social safety net, led to increasing poverty. Although Thatcher's policies aided corporate wealth and international competitiveness, during her three terms in office (1979–1990), the United Kingdom suffered from widespread unemployment, racial unrest, ubiquitous homelessness, and increasing poverty levels.

—Abraham O. Mendoza

pansion. Critics suggest that this is an attempt at reverting to the classical liberalism of the late eighteenth and nineteenth centuries promoted by political economist Adam Smith. Specifically, neoliberalism refers to a recent reemergence of classic economic liberalism's influence among

economic scholars and policy makers during the 1970s, particularly in the West (United States, European Union, and Latin America).

Neoliberalism is not a uniform political philosophy or set of economic theories but instead is a shift in social and political thinking espousing decentralized government planning of the economy as opposed to the centralized control that emerged in the late twentieth century.

While British economist John Maynard Keynes had argued that the social stability provided by welfare was a prerequisite of overall economic health, in the late 1960s the demands of the welfare-state systems began to strain the international financial system. After three decades of economic expansion and political soundness, Keynesian doctrine was questioned. Neoliberal arguments gained currency after the stagflation crisis of the 1970s, prompted by the Organization of Petroleum Exporting Countries (OPEC) Oil Crisis of 1973 and the end of the Bretton Woods Agreements. As a result, political factions in various countries in Europe (Gaullists in France, Conservatives in Britain), the United States (the Republican Party), and Latin America (Augusto Pinochet in Chile, the Institutional Revolutionary Party [PRI] in Mexico), typically on the political Right, supported political and economic arguments in support of free markets and little government regulation of the economy.

Economists such as Friedrich Hayek of the Austrian School of Economics and Milton Friedman and Arnold Harberger at the University of Chicago Economics Department developed the theory behind neoliberalism. These intellectuals advocated strict fiscal policies, competitive exchange rates, free trade, privatization, and limited state intervention in the economy. Strict fiscal policies ensured that governments would cut their expenditures on social programs, on which the welfare state was based, and impose tax increases to end deficit spending. Exchange rates would remain competitive on a global scale, where governments would accept market-driven currency prices to encourage investment and trade.

Neoliberals also encouraged the widespread acceptance of free trade and the requisite removal of protective tariffs, government subsidies, and trade barriers. Along with free trade, pri-

vatization was heavily encouraged, transferring state-owned industries to the private sector. Lastly, neoliberal economic theory strongly encouraged governments to limit their intervention in business, focusing on encouraging rather than preventing foreign trade. All of these measures stimulated the interlinking trends later described as globalization.

Neoliberal theory influenced policies across the globe, from those unhappy with the welfare state and Keynesianism in the West to those unhappy with slow development in Latin America and to policy makers in the newly freed East European countries eager to adapt to the global market by adopting capitalism. In the early 1980s, Western politicians such as British prime minister Margaret Thatcher and U.S. president Ronald Reagan became famous (or notorious) for their implementation of neoliberal policies, such as the dismantling of the public sector industries in Britain at the hands of Thatcher and the decreased expenditure in social programs prompted by Reagan. Critics from the Left of the political spectrum suggested that these policies would lead to the slow dismantling of the welfare state and growing economic insecurity for the most vulnerable in society, resulting in poverty, homelessness, and crime.

Elsewhere in the world, the mounting developing world debt crisis of the 1980s and the fall of the Soviet Union and its satellites across Eastern Europe prompted neoliberal theorists to encourage others to deregulate their economies and support international free trade. In Eastern Europe, the new policies led to widespread graft, corruption, and economic hardship for a great majority of the citizens. Countries such as Mexico and Argentina—held by single-party dictatorships, fraught with debt, and in economic shambles—also sought to adapt neoliberal policies that contributed to a growing gap between rich and poor. This led some critics to accuse nations such as the United States and Japan of neocolonialism when they took advantage of neighboring Latin American and Asian countries' cheap labor. Nations such as Bolivia and the Philippines found themselves shackled to conditions set by the World Bank and the International Monetary Fund, which pulled them into the world market by allowing their labor to be ex-

ploited for the needs of the global free market. As a philosophy and movement, neoliberalism has had an enormous social and cultural impact.

—Abraham O. Mendoza

Bibliography

Craig, David, and Doug Porter. *Development beyond Neoliberalism? Governance, Poverty Reduction,*

and Political Economy. New York: Routledge, 2006.

Kiely, Ray. *The New Political Economy of Development: Globalization, Imperialism, Hegemony.* London: Palgrave, Macmillan, 2007.

Thompson, Michael J., ed. *Confronting the New Conservatism: The Rise of the Right in America.* New York: New York University Press, 2007.

■ Introduction: Trade

The United States had a crucial role in reshaping the world economy in the postwar period. During much of World War II President Franklin D. Roosevelt's administration made plans for the postwar years. This involved both plans for the occupation of countries and for trade. The Bretton Woods Agreement of 1944 focused on currency, as currency stability and convertibility were essential to free trade. This, however, was not enough.

The Marshall Plan (European Recovery Program) was implemented in 1948 in order to give money as grants to European countries as part of a reconstruction program. The aim was to rebuild the western European economy and ensure stable democratic governments in the region. The long-term goal was to grow the volume of free trade, although there was a requirement that participants in the Marshall Plan import U.S.-produced goods.

Trade had been greatly reduced during the years of the Great Depression because most countries had instituted tariffs (import taxes) in an attempt to keep out foreign goods that competed with their own domestic producers. To counter this trend, a number of institutions were developed to reduce trade barriers or to resolve trade disputes.

During the decades of the 1950s and beyond, the focus of trade negotiation was usually on tariff barriers to trade. These could be negotiated on a bilateral or multilateral basis. Other negotiations in the decades of the 1960s and afterward were over nontariff trade barriers. In this category were trade barriers that involved cultural attitudes, often involving inspections to prevent the entry of foreign goods into local markets.

Trade issues also include actions by countries that were aimed at preventing the exporting and selling of goods at prices below the market rate, known as dumping. Some countries subsidized their industries and overproduction for political reasons. Although often economically unsound, the practice of dumping was often the result of political policies that kept a nation's workforce employed making more goods than could be sold at market prices. It was also a tactic to dominate markets and crush competition.

Among the institutions developed to handle trade issues was the General Agreement on Tariffs and Trade (GATT), which became the leader in tariff negotiations following the failure of the International Trade Organization (ITO) to be accepted as the agency for trade management. GATT lasted from 1947 until 1995, when it was replaced by the World Trade Organization (WTO). The WTO is the only institution that administers the rules of trade among the nations of the world.

Numerous other organizations were formed to promote regional trade. In the decades since 1945, economic growth was flourishing in Europe and Japan by the 1960s. By the 1980s many Asian countries such as Korea, Indonesia, Malaysia, and others were joining together into economic organizations. Europeans were moving toward the formation of the European Union. States were organizing to promote free trade in Latin America as well, where Mercosur (Mercado Común del Sur) was founded in 1991. In post-Mao China, a new focus on manufacture and export allowed its trade surplus to steadily grow, making China, as of 2009, the world's second-largest economy, based on gross domestic product (GDP).

The North American Free Trade Agreement (NAFTA) was signed in 1992 and implemented in 1994. The agreement reduced barriers and increased trade between the United States, Canada, and Mexico, with flows in goods, services, jobs, and money across all borders. Critics noted that NAFTA also led to a loss of labor union power and a shift of manufacture to *maquiladoras*, or factories with sweatshop conditions, often entirely financed by U.S. or multinational capital, in Mexico just across the border from the United States.

Aiding the growing volume of trade was the development of global trading in securities, currency speculations, and electronic banking. The development of the Internet allowed for trade orders to be processed much more rapidly. Other inventions such as cargo containers and cargo shipping improvements supported the huge growth in trade that was supporting a world population that was rapidly urbanizing and had more than doubled between 1945 and 2009.

The growth in trade was the concern of the leaders of the world in the G-8 and the G-20, which are the countries producing about 80 percent of the world's goods and services. A parallel concern was the poverty in the other countries of the world. The concern encouraged a number of programs for promoting development through foreign aid or through other mechanisms. At the same time, escalating environmental problems prompted discussions that led to the Kyoto Protocol (1997), aimed at the limitation of carbon dioxide emissions. Conceivably, while offering new markets in carbon trading, enforcing such limits could trigger a general downturn in economic growth that would coincide with the environmental ethos of limits.

—*Jack Waskey*

North American Free Trade Agreement (NAFTA)

The North American Free Trade Agreement (NAFTA) was signed between the United States, Canada, and Mexico in 1992 and implemented on January 1, 1994, creating a free trade zone among the three countries. In addition, NAFTA has been supplemented by two further treaties: the North American Agreement on Environmental Cooper-

ation (NAAEC) and the North American Agreement on Labor Cooperation (NAALC). These two treaties provided consistent environmental and labor standards for the three member nations to abide by after the creation of the North American free trade zone. However, while NAFTA has led to considerable growth in the economies of the composite nation-states, it has also sparked disputes regarding labor and environmental issues.

Inspired by the success of the European Economic Community (European Union after 1993), North American politicians such as U.S. president George H. W. Bush, Canadian prime minister Brian Mulroney, and Mexican president Carlos Salinas de Gortari pushed for the economic integration of North America through the creation of a free trade zone, a reduction of tariffs and duties, and the free movement of investment capital. In the early 1990s the previously mentioned three major North American heads of state as well as their immediate successors (Bill Clinton in the United States, Jean Chrétien in Canada, and Ernesto Zedillo in Mexico) were all keen supporters of NAFTA. Despite opposition from vast segments of their national publics, which feared a loss of jobs, national sovereignty, and economic independence, by 1994 it was ratified by the governments of the United States, Canada, and Mexico. The NAAEC and the NAALC were included to assure environmentalists and labor organizations that NAFTA would have uniform provisions for environmental and labor concerns, thereby allowing for its ratification.

Controversy surrounding NAFTA has been widespread in all three countries. Accusations that U.S. jobs would be lost to both Canada and especially Mexico were sounded by public figures such as 1992 U.S. presidential candidate Ross Perot as well as by vast segments of the public. In Canada and Mexico, many viewed NAFTA as an infringement by the United States on their political and economic sovereignty. Furthermore, some people in all three countries feared that this was the first step in the creation of a large North American supracountry (the mythical North American Union), which would eventually erode national political autonomy and ethnocultural characteristics.

Following the implementation of NAFTA the Zapatista Army of National Liberation (EZLN)

under the leadership of Subcomandante Marcos declared its opposition against the Mexican government and NAFTA. This action fixed international attention on the gross economic inequalities created by NAFTA, as U.S. agriculture poured into Mexico and the *maquiladoras* were built on the Mexican edge of the U.S.-Mexico border, much to the detriment of peasants and workers in Mexico. The devaluation of the Mexican peso that year was also attributed to the large-scale economic dislocations resulting from NAFTA. In the United States, criticism ranged across the political Left and Right. On the Left, liberals, antiglobalization activists, and environmentalists argued that NAFTA was another form of exploitation to the detriment of Mexico (and Canada). On the Right, libertarians, xenophobes, and nationalists argued that NAFTA encouraged the migration of jobs to Mexico's cheap labor pool while triggering further deindustrialization in the United States. Canadian opposition, while similar to that in the United States, was less noticeable since NAFTA was mostly positive in its effects.

Current criticism of NAFTA alleges that it continues to exploit Mexican vulnerability vis-à-vis the United States and Canada while also exporting jobs to Mexico. Furthermore, U.S. agricultural policies have allegedly led to the uprooting of thousands of peasants from southern Mexico who have migrated not only to Mexico's largest cities but also to the United States through illegal immigration. While NAFTA has ensured the growth of the economies of North America, it has done so at the expense of farmers and workers in all three countries, albeit at differing levels. It has also supposedly contributed to a massive transnational influx of capital and labor (both legal and illegal) in all three countries, much to the benefit of investors and multinational corporations at the expense of the economically vulnerable.

—Abraham O. Mendoza

Bibliography

- Cameron, Maxwell A., and Brian W. Tomlin. *The Making of NAFTA: How the Deal was Done*. Ithaca, NY: Cornell University Press, 2000.
- Hufbauer, Gary Clyde, and Jeffrey J. Schott. *NAFTA Revisited: Achievements and Challenges*. Washington, DC: Institute for International Economics, 2005.

Weintraub, Sidney, ed. *NAFTA's Impact on North America: The First Decade*. Washington, DC: Center for Strategic and International Studies, 2004.

Mercosur (Mercado Común del Sur)

The Mercado Común del Sur (Mercosur), or the Southern Common Market, is a regional trade agreement between the South American countries of Argentina, Brazil, Uruguay, and Paraguay established by the Treaty of Asunción in 1991. It was later updated by the 1994 Treaty of Ouro Preto, with cooperation agreements later extended to Chile and Bolivia. Its main purpose is to promote free trade and the fluid movement of goods, peoples, and currency within this trade bloc based on the model of the European Union.

Severe economic and political conditions in the 1980s led these South American countries, which had formerly focused most of their trade with major nations outside the region, to begin to integrate their economies regionally. The belief that external international conditions restricted Latin American economic development led many financial experts and politicians to conclude that coordinating economic efforts within a regional basis would be more suitable to domestic economic development. The Latin American Debt Crisis of the 1970s and 1980s, caused in part by



Presidents and the delegations of the Mercosur trade block participate in the XXV summit of the Mercosur, in Montevideo, Uruguay, December 16, 2003. (Adrian Sifon/Reuters/Corbis)

► THE FREE TRADE AREA OF THE AMERICAS (FTAA)

The Free Trade Area of the Americas (FTAA) was a proposed agreement to eliminate or reduce the trade barriers throughout the Americas. Formal talks regarding its establishment began with the Summit of the Americas in Miami in 1994. The FTAA first attained public attention during the Quebec City Summit of the Americas in 2001, which was targeted by massive antiglobalization protests. In negotiations held in Mexico on November 16, 2003, officials of 34 potential member nations met to discuss proposals. The proposed agreement was essentially an extension of the existing North American Free Trade Agreement (NAFTA) between Canada, Mexico, and the United States established in 1994 to include Latin American and Caribbean states. However, these talks failed to establish the FTAA, as individual states were concerned about losing economic autonomy and the possibility of expanding U.S. hegemony.

Critics of the proposed FTAA allege that it is yet another attempt by the United States to dominate the economic destinies of Latin America. The FTAA has come under fire in recent years by antiglobalization activists and critics of alleged American economic imperialism in Latin America. In 2004, Cuba, Venezuela, Bolivia, Ecuador, and Nicaragua joined together to form the Bolivarian Alternative for the Americas in protest of the U.S.-backed FTAA. The last FTAA summit was held at Mar del Plata, Argentina, in November 2005. However, no agreement on the future establishment of the FTAA has been reached, leading some critics to believe that it is essentially a dead letter.

—Abraham O. Mendoza

inadequate industrialization in these nations and economic subservience to the whims of the World Bank and the International Monetary Fund (IMF), helped provide the impetus to create Mercosur. Latin American debtor countries could either default on international loans or accept the conditions imposed by the IMF. Eventually by the 1990s, major debtors accepted the IMF's plan, which included austerity measures, cutting subsidies, opening markets to foreign competition, decreasing imports, increasing exports, and privatizing state industries. This subjection to what were perceived to be neocolonial foreign

interests made Latin American leaders believe that regional integration would create a larger market that could better support more rational industrial development and greater autonomy from external interests.

Prior to Mercosur, the first economic integration agreement between Argentina and Brazil occurred in 1985 when President Raúl Alfonsín of Argentina and President José Sarney of Brazil signed the Argentina-Brazil Integration and Economics Cooperation Program. The formal establishment of Mercosur, however, came with the Treaty of Asunción, signed in Paraguay on March 26, 1991. Argentina and Brazil are the integral nations of Mercosur because they represent approximately 90 percent of the area's population, economic output, major key industries, and exports. For the purpose of establishing an effective intrastate customs union and common market, the Mercosur signatory nations ended their tariffs and created a free-trade zone. They also established a common external tariff and began to coordinate their domestic economic plans to ensure uniformity within the trading bloc. In addition, they allowed for the unrestricted movement of investment capital, migrant labor, and services within the signatory nations. In 1994 the presidents of the four member countries met in Brazil to sign the Ouro Preto Protocol, and on January 1, 1995, Mercosur was officially inaugurated. Mercosur countries at the time were apprehensive that the United States would attempt to coerce participants into a rival continental economic zone than being planned, the Free Trade Area of the Americas (FTAA). However, U.S. president Bill Clinton gave Mercosur his blessing in 1997, allaying these fears.

Mercosur has emerged to become Latin America's most successful economic union and is currently the fourth-largest commercial bloc in the world. Mercosur encompasses an area of more than 4.5 million square miles with more than 200 million inhabitants; the combined gross domestic product of the member nations is in excess of \$2.42 trillion a year, ensuring its potential as a major economic force in the near future. While some critics, particularly within the major regional economic powers Argentina and Brazil, resent the lack of independence in economic affairs imposed by cooperation with

Mercosur, most people see it as a positive development in securing a greater degree of prosperity for Latin America.

Currently, Bolivia, Chile, Colombia, Ecuador, and Peru have associate member status with the potential of seeking full Mercosur membership in the future. Most recently, Venezuela signed a membership agreement on June 17, 2006, but prior to becoming a full member, its entry needs the ratification of the parliaments of Brazil and Paraguay. However, the Treaty of Asunción explicitly delineates democratic government as an essential condition for membership in Mercosur, which is problematic to Venezuelan admission given the alleged authoritarianism of the current regime of Hugo Chavez.

—Abraham O. Mendoza

Bibliography

- Coffey, Peter, ed. *Latin America: MERCOSUR*. Boston: Kluwer Academic, 1998.
- Duina, Francesco. *The Social Construction of Free Trade: The European Union, NAFTA, and Mercosur*. Princeton, NJ: Princeton University Press, 2006.
- Grimson, Alejandro. *On Argentina and the Southern Cone: Neoliberalism and National Imaginations*. New York: Routledge, 2005.

The Association of Southeast Asian Nations (ASEAN)

The Association of Southeast Asian Nations (ASEAN) is the regional alliance of the ten states of Southeast Asia that have agreed to work together to accelerate economic growth and to foster peace and security since its founding in 1967. Representing the 500 million people of Southeast Asia and having a gross domestic product of \$737 billion, ASEAN is one of the major trade associations in the world. The participation of the United States, Japan, and China in ASEAN as dialogue partners allows the organization to transcend its regional role and play a major global role as well. Given the present plans of China to create a free trade area with ASEAN, it has the potential of becoming the world's biggest free trade zone. In addition to these qualities, ASEAN likewise has diverse programs that include cultural, social, and educational benefits for its members. The headquarters is located in Jakarta, Indonesia.

➤ ASIA-PACIFIC ECONOMIC COOPERATION (APEC)

Asia-Pacific Economic Cooperation (APEC) is the preeminent economic grouping of countries from the Asia-Pacific Rim region, the nations bordering the Pacific Ocean that have committed to facilitating free trade, safe and efficient commerce, and economic and technical cooperation. These 21 Member Economies include the diverse political and economic systems of the United States, Japan, the People's Republic of China, Mexico, the Republic of China (Taiwan), the Russian Federation, Brunei Darussalam, and Vietnam, among others. APEC claims to be the only economic organization in the world that operates on a voluntary basis and not on formal agreements. The economies of this association account for 60 percent of the world's gross domestic product (GDP) and 47 percent of world trade. Furthermore, these nations that constitute the membership of APEC include one-third of the world's population. The annual meetings, which serve as the primary summits for the organization, host the heads of state of each member nation excluding Taiwan, which sends a nongovernmental representative as a concession to the political pressure exerted by the People's Republic of China. The annual meetings rotate among the member states. The headquarters of APEC is located in Singapore.

Since APEC's first meeting at Canberra, Australia, in 1989, this economic association has developed its organization and its goals, increased its membership, and experienced noteworthy obstacles. During the Bogor, Indonesia, summit in 1994, APEC announced the Bogor Goals, which projected the achievement of the goal of free trade and investment in the Asia-Pacific region by 2010. At the 1997 APEC summit in Vancouver, British Columbia, local police used pepper spray on protestors who opposed APEC for a variety of reasons. The year 1997–1998 also brought an economic crisis in the region that challenged the notions of free trade and foreign investment. In 2003 Thai police thwarted the terrorist activities of Riduan Isamuddin (aka Hambali) of Jemaah Islamiah, who planned to attack the APEC summit scheduled for 2003 in Bangkok, Thailand.

—Scott Catino

ASEAN grew from a predecessor organization called Maphilindo (an amalgamation of the names of the three participating nations: Malaysia, the Philippines, and Indonesia) to include the vibrant economies of Singapore and Thailand. On August 8, 1967, these five nations signed the ASEAN Declaration, also known as the Bangkok Declaration. Although founded originally as a bulwark against communism in Southeast Asia during the hostilities of the Vietnam War era, ASEAN transcended this limited role and later included all of the nations of Southeast Asia, including communist Vietnam. After Brunei Darussalam joined in 1984 shortly after attaining independence, the remaining states of Southeast Asia joined during the mid-1990s except Cambodia, which was admitted in 1999 after some delay because of its internal instability.

ASEAN has survived the numerous problems generated by the diverse political and religious ideologies of its members by chiefly relying upon the principle of noninterference. Democratic reformers, Muslim activists and supporters, and the threat of independence movements, particularly the independence of East Timor, all have challenged the noninterference policy but without damaging the essential unity of the organization. Some critics of the organization have argued that ASEAN has acted indecisively and has supported authoritarian regimes such as Burma and Vietnam. However, the ASEAN Regional Forum has addressed global problems such as nuclear proliferation, security problems on the Korean peninsula, and international terrorism, the latter being a major problem after the Bali nightclub attacks in 2002. ASEAN seems poised to play an increasingly diverse and important role in regional and international affairs throughout the twenty-first century.

—Scott Catino

Bibliography

- Asia Pacific Economic Cooperation. *Selected APEC Documents, 1989–1994*. Singapore: APEC Secretariat, 1995.
- Cronin, Patrick M. *ASEAN and Regional Security*. Washington, DC: National Defense University Institute for National Strategic Studies, 1996.
- Dent, Christopher, ed. *Asia-Pacific Economic and Security Co-Operation: New Regional Agendas*. New York: Palgrave Macmillan, 2003.

Feinberg, Richard, ed. *APEC as an Institution: Multilateral Governance in the Asia-Pacific*. Singapore: Institute of Southeast Asian Studies, 2003.

Mya, Than, ed. *ASEAN beyond the Regional Crisis: Challenges and Initiatives*. Singapore: ISEAS, 2001.

Solidum, Estrella D. *The Politics of ASEAN: An Introduction to Southeast Asian Regionalism*. Singapore: Eastern Universities Press, 2004.

World Trade Organization

The World Trade Organization (WTO), created in 1995, represented the culmination of a 50-year conversation about the ideals and practice of international trade. In its present form, the WTO is an international treaty organization, intended to increase the overall level of trade by lowering tariffs and abolishing restrictive, preferential, or mercantilist regulation. It is not only a venue for trade negotiation, as was its predecessor, the General Agreement on Tariffs and Trade (GATT), but contains dispute resolution and treaty enforcement powers. The WTO has its roots in the 1944 Bretton Woods conference, whose objectives (strongly supported by the United States) included a commitment to a multilateral trade system that would manage itself autonomously, independent of its members' governments. The agreement terminated the financial advantages of the British colonial order, developed over the course of the nineteenth century. Together, GATT and the WTO are a transformational achievement in economic ideology, national power, and internationalism. In 2008 the WTO had 165 member states with the aims of suppressing barriers to trade and having a common tariff policy for each and for all.

The birth of GATT followed the spectacular rise of the United States through World War II. Prior to World War II, the United States had long chafed under what it saw as a world system dominated by closed currency blocs constructed to benefit colonial powers and above them all the British Commonwealth. Financially enfeebled by the war, having little choice but to follow the United States or attempt to stay abreast, Britain enthusiastically collaborated on the making of an U.S.-inspired postwar world. The U.S. vision was the embodiment of classical economic doctrines:

that trade benefited all parties, that hindrances to trade were impediments to all, and that unrestricted trade unlocked the magic of comparative advantage (though cynics might note that the United States was best equipped to excel on these terms).

The devastated nations of Western Europe, for their part, were bankrupt and had little national advantage left to protect; any system that offered immediate aid was a lifeline that could scarcely be refused. The concurrent rise of the Soviet Union, acquiring territories in Eastern Europe and operating its own closed and distinct economic system, was further inducement to act with speed and strength. The United States also looked homeward; despite its fabulous wartime wealth, the terrifying Great Depression was only four years in memory. The United States was willing to take enormous risky steps to secure prosperity, transform trade, and reject protectionist policy on a global scale.

The initial Bretton Woods meeting of 1944 created the International Bank for Reconstruction and Development, which later became the World Bank; created the International Monetary Fund, which stabilized the world's currency system; promised U.S. subsidies; and positioned the 44 signatories for the postwar economic rebuilding. This meeting in the spring of 1944, however, did not set up an organization to encourage reciprocal trade agreements. The United States sent out invitations in 1945 to the signatories of Bretton Woods to begin this second discussion.

Two separate initiatives resulted: a working group on trades and tariffs and a U.S.-sponsored United Nations (UN) resolution to create the International Trade Organization (ITO). In 1947 the working group created the Protocol of Provisional Application of the General Agreement on Tariff and Trade that was signed by 8 of the 23 participants. This group became known as GATT 1947. The UN resolution resulted in a charter for the ITO, which ran into difficulties. The organization was meant to organize and counsel nations seeking to improve their trade portfolios, but its view was clearly supranational in scope and ran into difficulties with sovereign nations. Originally, 23 countries signed on to the ITO, but the U.S. Congress refused to ratify it, suspicious of the loss of sovereignty implied in the

➤ G-20

The G-7 finance ministers, meeting in 1999, announced a new advisory council, the Group of Twenty, or G-20. The G-20 consists of the G-7 (Canada, France, Germany, Italy, Japan, Britain, and the United States), the European Union, and 12 emerging market economies (Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, and Turkey). Following the East Asian financial meltdown, the G-7 worried that their aura of financial infallibility was dimming and sought to enhance the stability of the Bretton Woods institutional system by establishing a larger consultative body. For its first eight years the G-20 held seemingly important meetings, released study papers, and was generally toothless. The global economic crisis of 2008 and the increased global economic heft of emerging nations, however, have brought the G-20 forward as the natural voice for the developing world. Emerging economies are calling for reform of Bretton Woods institutions and for greater voice and representation therein. The G-7, for its part, may be listening.

—*Jacqueline Swansinger*

charter. The original combined planning of the ITO, the International Monetary Fund (IMF), and the World Bank underwent some transformations as a result, and GATT survived as the vehicle for liberalizing commerce and trade.

Between 1948 and 1986 there were seven rounds of GATT negotiation to level the playing field for all traders. These discussions managed to decrease tariffs on manufactured goods from 40 percent to 5 percent during a period when world trade grew by a factor of 4 percent. In 1986 the eighth round of negotiations, called the Uruguay Round, led to the decision to form the WTO, an international agency empowered to bring the world closer to a global standard of free trade and commerce, with powers to punish and cajole national actors into following WTO stipulations. Measured solely by volume of trade, the WTO has been wildly successful: in 2006 world exports of goods and services totaled \$11.8 trillion; in the first ten years of life of the WTO, trade more than doubled. In fact, since 1950, trade has multiplied twenty-sevenfold.

According to the founding philosophies of GATT and the WTO, nationalism and national interests impede social and economic development and the progressive global movement toward liberal trade. Although free trade economists created this idealistic vision of the world, the citizens of individual nations, especially underdeveloped nations, grew less convinced and increasingly bitter about the economic changes forced upon them by agencies enamored of capital.

This antagonism surfaced in violent protests during the 1999 WTO trade talks in Seattle. In the aftermath, the Doha Round, negotiators decided to focus on the problems of developing countries and give increased consideration to three concerns: the sustainability of development, not just growth; protection of the environment; and transparency and democracy in the governance of global policy. This new conversation reflects a nascent perspective that economics is not value neutral, that profit can coexist with debt forgiveness, fair trade, and equity, or as Joseph Stiglitz has said, capitalism may occur in different flavors.

—Jacqueline Swansinger

Bibliography

- Polyani, Karl. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press, 2001.
- Reich, Robert. *The Work of Nations: Preparing Ourselves for the 21st Century Capitalism*. New York: Random House, 1991.
- Sachs, Jeffrey D. *The End of Poverty: Economic Possibilities for Our Time*. New York: Penguin, 2005.
- Sen, Amartya. *Development as Freedom*. New York: Oxford University Press, 2001.
- Stiglitz, Joseph. *Globalization and Its Discontents*. New York: Norton, 2002.
- World Trade Organization. Annual Report, 2006–2007 (pdf file). May 2008. www.wto.org.

Tariffs and Dumping

Tariffs (taxes applied to goods imported into a country) and dumping (where exported goods are sold at very low prices in order to capture market share and eliminate competition in foreign markets) are both important issues that are fundamental to international trade policy. Since

the mid-nineteenth century, tariffs have steadily declined worldwide as countries have generally abided by the increasingly liberalized trade agreements of the General Agreement on Tariffs and Trade (GATT) established in 1947 and then the World Trade Organization (WTO), which replaced GATT in 1995. Tariffs act as barriers to trade by making goods more expensive to sell in foreign markets. As tariffs have fallen worldwide, the amount of international trade has correspondingly increased. Reducing tariffs promotes freer trade, which benefits society as a whole. However, individuals and firms producing goods that compete with foreign importing firms face increased competition as tariffs are reduced. This may result in reduced wages or even job loss if these domestic firms go bankrupt. If the trade is fair, however, this negative aspect of trade is more than offset by the advantages both to consumers, who receive a greater variety of goods, and to domestic firms, which will find it easier to export to foreign markets.

One situation where trade has been found to not be fair is when firms dump products on foreign markets. Like the reduction of tariffs, dumping goods has two immediate offsetting effects. The import of extremely low-priced products, possibly even at prices below the cost of the inputs used to manufacture the products, will force domestic firms to lower prices to points where they are no longer profitable. Similar to lower tariffs, this will have significant negative effects on the domestic firm that cannot compete at such low prices. The consumers of these imported goods will, at least in the short run, benefit by paying much less for the dumped goods. Opponents of dumping argue that over a longer time period, dumping will harm even the consumers when the foreign firms eliminate competition and increase prices to ever higher levels. The threat of dumping could stifle domestic firms from starting up or investing. This would also negatively affect domestic economies. Antidumping laws are therefore needed to counter what is considered unfair trade so as to ensure free and competitive international trade. In addition, without these laws political resentment would build up against free trade, which would ultimately hurt all countries. Alternatively, others argue that without subsidy from their government, firms that are

dumping cannot continue to sell products below cost. Dumping therefore provides benefits to consumers with little lasting impact on domestic firms. Regardless of which argument is correct, antidumping receives tremendous support from well-organized labor organizations and industry groups, while consumers are generally not represented.

Over the years, a number of U.S. industries have claimed to have been harmed by foreign dumping. In the steel industry, U.S. firms faced the first real wave of competition in the early 1960s. Steelmakers in Europe and Japan took advantage of technological advances to export inexpensive steel, while U.S. firms were saddled with high labor costs. By 1974 the U.S. steel industry lobbied for protection by charging the foreign firms with dumping. President Jimmy Carter was able to satisfy the steel industry by implementing a system that would automatically apply a punitive tariff if the price of imported steel was below a benchmark price. This fell apart shortly after the U.S. Steel Corporation filed a dumping suit in 1980. After the early 1980s, the U.S. steel industry was protected from foreign competition by convincing foreign countries to voluntarily restrain the amount they import to the United States. As a result of this, steel prices in the United States were up to 40 percent higher than the world market price.

In a similar case involving alleged dumping, the United States in the 1980s was able to force foreign automobile companies to agree to voluntarily restrain their exports to the United States or face imposed tariffs. The U.S. computer chip industry was another industry that faced severe competition from Japanese countries that were exporting Direct Random Access Memory (DRAM) computer chips in the mid-1980s. At the time, U.S. producers accused the firms of dumping by selling the chips below the production costs. After being threatened with punitive tariffs, the Japanese firms voluntarily agreed to production controls and price floors. When in 1988 the demand for chips brought about a worldwide shortage, the Japanese producers and the remaining U.S. producers received huge profits. Under the final round of GATT in 1994, all WTO countries agreed to phase out all voluntary export restraint agreements within four years. With

voluntary export restraints eliminated, the dumping issue is now dealt with more directly.

GATT and the WTO contain detailed provisions on the identification of dumping and the measures that may be taken to offset the damages incurred from dumping. Countries that rely heavily on export industries have taken great lengths to ensure that procedures used in calculating the export price and normal domestic prices are fair. Difficulties arise in calculating these amounts when, for example, the product is not resold in the original condition in which it was imported or if the government has controls on prices that result in the normal price in the domestic market being unsuitable for comparison. These problems also arise when trade is between countries with vastly differing economic systems, as when a market-oriented country trades with a government-controlled communist country. If dumping is found to have occurred, then the level of injury determines the size of the duty to be placed on the exporting country. Just initiating a dumping investigation is usually enough to end the practice, as importers shift to alternative sources. Usually the investigation takes a long time, which has the effect of penalizing the exporter even when no evidence of dumping is found to have occurred. Unlike other WTO provisions, there is no exception for developing nations with respect to dumping. Developing nations are frequently accused of dumping, which has adversely affected the development of their export industries.

—Joseph Cavanaugh

Bibliography

- Feenstra, Robert. *Advanced International Trade: Theory and Evidence*. Princeton, NJ: Princeton University Press, 2004.
- Mastel, Greg. *Antidumping Laws and the U.S. Economy*. Armonk, NY: M. E. Sharpe, 1998.

Electronic Banking

In the late 1800s, the Western Union Telegraph Company of Rochester, New York, first offered money transfer services across the United States. More widespread applications of electronic banking, however, did not occur until the 1950s. With checking accounts growing by over 20,000 per

➤ OFFSHORE BANKS AND TAX HAVENS

Since the end of World War II, offshore banks and banks in Switzerland and Luxembourg have provided a way to escape regulation or taxation of assets by home governments for wealthy tax evaders, criminals, and terrorists. Such banks are typically located in island nations or landlocked states that provide low taxes or no taxes on deposits, absolute secrecy, little legal restrictions and regulations, and easy access to deposits and withdrawals to their clients, who mostly live in neighboring countries. Switzerland and Luxembourg in Europe and the Cayman Islands in the Caribbean region are famous for banks that provide customers with the aforementioned benefits not provided by their own state's banking systems. Many of the transactions are made electronically or through the Internet, meaning that customers never actually set foot in an offshore bank. However, offshore banking is criticized for its association with organized crime, money laundering, tax evasion, and international terrorist networks. By providing tax havens for the superrich of developed countries not wishing to pay taxes, offshore banks deprive these countries of substantial tax revenue. Furthermore, by allowing international crime syndicates and transnational terrorist organizations the use of their services, they become an integral part of their networks.

—*Abraham O. Mendoza*

month in the early 1950s, the Bank of America, the world's largest bank, desperately needed a means to automate check processing and asked the Stanford Research Institute for help. After a number of setbacks, the Stanford Research Institute invented magnetic ink character recognition (MICR) and also developed working prototypes of the equipment and computer that would use MICR for check processing. In 1956, General Electric began to commercially manufacture the first 32 electronic accounting machines for the Bank of America. These first models could read, record, and sort MICR-encoded checks at speeds approaching 3,000 checks per minute. In comparison, it took an hour for 240–250 checks to be manually posted by experienced workers. Elec-

tronic Recording Machine Accounting would transform the banking industry by standardizing the use of numbers instead of names to process checks and by providing a means to automatically read and post transactions using computers. These innovations became worldwide standards that are still in practice today.

Two other technological advances—credit cards and automatic teller machines (ATMs)—set the stage for modern electronic banking. The first bank credit card was issued in the early 1950s by Franklin National Bank, located in New York. The credit card caught on quickly, and soon banks in all major cities had credit cards that could be used at selected merchants in each city. In 1966 a number of banks formed what would become MasterCard International, which would allow one card to be used across the country and internationally. Also during the mid-1960s, the Bank of America began to license its BankAmericard to U.S. banks. By 1977, these banks formed a membership association and adopted the name VISA.

The first ATM was installed in 1971 by Seattle First National Bank. ATMs were never intended to be a means of improving efficiency or cost savings for banks but instead were intended only to provide a convenient means for customers to obtain cash and make deposits after hours. Customers liked this convenience. The popularity of ATMs grew through the 1970s, and banks stepped up installations to match or one-up their competitors. The number of ATMs grew from a few thousand in 1973 to about 60,000 in 1985 and reached 500,000 in 2005. The number of ATM transactions also grew but not as rapidly and eventually peaked at 6,500 transactions per machine per month in 1995. ATM usage has since declined as consumers have turned to the use of debit cards at the point-of-sale to obtain cash conveniently. As consumers became more familiar with the use of credit cards and ATMs, they became increasingly willing to perform traditional banking services such as borrowing, depositing, and obtaining cash outside of the traditional brick-and-mortar bank. During the 1980s and early 1990s this prompted many to forecast a cashless society where ATMs and traditional banks would be replaced by home banking over the Internet. In addition, most ATMs

today are affiliated with one of the major credit card companies so that users can obtain cash from their accounts in local currencies around the world.

Internet banking began in 1995 when Security First Network Bank (SFNB) was chartered as a fully transactional online thrift institution in Atlanta, Georgia. The first nationally chartered bank was CompuBank N.A., headquartered in Houston, Texas, in 1997. Other completely online banks have followed, such as Nexity and Telebank (which became E-Trade Bank), but into the mid-2000s their customer base has remained small. Internet banks have also been started internationally such as Dublin-based First-e, Spanish- and Argentinean-based Uno-e, and Germany-based Moneyshelf. Online banks have significant cost advantages arising from their low overhead expenses; they are therefore able to offer higher interest rates on savings accounts and lower costs for loans. Compared to brick-and-mortar banks, online banking offers the convenience of anywhere, anytime access, though it is often more difficult to obtain cash and make deposits.

Electronic banking faces many problems including high levels of credit card debt, and fraud. Privacy is also an issue that is of particular concern to electronic banking customers. Online applications require individuals to divulge private information, which customers fear can be stolen as it is transmitted. Additional privacy concerns deal with the ease with which personal information can be shared with affiliated companies or third parties. This can lead to individualized Internet marketing.

For the foreseeable future, traditional brick-and-mortar banking will continue. Instead of replacing traditional banks, electronic banking will continue to evolve to better meet the needs of customers, and the distinctions between brick-and-mortar banking and electronic banking will blur.

—Joseph Cavanaugh

Bibliography

- ABA. "Progress Report on the Automated Teller Battle in Seattle." *ABA Banking Journal* 71 (1979): 46.
- Stakelbeck, Frederick W. "The Role of Credit Cards in an Increasingly Indebted World Economy." *SRC*

Insights: Federal Reserve Bank of Philadelphia 1 (2005): 1–3. http://www.phil.frb.org/src/srcinsights/srcinsights/q1si3_05.html.

Tiller, Jim. "Visa, Everywhere You Want to Be." *Information Systems Security* 14 (2006): 2–5.

Online Trading

Computers have made it possible for traders and investors to buy or sell securities, or shares of stock, through an Internet brokerage account. This historical development has made national and global trading markets available almost instantaneously day and night around the world. To engage in online trading, an investor or trader must have an account that is accessible to online direct trading. Instead of calling a traditional brokerage house that has access to a representative on the floor of, say, the New York Stock Exchange, the online trader executes a trade for her or his individual account(s) through Internet access to a trader on the floor of the stock exchange (or other market). This means that computers have greatly expanded the direct access of individuals in remote areas to stock or securities markets.

Online trading began in the United States in the mid-1990s and grew rapidly, reaching over 3 million accounts by 1997. Although the rate of growth slowed as the stock market fell in the early 2000s, by 2005 there were over 40 million accounts trading online. Along with the improving stock market, online trading also grew because of the increased adoption of household Internet connectivity, specifically the growth of high-speed or broadband connections. Online investors in the United States tend to be wealthy, male, and infrequent traders. According to Magali Rheault of Kiplinger's Personal Finance, in 2004 the average size of an online investor's portfolio was \$189,000, the average household income was \$93,000, and the typical investor made 30 trades a year.

Similar to the United States, online trading has also increased in other industrialized nations. According to Forrester Research, relatively few Europeans have online accounts, but the characteristics of these traders are very similar to those in the United States. In addition, the number of accounts is anticipated to grow significantly

over time. Currently, there are 3.5 million online trading accounts in Europe, but Forrester Research forecasts that by 2011 French traders will number 1.2 million, UK traders will grow to 1.1 million, and Germany will have 2.3 million online traders.

The convenience and low cost of trading have resulted in an increase in the frequency of trading in general and an increase in day trading. Day trading is a strategy whereby an individual buys and sells stock typically on margin to take advantage of rapid changes in the price of stocks, with the hope of making quick profits. Day trading first gained popularity in the stock market boom of the late 1990s when the share prices of many companies were increasing at rates of over 100 percent per year and the stock market in general was going up at double-digit annual rates. At the time, day trading's popularity grew along with stories of small investors

who bought into IPOs (initial public offerings) of small Internet companies and were able to make thousands of dollars overnight by trading online. After the swift decline of the stock market in the early 2000s, the popularity of day trading diminished, and research was published suggesting that online trading was highly time consuming, risky, and rarely profitable.

—Joseph Cavanaugh

Bibliography

- Barber, Brad, and Terrance Odean. "Online Investors: Do the Slow Die First?" *Review of Financial Studies Special* 15 (2002): 455–487.
- Doyle, Bill. "The Affluent Are the Most Active Online Investors." Forrester Research, 2006. <http://www.forrester.com>.
- Etzkorn, Mark. *What Works in Online Trading*. New York: Wiley, 2001.
- Rheault, Magali. "Investors Take Charge." *Kiplinger's Personal Finance* 58 (2004): 28–30.

■ Introduction: Labor

The accelerated pace of globalization has been the most significant factor affecting labor in the postwar period. The spread of new transportation and communication technologies has increased the pace of globalization. At the same time, both Russia (the former communist Soviet Union) and the still nominally communist yet functionally capitalist People's Republic of China have shifted their economies to accept the primacy of free market forces. Following Immanuel Wallerstein's World-Systems theory, these enormous political and technological changes have brought more regions of the world into the dynamic of the capitalist world system, creating new bourgeois core regions (developed nations) and new proletariat peripheries (the developing world) dedicated to manufacture. As developed nations de-industrialize and shift toward a service economy, manufacture is outsourced across multiple national borders to countries with less expensive labor pools and weaker labor regulations.

Sweatshop or near-sweatshop conditions that include long working hours, inadequate job

safety, and subsistence pay are typical in these new factory zones. At the same time, the developed nations' economies have shifted from a base in production to one catering to consumption. As such, women and formerly marginalized groups have been encouraged to join the job market to maintain consumer lifestyles with high living standards. In addition, in developing nations young people are often trained for careers that involve computer and communications technology, while others are trained not for manufacture jobs but for jobs in the service industries. In both arenas, management strategies maintain a pool of low-salaried workers, whether white-collar or blue-collar workers delegated to so-called McJobs. Globalization has also encouraged global labor migrations to fill the unskilled labor sector in developed nations and in manufacture.

Labor unions, which had grown in strength through the 1960s, became weakened in the 1970s when an economic recession led to the primacy of the policies that deregulated industries, eroding the manufacturing base, and encouraged outsourcing. Yet unions remain a

potent force as representatives seek to organize jobs in the developing world and in the service industries in the developed world.

—Fred Nadis

Gender Integration and Global Labor since 1945

The increased industrial production of the World War II era was a turning point for the employment of women in the United States as well as in Great Britain and Australia. Gearing up for the war effort helped to revive the economy and end the Great Depression of the 1930s, creating thousands of new defense-related industry jobs, many of which were filled by women. With brothers and husbands serving in the military, the female labor force in the United States expanded by more than 6.5 million women in the early 1940s, an increase of 46 percent from levels prior to U.S. entry into the war. However, by

February 1946 with World War II's conclusion and the reentry of men into the labor force, 4.6 million women exited paid employment.

In spite of this temporary decrease in women's labor force participation, female employment rates soared in the second half of the twentieth century, rising from 16.5 million in 1950 to 65.9 million in 2000, a labor force participation rate (LFPR) of 60.3 percent of all women of working age. In comparison, worldwide female employment in 2003 was 1.208 billion for a global LFPR of 53.9 percent. Although these rates differed widely throughout the world's countries and regions, even among advanced industrialized countries, no consistent pattern existed with regard to female LFPRs due to economic, political, and cultural factors. For example, women's employment rates in Sweden were similar to those in the United States, while in Japan, Germany, and Italy far fewer women work for wages outside the home.

MALE AND FEMALE LABOR FORCE PARTICIPATION RATES (%) AND THE GENDER GAP IN ECONOMICALLY ACTIVE FEMALES PER 100 MALES, 2003

	Male LFPR (%)	Female LFPR (%)	Gender Gap: Economically Active Females per 100 Males
World	79.4	53.9	68
Middle East and North Africa	76.8	28.2	36
South Asia	81.1	37.4	44
Latin America and the Caribbean	80.5	49.2	64
Industrialized Economies	70.3	50.5	76
Transition Economies	65.7	53.1	91
South-East Asia	82.9	60.5	75
Sub-Saharan Africa	85.3	63.2	77
East Asia	85.1	73.1	83

The Labor Force Participation Rate (LFPR) measures the ratio between the total number of a

group that are employed to the number in that group who are of employment age. Globally in 2003, only 68 women were in the labor force for every 100 men. The disparity was the largest in the Middle East and North Africa (with 36 economically active women for every 100 men) and in South Asia (with 44 active women per 100 men). In addition, these two geographical areas had the LFPRs with only about 1 in 3 working-age women either employed or seeking employment, with LFPRs of 28.2 percent and 37.4 percent, respectively. These low rates are probably due to the traditional role forced on women in many of these regions' economies. On the other hand, East Asia experienced the highest LFPR and exhibited a slight gender disparity between the LFPRs of males and females, with 83 economically active women in the labor force per 100 men.

—Victor Devinatz

Bibliography

ILO, Global Employment Trends Model, 2003; see also ILO, *Global Employment Trends 2004*, Technical note.

This dramatic influx of women in workplaces in the United States was due to a number of factors. These include the need to supplement family income, changing marital patterns, higher divorce rates, increased educational opportunities, the end of the family wage and the decline of real wages, and the implementation of equal employment legislation.

Prior to the mid-twentieth century, in the United States there had been a slow and steady increase in the LFPRs of married women, but in the decades after 1950, this trickle became an astonishing surge. Many black married women in their twenties and thirties with young children joined the labor force immediately after World War II seeking to supplement their family income; by 1970, more than one half of all black married women in their prime adult years were employed, with two-thirds holding full-time positions. Older lower middle-class white women with grown children who had devoted their lives to housework entered the workforce in increasing numbers during the 1950s due to their families' need for additional income. In the late 1960s, white married women in their mid-thirties also joined the labor force. These middle-class college-educated women were motivated less by the need to supplement family income than by occupying their time upon the end of their childrearing duties. Thus, by 1980 the majority of married and single women were employed, many of them full-time.

With more women entering the workforce after World War II, marriage became less valued for reasons of economic necessity but more esteemed as an institution for fulfilling the partners' emotional and sexual needs. With marital separation rates doubling between 1964 and 1975 in the United States combined with divorce law changes, women whose marriages had ended no longer could depend on their ex-husbands for financial support. This trend pushed even more women into the labor force, as once-married full-time homemakers were now required to provide for themselves and their children.

Although divorce laws eventually became liberalized in West European countries, this happened later than in the United States. Divorce rates did increase in European nations throughout the 1970s, although they remained much

higher in the United States than, for example, in the United Kingdom, Sweden, Germany, France, Spain, and Italy. As such, the acceleration of divorces in Western Europe had little effect on increasing women's LFPRs.

With men's real wages eroding by 1973 combined with the significant loss of well-paying factory jobs by 1975, young married women with a high school education and even those raising small children surged into the labor force to bolster the unraveling of what has been called the family wage that had allowed a single male worker to support a family. Downward pressure on men's wages in the West European industrial democracies was less severe than in the United States in the early to mid-1970s because of these nations' stronger labor unions. In addition, in these countries extensive welfare state measures provided much more protection for families, regardless of the employment situation of family members.

Legislative reform was another factor that led to dramatic increases in the LFPRs of women after the end of World War II. Around the turn of the twentieth century, the passage of laws and the use of the marriage bar, the pervasive tradition of disallowing married women to obtain paid employment, restricted women's opportunities in the nascent industrial economy. However, with 20 million new jobs generated after World War II in the United States, these restrictive laws and the marriage bar began to be dismantled as employers viewed the employment of married women in a much more positive light.

Furthermore, the passage of landmark equal employment legislation in the early 1960s in the United States contributed to more women seeking jobs. The 1963 Equal Pay Act, which mandated that men and women who performed substantially similar work should be paid the same, led to an increase in women's wages, although collectively they still earned substantially less than their male counterparts. Additionally, Title VII of the 1964 Civil Rights Act, which outlawed employment discrimination based on race, color, religion, national origin, and sex, helped women gain access to jobs that had been unavailable to them in the past.

By the late 1990s, women in the United States held 60 percent of the 65 million jobs generated

since the 1960s and were predicted to comprise two-thirds of new employees in the first decade of the twenty-first century. By 2000, more than two-fifths of medical, law, and doctoral degrees in the United States were earned by women, increasing their numbers in the academic, business, medical, and legal professions. Although many women with a high school education or less are still concentrated in low-paying service industries, one can expect to see more women obtaining highly skilled positions in the early decades of the twenty-first century.

—Victor Devinez

Bibliography

- Bergmann, Barbara R. *The Economic Emergence of Women*. 2nd ed. New York: Palgrave Macmillan, 2005.
- Blackwelder, Julia Kirk. *Now Hiring: The Feminization of Work in the United States, 1900–1995*. College Station: Texas A&M University Press, 1997.
- Kessler-Harris, Alice. *Out to Work: A History of Wage-Earning Women in the United States*. New York: Oxford University Press, 2003.
- Thistle, Susan. *From Marriage to the Market: The Transformation of Women's Lives and Work*. Berkeley: University of California Press, 2006.

Labor Unions since 1945

There has been enormous regional diversity in the character and density of labor unions since 1945. Unions have acted as mutual aid societies, as bargaining agents with employers, and as political lobbyists. Influenced by economic and political factors at the national and global levels, in general unions saw growing membership and influence in the three decades after World War II, but more recently union membership in industrially developed countries has declined, while developing countries have seen the most union growth.

Post-World War II economic growth led to a dramatic increase in the membership and influence of unions. In many Western countries, employers came to accept the role of unions in collective bargaining systems, and governments consulted with unions on economic policy and passed laws that were favorable to union growth. In the communist countries, unions had no real

➤ CHANGE IN TRADE UNION DENSITY

The International Labour Organization's 1997–1998 report "Industrial Relations, Democracy, and Social Stability" tracked union membership density, that is, the ratio of union affiliated workers to the total number of workers between 1985 and 1995. In general, the trend was down. South Africa and Zimbabwe showed a high increase in union membership in Africa. In the Americas only Chile showed a significant increase in membership, whereas other countries, such as Argentina, Costa Rica, and Venezuela, showed significant declines, as did the United States. In Asia also the trend was decline except in Hong Kong and the Philippines. Australia and New Zealand also showed a significant decline, as did most of Europe, particularly Eastern Europe where union membership often had been mandatory prior to the collapse of the Soviet Union. Spain alone showed significant increases. Overall, these statistics confirm that this was a period of decline in union membership, often a result of Reagan- and Thatcher-inspired government deregulation policies as well as a deterioration of the industrial base in developed countries.

—Victor Devinez

independence from the government but existed to help attain higher production levels. Independent unions, most notably Solidarity founded in Poland in 1980, faced government repression. Powerful unions in Latin America helped achieve political changes, and unions in Africa and Asia played a role in successful independence struggles.

Economic and political changes in the 1970s led to the decline in union strength in the industrially developed world. Growing unemployment and the shift from the highly unionized manufacturing and public sectors to the less-unionized service sector has diminished union power. In the 1980s and 1990s, governments and employers in places such as Australia, Britain, and New Zealand sought to regulate union behavior and diminish the ability of unions to strike and bargain. As a result, labor unions have less influence in national politics and in collective bargaining, and union membership has declined.

However, wide variations in union strength in Western countries exist. In the United States, unions have steadily declined from 33 percent of the workforce in the mid-1950s to 13 percent in 2000. Canada's union density remained stable at about 38 percent between 1980 and 1994 due to a more politically friendly environment. Britain had a Conservative government that introduced a whole host of antiunion legislation in the 1980s, and this plus a marked decline in the manufacturing industry led to a fall in union membership from 55 percent of the workforce in 1979 to less than a third by the end of the century. In contrast, Scandinavian countries have been especially successful in maintaining the largest unions in Europe.

The end of the Cold War ushered in a new era in trade unionism in previously authoritarian countries. Communist countries of Eastern and Central Europe such as the Czech Republic, Poland, and Hungary saw a drop in union membership, which can be attributed to the ending of government-sponsored unions. In Africa and Asia, unions grew in strength as these areas industrialized and repressive regimes ended. South African unionization rates rose 130 percent and Thailand's unionization rates rose 77 percent between 1985 and 1995. In many Middle Eastern countries and in places such as Colombia, however, union members still faced imprisonment and even death from employers and governments.

Even though union strength has declined across the world, unions have adapted to new circumstances. To enhance organizational strength and to expand their jurisdictions, unions have increasingly turned to mergers. Transnational union cooperation has emerged in some sectors of the economy, such as dock workers and automobile manufacture, and in individual multinational corporations, such as General Motors and the Electrolux Group. Unions have increasingly embraced a female workforce in the service and white-collar occupations, and this has further changed the complexion of trade unions.

—John F. Lyons

Bibliography

Chaison, Gary N. *Union Mergers in Hard Times: The View from Five Countries*. Ithaca, NY, and London: Cornell University Press, 1996.

Ferner, Anthony, and Richard Hyman, eds. *Industrial Relations in the New Europe*. Oxford, MA: Blackwell, 1992.

Hyman, Richard. "Agitation, Organisation, Diplomacy, Bureaucracy: Trends and Dilemmas in International Trade Unionism." *Labor History* 46 (2005): 137–154.

U.S. Labor Unions, Postindustrial Era

At the time of the merger of the American Federation of Labor (AFL) and the Congress of Industrial Organizations (CIO) in 1955, union density in the United States had reached its peak of 35 percent, meaning that more than one out of three eligible workers were union members. Union strength predominated in blue-collar jobs in such industries as manufacturing, mining, construction, and the railroad, while union density was substantially lower among white-collar workers and government employees. Although the economy was still considered to be industrially based during the middle of the twentieth century, by the late 1950s service sector jobs slightly outnumbered manufacturing jobs for the first time in U.S. history.

Despite the gradual elimination of unionized manufacturing jobs through plant shutdowns, the movement of factories to the right-to-work states located predominantly in the southern United States, and outsourcing to other nations throughout the 1960s and the 1970s, industrial unions such as the United Auto Workers (UAW) and the United Steel Workers of America (USWA) remained the leading labor organizations in the U.S. trade union movement. In fact, in 1979 just a couple of years before the onset of the 1981–1982 economic recession and the shakeout in U.S. industry, the UAW's membership reached its apex of 1.5 million members.

With the continued loss of unionized factory jobs in the 1980s and the concomitant growth in service sector jobs, industrial unionism began to be replaced with a postindustrial unionism based on the unionization of government employees, many who could be classified as white-collar workers. Beginning in 1962, U.S. government employees obtained the legal right to organize with the issuance of President John F. Kennedy's

Executive Order 10988. In addition, during this same period states began to pass laws allowing public sector workers the right to organize and to collectively bargain with municipal and state administrations and agencies. Wisconsin was the first state to pass such a law in 1959. This trend continued from the 1960s through the 1980s, dramatically increasing public sector union density. This impressive rise in public sector unionism led to the substantial growth of the American Federation of State, County and Municipal Employees (AFSCME) among city and state employees as well as the National Education Association (NEA) and the American Federation of Teachers (AFT) among public primary and secondary school teachers. By 2006 overall union density in the United States registered at 12.5 percent, with union density in the private sector having plummeted to 7.4 percent, while public sector union density was nearly five times higher (36.8 percent).

Besides the proliferation of public sector union membership, some unions committed to organizing in service industries also experienced growth, while industrial union membership continued to decline. For example, beginning in the late 1980s the Service Employees International Union (SEIU) devoted much of its resources to organizing with the launching of its Justice for Janitors campaigns. By 2007 the SEIU was one of the largest unions in the United States. In order to adapt to the realities of a postindustrial economy, industrial unions such as the UAW and the USWA began to organize workers outside of their traditional manufacturing and related jurisdictions, expanding into a wide range of service industries.

In the summer of 2005 the crisis of post-industrial unionism in the private sector resulted in the exodus of a number of large unions from the AFL-CIO. Arguing that the decline in private sector union density was alarming and that the federation was not doing enough to encourage its affiliated unions to spend more of their resources in organizing workers, these unions established the rival Change to Win Federation (CWF) at the end of September 2005 in an attempt to reinvigorate private sector unionism.

With manufacturing constituting only 11 percent of jobs in the U.S. economy by 2007, it be-

➤ THE ORIGINS OF THE CHANGE TO WIN FEDERATION

The Change to Win Federation (CWF) of labor unions emerged from the New Unity Partnership (NUP), formed over the July 4 holiday in 2003 when five national union presidents, four of whom represented AFL-CIO member unions, assembled to discuss the dramatic deterioration of unions and the decades-long slide in union density. From this and subsequent meetings, these presidents devised a strategy to boost union membership by drastically reorganizing the labor movement. Five unions—the Service Employees International Union (SEIU), the Hotel Employees and Restaurant Employees (HERE), the Laborers International Union of North America (LIUNA), the United Brotherhood of Carpenters (UBC), and the Union of Needle Trades, Industrial, and Textile Employees (UNITE)—agreed to combine their resources in cooperative union-organizing campaigns while calling for the AFL-CIO's 57 affiliates to be merged into 15 or 20 larger industrial unions.

Although the NUP formally broke up in January 2005, on June 14, 2005, the SEIU, UNITE HERE (the merger of UNITE and HERE), the Laborers, the Teamsters, and the United Food and Commercial Workers (UFCW) created the CWF to promote joint union-organizing drives to revitalize the American labor movement. In late September 2005, the five above-mentioned labor organizations along with the UBC and the United Farm Workers, representing 5.4 million members, officially inaugurated the CWF, promising to unionize hundreds of thousands of workers. The CWF stated that it was committed to devoting 75 percent of the federation's budget to organizing 50 million landlocked service industry workers such as cashiers, janitors, nurses' aides, security guards, and retail employees. Major companies that the CWF expressed interest in organizing included Wal-Mart, Home Depot, and FedEx.

—Victor G. Devinatz

came essential that unions target a wide variety of industries that had been barely touched by unionization in order to continue to provide vital protection for U.S. workers in the early decades of the twenty-first century. Many organizers recognized that for postindustrial unionism to be successful, labor organizations would have to focus their recruiting efforts on women,



Grocery store workers, members of the United Food and Commercial Workers Union, strike in California in 2004. The strike was in response to proposed cuts in health care and pension benefits. (Los Angeles County Federation of Labor, AFL-CIO)

immigrants, and minority groups rather than continuing to emphasize the organizing of white male employees as they had done throughout most of the twentieth century. The continuing industrial and occupational transformation of the U.S. economy also indicated that unions must target not only college-educated white-collar employees but also different types of contingent workers and workfare workers as well as traditional blue-collar employees.

—Victor G. Devinez

Bibliography

- Chaison, Gary. "The AFL-CIO Split: Does It Really Matter?" *Journal of Labor Research* 28 (2007): 301–311.
- Freeman, Richard B. "Contraction and Expansion: The Divergence of Private and Public Sector Unionism in the United States." *Journal of Economic Perspectives* 2 (1988): 63–88.
- Lipset, Seymour Martin, and Ivan Katchanovski. "The Future of Private Sector Unions in the U.S." *Journal of Labor Research* 22 (2001): 229–244.
- Savage, Lydia. "Justice for Janitors: Scales of Organizing and Representing Workers." *Antipode* 38 (2006): 645–666.

Modern Slavery

Under Article 4 of the United Nation's Universal Declaration of Human Rights, "No one shall be

held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms." Slavery nevertheless continues to exist in most parts of the world, although it is illegal under both national and international law, including the 1956 United Nations Supplementary Convention on the Abolition of Slavery, the Slave Trade and Institutions and Practices Similar to Slavery. The 2002 Rome Statute of the International Criminal Court, moreover, characterizes enslavement as a crime against humanity falling within the jurisdiction of the Court. While the term "slavery" denotes an economic system in which someone, who is the property of another person, provides labor for that person without payment, in modern times the term has come to include labor relations such as bonded labor, forced labor, and forced marriage.

Modern slavery takes several forms and includes labor relations that are not normally associated with transatlantic slavery. As defined by Anti-Slavery International, a slave is (1) forced to work through mental or physical threat; (2) owned or controlled by an employer, usually through mental or physical abuse or threatened abuse; (3) dehumanized, treated as a commodity, or bought and sold as property; and (4) physically constrained or has restrictions placed on his or her freedom of movement.

Estimates vary as to the scale of modern slavery and the modern slave trade, also known as people trafficking. The United Nations estimated in 2005 that there were 27 million enslaved persons worldwide, while according to U.S. State Department figures (2005), 600,000–800,000 people are trafficked internationally each year (including 14,500–17,500 into the United States, 80 percent of whom are women and children). Modern slaves work in a wide range of industries and countries across the world, such as in the cotton and silk industries in India, agriculture (especially cocoa) in West Africa, mining in Peru, domestic service in the Philippines, and the sex industry in the United States. Filipino and Thai women are trafficked to Japan and Australia, Iraqi women to other Arab countries, and East European women to the United Kingdom and the United States. Children are also forcibly recruited into military service in countries such as Sudan.

There are no reliable statistics for the prices of slaves, but as of 2005 these have been estimated, in U.S. dollars, as between \$50 and \$100 in Sudan and \$1,000 and \$6,000 in Eastern Europe. The price of a slave is hence considered a small capital outlay in a relatively low-risk high-profit endeavor. After illegal drug sales and arms trafficking, human trafficking is today the third most profitable criminal activity in the world, generating \$60 billion annually. The worldwide sex industry, for example, is estimated to net an annual profit of \$6 billion from slave labor according to the American Anti-Slavery Group.

Recent legal measures to tackle the problem of modern slavery include the Victims of Trafficking and Violence Protection Act, which was passed by the U.S. Congress in 2000, while slavery was finally criminalized in Niger in 2003. Organizations and charities campaigning against modern slavery include the United Nations (including its International Labour Organisation); Anti-Slavery International (formerly the British and Foreign Anti-Slavery Society, founded in Britain in 1839); its sister organization in the United States, Free the Slaves; and the American Anti-Slavery Group.

Because people in economically depressed and politically unstable countries are especially prone to becoming victims of slavery and trafficking, economic and social development is seen as the key to abolishing the root causes of modern slavery.

—Alexander Hugo Schulenburg

Bibliography

- Bales, Kevin. *Disposable People*. Berkeley: University of California Press, 1999.
- Sage, Jesse, and Liora Kasten, eds. *Enslaved: True Stories of Modern Day Slavery*. New York: Palgrave Macmillan, 2006.
- United Nations. *Fact Sheet No. 14: Contemporary Forms of Slavery*. Geneva: United Nations, 1991.
- Weissbrodt, David, and Anti-Slavery International. *Abolishing Slavery and Its Contemporary Forms*. New York: United Nations, 2002.

Sweatshops

The term “sweatshop” originated between 1830 and 1850 to describe a particular kind of workplace consisting of up to 100 workers where a

IDENTIFYING MODERN SLAVERY

As described in the Anti-Slavery International Web site, several common forms of modern slavery are:

Bonded labor, in which individuals accept or are tricked into taking a loan, but to repay that debt bonded laborers are forced to work long hours, for which they receive basic food and shelter as payment but may never pay off the loan, which can be passed down for generations.

Forced labor, which affects people who are illegally recruited by individuals, governments, or political parties and forced to work, usually under threat of violence or other penalties.

Slavery by descent, in which people are either born into a slave class or are from a group that society views as suited to being used as slave labor.

Early and forced marriage, which affects women and girls who are married without choice and are forced into lives of servitude, often accompanied by physical violence.

People trafficking, defined as involving the transport and/or trade of people—women, children, and men—from one area to another for the purpose of forcing them into slavery conditions.

—Alexander Hugo Schulenburg

middleman, known as the sweater, managed workers in the manufacturing of garments or clothing under grueling working conditions. Serving as a subcontractor, the sweater paid workers on a piece rate basis for each garment produced, often employing women and children in order to pay the lowest wages possible. By the turn of the twentieth century, the sweatshop was omnipresent in the garment and other industries, particularly in Britain and the United States.

With the aid of union organizing, sweatshops in the United States were supposedly eliminated by 1940. Nevertheless, by the 1950s, the sweatshop had returned. This can be explained as a result of minority groups such as Puerto Ricans and African Americans entering the garment industry in increasing numbers, later to be followed by Chinese, Korean, and other Southeast Asian immigrants. At the same time, the easing of restrictions on the industry exerted downward

► CHILD LABOR IN THE UNITED STATES

It was not until the onset of industrialization that child labor came to be viewed as socially unacceptable in the United States. According to the U.S. Census, at the start of the twentieth century 1.75 million 10–14 year olds were employed, or 22 percent of all children in this age group. By 1938, when the first lasting federal child labor law, the Fair Labor Standards Act, was implemented in the United States, child labor for the most part had been successfully eradicated from the country's mines, mills, and factories. Nevertheless, the persistence of legal and illegal child labor in certain industries still remains a problem in the United States in the early twenty-first century.

For example, in commercial agriculture, Human Rights Watch reports that children as young as 8 and 9 years old regularly labor in the industry. Of the 14–17 year olds who work as seasonal or migrant farmworkers (of which 85 percent are Hispanic), only 47 percent are enrolled in school at grade level, and 37 percent have dropped out of school altogether. In the construction industry, young workers are twice as likely to experience an occupational fatality as adult workers and 7.5 times as likely as young workers in other industries. Furthermore, in studies performed in the late 1980s and early 1990s, the General Accounting Office determined that more than half of the country's garment shops could be classified as sweatshops that illegally employed hundreds of child workers.

Finally, child labor has been frequently used in scams where young workers are recruited from central city neighborhoods to sell items such as magazines, candy, and cookies allegedly for charity. In a similar vein, young workers who sell magazines or other items as part of traveling sales crews have experienced intolerable working conditions from which many find it difficult to escape. However, undoubtedly the worst and most dangerous and abusive form of child labor involves child prostitution with an estimated 300,000 children, some entering the industry as young as 9 years old but most by age 14, working in the early twenty-first century in the United States as prostitutes controlled by adult handlers.

—Victor Devinatz

pressure on wages. The return of sweatshops in the United States also was accompanied by the rise of sweatshop factories in other nations, such as Mexico, Honduras, El Salvador, the Dominican Republic, Thailand, Indonesia, Taiwan, and South Korea, as the clothing industry globalized in the late twentieth century.

In 1994, a report issued by the U.S. government stated that thousands of sweatshops existed in the United States based on a redefinition of the term to include any employer that had violated more than one federal or state labor law regulating minimum wages, overtime work, child labor, industrial homework, occupational safety and health, or workers' compensation. Manufacturing industries that are subjected to intense global competition in the early twenty-first century, such as garments and electronics, are more likely to spawn sweatshops in developed nations to compete with manufacturing in nations with lower labor costs.

If there were any popular beliefs that working conditions in sweatshops during the 1990s were somehow qualitatively better than those found at the turn of the twentieth century, these were dispelled with the sweatshop raid on a garment factory located in an apartment complex in El Monte, California, in early August 1995. Authorities discovered more than 70 Thai workers, composed of mostly women and a few men, sewing on designer labels for top-end mass-produced clothing for an average of 84 hours per week and earning hourly wages ranging between \$.60 and \$2.00. Furthermore, the workers were guarded at all times, and they were warned that they would be killed if they tried to escape.

Working conditions in Mexico's border factories, or *maquiladoras*, appear to be representative of typical sweatshop conditions found in the global apparel industry. Workers earn between \$25 and \$50 for a 48-hour workweek (1998 figures), with unpaid overtime often required to meet the factories' quotas. This forced overtime occasionally includes working all night, with plant guards preventing workers from leaving the factories for the duration of their shifts. In these often windowless plants contained within towering walls and bolted gates, children as young as 13 labor at the same jobs as adults under unsafe and dangerous working conditions.

The return of the sweatshop has resulted in the growth of an antisweatshop movement in the twenty-first century that fights to improve the condition of sweatshop workers both in the United States and abroad. The movement includes the United Students Against Sweatshops, trade unions, and consumer groups. Its members argue that the outsourcing and subcontracting in manufacturing, due to neoliberal globalization, has encouraged the continued existence of sweatshops in this country and throughout the world. Such activists have been able to exert a negative economic impact on transnational corporations by damaging their public images through the exposure of intolerable working conditions in factories that manufacture their products in global locations. Antisweatshop activists also have called for, with some success, the monitoring of factories worldwide. For example, the continuing scrutinizing of production facilities by the anti-sweatshop movement has led in the past decade to union victories and the amelioration of intolerable working conditions in the Kukdong factory in Puebla, Mexico, and the BJ + B factory in Villa Alta Graica, Dominican Republic. Nevertheless, it is clear that the fight for labor rights in sweatshops in the developing world is intricately connected with the struggle to eliminate sweatshops in developed nations.

—Victor Devinatz

Bibliography

- Bender, Daniel E., and Richard A. Greenwald, eds. *Sweatshop USA: The American Sweatshop in Historical and Global Perspective*. New York and London: Routledge, 2003.
- Esbenshade, Jill. *Monitoring Sweatshops: Workers, Consumers, and the Global Apparel Industry*. Philadelphia: Temple University Press, 2004.
- Hapke, Laura. *Sweatshop: The History of an American Idea*. New Brunswick, NJ, and London: Rutgers University Press, 2004.
- Ross, Robert J. *Slaves to Fashion: Poverty and Abuse in the New Sweatshops*. Ann Arbor: University of Michigan Press, 2004.

Industrial Safety and Labor, 1945–Present

Within the past century, industrial safety has improved dramatically in all advanced industrialized

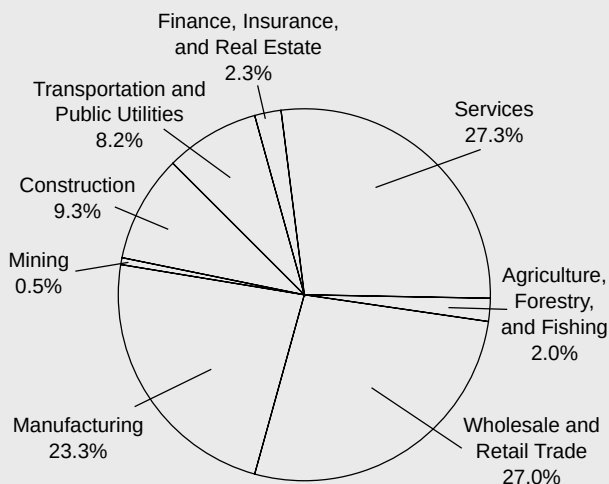
countries as measured by the quantity of injuries or fatalities that annually occur to a group of workers. This dramatic reduction in workplace injuries and fatalities can be partially explained through the transformation of these nations from a manufacturing-based to a service-based economy with an increase in relatively safer jobs in the retail trade and service industries. Nevertheless, even dangerous occupations in the early twenty-first century were much safer than the same jobs a century before. For example, in mining in 2000, 9 miners died on the job for every 100,000 miners employed in the United States; in 1900, the annual fatality rate was 300 miners for each 100,000 miners. In developing nations, however, work-related illnesses, injuries, and deaths have remained at far higher levels.

Throughout the twentieth century workplace safety improved in developed nations despite some decline in the World War II production industries. After the war the newly formed industrial unions of the Congress of Industrial Organizations as well as a number of the older craft-oriented American Federation of Labor unions exerted an extremely important role in monitoring and enforcing workplace safety in the United States. Although labor leaders remained concerned with longer-term health hazards such as worker exposure to toxins, industrial hygienists emphasized plant safety problems throughout much of the 1950s. West European labor organizations took similar positions concerning industrial safety during this time period.

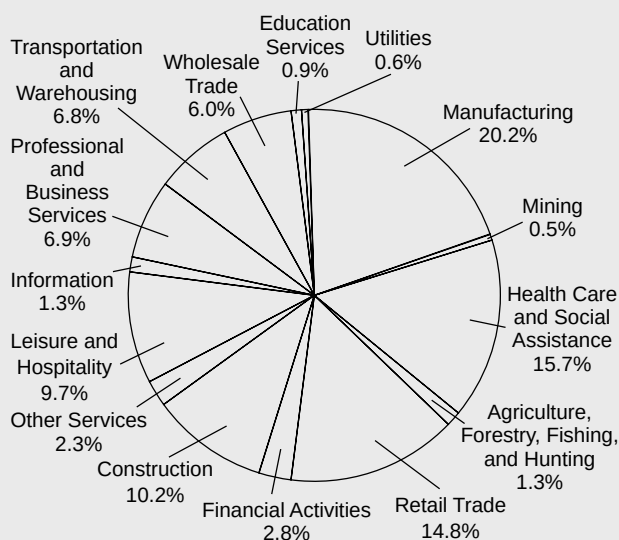
In the 1960s, complementing the social activism at large, many union leaders in the United States advocated that workers be fully protected on the job and as citizens in their communities. One effect of this workplace health and safety activism was the passage of three laws in 1969 and 1970. The U.S. Congress implemented the Mine Safety and Health Act in 1969, which not only improved the miners' health and safety at work but provided financial and medical support to miners who acquired diseases, such as Black Lung, on the job. The passage of the Occupational Safety and Health Act in 1970 led to the formation of the Occupational Safety and Health Administration (OSHA) and the National Institute of Occupational Safety and Health (NIOSH). OSHA was responsible for enforcing health and

PERCENT OF NONFATAL WORKPLACE INJURIES BY SELECTED INDUSTRY SECTOR, 2002 AND 2005

Percent of Nonfatal Workplace Injuries, 2002



Percent of Nonfatal Workplace Injuries, 2005



Sources: Bureau of Labor Statistics, U.S. Department of Labor (December 2003); Bureau of Labor Statistics, U.S. Department of Labor (October 2006).

In 2002, there were 4,406,100 nonfatal injuries in private industry compared with 3,971,700 nonfatal injuries in private industry in 2005. A little over 75 percent of all reported occupational injuries in 2002 occurred in services, trade, and manufacturing combined. In 2005, 51 percent of all reported occupational injuries occurred in manufacturing, health care and social assistance, and retail trade combined.

—Victor Devinatz

safety standards in the workplace, while NIOSH's major function was determining the appropriate levels of contact with industrial toxins. Additionally, in 1970 Congress adopted the Environmental Protection Act, establishing the Environmental Protection Agency (EPA), whose major focus was the lowering of risks to communities from exposure to pollution.

Laws and government agencies responsible for enforcing such legislation similar to those found in the United States were established in other advanced industrial democracies during this era. For example, in the United Kingdom in 1974 the Health and Safety at Work Act was passed, mandating that health and safety legislation be drafted and implemented by the Health and Safety Executive and local officials. In Canada, the Canadian Centre for Occupational Health and Safety, a government of Canada agency, was formed in 1978 by an act of Parliament in order to encourage safe and healthy work sites by eliminating injuries and illnesses at work. Such legislation has undoubtedly led to decreased death rates on the job; in the United States, 4.3 fatalities per 100,000 employees occurred in 2000 compared with 2.5 fatalities per 100,000 employees for the 15 European Union nations in 2003.

Safety standards are not as secure in the developing world. Early in the twenty-first century, approximately 1.1 million people died worldwide from workplace injuries and diseases each year, while 250 million accidents occur at work annually. The World Health Organization (WHO) estimates that only 5–10 percent of workers in developing countries have access to satisfactory occupational health services. Furthermore, WHO calculates that 50–70 percent of the workforce in developing countries might confront arduous physical workloads or ergonomically insufficient working conditions resulting in musculoskeletal injuries. In addition, up to 80 percent of workers in developing countries must regularly deal with physical dangers such as noise, radiation, pesticide poisoning, and extreme heat at their work sites. A final problem involves the systematic underreporting of workplace injuries and diseases. In Latin American countries, for example, WHO states that merely 1–4 percent of occupational diseases are actually reported. Such statistics combined with the decline of union strength

in virtually every nation indicate that industrial safety is still a major concern, especially in developing countries, in the first decade of the twenty-first century.

—Victor Devinatz

Bibliography

- Aldrich, Mark. *Safety First: Technology, Labor, and Business in the Building of American Work Safety, 1870-1939*. Baltimore: Johns Hopkins University Press, 1997.
- Mogensen, Vernon, ed. *Worker Safety under Siege: Labor, Capital, and the Politics of Workplace Safety in a Deregulated World*. Armonk, NY: M. E. Sharpe, 2006.
- Robinson, James C. *Toil and Toxics: Workplace Struggles and Political Strategies for Occupational Health*. Berkeley: University of California Press, 1991.
- Rosner, David, and Gerald Markowitz, Gerald eds. *Dying for Work: Workers' Safety and Health in Twentieth-Century America*. Bloomington: Indiana University Press, 1987.

Age of Outsourcing

Outsourcing is the contracting out of aspects of a company's business to an outside firm. While often associated with globalization, outsourcing existed in some form before 1945. For example, throughout the twentieth century large companies in the United States often used fully owned subsidiaries to produce nonessential components for its products. The services outsourced gradually expanded to include essential functions being contracted out to independent businesses; this is especially true in manufacturing. Of course, outsourcing is not just U.S.-based. Companies in countries around the world outsource; this is especially true in Europe and Japan. While outsourcing may be positive to companies, for employees in these companies outsourcing is not as beneficial.

Outsourcing developed in the 1950s as businesses began to become more diversified. Initially, much of the manufacturing process could be handled in-house. However, beginning in the 1970s and with the onset of rapid globalization, companies began to find it difficult to be the best at everything. This led them to focus on their core goals while embracing the idea that

➤ OUTSOURCING AND THE DECLINE OF ORGANIZED LABOR

Throughout the developed world the number of workers belonging to unions has declined dramatically in recent decades. During the same time period the number of jobs being outsourced has been unprecedented. In the United States the number of jobs being outsourced rose from 6.5 million in 1983 to 10 million in 2000. During this same period union membership declined from 20.1 percent to 13.5 percent.

Unionized jobs are often targeted for outsourcing because generally they are higher-paying jobs, with employees receiving better working conditions than their nonunionized counterparts. Thus, as organized labor lost strength, it was unable to stop the outsourcing of union jobs. As a result union members suffered disproportionately due to the loss of jobs offshore.

—Michael Schiavone

nonessential functions could be fanned out. There was a dramatic increase in outsourcing during the 1980s and 1990s, with nonessential and essential aspects being contracted out. For example, half of all U.S. firms not outsourcing in 1987 were doing so by 1991, while only 58 percent of firms were outsourcing in 1992 and 86 percent were doing so by 1995.

However, it is wrong to assume that the majority of companies outsource the greater part of their functions. For example, in 2000 the largest 100 U.S. transnational companies (TNCs) had the majority of their employment locally (61.4 percent of total employment). The Transnationality Index (which is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales, and foreign employment to total employment) of American TNCs is 48.2. In other words, even the largest TNCs in the United States, based on foreign assets, still have the majority of their assets, sales, and employment in the United States.

It is not just companies in developed countries that outsource; there also is an increasing trend for companies in developing countries to

do so. Initially, countries such as Japan and South Korea were favored destinations of Western companies for outsourcing. However, as these countries gained economic power and wages rose, Western companies moved production facilities to other periphery countries. What also happened was that as local companies expanded, they also outsourced. For example, since the opening of its economy, China has been the preferred outsourcing destination of Western companies. However, with increasing wages and with the Chinese government being less willing to provide tax breaks for foreign investors, there has been a move away from China. Moreover, Chinese companies are also outsourcing to such countries as Vietnam due to rising wages at home; wages are 30 percent higher in the Pearl River Delta in China than in North Vietnam. Chinese investment in Vietnam increased from \$66 million in 2005 to \$312 million in 2006.

Job loss, particularly in manufacturing, is the major controversy surrounding outsourcing in developed nations. A company can make substantial savings by outsourcing; while this benefits the company, the biggest losers are former employees who have lost their jobs. In addition, remaining employees often accept a decline in wages and working conditions in the hope that their jobs will not be outsourced. In the end, outsourcing places profits over people.

—Michael Schiavone

Bibliography

- Hoplin, Herman P., and George S. Hsieh. "Outsourcing/ rightsizing for the 1990s." *Industrial Management + Data Systems* 93(1) (1993): 18–24.
- Schiavone, Michael. *Unions in Crisis? The Future of Organized Labor in America*. Westport, CT: Praeger, 2008.
- UNCTAD. *World Investment Report, 2006*. New York and Geneva: United Nations, 2006.

■ Introduction: Oil Economics

The modern industrial global economy has been built upon the availability of cheap petroleum supplies. The years following 2000 have called into question the status of oil, with many arguing that supplies would soon be exhausted. More strictly speaking, the modern industrial economy will continue to exist if it can be supplied with cheap energy supplies as it has been with cheap oil supplies until recently.

Petroleum was used as pitch or for other purposes from very early in human history. Until the first oil well was successfully drilled at Titusville, Pennsylvania, in 1859, oil had been gathered by hand or with simple tools. The gusher at Titusville marked the beginning of the modern industrial age of oil. Until the early years of the 1900s, oil was used in kerosene lamps for lighting as a substitute for whale oil; however, just prior to World War I it began to be used as a fuel for mechanical engines driving automobiles, trucks, airplanes, and ships.

After World War II, which had been successfully fought by the Allies largely because they had

been able to control oil supplies much better than the defeated Axis powers, the oil companies both large and small began an intense search for oil to fuel the growing postwar recovery.

From 1945 until about 1965 the major oil companies dominated the oil exploration, refining, shipping, and distribution sectors of the oil industry. A vast portion of the market in gasoline sales was in the United States, which held the largest number of automobiles and also had an ever-expanding highway system to serve its mobile population. Oil companies such as Texaco were television sponsors for a market that was saturated in the 1950s. Gasoline station price wars at times were marked with gifts of inexpensive dinnerware for gasoline purchases. Prices on average were below 30 cents a gallon but in times of severe price competition would drop below 10 cents a gallon.

By the 1960s the European countries had made significant strides toward recovery from the damage done during World War II. Their colonies or former colonies were also growing. The

net effect was significant growth in global oil demand about the time that the United States became an oil-importing country instead of the oil-exporting country it has previously been. As oil demand in the United States and around the world increased steadily, the price of oil began to be affected by political factors.

The oil resource-rich countries, most of which were and are still in the Middle East, began to try to control the market price of oil, forming the Organization of the Petroleum Exporting Countries (OPEC) in 1960 in Iraq in order to further that goal. At first, the goal of the states involved was to increase the yield they received from oil companies, but by the 1970s most were moving to nationalize their oil resources.

OPEC's reaction to the Arab-Israeli War of 1973 led to oil price increases for the world market. The rise in the price of oil per barrel led to a massive transfer of wealth from the industrialized nations in Europe, North America, and Japan. The high cost of oil produced high inflation and stagflation in the United States as well. In response, the Japanese moved quickly to limit their dependence upon oil. A massive development and adoption of energy efficient equipment was adopted. Japan also invested heavily in energy sources such as nuclear power and geothermal power. Europe, and the United States in particular, did not follow the Japanese example after oil prices dropped to much lower levels.

In the Middle East, much of this wealth was spent on weapons and wars and went for private gain. However, some of the oil revenues of small Arab states such as the United Arab Republic and Kuwait were put to use building a vast infrastructure that transformed their main cities into modern cities with schools, businesses, shopping malls, and more.

By the mid-1980s oil prices dropped to below \$20 a barrel as more supplies came on line. The next ten years were a decade of relatively stable oil prices and growing prosperity in the post-Cold War world until the terrorist attacks upon the United States in September 2001. The American wars in both Afghanistan and soon afterward Iraq were coupled with a huge increase in the demand for oil as China, India, and other countries grew significantly in prosperity. There

transportation systems began to demand much more oil as supplies became tight.

In 2007 and 2008 oil traders entered into a series of bidding wars for oil contracts that drove up the price of a barrel of oil. The peak came in the summer of 2008 when the price of oil drove the cost of gasoline to over \$4.00 a gallon in much of the western United States and to well over \$3.00 a gallon in much of the United States east of the Mississippi River.

The price of oil may well have remained at the record high levels set in 2008 had it not been for the financial collapse that occurred in September 2008 when the housing market crashed, generated by overextensions in the subprime lending markets.

Even as the price of oil declined after the summer of 2008, the issue of peak oil (or the point at which half of the recoverable oil in the world has been found and used) was disturbing many people who try to plan for the future. A range of views on the question of when oil production will peak includes those who believe that it already has to those who believe that this is a distant future event.

—Jack Waskey

Oil Demand since 1945

The world demand for oil has grown rapidly over the past century. In particular, the rapid growth of the economies in China and India and rising wealth of their citizens in recent decades has resulted in a new and a growing demand for oil. Yet the United States, which consumes about 25 percent of the world oil production, remains the world's leading consumer and is increasingly dependent on a foreign supply. As of 2006, European nations ran second to the United States, using approximately 15.6 million barrels daily compared to 20.8 million used daily in the United States, 6.6 million used daily in China, and 5.4 million barrels per day used in Japan.

In the early 1950s the United States was the world leader in the production of oil, producing more than 5 million barrels per day. At the time there was little concern about an end to the supply. The world's proven reserves were less than 100 billion barrels, and the United States

➤ OIL COMPANIES AND THE ENVIRONMENT

Major petroleum producers are heavily criticized internationally for the damage and irreparable harm that oil extraction (and much-publicized oil spills) inflicts on the environment. Companies such as U.S.-based Chevron, British Petroleum (BP), and Royal Dutch Shell have been proactive in responding to these critiques through public relations campaigns and advertising that depict them as responsible stewards of the environment and promoters of carbon efficiency and energy conservation. While this has led to further criticism by various nongovernmental organizations and environmental activists of greenwashing, it has also resonated with consumers who want to associate with products and services that minimize or restore environmental damage. Chevron Corporation in particular promotes energy conservation and responsible extraction practices, which have proven to be a boon to restoring its image domestically in the United States. However, while these public relations campaigns have proven helpful to oil companies and their growing assets, oil extraction and refining continue to be controversial given their continuing peril to the environment.

—Abraham O. Mendoza

held about 30 percent of these reserves. For the next two decades the world production of oil increased at a rate of 10 percent per year. The U.S. production continued to increase but peaked in 1970 at just under 10 million barrels per day. The date of this peak and the subsequent decline in production were accurately forecasted by Marion K. Hubbert. Hubbert, a geologist working in the Exploration and Production Research Division of Shell Development Company, made public in 1956 his calculations accurately predicting the peak of U.S. oil production at or near 1970.

Even as early as 1970 at the peak of U.S. production, the United States was highly dependent on foreign oil. At this time oil provided the United States with about 44 percent of the total energy used. This consumption of 5.4 billion barrels was equivalent to 1,100 gallons of oil for every person in the United States. The amount of oil imported represented about 23

percent of the total U.S. consumption. This gap between what the United States produced and consumed has grown over time as U.S. production has continued to decline while demand increased. The price of oil remained at around \$12 a barrel (in constant 1994 prices) from the turn of the nineteenth century up until the 1970s, when the price of oil rose dramatically.

The spike in oil prices in the 1970s was a result of oil production cutbacks by OPEC (Organization of Petroleum Exporting Countries) nations. OPEC was formed in 1960 with a goal of regulating the production and price of oil. The members of OPEC with the largest crude oil reserves are Saudi Arabia, Iraq, Kuwait, the United Arab Emirates, and Iran. Saudi Arabia's reserves, at more than 260 billion barrels, are double that of the next largest OPEC member and represent 22 percent of the world's proven reserves. Non-Middle East countries with large reserves include Mexico with more than 50 billion barrels, Russia with more than 55 billion barrels, and Venezuela, which is a member of OPEC, with more than 65 billion barrels. Even with the large oil fields in Alaska, the United States has less than 3 percent of the world's proven reserves.

The success of OPEC to maximize its members' profit has been spotty at best. In 1973 and again in 1979 OPEC cut production, and this resulted in a quadrupling in the price of oil. These price shocks resulted in recessions and severe disruptions in the world economy. In the short run this increased OPEC's profits, but over time the growth in the demand for oil slowed dramatically as energy efficiency became a much greater concern. The demand for oil slowed to less than 1 percent per year from the first oil shock until the mid-1990s. Except for a brief spike in the price of oil during the Gulf War in 1991, the price of oil remained relatively stable at about \$20 a barrel until the turn of the century.

Since the turn of the twenty-first century, a number of events such as the 9/11 terrorist attack on the World Trade Center in 2001, the U.S. invasion of Afghanistan during 2001–2002, and the Iraq War beginning in 2003 have caused uncertainty that has affected oil prices. Along with these events, the sustained increase in the price of oil from 2002 through 2008 has been caused by rapid increases in the demand for oil

by developing nations and China coupled with capacity constraints of the major oil producing countries.

Not anticipating this demand, the major oil producers have not been able to increase capacity fast enough. The price of oil reached above \$100 a barrel (not adjusted for inflation) in 2008. With the price of oil reaching record levels, there has been a renewed concern that the world's oil supply is running out. With the exception of Hubbert's predictions about the U.S. oil supply, however, forecasters over the past 50 years have failed to predict world trends correctly. Although the number of easy oil hits (that is, new fields close to the surface in readily available locations) are rarer, improvements in technology have allowed for profitable oil production at ever deeper levels and more difficult locations. Geologists estimate that the recoverable oil from tar sand in Canada and shale rock in Colorado is larger than all proven reserves of Saudi Arabia. With the technology available today, it may soon be profitable to use these alternative sources. In addition, oil demands should be lessened with continued improvements in energy efficiency and increased use of non-fossil fuel energy sources such as nuclear, solar, and wind.

—Joseph Cavanaugh

Bibliography

- Campbell, C. J. *Oil Crisis*. Essex, UK: Hill and Wang, 2005.
- Deffeyes, Kenneth. *Beyond Oil*. New York: Multi-Science Publishing, 2005.
- Kayal, Alawi. *The Control of Oil: The East-West Rivalry in the Persian Gulf*. New York: Columbia University Press, 2002.
- Worldwatch Institute. *Vital Signs, 2007–2008*. New York and London: Norton, 2007.

Oil Fields Globally

Oil (petroleum) is found around the world in sedimentary rock formations. In many places petroleum seeps from deposits near the surface. Many of the first oil strikes occurred where natural oil seeps pointed to oil deposits. Since at least the 1950s most of the easily found oil is believed to have been discovered. The quest for oil has revealed many giant fields (over 500 million barrels); however, they number less than 1,000.

➤ PEAK OIL THEORY

Since the end of World War II, the global demand for petroleum has increased as many countries around the world acquired an appetite for oil due to massive economic development. As the world's supply of petroleum is finite, increased demand has led to various theories of when petroleum extraction would reach its peak, after which the rate of production would enter into decline as a result of dwindling supplies. M. King Hubbert (1903–1989), an American geoscientist, is credited with developing the Hubbert peak theory in 1956. Hubbert predicted that U.S. oil production would peak in the early 1970s, given the projected capacity of U.S. oil fields. Most experts would agree that as predicted, U.S. oil field production did peak in the 1970s. Subsequent theories, some modeled on Hubbert's theory, have attempted to predict the peak for global oil supplies. Some of the most pessimistic theories have estimated mere decades, while the most optimistic predicted at the very least a century. While the accuracy of these projections remains controversial, it illustrates the growing concerns regarding oil dependency across the Western world.

—Abraham O. Mendoza

All together there are about 40,000 significant oil-producing areas around the world.

The giant oil fields are concentrated in about 27 regions of the world. The largest concentrations are in the Persian (Arabian) Gulf area and the western Siberian basin. Other concentrations are in Venezuela, Mexico, Nigeria, the Caspian Sea region, the Gulf of Mexico, North Africa, the continental United States, Canada, and Alaska. They are usually found at the edges of ocean basins or in rift environments (cracks in the earth's crust).

Since 1945, the supply of oil for gasoline or heating oil has oscillated through cycles of boom and bust. The discovery of the giant Ghawar oil field in eastern Saudi Arabia by American geologists in 1948 revealed the largest-known field in the world. Between 1960 and the early 1970s the number of giant fields discovered peaked and declined thereafter. Still, a number

of giants were discovered in Angola, Nigeria, Algeria, Libya, and Equatorial Guinea and in the 1990s in Saudi Arabia.

Among the largest fields in Saudi Arabia are the Safaniya field discovered in 1951, the Manifa field discovered in 1957, and the Zuluf field discovered in 1965. Other large field discoveries include the Muran field in Iran (1953), Prudhoe Bay in Alaska (1969), Samotlor in Russia (1961), the Cantarell Complex in Mexico (1976), Cusiana/Cupiagua in Colombia (1991), Ourhoud in Algeria (1994), and Roncador in Brazil (1996). Between 2000 and 2007, 79 new giants were found in places such as the Kashagan field in Kazakhstan (2000).

Many previously ignored sites are being searched at increased drilling depths. Recent discoveries of oil under the Baaken Shale formation in the badlands of North Dakota and Montana suggest a new giant field holding billions of barrels of oil. The oil is at a depth of two miles. Other recent explorations have been under the sea nearer to the edge of the continental shelf in ever deeper waters or under the Arctic ice cap. Potentially billions of barrels of oil are in these as yet unproven fields, such as a recently identified deep-water Atlantic field off the coast of Brazil.

Both the Antarctica and the Arctic are major regions that have not been explored for oil. In 2007 Russia claimed the entire Arctic as its oil field. This claim has been dismissed by Canada. Geologists expect that giants will continue to be found in regions not previously examined or in reexamination of older areas. Until the global financial crisis of 2008 the world's consumption of oil was rising rapidly, leaving many to predict an end to oil in a few decades at most.

—Jack Waskey

Bibliography

- Deffeyes, Kenneth S. *Beyond Oil: The View from Hubbert's Peak*. New York: Farrar, Straus and Giroux, 2006.
- Halbouty, Michel Thomas. *Giant Oil and Gas Fields of the Decade, 1968–1978*. Tulsa, OK: American Association of Petroleum Geologists, 1980.
- Leffler, William L. *Oil & Gas Production in Nontechnical Language*. Tulsa, OK: PennWell Corporation, 2003.

Organization of Petroleum Exporting Countries (OPEC)

The Organization of Petroleum Exporting Countries (OPEC) was founded in 1960 by countries whose primary source of income flowed from the sale of petroleum, particularly to the West (i.e., the United States, Europe, and Japan). Its founding nations included Venezuela, Saudi Arabia, Iran, Iraq, and Kuwait, and its ranks later included Algeria, Indonesia, Ecuador, Libya, Nigeria, Gabon, Qatar, the United Arab Emirates, and, most recently, Angola, which joined in 2007. OPEC was established with the intention of creating a unilateral policy to promote the mutual interests of member nations and to counter the power of multinational oil companies to set prices and control the industry. OPEC's control of the majority of the world's oil has allowed it considerable influence in international affairs, the most evident case being its role in causing the Oil Crisis of 1973 as a response to American and Dutch support of Israel in the Yom Kippur War against Egypt and Syria. However, OPEC's position as a major agent in world affairs has dissipated in recent decades due to greater access to alternate sources of energy and non-OPEC production.

In the first half of the twentieth century, American and British oil companies were responsible for the discovery and exploitation of petroleum resources in various world regions. The majority of the wealth was extracted for the benefit of such companies (Standard Oil, Exxon, Texaco, British Petroleum), leaving a fixed percentage of corporate profits to the countries where the oil was taken. In the 1940s, Venezuelan minister of mines and hydrocarbons Dr. Juan Pablo Perez Alfonso advocated greater collaboration among the world's oil-producing nations in order to increase their share of oil export profits and thus retain a substantial portion of the wealth for the benefit of their countries. In 1959, Alfonso attended the Arab Petroleum Conference to encourage unity between Venezuela and the Middle Eastern oil producing countries. OPEC was inaugurated the following year in Baghdad at a conference that included the founding members of Venezuela, Iran, Iraq, Saudi Arabia, and Kuwait.

Throughout much of the 1960s, OPEC focused much of its efforts on negotiating concessions from the multinational oil companies primarily over production issues, taxation, and world prices. This resulted in greater OPEC control of production and pricing while allowing the oil industry to retain control of the marketing and transport of petroleum. OPEC shifted its attention to creating production quotas for member nations in order to stabilize world prices for petroleum, ensuring the benefit of all OPEC members. In the next decade, OPEC expanded to include the new member nations of Qatar (1961), Indonesia (1962), Libya (1962), Ecuador (1963), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), and Gabon (1975), all seeking to extract their own concessions from the multinational corporations working within their borders.

The outbreak of the Yom Kippur War of 1973 infuriated OPEC's Arab nation members. Outraged over the continued aid provided by the West to Israel, the Arab nations set a petroleum embargo on the United States and much of Western Europe. The major oil industry conglomerates suddenly found themselves at the mercy of OPEC and its demands for higher oil prices for the world market. However, the threat of OPEC's power over vast amounts of the world's oil supply led to Western nations' awareness of their own vulnerability. Developed nations began to seek oil supplies elsewhere, particularly from non-OPEC countries such as the Soviet Union and Mexico, and to rely on their own sources of oil to avoid being coerced by OPEC and its foreign policy demands.

Rising oil prices have resulted in a huge influx of money into OPEC countries, which has been a mixed blessing for the member nations. Many OPEC governments have failed to invest much of this capital in their own countries, choosing to invest abroad (particularly in Europe and the United States) or to provide aid grants to non-Western developing countries to generate support for their international economic policies against the West. The dependence on oil as the primary source of generating national income failed to give the majority of OPEC nations economic independence; OPEC nations still needed

➤ THE 1973 OIL CRISIS



Cars line up in two directions on December 23, 1973, at a gas station in New York City at the height of the oil boycott crisis of 1973. Motorists waited in long lines and paid high prices for gas when the Organization of Petroleum Exporting Countries (OPEC) declared an oil embargo on the United States in October, 1973. (AP/Wide World Photos)

The Organization of Petroleum Exporting Countries (OPEC) declared an embargo on the United States and the Netherlands in response to continued Western aid to Israel during the Yom Kippur War of 1973. OPEC also raised prices for much of Western Europe by as much as 70 percent. Within the United States, the embargo created an energy crisis that grew considerably worse through much of that same year. Gasoline prices skyrocketed, and long lines of cars began to form at filling stations as consumers waited, often at empty pumps.

Even with the end of the oil embargo in 1974, high gasoline prices remained. The dislocation of the global economy resulted in the breakdown of the existing Bretton Woods economic order as the United States sought to remove itself from the gold standard to rescue its economy. A period of sustained inflation in much of the developed world resulted in growing unemployment, particularly in Western Europe. The 1973 Oil Crisis ended the sustained economic growth of the postwar decades, ushering in a period of global economic instability that lasted well into the 1980s.

—Abraham O. Mendoza

to purchase products and industrial equipment from the West, resulting in the eventual granting of concessions for trade credits (increased oil exports in exchange for Western consumer goods) and a gradual loss of international power.

Disagreements over quotas have led members to withdraw from OPEC. For example, Ecuador withdrew in 1992, and Gabon withdrew in 1996. Currently, Indonesia's membership is under review given its position as a net importer of petroleum. In recent decades, OPEC has continued to function as a mediator for the global interests of the major oil-production countries albeit with lesser international influence.

—*Abraham O. Mendoza*

Bibliography

- Amuzegar, Jahangir. *Managing the Oil Wealth: OPEC's Windfalls and Pitfalls*. New York: I. B. Tauris, 2005.
- Falola, Toyin. *The Politics of the Global Oil Industry: An Introduction*. Westport, CT: Praeger, 2005.
- Yergin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. New York: Free Press, 2003.

Oil Fuels in Latin America

The desire of governments in Latin America to promote and, at times, control national economic growth highlights the changing nature of the oil industry in Latin America during the twentieth century. A general movement in favor of oil nationalization from the 1920s through the 1970s preceded a shift toward privatization that began in the 1990s. In between these two eras, the 1973 Oil Crisis stimulated investment in state-run oil companies through loans for exploration and development of previously untapped oil reserves, which in the 1980s resulted in a series of debt crises for many Latin American nations. The politics of neoliberalism promised to resolve these issues by privatizing state-controlled monopolies and utilities. In the 1990s nearly every state-run oil company in Latin America opened up to private investment, although the degree to which this took place varied according to the particular political, economic, and environmental conditions of each nation.

The nationalization of oil deposits, which began in 1922 with Argentina and ended in 1976 with Venezuela, was legally possible because in

Latin America the sovereign nation owns the subterranean mineral rights, which are separate from the surface rights. This is a legacy of the Spanish colonial legal tradition that assigned ownership of underground resources such as gold and silver to the Crown, rights that were later transferred to the newly independent nation-states. This is also in contrast to former Anglo-Saxon colonies such as the United States in which mineral rights may be separated from surface rights but are nevertheless not explicitly the property of the nation or its people.

Generally speaking, the nationalization of oil served five general purposes for Latin American governments. First, the state-owned oil company was at the top of the national economy and led the way to national economic self-sufficiency. States that integrated development, financial, and military programs into an overall industrial policy typically relied upon the control of the nation's oil industry. Second, the nationalized industry promoted private industry by providing a basic infrastructure that produced inputs for the industrial sector at attractive prices. This logic promised that cheap state-produced oil fuel would underwrite economic development. Third, in a related area, the state-as-oil-company acted as an industrial entrepreneur and spurred growth in related industrial sectors. Fourth, the nation set an example by operating an industry according to the state's idealized social and labor policy. Finally, the nation cultivated within its oil industry a large group of public employees with a vested interest in maintaining state control over both the industry and the economy.

Financing additional oil exploration remained a problem for the region up until the 1970s. Many states nationalized their industries in response to dwindling foreign investment, which after World War II focused on developing oil fields in the Middle East. Over time, the tendencies toward increased nationalization of the oil industry and declining foreign investment in the region became mutually reinforcing. As more Latin American nations appropriated privately held oil infrastructure, foreign corporations became less attracted to investment in those countries that had yet to nationalize their oil industry. As a consequence, nations looked at nationalization as a way to consolidate multiple

private companies into one state-owned enterprise that would reinvest its profits into further development. From the state's point of view, sustained economic growth depended upon a steady increase in cheap oil fuels for domestic use, an increase that could only come from further investment in exploration and infrastructure expansion.

Although Mexico and Venezuela successfully improved their nationalized oil infrastructure without the aid of private investment, other countries with quantitatively smaller oil reserves such as Peru, Argentina, Bolivia, Ecuador, and Colombia balanced their desire for national control over oil with the need for increased exploration and production. In these cases, foreign investment eventually augmented state resources after nationalization had taken place. While a certain amount of state-financed exploration took place, the high costs and difficulties often imbued such projects with limited value. As a result, nations other than Mexico and Venezuela remained dependent on international arrangements despite the nationalized character of their oil industries. Furthermore, prior to the 1973 Oil Crisis and its aftermath, most international companies would only agree to explore for oil provided a concession contract gave the company nearly complete control of development.

However, after 1973 a transformation in the international oil market changed the basis on which states undertook oil exploration and development. Three key worldwide developments strengthened this shift in the oil industry. First, a number of countries acquired foreign investment under favorable terms in part because international oil companies feared that an unsatisfactory outcome in one location might have unwelcome implications internationally. Second, credit for oil industry development became more readily accessible to state-run companies, and World Bank assistance also became available for oil field development for the first time. Finally, the overall growth in the oil industry increased the number of companies specializing in refineries, pipelines, transport terminals, and petrochemical plants, which drove down costs and increased the options for public-private partnerships.

The resulting oil industry boom lasted over a decade, but by the late 1980s struggling econo-

mies led many Latin American policy makers to believe that the state-directed development model had reached the limit of its power. The immense amounts of government debt that had accumulated with the expansion of state-owned oil industries hobbled many national budgets. As a solution, the adoption of neoliberal economic policies, which first began in Chile in the early 1970s, swept through Latin America following the debt crises of the 1980s. Privatization became the remedy to debt-ridden state-run corporations and the centerpiece of neoliberal reform. This change also reflected the new preeminence given by policy makers to the private sector and the role of market forces in achieving sustainable economic growth.

Consequently, many Latin American states privatized state-owned oil companies or removed the state monopoly on oil production, distribution, and refinement. This process generally involved breaking up the state-run company into smaller components and selling a percentage of the company along with management responsibility to private interests. For example, the privatization of Bolivia's Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) began with the passage of the 1994 Capitalization Law, which allowed the state to sell 50 percent of the company to private investors. Bolivia subsequently divided YPFB into two upstream units, a transport company, a refining company, and several service companies. Bolivia privatized the two upstream units in 1996 and the transport company in 1997. In a more extreme case, Argentina sold 99 percent of its state-run oil company to the Spanish conglomerate Repsol S.A. However, in Mexico the 1992 restructuring of PEMEX into four decentralized divisions did not lead to foreign ownership or investment.

—Jonathan Hagood

Bibliography

- Birch, Melissa H., and Jerry Haar, eds. *The Impact of Privatization in the Americas*. Coral Gables, FL: North-South Center Press, 2000.
- Philip, George. *Oil and Politics in Latin America: Nationalist Movements and State Companies*. New York: Cambridge University Press, 1982.
- Wirth, John D., ed. *The Oil Business in Latin America: The Early Years*. Washington, DC: Beard Books, 2001.

■ Introduction: Shadow Economies

Shadow economies are also sometimes known as underground economies, parallel economies, or black markets. They are markets in which trades are made without taxes being collected, labor laws are evaded, environmental laws are avoided, or some type of prohibited service or commodity is sold.

Shadow economies can exist as mild forms of tax evasion in many countries where goods or services are traded without taxes being collected. For example, if a guest in a bed and breakfast (B&B) inn pays in cash, the B&B operator might pocket the payment, ignoring sales or tourist taxes. In that instance, the B&B operator, especially if the paying guest is a foreigner, safely evades declaring the room rent as part of the B&B's business income, which is subject to taxation, and the guest evades paying the taxes due. Both save a small sum that would have gone to the government. Many other types of shadow economies may be in countries where tax collecting is more easily evaded than in the United States or in other industrial societies. In the same way, hired laborers in restaurants and other service industries may be paid off the books, without taxation. In the United States alone, the underground economy is estimated to run into the billions of dollars every year.

Black markets are another form of shadow economy. These black markets operate at times in the open but often exist deeply underground. There is often violent conflict associated with them. The value of the commodities that black marketers sell is often quite high. The black markets includes guns, diamonds, oil, human body parts, human babies, the smuggling of humans into countries as illegal laborers, pirated goods, stolen goods, stolen art, archaeological artifacts, cattle, sheep, illegal drugs (such as cocaine or opium), imitation pharmaceuticals, exotic animals or exotic animal parts (for example, elephant ivory), nuclear materials and nuclear technology, alcohol, and more. Black markets in currencies or services such as gambling or prostitution are common businesses in shadow economies.

Other shadow economies deal in the more unseemly or violent activities, for instance, the

diamond trade. Murder-soiled diamond production has plagued Africa after the end of colonialism. By the 1990s trafficking in conflict (blood) diamonds taken from mines dominated by rebel groups provided them with money for weapons and supplies. Sometimes armed gangs would enter a diamond-producing area and would deliberately mutilate a hand or a foot of men, women, and children in order to brutalize them psychologically and physically. Terrorist groups, including al-Qaeda, joined in the great profits to be made from smuggling rough diamonds to diamond centers for cutting and polishing before entering the public diamond markets.

In November 2002 a global movement among nongovernmental organizations (NGOs) and other activists pressured the diamond industry and the governments of diamond-producing countries to take action on conflict diamonds. After a meeting in Kimberley, South Africa, the Kimberley Certification Process Scheme was adopted. In August 2003 the Kimberley Process, a joint government, international diamond industry, and civil society initiative for stemming the flow of conflict diamonds, was instituted.

By 2006 nearly 4 million Africans in Sierra Leone, Liberia, Angola, and the Democratic Republic of Congo had been killed because of conflict diamonds. The International Criminal Court has sought to prosecute as war criminals warlords, gun runners, and corporate executives selling conflict diamonds and purchasers with involvement in genocide.

The common element in all illegal markets is an attempt to evade government control, whether the goods sold have been legally purchased or stolen. As an example, the government goal may be to collect taxes on transactions that people do not accept as legitimate or to ban some product or a service that is believed to be unhealthy or dangerous.

Black markets are the common link between all pirates throughout history. No matter how pirates of the Caribbean in the sixteenth through the eighteenth centuries may be romanticized, they share with modern Somali pirates, and others, the fact that they are criminal bands orga-

nized to steal on the seas or elsewhere. Modern so-called designer pirates have intelligence networks that identify ships and their specific cargos that are the most valuable to steal. After a successful act of piracy, the goods, including the ship sometimes, are sold in a black market.

Crime organizations, such as the criminal gang run by Al Capone in Chicago during Prohibition, often develop where there are black market opportunities. In the long run they are also able to gain the support of law enforcement, usually at a price. Shadow economies tend to be large and more important in countries where economic liberty is reduced.

Of growing importance in recent decades is the black market of making and selling of counterfeit goods. These are often imitations of expensive brand name goods that are sold at a profit to those making the imitation. Intellectual piracy (for example, the sale of movie DVDs) is often practiced in black markets that are global in scope.

—*Jack Waskey*

Crime Organizations since 1945

Since 1945, international crime organizations have expanded despite the efforts of individual nation-states, international cooperation, and transnational police entities (such as the International Criminal Police Commission, or INTERPOL) to curtail their business. The global expansion of shadow economies based from the profits of these organizations at times make a considerable portion of national wealth, albeit indirectly, for some developing states. While international criminal organizations preceded this period, since 1945 such groups have expanded due to immigration patterns (South to North), the increase of drug and human trafficking, and the augmented level of cooperation of these organizations with civilian populations and corruption in governments in developing nations. In countries such as Colombia, Mexico, Afghanistan, and Somalia, crime organizations have increasing levels of autonomy in areas of those respective states, amounting to quasi-political and economic control. Moreover, crime organizations such as the Sicilian, Russian, Israeli, and Japanese (Yakuza)

mafia have transnational syndicates due to their respective diasporas.

International immigration in the post-1945 world from the developing world to the West has led to the establishment of transnational crime organizations between the country of origin and the host country. Mexican and Colombian drug cartels have connections with street gangs in the United States, particularly in major cities such as Los Angeles and in state prisons. Through intricate indirect and direct communication channels, the smuggling and pricing for narcotics is coordinated, with differing levels of autonomy for the various street gangs. Given the competitiveness of cartels and gangs, turf wars often lead to violence, either in gang warfare at the street level or wide-scale gun battles between cartels. More recently, drug cartels in Mexico and Colombia with their own armed militia groups have engaged with the military forces of the national government, often with popular support in regions of drug cultivation. Moreover, government corruption at the local and national levels often leads to overt bribery, overturned convictions, and indifference. For example, drug cartels in central and southern Mexico, particularly in the state of Michoacán, have substantial support from local populations vis-à-vis the federal government and the antidrug efforts of President Felipe Calderon. Similarly, in the Taliban-held areas of Afghanistan, poppy growers are supported by the Islamist Taliban as a means of acquiring currency to purchase weapons through the global heroin trade to the West to fight North Atlantic Treaty Organization (NATO) forces.

Transnational mafia families in the West have also expanded their international economic powers, particularly the Russian mafia. After the fall of the Soviet Union and the migration of Russians to Europe and the United States, the Russian mafia has expanded its base of operations. Drugs, arms, and human trafficking (particularly slave-prostitutes from the former Eastern Bloc) have been traded across much of Europe, the Middle East (based in Tel Aviv), and Asia through their myriad networks and families based in major cities. To a lesser extent, Sicilian (Italian), Israeli, and Japanese crime families have also expanded throughout much of the West in similar rackets as those of the Russians, with levels of

involvement in gambling, counterfeiting, and extortion. The power exerted by mafia networks, while sometimes limited to the local diaspora community in the city base of operations, often engenders turf wars with adjacent crime organizations and conflicts with local governments.

Other forms of international crime organizations are based in failed states (Somalia and Afghanistan) or are operated by nonstate actors working through the auspices of a rogue state (North Korean hackers) or terrorist networks (al-Qaeda). Somali pirates off the coast of the Horn of Africa have made substantial profits from ransoms and hijackings of shipping freighters going to and fro from the Persian Gulf in spite of Western naval efforts to curtail their actions. Cybercrime by North Korean and al-Qaeda hackers to deliberately slow down intelligence agencies and steal delicate information, in addition to cybercrime by other petty hackers (who focus on identity theft, password theft, Internet scams, and usurpation of funds), has increased by leaps and bounds in the past decade as a means of acquiring money and for intelligence gathering.

—*Abraham O. Mendoza*

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Spellman, W. M. *A Concise History of the World since 1945: States and Peoples*. New York: Palgrave Macmillan, 2006.

Drug Trafficking

While international drug trafficking has been a significant form of transnational exchange for centuries (e.g., the opium trade between India and China in the nineteenth century under British auspices), in the period following the end of World War II this trade has expanded exponentially. Contemporary drug trafficking is directly related to globalization, characterized by its components of mass migration, transnational diaspora networks, international trade networks, and the emergence of transnational criminal organizations (such as Chinese Triads, the Russian Mafia, and Colombian drug lords). After 1945, as economic disparities between the developed West and the developing postcolonial world pro-

gressed, the illicit international drug trade became a viable way for various world regions (Latin American countries of production such as Mexico and Colombia, the Southeast Asian Golden Triangle, and the Central Asian Golden Crescent) to accumulate wealth while satisfying the demand for heroin, cocaine, and marijuana in the West. The relationship between global drug trafficking networks and government corruption at all levels in drug-exporting countries (such as Mexico, Colombia, Afghanistan, Laos, and North Korea) further complicated international attempts to stem the transnational trade in illegal drugs and narcotics.

After 1945 the emergence of transnational drug cartels took place in the West in relation to immigrant communities with links to drug-producing home countries. In this period heroin, a derivative of opium, was heavily in demand by drug users. Beginning in the late 1940s, the Sicilian Cosa Nostra (Mafia) in major U.S. cities used skills learned during the 1920s Prohibition era to smuggle heroin into the country by utilizing their connections in Italy (Sicily). Similarly, the Corsican Mafia utilized its transnational connections spread out within the late French Empire, funneling heroin from French Indochina (Vietnam, Laos, Cambodia) into the French port of Marseilles, where it was distributed into Western Europe. These early transnational trade diasporas created a cohesive international trade network that relied on foreign producers for product but was responsible for smuggling and distribution in the country of consumption.

Much of this heroin was purchased from local opium producers in Indochina with links to the Chinese Nationalist Army in the nascent Golden Triangle in Southeast Asia. In the late 1940s the Chinese Nationalist Army, fleeing from the Chinese communist forces, developed opium farming in Southeast Asia—an area since named the Golden Triangle—to fund their counterinsurgency activities. The governments in Burma, Thailand, and Laos allowed the development of the opium trade within their states for local economic development and eventual sale into established regional markets in neighboring China and Hong Kong. This trade network established Bangkok as the center of the international heroin trade for decades. In the mid to late 1960s,

U.S. involvement in Vietnam introduced a significant amount of American soldiers to heroin use (popularly known as “chasing the dragon”). Ironically, U.S. allies in Vietnam made a sizable profit in the distribution of heroin to American GIs, who managed to spread the heroin habit (along with the trade in heroin) to countries where they spent their rest and recuperation time (Taiwan, Hong Kong, South Vietnam, and Japan). Also, these GIs inadvertently established heroin in the United States on a wider scale upon their return stateside, further cementing the link between the Golden Triangle and the United States. Diaspora Chinese communities in Southeast Asia developed transnational criminal organizations responsible for distribution (known as the infamous Triads), with the networks spreading to places such as Australia, New Zealand, and the United States with sizable Chinese immigrant communities

The growth of the marijuana and cocaine trade, which became widespread in the late 1960s in the West, fueled cultivation of these crops in the Latin American countries of Colombia, Bolivia, and Peru. These developing countries, already dependent on cash crops, created lucrative drug empires by exploiting the West’s demand for drugs. Countries of transit such as Mexico, with its proximity to the United States, also developed localized drug production cartels, which relied on its diaspora communities (typically in the form of Hispanic street gangs in urban and rural areas) in the United States for distribution. Mexican drug lords also recognized the potential for the marijuana trade, cultivating it in huge plantations in secluded areas impervious to the authorities who were typically already bribed. National governments in Mexico and Colombia, recognizing the growing power of drug lords (*narcos*), were reluctant to confront them because it would expose them to the high level of internal corruption that plagued their own bureaucracies. The international U.S. war on drugs in the late 1980s and early 1990s was an effort to work together with countries such as Mexico and Colombia to destroy the supply side of the international drug trade. While this lessened the amount of drugs trafficked into the United States, it inadvertently created domestic drug cultivation operations (most famously

➤ DRUG LORDS—COLOMBIANS

Since the late 1970s, Colombia has been the world’s largest producer of cocaine and also a large producer of marijuana and heroin. It is not surprising that extensive criminal gangs have organized into cartels to control Colombia’s drug traffic into the United States and Western Europe.

In the 1980s, the most powerful and violent of these cartels was centered in Medellín. Led by Pablo Escobar, Jorge Luis Ochoa, and Carlos Lehder, the Medellín Cartel first attempted to present itself as a beneficent organization that employed the poor and provided them with social services. But when Colombian politicians and law enforcement officials demonstrated a renewed determination to stem the drug trade, the Medellín Cartel began to conduct terror bombings and assassinations. The brazenness of their crimes, culminating in the assassination of presidential candidate Luis Carlos Galán, led to an international outcry over the seeming disintegration of the Colombian state and the intervention of U.S. drug enforcement personnel and other paramilitary forces into the conflict. After a number of melodramatic turns in his negotiations with the government, Escobar was eventually tracked down and killed in a shootout.

After Escobar’s death and the imprisonment of Ochoa and Lehder, the Medellín Cartel lost ground to other regional cartels, the most powerful of which was centered in Cali. These cartels have either allied themselves with the Revolutionary Armed Forces of Colombia (FARC), which has conducted an extended insurgency against the Colombian government, or have created militias to eliminate FARC forces and more directly control large swaths of the thinly populated rural and wilderness areas of the country. The war against drugs in Colombia is similar to other law enforcement efforts to prevent the production and distribution of intoxicants and addictive substances.

—Martin Kich

those of Santa Cruz and Humboldt counties in California). Despite U.S. efforts to stem Latin American drug cartels, Western demand continues to prompt suppliers. Some critics suggest that U.S. policies should instead combat the demand side by encouraging rehabilitation and treatment for drug users.

➤ FRENCH CONNECTION

The French Connection was a famous narcotics case that led to the conviction of major heroin traffickers through the combined efforts of the New York City Police Department (NYPD) and the Federal Bureau of Investigation. The case was called the French Connection because Marseille, France, was the connection point between the poppy fields of the Middle East and the sale of heroin on American streets. In Marseille, raw opium would be processed in secret laboratories into pure heroin that was of a very high quality, usually 85 percent pure heroin. It was then smuggled into the United States for street sales to narcotics users.

The success of the NYPD in the French Connection case was instrumental in developing information that was used to severely damage the Mafia in New York. It also slowed the importation of heroin. The case began on the late Saturday night of October 7, 1961, when two off-duty New York detectives followed two animated party goers from the Copacabana night club to a shabby candy store that they apparently owned. From this beginning the two detectives eventually discovered that drug dealers from France were smuggling nearly pure heroin into the United States. The drug dealers attempted to smuggle 112 pounds of heroin into the United States hidden in the rocker panels of a 1960 Buick Invicta. The car belonged to a French television entertainer, Jacques Angel-

vin, who was a conspirator. The value of the load was approximately \$32 million.

The French Connection case brought attention to heroin-smuggling operations. In the late 1960s French drug dealers were still smuggling in larger quantities of heroin. In December 1965, 200 pounds were seized in Columbus, Georgia. Another 200 pounds were seized in New York City in 1968.

President Richard M. Nixon forced the Turkish government to stop the sale of surplus Turkish pharmaceutical poppy by simply buying it from the registered Turkish growers. Nixon's administration then applied pressure on the French to close the drug labs in France. The short-term impact was the elimination of smuggled supplies. However, the drug dealers soon found alternative ways to reach their markets in America, especially from Southeastern Asia. The purity of smuggled heroin since the French Connection has yet to return to its 85 percent purity.

The book *The French Connection* by Robin Moore (1969) was made into a movie with the same title in 1970 by Twentieth Century Fox. A sequel was produced in 1975. The movie starred Gene Hackman, who played "Popeye" Doyle (the character representing Edward Egan), and Roy Scheider, who played Buddy Russo (the character representing Salvatore Grosso). It won five Academy Awards in 1971.

—Jack Waskey

The Golden Crescent, the mountainous regions of the Central Asian nations of Iran, Pakistan, and Afghanistan, has become a central area for heroin poppy cultivation, with Islamic terrorist organizations and militias among those funding their operations. U.S. CIA operatives assisting Afghan and Arab Islamic militants (such as the Taliban and the militants who would eventually become al-Qaeda) allowed these factions to fund themselves via opium cultivation and the international heroin trade. The widespread destruction left behind by the Soviet-Afghan War (1979–1989) encouraged the further development of opium growing as a lucrative cash crop in the region. The Taliban regime in Afghanistan, while officially opposed to the growth of opium, toler-

ated its existence as a form of accumulating currency to buy weapons and fund operations abroad. The dissolution of the Soviet Union (1991) allowed the creation of the transnational funneling of Central Asian opium (made into heroin in Western Europe) through Eastern Europe. East European nationals, having already suffered the shock of crash capitalism, took to smuggling, production, and distribution in the mid-1990s. Contemporary Russia is now a leading consumer of heroin smuggled from Afghanistan and the greater Golden Crescent. The Golden Crescent is currently the world's largest producer of the world's opium, replacing the former Golden Triangle as the center of the heroin trade.

—Abraham O. Mendoza

Bibliography

- Arnold, Guy. *The International Drugs Trade*. New York: Routledge, 2005.
- Booth, Martin. *Opium: A History*. New York: St. Martin's, 1998.
- Thachuk, Kimberley L., ed. *Transnational Threats: Smuggling and Trafficking in Arms, Drugs, and Human Life*. Westport, CT: Praeger Security International, 2007.

Intellectual Property, 1945–Present

The development of intellectual property law since 1945 has been dominated by the globalization of the world information economy and the emergence of digital technology. Globalization has brought some uniformity and consistency to international intellectual property law, while digital technology has presented new threats to existing intellectual property rights as well as opportunities for the expansion of the intellectual property economy.

Intellectual property rights are territorial grants of monopoly. They exist and are enforceable only in the territory of the sovereign that grants them or in the territory of some other sovereign that has agreed to respect the first sovereign's grant. In 1945 the regimes of copyright, patent, and trademark were fragmented. Over the next two decades various international administrative and regulatory functions were gathered under the control of a single agency, which in 1967 became the World Intellectual Property Organization (WIPO). The WIPO is responsible for the administration of two dozen multilateral intellectual property treaties. Another organization, the World Trade Organization (WTO), administers the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs).

By 1945 most countries belonged to the Berne Convention, an international copyright treaty requiring members to respect each other's copyrights, but some countries—including the United States—did not. The United States could not join the Berne Convention because the Copyright Act of 1909, which governed U.S. copyrights, was inconsistent with the convention's requirements. To address this problem, the United States pushed for the adoption of another multilateral copyright treaty to create a parallel international

copyright regime. This treaty, the Universal Copyright Convention (UCC), was adopted in 1955. U.S. copyright law was overhauled again with the Copyright Act of 1976. But it was only after the Berne Convention Implementation Act of 1988 that the United States was able to join Berne, bringing about a near-universal copyright regime in which works copyrighted almost anywhere in the world are protected almost everywhere.

Even as copyright succeeded in overcoming problems posed by the global information economy, a new challenge was appearing on the horizon: digital recording. Electronic copying technology had long posed a threat to copyrights in music and movies. In 1984 the U.S. Supreme Court decided, in *Sony Corporation of America v. Universal City Studios*, that the fact that a videotape recorder could be used for copyright infringement did not make the device unlawful. Because videotape recorders were capable of substantial noninfringing uses, they were “staple articles of commerce,” and Sony was not liable for infringements committed by its customers. This rule was to play a major part in later battles over computer file sharing.

Analog copying, resulting in usable but imperfect copies, was worrisome enough for the content industry. Digital copying made possible the creation of an unlimited number of generations of copies with no degradation in quality. United States and international law responded with statutes and treaties aimed at abuses of this new technology. The Audio Home Recording Act of 1992 effectively killed the first digital copying device aimed at home users, the digital audio tape (DAT) recorder. The WIPO Copyright Treaty and the WIPO Performance and Phonograms Treaty, opened for signature in 1996, required WIPO member states to provide protections for digital copies, including laws against circumventing copy-protection technology. And the Digital Millennium Copyright Act (DMCA) of 1998 provided these protections and imposed other restrictions on certain types of online content providers, including educational institutions and Internet radio stations.

While the DMCA protected the interests of content owners, many consumer advocates perceived it as unfair. The DMCA and the Sonny Bono Copyright Term Extension Act, also enacted

➤ FILE SHARING

In the first major battle of the file-sharing wars, in 2000 the U.S. music industry successfully concluded its suit against MP3.com for making copies of CDs it had purchased and placing them on a server for users to access. The next battle was over Napster. Napster had learned from MP3.com's experience and made no copies of files. Instead, it provided software allowing users to exchange music files with each other and a directory service allowing users to search for song titles available on other users' computers. Napster was not a direct infringer because it had copied no songs. Nevertheless, the music industry claimed that Napster was a contributory infringer (knowing of and materially contributing to direct infringement by its users) and a vicarious infringer (receiving a direct financial benefit from direct infringement by its users while also having the right and ability to control those users' actions). In 2001 the U.S. Ninth Circuit Court of Appeals ultimately agreed.

The *Napster* decision spurred software developers to create a file-sharing network that did not require a centralized directory by placing the directory on the users' computers. This required that some users' computers act as supernodes, maintaining lists of available files on other computers on the network. Supernode-based systems (such as Kazaa or Grokster) operate beyond the control of the company distributing the software; the company should thus be neither a contributory nor a vicarious infringer. The Ninth Circuit in the *Grokster* case initially agreed with this reasoning, but in 2005 the U.S. Supreme Court held that inducement to commit copyright infringement could also satisfy the requirements of contributory infringement. Nor was supernode software protected by the staple article of commerce doctrine. Unlike the videotape recorders in *Sony*, the software did not have a substantial noninfringing use.

For the moment, the content industry can claim victory in the file-sharing wars, but the emergence of new technologies, such as nonprofit BitTorrent with its substantial noninfringing uses, suggests that new battles may lie ahead.

—Aaron Schwabach

in 1998, helped transform the formerly obscure field of copyright law into a battleground between consumers and content owners. The tensions between consumers, who want greater freedom to use the content they have purchased, and content owners, who fear that any permitted copying opens the door to widespread piracy, have not yet been resolved and will probably define the future development of copyright law.

Patent law has not yet achieved the near-seamless, near-universal coverage of copyright law. A patent in the United States, for example, provides no protection against infringement in other countries. An inventor must apply for patent protection in every country in which protection is sought. Prior to 1970, this could be extremely difficult. The 1970 Patent Cooperation Treaty (PCT) allows an inventor to file a single patent application and have it simultaneously submitted in any or all of the countries (138 as of January 2008) that are parties. A separate application fee must still be paid for each country. While the PCT does not guarantee that the patent will be granted in all, or even in any, of the countries in which it is sought, it makes the multiple-application process far simpler. TRIPs has also aided in the globalization of patent law, providing more or less uniform terms of patent protection.

Computer technology provided challenges for patent law as well. In the 1960s the U.S. Patent and Trademark Office (USPTO) and the 1966 President's Commission on the Patent System opposed the idea of software patents. In 1972 the U.S. Supreme Court held, in *Gottschalk v. Benson*, that a mathematical algorithm used in a computer program was not patentable. This was widely, if incorrectly, understood as meaning that computer programs were unpatentable and had echoes outside the United States. To this day the European Patent Convention provides that computer programs are not patentable. U.S. patent law is increasingly at odds with that of other countries. The grant of U.S. patents for such "inventions" as a crustless peanut butter and jelly sandwich, a method of swinging on a swing, and teasing a kitten with a laser pointer have given the USPTO an international reputation for laxity. International disagreements over software and business method patents also persist.

Trademark law was the first area of intellectual property to receive significant attention in the United States in the post-1945 era. In 1946 Congress enacted the Lanham Act to modernize, simplify, and unify existing federal trademark law and to comply with international obligations. The threat of counterfeit trademark-infringing goods originating outside the United States led to the Anticounterfeiting Consumer Protection Act of 1996. In 1995 the controversial Federal Trademark Dilution Act provided remedies for holders of famous marks (such as the golden arches of McDonald's or the red-and-white Coca-Cola logo), even in the absence of actual infringement, against those who used the same or similar marks in ways that might blur the distinctiveness of the mark or tarnish it by associating it with something undesirable.

The Internet has had an impact on trademark law as well. The 1999 Anticybersquatting Consumer Protection Act protected trademark holders from Internet users who might register the trademark holders' trademarks as domain names. The advent of the Internet has also given rise to the abuse of trademarks in search engine spamming and fraud.

The international trademark regime is less developed than the copyright regime or even the patent regime. In 2003 the United States joined the Madrid Union by becoming a party to the 1989 Madrid Protocol, which provides a single application process for trademark registrations in all member states. However, with only 82 members as of February 2008, the Madrid Union still leaves more than half of the world's countries uncovered.

—Aaron Schwabach

Bibliography

- Greene, Kevin J. "Abusive Trademark Litigation and the Incredible Shrinking Confusion Doctrine: Trademark Abuse in the Context of Entertainment Media and Cyberspace." *Harvard Journal of Law and Public Policy* 27 (2004): 609.
- Leaffer, Marshall. *Understanding Copyright Law*. 3rd ed. New York: Matthew Bender, 1999.
- McCarthy, J. Thomas, et al. *McCarthy's Desk Encyclopedia of Intellectual Property*. 3rd ed. Washington, DC: Bureau of National Affairs, 2004.

Schwabach, Aaron. *Intellectual Property: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2007.

Schwabach, Aaron. *Internet and the Law: Technology, Society, and Compromises*. Santa Barbara, CA: ABC-CLIO, 2005.

Maritime Piracy since 1945

In the decades after World War II, large robust navies patrolling against Cold War enemies coupled with economic prosperity worldwide limited piracy to a handful of areas, chiefly in Southeast Asia. The phenomenon began to grow in the wake of decolonization, starting with the global economic downturns of the 1970s. Yet until the 1980s, incidents of piracy were relatively few, and violence was rare. The ships most vulnerable to attack were anchored or dockside on the coast of Nigeria, and by the end of the decade Nigerian authorities had virtually eliminated the threat, although it subsequently returned at the end of the 1990s.

By that time, piracy had become endemic in parts of Southeast Asia, especially in the Strait of Melaka between Malaysia and Indonesia and in the South China Sea. These regions accounted for a third of the 715 incidents reported between 1995 and 2000. More than half of these involved ships at anchor or on a berth, and 86 percent took place in the territorial waters of one state or another. Many of the victims were fishing vessels that were stripped of their catch, engines, and fittings and their crews' personal belongings, if the ship itself was not commandeered. Thai fishermen, in particular, were implicated in a significant number of attacks on refugees (so-called boat people) fleeing Vietnam in the decades after the Vietnam War.

International attention did not focus on these problems until the 1980s, when pirates in the Strait of Melaka and the South China Sea began attacking large freighters while under way. In several notorious incidents, the crews were cast away or murdered. Southeast Asia remained the region of greatest concern for antipiracy experts until 2008, when there was a sharp rise in piracy around the Horn of Africa in waters adjacent to the failed state of Somalia, which has been without a strong central government since 1991.

► THE ORIGINS OF SOMALI PIRACY

The collapse of Somalia's central government in the early 1990s opened the country's rich coastal and offshore fisheries to illegal dumping and overexploitation by foreign fishing vessels, including factory ships, with which local fishermen were unable to compete. These slow, poorly protected fishing vessels became the first victims of piracy as Somali fishermen sought to protect their own livelihoods, first by boarding fishing boats and demanding compensation, often in the form of fees for fishing licenses. Increased profits from kidnapping ships and crews for ransom encouraged local warlords to invest in piracy. Tankers, cruise ships, and container ships joined the ranks of ships at risk, even when they kept more than 200 miles from shore. Nor did pirates discriminate on the basis of a vessel's registry, and victims have included ships flying the flags of such countries as Ethiopia, Yemen, China, Taiwan, the United States, and Russia.

—Lincoln Paine

Although there were only 11 reported attacks in the first quarter of the year, 135 attacks were registered for the whole year, and 44 ships and more than 600 mariners had been seized.

The conditions that enable piracy to flourish remain fairly constant: an absence of political authority or military will to prevent it, an abundance of shipping to attack, and a lack of alternative economic opportunity for prospective pirates. Which of these factors predominates varies according to circumstances and dictates the nature that piracy takes. A problem of growing concern and complexity at the start of the twenty-first century has been the potential interrelationship among ordinary criminality, piracy, trafficking in drugs, arms and people, nationalist insurgency, and terrorism. However, these are largely discrete enterprises.

Few nationalist insurgencies have effectively used piracy as a means to their ends. People who discriminate in terms of their victims on the basis of nationality—confining themselves to ships belonging to the regime against which they are

rebellious or its allies—do not fall into the ancient definition of pirates as the enemy of mankind. Nor do people who rob ships at anchor have much in common with either terrorists or drug traffickers, who in turn share few aims or means.

Combating piracy is complicated by a number of logistical and legal factors. About 50,000 merchant ships sail in international trade worldwide. While the areas in which piracy occurs appear to be concentrated and limited to strategic waterways, these can be vast. The Strait of Melaka is about 500 miles long and is fringed with innumerable islands in which pirates can easily hide. The Gulf of Aden north of Somalia is a major strategic waterway used by 22,000 ships per year transiting between the Indian Ocean and the Mediterranean. These account for 8 percent of the world's trade and 12 percent of the world's oil. Somali pirates have attacked ships within an area of about 1.1 million square miles (2.8 million square kilometers), roughly the size of the Mediterranean Sea and the Red Sea combined.

As a matter of law, the 1982 United Nations Convention on the Law of the Sea (UNCLOS) defines acts of piracy as those that take place “on the high seas” or “in a place outside the jurisdiction of any state.” Most acts of piracy, however, take place within territorial waters—which extend up to 12 miles from shore—and are tabulated in international statistics on piracy. While some officials might welcome foreign assistance in patrolling these areas, in most cases it is politically untenable to invite foreign-flag navies or coast guards into one's home waters.

—Lincoln Paine

Bibliography

- International Maritime Organization. *Focus on IMO*. London: International Maritime Organization, January 2000.
- Murphy, Martin N. “Suppression of Piracy and Maritime Terrorism: A Suitable Role for the Navy?” *Naval War College Review* 60(3) (Summer 2007): 22–45.
- Warren, James F. *A Tale of Two Centuries: The Globalization of Maritime Raiding and Piracy in Southeast Asia at the End of the Eighteenth and Twentieth Centuries*. Singapore: Asia Research Institute, National University of Singapore, 2003.

Weir, Gary E. "Fish, Family, and Profit: Piracy and the Horn of Africa." *Naval War College Review* 62(3) (Summer 2009): 14–29.

Black Markets and Contraband Trade

A global black market is an international circulation of goods that are deemed explicitly illegal by one or more of the countries involved in their production, distribution, and consumption. For this reason it is difficult to impose the notion of a global black market too far into the past, before the existence of strong centralized states, and before international cooperation and law (or at least before the ideas of international cooperation and international law), much international trade would be considered black by our standards. Governments, such as they were, attempted to restrict trade through tariffs and military, usually naval, power.

The first global black market recognizable by these standards was likely the mass importation of Indian opium into China by the British in the mid-nineteenth century. But what makes global black markets since 1945 fundamentally different from anything that came before was that from 1945 onward there were far more international laws and international regulatory bodies. With the founding of the United Nations (UN) and the International Court of Justice (ICJ) after World War II along with the revival of INTERPOL, international law enforcement became an institutional response to international crime.

Post-1945, the most common global black market commodities have been narcotics, weaponry, currency, cigarettes, gemstones, caviar, transplant organs, and, most tragically, human beings. What ties these commodities together other than their illegality? The economist Jagdish Bhagwati makes an interesting distinction between "goods" as opposed to "bads," globally circulating commodities whose destructive powers extend beyond the individual consuming them and into the society in which that individual lives. A bad, in other words, is a commodity that at a given time and place is deemed to cause a social harm. Narcotics such as heroin or methamphetamines,

THE INTERNATIONAL KIDNEY TRADE

Although successful kidney transplants took place as early as the 1950s, it was not until the 1970s that immunosuppressive drugs made it possible to transplant kidneys between people who were not immediate family members. The idea of kidneys for sale, which had been around for several decades as an ethical conundrum, was now a reality. The first known kidney-selling network to come to light was in the early 1980s in India, where brokers arranged for patients from Oman and the United Arab Emirates suffering from end-stage renal disease to be flown to Bombay, where they would be given kidneys donated by poor Indians who were paid approximately \$3,000 for their trouble. The long-term health results for both donors and recipients were poor, but the practice spread nonetheless. In 1988 a prominent London nephrologist was discovered to be recruiting patients from rural Turkey and flying them to Britain, where their kidneys were sold to paying patients from Greece, Afghanistan, Libya, and Israel. By the 1990s the kidney trade was known to exist in South Africa, Turkey, parts of the former Soviet Union, and China. China was unique in that the kidney trade there was a state-sanctioned enterprise in which organs were removed from executed prisoners and sold to overseas patients.

—Joel Tannenbaum

handguns, or adulterated foods or medicines could be considered bads. Only some bads are illegal.

Nearly all of these black market commodities are controlled by organized criminal networks. These seem to exist in all times in all societies, but often access to a particularly lucrative global black market will allow a criminal network to gain access to considerable political and economic power, particularly if they operate within countries whose governments are structurally weak or unstable. This was the case with many criminal organizations in former Warsaw Pact and Soviet countries after the end of the Cold War. Their involvement in, among other things, sex trafficking and the massive international trade in stolen automobiles allowed many of them

to exercise influence at the highest levels of government.

To further complicate matters, the purveyors of black market commodities are sometimes the states themselves. Sometimes the state is a comparatively strong state, wishing to advance short-term political or economic objectives usually far from home. This was the case with the involvement of U.S. intelligence services in the heroin trade in Southeast Asia during the Vietnam War. Sometimes the state is a comparatively weak state, desperate for hard currency. This has been the case with North Korea's active participation in the production and distribution of counterfeit U.S. dollars and with the illegal export of caviar from former Soviet countries in Central Asia.

Global black markets in human beings come in multiple forms, but the two most important are the trafficking of sex workers and the trafficking of illegal migrant workers. There is obvious overlap between these two categories, but they remain distinct in that the former have often been kidnapped and essentially imprisoned in their new environs. This was the case with women in Bulgaria and other former Soviet countries who were lured with promises of legitimate work in Western Europe only to find themselves forced into sex work and with Nepali women who found themselves in neighboring India under similar circumstances. In the case of illegal immigration, the victims often wish to migrate but are unable to do so through legal means and instead are forced to trade their fu-

ture labor for illegal and often dangerous passage to their new country, where their illegal status generally places them outside the protection of the law. This has often been the case with human trafficking between southern China and major urban centers in the United States.

To make matters yet more complicated, the distinction between organized criminal networks and states themselves has often been an ambiguous one. Kimtex, a Bulgarian company run by the security services of the government during the Cold War, specialized in weapons sales in the Middle East and Africa but dabbled in drugs and human trafficking as well. When private enterprise was legalized in Bulgaria in 1986, 90 percent of the joint-stock companies established belonged to members of the security services.

The broad economic trends of the post-Cold War world such as privatization and relaxed trade laws, whether their legacy is ultimately deemed positive or negative, have created an environment in which global black markets have not only survived but thrived.

—Joel Tannenbaum

Bibliography

- Glenny, Misha. *McMafia*. New York: Knopf, 2008.
- McCoy, Alfred W. *The Politics of Heroin: CIA Complicity in the Global Drug Trade*. Chicago: Lawrence Hill Books, 2003.
- Nordstrom, Carolyn. *Global Outlaws: Crime, Money and Power in the Contemporary World*. Berkeley: University of California Press, 2007.

War and Diplomacy

The Atlantic Charter, devised by British prime minister Winston Churchill and U.S. president Franklin Delano Roosevelt in 1941 in the midst of World War II, outlined a common set of principles to devise an international set of organizations to regulate world diplomacy and ensure global stability in the postwar world. Following the war that had led to an estimated 60 million deaths, optimism prevailed that the promises established by the Atlantic Charter could be realized through the cooperation of the Grand Alliance (the United States, Britain, and the Soviet Union). Yet fissures preventing such an eventuality were already apparent at conferences held at Yalta and Potsdam in 1945, when the Allies divided up Europe into spheres of influences, with the Soviet Union holding onto most of Eastern Europe and the United States extending its influence across Western Europe. The Marshall Plan of 1947, the Berlin Airlift of 1948, and major differences over postwar Germany ignited the nascent Cold War between the superpowers.

The ideologically driven Cold War that erupted between the United States and the Soviet Union in the postwar period did not result in World War III. The development of new weapons of mass destruction eclipsing the nightmare potential of even such conventional warfare as seen during World War II helped limit the superpowers' engagement to diplomatic offensives and proxy wars, including wars that emerged from anticolonial struggles.

The Cold War had a powerful influence on such wars of national liberation. These efforts grew in part from the anticolonial sentiment (and rhetoric) shared by the United States, the Soviet Union, and the United Nations (UN). Long-standing indigenous resistance to colonization gained force against the European colonial powers that World War II had left weakened militarily and economically. Many of these nationalist struggles turned into proxy wars for the superpowers. Postwar regional conflicts, such as the India-Pakistan Wars (1947, 1965, and 1971), the Arab-Israeli Wars (1948, 1967, and 1973), the Algerian War (1954–1962) against France, civil wars in the Congo (1960–1962, 1996–1997, and 1998–2003), and the Angolan Civil War (1975–2002), not to mention myriad wars in Latin America—Cuba (1959), Guatemala (1960–1996), and El Salvador (1980–1992)—were subsumed in the greater Cold War conflict. Regional actors chose sides for the benefit of funds and weapons. Other nationalist liberation struggles, such as those in Vietnam and Afghanistan, brought direct superpower military deployment, as these regions were seen as vital links in the fight against an ideological adversary. However, U.S. involvement in the Vietnam War (1964–1975) and the later Soviet-Afghan War (1979–1989) turned into

quagmires for each superpower, as the unpopular wars consumed troops and money and severely marred international prestige and domestic morale. Furthermore, U.S. support of authoritarian regimes in Nicaragua, South Korea, South Vietnam, Iran, and Chile marred its international reputation as the beacon of democracy, particularly as these states practiced state terrorism against internal dissidents. Some major nationalist struggles did not neatly fit the Cold War context. The Iranian Revolution of 1979, led by Islamic fundamentalists against American support of the shah, did not fit the mold of Cold War ideological rivalries. In this case, there was no Soviet support for the new Iranian regime, as a reactionary ideological position was enunciated that rejected both U.S. and Soviet paradigms.

Despite the efforts of the United States and the Soviet Union to garner support from their domestic populations and their allies, support often shifted and foundered. Chinese accusations of Soviet revisionism, for example, partly due to Nikita Khrushchev's policy of peaceful co-existence, did much to taint Soviet efforts abroad and accentuate Chinese leadership of the global liberation movements. Critics were not

Groups such as the Red Brigades in Italy and the Red Army Faction in West Germany used violent tactics in their efforts to destroy the establishment. Some of the more violent groups found common cause with Third World liberation movements, often training and funding their causes.

only abroad but also at home. In the Soviet Union intellectuals who voiced a dissident position (often circulated in the underground samizdat literature) were often jailed or otherwise persecuted. The antiwar and antinuclear movements in the West, in tandem with the counterculture of the late 1960s and early 1970s, led to widespread protests and sometimes violent government reactions. Groups such as the Red Brigades in Italy and the Red Army Faction in West Germany used violent tactics in their efforts to destroy the establish-

ment. Some of the more violent groups found common cause with Third World liberation movements, often training and funding their causes.

The end of the Cold War in 1991, which was expected to herald permanent peace, in fact exposed a new instability. Suddenly the world's sole superpower, the United States, sought to find a new role amid the chaos unleashed by the fall of the Berlin Wall. As the regimes that had held contentious populations together under communist ideology fell apart, such as in Yugoslavia, new nationalist hatreds surfaced among the region's myriad ethnic groups. Ethnic cleansing was unleashed against minority populations in states such as Bosnia-Herzegovina. Ethnic cleansing also developed in other unstable states—for example, in Rwanda and in the Darfur region in the Sudan—as groups within these African states sought to create a more homogenous population to conform to state boundaries. U.S. support of Israel and an international military presence in the Middle East following the first Gulf War (1990–1991) increasingly fueled anti-American sentiment in the region. Such resentment would see its ultimate consequence with the September 11, 2001, attacks on the World Trade Center and the Pentagon, thereby unleashing a new era in global war and diplomacy.

Although they became increasingly important after the September 11 attacks, terrorist groups and asymmetrical warfare had characterized conflicts preceding and during the Cold War as well. In the earlier period, groups such as the Irish Republican Army, the Basque ETA, the Red Army Faction, Hamas, and Hizbullah waged asymmetrical wars against organized state military institutions. Such terror groups long had functioned as nonstate actors, working as international organizations with interlinking autonomous cells. Suffused with ideological fervor as well as international funding from sympathetic contributors, these groups used simple technologies to impart terror on civilian populations and draw attention toward their cause. Al-Qaeda's attacks on September 11, 2001, were such an event, on a far vaster scale. Subsequent attacks in Madrid and London showed the vulnerability of Western societies to such organizations and their methods. Moreover, drug cartels in Colombia and more recently Mexico openly have engaged in war against their respective states, illustrating how nonstate actors may successfully vie with state military institutions.

In 2009, two decades after the fall of the Berlin Wall at which point the so-called end of history was in sight, the world is still engulfed in warfare. Currently, the United States is engaged in wars in Iraq and Afghanistan, not to mention a declared global war against Islamic terror networks. As evidenced in the Russo-Georgian Conflict of 2008, Russia has continued to extend its influence in Central Asia and the Caucasus region, often at the expense of its smaller neighbors. Regional conflicts in Congo, Sudan, and Sri Lanka continue in addition to the territorial disputes between Israel and Palestine and between India and Pakistan. Nuclear proliferation continues to be an issue, with new nations becoming unbidden members of the nuclear club. While no catastrophes on the scale of the world wars of the first half of the twentieth century have occurred, the human population has continued to experience instances of war, widespread destruction, civilian deaths, and genocide.

—*Abraham O. Mendoza and Fred Nadis*

■ Introduction: Cold War Conflicts

While both the Berlin (1961) and Cuban Missile (1962) crises nearly brought both superpowers to a direct nuclear confrontation, the fear of nuclear war forced the United States and the Soviet Union to seek other venues for confronting each other. Regional contentions such as the Arab-Israeli conflict, the India-Pakistan wars, and wars of national liberation (e.g., Vietnam, Algeria, and Angola) were supported by both the Soviet Union and the United States, albeit on opposing sides. However, whether disputes over territory or national lib-

eration struggles, these were fought in a Cold War context, with the superpowers offering differing levels of financial, military, and intelligence backing. Rarer, direct intervention on the part of the superpowers, in the form of combat troops (the United States in Korea and Vietnam, and the Soviet Union in Afghanistan) created theaters of operations where the superpowers again confronted each other indirectly and thereby minimized the potential for the outbreak of nuclear war. Nonetheless, such direct interventions, specifically Vietnam and Afghanistan, were a drain

GLOBAL DIVISIONS AT THE HEIGHT OF THE COLD WAR, 1962



on the finances of the superpowers in addition to being costly wars of attrition that depleted combat troops through heavy casualties and severely affected the superpowers' prestige internationally. While many of these regional conflicts would have occurred anyway, nonetheless Cold War considerations prompted the attention of both the United States and the Soviet Union's policy makers, who attempted to influence these conflicts and fit them into their own ideological and geopolitical goals.

—*Abraham O. Mendoza*

Communist Insurgencies

Also called wars of national liberation, or people's wars, these communist revolutions became most apparent and prominent in the post-World War II era when the defeat of international fascism (the avowed enemy of communism) and the exhaustion of the Western imperial powers (Great Britain, France, and the Netherlands, among others) provided the communist forces headed by the Union of Soviet Socialist Republics (USSR), or Soviet Union, an opportunity to operate with far less resistance. The combination of Soviet designs—later Chinese communist designs—and anticolonial sentiment influenced both the impetus and the character of these revolutionary struggles. Global changes socially and politically that included indigenous unrest, rising nationalism, increased access to military technology, and development and refinement of guerrilla warfare created yet further advantages for communists and their adaptation to local political conditions.

Throughout the postwar era, insurgencies developed on nearly every populated continent of the globe to varying degrees: Europe, Asia, Africa, Central and South America, and the Middle East. Communists such as Mao Zedong (China), Fidel Castro (Cuba), Ernesto "Che" Guevara (Latin America), Ho Chi Minh (Vietnam), and Pol Pot (Cambodia) became associated not only with the leadership of these movements but also with some of the major historical events of the modern era. Although each communist guerrilla war differed in some aspects and demonstrated a remarkable adaptation to local and historical circumstances, all of these revolutions had the

basic aim of overthrowing the capitalist or feudal systems of their respective countries, imposing a communist dictatorship of the proletariat, developing an economic and social system along communist lines, and working toward the betterment of international communism policies of Marxism-Leninism. These insurgencies posed a major obstacle to the foreign policies of the United States and other countries of the free world and likewise played a major part in the developments of the Cold War era.

Early successes of communist revolutions in Russia and later China propelled the revolutionary socialist movement forward and added leadership, support, and inspiration to communist insurgencies around the globe. In 1919 the Russian Bolsheviks, led by Vladimir I. Lenin, overthrew the tsarist system of imperial Russia and transformed the communist movement from an ideological following of disorganized adherents to a highly organized state-supported movement with the entire resources and experiences of the Soviet Union. Lenin not only established the Communist International (Comintern) as a guiding, unifying, and supportive organization to further international communism, but he and his associates also particularly singled out the colonial regions of the world for communist insurgencies.

In China, Mao followed Lenin's example but added important additions to the prevailing ideology of Marxism-Leninism. Rather than relying on the proletariat as the basis of revolution, Mao relied on the rural peasantry for developing communications, organizational structures, logistics, and resistance. He developed a three-staged guerrilla warfare strategy that utilized the strength of the peasantry to offset the power of the urban areas, which then were held by the Nationalist forces of Jiang Jieshi (Chiang Kai-shek). Mao summarized his guerrilla warfare strategy by asserting that when the enemy advances the insurgents retreat; when the enemy camps, the insurgents harass; when the enemy tires, the insurgents attack; and when the enemy retreats, the insurgents pursue. His victory over Jiang in 1949, after decades of resistance, emboldened communist revolutionaries around the world. Mao's victory and tactics provided an effective framework for organizing and conducting guerrilla wars in East Asia and developing countries,

➤ KHMER ROUGE

The Khmer Rouge was an armed communist organization that ruled Cambodia between 1975 and 1979 and endorsed a revolutionary strategy aimed at returning Cambodia to an idealized agrarian past. Their policies, however, led to their committing mass murder on a genocidal scale.

After World War II, Cambodia's nationalists sought to end French colonial rule; many left-wing activists came under Vietnamese communist influence. After 1950 the resistance movement split, and the anti-Vietnamese element, popularly known as the Khmer Rouge, coalesced around a group of ethnic Khmer intellectuals who emphasized Cambodia's history as a regional power. This group was led by Saloth Sar (after 1969 he was known as Pol Pot), a French-educated revolutionist greatly influenced by the writings of China's communist leader Mao Zedong.

Pol Pot shifted the Khmer Rouge's focus from urban-based activism to rural-based armed insurgency. In April 1967 in Battambang Province his Communist Party of Kampuchea (an ancient name for Cambodia) staged an uprising against local officials of Cambodia's government, led by Prince Norodom Sihanouk. The revolt was quelled, but subsequent punitive raids against the communists kindled growing support among Cambodia's poorest peasants. The Khmer Rouge military grew rapidly and in April 1975 overthrew the government of General Lon Nol, who had replaced Sihanouk.

Over the next three years the Khmer Rouge, known to Cambodians as Angkar (Organization), brutally tortured and killed tens of thousands of technicians, teachers, and specialists in all fields from dance to development economics. Agricultural production dropped, and food shortages caused further devastation. An estimated 1.5 million people, approximately 20 percent of Cambodia's population, died under Khmer Rouge rule, which ended when Vietnamese troops invaded Cambodia in 1979. Remnants of the Khmer Rouge maintained a low-level insurgency in western Cambodia until 2000. Pol Pot died while under house arrest in 1998. Cambodian courts continue to prosecute other Khmer Rouge leaders.

—Laura M. Calkins



With a skull on the muzzle of his M-16 rifle from the killing fields, a Khmer Rouge government soldier waits with his comrades for the word to move out from Dei Kraham, 20 kilometers south of Phnom Penh, during an operation along Highway 2, September 5, 1973. (Bettmann/Corbis)

Bibliography

- Chandler, David P. *The Tragedy of Cambodian History: Politics, War, and Revolution since 1945*. New Haven, CT: Yale University Press, 1991.
- Jackson, Karl D., ed. *Cambodia 1975–78: Rendezvous with Death*. Princeton, NJ: Princeton University Press, 1989.
- Short, Philip. *Pol Pot: Anatomy of a Nightmare*. New York: Henry Holt, 2004.

and communist China provided critical bases and training areas for Marxist-Leninist revolutions in Southeast Asia, including the revolution led by a charismatic communist Ho Chi Minh, who fought successfully against both France and later the United States. Moreover, during the same period nearly every nation in Southeast Asia faced a serious proxy war led by leaders who lifted up the so-called Red banner: Malaysia, the Philippines, Cambodia, Thailand, Burma, and Indonesia.

During the 1960s, 1970s, and 1980s, communist revolutions spread throughout Latin America, Africa, and the Middle East, an indication that communism found fertile political ground in the anticolonial struggles of the era. Castro and Guevara led the revolution in Cuba and promoted insurgencies in other parts of Central and South America. Cuban troops operating in Angola and Ethiopia, supporting communist regimes there, demonstrated both the internationalism of the movement and its solidarity with other communist insurgencies. Other African states, such as South Africa, demonstrated that their revolutionary movements had been influenced by communist ideology. Although the Middle East was also a theater for communist insurgencies, the results were far less successful, as many Muslims rejected the materialistic and atheistic notions of communist ideology.

In the early 1990s the collapse of the Soviet Union furthered the already declining position of international communism. With the loss of Soviet support and the transition of China from communism to capitalism, communist insurgencies withered on the vine as the entire movement fell into obscurity. Although communist insurgencies exist today in Nepal and the Philippines and although the communist parties of the world remain active, their political power, popular appeal, and military capacity are negligible in comparison to their earlier periods of success. Contrary to popular opinion in the United States and elsewhere, communist insurgencies were not invincible. During the Cold War period, popular and government forces defeated the communists in Malaysia, the Philippines, El Salvador, Singapore, Indonesia, and numerous other places around the globe.

—Scott Catino

Bibliography

- Castro, Fidel. *Revolutionary Struggle, 1947-1958*. Edited by Rolando E. Bonachea and Nelson P. Valdés. Cambridge, MA: MIT Press, 1972.
- Hutt, Michael. *Himalayan People's War: Nepal's Maoist Rebellion*. Bloomington: Indiana University Press, 2004.
- Mao, Zedong. *On the Protracted War*. Peking: Foreign Languages Press, 1954.
- Thompson, Robert. *Defeating Communist Insurgency: The Lessons of Malaya and Vietnam*. New York: Praeger, 1966.
- Vo, Nguyen Giap. *People's War; People's Army*. Washington, D.C.: U.S. Government Printing Office, 1962.

Cold War in the Middle East

The Cold War began with most of the Middle East controlled directly or indirectly by the United Kingdom and France, with a strong U.S. presence. As elsewhere, the region became a pawn in the Cold War. By the early 1960s the West European empires no longer existed, and the United States and the Soviet Union were the major players in the region, vying for influence over and control of resources and strategic locations. Yet the countries in the Middle East were often able to use this competition to their benefit by bidding for economic, political, and military support. They did this by allying with the highest bidder, changing sides as circumstances warranted, or advocating neutrality as a means of presenting the world an alternative to superpower domination.

In 1946, Iran became the first major Cold War hotspot in the Middle East. Even before the end of the war the Soviet Union had backed the leftist Tudeh party, which supported Iranian oil concessions to the Soviets. The Soviets controlled much of northern Iran and after the war supported establishment of communist republics there. While both Britain and the United States withdrew their forces from Iran after the war, the Soviets remained, preventing Iran from reestablishing control of all of its territory and demanding oil concessions in return for withdrawal. Iran agreed. The United States and Britain took the issue to the United Nations (UN), and this, with the oil concessions, convinced the Soviets to withdraw troops in May 1946. The

COLD WAR IN THE MIDDLE EAST, 1945 – 1990



communist governments collapsed, and Iran cancelled the concessions and curtailed Tudeh influence.

This episode was a prelude to many confrontations between the Cold War powers in the Middle East. Iran continued as a front in the Cold War for many years, including the Central Intelligence Agency's successful efforts in 1953 to overthrow the Mossadeq government in Iran because of supposed Soviet influence. Iran then became a member of the Baghdad Pact, one of the links in worldwide alliances opposing the Soviet Union. Iran continued to be an ally of the United States until the overthrow of the shah in 1979, toward the end of the Cold War. After that Iran under Ayatollah Khomeini was almost equally opposed to both the United States and the USSR, one being named the "Great Satan" and the other the "Little Satan."

After Iran, the next Cold War arena in the Middle East was British Palestine. After World War II, Britain reduced its presence and costs outside Europe. France would do the same but more reluctantly. The Arab Middle East smelled the possibility of independence from the European empires. The United States and the Soviet Union were viewing the area as a future arena of competition.

In tandem with the British removal of forces, Israel's Labor Zionist government under David Ben-Gurion declared independence on May 14, 1948. The United States recognized the new state the same day as the Soviet Union, on May 18. A series of battles between Israel and invading Arab forces resulted in an Israeli victory and a cease-fire in early 1949, with Israeli admission to the UN in May 1949. At this time, Israel enjoyed support from both the United States and the Soviet Union.

The two superpowers had varying motivations; the United States realized that a strong presence in the Middle East would be crucial as the West European powers began to withdraw in order to secure vital petroleum resources and prevent the Soviet Union from exercising strong influence. Both sides provided substantial aid to Israel. Israel continued to be a focal point during the Cold War, but over time the United States prevailed.

The Cold War continued to shape the Middle East from the 1950s until the fall of the Soviet

➤ EGYPT AND THE ASWAN DAM CONTROVERSY

After World War II Great Britain decided to reduce its presence in the Middle East, hoping to be replaced by the United States or regional nations favorable to British interests. Egypt was nominally independent since 1922 and ruled by descendants of Muhammad Ali, the Albanian Ottoman pasha of Egypt after 1805. Britain left most of Egypt to King Faruk after the end of World War I, withdrawing its forces to the Suez Canal. The coup of 1952 overthrew the monarchy, and Gamal Abdel Nasser took control.

Britain and the United States recognized the new government, but the Soviet Union took little interest as Nasser continued to outlaw the Egyptian communist party. Nasser courted both sides for possible aid, using a position of nonalignment in the Cold War as a bargaining chip, hoping to become the leader of a resurgent Arab Middle East. The United States sought Nasser's support by promising funding for the Aswan Dam, which would control flooding of the Nile and provide vast amounts of hydroelectric energy. This would come with substantial military aid. The Soviets waited patiently on the sidelines to determine if Nasser's neutrality would be maintained with U.S. aid.

Secretary of State John Foster Dulles, however, took exception to Nasser's neutrality position and demanded allegiance before the United States would provide funds. At the same time the Soviets offered funding for the dam and military support. In 1955 Nasser concluded a military arms deal with Czechoslovakia and also accepted U.S. conditions for financing the Aswan Dam. The Cold War was at its height, and Dulles, having insisted on an all-or-nothing deal with Egypt, withdrew the U.S. offer on July 19, 1956. Nasser played his cards within a week by declaring that Egypt would nationalize the Suez Canal, accept Soviet funding for the Aswan Dam, and turn to the Warsaw Pact for future arms. Within months the balance of Cold War influence in Egypt had dramatically reversed.

—Dan Spector

Union. The competition ranged from North Africa in the west through Afghanistan in the east. As Morocco asserted its independence from the West in the late 1950s, it played both sides against each other. In 1959, Morocco obtained a U.S. agreement to return control of air force bases

to Moroccan control while also persuading the Soviets to provide military assistance. This did not result in a long-term commitment of this nation to the Soviets, and the United States later regained influence. In the mid-1980s Algeria obtained Soviet military aid in the form of air defense missiles. This too did not result in a sustained shift toward the Soviet Bloc.

Both superpowers vied for influence in Afghanistan after World War II, with the Soviets gaining ground during the reign of a liberal member of the royal family, Mohammed Daoud Khan, as prime minister from 1953 to 1963. This included a loan of \$3.5 million in 1954, countered by smaller amounts of aid from the United States during the 1950s. A royal power struggle left Daoud outside government in 1963, but he returned after a coup in 1973. Although he leaned toward the Soviets, Daoud refused to be a puppet and did not bow to demands for more communist participation in government. This along with opposition from traditional Muslims opposed to a move toward secular government led to a coup during April 27–28, 1978, in which Daoud lost his life and the monarchy was abolished. Unwilling to leave events in Afghanistan to chance, the Soviet Union sent troops across the border on December 27, 1979, and installed a government favorable to them under Babrak Karmal. Soon after, Soviet troops spent nearly a decade unsuccessfully battling anticommunist insurgents.

Egypt was the focus of a Cold War struggle that began with the end of British control in the early 1950s. As elsewhere, local leaders played both sides for their national and regional goals. Key players were Gamal Abdel Nasser and Anwar Sadat, both of whom courted both sides, changing allegiances or professing neutrality as opportunities arose. The construction of the Aswan Dam on the Nile provides an insight into how intense and complex the Cold War was.

After the Cold War the Middle East faced an entirely different set of circumstances. The United States and its allies were the most powerful force in the area, but regional conflicts took on a greater importance to the peoples of the Middle East.

—Daniel Spector

Bibliography

Levering, Ralph B. *The Cold War: 1945–1987*. Arlington Heights, IL: Harlan Davidson, 1988.

Powaski, Ronald E. *The Cold War: The United States and the Soviet Union, 1917–1991*. Oxford: New York, 1988.

Cold War in South Asia

At the dawn of the Cold War, the role of newly independent postcolonial South Asia was not defined. Although both Pakistan and India had dense populations and vast and diverse territories, neither was viewed as having the strategic importance of Western Europe or Japan. The subcontinent was not as industrialized, did not have any particularly valuable natural resources, and did not command strategic military assets. Thus, the U.S. and Soviet initial responses to these nonthreatening nation-states bordered on indifference.

On the American side, this changed following the outbreak of the Korean War. Now that the Cold War had metamorphosed into a hot war in Asia, strategists in President Harry S. Truman's administration insisted upon South Asia's importance to American Cold War objectives. However, there were divergent views over whether it would be best to align with India or Pakistan. The consequence of a successful pursuit of India would be the claim of being associated with the developing world's most prominent—and democratic—nonaligned state. However, other advisers pointed to Pakistan's strategic proximity to both the Soviet Union and the Middle East.

For India, the nearly half-century of relations that followed between itself and the superpowers was inconsistent. India tended to align itself more closely with the Soviets or the United States depending on India's perceived security interests, which centered on its often hostile relations with its northern neighbor, Pakistan. India would eventually fight three wars with Pakistan by 2000. Another benefit of at times accommodating the Soviet Union was that India gained support against China, with which it had several violent clashes over borders and strained relations following the Chinese occupation of Tibet. Confronted with these challenges that were not products of the Cold War, India under Jawaharlal Nehru preferred to remain nonaligned in the superpower conflict. This refusal to endorse the U.S. perception of the Soviet threat angered

American policy makers, yet later, under Indira Gandhi, India went even further by establishing even closer security and political ties with Moscow.

While Indian agreements with the Soviet Union disturbed American foreign policy planners, India meanwhile resented being accorded low priority in American foreign policy. India had one-sixth of the Earth's population and was strategically placed adjacent to oil supply routes and near another great power, China, all of which indicated India's Cold War importance. However, Americans did not appreciate criticism of its handling of the Vietnam War or Indian assumptions that every aspect of U.S. foreign policy contained ulterior motives. On both sides, the breakdown in trust was a product of the era. After two world wars in little more than a generation, it was hardly irrational to fear a third, and with the proliferation of nuclear weapons, some people believed that the next war would be the last.

Pakistan, after obtaining independence in 1947, faced the struggles of an impoverished nation with an unclear future and believed that superpowers such as the United States would more likely prefer closer ties with its much larger southern neighbor, India. Yet after New Delhi chose a neutralist path, Pakistan became more attractive in the mid-1950s as a potential partner in American security arrangements designed to contain potential Soviet expansion in the Middle East. Since then, when Pakistan became viewed as important to American security interests—such as during President Richard Nixon's overtures to China or during the Soviet invasion of Afghanistan in the 1980s—relations were closer, but at other times, such as during the presidencies of John Kennedy, Lyndon Johnson, and Jimmy Carter, relations were much more tense.

Pakistani leaders regarded such U.S. oscillation as vacillation, and Americans considered Pakistan overly consumed with India. The reason for so many mixed signals in U.S.-Pakistani relations was that their respective security interests—when aligned, the key factor in close relations—were often out of harmony. Absent a more significant basis for ties, differences and disputes were inevitable.

The primary security concern of Pakistan was disagreement with India, especially over Kashmir.

➤ CHRONOLOGY OF THE COLD WAR IN SOUTH ASIA

- 1947—End of British rule in South Asia.
- 1947—Partition of region into Hindu India and Muslim Pakistan.
- 1948—First Indo-Pakistani War over Kashmir.
- 1948—Gandhi assassinated by Hindu extremist.
- 1948—Muhammed Ali Jinnah, first president of Pakistan, dies.
- 1951—Indian prime minister Nehru comes to power.
- 1951—Jinnah's successor Liaquat Ali Khan is assassinated.
- 1956—Pakistani constitution written, declaring Pakistan an Islamic republic.
- 1962—India loses war with China over border disputes.
- 1964—Death of Indian prime minister Nehru.
- 1965—Second Indo-Pakistani War over Kashmir.
- 1966—Nehru's daughter Indira Gandhi becomes prime minister of India.
- 1971—Third Indo-Pakistani War over creation of Bangladesh.
- 1971—India signs 20-year treaty of friendship with the Soviet Union.
- 1972—American president Richard Nixon visits China, a visit that was made possible largely through Pakistani contacts with China.
- 1974—India successfully tests first nuclear device.
- 1980—Soviet Union intervention in Afghanistan begins; United States pledges military assistance to Pakistan.
- 1984—Indira Gandhi assassinated by her bodyguards.
- 1987—India first deploys troops to Sri Lanka to prevent ethnic conflict.
- 1988—Pakistani president Zia ul-Haq and U.S. ambassador to Pakistan Arnold L. Raphel, along with 28 others, die in mysterious plane crash.
- 1990—Muslim separatist groups begin Kashmir campaign of violence.
- 1991—Indian prime minister Rao begins economic reform programs.

—Luke Nichter

This meant that Pakistan endured heavier military and security expenditures than a newly independent country with an underdeveloped economy could maintain. When Pakistan realized that it was unable to match, dollar for dollar, military expenditures with India, it sought parity with its southern neighbor by other diplomatic conventions, such as cozying up to China in the 1960s, going to war with India over Kashmir in 1965, and implementing a nuclear weapons program in the mid-1970s.

On the American side, although U.S. policy makers had their share of difficulties with India, the country was never considered hostile or a threat to Americans. The United States generally tried to stay out of the deep-seated dispute between Pakistan and India. The major exception was during the Nixon administration. Because Pakistan had reached out to China in the 1960s, the Nixon administration found Pakistan's ties to the reclusive and secretive People's Republic of China valuable in the process of beginning Sino-American rapprochement.

Overall, from the late 1940s until the Iron Curtain disintegrated in 1989, the evolution in relations between the superpowers and India and Pakistan and the status of South Asia itself remained in the shadow of the Cold War struggle between the United States and what Reagan called the "evil empire." The United States expected both India and Pakistan to be cooperative allies, but when one of the junior partners refused to play the game according to Washington's rules, trouble ensued. Furthermore, debates and diplomacy that centered on which nations should or should not be allowed nuclear weapons also developed into a major source of friction beginning in the mid-1970s.

It is likely that the superpowers overplayed the importance of South Asia in the Cold War. U.S. policy makers' one-time notion that Pakistan could mobilize sufficient forces to help deter Soviet military marauding in the Middle East was not realistic. In fact, on balance South Asia contributed little to Western defense efforts in the Middle East—the alliance's basic purpose—and added almost nothing to the overall global strength of the United States, not militarily, not politically, and certainly not economically.

As the dissolution of the Soviet Union became inevitable in the late 1980s, the status of India and Pakistan once again became unclear. Although the two principal sources of past friction—American arms sales to Pakistan and India's close ties with the Soviet Union—had been lessened or removed, the United States failed to translate its overwhelming military power over the previous four decades into lasting influence.

The superpowers deliberately extended the Cold War into South Asia and sought to align both Pakistan and India with their respective blocs, principally because of exaggerated American concerns about its own vulnerability and communism's presumed military and ideological threat. Policy makers in both the Soviet Union and the United States habitually evaluated India and Pakistan—as well as states in other less-developed regions—with a Cold War viewpoint. Such evaluations, more often than not, proved inaccurate.

—Luke Nichter

Bibliography

- Brands, H. W. *India and the United States: The Cold Peace*. Boston: Twayne, 1990.
- Kux, Dennis. *Estranged Democracies: India and the United States, 1941–1991*. Thousand Oaks, CA: Sage, 1993.
- Kux, Dennis. *The United States and Pakistan, 1947–2000: Disenchanted Allies*. Washington, DC: Woodrow Wilson Center Press, 2001.
- McMahon, Robert J. *The Cold War on the Periphery: The United States, India, and Pakistan*. New York: Columbia University Press, 1994.

The Cold War in East Asia

The confrontation between the West and the Communist Bloc after 1947 as well as the growth of the Sino-Soviet rivalry from the late 1960s onward was an important feature of the East Asian political landscape in the Cold War era. Misunderstanding and miscalculation by the United States, the Soviet Union, and the People's Republic of China (PRC) exacerbated regional crises and military aggrandizement, and yet their rationality and mutual interests helped avoid nuclear war and prevented the spillover of regional war in the world. U.S. protégés such as

COLD WAR IN FAR EAST, 1945 – 1990



➤ U.S. MILITARY BASES IN THE PHILIPPINES

The presence of U.S. military bases in the Philippines has its roots in the American victory against Spain in 1898. Despite Filipino resistance against U.S. occupation, the United States made the Philippines its military stronghold in Asia by establishing Manila as the region's largest naval station, to which later was added Clark Air Base on Luzon Island. On December 8, 1941, after Japan's attack on Pearl Harbor occurred, Japanese air assaults also heavily damaged the Clark Air Base. A series of fierce battles between the U.S.-Filipino army and Japan eventually forced the U.S. troops to retreat from the Philippines in 1942. In October 1944 General Douglas MacArthur's Allied forces returned and landed on Leyte Island. Despite the independence of the Philippines in 1946, the U.S. military presence remained throughout the Cold War era. The 1951 Mutual Defense Pact between the Philippines and the United States was an important component of the U.S. military strategy of containing communism in Asia. Clark Air Base, together with the string of U.S. bases in Japan, served as the backbone of logistical support for U.S. troops during the Vietnam War. In 1992 U.S. troops were withdrawn from the Philippines; however, mutual defense treaties have remained in effect. Most recently, American advisers joined Philippine forces in maneuvers against Abu Sayyaf ("bearer of the sword") and other terrorist groups linked to al-Qaeda in the southern area of the island archipelago.

—*Ryoko Nakano*

Japan, South Korea, and Taiwan enjoyed unprecedented economic development during the Cold War, while China, after its rapprochement with noncommunist countries in the 1970s, made diplomatic and economic overtures to the world. The Chinese communist capture of Mainland China in 1949 fostered the U.S. perception that communism was on the march in East Asia. The newly formed PRC as well as the Soviet Union encouraged Kim Il Sung's invasion of South Korean territory in June 1950. U.S.-led United Nations (UN) forces intervened in the war and penetrated the North beyond the original demarcation border along the 38th parallel. The presence of U.S. troops near Manchuria triggered

China's entry into the war. Military supplies and air cover provided for Chinese troops by the Soviet Union prolonged the war, which was finally ended in 1953 by freezing the original partition of the Korean peninsula.

The Korean War provided important lessons to both the United States and the Soviet Union, both of which originally had been reluctant to abrogate their obligations under the Yalta agreement. In order to prepare for a potential conflict with the communist regime, the United States made a decisive turn by dispatching troops to alliance partners such as Japan, South Korea, and the Philippines. Both of the superpowers refrained from direct confrontation in order to contain the risk of nuclear war. The Korean War also gave China an incentive to strengthen its military power, which intensified arms competition in East Asia.

At the peak of the Korean War, Japan gained *de jure* independence by signing the San Francisco Peace Treaty on September 8, 1951, while also signing the U.S.-Japan Security Treaty. These treaties marked the end of World War II in East Asia, terminated Japan's position as an imperial power, and, among other points, redistributed its overseas possessions, formalized Japan's acceptance of judgments by War Crimes Tribunals and its renunciation of future military aggression, and placed Okinawa under U.S. authority. The Soviet Union did not sign the peace treaty due to the Soviet-Japan territorial disputes over Sakhalin and the Kurile Islands. Under the U.S.-Japan security pact, the United States was obliged to defend Japan, while Japan did not have a reciprocal obligation due to the renunciation of war clause (Article 9) in the Japanese Constitution. Japan instead provided the United States with strategically important bases and developed its self-defense forces within the framework of U.S.-Japan security agreements for enabling peace and security in the Far East.

The United States aimed at shaping the East Asian region outside the U.S.-Soviet-Chinese triangle. Taiwan, ruled under Jiang Jieshi's (Chiang Kai-shek's) Nationalist government, was given military and economic support from the United States. The Taiwan Straits Crisis in 1954–1958 was the most critical time of the U.S.-China confrontation over Taiwan. In response to Jiang's

demands, U.S. president Dwight D. Eisenhower sent the Seventh Fleet to the Taiwan Strait to defend Taiwan's Quemoy and Matsu islands from communist China and enacted the Taiwan Resolution in 1955 committing the United States to defend Taiwan.

Deteriorating relations between the Soviet Union and China had reached a crisis point by 1969. A series of events made it clear that the two communist countries would go in different directions: Khrushchev's speech criticizing Stalin in 1956 without any prior consultation with China, Soviet refusal to transfer its nuclear technology to China in 1959, Chairman Mao Zedong's political elimination of so-called Soviet advisers in the period of the Great Leap Forward (1958–1962), China's assertive policy against India, and the two border clashes between the Soviets and the Chinese in 1969. This Sino-Soviet split caused a fundamental transformation of the political climate, undermining perceptions of communism as a monolithic bloc, and eventually led to the Sino-U.S. détente. Mao Zedong aimed at developing Sino-U.S. cooperation to counter the Soviet Union. U.S. president Richard M. Nixon and Secretary of State Henry Kissinger had the same interest in regard to the Soviet Union and wanted to make an honorable retreat from the Vietnam War by gaining Chinese support.

Nixon's secret negotiations with China came as a great surprise and even appeared as a betrayal to Japan, which had no alternative but to accept U.S. policy preferences. Nevertheless, Prime Minister Tanaka Kakuei swiftly normalized relations with China in 1972. After China and Japan signed the Treaty of Peace and Friendship in 1978, with an antihegemony clause implying that the Soviet Union constituted a threat to both, they developed friendly relationships until 1989 while setting aside divisive issues such as the Taiwan problem, territorial rights of the Diaoyu Islands (called Senkaku by the Japanese), and problems of the alleged bias within the Japanese educational system in interpreting the history of Japan's imperialist past. The United States also reached a compromise with China by withdrawing U.S. troops from Taiwan, which lost its UN seat in 1971. U.S. détente with China transformed the regional landscape dramatically.

By the end of the Cold War, the United States had become an unprecedented hegemonic power in East Asia. Together with alliance partners, the United States consolidated its strategic role as the guarantor of East Asian security. Owing substantially to U.S. commercial involvement in this region, Japan, South Korea, and Taiwan headed along the path of democracy and economic prosperity. Hong Kong, leased by China to Britain until 1997, served as a reliable means of access for the Chinese to the capital and technology of the Western market.

The bilateral approach that dominated East Asian politics sidestepped the painstaking negotiations necessary to establish a multilateral framework capable of solving regional tensions. Despite Deng Xiaoping's compromising proposal of the one country, two systems policy for inter-Chinese relations, the Taiwan problem continued to be explosive. In addition, military tensions on the Korean peninsula never ended due to the fear that the North Korean regime would gain possession of nuclear arms. Even though the disintegration of the Soviet Union decreased the risk of nuclear war in East Asia, the ghosts of Cold War uncertainty and instability still haunted the region at the opening of the twenty-first century.

—Ryoko Nakano

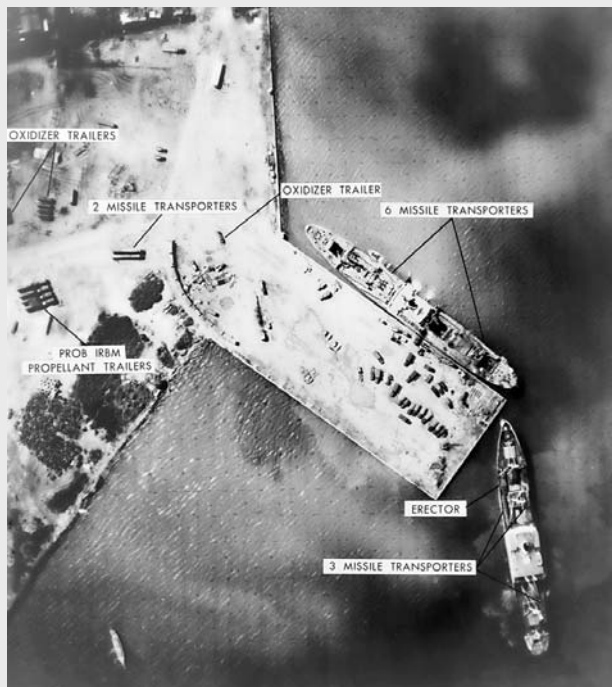
Bibliography

- Buckley, Rodger. *The United States in the Asia-Pacific since 1945*. Cambridge and New York: Cambridge University Press, 2002.
- Vogel, Ezra F., Yuan Ming, and Tanaka Akihito, eds. *The Golden Age of the US-China-Japan Triangle, 1972–1989*. Cambridge, MA, and London: Harvard University Press, 2002.
- Westad, Odd Arne, ed. *Brothers in Arms: The Rise and Fall of the Sino-Soviet Alliance, 1945–1963*. Washington, DC: Stanford University Press and Woodrow Wilson Center Press, 1998.
- Zhao, Suisheng. *Power Competition in East Asia: From the Old Chinese World Order to Post-Cold War Regional Multipolarity*. London: Macmillan, 1997.

Cold War in Latin America

The Cold War originated as a political, economic, and ideological competition between the United

THE CUBAN MISSILE CRISIS (1962)



View from a U.S. reconnaissance aircraft of Mariel Bay, Cuba, showing Soviet missile equipment and transport ships in 1962. (Library of Congress)

In October 1962, the world came to the brink of nuclear war. What came to be known as the Cuban Missile Crisis demonstrated the great danger of Cold War competition and the delicate balance negotiated between nuclear superpowers caught up in an arms race. In alliance with revolutionary Cuba, Russian premier Nikita Khrushchev supervised the secret construction of missile bases on the island. When U.S. intelligence informed President John F. Kennedy of the threat of nuclear weapons 90 miles from Florida, a tense showdown between the two heads of state occurred, lasting 13 long days while the world held its breath. Kennedy demanded the immediate removal of all weapons from the island and set up a naval blockade off the Cuban coast, preventing Soviet ships from delivering additional missiles and construction materials. Khrushchev finally conceded to Kennedy's demands, and the Soviet Union removed all installations and weapons from the island. In exchange, the United States agreed to withdraw medium-range missiles from Turkey and not to intervene in Cuba.

—Jadwiga E. Pieper Mooney

States and the Soviet Union in the aftermath of World War II. It became a global conflict between a communist Eastern Bloc and the capitalist U.S.-led West and ended with the Soviet Union's collapse in the 1990s. In this period, Latin America became an important contested arena between the Soviet Union and the United States.

Between the late 1940s and the early 1990s Cold War ideologies shaped all political and economic interaction between Latin America and the United States. New U.S. foreign policy approaches produced novel forms of foreign intervention. On the global level, U.S. foreign policy shifted between containment, aimed at preventing the spread of communism, and the policy of détente, aimed at securing a balance of power and thereby peaceful coexistence with the Soviet Union. The domino theory complemented these doctrines, implying that if one country came under communist influence, others near it would fall in a domino effect. As a result, the United States supported some authoritarian leaders as a lesser evil, backing anticommunist dictators such as Fulgencio Batista in Cuba (1952–1959), the Somoza dynasty in Nicaragua (1936–1979), and Augusto Pinochet in Chile (1973–1989). The United States also began to train Latin American militaries in 1946, when the School of the Americas opened in Panama as a military academy for the hemisphere. Its doctrine of national security taught that the principal threat to a nation was subversion within its own boundaries and became the guiding principle behind dictatorships in Argentina, Brazil, Chile, Uruguay, and several Central American countries.

Cold War tensions inspired a number of treaties and support programs between the United States and Latin America. In 1947 delegates from the United States and 19 Latin American countries signed the Inter-American Treaty of Reciprocal Assistance, or Rio Pact, to strengthen cooperation against threats to the hemisphere. In 1948 American leaders established the Organization of American States (OAS) in the spirit of further regional unity. When Vice President Richard Nixon encountered strong anti-American sentiment on his goodwill tour of Latin America in 1958, it became clear that the United States had become unpopular and that alliances needed

to go further to secure the support of Latin American citizens against communism. The 1959 Cuban Revolution emphasized the need for increased intervention. In 1961 President John F. Kennedy helped establish the Alliance for Progress, a new foreign policy approach aimed at promoting development through an increase of loans and cooperation.

Throughout the 1960s, Kennedy's Alliance for Progress aimed at bringing reform and development to Latin American nations. The charter called for an increase in per capita income, more equitable distribution of land and wealth, and, most importantly, economic and social planning as the basis for democratic government and a free market economy. The plan intended that aid programs would bring the benefits of capitalism to the poor and weaken support for communism. Yet economic support dropped sharply under President Nixon in the late 1960s. Despite some improvements in land reforms, education, and health care services, Latin American elites resisted the changes, the redistribution was limited, and, in the words of Chilean President Eduardo Frei, "the Alliance . . . lost its way."

Covert military operations by the U.S. Central Intelligence Agency (CIA) became important extensions of U.S. foreign policy and the fight against communism. Justified through fears of communist takeovers, U.S.-supported armed interventions took place in nations including Guatemala (1954), Cuba (1961), the Dominican Republic (1965), Chile (1973), Nicaragua (1979), and Grenada (1983). The 1954 overthrow of Jacobo Arbenz's constitutional government in Guatemala exemplifies the nature and consequences of Cold War interventions driven by ideology. Arbenz had introduced land reforms and, in the process, seized unused territory owned by the U.S. United Fruit Company with the promise of compensation. CIA forces soon helped expose the president's goal to create a communist state. With U.S. backing, Arbenz was replaced by Carlos Castillo Armas, a dictator who dismantled previous land reforms, outlawed political parties, threatened striking workers with the death penalty, and violently curbed unrest. In the course of the next three decades in Guatemala, more than 200,000 citizens lost their lives.

In Latin America some political leaders and citizens deeply resented U.S. interventions as manifestations of imperialism and as threats to their sovereignty. Resistance to Cold War interference reached from small-scale protests to outright revolution. Argentine physician Ernesto "Che" Guevara played an influential role in this resistance by the late 1950s, as he became one of the leaders in the 1959 Cuban Revolution. In 1954 Guevara witnessed the deposition of President Arbenz in Guatemala and began to defend the need for revolution on his path to social justice. In Mexico, Guevara met Cuban exile and like-minded revolutionary Fidel Castro. The two returned to Cuba with a group of supporters and initiated a new chapter in the history of Latin America in the Cold War era. (Guevara later became an icon of Latin American resistance when the CIA killed him in Bolivia in 1967. A larger-than-life romanticized image of his role as a revolutionary has lived on after his violent death.)

In 1959 the 26th of July movement, led by Castro and Guevara, entered Havana after six years of guerrilla warfare and deposed U.S.-supported dictator Fulgencio Batista. Breaking all economic ties with the United States, the new leadership made the Soviet Union Cuba's major trading partner. President Dwight D. Eisenhower's administration broke diplomatic relations with Cuba, and tensions increased when Castro declared communism the official doctrine of revolutionary Cuban development. In response, the United States organized a force of anti-Castro exiles to embark on an invasion of the Cuban Bay of Pigs in 1961. This intervention not only became the biggest failure of covert actions against Cuba and other Latin American nations but also strengthened Castro's position as head of state of the last surviving communist nation in the hemisphere. A more dangerous Cold War emergency followed the Bay of Pigs invasion: in 1962, the Cuban Missile Crisis brought the world dramatically close to nuclear war.

Other Latin American leaders promoted less drastic programs of revolutionary change but were perceived as equally threatening to the United States. In 1970 socialist president Salvador Allende won democratic elections in Chile. His coalition government promoted a path of peaceful revolution, generating social justice and

economic redistribution within the margins of the democratic constitution. Although Allende overtly rejected affiliation with communism, the CIA provided substantial financial support to his opposition. In light of the Cold War fears of leftist political leaders, the United States supported a military coup that killed Allende and brought to power General Augusto Pinochet on September 11, 1973. In the course of the Pinochet dictatorship (1973–1989) potential opponents were arrested and tortured and often disappeared. Yet this was acceptable in the Cold War context so long as economic policies conformed to the standards of neoliberal capitalism, and the regime ended all previous programs of redistribution.

Bilateral relations between the United States and Latin American nations transformed significantly with the end of Cold War tensions. Anti-communist crusades were no longer important to the maintenance of global balance, and new global policy concerns have replaced the bipolar worldview limited to East-West competitions of previous decades. Cuba and the endurance of its revolutionary position against unremitting U.S. aggression remained one of the few leftovers of an era.

—Jadwiga E. Pieper Mooney

Bibliography

- Franco, Jean. *The Decline and Fall of the Lettered City: Latin America in the Cold War*. Cambridge: Harvard University Press, 2002.
- LaFeber, Walter. *Inevitable Revolutions: The United States in Central America*. New York: Norton, 1993.
- Langley, L. D. *The Americas in the Modern Age*. New Haven, CT: Yale University Press, 2003.
- Martz, John D., ed. *United States Policy in Latin America: A Quarter Century of Crisis and Challenge, 1961–1986*. Lincoln: University of Nebraska Press, 1988.
- Smith, P. H. *Talons of the Eagle: Dynamics of U.S.–Latin American Relations*. New York: Oxford University Press, 2000.
- Stern, Sheldon M. *The Week the World Stood Still: Inside the Secret Cuban Missile Crisis*. Palo Alto, CA: Stanford University Press, 2005.

The Korean War, 1950–1953

The Korean War was the first major hot war of the Cold War and was fought on the Korean Pen-

insula between the Soviet and Chinese-backed communist North Korea and the U.S.-sponsored noncommunist South Korea from 1950 to 1953. The conflict began in June 1950 when North Korea invaded South Korea. The situation quickly escalated, with United Nations (UN) forces under American leadership entering the war in support of the southern portion of the country. Chinese forces with logistical Soviet support eventually entered the war in support of North Korean communist forces.

Korea had been divided at the end of World War II at the 38th parallel under an agreement by the Soviet Union and the United States upon the surrender of occupying Japanese forces. Both sides acknowledged that they could organize the political structure of their respective zones of occupation as they wished. UN efforts to reunify the country came to nothing, as the northern section refused to allow free elections on its soil. In 1948, the UN elections commission held elections in the southern half of Korea (Republic of Korea, ROK), leading to the election of Syngman Rhee as president. North Korea reciprocated by establishing itself as the Democratic People's Republic of Korea (DPRK) under the leadership of Prime Minister Kim Il Sung with full Soviet and Chinese Communist Party (CCP) support. The establishment of the People's Republic of China (PRC) in 1949 by the CCP cemented its support of the communist North Korean state.

By 1949, the United States had withdrawn its remaining postwar garrison forces from South Korea, leaving a small group of advisers for the training of the ROK military. In 1950, U.S. secretary of state Dean Acheson declared that the American strategic defense perimeter did not include Korea, leading some in the communist world to believe that this was a blank check for North Korea to acquire South Korea. After receiving the blessings of both Soviet general secretary Josef Stalin and Chinese chairman Mao Zedong, Kim Il Sung launched a surprise invasion of South Korea on June 25, 1950. This aggression was the official beginning of the Korean War. Immediately, U.S. president Harry Truman committed small air and naval contingents to South Korea and ensured the passing of a UN resolution condemning the invasion. The Soviets abstained from the Security Council voting in the

KOREAN WAR, 1950 – 1953





United States Marines of the First Division climb a sea wall during the Inchon invasion on September 15, 1950. Engineered by General MacArthur, the Inchon landing proved a strategic coup that turned the tide of the war against North Korea. (National Archives)

➤ KOREAN DEMILITARIZED ZONE (DMZ)

The Korean Demilitarized Zone (DMZ), established by the 1953 armistice that ended the Korean War, is a strip of land running across the Korean Peninsula that serves as a buffer zone separating North and South Korea. The DMZ cuts the Korean Peninsula geographically, approximately in half, across the old 38th parallel that divided Korea before the conflict. At a length of 155 miles (248 kilometers) and a width of 2.5 miles (4 kilometers), it is currently the most heavily armed border in the world.

The Joint Security Area (JSA), or Panmunjom, is the only section of the DMZ where South and North Korean forces stand facing each other. The section is reserved between the two Koreas for diplomatic efforts. Most of the DMZ is largely bereft of humans and military equipment, which are restricted on both sides to 100 miles (160 kilometers) away from the armistice line of demarcation. However, along these parameters it is heavily fortified with pillboxes, watchtowers, and other defensive installations along with both South Korean and U.S. troops facing North Korean troops, albeit at a long distance.

—Abraham O. Mendoza

hopes that this would be assumed to be a veto. The vote was followed by a UN resolution in July authorizing a UN multinational force under U.S. leadership. This UN force was composed mostly of U.S. and ROK troops but also had sizable contingents from Britain, Australia, Canada, Turkey, and New Zealand. The Korean conflict quickened the formation of the North Atlantic Treaty Organization (NATO), the reincorporation of West Germany into the Western fold, and the widespread stationing of American troops in Europe.

The North Korean military continued to press forward into South Korea, scattering U.S. and ROK troops. By August, the beleaguered U.S. forces had established the Pusan perimeter at the southernmost region of the Korean Peninsula. However, by August, General Douglas MacArthur's surprise landing and victory at Inchon defeated the ROK's armies, putting the UN forces on the offensive. Two months later, Truman decided that in order to prevent the intervention of the Soviets or the Chinese (the newly formed PRC), U.S. forces would remain to the south of the 38th parallel. However, they would continue to allow ROK forces to conduct limited operations in North Korea with the condition of acting as support if either the Soviets or the Chinese intervened.

ROK forces retreated into North Korea but did not officially surrender. DPRK forces entered North Korea in early October and met little resistance, followed by U.S. requests to the UN General Assembly for a resolution to continue the struggle. This resolution provided a UN plan to seek the reunification of Korea, leading U.S. forces to enter Korea on October 7 in spite of a major Chinese buildup on the border with North Korea. Chinese forces began to deploy into North Korea, snatching potential victory from joint UN forces. Truman was reluctant to escalate hostilities, coming into direct conflict with MacArthur, who advocated attacking targets in Manchuria to hinder the deployment of Chinese troops and going as far as suggesting the use of atomic weapons. These differences over military strategy led to Truman's firing of MacArthur in April 1951.

From November 1950 to 1951, successful Chinese offensives had drastically altered the conflict. UN forces eventually halted the Chinese

advance and launched a major offensive, restoring a line of defense just north of the 38th parallel, turning the conflict into a bloody and costly stalemate by May 1951. At this point, Truman was willing to settle for a diplomatic solution with the North Koreans, the Soviets, and the Chinese, all advocating a return to the territorial status quo that preceded the conflict. However, negotiations stalled as disagreements over cease-fire agreements, prisoner exchanges, and the withdrawal of military forces complicated deliberations. Meanwhile, as both sides continued limited military engagements, casualties continued to mount. Casualties for military personnel were an estimated 400,000 for the Chinese, 54,246 for the United States, 215,000 for North Korea, and 47,000 for South Korea. An estimated 2 million Korean civilians were also killed during the war, approximately 1 million for either side, as a result of artillery attacks, aerial bombardments, and other direct military engagements resulting in collateral damage.

The Korean Armistice Agreement, signed on July 27, 1953, finally ended the bloody conflict. The South Korean government's fears of a Chinese garrison allied with North Korean forces menacing its existence just across the border were allayed by Eisenhower's promises of substantial U.S. aid and a security pact for the ROK. However, the armistice that ended hostilities divided Korea politically and geographically and never fostered a decisive treaty ending the war. The Korean War also established that while Cold War antagonisms in such limited engagement proxy wars did not lead to direct military engagement by the major world powers (Chinese troops were considered volunteers and not officially armed combatants of the PRC), it did complicate matters of foreign policy in other world regions, particularly issues related to the division of Germany.

—Abraham O. Mendoza

Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Halberstam, David. *The Coldest Winter: America and the Korean War*. New York: Hyperion, 2007.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.

Stueck, William Whitney. *Rethinking the Korean War: A New Diplomatic and Strategic History*. Princeton, NJ: Princeton University Press, 2002.

South Vietnam and the Cold War

South Vietnam (1954–1975) is the common term for the political entity south of the 17th parallel of present-day Vietnam. Its creation was an indirect result of the 1954 Geneva Conference. As part of the larger Cold War pattern of conflicts and compromises, the conference dealt first with the end of the Korean War and then turned its attention to settling the conflict between France and communist-led Vietnamese guerrilla forces, known as the First Indochina War. Besides Laos and Cambodia, the participants for the Indochinese portion fell squarely into anticommunist and communist sides. On one side were France, Britain, the United States, and the pro-Western



Republic of Vietnam president Ngo Dinh Diem (1955–1963) casts a ballot in Saigon. Diem resisted democratization of South Vietnam and his dictatorial, often brutal, rule led to withdrawal of U.S. support, a coup d'état, and his assassination in 1963. (Library of Congress)



State of Vietnam, which was led by the former emperor Bao Dai. On the other side were the Soviet Union, China, and the Democratic Republic of Vietnam (DRV), which had just decisively won the Battle of Dien Bien Phu against France. Signed by only France and the DRV, the Geneva Accords agreed to a temporary partition of Vietnam—the north to be controlled by the DRV and the south by the State of Vietnam—to be followed by a general election two years later.

At the start of the partition, South Vietnam had a new premier in Ngo Dinh Diem. The next year, the U.S.-backed Diem successfully deposed Bao Dai in a referendum and created the new Republic of Vietnam (RVN), with its capital in Saigon. Diem also declared that because his government had not signed the Geneva Accords, it was not bound to honor the mandate for a general election. South Vietnam quickly became a major Cold War battleground as the United States pumped in massive aid to help Diem build a viable nation and contain the spread of communism in Southeast Asia. Not having the chance to win a political victory, North Vietnam sought economic and military aid from China and the Soviet Union to build socialism in the north while aiding an anti-Diem insurgency in the south. Both governments refused to recognize each other and instead claimed authority over the entire country. It took two more decades, continuous warfare, and millions of dead and wounded combatants and civilians before Vietnam became one again.

The political history of South Vietnam can be divided into three periods. The first and longest was under Diem (July 1954 to November 1963). The first half of this period saw three major developments: the immigration of nearly 1 million anticommunist northerners, including many Catholics; Diem's antidissident campaign that suppressed underground communists but also alienated many noncommunist Vietnamese; and, with American help, the training of South Vietnamese administrative and military personnel. The second half of the period saw renewed insurgency in the countryside, an increase from 700 to 16,000 American advisers, growing conflicts between Diem and U.S. president John F. Kennedy's administration over nation building and anti-insurgent strategy, and intensifying urban

➤ SOUTH VIETNAMESE URBAN CULTURE

Although most Vietnamese lived in the countryside and engaged in agriculture, the two decades of South Vietnam's existence marked an important shift toward urbanization. The Americanization of the war played a major role in the shift. Bombing and warfare in the countryside created a refugee crisis and drove many people toward the cities. In addition, the massive presence of American personnel in urban areas led to the growth of a service sector and an explosion in the black market. In Western media, Saigon and other Vietnamese cities were often portrayed as full of bars, prostitutes, drug pushers, and beggars.

However, the American presence alone did not account for the growing significance of the urban society, and wartime and postwar portrayals did not show more than what met the eye. Since at least the 1920s, Vietnamese society underwent a profound shift in morals, manners, and modes of thinking. While nationalism occupied a central place in the collective psyche, there was also a rise in cultural acceptance and encouragement of a more acquisitive individualism. This rise was most obvious in South Vietnamese urban society, which encouraged the growth of the bourgeoisie as well as bourgeois values. Widely lauded in the popular culture were virtues such as determination, patience, hard work, and development of God-given talents. In particular, poets and fiction writers were held in high regard for their creative abilities. But singers and songwriters of popular music were also celebrated for expressing more private sentiments that were shared by their audience.

The abundance of opportunities for print and recording helped create a new phenomenon in modern Vietnamese culture: the rise of women as popular writers and singers. Among the most consequential women novelists were the best-selling Madame Tung Long and the prize-winning Nha Ca, and among the most beloved female singers were the northern-voiced Khanh Ly and the southern-voiced Phuong Dung. Whether they were creators or reflectors of increasingly individualized sentiments is a question open to debate. But their popularity pointed to the deeper shift toward a more acquisitive and individualistic sensibility of a postcolonial society.

—Tuan Hoang

discontent in regard to Diem and his style of family rule. Buddhist protests ignited in the summer of 1963; a military coup followed in the fall, and its leaders killed Diem and his brother-adviser Nhu.

Following Diem's death was an interregnum period (November 1963 to September 1967) characterized by a series of military or military-backed governments that were typically accompanied by coups and countercoups. In the first half of this period, the most prominent figure was General Nguyen Khanh, who had the support of U.S. president Lyndon B. Johnson's government but was subsequently ousted by his fellow military leaders in February 1965. The second half saw a War Cabinet government led by head of state Nguyen Van Thieu and Premier Nguyen Cao Ky. This period witnessed the start of U.S.-led bombing of North Vietnam in retaliation for increasing communist attacks and the rapid introduction of U.S. combat troops that Americanized the war. The last period, the Second Republic (September 1967 to April 1975), saw its first presidential election in 1967 and the second in 1971, both of which were won by Thieu.

Various Saigon governments, controlling the cities but only parts of the South Vietnamese countryside, were not the only ones to claim political legitimacy throughout these periods. Having gained revolutionary support from many rural people during the First Indochina War, the communists in South Vietnam suffered high losses during Diem's antidissident campaign but nevertheless survived. Called the Vietcong by South Vietnamese and Americans, they received substantial backing from North Vietnam and formed the National Liberation Front (NLF) in 1960 to challenge Diem and the subsequent U.S.-supported governments. Following Diem's death, political instability in Saigon and the weak performance of the South Vietnamese military emboldened the Vietcong to increase their attacks, leading to the Americanization of the war in the summer of 1965. North Vietnam itself had already decided at the end of 1963 to expand infiltration of supplies and personnel into the south via the Ho Chi Minh Trail that went through Laos and Cambodia. The war thus escalated swiftly and culminated in the Tet Offensive

during the lunar New Year's holidays of 1968, when NLF and North Vietnamese forces carried out a massive and well-coordinated assault on urban areas, including Saigon. Although the NLF suffered tremendous losses, the offense's ferocity shook the American public's remaining support for the war.

Starting in 1969 the United States began to withdraw its troops, and warfare shifted increasingly from a guerrilla to a conventional struggle between the Saigon and Hanoi armies. In the spring of 1972, North Vietnamese forces made an incursion across the partition line but were eventually driven back by the South Vietnamese Army and American air support. The NLF ably maneuvered to be a participant in the Paris Peace Conference that also involved North Vietnam, South Vietnam, and the United States. The Paris Accords of 1973 ended all forms of American military involvement. Although the Thieu government was initially unwilling to sign the accords, it went along under American pressure. In the spring of 1975, Hanoi launched a second attack and forced the Saigon government to surrender on April 30. The next year, the two countries were formally reunified.

—Tuan Hoang

Bibliography

- Catton, Philip. *Diem's Last Failure: Prelude to America's War in Vietnam*. Lawrence: University Press of Kansas, 2002.
- Duiker, William J. *Sacred War: Nationalism and Revolution in a Divided Vietnam*. Boston: McGraw Hill, 1995.
- Elliott, David W. P. *The Vietnamese War: Revolution and Social Change in the Mekong Delta, 1930–1975 (Concise Edition)*. Armonk, NY: M. E. Sharpe, 2007.
- Elliott, Duong Van Mai. *The Sacred Willow: Four Generations in the Life of a Vietnamese Family*. Oxford: Oxford University Press, 1999.

Afghan Wars

Not to be confused with the Anglo-Afghan Wars, the Afghan War or Soviet-Afghan War (1979–1989) refers to the brutal conflict fought between the Soviet Army and the Soviet Union's Afghan allies against the staunchly anticommunist Afghan mujahideen (holy warriors) in which So-

viet forces killed 1.3 million Afghans and forced another 5.5 million Afghans into exile.

The origins of the Afghan War lay in the turbulent domestic politics of late 1970s Afghanistan. During the Saur (April) Revolution of 1978, leftist military officers overthrew the government of Muhammad Daoud Khan on April 27, 1978. Following their seizure of power, the Khalq (meaning “the People”) and Parcham (meaning “Banner” or “Flag”) factions of the People’s Democratic Party of Afghanistan (Jamiyat-e Demokratati-e Khakq-e Afghanistan, PDPA) formed a new government and appointed Nour Mohammed Taraki, leader of the Khalq, as president of the Revolutionary Council and Hafizullah Amin, leader of the Parcham, as prime minister. Soon thereafter, Taraki set about changing Afghanistan from a feudal theocratic society to a socialist society as he embarked on a series of sweeping social reforms that ignored the traditional tribal elite and alienated large portions of the rural Afghanistan populace. Opposition to these reforms and to the changes to Afghan society led to clashes between mujahideen and Afghan security forces in the countryside. Soldiers, units, and entire brigades deserted to join the mujahideen. By early 1979 there was armed resistance in 25 of the 28 provinces of Afghanistan, and over half of the officer corps was either purged, executed, or had deserted. As the state began to fail, the Afghan army and civil bureaucracy disintegrated, and the Soviets resolved to come to the aid of their Afghan allies.

During this unrest, the PDPA’s Khalq and Parcham coalition proved temporary. Friction between these factions eventually led to a power struggle in which Parcham leader Amin launched a coup d’état on September 14, 1979, seizing the presidential palace and secretly executing Taraki. Amin then declared himself president of the People’s Republic of Afghanistan. Amin’s rule proved no better, as Afghanistan spun out of control and out of Moscow’s orbit.

Following years of internal political bickering between the Khalq and the Parcham factions, the assassination of Taraki provided the Soviet Union with the excuse to invade Afghanistan to save the Afghan communist revolution. On December 24, 1979, Soviet forces quickly seized Afghanistan’s capital, Kabul. Although Soviet

➤ U.S. INVOLVEMENT IN THE SOVIET-AFGHAN WAR

Compared to the Vietnam War by many historians, the Soviet-Afghan War (1979–1989) was fought by a major industrial power with modern conventional forces and military hardware, able to hold on to major urban areas but pitted against nonconventional guerrilla forces, sustained by the sympathetic countryside and by antagonistic international sponsors. Unlike Vietnam, this time it was the Soviet Union and not the United States in the role of invading superpower. U.S. support of the mujahideen then battling the Soviets through the supply of rocket-propelled grenades and stinger missiles, typically supplied by third parties such as the Pakistanis, ensured a long war of attrition for Soviet forces bogged down in the difficult terrain fighting against partisan guerrillas. Presidents Jimmy Carter and Ronald Reagan both viewed the Soviet-Afghan War as a critical theater for the global Cold War and ensured the supply of crucial materials for rebel Afghan forces and their mujahideen allies, many of which viewed this struggle as a jihad against the atheist Soviets. However, while some scholars credit the Soviet-Afghan War as having been a contributing factor, among many, triggering the collapse of the Soviet Union, they also acknowledge that it destabilized Afghanistan as it entered a long period of endemic fighting among warlords, which eventually led to the rise of the Taliban.

—Abraham O. Mendoza

intervention was ostensibly meant to stabilize the procommunist government, Soviet Spetsnaz forces killed Afghan president Hafizullah Amin and installed a regime closely allied to Moscow led by President Babrak Karmal. Karmal quickly set about stabilizing the countryside by stressing a return to Islam and tribal traditions as well as signing a new constitution on April 14, 1980. Karmal also suspended the social reforms that Taraki had initiated, but Amin’s brutal methods had already alienated the rural Afghan population.

Fearing the spread of an Islamic revolution, the Soviets did everything in their power to stabilize Afghanistan. They tried to influence Afghans first through massive aid and then through extensive military assistance. Yet for all the assistance

that the Soviets gave the Afghans, the Afghan National Liberation Front's jihad against the Kabul government was extended to the Soviet Union. Volunteers throughout the Muslim world joined the jihad as military and financial support from the United States, Saudi Arabia, and Pakistan strengthened the disorganized mujahideen movement. Based in Peshawar, Pakistan, the mujahideen were an alliance of seven Sunni political factions and the Shia organization Hizbi-Wahidat as well as Muslim volunteers from various countries. They initially were trained and funded by Pakistan's intelligence service, the Inter-Services Intelligence (ISI), and then later by the United States, Saudi Arabia, and the People's Republic of China.

As a result of the influx of support from the West and Middle Eastern states, the mujahideen's guerrilla campaign grew in scale and effectiveness. By 1980 the Soviets were forced to expand and deepen their involvement in Afghanistan. In an attempt to undermine and halt mujahideen, the Soviets occupied key towns where airbases, garrisons, and government centers were located. For the next five years the warfare followed a similar pattern. Typically, in the spring the Soviets would launch massive mechanized assaults into the valleys, where they would systematically destroy the infrastructure in mujahideen villages. Then in the fall and winter the Soviets would cease ground operations and concentrate on protecting their bases and encampments as well as securing strategic roads. Beginning in 1986 when the mujahideen began receiving military aid, the Afghans were able to hold their own against the Soviets; mujahideen fought the Soviet Union to a stalemate.

The ceaseless Afghan campaigns were unpopular in the Soviet Union. At about the time Mikhail Gorbachev came to power in the Soviet Union in February 1985, there was a feeling in Moscow that the Kabul regime was incapable of stabilizing the political situation in Afghanistan. Yet the Soviets sought an elusive way out of Afghanistan, desiring a unified government that would facilitate the withdrawal of troops and leave Afghanistan in the hands of a stable pro-Soviet government.

Under heavy Soviet pressure, Karmal declared a series of changes and reforms in 1985

that integrated moderate Islamists into the government. However, in April 1986 Karmal was deposed and replaced by Najibullah, the head of the secret police in Afghanistan. His appointment only increased tensions between members of the Khalq and Parcham factions as well as between ethnic groups.

In January 1987 the Najibullah regime called for a six-month cease-fire and a national reconciliation council. These were rejected by the mujahideen who, in turn, stepped up their attacks. The withdrawal of Soviet forces sealed the fate of the Najibullah regime. Najibullah clung to power until 1989, when Kabul fell to the mujahideen forces of Gulbuddin Hekmatyar and Ahmad Shah Masoud.

—Keith A. Leitch

Bibliography

- Andrew, Christopher, and Vasili Mitrokhin. *The Sword and the Shield: The Mitrokhin Archive and the Secret History of the KGB*. New York: Basic Books, 1999.
- Leitch, Keith A. "Warfare in Afghanistan: 1979–1991." In *Waging War: Weapons and Strategies*, edited by John Powell. Pasadena, CA: Salem Press, 2001.
- Maley, William. *The Afghan Wars*. New York: Palgrave Macmillan, 2002.
- O'Ballonce, Edgar. *Afghan Wars*. London: Brassey's, 2002.
- Russian General Staff. *The Soviet-Afghan War: How a Superpower Fought and Lost*. Translated and edited by Lester W. Grau and Micheal A. Gress. Lawrence: University Press of Kansas, 2002.

The Berlin Wall, 1961–1989

The Berlin Wall was erected in 1961 to prevent the exodus of escapees from East Germany (German Democratic Republic, GDR) into West Germany (Federal Republic of Germany, FGR). In the decades to follow, the wall provided a symbol of the division between the capitalist American-aligned West and the socialist Eastern Bloc under Soviet hegemony. At the end of World War II, disputes between the Soviet Union and other Allies regarding the postwar map of Europe resulted in the division of Germany into the Western-oriented West Germany and the Soviet-occupied East Germany in their respective zones of occupation. Over the course of the Cold War

(1945–1991), the issue of East Germany, particularly the divided city of Berlin (also divided into West and East) within East Germany's territory, remained a thorny issue for both the capitalist West and the socialist East. Almost immediately, the East German authorities were having trouble keeping their population from defecting to the West, causing a brain drain as many skilled workers and educated elites left for West Germany in droves, approximately 2.7 million between 1949 and mid-1961. The result was the militarization of the East German border and the construction of the Berlin Wall in 1961.

The Berlin Wall was constructed after the standoff between American and Soviet forces in the city of Berlin in 1958. Soviet premier Nikita Khrushchev chose to force the issue of Berlin by requesting that the city be transformed into a demilitarized free zone. He gave the West an ultimatum of six months (with a deadline of May 27, 1959) to negotiate directly with the East German government regarding its presence in the region. The Dwight D. Eisenhower administration, fearful of losing face in world opinion, decided not to back down on this particular issue and used the threat of military force to maintain control of West Berlin. A fresh confrontation over the city of Berlin emerged in 1961 as Khrushchev tested the resolve of the newly instated U.S. president John F. Kennedy. Kennedy and Khrushchev engaged in brinksmanship, and soon armed American and Soviet forces faced off against each other along Berlin's divide. East German minister Walter Ulbricht urged Soviet backing in the construction of the Berlin Wall to end the continuing flow of refugees into West Germany. The Berlin Wall was first erected on August 12–13, 1961.

The militarization of the Berlin Wall and the East German border resulted in the increased usage of border guards and armed military units to prevent the passage of potential defectors and escapees to the West. Observation towers, troops, border guards, barbed wire, and weapons were placed along the concrete barriers not only to prohibit entry and exit but also to display to the West the military potential of the Eastern Bloc under Soviet ideological hegemony. Utilizing the discourse of international communism, East Germany legitimized its fortification of the



A group of West Germans peer over the Berlin Wall, a barricade constructed by the East German government in 1961 that closed the border between West Germany and East Germany for 28 years. (Library of Congress)

➤ COLD WAR RELICS—EBAY AND THE CONSUMPTION OF COMMUNISM

Much as miniatures of the Bastille were popular commodities during the French Revolution (1789–1791), reminding the French citizenry of their struggle against the Old Regime, today Soviet uniforms, watches, and other memorabilia are available to Cold War enthusiasts, collectors, and die-hard old believers alike. Through eBay and other online e-commerce sites, anyone can purchase a relic to remind them of the Cold War. Chunks of the Berlin Wall, real and bogus, are available to anyone willing to purchase such a stark reminder of the greatest symbol of the Cold War and its eventual dismantling in 1989.

—Abraham O. Mendoza

borders with West Germany as a means of prohibiting the entry of subversive imperialism into the utopian workers' state. The East German Stasi police organization, utilizing a network of spies and informers in the civilian population, offered another level of internal security to prevent contacts with the West. Potential defectors were shot or maimed in the no-man's-land between the barriers of barbed wire along the border and

were immediately apprehended and subject to human rights abuses, displaying the power of the East German police state to East German citizens and Western observers. To the West, however, the Berlin Wall remained a potent symbol of the oppressive nature of communist rule. With the dissolution of Soviet authority in Eastern Europe after the policies of glasnost and perestroika in the Soviet Union, the devolution of East Germany from the Soviet sphere was imminent. In 1989, East German border guards allowed a flow of East German evacuees to enter into West Germany; this came after several weeks of problems regarding large numbers of evacuees escaping to the West through other Eastern

Bloc countries. During this wave of democratization that swept through Eastern Europe, spelling the end of communism, much of the wall was dismantled amid celebrations and fanfare. Germany became a unified nation the following year, 1990, after nearly half a century of being on the front lines of the global Cold War.

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Bibliography

Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.

McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.

■ Introduction: Regional Conflicts

The Cold War and European decolonization unleashed waves of conflicts from 1945 to 1991, with the end of the Cold War further triggering more conflicts lasting up to the present. At the same time that the United States and the Soviet Union were attempting to assert their respective ideological worldviews across the globe, many newly independent states took sides in an effort to gain support in territorial expansion or in throwing off remaining European domination.

Regional conflicts between two powers often were independent of the ideological connotations of the Cold War and instead reflected territorial ambitions and national interests. Specific examples include, but are not limited to, India and Pakistan, China and Taiwan, Israel and Palestine, Iran and Iraq, Britain and Argentina, and Portugal and Angola. Nevertheless, they managed to become part of the geopolitical chessboard of the superpowers, with requisite financial support.

Furthermore, U.S. and Soviet interventions further triggered regional conflicts in contentious and unstable areas, such as the Horn of Africa (Ethiopia, Somalia, and Eritrea), sub-Saharan Africa (Congo and Angola), Southeast Asia (Vietnam, Laos, and Cambodia), Central Asia (Iran and Afghanistan), and Latin America (Nicaragua, El

Salvador, and Chile). While the superpowers often maintained the guise of Cold War ideological objectives, they often supported authoritarian regimes with which they had little ideological similarities.

The decade following the end of the Cold War, an era in which the United States represented the world's sole superpower, was characterized by a whole host of new conflicts that had been previously contained by the imposition of socialist regimes (Yugoslavian Civil War) or exacerbated by superpower interventions (Afghanistan and Iraq), often leading to episodes of ethnic cleansing (Bosnia and Iraqi Kurdistan). Nationalist conflicts in Africa also continued, unabated by Cold War antagonisms but imbued with ethnonationalist territorial ambitions, often resulting in ethnic cleansing and other atrocities (Rwanda, Congo, and Sudan).

The post-9/11 world has been characterized in part by U.S. unilateralist foreign policy in attempts to fulfill its perceived role as the world's sole superpower, despite international condemnation and criticism. Arguably in response to such unilateralism, the United States became one of the targets of a rise in asymmetrical warfare on the part of nonstate actors. The importance of such nonstate actors has increased. International

terrorist organizations (al-Qaeda, Hizbullah, and Jemaah Islamiyah) and transnational criminal syndicates (Mexican and Colombian drug cartels) have been able to exert their power through violence and warfare at the expense of state power. Moreover, they have been able to hold their own against the military forces of states, further triggering large-scale conflicts in their respective world regions well into the present. As of 2009 the United States is still fighting Islamist insurgencies in Iraq and Afghanistan; concurrently, Russia is reasserting its position in the Caucasus and Eastern Europe, and China has cracked down on separatist movements in Tibet and Xinjiang, illustrating that the intervention of great powers is not yet over in global geopolitics.

—*Abraham O. Mendoza*

Nationalist Movements since 1945

“Nationalist movement” is an umbrella term denoting a group of people who, believing themselves to be endowed with distinctive cultural characteristics and a shared identity, pursue political power and, often, territorial autonomy. Nationalists consider themselves to be members of a unique people, a nation, entitled to its own homeland. Such movements may take many forms: they may be liberation movements, unification movements, resistance movements, nativist movements, succession movements, or any other movement that seeks to obtain, control, or protect a piece of territory on behalf of a nation. Nationalist movements are a global phenomenon spanning every inhabited continent. Since 1945 such movements tended historically to be anti-colonial independence movements; however, even after independence has been achieved, new nationalistic aims often emerge.

In the first two decades after 1945, the bulk of nationalist movements were anticolonial or liberation movements aimed toward securing independence from imperialists and establishing independent nation-states. Decades later, the disintegration of the Soviet Union also represented a decolonization process. After the crumbling of centralized Soviet power in 1991, the former Soviet Bloc dissolved into independent nation-states: Russia, Ukraine, Belarus, Azerbai-

jan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Moldova, Uzbekistan, Georgia, Estonia, Latvia, and Lithuania. As in many of the former colonial holdings of the Western states, various indigenous nationalist movements in the Soviet Bloc had been agitating for independence prior to actually having it granted.

The widespread independence after World War II meant that many of the nationalist movements of the second half of the twentieth century would have goals that differed from those of their predecessors. What distinguishes the post-1945 era is the continuation of nationalist movements in a world of independent states—over half of which had not existed before 1945—and these states’ postindependence aims, which might be territorial expansion, protection of sovereignty or borders, or the wresting of territory from another nation.

For a number of reasons, nationalism has proven itself to be a remarkably enduring and flexible ideology in a world of sovereign states. For one thing, particularly in newly independent states but also in long-established Western states, the nation-state as envisioned by nationalists does not always coincide with the artificial borders of the state left behind by departing colonial powers. Thus, in some cases the failure to secure all of a perceived homeland may spur nationalist movements seeking to acquire what they believe is their nation’s rightful land. This motivation, for example, brought the North Vietnamese into open conflict with the United States during 1965–1973 as the North Vietnamese sought to reunify North and South Vietnam after the French partition. Such is also the case with the Nagorno-Karabakh region of Azerbaijan following independence from the Soviet Union in 1991. Composed of a majority ethnic Armenian population but falling within Azerbaijan borders, Armenia sought to gain control over it, leading to a three-year war between the two states that finally ended with de facto Armenian control over Nagorno-Karabakh.

Nationalist movements in independent states may also mobilize in the form of opposition or resistance to a real or perceived external threat to the national homeland. The case of Israel is one of the most clear-cut examples of this form of nationalist mobilization and certainly one of the most ongoing. Israeli nationalists are driven

by the concern that their neighbors, be they Iran, autonomous Arab states, or the stateless Palestinians in the Occupied Territories, could at any moment strike their homeland. The threat, however, need not solely be a military one. It is possible for nationalists to perceive outside threats in the form of neocolonial domination or economic exploitation, particularly in regions of the world that hold a high economic or political interest for the West even after obtaining independence. A particularly vivid example of this form of national mobilization is the Pan-Arab movement that characterized Middle Eastern politics in the 1950s and 1960s. Although the Arab states had achieved independence by this time, they still felt threatened not only by the military presence of Israel but also by what they perceived as Western, particularly U.S., attempts to meddle in Arabs' political and economic affairs.

Further, oftentimes a nationalist movement will mobilize against a minority population that it perceives as a threat. India's Hindu nationalist Bharatiya Janata Party, which had been steadily gaining seats in the Indian Parliament since 1989 until it lost the 2004 elections, espoused a radical form of anti-Muslim rhetoric, and some of its party members were accused of complicity in the violence that killed as many as 2,000 Muslims in 2002. Also, in independent nation-states, oftentimes multiple nations will find themselves in conflict over the same homeland. An especially bloody example of this type of nationalist mobilization can be found in the Rwandan Civil War of 1990–1994 between two tribal groups, the Hutus and Tutsis, that culminated in the 1994 genocide of some 800,000 Tutsis and moderate Hutus by radical Hutu militias before the Tutsi rebels finally won out.

Finally, although the second half of the twentieth century has witnessed decolonization on a global scale and the partition of the globe into sovereign nation-states, not every group that considers itself a nation has been fortunate enough to have its own homeland. Nationalist liberation movements remain, although they are now directed against states rather than empires. Basque nationalists in northern Spain, for example, have been seeking greater territorial autonomy since the late 1900s, and Tibetan nationalists

have sought independence from China since the turn of the century. Palestinian nationalists, meanwhile, also have yet to succeed in establishing a state of their own.

—Joshua Hoffman

Bibliography

- Barrington, Lowell W. "Nationalism & Independence." In *After Independence: Making and Protecting the Nation in Postcolonial and Postcommunist States*, edited by Lowell W. Barrington. Ann Arbor: University of Michigan Press, 2006.
- Hobsbawm, E. J. *Nations and Nationalism since 1780: Programme, Myth, Reality*. Cambridge: Cambridge University Press, 1990.
- Özkırımlı, Umut. *Contemporary Debates on Nationalism: A Critical Engagement*. Basingstoke, UK: Palgrave Macmillan, 2005.
- Smith, Anthony. *Nations and Nationalism in a Global Era*. Oxford, UK: Polity, 1995.

Regional Conflict in Africa, 1945–Present

Many of the conflicts arising from post-independence within and between African states involve the dispute of arbitrary national borders established by nineteenth-century European imperialists. Many of these conflicts also reflect the chaos and poverty that followed the collapse of colonialist regimes.

Strong irredentist elements existed or exist in the Nigerian Civil War (1966–1970); wars between Ethiopia, Eritrea, and Somalia (1972–2002); ongoing conflicts in Chad, Sudan, and the Democratic Republic of the Congo (DRC); wars in Angola (1961–1994); and wars in Mozambique (1964–1994). "Irredentist" is an Italian term applied to post-1919 Eastern Europe that refers to the feelings of people sharing a common identity who find themselves divided into rival states against which they struggle to reunite their people across international borders.

Within national borders, secession is a second threat to state integrity. It loomed large in the 1960s in Nigeria, has recurred in the DRC, and also has deep nineteenth-century roots. Even a stable country such as Senegal has its secessionist Casamance region. Somalia, owing to irredentism and secession, best illustrates the point and is today furthest from a nation-state. After Euro-

pean intervention in the 1880s, the Somalis—a clan-based nomadic Islamic people—found themselves divided into four alien-imposed states: British Somaliland, Italian Somaliland, French Djibouti, and indigenous Ethiopia. As a result, Somali patriots have since celebrated Somali heroes in four separate anticolonial struggles. The challenge by the 1960s was to build a Somali nation by reuniting peoples in different states, ruled by separate elites who had reached various compromises with three departing Western powers or who had come to uneasily coexist in Ethiopia, a country whose Christian traditions antagonized most Somalis. Djibouti was so small, so French, that until it gained independence in 1977, it remained aloof from regional tension.

As with earlier outsider interventions in Africa, Cold War interests encouraged irredentism and secession. In late 1977, searching for unity, Somalis of ex-British and ex-Italian states in Somalia took U.S. military aid, having received Soviet assistance at the start of the year. Contrariwise, Ethiopia received Soviet support at year's end, having had U.S. military aid at its start. What changed things around was a Marxist coup that overthrew Ethiopia's emperor Haile Selassie. Irredentism remained; only the rivals' global partners altered. The role of outside agencies in fomenting and arming contending factions—whether in pursuit of blood diamonds in Sierra Leone and Liberia or destabilization in apartheid's dealings with socialist Mozambique and Angola—remained key to inflaming irredentist conflicts.

While the European powers left behind few societies with the wealth, infrastructure, or education system important to maintain bureaucracies and government, none of this need acquits African politicians of military grandstanding, venal misrule, or delusional mismanagement of their economies, militaries, or regional politics. It does, however, indicate the scale of challenges that new African governments faced following colonialism. In the Nigerian Civil War, for example, the Ibo (or Igbo) of federal Nigeria's southeast attempted to secede from a recently independent republic (1960) because of the ambitions of the Ibo leader, Colonel Odumegwu Ojukwu. The pogroms that the republic waged against the Ibo in northern Nigeria and Ibo pros-

pects of enrichment from recent oil discoveries in the Niger Delta also encouraged Ojukwu. Similar motivations led to repeated secessionist attempts on the part of mineral-rich Katanga in the DRC in 1961 and 1978 and more recently in the aftermath of General Joseph Desire Mobutu's 32-year dictatorship.

The underlying causes of the Nigerian Civil War include the agreement between Nigerians and Britons in the late 1950s that a larger Nigeria would enjoy more global gravitas and the decision of British colonialists to connect a Muslim Hausa north, ill-schooled in Western ways, to a striving Christian southwest and southeast, where Yoruba and Ibo made much of their limited colonial opportunities. Exacerbating all this was the material poverty that encouraged potential fighters to desperately accept Ojukwu's beguiling promises, this after considerable suffering in their flight from northern Nigeria. The point is that it was not religion or tribalism but the colonial legacy combined with contemporary misrule that produced the Nigerian Civil War.

This is clearer if one reverses Nigeria's modern-Christian, traditional-Muslim pattern as in the Sudan. There it is a modern Muslim north that faces a disadvantaged Christian south. In describing Africa's conflicts, use of terms such as "tribal" or "ancestral" rather than "regionalism" or "irredentism" reveals the failure of outsiders to understand why Africans fight. In Nigeria, the confusion of global politics led Tanzania, France, China, and Israel to support southeast Nigeria, or Biafra, while Britain, the Soviet Union, and Czechoslovakia supported federal Nigeria. The United States was preoccupied in Southeast Asia. In most cases, regional conflicts arose as a final denouement following the breakdown of state politics.

Such is also the case in the DRC (Zaire) with current conflicts known collectively as Africa's world war. Africa's world war involves Rwandans, Ugandans, Angolans, Zimbabweans, and Moroccans as well as various Congolese groupings. Rwanda's original concern was to incapacitate *interahamwe* militias, practitioners of 1994 genocide, who had fled Rwanda into the DRC. There dictatorial misrule, Cold War politicking, and brutal early colonialism bedeviled a very fragile mineral-rich state. After the 1997 collapse

of General Mobutu's kleptocratic dictatorship—itsself a product of the chaotic decolonization that ensnared Africa in the 1960s—all Zaire's regions were fought over, as its many neighbors jealously eyed its mineral wealth. Better governance might have ameliorated some of the rivalries currently dividing peoples and states of the Zaire River basin and Great Lakes region, but the stage for tension, if not conflict, had long been set—and the dice heavily loaded against peace—by nineteenth-century Belgian, French, British, and German colonialists.

Conflicts cannot always be categorized: Nigeria's regional tragedy had a strong ethnic component and, according to Ojukwu, an anti-Ibo genocidal aspect. The terrorizing of DRC civilians follows ethnic as well as regional lines. However, Africa's regional wars follow—as did Nigeria's, as does the DRC's—patterns set out by nineteenth-century strangers who arbitrarily drew Africa's borders. The weaknesses of post-colonial states have meant that their armies usually attack their own governments rather than engage in aggression against neighbors.

—John David Leaver

Bibliography

- Clark, John F., ed. *The African Stakes in the Congo War*. New York: Palgrave Macmillan, 2002.
- Clayton, Anthony. *Frontiersmen: Warfare in Africa since 1950*. Philadelphia: UCL Press, 1999.
- Falola, Toyin, ed. *Nigeria in the Twentieth Century*. Durham, NC: Carolina Academic Press, 2002.

African Colonial Wars

Following World War II, the Soviet Union and the United States committed themselves rhetorically to ending European colonialism. This rhetoric tallied with that of the newly formed United Nations and its Universal Declaration of Human Rights. Increased pressure on Europeans to legitimize their rule in Africa made insurgency more difficult to counter in the face of world opinion. World War II anti-Nazi resistance rhetoric was by analogy applied to anticolonialism: resistance fighters confronted local collaborators in liberated zones against which fascist methods were often deployed.

Earlier Anglo-American propaganda, especially the Atlantic Charter of 1941, had promised

the world self-determination once democracy defeated Nazi, Japanese, and fascist aggression. Winston Churchill might protest that he had not become his king's prime minister to oversee dismemberment of the British Empire, but President Franklin D. Roosevelt understood the charter as a license for free trade and liberal democracy. Budding developing world nationalists, moreover, saw it as vindication of their own calls for greater indigenous influence in colonial affairs.

Military power, furthermore, began to swing gradually but decisively against colonialism. After 1945 military strategists recognize only one large-scale antiguerrilla success: Britain's counter-insurgency in Malaysia between 1949 and 1965. By the 1970s, military aid made up the bulk of Soviet assistance to African national liberation movements. The importation of numerous cheap and reliable AK-47 assault rifles made the expense of holding African real estate greater than the benefits derived from exploiting it. At the same time, Western opinion embodied in World Council of Churches support for Southern African guerrillas encapsulated progressive opposition to racist denial of African rights.

More significantly, mid-twentieth-century world opinion swung against the nineteenth-century prejudices that had portrayed African life as cheap and justified colonial pacification: notoriously, Germany's 1906 extermination of Herero and Nama peoples in Namibia, then South West Africa. By the 1960s and 1970s, white supremacist regimes in Southern and Portuguese Africa were fighting an ideological rear guard to exploit growing belief in the United States that political instability in Africa invited communist subversion of America's colonial allies. Middle-of-the-road U.S. leaders had seen anticolonial struggles in French Indochina—from 1954 in Vietnam, Laos, and Cambodia—almost exclusively in Cold War terms. A similar tendency led right-wingers into Central Intelligence Agency (CIA) flirtation in the mid-1970s with apartheid South Africa against Cuban and Soviet forces in Angola.

One case where anticommunism and liberation rhetoric contested a more level playing field was Kenya Colony (1920–1964, before that Britain's East African Protectorate). Mau Mau insurgents of Kenya's self-styled Land and Freedom

Army opposed British settlers there from 1952 to 1960. Kenya reached independence in 1964, effectively bypassing Mau Mau freedom fighters, who were celebrated in myth rather than rewarded in fact. To Britain's relief, the Mau Mau conflict escaped serious international complications but was the last indigenous colonial conflict to do so. British expenses required in putting Mau Mau down accelerated independence but also established a black Kenyan elite opposed to subversion of Western dominance in East Africa. Quite simply, Mau Mau lacked the modern weaponry of near contemporaries, weaponry readily available to Zimbabwean, Mozambican, and Angolan guerrillas by the 1970s. Overtaken by the politics of decolonization, Britain's colonial wars ended in the 1950s. White supremacist politics and insurgent violence persisted, though, in former self-governing possessions such as South Africa and Zimbabwe.

As Africa became a cockpit for Cold War rivalries, France and Portugal fought on to maintain their colonial strangleholds. Starting at Setif in 1945, French authorities showed a brutal commitment to L'Algerie Française, paralleled only by their contemporary repression in Madagascar. From 1954 to 1962, the brutality of France's war against the Front de Libération Nationale (FLN) reflected the bitter legacy of Algeria's original conquest, the presence in Algeria of a large settler community, and the determination of France's elites to compensate for Indochinese losses. Algeria in 1960 spawned a settler-military alliance in the Organisation Armée Secrète (OAS), opposed to de Gaulle's Fifth Republic since it countenanced a negotiated settlement. The ultimate cost was more than 1 million Algerian casualties. Moreover, when the FLN did drive French soldiers and settlers (the *pied noire*) out politically, there erupted a war within the war as Algerian nationalists turned bloodily on France's former Muslim allies.

Portuguese wars in Angola, Mozambique, and Guinea-Bissau lasted well into the 1970s as Lisbon's dictatorship sought to grimly hang on to Portugal's overseas provinces. It took a 1974 military coup against Marcelo Caetano's fascist regime to end Portugal's wars in Africa. The Portuguese, North Atlantic Treaty Organization (NATO) members throughout, showed a colonial

➤ AHMED SÉKOU TOURÉ



Ahmed Sékou Touré was a radical nationalist who became the first president of independent Guinea in 1958. (Keystone/Getty Images)

Francophone Africa's more brutal equivalent to Ghana's Kwame Nkrumah, Ahmed Sékou Touré (1922–1984), led Guinea-Conakry—France's first independent black African colony—to freedom in 1958. A descendant of the nineteenth century Malinke resistance fighter Samori Touré, Sékou Touré began his career as a trade union organizer. He led Guinea's post and telegraph workers before joining the Rassemblement Démocratique Africain (RDA) in 1946. After brief service in France's National Assembly, Touré led Guinean opposition to General Charles de Gaulle's offer of a French colonial and national Union. Guinea's refusal to de Gaulle's 1958 proposal provoked a rapid French withdrawal, which Guinea only survived with the help of Soviet and Ghanaian aid.

Touré's one-party state, governed through the Parti Démocratique de Guinée (PDG), reflected his paranoid style, but despite economic mismanagement, Guinea's extensive bauxite (aluminum ore) deposits offered Guinea relative stability. Famous for his statement "We prefer poverty in liberty to riches in slavery," Touré gave his surname to African American activist Stokely Carmichael who, after immigrating to Guinea in 1969, combined it with Nkrumah's first name to become Kwame Touré. Recent investigations at Kindia have revealed mass graves dating from 1971 when Touré's oppressive rule was at its height. Guinea's current president Lansane Conde stands in Touré's shadow.

—John David Leaver

militancy eclipsing even that of the French. Portugal's secret police, the Polícia Internacional e de Defesa do Estado (International and State Defense Police, or PIDE), assassinated two guerrilla leaders, Amílcar Cabral in Guinea-Bissau and Eduardo Mondlane in Mozambique. Ultimately, it was Portugal's professional officer corps presiding over a large disgruntled conscript army that ended their country's colonial wars. At Angolan and Mozambican independence in 1975, tens of thousands of Portuguese settlers left. They were by then the only ones committed since the early 1960s to Portuguese Africa at any price.

Settlers indeed provoked liberation's bloodiest phase. Some scholars in the 1970s, however, persuaded by a Martinican psychiatrist practicing in Algeria, Frantz Fanon, argued that anticolonial wars offered ex-colonial subjects psychological catharsis and deepened the transformative potential of revolutionary violence. Persisting into the 1980s, such thinking encouraged expectations of an all-out race war in South Africa. From 1972 to 1979 Zimbabwe's liberation war, or Chimurenga, showed that on both sides violence intensified at those moments when negotiations stalled. Recent events in Zimbabwe suggest that violence offers no catharsis. Thankfully, negotiation, embittered though it was by civil strife, led South Africa to democracy in 1994, leaving anticolonial struggles to bleed over into national and regional conflict.

—John David Leaver

Bibliography

- Davidson, Basil. *The Liberation of Guinea: Aspects of an African Revolution*. With a foreword by Amílcar Cabral. Harmondsworth, UK: Penguin, 1969.
- First, Ruth. *From the Barrel of a Gun: Political Power in Africa and the Coup d'Etat*. London: Allen Lane, 1970.
- Horne, Alistair. *A Savage War of Peace: Algeria, 1954–1962*. New York: Penguin, 1987.
- Horne, Gerald. *From the Barrel of a Gun: The United States and the War against Zimbabwe, 1965–1980*. Chapel Hill: University of North Carolina Press, 2001.

Middle Eastern and Gulf Wars

There have been multiple wars in the Middle East in the post-World War II era, from the Arab-

Israeli wars to the Gulf wars. While the reasons for and the circumstances surrounding these wars are distinctive, most emerged in a context of recent European decolonization.

Algerian War for Independence (1954–1962)

Because of its unique history as a settler-colony that was fully integrated into France, Algeria's long struggle for independence was also the bloodiest and most arduous war for independence in the Middle East. Since the beginning of French occupation in 1830, France had incorporated Algeria politically and economically. When faced with an independence movement, France was unwilling to release its annex. Over one million Algerians died in the struggle led by the National Liberation Front (FLN), and France finally withdrew in 1962. The FLN continues to rule Algeria but competition and conflict have emerged in recent decades. In 1991, when the Islamic Salvation Front (FIS) won numerous seats in an election, the FLN canceled the elections, and civil war followed; in 2000 the FIS's armed faction, the Islamic Salvation Army disbanded, but violence has not completely ceased. In 2006 an al-Qaeda branch in Algeria began a series of kidnappings and bombings of government and Western-linked targets.

North Yemen's Civil War (1962–1970)

In 1962 a military coup overthrew North Yemen's Shia ruler, Imam Muhammad al-Badr, and civil war broke out as al-Badr tried to regain power. Both the military regime and royalists obtained foreign aid in the conflict; Egyptian president Gamal Abdel Nasser provided some 70,000 troops to the military regime, and Saudi Arabia supplied the royalists with arms. The war ended in 1970, and the opposing sides agreed on a conservative republic. Nasser's involvement in the war is sometimes called Nasser's Vietnam, as he made no apparent gains.

The next few decades saw volatile relations between North and South Yemen. North Yemen had been an independent monarchy since the end of the Ottoman Empire following World War I,

MIDDLE EAST



➤ KURDISTAN—MINORITY IN THREE COUNTRIES

Kurdistan is an area in the Middle East populated mostly by Kurds that covers areas of northwestern Iran, northern Iraq, eastern Turkey, and small regions of northern Syria and southern Armenia. While not an independent nation-state, there is still some level of common cultural traits that characterize this transnational region, with its only politically autonomous region being Iraqi Kurdistan. Due to their ethnicity and religion, the Kurds have come into conflict with each of the major states within which Kurdistan exists. During the Iranian Revolution (1979–1982), holy war was declared against Kurdish rebels by Ruhollah Khomeini, stamping out the rebellion in Iranian Kurdistan. During the Iran-Iraq War (1980–1988) and after the First Gulf War (1990–1991), Iraqi leader Saddam Hussein ordered attacks against Iraqi Kurds, who were deemed traitors to Iraq in both conflicts. In Turkey, while Kurds are an important sector of Turkish society, they are also seen as a threat to the unity of the Turkish state, particularly given the recent violence of the secessionist Kurdistan Workers' Party (Partiya Karkerên Kurdistan, PKK) against the Turkish state.

—Abraham O. Mendoza

while the southern part of Yemen was a British Protectorate until 1967. After Britain's withdrawal, a radical Marxist state emerged, which was a unique phenomenon in the Middle East. In the 1970s hostilities and unification talks occurred intermittently, and throughout the 1980s the two states were wary of each other; finally in 1990 North and South Yemen united into one state.

Lebanese Civil War (1975–1990)

The underlying reasons for Lebanon's violent civil war are rooted in its unique confessional political system that was established under French colonial rule. After Lebanon's full independence from France in 1946, the power dynamics of the representative government remained based on the ratio of Christians to Muslims that was de-

termined by the 1932 census; cabinet members were selected on a more specific sectarian basis. Lebanon's population is extremely diverse, with 18 officially recognized religious sects, and its main groups are Shia, Sunni, and Maronite Christian. In the late 1960s, some Muslims began demanding a new census to reflect Lebanon's accurate demographics. Maronites still held the most power in government, but Muslims outnumbered them, and Shia Muslims had long surpassed Maronites as Lebanon's largest religious group.

In the early 1970s, as Lebanon was already dealing with increasing tensions among its diverse religious groups, the Palestine Liberation Organization (PLO) moved its base to southern Lebanon. The PLO's relocation, and particularly its rivalry with Maronite paramilitary groups, was a central factor in Lebanon's descent into civil war in 1975.

The already complicated war became further entangled with Syrian, Israeli, and American interference, which escalated fighting among Lebanon's various sectarian militias. Muslims and others who felt alienated by the current political system tended to side with the PLO; the Maronites' main militia was supported first by Syria and later by Israel. The war did not officially end until the Taif Agreement of 1989, which left Syria in virtual control of Lebanese politics until Syria finally withdrew its forces in 2005. Once a country where diverse religious groups lived quite well together, the Lebanese Civil War intensified sectarian identities and divisions.

Iraq-Iran War (1980–1988)

Relations between Iran and Iraq were tenuous leading up to the Iran-Iraq War after Iran had supplied arms to Kurdish insurgents in Iraq during the 1970s, but the countries had signed a treaty in 1975. After Iran's 1978–1979 revolution, however, the new Islamic Republic of Iran promoted the spread of Islamic rule in the region and particularly encouraged Iraq's Shia community to revolt. Moreover, Kurds had utilized the chaos of Iran's revolution to resume attacks against Saddam Hussein's government; when Iran harbored Kurdish rebels in violation of the 1975 treaty, this renewed animosity with Hussein's sec-

ular regime. In 1980, Hussein invaded Iran in an attempt to overthrow the fledgling Islamic regime while Ayatollah Khomeini was still consolidating control.

Hussein's intended incursion swelled into an expensive eight-year war in which over half a million lives were lost by its end in 1988. The war ended with no apparent gains to either side in terms of territory or political standing.

Gulf Wars (1991, 2003–)

The First Gulf War of 1991 began when Iraq invaded Kuwait in 1990, on account of long-standing and recent border disputes, Hussein's political ambitions, and his massive debt after the war with Iran. After Iraq ignored pressure by the United Nations (UN) to withdraw, American president George H. W. Bush, unwilling to let Hussein control the oil-rich Gulf, formed a coalition among most of the Arab states. After bombing Iraq for 42 days, Bush declared Kuwait liberated in February 1991. The consequences of the war were devastating and extensive for the Iraqi people. U.S. air strikes and UN economic sanctions continued throughout the 1990s, while programs such as the notorious Oil for Food provided little for ordinary Iraqis.

In 2003, the United States invaded Iraq due to inaccurate intelligence that Iraq was hiding weapons of mass destruction from UN inspectors, who had been authorized to search Iraqi sites after the 1991 Gulf War. Hussein had thrown out inspectors in 1998 but allowed them to resume inspections in 2002. Despite their return, President George W. Bush invaded Iraq in the face of the UN's objections and international outrage. Iraq's weakened state after UN sanctions and the superior U.S. military ensured a successful conquest; the occupation, however, has encountered numerous difficulties. Even though a constitution was passed in October 2005, resistance groups remain active, and Iraq still lacks security and continuous basic services.

—Elizabeth Brownson

Bibliography

Heydemann, Steven, ed. *War, Institutions, and Social Change in the Middle East*. Berkeley: University of California Press, 2000.

Malley, Robert. *The Call from Algeria: Third Worldism, Revolution, and the Turn to Islam*. Berkeley: University of California Press, 1996.

Militon-Edwards, Beverley. *Conflicts in the Middle East since 1945*. 2nd ed. New York: Routledge, 2004.

Shlaim, Avi. *War and Peace in the Middle East: A Critique of American Policy*. New York: Whittle Books in association with Viking, 1994.

Smith, Charles. *Palestine and the Arab-Israeli Conflict*. 5th ed. New York: Bedford/St. Martin's, 2004.

Algerian Wars of Liberation

The French-Algerian War, which lasted from 1954 to 1962, was one of the postwar world's most brutal and protracted struggles. Power returned to the southern Mediterranean's majority Muslim population at Algerian independence, when France was finally driven from North Africa.

L'Algerie Francaise, the notion that Algeria was an integral part of France, took hold after 1830 and endured among most of the French until 1962. It took the overthrow of France's Fourth Republic in 1958 and the return of Charles de Gaulle to a reinvigorated national presidency to begin the slow process of extracting France from its Algerian quagmire. Algeria, having been one of France's initial conquests, proved to be the last of its substantial possessions to achieve independence. Estimates of total fatalities over eight years of conflict range from 350,000 to one million. These deaths continue to haunt both France and Algeria.

France became involved in Algeria in 1830 when Charles X's restored royalist government refused to pay grain debts owed to the Algerian Dey by Napoleon Bonaparte following his 1798 invasion of Egypt. Charles X, his regime in trouble, turned a minor diplomatic incident, when the Dey struck a French consul, into pretext for an invasion of Algeria. France, however, initially struggled to conquer Algeria. Until the late 1840s Abd al-Qadir, an Islamic holy man, maintained effective opposition to French armies, which numbered in the hundreds of thousands. These armies controlled only a narrow coastal strip and only occasionally penetrated inland in exhausting and vulnerable flying columns. As late as 1870 a major uprising in the Kabylie Mountains threatened French power in Algeria.

► THE PIEDS NOIRS OF ALGERIA

French Algerians, also known as *pieds noirs* (black feet), were descended from European settlers and considered French nationals in the context of the Algerian War (1954–1962). While a considerable number of them were French settlers, many of them were descended from settlers from Spain, Italy, and other places in the Mediterranean, among them Sephardic Jews. Pieds noirs constituted 10 percent of the population of French Algeria, and a sizable proportion of them were in support of French control of Algeria, with a tiny minority advocating independence for Algeria. With the end of the Algerian War, the pied noirs were faced with the grim realization that France would not continue the struggle, and most decided to repatriate to France. Approximately 1 million pieds noirs left for France, with most of them settling in southern France particularly around Marseilles. Others migrated to Spain, North America, Australia, and Israel, among other places. Many of them had never been to France, and while they did consider themselves French, they did not think of France as home. While pieds noirs have adapted and assimilated to French society, some express the sentiment of having been displaced from the homeland of their ancestors.

—Abraham O. Mendoza

Thereafter settlers from the northern side of the Mediterranean arrived in numbers. Once these so-called *pied noirs* constituted ten percent of Algeria's population, a French presence was secure. This lasted until France's colonial empire was undermined by military defeats, first at the hands of the Nazis and later by colonial nationalist movements. Among the European settlers in Algeria was existential novelist and philosopher Albert Camus. An influential liberationist residing in Algeria was Franz Fanon, the psychiatrist from French Martinique who became a theoretician of cathartic violence. Throughout the 1950s, the long struggle in Algeria against the secularist forces of the Front de Libération Nationale (FLN) did much to inspire the pessimism of postmodernist and existentialist French thinkers such as Jacques Derrida, Jacques Lacan, Michel Foucault, and Albert Camus.

Ironically, many *pieds noirs* (literally “black foot” in English, a derogatory label aimed at the original poverty of those seeking wealth in a land they dominated as a racial minority) were not even French. When Algerian conflict began in 1954, Spaniards, Italians, and Maltese made up a large proportion of the 1.1 million *pieds noirs*. During the early phase of the war this group attacked traitors to L'Algerie Francaise. De Gaulle's willingness to negotiate with Algerians and subsequent Algerian independence helped the *pied noire* to convert a governor-general, raise a military coup (initially supportive of de Gaulle), and finally challenge de Gaulle's Fifth Republic through a terrorist army, the Organisation Armée Secrète (OAS).

In contrast, FLN opposition to France became a cause célèbre for Third World liberationists, including Egypt's Gamal Abdel Nasser. From the 1945 massacre of Muslims at Setif by French police and *pieds noirs* to the Philippeville counter-massacre of Europeans in 1955, many on both sides showed a readiness to take lives when necessary. When FLN *maquis* (guerrillas) took the fight into Algiers city in 1961, Jacques Massau's French paratroopers terrorized the terrorists, inspiring the classic liberationist cinematography of *The Battle of Algiers*. By 1962 when de Gaulle succeeded in extricating France, perhaps 200,000 Muslims had fought alongside 400,000 French conscripts against possibly 50,000 FLN guerrillas. Almost 600,000 *pieds noirs* and perhaps 120,000 of France's Muslim allies soon after left Algeria for France. The Algerians paid a substantial price but finally gained control of their own country.

In 1965 Algeria's military took control from civilian FLN leaders, ending divisions that had afflicted the country's freedom fighters throughout their struggle. In so-called café wars perhaps 5,000 Algerians in France lost their lives in intra-nationalist faction fights. Meanwhile, France's Muslim allies, the *barkis*, struggled to integrate into a French society long accustomed to ignoring its North African communities. By 1991 when Islamists appeared to have won Algeria's presidential elections, the Algerian military annulled the elections, plunging the country into civil war. Today under President Bouteflika, Algeria is emerging from a secular-Islamist conflict that

for more than 20 years has torn the country apart. France meanwhile is now home to Europe's largest Muslim population and, as the 2005 Muslim youth riots illustrated, has yet to successfully integrate many members of these communities into its national culture.

—John David Leaver

Bibliography

- Clancy-Smith, Julia, ed. *North Africa, Islam and the Mediterranean World: From the Almoravids to the Algerian War*. Portland, OR: Frank Cass, 2001.
- Dine, Philip. *Images of the Algerian War: French Fiction and Film, 1954-1992*. New York: Oxford University Press, 1995.
- Horne, Alistair. *A Savage War of Peace: Algeria, 1954-1962*. New York: Penguin, 1977.
- MacMaster, Neil, ed. *Colonial Migrants and Racism: Algerians in France, 1900-62*. New York: Palgrave-Macmillan, 1997.

Arab-Israeli Conflict

Zionism, which originated as a reaction to pervasive East European anti-Semitism as well as from the nationalist sentiments of Central and West European Jewish thinkers, emerged in the late nineteenth century and culminated in the declaration of a Jewish state in Israel, at that time British Palestine, on May 15, 1948. The Arab-Israeli wars that ensued over the next 60 years have had major impacts on both regional and international politics.

During the first Arab-Israeli war (1948-1949) the nascent state, enjoying superior military numbers and organization but lacking first-rate military equipment, successfully fought off the invading Arab armies from Egypt, Lebanon, Jordan, Iraq, and Syria. The Israelis turned the tide in this war only after receiving arms from Soviet-backed Czechoslovakia, as the United States refused to sell weapons to any involved parties. Both the United States and the Soviet Union, however, had immediately recognized Israel following its declaration of independence.

The 1948 War, known in Israel as the War of Independence and among Palestinians and some Arabs as the Nakba, or "Catastrophe," resulted in the new state gaining legitimacy to its borders, at least to those outside the Arab world. On the Palestinian side, this conflict resulted in the

creation of a massive refugee crisis, as at least 700,000 Palestinians fled to neighboring Arab states with the hope of returning home following the anticipated Arab victory. The Israeli government, press, and many academics have long claimed that the Palestinians fled their homes at the behest of Arab governments and radio broadcasts. Recent research, however, has shown that in many instances the Israeli military used armed force or scare tactics in order to remove these people from their homes. Other serious by-products of this war include the beginning of the secondary Arab boycott of Israel, which meant that the Arab nations refused to trade with the new state, and the expulsion of many Jews from Arab countries, most notably Iraq. Finally, the Arab military defeat in this war contributed in some part to regime changes in parts of the Arab world, as Jordan, Syria, and Egypt all suffered through either assassinations or coups in the years immediately following the 1948 War.

By 1956 the Israelis enjoyed a growing economy and arms shipments from Europe but experienced a worsening of relations with the Soviet Union, which had begun championing Arab causes in the region in hopes of breaking the Western stranglehold in the Middle East. In 1955 the Soviets, again through Czechoslovakia, signed a significant arms deal with Egypt, now controlled by the Free Officer Movement under the direction of Gamal Abdel Nasser. While the Israelis feared that the new arms deal would soon allow Egypt to wage war on the young state, the British and the French were even more upset with Nasser after he nationalized the Suez Canal and ordered all foreign troops out of Egypt. Following this event, France and England approached Israel regarding possible military action against Nasser, and the three nations eventually agreed on a course of action. The Israelis would attack Egypt on the pretext, which was valid, that Egypt was refusing to allow Israeli vessels to pass through the Suez Canal, an international waterway. Following this the British and the French were supposed to call on both sides to stop fighting. The Egyptians were expected to refuse this order, at which point the French and the British had planned to attack their forces. On October 9, 1956, Israel invaded the Sinai Peninsula in Egypt, thus allowing Britain and France

➤ YASSER ARAFAT

Yasser Arafat was the leader of the Palestine Liberation Organization (PLO) from 1969 to 2004 and the president of the Palestinian Authority from 1996 to 2004. Praised by some for his central role in placing Palestinians' rights on the United Nations (UN) agenda and denounced by others for the PLO's endorsement of violent resistance before 1988, Arafat was a controversial figure throughout his life. Even among Palestinians, he has a mixed legacy; their perceptions of his image range from the legitimate spokesman of the Palestinians to an obstacle to peace and a corrupt politician.

Arafat was born in Gaza in 1929 and earned his engineering degree in Cairo. In the late 1950s, he founded al-Fatah, an exile group that aimed to recover Palestine via armed struggle. After Israel's victory in the 1967 war, Palestinians lost confidence in the Arab states, while al-Fatah gained popularity with its emphasis on establishing an independent Palestinian state. In 1969, Arafat was chosen to lead the PLO, an umbrella organization of groups with various ideological strains; since then he has been the predominant symbol of the Palestinian cause.

Despite receiving a Nobel Peace Prize in 1994 for his efforts in the Oslo Accords (1993 and 1995) along with Israeli leaders Yitzhak Rabin and Shimon Peres, the peace process all but ended with the Second Intifada in 2000. Throughout most of the intifada until his death in 2004, Israel confined Arafat to his compound in Ramallah under house arrest while blaming him for all militant resistance waged against its occupation. Israel's fear of him becoming a martyr certainly enabled him to die a natural death, yet Palestinians revere his memory and continue to flock to the Muqata, his burial site in Ramallah.

—Elizabeth Brownson

to issue their ultimatum. When, as anticipated, Egypt refused to comply, Britain and France began bombarding Egyptian positions. The United States and the Soviet Union both reacted angrily to this course of action and, following Britain and France's entry into the war, agreed to impose sanctions on all three aggressor nations. This conflict therefore marked the beginning of the end of major British involvement in the re-

gion. Although the United States and the Soviet Union reprimanded Israel, it had scored a major military victory over Egypt and had established a strong relationship with France that would last until 1967. The war also bought Israel a decade of peace that it used to build up its forces and gain further international allies. Oddly, the 1956 war marked a rare moment of cooperation between the two superpowers, as the Soviets hoped to capitalize by portraying themselves as a non-imperialist power in the region, and the United States attempted to distance itself from its allies' actions.

Although the early 1960s witnessed inter-Arab conflicts, it was not until 1967 that Israel and several Arab states again went to war. Encouraged by the Soviet Union and angered by taunts from other Arab states claiming that he had not done enough to help the Palestinians in their struggle against Israel, Nasser engaged in a game of brinkmanship with the Jewish state. He ordered the United Nations peacekeeping force, which had resided in the Sinai Peninsula in between Israel and Egypt, out of the country and moved his forces into this region. Furthermore, he began to boast that Israel would soon be destroyed, thus evoking, in the imaginations of many Israelis and Jews around the world, still recent memories of Hitler's war on the Jewish people. Nasser also, in direct violation of the conditions that he agreed to following the 1956 war, again closed Egyptian waters to Israeli shipping. Although it is unknown if Nasser actually intended to go to war with the Jewish state, on June 5, 1967, Israel simultaneously attacked Egypt, Syria, and Jordan, wiping out each nation's air force before they had a chance to counterattack. Thus the war, although it continued until June 10, 1967, was basically won on the first day.

The 1967 war irrevocably altered Middle Eastern and international politics. Israel, which emerged as the best-organized and most powerful nation in the region, dealt what turned out to be a death blow to the spread of the radical secular-Arab nationalism embodied by Nasser. The Jewish state also doubled its territory, acquiring the West Bank from Jordan, Gaza and the Sinai from Egypt, and the Golan from Syria and uniting Jerusalem for the first time since the British mandate. Israel would later give Sinai back

to Egypt as part of the terms of the 1979 Camp David Peace Accords but remains in control, at least militarily, of the other conquered areas. Following the 1967 War, Israel lost its major supporter, France, which distanced itself from the Jewish state possibly in order to curry favor with the Arabs. Israel, however, gained a new primary backer, the United States. An additional result of this war was another exodus of Palestinian refugees escaping the Israeli advance in the Jordanian-occupied West Bank. Following the 1967 War, the Palestinian national movement gained new life as Yasser Arafat's Fatah faction took over the Palestinian Liberation Organization (PLO). This war also led many in the Arab world to renounce secular nationalism as the path to global success and eventual victory over Israel and instead to turn to Islam as the answer. Finally, the 1967 War brought Israel greater international Jewish support, especially from American Jews, and also inspired many evangelical Christian groups who believed that Israel's reunification of Jerusalem was an apocalyptic signal that Jesus would soon return to earth.

During the late 1960s and early 1970s Israel and Egypt engaged in what is referred to as the War of Attrition. These border skirmishes resulted in a prolonged period of heightened tensions in the region but little more. By 1973 many Israeli civilian and military leaders had grown overconfident in their nation's position in the region and thus ignored reports of possible threats from their neighbors. At this time Egypt, now ruled by Anwar Sadat, and Syria, ruled by Hafez al-Assad, were secretly planning a new war against Israel. While it is difficult to assess Asad's ultimate goals beyond recapturing the Golan, it is evident that Sadat did not expect to win the war but rather hoped to regain some of Egypt's prestige by winning early battles. This, he believed, would eventually force Israel to the negotiating table and might bring about peace in the region. Egypt and Syria attacked Israel on October 6, 1973, during the Jewish holiday of Yom Kippur, and thus this war is known in Israel as the Yom Kippur War. Israel was, for once, caught off guard and struggled to mobilize its forces. After suffering significant casualties during the initial fighting, Israel, aided by a massive American supply lift, regrouped and systemati-

cally pushed back the invading armies, which had also been resupplied by a Soviet air lift. Before they could capture Egypt or Syria's capitals and destroy their armies, the United States and the Soviet Union pressured the warring parties into signing a cease-fire agreement.

Unlike the other Arab-Israeli wars, the 1973 war led Israel to reconsider its options in the region. The first postwar casualty was Golda Meir, Israel's prime minister, who left office under pressure from constituents who blamed her for Israel's initial problems in the war. A key international development during this war was that Arab oil-producing countries including Saudi Arabia used OPEC as a political tool by refusing to supply oil to Western nations that were aiding Israel. This marked the first time that Arab oil-producing states succeeded in seriously disrupting oil supplies to the West and touched off the first of several global energy crises during the 1970s. By the end of the decade Israel and Egypt would sign the first peace agreement between the Jewish state and an Arab country. Syria and Israel, however, would come into conflict a decade later.

The next major Arab-Israeli conflict occurred in the midst of the Lebanese Civil War of the 1980s. On June 6, 1982, Israel invaded southern Lebanon in order to seek out and destroy Yasser Arafat's PLO leadership. Lebanon in this period had been torn apart by sectarian battles between its Maronite Christian, Sunni Muslim, Shiite Muslim, and Palestinian refugee communities. Israel entered the conflict on the side of the Maronite Christians but also hoped to gain support from Shiite communities in the south of Lebanon. Syria, which had long considered Lebanon to be in its direct sphere of influence if not part of its country, was also active in Lebanon in this period and came into conflict with the Israelis inside and outside of Beirut. The Israelis eventually forced the PLO leadership, including Arafat, to leave Lebanon for Tunisia but also suffered through both public relations and military disasters. While helping their Maronite allies hunt down alleged terrorists, the Israelis allowed a Phalangist (Maronite militia) faction to enter the Palestinian refugee camps of Sabra and Shatila, where the militia engaged in a massacre of men, women, and children. While Israelis did not take

part in this event, there is no doubt that they aided the Phalange in its attack. This conflict also saw the beginning of the radical Shiite organization known as Hizbullah, which used suicide attacks and guerrilla warfare against its Christian and Israeli enemies and later against American marines stationed in Beirut. The rise of Hizbullah in Lebanon also allowed the Iranians, the largest predominantly Shiite nation in the world, the ability to interfere in Lebanese domestic politics.

Although the period 1984–2006 did not witness reconciliation between Israel and the majority of the Arab world, outside of the Israeli-Palestinian conflict that continues to rage on it has been a period of relative peace, at least compared to the previous 36 years. Most of the conflicts in this region since this time have been between other states or have involved external actors such as during the First and Second Gulf Wars.

—Jonathan Sciarcon

Bibliography

- Gilbert, Martin. *The Routledge Atlas of the Arab-Israeli Conflict*. New York: Routledge, 2005.
- Morris, Benny. *Righteous Victims: A History of the Zionist-Arab Conflict, 1881–1999*. New York: Vintage Books, 2001.
- Oren, Michael. *Six Days of War: June 1967 and the Making of the Modern Middle East*. Oxford: Oxford University Press, 2002.
- Shlaim, Avi. *The Iron Wall: Israel and the Arab World*. New York: Norton, 2000.
- Smith, Charles D. *Palestine and the Arab-Israeli Conflict*. Boston: St. Martin's, 2004.

Middle East Peace Process

The Middle East Peace Process refers to the diplomatic efforts to establish permanent peace and normal relations between Israel and the Arab world since the early 1990s. As a response to the series of wars that have plagued the region since 1948, these have included separate efforts at reconciliations between Israel and the Palestinians, Jordan, Lebanon, and Syria. Egypt was the first Arab country to sign a peace treaty with Israel in 1979, which occurred under the leadership of Egyptian president Anwar Sadat and Israeli prime minister Menachem Begin and was mediated by U.S. president Jimmy Carter. Since then, Jordan

has been the only other Arab country to sign a peace accord with Israel. It did so in 1994 under the collaboration of King Husayn and Israeli prime minister Yitzhak Rabin. While it is the Oslo agreements of 1993 and 1995 between Israel and the Palestine Liberation Organization (PLO) that are the most evocative of the phrase “the Middle East Peace Process,” peace talks are now on hold because conditions have deteriorated significantly since 1995. Although Ehud Barak and Yasser Arafat attempted to revive peace negotiations in 1999, those efforts failed and have been shelved since the outbreak of the Second Intifada (uprising) in 2000.

Conflict between Israel and the Arab states dates to Israel's declaration of independence in 1948. Hostilities between Jews and Palestinians began gradually in the late nineteenth century as Jewish immigrants started settling in the unoccupied areas of Turkish-ruled land, which was then predominantly Arab Palestine. Jewish immigration stemmed from violence against Jews in Russia and the rising appeal of Zionism in Europe. During the period of British rule (1920–1948), the Jewish population of Palestine increased from about 12 percent in 1914 to about 32 percent in 1946 largely due to the need to relocate survivors of the Holocaust. The influx of Jewish immigrants during the 1930s who sought to escape the rising power of Nazi Germany in Europe exacerbated tensions between the Jewish and Arab communities.

Fighting ensued immediately after the British withdrew from Palestine in 1948 and Jewish forces defeated the Palestinians and Arab states. During the war, most of the Palestinian community was displaced as Arabs heeded the call of their leaders to leave, causing the entire region to face a major refugee crisis. Out of approximately 860,000 Palestinians, only about 130,000 were allowed to stay in Israel. The rest moved to refugee camps, including 470,000 Palestinians who had fled or were expelled to the West Bank and Gaza; these territories came under Jordanian and Egyptian control, respectively, until the 1967 war, when Israel captured and subsequently occupied them. The other approximately 257,000 displaced Palestinians were taken in by Arab states, mostly Jordan, Syria, and Lebanon.

After the unprecedented peace treaty between Egypt and Israel was signed in 1979, there was an impasse in terms of further peace talks until the 1990s. In the wake of the First Intifada of 1987–1991, which contested Israel's occupation of the Palestinian territories and human rights violations, and the first Gulf War, the United States and the Soviet Union sponsored peace talks in Madrid, Spain, in 1991. The Madrid Talks consisted of separate meetings between Israel and Jordan, Syria, and Lebanon; the PLO consented to have its interests represented by the joint Palestinian-Jordanian panel. After several rounds of negotiations, the talks amounted to little before the 1993 talks in Oslo were made public. The secret negotiations at Oslo resulted in mutual recognition between Israel and the PLO and gave Prime Minister Rabin and Arafat a starting point to begin official peace talks, which enabled Jordan and Israel to sign a peace treaty in 1994. Rabin and Arafat agreed to create an elected Palestinian Authority (PA) to govern Palestinians in the Occupied Territories (OT) and also agreed to Israel's phased withdrawal from occupied areas but postponed discussions on the difficult issues of Israeli settlements in the OT (which are illegal according to international law), Palestinian refugee compensation, and the status of Jerusalem until a later date.

A devastating blow to the peace process came when Yigal Amir, an extremist Israeli Jew, assassinated Rabin one month after the 1995 agreement in Oslo. Benjamin Netanyahu, the Israeli prime minister during 1996–1999, denounced Oslo, promised not to turn over any land to Palestinians, and continued building settlements in the OT. Under Barak's government in 1999–2000, there was a renewed attempt to reach an Israeli-Palestinian accord with U.S. president Bill Clinton's assistance.

While Barak's talks with Arafat had not resolved every issue, they at least provided hope to Israelis and Palestinians alike. Both sides, however, claim that the other had undermined these negotiations. The Palestinians charge that Ariel Sharon's provocative visit to Haram ash Sharif, a sacred space for Muslims adjacent to the holy Jewish Western Wall, accompanied by 1,000 Israeli police officers was meant to harm the peace process. This event angered a large number of

Palestinians, many of whom took to the streets to begin the Second Intifada. On the Israeli side, many argue that Arafat had never intended to make peace, which was why he refused a generous offer by Barak and, in their opinions, resorted to violent struggle. It should be noted that since whatever Barak did or did not offer Arafat remains unknown, the truth of this definitive event remains hidden. In any event, Sharon soon rose to power, and he along with Arafat and Hamas (the most powerful Islamic party in the Palestinian territories) continued to undermine peace efforts. While Sharon regained some credibility with his unilateral pullout of Gaza in 2005, numerous critics suspect that his motives were to leave this area in order to consolidate Israel's position in the West Bank.

—Elizabeth Brownson

Bibliography

- Freedman, Robert O., ed. *The Middle East and the Peace Process: The Impact of the Oslo Accords*. Gainesville: University Press of Florida, 1998.
- Quandt, William B. *Peace Process: American Diplomacy and the Arab-Israeli Conflict since 1967*. 3rd ed. Berkeley: University of California Press, 2005.
- Shlaim, Avi. *War and Peace in the Middle East: A Critique of American Policy*. New York: Whittle Books in association with Viking, 1994.
- Smith, Charles. *Palestine and the Arab-Israeli Conflict*. 5th ed. New York: Bedford/St. Martin's, 2004.

India and Pakistan since Partition

The India-Pakistan wars were a series of four regional conflicts between the two countries following their partition (as constituent parts of British India) and independence from British rule in 1947. Three of these wars were centered on the contested territory of Kashmir, while the 1971 dispute concerned East Pakistan, modern-day Bangladesh. Tensions between the two countries remain high, justifying immense military expenditures by both sides extending to the development of nuclear weapons. In the Cold War context, the United States and China typically aligned themselves with Pakistan to prevent the development of India as a major regional power, providing diplomatic support and weapons systems. In turn, the Soviet Union provided



diplomatic support to India. While India declared itself to be a nonaligned power in the Cold War, it sought Soviet economic support in its struggle against Pakistan.

After World War II, Britain officials in Westminster had effectively decided to leave India due to its waning economic importance and Britain's domestic financial troubles. In previous decades, British authorities had countered Indian opposition to their rule by supporting the Muslim League against the Indian National Congress, which represented the Hindu majority of British India. The Muslim League supported Brit-

ish authorities, hoping to gain their own Muslim state (Pakistan) after independence. However, by playing both sides against the other, Britain ensured that the religious divide shaped political attitudes in the future. In 1947 Britain finally relinquished control of the Raj (British India) and gave India its independence, partitioning British India into Muslim Pakistan (West Pakistan and East Pakistan) and Hindu India. However, this led to a massive exchange of populations and dissatisfaction regarding the resulting land distribution, particularly centering on the province of Kashmir.

The source of the multiple conflicts is a dispute over the mountainous region of Kashmir and the way the destiny of the region was handled by the two countries following partition in 1947. At the time of partition, Kashmir, populated mostly by Muslims, was ruled independently by the Hindu Maharaja Hari Singh until an invasion by Pakistanis forced him to cede his dominions to India. Pakistan argued that Singh had only done this after succumbing to pressure from India. This situation ignited the First Kashmir War in 1947 between regular Indian and Pakistani troops. Lasting for more than a year, the war was characterized by both sides as making significant incursions into each other's territory. However, when the war ended with a United Nations (UN) cease-fire, India had managed to secure a major portion of Kashmir.

The Second Kashmir War of 1965 began when Pakistan played a role in igniting rebellions, known as Operation Gibraltar, in the contested provinces of Jammu and Kashmir among Indian Muslims against Indian authorities. Pakistan hoped to create a major rebellion to justify an armed intervention in support of their fellow Muslims. However, India retaliated by launching an attack on Pakistan, effectively triggering the larger war. By September 22 of that year, the UN Security Council called for a cease-fire from both nations. Nonetheless, the cease-fire lasted only six years before the Indo-Pakistani War of 1971.

The Indo-Pakistani War of 1971 was associated with the Bangladeshi war of independence, a conflict between West Pakistan and East Pakistan (Bangladesh). India supported the East Pakistanis in their struggle for independence against West Pakistan through various diplomatic efforts and humanitarian aid. After months of increasing tensions between India and Pakistan due to the increased military buildup on their respective borders, Pakistan finally attacked India on December 3, 1971. The Indian military defeated the Pakistanis in Bangladesh, and major combat operations then focused on West Pakistan. A mere two weeks after India entered the war, the Pakistanis surrendered, suffering heavy casualties, huge materiel losses, and the secession of East Pakistan, now the newly independent nation of Bangladesh.

➤ MASS KILLINGS IN BANGLADESH, 1971

Bangladesh was formerly a province of greater Pakistan on the eastern side of India with a sectarian Bengali independence movement seeking the creation of their own state. During the Bangladesh War of Independence from Pakistan, widespread killings of civilians by Pakistani forces and local religious militias resulted in an estimated 200,000–3 million civilian casualties. In addition, Bangladeshi intellectuals throughout the country were systematically murdered by religious militias at the instigation of Pakistani forces. Following the invasion of Pakistani forces many Bengalis, mostly Hindus persecuted by Muslim militias and the Pakistani army, sought refuge in neighboring India, which was Pakistan's major regional rival. India's entry into the war resulted in the defeat of Pakistan and the secession of Bangladesh. To this day, scholars, politicians, and survivors still debate whether this violent episode in 1971 should be considered genocide.

—Abraham O. Mendoza

The fourth Indo-Pakistani war, also known as the Kargil War, took place in 1999 in the Kargil district of Kashmir. The direct cause of the war was the infiltration of Pakistani troops and Kashmiri rebels on the Indian side of the Line of Control, which served as the defensive perimeter of Indian territory for the Indian military. Indian military forces attacked the enemy positions and forced a Pakistani withdrawal. The situation triggered major instability within the Pakistani government and economy, resulting in the 1999 coup d'état by General Pervez Musharraf.

Decades of suspicions and antipathy have led both Pakistan and India to increase their military striking power. This has resulted in vast military expenditures on their military organizations and weapons systems, particularly nuclear weapons. Both sides have also solicited assistance from outside powers in their efforts. Pakistan has been a staunch ally of the United States, enabling Pakistan to secure weapons and financial assistance to meet the Indian challenge. Pakistan also has a friendly stance with China, which also has border disputes with India. In contrast, India relied primarily on the auspices of the Soviet

Union (until 1991) for diplomatic support and assistance. In recent years, Pakistan has remained a valuable ally for the United States in terms of its support against global terrorism and through its provision of bases for operations into Afghanistan in support of the NATO offensive in response to the September 11, 2001, attacks. However, India also has recently forged stronger diplomatic and economic links with the West after enacting neoliberal trade policies in the 1990s, opening it to investment from Europe and the United States.

—Abraham O. Mendoza

Bibliography

Dixit, J. N. *India-Pakistan in War and Peace*. New York: Routledge, 2002.

Paul, T. V., ed. *The India-Pakistan Conflict: An Enduring Rivalry*. New York: Cambridge University Press, 2005.

Sino-Soviet Conflict, 1956–1989

Beginning in the mid-1950s, the relationship between the Soviet Union and the People's Republic of China (PRC) deteriorated rapidly, this

despite the fact that since 1950 Moscow had provided significant financial, technological, and scientific assistance to Mao Zedong's regime. Weakening relations culminated in a public split in the early 1960s. The Sino-Soviet rift destroyed the myth of a monolithic world communism and had major ramifications for the Cold War, creating a new military rival and foreign policy distractions for the Soviet Union while offering diplomatic opportunities to the United States.

The rift between Moscow and Beijing first appeared during 1956–1959. Friction ensued when Soviet leader Nikita Khrushchev's de-Stalinization campaign, his policy of peaceful coexistence vis-à-vis the United States, and his refusal to assist China in building atomic weapons converged with Mao's aspirations for recognition as Josef Stalin's successor in the communist world and his boasts that China could achieve socialism more quickly via a path different than that followed by the Soviet Union. In 1960 the split became open as the respective leaderships exchanged insults and accusations publicly. At a major communist congress (May 1960) in Bucharest, Romania, Khrushchev characterized the Chinese as "left adventurists" who recklessly risked unleashing a third world war. Later (November 1960) at a communist conference in Moscow, convened to heal the Sino-Soviet break, the Chinese accused the Soviets of revisionism, while Khrushchev charged Mao with dogmatism. In the years immediately following, animosity grew as the Chinese lambasted Khrushchev for his handling of the Cuban Missile Crisis (October 1962), for his refusal to support them during their war against India (1962), and for his signing of the Limited Nuclear Test Ban Treaty (August 1963). Beijing also demanded that Moscow relinquish those territories, specifically the Soviet Maritime Provinces, that the tsarist regime had extorted from the Qing dynasty in the mid-nineteenth century, exacerbating the situation.

Neither Khrushchev's dismissal in October 1964 nor Mao's death in 1976 improved relations. In March 1969 animosity reached a dangerous flashpoint when Soviet and Chinese military forces engaged in brief but heavy fighting near disputed territories in the Amur-Ussuri region. This clash sparked firefights at other points along

➤ BORDER CLASHES

Escalating tensions between China and the Soviet Union, as a result of ideological differences regarding the international revolution as well as old unresolved border disputes, resulted in a series of border incidents between the Red Army and Chinese forces. In March 1969, Chinese troops attacked Soviet border guards on Zhenbao Island, which resulted in Soviet retaliation concentrating on Chinese positions along the Ussuri River. In August of that year, along the Sino-Soviet border in the Chinese province of Xinjiang, Soviet troops inflicted heavy casualties on Chinese troops. These skirmishes increased the likelihood of warfare, with some concerns that either side might use nuclear weapons. However, cooler heads in Moscow and Beijing decided on diplomacy and negotiation in September 1969, ending the threat of a potential war over disputed borders.

—Abraham O. Mendoza

the 4,000-mile Sino-Soviet frontier that produced significant casualties and mutual recriminations. In light of what was viewed as an extremely unstable situation in the East, the Brezhnev leadership, which had succeeded Khrushchev in 1964, deployed 40 divisions supported by nuclear weapons along the frontier with China while simultaneously making a renewed commitment to achieve détente with the West, the latter policy exemplified by the willingness to accommodate West German chancellor Willy Brandt's Ostpolitik (1970-1974), to enter into the SALT I agreement (1972) with the United States, and to sign the Helsinki Accords (1975). Simultaneously, Beijing established relations with the United States (1971), which resulted in Washington's formal recognition of the PRC.

During the late 1970s and early 1980s, relations between the USSR and the PRC arguably reached their lowest point. Soviet support for Vietnam's December 1978 invasion of Kampuchea (Cambodia) that toppled Pol Pot's pro-Chinese Khmer Rouge government, China's brief February 1979 invasion of Vietnam ostensibly in retaliation for the latter's attack against Kampuchea, the Soviet Union's December 1979 invasion of Afghanistan, and the continued presence of substantial Soviet forces along the frontier with China combined to keep tensions high and the situation along the Sino-Soviet frontier extremely unstable. Mikhail Gorbachev, however, Soviet general secretary from March 1985, began the process of normalizing Sino-Soviet relations.

The architect of perestroika and glasnost, Gorbachev actively sought improved relations with Beijing, proclaiming this goal publicly and negotiating a series of commercial and educational exchange agreements during his first months in office. Subsequently, Gorbachev removed all major obstacles, as defined by China, to Sino-Soviet reconciliation, ending the Soviet Union's war in Afghanistan, persuading Vietnam to withdraw from Kampuchea, and reducing Soviet troop deployments along the border with China. Gorbachev's efforts culminated in a May 1989 visit to Beijing, which, though complicated by student protests, signaled the end of the Sino-Soviet split and the beginning of a new era in Russo-Chinese relations.

—Bruce J. DeHart

Bibliography

- Ellison, Herbert, ed. *The Sino-Soviet Conflict: A Global Perspective*. Seattle: University of Washington Press, 1982.
- Low, Alfred D. *The Sino-Soviet Confrontation since Mao Zedong*. New York: Columbia University Press, 1987.
- Westad, Odd Arne. *Brothers in Arms: The Rise and Fall of the Sino-Soviet Alliance, 1945-1963*. Stanford, CA: Stanford University Press, 1998.

China-India Conflict

As ancient civilizations, China and India coexisted in peace for millennia, with the Himalayas separating the two empires and political contacts minimal. Culturally, Hinduism and Buddhism spread from India to China (and then to Korea and Japan), and this spread completely transformed Chinese society and culture. Nevertheless, as modern nation-states in the late twentieth century, with the exception of the early 1950s, Sino-Indian relations have been characterized by border conflict, regional rivalry, and strategic, military, and economic competition.

The Sino-Indian border conflicts resulted from the rejection by Beijing of the British-drawn McMahon Line of 1913-1914 separating India and Tibet, the flight of the Dalai Lama to India after the 1959 Tibetan Uprising, and the dispute following the 1962 border war in which China seized 38,000 14,670 square miles (square kilometers) of Indian territory in Aksai Chin and another 2,000 square miles (5,180 square kilometers) of northern Kashmir that Pakistan had ceded to Beijing under a 1963 pact.

China sought to confine Indian power to the region of South Asia in order to avoid confronting a powerful neighbor south of the Himalayas. Beijing was extremely concerned when India permitted the creation of the Dalai Lama's exiled government in Dharamsala. In response, China decided to contain India by supporting Pakistan in the 1965 Indo-Pakistani War. Throughout the 1970s and 1980s, the continuous Chinese arms transfers to Pakistan indicated the close links between Beijing and Islamabad.

The Cold War conflict further complicated the Sino-Indian relations, as shown in the Soviet alliance with India and the U.S. support for China since the 1970s. Despite the gradual development

➤ SINO-PAKISTANI RELATIONS AND INDIA

The regional rivalry between Pakistan and India, following the partition of 1947, has shaped Pakistani relations with the People's Republic of China. Given China's frosty relationship with India in regard to border disputes and outright armed hostilities in 1962 (Sino-Indian War), Pakistan's relationship with China became one of mutual support vis-à-vis India. Following partition, India sought friendly relations with China, seeking Chinese participation in the Non-Aligned Movement against the bipolar Cold War superpowers. However, the Sino-Indian War ended any possibility of such support. Furthermore, Chinese backing of Pakistan, in the form of supplying weapons, money, and diplomatic support against India, further soured relations between India and China. By the late 1960s, the Sino-Soviet split led to better relations between the Soviet Union and India to better counter the solidarity of China and Pakistan in Central Asian regional affairs.

—Abraham O. Mendoza

of Sino-Indian rapprochement after Indian prime minister Rajiv Gandhi's visit to Beijing in 1988, Beijing refused to sacrifice its strategic partnership with Pakistan. It is this two-front threat (Pakistan in the west and China in the north and northeast) that gave rise to Indian concern about China's policy in South Asia. With the end of the Cold War and the American military involvement in Iraq and Afghanistan, the United States becomes an active factor in the balance of power among China, India, and Pakistan. Because of the new quadrangular structure, the Indo-Pakistan-China interactions also have become part of the tension between the United States and China over Taiwan and North Korea.

Another security issue affecting Sino-Indian relations is the rise of Chinese naval activity in the Indian Ocean. To protect its lines of communication across the Indian and Pacific oceans, China gradually expanded its naval activity in the region throughout the 1990s. China constructed new ports, maritime communications, and overland transport routes in Pakistan and Myanmar. Underlying China's agenda is the need

to strengthen Pakistan in order to maintain the balance of power in South Asia.

In response to the perceived Chinese encirclement, India launched its countermeasures by pursuing security relations with China's neighbors in the Pacific Ocean, especially Vietnam, Japan, and Taiwan. New Delhi's counterencirclement was a direct response to China's expansion of its security ties with India's neighbors in South Asia. The entangled relations between China and India indicate each country's security concerns as they continue to compete with each other in the wider Asian region.

—Joseph Tse-Hei Lee

Bibliography

- Garver, John W. *Protracted Contest: Sino-Indian Rivalry in the Twentieth Century*. Seattle: University of Washington Press, 2001.
- Garver, John W. "The Security Dilemma in Sino-Indian Relations." *Indian Review* 1(4) (October 2002): 1–38.
- Liu, Xuecheng. *The Sino-Indian Border Dispute and Sino-Indian Relations*. Lanhan, NY, and London: University Press of America, 1994.
- Malik, J. Mohan. "South Asia in China's Foreign Relations." *Pacifica Review* 13(1) (February 2001): 73–90.

China-Taiwan Conflict

The present conflict between the People's Republic of China (PRC, or China) and the Republic of China (ROC, or Taiwan) is rooted in the Chinese Civil War (intermittently fought between 1927 and 1949). As Guomindang (GMD) Nationalist forces, under Generalissimo Jiang Jieshi (Chiang Kai-shek), were forced from mainland China by PRC forces, they retreated to the island of Taiwan as their tentative base of operations. The subsequent international recognition of Taiwan as the Republic of China, particularly by the United Nations (UN), and the PRC's contrasting view of Taiwan as a renegade province show how both sides were unwilling to recognize the other's independence. This rivalry quickly took on Cold War coloring as Taiwan became a staunch U.S. ally, leading to small acts of brinksmanship between PRC and ROC forces. New constellations emerged in the early 1970s when U.S. president Richard Nixon extended a conciliatory rapprochement to the PRC.

Chinese Nationalist leader Jiang Jieshi represented China during wartime and postwar conferences held by the major Allies of World War II, even as his forces were losing the war to the Chinese communists in the late 1940s. This allowed the ROC to receive international recognition as the sole representative in the UN for China, with a seat on the Security Council and the associated international legitimacy. However, the reality was that by 1949, most of China was well under the control of Chairman Mao Zedong of the Chinese Communist Party (CCP), who saw the existence of Taiwan as tentative and to be rectified in the future by an eventual PRC conquest. In addition, the GMD in Taiwan refused to recognize the CCP's control of mainland China as permanent, leading both sides to abide by a one-China policy that would guide their relations for the rest of the century.

The emergent Cold War antagonisms between the United States and the Soviet Union and between the United States and the PRC had a significant impact on Chinese-Taiwanese relations. U.S. support for Taiwanese independence strengthened the ROC's position and ensured its survival. However, it also prompted small skirmishes between ROC and PRC forces, mainly over islands in the Taiwan Straits (Formosa Sea) that separated China from Taiwan, as the islands of Matsu and Quemoy, occupied by ROC forces, were contested twice. Two major Taiwan Straits crises, one in 1954–1955 and the second in 1958, were instances in which ROC forces held on to these islands while undergoing shelling by PRC artillery and small-scale amphibious invasions. These skirmishes ensured staunch U.S. support of Taiwan and led to the opening of the Sino-Soviet split as China began to detect a lack of support coming from Moscow.

In the 1970s U.S. president Richard Nixon, wishing to take advantage of the emergent Sino-Soviet split, began negotiations with the PRC for international recognition and its seat in the UN. During this time, both the PRC and the ROC were still at odds over Chinese unification. However, the GMD's dictatorial hold over Taiwan's domestic politics and repressive regime had alienated the ruling party from most of the island's inhabitants. The development of the Democratic Progressive Party (DPP) in 1989, in opposition to

➤ TAIWAN AND THE KOREAN WAR

In reaction to the escalation of events in Korea, driven by efforts by the communist North to subdue the capitalist South, the fiercely anti-communist Nationalist government of Taiwan (Republic of China) requested participation in the resistance against this act of aggression. The United States, which was effectively leading United Nations (UN) forces in the upcoming struggle, refused to allow Taiwan to participate, fearing that this would ensure the entry of the People's Republic of China into the conflict on the side of the North. However, President Harry S. Truman sent the U.S. Seventh Fleet to protect Taiwan from a potential Chinese attack. This further complicated the matter, which was formerly seen as primarily an inter-Chinese problem, by bringing in the United States as guarantor of Taiwanese independence. As Taiwan tied its fortunes to American support, it also soured its relationship with the mainland, becoming a contentious hotspot during the Cold War.

—Abraham O. Mendoza

the GMD's policy of one China, has gained since in popularity as the Taiwanese have developed a sense of national identity as Taiwanese rather than as Chinese. In spite of the growing economic and diplomatic links between the two countries since the 1980s in the form of massive investment, travel permissions, and conciliatory meetings, as the DPP grows in political popularity, mainland Chinese hostility in the form of increased missile defenses and naval strength continues to prevent a lasting peace.

—Abraham O. Mendoza

Bibliography

- Chen, Jian. *Mao's China and the Cold War*. Chapel Hill: University of North Carolina Press, 2001.
- Cooper, John F. *Taiwan: Nation-State or Province?* 4th ed. Boulder, CO: Westview, 2003.
- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2007.

Falkland Islands War (1982)

The Falklands War was a 72-day war between Argentina and Great Britain over control of the

➤ MARGARET THATCHER AND THE FALKLAND ISLANDS WAR



British prime minister Margaret Thatcher, rides aboard a British tank at Fallingbommel, West Germany, on September 17, 1986. Mrs. Thatcher was making an official visit to British forces. (AP Photo/Joel Fink)

Grim economic problems beset British prime minister Margaret Thatcher in her early years in office, making her unpopular among many in the British public. Her free market and privatization policies had alienated much of the population, particularly the hard-pressed working class. However, the outbreak of the Falkland Islands War (1982), which galvanized British public support and a newfound sense of national pride, assisted in Thatcher's growing popularity. Despite British casualties and what was deemed by international critics as a minor war for a small contested colony by both Britain and Argentina, the conflict resulted in an outpouring of British patriotism and increasing support for Thatcher's Conservative government. As a result, the British Conservative Party held the majority in the House of Commons in the 1983 elections, maintaining Thatcher at the helm in the office of prime minister.

—Abraham O. Mendoza

Falkland (Malvinas) Islands. The Falklands War officially began on April 2, 1982, when Argentina landed thousands of troops on the islands and ended on June 14, 1982, when Argentina surrendered to British forces. The war was the product of a long-running dispute between Great Britain

and Argentina over the Falkland Islands, or the Malvinas as Argentina called them. The Falklands are a rugged collection of islands in the South Atlantic some 300 miles off Argentina's coast. Britain frequently intervened in the region in the early 1800s and had been in continuous possession of the Falklands since 1833. Argentina repeatedly protested the British presence, although the Argentine dictator of the 1830s and 1840s, Juan Manuel de Rosas, offered to sell the Falklands to Britain. Britain refused to pay for what it already possessed.

Through the decades, Argentina never renounced its claim to the Falklands. Sporadic negotiations between Britain and Argentina in the 1970s yielded some progress but no substantive agreement on the key issue, namely sovereignty over the islands. The Argentine government attempted to entice the United States into backing its position by claiming that British possession of the Falklands violated the Monroe Doctrine; however, the United States rejected the application of the doctrine to the Falklands case, arguing that Britain had a claim that antedated its seizure of the islands in 1833. During much of the twentieth century, the United States maintained only a marginal interest in the controversy.

The dispute over the Falklands came to a head in 1982. Argentina had long expressed disenchantment with what it considered the slow pace of negotiations with Britain. The approach of the 150th anniversary of the British takeover also played a part in the Argentine decision to resort to force. Growing domestic opposition to military rule encouraged some in the military leadership to conclude that a move against the Falklands would help unite the country behind the regime. Military action would also be a distraction from the sorry state of the Argentine economy. The Argentine leadership doubted that Britain would move militarily to prevent seizure of the islands.

In late March 1982 U.S. intelligence reports indicated that Argentine forces appeared to be preparing for an invasion of the islands, prompting a lengthy telephone conversation on April 1 between U.S. president Ronald Reagan and Argentine president General Leopoldo Galtieri. Reagan warned Galtieri that an invasion would compromise U.S.-Argentine relations and provoke a mili-

tary response by Britain. Nevertheless, Argentina invaded on April 2, quickly subduing a small detachment of British Royal Marines.

Britain responded diplomatically and militarily. The British convinced the European Economic Community (EEC) to impose economic sanctions on Argentina and the United Nations (UN) Security Council to condemn the invasion and call for an Argentine withdrawal. Britain dispatched a large military contingent to retake the islands by force if necessary. The United States responded with a spurt of shuttle diplomacy led by U.S. secretary of state Alexander Haig. Haig made the diplomatic rounds of London and Buenos Aires trying to broker an agreement based on a cease-fire, Argentine withdrawal, and a commitment to negotiate on the long-term status of the islands.

Haig's shuttle diplomacy soon unraveled as the negotiations demonstrated America's pro-British position. American efforts at mediation ended on April 30 when the United States announced that it was imposing economic sanctions on Argentina and would provide military assistance to Britain, although there would be no direct U.S. military involvement. British forces landed en masse in the Falklands on May 21, 1982, resulting in another meeting of consultation of North and South American countries under the Rio Pact. The meeting passed a resolution—with the United States abstaining—that condemned Britain for its “unjust attack on Argentina” and called upon the United States to lift its economic sanctions on Argentina and end its assistance to Britain. With little substantive diplomatic action, the struggle for the Falklands would be determined by military action alone.

The lopsided conflict came to a predictable conclusion with the surrender of Argentine forces on June 14, 1982. Argentina sustained 655 killed in action, while Great Britain suffered 236 killed in action.

The Falklands War was more a colonial war than a Cold War conflict, but it certainly had Cold War implications. First, the Reagan administration lost one of the strongest supporters of its anticommunist policies in Central America. Second, the crisis strengthened ties between Argentina and Cuba, which had prominently supported the Argentine position. Finally, the crisis produced widespread doubts about the role the United States played in mediation efforts, especially given the rapid U.S. switch from quasi-impartial mediator to supporter of Britain. In addition, in the wake of the war, two of its most prominent players lost their positions. The Argentine military regime was humiliated, bringing a return to civilian rule in 1983 and the prompt resignation of President Galtieri. Secretary of State Haig resigned on June 25, 1982, partially as a result of his controversial role in the crisis. Only British prime minister Margaret Thatcher benefited politically from the war, as it raised her sagging popularity and ultimately led to her success in upcoming elections.

—Don M. Coerver

Bibliography

- Haig, Alexander M. *Caveat: Realism, Reagan, and Foreign Policy*. New York: Macmillan, 1984.
- Hastings, Max, and Simon Jenkins. *The Battle for the Falklands*. New York: Norton, 1983.
- Pastor, Robert A. *Whirlpool: U.S. Foreign Policy toward Latin America and the Caribbean*. Princeton, NJ: Princeton University Press, 1992.

■ Introduction: Ethnic Cleansing and Genocide

Ethnic cleansing is defined as a policy by which governments, military institutions, or armed combatants relocate and remove members of specific ethnic, racial, or religious communities deemed enemies of the state, coercing them to seek asylum elsewhere or be threatened by the potentiality of extinction, that

is, genocide (the actual deliberate act of annihilating people of a particular group). The apparent goal of ethnic cleansing is to create a more homogenous state for the national identity group in power. Ethnic cleansing not only involves the actions of the perpetrators against the victims but is also a larger dynamic, as it can only be

successful with the complacency of the international community and institutions such as the United Nations (UN) or North Atlantic Treaty Organization (NATO) that are often unwilling to involve themselves in ending the bloodshed.

Article II of the 1948 UN Convention on the Prevention and Punishment of the Crime of Genocide (CPPCG) defines genocide as “any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: killing members of the group; causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life, calculated to bring about its physical destruction in whole or in part; imposing measures intended to prevent births within the group; [and] forcibly transferring children of the group to another group.” Written as a response to the mass murder of an estimated six million European Jews (the Holocaust) committed under the German Third Reich during World War II, this convention stipulated the characteristics that delineated genocide as a crime against humanity and was therefore illegal under international law. This convention failed to apply to the genocide of the *Volkdeutsche* Germans (ethnic Germans, many of whom had resided in Eastern Europe for centuries) as they were expelled, abused, and murdered in great numbers (an estimated two million) in Eastern Europe from 1948 to 1951.

The euphemistic term “ethnic cleansing” entered the English language and international discourse in the 1990s to describe the acts perpetrated by Serbs on Muslim minorities in the context of the Yugoslavian Civil War. Within this upheaval in the Balkans, the term developed as a less objectionable way to refer to genocide on the part of the Serbs. The contested origin of the term is typically attributed to the Serbo-Croatian term *ciscenje* to describe policies of making the nation pure of minority national groups and was widely disseminated through the global news media. The term was used to avoid the type of morally objectionable (and legal) connotation carried by the term “genocide” and its association with crimes against humanity as defined by international law. Various critics allege that the term was popularized by the U.S. public relations agency Ruder Finn to characterize Serbian ac-

tions in Kosovo as akin to the Holocaust to gain world support for Albanians.

Widespread ethnic cleansing policies have occurred at various times in many world regions after 1945, often with minimal international intervention. In the 1960s and 1970s, the ethnic cleansing policies of Indonesia and Congo toward minority populations were dismissed in the West as postcolonial internal affairs, thereby achieving a negligible international response and ignoring the tenets of international law regarding genocide. In the late 1990s, the ethnic cleansing policies enacted in Rwanda, in Yugoslavia, and in the province of Darfur in the Sudan have gathered much attention. The Rwandan genocide committed by the politically and militarily dominant Hutus led to the deaths of 500,000 Tutsis and the exodus of 2 million. The Serbian destruction of vast segments of the Bosnian Muslim population of Sarajevo and later the persecution of the Albanian Muslim population of Kosovo garnered little response from the European Union but led to international outrage and NATO intervention. The crisis, still ongoing as of 2009, in the Darfur province of southern Sudan, with black Sudanese being murdered at the hands of Muslim fundamentalists from the north, while attaining much international attention, has nonetheless failed to ignite an assertive response from abroad other than much severe international condemnation.

—Abraham O. Mendoza

Indonesian Ethnic Conflicts

The Republic of Indonesia has a very diverse population. It is home to hundreds of ethnic groups speaking approximately 200 distinct languages and dialects. But since Indonesia won independence from Dutch rule in the 1940s, it has been a unified state with a single national identity. It has, however, had problems with conflict between various Indonesian ethnic groups; some of these conflicts even threatened the existence of the unified nation-state.

These conflicts are based on a variety of divisions within Indonesian society. Muslims have clashed with non-Muslims, and there have also been disputes among Indonesian Muslims over how their religion should be practiced. Conflicts

have sometimes assumed a regional dimension. Minority populations perceive the Javanese, who make up some 40 percent of the population, as having dominated the country both politically and economically. The Javanese have also been seen as having defined the nation in a manner that assumes that an Indonesian identity is in fact a Javanese one. Feelings of regional resentment might be related to the fact that several regions have unique relationships with the national narrative. Aceh, Irian Jaya, and East Timor were all brought into the Indonesian nation-state in unique ways. Furthermore, ethnic Chinese, who came to Indonesia during colonial times, have had a complex and troubled relationship with the rest of the Indonesian population.

Starting with the attempt by Ambonese Christians to set up an independent republic in the Moluccas in 1950, Indonesia has had a series of regionally based rebellions. The West Java-based Darul Islam movement violently agitated to make Indonesia an Islamic state until the capture of its leader Kartosuwiryo in 1962. In 1956–1957 discontented military officers and politicians staged revolts in Sumatra and Sulawesi. These rebellions were prompted by unhappiness with the regime of President Sukarno rather than with the desire to separate from Indonesia and were largely suppressed by the end of 1958. Violent clashes between the army and local guerrillas took place in Aceh in the 1950s and from 1991 until 2004. Armed resistance to incorporation into Indonesia took place in East Timor from 1975 until 1999, when *de facto* independence was achieved, and has occurred on a much lesser scale in Irian Jaya from the 1970s until the present day.

Communal violence has also long marred Indonesia. Anti-Chinese riots have occurred at regular intervals and have been fueled by the widely held belief that the Chinese had an unfair economic advantage, which they used to exploit other Indonesians. At the same time Chinese Indonesians, systematically kept out of mainstream society, were until recently subject to discriminatory legislation and were largely barred from careers in the military and politics. As another example, in the late 1990s clashes took place in Kalimantan between Madurese, who had settled in the region with government encouragement,

➤ INDONESIA—THE NEXT YUGOSLAVIA?

The 1990s witnessed the breakup of the multiethnic Yugoslav federation, an event accompanied by a great loss of life. The disintegration was connected to an economic downturn and the death of dictator Josip Broz Tito, who had provided a strong unifying hand. In 1998 the downfall of Suharto and perhaps a parallel breakup scenario for Indonesia occurred. Democratic institutions were slow to gain strength, and the economic crisis that had helped end the Suharto regime continued. There was also the temptation on the part of some politicians and military officers to stress religious and ethnic differences among the population in order to consolidate their personal power. East Timor voted to leave Indonesia in 1999, while the government continued to suppress an insurgency in Aceh, and communal fighting broke out in the Moluccas. Terrorist attacks in Bali and Java in 2002 and 2003 threatened to earn the country a reputation as a haven for violent religious radicalism. But the inevitability of the breakup scenario may have been exaggerated. Political institutions have strengthened. The 2004 presidential elections were deemed by outside observers to have been a great success. Fighting has stopped in the Moluccas, and a peace settlement has recently been signed in Aceh. Most Indonesians, according to recent public opinion polls, are committed to a national identity while being proud of local ethnic and religious roots.

—Michael Wood

and indigenous Dayak, who felt that their land and way of life were under threat. Javanese and Balinese soldiers and officials stood by powerless as thousands were murdered, and numerous refugees fled the island.

In the Moluccas, violent battles raged between Muslims and Christians from 1999 until 2002. The population had lived together in peace for centuries, but economic pressures along with competition for political patronage drove communities apart. Conflict was associated with increased religious self-awareness and the presence of outside agitators. Factions of the Indonesian military openly sided with the participants in the fighting, and the radical Laksar

Jihad recruited volunteers in Java to aid Muslim combatants. Conflicts within and between Indonesian ethnic groups have been costly in terms of loss of life and property. However, such losses are dwarfed in magnitude by those caused by purely political violence. The killings associated with the destruction of the Indonesian Communist Party and the rise of Suharto in 1965–1966 may have claimed half a million victims.

Despite the troubled history of ethnic and communal conflict in Indonesia, the country has held together remarkably well. Only areas such as East Timor, Irian Jaya, and Aceh that have a radically different connection to the development of the nation have taken the opportunity to break away. For most of the populace, there seems to be little interest in entirely placing ethnic identity before national identity. Communal violence has largely ended in the Moluccas, although scattered killings continue in Sulawesi. The status of the ethnic Chinese has improved, with Chinese politicians serving in the cabinet and Chinese festivals openly celebrated. However, there have recently been some troubling signs of village-based intolerance in Java, with local hostility directed at members of the Ahmadiyya Muslim community, at charismatic Javanese sects, and at Christians living in predominantly Muslim areas.

—Michael Wood

Bibliography

- Bertrand, Jacques. *Nationalism and Ethnic Conflict in Indonesia*. Cambridge: Cambridge University Press, 2004.
- Vickers, Adrian. *A History of Modern Indonesia*. Cambridge: Cambridge University Press, 2005.

Rwanda

On the night of April 6, 1994, a genocide lasting 100 days began in the small central African country of Rwanda. This state-sponsored and systematic mass murder of Africans defined as Tutsis and any politically moderate Hutu elements of the population left more than 800,000 dead and 2 million more displaced as refugees. Many world leaders dismissed this obvious genocide as merely an ancient and inherent tribal conflict. However, there is no evidence of ethnic

conflict in Rwanda's history prior to German and Belgian colonial rule.

By the late nineteenth century a complex centralized state had developed in Rwanda, and definitions of ethnicity were quite loose. The kingdom was ruled through an intricate web of client-patronage relationships. Wealthier members of the aristocracy were loosely associated with the term "Tutsi." The term "Hutu" was roughly defined as "subject" or a marker of socioeconomic status and was not the cultural definition commonly associated with ethnicity. People in Rwanda spoke the same language (Kinyarwanda), practiced similar traditions, and intermarried across the fluid lines of Tutsi and Hutu. However, these terms hardened into more rigid classifications under European colonial rule.

Beginning in 1894, Rwanda experienced nearly 70 years of foreign rule under first German and later Belgian colonial domination. Rwanda's complex government contradicted racist notions of African inferiority common among Europeans at the time. Witnessing that loosely defined Tutsis held many of the positions of power in government, European officials grasped onto a corrupted version of Rwanda's oral traditions in an effort to explain their conundrum. Some local traditions stated that the Tutsis were cattle-herding foreigners who had migrated to Rwanda from Ethiopia or North Africa. While it is true that a population had migrated to Rwanda from the southern Sudan several hundred years before, this group had been assimilated into the local culture by the twentieth century and did not define the Tutsi social class. Nonetheless, the corrupted theory was instituted as historical fact and came to be called the Hamitic Myth. This myth presumed that Tutsis were descendants of a superior race of foreign invaders who conquered Rwanda and subjugated the masses of people defined as Hutus. The myth was taught in schools and became reinforced as European colonialists chose Tutsi individuals as their local government agents. The roughly 15 percent of the population labeled Tutsi, mainly on the basis of economic wealth, were favored under the colonial system. They were given the best jobs and were provided with the limited social and economic benefits associated with European rule. By the 1930s, Rwandans were required to carry identity cards listing one's

ethnicity, firmly institutionalizing the importance of the terms “Hutu” and “Tutsi” in Rwandan society.

By the 1950s, the Belgian colonial rulers knew that independence was imminent in Rwanda and worried that the minority Tutsi population, whom they had supported, would not maintain political control. In an effort to protect Belgian interests in the country, support for a ruling Tutsi minority was abandoned and shifted to a dominant Hutu government. This resulted in the Tutsi minority being viewed as the scapegoats for the injustices of the colonial period as the two groups competed for power. In the wake of these power struggles, the country witnessed its first examples of ethnic violence in the late 1950s and early 1960s.

From independence in 1962 until 1994, Rwanda was controlled by an increasingly radical government dominated by a small clique of Hutu elites. A government propaganda campaign heightened social tensions and often blamed Tutsis for the struggles faced by the nation. Quotas were established in schools and in government institutions, reserving the majority of positions of power for Hutus. Many Tutsis fled the country as refugees throughout the early years after independence in an effort to escape persecution. By the late 1980s, Rwanda had fallen on hard economic times, and the government was heavily dependent on foreign aid. At the same time, Tutsi refugees began organizing outside Rwanda. In 1990 a Tutsi-dominated force called the Rwandan Patriotic Front (RPF) invaded. Over the next four years civil war waged between the RPF and the Hutu government.

By April 1994, the United Nations brokered a fragile power-sharing agreement between the RPF and government forces; however, tensions were still high. The spark that set off the genocide was the assassination of Rwanda’s president, whose plane was mysteriously shot down in the country’s capital on April 6. Massacres began immediately and spread out from Kigali across the countryside. The killings were systematic and rapidly orchestrated. Many in the international community failed to publicly recognize the genocide and did little to stop it. During a period of 100 days Rwanda was engulfed in violence that would leave up to 85 percent of the Tutsi

> NYARUBUYE



Staff and pupils murdered at the Catholic school and convent at Nyarubuye, Rwanda, by Hutu militia on May 15, 1994. (Sam Kiley/Sygma/Corbis)

In rural eastern Rwanda there is a Catholic church and school called Nyarubuye. In the early days of the 1994 genocide, thousands of local Tutsi fled to the church for sanctuary from the massacres. They were encouraged to do so by their local mayor, Sylvestre Gacumbitsi. Tragically, they were not spared. Led by the same local mayor, a large group of militia came to Nyarubuye, and over the course of several days as many as 20,000 men, women, and children were murdered in the parish compound.

Churches such as Nyarubuye had historically been places of sanctuary during times of trouble in Rwanda. Unfortunately, those orchestrating the genocide also knew this, and the horrific scenes that played out in Nyarubuye were replicated at many different churches around the country. In some cases Church officials actively resisted and tried to save the victims, while in other instances members of the clergy were among those who organized the killings. Today Nyarubuye remains much as it did in the immediate aftermath of the genocide. The unburied remains of victims still lie on the parish floor, with the evidence of genocide distinctly visible. Nyarubuye remains in this state for a reason. It is a contemporary memorial, a monument of shame, a way to never forget the horror of genocide in Rwanda.

—Matthew Carotenuto

population dead; also killed were thousands of Hutu who opposed the genocide. Ultimately the RPF ended the genocide. As of 2007, the RPF's controversial general, Paul Kagame, led the country in efforts to rebuild and reconcile Rwanda's troubling past.

—Matthew Carotenuto

Bibliography

- Des Forges, Alison. *Leave None to Tell the Story: Genocide in Rwanda*. New York: Human Rights Watch, 1999.
- Hintjens, Helen M. "Explaining the 1994 Genocide in Rwanda." *Journal of Modern African Studies* 37 (2) (1999): 241–286.
- Mamdani, Mahmood. *When Victims Become Killers: Colonialism, Nativism, and the Genocide in Rwanda*. Princeton, NJ: Princeton University Press, 2001.

Sudanese and Congolese Civil Wars

The Sudanese and Congolese civil wars were both based on enduring ethnic conflicts that erupted following the decolonization of these and other African territories in the late twentieth century. Both the Sudan and Congo gained independence during the first wave of African nationalism (1940s to 1960s), yet neither had developed a strong national identity by the time independence was achieved. In both countries, civil wars broke out as various factions attempted to gain power to either build a national identity or retain distinctive regional and ethnic identities. The conflicts began when secessionist groups attempted to break away from the new states while the central governments attempted to retain the colonial structures and borders. The conflicts also were complicated by external influences related to the Cold War.

In the Sudan, armed conflict between the culturally distinct northern and southern regions began in 1955 on the eve of independence. The north was predominantly Arab and Muslim and had maintained close cultural ties to Egypt. The south was predominantly black and Christian or animist with cultural ties to ethnicities in northern Uganda. The regions had been administered separately by the British empire until 1946, when

northern and southern Sudan were merged into a single administrative unit.

Following the granting of independence in 1956, scattered elements of resistance in the south were put down using military force, but this only seemed to strengthen the resolve of the resisters and further polarize Sudanese society. By 1963 a group calling itself Anyanya had unified many of the southern ethnic groups in a guerrilla war against the Sudanese government. Anyanya gained strength, declaring the independence of southern Sudan in 1967. In the north, coups and countercoups plagued the government at Khartoum, weakening central authority and political legitimacy. In 1972 Sudanese president Jafar Nimeiri negotiated an agreement with Anyanya, granting amnesty to the rebels and regional autonomy.

In the 1970s Nimeiri embarked on an effort at nation-building through a series of socialist reforms, which began to infringe on the provisions of the 1972 agreement. In 1983, faced with the rising strength of the Islamist element of Sudanese society, Nimeiri imposed Sharia (Islamic law) on the entire state, including the previously autonomous southern region. A second civil war broke out, and Khartoum faced further instability until Omar al-Bashir seized power in 1989. The southern forces, predominantly represented by the Sudan People's Liberation Army (SPLA), maintained control of a significant portion of the southern third of the Sudan. Distinct but related conflicts subsequently erupted in northern Uganda and in western Sudan (Darfur).

The Congolese conflict originated shortly after the Congo became an independent state in June 1960. Within months the new government faced secessionist movements in the resource-rich Katanga and South Kasai provinces. The power struggle soon drew in the involvement of Cold War opponents, as Premier Patrice Lumumba appealed for external support and both the United States and the Soviet Union sought to influence the newly independent state. Belgian paratroopers and a United Nations (UN) force deployed to the Congo and a UN-brokered peace agreement ended the fighting with the separatists of Katanga Province in 1963. In 1965 the Congo was dominated by Cold War politics. Mobutu Sese

Seko seized power in a coup supported by the Central Intelligence Agency (CIA), while Che Guevara attempted to galvanize rebel leader Laurent Kabila for the socialist camp.

Over the next several decades, Mobutu transformed the Congo into a corrupt and oppressive single-party state, while Kabila continued to bide his time in the eastern jungles of the Great Lakes region. In the 1970s and 1980s Mobutu began a program of Zaireanization and economic development that fell far short of expectations but was propped up by the United States because Zaire, as the Congo was then known, supported a CIA-sponsored faction in the Angolan conflict.

With the end of the Cold War, the Western financial and military support for Mobutu dried up. The Great Lakes refugee crisis of 1994–1996 proved more than the decaying Mobutu regime could handle, and Kabila was in a position to take advantage of this situation. Supported by both Uganda and the Tutsi government, which had come to power in Rwanda in the aftermath of the 1994 genocide, Kabila marched on Kinshasa and deposed Mobutu in 1997.

The establishment of the Democratic Republic of Congo in 1997 did not end the conflict because the questions of power distribution were still unresolved. Kabila's attempts to reduce foreign (Rwandan) interference in the Congo sparked a second civil war in 1998. This renewed conflict essentially divided the Congo into three parts: the regions controlled by Kabila loyalists, a pro-Uganda faction, and a pro-Rwanda faction. Two bilateral peace agreements ended the conflict with Uganda and Rwanda in 2002. Following Kabila's assassination in 2001, a transitional government of the Congo was formed in 2003. As of 2009, fighting continued in the eastern and southeastern provinces.

—William Mengel

Bibliography

- Callaghy, Thomas. *The State-Society Struggle: Zaire in Comparative Perspective*. New York: Columbia University Press, 1984.
- Clark, John, ed. *The African Stakes of the Congo War*. New York: Palgrave, 2002.
- Deng, Francis Mading. *War of Visions*. Washington, DC: Brookings Institution Press, 1995.

Johnson, Douglas. *The Root Causes of Sudan's Civil Wars*. Bloomington: Indiana University Press, 2003.

Young, Crawford, and Thomas Turner. *The Rise and Decline of the Zairian State*. Madison: University of Wisconsin Press, 1985.

Ethnic and Genocidal Wars in Africa

Outsiders to Africa have long misconstrued ethnicity as tribalism. Ethnicity refers to subnational identity within a nation containing many such identities. People who acknowledge a common culture based on language, sanctioned behaviors, ritual, spiritual beliefs, and distinct attitudes toward life share an ethnicity. Tribalism is not a term usefully applicable in Africa. Belief in tribalism, however, has sustained conflicts in which one side or other has made unsubstantiated charges of genocide. Genocide is the effort to exterminate an entire ethnic group. There was, for instance, no genocide of Ibo people by a northern-dominated federal government in Biafra, in southeastern Nigeria, in the mid-1960s. Not all such charges are spurious, but readiness to recoil at supposed barbarism has exacerbated conflicts by drawing outside sympathies one way or another. The world is often too ill-equipped, too easily distracted, and too ready to respond superficially to African conflicts.

This proved the case, despite United Nations principles outlawing Nazi-style atrocities, during the 1994 Rwandan genocide. Hutu and the Tutsi identities emerged from colonialism in Rwanda ruled first by the Germans from 1895 and then by the Belgians after 1919. Both colonial powers propagated Hamitic myths, according to which taller, supposedly lighter-skinned pastoral people had moved south to establish hegemony over shorter, apparently darker-skinned agricultural people. So-called Hamitic pastoralists were identified as Tutsi, while their agricultural subordinates were identified as Hutus. The colonial ethnographers responsible for this theory badly mixed up culture, race, and language. Hamitic does not refer to race but instead only to a linguistic branch of an Afro-Asiatic language family that also includes Arabic and Hebrew. Although

Tutsis long dominated Hutus—*ububake* and *umubeto* are terms that anthropologists use for their precolonial patron-client relationships—it was the Belgians who, by favoring Tutsi over Hutu, fossilized Rwandan identities. Sharpened identities, which few scholars acknowledge as distinct ethnicities, thereafter nurtured post-colonial conflict and ultimately genocide.

When Belgian colonialism ended in 1959–1960, the Hutu overthrew the Tutsi, and many Tutsi refugees fled to neighboring Uganda. More than communal hatred, though, would be required for genocide. By the 1980s Rwanda's economy was in a perilous state. Coffee, the country's major export, earned record low prices. This accelerated rural migration to Kigali, the capital, where urban unemployment grew. The ruling Hutu government mobilized unemployed youths into militias known as *interahamwe* (those who fight together) or *impuzamugambi* (those who fight with a single aim). With unwitting outside connivance, these young men, many simple civilians, responded to a campaign on state radio of hatred by joining with army units and murdering between 800,000 and 1,000,000 Tutsis and moderate Hutus from April to July 1994. UNIMIR, the UN force in Rwanda at the time, proved powerless, although it had been told to supervise an earlier cease-fire by rebel Tutsi-dominated forces attacking the extremist Hutu government.

Government propaganda about Tutsi rebels of the Rwandan Patriotic Front (RPF) convinced many Hutus that it was kill or be killed. Appeals from Canadian UNIMIR commander Romeo Dallaire fell on deaf ears. President Bill Clinton's State Department performed verbal gymnastics to avoid the word "genocide," the term triggering UN responsibility for intervention. Indeed, with extremist Rwandese officials sitting on the UN Security Council, UNIMIR forces were actually scaled back. Ultimately only an RPF victory ended the genocide, but even that triggered French intervention to establish a safe zone into which fearful Hutu refugees, some mass murderers, fled. As the RPF established itself, Hutu *interahamwe* forces attacked the new government from the Democratic Republic of the Congo (DRC). There the RPF pursued its enemies in a spreading regional conflict that some have called Africa's first world war.

Few doubts have been raised about the world's shameful response to the Rwandan genocide, but controversy still swirls around the term itself and its bearing on ethnic conflict elsewhere. The George W. Bush administration, perhaps influenced by its war on terrorism, described events in Sudan's Darfur region as genocide. Neither the African Union (AU) nor the European Union (EU) agreed. Across Sudan's regional divide, the North is better watered and mainly Arab. The South and West are arid and Christian or Animist. There, Janjaweed Arab militias supporting the Sudanese government are massacring farmers, presumed to support guerrillas of the Justice and Equality Movement (JEM) or the Sudanese Liberation Movement (SLM).

Long-standing ethnic conflicts, as in Rwanda, underlie Sudan's tragedy. Baqarra Arab nomads, prior to Janjaweed recruitment, clashed with Zaghawa, Fur, and Masalit farmers, and the region has long seen northerners enslave southerners. Genocide might accurately describe events in Darfur, where as many as 400,000 lives have been lost since 2003, but the history of supposed (Biafran) and actual (Rwandan) genocide forewarns us of ethnic and political complexities. In the Sudan, the way forward, as it should have been in Rwanda, is cautious support for the AU. Only in that way can mistakes made in Rwanda be avoided in the Sudan instead of being revisited on a scale approaching those that abetted Nazi atrocities.

—John David Leaver

Bibliography

- Barnett, Michael. *Eyewitness to a Genocide: The United Nations and Rwanda*. Ithaca, NY: Cornell University Press, 2003.
- Des Forges, Alison Liebhafsky. *Leave None to Tell the Story: Genocide in Rwanda*. New York: Human Rights Watch, 1999.
- De Waal, Alex. *Famine That Kills: Darfur, Sudan*. New York: Oxford University Press, 2005.
- Keane, Fergal. *Season of Blood: A Rwandan Journey*. New York: Penguin, 1995.

Ethnic Cleansing in Europe—Yugoslavia

The campaigns of ethnic cleansing committed throughout the 1990s in the former Yugoslavian

federation, particularly in the province of Bosnia-Herzegovina at the hands of Bosnian Serbs and Serbian nationals, appalled a world community certain that the excesses committed during the Holocaust would never again plague Europe. The surge of nationalist sentiment unleashed by the end of the Cold War created the conditions that allowed this process, which ultimately led to the deaths of an estimated 200,000 Bosnian Muslims, Serbians, and Croats. The ambivalent behavior of international organizations, the United Nations (UN) and the North Atlantic Treaty Organization (NATO), in responding to policies of ethnic cleansing encouraged the actions of the Serbian perpetrators of genocide. The attempt at ethnic cleansing in the province of Kosovo several years later, in a Serbian attempt to cleanse the area of Kosovar Albanians, also triggered international outrage but resulted in an assertive military response by NATO led by the United States.

The conciliatory policies of Josip Broz Tito (1941–1980) maintained a fragile unity within the postwar multinational communist republic of Yugoslavia. Upon his death the devolutionist nationalist tendencies became unleashed, and his tactics of playing off the major ethnic groups against each other would not work any longer. In 1989 Serbian president Slobodan Milosevic (1989–2000) proceeded to eliminate the autonomous position of the Yugoslavian provinces of Kosovo and Vojvodina. His continued attempts to assert Serbian domination of Yugoslavia triggered the secession of Slovenia, Croatia, Macedonia, and Bosnia-Herzegovina in 1992. This angered Milosevic, triggering his deployment of the Yugoslavian military, composed primarily of Serbians, to reclaim the newly independent nations and unleashing a civil war. The attempts to create ethnically heterogeneous nation-states on the part of each former Yugoslavian republic, with the exception of Slovenia, resulted in various campaigns of ethnic cleansing in the midst of the Yugoslavian Civil War (1991–1998).

The ethnic cleansing policy on the part of various actors within Bosnia-Herzegovina was due to its multicultural character. The tenuous constitutional structure of newly independent Bosnia-Herzegovina rested on the supposed cooperation of its various component nationalities.



Bosnian Muslim women cry as their relative is buried in Potocari on July 11, 2005. Relatives wept over more than 600 coffins of victims of the Srebrenica Massacre, dug out of death pits at a ceremony to mark the 10th anniversary of Europe's worst atrocity in 50 years. (Damir Sagolj/Reuters/Corbis)

Unlike the other former Yugoslavian republics, it had no majority ethnic group but instead was composed of substantial pluralities of different nationalities. In 1991 a census estimated that Muslims accounted for 43.7 percent of the population, Serbians accounted for 31.4 percent, Croats accounted for 17.3 percent, Yugoslavs accounted for 5.5 percent, and others accounted for 2.1 percent.

The Serbian population, determined to maintain their political and cultural hegemony, proceeded to create the Republika Srpska under the leadership of Radovan Karadžić. The Bosnian Serb paramilitary formations, with covert assistance from Serbia, proceeded to ethnically cleanse Bosnia-Herzegovina of non-Serbs, primarily of Muslims. The age-old antagonism based on religious hatred emerged in the midst of the Bosnian Civil War. The resulting exterminations of Muslims with the associated tactics of widespread massacres, shootings, and mass rapes led to a massive death toll. Concentration camps and mass killings characterized the Bosnian Serb policies to exterminate the culture and populations of Bosnian Muslims. Armed groups of Bosnian Muslims retaliated by conducting their own campaigns of genocide against Bosnian Serbs.

➤ SREBRENICA MASSACRE—PORTRAIT OF A CONTEMPORARY WAR CRIME

The Srebrenica Massacre (July 1995) was the genocidal mass killing of approximately 7,000 Bosnian men in the region of Srebrenica in Bosnia-Herzegovina by nationalist Bosnian Serb Republika Srpska (VRS) units under General Ratko Mladić along with a mercenary Greek unit known as the Scorpions. This was the largest mass murder in Europe since the end of World War II and stands as an example of the controversy over the value of the United Nations (UN) peacekeeping mission amid the Serbian ethnic cleansing in Bosnia-Herzegovina.

The UN Security Council issued Resolution 819 on April 16, 1993, creating a UN Safe Area out of Srebrenica and its surroundings. This was meant to prevent the incursion of Bosnian Serb military actions against civilians. On April 18, the first contingents of United Nations Protection Force (UNPRFOR) troops arrived to serve as peacekeepers; these troops were mostly composed of Dutch units. By July, Serbian forces completely disregarded the UN decree and advanced into the region. The UN Dutch peacekeepers were unable to stop the VRS from murdering and raping the local populace, with some peacekeepers taken as hostages and, according to some reports, others turning a blind eye. Allegations of the UN Dutch battalion's negligence and incompetence surfaced in light of the killings. This massacre in addition to reports of UN forces' widespread corruption (selling arms, trafficking women) and sympathy with Bosnian Serbs made the UN strategy in Bosnia significantly controversial. The slow process of finding corpses in the Srebrenica region, often in mass graves, and of exhuming and identifying them lasted for a decade. Debate over the efficacy of peacekeeping operations in ceasing hostilities and preventing ethnic cleansing still plagues the UN.

—Abraham O. Mendoza

Bibliography

Rohde, David. *Endgame: The Betrayal and Fall of Srebrenica, Europe's Worst Massacre since World War II*. Boulder, CO: Westview, 1998.

In the midst of the carnage, Serbia maintained official neutrality while supplying the Bosnian Serbs with arms and supplies.

Bosnian Croats and Muslims also enacted policies of attrition against the Serbs and each other in an attempt to eliminate each other from territories where a respective ethnic group constituted a demographic majority. Croatian forces concentrated their persecutions of Muslims in central Bosnia and most of Herzegovina. In the Bosnian town of Ahmici, Croatian militants perpetrated a massacre of Muslims by locking them in cellars and setting them afire. The smaller Muslim guerrilla force managed to commit small-scale massacres against both Croats and Serbs. A mass grave of potentially hundreds of Serbian civilians murdered by Muslim authorities that was unearthed near Sarajevo and abuses committed against Serbian prisoners at a Bosnian camp in Celibici are examples of Bosnian Muslim actions against their opponents. While Serbian genocide created a larger death toll, Croatian and Muslim actions also characterized the chaotic acts of ethnic cleansing on all sides.

The tactics involved in ethnic cleansing in the former Yugoslavia involved very crude methods of extermination and torture. Accounts of such actions involve shooting en masse, stabbing or knifing victims to death, torturing to death by various means, and starvation in concentration camps. The dehumanization of rival groups resulted in acts of mass rape, torture, and death. The participation of both paramilitary groups and civilians characterized many of these acts of genocide. Knowledge of these events troubled NATO and the UN in particular, which eventually sent in peacekeepers. Some accounts allege that there was inaction on the part of these forces that failed to prevent acts of genocide in some instances. Allegations of bribery and corruption of UN peacekeepers and their role as mere bystanders have also contributed to substantial controversy.

Following the Dayton Agreement in 1995, which brought an end to belligerency among the former Yugoslavian republics and settled differences in Bosnia, Milosevic proceeded to focus on affairs within Serbia. The province of Kosovo, which had a considerable Muslim Albanian popu-

lation, became the target of Serbian exclusionary legislation targeting non-Serbs. Kosovo Albanians were removed from universities and other venues of public life and encouraged to emigrate through government sanction. However, NATO and the UN were paying close attention to these actions on the part of Serbia. While Milosevic maintained that this was an internal affair and that he was merely responding to the actions of Muslim terrorist groups, NATO began a policy of aerial bombardment of key Serbian positions and the city of Belgrade in 1998 in retaliation for Serbian aggression against Kosovo.

U.S. president Bill Clinton enacted what political analysts refer to as the Clinton Doctrine, which advocates a policy of military engagement in nations with internal ethnic strife with the potential of escalating into genocide. This policy displeased Russia, which had backed Serbia's position in the Balkans as a sympathetic Slavic power. Diplomacy and the eventual granting of autonomy to Kosovo eventually diffused the issue. Milosevic was nonetheless proclaimed a war criminal and was seen as responsible for his involvement in actions in Bosnia-Herzegovina and his policy on Kosovo. He was eventually brought to trial in The Hague in 2000 for crimes against humanity, but he died on March 11, 2006, before the trial ended.

—Abraham O. Mendoza

Bibliography

- Caplan, Richard. "International Diplomacy and the Crisis in Kosovo." *International Affairs: Royal Institute of International Affairs* 4(74) (1998): 745-761.
- Hayden, Robert M. "Imagined Communities and Real Victims: Self-Determination and Ethnic Cleansing." *American Ethnologist* 4(23) (1996): 783-801.
- Lieberman, Benjamin. *Terrible Fate: Ethnic Cleansing in the Making of Modern Europe*. New York: Ivan R. Dee, 2006.
- Mirković, Damir. "Ethnic Conflict and Genocide: Reflections on Ethnic Cleansing in the Former Yugoslavia." *Annals of the American Academy of Political and Social Science* 548 (December 1996): 191-199.
- Vulliamy, Ed. "Bosnia: The Crime of Appeasement." *International Affairs: Royal Institute of International Affairs* 1(74) (1998): 73-91.

Nativist Revivals

Nativism can be defined as either loyalty to the ethnic, religious, or cultural group to which one belongs or as hostility to foreign influences such as immigrants and minority groups. Nativistic revivals are political movements of nations or peoples that coalesce around such sentiments. Nativism usually involves ethnic, racial, or religious prejudice. Nativism is wed to nationalism. Often nationalism can entail veneration of one's ethnic or religious culture rather than an affiliation with a larger nation-state. Since nationalism and nativism are bound together, there is often conflict among native residents of the nation and immigrants as well as between groups with conflicting nativist agendas.

Historically, nativism has been associated with the United States and the tendency of some Americans, including the Know-Nothing Party of the 1850s and the 1920s Ku Klux Klan, to blame all social problems on foreigners. Despite the term's association with American history, it can be applied to other countries because of the emphasis on the fear of the foreign. Ethnic conflicts in particular emerged as a feature of the post-World War II world, and after the end of the Cold War in the late 1980s there was an explosion of these conflicts. Nativist revivals occurred worldwide in the late twentieth century, including the Tamil-Sinhalese conflict in Sri Lanka, Chechnya's fight for independence from the Soviet Union, genocide in Bosnia and Rwanda, fighting between Muslims and Hindus in India, and anti-immigrant movements in the United States and Japan. Nativism, then, emerges as prejudices against outsiders, which causes conflict, political legislation, violence, and possibly genocide.

Since World War II, Yugoslavia was plagued with infighting between Serbs, Croats, and Muslims, and violence erupted in the 1990s that led to the Bosnian genocide (1992-1995) in which thousands of Bosnian Muslims were killed by Serb militaries. This ethnic cleansing was an attack on Muslims by Serbs, who identified their sense of nation with their religious background, Christianity. This nativist revival centered on the religious tolerance of Bosnia and particularly on

Bosnian Muslims. This genocide was a way to purify the nation of foreign religious influence.

Another example of religious differences leading to nativism is the Ayodhya conflict in India. In 1984, Hindu nationalists launched a campaign to reclaim the Ayodhya temple as a Hindu religious site. The controversy revolved around whether the Islamic mosque, built in 1528, was constructed on top of a Hindu temple to Rama. From the 1980s to the 1990s, riots occurred between Hindus and Muslims, resulting in the death of hundreds. For Hindu nationalists, this mosque became of a symbol of their majority threatened by the Muslim minority in India. In 1992, Hindu nationalists organized a rally at Ayodhya in which the mosque was destroyed. This destruction caused riots as well as attacks on Muslims. In Bombay, thousands of Muslims were killed.

Nativist revivals also occurred because of the departure of colonial powers, as in Africa. The removal of the colonial structure often caused tumult in countries such as Nigeria and Rwanda. In Rwanda, German and Belgian colonizers developed the system of identifying Hutus and Tutsis, and Tutsis were given better jobs and education than Hutus. By the 1990s, the two groups had intermarried to the extent that their ethnic differences were indistinguishable, yet the preferential treatment due to ethnicity caused animosity. In 1994, the genocide began with the death of the Rwandan president, which was blamed on the Tutsis. Hutus killed over 1.5 million Tutsis, and Tutsis rebels responded by killing over 100,000 Hutus.

Nativism also emerges in less violent and more political forms. For example, in 1979, the

Iranian Revolution displaced the shah and reinstated Islamic law in the country. This revolution favored the laws of Islam to the Westernization of the country, which was seen as foreign and corrupting. In the United States, there is a long history of identifying immigrants as threats to the national character. In contemporary America, nativist revivals have taken the form of protests and legislation against immigrants; following the September 11, 2001, attacks on the World Trade Center, such nativism has gained popularity and brought about new federal initiatives concerning border regulations and immigrants' rights on American soil. Nativist revivals thus have emerged in full force in the contemporary world as reaction to perceived threats to nation, culture, and personal identity.

—Kelly J. Baker

Bibliography

- Knobel, Dale T. *"America for Americans": The Nativist Movement in the United States*. New York: Twayne, 1996.
- Mills, Nicolaus, and Kira Brunner, eds. *The New Killing Fields: Massacre and the Politics of Intervention*. New York: Basic Books, 2002.
- Saideman, Stephen M. *The Ties That Divide: Ethnic Politics, Foreign Policy, and International Conflict*. New York: Columbia University Press, 2001.
- Sells, Michael A. *The Bridge Betrayed: Religion and Genocide in Bosnia*. Berkeley: University of California Press, 1996.
- Taras, Raymond C., and Rajat Ganguly. *Understanding Ethnic Conflict: The International Dimension*. New York: Longman, 1998.
- Van Der Veer, Peter. *Religious Nationalism: Hindus and Muslims in India*. Berkeley: University of California Press, 1996.

■ Introduction: Terrorism

Terrorism is the systematic use of violence by domestic or international organizations for specific political objectives. While the use of terrorism is not a new development in world history, it has become more prevalent since 1945. Factors for its growth include the postwar acceleration of decolonization, separat-

ist movements and their struggle for national liberation, and growing Islamist resentment against U.S. hegemony and the more amorphous forces of globalization.

Types of terrorism include state terrorism, domestic terrorism, and nonstate actor terrorism. State terrorism involves use of coercion through

violence on the part of a police state to eliminate dissent and cow the population into ideological submission (e.g., Argentina, China, and South Africa). Domestic terrorism involves the use of violence against civilians or public officials to promote a political cause by a clandestine organization bent on the overthrow of the state or to promote a national separatist move-

ment (e.g., Irish Republican Army in Northern Ireland, Red Army Faction in Germany, and Aum Shinrikyo in Japan). Nonstate actor terrorism is directed against what is perceived as foreign occupation by a foreign state by international terror organizations utilizing asymmetrical warfare against civilian populations and military forces (e.g., al-Qaeda's September 11, 2001, attacks in

➤ MAJOR TERRORIST ATTACKS TIMELINE

- July 22, 1946—The Zionist militant group Irgun bombs British military headquarters at the King David Hotel in Jerusalem, killing 91 people.
- September 15, 1963—The Ku Klux Klan bombs a church in Birmingham, Alabama, killing four African American girls.
- July 21, 1972—Known as Bloody Friday, the Provisional Irish Republican Army bombs Belfast, Northern Ireland, killing 9 people and injuring 130.
- September 5, 1972—The Palestinian terrorist group Black September kidnaps 11 members of the Israeli Olympic team from the Olympic village in Munich, Germany. All 11 athletes die.
- October 6, 1976—Anti-Castro Cuban exiles, with alleged ties to the Central Intelligence Agency (CIA), bomb Cubana Flight 455 en route to Havana, Cuba, killing all 73 passengers and crew.
- 1978–1995—Theodore Kaczynski, an American terrorist better known as the Unabomber, kills 3 people and injures 29 in a string of antitechnology letter bombings.
- August 2, 1980—The far-right Italian group Ordine Nuovo bombs the railway station in Bologna, Italy, killing 85 people and wounding more than 200.
- October 23, 1983—Two suicide truck bomb attacks by Islamic jihad kill 241 U.S. servicemen and 58 French paratroopers in their barracks in Beirut.
- March 8, 1985—A car bomb, allegedly planted by the CIA, explodes in Beirut, Lebanon, near the home of prominent Islamic cleric Sayyed Mohammad Hussein Fadlallah, killing 80 people and injuring 175.
- June 22, 1985—Unknown terrorists bomb Air India Flight 182 in flight from Canada to India, killing all 329 passengers and crew.
- April 21, 1987—Tamil Tigers bomb a bus terminal in Colombo, Sri Lanka, killing 110 people.
- December 21, 1988—A Libyan agent plants a bomb on Pan Am Flight 103, which explodes over Lockerbie, Scotland, killing all 270 passengers and crew.
- April 19, 1995—American terrorist Timothy McVeigh bombs an office complex in downtown Oklahoma City, Oklahoma, killing 168 people.
- August 7, 1998—Arab terrorist network al-Qaeda bombs U.S. embassies in Tanzania and Kenya, killing 225 people and injuring over 4,000.
- October 18, 1998—The Colombian rebel group National Liberation Army (ELN) bombs a pipeline near Machuca, Colombia, resulting in fires that kill 84 people and injure 100.
- September 11, 2001—Al-Qaeda operatives hijack four airliners, crashing two into the World Trade Center in New York City; one into the Pentagon in Arlington, Virginia; and one into a field in Pennsylvania. In all, 2,997 people are killed.
- October 23, 2002—Chechen terrorists take 850 hostages in a Moscow theater. Russian police mount a botched rescue attempt three days later, and 120 hostages and 40 terrorists are killed.
- March 11, 2004—Al-Qaeda operatives bomb commuter trains in Madrid, Spain, killing 191 people and injuring over 1,500.
- July 7, 2005—Al-Qaeda-linked terrorists explode four bombs in London, killing 52 people and injuring over 700.
- July 11, 2006—Islamic militants carry out a series of bombings on commuter trains in Mumbai, India, killing 209 and injuring 700.
- November 26–29, 2008—In Mumbai, India, nearly 200 people are killed when 10 gunmen armed with bombs and grenades attack a train station, a cafe, luxury hotels, a Jewish cultural center, and a hospital during a three-day rampage.

—Logan Craig

the United States and Jemaah Islamiyah's Bali bombings in Indonesia that killed mostly Australian civilians in 2002).

Methods utilized by terrorists include bombings of public infrastructure in urban areas (e.g., the London bombings of July 7, 2005, and the Madrid bombings of March 11, 2004, both by al-Qaeda cells), suicide bombing attacks on civilian populations (e.g., Israel, Iraq, and Afghanistan), or the use of asymmetrical warfare by nonstate actor militias against state military forces and civilian institutions (e.g., Iraq, Afghanistan, and Northern Ireland).

The word "terrorism" is an ideologically laden term, as it implies a senseless application of violence and an absolute rejection of the perpetrators' objectives. Yet most societies and peoples tend to sanction some uses of violence, such as state executions or militaries aimed, purportedly, at national defense. Particularly since the 9/11 attacks on the United States, the word "terrorism" has become something of a catchall in public discourse in the West to condemn any and all use of violence with political intent, leading to the rise of such terms as "ecoterrorism" to describe radical environmentalists' attacks on property and "cyberterrorism" to describe the hacking of sensitive Web sites.

—*Abraham O. Mendoza*

State Terrorism

The term "state terrorism" is used to describe any instance in which a state systematically directs and advocates violence against the civilian population of its own or that of another state through military or clandestine actions. It is a form of terrorism in that it seeks to destroy the stability of the day-to-day livelihood of a group of people in order to coerce or to change an existing social or political structure. Such actions include the use of covert operations through domestic police, military, and intelligence agencies; covert operations through subsidized foreign organizations (freedom fighters); and acts of war directed at the civilian population by both legitimate and clandestine military actors during internationally sanctioned warfare. State terrorism is different from war in that it is directed against the civilian population as a means to weaken

and overthrow an enemy government, nonstate actors, or covert organizations. Such actions disregard statutes of international law, most notably the 1949 Geneva Convention Relative to the Protection of Civilian Persons in Time of War.

State terrorism is characterized by the systematic destruction of civilian elements that are deemed to be a potential threat to the aggressor government. These might be within the country itself or an enemy nation. Well-documented cases of domestic state terrorism include the Argentine Dirty War (1976–1983), Salvador Allende's repressive regime in Chile (1973–1990), and endemic human rights abuses in the Eastern Bloc (e.g., the German Democratic Republic, Romania, Hungary, Czechoslovakia, and the Soviet Union) throughout the postwar period to the fall of communism (1945–1991). In the Eastern Bloc instances, the government through internal police, military, and intelligence services, working in tandem with elements in the general civilian population, removed from public life civilians deemed a threat to the existing state. These removals were characterized by internal espionage, mass arrests (sometimes in secret to avoid public scrutiny), torture, show trials, and summary executions. The Serbian ethnic cleansing campaigns in Bosnia-Herzegovina (1991–1995) and Kosovo (1995–1999) are examples of both domestic and foreign state terrorism on behalf of the Serbian government. The genocidal policy in the Darfur region of Sudan is a current example of a government taking it upon itself to destroy segments of its own civilian population for state purposes.

State terrorism also involves the actions of one state directing violence toward the civilian population of another state through a legitimate war sanctioned by international law. In this case, a particular state threatened by another state directly or indirectly by military aggression decides to respond with its own military force in ways that inevitably target civilian populations. The concept of total war partially legitimized during World War II, which deems the destruction of civilian institutions as legitimate military targets given that without these the aggressor state would be unable to continue the struggle, creates optimum conditions for legitimizing state terrorism. Under this logic, to destroy the state

one must destroy the stability that the state ensures for its citizenry, resulting in the eventual overthrow or reversal of the state or its policies.

Recent examples of alleged state terrorism under the pretext of war include National Socialist Germany's domestic atrocities and bombing of Allied cities (1939–1945), British and American bombardment of German cities (1940–1945), the American atomic bombing of the Japanese cities of Hiroshima and Nagasaki (1945), the American actions against civilians in the Korean War (1950–1953) and the Vietnam War (1961–1975), the French repression in Algeria (1954), and Israeli air strikes and military offensives in its wars against its Arab neighbors (1948, 1956, 1967, 1973, 1981). State-sponsored attacks by Iran and Saudi Arabia through proxy terrorist organizations on the State of Israel are also egregious examples of state terror. Some scholars suggest that the current U.S.-British war in Iraq (2003–present) is an example of state terrorism.

Violence against civilians in these wars is characterized by the widespread destruction of life and property, myriad human rights abuses, and massive collateral damage of innocent bystanders during the aerial bombardment and artillery attacks of enemy cities. Public support of such total war tactics has been crucial to the undertaking of such wars, given that these bombing campaigns might prevent or forestall costly military invasions both financially and in terms of casualties.

State terrorism outside of the conduct of war is also enacted indirectly by one state against another through the use of its intelligence services operating in secret, subsidizing and operating with foreign nonstate actors, and through the overthrow and/or support of regimes deemed to be necessary for domestic national security rationale. Intelligence organizations such as the U.S. Central Intelligence Agency (CIA), the Soviet KGB (Committee of State Security), and the Israeli Mossad have actively operated on foreign soil in their efforts to dismantle, disrupt, and destroy foreign governments seen as a threat to their national security. Political assassinations, destruction of life and property, and collateral damage to civilians have been part of the policies of such intelligence services in carrying out their actions.

—Abraham O. Mendoza

➤ THE ARGENTINE DIRTY WAR AND THE *DESAPARECIDOS*

The Argentine Dirty War (1976–1983) resulted in widespread human rights violations characterized by the torture, arrest, and execution of leftist political dissidents by the right-wing military dictatorship of General Jorge Rafael Videla. The Argentinean armed forces, under the leadership of a rightist military clique, overthrew the existing government on March 24, 1976. The military junta that seized power subsequently enacted a campaign to liquidate Argentina of potential dissidents. Scholars, intellectuals, university students, and politicians associated with the previous liberal regime were removed from public life, never to be seen again (*desaparecidos*), by state police personnel operating clandestinely. The authoritarian regime saw any potential dissent as a threat to their hold on power and enacted censorship legislation, curtailed civil rights, and continued to remove from society people deemed to be threats.

The arrests, torture, and execution of the *desaparecidos* (the disappeared ones) indicate massive human rights violations that resulted in an estimated 6,000 to 15,000 deaths from 1975 to 1981. International outrage resulted in growing pressure against the Argentinean government, including decreased economic aid and diplomatic pressure. In 1983 greater compliance with international opinion resulted in the relaxation of the worst abuses and the installation of a democratically elected regime. Subsequently, General Roberto Eduardo Viola and General Leopoldo Galtieri, the generals who had led the military coup, were tried and imprisoned.

—Abraham O. Mendoza

Bibliography

- Burbach, Roger. *The Pinochet Affair: State Terrorism and Global Justice*. New York: Zed Books, 2003.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Pion-Berlin, David, and David Lopez. "Of Victims and Executioners: Argentine State Terror, 1975–1979." *International Studies Quarterly* 1(35) (1991): 63–86.
- Selden, Mark, and Alvin Y. So, eds. *War and State Terrorism: The United States and the Asia-Pacific in the Long Twentieth Century*. New York: Rowman and Littlefield, 2004.

SHINING PATH

Shining Path (Sendero Luminoso) is a violent Marxist revolutionary group in Peru. Its founder, Abimael Guzman, was a professor of philosophy who had studied Maoism in China. Shining Path was not an organization born of peasant or worker beginnings but rather one that sprung out of a radical student organization.

Guzman started his violent revolutionary movement in 1980. His initial goal was to stop democratic reform in Peru, and his initial targets were polling places and newly elected officials. In the 1980s and 1990s Shining Path participated in a wave of bombings that would include everything from government buildings to churches. Shining Path used terror, including a campaign of killing police officers, as a part of its platform for change. By the mid-1980s Shining Path had made alliances with drug traffickers to fund its revolution.

Ultimately, Guzman was arrested and sentenced to life in prison in 1992 by the administration of Alberto Fujimori. In 2003 the Peruvian government, in a rebuke of Fujimori's autocratic tactics, declared Guzman's trial void. This declaration also applied to approximately 2,000 Shining Path members. Guzman, however, was convicted again in 2006 and sentenced to life in prison. While Shining Path never successfully brought about its mission of revolution, the teachings of Guzman continue to be influential to Marxist revolutionaries, some of whom are again operating in the Amazon jungles of eastern Peru.

—Richards P. Davis

Islamic Radical Terrorism

In the late twentieth and early twenty-first centuries, radical Islamic terrorism emerged as a global phenomenon. Islamic terrorists perpetrated attacks in Europe, North America, the Middle East, Africa, and South and Southeast Asia.

There is no singular reason why people, including Muslims, carry out terrorist attacks. Scholars also cannot pinpoint the birth of the Islamic terrorist movement, since that would imply a unity within the Islamic world that does not exist. While Islam is the majority religion in more than 60 nations and a minority religion in more than 100 more, it is divided up into many

sects, Sunnis and Shia being the two most prominent. The modern world has seen both Sunni (al-Qaeda, Hamas), and Shia (Hizbullah) forms of terrorism. Although several of these Sunni and Shia groups have worked together over the years, in many instances radical Sunni and Shia groups consider each other to be even greater threats than non-Muslim groups. This is because many Muslims believe that before they can attack outsiders, they must cleanse the lands of Islam of impious Muslims, who to many radical Sunnis are Shia and vice versa.

Although many citizens in Europe and North America have long associated with the Middle East and thus Muslims, the vast majority of terrorist acts carried out by Middle Easterners prior to the mid-1980s were inspired by secular, often Marxist-Leninist or nationalistic ideas. In fact, many Arab Muslim leaders associated with either state- or guerrilla-sponsored terrorism including Yasser Arafat (Palestinian), Saddam Hussein (Iraq), Mohammar Qaddafi (Libya), and Hafez al-Asad (Syria) were secular leaders who often feared Islamic movements.

The reasons behind the rise of Islamic terrorism are not entirely clear, but most scholars point to the perceived failure of the secular Western model of development, internal resentment toward the repressive regimes throughout much of the Islamic world, the West's support of Israel at the expense of the Palestinian refugees, and high rates of unemployment in many Islamic nations. Furthermore, many Muslims have grown increasingly upset over their secular governments' inability to oppose foreign interference in their nations' domestic and foreign affairs.

Such discontent has also spilled into Muslim immigrant populations. Over the past decade many European nations have also witnessed the rise of homegrown Islamic terrorism among second- and third-generation Muslims residing in these countries. An example of this was the attacks on London on July 7, 2005, in which a group of homegrown British terrorists attacked domestic targets.

While many modern Islamic movements, including terrorist groups, boast that they want to unify the Islamic world as it had been under Muhammad and the subsequent Four Rightly Guided Caliphs (ca. 622–660 CE), it is a mistake

to view these movements as inherently anti-modern. These groups often employ modern communications technology and innovative interpretations of the Quran and other sacred Islamic writings and, perhaps most importantly, are reacting against the perceived inequalities of the modern nation-state system. Therefore, although many of these groups proclaim their desire to return to a Golden Age of Islam, they are using modern means to recruit new members and to organize and carry out attacks.

During the late nineteenth and early twentieth centuries, Islamic reformers such as Mohammed Abduh in Egypt and Jamal al-Din al-Afghani in the Persian Gulf region attempted to harmonize traditional Islamic life with the modern world. Although important, these were but two of the first in a series of Islamic reformers over the course of the late nineteenth and twentieth centuries. By 1928 during the British occupation of Egypt, Hassan al-Banna founded the Muslim Brotherhood, an Islamic political organization dedicated to the eventual founding of a single supra-Islamic state. While many members of this new organization took part in sporadic acts of violence against the British and later Israelis in Palestine between 1936 and 1949, most notably during the Palestinian uprising against the British (1936–1939), this group remained primarily dedicated to a policy of nonviolent reform. The Muslim Brotherhood, like many later Islamic political movements, eventually came into conflict with Egypt's secular leadership and, under Gamal Abdel Nasser's rule in the 1950s, was banned from public life.

In the post-World War II era, perhaps the most influential Islamic reformer, at least to Sunni Muslim terrorist groups, was Sayyid Qutb, an Egyptian member of the Muslim Brotherhood who was imprisoned during Nasser's reign. During one of his periods of incarceration at the hands of Egyptian authorities, Qutb wrote *Signposts*, his contribution to Islamic political thought. In this work Qutb argued that before jihad could be successfully waged against Islam's enemies, Muslims would first have to cleanse their lands of Islamic impostors. These came to include secular Muslim leaders.

The 1970s were a decade of silent growth for many Islamic movements, but following Ayatollah

Khomeini's successful revolution against the Reza Shah Pahlavi in Iran in 1979, radical Islam burst onto the international scene. Although Khomeini's was a Shia revolution and rather hostile to other forms of Islam, his movement's success encouraged both Sunni and Shia groups throughout the Islamic world. Around the same time as Iran's revolution, the Soviet Union invaded Afghanistan to prop up a pro-Soviet government, and this infuriated much of the Islamic world. Following the Soviet invasion, thousands of Sunni Arab Muslims from Gulf nations such as Saudi Arabia and Mediterranean nations such as Egypt descended upon Afghanistan to wage jihad (holy war) against the so-called godless communist invaders. There is currently a debate under way within academia over the U.S. role in aiding these anti-Soviet fighters, but it is clear that the United States provided both military and economic aid to the Afghan resistance.

By the late 1980s many new groups had formed. These included Hizbullah, a Shia group forged in the middle of the Lebanese Civil War to fight both Lebanese Christians and Israeli soldiers, and Hamas, a Sunni Palestinian offshoot of the Muslim Brotherhood established during the First Intifada in 1987 to fight Israel. Following the Soviet withdrawal from Afghanistan and the subsequent American invasion of Iraq, many Islamic terrorist groups switched their focus from the Soviet Union to the United States. The most prominent of these movements was al-Qaeda, led by Osama bin Laden, a wealthy Saudi expatriate who had fought in Afghanistan. In the late 1990s bin Laden's group merged with Ayman al-Zawahiri's Egyptian Islamic Jihad to form what would become the most notorious terrorist group of the early twenty-first century. Al-Qaeda has claimed responsibility for several major attacks on U.S. and West European targets, most notably the September 11, 2001, attacks in New York City and Washington D.C.; the March 11, 2004, attacks in Madrid, Spain; and the July 7, 2005, subway and bus bombings in London, England.

While al-Qaeda has become the most well-known Islamic terrorist group, other groups have continued to attack targets around the world. Since 1994 the Chechen independence campaign has led to warfare in this majority-Muslim territory as well as Chechen terror attacks inside

Russia. Southeast Asia is home to Jamaat Islamiyya, a Sunni Indonesian-based group best known for the 2002 bombing of a nightclub in Bali that led to the deaths of more than 200 civilians, mostly Australians. Between 1994 and 2001 Afghanistan was ruled by the Taliban (Sunni), an ultra-religious group that aided and sheltered bin Laden and his al-Qaeda network until the United States and a coalition of Afghani warlords removed them from power. Between 2001 and 2006 the Pakistani Shia community suffered through a series of attacks at the hands of radical Sunni groups. Egypt, Saudi Arabia, and Jordan have also endured major attacks on their civilian populations and Western targets in their countries. Finally, the Israeli-Palestinian conflict continues unabated, fueling Islamist attacks on Israeli civilians.

In the 1990s several prominent scholars argued that radical Islamic politics, although increasingly violent, had reached its zenith and would soon begin to gradually lose popular support throughout the Islamic world. While it may be too soon to totally reject this hypothesis, it is evident in the early twenty-first century that Islamic terrorism will continue throughout the foreseeable future.

—Jonathan Sciarcon

Bibliography

- Edwards, Beverly Milton. *Islamic Fundamentalism since 1945*. London: Routledge, 2005.
- Kepel, Gilles. *Jihad: The Trail of Political Islam*. Translated by Anthony F. Roberts. Cambridge: Harvard University Press, 2002.
- Roy, Olivier. *The Failure of Political Islam*. Translated by Carol Volk. Cambridge: Harvard University Press, 1994.
- Roy, Olivier. *Globalized Islam: The Search for a New Ummah*. New York: Columbia University Press, 2004.
- Tibi, Bassam. *The Challenge of Fundamentalism: Political Islam and the New World Disorder*. Berkeley: University of California Press, 2002.

Hizbullah

Hizbullah, the Party of God, is a Shia Lebanese political party that was founded in the wake of Israel's 1982 invasion of Lebanon. Some, both in Lebanon and abroad, consider Hizbullah a ter-

rorist organization, while others view Hizbullah as a legitimate political party. In fact, Hizbullah has both a political and a military wing. The political wing engages in all levels of Lebanese politics, where it enjoys immense support from Lebanon's Shia community and even certain segments of the Christian population. The military wing of Hizbullah occasionally clashes with the Israeli military and has been accused of perpetrating terrorist acts against American, Israeli, and Jewish targets.

Hizbullah's founding and rapid rise to prominence in Lebanon in the early 1980s signaled the arrival of Lebanon's Shia population on the national scene. Although they had long been the largest single religious group in Lebanon, earlier French policies, which were translated into official Lebanese policies following independence, promoted Christian and Sunni but not Shia interests.

While Hizbullah is a Lebanese movement, it has been greatly influenced by Shia in other parts of the Middle East. In the 1960s and 1970s many of Hizbullah's leaders studied in Iraqi religious schools, where they came into contact with Iranian and Iraqi thinkers, most notably Ayatollah Khomeini of Iran. Furthermore, following Israel's invasion of Lebanon in 1982, Khomeini's government in Iran sent members of his military to Lebanon to aid the Shia. These soldiers helped spread revolutionary Shia ideology among the Lebanese Shia.

Initially Hizbullah was engaged in military activities against Israel and its Christian Phalange allies, who had perpetrated massacres at the Palestinian refugee camps of Sabra and Shatila. Although Hizbullah is a Shia resistance group, its leadership also draws a good deal of prestige from its support of Palestinian national and Islamic movements. Hizbullah is also believed to have perpetrated the deadly suicide attack on the U.S. Marine barracks in Beirut in October 1983 that left 243 American soldiers dead and to have kidnapped tens of foreign nationals. In the 1990s Hizbullah was also implicated in deadly attacks on a Jewish youth center in Buenos Aires, Argentina, and an attack on the Israeli embassy in Argentina.

From 1982 to 2000 Hizbullah's military wing spent most of its time engaged with the Israeli

military and Israel's ally, the Southern Lebanese Army, which occupied much of southern Lebanon. In 2000 Israel unconditionally withdrew its forces from southern Lebanon. This withdrawal was viewed throughout the region as a Hizbullah defeat of Israel, boosting the group's prestige. Hizbullah continued to maintain that Israel was still occupying the Shebaa Farms on the Lebanese-Syrian border, which many international actors actually claim belongs to Syria.

In July 2006 Hizbullah kidnapped two Israeli soldiers and killed three others, leading to a 34-day conflict. Hizbullah claims that the Israelis were captured on Lebanese soil, while Israel claims that Hizbullah militants illegally crossed into Israel. In the conflict that followed, the Israeli Air Force and Army wrought destruction on southern Lebanon and Beirut while Hizbullah launched rockets into northern Israel, creating a sense of mass panic in Israeli cities. Following the war, which ended as a standoff although both sides sought to claim victory, both Israel and Lebanon suffered through political crises. Although the vast majority of Lebanon's population eventually came to support Hizbullah's fight against Israel, many Sunnis and Christians resented being dragged into the middle of Hizbullah's war. This led to demonstrations by Hizbullah against the government and counterdemonstrations by progovernment forces against Hizbullah. In Israel, Prime Minister Ehud Olmert's popularity fell to just over three percent in the months following the war.

Over the past quarter century Hizbullah has grown from a resistance movement into a full-fledged political-military organization. As of 2009 it is one of the two largest political parties in Lebanon. Yet it is considered a terrorist organization by many Western nations including the United States. Still Hizbullah remains highly popular among Lebanese Shia and enjoys popularity among other segments of Lebanon's population as well.

—Jonathan Sciarcon

Bibliography

Norton, Augustus. *Hezbollah: A Short History*. Princeton, NJ: Princeton University Press, 2007.
Saad-Ghorayeb, Amal. *Hizbu'llah: Politics and Religion*. London: Pluto, 2002.

➤ SHEBAA FARMS

Between the border of Lebanon and the Golan Heights is the tiny Shebaa Farms, which has been disputed among Israel, Syria, and Lebanon. The total area measures between approximately 5.5 miles (8.6 kilometers) in length and an estimated 1.5 miles (2.4 kilometers) in width. As a point of contention among the three states, in spite of the small size of Shebaa Farms, scholars and policy makers on all sides point to Ottoman surveys and French Mandate maps to illustrate who has the most legitimate claim to its possession. Hizbullah and Lebanese officials view the area as an integral part of their state, taken by force by Israel. While Syria currently views Shebaa Farms as part of its state, it has argued in the past that it is part of Lebanon. Syrian influence over Lebanese affairs in the past has made its relations with that state contentious. Israel viewed the tract as having been Syrian and never Lebanese when it was seized during the Six-Day War (1967) by Israeli forces. The United Nations (UN), which effectively ordered the Israeli withdrawal through UN Resolution 425 in 1978 (a withdrawal that has not yet occurred), is unclear as to who has title to this land, also basing its ruling on vague maps from prior disputes between Syria and Lebanon. Continued Israeli possession of the region in addition to the greater conflict over Palestine continue to sour relations among the three states.

—Abraham O. Mendoza

The Muslim Brotherhood

The Muslim Brotherhood was founded in Egypt by Hassan al-Banna in 1928. Al-Banna hoped to peacefully transform Egypt into an Islamic nation that would uphold Islamic Sharia law and become free of foreign interference. The Muslim Brotherhood was influenced by older thinkers such as Jamal al-Afghani and Muhammad Abduh, himself Egyptian, who published works praising the merits of Islamic government, though neither Abduh nor al-Afghani fully rejected Western ideas.

Throughout the 1930s and 1940s the Muslim Brotherhood, which was more of a spiritual organization than a political party, slowly spread through the Arab Middle East, most notably in

Palestine, Transjordan, and Syria. While some Muslim Brotherhood activists adhered to a peaceful worldview, others adopted violent practices, especially in Palestine where members of the Muslim Brotherhood took part in the Palestinian Revolt during 1936–1939. The Muslim Brotherhood gained popularity through charitable acts, resisting Zionism, and appealing to Middle Eastern Muslims' Islamic background. In Egypt the ruling class began to fear the Muslim Brotherhood's rising power. Following the assassination of the Egyptian prime minister in 1948, Egyptian authorities claimed that the Brotherhood was responsible and murdered al-Banna.

Although they had helped the Free Officers Revolution in Egypt in 1952, the Officers, led by Muhammed Naguib and Gamal Abdel Nasser, cracked down on the Brotherhood during the 1950s, arresting scores of activists. One such activist was Sayyid Qutb, an ideologue who was executed in 1967 after years in prison but who wrote an influential book while incarcerated. This book, often translated as either *Signposts* or *Milestones*, justified the murder of rulers of Middle Eastern countries if those rulers did not ascribe to proper Islamic ways. Quttub compared these rulers to those who had dominated Arab lands prior to the rise of Islam (the Jahilliya period) and argued that they lacked legitimacy. His work influenced later Islamist thinkers including Osama bin Laden.

The Muslim Brotherhood also ran afoul of the secularist Syrian Baathist party two decades later. In 1982, fearing that members of the Muslim Brotherhood in Syria were a threat, Syria's leader Hafez al-Asad launched a devastating attack on the city of Hama, killing not only Brotherhood activists but tens of thousands of innocent civilians. Other crackdowns, though none involving even close to this amount of violence, occurred in Egypt during the 1990s and the early twenty-first century.

Today the Muslim Brotherhood's power can be felt in numerous countries. In Egypt, the Brotherhood is the leading opposition group to Hosni Mubarak; in Jordan, the Brotherhood would most likely seize power if open elections were held; and in the Palestinian territories, Hamas, a Brotherhood spin-off, rules Gaza, while the Palestinian Islamic Jihad, an even more mili-

tant spin-off of the Brotherhood, continues to launch attacks against Israeli civilians. The common theme that connects the various Muslim Brotherhood sects is an opposition to secular rule in the Middle East. Thus, while they remain feared by Westerners, the Muslim Brotherhood groups pose a far larger threat to secular Arab leaders in the region and therefore continue to be persecuted by secularist regimes.

—Jonathan Sciarcon

Bibliography

- Kepel, Gilles. *Jihad: The Trail of Political Islam*. Cambridge: Harvard University Press, 2002.
Milton-Edwards, Beverly. *Islamic Fundamentalism since 1945*. London: Routledge, 2005.

The Palestine Liberation Organization

The Palestine Liberation Organization (PLO) was founded in 1964 by Palestinian representatives from both the West Bank and Gaza and the Palestinian diaspora with the support of the Arab League. The idea of a Palestinian national body was Egyptian leader Gamal Abdel Nasser's. Nasser, constantly concerned with Israeli military power and his own peoples' unfulfilled political-economic desires, championed the new organization that would demonstrate to the Arab world and to Nasser's domestic constituency that he was doing something constructive for the Palestinians while effectively shifting the burden of representation to the new body. The existence of the PLO would place even greater military pressure on Israel, Egypt's most powerful and feared enemy. Initially the PLO, which was headed by Ahmed al-Shuqayri, was a weak organization that was under the military control of the countries in which it operated (Egypt, Syria, and Jordan). Following Israel's lightning victories over Egypt, Syria, and Jordan in 1967 and its subsequent military occupation of Gaza and the West Bank, which brought the majority of Palestinians under Israeli control, Yasser Arafat was able to take control of the PLO. Arafat, an Egyptian-educated Palestinian who had fought in the 1948 war, aimed to liberate all of Mandate Palestine, including the 78 percent that had become the State of Israel, in order to create a secular Palestinian state. He had previously founded Fatah, a secular

➤ HAMAS

Hamas is an offshoot of the Muslim Brotherhood movement that was founded in Egypt in 1928 by Hassan al-Banna. Hamas emerged as an independent entity during the early stages of the first Palestinian Intifada (1987–1993) under the leadership of Shekh Ahmed Yassin (ca. 1936–2004). Although most members of the Muslim Brotherhood in the Palestinian territories in the 1970s and early 1980s hoped to use nonviolent means to gradually transform Israel, the West Bank, and Gaza into one Islamic state, by the late 1980s the new Hamas movement had adopted violence as their chief tactic.

Unlike Fatah, the secular military wing of the Palestine Liberation Organization (PLO), Hamas in this period was not part of the overall Palestinian government. Thus, Hamas reacted angrily to the PLO's tacit acceptance of Israel in the late 1980s and to Yasser Arafat's formal signing of the Oslo Accords in 1993. Following these events, through suicide bombings in heavily populated civilian areas in Israel, Hamas attempted to derail the peace process in the mid to late 1990s. In this period Hamas was not just a military-resistance organization but also provided much-needed educational, social, and medical services to Palestinians. Compared to the notoriously corrupt PLO, which remained in control of the Palestinian Authority (PA) following the 1993 Oslo Accords, Hamas was able to present itself to its constituents as a charitable and honest party.

The Israeli Army assassinated Hamas founder Sheikh Yassin in March 2004 and his successor Dr. Abdel Aziz Rantisi a month later. Hamas has also faced opposition, occasionally armed, from Palestinian groups. Their fiercest competition has come from Arafat's Fatah faction, which aims to create a secular Palestinian state based on socialist-inspired values. On the Islamic side they have also come into conflict with Palestinian Islamic Jihad, another violent offshoot of the

Muslim Brotherhood. Palestinian Islamic Jihad has been, if anything, more violent than Hamas and has often accepted aid from Iran and Hizbullah. Still, Palestinian Islamic Jihad, perhaps because of its refusal to moderate its positions, has failed to match Hamas's steady rise in popularity over the past 20 years.

During the Second Intifada (2000–present) Hamas has continued to simultaneously attack Israeli military and civilian targets while providing desperately needed domestic services to its constituents. Thus, the new round of violence proved to be a boon for the organization. In 2005 Hamas delegates won over 50 percent of the popular vote in Palestinian legislative elections, bringing their group into power for the first time. Upon entering office the new Hamas-led government quickly came into conflict with the United States over its refusal to honor previous Palestinian agreements to recognize Israel's right to exist. Furthermore, since the democratically elected president of the PA remains Mahmoud Abbas, Arafat's successor, Hamas has not been able to implement many of its policies. It is unknown whether Hamas will follow other Islamic movements in moderating its positions now that it has come to power or if it will continue to pursue violent tactics against enemy civilians as one of its major policies. Recent evidence, including Hamas's decision to abide by a truce with Israel (February 2005–present), indicates that Hamas has the potential to become a moderate party.

—Jonathan Sciarcon

Bibliography

- Levitt, Matthew. *Hamas: Politics, Charity, and Terrorism in the Service of Jihad*. New Haven, CT: Yale University Press, 2006.
- Mishal, Shaul, and Avraham Sela. *The Palestinian Hamas: Vision, Violence and Coexistence*. New York: Columbia University Press, 2000.

group that was nevertheless influenced by the Muslim Brotherhood, in order to conduct raids against Israeli targets and to help build a Palestinian military force. His fellow Fatah commanders also came to dominate the PLO's leadership following the 1967 war.

By the early 1970s, the PLO had established a state within a state in Jordan, which was home to a sizable Palestinian minority. Worried that Palestinian military activities were undermining his nation's sovereignty, Jordan's King Hussein attacked the PLO in September 1970. Although

the conflict threatened to escalate into a regional war, Jordan was eventually successful and drove the PLO leadership out of Jordan and into Beirut. Following this event, however, the PLO leadership soon rebounded, and by the mid-1970s the PLO had established itself as the global representative of the Palestinian people.

During their stay in Lebanon the PLO leadership again established a state within a state and continued to launch raids against Israel. In 1982 Israel invaded Lebanon in an attempt to drive the PLO out of Beirut. Although this invasion had disastrous public relations and political ramifications for Israel, by late 1982 the PLO leadership had agreed to leave Lebanon, with the United States guaranteeing their safe passage. The PLO leadership soon relocated to Tunisia.

In the late 1980s two key events helped transform the PLO: the first Palestinian Intifada (uprising) and the U.S.-PLO dialogue. The intifada against Israel's 20-year occupation began in Gaza and soon spread to the West Bank, bringing international attention to the Palestinian cause. At the same time the PLO leadership announced its intention to honor previous United Nations resolutions that called for a two-state solution to the Israeli-Palestinian conflict. Following this announcement, U.S. president Ronald Reagan's administration entered into its first official dialogue with the PLO. Although short-lived because of Arafat's subsequent support of Saddam Hussein in the 1991 Gulf War, this marked the beginning of the U.S.-PLO dialogue.

By the early 1990s the Israeli government and the PLO had entered into secret negotiations in Oslo, Norway, regarding a future peace settlement. In 1993 Arafat and Israeli prime minister Yitzhak Rabin signed the Oslo Accords at the White House, thus ushering in a new era of Israeli-Palestinian relations. Unfortunately, Rabin came under significant attack by right-wing politicians in Israel such as Ariel Sharon and Benjamin Netanyahu, while Arafat was challenged by a new Palestinian Islamist movement, Hamas, that rejected the idea of a two-state solution and aimed to establish an Islamic government in all of Mandate Palestine. The situation continued to deteriorate. In 1995 Rabin was assassinated by a Jewish militant, and during the mid- to late 1990s Hamas unleashed a series of suicide bomb-

ings inside Israel. Meanwhile, Israel continued to build settlements in the West Bank and Gaza, and the PLO leadership was accused of large-scale corruption by Palestinians and foreigners. By 2000 the Oslo Accords had proven to be a failure, as Arafat and then Israeli prime minister Ehud Barak could not come to a final agreement over a future peace.

In 2000 a new, more violent intifada broke out in the West Bank and Gaza that included suicide attacks against Israeli civilians. Israel responded by using collective punishment against Palestinian militants and civilians. In 2005 Arafat died, and the Palestinians held a new election, voting Hamas into office and thus ending Fatah's (in reality the PLO's) 38-year rule. In 2007 a civil war erupted in Gaza in which Hamas drove Fatah supporters from the area. Fatah responded by taking control of the West Bank with international support. Thus, as of 2009 not only are the Palestinians without their own state, but they also lack any semblance of national unity.

—Jonathan Sciarcon

Bibliography

- Kimmerling, Baruch, and Joel Migdal. *The Palestinians: The Making of a People*. New York: Free Press, 1993.
- Nasser, Jamal. *The Palestinian Liberation Organization: From Armed Struggle to the Declaration of Independence*. New York: Praeger, 1991.
- Sayigh, Yazid. *Armed Struggle and the Search for a State: The Palestinian National Movement, 1949–1993*. Oxford: Oxford University Press, 1997.

U.S. Domestic Terrorism

Events such as the September 11 attacks in 2001 and the first bombing of the World Trade Center in 1993 demonstrate that the threat of terrorism within the borders of the United States is considerable. In fact, the United States has suffered a number of terrorist attacks in its history, with terrorism broadly defined as attacks against civilian targets for political or ideological purposes. The perpetrators have often been American citizens. Underground radical groups such as the Weathermen orchestrated bombing campaigns in the 1960s and 1970s. The Oklahoma City bombing of 1995, the Unabomber series of mail

► ECOTERRORISM

The term “ecoterrorism,” coined only in recent decades, is used to describe acts and threats of violence against people or property, sabotage, vandalism, and intimidation committed in the name of environmentalism by political activists. The attacks are often of a symbolic nature; for instance, ecoterrorists will vandalize a logging site or a luxury car dealership or commit arson against a new home development believed to threaten a local ecosystem. There have been well over 1,000 separate incidents of ecoterror in recent decades. While there have been no known human deaths as a result of ecoterror, estimates of the damage to property range from \$50 million to \$200 million over the last 20 years.

One of the largest groups in the United States that has been associated with acts of ecoterrorism is the Earth Liberation Front (ELF). The organization is largely composed of autonomous individuals and smaller groups operating independently, united mainly by shared goals and methods. ELF is also active in Canada, the United Kingdom, and Greece. Individuals linked with ELF have stated



Fire set by arsonists engulfs the Two Elk Lodge in Vail, Colorado, on October 19, 1998. The Earth Liberation Front claimed responsibility for the fire, which they said was a protest against the ski resort's expansion into the habitat of the endangered Canadian lynx. (AP/Wide World Photos)

that their goal is to eliminate profits from businesses that they believe are exploiting or destroying natural resources by taking direct action against these companies, usually through vandalism or arson. ELF has been linked with more than 1,000 acts of vandalism and arson and tens of millions of dollars worth of damage. Prior to the September 11 attacks, the Federal Bureau of Investigation (FBI) ranked ELF as the number one domestic terrorism threat to the United States. Members and sympathizers of ELF object to being labeled terrorists since there have not been any deaths yet associated with their activities. The FBI arrested 18 activists, some of whom are affiliated with ELF, on ecoterrorism-related charges in 2005 and 2006.

The activities of ELF and other ecoterrorist groups are often collectively referred to as monkeywrenching. This is a euphemism for arson, vandalism, and sabotage against construction sites, logging company operations, genetic engineering laboratories, car dealerships, energy companies, and the like. Ecoterrorists also frequently engage in tree spiking, a form of sabotage that involves hammering a metal spike into a tree so that it damages a saw blade attempting to cut the tree down. Saw blades destroyed by tree spikes have been known to cause injuries to loggers; as a result, tree spiking was declared a federal felony in 1988. Some tree spikers mark trees that have been spiked or otherwise notify logging companies of the action as a deterrent to logging operations.

—Andrew Byers

bomb attacks from the 1970s to the 1990s, and various abortion-related violent incidents are representative of the many terrorist attacks that have occurred within the United States in more recent decades.

The Oklahoma City bombing of the Alfred P. Murrah Federal Building occurred on April 19, 1995. In the attack, 168 people died and more than 850 were injured. Until the September 11, 2001, attacks, the Oklahoma City bombing was the deadliest in U.S. history. The two men later convicted of the bombing, Timothy McVeigh and Terry Nichols, were members of the strongly

antigovernment militia movement. They claimed that the attack was in retaliation for heavy-handed and violent government actions in the Waco siege of the Branch Davidian compound in 1993 and the Ruby Ridge standoff in 1992. Both McVeigh and Nichols were arrested and convicted of multiple federal offenses; McVeigh was ultimately executed as a result of his role in the bombing, and Nichols is serving a life sentence. The Murrah Building was destroyed with 5,000 pounds of ammonium nitrate (a fertilizer) hidden in the back of a rented truck. In addition to the numerous deaths and injuries, which included

children at a daycare center in the building, the blast damaged more than 300 nearby buildings. More than 12,000 rescue workers and volunteers were involved in the rescue, recovery, and cleanup operations.

Theodore John “Ted” Kaczynski, who became known as the Unabomber, is an American antitechnology anarchist known for his campaign of mail bombings from the late 1970s through the early 1990s. Kaczynski sent bombs to a number of university employees and airlines officials; his 16 mail bombs killed 3 people and wounded another 23.

In 1995 Kaczynski sent letters to some of his previous victims, demanding that his paper *Industrial Society and Its Future* (commonly called the Unabomber Manifesto), describing the perceived dangers of modern technology and industrialization for modern society, be printed in a major newspaper, and stating that he would then end his bombing campaign. The manifesto was subsequently published in the *New York Times* and the *Washington Post*. Kaczynski’s brother recognized the writing style and notified authorities, who arrested Kaczynski soon thereafter outside his remote Montana cabin. Kaczynski has since been convicted of numerous federal offenses and is serving a life sentence in prison.

Incidents of abortion-related violence have frequently occurred in the United States since the 1970s when antiabortion groups began their protests of abortion policies. These violent incidents have included property crimes such as vandalism, arson, and bombings as well as attacks against abortion providers, including kidnappings, assaults, and murders or attempted murders. Most of these acts have been committed by antiabortion activists against abortion facilities or providers. Those supporting or engaging in such activities commonly explain their actions as justifiable defense in the interest of protecting the life of the fetus.

Violence directed toward abortion providers has killed at least seven people, including doctors, clinic employees, and a security guard. Several of the victims were shot, either at their place of work or at home, and a security guard was killed when his workplace was bombed. Some of these victims were targeted on Web sites prior to the assaults or murders. There have

been dozens of additional attempted murders, kidnappings, and incidents of assault or battery. Death threats are also extremely common. Property crimes are even more common; there have been several hundred bombings and arsons of abortion clinics as well as many lesser cases of vandalism. The most infamous antiabortion bombings were carried out by Eric Rudolph, who committed a series of bombings across the United States, including one at the 1996 Summer Olympics in Atlanta. Rudolph spent years on the Federal Bureau of Investigation’s (FBI) list of most-wanted criminal fugitives but was eventually caught and sentenced to multiple consecutive life sentences.

—Andrew Byers

Bibliography

- Arnold, Ron. *Ecoterror: The Violent Agenda to Save Nature; The World of the Unabomber*. Bellevue, WA: Free Enterprise Press, 1997.
- Combs, Cindy C., and Martin Slann. *Encyclopedia of Terrorism*. New York: Checkmark Books, 2003.
- Michel, Lou, and Dan Herbeck. *American Terrorist: Timothy McVeigh and the Oklahoma City Bombing*. New York: Avon Books, 2002.

Basque Terrorists

The Basques, a distinct ethnic group with a distinct language and culture, are the majority population of several provinces in the Pyrenees region of northern Spain and southern France. The Basque insurgency against Spanish rule began in the late 1950s in response to the intensified efforts of the Francisco Franco regime to suppress the use of the Basque language and the practice of Basque customs. The moderate groups that had been advocating Basque autonomy, in particular the Partido Nacionalista Vasco (Basque Nationalist Party, PNV), seemed ineffectual in the face of this escalated oppression, and the Euskadi Ta Askatasuna (Basque Fatherland and Freedom, ETA) movement was formed to present a more radical response.

A further split within the ETA itself occurred in the late 1960s, with the ETA-M (ETA Military Front) separating from the ETA-PM (ETA Political and Military Front). Whereas the ETA-PM sought to combine political activism with selectively targeted violent actions, the ETA-M insisted that

the only effective means for achieving an independent Basque state was terrorism.

The ETA-M has been responsible for most of the subsequent violence in Spain. In 1973 the ETA-M came to international attention with the assassination of the Spanish prime minister, Admiral Luis Carrero Blanco. Over the next 25 years, the ETA-M killed more than 700 people in Spain. More than 60 percent of those killed were members of the Civil Guard, the national police force, but the dead also included assassinated political and military leaders as well as civilians who had been killed randomly in terror bombings.

In 1977 Spain adopted a parliamentary system of government, and in 1980 the federal government allowed direct Basque representation in the federal parliament as well as the formation of a regional Basque parliament. Of the three Basque political parties that have subsequently emerged, the party most closely aligned with ETA-M, Herri Batasuna (Popular Unity, HB), has typically received only 15–20 percent of the Basque votes cast in both regional and federal elections. Clearly, the radical program espoused by ETA-M and its commitment to terrorism have not appealed to more than a minority of the Basques themselves.

In 1987 a combined operation of Spanish and French police eliminated a significant percentage of the ETA-M leadership and seized a sizable cache of weapons and other resources. And yet the core membership of ETA-M has demonstrated a continuing intense commitment to its cause that seems to depend as little on the presence of particular leaders as on widespread popular support. Although the ETA-M's acts of terrorism became more intermittent in the 1990s and diminished dramatically after the September 11, 2001, terrorist attacks against the United States, they have occurred with enough regularity to convince investigators that the group has maintained its operational capabilities and still poses a considerable threat.

—Martin Kich

Bibliography

Arenillas, Jose Maria. *The Basque Country, the National Question, and the Socialist Revolution*. Translated from Spanish. Leeds, UK: I.L.P. Square One, 1973.

➤ BASQUE TERRORISTS AND MARCH 11, 2004

In the initial response to the March 11, 2004, Madrid train bombings (also known as 3/11), the Spanish government under the center-rightist Popular Party (PP) initially blamed the Basque Euskadi Ta Askatasuna (ETA). Almost immediately after the bombings occurred, the Spanish government claimed that evidence pointed at ETA involvement in the terrorist attack that had resulted in the deaths of 191 people and the wounding of another 1,755. Later investigations showed that it was not the ETA but rather Islamic terrorists with alleged links to al-Qaeda composed of Moroccans, Syrians, and Algerians allegedly angered at Spain's involvement in the Iraq War. The PP lost its majority in the elections later that month to the center-leftist Partido Socialista Obrero Español or Spanish Socialist Workers' Party (PSOE), as many in the Spanish public felt that the bombings were a result of Spanish involvement in the unpopular war. Nevertheless, this episode shows how many in Spanish society were ready to cast blame on the ETA as they were the group typically associated with terrorism in Spanish society.

—Abraham O. Mendoza

Clark, Robert P. *The Basques: The Franco Years and Beyond*. Reno: University of Nevada Press, 1979.

Payne, Stanley G. *Basque Nationalism*. Reno: University of Nevada Press, 1975.

Shabad, Goldie, and Francisco Jose Llera Ramo. "Political Violence in a Democratic State: Basque Terrorism in Spain." In *Terrorism in Context*, edited by Martha Crenshaw. University Park: Pennsylvania State University Press, 1995.

European Terrorists—Red Brigades, Red Army Faction, and the Irish Republican Army

European terrorism emerged from the tumult of the late 1960s when various ideologically driven organizations of armed militants set about to destroy their respective states, either to provoke a fascist response or to secede from colonial hegemony. The Red Brigades in Italy and the Red Army Faction (RAF) in West Germany, both formed by former student radicals fueled

➤ MUNICH: SEPTEMBER 5, 1972

During the 1972 Munich Olympic Games in West Germany, 8 Palestinian terrorists were responsible for the murder of 11 members of the Israeli Olympic team taken as hostages. In total, all 9 athletes, 2 coaches, 5 terrorists, and 1 police officer were dead after the disaster ended. The games were meant to reconcile the Germans and the Israelis, this after several decades had passed since the end of World War II and the Holocaust. The Palestinian terrorists, affiliated with the Black September organization, had ties with the leftist German terror group the Red Army Faction (RAF), having trained together in Middle East camps along with Basques, Italian Red Brigades, and the Irish Republican Army. This event illustrated the transnational ties that existed between European and Middle Eastern terrorist organizations.

—*Abraham O. Mendoza*

by Marxist or nationalist discourses, believed that if pushed hard enough, their respective democratic regimes would impose repressive measures and show their true fascist structures. The nationalist Irish Republican Army (IRA) in Northern Ireland, much like the Basque secessionists in Spain, believed that through acts of terrorism on British military, civil, and civilians they would better persuade the British government to cede Northern Ireland to Greater Ireland, liberating Ireland completely from the British yoke.

The Red Brigade (Brigate Rosse) was a fringe left-wing terrorist organization in Italy during the 1970s, emerging from the historically radical leftist city of Milan. The Red Brigade committed repeated acts of terrorism in order to ignite Marxist revolution and thus bring about a socialist transformation of Italian society. From 1972 to 1983 the Red Brigade was responsible for terrorist attacks against Italian politicians and businessmen, American military installations, and the police. In addition to bombings perpetrated by right-wing groups, the Red Brigade's activities made the 1970s known in Italy as the years of bullets (*anni di piombo*). In 1976 the Red Brigade murdered 8 and seriously wounded 16. The

following year the organization was responsible for the murders of 7 people and the wounding of 40. In 1978 the Red Brigade was responsible for the kidnapping and murder of former prime minister Aldo Moro, its most infamous action. Rather than instigating a revolution, the Red Brigade's actions provoked severe government repression and created popular suspicion of leftist student and labor organizations.

Similar to the Red Brigade, the RAF was a German terrorist group with Marxist-Leninist leanings founded in 1968 by Andreas Baader, Ulrike Meinhof, Gudrun Ensslin, and Horst Mahler out of the more radical wing of the German Socialist Student Alliance (SDS), heavily composed of anarchist students of middle-class background. Subsequently, the RAF began a terrorist campaign characterized first by bank robberies and ransom kidnappings, eventually escalating to attacks on West German, North Atlantic Treaty Organization (NATO), and U.S. targets through bombings, assassinations, kidnappings, and acts of sabotage. In 1977 the RAF kidnapped and murdered West German industrialist Hanns-Martin Schleyer, its most infamous action. However, the RAF's hijacking of a German airliner in 1977 resulted in repressive government legislation in the form of antiterrorism laws and more intense policing measures. Since then, most RAF leaders have been captured or have committed suicide.

Through much of the early twentieth century, the IRA sought to dislodge Catholic Northern Ireland from Protestant Great Britain through political and armed action after having successfully ensured the independence of the Irish Free State in 1921 (Republic of Ireland, 1948). In 1969, violence erupted in Northern Ireland, resulting in the split between the political and the militarist factions of the IRA. The militarists formed into the Provisional IRA, while the political faction became known as the Officials, which suspended the use of violence in 1972. The Provisional IRA sustained an active campaign of violence for decades, with its objective being to make the province of Ulster (Northern Ireland) ungovernable and force British troops to withdraw their support of the Protestant majority. Between 1973 and 1993 the IRA carried out 487 bombings and 28 shootings in Britain in an attempt to weaken

British resolve. Armed clashes also continued in Northern Ireland with an average death toll of 100 a year. Conciliatory actions between the IRA and the British government in the 1980s came to nothing, and violence continued. However, in the Good Friday Agreement (April 1998), the IRA agreed to participate in a decommissioning process and on July 28, 2005, agreed to pursue only political means to ensuring Northern Ireland's independence. Growing international involvement

and domestic discontent with violence contributed to the wane in militancy.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.
- Sutcliffe, Anthony. *An Economic and Social History of Europe since 1945*. New York: Longman, 1996.

■ Introduction: Militarization and Peace Movements

Many would argue that well-funded militaries offer stability to nations in a world of dangerous adversaries that include terrorists and rogue states armed with the means of gaining access to nuclear or biological weapons. Others would argue that military spending and the militarized mind-set only encourage the rise of dangerous adversaries and a self-perpetuating march toward violence. One of the most remarkable historical shifts of the modern period is the growth of the U.S. military and military expenditures since 1941. World War II and the Cold War that followed transformed the United States from a minor military power to one with at least seven times the annual budget of any rival military in the world, creating, in effect, a permanent wartime economy in the United States. Dwight Eisenhower, the supreme commander of Allied Expeditionary Forces in Europe during World War II and a Cold War-era president (1953–1961), left office warning of the dangers of the military-industrial complex. This speech made him an unlikely critic of the myriad connections between the U.S. military and its universities and corporations. Following the collapse of the Soviet Union, there was general discussion of a peace dividend in the United States, but military spending instead remained high. The terrorist attacks of 2001 in the United States, the 2004 bombings in Madrid, and the 2005 bombings in London encouraged this militarized mind-set in the United States and Britain. As of 2008, according to the Stockholm

International Peace Research Institute, the \$607 billion in military spending by the United States encompassed 41 percent of the world's total; China, with \$84.9 billion in military spending, was a distant second, with 5.8 percent of the world's total. Since 2001, major sporting events in the United States tend to feature flyovers of fighter jets and other patriotic nods to the military. Discussions of the appropriate use of torture, common in the past decade, would be unheard of decades ago.

Peace movements have been many, including the (failed) international scientists' movement to ban nuclear weapons, other antinuclear coalitions such as the National Committee for a Sane Nuclear Policy (SANE), the international Nuclear Freeze movement, and various groups that have protested wars ranging from the U.S. war in Vietnam to the Persian Gulf wars of more recent decades. Peace Studies is now a fledgling academic discipline, underpinned by such notions as those expressed by Herbert Marcuse in *One Dimensional Man* (1967) that modern society is encoded with a rationality gone berserk; that is, research and the rational systems of technology are premised on irrational ends (leveling cities with nuclear weapons or designing weapons that will kill people but not destroy property, as two examples). The apparatus of national security states forged following World War II neatly dovetailed military concerns with civilian control. This merge has become only more apparent following the September 11, 2001, terrorist

attacks as governments extend their intelligence gathering of citizens' communication in the name of public safety and national security, as police and intelligence agencies share information, as cyberspace become militarized, as modern police forces borrow military hardware and procedures, and as public space is placed under surveillance.

—*Fred Nadis*

Military-Industrial Complex

Before World War II, the United States mobilized only after its wars began. During the Cold War, however, the United States and the Soviet Union shifted to a constant state of military preparedness, maintaining large combat-ready military forces and nuclear arsenals. The sum total of the academic, industrial, and government institutions that evolved to meet the requirements of Cold War deterrence and defense has been called the military-industrial complex (MIC). President Dwight D. Eisenhower first used the term in his 1961 farewell speech when he warned against excessive military and defense industry influence on the scientific world, academia, and democratic processes. Some observers describe the MIC as an iron triangle of beneficial relationships among the Defense Department, legislators with jurisdiction over defense programs and budgets, and defense contractors.

Creating and improving superior military forces during the long Cold War competition with the Soviets required relentless scientific, technological, and engineering innovation. To promote this innovation, the Defense Department sponsored basic and applied research, development, testing, evaluation, and experimentation in academic and industrial laboratories. Government funding of U.S. research and development (R&D) exceeded private industry funding until the early 1980s, and defense generally dominated federal R&D funding after 1945, especially from 1945 until 1963. Defense research declined as a proportion of federal R&D after the Vietnam conflict but jumped again (from 49 percent to 70 percent) between 1980 and 1987 largely because of research on the Strategic Defense Initiative (SDI), which proposed to create space-based defenses against intercontinental ballistic missile

attack. Universities performed most of the basic defense research, and private industry conducted most of the applied research for SDI. Defense-related industries consistently received about 80 percent of all federal funding for manufacturing R&D from 1945 to 2002, with most of the funds concentrated among the largest contractors.

During the Cold War, the U.S. government cooperated closely with defense industries, funding plant construction, providing guaranteed markets, protecting weak firms, and promoting exports. The government cultivated an oligopolistic defense industry in which relatively few aerospace, electronics, and communications firms provided small numbers of highly specialized products to a single customer that cared more about quality than cost. Defense projects represented about 6–10 percent of the private-sector workforce but employed more than half of the nation's aerospace engineers and one-quarter of all electrical engineers and physicists. Defense work also employed large numbers of highly skilled blue-collar workers, particularly aircraft and electronics assemblers, machinists, metalworkers, shipfitters, and aircraft mechanics.

Defense corporations usually hired retired military officers, who had excellent institutional knowledge and personal contacts inside the military, to market to the Pentagon. Defense corporations subsidized lobbying groups and contributed heavily to selected political campaigns. In the 1990s, defense lobbyists urged Congress to provide tax exemptions for arms exporters, issue government-backed loans to countries importing American weapons, and lift bans on arms sales to repressive regimes. Defense corporations often organized grassroots lobbying efforts for particular weapons systems that were in danger of cancellation.

The MIC conferred mixed benefits on the U.S. economy and society. It created a military that deterred Soviet aggression and prevented nuclear war, and it ensured U.S. leadership in aerospace, computer, communications, and electronics technologies. Commercial products or ventures that emerged from the MIC included jet engines as well as the widespread civil aviation after the invention of radar, lasers, microchips, computers, satellites, robotics, and the Internet. However, the MIC imposed enormous financial, political, and

➤ EXCERPT FROM DWIGHT D. EISENHOWER'S FAREWELL ADDRESS, JANUARY 17, 1961

"Until the latest of our world conflicts, the United States had no armaments industry. American makers of plowshares could, with time and as required, make swords as well. But now we can no longer risk emergency improvisation of national defense; we have been compelled to create a permanent armaments industry of vast proportions. Added to this, three and a half million men and women are directly engaged in the defense establishment. We annually spend on military security more than the net income of all United States corporations.

This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political, even spiritual—is felt in every city, every Statehouse, every office of the Federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources, and livelihood are all involved; so is the very structure of our society.

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

We must never let the weight of this combination endanger our liberties or democratic processes. We should take nothing for granted. Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together."

Bibliography

Eisenhower, Dwight D. "Farewell Radio and Television Address to the American People, January 17, 1961." In *America in the 20th Century: Primary Sources, 1950–1999*. Tarrytown, NY: Marshall Cavendish, 2003, 1622.

environmental burdens on the nation. The MIC's costs impaired competitiveness in the post-Cold War world and led to government neglect of social programs and the civilian industrial base.

—James D. Perry

Bibliography

- Adams, Gordon. *The Iron Triangle*. New Brunswick, NJ: Transaction Books, 1982.
- Hartung, William. *Corporate Welfare for Weapons Makers*. Washington, DC: Cato Institute, 1999.
- Koistinen, Paul. *The Military-Industrial Complex*. New York: Praeger, 1980.
- Markusen, Ann, and Joel Yudken. *Dismantling the Cold War Economy*. New York: Basic Books, 1992.

The Globalization of the Defense Industry

Defense industries were, by necessity, internationalized before World War I. At that time only Britain, France, and Germany possessed full industrial capacity to produce modern weapons, and even other Great Powers (Austro-Hungary,

Italy, Japan, the Russian Empire, and the United States) were dependent on imports for a significant part of their armaments and materiel. Moreover, given the competition between the major powers, weapons were frequently imported from opposing alliances. Japan relied on British yards for its navy and on German factories for its artillery; Russia ordered cruisers in England and Germany and armed home-built vessels with French light guns.

The rupture associated with World War I—Germany's defeat, the collapse of world trade, local nationalism, the rise of the United States and of the Soviet Union with its autarchic economy—fragmented the world arms market. Internationalist inclinations of the elites on the eve of World War I were replaced by nationalist hysteria and a cult of military secrecy. By the beginning of World War II, major combatants possessed predominantly domestic weapons. Even armaments, transferred to the Soviet Union and Great Britain by the United States through Lend-Lease or given by the Germans to Romania, Hungary, or Finland, were rarely state-of-the-art equipment.

➤ NUCLEAR PROLIFERATION

“I am haunted by feeling that by 1970, there will be 10 nuclear powers instead of 4, and by 1975, 15–20.” John Kennedy, 1963.

Alongside the legal transfer and acquisition of weapons and military technology, there exists its illegal companion, called proliferation. The conventional view that the policy of nonproliferation of nuclear weapons has been an expensive failure ignores the evidence. As of 2007, only eight states (the United States, Russia, the United Kingdom, France, China, Israel, India, and Pakistan) credibly possess nuclear weapons, while a similar number of states terminated their nuclear-weapons programs either unilaterally or under pressure from the world community. In the 1990s three Soviet-successor states—Belarus, Kazakhstan, and Ukraine—returned ex-Soviet nuclear weapons to Russia, while South Africa destroyed already-produced nuclear devices. All four acceded to the Non-Proliferation Treaty (NPT) as nonnuclear states.

—Peter Lerner

The onset of the Cold War and the withdrawal of France and Britain from global competition in 1954–1956 in the aftermath of the Indochina and Suez crises created the conditions for the formation of an essentially duopolistic system. The two superpowers supplied major weapons and technologies to their allies and client states, frequently on a noncommercial basis. Since the 1970s the North Atlantic Treaty Organization (NATO) had conducted extensive standardization of its arsenals, thought by many as an attempt to impose American technologies and priorities on its European allies. Yet this multibillion-dollar process was probably highly beneficial for both the United States and the European members of NATO. By the end of the Cold War, the United States and the Soviet Union controlled approximately 70 percent of the trade in conventional weapons (\$119 billion out of \$173 billion during 1985–1989).

By the 1970s, intensifying competition led to export offerings of systems that were as advanced as (or more advanced than) those being supplied to the national armed forces (e.g., Ira-

nian orders of US F-14s, Kidd destroyers, and British Chieftain tanks). The Soviet-Chinese split created an independent market in the copycat designs of lower-tech weapons. Another end of the Cold War phenomenon was offsets: investments, transfers of technology, and production capacity were provided as enticements to potential customers (e.g., the F-16 was coproduced in five countries, including Turkey and the Netherlands).

Globalization of defense production was closely related to the consolidation of domestic U.S. and European Union (EU) industries: the world market became too small for the Cold War establishments. As a result of the mergers and acquisitions activity in the 1990s (\$21.5 billion in 1995), the bulk of defense production in the United States was concentrated in four conglomerates: Boeing, Lockheed Martin, Northrop Grumman, and Raytheon. By 2000, consolidation of the prime contractors in the United States was almost complete. For example, while 13 separate contractors were involved in tactical missile construction in the United States in 1990, in 2000 there were only three.

The collapse of the Soviet Union brought the previously smaller-size European and Israeli companies to the forefront of the new global defense industry. The EU also tried to force consolidation of its defense industry. In particular the Airbus, Eurocopter, and Eurofighter programs were united in the holding the European Aeronautic Defense and Space Company (EADS) (majority owned in 2006 by Daimler Chrysler, Spanish SEPI, French Group Lagardère, and the French government; concluded a transatlantic alliance with Northrop). The tactical missile program of EADS was managed by MBDA, created by the merger of French Matra, UK BAE, and Italian Alenia. In 2000, European defense contractors owned approximately 200 subsidiaries in the United States. Foreign ownership of defense companies became accepted in previously nationalistic South Korea, South Africa, and Brazil.

The consolidation of defense industries has gone hand in hand with internationalization of production. While the United States and the EU still procure main weapons platforms from domestic manufacturers, contracts for subsystems, components, and spare parts are more globally

dispersed. This process will only accelerate in the future with the further growth of software and computer-aided design (CAD) in proportion to total cost. For example, with some reluctance, the U.S. Air Force noted that the software development for its newest fighter, the Raptor, had been partially outsourced to India. However, the defense industry is unlikely to become completely transnational. Even among allies there are obstacles: state regulations, the desire to maintain domestic manufacturing base, and the vagaries of a national budgeting process. Yet globalization is likely to continue, transcending the borders of the military and commercial blocs. A consortium of Russian banks acquired a minority stake in EADS in 2006. The Ukrainian Space Agency, Norwegian Aker, and Russian NPO Energy formed a Sea Launch JV with Boeing. In 2004 China offered to Pakistan a reconnaissance system based on a Russian-built plane and Israeli radar.

While the globalization of design and production of weapons and space systems has no parallels in history, the political landscape has become strangely reminiscent of pre-World War I times. Weapons production has become concentrated in a few giant conglomerates, while the national and political affiliation of weapons supplier once again has lessened in importance.

—Peter Lerner

Bibliography

- Gansler, J. S. *Affording Defense*. Cambridge, MA: MIT Press, 1989.
- Globalization of Defense Industry*. Proceedings, NDIA Conference, Arlington, VA, 2002.
- Sandler, T., and T. Hartley. *The Economics of Defense*. Cambridge and New York: Cambridge University Press, 1995.
- SIPRI Bulletins*, 1995–2005, Sipri Institute, Stockholm, Sweden.
- Wessner, Charles W., ed. *Trends and Challenges in Aerospace Offsets*. Washington, DC: National Academy Press, 1999.

The National Security State

The national security state emerged in the years immediately following the end of World War II as parties on both sides of the Iron Curtain prepared for possible military conflict. The national security states likewise developed as Cold War

participants prepared for possible subversion stemming from without by foreign agents and from within by saboteurs and traitors. Both superpowers, the United States and the Soviet Union, through their domestic and foreign intelligence offices and those of their allies and satellites (such as the notorious STASI in East Germany), created intricate surveillance infrastructures and procedures to prevent foreign and domestic infiltration and espionage. The tense climate of the Cold War legitimized the expansion of the police powers of the state and the normalization of questionable practices violating civil and political rights. The arms buildup in the form of increasing government expenditures on new systems of nuclear weapons and massive conventional stockpiles of modern war materiel were also a fundamental characteristic of the emerging national security state.

Under the Harry S. Truman administration, the importance of national security in the United States was highlighted with the passing of the National Security Act in 1947, which created two new institutions—the Central Intelligence Agency (CIA) and the National Security Council (NSC)—while also dramatically expanding the Federal Bureau of Investigation (FBI). By 1950, the U.S. NSC presented the Truman administration with NSC-68, titled *U.S. Objectives and Programs for National Security*, presenting the case for prioritizing the Cold War as the primary foreign policy objective. The document urged more rigorous domestic and foreign surveillance by intelligence services and urged political, economic, military, and diplomatic engagement globally to counter and contain the Soviet threat.

At the same time, the House of Un-American Activities Committee (HUAC), established in 1938 to investigate New Deal programs and their implementation, began to focus in 1947 on investigating communist activity in the United States. FBI director J. Edgar Hoover gave the committee new life when he testified that there was a new Red Menace in the United States. In an ensuing high-profile investigation, HUAC scrutinized the U.S. entertainment industry, which resulted in the blacklisting of many writers, directors, and actors with alleged communist sympathies. HUAC's actions revived various federal and state governmental loyalty committees. Amid this

► MILITARIZATION OF SPACE

One of the main impetuses for forging the space programs in both the United States and the Soviet Union was the desire to develop weapon delivery systems for nuclear warheads and improve surveillance in the context of the Cold War. The launch of Sputnik in 1957 by the Soviets triggered the space race between the superpowers. In response, the National Aeronautics and Space Administration (NASA) was established in the United States by the 1958 National Aeronautics and Space Act. Advances made by both sides, in terms of satellite technology involving communications, reconnaissance, and surveillance capabilities, led to the potentiality of the militarization of space as the technology advanced to the point when it was possible to launch missiles from satellites.

In addition to prompting successful orbits around the earth, landing men on the moon, and scientific research, the space race also contributed to advances in weapons systems, such as the Intercontinental Ballistic Missiles (ICBM) and Anti-Satellite Weapons (ASATs) in the decades following the launch of Sputnik. To better cover large distances, ICBMs are launched into sub-orbital spaceflight. However, the ability to use these weapons from space or in space caused severe concerns among an already tense public during the Cold War. This led to the Outer Space Treaty of 1967, which prohibited the stationing of nuclear weapons in space but did not ban ground or air attacks on satellites.

In 1983, U.S. president Ronald Reagan proposed the Strategic Defense Initiative (SDI), nicknamed “Star Wars” after the popular series of films by George Lucas. Edward Teller, who oversaw the development of the hydrogen bomb in the United States, conceived SDI as a defense system that would rely on ground-based and space-based systems (using lasers) to protect the United States from attack by Soviet ICBMs. Despite domestic and international criticism, SDI-related research received enormous government funding. At the end of the Cold War, defense spending was reduced, and space research emphasized a scientific, not a military, agenda. In 2002, however, U.S. president George W. Bush signed the National Security Presidential Directive that rejected U.S. participation in the 1972 ABM Treaty with the USSR and promoted efforts to deploy operational ballistic missile defense systems by 2004, utilizing extensive satellite technology for global positioning weapons capabilities and nuclear weapon detection. Other countries, such as Russia, China, and India, continue to launch and conduct research on spy satellites. In January 2007, China successfully shot down one of its aged weather satellites in a clear announcement that China was no longer a bystander in the militarization of outer space and had the means to shoot down surveillance satellites.

—*Abraham O. Mendoza*

atmosphere of paranoia, schoolteachers, university professors, and other state employees were scrutinized for loyalty, while federal employees were subjected to FBI background checks, with many homosexuals, for example, being forced to resign from federal positions as security risks.

Control of possible subversives in the Soviet Union relied on starker methods. From the late 1940s to the mid-1950s, the Soviet Union began to exile and incarcerate many of its returning soldiers from Europe, sending many of them to the Gulag camps in Siberia as political criminals infected with Western ideas. Many top Soviet officials were labeled as American spies and Zionists and, in an atmosphere of heightened suspicion, were purged from the party either

by exile or murder. The myriad responsibilities of the *Komitet Gosudarstvennoy Bezopasnosti* (KGB), Committee of State Security (previously known as the NKVD), included foreign and domestic espionage, intelligence, counterintelligence, maintaining networks of informers and police authority over the domestic population, protection of the nation’s borders, and covert activities and disinformation within and outside the Soviet Union. The KGB maintained constant surveillance over the Soviet population from 1954 to 1991. The KGB also worked with foreign intelligence services in the Eastern Bloc countries.

In the United States, the newly founded CIA, taking over from the disbanded Office of Strategic Services (OSS), became responsible for

gathering foreign intelligence and compiling strategic reports for the federal government. The CIA influenced foreign policy decisions and conducted covert operations (ops) abroad. One example of such covert ops, which flourished during the Dwight D. Eisenhower administration, was Operation Ajax in which the CIA staged a 1953 coup against Iranian leader Mohammad Mosaddeq, suspected of Soviet sympathies, and restored the pro-American authoritarian shah. At the same time, the FBI, under the authority of J. Edgar Hoover for nearly four decades, was responsible for domestic intelligence. Overstepping its mandate, the FBI's Counterintelligence Program (COINTELPRO), begun in the mid-1950s, ensured the surveillance of not only underground subversive groups but also oppositional and activist organizations such as those advocating civil rights for black Americans.

Both Cold War opponents also invested massive amounts of their national wealth on developing weapons systems, particularly in the form of nuclear weapons, and their respective armed forces and those of their allies. In the four decades following World War II, both superpowers developed atomic and hydrogen weapons as well as delivery systems such as Intercontinental Ballistic Missiles (ICBMs), Multiple Re-entry Vehicles (MRVs), and suitcase bombs. They also forged alliance systems—the North Atlantic Treaty Organization (NATO) and the Warsaw Pact—to counter each other's advances.

Even after the fall of the Soviet Union and much of the socialist Eastern Bloc from 1989 to 1991, which spelled the end of the communist threat, the powers secured by the national security state have continued unabated, particularly as seen in the United States and in Russia, again, under the authoritarian President Vladimir Putin. Many other governments across the world continue to use national emergencies as a pretext to circumscribe civil rights and to augment national police powers against external (i.e., global terror networks such as al-Qaeda) and internal enemies (i.e., Islamic fundamentalists, separatists). Most recently, the September 11, 2001, attacks on the United States resulted in the creation of the Department of Homeland Security and the establishment of the USA PATRIOT Act (Uniting and Strengthening America by Providing Appro-

priate Tools Required to Intercept and Obstruct Terrorism Act of 2001), which some critics allege provides tools to constrict U.S. civil liberties and therefore create dangerous precedents. In the revived atmosphere of heightened security, there also has been controversy over U.S. military authorities alleged human rights abuses against suspected armed combatants at Abu Ghraib prison in Baghdad and in Guantanamo Bay in Cuba.

At the same time, countries such as Russia, Venezuela, and China have increased the power of their state police forces in response to internal developments and perceived foreign subversion in a post-Gulf War and post-9/11 world of heightened vulnerability and suspicion. However, strong police state internal surveillance does not constitute the only element in the existing definition of the national security state. Experts would also insist that a security state include increased spending on arms and weapons systems—the case in Iran—but not, for example, in the police state of Argentina in the 1980s during its so-called dirty war.

—Abraham O. Mendoza

Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Hanhimäki, Jussi M., and Odd Arne Westad, eds. *The Cold War: A History in Documents and Eyewitness Accounts*. New York: Oxford University Press, 2005.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.

Military and Corporate Patronage at Universities

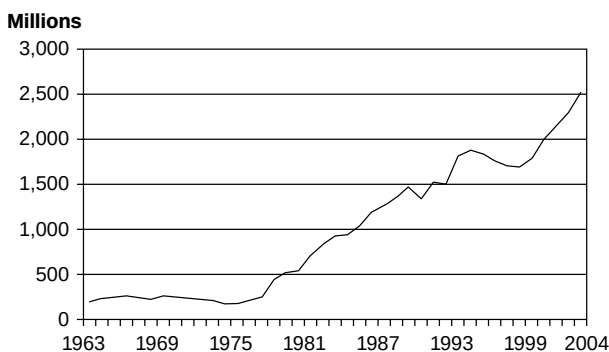
During the second half of the twentieth century, higher education in the United States and elsewhere underwent a radical transformation. Enrollments skyrocketed, and student populations became more diverse ethnically and racially. Faculty research became enmeshed in larger, more collaborative projects. Curricula expanded as interdisciplinary approaches to knowledge gave rise to area studies and special interest topics. Campuses themselves began to take on a new look, with architectural innovations making their

way into dorm life and classroom design. Universities of the first half of the century shared little in common with those of the second half. One of the leading factors that contributed to this transformation had to do with a change in how these institutions were funded, particularly from such sources as the military and the private sector.

Military patronage affected change in higher education largely through significant increases in funding for faculty research. Research ties among academic scientists, universities, the military-industrial complex, and government agencies forged during World War II continued during the Cold War, particularly in America and the Soviet Union, where national defense fueled increasingly larger scientific projects. After the Manhattan Project (the project to develop the first nuclear weapon) came the research, design, and development of other weapons of mass destruction, such as the hydrogen bomb and the neutron bomb. These and similar projects, as developed by at least the Cold War superpowers, required high levels of organization, military funding, and, in many cases, secrecy. Certain institutions, such as Stanford and the Massachusetts Institute of Technology (MIT), developed better relations with the U.S. Department of Defense than others, depending on the university's culture and leadership. Harvard's president, James Conant, for example, was less comfortable with the idea of applied classified research than was MIT's Karl Compton. By 1960, U.S. agencies funded research at a price tag of more than \$5 billion a year.

Many other nations developed strong relations between the military and universities. Australia increased defense-related research on its campuses in the decades following World War II. The Manhattan Project served as an important model for coordinating Australian university and military resources. University scientists in Brazil received a significant boost from the country's military and political leadership with the founding of the Synchrotron Light National Laboratory in the 1980s. In other countries, military patronage or influence redirected resources for specific purposes. Italian science became predominately focused on physics (as opposed to other physical, biological, and social sciences) as a result of

Department of Defense Funding of University Research Science and Engineering



During the early period of the Cold War, the U.S. Department of Defense provided steady funding for university-based scientific and engineering research projects. Beginning in the late 1970s, this funding dramatically increased and continued to increase after the so-called end of the Cold War in 1989.

Source: National Science Foundation,
<http://www.nsf.gov/statistics/nsf06309/tables.htm>.

—A.J. Angulo

military and governmental funding. Turkish space science since the 1970s has been supported by a web of military and private sources. Due to the influence of the military in shaping policy, however, the establishment of a Turkish space agency was thwarted throughout the end of the twentieth and early twenty-first centuries.

As with military-university relations, funding from the private sector also influenced changes in post-World War II faculty research. The United States and Japan followed two different models of corporate-university relations that other nations adopted. In the United States, universities conducted both basic and applied research. Whatever the source of funding, the two could be found on most campuses. The locus of Japanese scientific research, however, has centered in the private industrial laboratories. In India and China, concerted efforts to unite industry and universities in research resulted in specific developments such as the creation of technology research parks, the standardization of contracted research, and increases in government investment for collaboration. A turning point for American university-industry relations came with the passage of the Bayh-Dole Act of 1982, otherwise known as the Patent and Trademark Amendments Act. The passage of this bill allowed universities that conducted federally funded research to claim patent

rights and licenses. With these rights and licenses came a sharp increase in interest from both universities and industry to commercialize products resulting from government-funded research.

—A. J. Angulo

Bibliography

- Cummings, William K. "The Culture of Effective Science: Japan and the United States." *Minerva: A Review of Science, Learning and Policy* 28 (1990): 426–445.
- Geiger, Roger L. *Research and Relevant Knowledge: American Research Universities since World War II*. New Brunswick, NJ: Transaction Publishers, 2004.
- Kharbanda, V. P. "Academia-Industry Symbiosis: Need for Technological Competitiveness in India and China." *China Report* 36 (2000): 43–73.
- Reynolds, Wayne. "Defence Science Research, Higher Education and the Australian Quest for the Atomic Bomb, 1945–60." *History of Education* 26 (1997): 225–242.
- Velho, Lea, and Osvaldo Pessoa Jr. "The Decision-making Process in the Construction of the Synchrotron Light National Laboratory in Brazil." *Social Studies of Science* 28 (1998): 195–219.

Pacifist Movements— Japan and Costa Rica

Following World War II, the governments of Costa Rica and Japan both created pacifist constitutions in an undemocratic manner; nonetheless, these constitutions have aided the stability of their democracies and greatly enhanced both nations' economic development.

Costa Rica's national policy of pacifism began after the brief Costa Rican Civil War (March 11–April 24, 1948), which brought victory for coffee businessman-farmer José Figueres Ferrer (1906–1990) and the Partido Union Nacional and exile for most of the Calderon-Picada government. As the military dictator of Costa Rica (April 1948–November 1949), Figueres drafted a new constitution that abolished the army, established a public police force, and subordinated all police power to civilian authority in its Article 12. President Otilio Blanco Ulate (1871–1973) finished the abolition of Costa Rica's national military in 1950, completing that country's transition to pacifism.

Costa Ricans' commitment to pacifism and the absence of a military have contributed to a political stability and economic prosperity unmatched in Central America. When rebel forces led by exiled Rafael Calderon Guardia (1900–1970) invaded Costa Rica from Nicaragua in January 1955, President Figueres turned to other American nations for aid. In negotiations with the Organization of American States (OAS) and U.S. politicians, Figueres invoked Article 2 of the nonaggression pact of the 1947 Rio Treaty committing signatory nations to peaceful settlements and subordination to the Inter-American System. Convinced by Figueres's argument, the OAS requested that the United States send fighter planes to Costa Rica, a move that marked the end of the Calderon junta.

Costa Rica continues today to rely on pacifism for its national security. U.S. president Ronald Reagan encouraged the fortification of the Costa Rican national police to counter the Nicaraguan Sandinistas' threat in the early 1980s. The end of the Contra War in Nicaragua, El Salvador, and Guatemala, however, came through the 1987 Peace Plan of Costa Rican president Oscar Arias Sanchez, who won the Nobel Peace Prize (1987). Costa Rica initially supported the forceful overthrow of Iraqi dictator Saddam Hussein in 2003. However, the Costa Rican Supreme Court ruled that this support was an unconstitutional act that also violated international law, and Costa Rica then withdrew its moral support for the invasion of Iraq.

Costa Rica's reputation for pacifism attracted Jewish refugees from the Third Reich during and after World War II and Quaker conscientious objectors from the United States during the Vietnam War. The Quakers have established a community at Monteverde, still known today for its pacifism, where they have been joined by Mennonites, Beech Amish, and other pacifist groups. U.S. and other American tourists have now made Costa Rica a popular destination.

While the pacifist constitution of Japan developed in the aftermath of World War II, the Japanese pacifist movement first began in the late nineteenth century among Japanese Christian and socialist intellectuals who opposed Japanese militarism. Quaker Nitobe Inazō (1862–1933), a student of American Dr. William S. Clark at his

➤ POST-HIROSHIMA JAPANESE PEACE MOVEMENT

Japanese pacifism was reborn in 1945 as an antiwar and antinuclear peace movement from the atomic ashes of Hiroshima and Nagasaki. The Japan Socialist Party (JSP) remains the most vocal proponent of the general disarmament outlined in Article 9 of Japan's postwar constitution and a nuclear weapons ban. JSP chairman Suzuki Mosaburō (1893–1970) and Christian socialist professor Tabata Shinobu (1902–1993) fought to defend Article 9 against pressure on Japan, from both conservative Japanese politicians and the Supreme Command of Allied Powers, to rearm and combat Asian communism. Major protests erupted after the U.S.-Japan Security Treaty (January 19, 1951) stationed U.S. troops throughout Japan. That year 8,000 fishermen also demonstrated against U.S. nuclear testing at Bikini Atoll, galvanizing the housewives and schoolteachers who founded the Japan Council Against Atomic and Hydrogen Bombs (Gensuikyo) in 1955. Students, the JSP, the General Council of Trade Unions (Sohyo), teachers, and housewives surrounded the Diet in objection to the U.S.-Japan Treaty of Mutual Cooperation and Security (Anpo) signed on January 19, 1960. The Anpo protests denounced the nation's remilitarization and both the stationing and extraterritoriality of U.S. soldiers in Japan stipulated in the treaty. Gensuikyo, led by Professor Yasui Kaoru, organized the first annual World Conference Against Atomic and Hydrogen Bombs in Hiroshima (1963) and remains Japan's most prominent antinuclear organization. The year 1963 also marked the beginning of Hiroshima Day (August 6) as a national holiday and of television programs, artwork, and performances depicting wartime tragedies. Under Prime Minister Satō Eisaku (1964–1972), the National Diet signed the Nuclear Non-Proliferation Treaty (1968) and adopted the Three Non-Nuclear Principles against the production, possession, and importation of nuclear weapons (1971). Today Japan maintains its antinuclear position, while the United States, other United Nations members, and conservative Japanese nationalists pressure the nation to play a military role in international disputes appropriate to its economic status.

—Garrett Washington

new Sapporo Agricultural College in the early 1880s, and his American Quaker wife Mary El-kinton (1857–1938) promoted U.S.-Japan relations and international pacifism. Uchimura Kanzō (1861–1930), by far Japan's most well-known Christian pacifist and Nitobe's classmate in Sapporo, became Japan's most vocal critic of the military's expansion in China and Korea through articles in the daily *All Things Morning News* and his own monthly magazine *Studies on War*.

Japanese Christian and socialist professors shaped the pacifism of their students. Before being forced to resign from Tokyo's Number One High School for refusing to show reverence to the ultranationalist 1891 Imperial Rescript on Education, Uchimura led some students, including political scientist Yanaihara Tadao (1893–1961), toward pacifism. Yanaihara echoed Uchimura's prophecy of Japan's devastation by war. Tokyo Senmon Gakkō professor Abe Isoo (1865–1949), often called the father of Japanese socialism, actively opposed militarism in his courses and articles. Abe's students at Tokyo Senmon (now Waseda University), including Saitō Takao (b. 1936), revived the Japan Socialist Party (1945) with Abe as adviser. They strongly opposed Japanese rearmament.

During and after World War II, champions of pacifism became even more outspoken. Christian pacifist Kagawa Toyohiko (1888–1960) aimed to avoid war with the United States through the Christian Peace Mission (1941), founded the International Peace Society (1945), and earned a Nobel Peace Prize nomination in 1955. While the U.S.-dominated Supreme Commander of Allied Forces' Government Section drew up the postwar constitution for Japan, ardently pacifist Japanese prime minister Shidehara Kijūrō (who served during October 1944–May 1946) wrote Article 9, stipulating Japan's disarmament and renunciation of war.

Dōshisha University president and professor of political science Tabata Shinobu (1902–1993), the leading postwar Japanese pacifist scholar, encouraged socialist antirearmament Diet member Doi Takako (b. 1928) and other students to embrace pacifism. Tabata's National League to Defend the Constitution, People's League to Prevent Constitutional Revision, and Institute of the Japanese Constitution at Dōshisha continue with

Doi to uphold Article 9 of the postwar constitution of Japan against Liberal Democratic Party proponents for rearmament. As of the spring of 2007, Japanese politicians revived the debate over revising the pacifist articles in the 1947 constitution.

—Garrett Washington

Bibliography

- Ameringer, Charles. *Democracy in Costa Rica*. Stanford, CA: Hoover Institution Press, 1982.
- Bamba, Nobuya, and John F. Howes, eds. *Pacifism in Japan: The Christian and Socialist Tradition*. Vancouver: University of British Columbia Press, 1978.
- Booth, John A., and Thomas W. Walker, eds. *Understanding Central America*. Boulder, CO: Westview, 1989.
- Dower, John. *Embracing Defeat: Japan in the Wake of World War II*. New York: Norton, 1999.
- Dower, John. *Empire and Aftermath: Yoshida Shigeru and the Japanese Experience, 1878–1954*. Cambridge: Harvard Council on East Asian Studies, 1979.
- Howes, John F. *Japan's Modern Prophet: Uchimura Kanzo, 1861–1930*. Vancouver: University of British Columbia Press, 2006.
- LaFeber, Walter. *Inevitable Revolutions: The United States in Central America*. New York: Norton, 1983.
- Tsurumi, E. Patricia. *The Other Japan: Postwar Realities*. Armonk, NY: Sharpe, 1988.

Pacifism and Anti-Vietnam Protests

The Vietnam War was America's longest-lasting military conflict and remains arguably its most controversial. Protests eventually helped force a reassessment of the U.S. conduct of the war. Activists' reasons for opposing the war ranged from pacifism to political, ethical, and religious objections. Protesters often voiced their opposition through traditional demonstrations such as rallies and parades. The small number of Americans who were more specifically pacifists, and not just against the war in Vietnam, were matched by Buddhists in South Vietnam. Antiwar literature from war opponents ranged from materials supplied by pacifist groups (including Quakers), some communist front organizations, and other groups and individuals who argued that the war



On June 11, 1963, Buddhist monk Thich Quang Duc immolated himself on a busy Saigon street. Malcolm Browne's photograph was taken as Thich Quang Duc burned to death after gasoline was poured on him by two fellow monks. The photo, widely publicized by the American press, brought religious protests against the war to the forefront. (AP Photo/Malcolm Browne)

was unjust. While this was not the first time that the United States saw significant antiwar protest, the protests left a significant legacy. The U.S. military moved away from the draft and became an all-volunteer force, and later U.S. presidents have been more cognizant of public opinion when committing forces abroad.

Early in the conflict, the majority of Americans supported involvement in Vietnam. However, as the casualties increased and the objectives became less clear, Americans began to question their leaders. In early 1966, the antiwar movement grew in force and numbers, and people began to demonstrate more publicly. During this time, picketers were constantly marching in front of the White House chanting rhymes such as "Hey, hey, LBJ, how many kids did you kill today?" Due to their increasing numbers and the liberal climate found on most campuses, college students became one of the most important forces in the movement for peace. Eventually, veterans of the war became another important contingent that effectively argued for the pursuit of peace. One of the most important such organizations was the Vietnam Veterans Against the War (VVAW). Originally, there was tension between veterans and most protest groups, but as the war dragged on many veterans against the war began to earn the respect of other objectors.

Since the draft was in effect during Vietnam, many Americans eligible for military service chose to physically desert by relocating to Canada. Although women were not eligible for the draft, many men who headed north across the border were accompanied by women whose antiwar convictions were equally strong. Others chose to avoid the draft in more traditional ways, such as seeking educational or medical deferments. President Bill Clinton is perhaps the most famous of these draft dodgers and remained outspoken in his opposition to the war.

It must be noted that there is a distinction between those who were established pacifists (people opposed to all wars) and those Americans who were specifically against the Vietnam War. One long-standing American pacifist group is the War Resisters League (WRL). Founded during World War I, the WRL has led protest movements, has promoted secular pacifism, and has been a leader in promulgating draft resistance during most U.S. military engagements. The height of its influence was during the Vietnam War, when its members led many acts of civil disobedience. Other pacifists groups have religious foundations. For instance, American Quakers are active in international movements for peace and were particularly involved during the Vietnam War. On the home front, Quakers visited members of congress and led protests against the war based on their pacifist religion.

In 1968, Phillip Berrigan, a Josephite priest, and his brother Daniel Berrigan, a Jesuit priest, brought religious pacifism to the forefront with a daring raid of draft board files in Cantonsville, Maryland, which they destroyed with chicken blood and napalm. The Berrigans and their accomplices acknowledged that their actions were illegal but felt that they were justified by a higher power that called for a more just and civilized society. The Berrigan trial began a nationwide movement of sympathy for the antiwar movement and inspired other religious pacifists to act, such as when a group of Wisconsin Catholics burned 10,000 files in a Selective Service office.

There was a significant faction for peace in South Vietnam as well. The Buddhists of the war-torn country were particularly active in promoting peace. From the outset of the war, Buddhists had suffered oppression from U.S.-supported governments such as that of Ngo Dinh Diem, a

member of the country's Catholic minority. Despite representing about 80 percent of the South Vietnamese people, the Buddhists were often forced to turn to protests to make their voices heard. Thich Nhat Hanh was one of the most influential Vietnamese Buddhist monks and was responsible for leading a movement known as engaged Buddhism, which encouraged his followers to combine traditional meditation with nonviolent but active forms of civil disobedience. He worked relentlessly to bring peace between North and South Vietnam and was eventually exiled from both regions for his efforts.

In both 1963 and 1966, the most strenuous objections to the war came to the attention of the global community in the Buddhist Crisis as protests took a radical turn. For example, in the summer of 1963, Thich Quang Duc, a Buddhist monk, set himself on fire on a crowded Saigon street. As pacifists, the Buddhists made a significant impact on the war. Because the anticommunist regime in Saigon was never able to earn the complete support of the Buddhist majority, many historians have argued that the war was doomed from the outset. The plight of the Buddhists was well publicized in the United States and caused many Americans to take antiwar stances.

—Nicole L. Anslover

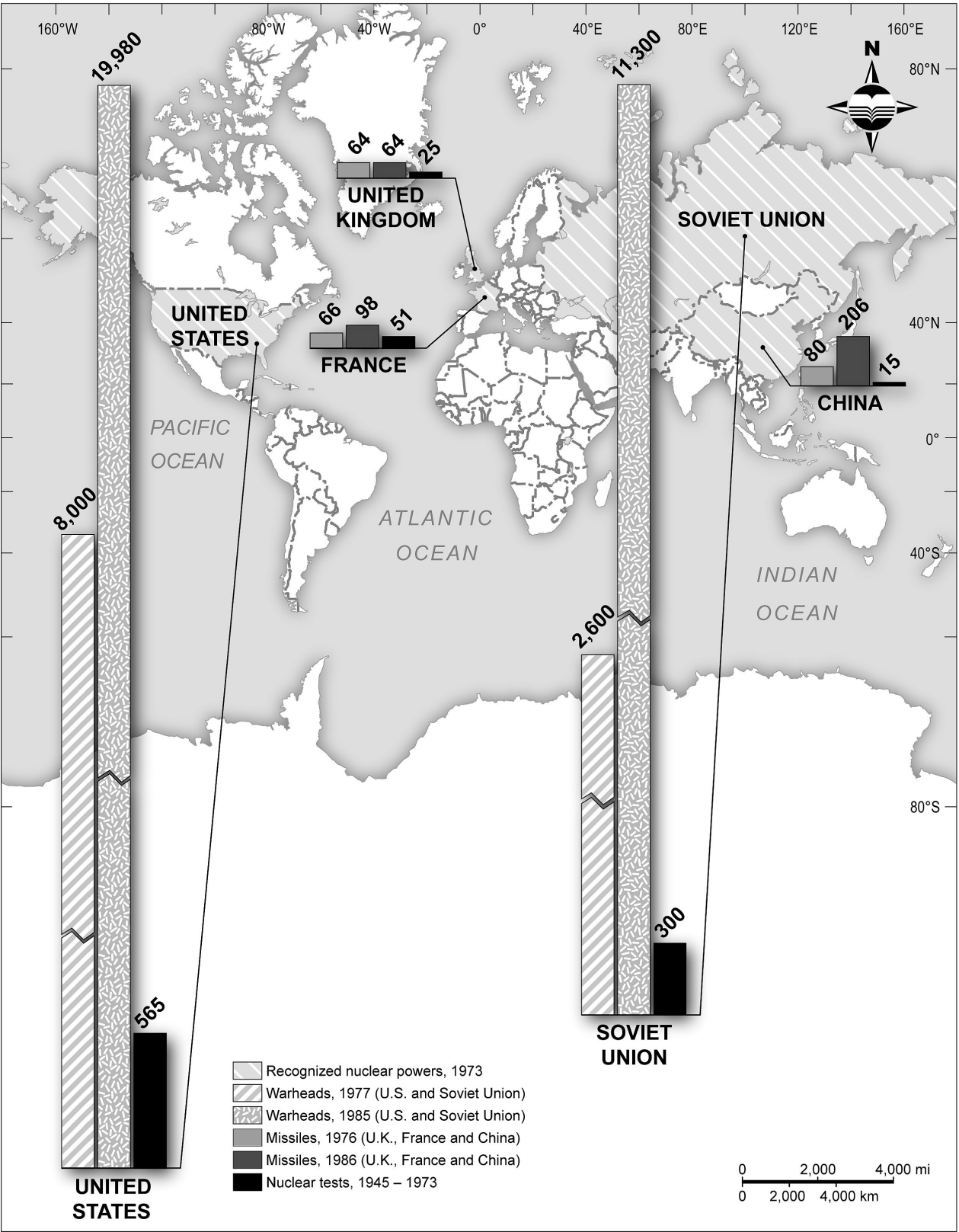
Bibliography

- Dickerson, James. *North to Canada: Men and Women against the Vietnam War*. Westport, CT: Praeger, 1999.
- Hunt, Andrew E. *The Turning: A History of Vietnam Veterans Against the War*. New York: New York University Press, 1999.
- Hunt, Richard A. *Pacification: The American Struggle for Vietnam's Hearts and Minds*. Boulder, CO: Westview, 1995.
- Small, Melvin. *Antiwarriors: The Vietnam War and the Battle for America's Hearts and Minds*. Wilmington, DE: SR Books, 2002.
- Topmiller, Robert J. *The Lotus Unleashed: The Buddhist Peace Movement in South Vietnam, 1964–1966*. Lexington: University Press of Kentucky, 2002.

Antinuclear Weaponry Movement

The antinuclear weaponry movement has been a worldwide movement opposed to the development, testing, deployment, and use of nuclear

NUCLEAR ARMS RACE, 1945 – 1985



➤ STRONTIUM 90 IN BREAST MILK AND TEETH

“Your Children’s Teeth Contain Strontium-90,” proclaimed an advertisement taken out by the Dentists for SANE in the *New York Times* on April 7, 1963. The dentists’ group was affiliated with the lead antinuclear weaponry group of the day, SANE (the National Committee for a Sane Nuclear Policy). The ad declared that the teeth and bones of all of the children, indeed of all of the people in the world, contained the radioactive isotope strontium 90 as a result of the fallout from H-bomb tests being conducted by the United States and the Soviet Union. SANE and its affiliated groups were advocating for a treaty banning the atmospheric testing of nuclear weapons.

This ad was part of a series of ads that SANE had taken out that emphasized the dangers to public health posed not by nuclear war but by the testing of nuclear weapons. Fallout from nuclear weapon tests had been traced to areas far from the test sites themselves, and news stories had warned that traces of radioactive fallout had been detected in milk worldwide as well as in children’s teeth. Such efforts were a factor in the Partial Test Ban Treaty of 1963, which banned nuclear weapon tests in the atmosphere.

—Robert A. Jacobs

weapons as tools of war by any government. Some of these groups have worked to halt the spread of nuclear weapon technology and the growth of weapon stockpiles, while other groups have sought to eliminate such weapons from the arsenals of all nations.

Within mere months of the nuclear bombing of Hiroshima and Nagasaki, there were several organized antinuclear weapon groups. Among the most public and vociferous of the early movements were the antinuclear efforts of scientists, many of whom had worked on the Manhattan Project on the construction of the first bombs. These groups, known collectively as the scientists’ movement, worked diligently to educate people about the true dangers of nuclear weapons. They advocated for civilian as opposed to military control of atomic energy in the United States, which was achieved with Congress’s creation of the Atomic Energy Commission; they

also advocated for a world government to reduce the risk of nuclear warfare between nations. In 1945, members of the scientists’ movement created the magazine *Bulletin of the Atomic Scientists*, which published broadly on nuclear issues along with the Doomsday Clock, which the bulletin first featured in 1947. This is a visual representation of the level of nuclear tensions between the nations of the earth displayed in the format of a clock face showing how many minutes were left until midnight, with midnight representing nuclear war.

The scientists’ movement and other early antinuclear weaponry groups fell apart once the Soviet Union developed nuclear weapons in late 1949. Members of these early groups became the targets of the anticommunist fervor of the early 1950s, and their organizations were labeled communist front organizations. But in response to the development of thermonuclear weapons in the mid-1950s and the increased number of atmospheric nuclear weapon tests of the late 1950s, new groups dedicated to the abolition of nuclear weapons began to spring up.

This second wave of antinuclear weaponry protests was triggered by fears generated from the release of large quantities of radioactive particles from nuclear weapon testing. The Castle-Bravo test of the first deliverable hydrogen bomb in March 1954 produced radioactive fallout that contaminated hundreds of Pacific islanders and the crew of a Japanese fishing boat even though they were located well over 100 miles from ground zero. All of these people became sick from radiation poisoning, and eventually one of the Japanese fishermen died from radiation sickness. In the next several years, radioactive fallout from H-bomb tests were detected in many parts of the world, leading to widespread fears of contamination from testing separate from the fear of nuclear war itself.

Among the most important of the new antinuclear weaponry groups was the National Committee for a Sane Nuclear Policy (SANE), which took out a series of high-profile advertisements that dramatically raised awareness of the risks of fallout from weapon testing. SANE and other antinuclear groups helped to compel governments that possessed nuclear weapons to sign the Test Ban Treaty in 1963 that outlawed the testing of

weapons in the atmosphere. As the tests went underground, so too did public awareness of nuclear weapon testing itself, replaced in part by concerns about the conventional war being fought in Vietnam.

The third significant wave of antinuclear weaponry protests began in the early 1980s partly in response to a renewed round of nuclear brinksmanship from the administration of U.S. president Ronald Reagan. The worldwide Nuclear Freeze movement grew suddenly during 1980–1982 and included people from dozens of countries, generating some of the largest public protests ever held. These protestors demanded a freeze in the testing, production, and deployment of new nuclear weapons on the part of all nations that possessed nuclear weapons. In June 1982, more than 1 million people marched through New York's Central Park in support of the freeze, the largest protest ever held in U.S. history. Many more protested the deployment of new weapons in Western Europe to counter the superior numbers of Soviet ground troops in Eastern Europe. The fall of the Soviet Union in 1989 and the subsequent end of the Cold War marked the end of this most recent round of antinuclear weapon protests.

While previously the focus of antinuclear weaponry protests was centered on the threat of nuclear war posed by the Cold War between the United States and the Soviet Union, the post-Cold War focus has been on the problems of nuclear weapon proliferation. The acquisition of nuclear weapons by a number of smaller countries and the black market in nuclear technology have created a new dynamic that is likely to become the primary concern of any future protest movements.

—Robert A. Jacobs

Bibliography

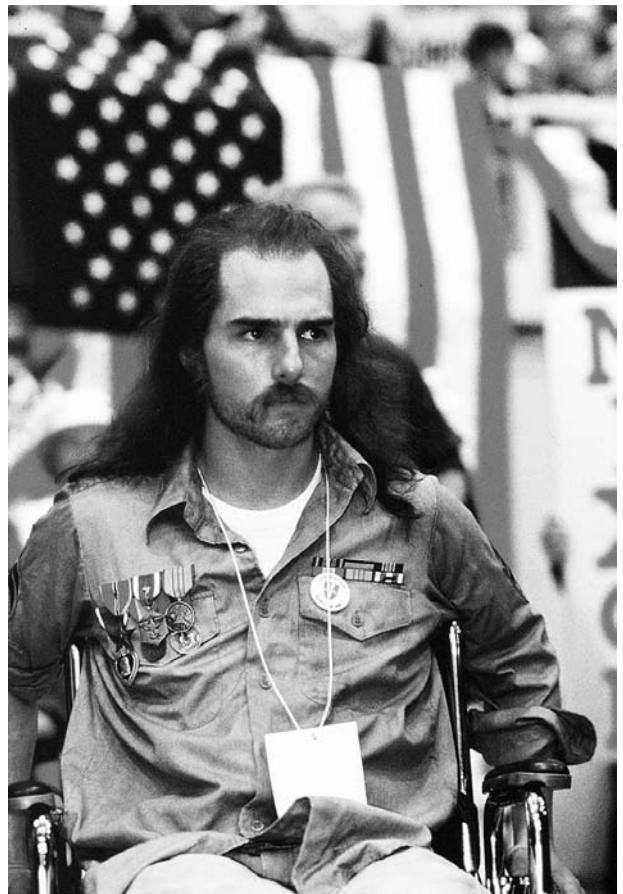
- Adams, David. *The American Peace Movements*. New Haven, CT: Advocate Press, 1985.
- Katz, Milton S. *Ban the Bomb: A History of SANE, the Committee for a Sane Nuclear Policy*. New York: Praeger, 1986.
- Smith, Alice Kimbal. *A Peril and a Hope: The Scientists' Movement in America, 1945–47*. Chicago: University of Chicago Press, 1965.
- Weart, Spencer. *Nuclear Fear: A History of Images*. Cambridge: Harvard University Press, 1988.

Wittner, Lawrence S. *The Struggle against the Bomb, Vol. 2, Resisting the Bomb, 1954–1970*. Stanford, CA: Stanford University Press, 1997.

Antiwar in Art, Literature, and Film

Wars never fail to elicit extreme reactions from those societies that are affected by them. During the twentieth century, as technology made wide-scale slaughter easier, antiwar messages became increasingly common worldwide in art, literature, and film.

Examples of visual art that revealed the atrocities and anguish that accompanied modern warfare became prevalent during World War I, particularly in the work of German artists George Grosz and Otto Dix.



Tom Cruise in *Born on the Fourth of July*, an Oliver Stone film based on the memoirs of Ron Kovic, a disabled Vietnam War veteran who became an antiwar activist, disenchanted with U.S. aims in Vietnam. (Universal/The Kobal Collection/Roland Neveu)

Antiwar literature in the form of poetry, short stories, and novels also became pronounced during World War I. *All Quiet on the Western Front* (first published in 1929 and produced as a film in 1930), German author Erich Remarque's story of a young soldier's depressing experience, made such a strong antiwar statement that the German government banned it.

Although the motivations behind the fighting of World War II were considered moral and just by many, even the so-called good war produced antiwar sentiment. The 1946 film *The Best Years of Our Lives* presented the troubles that former soldiers had in reacclimating to civilian life. John Hersey's 1946 book *Hiroshima* was one of the first to look at the horrific effects of the use of atomic bombs on Japan. Hersey's powerful work examines how the lives of six different people were altered by the bombing. Alain Resnais's 1955 documentary *Night and Fog* depicts the horrors of the Holocaust, with disturbing images of the deserted concentration camps contrasted with wartime footage.

Even in the 1950s before the United States had been deeply drawn into the quagmire, Graham Greene's *The Quiet American* (1955) predicted that American involvement in Southeast Asia would have disastrous consequences.

During the 1960s, the Vietnam War inspired a new generation of artists to use their craft to speak out against war. It also led to a rethinking of earlier wars. Joseph Heller's novel *Catch-22* (1961) is a fictionalized account that brought to light the confusion, guilt, corruption, and systematized irrationality that accompanied World War II. Kurt Vonnegut's *Slaughterhouse-Five* (1969) used satire and irony to convey the cruelty of war, particularly the Allied firebombing of Dresden during World War II. Thomas Berger's *Little Big Man* (1964) refashioned the usual heroic narrative of the conquest of the American West.

Specifically addressing the U.S. war in Vietnam, Antonio Frasconi's woodcuts depicted the massive U.S. bombings against North Vietnam, and the popular American artist Jasper Johns deviated from his apolitical yet iconic depictions of American flags with his *Moratorium* print. In this work, Johns departed from his traditional

red, white, and blue flag and instead painted a toxic flag, with the acid green background serving as a symbol of the poison of war that had spread across the nation. Of course, there were many other symbols of protest such as the peace symbol, which began as a symbol of the anti-nuclear movement of the 1950s, as well as posters depicting the white dove of peace. One popular poster, designed by Lorraine Schneider, declared that "War is not healthy for children and other living things."

Journalists began to write about their own experiences in Vietnam while maintaining an objective, factual depiction. Michael Herr's *Dispatches* (1977) offers a vivid portrayal of an American soldier's devastating experiences during the Vietnam War.

Tim O'Brien used his own personal experiences as a soldier to make strong statements with his novel *Going After Cacciato* (1978) and nonfiction works such as *If I Die in a Combat Zone* (1973) and the later novel *The Things They Carried* (1990). Bobbie Ann Mason's *In Country* (1985) is an emotional fictional account of characters who had their lives drastically altered by the war.

The Vietnam War also became a platform for many filmmakers to express their views on the horrors of modern war. Oliver Stone's films include indictments from the soldier's point of view, particularly in *Born on the Fourth of July* (1989) and *Platoon* (1986). Francis Ford Coppola's *Apocalypse Now* (1979) portrayed Vietnam as a hallucinatory experience. Along with antiwar art and literature, films have played an important role in expressing political and humanitarian views against war.

—Nicole L. Anslover

Bibliography

- Hillstrom, Kevin, and Laurie Collier Hillstrom. *The Vietnam Experience: A Concise Encyclopedia of American Literature, Songs, and Films*. Westport, CT: Greenwood, 1998.
- Malo, Jean-Jacques, and Tony Williams. *Vietnam War Films: Over 600 Feature, Made-For-TV, Pilot and Short Movies, 1939–1992, from the United States, Vietnam, France, Belgium, Australia, Hong Kong, South Africa, Great Britain and Other Countries*. Jefferson, NC: McFarland, 1994.

Vernon, Alex. *Soldiers Once and Still: Ernest Hemingway, James Salter, and Tim O'Brien*. Iowa City: University of Iowa Press, 2004.

War Memorials since 1945

War memorials, particularly those of World War II, exist in many countries that were directly affected by armed conflict, military and civilian casualties, and the destruction of cities and infrastructure. Such memorials, in the form of museums, monuments, parks, and former concentration and death camps turned tourist destinations, have a considerable historical value often affected by contemporary politics related to public memory. How people choose to remember the past, as filtered through contemporary political and social realities, can determine how such war memorials function in bolstering either a semimythic collective memory or a less ideologically embellished and thus more accurate commemoration. Yet ideology—or a shared set of values and assumptions—inevitably colors all such displays.

In the aftermath of World War II in most every nation involved in the war, war memorials were erected to commemorate the dead, emphasizing their struggle against insurmountable odds or their status as victims caught in a situation beyond their control. The postwar divisions of Europe created an ideological divide that relegated most of Eastern Europe to the economic and political domination of the Soviet Union. Many of the war memorials in the communist Eastern Bloc constructed immediately after the war emphasized the solidarity of loyal socialists to the ideals of communism in the face of the fascist-capitalist invader, National Socialist Germany. In light of the impending Cold War, it was particularly important to emphasize the connection between fascism and capitalism given U.S. hegemony in Western Europe. This allowed the various communist governments in Eastern Europe to construct war memorials highlighting their subservience to communism during the so-called Great Patriotic War (World War II) while overlooking historical realities such as widespread collaboration with the enemy, particularly in Poland, the Baltic countries, and Hungary, or the

YASUKUNI SHRINE



(Matsukin)

Yasukuni Shrine was constructed in 1869 to commemorate Japanese war dead, initially of combatants who died for the Meiji emperor as part of the overthrow of the Tokugawa Shogunate. The names of over 2.4 million Japanese combatants of the nineteenth and twentieth centuries now are inscribed at Yasukuni Shrine in a “book of souls.” Believed to house the spirits of those commemorated, this Shinto shrine is particularly controversial because as of 1978, the names of 14 World War II war criminals were added. In subsequent decades, protests from the governments of the Koreas and China have followed Japanese prime ministers’ visits to the shrine.

—Fred Nadis

immediate postwar persecution and extermination of German refugees attempting to return westward into Germany (both East and West).

Memories of the Holocaust, the extermination of 6 million Jews under the National Socialist regime, took on different meanings in both the U.S.-dominated West and the Soviet-controlled East. In the democratic West, Holocaust memorials emphasized the destruction of European Jews at the hands of the Third Reich and its non-German collaborators. Museums, former camps, and monuments were established in various places in Europe, such as the Holocaust

► THE *ENOLA GAY* CONTROVERSY— U.S. MEMORY OF HIROSHIMA

As part of an exhibit at the Smithsonian Institution in 1994 commemorating the 50th anniversary of the atomic bombing of Hiroshima, the planned display of the fuselage of the bomber *Enola Gay*, used to drop the atomic bomb, ignited a national controversy. The exhibit “The Crossroads: The End of World War II, the Atomic Bomb and the Cold War” was prepared by the Smithsonian’s National Air and Space Museum and centered on a restored version of *Enola Gay*. However, various critics, particularly U.S. veterans’ groups such as the American Legion and the Air Force Association, alleged that the exhibit and its planned accompanying text focused only on the casualties caused by the bombing and not on the motives for the bombing (i.e., President Harry S. Truman’s assertion that the bombing would avoid massive American casualties from a land invasion of mainland Japan) or its role in ending the war.

The *Enola Gay* exhibit brought to national attention various academic and political issues directly related to interpretations of U.S. motives for the atomic bombing of Japanese cities. It became the center of political attention in Washington, when some Republican lawmakers threatened to cut off funding to the Smithsonian if the exhibit was not revised to meet the specifications of veterans’ groups. Academic historians and civil liberties organizations urged the Smithsonian to maintain the exhibit and not to falter amid such threats. Many attempts were made to revise the exhibit to meet the demands of the infuriated interest groups, achieving little to satisfy either side. The original director of the National Air and Space Museum, Martin Harwit, resigned a month before the bomber was finally displayed on June 28, 1995, with an exhibit emphasizing the *Enola Gay*’s role in ending World War II.

—Abraham O. Mendoza

memorial (Mémorial de la Shoah) in Paris, the Dachau concentration camp in Germany, and the Anne Frank House in the Netherlands, to commemorate the Jewish genocide and to serve as a reminder of genocide in our own time. In the socialist East, memorials that should have been associated with the Jewish people, such as

various Warsaw memorials in Poland and the Buchenwald concentration camp in the former East Germany, instead were associated with the suffering of loyal communists at the hands of fascism. Ethnicity and nationality were overlooked as factors in commemoration, with Jews recognized as Poles particularly in the memorial at Auschwitz (in Poland), completely evading the realities of Polish collaboration and leading many critics in the West to assume that this approach fulfilled ideological aims. In contrast, the newly created State of Israel (1948) commemorated the Holocaust in various museums and monuments, particularly Yad Vashem in Jerusalem, leading some critics to claim that such commemorative exhibitions were created to justify the creation of the Israeli state in Jewish collective memory.

In the portrayal of various war memorials in the former belligerent countries of World War II, the home country is generally depicted as a victim of war rather than as an aggressor, glossing over history to fit current domestic politics. In particular, Germans (both East and West) paint their past as victims of both the Nazis and the Allies in their memorials commemorating the catastrophic U.S. and British aerial bombings of Dresden and in the creation of the mythology of the so-called Good Germans (e.g., Klaus von Stauffenberg and the July Plot, Sophie Scholl and the White Rose movement). Such tactics completely disregard the role of a considerable German plurality during World War II in enacting National Socialist policies. In a similar vein, Japan’s memories of Hiroshima and Nagasaki often have been used to highlight the controversial American use of the atomic bomb while overlooking the role of the Japanese populace in supporting wars of aggression in Southeast Asia, China, and the Pacific. In particular, the Yasukuni Shrine in Japan, where a number of convicted World War II war criminals are interred, has been regularly visited by Japanese politicians, leading to protests in China and North and South Korea. Much like German memorials, this emphasis causes much consternation among the descendants of former conquered enemies and victims.

Another type of war memorial, purposefully lacking in ideological and political sentiment, allows the observer to interpret it from his or

her own perspective. War memorials, such as the Pearl Harbor National Monument in Hawaii and the Vietnam War Memorial in Washington, D.C., are attempts to commemorate events with a minimum of ideological baggage rather than create mythological constructs to influence collective memory. Such displays, with a minimum of context cues, allow people from different points of view to commemorate and view such an exhibit with their own interpretation of the event under observation. The Vietnam War Memorial, characterized by the inscriptions of the names of the U.S. war dead on two black granite walls, allows the observer to commemorate the Vietnam War

from his or her own personal perspective. However, these war memorials are still scrutinized by some critics and veterans groups as disrespectful or negligent of the troops' efforts.

—*Abraham O. Mendoza*

Bibliography

- Bleakney, Julia. *Revisiting Vietnam: Memoirs, Memorials, Museums*. New York: Routledge, 2006.
- Hogan, Michael J., ed. *Hiroshima in History and Memory*. New York: Cambridge University Press, 1996.
- Marcuse, Harold. *Legacies of Dachau: The Uses and Abuses of a Concentration Camp, 1933–2001*. New York: Cambridge University Press, 2001.

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Thought and Religion

The changing reality of life after World War II has had a dramatic impact on theologians, philosophers, and established worldviews. The period from 1945 to the present, as reflected in thought and religion, can usefully be dubbed the age of posts. Depending on who is making the list, these posts for thought and religion might include postwar, post-Holocaust, postcolonial, and postmodern. These terms indicate radical challenges to ruling belief systems. From the perspective of the early twenty-first century, the brutal events of the preceding century (including the use of atomic weapons and the death camps of the Holocaust) revealed the limits of the simple faith in scientific progress and rationality that was common in the West since the period of the Enlightenment. Throughout his work, Karl Marx argued that thought, and for that matter religion, follows the economic base. Peoples and governments rationalize their economic and political systems in terms of a shared ideology. In the postwar period, cracks began to appear in dominant ideologies (this includes both the communist and capitalist worlds). Since 1945, in addition to a growing distrust with the notion of progress, the economic transformation connected to increasing globalization has forced critiques of Eurocentric or Western-centric assumptions and hierarchies in thought. This has sharpened some cultural divides and ideological conflicts yet also offers greater hopes for a widening ecumenism, that is, efforts to seek unity across significant divides.

The atrocities of World War II gave a new impetus to an ecumenical movement. Reactions to war atrocities had a major impact on thought and religion, as people of conscience reflected on the Holocaust, in which the Nazis and their collaborators, with little opposition, slaughtered 6 million Jews and another 2 million perceived enemies including non-Jewish Poles, Roma-Sinti (Gypsies), disabled people, and homosexuals. The Holocaust revealed the ultimate amorality of the ideals of efficiency and rationality as well as the bankruptcy of the racial and ethnic hierarchies embedded in the Western concepts of progress and modernization. In a conscious effort to promote ecumenism—that is, an acceptance of religious pluralism and outreach between different denominations—the World Council of Churches was formed in 1948 with a meeting in Amsterdam. The aftermath of World War II and the Holocaust also played a role in prompting the Catholic Church's liberal reforms during

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Vatican II in the early 1960s; implicit in Vatican II was a decision to move beyond the Catholic Church's earlier rejections of religious pluralism and to further notions of tolerance and ecumenism. In a general way it can be said that all of the major world religions underwent a similar shift to liberalization, as social activism and a concern with poverty and social equality began to inflect mainline religious services in the developed and developing world in the 1950s and 1960s. The African American church had a major role in the U.S. civil rights movement of the 1950s and 1960s, affirming the connection between religion and social activism; protests against the U.S. role in the Vietnam War also galvanized the liberal clergy in the United States; in ensuing decades, Catholic priests in Latin America promoted the cause of liberation theology to promote social equality and combat poverty and its ills.

One of the major surprises to secularists and believers in the idea of progress has been the religious ferment of the postwar period. Despite the high hopes for the secularist state (one in which religion has no direct structural role) on both sides of the Cold War divide—including an active suppression of religion in much of the Communist Bloc—religion did not wither away. The Cold War nuclear arms race, in which nuclear annihilation could at any moment be imminent, encouraged a millennialist attitude that the end was near. Such fears aided, for example, the mass Christian revivals of the 1950s, typified by Billy Graham's crusades in the United States and Britain. In the communist world, a newly suppressed Church became a powerful force of opposition to central authority, as particularly seen in Poland after the harsh suppression of clergy. While the founders of the State of Israel by and large were secular socialists, ultra-Orthodox Jews, seeing in secular Zionist a fulfillment of a narrative of religious redemption, consistently urged the establishment of a state religion and grew to become a powerful political force, represented in the Knesset, the Israeli parliament. In the developing world, the last few decades of the twentieth century showed the consistent growth of Christian evangelism, particularly of Pentecostalism in

Latin America and Africa. Adherents to Islam have also increased, as the secularist vision of authoritarian states, such as that under the shah of Iran, were deemed social catastrophes, and as a global labor market stimulated the growth of large diaspora communities for which religious identity provides cohesion. Religious fundamentalism as a political force, whether channeled through nonstate revolutionary groups or via electoral politics, has become a part of the fabric of politics in the

Religious fundamentalism as a political force, whether channeled through nonstate revolutionary groups or via electoral politics, has become a part of the fabric of politics in the United States, Israel, many Islamic majority countries, South Asia, and elsewhere.

United States, Israel, many Islamic majority countries, South Asia, and elsewhere. Clearly, mainstream religions have not withered either. All the major religions have grown, so that as of 2009 Christianity, with its 2 billion adherents, and Islam, with over 1.25 billion adherents, constituted more than half of the world's population.

As European powers withdrew from former colonies in the postwar period, some indigenous leaders placed their hopes in the secular state on the Western model (alongside the possibilities of modernization and development), but many also sought to shape institutions that preserved and valorized traditional culture. Authors such as Frantz Fanon, and later Edward Said, argued that a view of cultural superiority and hierarchy was enmeshed in European language and thought. Such assumptions were to be overturned. Postcolonialist intellectuals did not necessarily reject the modern but rather embraced a hybrid identity as well as new syncretic (synthesized from varied sources) forms of governance, culture, and even religious worship. From such a point of view, secularism could be painted as a cohort of Western imperialism. Mao Zedong, as leader of the People's Republic of China, supported a radical anti-imperialist vision for the developing world that also encouraged a harsh rejection of Western support. For Mao it was not so much modernity but imperialism that had to be rejected. Countries with Islamic majorities such as Turkey early in the twentieth century, and Iran in mid-century, had embarked on modernization projects, yet the Iranian Revolution indicated a strong faction that rejected Western domination and Western values and that largely approved a return to the guiding principles of Islam and a theocratic state. Secularists and Islamists still are engaged in a standoff in these countries, with Islamists generally rejecting local nationalist identities—and for that matter, the bland unitary identity implied in globalization—while preferring the dream of an *ummah*, or united Islam. The breakup of colonialism, as well as of the Soviet Union, has led many peoples to link nationalist dreams with religious affiliations. A prime example would be the conflicted relationship in postcolonial South Asia among Hindu, Muslim, and Sikh nationalists.

The term “postmodern” is a catch-all that attempts to map many of the conditions discussed above for the post-1945 period. First, it marks a rejection of modernism, such as the sleek geometric style in prewar architecture that was perhaps the apotheosis of Enlightenment ideals of rationalism. Second, it marks an attempt to decode and reject the cultural hierarchies embedded in literature, language, and culture. These hierarchies might reflect not only cultural imperialism but also unstated sexist, racist, or even speciesist assumptions. And perhaps most importantly, postmodernism revolves around a diagnosis of the economic condition that Frederic Jameson termed late capitalism. Late capitalism, which might also be termed high consumerism, encourages an advertising-soaked culture in which signs and images gain dominance over text and logic. The postmodern analysis of late capitalism also dovetails with the acceleration of globalization, that is, the spread of consumer culture concentrated in global cities. Postmodern thought acknowledges the impact of global migrations, growing diasporic communities, and the hybridization of culture in which regional traditions and norms are mixed and dissolved. Literary critics have spoken of de-centered texts, and postmodernists also have argued for a de-centered social landscape in which cultural authority is up for grabs. Eurocentrism is no longer a hidden assumption but instead is more easily revealed as a

slight absurdity in a global age. For some, postmodernism implies a relativism that moves past the ethic of ecumenism to an embrace of the irrational—or at least extreme skepticism. Meaning ultimately cannot be grounded. Anyone with a Web site can reach out to a global audience, and, potentially, initiate a new religion. A culture of signs encourages a neoprimitivism that Marshall McLuhan first diagnosed when he spoke of the new tribalism of media culture. And indeed, what are termed New Religious Movements, whether decked out with archaic or science fiction trappings, have flourished since the dropping of the atomic bomb as old myths are repackaged and spread anew in forms varying from shaman retreat seminars to neopaganism or Scientology. Conspiracy theories have also proliferated as traditional centers of cultural authority (including faith in scientific authority) are questioned and new modes of communications such as the Internet and cell phone text messaging systems allow rumors to spread and gather momentum.

While what might be termed the postmodern era has not yet come to an end, certainly the vision of meaning as an exile in an endless hall of mirrors has limited appeal. Late capitalism with its luxury and fog of deception may be giving way in a new age of limits in which both global warming and economic downturn demand a more grounded ethical vision.

—Fred Nadis

■ Introduction: Major World Religions

Recent developments in Buddhism, Christianity, Judaism, Islam, and Hinduism have collectively assembled the foundation for most spiritual experience in the twenty-first century. While many new converts were made to these major world religions, alternative religions have also grown.

Shortly after World War II, Buddhism in China, Tibet, and Cambodia suffered suppression under communism. When Chinese Buddhism refused to die upon the 1949 institution of the People's Republic, the government engineered violent attacks on Buddhist temples and leaders during 1966–1976. This action represented a continuation of communist China's suppression of Buddhism after its 1959 invasion of Tibet in which monasteries were looted, libraries were burned, over one million believers were martyred, and the current Dalai Lama, Tenzin Gyatso (b. 1935) was forced into exile. Likewise, between 1975 and 1979 the Khmer Rouge launched

a systematic decimation of Cambodian Buddhism. But these losses have been more than counterbalanced by Buddhism's significant growth in the non-Asian world. Daisetz Teitaro Suzuki (1870–1966) effectively transmitted Buddhism in general and Zen in particular to a generation of Westerners through over 30 volumes in English.

The Roman Catholic Church experienced internal revitalization and external reconciliation with other Christian groups at Vatican II (1962–1965), called by Pope John XXIII (r. 1958–1963). Championing *aggiornamento* (renewal or bringing up to date), Vatican II substituted the vernacular for Latin in the Mass, eliminated the Index of Prohibited Books, sanctioned new translations of the Bible, and authorized lay women and men to serve as teachers, Eucharistic ministers, and altar attendants. Not only did Pope Paul VI (r. 1963–1978) and Ecumenical Patriarch Athenagoras I (r. 1948–1972) revoke the 1054 mutual excommunication between Catholics and Eastern

Orthodox, but the council deemed Protestants as separated brethren no longer to be regarded as heretics.

Following the 1948 establishment of the World Council of Churches, newly allied Protestants sustained an ecumenical spirit through the Evangelicals and Catholics Together movement (started in 1994) and the 1999 Joint Statement on Justification between the Lutheran World Federation and the Catholic Church. In some cases denominations rejoined to heal old schisms, while in other cases struggles between theologically liberal church leaders and more conservative or orthodox leaders led to significant separations into new church bodies. Even the Roman Catholic Church suffered losses in membership due to the spread of secularism.

In the West, secularization has triggered the decline of mainline denominations. These denominations have adopted liberal theologies that are secularized versions of traditional beliefs, have abandoned traditional convert-making missions, and have become essentially social service agencies. Secularization in the West has not meant the abandonment of religion for atheism except for relatively small numbers of people. The most common response to the abandonment of traditional Christianity has been the adoption of some form of spirituality. The alternative religions of today can be categorized as new religions or as the return of the religions of native peoples. Neopaganism, for example, may include practices and beliefs derived from the religions of native peoples, including a revived interest in shamanism.

The most significant Christian increases are transpiring outside the Western world, as the Pentecostal-Charismatic movement sweeps through Latin America, Africa, and Asia. In addition, Orthodox Christianity moved beyond its ancient heartland of Eastern and Southern Europe to assume a significant presence in the Americas and in Australia through the migration of numerous Greek and Slavic immigrants. Today Christianity is no longer a North American and European religion but instead is a truly global faith, with 1.2 billion non-Western Christians compared to .8 billion Western ones. Many non-Western churches see Europe and North America as mission fields. As immigrants from Asia,

Latin America, and Africa, both legal and illegal, have moved into Western Europe and North America, they have brought their strongly held faith and have become communities of spiritual renewal to either compete with or to renew mainline Christianity.

Largely as a response to the Holocaust, the United Nations partitioned the formerly British-governed Palestine into Jewish and Arab sectors, thereby creating the modern nation-state of Israel in 1948. Several diverse schools of thought thrive in contemporary Judaism. Most traditional is Orthodox Judaism, holding strictly to the Decalogue plus 613 additional mitzvot, or commandments, in the Torah. By contrast, Reform Jews regard most mitzvot as outdated and instead conceive the essence of Judaism as an ethical monotheism harmonious with progress. Mediating between the Orthodox and Reform branches, Conservative Judaism preserves traditional practices but reinterprets Jewish law in view of modernity and historical criticism.

Over the past 30 years Western academics have observed the trend of Islamic revival or resurgent Islam in Africa, the Middle East, and North America. Although the events of September 11, 2001, evoked a clash of civilizations in Western consciousness, two pacifying dynamics are frequently overlooked. First, many Muslim leaders worldwide sense the need to modernize Islam by allowing lay Muslims to interpret the Quran for themselves in ways that take into account twenty-first-century cultural circumstances. Second, realizing that extremists frame current sociopolitical problems in theological terms, Muslim moderates have exhorted Western governments to undermine extremist solutions by proactively remedying past and present injustices against Muslims in Palestine, Iraq, Chechnya, Algeria, and Bosnia. The tension between Islamism and moderate Islam can best be seen in the Shia nation-state of Iran, where a largely tolerant population has found itself at odds with antimodern leadership since the ascendancy of Ayatollah Khomeini (1902–1989) in the 1979 Islamic Revolution.

It should be noted that religious extremism is not unique to Islam but can be found in most if not all religions. By “extremism” means the attempt to live out the principles of the religion in an absolute manner that may include in the case

of Christians a refusal to use the means of medical science and instead depend upon faith healing for the treatment of a disease or injury. Other forms of extremism include the use of violence to advance religious beliefs, which has been seized upon by fringe groups in Judaism, Christianity, Islam, Hinduism, Sikhism, and other religions.

Mohandas (Mahatma) Gandhi (1869–1948) attempted to synthesize Hindu spirituality with politics as he spearheaded the 1947 victory of Indian independence movements in breaking from British colonial rule. At the center of this effort was Gandhi's concept of truth grasping, derived from karma-yoga and the Sermon on the Mount, according to which spiritual integrity and discipline in individual life proved indispensable for securing communal moral victories in the political arena. Accordingly, Gandhi championed nonviolent resistance against imperial rule and advocated the dissolution of caste restrictions against the *barijans* (untouchables), advances for the latter of which are now enshrined in an Indian democratic constitution. Despite his successful leadership, Gandhi was assassinated by a Hindu extremist.

Finally, India's inheritance of the English language has enabled it to spread Hindu teachings in English rather than in the less widely spoken Hindi or in the classical language of Sanskrit. Born in sixteenth-century India with roots in Hinduism and Islam, Sikhism has spread from its native Punjab to most major Western cities and now claims nearly 19 million followers.

The religions of African and American indigenous groups continue to exist and effectively allow tribal histories and memories of the ancestors to exert a powerful impact on the present. In some cases indigenous religions have increased with population growth.

—Kirk R. MacGregor

Bibliography

- Esposito, John L., Darrell J. Fasching, and Todd Lewis. *World Religions Today*. 2nd ed. Oxford: Oxford University Press, 2006.
- Matthews, Warren. *World Religions*. 5th ed. Belmont, CA: Thomson Wadsworth, 2007.
- Molloy, Michael. *Experiencing the World's Religions: Tradition, Challenge, and Change*. 3rd ed. Boston: McGraw-Hill, 2005.

Partridge, Christopher, gen. ed. *Introduction to World Religions*. Minneapolis: Fortress, 2005.

Robinson, Thomas A., and Hillary Rodrigues, eds. *World Religions: A Guide to the Essentials*. Peabody, MA: Hendrickson, 2006.

Hinduism since 1945

With roughly 900 million adherents worldwide, Hinduism has the third largest following among the world's religions (the two largest being Christianity and Islam, respectively). Hinduism is also the oldest of today's major religions, with a scriptural tradition dating to roughly 1500 BCE and some beliefs and practices possibly being derived from the Indus Valley civilization (ca. 2600–1900 BCE).

The vast majority of Hindus live in India and its neighboring countries in South Asia. Most Hindus are of South Asian ethnic descent, though in the modern period, non-South Asian practitioners of Hinduism have also emerged in North America and Europe due to the activities of spiritual teachers who have spread Hindu ideas and practices to the West. The first such spiritual teacher to have a major impact was Swami Vivekananda, whose address to the Parliament of World Religions in Chicago in 1893 is regarded as a watershed event in which Hinduism was popularized in the West for the first time.

Having no single founding figure or centralized institution, such as a church, to define correct belief and practice, Hinduism is a highly internally diversified and loosely organized tradition. In fact, Hinduism is better defined as a family of related traditions, united under the umbrella term "Hinduism," than as a singular tradition. The diversity of views and practices coexisting under this term rivals that of the world's major religions, with some Hindus believing in an impersonal ultimate reality (not unlike Buddhists and Taoists), others practicing devotion to a personal deity (not unlike Jews, Christians, and Muslims), and still others having no religious belief but living their lives according to Hindu cultural norms and societal expectations.

Bearing this internal diversity in mind, though, it is possible to locate widely held beliefs and practices that most Hindus share. Most Hindus believe in rebirth, or reincarnation, ac-

cording to which the souls of living beings are reborn in another form after death. This view is described in the widely revered Hindu scripture the *Bhagavad Gita* (Song of the Lord) as being akin to someone exchanging a set of old worn-out clothes for a new set. The type of body that the soul inhabits is determined by karma, a law of cause and effect that could be compared to Newton's Third Law of Motion: "For every action, there is an equal and opposite reaction." But karma applies not only in the realm of physics but also in the realm of morality and spirituality. Life can be seen as a school in which one is gradually learning right from wrong, through trial and error, and moving lifetime after lifetime toward the ultimate goal: *moksha*, or liberation from the cycle of birth, death, and rebirth.

The ways of attaining *moksha* and the ways in which *moksha* is conceived vary in different Hindu traditions. The Advaita Vedanta tradition views *moksha* as a matter of realizing the true nature of existence: that the self is ultimately identical to Brahman, the ultimate reality. In this view, our existence in the realm of rebirth is like a dream from which we are seeking to awaken. The Vaishnava traditions, in contrast, view *moksha* as a gift from God with whom one needs to cultivate a relationship of devotion, or *bhakti*. These views and others can all find support in the vast and greatly varied body of sacred texts on which the Hindu traditions are based, beginning with the *Vedas* (which most scholars date to between 1500 and 1000 BCE, though Hindu traditions hold them to be much older than this) and continuing through the *Upanishads* (ca. 600 to 200 BCE), the *Ramayana* and *Mahabharata* (ca. 300 BCE to 300 CE), the *Puranas* (ca. 300 to 600 CE), and numerous other philosophical and legal writings, or *shastras*.

Another feature of Hinduism is the social practice of *varna* (caste), a hereditary system of occupations that ranks different tasks in a hierarchy of purity, with Brahmins, the priestly caste, at the top and various menial tasks, considered unclean, at the bottom.

In the modern period, caste has become highly controversial in Hindu society, in some ways analogous to the issue of race in North America and Europe. While caste is still practiced in a highly conservative form in rural India,

Hindu reformers have sought either to divest it of the prejudicial attitudes with which it has been associated (this was the approach, for example, of Mahatma Gandhi) or to do away with it altogether (the approach of B. R. Ambedkar, the author of the Indian constitution).

Finally, the modern Hindu tradition has been characterized by tension between a universalist and pluralistic vision of Hinduism—embodied by such figures as Vivekananda and Gandhi—and Hindu nationalism, which identifies Hinduism exclusively with Indian nationality and ethnicity.

—Jeffery D. Long

Bibliography

- Doniger, Wendy. *The Hindus: An Alternative History*. New York: Penguin, 2009.
- Klostermaier, Klaus K. *A Survey of Hinduism*. 3rd ed. Albany: State University of New York Press, 2007.

Buddhism since 1945

Buddhism in the late modern period has experienced unprecedented opportunities for worldwide growth and serious challenges to its traditional forms of thought and practice. Prior to 1945, many Asian societies that were home to the Buddhist religion were under European colonial rule. Asian Buddhists and European colonialists and travelers emerged from these encounters profoundly changed, with Buddhists more keenly aware of their religion as something comparable to, yet different from, other religions such as Christianity. Europeans, and then later during World War II American military personnel, were exposed to Buddhist ideas, practices, and art, leading some of them to take a particular interest in the religion. These encounters would pave the way for the global spread of Buddhism and its practitioners, a phenomenon that accelerated in terms of pace and intensity after 1945.

A distinctly new form of Modern Buddhism had already begun to take shape starting in the latter part of the nineteenth century. This Modern Buddhism tended to be represented first and foremost as a system of ethical philosophy that excluded many of the traditional rituals found in the everyday lives of Asian Buddhists. Having redefined Buddhism as a supremely ethical and

➤ DALAI LAMA

The Dalai Lama is arguably the most recognizable and influential Buddhist living today. Born on July 6, 1935, in northeastern Tibet, Tenzin Gyatso was identified as the fourteenth reincarnation of the leader of the Gelug school of Tibetan Buddhist monks and was installed as the spiritual leader of Tibet in 1940. The title “Dalai Lama” translates as “Ocean (of Wisdom) Teacher,” and a Mongol ruler who converted to Buddhism in 1578 first bestowed it to the third successor of the monk Tsongkhapa, who founded the Gelug lineage. Ever since, the leader of the Gelug School has been called the Dalai Lama. The Fifth Dalai Lama (1617–1682) employed Mongol troops to defeat his enemies and consolidate his political power, effectively becoming the ruling viceroy over all Tibet. Each successive Dalai Lama was able to retain control over Tibet with the patronage and support of the Chinese well into the twentieth century, although this relationship ultimately compromised Tibet’s independent status after being annexed by the People’s Republic of China in 1959. In that same year, the current Dalai Lama was forced into exile and resettled in India along with tens of thousands of Tibetan refugees.

Currently, the Fourteenth Dalai Lama travels the world to advocate for Tibetan self-determination and the preservation of Tibetan culture. He is the acknowledged and beloved head of the Tibetan exile community, a Nobel Peace Prize winner, and a source of consternation for the government of China, which would like to quell Tibetan aspirations for independence. He is also a leading spokesperson for a modern form of Buddhism that highlights the tradition’s ethical foundations and compatibility with science. The Dalai Lama remains at the center of efforts to find a solution to the so-called Tibet Question that would preserve Tibetan Buddhism and culture within a political framework acceptable to China.

—Stephen C. Berkwitz

rationalistic faith, twentieth-century Buddhists of both Asian and Western origins were at once able to fend off the critiques of idolatry and superstition made by non-Buddhists and to invest Buddhism with a kind of universality that freed it from particular constraints of time and place. These changes were the products of larger pro-

cesses of globalization. The increasing attraction of democratic ideals, capitalist market forces, scientific knowledge, Western models of development, and popular culture across the world since 1945 have caused a radical break in the ways that Buddhism and Buddhist identity have been traditionally practiced and understood.

This newer globalized form of Buddhism, heavily influenced by encounters with Western cultures and institutions, has emerged as a competitor to more local and traditional forms of the religion. While Modern Buddhism is more widespread and perhaps more well entrenched in Western cultures, most of the world’s Buddhist population continues to privilege traditional rituals of venerating Buddha images and relics, supporting and paying homage to monks and nuns, and earning and sharing merit from the performance of deeds thought to yield positive karmic fruits. Buddhist thought generally affirms that such practices are helpful in alleviating the suffering of beings who are not yet liberated from *samsara*, or the cycle of repeated birth and death. However, there are some in Buddhist cultures who denounce, or at least supplement, traditional ritual forms of the religion in favor of (or in combination with) more universalizing modern expressions of Buddhism.

The spread of Modern Buddhism and its concordant emphases on meditation, egalitarian social structures, and a nonsectarian vision of what it means to be Buddhist are arguably the definitive characteristics of postwar Buddhism as a whole. In the past several decades, meditation has become the paradigmatic Buddhist practice, and it has been taken up by more laypersons than ever before in home practice, sitting groups, and meditation retreats. The stress on meditation as a Buddhist practice that is no longer restricted to a select group of monks supports the idea that nirvana (the ultimate goal of liberation from suffering and rebirth) is an attainable goal for almost everyone. This notion, moreover, symbolizes in Modern Buddhism the transcendence of traditional religious hierarchies that privilege monks over laypersons. The practice of meditation, with its emphasis on experience over textual study and moral discipline, has allowed Buddhists to embrace more democratic and egalitarian models for their communities. At the same time, the de-

centralization of traditional religious authority—in the form of texts and monks—has led Modern Buddhists to dismiss the relevance of sectarian identities and selectively appropriate certain practices and ideas from a variety of Asian Buddhist traditions.

Although the expansion of knowledge about and interest in Buddhism since 1945 is largely seen as a positive development, there have been negative trends as well. Huge numbers of Buddhists have become the victims of religious and political persecutions since 1945, leading many to worry about the future of their religion. Buddhist monks have suffered at the hands of Chinese communists who took over Tibet in 1951, the Khmer Rouge genocide in Cambodia during the late 1970s, and the violent separatist Tamil Tigers in Sri Lanka since 1982, among others. Communism and Islamism have also directly led to the suppression and destruction of Buddhist institutions and monuments across Asia from time to time. Nevertheless, the survival and continued growth of Buddhism in the modern world seems assured, even if we do not yet know the long-term effects of modernity on the more traditional forms of the religion.

—Stephen C. Berkwitz

Bibliography

- Berkwitz, Stephen C. "The History of Buddhism in Retrospect." In *Buddhism in World Cultures: Comparative Perspectives*, edited by Stephen C. Berkwitz. Santa Barbara, CA: ABC-CLIO, 2006.
- Gyatso, Tenzin. *Freedom in Exile: The Autobiography of the Dalai Lama*. San Francisco: Harper-Collins, 1990.
- Hallisey, Charles. "Buddhist Ethics: Trajectories." In *The Blackwell Companion to Religious Ethics*, edited by William Schweiker. Malden, MA: Blackwell, 2005.
- Lopez, Donald S., Jr. *A Modern Buddhist Bible: Essential Readings from East and West*. Boston: Beacon, 2002.
- Lopez, Donald S., Jr. *Prisoners of Shangri-La: Tibetan Buddhism and the West*. Chicago: University of Chicago Press, 1998.

Islam since 1945

As of 2009, Islam remained the world's second most common religion, with at least 1.2 billion

adherents globally. Of these, nearly 75 percent identify themselves as Sunni, while the second-largest grouping, Shia Muslims, live predominately in Iran, Syria, and Lebanon. The Sunni-Shia division followed an early dispute over the rightful successor to Muhammad, Islam's founding prophet; in the contemporary world, this division also includes the acceptability of different schools of Islamic law and interpretation. All Muslims honor what are known as Islam's five pillars, which include *shahada*, the testimony of faith; *salah*, daily prayer; *zakah*, providing alms; *sawm*, the Ramadan fast; and the *hajj*, or pilgrimage to Mecca, expected of every Muslim at least once in their life.

At the end of World War II, most of the world's Muslims lived primarily in the Middle East, North Africa, Central Asia, South Asia, and Indonesia. The effects of global migration patterns, growing oil revenues, modern technology, and a high birthrate contributed to an Islamic religious revival and aided the global spread of Islam from these core regions to Europe and the Americas. The tug between modernism and anti-modernist sentiments—as well as the relationship between moderate and radicals within Islam, between Sunni and Shia Muslims (as well as Sufis in Pakistan), and the reflection of such fissures in politics and governance—have informed much of Islamic developments since 1945. While dramatic events of recent decades indicate the historical impact of violent Islamist groups, varying calls for reform are as common as calls for revival throughout the Muslim world.

As one approach to modernization, Islamic secularism was adapted, particularly in Sunni-dominated countries, and was implemented in the early twentieth century in Turkey and later in Arabic-speaking countries as nationalist parties (such as the Baath in Iraq and Syria) came into power. These parties often suppressed or discouraged Islamist fervor because it was viewed as a political threat. The aspirations of many nationalists and secularists included democratizing and modernizing the old autocratic Islamic societies to some extent. In the case of the new autocratic Baathist regimes, however, secularization and democracy did not go hand in hand. From 1945 until the Islamic Revolution in Iran in 1979, nationalists sought to order and govern Middle

Eastern states along a secularist course of modern development. In Turkey the secularism begun by Kemal Ataturk (1881–1938) continued, but like secularism elsewhere in Islamic countries, it was increasingly countered by growing Islamic revivals sponsored by the Shia revivals in Iran and the Sunni revival of faith and practice preached by the Wahhabi or by other strict Islamists.

Of significant importance to the revival and growth of Islam in the modern world was the enormous increase in birthrates for Muslims. Educational opportunities grew with the growth of oil wealth and the construction of schools. This was coupled with the spread of modern scientific medicine that saved the lives of millions. The growing population, endemic poverty, and numerous wars in the Middle East and North Africa created the push that led to widespread immigration. This was coupled with the pull of growing global prosperity that allowed emigrants from heavily Muslim countries to settle around the world, taking their faith with them. This resulted in new Muslim diasporic communities along with new mosques. Islamic centers developed in Europe, Oceania, and the Americas. In France, the Muslim population grew to a significant portion of the total population as immigrants arrived from former North African colonies, particularly Algeria. In Germany, large numbers of Turkish guest workers established families and flourishing diasporic communities in major cities.

While many of the new mosques in places such as the United States were often constructed by Muslims who preferred to live in a secular civil society, a growing number were constructed and staffed by traditionalist leaders from the Middle East. After the Balkan War that followed the collapse of the former Yugoslavia in the 1990s, Wahhabi money and preachers rebuilt mosques across Bosnia-Herzegovina and radicalized a portion of its population. Traditional and radical forms of Islam accelerated in importance following the Iranian Revolution of 1979 and the Taliban's seizure of power in Afghanistan in the 1990s. The more extreme variants of these supported the attacks on the United States on September 11, 2001. Others contributed to the establishment of Islamic courts in countries with large Muslim populations such as Canada and

Britain, courts that to some degree have allowed for arbitration and Sharia-based interpretations. Yet it should be stressed that even in the majority of Islamic countries (not including the Gulf nations), Sharia law generally only pertains to issues of family law and inheritance.

Women's rights movements that began in the West in the 1970s influenced women in Islamic countries to work against the patriarchal constraints of traditionalist Muslim society, creating, along with social democracy and human rights issues, a crucial thread in the discourse of Islamic reform. Such reformers emphasize the tradition within Islam of *ijtihad*, or the use of critical reasoning to challenge received opinion and interpretation. Islamic jurists are included in their ranks. Muslim feminists, who have ranged from secularist to traditionalist in viewpoint, have interpreted the Quran to illustrate that the Prophet Muhammad had supported better treatment for women in early Islam, and therefore his practice and words should be followed to allow for greater inclusion of women in Muslim society. Feminist organizations also operate in the face of much opposition and open rejection in countries such as Afghanistan. Other progressive Muslims have supported a range of causes and groups such as the Children's Rights Society in Iran and medical and social support for HIV-positive Muslims in Africa.

While episodes such as death threats sent to European newspapers for publishing cartoons that satirized images of Muhammad in 2005–2006 indicate a strong current of intolerance, Islam cannot be seen as a monolithic or even reactionary force. The doctrine of jihad (literally “to struggle or strive”), for example, has numerous interpretations that range from prescriptions for waging a violent holy war to an intense personal struggle to seek enlightenment and improvement as a society or an individual. Many interpreters of the Quran will insist that militant groups have misappropriated the term “jihad.” Moreover, interpretations of Islam by clerics and scholars that range from moderate modernist to progressive in position, including those of scholars such as Fazlur Rahman, Shabbir Akhtar, Mohammad Arkoun, and Abdolkarim Soroush, argue that Islam can and should support progressive approaches to gender equity and social

justice. Others insist that Islam is dynamic in nature and can adapt to secular civil societies while retaining traditions in the personal sphere and the Islamic community.

—*Jack Waskey and Fred Nadis*

Bibliography

- Ahmed, Leila. *Women and Gender in Islam: Historical Roots of a Modern Debate*. New Haven, CT: Yale University Press, 1993.
- Cornell, Vincent J, Virginia Gray Henry-Blakemore, and Omid Safi, eds. *Voices of Islam*. 5 vols. Santa Barbara, CA: ABC-CLIO, 2006.
- Hattstein, Markus. *Islam: Religion and Culture*. Königswinter, Germany: U. F. Ullmann, 2008.
- Malise, Ruthven. *Islam: a Very Short Introduction*. Oxford: Oxford University Press, 2000.
- Milton-Edwards, Beverly. *Islamic Fundamentalism since 1945*. London: Taylor and Francis, 2005.
- Nasr, Vali. *Shia Revival: How Conflicts within Islam Will Shape the Future*. New York: Norton, 2006.

Catholicism since 1945

The social and political upheavals of the twentieth century affected the direction of Roman Catholicism after 1945. Catholic popes, bishops, and priests responded to some of the most important issues and events of the period, sometimes with hesitancy and other times with forthrightness. Catholics around the world experienced and participated in the world wars, the Cold War, ecumenical councils with Protestants and Eastern Orthodox clergy in unofficial capacities, international missions, and political movements. Catholics of all types struggled to negotiate between their Christian faith and their socioeconomic circumstances, between the global and local application of Catholicism in the world.

Millions of Roman Catholics fought in World War II. Millions more experienced the atrocities of war from the home front or concentration camps. After the war, national, political, and ideological loyalties continued to divide Catholics. The exposure of the Holocaust and the complicity of many Catholic leaders compelled some to reconsider the role of the Church in society. It was not until the 1990s that Catholic leaders, including Pope John Paul II, officially apologized for the direct or indirect involvement of the Church in the Holocaust.

> VATICAN II

In an effort to reorient the Roman Catholic Church so that its ministry would be more effective in reaching and serving people increasingly shaped by modernist secular culture, Pope John XXIII called for an ecumenical council of bishops on January 25, 1959. He intended for the council to improve the internal organization of the Church, the unity of all Christians, and the prospects for peace around the world. Cardinals, bishops, priests, and theologians met for a total of ten weeks during the autumn of 1962 through 1965. Members of Eastern Orthodox and Protestant denominations also came as invited observers.

Pope John XXIII died during the second year of the council and was later succeeded by Pope Paul VI. The council issued 16 documents ranging in topics from the sacred liturgy to ecumenism to religious freedom. Approximately 2,800 people acted as members of the council over the four-year period. Vatican II was the first council of its kind since the First Vatican Council of 1869–1870 but possibly the most ecumenical since the councils of the early Church.

Pope John XXIII described Vatican II as an *aggiornamento*, or an updating of the Church's active role in society. The council adjusted the manner in which Catholics participated in the sacrament of mass, as seen most evidently in the replacement of Latin with vernacular languages. The council also brought to light tensions between tradition and modernism within the Church over issues of ecclesiastical authority, lay involvement in the everyday life of the Church, the ordination of women, and the marriage of priests.

Since 1965, Catholics have attempted to interpret and implement the teachings of Vatican II. Debates over the messages of Vatican II continue at all levels of the Church.

—*Michael Pasquier*

One reason for the Catholic Church's lack of public attention to the Holocaust was its interest in the immediate threat of communism and the Soviet Union after World War II. Pope Pius XII warned against the rise of communism as early as 1945. Through the Catholic Action movement, the pope mobilized Italian Catholics to oppose the Communist Party in Italy. He also condemned

the communist regimes of Eastern Europe for the persecution of Catholics.

Pope John XXIII succeeded Pope Pius XII in 1958 and quickly moved to address the social ills that communists often attributed to Church-influenced societies. He considered it the duty of Catholics to disprove the Marxist critique of the Church as unaccountable to the plight of ordinary people. To do so, the pope called for an ecumenical council, known as the Second Vatican Council (1962–1965), in order to meet the challenges of modern society and particularly communism.

The debate over the proper interpretation and application of the Vatican II documents caused ideological rifts both inside and outside the Church. By the end of the 1960s, Pope Paul VI reaffirmed traditional Catholic teachings on marriage, contraception, and procreation in an effort to curb the influence of some of the more liberal promoters of Vatican II in Europe and North America. Gradually the European and American Catholic hierarchy moved toward a more conservative application of Vatican II as the reforms continued to be implemented during the pontificate of John Paul II (1978–2005). Yet despite the efforts of Rome, many lay Catholics as well as some members of the clergy and religious orders took positions that challenged official Church teachings.

Besides doctrinal issues, Pope John Paul II carried on the efforts of previous popes in opposition to communism. As the archbishop of Krakow in communist Poland, Pope John Paul II, known at the time as Carol Wojtyła, promoted Polish opposition to Marxist ideology and communist government policies. After his ordination as pope in 1978, John Paul II supported the Solidarity movement in Poland that contributed immensely to the demise of communism throughout Europe during the 1980s.

Catholicism took a somewhat different direction in Latin America, Asia, and Africa after Vatican II due in large part to the emergence of a theology of liberation. Building on the ideas of previous thinkers and activists, a Catholic layperson from Latin America named Gustavo Gutierrez brought to the attention of the Church the need for social justice among the poor and mar-

ginalized members of society during the 1960s and 1970s. The goal of liberation theology was to manifest social justice throughout the world. Many Catholics in Asia and Africa incorporated the message of liberation theology into their churches. Many Catholics in Europe and North America, however, identified Marxism with liberation theology, which led many Church leaders and theologians to question the legitimacy of the liberation movement.

In the period after Vatican II, missionary activities in Africa and Asia increased the number of baptized Catholics on those continents. Latin Americans remain the largest continental body of Catholics in the world, with 420 million followers. The number of baptized Catholics in Europe has decreased. Pope John Paul II and now Pope Benedict XVI identified cultural relativism as a primary culprit in this European decline.

—Michael Pasquier

Bibliography

- Flannery, Austin, ed. *The Conciliar and Post Conciliar Documents*, Vatican Council II. Dublin: Dominican Publications, 1975.
- Hastings, Adrian, ed. *Modern Catholicism: Vatican II and After*. New York: Oxford University Press, 1991.
- Jenkins, Philip. *The Next Christendom: The Coming of Global Christianity*. New York: Oxford University Press, 2002.
- Luxmoore, Jonathan, and Jolanta Babiuch. *The Vatican and the Red Flag: The Struggle for the Soul of Eastern Europe*. New York: Geoffrey Chapman, 1999.
- Rowland, Christopher, ed. *The Cambridge Companion to Liberation Theology*. Cambridge: Cambridge University Press, 1999.

Eastern Orthodoxy since 1945

The Eastern Orthodox Churches have always been autocephalous (self-governing), with each headed by a patriarch yet in communion with each other and sharing the same faith. Orthodoxy has historically been centered mostly in the Balkans, Russia, the Caucasus, and other areas under Byzantine and Slavic influence. They have always recognized the four ancient patriarchs of Constantinople, Antioch, Alexandria, and Jeru-

salem with the Patriarch of Constantinople as primary. They often describe themselves as the Church of the Seven Councils, which were held between 325 and 787: Nicaea (325), Constantinople (381), Ephesus (431), Chalcedon (451), Constantinople (553, 680–681), and Nicaea (787).

Following the Great Schism of 1054, the Eastern Churches were treated as heretics by the Western Catholic Christendom. However, while the Orthodox Churches recognize the pope as the chief bishop of Christendom, they reject papal claims of authority. In 1999 Pope John Paul II effectively ended the schism.

Under the rule of the Ottoman Empire, Eastern Orthodoxy suffered but survived in many places. During the Cold War, it was repressed by communist authorities in favor of state atheism. Following the end of the Cold War, a great revival of membership occurred in the former Eastern Bloc countries. One reason was that the churches were opponents of and persecuted targets of communism.

Until 1945, the main Orthodox Churches were in several Middle Eastern countries and in Greece, Serbia, Bulgaria, Russia, Ukraine, Georgia, and Cyprus. However, massive immigration of Greeks and Slavs since the end of World War II has resulted in the expansion of Orthodoxy in the West, especially in Australia, Canada, and the United States. Currently there may be as many as 4 million Eastern Orthodox members in the United States and Canada. The main bodies are the Greek Orthodox Archdiocese and the Orthodox Church of America (previously the American Russian Orthodox Church).

Their main sources for membership have been immigration, intermarriage with non-Orthodox members, children born to members, and conversions from domestic missionary work. The Orthodox Churches, as with other ethnic churches, struggle to maintain an ethnic identity as congregation members acculturate to new regions. Among the common changes is the switch to English from Russian, Greek, Serbian, Syrian, or other original language. As the local national language is substituted for the original language, the original ethnic identity of the members of the Orthodox Church usually declines, but adherence to the original ecclesiastical tradition that is

adapted to the country where they are now living increases.

In Australia, immigrant Orthodox Churches were established following the large immigration of East Europeans after World War II. In South America and in Africa, significant communities have also developed in the postwar era. The spread of Eastern Orthodoxy has changed it from a collection of churches in a diaspora into a growing global presence.

Eastern Orthodoxy is currently engaged in ecumenical relations with the other churches of the world. Engagement has included participating in the World Council of Churches and in dialogues with Roman Catholicism and with various Protestant denominations.

—Jack Waskey

Bibliography

- Agadjanian, Alexander, ed. *Eastern Orthodoxy in a Global Age: Tradition Faces the 21st Century*. Walnut Creek, CA: AltaMira, 2005.
- Cutsinger, James S., ed. *Reclaiming the Great Tradition: Evangelicals, Catholics & Orthodox in Dialogue*. Downers Grove, IL: InterVarsity, 1997.
- Ware, Timothy. *The Orthodox Church*. New York: Penguin, 1993.

Protestantism, 1945–Present

Protestantism is one of the three major divisions of Christianity, with roots in the sixteenth-century European religious schisms of the Reformation. Protestantism is unique because hundreds of different Christian religious sects and denominations classify themselves as Protestant rather than Orthodox or Catholic. Protestantism is difficult to define on a global scale but easier to describe. Although Protestant sects are historically, theologically, socially, and ethnically diverse, they do share a rejection of papal authority, emphasize biblical Scripture, and focus on individual faith. The tenets of Protestantism encompass a variety of religious denominations, remain open to flexibility and change, and adapt to infinite cultural and regional contexts. Despite the fact that there are several hundred Protestant denominations, most Protestants are members of the Lutheran, Calvinist (Presbyterian or Reformed), Anabaptist (Amish and Menonites),



A Protestant church in Shanghai, China. Christianity is growing rapidly in China and other Asian countries. (Flickr)

Anglican (Episcopalians), Methodist, Baptist, and Pentecostal churches. Protestants may also classify themselves as evangelicals, fundamentalists, charismatics, and independents, among many others.

In the first half of the twentieth century Congregationalists, Episcopalians, and Presbyterians constituted the established Protestant denominations in the United States. These mainline Protestant groups, whose members were middle or upper class, educated, of northwestern European ancestry, attracted to liberal and neo-orthodox theologies, and participants in ecumenical activities. These groups included some Baptists, Methodists, Lutherans, and Disciples of Christ whose theologies and practices varied depending on region. Mainline Protestants were com-

➤ PENTECOSTALISM

Pentecostalism is a Protestant expression of Christianity that is found in nearly every country worldwide and claims more than 500 million adherents. Pentecostals trace their movement back to the Pentecost, when the followers of Jesus gathered after his death and experienced gifts of the Holy Spirit. Historically, Pentecostalism is associated with the religious reformation and revival movements of the nineteenth century in Murphy, North Carolina, and Cleveland, Tennessee, and the 1906 revival in Los Angeles. In the 1960s it entered both mainline Protestant churches and thereafter into the lives of many Roman Catholics as the Charismatic movement or as neo-Pentecostalism.

The institutional development of Pentecostalism has been characterized by the proliferation of independent congregations and organized denominations even as it expanded beyond North America and adapted to the lifestyles of disaffected Protestants throughout the world. Buoyed by the rise of globalization after 1945, Pentecostal and related Charismatic movements, or movements that demonstrate and encourage charismata or spiritual gifts, flourished into a multiplicity of forms and became the fastest-growing set of churches within modern Christianity. If accurate, these

figures indicate that within the next century, Pentecostal and Charismatic movements will become numerically the largest form of global Christianity after the Roman Catholic Church and will include a quarter of all Christians.

The genesis of the North American classical Pentecostal movement is associated with a community of mixed ethnicities including members of the African American Holiness Church led by William Joseph Seymour that met in 1906 in a warehouse on Azusa Street in Los Angeles and experienced a spontaneous, emotional communion with the Holy Spirit accompanied by people falling to the ground and speaking in tongues. The modern Pentecostal movement is often characterized by an emphasis on the working of the gifts of the Spirit, including a postconversion experience of baptism in the Holy Spirit and the practice of speaking in tongues, or glossolalia, as an indication of the presence of the Spirit. According to its adherents, the supernatural and miraculous are a part of everyday reality and manifest through faith healers, glossolalia, and other manifestations of the Spirit. Pentecostalism in practice is frequently apocalyptic, and the coming of the Spirit has frequently been linked to the final days of history.

—Michael Gueno

fortable in secular culture, involved in social issues, and held a less exalted view of the Bible than their more evangelical counterparts.

Most Protestants in the West joined the World War II efforts as theologians wrestled with human suffering and just war theory. In the 1940s and 1950s Protestant churches were distracted with war, the spread of fascism, and the rise of communism, but it was a time of religious renewal, revivalism, and growth. During the post-war era Protestants worked together for keeping peace through a host of voluntary denominational associations by donating money to prisoners of war, helping relief efforts, and aiding bombed cities and churches. In 1948 the World Council of Churches (WCC) organized in Amsterdam shortly after the creation of the United Nations to coordinate worldwide humanitarian efforts. An ecumenical movement with the goal of Christian unity, the WCC represented mostly mainline Protestant traditions but also the Eastern Orthodox and independent traditions.

The Eisenhower era in the United States (1953–1961) was one of religious renewal and revival during which mainstream Protestantism flourished. Record numbers of Americans reported that they believed in God, a statistic higher than any other industrialized nation. According to the 1957 U.S. Census Bureau, out of a population of 120 million, 70 million Americans thought of themselves as Protestant. In postwar America families were flocking to the suburbs, and steeples were erected across the increasingly sprawling landscapes. There was a literal presence of religion in the nation as Protestant churches participated in a building boom, experimenting with traditional and contemporary forms of architecture. Some revivalists took their message beyond the walls of the church. Reverend Billy Graham emerged as an evangelist whose message of individual conversion and social responsibility appealed to thousands during his big city and worldwide crusades at parks, fields, and stadiums.

In the 1960s mainline Protestantism in the United States declined amid debates over race, the Vietnam War, feminism, and sexuality. From the 1960s onward, while mainline Protestant membership declined, evangelicals, who empha-

sized born again or conversion experiences, the centrality of the Bible, and otherworldly spirituality, grew to have a major cultural influence on Protestantism in the late twentieth and early twenty-first centuries.

Most Protestant growth, specifically evangelical and Pentecostal success, over the last 50 years has happened not in the West but rather in Asia, Africa, and Latin America. North American and European Protestant membership and attendance have declined in comparison to the global scope of Protestant growth. Since World War II, Protestant growth has been higher in Asia than any other continent. In the 1980s the number of evangelicals in Asia doubled as Protestants flourished in China, South Korea, and Indonesia. Presbyterians fill megachurches in Korea, while China has the largest number of Pentecostals.

Although Western Protestant missionaries arrived in Africa in the 1700s, Protestantism spread through Africa via African preachers, thus integrating African folk culture and symbolism into Christian rituals. Thousands of independent Protestant churches devoid of Western oversight make Africa the continent with the highest number of Christians. Most African Protestants emphasize Pentecostal or charismatic forms of worship involving healing, exorcism, music, and dance. The same is true in Latin America, the birthplace of Catholic liberation theology in the 1960s. This social movement also attracted liberal Protestants, yet it is the more theologically and politically conservative Pentecostals, however, who now dominate the Latin American Protestant landscape.

—Howell Williams

Bibliography

- Balmer, Randall Herbert, and Lauren F. Winner. *Protestantism in America*. New York: Columbia University Press, 2002.
- Jenkins, Philip. *The Next Christendom: The Coming of Global Christianity*. Oxford: Oxford University Press, 2002.
- McGrath, Alister E., and Darren C. Marks, eds. *The Blackwell Companion to Protestantism*. Malden, MA: Blackwell, 2004.
- Williams, Peter. *America's Religions: From Their Origins to the Twenty-First Century*. Urbana and Chicago: University of Illinois Press, 2002.

Judaism since 1945

Developments in Judaism since 1945 include the aftermath of the Holocaust, the migration of large numbers of Jews to Israel and the West, and the relationship of Judaism to the politics of the State of Israel. Reformist movements within Judaism in the West, particularly within the Reform, Conservative, and Orthodox branches, continued during this period especially in the United States and Britain.

The destruction of the European Jews under the Third Reich eliminated the center of world Jewry in Eastern Europe, making the United States and Israel the centers for theological debate and reforms within Judaism. The exodus of Ashkenazim (Eastern European Jews) who were survivors of the Holocaust primarily from Poland to places such as Australia, New Zealand, the United States, Canada, and Israel had a significant impact on the developments within Judaism in those countries. Moreover, the establishment of the State of Israel led to divisions between Zionist and anti-Zionist strands within Judaism and arguments against the political and theological validity of the Jewish state. These divisions were further complicated by Israel's regional conflicts with the Arab states and global anti-Semitism.

The Holocaust and subsequent migrations truly made Judaism a world religion, as Eastern Europe with its annihilated Jewish population was no longer the centuries-old center of world Jewry. However, well before 1945, the primarily Ashkenazi Jewish Diaspora in the United States and Britain had already made significant reforms within their respective branches of Reform, Conservative, and Orthodox practices, many of which pertained to allowing the observance of Jewish law while existing in a non-Jewish secular milieu, albeit at differing levels. Reform Judaism, which had originated in Germany in the nineteenth century and had a far more progressive and liberal agenda, allowed more leeway in the observation of the 613 commandments (for example, a complete rejection of kosher food laws and of certain gender restrictions), with the Orthodox preferring far more traditional interpretations of and adherence to Jewish law. Conservatism had emerged as a compromise solution

at the turn of the twentieth century as the new Orthodox immigrants from Russia attempted to coexist with the population of primarily reform Jews settled during earlier waves of immigration.

The various social movements of the 1960s in the West, such as second-wave feminism, advocacy for civil rights, and the antiwar movement, influenced Judaism significantly, as many Jews found these to resonate with their own historical struggles as a people. This allowed theological interpretations within all branches to enter the public sphere as advocates of social change. Feminism changed Jewish practice. Reform and Conservative synagogues allowed women to enter rabbinic studies and become rabbis and also allowed bat mitzvah ceremonies for Jewish girls who had studied Torah. As of the early twenty-first century, Orthodox synagogues continued to debate whether women should be allowed to read directly from the Torah, but many do offer a somewhat reduced bat mitzvah ceremony, and some Orthodox women rabbis have been ordained in rabbinical schools.

Jewish migration to Israel accelerated after the establishment of the State of Israel in 1948. Immigrants came not just from Eastern Europe but also from the Middle East, North Africa, and even North America (and later from the Soviet Union and Africa). Israel's shifting demographics had a significant impact on the relationship between Judaism and the diffuse Jewish diaspora. The initial drive to form the State of Israel, mostly by socialists, developed for many religiously minded Jews into a theological project, with the settlement regarded for some as the fulfillment of religious prophecy. The subsequent Arab-Israeli conflicts further divided Diaspora Jews into those advocating that state's expansionist policies, those who sought moderation and peaceful coexistence with Arab states and Palestinian refugees, and a fringe that negated the existence of the state. Zionists, many of whom were Orthodox Jews, advocated the expansion of the state as a necessity for ensuring it as the homeland to all the world's Jews to which they would all return and thus herald the Messiah. Many Reform and Conservative Jews, while supporting the existence of the State of Israel, had more conflicting views on this issue. The theological underpinnings of the State of Israel as the

homeland of the world's Jews and the adherence of many Diasporic Jews to identify with their host nation is certainly one of the major divisions within the world's Jewish community. Both radical Zionists and anti-Zionist Jews remain on the fringes of this theological debate, illustrating its complexity in Judaism.

Judaism has many diverse groups. Sephardic Jews (originally from Spain and Portugal), from various regions in the Mediterranean, follow a form of Judaism heavily influenced by Islam and Middle Eastern culture, albeit with a more lax interpretation of Jewish law than the more orthodox Ashkenazi. However, within recent decades the Sephardim, many of whom have immigrated to Israel and the West, have come under the influence of the trends of Ashkenazim. Within the Ashkenazi, the Hasidim, an ecstatic sect of orthodoxy that developed in the eighteenth century in Poland, currently exist in many Jewish communities in the West and are easily identified by their clothing and more austere quotidian lifeways. The most widespread of the Hasidic groups, the Lubavitcher Hasidim, also known as Chabad, have made significant inroads in the West and Israel. The Lubavitcher Movement is

active in returning Jews to the faith or imbuing more traditional practices on more liberal Jews. Other strands of Judaism, particularly Kabbalah, which emphasizes the more mystical dimension of Judaism and its relationship to self-realization, have also become a trend in recent decades among some Jews and non-Jews.

Since the end of World War II, there has been an emergent trend of cultural or secular Judaism, meaning Jews who identify with Jewish culture and identity but have little to no adherence to the faith. Inter marriage with non-Jews and the possible fading of Jewish identity have raised concerns in Jewish communities. With the depletion of a third of the world's Jews in the Holocaust (6 million), the global Jewish population has only approximately its pre-Holocaust total (an estimated 18 million) at the turn of the twenty-first century.

—Abraham O. Mendoza

Bibliography

- Solomon, Norman. *Judaism: A Very Short Introduction*. New York: Oxford University Press, 2000.
- Taitz, Emily. *Introduction to the World's Major Religions: Judaism*. Westport, CT: Greenwood, 2005.

■ Introduction: Modern Religious Trends

The dropping of atom bombs on Hiroshima and Nagasaki marked the end of World War II and also ended the liberal Christian vision of a world of progress. The flames of firebombed cities and the vanishing of tens of thousands of people in a blinding flash opened the door to apocalyptic visions of a coming doomsday. Apocalyptic theologies expanded their appeal following World War II.

While millennialist thought suggesting the birth of a new world, common to Christianity and New Age theology, for example, need not imply a violent end of the current world, some of the more radical apocalyptic groups have encouraged violence. In the case of Jim Jones and the People's Temple, virtually the whole cult committed mass suicide in Guyana in 1978 after murdering a U.S. congressman and others who

had come to investigate the cult. Technology and science fiction-based notions played a role in the mass suicide of the Heaven's Gate cult led by Martin Applewhite at San Diego in 1997. This UFO religion asserted that the earth was going to experience an apocalyptic end that would wipe it clean, and the only way to escape was to leave immediately. Other apocalyptic groups, seeking to fulfill prophecy, have moved to Israel or have prepared to do so. Some, as the year 2000 approached, expected terrible things to happen at this purported marker of a millennium. These gathered in a year's supply of food, armed themselves in fortified locations, and awaited the apocalypse that never arrived.

Secular humanism has continued to appeal to those who see in science and rationality the means for progress and a basis for ethics. It is

based on the assumption that humans are capable of rationality, emphasizing the use of critical reason and factual evidence for making decisions. Secular humanism's pedigree stretches back centuries, as does Christian humanism. For humanists of all kinds, people are important. Why they are important is the crucial point that distinguishes them. Christian humanism taught that people are important because the historical Jesus died to save all people. They are therefore to be valued as worth the price of the suffering death of the Christian messiah.

In recent decades, the materialism of consumer culture alienated great numbers of people who have wished to turn away from industrial society and return to nature for a somewhat inchoate spirituality separate from organized denominations. A variety of spiritualities have emerged especially since the 1970s that have accompanied the growth of the environmental movement. Millions of people have left churches and synagogues in the West in order to practice some form of religion that is more of an individualistic nature worship. Some have turned to atheism, but it has never gained great popularity even though it has a number of intellectually astute champions, as evidenced in works such as Richard Dawkins, *The God Delusion* (2006). Historically the United States has had a secularist public policy that, arguably, has driven people into ever more intense forms of private devotions. The effect has been to make the United States the most fertile grounds in the world in the last 300 years for the development of new religions. From the First Great Awakening (begun in 1725) through the rise of Pentecostalism in the early 1900s to the Reverend Billy Graham's crusades of the postwar period, public secularism has intensified religious belief and expression in the United States.

These American expressions of faith have spread globally through the missionary work of Roman Catholicism, Protestantism, and the numerous sects and cults that emerged in U.S. religious history. Zealous for the spread of their faiths, these groups engaged in a growing program of mission work that took large numbers of believers to Third World countries on mission trips (or to permanent mission stations) to engage

in hands-on humanitarian missions that supported the preaching and teaching of local indigenous pastors. The effect was great growth in fundamentalist churches, especially of the Pentecostal forms. By 1973 the demographic balance among Christians had shifted from Europe and North America to the Third World. The growth of Christianity in the Third World was also largely in the conservative and fundamentalist churches.

In return, open immigration to the United States and Europe brought millions of Third World conservative and fundamentalist Christian (as well as Islamic) immigrants to these countries. As liberal churches adopted increasingly liberal social pronouncements, millions of church members left to become members of conservative or fundamentalist churches. Other Protestant churches and television ministries adopted a more consumer-friendly attitude and developed into megachurches that stress the therapeutic value of religion and of a social community. With the struggle in the mainline Protestant churches regarding the spiritual status of open homosexuals, many individual churches also withdrew from more accepting organizations, becoming members of conservative or fundamentalist Third World denominations.

"Fundamentalism" is a term that arose within American Protestantism. It was originally applied to those who listed a few fundamental beliefs as defining true Christians. The term, however, has been applied in a more blanket fashion in recent decades to religiously based groups that reject aspects of modernity. Most fundamentalist expressions of faith accept modern technology but reject any worldview, scientific or otherwise, that marginalizes the importance of religious faith. Fundamentalist groups set themselves apart yet seek to influence mainstream society through persuasion and politics, often based on a vision of redemption; in this pursuit, fundamentalist fringe groups at times may resort to and even celebrate violence as a method. Assassinations (for example, of political leaders or abortion doctors), suicide bombings, and hijackings all often have a justification in a religion-based ideology.

—Jack Waskey

Globalization of World Religions

While all major world religions have experienced periods of expansion, decline, and change in earlier eras, during the twentieth and early twenty-first centuries Islam, Hinduism, Buddhism, and other faiths all became less rooted in specific locations or regions and spread out of their Asian homelands in significant numbers to new places in Europe, Africa, and the Americas. This globalization is part of a transnational phenomenon and includes religious and cultural factors as well as the more familiar economic, social, and political processes, all contributing to the emergence of a single world system that transcends economics and other historical limitations. Stimulated by the impact of colonialism, war, world trade, and other factors, global flows of recent migrants from Asia have not resulted in severed ties with their countries of origin. Rather, these migrants maintain significant and lasting contacts with their countries of origin. Global religions provide an important and continuing influence in their diasporic communities, offering religious institutions, cultural networks, and other linkages. Away from home in a strange land, migrants gain a strong sense of identity from continuing participation in their religion, including language, foodways, status, common activities, and access to a wider world. Unlike in the homelands, migrants' places of worship, mosques and temples alike, often become centers of diasporic community life.

As the world's second-largest religion, Islam long since moved beyond its place of origin among the Arabic-speaking peoples of West Asia and North Africa, which today make up only 20 percent of its 1.2 billion adherents. While the bulk of the world's Muslims now live in Indonesia, Pakistan, Bangladesh, India, and Nigeria, Islam has become not only the fastest-growing but also the second- or third-largest religion in many West European and North American nations in recent decades. For example, France's Muslim population, which originated mostly in its former North African colonial region, approaches 10 percent of the total and exceeds both Protestants and Jews.

While estimates vary widely from three million to five million in the United States, two-

thirds of Muslim immigrants and their descendants stem from West and South Asia and frequently are businesspersons, professionals, academics, and students. The remainder are either African American or white converts and include quasi-Islamic groups such as the Nation of Islam, which combines aspects of Islam with black nationalism.

Despite increases based on immigration, conversion, and birthrate, the large Muslim communities in Europe and America have recently had to face the challenges of negative stereotypes and local resentments stemming from conflicts associated with the September 11, 2001, terrorist attacks and the threats of global terrorism. Muslims, whose communities often center on the local mosques, continue to face the pressures of assimilation and integration from the secular or Christian majorities in the West, but some segments of their communities have firmly resisted the loss of their identity as a distinct religious minority, as often symbolized by the wearing of religious apparel such as the hijab, or headscarf.

The world's third-largest religion behind Christianity and Islam, Hinduism numbers just under one billion adherents worldwide. With the South Asian subcontinent, and particularly the nations of India and Nepal, as the heartland of this second fastest-growing world religion, Hinduism thrives despite the fact that it is more of a huge family of religious practices and beliefs than a unified or centralized religion, or perhaps it thrives for this reason. Some of the greatest differences within Hinduism are reflected in variation between geographic and cultural regions, especially between North and South India. These differences are often reflected in the globalized expressions of Hindu migrant communities and their temples around the world.

In addition to increasing awareness of isolated ideas and practices of Hindu spirituality and philosophy such as yoga and meditation, North America and Europe are home to increasingly large Hindu diaspora settlements including both first- and second-generation members. During the time of the British Empire, Hinduism established growing communities in Britain, Canada, other parts of the empire, and the United States. In America, the Indian community, whose

members are mostly Hindu, represents the minority group with the highest per capita income level.

Similar to Hinduism, the South Asian subcontinent is home to two other religions of growing importance, Sikhism and Jainism, that developed as separate religions from Hinduism despite their common roots. Over 90 percent of the world's 24 million Sikhs live in India, mostly concentrated in the northern state of Punjab. Sikh communities, which focus on the local gurdwara, or place of worship, have spread to Britain, the Americas, and former territories of the British Empire. The largest Sikh community outside of South Asia is in the United States and numbers over 500,000 adherents. Also originating in India, the ancient religion of almost 5 million Jains has spread along with the worldwide Hindu migration, mainly through the English-speaking world. Abroad, Jains sometimes share religious facilities with the much larger Hindu community and may inaccurately be lumped in with the larger Hindu population, despite their distinct religious beliefs. Jains in the United States number about 75,000.

One of the most adaptable of the world's religions, Buddhism originated below the Himalayas in South Asia but spread early on throughout Central, East, and Southeast Asia. The earliest missionary religion, Buddhism today numbers over 350 million followers, with over 95 percent still in Asia. In global size, Buddhists are approximately equal in numbers to Protestant Christians in North America. Within Buddhism, different practices identify the larger Theravada, or Northern Buddhist tradition, of East Asia and the smaller Theravada, or Southern Buddhist grouping, concentrated in Southeast Asia.

In the years of Western colonialism, Buddhism benefited by a reverse flow westward during the early decades of the twentieth century, carried by both migrants and European and American converts. Early Western fascination with the Japanese Zen school of Mahayana Buddhism focused on its perceived adaptability to a secular and scientific worldview. In Europe and North America the historic Buddha popularly appeared to many as a sympathetic, nontheistic, reform-minded teacher. Interest in Buddhist meditation reinforced similar Hindu practices among

Western intellectuals, especially among the avant-garde in the arts and psychology. Interest in Japanese Zen Buddhism emerged in the post-World War II United States as Japanese culture was rediscovered during the occupation years.

Buddhist migrants accompanied the global expansion of Asian economies of the late twentieth century. By 2006, the numbers of Buddhists exceeded 3 million in the United States and 1.5 million in Europe and numbered about 700,000 in Latin America, especially Ecuador and Brazil. The largest percentage of Buddhists in America are Southeast Asian migrants.

—Nicholas J. Bridger

Bibliography

- Esposito, John L., Darrell J. Fasching, and Todd Lewis. *World Religions Today*. 2nd ed. New York: Oxford University Press, 2006.
- Hopkins, Dwight N., Lois Ann Lorentzen, Eduardo Mendieta, and David Batstone, eds. *Religions/Globalizations: Theories and Cases*. Durham, NC: Duke University Press, 2001.
- O'Brien, Joanne, and Martin Palmer. *The Atlas of Religion*. Berkeley: University of California Press, 2007.
- Prebish, Charles, and Martin Baumann, eds. *Westward Dharma: Buddhism beyond Asia*. Berkeley: University of California Press, 2002.

Secularism

Secularism can refer to one of two ideological positions. First, in politics and government, secularism argues for a separation between church and state. Second, as an all-encompassing worldview, secularism argues for a rejection of traditionally religious ideologies, especially as they relate to human ethics, activities, and decisions. Secularism is not the equivalent of atheism, nor does it mandate that an individual must not be religious. Many secularists, especially those espousing the separation between church and state, believe in some form of higher power and affiliate with a religious body.

Both of these ideological positions have historical precedent. One well-known historical predecessor of secularism in the United States is Thomas Jefferson (1743–1826), who argued for a “wall of separation” between church and state. Most historians also agree that Jefferson

was a deist, an early form of secularism that separated belief in deity from organized religion. While still maintaining a belief in a deity, Jefferson did not believe that morality required divine sanction but rather believed that it should rest on reason and nature alone.

While the ideological positions outlined above argue for specific beliefs, policies, and practices, scholars continue to debate whether actual beliefs, policies, and practices have fallen in line with the secularist position. As regards the first ideological position, a separation between religion and government, some scholars argue that even in secular societies religions can and do still influence governments and public policy. Others argue that the media exaggerates the influence of religions in public life. Both muster evidence to support their claims. Roman Catholicism, for example, was influential in the Polish overthrow of communism in the late 1980s and early 1990s. Religion, in other cases, may offer only an elusive power. For example, the U.S. media depicted the Moral Majority, a politico-religious movement during the 1980s, as holding substantial political clout. However, the movement lost much of its support within a decade of its founding and dissolved in 1989 with many of its goals not realized.

As for whether the second understanding of secularism—that is, as a worldview—is spreading, scholars see this as a complex question that is relative to both historical measures of secularism and sociopolitical factors of individual nation-states. The populations of countries in Western Europe as well as in Australia, New Zealand, Canada, and Japan are widely recognized as having high levels of adherence to secular ideology. In contrast, secularism is almost nonexistent in some nations, such as modern-day Iran, an Islamic republic. Secularism has mixed support in the United States. Current research finds that 50 percent of Americans support a wall of separation between church and state, while 32 percent believe that the federal government should “protect America’s religious heritage” by favoring Protestant Christianity (18 percent are undecided). Support for government involvement with religion varies by issue, ranging from almost 90 percent of Americans supporting the federal government providing military chaplains to around

➤ MADALYN MURRAY O’HAIR

Madalyn Murray O’Hair (1919–1995) was an outspoken advocate of secularism in the United States during the second half of the twentieth century. Ms. O’Hair’s public involvement with secularism began in 1960 with her role in the case *Murray v. Curlett*, in which Ms. O’Hair filed suit against a Baltimore, Maryland, school district over Bible readings in public school. Ms. O’Hair claimed that it was unconstitutional for her son, William Murray, to participate in these readings as an atheist. The *Murray v. Curlett* case was consolidated with *Abington Township School District v. Schempp*, a similar case against a Pennsylvania school district, when brought before the Supreme Court. The case was decided in favor of the plaintiffs (Murray and Schempp) in 1963. The decision effectively outlawed the forcing of students to participate in sectarian religious rituals (i.e., prayer and reading the Bible) in public schools.

As a result of this very public case, Ms. O’Hair became so infamous as to be declared by *Life* magazine in 1964 “the most hated woman in America.” Part of this ire resulted from her very open declaration of atheism. Ms. O’Hair organized the precursor organizations to one of the more prominent pro secularism organizations in the United States, American Atheists, in 1963. American Atheists works for the civil liberties of atheists and the separation of government and religion. Ms. O’Hair remained at the helm of the American Atheists until 1995 when, in a tragic and bizarre case, an associate kidnapped and murdered her and her two children and made off with funds from one of the groups that Ms. O’Hair founded.

—Ryan Cragun

Bibliography

Seaman, A. R. *America’s Most Hated Woman: The Life and Gruesome Death of Madalyn Murray O’Hair*. New York: Continuum International Publishing Group, 2005.

30 percent of Americans supporting teaching religious values in public schools.

Early proponents of secularism and its accompanying process, secularization, argued that the modernization and rationalization of society would inevitably lead to increasingly secular

societies and people without specifically describing any mechanisms. More recent scholarship argues instead that secularism, like other social movements, spreads through the actions of activist groups and individuals. The International Humanist and Ethical Union (IHEU) is an umbrella organization embracing secular movements and groups worldwide. Founded in Amsterdam in 1952, the group now represents the views of over 100 national organizations in over 40 countries, with a combined membership of over 3 million. The goal of the organization is to spread secularism (also called humanism or secular humanism) in the belief that a secular worldview, rather than religious ideology, provides a stronger foundation for human rights, ethics, and morals.

—Ryan Cragun

Bibliography

- Casanova, J. *Public Religion in the Modern World*. Chicago: University of Chicago Press, 1994.
- Dobbelaere, K. *Secularization: An Analysis at Three Levels (Gods, Humans, and Religions)*. New York: Peter Lang, 2002.
- Kohut, A., J. C. Green, and S. T. R. C. Keeter. *The Diminishing Divide: Religion's Changing Role in American Politics*. Washington, DC: Brookings Institute, 2000.
- Kurtz, L. R. *Gods in the Global Village: The World's Religions in Sociological Perspective*. Sociology for a New Century Series. Thousand Oaks, CA: Pine Forge, 2006.
- Peterson, M. D. *Thomas Jefferson*. New York: Viking Adult, 1975.
- Wald, K. D. *Religion and Politics in the United States*. New York: Rowman and Littlefield, 2003.

Atheism

Atheism is a difficult category to historically trace because many who subscribe to an atheistic worldview—that is, the disbelief of a deity or deities—do not self-identify as atheists. The reasons for such a rejection vary, but alternative labels are numerous, many of them having a complex history of their own. Some of these include Freethinkers, Secular Humanists, Anti-theists, Skeptics, Rationalists, and Brights, to name but a few. In addition, groups and individuals that were outside of mainstream Protestant Christianity were at times referred to as atheists, even if they

were theistic. Therefore, to trace a history of atheism is a complex undertaking that requires scholars to contend with multiple forms of identity and mislabeling. There are specific historical moments, however, where the terms “atheism” and “atheist” have been specifically used for political, social, and cultural motivations.

Tensions between atheists and religious groups in the post-World War II era have been most prevalent in the United States, as Europe entered an era of rapid secularization at all levels of society while the United States continued to experience an increase of religious fervor. In the United States in 1948, Vashti McCollum brought national attention to atheists when she sued the school board in Champagne, Illinois, over the practice of allowing school time for religious teachings. She argued that her son was being discriminated against as an atheist and was pressured to attend one of the sessions for Christianity, Catholicism, or Judaism. The Supreme Court ruled in favor of McCollum, citing that the school district's practice was a violation of the separation of church and state and the Fourteenth Amendment's Equal Protection Clause.

At the time of the McCollum decision anti-Catholicism was rampant in the nation, a bias that, according to some, helped to sway the Court in favor of McCollum. Although her position as an atheist did not avoid criticism, church organizations such as the Southern Baptist Convention supported McCollum, uniting against Catholic influence in schools. As anticommunist rhetoric continued to spread, however, it was becoming increasingly difficult to openly assert that one was an atheist. With the rise of McCarthyism, communism and atheism were often viewed as synonymous, and thus atheists were eyed with suspicion as unpatriotic threats to the nation-state.

Even though it was harder to self-identify as an atheist in Western countries in the 1950s, organizations continued to distribute publications with atheist messages at the height of McCarthyism. The Freethinkers of America, the United Secularists of America, and the National Liberal League published essays that were critical of religion and presented an alternative worldview to Protestant ideology. Many articles within their publications attempted to clarify that

not all atheists were sympathetic to communists in an attempt to distance themselves from Cold War paranoia. In addition, there were several independent publications promoting atheism that emerged throughout the United States in the postwar period.

The same year as the ruling on *McCollum v. Board of Education*, the United Nations drafted Article 18 of the Universal Declaration of Human Rights. Specifically dealing with freedom of religion, the following decade would involve debates over whether or not atheists were also protected under the word “belief,” as laid out in the declaration. The Soviet Union argued that freedom of religion was different from freedom of thought, a stance that others supported, placing atheism in line with philosophical thought and scientific reasoning instead of religion. It was not until 1960 that the influential Krishnaswami Report stated that atheism should indeed be protected as a belief.

In 1960 another landmark case in the United States was brought forward by an outspoken atheist, Madalyn Murray, who sued a junior high school in Baltimore for requiring students to read the Bible and recite the Lord’s Prayer. In 1963 the Supreme Court ruling sided with Murray, finding the junior high school’s practices in violation of the First Amendment’s Establishment Clause. That same year Murray founded the American Atheists, centering the organization in Austin, Texas. By 1964 *Life* magazine had dubbed her “The most hated woman in America.” Just two years after *Life*’s cover, *Time* magazine questioned “Is God Dead?” in its April 8 issue. Atheism had become highly visible in U.S. popular culture.

With the emergence of new atheist organizations toward the end of the twentieth century such as Atheist Alliance International and the increased visibility of the New Atheists, there are debates about the prevalence of atheists in the world. Local and national atheist groups have emerged all over the world including in Argentina, Cameroon, India, Nigeria, and the Philippines. University campuses across the world have also seen an increase in atheist student organizations. Furthermore, books and the blogosphere have brought more attention to atheism, with scholars such as Richard Dawkins, Daniel Dennett, Christopher Hitchens, and Sam Harris

contributing to a growing literature defending atheistic thought.

The increased visibility of atheists has been met with some hostility, however. In 2006 scholars from the University of Minnesota published a report stating that atheists were the least trusted group in the United States. This attitude is in part fostered by the notion that atheists are amoral and outside of the nation’s so-called religious foundation and are thus incapable of being good citizens. Even with this bias, those who identify as atheists have continued to increase.

—Janiene Langford

Bibliography

- Edgell, Penny, Joseph Gerteis, and Douglas Hartmann. “Atheists As ‘Other’: Moral Boundaries and Cultural Membership in American Society.” *American Sociological Review* 71(2) (April 2006): 211–214.
- Evans, Malcolm D. “The United Nations and Freedom of Religion: The Work of the Human Rights Committee.” In *Law and Religion*, edited by Rex J. Ahdar. Burlington, VT: Ashgate, 2000.
- Le Beau, Bryan F. *The Atheist: Madalyn Murray O’Hair*. New York: New York University Press, 2003.
- Zucker, James E. “Better a Catholic Than a Communist: Reexamining *McCollum v. Board of Education* and *Zorach v. Clauson*.” *Virginia Law Review* 93(8) (2007): 2069–2118.
- Zuckerman, Phil. “Atheism: Contemporary Rates and Patterns.” In *Cambridge Companion to Atheism*, edited by Michael Martin. Cambridge: Cambridge University Press, 2007.

Religion, Secularism, and Postcolonial Politics

In the mid-1950s, many former colonies in the developing world achieved political independence from their respective colonial powers. At that time, European and American observers wrote with glee of the spread of nation-states throughout the world. This fervor was for a perceived secular phenomenon. Enthusiasts for the emerging secular nationalism asserted that the legitimacy of government was dependent upon the consent of the governed, irrespective of religious sanctions. Those who promoted the agenda of secular nationalism in the blossoming governments often promoted the separation of

religion and politics as a necessary premise for such nationalism in order to transcend the obstructions to efficacious government and the solidification of political power created by religious orientations. These politicians hoped to define political power in such a way as to deny religious influence over its processes.

The secular nationalism articulated at this time was not entirely divorced from religion. It sought to provide answers to the human need for collective identity, ultimate loyalty, and social structure that has traditionally been the venue of religion in the West. This may be enough to classify secular nationalism as a religion itself. Moreover, critics within the developing world began to recognize a latent Christianity in the peculiarly Western form of secular nationalism. Such Christian overtones may not be overt, but when coupled, for example, with nationalism's quasi-religious structuring role in U.S. society similar to that of orthodox religious traditions within other societies, the continual connection between religion and politics surfaces.

Disregarding such Western calls for secularism, over the next several decades intellectuals in countries recently freed from colonial rule instead expressed the desire for an indigenous religio-political system free from the influence of Western culture. Such calls appeared in Egypt, Ukraine, Sri Lanka, India, Israel, and Mongolia among other countries and peoples throughout the world. In the post-Cold War era, religion has been even more firmly embraced as an alternative to Western imposition and serves as a platform for criticism and hope. The rhetoric of politically active religious leaders throughout the world presents religion as the avenue for change within modern contexts and as a link of continuity with a traditional past. While united against the common enemy of Western secular nationalism, such postcolonial nationalism often utilizes the symbols and ideas of the indigenous culture, including religion, to revitalize the society and religion as a vital element of the public arena. This is a broader social understanding of religion than is traditionally recognized by the Western definition of religion as a matter of private beliefs and precise doctrines. It includes religion in daily life and as founding the cosmological frame-

work that provides legitimation to political states and national loyalty.

—Michael P. Gueno

Bibliography

- Cromartie, Michael. *Religion, Culture, and International Conflict: A Conversation*. Lanham, MD: Rowman and Littlefield, 2005.
- Jurgensmeyer, Mark. *The New Cold War? Religious Nationalism Confronts the Secular State*. Berkeley: University of California Press, 1993.
- Petito, Fabio, and Pavlos Hatzopoulos, eds. *Religion in International Relations: The Return from Exile*. New York: Palgrave Macmillan, 2003.

Christianity Moves to the Developing World

Late in the nineteenth century, the spread of Catholicism and Protestant Christianity coincided with large-scale industrial development in Western Europe and the United States and with the imperialism of European and American rulers who were eager to develop trade and gain sovereignty over peoples in Africa, Asia, and Latin America. There was indeed a close connection between the Bible and the gun in the Christian penetration into the developing world, which became a mechanism for controlling these native populations. Yet despite the Eurocentric view of Christianity conveyed by Western missionaries, many native converts successfully integrated Christianity with traditional values and customs. This gave rise to new forms of Christian movements in the developing world.

Throughout the twentieth century, Western Christianity's global expansion has marked a dramatic shift in the center of Christianity from Europe and North America to Africa, Asia, and Latin America. The proliferation of mainline Protestant denominations, Pentecostal groups, and indigenous Catholic churches and sects had characterized the religious landscape of the developing world. A wide range of denominational and independent churches began to take shape in the developing world, the most famous examples being the Brazil-based Universal Church of the Kingdom of God (the Igreja Universal do Reino de Deus) and Brazil for Christ (Brasil Para o Cristo), the Redeemed Christian Church of God

in Nigeria, the True Jesus Church and Watchman Nee's Little Flock Movement in China, and the Minjung movement in Korea as well as the liberation theology movement in Latin America.

This phenomenon of church growth was a new global religious development comparable in importance to the growth of Catholicism, Protestantism, and orthodox Christianity in continental Europe, the rise of Islam, and the Buddhist transformation of East Asia. Its success owed much to the efforts of native converts. These native converts took the initiative to integrate Christianity into their communities and networks. Religious specialist Philip Jenkins refers to this religious phenomenon as the rise of "Southern Christianity," as opposed to Western Christianity in the Northern Hemisphere. By nature, the Southern Christianity is an enthusiastic, spontaneous, fundamentalist, and supernatural-oriented religious movement, considerably different from any other branch of Christian denominations in Europe and North America.

Politically, the growth of Southern Christianity coincided with a quest for justice, equality, and community empowerment across the developing world. Many Latin American liberation theologians, African revolutionaries, and Asian freedom fighters drew on their understanding of Christianity for ideas and inspirations in their struggles against colonialism, injustice, poverty, and political oppression.

The politicization of Christianity can best be seen in Africa, where the churches were often the only viable institutions to become involved in political, social, and cultural activities. A good example was the dynamics of Christian activism in South Africa. There was an intense conflict between the Dutch Reformed Protestants who used Christianity to justify apartheid rule and the Africans inspired by Christian principles to oppose it. As symbols of black consciousness, theologians such as Robert Sobukwe, Steve Biko, and Desmond Tutu identified the racist oppressors as those who crucified Jesus Christ, asserting that blacks had God on their side in the struggle for justice and racial equality. They critiqued the otherworldly interpretation of Christianity, as in the white churches, and reinterpreted Christian doctrines in relation to community

empowerment and this-worldly ethics of African religions.

The dynamics of Christianity as a driving force of change served as a form of political mobilization, social renovation, and cultural regeneration. After so many centuries of cross-cultural interaction, Christianity had become an integral part of local politics, religion, and culture in the developing world.

—Joseph Tse-Hei Lee

Bibliography

- Hastings, Adrian, ed. *A World History of Christianity*. Grand Rapids, MI: Eerdmans, 1999.
- Jenkins, Philip. *The Next Christendom: The Coming of Global Christianity*. Oxford: Oxford University Press, 2002.
- Lee, Joseph Tse-Hei. *The Bible and the Gun: Christianity in South China, 1860-1900*. New York and London: Routledge, 2003.
- Walls, Andrew F. *The Cross-Cultural Process in Christian History*. Maryknoll, NY: Orbis Books, 2002.

Acceleration of Fundamentalism

The last three decades have witnessed an acceleration of fundamentalism in different religious traditions and countries of the world. While the term "fundamentalism" originated in a conservative Christian context and was first used in a series of pamphlets published between 1910 and 1915, the term has entered popular discourse to refer to movements within various major world religions. Fundamentalists perceive the shift to modernity and secularization as an error, resulting in a loss of ethical and cultural values; each fundamentalist creed has created an alternate ideology in order to redeem society. There has been a conscious effort among these movements to return to authentic religious beliefs and core ethical and moral values of the past, and to this end, many fundamentalist groups participate in modern political and democratic processes.

In Israel, those among the Jewish population who identify themselves as the *haredim* (God-fearing) form the backbone of radical fundamentalism. The haredim attempt to return to the authentic religion of Judaism and revitalize Judaism in response to the reality of a modern secular State of Israel. The haredim, who find

themselves in perpetual conflict with the secular society and state, have built a strong political base. From the 1980s the National Republic Party (NRP) has followed the ideological lead of the fundamentalist group known as Gush Emunim (GE) and its policy of encouraging Jewish settlements. The members of GE and the NRP have succeeded in recent parliamentary elections and continue efforts to base the State of Israel on fundamentalist ideology, exacerbating tensions with Palestinians.

Christian fundamentalism in North America, Latin America, Australia, and New Zealand is shaped by a variety of ideological, organizational, and political forces (including the mainstream denominations). The New Christian Right (NCR) in the United States includes three major groups: the evangelical mainstream represented by Billy Graham and Christianity Today organization, the fundamentalists represented by the deceased Jerry Falwell, and the Pentecostal group led by Pat Robertson. The common thread running among them is the rejection of liberal trends in social practices. These movements draw sharp boundaries between themselves and a wider liberal culture and pointedly condemn homosexuality, pornography, abortion, feminism, and Supreme Court restrictions on prayer in schools. Since 1945, the NCR has created an infrastructure that has helped to reshape the political landscape of the United States.

Fundamentalist movements in Latin America can be characterized in three broad categories: mainline Protestantism, Evangelical Protestantism, and Pentecostal Protestantism. Today most of Latin American Protestant movements are influenced by the fundamentalist movements in the United States and are similar in values, ideas, and ethical conduct. In Latin America, evangelists have mobilized the lower and poor segments of society by establishing local and community development programs, hospitals, schools, and orphanages.

Some of the most important fundamentalist groups in Sunni Islam are the Muslim Brotherhood in Egypt, Jamaat-i-Islami in Pakistan, Darul Islam in Indonesia, the Islamic National Front in Sudan, the Rafah Party in Turkey, and other fundamentalist movements in Algeria, Morocco, and Tunisia. The list must also include various

fundamentalist groups among the Shiites. Their basic contention is to return to the Golden Age of Islam by implementing Sharia as a system of laws based on the teachings of the Quran and Sunna. In the recent past a newer generation of fundamentalist movements in Muslim countries has sprung up that advocate violence.

South Asia's political and social landscape includes Muslim fundamentalists, Hindu fundamentalists, and Sikh fundamentalists. To highlight only one of these, Hindu fundamentalism developed during the period of European colonization and is based on the notion that the Hindu nation is a cultural and religious entity that needs to return to ancient social norms and religious values. As with other such groups, Hindu fundamentalists want these nationalist values reflected in the state apparatus. Hindu fundamentalism as represented by Brahmo Samaj (Society of Brahmo) that emerged in 1839, Arya Samaj (Society of Aryas) that was established in 1875, and Rashtriya Svayamsevak Sangh (National Union Volunteers) that was founded in the 1920s presents varying assertions of Hindu national identity. Brahmo Samaj and Arya Samaj aimed to reform Hindu doctrines and practices in order to legitimize a Hindu religious identity in a secular state. Swami Dayananda Sarasvati, the founder of Arya Samaj, categorically declared in 1877 that India is *aryavarta* (the Golden Land) that should be brought to glory again. In South Asia, fundamentalist groups have been major actors in electoral politics and, at times, have encouraged communal riots and other violence.

—Husain Kassim

Bibliography

- Almond, Gabriel A., R. Scott Appleby, and Emmanuel Sivan. *Strong Religion*. Chicago: University of Chicago Press, 2003.
- Marty, Martin E., and R. Scott Appleby, eds. *Fundamentalism Observed*. Chicago and London: University of Chicago Press, 1991.
- Saha, Santosh C., ed. *Religious Fundamentalism in the Contemporary World*. Lanham, MD: Lexington Books, 2004.
- Saha, Santosh C., and Thomas K. Carr, eds. *Religious Fundamentalism in Developing Countries*. Westport, CT: Greenwood, 2001.
- Sahliyyeh, Emile, ed. *Religious Resurgence in the Contemporary World*. Albany: State University of New York Press, 1990.

Youssef, Michael. *Revolt against Modernity: Muslim Zealots and the West*. Leiden: Brill, 1985.

Christian Fundamentalism

The term “fundamentalism” derives from a series of pamphlets that appeared between 1910 and 1915 called *The Fundamentals*. These booklets represented an attempt on the part of conservative Protestants to counteract what they saw as a drift toward liberal theology or modernism in mainline Protestant denominations early in the twentieth century. Subtitled *Testimony to the Truth*, these pamphlets contained articles on doctrinal matters written by respected evangelical theologians from North America, Australia, and Great Britain. The idea for such a series came from Lyman Stewart of Union Oil Company of California; he and his brother, Milton, financed their publication and set up a fund to distribute the booklets to Protestant pastors, Sunday school superintendents, and other religious leaders throughout the English-speaking world.

Out of the 90 articles contained in the pamphlets, approximately one-third addressed the contested issue of biblical inspiration, arguing that the Bible is divinely inspired and utterly without error in the original manuscripts. Other articles articulated conservative positions on such issues as the virgin birth of Jesus, the authenticity of miracles, the resurrection, and the Genesis account of creation. Those who subscribed to these doctrines became known as fundamentalists, and the term “fundamentalism” came to refer to the entire movement.

Although the term has since been applied more generally to conservative movements in other religious traditions—Islamic fundamentalism, Hindu fundamentalism, Jewish fundamentalism, and others—the term properly belongs to a movement within North American evangelicalism, which is characterized by a belief in the Bible as God’s revelation to humanity, the centrality of a conversion experience, and the impulse to evangelize or bring others into the fold. Fundamentalism differs from the longer tradition of evangelicalism primarily in the demands on the part of its leaders for separatism, sectarianism, and militancy.

ANTIMODERNISM ON TRIAL

The Scopes trial of 1925 illustrates the tensions that emerged in the 1920s between Christian Fundamentalists and mainstream U.S. society, including Christian modernists who accepted evolutionary teaching. At this trial, attorney Clarence Darrow and politician William Jennings Bryan squared off in the Rhea County courthouse in Dayton, Tennessee, over the teaching of evolution in public schools. Bryan, a fundamentalist and three-time Democratic nominee for president, feared that the teaching of evolution would lead to a kind of social Darwinism and thereby threaten traditional values and democratic principles. Although Bryan won his case—John T. Scopes was convicted of violating the state’s Butler Act (1925), which forbade the teaching of evolution in public classrooms—the press contingent, led by H. L. Mencken, succeeded in painting Bryan and, by extension, all fundamentalists as backwoods country bumpkins who were averse to science and threatened by modernity. The hostility was so intense that many fundamentalists separated from the mainstream, creating new institutions such as separate schools and refusing to vote in popular elections.

—Randall Balmer

Whereas evangelicalism historically has sought to be as winsome as possible in order to attract nonbelievers to the faith, fundamentalists have emphasized the importance of purity in doctrine and lifestyle, even to the point of separating from those who, in the judgment of fundamentalist leaders, fail to adhere to those standards. Fundamentalists, more often than not, wear their sectarianism as a badge, evidence that they have not succumbed to the allure of false doctrine or cultural blandishments.

Fundamentalism has also been described as a militant antimodernism, but that characterization must be qualified. Fundamentalists are not opposed to modernism in the sense of being suspicious of innovation or technology; indeed, fundamentalists (and evangelicals generally) have often been in the vanguard of technology especially communications technology, including radio and television. Fundamentalists have an

► THE PROMISE KEEPERS

The Promise Keepers (PK) began on March 20, 1990, while the University of Colorado football coach Bill McCartney, subsequently generally known as “coach” among PK enthusiasts, and his friend Dave Wardell, the University of Colorado athletic director, were on a three-hour car ride to attend a meeting of the Fellowship for Christian Athletes. The first conference, or PK mass rally, took place in July 1991 in the University of Colorado basketball arena, with 4,200 men in attendance. By 1992 they attracted 52,000 to a conference at Folsom Field, the football stadium at the University of Colorado. By 1996 they drew 1.1 million men to stadiums around the United States and as many as 1 million in 1997 to the mall in Washington, D.C., for a special event, Stand in the Gap. As of 2005, the PK conferences drew typically 35,000–50,000 a year. For 2009, they scheduled only one conference for the year at Folsom Field in Boulder, Colorado. The conferences have included music, drama, humor, multimedia presentations, and sermons. The revivalist nature of the PK likely explains their rapid rise and decline at large-scale events, in that revival inherently inspires an intensity that is difficult to maintain.

As a Christian ministry, the PK follows in a long history of revivalism in the United States. Officially formed as nondenominational and nonpolitical, the PK seeks to energize and unite men of all faiths

and races worldwide under Christianity through what they call the Seven Promises and Seven Statements of Faith. The Promises govern personal behavior and specify aspirational goals to fulfill God’s Word: achieve a loving family, practice truth and integrity, and persevere to uphold the ideals of Christianity in all aspects of life, as described in the Statements of Faith. In the Statements, a Promise Keeper should uphold the inerrancy of Scripture, admit one’s own inherent sinfulness and inadequacy, work to meet the needs of less fortunate people, and promote Christianity as the one true faith to achieve harmony among all people worldwide.

The group also has garnered a great deal of controversy, with critics arguing that the PK can be thought of as having a barely hidden political agenda. Critics note that the group, predominately white, emphasizes gender norms that assume female subordination. In addition, PK leader Bill McCartney’s and other PK speakers’ antiabortion, antigay, and antilesbian rights pronouncements at forums such as Operation Rescue suggest common interests with the New Right and the antifeminist backlash of recent decades. Responding to the PK’s call to responsibility, however, many participants report that the PK has had a vital significance in their lives, and they appreciated the at least overtly nonpolitical orientation.

—George N. Lundskow

aversion to modernity only when it is invested with a moral valence, that is, when modernity appears to authorize a departure from orthodoxy or traditional values, however they might be defined.

Because of the movement’s emphasis on biblical literalism, fundamentalists have devoted much attention to the prophetic passages in the Bible, especially the book of Daniel in the Hebrew Bible and the book of Revelation in the New Testament. Drawing on a nineteenth-century mode of biblical interpretation called dispensationalism, or dispensational premillennialism, fundamentalists, especially in the early decades of the movement, looked for the imminent return of Jesus. According to this dispensationalist scheme, the true believers (those who have

been converted and who remain faithful to the Scriptures) would be raptured, or taken directly into heaven at the second coming of Jesus. Those outside of the faith, including those associated with theological liberalism, would face divine judgment.

Because of this emphasis on the imminent return of Jesus, fundamentalists for much of the twentieth century were adamantly apolitical. If Jesus was coming at any moment, they reasoned, why concern yourself with earthly matters? From the end of the Scopes trial in 1925 until the late 1970s, many fundamentalists refused to participate in the political process; many were not registered to vote. That changed after 1976, however, when the Internal Revenue Service revoked the tax-exempt status of Bob Jones University, a fun-

damentalist school in Greenville, South Carolina, because of its racially discriminatory policies. Various fundamentalist leaders banded together to resist that ruling, thereby sowing the seeds of political activism that germinated into the Religious Right. By the time of the 1980 presidential election, the Religious Right included family values and opposition to homosexuality and abortion in its political agenda. In 1979 the political advocacy group called Moral Majority, for instance, was organized by Jerry Falwell. Falwell, pastor of the Thomas Road Baptist Church in Lynchburg, Virginia, called on his fellow fundamentalists to register and vote in the 1980 election, many of them for the first time.

Finally, fundamentalism can be characterized as confrontational, at least as it has developed in the United States; Falwell, for example, insisted that he was a fundamentalist, not an evangelical. This militancy—on matters of doctrine, ecclesiology (church order), dress, personal behavior, or politics—has prompted George M. Marsden, the preeminent historian of fundamentalism, to remark that the difference between an evangelical and a fundamentalist is that a fundamentalist is “an evangelical who is mad about something.”

—Randall Balmer

Bibliography

- Ammerman, Nancy Tatom. *Bible Believers: Fundamentalists in the Modern World*. New Brunswick, NJ: Rutgers University Press, 1987.
- Carpenter, Joel A. *Revive Us Again: The Reawakening of American Fundamentalism*. New York: Oxford University Press, 1977.
- Harding, Susan Friend. *The Book of Jerry Falwell: Fundamentalist Language and Politics*. Princeton, NJ: Princeton University Press, 2000.
- Marsden, George M. *Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism, 1870 to 1925*. New York: Oxford University Press, 1980.
- Sandeel, Ernest R. *The Roots of Fundamentalism: British and American Millenarianism, 1800–1930*. Chicago: University of Chicago Press, 1970.

Wahabism

Wahabism is an extremist form of Islam that a tiny fraction of the world's Muslims endorse; however, it is the Kingdom of Saudi Arabia's offi-

cial religious doctrine. During the eighteenth century, Wahabism emerged in the Arabian Peninsula, which had officially been part of the Ottoman Empire since the sixteenth century; nevertheless, local tribal chiefs were able to maintain a great deal of autonomy. Some of the underlying convictions of more contemporary Islamist movements can be found in the eighteenth- and nineteenth-century Muslim world, which saw the development of movements such as Wahabism that espoused a return to the earliest period of Islam. In particular, proponents of these movements focused on upholding the original teachings of the Prophet Muhammad and the Quran and on eliminating cultural practices that they deemed un-Islamic; those who advocate such beliefs are sometimes termed “fundamentalist.”

One of the leaders of such a movement was Muhammad ibn Abd al-Wahab (1703–1792), a religious scholar who emphasized an austere interpretation of Islam, the eradication of Sufism (Islamic mysticism), and a purging of popular religious customs, such as visiting saints' shrines. Abd al-Wahab attracted a following of devotees in central Arabia, and in 1745 he formed an alliance with the powerful local chieftain Muhammad ibn Saud. Their affiliation provided religious legitimacy for ibn Saud and military power for al-Wahab as their movement expanded throughout Arabia and captured Mecca in 1803. The Ottomans sent forces to suppress the fledgling state within a few decades, but a century later Abd al-Aziz ibn Saud (1881–1953) established the Kingdom of Saudi Arabia in 1932.

The Saudis' absorption of Wahabism into the state has been systematic ever since its founding. For example, Saudi Arabia has no constitution because the state claims the Quran as its constitution. Unfortunately, the Quran provides almost no protection for citizens in practical terms since it has few passages with explicit commands that could serve as anything comparable to a Bill of Rights. Saudi Arabia's legal system also is not codified and is based on the conservative Hanbali School of Islamic law. Most Muslim countries use some variation of Islamic law that has been blended with Western influences for personal status matters (such as marriage, divorce, custody, and inheritance), while

➤ HUNTINGTON'S THESIS—CLASH OF CIVILIZATIONS

In 1993, U.S. political scientist Samuel Huntington's polemic article "The Clash of Civilizations," published in the widely circulated international relations journal *Foreign Affairs*, touched off a public debate over the post-Cold War world. Huntington argued that post-Cold War international relations would not be determined by "the end of history" (a notion promoted by scholars such as Francis Fukayama) or the preeminence of the West but rather by a "clash of civilizations." According to Huntington, cultural and religious identities, as evidenced by the emergence of Islamist movements, Russian nationalism, and Chinese assertiveness, would replace the ideological antagonisms of the bipolar Cold War. Civilizations, characterized by ethnocultural attributes such as religion, language, and common identity, would create new challenges to Western hegemony, particularly along what Huntington called "cultural fault lines" (e.g., Christian Europe-Muslim Middle East, Hindu India-Muslim Pakistan, and Slavic/Orthodox Russia-Europe). Thus, civilizational identity would pose the greatest source of antagonism in future geopolitical strategies vis-à-vis the West by non-Wests. Moreover, certain civilizations limited to the boundaries of one nation-state (such as Turkey and Japan) would find themselves at odds with adjacent civilizations, regardless of their level of economic development (or Westernization). Western universalist notions of democracy, human rights, and economic liberalism

would be at odds with the cultural traditions of the developing world. The non-Wests would be resistant to what they deemed a form of cultural imperialism, particularly when threatened by instances such as the U.S. war on Iraq of 1990–1991 and accelerated globalization. Moreover, non-Wests such as Iran, Pakistan, and China would be more willing to acquire weapons of mass destruction in order to counter Western (particularly U.S.) firepower in that regard, taking a more assertive stance in what was deemed an era of a supreme U.S. military. Non-state actors, particularly Islamist movements, would be prone to center their anti-American ideology on religious discourses (particularly anti-Zionism) to gain the adherence of their followers and mass support from Muslims in the non-Wests.

Despite an initial adherence to the Huntington thesis by neoconservatives in the West, his argument was immediately scrutinized. Critics pointed out that Huntington overlooked the processes of globalization and its effects of creating commonalities among the vast populations of the world, not to mention the continuity of the myriad ideologies that still transcended the boundaries of nation-states and the remaining primacy of the nation-state itself. Regardless, the Huntington thesis provided a valuable framework, albeit with some oversimplifications and generalizations, from which to examine contemporary world affairs.

—Abraham O. Mendoza

other types of law are based on Western codes. Saudi Arabia is one of the few countries that still uses archaic, severe interpretations of Islamic law for criminal matters as well. Religious scholars also hold powerful positions in the country, and many are related to the royal family. In gender matters, the Wahabi state treats women as second-class citizens in many respects, but women do take advantage of educational and professional opportunities. Likewise, gender segregation has actually facilitated many employment openings for women, especially in medicine and teaching.

The most significant ways in which Wahabism has affected the rise of Islamist movements has been in terms of inspiring certain convictions

and spreading its influence by taking advantage of its base in Saudi. Some groups have supported comparable doctrinal positions such as advocating a return to the origins of Islam and denouncing popular religious practices. Another example is Wahabi's use of the term "jahiliya" (the age of ignorance, which Muslims call the pre-Islamic period) to characterize the current (Muslim) regime, which Sayyid Qutb, the ideologue of the Muslim Brotherhood in Egypt, borrowed in the 1960s. In terms of more general Wahabi influence, the hajj pilgrimage to Mecca and oil revenues have been strategic vehicles. Since the hajj takes place in Saudi Arabia, Wahabis are in an ideal position to exert influence on the millions of Muslims who make the trip every year.

Oil revenues enabled Saudis to form the Muslim World League (a nongovernmental organization) in 1962 with the primary goal of spreading Wahabism, and oil money attracted millions of Muslims to work in the Saudi oil industry during the 1970s, where they were exposed to Wahabi thinking. Saudi oil money has also funded the construction of some 1,500 mosques around the world since the 1950s, and Saudis helped fund the Taliban in order to counter the Soviet invasion of Afghanistan in 1979.

While there are certain parallels between Wahabis and Islamist groups, there are also important distinctions. Most Islamist groups espouse social concerns and, indeed, are able to gain a great deal of community support by providing social services and drawing attention to social causes. Many Islamist groups, moreover, have revolutionary aspirations and actively seek the establishment of an Islamic state. Wahabis, on the other hand, tend to have fewer social concerns and are overwhelmingly conservative. That is, they are hardly advocates of revolution and certainly not in Saudi, although some are willing to criticize the state.

—Elizabeth Brownson

Bibliography

- Algar, Hamid. *Wahabism; A Critical Essay*. Oneonta, NY: Islamic Publications International, 2002.
- Kepel, Gilles. *Jihad: The Trail of Political Islam*. Cambridge: Harvard University Press, 2002.
- Kostiner, Joseph. *The Making of Saudi Arabia, 1916–1936: From Chieftancy to Monarchical State*. New York: Oxford University Press, 1993.
- Rentz, George. *The Birth of the Islamic Reform Movement in Saudi Arabia: Muhammad Ibn ‘Abd al-Wahhab (1703/4–1792) and the Beginnings of Unitarian Empire in Arabia*. London: Arabian Publishers, 2004.

Hindu Fundamentalism

Hindu fundamentalism—or, more properly, Hindu nationalism—is a social and political movement that arose over the course of the twentieth century in tandem with a growing sense of Hindu identity as distinct from other religious identities prominent in India, particularly Islamic identity. Inspired primarily by the writings and thought of Vinayak Damodar Savarkar (1883–1966) and

Madhav Sadashiv Golwalkar (1906–1973), Hindu nationalism is rooted largely in the politics of the Indian independence movement and the traumatic aftermath of the partition of India and Pakistan (1947). It is associated today primarily with the Bharatiya Janata Party (Indian People's Party).

Hindu nationalism, as distinct from other types of religious fundamentalism, is not based on a literalist reading of the Hindu scriptures, nor does it involve claims of Hinduism being the only way to salvation. This is different from, for example, Christian fundamentalism, with its conflict between creationism and evolutionary theory and its agenda of conversion. Indeed, Hindu nationalists sometimes pride themselves on the lack of conflict between Hinduism and modern science as well as on the Hindu teaching that there are many paths to salvation and the tolerance that this teaching is supposed to engender.

Hindu nationalism is better characterized as a political ideology that asserts Hindu supremacy within the Indian nation-state. In much the same way that the Christian Right asserts that the United States is a Christian nation, Hindu nationalists assert that India is a Hindu nation in which non-Hindus are to play a marginal, or even subservient, role. Hindu nationalism shares with other types of religious fundamentalism a general sense of hostility and suspicion toward other religious traditions as well as toward secularism, the latter of which is viewed by Hindu nationalists as a clever ploy to subjugate Hindus to religious minorities in India, such as Muslims and Christians.

The irony of such a doctrine of communal supremacy being upheld by Hindus, who pride themselves, as just mentioned, on the tolerance and pluralism of Hinduism, is not lost on critics of Hindu nationalism, some of whom claim that Hindu nationalism is not truly Hindu and that the phrase “Hindu fundamentalism” is an oxymoron. Hindu nationalists, in turn, typically respond to this criticism by arguing that the intolerance of other religious communities requires a forceful response from the otherwise tolerant Hindu community.

The ideological foundations of Hindu nationalism can be traced to a short treatise written by Savarkar during his imprisonment by the British

in the period of the Indian independence movement. The title of this treatise, *Hindutva*, means “Hindu-ness” and is also the term by which Hindu nationalism is generally known by its supporters. Savarkar defines a Hindu as someone who fulfills three criteria. A Hindu is (1) a citizen of India, (2) of Indian descent, and (3) an adherent of a religious tradition indigenous to the Indian subcontinent (thus including not only Hindus as generally understood but also Jains, Buddhists, and Sikhs). Hinduness, in other words, is coextensive with Indian-ness and does not include Indian Muslims or Christians or practitioners of Hindu spiritual paths who are not Indian or of Indian descent.

Interestingly, however, despite its marginalization of non-Hindu Indians and non-Indian Hindus, some Indian Muslims and Christians have supported Hindu nationalism, even rising to positions of prominence in Hindu nationalist organizations, as have some non-Indian practitioners of Hinduism. Sikander Bakht, for example, an Indian Muslim, became vice president of the Bharatiya Janata Party in 1984, and American Hindu author David Frawley has written numerous works in support of Hindu nationalism. Supporters see Hindu nationalism as a conservative ideology that upholds traditional Indian values.

Hindu nationalism is perceived by its critics to be an ideology that promotes intercommunal tension and violence. Nathuram Godse, who assassinated Mahatma Gandhi, was a Hindu nationalist who blamed Gandhi for the partition of India and felt that Gandhi was too accommodating to the concerns of the Indian Muslim community.

More recently, in 1992, a group of Hindu nationalists demolished a mosque in the town of Ayodhya that they believed had been constructed 500 years earlier on the ruins of a temple marking the birthplace of the Hindu deity Rama, a temple that had itself allegedly been destroyed under the Mughal emperor Babur. This led to widespread communal rioting in which many Hindus and Muslims were killed not only in India but in Pakistan and Bangladesh as well. Later, in 2002, extremely violent riots broke out between Hindus and Muslims in the city of Ahmedabad, in the state of Gujarat, in which the Hindu nationalist government of the state is still suspected to have been complicit.

Though associated primarily with the Bharatiya Janata Party, Hindu nationalism is not a centralized movement but instead is espoused by a variety of political organizations, such as the Rashtriya Swayamsevak Sangh (National Volunteers Organization), the Vishva Hindu Parishad (World Hindu Council), and the Shiv Sena (Army of Shiva). Though these are all, broadly speaking, Hindu nationalist organizations, they do not agree on all issues and often differ in their aims and views on specific topics.

—Jeffery Long

Bibliography

- Frawley, David. *Hinduism and the Clash of Civilizations*. New Delhi: Voice of India, 2001.
- Llewellyn, J. E., ed. *Defining Hinduism: A Reader*. New York: Routledge, 2005.
- Long, Jeffery D. *A Vision for Hinduism: Beyond Hindu Nationalism*. London: I. B. Tauris, 2007.
- Nussbaum, Martha C. *The Clash Within: Democracy, Religious Violence, and India's Future*. Cambridge: Harvard University Press, 2007.
- Savarkar, Vinayak Damodar. “Hindutva.” In *Sources of Indian Tradition*, Vol. 2, edited by S. Hay. New York: Columbia University Press, 1988.

Religious Broadcasting

Preachers have made good use of broadcasting since its inception. In the United States, there were live church services on radio as early as 1921. When the television era began in the late 1940s, many popular preachers in the United States adapted to the new medium. A few were Catholic, such as Bishop Fulton J. Sheen, but the majority came from Protestantism, and of those many were from the Pentecostal tradition. By the early 1980s, with many popular U.S. religious broadcasts and networks, the term “televangelist” came into common use.

Some of the first internationally known televangelists came from the United States and brought their successful crusades (revival meetings) to other countries. For example, Billy Graham, who had already held revival meetings in Berlin and London in the late 1960s, preached in Dortmund, Germany, in April 1970. Using a closed circuit hookup, the revival was broadcast to 15 cities in 11 countries. Another American televangelist was the controversial faith healer

Morris Cerullo, who held miracle crusades in countries such as Nigeria and India during the mid-1970s. By 1982, he had offices in the United States, Canada, England, and Israel. In the early 1990s, Cerullo also was at the forefront of evangelizing in the former Soviet Union. Well-known American TV preacher Pat Robertson's *700 Club* program went on the air in 1966; by the mid-1990s, his Christian Broadcasting Network (CBN) was seen in Asia, Europe, and Latin America. Canadian televangelist David Mainse brought his Christian talk and entertainment program *100 Huntley Street* throughout the United Kingdom in the late 1980s.

It was not only American and Canadian televangelists who brought their electronic church to other countries. In early 2009, a well-known TV preacher from Argentina, Dante Gebel, came to America to preach to Southern California's large Hispanic audience. Gebel was hired by Reverend Robert H. Schuller, pastor of the megachurch known as the Crystal Cathedral and host of the syndicated *Hour of Power*. Another Argentinian-born evangelist, Luis Palau Jr., was so strongly influenced by Billy Graham's preaching that he ultimately came to America and worked as Graham's translator, helping to expand Graham's ministry into Spanish-speaking countries. Palau also set up a bilingual ministry of his own, using both radio and TV to do so.

Preachers all over the world emulated the success of their North American counterparts and used the electronic media to carve out their own niches. Among the most influential has been Mariano "Brother Mike" Velarde, a lay preacher and leader of a Catholic Charismatic movement in the Philippines called El Shaddai. The personable Brother Mike is beloved by his millions of fans. Brother Mike's influence also extends to politics; because of his popularity and his ability to get his followers to do as he asks, he has affected political elections and aroused controversy by endorsing political candidates. He was the spiritual advisor during the regime of scandal-plagued former president Joseph Estrada.

In Nigeria, televangelists have been on the air since the mid-1970s, and nearly all of the TV preachers are Pentecostal. As in America, the Pentecostal style of worship lends itself well to television. It is energetic, enthusiastic, and emo-

➤ MUSLIM TELEVANGELISTS

Although televangelism is usually associated with Christianity, in countries such as Egypt, Saudi Arabia, and Dubai the most popular televangelists are Muslims. As of 2008 there were more than 400 satellite channels in the Arab world, and about 80 of them were devoted entirely to religious broadcasting. These channels feature every type of program, from famous imams teaching lessons from the Holy Quran to young clerics hosting talk shows and giving advice to callers. Some channels are conservative, with imams who deliver fiery sermons from a traditionalist perspective. Other channels identify as moderate, with telegenic young preachers who apply Islam to contemporary problems. Muslim televangelists often use a multimedia approach to reach a wider audience, combining their television shows with postings on their Web sites, selling their DVDs, and even making YouTube videos. Especially popular with young viewers are moderates such as Amr Khaled and Moez Masoud, who broadcast from an Egyptian station, and a young Saudi cleric named Ahmad al-Shugairi. Khaled in particular has an international reputation. A 2007 article in *Time* magazine named him one of the most influential people, comparing his popularity among young Muslims to that of a rock star. But Muslim televangelism is not without controversy. As in the West, critics accuse some preachers of being materialistic and acting like celebrities. Also, within Islam, moderate television preachers accuse traditionalists of presenting a harsh and intolerant version of Islam, while the traditionalists accuse moderates of teaching something that is not Islam at all. Meanwhile, the popularity of Muslim televangelism continues to grow, and more religious channels are going on the air.

—Donna Halper

tional. Nigerian TV services often include faith healing, the driving out of demons, and speaking in tongues. Among the best-known televangelists is Pastor Chris Oyakhilome; his following has extended throughout Africa, and millions have attended his revivals. But he has also been accused of fraud regarding his faith-healing claims. Despite the skeptics, Pastor Chris and other faith-healing televangelists remain popular.

Since India is predominately Hindu, there has been some resistance to Christian evangelists leading revivals. And yet by 2007, India had four Christian satellite networks, and several native-born evangelists had achieved considerable popularity. Perhaps the best-known was Dr. D. G. S. Dhinakaran. A convert to Christianity, he began a radio ministry in the early 1970s known as *Jesus Calls* and subsequently moved over to television, gaining many fans in India, Sri Lanka, and Malaysia. He became friends with Pat Robertson and affiliated with Robertson's Christian Broadcasting Network. Dhinakaran continued to preach until his death in 2008. The Hindu faith also has adapted to the idea of televangelism, with a few gurus using the airwaves to preach, but this too has proven controversial. Some religious leaders believe that it is improper for a guru to become a TV star and that it promotes materialism when TV preachers sell their CDs or DVDs. But other Hindu clerics believe that using modern media to get the message out to a wider audience is beneficial.

In Brazil, televangelists have encountered a similar problem to that of India but for a different reason. Brazil was predominantly Catholic until the rise of televangelists, who brought Pentacostal-style Protestant worship to the airwaves. At the forefront of this movement is Edir Macedo, a convert from Catholicism to Protestantism who founded the Universal Church in 1977, gaining members in both Brazil and Portugal. Despite questions about his church's fundraising tactics, Macedo and his television ministry remain very successful. But his harsh criticism of Catholic doctrines has also made him a figure of controversy.

Despite the controversial image of some in their ranks, other televangelists have been known for the good works they perform. As of 2009, religious broadcasting continued to attract millions of viewers worldwide.

—Donna Halper

Bibliography

- Butler, John, Grant Wacker, and Randall H. Balmer. *Religion in American Life: A Short History*. Rev. ed. New York: Oxford University Press, 2007.
- Haynes, Jeff, ed. *Religion, Globalization and Political Culture in the Third World*. New York: Palgrave Macmillan, 1999.

James, Jonathan, and Brian P. Shoesmith. "Masala McGospel: A Case Study of CBN's Solutions Programme in India." *Studies in World Christianity* 13(2) (2007): 170–191.

Prusher, Ilene R. "Philippine Churches Take Sides." *Christian Science Monitor*, December 11, 2000, 6.

Worth, Robert F. "Preaching Moderate Islam and Becoming a TV Star." *New York Times*, January 3, 2009, A1.

Mormonism since 1945

Founded by Joseph Smith and a handful of followers in 1830, the Church of Jesus Christ of Latter-day Saints, often referred to as the Mormon Church, has grown to over 13 million members worldwide. While it is commonly thought of as an almost exclusively U.S. denomination and is headquartered in Salt Lake City, Utah, by 2007 a slight but growing majority of Mormons lived outside the United States.

In 1947 Mormonism's membership topped one million worldwide. Steady growth in the United States and explosive growth in other countries, especially in Latin America, brought total membership to over four million by 1980, and this number more than tripled to 13 million by 2007. This represents an increase of 1,300 percent in the six-decade period following 1947. In 2004 Mormonism became the fourth-largest Christian denomination in the United States, and in 2007 it had a U.S. membership of more than 5.6 million. In other countries, however, the growth of Mormonism has been even more pronounced. For instance, in 1946 Mexico had only about 6,000 Mormons; however, by 2007 there were more than 1 million Mormons in the country. This type of growth has also occurred throughout much of Central and South America. By 2007 Latin America was home to approximately 4.7 million Mormons. While North and South America constitute the bulk of Mormonism statistically, Mormon congregations exist in more than 160 countries, with many also experiencing rapid growth. The West African country of Ghana, which had barely over 100 members in 1980, by 2007 had nearly 30,000. Globally, this trend has allowed the Mormon Church to grow by 350,000–400,000 members per year, adding another million adherents approximately every three years.

As this growth in membership suggests, Mormon missionary efforts are extensive and worldwide. All young men are expected and commanded to serve a two-year mission for the Mormon Church after reaching age 19. However, those who choose not to go can remain members. Many thousands of women also serve an 18-month mission after reaching age 21, but such service is not expected for women as it is men. In the early twenty-first century, at any given time there were between 50,000 and 60,000 missionaries spreading the Mormon message to every nation that will permit proselytizing.

Mormonism's unique doctrines and practices often have placed it at odds with mainstream Christian denominations. One aspect of Latter-day Saint theology, unique to the Mormon Church, maintains that essential covenants beyond baptism must be made to God, not in the weekly meetinghouses but in the temples. Unlike the weekly worship services at Mormon meetinghouses that are open to all, only Mormons who are judged by the church to be adequately adhering to the religion's tenets are allowed entry to temples. Reflecting the growth in membership, the number of temples has also increased. In 1996 there were only 50 Mormon temples operating worldwide; in 2007 there were 124 temples, ranging from Suva, Fiji, to Helsinki, Finland, with another 12 under construction. The Mormon Church also has a temple inside of communist China despite that country's injunction against Christian evangelizing, having built a temple in Hong Kong just prior to its transfer from British to Chinese control.

In the temples, Mormons perform eternal marriage ceremonies under the Mormon belief that temple marriages and the subsequent family relations can extend beyond death and into the afterlife. Because baptism is deemed essential for salvation, Mormons also practice baptisms for the dead in temples. In these ceremonies, Mormons stand in place of deceased ancestors, who may never have had the opportunity to hear the Gospel as it was restored through Joseph Smith, and are themselves baptized. Mormons believe that everyone who has lived on the earth will have an opportunity to accept the Gospel of Jesus Christ either in mortal life or in the spirit world after death. Their doctrine teaches that all men

and women will be judged according to the lives they lived, according to the knowledge of truth they possessed while they were alive; thus those who die outside the realm of Christianity can still obtain heaven and eternal life. This practice has, at times, generated controversy, particularly when relatives of Jewish Holocaust victims learned that their deceased relatives were being given such proxy baptisms without the family's knowledge or consent. In the mid-1990s Mormon officials agreed to end this practice if the deceased were not direct relatives of members.

Several other key beliefs separate Mormons from most Christian groups. While Mormon theology teaches that salvation can only come through the sacrifice (or atonement) of Jesus, Mormons do not accept the doctrine of the Trinity common among Protestant denominations and Catholicism; Mormons believe that God the Father and Jesus Christ his Son are two separate and distinct beings but are one in purpose. Mormons believe that as in biblical times, God has again visited the earth and called prophets, such as Joseph Smith. The Mormon Church is led by a prophet and 12 men deemed to be called as apostles. These Mormon Church leaders claim to receive new revelations for the whole Church that are passed on to the individual congregations. Furthermore, Mormons accept the Book of Mormon as scripture in addition to the Bible.

The Church of Jesus Christ of Latter-day Saints officially ended plural marriages in 1890 with church president Wilford Woodruff's *Manifesto*, and now such marriages are grounds for excommunication. Breakaway Mormon sects that have viewed Woodruff's *Manifesto* as a heretical compromise to ensure Utah statehood and highly publicized trials have continued to perpetuate a misconception that present-day Mormons practice polygamy. Contemporary Mormons are also noticeable for their commitment to a distinct health code, which requires them to abstain from coffee, tea, tobacco, and alcohol.

—Gerrit Dirkmaat

Bibliography

- The Deseret Morning News 2007 Church Almanac*. Salt Lake City: Deseret Morning News, 2007.
- Lindner, Eileen, ed. *Yearbook of American and Canadian Churches*, 2007. Nashville, TN: Abingdon, 2007.

Stark, Rodey. *The Rise of Mormonism*. New York: Columbia University Press, 2005.

Jehovah's Witnesses

Jehovah's Witnesses are members of a worldwide Christian movement that has rapidly grown, especially in the second half of the twentieth century, to its present status of about 6.7 million members. In 2007, Jehovah's Witnesses were listed as the 25th largest church in terms of membership in the United States, with over one million members. Brazil and Mexico both contained hundreds of thousands of Jehovah's Witnesses as well.

Jehovah's Witnesses can trace their roots back to the early 1870s. Charles Taze Russell led a Bible study group that focused on the imminent millennial return of Christ, or the Second Advent. Eventually, the movement grew out of the Millerites, and in 1879 the group began publishing the magazine *Zion's Watch Tower and Herald of Christ's Presence*. Russell's adherents eventually became incorporated in 1884 as the Watch Tower Bible and Tract Society of Pennsylvania. In 1931 the growing religious body changed its name to Jehovah's Witnesses, falling in line with a key part of the group's doctrinal beliefs.

Dramatic growth of the movement occurred following World War II, with membership rising

from about 150,000 to more than 6.741 million worldwide according to the Church's 2006 annual report. The group's membership is distributed over a worldwide geographical area, however, with very few large concentrations. In fact, at the end of 2006, only one nation outside of a few island countries, Zambia, had even one percent of its population that belonged to the Jehovah's Witnesses, though the sparsely populated French Guiana also approached that percentage.

Despite the fact that there were only slightly over one million members in the United States in 2006, the Jehovah's Witnesses have a visibility in that country that far outweighs its numbers. The extensive and energetic proselytizing effort of individual members of the church carries their message to the doorsteps of millions of Americans each year. All members are expected to engage in some level of weekly door-to-door preaching. In fact, in 2006 the Jehovah's Witnesses in the United States claimed to have engaged in over 194 million hours of preaching, a figure that roughly breaks down to an average of over 35 hours per week per member.

Though their door-to-door missionary efforts set them apart from most Christian denominations, their doctrines also set them apart from mainstream Protestant or Catholic groups. Jehovah's Witnesses do not accept the central doctrine of a Holy Trinity. Instead, they believe that Jehovah, God, is himself the creator of the world and all mankind and that Jehovah in turn created Jesus who, as the perfect man, died for all mankind to bring about salvation. Jehovah's Witnesses reject the ideas of heaven and hell as they are taught in most Christian churches. Believing that the doctrine of the immortality of the soul is not biblical, Jehovah's Witnesses claim that "at death humans cease to exist. The dead know, feel, and experience absolutely nothing." The righteous will be resurrected and will live again forever on the earth, which will be made into a garden of Eden-like paradise. According to their teachings, a few select Jehovah's Witnesses will be resurrected to live with Jehovah, a number totaling 144,000.

Other doctrines held by Jehovah's Witnesses have caused controversy in both the political and cultural realm and have further separated Jehovah's Witnesses from others outside of their

➤ JEHOVAH'S WITNESSES IN COURT

From the early 1940s through the mid-1950s, the Jehovah's Witnesses argued several First Amendment cases in the Supreme Court. Testing the "Free Exercise" clause, they defended their religious beliefs and practices and the subsequent judgments permitted them to preach in public parks, trespass on property during door-to-door evangelism, refuse to salute the flag or recite the Pledge of Allegiance, and to claim exemption from the draft. (Technically, Witnesses were not pacifists, as they would fight "Jehovah's War of Armageddon," but they would not fight human wars.) The Witnesses faced severe discrimination on the basis of what was perceived as a lack of patriotism.

—Howell Williams

faith. Believing that holidays (such as Christmas and Easter) and birthday celebrations are not sanctioned by Jehovah, members of the faith refrain from taking part in these common cultural practices. They reject the cross as a symbol that has taken on the traits of idol worship among Christians, and they also believe that Christ was not crucified but that he died on a pole or stake, further justifying their rejection of the cross as a symbol.

Members are to refrain from drunkenness and smoking and take conservative stances opposed to gay marriage, premarital sex, and abortion. Much more controversially, the doctrine of Jehovah's Witnesses maintains that "true Christians will not accept a blood transfusion," pointing to Paul's New Testament instruction for Christians to keep themselves from blood. In the political realm, while Jehovah's Witnesses pay taxes, they do not partake in the political process of any country, seeing such governments as man-made constructs to which they do not owe loyalty. Consequently, they refuse to salute the flag of any nation. They also refuse to fight in the military, causing great difficulties in countries with compulsory military service and leading to jail time and persecution of faithful members in many nations.

Though the growth of the Jehovah's Witnesses has slowed in recent decades, it continues to grow in many nations even as the older, more established Protestant churches decline in membership and attendance. In 2006, the Jehovah's Witnesses experienced a growth of 1.56 percent in the United States, a growth rate only bested (among Christian churches) by the Catholic Church, the Assemblies of God, and the Church of Jesus Christ of Latter-day Saints (Mormons).

—Gerrit Dirkmaat

Bibliography

- Holden, Andrew. *Jehovah's Witnesses: Portrait of a Contemporary Religious Movement*. New York: Routledge, 2002.
- Jehovah's Witnesses: Victims of the Nazi Era, 1933–1945*. Booklet published by the United States Holocaust Memorial Museum, n.d.
- Lindner, Eileen, ed. *Yearbook of American and Canadian Churches, 2007*. Nashville, TN: Abingdon, 2007.

Consumerism and Christianity in the United States

While remaining the dominant religion in an increasingly diverse society, Protestant Christianity in the United States has evolved and adapted to the new social and economic realities of consumer society. As such, religion in a mass society can be regarded as a commodity to sell. If religious practice once was an expression of duty and tradition, in its current form it as often fulfills a therapeutic role and as such reflects the surrounding cure culture and entertainment industry. The development of megachurches and television ministries in the United States extend trends that began in the late nineteenth century when evangelical Protestants explored ways to fuse Christianity, education, and entertainment in such forums as the highbrow Chautauqua Movement as well as the mass revival meetings of Dwight L. Moody, Billy Sunday, and Aimee Semple McPherson that relied on pageantry, music, and show business trappings.

As globalization accelerates, Christianity, like all religions, has faced pressure not only from other religions but also from broader cultural and economic forces. Without the support of nation-states or clear and direct ties to a community, the denominations of Christianity must compete



Crystal Cathedral, a Protestant Christian megachurch in Garden Grove, California. Purported to be the largest glass building in the world, the cathedral seats 3,000 for its televised Sunday services. (iStockPhoto.com)

► CHRISTIAN ROCK INDUSTRY

Early Christian rock and roll, referred to as Jesus Music in the 1970s when it developed, later became known as contemporary Christian music (CCM). With 1980s Jesus rockers such as Larry Norman, Randy Mathews, Chuck Gerard, and the group Love Song, contemporary Christian music was born. Jesus Movement convert Paul Stookey of the group Peter, Paul and Mary reportedly preached at Berkeley's Sproul Hall. Kerry Livgren ended his search in the early 1980s, espousing Christianity openly through his group Kansas, which he later left, forming the Christian rock band AD. Fleetwood Mac's Jeremy Spencer joined the rigid and controversial commune the Children of God.

While artists such as Amy Grant and Michael W. Smith helped define CCM, groups such as Petra and the Rez Band provided CCM with rock credentials. Although CCM began on the American West Coast, its influence is global. There is an influx of CCM and praise and worship groups out of Australia and Europe. The Newsboys, Delirious?, and Rebecca St. James are all non-U.S.-based artists in this genre. During the 1980s the CCM industry also began to form its own version of hip hop culture, with groups such as dc Talk paving the way for others.

Over the years the Christian music movement, originally designed to bring immediate conversion, has gained the freedom to function independently of the Christian music establishment. The most obvious example of CCM's shift away from a strictly utilitarian approach to Christian music is seen by its acceptance into the mainstream secular market, enjoying everything from airplay on top-40 radio to tours with major secular artists. Groups such as Jars of Clay and P.O.D. exemplify this.

The Gospel Music Association (GMA) includes CCM, adult contemporary, black gospel, southern gospel, and others. According to statistics on the GMA's Web site, album sales in 1998 amounted to approximately 43 million units. In 2001, the album sales amounted to approximately 50 million units. Christian music sales have increased to a market of nearly \$700 million annually. Thirty-nine percent of these sales were in the CCM/Christian rock genres as of 2006.

—Shawn David Young

in a global marketplace. Like a commodity, Christianity must evolve in relationship to the market such that the consumer configures the religion rather than the religion shaping the individual. Given that Christianity has a minimal core doctrine, it has proven flexible in the global religious market. However, the consumerist orientation tends to reduce personal commitment; people buy things to make life easier, not harder.

Michael Emerson and Christian Smith's recent sociological study indicates that among Christian youths (aged 14–24) in the United States, God functions mostly as a kind of personal therapeutic device who responds to whatever an individual requests. This God plays only a background role at other times. Alan Wolfe's similar study of adults found likewise that personal interests rather than tradition or doctrine most decisively shaped attitudes toward God. Altogether, one's God becomes an expression of one's lifestyle rather than one's lifestyle conforming to God's expectations.

Concerns thus arise as to whether any decidedly Christian or religious center remains if the individual can freely choose a preferred version from innumerable possibilities. The contemporary megachurch phenomenon, in which the church integrates retail businesses and social gatherings under one all-encompassing roof, blends Christian worship with recreation and entertainment and blurs the distinction between religious devotion and other activities. Christianity becomes a lifestyle based on consumer choices rather than on adherence to specific doctrine and mandates. The religious service itself reduces doctrine and requirements to the most minimal content in order to attract the largest number of people, and megachurches are almost all nondenominational. At the same time that the democratization of religion tends to create diversity, megachurches represent a mass-production process that tends to consolidate conformity.

Yet while megachurches generalize and minimize doctrine, various members form small Bible study groups and other intimate ties through friendship networks, and this networking tends to maintain diversity and sophistication within the larger generalized membership. Given the advantage of size yet offering the possibility of

small group diversity, the megachurch phenomenon will likely continue and possibly supplant established denominations, which will become special interest by comparison.

Congruent with the rise of megachurches, a Christian culture industry has developed that parallels secular culture. Through bookstores, music and clothing stores, travel agencies, other retailers, and private schools, entrepreneurs sell Christian culture. This includes popular material, including Christian rock-and-roll recordings, and popular novels once deemed profane. Critics argue that such exposure in the market reduces Christianity to a veneer, with underlying substance no different than secular culture. Consumers nevertheless buy increasing amounts of mass-marketed Christian culture and education, with crossovers to non-Christian markets. Similarly, non-Christian rock bands and books with compatible content now appear in Christian retail establishments, further blending the religious and the secular. In the realm of popular culture, such blending occurs with increasing frequency and ease. While moralists once decried the secularization of U.S. culture, instead it appears that the United States is still a profoundly religious nation, although its religions have adapted to a more consumerist mode.

—George N. Lundskow

Bibliography

- Ahlstrom, Sydney E. *A Religious History of the American People*. New Haven, CT: Yale University Press, 1972.
- Ammerman, Nancy, and Arthur Emery Farnsley. *Congregation and Community*. New Brunswick, NJ: Rutgers University Press, 1997.
- Becker, Penny Edgell. *Congregations in Conflict: Cultural Models of Local Religious Life*. New York: Cambridge University Press, 1999.
- Emerson, Michael O., and Christian Smith. *Divided by Faith: Evangelical Religion and the Problem of Race in America*. New York: Oxford University Press, 2000.
- Smith, Christian, and Melinda Lundquist Denton. *Soul Searching: The Religious and Spiritual Lives of American Teenagers*. New York: Oxford University Press, 2005.
- Wolfe, Alan. *The Transformation of American Religion: How We Actually Live Our Faith*. New York: Free Press, 2003.

Counterculture Christianity

A Christian revival called the Jesus People Movement began among the youth subculture of the late 1960s in the United States. It quickly spread across the country and beyond and has had lasting influences on the Evangelical Christianity in the United States. Early converts simply wanted to live like Jesus, reading the Bible literally to the point of selling all possessions and founding Christian hippie communes (now called intentional communities) while citing the Scriptures as a complete guidebook for life and ultimate truth. To some extent the movement was co-opted by conservative Christianity, but counterculture values and politics still inform some of its remaining groups.

As Jesus Movement converts, or Jesus freaks, came of age, they sought autonomy. Burgeoning new fellowships seemed to fall into the same trap as the very middle American denominationism that they opposed. New converts fled organizational structure only to create their own brand of denominational exclusivity. As a result, Jesus freaks began to disengage from society, adopting a mixture of orthodox Christianity and a concern for social justice, which was slowly erased by a growing cultural conservatism. With a growing interest in apocalyptic eschatology, Jesus Movement communes looked to the early church in the book of Acts, preaching a sort of separatism and leading members to pursue a temporary utopian structure until the second coming of Christ.

The Children of God (later known as The Family) was led by Protestant David Berg (1919–1994). It became an example of the extremes that new converts might follow in their countercultural experiments in living a biblically oriented Christian life. After media hype and continuing pressure, the Children of God relocated to Europe. It is still in operation and appears as any mainstream Protestant church. The controversial side of this group included charges of sexual abuse as well as their avowed method of proselytizing known as flirty fishing. The women made sexual overtures to men for the purpose of evangelizing. This group rejected the system and espoused Apocalypticism. Berg's *Mo Letters*

➤ JEWS FOR JESUS

Jews for Jesus (JFJ) is an organization composed almost entirely of Jews who believe that they have completed their Judaism by accepting Jesus of Nazareth as the Messiah. A major focus of the group is its proselytizing efforts in converting Jewish people to Christianity. The 1960s and early 1970s were something of a heyday for evangelical, nondenominational Christian groups that arose in the United States, and it was in this context in which the group was founded by Moshe (Martin) Rosen. JFJ members identify themselves as Jews despite upholding the teachings of the New Testament. The organization sends missionaries to 11 countries ranging from Israel to Brazil, and it uses unique evangelizing techniques that aim to appeal to Jews.

The JFJ draws criticism from most denominations of Jews and many Christians alike, primarily on account of the organization's controversial beliefs, missionaries' tactics, and Christian Zionist positions. The JFJ's claim that a Jewish person can believe in the Christian New Testament, accept Jesus as her or his Savior, and remain a Jew is a concept that most Jews and Christians oppose. Jewish critics further maintain that such ideas are tantamount to dismissing Judaism as a religion by reducing Judaism to its cultural and ethnic components; they also denounce the JFJ's method of emulating Jewish rituals and traditions to attract potential converts as being deceptive and unscrupulous. Jewish and Christian opponents further point out that the founder and current executive of the JFJ are Baptist ministers who attended evangelical Bible colleges.

The JFJ can be considered a Christian Zionist organization because of its uncritical support for Israel. The JFJ takes this position because of its literalist interpretation of biblical prophecies and the role of the Jewish people in them. Their convictions likely offend nearly all of Israel/Palestine's population. The JFJ advocates Israel's right to all of historic Palestine, with no regard for the rights of Palestinians, and believes that the return of Jews to Palestine will be followed by their near annihilation during the end times.

—Elizabeth Brownson

was the text in which sect members found extrabiblical confirmation of sect doctrine. As an evangelical tool, this sect also created its 1960s underground-flavored “True Komix” in whose cartoon frames Berg appeared as a lion, the group's flirty fishing was depicted, and Nixon was denounced as “Nitler.”

Another product of the 1970s Jesus Movement was the Living Word Fellowship (LWF), which began in a suburb of San Francisco. This group was Pentecostal in ritual and believed that God would destroy urban America by firestorm. The LWF believed that God had chosen them to prepare for the end. The group purchased land in the Sierras, where they built a small town with a church called the Ark. Operating under theocratic rule, the LWF encouraged members to hold working-class jobs for the purpose of storing up resources for the apocalypse. Members followed a strict moral code of conduct, based upon a literal understanding of the Christian Bible.

While the more controversial groups have gone underground or collapsed, Jesus People USA (JPUSA) still thrives. Founded in 1972 and functioning socialistically, the inner-city Chicago-based JPUSA considers itself an intentional community, citing the book of Acts as their inspiration. They adopt a mixture of orthodox Christianity and a concern for social justice as well as an interest in apocalyptic eschatology and the value of community.

The JPUSA brings its utopian sensibility to the global community through its annual Cornerstone Festival, celebrating music, culture, and ideas. The Cornerstone Festival, which began in 1984 in rural Illinois, has been held every summer since. Web casting links the global community to this Christian version of Woodstock. Attendance has reached 25,000 in years past. In spite of its Christian orientation, this festival offers a place where people can experience a week of reveling in an acceptance of “the other.” Those who attend expect to challenge and to be challenged as they question or rebuild their own notions of cosmic order, developing meta-narratives, giving them a sense of identity and connection to something greater than themselves. This provides, if only temporarily, a collective

agreement of what could be: the possible. When first encountering the festival, band member Jeff the Girl from the punk group Five Iron Frenzy declared, “God, I am in Heaven!”

Attempts to socially engineer the Kingdom of God on earth as a Christian utopia have historically ended in what could be considered dystopian communities. The Cornerstone Festival indicates, however, that the message of 1960s counterculture Christianity still has appeal to contemporary youth culture.

—Shawn David Young

Bibliography

- The Cornerstone Festival: Twenty Years and Counting*. DVD. Chicago: Cornerstone, 2002.
- Di Sabatino, David. *The Jesus People Movement: An Annotated Bibliography and General Resource*. 2nd ed. Lake Forest, IL: Jester Media, 2004.
- Sizer, Stephen. *Christian Zionism: Road Map to Armageddon?* Nottingham, UK: InterVarsity, 2005.
- Tipton, Steven M. *Getting Saved from the Sixties*. Berkeley and Los Angeles: University of California Press, 1982.
- Tucker, Ruth. *Not Ashamed: The Story of Jews for Jesus*. Sisters, OR: Multnomah, 2000.

■ Introduction: New Religions and Archaic Revivals

Since 1945 there have been many religious changes, among these the rise of many new religious movements. Some of these are completely new, some are revivals that include elements of older religions, and some are simply more visible now than they were in previous decades. The changes in religion have not fulfilled any “God is dead” visions. Rather, there has been a shift to religion as spirituality and a great religious ferment, including revivals, new syncretic religions, and what are generally described as New Religious Movements (NRMs).

New groups that emerge as purists in the mainstream of a religion seek reforms that will purify it of its obsolete traditions or its errors. These religions tend to be best understood as Accommodationist movements. They use the mainstream religion from which they emerge but then add other elements such as prophecies or rituals. The Unification Church (Moonies) founded by Sun Myung Moon (previously a Protestant minister) presented new teachings to his disciples. Sects that hail their leader as a new prophet with a new revelation have been numerous. Some spinoffs of the Jesus Movement eventually hail their leaders as new prophets. The Children of God (now The Family International), led by David Berg, for example, accepted Berg’s revelations and exhortations to abandon all worldly institutions.

Many new religions, particularly those that first developed in colonized regions and have continued to evolve, are hybrids. They are syncretistic unions of several religions. The religions are usually aspects of Roman Catholicism and pre-Christian native religions. Santeria (“the way of the saints”), for example, is a blend of the religion of the Yorubas of Nigeria and Roman Catholicism that is practiced throughout the Caribbean diaspora.

Other religious movements stress the coming of a new age after an apocalyptic event or a millennium, hence the name “New Age.” Others stress magical practices (thaumaturgical). Other new religions stress healing, communal living, legalistic practices, or devotional practices. All, however, show some elements of syncretism.

Many spirit movements have emerged since 1945. These groups, as did earlier adherents to Swedenborgianism and Spiritualism in the eighteenth and nineteenth centuries, stress contacts with spiritual beings such as angels, ghosts, nature spirits, or other spiritual forces. Religion can appeal to reason, to practices, or to emotions. The spirit movements appeal to the emotions. Some of these also provide their adherents a way to make sense of the world that is technologically strange with teachings about UFOs and extraterrestrial life.

Other new religions offer a new way of thinking about society and its practices. Some of the new feminist spirituality groups are in this category, as are the neo-pagan groups. Neo-pagans seek to revive elements of ancient faiths and include references to Norse, Celtic, and Greco-Roman religions as well as Native American and other indigenous groups' shamanistic practices. Frequently their beliefs stress that nature is sacred. Some feminist groups have identified goddesses who should be worshipped, drawing them primarily from pre-Christian pagan goddesses.

Persecution of religions by governments has been a regular feature in the past century. In China, the new Falun Gong movement, based on Buddhist and Daoist ideas, has been persecuted by the Chinese communist government on the grounds that its healing practices are harmful. Often the persecution is due to the government's fear of a movement that it cannot control. Opposition to new religions has emerged not only in China but also in the former Soviet Union and the East European countries where religion was suppressed during the Cold War. Public concerns about cults have also led to conflicts with NRMs in the United States, Europe, and elsewhere. Sometimes the opposition has been political, such as recent laws in France prohibiting the wearing of religious symbols, aimed primarily at the *hijab* worn by Muslim women, in public schools.

Global migrations have carried religions around the world far from their origins. Religions such as the Hare Krishna Consciousness movement is derived from the Hindu bhakti movements, but like Buddhism it has found many adherents far from India or elsewhere in Asia. They have been imported into new countries, as has Christianity throughout its history or as the Pentecostal Movement has been in Latin America and Africa.

The presence of so many religions crossing all manner of political boundaries has made the world resemble the religious plurality of antiquity.

—Jack Waskey

New Religious Movements

One of the most interesting and often controversial facts about the modern religious land-

scape is the development and growth of religious pluralism. The late twentieth century witnessed a profound growth in New Religious Movements (NRMs). Arising within the context of colonial contact with subjugated cultures and cultural dissatisfaction in Western nations and facilitated by the rise of rapid global travel and communication, the late twentieth century provided fertile soil for the growth of alternative religious ideas and sometimes created a framework for bitter ideological struggles.

Though the number of NRMs increased dramatically after 1945, many have roots in earlier periods. For example, religious groups collectively known as UFO-related religions (e.g., the Raelians, the Ashtar Command, and Heaven's Gate) did not emerge until the 1950s and after and are related to late-nineteenth-century esoteric traditions, particularly Madame Blavatsky's Theosophical Movement. These new religions constructed a UFO mythology that included messengers in alien spacecraft warning of nuclear and, more recently, environmental destruction.

Wicca, witchcraft, and other traditions collectively known as neo-pagan religious movements also arose from the changing historical context of the 1940s and 1950s. For example, the 1951 repeal of England's Witchcraft Act of 1735 was a watershed moment for the development of Wicca. This event made possible the publication of Gerald Gardner's highly influential books *Witchcraft Today* (1954) and *Meaning of Witchcraft* (1959). In these works Gardner laid the groundwork for modern Wicca and created a controversial history of witchcraft by pushing its origins back to pre-Christian European pagan traditions. Wicca and other neo-pagan traditions remain popular with individuals seeking ecologically friendly and loosely structured religious traditions.

The 1960s were a pivotal period for the formation of NRMs. In this period disgruntled baby boomers questioned Western Judeo-Christian culture and experimented with alternative intellectual, philosophical, and religious ideas. Thus, religious ideas associated with Western paganism, indigenous religions, and the East—particularly Hinduism and Buddhism—found a ready audience among dissatisfied youths. This is demonstrated by the influence of Transcendental Meditation

and its founder Maharishi Mahesh Yogi (1917–2008) and the International Society for Krishna Consciousness (Hare Krishna) founded by A. C. Bhaktivedanta Swami Srila Prabhupada (1896–1977).

The development of such groups in Western nations was not without controversy, however. Many Americans reacted negatively as loved ones sometimes gave up possessions and wealth and rejected family and friends to join one of thousands of alternative religious groups. From this negative backlash the so-called cult wars of the 1970s and 1980s commenced.

From the perspectives of the countercult and anticult movements, cult leaders used deceptive and coercive mind control techniques, commonly known as brainwashing, to acquire and maintain membership. This led to the rise of cult deprogrammers, sometimes known by the innocuous term “exit counselors,” and the controversial practice of forcibly removing adherents and subjecting them to a variety of mental and physical coercions in order to break the influence of the cult leader. Those who objected to these practices debunked brainwashing theory and maintained that forced kidnapping of individuals from these religious groups is a violation of constitutionally guaranteed rights to religious freedom.

As the turn of the millennium approached, the late 1980s and the 1990s saw renewed debate concerning the role of violence in NRMs. The 1969 Manson Family killings in California and the 1978 People’s Temple suicides in Guyana already loomed large in the public imagination when reports about violence and ritual killings related to purported Satanic cults emerged in the late 1980s. The alleged ritual killings and reports of sexual abuse were rumor panics having little to do with the activities of established Satanic religions such as Anton LaVey’s Church of Satan. Nevertheless, the high-profile nature of the Manson Family killings, the People’s Temple suicides, and the so-called Satanic panic of the 1980s helped shape a popular willingness to believe that alternative religious movements are prone to violence and deviant behavior.

Such perceptions about alternative religious movements became evident during the 1993 51-day FBI siege of the Branch Davidian community

➤ TERMS OF DEBATE—THE PROBLEM WITH “CULT”

Can the word “cult” be saved? For scholars of alternative religious movements, the term “cult” is used carefully and sparingly. This practice arises from the fact that misperceptions related to the term dominate media depictions and popular discourse. In such depictions the word “cult” conjures images of maniacal masters of brainwashing leading isolated religious groups comprised of zombielike members deprived of possessions, money, family, and individuality. In truth, very few alternative religious groups fit within this discourse, which has caused scholars to shy away from the word “cult” as too loaded with preconceptions for academic use. By far the most common alternative designation is “new religious movements,” often abbreviated as NRMs. This term is not without its problems; determining what constitutes “new,” for example, has generated debate. Others favor the term “alternative religious movements” as a solution. “Alternative” solves the problem of defining “new” by shifting the focus from age to evaluating a religious group against the religiosity of the culture in which it resides. However, “alternative” also suffers from ambiguities because defining what is standard or accepted as opposed to what is alternative depends on a variety of differing contexts and preconceptions.

—Paul Brian Thomas

near Waco, Texas. Though the Branch Davidians are a sect of the Seventh-day Adventist Church, media accounts labeled the group’s leader, David Koresh, as a cult leader guilty of sexual abuse. These assertions supported the perception that the Branch Davidians were a threat, which in turn led to a standoff that ended with the destruction of the community and the burning deaths of 80 Davidians.

Other acts of violence by alternative religious movements received prominent attention in the 1990s, including the Aum Shinrikyō serin gas attacks on the Tokyo subway system in 1995 and the 1997 Heaven’s Gate suicides near San Diego, California. Despite media attention, it is important to remember that such examples stand out because they are exceptional. The few groups that have engaged in violence are hardly

representative of the thousands of alternative religious movements that peacefully coexist all across the world.

As religious pluralism shows no signs of abating, it is evident that more nuanced perspectives on alternative religious movements are required. Too often opinions about these groups are informed by false information, apostate testimony, the opinions of countercult and anticult experts, and preconceived notions regarding deviance and abusiveness within such communities. Therefore, one of the challenges faced by academia, law enforcement and government agencies, and society at large is formulating a more balanced and unbiased approach to religious pluralism and alternative religious worldviews.

—Paul Brian Thomas

Bibliography

- Barker, Eileen. *Making a Moonie: Choice or Brainwashing*. Oxford, UK: Basil Blackwell, 1984.
- Dawson, Lorne L. *Comprehending Cults: The Sociology of New Religious Movements*. 2nd ed. Oxford: Oxford University Press, 2006.
- Dawson, Lorne L., ed. *Cults in Context: Readings in the Study of New Religious Movements*. New Brunswick and London: Transaction, 1998.
- Stark, Rodney, and William Sims Bainbridge. *The Future of Religion: Secularization, Revival and Cult Formation*. Berkeley: University of California Press, 1985.

New Age Religions

New Age religions are any of a number of religions that have grown out of the international New Age movement, a religious and social movement that coalesced in its presently identifiable form in Western cultures in the late 1960s. The goal of New Age religions is to explain the past, explore the present in a meaningful way, and orient the hope of adherents to a future transformation of self, species, or society. The modern form of New Age is a recent development that emerged from older, more established Western religions and strains of intellectual thought and has integrated religious ideas and traditions from the East. The New Age movement is the latest phase in the development of Western society's occult-metaphysical tradition that has developed historically alongside of Christianity for centuries.

The New Age movement rejects religious orthodoxy. However, the members of the movement do share several common beliefs and values. As its name suggests, New Age adherents anticipate a future era or age in which the perceived mental or metaphysical sicknesses of humankind will be transcended often through individual transformations and experiences. A global transformation and a universal religion will ensue, expressing the root mystical experience underlying each world religion. To bring about such a transformation, adherents promote self-awareness and spiritual exploration to evoke individual inner transformations through mystical awareness referred to alternately as self-awareness, higher consciousness, or self-realization. Many New Age religious organizations and individuals couple this inner process with an active sociopolitical agenda. Frequently the environmental ethic of many New Age religions is itself the social ethic of adherents, as society and the earth are understood to be holistically linked.

New Age religions affirm that religious experience is of greater importance than specific beliefs, which tend to be held only as long as they are efficacious. New Age practitioners generally believe that there are several ways to approach truth that are differentiated only by their ability to produce effects. New Age religion may or may not identify the reality of God. Such a God, if present, may be envisioned in terms of immanence or as of one reality with the universe or may be expressed in a form of dualism in which the spiritual reality is perceived as inherently good and matter as inherently bad. New Age religions generally affirm the existence of disembodied beings that may or may not serve as masters and teachers of humankind. Many New Age religions express belief in karma and reincarnation. Regardless, the power for transformation comes from an omnipresent form of energy that permeates all aspects of existence. This energy is recognized as prana, mind, mana, the chi, or the holy spirit and is the underlying essence of reality.

The beginning of what would grow into the modern metaphysical tradition and New Age religion can be traced to Emanuel Swedenborg, an influential eighteenth-century scientist who

is remembered most for reporting that he communicated with angels and explored the spiritual world through dream states. He developed a complex cosmology that formed the basis for most of the Western metaphysical tradition that followed. Building upon Swedenborg, Franz Anton Mesmer, a Viennese physician, used the existence of a hypothesized universal magnetic fluid to articulate a scientifically influenced worldview through which he could recast conceptions of magic, miraculous healings, and spiritual energy. In early-nineteenth-century America the thought of Swedenborg and Mesmer mingled with Transcendentalism, which incorporated elements of Christianity and Unitarianism to articulate a new religious vision, infused with elements of the religions of India and Asia and American Romanticism, that is best described as pantheistic nature mysticism.

In the 1850s Spiritualism, the first popular synthesis of Swedenborg, Mesmer, and Transcendentalism achieved widespread acceptance in America. Adherents claimed the ability to commune with deceased spirits, prove scientifically the existence of life after death, reveal accurate information about individual lives and the spiritual landscape, and even perform acts of healing. Adherents of Theosophy, begun at the end of the nineteenth century, engaged spirits to learn the history and purpose of life. It rejected Spiritualism's frequent fusion with Christianity and expressed its worldview through a synthesis of metaphysical ideas and science. Theosophy further proposed the existence of masters, a ruling spiritual elite, who controlled reality, guided human society through scientific ideas, and showed humanity a path to a higher existence by descending to the physical world as mortals.

In the twentieth century the rise of humanistic, parapsychology, and transpersonal psychology that examined religious states of mind separated the practice of religious techniques and rituals, particularly meditation, magic, and yogic postures, from the ideological framework with which they were traditionally associated. This disassociation facilitated the free acquisition of these techniques by various individuals and movements within the metaphysical community. Later, following the series of reported sightings of unidentified flying objects, or UFOs, that

➤ GAIA HYPOTHESIS CONTROVERSY

The idea that Earth and its inhabitants are a single organism is not confined to the New Age movement. Scientists confronted a similar concept when James Lovelock presented his Gaia Hypothesis in 1969.

James Lovelock (1919–), an atmospheric specialist, was working for NASA during the 1960s when he learned that the sun had once been 25 percent less luminous. Baffled as to how Earth had sustained life, he developed a hypothesis: The Earth is like a living organism, which regulates conditions on its surface in order to maintain and nurture life. Everything on Earth is interdependent. For example, the uniquely high percentage of oxygen in the Earth's atmosphere (21 percent) is necessary for our respiratory systems. The percentage is maintained because trees, algae, and bacteria use carbon dioxide, which humans exhale as respiratory waste, to produce oxygen that replenishes the atmosphere. Another example of such a feedback system is the radiation of heat from the sun, which the planet absorbs and reflects; either action depends on the number and kind of living things on Earth's surface.

Lovelock named his theory Gaia after the ancient Greek primordial Mother-goddess. The name added appeal to the New Age community and its dual fascination with environmentalism and religion. Lovelock attempted to distance himself from those who adopted his hypothesis as proof of an omnipresent Earth deity. In 1988, however, he wrote a second book on Gaia for a lay audience. In this work he occasionally implied that Gaia was conscious; indeed, Gaia might compensate for people's tendencies to pollute by gradually eliminating humankind.

Lynn Margulis, a distinguished cellular biologist, boosted the credibility of the Gaia Hypothesis by joining Lovelock's project in 1970. However, many scientists, such as Daniel Botkin, were ambivalent about Gaia theory because of its religious undertones. Others, such as James Kirchner, pointed to logical discrepancies. Lovelock's statement that Gaia seeks a steady state, an unadapting ecological balance, appeared to contradict the processes of evolution. Further, if "Gaia" is just an overall term for Earth's feedback systems, then the Gaia Hypothesis is nothing new. Today, the debate still shows how personal interpretations can exist and compete in the absolutist world of science.

began in 1947, groups arose that reinvigorated the occult movements and began to reinterpret the spiritual masters of the occult movement as space commanders who transmitted messages to mankind through their human contacts or abductees.

In the 1960s, with the changed U.S. immigration law, the presence of Asian peoples increased, as did the influence of Eastern religions. While the various metaphysical movements of America bolstered their legitimacy with Asian sources and absorbed the ritual practices of Eastern religions, the movements simultaneously began to absorb the revived spiritual traditions of Native Americans. New Age movements incorporated shamanic ritual and seized upon Native American spirituality to develop an emphasis on nature, inherited from Transcendentalism, into a protoenvironmentalism. This renewed focus upon the macrocosm of the earth provides the conceptual foundation for some New Agers to espouse belief in Gaia, the Earth Goddess/Mother. The accompanying hope for planetary healing through human effort is but one manifestation of a persistent millennial theme in New Age religions.

—Michael P. Gueno

Bibliography

- Hanegraaff, Wouter J. *New Age Religion and Western Culture: Esotericism in the Mirror of Secular Thought*. Leiden: Brill, 1996.
- Jenkins, Philip. *Mystics and Messiahs: Cults and New Religions in American History*. Oxford: Oxford University Press, 2000.
- Kyle, Richard. *The History of Alternative Religions in America*. Downers Grove, IL: InterVarsity, 1993.
- Melton, J. Gordon, Jerome Clark, and Aidan A. Kelly. *New Age Almanac*. New York: Visible Ink, 1991.
- Stark, Rodney, and William Sims Bainbridge. *The Future of Religion: Secularization, Revival and Cult Formation*. Berkeley: University of California Press, 1985.

Kejawen—Religious Resistance on Java

Islam is the religion of the majority of Indonesians today and is especially entrenched on the

island of Java. However, many Javanese have continued to hold to a set of indigenous beliefs termed *kejawen* (Javanese science) that combine animist, Hindu, and Islamic elements. Of central importance in this system of beliefs are traditional ceremonies aimed at communicating with and placating the spirit world. Powerful spirits are held to live at various points in Java, including mountains, the sea, and gravesites. *Kejawen*, however, is not an organized religion and possesses little in the way of clergy or a central scripture. Its followers do recognize a type of shaman (*dukun*) and venerate certain texts and folktales. Nor has *kejawen* directly rejected Islam, but it has, in fact, existed in symbiosis with Islamic practices.

At the beginning of the fifteenth century Java was dominated by the Majapahit kingdom. While the court practiced a local version of Hinduism and numerous temples dotted the landscape, the population retained many animist customs. By the middle of the century, however, this powerful Hindu empire was in decline. Muslim city-states emerged on the island's northern coast, and Islam slowly spread from these outposts into the interior. The emergence of *kejawen* as an identifiable set of beliefs is related to conversion to Islam, a process that continued until perhaps the end of the eighteenth century.

The form of Islam that developed in Java's interior blended elements common throughout the Islamic world with indigenous belief in the spirit realm and a reverence for local royalty. To this day, Javans hold that the Sultan of Yogyakarta possesses supernatural abilities and enjoys an intimate relationship with Loro Kidul, a mythical marine goddess. The population, while nominally Muslim, devoted itself to appeasing the spirit world through modest ceremonies conducted with the help of shamans and exorcists in response to life crises. Importance was also placed on pilgrimages to holy places situated in the mountains and forests. Little attention was paid to regular prayer or study of the Quran. *Kejawen* could be seen as a type of religious belief and practice that goes beyond this form of Javanese Islam. Islamic elements are downplayed in favor of indigenous elements. This has led some to claim that *kejawen* is not in

fact Islamic at all but instead constitutes a separate religion.

Some Javanese have embraced the idea that *kejawen* is indeed distinct from Islam and have started to form groups to practice traditional spiritual exercises. Many of these groups are organized around charismatic teachers and have come to attract a national or even international following. In the 1970s these groups started to look for official recognition. In the wake of the 1965–1966 suppression of the supposedly atheistic Indonesian Communist Party there was increasing importance placed on choosing an official religion, with the government establishing a separate department to oversee religious affairs. Every citizen had to choose from one of the official religions and note this on their identity card. Some felt that all the available choices were foreign religions and that official recognition should be granted to at least one indigenous faith. Such sentiments were given some encouragement from within the Indonesian government. It was rumored that President Suharto and some in his circle were in fact *kejawen* practitioners.

Efforts to make *kejawen* an official religion have petered out, as many Javanese are embracing a more self-conscious Islamic identity. With the trends of urbanization, modernization, and globalization there is less interest in folk beliefs associated with a rapidly disappearing rural world. However, when the volcanic Mount Merapi became active again in 2006, it was to the mountain's traditional guardian, a hereditary shaman appointed by the sultan of Yogyakarta, rather than to government seismologists that residents turned for advice on when to evacuate. *Kejawen* is a reminder that religious beliefs and practices perhaps never really disappear. Islamic beliefs and practices arrived in Java 500 years ago but had to adapt to local conditions and recognize the power of local belief in order to take root in a complex society strongly influenced by animistic traditions.

—Michael Wood

Bibliography

Geertz, Clifford. *The Religion of Java*. Glencoe, IL.: Free Press, 1960.
Koentjaraningrat. *Javanese Culture*. Singapore: Oxford University Press, 1985.

➤ CLIFFORD GEERTZ—*SANTRI*, *PRIYAYI*, AND *ABANGAN*

The nature of *kejawen* is connected to a terminology devised for the study of Javanese religion by American anthropologist Clifford Geertz (1926–2006). He divided Javanese society into three streams: *santri*, *priyayi*, and *abangan*. Although all three groups identified themselves as Muslim, they had very different ideas as to how this religion should actually be practiced. *Santri* took their commitment to Islamic regulations seriously. Prayer, fasting, and the pilgrimage to Mecca were all central elements of *santri* life. The *priyayi* stressed refinement and the cultivation of inner peace and spiritual power through meditation, art, and mysticism. Some critics have questioned whether the *priyayi* is really a valid religious category at all and is not better understood as a sociological label for the minor Javanese aristocracy. The *abangan* stream was that of the rural peasant whose religious outlook was a syncretism that combined animism with Hinduism and Islam. The core ritual of the *abangan* variant was the *slametan*, a ritual intended to appease hostile spirits. *Kejawen* could be seen as simply a more defined version of the *abangan* stream, with more emphasis placed on local traditions and a more obvious rejection of some of the Islamic practices associated with the *santri*. Much has changed since Geertz conducted his fieldwork in the late 1950s, especially as Javanese rural society has come under increasing influence from a larger Pan-Indonesian society. Many Javanese have abandoned *abangan* or *kejawen* identities in favor of more self-consciously Islamic ones.

—Michael Wood

Mulder, Niels. *Mysticism in Java: Ideology in Indonesia*. Amsterdam: Pepin, 1998.

Stange, Paul. "Religious Change in Contemporary Southeast Asia." In *The Cambridge History of Southeast Asia*, Vol. 2, *The Nineteenth and Twentieth Centuries*, edited by Nicholas Tarling, 529–584. Cambridge: Cambridge University Press, 1992.

Woodward, Mark. *Islam in Java: Normative Piety and Mysticism in the Sultanate of Yogyakarta*. Tucson: University of Arizona Press, 1989.

Global Ashrams

In the popular imagination, the word *ashram* (anglicized form of Sanskrit *ashrama*) evokes images of a peaceful and serene natural setting where persons in search of the ultimate spiritual goal flock. In Classical Hindu literature, written mostly in Sanskrit, ashrama has two meanings. One meaning of ashrama in the ancient literature is connected with a location, a place. The other meaning is a more technical one that is connected with modes or stages of life.

The ashram was an important feature in the development of Hindu reform movements that began in the late nineteenth century in India. These movements reached back to India's long religious history and remodeled ancient tradition in the style of Western missions. Movements such as those led by Swami Vivekananda (1863–1902), Swami Chinmayananda (1916–1993), and Swami Shivananda (1887–1963) of Rishikesh spread throughout India and beyond, with a number of them now located in Europe and the Americas.

Ashrams, both inside and outside India, show great variety and complexity. Structurally, an ashram may consist of a small building with a few rooms, where devotees may come to obtain *darshan* (sight of the deity) and spiritual education. The daily routine of an ashram is exemplified by Swami Shivananda's daily routine, which consisted of evening talks and question and answer periods with disciples. Evenings would also include recitation of religious texts and singing of devotional songs (*bhajan*s).

Many ashrams stress a commitment to social outreach and services, such as running local schools, medical clinics, or training centers. After the establishment of the Divine Life Society, Shivananda's mission established hospitals, annual outpatient camps for persons in need of surgical treatment, villages for lepers, and vocational training centers for low-caste women. The Ramakrishna Mission established a dispensary in Bhuvaneshvar, Orissa, in 1920 to provide free medical treatment in both traditional Ayurvedic medicine and modern Western medicine. In addition to outreach programs that provide medical services, BAPS Swaminarayan Sanstha provides educational programming ranging from religious

education to educational programs to encourage computer literacy.

The appeal of the modern ashrams, both inside and outside India, can be traced to features that reach back to the ancient forest ashram visited by heroes and gods of Hindu religious texts. At its core, the ashram remains an ideal, an island of peace in the midst of the chaos of the world. Modern ashrams continue to focus on this key ideal as a selling point. The Shivananda Yoga Vedanta Centers in India, Europe, the Middle East, and the Americas emphasize this feature of ashrams with their yoga vacation programs. These vacations provide the intense experience of the ashram as a way to recharge. Individuals are attracted to the ashram because they are in search of religious truth and an escape from the madness of the world.

—Carlos Lopez

Bibliography

- Ghurye, G. S., and L. N. Chapeka. *Indian Sadhus*. Bombay: Popular Prakashan, 1964.
- Miller, David M., and Dorothy C. Wertz. *Hindu Monastic Life: The Monks and Monestaries of Bhuvaneshwar*. Montreal and London: McGill-Queen's University Press, 1976.
- Olivelle, Patrick. *The Ashrama System: The History and Hermeneutics of a Religious Institution*. New York: Oxford University Press, 1993.
- Olivelle, Patrick, trans. *The Law Code of Manu*. Oxford: Oxford University Press, 2004.

Religion and the Arts since 1945

Religious traditions have had long and difficult relationships with arts. Religious movements have affirmed the place of icons and images, and other movements have destroyed images in the name of protecting the faith. World religions, from the Abrahamic faiths of Judaism, Christianity, and Islam to Hinduism and Buddhism, have all appropriated art and images in myriad ways throughout their histories. With the advent of modernism and abstraction in the twentieth century, religious imagery was not as obvious as it once was in the arts, but religious belief still found expression in art forms.

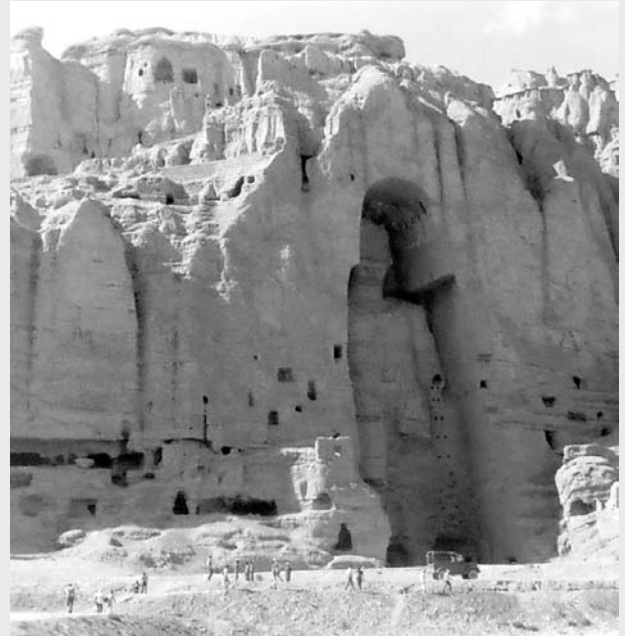
In the Abrahamic faiths, there have been injunctions against visual representations of God,

but Christians, Jews, and Muslims still produce their own versions of visual belief. Christian art after 1945 might be considered lacking when compared to previous historical periods, but symbolism of this faith appears in art forms ranging from Abstract Expressionism to new renderings of Jesus as black, female, Asian, and so on. Religious imagery has also been co-opted by artists with a more secular vision or by those who seek to use religion as a revolutionary element in art. In the 1990s, there was much controversy over Chris Ofili's *The Holy Virgin Mary*, in which Mary was created partially out of dung, and Renée Cox's *Yo Mama's Last Supper*, in which she poses naked as Christ. Both artists pressed the boundaries of what the relationship between art and religious imagery is in the post-modern age.

On the other hand, since 1945 many Jewish artists have grappled with the impact of the Holocaust. Jewish art might seem like an anomaly because of the Hebrew Bible's injunctions against idolatry and rabbinic teachings that any representation of the divine is reductive. Yet throughout their history, Jewish people have made artifacts, art, and architecture imbued with spiritual intent. In the modern era, Barnett Newman in particular attempted to understand the world post-Holocaust, and his abstract paintings attempted to repair the world (*tikkun olam*). His paintings were large fields with a thread of different color running down the center, and it was his attempt to reorder a world that was broken after World War II.

Islamic art has retained a focus on calligraphy, which leads to abstraction rather than figuration. This art contains passages from the Quran as well as geometric and floral patterns because figural representation, icons, and idolatry are forbidden with Islam. In 2001, Taliban leader Mullah Mohammed Omar delivered an edict against non-Muslim graven images, and thus the Taliban set about destroying ancient Buddha sculptures in Afghanistan. Islamic art has still flourished despite this injunction. Following the Iranian Revolution in 1979, some Muslim artists have used their art for political and religious commentary in abstract forms to protest and to affirm the revolution.

➤ RELIGION AND THE ARTS



(UNESCO/F. Riviere)

In early 2001, Taliban leader Mullah Mohammed Omar presented an edict in which non-Muslim graven images were to be destroyed as idolatrous. With explosives and tanks, the Taliban reduced two gigantic statues of the Buddha in the Bamiyan Province of Afghanistan to rubble. The Buddhas were possibly crafted between the third and fifth centuries CE, and they were located at the heart of what had been the Silk Roads. Bamiyan was also a Buddhist center for at least 500 years. The international community reacted in horror to the destruction of these artifacts, with some Muslim leaders also condemning Omar's actions.

—Kelly J. Baker

Hinduism and Buddhism have long relied on visual cues in religious practice. In Hinduism, *darshan*, the act of religious seeing, is crucial for the experience of the divine. Images contain the divine in this tradition, and thus religious imagery is used as a part of worship. From shrines to mass-produced images, the arts are vehicles for the divine. Images also are used in Buddhism to aid in meditation to focus one's mind. Images

and statues of the Buddha proliferate as examples of his life as well as a means for religious devotion. For both Hinduism and Buddhism, the arts have served in religious practice for centuries. For all of these traditions, the arts express both the individual artist and the larger community's faith, beliefs, and histories.

—Kelly J. Baker

Bibliography

- Morgan, David. *The Sacred Gaze: Religious Visual Culture in Theory and Practice*. Berkeley: University of California Press, 2005.
- Plate, S. Brent, ed. *Religion, Art, and Visual Culture: A Cross-Cultural Reader*. New York: Palgrave, 2002.
- Rathie, W.L. "Why the Taliban Are Destroying Buddhas." *USA Today*, March 22, 2001, <http://www.usatoday.com/news/science/archaeology/2001-03-22-afghan-buddhas.htm>.
- Soltes, Ori Z. *Our Sacred Signs: How Jewish, Christian, and Muslim Art Draw from the Same Source*. Cambridge, MA: Westview, 2005.

The Black Muslims

"Black Muslim" was a term given to the African American Muslims by historian C. Eric Lincoln in the 1950s. These Muslims were generally the followers of Elijah Muhammad, a charismatic leader who succeeded Wallace Fard, the founder of the Lost Found Nation of Islam in the Wilderness. When Fard disappeared in 1934, Muhammad became the leader of the Nation of Islam and turned it into a black nationalist movement. Under Muhammad, the group preached the supremacy of African Americans over white Americans. Muhammad encouraged blacks to be free from a slave mentality, to reject drugs and Christianity, and to be financially independent. In addition, he urged African American men to respect black women and the ethics of hard work.

Malcolm X, Louis Farrakhan, and Warithu Deen Mohammed also played important roles

in the Nation of Islam. After his conversion in the late 1940s, Malcolm X recruited many black youths into the Nation of Islam through his relentless efforts and charisma. He devoted much of his life to the Nation of Islam but was assassinated in 1965 after rejecting Muhammad's leadership and teachings after making the hajj to Mecca and coming to understand the nature of traditional Islam. When Muhammad died in 1975, his son Warithu Deen Mohammed succeeded him and, condemning many of his father's ideas, reformulated the group under the new name American Muslim Mission. He turned the group toward mainstream Islam and away from separatism and racial hatred. In 1985, Mohammed decentralized his group and asked each imam to lead his community. In October 2003, he resigned from the leadership of the American Muslim Mission.

Farrakhan broke away in 1977 from Mohammad's American Muslim Mission to revive the Nation of Islam and some of its separatist philosophy. Farrakhan remains the leader of the group today. Both the Nation of Islam and members of Imam Mohammed are very active in the black community. Prison is one of the recruitment sites for both groups. The public perceive the Nation of Islam as violent, but that perception has changed since the 1980s, as they have participated in politics and established their own schools and businesses and an independent outlook.

—Yushau Sodiq

Bibliography

- Lincoln, C. Eric. *The Black Muslims in America*. Trenton, NJ: Africa World Press, 1994.
- Marsh, Clifton E. *From Black Muslims to Muslims: The Transition from Separatism to Islam, 1930–1980*. Metuchen, NJ: Scarecrow, 1984.
- Smith, Jane I. *Islam in America*. New York: Columbia University Press, 1999.
- Turner, Richard Brent. *Islam in the African American Experience*. Bloomington: Indiana University Press, 1997.

■ Introduction: Age of Ideology

The very notion of ideology (or of a society's self-justifying belief system) has always implied that it was a limitation to be overcome. In the nineteenth century, Karl Marx and Friedrich Engels noted that what was regarded as culture—whether thought, the arts, or religion—was simply sugarcoated expressions of harsh underlying economic realities. Economics, in their eyes, forged belief systems. At the same time, anthropologists had begun to study and define the presumably exotic ways and beliefs of primitive peoples, keeping ideology, whatever its origins, at a safe remove. As the anthropologist Clifford Geertz remarked in *The Interpretation of Cultures* (1973), “I have a social philosophy; you have political opinions; he has an ideology.” By the early twentieth century, the successes of socialism and communism and their fundamental conflict with democracy and/or capitalism guaranteed ideological debate and battle.

The Cold War brought both an intensified ideological clash and a desire in many to step above the ideological trap. Following World War II, sociologists, political theorists, writers, and public intellectuals puzzled over how extreme and inhumane belief systems were nurtured and manipulated by groups such as the National Socialists (Nazis) in Germany, the fascist regimes in Spain and Italy, and the Stalinist and later Maoist regimes of the communist world. Concerns over the power of propaganda channeled via media interlocking with other systems of social control animated novels such as George Orwell's *Animal Farm* (1945) and *1984* (1949). Other intellectuals, including the psychoanalyst Eric Fromm, explored concerns about the dangers of conformity in the so-called free nations. Fromm argued in *Escape from Freedom* (1941) that totalitarian movements could be accounted for by their fulfillment of individual psychological needs, making them appealing to all.

At the same time that mass culture theorists fretted over the possibility that something akin to totalitarianism lurked behind the conformity found in the free market liberal societies of the

West, the Cold War struggle between the United States and the Soviet Union only intensified, with each side (whether communist or capitalist) claiming absolute truth and maximum benefit for their own socioeconomic system. Both sides demonized the other and painted the other as imperialist, bent on world conquest and control. Yet within each side were differing ideological camps, whether Stalinism, Maoism, Leninism, and Trotskyism on the communist side or the many shadings of belief under liberal capitalism in the West (from conservative to liberal). Both sides had converts and apostates renouncing their former views. For example, as part of anti-communist discourse, writers such as Arthur Koestler and Andre Gide, who had once held communist beliefs, renounced that faith in the anticommunist work *The God That Failed* (1949).

The intensity of the anticommunist bent in the West and the anti-American bent in other parts of the world and their inevitable contradictions in international and domestic actions ultimately fostered domestic dissent. In the 1960s, young people, nurtured on critiques of conformity and mass culture, questioned the tenets of liberal democracy and often embraced, in wild extreme and perhaps with a shopper's zeal, such alternative ideologies as Maoism with its seemingly exotic empowerment of the peasantry engaged in noble struggle. Dissenters in the Soviet Union chafed under the surveillance of a police state and its repression of free discourse.

Philosopher John Dewey, over a long career, analyzed, explained, and defended liberalism as an evolving philosophy that was premised not only on the development of a free market and free exchange of thought but also on the personal development of all citizens, which implies social protections such as a rejection of unfettered capitalism. In the West, the conservative movement regrouped in the 1950s through the 1970s and briefly became the main current with the ascent of neoconservative thought, which encouraged deregulated national markets, and the linking of global markets with an accompanying erosion of labor and social welfare. Curiously,

liberalism, which Dewey labored to define as all that was noble about capitalism, during this period became and for many remains a dirty word.

Much of the poststructuralist and postmodern thought that emerged in Europe from the 1960s on was, once again, in reaction to the excesses of the Cold War and a growing distrust of authority and expressed an attempt to escape ideology and the limits of subjectivity (or personal consciousness ideologically conditioned). While the collapse of the Soviet Union implied for some an end to history and ideology, it also revived nationalist ideologies (such as Greater Serbia). Yet for others, recent decades have been a call to invent one's own ideology and reinvent history, resulting in the many conspiracy theories posted on Internet sites among the like-minded with views that span the political and philosophical spectrum.

—*Fred Nadis*

Cold War Ideology

Since 1945, the divisions created by the global Cold War gave rise to a variety of new political ideologies created in response to the emergent new world order built in the ruins of World War II and the bygone era of European primacy in world affairs. The ideological world views that emerged during this period, while building on previous frameworks, developed specific characteristics that addressed current political, social, and economic issues of the latter half of the twentieth century. The capitalist liberal West under U.S. leadership and the communist authoritarian East under Soviet (and later Chinese) leadership accused each other of being a threat to world peace, attempting to colonize the world, and dispersing agendas and agents to create regional instability in Southeast Asia, the Middle East, Latin America, and Africa.

The postwar capitalist West, characterized by liberal democracies seeking to counter the spread of global communism, sought to re-create the world in its image, espousing economic prosperity and personal freedom while demonizing the communist world under the leadership of the Soviet Union. Amid the destruction created by World War II, the United States assisted in the rebuilding of Western Europe (and the European

Economic Community) through the Marshall Plan and its support for liberal democracy to counter communist advances. In the United States, Western Europe, and Australia, new definitions of liberalism and conservatism addressed postwar domestic social concerns (among them issues of class, race, and gender) and foreign policy objectives (Cold War, decolonization, global trade). With an intense distrust of both the Far Left (Stalinists, anarchists, and communists) and the Far Right (Neo-Fascists, paleo-conservatives, Segregationists), these new sociopolitical movements embraced a *modus vivendi* that supported the welfare state, statist public policy, and the advancement of rights for minorities, women, and other disenfranchised groups. However, specific ideological views divided the political spectrum throughout the West on how best to approach these changes in creating a more egalitarian society. Moreover, excesses in Cold War strategy (the Algerian War, the Vietnam War, CIA coups in the developing world) further divided the ideological camps within the West, yet fears of Soviet world domination shaped ideology and many of the domestic and foreign policies of the United States and its allies in global affairs.

The Communist Bloc (Eastern Europe, the Soviet Union, China), which straddled much of Eurasia from the mid- to late-twentieth century, was characterized by the internal drive to industrialize to better compete with the capitalist world and quell the external threat (the imperialist capitalist West) to the advancement of the socialist experiment. These two forces shaped the ideological development of Marxist-Leninist ideals in the immediate postwar socialist world, albeit sometimes in conflict with each other (i.e., Khrushchev's so-called thaw in 1954 was in direct conflict with Stalinist diehards across the socialist world). However, Soviet excesses in Hungary (1956) and Czechoslovakia (1968) created rifts in the socialist world, leading to the emergence of divergent roads to socialism (goulash socialism, Titoism, Maoism, and Third World revolutionary movements). Neo-Marxist intellectuals and revolutionaries denounced the authoritarian approach (Stalinism) to the socialist project and suggested advancing the plight of the oppressed throughout the world to best engage the alleged capitalist enemy (most notably

the United States and its European allies) and its new tools of imperialist conquest (the World Bank, the International Monetary Fund, and G-8). These neo-Marxist ideals resonated with much of the newly decolonized developing world (sub-Saharan Africa, Oceania, Southeast Asia) and underdeveloped peripheral regions (Latin America, East Asia, and the Middle East) seeking to extricate themselves from the neocolonial power relations (such as Zionism, globalization, and U.S. global presence) vis-à-vis the West. Often, this led to soured relations with the Soviet Union, which espoused more moderate courses of action in terms of its national interests. Nonetheless, members of this bloc could all agree on the alleged imperialist economic ambitions of the United States, shaping a common ideology.

On both sides of the divide, Cold War ideology inflected not only policy and propaganda but also culture and thought.

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Bibliography

- Dockrill, Saki R., and Garaint Hughes, eds. *Palgrave Advances in Cold War History*. New York: Palgrave Macmillan, 2006.
- Service, Robert. *Comrades! A History of World Communism*. Cambridge: Harvard University Press, 2007.

Modern Liberalism

In the decades following World War II, the ideology of liberalism took on different meanings throughout much of the world, resulting in divergent trajectories from a common European ideological origin. The liberal democracies of Western Europe, North America, and Oceania, which, in league with the Soviet Union, confronted the fascists during World War II, now found themselves engaged in the global Cold War with this former ally, severely affecting domestic politics. Liberal politicians sought desperately to differentiate themselves from the Far Right (fascists) and the Far Left (communists) and in so doing altered the ideological composition of liberalism. Throughout Western Europe, Latin America, and much of the postwar decolonizing world (sub-Saharan Africa, East Asia, the Near East), liberalism represented a European

➤ BRAINWASHING AND THE COLD WAR

Following the Korean War, accusations that the Koreans and the Chinese had used brainwashing techniques on American prisoners of war (POWs) surfaced, leading to various studies on the issue in the United States. In the mid-1950s studies by Robert Jay Lifton and Edgar Schein concluded that brainwashing had a significant effect on POWs, as the Chinese had practiced coercive persuasion to induce behavior modification. Practices such as sleep deprivation, dehumanization, and harassment served to make prisoners confess, make anti-American statements, or strongly adhere to socialist ideology. Many of these tactics had been used earlier in the Soviet Union during the show trials and purges of the 1930s. Popular fear of brainwashing was reflected in the film *The Manchurian Candidate* (1962). The film depicts a communist plot to brainwash a former Korean War POW to turn him into an assassin and thus ensure the election of a communist puppet to the U.S. presidency. While there was a genuine fear in the United States that the Soviet Union and China were engaged in brainwashing, these fears were reciprocated when rumors of the Central Intelligence Agency (CIA) engaging in similar tactics across the world surfaced from time to time in the 1960s and 1970s.

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ideology mostly identified with traditional pre-war capitalist elites who recognized the authority of representative government while remaining suspect of its encroachments on the market and the rights of the individual. However, in the United States, liberalism in the postwar period shifted from an ideology that identified itself with the broad needs of the nation and the modern economy (Franklin Delano Roosevelt's New Deal welfare state) to one that sought to extend civil rights to minorities, women, and other excluded groups (as in the Great Society, the War on Poverty, Affirmative Action, and so on).

West European liberalism in the postwar period, embraced by the Christian Democratic movements in France, Germany, and Italy and working against the communist threat at the polls, sought to rebuild the European state and

➤ POLITICAL CORRECTNESS

Political correctness (abbreviated as PC) is a term that began on the political Left and was meant to evaluate public discourse so as to eliminate discrimination against marginalized or disadvantaged groups in society. It originated as a Marxist-Leninist term delineating the correct party position. In the 1960s, the New Left in the United States began to utilize the term as a way to establish the correct definition of group identifications in public discourse (for example, concerns over using the terms “Afro-American” or “black,” “Mexican American” or “Chicano” or “Latino/a,” and so on). Gradually, it became a linguistic tool geared toward shaping ideas and words in public discourse (sexist language, racist epithets, religious biases), with the objective of making the public aware of unconscious biases and to discontinue the use of expressions found offensive by marginalized groups. It has gradually expanded throughout much of the world as a way to transform existing biased attitudes toward women (Ms. instead of Miss), immigrants (British blacks in the United Kingdom), and other marginalized groupings (i.e., homosexuals, transgender, and the disabled).

Humor based on the excesses of PC language originated both in the political Left and among conservatives. For example, the bumper sticker “Nuke the Whales” became common in the 1970s as a response to the holier-than-thou attitude that emanated from PC environmentalist and anti-nuclear weapons circles. Criticism of PC on the part of libertarians, conservatives, advocates of free speech, and right-wing radio talk shows in the United States is still widespread. Much of this criticism alleges that PC language is a form of censorship that restricts rather than liberates individuals, constraining them to act and speak in a specific way through coercion and social controls. In this regard, PC is often compared to George Orwell’s concept of newspeak as presented by the bureaucracies and propaganda wings of governments. Furthermore, divisions over the proper usage of terms, even within many of these supposed marginalized groups, illustrate the complexity of establishing a consensus over a proper PC lexicon.

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economy under U.S. tutelage (i.e., the Marshall Plan and the North Atlantic Treaty Organization [NATO]) and with the nascent European Economic Community (EEC). While Europe’s liberal leaders, favoring individual rights and free markets, were resistant to the idea of the welfare state, they reluctantly worked with socialists due to their apprehension of communists coming to power in this period of political and economic vulnerability. Many of these European liberals (Konrad Adenauer in West Germany, Alcide De Gasperi in Italy, and Robert Schumann in France) had been influential in government before the war as liberals of the prewar vein. In the immediate postwar period, these liberals viewed a wider European structure, or the EEC, as a viable way to integrate their economies and their political structures, maintaining the liberal definition of representative government as an ideal. However, as European politics turned sharply toward the socialist Left in the early 1960s, many of these liberals found themselves out of power. In later decades, liberalism in Europe found itself out of the mainstream of politics, still advocating decentralized representative government (as opposed to the centralized welfare state) and neoliberal economic policies, items that had been gradually discredited in continental European politics for decades (except in the United Kingdom, where neoliberalism was embraced by both Conservative prime minister Margaret Thatcher and Labour prime minister Tony Blair). In Western Europe, however, both center-right and center-left coalitions embraced the welfare state as *modus vivendi* between capitalism and communism, relegating ideological liberalism to the margins of political life.

Much of Latin America (except Brazil) had a common liberal tradition harkening back to the Wars of Independence from Spain in the early nineteenth century, defined by support for representative government, secularism, and egalitarian ideals. In the period following World War II, liberalism was embraced by pro-Western Latin American elites to maintain their hold on political and economic power, much to the dismay of the workers and peasants. The influence of socialism and communism (particularly Maoism) in Latin America was particularly strong, especially after the successful Cuban Revolution of

Fidel Castro (1959). From the 1960s to the 1980s, CIA-supported right-wing military coups (Argentina, 1976; Chile, 1973; Nicaragua, 1984) seeking to stem the socialist and communist surge in domestic politics eventually displaced the traditional hold of liberals in power. Widespread resentment against alleged U.S. hegemony in the region has provided socialism with tremendous political capital, leading to the successes of its more recent proponents in Brazil, Venezuela, and Bolivia.

In many of the decolonizing regions of the world, such as the Near East, South Asia, and sub-Saharan Africa, liberalism was embraced by colonial elites espousing independence from European colonialism. However, liberal conceptions of representative government proved to be quite fragile given the ethnic divisions that characterized the various postcolonial states, as seen in the partition of India (1947) and its effect on Pakistan (1971), Kenya (1991), and Iraq (2003). The British Westminster system of granting independence to colonies with representative parliaments while maintaining their economic dependence on the United Kingdom (seen by critics as the roots of neocolonialism) severely undermined efforts to legitimize liberalism abroad. Some of these early experiments at liberalism in Africa and Asia eventually gave way to oppressive right-wing military rule (Kenya, Egypt, South Korea, and Pakistan). Communism (particularly Maoism) and socialism, in addition to Islamic fundamentalism (primarily in the traditional lands of Islam in North Africa, the Near East, and Central and South Asia), have had significant influence in these regions, where traditional liberalism remains suspect as a form of Western infiltration along with its neoliberal economic policies.

In the postwar United States, liberalism transformed itself from an ideology advocating the gradual expansion of the national welfare state (the New Deal) to that of one espousing the extension of civil rights to women, minorities, and other disenfranchised groups, particularly associated with the realignment of the Democratic Party under Lyndon B. Johnson. Shaped by the political thinking of longtime advocates of social reform such as John Dewey as well as the political radicalism of the New Left and civil rights

organizations, liberalism in the 1960s embraced multiculturalism, identity politics, and policies advancing progressive social reform. During Johnson's presidency, liberalism transformed from an ideology advocating statist social reform to alleviate poverty through wealth distribution (Great Society, civil rights, War on Poverty, etc.) to one actively supporting the radical movements of the late 1960s (protests against the Vietnam War, minority power movements, women's rights, etc.) emphasizing greater social equality. However, attacks from the resurgent political Right from the 1970s to contemporary times moved many liberals such as President Bill Clinton to the center, seeking to break away from the previous flirtation with the progressive Far Left. Contemporary U.S. liberalism reflects traditional support of the central government in alleviating socioeconomic disparities through the expansion of the welfare state, along with further expansion of the civil rights of disenfranchised groups, while at times supporting centrist middle-of-the-road compromise positions regarding neoliberal economic policies (North Atlantic Free Trade Association [NAFTA], 1994) and values policies (e.g., the infamous "Don't Ask, Don't Tell" law concerning gays in the U.S. military that passed in the U.S. Congress in 1993).

In Australia, traditional liberalism has succeeded in surviving through the political success of the Liberal Party in postwar decades in spite of the expansion of the welfare state in the postwar period under Labour control of the federal government. However, with its support of U.S. foreign policy, neoliberal free trade policies, and decentralized government, the Liberal Party has found itself under scrutiny by the Labour opposition in recent years.

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Bibliography

- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Vintage Books, 1995.
- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Jumonville, Neil, and Kevin Mattson, eds. *Liberalism for a New Century*. Berkeley: University of California Press, 2007.
- Mazower, Mark. *Dark Continent: Europe's Twentieth Century*. New York: Vintage, 2000.

Neoconservatism

Neoconservatism is a U.S. political ideology that developed in the decades following the end of World War II that advocates an international free market economy and a fervent anticommunist foreign policy (first directed against the Soviet Union until 1991, now against China) in tandem with the global spread of democracy through U.S. military power. The term was first used in 1972 by Michael Harrington as a derisive term to identify a group of self-described liberals who were really conservative ex-liberals. The movement developed out of a collective group of Jewish New York intellectuals who had previously been fervent devotees to President Franklin Delano Roosevelt's New Deal in the late 1930s and early 1940s. It later attracted some liberals, those mostly disenchanted with the liberalism of the Democratic Party of Lyndon B. Johnson and its flirtations with the New Left of the 1960s. At this time, the neoconservatives developed a political philosophy that embraced fervent anti-communism and the spread of democracy around the globe, putting them at odds with both the Republican Party (suspicious of them as liberals) and the Democratic Party (who viewed them as centrist liberals deviating from the progressive wing). With the election of President Ronald Reagan in 1981, neoconservatives switched en masse to the Republican Party and helped shape its foreign policy objectives in the last days of the Cold War and well up to the post-September 11, 2001, conflicts: the War on Terror and the Iraq War.

The intellectual roots of neoconservatism lie in a group of Jewish intellectuals centered in City College in New York City in the 1930s. During this time, this small group became increasingly supportive of Roosevelt's liberal policies, many of them enacted in the late 1930s and known collectively as the New Deal. Influenced by Trotskyite ideals, trade unionism, and the New Deal, Lionel Trilling, Irving Kristol, and Norman Podhoretz, among others, developed what was to later become the ideology of neoconservatism. Following the 1939 Nazi-Soviet Pact, the divide in the progressive ranks between the supporters of Soviet-backed communist organizations and other leftists led a small group of Jewish

intellectuals to split from a larger group of communist-affiliated intellectuals. In the midst of World War II, this small group of anticommunist liberals maintained their autonomy from the progressive Far Left and its unwavering support for Stalinism while remaining supportive of U.S. efforts abroad to liberate Europe and East Asia from the Axis forces and active participants in the U.S. Democratic Party.

In the late 1940s and early 1950s in the midst of the Cold War, the neoconservative coterie remained among anticommunist centrist liberals staunchly on the side of the United States while able to denounce those who implied that all liberals were Soviet sympathizers, especially Senator Joseph McCarthy. Now working as journalists, editors, and publishers, many of them were able to voice their political positions, largely through the publications *Commentary*, *The Public Interest*, and *Dissent*. They maintained their ideological differences with the Far Left progressive liberals (some still supportive of Stalinism until 1956), who cast all anticommunists as McCarthyites and traitors to liberalism.

During the 1960s, as John F. Kennedy and then Lyndon B. Johnson unleashed a vast set of social reforms and programs aimed at ending poverty and redistributing wealth among the less fortunate (New Frontier, Great Society, War on Poverty), liberals in the United States responded with enthusiasm and united themselves to the cause. However, in the midst of the massive social changes brought about by the extension of civil rights legislation, widespread protests against the Vietnam War, ubiquitous criticism of Israel after the 1967 Arab-Israeli War, and the growth of the counterculture in U.S. society, the anti-communist liberals became wary of what they considered to be the appeasement of the New Left (student radical organizations, civil rights activists, red-diaper baby boomers) by the Old Left (Great Society liberals) during the turbulent late 1960s. The flirtation of the Democratic Party with what were then considered anti-American radicals led anticommunist liberals to openly criticize the liberal establishment of the party currently in power in the late 1960s. By 1972, this breach led to this group being labeled neo-conservatives, or liberals without a home on the Democratic Party's liberal and left wings. How-

ever, they maintained their place, albeit an uncomfortable one, in the ranks of the Democratic Party.

In the 1970s, many neoconservatives critiqued the enactment of civil rights-based quota programs in educational and occupational programs to ensure equitable racial integration. Many neoconservatives saw this as a breach of the intention behind civil rights, and some of them, as Jews, were shocked to see quotas, something used in the past to limit the amount of people in a given occupation (primarily Jews), now being used to accommodate people's entry into occupations and educational institutions. Moreover, President Richard Nixon's policy of détente vis-à-vis the Soviet Union and his opening of China alarmed neoconservatives, who saw this as a form of appeasement of global communism. They were also critical of the Nixon administration's support of pro-American anticommunist dictators in the developing world. In this fashion, they were alienated by both the political Left and Right, opposed to affirmative action programs and its quotas and what they perceived as reverses in U.S. foreign policy in Vietnam and against the Soviet Union and China under Nixon. Anti-Soviet Democratic lawmakers such as Senator Henry "Scoop" Jackson and Republican hawks such as Ronald Reagan, fervently against Nixon's policies, were backed by previously reluctant neoconservatives.

The election of Reagan as president of the United States in 1981 finally allowed the neoconservatives to join the Republican Party, as he advocated a more aggressive policy against the Soviet Union than his predecessors. While some neoconservatives felt ill at ease with the emerging New Right and its alignment with evangelical pro-life Christians (the Moral Majority), they felt that Reagan was a better fit than the evanescent liberal Left. While this support of Reagan meant the slow erosion of social programs enacted under the Great Society, which many neoconservatives had supported wholeheartedly, it also meant the extension of U.S. military power in confronting global communism, which did eventually come crashing down between 1989 and 1991 due to external and internal factors.

By 2007 many neoconservatives occupied positions in conservative think tanks (such as the

➤ BLAIRISM



British prime minister Tony Blair brought the Labour Party into power with a landslide victory in the 1997 general election. He was the Labour Party's longest serving prime minister and the only person to have led the party to three consecutive general election victories. (British Embassy)

Blairism refers to support for the policies of Prime Minister Tony Blair and his New Labour policies in the United Kingdom from 1997 to 2007, which included an Atlanticist foreign policy (which critics alleged was an unbending compliance with U.S. foreign policy in world affairs), greater European integration, and economic policies of privatization similar to those of Margaret Thatcher. Blairism, or New Labour, was a centrist position by the British Labour Party, developed to attract probusiness and pro-free market

Conservative voters while maintaining the traditional Labour core.

Maintaining a centrist position was not without its critics, who alleged that this was a betrayal of the core values and previous platforms of the Labour Party, which had historically been the stalwart supporters of both the British welfare state and labor unions. This is similar to Democratic U.S. president Bill Clinton's embracing of unhindered free trade economic policies and curtailing of social programs in order to appeal to center-right probusiness fiscal conservatives in the mid-1990s. This precarious alliance at the political center, while expedient in gaining voters in the short term, alienated both Blair and Clinton from both the political Left and Right in their respective countries.

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American Enterprise Institute and the Hoover Institute) as leaders in the presidential administration of Republican George W. Bush and as shapers of public policy and foreign affairs. Their vision of spreading democracy abroad and quelling global communism (and now global Islamo-fascism) had been extended to establishing democratic regimes in the Near East and Central Asia. In the post-September 11 world, they actively promoted regime change throughout this volatile region, advocating the global War on Terror and current Iraq War. However, their willingness to embark on extensive deficit spending on these wars pitted them against fiscal conservatives in the Republican Party as well as libertarians opposed to their support of increased government bureaucracy and increased surveillance of citizens (PATRIOT Act, Department of Homeland Security). Yet neoconservatives continued to find common ground with social conservatives on their foreign policy objectives considering the War on Terror a moral crusade in its extension of U.S. democratic values abroad.

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Bibliography

- Gerson, Mark. *The Neoconservative Vision: From the Cold War to the Culture Wars*. New York: Madison Books, 1996.
- Gottfried, Paul Edward. *Conservatism in America: Making Sense of the American Right*. New York: Palgrave Macmillan, 2007.

Communist Ideology—Third World Revolution

At the end of World War II as the European empires throughout much of the world began to dissolve, the influence of Marxism and its anti-imperialist rhetoric became widely popular among the colonized masses. The experience of the war, with the removal of the defeated colonial authority by the Axis and with the work of the resistance movements in response run by the colonized themselves, did much to discredit the British and French throughout their imperial dominions. The immediate post-Cold War antagonism between the United States and the Soviet Union, along with the People's Republic of China

(since 1949), made the leadership of many newly decolonized nations choose communist support in the face of the potential indirect rule of U.S. global hegemony, either through the international organizations of the International Monetary Fund (IMF) or the World Bank or through the direct U.S. support of right-wing pro-Western dictators. Many of these communist movements had to take to the countryside to fight against the imperialist oppressor through revolutionary tactics (guerrilla warfare) to break the will of an otherwise superior military force, relying on the support of the Soviet Union and/or China.

From the 1950s through the 1970s, as decolonization proceeded throughout much of East and South Asia, North Africa, sub-Saharan Africa, and the Near East, the influence of communism resonated throughout many of the newly independent nations. British policies of decolonization emphasized placing “responsible” representative government in power (the Westminster system) along with secure economic ties that placed the new nation securely under the economic control of the United Kingdom. Communist factions (particularly in Malaysia) in the newly created British Commonwealth of Nations (a loose coalition of former British colonies and dependencies to the United Kingdom) resented this arrangement and worked against the new political establishment, albeit unsuccessfully in most cases.

In contrast, France's reluctance to let go of its colonies and willingness to use its military led to attempts to accommodate its colonies into new postwar relationships with metropolitan France. The French Union (1958–1960), which granted the African colonies greater political representation, failed when France proved unwilling to provide funds for economic and infrastructural development. Such limitations convinced post-colonial communist leaders that Europeans were merely interested in economic issues and not the interests of subject regional populations. In addition, armed revolutionaries in Indochina (1954) and Algeria (1962) managed, with Soviet support, to oust the French, severely discrediting the future of French imperialism and creating support for local communist (and nationalist) insurgents. Congolese resistance to colonial rule eventually led to the withdrawal of Belgian

forces and the subsequent development of an independent Democratic Republic of Congo in 1960. In the midst of the ensuing civil war in Congo and other conflicts, decolonization proceeded, sometimes quickened by the restlessness of communist (i.e., Malaysia, Vietnam) and communist-backed insurgencies (i.e., Kenya, Angola). Decolonization and the prevention of neocolonization were seen as the necessary preconditions of ensuring political self-determination on the road to socialism and augmented the ideological rhetoric espoused by insurgents, much of it already encouraging resistance against the exploitative and weakened European colonialists.

Communist insurgents and activists in post-colonial societies regarded Soviet support as necessary to oust the European colonizers (and the perceived U.S. neoimperialists). Encouraged by communist successes in North Korea (1950–1953) and Vietnam (1946–1954), communist leaders strongly advocated combating European-style occupational armies via guerrilla warfare in the countryside (i.e., Maoism). Armed guerrillas working in tandem with the peasantry became a vital factor in the struggle against either the colonial powers or the elites, perceived as capitalist puppets left in place after decolonization. Communist insurgent leaders such as North Vietnamese Ho Chi Minh and Cambodian Pol Pot took these lessons to heart, the former in his fight against both France (1954) and the United States (1964–1975) and the latter in his genocidal purges of urban elites during the Khmer Rouge (1975–1979). The Cuban Revolution of 1959, under Fidel Castro and the legendary and almost mythological Che Guevara, spearheaded the communist movement in Latin America, illustrating the widespread resentment against U.S. economic hegemony in the Western Hemisphere. Latin American revolutionaries sought to oust capitalist elites, whom they viewed as U.S. cronies. Drawing on Cuban support and indirect Soviet support, communist revolutionaries in such places as Bolivia, Nicaragua, and El Salvador worked against their existing political establishments through guerrilla warfare, peasant upheavals, and open warfare. U.S. involvement through CIA coups and the installation of pro-U.S. dictators (the overthrow of Salvador Allende in Chile in

➤ MAOISM

Maoism (Mao Zedong thought) is an interpretation of Marxist-Leninism derived from the teachings collected in the widely distributed *Little Red Book*, formally known as *Quotations of Chairman Mao Zedong*. It was widely disseminated throughout the population during the Cultural Revolution (1966–1976) in the People's Republic of China (PRC) as the official doctrine of the Chinese Communist Party (CCP) and emphasized the role of the peasantry in the coming revolution against capitalism. Since China lacked a substantial middle class (bourgeoisie) and the requisite working class (proletariat) necessary for an orthodox Marxist revolution, Mao foresaw the need to employ the demographically large Chinese peasantry to fulfill this task. Maoists attempted to mobilize and organize rank-and-file guerrilla fighters from the peasantry, creating rural sanctuaries in peasant communities while increasing coordination among the guerrillas and then transitioning to conventional warfare. Maoist military doctrine emphasizes the role of the peasantry in keeping the guerrilla fighters logistically supported and hidden.

Maoism and its emphasis on rural peasant participation in revolution had a significant influence throughout much of the developing world (i.e., Latin America, sub-Saharan Africa, and Southeast Asia) in the second half of the twentieth century. Maoist precepts were also embraced—with violent and absurd consequences—by the New Left throughout the West. Mao's admirers agreed that only through mobilizing the peasantry, much in the same way Mao conducted the Great Leap Forward or the Cultural Revolution, could revolutionary ends be achieved.

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1973 being the most notorious) did much to galvanize these movements.

As communist revolutionaries throughout the developing world saw many of their countries enter an uncertain period of development, many sought foreign assistance from the Soviet Union. Many African and Asian countries, even Non-Aligned Movement (NAM) countries such as Egypt, wished to develop their economies in a

way that would allow them to proceed on the path of building socialism and modernization. Soviet engineers, advisers, and funds poured into African, Asian, and Latin American countries (mainly Cuba) to assist in these endeavors. However, with Cold War military expenditures draining resources, Soviet aid was not substantial enough to help these countries be self-supporting. This led some of them to seek more financial assistance from the United States or Europe (primarily through the World Bank or the IMF, seen as neocolonial methods of economic control). In spite of these shortcomings, communist revolutionary movements in the developing world continued to look to the Soviet Union for military, diplomatic, and economic support (not to mention as a model) in the face of their economically dependent position vis-à-vis the West while continuing to utilize revolutionary warfare methods learned from World War II and the Chinese example.

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Bibliography

- Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2005.
- Hanhimäki, Jussi M., and Odd Arne Westad, eds. *The Cold War: A History in Documents and Eyewitness Accounts*. New York: Oxford University Press, 2003.
- McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2005.

Zionism, Post-1945

Zionism, a multifaceted Jewish national liberation movement, has undergone a series of redefinitions since its initial development in the late nineteenth century. While most written histories of the Zionist movement conclude with 1948—the year of the foundation of the State of Israel—Zionism remains a controversial mainstay of contemporary political discourse. Since attaining its preeminent goal of establishing a national Jewish homeland in Palestine, Zionism has been rooted in the assertion of Israel's right to exist and the Law of Return extending the right of citizenship to any Jew wishing to make *aliyah* (literally “going up,” or settling in Israel). The

term has also come to represent the political, financial, and spiritual support of the State of Israel by Jews living in the Diaspora.

By 1945, the Jewish population of the Yishuv (“settlement”) in British Mandatory Palestine numbered over 500,000. Growing Zionist demand for a Jewish homeland had been rebuffed by the immigration restrictions imposed by the White Paper of 1939 and further exacerbated by the continuous revelation of the realities of the Holocaust. By 1946, British authorities overlooked the flow of refugees into Israel that far exceeded the 75,000 allowed by the White Paper. Facing an exhausted military and economy after the war, Britain had grown weary of worrying about Palestine, and political maneuvers could not resolve the issue in a manner that would placate the Palestinian Arabs and satisfy the Zionist Jews. Thus, the issue of Palestine was forwarded to the newly established United Nations (UN), which reached the conclusion that partitioning Palestine was the only workable solution. In November 1947, the UN voted to partition Palestine into two separate states, one Arab and the other Jewish; following the adoption of the partition plan, a civil war erupted throughout Palestine.

On May 14, 1948, the British mandate for Palestine expired. David Ben-Gurion, Israel's first prime minister, utilized this moment to proclaim the Declaration of Independence of the State of Israel. Almost immediately, Egyptian, Syrian, Iraqi, and Lebanese soldiers invaded the new state, effectively transforming the Palestinian civil war into a full-fledged war between the State of Israel and surrounding Arab states. By January 1949, Jewish forces had defended the territories of the 1947 partition and captured a considerable amount of Arab land. The cease-fire lines established by the armistice agreements made in 1949 increased Israeli territory to up to 78 percent of the physical area of mandatory Palestine. However, the Arab-Israeli War of 1948 neither ignited nor ended the hostilities between Zionist Jews and nationalist Palestinian Arabs.

During Israel's formative years, Zionism's function was clearly political and practical; the momentum of the Zionist movement helped consolidate the government and strengthen na-

tional defense while at the same time mediating between the new state and world affairs. In effect, Zionism served as the foundational *raison d'être* for the State of Israel. A principal shift in the meaning of Zionism was facilitated by the concurrent shift in Israeli demographics brought about by territorial expansion and a massive influx of immigrants. The differences of opinion over the definition of Zionism arose primarily between Israeli politicians and American Zionists. After 1948, the World Zionist Organization (WZO) had continued its operations, focusing on fund-raising and facilitating immigration to Israel. Yet most of these Zionists had little desire to emigrate. They were content with remaining in the Diaspora, a reality anticipated by the spiritual Zionist Ahad HaAm (1856–1927). Following HaAm's vision, such Zionists wished to remain in the Diaspora while aiding in making Israel an exemplary cultural and spiritual center. Eventually, conflicting views concerning the would-be characteristics of a shared partnership between Israel and Zionist organizations in the Diaspora intensified the confusion over the definition of Zionism.

Ben-Gurion and other Israeli Zionists vehemently rejected the HaAmist version of spiritual Zionism. They envisioned a dissolution of Diasporic Jewish identity alongside Israel's development as the singular geographical location for Jewish civilization. This "negation of the Diaspora" (*Shelilat baGolah*) infuriated Zionist leaders such as Emanuel Neumann, president of the Zionist Organization of America, who opposed Ben-Gurion's emphatic definition of Zionism as eventual immigration to Israel. At the same time, rejecting the validity of Jewish identity in the Diaspora threatened the value of Western Zionist organizations, especially in terms of their political and financial support for Israel.

Eventually Israel and the WZO reached an official agreement stipulating that the responsibilities of the WZO would remain in the area of immigration assistance and fund-raising. Nevertheless, among the younger generation of Israeli Jews, the term "Zionism" came to be considered a pejorative synonym for "empty talking," reflecting the predominant association of Zionism with personal aliyah and subsequent disdain for

➤ JEWISH ANTI-ZIONISM

While Jewish organizations across the world primarily support Israel, some groups and individuals within the Diaspora and Israel continued to reject Zionism after the creation of the state in 1948. Such Jewish anti-Zionism involves a fundamental opposition to the founding of the Israeli state or to the story of that founding and tends to be either religious in nature or revisionist. Opposition to Zionism from Jewish religious groups stems primarily from *haredi* (Orthodox Judaism) sects, such as the Satmar Hasidim, Edah HaChareidis, and Neturei Karta. These *haredi* groups reject the sovereignty of a Jewish state in the land of Israel because the War of Independence preempted the messianic era foretold by the biblical prophets. The establishment of the State of Israel is interpreted as an act of impatience, violating the biblical demand to wait for the Jewish Messiah. An extreme faction within Neturei Karta caused considerable controversy when, in December 2006, some of its members attended the International Conference to Review the Global Vision of the Holocaust convened in Tehran by the president of Iran, Mahmoud Ahmadinejad. They were not Holocaust deniers but objected to the invocation of the Holocaust to legitimize the founding of the Israeli state. Another source of anti-Zionism sentiment emerged in Israel in the form of revisionist history. In the 1980s, a group of Israeli historians utilized access to declassified Israeli documents to reevaluate the plight of indigenous Palestinians throughout the 1940s. These so-called New Historians, such as Benny Morris and Ilan Pappé, question the traditional Zionist narrative, a story dominated by struggle, sacrifice, and heroism culminating in the triumphant return to the land of Israel. Their acknowledgment of the Palestinian exodus of 1948, or Nakba (Disaster), for example, was one of the foundational steps in rewriting Israeli history to include, for the first time, the victimhood of the Palestinians. This academic turn toward questioning Zionist ideology contributed to the so-called post-Zionist attitude present in contemporary Israeli society.

—Blake W. Remington

those who remained in the Diaspora yet considered themselves Zionists.

The Six-Day War of June 1967 served as a watershed moment for Israel and Zionism alike. Israel's success in capturing the remaining territory of pre-1948 Palestine—including the West Bank and the Gaza Strip—resulted in an outpouring of support from Diaspora Jews and an intensification of anti-Zionist sentiment among Arab states, which had repeatedly rejected Zionist claims. The dispute over Israel's borders led to the Yom Kippur War only six years later. Arab allegations of Israeli imperialism also contributed to a 1975 UN Resolution equating Zionism with racism. However, in 1991, the UN General Assembly repealed the resolution by an overwhelming vote.

Despite the fact that the Jerusalem Program—adopted at the World Zionist Congress in 1951 and revised in 1968 and again in 2004—stipulated the ingathering of the Jewish people in Israel via worldwide aliyah as a main component of Zionism, Zionist organizations continued to operate in the Diaspora. In America and other Western democracies, Zionism took the form of cultural and religious education, with a dual purpose of stimulating support among Jewish communities and increasing global acknowledgment of Israel's rightful existence. In the 1970s and 1980s, Zionist organizations focused their efforts on the plight of Jews in the Soviet Union who, following the collapse of communism, were finally able to emigrate to the West.

Current debates within Israel question whether Zionism has been rendered obsolete by the movement's own political and cultural accomplishments: Israel exists as an independent state and houses half the world Jewish population, and Hebrew has been revitalized and transformed into a national language of both business and literature.

—Blake W. Remington

Bibliography

- Laqueur, Walter. *A History of Zionism*. London: Weidenfeld and Nicolson, 1972.
- Rebhun, Uzi, and Chaim I. Waxman, eds. *Jews in Israel: Contemporary Social and Cultural Patterns*. Lebanon, NH: University Press of New England, 2004.

Sachar, Howard M. *A History of Israel: From the Rise of Zionism to Our Time*. 3rd ed. New York: Knopf, 2007.

Anti-Zionism

The concept of anti-Zionism encapsulates the attitudes of individuals or organizations opposed to the formation or existence of the State of Israel or its expansion into the Palestinian occupied territories. Anti-Zionism is a controversial theme in the contemporary world since it is inclusive of a variety of groups ranging from neofascist anti-Semites in right-wing fringe parties throughout the West to Islamic fundamentalists, Arab nationalists, Marxists, socialists, and people critical of Israeli policies in the Palestinian territories. In defining anti-Zionists, one must distinguish between anti-Semites bent on the destruction of the State of Israel and its inhabitants, those critical of Israel's existence in the Middle East, and those who are critical of Israeli policy in the Occupied Territories.

In the immediate aftermath of World War II and the liberation of the Nazi death camps, Jewish emigration from Eastern Europe surged toward British Mandatory Palestine. This followed a half-century of gradual Jewish immigration to the region from Eastern Europe under the auspices of various Zionist organizations. After 1945 increased immigration fueled tensions between Jewish settlers and indigenous Arab residents. The formation of the State of Israel in 1948, recognized by the United Nations, further aggravated the issue, leading to open war between Palestinian Jews and Arabs.

Anti-Zionism emerged within the Communist Party of the Soviet Union in a policy of resistance to the formation of the State of Israel or any sympathy toward a Jewish identity associated with such a state and in efforts to persecute prominent Jewish leaders within the party and the state. While the Soviet Union ultimately supported the formation of the State of Israel in 1948, traditional Russian anti-Semitism lingered in the top ranks of the Soviet leadership. The Soviet leadership itself contained a number of assimilated Jews who did not adhere to Zionism and believed that the draw to emigrate was just another nationalist bourgeois ploy that would

hinder the advance of socialism among Soviet Jews. Nonetheless, under the pretext of harboring Zionist sympathies, Soviet Jews experienced a high degree of scrutiny and suspicion under the Soviet state. In 1952 Josef Stalin plotted directly against Jews in the Soviet Union, deciding to purge Zionists and so-called cosmopolitans (Jewish intellectuals) from Soviet society. Using the pretext of a doctors' plot to poison Stalin, Soviet authorities rounded up Jewish doctors and accused them of Zionism and of working with the United States as Jewish bourgeois-nationalists. However, Stalin's death on March 5, 1953, prevented the Jewish doctors from being put to death or prosecuted any further. Nonetheless, Soviet suspicions of Zionism of Soviet Jews and Jews in general continued throughout their reign within the Soviet Union and in much of the Eastern Bloc.

The mere existence of Israel in the Middle East, surrounded by Arab and Muslim neighbors hostile to what was seen as an infringement into the land of Islam, has led to the emergence of strong anti-Zionist attitudes among Arab nationalists and Islamic fundamentalists throughout the region. The wars of 1948, 1956, 1967, and 1973, resulting in losses of territory and lives on the part of the Arab states, created long-term resistance against the State of Israel. The issue of the Palestinian Occupied Territories and the plight of its peoples as well as the plight of Palestinian refugees in adjacent countries further exacerbated the situation. Arab nationalists, such as Egyptian president Gamal Abdel Nasser and the Baath parties in Syria and Iraq, viewed Israel as a Western enclave, a constant reminder of previous centuries of European colonization of the region. In contrast, Islamic fundamentalists, particularly after the war of 1967, viewed Israel as an affront to the unity of the lands of Islam, particularly with the occupation of the city of Jerusalem in 1967 and the alleged Israeli oppression of their fellow Muslim Palestinians.

The terrorist organizations Hamas, Hizbullah, and Islamic Jihad developed in the late twentieth century and openly advocated the destruction of the State of Israel. Such organizations emerged from widespread Arab and Muslim disdain of the Jewish state. Both Arab nationalists and Islamic fundamentalists have developed anti-Semitic rhet-

➤ MODERN ANTI-SEMITISM

In contrast with previous historical modes of anti-Semitism, modern anti-Semitism is heavily influenced by the global anti-Zionism shaped by the Arab-Israeli conflict in the Middle East centered on the Palestinian-occupied territories. Modern anti-Semites are openly critical of U.S. support of Israel and the role of the Israel lobby in securing this support, claiming that this political clout is evidence for Jewish control of the U.S. government akin to the type of conspiracy theories espoused by National Socialists in 1930s' Germany. Such alleged Jewish control of government is depicted in the right-wing extremist novel *The Turner Diaries* by Andrew MacDonald, offering a story about the "Zionist Occupation Government" (ZOG) and its policies of multiculturalism and seizure of guns. The book describes an ensuing widespread race war in the United States that ends with the extermination of Jews and non-whites at the hands of the "Organization," which promotes white supremacy. Another conspiracy theory places the blame for the September 11 attacks on Jews, alleging a Jewish conspiracy to provoke an American reaction against Islam to the benefit of Israel. Much of this anti-Semitic discourse is available on the Internet and is referenced by Western neofascists, Islamic fundamentalists, and left-wing fringe extremists alike, illustrating the complexity of modern anti-Semitism in invoking older anti-Jewish myths and combining them with modern global anti-Zionist attitudes.

—Abraham O. Mendoza

oric in their anti-Zionist policies, indoctrinating and advocating racism and visceral hatred of Israelis, the State of Israel, and Diaspora Jews throughout the world.

Right-wing fringe parties and organizations in Western Europe and the United States, such as neofascists, neo-Nazis, and racist factions, also have openly advocated anti-Zionism as a way to legitimize their anti-Semitic and racist agendas by using the rhetoric of criticism of the State of Israel and its policies. Political parties such as the Front National in France, the British National Front in the United Kingdom, the American Nazi Party in the United States, and the National Democratic Party of Germany are openly critical of



Palestinian supporters of the militant Hamas group, which advocates the dissolution of the State of Israel, celebrate the Israeli pullout from Gaza on September 11, 2005, in the West Bank city of Birzeit. (Abbas Momani/AFP/Getty Images)

the State of Israel and its policies. These parties also recirculate older anti-Semitic myths of global Jewish conspiracies to take over the world through the control of Western governments, the media, and international finance. Relying on anti-Semitic texts such as *Mein Kampf* and *The Protocols of the Elders of Zion*, many of these parties and organizations have managed to transmit these older ideas into their anti-Zionist agendas and Holocaust denial allegations.

The political Left throughout Europe, the United States, Latin America, Australia, Africa, and Asia have also developed anti-Zionist positions, particularly after the 1967 war. However, their form of anti-Zionism is less tinged by anti-Semitic discourse and more focused on the plight of the Palestinian Arabs in the Occupied Territories. Following the 1967 war, Israel changed in the eyes of the world from a tiny state surrounded by hostile neighbors to one openly engaged in colonizing its weaker neighbors. This drastically altered the attitudes held toward Israel by the political Left throughout the world.

Once seen as a model of socialism, with its kibbutzim and secular political system, it became yet another example of colonial oppression in the contemporary world. Third World revolutionaries, Maoists, New Left movements, and socialist parties throughout the world became vocal in their criticism of Israeli policies and their continuing occupation of the West Bank and Gaza and gave moral weight to the Palestinian cause. While there are some instances of anti-Semitism in the remarks of some factions within the global political Left, much of its message focuses on Israeli policies against the Palestinians and criticism of U.S. support for Israel.

—Abraham O. Mendoza

Bibliography

- Lustiger, Arno. *Stalin and the Jews: The Tragedy of the Jewish Anti-Fascist Committee and the Soviet Jews*. New York: Enigma Books, 2003.
- Tekiner, Roselle, Samir Abed-Rabbo, and Norton Mezninsky, eds. *Anti-Zionism: Analytical Reflections*. Brattleboro, VT: Amana Books, 1989.
- Wistrich, Robert S. *Anti-Zionism and Antisemitism in the Contemporary World*. New York: New York University Press, 1990.

Public Memory of Postdictatorial Societies

In the twentieth century, numerous dictatorial regimes emerged and dissolved. The nature of the transition from dictatorship to democracy determined the ways in which postdictatorial societies dealt with past crimes against humanity. In Spain, Uruguay, and Chile, for instance, indictments of individuals responsible for human rights abuses were prevented by amnesty laws enacted by the former rulers. The main argument for such laws, which had been imposed by former dictators but were upheld by democratically legitimized legislations and plebiscites, was that a reckoning with past crimes would divide society and prevent national reconciliation. Therefore, many postdictatorial governments, as in the case of Spain in regard to the Francisco Franco dictatorship, embarked on a policy of national amnesia.

José Zalaquett, a member of the Chilean Truth and Reconciliation Commission, provided a typology of situations for the transition from

repressive systems to democratic rule and the consequences for dealing with crimes and abuses of the past system. His first category refers to a situation of clear victory over the previous dictatorship, such as in the case of the Allied victory over Nazi Germany (1945) and the Sandinistas' successful struggle against the former dictator Anastasio Somoza Debayle (1979). Such a situation gives the victor unlimited power to impose punishment for past crimes (Nuremberg War Crimes Trials). The second category describes situations, as they occurred in Greece (1974) and Argentina (1983), in which the military rulers relinquished power as a result of an embarrassing military defeat. Since the military found itself in a weak position, it could not impose its conditions. As a result, civilian governments were able to revoke amnesties and to put high-ranking officers on trial for human rights abuses. However, while human rights violations in Argentina were significantly greater than in Greece under military rule, the postdictatorial government of Greece succeeded in convicting many more military personnel than the Argentinean government. By 1976, between 100 and 400 trials for torture were held throughout Greece, and the top-ranking officials of the military junta were put on trial. In contrast, in Argentina only 16 officers were indicted and 10 convicted of human rights violations. The third category is based on the experience of Chile (but also applies to Uruguay and Spain), where the dictator and the military relinquished power at a moment of strength. The military allowed for a democratic transition and, in return, imposed its conditions on the process. Since Chilean society was deeply divided over the evaluation of Augusto Pinochet's rule, the military still plays a significant role in the postdictatorial state. The fourth category refers to a gradual transition from dictatorship to democracy such as that which occurred in Brazil, where postdictatorial governments emphasize the prevention of future human rights abuses rather than an investigation of past crimes.

In the case of Spain the policy of forgetting the past also included the decision to seal the police files from the Franco era indefinitely. Such a decision characterized the dealing with dictatorial pasts in many countries. Only in the case of South Africa because of its truth commission

➤ VALLEY OF THE FALLEN

Typically, modern dictatorships have, more often than not, caused physical and psychological damage to the populations over which they have held control. Furthermore, they left behind monuments dedicated to their leaders. These monuments often attracted the outrage of people in popular revolutions, and their removal was part of the symbolic liberation from dictatorial dominance. The end of communism in Eastern Europe was therefore closely related to the removal of Lenin statues from public spaces. In the case of Spain, however, one of the most horrific monuments to dictatorial power still attracts hundreds of thousands of tourists each year. The Valley of the Fallen was built in the years from 1940 to 1959 through the forced labor of political prisoners and opponents incarcerated in concentration camps. It consists of a Catholic Church (the largest in the world) built into a mountain with a gigantic cross (the largest freestanding cross in the world) on its summit. This church still contains the sarcophagi of Generalissimo Francisco Franco and of former dictator José Antonio Primo de Rivera, the founder of Spain's fascist movement Falange Española. Moreover, to this very day it attracts right-wing organizations, which commemorate Franco's and Primo de Rivera's deaths on November 20th on a yearly basis.

—Thomas Adam

and in the case of the German Democratic Republic (GDR) were crimes and those who committed them under the mantle of the previous dictatorial regimes disclosed to the public. The GDR is an exceptional case in that the archives of the former state secret service were opened to the public. After unification with the Federal Republic of Germany (1990), the German parliament established in 1991 an agency with the task of making the files produced by the East German Stasi (secret service) available to those individuals who had been spied upon by the Stasi. In effect each East German citizen thus gained the right to see the information collected about him or her by the state security. In addition, the German parliament passed a law banning the employment of individuals as civil servants and

in public office who had formerly collaborated with the Stasi. In the case of the East German state of Saxony, the state legislature even included in the state's constitution an article (Article 118) that allows parliament to expel an elected member of parliament if he or she had collaborated with the Stasi.

Such lustration laws are characteristic for some but not all former communist countries. In the case of Czechoslovakia, a law from 1991 prohibited high-ranking functionaries of the former Communist Party, members of the State Security Agency, and the People's Militia as well as collaborators from holding senior administrative positions in government, the military, the police, the intelligence service, state-owned media, and state-owned enterprises for five years. Poland attempted to follow East Germany's lead several times and enacted lustration laws in 1992, 1998, and 2007. However, Poland's constitutional court declared each of these laws unconstitutional and thus prevented the investigation of collaborators with the secret service during the communist dictatorship.

Lustration laws as a means of dealing with a dictatorial past have remained an East European phenomenon for a number of reasons. Dictatorships in Africa, Asia, and South America have not assembled such detailed records of collaboration between individuals and the regimes. And even if such records existed, they have been destroyed in the course of transition. Furthermore, political transitions especially in Africa and South America were often the result of negotiations that included agreements on the protection of those who had supported the former regime in one way or another. In their efforts to resolve the past, postdictatorial societies in Africa and South America chose to employ truth and reconciliation commissions, created immediately after the political transition toward democracy. Priscilla B. Hayner counted at least 21 truth and reconciliation commissions created since 1974. However, the scope of inquiry and the authority of these truth commissions differ widely. The South African Truth and Reconciliation Commission (TRC) created in 1995 was the first such commission created by an act of parliament. Its task was to uncover the crimes against humanity under the system of apartheid (1960–1994) in

order to facilitate national unity and reconciliation. For this purpose, the TRC was charged with producing as complete a picture of the past as possible by collecting statements from victims and perpetrators of past crimes. To secure the participation of perpetrators, the TRC had the power to grant amnesty to persons who fully disclosed their participation in those human rights abuses. In contrast, truth commissions in Argentina, Chile, El Salvador, and Guatemala did not possess such far-reaching powers. These commissions were not endowed with any subpoena powers and were not in a position to grant amnesty for testimony. They completely relied on the voluntary cooperation of individuals and their willingness to testify publicly, leaving an incomplete picture.

—Thomas Adam

Bibliography

- Ellis, Mark S. "Purging the Past: The Current State of Lustration Laws in the Former Communist Bloc." *Law and Contemporary Problems* 59(4) (1996): 181–196.
- Hayner, Priscilla B. *Unspeakable Truths: Facing the Challenge of Truth Commissions*. New York: Routledge 2002.
- Kritz, Neil J., ed. *Transitional Justice: How Emerging Democracies Reckon with Former Regimes*. 3 vols. Washington DC: United States Institute of Peace Press, 1995.

Conspiracy Theories in the United States

Although conspiracy theories have been a part of American history at least as far back as the founding of the nation, the astounding and frightening use of new technologies during World War II, together with anxieties about amorphous, duplicitous enemies, gave rise to a whole host of creative and long-standing mythologies about government cover-ups and alien intrigue. From the Cold War to the modern era, these theories have fed on the fact that in the name of national security, the U.S. government regularly classifies and withholds information from the public. Ultimately, conspiracy theories may be a way for people worldwide to make sense of the threats, dangers, and complexities they see in the modern world.

After World War II, those who reflected on the destruction wrought on Hiroshima and Nagasaki realized that America now possessed the capacity to annihilate entire cities. Some tried to put a positive spin on atomic energy; many popular American magazines and advertisements celebrated the term “atomic,” with one article even suggesting that atomic medicine would enable paraplegics to walk again. Yet once the Soviet Union developed its own atomic and hydrogen bombs, the terrifying specter of nuclear war produced a slew of conspiracy theories by people trying to make sense of the ensuing nuclear arms race.

The combination of this frightening new technology and the secrecy surrounding its development encouraged modern conspiracy theories about a supposed U.S. government cover-up of aliens and UFOs. The secret facility where the atomic bomb was developed was in Los Alamos, New Mexico, and after World War II the government continued to perform secret experiments in Roswell, New Mexico. The secrecy surrounding such projects led to wild speculation about their nature and intent and fostered the conspiracy theory, still active today, that the U.S. government had found evidence of alien life in Roswell but was hiding the fact from the American public and the world.

The sheer brutality of World War II, epitomized by the horror of the concentration camps in Nazi Germany, gave credence to postwar fears that undemocratic countries were bent on destroying democracies and that they would stop at nothing to do so. The subsequent fears of atomic warfare led to theories about the underhanded tactics that communists would use to subvert democratic nations. In America these conspiracies were exploited in the 1950s by politicians such as Wisconsin senator Joseph McCarthy, who inflamed growing paranoia of communist takeovers by brandishing lists that contained, he said, the names of communists employed at the highest levels of government. Anticommunists used the House Un-American Activities Committee (HUAC) to badger and intimidate witnesses into admitting their past involvement with supposedly subversive organizations and activities. Although fear of communist espionage predated McCarthy and anticommunism—indeed, the Sen-

➤ THE X-FILES

A huge hit in the 1990s, *The X-Files* was a U.S. television series that followed the adventures of FBI special agents Fox Mulder and Dana Scully as they pursued a multitude of conspiracy-tainted mysteries. The show’s mottos, “I Want to Believe,” “The Truth Is Out There,” and “Trust No One,” all spoke to the strong appeal of conspiracy theory culture. The show’s writers hinted that the government and even the FBI itself was behind many of the paranormal mysteries and that government officials had hidden, invented, or developed alien organisms. The series never clearly revealed whether the government was faking the existence of aliens or aliens were insinuating themselves into the government. Much like real conspiracy conspiracists, fans of *The X-Files* could speculate endlessly on their beliefs about the series and yet never actually confirm those theories beyond the shadow of a doubt.

—Joel Silverman

ate formed HUAC back in 1938—McCarthy, his fellow anticommunists, and FBI director J. Edgar Hoover endorsed the idea of a communist conspiracy.

In America, fears stemming from government secrecy merged with anxieties about foreign communist intrigue in 1963 after President John F. Kennedy was assassinated. More than 2,000 books have been published about the assassination, and while the theories surrounding the assassination differ, more than four decades later the conspiracy theories linger. Many of these theories stem from the argument that Lee Harvey Oswald, who was arrested for the assassination, was not and could not have been the lone gunman. One theory that many conspiracy theorists embrace is that the CIA, supposedly frustrated with Kennedy’s weak stance on communism and threatened by his disapproval of the agency, planned his assassination. Another posits that FBI chief J. Edgar Hoover, similarly threatened by Kennedy’s policies, arranged the murder. Yet another theory insists that Kennedy’s vice president, Lyndon B. Johnson, had his boss killed in Johnson’s home state of Texas so that

he could take over the presidency. Whether conspiracy theorists point to the Mafia, anti-Castro Cuban exiles, or Union Teamsters, the one common thread to these wildly disparate theories is the assumption that the U.S. government covered up the truth of the Kennedy assassination. Similar conspiracy theories surround the 1968 assassinations of Martin Luther King and Robert Kennedy.

Although no credible evidence has come to light to support any of these theories, the exposure of actual government cover-ups, such as those of the Watergate Scandal and of American covert military operations, has buoyed conspiracists. While some contemporaries dismissed the original crime that led to the Watergate Scandal as a third-rate burglary, the facts that emerged from the investigation into the men who orchestrated the break-in to the Democratic National Headquarters in 1973 illustrated that highly placed government officials were willing to break the law with impunity and that politicians, and even presidents, might use lies and deceit to cover up those crimes. To those who believed in conspiracy theories, the downfall of Richard Nixon and the imprisonment of some of his staff did not demonstrate that governments were unable to maintain secrecy forever. Rather, for conspiracy theory buffs, the disclosure of such foul play simply served as evidence that the U.S. government could not be trusted.

Although conspiracy theorists might belong to fringe groups, the fascination surrounding aliens, foreign intrigue, and government cover-ups has resulted in a wealth of movies, television shows, Web sites, and other popularizations of conspiracies. Hollywood aided the cause early in the Cold War, producing numerous films

depicting insidious communist spies and fellow travelers. But after the Cold War ended and the threat of communism seemingly vanished, Hollywood and television producers continued to revel in the drama of the conspiracy theory, most notably with the movies *J.F.K.* (1991) and *Conspiracy Theory* (1997) and the hit television show *The X-Files* (1993–2002).

As the Internet gained in popularity, conspiracy theory sites about aliens, the Kennedy assassination, and countless other plots have sprouted up. The mainstream media frequently documents these theories online, thereby disseminating them to a larger readership. Major news organizations reported, for example, on a 2005 study showing that almost 50 percent of African Americans believe that the government engineered and then spread the AIDS virus. Most recently, conspiracy theories abound about the U.S. government's role in the terrorist attacks of September 11, 2001; about the government's response to Hurricane Katrina in 2005; and about the Bush administration's true motives in the Iraq War.

—Joel Silverman

Bibliography

- Boyer, Paul. *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. Chapel Hill: University of North Carolina Press, 1994.
- Fears, Darryl. "Study: Many Blacks Cite AIDS Conspiracy." *Washington Post*, January 25, 2005, A2.
- Knight, Peter. *Conspiracy Culture: From Kennedy to the X-files*. New York: Routledge, 2000.
- Melley, Timothy. *Empire of Conspiracy: The Culture of Paranoia in Postwar America*. Ithaca, NY: Cornell University Press, 2000.
- Whitfield, Stephen J. *The Culture of the Cold War*. Baltimore: Johns Hopkins University Press, 1996.

■ Introduction: Theology and Thought

The Cold War dynamic encouraged rather simple nationalistic messages that included anticommunism and procapitalism in the West and its opposite in the communist world; nevertheless, authority was in crisis. A general

skepticism with authority marks much of popular, academic, and even religious thought for the post-1945 period. The Holocaust, the atomic bombing of Japanese cities, the atmosphere of reprisals and devastation that followed World

War II, and the ensuing nuclear arms race proved troubling in the extreme to people of conscience. The authority of mainstream religion was on the wane. In 1966, *Time* magazine ran the cover story "Is God Dead?" that highlighted the thought of Christian theologians, public intellectuals, and everyday people in their efforts to redefine "God" or to imagine a religion without one, often by looking to existentialism. Existentialism offered a modern variant of stoicism, with its demand for moral duty to one's self in an absurd universe. Existentialism also remained popular in mainstream discourse in the 1950s in such venues as crime novels and crime films, and in magazine profiles of jazz musicians and beat generation literary celebrities.

Established religion was not the only faith under attack. Films that featured mad scientists concocting blobs that escaped laboratories or Godzilla rearing his head from atomic seas not-so-subtly critiqued an overreaching faith in science and technology. The absurd, often infantile, yet imaginative advertising pitches that saturated the media in the West deepened a tradition as old as P. T. Barnum that encouraged in the public a healthy skepticism of the advertising that sustained consumer economies. The civil rights movement and the antiwar movement in the United States, anticolonial movements in the developing world, the Solidarity movement in Poland, and the underground networks in the Soviet Union that disseminated forbidden samizdat literature critical of the Soviet Union also showed that political authority could be challenged.

In the academic world and associated media, an at times not very rigorous relativism flourished, spreading from literary criticism and philosophy to popular culture. New liberation movements that included Marxism, feminism, gay rights, and animal rights encouraged the exposure of hidden assumptions that recapitulated the status quo power arrangement; according to this method of inquiry, linguistic analysis shed light on the power hierarchy that underpinned political life, gender relations, race relations, and beliefs related to sexuality or nature. Paradoxically, the authority of skepticism was also challenged. A conservative reaction to demands for tolerance and the purported moral malaise

inevitable in endless relativism were nurtured throughout this period.

Fundamentalist religious thought returned with renewed vigor in Islam, Judaism, Hinduism, and Christianity in a rejection of what was seen as moral decline. Often fundamentalist theology was sharply linked to a political agenda and the goal of reinstilling morality. At the same time, secular conservatives attacked politically correct thought as a form of censorship. Globalization, the growth of diaspora communities, and the challenges of multiethnic populations (for example, the 2004 beheading of the Dutch filmmaker Theo van Gogh, who had made a film about spousal abuse of an Islamic woman) also led to public debates over the value of cultural relativism and the demands for inclusion that had previously been unquestioned.

The dialectic between tradition with its promise of order and innovation with its accompanying demand for tolerance continues unresolved.

—Fred Nadis

Developments in Philosophy since 1945

Philosophy in the second half of the twentieth century continues to develop from noticeable presuppositions that have molded philosophy since the eighteenth-century philosopher Immanuel Kant. This includes the continued division within Western philosophy between analytic philosophers and continental philosophers. While analytic philosophers have focused on the logical structure of language and meaning in relation to use, continental philosophers have furthered the Kantian distinction between being-in-itself (noumena) and being-as-experienced (phenomena) and have pursued questions about the meaning of existence. Recent developments also include the rise of postmodernism, which has influence in both analytic and continental philosophy. Yet all three of these schools share common ground, including the rejection of metaphysics and its attempts to make definitive analyses of reality and shift to a focus on language and the move from skepticism about values (related to skepticism about metaphysics) to relativism and nihilism about values. All of these trends

indicate larger concerns about the relationship between philosophy answering foundational questions (or failing to do so) and the rise or collapse of civilizations.

The most formative philosopher of the twentieth century is commonly believed to have been Ludwig Wittgenstein (1889–1951). The early Wittgenstein (based on his first book, *Tractatus Logico-Philosophicus*) was influential before 1945 and continued to have influence after that, but the latter Wittgenstein (based on his book *Philosophical Investigations*) is particularly prominent after 1945 (it was published in 1953). The latter Wittgenstein rejected his earlier search for the perfect language and instead focused on language in its use. This involved what he called language games and the family resemblance between words (as opposed to direct or ideal reference whereby meaning is determined by the reference of a word to an object or idea).

The analytic philosophers incorporated the latter Wittgenstein into linguistic analysis. Instead of reducing ordinary language to a perfect logical language as in earlier efforts, they instead analyzed language in terms of use and pragmatics. This continued the theme of skepticism in that ordinary use and pragmatism do not admit certainty or metaphysical truths.

Phenomenology and existentialism, both offshoots of continental philosophy, trace their influence to Edmund Husserl (1859–1938). Through Husserl, Martin Heidegger (1889–1976), and Jean Paul Sartre (1905–1980), this branch of philosophy was more humanistic in its orientation than was analytic philosophy. It was humanistic in the sense of asking questions about what it means to be a human, how to lead a meaningful life, and what actions are free and genuine. Wittgensteinian influence can also be seen here in the later Wittgenstein claim that meaning must be understood in terms of language games and their use by humans. Meaning is given by humans rather than being discovered by humans.

There was also a revival of the philosophy of religion. Especially traced to thinkers such as Alvin Plantinga (1932–) of the United States, this revival tended to focus on the acceptability of religious belief as opposed to a defense of the truth of religious belief. Rather than trying to demonstrate the truth of a religious claim, such

as belief in God, Plantinga argued for the warrant of this belief, or that the believer was not violating any epistemic duties in holding such a belief. Belief in God, according to Plantinga, is as warranted as belief in other minds, which is a belief that is generally accepted to be warranted. In contrast to the claim, made for instance by Marx and Freud, that religious belief is intellectually subpar, Plantinga maintained that religious belief is as warranted as materialistic belief.

This focus on warrant is part of a larger abandonment of the Enlightenment project of establishing truth and certainty. Thinkers such as Descartes had sought a secure starting point for philosophy and then built their philosophical system on that certainty. The second half of the twentieth century saw an emphasis on the inability to find such certainty. All starting points were thought to be relative to a given language. For example, the revival of the philosophy of religion, and especially Reformed Epistemology (represented by Plantinga), argued for the warrant of religious belief within a given language. While within one language game it might be true that God exists, this same claim is not necessarily true in all language games. This is a shift from thinking about reality to the way that humans represent reality. As such, it is a continuation of Kant's categories that distinguish between phenomena and noumena.

Postmodernism, which emerged in force in the 1960s, is an overarching title that applies to both analytic and phenomenological/existential philosophy. The emphasis in postmodernism is hermeneutical skepticism as opposed to the search for the universals and certainty that marked modernity. Hermeneutical skepticism can be seen in the analytic tradition's emphasis on language and in the continental tradition's emphasis on subjectivism and situatedness. This is a continuation of the latter Wittgenstein's emphasis on language games.

Postmodernism views the fundamental human relationship as power. This position is influenced by thinkers such as Michel Foucault (1926–1984). Language is used to justify power structures and to marginalize opposition. In deconstructing language, this use is exposed and undermined. However, this means that any attempt to justify a position is a power struggle

that seeks both to place one group in power and to marginalize other groups. According to this political analysis, the marginalized should express their position and seek to deconstruct hegemonies.

Philosophy after 1945 continues to struggle with the same questions that have been the subject of philosophy since its beginning. The split between the analytic and continental philosophers are similar to those present between the Greek materialists and Sophists. These patterns reflect an ongoing failure to establish an ultimate foundation from which to answer the basic questions raised by philosophy (questions about authority and knowledge, reality and the eternal, and value and the good). As both analytic and continental philosophers presuppose a form of skepticism about basic questions, they repeat the lessons of earlier philosophers. As the twenty-first century begins and brings old conflicts into new light, these basic questions remain to be answered in a way that will provide a foundation for knowledge.

—Owen Anderson

Bibliography

- Audi, Robert, ed. *Cambridge Dictionary of Philosophy*. 3rd ed. Cambridge: Cambridge University Press, 1999.
- Baird, Forrest E., and Walter Kaufmann, eds. *From Plato to Derrida*. 3rd ed. Upper Saddle River, NJ: Prentice Hall, 2000.
- Grenz, Stanley J. *Primer on Postmodernism*. Grand Rapids, MI: Eerdmans, 1996.

Existentialism

Existentialism is a philosophical construct and corpus of ethical thought developed in the nineteenth century and expanded upon in the twentieth century. Existentialism explores both the solitude and uniqueness of the human condition within a universe that is unconcerned—or even antagonistic—toward humankind. Existentialism holds that the reason and purpose for human life are unknowable and thus that free will and personal responsibility govern the consequences of one's actions. In its broadest application, existentialism has been embraced in some form by twentieth-century theologians (Karl Barth and Reinhold Niebuhr), psychologists (Viktor Frankl

and Rollo May), writers (Albert Camus and Franz Kafka), and philosophers (Simone de Beauvoir, Martin Heidegger, and Jean-Paul Sartre). Existentialism has its roots in the thinking and writings of such nineteenth-century luminaries as Friedrich Nietzsche, Fyodor Dostoyevsky, and Søren Kierkegaard, among others.

Existentialism, like its immediate philosophical predecessors, is a sharp departure from traditional Western thought that holds that rationality and consciousness are paramount to understanding the human condition. According to Sartre, “existence precedes and rules essence.” Otherwise stated, there is no preexisting, predefined nature to humanity other than what the individual creates for himself. And because existentialism does not acknowledge God or a supreme all-knowing entity, human beings are free to make their own choices and will be judged exclusively by the actions and choices they take.

While a part of earlier intellectual currents and popular culture, existentialism became a powerful force in the aftermath of World War II. It is not difficult to understand how a reaction to that war followed by the onset of a Cold War that brought with it the constant threat of instantaneous nuclear annihilation might have given impetus to existentialist thinking. The isolation of each individual in an absurd universe and the humanistic yet stoic philosophy of existentialists seemed suddenly reasonable. The idea of random absurdity that existentialists see as part and parcel of the human condition became the subject of many influential plays and films. Some of the more influential playwrights who explored the theater of the absurd included Eugene Ionesco, Boris Vian, Samuel Beckett, Luigi Pirandello, and Edward Albee.

Translations of Sartre and Camus, particularly the latter's novel *The Stranger* and his essay *The Myth of Sisyphus*, fueled a fascination with existentialism in the United States in the Cold War era. Also influential at this time were the so-called Beat writers such as Jack Kerouac, Allen Ginsberg, and Lawrence Ferlinghetti who borrowed heavily from existentialist thought. On a more popular level, an existential style emerged as early as the 1930s in crime fiction and in film noir with their criminal or semicriminal anti-heroes operating in an amoral, indifferent world.

Those genres continued to thrive in the literature and film of the 1950s. An existential stance also inflected the highbrow films of Sweden's Ingmar Bergman, Italy's Michelangelo Antonio, and the New Wave cinema of France developing around the *Cahiers du Cinema* and new directors such as Jean Luc Godard with his 1960 debut film *A Bout de Souffle* (*Breathless*).

Other arts were influenced as well. The dominant post-World War II movement in painting of abstract expressionism placed primacy on the individual and spontaneity, with Jackson Pollock its most celebrated figure. Likewise, post-World War II developments in jazz, noticeably bebop, led by Charlie Parker and Dizzy Gillespie, celebrated the individual and an embrace of freedom and spontaneous expression. Theologians such as Martin Buber and Paul Tillich also grappled with existentialism in the interwar and Cold War years. One of the most famous products of Cold War concern with a silent universe emerged in the mid-1960s when popular magazines in the United States announced to the public that young Protestant scholars and theologians had begun the theological movement "God is Dead."

—Paul G. Pierpaoli Jr.

Bibliography

- Apignanesi, Richard. *Introducing Existentialism*. New York: Totem, 2002.
- Fulton, Ann. *Apostles of Sartre: Existentialism in America, 1945–1963*. Evanston, IL: Northwestern University Press, 1999.
- Kaufmann, Walter Arnold. *Existentialism: From Dostoyevsky to Sartre*. New York: Meridian, 1988.
- Marino, Gordon. *Basic Writings of Existentialism*. New York: Random House/Modern Library, 2004.

Epistemology

Epistemology, or the philosophical investigation of the basis of knowledge, has been characterized by skepticism since 1945. This is true of the continental and postmodern schools as well as in the analytic school (prevalent in academia in the United States and Britain). The condition of skepticism prevents foundational questions about what exists and what is good from being answered and built upon. This is especially problematic for epistemology, which has as its subject the idea of knowledge itself.

Hermeneutical skepticism, found in post-modern thinkers such as Michel Foucault (1926–1984) and Jacques Derrida (1930–2004), focuses on the nature of interpretation and the elements affecting interpretation. This approach, ultimately, is similar to the cultural relativism advanced by others in the history of philosophy, such as the Sophists of ancient Greece. This position justifies skepticism by noting, first, the failure of previous programs to achieve knowledge (in this case the Enlightenment); second, the reality of cultural diversity (brought to the forefront by globalization); third, the role of language in shaping what is discussed and how it is discussed; and finally, the relationship between power and knowledge on the one hand and, on the other, the vested interest of those in power to manipulate what is accepted as knowledge.

This hermeneutical skepticism leads to relativism, which in turn leads to nihilism. If meaning is relative to individuals or groups, then the world itself is not meaningful, but instead meaning is imputed by humans. The implication is that anything can be said to be meaningful, while nothing is actually meaningful. This raises significant existential problems about the meaning of life and the purposefulness of activity at the individual and group level. It also has devastating implications for philosophy and academia, since workers in these fields can no longer claim to have and teach knowledge.

In the analytic school a different path leads to the same skeptical implications. The focus of this philosophical tradition in the twentieth century has been on language. This began with the goal of finding the perfect language based solely on logic, a program attempted by Bertrand Russell (1872–1970) and Alfred North Whitehead (1861–1947) in their *Principia Mathematica*. As the century continued, this project was largely abandoned and replaced with an emphasis on the common usage of language. The reality of different languages also indicates the reality of different logical systems. If logic is conceived of as rules of inference, the initial rules that govern inferences are believed to be changeable and relative.

This claim led to a general abandonment of foundationalism. Common since the Enlightenment, foundationalism asserts that knowledge

claims are either self-evident truths or deduced from such. If there are no self-evident starting points, however, or if different logical systems have different starting points, then the foundationalist program cannot provide certainty. This raises questions about the nature of justification. Because of the problems surrounding justification, some philosophers began to emphasize alternative definitions of knowledge, such as warranted belief.

The Gettier Problem, found in the 1963 article "Is Justified True Belief Knowledge?" raises questions about the definition of knowledge. Up until this point it was assumed that knowledge, as stated in a specific proposition, is justified true belief. This means that persons have knowledge when they can state their belief in a proposition, their belief is true, and they can show that it is true. Gettier called this into question by giving examples where persons had justified true belief that did not appear to be knowledge. The examples he used involved persons who believed that something would happen and had justification for this belief, yet the event happened in a way that differed from the person's expectations. One philosopher offered a Gettier situation in which an observer believes that he or she has seen a sheep in a field, generating the belief or statement: *a sheep is in the field*. What the person was actually looking at, however, was a dog disguised as a sheep. However, another sheep was hidden behind a hill on the field. While the proposition technically fulfilled the criterion of a true statement, the person's justification was slender and skewed. So, although the proposition was true, it did not represent knowledge.

Many philosophers believe that the Gettier Problem demonstrates that an additional element must be added to justified true belief in order to arrive at knowledge. Others denied that the Gettier cases were instances of justified true belief. Another response is to distinguish between weak and strong justification, whereby weak justification is commonly accepted in human activities but does not provide certainty and strong justification, although less common, does provide certainty. While the Gettier Problem focuses on beliefs about matters of fact known through sense data, it does not address the issue of hav-

ing strong justification about the basic questions asked by philosophy; these include the nature of reality, what is eternal, and what is good.

The debate over the definition of knowledge is sometimes framed as a debate between externalists and internalists. The internalists continue to focus on justification, which is a property for belief that is accessible to the individual, implying an internal faculty for formulating the truth. The externalists focus on properties of belief that are not accessible to the individual but can be observed from without, such as warrant and proper function. To properly function means to work within one's design plan in an environment suitable to that plan. Significant problems attend the concept of proper function, since any account of what it means to properly function requires a theory that itself must be shown to be true. Similar problems attend the concept of warrant, which involves ratifying the underlying presuppositions for a particular belief or action based on a lining up of various external circumstances. The result is a focus on what counts as knowledge for either the individual or the group. This means that knowledge as certainty is abandoned for other definitions such as functional ability to achieve one's goals.

To define knowledge in relation to achieving what one wants is a kind of pragmatism, a movement championed at the turn of the twentieth century by American philosophers such as William James (1842–1910) and John Dewey (1859–1952). While it can be known what means are necessary to achieve a given goal, pragmatism is silent on what goals should be sought. This is because what works is a claim about one's feelings and not about what is real. Pragmatism leads to this kind of skepticism because of its roots in empiricism. Empiricism asserts that knowledge begins in sense data, and analytic philosophers since 1945 have generally viewed sense data as basic in their attempts to construct theories of knowledge and language.

Presupposing empiricism without critically examining it and its attending problems is the common denominator in philosophy (continental and analytic) since 1945. Because of the individuality of sense experience and the inductive nature of all empirical approaches, it has long been noted that empiricism ends in skepticism.

The past centuries of philosophy that have been based on empiricism and the critics of those philosophers who continue to rely on empiricism in their critiques are a testimony to the way patterns work in the history of philosophy. If empiricism leads to skepticism, then the alternatives are to accept the consequences of skepticism or to reject empiricism in favor of an alternative approach to knowledge. Because alternative approaches, such as rationalism, have also failed to arrive at knowledge, an alternative approach must avoid antinomies and instead critically examine the presuppositions behind knowledge claims.

—Owen Anderson

Bibliography

- Baird, Forrest E., and Walter Kaufmann, eds. *From Plato to Derrida*. Upper Saddle River, NJ: Prentice Hall: 2000.
- Stumpf, Samuel Enoch. *Philosophy: History and Problems*. New York: McGraw-Hill, 1971.

Neo-Orthodoxy Theology

Nineteenth-century liberal theology had assumed that human nature was basically good. The terrible slaughter and destruction during World War I and World War II virtually destroyed

the liberal belief that all but a few humans are good, kind, and gentle. In its place, the theology known as Neo-Orthodoxy posited an infinite gulf between God and humanity created by original sin, which humanity cannot traverse apart from the reconciling work of Christ.

Neo-Orthodoxy was a progressive twentieth-century Protestant theological movement that both embraced post-Enlightenment philosophical perspectives (hence, “neo”) and claimed continuity with the classic Christian creeds (Nicene, Chalcedon, and others) as well as the ideals of the Reformation (hence, “or-

thodoxy”). Due to its amorphous boundaries, the movement was not unified and did not possess a common set of fundamental beliefs. Nevertheless, the major Neo-Orthodox approaches are most easily distinguished by splitting its adherents into two streams: (1) those who accepted a supernaturalist worldview and the factual truth of historic Christian doctrine, and (2) those who rejected a supernaturalist worldview but maintained that historic Christian doctrine was true in a nonfactual sense and needed to be freshly applied to each new generation. The two most prominent representatives of the first stream were Swiss theologians Karl Barth (1886–1968) and Emil Brunner (1889–1966), whose contributions were developed and expanded by Gustav Aulén (1879–1977), C. H. Dodd (1884–1973), and Reinhold Niebuhr (1892–1971). The German theologians Paul Tillich (1886–1965) and Rudolf Bultmann (1884–1976) dominated the second stream, whose ideas were elaborated and given mainstream expression by H. Richard Niebuhr (1894–1962) and John A. T. Robinson (1919–1983).

Foremost among the tenets of the first (or “supernaturalist”) stream was its doctrine of God as an eternally transcendent holy being who is wholly other than humanity and who, with free and complete sovereignty, chooses how to control, redeem, and reveal himself to his creation. Barth and his followers argued that God’s self-revelation comprises the threefold Word of God, which comes to humanity as Christ (the revealed Word), the Scripture pointing to Christ (the written Word), and the sermon that serves as the vehicle for the Holy Spirit (the preached Word). The revealed Word is the Christ of faith, risen from the dead and proclaimed by the apostles, and is not, as for nineteenth-century liberalism, necessarily identical with the Jesus of history. Viewed as a purely human book containing errors and contradictions, the Bible does not itself constitute the Word of God but is a witness to revelation that becomes the Word of God only insofar as God employs it to effect personal encounters with individuals. Similarly, the sermon is not the preached Word unless the Spirit discloses himself to persons in moments of crisis through the language of the pastor.

Barth’s radical view of original sin led him to reject all forms of general revelation (knowledge



Karl Barth was considered the leading Protestant theologian of the twentieth century. Many intellectuals consider the Swiss scholar the most influential Christian thinker since sixteenth century theologian John Calvin. (Library of Congress)

of God learned from nature); however, Brunner took a positive attitude toward natural theology. He believed in the innate ability of humanity to gain knowledge of God by rationally reflecting on creation and apprehending an objective moral law. Inspired by Dietrich Bonhoeffer (1906–1945), Brunner adopted natural theology as a foundation for a socially just ethical system balancing individuality and community. Brunner was followed in this endeavor by German American theologian Reinhold Niebuhr, who forged proximate social answers to human needs that could be accomplished through the manifestation of Christ's redeeming love in believers.

Central to the theology proffered by the second (or “nonsupernaturalist”) stream was Tillich's method of correlation, which first analyzed the human situation to locate its existential questions and then demonstrated that the essential Christian symbols contained the answers to these questions. Denying the existence of a supernatural being outside the universe who created that universe, Tillich redefined God as the suprapersonal ground of being itself and the structure of existence, namely that power of being that is presupposed whenever one queries what it means for something to exist. Heavily influenced by Platonism, Tillich expressed the estrangement between God and humanity as the separation between essential being, or all that any person could potentially be, and existential being, or the actual state of each person that radically fails to measure up to its potential. For Tillich, this existential predicament was overcome by new being, defined as essential being present under the conditions of existence. Tillich argued that Jesus of Nazareth was the bearer of the new being and thus the Christ, who manifested essential being in such a way that it was not overcome by time-space limitations. Because of Jesus's triumph over estrangement (sin), new being is available to anyone who wishes to access it via the courage to be, which Tillich considered the literal truth underlying the Reformation *sola fide* (justification by faith alone).

Bultmann endeavored to reclaim the value of Scripture in an age of skepticism through a program of demythologization, which extracted kernels of truth from the alleged husks of biblical myth. This program, Bultmann insisted,

➤ BARTH AND TILlich

Karl Barth's four-volume, 13-part *Church Dogmatics* and Paul Tillich's three-volume *Systematic Theology* stand as the greatest neo-orthodox contributions to twentieth-century religious thought. In the following selection from *Church Dogmatics*, Barth juxtaposes the radical sinfulness of humanity against the radical grace of God displayed in Christ. Barth says, “The election of grace is the eternal beginning of all the ways and works of God in Jesus Christ. In Jesus Christ God in His free grace determines Himself for sinful man and sinful man for Himself. He therefore takes upon Himself the rejection of man with all its consequences, and elects man to participation in His own glory.”

Owing to the resonance of Tillich's doctrine of God with many scholars, he has been styled “the apostle to the intellectuals.” Tillich expounds this concept in *Systematic Theology* when he says, “The being of God is being-itself. The being of God cannot be understood as the existence of a being alongside others or above others. If God is a being, he is subject to the categories of finitude. . . . Many confusions in the doctrine of God and many apologetic weaknesses could be avoided if God were understood first of all as being-itself or as the ground of being. The power of being.”

—Kirk R. MacGregor

Sources

Karl Barth, *Church Dogmatics*, Vol. 2, translated by G. W. Bromiley (Edinburgh: T & T Clark, 1975 [1936]), 94; Paul Tillich, *Theologian of the Boundaries*, edited by Mark Kline Taylor (London and San Francisco: Collins, 1987), 163.

would disabuse modern people from wrongly stumbling over the Bible's scientific implausibility and draw them to the *kerygma*, or Christ's key message of the cross calling individuals out of insecurity and into authentic existence.

—Kirk R. MacGregor

Bibliography

Barth, Karl. *Church Dogmatics*. 4 vols. Edinburgh: T. and T. Clark, 1962.
Brunner, Emil. *Theology of Crisis*. New York: Scribner, 1929.

Bultmann, Rudolf. *Jesus Christ and Mythology*. New York: Scribner, 1958.

Pelikan, Jaroslav. *Twentieth-Century Theology in the Making*. 3 vols. New York: Harper and Row, 1971.

Tillich, Paul. *Systematic Theology*. 3 vols. Chicago: University of Chicago Press, 1967.

Apocalyptic Expectations— Roots and Legacy

Religious Studies departments are growing in the United States and all over the world. Part of this desire to understand religion has been fueled by the bombings of New York City and the Pentagon on September 11, 2001, an apocalyptic event if there ever was one. Within this general upsurge of interest in studying religion, there has also been a burgeoning interest in American society in apocalypticism. Such interest is evidenced in popular culture in movies, music, and books, such as the *Left Behind* series of popular best-selling novels by Tim LaHaye and Jerry Jenkins. The ancient apocalyptic imagination, which arguably has its roots in ancient Persia, is alive and well, and indeed it still gives rise to apocalyptic expectations today.

The Greek term “apocalypse” means “the lifting of the veil.” In religious language it comes to mean a revelation, as in the Revelation to St. John, the last book in the New Testament. Apocalyptic literature, then, deals with secrets and mysteries, usually about the end of time. Often these unveilings come by means of visions and dreams with enigmatic symbolism. Apocalyptic authors usually assume pseudonymity, tend to write prophecies after the event, and write their historical reconstructions in times of distress. Many scholars note that apocalyptic literature has certain resonances as well as dissonances with prophetic literature. While, for example, prophets call for repentance and believe that the world can be saved, apocalyptic writers call for patience and ensure a final victory and new creation, one in which the present world will be destroyed and overcome. The book of Revelation is a case in point, though there are many other ancient apocalyptic texts. Apocalyptic themes can be found in apocryphal books such as 2 Esdras (see chapters 3–14), and in Bible texts such as the

book of Daniel (see chapters 7–12) and the Gospels, as Albert Schweitzer has argued in *The Quest of the Historical Jesus: A Critical Study of Its Progress from Reimarus to Wrede*.

A related topic to apocalypticism is eschatology. Eschatology is the study of the end of the world, particularly in theology. Such reasoning includes questions concerning what will happen to particular individuals, the world, and heaven and hell at the end of time. The question as to when Christ will return and when the Final Judgment will be are also eschatological questions, and depending on how these questions are answered, they can be considered premillennial, postmillennial, or amillennial. But the crucial point to note here is that eschatology refers to a theological endeavor, while the term “apocalyptic” is usually understood to be a genre of literature but, as noted, has other contemporary manifestations as well, as in movies and music.

Ancient sources have inspired the apocalyptic imagination to the present day. In *The End of the World: An Annotated Bibliography*, Tom McIver lists thousands of sources of a wide variety that deal with the end of the world, from works predating 1800 to works up to 2000. One lesson that he took away from his research was that the end of the world has been predicted time and again by various groups, but all such predictions, of course, turned out to be false. Such failures, however, have not stopped new predictions, predictions that are as contradictory as they are violent.

One can observe these contradictory claims and violence in modern-day Israel. On May 14, 1948, the Declaration of the State of Israel was read in Tel Aviv. The timing of this event was no coincidence, because nearly half of the world's population of Jews had been exterminated by the Nazis. The founding of the modern State of Israel, then, was to provide a safe haven for Jews. The declaration appealed to the Hebrew Bible for its justification, for the birth of the Jewish people, according to the Hebrew Bible, was in the land of Israel. Having been forced into exile, the declaration reads, the Jews have prayed for their return. Christian Zionists believe that the founding of the modern State of Israel is in accord with biblical prophecy, that the end times will unfold just

as the book of Revelation has predicted, and they long to see the Temple rebuilt so that the end times will be inaugurated. However, the al-Aqsa mosque is situated on what Christians and Jews call the Temple Mount. Muslims know this place as al-Haram al-Sharif (Noble Sanctuary). The mosque has been closed to non-Muslims since 2000 because of attempts at destroying it. The beautiful Dome of the Rock is also nearby, and Muslims believe that it marks the spot where the Prophet Muhammad ascended into heaven. What exists in this sacred place are competing faith claims over the same space; add an apocalyptic spirit, and there is a deadly recipe for violence.

No one understands what is at stake with regard to apocalyptic expectations today better than Princeton's Richard Fenn. In his recent *Dreams of Glory: The Sources of Apocalyptic Terror*, Fenn argues that Judaism, Christianity, and Islam need to repudiate the apocalyptic elements in their own traditions, both in their theology and in their scriptures, because apocalyptic longings, with their promises of final and complete victory for those who are able to stand the test of time, are, in Fenn's analysis, both the result and the cause of various disasters, such as September 11, 2001. In response to the threat of nuclear annihilation, Fenn is calling for a "unilateral theological disarmament" whereby all religious traditions get rid of their narcissistic sense of superiority. What is particularly interesting about Fenn's critique is that it is aimed at liberal churches that have tended to read the apocalyptic aspects of their traditions metaphorically and existentially, because this has provided theological cover for more literal beliefs with more destructive effects. The liberal churches, in other words, have provided cover for the Pat Robertsons and the Jerry Falwells and for radical Islam.

Whatever one makes of Fenn's call to the churches, it is hard to disagree with his insight that the stakes are very high with respect to the apocalyptic expectations of today. It is appropriate, then, that Religious Studies departments are growing, especially as they turn their gaze to understanding apocalyptic expectations. And if we look with Fenn, we might begin to see through them.

—Nathan Carlin

➤ CHRISTIAN ZIONISM

Christian Zionists are evangelical Protestant Christians who fully support the State of Israel and advocate its right to all of historic Palestine because of their literal reading of biblical prophecies and the role of the Jewish people in them. These Christians believe that Israel's existence fulfills messianic prophecies in the Bible and indicates that the second coming of Christ is drawing near.

The tenets of Christian Zionism emerged in nineteenth-century England in the teachings of two evangelical preachers who promoted the literal interpretations of apocalyptic references in the Bible and developed doctrines such as the rapture. These ideas gained popularity in the United States and, particularly in the last 30 years, have become a major interest of conservative Christian groups, including those led by Jerry Falwell and Pat Robertson.

One of the most controversial Christian Zionist beliefs is that the return of Jews to Palestine will be followed by the near annihilation of the Jews during the end times. Despite this conviction, the Israeli government welcomes the support of Christian Zionists and enabled the International Christian Embassy to establish its headquarters in Jerusalem in 1980; likewise, Christian Zionists and lobbyists for Jewish causes and Israel in the United States have nurtured an alliance since the 1980s.

—Elizabeth Brownson

Bibliography

- Boyer, Paul. *When Time Shall Be No More: Prophecy Belief in Modern American Culture*. Cambridge: Harvard University Press, 1992.
- Wagner, Donald E. *Anxious for Armageddon*. Scottdale, PA: Herald Press, 1995.

Bibliography

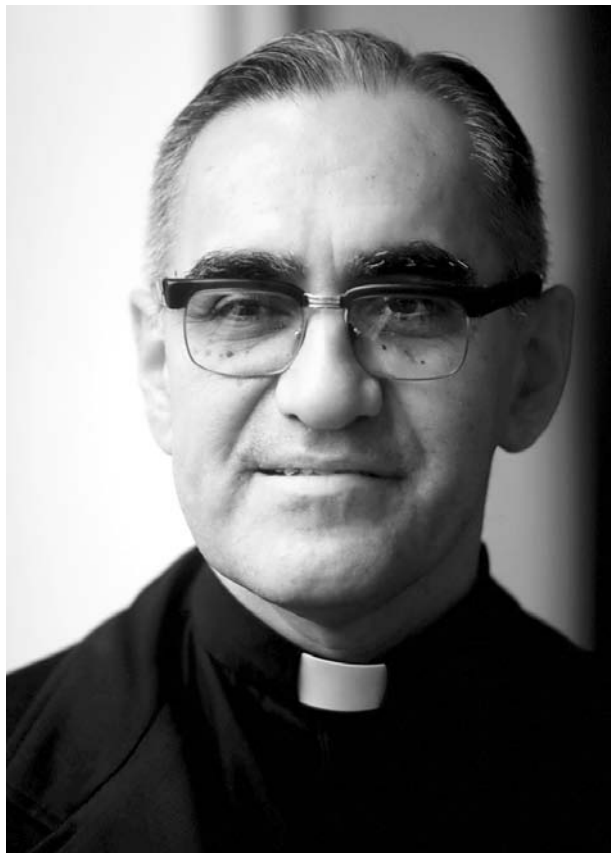
- Fenn, Richard. *Dreams of Glory: The Sources of Apocalyptic Terror*. Aldershot, UK: Ashgate, 2006.
- McIver, Tom. *The End of the World: An Annotated Bibliography*. London: McFarland, 1999.
- Schweitzer, Albert. *The Quest of the Historical Jesus: A Critical Study of Its Progress from Reimarus to Wrede*. London: Johns Hopkins University Press, 1998.

Liberation Theology

Liberation theology emerged in the wake of Vatican II, principally in Latin America as an attempt to link social concerns for poor people with Catholic practice. In the 1960s and 1970s, important scholarly theologies of liberation were produced, following the lead of Peruvian Gustavo Gutierrez. However, most of the activity of liberation theology emanated from locally organized base Christian communities. These groups, often led by laypersons, discussed biblical passages in an effort to understand the difficult social and political realities of their day. Liberation theology in practice empowered poor people to understand their oppression under national security regimes and on occasion has encouraged them to take political or military action against their oppressors.

The larger scope of Vatican II, which pursued the objective of making the Catholic Church more relevant to the masses, found expression in Catholic discourse in Latin America. In 1968, some three years after the rise of Vatican II, Latin American bishops met at Medellín, Colombia, under the auspices of the *Conselho Episcopal Latino Americano* (Latin American Episcopal Conference, or CELAM). During much of the twentieth century, Church officials had maintained a cozy relationship with Latin American heads of state, many of whom came to power through coups or questionable elections. Bishops at the conference argued for a change of direction, declaring that priests should offer a “preferential option for the poor.” The new theological direction was reaffirmed at a subsequent conference in Puebla, Mexico, in 1979.

Liberation theology grew from a grassroots level, notably in Central America, Brazil, Peru, and elsewhere in Latin America. Versions of the trend appeared in other developing countries across the globe. Base communities were initiated with the help of parish priests, although often enough these were created by laypersons. In one sense, these local collectivities were parallel to the colonial institutions called *cofradías*, lay groups that took responsibility for public homage of Catholic saints who were locally important. The twentieth-century groups focused more squarely on everyday concerns, with a new



The violently repressive actions of the Salvadoran government against its citizens and clergy transformed archbishop Oscar Romero into a crusader for human rights and a critic of U.S. military aid to El Salvador. (Leif Skoogfors/Corbis)

twist: participants were reading and discussing the Bible.

The rise of liberation theology needs to be understood in light of the political situation in Latin America in the mid-twentieth century. Most nations were governed as national security states, strong-arm ruled with the support of a small elite class. The Church generally turned a blind eye to the atrocities of these states, including the harsh treatment meted out by national guards and other police forces. Right-wing dictatorships thrived in much of Central America from mid-century, such as the Nicaragua of Anastasio Somoza. Civil wars broke out there and in El Salvador and Guatemala. Meanwhile, a 1964 military coup in Brazil resulted in a ruling junta that stayed in power until 1983.

Gradually, Catholic priests and some of the hierarchy became aware of and concerned about

the atrocities perpetrated by these regimes. Parish priests counseled numerous peasants who were caught in the crossfire of the civil wars. A few priests, such as Nicaragua's Gaspar García Laviana, even took up arms in support. Mostly, however, parish priests sought avenues of non-violent resistance to the national security states.

Nevertheless, numerous Catholic priests and nuns paid for their support of these local groups with their lives and are remembered as martyrs. The most famous of these was Archbishop Oscar Romero of El Salvador, whose discovery of the social realities of his day are well documented in the feature film *Romero*. After urging Salvadoran soldiers to lay down their arms in a 1980 radio address, Romero was killed in the middle of celebrating Mass. Also in El Salvador, six Jesuits, their housekeeper, and her daughter were slaughtered in 1989. This and other violence was perpetrated by right-wing paramilitary forces as much as by government soldiers.

Among Latin American intellectuals of the 1970s and 1980s, a new genre of publication emerged that reflected these local theologies. Thus, liberation theology is also known as a genre of theological writing by Latin American scholars aligned with the Church. Best known among these was Gustavo Gutiérrez, whose 1973 publication *A Theology of Liberation* is considered to be a seminal text in the field. Gutiérrez and other writers sought to encapsulate the possibilities for liberation in these biblical discussions. Their audience was an academic one, and these works were read throughout the world.

In the last decade of the twentieth century, liberation theology faded out of public view. This was due to several factors. Pope John Paul II, who as a conservative was alarmed by the connection between the Christian Base Communities and left-wing political groups, spoke out against liberation theology and its leaders. He publicly chastised the Nicaraguan priest and minister of culture Ernesto Cardenal on a visit to that country, a rebuke that was not well received by his audience. Toward the end of the century, the political climate in the region stabilized as well. Rebellions in El Salvador and Guatemala subsided, and in Nicaragua the Sandinistas were removed from office in the 1990 election.

➤ BASE COMMUNITIES

Ecclesiastical Base Communities, known alternatively as CEBs or BCCs, were locally based groups of Latin American Catholics who produced and practiced liberation theology in the late twentieth century. The groups were often as not lay led, although sometimes priests would attend. At base these were organized as Bible study groups in which participants sought meaning in biblical passages that would resonate with the difficulties of living under oppressive or restrictive regimes.

In the CEBs, many Latin American peasants learned to read, which in itself was empowering. Biblical passages were discussed with an eye to finding relevance to the world of oppression in which they lived. Several questions were pursued in these groups. How can they view the world as Christians, given the poverty and violence in their lives? What solutions can be found in these communities of faith?

For example, CEB parishioners might discuss the following passage from Matthew 19:24: "It is easier for a camel to go through the eye of a needle, than for a rich man to enter the kingdom of God." They might ask why Latin American society has become so divided between a small elite class and a large class of poor people and how a Christian ought to react to that reflection. Some might go so far as to suggest violent resistance to the regime, although others might cite biblical passages that condemn violence.

Liberation theology and its base communities have not totally disappeared, but their prevalence has greatly diminished since the settlement of Central American civil conflicts, the end of oppressive national security regimes elsewhere in the region, and the increasing popularity of Protestantism especially in its Pentecostal form.

—Rick Warner

Finally, the rise of Protestantism especially in Central American villages offered peasants an alternative to Catholicism altogether. They found Protestantism meaningful for many of the same reasons that liberation theology appealed to them in earlier years: personal relationship to the Bible as text, supportive grassroots-based community, and freedom from the dictates of religious hierarchy.

—Rick Warner

Bibliography

- Berryman, Phillip. *Liberation Theology: The Essential Facts about the Revolutionary Movement in Latin America and Beyond*. New York: Pantheon, 1987.
- Gutiérrez, Gustavo. *A Theology of Liberation*. Maryknoll, NY: Orbis Books, 1973.
- O'Higgins, Kevin P. "Liberation Theology and the 'New World Order.'" *America* (November 24, 1990): 389–393.
- Sigmund, Paul E. *Liberation Theology at the Crossroads: Democracy or Revolution?* New York: Oxford University Press, 1990.

Structuralism and Post-Structuralism

Structuralism was a twentieth-century intellectual movement that has affected disciplines and challenged the traditional sources of meaning provided by the Western tradition. This tradition provided meaning to the world through transcendent, other-worldly essences that were located in a divine or metaphysical realm, much like Plato's forms or the Christian God.

Structuralism's founders argued that such essences did not exist, insisting that meaning was produced by structures that preceded human consciousness. Meaning did not come down from a divine, metaphysical realm but rather came up from the material structures. These structures, furthermore, changed slowly over

time and determined how human beings acted by limiting the context in which a person lived, a severe blow to the freedom of human agency. One could argue, then, with the French social historian Lucien Febvre (1878–1956) that one could not be an atheist in the sixteenth century because the structures of religious thought did not allow it. Just as important, however, is that meaning did not reside in the structures themselves but instead arose from the differences between the parts in a structure. Thus, the letters "d," "a," and "d"

have no meaning by themselves but do have a meaning when they are combined into a word that manifests the differences in sound. All of these components in a system, moreover, can be assigned a place and a function in relation to the other parts, which inclines structuralism to treat traditionally humanistic topics in a scientific manner. As a result, a structuralist historian does not examine the people or events but instead examines the underlying structures of society that limit a person's actions and thoughts.

Structuralism began in the studies of Swiss linguist Ferdinand de Saussure (1857–1913) who argued that in the sign system of language, a word (sign) links a concept (signified) with a sound or image (signifier). This means that when one uses a word such as "bean," one is not attempting to capture the essence of a bean but instead is merely describing a concept by placing sounds and letters next to each other. The point is that the link between the concept and the sound or image, between the signified and the signifier, is arbitrary. If it was not, then only one language would exist.

Saussure's ideas heavily influenced the French anthropologist Claude Lévi-Strauss (1908–2009), who believes that culture, like linguistics, was built on structures. All cultures, for Lévi-Strauss, have structures for myths and rituals that, in turn, give meaning to human life. While the content of myths and rituals differed, the social significance was the same in that all myths and rituals allowed people to live together in society. These structures, moreover, were always articulated in the form of binary oppositions: for example, female versus male, raw versus cooked, or nature versus culture.

Post-structuralism, which arose in the mid-twentieth century, challenged this binary opposition model, emphasizing instead the interrelatedness and overlapping of the structures of thought. Specifically concerned with the complex relationships of knowledge, power, and discourse, the French philosopher and historian Michel Foucault (1926–1984) argued that power and knowledge were inseparable. In fact, power is spread throughout society in the form of institutions of control (e.g., schools, hospitals, and the military). Experts operate these institu-



France's Jacques Derrida, the leading philosopher of "deconstruction," an important post-structural intellectual movement. (Hulton Archive/Getty Images)

tions by categorizing people, ordering them in their proper place. The people then internalize this categorization and believe that they are what the experts say they are. Ultimately, this means that a person is neither autonomous nor simply created by structures embedded with binary oppositions but instead is culturally constructed through several discourses, or systems of thought, and the many relationships of power and knowledge.

French philosopher Jacques Derrida (1930–2004), another important post-structuralist, did not specifically critique structural anthropology, as Michel Foucault did, but instead critiqued the entire Western tradition of philosophy as well as the structuralists. More specifically, he critiqued those who sought an original source for all things on which to ground their systems of thought. Derrida argued that the entire philosophic tradition was simply the renaming of this original source, this Logos, whether Logos was conceived of as the Christian God, Locke's natural laws, Hegel's Idea, or even the structures of Saussure. Instead of positing another conception of this source, Derrida wanted to break apart, or deconstruct, any attempt to establish a central source or the binaries that described it.

Derrida's method of deconstruction did not allow the existence of an original source. If such a source did exist, he continued, people cannot know it. He contained this argument in his term *différance*, a French pun on the words for "difference" and "to defer." For Derrida, as for the structuralists, difference is important, but unlike the structuralists, for Derrida there is no center or structure. For instance, in language one may trace a signifier (sound or image) to its signified (concept), but one discovers that this signified is also a signifier for another signified. Thus meaning, which arose for the structuralists in the differences between parts, continuously escapes because it is always deferred to the next component. Derrida, however, did not understand his position as endowing meaninglessness. Instead, he saw his method of deconstruction as a way to free people from fixed truths, endowing them with the radical freedom to create their own selves and world.

—James M. King

➤ SEMIOTICS

Semiotics, or the study of signs, arose in the work of the Swiss structural linguist Ferdinand de Saussure. He posited that a word (sign) connected a sound or image (signifier) to a concept (signified) and that this connection was entirely arbitrary. Thus, describing a table with the word "table" is necessary only because "table" is the carrier of meaning that has been agreed upon. This sign is only one of the many signs of a communication system, called a code, that also requires people to agree upon rules that relate signs to one another. These signs are called the code's vocabulary, while the rules are the code's grammar. This code could take any number of forms: a language, air traffic control signals, body movements, games, or rituals, to name only a few. Since these codes do not precede people but are created by them, the values of the people who create the codes are also included in those codes. As a result, by examining a culture's codes, one can determine what is important to that culture. Thus, it is not surprising to learn that semiotics, which originated in linguistics, has often been employed in anthropology and cultural studies.

—James M. King

Bibliography

- Derrida, Jacques. *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: Johns Hopkins University Press, 1976.
- Febvre, Lucien. *The Problem of Unbelief in the Sixteenth Century: The Religion of Rabelais*. Translated by Beatrice Gottlieb. Cambridge: Harvard University Press, 1982.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan. New York: Pantheon, 1977.
- Lévi-Strauss, Claude. *Structural Anthropology*. Translated by Claire Jacobson and Brooke Grundfest Schoepf. New York: Basic Books, 1976.
- Palmer, Donald D. *Structuralism and Poststructuralism for Beginners*. New York: Writers and Readers, 1997.
- Saussure, Ferdinand de. *Course in General Linguistics*. Edited by Charles Bally and Albert Sechehaye in collaboration with Albert Reidlinger. Translated by Wade Baskin. London: P. Owen, 1960.

Postmodernism and Deconstruction

The terms “postmodernism” and “deconstruction” resist easy definition. One difficulty stems from the use of the terms in fields of study as wide ranging as art, literature, sociology, philosophy, architecture, and religious studies. In each of these contexts, the terms have taken on distinct shades of meaning suited to their particular objects of analysis. Yet the more significant complication in defining the terms involves the central idea behind them. Both terms rest on the notion that human concepts do not reflect objective realities. Because concepts have no firm meaning beyond their representation, definitions are inherently arbitrary. The two terms have proven useful in varied intellectual contexts precisely because their very definitions unsettle strict disciplinary distinctions.

Both historically and conceptually, postmodernism followed modernism, a broad approach predicated on at least two assumptions: the existence of objective truths and the increasing ability of humans to access those truths through the continual application and development of tools of scientific and rational analysis. Historians have associated the emergence of modernity with the anti-authoritarian Enlightenment, which valorized critical scrutiny of received knowledge as the gateway to a better future.

But the term “modernism” also belongs to the late nineteenth and early twentieth centuries, when rapid advances in science and industry helped give influential movements of artists, intellectuals, and theologians newfound confidence in humanity’s progression away from traditional beliefs, practices, and standards. Examples of modernism include the architecture of Frank Lloyd Wright (1867–1959), with its rejection of ornate Victorian forms, as well as the so-called higher criticism of Julius Wellhausen (1844–1918), which subjected biblical texts to historical and critical analyses.

Following World War I, various thinkers and artists began laying the conceptual roots of the move beyond modernism. They pointed out that early modernists had not rejected traditional styles and techniques so much as they replaced certain traditions with their own. These later

modernists included both Dadaist and Surrealist artists as well as European intellectuals in dialogue with the work of Søren Kierkegaard and Friedrich Nietzsche. Deeply skeptical of cultural and intellectual convention, they set out to free thought and creativity from the restrictions inherent in conventional systems of meaning and organization.

But even these later modernisms, the Marxist theorist Frederic Jameson (1934–) would lament in *Postmodernism, or, The Cultural Logic of Late Capitalism* (1991), ultimately became subject to “canonization and an academic institutionalization of the modern movement.” Seeking an explanation for the emergence of the postmodernism that theorists began discussing in the 1970s, both Jameson and French philosopher Jean Baudrillard (1929–2007) concluded in the late 1980s that the shift from modernism to postmodernism reflected the transition from industrial to postindustrial society. While industrial society had tended to canonize objects and ideas whose use-value it found superior to those of the past, postindustrial society and its concern for technology, information, and reproduction had replaced use-value with an empty and ahistorical sign-value. In this way, humans had moved from a modern world of reality, in which tangible commodities are produced and consumed, to a postmodern world of simulated hyperreality, comprised entirely of what Baudrillard termed “simulacrum,” copies of copies for which no apparent original exists. Focusing much of his attention on the history of architecture and art, Jameson encapsulates the shift to postmodernism through a comparison between the immediacy of the art of Vincent Van Gogh (1853–1890) and the commodity fetishism of Andy Warhol (1928–1987).

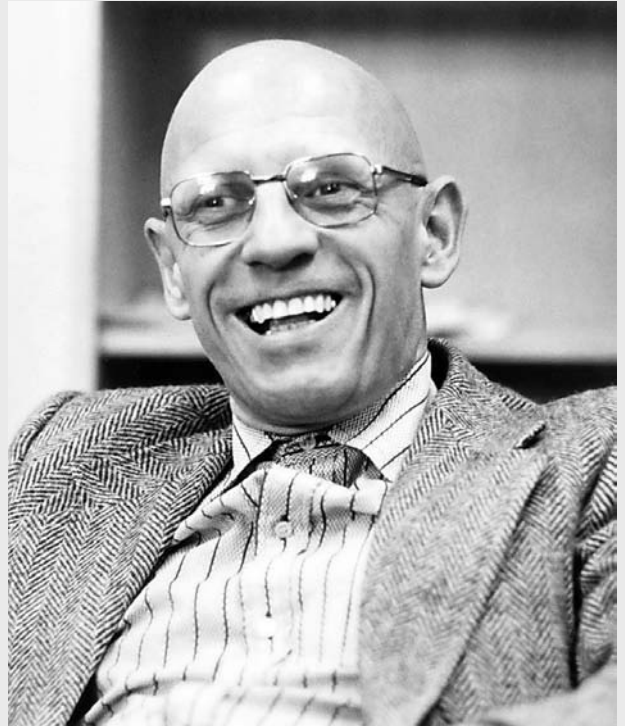
On account of the depthlessness, alienation, and pessimism about human agency that they believe the postmodern collapse of reality has inspired, both Jameson and Baudrillard are critical of its development at the very same time that they help theorize its existence. This has led intellectual historians to identify them as heirs of the German theorists of the Frankfurt School, proto-postmodernists whose best-known works criticized what they saw as the negative influence of modernism and advanced capitalism on

➤ FOUCAULT'S IMPACT ON SOCIAL THEORY

Both because French philosopher Michel Foucault examined a wide range of topics throughout his career and because scholars continue to debate whether or not Foucault changed his position on theoretical issues central to his work over time, his legacy does not admit to easy summaries. Of his diverse contributions to social theory, however, few have proven as influential as his conceptualization of power, which he presented in such works as *Discipline and Punish* (1975).

To be sure, the concept of power and its influence on human society had received attention well before Foucault's best-known works appeared in the 1960s. Max Weber, for instance, had argued that humans exerted power over others through shared or imposed beliefs and values. Karl Marx asserted that certain classes exerted power over others through control of means of production.

But Foucault deviated from both of these models. On the one hand, he broke down binary oppositions between oppressed and oppressor by insisting that power exists everywhere and reaches everyone. On the other hand, he freed the concept of power from its association with either beliefs or resources by locating power in social institutions and their various techniques of power. Foucault therefore deemphasized the power of individuals by situating the supposed power of any given individual in relation to the apparatus of knowledge and discipline that creates, sustains, and perpetuates that power. Importantly, he insisted that power does not merely deny or "exclude and repress," as Marxist and other accounts of power had suggested. Instead, it "produces



A philosopher and historian of thought, Michel Foucault was a controversial critic of some of the fundamental ideas of Western civilization. (Bettmann/Corbis)

reality; it produces domains and objects and rituals of truth."

Foucault's studies of prisons, psychiatric institutions, and human sexuality made profound contributions to the study of institutions and human behavior, even if later interpreters often have found him too rigidly structuralist.

—Daniel Vaca

human freedom, fulfillment, self-understanding, and relationships.

Focusing not on capitalism but on text and language, Jacques Derrida (1930–2004) not only contributed significantly to the theoretical development of postmodernism but also gave it substantial analytical support. As evidenced in *Of Grammatology* (1967), Derrida believed that text provided the clearest examples of the inescapable gap between ideas and symbols in systems of signification. To make his point, he denoted

this inevitable "différance" with the nearly identical term "différance." Through close analysis of différance, he demonstrated that words or symbols neither possess single meanings nor can entirely repress alternative meanings. This approach is the fundamental logic of the deconstruction for which Derrida often is remembered. But he did not limit the relevance of deconstruction to text; he insisted that repressions and exclusions of meaning pervade all aspects of human signification. Even analyses of texts inevitably require

a move beyond them, for systems of exclusion rely on discourses that extend far beyond single volumes. A textual analyst cannot decenter a subject without some perspective on the structures that undergird that subject's assumed centrality.

Deconstruction's opposition to clear categories, hierarchical oppositions, and assumed functions and essences helped refine the core postmodern principle that no beliefs, practices, styles, standards, symbols, or words bear universal truth or meaning. Humans do not reflect objective realities or articulate reliable remedies through their thought, writing, or art; instead, they construct realities, standards, and structures through those activities.

Today, both the postmodern denial of universal truth and its corollary—an affirmation of and respect for difference—pervades academic discourse. Although postmodernism sometimes is seen as inherently nihilistic, its potentially positive logic has proved influential not just in scholarly circles but even among religious groups in pursuit of protection from discourses that they find hegemonic or threatening. Although postmodernism may deny that humans have access to a single reality, deconstruction's insistence that humans can unsettle the hegemony of any assumed reality may provide an antidote to the pessimism that the postmodern principle so often inspires.

—Daniel Vaca

Bibliography

- Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Faria Glaser. Ann Arbor: University of Michigan Press, 1994.
- Derrida, Jacques. *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: Johns Hopkins University Press, 1976.
- Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, MA: Blackwell, 1990.
- Jameson, Fredric. *Postmodernism, or, The Cultural Logic of Late Capitalism*. Durham, NC: Duke University Press, 1991.
- Lyotard, Jean François. *The Postmodern Condition: A Report on Knowledge*. Translated by Geoff Bennington and Brian Massumi. Minneapolis: University of Minnesota Press, 1984.

Feminism, 1945–Present

Feminism is a movement that aims to redress the social, political, and economic inequality that exists between women and men. It is possible to trace the roots of organized feminism to the suffrage campaigns of the late nineteenth and early twentieth centuries, which are often referred to as the first wave of a growing feminist consciousness. Since 1945, the movement has evolved to encompass various culture-specific ideologies, philosophies, and social theories. The feminist movement has not been homogenous. Rather, feminism has been shaped by the diverse contexts in which it arose. Feminists have never been in agreement on how to locate or combat the fundamental oppression under which women have lived their everyday lives. While the feminist movement has been divided along ideological, racial, and class-based lines, the perseverance with which global feminists have fought for women's equal rights and the variety of theories that they have employed made feminism one of the defining movements of the twentieth century.

In the aftermath of World War II, feminism as a movement became less visible throughout the world. Women continued to agitate for political and legal rights, but in general the movement was fragmented. It was not until the late 1960s that feminism would once again develop a mass following. This second-wave feminism developed from the civil rights and antiwar movements in the United States and from global campaigns for peace and nuclear disarmament. These new feminists recognized that despite the political and legal gains of the first-wave movement, women were still an oppressed group. It was believed that in order to free women from this oppression, what was needed was a revolution rather than the reform fought for by their first-wave counterparts. The overriding concern was no longer merely equal rights for women but liberation from the bonds of an oppressive society. Above all else, it was this basic idea that separated first-wave social reformers from the often radical feminist consciousness of the second wave. Women continued to fight for equality in the workforce and greater access to education,

but the movement took on new issues as well, centered predominantly on a woman's right to control her body. Free access to contraception and the legalization of abortion were the two main issues that characterized the second-wave struggle in the United States, Britain, and Europe.

In the United States, one of the major divisions in the feminist movement was between liberal or equal rights feminism and its more radical counterpart. At the heart of the liberal movement was a quest for equality between women and men and a desire to put an end to gender discrimination and sexism. Liberal feminists tended to emphasize women's subordination in the public sphere. To that end, Betty Friedan, author of *The Feminine Mystique* (1963) and one of the foremost liberal American feminists, formed the National Organization for Women (NOW) in 1966, which pushed for equal rights for women in politics and the workforce and increased access to education. Liberal equal rights groups also then were becoming more common in Britain and Canada, for instance, although these organizations tended to be more socialist in character and focused primarily on the status of working-class women. Regardless, liberal feminists shared the common goal of equality between the sexes and strove to foster an egalitarian society through political action and lobbying campaigns.

In many ways, radical feminism developed as a response to the increasing alienation that many women felt in the male-dominated civil rights and antiwar movements. In contrast to the liberal feminists, the more radical feminists who launched the women's liberation movement believed that true equality between the sexes was not possible, as there was a deeper ideological level on which women were being oppressed. Influenced by the groundbreaking work of Kate Millet (*Sexual Politics*, 1970) and Shulamith Firestone (*The Dialectic of Sex*, 1970), radical feminists named patriarchy as the root cause of women's historical and continued oppression. Members of the women's liberation movement focused their efforts around revolutionizing conceptions of the private sphere. They believed that the personal is political, meaning that it was in the institutions of marriage, motherhood, and



National Organization for Women president Betty Friedan and feminists march in New York City on August 26, 1970. The march commemorated the 50th anniversary of the passage of the Nineteenth Amendment which granted American women full suffrage. (JP Laffont/Sygma/Corbis)

sexuality that male power was most deeply felt and that it was in this arena that the liberation of women first would take place. The practice of consciousness raising, which offered women the chance to speak out and voice their own experiences and concerns, was intended to politicize the private sphere and was an integral part of the radical feminist movement.

The division between liberal and radical forms of feminism was not the only fracture in the movement. Situated alongside and sometimes within the predominantly white middle-class movement, lesbians and women of color began to speak out about their own experiences and to form separate feminist groups. The ideology of second-wave feminism had emphasized

► SIMONE DE BEAUVOIR AND *THE SECOND SEX*

Published in 1949, Simone de Beauvoir's (1908–1986) *The Second Sex* has been one of the most influential feminist texts of the twentieth century. Initially intending to write her autobiography, Beauvoir decided that before she could write about herself she needed to ask, "What is a woman?" What resulted has been subjected to its fair share of criticism, yet it remains a hallmark of feminist theory, its influence still evident in feminist writing today.

A prolific writer of fiction, philosophical essays, and journalism, Beauvoir did not consider herself a feminist when she wrote *The Second Sex*. Indeed, she begins the work by stating that the subject of women is "irritating" and that there has already been "too much" written on the subject. Her work was also not intended to reestablish debate about feminism or even to revive the flagging movement. Rather, Beauvoir intended to examine the condition of women through analysis of biology, history, philosophy, and literature and ultimately to prove that the category of woman was a subjective one. Her conclusions were a radical departure from anything that had been written on women up to that point; the book was both vilified and highly praised when it was first published in France.

The importance of Beauvoir's work to second-wave feminism cannot be overstated. It was Beauvoir who first offered the analysis of women as a culturally and socially constructed Other. As

she famously wrote, "One is not born, but rather becomes a woman." This construction of the feminine form is in opposition to the definition of man as the essence of humanity, or Self. "Self," she argues, can only be defined by what is not-self. Women, as the Other, are therefore defined by the qualities they are seen to lack: education, independent income, and the qualities most often associated with masculinity. In other words, women are defined by the very fact that they are not men. More importantly, women have been required to internalize this definition of themselves as the Other, and it is this acceptance, in part, that has ensured the continuation of women's oppression.

The tendency to blame women for their oppressed condition, as well as the lack of agency ascribed to women historically, has been the predominant criticism of *The Second Sex*. Regardless of this, Beauvoir's ideas have informed much of the theoretical writing of the second-wave feminism, from Betty Friedan's *The Feminine Mystique* to the more radical feminist theories of Kate Millet, Shulamith Firestone, and Sheila Rowbotham. These writers have relied on the idea of woman as a socially constructed category. Beauvoir's ideas regarding woman as the Other have proven to be a powerful basis for a variety of theoretical examinations of women's oppression.

—Caroline Butt

gender—above race, class, and sexual orientation—as the primary site of societal oppression. For this reason, many women situated outside the white middle-class norms felt marginalized and unwelcome in the wider movement. In many ways a precursor to third-wave feminism of today, groups such as the Radicalesbians in the United States (1970) and the Organization of Women of African and Asian Descent (OWAAD) in Britain (1978) recognized the need to create separate spaces in which their own issues could be addressed and debated.

Postfeminism, a term believed to have been coined in the 1980s, is almost a complete repudiation of second-wave ideology and represents a break with the second wave. Still debated and far from being universally embraced, the precise

definition of postfeminism is hard to pin down but is often seen as being a media construct and a backlash against the gains made by second-wave feminists. Nevertheless, many postfeminist writers have critiqued the second wave as contributing to the image of women as helpless and submissive and completely at the mercy of an all-powerful patriarchy. Ultimately, postfeminists view second-wave feminism as contributing to the further victimization of women.

The feminist movement today is one that is characterized by a variety of different ideologies and theories. Perhaps the most important ideologically is what is commonly called third-wave feminism. The third wave not only developed as a critique of second-wave feminists and their tendency to focus on issues that were of importance

to predominantly white middle-class women but also as a reaction to postfeminism. The third wave has been characterized by a realization that women from different socioeconomic backgrounds or cultures have not experienced oppression in similar ways. While liberal second-wave feminists would argue that gender is the predominant site of women's oppression and indeed that it takes precedence over issues of race, class, or sexual orientation, third-wave feminists have consistently fought against this assumption. In doing so, they have added further depth to a movement that has been shaped by a richness of diverse social theories and ideologies.

—Caroline Butt

Bibliography

- Blair, Deirdre. *Simone de Beauvoir: A Biography*. New York: Summit Books, 1990.
- de Beauvoir, Simone. *The Second Sex*. Translated by H. M. Parshley. New York: Vintage Books, 1989.
- Gamble, Sarah. *The Routledge Critical Dictionary of Feminism and Postfeminism*. New York: Routledge, 2000.
- Jaggar, Alison M., ed. *Living with Contradictions: Controversies in Feminist Social Ethics*. Boulder, CO: Westview, 1994.
- Lorber, Judith. *Gender Inequality: Feminist Theories and Politics*. 2nd ed. Los Angeles: Roxbury, 2001.
- Roth, Benita. *Separate Roads to Feminism: Black, Chicana, and White Feminist Movements in America's Second Wave*. Cambridge: Cambridge University Press, 2004.
- Simons, Margaret A., ed. *Feminist Interpretations of Simone de Beauvoir*. University Park: Pennsylvania State University Press, 1995.
- Whelehan, Imelda. *Modern Feminist Thought: From the Second Wave to "Post-Feminism"*. New York: New York University Press, 1995.

Queer Theory

Queer theory is a body of thought that has emerged along with the academic study of gender and sexuality that traces its intellectual origins in lesbian and gay studies and feminist theory. Yet this newer school of thought, which did not begin to coalesce until the 1990s, also challenges many of the paradigms of those more established fields. For many, the term "queer theory"—in itself a loaded term taken from an

epithet—signifies a shift away from what is understood to be the essentialist underpinnings of those more traditionally defined fields. Queer theory is radically antiessentialist in that it challenges a notion of homosexuality—and indeed of gender itself—as intrinsic, fixed, innate, and universally present across time and space. Queer theorists instead argue that desires, sexual practices, and gendered identities are performances and enactments rather than expressions of true subjectivity (that is, consciousness). This theory serves to critique the whole notion of identity categories and the norms, codes, or commands that create the rubric of good versus bad (or pathological) sexualities. Queer theorists argue that there is no normal, only shifting norms that others may or may not conform to in everyday performances.

If queer theory has developed out of the intellectual movements of postmodernism, feminist theory, and lesbian and gay studies, it also emerged in the context of late-twentieth-century political alliances and strategies. Beginning in the 1980s, as the gay community faced AIDS and governmental reluctance to address this disease, gay activist groups developed new strategies, exemplified by the work of such groups as ACT-UP—a group in the United States that often staged dramatic agitprop protests—and Queer Nation. Although not necessarily drawing on queer theory explicitly, these groups helped to define the field by emphasizing a non-normative antiassimilationist alternative to traditional identity politics and minority group formations.

Queer theory takes as its primary theoretical and analytic focus the destabilization of the terms "gay" and "lesbian" and the disruption of the category of gender, particularly in terms of how gendered analysis, since the 1960s and 1970s, has often been treated as the appropriate intellectual framework for the study of sexuality. Queer theorists argue that the identity-based theories common to gender studies reproduce the conditions of repression they desire to challenge. For example, to claim gayness is not simply an act of self-revelation but is also a way of corralling sexuality within the framework of a category that only appears coherent but that, when opened up, reveals its instability (e.g., Am I still gay if I sleep with a person of the opposite

sex? Or if I sleep with those of the same sex but only in certain conditions and in certain ways? Or if my self-understanding is of myself as straight?).

Because queer theory understands sexuality as fluid, mobile, and plural, starting with the work of theorist Judith Butler, the concept of performance has been a central one, insisting on the situational and provisional nature of all identity. Thus, the terms “gay” and “lesbian” or even “woman” are not understood as self-evident and essential categories but rather as enactments of subjectivity. In this queer reading of identity, gender is understood as process, acquisition, enactment, and creation. Thus, queer theorists often take as their analytic site the spaces where these performances occur and are highlighted: cross-dressing and drag, for example. Rather than assert a universal humanism (gays are essentially the same as heterosexuals, women are as good as men), queer theory embraces the denigrated and ostracized identities (much as it embraces the epithet “queer”) and sees in these hybrid spaces (the transsexual, the drag queen) possibilities for a more thorough-going critique of normative culture.

Therefore, for queer theorists, the problem is not primarily one of bigotry or lack of tolerance or even homophobia per se. Rather than seeking to normalize gayness, it questions the processes that create the urge to normalize. Thus, queer theorists search for and celebrate moments of sexual subjectivity that appear outside of or resistant to firm categories of unified identity. In this sense it is not about gay liberation but rather is about a wider liberation from preconceived notions and/or categories of gender or sexuality.

Feminist theorists and theorists of race and ethnicity have been among queer theory’s sharpest and most persuasive critics. Both the feminist and race critiques of queer theory focus on the ways in which queer theory often implicitly assumes a white gay maleness as prototypical of queer subjectivity. Both feminists and radical theorists of color have been suspicious of any theoretical framework that rejects the need for an aggressive identity politics, a politics based on a notion of a unified and real identity (gay, woman, person of color, and so on). For many

feminist theorists, queer theory is seen as having eviscerated the centrality of gender to social identity, social power, sexuality and sexual identity, and dethroned gender critique as the cornerstone of the critique of both homophobia and sexism. Queer theory’s relation to the politics and theorizing of racialized identities is no less fraught with difficulties than its relation to feminism and feminist identities. The generalizing tendencies of “queerness” (queer as everything not normatively heterosexual) has the potential to evacuate the specificities of racialized identities in favor of a queer universalism that claims multiracial status without ever seriously reckoning with the ways in which heterosexual dominance depends on certain racial ideologies.

Many queer theorists have taken these criticisms to heart and are attempting to reframe queer theory to pay more attention to structural social conditions, bodily realities, and the lived vicissitudes of race, class, and gender violence.

—Suzanna Danuta Walters

Bibliography

- Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge, 1999.
- Halberstam, Judith. *Female Masculinity*. Durham, NC: Duke University Press, 1998.
- Jagose, Annemarie. *Queer Theory: An Introduction*. New York: New York University Press, 1996.
- Walters, Suzanna. “From Here to Queer: Radical Feminism, Postmodernism, and the Lesbian Menace (or, Why Can’t a Woman Be More Like a Fag?)” *Signs* 21(4) (Summer 1996): 830–869.
- Warner, Michael. *Fear of a Queer Planet: Queer Politics and Social Theory*. Minneapolis: University of Minnesota Press, 1993.

Modern Psychology—The Post-Freudian Landscape

Psychology in the late twentieth and early twenty-first centuries has had no central school or personality as had been the case with psychoanalysis and Sigmund Freud in the early twentieth century. As of the early twenty-first century, many competing therapeutic and analytic approaches were available, and many different subfields of psychology were recognized in academic contexts, a situation likely to continue.

Behaviorism, or behavioral psychology, remained a strong current following World War II. This field is based on the study of behaviors and does not rely on unobservable abstractions (such as the mind) to explain behavior. It was developed in part to make psychology more of an experimental science with replicable results. American psychologist Burrhus Frederick Skinner (1904–1990) was the best-known proponent of behaviorism to follow early pioneers such as Ivan Pavlov and John Watson. Skinner argued that any organism's behavior is a function of an organism's history of reinforcement (rewards and punishments), and he conducted many detailed studies of the influence of different types of reinforcement. His ideas have been incorporated into education (programmed instruction stems directly from his theory of learning) and applied behavior analysis, which uses principles of behavior developed by Skinner to improve the communication and social skills of autistic children.

The Swiss psychologist Jean Piaget (1896–1980) founded the field of developmental psychology in the 1920s. His detailed observations of children allowed him to develop a theory of human mental development as passing through a series of stages. Other influential developmental psychologists, with their primary contributions to the field, include Lawrence Kohlberg (1927–1987), who developed a theory of stages of moral development; John Bowlby (1907–1990), who developed attachment theory to describe how parents and children form bonds; and Erik Erikson (1902–1994), who divided the psychosocial development of humans into eight stages and is credited with inventing the term “identity crisis.”

Interest in the field of social psychology received a boost during World War II when governments sought effective ways to influence the behavior of large numbers of people through means such as propaganda. When the extent of German atrocities were discovered after the war, social psychology was invoked to explain how large numbers of ordinary civilians could be induced in large numbers to violate their own moral standards. The American psychologist Leon Festinger (1919–1989) developed the theory of cognitive dissonance to explain how people

➤ THE MILGRAM EXPERIMENT

Stanley Milgram (1933–1984) was one of the most influential psychologists of the twentieth century. His most controversial contribution is the Milgram experiment, a pioneering study in the social aspects of obedience to authority. This experiment has been replicated many times and cited to explain episodes from the massacre of Vietnamese civilians at My Lai in 1968 to the abuse of prisoners at the military prison in Guantanamo Bay, Cuba, during the more recent American war with Iraq.

In the classic Milgram experiment, the subject is instructed by an authority figure to help a learner (who is in fact a confederate of the experimenter) memorize word pairs. The instruction process requires the subject to administer electric shocks to the learner for wrong answers. In fact no shocks are delivered, but the learner acts as if they are. The voltage of the apparent shocks increases, and the learner appears to be in ever greater distress. If the subject attempts to stop the experiment or to check on the learner, he or she is sternly instructed to continue by an authority figure.

The Milgram experiment was prompted by claims of the Nazi war criminal Adolph Eichmann that he was not responsible for his behavior because he was following orders. This raised the question of whether blind obedience to authority was a peculiarity of the Nazi regime or whether it was more widespread. In Milgram's initial experiments (conducted at Yale University), all subjects delivered what they believed to be major electrical shocks (300 volts, sufficient to cause seizures), and over half the subjects delivered what they believed to be 450-volt shocks (the maximum dosage used in electroconvulsive therapy). Similar results were achieved in many replications conducted with varied populations all over the world. What the Milgram experiment demonstrated was that contrary to popular belief, many ordinary law-abiding people will inflict pain upon a blameless fellow citizen if instructed to do so by an authority figure.

—Sarah Boslaugh

Bibliography

- Blass, Thomas. *The Man Who Shocked the World: The Life and Legacy of Stanley Milgram*. Cambridge, MA: Basic Books, 2004.
- Milgram, Stanley. *Obedience to Authority: An Experimental View*. New York: Harper, 1974.

negotiate the mental conflict of being confronted with contradictory ideas (or situations that conflict with imbedded values). His initial studies were of a cult whose members became even more radical in their beliefs after an initial prophecy (destruction of the earth on a specified date) failed to occur. An influential series of social psychology experiments conducted by American psychologist Stanley Milgram (1933–1984) and continued by Philip Zimbardo (1933–) demonstrated that most people would obey directions from an authority figure even when they believed they were injuring an innocent person.

After World War II, American psychologist Carl Rogers (1902–1987) developed what he called the person-centered approach to psychology while working at a counseling center at the University of Chicago and later applied these ideas based in conflict resolution to areas of social conflict such as the Protestant-Catholic disputes in Northern Ireland. Rogers's work, along with the American psychologist Abraham Maslow (1908–1970), is often given the rubric humanistic psychology. Maslow developed the theory of the hierarchy of human needs, which ranked needs from lowest to highest as physical (air, food, water), safety (security), psychological and social (love, acceptance), and self-actualizing (fulfilling one's unique talents) and argued that needs lower on the hierarchy must generally be fulfilled before an individual will devote much attention to those higher on the hierarchy. Use of psychedelic drugs such as LSD and peyote as an aid to spiritual development was popularized in the 1950s and 1960s by former Harvard University psychologists Richard Alpert (1931–), later known as Baba Ram Dass, and Timothy Leary (1920–1996). The psychedelic movements' insistence on human potential dovetailed with aspects of the humanistic psychology movement.

As the importance of behavioral psychology with its emphasis on rat-in-maze (or, more properly, pigeon-in-cage) experiments peaked in the 1950s, and as the computer age dawned, by the 1970s, experiment-based psychology shifted again toward interest in cognitive psychology. Cognitive psychologists explore mental processes, how humans perceive, acquire, react to, and process information. As with behaviorism,

cognitive psychology has many applications; examples include educational theory, linguistics, neurophysiology, robotics, advertising, and the design of diagnostic systems and of user-friendly products such as buildings, libraries, automobiles and electronic goods.

Besides the cognitive revolution, in experimental psychology, another significant shift in the twentieth and twenty-first centuries has been that from talk-based therapy to the use of psychoactive drugs. Advances in chemistry in the 1950s produced a number of highly effective psychoactive drugs, including tricyclics such as imipramine (Tofranil), an antidepressant, and antipsychotic drugs such as chlorpromazine (Thorazine) and haloperidol (Haldol). These drugs were the first effective treatment for many serious psychiatric disorders, but all carried significant side effects. More recent additions to the psychiatric medical chest include fluoxetine hydrochloride (Prozac) and risperidone (Risperdal). Drug treatment of psychiatric disorders has become the norm, even in very young children, and some worry that many ordinary conditions of life (such as disinterest in school) are being diagnosed as mental illnesses and treated pharmaceutically.

—Sarah Boslaugh

Bibliography

- Hothersall, David. *History of Psychology*. New York: McGraw-Hill, 2004.
- Schultz, Duane P., and Sydney Ellen Schultz. *A History of Modern Psychology*. 9th ed. Boston: Wadsworth, 2007.

Public Intellectuals on Democracy

As Richard Posner has suggested, public intellectuals are professionals from academia as well as activists or pundits whose analyses of issues of general concern gain media attention. Political freedom affords these opinion makers an opportunity to articulate dissenting positions on issues and influence the policy-making process. Simply put, without freedom, public intellectuals cease to exist. For this reason, intellectuals, particularly in Western nations, have long debated the meaning, value, and extent of democracy. Argu-

ably, this debate took a more public and engaging turn after World War II with the advent of mass media and in the wake of such totalitarian movements as fascism and Stalinism. Postwar democratic discourse has manifested itself in two areas of concern: the mechanisms and distribution of power and the strength of pluralistic political institutions.

The experience of the 1950s, particularly the intense ideological contentions that unfolded with the development of the Cold War as well as the rise of McCarthyism in the United States, brought renewed attention to the question of challenges to democracy and the issue of power and its distribution in society. In the United States, the pluralist movement headed by Robert Dahl rejected arguments that democracy was on the wane by arguing that political power rested on the extent to which citizens participate in the democratic process. Dahl believed that electoral victories, quite simply, amounted to legitimate mandates. The pluralists do not say much about the relation between resource distribution and the capacity to win elections; rather, they suppose that the democratic process must at least meet conditions of public contestation and voluntary participation. Since electoral contests recur often and periodically, political elites presumably play by the rules of the game. Moreover, pluralists presuppose that citizens participate in electing those who would run the government on their behalf. Concurrently, governing elites have an interest in representing the general will. Whether through term limits or electoral defeats, the democratic system ensures rotation in office. Democracy, according to this perspective, is governed by mechanisms to guarantee elite rotation, widespread participation, and the right to organize an opposition.

The liberal pluralist framework opens several avenues of debate. One such line of research examines how resources affect political power distribution. C. Wright Mills, writing in the 1950s, popularized the notion that the power elite often guards its commanding position through self-sustaining networks involving elites from multiple social sectors. The disproportionate power and prestige of the power elite practically assures this group a victory in electoral contests, distancing it from democratic controls. This crit-

➤ DEMOCRACY IN CRISIS?

Robert Putman, the author of *Bowling Alone: The Collapse and Revival of American Community* (2000) and a past president of the American Political Science Association, is not alone about his pessimism regarding modernity and democracy. Two intellectuals with very different persuasions are also skeptical of modern forms of governance. The celebrated Russian dissident Aleksandr Solzhenitsyn, a vocal critic of the Soviet Union prior to its collapse, has described the political problems of contemporary societies—East and West—as disasters rooted in atheism and spiritual crises. To be sure, Solzhenitsyn regards the excessive materialism and individualism of the recent era as two of the most damaging challenges to Western democracies. The well-known American anarchist Noam Chomsky, on the other hand, views with great suspicion the overriding power of the modern state and celebrates the proliferation of grassroots political movements.

—Enrique Pumar

ical position toward liberal democracy formed the pillar of the new leftist movement that followed in the United States. In addition to pluralists and Mills's approach, David Riesman and other skeptics argued a third posture. Riesman noted in the mid-1950s that a new style of indifference among American voters fostered complacent attitudes toward political participation and electoral politics that impeded rather than manufactured policy outcomes. In Riesman's view, consumerism led to a citizenship more concerned with shopping and leisure than political engagement.

Another venue for analysis is the relation between freedom and the possibility of democratic citizenship formation. For Hannah Arendt, whose most enduring works are *The Origins of Totalitarianism* (1951), *The Human Condition* (1958), and *On Revolution* (1962), democratic participation is not a natural predisposition; for democracy to thrive, favorable conditions for civic engagement must be in place. These concerns arose again in Robert Putman's recent *Bowling Alone* (2000), which examines the relationship between social capital, fostered through

informal and formal networks, and democratic competitiveness. Putnam concluded that in the United States, participation in communities has been impoverished in part from the exigencies of modern life. Relative social isolation, while not yet obstructing essential mechanisms of democracy, is certainly changing the rate of democratic activism. In Putnam's view, politics today is characterized by conformity and a constrained participation.

Another line of public debate concerns the autonomy of the state in relation to class interests. At stake here is the overriding concern among European Marxists and intellectuals from developing nations who share Mills's concern about the capacity of state institutions and mechanisms to act independently from the organized interests of the ruling elite. In essence, the question is whether the state in capitalist societies is merely an instrument of elite interests or whether it possesses enough faculties to be autonomous. Instrumentalists such as the Briton Ralph Miliband argue that while the state may not necessarily be a tool of the ruling class, it certainly acts in concert with their interests. This position differs substantially from the structuralist argument of the French Nicos Poulantzas and others who argue that by taking advantage of internal ruling class cleavages, the state develops sovereignty.

A further dimension of democratic discourse relates to the durability and applicability of democratic institutions worldwide. Is democracy the product of Western civic culture, of years of deepening modernization linked to industrial advance as some intellectuals argue, or do other societies regardless of their levels of development and political culture stand a chance to be democratic? Italy's Norberto Bobbio insists that

citizens have a natural tendency to favor representative governments rather than tyrannies. Others insist that democracy is a warrantor of national security. Accordingly, proponents of this view argue that exporting democracy is the best way to combat major social ills that may escalate into violence among deprived populations. This assumption has fueled many efforts for political development and nation building to this date.

Public intellectuals such as Anthony Giddens, S. M. Lipset, Samuel Huntington, and Guillermo O'Donnell have argued extensively about the peculiar trajectories of democracy among developing nations. One important conclusion from this debate is that democratic institutions do not arise out of conditions exclusive to Western societies such as industrialization or the presence of a large middle class. Rather, democracy manifests itself in the context of national conditions. As Amartya Sen so eloquently reminds us, democracy ought not to be the end but instead should be one of several prerequisites to achieve prosperity and development.

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Bibliography

- Carnoy, Martin. *The State and Political Theory*. Princeton, NJ: Princeton University Press, 1984.
- Dahl, Robert. *Polyarchy*. New Haven, CT: Yale University Press, 1971.
- Huntington, Samuel. *Political Order in Changing Societies*. New Haven, CT: Yale University Press, 1968.
- Posner, Richard A. *Public Intellectuals: A Study of Decline*. Cambridge: Harvard University Press, 2001.
- Putnam, Robert D. *Bowling Alone*. New York: Simon and Schuster, 2000.
- Sen, Amartya. *Development as Freedom*. New York: Anchor Books, 2000.

Science and Technology

Examining the history of science and technology since 1945 from a cultural perspective leads inevitably to a mixed review. During this period, some of the major promises of science materialized: longer and healthier human lives thanks to technical breakthroughs in medicine and agriculture, an increase in daily comfort for many, and an opportunity to live in a world informed with technology that was once the stuff of science fiction. Yet the dream itself had soured. Under military supervision, scientists and engineers ended World War II in mushroom clouds and ushered in a new age of nuclear dread. Technological enhancement of economic activities has also stretched the earth's capacities for renewal, with the brunt of environmental stress a burden for the poorer nations and the poor within all nations. The blessings of science also have been unequally distributed between rich and poor nations and between the rich and poor within nations. Since World War II, the Western Enlightenment dream of rational control of nature's forces and resources has deteriorated. Yet viewed from a different angle, this period has offered fascinating developments, including a clearer understanding of the geology of the earth (plate tectonics), the new field of genetic engineering and the mapping of the human genome, and the social revolution engendered by the steady advances of computer technology.

Since 1945, ideology, science, and technology have been closely intertwined. Both the United States and the USSR turned to science for symbolic and strategic gains during the confrontation of the Cold War. In the Soviet Union, Josef Stalin's taste for the neo-Lamarckian genetic theories of Trofim Lysenko created a strange warping of agricultural research. To Stalin, Lysenko's theories of acquired or learned characteristics, rather than Mendel's notion of inherited characteristics, provided a better example of the assumed dynamism and the rejection of tradition on which Marxism was based. Soviet scientists who disagreed might be arrested or even exiled, Lysenko's eventual fate after Stalin's death. Military contracts on both sides of the Cold War divide also warped the basic pattern of research and development through this period, as weapons research drew a high percentage of engineers and physicists.

The symbolic confrontation of the Cold War Space Race between the United States and the Soviet Union provided a form of global spectator sport as both sides channeled resources to realize a new adventure for humanity. Yet even this spectacle, which offered new spying opportunities and relied on missile systems of equal value to nuclear warfare, barely masked the underlying weapons race.

Yet such symbolic contests did help to dissolve tensions and provide common ground. Both the USSR and the United States launched

The 1957 Soviet launch of the first satellite, Sputnik, was hailed in the press throughout the world, including the United States, as a great step forward for all humanity.

their first satellites during the International Geophysical Year, 1957–1958, designed as an arena for international cooperation in science. The 1957 Soviet launch of the first satellite, Sputnik, was hailed in the press throughout the world, including the United States, as a great step forward

for all humanity. A similar reaction developed to the success of the Apollo 11 mission of 1969 in which U.S. astronauts first took “one small step” on the moon. The cosmic perspective offered by satellite photographs of the earth also helped spur the environmental movement and the sense of common humanity it enforced. A spirit of scientific and cultural cooperation was renewed again during the Cold War’s interim thaws of détente and glasnost.

Outside the warping influence of the Cold War, post-1945 science and technology have been marked by notable accomplishments. Although the contribution of the deceased Rosalind Franklin was ignored when Nobel prizes were handed out, James D. Watson and Francis Crick’s discovery in 1953 of the double helix structure of DNA was a major milestone. The emergence of genetic engineering abetted by the Big Science effort of the Human Genome Project (1990–2003) that mapped the entire human DNA code continues to generate new biological and medical discoveries and applications.

On an institutional level, the creation of the United Nations in 1945 helped forge bureaucracies such as the World Health Organization (WHO), founded in 1948, with its humanitarian goal of spreading basic sanitation standards and medical care to all parts of the globe. The WHO began with major campaigns to eradicate specific diseases such as smallpox and, with lesser success, diseases such as malaria. It continues to fund campaigns against epidemics such as HIV/AIDS and, more controversially, to broker health policies for member nations.

Basic knowledge in physics continued to accelerate (along with subatomic particles) after World War II. Shortly after the war, physicist Maria Goeppert Mayer developed the shell model of the atomic nucleus that assigned orbital shells to protons and neutrons, much as had earlier been established for electrons. Postwar Big Science funding of large atom smashers or particle accelerators yielded a harvest of long-awaited chemical elements as well as exotic subatomic particles such as quarks and leptons and antiparticles such as antiprotons and antiquarks. These discoveries came in tandem with new theory such as Murray Gell-Man’s equations for strangeness, which successfully predicted new subatomic particles, as well as his equations for charm that predicted new forms of quarks.

Theorists—with some success—continued Einstein’s effort to reconcile the four basic forces (weak nuclear force, strong nuclear force, gravity, and electromagnetism). Sheldon L. Glashow mathematically connected electromagnetism and weak nuclear forces. Yoichiro Nambu’s insight that quarks and all other elementary particles may be composed of strings has led to the most recent effort at synthesis, since dubbed

“string theory” or “superstring theory,” which represent attempts to unify gravity with the other forces of nature.

In the related realm of astrophysics and cosmology, guided by theory, new devices such as radio telescopes and satellite-based sensors revealed new cosmic exotics, including quasars, pulsars, and black holes. Radio telescopes also detected background microwave radiation pervading the universe that provided stunning support for the Big Bang theory. Aided by satellite sensors, further studies of this background radiation led astronomers to the sobering view that detectable matter comprises only 4 percent of all the matter in the universe, with the other 96 percent locked up in dark matter and dark energy. Concerning this missing 96 percent, no scientists, or for that matter theologians, are yet prepared to offer a coherent explanation.

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The digital computer is one of many breakthroughs in electronics that emerged from military development during World War II. While the British built Colossus to decode German radio transmissions, the United States built ENIAC (Electronic Numerical Integrator and Computer) to compute ballistic tables. Both were enormous machines built of vacuum tubes and required hand plugging of wires similar to telephone switchboards. In 1947, Bell Telephone Laboratories introduced the transistor, which replaced the bulkier and less-efficient vacuum tube as the basic switching and amplifying device in computers and other electronic devices. The transistor was later finessed in the 1960s with the introduction of commercially viable integrated circuits that allowed microscopic transistors as well as diodes, resistors, and capacitors to be etched onto semiconducting silicon wafers. Integrated circuits continued to be miniaturized. Noting this, in 1964 Gordon E. Moore outlined Moore’s law, which so far correctly predicted that the density of integrated chips would double each year. This increase of computing power per cubic inch led to the development of increasingly more powerful workstations and eventually personal computers. Along with the Internet, the computer has had revolutionary impact on research and development, reshaping industry, workplaces, homes, and daily lives.

As significant throughout this period, however, has been the increasing authority behind critiques of science and technology. Such critiques, once emanating from a marginal sphere inhabited largely by romantics and crackpots, slowly migrated toward the center. As the twentieth century progressed, the dystopian possibilities of a technologically advanced civilization became more and more apparent. The 1960s counterculture, itself conditioned to a large extent by the technological discovery of the drug LSD, brought a taste for the critique of progress and a questioning of the rational basis of advanced society to the foreground. The development of nuclear power, from the bombing

of Hiroshima to the nuclear accidents at Chernobyl and Three Mile Island, gave proof that physicists, Aladdin-like, had conjured up powers with immense destructive capabilities. Maverick voices such as that of biologist Rachel Carson, with her study of the adverse effects of pesticides on human health and environmental soundness, also called into question the heroic narrative of progress.

Yet the utopian possibilities of science continue to beckon. More recently, the emerging field of nanotechnology, first prompted by a Richard P. Feynman speech in 1959, offers a similar genie-in-the-bottle scenario. Nanotechnology, or the manipulation and assemblage of matter on the atomic level, already has yielded new chemical products. The field has also created utopian hopes familiar to science fiction of infinitely malleable nature along with dystopian concerns about nanobots run amok destroying all life.

Environmental crisis has offered a new opening for thinking about progress in terms other than the Enlightenment's simple goal of the conquest of nature and natural forces. The near universal scientific consensus of human-fueled global warming reached at the United Nations Conference on Climate Change in Kyoto in 1997 and the urging of a dramatic reduction of carbon dioxide emissions is one major example. Global warming provides a powerful lesson that the Enlightenment dream, when connected with the unfettered market and international competition, has proved itself too successful. Science and technology appear to have rendered humanity on its present largely unmoderated course, too powerful to remain a sustainable species. Environmentalism appears as one way to inject an ethical component into the social demands that guide scientific and technological research and development.

—Fred Nadis

■ Introduction: Scientific Developments

Science continues to be a central engine of change in the contemporary world, stimulating new conceptualizations, thought, and possibilities. As such, research is a high priority for governmental funding worldwide. Yet the knowledge gap between scientists and laypeople that C. P. Snow reported in his 1959 lecture “The Two Cultures and the Scientific Revolution” ensures that much that is revolutionary in science is obscured from the general populace.

Nevertheless, the focus of scientific research, at least in part, can be seen as having a historical component. Weapons-related research during World War II proved that atomic energy could be unleashed for weapons as well as for the

generation of energy; following the war, atomic weapons tests also encouraged U.S. government funding of ecological studies of the aftereffects of nuclear fallout on marine ecosystems. Theoretical developments of the 1920s and 1930s in nuclear physics preceded those history-making developments, but the nuances of current nuclear physics—and the hopes placed recently in string theory to mathematically unify all of the basic physical forces operating in the universe—remain somewhat at a removed from the understanding of the general populace.

Scientific revolutions can also lead or follow larger revolutions in thought: the rise of computers and information theory underpinned the

new field of chaos theory with its somewhat postmodern interest in the mathematical study not of regularities in nature but in finding patterns in irregularities, or what might once have been overlooked as simply the unaccountably random. Along with the rise of computing technology, the paradigm shift toward information can be seen as well in Francis Crick and James Watson's 1953 discovery of the molecular shape of DNA and its ability to code information for regulating and replicating cellular-based life. Life, in this regard, can be simply regarded as information. Tellingly, even physicists and astrophysicists have found it useful to incorporate the notion of information as a basic component of the universe along with older notions such as time, space, matter, and energy. In this respect, we can see in the highlighting of the concept of information a kinship between the worlds of physics and biology and larger currents of thought.

—*Fred Nadis*

Particle Physics

Particle physics is the branch of physics that deals with subatomic particles. As the twentieth century progressed, particle physicists deconstructed the atom into ever smaller particles. The German Werner Heisenberg (1901–1976), the Englishman P. A. M. Dirac (1902–1984), and the Austrian Wolfgang Pauli (1900–1958) developed quantum electrodynamics (QED) in the 1920s to explain the interactions between electrons and photons. In the late 1940s and early 1950s, the German-born physicist Maria Goeppert Mayer (1906–1972) developed the shell model of the nucleus, explaining how protons and neutrons occupy orbital shells around the atomic nucleus.

After World War II, a second generation of theorists refined quantum electrodynamics by mathematically renormalizing it and fixing flawed equations that led to infinite results and problems with how to handle the self-energy of particles. The physicists Richard P. Feynman (1918–1988) and Julian Schwinger (1918–1994), both from New York City, independently developed similar theories. The Japanese physicist Shinichiro Tomonaga (1906–1979), working in wartime isolation in Japan, earlier developed a similar system. Freeman Dyson (1923–) showed that the three

theories were mathematically equivalent, which led to the 1965 Nobel Prize in Physics for Feynman, Schwinger, and Tomonaga. The physics community chose Feynman's mathematical notation system over Schwinger and Tomonaga's systems, and his method of graphically drawing particle interactions, dubbed Feynman diagrams, became widely used.

Postwar particle physicists heavily relied on two tools: the particle accelerator to smash subatomic particles into ever smaller particles and the electronic computer to organize the volumes of data from their research. As a matter of national prestige during the Cold War, the U.S. government built ever larger particle accelerators in national laboratories, most of them attached to universities, in an example of what historians call Big Science. In 1954, 12 European nations created the Conseil Européen pour la Recherche Nucléaire (CERN), located near Geneva on the French-Swiss border, that built multiple particle accelerators in a successful postwar effort to revive European research in nuclear and particle physics. The particle physics community has tended to divide into experimentalists who run the intricate experiments and theoreticians who develop mathematical models to understand the results of the experiments. In 2008, CERN brought online the Large Hadron Collider (LHC), the world's largest high-energy particle accelerator. Keeping the 16.7 miles (27 kilometers) long LHC operational has proven to be a challenge, and as of yet it has not yielded new insights.

New subatomic particles had already been found in cosmic ray research, but the postwar particle accelerators revealed dozens of new subatomic particles during the early 1950s. There was little theoretical understanding of how to organize them until 1953, when the American theoretical physicist Murray Gell-Mann (1929–) proposed a new property called “strangeness” for subatomic particles to help categorize these subatomic particles. In the early 1960s Gell-Mann collaborated with the Israeli physicist Yuval Ne’eman (1925–) to devise the eightfold way to group the known particles into a table similar to the periodic table for chemicals. Just as the periodic table successfully predicted the existence of unknown chemicals to fill out the table, the eightfold way successfully predicted new particles

with specific characteristics. By the early years of the twenty-first century, over 200 subatomic particles have been found experimentally.

Theory also predicted the existence of antiparticles, with the same mass as the corresponding particle but an opposite value for the electric charge. When a particle and antiparticle meet, they annihilate each other in a complete conversion of mass to energy. In 1955, the American physicist Owen Chamberlain (1920–) and Italian-born physicist Emilio Serge (1905–1989) used the Bevatron particle accelerator at Berkeley to confirm the theory by creating antiprotons. The two physicists shared the 1959 Nobel Prize in Physics, and numerous other antiparticles have been found since then. In 1995, researchers at CERN succeeded in creating nine atoms of antihydrogen, the first antiatom, that existed for about 40 billionths of a second before being annihilated in collision with normal matter.

In 1964 Gell-Mann proposed a new type of fundamental matter that in turn formed the larger known subatomic particles. Gell-Mann whimsically labeled his proposed matter quarks and antiquarks and suggested that three flavors, or types, existed. The American theoretical physicist Sheldon L. Glashow (1932–), having published a theory in 1960 unifying the weak nuclear force and the electromagnetic force into an electroweak force, took Gell-Mann's work and proposed a new property for quarks, called charm, and the existence of a fourth quark. Since then the number of quarks has risen to six, and quark theory is now part of the standard model. The standard model attempts to combine the four basic forces (weak nuclear force, strong nuclear force, electromagnetism, and gravity) into a grand unified theory. Glashow's electroweak theory is also part of the standard model. Gell-Mann received an unshared Nobel Prize in Physics in 1969, and Glashow shared a 1979 Nobel Prize in Physics. In the 1970s, Gell-Mann expanded his theory of quarks into what he called quantum chromodynamics (QCD).

The Japanese-born physicist Yoichiro Nambu (1921–) also contributed to quark theory and realized in 1970 that quarks act as if they are connected by strings. Nambu and others developed this insight into string theory in the 1980s. String theory gets even smaller than quarks, dealing

with hypothetical vibrating strings that are near the Planck length (about 10^{-33} centimeters or 10^{-34} inches). No instruments can measure objects that small. These strings in turn make up the larger known elementary particles, such as quarks, bosons, and gluons. String theory demands complex mathematics using up to 26 multiple dimensions and provides a promising avenue to the development of a grand unified theory. String theory later combined with supersymmetry to create superstring theory.

In 1956, the physicists Frederick Reines (1918–1998) and Clyde Cowan (1919–1974) detected a theoretical particle called the neutrino at a nuclear reactor at Savannah River, South Carolina. Reines and Cowan had found that the neutrino that is created occurred during the formation of an electron. In 1962 a neutrino associated with the formation of a muon particle was discovered. Neutrino theory in the 1970s predicted that a third type of neutrino, created during the formation of a tau particle, should also exist, though the tau neutrino has not been found experimentally.

The Sun, powered by nuclear reactions, emits neutrinos. In another example of Big Science, scientists built huge underground experiments to detect solar or stellar neutrinos. The radiochemist Ray Davis (1914–) organized the first experiment in the Homestake gold mine in South Dakota. Solar neutrinos that passed through a huge tank filled with chlorine reacted with chlorine-37 isotopes to create argon-37, though scientists were puzzled to detect only a fourth of the predicted number.

—Eric G. Swedin

Bibliography

- Brown, Laurie M., Lillian Hoddeson, and Max Dresden. *Pions to Quarks: Particle Physics in the 1950s*. Cambridge: Cambridge University Press, 1989.
- Crease, Robert P., and Charles C. Mann. *The Second Creation: Makers of the Revolution in Twentieth-century Physics*. New York: Macmillan, 1986.
- Gribbin, John. *Q Is for Quantum: An Encyclopedia of Particle Physics*. New York: Free Press, 1998.
- Pickering, Andrew. *Constructing Quarks: A Sociological History of Particle Physics*. Chicago: University of Chicago Press, 1984.

Schweber, Silvan S. *QED and the Men Who Made It: Dyson, Feynman, Schwinger, and Tomonaga*. Princeton, NJ: Princeton University Press, 1994.

Grand Unified Theory in Physics

The search for a grand unified theory (GUT), combining the four known fundamental physical forces of nature into one mathematical model, became an important quest in the late twentieth century. The great English scientist Isaac Newton (1642–1727) mathematically explained the force of gravity in the late seventeenth century. In the nineteenth century the Scottish scientist James Clerk Maxwell (1831–1879) mathematically explained the force of electromagnetism. In the early half of the twentieth century, Albert Einstein (1879–1955) refined the work of Newton with his general theory of relativity. Einstein spent the last quarter century of his life trying to create a theory that combined his own theory with Maxwell's electromagnetism but failed. With the development of quantum mechanics, physicists discovered two more forces of nature: the strong nuclear force, which holds nuclear particles together, and the weak nuclear force, which causes radiation.

Beginning in 1960, the American theoretical physicists Sheldon L. Glashow (1932–) and Steven Weinberg (1933–), as well as the Indian-born and Cambridge-educated Abdus Salam (1926–1996), developed the electroweak theory, combining the weak nuclear force and the electromagnetic force. Tests in particle accelerators confirmed their predictions of a weak neutral current. Their theory also predicted the existence of three vector bosons that, along with the photon, mediate the interactions within the electroweak theory. Experimental physicists using the particle accelerators at the Conseil Européen pour la Recherche Nucléaire (CERN) discovered the three bosons in 1983.

The American physicist Murray Gell-Mann (1929–) proposed the existence of quarks in 1964, later expanding this insight into a theory called quantum chromodynamics (QCD) to explain the strong nuclear force. This theory proposed gluons as the force particles to mediate the strong force. Gravitons have been proposed as the me-

diating particle for the force of gravity but have not been found and are not widely accepted.

The currently accepted and experimentally proven theories are called the standard model. In the 1960s, cosmologists, used to thinking about the vast expanses of the universe, accepted the Big Bang model to explain the origin of the universe and all matter within the universe. The first few minutes of the Big Bang, as matter formed from energy, replicated many of the conditions that the particle physicists studied in their quest for a grand unified theory. Supersymmetry theories emerged from this marriage of the physics of the very large and the physics of the very small, which seemed reasonable to expect, since any grand unified theory had to explain everything from the Big Bang to the smallest interaction between subatomic particles.

The Japanese-born physicist Yoichiro Nambu (1921–) realized in 1970 that quarks act as if they are connected by strings. Further work by Nambu and others led to the development of string theory in the 1980s. String theory deals with hypothetical strings that are near the Planck length in size (about 10^{-33} centimeters or 10^{-34} inches), so small that no instruments can measure them. These strings manifest themselves as the larger known elementary particles, such as quarks, bosons, and gluons. String theory demanded complex mathematics, using up to 26 multiple dimensions, and provided a promising avenue to the development of a grand unified theory. String theory later combined with supersymmetry to create superstring theory.

Multiple grand unified theories have been proposed, many of them based on string theory, but all the theories require experimental proof that can only come from particle accelerators far beyond current technology, extraordinarily precise measurements to detect gravitons, or measurements of the natural abundance of other esoteric particles thought to exist in certain quantities after the Big Bang. Occasionally another fundamental force is proposed, a fifth to add to the known four, but none have ever been accepted by the physics community. The notion of parallel universes, a consequence of quantum theory, is now seriously entertained among sober-minded theorists.

—Eric G. Swedin

Bibliography

- Crease, Robert P., and Charles C. Mann. *The Second Creation: Makers of the Revolution in Twentieth-century Physics*. New York: Macmillan, 1986.
- Greene, Brian. *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*. New York: Norton, 1999.
- Kaku, Michio. *Hyperspace: A Scientific Odyssey through Parallel Universes, Time Warps, and the 10th Dimension*. New York: Oxford University Press, 1994.
- Kaku, Michio, and Jennifer Thompson. *Beyond Einstein: The Cosmic Quest for the Theory of the Universe*. Rev. ed. New York: Anchor, 1995.
- Weinberg, Steven. *Dreams of a Final Theory: The Search for the Fundamental Laws of Nature*. New York: Hutchinson Radius, 1993.

Cosmology—The Big Bang, Inflation, and the Dark Universe

The quest to understand our cosmic origins has engaged humans for thousands of years. For most of that time, this venture has been a strictly philosophical exercise, with stargazers and pontificators trying to fathom our place within the enormity of the heavens. But cosmology has recently crossed a threshold, moving into the realm of a hard and testable science where the predictions of theorists can actually be verified by observers. This shift has been facilitated by advances in technology, including the advent of accurate instruments that are now providing a flood of data to what has traditionally been a data-starved discipline. Armed with a new generation of precision tools, astronomers may eventually fulfill a long-standing dream: to chart the history of the universe, predict its future, and determine its size, shape, age, and composition.

Among the first observations of lasting importance were the redshift measurements of Edwin Hubble in the 1920s, which showed that distant galaxies are moving away from our own galaxy with recessional velocities proportional to their distance from us. In 1929, Hubble announced his findings, which revealed an almost uniformly expanding universe. His work later became one of the main pillars of Big Bang theory.

Thirty-five years later, in 1964, theorists at Princeton University determined that a primordial blast like the Big Bang would have left be-

hind a detectable trace, a residual background of microwave radiation. This radio haze, known as the cosmic microwave background, was soon discovered, quite by accident, by two scientists at Bell Laboratories in New Jersey, Arno Penzias and Robert Wilson. In 1964, Penzias and Wilson were testing a new radio antenna sensitive to microwave frequencies. They kept picking up static no matter which direction they pointed the antenna and were unable to eliminate this low-level noise. Upon learning of the Princeton work, the Bell Labs researchers eventually concluded that their antenna was picking up the faint fading glow of the Big Bang. Penzias and Wilson received a Nobel Prize for this discovery in 1978.

By then, Big Bang theory had gained broad acceptance in the scientific community—largely supplanting the competing steady-state scenario—yet the concept itself was ill-defined. In 1979, physicist Alan Guth provided some theoretical insights into the earliest moments of the cosmic dawn, determining that when the universe sprang into existence, it grew exponentially and explosively in a short-lived burst called inflation, a term that Guth coined. Inflation, he explained, provided the bang behind the Big Bang as well as the outward thrust behind the expansion first documented by Hubble.

Inflation predicts that matter will be smoothly distributed in the universe except for slight deviations from homogeneity (or anisotropies) due to quantum fluctuations that become amplified during the inflationary phase. Although Guth felt confident about the idea, which was later refined by other investigators, he doubted that it would be rigorously tested in his lifetime. On that score, however, history proved him wrong.

While there have been a number of crucial measurements from both space and the ground since inflation was first dreamed up, one experiment stands out: the Wilkinson Microwave Anisotropy Probe (WMAP), a satellite orbiting Earth since July 2001 whose instruments are sensitive enough to discern a millionth of a degree temperature differences in the cosmic microwave background. The anisotropies measured by WMAP closely matched the predictions of inflation. Based on the latest WMAP data, researchers also estimated that the universe is composed

of 4 percent ordinary matter, with just 0.4 percent of that being luminous matter (stars, galaxies, and the like). The rest consists of the ill-understood categories of invisible dark matter (22 percent) and dark energy (74 percent).

The data also pins down the age of the universe (13.7 billion years) and its constituents with unprecedented accuracy. Yet these triumphs are marred by a sobering fact: 96 percent of the universe is almost a total mystery, as we cannot yet describe the true nature of dark matter and dark energy. In addition, it turns out that the luminous objects that astronomers have fixated on for centuries are a sideshow, relatively speaking, comprising less than one half of 1 percent of the entire cosmos.

Therein lies the paradox of modern cosmology: the more precisely we measure the universe, the more precisely we spell out just what it is we do not know. While some might despair over the fact that the overwhelming bulk of matter and energy assumes a mysterious form that we cannot characterize much beyond labeling it “dark,” other practitioners take heart in the fact that the tools at their disposal are finally getting good enough that we can start to understand the known unknowns—such as dark matter and dark energy—and eventually take on the unknown unknowns, the surprises that are almost inevitably lurking around the corner. “It’s a good bet,” says California Institute of Technology theorist Sean Carroll, “that the fun is only beginning.”

—Steve Nadis

Bibliography

- Cho, Adrian. “Long-Awaited Data Sharpen Picture of Universe’s Birth.” *Science* 311 (2006): 1689.
- Guth, Alan. *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins*. Reading, MA: Addison-Wesley Publishing, 1997.
- Guth, Alan, and David Kaiser. “Inflationary Cosmology: Exploring the Universe from the Smallest to the Largest Scales.” *Science* 307 (2005): 884–890.
- Livio, Mario. *The Accelerating Universe: Infinite Expansion, the Cosmological Constant, and the Beauty of the Cosmos*. New York: Wiley, 2000.
- Silk, Joseph. *The Infinite Cosmos: Questions from the Frontiers of Cosmology*. New York and London: Oxford University Press, 2006.

➤ ALAN GUTH’S “SPECTACULAR REALIZATION”

Alan Guth had no idea what he was getting into in the late 1970s when, as a young physics postdoc at Stanford University, he embarked on a path that led to his development of the inflationary universe paradigm, now a cornerstone of modern cosmology. In fact, Guth (a professor at the Massachusetts Institute of Technology since 1980) knew little about cosmology at the time, modern or otherwise. The initial problem that he took on, with help from Cornell University physicist Henry Tye, related to magnetic monopoles, hypothetical particles that carry lone north or south poles. Guth and Tye’s calculations suggested that fantastically large numbers of these particles should have been produced in the Big Bang, yet none has ever been detected.

Guth and Tye showed that monopole production would be suppressed if a phase transition in the early universe was delayed by supercooling so that it occurred at a lower temperature than had been assumed (just as supercooled water turns to ice well below its normal freezing point).

Late one night in December 1979, Guth recognized another consequence of supercooling: It would send the universe into a state of exponential expansion. Cosmic inflation—the notion of a fleeting yet explosive growth spurt in the universe’s earliest moments—was thus born. The accelerated growth phase that Guth proposed did not just dilute magnetic monopoles to unobservably low densities. It also solved numerous cosmological puzzles, explaining why the universe is flat, as observed; why it is so smooth; and even why it produced the small departures from complete blandness that eventually generated galaxies and galaxy clusters.

Inflation has passed numerous observational hurdles in the decades since Guth’s original insight. The model has borne up so well, in fact, that University of Chicago cosmologist Michael Turner has called inflation “the most important idea in cosmology since the Big Bang.”

—Steve Nadis

Chaos Theory

Chaos theory, sometimes called the science of complexity, is a new mathematical understanding of physical phenomena represented by systems of nonlinear equations. Classical Newtonian physics predicted that the physical world behaved in a mechanical, deterministic manner, best described by linear equations. Nonlinear equations contain infinite quantities and can often only be solved approximately. The great French mathematician and astronomer Jules Henri Poincaré (1854–1912) realized at the turn of the century that Newton's equations were not always so straightforward and that small differences in initial conditions of nonlinear equations could have dramatic effects when calculating the orbits of planets. The development of computers,

allowing approximate solutions to large systems of equations, enabled scientists to examine nonlinear equations more closely.

The meteorologist Edward N. Lorenz (1917–2008) introduced the term “butterfly effect” to describe his own insight that a small change in initial conditions can have a dramatic effect on later events, or as he titled a 1972 paper, “Predictability: Does the Flap of a Butterfly's Wings in Brazil Set Off a Tornado in Texas?” Because of the nature of chaos, he argued, even the best knowledge of current weather conditions would not enable meteorologists to predict weather too far into the future. Lorenz used computer modeling to illustrate his ideas and developed a set of well-known equations used in chaos theory. Computers became the essential tool of chaos theorists.

The mathematician Benoit Mandelbrot (1924–) coined the word “fractals” to describe physical shapes that have the same jagged shape no matter what scale you choose to use when looking at them. He noticed that his computer-generated color images resembled shapes in nature, such as the curve of coastlines, the patterns in turbulent liquids, snowflakes, blood vessels, and other natural systems that reflect chaotic behavior. In 1979, he developed his Mandelbrot Set to support his theory of fractals, and his 1982 book *The Fractal Geometry of Nature*, with its gorgeous computer-generated pictures of fractals, helped scientists understand that fractals were a fundamental element of emerging chaos theory.

The physicist and Nobel laureate Murray Gell-Mann (1929–) and others founded the Santa Fe Institute in New Mexico in 1984 to promote the study of chaos theory and other implications of complexity. Chaos theory is probably misnamed, since the use of the word “chaos” implies that there are no constraints; in reality, chaotic systems confine themselves to a limited range of behavior. The implications of chaos theory are still in the early stages, but clearly the Newtonian understanding of physical phenomena is being significantly revised. Chaos theory has been applied to almost every area of science, including ecology, thermodynamics, chemistry, astrophysics, biology, economics, cognitive science, medicine, and even political geography.

—Eric G. Swedin

MANDELBROT AND FRACTALS

Benoit Mandelbrot (1924–) developed the mathematics of fractals, which came to be an important way to visualize chaos theory. As a researcher, Mandelbrot consistently sought the patterns and shapes in things, and early in the 1960s he found that his varied interests all came together in the idea of fractals. Mandelbrot invented the word “fractal” by deriving it from the Latin word *fractus*, which means “fragmented.” Fractals often describe irregular shapes and often are self-similar, in the sense that the closer one looks at the fractal, the more similar fractals appear, just on a smaller scale. Computer scientists worked with Mandelbrot, making complex multicolor graphic images of fractals. They noticed that the images resembled shapes in nature, such as the curve of coastlines, and the patterns in turbulent liquids, snowflakes, blood vessels, and other natural systems that exhibit mathematically chaotic behavior. In 1979, he developed his Mandelbrot Set, which supported his theory of fractals. Mandelbrot's 1982 book *The Fractal Geometry of Nature*, with its gorgeous computer-generated pictures, spread knowledge of his insights. After many years working as a researcher at International Business Machines (IBM), Mandelbrot became a professor at Yale University in 1987.

—Eric G. Swedin

Bibliography

- Briggs, John, and F. David Peat. *Turbulent Mirror: An Illustrated Guide to Chaos Theory and the Science of Wholeness*. New York: Harper and Row, 1989.
- Gell-Mann, Murray. *The Quark and the Jaguar: Adventures in the Simple and the Complex*. San Francisco: W. H. Freeman, 1994.
- Gleick, James. *Chaos: Making a New Science*. New York: Penguin, 1987.
- Lorenz, Edward N. *The Essence of Chaos*. Seattle: University of Washington Press, 1993.
- Pagels, Heinz R. *The Dreams of Reason: The Computer and the Rise of the Sciences of Complexity*. New York: Simon and Schuster, 1988.

Information as a New Paradigm

Is reality just a massive complex computer program? Can all of reality—atoms, stars, and living things—be reduced down to just bits of information?

In 1948, Claude Shannon (1916–2001), an electrical engineer and mathematician, published “A Mathematical Theory of Communication,” a two-part article in the *Bell System Technical Journal*. Shannon had been attracted to the problem of how to measure noise on a telegraph or telephone line. He developed the idea that any type of communication can be measured if it could be broken down into a series of yes or no questions. Yes or no are only two values, just like true and false in Boolean logic. Shannon coined the term “bit,” for “binary digit,” as a way to represent the answers to these yes or no questions. Any form of communication could be measured in terms of bits. While the title of his paper was about communication, Shannon had really developed a theory of information.

Bits are also the foundation of modern digital computers, where every bit can only have one of two possible values, zero or one. Shannon’s ideas were first used to create techniques in the form of error-correcting codes so that messages could still get through in the correct form even if there was noise on the line. His ideas also helped develop new ways to engage in cryptography, the making and breaking of secret codes.

Within just a few years, Shannon’s ideas were picked up by physicists and used to try to understand the problem of entropy. In thermo-

dynamics, entropy is the idea that any organized system of particles will tend toward disintegration into randomness over time. If you realize that the organization of particles is just information, then entropy is the loss of information. Shannon had already recognized this and included the idea of entropy in his theory, but physicists took the implications of the theory and started to apply it in other areas. From this new point of view, the four-letter sequences found in genes are merely information expressed as physical chemicals, and cells are merely complex forms of information.

In 1997, Stephen Hawking and two other famous physicists made a wager over whether information was forever lost when particles were swallowed by black holes. Black holes are a favorite topic of physicists because they push their equations to the extremes, and the study of this reveals new insights. In 2004, Hawking paid off the wager, having conceded that black holes do not completely destroy information.

In 1992, the term “qubit” was coined, short for “quantum bit.” Taking advantage of the bizarre qualities of quantum mechanics, the qubit can be both partially one or zero. This intellectual leap led to much speculation on building quantum computers that can solve problems that conventional computers cannot solve. This has particular possible utility in cryptography, where present techniques cannot break strong encryption, while quantum computers would be able to do so. Considerable research has been devoted to building an actual quantum computer, but so far the effort remains in the realm of theory.

In the early nineteenth century, the technological development of steam engines led scientists to seek to understand the natural world in terms of energy. The idea of energy, what it was and how it explained different physical phenomena, revolutionized physics. Now the technological development of the digital computer has led scientists to seek a deeper understanding of information and how the idea of information can explain the natural world. It is yet to be seen if the new paradigm of information will be as important as the paradigm of energy two centuries ago.

—Eric G. Swedin

Bibliography

- Seife, Charles. *Decoding the Universe: How the New Science of Information Is Explaining Everything in the Cosmos, from Our Brains to Black Holes*. New York: Viking, 2006.
- von Baeyer, Hans Christian. *Information: The New Language of Science*. Cambridge: Harvard University Press, 2004.
- Wolfram, Stephen. *A New Kind of Science*. Champaign, IL: Wolfram Media, 2002.

> PACIFIC RING OF FIRE

The string of volcanoes that extends from Tierra del Fuego northward along the South and North American continental edge through the Aleutian Islands and then southward past Japan to New Zealand has been characterized as the Pacific Ring of Fire. According to the theory of plate tectonics, the volcanoes as well as related earthquakes are a result of the movement of the crustal plates that make up Earth's surface as they converge, diverge, or pass each other laterally. More than 24,000 miles long in its encirclement of the Pacific basin, the Pacific Ring of Fire is generally defined by the edges of the huge Pacific plate. Along this very active boundary, more than 80 percent of the world's largest earthquakes occur. The Mid-Atlantic Ridge and the Alptide belt extending from Java to the Atlantic are the two other major world seismic regions.

The Pacific Plate with a few other smaller plates create borders of instability as they subduct (or descend) under lighter continental plates. This creates deep oceanic trenches, and melting magma forces its way to the surface in the form of coastal volcanic ranges, as on the western coast of South and Central America and the Aleutians. The collisions can also create island arcs such as the Marianas, the Philippines, part of the Indonesian archipelago, and New Zealand. The San Andreas Fault is a transform fault caused by the Pacific Plate grinding past the North American Plate, which creates massive instability. On the ring's edge are some of the most active volcanoes in the world, including Mount St. Helens, Pinatubo, and Fujiyama.

—Thomas Deaton

Plate Tectonics

In 1915 Alfred Wegener proposed the theory of continental drift. Based on the similarity in land shapes, rocks, and fossils on widely separated landmasses, he postulated that for the last 225 million years the continents had been moving away from the former Pangaea (or supercontinent in which all current landmasses had once been gathered together as one). The idea was revived in the 1970s and renamed Plate tectonics. Plate tectonics theory states that the Earth's rigid outer surface known as the lithosphere is broken into about 22 large and smaller plates that float and move above the asthenosphere, or semimolten layer atop the Earth's mantle. These tectonic plates are irregular slabs of solid rock of varying sizes (the largest are the Antarctic and Pacific plates) and thickness (continental ones may be 120 miles thick and oceanic ones as little as 9 miles thick).

The theory has been used to explain the existence of mountains, deep ocean trenches, earthquakes, and volcanoes. As plates diverge, they create midoceanic ridges such as the one stretching from Iceland into the Indian Ocean or the Great Rift Valley of Africa. Their convergence can create oceanic trenches as heavier plates subduct (descend) under lighter continental ones or can fold up mountain ranges such as the Himalayas when two lighter plates bend as they collide. The San Andres Fault is an example of a transform fault in which the North American and Pacific plates grind past each other. Where the boundaries occur, the instability and tension provide an opportunity for volcanism, earthquakes, and violent movement.

—Thomas Deaton

Bibliography

- Bolt, Bruce A. *Earthquakes*. New York: W. H. Freeman, 1993.
- Davies, Geoffrey F. *Dynamic Earth: Plates, Plumes and Mantle Convection*. Cambridge: Cambridge University Press, 1999.
- Ernst, W. G. *The Dynamic Planet*. New York: Columbia University Press, 1990.
- Ritchie, David. *The Ring of Fire*. New York: New American Library, 1981.
- Rogers, John J. W., and M. Santosh. *Continents and Supercontinents*. New York: Oxford University Press, 2004.

Scarth, Alwyn. *Volcanoes*. London: University College London, 1994.

Sullivan, Walter. *Continents in Motion*. New York: McGraw-Hill, 1991.

Windley, Brian F. *The Evolving Continents*. New York: Wiley, 1984.

Discovery of DNA

In 1962 three molecular biologists were jointly awarded the Nobel Prize in Physiology or Medicine for their work in discovering the structure of the molecule DNA (deoxyribonucleic acid) in 1953. The significance of their achievement was that DNA is the means by which organisms are coded, in terms of both their structure and their function. The result was the birth of a new science—molecular genetics—and a more intimate understanding of life itself.

The three scientists were an American, James Watson; a Briton, Francis Crick; and a New Zealand-born Briton, Maurice Wilkins. They worked on the DNA problem at the University of Cambridge, England, along with a British biophysicist, Rosalind Franklin, who should also have shared the Nobel Prize but died from ovarian cancer in 1958 (the award is not offered posthumously).

In 1943 a Canadian-American team had shown that DNA was responsible for carrying genetic information, but scientists couldn't understand how a simple molecule was able to contain the enormous and varying amounts of information required for coding all of the species of animal and plant comprising life on earth. Thus, the race was on to solve the problem.

As the molecular components for DNA were already identified, it was largely a case of experimentation with models in working out how those components might have fitted together. This process, in itself, revealed that DNA must be a polymer, so its molecular structure was a chain of similar units bonded together. A polymer made perfect sense, because it allowed for indeterminate lengths of DNA molecule, thereby allowing for the information-carrying capacity clearly needed. Franklin's X-ray diffraction pictures of DNA, made in collaboration with Wilkins in the early 1950s at the University of London,

provided important clues to researchers Crick and Watson.

By 1953 the DNA molecule's famous double-helix structure was theorized and then confirmed. The thing that amazed everyone was the beautiful simplicity of the DNA molecule. In essence, it stored genetic information in the form of a double-binary or quadrinary code. This was because it comprised base-pairs, rather like the rungs on a twisting ladder, and each had only four possible chemical combinations: adenine/thymine, thymine/adenine, cytosine/guanine, and guanine/cytosine.

As the coding for all animals and plants comprised sequences of this simple code, it meant that DNA molecules had to be incredibly long to contain sufficient information for building and running even the most primitive organisms. Eventually it was realized that DNA had a trick up its sleeve. It could unzip along its midline so that its base-pairs parted company. This meant that new DNA molecules could easily be constructed by using each half as a jig, or the DNA could convey information by constructing a similar molecule, RNA (ribonucleic acid), to act as a code carrier within cells.

These processes are known as replication and transcription. They are, quite literally, vital processes, as they are behind the phenomenon often described as the life force. They enable organisms to grow and to function. In addition, it is the recombination of DNA coding during reproduction that provides the genetic variety in species to allow for the process of evolution by natural selection. This discovery opened a Pandora's box of possibilities for genetic research and engineering, the implications of which are not yet fully realized.

—Gerard Cheshire

Bibliography

Maddox, Brenda. *Rosalind Franklin: The Dark Lady of DNA*. New York: HarperCollins, 2003.

McElheny, Victor K. *Watson and DNA: Making a Scientific Revolution*. Cambridge, MA: Perseus, 2004.

Human Genome Project

In the mid-1980s, the advent of new gene-sequencing techniques encouraged visionaries

➤ NEANDERTHAL GENOME PROJECT

In the summer of 2008 researchers at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, completed their analysis of the mitochondrial DNA sequence from a 38,000-year-old Neanderthal bone sample. At the same time, they continued to analyze the code for the far lengthier DNA sequencing of the sample bone's cell nucleus. The mitochondrial DNA code has already led these researchers to some conclusions about the evolutionary role of Neanderthals, foremost that it is unlikely that, as has been hypothesized, Neanderthals interbred with the more late-coming ancestors of modern Europeans (early *Homo sapiens sapiens*). Modern European DNA has a much closer match to African than Neanderthal DNA, indicating little or no mixing after the Out of Africa scenario played across Eurasia. The recent data supports earlier conclusions that Neanderthal and modern human's final common ancestry dates back roughly 600,000 years. As the Neanderthal DNA code is further analyzed, the researchers hope to get a further glimpse of Neanderthal lifeways and their variance from that of modern humans.

—Fred Nadis

to begin to promote the idea of sequencing the entire human genome. Individuals at the U.S. Department of Energy (DOE) and National Institutes of Health (NIH) both started to seek funding for such a project. The DOE justified its interest as a continuation of its long-term studies of the effects of radiation on humans and pointed to its experience with multibillion-dollar big science projects. The molecular biologist and Nobel laureate Walter Gilbert (1932–) became an early proponent of the idea and persuaded his fellow Nobel laureate James D. Watson (1928–) of its feasibility.

The Human Genome Project officially began in 1990 as a joint NIH-DOE project, federally funded at \$200 million a year for 15 years. Watson became the first director of the organization, serving until 1992 when the physician Francis Collins took over the job. The project began by sequencing the genomes of simpler organisms, such as *Escherichia coli*, in order to gain experi-

ence and develop better gene-sequencing technologies. Work on the genome of the mouse accompanied intensified work on the human genome. Britain's Wellcome Trust joined the project in 1993, and many other international collaborators joined, with organizations and individuals from over 20 countries contributing. The Internet allowed the collaborators to share and publish their data.

When the project began, scientists knew that the human genome contained about 3 billion base pairs, making up an estimated 50,000 to 100,000 genes. Many of the base pairs are not parts of genes but instead are just debris connecting the double-helix-shaped deoxyribonucleic acid (DNA) molecule together. As the project progressed, scientists were astonished to find that the human genome contained only about 30,000 to 35,000 genes. The project intended to sequence every base pair. The physiologist J. Craig Venter of the National Institute for Neurological Disorders and Stroke disagreed with the conservative sequencing approach of the project, arguing that they should seek out the genes and only sequence them, not everything else. In 1991, a venture capital firm lured Venter away from the NIH to form the Institute for Genomic Research (TIGR).

In 1995, Venter and TIGR announced that they had sequenced the genome of the bacterium *Haemophilus influenzae*, which contained 1.8 million base pairs. They used a shotgun technique, cutting the entire genome into smaller pieces and using powerful computers to match the base pairs at the ends of the fragments. In 1996, the NIH succeeded in sequencing the yeast genome, using their more methodical and more accurate methods. In 1998, Venter raised the stakes by announcing a partnership with the Perkin-Elmer Corporation, which made a sophisticated automated sequencing machine. Venter's new company, Celera Genomics, intended to use 300 of the machines to sequence the entire human genome in just three years for only \$300 million. They planned to publish their results through their own Web site and not the usual GenBank public database and also sought to make a profit from commercial users of the data.

The two projects feuded as their race intensified. A temporary truce allowed the two to

agree to the simultaneous publication of rough drafts of the genome in 2000. In April 2003, the Human Genome Project announced that it had mapped 99.99 percent of the human genome (100 percent was not reachable because people are genetically different from each other), finishing the project in 13 years instead of the originally projected 15 years and coming in under budget at \$2.7 billion. The final genome contained 3.1 billion pairs, making up 35,000 to 40,000 genes. The Sanger Institute in England had done 30 percent of the work, and the political leaders of the United States, the United Kingdom, France, Germany, Japan, and China signed the statement announcing final success. Celera chose not to complete its effort and continued to offer its research via subscription.

Up to 5 percent of the funding for the Human Genome Project was devoted to studies of the ethical, legal, and social issues involved, a unique innovation for a big science project. It is expected that the human genome map will help scientists create new medical treatments. It may also enable the genetic engineering of human beings, stoking fears of a return of eugen-

ics. Besides curing diseases, will people start to modify their own bodies and the bodies of their children?

—Eric G. Swedin

Bibliography

- Bodmer, Walter, and Robin McKie. *The Book of Man: The Human Genome Project and the Quest to Discover Our Genetic Heritage*. Boston: Little, Brown, 1994.
- Davies, Kevin. *Cracking the Genome: Inside the Race to Unlock Human DNA*. New York: Free Press, 2001.
- Kay, Lily E. *Who Wrote the Book of Life? A History of the Genetic Code*. Stanford, CA: Stanford University Press, 2000.
- Kevles, Daniel J., and Leroy Hood, eds. *The Code of Codes: Scientific and Social Issues in the Human Genome Project*. Cambridge: Harvard University Press, 1992.
- Roberts, Leslie. "Controversial from the Start." *Science* 291 (February 16, 2001): 1182–1188.
- Sloan, Phillip R., ed. *Controlling Our Destinies: Historical, Philosophical, Ethical, and Theological Perspectives on the Human Genome Project*. Notre Dame, IN: University of Notre Dame Press, 2000.

■ Introduction: Cold War, Science, and Space

The Soviet Union's successful 1957 launch of the first satellite, Sputnik, as a surprise event during the scientist-planned International Geophysical Year created an international sensation, as journalists and public figures worldwide celebrated humanity's apparent maturing with this new ability to enter the heavens. The launch also stirred consternation in the United States, the Soviet Union's rival in the Cold War. As with the events and posturing of the International Geophysical Year, a conflict and cooperation have been the keynotes of international science during the postwar period.

Rival space programs, in tandem with the building of missiles, nuclear weapons, and other weaponry, were major components of the huge government spending lavished on science and technology during the Cold War. The Soviet Union

created entire science cities in Novosibirsk, Pushchino, and Dubna dedicated to government-prescribed research. The United States created vast networks that involved the military, universities, research facilities, and think tanks.

As with the arts, science, in creating communities of like-minded individuals who must collaborate to succeed, has always offered possibilities for transcending national boundaries and identities. The episode of Lysenkoism in the Soviet Union during which Trofim Lysenko's pseudoscientific theories of botany, which appeared to prop up Stalinist ideology, gained Stalin's backing with devastating results in agriculture and in the scientific community, illustrates the dangers of provincialism in science and the advantage of cooperation. Even well prior to the collapse of the Soviet Union, joint Soviet-U.S. space missions

had become common, culminating in the building of the International Space Station during 1998–2000. Other big science projects with an international component include the development of the multinational CERN particle accelerator in Europe, costly nuclear fusion research facilities, and the Human Genome Project. Fittingly, international concern and studies of global warming rely on data first collected during the International Geophysical Year of 1957.

—Fred Nadis

International Geophysical Year, 1957–1958

The International Geophysical Year (IGY) lasted for 18 months, from July 1, 1957, to December 31, 1958, bringing together most of the globe's nations in a concerted scientific effort to learn more about the planet. Its origins go back to 1950, when several prominent geophysicists met at the home of the American physicist James Van Allen (1914–), and Lloyd Berkner (1905–1967) suggested that another international polar year be organized. (The original International Polar Year [1882–1883] had investigated the Arctic re-

gion. The Second International Polar Year, held 50 years later in 1932–1933, also investigated the Arctic and parts of Antarctica.) Within two years, Berkner's idea became a proposal for an IGY in 1957–1958 under the auspices of the International Council of Scientific Unions (ICSU), a body founded in 1931 to foster international cooperation in science. The United Nations Educational, Scientific and Cultural Organization (UNESCO) began to partially sponsor the ICSU in 1947 and lent its efforts to the IGY. In the United States, the National Science Foundation helped fund the U.S. efforts, with considerable cooperation from the U.S. military, under the auspices of the National Academy of Sciences. The IGY was timed to coincide with the peak of the solar activity cycle, when sunspots and solar flares are more frequent. The Englishman Sydney Chapman (1888–1979) headed the global effort.

The advances in technology during World War II gave scientists radar, sonar, rockets, aircraft, and computers to assist in their more peaceful efforts. The main subjects and tools of the IGY included meteorology, geomagnetism, the aurora and air glow, the ionosphere, solar activity, cosmic rays, longitude and latitude studies, glaciology, oceanography, rockets and satellites, seismology, gravimetry, and nuclear radiation. An IGY committee also coordinated the idea of world days, specific times set aside when scientists at numerous places around the globe make simultaneous measurements, such as during the total solar eclipse on October 12, 1958.

In 1954, an IGY committee agreed to an American plan to launch artificial satellites to orbit Earth as sensor platforms during the IGY. Sergey Pavlovich Korolev (1907–1966), the chief designer of the Soviet ballistic missile program, used the impending IGY to persuade the Soviet government to build a launcher and satellite to preempt the United States. The project was kept secret, and the United States did not even know that a competition was going on until the Soviets surprised the world by launching Sputnik I on October 4, 1957. In their haste to beat the Americans, the Soviets made the first satellite quite simple, with few scientific instruments.

The first successful American satellite, Explorer 1, was launched on January 31, 1958. The satellite discovered zones of radiation around

► CHARLES DAVID KEELING AND GLOBAL WARMING

American chemist Charles David Keeling's (1928–2005) early findings from his research on carbon dioxide at Mauna Loa in Hawaii led to the first warnings in regard to the greenhouse effect and global warming in the 1960s. Dr. Keeling's early research was based on his collection of carbon dioxide samples, through which he established a pattern of increasing levels over time. By 1961, Keeling presented his results using the Keeling Curve to illustrate how carbon dioxide levels were rising over long periods of time, in spite of the response from plant growth in its absorption during certain seasons. This early report led to warnings of the greenhouse effect and its dangers by the mid-1960s. As a result, the Keeling Curve remains an important contribution to the development of understanding the current phenomenon of global warming and its debate among the scientific community.

—Abraham O. Mendoza

Earth, later named the Van Allen Radiation Belts in honor of the creator of the onboard scientific instrument that detected the radiation. Scientists later learned that Earth's magnetic field created these belts of radiation and that the belts helped protect Earth from some of the more harmful effects of solar radiation.

In the run-up to the IGY, explorers swarmed onto Antarctica, setting up dozens of camps and monitoring stations. The naval and military forces of many nations participated in establishing these bases, some of which have remained manned and useful. The IGY also prompted the negotiation of a 1961 Antarctic Treaty, which declared Antarctica the possession of no nation and set the frozen continent aside for scientific study.

A total of 67 nations participated in the IGY with the notable major exception of China, which withdrew from its initial efforts. John Tuzo Wilson (1908–1993), the Canadian geophysicist who later played an important role in the theory of Plate tectonics, was president of the International Union on Geodesy and Geophysics during the IGY and played an important leadership role. China invited him to visit them during the IGY, and he gained some limited informal cooperation. Measurements of geomagnetism on the ocean floors during the IGY contributed to the development of the theory of plate tectonics in the 1960s. Eighty-six vessels participated in measurements of the planet's oceans and seas.

Scientists began the systematic monitoring of the planet's ozone layer during the IGY, creating an important base of information when chlorofluorocarbons became an important environmental issue in the 1970s. The fallout from open-air nuclear testing was also more carefully monitored during the IGY, leading to alarm over the higher than expected levels and contributing to the creation of an open-air test ban treaty in 1963 between the United States and the Soviet Union.

The IGY was followed by the International Geophysical Co-operation of 1959, which allowed the organized tapering off of IGY activities. Many organizations and efforts, such as those in Antarctica, continued after the IGY on a reduced scale, and the organizational effects of the IGY are still felt today. Both the Americans and Soviets embarked on vigorous space programs as part of their Cold War ideological struggle. The

IGY also inspired other smaller-scale efforts, such as the International Years of the Quiet Sun (1964–1965) and the International Decade of Ocean Exploration (1970–1980). Among the efforts directly sponsored by the ICSU was the International Biological Programme (1964–1974).

—Eric G. Swedin

Bibliography

- Chapman, Sydney. *IGY: Year of Discovery*. Ann Arbor: University of Michigan Press, 1959.
- Eklund, Carl R., and Joan Beckman. *Antarctica: Polar Research and Discovery during the International Geophysical Year*. New York: Holt, Rinehart and Winston, 1963.
- "International Geophysical Year." <http://www.hq.nasa.gov/office/pao/History/sputnik/siddiqi.html>.
- Sullivan, Walter. *Assault on the Unknown: The International Geophysical Year*. New York: McGraw-Hill, 1961.
- Wilson, John Tuzo. *IGY: Year of the New Moons*. New York: Knopf, 1961.

The Hydrogen Bomb and the Politics of Fallout

During World War II, émigré scientists in the United States, including German Jewish physicist Albert Einstein, learned of National Socialist Germany's atomic weapons development program and urged that the United States develop



The first U.S. hydrogen bomb, known as "Mike," is tested in the Pacific Ocean at Eniwetok Atoll, Marshall Islands, on November 1, 1952. (U.S. Air Force)

► BIKINI ATOLL

Bikini Atoll, the northernmost atoll of the Marshall Islands, was used as a test site for nuclear and thermonuclear explosions by the United States between 1946 and 1958. More than any other test site, Bikini came to public attention with media coverage in 1946. The Operation CROSSROADS tests of 1946 demonstrated the might of atomic explosions on vessels located in the lagoon and brought the mushroom cloud to the public eye. Much discussed during that year, the tests inspired Louis Réard to name his new bathing costume design after the atoll.

Bikini achieved notoriety in 1954 when radioactive fallout from Castle Bravo, the first of a hydrogen bomb test series, contaminated a much larger area than expected, making the nearest atolls—Rongelap and Ailinginae—uninhabitable for years. The native population suffered from radiation sickness, as did the crew of the *Lucky Dragon*, a Japanese fishing boat cruising outside the security area. The U.S. administration received much criticism for its attempt to belittle the implications of fallout on the Marshall Islanders and the Japanese fishermen. Nuclear tests became a major issue of public concern and of international politics, leading to test moratoria in the 1950s and finally to the Limited Nuclear Test Ban Treaty, signed by the United States, the Soviet Union, and Great Britain in 1963.

The four test series conducted at Bikini left the atoll contaminated and uninhabitable. The population of Bikini, which was evacuated in 1946, has not yet been able to return permanently to the islands.

—Ulrike Wunderle

similar weapons. Their warning led to the Manhattan Project, a massive undertaking in which the world's first atomic weapons were produced and used in 1945. As early as January 1944 Edward Teller, one of the Manhattan Project scientists, believed that the fission weapons being developed in the New Mexico desert were not powerful enough. Teller began to theorize a far more powerful thermonuclear device that would rely on an atomic bomb to ignite and trigger a fusion reaction of hydrogen.

After the successful Trinity plutonium fission bomb test and the bombings of Hiroshima and Nagasaki in 1945, the arms race with the Soviet Union began in earnest. The Soviet Union successfully detonated its first atomic bomb in 1949. With this Soviet success as a backdrop, in the United States Teller again began to make his case for the hydrogen bomb. Despite the opposition of 12 of the leading physicists in the United States, including Robert Oppenheimer who had headed the Los Alamos laboratory for the Manhattan Project, in January 1950 U.S. president Harry Truman approved the development of the hydrogen bomb. The successful design involved placing a fission bomb within a larger casing. The intense radiation from the fission reaction would begin the fusion reaction, releasing even greater energy. The first American electronic computer, the U.S. Army's ENIAC (Electronic Numerical Integrator and Computer), aided Teller and others in the planning. Approximately three years after Truman's initiative, on November 1, 1952, the United States detonated its first hydrogen bomb, "Mike," on the South Pacific Eniwetok Atoll. Within a year, under the guidance of the scientist Andrei Sakharov, on August 12, 1953, the Soviet Union successfully detonated its own hydrogen bomb. The Soviet Union's hydrogen bomb had been several years in the planning. Sakharov, later to become one of the Soviet Union's leading political dissidents, was given the Stalin Medal and named a Hero of Socialist Labor.

The global public slowly learned of the dangers of nuclear weapons and radioactive fallout. A U.S. H-bomb test on the Bikini Islands in July 1954 inadvertently exposed the crew of a Japanese fishing ship, the *Lucky Dragon Number Five*, supposedly well outside the danger zone, to atomic fallout. All of the crew sickened immediately, and at least half of the 23-person crew eventually died from complications probably related to exposure. Other fallout-related health problems were reported for populations on other atolls in the Marshall Islands near Bikini. News of the *Lucky Dragon* incident infuriated the Japanese public; a protest group there quickly gained 20 million signatures on a petition urging the banning of nuclear weapons.

Similar protests developed in Western nations. In 1955 Einstein and Bertrand Russell co-

signed a manifesto urging a ban on nuclear weapons. In the manifesto they stressed the dangers of fallout, noting that “it is feared that if many H-bombs are used there will be universal death, sudden only for a minority, but for the majority a slow torture of disease and disintegration.” In 1957, two years later, 22 scientists gathered at the Pugwash Conference in Nova Scotia and issued a statement urging the governments of the world to renounce warfare. In that same year the first protests were staged at the Nevada atomic test site outside of Las Vegas, and the Committee for a Sane Nuclear Policy (SANE) was organized. In the spring of 1957 Australia refused to allow Great Britain to explode a test hydrogen bomb in Australia, and Britain instead chose Christmas Island for its first test. In 1958, more than 11,000 scientists signed a petition presented to the United Nations to end nuclear testing. By the late 1950s Sakharov also began writing of the dangers of nuclear fallout and of atmospheric tests.

Others insisted that nuclear war was indeed an option and that the nuclear weapons race ensured deterrence. Herman Kahn, the RAND Corporation strategist and polymath, published *On Thermonuclear War* (1960), which argued that a thermonuclear war was winnable; his book also provided different scenarios for nuclear war and its aftermath. Civilization, he argued, could survive. “War,” he commented, “is horrible. There is no doubt about it. But so is peace. To some extent, the horrors of war are only an increase or intensification of some of the familiar horrors of peace.”

In 1963 after the nuclear brinkmanship of the Cuban Missile Crisis, the United States and the Soviet Union signed the Partial Test Ban Treaty ending aboveground nuclear bomb tests. In 1968 Sakharov distributed his own manifesto urging peace between the Soviet Union and the West.

—Fred Nadis

Bibliography

- Diehl, Sarah J., and James Clay Moltz. *Nuclear Weapons and Nonproliferation*. Santa Barbara, CA: ABC-CLIO, 2002.
- Hewlett, Richard G., and Oscar E. Anderson Jr. *The New World, 1939–1946*. 1962; reprint, Berkeley: University of California Press, 1990.

- Hewlett, Richard G., and Jack M. Holl. *Atoms for Peace and War, 1953–1961: Eisenhower and the Atomic Energy Commission*. Berkeley and Los Angeles: University of California Press, 1989.
- Kaplan, Fred. *The Wizards of Armageddon*. New York: Simon and Schuster, 1983.
- Moss, Norman. *Men Who Play God: The Story of the H-Bomb and How the World Came to Live with It*. New York: Harper and Row, 1968.
- Rhodes, Richard. *Dark Sun: The Making of the Hydrogen Bomb*. New York: Simon and Schuster, 1995.
- Wittner, Lawrence. *Resisting the Bomb: A History of the World Nuclear Disarmament Movement, 1954–1970*. Stanford, CA: Stanford University Press, 1997.

Nuclear Weapons Strategy

The development of nuclear weapons after the end of World War II by the major antagonists of the Cold War and their respective allies led to the establishment of specific strategies in dealing with the threat of their use by the other side. Both the United States and the Soviet Union developed huge stockpiles of these weapons from the late 1950s to the 1980s in addition to intricate delivery systems. The threat of using nuclear weapons as a deterrent, ensuring that the other side would respond in kind, known as Mutual Assured Destruction (MAD), was seen as a means to prevent full-scale nuclear war. However, both sides also sought to outmaneuver the other by circumventing this arrangement through the development of newer weapons systems capable of overwhelming the other side’s nuclear weapons.

At the end of World War II the United States held a monopoly on nuclear weapons, which at this time were atomic weapons and had been used to bomb Hiroshima and Nagasaki in August 1945. This monopoly ended in 1949 with a successful Soviet experiment of its first atomic bomb. This led to the United States developing thermonuclear weapons (hydrogen bombs), exponentially more destructive than atomic weapons, by 1952. The Soviet Union successfully tested its own the following year.

Initially, nuclear strategy relied on dropping such weapons from large bomber aircraft, such as the U.S. B-29 Superfortress. The policy of massive retaliation, supported by the Dwight D.

➤ NUCLEAR PROLIFERATION AND NONSTATE ACTORS

Over the past decade, speculation has increased that global terrorist networks, such as al-Qaeda, are working toward purchasing nuclear devices or materials necessary for their construction. The increasing amount of missing sources of depleted or active uranium and plutonium, particularly from Russia, has led many intelligence agencies and government ministries the world over to voice concerns about the growing threat that a nonstate actor might now have a viable weapon. The use of an actual nuclear device or a dirty bomb (made from depleted radioactive material) in a major urban area is a genuine fear given the number of cases in which individuals, among them Russian mafia and Muslim extremists, have been apprehended with or trying to purchase such material. This contrasts with past fears of nuclear annihilation from an actual nation-state exercising its military capability. Nonstate actors with radical political and religious ideologies, acting clandestinely and with no warning and few scruples, offer a new threat for nuclear warfare in the twenty-first century.

—Abraham O. Mendoza

Eisenhower administration, aimed at a first strike against the Soviet Union in case of an attack on Western Europe, relied primarily on the delivery of nuclear devices through bombers. However, as both sides developed huge stockpiles of nuclear weapons and newer delivery systems such as missiles and long-range bombers, such a strategy seemed less effective. While tactical nuclear weapons (for use in the battlefield) continued to be developed, those geared toward the destruction of enemy nuclear weapons deployment and population centers became the standard.

Through the late 1950s to the 1980s, MAD (or nuclear deterrence) structured a nuclear war into two stages, the first strike and the second strike. The first strike would be a first attack by one of the major antagonists on the other. The second strike would be when the attacked state would respond in kind. Given this scenario, both states would be utterly destroyed after this nuclear engagement. According to this paradigm,

a nuclear war would be so devastating and destructive that it would be avoided by both sides. However, if one of the antagonists had the capability of a first strike in which the attacked state's ability for a second strike was destroyed, then it would ensure that the balance of MAD was circumvented.

Circumventing MAD led to the development of more intricate and complex nuclear delivery systems such as clandestine missile silos, intercontinental ballistic missiles (ICBMs), antiballistic missiles (ABMs), submarines equipped with missiles, and long-range bombers. The United States developed the Multiple Independently Targetable Reentry Vehicle (MIRV) as a weapons system specifically designed to circumvent MAD. One ICBM would hold many MIRV warheads that would deploy independently from the missile, thereby destroying enemy targets and nuclear capabilities in a first strike and preventing a second strike. Another means for circumventing MAD was the establishment of the nuclear triad strategy, which meant having a nuclear arsenal of three major delivery components. In both the United States and the Soviet Union, this triad included strategic long-range bombers, silo-launched land missiles, and submarines armed with ballistic missiles. In the event that one or even two of these components were destroyed in a first strike, the third leg of the triad would remain and ensure a second strike by the attacked state.

The end of the Cold War in 1991 lessened the immediate danger of global nuclear war and ended the stalemate between the superpowers. At the end of the Cold War, both the former Soviet Union (including Russia and other break-away republics) and the United States drastically reduced the amount of deployed nuclear weapons, eliminating huge stockpiles of such weapons systems en masse. However, the danger of nuclear weapons or materials necessary for their construction falling in the hands of nonstate actors or being developed by rogue states offers a new threat for a post-MAD world.

—Abraham O. Mendoza

Bibliography

Gaddis, John Lewis. *The Cold War: A New History*. New York: Penguin, 2007.

McMahon, Robert J. *The Cold War: A Very Short Introduction*. New York: Oxford University Press, 2003.

Atomic Power and the World's Navies

The U.S. Navy pioneered the use of atomic power for naval propulsion through the development of nuclear-powered submarines in the late 1940s and early 1950s. Admiral Hyman G. Rickover, known as the “Father of the Nuclear Navy,” was in charge of the design and construction of USS *Nautilus*, the world’s first nuclear-powered submarine, that was launched in 1954. The use of nuclear propulsion expanded to include aircraft carriers as well as submarines in the navies of the Soviet Union, the United Kingdom, France, and China. The use of nuclear-powered naval vessels peaked at the end of the Cold War in 1989, although significant numbers remained in operation or production at the beginning of the twenty-first century.

In 1945 many naval analysts saw atomic power as the solution to the problem of the true submarine. Prior to nuclear propulsion, submarines used diesel-powered engines for power while running on the surface and electric batteries while submerged. As a consequence, a submarine could remain submerged only as long as its batteries retained their electrical charge. A submarine needed to surface in order to use its diesel engines and recharge its batteries, a requirement that limited the submarine’s ability to avoid detection by the enemy over the long term. Nuclear propulsion promised to provide a submarine with the ability to remain submerged indefinitely. In simplest terms, a nuclear reactor produces heat that is used to generate steam, which drives a steam turbine for propulsion. Unlike the diesel engines on older submarines, a nuclear reactor required neither fresh air nor a means to exhaust fumes, and therefore the time that a nuclear-powered submarine remained submerged was limited only by its ability to keep the internal air oxygenated and the crew supplied. A nuclear-powered submarine promised to run out of food before it ran out of fuel.

By 1989 there were more than 400 nuclear-powered submarines in service or under construction. With the end of the Cold War and the

➤ RUSSIAN SUBMARINE *KURSK*



The crew of the Soviet nuclear submarine Kursk stands on its rear deck on June 30, 2000. The vessel sank in the Barents Sea in August, killing 180 crew members. (Reuters/Corbis)

In August 2000 the nuclear-powered Russian submarine *Kursk* sank in the Barents Sea as a result of damage sustained from two explosions in its forward torpedo room, the second of which registered on seismographs across Northern Europe. All 118 members of the crew died despite rescue attempts by teams from Norway and the United Kingdom. A Dutch team later raised the *Kursk*, and the official investigation determined that problems with experimental torpedo warheads caused the first explosion, which in turn detonated surrounding warheads in a blast equivalent to three to seven tons of TNT.

While contemporary observers viewed the incident as emblematic of the state of the post-Soviet Russian navy, the loss of the *Kursk* ironically took place during the largest summer drill for the Northern Fleet since the breakup of the Soviet Union. The *Kursk*, commissioned in 1994, was the last of the large (four stories high and more than 500 feet long) Oscar II-class attack submarines designed and approved by the Soviet Navy. During the 1990s many Russian submarines were left to rust in docks along the Barents Sea, and sailors went years without being paid. Although a successful reconnaissance mission in the Mediterranean by the *Kursk* in 1999 signaled renewed military investment, the loss of the submarine rekindled doubts about the post-Cold War prowess of the Russian Navy.

—Jonathan Hagood

subsequent reduction in weapons programs, defense spending, and the size of the navies of the United States and the former Soviet Union, the one-time adversaries scrapped or canceled production of more than half of these submarines. Beginning in 1950 the Soviet Union had built 248 nuclear submarines and 5 naval surface vessels. Russia's post-Soviet navy operated around 60 vessels with nuclear propulsion. By 1993, the U.S. Navy had accumulated more than 5,400 accident-free reactor years. Its post-Cold War navy included more than 80 nuclear-powered ships. The French and British navies included nearly 20 nuclear-powered submarines each at the height of the Cold War, and China launched less than 10 nuclear-powered submarines in the last two decades of the twentieth century.

Nuclear navies also included aircraft carriers. In 1960 the United States launched the first nuclear-powered aircraft carrier, USS *Enterprise*, that was powered by 8 reactor units. By 2005 the U.S. Navy included 20 nuclear-powered Nimitz-class supercarriers. The Soviet Union maintained nuclear-powered helicopter carriers during the 1970s and 1980s. In 2001 the French Navy commissioned its first nuclear-powered surface ship, the aircraft carrier *Charles de Gaulle*. Nuclear-powered aircraft carriers had the advantage of providing more fuel storage space for its aircraft and support ships.

—Jonathan Hagood

Bibliography

- Duncan, Francis. *Rickover and the Nuclear Navy*. Annapolis, MD: Naval Institute Press, 1990.
- Gardiner, Robert, ed. *Navies in the Nuclear Age*. Annapolis, MD: Naval Institute Press, 1993.
- Simpson, John W. *Nuclear Power from Underseas to Outer Space*. La Grange Park, IL: American Nuclear Society, 1995.

Big Science through the Cold War

“Big science” is a phrase used to describe a pattern of large-scale funding for large-scale scientific research that first emerged during World War II. Prior to this period, scientists often worked individually, in independent laboratories, or in small networks of interrelated research centers. During World War II, however, U.S. gov-

ernment officials organized large numbers of research scientists and technicians for the purposes of developing the first atomic bomb. This effort, called the Manhattan Project, involved over a dozen Nobel laureates and cost approximately \$2 billion. The institutional relationships forged during the war facilitated the continuation of big science activities throughout the Cold War. Not all scientists welcomed the shift toward big science with the qualities that came with it: the focus on funding, expanding layers of administration in science, and, in the early years, its relationship with weapons-related research, as atomic bomb development gave way to hydrogen bomb development and later the neutron bomb.

Through weapons-related research, academic scientists established vital connections with military and industrial interests as well as governmental support that allowed for a wide range of research. Federal funding of university-based scientific research increased from \$1.3 billion in 1963 to \$10 billion in 1989 when, as most scholars suggest, the Cold War ended. While physicists received a disproportionate amount of attention, others in the physical, biological, and social sciences gained from the expansion of big science. American research laboratories that supported their labors include the Oakridge National Laboratory, the Brookhaven National Laboratory, and the National Institutes of Health as well as university-housed and federally supported centers such as the Stanford Research Institute, MIT's Lincoln Laboratory, and the University of Chicago's Argonne National Laboratory.

During the Cold War era, the Soviets established large science cities in Novosibirsk, Pushchino, Dubna, Obninsk, and elsewhere that employed thousands of researchers who worked together on big science projects. Whatever the pursuit or discipline in question, big science typically came with a culture and infrastructure. The culture has typically leaned toward the industrial and bureaucratic rather than the academic and independent. Bigness in Soviet science translated into an industrial-styled organization of the largest community of scientists in the world, with a highly centralized bureaucracy, that was directed by a small corps of powerful leaders.

Although tensions prevailed between superpowers during the Cold War, American and Soviet scientists collaborated on several occasions, including the International Geophysical Year (IGY) studies of 1957–1958 and missions to space. The IGY involved scientists from 67 countries. Their work coordinated global observations in meteorology, oceanography, glaciology, and many other areas. The IGY yielded the collection of novel scientific data, the launching of satellites, and the Antarctic Treaty that required countries to recognize the continent as an international territory for science research. U.S.-Soviet cooperation in space came largely after a period of intense competition over the race to the moon that ended in 1969. In the 1970s, following America's lunar landing, U.S.-Soviet cooperation began with the Apollo-Soyuz Test Project (ASTP). The project tested compatible docking systems between their spacecrafts and facilitated peaceful space exploration agreements between the two nations. Collaborations slowed during the 1980s, as frosty relations developed after the Soviet invasion of Afghanistan, but were revived in the 1990s with the design and development of the International Space Station and \$650 million in NASA commitments to collaborate with Russian science organizations.

Common to all big science projects is the expensive equipment or the large grants necessary for conducting grand-scale studies. In the case of physics, accelerators require large amounts of space and power and large staffs to run research studies on elementary particles. The Fermi National Accelerator Laboratory (United States) and the multinational CERN (European Union) represent two such examples of big physics facilities. In the case of the biological sciences, the Human Genome Project received extensive funding from the American National Institutes of Health and the Department of Energy. Hundreds of millions of dollars, thousands of scientists, and hundreds of centers throughout the world contributed to the big biology sequencing of the code during 1990–2003. Eighty percent of the research and support for the project came from the United States and Europe, along with 5 percent from Japan.

With the end of the Cold War came a shift in support for big science, particularly in the area

➤ ENHANCED RADIATION WEAPONS—NEUTRON BOMB

More commonly known as the neutron bomb, the enhanced radiation weapon (ERW) was a tactical nuclear weapon designed in the United States with the intention of only destroying life while minimizing property damage. An ERW is designed to release energy as neutron radiation, which has lower explosive power than thermonuclear weapons but is still capable of annihilating enemy troops. The concept was originally conceived in 1958 at the Lawrence Livermore National Laboratory in California and was first tested in 1963. President Jimmy Carter halted development in 1978, but it was continued by President Ronald Reagan in 1981. Eventually, with the end of the Cold War in 1991, the project was discontinued, and the weapons were eventually dismantled. While devised as weapons to minimize infrastructural damage (and thus eliminate the widespread destruction associated with nuclear weapons), they still illustrate the employment of big science to develop weapons of mass destruction in the midst of the Cold War.

—Abraham O. Mendoza

of high-energy physics, as evidenced in the mid-1990s in the U.S. decision not to fund the creation of a superconducting supercollider. At around the same time interest shifted toward nanotechnology, research on elements as small as 1 billionth of a meter, with the National Nanotechnology Initiative begun in 2000 and American government funding in this area approaching \$1 billion annually.

—A. J. Angulo

Bibliography

- Graham, Loren. "Big Science in the Last Years of the Big Soviet Union." *Osiris* 7 (1992): 49–71.
- Hayakawa, Satio, and Morris Fraser Low. "Science Policy and Politics in Post-War Japan: The Establishment of the KEK High Energy Physics Laboratory." *Annals of Science* 48 (1991): 207–229.
- Justo, Luciene Fernandez, and Gildo Santos. "The Otto Hahn Nuclear Ship and the German-Brazilian Deals on Nuclear Energy: A Case Study in Big Science." *Journal of the International Committee for the History of Technology* 6 (2000): 21–49.

➤ TROFIM LYSENKO

The biologist Trofim Denisovich Lysenko promoted a theory of non-Mendelian genetics that found favor in the Stalinist Soviet Union and distorted the science of biology in that country for decades. Born to peasants in Karlovka, Ukraine, in the old Russian empire, Lysenko earned a doctorate of agricultural science in 1925 from the Kiev Agricultural Institute and then worked at the Gyandzha Experimental Station in the Caucasus until 1929, when he moved to the Ukrainian All-Union Institute of Selection and Genetics in Odessa.

A well-known figure in Soviet agriculture, the plant breeder Ivan V. Michurin (d. 1935), argued that plants adapt to their environmental conditions by acquiring the characteristics that they need. This revival of Lamarckianism was more compatible with Marxist ideology than was Mendelian genetics. Lysenko adopted the ideas of Michurin as his own and promoted what he called vernalization, a technique that he claimed would convert winter wheat seeds to spring wheat seeds by simply freezing the seeds. He claimed that his new seeds would dramatically increase wheat yields.

Supported by the Soviet leader Josef Stalin (1879–1953), Lysenko became a powerful Soviet bureaucrat. From 1935 to 1938, he was the scientific director and then the director at the Odessa institute. From 1940 to 1965, Lysenko directed the Institute of Genetics of the Academy of Science of the USSR and served as president of the powerful V. I. Lenin All-Union Academy of Agricultural Sciences. As the effective dictator of Soviet agricultural science, Lysenko wielded his power ruthlessly. Soviet scientists who did not support his ideas found themselves unemployed. Some Soviet scientists who disagreed with Lysenko died from either execution or starvation after being arrested and taken into custody. At one point, at the height of his power, Lysenko claimed that wheat planted in a hostile environment would convert to rye.

Lysenko survived even though widespread adoption of his ideas led to agricultural failures. After Stalin's death in 1953, Lysenko's power declined. In 1964, after changes in the Soviet leadership, Lysenko was finally completely discredited and exiled to a remote agricultural station, though it took even more time for the effects of his regime to fade.

—Eric G. Swedin

Kevles, Daniel. *The Physicists: The History of a Scientific Community in Modern America*. Cambridge: Harvard University Press, 1995.

Moody, Glyn. *Digital Code of Life: How Bioinformatics is Revolutionizing Science, Medicine, and Business*. Hoboken, NJ: Wiley, 2004.

Biology in China since 1945

The state of Chinese biology changed drastically when the Chinese Communist Party (CCP) took over the government in 1949. During the earlier Republican period, many Chinese biologists had studied genetics in the United States under Thomas H. Morgan, first at Columbia and, after 1928, at Caltech. Upon returning to China, most of these biologists established themselves in Yenching University. Meanwhile, a more formal network materialized between the University of Nanking and Cornell University, then the leading institution in plant genetics in the world. The development of both networks was largely assisted by the financial contributions from the Rockefeller Foundation and the China Foundation for the Promotion of Education and Culture.

In early Maoist China, the intellectual patterns of the scientific community were significantly shifted by the new surrounding political forces. The majority of life scientists followed the prevailing policy of the time: “learning from the Soviet Union.” This led to a sharp separation between two groups of Chinese geneticists: the newer generation of Lysenkoists whose influence began to dominate and the older generation of Morganists. Trofim D. Lysenko, a favorite of Josef Stalin, rejected the Mendel-Morganist theoretical framework of the gene in favor of a modified theory, much like the earlier theories of Jean Baptiste Lamarck, which proposed the inheritance of acquired, or learned, traits. Lysenko's neo-Lamarckian doctrine was proclaimed by Stalin and the Central Committee of the Russian Communist Party as a true Marxist biology. Between 1949 and 1956, Russian scientists who visited China also helped promote Lysenko's biological views. In this period, doctrines and teachings associated with Morgan were heavily criticized and forbidden. For example, the famous Republican geneticist Tan Jiazhen, who studied

with Morgan at Caltech in the 1930s under the sponsorship of the Rockefeller Foundation, published no papers between 1950 and 1963.

The Qingdao Symposium of August 1956 in China reopened communications between the Lysenkoists and the Morganists. The symposium was preceded by two important political events in the Soviet Union that greatly altered Lysenko's status in 1955 and 1956. First, Nikita Khrushchev gradually took control of the Soviet Union after Stalin's death. As a result, Stalin was openly criticized at the Twentieth Party Congress in February 1956. Second, by the end of 1955, hundreds of people had signed a petition that requested Lysenko's removal from the presidency of the Lenin Academy of Agricultural Science. Lysenko stepped down in April 1956. These events led to the CCP leaders' critical reevaluation of Lysenkoism and its application in the Chinese context. Mao Zedong's Double-Hundred proposal—"Let a hundred flowers blossom and a hundred schools of thought contend"—enabled the Morganist school of biological thought to be discussed publicly again. Following the Qingdao Symposium, the Morganists gained a firmer footing in China. At Fudan University, for example, Tan Jiazhen was able to establish a Genetics Institute that became the counterforce to the Chinese Academy of Sciences (CAS) Genetics Institute, which was still dominated by the Lysenkoists in the early 1960s.

During the Cultural Revolution (1966–1976), intellectuals were repressed in China to the detriment of science and technology, and both the Lysenkoist and the Morganist groups suffered. By the early 1980s, as the worldwide focus in the life sciences shifted to biotechnology and genetic engineering, a new CAS unit, the Developmental Biology Institute, opened in Beijing in October 1983, followed by the CAS Genetics Engineering Laboratory in 1984. In Shanghai, the institute on genetics research that Tan opened in the early 1960s at Fudan University also metamorphosed into a leading biotechnology unit in the country; meanwhile, other scientists such as Wang Zhiya and Luo Deng were involved in developing the comprehensive Shanghai Center for Biotechnology, another new CAS branch. All of these organizations directly benefited from newly es-

tablished centralized agencies for science policy and funding, such as China's National Natural Science Foundation of China.

—Howard Hsueh-Hao Chiang

Bibliography

- Bowers, John, William Hess, and Nathan Sivin, eds. *Science and Medicine in Twentieth-Century China: Research and Education*. Ann Arbor: Center for Chinese Studies, University of Michigan, 1988.
- Li, Peishan. "Genetics in China: The Qingdao Symposium of 1956." *Isis* 79 (1988): 227–236.
- Schneider, Laurence A. *Biology and Revolution in Twentieth-Century China*. Lanham, MD: Rowman and Littlefield, 2003.
- Simon, Denis Fred, and Merle Goldman, eds. *Science and Technology in Post-Mao China*. Cambridge: Harvard University Press, 1989.

The Age of Space and the Rise of Rocketry

Rocket technology dates back to at least 1000 CE in India and Southwest Asia and may well be older. Indian armies used rockets against British invaders in the wars of the late eighteenth century, and the British in turn refined the technology and reintroduced it to Western Europe, where rocketry had been moribund since the Renaissance. Rockets fueled by black powder were pushed to the limits of their capabilities during the next half century and were widely used in Europe for war, signaling, and lifesaving at sea. By the last third of the century, however, rocket makers had exhausted the possibilities of black powder as a fuel, and rocket technology stagnated again. The next major breakthrough—the development of liquid fuels in the 1920s and 1930s—set the stage for a quantum leap in rocket performance and brought outer space (at least theoretically) within reach.

The first serious work on liquid fuel rockets was carried out by Robert H. Goddard, a professor of science at Worcester Polytechnic Institute, in the 1920s. Like his counterparts Konstantin Tsiolkovsky in Russia and Hermann Oberth in Germany, Goddard had analyzed the physics of rocket propulsion and took a particular interest in space travel. Unlike them, Goddard was also a

SPACE FLIGHT

- 1900–1925—Konstantin Tsiolkovsky, Robert Goddard, and Hermann Oberth independently develop plans for liquid-propellant rockets.
- 1926—Goddard builds and flies the first liquid-propellant rocket.
- 1925–1940—Amateur rocket societies founded in the United States, the USSR, and Germany test technologies used in wartime rockets and missiles.
- 1944–1945—Germany deploys the world's first guided missile, the V-2.
- 1957–1958—First artificial satellites launched; space race begins.
- 1961—First manned spaceflights launched by the USSR (April) and the United States (May).
- 1965—France becomes the first nonsuperpower to launch its own satellite.
- 1967—First test flight of the Saturn V.
- 1969–1972—Project Apollo lands six two-man spacecraft on the Moon in seven tries.
- 1972—President Richard Nixon announces the space shuttle program.
- 1973 (January)—The USSR abandons its manned lunar landing program.
- 1973 (May)—First flight of the Soyuz-U launch vehicle, still in use as of 2007.
- 1979—First flight of the Ariane launch vehicle.
- 1981—First orbital test flight of the space shuttle.
- 1986—Loss of the space shuttle Challenger.
- 1993—International Space Station proposed; formal U.S.-Russian cooperation in space begins.
- 2003—Loss of the space shuttle Columbia.
- 2004—SpaceShip One becomes the first privately funded vehicle to fly in space.
- 2010 (projected)—Completion of the International Space Station and retirement of the space shuttle.

talented engineer who could translate his theoretical insights into a series of rockets that he built and tested himself. Their published work inspired and guided a new generation of rocket designers, and active rocket societies arose in Germany, the United States, and the Soviet Union during the 1930s. The leaders of those chronically underfunded amateur societies became, during World War II, the leaders of well-funded

military research programs. The most successful of them was Wernher von Braun, a protégé of Oberth, who developed for the Nazis the world's first successful ballistic missile, the V-2.

Both the United States and the Soviet Union had well-developed wartime rocket programs, but both countries built their postwar rocket programs around captured V-2 technology. Both began by experimenting with German V-2s that had been captured intact or assembled from captured parts, then developed their own modifications of the basic V-2 design. Well into the 1950s, the most advanced missiles in the arsenals of both superpowers were straightforward elaborations of von Braun's 1944 design. The two superpowers pursued rocket research in order to enhance their military power—missiles, unlike manned bombers, could not be shot down—but both nations also adapted military missiles to carry out scientific research on the upper atmosphere. Scientific research beyond the atmosphere, in outer space, became possible with the development of intercontinental ballistic missiles in the late 1950s. A missile powerful enough to loft a nuclear warhead halfway across the world, such as the American Atlas or the Soviet R-7, was equally capable of putting a satellite in orbit.

The first satellites, the Soviet Sputnik I launched in November 1957 and the U.S. Explorer I, launched in January 1958, were launched as part of the International Geophysical Year. Others followed in rapid succession, and within four years both superpowers had launched their first manned spacecraft and dispatched their first robot probes to other planets. The rockets used for such launches continued to be adapted from military missiles, but by the early 1960s rocket development had reached a crossroads. The diminishing size and weight of nuclear warheads meant that neither superpower needed missiles more powerful than those already in production. At the same time, however, both superpowers were committing themselves to ambitious manned space programs that did require larger and more powerful launch vehicles. The success of Project Apollo, the American lunar landing program, rested on the success of the Saturn family of launch vehicles that propelled its spacecraft first into Earth's orbit and later to the Moon. The failure of the Soviet lunar landing

was largely due to the premature death of chief designer Sergei Korolev and his successors' inability to produce a reliable heavy-lift booster.

After the race to the moon ended, the Soviet space program fell back on established well-tested designs such as the UR-500 Proton and the R-7 Soyuz. Continually refined and upgraded, these workhorse boosters made hundreds of successful launches and, after the collapse of the Soviet Union in 1991, became the basis of Russia's state-run satellite-launch business. The leaders of the American space program, faced with rapidly shrinking budgets, spent the 1970s developing a partially reusable space shuttle that (they believed) would substantially lower the cost of putting payloads into orbit and ultimately would render traditional single-use launch vehicles obsolete. First flown in April 1981, the shuttle never came close to achieving the high flight rates and low operating costs that its backers had promised. Attempts to make good on those promises led to the Challenger disaster of January 1986, which killed seven astronauts and grounded the program for two and a half years. When the shuttle began flying again in September 1988, it was as a platform for scientific experiments and (as the International Space Station took shape) heavy construction, not as a cargo hauler.

The United States and the USSR had, by the late 1980s, long since ceased to be the world's only space-faring nations. France launched a satellite into Earth's orbit on a booster of its own design in 1965; Japan, China, and Great Britain followed in quick succession in 1970–1971. India, Israel, and Iraq joined the list in the 1980s. The European Space Agency (ESA)—formed jointly by France, Britain, and West Germany in 1975—went on to develop its own family of launch vehicles (the Ariane series, first flown in 1979) and its own program of scientific missions. The ESA also established a commercial arm, Arianespace Corporation, to market its satellite-launching services to other companies and non-space-faring countries. The commercial success of Arianespace helped to lay the groundwork for more recent projects backed entirely by private funds. The most successful of these has been Scaled Composites in Mojave, California, founded by engineer Burt Rutan and backed by computer bil-

lionaire Paul Allen. The company made the world's first privately funded spaceflights in 2004 and formed an alliance with Sir Richard Branson's newly founded space tourism company, Virgin Galactic, the same year.

—A. Bowdoin Van Riper

Bibliography

- Harvey, Brian. *Russia in Space: The Failed Frontier?* New York: Springer, 2001.
- Heppenheimer, T. A. *Countdown: A History of Spaceflight*. New York: Wiley, 1997.
- Jenkins, Dennis R. *Space Shuttle: The History of the National Space Transportation System*. 3rd ed. Osceola, WI: Motorbooks, 2001.
- Launius, Roger, and Dennis R. Jenkins. *To Reach the High Frontier: A History of U. S. Launch Vehicles*. Lexington: University of Kentucky Press, 2002.
- Van Riper, A. Bowdoin. *Rockets and Missiles: The Life Story of a Technology*. Westport, CT: Greenwood, 2004.

Manned Spaceflight

The launch of the first Soviet satellite (Sputnik I) in October 1957 and the first American satellite (Explorer I) in January 1958 established outer space as a site for bloodless technological competition between the Cold War superpowers. Sending a human into space was an early goal for both nations. Soviet space planners had discussed the possibility as early as 1956, and the National Advisory Committee on Aeronautics (NACA) had drafted preliminary studies in 1957. The American program introduced its first 7 astronauts with great fanfare in 1959 and began public flight tests of its Mercury spacecraft the same year. The Soviet program, carried out in near-complete secrecy, recruited its first 20 pilots and began flight tests of its one-man Vostok spacecraft in 1960. The first manned Mercury flight was scheduled for January 1961, but safety concerns led National Aeronautics and Space Administration (NASA) to substitute a chimpanzee and postpone the manned flight until May. The delay allowed Yuri Gagarin to become, on April 12, 1961, the first human in space and the first to orbit Earth. NASA successfully launched Alan Shepard on his 15-minute suborbital flight in May 1961 but could not match Gagarin's orbital flight until John Glenn flew in February 1962.

► INTERNATIONAL SPACE STATION

The International Space Station was conceived, in 1993, as a merger of three separate space station projects then in the planning stage: the U.S. Freedom, Russia's Mir 2, and the European Space Agency's Columbus. The Japanese, Canadian, and Brazilian national space agencies also participate in the project. The station consists of a series of interconnected modules that provide living, working, and storage space and are connected to auxiliary elements such as solar arrays, airlocks, and docking ports for visiting spacecraft. Assembly of the station began in November 1998, and the first three-member crew arrived two years later. The station has been continuously occupied ever since, though for three years after the Columbia disaster in January 2003 the crews were reduced from three members to two. It has also played host to four space tourists, each of whom paid \$20 million to the Russian space agency for stays of 7–10 days. The International Space Station was originally envisioned as a platform for scientific research, but budget cuts have eliminated much of its laboratory space, and day-to-day operations have consumed most of its crews' time. It has, to date, proven more significant as a test bed for engineering and construction techniques.

—A. Bowdoin Van Riper

Gagarin's orbital flight continued the series of Soviet space firsts that began with Sputnik. Soviet leaders, eager to present the USSR as the world's premier space-faring nation, called for more of the same, and Soviet space program delivered. Over the next five years it was responsible for the first day-long spaceflight (1961), the first woman in space (1963), the first multi-member crews (1964), the first flight of two spacecraft simultaneously, and the first spacewalk (1965). Doing so, however, pulled resources away from longer-term programs such as plans to land men on the moon. Development problems with the powerful new N-1 booster, the 1966 death of chief designer Sergei Korolev, and the deaths of cosmonauts Vladimir Komarov and Yuri Gagarin (both in 1967) left the program moribund, unable to compete with an American

lunar-landing program that had been gathering momentum steadily since 1961.

Set in motion by President John F. Kennedy's May 1961 call to land a man on the moon "before this decade is out," the American drive for a lunar landing encompassed three distinct manned programs. Project Mercury (1961–1963)—two suborbital and four orbital flights in spacecraft carrying a single pilot—established that humans could not only survive but also perform useful work in space. Project Gemini (1965–1966)—ten orbital flights in two-seat spacecraft—gave NASA experience with space walks, rendezvous and docking maneuvers, and flights up to fourteen days long. Project Apollo (1967–1972) was designed to accomplish the lunar landings themselves. It used three-member crews and a spacecraft consisting of four distinct modules, lifted into orbit by the largest and most powerful rocket ever built, the Saturn V. The first four manned flights, Apollo 7 through Apollo 10, tested the spacecraft in both Earth and lunar orbit. The fifth manned flight, Apollo 11, carried out the first successful landing in July 1969. Five more landings (out of six attempts) followed between November 1969 and December 1972, but political and popular support for the program faded quickly.

Conceived and set in motion at the height of the Cold War, lunar exploration programs were perceived as an expensive anachronism amid the U.S.-Soviet détente of the early 1970s. Three scheduled Apollo missions—18, 19, and 20—were cancelled by the end of 1970, along with a separate series of follow-up missions. The Soviet lunar program, still lacking a visionary leader and a reliable booster, was quietly shut down in 1972. For decades afterward, the Soviet government denied that it had even existed.

After 1972, the two superpowers conspicuously avoided competition in space. Except for a brief experiment with an Earth-orbiting space station (Skylab) in 1973–1974, the United States focused on developing a reusable spacecraft for use in Earth orbit. The space shuttle, which first flew to orbit in April 1981, remained in service for more than 25 years despite unexpectedly high operating costs and accidents that led to the loss of Challenger in 1986 and Columbia in 2003. Except for a brief experiment with a reusable

spacecraft (Buran) in 1988, the Soviet Union focused on building space stations. The seven stations of the Salyut series, operated successively in Earth orbit from April 1971 until February 1991, gave the Soviets valuable experience with the long-term effects of weightlessness. They also laid the engineering groundwork for the larger and more ambitious Mir, the assembly of which began in 1986.

Designed as a three-man research station, Mir was continuously inhabited from 1989 through 1999. Inherited by Russia after the collapse of the Soviet Union in 1991, it played host to astronauts from the former Soviet republics of Ukraine and Kazakhstan as well as from France, Britain, Germany, Austria, Japan, and Canada. The space shuttle orbiter Atlantis docked with Mir on seven missions between June 1995 and October 1997, and the orbiters Discovery and Endeavour each visited the station once in 1998. The visits were part of the Shuttle-Mir program and were complemented by the long-term stays of seven individual American astronauts during the same period. The American visits to Mir ran concurrently with the planning and development of the International Space Station (ISS) and were designed to lay the technological and organizational groundwork that would make construction of the ISS possible.

Assembly of the ISS began in 1998 and is scheduled to be completed in 2010. Plans for its use after that point remain uncertain. The space shuttle, deemed essential to the construction of the station, is scheduled to be retired once the station is completed. Plans for its replacement, dubbed "Apollo on steroids" and designed to support a new program of manned lunar landings, remain sketchy. The most vigorous manned spaceflight programs of the early twenty-first century prove to be those mounted by China (which launched its first piloted spacecraft in October 2003) and space tourism companies such as Virgin Galactic.

—A. Bowdoin Van Riper

Bibliography

- Burrough, Bryan. *Dragonfly: NASA and the Crisis Aboard Mir*. New York: HarperCollins, 1998.
- Chaikin, Andrew. *A Man on the Moon: The Voyages of the Apollo Astronauts*. New York: Penguin, 1998.

Crouch, Tom D. *Aiming for the Stars: Dreamers and Doers of the Space Age*. Washington, DC: Smithsonian Institution Press, 2000.

Harvey, Brian. *Russia in Space: The Failed Frontier?* New York: Springer, 2001.

Murray, Charles, and Catherine Bly Cox. *Apollo*. Burkittsville, MD: South Mountain Books, 2004.

Zimmerman, Robert. *Leaving Earth: Space Stations, Rival Superpowers, and the Quest for Interplanetary Travel*. Washington, DC: Joseph Henry, 2003.

Space Probes

Both of the world's major space-faring nations, the United States and the Soviet Union, began launching robot probes in the late 1950s, during the early stages of the space race. Smaller and less complex than spacecraft designed to carry human crews, the probes consumed relatively few resources and could be sent on one-way or high-risk missions with impunity. Collectively, these missions revolutionized scientists' understanding of the solar system, revealing dozens of new moons as well as unsuspected features of planetary surfaces and atmospheres.

The Moon, only a quarter million miles from Earth, was the first target for both Soviet and American probes. Competition between the superpowers was intense, and as they had in Earth-orbiting satellites and would in manned flights, the Soviet Union took an early lead. The USSR's Luna 1 became the first spacecraft to fly past the Moon in January 1959, Luna 2 became (intentionally) the first to impact it in March, and Luna 3 was the first to photograph its far side in October. Making a controlled (or soft) landing on the lunar surface proved more challenging, but after 11 failed attempts Luna 9 achieved this in February 1966. The next probe in the series, Luna 10, became the first spacecraft to enter lunar orbit the following month. After an unpromising start—6 failures in 6 attempts between August 1961 and January 1964—the spacecraft of the U.S. Ranger program achieved 3 successful lunar-impact missions in 1964–1965. These were followed by the 5 successful soft landings (in 7 attempts) of the Surveyor program (1966–1968) and the 5 successful orbital missions (in 5 attempts) of the parallel Lunar Orbiter program (1966–1967).

► MESSAGES TO THE STARS

When Pioneer 10 was launched in 1972, nobody connected with the project was sure that the probe would make it to Jupiter, much less to the edge of the solar system. Hoping that it would survive and eventually reach deep space, scientists connected with the project designed an engraved metal plaque to serve as a greeting to any space-faring alien species that might someday find it. The images on the plaque included a map of the solar system, a diagram showing its position with respect to nearby stars, a schematic diagram of the spacecraft, and line drawings of a nude man and woman. The goal of the images was to communicate a simple message: “We made this machine. This is where we live, and what we look like.”

Pioneer 11 carried an identical plaque, but Voyager 1 and 2, launched in the mid-1970s and also designed to leave the solar system after flybys of the outer planets, carried more elaborate messages. Each bore a 12-inch gold-plated copper disk that carried not only symbols but also 115 images of Earth and a variety of audio clips. The record, designed on the same principle as a phonograph record, was packed inside an aluminum box along with the pictorial instructions and key components needed to build a machine to play it. The sounds encoded on it included wind, running water, animal noises, snippets of music from cultures throughout the world, and greetings in 55 human languages.

—A. Bowdoin Van Riper

Attempts to send probes to the inner planets—Venus, Mars, and to a lesser extent Mercury—also began in the early 1960s. The American Mariner 2 carried out the first flyby of Venus in 1962, but further exploration lagged behind programs aimed at the Moon and Mars. The Soviet space program, meanwhile, made a specialty of Venus. Probes from its Venera series executed the first crash-landing on its surface (1965), returned the first data from inside its atmosphere (1966), and made the first soft landing (1970). The scientific investigation of Mars hit its stride in the late 1960s and early 1970s. The Mariner 6 and Mariner 7 flyby missions returned the first high-resolution photographs of the Martian sur-

face in 1969, and the Mariner 9 orbiter (along with the Soviet Mars 2 and Mars 3 missions) expanded photographic coverage in 1970–1971. The Mars 3 mission also deployed a lander that, though it landed safely, ceased transmissions less than a minute later.

The years 1970–1971 marked a watershed in the history of planetary exploration. They marked the end of the Soviet-American space race and the competition for firsts that had gone with it. They also marked the abandonment by both nations of any long-term plans for manned flights beyond Earth’s orbit. Planetary exploration was, from 1970–1971 onward, entirely the province of increasingly sophisticated robot probes aimed at an increasingly wide range of destinations.

The second phase of robotic exploration, which began in 1970–1971, lasted until the collapse of the Soviet Union in 1990–1991. It included the first flybys of Mercury (by Mariner 10 in 1973), Jupiter (by Pioneer 10 the same year), and Saturn (by Pioneer 11 in 1979); the first successful soft landings on Mars (Viking 1 and Viking 2 in 1976); missions to Halley’s Comet in 1985–1986; and the mapping of the surface of Venus by radar (Venera 15 and Venera 16 in 1983–1984 and Magellan in 1990–1994). The technology used in robot probes also grew more diverse. Luna 16 returned samples from the Moon in 1970, while Luna 18 and Luna 21 deployed robotic rovers on the lunar surface in 1970 and 1973. Venera 13 returned the first color images from the surface of Venus in 1981, and the Soviet Vega missions of 1985 deployed balloons in the Venusian atmosphere to measure wind speed and direction at high altitudes. The undisputed climax of the second phase, however, was Voyager 2’s grand tour of the outer solar system. Built and run by NASA’s Jet Propulsion Laboratory, Voyager 2 passed Jupiter in 1979 and used the giant planet’s gravity as a slingshot to accelerate it toward Saturn. The gravitational pull of Saturn, combined with carefully timed bursts of energy from its thrusters, sent it on to rendezvous with Uranus (1986) and Neptune (1989). It thus became the first spacecraft to survey the two outermost planets, the only spacecraft to fly by four different worlds, and the most scientifically productive space probe in history.

The space probes of the 1970s and 1980s tended to be large, complex machines designed from scratch for specific missions. This made them extremely capable but also costly (in time and resources) to build. The third phase of robotic exploration, which began in the mid-1990s, was marked by a partial shift toward smaller, simpler probes that could be built relatively quickly and cheaply and thus launched more frequently. This approach—summed up in NASA's mid-1990s slogan “faster, better, cheaper”—achieved an early success with the Mars Pathfinder mission of 1997, which drew worldwide attention for its small six-wheeled rover, Sojourner. It also produced Lunar Prospector, the first American probe of the Moon since the Lunar Orbiter program 30 years earlier, and the comet-investigation spacecraft Deep Impact and Stardust. NASA's flagship missions continued, however, to use large and elaborate spacecraft. Galileo made an extensive survey of Jupiter in 1995–2003 and dropped the first probe into its atmosphere. The twin Mars Exploration Rover missions deployed a pair of large sophisticated rovers named Spirit and Opportunity on opposite sides of Mars during 2004. The Cassini-Huygens mission—the most elaborate to date—put Cassini into orbit around Saturn in late 2004 and dispatched Huygens to a soft landing on the surface of Saturn's largest moon, Titan, in early 2005. New Horizons, a spacecraft intermediate in size between flagship probes such as Cassini-Huygens and smaller vehicles such as Mars Pathfinder, is expected to fly past Pluto in 2015 and then investigate the icy minor planets of the Kuiper Belt beyond.

—A. Bowdoin Van Riper

Bibliography

- Burrows, William E. *Exploring Space: Voyages in the Solar System and Beyond*. New York: Random House, 1990.
- Dethloff, Henry C., and Ronald A. Schorn. *Voyager's Grand Tour*. Washington, DC: Smithsonian Institution Press, 2003.
- Hanlon, Michael. *The Worlds of Galileo: The Inside Story of NASA's Mission to Jupiter*. New York: St. Martin's, 2001.
- McCurdy, Howard E. *Faster, Better, Cheaper: Low-Cost Innovation in the U.S. Space Program*. Baltimore: Johns Hopkins University Press, 2003.

Squyres, Steve. *Roving Mars: Spirit, Opportunity, and the Exploration of the Red Planet*. New York: Hyperion, 2005.

The Hubble Space Telescope and Science in Space

The history of scientific research in space begins with the first American artificial satellite, Explorer 1, that discovered that Earth is encircled by belts of radiation. It includes robot probes and landers sent to other planets, satellites designed to monitor conditions on Earth, and experiments carried out by astronauts aboard the space shuttle and on the surface of the Moon. The most powerful tools yet used for space science, however, are the four Great Observatories launched by the National Aeronautics and Space Administration (NASA) between 1990 and 2003. Each of the four observatories, named after a great twentieth-century astronomer or physicist, was designed to monitor a specific part of the

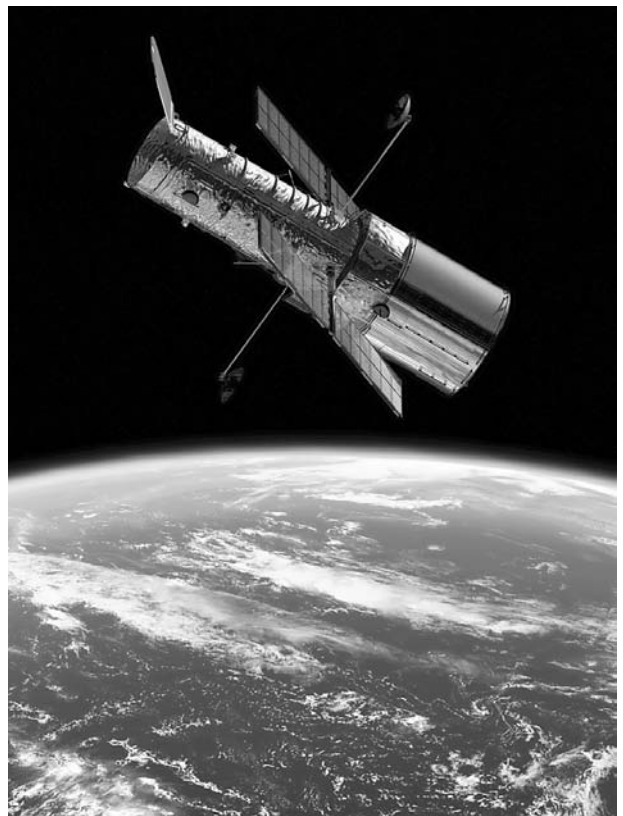


Illustration of the Hubble space telescope in orbit, first launched in 1990. (European Space Agency)

➤ SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE

Search for Extraterrestrial Intelligence (SETI) was never a specific space communications program but rather a series of attempts to receive messages from extraterrestrials. The impetus for SETI arose in the 1950s when Nobel laureate Enrico Fermi argued that given the size and age of the universe, it was probable that extraterrestrial life existed and must be detectable in some way. Scientists concluded that the best evidence for life would come from radio waves. In 1960, Cornell professor Frank Drake performed the first modern SETI experiment, named Project Ozma, with a small radio telescope. Other universities, often in conjunction with the National Aeronautics and Space Administration (NASA), also developed radio telescopes to search the sky for transmissions. The most famous event in SETI research occurred in 1977 when an especially strong signal was received at Ohio State University. This was dubbed the Wow! signal because of the notes in the margin. When NASA briefly stopped funding SETI research in 1993 (funding resumed in 2003), a private organization called the SETI Institute was founded in Mountain View, California, by Frank Drake, Carl Sagan, and other proponents of SETI. The SETI Institute enlisted the help of millions of people who downloaded a screensaver on their home computers to help analyze collected data. The NASA Pioneer and Voyager Probes on their extended missions have carried a selection of images, greetings, and sounds in case they are recovered by extraterrestrials.

electromagnetic spectrum. Together, the four cover the entire spectrum and enable scientists to view objects of interest from multiple perspectives.

Three of the Great Observatories are well known only to astronomers. The Compton Gamma Ray Observatory, in orbit from April 1991 to June 2000, carried instruments capable of monitoring long-wavelength gamma radiation from black holes, quasars, pulsars, and other energy sources. The Chandra X-Ray Observatory, launched in July 1999, monitors X-ray emissions from sources up to billions of light years away. The Spitzer Telescope, launched in 2003, sees in the thermal infrared region of the spectrum and

can look into the hearts of galaxies. It is ideally suited to observing molecular clouds, small and dim stars invisible to ordinary telescopes, and the nurseries where new stars are being born.

The most famous of the Great Observatories, however, was the first to be launched: the Hubble Space Telescope, named after the astronomer (Edwin Hubble, 1889–1953) who first established that the universe was expanding. Carried to orbit aboard the space shuttle *Discovery* in 1990, the Hubble is a reflecting (mirror-based as opposed to lens-based) telescope capable of observing not only the visible light portions of the electromagnetic spectrum but also the adjacent near-infrared and ultraviolet sections. Orbiting above Earth's atmosphere, which absorbs ultraviolet light and scatters visible light, its ability to capture images of unprecedented clarity and depth has made it both a powerful tool for astronomers and a public relations triumph for NASA. Hubble has recorded the collision of comet Shoemaker-Levy 9 with Jupiter, the birth and death of stars, and the existence of auroras in the atmospheres of Jupiter and Saturn. Images from Hubble have also helped to confirm the existence of black holes, clarify the nature of quasars, and (fittingly) shed light on the dark energy that drives the expansion of the universe.

Hubble is the only one of the Great Observatories capable of being serviced and upgraded by astronauts while in orbit. This capability proved critical when, soon after it was activated, Hubble was discovered to have a small but critical flaw in the shape of its main mirror that reduced the clarity of the images it could capture. On the first Hubble servicing mission, flown in December 1993, a team led by veteran astronaut Story Musgrave installed a specially designed package of electronics and corrective mirrors that all but eliminated the problem. Subsequent servicing missions in February 1997, December 1999, and March 2002 further expanded the Hubble's capabilities and extended its useful life. After the loss of the shuttle *Columbia* in 2003, NASA administrator Sean O'Keefe announced that no further manned servicing missions would be flown. The decision, which drew a storm of protests from space scientists and members of the public, was formally reversed by NASA administrator Michael Griffin in October

2006. During the final Hubble service mission in May 2009, astronauts made numerous spacewalks to repair and replace Hubble components in order to keep the telescope functioning until 2013, by which time its replacement is scheduled to be operational.

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Bibliography

- Kerrod, Robin. *Hubble: The Mirror on the Universe*. Newton Abbot, UK: David and Charles, 2005.
- National Aeronautics and Space Administration. "NASA's Great Observatories." December 2, 2004.
- Overbye, Dennis. "Refurbishments Complete, Astronauts Let Go of Hubble." *New York Times*. May 20, 2009.

Cyclotrons

One of the earliest types of particle accelerators, cyclotrons, has contributed to the development of nuclear physics and nuclear medicine. The first cyclotron, conceived by physicist Ernest O. Lawrence, went into operation in 1934 at the University of California, Berkeley. Lawrence received the Nobel Prize for Physics in 1939 for his development of the cyclotron. During World War II, the U.S. Manhattan Project used cyclotrons to enrich uranium for atomic bombs. After 1945, universities and research laboratories worldwide acquired cyclotrons either through their own efforts or via commercial purchases for research on subatomic particles.

The significant investment in postwar nuclear physics research created a demand for scientific instruments. The cyclotron, which accelerates particles in a closed loop, was a preferred alternative to other particle accelerators due to its relative low cost and the advantages of its compact design. Linear accelerators move particles in a straight line, and because it was not then possible to generate radio waves with both high power and high frequency, contemporary linear accelerators required multiple stages to offset the low power at each stage. Since cyclotrons accelerate particles in a circular path, in a given area of surface space occupied by the device a cyclotron contains more distance for a particle to travel than does a linear accelerator, and by design a cyclotron inherently provides more opportunities to accelerate the particles. For these

INTERNATIONAL ATOMIC ENERGY AGENCY

The International Atomic Energy Agency (IAEA) was founded as an autonomous department under the United Nations in 1957. Based in Vienna, Austria, its original purpose was to ensure the peaceful use of nuclear energy. After the Three Mile Island (1979) and Chernobyl (1986) disasters, the IAEA was given an expanded purview to provide inspections to ensure that nuclear facilities were being run safely. After the 1968 Nonproliferation Treaty, the IAEA became more concerned about halting the spread of nuclear material for military uses. The IAEA collaborates with other agencies, notably in the field of medicine, if radiation is involved. The IAEA has come under criticism in the last couple of decades for failing to keep closer scrutiny over Iraq, North Korea, and some of the former republics of the Soviet Union. The IAEA is often bound by the will of host nations, and its budget is fairly small for its newly expanded duties.

reasons, cyclotrons were less expensive to construct and more feasible than linear particle accelerators for new and growing institutions. Nevertheless, linear accelerators can produce particle energies that exceed those possible with cyclotrons and are also capable of producing a nearly continuous stream of particles, unlike a cyclotron's limited ability to only periodically raise a particle's energy level.

The Riken Institute for Physical and Chemical Research in Tokyo began running the first working cyclotron outside of the United States in 1937. By 1946, more than 20 cyclotrons were in operation in the United States, and 8 were in operation in other countries. Cyclotrons totaled 72 worldwide in 1969, and this number had doubled again by 1986. By 1998 more than 200 cyclotrons were in operation globally. By 2004, a cyclotron was in operation on every continent except Antarctica, with more than 25 percent of these located in research laboratories and universities in Asia.

In addition to furthering research into nuclear physics, scientists successfully adapted cyclotrons for medical use. The U.S. National Cancer

Institute funded research into the modification of cyclotrons in 1971, with patient treatments initiated in 1984. Doctors employed medical, or clinical, cyclotrons by adjusting the frequency of the X-rays produced by a cyclotron's radiation. So modified, a cyclotron's radiation can penetrate a limited distance and kill tumors in the human body in a process called external beam radiotherapy. In addition to direct treatment of patients, scientists developed cyclotrons that produce radioisotopes used in nuclear medicine, radiation therapy, and medical research. Radioisotopes produced by cyclotrons were used in positron emission tomography (PET) and computed tomography (CT) machines for radiotherapy.

—Jonathan Hagood

Bibliography

- Goto, A., ed. *17th International Conference on Cyclotrons and Their Applications: Tokyo, Japan, 18–22 October 2004*. Tokyo: Particle Accelerator Society of Japan, 2005.
- Heilbron, J. L., and Robert W. Seidel. *Lawrence and His laboratory: A History of the Lawrence Berkeley Laboratory*. Berkeley: University of California Press, 1989.
- Mould, Richard F. *A Century of X-rays and Radioactivity in Medicine with Emphasis on Photographic Records of the Early Years*. Philadelphia: Institute of Physics Publishing, 1993.

Nuclear Reactors

Nuclear reactors are devices that create, sustain, and control a chain of nuclear fission reactions. Enrico Fermi and Leo Szilard demonstrated the first controlled chain reaction at the University of Chicago on December 2, 1942, but it was not until after World War II that governments and the electric power industry seriously pursued the development of commercial nuclear reactors. Although corporations based in the United States dominated the global nuclear industry from the 1960s through the 1970s, state-subsidized programs in other nations also contributed to the development of nuclear reactors.

In a commercial nuclear reactor, the heat from nuclear chain reactions creates steam, which in turn is used to generate electricity. In most reactors, this nuclear chain reaction occurs

when neutrons bombard uranium atoms, which split (through nuclear fission) to release energy and additional neutrons, thereby bombarding neighboring atoms and continuing the reaction. The high speed of a neutron limits its ability to completely consume uranium fuel, and a neutron moderator can reduce the speed of neutrons and increase the extent to which the fuel is consumed. The extreme temperatures created by this process require the use of a cooling material, which dramatically affects the design of the nuclear reactor.

Two basic types of nuclear reactors characterized the postwar world: fast neutron reactors and thermal (slow) reactors. Less common were the fast reactors in which the nuclear chain reaction is sustained by high-energy fast neutrons. Such a reactor has no neutron moderator, is typically cooled by liquid metal because of the high temperatures it generates, and uses fuel such as highly enriched uranium or plutonium in order to provide enough fuel for the fast neutrons. In 1946 scientists at Los Alamos, New Mexico, built CLEMENTINE, the first fast reactor, which used plutonium metal fuel and mercury coolant. The United Kingdom's fast reactor program at Dounreay, Scotland (1957 to 1994), used NaK (78 percent potassium and 22 percent sodium) and sodium-cooled reactors. By 1985 France, Germany, India, Japan, and the Soviet Union also operated fast reactors.

More common among nuclear power plants were thermal reactors, which use slower low-energy thermal neutrons, have moderators to slow the neutrons, do not require liquid metal as a coolant, and use nonenriched nuclear fuel because of the ability of slow neutrons to more efficiently consume uranium. There were four significant versions. By far the most prevalent was the light-water or pressurized water reactor (LWR or PWR), which used ordinary light water as both coolant and moderator. Less widespread was the boiling water reactor (BWR), which likewise used light water but generated the steam for power production within the reactor itself instead of using heat exchangers. Unlike the LWR and PWR reactors, the CANDU reactor used pressurized heavy water (deuterium oxide) as a moderator. A Canadian public-private consortium designed CANDU in the late 1950s and 1960s,

and many nations installed and operated reactors of this type. Finally, the Soviet Union developed RBMK reactors, which used light water for cooling, graphite for moderation, and natural uranium for fuel. Scientists generally considered these reactors unstable. The Soviet Union had ceased new construction prior to the 1986 explosion of an RBMK reactor in Chernobyl, Ukraine, the worst civilian nuclear accident to date and caused by human errors.

Nuclear reactors in operation in the late 1990s were generally considered second- or third-generation systems that had superseded the first-generation prototypes constructed in the 1950s and 1960s. In May 2001, 11 nations formed the Generation IV International Forum to promote



Cooling towers at a nuclear power station in Dukovany, Czech Republic. (Shutterstock)

➤ NO NUKES PROTESTS

Beginning in the late 1970s, many people all over the world protested against the construction of nuclear power plants based on the belief that nuclear power plants were inherently unsafe and contributed to the environmental degradation of the earth. These movements also were closely connected to the antinuclear weapons movement of these decades, with many of the same people participating in both movements and identifying themselves as antinuclear in regard to both weaponry and energy issues. While some people opposed nuclear plants being built locally in their communities, many others opposed their construction anywhere. The antinuclear power movement has been among the most broadly based and widely supported environmental movements in history.

Accidents at nuclear power plants increased public opposition to the use of nuclear power as an energy source. In 1978 there were 222 nuclear power reactors operating worldwide, with 71 of them in the United States providing 12 percent of the total electricity produced nationally. After the partial meltdown at Three Mile Island in Harrisburg, Pennsylvania, in March 1979, worldwide protests against nuclear power increased dramatically along with mistrust of government and industrial officials who insisted on the safety of nuclear power. In August 1979 more than 200,000 people participated in a protest in New York City opposing nuclear power, the largest antinuke protest in U.S.

history and only one of dozens held that day around the country. Before 1977 there were more protests against nuclear weapons than against nuclear power. This reversed in 1978, and for a period of four years there were more protests against nuclear power plants. In 1981 more than 1,000 protestors were arrested at the still under construction Diablo Canyon nuclear power plant outside of San Luis Obispo, California.

In 1986 one of the reactors at the Chernobyl plant located in the Soviet Ukraine suffered a major meltdown, releasing large amounts of radiation into the atmosphere over Eastern and Northern Europe. This accident sparked international outrage and virtually ended public support of nuclear power. It is a historical irony that many of the same people who protested nuclear power in the past now champion its use as a means of addressing global warming.

—Robert A. Jacobs

Bibliography

- Bedford, Henry F. *Seabrook Station: Citizen Politics and Nuclear Power*. Amherst: University of Massachusetts Press, 1990.
- Pringle, Laurence. *Nuclear Power: From Physics to Politics*. New York: Macmillan, 1979.
- Walker, Samuel. *Three Mile Island: A Nuclear Crisis in Historical Perspective*. Berkeley: University of California Press, 2004.

the research and development of new nuclear reactors based on the technology goals of improved nuclear safety, improved proliferation resistance, minimized waste and natural resource utilization, and decreased construction and operation costs.

Access to technology for the peaceful use of nuclear reactors is guaranteed to signatories of the Nuclear Non-Proliferation Treaty (NPT), which went into effect in 1970. The NPT is generally considered a bargain for nations without nuclear weapons. According to the NPT, non-nuclear weapons states (the significant majority) refrain from developing nuclear weapons in exchange for the right to develop, purchase, and sell nuclear technology for peaceful use. In theory, nations that want nuclear reactors face no legal restrictions. In practice, distinguishing peaceful nuclear technology proved to be a difficult and highly politicized process.

—Jonathan Hagood

Bibliography

- Hertsgaard, Mark. *Nuclear Inc.* New York: Pantheon Books, 1983.
- Mozley, Robert F. *The Politics and Technology of Nuclear Proliferation.* Seattle: University of Washington Press, 1998.
- Wolfson, Richard. *Nuclear Choices: A Citizen's Guide to Nuclear Technology.* Cambridge, MA: MIT Press, 1993.

Nuclear Waste Disposal

The safe and permanent disposal of nuclear waste did not become a significant public policy issue until nuclear power plants had been in operation for several years. The medical and environmental harm caused by radioactive nuclear waste was neither apparent to the public nor advertised by the global nuclear industry in the early years of nuclear reactor construction in the 1950s and early 1960s. However, a rising awareness of the impact of nuclear pollution combined with a general increase in environmental awareness and activism in the early 1970s made nuclear waste disposal a growing political problem. At the same time, an increased number of nuclear power plants quantitatively increased the amount of nuclear waste requiring permanent disposal. By 2006 many observers believed that the problem

of nuclear waste disposal was one that required resolution in order to avoid an environmental crisis.

Regulatory agencies and the nuclear industry have classified nuclear waste into three categories: low, intermediate, and high. Medical and industrial use of radioactive isotopes creates low-level waste such as paper, tools, clothing, and so on that contains small amounts of short-lived radioactive material. This waste does not require shielding during handling and transport and usually has been compacted or incinerated prior to land burial. By contrast, intermediate-level waste includes higher amounts of radioactivity that require some shielding. It typically consists of contaminated resins, metals, and other materials. Intermediate-level waste typically has been solidified in concrete or bitumen for disposal.

High-level waste consists of the fission products generated in the core of a nuclear reactor and is high in both radioactivity and temperature. When nuclear reactors first began to generate waste in the 1950s and 1960s, scientists and engineers developed a two-stage process of waste storage. First, power plants stored the spent nuclear fuel in pools of water, which impeded any continuing nuclear chain reactions and cooled the extremely hot material. Second, after a period of wet storage, the material was moved to dry storage facilities in steel and concrete containers. No centralized global plan or facility for nuclear waste disposal currently exists, and dry storage typically has been arranged on or near the same site as the nuclear reactor.

Beginning in the 1970s, many governments began to actively seek long-term disposal options for high-level nuclear waste, and the concept of a deep geological disposal received the backing of science and industry. However, the idea of moving high-level waste from aboveground dry storage to geologically stable underground vaults was politically untenable, and public protests thwarted many plans for underground storage of nuclear waste. For example, in 1970 the U.S. Atomic Energy Commission announced plans to construct a repository near Lyons, Kansas. Unexpected external opposition to the plan and strong challenges from regional politicians forced the proposal's withdrawal. Since then, Belgium, Canada, Finland, France, Germany, Sweden, Swit-



A facility in Sweden for storing nuclear waste, located on the Swedish coast near the Forsmark reactor complex. (Karen Kasmauski/Corbis)

zerland, the United Kingdom, and the United States have all performed detailed studies involving exploratory boreholes, shafts, and ramps in underground research laboratories. Most notably and with much continuing controversy, the U.S. Department of Energy designated Yucca Mountain in Nevada as the future site of a terminal storage facility for spent nuclear reactor fuel and other radioactive waste. However, as of 2009 no permanent underground or undersea facilities for nuclear waste disposal existed or were under construction anywhere in the world.

—Jonathan Hagood

Bibliography

- Cooper, John R. *Radioactive Releases in the Environment: Impact and Assessment*. Hoboken, NJ: Wiley, 2003.
- Falk, Jim. *Global Fission: The Battle over Nuclear Power*. New York: Oxford University Press, 1982.
- Wolfson, Richard. *Nuclear Choices: A Citizen's Guide to Nuclear Technology*. Cambridge, MA: MIT Press, 1993.

Nuclear Plant Disasters

On September 29, 1957, at 16:20 local time, a chemical explosion at the nuclear fuel reprocessing facility in Mayak, the Southern Urals, Russia, then part of the Soviet Union, caused the release of 74×10^{16} becquerel (Bq; 1 curie is

37 billion Bq) of fission products, of which 10 percent became dispersed into the atmosphere. The accident became known as the Kyshtym disaster, taking its name from the closest populated town rather than from the plant itself. The disaster was reported internationally only in 1976, when Dr. Zhores Medvedev, a dissident scientist from the former USSR, communicated the accident in England, and the Soviet Union acknowledged the accident only in 1989. The radioactive emissions spread over a region of 3,861–7,722 square miles (10,000–20,000 square kilometers) known as the Eastern Ural Radioactive Trace (EURT), which later became a study area for the ecological effects of radiation. It is estimated that the intensity of radiation released from this accident was double that later released at Chernobyl.

Several radioactive emission events were, in fact, associated with the Mayak nuclear facility. The plant started polluting the environment during its first decade of operation, between 1949 and 1956, when approximately 20 billion gallons (76 million cubic meters) of liquid radioactive waste leaked into the Techa River. Hence, the Kyshtym nuclear disaster is considered to be the second environmental tragedy associated with this facility. In addition, some of the radioactive waste from the facility was diverted into the nearby Karachay Lake, and during the hot summer of 1967, dust from the lake bed spread over a large area, covering numerous villages inhabited by over 40,000 people. This was reported as the most polluted place on the planet, and spending a few minutes at this site was predicted to be sufficient to receive lethal radioactivity doses. In recent years, efforts to contain the radioactivity were made by filling the lake with blocks of concrete.

The same year as the Kyshtym disaster, 1957, brought Great Britain's largest nuclear disaster. Between October 10 and 11, a fire at number 1 Pile at the Windscale nuclear complex released approximately 1.86×10^{16} Bq radioactivity into the surrounding area. The radioactivity cloud subsequently dispersed, and isotopes could be detected over England, Wales, and parts of Northern Europe. A governmental inquiry was initiated within days, and the incident was widely reported in the media; this represented,

➤ RANKING NUCLEAR DISASTERS

Over 400 nuclear power plants that use nuclear fission technology for energy production exist worldwide, and establishing safe control systems for these facilities represents one of the major challenges for the twenty-first century. The International Nuclear Event Scale (INES), established to communicate to the public the significance of nuclear and radiological events, lists seven levels with which to rank accidents: 1, anomaly; 2, incident; 3, serious incident; 4, accident with local consequences; 5, accident with wider consequences; 6, serious accident; and 7, major accident. Each level describes an accident ten times more severe than that of the preceding level. Based on this scale, Three Mile Island and Windscale are classified as level 5, Kyshtym as level 6, and the Chernobyl explosion as level 7.

—Richard Stein

in fact, the first major publicized instance of radioactivity.

Both the Kyshtym and the Windscale accidents occurred at installations whose main purpose was to produce plutonium for national weapons programs. While the Windscale accident did not have any reported ecological effects, substantial ecological damage was observed in most areas contaminated by the Kyshtym accident.

On April 26, 1986, two violent explosions destroyed the core of Unit 4 of the power plant and roof of the Chernobyl nuclear power plant in Pripyat, Ukraine, in what is considered the worst nuclear accident in history. The accident generated a massive radioactivity cloud above most of Europe, particularly Ukraine, Belarus, and western Russia. An estimated 1.85×10^{18} Bq of total radioactivity were released, polluting approximately 49 million acres (200,000 square kilometers) of land. The nuclear disaster damaged the ecosystem to such an extent that even ten years after the accident, the radioactive contamination was still directly affecting the development of trees. Many studies that examined a link to various diseases were inconclusive. The main well-established medical impact was an increase in the rates of childhood thyroid can-

cer. While the rate of thyroid cancer in children under 15 years old was, prior to the accident, around 0.3–0.5 per million, during the 1991–1994 period it increased to over 30 per million in Belarus and to over 90 per million in the Gomel region, situated immediately north of Chernobyl.

The most significant nuclear accident in the history of the U.S. commercial nuclear power industry occurred on March 28, 1979, at the Three Mile Island nuclear power plant near Harrisburg, Pennsylvania. This accident occurred as a result of a partial core meltdown in Unit 2, a pressurized water reactor and, as a result, 0.5×10^{12} Bq of radiation were released into the environment. This accident caused minimal population exposure. It was estimated that approximately 2 million people in the area were exposed to about 1 millirem of radiation. For comparison, an X-ray causes an exposure of approximately 6 millirems. Many studies were unable to conclude whether the accident had any health-related effects. Improved plant design, enhanced operator training, and expanded safety inspections at nuclear power plants are a few of the safety measures implemented in the wake of this accident.

—Richard Stein

Bibliography

- International Atomic Energy Agency. <http://www.iaea.org/>.
- Jones, S. "Windscale and Kyshtym: A Double Anniversary." *Journal of Environmental Radioactivity* 99 (2008): 1–6.
- Stsjazhko, V. A., A. F. Tsyb, N. D. Tronko, G. Souchevitch, and K. F. Baverstock. "Childhood Thyroid Cancer since Accident at Chernobyl." *British Medical Journal* 310 (1995): 108.
- Takada, J. *Nuclear Hazards in the World: Field Studies on Affected Populations and Environments*. New York: Springer, 2005.
- Talbott, E. O., A. O. Youk, K. P. McHugh-Pemu, et al. "Long-term Follow-up of the Residents of the Three Mile Island Accident Area: 1979–1998." *Environmental Health Perspectives* 111 (2003): 341–348.
- United States Nuclear Regulatory Commission. "Backgrounder on the Three Mile Island Accident." <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html>. Accessed October 10, 2009.

The Pursuit of Fusion Power

The process of nuclear fusion combines atoms rather than splitting them apart as nuclear fission does. The German-born physicist Hans Bethe (1906–2005), who fled the Nazis to America, proposed in 1938, in a claim that has since been validated, that the process of fusion powered the Sun. A claim in 1951 by the Argentine president Juan Perón (1895–1974) that his country had built a fusion reactor astonished the world and turned out to be false. In the early 1950s, American scientists began to develop a way to use

magnetic fields to confine the high-temperature plasma necessary for fusion to occur in order to put the power source of the Sun into a magnetic bottle. The U.S. Atomic Energy Commission sponsored the secret work. The United States dropped the shroud of secrecy around the fusion effort after the Soviet success with Sputnik I in 1957 as part of a publicity effort to show that the United States still engaged in groundbreaking scientific research, though the effort eventually foundered on technical difficulties.

American scientists revived their fusion research effort in the early 1970s as the nuclear

► COLD FUSION

On March 23, 1989, the chemists Stanley Pons (1943–) and Martin Fleischmann (1927–) held a press conference with officials at the University of Utah, where they announced that a simple laboratory experiment had created excess heat that could only be explained by a process of fusion occurring at room temperatures (thus the term “cold fusion”). Fleischmann was a respected senior electrochemist from England and a fellow of the Royal Society. Normally, the results of such an experiment would be presented at a scientific meeting or published in a scientific journal. Pons, Fleischmann, and university officials chose such an unorthodox method because another scientist, the physicist Steven E. Jones (1949–) at nearby Brigham Young University, was also engaged in similar research. Whoever claimed priority on such a breakthrough technology stood to earn billions of dollars from a source of energy that promised to be environmentally friendly and cheap.

The experiment of Pons and Fleischmann consisted of a tabletop apparatus in which deuterium was electrolyzed by two electrodes made of palladium and platinum. The experiment appeared to generate more energy than was put into it. From the beginning, many scientists, especially physicists, doubted that such a simple experiment could yield such dramatic results. Other laboratories around the world attempted to duplicate the experiment; some met with partial success, while many failed. A laboratory in Italy announced that it had detected excess neutrons in its experiment,

an indication of fusion. The media went into a frenzy, and governments quickly announced funding for cold fusion research.

In a meeting of the American Physical Society in Baltimore on May 1, 1989, physicists condemned the entire idea of cold fusion. From a sociological standpoint, Pons and Fleischmann had three strikes against them. They were chemists claiming to succeed where generations of physicists working on hot fusion had failed, they had not followed the normal process of scientific publication, and their simple experiment proved not to be simple to reproduce. Cold fusion became a classic cautionary tale teaching the importance of repeating experimental results enough times to be certain and of following the accepted procedures of publication.

The story did not end there. Pons and Fleischmann left Utah for Nice, France, where the Japanese corporation Toyota funded their research. At the same time, scientists at the U.S. Office of Naval Research conducted over 200 experiments in cold fusion during the 1990s, achieving inconsistent results. They did find hints that the composition of trace elements in the palladium electrode was very important and that microscopic cracks stopped the experiment from producing excess energy. When they published their results, their work was ignored. As of 2009, research on cold fusion has become pariah science, conducted on the fringes of respectable science.

—Eric G. Swedin

industry came under concerted assault by the new environmental movement. Fusion enthusiasts expected a commercial fusion reactor to be safer and generate less radioactive waste than fission reactors. The radioactive waste generated by fusion reactors would also have a much shorter half-life than the radioactive waste of fission reactors. The 1970s' effort continued into the 1980s before funding fizzled and the U.S. Department of Energy elected to begin to work with other countries on the problem, spreading the cost of research. The Soviets, Japanese, French, and other European countries had already worked on fusion, with the Soviet tokamak method of confinement becoming a favored approach even in the United States. Despite bil-

lions of dollars in research, the promise of fusion remains only a hope for cheaper, cleaner electricity. At the end of the century, fusion researchers organized an international consortium, ITER (from the Latin term *iter*, meaning "the way"), to build a large research fusion reactor in Cadarache, France. The site is expected to be operational in 2016.

—Eric G. Swedin

Bibliography

Herman, Robin. *Fusion: The Search for Endless Energy*. Cambridge: Cambridge University Press, 1990.

ITER: The Way to New Energy. <http://www.iter.org/>.
Kenneth, Fowler, T. *The Fusion Quest*. Baltimore: Johns Hopkins University Press, 1997.

■ Introduction: Medicine and Health Care

Medical procedures and pharmaceuticals underwent rapid advances during both world wars. The ability of government bureaucracies to organize medical facilities as part of war mobilization contributed to sweeping changes in the post-1945 world in terms of medicine and health care. Initiatives in the United States, most notably the National Institutes of Health, created in 1948, illustrate the postwar government support for the research and development of treatments, pharmaceuticals, and state-of-the-art medical equipment. The establishment of Britain's National Health Service (NHS) in 1948 provided a model for state-funded universal health care as it transformed hospitals, clinics, and physicians into state institutions and employees. New international organizations such as the United Nations (UN) and the World Health Organization (WHO) also increased attention to the health needs of the developing world. International efforts to eradicate malaria, smallpox, and polio succeeded in eliminating these diseases from large swaths of postcolonial Asia and Africa, inadvertently triggering exponential population growth.

Advances in medical procedures, pharmaceuticals, and technology drastically accelerated

during the late twentieth and early twenty-first centuries as medicine became an increasingly transnational business venture with tremendous profit potential. Multinational pharmaceutical corporations, mostly centered in the West, developed new treatments and products to curtail disease and treat medical conditions. While such developments were advantageous to those who could afford it, polemic public debates across the West, particularly in the United States, emerged as health care became increasingly expensive and government funding provisions became inadequate to meet the needs of large portions of its population. The elderly and the poor were increasingly vulnerable to poor health as a result of the scaling down of the welfare state that occurred in the late 1970s and early 1980s in parts of the West. At the same time, various parts of the developing world struggled with pandemics such as HIV/AIDS, not to mention diseases related to malnutrition given the growing economic disparity vis-à-vis the developed world. Structural economic adjustments within multiple Latin American and sub-Saharan African states to meet obligations to the World Bank and the International Monetary Fund also led to severe cuts to existing health care systems. In the same period,

as of 1977, in a major shift in policy and philosophy, the WHO gave new support to indigenous medical practices, arguing that traditional remedies and treatments could be of great value to populations in countries such as India, Tibet, China, and Africa, as an adjunct to the more expensive Western model.

As populations expand and age, medical developments and health care will continue to be important and often contentious issues at the national and international levels.

—*Abraham O. Mendoza*

Globalization of Medical Science

Following World War II, advances in surgery, pharmaceuticals, medical education, and public health measures ensured the steady globalization of medical science. In the surgical field, improvements in anesthetic techniques, specialist teams, and organ transplantation saved countless lives. Pharmaceutical science provided new weapons for the fight against devastating and frequently fatal diseases. Reforms in medical education extended an army of specialists and highly trained professionals around the world. And public health measures helped prevent the spread of infectious diseases that previously decimated populations. While the original pattern for the globalization of medicine involved the imposition of Western standards and techniques on the developing world, in recent decades groups including the World Health Organization (WHO), created in 1948 as an intergovernmental arm of the United Nations, have begun to place greater emphasis on traditional medical practices.

Philanthropic organizations such as the Rockefeller Foundation played a major role in spreading the contributions of Western medical science in the first half of the twentieth century. After the war, philanthropists were joined by private pharmaceutical corporations that targeted non-Western markets and new international medical organizations that extended the knowledge, techniques, and the professional practice of Western medical science.

The WHO played a major role in the globalization of medical science in the second half of the twentieth century. Intent on fighting a war against disease, WHO medical professionals and

scientists insisted that international progress in health depended on bringing Western scientific medicine to the world. In its first year of existence, the WHO sent teams of medical officers, nurses, sanitary engineers, public health officers, bacteriologists, and other personnel to China, Ethiopia, Haiti, India, Ceylon, North Korea, South Korea, and the Philippines. By the early twenty-first century, the WHO included more than 190 member nations.

The first major WHO international campaign was fought against malaria. Despite an initial goal of total victory over the disease, by the mid-1960s the WHO scaled back funding amid criticism that the program had failed. While a variety of immunization campaigns subsequently made great strides against measles, diphtheria, whooping cough, tetanus, tuberculosis, and polio, the only successful eradication campaign came with smallpox in 1979.

Amid a worldwide economic recession and the heightening of Cold War tensions, WHO and UNICEF members convened in 1978 at an international conference in Alma-Ata, Kazakhstan, to discuss the globalization of medical science. The Alma-Ata Declaration emerged as a major milestone of the twentieth century in the field of public health and medicine. It identified the new concept of primary health care as the key to the attainment of the WHO goal of “Health for All by the Year 2000.” The Alma-Ata Declaration affirmed health as a fundamental human right and called for a transformation of conventional health care systems by encouraging collaboration between medical scientists and traditional healers through community organizing around the world.

In the closing decades of the twentieth century, many more countries questioned the ability of Western medical science to meet the basic health needs of all people. Subsequently, the WHO fundamentally changed its relationship with the developing world by promoting the study and preservation of indigenous folk medical knowledge. This reorientation of medical science was also accompanied by a growing body of literature in medical anthropology and the sociology of knowledge that often portrayed scientific medicine as an agent of colonization and imperial expansion.

➤ TRADITIONAL TIBETAN MEDICINE AND MODERNIZATION

Following the Chinese communist invasion of 1951, Tibetan society was propelled into a new era. In 1959, the 14th Dalai Lama, Tenzin Gyatso, together with thousands of Tibetans, escaped from Tibet to India, bringing with them their unique cultural and religious heritage. One of the first Tibetan institutions to be reestablished in exile was the Mentseekhang, or the Tibetan Medicine and Astrology Institute, originally a Tibetan hospital and college in Lhasa founded in 1916. Although it was not the first time that Tibetan medicine had come to a foreign land, it marked the beginning of substantial changes to its practice.

After the destruction of the traditional social system in Tibet and much of the country's religious and cultural heritage both prior to and during the Cultural Revolution (1966–1976), Tibetan medicine experienced a slow revival. The Chinese government started to support it as a member of the family of Chinese medicines, and it was partially integrated into the official health care system after many of its aspects were standardized, modernized, and cleansed of religious ideas.

With the integration of China into the global market economy from the 1990s, Tibetan medicines became increasingly manufactured in large pharmaceutical factories and geared toward urban Tibetans, Chinese, and the export market. This led to new priorities in production, particularly compliance with the “Good Manufacturing Practices” (GMP) based on documents issued by the World Health Organization (WHO). GMP originally regulated the production and packaging of biomedical drugs. However, it is now applied to many traditional medicines gaining global distribution. In the case of Tibetan medicine, some of GMP's standards contradict and compromise those laid out in indigenous texts.

In the fundamental Tibetan medical work the *Gyu Shi*, a seven-limb procedure for identifying,



Advertisement for Cheezheng “Tibetan medical” pain relieving plasters, Lhasa, 2003. (Theresia Hofer)

collecting, cultivating, and processing plant, mineral, and animal ingredients, is described. In this, the collection of certain plants is linked to the cycle of the moon, and the harvester is instructed to collect with the right motivation while reciting mantras (prayers). In contrast, GMP is mainly concerned with cleanliness and hygiene, which translates into the need to create new special factories and to invest in machines for the production and packaging of medicines. This not only alters what are considered quality Tibetan medicines but also increases their price, making them less affordable for rural Tibetans.

In addition, large-scale production of Tibetan medicine requires large amounts of ingredients. Hardly any of these are cultivated or harvested in sustainable ways in Tibet, straining the sensitive environment of the Tibetan plateau and, together with general environmental degradation, endangering the future supply of raw materials.

—Theresia Hofer

In virtually every instance of the introduction of Western scientific medicine into non-Western societies, the process has been contested on some level. Debates have taken place over the nature and cause of disease, appropriate therapies, the legitimacy of native healers, and coercive public health measures. Non-Western societies also have

struggled with implementing scientific medicine's requisite institutional infrastructure and accepting its intellectual presuppositions. Most notably, governments in China and India have continued to defend the indigenous prescientific medical systems of traditional Chinese medicine and Ayurveda. Offering a model response

➤ MEDICAL TOURISTS—NEW MEDICAL INDUSTRIES IN EAST ASIA

Medical tourism, sometimes called medical value travel, represents a growing international trend in health care as well as big business for some countries. Travelers combine elective or nonelective procedures with vacations or simply enjoy high-quality health care at lower prices than in their home countries. As international travel becomes cheaper and easier and as medical standards rise in developing countries as well as in industrialized ones, this new business is thriving and changing the structure of international health care.

Until recently, Singapore, Thailand, India, the Philippines, and Malaysia dominated the Asian medical travel industry. However, medical tourism in East Asia is developing rapidly, with mainland China, Hong Kong, Taiwan, and South Korea growing in popularity for procedures ranging from kidney transplants to face-lifts. In East Asia, well-trained doctors and specialized hospitals at low prices attract overseas patients who are uninsured or underinsured, too impatient or needy to wait for state hospital care, or question the quality of care in their home countries. But here as elsewhere, some hospitals further sweeten the medical tourism experience with luxuries such as private hotel suites, personal nurses, or vacation arrangements.

East Asian hospitals now serve a new market of foreign patients, often themselves from Asian

countries or from the Middle East. In Hong Kong, medical tourism is now estimated at about 6 percent of the private health care market. Clients there include Japanese expatriates and mainland Chinese citizens, especially for childbirth. Taiwan, with its Mandarin fluency, also hopes to attract some of the wealthy mainland Chinese market if cross-strait travel restrictions ease. Other developing East Asian medical tourism industries have been dogged by ethical queries, for instance about organ transplants in China and faked stem cell therapy results in South Korea.

Critics say that provider countries often have inadequate health care for their own citizens and warn of increased risks in traveling overseas for health care, including linguistic and cultural misunderstandings, problems maintaining continuity of care, increased risk of infection, or other problems related to travel after surgery and lack of legal recourse in case of malpractice. Others champion the development of a free market for health care, arguing that it forces hospitals and governments around the world to be more efficient and provide the best care for less money. Already in the United States, some employers and insurers are offering health care outsourcing options for employees.

—Kimberly Dukes

adopted by other countries around the world, China and India have provided legal, financial, and institutional support to preserve traditional medicine while incorporating the unquestionable contributions of medical science.

—Eric W. Boyle

Bibliography

- Arnold, David, ed. *Imperial Medicine and Indigenous Societies*. Manchester, UK: Manchester University Press, 1988.
- Cooter, Roger, and John Pickstone, eds. *Medicine in the Twentieth Century*. Amsterdam: Harwood Academic, 2000.
- Cunningham, Andrew, and Bridie Andrews, eds. *Western Medicine as Contested Knowledge*. Manchester, UK: Manchester University Press, 1997.

Kher, Unmesh. "Outsourcing Your Heart." *Time*, May 29, 2006, 44.

Metcalf, Tim. "Private Hospitals Cashing In on Medical Tourism." *South China Morning Post*, October 21, 2006, 7.

Muller, Mike. *The Health of Nations*. London: Faber and Faber, 1984.

"New Organ Transplant Rules Released. But Unregulated Trade in Body Parts Not Addressed, Says Surgeon Who Helped Draft Regulations." *South China Morning Post*, March 28, 2006, 6.

Globalization of Disease

In the era since 1945, with the aid of the World Health Organization and numerous nongovernmental organizations (NGOs), diseases such as

► CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

The Centers for Disease Control and Prevention (CDC) is headquartered in Atlanta, Georgia. It is an operating unit of the U.S. Department of Health and Human Services (HHS). The CDC was established in 1946 with a mission of controlling malaria, then a major problem in the southern states. Since that time its mission has expanded to protecting the health and safety of the American people as it seeks to control chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats.

The CDC does extensive research into viruses and other pathogens that threaten both human and animal health. It works with other centers such as the U.S. Army Medical Research & Materiel Command (USAMRMC) at Fort Detrick, Maryland, and the National Institute for Health (NIH), as well as foreign organizations such as the Prince Leopold Institute for Tropical Medicine (ITM) in Antwerp, Belgium, the World Health Organization (WHO), and other research centers around the world. The work of the CDC puts it on the forefront of public health work aimed at the prevention or control of infectious diseases. It conducts numerous research projects on well-known diseases as well as on emerging viruses such as the Human Immunodeficiency Virus (HIV/AIDS), Lassa or Ebola fevers, West Nile Virus, and mutating influenza strains.

Part of the work of the CDC is the training of physicians, nurses, and other health care professionals in new or emerging disease threats. Every year a steady stream of physicians or other health care workers receive training in Atlanta or at other facilities in matters related to deadly disease. In addition, the CDC in cooperation with 12 other HHS agencies sends investigators to remote corners of the world in search of sources of threatening diseases. The dangers of Avian Influenza or the mutating strains of a virus that could cause a global pandemic are of especial concern to its research scientists and to policy makers as well as to the public at large.

—Jack Waskey

smallpox have been eradicated through far-reaching vaccination campaigns, while other diseases, such as polio and measles, have been drastically reduced. However, new diseases have emerged from a number of sources to plague humans, animals, and plants, with globalization a major cause of their spread.

Globalization has permitted people, goods, animals, plants, capital, and diseases to move across political and geographic boundaries. Increased trade in economic goods has been accompanied by increased trade in pathogens. Also, low-cost travel in the modern era has allowed infectious diseases caused by viruses, bacteria, molds, fungi, or other pathogens to spread. They are usually spread by one of five vectors: by contact with pathogens that are airborne, waterborne, or bloodborne; direct contact with a sick individual; or contact with infectious agents such as insects or sick animals. As humans travel to and commercially develop remote areas, chances increase that previously unknown pathogens will be encountered. Some airborne diseases such as Ebola or the other hemorrhagic viruses are very deadly. However, quarantining infected patients allows the disease to exhaust the supply of potential victims.

Some diseases (as well as environmental woes) have been spread via the planned or unplanned importation of insects, animals, or diseased plants into a new country or continent. West Nile Virus was unknown in the Western Hemisphere until it was brought to the United States by some as yet unidentified source. Some diseases jump species to become infectious to new groups and, again, spread more easily as a result of global trade. Migratory birds can carry influenza strains that affect only birds on their migrations. However, the influenza strains could destroy domestic flocks of birds such as chickens, turkeys, or other birds. In addition, in areas such as South Asia great flocks of ducks can be infected and transmit or receive virus strains from pigs that can then be transmitted to humans in tainted food supplies that circulate along global networks. Many of the diseases of the digestive system are spread by infected food or water supplies.

The deadly HIV/AIDS epidemic offers a casebook account of the connection between glo-



Veterinarians wearing protective clothing walk past a barrier with a warning sign that reads "area infected by bird flu" in a northern province of Vietnam on November 5, 2005. (Hoang Dinh Nam/AFP/Getty Images)

balization and disease. The sexually transmitted HIV/AIDS virus takes years to develop, particularly when treated with expensive drugs, but will continue to be deadly to millions globally until vaccines and cures can be developed. Other sexually transmitted diseases have reemerged because of the development of resistance to the drugs used to treat them and because of ease of travel to areas where trafficking in prostitution is common or where sex tourism may be a well-developed industry.

Some diseases also have developed because of the adoption globally of popular but less healthy lifestyles. For example, heart disease is now a global disease that is due to sedentary urbanized lifestyles. The pharmaceutical industry, ironically, despite its successes, has also helped foster more powerful drug-resistant disease strains. Of great concern to health officials, for example, is influenza. The problem with influenza is that vaccines have to be annually tailored to the mutations in the virus strains.

Of great concern to health officials globally is the enormous population growth in the world that has led to huge slums in megacities. These areas are likely places for diseases to mutate and to become the source of deadly global pandemics.

—Jack Waskey

Bibliography

- Barnett, Tony, and Alan Whiteside. *AIDS in the Twenty-First Century: Disease and Globalization*. New York: Palgrave Macmillan, 2006.
- Bashford, Alison, ed. *Medicine at the Border: Disease, Globalization and Security, 1850 to The Present*. New York: Palgrave Macmillan, 2006.
- Clark, Robert P. *Global Life Systems: Population, Food and Disease in the Process of Globalization*. Lanham, MD: Rowman and Littlefield, 2001.
- Link, Kurt. *Understanding New, Resurgent, and Resistant Diseases: How Man and Globalization Create and Spread Illness*. Westport, CT: Greenwood, 2007.
- McCormick, Joseph B., Susan Fisher-Hoch, and Leslie Alan Horvitz. *Level IV: Virus Hunters of the CDC*. New York: Barnes and Noble, 1999.

The World Health Organization and Epidemics

Founded in April 1948, the World Health Organization (WHO), part of the United Nations (UN) system, is charged with monitoring and improving public health around the globe. WHO produces health guidelines and standards to help countries address public health concerns. Initially, WHO focused on malaria, tuberculosis, venereal disease, nutrition, and environmental sanitation as well as women's and children's health care.

In the decades since its establishment, the organization has taken numerous steps to respond to the threat posed by epidemic diseases. WHO, for example, took over responsibility from the defunct League of Nations for the preparation and publication of the *International Classification of Disease* in 1948, helping to standardize disease detection and quickly identify health concerns. WHO created a global control program in 1952 for the disease yaws. The disease, which crippled and disfigured about 50 million people in 1950, can be treated with penicillin. By 1965 the incidence of yaws had dropped by more than 95 percent overall in 46 countries. WHO had similar success with its onchocerciasis (river blindness) eradication program in West Africa. The program, begun in 1974, is estimated to have protected 18 million children from the disease over 30 years. WHO

SEVERE ACUTE RESPIRATORY SYNDROME

On November 22, 2002, Chinese physicians diagnosed the first case of an atypical pneumonia later labeled Severe Acute Respiratory Syndrome (SARS). SARS cases continued to multiply until Chinese health officials proclaimed a public health emergency in January 2003. By March, the disease had spread through much of China, Singapore, Taiwan, and Vietnam. The first case outside of Asia was an elderly woman who returned home to Toronto in late February from a trip to Hong Kong, dying two weeks after her return.

As a previously unknown virus, SARS required extensive information sharing and debate among health care workers. The resulting face-to-face meetings and close working conditions among health care workers facilitated the spread of the disease. Medical professionals eventually comprised nearly half of the SARS patients in both Canada and China.

The Canadian outbreak demonstrated the difficulties involved in facilitating quarantine compliance. During the epidemic, more than 30,000 people in the greater Toronto area were placed under quarantine restrictions. After the restrictions were lifted, city officials concluded that a significant number of people had violated the orders, mainly in order to obtain basic supplies (such as groceries) or to avoid losing income. Provincial and local officials determined that improving compensation for quarantined individuals might improve compliance.

The dissemination of the disease's Asian origins provoked a widespread fear of interaction with Asians, resulting in boycotts of Asian restaurants and businesses. Several Asian community leaders in Toronto accused the Canadian government of failing to combat rumors that Asian Canadians were the source of the outbreak, which fueled widespread anti-Asian discrimination and xenophobia throughout Canada.

—Katherine J. Worboys

coordinated the fight against smallpox between 1967 and 1979. The eradication of the age-old menace is the first instance of the worldwide elimination of a major infectious disease. The Global Polio Eradication Initiative, established in 1988, has dramatically reduced the number of cases of poliomyelitis through immunizations.

The rise of globalization has contributed mightily to the spread of infectious disease and complicated WHO's efforts. As the spread of HIV, first identified in 1983, has illustrated, a disease can now move rapidly around the world, emerging or reemerging anywhere. With the increased ease of air travel and the growth of international trade, infectious diseases, such as pandemic influenza, have more opportunities to spread than in previous eras. It is more effective to help other countries control or prevent dangerous diseases than to try to prevent their importation. The WHO approach to HIV/AIDS is typical of its attack on epidemic disease. It stresses prevention, rapid treatment, a special effort to protect women and children, and preempting epidemics by detecting them and acting swiftly to stop them. WHO has established HIV/AIDS teams in 85 countries to advise governments on prevention, treatment, and care. Country offices that need additional technical or financial help turn to regional HIV/AIDS teams in each of WHO's six regional offices. The HIV team at WHO headquarters in Geneva sets global policies and standards, helps mobilize technical support, monitors progress, and obtains political support.

The major epidemic threats at the start of the twenty-first century were pandemic influenza, Rift Valley Fever, Ebola hemorrhagic fever, Marburg fever, malaria, poliomyelitis, and the possibility of intentional releases of biological agents. WHO set a target date of 2015 to stop the spread of malaria and other major diseases. The SARS (Severe Acute Respiratory Syndrome) coronavirus, a killer epidemic that caused considerable global fear in 2003, ceased to be a severe threat because of WHO eradication efforts. WHO's Epidemic and Pandemic Alert and Response (EPR) helps countries prepare for epidemics and develop response plans. The EPR supports epidemic training programs, coordinates international responses, and develops standardized readiness approaches to major epidemic-prone diseases such as meningitis and yellow fever. In addition, the EPR strengthens biosafety, biosecurity, and readiness for outbreaks of emerging epidemics of such viral hemorrhagic fevers as Marburg and Ebola.

Much of WHO's attention in the early twenty-first century was devoted to avian influenza. Pan-

demic influenza has historically been a major killer, one that strikes down otherwise healthy adults in a matter of days. There is little doubt in the medical community that a pandemic influenza will strike again; only its timing, severity, and exact strain remain unknown. If a pandemic is severe, the effects of it will be far-ranging. Accordingly, WHO developed a pandemic influenza program that conducts influenza surveillance around the world, attempts to make genetic matches of influenza vaccine and current influenza viruses, and helps nations develop influenza control strategies and plans. WHO experts anticipate a gap between the supply of vaccine and the demand for vaccine. To reduce the impact of an influenza pandemic, WHO recommends a nonpharmaceutical approach such as infection control as well as a pharmaceutical approach such as the use of vaccines and antivirals for treatment and prophylaxis. The widespread nature of a pandemic means that there will be insufficient production capacity to supply everyone seeking vaccine with medication, at least in the initial months of an outbreak. WHO has developed a Global Vaccine Action Plan to increase the supply of a pandemic vaccine and thereby reduce the expected gap between supply and demand.

Vaccines offer the best means of stopping infectious disease. Under the WHO system, countries send influenza specimens to the agency, which then makes these samples available to the global community for public health purposes, including vaccine development. However, some developing countries have been reluctant to share viral samples for vaccine research because they want to ensure that their citizens have access to vaccines at affordable prices. Indonesia, the nation struck hardest by H5N1, or avian influenza, announced in 2007 that it would not send human bird flu virus samples to WHO unless the agency could guarantee that the specimens would not be used commercially. Indonesia and WHO subsequently came to an agreement that Indonesia would continue to send samples, while WHO would stockpile vaccines in the event of an epidemic. A long-term WHO goal is that developing countries obtain enough technology and scientific training to produce vaccines.

As the situation with Indonesia highlights, developing nations are increasingly uncomfortable



A World Health Organization doctor administers the smallpox vaccination in the Congo in January 1962. (Corel)

with institutions that were designed after World War II for a world dominated by the United States and Europe. Asian, African, and Latin American nations are resisting governing agreements made without their cooperation. It is possible that new public health alliances will be developed in the twenty-first century to give greater power to emerging nations.

—Caryn E. Neumann

Bibliography

- WHO Division of Communicable Diseases. *WHO Report on Infectious Diseases: Removing Obstacles to Healthy Development*. Geneva: World Health Organization, 1999.
- WHO's Regional Office for the Western Pacific. *SARS: How a Global Epidemic Was Stopped*. Hong Kong: World Health Organization, 2006.
- World Health Organization. *Stop the Spread: Measures to Stop the Spread of Highly Pathogenic Bird Flu at Its Source*. Geneva: World Health Organization, 2006.
- World Health Organization. *Working for Health: An Introduction to the World Health Organization*. Geneva: World Health Organization, 2007.

Pharmaceutical Advances since 1945

During the second half of the twentieth century, pharmaceutical advances fundamentally reshaped approaches to treating diseases. Drug development during World War II ushered in a

► THE GLOBAL ERADICATION OF SMALLPOX

Smallpox was a deadly disease that was completely eradicated (except for a few laboratory samples) by the World Health Organization (WHO) in 1979. The disease was originally common in Europe, Africa, and Asia and contributed in large part to the devastation of indigenous American populations in the fifteenth and sixteenth centuries. The practice of vaccination for smallpox was created in 1796 by Edward Jenner, who used less-virulent strains of cowpox to inoculate people. In 1958, the Soviet Union proposed to the WHO that smallpox could be eradicated by a mass program of vaccinations in affected countries in the developing world. In 1967, under physician Donald A. Henderson, the program was initiated in earnest. Treatments revolved around vaccinating people recently exposed to the virus rather than inoculating everyone. The smallpox virus was ideal for containment because vaccination gave immunity to all forms of the virus and because it only affected humans. In 1979 the WHO officially declared smallpox eradicated.

revolution in medical therapies and encouraged close associations among academic institutions, governments, and pharmaceutical companies. In a shift from earlier business strategies, pharmaceutical companies began devoting substantial funds to research and development and the discovery of new drugs while employing sophisticated business techniques to market new products to doctors and patients. Major advances in computer technology facilitated laboratory and production automation, revolutionizing the speed at which new drugs could be synthesized and tested.

Beginning in the 1940s, antibiotics revolutionized approaches to medical therapy and inaugurated the first major wave of drug development following World War II. Building on the early success of sulfonamides and penicillin development during World War II, in the 1950s various broad-spectrum antibiotics including tetracyclines and chloramphenicol were introduced in the United States, Europe, and Japan. Tuberculosis, typhus, diphtheria, and other devastating infectious diseases were subsequently largely controlled in

industrialized countries as increased knowledge about human biology and chemistry combined with new technology and instrumentation to make drug discovery more directly focused on targeting specific diseases. Once a researcher identified a new chemical class that was effective against a particular disease state, new prescriptions for ulcers, cancers, diabetes, pain control, and other illnesses followed, as did new vaccines and vitamins.

In the decades immediately following World War II, many pharmaceutical advances stemmed from three primary research and development areas: steroids, psychoactive preparations, and cardiovascular medications. In the 1940s and 1950s, substantial research on steroids and their chemistry produced the anti-inflammatory cortisone as an effective treatment for rheumatoid arthritis. Perhaps the most revolutionary class of steroidal drugs was marketed in the form of the contraceptive pill.

Dramatic advances also came in the area of treating mental disorders. Following the early success of chlorpromazine with psychotic patients, benzodiazepines including librium and valium dominated the pharmaceutical market in the late 1950s and 1960s. By the early 1960s, antibiotics and central nervous system therapies accounted for 44 percent of world drug sales. Meanwhile, as cardiovascular diseases replaced infectious diseases as the greatest killers in Western industrialized countries, pharmaceutical manufacturers developed a new class of drugs in the 1960s, the beta blockers, a major breakthrough in the treatment of high blood pressure and heart disease. In subsequent decades, cardiovascular drugs became the most important source of revenue for pharmaceutical companies globally, accounting for about 22 percent of total sales by the early 1990s.

Additional pharmaceutical advances in the second half of the twentieth century came from a greater understanding of both natural botanical substances and biochemistry. After virtually abandoning natural products in the 1950s and 1960s, success stories with botanical derivatives led many pharmaceutical companies back to this area of research. Taxol, for example, a cancer treatment developed from the bark of yew trees in the 1960s, later became the best-selling cancer

drug in history during the 1990s. In the late 1970s and 1980s new pharmaceutical technologies based on biochemistry, microbiology, and the science of molecular genetics also opened up new avenues in drug innovation. The first major pharmaceutical advance from genetic engineering and recombinant DNA techniques came with a biosynthetic replica of human insulin used in treating diabetes that was marketed in the early 1980s. Additional pharmaceutical advances from this area of molecular research and computer-based discovery in the 1980s and 1990s included a recombinant vaccine for treating hepatitis B, interferon for treating cancer, antidepressants and other serotonin drugs, antiviral drugs for treating HIV/AIDS, and a variety of treatments for high blood pressure, high cholesterol, ulcers, and glaucoma. Advances in molecular science also led to the creation and marketing of many congeners, or me-too drugs, that were molecularly distinct but had identical therapeutic indications.

Pharmaceutical advances have also been accompanied by a series of challenges and critiques. The development of some new drugs, such as thalidomide, have resulted in tragedies. In the late 1950s and early 1960s, thalidomide was sold and prescribed to pregnant women to combat morning sickness and help them sleep. From 1956 to 1962, approximately 10,000 children were born with deformities because their mothers had taken thalidomide while pregnant. Following the thalidomide disaster, widespread regulatory reforms were enacted in several countries, but the recent relaxing of some regulatory measures has revived debates over acceptable levels of risk in research and development. Additionally, the rising price of drugs in both developed and developing countries has also inspired widespread criticism. The pharmaceutical industry has blamed high research and development costs for the rising price of drugs, but critics have pointed to the fact that very little money has been invested in discovering new drugs for diseases that continue to plague developing nations. An analysis of drug development outcomes in the last quarter of the twentieth century showed that only 15 new drugs were indicated for tropical diseases and tuberculosis, which disproportionately affect the poor and represent 12 percent of the global disease burden. By contrast, 179 new

drugs were developed for cardiovascular diseases, which were more common in wealthier nations and represent 11 percent of the global disease burden. While charitable organizations have invested millions in research for neglected diseases including malaria, tuberculosis, and sleeping sickness, in 2003 the World Health Organization estimated that more than one-third of the population in developing countries still lacked access to essential medicines, a reminder that the benefits of pharmaceutical advances have not been fully realized on a global scale.

—Eric W. Boyle

Bibliography

- Chadwick, Derek J., and Joan Marsh, eds. *Ethnobotany and the Search for New Drugs*. Chichester: John Wiley & Sons, 1994.
- Chandler, Alfred D., Jr. *Shaping the Industrial Century: The Remarkable Story of the Evolution of the Modern Chemical and Pharmaceutical Industries*. Cambridge: Harvard University Press, 2005.
- Silverman, Milton, Mia Lydecker, and Philip R. Lee. *Bad Medicine: The Prescription Drug Industry in the Third World*. Stanford, CA: Stanford University Press, 1992.
- Weatherall, Miles. *In Search of a Cure: A History of Pharmaceutical Discovery*. Oxford: Oxford University Press, 1990.

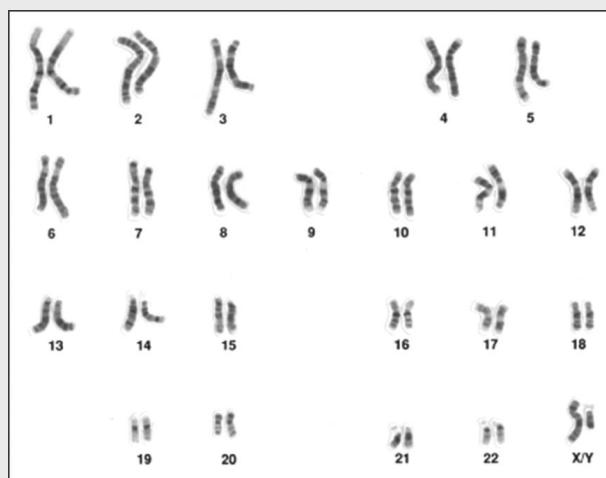
Genetic Engineering and Its Applications, Post-1945

Genetic engineering involves the alteration of genes for purposes that are not usually part of the organism's original biological function. Genes, which are comprised of DNA, are usually "engineered" through a three-step process. First, they are extracted from the organism's cell (isolation). Then they are manipulated through the process of adding or removing DNA using restriction enzymes (which "cut" DNA) and ligases (which "paste" DNA pieces back together again); this is done to change the genes' DNA sequence and modify its protein expression. Finally, they are reinserted or "spliced" into the original cell, or a host cell, to produce new, or "recombinant," DNA. Genetic engineering is intended to change or improve an organism's function. For example, scientists have used genetic engineering to

➤ GENETIC SCREENING

Genetic screening involves testing an individual's genes, chromosomes, and proteins in order to determine the presence of genetic disorders. Such testing can be used to analyze the genetic material of newborns (to detect illnesses such as phenylketonuria and congenital hypothyroidism); children, adolescents, and adults suspected of having genetic disorders or of being carriers; and the prenatal testing of fetuses whose parents have an increased risk of having a child with a genetic disorder, usually due to the advanced age of the parent(s) or because of a family history of genetic disorders. Prenatal testing involves both invasive techniques such as amniocentesis, chorionic villi sampling, and fetoscopy and noninvasive techniques such as ultrasound and serum testing and is used to diagnose disorders such as Down syndrome, spina bifida, and cystic fibrosis.

Testing involves sampling blood or, in the case of prenatal diagnosis, amniotic fluid and then analyzing it for genetic disorders. To do this, the chromosomes are separated and lined up in a process known as karyotyping; genes/proteins then undergo further analysis through more advanced laboratory testing. If a genetic disease is discovered, the parties involved undergo a



Human karyotype (male) (National Human Genome Research Institute)

process known as genetic counseling, which includes interpreting the results of the testing, discussing the outcomes, and establishing a plan to handle the ethical, physical, psychological, and medical ramifications of the situation.

—Tanfer Emin Tunc

program bacteria to produce human insulin; to genetically modify organisms such as mice, fish, and fruit flies; and to produce more robust crops such as tobacco, tomatoes, and corn.

Modern genetic engineering began in the mid-1950s, soon after James Watson and Francis Crick elucidated the double-helix structure of DNA (1953). However, large-scale experimentation did not occur until 1967, when American scientists isolated the first enzymatic DNA ligase. In 1970, Stewart Linn and Werner Arber discovered that a “restriction” enzyme in the bacteria *E. coli* could be used to cut DNA at specific locations. In 1972, Paul Berg used these new technologies to create the first “recombinant” plasmid (a circular bacterial chromosome). The following year, Herbert Boyer and Stanley Cohen inserted a genetically engineered plasmid into a bacterium to create the first successful recombinant DNA organism. By the late 1970s, advances

in genetic engineering began to occur at a rapid pace: in 1977, Walter Gilbert and Frederick Sanger formulated the technique used to determine DNA base sequences (gel electrophoresis), which Sanger used to determine the entire genome—that is, genetic sequence—of a virus.

Prenatal genetic diagnostic procedures such as amniocentesis and chorionic villi sampling became available in the mid-1970s as scientists discovered how to obtain samples safely, usually through ultrasound guidance, and to analyze human chromosomes for genetic diseases. A few years later, scientists started to experiment with splicing genes from different specimens to create chimera or “hybrid animals” such as rat-mice, sheep-goats, and so on. They also began to use transgenic or genetically modified bacteria to produce lifesaving substances such as insulin. Insulin was first produced in 1979, and the U.S. Food and Drug Administration approved Genen-

tech's Humulin in 1982. Research in genetic engineering was dramatically altered in 1983 when biochemist Kary Mullins formulated the polymerase chain reaction, which gave scientists the ability to replicate DNA at astounding rates. They were now able to use this new tool to develop techniques such as genetic fingerprinting (1984), which was eventually applied to forensics, paternity testing, the cloning of genes, and the creation of genetically modified plants and animals such as pigs, bulls, and "oncomice," which were specifically developed for use in cancer research.

In 1990, James Watson initiated the Human Genome Project, a global collaboration of scientists who spent the next 13 years mapping the human genome. Completed in 2003, the results of this revolutionary venture have facilitated breakthroughs in almost all branches of human genetic engineering. The development of gene therapy, which involves the substitution of an "abnormal" disease-causing gene with a healthy gene, usually through carriers known as vectors, has been one of the benefits of mapping the human genome. Now able to locate the position of disease-causing genes, scientists are using gene therapy to treat diseases such as cystic fibrosis, sickle cell anemia, thalassemia, and breast cancer.

Within the past decade, scientists have also used genetic engineering techniques to alter the meaning of reproduction. In 1997, Scottish researchers created "Dolly," the first sheep cloned using the nuclear transfer technique, while "Polly," who was born in December of the same year, became the first transgenic cloned sheep. In 2004, scientists in South Korea reported cloning the first human embryos. Several years earlier, in 2001, the American laboratory Advanced Cell Technologies reported cloning a human embryo using the "Dolly" method, but it only made it to the six-cell stage before dying. "Designer babies," that is, fetuses that have been preselected based on pre-implantation genetic diagnosis and cloning, have become visible examples of new reproductive technologies.

The hype over Dolly, Polly, and genetically modified babies—or fetuses containing the DNA of more than two parents—has reignited the ethical debates over genetic engineering. Human cloning is enraging individuals across the politi-

cal spectrum. Many humanitarians are concerned that cloning violates the sanctity of life. Recent experiences involving the termination of pregnancies because of the fetus's sex, particularly in China and India, raise further concerns. In some quarters, there is also a concern about removing control of reproduction from women in favor of scientists, presumed to be primarily male. Accusing scientists of "playing God," opponents of genetic engineering are not only voicing their opinions through the media but are also persuading governments all around the world to enact legislation regulating or criminalizing genetic research, especially on human cloning. Stem cell research, which involves genetically programming "blank" human embryonic cells with the hope of treating illnesses such as cancer, Parkinson's disease, and spinal cord injuries, has, not surprisingly, met with similar reactions. It is only the latest ethical quandary in what is sure to be many more decades of controversy for this revolutionary branch of science.

—Tanfer Emin Tunc

Bibliography

- Berry, Roberta. *The Ethics of Genetic Engineering*. New York: Routledge, 2007.
- A History of Genetic Engineering*. <http://www.ifgene.org/history.htm>.
- LeVine, Harry and Mildred Vasan. *Genetic Engineering: Contemporary World Issues*. Santa Barbara, CA: ABC-CLIO, 2006.
- Shanks, Pete. *Human Genetic Engineering: A Guide for Activists, Skeptics, and the Very Perplexed*. New York: Nation Books, 2005.
- Stock, Gregory. *Redesigning Humans: Our Inevitable Genetic Future*. New York: Houghton Mifflin, 2002.

Surgical Advances, 1945–Present

By the 1950s because of previous advances in anesthesia and postoperative care, surgery was already a well-established and well-respected discipline. The second half of the twentieth century witnessed further growth of surgery into previously unexplored areas. Technical advances enabled surgeons to operate on organs such as the heart, a feat that had previously been considered to be impossible. After World War II transfusions became safer, and the use of fluid-replacement

► HEART TRANSPLANT PIONEERS

In December 1967 Christiaan Barnard (1922–2001), a South African surgeon working at the Groote Schuur Hospital, performed the first successful heart transplant procedure. Operating on Lewis Washkansky, a 53-year-old male who faced certain death from heart failure, Barnard replaced the failing heart with a healthy heart from a 25-year-old woman who had died after an automobile accident.

Although this first heart transplant patient only lived for 18 days, Barnard achieved instant fame because he had proved that an unthinkable operation was now possible, offering hope for thousands of patients with previously incurable heart disease. Barnard's astonishing achievement was feasible because of two advances: (1) availability of mechanical equipment to substitute for the heart and lungs while replacing the defective heart and (2) immunosuppressive drugs such as cyclosporine, azathioprine, and prednisone to prevent rejection of the foreign organ.

Initially the procedure was rarely used because survival rates were less than 20 percent, with fatalities mainly caused by rejection of the new organ. However, the operation became acceptable after development of newer immunosuppressive drugs that offered much better control of the rejection phenomena. Since Barnard's historic first operation, heart transplantation has become a recognized surgical procedure available for the



Surgeon Christiaan Barnard shows an X-ray image of Louis Washkansky's chest taken during the first heart transplant December 5, 1967. (Bettmann/Corbis)

management of intractable heart failure. At present in the United States, 87 percent of heart transplant patients survive for one year, and more than two-thirds of patients survive for five years. The major limitation now is not related to rejection or technical problems but rather a shortage of suitable donor hearts. In the United States from 1988 to 2004, 36,000 cardiac transplants have been performed. More patients could be treated, but a shortage of suitable donor organs limits the opportunity for cardiac transplantation to about 2,000 patients per year.

—Albert B. Lowenfels

therapy for the management of shock improved the chances of survival for severely injured patients.

The rapid expansion of surgery since the 1950s coincides with advances in seemingly unrelated specialties. The results of all types of surgery improved in the 1950s after the development of antibiotics, which lowered the infection rate after surgery, and the availability of drugs to reduce the formation of potentially fatal blood clots that often develop after an injury or operation. Largely because of the development of immunosuppressive drugs that allowed the body to tolerate foreign tissue without rejection, surgeons could replace a failing organ with a

healthy donor organ. The kidney was the first organ to be successfully transplanted, with the initial patient receiving a healthy organ from his identical twin brother; over time, organs from unrelated donors were successfully transplanted. In 1990, Joseph Murray, because of his pioneering achievements in transplantation, received the Nobel Prize in Medicine. Successful renal transplantation led to replacement of other failing organs such as the liver, intestine, and pancreas. Now even the heart can be transplanted with relative safety. Patient survival after organ replacement has steadily improved over time.

In the second half of the twentieth century surgical diagnosis also became much more accu-

rate. Surgeons and surgical specialists now have greatly enhanced diagnostic tools such as mammography for the early diagnosis of breast cancer and newer types of scans such as computerized tomography (CT) to detect occult lesions hidden deep within the various body cavities. These new modalities greatly improve the surgeon's ability to pinpoint the exact nature and location of the patient's pathology.

Technologic advances have simplified surgery and improved patient recovery. Since the 1950s new tools such as surgical stapling devices to control internal hemorrhage or to reunite parts of the intestinal tract have simplified abdominal surgery. Laser devices are widely used, especially by ophthalmologists. Laparoscopic or minimal-access surgery has dramatically changed the way surgeons perform many of the most common operations. For example, removal of the gallbladder (cholecystectomy) traditionally required a large and painful abdominal incision followed by prolonged hospitalization. Today, most of these operations are carried out through tiny incisions to allow the surgeon to insert a small television camera inside the abdomen to visualize the organs and to allow use of long, narrow specially designed instruments. Patients are more comfortable and recover more rapidly after minimal-access surgery.

Perhaps the most dramatic technological advance has been the development of robotic surgery whereby the surgeon, seated at a computer console, sends instructions to specially designed instruments that perform the operation by following the surgeon's electronically submitted commands. No longer does the surgeon have to be in the same location as the patient. In 2001 a surgeon in the United States relying on robotically controlled instruments removed the gallbladder from a 68-year-old patient hospitalized in France.

In the latter half of the twentieth century surgical specialists developed numerous new operations. Pediatric surgeons can now successfully treat many birth defects, and today it is even feasible to perform fetal surgery. Orthopedic surgeons easily replace painful arthritic joints such as the hip, knee, or shoulder with a new highly functional synthetic joint. Surgeons have devel-

oped new operations to manage the growing number of patients with life-threatening obesity. Ophthalmologic surgeons have transformed cataract surgery into a safe, effective ambulatory procedure. Neurosurgeons have benefited from the development of diagnostic procedures to accurately locate and treat brain lesions.

The development of machines to temporarily substitute for the heart allowed cardiac surgery to develop. During open heart surgery, heart-lung machines shunt blood away from the heart while the surgeon repairs congenital defects or damaged heart valves or replaces occluded coronary blood vessels.

The advances in surgery that have taken place since the 1950s are well illustrated by Albert Einstein's final illness. In 1948 Einstein developed an aneurysm, or dilatation of his abdominal aorta, a disease with the risk of eventual rupture and fatal hemorrhage. At that time no definitive treatment for this life-threatening illness was available, and Einstein died in 1955 when his aorta ruptured. Only a few years after Einstein's death, surgeons developed a procedure to replace the swollen part of the aorta with a cloth graft. Remarkably, in the twenty-first century, a new breakthrough occurred. Rather than the formidable task of replacing the aorta, surgeons obtain excellent results by strengthening the bulging aorta internally with an expandable graft placed inside the damaged blood vessel. This has become a common operation because it can be done with minimal blood loss through small groin incisions, making it ideal for elderly poor-risk patients.

—Albert B. Lowenfels

Bibliography

- Berlinger, Norman T. "Robotic Surgery—Squeezing into Tight Places." *New England Journal of Medicine* 354 (2006): 2099–2101.
- Cai, Junchao, and Paul I. Terasaki. "Heart Transplantation in the United States 2004." *Clinical Transplantation* 20 (2004): 331–344.
- Stellato, Thomas A. "History of Laparoscopic Surgery." *Surgical Clinics of North America* 72 (1992): 997–1002.
- Toledo-Pereyra, Luis H. "Nobel Laureate Surgeons." *Journal of Investigative Surgery* 19 (2006): 211–218.

Folk Medicine since 1945

The second half of the twentieth century represented a crossroads for folk medicine. Mass-marketed pharmaceutical drugs and the encroachment of Western scientific medicine threatened the preservation of many traditional or folk systems of medical knowledge. This crisis, however, also stimulated intensive studies of folk medicine by scholars in a variety of academic disciplines in the 1950s and 1960s. Anthropologists, historians, archaeologists, and sociologists responded to the widespread loss of traditional cultural knowledge and practices by gaining a greater understanding of folk medical beliefs and practices in Europe, Asia, Africa, Polynesia, and the Americas. Armed with this knowledge, scientific researchers turned to studying the plant world as a source of new medicines in the 1980s and 1990s. At the end of the twentieth century, scientists demonstrated the effectiveness of hundreds of folk medical treatments used around the world since the beginnings of recorded history.

Ethnobotanists, who study how different cultures' use of plants, were among the scientists who sought to document and preserve indigenous medical practices. Richard Schultes, often called the father of ethnobotany, spent 13 years in South America, from 1941 to 1954, and collected 24,000 plant specimens, including 2,000 used by traditional healers. The collection is still being studied for undiscovered new medicines. In the early 1940s additional pioneering work by ethnobotanist Russell Marker with Mexican yams reminded practitioners of Western scientific medicine that folk medicine still had much to offer. Marker developed a technique for turning the crude active substance in Mexican yams into the steroid progesterone. Shortly thereafter, Syntex, a new company jointly founded by Marker and Mexican scientists, developed a synthetic cortisone and a hormone that inhibited ovulation, making Syntex the world leader in steroid chemistry. By the early 1960s Syntex was supplying the hormones for half the world's market in oral contraceptives. The success of Syntex was not replicated in subsequent decades, and much of Schultes's pioneering work went unrecognized.



Richard Evans Schultes at Yapobodá, in the Northwest Amazon, 1946. Schultes (1915–2001) is widely considered to be the founder of ethnobotany studies. (Smithsonian Institution)

During the 1980s and 1990s a combination of events led to a widespread revival of interest in folk medicines. Alarmed by the rate of rain forest destruction, environmentalists and scientists combined forces. At the same time, pharmaceutical companies began to see the value in returning to the analysis of plant compounds for new drugs. By this time, much progress was made in understanding the mechanisms of diseases such as cancer, heart disease, arthritis, and mental illness. Medical scientists developed a new approach to scan the thousands of compounds found in nature for drugs to target those disease mechanisms, a process called mechanism-based screening.

Inspired by the promise of medicinal botany's past, a new era of medicine hunting led to the phenomenon called biodiversity prospecting. The prospectors included ethnobotanists, biologists, and anthropologists. They mined tropical rain forests and discovered active compounds used to treat dozens of conditions and diseases includ-

ing high cholesterol, respiratory ailments, herpes, and cancer. Biodiversity prospecting has subsequently extended far beyond the rain forests. Scientists built on earlier studies that meticulously documented and demonstrated the efficacy of Amerindian, Asian, African, Indian, and European folk medicines originating in classical antiquity. Using clinical trials and molecular science to isolate and test the active ingredients in plants, they embarked on efforts to adapt these folk remedies for widespread use. Their work continued in the early twenty-first century.

The widespread revival of interest in folk medicine inspired by researchers was accompanied by international debates over the value of folk medicine and the control of indigenous knowledge in the last quarter of the twentieth century. In 1977 the World Health Organization (WHO) signaled a major shift in popular perceptions by officially endorsing the principle that many folk medicines could be used as safe and inexpensive alternatives to Western scientific medicine. In 2002 WHO launched its first comprehensive strategy to help countries preserve folk medicines, with additional goals to ensure availability and affordability while developing national policies on the evaluation and regulation of traditional medicine.

Meanwhile, disputes have continued over intellectual property rights and the control of indigenous folk medical knowledge. In 1981 the Model Law for the Protection of Expressions of Folklore against Illicit Exploitation and other Prejudicial Actions was jointly adopted by the World Intellectual Property Organization and the United Nations Educational, Scientific and Cultural Organization. In 1992 the Convention on Biological Diversity also specifically addressed the problem of unauthorized appropriation of traditional knowledge in order to ensure that indigenous populations would share in the benefits through a system of equitable distribution. In order to foster a dialogue about equity between developed and developing nations, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore was also established by the World Intellectual Property Organization in 2000. At its first meeting in 2001, debates over how to create international standards for the legal protection

➤ COCA LEAF AND INDIGENOUS MEDICINAL PRACTICES IN THE ANDES

Coca leaf, one of the world's first domesticated plants in the Americas, has been cultivated, traded, and used in medicines and ceremonies by Andean peoples for more than 4,000 years. Unfortunately, the Western world associates the plant primarily with its notorious derivative, cocaine. The leaf's tiny concentration of the cocaine alkaloid plays a role in its pharmacological properties, as when the leaves are used as a poultice for minor wounds or as a topical anesthetic. The drug cocaine, however, was a Western laboratory invention—extracted in 1860 by a German chemist—and has no corollary in Andean traditions.

Coca leaves are most commonly used as an herbal tea to ameliorate the effects of high altitude or indigestion and as a mild stimulant—with an effect similar to caffeine—when chewed during work in the fields, mines, and markets. The coca leaf is not addictive, as are both caffeine and pure cocaine. Traditionally, coca was also chewed after meals, which in the Andes consisted primarily of potatoes, and coca has been found to help regulate the blood sugar produced by potato starch. Because coca leaf has so many quotidian uses, it holds a central place in Andean spirituality and is considered the sacred leaf. Myths explain that coca was a gift to humankind from Pachamama (Mother Earth), so indigenous people continue to give offerings of coca leaf to Her during celebrations.

The legends that express reverence to coca represent deep cultural knowledge, for the leaf has been found to contain many essential vitamins and minerals that indigenous people could not access in the rest of their diet in ancient times and often cannot afford to access now. For example, coca is high in calcium, and milk products did not exist before the Spanish conquered the Andes in the sixteenth century; milk is also too expensive now for many to consume regularly. A major Harvard study showed that compared to 50 other native plants consumed in the Andes, coca leaf has higher concentrations of proteins, carbohydrates, fiber, calcium, iron, and vitamins A, B-12, and E. Coca's superior nutritional value thus complements its excellent medicinal qualities, making it seem like the sacred leaf indeed.

—Caroline S. Conzelman

of folk medicine as intellectual property continued. Early twenty-first-century estimates suggest that more than half of the world population relies on traditional healers and folk medicine for a wide variety of illnesses. While the future of folk medicine remains uncertain, these forms of medicine and therapeutic regimens have sparked widespread interest in the West. From traditional Chinese herbs and acupuncture to indigenous practices and Western folk cures, they represent alternatives to conventional scientific medicine with growing popularity in developed nations.

—Eric W. Boyle

Bibliography

- Carter, William E., and Mauricio Mamani P. *Coca en Bolivia*. La Paz, Bolivia: Librería Editorial Juventud, 1986.
- Correa, Carlos M. *Traditional Knowledge and Intellectual Property*. Geneva: Quaker United Nations Office, 2001.
- Davis, Wade. *One River: Explorations and Discoveries in the Amazon Rainforest*. New York: Simon and Schuster, 1996.
- Duke, James A., David Aulik, and Timothy Plowman. "Nutritional Value of Coca." *Harvard Museum Leaflets* 24(6) (1975): 113–119.
- Joyce, Christopher. *Earthly Goods: Medicine-Hunting in the Rainforest*. Boston: Little, Brown, 1995.
- Mayer, Enrique. "Coca Use in the Andes." In *Drugs in Latin America*, edited by E. Morales. Williamsburg, VA: Department of Anthropology, College of William and Mary, 1986.
- Plotkin, Mark J. *Medicine Quest: In Search of Nature's Healing Secrets*. New York: Viking, 2000.
- Scarborough, John, ed. *Folklore and Folk Medicines*. Madison, WI: American Institute of the History of Pharmacy, 1987.
- Schultes, Richard E., and Siri von Reis, eds. *Ethnobotany: Evolution of a Discipline*. Portland, OR: Dioscorides, 1995.
- Weil, Andrew. "The Therapeutic Value of Coca in Contemporary Medicine." *Journal of Ethnopharmacology* 3 (1981): 367–376.

AIDS and Poverty

As of 2006, 40 million people around the world were living with the human immunodeficiency virus (HIV), with the burden of the disease falling most heavily on developing countries. The pandemic is particularly devastating in sub-

Saharan Africa, where the HIV adult prevalence rate approaches 6 percent, far higher than on any other continent. When the virus progresses to the stage of acquired immunodeficiency syndrome (AIDS) and goes untreated, it causes death within a year on average. In 2006 there were 2.9 million AIDS deaths around the world, and almost three-quarters of them were in sub-Saharan Africa.

Experts have not been able to pinpoint the exact origins of the HIV virus but suspect that a trans-species jump from chimpanzees to humans occurred in West-Central Africa sometime during the twentieth century. Subsequent worldwide transmission of the virus has been the result of unprotected sexual activity; intravenous drug use involving nonsterile needles; mother-to-infant infection during pregnancy, childbirth, or breastfeeding; and contaminated blood transfusions (now rare). The virus cannot be spread through casual contact, such as handshakes or coughs. Another common misconception is to view AIDS as a homosexual disease. Globally, the virus is transmitted heterosexually in the majority of cases. In sub-Saharan Africa, women living with HIV now outnumber men in a ratio of six to four.

It is estimated that since the initial scientific recognition of the disease in the early 1980s, AIDS has claimed 25 million lives, making it one of history's most lethal epidemics. The toll has been severe, individually and at national and regional levels. Because of the specific ways that it spreads, HIV tends to impact young adults disproportionately, compounding the economic, social, and demographic costs of the disease. In countries with high infection rates, the illness is ravaging household incomes. Without strong systems of state-funded education, many families must withdraw their children from school. When one or both parents are incapacitated by AIDS, children are deprived of material and emotional support. Africa now has millions of AIDS orphans. Another demographic effect of AIDS is seen in reduced life expectancies. In several nations in Southern Africa, AIDS has been a major factor in the lowering of life expectancies to below 40 years of age, the lowest levels in the world and a stunning reversal of the modern trend toward longer lives.

➤ TIMELINE OF AIDS EPIDEMIC

- 1959—A blood sample is taken, which in 1986 tests positive for Human Immunodeficiency Virus (HIV).
- 1984—First AIDS conference held in Atlanta, Georgia.
- 1986—The clinical trial for the first antiretroviral drug, zidovudine (AZT), is complete.
- 1989—According to World Health Organization estimates, worldwide 480,000 people live with HIV and AIDS.
- 1991—Worldwide, 2.9 million people living with HIV and AIDS.
- 1994—AZT is shown to reduce mother-child transmission of HIV by 67.5 percent. Eleven million people with HIV and AIDS, 65 percent of the global total, live in sub-Saharan Africa.
- 1996—Brazil launches nationwide antiretroviral drug distribution and AIDS care and awareness program.
- 1999—In Russia, 12,000 new cases in 10 months are blamed mostly on drug injections within the military.
- 2000—“Debate on Impact of AIDS on Peace and Security in Africa” marks the first time in 50 years that the United Nations Security Council meets to discuss a public health issue.
- 2001—Bristol-Myers Squibb, a pharmaceutical company, offers to reduce stavudine and

didanosine therapy costs in Africa to \$1 per day per patient. Abbott Laboratories offers its antiretroviral drugs at no profit in African countries.

—AIDS is declared the main cause of death in Thailand.

—An estimated 40 million adults and children worldwide have HIV and AIDS.

2003—The U.S. Senate approves a \$15 billion emergency plan for AIDS relief, to be spent over 5 years. Of this, \$3 billion is to be distributed each year to the African and Caribbean countries worst hit by the HIV and AIDS epidemic.

2006—Estimates of the number of people living with HIV and AIDS range from 34.1 million to 47.1 million (www.unaids.org).

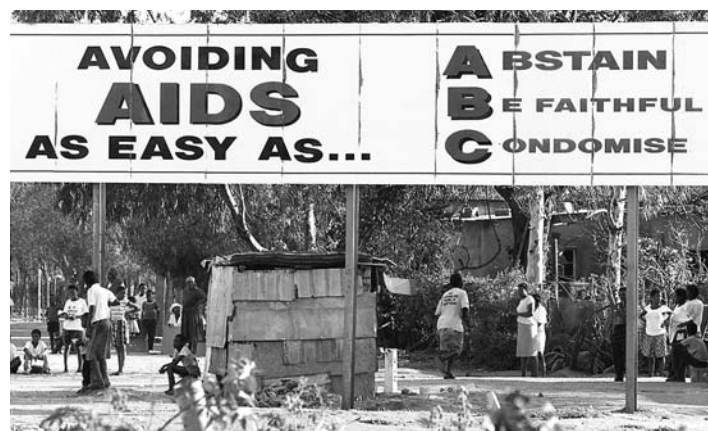
Bibliography

“Global Summary of the AIDS Epidemic, December 2006.” data.unaids.org/pub/EpiReport/2006/02-Global_Summary_2006_EpiUpdate_eng.pdf.

Marlink, Richard G., and Alice G. Kotin. “Global and Regional Responses to HIV and AIDS.” *Global AIDS Crisis: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, 2004.

The economic damage from HIV/AIDS varies from country to country. Where prevalence rates are highest, the damage is greatest. The disease cuts into the labor force in unpredictable ways, deprives employers of experienced workers, and drives up recruitment and training costs. Workers are lost not only to the disease but to caretaking duties for family members. As incomes fall, so does spending. Economic growth rates are being reduced in places where living standards are already among the lowest in the world. Governments are having to divert much-needed funds from physical and social investments to AIDS prevention, relief, and care.

The picture is not entirely grim. Although the disease is at present incurable, it is treatable and preventable. Antiretroviral drug treatments, which have been greatly improved and



A banner to help combat the spread of AIDS is displayed on the border of the Naledi township in Gaborone. More than one in four adults in Botswana is infected with the HIV/AIDS virus, according to official statistics, making it one of the world's worst-affected countries. (AFP/Getty Images)

simplified, can slow the onset of AIDS symptoms in those who are HIV-positive. Such drugs are extending many lives. Their cost remains a problem in poor nations, but low-cost generic substitutes are becoming more available. Ultimately, the hope is for an effective AIDS vaccine. Experts caution that there are major technical hurdles to be overcome, yet several vaccine trials are now under way. The other way to achieve prevention is through education efforts aimed at changing behavior to reduce the risks of HIV transmission. Needle exchange programs can lower that risk; so can the consistent use of condoms, faithfulness to one's sexual partner, and male circumcision. The establishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria in 2002 signaled a new international commitment to mobilize financial resources for the prevention and treatment of these diseases. Major funding for the Global Fund has come from the governments of the United States, Japan, and several European nations as well as the Gates Foundation.

HIV/AIDS now ranks as one of history's most devastating pandemics. Its capacity to elude a cure, decade after decade, sets it apart from most other communicable diseases that have afflicted humanity. Its disproportionate impact on Africa, the world's poorest continent, will be noted in every history of our time.

—Geoffrey Gilbert

Bibliography

- Barnett, Tony, and Alan Whiteside. *AIDS in the Twenty-First Century: Disease and Globalization*. New York: Palgrave Macmillan, 2002.
- Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization. *AIDS Epidemic Update: Special Report on HIV/AIDS: December 2006*. http://data.unaids.org/pub/EpiReport/2006/2006_EpiUpdate_en.pdf.
- Stillwaggon, Eileen. *AIDS and the Ecology of Poverty*. New York: Oxford University Press, 2005.

National Health Care Systems since 1945

With the emergence of the welfare state in Western Europe (e.g., Britain, France, and Germany) and the United States (under the New Deal) in the late nineteenth century to the first half of

the twentieth century (mostly in the form of unemployment insurance and old age pensions), the basic requirements for medical care continued to be covered at cost by patients, with some level of coverage through private insurance or their own savings. The ability to pay dictated the level of care that was available to the patient-consumer. Much of the colonized world lacked basic medical facilities to meet the demands of illnesses and injury, which put people at peril, much more so when they lacked the ability to pay. With the end of World War II, national health care systems were created throughout much of the developed world, albeit at differing levels of state agency and private initiative, in order to meet the medical, dental, and mental health issues of their respective populations.

Socialized health care systems were established in postwar Europe as part of the development of the welfare state. In 1946, Britain established the publically funded National Health Service (NHS), which offered comprehensive medical, dental, mental health care, and prescriptions, nominally free of charge to all British citizens, through the passage of the National Health Service Act. British prime minister Clement Attlee's Labour government created the NHS as part of the cradle-to-grave welfare state envisioned in the wartime Beveridge Report. The NHS established state-run hospitals, medical facilities, and teaching hospitals and made agreements with physicians, dentists, and other medical practitioners, essentially making them public servants. Private general practitioners (GPs) were allowed to continue their service albeit under government regulation and with their services paid by the state. Moreover, private insurance continued to function, albeit as an adjunct to NHS benefits. France, West Germany, Japan, Sweden, Australia, and other developed states established comparable health care systems by instituting social insurance legislation under the direct authority of their national governments. Marxist-Leninist East European states and the Soviet Union, while also establishing and expanding their health care systems for their respective populations, placed economic development as a higher priority of the state and thereby reduced the amount of service available to the people.

Single-payer health care systems were developed in North America and Oceania that offered publically funded health care without making medical facilities de facto government agencies, as in socialized health care systems in Europe. In North America, both the United States and Canada established health care systems with differing levels of government involvement. The United States instituted Medicare as part of the Social Security Act of 1965 under the auspices of Lyndon B. Johnson's progressive social policies known collectively as the Great Society. Medicare was established as a single-payer national health insurance plan (meaning that the government would pay for services in the private sector) for people ages 65 or older who met certain criteria for eligibility. Medicaid, which was also established that year, served to provide low-income families with health care through federal funds managed by individual states, which typically matched federal funds, under federal supervision. Nonetheless, these programs were geared toward certain sectors of the population, meaning that the majority were left to purchase their own health insurance. Those who were not able to afford such a luxury were left to their resources in a medical emergency. In contrast, in 1966, Canada instituted a single-payer universal health care system, similar to U.S. Medicare, but extended to the entire population in providing medical, dental, and mental health care.

Health care systems in the developing world are either absent or severely underfunded. Although Latin American states, such as Mexico, Brazil, and Argentina have extensive government-subsidized health care systems, they are often underfunded. Certain services are entirely absent from public facilities and must be obtained through private at-cost institutions. Thriving Asian states have developed privatized and semipublic health care systems, which often suffer from a

surfeit of funds or services. Some African states only have international nongovernmental organizations, such as the International Red Cross and Doctors without Borders, to provide medical care, particularly in war-torn states such as Congo and Sudan. Moreover, terrorist organizations, such as Hizbullah, offer health care to certain constituencies in Lebanon as a means to ensure support for their cause. India and China have developed public health care systems to meet the needs of their expanding populations, but these are often lacking suitable services and funding.

Public debates over national health care programs have recently become polemic throughout much of the West in light of rapidly expanding aging populations and the waning of public expenditures to meet their health care needs. Britain, France, Germany, and Japan, with large portions of their respective populations graying, will potentially incur huge health care costs to the state and thereby increased taxes. Moreover, as of 2009 in the United States under the administration of President Barack Obama, health care reform planning has led to protests against the perceived socialization of medicine, with the lead protest target a single-payer universal health care system administered by the federal government.

Regardless of public debate over health care systems and the level of state intervention in much of the developed and developing world, after 1945 most governments around the world have assumed the responsibility of instituting state-administered or at the very least privately held state-regulated health care systems.

—Abraham O. Mendoza

Bibliography

- Judt, Tony. *Postwar: A History of Europe since 1945*. New York: Penguin, 2005.
- Spellman, W. M. *A Concise History of the World since 1945: States and Peoples*. New York: Palgrave Macmillan, 2006.

■ Introduction: Technology, Post-1945

Wartime investments in science and technology led to numerous developments that saved the lives of combatants and noncombatants alike. Everything from penicillin to DDT and from elementary computers to new explosives were applied to civilian life after the end of the war. The Cold War military buildup and ideological struggle continued high levels of postwar funding for science and technology research.

Advances in basic science were applied to many areas of industry or life. The new postwar computers were huge machines such as the Electronic Numerical Integrator and Calculator (ENIAC) at the University of Pennsylvania, begun at the end of World War II as a U.S. Army tool for calculating missile trajectories. It weighed 50 tons and covered 1,800 square feet. Computers were first powered by vacuum tubes, which processed data recorded on punch cards. The development of computers postwar was aided by a number of advances in other sciences. These included at first transistors and then integrated circuit boards. Innovations included the development of silicon chips that contained metal wiring that was printed into the chip.

In the chemical industry, numerous materials were developed, including new plastic resins that were strong, light, and capable of being molded into a virtually limitless number of products. These resins include low-density polyethylene (1942) used in plastic squeeze bottles, polypropylene (1957) used in safety helmets, and liquid crystal polymers (1985) used in electronic parts. Resins such as rayon (1910) and nylon (1939) have been spun into fabrics. While nylon created so-called nylon wars following wartime shortages of silk stockings, spandex (1959) when spun into tight clothing created another fashion stir during the disco era. Other resins have been combined with fabric or fibers to manufacture a wide range of strong, light composite materials such as carbon fibers ideal for use in automotive or aviation production. Other new chemical materials range from Teflon (a solid fluorocarbon) to the engineered spherical carbon molecules known as Bucky Balls or Fullerenes, named after

the somewhat visionary U.S. inventor Buckminster Fuller who developed similar structures on the macroscale for his domes.

Miniaturization has allowed computers to become increasingly small and powerful. With the advance of miniaturization, the cutting edge by the 1990s was found in the new nanoscale science and technology. The full development of nanoscience is still in the future. However, it is the object of great concern for both the profits and the problems it may generate. Nanotechnology involves the manipulation of the materials at the atomic or molecular level. To give one example, it may be possible to develop nanopharma that will specifically target and destroy pathogens or a cancerous tumor. This nanopharma would be specific, unlike the chemotherapies or radiation treatments that have been used to kill cancers while also almost killing the patient with chemical or radiation poisoning.

The expected benefits from nanoscale science such as that of stem cell research are still hopes that will be realized in the future. However, the use of computers in developing new medicines is now standard through a high throughput process that uses the computer to test large numbers of chemicals and their biological responses.

There are hopes that new technologies will aid efforts to create sustainable homes, workplaces, and cities. To give one example, nanotechnology might create so-called smart compounds that could transform the paint of the house or roof into a electrical power plant.

—*Jack Waskey*

Integrated Circuits

Besides creating an enormous consumer electronics industry, integrated circuits had become pervasive in all areas of scientific endeavor by the late 1970s. Integrated circuits are made of wafers of silicon with electronic components, such as transistors, diodes, capacitors, and resistors, etched into the silicon by chemicals or light. The semiconducting nature of silicon is used to direct the flow of electrons through the electronic

components, using binary values and the rules of Boolean algebra, a mathematical curiosity created a century earlier by the self-taught British mathematician George Boole (1815–1864).

The earlier innovation necessary to create integrated circuits was the invention of the transistor in 1947 at Bell Telephone Laboratories in Murray Hill, New Jersey, by William Shockley (1910–1989), Walter H. Brattain (1902–1987), and John Bardeen (1908–1991), for which the three men shared the 1956 Nobel Prize in Physics. Integrated circuits were independently invented by Jack S. Kilby (1923–2005) of Texas Instruments and Robert Noyce (1927–1990) at Fairchild Semiconductor in 1958 and 1959. Kilby obtained the first patent, and Noyce developed the planar process to place metal connections on the semiconductor wafer; royalties were paid to both men for their inventions. Kilby received half of the 2000 Nobel Prize in Physics after Noyce had been dead for ten years.

Fairchild Semiconductor brought the first integrated circuit to market in 1961. The Apollo project became the first big customer for integrated circuits and proved a key driver to accelerate the growth of the semiconductor industry. Quite quickly, integrated circuits became the main technology of the computer industry, and integrated circuits made possible later space exploration. The integrated circuit led to the invention of the microprocessor in the early 1970s at Intel Corporation. A microprocessor combines all the central logic necessary for a computer onto a single chip.

In 1964, Gordon E. Moore (1929–) noticed that the density of transistors and other components on integrated chips doubled every year. He charted this trend and predicted that it would continue until about 1980, when the density of integrated circuits would decline to doubling every two years. Variations of this idea became known as Moore's Law. Since the early 1970s, chip density on integrated circuits, both microprocessors and memory chips, has doubled about every 18 months. About 50 electronic components per chip was the density in 1965, 5 million electronic components were placed on an individual chip in 2000, and in 2008 the number of components had reached 810 million. An individual transistor on a chip is now about 32 nano-

meters in size. At times, different commentators have predicted that this trend would hit an obstacle that engineers could not overcome and slow down, but that has not yet happened. The electronic components on integrated circuits are being packed so close that by the second decade of the twenty-first century it is believed that quantum effects will begin to make it impossible to maintain the rate of increasing density predicted by Moore's Law.

In the late 1990s, the technology used to manufacture integrated circuits was adapted by replacing transistors on the silicon with deposits of DNA. These DNA microarrays, or DNA chips, are used to quickly and simultaneously test a biological substance against thousands of pieces of different DNA, leading to a thousandfold increase in productivity by experimental biologists.

—Eric G. Swedin

Bibliography

- Ceruzzi, Paul E. *A History of Modern Computing*. Cambridge, MA: MIT Press, 1998.
- Queisser, Hans. *The Conquest of the Microchip: Science and Business in the Silicon Age*. Cambridge: Harvard University Press, 1988.
- Reid, T. R. *The Chip: How Two Americans Invented the Microchip and Launched a Revolution*. New York: Random House, 2001.
- Riordan, Michael, and Lillian Hoddeson. *Crystal Fire: The Birth of the Information Age*. New York: Norton, 1997.
- Slater, Robert. *Portraits in Silicon*. Cambridge, MA: MIT Press, 1987.

Computers

During World War II, various defense projects in America and Britain developed high-speed electronic calculators, among which were the first digital computers. Earlier computers were either mechanical or analog-based. Digital computers represent data as discrete pieces of information, or bits. These new computers were based on vacuum-tube technologies and experienced frequent failures. Engineers extending the frontiers of their craft, rather than scientists, built these computers.

The first truly digital computer that was more than a prototype was the Colossus, built by the British during World War II to help decrypt

German radio traffic. The British government kept its success a secret for more than two decades, so the first acknowledged digital computer was an American invention. Completed in 1945, the ENIAC (Electronic Numerical Integrator and Computer) was a high-speed electronic calculator designed to create artillery ballistic tables and built by J. Presper Eckert (1919–1995) and John Mauchly (1907–1980) for the U.S. Army at the University of Pennsylvania Moore School of Electrical Engineering. While building ENIAC, Eckert and Mauchly developed for their next computer the concept of a stored program, where data and program code resided together in memory. This concept allowed computers to be programmed dynamically so that the actual electronics did not have to change with every program.

The noted mathematician John von Neumann (1903–1957) expanded on the concept of stored programs and laid the theoretical foundations of all modern computers in a 1945 report and later work. His ideas came to be known as the von Neumann Architecture. The center of the architecture is the repeating fetch-decode-execute cycle: instructions are fetched from memory and then decoded and executed in a processor. The execution of the instruction changes data that are also in memory. Eckert and Mauchly deserve equal credit with von Neumann for their innovations, though von Neumann's elaboration of their initial ideas and his considerable prestige lent credibility to the budding movement to build digital computers. Eckert and Mauchly went on to build the first commercial computer, the UNIVAC (Universal Automatic Computer), in 1951.

The Soviet Union built its first computer in 1950 at the Kiev Institute of Electric Engineering under the direction of S. A. Lebedev; it ran 50 instructions a second and used a memory of 31 16-bit words. After moving to Moscow, Lebedev proceeded to supervise the development of the BESM (the acronym for the Russian-language term for "large electronic computer") series of computers, which used magnetic drums and magnetic tapes for storage.

The transistor was invented in 1947 at the Bell Telephone Laboratories in Murray Hill, New Jersey, by John Bardeen (1908–1991), William

Shockley (1910–1989), and Walter H. Brattain (1902–1987). By the late 1950s, the transistor became a useful commercial product, creating the second generation of computer hardware; it rapidly replaced vacuum tubes in computers and other electronic devices because transistors were much smaller, generated less heat, and were more reliable. Defense-related projects and space-related projects undertaken in the United States as part of the Cold War became a major driver for computer-related innovation in both hardware and software.

The development of integrated circuits in the mid-1960s concentrated transistors on silicon wafers, inaugurating a third generation of computer hardware. In the 1970s, engineers packed enough logic gates onto an integrated circuit to create a microprocessor, or a computer on a chip. Microprocessors led to personal computers and cheap handheld calculators, banishing slide rules to museums. The current fourth generation of hardware is based on microprocessors and ever more sophisticated integrated circuit chips.

The 1950s brought the first higher-level programming languages. FORTRAN (FORMula TRANslator) was invented in 1957 as an easy way to write mathematically oriented scientific programs. The 1960s brought time-sharing systems and the development of operating systems. In the 1970s, structured programming became prevalent, leading to programs that were easier to develop and less likely to have errors.

In the 1960s a new kind of computer, the supercomputer, emerged. Expensive and oriented toward scientific computing, it was used in new centers in Europe, the United States, and Japan to offer scientists the opportunity to model physical systems. Since the late 1970s, most supercomputers have been parallel computers: many processors combine to work on different parts of a problem in parallel rather than in sequence.

In the 1950s and 1960s, the academic discipline of computer science emerged, a unique combination of engineering, applied mathematics, and technical craft. Whereas other sciences have a natural part of the world that is the object of their study, computer scientists study and expand technological creations. Purists argue that computer science, if it is to be worthy of the

name of science, should be only the study of algorithms, which are mathematically proven recipes for solving programming problems. Computer science included, from the 1950s, research into artificial intelligence, trying to create a combination of computer hardware and computer software that behaves as the human brain does. Research into artificial intelligence has led to advances in cognitive research.

In the 1960s, early networks endeavored to link computers together for communications. The Internet began with four nodes in 1969 as a creation of the Cold War and became a worldwide network of networks, forming a single whole. Tim Berners-Lee (1955–) invented the World Wide Web in 1991, a technology that made the Internet accessible to the masses. E-mail, file transfer, and other network technologies have allowed scientists to communicate more quickly and access supercomputing resources from a distance. Such technology has since revolutionized homes, workplaces, institutions, and daily life.

Computers are the great technological and scientific innovation of the second half of the twentieth century. Computers have made many scientific advances possible, from models of subatomic interactions to models of the birth and death of the universe. Computers have made possible space travel, advanced aircraft design, robotics, DNA sequencing, advances in nanotechnology, chaos theory modeling, and numerical analysis as well as the creation of atmospheric models, molecular dynamics, and models of proteins. As computers have become ubiquitous in daily life, the dominant trends in computing are ever more processing power and greater ease of use.

—Eric G. Swedin

Bibliography

- Aspray, William. *John von Neumann and the Origins of Modern Computing*. Cambridge, MA: MIT Press, 1990.
- Ceruzzi, Paul E. *A History of Modern Computing*. Cambridge, MA: MIT Press, 1998.
- Garfinkel, Simson. *Architects of the Information Society: Thirty-Five Years of the Laboratory for Computer Science at MIT*. Cambridge, MA: MIT Press, 1999.
- Kaufmann, William J. *Supercomputing and the Transformation of Science*. New York: Scientific American Library, 1993.

McCartney, Scott. *ENIAC: The Triumphs and Tragedies of the World's First Computer*. New York: Walker, 1999.

Williams, Michael R. *A History of Computing Technology*. 2nd ed. Los Alamitos, CA: IEEE Computer Society, 1997.

Artificial Intelligence

Artificial intelligence (AI) research involves the effort to create computer hardware and software that behave as humans do and actually think. Early computer pioneers, such as the mathematicians Alan Turing (1912–1954) and John von Neumann (1903–1957), intentionally developed electronic computers as the first step toward the creation of genuine thinking machines. In 1950, Turing created the Turing Test, a way of testing an intelligent machine. If a person could interrogate an intelligent machine via a teletype and at the end of the conversation not tell whether or not there was another person or a machine at the other end of the teletype, then that machine was intelligent. Although contemporary researchers no longer commonly accept the Turing Test as an absolute criterion, it serves as a good indicator of the goals of these early pioneers.

The term “artificial intelligence” was first coined in a two-month summer workshop at Dartmouth College in 1956, organized by the mathematicians Marvin Minsky (1927–) and John McCarthy (1927–). The first two decades of AI research were dominated by researchers at the Massachusetts Institute of Technology (MIT), Carnegie Tech (later renamed Carnegie Mellon University), Stanford, and International Business Machines (IBM). European efforts and Japanese efforts later became important. The second high-level computer language, called LISP (from “list processor”), was created specifically in 1958 by McCarthy at MIT for AI research.

The history of AI has been characterized by a series of theories that showed initial promise when applied to limited cases, leading to optimistic declarations that intelligent machines were just around the corner and to disappointment as the theories failed when applied to more difficult problems. In the early 1980s, expert systems showed promise. An expert system is created as a series of rules, with an inference engine,

► IBM'S DEEP BLUE

In May 1997, after six grueling games, chess world champion and grand master Garry Kasparov was defeated by a computer, the International Business Machines (IBM) Deep Blue. It was the first time a computer had ever achieved grand master status. Its victory in the six-game series not only shocked Kasparov but focused the media on the debate about the similarities between computers and humans and the nature of thought.

Some, such as pioneering roboticist Marvin Minsky, applauded IBM's creation. Minsky believed that Deep Blue's victory heralded an age where computers would one day dominate humankind. Kasparov also believed that Deep Blue was capable of thought; as he said, its abilities indicated something that "feels like thinking." Herbert Simon, Nobel laureate and designer of chess programs, also equated Deep Blue's methods with thought. The computer used two techniques: brute force (i.e., calculating the probability of each position's effectiveness) and avoidance (i.e., not analyzing moves with miniscule chances of success). Although Deep Blue could calculate 200 million positions per second, chess has 10^{120} positions; to avoid taking trillions of years per match, Deep Blue used avoidance.

Another distinguished group of commentators, however, argued against calling Deep Blue's functioning a product of autonomous thought. Deep Blue's chief architect, Feng-Hsiung Hsu, noted that it was incapable of intuition or feeling. Watching Deep Blue, Douglas Hofstadter, Pulitzer



Gary Kasparov plays against IBM's Deep Blue supercomputer in 1997. After losing two out of six games, with three drawn, the chess grand master was defeated, and for the first time ever a computer achieved grand master status. Kasparov believed Deep Blue could think, but its designers noted that it was more stupid than any human, being incapable of both intuition and feeling. (Stan Honda/AFP/Getty Images)

Prize-winning professor of computer science, revised his ideas about the definition of thought; it was not that Deep Blue thinks but rather that chess is not thinking, merely emotionless calculating. Hofstadter's conversion was similar to that of Jerry Fodor, who in the 1980s promoted the idea of the mind's information-processing nature, only to reject his own theory in 2000 in *The Mind Doesn't Work That Way*.

covering a narrow field of expertise. The first successful commercial expert system configured orders for Digital Computer Corporation computer systems. The promise of expert systems created a commercial expansion of the field, only to end in disappointment by the end of the 1980s as the expense and limitations of expert systems became apparent.

AI researchers developed a close relationship with cognitive science, the study of how humans think. One result of this relationship was the creation of neural networks, implemented in either hardware or software; these networks simulate the way the human brain uses neurons

to form patterns and change the relationships within those patterns. The concept of fuzzy logic also grew out of this relationship, allowing software to make decisions when input data remain uncertain and incomplete.

Robotics is related to AI in that many of the difficult problems in each field are similar. Industrial robots that perform limited tasks have become common, though general-purpose robots that can correctly perceive the natural world, through sight or other sensory means, and react to that sensory data remain visions of the future. Significant work at MIT's AI Lab in the 1990s has developed a different bottom-up approach

to robotics, using simple algorithms to create machines that move like insects.

Vision is a form of pattern recognition, and AI research eventually led to pattern recognition of optical characters, which became common by the 1990s. Effectively recognizing handwriting patterns also became possible in the 1990s. The solution of the related problem of voice recognition has resulted in simple commercial applications such as automated phone services and voice-activated word processing software.

In the popular realm, AI is often linked with ontological issues, that is, questions about the nature of being. Can machines that think be considered as having a consciousness? Movies such as Ridley Scott's *Bladerunner* (1982) and Steven Spielberg's *AI* (2001) explore the uncanny aspects of what appears to be human interaction with and potential replacement by artificial life-forms. Some robotics and artificial intelligence experts, such as inventor and author Ray Kurzweil, see themselves as ushering in a new higher species of life that ultimately will make biological humanity obsolete.

Computer programming does continue to astonish. In 1997, an IBM supercomputer called Big Blue defeated Garry Kasparov (1963–), the world chess champion, in a chess tournament, a feat once considered impossible. Many commercial computer games and video games have rudimentary AI algorithms to provide an artificial opponent for the human player. Japan's National Institute of Advanced Industrial Science and Technology created the Paro, a robotic seal-like pet that reacts and responds as if it is alive, providing a form of therapy for autistic children and the elderly. Computer programs can write poetry, diagnose illnesses, and serve as psychological therapists, yet some of the basic attributes of human thought have not and may never be mimicked by circuitry.

—Eric G. Swedin

Bibliography

- Crevier, Daniel. *AI: The Tumultuous History of the Search for Artificial Intelligence*. New York: Basic Books, 1993.
- Hogan, James P. *Mind Matters: Exploring the World of Artificial Intelligence*. New York: Ballantine, 1997.
- Hsu, Feng-hsiung. *Behind Deep Blue: Building the Computer That Defeated the World Chess Cham-*

pion. Princeton, NJ: Princeton University Press, 2002.

Kurzweil, Raymond. *The Singularity Is Near: When Humans Transcend Biology*. New York: Viking, 2005.

Minsky, Marvin. *The Society of Mind*. New York: Simon and Schuster, 1988.

Newborn, Monty. *Kasparov versus Deep Blue: Computer Chess Comes of Age*. New York: Springer Verlag, 1996.

Internet

The Internet forms a global computer network interconnecting other computer networks, providing an unparalleled means of communication. The Advanced Research Projects Agency (ARPA) was formed in 1958 in response to the first artificial satellite, the Soviet Sputnik I, and the emerging space race. ARPA was an agency of the Pentagon, and the researchers at ARPA were given a generous mandate to develop innovative technologies. In 1962, a psychologist from the Massachusetts Institute of Technology's Lincoln Lab, J. C. R. Licklider (1915–1990), joined ARPA to take charge of the Information Processing Techniques Office (IPTO). In 1963 Licklider wrote a memo proposing an interactive network allowing people to communicate via computer. This project did not materialize. In 1966, Robert Taylor (1932–), then head of the IPTO, noted that he needed three different computer terminals to connect to three different machines in different locations around the nation. Taylor also recognized that universities working with the IPTO needed more computing resources. Instead of the government buying machines for each university, why not share machines? Taylor revitalized Licklider's idea, secured \$1 million in funding, and hired 29-year-old Larry Roberts (1937–) to direct the creation of ARPAnet.

Universities were reluctant to share their precious computing resources and were concerned about the processing load of a network. Wes Clark of Washington University of St. Louis proposed an Interface Message Processor (IMP), a separate smaller computer for each main computer on the network, that would handle the network communication. Another important idea came from Paul Baran (1926–), of the RAND Corporation, who had been concerned about the vulnerability

► WHITE HAT OR BLACK? HACKER SUBCULTURES

“White Hats” is the term that a group of computer science hobbyists from the Massachusetts Institute of Technology (MIT) adopted in the 1960s, identifying themselves with the good guys in old westerns. The Tech Model Railroad Club (TMRC) worked 30-hour-plus shifts to get its miniature railroads running smoothly. These were operated by telephone switch gears and vast primitive computers. The TMRC picked the locks to get in the building after hours and performed hacks, or programming shortcuts to improve their electronic systems and commands. The original term “hack” simply referred to a brilliant out-of-the-box prank that astonished the hacker’s peers; over time, hacks became associated with computers, since these scientists worked mainly with them.

White Hats gradually created the Hacker Ethic, which Steven Levy articulates in *Hackers: Heroes of the Computer Revolution* (1984). Besides the hacker’s passion for challenges, the Hacker Ethic holds that all information should be free. Authority is untrustworthy; rules simply obstruct development and hamper creativity. Some of information technology’s pivotal inventions grew from this code. In 1977, Steve Wozniak built the Apple I, precursor to current PCs, from scratch and originally just for fun. Richard Stallman founded the

Free Software Foundation (FSF) in 1982, a center of hacker activity dedicated to producing free high-quality software. The FSF tool kit helped Linus Torvald develop in 1991 the Linux operating system as freeware.

In contrast, in the computer community, Black Hats, or crackers, tend to be not just pranksters but vandals. Like White Hats, they believe in free information and often also in information theft. Unlike White Hats, their reasons are seldom altruistic; they defeat security systems for personal gain, to prove they are smarter, or to spite corporations. In an early example, John Draper was nicknamed “Cap’n Crunch” in 1971 for using whistles from Cap’n Crunch cereal boxes to produce an exact frequency to fool telephone switchboards and get free long-distance calls. Yet Draper’s curiosity was harmless compared to later movements such as warez, dedicated to breaking encryption codes used to protect copyrights for music, DVDs, and software. Besides helping the spread of hacking know-how, the Internet has spawned a new form of cracking: the creation of worms and viruses, such as the Code Red worm that caused \$2.6 billion in damages within 14 hours in 2001.

—Katie Gress

of the U.S. telephone communication system since 1960 but had yet to convince the telephone monopoly AT&T of the virtues of his ideas on distributed communications. He devised a scheme of breaking signals into blocks of information to be reassembled after reaching their destination. These blocks of information traveled through a distributed network, where each node, or communication point, could independently decide which path the block of information took to the next node. This allowed data to automatically flow around blockages in the network. Donald Davies (1924–2000) at the British National Physical Laboratory (NPL) independently developed a similar concept in 1965, which he termed packet-switching, each packet being a block of data. Although Baran was interested in a communications system that could continue to function during a nuclear war, ARPAnet

was purely a research tool, not a command-and-control system.

A small consulting firm in Cambridge, Massachusetts, Bolt, Beranek and Newman (BBN), got the contract to construct the IMP in December 1968. They decided that the IMP would only handle the routing, not the transmitted data content. As an analogy, the IMP looked only at the address on the envelope, not at the letter inside. Faculty and graduate students at the host universities created host-to-host protocols and software to enable the computers to understand each other. Because the machines did not know how to talk to each other as peers, the researchers wrote programs that fooled the computers into thinking they were talking to preexisting dumb terminals.

ARPAnet began with the installation of the first 900-pound IMP in the fall of 1969 at UCLA,

followed by three more nodes at the Stanford Research Institute (SRI), the University of California at Santa Barbara, and the University of Utah. The first message transmitted between UCLA and SRI was “L,” “O,” “G,” the first three letters of “LOGIN,” but then the system crashed. Initial bugs were overcome, and ARPAnet added an extra node every month in 1970. Improvements and new protocols quickly followed. Electronic mail, file transfer, and remote login became the dominant applications.

In 1981 the National Science Foundation (NSF) created the Computer Science Network (CSNET) to provide universities that did not have access to ARPAnet with their own network. In 1986, the NSF sponsored the NSFNET backbone to connect five supercomputing centers together. The backbone also connected ARPAnet and CSNET together. The idea of the Internet, a network of networks, became firmly entrenched. The open technical architecture of the Internet allowed numerous innovations to easily be grafted onto the whole. When ARPAnet was dismantled in 1990, the Internet was thriving at universities and technology-oriented companies. The NSF backbone was later dismantled when the NSF realized that commercial entities could keep the Internet running and growing on their own. The introduction in 1991 of the World Wide Web, developed by Tim Berners-Lee (1955–), took advantage of the modular architecture of the Internet and became widely successful. What began with four nodes in 1969 as a creation of the Cold War became a worldwide network of networks, forming a single whole. In early 2001, an estimated 120 million computers were connected to the Internet in every country of the world. As of 2009 the number of Internet users worldwide was estimated at 1.67 billion, approximately 1 out of every 4 people, and that number continues to increase.

—Eric G. Swedin

Bibliography

- Abbate, Janet. *Inventing the Internet*. Cambridge, MA: MIT Press, 2000.
- “Fun Facts: Worldwide Internet Usage.” *PC Magazine* 26(5) (2007): 21.
- Hafner, Katie, and Matthew Lyon. *Where Wizards Stay Up Late: The Origins of the Internet*. New York: Simon and Schuster, 1996.

Internet Society (ISOC). “Histories of the Internet.” <http://www.isoc.org/internet/history/>.

Moschovitis, Christos J. P., Hilary Poole, Tami Schuyler, and Theresa M. Senft. *History of the Internet: A Chronology, 1943 to the Present*. Santa Barbara, CA: ABC-CLIO, 1999.

Segaller, Stephen. *Nerds 2.0.1: A Brief History of the Internet*. New York: TV Books, 1988.

World Internet Usage Statistics News and World Population Stats, <http://www.internetworldstats.com/stats.htm>.

Advances in Biotechnology

Biotechnology is a branch of technology that transforms humans and their environment through the manipulation of biological systems and the utilization of living organisms. Although the term was first introduced in 1919 by the Hungarian agricultural engineer Karl Ereky, human societies have long relied on the modification of biological agents to improve living conditions. A stellar example is the historical use of microorganisms in food and agricultural production. Yeast was used by the Sumerians and the Babylonians to make beer (ca. 6000 BC) and by the Egyptians to bake leavened bread (ca. 4000 BC). Microorganisms such as molds and lactic acid bacteria were also used to turn milk into cheese and yogurt.



Molecular biologists James Watson and Francis Crick discovered the structure of deoxyribonucleic acid (DNA), the molecular blueprint of all living organisms, in 1953. (Bettmann/Corbis)

► RECOMBINANT DNA TECHNOLOGY IN THE 1970S

In 1973 Stanley Cohen of Stanford University and Herbert Boyer of the University of California at San Francisco performed the first recombinant DNA experiment by introducing a plasmid into a strand of *E. Coli* using the restriction enzyme *EcoR1*. In the following year, the National Academy of Sciences convened a special committee chaired by Paul Berg to consider the health and safety aspects of this unprecedented type of biotechnology. The group published an open letter in *Science* in July 1974 calling attention to the potential hazards associated with the creation of novel types of infectious DNA elements. When the National Institutes of Health released the Guidelines on Research Involving Recombinant DNA Molecules in July 1976, the controversy surrounding this new laboratory technique unfolded in a series of public hearings before the Cambridge, Massachusetts, City Council over whether the city would allow recombinant DNA research to take place at Harvard and the Massachusetts Institute of Technology. While certain

prominent biologists joined the public and voiced serious concerns about this new experimental possibility, other scientists argued that although the biological properties of the recombinant DNA molecules could not be fully predicted, it would be equally unfair to expect that scientists have all the answers in advance for any kind of discoveries. The hearings must therefore be understood in terms of the sociopolitical context of the time, when the value and authority of science came under great suspicion as a result of the Vietnam War and emerging environmental and public health concerns about chemical pollution and radiation hazards.

—Howard Hsueh-Hao Chiang

Bibliography

- Berg, Paul, et al. "Potential Biohazards of Recombinant DNA Molecules." *Science* 185(148) (July 26, 1974): 303.
- Lipson, Sam. "The Cambridge Model of Biotech Oversight." *GeneWatch* 16(5) (2003): 7–9.

Other fermentation processes were established in various parts of the ancient world, most notably in China. But it was really in the twentieth century, especially during its closing decades, that the involvement of public policy makers, heated discussions of ethical concerns in biomedicine and related professions, and the rising political valence of the pharmaceutical industry coalesced around the modern notion of biotechnology. The historical development of the various life sciences—such as genetics and microbiology—since the mid-nineteenth century undoubtedly contributed to the possible emergence of this modern biotechnology heavily rooted in genetic engineering and recombinant DNA technology. This process reached a crescendo in the 1970s and 1980s when developments in molecular biology and biochemistry significantly reoriented biotechnology from a professional to a policy category by shifting it toward a genetics-centered paradigm.

Already in 1866 the father of classical genetics, Gregor Mendel, delivered his laws of hered-

ity, which were rediscovered around the turn of the twentieth century by Hugo de Vries, Erich von Tschermak, and Carl Correns. In 1915, based on experiments using the fruit fly *Drosophila* as a model organism, Thomas H. Morgan reinterpreted Mendel's laws of inheritance in terms of his own chromosomal theory in *The Mechanism of Mendelian Heredity*. This new synthesis gradually led to the establishment of genetics as an isolated leading research field in biological science. Accompanied by the disciplinary emergence of molecular biology, classical genetics became molecular genetics by the 1960s after James Watson and Francis Crick published their seminal paper on the now famous double helix structure of DNA in 1953. Influenced by Watson and Crick, an increasing number of biologists attempted to reduce as many biological phenomena as possible down to the molecular level.

The statement of the central dogma, which posits that genetic information could proceed from a nucleic acid to a protein but not the other way around, and the deciphering of the genetic

code, which matches the genetic information on the nucleic-acid level to the genetic information on the protein level, secured a unique twentieth-century molecular vision of life. The concept provided a way to genetically engineer plants, organisms (such as viruses), and people. The possibilities for controlling or even eliminating genetic disorders and diseases turned many of the life sciences into a genetics-oriented body of knowledge by the early 1970s.

Before the second half of the twentieth century, biotechnology had primarily been associated with the selection, cultivation, and processing of naturally occurring organisms. The molecularization of biology defined its conception in a distinctly new light: starting in the 1970s, biotechnology has come to be understood as almost always involving some kind of genetic manipulation. Apart from Watson and Crick's discovery of the structure of DNA, another important event that contributed to this historical transformation was the formulation of a recombinant DNA technique by Stanley N. Cohen and Herbert Boyer in 1973. In their work, Cohen and Boyer excised a section of DNA from the plasmid of an *E. coli* bacterium and transferred it into the genetic material of another *E. coli*. This method allows bacteria to adopt the genetic material of other higher organisms, including humans, and therefore produce proteins of these higher organisms on demand. Popularly known as genetic engineering, this approach has defined the ground of modern biotechnology since the 1970s.

The early applications of this type of biotechnology included the development of genetically engineered drugs such as human insulin, approved by the U.S. Food and Drug Administration (FDA) in 1982; human growth hormone, approved by the FDA in 1985; and the hepatitis B vaccines, approved in 1986. Later, such medical applications of modern biotechnology would be called red biotechnology and expanded to include pharmacogenetics (the study of the relationship between an individual's genetic makeup and its influence on the body's response to drugs), genetic testing (including disease diagnosis, prenatal diagnostic screening, presymptomatic diagnosis, and, with the advent of DNA fingerprinting in 1984, forensic/identity testing), and

gene therapy (for treating or curing both genetic and acquired diseases), on top of the already mentioned pharmaceutical productions.

The term "green biotechnology" refers to the application of biotechnology to agricultural processes, such as improving yield from crops or altering the genetic nature of the crops themselves. For example, the first genetically engineered food product, the Flavr Savr tomatoes, gained FDA approval in 1994.

The term "white technology," also known as grey technology, refers to the application of modern biotechnology to industrial processes. A less popular term is "blue technology," which some people use to refer to the marine and aquatic applications of biotechnology. All of these modern biotechnological engineering processes are currently surrounded by intense political and ethical debates around the world.

—Howard Hsueh-Hao Chiang

Bibliography

- Bud, Robert. *The Uses of Life: A History of Biotechnology*. Cambridge and New York: Cambridge University Press, 1993.
- Fiechter, Armin, ed. *History of Modern Biotechnology I*. New York: Springer-Verlag Berlin Heidelberg, 2000.
- Morange, Michel. *A History of Molecular Biology*. Translated by Matthew Cobb. Cambridge: Harvard University Press, 1998.
- Thackray, Arnold, ed. *Private Science: Biotechnology and the Rise of the Molecular Sciences*. Philadelphia: University of Pennsylvania Press, 1998.
- Wright, Susan. "Recombinant DNA Technology and Its Social Transformations, 1972–1982." *Osiris* 2 (1986): 303–360.

Nanotechnology

Nanotechnology is an interdisciplinary scientific field that draws on physics, chemistry, biology, computer science, materials science, and engineering in its quest for understanding the world as it works on an atomic and near-atomic scale. It is a young scientific field with a history that goes back only a few decades. The first prophecy of an emerging field dates back to the Nobel laureate Richard Feynman's 1959 lecture "There's Plenty of Room at the Bottom." On the analogy of the completely new fields of physics that had

➤ ARE NANOBOTS POSSIBLE?

In his 1986 book *Engines of Creation*, Eric Drexler pictured the future of nanotechnology in terms of machines that could manipulate and build with individual atoms and even build copies of themselves. Drexler's futurist visions attracted much attention from the media and have been advanced from a multitude of sites on the Internet.

However, such views contrast with the reality of current research in nanotechnology. The American chemist and Nobel laureate Richard E. Smalley has raised two main arguments against the possibility of such machines: the fat finger problem and the sticky finger problem. In order to manipulate and build with individual atoms, the machine must not only be able to pick up atoms and insert them in the desired places but must also be able to control other existing atoms in the region. However, the manipulator arms are not irreducible in size but are themselves made of atoms, and they will therefore be too fat to be accommodated within regions of chemical reactions. Furthermore, the atoms of the manipulator arms may be imagined to control the atoms by adhesion, but then they will be too sticky to release the atoms in exactly the right spot.

—Hanne Andersen

been opened at the beginning of the twentieth century by the investigation of properties of matter at very low temperatures and at very high pressures, Feynman prophesized that a similarly new field would be that of the manipulation and control of things on a very small scale.

Feynman's talk foreshadowed two current areas of interest: the investigation of the special laws that will apply to material on the nanoscale and the manipulation and control of the arrangement of things on the atomic scale. Thus, nanoscientists work at understanding what can happen and what can be done at the nanoscale, which forms the borderland between individual atoms and molecules and the macroworld of bulk material. At this mesoscale between the purely atomic and purely macroscopic bulk level, a new blend of classical physics and quantum physics has to be developed. Some of the physical and

chemical subdisciplines that form important parts of nanoscience are areas such as cluster physics, which studies the gradual development of collective phenomena that characterize a bulk solid, and supramolecular chemistry, which focuses on the noncovalent bonding interactions of molecules. Another important interest in nanoscience is to look at natural structures in biology in order to emulate some of biology's nanoscale engineering.

Technological advances are also an integral part of nanoscience. One very important invention for the study of matter at the nanoscale is the scanning tunneling microscope (STM) that images individual atoms by tracking the changes in an electric current as an ultrasharp tip is swept over a surface. The STM was invented in 1981 by two IBM physicists, Gerd Binnig and Heinrich Rohrer, who received the 1986 Nobel Prize in Physics for this invention. A few years later, two other International Business Machine (IBM) scientists, Donald Eigler and Erhard Schweizer, managed to use the tip of the STM to move atoms around, and the image of the letters "IBM" written with individual xenon atoms on a nickel surface became an icon for atomic manipulation. Another nanotechnology breakthrough has been the discovery of fullerenes, which are carbon molecules that form either hollow spheres (buckminsterfullerene, or buckyballs for short) or cylinders (carbon nanotubes). Carbon nanotubes have very interesting properties. For example, they are very good conductors of heat and electricity, and they have a very high tensile strength. They have therefore given rise to much excitement as well as speculations about the many exciting applications that are expected to be developed once their synthesis can be fully controlled.

During the 1990s the first journals devoted exclusively to nanotechnology emerged, and by the beginning of the twenty-first century degree programs dedicated to nanotechnology were offered at many universities. As the field advanced, the potential contributions of nanotechnology to future economic growth brought increasing government attention, and large-scale initiatives were established, such as the U.S. National Nanotechnology Initiative in 2001 and the European Union Nanotechnology Action Plan in 2004.



Eric Drexler, author of *Engines of Creation* (1986), a look at the future of nanotechnology, with a large scale model of “immune machines” that would patrol the human body. (Ed Kashi/Corbis)

One of the prophets who has been very visible in the media coverage of nanotechnology is the American engineer Eric Drexler, whose popular book *Engines of Creation* (1986) introduced a wide audience to some of the issues relating to nanotechnology and its use in society. In this book Drexler described machines that manipulate and build with individual atoms, projecting that such assemblers would eventually be able to make virtually anything from common materials and without human labor. According to this vision, nanotechnology would remake our machines, our lives, our economy, and our world, for better or for worse. Thus, Drexler also imagined that nanotechnology could produce dangerous replicators that were so tough, so small, and so rapid in growth that the resulting so-called grey goo might obliterate all living organisms on earth. This scare vision reached the popular press and public culture, such as in the form of best-selling author Michael Crichton’s 2002 thriller *Prey* in which a scientist combats swarms of predatory nanobots. However, Drexler’s vision of building things atom by atom and molecule by molecule has so far remained a futurist’s dream.

Even if replicators prove impossible, nanotechnology will undoubtedly lead to enormous technological advances, including, for example, new recording media with a million-fold increase in storage capacity; new materials with excep-

tional combinations of strength, toughness, and lightness; and the development of personalized medical drugs.

—Hanne Andersen

Bibliography

- Baird, D., A. Nordmann, and J. Schummer, eds. *Discovering the Nanoscale*. Amsterdam: IOS Press, 2004.
- Fritz, Sandy. *Understanding Nanotechnology*. New York and Boston: Warner Books, 2002.
- Schummer, J., and D. Baird, eds. *Nanotechnology Challenges: Implications for Philosophy, Ethics and Society*. Singapore: World Scientific Publishing, 2006.
- Wolf, E. L. *Nanophysics and Nanotechnology: An Introduction to Modern Concepts in Nanoscience*. Weinheim: Wiley-VCH, 2004.

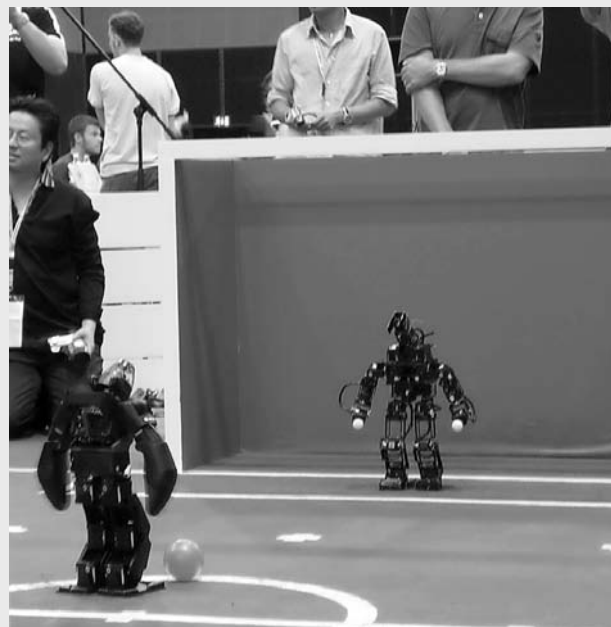
Industrial Robots

The idea of robots has long flourished in the human imagination. In the eighteenth and nineteenth centuries in Europe and Asia, popular clockwork automatons played chess, served tea, gave musical performances, and in the case of Jacques de Vaucanson’s “Digesting Duck” appeared to drink, eat real grains, and defecate. Automata also appeared in early science fiction, such as the dime novel series *The Steam Man of the Prairies*, which debuted in the United States just after the U.S. Civil War. In 1920 the Czech novelist and playwright Karel Capek came up with the word “robot” from the Czech word for “slave” for such machines in his play “Rossum’s Universal Robots.” Yet at the opening of the twenty-first century, the grand goals of roboticians and science fiction fantasists—the creation of autonomous artificial beings that might do all the hard labor and ensure a leisure world for humans—had not been achieved. Robots have been designed for useful tasks: assisting in surgery, conducting remote exploration in oceans and on distant planets, serving as therapeutic pets, cleaning sewers, vacuuming rooms, and disarming roadside bombs. The most singular achievement in robotics, however, is the most prosaic: the post-World War II development of the industrial robot.

Inventor George C. Devol patented his industrial robot, the Unimate, in 1954, and talked

> ROBOCUP

In 1993 Japanese robotics experts Hiroaki Kitano, Minoru Asada, and Yasuo Kuniyoshi attended an American Association for Artificial Intelligence competition that involved robots performing tasks such as lifting paper cups from tables. Concluding that robot developers could use a more dramatic vehicle, the three roboticists eventually came up with the idea of a Robot World Cup soccer competition, or RoboCup for short. The first tournament was held in Nagoya in 1997 and included 333 teams from 31 countries. The 2005 tournament in Osaka drew as many as 36,000 spectators a day to its exhibition halls. Various divisions have developed, such as a Four Legged League now dominated by Sony Aibo robo-dogs; a RoboCup junior league that drew student teams from 18 countries in 2005; a Middle Sized League that permits teams of rapid-wheeled robots; and a RoboCup Rescue division that involves sending rescue robots through simulated wreckage. Teams in the humanoid division compete for the coveted Louis Vuitton-designed crystal Humanoid Cup. The ultimate goal—much like that of the IBM team that built the computer Deep Blue that first defeated chess grand master Gary Kasparov in 1997—is to spur research that may lead by the year 2050 to the development of a robot team



Competitors in the Humanoid Division face off at RoboCup 2006 in Bremen, Germany. (Niels Heidenreich)

capable of beating the world's reigning human World Cup team.

—Fred Nadis

up his idea to businessman and scientist Joseph F. Engleberger at a 1956 cocktail party. They sold their first robots to General Motors in 1961 and founded Unimation Incorporated in 1962. The Unimate was a smart tool, a flexible hydraulic arm that could swivel, rotate, slide, bend, or grasp at various joints (each such opportunity known as a degree of freedom), providing remarkable mobility, dexterity, and strength. The first models could lift 100 pounds and could be programmed to perform such tasks as welding, operating machine lathes, and applying spray paint. All the Unimate's movements were easily programmed without computer commands. An operator simply pushed a record button and guided the arm through its proper movements, each step of which could be refined and stored on a magnetic drum. These fixed-position robot arms were soon joined by gantry robots that

could move on overhead rails; video cameras and other sensors were also introduced to provide input for guiding mechanisms.

Unimate and Kawasaki Motors teamed in Japan in 1968 to create the Kawasaki Unimate 2000. At first relying on joint ventures with manufacturers such as Tralfa in Norway and VFW in West Germany, other Japanese automobile, electronics, and steel manufacturers began to develop and adapt robots as Japanese industry turned to a steel-collar labor force. One decade later, 10,000 industrial robots a year were being sold in Japan. Aided by research at MIT and Stanford, in 1978 Unimation developed its Programmable Universal Machine for Assembly (PUMA), allowing for more intricate movements and sensor input in its guidance systems. In 1981 Sankyo Seiki began manufacturing a generation of lighter, swifter robot arms with less vertical flexibility

yet ideal for assembly line-style electronics manufacture. The new arm was called the Selective Compliant Assembly Robot Arm (SCARA). New two-armed robots were developed for the interior assembly of automobiles as well. In 1987 approximately 116,000 industrial robots operated in Japan, compared to 25,000 in the United States, 12,400 in West Germany, and 5,300 in France. In 1987 in Japan, while 40 percent of industrial robots worked in the automobile industry, the remainder were used in electronics and other assembly plants.

Industry elsewhere had been receptive to the use of robots but cautious regarding labor and safety issues. In 1981 in a much-publicized incident, the first robot murder occurred at a Kawasaki plant in Japan, when a robot pushed a worker into a grinder and killed him. Yet by 1980, Japan's manufacturing success led a trend toward robots in Western nations as well. The ensuing boom ended in a late 1980s bust when instant profits outside of the automobile industry were not realized and many robot manufacturers folded. Robots have since become an important focus for research and development and manufacture worldwide.

Between 1994 and 2000 the number of businesses in the Alliance of Manufacturers and Exporters of Canada relying on robots, for example, increased from 8 percent to 22 percent. In 2005 there were 158,000 robots installed in

the United States and a little over \$1 billion in new sales in North America. That same year, the People's Republic of China employed 11,557 robots. Following Japan, as of 2006 Italy had the highest concentration of robots to workers in its automotive industry. The worldwide market for industrial robots in 2006 was estimated at \$6 billion. Businesses such as Microsoft have begun to invest in robotics research, particularly in software systems, while Japanese automobile firms such as Honda and Toyota continue to research mobile humanoid robots for domestic use. While industrial uses will continue to multiply, the home and world outside the factory remain the new frontiers for robot developers.

—Fred Nadis

Bibliography

- Colby, Cash. "It Seemed So Obvious." *Report News-magazine* 27(5) (July 3, 2000).
- Green, Chuck. "A Record Year for Robots." *Inc.* 28(4) (April 2006).
- Hornyak, Timothy N. *Loving the Machine: The Art and Science of Japanese Robots*. Tokyo and New York: Kodansha International, 2006.
- Schodt, Frederick L. *Inside the Robot Kingdom: Japan, Mechatronics, and the Coming Robotopia*. Tokyo and New York: Kodansha International, 1988.
- United Nations Economic Commission for Europe, International Federation of Robotics. *World Robotics 2005*. Geneva: United Nations, 2005.

■ Introduction: Science, Technology, and Culture

Langdon Winner's study *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (1978) addressed the central fear that science and technology are unstoppable forces, revolutionizing life and offering utopian promises but more often than not providing dystopian consequences. In this sense, there is no study more important than that of the social and cultural consequences of science and technology, an interest that has gathered among scholars in recent decades largely with the hopes of establishing that sci-

ence and technology are social processes that indeed can and should be controlled for the social and environmental good. Concepts such as Moore's Law (1965) that so far has accurately predicted that computing technology will be able to double its efficiency every two years, breakthroughs in genetic engineering, and pioneering efforts in nanotechnology ensure that science and technology will continue to revolutionize daily life. How these forces can be channeled to serve rational ends and the greater good remains of critical importance. In philosophy,

art, and literature, intellectuals and artists continue to explore the ramifications and possibilities of scientific research and technological development.

—Fred Nadis

Critiques of the Idea of Progress

While isolated writers have spoken of human progress throughout history, it was only among West Europeans in the seventeenth century that a belief in such progress became widespread. European Enlightenment thinkers of that age argued that advances in scientific understanding would support progress not just in technology but also in economics, politics, and culture. The political and economic dominance of industrialized states during the nineteenth and early twentieth centuries caused societies across the world to embrace for the first time the notion that their well-being depended on the pursuit of change,

now defined as progress. Indeed, before the Enlightenment the word “progress” tended simply to imply “more.” Today, the word “progress” implies the achievement of better societal outcomes.

The horrors of the two world wars and the Great Depression of the 1930s inevitably blunted confidence in human progress and its link to technological advances in the first half of the twentieth century. Thereafter, confidence in progress rebounded but waned again in the closing decades of the century. Various problems of contemporary life—environmental deterioration, the threat of nuclear war, refugees, cultural dislocation, and, more recently, global warming—comprise one important source of that pessimism. Science and progress no longer seemed inevitably linked. The failure of socialist countries to achieve superior societal outcomes was another source of disillusionment for many intellectuals. Social programs in the West and thus by implication social science itself have likewise failed to solve social problems. Last but not least, developments in philosophy were interpreted in a way that encouraged pessimism.

To define what is better is an ethical challenge, and modern philosophy suggests that there is no one correct method of ethical evaluation. For many, especially but not exclusively writers on the postmodern condition, the notion of human progress thus appeared meaningless. Alternatively, though, one might argue that widespread consensus exists regarding at least some sorts of progress: eliminating hunger, expanding personal security, and curing disease.

Even if humanity could agree on what progress might mean, it must be able to successfully achieve this. Developments in epistemology and rhetoric as well as in literary theory and postmodern thought have suggested that rational thought does not govern human affairs. Humans send mixed messages, reflect a host of psychological and sociocultural biases, utilize necessarily ambiguous language, and make decisions on the basis of emotion rather than reason. Science and technology themselves have hardly been immune to these influences. While there is scholarly consensus that such limits to rationality are real, there is heated debate about their importance and thus whether the (fallible) pur-

➤ NEO-LUDDISM

Drawing its name from the Luddites or artisans who sought to destroy power looms in the early nineteenth century to protect skilled artisans' welfare, Neo-Luddism includes various recent movements opposed to notions of progress in modern society. Neo-Luddites, typically labeled that by others, are opposed to technological developments and their alleged corrupting influence on human values and quality of life in the broadest scale. Many of these Neo-Luddites are content to avoid as much as possible the use of technology. However, a more extreme ideology of anarcho-primitivism blames science and technology for creating and perpetuating social stratification, increased state control over society, unequal distribution of wealth, and environmental degradation. An even more extreme variant of these would be environmental activists and radicals, such as the Earth Liberation Front, opposed to technology for its role in the destruction of the environment and in the abuse of animals. Such radical groups have often taken part in the active destruction of auto sales lots and all their stock and breaking into and liberating laboratory animals.

—Abraham O. Mendoza

suit of progress is possible. Moreover, even if humans were incapable of purposely pursuing progress, they might still achieve this in a gradual evolutionary sense by recognizing and maintaining progressive outcomes when these occur by chance.

If human rationality can be rescued, it might nevertheless be thwarted by the complexity of the contemporary world. Scholarship is fragmented into thousands of specializations, while the complex problems faced by humanity such as global warming or inner-city poverty require integration of numerous specialized insights. The social and natural worlds function as complex systems, and even the most rational of plans may produce unforeseen negative consequences. Indeed, humanity may not even be able to recognize correctly a progressive or regressive outcome. It may, for example, applaud economic growth without recognizing the environmental or cultural dislocation associated with it. Again, while the problem of complexity is real, scholars debate the degree to which strategies for integrating knowledge can alleviate this. While an uncritical faith in science or reason as autonomous forces leading inevitably to progress is no longer tenable, the Enlightenment thinkers' endorsement of the scientific method and goals of social improvement remain admirable.

—Rick Szostak

Bibliography

- Bronk, Richard. *Progress and the Invisible Hand: The Philosophy and Economics of Human Advancement*. London: Little, Brown, 1998.
- Lyotard, Jacques. *The Postmodern Condition*. Minneapolis: University of Minnesota Press, 1984.
- Marx, Leo, and Bruce Mazlich, eds. *Progress: Fact or Illusion?* Ann Arbor: University of Michigan Press, 1996.
- Wood, Donald N. *The Unraveling of the West: The Rise of Postmodernism and the Decline of Democracy*. Westport CT: Praeger, 2003.

Science Wars

Prior to the 1960s, sociological and historical studies of science tended to be internalist accounts that examined the development of science in terms of problem solving, the jettisoning of failed theories, and the continuous develop-

ment of scientific expertise. The publication of Thomas Kuhn's *The Structure of Scientific Revolutions* (1962), however, provided an alternate method of thinking about science. Kuhn argued that social factors and not just pure logic often had an important influence on the debates that led to a new scientific consensus and a new conceptual model—or paradigm—for a field. Since Kuhn, scholars have continued to explore the influence of social factors on scientific and technological research. Sociologists who adhered to what was called the strong program in science such as David Bloor, Harry Collins, Steve Woolgar, Bruno Latour, and others encouraged the position that all knowledge is socially constructed. Their relativism tended to be methodological; that is, they proposed symmetry in their research as a means for investigating the social factors behind both winning and losing sides of scientific controversies. Yet this position was easily transformed into the more dubious critique that scientific knowledge is ultimately a language game, hopelessly mired in ideology, with little claim to objective truth. As the strong program became popular in the 1970s and 1980s and was seized upon by postmodern literary critics, defenders of scientific objectivity publicly condemned the entire school of thought as well as the new academic programs in science and technology studies that encouraged such scholarship.

In many ways these late twentieth-century science wars replayed earlier debates. For example, in the late nineteenth century in England, Matthew Arnold and T. H. Huxley debated the cultural primacy of science and the humanities. Huxley, a naturalist, politely nodded to the importance of the humanities but championed a scientific education. He pointed out that most of the romantic critics of science were largely "ignorant of the first principles of scientific education." In Arnold's lecture "Science and Culture" delivered at Cambridge in 1882, the poet reduced science to a simple cataloging of material facts while hailing the humanities for providing a moral guide and harboring "the best which has been thought and said in the world." These issues were revisited with the publication in 1959 of C. P. Snow's Cambridge lecture "The Two Cultures and the Scientific Revolution." Snow, a

► THOMAS KUHN'S IMPACT

Thomas Samuel Kuhn (1922–1996) is one of the most widely read philosophers of science of the twentieth century. In his principal work *The Structure of Scientific Revolutions* (1962), Kuhn criticized the received view of a cumulative development of science and claimed instead that scientific fields periodically underwent revolutions, or paradigm shifts. The new paradigm will then map out anew acceptable research problems, potentially acceptable solutions to these problems, and even which phenomena and entities can be assumed to exist. The new paradigm in a field may therefore be so different from the old one that it cannot be seen simply as an extension or a refinement. Kuhn termed this relation incommensurability.

Kuhn's phase model presupposes that the members of a scientific community periodically reach a new consensus on various fundamentals. Distinction can therefore be made between a mature science in which shared paradigms have been developed and a preparadigmatic science that is characterized by a variety of competing schools of thought. Kuhn claimed that the various scientific disciplines have reached maturity at different times in history.

Kuhn opened up new ways of thinking about science as a social enterprise. His incommensurability thesis implied that scientists cannot decide between competing paradigms solely on the basis of reason, argument, and evidence; other factors may also play important roles. This called for new kinds of studies that examined how social, cultural, political, and psychological factors external to science could influence the outcome of scientific debates. In this way, Kuhn helped engender the theory of the social construction of knowledge

and of scientific knowledge. The most extreme adherents of this constructivist movement claimed that the influence of these external factors was the dominant factor for the development of science, but these were views that were very far from what Kuhn had himself intended. Nevertheless, Kuhn has often been denounced as a relativist and irrationalist, and in the late 1990s scientists battling postmodern relativism in the so-called Science Wars viewed Kuhn as one of the instigators of the antiscientific views they were fighting against.

Kuhn's impact goes much further than his influence on science studies. His distinction between mature and preparadigmatic science has been discussed by scientists in many fields seeking the mantle of maturity. By the same token, his incommensurability thesis has been used by adherents of all sorts of alternative worldviews to deflect criticism raised by opponents. Above all, the notion of paradigm shifts has passed into everyday speech and is used to denote shifts in beliefs or organizations of all types.

—Hanne Andersen

Bibliography

- Andersen, Hanne. *On Kuhn*. Belmont CA: Wadsworth, 2001.
- Bird, Alexander. *Thomas Kuhn*. Princeton, NJ: Princeton University Press, 2000.
- Hoyningen-Huene, Paul. *Reconstructing Scientific Revolutions: Thomas Kuhn's Philosophy of Science*. Chicago: University of Chicago Press, 1993.
- Nickles, Thomas, ed. *Thomas Kuhn*. Cambridge: Cambridge University Press, 2003.

scientist and novelist, announced that the widening divide between science and the humanities posed a danger. From a Cold War perspective, the hostility to science among Western literary intellectuals and educators could only aid the Soviet Union in its efforts to spread its empire by lending expertise and industrializing the poorer nations of the Third World.

The science wars of the late 1980s and 1990s also played out the debate over the cultural pri-

macy of the humanities or the hard sciences. Defenders of science angrily attacked the ideological critiques of science offered by cultural studies scholars and sociologists. The first major salvo in this battle was the publication of Norman Levitt's and Paul Gross's *Higher Superstition: The Academic Left and Its Quarrels with Science* (1994), a critical examination of the work of cultural studies scholars who embraced social constructivism in their critique of science and

its ideological dimensions. Shortly after this work appeared, New York University physicist Alan Sokal continued the demolition of the reputation of social constructivism when he penned a parody of such scholarship titled "Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity." Much to his amusement, the journal *Social Text* accepted the article in full for its "Science Wars" issue in 1996 even though the article was loaded with dubious scientific assertions and postmodern buzzwords. Shortly after, he exposed his ploy, and news of the Sokal Hoax led to the public humiliation in various journals of postmodernists and their pretensions to the moral and intellectual high ground.

While the Sokal Hoax largely silenced the culture studies camp's more dubious pronouncements on science, the serious sociological and historical study of science has continued. Stephen Jay Gould, the evolutionary biologist and essayist and a friend of Sokal's, was bothered by the notion that the hoax once again asserted the primacy of science over the humanities. Afterward, he defended "the vast bulk of scholarly work in the social analysis of science as not only important and respectable, but as immensely salutary for scientists who rarely think enough about the historical background and immediate social contexts of their research." Gould's posthumous work *The Hedgehog, the Fox, and the Magister's Pox: Mending the Gap between Science and the Humanities* (2003) returned to the study of the two cultures problem. Like Snow, Gould argued that both camps had value and that the reductive project of claiming science preeminent or urging the humanities to remain silent about science was counterproductive.

—Fred Nadis

Bibliography

- Cartwright, John H., and Brian Baker. *Literature and Science: Social Impact and Interaction*. Santa Barbara, CA: ABC-CLIO, 2005.
- Gould, Stephen Jay. *The Hedgehog, the Fox, and the Magister's Pox: Mending the Gap between Science and the Humanities*. New York: Harmony Books, 2003.
- Koertge, Noretta, ed. *A House Built on Sand: Exposing Postmodernist Myths about Science*. New York: Oxford University Press, 1998.

Latour, Bruno. *Science in Action: How to Follow Scientists and Engineer through Society*. Cambridge: Harvard University Press, 1987.

Levin, Yuval. "Snow's Two Cultures—and Ours." *Public Interest* 153 (Fall 2003): 54–68.

Levitt, Norman, and Paul Gross. *Higher Superstition: The Academic Left and Its Quarrels with Science*. Baltimore: Johns Hopkins University Press, 1994.

Lingua Franca, Editors of. *The Sokal Hoax: The Sham That Shook the Academy*. Lincoln: University of Nebraska, 2000.

Imperialist Anthropology Examined

As the comparative study of human society and culture, the field of sociocultural anthropology is a relatively young discipline. Tracing its roots to the latter half of the nineteenth century in both Europe and North America, the field has distinguished itself on two different counts. First, sociocultural anthropology developed with a focus on the peoples of the non-Western, non-industrialized world. Second, anthropologists retain a distinctive methodology based on the belief that an extended period of social and cultural immersion within a respective community of study yields a unique form of knowledge. Referred to as participant observation, this method of inquiry allows the anthropologist to interpret and contextualize in such great depth and detail that meaning can be grasped and conveyed.

The development of sociocultural anthropology is intricately tied to a history of Western imperialism. In North America, the field arose in the context of America's westward expansion. As the U.S. government moved to fulfill its self-professed Manifest Destiny, it inevitably came into contact and conflict with the Native American peoples already long present on the continent. The problematic nature of this encounter led to government sponsorship and the eventual professionalization of the fledgling discipline. Through the Smithsonian's Bureau of Ethnology (established in 1879) and the Department of the Interior's Office of Indian Affairs, the U.S. government supported anthropological research in an effort to effectively settle, administer, and assimilate the various Native American groups.

► ANTHROPOLOGISTS AND THE WAR ON TERROR

In late 2007, the question of imperial anthropology surfaced once again, this time in the context of America's war on terror. The debate's resurgence was sparked by the introduction of the U.S. Army's Human Terrain System (HTS). The program deploys anthropologists and other social scientists to Iraq and Afghanistan in support of the military's efforts there. Anthropologists working in this capacity research indigenous social structures, local forms of authority, and grassroots networks, among other things. The information collected by the anthropologists is fed back to the military's decision-making process. According to the U.S. Army, ethnographic intelligence allows its forces to undertake counterinsurgency more effectively, thereby saving lives in the process. Proponents of the program claim that HTS contributes to a more secure world and builds cross-cultural understanding.

Despite its wide support within military circles, HTS has provoked significant criticism from most anthropologists. These critics assert that by con-

doning or participating in the program, anthropologists breach their discipline's ethical guidelines. In particular, they argue that it is impossible for these anthropologists to provide full disclosure to their informants, that their responsibilities toward the U.S. military conflict with their obligations toward the persons they study, and that in a war zone it is virtually impossible to acquire voluntary informed consent from research subjects. Furthermore, since such anthropological research may help to identify military targets, it violates the discipline's code against harming the subjects of one's study. Finally, the critics of HTS argue that the program promotes the association of anthropology with the U.S. military and thus creates difficulties and risks for the majority of non-HTS anthropologists. For all of these reasons, in late 2007 the Executive Board of the American Anthropological Association, the world's largest professional anthropology body, described HTS as an "unacceptable application of anthropological expertise."

—John T. Friedman

On the other side of the Atlantic, a different set of imperial contexts helped drive the new discipline. In Europe, late colonialism (ca. 1870–1960) offered opportunities for early anthropologists to further their careers through research in Africa, Asia, and Melanesia. In this respect, the British empire was most formative; however, anthropologists also worked in the Belgian, French, and Dutch colonies.

By the mid-twentieth century, sociocultural anthropology had taken its place as an established discipline among the social sciences. Although the period of formal colonialism was drawing to a close, a number of other imperial projects were garnering support from some corners of the discipline. In particular, the apartheid regimes in South Africa and Namibia drew on anthropology to both justify and enforce their system of racial oppression; likewise, during the Cold War the U.S. Army recruited anthropologists for its Project Camelot (1964–1965), a covert research program that aimed to utilize social scientific knowledge for counterrevolutionary ends, especially in Latin America. It was precisely

within these circumstances that a much more critical and self-reflective anthropology began to emerge.

The first concerted attempts to confront a so-called imperial anthropology took shape during the late 1960s and 1970s. For example, in 1968 anthropologist Kathleen Gough opened up a vociferous debate when she charged her discipline with failing to acknowledge the existence of Western imperialism and for ignoring the effects of such a system on the peoples and places anthropologists tended to study. Similarly, in 1973 Talal Asad and his colleagues reflected critically on the relationship between anthropology and colonialism. This project generated a view that was both complex and ambiguous. In the end, this group of studies showed that colonialism had a greater impact on anthropology than anthropology had on colonialism. Finally, in 1978 Edward Said, notably in his work *Orientalism* (1978), criticized Western scholarship more generally for essentializing and subordinating other cultures, an argument that further fueled, albeit indirectly, a notion of an imperial anthropology.

By the late 1980s and early 1990s, these initial attempts to examine the relationship between anthropology and imperial power were eclipsed by a much deeper and altogether more challenging critique. This new postmodern critique sent anthropology into deep crisis. If, as the postmodernists argued, there is no single, objective account of sociocultural reality, then ethnographic accounts must lack intellectual authority. Scholars such as James Clifford, George Marcus, and Michael Fisher thus led the debate by questioning anthropology's ability to represent culture and society. The imperialist question had surfaced once again but this time in a more intellectual vein. Postmodernism forced anthropology to scrutinize its methods, its claims, and its underlying assumptions. In response, some anthropologists experimented with their research methods and writing styles. Such innovation has granted more space for anthropology's subjects to represent themselves.

In the new millennium, it is now clear that sociocultural anthropology not only survived its crisis of authority but also was strengthened by it. The postmodern turn in anthropology does retain its strong critics. However, despite its legitimate shortcomings, the shift in thinking that accompanied its rise was indeed an important and much-needed corrective. As of the early twenty-first century, anthropology's imperial tendencies and history are well understood. In particular, anthropologists are more aware of the complex relationship between anthropology and power: anthropologists study power, the discipline is shaped by power, and anthropology exerts power in its own right.

—John T. Friedman

Bibliography

- Asad, Talal, ed. *Anthropology and the Colonial Encounter*. London: Ithaca Press, 1973.
- Clifford, James, and George Marcus, eds. *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley: University of California Press, 1986.
- Gough, Kathleen. "New Proposals for Anthropologists." *Current Anthropology* 9 (1968): 403–435.
- Marcus, George, and Michael Fischer. *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences*. Chicago: University of Chicago Press, 1986.

Said, Edward. *Orientalism*. New York: Vintage Books, 1978.

Gender, Science, and Technology

Whereas a distinction between sex and gender was almost nonexistent in the late nineteenth century, the notion of gender as a social category distinct from biological sex became common in scientific and medical discourses as well as in everyday lexicon by the closing decades of the twentieth century. The period between the 1890s and the 1990s witnessed a dramatic transformation in which biological determinism slowly gave way to social constructionism in accounting for the patterns, behaviors, and roles of women and men in society. This historical transformation reflects both the changing sociopolitical pressures and, perhaps more importantly, the dominant trends in science, medicine, and technology as they have evolved over the past 100 years.

The influence of feminism in particular has tremendously reshaped science, medicine, and technology in terms of both their professional orientation and cultural consequences. By the 1880s and 1890s, the nineteenth-century women's movement had propelled women into higher education across Europe and North America. New Women such as Margaret Sanger toured the world to promote birth control methods in the first few decades of the twentieth century. The rebirth of feminism in the 1960s, reaching its peak and joined by the increasingly visible gay and lesbian movement in the 1970s, further pushed issues of gender and sexuality to the forefront of politics.

Gradually, feminism has not only opened up many fields in the sciences to women but has also fundamentally reoriented the theoretical underpinnings and practices of research. In medicine, for instance, it is now routine for clinical trials to take into consideration the physiological differences between men and women. In computer science, software engineers have adopted, however unconsciously, an epistemological standpoint defined around gender in the practice of programming and for rethinking the human-interface problems resulting from people's growing reliance on computers. The increasing female

WOMEN AND THE PHYSICAL SCIENCES

Women have historically participated in scientific, mathematical, and technological developments, but they have not always been recognized for their contributions. Two factors changed this: women's movements and professionalization. In the middle to late nineteenth century, the suffrage movement gained momentum in countries such as the United States and Great Britain. At the same time, women gained access to education and training in scientific fields thanks to the rise in new women's colleges and traditional universities admitting women in Western countries.

While the number of women college graduates increased through the twentieth century, areas of study often were limited to those deemed appropriate for women. In the physical sciences, women were often relegated to assistant positions, prevented from presenting research findings at professional conferences, and received limited funding for their research projects and less pay than male colleagues. With rare exceptions, such as the work of Nobel Prize winning scientists Marie Curie (1904 in physics, 1911 in chemistry) and Maria Goeppert Mayer (1964 in physics), women's contributions to advancements in scientific knowledge went unrecognized.

Following the renewed women's movements of the 1960s and 1970s, women scientists have



British scientist Rosalind Franklin aided in the discovery of the molecular structure of DNA. Her contribution was not fully acknowledged when Americans Francis Crick and James Watson were awarded the Nobel Prize for the discovery in 1962. (Courtesy Jenifer Glynn/National Institutes of Health)

women's enrollment, participation, and recognition in science.

—Heidi Allene Henrickson

steadily increased in number. According to studies by the National Science Foundation, in the United States the number of female physical science undergraduates increased from 14 percent to 46 percent between 1966 to 2007. According to studies by the European Commission, the total number of women professors of natural science in Europe increased 23 percent between 1999 and 2002. These statistics indicate recent rapid changes due in part to European Commission efforts to bolster

participation in science, the health care profession, engineering, and other fields associated with technological research and development reveals the impact of feminism, which altered both the social expressions of the relationship between the sexes over time and, ultimately, the cultural conceptualization of gender itself.

Yet the historical process of separating out gender from sex owes as much to internal developments in science as to sociopolitical influences. Reflecting the ascending cultural authority of the mental health profession over the course of the twentieth century, the conceptual distinction between gender and sex first appeared in the medial literature during the 1950s. In an article published in 1955, the Johns Hopkins University medical psychologist John Money used the term “gender role” for “all those things that a

person says or does to disclose himself or herself as having the status of boy or man, girl or woman” and the term “gender” to refer to “outlook, demeanor, and orientation.” In 1964, building on Money’s vocabulary, the psychoanalyst Robert Stoller, working with his colleague Ralph Greenson at the UCLA Medical School, coined the concept of gender identity to indicate more directly one’s core sense of self as “being a member of a particular sex.” If by “gender role” Money referred to socially prescribed behavior patterns, Stoller and Greenson adopted the term “gender identity” to identify another layer of gender that is strictly psychological. In fact, they further differentiated gender identity from sexual identity, which encompasses one’s sexual desire and erotic drive, and thus distinguished gender from sexuality accordingly.

Whereas concepts of sex, gender, and sexuality were undistinguishable in the nineteenth century, the language of psychology now provides medical and scientific authorities as well as the lay public with sufficient working definitions for setting them apart. The second-wave feminists would quickly endorse and wield this novel language of gender in the 1960s to challenge discussions of sex roles in strict biology-as-destiny terms, a legacy that continues to the present day.

—Howard Hsueh-Hao Chiang

Bibliography

- Creager, Angela N. H., Elizabeth Lunbeck, and Londa Schiebinger, eds. *Feminism in Twentieth-Century Science, Technology, and Medicine*. Chicago: University of Chicago Press, 2001.
- Greenson, Ralph R. "On Homosexuality and Gender Identity." *International Journal of Psycho-Analysis* 45 (1964): 217–219.
- Meyerowitz, Joanne. *How Sex Changed: A History of Transsexuality in the United States*. Cambridge: Harvard University Press, 2002.
- Money, John. "Hermaphroditism, Gender, and Precocity in Hyperadrenocorticism." *Bulletin of the Johns Hopkins Hospital* 96 (1955): 253–264.
- Rosenberg, Rosalind. "Gender." In *The Cambridge History of Science*, Vol. 7, *The Modern Social Sciences*, edited by Theodore Porter and Dorothy Ross. Cambridge: Cambridge University Press, 2003.
- Stoller, Robert J. "A Contribution to the Study of Gender Identity." *International Journal of Psycho-Analysis* 45 (1964): 220–226.

Bioethic Debates

Fears about science gone awry are not new. J. W. Goethe's *Faust* (1790) and Mary Shelley's *Frankenstein* (1818) both reflected an ongoing cultural fascination with the possibility of creating or reshaping life through scientific intervention. As breakthroughs occur in science, technology, and medicine, the potential to generate human organs, offer brain implants, and clone and alter life in general inspires both public fascination and fear. Alongside medical and scientific advancement has come new possibilities and, inevitably, public reflection and ethical debate.

The discipline of bioethics is traceable through its institutionalization in the late 1960s, when important developments in science and

ETHICS AND DEVELOPMENTS IN STEM-CELL RESEARCH

The potential medical benefits of the research of stem cells (unspecialized human cells with the potential to grow into different cell types) are well known. They offer potential therapeutic benefits for treatment of heart disease, diabetes, and other diseases. Such research has been controversial because of the process by which such cells were gathered. Because embryonic stem cells were derived from early fetal stem cells, often from aborted fetal tissues, this research compelled controversy. Some application-related concerns still exist about the potential for human cloning and its associated ethical challenges. However, new research obviates some of these older ethical debates. Recent discoveries regarding the cloning of adult stem cells promise new therapeutic uses. Also, cell transdifferentiation (in which adult stem cells can be induced to develop into cells for organs or tissues other than those from which they were derived) may someday enable other uses. The possibilities unearthed through this kind of research still compel important social conversation.

—Mark Robinson

medicine emerged following the research investments of World War II. New developments in genetics, transplantation, and life-prolonging technologies compelled intensified discussion during the heightened political climate of the 1960s. In addition to religiously informed debate, much of the field extends from academic disciplines, with philosophers, social scientists, and physicians dominating bioethical debate in recent history. Additionally, there has been more attention to non-Western ethics traditions in contrast to historically (and presently) Western-dominated bioethics. As a result of anthropological and feminist critiques, multicultural, global, and feminist-informed ethics have come to the fore.

Even within the West, debates on issues such as abortion, stem-cell research, genetic testing, and assisted suicide often index a multitude of perspectives, whether explicitly religious or more secular in basis. For example, in response to the

possibility of human cloning, Christian ethicists offered biblical arguments about human nature. Similarly, debates about the 1973 ruling over abortion rights (*Roe v. Wade*) and the very public 2004 assisted suicide case of Terry Shiavo often focused upon theological conceptions about how life is constituted.

So-called secularist bioethical debate takes up the above issues via philosophical deliberation and appeals to rationality, reason, and a commitment to liberal ideals such as autonomy, democracy, and equality. This approach takes ethics as an extension of Western philosophy rather than a commitment to particular religious worldviews. In an attempt to create a more universal ethical framework, secular approaches tend to dominate global bioethics discussions especially in reference to human rights. For example, female genital cutting (sometimes referred to as female genital mutilation) is one practice that cannot be easily addressed in bioethics bereft of adequate attention to the cultural and religious contexts of the practice.

While the secular rights-based approach to ethics is often contrasted against religious approaches, this binary is much more complicated. Religious perspectives can also take up a rights-centered discourse. For example, Catholic ethicists often argue that unborn children and the severely disabled possess a right to life. An example of this stance is found in the Vatican's 1980 "Declaration on Euthanasia."

Secular bioethicists' concern about universal human equality maps out specific areas in which to examine genetics research. The relationship between genetics and adaptability, intelligence, and behavior means that the prospects of genetic engineering or neurological enhancement compel fears of something akin to a modern eugenics movement. Concerns about biological determinism also accompany the use of genetic screening. The passage in the United States in 1972 of the National Sickle Cell Anemia Control Act, for example, brought about discussions regarding the ethics of genetic screening. Theologian-turned-bioethicist John Fletcher echoed other ethicists in his argument, questioning therapies that sought to perfect humankind. In reflection about the possibility of human enhancement, secularist approaches often point

to the ethical problems related to diminished autonomy or inequality; in contrast, the religiously derived approaches focus on the problem of altering nature, or God's perceived handiwork.

As Western bioethics matured, several forms or modes of debate became institutionalized. One mode of ethical engagement, principlism, relies on deductivism and a strong commitment to specific ethical principles. With its commitment to respect for persons, beneficence, and justice, principlism often underlies many models of decision making and deliberation in the West. Principlism in bioethics took shape in the United States after the Belmont Report (commissioned by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research) in 1979 and still dominates bioethics. Critics of principlism suggest that it privileges a specific culturally rooted approach toward moral action that ignores non-Western values. Alongside these concerns over ethnocentrism came feminist critiques: scholars such as Carol Gilligan and bell hooks have attempted to bring attention to the need for a more comprehensive ethics informed by the experiences of women, people of color, and non-Western communities. While principlism still dominates global bioethics today, greater intercultural dialogue and vigorous debate have fostered greater awareness regarding the diverse landscape of ethical approaches, viewpoints, and traditions.

—Mark Robinson

Bibliography

- Jonsen, A. R. *The Birth of Bioethics*. New York: Oxford University Press, 1998.
- Keller, E. F. *Century of the Gene*. Cambridge: Harvard University Press, 2002.
- Stevens, Tina M. L. *Bioethics in America: Origins and Cultural Politics*. Baltimore: Johns Hopkins University Press, 2000.
- Thomson, James A., et al. "Embryonic Stem Cell Lines Derived from Human Blastocyst." *Science* 282 (1998): 1145–1147.

Computer's Social Impact

Since its creation as a tool to aid the Allied forces during World War II, the computer has transformed the social landscape, with a revolutionary impact on industry, economics, research,

communications, work, politics, leisure, and daily life.

In the late 1940s, the United States began using computers to calculate target ranges for missile guidance systems. The Semi-Automated Ground Environment (SAGE) computers that the U.S. Air Force relied on in the 1950s, produced by International Business Machines (IBM), required 20,000 square feet and weighed 300 tons. By the late 1950s, the development of integrated circuits allowed increased miniaturization, and computer technology spread into other areas by the 1960s. Incorporating integrated circuits during this time, Texas Instruments produced business calculators, and in the early 1970s the first pocket calculator. During this same period, universities, government departments, and corporations began to rely on increasingly more efficient computers. Eventually, the computer became integral to research, design, planning, management, and daily communications.

The computer's transformation of daily life was ensured in 1969, when the U.S. government's Advanced Research Project Agency (ARPA) successfully networked two computers across a considerable geographic distance, with one computer at the University of California, Los Angeles, and the other at Stanford University. By 1975, the ARPANET system connected over 60 computers in government offices and on college campuses around the nation. That same year, Micro Instrumentation and Telemetry Systems (MITS) founder Ed Roberts introduced a microcomputer kit to the public. The cost was \$395, but the peripherals needed to make it run properly were close to \$2,000. Regardless, around 2,000 units shipped out within a year. ARPANET and the MITS system solidified the foundation for the Internet and the likelihood of widespread personal computer ownership.

By 1984, around 8 percent of households in the United States had computers in them. In 1997, close to 40 percent did. By 2009, according to a study by the Center for the Digital Future at the University of Southern California, 85 percent of homes in the United States had computers, and 80 percent of its public accessed the Internet. In other developed areas of the world such as Europe, Japan, South Korea, and the Middle East, computer and Internet use also has contin-

ued to grow. Europeans' Internet use comprised 26 percent of global online activity by 2008.

The widespread use of personal computers and the Internet has influenced daily life in a multitude of ways. In developed countries, people now use personal computers for many actions that traditionally took other forms. Around 88 percent of Internet users in the United States say that they use electronic mail, known as e-mail, or instant messaging to communicate with other people. E-mail has largely replaced other forms of correspondence, such as letters, business memoranda, or transmitting faxes in business. Retail shopping now also can take place online. In fact, by 2003, 52 percent of U.S. Internet users accessed retail Web sites to purchase products or services. Banking has also begun to move online, with 28 percent of Internet users in the United States making financial transactions online in 2003. Classrooms and printed classified ads have also become less relevant, with around 25 percent of Internet users going online in 2003 for educational and job search purposes. These percentages continue to grow.

The computer has had a profound effect not only on work but also on leisure. Online networking and dating have become more popular as Web sites allow people to customize unique profiles for other people to view. Web sites allow users with high-speed broadband connections to stay at home and share information with friends, play video games, or watch movies. The production and distribution of music and film also has shifted toward the digital, transforming the entertainment industries along with publishing and news media. Traditional print media such as newspapers, periodicals, and book publishing are losing their audiences. As of 2007, about 67 percent of Internet users in the United States relied on the computer for locating news, sports, and weather information, and thus circulations for periodicals has eroded.

What has been termed a digital divide between the wealthy and poor within nations as well as between wealthy and poor nations has also emerged. In 2008, Africa, which contains 14 percent of the world's population, only had 4 percent of the world's Internet users. However, from 2000 to 2008, it did experience an Internet usage growth rate over 1,000 percent. This is due

to the rapid industrialization of rural areas and increased exposure to new technology in less-developed areas but is also due to the efforts of groups such as Collect and Recycle Ecologically (CARE), which distributes used equipment to countries such as Ghana, where less than 3 percent of the population is online.

Although clearly a source for innovation, there are concerns about the computer's social impact. While some foresaw a utopian potential of the computer to cultivate a true democracy of ideas, others have since argued that electronic and digital media deteriorate community. According to this line of argument, computers and the Internet provide people with the ability to communicate electronically, but they have decreased the amount of face-to-face contact that people experience. This may be a facile assumption. The Center for the Digital Future 2009 report notes to the contrary that Internet users in the United States report spending more time in clubs and volunteer organizations than nonusers. Other critics point to the inequalities of the digital divide, while still others express concerns about a potential loss of privacy as data about individuals, including their Web surfing habits, purchases, and e-mail correspondence may be shared and made available. Finally, computers and the Internet have also allowed old forms of social ills to increase, such as pornography and online gambling, and new forms of crime to flourish, such as Internet stalking, cyber bullying, identity theft, online confidence games, and illegal data downloading.

—Jason S. Ulsperger

Bibliography

- Campbell-Kelly, Martin, and William Aspray. *Computer: A History of the Information Machine*. Boulder, CO: Westview, 2004.
- Cooper, Kathleen, and Michael Gallagher. *A Nation Online: Entering the Broadband Age*. Washington, DC: U.S. Department of Commerce, 2004.
- Edwards, Paul. "From Impact to Social Process: Computers in Society and Culture." In *Handbook of Science and Technology Studies*, edited by Shelia Jasanoff, Gerald Markle, James Peterson, and Trevor Pinch. Beverly Hills, CA: Sage, 1994.
- International Telecommunication Union. *Yearbook of Statistics: Telecommunication Services*. Geneva, Switzerland, 2008.

Spencer, Donald D. *The Timetable of Computers: A Chronology of the Most Important People and Events in the History of Computers*. Ormond Beach, FL: Camelot Publishing, 1999.

Brave New World— Transhumanism, Prosthesis, and Enhancement Debates

Proponents of transhumanism believe that total enhancement of human nature by technological means, including genetic manipulation and prosthetic surgery, will one day lead to a liberating posthuman condition in which our given biological state will no longer serve as a boundary of the possible. By technologically sculpting our future rather than abandoning it to evolution's reproductive roulette, we put an end to the privations of our current physical nature. Transhumanism is, conceptually, a loosely held social, philosophical, and scientific movement that has developed at the turn of the twenty-first century. Despite varying positions, transhumanism's various factions converge on the denial that the natural is in itself invaluable and not to be tampered with. Inevitably, in championing what might be regarded as the monstrous, transhumanism traces a history of controversy.

Transhumanism's overall aim is to deliver human beings from undeserved yet avoidable agony and suffering via a wholesale alteration of their bodily, mental, and even emotional abilities (e.g., affective computing), including increased longevity and rationality, the wiping out of irrational or pathological behavior, development of wholly new talents, and enhancement of levels of happiness and well-being with a view to the attainment of the perfectibility of the human species beyond strictly therapeutic boundaries. A wide gamut of future states of such perfectibility, often also described in science fiction, is foreseen and urged on, such as humans interfaced with computers, machines, or animals; fitted with prosthetic devices or neural transplantations (such as brain makers used in deep brain stimulation curing mental disorders); or even wired to a permanent exocortex system (i.e., an outside brain).

The first use of the term "posthuman" was by Francis Fukuyama, a fierce detractor who called

it the “world’s most dangerous idea.” One of the manifestos that preceded the coining of the term was roboticist Hans Moravec’s *Mind Children: The Future of Robot and Human Intelligence* (1988), which looked forward to the time when an obsolete humanity could launch its nonhuman replacements in a space colonization scheme. Human self-transcendence whereby the human body is drastically improved by artificial prosthetic members has engaged the literary imagination since ancient times, such as in the Greek myth of Icarus, and more especially in science fiction of the past century. However, the particular historical background of posthumanism, human enhancement, species change, species hybridization, transgenics, and human-machine symbiosis as these have developed in recent decades should properly be placed within contemporary techno-scientific developments.

Two crucial differences distinguish current debates from older fears induced by apocalyptic scenarios: the advanced state of converging technologies rendering such an eventuality increasingly possible (though not without certain limitations imposed by biology) and the ideology of medicalization. Technological convergence based on the systemic intertwining of a quartet of novel advanced technologies—nanotechnology, biotechnology, information technology, and cognitive science—is expected to be the driving force behind the envisaged human enhancement. The culture of medicalization likewise amounts to the dominant intrusion of medicine into all aspects of life, beyond therapy, and into cyberspace as well (with such notions as virus and antiviral), repositioning medicine at center stage and redefining, empowering, and ascribing to it new values.

Transhumanist proponents denounce old-fashioned eugenics since they advocate individual reproductive and morphological freedom on a voluntary basis uncontrolled by state and reject utopian schemes promoting ultimate plans since they support freedom of personal choice and the multiplicity of valuable modes of life. Libertarian transhumanists espouse new or laissez-faire eugenics purged from any association with the horrors of state-planned killing or enforced compulsory abortion and sterilization. Such co-

ercive practices of human breeding to improve or purify the national stock belonged to the discredited bad-science or totalitarian eugenics of the twentieth century. While transhumanists see human enhancement as an expansion of personal autonomy and reproductive choice, critics point to offsprings’ diminished autonomy and their violated right to a genetic inheritance that has not been interfered with. Genetic enhancement affects the germ line of future generations, irrevocably modifying nonpathological traits without these future beings having a chance of granting their consent.

Traditionally, arguments against transhumanism voiced by bioconservatives or religious ethicists and Bio-Luddites, or an aversion triggered by technophobia, are phrased in terms of what is considered a natural repugnance (a special “wisdom of yuck-reaction”) against designing children and against drastically altered human bodies or human-animal chimeras, as concerns over the loss of the uniqueness of human essence, or as disrespect for human dignity: the punishable hubris of playing God. Attaining full posthumanity amounts to human extinction. Further, not strictly religious or moral objections include social and political criticism targeting the possibility of increased inequalities, discrimination, and social divides as a result of enhancement, pointing to obstacles in resource allocation, curbing liberties, or mounting social pressures that leave no room for freedom of alternatives (e.g., not to enhance). Other critics predict a violent confrontation between enhanced and nonenhanced, thus warranting the appellation of transhumanists as bioterrorists.

—Byron Kaldis

Bibliography

- Agar, N. *Liberal Eugenics: In Defence of Human Enhancement*. Oxford, UK: Blackwell, 2004.
- Bostrom, Nick. “In Defence of Posthuman Dignity.” *Bioethics* 19(3) (2005): 202–214.
- Fukuyama, Francis. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Farrar, Strauss and Giroux, 2002.
- Gordijn, Bert, and Chadwick Ruth, eds. *Medical Enhancement and Posthumanity*. London: Springer, 2008.
- Habermas, Jurgen. *The Future of Human Nature*. Oxford, UK: Blackwell, 2003.

Haraway, Donna. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991.

Hayles, Katherine N. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press, 1999.

Kass, Leon. "The Wisdom of Repugnance." *New Republic*, June 2, 1997, pp. 17–26.

Sandel, Michael J. "The Case against Perfection." *Atlantic Monthly*, April 2004, pp. 51–61.

Technology and Religion, 1945–Present

Recent scholars have argued that much religious and magical thinking surrounds the development and use of emerging technologies, regardless of how rational or scientific a technology's proponents imagine themselves. Modernity and religious thinking, rather than serving as opposites, often walk hand in hand. The idea of progress often joins religion and magic to the everyday and the technological. Modern advertisements that offer rapturous accounts of new technologies as well as science fiction depictions of utopian futures are two genres that have fostered such connections. While people with fervent religious beliefs at times have objected to new technologies, such technologies since World

War II have also supported generalized religious narratives and even engendered new religious cults.

The historian David F. Noble argued in *The Religion of Technology* (1997) that from the very onset of enthusiasm for technology, particularly in medieval monasteries, proponents such as the thirteenth-century Franciscan monk Roger Bacon imagined technology as fulfilling a religious scenario of progress. Bacon pictured technology as a path to redemption when fallen man would regain Adam's divinity and original powers. The overlap of religious with everyday conceptions of progress has continually accompanied new technologies. Historians looking at the late nineteenth century, for example, coined the phrase "technological sublime" to explain how industrial elites encouraged the public to experience technology as awe inspiring. Such an experience of the sublime might be prompted by a visit to a world's fair, by a stroll across the Golden Gate Bridge, or, more recently, by viewing a space shuttle launch or the televised shock-and-awe bombing campaign in 1990 that began the Gulf War.

The technological sublime also has blended with more apocalyptic visions of science and technology. The religious narrative of the apocalypse (common to many cultures) predicts a mythic clash between good and evil followed by the rebirth of a peaceful world. Concerns about nuclear warfare during the Cold War encouraged this apocalyptic worldview. During the Cold War, fears of impending nuclear annihilation and the Western belief that the Cold War represented a grand clash between good and evil aided Christian evangelists, such as Billy Graham in his revivalist meetings in the United States and Europe. Apocalyptic thought that focused on the rebirth of a new peaceful world also helped generate the flying saucer craze during the Cold War.

In the first six months of 1952, for example, 16,000 newspaper articles were dedicated to flying saucer sightings worldwide. In this same period, many flying saucer cults emerged in North America and Europe, helping to revitalize older occultist movements. These new religions emphasized the connection between space flight and human interaction with the heavens. In the typical flying saucer cult, a charismatic leader



Rael, the spiritual leader of the International Raelian Movement, poses before a mock spaceship in December 2002. (Clonaid/epa/Corbis)

would announce that he had experienced a vision or had channeled the voices or commands of spiritually advanced beings at large somewhere in the universe, often in flying saucers. The wise beings contacted would almost always urge world peace. There were many such groups in the 1950s, and as the millennial date of 2000 drew closer, many more such groups emerged offering millennial narratives of heavenly technological redemption.

In 1973, for example, the French race car journalist Claude Vorhilon reported encountering a flying saucer occupant who was one of the Elohim, or enlightened beings who first seeded life on earth with DNA. After this reported encounter, Vorhilon took the name Rael and founded an updated flying saucer religion, the Raelians. By 2005 the Raelian religion reported 40,000 members in France, Canada, and Japan. The Raelian Web site indicates that the religion also has members in Southeast Asia, Australia, Latin America, and Africa. The Raelians combine a fascination with such high-technology procedures as human cloning with pronouncements that a new world is imminent. The leaders of the Heaven's Gate group, a more destructive cult founded in 1975, persuaded their 39 followers to commit mass suicide in 1997 in order to be reborn on a spaceship that they believed was hidden behind the advancing Hale Bopp comet.

Throughout the twentieth century, technologists with superb credentials have also entered the millennialist arena. Rocketry and space flight pioneer Werner Von Braun, for example, became a fervent Christian who believed that spaceflight represented a fulfillment of human religious destiny. The fields of robotics and artificial intelligence have also been saturated with millennial fervor. Hans Moravec, for example, of the Robotics Institute at Carnegie Mellon University, wrote *Mind Children: The Future of Robot and Human Intelligence* (1988). His book announced that the human species was approaching obsolescence. He and other scientists, however, hoped to create a new race of mind children, robots endowed with superintelligence that would seed and redeem the universe. His book neatly fit an apocalyptic scenario of the impending ruin of a corrupt world and the birth of a cleansed post-human order.

➤ JUNG ON FLYING SAUCERS

Appearing at the height of the Cold War, Swiss psychologist Carl Jung's *Flying Saucers: A Modern Myth of Things Seen in the Skies* (1959) connected sightings of flying saucers to visionary religious experience. Jung interpreted the flying saucer as a visionary product arising from the schizophrenic political divide of the Cold War era. He proposed that the flying saucer offered a divided world a safe symbol of wholeness, perfection, and even divinity:

"Anything that looks technological goes down without difficulty with modern man. The possibility of space travel makes the unpopular idea of a metaphysical intervention much more acceptable. The apparent weightlessness of the UFOs, is, of course, rather hard to digest, but then our own physicists have discovered so many things that border on the miraculous: why should not more advanced star-dwellers have discovered a way to counteract gravitation and reach the speed of light, if not more?"

—Fred Nadis

Bibliography

C. G. Jung, *Flying Saucers: A Modern Myth of Things Seen in the Skies*, translated by R. F. C. Hull (1959; reprint, London: Routledge and Kegan Paul, 1977), 23.

These new strains of religious and millennialist thought may have been born of the stresses of maintaining a traditional religious outlook in a technological era. As in the long-running debates over the accuracy of Darwinism, religiously minded individuals and groups at times have opposed the application of new technologies. Christian fundamentalist movements and other faith-based groups have openly opposed aspects of modernity deemed threatening to the sanctity of life. For example, such groups have lobbied vigorously and effectively against aspects of abortion, cloning, and human stem cell research.

The environmentalist movements have been a more moderating influence in such culture wars centered on technology and religion. With historical roots in both scientific and religious

thought, proponents of environmentalism uphold broad principles of harmony and balance between humanity and the environment. The rise of these movements has also been accompanied on the popular level with apocalyptic warnings of impending doom. Popular accounts such as Rachel Carson's *Silent Spring* (1960) and dozens of science fiction novels and movies have featured a ruined planet. While modern concern for the environment might be traced back to 1970s' activists with progressive politics, in recent years environmentalism has also been drawing favor from religious fundamentalists. The growing Christian Environmental Stewardship movement, for example, has relied on biblical citations and teachings to encourage environmental activism.

—Fred Nadis

Bibliography

- Bailey, Lee. *The Enchantments of Technology*. Champaign: University of Illinois Press, 2005.
- Noble, David F. *The Religion of Technology: The Divinity of Man and the Spirit of Invention*. New York: Penguin, 1997.
- Nye, David E. *The American Technological Sublime*. Cambridge: MIT Press, 1996.

Science and Religion, 1945–Present

Contemporary philosophers of science and religion, such as Ian G. Barbour, have argued that at any given period since the onset of the scientific revolution of the eighteenth century, different narratives of the relationship between science and religion exist, including notions of absolute conflict, of a conflict-free separation of the two spheres, and various efforts to harmonize the two categories. While recent breakthroughs in genetic engineering (such as the development of mice on which are grown human ears) raise ethical concerns and religiously inflected debate (i.e., should scientists play at “God”), the primary areas of conflict for the past century and a half have been Charles Darwin's and Alfred Wallace's theory of evolution. Evolution directly challenges and rejects a literalist interpretation of religious scripture and the biblical account of creation. Such debates have emerged frequently

in the United States and in recent decades in countries such as Russia, Poland, Australia, South Korea, and Turkey.

Often seen as the avatar of modernity, the United States, paradoxically, has been at the center of many of the major Creationist debates since the early twentieth century. At the highly dramatic Scopes Trial of 1925, a Tennessee schoolteacher was fined for teaching evolution, but the courtroom debates ridiculed the Creationist cause as hopelessly backward. Anti-Darwinism resurfaced in the U.S. political arena with laws enacted in the 1940s and again in the 1980s. The issue has not vanished. A 2001 Gallup poll revealed that only 13 percent of those polled in the United States believed in evolution, while 38 percent preferred a notion of divinely guided evolution, and 45 percent rejected evolution entirely.

In 1968 the U.S. Supreme Court struck down a 1947 Arkansas law that prohibited the teaching of evolution. The Creationist cause surfaced again, slightly modified, in the early 1980s when Arkansas passed a law requiring that Creationism be taught alongside evolution. A similar law was also passed several years later in Louisiana, leading to heated debates locally and nationally. Both laws failed to withstand court challenges. In 1999 the Kansas Board of Education approved deleting evolution from the list of subjects to be included on standardized tests, leading once again to huge public outcries and campaigns to overturn the rule. In 2000 new board members were elected in Kansas who rejected the anti-evolution rule.

Most recently, focus has shifted to the theory of intelligent design, first presented in Percival Davis and Dean Kenyon's *Of Pandas and People: The Central Question of Biological Origins* (1993). Proponents of intelligent design insist there is a scientific case to be made against entirely chance-driven evolution. This school updates the long-standing argument from design prevalent in the eighteenth and nineteenth centuries, which insists that the wonders of nature by implication indicate the hand of a designer. Proponents of intelligent design often argue that evolution can only explain modification of species but not the larger leaps to create complexity

(such as complex biochemicals or organs such as eyes) within organisms or new species. While some U.S. scientists have signed on to intelligent design, most regard it as an only slightly more sophisticated version of Creationism. The debate erupted into the legal arena in the United States when a school board in Dover, Pennsylvania, enacted a rule in 2005 requiring teachers to discuss intelligent design before teaching evolution. A court challenge once again overturned the local rule as unconstitutional.

Creationist challenges to evolution are not unique to the United States. In Turkey, despite its secularist state, Creationism and antievolution texts are gaining popularity. In Moscow, as the Soviet state weakened, a Creationist society was formed in the 1980s, circulating translations of pro-Creationist texts. In Australia in 2005, the education minister proposed that parents have the option to choose whether intelligent design be presented in classrooms. Several Christian schools began teaching the theory, leading to intense public debates akin to those in the United States.

Intelligent design has not gained ground everywhere, particularly among religious leaders who would prefer to keep science and religion in separate realms. In January 2006 the official Vatican newspaper agreed with the soundness of the court decision in Pennsylvania that rejected the requirement to teach intelligent design. A similar position was advanced by the Archbishop of Canterbury, the leader of the Anglican Church in England. In his view, religion should not be reduced to science. When asked if Creationism should be taught he replied, "I don't think it should, actually."

Outside the intelligent design debate, those seeking a more rigorous harmonization of science and religion turn to theories such as the process philosophy that British mathematician and philosopher Alfred North Whitehead offered in the early twentieth century. The process philosophy overturns a crude scientific materialism and its dichotomy between matter and mind to redefine phenomena in terms of emergent events and patterns that might more easily accord with evolution and a cosmic holism. Another key meeting place since the 1970s has been

➤ COUNCIL OF EUROPE—RESOLUTION 1580, THE DANGERS OF CREATIONISM IN EDUCATION

On October 4, 2007, the Council of Europe's Parliamentary Assembly accepted a resolution that recommends that its 47 member governments oppose teaching Creationism as science, particularly in its more refined form known as intelligent design. The resolution developed in reaction to the growing advocacy for intelligent design from various European Christian and Muslim communities to encourage its integration into national public school curriculums. Among the resolution's central recommendations are the following:

19. The Parliamentary Assembly therefore urges the member states, and especially their education authorities to:
 - 19.1. Defend and promote scientific knowledge;
 - 19.2. Strengthen the teaching of the foundations of science, its history, its epistemology and its methods alongside the teaching of objective scientific knowledge;
 - 19.3. Make science more comprehensible, more attractive and closer to the realities of the contemporary world;
 - 19.4. Firmly oppose the teaching of creationism as a scientific discipline on an equal footing with the theory of evolution and in general the presentation of creationist ideas in any discipline other than religion;
 - 19.5. Promote the teaching of evolution as a fundamental scientific theory in the school curriculums.

While merely a supranational recommendation for the 47 members of the Council of Europe, albeit with strong rhetoric, this resolution, along with similar legislation in the United Kingdom, the United States, and other states in the West, reflects the continuing schism between religious doctrines and secular scientific empiricism as advocated by Western governments. Similar to the culture wars of nineteenth-century Europe and the 1920s United States (Scopes Monkey Trial), the divide between faith and science remains central in the contemporary world.

—Abraham O. Mendoza



A school bus in Dover, Pennsylvania, passes a school board election sign in October 2005. The election would determine whether the current school board members would retain their seats, or be replaced by opponents whose platform included removing intelligent design from the science curriculum. (AP Photo/Carolyn Kaster)

environmentalism, an ethic that can be equally grounded in scientific observations or in Christian or religious theories of stewardship of nature.

—Fred Nadis

Bibliography

- Barbour, Ian G. *When Science Meets Religion*. San Francisco: Harper, 2000.
- Larson, Edward J. *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion*. Cambridge: Harvard University Press, 1998.
- Lyall, Sarah. "Anglican Leader Says the Schools Shouldn't Teach Creationism." *New York Times*, March 22, 2006.

Science in the Arts since 1945

Crossovers between science and art are by no means limited to the modern period. Artists have relied on principles of mathematics and physics for creating accurate representations of human proportions and perspective for centuries. In the context of the shift from the machine age to the information age in the second half of the twentieth century, the correlations between art and science became more visible than ever. Numerous artists enthusiastically embraced new media, such as light and laser projections or

video and digital imaging as well as computers and synthesizers, but they also critically pondered the detrimental effects of science and technology.

In the aftermath of World War II, people became skeptical about the modern creed of linear scientific progress. The menace of the atomic bomb weighed heavily upon human consciousness. Moreover, advances in the theory of quantum mechanics enhanced the feeling of uncertainty. Both artists and scientists increasingly reflected on the implications of their creative experiments. The Happenings organized by Allan Kaprow in the 1950s emphasized temporal relativity, chance, and spontaneous behavior. Spectators were invited to directly participate in loosely scripted events by manipulating a variety of props in imaginative ways.

Norbert Wiener's theory of cybernetics (a mathematical approach to communication and information flow) formulated in 1948 catalyzed artists' interest in framing creative processes and events that encouraged human-machine interaction. In the second half of the 1950s, Nicolas Schöffer staged spatiodynamic spectacles in which cybernetic sculptures mechanically rotated and changed configuration in relation to human movement and light and sound variations. The members of GRAV (Groupe de Recherche d'Art Visuel), an art group active in Paris in the 1960s, were equally fascinated by the disruptive effect of kinetic environments. They were intent on annihilating the distance between spectators and art objects by creating technology-based labyrinths in outdoor settings that responded to the movements of passers-by.

Yet this enchantment with the new expressive possibilities inspired by cybernetics was sometimes tinged with anxiety over the close relationship between science and military applications. Fighting against the denigration of technology in Germany after the war, artist Otto Piene highlighted the role that art could play in appeasing fears of bombardments. Together with Franz Mack, he established Group Zero in Düsseldorf in 1957. They organized sublime light projections by relying on both technological equipment and natural factors, such as wind and water movement. In spite of the fact that they were somewhat reminiscent of air raids, these

events were supposed to have a therapeutic role and encourage experimentation. Swiss artist Jean Tinguely's self-destructive machine-sculptures constructed in the 1960s with the help of engineers also betrayed artists' ambivalent position toward scientific experimentation. The spectacular collapse of Tinguely's machines after a series of more or less intended malfunctions showed that technology cannot be perfectly controlled. It also seemingly announced the end of the machine era.

Influenced by cybernetics and new technologies, artists turned to new conceptual approaches that treated images and viewers as information. Les Levine, Frank Gillette, and Ira Schneider used closed-circuit television to encourage viewers to manipulate their self-image and see themselves in relation to others. Instead of focusing on the material shape of things, many artists called attention to biological, physical, and social processes that undermined the stability and permanence of the art object. In the 1960s, David Medalla constructed boxes that spit out dense waves of foam, Robert Barry released inert gases in the atmosphere as part of a publicized art project, and Hans Haacke displayed Plexiglas cubes filled with a small amount of water that would condense and form intricate patterns of drops. Many of these artists have relied as much on natural processes as on technological means to reveal the entropic transformations of systems. To respond to such challenges, engineer Billy Klüver and artists Robert Rauschenberg and Robert Whitman founded the collective Experiments in Art and Technology (E.A.T.) in 1966. The group had the role of assisting artists in finding appropriate electronic devices for making their ideas take shape.

The staging of environments that offer virtually unlimited possibilities of interaction has remained the desideratum of artists up to the present. In the 1970s, Myron Krueger designed computerized environments that responded to participants' actions in unexpected ways, and Lynn Hershman created the first interactive video installation based on laser disk technology that allowed participants to construct a story out of film sequences of their own choice. The Internet and open-source databases have granted new opportunities for designing real and virtual spaces

➤ THE PEPSI PAVILION, OSAKA, 1970

At the time of the Osaka World Expo of 1970, PepsiCo, the soft drink company, aimed to attract younger audiences by constructing a dome-shaped pavilion where rock concerts could be organized. The budget turned out to be too low for this purpose. After considering a series of alternatives, PepsiCo. commissioned E.A.T. (Experiments in Art and Technology) to design the interior of the pavilion and stage a series of performances. Acting as a group, the E.A.T. members hoped to negotiate with the corporation more easily. Over 70 artists, engineers, and consultants were involved in the project. As the executive coordinator of the Pepsi Pavilion, engineer Billy Klüver asked contributors to adopt a well-delimited role in the design process. Fujiko Nakaya explored several techniques for enveloping the pavilion in a veil of fog, Forrest Meyers designed exterior xenon projections, Robert Breer constructed mobile sculptures that slowly meandered on the pavilion terrace, Robert Whitman suggested creating a mirror dome inside the pavilion to generate holographic reflections, and David Tudor set up several acoustic channels to transmit sounds of varying frequency to different parts of the dome. Within the Pepsi Pavilion, visitors virtually lost sense of the material boundaries of their bodies. The compelling visual effects engendered by the reflective environment were paralleled by complex tactile and audio stimuli. With the help of a programming console, artists created audio-visual events in conformity with a pre-established program. E.A.T. members viewed the Pepsi Pavilion as a metaphor of the human mind, a mirrorlike surface that responded to sensorial impulses and affected the behavior of participants.

—Cristina Albu

that enable creative multiuser participation. Artists Paul Sermon, Julia Scher, and Rafael Lozano-Hemmer use technological interfaces to explore affective perceptual processes, bodily relations, and intimate encounters between people found in distant locations. While these artists contemplate the democratic potential of virtual networks, they also critically address issues of surveillance, control, and privacy.

Scientists and engineers continue to explore the parallels between electronic networks, biological networks, and ecosystems. While engineers currently resort to biological modeling to increase the efficiency of information dissemination, artists such as Chu-Yin Chen and Gina Czarnecki create environments in which viewer interaction activates virtual models of cell growth patterns and the spread of viruses. Contemporary scientific research and art practice reveal the advantages and risks implicit in living in a highly networked world.

—Cristina Albu

Bibliography

- Burnham, Jack. *Beyond Modern Sculpture: The Effects of Science and Technology on the Sculpture of this Century*. New York: Braziller, 1968.
- Davis, Douglas. *Art and the Future: A History/Prophecy of Collaboration between Science, Technology and Art*. New York: Praeger, 1973.
- Jones, Caroline. *Sensorium: Embodied Experience, Technology and Contemporary Art*. Cambridge, MA: MIT Press, 2006.
- Lee, Pamela. *Chronophobia: On Time in the Art of the 1960s*. Cambridge, MA: MIT Press, 2004.
- Shanken, Edward A., ed. *Art and Electronic Media*. London and New York: Phaidon, 2009.

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World History Encyclopedia

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Santa Barbara, California • Denver, Colorado • Oxford, England

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Library of Congress Cataloging-in-Publication Data

World history encyclopedia / Alfred J. Andrea, general editor ; Carolyn Neel, associate general editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-85109-929-0 (hard copy : alk. paper) —

ISBN 978-1-85109-930-6 (ebook)

1. World history—Encyclopedias. 2. History—Encyclopedias.

I. Andrea, Alfred J., 1941– II. Neel, Carolyn.

D9.W67 2011

909—dc22

2010045324

EAN: 978-1-85109-929-0

EAN (Ebook): 978-1-85109-930-6

15 14 13 12 11 1 2 3 4 5

This book is also available on the World Wide Web as an eBook.
Visit www.abc-clio.com for details.

ABC-CLIO, LLC

130 Cremona Drive, P.O. Box 1911

Santa Barbara, California 93116-1911

This book is printed on acid-free paper ☺

Manufactured in the United States of America

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Acknowledgments

Special thanks to the following scholars whose expertise made this project possible: William E. Burns, whose scholarship, scope of knowledge, and contributions helped shape our coverage in several eras, and Fritz Blackwell, an editor extraordinaire. We are also indebted to Candice Goucher, Harald Haarmann, Jonathan Reynolds, Jane R. McIntosh, and Eric G. Swedin.

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What Is World History?

Alfred J. Andrea and Carolyn Neel

Our purpose in creating this massive work, the *World History Encyclopedia*, is to provide intelligent laypeople, teachers, and students with a resource that will allow them to reach an understanding of the world in which they live. We offer a perspective that we believe will serve them well as they grapple with today's events and attitudes. First and foremost, we hope to assist them in developing a vision of the world as a human habitat, full of creativity, beauty, cooperation, brutality, choices, aptitudes, and attributes. We emphasize that a linear series of national, cultural, or geographical histories may have been considered world history in the past but is no longer a valid approach. Those elements are simply pieces of a mosaic designed to allow us to examine our world.

World history is as old as the putative “fathers of history,” Herodotus (fl. 450 BCE), Sima Qian (d. after 91 BCE), and the authors of Genesis. Each attempted to place the history of a particular people—Greeks, Chinese, and Israelites—into a far larger context, the context of the world as he knew and understood it. Beginning in the latter half of the twentieth century, however, a new historiographical tradition emerged, known as the New World History. Contemporary enthusiasm for world history, which is fast becoming global, initially blossomed in the United States in the aftermath of World War II and the Cold War that followed. People in the United States realized that isolationism was no longer possible or desirable. Consequently, interest in learning about other cultures and the interactions between societies led to an increasing interest in the study of world history. Such curiosity intensified as U.S. citizens realized, with some apprehension, that the “national” finances of the great American economic giant were intertwined with a global economic system. Three other phenomena were also at work. Demographically and culturally, the United States was clearly becoming far more complex and variegated after 1945, as immigrants from all over the globe swelled its numbers and enriched its social fabric. No longer was the standard Euro-American history a satisfactory response to the

question, “What are our roots?” With increased prosperity, higher levels of general education, greater leisure time, and faster modes of intercontinental travel, Americans were on the road to foreign destinations in numbers that multiplied almost annually, adding significantly to a growing awareness of and interest in the cultures of once-distant peoples. Then there was television and the other media of mass and fast communication that followed. Not only were Americans now able to view in their homes the cultures and histories of societies that once were largely unknown to the average university-educated American, but American culture was also going global and often returning to the United States in altered but interesting ways. One of many such manifestations of this development, which especially captivated young people, was (and is) Afropop, a blend of traditional African melodies and forms with Western music (much of which, in turn, had earlier connections with the music of Africa).

Most historians—certainly those who consider themselves students, consumers, or producers of works on world history—agree that this accelerating interest has been and will continue to be a good thing. Indeed, those who devote their lives to the discipline tend to be evangelical; some even believe that humanity’s very survival as a species depends upon our developing a nuanced understanding of the history of the world in which we live.

The discipline’s enthusiasts only begin diverging when they define their interests and methods of research and teaching. All agree on one issue. World history is *not* a collection of national or regional histories studied one after another. Put briefly, world history is a study of the past that transcends or crosses national, regional, and cultural boundaries. World history is also not, and can never be, the history of everything that has ever happened everywhere in the world. In order to be coherent and comprehensible, our remembrance, or reconstruction, of the past must be ordered and assembled with an end in mind. As is true of all historians no matter their specialty, world historians begin with specific questions and working hypotheses and subject those questions and hypotheses to exacting examination through careful analysis of available evidence. Only then do they venture to offer insights and to write their narratives. The only difference between the historian who focuses on a single nation, region, or cultural phenomenon and a world historian is the scope of the question and the narrative that follows.

When considering world history in the context of the discipline as a whole, it helps to think of a photographer in the field who carries a variety of lenses for a single camera. Some of those lenses are telescopic, allowing the photographer to capture distant objects. Others magnify minute objects that are close at hand but indistinct in their details to the unaided eye. Still others, known as wide-angle lenses, allow the photographer to take in vast panoramas. World history is analogous to that wide-angle lens.

The vast panoramas that world historians seek to describe include, but are not limited to, such issues as the ways in which societies across the world have come into contact with one another and cross-fertilized through a process of cultural interchange and adaptation. They also in-

clude a comparative, almost anthropological, approach to the past in which world historians study the different ways that diverse and often unconnected cultures have responded to similar stimuli. In addition to these three Cs—contact, cultural exchange, and comparative analysis—world historians are vitally interested in the ways in which societies across the globe have both cooperated and been in conflict with one another. One area in this regard that has become a rich field of inquiry for the new world historians is the study of borders and frontiers and the ways in which various societies have carried on complex relationships with their neighbors. Consider China, the self-described “Central Country” or “Middle Kingdom,” that has had a complex series of relationships with the many “peripheral” cultures along its borders. It is no wonder that China’s foreign relations loom large as a field of study for world historians. Simply put, world historians focus on historical *connections* on a grand scale. As already implied, that scale does not have to be global. For example, long-distance exchange of commodities and ideas along trade routes in the pre-Columbian Americas or similar commerce throughout Afro-Eurasia before 1500 CE have proved to be fruitful areas of investigation for many world historians.

Paradoxically, study of such grand vistas as, for example, exchange along the Silk Roads has also made world historians aware of the importance of many areas and cultures that were once considered obscure, largely peripheral to “real history,” and the province of only a few eccentric specialists working on arcane topics. One such area that is increasingly assuming a prominent position in world history studies is central Asia. No longer can it be seen as a great expanse of wasteland peopled only by nomadic pastoralists whose sole significant role in history was to occasionally raid and even overturn the states that ringed these great steppe lands, mountain ranges, and deserts that stretched from the Black and Caspian seas to Manchuria. To the contrary, the peoples, cultures, states, and even empires of central Asia are now coming into clearer focus (remember the historian as photographer?) and are being recognized for what they have been for many millennia: driving forces in the history of Afro-Eurasia.

Another paradox of world history studies is that the great majority of world historians, almost all in fact, also specialize in some discrete area of history. Most use their special area of interest, such as Tang China (618–907 CE), as a starting point for their world history studies. These two perspectives complement one another and result in a richer and fuller picture of both the localized field of inquiry (Tang China) and the broader field of study (Afro-Eurasia in the seventh and eighth centuries). To reiterate: all of the pieces are important, but they become world history only when assembled into the grand mosaic.

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Preface: This World History Encyclopedia

Alfred J. Andrea and Carolyn Neel

We live in an exciting and complex world. The realization that we are interlinked with other countries economically, politically, and culturally has inspired us—as curious laypeople, entrepreneurs, concerned citizens, or academics—to search for greater understanding of societies with which we share this globe. We find the process of globalization alternately exciting and disturbing, depending on the events of the day and our individual convictions. This intensified concern with international connections inspired educators to develop core courses in world history, some in response to state directives. Instructors by and large embrace the task, yet these mandates necessitate broad resources. Our goal for the *ABC-CLIO World History Encyclopedia (WHE)* has been to provide an interesting and comprehensive resource that is accessible to the intelligent reader, whether layperson, student, or instructor. We wanted to promote a deeper understanding without assuming prior knowledge. We were determined to write plainly and avoid jargon but never to “write down” or oversimplify. History presents many unanswered questions, and good history writing must address the past’s ambiguities and uncertainties. We also embraced the necessity for historical truth by addressing the common distortions in our understanding of history sometimes introduced in more or less well-meaning attempts to encourage pride by inflating the nobility, wisdom, or status of our ancestors.

The *WHE* is the result of several big dreams, beginning in early 2002, in the minds of Ron Boehm, the CEO of ABC-CLIO, and Simon Mason, an ABC-CLIO acquisitions editor. Simon searched for an academic general editor who shared his vision of a comprehensible story of human history. After an extensive search, he recruited Al Andrea during the spring of 2003, and Al came on board in January 2004. Although Simon went on to address other challenges, we believe that the encyclopedia remained true to his vision. His proposal remained our basic founding document and inspiration. By the summer, the team began to jell. Carolyn Neel was

hired as project editor in October 2004, and that month Carolyn, Ron, and Al began working together in earnest to refine the design of the *WHE*. Al had already been recruiting era editors to manage the nine chronological periods that the work would cover. He enticed Wilfred (Fred) Bisson, William (Bill) Mierse, James Overfield, Dane Morrison, and Micheal Tarver early on, reserving one era, the fifth (1000–1500) for himself. Later, Al and Carolyn were able to convince Kevin McGeough, Jack Waskey, Mark Aldenderfer, Fred Nadis, and, after the project was under way, Alexander Mikaberidze who joined us later in heroic effort to bring the *WHE* to the finish line.

We began organizing our project. Early on we had realized that the rich complexity of world history does not allow for a standard A–Z organization of entries. Such a structure plays havoc with the concept of change over time and would confuse more than enlighten. We also knew from many years of teaching that organizing world history courses under strict chronological narratives does not work well. There is too much happening simultaneously in too many parts of the world. The story becomes lost in a rapid blur of dates, names, and event. Yet chronology is the basic metric that every historian must follow. B does not happen before A and cannot, in Whiggish fashion, be read back into the past. Whether we like it or not, the discipline forces us to construct chronological narratives. For that reason, historians have traditionally divided the past into coherent periods, or eras, and have provided them with titles, such as the “Age of Democratic Revolutions.” These categorizations have a useful purpose in that they tend to focus attention on specific aspects of the past rather than presenting a confetti of dates, places, and strange names. Unfortunately, these labels also predispose us—professionals as well as students—to look at periods of time through a preset conceptual lens, often blinding us to phenomena that run counter to the theoretical overlay. For example, a student exploring the world through the perspective of western Europe’s so-called Scientific Revolution might miss the reality that societies in this same era experienced a widespread efflorescence of emotional religious or romantic movements throughout Europe and the Americas. World history presents the would-be codifier of eras with an almost insoluble conundrum. How does one find a characterization to describe a period of time that would be historically valid across the world? After all, even in the twentieth century societies across the globe are confronted with different challenges and move at different paces.

Over the past 50 years, many creative schemas have evolved. Fortunately, if we took great care to emphasize to our readers that these arbitrary delineations were for conceptual convenience, not indicators of concrete global realities, the task had already been largely done for us. As Simon Mason pointed out in his proposal, in 1994 the National Center for History in the Schools, under Professor Ross Dunn of San Diego State University, developed a set of national standards for world history for grades 5–12. Those standards had sadly fallen victim to political controversy but were widely respected by historians. Realizing that periodization of world history was absolutely necessary despite its pitfalls, Dunn and his collabo-

rators devised a schema comprised of eight eras that, in our estimation, was sufficiently general and broadly valid as to work fairly well. They are Era 1, The Beginnings of Human Society; Era 2, Early Civilizations to 1000 BCE; Era 3, Classical Traditions, Major Religions, and Giant Empires, 1000 BCE–300 CE; Era 4, Expanding Zones of Exchange and Encounter, 300–1000 CE; Era 5, Intensified Hemispheric Interactions, 1000–1500 CE; Era 6, Emergence of the First Global Age, 1450–1770; Era 7, The Age of Revolutions, 1750–1914; and Era 8, The Twentieth Century. This was an excellent beginning, but we needed to slightly refine this “table of historical periods” in light of our twenty-first-century purposes and perspectives. Again, with Simon’s proposal as our guide, we decided on a nine-part structure: Era 1, Beginnings of Human Society to 4000 BCE; Era 2, Early Civilizations, 4000–1000 BCE; Era 3, Classical Traditions, 1000 BCE–300; Era 4, Expanding Regional Civilizations, 300–1000 CE; Era 5, Intensified Hemispheric Interactions, 1000–1500; Era 6, The First Global Age, 1450–1770; Era 7, The Age of Revolutions, 1750–1914; Era 8, Crisis and Achievement, 1900–1945; and Era 9, Promises and Paradoxes, 1945–present.

Despite these nine eras that serve as the encyclopedia’s most basic divisions, it made sense to us (and again, Simon’s initial vision was our guideline) to organize the eras along thematic lines. As already noted, it is not feasible to try to give a simultaneous account of every society in the world; students and instructors alike would drown in a sea of facts.

We turned again to the National Standards for World History, which calls for the development of five themes: social, political, scientific/technological, economic, and cultural (philosophical/religious/aesthetic). Recognizing current historiographical trends and anticipating future developments, in full consultation with the era editors, Al and Carolyn went a bit further, and we wound up with eight themes: (1) Population and Environment, (2) Society and Culture, (3) Migration and Travel, (4) Politics and Statecraft, (5) Economics and Trade, (6) War and Diplomacy, (7) Thought and Religion, and (8) Science and Technology. Each theme would be further divided into major topics, and each topic would be developed through short essays ranging in length from 600 to 2,000 words, depending on the significance of the item under discussion, and almost every essay entry would be accompanied by a sidebar (short secondary articles highlighting some aspect of the main essay). For example, under Theme 2, Society and Culture, a topic might be literature across the world in the period between 1000 and 1500. Essays under the topic might then deal with literature in Persia, Tamil India, Islamic India, Southeast Asia, Japan, China, Latin Europe, Byzantium, the Inca empire, and other significant areas of the world. Sidebars would be designed to put the human face on each entry, perhaps a passage from a Chinese poem, an example showing the role of troubadours in Europe, and so forth. In the process of commissioning desired essays, we often found ourselves with a nice variety of regional examples, with accompanying human-interest sidebars, but discovered that we still needed an overview essay to tie them together. Given that reality, we quickly realized that we would need thematic and topic introductions to tie the pieces together into a “world history” perspective.

Early on, the question of “voice” arose. Would we try to maintain a single voice across the eras, or would we embrace the “multiple voices” mode of presentation? Al, Ron, and Carolyn agreed that much of the joy and beauty of studying world history comes from lively exchanges—a multiplicity of voices and perspectives—both in the primary source materials and in the work of those who compile histories. We believed that an attempt at a uniform voice would dilute the representation of people from various social and economic levels, various genders, and differing cultural milieus. Trying to force everything into one narrative tone would strip away much of the richness. And, of course, there was always the issue of the “adopted voice.” Historians tend to take on the cadence and vocabulary of those whom they spend their lives studying. We wanted to preserve those voices from the present and the past. The many-voices decision enriched the encyclopedia in ways that we had not originally anticipated because it allowed scholars to write from their hearts as well as their intellects. History without passion is sterile.

So, having developed the basic philosophy behind the structure of the work, Al and Carolyn spent a long week in a Santa Barbara conference room discussing, arguing, shifting sides, revising, evaluating. How would we deal with uneven coverage of themes? For instance, in the era 1500–1750, there were many developments in the ways humans conceive the divine or transcendent—whole libraries have been built with worthwhile works on the topic—but how much can we deduce about religious (or any other) sentiments in the period from the first hominids until about 3500 BCE? We look at evidence and draw conclusion, but the conclusions are based on our own worldviews; the minds of the earliest humans are out of our reach. But wait. Educated speculations based on archaeological remains are worth considering, and perhaps “what we don’t know” is indeed as important as “what we do.” It was a stimulating, invigorating, and exhausting week. At its end, Al and Carolyn realized that there was much to say about every theme in every corner of the world in every era, but trying to impose an artificial consistency for the relative percentage devoted across eras to any theme would result in distortions. We decided to avoid inflating or flattening any theme’s percentage of the era’s total number of words just to maintain a proportional consistency.

The next week we refined our notes and sent them to the era editors, asking for outlines for their eras, structured around the skeleton we had developed. As they came in we analyzed them, looking at the percentage of the proposed text devoted to each theme, and found that instinctively the era editors had made appropriate adjustments; not all themes are equally important in all ages. For instance, Era 5 (1000–1500) might devote a bit larger percentage of copy to disease because of the Great Eurasian Pandemic (known in the West as the Black Death), which began in China about 1330 and spread across Europe in the period 1348–1350. Era 7 (1750–1914), on the other hand, which encompasses the Industrial Revolution, might spend a higher percentage on the impact of technology. Not all issues had the same importance across all eras.

We began a series of long bimonthly teleconferences, most attended by all of the era editors, refining our approach. Each conversation lasted for more than two hours until one of us would throw in the towel by

admitting that his or her head was about to explode, and we would schedule the next one. Questions arose, and we found good answers for most, superb answers to a few, and agreed to revisit others. An example: Fred Bisson, editor of *Era 4* (300–1000 CE), asked where we would situate essays on warfare. The social impact of war would logically fit under “Society and Culture”; technological and scientific changes or discoveries made during the effort to provide weapons of war went under “Technology and Science.” But where would narratives of specific wars and war leaders fit? Of course they would normally go under the heading “War and Diplomacy,” but we would have to be very careful to ensure that the war did not overwhelm entries about efforts at diplomatic solutions. The biweekly teleconferences continued for several months, then Al and Carolyn met again in Santa Barbara to sort through the outlines. We commandeered a conference room and pasted copies of the outlines around the space at eye level (Carolyn’s eye level, as tiptoeing is more difficult than bending a bit).

By the end of July 2005, we believed that the work was as well designed as was humanly possible. Nearly every aspect of human life through nearly the whole of human existence was at least touched upon if not fully covered. We looked for thematic examples across the world, from the development of earliest humanoids to the age of astronauts, from the northernmost settlements in Russia, Siberia, or Canada to the southernmost areas of South America and the semipermanent stations of Antarctica. The work was organized so that readers could trace one aspect of human history, such as women’s roles, throughout history; they could make direct comparisons of changes brought about by temporal, cultural, or geographic distance or any combination thereof. By reading any one theme throughout the various eras, readers could develop a deep understanding of an issue, such as changes in environment and population or in attitudes toward technology. Teachers could assign the era introductions to a class to help students get a big-picture view of the topics to be covered in a class. There were so many ways to sort and pursue their interests that we began thinking about creative ways of organizing the search functions on the electronic versions.

We basked in the sheer beauty of our design; actually, we spent a couple of hours basking. Now all we had to do was find folks to write it all up. And therein lay the problem. The will was there with many scholars. We had a very good response from postings in *H-World* and e-mail notes to colleagues at university history and anthropology departments. But in some areas, the scholarship just did not exist yet. In other areas, scholars simply had so many other commitments that they had no time to devote to this project. We struggled with Africa—plenty of great African scholars around—but many were booked up for the next two or three or ten years. We found three outstanding scholars who made time to work with us—Candice Goucher, Jonathan Reynolds, and Eric Gilbert—and eventually they either wrote the entries we needed or found colleagues to do so. But entries on more comparative topics, such as comparing economic conditions in eleventh-century southern Asia with those in Europe, were beyond our reach. Over the next year we realized that few scholars were comfortable doing broad comparisons. Many of

our entries—essays under a single topic—would be centered on specific parts of the world, perhaps one on India, one on Germany, one on the Incas, one on Japan. But as already anticipated, we needed to have a solid topic introduction to tie them together into a world history perspective by making explicit comparisons and looking at the broader view. Composing these topic introductions fell largely to the era editors, and it was a task that proved formidable but doable after much gnashing of teeth.

Not surprisingly, we also found that many of the most exciting entries were done by a contributor/editor team when young scholars—sometimes advanced graduate students—were paired with academic editors with longtime experience in their fields. The back-and-forth (or, even often push-pull) relationships produced fresh insights that were well anchored to a solid base of acceptable historiography. We had a sense of insight and adventure interspersed with exhaustion. Some days it seemed that it would never be done; other days the finish line seemed to be just ahead.

The *WHE* team grew both at ABC-CLIO and in the number of people who were willing to invest their time and expertise in the project. The era editors have been the finest, most collegial group possible and made the work a joy despite some frustrating times. The ABC-CLIO staff's names are listed in the front of this volume. Each brought a set of characteristics and abilities that kept the work exciting. The *WHE* could never have reached this point without the grace, intelligence, and dedication of the entire staff both editorial and the fine production staff under the guidance of Donald Schmidt, a gentleman and scholar himself. We also owe a special note of gratitude to many fine contributors such as William Burns, who hung in with us throughout the entire project. And Al and Carolyn want to add a special note of thanks to Ron Boehm, who pushed, prodded, and challenged but never lost faith in us, even when we ourselves felt on shaky ground. All in all it has been a wonderful experience, and we did in fact live through it.

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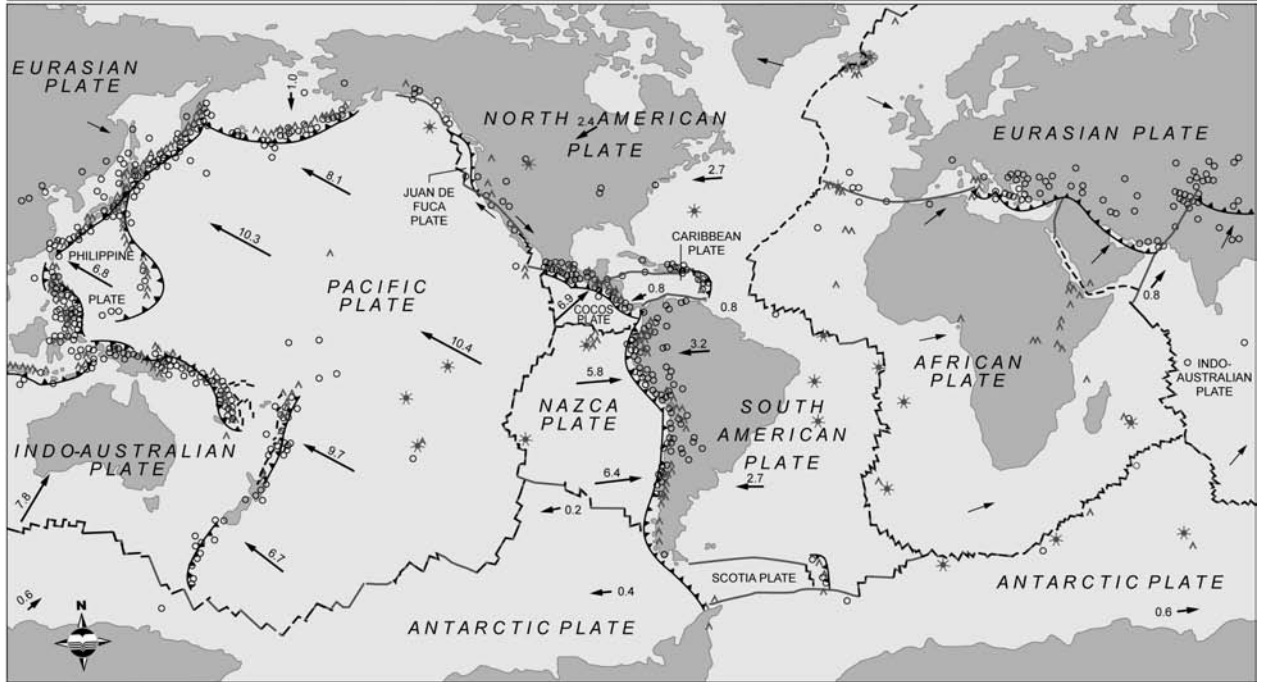
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Maps

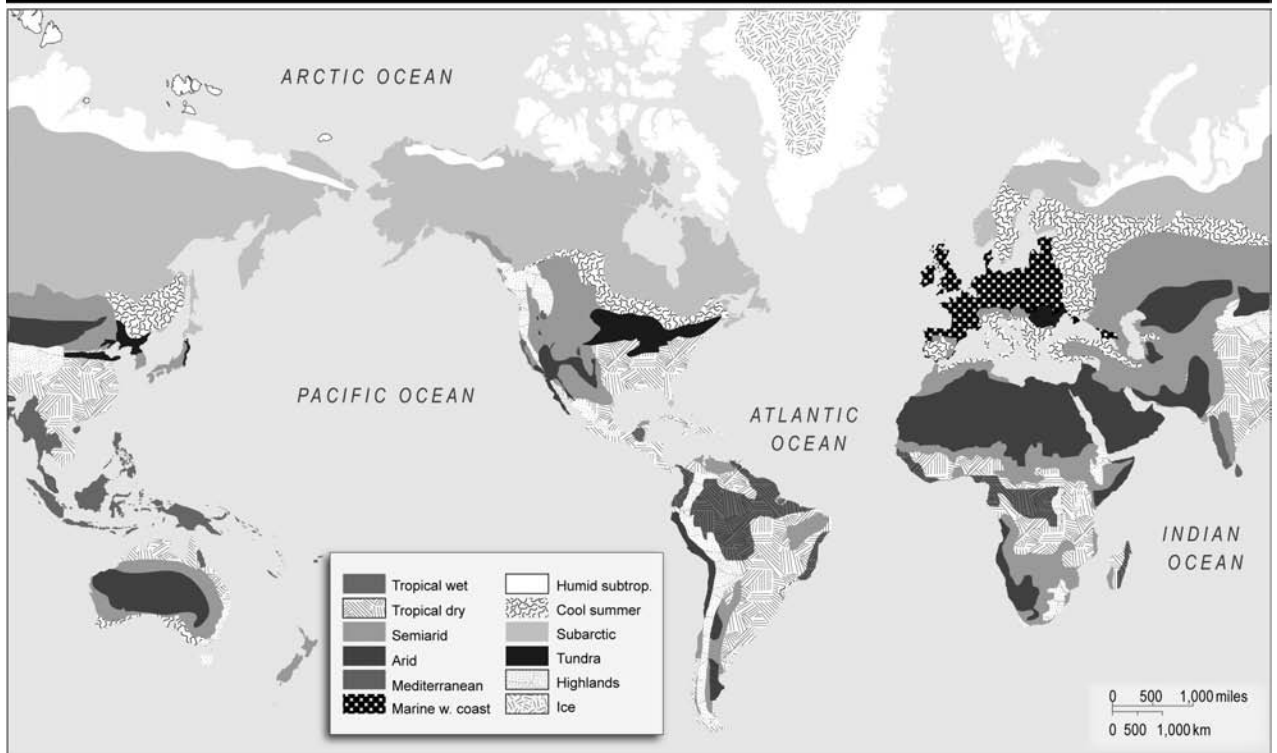
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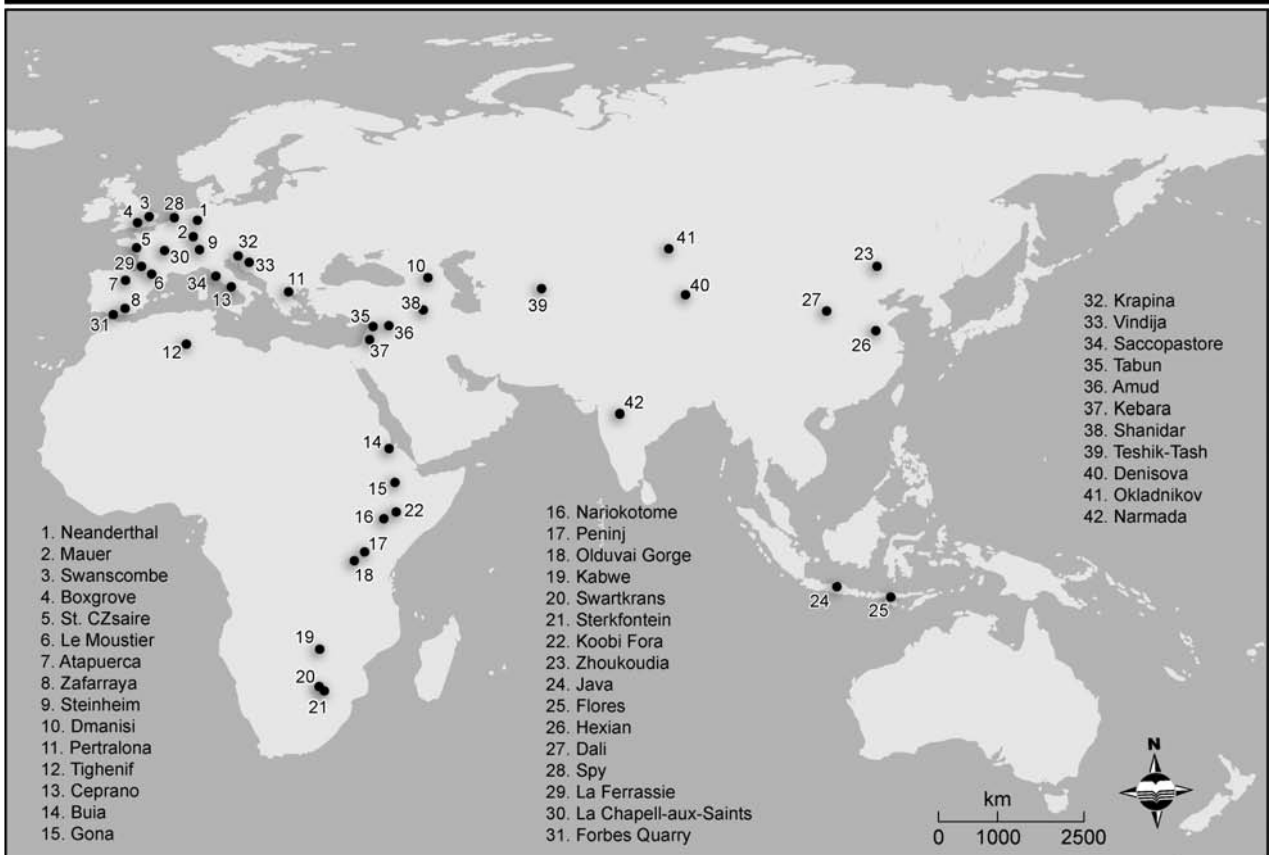
TECTONIC PLATES, WORLDWIDE

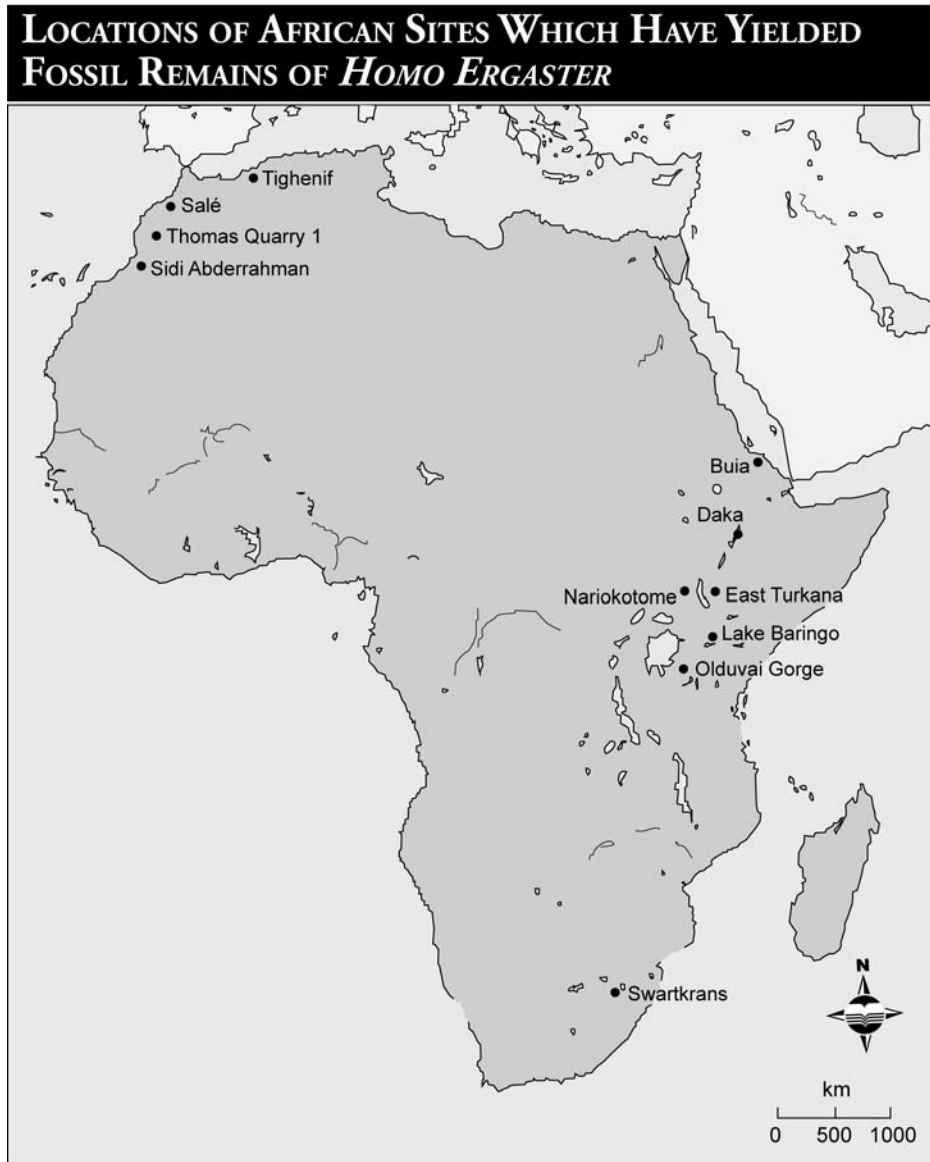


WORLD CLIMATE

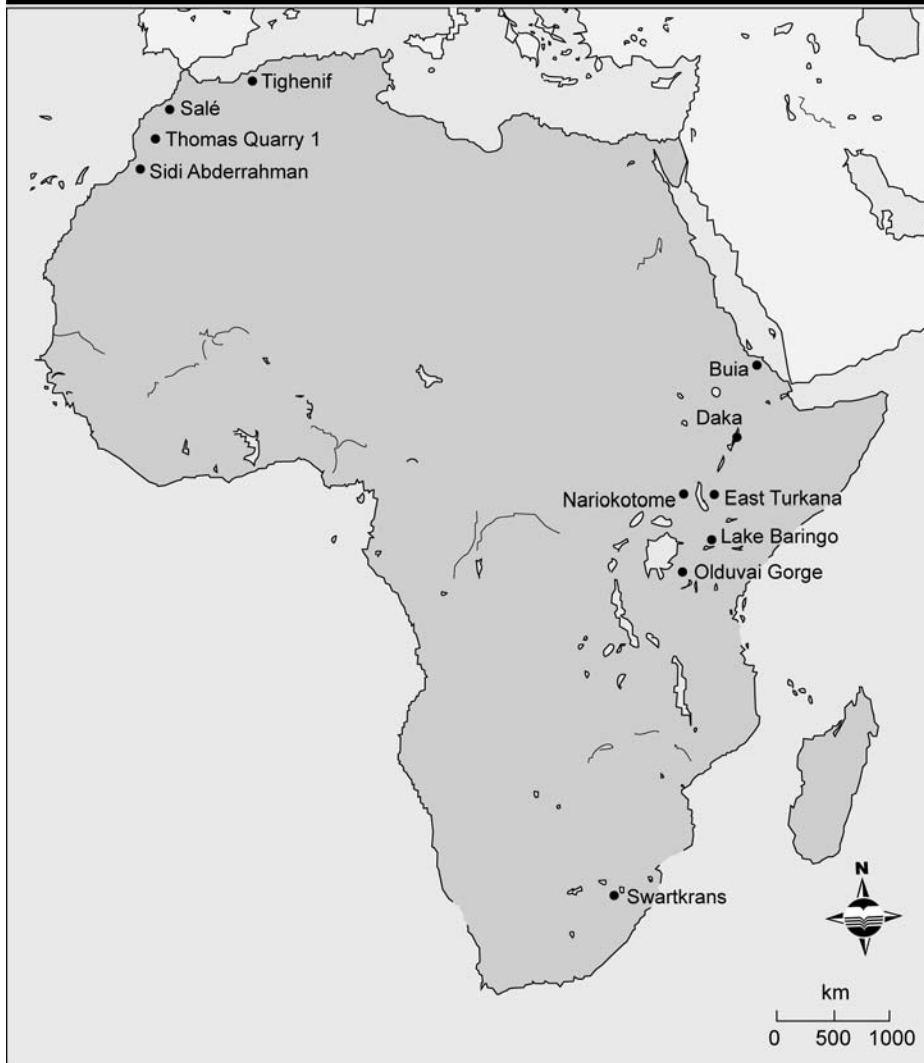


HOMINID FOSSILS FOUND THROUGHOUT THE WORLD

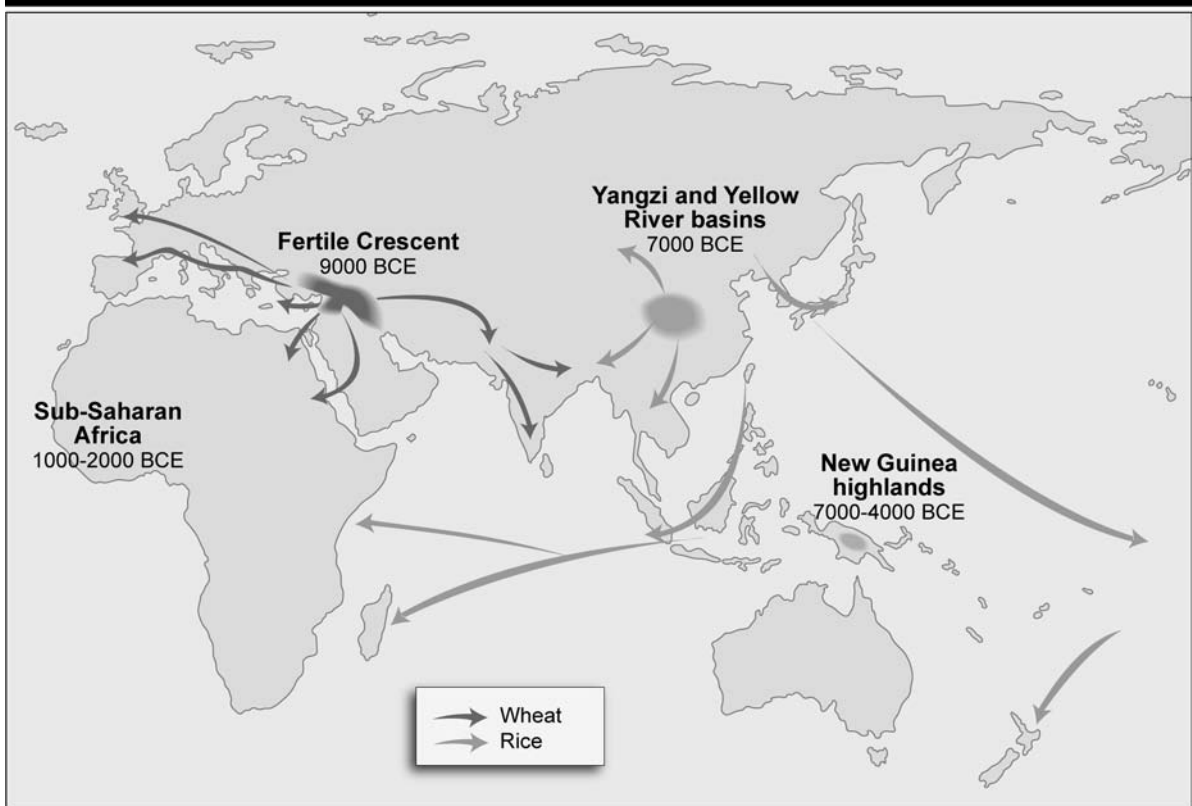




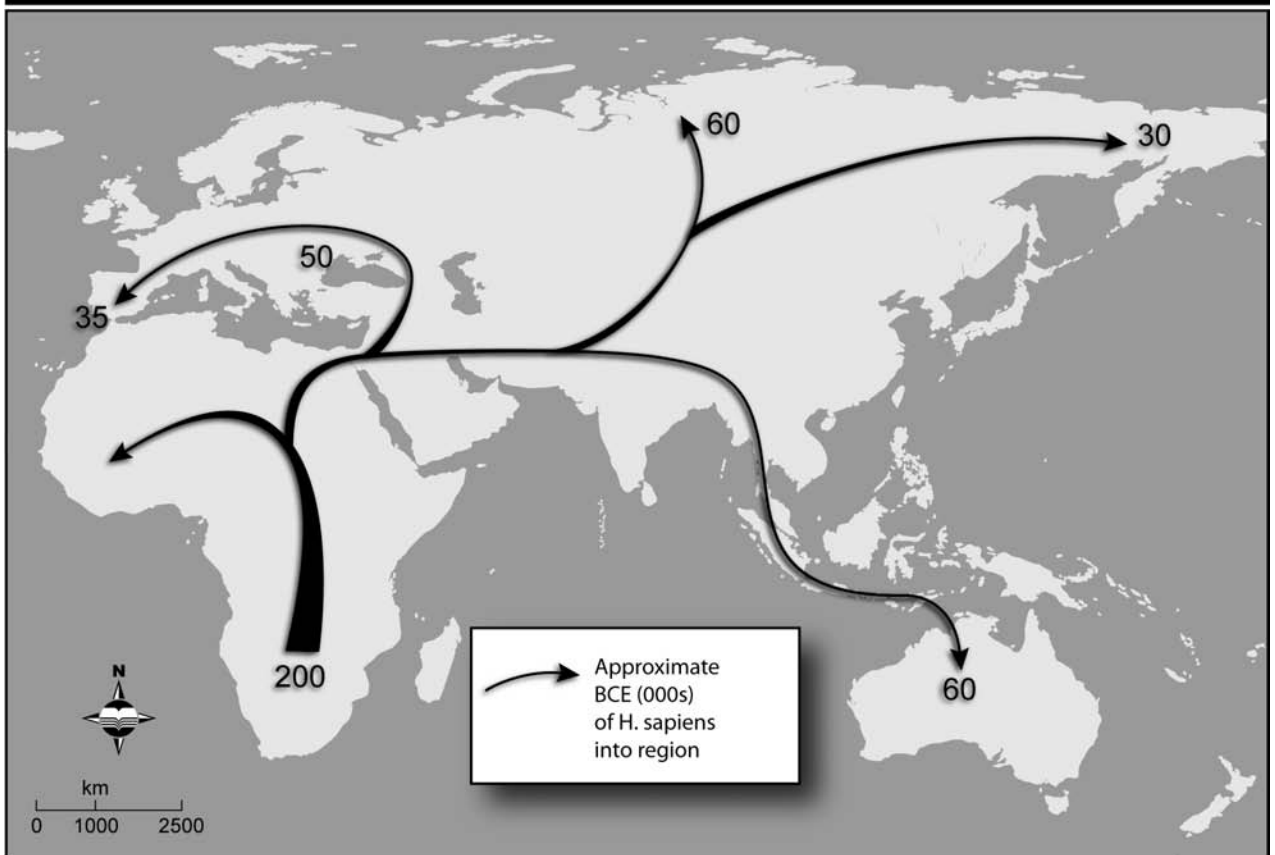
**LOCATIONS OF AFRICAN SITES WHICH HAVE YIELDED
FOSSIL REMAINS OF *HOMO ERGASTER***



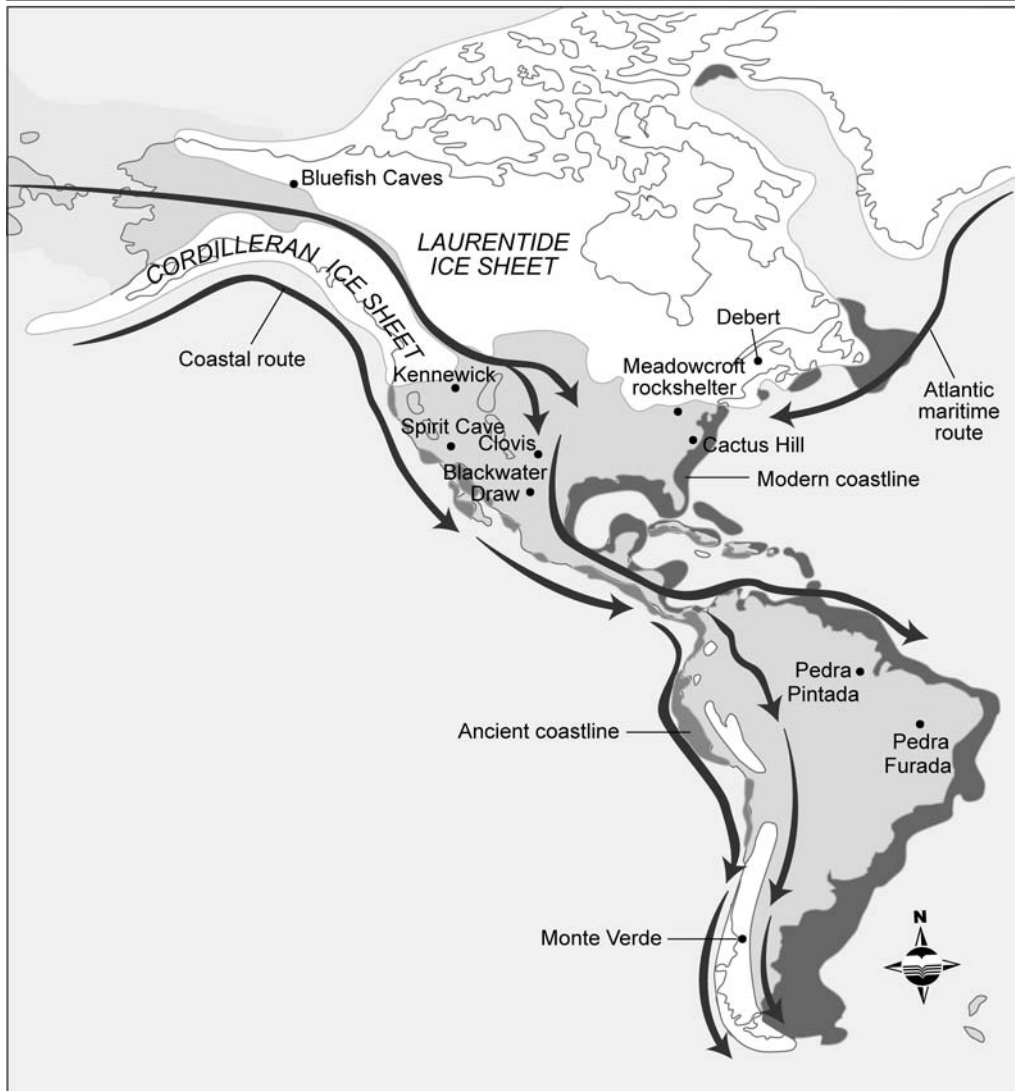
MOVEMENT OF DOMESTICATED WHEAT AND RICE

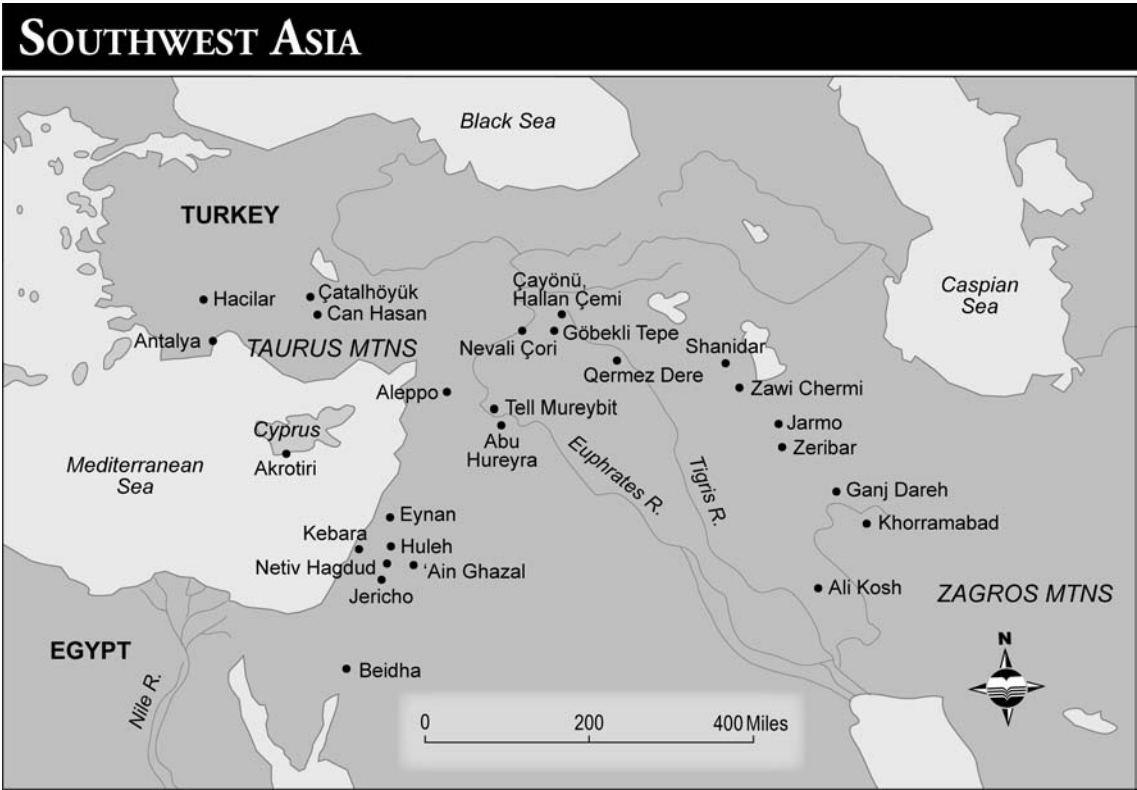


MIGRATION ROUTES OF EARLY PEOPLE

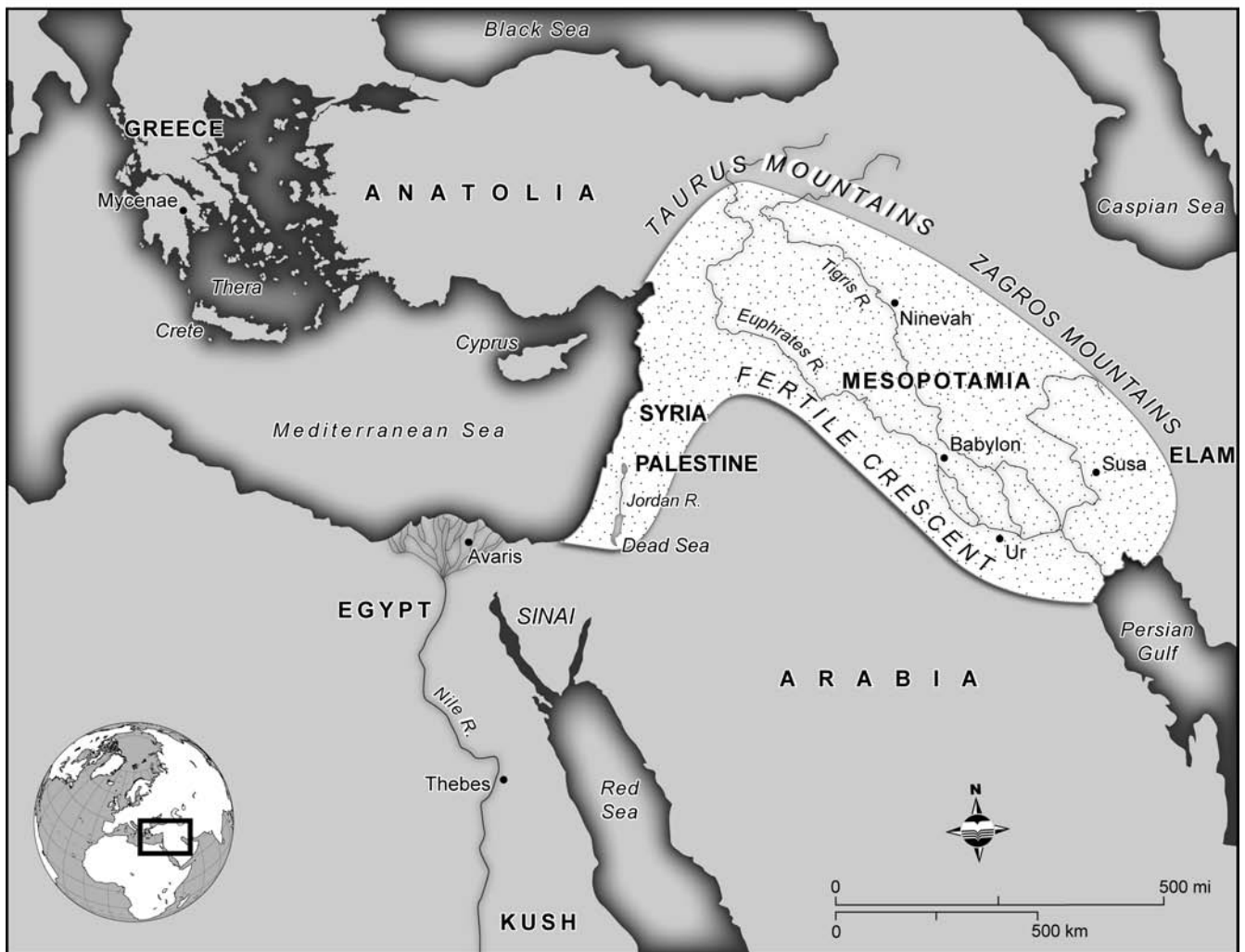


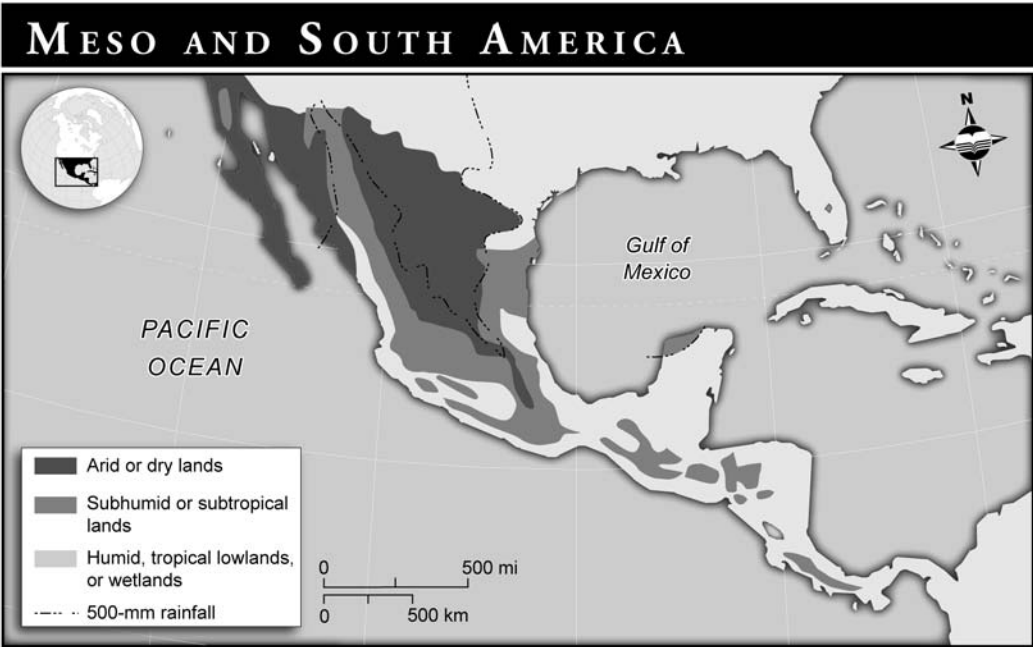
COLONIZATION OF THE AMERICAS

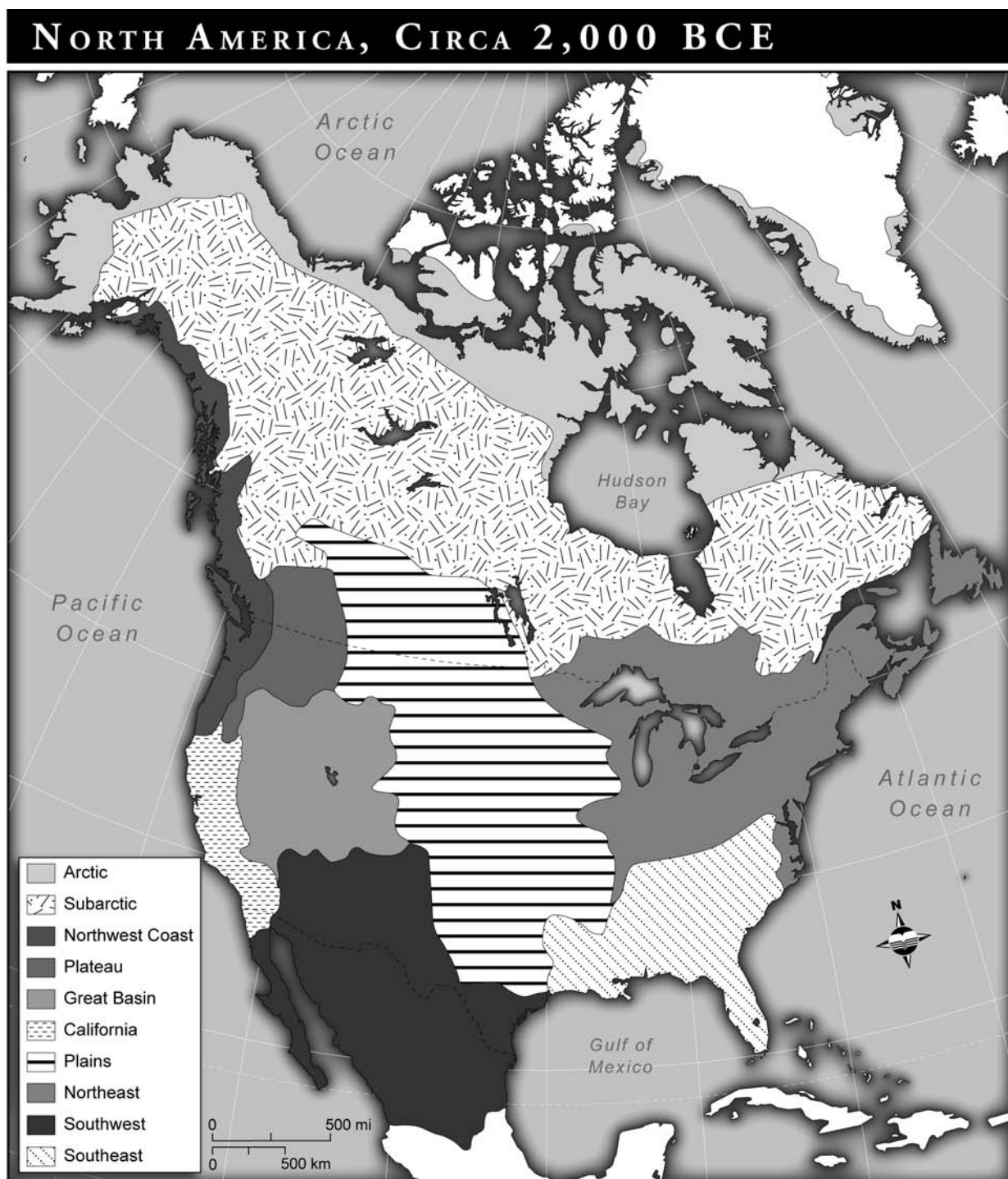


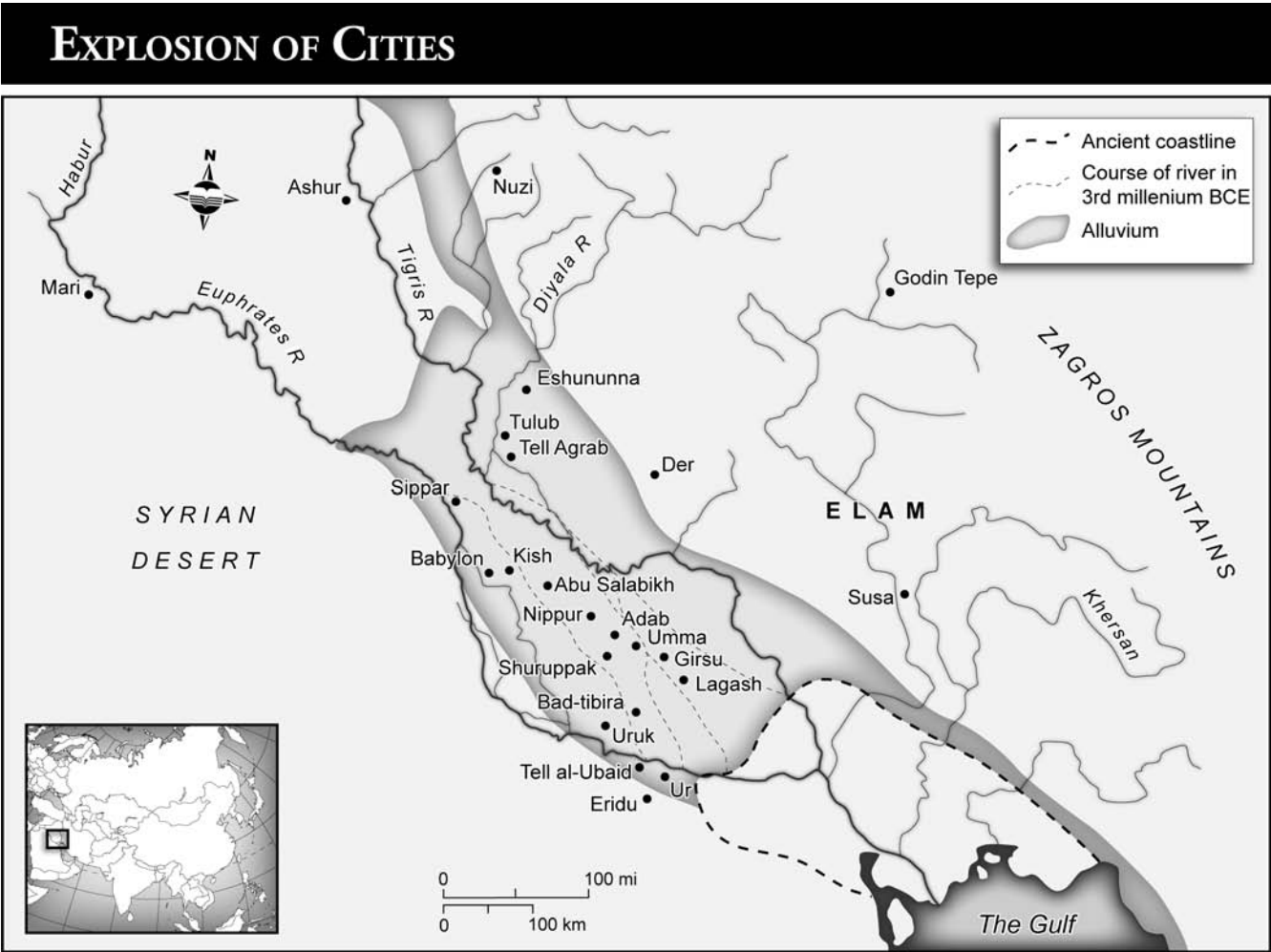


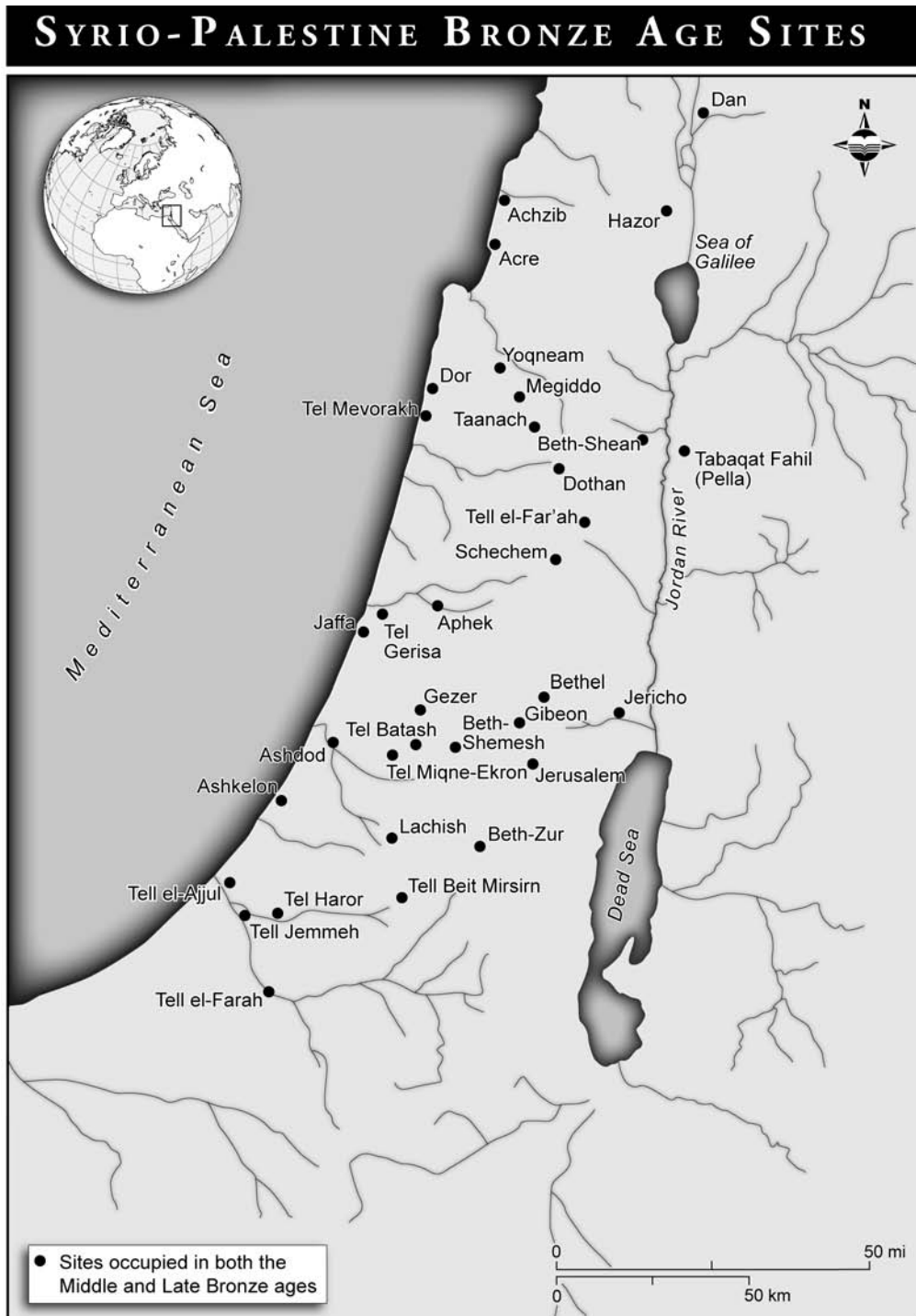
EASTERN MEDITERRANEAN AND MESOPOTAMIA, CIRCA 6,000 BCE

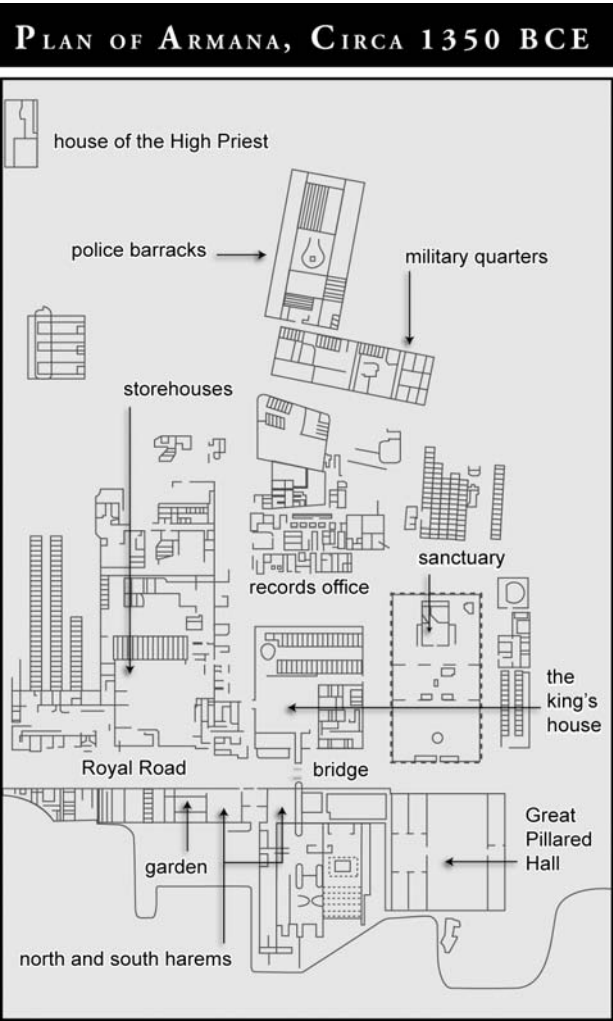


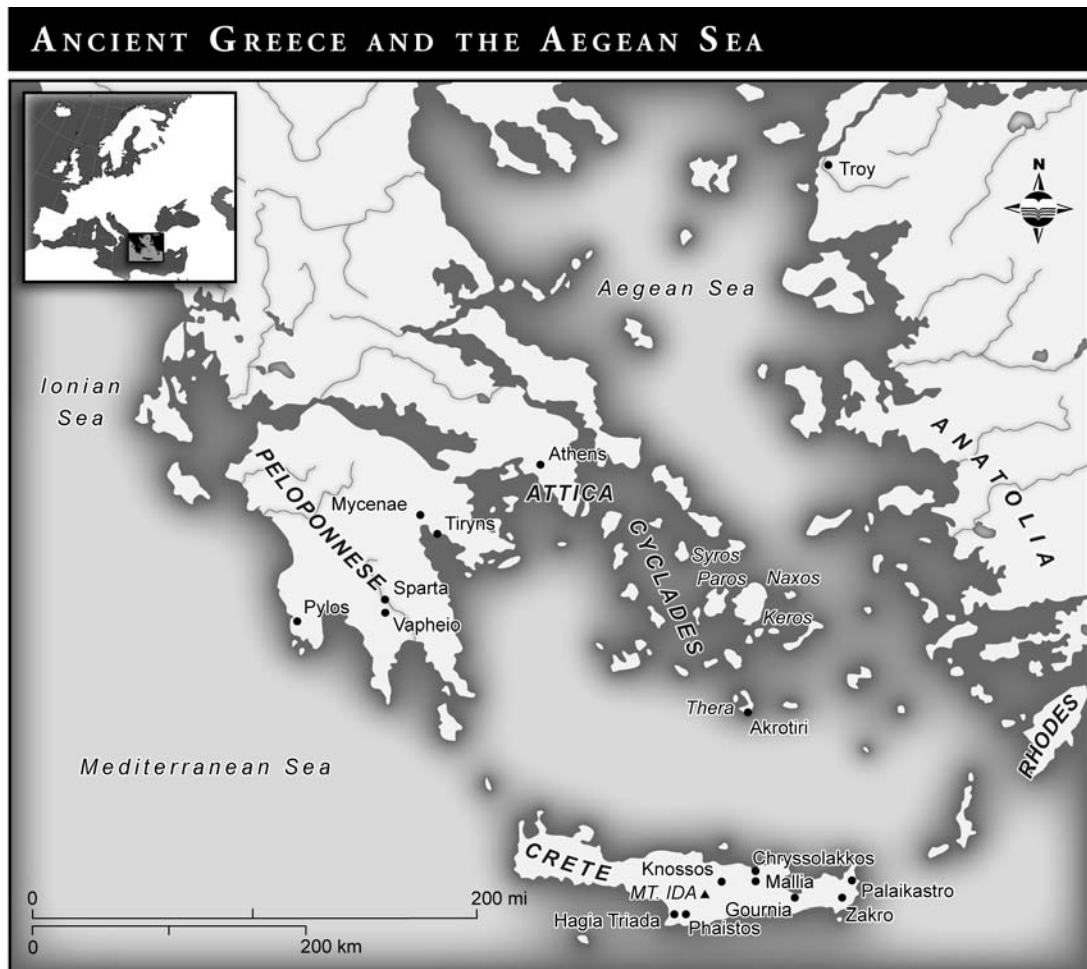




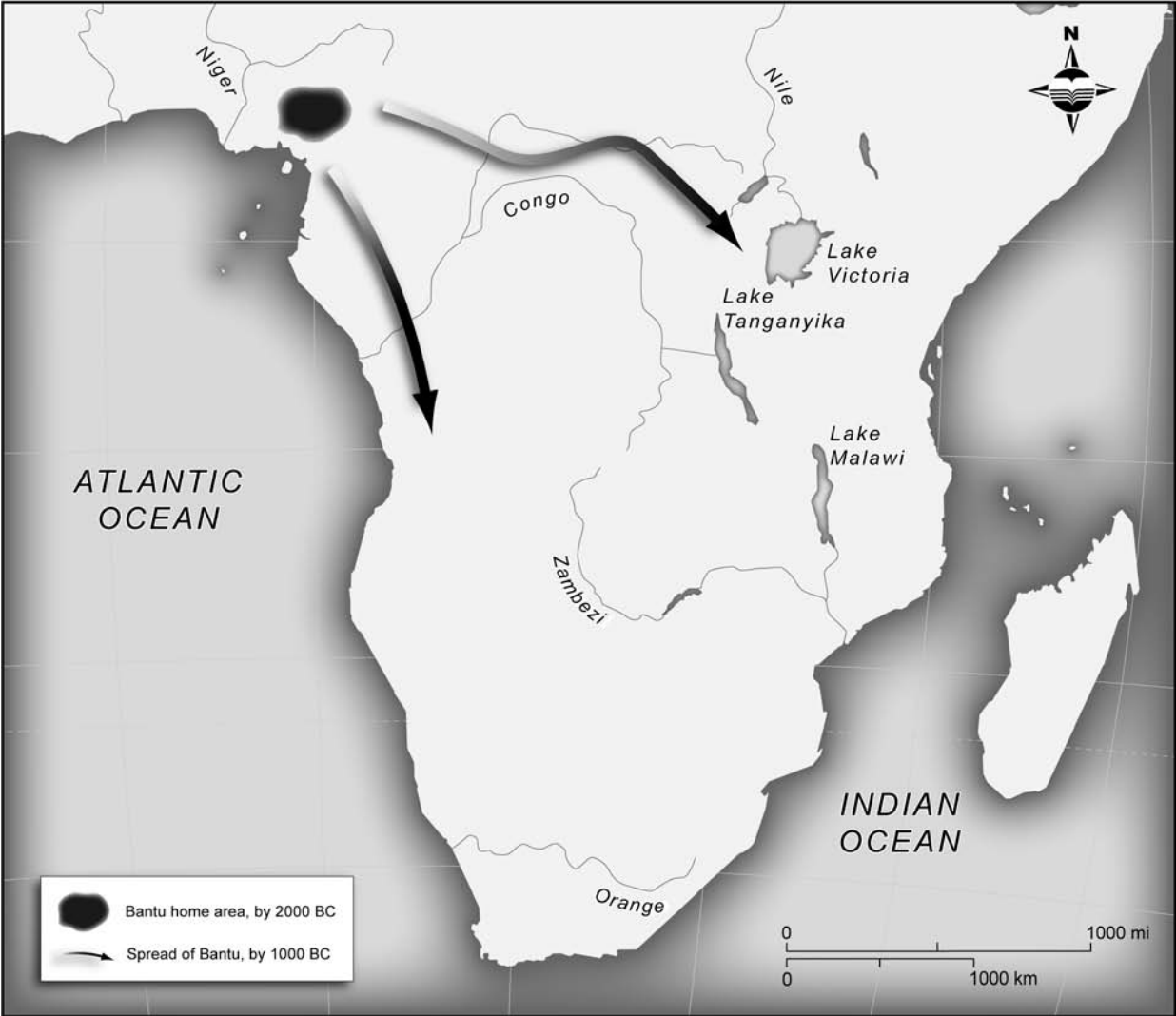


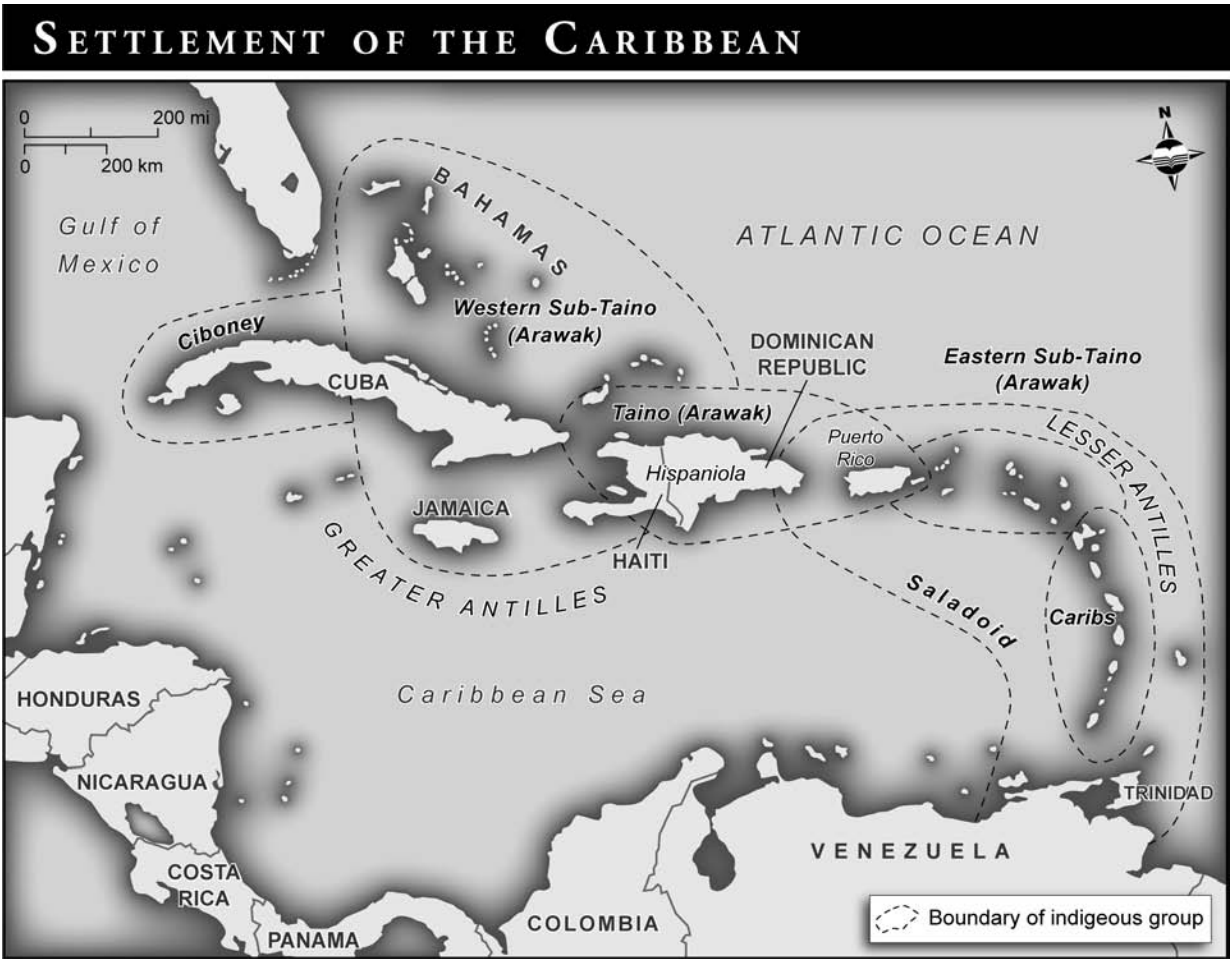




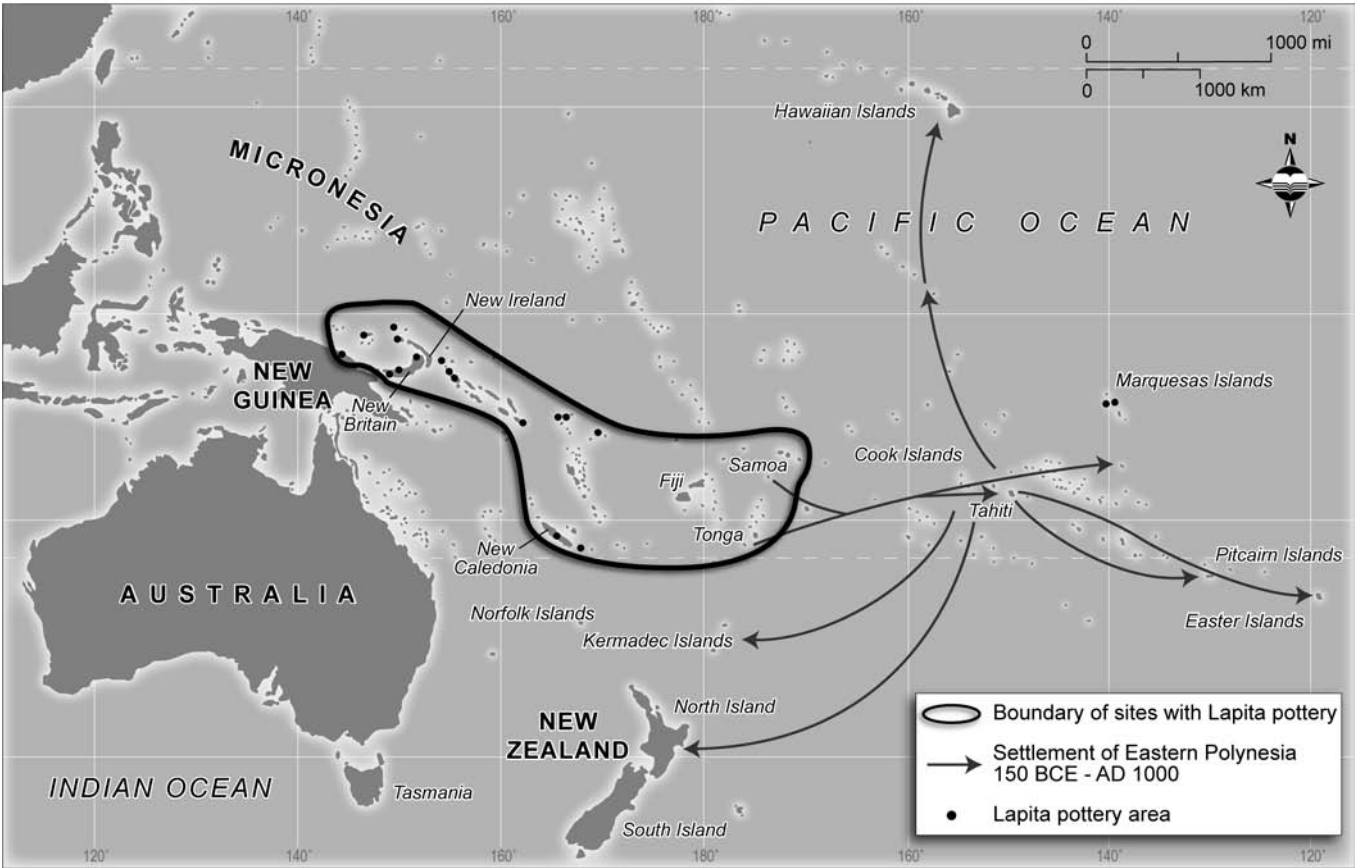


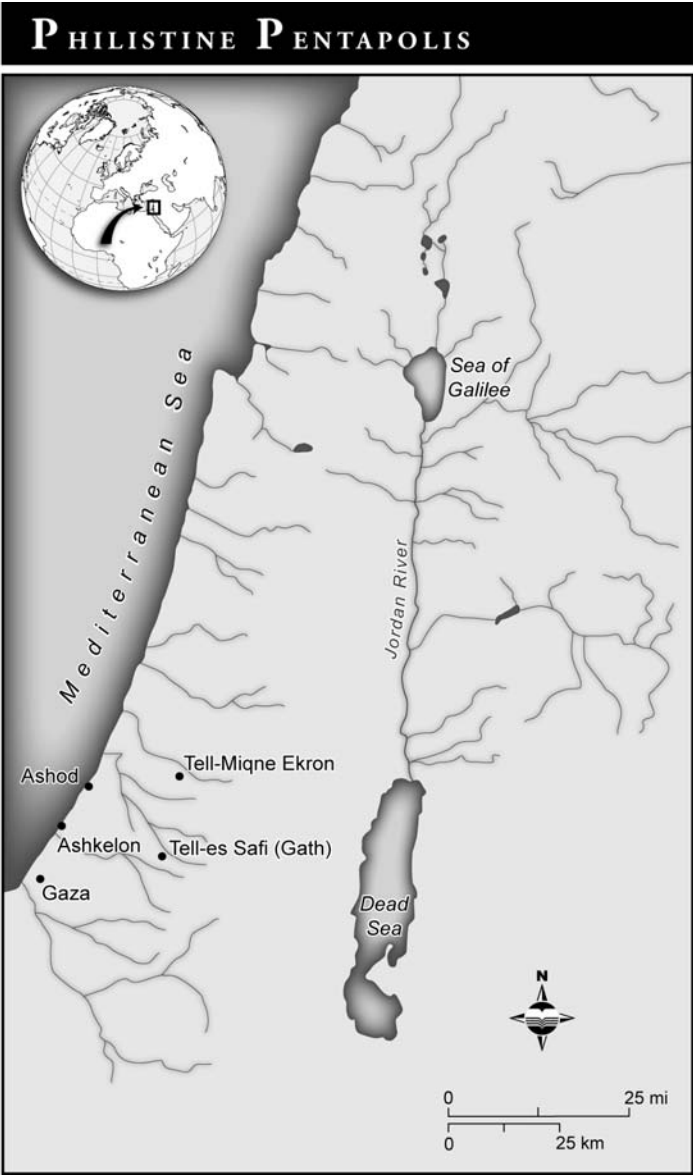
BANTU MIGRATIONS IN AFRICA

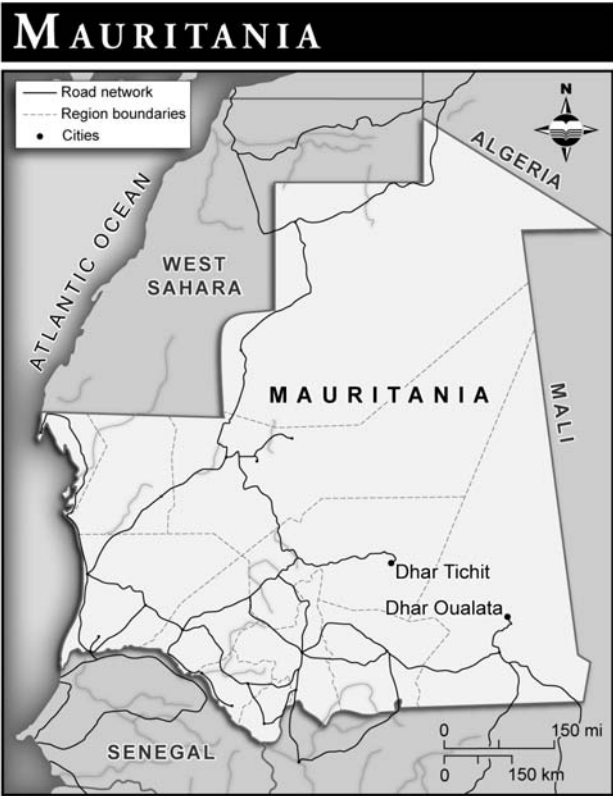




DISTRIBUTION OF LAPITA POTTERY



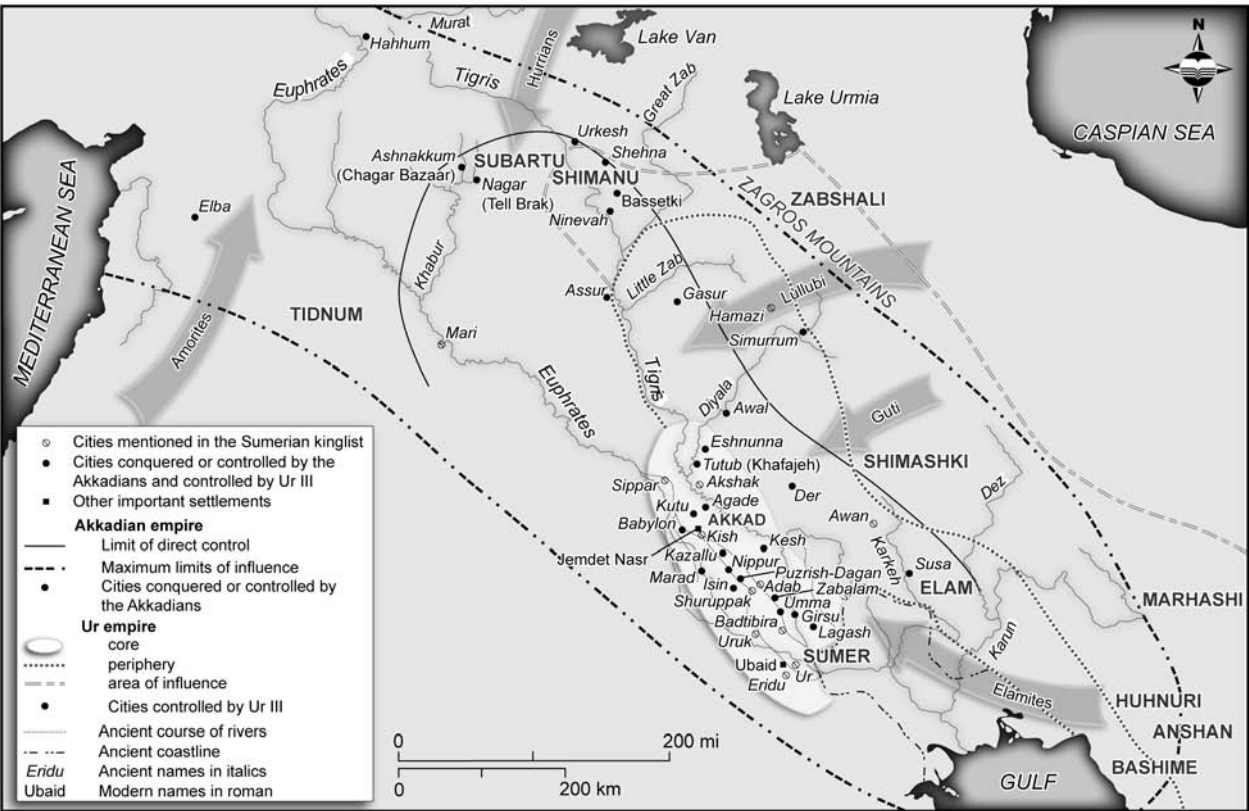


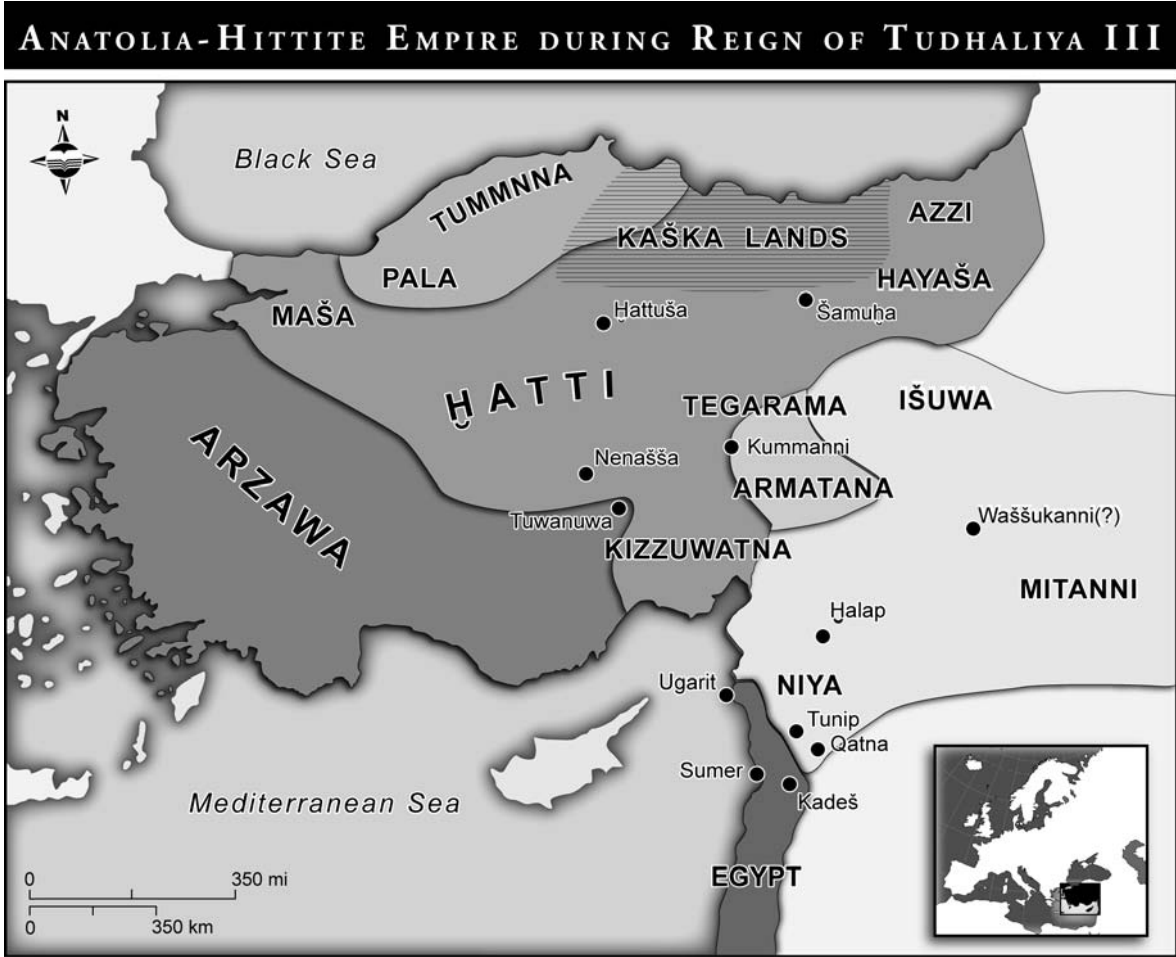






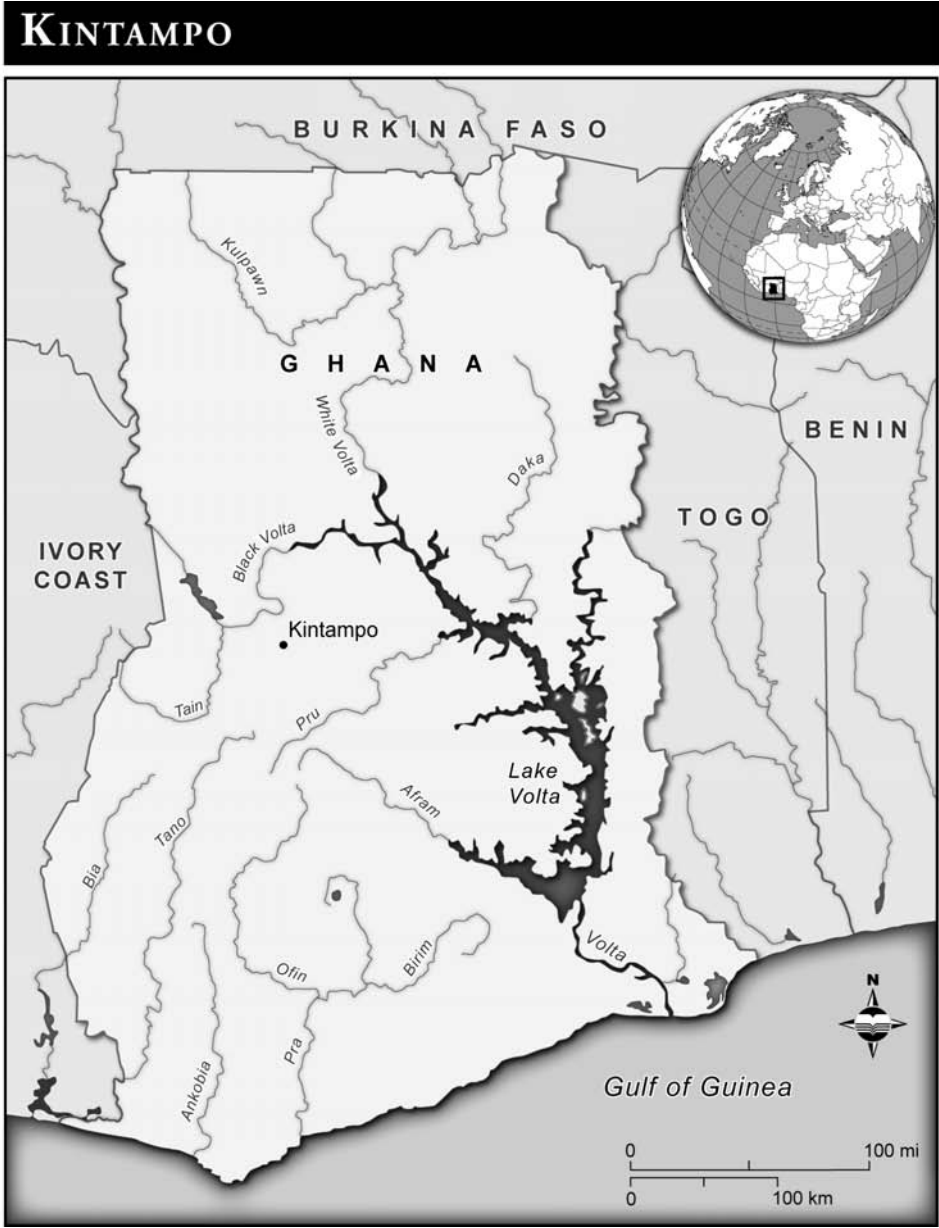
UR AND AKKADIAN EMPIRES



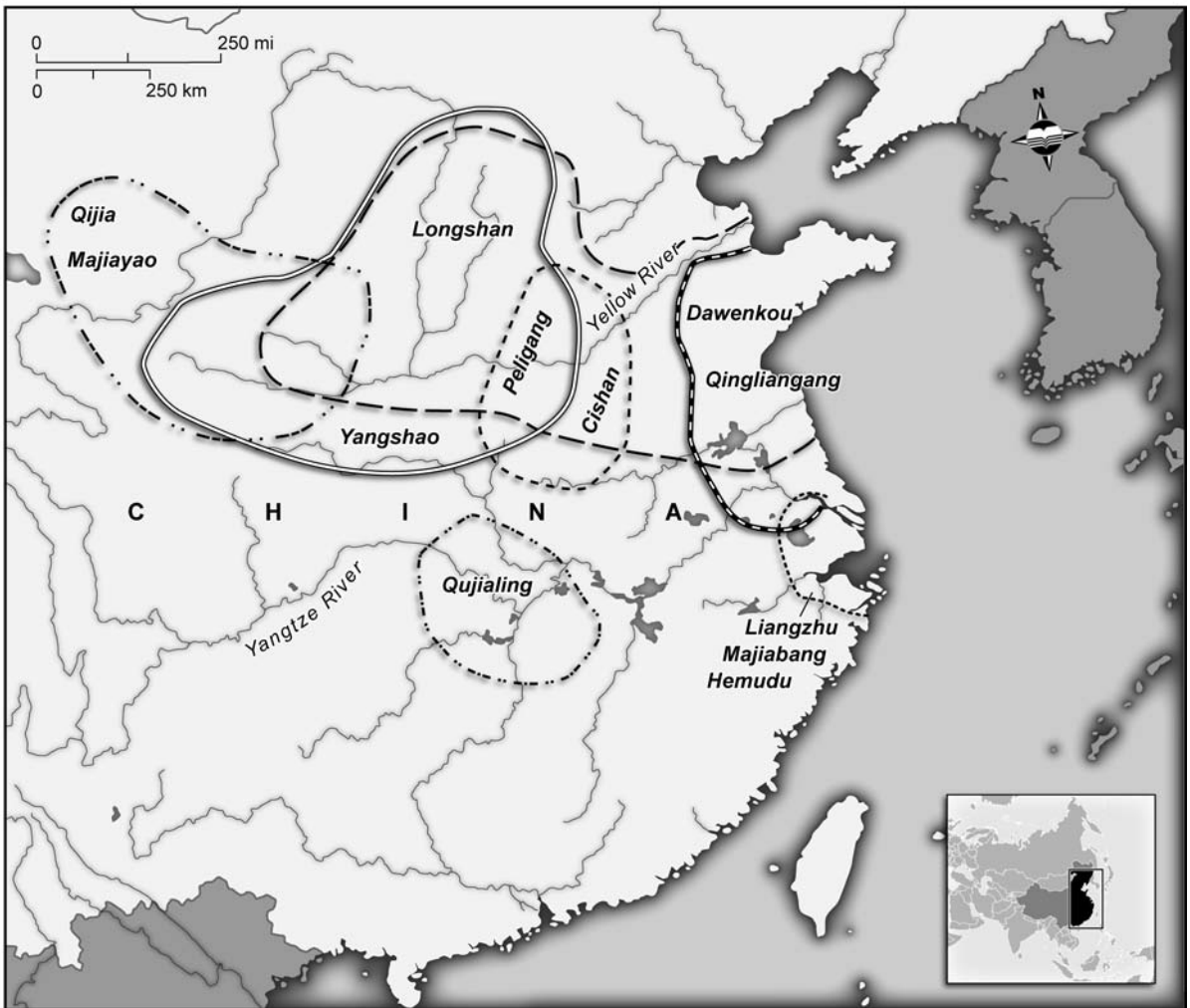


MAJOR SITES OF THE XIA, SHANG, AND ZHOU DYNASTIES

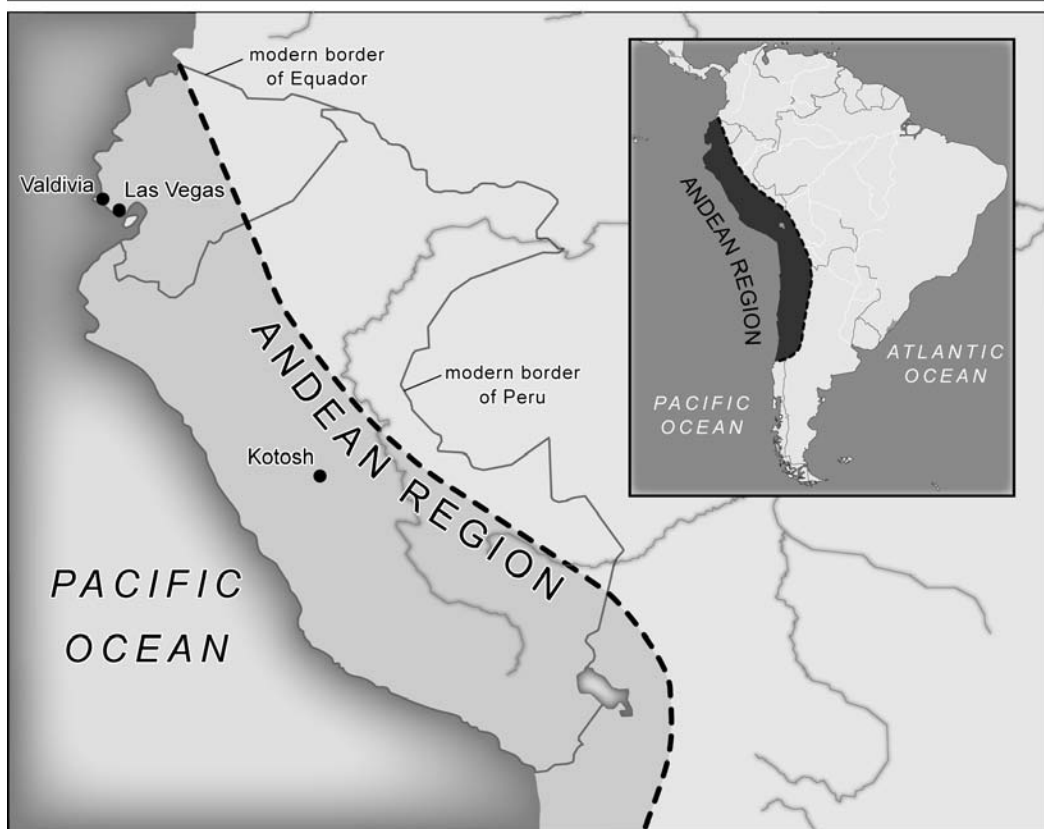




CHINESE NEOLITHIC CULTURES



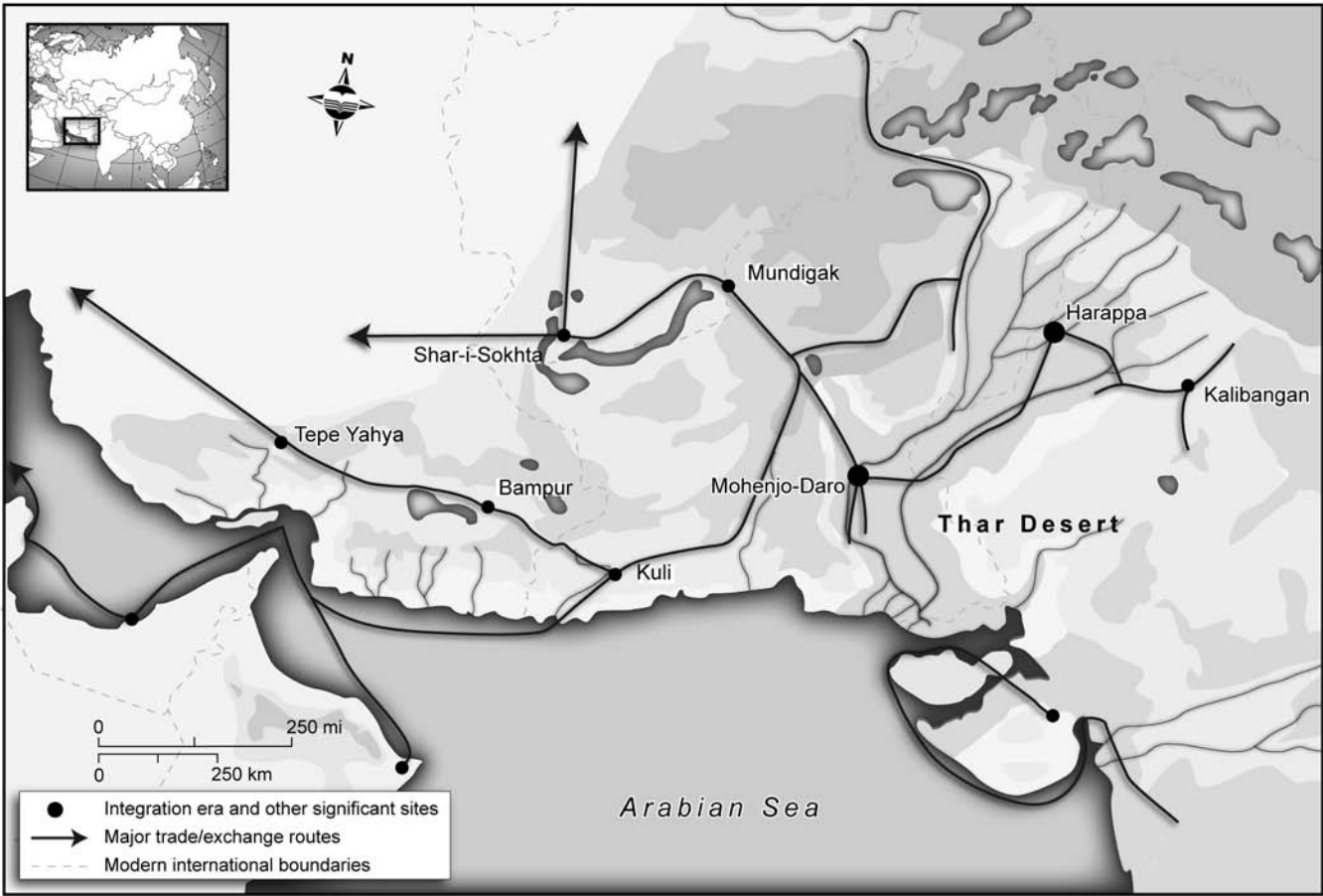
ANDEAN REGION OF SOUTH AMERICA

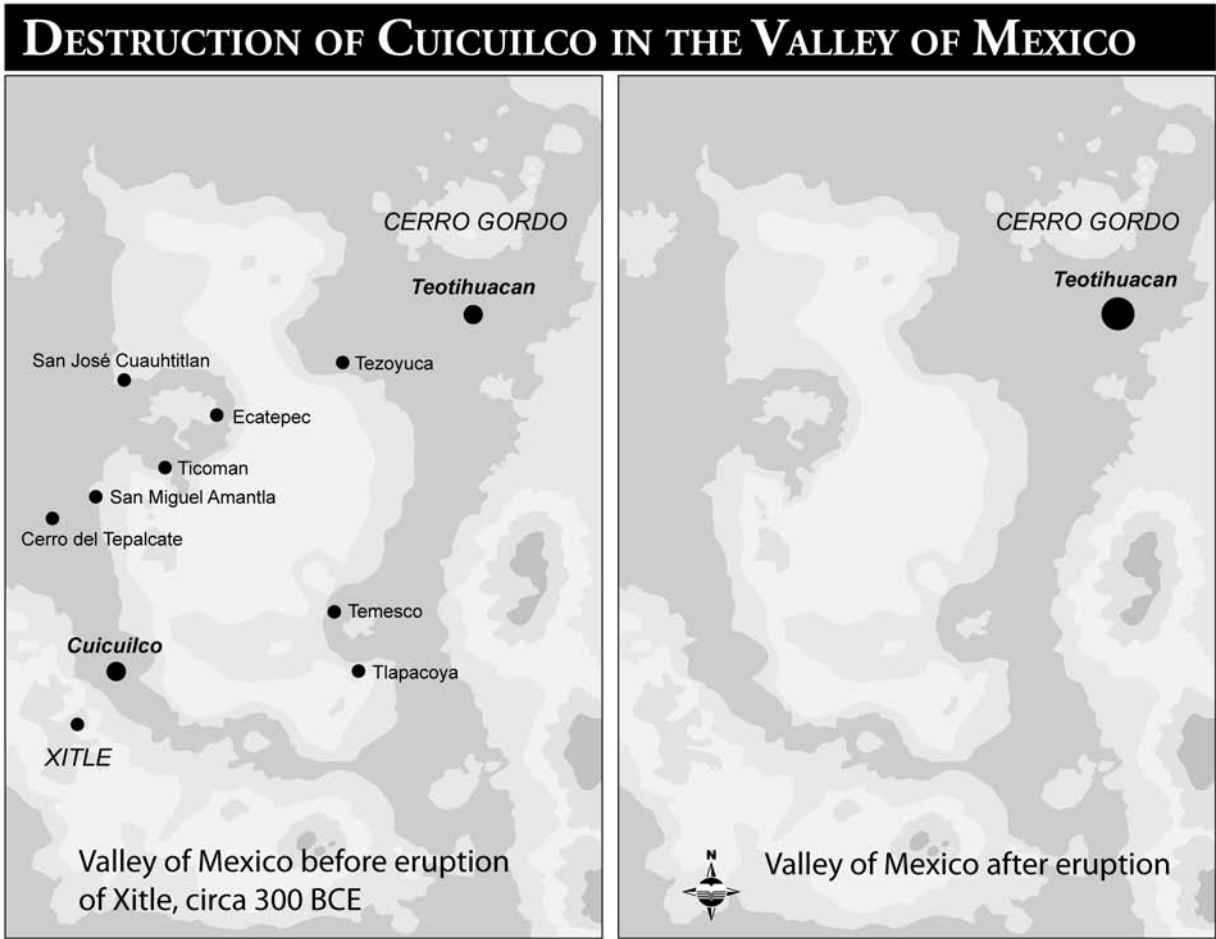


ASSYRIAN TRADE ROUTES, CIRCA 1880 BCE

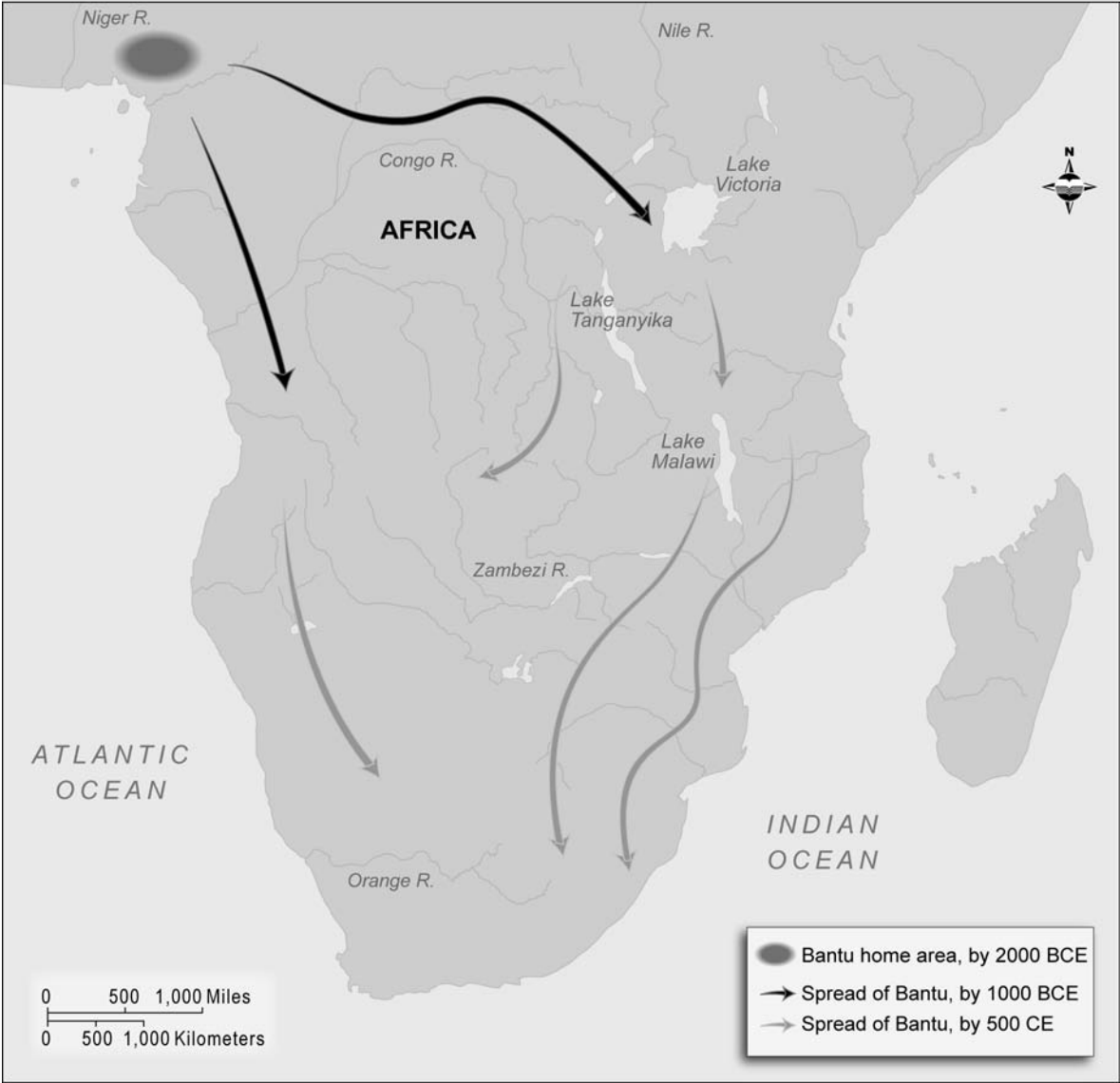


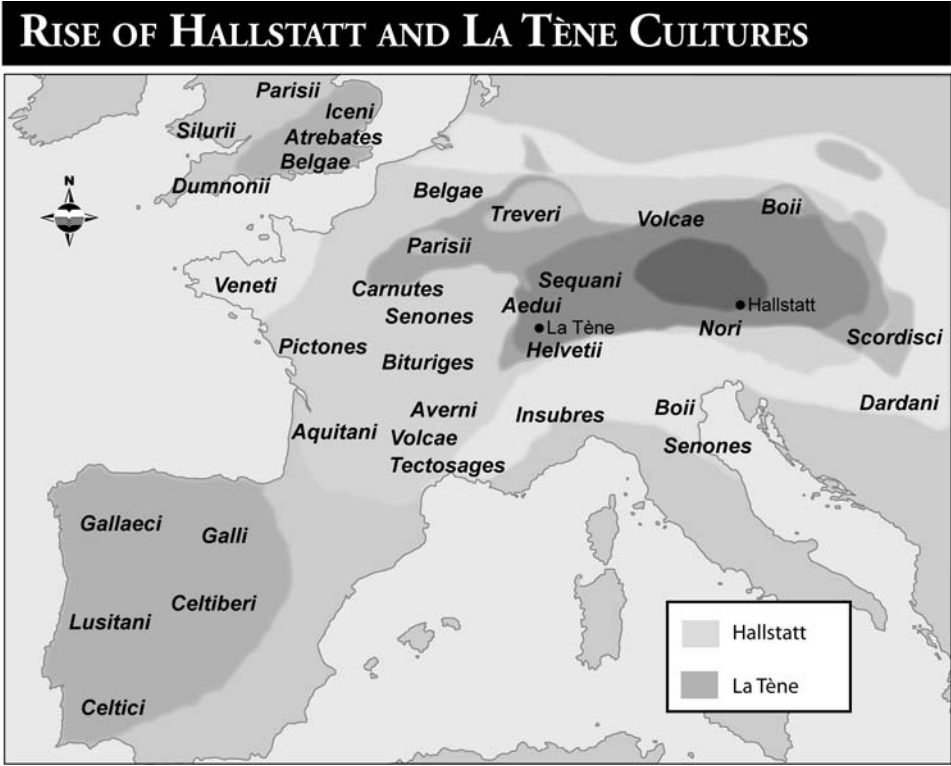
INDUS REGION TRADE ROUTES AND SITES, CIRCA 3,000 BCE



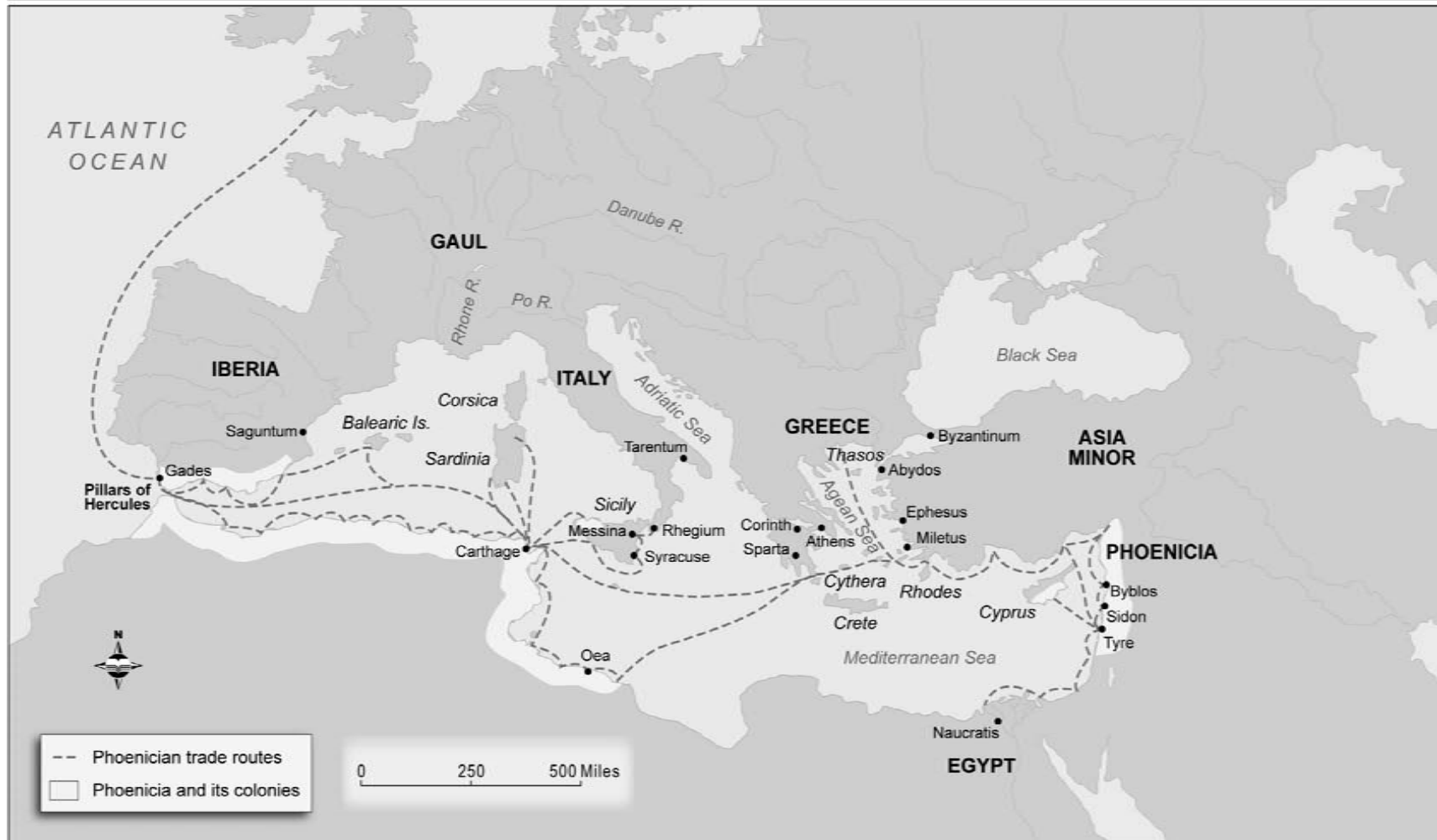


BANTU MIGRATION





PHOENICIAN EXPLORATION AND COLONIZATION



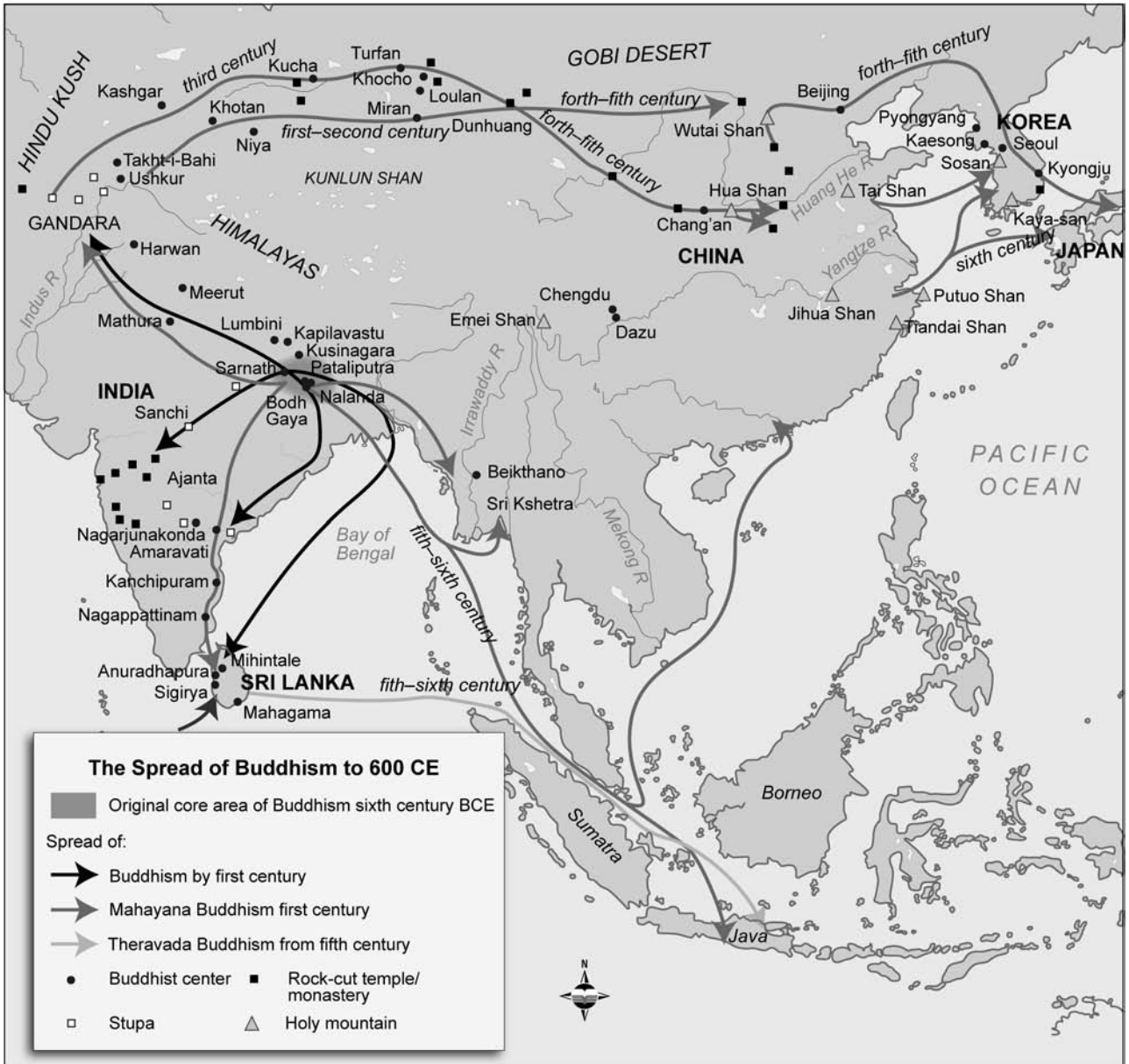
GREEK EXPLORATION AND COLONIZATION



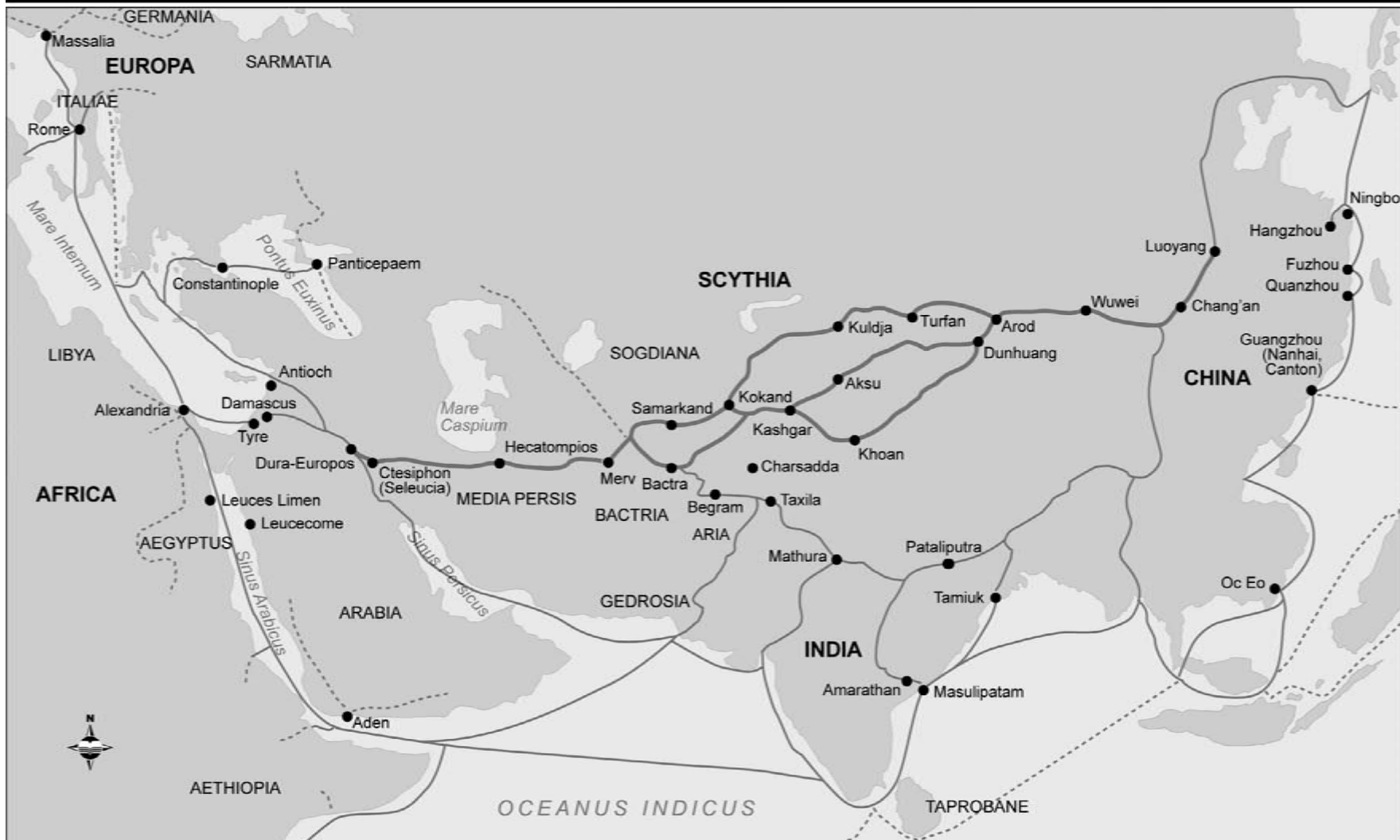
THE SETTLEMENT OF THE CARIBBEAN

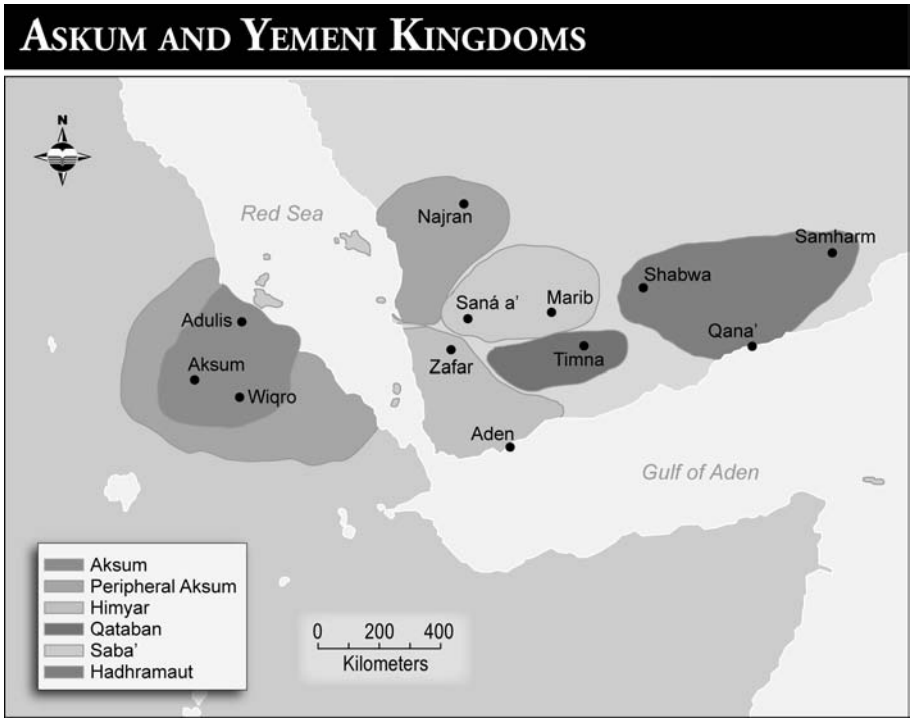


EARLY BUDDHIST MISSIONARY ACTIVITY



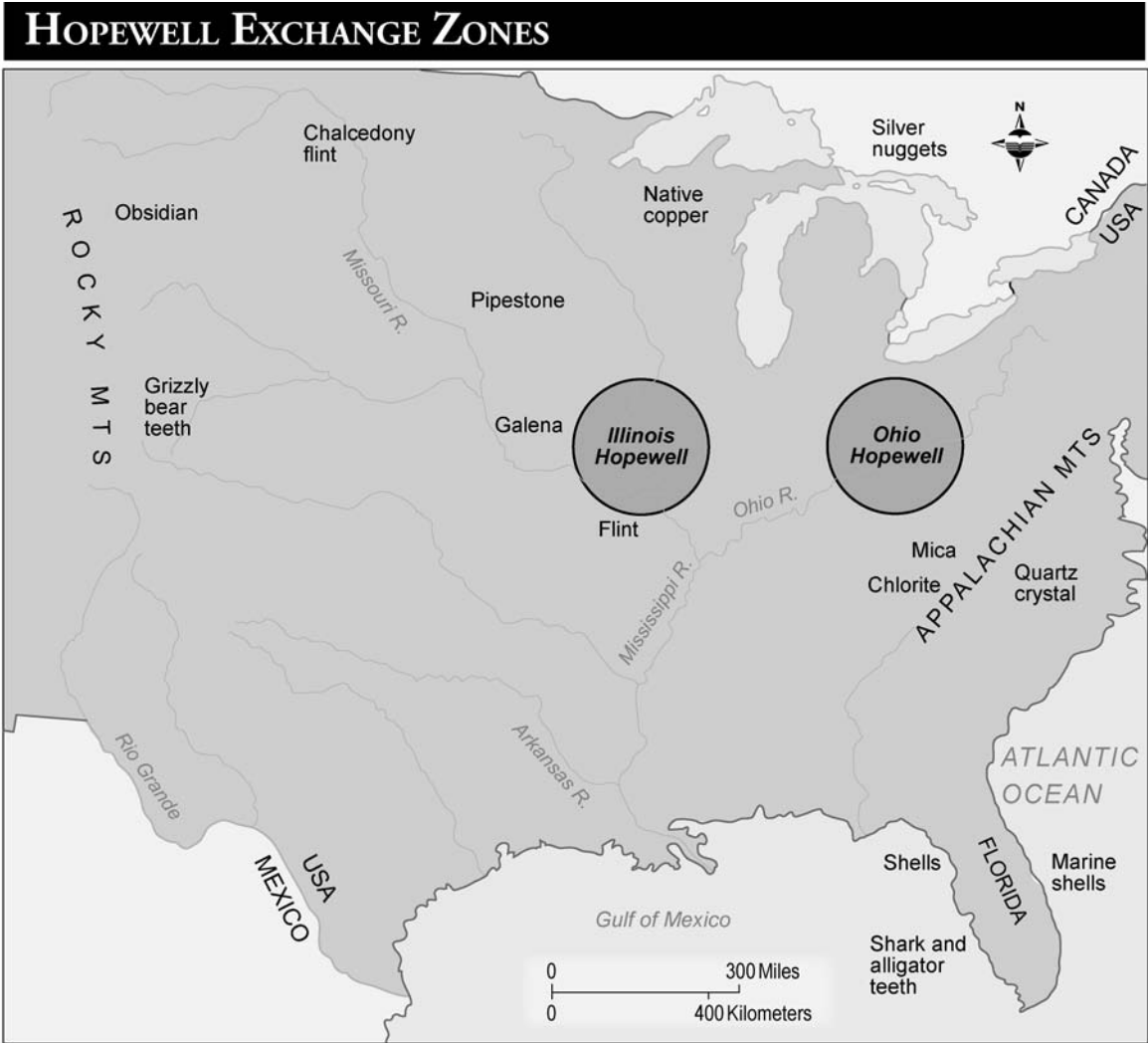
OASIS NETWORKS ACROSS CENTRAL ASIA

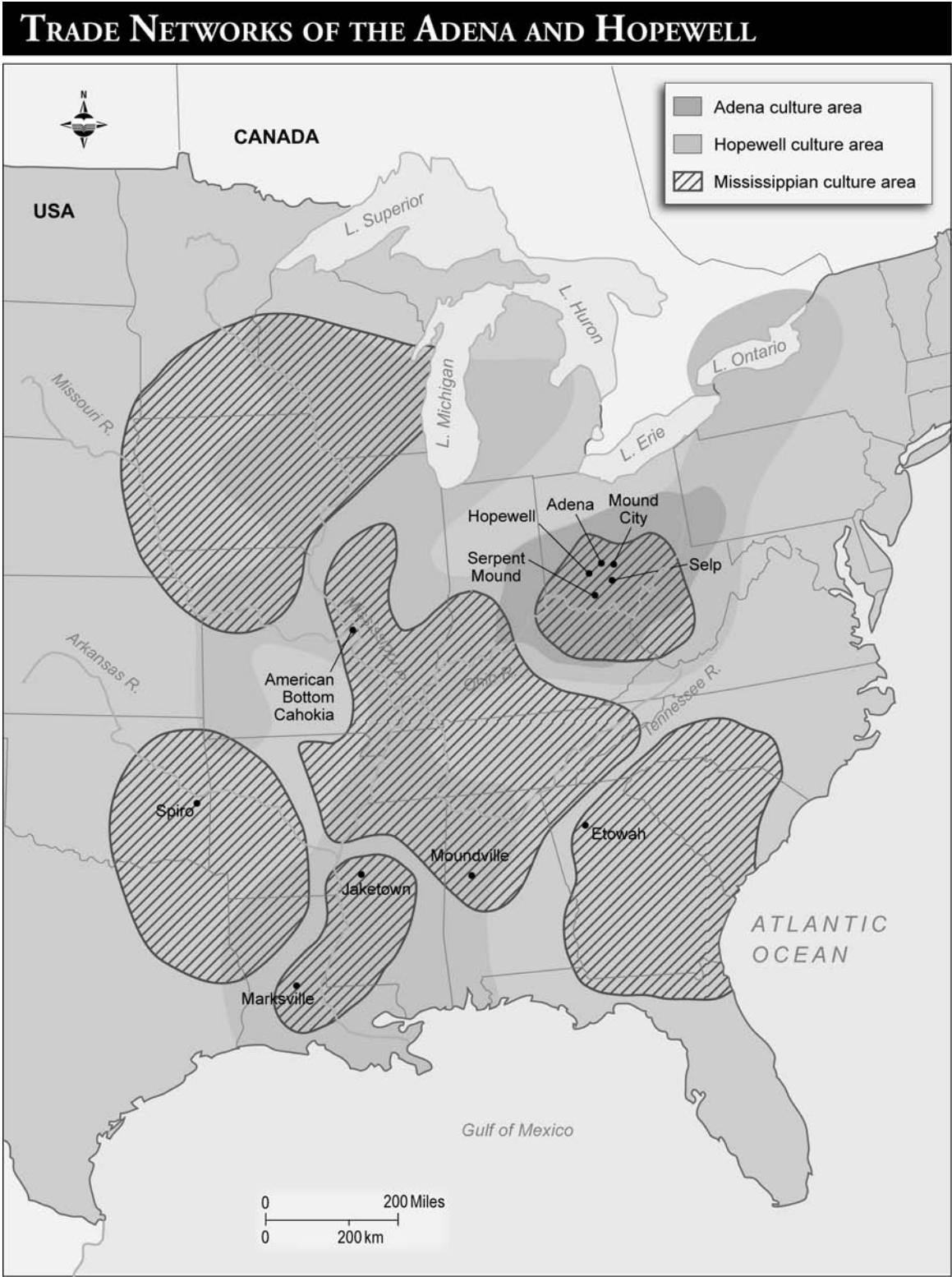




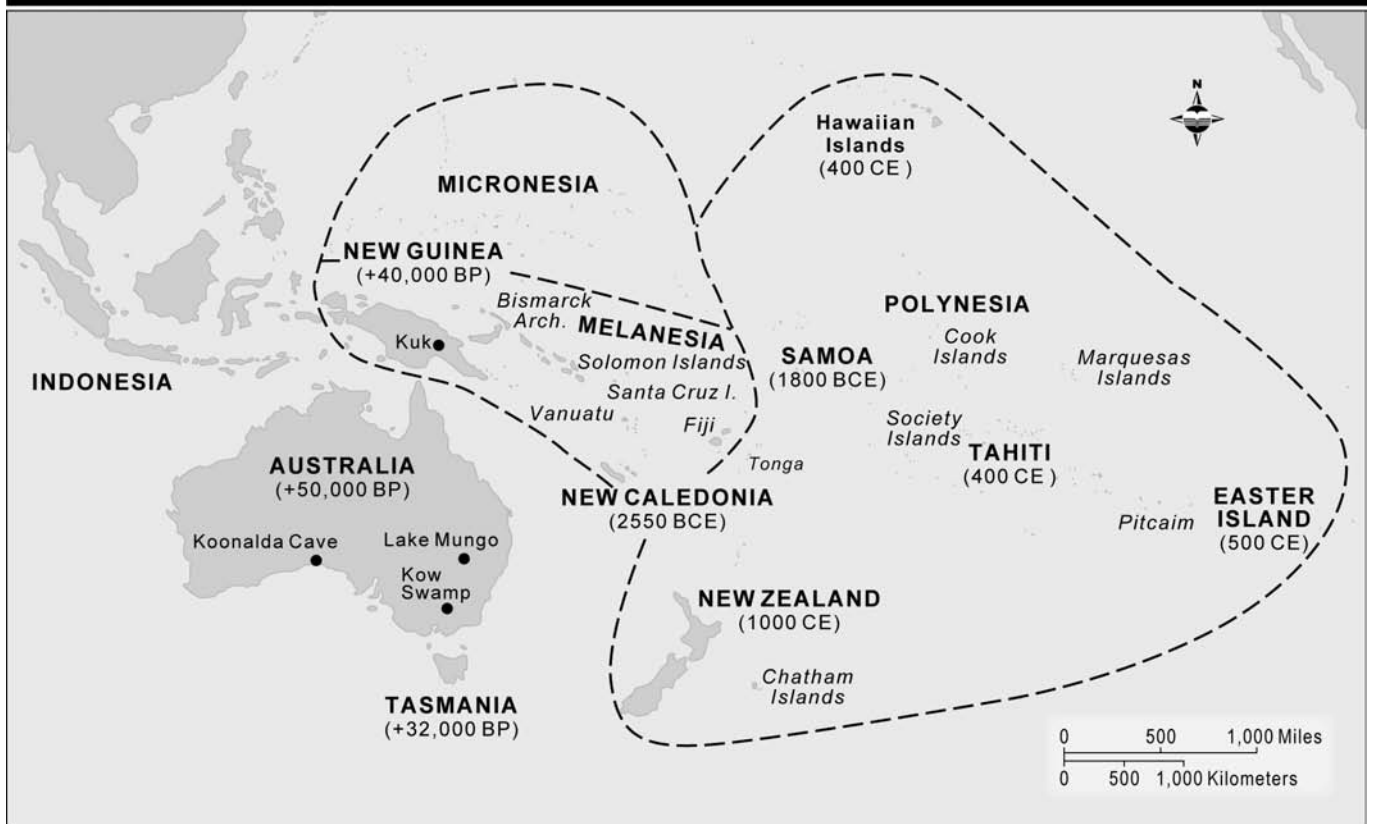
ARABIAN SEA AND ROUTE NORTH TO CENTRAL ASIA



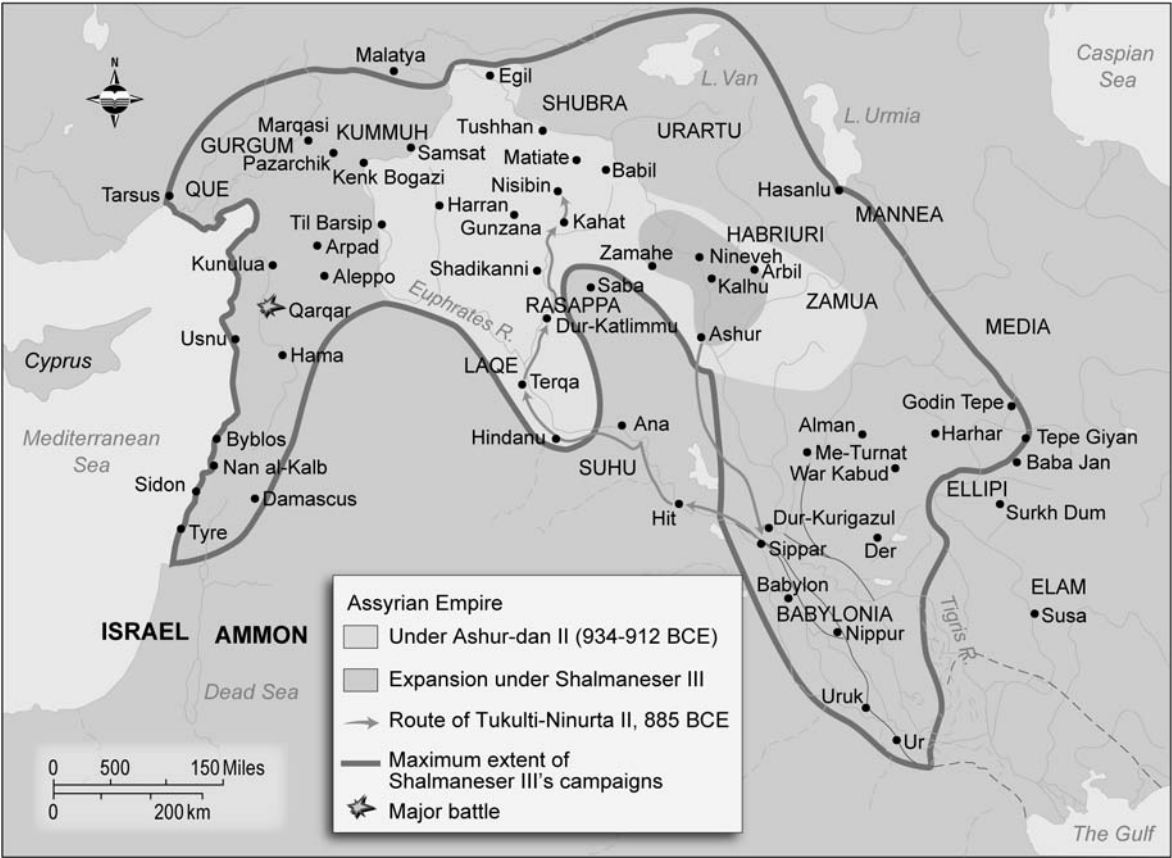




MAP OF PACIFIC SETTLEMENTS



NEO-ASSYRIAN GOVERNANCE



RISE OF PERSIA





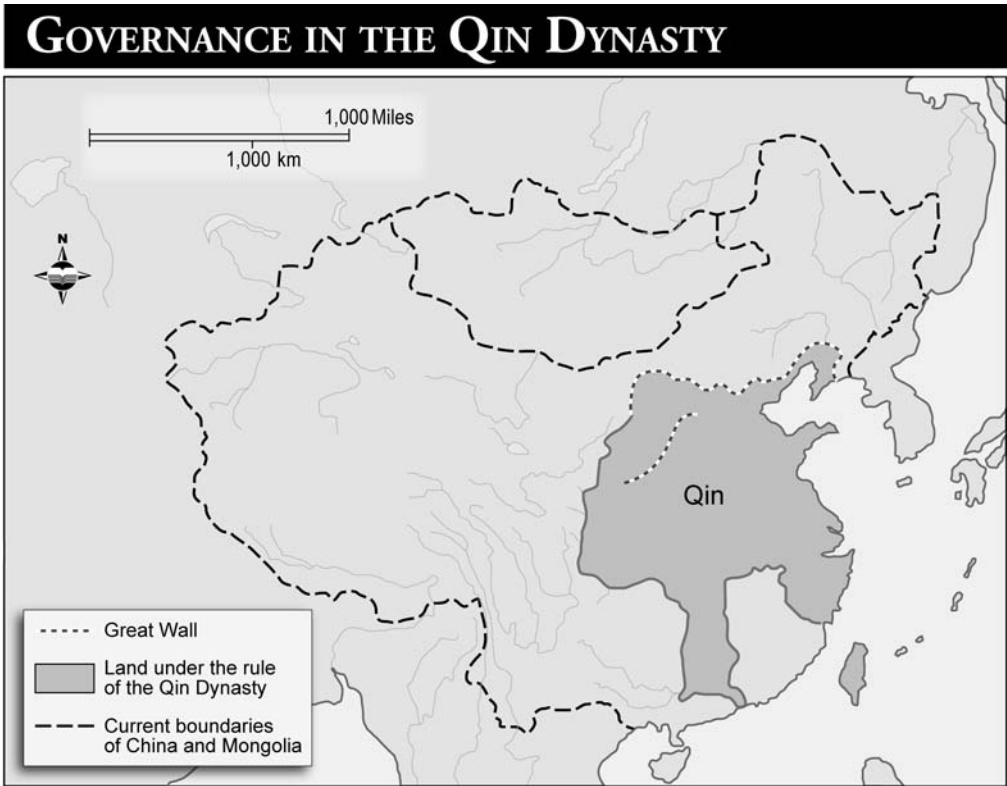


THE EXPANSION OF ROMAN CIVILIZATION

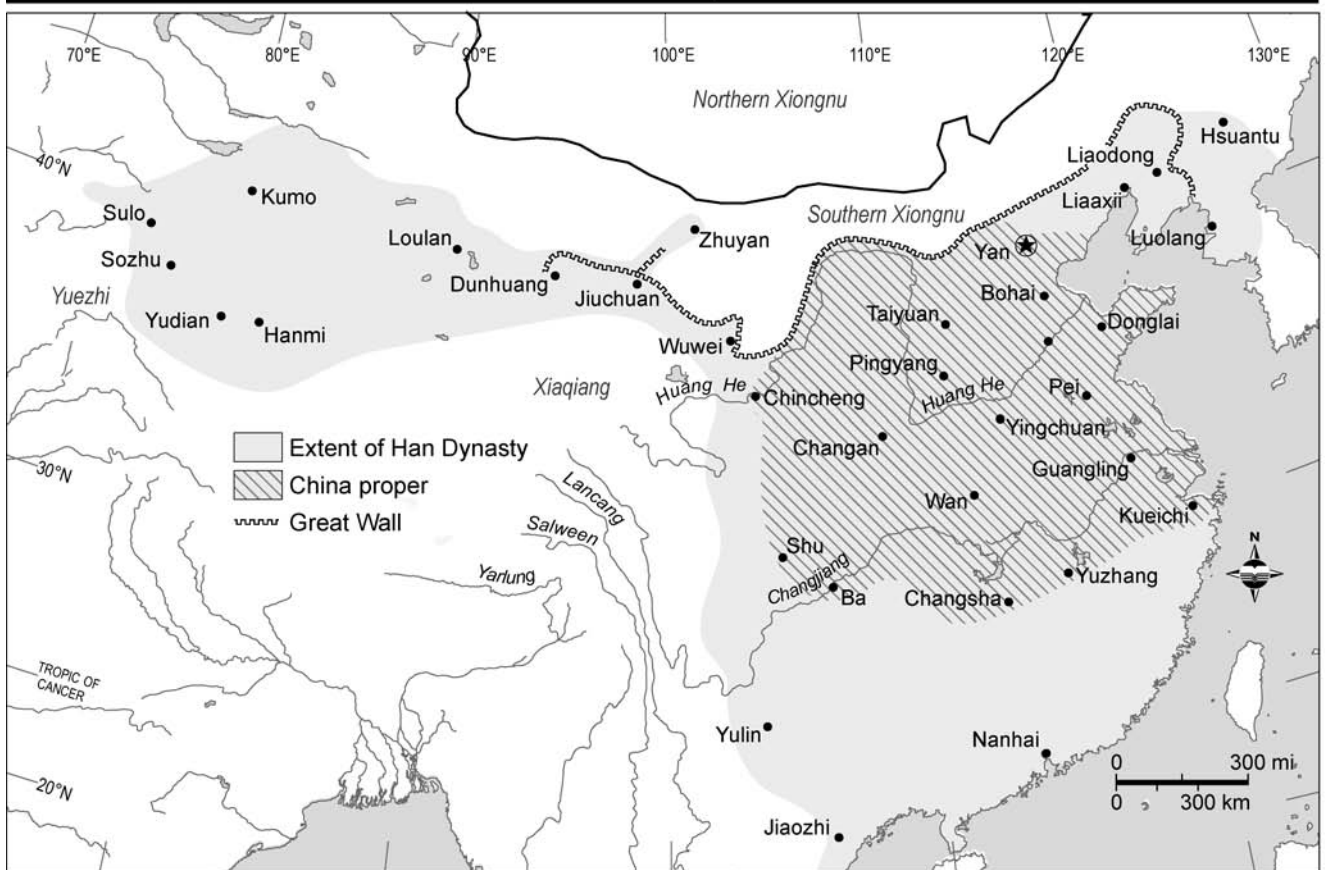


INDIAN MAURYAN DYNASTY

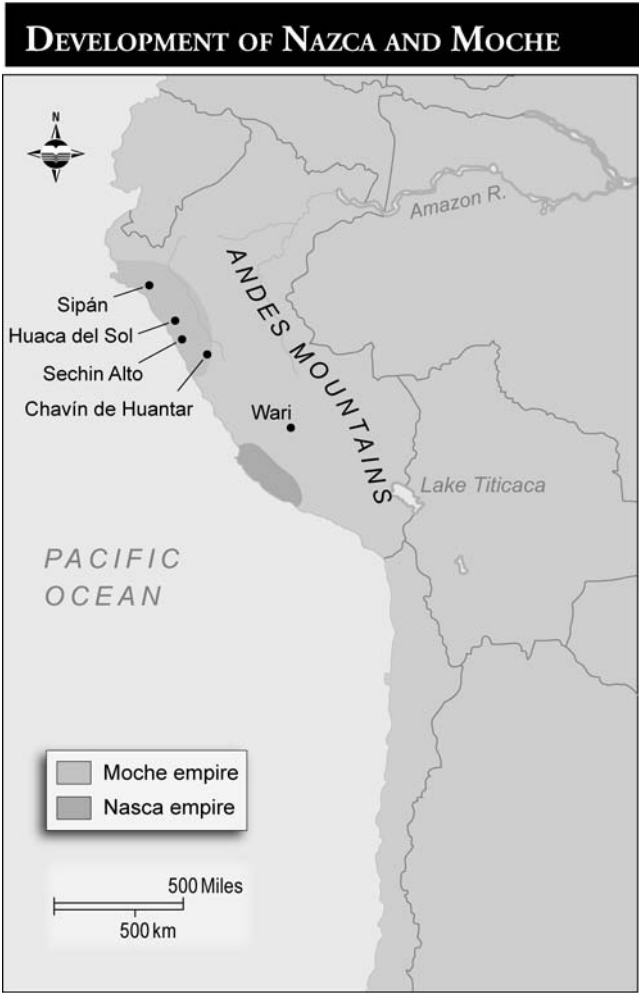




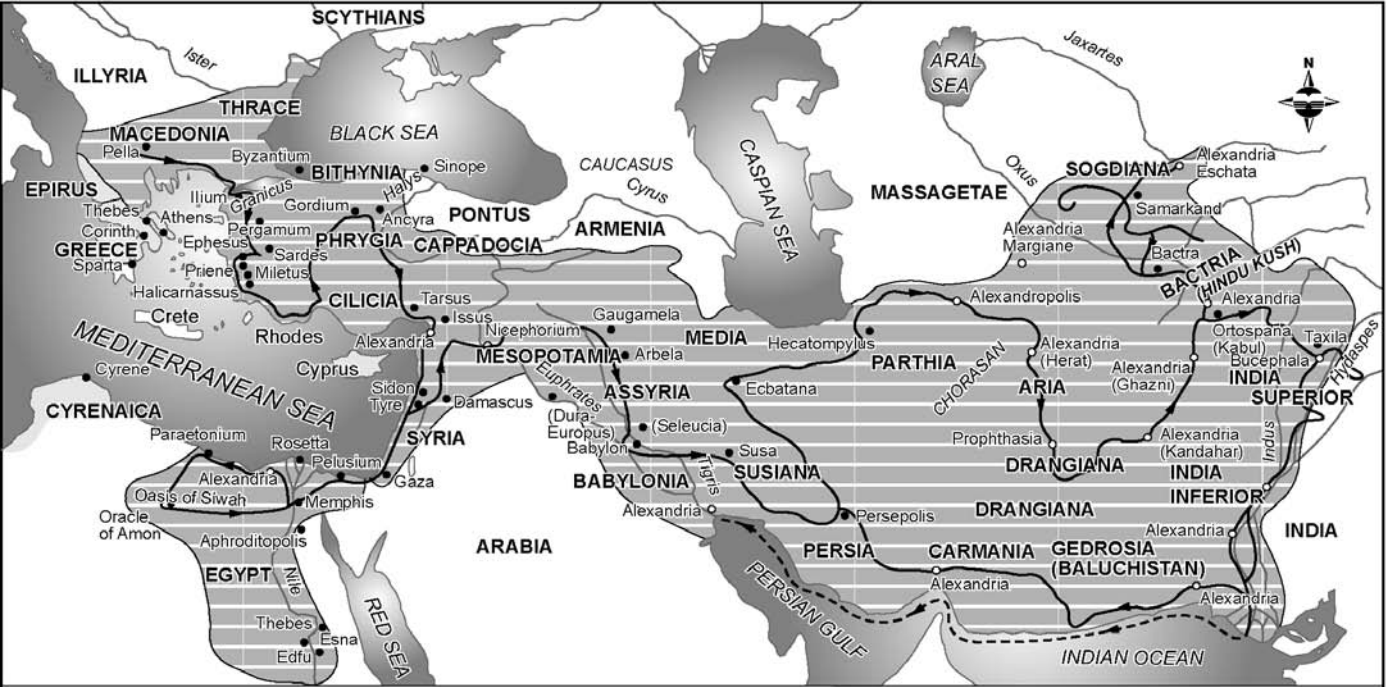
CHINA DURING THE HAN DYNASTY, 100 BCE







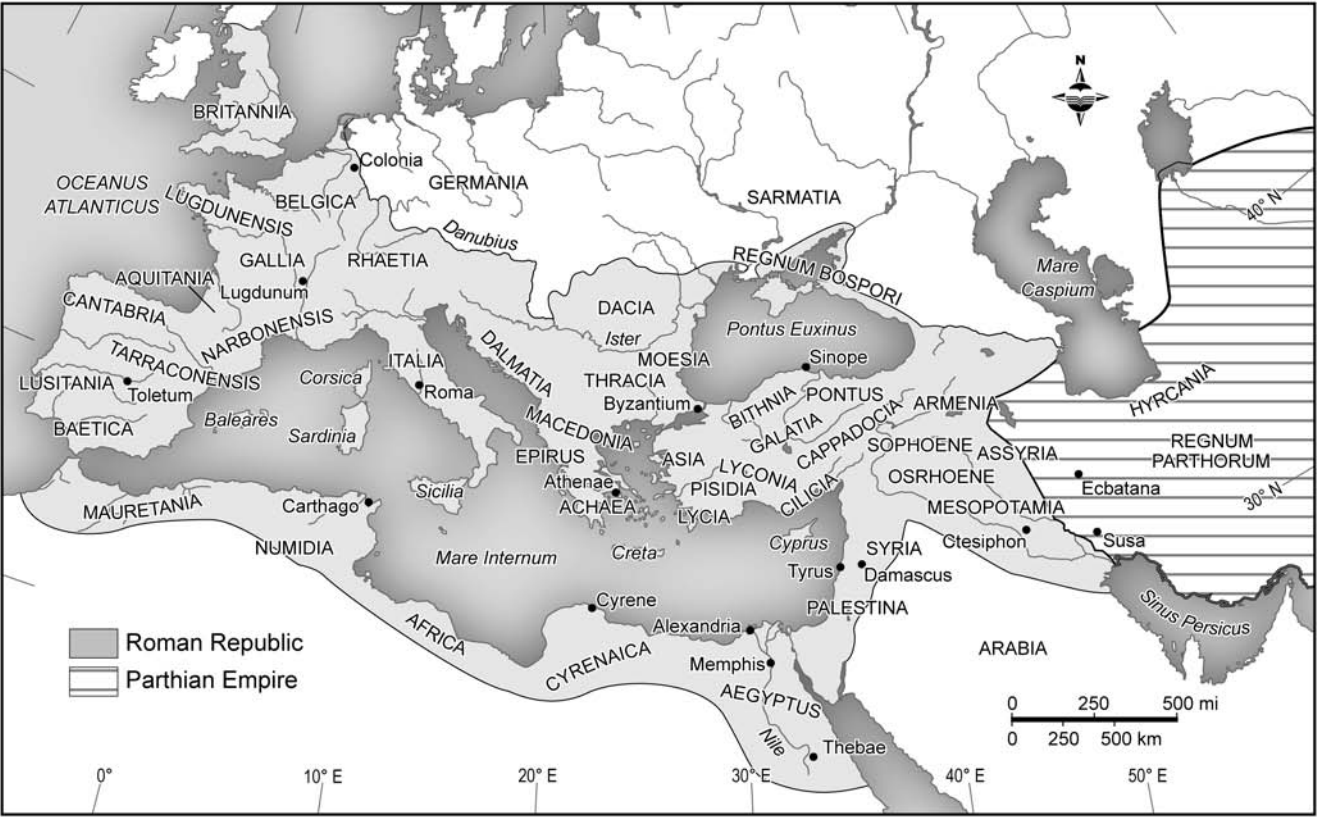
THE EMPIRE OF ALEXANDER THE GREAT



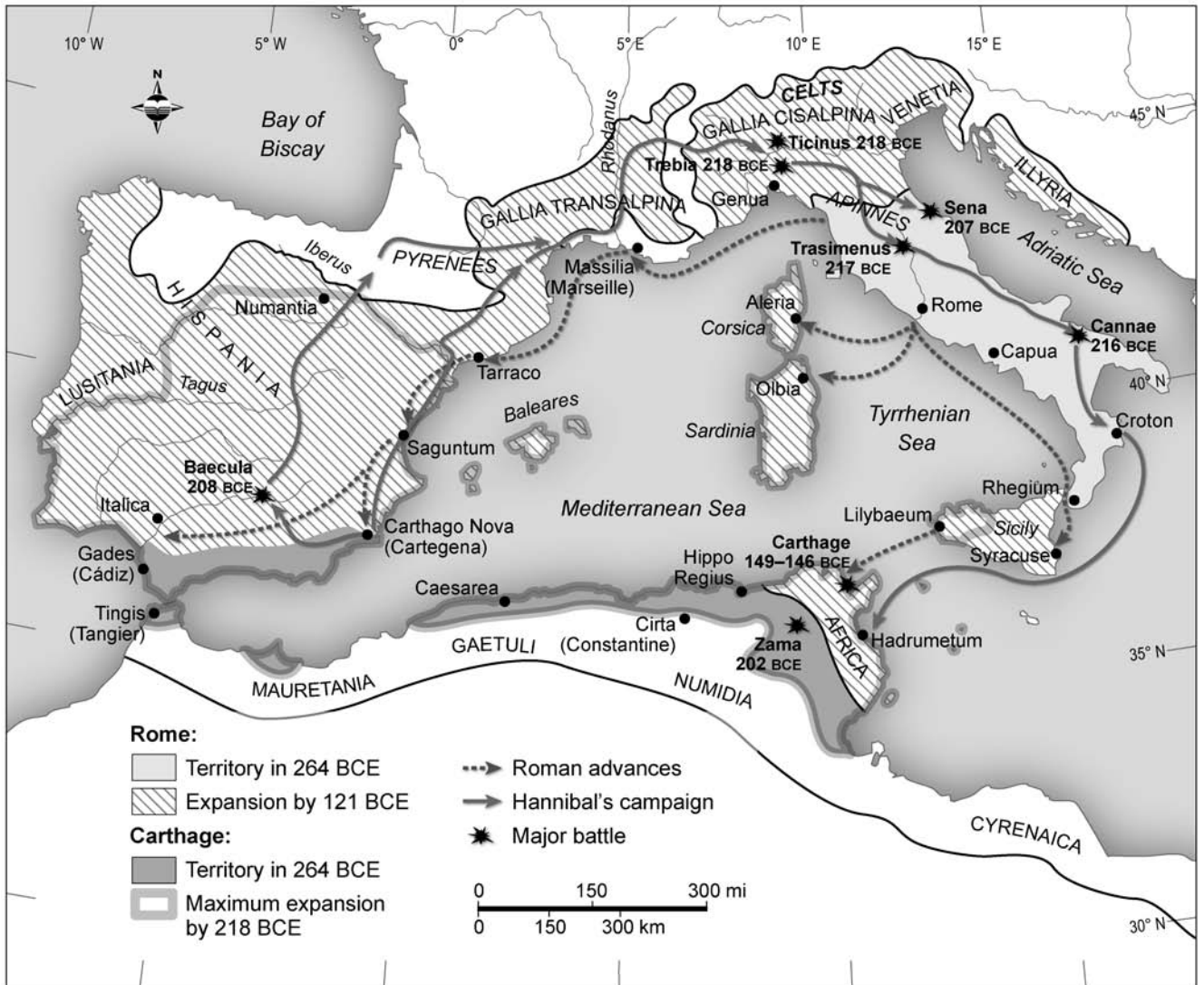
- Greatest expansion of the empire
- Areas dependent on Alexander
- Cities founded by Alexander the Great
- Alexander's route 334-323 BCE
- - - Voyage of Nearchus 325 BCE

0 750 mi
0 750 km

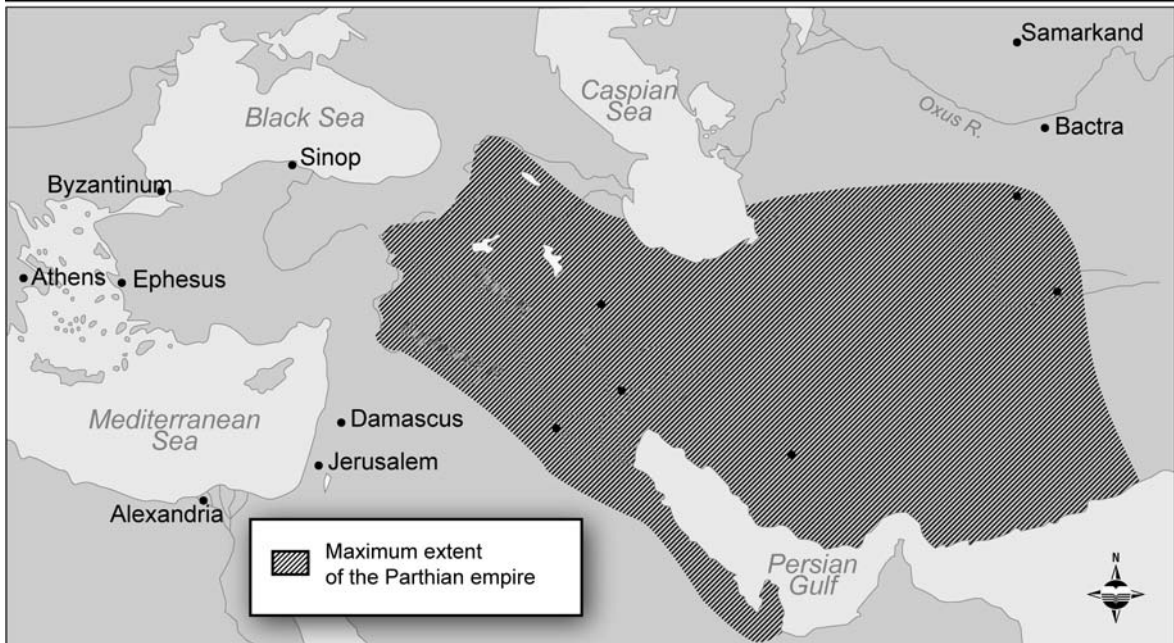
THE ROMAN REPUBLIC AT THE DEATH OF TRAJAN IN 117



THE PUNIC WARS, 264–146 BCE



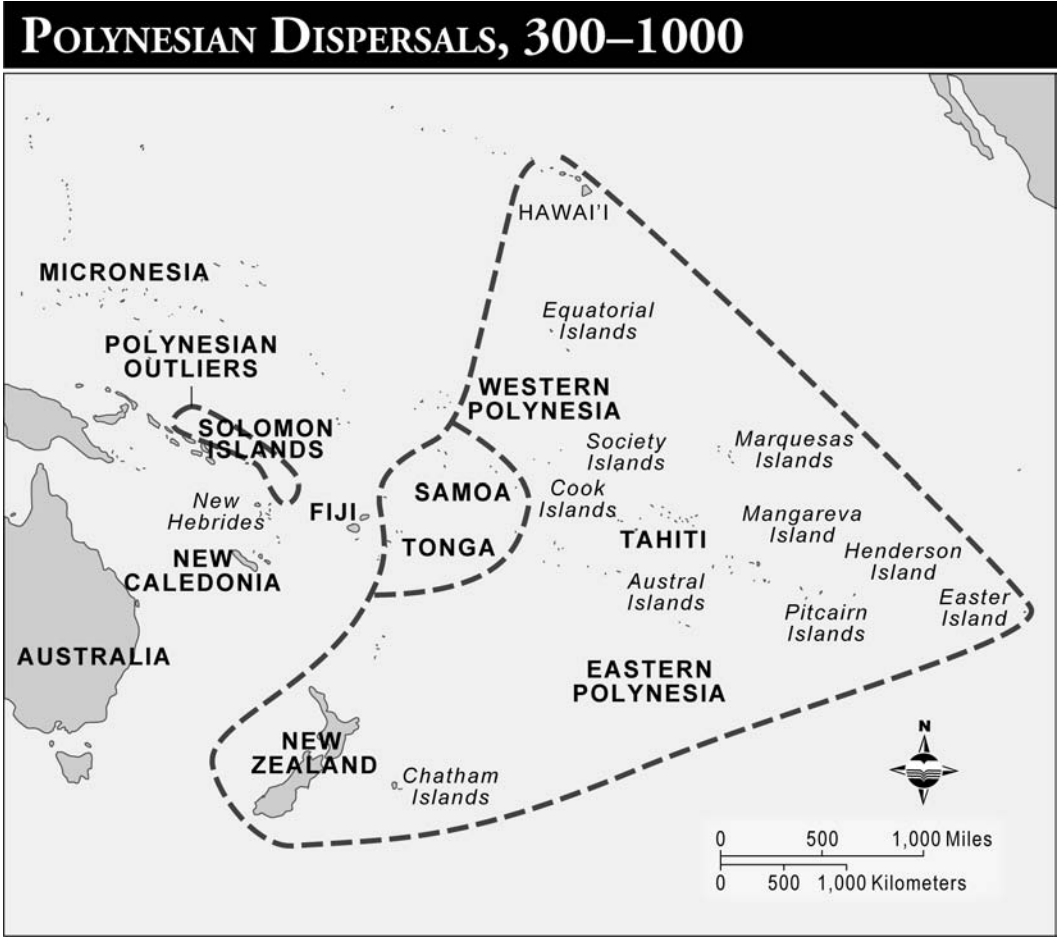
FORMATION AND DECLINE OF THE PARTHIAN EMPIRE



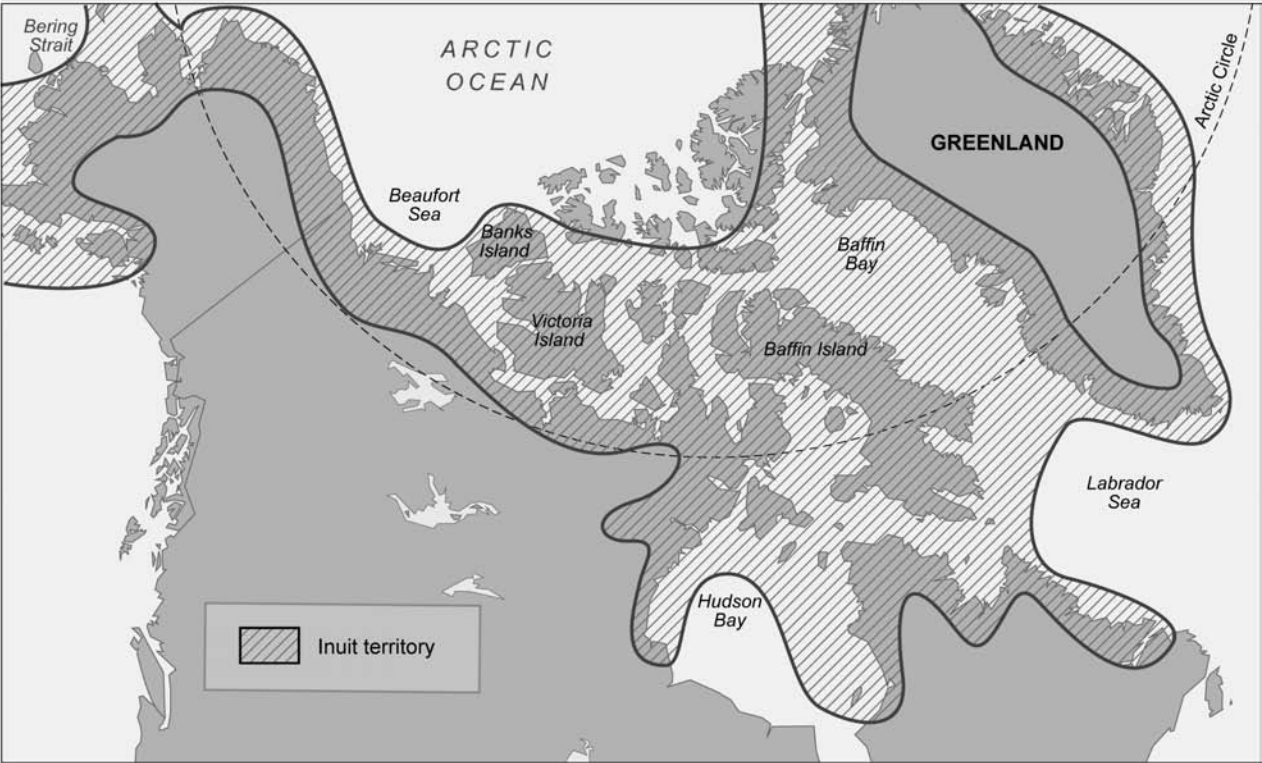
SCYTHIAN AND PARTHIAN EMPIRES





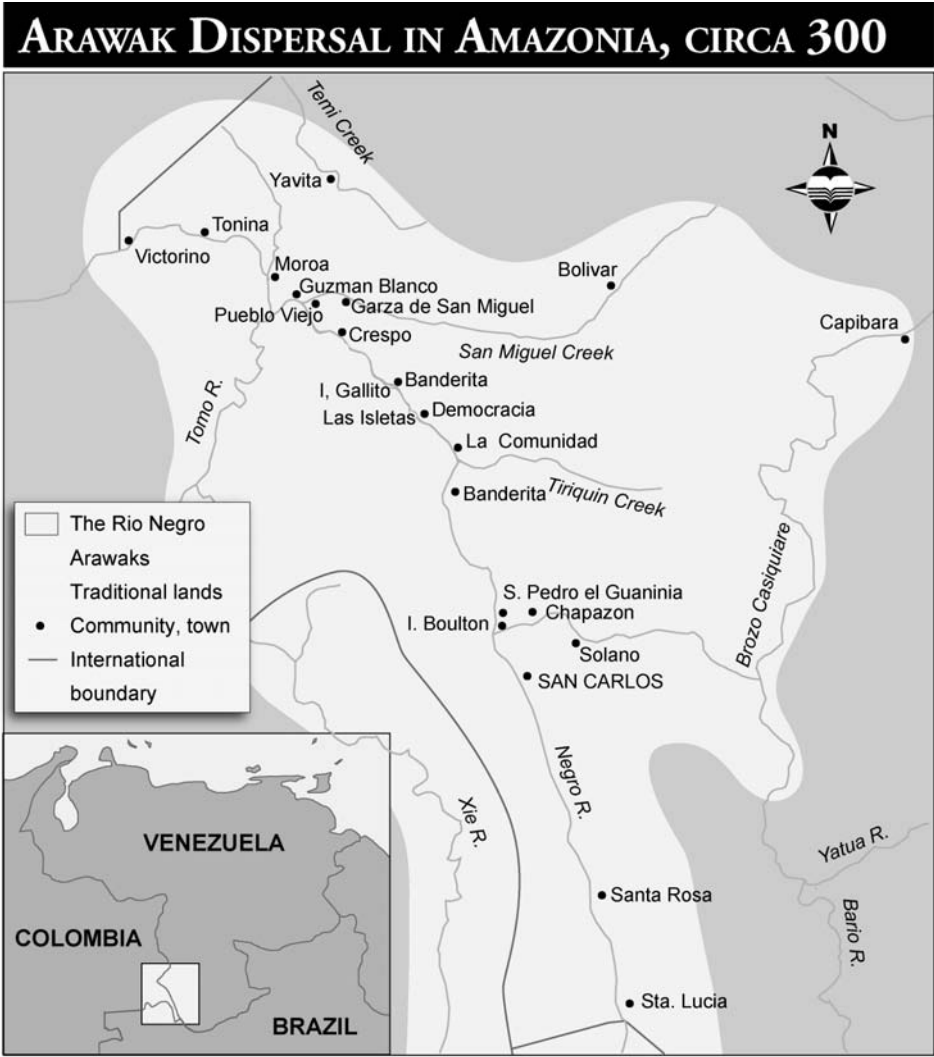


TRANSPOLAR MOVEMENT OF INUIT, CIRCA 500



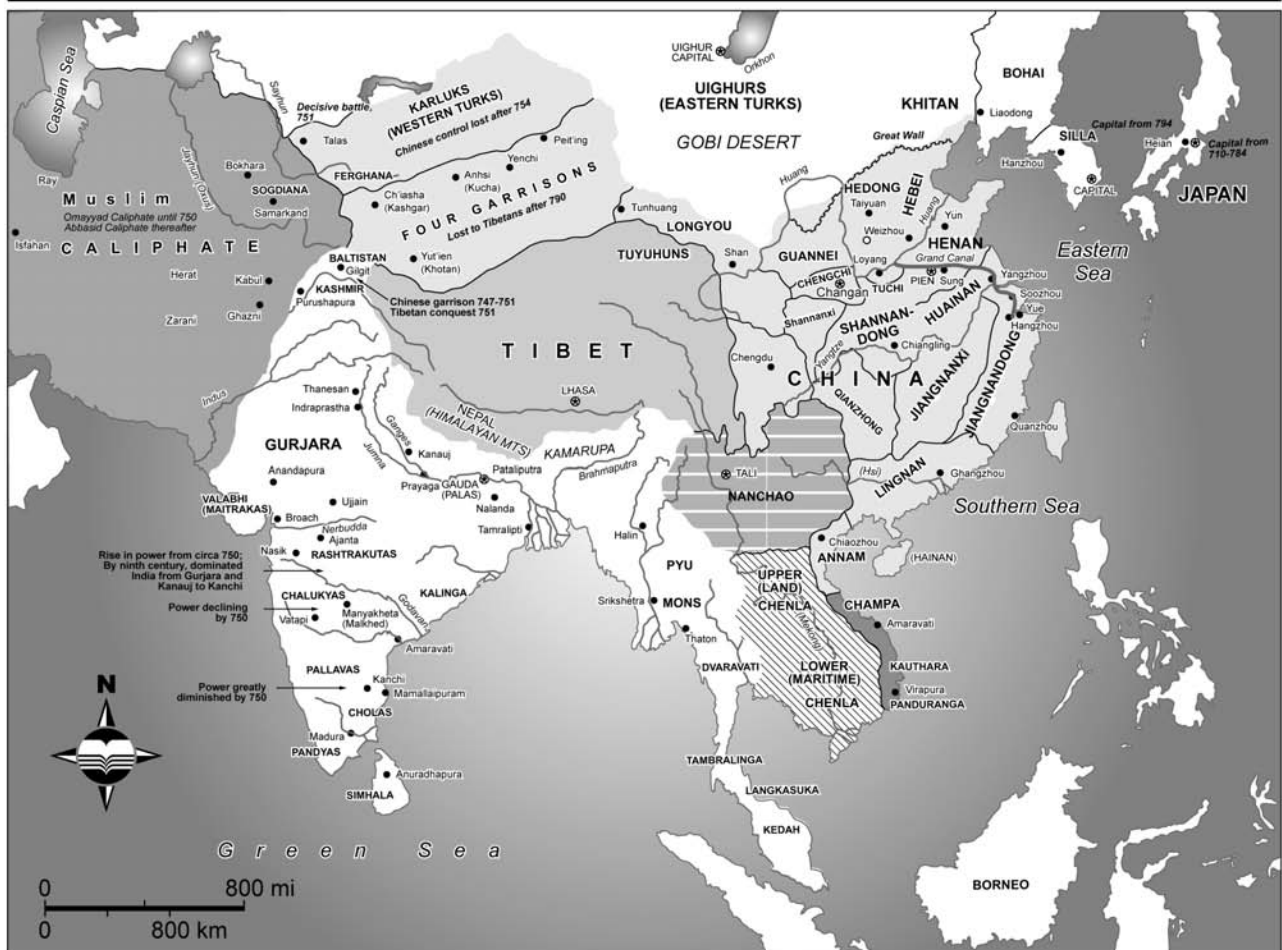
TEOTIHUACAN, CIRCA 700



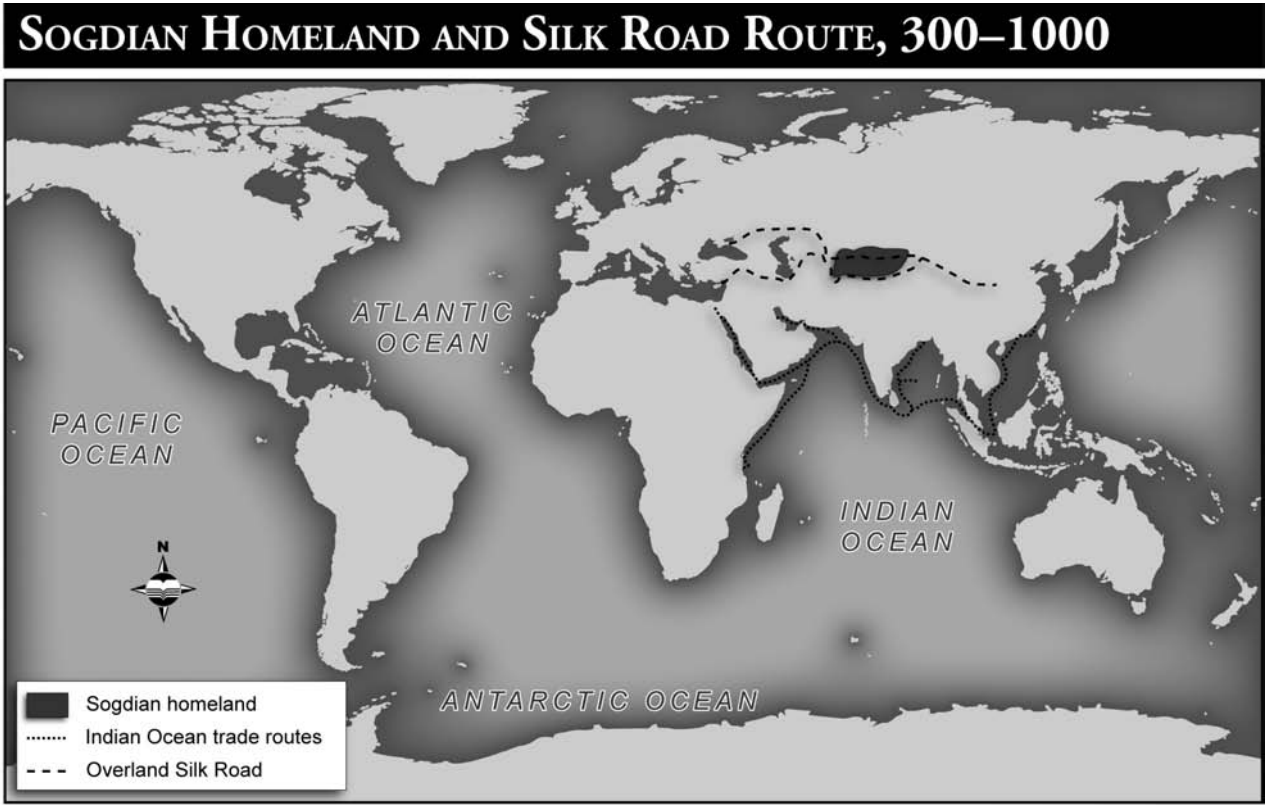


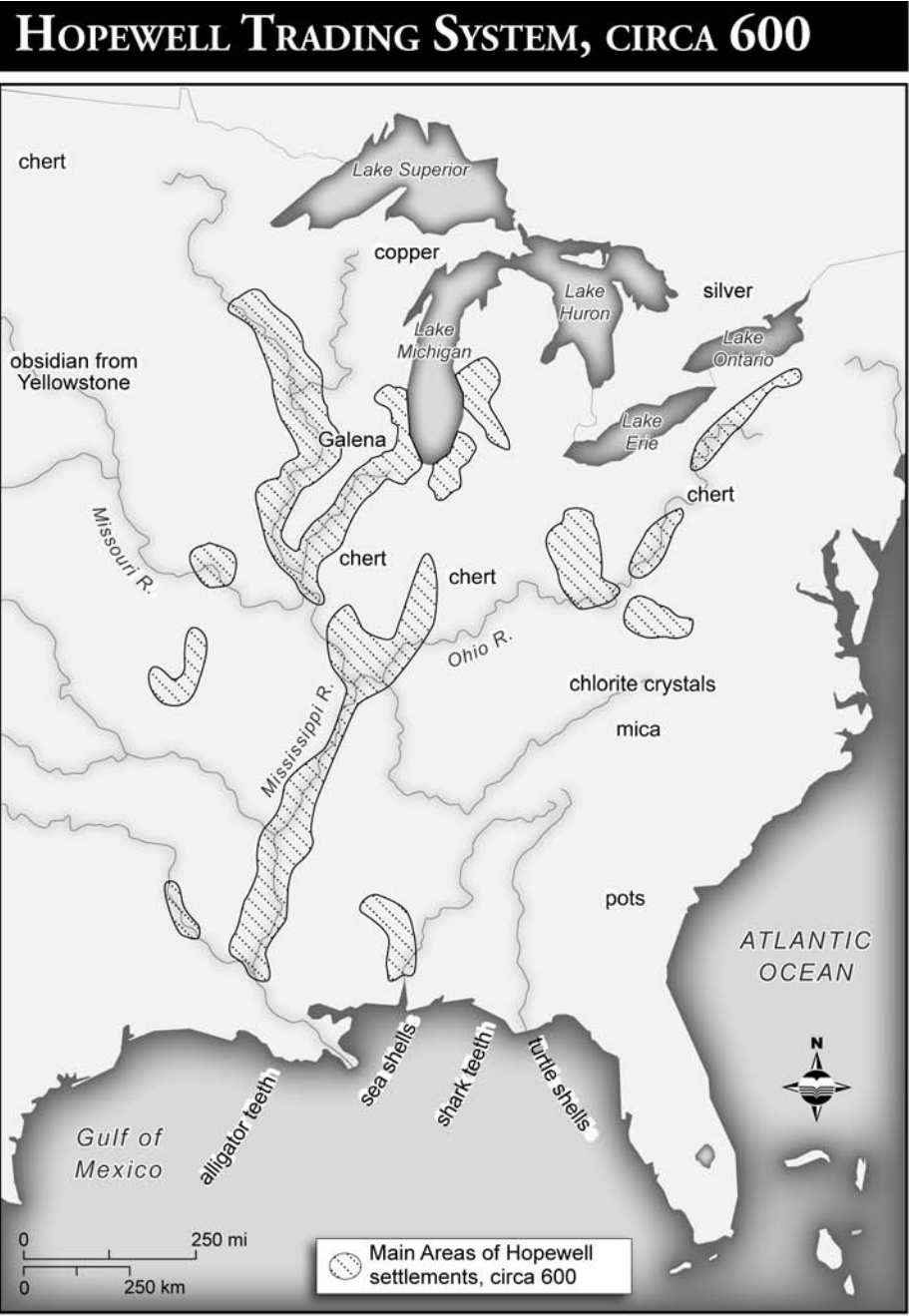


TANG CHINA AND EAST ASIA, 618-907



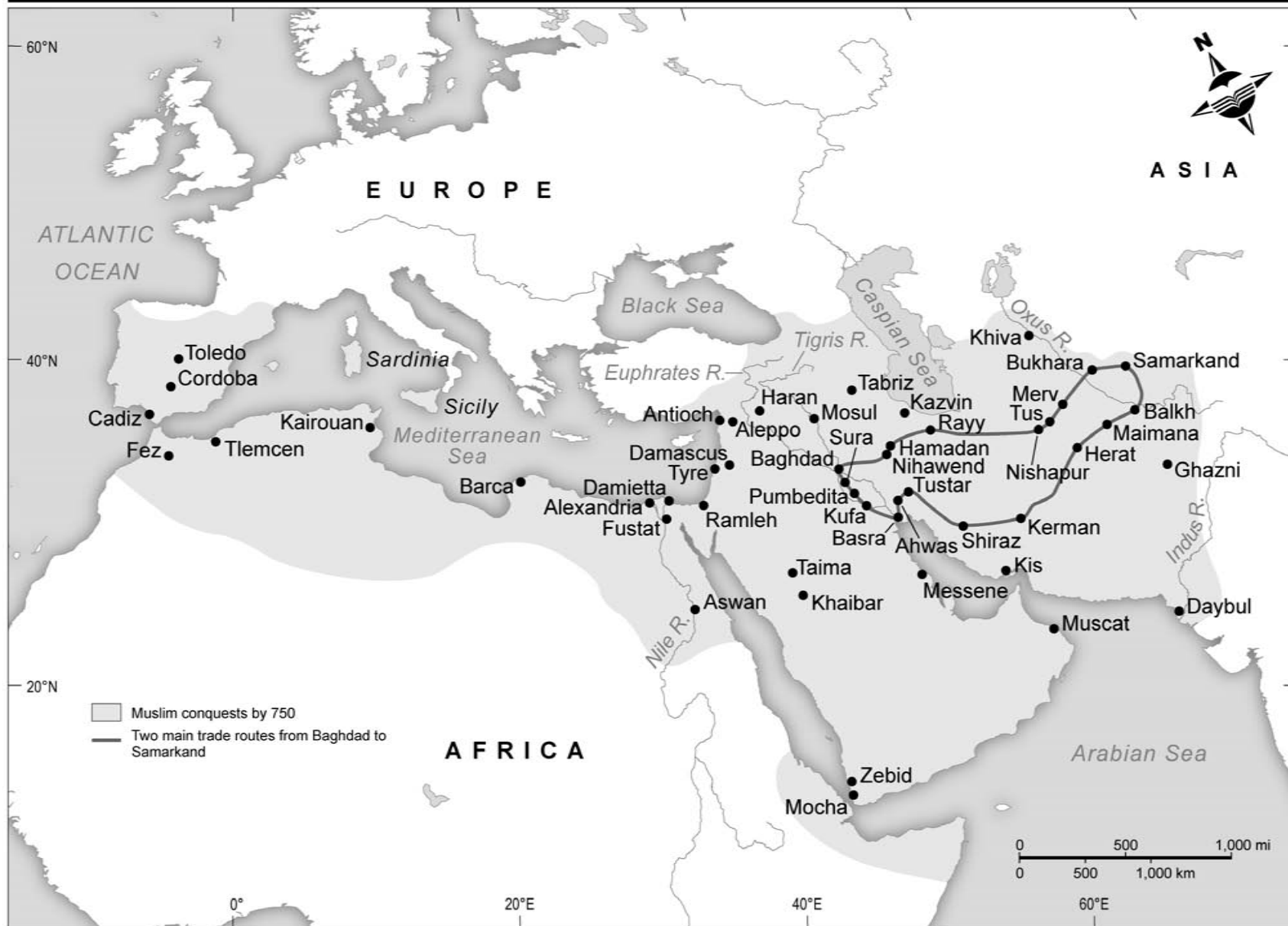


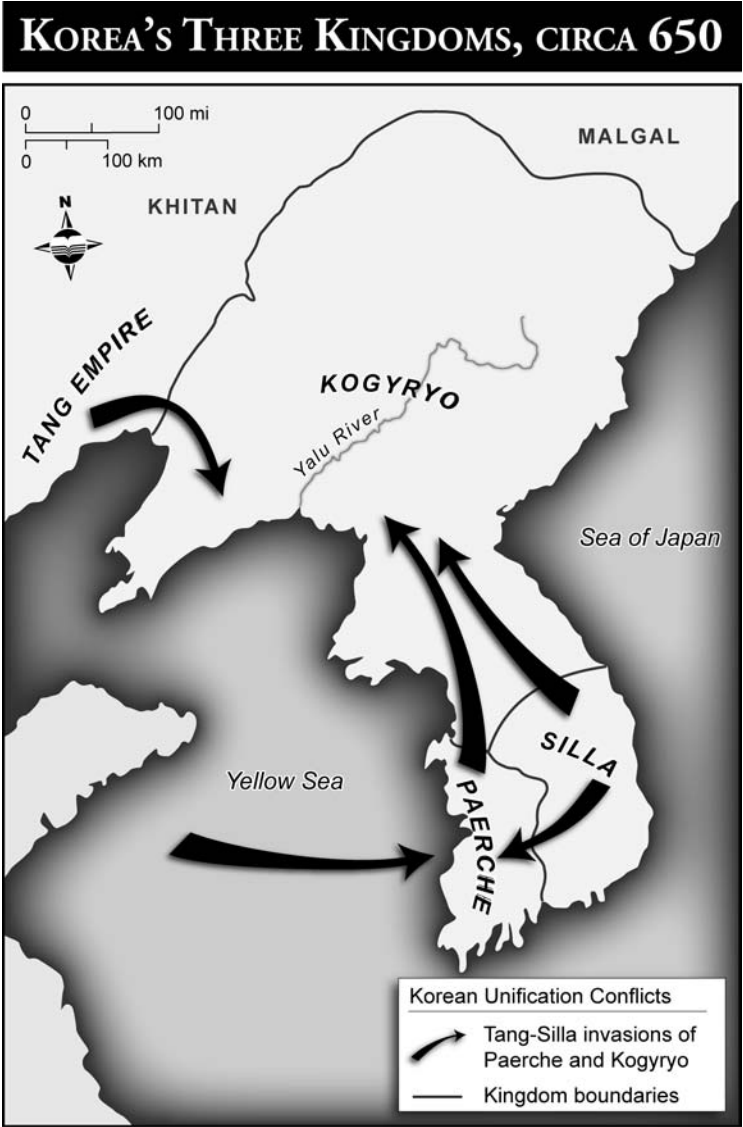






MUSLIM CONQUESTS, CIRCA 750





THE AN LUSHAN REBELLION, DECEMBER 16, 755–FEBRUARY 17, 763



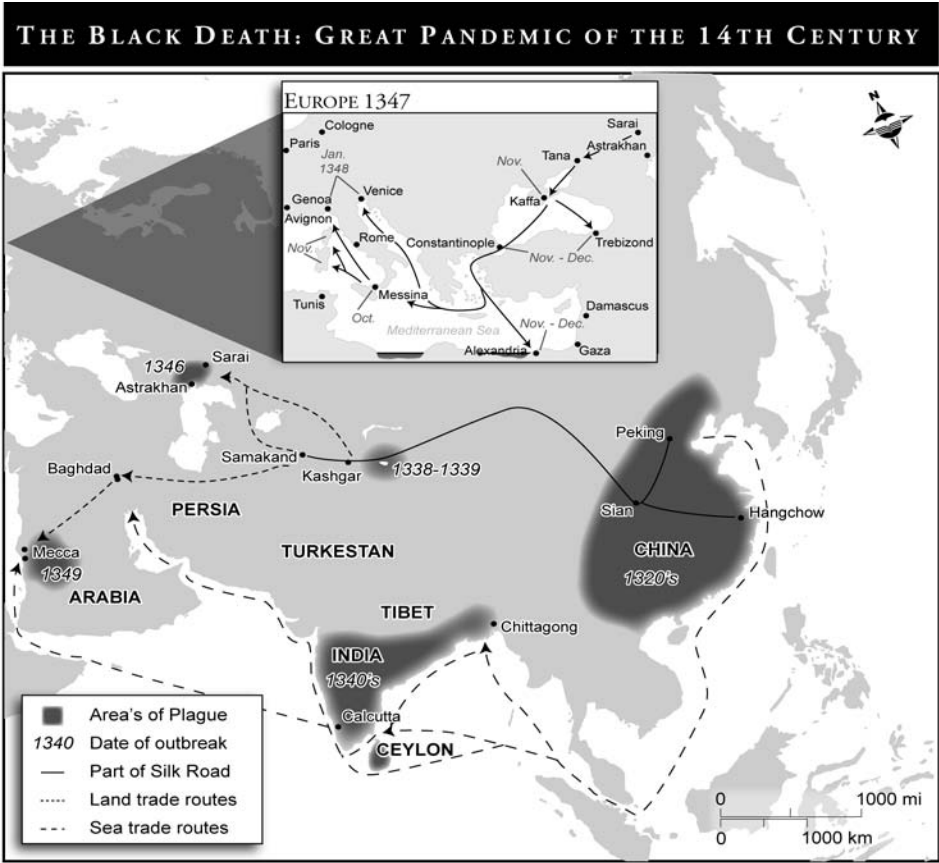


CENTRAL ASIA, 618–907



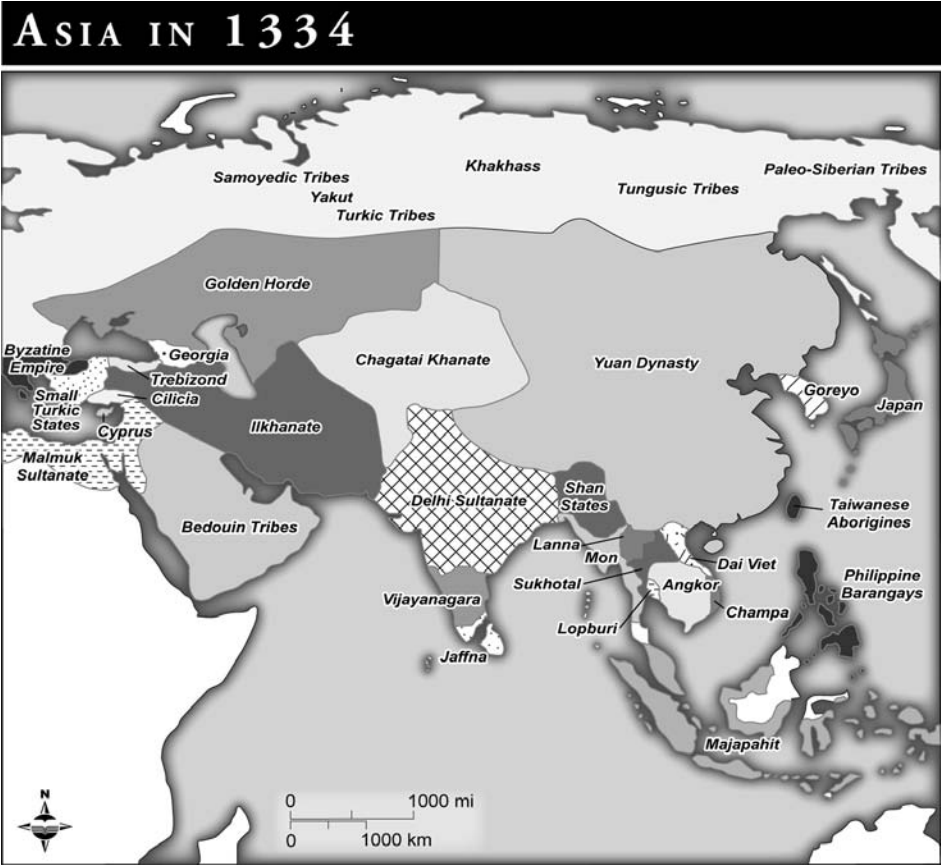
CAROLINGIAN EMPIRE AND CHARLEMAGNE'S WARS, CIRCA 800





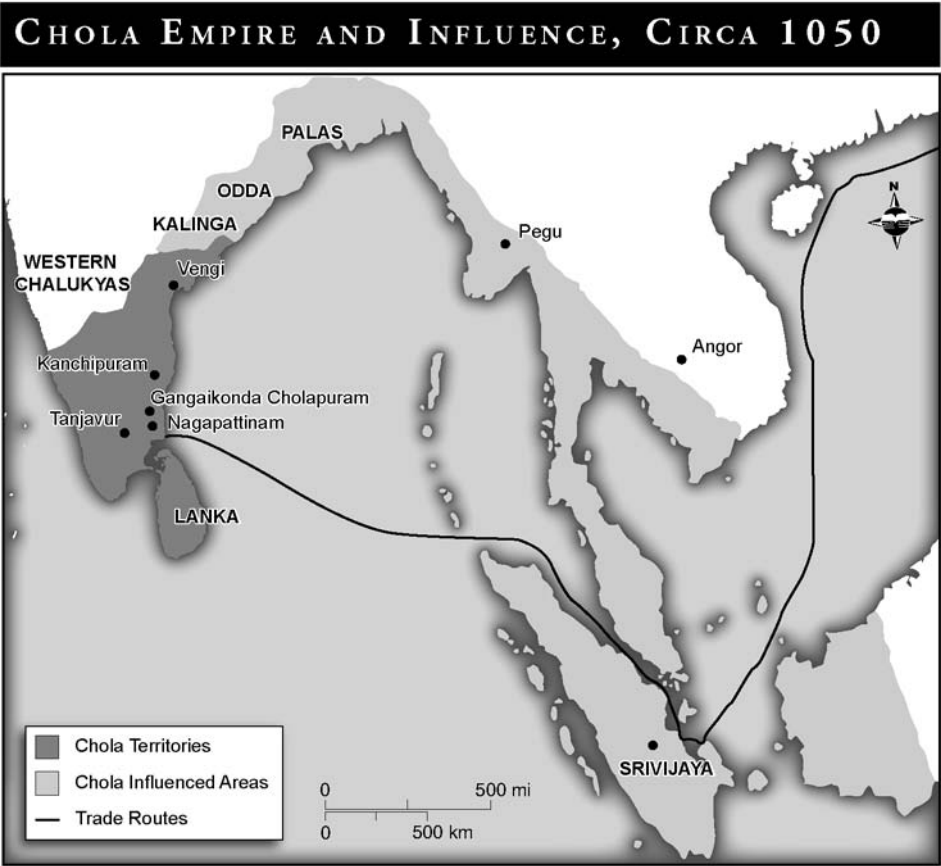
EURASIA BEFORE THE RISE OF THE MONGOL EMPIRE, 1206

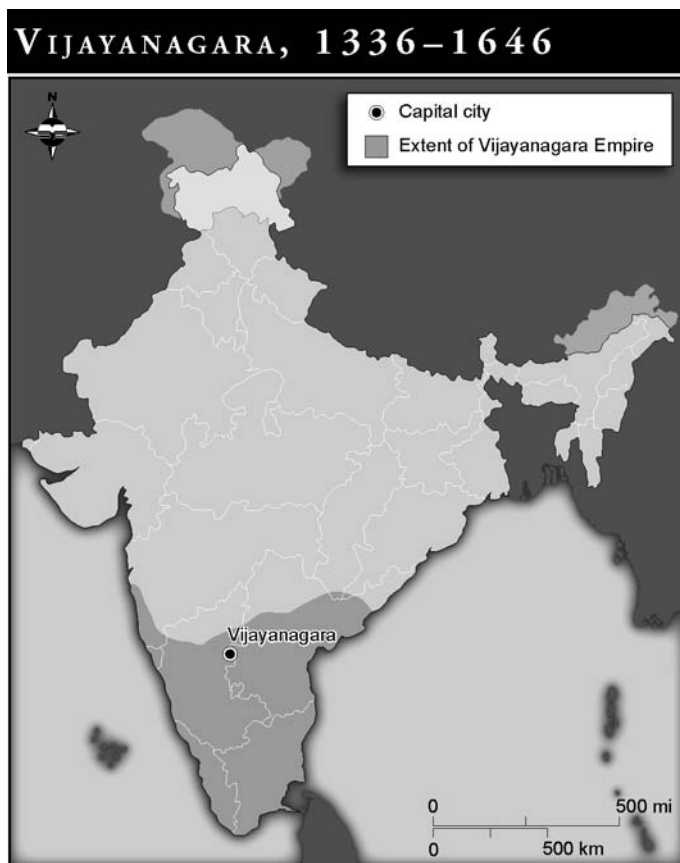
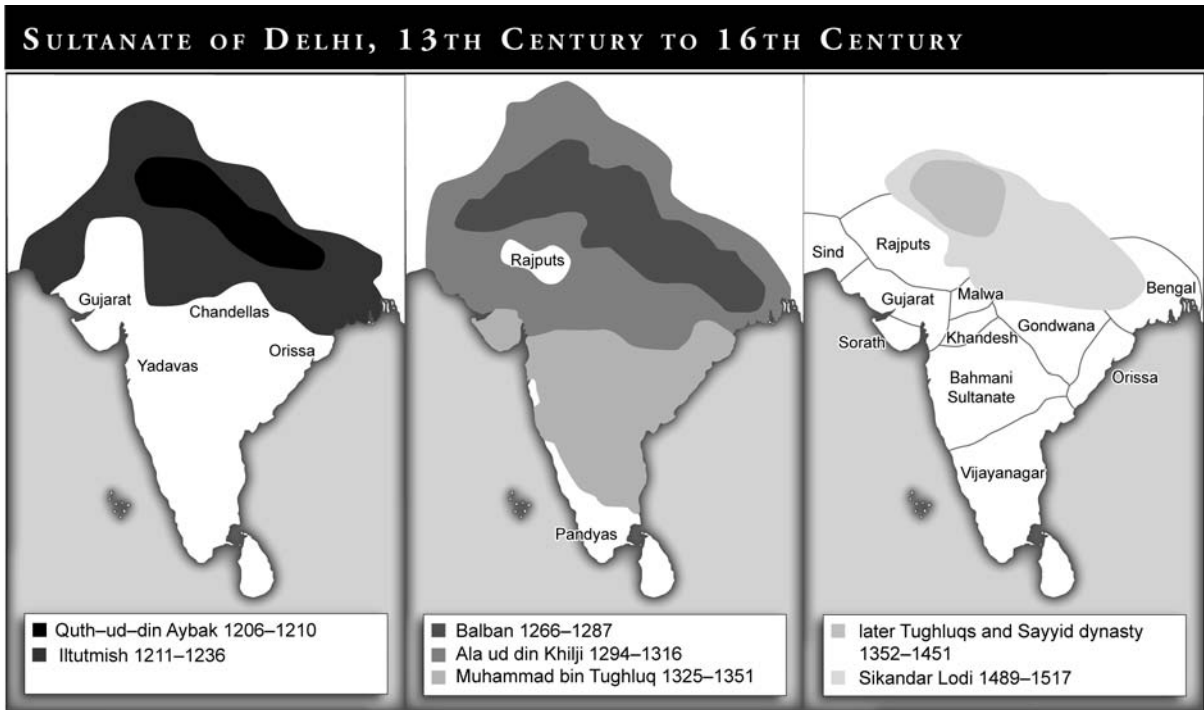


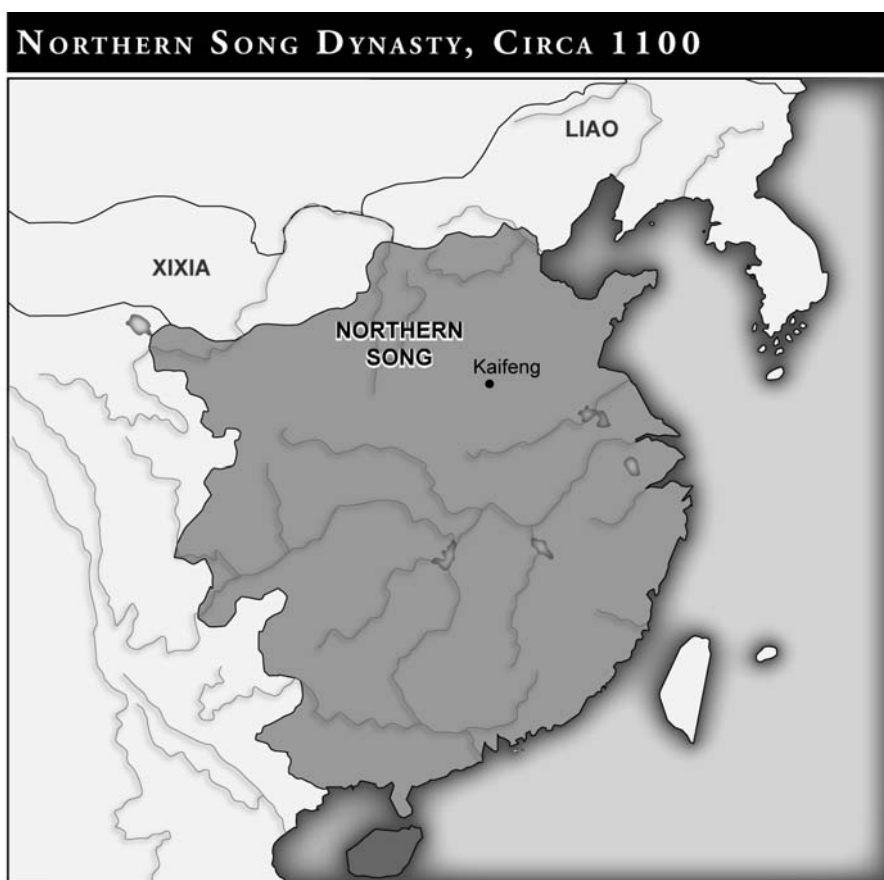




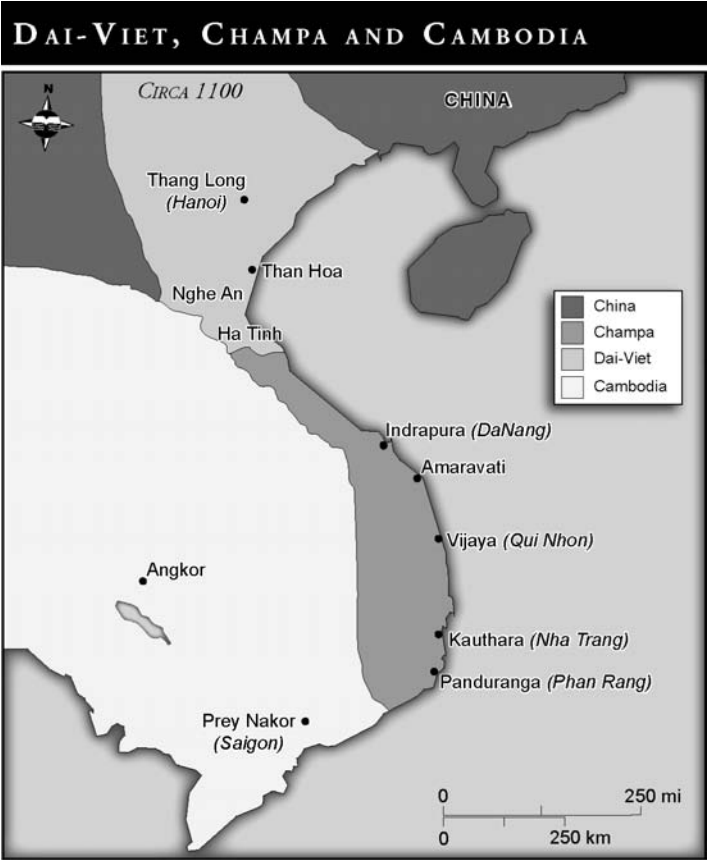


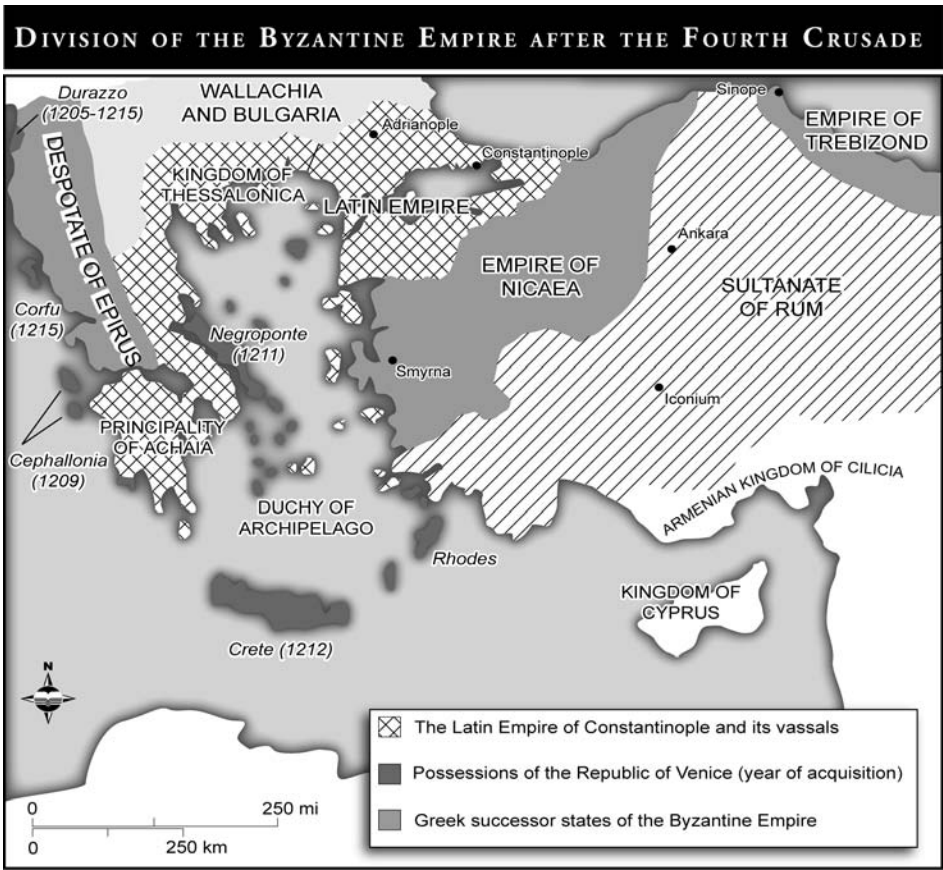


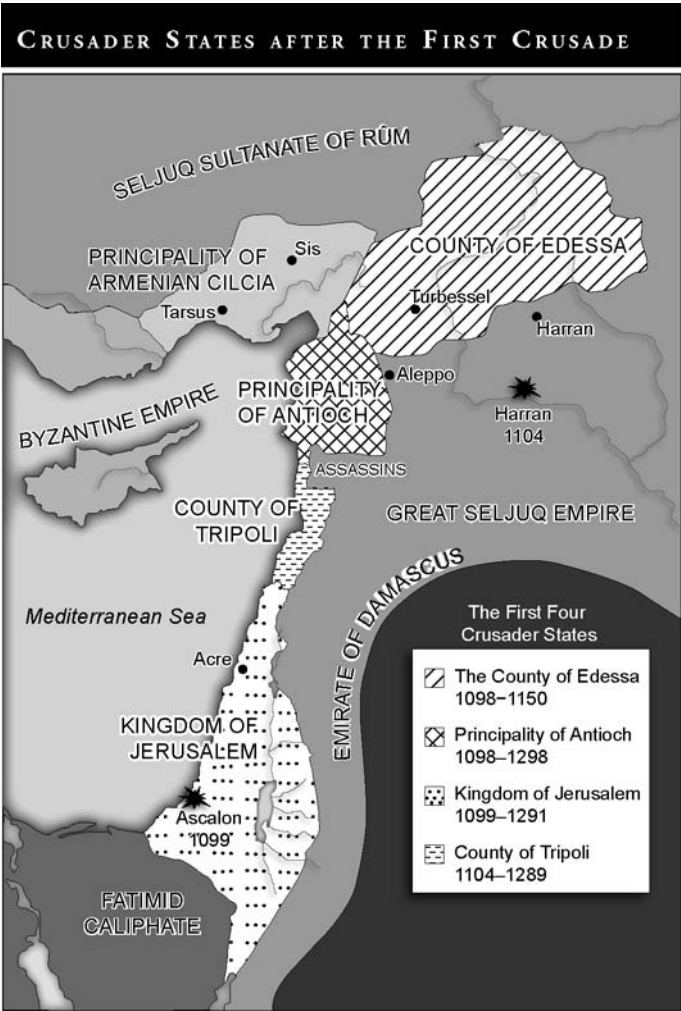








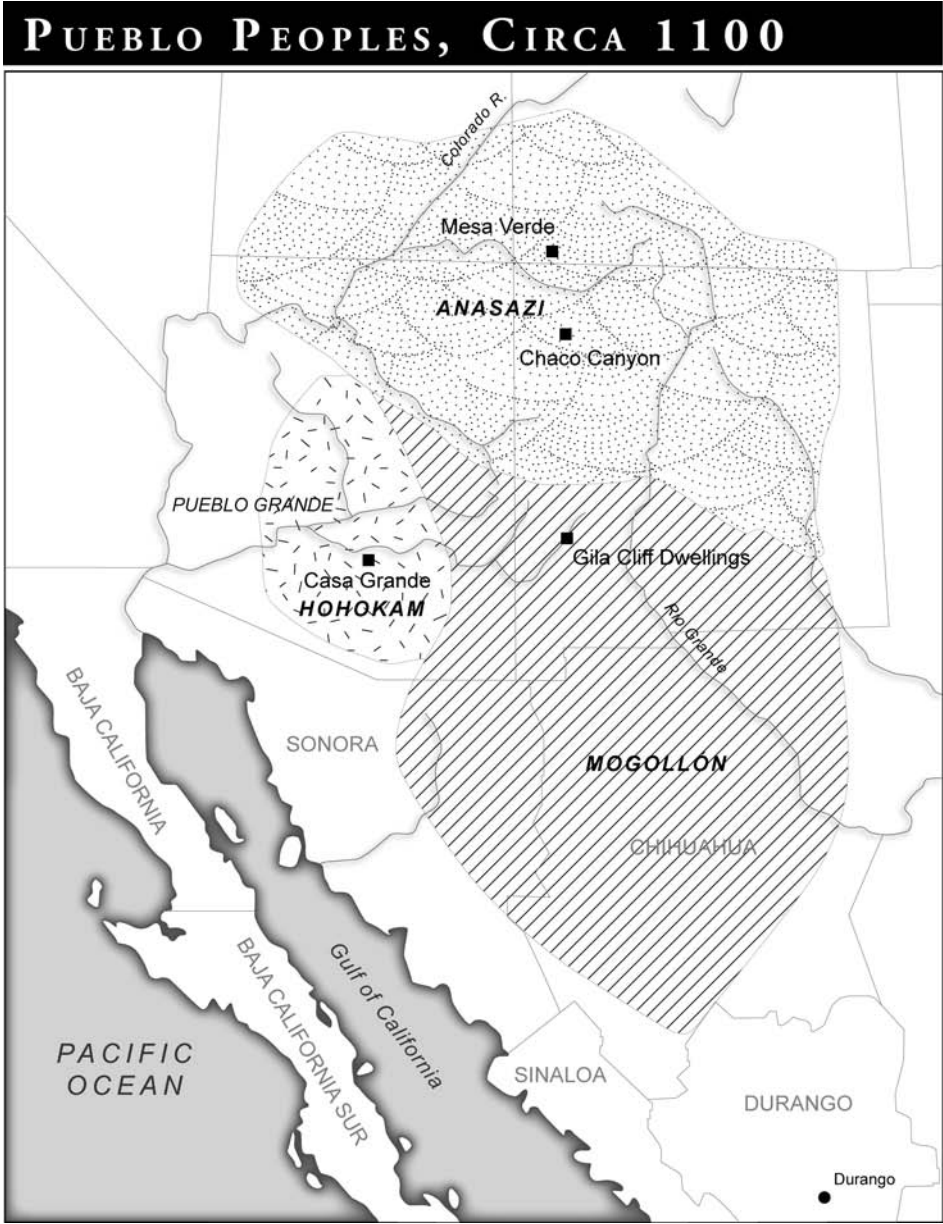


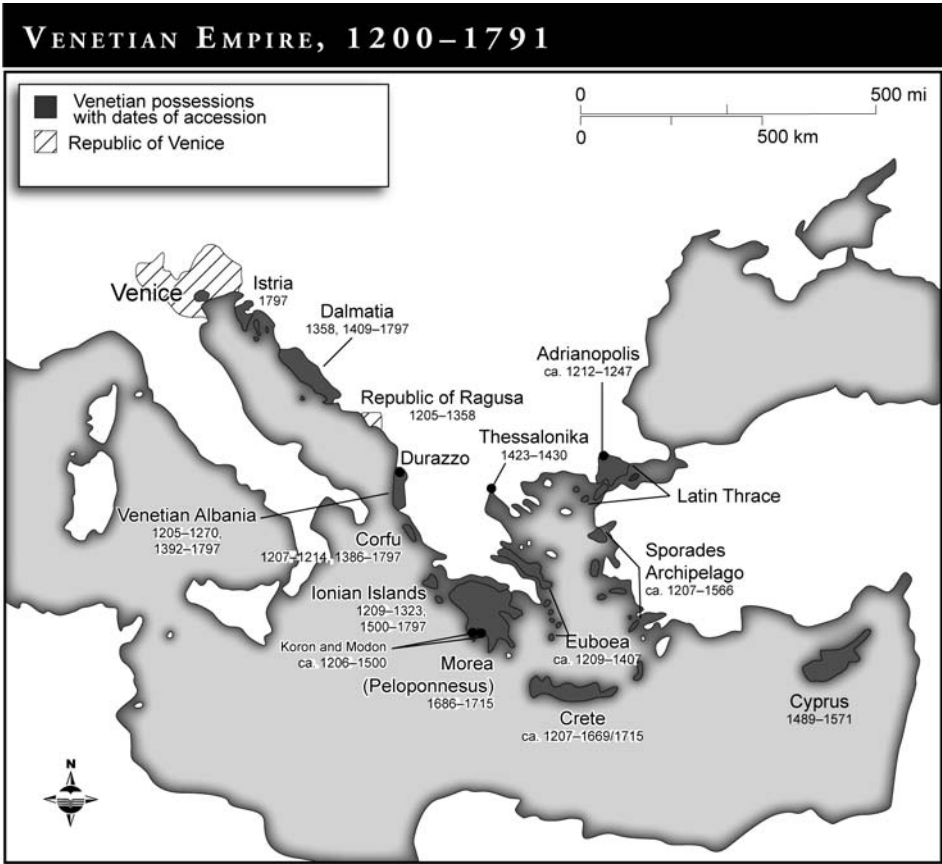


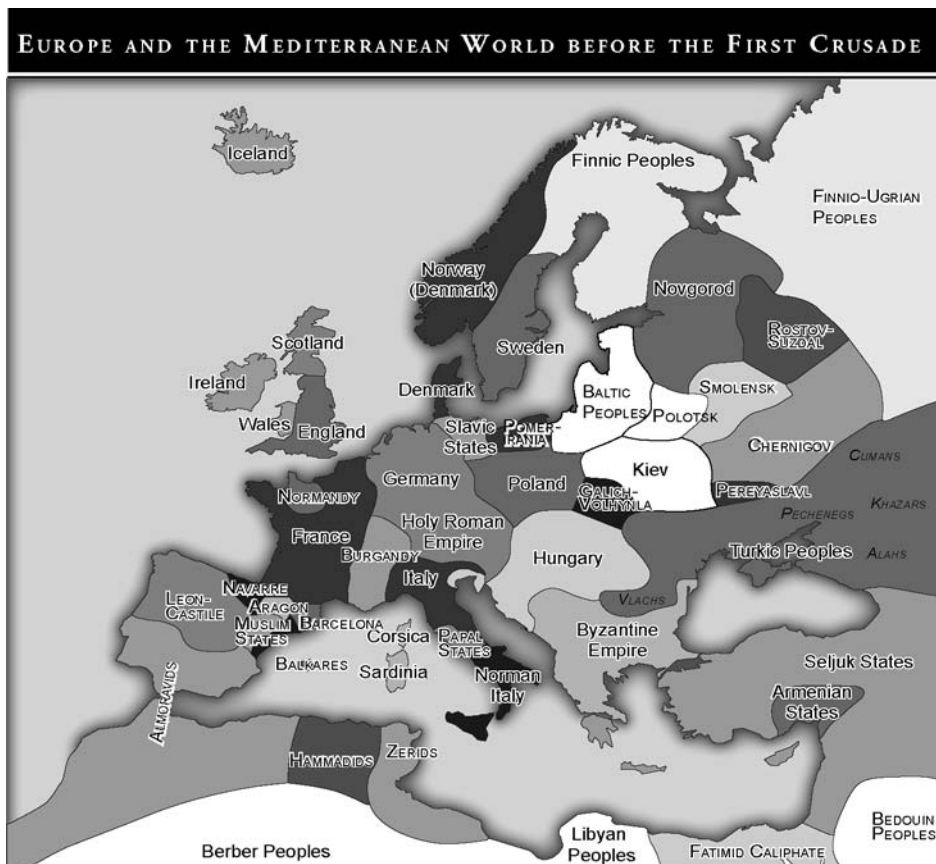


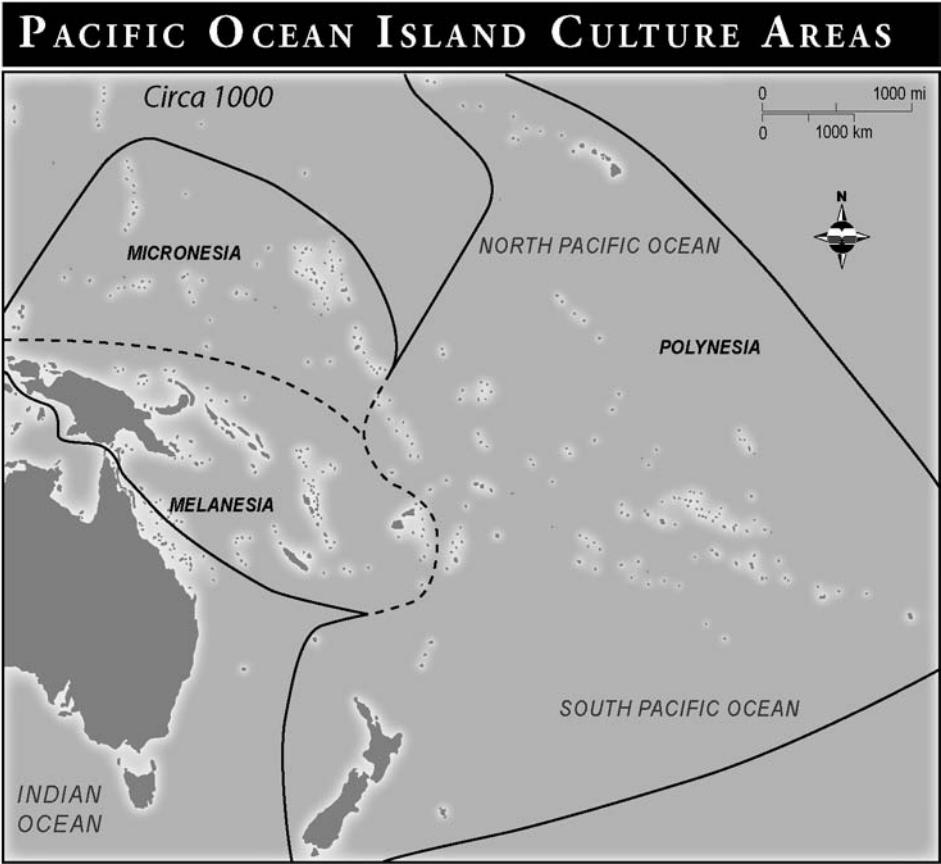






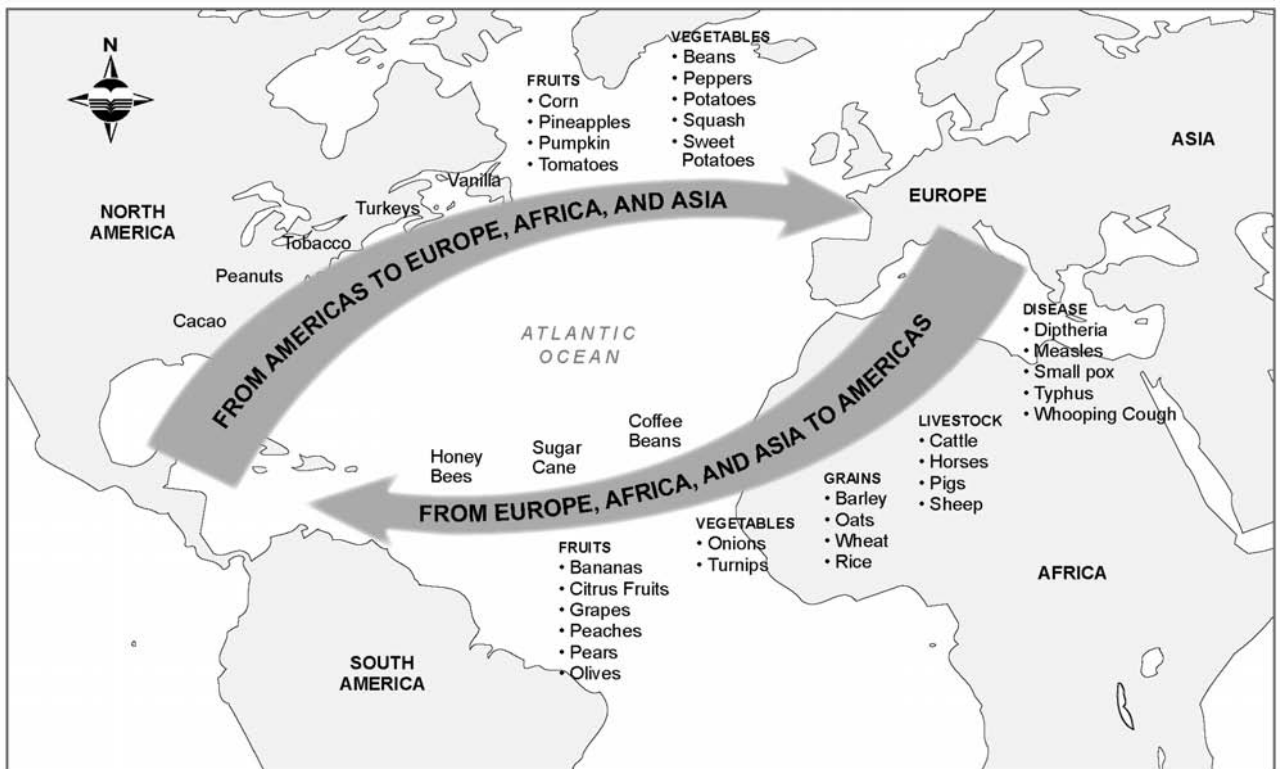








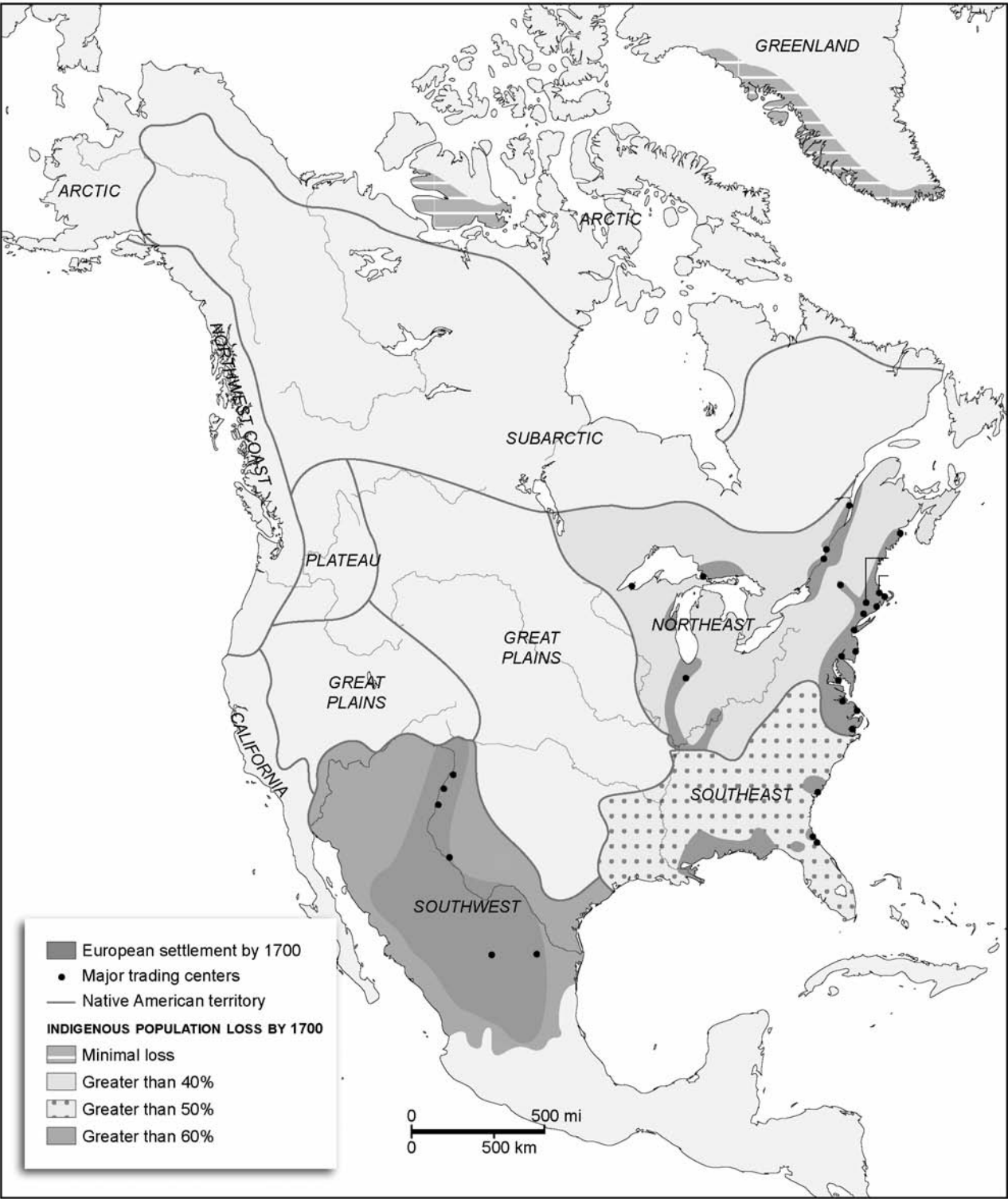
THE COLUMBIAN EXCHANGE



NATIVE AMERICAN NATIONS PRIOR TO COLONIZATION



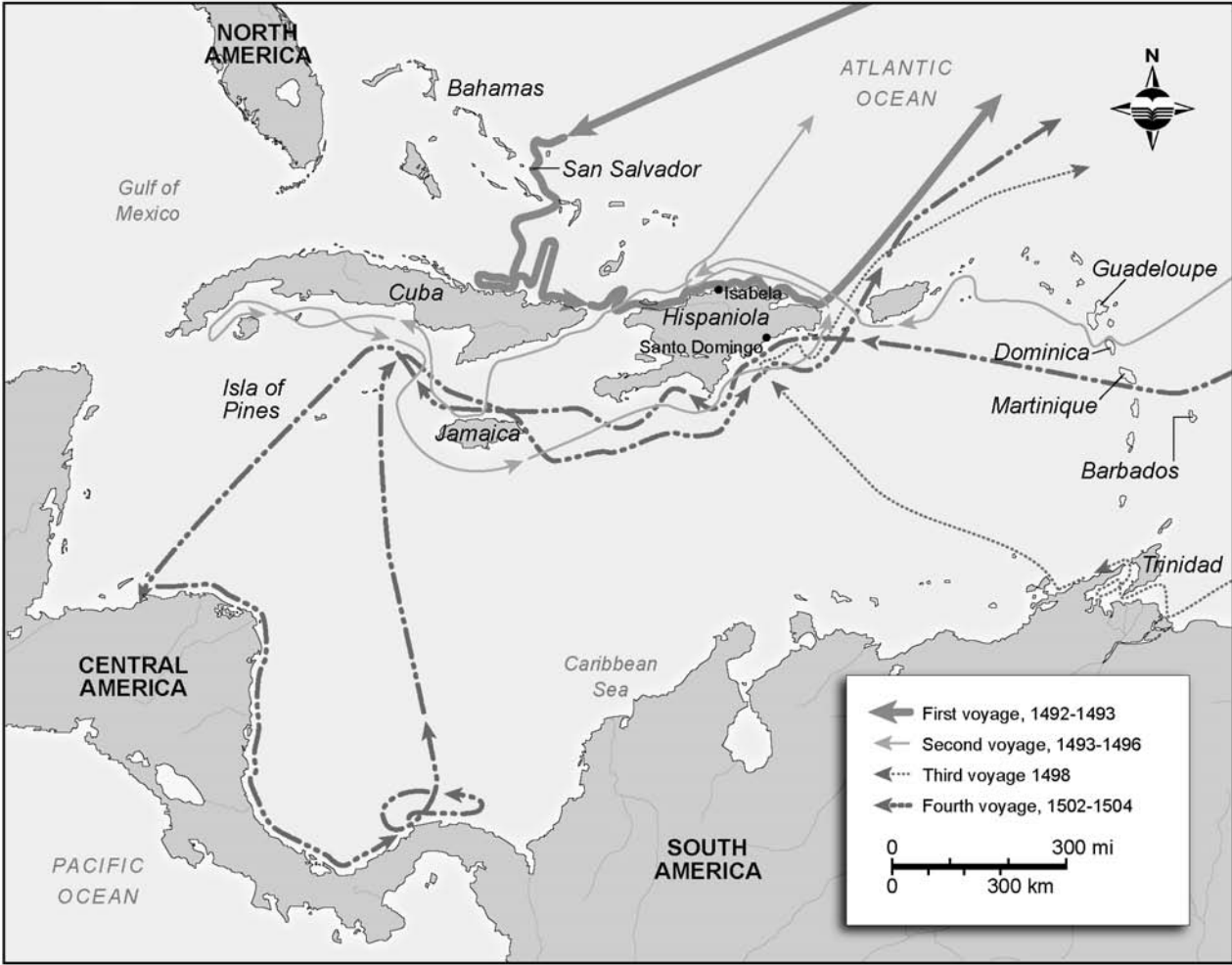
NATIVE AMERICAN POPULATION DECLINE, 1500–1700



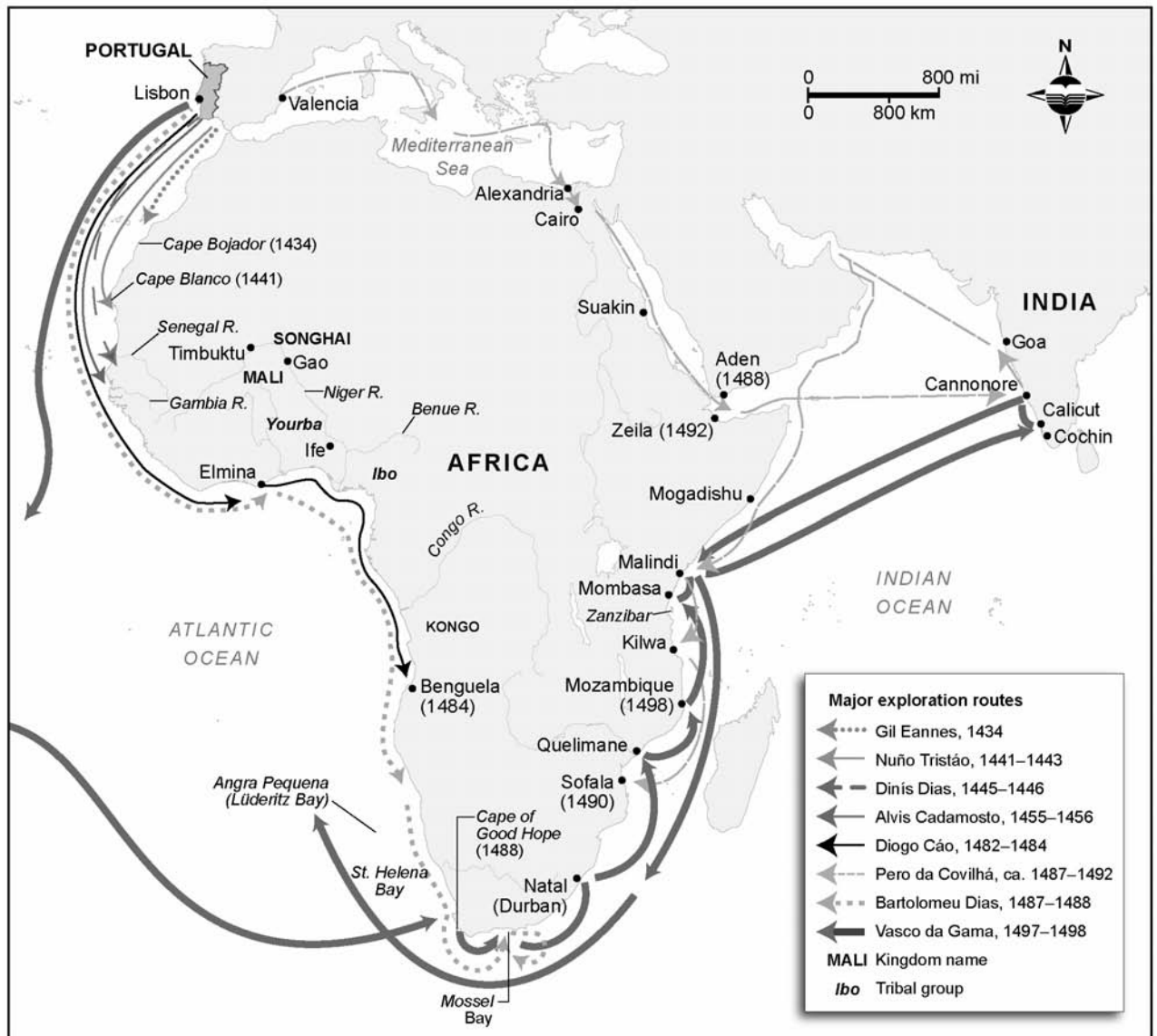
SPAIN AND PORTUGAL IN THE AMERICAS, 1750



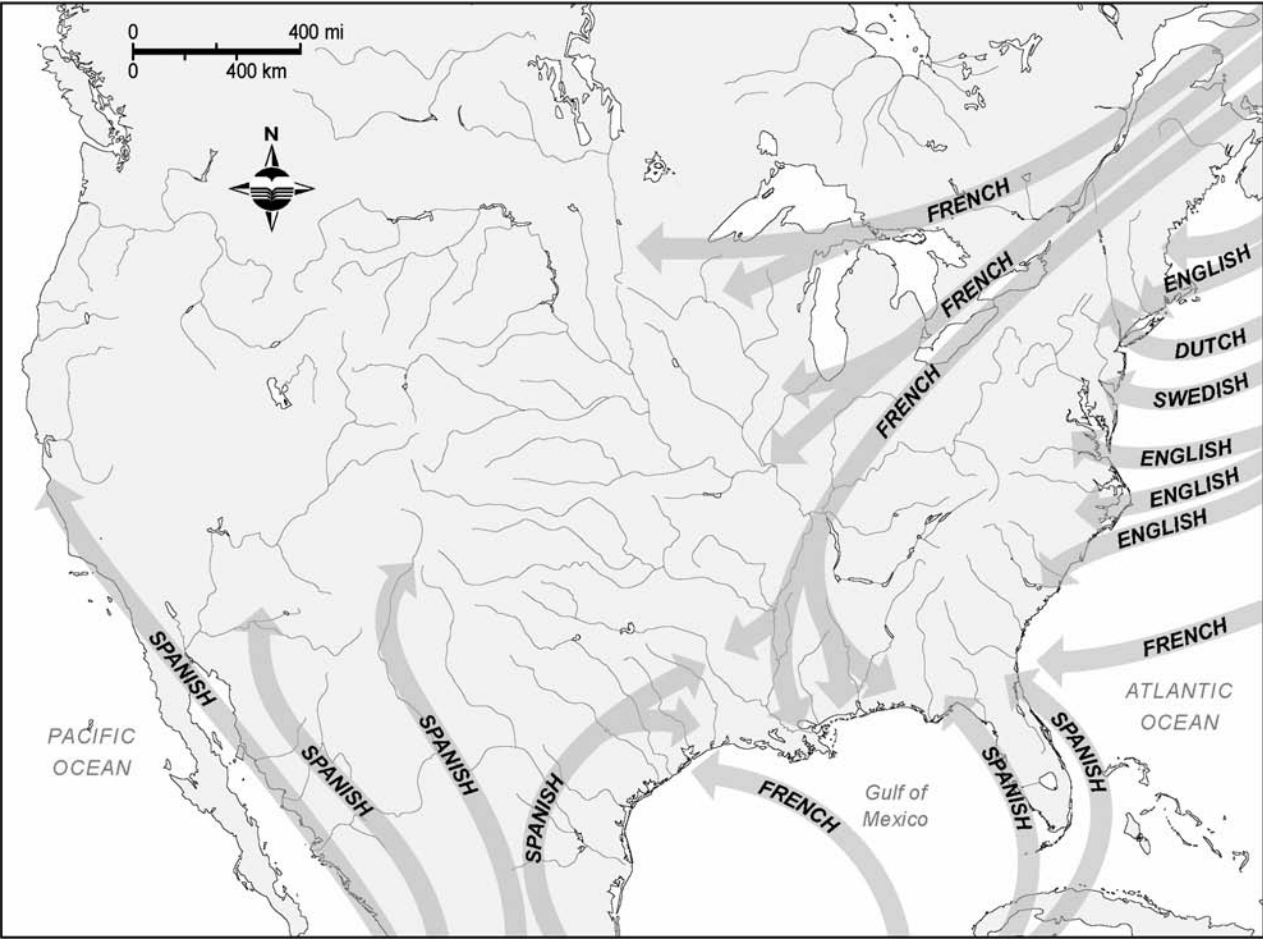
COLUMBUS'S VOYAGES, 1492–1504



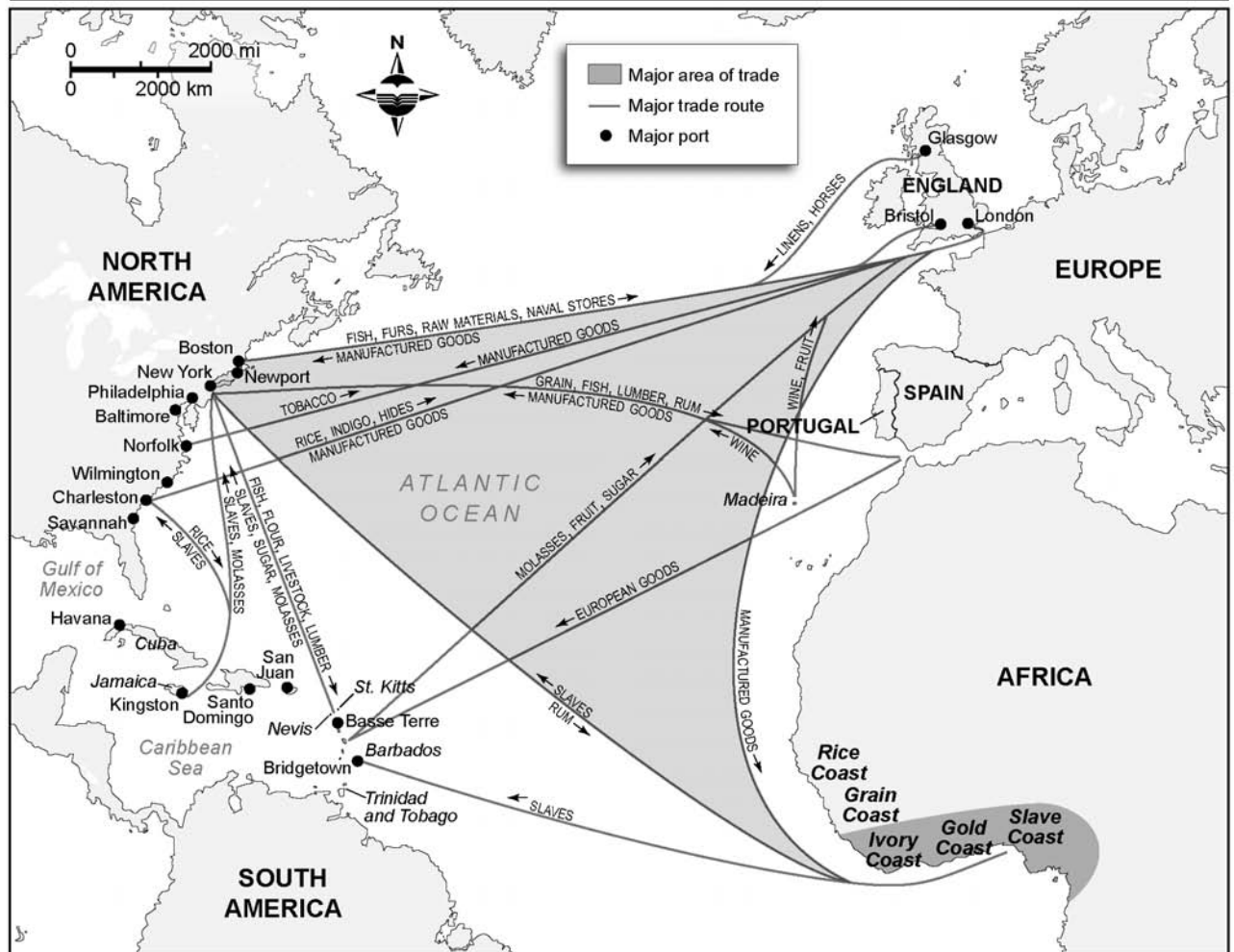
PORTUGUESE EXPLORATIONS OF THE AFRICAN COAST



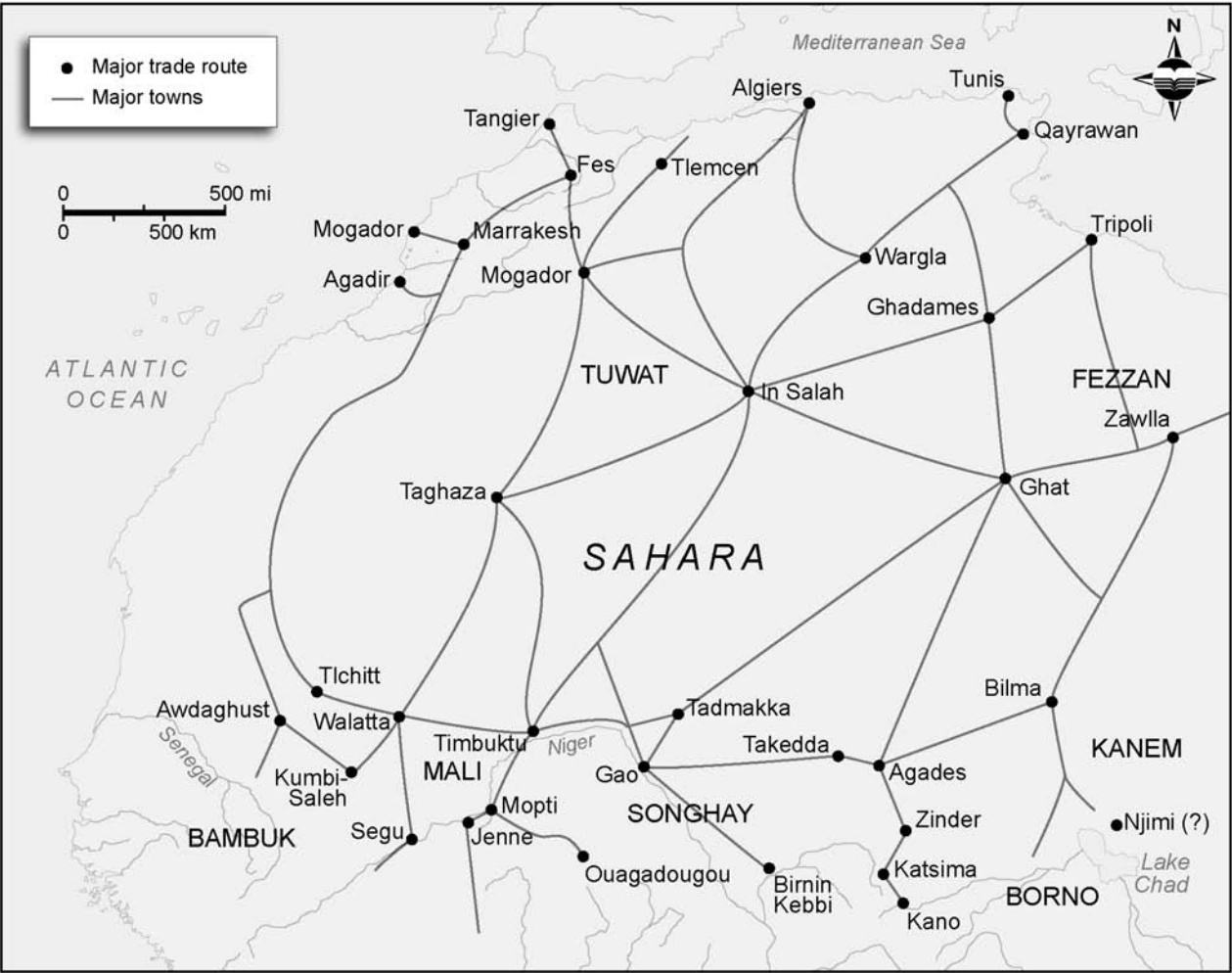
EARLY EUROPEAN PENETRATION OF NORTH AMERICA



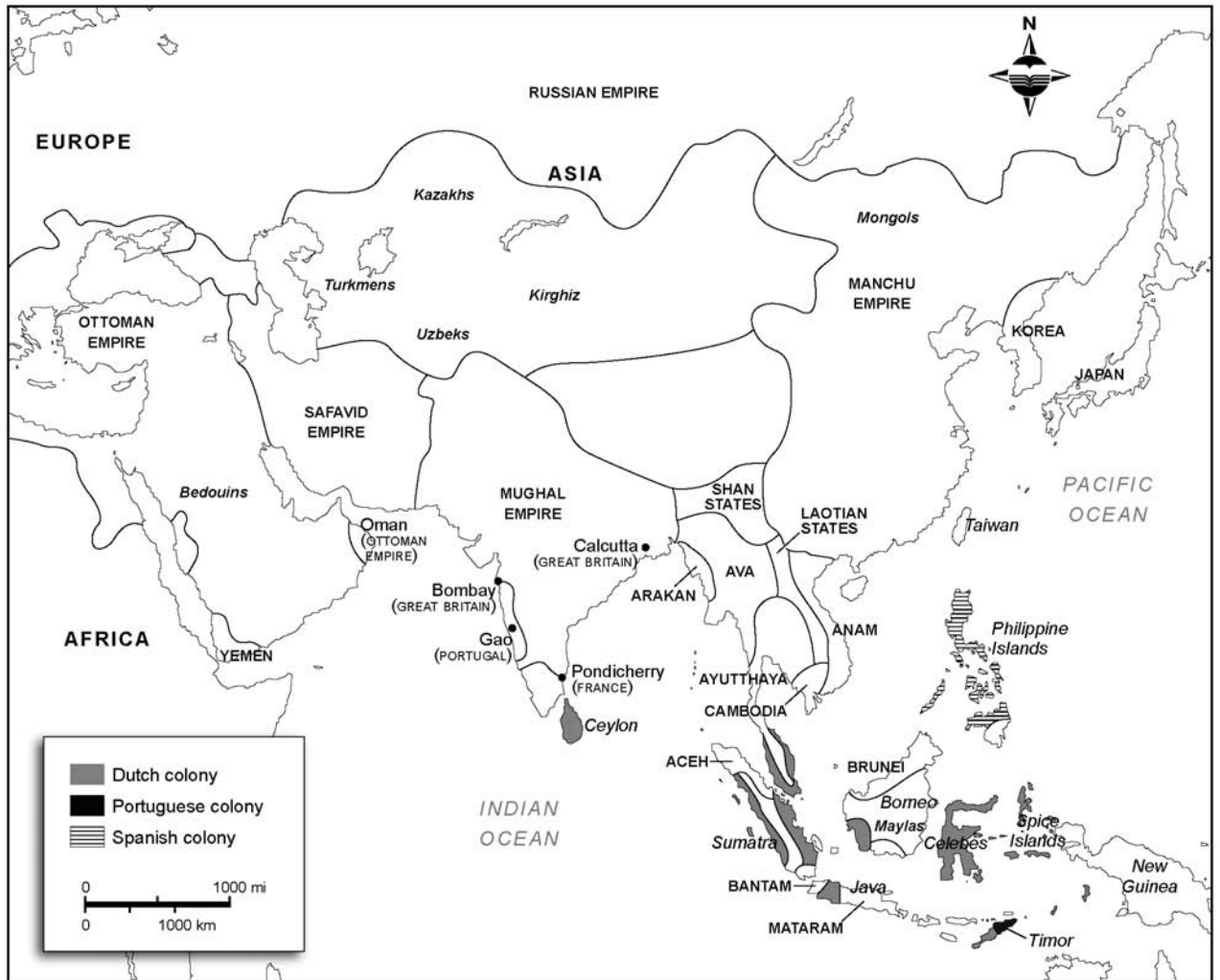
TRIANGLE TRADE



TRANS-SAHARAN TRADE, 9TH–19TH CENTURIES



ASIA IN 1700



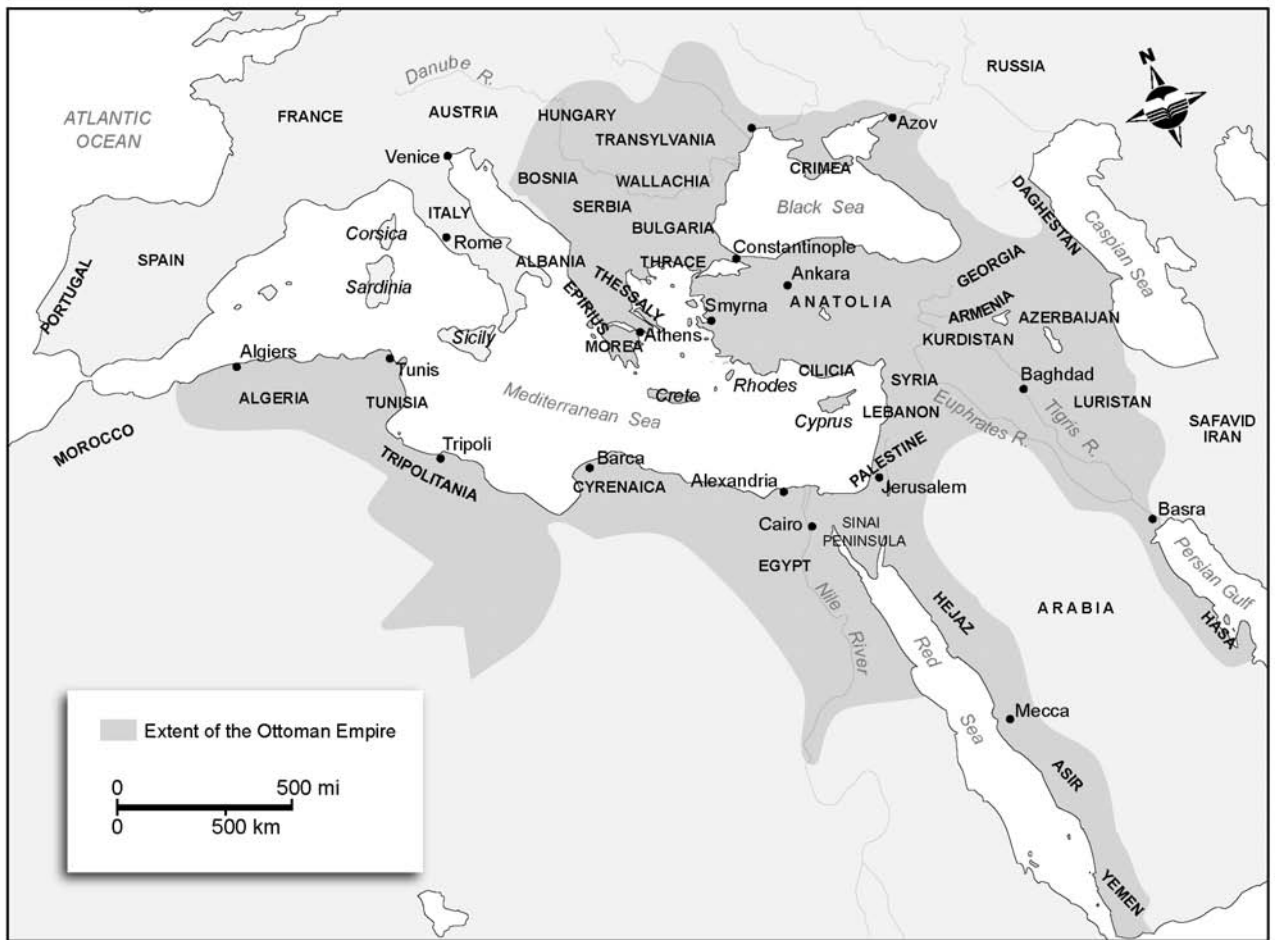
EXPANSION OF QING CHINA, 1683–1760



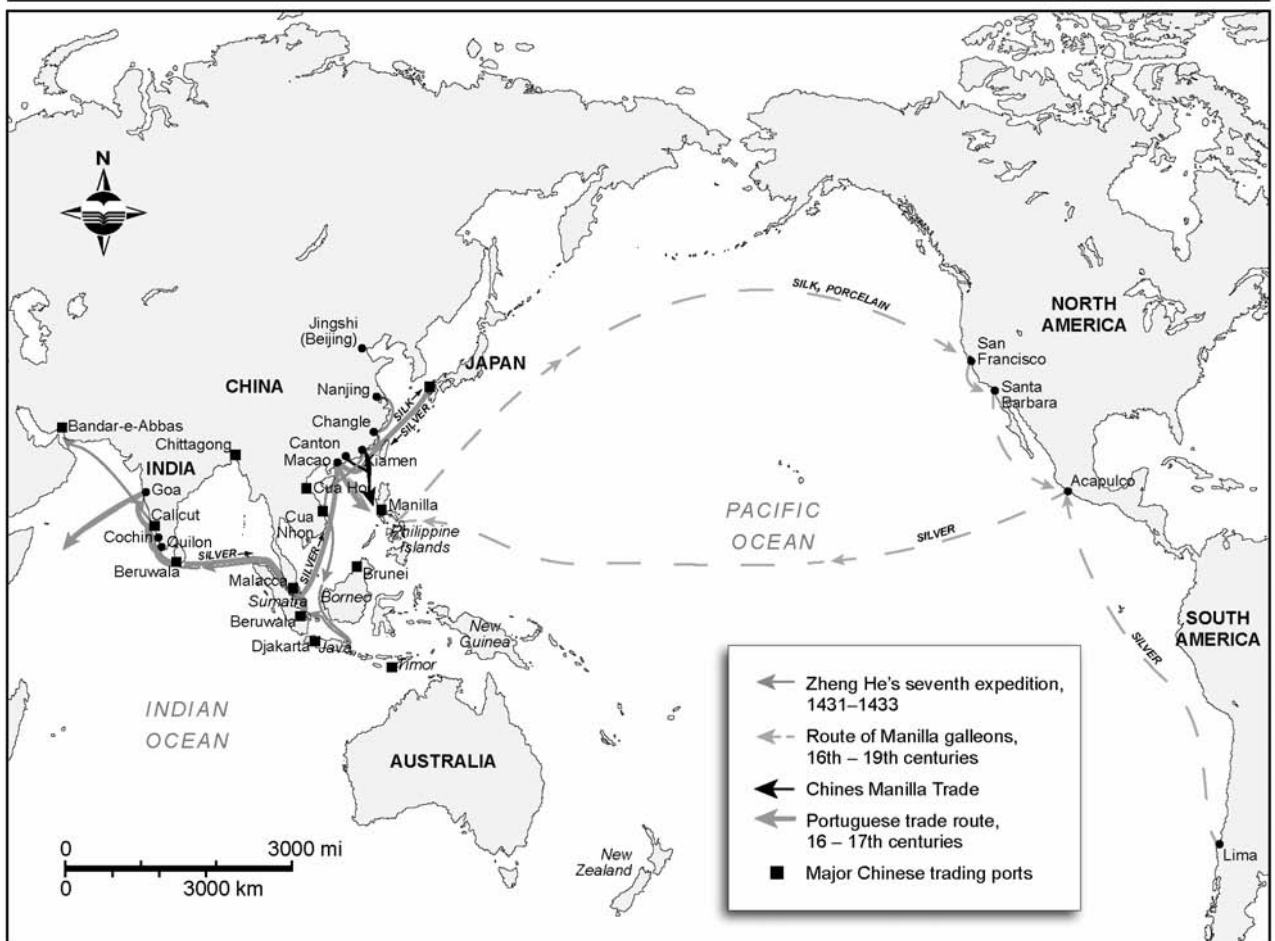
RISE OF EUROPEAN NATION STATES



OTTOMAN EMPIRE IN LATE 17TH CENTURY



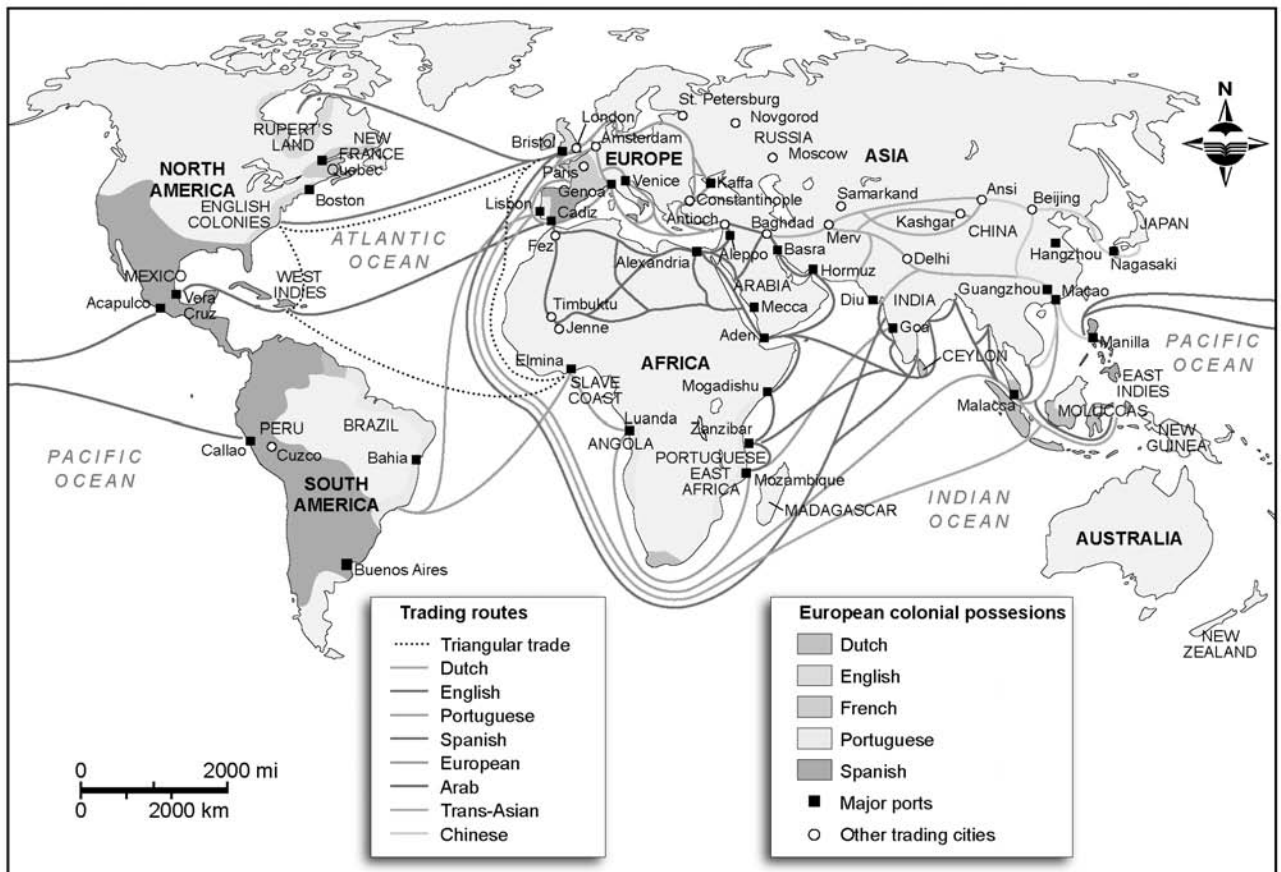
CHINA FOREIGN RELATIONS, 15TH–17TH CENTURIES



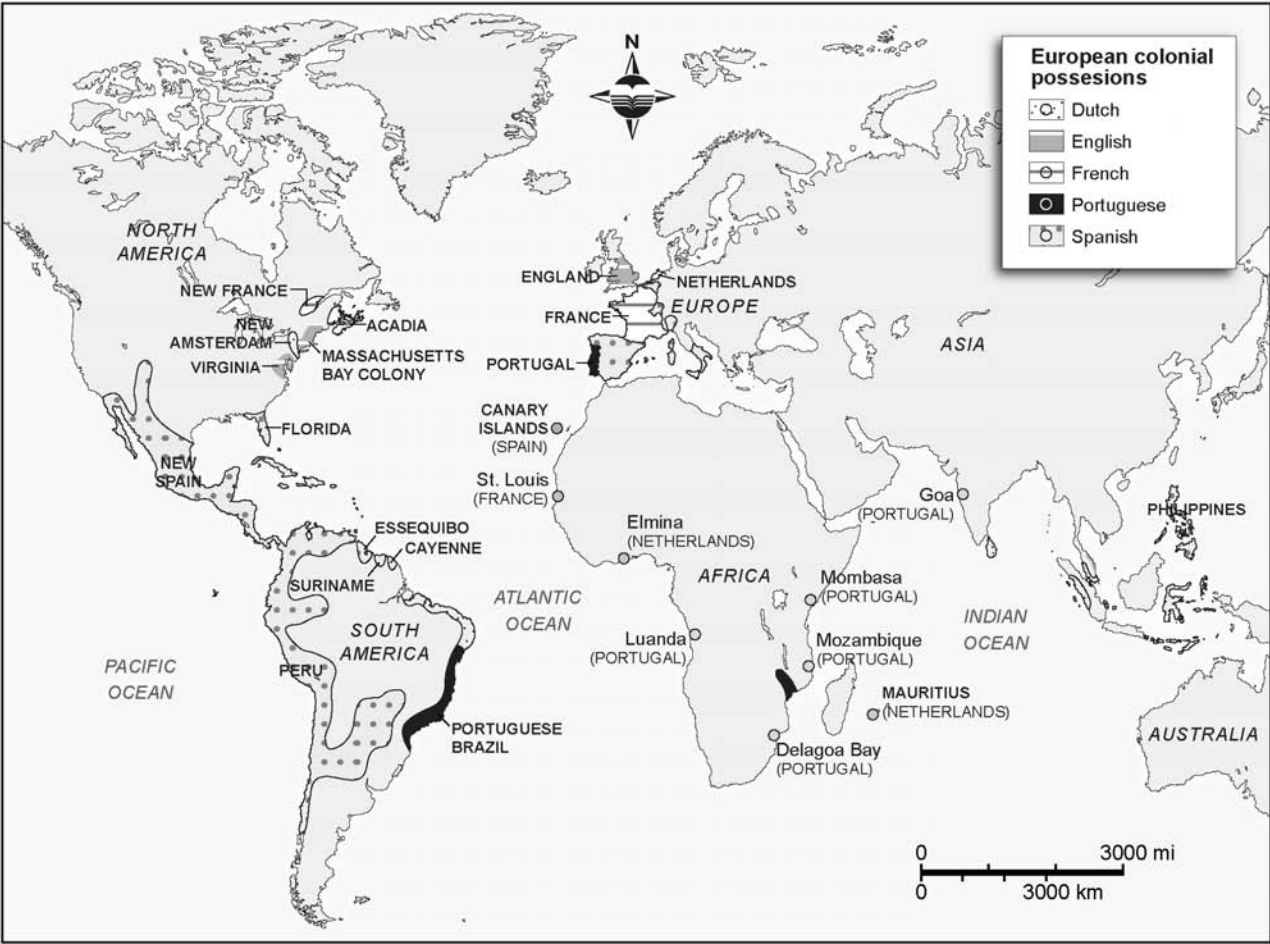
THE REFORMATION, 1517–1560



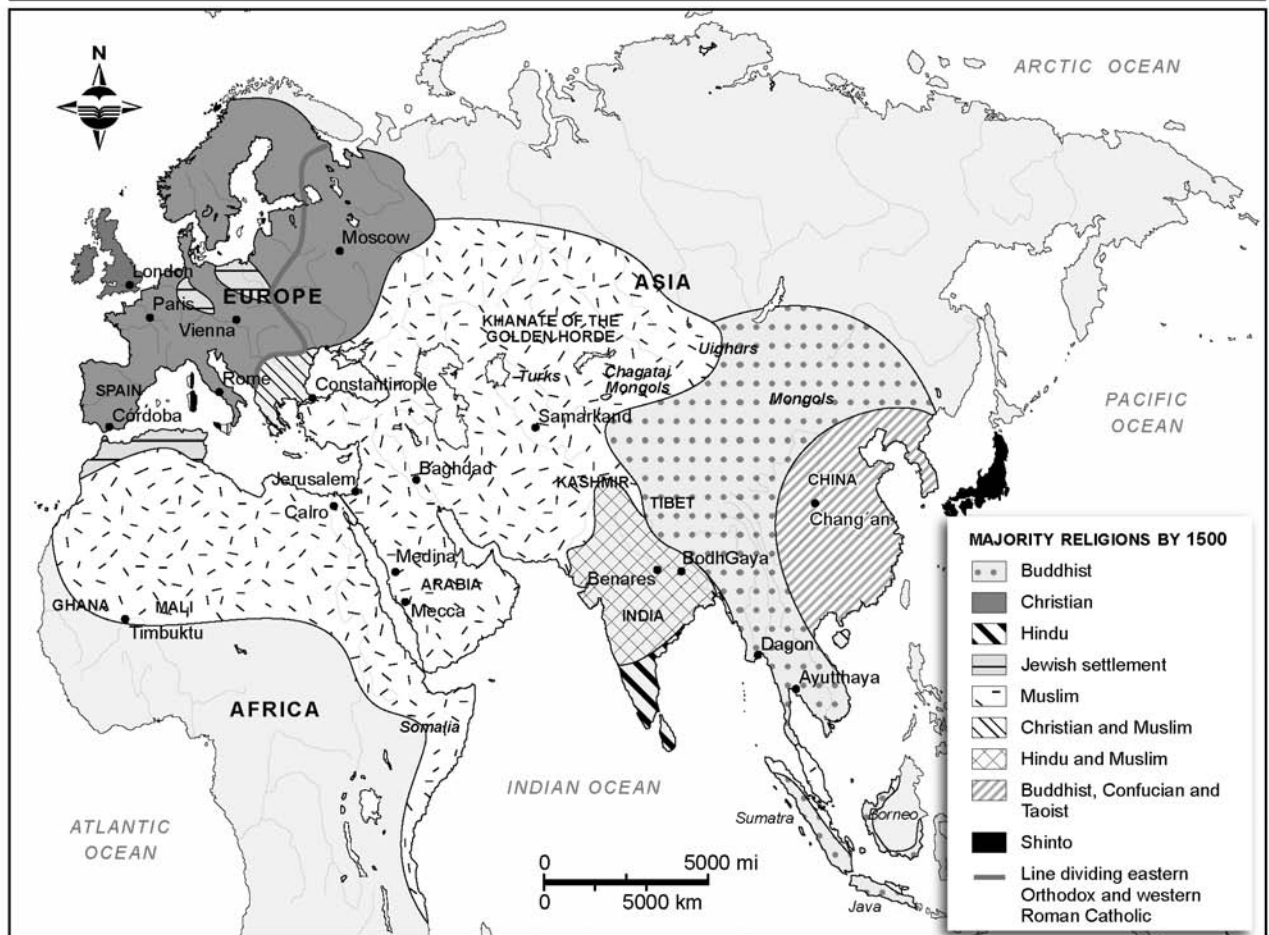
WORLD TRADE AND EUROPEAN COLONIZATION, 1600-1750



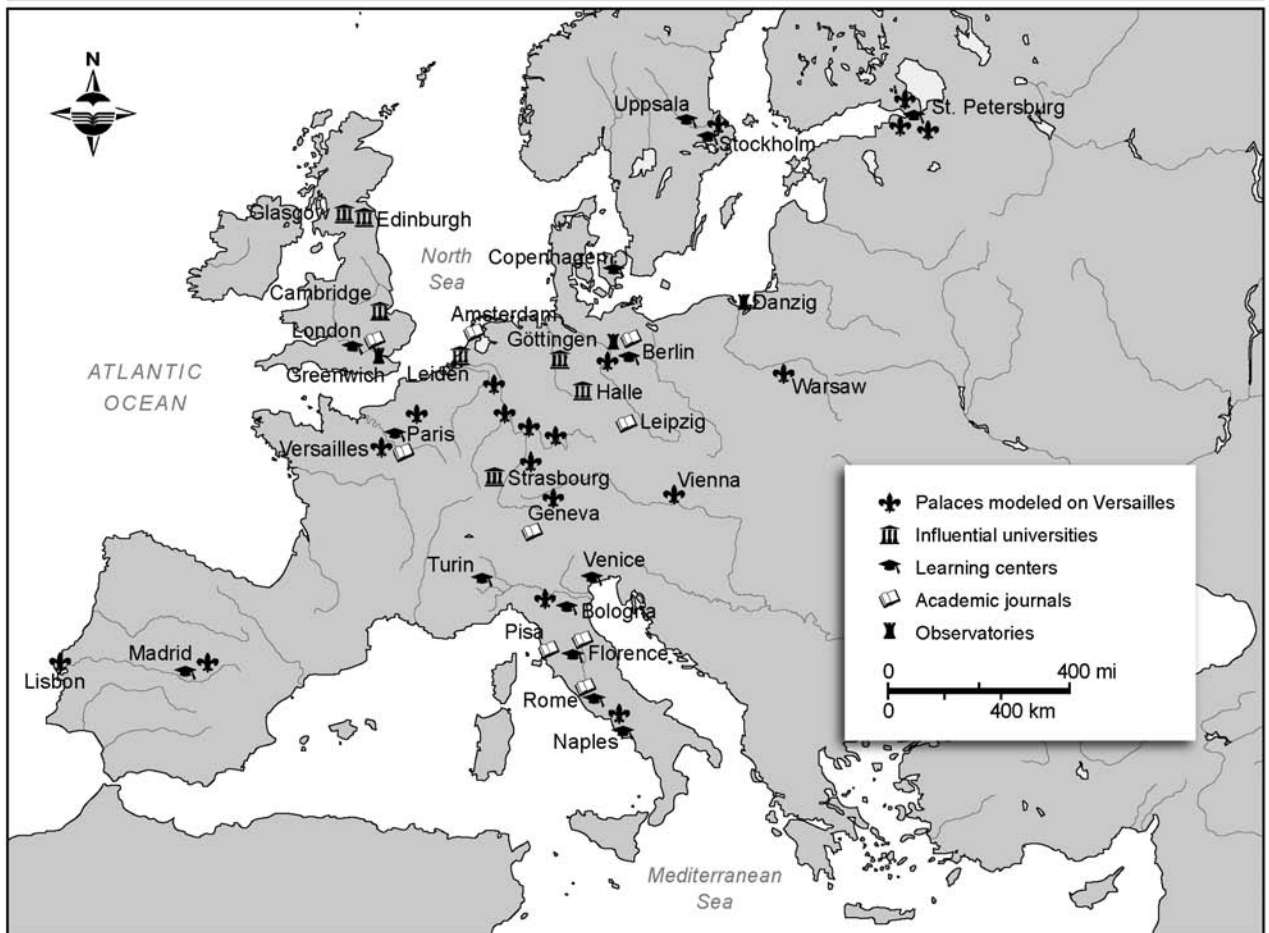
EUROPEAN COLONIAL POSSESSIONS BY 1648



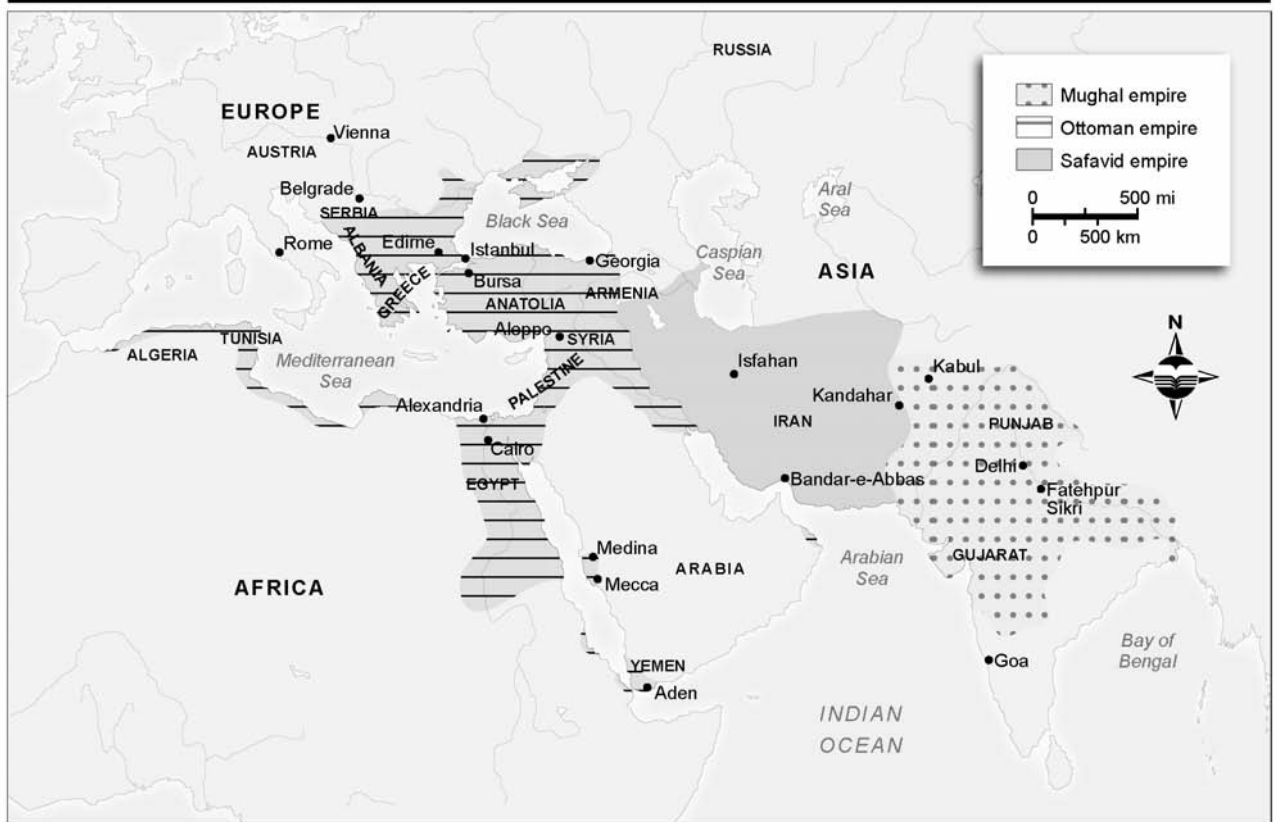
MAJOR RELIGIONS IN EASTERN HEMISPHERE, 1500

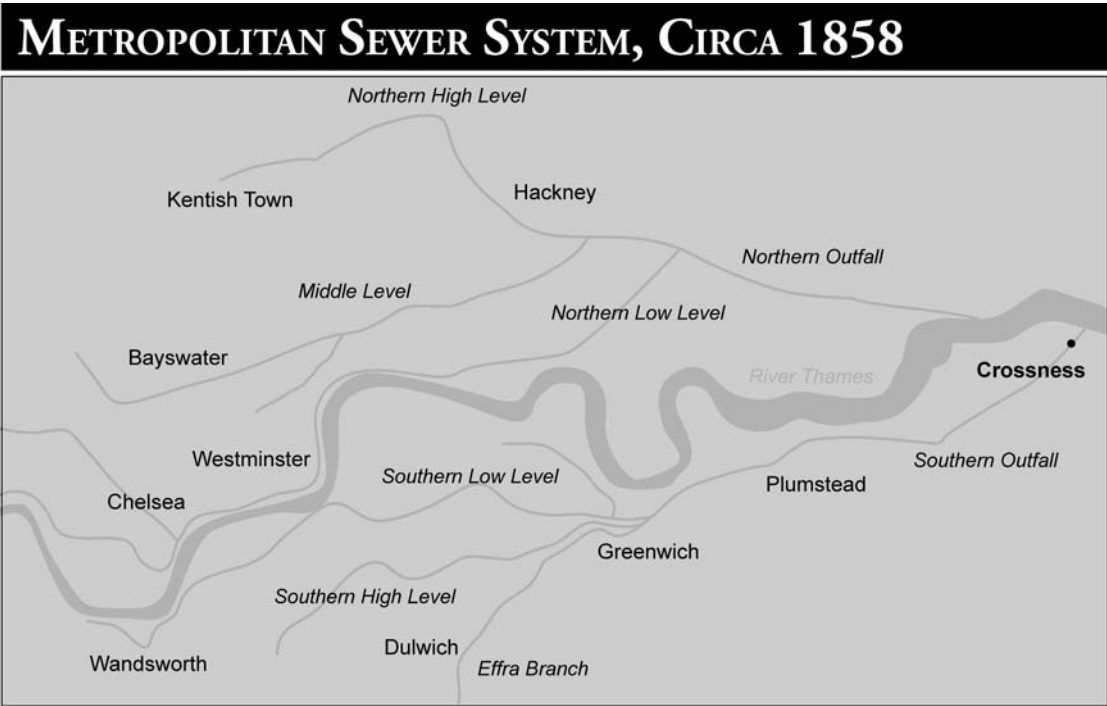


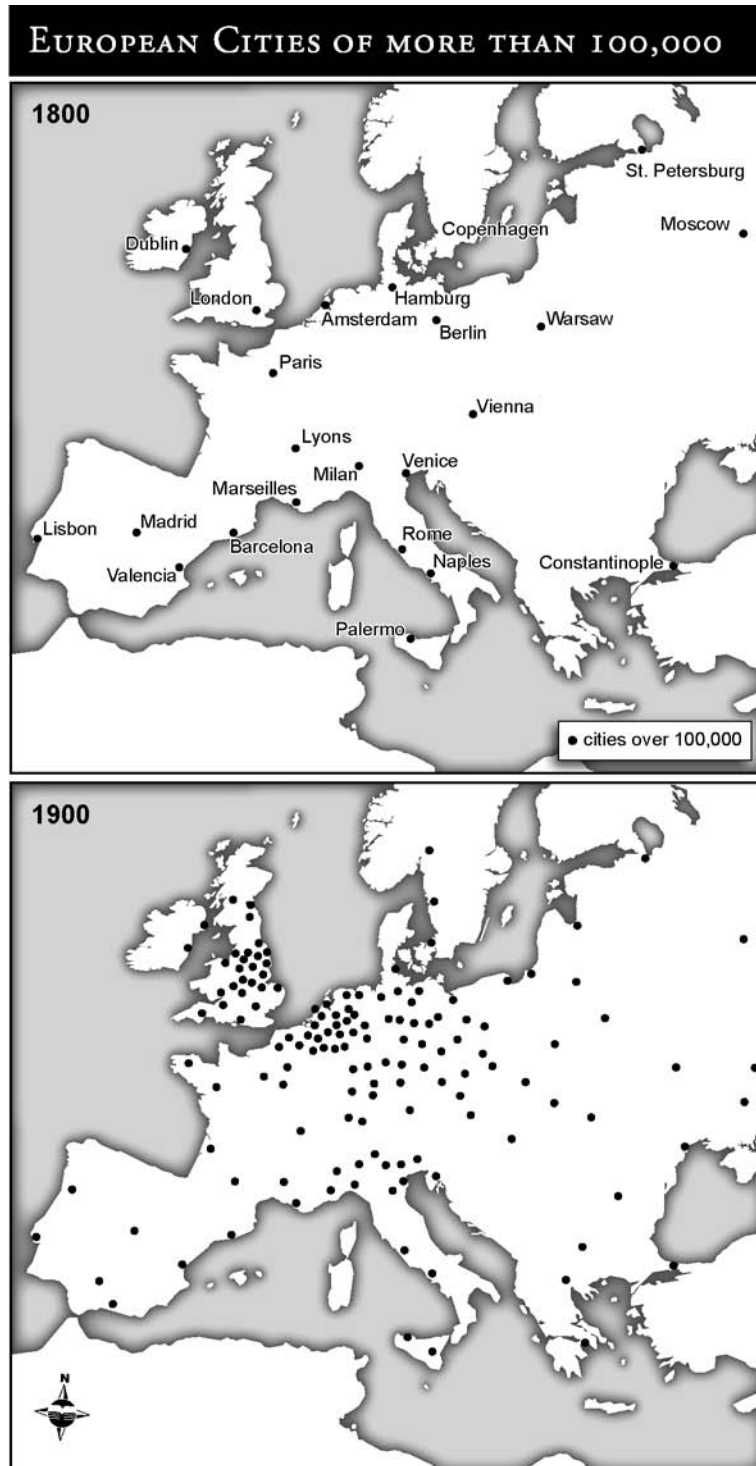
THE ENLIGHTENMENT IN THE 18TH CENTURY



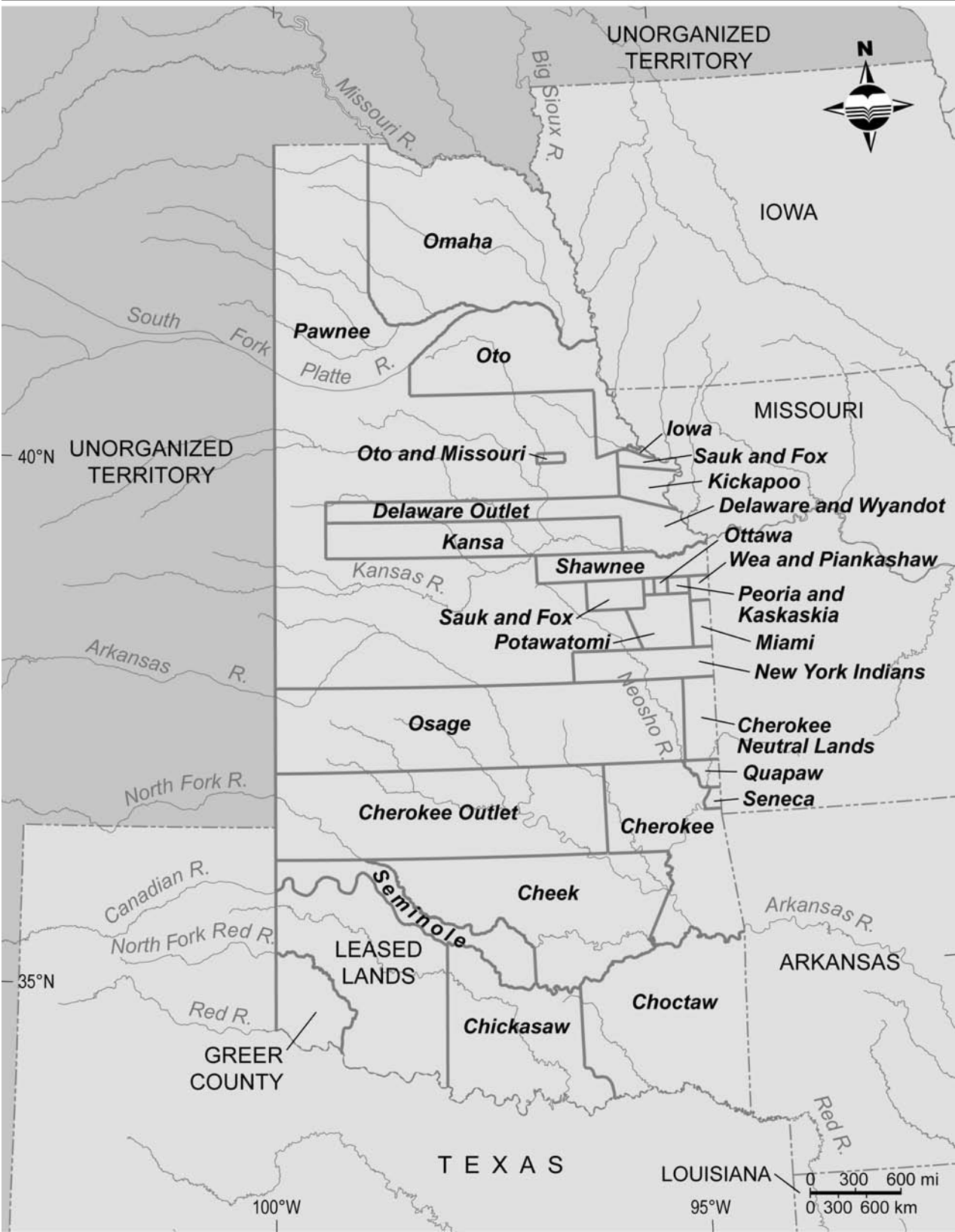
GUNPOWDER IN THE TURKIC EMPIRES IN THE 16TH CENTURY







INDIAN TERRITORY, 1854



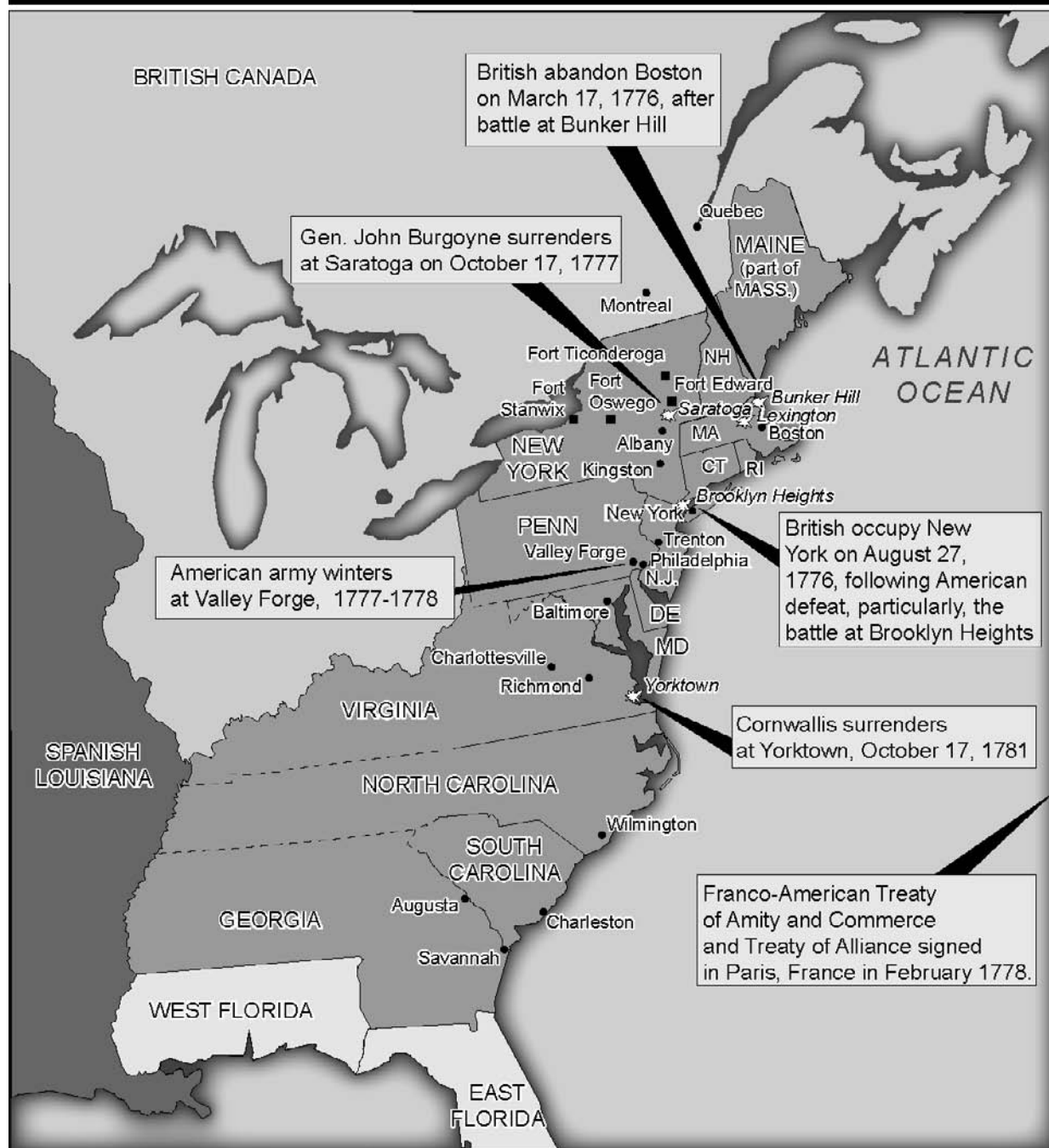
SOUTH AMERICA, 1810–1914



OTTOMAN EMPIRE AND RUSSIAN EMPIRE BY 1914



THE AMERICAN REVOLUTION



THE UNIFICATION OF ITALY, 1859-1870

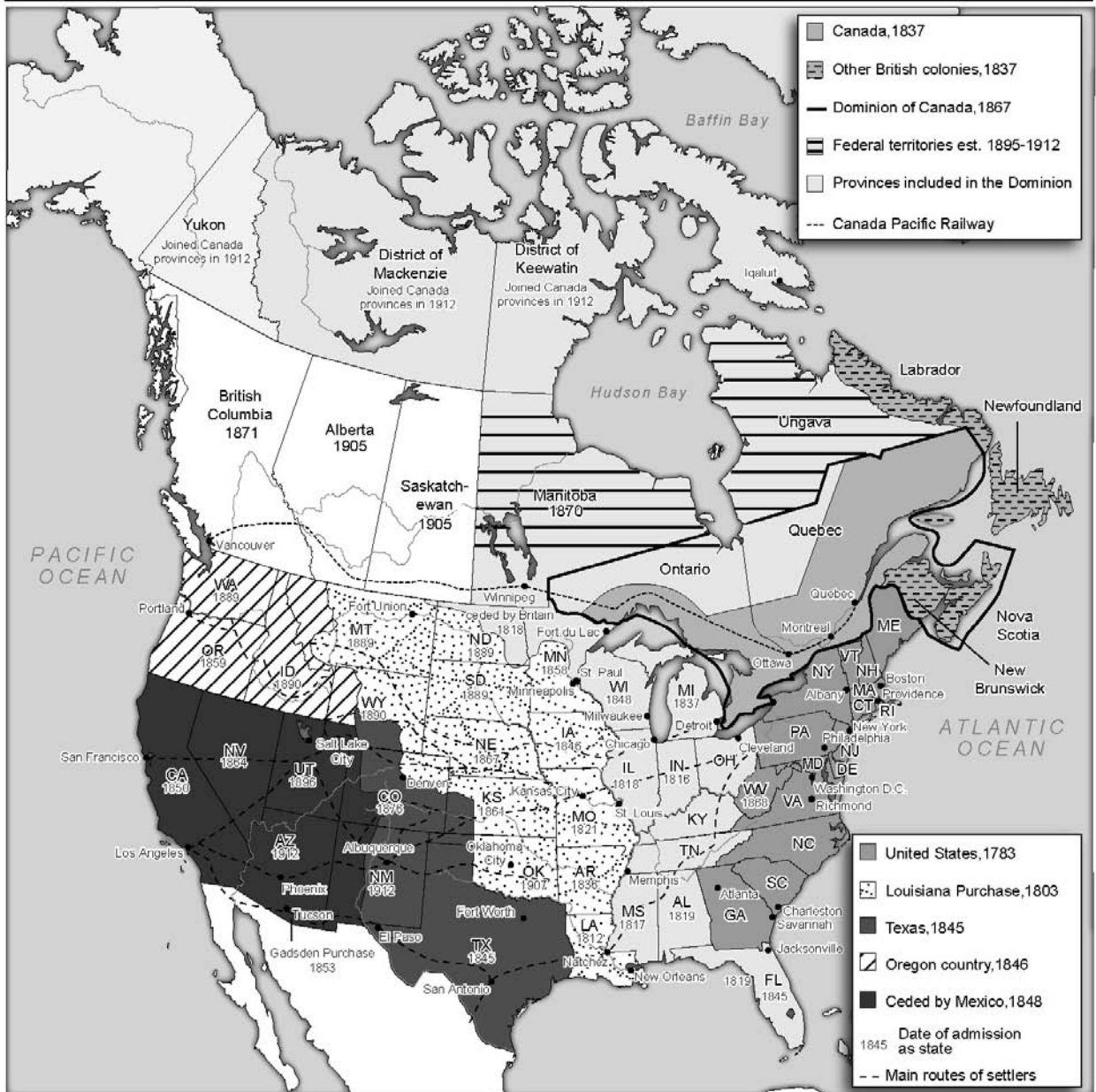




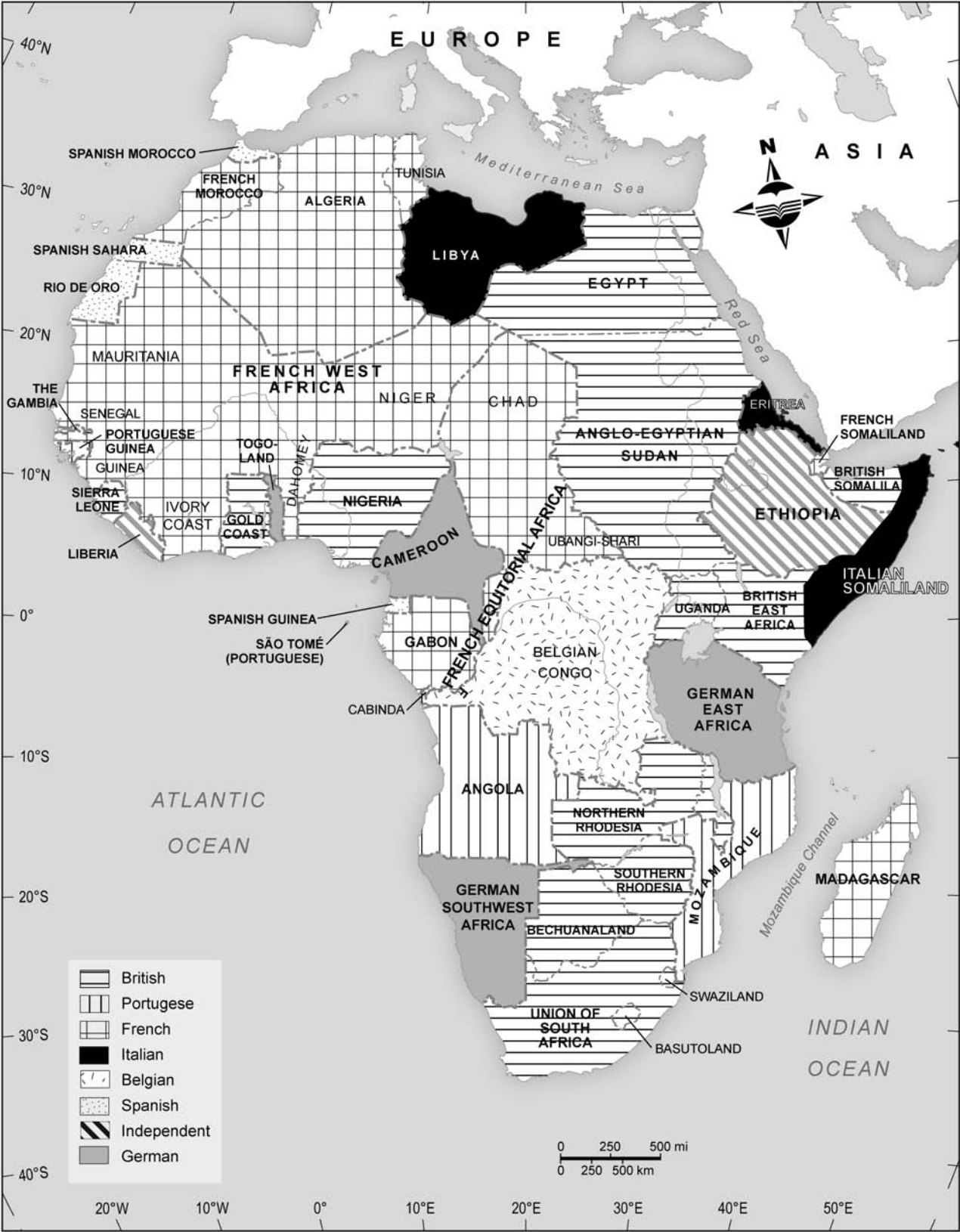
THE BALKANS, 1878–1913

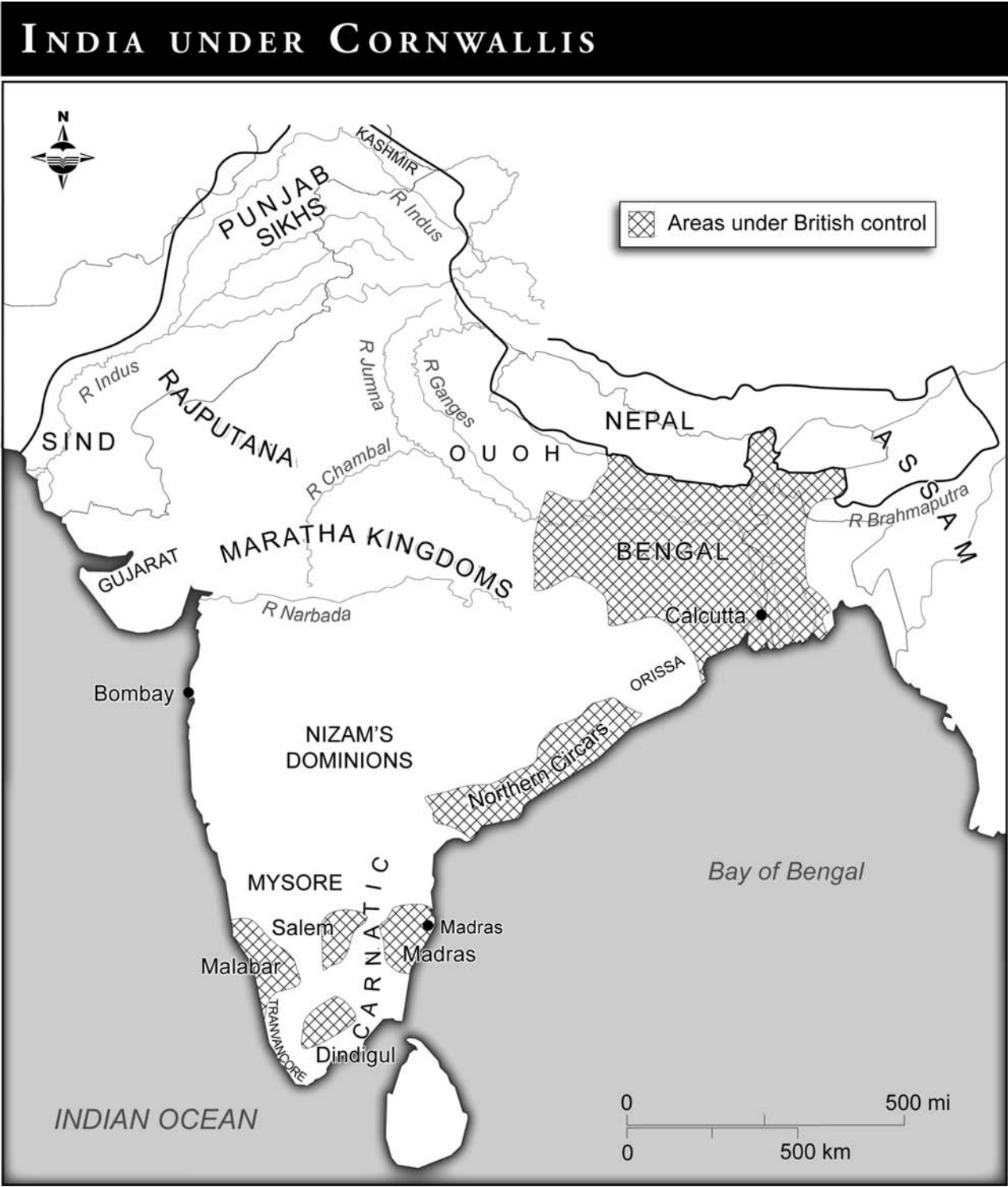


THE GROWTH OF CANADA AND THE UNITED STATES IN THE 19TH CENTURY

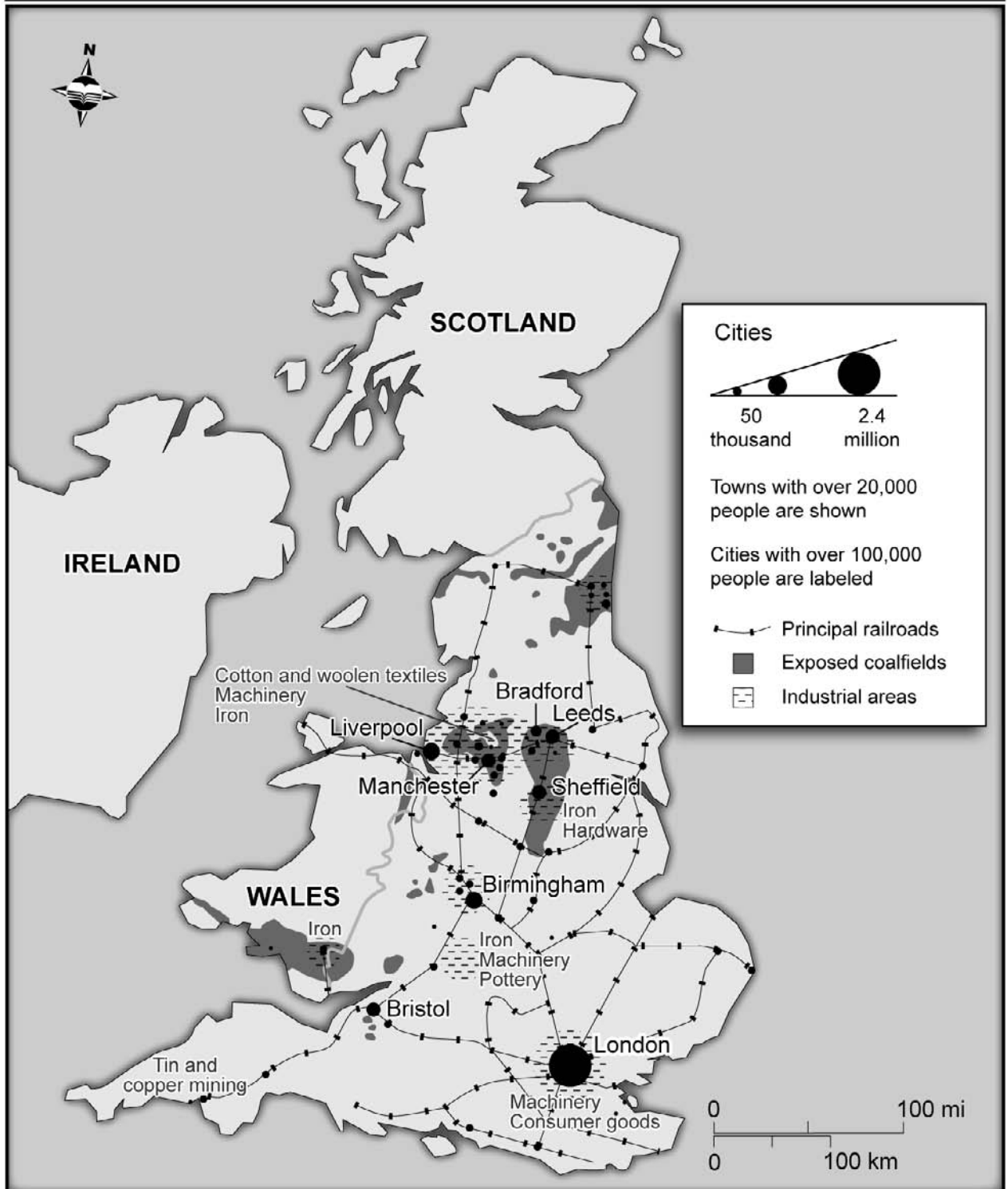


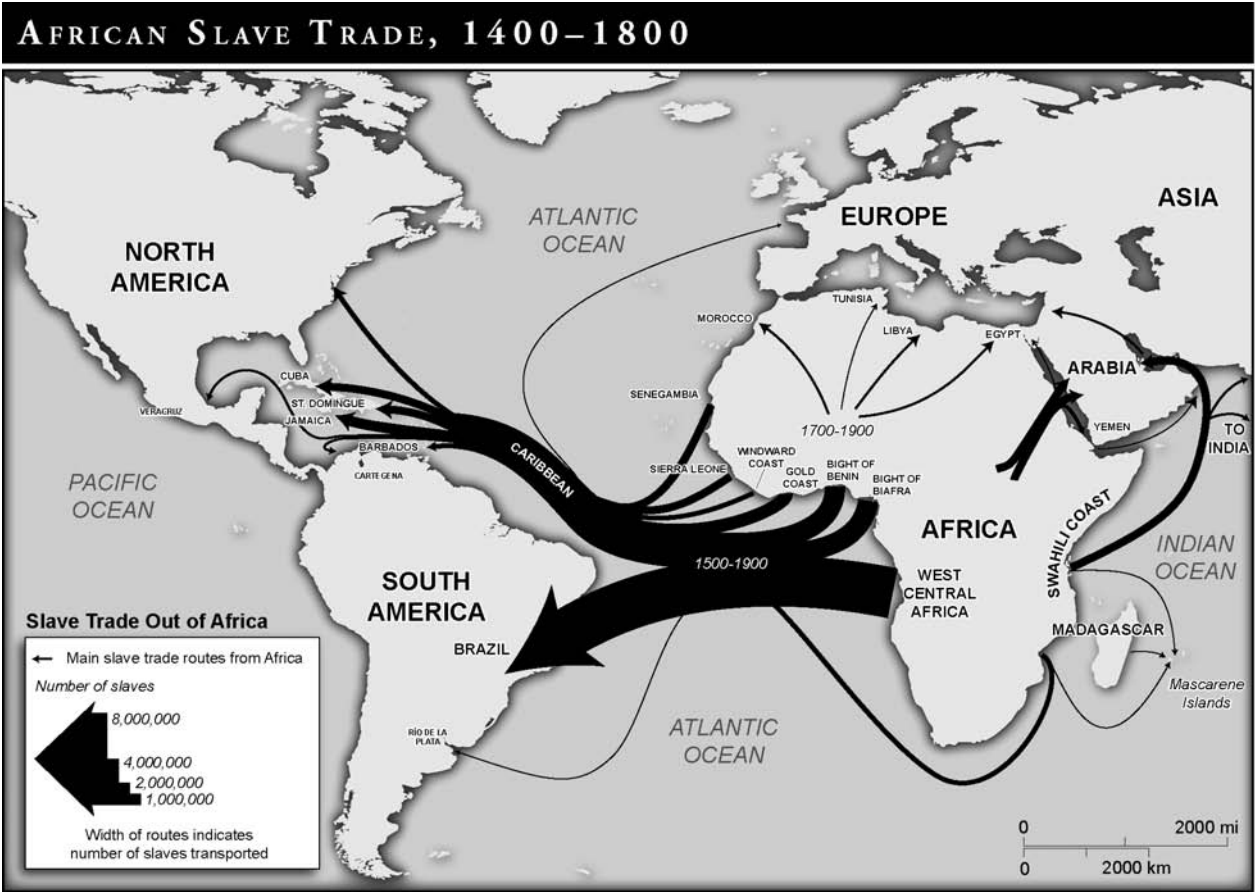
AFRICA, 1914





INDUSTRIAL REVOLUTION IN ENGLAND, CA. 1850





EUROPE IN 1810





BRITISH NORTH AMERICA AFTER THE TREATY OF PARIS (1763)

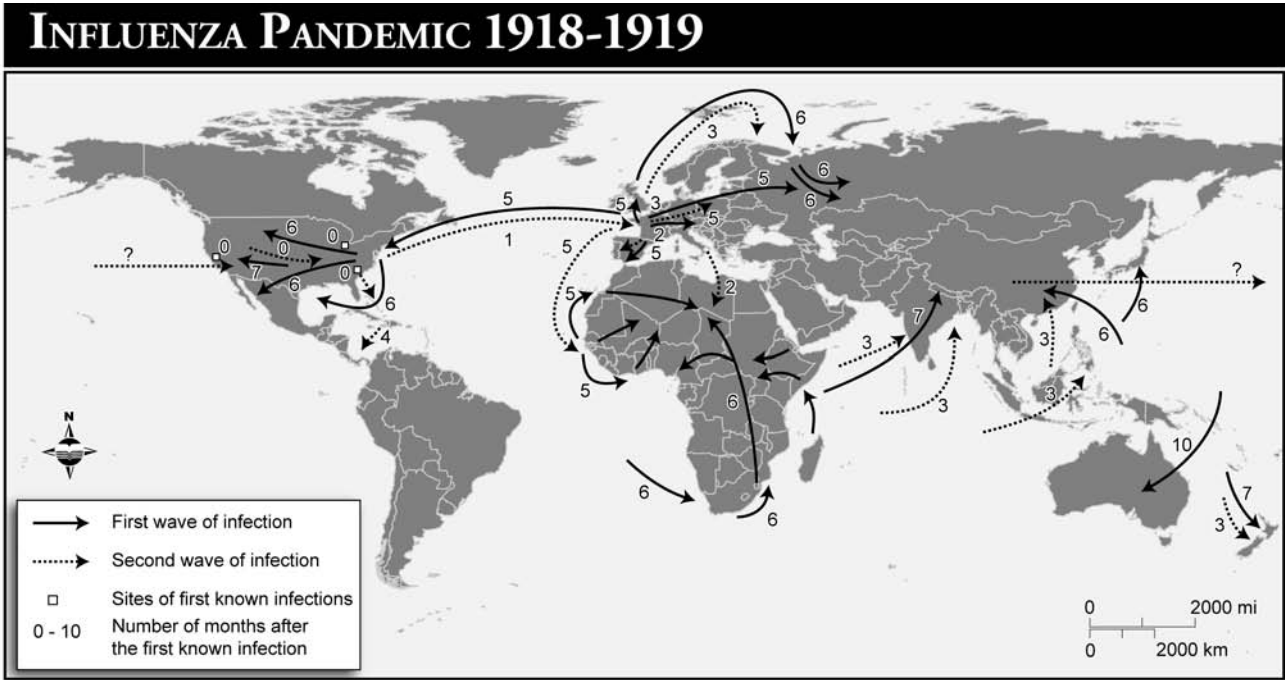


SOUTHERN THEATER OF OPERATIONS, WAR OF 1812

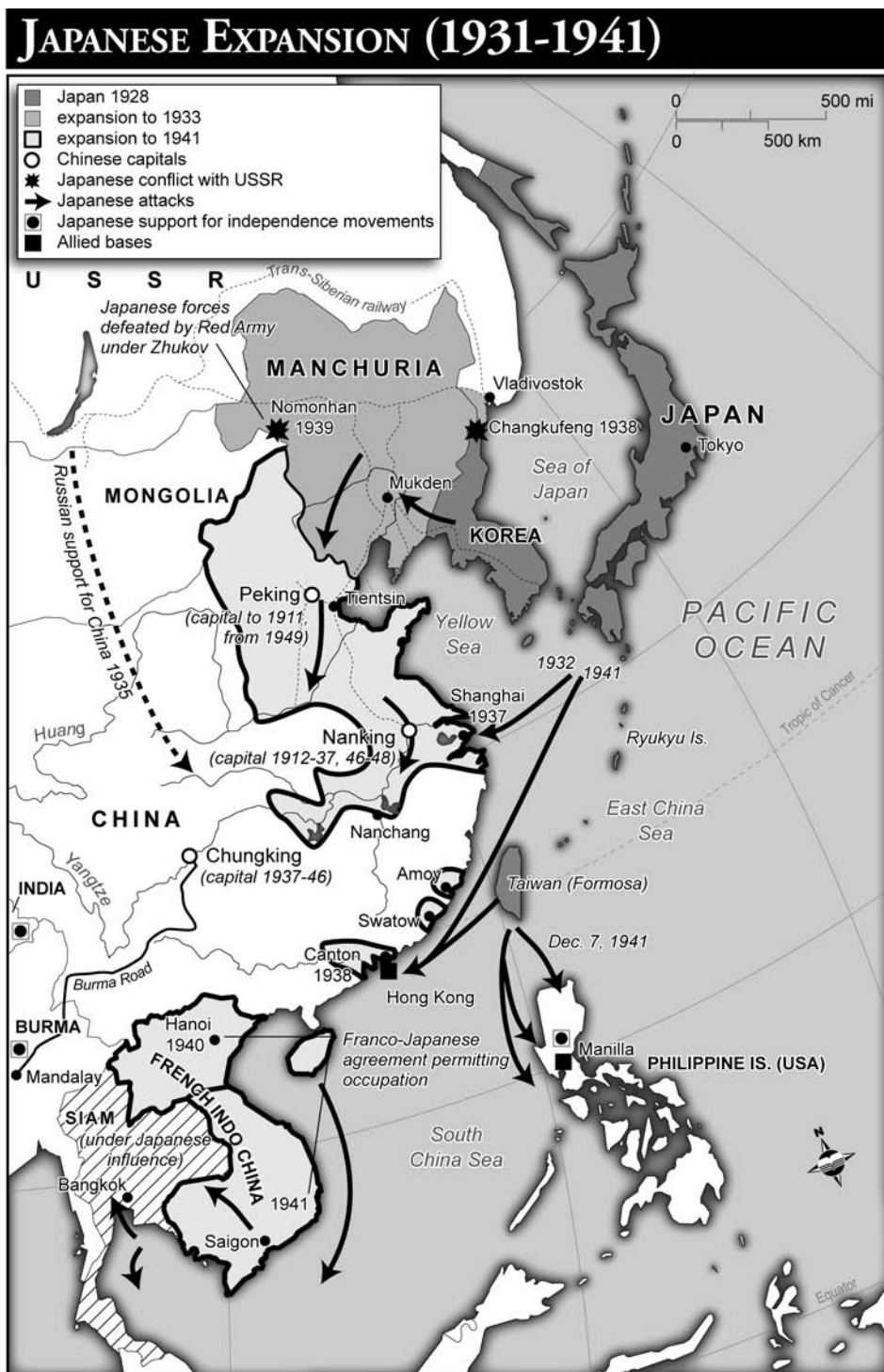


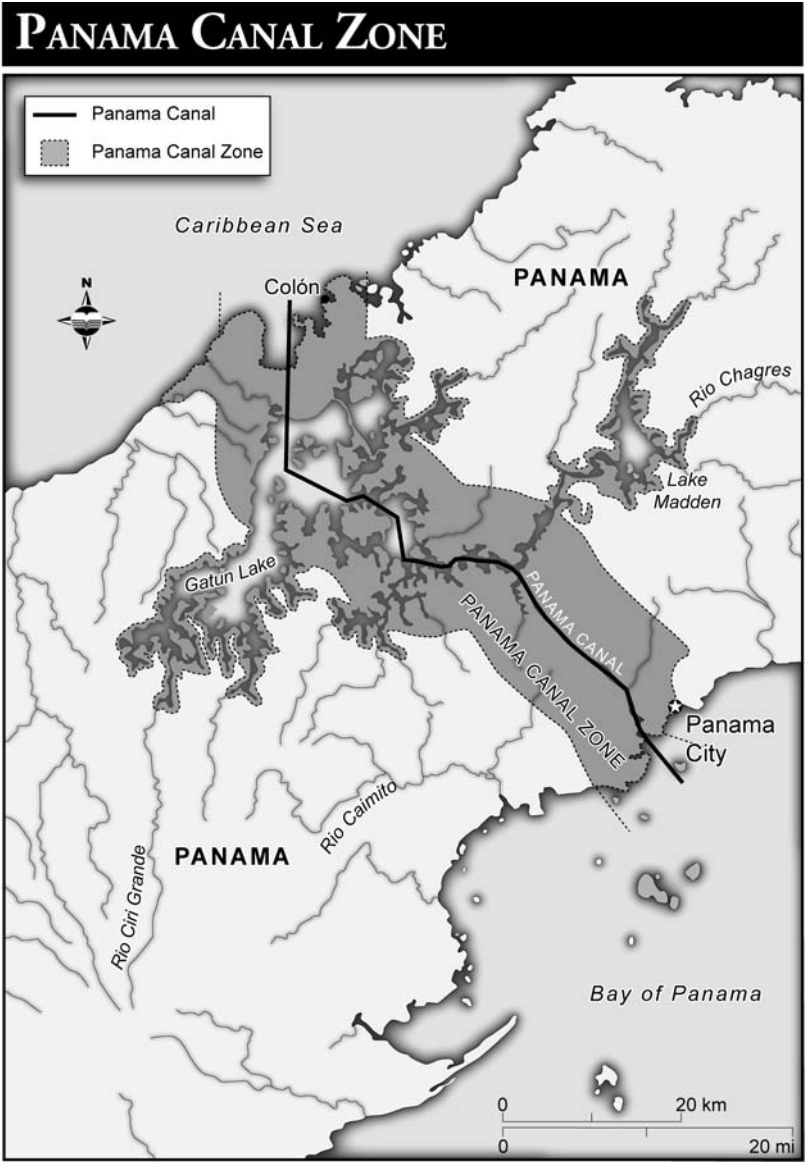
EUROPE IN 1815







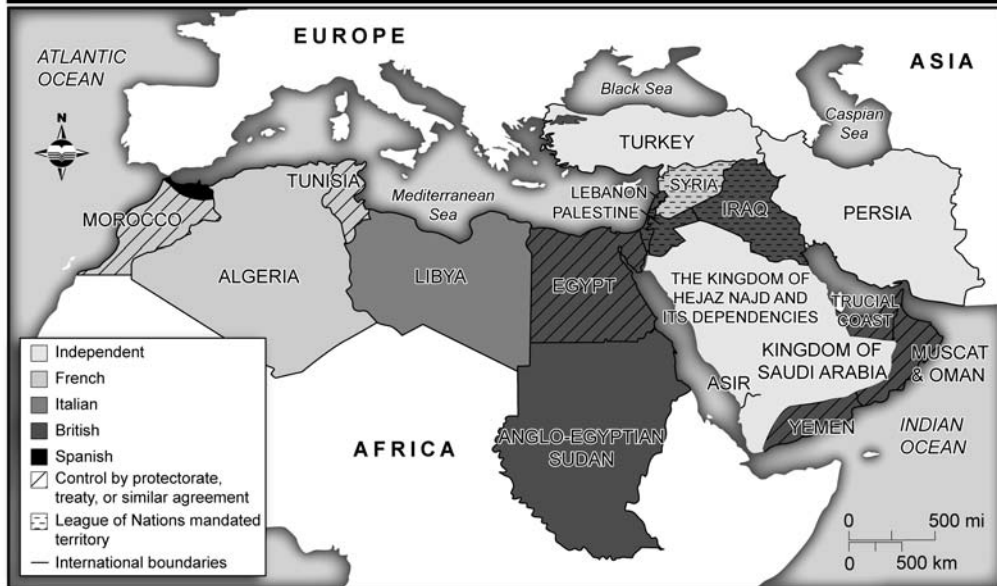








MIDDLE EAST BETWEEN WORLD WAR I AND WORLD WAR II



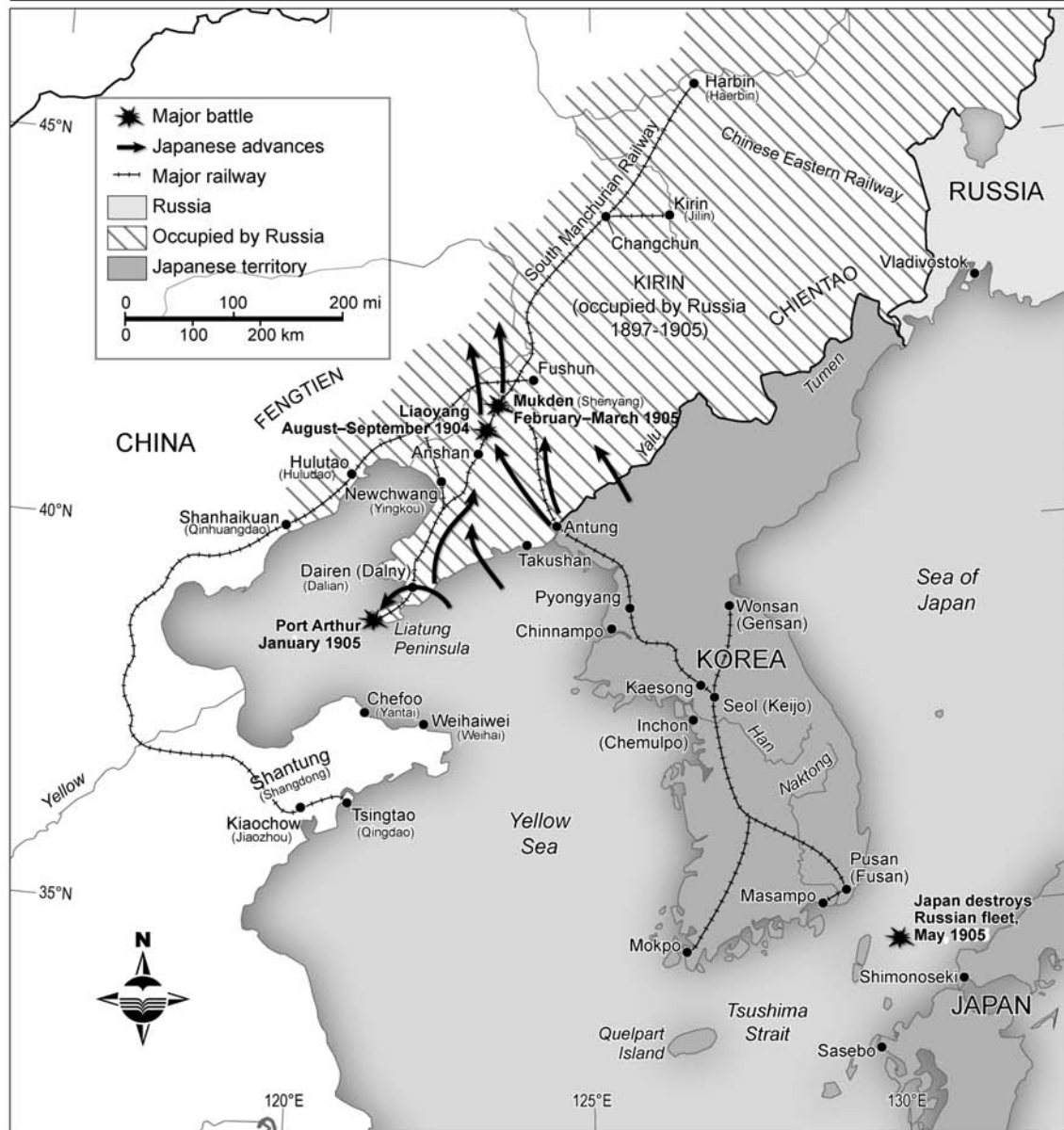
EUROPE BETWEEN THE WARS



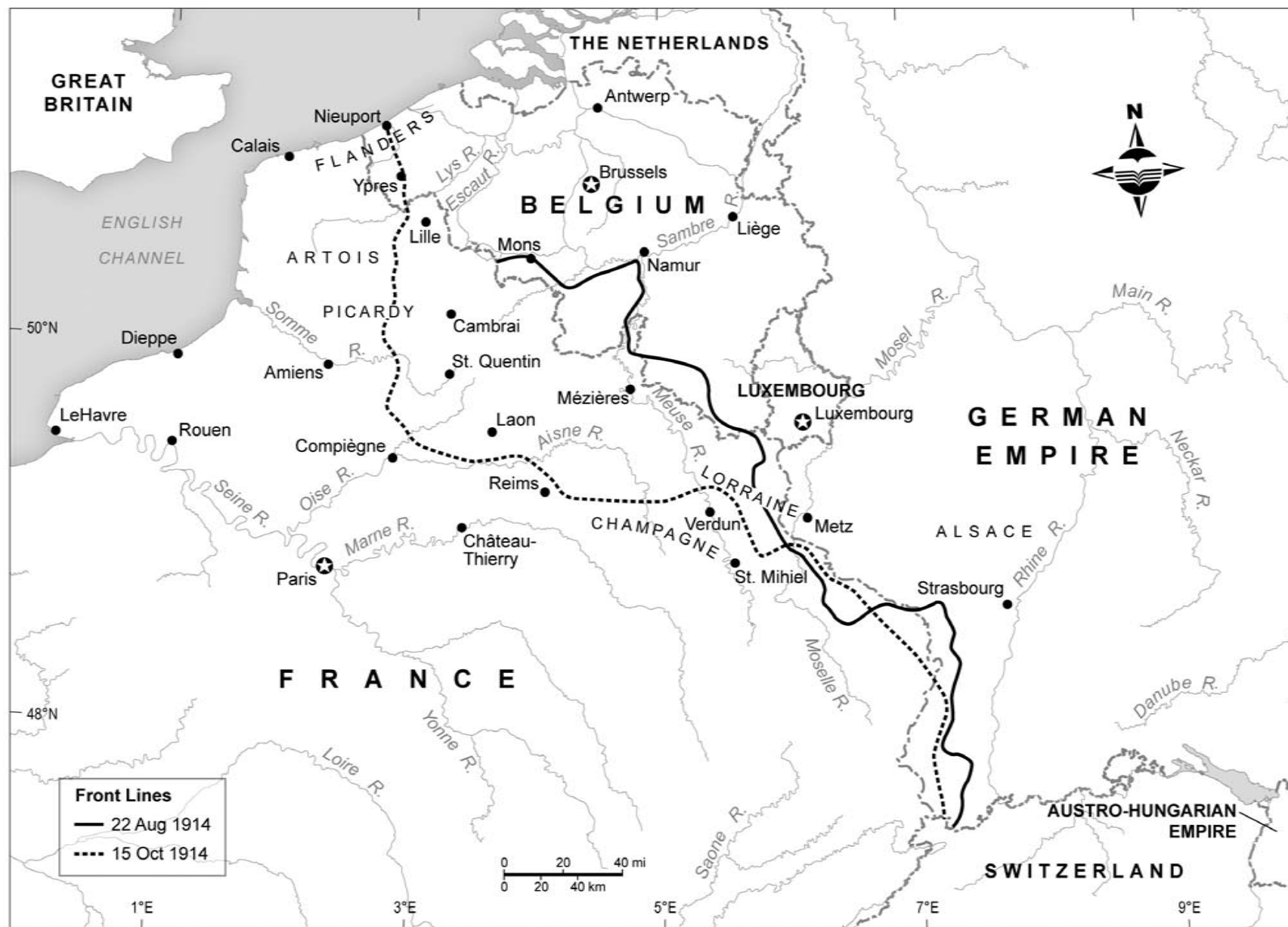




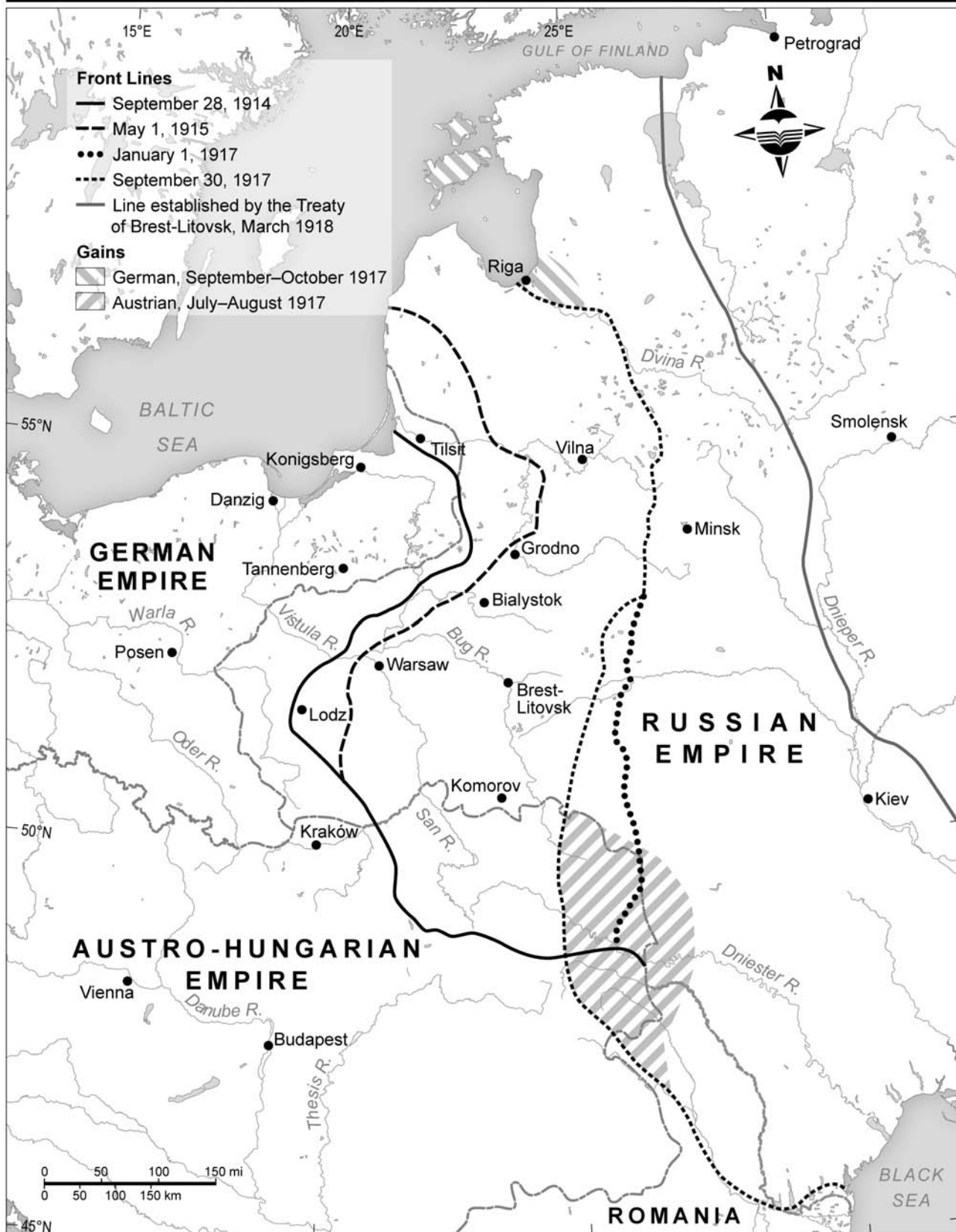
THE RUSSO-JAPANESE WAR, 1904–1905



WESTERN FRONT, 1914



EASTERN FRONT, 1914–1918



EUROPE, SEPTEMBER 1939



PACIFIC THEATER, 1941–1945

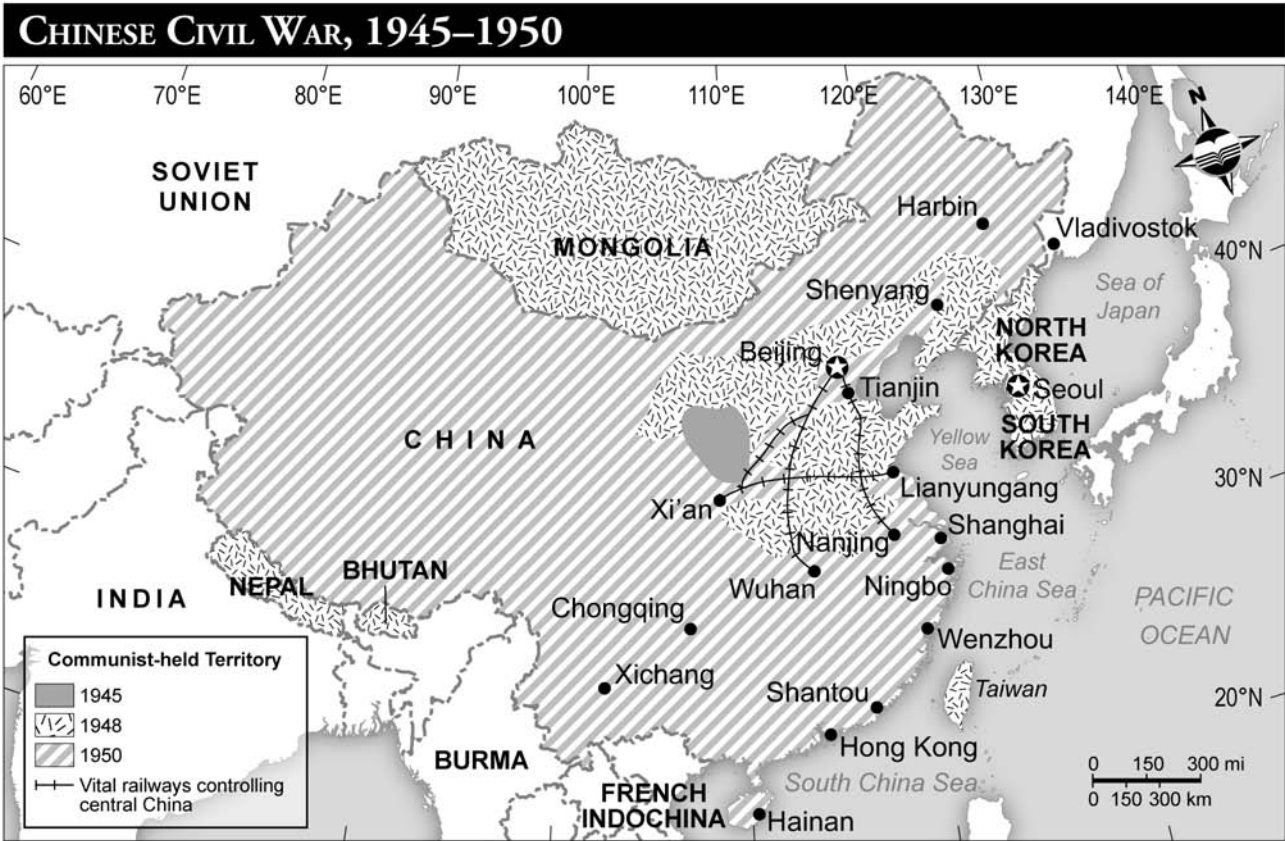


COLLAPSE OF GERMANY, 1945



POLAND AND EASTERN EUROPE, 1939–1940

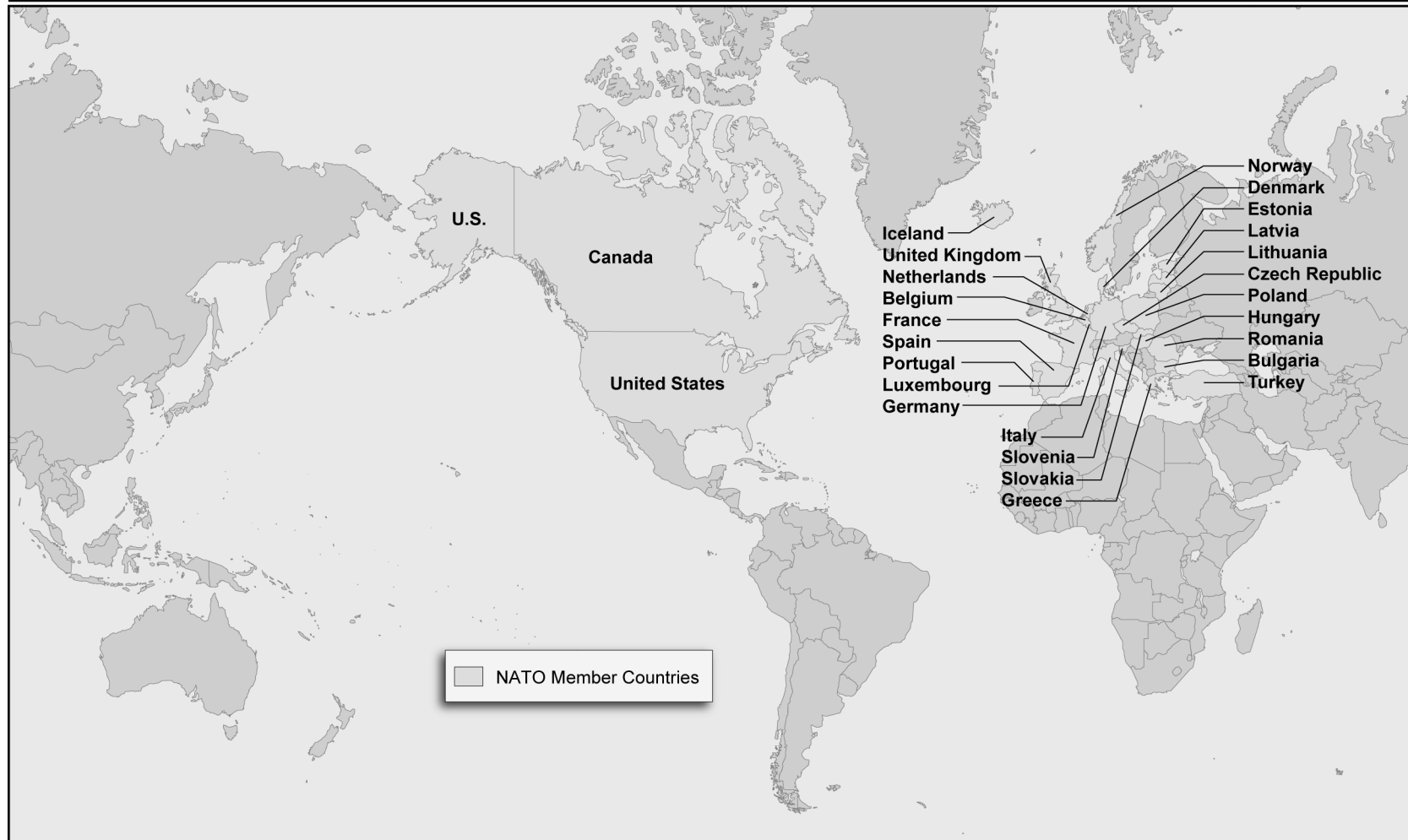


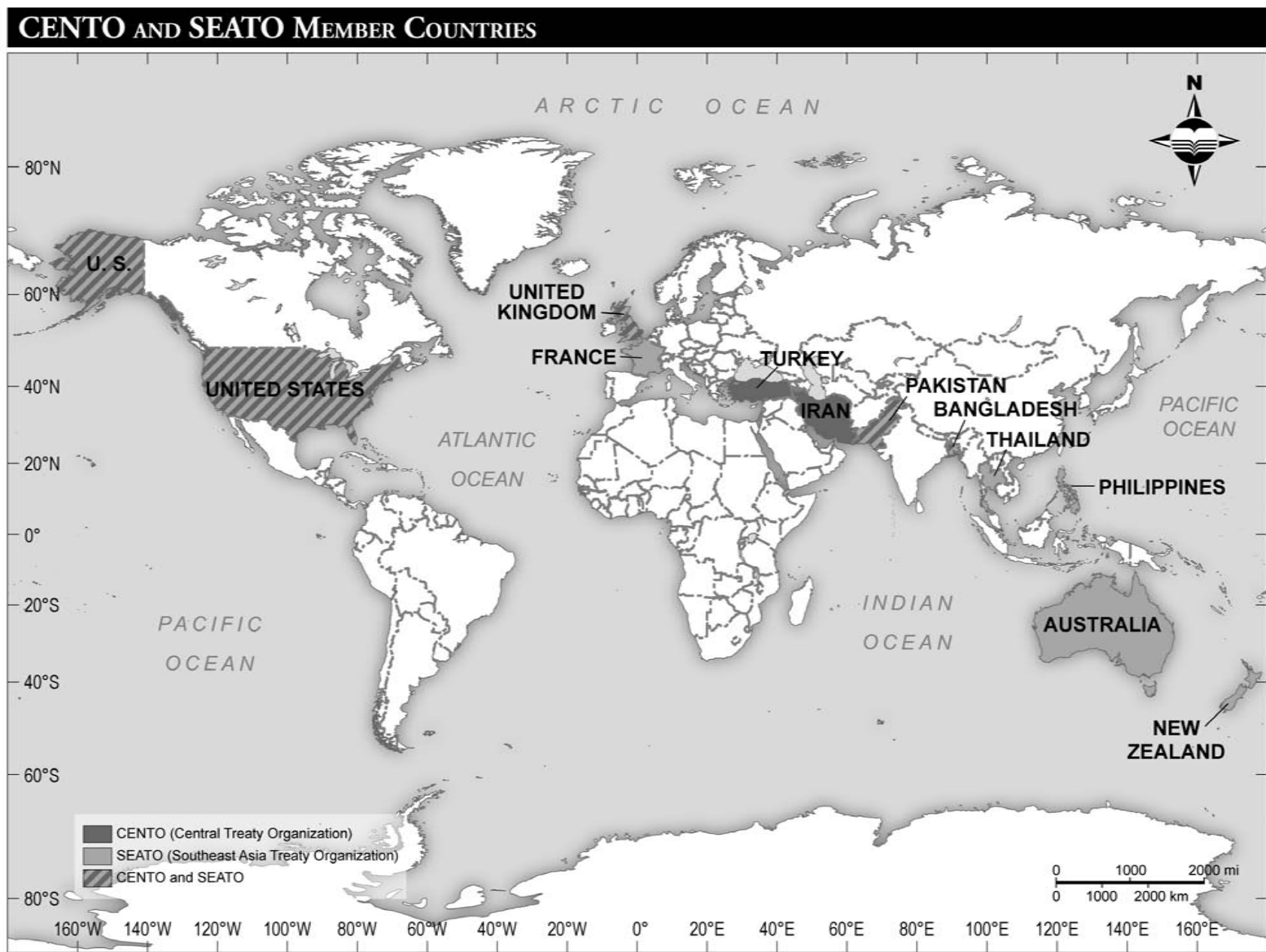


NUCLEAR POWER PRODUCERS, 2005



NATO MEMBER COUNTRIES





BREAKUP OF THE SOVIET UNION, 1989–1995



SOVIET TERRITORIAL GAINS, 1946



CHINESE CIVIL WAR, 1945 – 1950



CULTURAL REVOLUTION IN CHINA



MARSHALL PLAN AID



GLOBAL DIVISIONS AT THE HEIGHT OF THE COLD WAR, 1962



COLD WAR IN THE MIDDLE EAST, 1945 – 1990



COLD WAR IN FAR EAST, 1945 – 1990



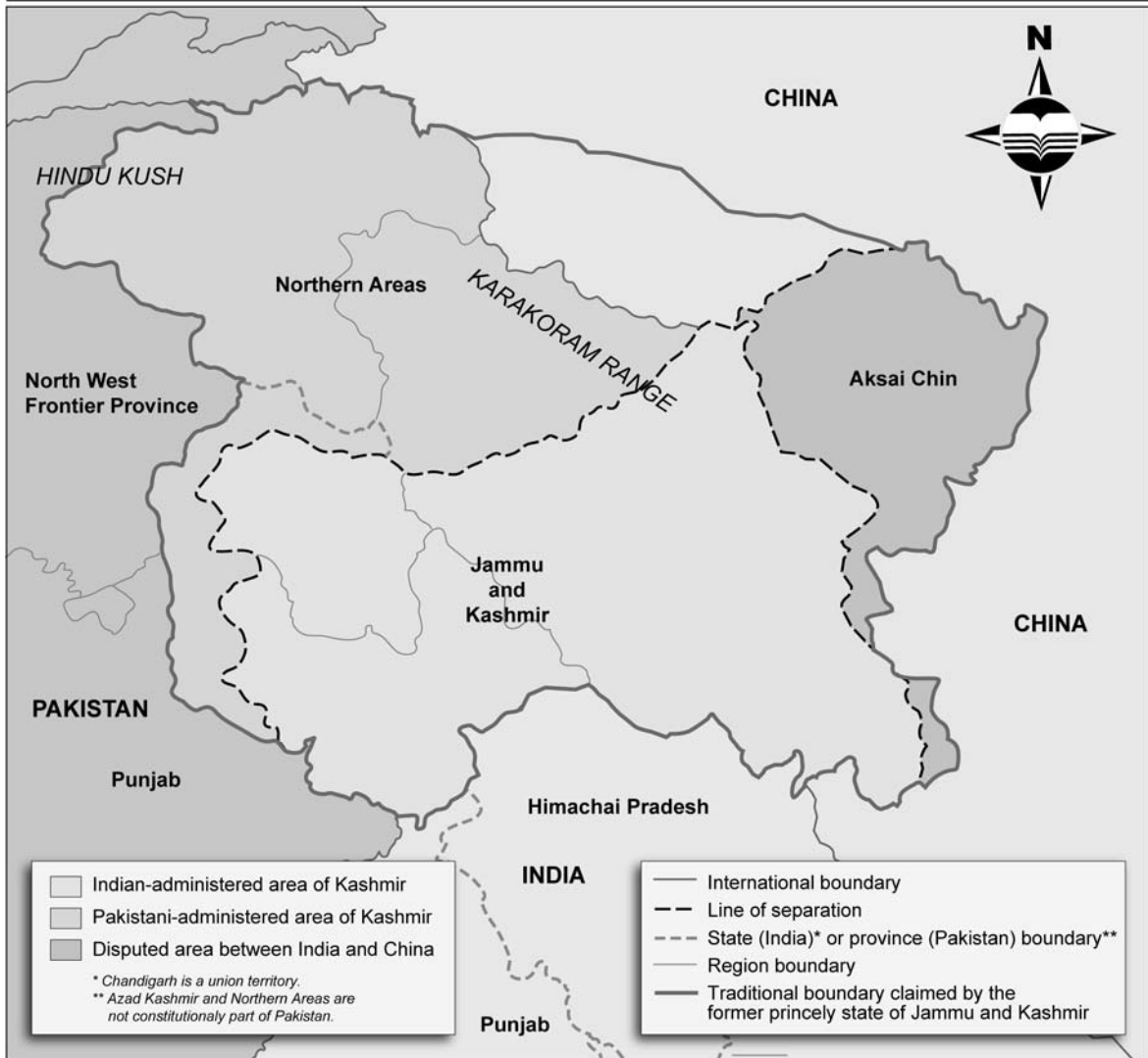
KOREAN WAR, 1950 – 1953



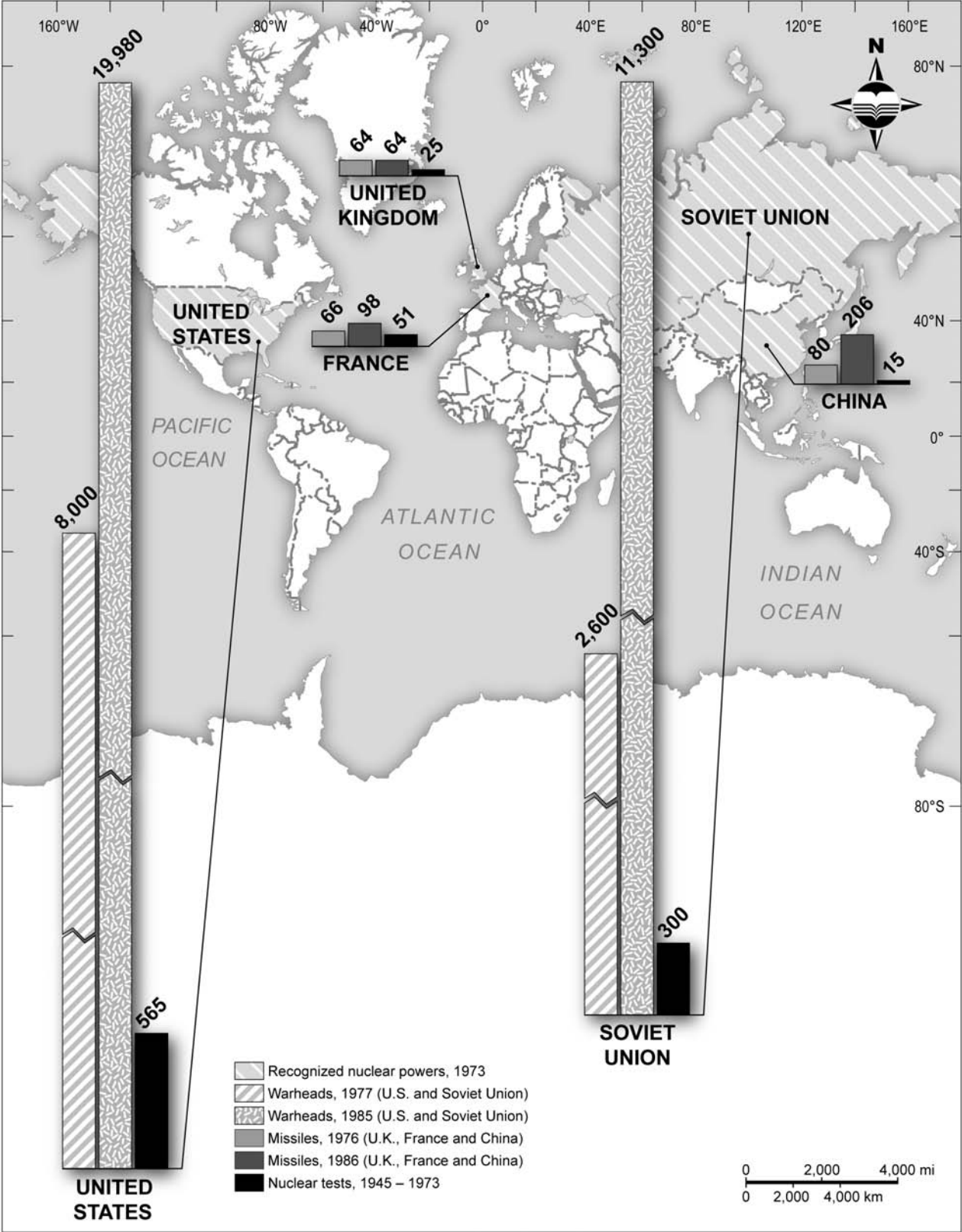




INDIA/PAKISTAN CONTESTED BORDERS



NUCLEAR ARMS RACE, 1945 – 1985



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